

DIODE(THREE PHASES BRIDGE TYPE)

DF100AA120/160



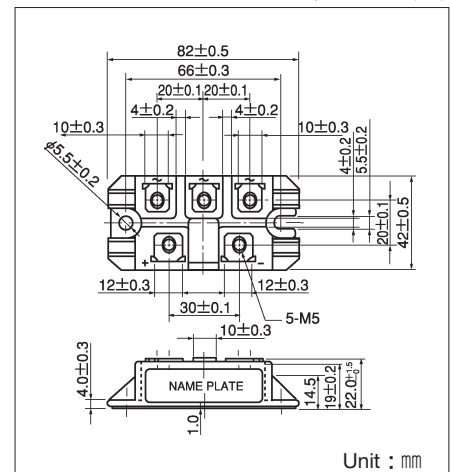
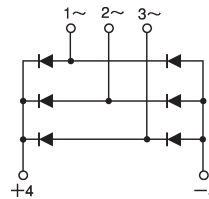
UL;E76102 (M)

Power Diode Module DF100AA is designed for three phase full wave rectification, which has six diodes connected in a three phase bridge configuration. The mounting base of the module is electrically isolated from semiconductor elements for simple heatsink construction. Output DC current is 100Amp ($T_c = 102^\circ\text{C}$) Repetitive peak reverse voltage is up to 1,600V.

- $T_{j\text{Max}} = 150^\circ\text{C}$
- Isolated mounting base
- High reliability by unique glass passivation

(Applications)

AC, DC Motor Drive/AVR/Switching
-for three phase rectification



Maximum Ratings

($T_j = 25^\circ\text{C}$)

| Symbol | Item | Ratings | | Unit |
|-----------|-------------------------------------|------------|------------|------|
| | | DF100AA120 | DF100AA160 | |
| V_{RRM} | Repetitive Peak Reverse Voltage | 1200 | 1600 | V |
| V_{RSM} | Non-Repetitive Peak Reverse Voltage | 1300 | 1700 | V |

| Symbol | Item | Conditions | Ratings | Unit | |
|-----------|--------------------------------------|--|-----------------------------------|----------------------|-----------------|
| I_D | Output Current (D.C.) | Three phase full wave. $T_c : 102^\circ\text{C}$ | 100 | A | |
| I_{FSM} | Surge Forward Current | 1cycle, 50/60Hz, peak value, non-repetitive | 910/1000 | A | |
| I^2t | I^2t | Value for one cycle of surge current | 4100 | A^2S | |
| T_j | Operating Junction Temperature | | $-40 \sim +150$ | $^\circ\text{C}$ | |
| T_{stg} | Storage Temperature | | $-40 \sim +125$ | $^\circ\text{C}$ | |
| V_{ISO} | Isolation Breakdown Voltage (R.M.S.) | A.C. 1 minute | 2500 | V | |
| | Mounting Torque | Mounting (M5) | Recommended Value 1.5~2.5 (15~25) | 2.7 (28) | N·m (kgf·cm) |
| | | Terminal (M5) | Recommended Value 1.5~2.5 (15~25) | 2.7 (28) | |
| | Mass | Typical Value | 160 | g | |

Electrical Characteristics

| Symbol | Item | Conditions | Ratings | | | Unit |
|---------------|---------------------------------|---|---------|------|------|---------------------------|
| | | | Min. | Typ. | Max. | |
| I_{RRM} | Repetitive Peak Reverse Current | $T_j = 150^\circ\text{C}$ at V_{RRM} | | | 15 | mA |
| V_{FM} | Forward Voltage Drop | $T_j = 25^\circ\text{C}$, $I_{FM} = 100\text{A}$, Inst. measurement | | | 1.2 | V |
| $R_{th(j-c)}$ | Thermal Impedance | Junction to case | | | 0.2 | $^\circ\text{C}/\text{W}$ |

