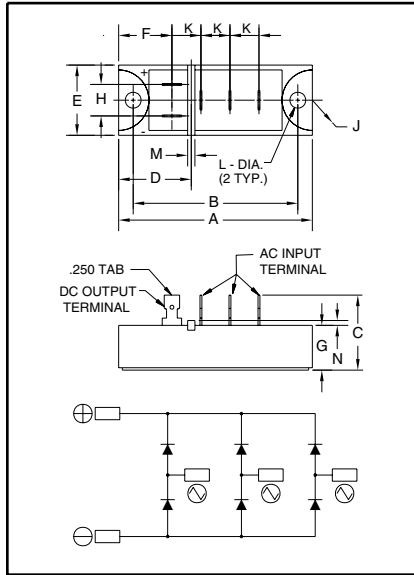


Three-Phase
Diode Bridge Modules
30 Amperes/1200-1600 Volts



Outline Drawing

| Dimension | Inches | Millimeters |
|-----------|------------------|--------------|
| A | 3.150 | 80 |
| B | 2.677±0.012 | 68±0.3 |
| C | 1.220 | 31 |
| D | 1.181 | 30 |
| E | 1.142 | 29 |
| F | 0.866 | 22 |
| G | 0.728 | 18.5 |
| H | 0.512 | 13 |
| J | 0.492 R | R12.5 |
| K | 0.472 | 12 |
| L | 0.256±0.008 Dia. | Dia. 6.5±0.2 |
| M | 0.118 | 3 |
| N | 0.079 | 2 |



ME701203, ME701603
Three-Phase Diode Bridge Modules
30 Amperes/1200-1600 Volts

Description:

Powerex Three-Phase Diode Bridge Modules are designed for use in three-phase bridge application. The modules are isolated consisting of six rectifier diodes. These ME70 Modules have been tested and recognized by Underwriters Laboratories (QQQX2 Power Switching Semiconductors).

Features:

- Isolated Mounting
- Planar Chips
- UL Recognized

Applications:

- Inverters
- DC Power Supplies
- AC Motor Control Front End

Ordering Information:

Select the complete eight digit module part number you desire from the table below.

Example: ME701603 is a 1600 Volt, 30 Ampere Three-Phase Diode Bridge Module.

| Type | Voltage Volts (x100) | Current Rating Amperes (x10) |
|------|----------------------|------------------------------|
| ME70 | 12 | 03 |
| | 16 | |



Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (724) 925-7272

ME701203, ME701603
Three-Phase Diode Bridge Modules
30 Amperes/1200-1600 Volts

Absolute Maximum Ratings

| Characteristics | Symbol | ME701203 | ME701603 | Units |
|---|-------------|------------|------------|-------------|
| Peak Reverse Blocking Voltage | V_{RRM} | 1200 | 1600 | Volts |
| Transient Peak Reverse Blocking Voltage (Non-Repetitive), $t < 5ms$ | V_{RSM} | 1350 | 1700 | Volts |
| DC Reverse Blocking Voltage | $V_{R(DC)}$ | 960 | 1280 | Volts |
| DC Output Current, $T_C = 103^{\circ}C$ | I_O | 30 | 30 | Amperes |
| Peak One-Cycle Surge (Non-Repetitive) On-State Current (60Hz) | I_{FSM} | 300 | 300 | Amperes |
| Peak One-Cycle Surge (Non-Repetitive) On-State Current (50Hz) | I_{FSM} | 275 | 275 | Amperes |
| I^2t (for Fusing), 8.3 milliseconds | I^2t | 375 | 375 | A^2sec |
| Storage Temperature | T_{STG} | -40 to 125 | -40 to 125 | $^{\circ}C$ |
| Operating Temperature | T_j | -40 to 150 | -40 to 125 | $^{\circ}C$ |
| Maximum Mounting Torque M6 Mounting Screw | — | 26 | 26 | in.-lb. |
| Module Weight (Typical) | — | 120 | 120 | Grams |
| V Isolation | V_{RMS} | 2500 | 2500 | Volts |



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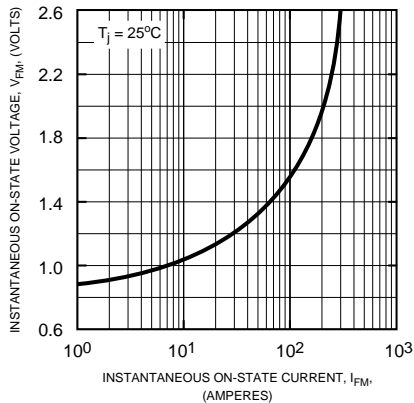
ME701203, ME701603
Three-Phase Diode Bridge Modules
30 Amperes/1200-1600 Volts

Electrical and Thermal Characteristics, $T_j = 25^\circ\text{C}$ unless otherwise specified

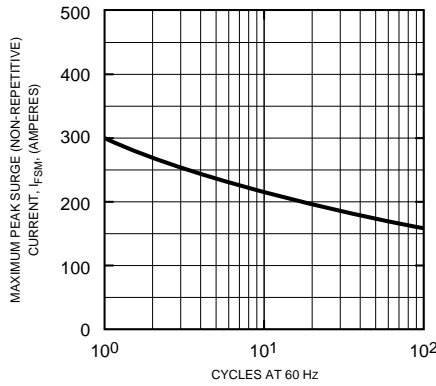
| Characteristics | Symbol | Test Conditions | ME701203/ME701603 | Units |
|---|-------------------|--|-------------------|------------------------------|
| Blocking State Maximums | | | | |
| Reverse Leakage Current, Peak | I_{RRM} | $T_j = 150^\circ\text{C}$, $V_{RRM} = \text{Rated}$ | 2.0 | mA |
| Conducting State Maximums | | | | |
| Peak On-State Voltage | V_{FM} | $I_{FM} = 30\text{A}$ | 1.25 | Volts |
| Thermal Maximums | | | | |
| Thermal Resistance, Junction-to-Case | $R_{\theta(J-C)}$ | Per Module | 0.7 | $^\circ\text{C}/\text{Watt}$ |
| Thermal Resistance, Case-to-Sink (Lubricated) | $R_{\theta(C-S)}$ | Per Module | 0.1 | $^\circ\text{C}/\text{Watt}$ |

ME701203, ME701603
Three-Phase Diode Bridge Modules
 30 Amperes/1200-1600 Volts

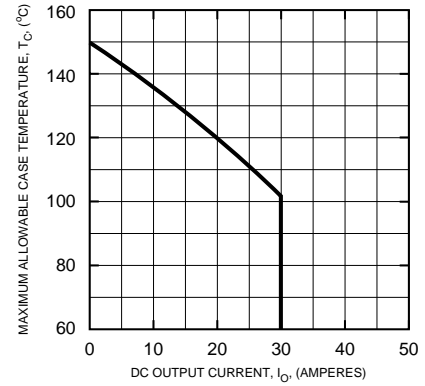
MAXIMUM ON-STATE CHARACTERISTICS



MAXIMUM ALLOWABLE PEAK SURGE (NON-REPETITIVE) CURRENT



MAXIMUM ALLOWABLE CASE TEMPERATURE



MAXIMUM ON-STATE POWER DISSIPATION

