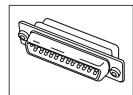


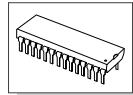
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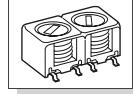
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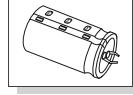
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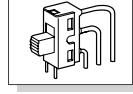
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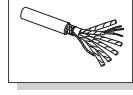
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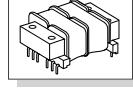


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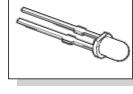
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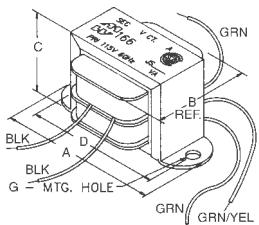
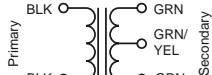
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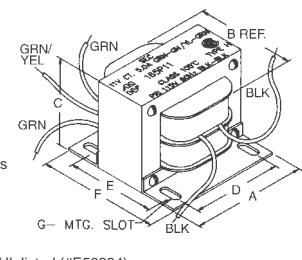
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Fig. 1
OPEN STYLE

- Primary 115 VAC, 60 Hz
- Open style, channel bracket, two hole chassis mount
- Minimum 6" (15.24cm) leads
- Dual bobbin design - no electrostatic shield required
- Class A insulation (105°C)
- Hi-Pot test of 2,000V RMS
- CSA certified (#LR3902) & UL listed (#E50394)


Schematic Drawing for "Open" and "High Current-Open Frame" styles.

Fig. 2
HIGH CURRENT - OPEN FRAME

- Primary 115 VAC, 60 Hz
- Open style, 4 hole frame chassis mount
- Minimum 6" (15.24cm) leads
- Dual bobbin design - no electrostatic shield required
- Class A insulation (105°C)
- Hi-Pot test of 2,000V RMS
- CSA certified (#LR3902) & UL listed (#E50394)



| Fig. | Volts* AC | Amps | Dimensions - mm | | | | | Digi-Key Part No. | Price Each | | | | Hammond Part No. |
|-------------|----------------------|-------------|------------------------|----------|----------|----------|----------|------------------------------|-------------------|----------|-----------|-----------|-----------------------------|
| | | | A | B | C | D | E | | 1 | 5 | 10 | 25 | |
| 1 | 2.5ct | 1.0 | 52.32 | 35.05 | 30.23 | 44.45 | — | HM500-ND | 16.98 | 15.50 | 14.44 | 12.57 | 166J2 |
| 1 | 2.5ct | 2.5 | 71.37 | 38.10 | 42.93 | 60.45 | — | HM501-ND | 16.02 | 14.62 | 13.62 | 11.86 | 166L2 |
| 1 | 2.5ct | 6.0 | 82.55 | 41.40 | 50.80 | 71.37 | — | HM502-ND | 17.86 | 16.30 | 15.19 | 13.22 | 166Q2 |
| 2 | 5.0ct | 30.0 | 95.25 | 66.80 | 79.50 | 79.50 | 63.50 | HM503-ND | 47.80 | 43.62 | 40.63 | 35.38 | 165X5 |
| 2 | 3.0ct | 50.0 | 95.25 | 79.50 | 79.50 | 79.50 | 69.85 | HM504-ND | 48.34 | 44.11 | 41.09 | 35.78 | 165Z3 |
| 1 | 6.3ct | 0.6 | 60.45 | 35.05 | 35.05 | 50.80 | — | HM505-ND | 14.84 | 13.55 | 12.62 | 10.99 | 166G6 |
| 1 | 6.3ct | 1.0 | 71.37 | 38.10 | 42.93 | 60.45 | — | HM506-ND | 16.00 | 14.60 | 13.60 | 11.84 | 166J6 |
| 1 | 6.3ct | 2.0 | 71.37 | 41.40 | 42.93 | 60.45 | — | HM507-ND | 16.10 | 14.70 | 13.69 | 11.92 | 166L6 |
| 1 | 6.3ct | 4.0 | 82.55 | 44.45 | 50.80 | 71.37 | — | HM508-ND | 17.04 | 15.55 | 14.49 | 12.61 | 166N6 |
| 1 | 8.5ct | 1.0 | 71.37 | 38.10 | 42.93 | 60.45 | — | HM509-ND | 16.16 | 14.75 | 13.74 | 11.96 | 166J8 |
| 1 | 8.5ct | 2.0 | 82.55 | 41.40 | 50.80 | 71.37 | — | HM510-ND | 16.56 | 15.12 | 14.08 | 12.26 | 166L8 |
| 1 | 9.0ct | 0.5 | 60.45 | 35.05 | 35.05 | 50.80 | — | HM511-ND | 14.84 | 13.55 | 12.62 | 10.99 | 166G9 |
| 1 | 10.0ct | 0.5 | 60.45 | 38.10 | 35.05 | 50.80 | — | HM512-ND | 15.52 | 14.17 | 13.20 | 11.49 | 166G10 |
| 1 | 10.0ct | 1.0 | 71.37 | 41.40 | 42.93 | 60.45 | — | HM513-ND | 16.12 | 14.71 | 13.71 | 11.93 | 166J10 |
| 1 | 10.0ct | 2.0 | 82.55 | 44.45 | 50.80 | 71.37 | — | HM514-ND | 16.72 | 15.26 | 14.22 | 12.38 | 166L10 |
| 1 | 10.0ct | 3.0 | 82.55 | 50.80 | 50.80 | 71.37 | — | HM515-ND | 17.26 | 15.75 | 14.68 | 12.78 | 166M10 |
| 1 | 12.0ct | 1.2 | 82.55 | 41.40 | 50.80 | 71.37 | — | HM516-ND | 16.40 | 14.97 | 13.94 | 12.14 | 166K12 |
| 1 | 12.6ct | 0.3 | 60.45 | 35.05 | 35.05 | 50.80 | — | HM517-ND | 14.88 | 13.58 | 12.65 | 11.02 | 166F12 |
| 1 | 12.6ct | 0.5 | 71.37 | 38.10 | 42.93 | 60.45 | — | HM518-ND | 15.78 | 14.40 | 13.42 | 11.68 | 166G12 |
| 1 | 12.6ct | 1.0 | 71.37 | 41.40 | 42.93 | 60.45 | — | HM519-ND | 16.34 | 14.91 | 13.89 | 12.10 | 166J12 |
| 1 | 12.6ct | 2.5 | 82.55 | 50.80 | 50.80 | 71.37 | — | HM520-ND | 18.12 | 16.54 | 15.41 | 13.41 | 166L12 |
| 1 | 12.6ct | 4.0 | 93.73 | 54.10 | 58.67 | 79.50 | — | HM521-ND | 20.98 | 19.15 | 17.84 | 15.53 | 166N12 |
| 1 | 12.6ct | 6.0 | 102.36 | 57.15 | 66.80 | 90.42 | — | HM522-ND | 26.22 | 23.93 | 22.29 | 19.41 | 166Q12 |
| 1 | 12.6ct | 8.0 | 114.30 | 63.50 | 73.15 | 101.60 | — | HM523-ND | 29.08 | 26.54 | 24.72 | 21.52 | 166R12 |
| 2 | 12.6ct | 10.0 | 76.20 | 82.55 | 65.02 | 63.50 | 82.55 | HM524-ND | 44.68 | 40.77 | 37.98 | 33.07 | 166S12 |
| 2 | 12.6ct | 20.0 | 95.25 | 92.20 | 79.50 | 79.50 | 82.55 | HM525-ND | 56.58 | 51.63 | 48.10 | 41.87 | 165V12 |
| 1 | 14.0ct | 0.15 | 52.32 | 35.05 | 30.23 | 44.45 | — | HM526-ND | 17.18 | 15.68 | 14.61 | 12.72 | 166E14 |
| 1 | 14.0ct | 0.5 | 71.37 | 38.10 | 42.93 | 60.45 | — | HM527-ND | 15.82 | 14.44 | 13.45 | 11.71 | 166G14 |
| 1 | 14.0ct | 1.0 | 71.37 | 41.40 | 42.93 | 60.45 | — | HM528-ND | 16.34 | 14.91 | 13.89 | 12.10 | 166J14 |
| 1 | 14.0ct | 2.0 | 82.55 | 50.80 | 50.80 | 71.37 | — | HM529-ND | 17.12 | 15.63 | 14.56 | 12.67 | 166L14 |
| 1 | 16.0ct | 0.25 | 60.45 | 35.05 | 35.05 | 50.80 | — | HM530-ND | 15.22 | 13.89 | 12.94 | 11.27 | 166F16 |
| 1 | 16.0ct | 0.5 | 71.37 | 38.10 | 42.93 | 60.45 | — | HM531-ND | 15.86 | 14.48 | 13.49 | 11.74 | 166G16 |
| 1 | 16.0ct | 1.0 | 82.55 | 41.40 | 50.80 | 71.37 | — | HM532-ND | 16.50 | 15.06 | 14.03 | 12.21 | 166J16 |
| 1 | 16.0ct | 2.2 | 82.55 | 50.80 | 50.80 | 71.37 | — | HM533-ND | 17.58 | 16.05 | 14.95 | 13.01 | 166L16 |
| 1 | 16.0ct | 3.0 | 93.73 | 54.10 | 58.67 | 79.50 | — | HM534-ND | 20.96 | 19.13 | 17.82 | 15.52 | 166M16 |
| 1 | 18.0ct | 1.5 | 82.55 | 44.45 | 50.80 | 71.37 | — | HM535-ND | 17.16 | 15.66 | 14.59 | 12.70 | 166K18 |
| 1 | 18.0ct | 3.0 | 93.73 | 54.10 | 58.67 | 79.50 | — | HM536-ND | 24.10 | 22.00 | 20.49 | 17.84 | 166M18 |
| 1 | 18.0ct | 5.0 | 102.36 | 63.50 | 66.80 | 90.42 | — | HM537-ND | 28.00 | 25.55 | 23.80 | 20.72 | 166P18 |
| 2 | 18.0ct | 10.0 | 95.25 | 79.50 | 79.50 | 95.25 | 69.85 | HM538-ND | 48.70 | 44.44 | 41.40 | 36.04 | 165S18 |
| 2 | 18.0ct | 15.0 | 114.30 | 98.55 | 95.25 | 95.25 | 69.85 | HM539-ND | 56.20 | 51.29 | 47.77 | 41.59 | 165U18 |
| 1 | 20.0ct | 0.1 | 52.32 | 35.05 | 30.23 | 44.45 | — | HM540-ND | 17.20 | 15.70 | 14.62 | 12.73 | 166D20 |
| 1 | 20.0ct | 0.15 | 52.32 | 35.05 | 30.23 | 44.45 | — | HM541-ND | 17.32 | 15.81 | 14.73 | 12.82 | 166E20 |
| 1 | 20.0ct | 0.5 | 71.37 | 41.40 | 42.93 | 60.45 | — | HM542-ND | 15.82 | 14.44 | 13.45 | 11.71 | 166G20 |
| 1 | 20.0ct | 2.0 | 93.73 | 47.75 | 58.67 | 79.50 | — | HM543-ND | 22.80 | 20.81 | 19.38 | 16.88 | 166L20 |
| 2 | 20.0ct | 12.0 | 114.30 | 98.55 | 95.25 | 95.25 | 69.85 | HM544-ND | 57.54 | 52.51 | 48.91 | 42.58 | 165T22 |
| 2 | 22.0ct | 20.0 | 114.30 | 111.25 | 95.25 | 95.25 | 114.30 | HM545-ND | 71.68 | 65.41 | 60.93 | 53.05 | 165V22 |
| 1 | 24.0ct | .085 | 52.32 | 35.05 | 30.23 | 44.45 | — | HM546-ND | 17.08 | 15.59 | 14.52 | 12.64 | 166C24 |
| 1 | 24.0ct | 2.0 | 93.73 | 54.10 | 58.67 | 79.50 | — | HM547-ND | 20.38 | 18.60 | 17.33 | 15.09 | 166L24 |
| 1 | 24.0ct | 4.0 | 114.30 | 63.50 | 73.15 | 101.60 | — | HM548-ND | 28.38 | 25.90 | 24.13 | 21.01 | 166N24 |
| 1 | 25.0ct | 0.1 | 52.32 | 35.05 | 30.23 | 44.45 | — | HM549-ND | 17.28 | 15.77 | 14.69 | 12.79 | 166D25 |
| 1 | 25.0ct | 0.15 | 60.45 | 35.05 | 35.05 | 50.80 | — | HM550-ND | 14.92 | 13.62 | 12.69 | 11.05 | 166E25 |
| 1 | 25.0ct | 0.3 | 71.37 | 38.10 | 42.93 | 60.45 | — | HM551-ND | 15.80 | 14.42 | 13.43 | 11.70 | 166F25 |
| 1 | 25.0ct | 0.5 | 71.37 | 41.40 | 42.93 | 60.45 | — | HM552-ND | 16.10 | 14.70 | 13.69 | 11.92 | 166G25 |
| 1 | 25.0ct | 1.0 | 82.55 | 44.45 | 50.80 | 71.37 | — | HM553-ND | 17.08 | 15.59 | 14.52 | 12.64 | 166J25 |
| 1 | 25.0ct | 1.5 | 93.73 | 47.75 | 58.67 | 79.50 | — | HM554-ND | 19.96 | 18.22 | 16.97 | 14.78 | 166K25 |
| 1 | 25.0ct | 2.0 | 93.73 | 54.10 | 58.67 | 79.50 | — | HM555-ND | 20.56 | 18.77 | 17.48 | 15.22 | 166L25 |
| 1 | 25.0ct | 3.0 | 102.36 | 57.15 | 66.80 | 90.42 | — | HM556-ND | 25.49 | 23.26 | 21.67 | 18.87 | 166M25 |
| 2 | 25.0ct | 5.0 | 76.20 | 82.55 | 65.02 | 63.50 | 82.55 | HM557-ND | 48.16 | 43.95 | 40.94 | 35.64 | 165P25 |
| 2 | 25.0ct | 10.0 | 95.25 | 92.20 | 79.50 | 79.50 | 82.55 | HM558-ND | 54.28 | 49.53 | 46.14 | 40.17 | 165S25 |
| 1 | 28.0ct | 0.5 | 71.37 | 41.40 | 42.93 | 60.45 | — | HM559-ND | 16.30 | 14.88 | 13.86 | 12.07 | 166G28 |
| 1 | 28.0ct | 1.0 | 82.55 | 50.80 | 50.80 | 71.37 | — | HM560-ND | 17.10 | 15.61 | 14.54 | 12.66 | 166J28 |
| 2 | 30.0ct | 0.5 | 76.20 | 82.55 | 65.02 | 63.50 | 82.55 | HM561-ND | 43.78 | 39.95 | 37.22 | 32.40 | 165P30 |
| 2 | 30.0ct | 1.0 | 114.30 | 98.55 | 95.25 | 95.25 | 69.85 | HM562-ND | 59.28 | 54.10 | 50.39 | 43.87 | 165S30 |
| 1 | 33.0ct | 1.0 | 82.55 | 50.80 | 50.80 | 71.37 | — | HM563-ND | 17.58 | 16.05 | 14.95 | 13.01 | 166J33 |
| 1 | 35.0ct | 1.5 | 93.73 | 54.10 | 58.67 | 79.50 | — | HM564-ND | 20.80 | 18.98 | 17.68 | 15.40 | 166K35 |
| 1 | 36.0ct | 0.15 | 60.45 | 38.10 | 35.05 | 50.80 | — | HM565-ND | 15.86 | 14.48 | 13.49 | 11.74 | 166E36 |
| 1 | 36.0ct | 0.5 | 82.55 | 41.40 | 50.80 | 71.37 | — | HM566-ND | 16.40 | 14.97 | 13.94 | 12.14 | 166G36 |
| 1 | 36.0ct | 1.0 | 93.73 | 47.75 | 58.67 | 79.50 | — | HM567-ND | 19.98 | 18.24 | 16.99 | 14.79 | 166J36 |
| 1 | 44.0ct | 1.0 | 93.73 | 50.80 | 50.80 | 71.37 | — | HM568-ND | 20.82 | 19.00 | 17.70 | 15.41 | 166J44 |
| 1 | 36.0ct | 1.5 | 93.73 | 54.10 | 58.67 | 79.50 | — | HM569-ND | 20.38 | 18.60 | 17.33 | 15.09 | 166C80 |

* All voltage ratings are based on full load current rating shown.

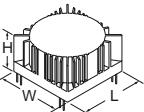
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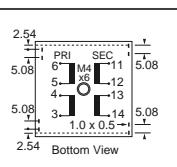
Toroidal Transformer

PC Mount, Low Profile 115/230V,
50/60 Hz Dual Primary



Low Magnetic strayfield emissions, higher efficiency, reduced "standby" current, reduced weight, fully en-capsulated durable body formation.

Primary-secondary test voltage 4.0 kV (IEC742, VDE055 & EN60742). Primaries and secondaries for parallel or series connection. Ambient operating temperature +60°C maximum. Recognized for Class A (105°C) and meets all requirements of Class E (125°C). UL and VDE recognized for P/N's 70000 through 70065.



| Power VA | Dimensions (Pin Length 5mm) L x W x H mm | Pin Pattern XY mm | Weight Total gr | Reg. % ΔV/ Sec mV | Δt °C | Eff. % | Excitation Current mA | 230V Fuse* mA | Max. Secondary Range | | | | |
|----------|--|----------------------------|-----------------------|-------------------------------|----------|-----------|-----------------------------|---------------------|----------------------|-----------------------------|-----------|----|-----|
| | | | | | | | | | VA | ΔV/ Sec % Δt °C | Eff. % | | |
| 1.6 | 39.6 x 39.6 x 18.5 | 35.56 | 82 | 29 | 10 | 77 | 1.0 | 32 | 2.0 | 60 | 30 | 60 | 32 |
| 3.2 | 44.7 x 44.7 x 19.5 | 40.64 | 110 | 43 | 20 | 70 | 1.5 | 32 | 3.7 | 80 | 40 | 50 | 50 |
| 5.0 | 49.7 x 49.7 x 19.5 | 45.72 | 144 | 40 | 29 | 68 | 2.0 | 50 | 5.5 | 80 | 40 | 50 | 63 |
| 7.0 | 49.7 x 49.7 x 23.1 | 45.72 | 174 | 34 | 25 | 74 | 3.0 | 63 | 7.5 | 70 | 40 | 60 | 80 |
| 10.0 | 55.0 x 55.0 x 26.0 | 50.80 | 252 | 20 | 24 | 82 | 3.0 | 80 | 12.0 | 60 | 45 | 60 | 100 |
| 15.0 | 60.0 x 60.0 x 26.3 | 55.88 | 304 | 23 | 27 | 80 | 4.0 | 100 | 16.0 | 60 | 40 | 65 | 125 |
| 25.0 | 60.0 x 60.0 x 37.5 | 55.88 | 435 | 19 | 28 | 83 | 5.0 | 160 | — | — | — | — | — |
| 35.0 | 72.0 x 72.0 x 37.5 | 66.04 | 525 | 17.7 | 31 | 81 | 7.0 | 200 | — | — | — | — | — |
| 50.0 | 82.4 x 82.4 x 37.5 | 76.02 | 685 | 15.5 | 30 | 86 | 8.0 | 315 | — | — | — | — | — |

* Recommend Sto-Blo. Double the fuse current for 120 volt operation.

| Power VA | Parallel VAC @ A | Series VCT @ A | Digi-Key Part No. | Pricing | | | |
|----------|---------------------|-------------------|----------------------|---------|--------|--------|--------|
| | | | | 1 | 10 | 25 | 50 |
| 1.6 | 7 @ .228 | 14 @ .114 | TE70000-ND | 9.34 | 83.00 | 181.56 | 332.00 |
| | 9 @ .178 | 18 @ .089 | TE70001-ND | 9.34 | 83.00 | 181.56 | 332.00 |
| | 12 @ .134 | 24 @ .067 | TE70002-ND | 9.34 | 83.00 | 181.56 | 332.00 |
| | 15 @ .106 | 30 @ .053 | TE70003-ND | 9.34 | 83.00 | 181.56 | 332.00 |
| | 18 @ .088 | 36 @ .044 | TE70004-ND | 9.34 | 83.00 | 181.56 | 332.00 |
| | 22 @ .072 | 44 @ .036 | TE70005-ND | 9.34 | 83.00 | 181.56 | 332.00 |
| 3.2 | 7 @ .458 | 14 @ .229 | TE70010-ND | 10.76 | 95.60 | 209.13 | 382.40 |
| | 9 @ .356 | 18 @ .178 | TE70011-ND | 10.76 | 95.60 | 209.13 | 382.40 |
| | 12 @ .266 | 24 @ .133 | TE70012-ND | 10.76 | 95.60 | 209.13 | 382.40 |
| | 15 @ .214 | 30 @ .107 | TE70013-ND | 10.76 | 95.60 | 209.13 | 382.40 |
| | 18 @ .178 | 36 @ .089 | TE70014-ND | 10.76 | 95.60 | 209.13 | 382.40 |
| | 22 @ .146 | 44 @ .073 | TE70015-ND | 10.76 | 95.60 | 209.13 | 382.40 |
| 5 | 7 @ .714 | 14 @ .357 | TE70020-ND | 11.41 | 101.40 | 221.81 | 405.60 |
| | 9 @ .556 | 18 @ .278 | TE70021-ND | 11.41 | 101.40 | 221.81 | 405.60 |
| | 12 @ .416 | 24 @ .208 | TE70022-ND | 11.41 | 101.40 | 221.81 | 405.60 |
| | 15 @ .334 | 30 @ .167 | TE70023-ND | 11.41 | 101.40 | 221.81 | 405.60 |
| | 18 @ .278 | 36 @ .139 | TE70024-ND | 11.41 | 101.40 | 221.81 | 405.60 |
| | 22 @ .228 | 44 @ .114 | TE70025-ND | 11.41 | 101.40 | 221.81 | 405.60 |
| 7 | 7 @ 1.0 | 14 @ .500 | TE70030-ND | 12.87 | 114.40 | 250.25 | 457.60 |
| | 9 @ .778 | 18 @ .389 | TE70031-ND | 12.87 | 114.40 | 250.25 | 457.60 |
| | 12 @ .584 | 24 @ .292 | TE70032-ND | 12.87 | 114.40 | 250.25 | 457.60 |
| | 15 @ .466 | 30 @ .233 | TE70033-ND | 12.87 | 114.40 | 250.25 | 457.60 |
| | 18 @ .388 | 36 @ .194 | TE70034-ND | 12.87 | 114.40 | 250.25 | 457.60 |
| | 22 @ .318 | 44 @ .159 | TE70035-ND | 12.87 | 114.40 | 250.25 | 457.60 |
| 10 | 7 @ 1.428 | 14 @ .714 | TE70040-ND | 14.45 | 128.40 | 280.88 | 513.60 |
| | 9 @ 1.112 | 18 @ .556 | TE70041-ND | 14.45 | 128.40 | 280.88 | 513.60 |
| | 12 @ .834 | 24 @ .417 | TE70042-ND | 14.45 | 128.40 | 280.88 | 513.60 |
| | 15 @ .666 | 30 @ .333 | TE70043-ND | 14.45 | 128.40 | 280.88 | 513.60 |
| | 18 @ .556 | 36 @ .278 | TE70044-ND | 14.45 | 128.40 | 280.88 | 513.60 |
| | 22 @ .454 | 44 @ .227 | TE70045-ND | 14.45 | 128.40 | 280.88 | 513.60 |
| 15 | 7 @ 2.142 | 14 @ 1.071 | TE70050-ND | 16.22 | 144.20 | 315.44 | 576.80 |
| | 9 @ 1.666 | 18 @ .833 | TE70051-ND | 16.22 | 144.20 | 315.44 | 576.80 |
| | 12 @ 1.250 | 24 @ .625 | TE70052-ND | 16.22 | 144.20 | 315.44 | 576.80 |
| | 15 @ 1.000 | 30 @ .500 | TE70053-ND | 16.22 | 144.20 | 315.44 | 576.80 |
| | 18 @ .834 | 36 @ .417 | TE70054-ND | 16.22 | 144.20 | 315.44 | 576.80 |
| | 22 @ .682 | 44 @ .341 | TE70055-ND | 16.22 | 144.20 | 315.44 | 576.80 |
| 25 | 7 @ 3.570 | 14 @ 1.785 | TE70060-ND | 18.23 | 162.00 | 354.38 | 648.00 |
| | 9 @ 2.754 | 18 @ 1.377 | TE70061-ND | 18.23 | 162.00 | 354.38 | 648.00 |
| | 12 @ 2.082 | 24 @ 1.041 | TE70062-ND | 18.23 | 162.00 | 354.38 | 648.00 |
| | 15 @ 1.664 | 30 @ .832 | TE70063-ND | 18.23 | 162.00 | 354.38 | 648.00 |
| | 18 @ 1.388 | 36 @ .694 | TE70064-ND | 18.23 | 162.00 | 354.38 | 648.00 |
| | 22 @ 1.136 | 44 @ .568 | TE70065-ND | 18.23 | 162.00 | 354.38 | 648.00 |
| 35 | 7 @ 5.000 | 14 @ 2.500 | TE70070-ND | 22.34 | 198.60 | 434.44 | 794.40 |
| | 9 @ 3.888 | 18 @ 1.944 | TE70071-ND | 22.34 | 198.60 | 434.44 | 794.40 |
| | 12 @ 2.916 | 24 @ 1.458 | TE70072-ND | 22.34 | 198.60 | 434.44 | 794.40 |
| | 15 @ 2.332 | 30 @ 1.166 | TE70073-ND | 22.34 | 198.60 | 434.44 | 794.40 |
| | 18 @ 1.944 | 36 @ .972 | TE70074-ND | 22.34 | 198.60 | 434.44 | 794.40 |
| | 22 @ 1.590 | 44 @ .795 | TE70075-ND | 22.34 | 198.60 | 434.44 | 794.40 |
| 50 | 7 @ 7.142 | 14 @ 3.571 | TE70080-ND | 27.65 | 245.80 | 537.69 | 983.20 |
| | 9 @ 5.554 | 18 @ 2.777 | TE70081-ND | 27.65 | 245.80 | 537.69 | 983.20 |
| | 12 @ 4.166 | 24 @ 2.083 | TE70082-ND | 27.65 | 245.80 | 537.69 | 983.20 |
| | 15 @ 3.332 | 30 @ 1.666 | TE70083-ND | 27.65 | 245.80 | 537.69 | 983.20 |
| | 18 @ 2.776 | 36 @ 1.388 | TE70084-ND | 27.65 | 245.80 | 537.69 | 983.20 |
| | 22 @ 2.272 | 44 @ 1.136 | TE70085-ND | 27.65 | 245.80 | 537.69 | 983.20 |

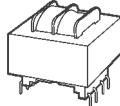
Note: To obtain output voltage, load current must be met.



MICROTRAN
company, Inc.



SPLITFORM® Split-Bobbin Power Transformers

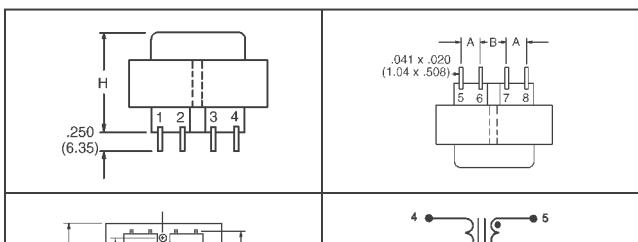


For PC Board Solid-State Power, Control, and Instrumentation Applications

- Split Bobbin Construction
- Center flange insulation barrier
- High isolation for low leakage applications
- Low capacitive coupling minimizes line noise and false triggering
- 2,500V RMS hipot
- 115/230V 50/60Hz dual primary
- Precision spaced terminals
- Terminal numbers are molded on bobbin
- 130°C insulation system

UL 1585 Class 2 &3 - File #E96720

UL 506 - File #E79781



| PSD Series | VA Size | Dimensions - Inch (mm) | | | | | | Weight Lbs. (kg) |
|------------|---------|------------------------|-----------------|-----------------|-----------------|----------------|-----------------|---------------------|
| | | L | W | H | MC | A | B | |
| 2 | 1.1 | 1.44 (36.58) | 1.23 (31.24) | 1.00 (25.40) | — | .250 (6.35) | .250 (6.35) | 1.200 (.077) |
| 3 | 2.4 | 1.44 (36.58) | 1.23 (31.24) | 1.26 (32.00) | — | .250 (6.35) | .250 (6.35) | 1.200 (.113) |
| 4 | 6 | 1.69 (42.93) | 1.39 (35.31) | 1.36 (34.54) | .250 (7.00) | .350 (6.35) | .350 (6.35) | 1.280 (.200) |
| 5 | 12 | 1.97 (50.04) | 1.63 (41.40) | 1.50 (38.10) | .300 (31.75) | .400 (7.62) | .400 (10.16) | 1.410 (.318) |

| VA (Size) | Parallel VAC @ A | Series VCT @ A | Digi-Key Part No. | Pricing* | | | Microtran Part No. |
|-----------|---------------------|-------------------|----------------------|----------|-------|--------|-----------------------|
| | | | | 1 | 10 | 25 | |
| 1.1 | 6.3 @ 0.18 | 12.6 @ 0.09 | MT2101-ND | 7.65 | 68.00 | 144.50 | PSD2-12 |
| 2.4 | 6.3 @ 0.4 | 12.6 @ 0.2 | MT2102-ND | 7.74 | 68.80 | 146.20 | PSD3-12 |
| 6.0 | 6.3 @ 1.0 | 12.6 @ 0.5 | MT2103-ND | 8.37 | 74.40 | 158.10 | PSD4-12 |
| 12.0 | 6.3 @ 2.0 | 12.6 @ 1.0 | MT2104-ND | 9.63 | 85.60 | 181.90 | PSD5-12 |
| 1.1 | 10 @ 0.11 | 20 @ 0.055 | MT2109-ND | 7.65 | 68.00 | 144.50 | PSD2-20 |
| 2.4 | 10 @ 0.24 | 20 @ 0.12 | MT2110-ND | 7.74 | 68.80 | 146.20 | PSD3-20 |
| 6.0 | 10 @ 0.6 | 20 @ 0.3 | MT2111-ND | 8.37 | 74.40 | 158.10 | PSD4-20 |
| 12.0 | 10 @ 1.2 | 20 @ 0.6 | MT2112-ND | 9.63 | 85.60 | 181.90 | PSD5-20 |
| 1.1 | 12 @ 0.09 | 24 @ 0.045 | MT2113-ND | 7.65 | 68.00 | 144.50 | PSD2-24 |
| 2.4 | 12 @ 0.2 | 24 @ 0.1 | MT2114-ND | 7.74 | 68.80 | 146.20 | PSD3-24 |
| 6.0 | 12 @ 0.5 | 24 @ 0.25 | MT2115-ND | 8.37 | 74.40 | 158.10 | PSD4-24 |
| 12.0 | 12 @ 1.0 | 24 @ 0.5 | MT2116-ND | 9.63 | 85.60 | 181.90 | PSD5-24 |
| 1.1 | 14 @ 0.08 | 28 @ 0.04 | MT2117-ND | 7.65 | 68.00 | 144.50 | PSD2-28 |
| 2.4 | 14 @ 0.17 | 28 @ 0.085 | MT2118-ND | 7.74 | 68.80 | 146.20 | PSD3-28 |
| 6.0 | 14 @ 0.4 | 28 @ 0.2 | MT2119-ND | 8.37 | 74.40 | 158.10 | PSD4-28 |
| 12.0 | 14 @ 0.84 | 28 @ 0.42 | MT2120-ND | 9.63 | 85.60 | 181.90 | PSD5-28 |
| 1.1 | 18 @ 0.06 | 36 @ 0.03 | MT2121-ND | 7.65 | 68.00 | 144.50 | PSD2-36 |
| 2.4 | 18 @ 0.13 | 36 @ 0.065 | MT2122-ND | 7.74 | 68.80 | 146.20 | PSD3-36 |
| 6.0 | 18 @ 0.34 | 36 @ 0.17 | MT2123-ND | 8.37 | 74.40 | 158.10 | PSD4-36 |
| 12.0 | 18 @ 0.7 | 36 @ 0.35 | MT2124-ND | 9.63 | 85.60 | 181.90 | PSD5-36</td |



MICROTRAN
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LOW PROFILE Power Transformers

For PC Board Solid-State Power, Control, & Instrumentation Applications

• Meets U.S. and International Safety Standards —

UL, VDE, IEC, CSA.

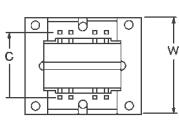
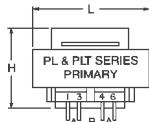
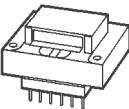
• 4,000V RMS hipot test —

Dual non-concentric bobbin and insulating shroud provide high isolation and reduced capacitance.

• 115/230V 50/60Hz primary.

• 130°C insulation system —

Insulating materials meet UL 94V-0 flammability requirements.

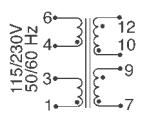
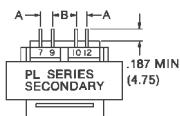


File #LR69222; File #LR69223



File 810/89, 811/89; VCD 0551,0806

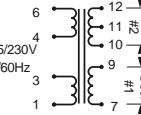
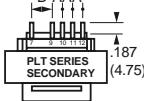
Fig. 1



TUV File 810/89, 811/89; IEC 380 EN60950

File #E79781; UL506

Fig. 2



TUV File 810/89, 811/89; IEC 380 EN60950

File #E79781; UL506

| VA Size | Dimensions - Inch (mm) | | | | | | Mtg. Screw | Pin Square In. (mm) | Wt. Lbs. (kg) |
|------------|------------------------|---------------|---------------|--------------|--------------|---------------|---------------|------------------------|------------------|
| | L | W | H | At | B | C | | | |
| 2.5 | 1.625 (41.28) | 1.313 (33.35) | 1.125 (28.58) | 200 (5.08) | 250 (6.35) | 1.000 (25.40) | — | .025 (.64) | .025 (.11) |
| 5.0 | 1.625 (41.28) | 1.313 (33.35) | 1.375 (34.93) | 200 (5.08) | .400 (10.16) | 1.000 (25.40) | — | .025 (.64) | .025 (.17) |
| 10.0 | 1.875 (47.63) | 1.563 (39.70) | 1.375 (34.93) | 200 (5.08) | .400 (10.16) | 1.140 (28.96) | — | .025 (.64) | .036 (.91) |
| 20.0 | 2.250 (57.15) | 1.875 (47.63) | 1.625 (41.28) | .400 (10.16) | .400 (10.16) | 1.460 (37.08) | .40 (10.16) | .025 (.64) | .036 (.91) |
| 30.0 | 2.625 (66.68) | 2.188 (55.58) | 1.563 (39.70) | .550 (13.97) | .275 (6.98) | 1.680 (42.67) | .55 (13.97) | .025 (.64) | .045 (1.14) |
| 56.0 | 3.000 (76.20) | 2.500 (63.50) | 1.812 (46.05) | .600 (15.24) | .300 (7.62) | 1.900 (48.26) | .60 (15.24) | .025 (.64) | .045 (1.14) |

† For PLT series secondary only. Dimension A is 1/2 of value shown.

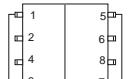
MICROTRAN
company, Inc.



Four Sizes
• 2.5VA size 0.6" (15.24mm) high for 13/16" (20.64mm) card spacing
• 6VA size 0.85" (21.59mm) high for 1" (25.40mm) card spacing
• 12VA size 1.065" (27.05mm) high for 1-1/4" (31.75mm) card spacing
• 24VA size 1.25" (31.75mm) high for 1-9/16" (39.69mm) card spacing

Split Bobbin • Primaries and secondaries wound side by side • High isolation for low leakage applications 1500V hipot • Low capacity coupling minimizes line noise and false triggering.

• Hum-bucking semi-toroidal construction
• Precision spaced terminals
• Dual primaries: 115/230V, 50/60Hz

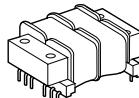


UL 506 File #E79781
130°C Insulation System

• 250(6.35) REF.
A .041(1.04) X .020(.508) THK PF2.5, PF6, PF12
B .040(1.02) SQ-PF24

FLAT STACK® Low Profile Power Transformers

For low height PC Board Solid-State Power, Control, and Instrumentation



| VA Size | Parallel VAC @ A | Series VCT @ A | Digi-Key Part No. | Pricing* | | | Microtran Part No. |
|------------|---------------------|-------------------|----------------------|----------|--------|--------|-----------------------|
| | | | | 1 | 10 | 25 | |
| 2.5 | 5.0 @ 0.5 | 10 @ 0.25 | MT1101-ND | 8.78 | 78.00 | 165.75 | PF2.5-10 |
| 6.0 | 5.0 @ 1.2 | 10 @ 0.6 | MT1102-ND | 9.63 | 85.60 | 181.90 | PF6-10 |
| 12.0 | 5.0 @ 2.4 | 10 @ 1.2 | MT1103-ND | 12.38 | 110.00 | 233.75 | PF12-10 |
| 24.0 | 5.0 @ 4.8 | 10 @ 2.4 | MT1104-ND | 13.73 | 122.00 | 259.25 | PF24-10 |
| 2.5 | 6.3 @ 0.4 | 12.6 @ 0.2 | MT1105-ND | 8.78 | 78.00 | 165.75 | PF2.5-12 |
| 6.0 | 6.3 @ 0.9 | 12.6 @ 0.45 | MT1106-ND | 9.63 | 85.60 | 181.90 | PF6-12 |
| 12.0 | 6.3 @ 1.9 | 12.6 @ 0.95 | MT1107-ND | 12.38 | 110.00 | 233.75 | PF12-12 |
| 24.0 | 6.3 @ 3.8 | 12.6 @ 1.9 | MT1108-ND | 13.73 | 122.00 | 259.25 | PF24-12 |
| 2.5 | 8 @ 0.3 | 16 @ 0.15 | MT1109-ND | 8.78 | 78.00 | 165.75 | PF2.5-16 |
| 6.0 | 8 @ 0.7 | 16 @ 0.35 | MT1110-ND | 9.63 | 85.60 | 181.90 | PF6-16 |
| 12.0 | 8 @ 1.5 | 16 @ 0.75 | MT1111-ND | 12.38 | 110.00 | 233.75 | PF12-16 |
| 24.0 | 8 @ 3.0 | 16 @ 1.5 | MT1112-ND | 13.73 | 122.00 | 259.25 | PF24-16 |
| 2.5 | 10 @ 0.25 | 20 @ 0.125 | MT1113-ND | 8.78 | 78.00 | 165.75 | PF2.5-20 |
| 6.0 | 10 @ 0.6 | 20 @ 0.3 | MT1114-ND | 9.63 | 85.60 | 181.90 | PF6-20 |
| 12.0 | 10 @ 1.2 | 20 @ 0.6 | MT1115-ND | 12.38 | 110.00 | 233.75 | PF12-20 |
| 24.0 | 10 @ 2.4 | 20 @ 1.2 | MT1116-ND | 13.73 | 122.00 | 259.25 | PF24-20 |
| 2.5 | 12 @ 0.2 | 24 @ 0.1 | MT1117-ND | 8.78 | 78.00 | 165.75 | PF2.5-24 |
| 6.0 | 12 @ 0.5 | 24 @ 0.25 | MT1118-ND | 9.63 | 85.60 | 181.90 | PF6-24 |
| 12.0 | 12 @ 1.0 | 24 @ 0.5 | MT1119-ND | 12.38 | 110.00 | 233.75 | PF12-24 |
| 24.0 | 12 @ 2.0 | 24 @ 1.0 | MT1120-ND | 13.73 | 122.00 | 259.25 | PF24-24 |
| 2.5 | 15 @ 0.17 | 30 @ 0.085 | MT1121-ND | 8.78 | 78.00 | 165.75 | PF2.5-30 |
| 6.0 | 15 @ 0.4 | 30 @ 0.2 | MT1122-ND | 9.63 | 85.60 | 181.90 | PF6-30 |
| 12.0 | 15 @ 0.8 | 30 @ 0.4 | MT1123-ND | 12.38 | 110.00 | 233.75 | PF12-30 |
| 24.0 | 15 @ 1.6 | 30 @ 0.8 | MT1124-ND | 13.73 | 122.00 | 259.25 | PF24-30 |
| 2.5 | 17 @ 0.15 | 34 @ 0.075 | MT1125-ND | 8.78 | 78.00 | 165.75 | PF2.5-34 |
| 6.0 | 17 @ 0.34 | 34 @ 0.17 | MT1126-ND | 9.63 | 85.60 | 181.90 | PF6-34 |
| 12.0 | 17 @ 0.7 | 34 @ 0.35 | MT1127-ND | 12.38 | 110.00 | 233.75 | PF12-34 |
| 24.0 | 17 @ 1.4 | 34 @ 0.7 | MT1128-ND | 13.73 | 122.00 | 259.25 | PF24-34 |

* Call for price on quantities of 50 or more. Note: To obtain output voltage, load current must be met.

† Intended for use as a regulated power supply transformer, 5VDC and ±12VDC. Contact Digi-Key for an application note.

1-800-344-4539

218-681-6674 • FAX: 218-681-3380 • www.digikey.com

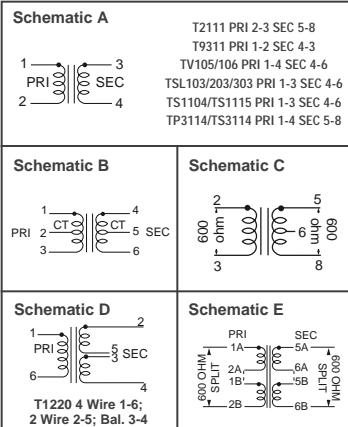
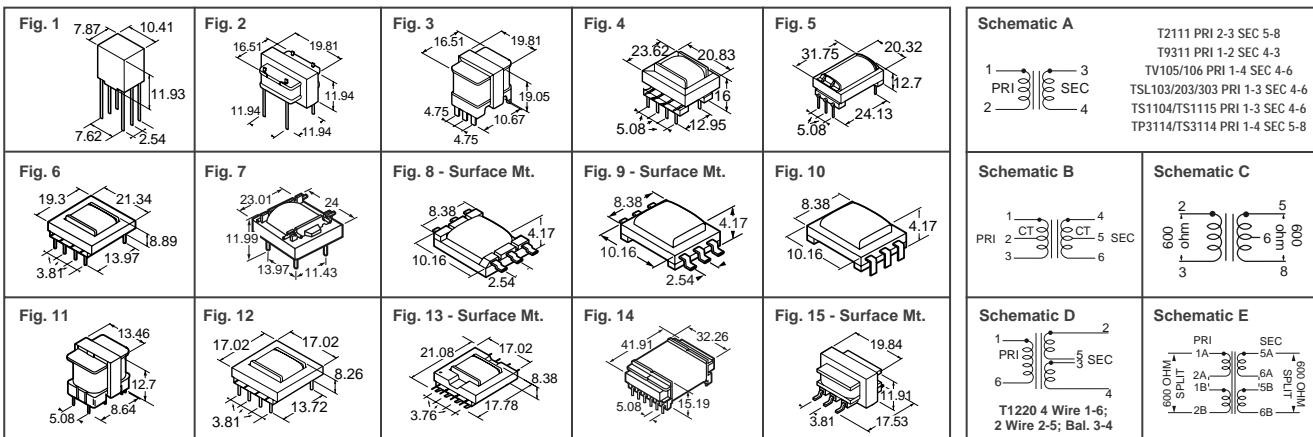


MICROTRAN
company, Inc.



Telephone Coupling Transformers

For Interconnecting Data/Voice Telephone Lines per FCC part 68. Frequency Response: 300-3500Hz±0.5dB. Hi-pot: 1500V RMS. Impedance Matching: ±10%. UL 1459, File #138028.



| Fig. | Schematic | Impedance | | IDC (mA) | Insertion Loss (dB) | Digi-Key Part No. | Pricing | | | Microtran Part No. |
|------|-----------|-----------|-----------|-------------|------------------------|----------------------|---------|--------|--------|-----------------------|
| | | Primary | Secondary | | | | 1 | 10 | 25 | |
| 1‡ | A | 600 | 600 | 1.5 | 1.6 | MT4110-ND | 24.50 | 217.80 | 462.83 | PM32-M |
| 1 | B | 600CT | 600CT | 3 | 1.6 | MT4111-ND | 25.83 | 229.60 | 487.90 | PM34-M |
| 2 | A | 600 | 600 | 0 | 1.0 | MT4112-ND | 13.88 | 123.40 | 262.23 | T1104 |
| 3‡ | A | 600 | 600 | 0 | 1.0 | MT4113-ND | 9.83 | 87.40 | 185.73 | T2104 |
| 3 | B | 600CT | 600CT | 0 | 1.0 | MT4114-ND | 11.34 | 100.80 | 214.20 | T2106 |
| 3 | D | 600 | 600/600 | 0 | 1.0 | MT4115-ND* | 13.34 | 118.60 | 252.03 | T2220 |
| 4 | A | 600 | 600 | 90 | 2.0 | MT4116-ND | 8.33 | 74.00 | 157.25 | T2111 |
| 4 | C | 600 | 600CT | 90 | 2.0 | MT4117-ND | 8.33 | 74.00 | 157.25 | T2112 |
| 5‡ | A | 600 | 600 | 90 | 1.8 | MT4118-ND | 9.61 | 85.40 | 181.48 | T9311 |
| 5 | D | 600 | 600 split | 90 | 1.8 | MT4119-ND | 9.92 | 88.20 | 187.43 | T9312 |
| 6 | A | 600 | 600 | 50 | 1.8 | MT4120-ND | 10.13 | 90.00 | 191.25 | TP3111 |
| 7 | A | 600 | 470 | 100 | 2.5 | MT4123-ND | 6.05 | 53.80 | 114.33 | TTC264 |
| 8 | A | 600 | 346 | 0 | 2.75 | MT4121-ND† | 13.48 | 119.80 | 254.58 | TSL103 |
| 9 | A | 600 | 346 | 0 | 2.75 | MT4122-ND | 13.48 | 119.80 | 254.58 | TSL203 |
| 10 | A | 600 | 346 | 0 | 2.7 | MT4124-ND | 13.48 | 119.80 | 254.58 | TSL303 |
| 11 | A | 600 | 600 | 0 | .60 | MT4126-ND | 16.00 | 142.20 | 302.18 | TV106 |
| 12 | A | 600 | 500 | 0 | 1.1 | MT4127-ND | 12.40 | 110.20 | 234.18 | TP3114 |
| 13 | A | 600 | 500 | 0 | 1.1 | MT4128-ND | 14.51 | 129.00 | 274.13 | TS3114 |
| 14 | E | 600 split | 600 split | 80 | 2.0 | MT4129-ND | 18.25 | 162.20 | 344.68 | T9116 |
| 15 | A | 600 | 600 | 0 | 1.0 | MT4130-ND | 11.54 | 102.60 | 218.03 | TS1104 |
| 15 | A | 600 | 600 | 65 | 1.5 | MT4131-ND | 14.29 | 127.00 | 269.88 | TS1115 |
| 15 | D | 600 | 600/600 | 0 | .7 | MT4132-ND | 14.00 | 124.40 | 264.35 | TS1220 |

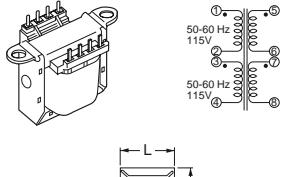
* Two required for conventional hybrid operation, the insertion loss does not include 3dB in hybrid balance network. ‡ Has a 4-pin configuration

† TSL103 must be mounted through a circuit board cutout .4" (10.16mm) x .33" (8.38mm)

EWC[®] INC. Transformers

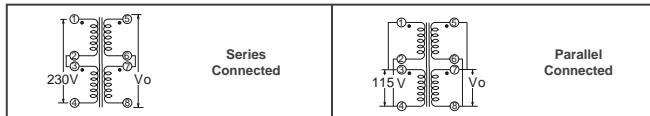
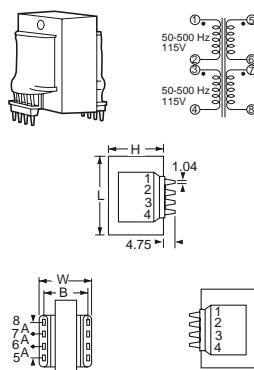
DEL Series - Dual Primary

Recommended PC hole Dia. = .052" (1.32mm)
Split bobbin construction, dual primary 115V/220V



DPC Series - Dual Primary

Concentric, single section bobbin construction, dual primary 115V/220V



| VA (Size) | Dimensions - Inch (mm) | | | | | |
|--------------|------------------------|---------------|---------------|---------------|---------------|--------------|
| | L | W | H | G | B | A |
| 4.4 | 1.720 (43.69) | 1.250 (31.75) | 1.400 (35.56) | 2.375 (60.33) | 1.100 (27.94) | 0.250 (6.35) |
| 10 | 1.970 (50.04) | 1.438 (36.53) | 1.660 (42.16) | 2.813 (71.45) | 1.300 (33.02) | 0.250 (6.35) |
| 24 | 1.625 (41.28) | 2.250 (57.15) | 1.375 (34.93) | — | 2.100 (53.34) | 0.250 (6.35) |

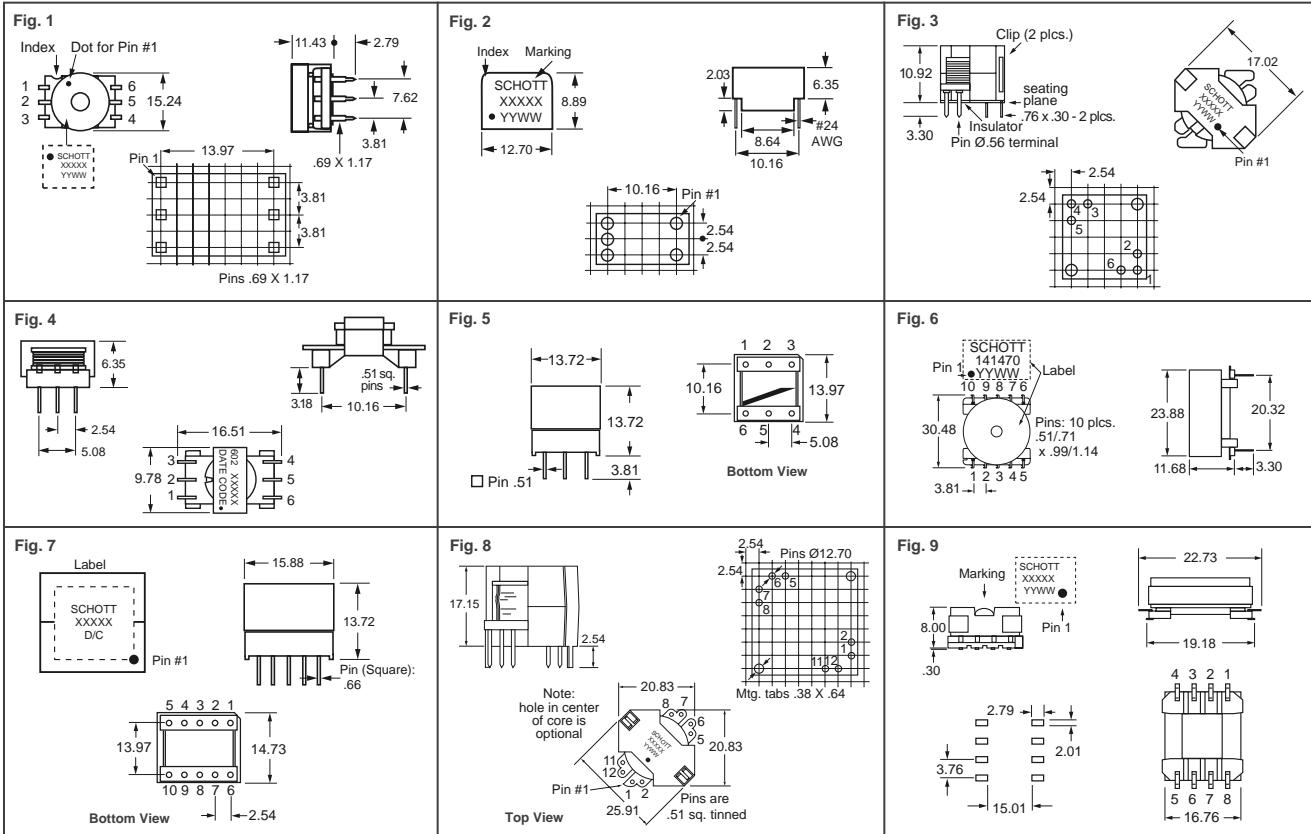
Ratings Based on 20% Regulation.

| Size VA | Output (Vo) | | Digi-Key Part No. | Pricing* | | | EWC. Part No. |
|------------|--------------------|--------------------|----------------------|----------|-------|--------|------------------|
| | Series VCT @ mA | Parallel V @ mA | | 1 | 10 | 25 | |
| DEL Series | | | | | | | |
| 4.4 | 10 @ 440 | 5 @ 880 | T130-ND | 5.25 | 49.00 | 113.75 | DEL10-440A2 |
| 4.4 | 28 @ 160 | 14 @ 320 | T135-ND | 5.25 | 49.00 | 113.75 | DEL28-160A50 |
| 10 | 16 @ 640 | 8 @ 1280 | T139-ND | 6.60 | 61.60 | 143.00 | DEL16-640A11 |
| 10 | 34 @ 300 | 17 @ 600 | T142-ND | 6.60 | 61.60 | 143.00 | DEL34-300A23 |
| DPC Series | | | | | | | |
| 24 | 34 @ 700 | 17 @ 1400 | T150-ND† | 6.83 | 63.70 | 147.88 | DPC34-700B24 |

* Pricing available for larger quantities. † Use B-24 Bracket.

Note: To obtain output voltage, load current must be met.

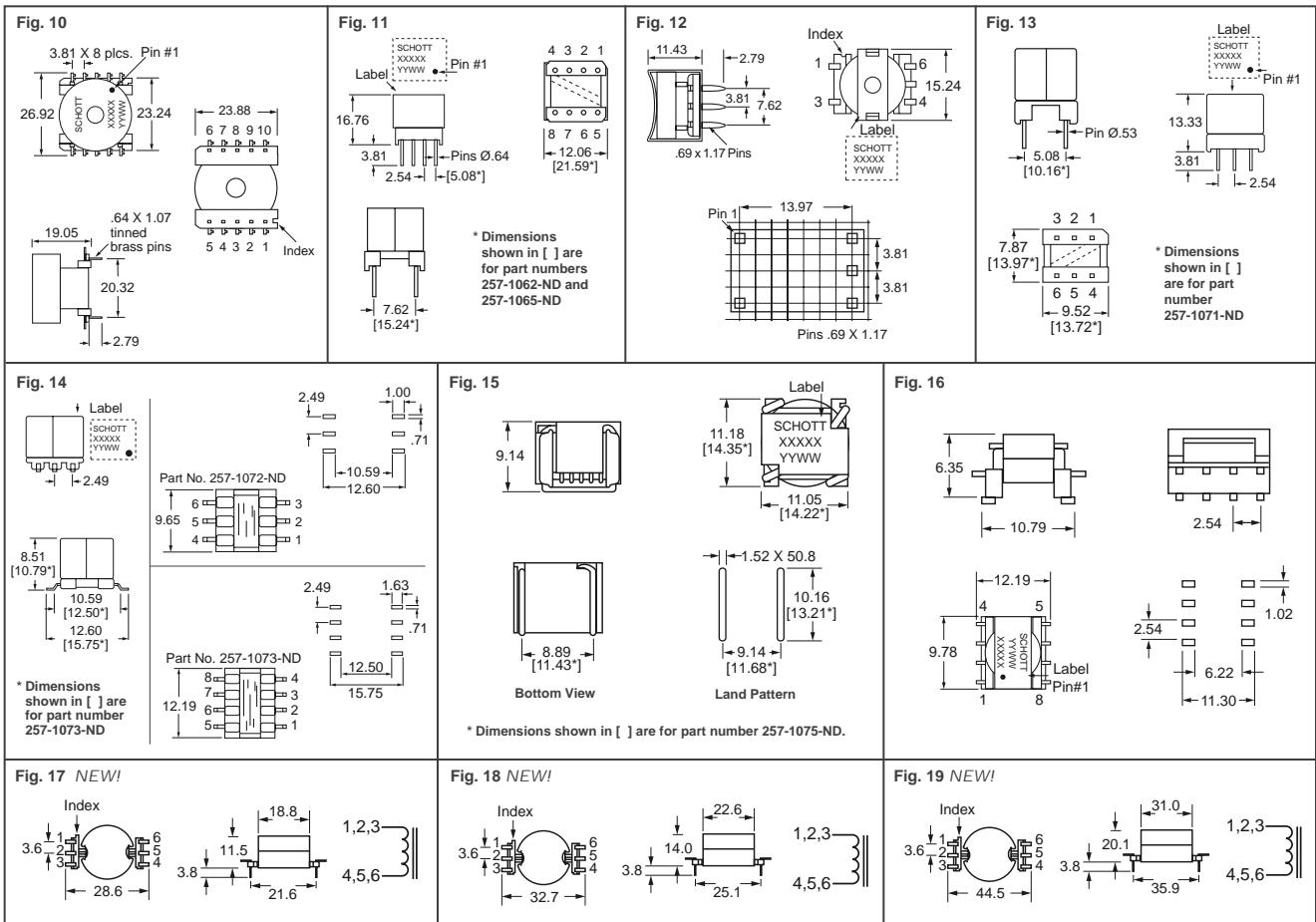
1-800-344-4539
218-681-6674 • FAX: 218-681-3380 • www.digikey.com



| Fig. | Description (applications and notes) | Inductance | Schematic Information | | | | | | Digi-Key Part No. | 1 | 10 | 50 | 100 | 500 | Schott Part No. |
|------|---|--|-----------------------|--------------|----------------|-----------------|----------------|------------------|-------------------|-------|------|------|------|------|-----------------|
| | | | Primary Start | Primary CTap | Primary Finish | Secondary Start | Secondary CTap | Secondary Finish | | | | | | | |
| 1 | Transformer for Maxim 635-637; 5V to 5V @50mA Transformer for Maxim 250/251; 5V to 5V @ 50mA | 290 μ H 2.5mH | 1 | — | 3 | 4 | — | 6 | 257-1005-ND | 9.56 | 7.35 | 4.70 | 3.76 | 2.62 | 67114750 |
| | | | 1 | — | 3 | 4 | — | 6 | 257-1006-ND | 9.29 | 7.14 | 5.19 | 4.16 | 2.89 | 67114760 |
| 2 | Transformer for T1 Transmit: Dallas 2151 Transformer for T1; Crystal 6154, 6158, 61535 Transformer for Maxim 250/251; For RS232 Isolation Transformer for T1 Receive; Dallas 2151 Line Interface Transformer T1 Transmit Transmit Transformer for Crystal CS61574/35, 100 ohms Transmit Transformer for Crystal CS61574/35, 75 ohms Isolation for Digital Audio; Crystal CS8401/2/11/12 | 500 μ H 700 μ H 2mH 700 μ H 1.5mH 1.5mH 225 μ H | 1 | — | 5 | 2 | 4 | 6 | 257-1007-ND | 10.55 | 8.12 | 5.19 | 4.15 | 2.89 | 67112020 |
| | | | 1 | — | 2 | 3 | — | 4 | 257-1008-ND | 9.61 | 6.45 | 4.70 | 3.51 | 2.89 | 67115100 |
| | | | 1 | 2 | 3 | 4 | — | 5 | 257-1009-ND | 9.71 | 6.55 | 4.80 | 3.61 | 2.99 | 67117970 |
| | | | 1 | 3 | 5 | 2 | — | 6 | 257-1010-ND | 9.61 | 6.45 | 4.70 | 3.51 | 2.89 | 67124650 |
| | | | 1 | — | 5 | 2 | 4 | 6 | 257-1011-ND | 8.93 | 6.87 | 4.40 | 3.52 | 2.25 | 67124670 |
| | | | 1 | — | 5 | 2 | — | 6 | 257-1012-ND | 10.56 | 8.12 | 5.20 | 4.16 | 2.89 | 67124840 |
| | | | 1 | — | 5 | 2 | 4 | 6 | 257-1013-ND | 9.61 | 6.45 | 4.70 | 3.51 | 2.89 | 67124850 |
| | | | 1 | — | 2 | 3 | — | 4 | 257-1015-ND | 9.61 | 6.45 | 4.70 | 3.51 | 2.89 | 67125450 |
| 3 | Transformer for EXAR T1 Receive T1 Transmit Transformer for Level One 310 | 8.44mH 3mH | 6 | 1 | 2 | 3 | 4 | 5 | 257-1016-ND | 11.44 | 7.68 | 4.39 | 3.84 | 3.48 | 67109510 |
| | | | 6 | 1 | 2 | 3 | 4 | 5 | 257-1017-ND | 10.08 | 7.75 | 4.96 | 3.96 | 2.76 | 67125350 |
| 4 | Transmit & Receive Transformer; Level One 300/301/305 Isolation for Digital Audio; Crystal CS8401/1/11/12 Transformer for Maxim 250/251; RS232 Isolation Receive Transformer for Crystal T1 Chips Transformer for T1 Transmit; Crystal 61574/35A Transmit Transformer for CS61574/35A, 75 ohms Isolation for Digital Audio, Shielded, Crystal CS8401/2/11/12 Receive Transformer for Rockwell 8069 Transmit Transformer for Rockwell 8069 Interface Transformer for Dallas 2187 Transmit Transformer for Level One LXT360/361, T1/E1 Digital Audio, shielded, 70-110 ohm, Crystal 8401, 8402, 8411 and 8412 | 700 μ H 225 μ H 2mH 700 μ H 1.5mH 1.5mH 225 μ H 1.2mH 1.2mH 60 μ H 1.5mH | 1 | — | 2 | 6 | — | 5 | 257-1018-ND | 8.61 | 5.78 | 3.47 | 2.89 | 2.46 | 67127370 |
| | | | 1 | — | 3 | 4 | — | 6 | 257-1020-ND | 8.61 | 5.78 | 3.47 | 2.89 | 2.46 | 67128990 |
| | | | 3 | 2 | 1 | 6 | 5 | 4 | 257-1021-ND | 8.20 | 5.50 | 3.30 | 2.93 | 2.61 | 67129080 |
| | | | 6 | — | 4 | 1 | 2 | 3 | 257-1022-ND | 8.61 | 5.78 | 3.47 | 2.89 | 2.46 | 67129300 |
| | | | 6 | — | 4 | 1 | 2 | 3 | 257-1023-ND | 8.67 | 6.67 | 4.27 | 3.42 | 2.38 | 67129310 |
| | | | 6 | 5 | 4 | 1 | 2 | 3 | 257-1024-ND | 8.03 | 6.18 | 3.95 | 3.16 | 2.20 | 67129320 |
| | | | 1 | — | 3 | 4 | — | 6 | 257-1025-ND | 8.61 | 5.78 | 3.47 | 2.89 | 2.46 | 67129600 |
| | | | 1 | 2 | 3 | 6 | — | 4 | 257-1027-ND | 8.61 | 5.78 | 3.47 | 2.89 | 2.46 | 67130380 |
| | | | 1 | 2 | 3 | 6 | 5 | 4 | 257-1028-ND | 11.24 | 8.64 | 5.53 | 4.43 | 3.28 | 67130850 |
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 257-1029-ND | 7.72 | 5.94 | 3.80 | 3.04 | 2.21 | 67131050 |
| | | | 4 | — | 6 | 1 | 2 | 3 | 257-1083-ND | 10.95 | 8.03 | 5.58 | 4.59 | 3.14 | 2.89 |
| 5 | Transformer "S" Interface for Metel 8930, National TP3420, PEMB2080, SGS Thomson 5420, and ISDN-S, 2:1 | 22mH | 1 | 2 | 3 | 4 | 5 | 6 | 257-1032-ND | 11.44 | 7.68 | 4.39 | 3.84 | 3.39 | 67128780 |
| 6 | Transformer for Motorola 145474, 145475, SGS5420 and SGS 5420 for ISDN-S, 1:1 | 22mH | 1 | 2 | 3 | 4 | 5 | 6 | 257-1033-ND | 11.44 | 7.68 | 4.39 | 3.84 | 3.39 | 67128920 |
| 7 | 1.3A Inductor, Buck for LM1575-LM2575 & LM1577-LM2577 1.3A Inductor, Buck for LM1575-LM2575 & LM1577-LM2577 3A Inductor, Buck for LM1575-LM2575 & LM1577-LM2577 | 220 μ H 150 μ H 220 μ H | 2 | — | 5 | — | — | — | 257-1036-ND | 11.77 | 9.06 | 5.80 | 4.64 | 3.37 | 67127020 |
| | | | 2 | — | 5 | — | — | — | 257-1038-ND | 11.89 | 9.15 | 5.86 | 4.68 | 3.41 | 67127060 |
| | | | 2 | — | 5 | — | — | — | 257-1039-ND | 12.16 | 9.35 | 5.99 | 4.79 | 3.48 | 67127070 |
| 8 | Transformer for National Semiconductor TP3410, ISDN U | 12mH 28.5mH | 7 | — | 6 | 1 | — | 12 | 257-1046-ND | 10.12 | 7.78 | 4.98 | 3.98 | 2.77 | 67128640 |
| | Transformer for Motorola 145472, ISDN "U" | 12mH 28.5mH | 7 | 6 | 5 | 1 | — | 12 | 257-1047-ND | 9.63 | 6.46 | 4.82 | 4.31 | 3.54 | 67128630 |
| 9 | Inductor DCR 0.09 ohms SMD, AC only Inductor DCR 0.08 ohms SMD, AC only Inductor DCR 0.03 ohms SMD, 3.8 Amps Inductor DCR 0.05 ohms SMD, 2.57 Amps Inductor DCR 0.09 ohms SMD, 1.77 Amps Inductor DCR 0.26 ohms SMD, 1.18 Amps Inductor DCR 0.45 ohms SMD, 0.8 Amps | 1000 μ H 1000 μ H 22 μ H 47 μ H 100 μ H 220 μ H 470 μ H | 1-4 | — | 5-8 | — | — | — | 257-1049-ND | 10.42 | 6.99 | 5.39 | 4.39 | 3.30 | 24500 |
| | | | 1-4 | — | 5-8 | — | — | — | 257-1050-ND | 10.42 | 6.99 | 5.39 | 4.39 | 3.30 | 24506 |
| | | | 1-4 | — | 5-8 | — | — | — | 257-1051-ND | 11.88 | 9.14 | 5.85 | 4.68 | 3.26 | 24514 |
| | | | 1-5 | — | 6-10 | — | — | — | 257-1052-ND | 10.53 | 7.07 | 5.46 | 4.46 | 3.39 | 24516 |
| | | | 1-5 | — | 6-10 | — | — | — | 257-1053-ND | 11.00 | 8.46 | 5.42 | 4.33 | 3.01 | 24518 |
| | | | 1-4 | — | 5-8 | — | — | — | 257-1054-ND | 12.04 | 9.27 | 5.93 | 4.74 | 3.30 | 24520 |
| | | | 1-4 | — | 5-8 | — | — | — | 257-1055-ND | 10.53 | 7.07 | 5.46 | 4.46 | 3.39 | 24522 |

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| Fig. | Description (applications and notes) | Inductance | Schematic Information | | | | | Digi-Key Part No. | Price Each | | | | | Schott Part No. | |
|------|---|--|-----------------------|--------------|----------------|-----------------|----------------|-------------------|--|---|--|--|--|--|--|
| | | | Primary Start | Primary CTap | Primary Finish | Secondary Start | Secondary CTap | Secondary Finish | 1 | 10 | 50 | 100 | 500 | | |
| 10 | Transformer for National Semiconductor TP3410, ISDN "U" | 12mH | 1 | — | 5 | 6 | 7 or 9 | 10 | 257-1079-ND* | 11.40 | 8.16 | 5.56 | 4.99 | 3.47 | 30591 |
| | Inductor DCR 0.15 ohms, 0.63A | 150µH | 1-4 | — | 5-8 | — | — | — | 257-1057-ND | 10.44 | 8.03 | 5.14 | 4.11 | 2.86 | 67144050 |
| | Inductor DCR 0.07 ohms, 0.95A | 68µH | 1,2,4 | — | 5-6 | — | — | — | 257-1059-ND | 13.45 | 9.96 | 5.89 | 4.72 | 3.42 | 67144070 |
| | Inductor DCR 0.045 ohms, 1.15A | 47µH | 1-4 | — | 5-8 | — | — | — | 257-1060-ND | 11.02 | 8.47 | 5.42 | 4.34 | 3.02 | 67144080 |
| | Inductor DCR 0.032 ohms, 1.37A | 33µH | 1-4 | — | 5-8 | — | — | — | 257-1061-ND | 6.84 | 5.39 | 3.24 | 2.27 | 1.77 | 67144090 |
| | Inductor DCR 0.04 ohms, 3.7A | 47µH | 1-4 | — | 5-8 | — | — | — | 257-1062-ND | 12.72 | 9.42 | 5.37 | 4.13 | 3.64 | 67144210 |
| | Transformer for Brooktree 8920 and 8952 HDSL | 3mH | 5 | — | 8 | 1 | — | 2 | 257-1064-ND | 11.91 | 7.99 | 5.37 | 4.60 | 3.68 | 67137860 |
| | Transformer for Brooktree 8920 and 8952 HDSL | 2mH | 1,3 | — | 2,4 | 5 | — | 8 | 257-1065-ND | 10.68 | 8.21 | 5.26 | 4.21 | 2.93 | 67141280 |
| 12 | Transformer DDS Level I LXT 400 | 200mH | 3 | — | 1 | 6 | 5 | 4 | 257-1066-ND | 10.84 | 8.33 | 5.33 | 4.26 | 2.97 | 67127340 |
| | Inductor DCR 0.20 ohms, 0.70A | 68µH | 1 | — | 6 | — | — | — | 257-1067-ND | 6.69 | 5.29 | 2.77 | 1.94 | 1.51 | 67143990 |
| | Inductor DCR 0.10 ohms, 0.80A | 47µH | 1 | — | 6 | — | — | — | 257-1068-ND | 6.69 | 5.29 | 2.77 | 1.94 | 1.51 | 67144000 |
| 13 | Inductor DCR 0.06 ohms, 1.30A | 22µH | 1 | — | 6 | — | — | — | 257-1069-ND | 6.69 | 5.29 | 2.77 | 1.94 | 1.51 | 67148350 |
| | Inductor DCR 0.05 ohms, 1.60A | 15µH | 1 | — | 6 | — | — | — | 257-1070-ND | 6.69 | 5.29 | 2.77 | 1.94 | 1.51 | 67148360 |
| | Inductor DCR 0.015 ohms, 4.0A | 15µH | 1-5 | — | 6-10 | — | — | — | 257-1071-ND | 6.99 | 5.45 | 3.12 | 2.16 | 1.71 | 67148400 |
| | DDS Transformer for Level One LXT441 | 40mH | 1 | 2 | 3 | 6 | 5 | 4 | 257-1084-ND | 11.18 | 9.35 | 5.52 | 4.61 | 3.02 | 29873 |
| 14 | Inductor DCR 0.300 ohms SMD, 0.45A | 150µH | 1 | — | 6 | — | — | — | 257-1072-ND | 12.08 | 8.95 | 5.10 | 3.92 | 2.51 | 67144340 |
| | Inductor DCR 0.150 ohms SMD, 0.63A | 150µH | 1-4 | — | 5-8 | — | — | — | 257-1073-ND | 12.08 | 8.95 | 5.10 | 3.92 | 2.51 | 67144430 |
| | Inductor DCR 166mΩ, SMD | 0Adc = 35.3µH 1.4Adc = 22.3µH | 1 | — | 2 | — | — | — | 257-1074-ND | 3.61 | 2.42 | 2.08 | 1.90 | 1.76 | 25544 |
| 15 | Inductor DCR 862mΩ, SMD | 0Adc = 672µH 0.72Adc = 287µH | 1 | — | 2 | — | — | — | 257-1075-ND | 5.72 | 3.84 | 3.36 | 3.15 | — | 25547 |
| | Inductor DCR 14mΩ, SMD | 0Adc = 1.10µH 3.4Adc = 0.76µH | 1 | — | 2 | — | — | — | 257-1076-ND | 3.29 | 2.21 | 1.79 | 1.59 | 1.23 | 25551 |
| 16 | Digital Audio, SMD:Crystal 8401/2/11/12 | 225µH | 1 | — | 4 | 5 | — | 8 | 257-1077-ND | 8.45 | 5.71 | 3.40 | 2.94 | 2.70 | 29398 |
| 17 | 3A Inductor, Buck for LM257x 1.3A Inductor, Buck for LM257x 1A Inductor, Buck for LM257x 0.95A Inductor, Buck for LM257x 0.62A Inductor, Buck for LM257x 0.42A Inductor, Buck for LM257x | 47µH 220µH 330µH 470µH 680µH 2200µH | 1 | — | 3 | 4 | — | 6 | 257-1094-ND NEW! 257-1095-ND NEW! 257-1096-ND NEW! 257-1097-ND NEW! 257-1098-ND NEW! 257-1099-ND NEW! | 11.78 11.78 11.78 11.78 11.78 11.78 | 9.06 9.06 9.06 9.06 9.06 9.06 | 5.80 5.80 5.80 5.80 5.80 5.80 | 4.64 4.64 4.64 4.64 4.64 4.64 | 3.37 3.37 3.37 3.37 3.37 3.37 | 67126980 67127020 67127030 67127040 67127050 67127130 |
| 18 | 3A Inductor, Buck for LM257x 3A Inductor, Buck for LM257x 2A Inductor, Buck for LM257x 3A Inductor, Buck for LM257x 1.3A Inductor, Buck for LM257x 0.9A Inductor, Buck for LM257x 0.62A Inductor, Buck for LM257x | 68µH 100µH 150µH 150µH 680µH 1000µH 1500µH | 1 | — | 3 | 4 | — | 6 | 257-1100-ND NEW! 257-1101-ND NEW! 257-1102-ND NEW! 257-1103-ND NEW! 257-1104-ND NEW! 257-1105-ND NEW! 257-1106-ND NEW! | 11.89 11.89 11.89 11.89 11.89 11.89 11.89 | 9.15 9.15 9.15 9.15 9.15 9.15 9.15 | 5.86 5.86 5.86 5.86 5.86 5.86 5.86 | 4.68 4.68 4.68 4.68 4.68 4.68 4.68 | 3.41 3.41 3.41 3.41 3.41 | 67126990 67127000 67127010 67127060 67127100 |
| 19 | 3A Inductor, Buck for LM257x 3A Inductor, Buck for LM257x 1.9A Inductor, Buck for LM257x | 220µH 330µH 470µH | 1 | — | 3 | 4 | — | 6 | 257-1077-ND NEW! 257-1078-ND NEW! 257-1099-ND NEW! | 12.16 12.16 12.16 | 9.35 9.35 9.35 | 5.99 5.99 5.99 | 4.79 4.79 4.79 | 3.48 3.48 3.48 | 67127070 67127080 67127090 |

* Multiple Output

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527

Audio Transformers

Data/Voice Coupling Transformers

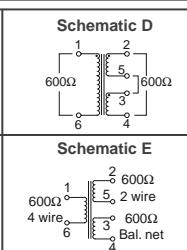
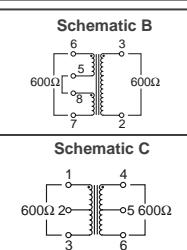
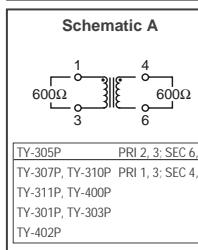
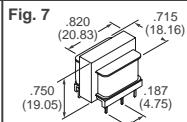
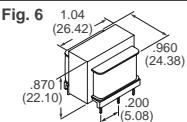
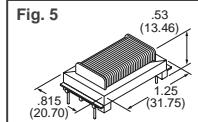
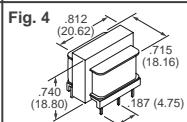
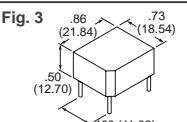
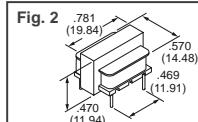
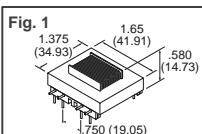
SPECIFICATIONS:

Designed to meet FCC Part 68.

Longitudinal Balance: (FCC68.310): 60dB min. 200-1000 HZ, 45 dB min. 1000-4000 HZ.

Dielectric Strength: (FCC 68.304): 1500V.

Freq. Range: Data/Voice = 300 - 3500 HZ, Data = 800 - 3500 HZ



TY-305P PRI 2, 3: SEC 6, 7

TY-307P, TY-310P PRI 1, 3: SEC 4, 6

TY-311P, TY-400P

TY-301P, TY-303P

TY-402P

| Fig. | Schematic | Pri. Impedance | Sec. Impedance | IDC Max | Insertion Loss | Digi-Key Part No. | Price Each | MagneTek Part No. |
|-------------------------------------|-----------|----------------|----------------|---------|----------------|-------------------|------------|-------------------|
| Data/Voice Coupling Transformers | | | | | | | | |
| 1 | A | 600 | 600 | 100 | 1.5 | 10619-ND | 10.94 | 7.14 |
| 1 | B | 600 Split | 600 | 75 | 1.5 | 10620-ND | 10.94 | 7.14 |
| 2 | A | 600 | 600 | 0 | 1.0 | 10621-ND | 6.41 | 4.18 |
| 3 | A | 600 | 600 | 0 | 1.0 | 10622-ND | 7.54 | 4.92 |
| 4 | A | 600 | 600 | 0 | 1.0 | 10623-ND | 5.56 | 3.63 |
| 4 | C | 600CT* | 600CT* | 0 | 1.0 | 10618-ND | 5.56 | 3.63 |
| 4 | A | 600 | 900 | 0 | 1.0 | 10615-ND | 5.56 | 3.63 |
| 4 | A | 4000 | 600 | 0 | 1.0 | 10617-ND | 5.56 | 3.63 |
| 7 | A | 600 | 600 | 90 | 1.75 | 10624-ND | 8.34 | 5.44 |
| 7 | C | 600CT* | 600CT* | 90 | 1.75 | 10625-ND | 8.34 | 5.44 |
| 5 | A | 600 | 600 | 90 | 1.75 | 10626-ND | 6.89 | 4.50 |
| 5 | D | 600 | 600 Split | 90 | 1.75 | 10627-ND | 6.89 | 4.50 |
| Data/Voice Dual Transformer Hybrids | | | | | | | | |
| 4 | E | 600 (4W) | 600/600 | 0 | 80 | 10614-ND | 5.56 | 3.63 |
| 6 | E | 600 (4W) | 600/600 | 0 | 65 | 10616-ND | 8.33 | 5.44 |

*CT = Center Tap

† Four-pin configuration

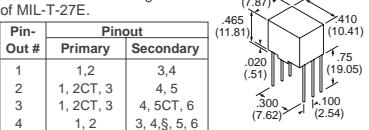
‡ Two required for conventional hybrid operation, the insertion loss does not include 3dB in hybrid balance network.

MIL-T-27E Audio Transformers

DESCRIPTION: The line of Red Spec audio transformers is designed and constructed to meet the rigid requirements of MIL-T-27E.

SPECIFICATIONS:
Freq. Response Ranges: 300 Hz to 150 kHz

TECHNICAL NOTES:
• Hi-Pot Test: 1,000 VRMS
• Working Voltage: 150 VDC



| Power Level in mW | Matching Impedance Pri. Sec. | DC Unbal. in Pri. Max(mA) | Pin-Out # | Price Each | | | MagneTek Part No. |
|-------------------|------------------------------|---------------------------|-----------|-------------------|----------|-------|-------------------|
| | | | | Digi-Key Part No. | 1 | 50 | |
| 10 | 20000 CT* | 1,000 CT* | 0.0 | 3 | 10628-ND | 21.29 | 13.90 |
| | 10,000 CT* | 2,000 CT* | 1.0 | 3 | 10632-ND | 21.21 | 13.85 |
| | 1,000 | 50 | 3.0 | 1 | 10635-ND | 17.25 | 11.26 |
| | 150 CT* | 12 | 10.0 | 2 | 10636-ND | 15.51 | 10.13 |
| | 7,500 CT* | 12 | 1.0 | 2 | 10637-ND | 18.39 | 12.00 |
| | 300 CT* | 600 | 7.0 | 2 | 10638-ND | 21.98 | 14.35 |
| | 900 CT* | 600 | 4.0 | 2 | 10640-ND | 19.12 | 12.47 |
| | 10,000 CT* | 10,000 CT* | 1.0 | 3 | 10642-ND | 16.93 | 11.05 |
| | 600 CT* | 600 CT* | 3.0 | 3 | 10643-ND | 18.64 | 12.17 |
| | 600 | 600 CT/150\$ | 3.0 | 4 | 10645-ND | 18.56 | 12.11 |
| | 600 | 600 | 3.0 | 1 | 10646-ND | 17.48 | 11.42 |
| Shield Only | | | | — | — | 2.76 | 1.80 |
| *CT = Center Tap | | | | — | — | 1.53 | SP-310 |

*CT = Center Tap \$ Split Secondary

Audio PC Mount Transformers

DESCRIPTION: Audio transformers are used in line matching, telephone coupling, pulse trigger and driver applications.

SPECIFICATIONS: • Freq. Response Ranges: 200 - 15,000Hz

Fig. 1

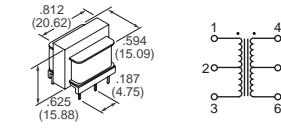
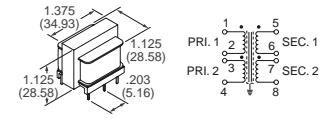


Fig. 2



| Fig. | Matching Impedance Pri. Sec. | DC Unbal. in Pri. Max (mA) | Digi-Key Part No. | Price Each | | | MagneTek Part No. |
|------|------------------------------|----------------------------|-------------------|------------|------|------|-------------------|
| | | | | 1 | 50 | 100 | |
| 1 | 10,000 CT* | 10,000 CT* | 4 Ma | 10609-ND | 3.89 | 2.54 | 2.16 |
| 1 | 10,000 CT* | 2,000 CT* | 4 Ma | 10610-ND | 3.89 | 2.54 | 2.16 |
| 1 | 15,000 CT* | 15,000 CT* | 4 Ma | 10611-ND | 3.89 | 2.54 | 2.16 |
| 1 | 600 CT* | 600 CT* | 15 Ma | 10612-ND | 3.89 | 2.54 | 2.16 |
| 2 | 600 CT/150\$ | 600 CT/150\$ | — | 10613-ND | 7.22 | 4.72 | 4.00 |

*CT = Center Tap \$ Split Winding

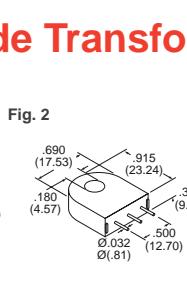
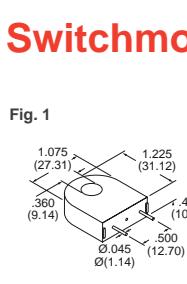
High Frequency Current Sense

DESCRIPTION:

TRIAD current sense transformers are used to detect the current passing through a conductor.

They are constructed of UL rated 130°C materials.

Freq. Range: 20 kHz- 200 kHz



Low Frequency Current Sense

DESCRIPTION:

Designed to monitor current in low freq. applications. Frequencies from 50 Hz to 400 Hz, current from .1 to 30 amperes.

TECHNICAL NOTES: • Turns ratio: Primary to sense 1:500. • Suggested burden resistor: 60 ohms. Hi-Pot: 2,500 volts.

| Primary DCR Max. pOhms | Sense DCR Max. Ohms | Typ. Output | Digi-Key Part No. | Price Each | | | MagneTek Part No. |
|------------------------|---------------------|-------------|-------------------|------------|------|------|-------------------|
| | | | | 1 | 50 | 100 | |
| 250 | 21 | 110 mV/Amp | 10515-ND | 2.89 | 1.89 | 1.60 | CSE187-L |



High Frequency Gate Drive

DESCRIPTION: TRIAD gate drive transformers are used to isolate the control circuitry from the line-connected switches such as with power supplies. The windings are interleaved for the lowest possible practical leakage inductance. Maximum leakage inductance: 2.5 μ H. Features operating frequencies up to 200 kHz.

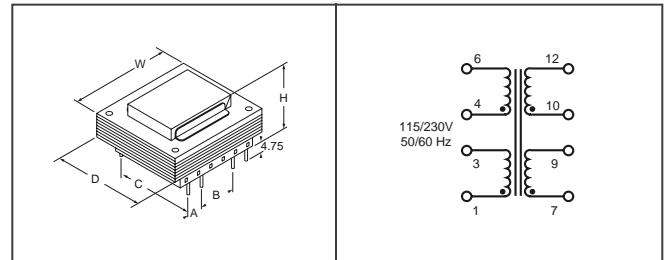
TECHNICAL NOTES: • Hi-Pot tested: 3,750 VRMS. • Pin-out: Drive = Pins 1, 2. Gate = Pins 3, 6 and Dual Gate = Pins 3, 4, 5, 6.

| Max. DCR Gate | Max. ET Product | Turns Ratio | Min. Inductance | Digi-Key Part No. | Price Each | | | MagneTek Part No. |
|---------------|-----------------|-------------|-----------------|-------------------|------------|-------|------|-------------------|
| | | | | | 1 | 50 | 100 | |
| .350 Ohms | 540 VpSec | 1:1 | .680 mH | 10552-ND | 15.56 | 10.15 | 8.61 | GDE25-1 |
| .650 Ohms | 540 VpSec | 1:1 | .680 mH | 10553-ND* | 15.56 | 10.15 | 8.61 | GDE25-2 |
| .350 Ohms | 840 VpSec | 1.5:1 | 1.50 mH | 10554-ND | 15.56 | 10.15 | 8.61 | GDE25-3 |
| .650 Ohms | 840 VpSec | 1.5:1 | 1.50 mH | 10555-ND* | 15.56 | 10.15 | 8.61 | GDE25-4 |
| .875 Ohms | 540 VpSec | 1.5:1 | .680 mH | 10556-ND | 15.56 | 10.15 | 8.61 | GDE25-5 |
| 1.75 Ohms | 540 VpSec | 1:1.5:1.5 | .680 mH | 10557-ND* | 15.56 | 10.15 | 8.61 | GDE25-6 |

* Dual Secondary Gate

10558-ND (GDE25-KIT) - 6-piece kit (one of each) \$88.89

- World Series dual bobbin construction transformers meet U.S. & international standards including CSA, IEC, VDE & UL requirements.
- Hi-Pot Test: 4,000 VRMS
- Primary: 115/230V, 50/60 Hz



| VA Size | Dimensions - Inch (mm) | | | | | Pin Dim. | Wt. Kg |
|---------|------------------------|---------------|----------------|--------------|--------------|---------------|-------------|
| | H | W | D | A | B | | |
| 2.5 | 1.125 (28.58) | 1.625 (41.28) | 1.3125 (33.34) | 200 (5.08) | .250 (6.35) | 1.000 (25.40) | .025 (.64) |
| 5.0 | 1.375 (34.93) | 1.625 (41.28) | 1.3125 (33.34) | 200 (5.08) | .400 (10.16) | 1.000 (25.40) | .025 (.64) |
| 10.0 | 1.375 (34.93) | 1.875 (47.63) | 1.5625 (39.69) | 200 (5.08) | .400 (10.16) | 1.140 (28.96) | .031 (.79) |
| 20.0 | 1.625 (41.28) | 2.25 (57.15) | 1.875 (47.63) | .400 (10.16) | .400 (10.16) | 1.460 (37.08) | .031 (.79) |
| 30.0 | 1.625 (39.69) | 2.625 (66.68) | 2.1875 (55.56) | .550 (13.97) | .275 (6.98) | 1.680 (42.67) | .045 (1.14) |
| 56.0 | 1.8125 (46.04) | 3.000 (76.20) | 2.500 (63.50) | .600 (15.24) | .300 (7.62) | 1.900 (48.26) | .045 (1.14) |
| | | | | | | | 1.70 (.77) |

| VA (Size) | Parallel VAC @ A | Series VCT* @ A | Digi-Key Part No. | Price Each | | | MagneTek Part No. |
|-----------|------------------|-----------------|-------------------|------------|-------|-------|-------------------|
| | | | | 1 | 50 | 100 | |
| 2.5 | 5 @ 0.5 | 10 @ 0.25 | 10473-ND | 9.62 | 6.51 | 5.70 | VPP10-250 |
| 5.0 | 5 @ 1.0 | 10 @ 0.5 | 10494-ND | 10.36 | 7.04 | 6.16 | VPP10-500 |
| 10.0 | 5 @ 2.0 | 10 @ 1.0 | 10466-ND | 11.60 | 7.76 | 6.78 | VPP10-1000 |
| 20.0 | 5 @ 4.0 | 10 @ 2.0 | 10480-ND | 14.11 | 9.35 | 8.18 | VPP10-2000 |
| 30.0 | 5 @ 6.0 | 10 @ 3.0 | 10487-ND | 16.22 | 11.08 | 9.69 | VPP10-3000 |
| 56.0 | 5 @ 11.2 | 10 @ 5.6 | 10501-ND | 19.84 | 12.30 | 10.44 | VPP10-5600 |
| 2.5 | 6.3 @ 0.4 | 12.6 @ 0.2 | 10474-ND | 9.62 | 6.51 | 5.70 | VPP12-200 |
| 5.0 | 6.3 @ 0.8 | 12.6 @ 0.4 | 10495-ND | 10.36 | 7.04 | 6.16 | VPP12-400 |
| 10.0 | 6.3 @ 1.6 | 12.6 @ 0.8 | 10467-ND | 11.60 | 7.76 | 6.78 | VPP12-800 |
| 20.0 | 6.3 @ 3.2 | 12.6 @ 1.6 | 10481-ND | 14.11 | 9.35 | 8.18 | VPP12-1600 |
| 30.0 | 6.3 @ 4.8 | 12.6 @ 2.4 | 10488-ND | 16.22 | 11.08 | 9.69 | VPP12-2400 |
| 56.0 | 6.3 @ 8.8 | 12.6 @ 4.4 | 10502-ND | 19.84 | 12.30 | 10.44 | VPP12-4400 |
| 2.5 | 8 @ 0.3 | 16 @ 0.15 | 10475-ND | 9.62 | 6.51 | 5.70 | VPP16-150 |
| 5.0 | 8 @ 0.62 | 16 @ 0.31 | 10496-ND | 10.36 | 7.04 | 6.16 | VPP16-310 |
| 10.0 | 8 @ 1.25 | 16 @ 0.62 | 10468-ND | 11.60 | 7.76 | 6.78 | VPP16-620 |
| 20.0 | 8 @ 2.5 | 16 @ 1.25 | 10482-ND | 14.11 | 9.35 | 8.18 | VPP16-1250 |
| 30.0 | 8 @ 3.8 | 16 @ 1.9 | 10489-ND | 16.22 | 11.08 | 9.69 | VPP16-1900 |
| 56.0 | 8 @ 7.0 | 16 @ 3.5 | 10503-ND | 19.84 | 12.30 | 10.44 | VPP16-3500 |
| 2.5 | 10 @ 0.24 | 20 @ 0.12 | 10476-ND | 9.62 | 6.51 | 5.70 | VPP20-120 |
| 5.0 | 10 @ 0.5 | 20 @ 0.25 | 10497-ND | 10.36 | 7.04 | 6.16 | VPP20-250 |
| 10.0 | 10 @ 1.0 | 20 @ 0.5 | 10469-ND | 11.60 | 7.76 | 6.78 | VPP20-500 |
| 20.0 | 10 @ 2.0 | 20 @ 1.0 | 10483-ND | 14.11 | 9.35 | 8.18 | VPP20-1000 |

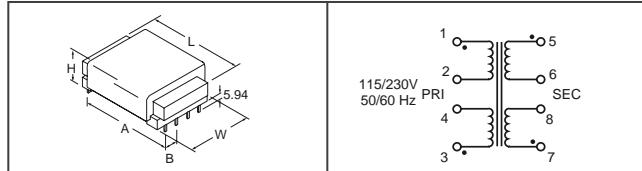
*CT = Center Tap

PC Mount - Flat Pack Power Transformers

- Designed to meet the needs of low clearance PC board and solid state power designs.
- Hi-Pot Test: 2,000 VRMS
- Primary: 115/230V, 50/60 Hz
- Class B UL Recognized, UL File E53148



| VA Size | Dimensions - Inch (mm) | | | | | Wt. Oz. (Gram) |
|---------|------------------------|---------------|---------------|---------------|---------------|----------------|
| | H | W | L | A | B | |
| 2.5 | 0.650 (16.51) | 1.562 (39.67) | 1.875 (47.63) | 1.600 (40.64) | 0.375 (9.52) | 5 (141.75) |
| 6.0 | 0.875 (22.23) | 1.562 (39.67) | 1.875 (47.63) | 1.600 (40.64) | 0.375 (9.52) | 7 (198.44) |
| 12.0 | 1.062 (26.97) | 2.000 (50.80) | 2.500 (63.50) | 2.000 (50.80) | 0.500 (12.70) | 11 (311.84) |



| VA (Size) | Parallel VAC @ A | Series VCT* @ A | Digi-Key Part No. | Price Each | | | MagneTek Part No. |
|-----------|------------------|-----------------|-------------------|------------|------|------|-------------------|
| | | | | 1 | 50 | 100 | |
| 2.5 | 5 @ 0.5 | 10 @ 0.25 | 10423-ND | 10.76 | 7.13 | 6.23 | FP10-250 |
| 6.0 | 6.3 @ 0.4 | 12.6 @ 0.2 | 10424-ND | 10.76 | 7.13 | 6.23 | FP12-200 |
| 10.0 | 8 @ 0.3 | 16 @ 0.15 | 10425-ND | 10.76 | 7.13 | 6.23 | FP16-150 |
| 20.0 | 10 @ 0.25 | 20 @ 0.125 | 10426-ND | 10.76 | 7.13 | 6.23 | FP20-125 |
| 40.0 | 12 @ 0.2 | 24 @ 0.1 | 10427-ND | 10.76 | 7.13 | 6.23 | FP24-100 |
| 80.0 | 15 @ 0.16 | 30 @ 0.08 | 10428-ND | 10.76 | 7.13 | 6.23 | FP30-85 |
| 160.0 | 17 @ 0.15 | 34 @ 0.075 | 10429-ND | 10.76 | 7.13 | 6.23 | FP34-75 |
| 320.0 | 28 @ 0.09 | 56 @ 0.045 | 10430-ND | 10.76 | 7.13 | 6.23 | FP56-45 |
| 6.0 | 5 @ 1.2 | 10 @ 0.6 | 10431-ND | 12.00 | 8.18 | 7.21 | FP10-600 |
| 12.0 | 6.3 @ 0.95 | 12.6 @ 0.475 | 10432-ND | 12.00 | 8.18 | 7.21 | FP12-475 |
| 24.0 | 8 @ 0.75 | 16 @ 0.375 | 10433-ND | 12.00 | 8.18 | 7.21 | FP16-375 |
| 48.0 | 10 @ 0.6 | 20 @ 0.3 | 10434-ND | 12.00 | 8.18 | 7.21 | FP20-300 |
| 96.0 | 12 @ 0.5 | 24 @ 0.25 | 10435-ND | 12.00 | 8.18 | 7.21 | FP24-250 |
| 192.0 | 15 @ 0.4 | 30 @ 0.2 | 10436-ND | 12.00 | 8.18 | 7.21 | FP30-200 |
| 384.0 | 17 @ 0.34 | 34 @ 0.17 | 10437-ND | 12.00 | 8.18 | 7.21 | FP34-170 |
| 768.0 | 28 @ 0.2 | 56 @ 0.1 | 10438-ND | 12.00 | 8.18 | 7.21 | FP56-100 |
| 12.0 | 5 @ 2.4 | 10 @ 1.2 | 10415-ND | 14.00 | 8.75 | 7.51 | FP10-1200 |
| 24.0 | 6.3 @ 1.9 | 12.6 @ 0.95 | 10416-ND | 14.00 | 8.75 | 7.51 | FP12-950 |
| 48.0 | 8 @ 1.5 | 16 @ 0.75 | 10417-ND | 14.00 | 8.75 | 7.51 | FP16-750 |
| 96.0 | 10 @ 1.2 | 20 @ 0.6 | 10418-ND | 14.00 | 8.75 | 7.51 | FP20-600 |
| 192.0 | 12 @ 1.0 | 24 @ 0.5 | 10419-ND | 14.00 | 8.75 | 7.51 | FP24-500 |
| 384.0 | 15 @ 0.8 | 30 @ 0.4 | 10420-ND | 14.00 | 8.75 | 7.51 | FP30-400 |
| 768.0 | 17 @ 0.68 | 34 @ 0.34 | 10421-ND | 14.00 | 8.75 | 7.51 | FP34-340 |
| 1536.0 | 28 @ 0.4 | 56 @ 0.2 | 10422-ND | 14.00 | 8.75 | 7.51 | FP56-200 |

*CT = Center Tap

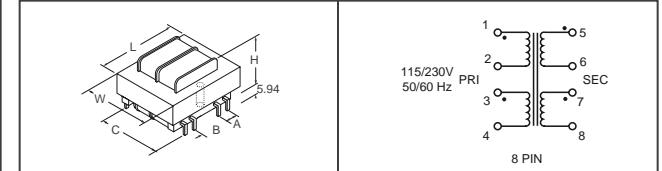
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PC Mount - Split Pack™ Power Transformers

- Split Pack split bobbin transformer for PC board applications.
- Hi-Pot Test: 2,500 VRMS
- Primary: 115/230V, 50/60 Hz
- Class B UL Recognized, UL File E53148



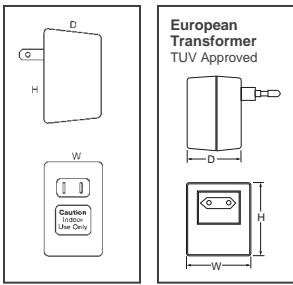
| VA Size | H | W | L | A | B | C | Wt. Lbs. (Kg) |
|---------|----------------|----------------|---------------|------------|-------------|---------------|---------------|
| | | | | | | | |
| 1.1 | 0.975 (23.81) | 1.125 (28.58) | 1.375 (34.93) | 250 (6.35) | 250 (6.35) | 1.20 (30.48) | .17 (.08) |
| 2.5 | 1.1875 (30.16) | 1.25 (28.58) | 1.375 (34.93) | 250 (6.35) | 250 (6.35) | 1.20 (30.48) | .25 (.11) |
| 6.0 | 3.125 (33.34) | 3.125 (33.34) | 1.625 (41.28) | 250 (6.35) | 350 (8.80) | 1.280 (32.51) | .44 (.20) |
| 12.0 | 1.4375 (36.51) | 1.5625 (39.69) | 1.875 (47.63) | .30 (7.62) | .40 (10.16) | 1.410 (35.81) | .70 (.32) |



| VA (Size) | Parallel VAC @ A | Series VCT* @ A | Digi-Key Part No. | Price Each | | | MagneTek Part No. |
|-----------|------------------|-----------------|-------------------|------------|------|------|-------------------|
| | | | | 1 | 50 | 100 | |
| 1.1 | 6.3 @ 0.18 | 12.6 @ 0.09 | 10439-ND | 8.71 | 5.51 | 4.73 | FS12-090 |
| 2.5 | 8 @ 0.14 | 16 @ 0.07 | 10440-ND | 8.71 | 5.51 | 4.73 | FS16-070 |
| 6.0 | 10 @ 0.11 | 20 @ 0.055 | 10441-ND | 8.71 | 5.51 | 4.73 | FS20-055 |
| 12.0 | 12 @ 0.09 | 24 @ 0.045 | 10442-ND | 8.71 | 5.51 | 4.73 | FS24-045 |
| 24.0 | 14 @ 0.08 | 28 @ 0.04 | 10443-ND | 8.71 | 5.51 | 4.73 | FS28-040 |
| 48.0 | 18 @ 0.06 | 36 @ 0.03 | 10444-ND | 8.71 | 5.51 | 4.73 | FS36-030 |
| 5.0 | 5 @ 0.5 | 10 @ 0.25 | 10445-ND | 9.00 | 5.63 | 4.83 | FS10-250 |
| 10.0 | 6.3 @ 0.4 | 12.6 @ 0.2 | 10446-ND | 9.00 | 5.63 | 4.83 | FS12-200 |
| 20.0 | 8 @ 0.3 | 16 @ 0.15 | 10447-ND | 9.00 | 5.63 | 4.83 | FS16-150 |
| 40.0 | 10 @ 0.24 | 20 @ 0.12 | 10448-ND | 9.00 | 5.63 | 4.83 | FS20-120 |
| 80.0 | 12 @ 0.2 | 24 @ 0.1 | 10449-ND | 9.00 | 5.63 | 4.83 | FS24-100 |
| 160.0 | 14 @ 0.17 | 28 @ 0.085 | 10450-ND | 9.00 | 5.63 | 4.83 | FS28-85 |
| 320.0 | 18 @ 0.13 | 36 @ 0.065 | 10451-ND | 9.00 | 5.63 | 4.83 | FS36-65 |
| 5.0 | 5 @ 1.2 | 10 @ 0.6 | 10452-ND | 9.60 | 6.08 | 5.22 | FS10-600 |
| 10.0 | 6.3 @ 1.0 | 12.6 @ 0.5 | 10453-ND | 9.60 | 6.08 | 5.22 | FS12-500 |
| 20.0 | 8 @ 0.8 | 16 @ 0.4 | 10454-ND | 9.60 | 6.08 | 5.22 | FS16-400 |
| 40.0 | 10 @ 0.6 | 20 @ 0.3 | 10455-ND | 9.60 | 6.08 | 5.22 | FS20-300 |
| 80.0 | 12 @ 0.5 | 24 @ 0.25 | 10456-ND | 9.60 | 6.08 | 5.22 | FS24-250 |
| 160.0 | 14 @ 0.4 | 28 @ 0.2 | 10457-ND | 9.60 | 6.08 | 5.22 | FS28-200 |
| 320.0 | 18 @ 0.34 | 36 @ 0.17 | 10458-ND | 9.60 | 6.08 | 5.22 | FS36-170 |
| 5.0 | 5 @ 2.4 | 10 @ 1.2 | 10459-ND | 11.00 | 6.93 | 5.95 | FS10-1200 |
| 10.0 | 6.3 @ 2.0 | 12.6 @ 1.0 | 10460-ND | 11.00 | 6.93 | 5.95 | FS12-1000 |
| 20.0 | 8 @ 1.6 | 16 @ 0.8 | 10461-ND | 11.00 | 6.93 | 5.95 | FS16-800 |
| 40.0 | 10 @ 1.2 | 20 @ 0.6 | 10462-ND | 11.00 | 6.93 | 5.95 | FS20-600 |
| 80.0 | 12 @ 1.0 | 24 @ 0.5 | 10463-ND | 11.00 | 6.93 | 5 | |

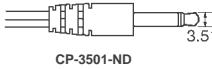
Wall Transformers

• Cord Lengths are all 6 feet (1.83 meters) unless otherwise noted. • All transformers are UL listed and most are also CSA approved.



P-1 (3.5mm Male)

Tip is Positive, Sleeve is Negative



3.51

P-5 (2.1mm Female)

2.11H
-11.99-
CP-004A-ND



5.51

Polarization

P-6 (2.5mm Female)

2.49H
-11.99-
CP-004B-ND



5.51

P-7 (1.3mm Female)

1.3H
-11.99-
3.5



Polarization

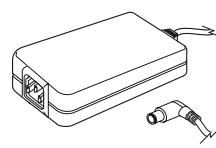
Switching Desk-Top Power Supply

Specifications:

- AC Input Voltage Range: 90 VAC to 264 VAC Universal
- AC Input Frequency: 47 Hz to 63 Hz
- Maximum In-rush Current: 26 A max @ 115 VAC, 50 A max @ 230 VAC at 25°C ambient cold start
- Minimum Load Current: 0A
- Output Ripple and Noise: 5V = 50 mVP-P, 12V = 120mVPP, 24V = 240mVPP
- Operating Temperature: 0°C to 40°C

Safety Requirements: (1) UL 1950, (2) CSA 22.2, No. 950, (3) CSA 22.2, No. 234 LEVEL 3, (4) IEC 950 (5) TUV/CS, (EN60950).

EMI Requirement: FCC class "B" rules. VDE 243/1991 class "B" rules



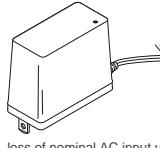
Switching Wall-Mount Power Supply

Specifications:

- AC Input Voltage Range: 100 VAC to 125 VAC Universal
- AC Input Frequency: 50 Hz to 60 Hz
- Switching Frequency: 65KHz
- Protection Type: Short circuit protection; continuous, automatic recovery. Over voltage protection
- Hold up time: 16ms after loss of nominal AC input under full load condition
- Operating Temp: -10°C to 40°C

Safety Requirements: (1) UL 1950, 1310 (2) CSA 22.2 (3) T-Mark technical standard - file no. 91-54878 (4) TUV, (EN60950) (5) FCC Class B Part 15 (6) Comply with CE Directives.

Output: No Minimum Load

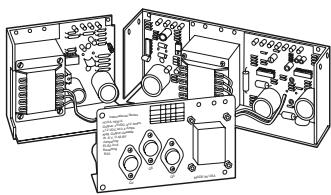


| Ratings | | | Dimensions (mm) H x W x D | Cord Plug | Digi-Key Part No. | Price Each | | | | CUI/Stack Part No. |
|---|------|------|------------------------------|--------------|----------------------|------------|-------|-------|-------|-----------------------|
| Volt. | mA | Reg. | | | | 1 | 10 | 50 | 100 | |
| US/Canada Transformer 110VAC/60Hz Input | | | | | | | | | | |
| 5VDC | 300 | 5% | 60.45 x 50.80 x 41.91 | P-6 | T309-ND | 10.00 | 8.00 | 7.00 | 6.64 | DPR050030-P6 |
| 5VDC | 1000 | 5% | 85.09 x 68.07 x 55.88 | P-1 | T310-ND* | 27.80 | 22.24 | 19.46 | 18.46 | DTR05100-P1 |
| 5VDC | 1500 | 5% | 119.89 x 77.98 x 62.99 | P-5 | T311-ND* | 51.98 | 41.58 | 36.39 | 34.52 | DTR05150-P5 |
| 5.5VDC | 500 | No | 60.45 x 50.80 x 37.08 | P-1 | T301-ND | 9.75 | 7.80 | 6.83 | 6.48 | DPD05050-P1 |
| 6VDC | 200 | No | 54.61 x 42.42 x 37.08 | P-1 | T305-ND | 5.65 | 4.52 | 3.96 | 3.76 | DPD06020-P1-SZ |
| 6VDC | 500 | No | 58.93 x 50.04 x 41.40 | P-1 | T307-ND | 6.25 | 5.00 | 4.38 | 4.15 | DPD06050-P1-SZ |
| 9VDC | 100 | No | 54.61 x 42.42 x 37.08 | P-1 | T406-ND | 5.40 | 4.32 | 3.78 | 3.59 | DPD09010-P1-SZ |
| 9VDC | 200 | No | 55.63 x 42.93 x 37.59 | P-1 | T401-ND | 5.18 | 4.14 | 3.63 | 3.44 | DPD09020-P1 |
| 9VDC | 200 | No | 55.63 x 42.93 x 37.59 | P-5 | T402-ND | 5.30 | 4.24 | 3.71 | 3.52 | DPD09020-P5 |
| 9VDC | 300 | No | 54.61 x 42.42 x 37.08 | P-1 | T407-ND | 5.68 | 4.54 | 3.98 | 3.77 | DPD09030-P1-SZ |
| 9VDC | 500 | No | 60.45 x 50.80 x 37.08 | P-1 | T403-ND | 5.78 | 4.62 | 4.05 | 3.84 | DPD09050-P1 |
| 9VDC | 500 | No | 60.45 x 50.80 x 37.08 | P-5 | T405-ND | 5.78 | 4.62 | 4.05 | 3.84 | DPD09050-P5 |
| 9VDC | 800 | 5% | 60.45 x 60.45 x 48.51 | P-5 | T410-ND | 15.43 | 12.34 | 10.80 | 10.25 | DPR09080-P5 |
| 9VDC | 1000 | No | 60.45 x 60.45 x 48.51 | P-1 | T404-ND | 11.90 | 9.52 | 8.33 | 7.91 | DPD09100-P1 |
| 12VDC | 50 | No | 54.61 x 42.42 x 37.08 | P-1 | T508-ND | 5.40 | 4.32 | 3.78 | 3.59 | DPD12005-P1-SZ |
| 12VDC | 200 | No | 54.61 x 42.42 x 37.08 | P-1 | T509-ND | 5.50 | 4.40 | 3.85 | 3.66 | DPD12020-P1-SZ |
| 12VDC | 300 | No | 60.45 x 50.80 x 37.08 | P-1 | T501-ND | 5.75 | 4.60 | 4.03 | 3.82 | DPD12030-P1 |
| 12VDC | 300 | No | 60.45 x 50.80 x 37.08 | P-5 | T505-ND | 5.75 | 4.60 | 4.03 | 3.68 | DPD12030-P5 |
| 12VDC | 500 | No | 60.45 x 50.80 x 37.08 | P-1 | T502-ND | 6.55 | 5.24 | 4.59 | 4.35 | DPD12050-P1 |
| 12VDC | 500 | No | 60.45 x 50.80 x 37.08 | P-5 | T506-ND | 6.55 | 5.24 | 4.59 | 4.35 | DPD12050-P5 |
| 12VDC | 800 | No | 60.45 x 60.45 x 48.51 | P-1 | T503-ND | 6.95 | 5.56 | 4.87 | 4.62 | DPD12080-P1 |
| 12VDC | 800 | No | 60.45 x 60.45 x 48.51 | P-5 | T507-ND | 6.95 | 5.56 | 4.87 | 4.62 | DPD12080-P5 |
| 24VDC | 400 | No | 60.45 x 60.45 x 48.51 | P-1 | T521-ND | 9.88 | 7.90 | 6.92 | 6.56 | DPD24040-P1 |
| 24VDC | 400 | No | 60.45 x 60.45 x 48.51 | P-6 | T520-ND | 9.88 | 7.90 | 6.92 | 6.56 | DPD24040-P6 |
| 9VAC | 100 | No | 54.61 x 42.42 x 37.08 | S/T | T701-ND | 5.28 | 4.22 | 3.70 | 3.51 | DPA09010-S/T-SZ |
| 9VAC | 600 | No | 58.93 x 50.55 x 40.89 | S/T | T702-ND | 6.70 | 5.36 | 4.69 | 4.45 | DPA09060-S/T-SZ |
| 12VAC | 300 | No | 54.61 x 42.42 x 37.08 | S/T | T601-ND† | 5.50 | 4.40 | 3.85 | 3.66 | DPA12030-S/T-SZ |
| 12VAC | 400 | No | 54.61 x 42.42 x 37.08 | S/T | T611-ND† | 6.98 | 5.58 | 4.89 | 4.64 | DPA12040-S/T-SZ |
| 12VAC | 500 | No | 58.93 x 50.55 x 40.89 | S/T | T612-ND† | 7.20 | 5.76 | 5.04 | 4.79 | DPA12050-S/T-SZ |
| 12VAC | 600 | No | 60.45 x 50.80 x 37.08 | S/T | T602-ND† | 7.55 | 6.04 | 5.29 | 5.02 | DPA12060-S/T |
| 12VAC | 1000 | No | 70.10 x 50.04 x 39.12 | S/T | T603-ND† | 8.30 | 6.64 | 5.81 | 5.52 | DPA120100-S/T |
| 12VAC | 1500 | No | 81.28 x 56.13 x 48.01 | S/T | T613-ND† | 13.38 | 10.70 | 9.37 | 8.89 | DPA120150-S/T |
| 12VAC | 2000 | No | 83.82 x 62.99 x 54.86 | S/T | T604-ND† | 14.28 | 11.42 | 10.00 | 9.48 | DPA120200-S/T |
| 12VAC | 3300 | No | 88.90 x 68.07 x 54.86 | S/T | T605-ND\$ | 23.60 | 18.88 | 16.52 | 15.68 | DPA12033C-S/T |
| 12VAC | 200 | No | 54.61 x 42.42 x 37.08 | P-1 | T606-ND | 5.40 | 4.32 | 3.78 | 3.59 | DPA120200-P1-SZ |
| 12VAC | 600 | No | 60.45 x 50.80 x 37.08 | P-1 | T607-ND | 5.88 | 4.70 | 4.12 | 3.91 | DPA120600-P1 |
| 12VAC | 1000 | No | 69.85 x 50.04 x 39.12 | P-1 | T608-ND | 6.35 | 5.08 | 4.45 | 4.22 | DPA120100-P1 |
| 12VAC | 2000 | No | 69.82 x 62.99 x 54.86 | P-1 | T609-ND | 14.28 | 11.42 | 10.00 | 9.48 | DPA120200-P1 |
| 24VAC | 1670 | No | 88.90 x 68.07 x 54.86 | S/T | T620-ND\$ | 23.60 | 18.88 | 16.52 | 15.68 | DPA240167C-S/T |
| European Transformer 220VAC/50Hz Input | | | | | | | | | | |
| 9VDC | 500 | No | 58.93 x 50.55 x 40.89 | P-5 | T408-ND | 12.00 | 9.60 | 8.40 | 7.97 | DPD09050E-P5 |
| 12VDC | 800 | No | 81.03 x 55.88 x 48.01 | P-5 | T511-ND | 15.00 | 12.00 | 10.50 | 9.96 | DPD12080E-P5 |
| Switching Desk-Top Power Supply | | | | | | | | | | |
| 5VDC | 4000 | 5% | 112.01 x 59.94 x 36.07 | P-5(R) | T801-ND‡ | 74.66 | 65.33 | 56.00 | 49.65 | DTS050400U/AC1-P5 |
| 12VDC | 2500 | 5% | 112.01 x 59.94 x 36.07 | P-5(R) | T802-ND‡ | 74.66 | 65.33 | 56.00 | 49.65 | DTS120250U/AC1-P5 |
| 24VDC | 1250 | 5% | 112.01 x 59.94 x 36.07 | P-5(R) | T803-ND‡ | 74.66 | 65.33 | 56.00 | 49.65 | DTS240125U/AC1-P5 |
| Switching Wall-Mount Power Supply | | | | | | | | | | |
| 9V | 1500 | 5% | 72.90 x 33.78 x 50.80 | P-5 | T903-ND | 36.30 | 29.04 | 25.41 | 24.11 | DPS090150-P5-SW |
| EI-28 Core Size Adapters | | | | | | | | | | |
| 3VDC | 400 | No | 55.88 x 38.10 x 33.78 | P-7 | T201-ND | 6.54 | 5.45 | 3.82 | 3.62 | DPD030040-P7-DK |
| 4.5VDC | 300 | No | 55.88 x 38.10 x 33.78 | P-7 | T202-ND | 6.30 | 5.25 | 3.68 | 3.49 | DPD045030-P7-DK |
| 6VDC | 250 | No | 55.88 x 38.10 x 33.78 | P-7 | T203-ND | 6.75 | 5.63 | 3.94 | 3.74 | DPD060205-P7-DK |
| 9VDC | 150 | No | 55.88 x 38.10 x 33.78 | P-7 | T205-ND | 6.75 | 5.63 | 3.94 | 3.74 | DPD090015-P7-DK |
| 12VDC | 100 | No | 55.88 x 38.10 x 33.78 | P-7 | T206-ND | 6.30 | 5.25 | 3.68 | 3.49 | DPD120010-P7-DK |

• Table Top Style. † "S/T" = Stripped/Tinned. ‡ AC cord included. § Center Tapped.

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Features:

- Worldwide AC input Capabilities
- Meets domestic and foreign safety standards: UL, CSA, IEC, VDE, BPO, ECMA, CEE
- Low output ripple
- 2 hour burn-in
- Made in U.S.A.

Overtvoltage Protection Options:

Optional overvoltage protection modules are offered, each is user adjustable from 6.4V to 34V. Note: Outputs with factory built-in OVP are indicated in the Voltage/Current Rating Chart for each model.

General Specifications:

- AC Input: 100/120/220/240 VAC +10%, -13%. 47-63 Hz. Tolerance for 230 VAC operation is +15%, -10%. Factory wired for 120V operation
- DC Output: Adjustment range $\pm 5\%$ minimum. Voltage non-adjustable on "3 terminal regulator" outputs
- Line Regulation: $\pm 0.05\%$ for a 10% line change. Exceptions: $\pm 0.01\%$ for F, G case models, $\pm 0.5\%$ for all other outputs using "3 terminal regulators"
- Load Regulation: $\pm 0.05\%$ for a 50% load change. Exceptions: $\pm 0.02\%$ for F, G case models, $\pm 0.5\%$ for all other outputs using "3 terminal regulators"
- Output Ripple: 5V through 15V models: 0.3 mV PK-PK maximum. (3.0 mV PK-PK maximum for F, G case models), 24V through 250V models: 3.0 mV PK-PK plus 0.2% of output voltage, maximum. All "3 terminal regulator" outputs: 0.2% PK-PK maximum
- Overtvoltage Protection: Provided on 5V outputs where indicated. Set at 6.2V $\pm 0.4\%$. Other outputs use optional overvoltage protectors OVP12 and OVP24.
- Operating Temperature: 0°C to 50°C full rated, derated linearly to 40% at 70°C.
- Efficiency: 5V outputs — 45%, 12V and 15V outputs — 55%, 24V through 250V outputs — 60%
- Master/Slave Operation: Provided on F, G models only. For parallel operation of up to 6 units.

Safety Specifications:

All models exceed the following safety standards — Leakage Current Line to Ground (max.): 0.05 mA • Dielectric Withstand Voltage (min.): Input to Ground — 3750VRMS, Input to Outputs — 3750VRMS, Outputs to Ground — 500VDC • 2 year warranty

Overvoltage Protection

| Voltage Adjustment Range: 6.4 - 33VDC | | |
|---------------------------------------|--------------|------------|
| Maximum Current Rating | | |
| Model | Intermittent | Continuous |
| OVP-12 | 12.0A | 8.0A |
| OVP-24 | 30.0A | 20.0A |

| Dimensions — In. (mm) | Digi-Key Part No. | Price Each | Power-One Part No. |
|--|-------------------|------------|--------------------|
| Height x Width x Thickness | 1 | 10 | 25 |
| 1.50 x 1.55 x 0.56 (38.10 x 39.37 x 14.22) | 179-2057-ND | 9.73 | 9.44 |
| 2.00 x 2.75 x 0.77 (50.80 x 69.85 x 19.56) | 179-2058-ND | 16.20 | 15.71 |
| | | 15.39 | OVP-24 |

International Series Single Output

| Voltage/ Current | Case Size | Digi-Key Part No. | Price Each | | | Power-One Part No. |
|------------------|-----------|-------------------|------------|--------|--------|--------------------|
| | | | 1 | 10 | 25 | |
| 5V @ 1.5A* | B | 179-2061-ND | 34.66 | 33.63 | 32.92 | 31.19 |
| 5V @ 3A†* | B | 179-2035-ND | 36.56 | 35.46 | 34.73 | 32.89 |
| 5V @ 6A†* | C | 179-2040-ND | 57.42 | 55.70 | 54.86 | 51.68 |
| 5V @ 9A†* | N | 179-2056-ND | 78.32 | 75.97 | 74.40 | 70.50 |
| 5V @ 12A†* | D | 179-2046-ND | 88.77 | 86.11 | 84.34 | 79.89 |
| 5V @ 18A†* | E | 179-2051-ND | 131.00 | 127.07 | 124.45 | 117.89 |
| 5V @ 25A†* | F | 179-2026-ND | 184.51 | 178.97 | 175.29 | 166.06 |
| 12V @ 0.9A** | B | 179-2027-ND | 32.13 | 31.16 | 30.51 | 28.90 |
| 12V @ 1.7A† | B | 179-2029-ND | 34.43 | 33.40 | 32.71 | 30.98 |
| 12V @ 3.4A† | C | 179-2036-ND | 52.20 | 50.63 | 49.59 | 46.97 |
| 12V @ 5.1A† | N | 179-2052-ND | 73.10 | 70.90 | 69.45 | 65.78 |
| 12V @ 6.8A† | D | 179-2041-ND | 83.55 | 81.04 | 79.37 | 75.20 |
| 12V @ 10.2A† | E | 179-2047-ND | 114.90 | 111.45 | 109.15 | 103.40 |
| 12V @ 16A†** | F | 179-2024-ND | 184.51 | 178.97 | 175.29 | 166.06 |
| 15V @ 1.5A† | B | 179-2030-ND | 35.64 | 34.58 | 33.86 | 32.07 |
| 15V @ 3A† | C | 179-2037-ND | 52.20 | 50.63 | 49.59 | 46.97 |
| 15V @ 4.5A† | N | 179-2053-ND | 73.10 | 70.90 | 69.45 | 65.78 |
| 15V @ 6A† | D | 179-2042-ND | 83.55 | 81.04 | 79.37 | 75.20 |
| 15V @ 9A† | E | 179-2048-ND | 114.90 | 111.45 | 109.15 | 103.40 |
| 24V @ 0.5A** | B | 179-2028-ND | 34.66 | 33.62 | 32.92 | 31.19 |
| 24V @ 1.2A† | B | 179-2032-ND | 36.35 | 35.26 | 34.53 | 32.70 |
| 24V @ 2.4A† | C | 179-2038-ND | 52.20 | 50.63 | 49.59 | 46.97 |
| 24V @ 3.6A† | N | 179-2054-ND | 73.10 | 70.90 | 69.45 | 65.78 |
| 24V @ 4.8A† | D | 179-2043-ND | 83.55 | 81.04 | 79.37 | 75.20 |
| 24V @ 7.2A† | E | 179-2049-ND | 114.90 | 111.45 | 109.15 | 103.40 |
| 24V @ 12A†** | F | 179-2025-ND | 184.51 | 178.97 | 175.29 | 166.06 |
| 28V @ 1A† | B | 179-2033-ND | 36.35 | 35.26 | 34.53 | 32.70 |
| 28V @ 2A† | C | 179-2039-ND | 52.20 | 50.63 | 49.59 | 46.97 |
| 28V @ 3A† | N | 179-2055-ND | 73.10 | 70.90 | 69.45 | 65.78 |
| 28V @ 4A† | D | 179-2044-ND | 83.55 | 81.04 | 79.37 | 75.20 |
| 48V @ 0.5A | B | 179-2034-ND | 41.83 | 40.58 | 39.73 | 37.65 |
| 48V @ 3A† | D | 179-2045-ND | 88.77 | 86.11 | 84.34 | 79.89 |
| 48V @ 4A† | E | 179-2050-ND | 125.35 | 121.59 | 119.08 | 112.81 |
| 175-210V @ 0.12A | B | 179-2031-ND | 46.97 | 45.55 | 44.61 | 43.29 |

* Overtvoltage protection provided. Set at 6.2V $\pm 0.4\%$. ** Adjustable outputs: F15-15-A; 12-15V, F24-12-A; 24-28V, HA24-0.5-A; 24-28V

† Remote sense provided

Case Size

| Case | Overall Size — In. (mm) | Weight |
|--------|---|----------|
| BB | 7.00 x 4.87 x 2.95 (177.80 x 123.70 x 74.93) | 4.4 Lbs |
| BAA | 10.25 x 4.00 x 2.95 (260.35 x 101.60 x 74.93) | 5 Lbs |
| C | 5.62 x 4.87 x 2.95 (142.75 x 123.70 x 74.93) | 4.25 Lbs |
| CC | 9.38 x 4.87 x 3.28 (238.25 x 123.70 x 81.31) | 7 Lbs |
| N | 7.00 x 4.87 x 3.20 (177.80 x 123.70 x 81.28) | 6 Lbs |
| CP131 | 11.00 x 4.87 x 3.20 (279.40 x 123.70 x 81.28) | 9 Lbs |
| NRG275 | 9.00 x 5.00 x 2.50 (228.60 x 127.00 x 63.50) | 3 Lbs |

International Series Dual Output

| Output #1 | Output #2 | Case Size | Digi-Key Part No. | Price Each | Power-One Part No. | |
|--------------------------------|---|-----------|-------------------|------------|--------------------|--------|
| | | | 1 | 10 | 25 | 50 |
| +12V @ 0.4A\$ | -12V @ 0.4A\$ | B | 179-2065-ND | 38.61 | 37.46 | 36.68 |
| +15 @ 0.4A\$ | -15V @ 0.4A\$ | B | 179-2066-ND | 38.61 | 37.46 | 36.76 |
| +12V @ 1A or +15V @ 0.8A† | -12V @ 1A or -15V @ 0.8A or -5V @ 0.4A† | AA | 179-2062-ND | 44.88 | 43.53 | 42.64 |
| +12V @ 1.7A or +15V @ 1.5A† | -12V @ 1.7A or -15V @ 1.5A or -5V @ 0.7A† | BB | 179-2068-ND | 57.42 | 55.70 | 54.86 |
| +12V @ 3.4A or +15V @ 3A† | -12V @ 3.4A or -15V @ 3A† | CC | 179-2073-ND | 91.91 | 89.15 | 87.63 |
| +12V or 15V @ 5A† | (-)12V or 15V @ 5A† | E | 179-2078-ND | 135.80 | 131.72 | 129.01 |
| +18-20V @ 0.4A or +24V @ 0.6A | (-)18-20V @ 0.4A or -24V @ 0.6A | AA | 179-2063-ND | 48.46 | 47.00 | 46.04 |
| +18-20V @ 0.9A or +24V @ 1.2A | (-)18-20V @ 0.9A or -24V @ 1.2A | BB | 179-2069-ND | 57.42 | 55.70 | 54.86 |
| +18-20V @ 1.8A or +24V @ 2.4A† | (-)18-20V @ 1.8A or -24V @ 2.4A† | CC | 179-2074-ND | 91.91 | 89.15 | 87.63 |
| 5V @ 2A*x | 9-15V @ 0.5A | AA | 179-2064-ND | 52.20 | 50.63 | 49.59 |
| 5V @ 3A*x† | 12-15V @ 1.25A† | BB | 179-2070-ND | 62.65 | 60.77 | 59.51 |
| 5V @ 6A*x† | 12-15V @ 2.5A† | CC | 179-2075-ND | 99.22 | 96.24 | 94.26 |
| +5V @ 2A* | +12V @ 4A | N | 179-2060-ND | 91.91 | 89.14 | 87.31 |

* Overtvoltage protection provided. Set at 6.2V $\pm 0.4\%$. † Remote sense provided. x Isolated outputs, can be referenced as + or -. § Non-adjustable 3 terminal regulator.

International Series Triple Output

| Output #1 | Output #2 | Output #3 | Case Size | Digi-Key Part No. | Price Each | Power-One Part No. | |
|-------------|-----------------------------|---|-----------|-------------------|------------|--------------------|--------|
| | | | | 1 | 10 | 25 | 50 |
| 5V @ 2A*x | +12 to 15V @ 0.4A | (-)12 to 15V @ 0.4A or -5V @ 0.4A | AA | 179-2079-ND | 57.42 | 55.70 | 54.55 |
| 5V @ 3A*x† | +12V @ 1A or +15V @ 0.8A† | (-)12 @ 1A or -15V @ 0.8A or -5V @ 0.4A† | BAA | 179-2067-ND | 79.37 | 76.99 | 75.41 |
| +5V @ 6A*x† | +12 to 15V @ 1.0A | (-)12 to 15V @ 1A or -5V @ 0.4A | D | 179-2071-ND | 94.00 | 91.18 | 89.30 |
| 5V @ 6A*x† | +12V @ 1.7A or +15V @ 1.5A† | -12V @ 1.7A or -15V @ 1.5A or -5V @ 0.7A† | CBB | 179-2072-ND | 109.67 | 106.38 | 104.17 |
| 5V @ 8A*x† | +12V @ 1.7A or +15V @ 1.5A† | -12V @ 1.7A or -15V @ 1.5A or -5V @ 0.7A† | 131 | 179-2059-ND | 125.35 | 121.59 | 119.08 |
| 5V @ 12A*x† | +12V @ 1.7A or +15V @ 1.5A† | -12V @ 1.7A or -15V @ 1.5A or -5V @ 0.7A† | DBB | 179-2076-ND | 141.02 | 136.79 | 133.97 |
| 5V @ 12A*x† | +12V @ 3.4A or +15V @ 3A† | -12V @ 3.4A or -15V @ 3A† | DCC | 179-2077-ND | 161.92 | 157.06 | 153.82 |

* Overtvoltage protection provided. Set at 6.2V $\pm 0.4\%$. † Remote sense provided. x Isolated outputs, can be referenced as + or -

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DC-DC Converters Single, Dual and Triple Output

9274B-ND Power One DC-DC Reference Guide.....\$1.95

General Specifications

| Fig. | Output Noise* | Load Reg (%) | Line Reg. (%) | Cross Reg. (%) | % Max Efficiency | Isolation Voltage | Temperature Range (case) |
|----------------------|---------------|--------------|---------------|----------------|------------------|-------------------|--------------------------|
| <i>Single Output</i> | | | | | | | |
| 12 | 70 mV | +8, -5 | ±1.2 | N/A | 75 | 700V | -25°C to +85°C |
| 2 | 50 mV | ±0.4 | ±0.8 | N/A | 83 | 700V | -40°C to +85°C |
| 1 | 75 mV | ±0.7 | ±0.2 | N/A | 77 | 700V | -40°C to +85°C |
| 3 | 60 mV | ±0.4 | ±1.0 | N/A | 83 | 700V/1544V† | -40°C to +85°C |
| 9 | 50 mV | ±0.7 | ±0.2 | N/A | 82 | 700V | -40°C to +85°C |
| 5 | 75 mV | ±0.75 | ±0.2 | N/A | 83 | 700V | -40°C to +85°C |
| 7 | 75 mV | ±0.6 | ±1.0 | N/A | 83 | 700V/1544V† | -40°C to +85°C |
| <i>Dual Output</i> | | | | | | | |
| 13 | 70 mV | ±5.0 | ±1.0 | ±6.0 | 70 | 700V | -25°C to +85°C |
| 4 | 100 mV | ±1.0 | ±0.75 | ±3.0 | 79 | 700V | -40°C to +85°C |
| 10 | 120 mV | ±0.7 | ±0.2 | ±2.5 | 78 | 700V | -40°C to +85°C |
| 6 | 70 mV | ±0.4 | ±0.2 | ±3.0 | 82 | 1544V | -40°C to +100°C |
| 8 | 50 mV | ±0.7 | ±0.8 | ±2.5 | 85 | 700V/1544V† | -40°C to +85°C |
| <i>Triple Output</i> | | | | | | | |
| 11 | 50 mV | ±2.0 | ±1.5 | ±5.0 | 84 | 700V/1544V† | -40°C to +90°C |

* Measured 1" from converter across a 1μF tantalum capacitor and bandwidth limited to 20MHz. †1544V isolation for DC/DC converters with 48V inputs.

Fig. 1

- Features:**
- Ultra-wide 3.5-16 volt input range
 - Input filtered
 - 6 watts of output power
 - Efficiencies to 77%
 - 700V Isolation
 - Low input to output capacitance
 - Ultra-wide input range (4:1)

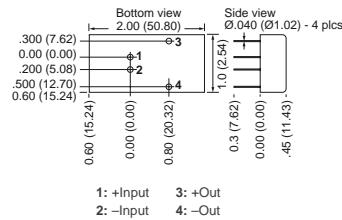


Fig. 3

- Features:**
- High power density, up to 11 watts per cubic inch (0.67 watts per cm³)
 - Efficiencies to 83% (lower for 3.3V)
 - Low input to output capacitance
 - 700V Isolation (1544V for 48V converters)
 - Continuous overcurrent protection
 - Five-sided shielded copper case
 - Extended input range (2:1)

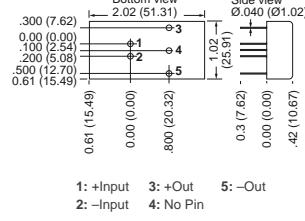


Fig. 5

- Features:**
- High power density, up to 11 watts per cubic inch (0.67 watts per cm³)
 - Efficiencies to 83% (lower for 3.3V)
 - Low input to output capacitance
 - 700V Isolation (1544V for 48V converters)
 - Continuous overcurrent protection
 - 3.3 Volt output available
 - Five-sided shielded copper case
 - Extended input range (2:1)

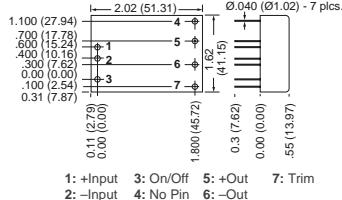


Fig. 2

- Features:**
- Up to 6 watts of output power
 - Overcurrent protection
 - Efficiencies to 83%
 - Low input to output capacitance
 - 700V Isolation, input to output
 - Ultra-wide input range (3:1)

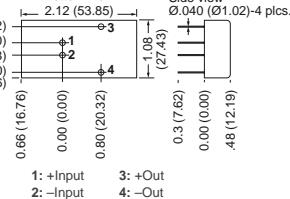


Fig. 4

- Features:**
- High power density, up to 11 watts per cubic inch
 - Efficiencies to 79%
 - Fully isolated, fully filtered design
 - Greater than 700V Isolation
 - Overcurrent protection
 - Five-sided shielded copper case
 - Ultra-wide range input (4:1)

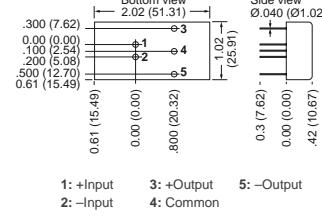


Fig. 6

- Features:**
- Remote On/Off and Trim
 - Overcurrent and overtemperature protected
 - Water washable case
 - Efficiencies to 82%
 - 1544V Isolation
 - Ultra-wide range input (>3:1)

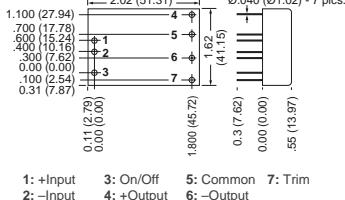


Fig. 1
Fig. 3
Fig. 5

| Fig. | V Out | I Out | V In Range | Digi-Key | | Price Each | | | | Power-One Part No. |
|------|-------|-------|------------|-------------|-------|------------|-------|-------|-------------|-----------------------|
| | | | | Part No. | 1 | 10 | 25 | 50 | | |
| 1 | 5 | 1.2 A | 3.5-16.0 | 179-1001-ND | 61.00 | 58.50 | 56.00 | 54.00 | DFC6U5S5 | |
| | 5.2 | 1.2 A | 3.5-16.0 | 179-1002-ND | 61.00 | 58.50 | 56.00 | 54.00 | DFC6U5S5.2 | |
| | 12 | 0.5 A | 3.5-16.0 | 179-1003-ND | 61.00 | 58.50 | 56.00 | 54.00 | DFC6U5S12 | |
| | 15 | 0.4 A | 3.5-16.0 | 179-1004-ND | 61.00 | 58.50 | 56.00 | 54.00 | DFC6U5S15 | |
| 2 | 5 | 1 A | 9.0-27.0 | 179-1005-ND | 61.00 | 58.50 | 56.00 | 54.00 | DFA6U12S5 | |
| | 12 | 0.5 A | 9.0-27.0 | 179-1006-ND | 61.00 | 58.50 | 56.00 | 54.00 | DFA6U12S12 | |
| | 15 | 0.4 A | 9.0-27.0 | 179-1007-ND | 61.00 | 58.50 | 56.00 | 54.00 | DFA6U12S15 | |
| | 5 | 1 A | 20.0-60.0 | 179-1008-ND | 61.00 | 58.50 | 56.00 | 54.00 | DFA6U48S5 | |
| 3 | 12 | 0.5 A | 20.0-60.0 | 179-1009-ND | 61.00 | 58.50 | 56.00 | 54.00 | DFA6U48S12 | |
| | 5 | 2 A | 9.0-18.0 | 179-1011-ND | 68.00 | 66.50 | 65.00 | 63.51 | DFC10E12S5 | |
| | 12 | 0.9 A | 9.0-18.0 | 179-1014-ND | 68.00 | 66.50 | 65.00 | 63.51 | DFC10E12S12 | |
| | 15 | 0.7 A | 9.0-18.0 | 179-1015-ND | 68.00 | 66.50 | 65.00 | 63.51 | DFC10E12S15 | |

Fig. 2
Fig. 4
Fig. 6

| Fig. | V Out | I Out | V In Range | Digi-Key | | Price Each | | | | Power-One Part No. |
|------|-------|----------|------------|-------------|-------|------------|-------|-------|-------------|-----------------------|
| | | | | Part No. | 1 | 10 | 25 | 50 | | |
| 3 | 5 | 2 A | 18.0-36.0 | 179-1012-ND | 68.00 | 66.50 | 65.00 | 63.51 | DFC10E24S5 | |
| | 12 | 0.9 A | 18.0-36.0 | 179-1016-ND | 68.00 | 66.50 | 65.00 | 63.51 | DFC10E24S12 | |
| | 15 | 0.7 A | 18.0-36.0 | 179-1017-ND | 68.00 | 66.50 | 65.00 | 63.51 | DFC10E24S15 | |
| | 5 | 2 A | 36.0-72.0 | 179-1013-ND | 68.00 | 66.50 | 65.00 | 63.51 | DFC10E48S5 | |
| 4 | 12 | 0.9 A | 36.0-72.0 | 179-1019-ND | 68.00 | 66.50 | 65.00 | 63.51 | DFC10E48S12 | |
| | ±5 | ±0.85 A | 9.0-36.0 | 179-1021-ND | 68.00 | 66.50 | 65.00 | 63.51 | DFC10U24D5 | |
| | ±12 | ±0.4 A | 9.0-36.0 | 179-1022-ND | 68.00 | 66.50 | 65.00 | 63.51 | DFC10U24D12 | |
| | ±15 | ±0.32 A | 9.0-36.0 | 179-1023-ND | 68.00 | 66.50 | 65.00 | 63.51 | DFC10U24D15 | |
| 5 | ±5 | ±0.8 A | 18.0-72.0 | 179-1024-ND | 68.00 | 66.50 | 65.00 | 63.51 | DFC10U48D5 | |
| | ±12 | ±0.415 A | 18.0-72.0 | 179-1025-ND | 68.00 | 66.50 | 65.00 | 63.51 | DFC10U48D12 | |
| | ±15 | ±0.33 A | 18.0-72.0 | 179-1026-ND | 68.00 | 66.50 | 65.00 | 63.51 | DFC10U48D15 | |
| | 5 | 3 A | 20.0-60.0 | 179-1027-ND | 93.00 | 89.00 | 85.50 | 82.00 | DFC15U48S5 | |
| 6 | 12 | 1.25 A | 20.0-60.0 | 179-1028-ND | 93.00 | 89.00 | 85.50 | 82.00 | DFC15U48S12 | |
| | ±15 | ±0.5 A | 20.0-72.0 | 179-1031-ND | 93.00 | 89.00 | 85.50 | 82.00 | DFC15U48D15 | |

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Fig. 7

- Features:**
- Remote On/Off and Trim
 - Overcurrent protection and thermal shutdown
 - Efficiencies to 83%
 - 700V Isolation up to 1544V on 48V converters
 - Power density up to 11 watts per cubic inch
 - Five-sided shielded case
 - Extended range input (2:1)

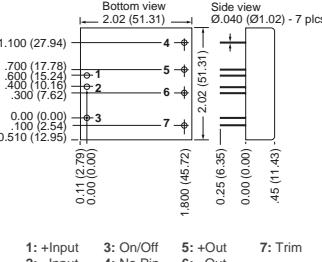


Fig. 8

- Features:**
- Remote On/Off and Trim
 - Water washable case
 - Overcurrent protection and thermal shutdown
 - Efficiencies to 85%
 - Low input to output capacitance
 - 700V to 1544V isolation
 - Five-sided shielded case
 - Extended range input (2:1)

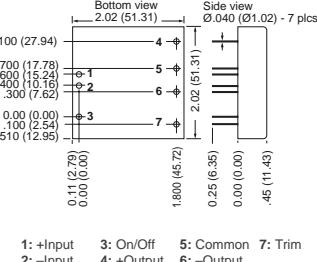


Fig. 9

- Features:**
- Up to 12 watts output power
 - Five-sided shielded isolated copper case
 - Ultra-wide 3.5 to 16 volt input range
 - Efficiencies to 82%
 - Fully isolated and filtered
 - 700V isolation
 - Remote On/Off and Trim

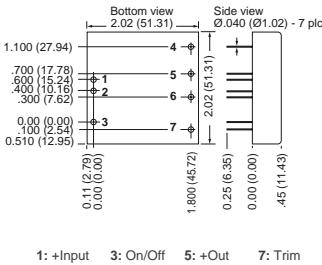


Fig. 10

- Features:**
- Remote On/Off and Trim
 - Five-sided shielded copper case
 - Typical efficiencies up to 78%
 - Fully isolated and filtered
 - 700V isolation
 - Ultra-wide range input (4:1)

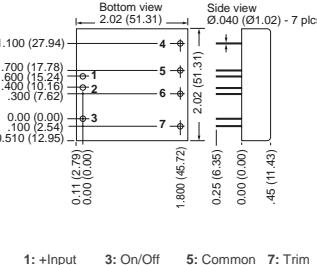
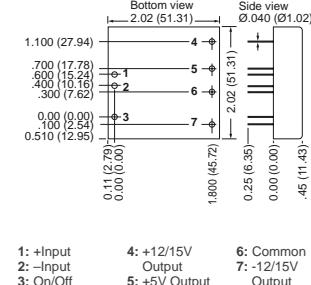
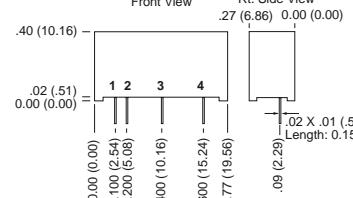


Fig. 11



- Features:**
- Triple Outputs
 - Five-sided shielded case
 - Remote On/Off
 - Efficiencies to 84%
 - -40°C to +85°C operation
 - 700V isolation
 - Extended range input (2:1)

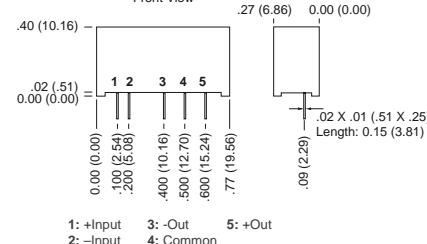
Fig. 12



- Features:**
- Up to 1 watt unregulated output power
 - Single in-line package
 - Four terminal operation
 - Efficiencies to 75%
 - 350KHz fixed frequency operation
 - 700V isolation
 - -25°C to +85°C operation

Output filtering is required for operation 10μF min.

Fig. 13



- Features:**
- Up to 1 watt unregulated output power
 - Single in-line package
 - Four terminal operation
 - Efficiencies to 70%
 - Output voltages: 5V, 7V, 12V, 14V, 15V, 17V
 - 500V isolation
 - -25°C to +85°C operation

| Fig. | V Out | I Out | V In Range | Digi-Key | | | | Power-One Part No. | |
|------|-------|---------|------------|-------------|--------|-------|-------|--------------------|-------------|
| | | | | Part No. | 1 | 10 | 25 | | |
| 7 | 5 | 4 A | 9.0-18.0 | 179-1033-ND | 100.50 | 96.50 | 91.50 | 86.50 | DFA20E12S5 |
| | 12 | 1.7 A | 9.0-18.0 | 179-1034-ND | 100.50 | 96.50 | 91.50 | 86.50 | DFA20E12S12 |
| | 15 | 1.4 A | 9.0-18.0 | 179-1035-ND | 100.50 | 96.50 | 91.50 | 86.50 | DFA20E12S15 |
| | 5 | 4 A | 18.0-36.0 | 179-1037-ND | 100.50 | 96.50 | 91.50 | 86.50 | DFA20E24S5 |
| 8 | 12 | 1.7 A | 18.0-36.0 | 179-1038-ND | 100.50 | 96.50 | 91.50 | 86.50 | DFA20E24S12 |
| | 15 | 1.4 A | 18.0-36.0 | 179-1039-ND | 100.50 | 96.50 | 91.50 | 86.50 | DFA20E24S15 |
| | 12 | 1.7 A | 36.0-72.0 | 179-1042-ND | 100.50 | 96.50 | 91.50 | 86.50 | DFA20E48S12 |
| | ±5 | ±1.7 A | 9.0-18.0 | 179-1044-ND | 100.50 | 96.50 | 91.50 | 86.50 | DFA20E12D5 |
| 9 | ±12 | ±0.85 A | 9.0-18.0 | 179-1045-ND | 100.50 | 96.50 | 91.50 | 86.50 | DFA20E12D12 |
| | ±15 | ±0.7 A | 9.0-18.0 | 179-1046-ND | 100.50 | 96.50 | 91.50 | 86.50 | DFA20E12D15 |
| | ±5 | ±1.7 A | 18.0-36.0 | 179-1047-ND | 100.50 | 96.50 | 91.50 | 86.50 | DFA20E24D5 |
| | ±12 | ±0.85 A | 18.0-36.0 | 179-1048-ND | 100.50 | 96.50 | 91.50 | 86.50 | DFA20E24D12 |
| 10 | ±15 | ±0.7 A | 18.0-36.0 | 179-1049-ND | 100.50 | 96.50 | 91.50 | 86.50 | DFA20E24D15 |
| | 5 | 2 A | 3.5-16.0 | 179-1053-ND | 81.50 | 78.00 | 75.00 | 72.00 | DGP12U55 |
| | 12 | 1 A | 3.5-16.0 | 179-1054-ND | 81.50 | 78.00 | 75.00 | 72.00 | DGP12U55S12 |
| | ±5 | ±1.0 A | 3.5-16.0 | 179-1056-ND | 81.50 | 78.00 | 75.00 | 72.00 | DGP12U5D5 |
| 11 | ±12 | ±0.5 A | 3.5-16.0 | 179-1057-ND | 81.50 | 78.00 | 75.00 | 72.00 | DGP12U5D12 |
| | ±15 | ±0.4 A | 3.5-16.0 | 179-1058-ND | 81.50 | 78.00 | 75.00 | 72.00 | DGP12U5D15 |

*600 mA, †75 mA, ‡60 mA = Minimum Current Load

| Fig. | V Out | I Out | V In Range | Digi-Key | | | | Power-One Part No. | |
|------|-------|----------------|------------|---------------|--------|-------|-------|--------------------|---------------|
| | | | | Part No. | 1 | 10 | 25 | | |
| 11 | 5 ±12 | 2.5 A ±0.310 A | 9.0-18.0 | 179-1059-ND* | 102.00 | 98.00 | 94.00 | 89.00 | DGP20E12T5/12 |
| | 5 ±15 | 2.5 A ±0.250 A | 9.0-18.0 | 179-1060-ND† | 102.00 | 98.00 | 94.00 | 89.00 | DGP20E12T5/15 |
| | 5 ±12 | 2.5 A ±0.310 A | 18-36.0 | 179-1061-ND‡ | 102.00 | 98.00 | 94.00 | 89.00 | DGP20E24T5/12 |
| | 5 ±15 | 2.5 A ±0.250 A | 18-36.0 | 179-1062-ND*‡ | 102.00 | 98.00 | 94.00 | 89.00 | DGP20E24T5/15 |
| 12 | 5 | 0.15 A | 4.5-5.5 | 179-1068-ND | 9.00 | 8.75 | 8.50 | 8.25 | DSP1N5S5 |
| | 7 | 0.14 A | 4.5-5.5 | 179-1069-ND | 9.00 | 8.75 | 8.50 | 8.25 | DSP1N5S7 |
| | 12 | 0.08 A | 4.5-5.5 | 179-1070-ND | 9.00 | 8.75 | 8.50 | 8.25 | DSP1N5S12 |
| | 14 | 0.07 A | 4.5-5.5 | 179-1071-ND | 9.00 | 8.75 | 8.50 | 8.25 | DSP1N5S14 |
| 13 | 15 | 0.065 A | 4.5-5.5 | 179-1072-ND | 9.00 | 8.75 | 8.50 | 8.25 | DSP1N5S15 |
| | 17 | 0.06 A | 4.5-5.5 | 179-1073-ND | 9.00 | 8.75 | 8.50 | 8.25 | DSP1N5S17 |
| | ±5 | ±0.075 A | 4.5-5.5 | 179-1074-ND | 15.00 | 14.50 | 14.00 | 13.00 | DSP1N5D5 |
| | ±7 | ±0.07 A | 4.5-5.5 | 179-1075-ND | 15.00 | 14.50 | 14.00 | 13.00 | DSP1N5D7 |



Switching Power Supplies

GENERAL FEATURES: Power-One's proprietary Universal Terminal Block Connectors and Mounting System assure product integration. Safety agency approved: UL recognized, CSA certified, and TUV Essen certified. • Power Fail Warning Signal, 100% test, inspection and burn-in. • Overload Protection • Overvoltage Protection • Overtemperature Protection. **AC Input:** Automatic selecting: 90-264 VAC, 47-63 Hz single phase. **Temperature Rating:** 0°C to +50°C • Two Year Warranty

MPU150 - 150 Watts with PFC

The MPU150 is the first product in this power range

incorporating PFC in a low profile package that meets 1U height constraints. All models feature remote sense on V1 and V2 to provide independent compensation of power cable losses.

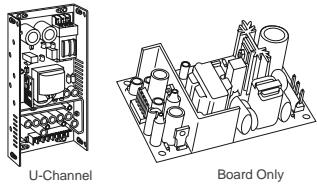
Power-One's unique dual-converter architecture combines high reliability, achieved through reduced component stresses, with exceptional regulation. Other standard features include CE Marking, current sharing on V1 and V2, thermal shutdown, and remote inhibit. Additionally only 300 Linear Feet per Minute (LFM) airflow is required. **FEATURES:**

• Active power factor correction meets EN61000-3-2 • Low

profile height fits 1U height constraints • Dual main outputs provide 3.3V and 5V for mixed logic applications • CE Marked to the LVD • Autoranging AC input, 85-264VAC • Isolated V3 and V4 can be used as plus or minus outputs

MPB80 - 80 Watts with PFC

FEATURES: • 65 Watts convection cooled, 80 Watts with 300 LFM forced air • Power factor correction meets EN61000-3-2 • High 3.3V and 5V current capabilities available • CE Marked to the LVD • Autoranging AC input, 85-264VAC • Overvoltage protection on the main output • Isolated V3 can be used as a plus or minus output.



U-Channel

Board Only

9222B-ND Power One Reference Guide ...\$3.95

MAP SERIES Single Output

| Nominal Output Voltage | Power (Watts) Continuous | Power (Watts) Peak | Current Maximum | Current Peak | Initial Setting Tolerance | Line Reg. | Load Reg. | Output Adj. Range | Configuration | | Digi-Key Part No. | 1 | Price Each 10 | 25 | Power-One Part No. |
|------------------------|--------------------------|--------------------|-----------------|--------------|---------------------------|-----------|-----------|-------------------|---|---|-------------------|--------|---------------|--------|--------------------|
| | | | | | | | | | | | | | | | |
| 5V | 40 | — | 8A/11A | — | — | 2% | 1% | 4.75V-5.5V | 6.00" x 3.27" x 1.60" (152.40mm x 83.06mm x 40.64mm) | * | 179-2020-ND NEW! | 99.28 | 85.95 | 77.49 | MAP40-1005 |
| 5V | 40 | — | 8A/11A | — | 4.9 to 5.1V | 2% | 1% | 4.7V-5.8V | 5.00" x 3.00" x 1.25" (127.00mm x 76.20mm x 31.75mm) | ‡ | 179-2001-ND NEW! | 60.00 | 55.00 | 50.00 | MAP42-1005 |
| 12V-15V | 40 | — | 3.4A/2.2A | 4.6A/3.0A | 11.9 to 12.1V | 2% | 1% | 11V-18V | 5.00" x 3.00" x 1.25" (127.00mm x 76.20mm x 31.75mm) | ‡ | 179-2002-ND NEW! | 60.00 | 55.00 | 50.00 | MAP42-1012 |
| 24V-28V | 40 | — | 1.4A/1.7A | 2.3A/1.9A | 23.8 to 24.2V | 2% | 1% | 23V-29V | 5.00" x 3.00" x 1.25" (127.00mm x 76.20mm x 31.75mm) | ‡ | 179-2003-ND NEW! | 60.00 | 55.00 | 50.00 | MAP42-1024 |
| 12V-15V† | 60 | 70 | 5.0A/4.0A | 5.8A/4.7A | 12.0 to 12.2V | 2% | 1% | 11.4V-15.7V | 6.00" x 3.27" x 1.60" (152.40mm x 83.06mm x 40.64mm) | * | 179-2081-ND | 99.28 | 85.95 | 77.49 | MAP55-1012 |
| 24V-28V† | 60 | 70 | 2.5A/2.2A | 2.9A/2.5A | 23.8 to 24.2V | 2% | 1% | 23.5V-28.5V | 6.00" x 3.27" x 1.60" (152.40mm x 83.06mm x 40.64mm) | * | 179-2082-ND | 99.28 | 85.95 | 77.49 | MAP55-1024 |
| 5.1V | 110†† | 110 | 16A | 22A | 5.09 to 5.11V | 2% | 1% | 4.95V-5.50V | 7.00" x 4.25" x 1.80" (177.80mm x 107.95mm x 45.72mm) | ‡ | 179-2006-ND NEW! | 150.00 | 140.00 | 130.00 | MAP110-1005 |
| 12V-15V† | 150 | 165 | 12A/10A | 13.8A/11A | 12 to 12.2V | 2% | 1% | 11.4V-15.75V | 8.50" x 4.50" x 2.00" (215.90mm x 114.30mm x 50.80mm) | * | 179-2080-ND | 212.59 | 189.18 | 170.50 | MAP130-1012 |
| 12V-15V† | 140†† | — | 9.2A | 12.5A | 11.97 to 12.03V | .1% | .5% | 11.0V-16.0V | 7.00" x 4.25" x 1.80" (177.80mm x 107.95mm x 45.72mm) | * | 179-2009-ND NEW! | 180.00 | 170.00 | 160.01 | MAP140-1012 |
| 24V-28V† | 140†† | — | 4.6A | 6.3A | 23.95 to 24.5V | .1% | .5% | 22.8V-29.2V | 7.00" x 4.25" x 1.80" (177.80mm x 107.95mm x 45.72mm) | * | 179-2010-ND NEW! | 180.00 | 170.00 | 160.01 | MAP140-1024 |
| 48V | 140†† | — | 2.3A | 3.1A | 47.9 to 48.1V | .1% | .5% | 45.6V-54V | 7.00" x 4.25" x 1.80" (177.80mm x 107.95mm x 45.72mm) | * | 179-2011-ND NEW! | 180.00 | 170.00 | 160.01 | MAP140-1048 |

* U-Channel Configuration † Models with adjustable outputs have current ratings expressed as current at lowest nominal voltage followed by current at highest nominal voltage.

†† 200LFM force-aircooling ‡ Board Only Configuration.

Triple Output

| Nom. Output Voltage | Power (Watts) Continuous | Power (Watts) Peak | Current | Initial Setting Tolerance | Line Reg. | Load Reg. | Configuration | Digi-Key Part No. | | 1 | Price Each 10 | 25 | 50 | Power-One Part No. | |
|---------------------|--------------------------|--------------------|---------|---------------------------|-----------|-----------|---------------|---|--|------------------|---------------|--------|--------|--------------------|--------------|
| | | | | | | | | | | | | | | | |
| +5V | 40 | 50 | 3A | 4.9 to 5.1V | .2% | 2% | Board Only | | | 179-2004-ND NEW! | 71.94 | 65.10 | 58.92 | 53.35 | MAP40-3101 |
| +24V | — | — | 1A | 23.0 to 25V | 1% | 3.5% | | 5.00" x 3.00" x 1.25" (127.00mm x 76.20mm x 31.75mm) | | 179-2005-ND NEW! | 71.94 | 65.10 | 58.92 | 53.35 | MAP40-3105 |
| -12V | — | — | .3A | -11.5 to -12.5V | 1% | 2% | | | | | | | | | |
| +5V | 40 | 50 | 3A | 4.9 to 5.1V | .2% | 2% | Board Only | | | 179-2095-ND* | 59.95 | 54.25 | 49.10 | 44.45 | MAP40-3000 |
| +12V | — | — | 2A | 11.5 to 12.5V | 1% | 3.5% | | 5.00" x 3.00" x 1.25" (127.00mm x 76.20mm x 31.75mm) | | 179-2012-ND NEW! | 195.00 | 185.00 | 172.00 | 158.00 | MAP140-3000P |
| -5V | — | — | .5A | -4.75 to 5.25V | 1% | 2% | | | | | | | | | |
| +5V | 40 | 50 | 3A | 4.9 to 5.1V | .2% | 2% | Board Only | | | 179-2097-ND | 109.72 | 95.04 | 85.69 | 83.34 | MAP55-4000 |
| +24V | — | — | 1.5A | 23.0 to 24.9V | 1% | 2% | | 6.00" x 3.27" x 1.60" (152.40mm x 83.06mm x 40.64mm) | | 179-2098-ND | 109.72 | 95.04 | 85.69 | 83.34 | MAP55-4001 |
| +12V | — | — | 1A | 11.6 to 12.4V | 1% | 2% | | | | 179-2099-ND | 114.17 | 100.95 | 89.14 | 86.48 | MAP55-4003 |
| -12V | — | — | .5A* | -11.6 to -12.4V | 1% | 2% | | | | 179-2100-ND | 154.00 | 145.20 | 132.00 | 127.60 | MAP80-4000 |
| +5V | 55 | 65 | 6A | 5.0 to 5.2V | 2% | 2% | U-Channel | | | 179-2101-ND | 154.00 | 145.20 | 132.00 | 127.60 | MAP80-4001 |
| +12V | — | — | 3A | 11.6 to 12.4V | 2% | 2% | | 6.00" x 3.27" x 1.60" (152.40mm x 83.06mm x 40.64mm) | | 179-2102-ND | 154.00 | 145.20 | 132.00 | 127.60 | MAP80-4002 |
| -5V | — | — | .5A* | -4.8 to -5.2V | 5% | 2% | | | | 179-2103-ND | 157.30 | 154.00 | 140.80 | 132.01 | MAP80-4003 |
| +5V | 80 | 90 | 14A | 5.1 to 5.2V | 2% | 1% | U-Channel | | | 179-2104-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4011 |
| +12V | — | — | 4A | 11.9 to 12.1V | 2% | 1% | | 7.20" x 4.20" x 1.80" (182.88mm x 106.68mm x 45.72mm) | | 179-2105-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4012 |
| -12V | — | — | 1A | -11.5 to -12.5V | 5% | 2% | | | | 179-2106-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4013 |
| +5V | 80 | 90 | 14A | 5.1 to 5.2V | 2% | 1% | U-Channel | | | 179-2107-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4014 |
| +24V | — | — | 2A | 24.0 to 24.1V | 2% | 1% | | 7.20" x 4.20" x 1.80" (182.88mm x 106.68mm x 45.72mm) | | 179-2108-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4015 |
| +12V | — | — | 1A | 11.5 to 12.5V | 5% | 2% | | | | 179-2109-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4016 |
| -12V | — | — | 1A | -11.5 to -12.5V | 5% | 2% | | | | 179-2110-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4017 |
| +5V | 80 | 90 | 14A | 5.1 to 5.2V | 2% | 1% | U-Channel | | | 179-2111-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4018 |
| +12V | — | — | 4A | 12.0 to 12.1V | 2% | 1% | | 7.20" x 4.20" x 1.80" (182.88mm x 106.68mm x 45.72mm) | | 179-2112-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4019 |
| -12V | — | — | 1A | 11.6 to 12.4V | 5% | 2% | | | | 179-2113-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4020 |
| +5V | 80 | 90 | 14A | 5.1 to 5.2V | 2% | 1% | U-Channel | | | 179-2114-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4021 |
| +15V | — | — | 1A | 14.6 to 15.4V | 2% | 1% | | 7.20" x 4.20" x 1.80" (182.88mm x 106.68mm x 45.72mm) | | 179-2115-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4022 |
| -5V | — | — | 1A | -4.8 to -5.2V | 5% | 2% | | | | 179-2116-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4023 |
| +5V | 80 | 90 | 14A | 5.1 to 5.2V | 2% | 1% | Board Only | | | 179-2117-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4024 |
| +12V | — | — | 5A | 11.97 to 12.03V | .1% | 1% | | 7.00" x 4.25" x 1.80" (177.80mm x 107.95mm x 45.72mm) | | 179-2118-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4025 |
| -12V | — | — | 1A | -11.4 to -12.6V | .1% | 1% | | | | 179-2119-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4026 |
| +24V | — | — | 1A | 23.2 to 24.8V | .1% | 1% | | | | 179-2120-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4027 |
| +3.3V | — | — | 1A | 3.29 to 3.31V | .3% | .7% | | | | 179-2121-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4028 |
| +5V | 80 | 110 | 12A | 4.98 to 5.02V | 2% | 1% | Board Only | | | 179-2122-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4029 |
| +12V | — | — | 1A | -11.4 to -12.6V | .1% | 1% | | 7.00" x 4.25" x 1.80" (177.80mm x 107.95mm x 45.72mm) | | 179-2123-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4030 |
| -12V | — | — | 1A | 11.4 to 12.6V | .1% | 1% | | | | 179-2124-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4031 |
| +24V | — | — | 1A | -48 to -52V | .5% | 2% | | | | 179-2125-ND | 180.00 | 170.00 | 160.00 | 150.00 | MAP110-4032 |
| +5V | 130 | 165 | 20A | 5.1 to 5.2V | 2% | 1% | U-Channel | | | 179-2093-ND | 212.59 | 189.18 | 170.50 | 165.83 | MAP130-4000 |
| +12V | — | — | 5A | 11.75 to 12V | .5% | 2% | | 8.50" x 4.50" x 2.00" (215.90mm x 114.30mm x 50.80mm) | | 179-2094-ND | 212.59 | 189.18 | 170.50 | 165.83 | MAP130-4001 |
| -12V | — | — | 1A | -11.6 to -12.4V | .5% | 2% | | | | 179-2095-ND | 212.59 | 189.18 | 170.50 | 165.83 | MAP130-4002 |
| +24V | — | — | 1A | 23.9 to 24.1V | .5% | 2% | U-Channel | | | 179-2096-ND | 212.59 | 189.18 | 170.50 | 165.83 | MAP130-4003 |
| +12V | — | — | 1A | -11.6 to -12.4V | .5% | 2% | | 8.50" x 4.50" x 2.00" (215.90mm x 114.30mm x 50.80mm) | | 179-2097-ND | 212.59 | 189.18 | 170.50 | 165.83 | MAP130-4004 |
| +12V | 130 | 165 | 20A | 5.1 to 5.2V | .5% | 2% | U-Channel | | | 179-2098-ND | 212.59 | 189.18 | 170.50 | 165.83 | MAP130-4005 |
| +12V | 130 | 165 | 5A | 11.9 to 12.1V | .5% | 2% | U-Channel | | | 179-2099-ND | 212.59 | 189.18 | 170.50 | 165.83 | MAP130-4006 |
| +12V | 130 | 165 | 1A | 11.6 to 12.4V | .5% | 2% | U-Channel | | | 179-2100-ND | 212.59 | 189.18 | 170.50 | 165.83 | MAP130-4007 |
| +12V | 130 | 165 | 1A | -11.6 to -12.4V | .5% | 2% | U-Channel | | | 179-2101-ND | 212.59 | 189.18 | 170.50 | 165.83 | MAP130-4008 |
| +5V | 130 | 165 | 20A | 5.1 to 5.2V | .5% | 2% | U-Channel | | | | | | | | |

Switching Power Supplies continued - MPB 80 Series

| Nom. Output Voltage | Power (Watts) | Current | Adjustable Range | Line Reg. | Load Reg. | Configuration | Digi-Key Part No. | 1 | 10 | Price Each 25 | 50 | Power-One Part No. |
|---------------------|---------------|--------------------|---|--------------------|----------------------------------|---|-------------------|--------|-------|---------------|-------|--------------------|
| +5V +12V | 80* | 11A .5A | 4.9 to 5.1V 11.5 to 12.5V | .8% .5% | -4% to +2% ±5% | Board Only 5.00" x 3.00" x 1.30" (127.00mm x 76.20mm x 33.02mm) | 179-2013-ND NEW! | 94.00 | 84.00 | 78.00 | 70.01 | MPB80-2000 |
| +5V +12V 12V | 80* | 7A 2.5A 0.3A | 4.9 to 5.1V 11.5 to 12.5 -11.5 to -12.5 | .5% .5% .5% | -4% to +6% -7% to +13% ±4% | Board Only 5.00" x 3.00" x 1.40" (127.00mm x 76.20mm x 35.56mm) | 179-2014-ND NEW! | 94.00 | 84.00 | 78.00 | 70.01 | MPB80-3000 |
| +3.3V +5V 12V | 80* | 7A 3A 0.4A | 3.27 to 3.33V 4.95 to 5.05V 10.2 to 14.0V | .7% .5% 1.5% | ±2% ±2% -15% to +17% | Board Only 5.00" x 3.00" x 1.40" (127.00mm x 76.20mm x 35.56mm) | 179-2015-ND NEW! | 100.00 | 92.00 | 85.00 | 76.00 | MPB80-3300 |

* 80 Watt with 300LFM force-air cooling.

MPU 150 Series

| Nom. Output Voltage | Power (Watts) | Current | Adjustable Range | Line Reg. | Load Reg. | Configuration | Digi-Key Part No. | 1 | 10 | Price Each 25 | 50 | Power-One Part No. |
|------------------------------|---------------|--------------------------|---|--------------------------|------------------------|---|-------------------|--------|--------|---------------|--------|--------------------|
| +3.3V +5V +12V | 150* | 35A 20A 2A | 3.15 to 3.8V 5.0 to 5.5V 10.8 to 13.2V | .6% .4% .4% | 1.5% 3% 3% | U Channel 7.40" x 4.20" x 1.50" (187.96mm x 106.68mm x 38.10mm) | 179-2016-ND NEW! | 230.00 | 210.00 | 200.01 | 185.01 | MPU150-3300 |
| +5.1V +12V 5V 12V | 150* | 30A 8A 3A 2A | 5.0 to 5.5V 10.8 to 13.2V 10.8 to 13.2V 5.0 to 5.5V | .4% .4% .4% .4% | 1% 1% 1% 1% | U Channel 7.40" x 4.20" x 1.50" (187.96mm x 106.68mm x 38.10mm) | 179-2017-ND NEW! | 250.00 | 230.00 | 215.00 | 195.00 | MPU150-4000 |
| +5.1V +3.3V 12V 12V | 150* | 30A 15A 3A† 3A† | 5.0 to 5.5V 3.15 to 3.6V 10.8 to 13.2V 10.8 to 13.2V | .4% .6% .4% .4% | 1% 1.5% 7% 7% | U Channel 7.40" x 4.20" x 1.50" (187.96mm x 106.68mm x 38.10mm) | 179-2018-ND NEW! | 250.00 | 230.00 | 215.00 | 195.00 | MPU150-4530 |

* 150 Watt with 300LFM force-air cooling. † Total not to exceed 5A.

SPL SERIES

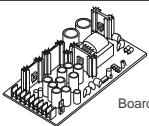
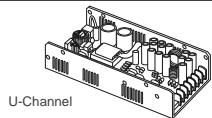
SPECIFICATIONS:

AC Input: 90-264 VAC, user selectable 47-63 Hz • Power-Fail Warning Signal: Single Output Models: provided on SPL 250 models only • Efficiency: 70% ±5% • Minimum Load: Single Output Models: 5% of rated current • Multiple Output Models: • Output

Noise and Ripple: 0.3% RMS, 1% PK-PK maximum. • Output

Overload Protection • Overvoltage Protection: Single Output

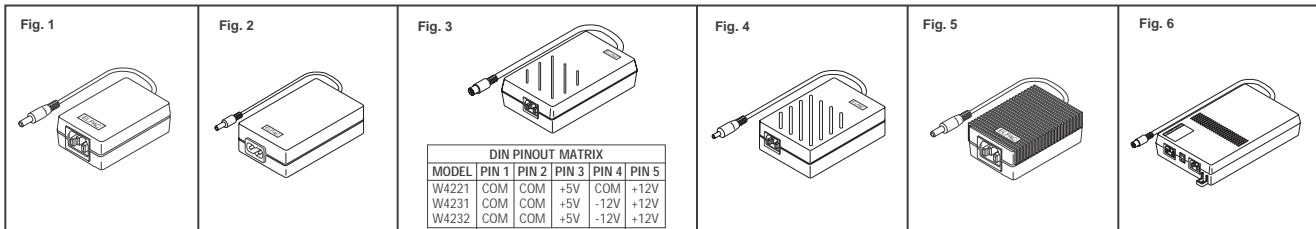
Models: provided on all 5V models. Multiple Output Models: provided on +5V main output • Temperature Rating: Operating: 0°C to +50°C • 2 year warranty



| Output Voltage | Power (Watts) Continuous | Peak | Current | Line Reg. | Load Reg. | Configuration | Digi-Key Part No. | 1 | 10 | Price Each 25 | 50 | Power-One Part No. |
|----------------|--------------------------|------|---------|-----------|-----------|---------------|-------------------|--------|--------|---------------|----|--------------------|
| 5V | 250 | N/A | 50A | ±0.3% | ±1% | U-Channel | 179-2086-ND | 282.19 | 270.90 | | | SPL250-1005 |
| 12-15V* Adj. | 250 | N/A | 21A/17A | ±0.3% | ±1% | U-Channel | 179-2087-ND | 282.19 | 270.90 | | | SPL250-1012 |
| 24-28V* Adj. | 250 | N/A | 10A/7A | ±0.3% | ±1% | U-Channel | 179-2088-ND | 282.19 | 270.90 | | | SPL250-1024 |

* Models with adjustable voltages have current ratings expressed as current at lowest Voltage/Current followed at highest voltage.

ELPAC POWER SYSTEMS **NEW!** AC Adapters



International

FEATURES:

- 95-250 VAC 47-63Hz Input
- IEC 320 Input Connector for Worldwide Use
- Input Protected VIA Internal Line Fuse
- Ripple & Noise: ±1% PK-PK Max.
- Overload Protection: All Outputs Protected-Auto Recovery
- Operating Temp. Range: 0°C to 40°C
- Output Cable - 6 foot - 760 standard (ID=2.5mm/OD=5.5mm/Barrel Length 10mm/Inside Positive) or 5 Pin DIN as shown
- Two-Year Warranty

AGENCY APPROVALS:

- UL1012 Listed
- CSA Certified to 22.2 No. 223
- TUV Licensed, IEC 950
- CE Certified
- FCC/VDE Class B Emissions

| Fig. | Outputs | | | Max. Power | Dimensions - mm L x W x H | Digi-Key Part No. | Price Each | | | Elpac Part No. |
|--|-------------|------------|-------------|------------|---------------------------|-------------------|------------|--------|--------|----------------|
| | Single | Double | Triple | | | | 1 | 5 | 10 | |
| Desk Mount - International Power Supply | | | | | | | | | | |
| 1 | 5V @ 2.5A | — | — | 13W | 83.82 x 50.80 x 33.02 | EPS165-ND | 38.00 | 36.00 | 33.20 | W1505-760 |
| 1 | 12V @ 1.25A | — | — | 15W | 83.82 x 50.80 x 33.02 | EPS166-ND | 38.00 | 36.00 | 33.20 | W1512-760 |
| 1 | 24V @ 0.63 | — | — | 15W | 83.82 x 50.80 x 33.02 | EPS167-ND | 38.00 | 36.00 | 33.20 | W1524-760 |
| 2 | 12V @ 4.0A | — | — | 48W | 104.14 x 55.88 x 30.48 | EPS168-ND | 88.00 | 79.20 | 73.04 | W4012-760 |
| 2 | 24V @ 2.1A | — | — | 50W | 104.14 x 55.88 x 30.48 | EPS169-ND* | 88.00 | 79.20 | 73.04 | W4024-760 |
| 3 | 5V @ 3.0A | 12V @ 2.5A | — | 42W | 147.32 x 83.82 x 38.10 | EPS170-ND | 114.00 | 102.60 | 94.62 | W4221-D5 |
| 3 | 5V @ 3.0A | 12V @ 2.5A | -12V @ 0.5A | 42W | 147.32 x 83.82 x 38.10 | EPS171-ND | 114.00 | 102.60 | 94.62 | W4231-D5 |
| 3 | 5V @ 4.8A | 12V @ 1.5A | -12V @ 0.5A | 42W | 147.32 x 83.82 x 38.10 | EPS172-ND | 114.00 | 102.60 | 94.62 | W4232-D5 |
| 4 | 5V @ 3.5A | — | — | 18W | 109.22 x 58.42 x 33.02 | EPS173-ND | 74.00 | 66.60 | 61.42 | W42005-760 |
| 4 | 12V @ 1.7A | — | — | 20W | 109.22 x 58.42 x 33.02 | EPS174-ND | 74.00 | 66.60 | 61.42 | W42012-760 |
| 5 | 12V @ 6.0A | — | — | 72W | 165 x 98 x 66 | EPS175-ND | 170.00 | 153.00 | 141.10 | W7212-D5 |
| 5 | 24V @ 3.0A | — | — | 72W | 165 x 98 x 66 | EPS176-ND | 170.00 | 153.00 | 141.10 | W7224-D5 |
| Panel Mount - International Power Supply | | | | | | | | | | |
| 6 | 12V @ 8.3A | — | — | 100W | 281.94 x 175.26 x 45.72 | EPS177-ND† | 220.00 | 198.00 | 182.60 | W100-11 |
| 6 | 24V @ 4.2A | — | — | 100W | 281.94 x 175.26 x 45.72 | EPS178-ND† | 220.00 | 198.00 | 182.60 | W100-13 |

* Minimum load of 2 watts required to fully regulated. † Minimum load of 20 watts required to fully regulate.

| Fig. | Outputs Single | Max. Power | Dimensions - mm L x W x H | Digi-Key Part No. | Price Each | | | Elpac Part No. |
|------------------------------------|----------------|------------|---------------------------|-------------------|------------|-------|-------|----------------|
| | | | | | 1 | 5 | 10 | |
| Wall Mount - Domestic Power Supply | | | | | | | | |
| 1 | 5V @ 1.6A | 8W | 55.88 x 45.72 x 27.94 | EPS160-ND | 27.58 | 24.83 | 22.90 | WP1105-760 |
| 1 | 12V @ 0.8A | 10W | 55.88 x 45.72 x 27.94 | EPS161-ND | 29.42 | 26.48 | 24.42 | WP1112-760 |
| 2 | 5V @ 2.4A | 12W | 76.20 x 50.80 x 25.40 | EPS162-ND | 33.00 | 29.25 | 26.98 | WP1205-760 |
| 2 | 12V @ 1A | 12W | 76.20 x 50.80 x 25.40 | EPS163-ND | 33.00 | 29.25 | 26.98 | WP1212-760 |
| 2 | 24V @ 0.5A | 12W | 91.44 x 58.42 x 33.02 | EPS164-ND | 88.00 | 79.20 | 73.04 | WP1224-760 |



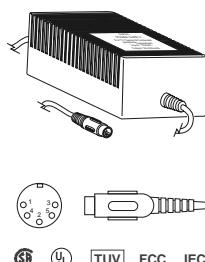
1-800-344-4539
218-681-6674 • FAX: 218-681-3380 • www.digikey.com



ELPAC POWER SYSTEMS

External Power Supplies

Wide Range Input Series- Switching Regulated Tabletops



Outside ring on all units is an EMI earth ground (Not to be used as a safety ground).

Features: • IEC input connector • One year warranty.

General Specifications: • Storage Temp.: -55°C to +85°C • Operating Temp.: 0-40°C Centigrade

Output Specifications: • Line Regulation: ±0.2% max. • Load Regulation: ±5% from 60% nominal except output #2 • Cross Regulation: ±2%. Cross regulation specifies the max. voltage change on auxiliary outputs when the +5V output load current is varied from 75% of full rated to either 50% or 100% of full rated • Set Point: ±2% at 60% load on main input • Ripple & Noise: ±1% max. • Overload Protection: All outputs protected against overloads and short circuit. Automatic recovery upon removal of overload conditions • Overvoltage Protection: Provided on main output only and set at 115-135% • Output Overshoot: No overshoot on turn-on or turn-off • Transient Response: For all outputs, recovery to within 1% of nominal output occurs within 2 milliseconds for a 50% to 100% load step. Maximum excursion is 6% from initial voltage setpoint • Hold-Up Time: 25msec min. at full rated load and nominal AC input voltage • Min. Load: Third quarter down to zero load.

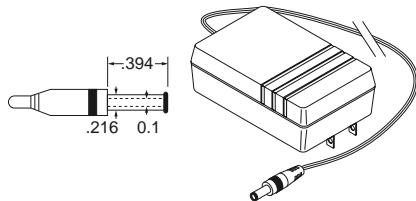
Approved by all major regulatory agencies

| OUTPUT PIN CONFIGURATION-5 PIN DIN | | | | | |
|---------------------------------------|-------|-------|-------|-------|-------|
| Single Output Model | | | | | |
| MODEL | PIN 1 | PIN 2 | PIN 3 | PIN 4 | PIN 5 |
| WR13012 | COM | COM | 12V | COM | 12V |
| WR13014 | COM | COM | 24V | COM | 24V |
| WR14212 | COM | COM | 12V | COM | 12V |
| WR14214 | COM | COM | 24V | COM | 24V |
| WR15215 | COM | COM | 30V | COM | 30V |

| Dual Output Model | | | | | |
|-------------------|-------|-------|-------|-------|-------|
| MODEL | PIN 1 | PIN 2 | PIN 3 | PIN 4 | PIN 5 |
| WR12721 | COM | COM | 5V | COM | 12V |
| WR13021 | COM | COM | 5V | COM | 12V |
| WR13025 | COM | N/C | 5V | COM | 5V |
| WR14221 | COM | COM | 5V | COM | 12V |

| Triple Output Model | | | | | |
|---------------------|-------|-------|-------|-------|-------|
| MODEL | PIN 1 | PIN 2 | PIN 3 | PIN 4 | PIN 5 |
| WR12731 | COM | COM | 5V | -12V | 12V |
| WR13031 | COM | COM | 5V | -12V | 12V |
| WR14231 | COM | COM | 5V | -12V | 12V |
| WR14232 | COM | COM | 5V | -12V | 12V |

Wallmount Switchers



Input Specifications: • A/C Input: 108-132VAC 60Hz • Efficiency: Typical 82% at nominal line. • Input Protection: Internal Input line fuse.

Output Specifications: • Minimum Load: 0 watts • Ripple & Noise: ±1% PK-PK max. • Line Regulation: ±1% • Load Regulation: ±5%

General Specifications: • Operating Temperature: 0-40°C • Size: 2.3" x 3.6" x 1.3" (58.42mm x 91.44mm x 33.02mm) • Weight: 5.7oz • Agency Approvals: UL1310 listed, CSA certified to 223 • Input: M3 standard 3 prong • Output Cable: 6' with barrel connector: ID = 2.5mm, OD = 5.5mm, Barrel Length 10.0mm, Inside positive

Regulated Tabletops

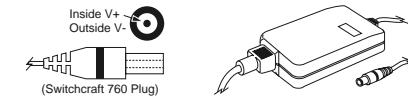


Features: • UL 1310 listed, CSA Approved • One year warranty

Specifications: • Output Ripple: 20 millivolts (p-p) • Operating Temperature: 0-40°C • Combined Regulation: ±5% • Fusing: Internal & non-replaceable

Options: • **Shielded output cable - S Option:** Shielded cable with EMI ground tied to outer ring of DIN connector (Not to be used as safety ground) • Connector Type: DINUL and CSA Approved
★ CSA Approved Only

| DIN PINOUT MATRIX | | | | | |
|-------------------|-------|-------|-------|-------|-------|
| MODEL | PIN 1 | PIN 2 | PIN 3 | PIN 4 | PIN 5 |
| WM100★ | -5V | N/C | 5V | COM | COM |
| WM113TT | COM | N/C | 5V | -12V | 12V |
| WM220-1T | COM | N/C | 5V | -12V | 12V |
| WM230 | 12V | N/C | 5V | COM | COM |

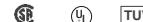
Switching MIADA Series
(Notebook Style)

Input Specifications: • A/C Input: 95-250VAC 47/63Hz via IEC input connector • Input Protection: Input line fuse provided. • Inrush Current: Internally limited by thermistor. Cold start, peak current at 250VAC, 25 amps max.

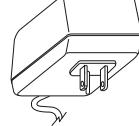
Output Specifications: • Line Regulation: ±2% over 90-132 or 180-250 • Load Regulation: ±5% for ±40% load variation (60% nominal) • Minimum load: 0 watts • Ripple & Noise: ±1% PK-PK max. • Overload Protection: Automatic Recovery • Overvoltage Protection: 115-140%

General Specifications: • Storage Temperature: -55°C to +85°C • Operating Temperature: 0-40°C • EMI: FCC B/VDE B • Input Connector: IEC 320 Series

UL, CSA & TUV Approved



Regulated Wallmounts



Features: • UL 1310 & UL 1950 listed, CSA Approved • One year warranty

Specifications: • Output Ripple: 20 millivolts (p-p) • Operating Temperature: 0-40°C • Combined Regulation: ±5% • Fusing: Internal & non-replaceable

Options: • **Shielded output cable - S Option:** Shielded cable with EMI ground tied to outer ring of DIN connector (Not to be used as safety ground) • Connector Type: DIN, except for WM025 which is Switchcraft Plug 760.

UL and CSA Approved

| DIN PINOUT MATRIX | | | | | |
|-------------------|-------|-------|-------|-------|-------|
| MODEL | PIN 1 | PIN 2 | PIN 3 | PIN 4 | PIN 5 |
| WM025 | COM | N/C | 5V | COM | 5V |
| WM053 | COM | N/C | 5V | -12V | 12V |
| WM063 | COM | N/C | 5V | -12V | 12V |
| WM075 | COM | N/C | 5V | COM | 5V |
| WM093 | COM | N/C | 5V | -5V | 12V |
| WM112 | COM | N/C | 5V | COM | 12V |
| WM113 | COM | N/C | 5V | -12V | 12V |
| WM144 | COM | N/C | 12V | COM | 12V |



AC Input

Outputs

Single

Double

Triple

Max.

Watts

Dimensions - In. (mm)

L x W x H

Digi-Key

Part No.

1

Price Each

5

10

Elpac

Part No.

Wide Range Input Series-Regulated Tabletops

| Wide Range Input Series-Regulated Tabletops | | | | | | | | | |
|---|------------|----------------|--------|--------|------------|--|-------------------|--------------|--------------|
| AC Input | Outputs | Single | Double | Triple | Max. Watts | Dimensions - In. (mm) | Digi-Key Part No. | Price Each 1 | Price Each 5 |
| 90-250VAC, 47-440Hz | 12V, 2.5A | — | — | — | 30† | 6.3 x 3.82 x 2.66 (160.02 x 97.03 x 67.56) | EPS107-ND | 110.00 | 99.00 |
| 90-250VAC, 47-440Hz | 24V, 1.25A | — | — | — | 30† | 6.3 x 3.82 x 2.66 (160.02 x 97.03 x 67.56) | EPS108-ND | 114.00 | 102.60 |
| 90-250VAC, 47-440Hz | 12V, 3.5A | — | — | — | 42† | 6.3 x 3.82 x 2.66 (160.02 x 97.03 x 67.56) | EPS112-ND | 110.00 | 99.00 |
| 90-250VAC, 47-440Hz | 24V, 1.75A | — | — | — | 42† | 6.3 x 3.82 x 2.66 (160.02 x 97.03 x 67.56) | EPS113-ND | 114.00 | 102.60 |
| 90-250VAC, 47-440Hz | 30V, 1.75A | — | — | — | 52† | 6.3 x 3.82 x 2.66 (160.02 x 97.03 x 67.56) | EPS117-ND | 136.00 | 122.40 |
| 90-250VAC, 47-440Hz | 5V, 4.0A | 12V, .5A | — | — | 27†† | 6.3 x 3.82 x 2.66 (160.02 x 97.03 x 67.56) | EPS105-ND | 120.00 | 108.00 |
| 90-250VAC, 47-440Hz | 5V, 2.0A | 12V, 1.5/2.5A* | — | — | 30 | 6.3 x 3.82 x 2.66 (160.02 x 97.03 x 67.56) | EPS109-ND | 118.00 | 106.20 |
| 90-250VAC, 47-440Hz | 5V, 3.0A | — | — | — | 30† | 6.3 x 3.82 x 2.66 (160.02 x 97.03 x 67.56) | EPS110-ND | 120.00 | 108.00 |
| 90-250VAC, 47-440Hz | 5V, 3.0A | 12V, 2.5/4.0A* | — | — | 42 | 6.3 x 3.82 x 2.66 (160.02 x 97.03 x 67.56) | EPS114-ND | 118.00 | 106.20 |
| 90-250VAC, 47-440Hz | 5V, 3.0A | 12V, .5A | — | — | 27†† | 6.3 x 3.82 x 2.66 (160.02 x 97.03 x 67.56) | EPS106-ND | 120.00 | 108.00 |
| 90-250VAC, 47-440Hz | 5V, 2.0A | 12V, 1.5/2.5A* | — | — | 30 | 6.3 x 3.82 x 2.66 (160.02 x 97.03 x 67.56) | EPS111-ND | 120.00 | 108.00 |
| 90-250VAC, 47-440Hz | 5V, 3.0A | 12V, 2.5/4.0A* | — | — | 42 | 6.3 x 3.82 x 2.66 (160.02 x 97.03 x 67.56) | EPS115-ND | 120.00 | 108.00 |
| 90-250VAC, 47-440Hz | 5V, 4.8A | 12V, 1.5/2.5A* | — | — | 42 | 6.3 x 3.82 x 2.66 (160.02 x 97.03 x 67.56) | EPS116-ND | 124.00 | 111.60 |

Regulated Wallmounts

| Regulated Wallmounts | | | | | | | | | |
|----------------------|------------|-------------|-------------|--------|------------|--|-------------------|--------------|--------------|
| AC Input | Outputs | Single | Double | Triple | Max. Watts | Dimensions - In. (mm) | Digi-Key Part No. | Price Each 1 | Price Each 5 |
| 115VAC, 60Hz | 5V, 500mA | — | — | — | 2.5 | 2.20 x 2.75 x 3.50 (55.88 x 69.85 x 88.90) | EPS129-ND* | 33.75 | 30.00 |
| 115VAC, 60Hz | 5V, 380mA | -5V, 180mA | 12V, 180mA | — | 5.3 | 2.20 x 2.75 x 3.50 (55.88 x 69.85 x 88.90) | EPS118-ND | 48.38 | 43.00 |
| 115VAC, 60Hz | 5V, 380mA | -12V, 180mA | 12V, 180mA | — | 6.3 | 2.20 x 2.75 x 3.50 (55.88 x 69.85 x 88.90) | EPS120-ND | 51.75 | 46.00 |
| 115VAC, 60Hz | 5V, 600mA | +12V, 180mA | -12V, 160mA | — | 6.8 | 1.80 x 2.60 x 4.50 (45.72 x 66.04 x 114.30) | EPS142-ND | 46.13 | 41.00 |
| 115VAC, 60Hz | 5V, 1.5A | — | — | — | 7.5 | 2.28 x 3.10 x 4.36 (57.91 x 78.74 x 110.74) | EPS143-ND | 45.00 | 40.00 |
| 115VAC, 60Hz | 5V, 1.5A | — | — | — | 7.5 | 2.28 x 3.10 x 4.36 (57.91 x 78.74 x 110.74) | EPS144-ND | 47.25 | 42.00 |
| 115VAC, 60Hz | 5V, 860mA | -5V, 300mA | 12V, 300mA | — | 9.3 | 2.28 x 3.10 x 4.36 (57.91 x 78.74 x 110.74) | EPS123-ND | 60.75 | 54.00 |
| 115VAC, 60Hz | 5V, 860mA | -5V, 300mA | 12V, 300mA | — | 9.3 | 2.28 x 3.10 x 4.36 (57.91 x 78.74 x 110.74) | EPS124-ND | 63.00 | 56.00 |
| 115VAC, 60Hz | 5V, 800mA | 12V, 700mA | — | — | 11.2 | 2.28 x 3.10 x 4.36 (57.91 x 78.74 x 110.74) | EPS125-ND | 60.75 | 54.00 |
| 115VAC, 60Hz | 5V, 860mA | -12V, 300mA | 12V, 300mA | — | 11.3 | 2.28 x 3.10 x 4.36 (57.91 x 78.74 x 110.74) | EPS126-ND | 46.13 | 41.00 |
| 115VAC, 60Hz | 5V, 860mA | -12V, 300mA | 12V, 300mA | — | 11.3 | 2.28 x 3.10 x 4.36 (57.91 x 78.74 x 110.74) | EPS127-ND | 50.63 | 45.00 |
| 115VAC, 60Hz | 12V, 1.2A | — | — | — | 14.4 | 2.28 x 3.10 x 4.36 (57.91 x 78.74 x 110.74) | EPS145-ND | 49.50 | 44.00 |
| 115VAC, 60Hz | 5V, 1.0A | -5V, 1.0A | — | — | 10 | 2.66 x 3.82 x 6.30 (67.56 x 97.03 x 160.02) | EPS130-ND | 58.50 | 52.00 |
| 115VAC, 60Hz | 5V, 860mA | +12V, 300mA | 12V, 300mA | — | 11.3 | 2.28 x 3.10 x 4.36 (57.91 x 78.74 x 110.74) | EPS131-ND | 58.50 | 52.00 |
| 115VAC, 60Hz | 5V, 2.0A | -12V, 500mA | 12V, 500mA | — | 22 | 2.28 x 3.10 x 5.025 (57.91 x 78.74 x 127.64) | EPS134-ND | 96.75 | 86.00 |
| 95-250VAC, 47/63Hz | 5V, 3.0A | — | — | — | 15 | 3.0 x 5.0 x 1.31 (76.20 x 127.00 x 33.27) | EPS146-ND | 101.25 | 90.00 |
| 95-250VAC, 47/63Hz | 12V, 2.17A | — | — | — | 26 | 3.0 x 5.0 x 1.31 (76.20 x 127.00 x 33.27) | EPS101-ND | 90.00 | 81.00 |
| 95-250VAC, 47/63Hz | 15V, 1.9A | — | — | — | 28 | 3.0 x 5.0 x 1.31 (76.20 x 127.00 x 33.27) | EPS102-ND | 90.00 | 81.00 |
| 95-250VAC, 47/63Hz | 18V, 1.56A | — | — | — | 28 | 3.0 x 5.0 x 1.31 (76.20 x 127.00 x 33.27) | EPS103-ND | 90.00 | 81.00 |
| 95-250VAC, 47/63Hz | 24V, 1.17A | — | — | — | 28 | 3.0 x 5.0 x 1.31 (76.20 x 127.00 x 33.27) | EPS104-ND | 90.00 | 81.00 |
| 108-132VAC, 60Hz | 12V, 2.5A | — | — | — | 30 | 2.3 x 3.6 x 1.3 (58.42 x 91.44 x 33.02) | EPS152-ND | | |



NEW! UltraFlex® Series Power Supply

Modular Power Supplies with Any Combination of Outputs — Custom-Made and Shipped in 24 Hours*

The UltraFlex® Series provides high performance and high power density, with either a power factor corrected AC input or a 48VDC input. With leading edge and proprietary circuit design (280 KHz fixed frequency converters, synchronized circuit planar magnetics), advanced thermal management and surface mount technology, these power supplies offer state-of-the-art power densities, exceptional flexibility, reliability, and outstanding performance. The UltraFlex Series gives you the flexibility you need to cope with today's fast-paced new product development cycles and relentless time-to-market schedules.

SPECIFICATIONS:

- AC Input: 85-265VAC, 47-63 Hz (Case A/B)
- DC Input: 36-75 VDC on Case C
- Inrush Current: Less than 40A peak
- Efficiency: 75% typical at nominal line voltage
- EMI: Conducted EMI conforms to EN55022, Level B, and FCC Docket 20780 Part 15, Subpart J, Class B for AC input versions. Conducted EMI to EN55022A for DC input models.
- Power Factor and Harmonic Correction: All models are compliant with EN60555-2 and EN61000-3-2, with up to 250 VAC input. Power factor is 0.98 typical at full load.
- Input Transient and ESD Protection: IEEE-C62.41, Category A3; IEEE-587 Category B; EN61000-4-2/4/5 Level 3.
- Regulated Voltage: Line Regulation — <0.1% for line variations from 85-265VAC; <0.2% for dual output modules. Load Regulation — <0.4% for load variations from no load to full load and full load to no load; <0.8% for dual output modules. Cross Regulation — <0.1% between single

output modules; <3% between dual outputs with 25% load change on high current output. Ripple and Noise — <0.33% or 15mV RMS; <1.0% or 50mV pk-pk (<50mV pk-pk on 5V and 12V outputs) on single output modules; <1.0% or 50mV pk-pk on dual output modules. Temperature Coefficient — 0.02%/°C.

Output Adjustment Range: ±10% of nominal output voltage on all models.

• Thermal Protection: The power supply will shut down in the event of an overtemperature condition (the fan will continue to operate). To restore operation, the supply must cool down and the AC input must be recycled.

• Overcurrent Protection: Overcurrent protection on single output modules limits the current from 110% to 120% of current rating on outputs greater than 400W. (110% to 150% of current rating on outputs less than 400W.) Upon removal of the overload condition, normal operation resumes automatically.

• Overvoltage Protection: Factory-set overvoltage protection from 120% to 130% of nominal output on single output modules. Dual output modules have factory-set overvoltage protection of 120% to 140% of nominal. Internal circuitry will shut down the individual output module. Reset the OVP by cycling the input power.

• Preload: External preload is not required on single output modules. Dual output modules require 1A minimum load on the highest current output (Output #1).

• Dynamic Response: ±25% load change (from 75% base at a rate of 1A/usec) will result in input deviation of less than 2% or 100mV peak (125mV for less than 5V outputs). Output recovery to within 1% of nominal

to be less than 300μsec.

• Holdup Time: The output voltage will remain within regulation limits for 20msec at full load with nominal 115/230VAC line input.

• Remote Sensing: Remote Sense compensates for total cable drop up to 0.5VDC. Available on all outputs.

• Isolation Ratings: Conforms to safety agency requirements.

• Cooling: Provided via an internal DC operated ball-bearing fan.

• Operating Temperature Range: Full operation from 0°C to +50°C with 100% rated power on most models. Derate linearly from +50°C to 50% power at +65°C. Derate H, V, W and Y models in 600W case starting at +40°C to 50% power at 55°C.

• Storage Temperature: -40°C to +85°C

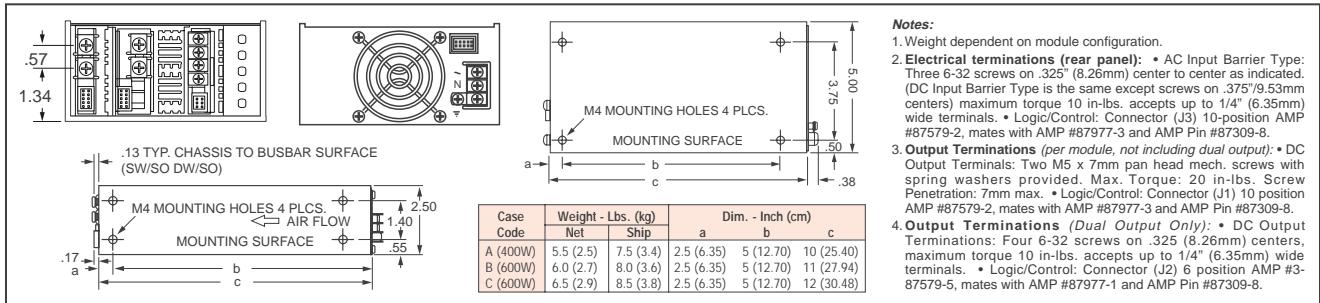
• Military Specifications: Shock — MIL-STD-810E, Method 516.4, Procedure I; Vibration — MIL-STD-810E, Method 514.4, Category I, TP1.

• Mounting: Two mounting surfaces on all models.

• Safety Agency Approvals: The UltraFlex Series meets UL 1950, CSA 22.2 No. 234, TUV, EN60505/IEC950, and SELV. All models carry the CE mark to indicate conformance to the Low Voltage Directive on complete custom-assembled units.

• Guarantee: Lambda's 3-year guarantee includes labor and parts. Guarantee applies to operation within published specifications at the end of 3 years.

* NOTE: 24-hour shipping dependent upon modules selected, time of day ordered, and destination of shipment. Call Digi-Key Specialty Sales for assistance, 1-888-671-1741.



How to Configure Your Standard UltraFlex Power Supply

Step 1 — Case Configuration

Select your power supply case based on the total output power you need (either 400W or 600W) and the corresponding package size.

Note: Items are not sold separately.

| Case Code | Output Power | Input Voltage | Without Signal Approximate Price Each | With Signal Approximate Price Each |
|-----------|--------------|---------------|---------------------------------------|------------------------------------|
| A | 400W | 85-265 VAC | 314.00 | 338.00 |
| B | 600W | 85-265 VAC | 484.00 | 508.00 |
| C | 600W | 36-75 VDC | 664.00 | 634.00 |

Step 2 — Interface Signals Option Code

Select your input and output interface signal code.

| Signal Code | Input Signal | Output Signal | Description of Included Signals & Functions |
|-------------|--------------|---------------|--|
| J | No | No | No Option Signals: The Standard DC Output Module has remote sense, over-current and overvoltage protection. |
| K | Yes | No | Input Signals (Global): Input power fail, 5V standby, global inhibit, fan stop/thermal alarm, fan inhibit, sync input. |
| T | No | Yes | Output Module Signals: Module inhibit, margin, remote adjust, output good, current monitor and current share: active current share and module inverter OK. |
| Z | Yes | Yes | Input Signals (Global): Input power fail, 5V Standby, global inhibit, global output good, fan stop/thermal alarm, fan inhibit. Module Signals: Module inhibit, margin, remote adjust, output good, current monitor and current share: active current share and module inverter OK. |

| | | |
|--------------------------------|---|--|
| Example: Part No. UAK1-HJJP | U = UltraFlex Power Supply A = 400 Watts, Standard Case K = Input Signals (Global) T = 85-265VAC, PFC, Class B EMI Input HJJP = with 4 Output Modules | H = 5V/60V (2 slots) J = 12V/17A (1 slot) J = 12V/17A (1 slot) P = 24V/8.5A (1 slot) Total 5 Slots |
|--------------------------------|---|--|

For assistance in configuring the part number and determining the cost of your custom-made power supply unit, call a Digi-Key Specialty Sales Representative —

1-888-671-1741

Step 3 — Input Voltage and EMI Code

Select AC or DC input voltage

| |
|--|
| 1 = PFC, 85-265 VAC, 50/60 Hz, Class B EMI |
| 4 = DC INPUT, 36-75 VDC, EN55022A |

Step 4 — Output Module Codes

List the output voltages and currents you need, and select your output modules. The modules are available with 2V to 48V outputs. Choose as many modules as you need — up to five module slot widths. Single output modules may be paralleled for higher current requirements.

Note: Components are not sold separately.

| Module Code | Output Voltage | Max. Current Amps @ 50°C | Max. Power Watts @ 50°C | Vout Adj. Range | Slot Width | Without Signal Option Price Each | With Signal Option Price Each |
|-----------------------|----------------|--------------------------|-------------------------|-----------------|------------|----------------------------------|-------------------------------|
| Single Output Modules | | | | | | | |
| A | 2V | 30.0 | 66 | 1.8-2.2 | 1 | 129.00 | 143.00 |
| B | 2V | 60.0 | 132 | 1.8-2.2 | 2 | 189.00 | 203.00 |
| C | 2V | 100.0 | 200 | 1.8-2.2 | 3 | — | 323.00 |
| D | 3.3V | 30.0 | 108 | 3.0-3.6 | 1 | 129.00 | 143.00 |
| E | 3.3V | 60.0 | 216 | 3.0-3.6 | 2 | 189.00 | 203.00 |
| F | 3.3V | 100.0 | 330 | 3.0-3.6 | 3 | — | 323.00 |
| G | 5V | 30.0 | 150 | 4.5-6.0 | 1 | 119.00 | 133.00 |
| H | 5V† | 60.0 | 300 | 4.5-6.0 | 2 | 169.00 | 183.00 |
| I | 5V | 100.0 | 500 | 4.5-6.0 | 3 | — | 293.00 |
| J | 12V | 17.0 | 204 | 10.8-13.2 | 1 | 109.00 | 123.00 |
| K | 12V | 30.0 | 360 | 10.8-13.2 | 2 | 179.00 | 193.00 |
| L | 12V | 50.0 | 600 | 10.8-13.2 | 3 | — | 323.00 |
| M | 15V | 14.0 | 210 | 13.5-16.5 | 1 | 139.00 | 153.00 |
| N | 15V | 24.0 | 360 | 13.5-16.5 | 2 | 199.00 | 213.00 |
| P | 24V | 8.5 | 204 | 21.6-26.4 | 1 | 149.00 | 163.00 |
| Q | 24V | 15.0 | 360 | 21.6-26.4 | 2 | 219.00 | 233.00 |
| R | 24V | 25.0 | 600 | 21.6-26.4 | 3 | — | 363.00 |
| 8 | 28V | 12.0 | 336 | 25.2-30.8 | 2 | — | 233.00 |
| 3 | 36V | 11.0 | 396 | 32.4-39.6 | 2 | — | 233.00 |
| S | 48V | 4.0 | 192 | 43.2-52.8 | 1 | 149.00 | 163.00 |
| T | 48V | 8.0 | 384 | 43.2-52.8 | 2 | 219.00 | 233.00 |
| U | 48V | 12.5 | 600 | 43.2-52.8 | 3 | — | 363.00 |
| Dual Output Modules* | | | | | | | |
| V | 12V & 5V† | 10.0 & 4.0 | 150 | ±10% | 1 | 179.00 | — |
| W | 5V & 12V† | 10.0 & 4.0 | 150 | ±10% | 1 | 179.00 | — |
| Y | 12V & 12V† | 10.0 & 4.0 | 150 | ±10% | 1 | 179.00 | — |
| Z | 15V & 15V | 8.0 & 3.0† | 150 | ±10% | 1 | 179.00 | — |

* When using the 600W AC Case B, derate as follows:

H Mod.: 5V @ 55A
W Mod.: 5V @ 8A, 12V @ 4A
Y Mod.: 12V @ 8A, 12 @ 3A

† Peak Rating 10A and 4A for up to 1 minute.

* On dual output modules, output 1 has the highest current rating.

Note: Due to UL approval requirements, modules may not be ordered separately.

1-800-344-4539

218-681-6674 • FAX: 218-681-3380 • www.digikey.com

SWT SERIES Low Cost Triple Output Power Supplies

Lambda's SWT series of triple output PCB style power supplies have a continuous wide range or auto ranging AC input and EMI to curve B. Full power is available up to 50°C ambient without the need for forced air cooling.

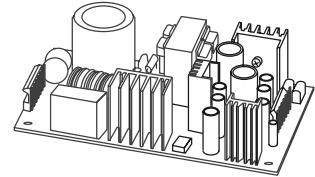
Available in four industry standard package sizes from 30-100 watts using high performance

components, Lambda's SWT series will prove to be the economical choice for high reliability and quality, ensuring maximum up-time.

Specifications:

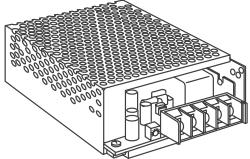
- AC Input: SWT30, SWT40 and SWT 100: 85-265VAC, 47-63Hz. (110-340VDC); SWT65: 85-132, 170-265VAC, 47-63Hz (Autostrap) • Minimum

Load: SWT30: +5V 0.2A, +12/15 0.4A; SWT 40: +5V 0.2A, +12/15V 0.3A; SWT65: +5V 0.3A; SWT100: +5V 0.5A • Operating Temperature Range: -10°C to +60°C; 100% output at 50°C, derate linearly to 70% at 60°C • Safety Agency Approval: UL1950, CSA950, EN60950, Dentor, CE Mark. • Warranty: 2 years.



| Power (W) | Output 1 | Output 2 | Output 3 | Dimensions - In. (mm) W x H x L | Wgt. (Kilograms) | Digi-Key Part No. | Price Each 1 | Price Each 10 | Price Each 25 | Lambda Part No. |
|--------------------------|----------|-----------|----------|--|------------------|-------------------|--------------|---------------|---------------|-----------------|
| 30 | +5V@2A | +12V@1.5A | -5V@.3A | 3.00 x 1.20 x 5.00 (76.20 x 30.48 x 127.00) | .07 | 285-1069-ND | 42.05 | 397.3 | 37.70 | SWT30-525 |
| | +5V@2A | +12V@1.5A | -12V@.3A | 3.00 x 1.20 x 5.00 (76.20 x 30.48 x 127.00) | .07 | 285-1068-ND | 42.05 | 397.3 | 37.70 | SWT30-522 |
| | +5V@2A | +15V@1A | -15V@.3A | 3.00 x 1.20 x 5.00 (76.20 x 30.48 x 127.00) | .07 | 285-1070-ND | 42.05 | 397.3 | 37.70 | SWT30-5FF |
| 40 | +5V@3A | +12V@2A | -5V@.3A | 3.00 x 1.40 x 5.00 (76.20 x 35.56 x 127.00) | .09 | 285-1072-ND | 44.95 | 424.7 | 40.30 | SWT40-525 |
| | +5V@3A | +15V@1.5A | -15V@.3A | 3.00 x 1.40 x 5.00 (76.20 x 35.56 x 127.00) | .09 | 285-1073-ND | 44.95 | 424.7 | 40.30 | SWT40-5FF |
| | +5V@3A | +12V@2A | -12V@.3A | 3.00 x 1.40 x 5.00 (76.20 x 35.56 x 127.00) | .09 | 285-1071-ND | 44.95 | 424.7 | 40.30 | SWT40-522 |
| 65 | +5V@6A | +12V@2.5A | -5V@.5A | 3.50 x 1.77 x 6.00 (88.90 x 44.96 x 152.40) | .13 | 285-1075-ND | 53.65 | 50.69 | 48.10 | SWT65-525 |
| | +5V@6A | +15V@1.8A | -15V@.5A | 3.50 x 1.77 x 6.00 (88.90 x 44.96 x 152.40) | .13 | 285-1076-ND | 53.65 | 50.69 | 48.10 | SWT65-5FF |
| | +5V@6A | +12V@2.5A | -12V@.5A | 3.50 x 1.77 x 6.00 (88.90 x 44.96 x 152.40) | .13 | 285-1074-ND | 53.65 | 50.69 | 48.10 | SWT65-522 |
| 100 | +5V@8A | +12V@4A | -5V@.8A | 4.25 x 1.77 x 7.75 (107.95 x 44.96 x 196.85) | .32 | 285-1066-ND | 117.45 | 110.97 | 105.30 | SWT100-525 |
| | +5V@8A | +12V@4A | -12V@.8A | 4.25 x 1.77 x 7.75 (107.95 x 44.96 x 196.85) | .32 | 285-1065-ND | 117.45 | 110.97 | 105.30 | SWT100-522 |
| | +5V@8A | +15V@3.2A | -15V@.8A | 4.25 x 1.77 x 7.75 (107.95 x 44.96 x 196.85) | .32 | 285-1067-ND | 117.45 | 110.97 | 105.30 | SWT100-5FF |
| Connector Kit for SWT30 | | | | | | 285-1095-ND | 8.00 | — | — | KTSWT30 |
| Connector Kit for SWT40 | | | | | | 285-1096-ND | 8.00 | — | — | KTSWT40 |
| Connector Kit for SWT65 | | | | | | 285-1097-ND | 8.00 | — | — | KTSWT65 |
| Connector Kit for SWT100 | | | | | | 285-1098-ND | 8.00 | — | — | KTSWT100 |

RWS-A SERIES Low Power Industrial Supply



Lambda's RWS-A Series meets the demands of today's global industrial market with universal AC input, international agency approvals including the CE Mark and FCC Class B EMI compliance. The RWS-A Series is available in 15 and 30 watt packages with output voltages ranging from 5 to 48 volts with a ±10% adjustment range.

Specifications:

- AC Input: 85-265VAC, 47-440Hz • DC Input: 110-330VDC • EMI: Conducted: FCC Class B • Output Voltage Adj. Range: ±10% • Over-

current Protection: Electronic current limiting circuits limits the output current to 105% of the maximum rated current with automatic recovery

- Overvoltage Protection: Non-crowbar, inverter shutdown type OV protection • Operating Temperature Range: 0°C to +60°C with derating above +50°C • Output Status Indicator: A green LED when DC output is "ON" • Input and Output Connections: Barrier strip with clear plastic cover

• Safety Agency Approval: UL1950, CSA22.2 No. 234, EN60950, and CE Mark (Low voltage directive) • Warranty: 3 years.

| Out-put V | Power (W) | Max. Current Amps at 40° 50° 60° | | | Dimensions - In. (mm) W x H x L | Wgt. (Kilograms) | Digi-Key Part No. | Price Each 1 | Price Each 10 | Price Each 25 | Lambda Part No. |
|-----------|-----------|----------------------------------|-----|------|---|------------------|-------------------|--------------|---------------|---------------|-----------------|
| 5 | 15 | 3.0 | 3.0 | 1.80 | 3.81 x 1.55 x 3.87 (96.77 x 39.37 x 98.30) | .22 | 285-1038-ND | 72.50 | 68.50 | 65.00 | RWS-15A-5/A |
| | 30 | 6.0 | 6.0 | 3.60 | 3.81 x 1.55 x 4.78 (96.77 x 39.37 x 121.41) | .25 | 285-1042-ND | 82.65 | 78.09 | 74.10 | RWS-30A-5/A |
| 12 | 15 | 1.3 | 1.3 | 0.78 | 3.81 x 1.55 x 3.87 (96.77 x 39.37 x 98.30) | .22 | 285-1035-ND | 72.50 | 68.50 | 65.00 | RWS-15A-12/A |
| | 30 | 2.5 | 2.5 | 1.50 | 3.81 x 1.55 x 4.78 (96.77 x 39.37 x 121.41) | .25 | 285-1039-ND | 82.65 | 78.09 | 74.10 | RWS-30A-12/A |
| 15 | 15 | 1.0 | 1.0 | 0.60 | 3.81 x 1.55 x 3.87 (96.77 x 39.37 x 98.30) | .22 | 285-1036-ND | 72.50 | 68.50 | 65.00 | RWS-15A-15/A |
| | 30 | 2.0 | 2.0 | 1.20 | 3.81 x 1.55 x 4.78 (96.77 x 39.37 x 121.41) | .25 | 285-1040-ND | 82.65 | 78.09 | 74.10 | RWS-30A-15/A |
| 24 | 15 | 0.7 | 0.7 | 0.42 | 3.81 x 1.55 x 3.87 (96.77 x 39.37 x 98.30) | .22 | 285-1037-ND | 72.50 | 68.50 | 65.00 | RWS-15A-24/A |
| | 30 | 1.3 | 1.3 | 0.78 | 3.81 x 1.55 x 4.78 (96.77 x 39.37 x 121.41) | .25 | 285-1041-ND | 82.65 | 78.09 | 74.10 | RWS-30A-24/A |
| | 50 | 2.1 | 2.1 | 1.2 | 3.81 x 1.55 x 6.26 (96.77 x 39.37 x 159.00) | .37 | 285-1044-ND | 117.45 | 110.97 | 105.30 | RWS-50A-24A |

LW SERIES Compact Dual and Triple Output Power Supplies

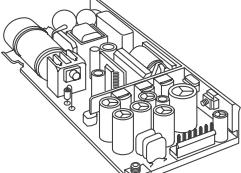
Lambda's LW multiple output power supplies feature international safety approvals, universal AC input, and integral EMI filtering. The LW's low profile package, available from 15-50 watts, makes it ideal for space limited applications. Designed to meet the demands of industrial applications, the LW's high reliability and performance specifications will be an effective solution for your power supply needs.

Specifications:

- AC Input: 85-265VAC, 47-440Hz • DC Input:

110-330VDC • Fusing: AC input line fuse protects the input wiring to the power supply. Overload of power supply does not cause fuse failure. • Minimum Load: (On Channel 1) LW15H: 0.5A; LW130H: 0.7A; LW750H: 1.0A; LW5D-20: 20% on output #1 • Overvoltage Protection: Standard on main outputs, inverter shut down method, manual reset • Overload Protection: Automatic electronic current limiting circuit limits short circuit output current to safe, preset value, thereby protecting the load as

well as the power supply when direct shorts occur. Sustained short circuit operation for more than 30 seconds may cause damage to the power supply. • Operating Temperature Range: 0°C to +60°C with derating above 40°C • Input and Output Connections: Connectors (Mating connectors provided with units) • Safety Agency Approval: UL1950, CSA22.2 No. 234, IEC950, EN60950, CE Mark (Low voltage directive) • Warranty: 1 year



| Power (W) | Output 1 | Output 2 | Output 3 | Dimensions - In. (mm) W x H x L | Wgt. (Kilograms) | Digi-Key Part No. | Price Each 1 | Price Each 10 | Price Each 25 | Lambda Part No. |
|----------------|------------|------------|----------|---|------------------|-------------------|--------------|---------------|---------------|-----------------|
| Dual Outputs | | | | | | | | | | |
| 15 | +5V@1.5A | +12V@ 6A | — | 2.36 x 1.03 x 4.32 (59.94 x 26.16 x 109.73) | .19 | 285-1001-ND | 110.20 | 104.12 | 98.80 | LWD-15-0512 |
| | +5V@1.5A | +24V@ 3A | — | 2.36 x 1.03 x 4.32 (59.94 x 26.16 x 109.73) | .19 | 285-1002-ND | 110.20 | 104.12 | 98.80 | LWD-15-0524 |
| 30 | +12V@.6A | +12V@ 6A | — | 2.36 x 1.03 x 4.32 (59.94 x 26.16 x 109.73) | .19 | 285-1003-ND | 110.20 | 104.12 | 98.80 | LWD-15-1212 |
| | +12V@.6A | +24V@ 3A | — | 2.36 x 1.03 x 4.32 (59.94 x 26.16 x 109.73) | .19 | 285-1004-ND | 110.20 | 104.12 | 98.80 | LWD-15-1224 |
| 50 | +5V@3A | +12V@ 1.2A | — | 2.36 x 1.03 x 5.75 (59.94 x 26.16 x 146.05) | .26 | 285-1006-ND | 159.50 | 150.70 | 143.00 | LWD-30-0512 |
| | +5V@3A | +24V@ 6A | — | 2.36 x 1.03 x 5.75 (59.94 x 26.16 x 146.05) | .26 | 285-1007-ND | 159.50 | 150.70 | 143.00 | LWD-30-0524 |
| 30 | +12V@ 1.2A | +12V@ 1.2A | — | 2.36 x 1.03 x 5.75 (59.94 x 26.16 x 146.05) | .26 | 285-1008-ND | 159.50 | 150.70 | 143.00 | LWD-30-1212 |
| | +12V@ 1.2A | +24V@ 6A | — | 2.36 x 1.03 x 5.75 (59.94 x 26.16 x 146.05) | .26 | 285-1009-ND | 159.50 | 150.70 | 143.00 | LWD-30-1224 |
| 50 | +5V@5A | +12V@ 2A | — | 3.81 x 1.03 x 6.29 (96.77 x 26.16 x 159.77) | .37 | 285-1011-ND | 200.10 | 189.06 | 179.40 | LWD-50-0512 |
| | +5V@5A | +24V@ 1A | — | 3.81 x 1.03 x 6.29 (96.77 x 26.16 x 159.77) | .37 | 285-1012-ND | 200.10 | 189.06 | 179.40 | LWD-50-0524 |
| 50 | +12V@ 2A | +12V@ 2A | — | 3.81 x 1.03 x 6.29 (96.77 x 26.16 x 159.77) | .37 | 285-1013-ND | 200.10 | 189.06 | 179.40 | LWD-50-1212 |
| | +12V@ 2A | +24V@ 1A | — | 3.81 x 1.03 x 6.29 (96.77 x 26.16 x 159.77) | .37 | 285-1014-ND | 200.10 | 189.06 | 179.40 | LWD-50-1224 |
| 50 | +15V@ 1.6A | +15V@ 1.6A | — | 3.81 x 1.03 x 6.29 (96.77 x 26.16 x 159.77) | .37 | 285-1015-ND | 200.10 | 189.06 | 179.40 | LWD-50-1515 |
| Triple Outputs | | | | | | | | | | |
| 15 | +5V@3A | +12V@ 6A | -12V@ 4A | 2.36 x 1.02 x 5.03 (59.94 x 25.91 x 127.76) | .19 | 285-1016-ND | 143.55 | 135.63 | 128.70 | LWT-15H-522 |
| | +5V@3A | +24V@ 6A | -15V@ 4A | 2.36 x 1.02 x 5.03 (59.94 x 25.91 x 127.76) | .19 | 285-1017-ND | 143.55 | 135.63 | 128.70 | LWT-15H-525 |
| 30 | +5V@5A | +12V@ 1.2A | -12V@ 6A | 2.75 x 1.02 x 6.29 (69.85 x 25.91 x 159.77) | .26 | 285-1019-ND | 185.60 | 175.36 | 166.40 | LWT-30H-522 |
| | +5V@5A | +12V@ 1.2A | -5V@ 6A | 2.75 x 1.02 x 6.29 (69.85 x 25.91 x 159.77) | .26 | 285-1020-ND | 185.60 | 175.36 | 166.40 | LWT-30H-525 |
| 50 | +5V@8A | +12V@ 1.5A | -12V@ 1A | 3.82 x 1.02 x 6.29 (97.03 x 25.91 x 159.77) | .37 | 285-1022-ND | 227.65 | 215.09 | 204.10 | LWT-50H-522 |
| | +5V@8A | +12V@ 1.5A | -5V@ 1A | 3.82 x 1.02 x 6.29 (97.03 x 25.91 x 159.77) | .37 | 285-1023-ND | 227.65 | 215.09 | 204.10 | LWT-50H-525 |
| 50 | +5V@8A | +15V@ 1.5A | -15V@ 1A | 3.82 x 1.02 x 6.29 (97.03 x 25.91 x 159.77) | .37 | 285-1024-ND | 227.65 | 215.09 | 204.10 | LWT-50H-5FF |

1-800-344-4539

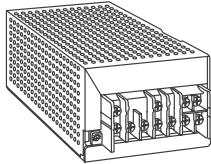
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Power Supplies

9293-B-ND Lambda 1998 Power Supply Solutions Book.....\$1.95

JWS SERIES High Quality Industrial Power Supplies



Lambda's new JWS series meets the demands of today's worldwide industrial market with universal input, international agency approvals, and CE Marking. Reducing the risk of system failures, the JWS has been engineered to meet input transients and brownouts in compliance to EN61000-4 (2, -3, -4, -5, -6) as well as meeting EMI Curve B (for both radiated and conducted).

The JWS Series is power factored corrected.

Backed by Lambda's five-year warranty, the JWS series will prove to be the industrial choice for insured reliability and high quality, guaranteeing end-users maximum up-time.

Protection: Electronic current limiting circuit limits the output current to 105% of the maximum rated current with automatic recovery • **Overvoltage Protection:** Non-crowbar, inverter shutdown type OV protection • **Cooling:** Convection • **Operating Temperature Range:** -10°C to +50°C with derating above +40°C • **Output Status Indicator:** A green LED when DC output is "ON" • **Safety Agency Approval:** UL1950, CSA950, EN60950, VDE0160 and CE Mark (Low voltage directive) • **Warranty:** 5-year

| Output V | Power (W) | Max. Current Amps at 40° 45° 50° | | | Dimensions - In. (mm) W x H x L | Wgt. (Kilograms) | Digi-Key Part No. | Price Each | | | Lambda Part No. |
|----------|-----------|----------------------------------|------|---|--|------------------|-------------------|------------|--------|-------------|-----------------|
| | | 40° | 45° | 50° | | | | 1 | 10 | 25 | |
| 3.3 | 33 | 10.0 | 10.0 | 8.0 | 3.346 x 1.45 x 6.25 (84.99 x 36.83 x 158.75) | .35 | 285-1047-ND | 111.65 | 105.49 | 100.10 | JWS50-3/A |
| | 50 | 15.0 | 12.0 | 9.0 | 3.62 x 1.65 x 6.88 (91.95 x 41.91 x 174.75) | .45 | 285-1052-ND | 130.50 | 123.30 | 117.00 | JWS75-3/A |
| 5 | 50 | 10.0 | 10.0 | 6.0 | 3.346 x 1.45 x 6.25 (84.99 x 36.83 x 158.75) | .35 | 285-1048-ND | 130.50 | 123.30 | 117.00 | JWS50-5/A |
| | 75 | 15.0 | 12.0 | 9.0 | 3.62 x 1.65 x 6.88 (91.95 x 41.91 x 174.75) | .45 | 285-1053-ND | 171.10 | 161.66 | 153.40 | JWS75-5/A |
| 10 | 100 | 20.0 | 16.0 | 12.0 | 3.62 x 1.96 x 7.40 (91.95 x 49.78 x 187.96) | .65 | 285-1057-ND | 201.55 | 190.43 | 180.70 | JWS100-5/A |
| | 150 | 30.0 | 24.0 | 18.0 | 3.62 x 2.55 x 7.79 (91.95 x 64.77 x 197.87) | .85 | 285-1061-ND | 262.45 | 247.97 | 235.30 | JWS150-5/A |
| 12 | 50 | 4.3 | 4.3 | 3.4 | 3.346 x 1.45 x 6.25 (84.99 x 36.83 x 158.75) | .35 | 285-1049-ND | 130.50 | 123.30 | 117.00 | JWS50-12/A |
| | 75 | 6.3 | 5.0 | 3.8 | 3.62 x 1.65 x 6.88 (91.95 x 41.91 x 174.75) | .45 | 285-1054-ND | 171.10 | 161.66 | 153.40 | JWS75-12/A |
| 24 | 100 | 8.5 | 6.8 | 5.1 | 3.62 x 1.96 x 7.40 (91.95 x 49.78 x 187.96) | .65 | 285-1058-ND | 201.55 | 190.43 | 180.70 | JWS100-12/A |
| | 150 | 13.0 | 10.4 | 7.8 | 3.62 x 2.55 x 7.79 (91.95 x 64.77 x 197.87) | .85 | 285-1062-ND | 262.45 | 247.97 | 235.30 | JWS150-12/A |
| 24 | 50 | 2.2 | 2.2 | 1.7 | 3.346 x 1.45 x 6.25 (84.99 x 36.83 x 158.75) | .35 | 285-1050-ND | 130.50 | 123.30 | 117.00 | JWS50-24/A |
| | 75 | 3.2 | 2.5 | 1.9 | 3.62 x 1.65 x 6.88 (91.95 x 41.91 x 174.75) | .45 | 285-1055-ND | 171.10 | 161.66 | 153.40 | JWS75-24/A |
| 48 | 100 | 4.5 | 3.6 | 2.7 | 3.62 x 1.96 x 7.40 (91.95 x 49.78 x 187.96) | .65 | 285-1059-ND | 201.55 | 190.43 | 180.70 | JWS100-24/A |
| | 150 | 6.5 | 5.2 | 3.9 | 3.62 x 2.55 x 7.79 (91.95 x 64.77 x 197.87) | .85 | 285-1063-ND | 262.45 | 247.97 | 235.30 | JWS150-24/A |
| 48 | 50 | 1.1 | 1.1 | 0.88 | 3.346 x 1.45 x 6.25 (84.99 x 36.83 x 158.75) | .35 | 285-1051-ND | 130.50 | 123.30 | 117.00 | JWS50-48/A |
| | 75 | 1.6 | 1.3 | 0.96 | 3.62 x 1.65 x 6.88 (91.95 x 41.91 x 174.75) | .45 | 285-1056-ND | 171.10 | 161.66 | 153.40 | JWS75-48/A |
| 100 | 2.1 | 1.7 | 1.26 | 3.62 x 1.96 x 7.40 (91.95 x 49.78 x 187.96) | .65 | 285-1060-ND | 201.55 | 190.43 | 180.70 | JWS100-48/A | |
| | 150 | 3.3 | 2.6 | 1.98 | 3.62 x 2.55 x 7.79 (91.95 x 64.77 x 197.87) | .85 | 285-1064-ND | 262.45 | 247.97 | 235.30 | JWS150-48/A |

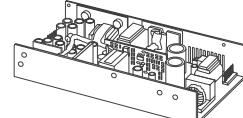
SVP SERIES Power Factor Corrected

Specifications:

• **Input:** SVP Models: 90-132VAC, 187-264VAC (auto-selecting input), 47-63Hz • **Power Factor Correction:** IEC555-2 and EN60555-2 • **Output Voltage Adj. Range:** ±5% user adjustable on single output models and on main output of multiples. Auxiliary outputs are

fixed • **Overvoltage Protection:** OV protection is provided on 5V single output models and main outputs of multiple output models. The unit will reset after input is recycled if OV condition is removed. • **Short Circuit Protection:** All outputs are protected from temporary short circuits • **Operating Temperature Range:** 0°C to +60°C with derating above 50°C • **Monitoring Signals:** AC Power Fail and DC Output Good Signals (Open Collector, Conductance Signal) are standard features • **Safety Agency Approval:** UL1950, CSA22.2 No. 234, VDE/EN60950, and CE Mark (Low voltage directive) • **Warranty:** 1 year.

to +60°C with derating above 50°C • **Monitoring Signals:** AC Power Fail and DC Output Good Signals (Open Collector, Conductance Signal) are standard features • **Safety Agency Approval:** UL1950, CSA22.2 No. 234, VDE/EN60950, and CE Mark (Low voltage directive) • **Warranty:** 1 year.



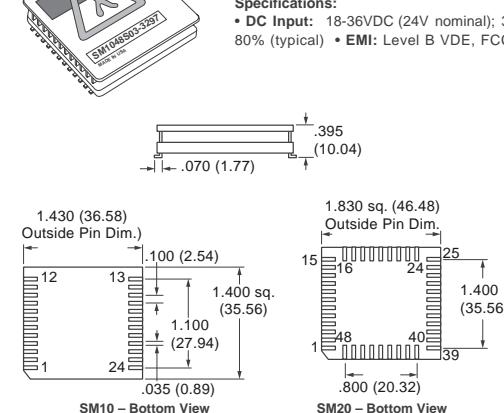
| Power (W) | Output 1 | Output 2 | Output 3 | Output 4 | Dimensions - In. (mm) W x H x L | Wgt. (Kilograms) | Digi-Key Part No. | 1 | 10 | 25 | Lambda Part No. |
|----------------------|------------|-----------|----------|----------|--|------------------|-------------------|--------|--------|--------|-----------------|
| <i>Single Output</i> | | | | | | | | | | | |
| 100 | +5V@20A | — | — | — | 4.75 x 1.77 x 7.50 (120.65 x 44.96 x 190.50) | .78 | 285-1031-ND | 221.85 | 209.61 | 198.90 | SVPS10-52 |
| | +12V@8.3A | — | — | — | 4.75 x 1.77 x 7.50 (120.65 x 44.96 x 190.50) | .78 | 285-1029-ND | 221.85 | 209.61 | 198.90 | SVPS10-122 |
| 100 | +24V@4.3A | — | — | — | 4.75 x 1.77 x 7.50 (120.65 x 44.96 x 190.50) | .78 | 285-1030-ND | 221.85 | 209.61 | 198.90 | SVPS10-242 |
| 150 | +5V@30A | — | — | — | 4.75 x 1.77 x 8.50 (120.65 x 44.96 x 215.90) | 1.46 | 285-1034-ND | 234.90 | 221.94 | 210.60 | SVPS15-122 |
| 150 | +12V@12.5A | — | — | — | 4.75 x 1.77 x 8.50 (120.65 x 44.96 x 215.90) | 1.46 | 285-1032-ND | 234.90 | 221.94 | 210.60 | SVPS15-122 |
| 150 | +24V@6.25A | — | — | — | 4.75 x 1.77 x 8.50 (120.65 x 44.96 x 215.90) | 1.46 | 285-1033-ND | 234.90 | 221.94 | 210.60 | SVPS15-242 |
| <i>Triple Output</i> | | | | | | | | | | | |
| 115 | +5V@15A | +12V@2.5A | -12V@1A | — | 4.75 x 1.77 x 8.50 (120.65 x 44.96 x 215.90) | 1.42 | 285-1045-ND | 247.95 | 234.27 | 222.30 | SVPT115-1Z |
| 115 | +5V@15A | +15V@2.5A | -15V@1A | — | 4.75 x 1.77 x 8.50 (120.65 x 44.96 x 215.90) | 1.42 | 285-1046-ND | 247.95 | 234.27 | 222.30 | SVPT115-2Z |
| <i>Quad Output</i> | | | | | | | | | | | |
| 130 | +5V@15A | +12V@2.5A | -12V@1A | +24V@.8A | 4.75 x 1.77 x 8.50 (120.65 x 44.96 x 215.90) | 1.05 | 285-1025-ND | 256.65 | 242.49 | 230.10 | SVPQ130-1Z |
| 130 | +5V@15A | +12V@2.5A | -12V@1A | -5V@1.5A | 4.75 x 1.77 x 8.50 (120.65 x 44.96 x 215.90) | 1.05 | 285-1026-ND | 256.65 | 242.49 | 230.10 | SVPQ130-2Z |
| 130 | +5V@15A | +15V@2.5A | -15V@1A | +24V@.8A | 4.75 x 1.77 x 8.50 (120.65 x 44.96 x 215.90) | 1.05 | 285-1027-ND | 256.65 | 242.49 | 230.10 | SVPQ130-3Z |
| 130 | +5V@15A | +15V@2.5A | -15V@1A | -5V@1.5A | 4.75 x 1.77 x 8.50 (120.65 x 44.96 x 215.90) | 1.05 | 285-1028-ND | 256.65 | 242.49 | 230.10 | SVPQ130-4Z |
| <i>Connector Kit</i> | | | | | | | | | | | |
| | | | | | | | 285-1093-ND | 12.96 | — | — | SVKT100-25 |
| | | | | | | | 285-1094-ND | 12.96 | — | — | SVKT150-15 |

SM SERIES Surface Mountable DC-DC Converters



Lambda's new SM Series is the first family of surface mount DC-DC converters that is designed specifically for card level distributed power applications targeted at the Telecom and Computer markets.

Specifications: • **DC Input:** 18-36VDC (24V nominal); 36-75VDC (48V nominal) • **Efficiency:** 80% (typical) • **EMI:** Level B VDE, FCC, Bellcore 1089 with an external filter



• **Minimum Load:** 10% on primary output • **Output Voltage Accuracy:** ±1% • **Load Regulation:** Singles: 1% max of total output; Duals: 1% max -V to +V; 2% max -V or +V to common • **Start Up:** Within 10ms after application of nominal input voltage • **Operating Temperature Range:** SM10: -40°C to 70°C; SM20: -40°C to 60°C • **Safety Agency Approval:** UL1950, CSA22.2 No. 234, VDE/EN60950, and CE Mark • **Warranty:** 2 years.

| Input (V) | Output (V) | Current (A) | Power (W) | Digi-Key Part No. | 1 | 10 | 25 | Lambda Part No. |
|----------------------|------------|-------------|-----------|-------------------|--------|--------|--------|-----------------|
| <i>Single Output</i> | | | | | | | | |
| 24 | 3.3 | 2.55 | 8.40 | 285-1082-ND | 82.65 | 78.09 | 74.10 | SM10-24S03 |
| 24 | 3.3 | 5.00 | 16.50 | 285-1090-ND | 133.40 | 126.04 | 119.60 | SM20-24S03 |
| 48 | 3.3 | 2.55 | 8.40 | 285-1079-ND | 82.65 | 78.09 | 74.10 | SM10-48S03 |
| 48 | 3.3 | 5.00 | 16.50 | 285-1087-ND | 134.85 | 127.41 | 120.90 | SM20-48S03 |
| 24 | 5 | 2.00 | 10.00 | 285-1083-ND | 82.65 | 78.09 | 74.10 | SM10-24S05 |
| 24 | 5 | 4.00 | 20.00 | 285-1091-ND | 133.40 | 126.04 | 119.60 | SM20-24S05 |
| 48 | 5 | 2.00 | 10.00 | 285-1080-ND | 82.65 | 78.09 | 74.10 | SM10-48S05 |
| 48 | 5 | 4.00 | 20.00 | 285-1088-ND | 133.40 | 126.04 | 119.60 | SM20-48S05 |
| 24 | 12 | 0.83 | 10.00 | 285-1084-ND | 82.65 | 78.09 | 74.10 | SM10-24S12 |
| 24 | 12 | 1.67 | 20.00 | 285-1092-ND | 133.40 | 126.04 | 119.60 | SM20-24S12 |
| 48 | 12 | 0.83 | 10.00 | 285-1081-ND | 82.65 | 78.09 | 74.10 | SM10-48S12 |
| 48 | 12 | 1.67 | 20.00 | 285-1089-ND | 133.40 | 126.04 | 119.60 | SM20-48S12 |
| <i>Dual Output</i> | | | | | | | | |
| 24 | ±12 | 0.42 | 10.00 | 285-1078-ND | 82.65 | 78.09 | 74.10 | SM10-24D12 |
| 24 | ±12 | 0.83 | 20.00 | 285-1086-ND | 134.85 | 127.41 | 120.90 | SM20-24D12 |
| 48 | ±12 | 0.42 | 10.00 | 285-1077-ND | 82.65 | 78.09 | 74.10 | SM10-48D12 |
| 48 | ±12 | 0.83 | 20.00 | 285-1085-ND | 134.85 | 127.41 | 120.90 | SM20-48D12 |

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World Class Medical Linears

FEATURES:

- 19 Models (single, dual and triple output)
- Approved to UL 544, IEC 601 and CSA 234 L3
- 3 Power Levels (5 to 92 watts)
- Medical leakage current does not exceed 10µA
- 8-Hour Burn-in with Cycling
- Full 3-Year Warranty

World Wide AC Input Ranges:

- AC Input: 110/120/220/240 VAC, 47-63 Hz
- OVP on all 5V Outputs
- Meets EMI Per FCC/VDE B

Industry Standard Packaging:

- Hermetically Sealed Power Transistors and ICs
- MTFB 200,000+ Hours Per Mil Handbook 217D

9288B-ND Power Engineering Manual\$2.95

Single Output

| Output | Dimensions (mm) | Digi-Key Part No. | Price Each | | | | Condor Part No. |
|-----------|-------------------------|-------------------|------------|-------|-------|-------|-----------------|
| | | | 1 | 10 | 25 | 50 | |
| 5V @1.0A | 107.95 x 82.55 x 45.72 | 271-1018-ND | 40.56 | 39.34 | 38.53 | 36.51 | ML5-1-OV-A |
| 5V @3.0A | 123.95 x 101.60 x 57.15 | 271-1006-ND | 48.88 | 47.41 | 46.44 | 43.99 | MB5-3-OV-A |
| 5V @6.0A | 143.00 x 123.44 x 74.93 | 271-1012-ND | 62.40 | 60.53 | 59.28 | 56.16 | MC5-6-OV-A |
| 12V @1.7A | 123.95 x 101.60 x 57.15 | 271-1002-ND | 48.88 | 47.41 | 46.44 | 43.99 | MB12-1.7-A |
| 12V @3.4A | 143.00 x 123.44 x 74.93 | 271-1009-ND | 62.40 | 60.53 | 59.28 | 56.16 | MC12-3.4-A |
| 15V @0.4A | 107.95 x 82.55 x 45.72 | 271-1017-ND | 40.56 | 39.34 | 38.53 | 36.51 | ML15-0.4-A |
| 15V @1.5A | 123.44 x 101.60 x 57.15 | 271-1003-ND | 48.88 | 47.41 | 46.44 | 43.99 | MB15-1.5-A |
| 24V @1.2A | 123.44 x 101.60 x 57.15 | 271-1004-ND | 48.88 | 47.41 | 46.44 | 43.99 | MB24-1.2-A |
| 24V @2.4A | 143.00 x 123.44 x 74.93 | 271-1011-ND | 62.40 | 60.53 | 59.28 | 56.16 | MC24-2.4-A |
| 24V @4.8A | 228.60 x 123.44 x 83.82 | 271-1015-ND | 96.72 | 93.82 | 91.88 | 87.05 | MD24-4.8-A |
| 28V @1.0A | 123.44 x 101.60 x 57.15 | 271-1005-ND | 48.88 | 47.41 | 46.44 | 43.99 | MB28-1-A |

Multiple Output

| Output 1 | Output 2 | Output 3 | Dimensions (mm) | Digi-Key Part No. | Price Each | | | | Condor Part No. |
|-------------------|-------------------|-------------------|-------------------------|-------------------|------------|--------|--------|-------|-----------------|
| | | | | | 1 | 10 | 25 | 50 | |
| Dual Output | | | | | | | | | |
| +12/15V @1.0/0.8A | -12/15V @1.0/0.8A | — | 165.10 x 101.60 x 57.15 | 271-1000-ND | 55.12 | 53.47 | 52.36 | 49.62 | MAA15-0.8-A |
| +12/15V @1.7/1.5A | -12/15V @1.7/1.5A | — | 177.80 x 123.95 x 74.93 | 271-1006-ND | 70.72 | 68.60 | 67.18 | 63.65 | MBB15-1.5-A |
| +12/15V @3.4/3.0A | -12/15V @3.4/3.0A | — | 238.25 x 123.95 x 83.82 | 271-1014-ND | 106.08 | 102.90 | 100.78 | 95.47 | MCC15-3-A |
| Triple Output | | | | | | | | | |
| +5V @3.0A | +12/15V @1.0/0.8A | -12/15V @1.0/0.8A | 260.35 x 101.60 x 74.93 | 271-1007-ND | 91.52 | 88.77 | 86.94 | 82.38 | MBAA-40W-A |

Medical Global Switchers

Global Performance switching power supplies with the agency approvals you need.

FEATURES:

- Wide range input (85-264V) • Approval to IEC601-1, UL2601 and CSA 601.1 • Conducted Emissions to FCC and VDC Class B • 2-Year Warranty • Models from 28-225W

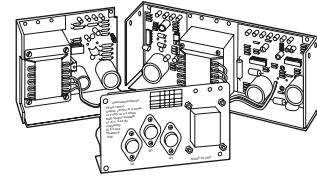
Input Protection: Internal A.C. fuse provided on all units. This fuse only blows if a catastrophic failure occurs in the unit — it does not blow on overload or short circuit. A.C. input protected against line transients by metal oxide varistors on all medical units.

Output Noise and Ripple: 0.5% RMS, 1% PK-PK maximum on all outputs (20MHz bandwidth on GSM7 & GSM28 series).

Temperature Coefficient: 0.03% per degree C typical for all outputs.

GENERAL SPECIFICATIONS:

- **AC Input:** 85-264 VAC, 47-63 Hz single phase
- **Safety Specifications:** All medical models are approved to UL544/UL2601, IEC601-1, CSA234L3, VDE0750 and CE9LV
- **Overload Protection:** Fully protected against short circuit and output overload. Short circuit protection is cycling type on Outputs #1 and #2; foldback type on Outputs #3 and #4. Recovery after fault is automatic.
- **Temperature Rating:** 0°C to 50°C full rated load.
- **Minimum Load:** Single output units require no minimum load except for GSM28 (GSM28 = ±5%). Multiple output units: GPM40 = 0.4A, GPM55 = 0.7A, GPM80 = 1A, GPM130 = 3A.
- **EMI Compliance:** All models include EMI filtering to meet or exceed conducted emissions of CISPR 11 Class B, VDE0871 Class B (FCC Class B, CISPR 11 Class B and EN5522 Class B for GSM7 & GSM28 Series).
- **Voltage Adjustment:** Outputs adjustable ±5% minimum via built-in potentiometer (Factory set for GSM7 & GSM28 Series).
- **Remote Sense:** Provided as a standard feature on the +5V output of the GPM130 and on all single output units except for GSM7 and GSM28 series.
- **Reverse Voltage Protection:** All outputs protected against inadvertent application of reverse voltage up to 1 times the rated current of the reversed output.



| Output 1 | Output 2 | Output 3 | Output 4 | Total Power Watts | Dimensions (mm) | Mating Connectors | | | Digi-Key Part No. | 1 | 10 | 25 | 50 | Condor Part No. |
|---|---------------------|-------------|-------------|-------------------|-------------------------|-------------------|----------------|----------|-------------------|--------|--------|--------|--------|-----------------|
| | | | | | | Housing Input | Housing Output | Contacts | | | | | | |
| NEW! Single Output - GSM Series NEW! | | | | | | | | | | | | | | |
| 5.0V @ 1.4A | — | — | — | 7 | 50.80 x 57.91 x 12.70 | WM17407 | WM17408 | WM17406 | 271-1100-ND | 29.22 | 27.76 | 26.30 | 24.84 | GSM7-5 |
| 12V @ 58A | — | — | — | 7 | 50.80 x 57.91 x 12.70 | WM17407 | WM17408 | WM17406 | 271-1101-ND | 29.22 | 27.76 | 26.30 | 24.84 | GSM7-12 |
| 15V @ 47A | — | — | — | 7 | 50.80 x 57.91 x 12.70 | WM17407 | WM17408 | WM17406 | 271-1102-ND | 29.22 | 27.76 | 26.30 | 24.84 | GSM7-15 |
| 24V @ 29A | — | — | — | 7 | 50.80 x 57.91 x 12.70 | WM17407 | WM17408 | WM17406 | 271-1103-ND | 29.22 | 27.76 | 26.30 | 24.84 | GSM7-24 |
| 28V @ 25A | — | — | — | 7 | 50.80 x 57.91 x 12.70 | WM17407 | WM17408 | WM17406 | 271-1104-ND | 29.22 | 27.76 | 26.30 | 24.84 | GSM7-28 |
| NEW! Single Output - GSM28 Series NEW! | | | | | | | | | | | | | | |
| 5.1V @ 5.5A | — | — | — | 28 | 65.79 x 101.60 x 23.37 | WM2125 | WM2124 | WM17403 | 271-1121-ND | 52.00 | 49.40 | 46.80 | 44.20 | GSM28-5 |
| 12V @ 2.3A | — | — | — | 28 | 65.79 x 101.60 x 23.37 | WM2125 | WM2124 | WM17403 | 271-1122-ND | 52.00 | 49.40 | 46.80 | 44.20 | GSM28-12 |
| 24V @ 1.2A | — | — | — | 28 | 65.79 x 101.60 x 23.37 | WM2125 | WM2124 | WM17403 | 271-1123-ND | 52.00 | 49.40 | 46.80 | 44.20 | GSM28-24 |
| Single Output - Switching Power Supply - GPM Series | | | | | | | | | | | | | | |
| 12V @ 3.3A | — | — | — | 40 | 76.20 x 127.00 x 32.51 | WM2123 | WM2104 | WM17403 | 271-1019-ND | 74.88 | 71.13 | 67.39 | 63.64 | GPM40-12 |
| 15V @ 2.7A | — | — | — | 40 | 76.20 x 127.00 x 32.51 | WM2123 | WM2104 | WM17403 | 271-1020-ND | 74.88 | 71.13 | 67.39 | 63.64 | GPM40-15 |
| 24V @ 1.7A (2.1PK) | — | — | — | 40 | 76.20 x 127.00 x 32.51 | WM2123 | WM2104 | WM17403 | 271-1021-ND | 74.88 | 71.13 | 67.39 | 63.64 | GPM40-24 |
| 28V @ 1.4A (1.8PK) | — | — | — | 40 | 76.20 x 127.00 x 32.51 | WM2123 | WM2104 | WM17403 | 271-1022-ND | 74.88 | 71.13 | 67.39 | 63.64 | GPM40-28 |
| +5V @ 8.0A | — | — | — | 40 | 76.20 x 127.00 x 32.51 | WM2123 | WM2104 | WM17403 | 271-1023-ND | 74.88 | 71.13 | 67.39 | 63.64 | GPM40-5 |
| 12V @ 4.7A | — | — | — | 55 | 160.02 x 100.08 x 42.67 | WM17401 | WM17402 | WM17403 | 271-1024-ND | 99.84 | 94.84 | 89.85 | 84.87 | GPM55-12 |
| 15V @ 3.7A | — | — | — | 55 | 160.02 x 100.08 x 42.67 | WM17401 | WM17402 | WM17403 | 271-1025-ND | 99.84 | 94.84 | 89.85 | 84.87 | GPM55-15 |
| 24V @ 2.3A | — | — | — | 55 | 160.02 x 100.08 x 42.67 | WM17401 | WM17402 | WM17403 | 271-1026-ND | 99.84 | 94.84 | 89.85 | 84.87 | GPM55-24 |
| 12V @ 6.7A | — | — | — | 80/110* | 177.80 x 107.95 x 47.24 | WM2103 | WM2105 | WM17403 | 271-1027-ND | 137.28 | 130.41 | 123.55 | 116.69 | GPM80-12 |
| 24V @ 3.4A | — | — | — | 80/110* | 177.80 x 107.95 x 47.24 | WM2103 | WM2105 | WM17403 | 271-1029-ND | 137.28 | 130.41 | 123.55 | 116.69 | GPM80-24 |
| +5V @ 4.0A | +12V @ 2.0A (3PK) | -12V @ 0.4A | — | 40 | 76.20 x 127.00 x 32.51 | WM2123 | WM2104 | WM17403 | 271-1039-ND | 74.88 | 71.13 | 67.39 | 63.64 | GPM40A |
| +5V @ 4.0A | +12V @ 2.0A (3PK) | -15V @ 0.4A | — | 40 | 76.20 x 127.00 x 32.51 | WM2123 | WM2104 | WM17403 | 271-1040-ND | 74.88 | 71.13 | 67.39 | 63.64 | GPM40B |
| Quad Output Power Supply - GPM Series | | | | | | | | | | | | | | |
| +5V @ 6.0A | +12V @ 3.0A (5PK) | +12V @ 1.0A | -12V @ 1.0A | 55 | 160.02 x 100.08 x 42.67 | WM17401 | WM17402 | WM17403 | 271-1041-ND | 99.84 | 94.84 | 89.85 | 84.87 | GPM55A |
| +5V @ 6.0A | +12V @ 3.0A (5PK) | +12V @ 1.0A | -5V @ 1.0A | 55 | 160.02 x 100.08 x 42.67 | WM17401 | WM17402 | WM17403 | 271-1042-ND | 99.84 | 94.84 | 89.85 | 84.87 | GPM55B |
| +5V @ 6.0A | +15V @ 3.0A (5APK) | -15V @ 1.0A | -5V @ 1.0A | 55 | 160.02 x 100.08 x 42.67 | WM17401 | WM17402 | WM17403 | 271-1043-ND | 99.84 | 94.84 | 89.85 | 84.87 | GPM55C |
| +5V @ 6.0A | +24V @ 1.5A (2PK) | +12V @ 1.0A | -12V @ 1.0A | 55 | 160.02 x 100.08 x 42.67 | WM17401 | WM17402 | WM17403 | 271-1044-ND | 99.84 | 94.84 | 89.85 | 84.87 | GPM55D |
| +5V @ 6.0A | +24V @ 1.5A (2PK) | +15V @ 1.0A | -15V @ 1.0A | 55 | 160.02 x 100.08 x 42.67 | WM17401 | WM17402 | WM17403 | 271-1045-ND | 99.84 | 94.84 | 89.85 | 84.87 | GPM55E |
| +5V @ 12.0A | +12V @ 3.0A (5PK) | -12V @ 1.0A | +12V @ 1.0A | 80/110* | 177.80 x 107.95 x 47.24 | WM2103 | WM1910 | WM17403 | 271-1046-ND | 137.28 | 130.41 | 123.55 | 116.69 | GPM80A |
| +5V @ 12.0A | +12V @ 3.0A (5PK) | -15V @ 1.0A | +15V @ 1.0A | 80/110* | 177.80 x 107.95 x 47.24 | WM2103 | WM1910 | WM17403 | 271-1048-ND | 137.28 | 130.41 | 123.55 | 116.69 | GPM80C |
| +5V @ 12.0A | +24V @ 2.0A (4PK) | -15V @ 1.0A | +15V @ 1.0A | 80/110* | 177.80 x 107.95 x 47.24 | WM2103 | WM1910 | WM17403 | 271-1050-ND | 137.28 | 130.41 | 123.55 | 116.69 | GPM80E |
| +5V @ 12.0A | +24V @ 3.5A (4.5PK) | -12V @ 1.0A | +12V @ 2.0A | 80/110* | 177.80 x 107.95 x 47.24 | WM2103 | WM1910 | WM17403 | 271-1051-ND | 137.28 | 130.41 | 123.55 | 116.69 | GPM80P |
| +5V @ 16.0A | +12V @ 5.0A (8PK) | -12V @ 1.2A | +12V @ 1.2A | 130* | 215.90 x 114.30 x 50.80 | WM2125 | WM17400 | WM17403 | 271-1035-ND | 199.68 | 189.69 | 175.74 | 169.72 | GPM130A |
| +5V @ 16.0A | +24V @ 3.5A (5PK) | -15V @ 1.2A | +15V @ 1.2A | 130* | 215.90 x 114.30 x 50.80 | WM2125 | WM17400 | WM17403 | 271-1038-ND | 199.68 | 189.69 | 175.74 | 169.72 | GPM130D |
| +5V @ 16.0A | +24V @ 3.5A (5PK) | -15V @ 1.2A | +15V @ 1.2A | 130* | 215.90 x 114.30 x 50.80 | WM2125 | WM17400 | WM17403 | 271-1038-ND | 199.68 | 189.69 | 175.74 | 169.72 | GPM130E |

* 26cfm moving air required.

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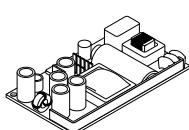
CONDOR Commercial Switcher

GSC20 Series The World's Smallest 20-watt Commercial Switcher!

With a footprint no bigger than a business card and output of 4 watts/cu. in., the GSC20 is ideal for overhead projectors, data communications devices and many other applications requiring compact, portable, reliable power sources.

GENERAL FEATURES:

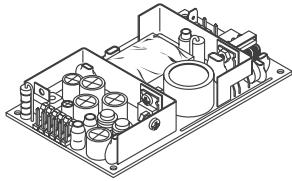
- Industry's smallest 20-watt switcher, 2.00" x 3.50" x 0.68" (50.80mm x 89.90mm x 17.27mm)
- 90-264VAC input
- EMI FCC Class B, CISPR22B
- Standard over-voltage protection
- Fixed frequency operation
- Approved to UL 1950, IEC 950, CSA 22.2 No. 234 Level 3 and EN60950
- Full burn-in; two-year warranty



| Output | Total Power Watts | Mating Connectors | | | Digi-Key Part No. | Price Each | | | Condor Part No. |
|-------------|-------------------|-------------------|----------------|----------|-------------------|------------|-------|-------|-----------------|
| | | Housing Input | Housing Output | Contacts | | 1 | 10 | 25 | |
| +12V @ 1.7A | 20 | WM17405 | WM17405 | WM17406 | 271-1030-ND | 48.00 | 45.60 | 43.20 | GSC20-12 |
| +15V @ 1.4A | 20 | WM17405 | WM17405 | WM17406 | 271-1031-ND | 48.00 | 45.60 | 43.20 | GSC20-15 |
| +24V @ .85A | 20 | WM17405 | WM17405 | WM17406 | 271-1032-ND | 48.00 | 45.60 | 43.20 | GSC20-24 |
| 28V @ 0.7A | 20 | WM17405 | WM17405 | WM17406 | 271-1033-ND | 48.00 | 45.60 | 43.20 | GSC20-28 |
| +5V @ 3.8A | 20 | WM17405 | WM17405 | WM17406 | 271-1034-ND | 48.00 | 45.60 | 43.20 | GSC20-5 |

CONDOR

NEW! DC Power Supplies



The standard version power supply for data processing, control, etc., applications.

GENERAL FEATURES:

- Cost Effective Power Source
- 2-Year Warranty - 100% burn-in, test and inspection

GENERAL SPECIFICATIONS:

- **AC Input:** 90-264 VAC, 47-63 Hz single phase (GPC41 and GPFC160 Series: 85-264 VAC, 47-63 Hz single phase)
- **Safety Specifications:** Conform with the applicable requirements of EN60950 following the provisions of the Low Voltage Directive 73/23/EEC. Approved to UL1950, CSA22.2 No. 234 Level 3, IEC950, EN60950, VDE 0805 and CSA950
- **Overload Protection:** Fully protected against short circuit and output overload
- **Temperature Rating:** 0°C to 50°C full rated output power
- **EMI Compliance:** All models include EMI filtering to meet or exceed conducted emissions of CISPR 11 Class B, VDE0871 Class B and EN55022 Class B
- **Voltage Adjustment:** ±5% on primary output
- **Remote Sense:** GPFC160 series only
- **Reverse Voltage Protection:** All outputs protected against inadvertent application of reverse voltage up to 1 times the rated current of the reverse output

| Wattage | Voltage | Min. Load | Current (A) | Current (B) | I Peak | Dimensions L x W x H (mm) | Mating Connectors | | | Digi-Key Part No. | Price Each | | | Condor Part No. | | | |
|---|-------------------------------|----------------------|--------------------------|-----------------------|-------------------------|---------------------------|-------------------|----------------|----------|-------------------|-------------|-------------|--------|-----------------|--------|-----------|------------|
| | | | | | | | Housing Input | Housing Output | Contacts | | 1 | 10 | 25 | | | | |
| <i>Triple Output - GSC25 Series</i> | | | | | | | | | | | | | | | | | |
| 25 | +5.1V +12V -12 | 0.25A 0 0 | 2.5A 1.5A 0.2A | — — — | — — — | 107.95 x 63.50 x 21.84 | WM2123 | WM2104 | WM17403 | — — — | 271-1105-ND | 51.00 | 48.45 | 45.90 | 45.40 | GSC25A | |
| 25 | +5.1V +24V -12 | 0.25A 0 0 | 2.5A 1.0A 0.2A | — — — | — — — | 107.95 x 63.50 x 21.84 | WM2123 | WM2104 | WM17403 | — — — | 271-1106-ND | 51.00 | 48.45 | 45.90 | 45.40 | GSC25D | |
| <i>Single Output - GPC41 Series</i> | | | | | | | | | | | | | | | | | |
| 30 | 5.1V | 0.15 | 6.0A | — | — | 101.60 x 50.80 x 38.10 | A19950 | A19952 | A19990 | — — — | 271-1124-ND | 50.00 | 47.50 | 45.00 | 42.50 | GPC41-5 | |
| 40 | 12V | 0.03 | 3.3A | — | — | 101.60 x 50.80 x 38.10 | A19950 | A19952 | A19990 | — — — | 271-1125-ND | 50.00 | 47.50 | 45.00 | 42.50 | GPC41-12 | |
| 40 | 24V | 0.01 | 1.7A | — | — | 101.60 x 50.80 x 38.10 | A19950 | A19952 | A19990 | — — — | 271-1126-ND | 50.00 | 47.50 | 45.00 | 42.50 | GPC41-24 | |
| <i>Single Output - GLC50 Series</i> | | | | | | | | | | | | | | | | | |
| 50 | 3.3V | 0 | 8A | — | — | 107.95 x 63.50 x 27.94 | WM2123 | WM2126 | WM17403 | — — — | 271-1109-ND | 53.50 | 52.25 | 50.35 | 47.50 | GLC50-3.3 | |
| 50 | 5.1V | 0 | 8A | — | — | 107.95 x 63.50 x 27.94 | WM2123 | WM2126 | WM17403 | — — — | 271-1110-ND | 53.50 | 52.25 | 50.35 | 47.50 | GLC50-5 | |
| 50 | 12V | 0 | 4.2A | — | — | 107.95 x 63.50 x 27.94 | WM2123 | WM2126 | WM17403 | — — — | 271-1111-ND | 53.50 | 52.25 | 50.35 | 47.50 | GLC50-12 | |
| 50 | 24V | 0 | 2.1A | — | — | 107.95 x 63.50 x 27.94 | WM2123 | WM2126 | WM17403 | — — — | 271-1112-ND | 53.50 | 52.25 | 50.35 | 47.50 | GLC50-24 | |
| <i>Triple Output - GLC50 Series</i> | | | | | | | | | | | | | | | | | |
| 50 | +5.1V +12V -12V | 0.5A 0.1A 0 | 4A 2.5A 0.2A | — — — | — — — | 107.95 x 63.50 x 27.94 | WM2123 | WM2126 | WM17403 | — — — | 271-1107-ND | 53.50 | 52.25 | 50.35 | 47.50 | GLC50A | |
| 50 | +5.1V +24V -12V | 0.5A 0.1A 0 | 4A 1.5A 0.2A | — — — | — — — | 107.95 x 63.50 x 27.94 | WM2123 | WM2126 | WM17403 | — — — | 271-1108-ND | 53.50 | 52.25 | 50.35 | 47.50 | GLC50D | |
| <i>Single Output - GLC75 Series (See Amperage Rating Notes Below)</i> | | | | | | | | | | | | | | | | | |
| 75 | 5.1V | 0 | 14.7A | 18A | 18A | 146.05 x 86.36 x 39.70 | WM2125 | WM2129 | WM17403 | — — — | 271-1113-ND | 68.82 | 65.38 | 61.94 | 58.88 | GLC75-5 | |
| 75 | 12V | 0 | 6.3A | 9.1A | 9.1A | 146.05 x 86.36 x 39.70 | WM2125 | WM2129 | WM17403 | — — — | 271-1114-ND | 68.82 | 65.38 | 61.94 | 58.88 | GLC75-12 | |
| 75 | 24V | 0 | 3.1A | 4.6A | 4.6A | 146.05 x 86.36 x 39.70 | WM2125 | WM2129 | WM17403 | — — — | 271-1115-ND | 68.82 | 65.38 | 61.94 | 58.88 | GLC75-24 | |
| <i>Quad Output - GLC75 Series (See Amperage Rating Notes Below)</i> | | | | | | | | | | | | | | | | | |
| 75 | +5.1V +12V -12V 12V* | 1A 0.5A — — | 8A 2.5A 1A 2.5A | 10A 3A 1A 3A | 12A 4A 1.2A 4A | 177.80 x 107.95 x 33.02 | WM2125 | WM17404 | WM17403 | — — — — | 271-1116-ND | 68.82 | 65.38 | 61.94 | 58.87 | GLC75A | |
| 75 | +5.1V +24V -12V 12V* | 1A 0.5A — — | 8A 2.5A 1A 2.5A | 10A 3A 1A 3A | 12A 4A 1.2A 4A | 177.80 x 107.95 x 33.02 | WM2125 | WM17404 | WM17403 | — — — — | 271-1117-ND | 68.82 | 65.38 | 61.94 | 58.87 | GLC75D | |
| <i>Single Output - GPFC160 Series</i> | | | | | | | | | | | | | | | | | |
| 160 | 5.1V | — | 26A | — | — | 177.80 x 114.30 x 42.93 | WM2125 | WM17400 | WM17403 | WM2013 | WM2200 | 271-1118-ND | 173.29 | 164.62 | 155.96 | 147.30 | GPFC160-5 |
| 160 | 12V | — | 11.7A | — | — | 177.80 x 114.30 x 42.93 | WM2125 | WM17400 | WM17403 | WM2013 | WM2200 | 271-1119-ND | 173.29 | 164.62 | 155.96 | 147.30 | GPFC160-12 |
| 160 | 24V | — | 5.8A | — | — | 177.80 x 114.30 x 42.93 | WM2125 | WM17400 | WM17403 | WM2013 | WM2200 | 271-1120-ND | 173.29 | 164.62 | 155.96 | 147.30 | GPFC160-24 |

* Floating fourth output can be referenced as either positive or negative.

Amperage Rating Notes for GLC75 Series: **Current A:** Rating with unrestricted convection cooling. Total power not to exceed 75W. **Current B:** Rating with 26cfm forced air cooling. Total power not to exceed 110W. **I Peak:** During peak load conditions output regulation may exceed specified limits.

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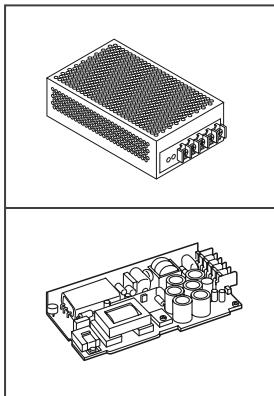
SW SERIES

FEATURES:

- Very low profile and small size
- Wide Variation: 7 type 94 part number
- Worldwide Input Voltage: all type 85VAC ~ 264VAC (continuous)
- High Dielectric Strength: 2000VAC between input & output
- Safety Standards: Designed to meet UL1950(D3).

GENERAL SPECIFICATIONS:

- Frequency Range: 47-63 Hz
- Inrush Current: 5V-15V = 30/60A; 30V-100V = 45/90A
- Ripple Voltage (max.): 5V-12V: 120mVpp; 15V: 150mVpp; 24V: 200mVpp; 48V: 400mVpp
- Overall Output Req.: 3%
- Overload Protection: +105% of rated current, automatic recovery
- Dielectric Strength: 2.0kVAC for 1 minute applied between input/output
- Insulation Resistance: 100MΩ between output/frame and input/output, measured with a 500 VDC tester
- Operating Temperature: 0° to +60°C
- Operating Humidity: 30% to 85% RH
- Weight: SW05: 50g; SW10: 60g; SW15: 220g; SW30: 250g; SW50: 400g; SW75: 550g; SW100: 600g



| Input Voltage (Vac) | Output Voltage(s) (V) | Output Current (A) | Dimensions (mm) H x D x W | Digi-Key Part No. | Price Each 1 | Price Each 50 | Price Each 100 | Toko Part No. |
|---|-----------------------|--------------------|---------------------------|-------------------|--------------|---------------|----------------|---------------|
| Output Power — 30 Watts — Open Frame | | | | | | | | |
| 85-264 | 24 | 1.33 | 97 x 114 x 25.4 | TS9996-ND | 67.65 | 65.06 | 62.45 | SW30-24F |
| Output Power — 50 Watts — Open Frame | | | | | | | | |
| 85-264 | 24 | 2.1 | 97 x 158 x 25.4 | TS9937-ND | 89.22 | 85.79 | 82.36 | SW5024F |
| Output Power — 75 Watts — Open Frame | | | | | | | | |
| 85-264 | 48 | 1.6 | 97 x 179 x 30 | TS9932-ND | 149.98 | 129.99 | 125.99 | SW75-48F |
| Output Power — 75 Watts — Enclosed Frame | | | | | | | | |
| 85-264 | 48 | 1.6 | 97 x 179 x 32 | TS9865-ND | 155.04 | 134.38 | 130.24 | SW75-48C |
| Output Power — 100 Watts — Open Frame | | | | | | | | |
| 85-264 | 5 | 20.0 | 97 x 194 x 35 | TS9931-ND | 171.89 | 148.98 | 144.39 | SW100-05F |
| 85-264 | 12 | 8.3 | 97 x 194 x 35 | TS9930-ND | 171.89 | 148.98 | 144.39 | SW100-12F |
| 85-264 | 15 | 6.7 | 97 x 194 x 35 | TS9929-ND | 171.89 | 148.98 | 144.39 | SW100-15F |
| 85-264 | 48 | 2.1 | 97 x 194 x 35 | TS9927-ND | 171.89 | 148.98 | 144.39 | SW100-48F |
| Output Power — 100 Watts — Enclosed Frame | | | | | | | | |
| 85-264 | 12 | 8.3 | 97 x 194 x 35 | TS9863-ND | 179.12 | 155.24 | 150.46 | SW100-12C |
| 85-264 | 15 | 6.7 | 97 x 194 x 35 | TS9862-ND | 179.12 | 155.24 | 150.46 | SW100-15C |
| 85-264 | 48 | 2.1 | 97 x 194 x 35 | TS9860-ND | 179.12 | 155.24 | 150.46 | SW100-48C |

MK SERIES

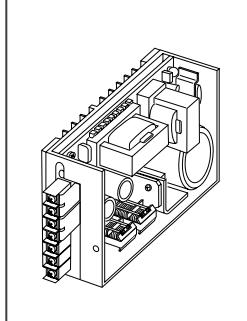
150W Single Output MOSFET Power Supply-Open Frame

FEATURES:

- Ultra compact, high power density
- High conversion efficiency, 80% typical
- Overload and overvoltage protection
- Highest grade components for highest reliability
- Switching frequency: 150KHz
- MK is UL478 approved, designed to meet CSA 22.2/154.

SPECIFICATIONS:

- Input Voltage: MK: 90 ~ 132VAC, 120 ~ 175VDC
- Input Frequency: 47 to 440Hz
- Efficiency: 78 to 82%
- Adjustable output range: ±10%
- Output Voltage Accuracy: ±3%
- Overload Protection: From 105% of rated output (automatic recovery)
- Overvoltage Protection: Internal, overall cut off method (recovery at switch ON)
- Power ON Indicator: Red LED on front panel
- Dielectric Test: 1500VAC 1 min. between input to frame, and input to output (w/o varistor 2000VAC)
- Insulation Resistance: 100MΩ, min. at 500VDC (input to frame)
- Operating Temperature: 0 to +60°C



| Input Voltage | Output Voltage(s) (V) | Output Current (A) | Dimensions (mm) H x D x W | Digi-Key Part No. | Price Each 1 | Price Each 50 | Price Each 100 | Toko Part No. |
|--------------------------|-----------------------|--------------------|---------------------------|-------------------|--------------|---------------|----------------|---------------|
| Output Power — 150 Watts | | | | | | | | |
| 110 | 5 | 30.0 | 97 x 171 x 59 | TS9979-ND | 208.02 | 180.29 | 174.74 | MK150-05F |
| 110 | 12 | 12.5 | 97 x 171 x 59 | TS9980-ND | 208.02 | 180.29 | 174.74 | MK150-12F |
| 110 | 15 | 10.0 | 97 x 171 x 59 | TS9981-ND | 208.02 | 180.29 | 174.74 | MK150-15F |
| 110 | 24 | 6.3 | 97 x 171 x 59 | TS9982-ND | 208.02 | 180.29 | 174.74 | MK150-24F |

9140B-ND Toko Power Supplies & DC-DC Converter Catalog

\$9.95

SWE SERIES

FEATURES:

- Meets CE marking
- Ultra thin and compact
- High isolation
- Universal input (85-264 VAC) Safety Standard: UL, CSA, EN60 950. Noise Immunity: EN61000-4-2-5. Noise Standard: FCC, VCCI, EN55011, EN55022

DESCRIPTION:

The SWE Series of switching power supplies is Toko's CE approved single output series. Compact size and high reliability make the SWE Series an excellent choice when a very low profile is required. Six standard single output ratings with 65 versions are available, all with universal input (85 ~ 264 VAC). If you need the low profile offered by the SWE Series, but need more flexibility in output, the SWE Series can fit into your distributive power architectures by adding Toko's DC-DC converters to your design. This will keep your costs low, while allowing you to choose the output you need.

| Input Voltage (VAC) | Output Voltage(s) (V) | Output Current (A) | Dimensions (mm) H x D x W | Digi-Key Part No. | Price Each 1 | Price Each 50 | Price Each 100 | Toko Part No. |
|---|-----------------------|--------------------|---------------------------|-------------------|--------------|---------------|----------------|---------------|
| Output Power — 5 Watts — Open Frame | | | | | | | | |
| 85-264 | 5 | 1.0 | 18 x 65 x 50 | TS9701-ND | 42.78 | 37.08 | 35.94 | SWE05-05PC |
| 85-264 | 12 | 0.42 | 18 x 65 x 50 | TS9702-ND | 42.78 | 37.08 | 35.94 | SWE05-12PC |
| Output Power — 10 Watts — Open Frame | | | | | | | | |
| 85-264 | 5 | 2.0 | 18 x 70 x 65 | TS9703-ND | 49.38 | 42.80 | 41.48 | SWE10-05PC |
| 85-264 | 12 | 0.83 | 18 x 70 x 65 | TS9704-ND | 49.38 | 42.80 | 41.48 | SWE10-12PC |
| 85-264 | 24 | 0.42 | 18 x 70 x 65 | TS9705-ND | 49.38 | 42.80 | 41.48 | SWE10-24PC |
| Output Power — 15 Watts — Open Frame | | | | | | | | |
| 85-264 | 5 | 2.4 | 25.4 x 80 x 97 | TS9706-ND | 73.31 | 63.54 | 61.58 | SWE15-05C |
| 85-264 | 12 | 1.0 | 25.4 x 80 x 97 | TS9707-ND | 73.31 | 63.54 | 61.58 | SWE15-12C |
| 85-264 | 24 | 0.5 | 25.4 x 80 x 97 | TS9708-ND | 73.31 | 63.54 | 61.58 | SWE15-24C |
| Output Power — 15 Watts — Enclosed Frame* | | | | | | | | |
| 85-264 | 5 | 3.0 | 25.4 x 80 x 97 | TS9709-ND | 67.51 | 58.51 | 56.71 | SWE15-05F |
| 85-264 | 12 | 1.30 | 25.4 x 80 x 97 | TS9710-ND | 67.51 | 58.51 | 56.71 | SWE15-12F |
| 85-264 | 24 | 0.63 | 25.4 x 80 x 97 | TS9711-ND | 67.51 | 58.51 | 56.71 | SWE15-24F |
| Output Power — 30 Watts — Enclosed Frame* | | | | | | | | |
| 85-264 | 5 | 4.8 | 27.4 x 114 x 97 | TS9712-ND | 97.48 | 84.49 | 81.89 | SWE30-05C |
| 85-264 | 12 | 2.0 | 27.4 x 114 x 97 | TS9713-ND | 97.48 | 84.49 | 81.89 | SWE30-12C |
| 85-264 | 24 | 1.0 | 27.4 x 114 x 97 | TS9714-ND | 97.48 | 84.49 | 81.89 | SWE30-24C |
| Output Power — 30 Watts — Open Frame | | | | | | | | |
| 85-264 | 12 | 2.50 | 27.4 x 114 x 97 | TS9715-ND | 91.84 | 79.60 | 77.15 | SWE30-12F |
| 85-264 | 24 | 1.33 | 27.4 x 114 x 97 | TS9716-ND | 91.84 | 79.60 | 77.15 | SWE30-24F |
| Output Power — 50 Watts — Enclosed Frame* | | | | | | | | |
| 85-264 | 5 | 10.0 | 25.4 x 158 x 97 | TS9717-ND | 127.50 | 110.50 | 107.10 | SWE50-05C |
| 85-264 | 12 | 4.20 | 25.4 x 158 x 97 | TS9718-ND | 127.50 | 110.50 | 107.10 | SWE50-12C |
| 85-264 | 24 | 2.10 | 25.4 x 158 x 97 | TS9719-ND | 127.50 | 110.50 | 107.10 | SWE50-24C |
| Output Power — 50 Watts — Open Frame | | | | | | | | |
| 85-264 | 12 | 4.20 | 25.4 x 158 x 97 | TS9720-ND | 121.11 | 104.97 | 101.74 | SWE50-12F |
| 85-264 | 24 | 2.10 | 25.4 x 158 x 97 | TS9721-ND | 121.11 | 104.97 | 101.74 | SWE50-24F |
| Output Power — 75 Watts — Enclosed Frame* | | | | | | | | |
| 85-264 | 12 | 6.30 | 37.0 x 179 x 97 | TS9722-ND | 182.40 | 158.09 | 153.22 | SWE75-12C |
| 85-264 | 24 | 3.10 | 37.0 x 179 x 97 | TS9723-ND | 182.40 | 158.09 | 153.22 | SWE75-24C |
| Output Power — 75 Watts — Open Frame | | | | | | | | |
| 85-264 | 24 | 3.10 | 37.0 x 179 x 97 | TS9724-ND | 176.45 | 152.92 | 148.22 | SWE75-24F |

* These units have a 20% current derating unless fan cooled.

| | | |
|-----------|---|--------|
| TS9914-ND | Cable Kit AC Input SW05/10 Series | \$4.60 |
| TS9905-ND | Cable Kit DC Output SW05 Series..... | \$4.60 |
| TS9901-ND | Cable Kit DC Output SW10 Series..... | \$7.23 |

BX SERIES

FEATURES:

- Thin, compact and on-board type
- Highly reliable molding package
- Inrush current protection
- Overcurrent protection
- Overvoltage protection
- Safety Standards: Designed to meet UL1950, CSA234
- Noise Standards: Designed to meet VCCI-2, FCC-B
- Free warranty: 1 year

GENERAL SPECIFICATIONS:

- Input Voltage: 85-135 VAC or 110-175 VDC
- Line Frequency: 47-63 Hz; Single phase or DC
- Rated Line Voltage: 100, 120VAC
- Line Regulation (85-132V): ±5%
- Temperature: 0+60°C

| Rated Power (W) | Rated Voltage (V) | Rated Current (A) | Dimensions (mm) H x D x W | Weight (g.) | Digi-Key Part No. | Price Each 1 | Price Each 50 | Price Each 100 | Toko Part No. |
|--------------------------------|-------------------|-------------------|---------------------------|-------------|-------------------|--------------|---------------|----------------|---------------|
| On-Board Type AC-DC Converters | | | | | | | | | |
| 5 | 5 | 1.0 | 18 x 50 x 43 | 80 | TS9600-ND | 44.95 | 38.96 | 37.76 | BX05-05 |
| 5 | 12 | 0.45 | 18 x 50 x 43 | 80 | TS9601-ND | 44.95 | 38.96 | 37.76 | BX05-12 |
| 10 | 5 | 2.0 | 19.5 x 54 x 45 | 85 | TS9602-ND | 60.82 | 52.71 | 51.09 | BX10-05 |
| 10 | 12 | 0.9 | 19.5 x 54 x 45 | 85 | TS9603-ND | 60.82 | 52.71 | 51.09 | BX10-12 |



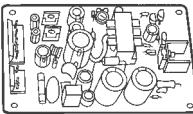


Switching Power Supplies ET and EM Series

General Specifications:

- Input Voltage: ET: 85 ~ 132 VAC; EM: 170 ~ 264 VAC
- Frequency Range: 47 ~ 440Hz (single phase) • Inrush Current: 20A
- Ripple Voltage (max.): 100mVpp typical • Overall Output Reg.: ±5%
- Overload Protection: 105% of rated current, automatic recovery
- Efficiency: 65% (typical at 220 VAC input and max. load)
- Dielectric Strength: 1,500 VAC for 1 min. applied between input/output and input/frame, leakage less than 10mA
- Insulation Resistance: +100MΩ between output/frame, measured with a 500V DC tester (25°C, 60% RH)
- Operating Temperature: 0 to +60°C
- Operating Humidity: 30 to 85% RH
- Weight: ET: 100g (.22 lb.); EM10: 100g (.22 lb.); EM15: 120g (.27 lb.)

The power supplies are most suited for installation in equipment due to their small size. The ET and EM Series are designed for 85-132V AC and 170-264V AC use respectively. Both series are available with triple output and with 10 and 15W ratings.



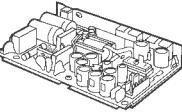
| Input Voltage | Output Voltage(s) (V) | Output Current (A) | Dimensions (mm) H x D x W | Digi-Key Part No. | Price Each | Toko Part No. |
|-------------------------|-----------------------|--------------------|---------------------------|-------------------|------------|---------------|
| Output Power — 10 Watts | | | | | | |
| 110 | +5, +12, -12 | 1, 0.3, 0.1 | 65 x 112 x 32 | TS9960-ND | 32.85 | 28.47 |
| 110 | +5, +12, -5 | 1, 0.3, 0.1 | 65 x 112 x 32 | TS9961-ND | 32.85 | 28.47 |
| Output Power — 15 Watts | | | | | | |
| 110 | +5, +12, -12 | 2, 0.3, 0.2 | 78 x 125 x 35 | TS9962-ND | 36.57 | 31.70 |
| 110 | +5, +12, -5 | 2, 0.3, 0.2 | 78 x 125 x 35 | TS9963-ND | 36.57 | 31.70 |
| 220 | +5, +12, -5 | 2, 0.3, 0.2 | 78 x 125 x 35 | TS9968-ND | 41.82 | 36.25 |

| | | | |
|-----------|-------------------------------------|-------|---------------|
| TS9916-ND | Cable Kit AC Input ET/EM 10 Series | ..... | \$3.72 |
| TS9917-ND | Cable Kit AC Input ET/EM 15 Series | ..... | \$2.85 |
| TS9909-ND | Cable Kit DC Output ET/EM 10 Series | ..... | \$6.57 |
| TS9910-ND | Cable Kit DC Output ET/EM 15 Series | ..... | \$6.13 |

R TOKO MW SERIES Switching Power Supplies

General Specifications:

- Frequency Range: 47-63Hz • Inrush Current: 30A • Ripple Voltage (max.): 100mVpp • Overall Output Reg.: 2% max. • Overload Protection: Effective at 105% of rated current, automatic recovery
- Efficiency: 65% • Dielectric Strength: 3,750 VAC for 1 minute applied between input/output and input/frame, leakage less than 10mA
- Insulation Resistance: +100MΩ between output frame, measured with a 500V DC tester
- Operating Temperature: -10 ~ 60°C • Operating Humidity: 30 ~ 85% RH • Weight: MW15: 150g (.33 lb.); MW30: 230g (0.5 lb.); MW50: 330g (.73 lb.); MW100: 1,000g (2.2 lb.)
- Safety Standards: UL478 CSA C22.2, No. 143, 154; MW100: Designed to meet VDE, IEC 950, CSA C22.2, No.143, 154, applicable to UL478, 1419 • Noise Standards: Meets FCC Class B.



| Input Voltage (AC) | Output Voltage(s) (V) | Output Current (A) | Dimensions (mm) H x D x W | Digi-Key Part No. | Price Each | Toko Part No. |
|---------------------------|-----------------------|--------------------|---------------------------|-------------------|------------|---------------|
| Output Power — 15 Watts | | | | | | |
| 85-264 | +5, +15, -15 | 2, 0.3, 0.2 | 25 x 110 x 60 | TS9970-ND | 63.95 | 51.49 |
| Output Power — 100 Watts* | | | | | | |
| 85-132/ | +5, +24, +12, -12 | 10, 4.1, 15, 0.67 | 40 x 210 x 120 | TS9976-ND | 309.40 | 268.15 |
| 170-264 | +5, +12, +12, -12 | 12, 2, 2, 1 | 40 x 210 x 120 | TS9977-ND | 309.40 | 268.15 |
| Dual | +5, +12, -12 | 10, 4, 2, 2 | 40 x 210 x 120 | TS9978-ND | 309.40 | 268.15 |

| | | | |
|-----------|------------------------------------|-------|---------------|
| TS9915-ND | Cable Kit AC Input MW Series | ..... | \$4.60 |
| TS9908-ND | Cable Kit DC Output MW15 Series | ..... | \$7.88 |
| TS9907-ND | Cable Kit DC Output MW30/50 Series | ..... | \$9.85 |
| TS9902-ND | Cable Kit DC Output MW100 Series | ..... | \$9.85 |
| TS9906-ND | Cable Kit DC Output MW100 Series | ..... | \$7.88 |

* Note: Both TS9906-ND & TS9902-ND are required for the MW100 Series

R TOKO MWE SERIES

Multiple Output • Universal Input (85-264VAC) • Conforming to the CE Marking

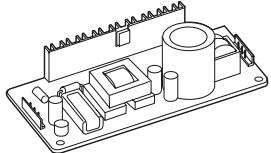
Features: • Triple output • Ultra thin and compact • High isolation • Universal input (85-264VAC) • Safety Standard: Approved UL1950, CAS 950, EN60950 (LGA) • Noise Standard: Designed to Meet FCC-B, VCCI-2, EN55011, EN55022 Class: B • Immunity: EN61000-4-2-5 • Flex power topology

| Input Voltage (AC) | Output Voltage(s) (V) | Output Current (A) | Dimensions (mm) H x D x W | Digi-Key Part No. | Price Each | Toko Part No. |
|-------------------------|-----------------------|--------------------|---------------------------|-------------------|------------|---------------|
| Output Power — 15 Watts | | | | | | |
| 85-264 | +5, +12, -12 | 3, 0.5, 0.5 | 25.4 x 110 x 60 | TS9750-ND | 86.80 | 75.23 |
| | +5, +15, -15 | 3, 0.5, 0.5 | 25.4 x 110 x 60 | TS9750-ND | 86.80 | 75.23 |
| Output Power — 30 Watts | | | | | | |
| 85-264 | +5, +12, -12 | 5, 1.2, 0.5 | 27 x 150 x 60 | TS9752-ND | 121.14 | 104.99 |
| | +5, +15, -15 | 5, 1.2, 0.5 | 27 x 150 x 60 | TS9753-ND | 121.14 | 104.99 |
| Output Power — 50 Watts | | | | | | |
| 85-132/ | +5, +12, -12 | 8, 1.5, 1.0 | 27 x 155 x 95 | TS9754-ND | 168.90 | 146.39 |
| 170-264 | +5, +15, -15 | 8, 1.5, 1.0 | 27 x 155 x 95 | TS9755-ND | 168.90 | 146.39 |

| | | | |
|-----------|------------------------------------|-------|---------------|
| TS9915-ND | Cable Kit AC Input MW Series | ..... | \$4.60 |
| TS9908-ND | Cable Kit DC Output MW15 Series | ..... | \$7.88 |
| TS9907-ND | Cable Kit DC Output MW30/50 Series | ..... | \$9.85 |



Switching Power Supplies LS Series



The LS Series of switching power supplies offers high density and low profile. Worldwide input ratings are covered by the LS Series at 85 - 132 VAC input. The LS Series is especially suited for distributed power architectures where flexibility of output is required. With the addition of Toko DC-DC Converter.

Features:

- Low cost • High density • High isolation • Simple structure that is easy to install • Overcurrent protection with safety reset • Overvoltage protection • Ability to operate in series • Input voltage: LS Series input of 120 VAC • Available power: 30W, 50W, and 100W • Available voltage: 5V, 12V, and 24V

Safety Standard:

- Designed to meet UL 1950 (D3) • Designed to meet CSA 22.2 no. 950 (D3)

Noise Standard:

- FCC Class A • VCCI Class 1

| Input Voltage | Output Voltage(s) | Output Current | Dimensions | Digi-Key Part No. | Price Each | Toko Part No. |
|---------------------------------------|-------------------|----------------|---------------|-------------------|------------|---------------|
| Output Power — 30 Watts - Open Frame | | | | | | |
| 85 - 132 | 5 | 6.0 | 30 x 145 x 50 | TS9926-ND | 51.46 | 44.60 |
| 85 - 132 | 12 | 2.5 | 30 x 145 x 50 | TS9925-ND | 51.46 | 44.60 |
| 85 - 132 | 24 | 1.3 | 30 x 145 x 50 | TS9924-ND | 51.46 | 44.60 |
| Output Power — 50 Watts - Open Frame | | | | | | |
| 85 - 132 | 5 | 10.0 | 32 x 190 x 55 | TS9923-ND | 57.92 | 50.20 |
| 85 - 132 | 12 | 4.2 | 32 x 190 x 55 | TS9922-ND | 57.92 | 50.20 |
| 85 - 132 | 24 | 2.1 | 32 x 190 x 55 | TS9921-ND | 57.92 | 50.20 |
| Output Power — 100 Watts - Open Frame | | | | | | |
| 85 - 132 | 5 | 20.0 | 37 x 220 x 65 | TS9920-ND | 98.65 | 85.50 |
| 85 - 132 | 12 | 8.3 | 37 x 220 x 65 | TS9919-ND | 98.65 | 85.50 |
| 85 - 132 | 24 | 4.2 | 37 x 220 x 65 | TS9918-ND | 98.65 | 85.50 |

| | | | |
|-----------|------------------------------------|-------|---------------|
| TS9915-ND | Cable Kit AC Input LS Series | ..... | \$4.60 |
| TS9904-ND | Cable Kit DC Output LS30/50 Series | ..... | \$7.88 |
| TS9902-ND | Cable Kit DC Output LS100 Series | ..... | \$9.85 |

50 W (Series K)

Electrical Specifications:

- Input Voltage: 85-132VAC or 170-264VAC, 240V-360VDC.

- Input Current: 1.0A typ., 0.6A typ. (15W); 0.8A typ. (30W); 1.1A typ. (50W).

- Efficiency: 65% typ. (+5V), 75% typ. (others).

Output Voltage Adjustment Range:

- ±10%.

Load Regulation:

- 0.5% max.

Ripple and Noise:

- 1% (p-p) max.

Overcurrent Protection:

- 120% typ.

Overvoltage Protection:

- 130% typ.

Radiated Noise:

- FCC Class B limits.

Operating Temperature:

- 0-40°C.

60 W (Series V)

Electrical Specifications:

- Input Voltage: 85-132VAC or 170-264VAC, 240V-360VDC.

- Input Current: 1.9A typ., 1.0A typ. (15W); 0.8A typ. (30W); 1.1A typ. (50W).

- Efficiency: 65% typ. (15V model), 75% typ. (All others).

Output Voltage Adjustment Range:

- ±10%.

Load Regulation:

- 0.5% max.

Ripple and Noise:

- 1% (+75 mV p-p) max.

Overcurrent Protection:

- 120% typ.

Overvoltage Protection:

- 130% typ.

Radiated Noise:

- FCC Class A.

Operating Temperature:

- 0-50°C.

* Call for special pricing on five or more units.

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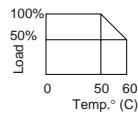
Enclosed Switching Power Supplies

SXU SERIES

Models: 15W, 30W, 50W, 100W & 150W



Derating Temperature:



Features:

- AC Input for U.S. & Canada (AC85-132V) • Safety Approvals: UL 1950, CSA22.2 No. 234 • EMI: FCC Class "B", CISPR-B, VCCI-2 • Built-in Overvoltage/Overcurrent Protection • Operating Temperature: 0 - 50°C • Metal Chassis with Cover • Compact, Low-Profile Packages • One Year Factory Warranty.

General Specifications:

- **Input Frequency:** 50/60Hz (47-63 Hz) • **Output Adjust Range:** ±10% • **Over Voltage Protection:** Zener Limiter (Output Shutdown: for 50, 100 and 150 Models). • **Over Current Protection:** Over 105% (Automatic Recovery). • **Temperature Coefficient:** 0.02% / °C • **Drift:** 0.5% ±15 mV

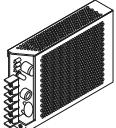
max. / 8 hour (after 1 hour). • **Rise Time:** 100 mS max. (at 25°C nominal input/output) & 300 mS max. for 100 & 150 Models • **Hold-Up Time:** 20mS (typical) • **Storage Temperature:** Temperature: -20 - 85°C. • Humidity: 20-85% RH (Non Condensing)

Dielectric Withstanding Voltage: Models 15W, 30W & 50W: Primary - Secondary: AC 2000V / 1 min., Primary Case: AC 2000V / 1 min., Secondary Case: AC 500V / 1 min. Models 100W & 150W: Primary - Secondary: AC 2000V / 1 min., Primary Case: AC 1500V / 1 min., Secondary Case: AC 500V / 1 min. • **Leakage Current:** 0.5 mA max. • **Isolation Resistance:** Input-Output-Case 100 M-ohms min. • **Shock Test Procedures:** 0.5mm width, 10-55 Hz / 1 min. cycle, 3 directions each 30 min. 20G (3 directions each 3 times).

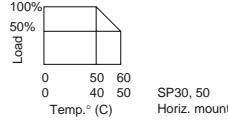
| Input Voltage | Input Current A(typ) | Inrush Current A(typ) | Output Voltage (VDC) | Output Current (A) | Efficiency | Line Reg. (mV) | Load Reg. (mV) | Ripple Noise (mVp-p) | Dimensions (mm) HxWxD | Digi-Key Part No. | 1 | 10 | 25 | 50 | Volgen Part No. |
|---------------|----------------------|-----------------------|----------------------|--------------------|------------|----------------|----------------|----------------------|-----------------------|-------------------|--------|---------|---------|---------|-----------------|
| SX15U | | | | | | | | | | | | | | | |
| 85 - 132 | 0.3 | 10 | 5 | 3.0 | 73% | 20 | 40 | 100 | 34x69x84 | 10348-ND | 54.83 | 501.28 | 1049.75 | 2032.50 | SX15U-05S |
| 85 - 132 | 0.3 | 10 | 12 | 1.3 | 76% | 40 | 60 | 150 | 34x69x84 | 10349-ND | 54.83 | 501.28 | 1049.75 | 2032.50 | SX15U-12S |
| 85 - 132 | 0.3 | 10 | 15 | 1.0 | 76% | 40 | 60 | 150 | 34x69x84 | 10350-ND | 54.83 | 501.28 | 1049.75 | 2032.50 | SX15U-15S |
| 85 - 132 | 0.3 | 10 | 24 | 0.7 | 78% | 60 | 150 | 200 | 34x69x84 | 10351-ND | 54.83 | 501.28 | 1049.75 | 2032.50 | SX15U-24S |
| SX30U | | | | | | | | | | | | | | | |
| 85 - 132 | 0.7 | 20 | 5 | 6.0 | 72% | 20 | 40 | 150 | 34x69x104 | 10352-ND | 63.21 | 577.92 | 1211.25 | 2345.00 | SX30U-05S |
| 85 - 132 | 0.7 | 20 | 12 | 2.6 | 76% | 30 | 60 | 150 | 34x69x104 | 10353-ND | 63.21 | 577.92 | 1211.25 | 2345.00 | SX30U-12S |
| 85 - 132 | 0.7 | 20 | 15 | 2.1 | 77% | 30 | 60 | 150 | 34x69x104 | 10354-ND | 63.21 | 577.92 | 1211.25 | 2345.00 | SX30U-15S |
| 85 - 132 | 0.7 | 20 | 24 | 1.4 | 79% | 30 | 60 | 150 | 34x69x104 | 10355-ND | 63.21 | 577.92 | 1211.25 | 2345.00 | SX30U-24S |
| SX50U | | | | | | | | | | | | | | | |
| 85 - 132 | 1.1 | 28 | 5 | 9.5 | 72% | 25 | 60 | 100 | 37x85x119 | 10356-ND | 87.29 | 798.08 | 1676.50 | 3244.99 | SX50U-05S |
| 85 - 132 | 1.1 | 28 | 12 | 4.2 | 78% | 40 | 120 | 150 | 37x85x119 | 10357-ND | 87.29 | 798.08 | 1676.50 | 3244.99 | SX50U-12S |
| 85 - 132 | 1.1 | 28 | 15 | 3.4 | 78% | 40 | 120 | 150 | 37x85x119 | 10358-ND | 87.29 | 798.08 | 1676.50 | 3244.99 | SX50U-15S |
| 85 - 132 | 1.1 | 28 | 24 | 2.2 | 80% | 60 | 160 | 200 | 37x85x119 | 10359-ND | 87.29 | 798.08 | 1676.50 | 3244.99 | SX50U-24S |
| SX100U | | | | | | | | | | | | | | | |
| 85 - 132 | 2.3 | 14 | 5 | 20.0 | 82% | 10 | 20 | 100 | 39x93x160 | 10360-ND | 129.48 | 1183.84 | 2490.74 | 4820.49 | SX100U-05S |
| 85 - 132 | 2.3 | 14 | 12 | 8.6 | 85% | 10 | 20 | 170 | 39x93x160 | 10361-ND | 129.48 | 1183.84 | 2490.74 | 4820.49 | SX100U-12S |
| 85 - 132 | 2.3 | 14 | 15 | 7.0 | 86% | 10 | 20 | 170 | 39x93x160 | 10362-ND | 129.48 | 1183.84 | 2490.74 | 4820.49 | SX100U-15S |
| 85 - 132 | 2.3 | 14 | 24 | 4.4 | 87% | 20 | 30 | 200 | 39x93x160 | 10363-ND | 129.48 | 1183.84 | 2490.74 | 4820.49 | SX100U-24S |
| SP150U | | | | | | | | | | | | | | | |
| 85 - 132 | 3.5 | 15 | 5 | 30.0 | 82% | 10 | 30 | 100 | 48x93x175 | 10364-ND | 169.14 | 1546.40 | 3256.50 | 6302.01 | SX150U-05S |
| 85 - 132 | 3.5 | 15 | 12 | 12.5 | 85% | 15 | 45 | 170 | 48x93x175 | 10365-ND | 169.14 | 1546.40 | 3256.50 | 6302.01 | SX150U-12S |
| 85 - 132 | 3.5 | 15 | 15 | 10.0 | 86% | 15 | 45 | 170 | 48x93x175 | 10366-ND | 169.14 | 1546.40 | 3256.50 | 6302.01 | SX150U-15S |
| 85 - 132 | 3.5 | 15 | 24 | 6.5 | 87% | 20 | 60 | 200 | 48x93x175 | 10367-ND | 169.14 | 1546.40 | 3256.50 | 6302.01 | SX150U-24S |

SPU SERIES Universal Input

Models: 15W, 30W & 50W



Derating Temperature:



Features:

- Universal Input (AC85-264V). • International Safety Approvals including: IEC801-2, -3, -4 & EMI: FCC Class "B", EN55022-B, VCCI-II, CE • Built-in Overvoltage/Overcurrent Protection • Operating Temperature: 0 - 50°C • Lightweight Construction • Metal Chassis with Cover • 1 Year Factory Warranty.

General Specifications:

- **Input Frequency:** 50/60Hz (47-63 Hz) • **Output Adjust Range:** ±10% • **Output Ripple (100/230VAC, Full load):** 150mV / 75mVp-p max. DC-100MHz • **Over Voltage Protection:** Zener Limiter • **Over Current Protection:** Over

105% (Auto. Recovery) • **Temperature Coefficient:** 0.02% / °C maximum • **Drift:** 0.5% ±15 mV max. / 8 hr. (after one hour)

• **Rise Time:** 100 mS maximum • **Storage Temperature and Humidity:** Temperature: -20 - 85°C. Humidity: 20-85% RH (Non Condensing) • **Dielectric Withstanding Voltage:** Primary - Secondary: AC 3000V / 1 min., Primary Case: AC 1500V / 1 minute, Secondary Case: AC 500V / 1 min. • **Leakage Current:** (100 / 230 VAC): 0.5 / 0.75 mA max. • **Isolation Resistance:** Input-Output-Case 100 M-ohms min. • **Shock Test Procedures:** Vibration: 0.5mm width, 10-55 Hz / 1 minute cycle, 3 directions each 30 minutes. Shock: 20G (3 directions each 3 times).

| Input Voltage | Input Current A(typ) | Hold-Up Time ms(typ) | Inrush Current A(typ) | Output Voltage (VDC) | Output Current @100V (A) | Output Current @230V (A) | Efficiency | Line Reg. (mV) | Load Reg. (mV) | Dimensions (mm) HxWxD | Digi-Key Part No. | 1 | 10 | 25 | 50 | Volgen Part No. |
|---------------|----------------------|----------------------|-----------------------|----------------------|--------------------------|--------------------------|------------|----------------|----------------|-----------------------|-------------------|--------|---------|---------|---------|-----------------|
| SP15U | | | | | | | | | | | | | | | | |
| 85-264 | 0.28-0.17 | 20-100 | 12-24 | 3.3 | 3.0 | 3.6 | 70% | 20 | 40 | 33x75x107 | 10368-ND | 74.20 | 678.40 | 1423.50 | 2756.00 | SPU15-03S |
| 85-264 | 0.36-0.24 | 15-70 | 12-24 | 5 | 3.0 | 3.6 | 73% | 20 | 50 | 33x75x107 | 10369-ND | 74.20 | 678.40 | 1423.50 | 2756.00 | SPU15-05S |
| 85-264 | 0.36-0.24 | 15-70 | 12-24 | 12 | 1.3 | 1.5 | 77% | 30 | 50 | 33x75x107 | 10370-ND | 74.20 | 678.40 | 1423.50 | 2756.00 | SPU15-12S |
| 85-264 | 0.36-0.24 | 15-70 | 12-24 | 15 | 1.0 | 1.2 | 77% | 30 | 50 | 33x75x107 | 10371-ND | 74.20 | 678.40 | 1423.50 | 2756.00 | SPU15-15S |
| 85-264 | 0.36-0.24 | 15-70 | 12-24 | 24 | 0.7 | 0.8 | 78% | 30 | 50 | 33x75x107 | 10372-ND | 74.20 | 678.40 | 1423.50 | 2756.00 | SPU15-24S |
| 85-264 | 0.36-0.24 | 15-70 | 12-24 | 48 | 0.35 | 0.4 | 79% | 50 | 50 | 33x75x107 | 10373-ND | 74.20 | 678.40 | 1423.50 | 2756.00 | SPU15-48S |
| SP30U | | | | | | | | | | | | | | | | |
| 85-264 | 0.5-0.33 | 30-180 | 12-28 | 3.3 | 6.0 | 7.0 | 70% | 20 | 40 | 33x79x124 | 10374-ND | 93.94 | 858.88 | 1804.49 | 3493.49 | SPU30-03S |
| 85-264 | 0.7-0.46 | 20-120 | 12-28 | 5 | 6.0 | 7.0 | 72% | 20 | 40 | 33x79x124 | 10375-ND | 93.94 | 858.88 | 1804.49 | 3493.49 | SPU30-05S |
| 85-264 | 0.7-0.46 | 20-120 | 12-28 | 12 | 2.6 | 3.0 | 77% | 20 | 40 | 33x79x124 | 10376-ND | 93.94 | 858.88 | 1804.49 | 3493.49 | SPU30-12S |
| 85-264 | 0.7-0.46 | 20-120 | 12-28 | 15 | 2.1 | 2.5 | 77% | 20 | 40 | 33x79x124 | 10377-ND | 93.94 | 858.88 | 1804.49 | 3493.49 | SPU30-15S |
| 85-264 | 0.7-0.46 | 20-120 | 12-28 | 24 | 1.4 | 1.5 | 77% | 30 | 80 | 33x79x124 | 10378-ND | 93.94 | 858.88 | 1804.49 | 3493.49 | SPU30-24S |
| 85-264 | 0.7-0.46 | 20-120 | 12-28 | 48 | 0.7 | 0.80 | 79% | 50 | 120 | 33x79x124 | 10379-ND | 93.94 | 858.88 | 1804.49 | 3493.49 | SPU30-48S |
| SP50U | | | | | | | | | | | | | | | | |
| 85-264 | 0.8-0.52 | 35-210 | 18-45 | 3.3 | 10.0 | 12.0 | 70% | 20 | 60 | 33x89x164 | 10380-ND | 117.84 | 1067.93 | 2479.24 | 4798.48 | SPU50-03S |
| 85-264 | 1.2-0.75 | 20-120 | 18-45 | 5 | 10.0 | 12.0 | 72% | 20 | 60 | 33x89x164 | 10381-ND | 117.84 | 1067.93 | 2479.24 | 4798.48 | SPU50-05S |
| 85-264 | 1.2-0.75 | 20-120 | 18-45 | 12 | 4.6 | 5.5 | 77% | 20 | 60 | 33x89x164 | 10382-ND | 117.84 | 1067.93 | 2479.24 | 4798.48 | SPU50-12S |
| 85-264 | 1.2-0.75 | 20-120 | 18-45 | 15 | 3.7 | 4.4 | 77% | 20 | 60 | 33x89x164 | 10383-ND | 117.84 | 1067.93 | 2479.24 | 4798.48 | SPU50-15S |
| 85-264 | 1.2-0.75 | 20-120 | 18-45 | 24 | 2.3 | 2.7 | 77% | 30 | 120 | 33x89x164 | 10384-ND | 117.84 | 1067.93 | 2479.24 | 4798.48 | SPU50-24S |
| 85-264 | 1.2-0.75 | 20-120 | 18-45 | 48 | 1.2 | 1.4 | 79% | 50 | 180 | 33x89x164 | 10385-ND | 117.84 | 1067.93 | 2479.24 | 4798.48 | SPU50-48S |

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Panasonic® Thermal Printers

THERMAL PRINTERS:

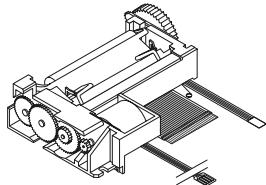
Use a non-impact method for printing. This is accomplished by using chemically treated thermal paper. Chemicals suspended in the paper react to heat generated by the print head to form dots that make up the characters or image. Panasonic offers a thermal serial printer and a thermal line printer. The serial printer uses a moving head that prints one character at a time, it is most suited for character printing, although the high speed model does support graphics. Its main benefit is low cost. Line printers have a fixed print head, printing one line at a time. It is suited for both high speed character and graphic printing. Its main benefits are higher definition graphic printing along with fewer moving parts.

INTERFACE BOARDS:

Acts as an interface between user's system and the thermal printer. Monitors temperature and paper status. Controls motor(s) and thermal head energy for optimal printing. Generates built in test pattern. Accepts both simplified Centronics or RS-232C (TTL only) interface.

Line Printer

Fig. 1



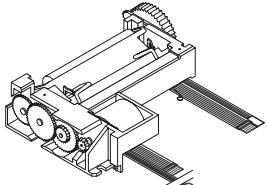
EPL1600 Series

- Compact size, light weight
- High resolution (8 dots/mm), high printing speed
- Operable by batteries (4.2 to 8.5 volts)
- Low current consumption
- Semi-auto paper loading function

Note: Available in 58, 80, and 112mm paper widths

Line Printer

Fig. 2



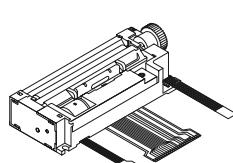
EPL1700 Series

- Compact size, light weight
- High resolution (8 dots/mm), high printing speed
- Semi-auto paper loading function
- Thick (label paper) paper printing possible

Note: Available in 60, 80, and 112mm paper widths

Miniature Line Printer

Fig. 3

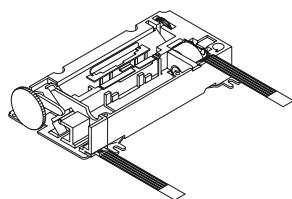


EPL1802S2 Series

- High speed printing
- Very small size
- Very light weight (40g)
- Low power consumption

Compact Line Printer

Fig. 4



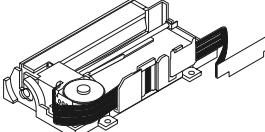
EPL1900 Series

- Compact size
- Low weight (55g)
- High reliability
- Easy maintenance

Note: Available with paper cutter (PT1034-ND)

Serial Printer

Fig. 5



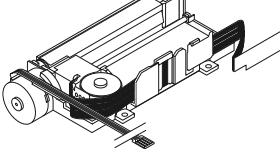
EPT2000L Series

- High speed printing
- Uni-directional character printing (L to R)
- 8 vertical dots per line
- Low noise, less than 55dB
- Compact size, lightweight
- Single 5 volt power source (battery operation)
- Low cost

Note: Available in 58, 80, and 112mm paper widths

Serial Printer

Fig. 6



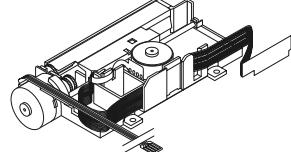
EPT2000H Series

- High speed printing
- Suitable for graphic printing
- Bi-directional character printing
- 8 vertical dots per line
- Uni-directional graphic printing (L to R)
- Low noise, less than 55dB
- Compact size, lightweight
- Single 5 volt power source (battery operation)
- Low cost

Note: Available in 58, 80, and 112mm paper widths

High Speed Serial Printer

Fig. 7



EPT2214S2H Series

- Character printing only
- 8 vertical dots per line
- High speed printing 140 cps
- High reliability 2 million lines
- Compact size lightweight
- Single 5 volt power source (battery operation)

| Fig. | Print Method | Paper Width | Head Volt | Logic Volt | Print Speed (max) | Char./line | Head life | Size (mm) | Digi-Key Part No. | Price Each | | | | Panasonic Part No. |
|------|--------------|-------------|-----------|------------|---------------------|------------|---------------------------------|------------|-------------------|------------|--------|--------|--------|--------------------|
| | | | | | | | | | | 1 | 10 | 100 | 250 | |
| 1 | Line | 58mm | 5v | 5v | 450 dots-line/s max | 24/48 | 5x10 ⁷ pulse/50 km | 79x51x20 | PT1000-ND | 107.72 | 99.33 | 92.24 | 86.43 | EPL1601S2 |
| 1 | Line | 80mm | 5v | 5v | 400 dots-line/s max | 36/72 | 5x10 ⁷ pulse/50 km | 101x52x20 | PT1001-ND | 127.76 | 117.81 | 109.40 | 102.51 | EPL1602S3 |
| 1 | Line | 112mm | 5v | 5v | 360 dots-line/s max | 52/104 | 5x10 ⁷ pulse/50 km | 147x54x20 | PT1002-ND | 147.80 | 136.29 | 126.56 | 118.59 | EPL1603S4 |
| 2 | Line | 60mm | 24v | 5v | 432 dots-line/s max | 27/54 | 5x10 ⁷ pulse/50 km | 81x52x20 | PT1003-ND | 80.16 | 73.92 | 68.64 | 64.32 | EPL1701S2 |
| 2 | Line | 80mm | 24v | 5v | 572 dots-line/s max | 36/72 | 5x10 ⁷ pulse/50 km | 101x52x20 | PT1004-ND | 99.37 | 91.63 | 85.09 | 79.73 | EPL1702S3 |
| 2 | Line | 112mm | 24v | 5v | 864 dots-line/s max | 54/108 | 5x10 ⁷ pulse/50 km | 147x54x20 | PT1005-ND | 119.41 | 110.11 | 102.25 | 95.81 | EPL1703S4 |
| 3 | Line | 58mm | 5v | 5v | 450 dots-line/s max | 24/48 | 1x10 ⁸ pulse/50km | 72x32x15 | PT1032-ND | 90.18 | 83.16 | 77.22 | 72.36 | EPL1802S2 |
| 4 | Line | 58mm | 5v | 5v | 300 dots-line/s max | 24/36 | 5x10 ⁷ pulse/30km | 82x41x15.8 | PT1033-ND | 58.45 | 53.90 | 50.05 | 46.90 | EPL1902S2C |
| 4 | Line | 58mm | 5v | 5v | 300 dots-line/s max | 24/36 | 5x10 ⁷ pulse/30km | 82x41x15 | PT1034-ND | 75.15 | 69.30 | 64.35 | 60.30 | EPL1904S2C |
| 5 | Serial | 58mm | 5v | 5v | 70cps | 24 | 5x10 ⁵ pulse/50 MCTF | 87x43x24 | PT1006-ND | 46.53 | 42.91 | 39.84 | 37.34 | EPT2014S2L |
| 5 | Serial | 80mm | 5v | 5v | 70cps | 32 | 5x10 ⁵ pulse/50 MCTF | 111x43x24 | PT1007-ND | 48.46 | 44.70 | 41.50 | 38.89 | EPT2019S3L |
| 5 | Serial | 112mm | 5v | 5v | 70cps | 53 | 5x10 ⁵ pulse/50 MCTF | 143x43x24 | PT1008-ND | 50.38 | 46.47 | 43.15 | 40.43 | EPT2025S4L |
| 6 | Serial | 58mm | 5v | 5v | 70cps | 24 | 5x10 ⁵ pulse/50 MCTF | 100x43x24 | PT1009-ND | 54.28 | 50.05 | 46.48 | 43.55 | EPT2014S2H |
| 6 | Serial | 80mm | 5v | 5v | 70cps | 32 | 5x10 ⁵ pulse/50 MCTF | 124x43x24 | PT1010-ND | 56.23 | 51.86 | 48.15 | 45.12 | EPT2019S3H |
| 6 | Serial | 112mm | 5v | 5v | 70cps | 53 | 5x10 ⁵ pulse/50 MCTF | 156x43x24 | PT1011-ND | 58.17 | 53.64 | 49.81 | 46.68 | EPT2025S4H |
| 7 | Serial | 58mm | 5v | 5v | 140cps | 24 | 2x10 ⁶ pulse/50 MCTF | 100x43x24 | PT1012-ND | 55.76 | 51.43 | 47.75 | 44.75 | EPT2214S2H |

Interface Boards

EPLR1601/EPLR1701 Series

- Supports EPLR1600/EPLR1700 series
- 364 built in character fonts
- ASCII JIS C6220 character codes
- Automatic loading
- Marker detection
- Bar code printing (UPC, JAN, EAN, CODE39, ITF, NW7)
- Operates on 5 volts EPLR1601, 24 volts for EPLR1701

EPTR2002/EPTR2102 Series

- Supports EPT2000 series (not EPT2214S2H)
- 353 built in character fonts
- ASCII JIS C6220 character codes
- Operates on 5 volts

| Description | | Digi-Key Part No. | 1 | 10 | 100 | 250 | Panasonic Part No. |
|--|-----------|-------------------|--------|--------|--------|-----|--------------------|
| Interface board for EPL1600 Series | PT1013-ND | 161.57 | 149.00 | 138.36 | 129.65 | | EPLR1601 |
| Interface board for EPL1700 Series | PT1014-ND | 161.57 | 149.00 | 138.36 | 129.65 | | EPLR1701 |
| Interface board for EPL1900 Series | PT1035-ND | 208.75 | 192.50 | 178.75 | 167.50 | | EPLZR1901E |
| Interface board for EPT2000L Series | PT1015-ND | 90.48 | 83.44 | 77.48 | 72.61 | | EPTR2002 |
| Interface board for EPT2000H Series | PT1016-ND | 144.27 | 133.05 | 123.54 | 115.77 | | EPTR2102 |
| Power cable for EPLR1601/1701 interface boards | PT1017-ND | 8.02 | 7.40 | 6.87 | 6.44 | | EPLSRDSP303 |
| Centronics cable for EPLR1601/1701 interface boards | PT1018-ND | 7.52 | 6.93 | 6.44 | 6.03 | | EPLSRDSP304 |
| RS232 cable for EPLR1601/1701 interface boards | PT1019-ND | 5.85 | 5.39 | 5.01 | 4.69 | | EPLSRDSP305 |
| Power cable for EPT2000L/H interface boards | PT1020-ND | 1.77 | 1.64 | 1.52 | 1.43 | | EPTSRDSP279 |
| Centronics cable for EPT2000L/H interface boards | PT1021-ND | 5.90 | 5.44 | 5.05 | 4.74 | | EPTSRDSP276 |
| RS232 cable for EPT2000L/H interface boards | PT1022-ND | 3.52 | 3.25 | 3.02 | 2.83 | | EPLSRDSP277 |
| EPLR1601 CPU replacement chip for user designed interfaces | PT1023-ND | 24.80 | 22.87 | 21.24 | 19.90 | | EPLSR1601 |
| EPLR1701 CPU replacement chip for user designed interfaces | PT1024-ND | 24.80 | 22.87 | 21.24 | 19.90 | | EPLSR1701 |
| EPLR1601/1701 gate-array for user designed interfaces | PT1025-ND | 10.44 | 9.63 | 8.94 | 8.38 | | EPLSR1101 |
| EPTR2002 CPU replacement chip for user designed interfaces | PT1026-ND | 29.23 | 26.95 | 25.03 | 23.45 | | EPTSR2001 |
| EPTR2102 CPU replacement chip for user designed interfaces | PT1027-ND | 29.23 | 26.95 | 25.03 | 23.45 | | EPTSR2101 |

NAKAGAWA MFG. (USA), INC. Thermal Paper

Quality thermal paper available in 58, 60, 80 and 112mm paper widths.

SPECIFICATIONS:

- Paper core: 12mm
- Paper length: 30M
- Outer diameter: 55mm
- End mark: red, 50cm from end of roll.
- 65% R.H. max.

- Paper weight: 65um
- Print life: greater than 5 years when stored in a dark location, 25°C or less.
- 58mm thermal printer paper
- 60mm thermal printer paper
- 80mm thermal printer paper
- 112mm thermal printer paper

| Description | | Digi-Key Part No. | 1 | 10 | 100 | 250 | Nakagawa Part No. |
|-----------------------------|-----------|-------------------|------|------|------|-----|-------------------|
| 58mm thermal printer paper | PT1028-ND | 2.08 | 1.66 | 1.46 | 1.39 | | EPT-58 |
| 60mm thermal printer paper | PT1029-ND | 2.43 | 1.94 | 1.70 | 1.62 | | EPL-60 |
| 80mm thermal printer paper | PT1030-ND | 2.65 | 2.12 | 1.86 | 1.78 | | EPT-80 |
| 112mm thermal printer paper | PT1031-ND | 2.93 | 2.34 | 2.05 | 1.96 | | EPL-112 |

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Digi-Key® Parts Kits

| Description | Digi-Key Part No. | Price Each |
|---|-------------------|------------|
| Digi-Key® Potentiometer Kits | | |
| Panasonic 5mm Sq. Single-Turn Side Adjust - 10 ea. (140 total pcs.) | MBG-KIT-ND | 129.95 |
| Top Adjust - 10 ea. (140 total pcs.) | MSG-KIT-ND | 129.95 |
| Panasonic 6mm Carbon Trimmer, Laydown & Standup Version - 10 ea. of 14 values (140 pcs.) | DXA-KIT-ND | 29.95 |
| Panasonic 6mm Ceramic Dust-Proof Both Sides Adjust - 10 ea. (130 pcs.) | 31G-KIT-ND | 52.95 |
| Top/Bottom Adjust - 10 ea. (130 pcs.) | 31C-KIT-ND | 52.95 |
| Panasonic 5/16" (8mm) Preset Variable Trimmer 10 ea. of 18 values (180 total pcs.) | K-KIT-ND | 42.95 |
| Panasonic SMT Trimmer | | |
| P15 Series - 10 ea. of 12 values (120 total pcs.) | P15-KIT-ND | 43.95 |
| P16 Series - 10 ea. of 13 values (130 total pcs.) | P16-KIT-ND | 43.95 |
| P1D Series - 10 ea. of 13 values (130 total pcs.) | P1D-KIT-ND | 43.95 |
| P1E Series - 10 ea. of 13 values (130 total pcs.) | P1E-KIT-ND | 43.95 |
| P7J Series - 10 ea. of 15 values (150 total pcs.) | P7J-KIT-ND | 59.95 |
| Bourns 3/4" (19.05mm) Rectangular 15-Turn 10 ea. of 15 values (150 total pcs.) | 3006P-KIT-ND | 159.00 |
| Bourns 3/8" (9.52mm) Square 25-Turn 3296P Series - 5 ea. of values denoted (75 pcs.) | 3296P-KIT-ND | 139.00 |
| 3296W Series - 5 ea. of values denoted (75 pcs.) | 3296W-KIT-ND | 139.00 |
| 3296X Series - 5 ea. of values denoted (75 pcs.) | 3296X-KIT-ND | 139.00 |
| 3296Y Series - 5 ea. of values denoted (75 pcs.) | 3296Y-KIT-ND | 139.00 |
| 3296Z Series - 5 ea. of values denoted (75 pcs.) | 3296Z-KIT-ND | 139.00 |
| Bourns 3/8" (9.52mm) Square Single-Turn 3386C Series - 5 ea. of values denoted (75 pcs.) | 3386C-KIT-ND | 64.95 |
| 3386F Series - 5 ea. of values denoted (75 pcs.) | 3386F-KIT-ND | 64.95 |
| 3386P Series - 5 ea. of values denoted (75 pcs.) | 3386P-KIT-ND | 64.95 |
| 3386R Series - 5 ea. of values denoted (75 pcs.) | 3386R-KIT-ND | 64.95 |
| 3386X Series - 5 ea. of values denoted (75 pcs.) | 3386X-KIT-ND | 64.95 |
| Bourns 1/2" (12.70mm) Square 25-Turn 5 ea. of 18 popular values (90 pcs.) | 3252-KIT-ND | 569.00 |
| Bourns 1/4" (6.35mm) Square Ceramic 12-Turn 3266W Series - 5 ea. of values denoted (85 pcs.) | 3266W-KIT-ND | 189.00 |
| 3266X Series - 5 ea. of values denoted (85 pcs.) | 3266X-KIT-ND | 189.00 |
| Bourns 1/4" (6.35mm) Square Ceramic Single-Turn 3362H Series - 10 ea. of values (140 total pcs.) | 3362H-KIT-ND | 89.95 |
| 3362M Series - 10 ea. of values (140 total pcs.) | 3362M-KIT-ND | 89.95 |
| 3362R Series - 10 ea. of values (140 total pcs.) | 3362R-KIT-ND | 89.95 |
| 3362U Series - 10 ea. of values (140 total pcs.) | 3362U-KIT-ND | 89.95 |
| 3362X Series - 10 ea. of values (140 total pcs.) | 3362X-KIT-ND | 89.95 |
| Bourns 9mm Round Ceramic Single-Turn 10 ea. of all values denoted (180 total pcs.) | 3309-KIT-ND | 89.95 |
| Bourns 6mm Round Ceramic Single-Turn 3316K Series - 10 ea. of values (130 total pcs.) | 3316K-KIT-ND | 37.95 |
| 3316W Series - 10 ea. of values (130 total pcs.) | 3316W-KIT-ND | 37.95 |
| Bourns 1/4" (6.35mm) Round Ceramic Single-Turn 3329H Series - 5 ea. of all values (70 total pcs.) | 3329H-KIT-ND | 119.95 |
| 3329P Series - 5 ea. of all values (70 total pcs.) | 3329P-KIT-ND | 119.95 |
| 3329S Series - 5 ea. of all values (70 total pcs.) | 3329S-KIT-ND | 119.95 |
| 3329W Series - 5 ea. of all values (70 total pcs.) | 3329W-KIT-ND | 119.95 |
| 3329X Series - 5 ea. of all values (70 total pcs.) | 3329X-KIT-ND | 119.95 |
| Bourns 5/16" (7.95mm) Round Ceramic 4-Turn 3339P Series - 5 ea. of all values (70 total pcs.) | 3339P-KIT-ND | 259.00 |
| 3339W Series - 5 ea. of all values (70 total pcs.) | 3339W-KIT-ND | 259.00 |
| Bourns 3/8" (9.52mm) Round Ceramic Single-Turn 3352E Series - 5 ea. of all values (75 total pcs.) | 3352E-KIT-ND | 46.95 |
| 3352H Series - 5 ea. of all values (75 total pcs.) | 3352H-KIT-ND | 46.95 |
| 3352P Series - 5 ea. of all values (75 total pcs.) | 3352P-KIT-ND | 46.95 |
| 3352T Series - 5 ea. of all values (75 total pcs.) | 3352T-KIT-ND | 46.95 |
| 3352W Series - 5 ea. of all values (75 total pcs.) | 3352W-KIT-ND | 46.95 |
| 3359P Series - 5 ea. of all values (65 total pcs.) | 3359P-KIT-ND | 49.95 |
| 3359W Series - 5 ea. of all values (65 total pcs.) | 3359W-KIT-ND | 49.95 |
| Bourns 1/2" (12.70mm) Round Wirewound Single-Turn 5 ea. of 9 values (45 total pcs.) | 3345P-KIT-ND | 169.95 |
| Bourns SMD 4mm Sq. Ceramic Single-Turn Open Frame - 5 ea. of values denoted (55 total pcs.) | 3364W-KIT-ND | 39.95 |
| Digi-Key® Thermistor Kits | | |
| Keystone Thermistors | | |
| PTC - 2 ea. (20 total pcs.) | KCPTC1-KIT-ND | 37.95 |
| NTC - 2 ea. of values denoted (30 total pcs.) | KCNTC-KIT-ND | 39.95 |
| Digi-Key® Resistor Kits | | |
| Yageo 5% Carbon Film, 1/8 Watt 5 ea. of values 1.0, 1.2, 1.5, 1.8, 2.2, etc. | RS112-ND | 16.96 |
| thru 1.0 megohm (365 total pcs.) | | |
| 5 ea. of values 1.1, 1.3, 1.6, 2.0, 2.4, etc. | RS212-ND | 16.99 |
| thru 910 kilohm (360 total pcs.) | | |
| 200 ea. of all 16 standard values 1.0 - 4.7 megohms (32,200 total pcs.) | RSE200-ND | 399.00 |
| Yageo 5% Carbon Film, 1/4 Watt 5 ea. of values 1.0, 1.2, 1.5, 1.8, 2.2, etc. | RS125-ND | 14.95 |
| thru 1.0 megohm (365 total pcs.) | | |
| 5 ea. of values 1.1, 1.3, 1.6, 2.0, 2.4, etc. | RS225-ND | 14.95 |
| thru 910 kilohm (360 total pcs.) | | |
| 200 ea. of all 16 standard values 1.0 - 4.7 megohms (32,200 total pcs.) | RSQ200-ND | 219.00 |
| Yageo 5% Carbon Film, 1/2 Watt 5 ea. of values 1.0, 1.2, 1.5, 1.8, 2.2, etc. | RS150-ND | 16.95 |
| thru 1.0 megohm (365 total pcs.) | | |
| 5 ea. of values 1.1, 1.3, 1.6, 2.0, 2.4, etc. | RS250-ND | 16.95 |
| thru 910 kilohm (360 total pcs.) | | |
| 200 ea. of all 16 standard values 1.0 - 4.7 megohms (32,200 total pcs.) | RSH200-ND | 297.00 |
| Panasonic 0402 1% Chip Resistor Assts., 1/16 Watt 50 ea. of values 100nm to 97.6ohm (4,800 pcs.) | RSM1L-ND | 349.00 |
| 50 ea. of values 100nm to 976ohm (4,800 pcs.) | RSM2L-ND | 349.00 |
| 50 ea. of values 1.00K to 9.76K (4,800 pcs.) | RSM3L-ND | 349.00 |
| 50 ea. of values 10.0K to 97.6K (4,800 pcs.) | RSM4L-ND | 349.00 |
| 50 ea. of values 100K to 1,000M (4,850 pcs.) | RSM5L-ND | 349.00 |

| Description | Digi-Key Part No. | Price Each |
|--|-------------------|------------|
| Panasonic 0402 5% Chip Resistor Assts., 1/16 Watt | | |
| 50 ea. of every other value from 10, 12, 15, etc 1.0M (3,050 pcs.) | CR7A-KIT-ND | 99.95 |
| 200 ea. - same values as kit above (12,200 pcs.) | CR7-KIT-ND | 399.00 |
| 50 ea. of every other value from 11, 13, 16, etc. 910K (3,000 pcs.) | CR8A-KIT-ND | 99.95 |
| 200 ea. - same values as kit above (12,000 pcs.) | CR8-KIT-ND | 399.00 |
| Panasonic 0603 1% Chip Resistor Assts., 1/16 Watt 50 ea. of values 100nm to 97.6ohm (4,800 pcs.) | RSM1H-ND | 199.00 |
| 50 ea. of values 100nm to 976ohm (4,800 pcs.) | RSM2H-ND | 199.00 |
| 50 ea. of values 1.00K to 9.76K (4,800 pcs.) | RSM3H-ND | 199.00 |
| 50 ea. of values 10.0K to 97.6K (4,800 pcs.) | RSM4H-ND | 199.00 |
| 50 ea. of values 100K to 1,000M (4,850 pcs.) | RSM5H-ND | 199.00 |
| Panasonic 0603 5% Chip Resistor Assts., 1/16 Watt 50 ea. of every other value from 10, 12, 15, etc 1.0M (3,050 pcs.) | CR5A-KIT-ND | 94.95 |
| 200 ea. - same values as kit above (12,200 pcs.) | CR5-KIT-ND | 379.00 |
| 50 ea. of every other value from 11, 13, 16, etc. 910K (3,000 pcs.) | CR6A-KIT-ND | 94.95 |
| 200 ea. - same values as kit above (12,000 pcs.) | CR6-KIT-ND | 379.00 |
| Panasonic 0805 1% Chip Resistor Assts., 1/10 Watt 50 ea. of values 100nm to 97.6ohm (4,800 pcs.) | RSM1CA-ND | 129.95 |
| 200 ea. of values 100nm to 976ohm (19,200 pcs.) | RSM1NC-ND | 495.00 |
| 50 ea. of values 100nm to 976ohm (4,800 pcs.) | RSM2CA-ND | 129.95 |
| 200 ea. of values 100nm to 976ohm (19,200 pcs.) | RSM2NC-ND | 495.00 |
| 50 ea. of values 1.00K to 9.76K (4,800 pcs.) | RSM3CA-ND | 129.95 |
| 200 ea. of values 10.0K to 97.6K (4,800 pcs.) | RSM4CA-ND | 129.95 |
| 50 ea. of values 100K to 1,000M (4,850 pcs.) | RSM5CA-ND | 129.95 |
| 200 ea. of values 100K to 1,000M (19,400 pcs.) | RSM5NC-ND | 495.00 |
| Panasonic 1206 5% Chip Resistor Assts., 1/10 Watt 50 ea. of every other value from 10, 12, 15, etc. 1.0M (3,050 pcs.) | CR3A-KIT-ND | 89.95 |
| 200 ea. - same values as kit above (12,200 pcs.) | CR3-KIT-ND | 349.00 |
| 50 ea. of every other value from 11, 13, 16, etc. 910K (3,000 pcs.) | CR4A-KIT-ND | 89.95 |
| 200 ea. - same values as kit above (12,000 pcs.) | CR4-KIT-ND | 349.00 |
| Panasonic 1206 1% Chip Resistor Assts., 1/8 Watt 50 ea. of values 10.00nm to 97.6ohm (4,800 pcs.) | RSM1FA-ND | 129.95 |
| 200 ea. of values 10.00nm to 97.6ohm (19,200 pcs.) | RSM1NF-ND | 495.00 |
| 50 ea. of values 100nm to 976ohm (4,800 pcs.) | RSM2FA-ND | 129.95 |
| 200 ea. of values 100nm to 976ohm (19,200 pcs.) | RSM2NF-ND | 495.00 |
| 50 ea. of values 1.00K to 9.76K (4,800 pcs.) | RSM3FA-ND | 129.95 |
| 200 ea. of values 1.00K to 9.76K (19,200 pcs.) | RSM4FA-ND | 129.95 |
| 50 ea. of values 10.0K to 97.6K (4,900 pcs.) | RSM5FA-ND | 129.95 |
| 200 ea. of values 10.0K to 97.6K (19,400 pcs.) | RSM5NF-ND | 495.00 |
| Panasonic 1206 5% Chip Resistor Assts., 1/8 Watt 50 ea. of every other value from 10, 12, 15, etc. 1.0M (3,050 pcs.) | CR1A-KIT-ND | 89.95 |
| 200 ea. - same values as kit above (12,200 pcs.) | CR1-KIT-ND | 329.00 |
| 50 ea. of every other value from 11, 13, 16, etc. 910K (3,000 pcs.) | CR2A-KIT-ND | 89.95 |
| 200 ea. - same values as kit above (12,000 pcs.) | CR2-KIT-ND | 329.00 |
| Yageo 1/5 Metal Film, 1/4 Watt 5 ea. of values 100nm to 97.6ohm (480 total pcs.) | RS1X-ND | 29.95 |
| 5 ea. of values 100nm to 976ohm (480 total pcs.) | RS2X-ND | 29.95 |
| 5 ea. of values 1.00K to 9.76K (480 total pcs.) | RS3X-ND | 29.95 |
| 5 ea. of values 10.0K to 97.6K (480 total pcs.) | RS4X-ND | 29.95 |
| 5 ea. of values 100K to 1,000M (480 total pcs.) | RS5X-ND | 29.95 |
| Yageo 5% Metal Oxide, 1 Watt 5 ea. of values 0.47ohm to 560ohm (255 total pcs.) | RS101-ND | 26.95 |
| 5 ea. of values 62ohm to 7.5K (255 total pcs.) | RS202-ND | 26.95 |
| 5 ea. of values 8.2K to 1.0M (255 total pcs.) | RS302-ND | 26.95 |
| Yageo 5% Metal Oxide, 2 Watt 5 ea. of values 0.47ohm to 560ohm (255 total pcs.) | RS102-ND | 29.95 |
| 5 ea. of values 62ohm to 7.5K (255 total pcs.) | RS203-ND | 29.95 |
| 5 ea. of values 8.2K to 1.0M (255 total pcs.) | RS303-ND | 29.95 |
| Yageo 5% Wirewound Rect., 5 Watt 5 ea. of values 0.30ohm - 0.91ohm (60 pcs.) | RS105-ND | 23.95 |
| 4 ea. of values 1.00hm - 9.10hm (96 pcs.) | RS205-ND | 32.95 |
| 4 ea. of values 10.0hm - 19.10hm (96 pcs.) | RS305-ND | 32.95 |
| 3 ea. of values 100ohm - 2.0K (96 pcs.) | RS405-ND | 32.95 |
| Yageo 5% Wirewound Rect., 10 Watt 2 ea. (168 total pcs.) | R110-ND | 72.95 |
| Digi-Key® Capacitor Kits | | |
| Panasonic Miniature Aluminum Electrolytic KG Series - 10 ea. of 18 values (180 pcs.) | P900-KIT-ND | 34.95 |
| Panasonic Miniature Radial Lead Electrolytic SU-Series - 10 ea. of 15 values (150 pcs.) | P619B-KIT-ND | 49.95 |
| NHE-Series - 10 ea. of 15 values (150 pieces) | P519B-KIT-ND | 69.95 |
| Z-Series - 10 ea. of 15 values (150 total pcs.) | Z-KIT-ND | 42.95 |
| Panasonic Mini. High Freq. Radial Lead Electrolytic HF/HFU Series - 10 ea. of 13 values (130 total pcs.) | P6700-KIT-ND | 129.95 |
| Panasonic Mini. Radial Lead Electrolytic KA-Series - 10 ea. of 16 values (160 total pieces) | P835-KIT-ND | 29.95 |
| Panasonic Tantalum EF-Series - Assort. of 15 values (180 total pcs.) | F-KIT-ND | 39.95 |
| Panasonic Stacked Metal Film V-Series, 50 Volt - 10 ea. of 18 values (190 pcs.) | P454Z-KIT-ND | 49.95 |
| V-Series, 100 Volt - 10 ea. of 18 values (180 pcs.) | P4700-KIT-ND | 49.95 |
| Panasonic Metal Film (Interference Suppressor) X-Y Series - 10 ea. of 10 values (100 pcs.) | P4650-KIT-ND | 59.95 |
| Panasonic Metallized Polyester E-Series - 10 each of all values denoted (except #E2104 has 30 pcs.) - (170 total pcs.) | E-KIT-ND | 59.95 |
| Panasonic Polyester B-Series - Various quantities of 12 values (300 pcs.) | P4550-KIT-ND | 29.95 |
| Panasonic Polyester Foil M-Series, 200 Volt - 10 ea. of 18 values (150 pcs.) | M200-KIT-ND | 29.95 |
| M-Series, 400 Volt - 10 ea. of 15 values (150 pcs.) | M400-KIT-ND | 29.95 |
| Panasonic Polypropylene P-Series - 10 ea. of 15 values (150 pcs.) | P3100-KIT-ND | 69.95 |
| Panasonic Bi-Polar Capacitor 10 ea. of 14 values (140 pcs.) | P1141-KIT-ND | 89.95 |
| Panasonic SMD Electrolytic VA-Series - 10 ea. of 16 values (160 pcs.) | PCE2-KIT-ND | 49.95 |
| Panasonic SMD Tantalum Electrolytic TE-Series - 10 ea. of 18 values (180 pcs.) | PC1S1-KIT-ND | 89.95 |
| TE-Series - 10 ea. of 18 values (180 pcs.) | PC2S2-KIT-ND | 89.95 |
| TES-Series - 10 ea. of 18 values (180 pcs.) | PC3S3-KIT-ND | 89.95 |

| Description | Digi-Key Part No. | Price Each |
|---|-------------------|------------|
| Panasonic Chip Tantalum - TE Series | | |
| 6.3, 10, 16VDC - 10 ea. of 19 values (190 total pcs.) | PCT1-KIT-ND | 129.95 |
| 25, 35VDC - 10 ea. of 17 values (170 total pcs.) | PCT2-KIT-ND | 119.95 |
| Panasonic SMT Film ECH-U Series - 10 ea. of 18 values (180 pcs.) | PCF1-KIT-ND | 59.95 |
| ECH-V Series - 10 ea. of 23 values (230 pcs.) | PCF2-KIT-ND | 59.95 |
| Panasonic 0402 Chip Ceramic NPO Series - 10 ea. of 30 values (300 pcs.) | PCC1-KIT-ND | 64.95 |
| X7R & Y5V Series - 10 ea. of 26 values (260 pcs.) | PCC2-KIT-ND | 29.95 |
| Panasonic 0603 Chip Ceramic NPO Series - 10 ea. of 30 values (300 pcs.) | PCC3-KIT-ND | 29.95 |
| X7R Series - 10 ea. of 25 values (250 pcs.) | PCC4-KIT-ND | 29.95 |
| Panasonic 0805 Chip Ceramic NPO Series - 10 ea. of 30 values (300 pcs.) | PCC5-KIT-ND | 29.95 |
| X7R Series - 10 ea. of 26 values (260 pcs.) | PCC6-KIT-ND | 29.95 |
| Panasonic 1206 Chip Ceramic NPO Series - 10 ea. of 30 values (300 pcs.) | PCC7-KIT-ND | 29.95 |
| X7R Series - 10 ea. of 26 values (260 pcs.) | PCC8-KIT-ND | 29.95 |
| Panasonic 0402 1% Chip Resistor Assts., 1/16 Watt 10 ea. of every other value from 10, 12, 15, etc 1.0M (3,050 pcs.) | CR7A-KIT-ND | 99.95 |
| 200 ea. - same values as kit above (12,200 pcs.) | CR7-KIT-ND | 399.00 |
| 10 ea. of every other value from 11, 13, 16, etc. 910K (3,000 pcs.) | CR8A-KIT-ND | 99.95 |
| 200 ea. - same values as kit above (12,000 pcs.) | CR8-KIT-ND | 399.00 |
| Panasonic 0603 1% Chip Resistor Assts., 1/16 Watt 10 ea. of every other value from 10, 12, 15, etc 1.0M (3,050 pcs.) | CR5A-KIT-ND | 94.95 |
| 200 ea. - same values as kit above (12,200 pcs.) | CR5-KIT-ND | 379.00 |
| 10 ea. of every other value from 11, 13, 16, etc. 910K (3,000 pcs.) | CR6A-KIT-ND | 94.95 |
| 200 ea. - same values as kit above (12,000 pcs.) | CR6-KIT-ND | 379.00 |
| Panasonic 0805 1% Chip Resistor Assts., 1/10 Watt 10 ea. of every other value from 10, 12, 15, etc 1.0M (3,050 pcs.) | CR1A-KIT-ND | 89.95 |
| 200 ea. - same values as kit above (12,200 pcs.) | CR1-KIT-ND | 329.00 |
| 10 ea. of every other value from 11, 13, 16, etc. 910K (3,000 pcs.) | CR2A-KIT-ND | 89.95 |
| 200 ea. - same values as kit above (12,000 pcs.) | CR2-KIT-ND | 329.00 |
| Yageo 1/4 Metal Film, 1/4 Watt 5 ea. of values 100nm to 97.6ohm (480 total pcs.) | RS1X-ND | 29.95 |
| 5 ea. of values 100nm to 976ohm (480 total pcs.) | RS2X-ND | 29.95 |
| 5 ea. of values 1.00K to 9.76K (480 total pcs.) | RS3X-ND | 29.95 |
| 5 ea. of values 10.0K to 97.6K (480 total pcs.) | RS4X-ND | 29.95 |
| 5 ea. of values 100K to 1,000M (480 total pcs.) | RS5X-ND | 29.95 |
| Panasonic Surface Mount Crystals MA-505 Series - 3 each (51 total pcs.) | SE1-KIT-ND | 89.00 |
| MA-506 Series - 3 each (51 total pcs.) | SE2-KIT-ND | 89.00 |
| SG-615P Series - 2 each (32 total pcs.) | SE3-KIT-ND | 109.00 |
| Littelfuse Pico SM and Nano® SMF Fuses 5 Each of indicated values (150 total pieces) | SMF-KIT-ND | 99.95 |
| Panasonic LEDs - 10 ea. of 18 LED's (180 total pcs.) | LED-KIT-ND | 36.95 |
| Capital Advanced Technologies Inc. - Master Ass't. Kit for Discretes, 2 ea. of all 23 models in the 6000 series of surfboards for discrete components | MK-6000CA-ND | 99.00 |
| Capital Advanced Technologies Inc. - Master Ass't. Kit for IC's, 2 ea. of models 9081, 9082, 9161, 9162 & 2 ea. of models 9163, 9164, 9165, 9210, 9301 & 9302 (32 pieces) | MK-9000CA-ND | 99.00 |
| Capital Advanced Technologies Inc. - Uni-SIP 2A, 10 ea. of all 26 type in the Uni-SIP Series, pkg'd in reclosable bags grouped by series number | MK260CA-ND | 79.00 |
| Johnson Plugs & Jacks 10 ea. of 15 plugs & jacks (150 pcs.) | J100-KIT-ND | 76.95 |
| Johnson Spacers - 10 ea. of 15 spacers (150 pcs.) | J200-KIT-ND | 29.95 |
| Hardware - 100 each of machine screws, hex nuts & lock washers in each of the following | | |

**Electronic Reproduction of
Digi-Key® Catalog #992
April - June, 1999**

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