## DIODE MODULE

DD55F/KD55F
UL;E76102 (M)
Power Diode Module DD55F series are designed for various rectifier circuits. DD55F has two diode chips connected in series in 25 mm (1inch) width package and the mounting base is elctrically isolated from elements for simple heatsink construction. Wide voltage rating up to, $1,600 \mathrm{~V}$ is avaiable for various input voltage.

- Isolated mounting base
- Two elements in a package for simple (single and three phase) bridge connections
- Highly reliable glass passivated chips
- High surge current capability
(Applications)
Various rectifiers, Battery chargers, DC motor drives


Unit : mm

| Maximum Ratings |  |  | $\left(\mathrm{Tj}=25^{\circ} \mathrm{C}\right)$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Symbol | Item |  | Ratings |  |  |  | Unit |
|  |  |  | DD55F40 | DD55F80 | DD55F120 | DD55F160 |  |
| Vrrm | Repetitive Peak Reverse Voltage |  | 400 | 800 | 1200 | 1600 | V |
| VRSM | Non-Repetitive Peak Reverse Voltage |  | 480 | 960 | 1300 | 1700 | V |
| Symbol | Item |  | Conditions |  |  | Ratings | Unit |
| If (AV) | Average Forward Current |  | Single phase, half wave, $180^{\circ}$ conduction, $\mathrm{Tc}: 89{ }^{\circ} \mathrm{C}$ |  |  | 55 | A |
| IF (RMS) | R.M.S. Forward Current |  | Single phase, half wave, $180^{\circ}$ conduction, $\mathrm{Tc}: 89{ }^{\circ} \mathrm{C}$ |  |  | 86 | A |
| IFSM | Surge Forward Current |  | $1 / 2$ cycle, $50 / 60 \mathrm{~Hz}$, peak value, non-repetitive |  |  | 1600/1750 | A |
| 12 t | 12 t |  | Value for one cycle of surge current |  |  | 12800 | $\mathrm{A}^{2} \mathrm{~S}$ |
| Viso | Isolation Breakdown Voltage (R.M.S.) |  | A.C. 1 minute |  |  | 2500 | ${ }^{\circ} \mathrm{C}$ |
| Tj | Junction Temperature |  |  |  |  | $-40 \sim+125$ | ${ }^{\circ} \mathrm{C}$ |
| Tstg | Storage Temperature |  |  |  |  | $-40 \sim+125$ | V |
|  | Mounting Torque | Mounting (M5) | Recommend | ue $1.5 \sim 2.5$ | 25) | 2.7 (28) | $\mathrm{N} \cdot \mathrm{m}$ |
|  |  | Terminal (M5) | Recommended Value 1.5~2.5 (15~25) |  |  | 2.7 (28) | ( $\mathrm{kgf} \cdot \mathrm{cm}$ ) |
|  | Mass |  |  |  |  | 170 | g |

## Electrical Characteristics

| Symbol | Item | Conditions | Ratings | Unit |
| :---: | :--- | :--- | :---: | :---: |
| IRRM | Repetitive Peak Reverse Current, max. | at VDRM, single phase, half wave. $\mathrm{Tj}=125^{\circ} \mathrm{C}$ | 15 | mA |
| VFm $^{\text {I }}$ | Forward Voltage Drop, max. | Forward current $170 \mathrm{~A}, \mathrm{Tj}=25^{\circ} \mathrm{C}$, Inst. measurement | 1.40 | V |
| Rth $(\mathrm{j}-\mathrm{C})$ | Thermal Impedance, max. | Junction to case | 0.50 | ${ }^{\circ} \mathrm{C} / \mathrm{W}$ |

Average Forward Current vs.


Cycle Surge Forward Current Rating
(Non-Repetitive)





