

DIODE(THREE PHASES BRIDGE TYPE)

DF75AA120/160

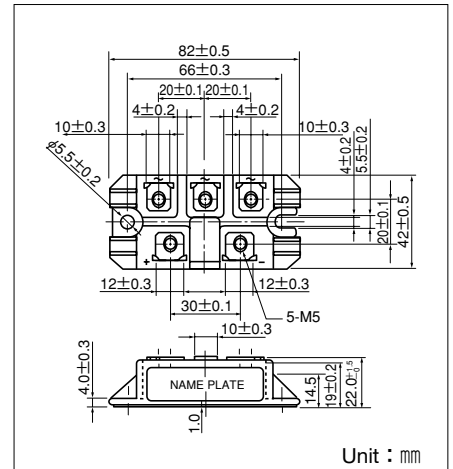
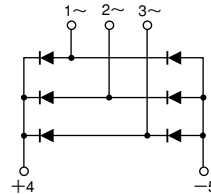
UL;E76102(M)

Power Diode Module **DF75AA** 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 75Amp ($T_c=100^\circ\text{C}$) Repetitive peak reverse voltage is up to 1600V.

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

(Applications)

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



Maximum Ratings

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

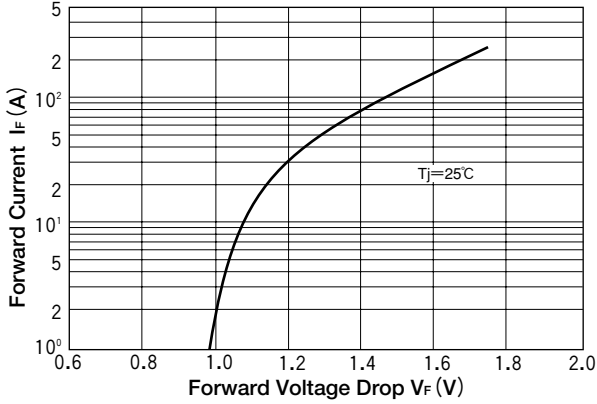
| Symbol | Item | Ratings | | Unit |
|-----------|-------------------------------------|-----------|-----------|------|
| | | DF75AA120 | DF75AA160 | |
| V_{RRM} | Repetitive Peak Reverse Voltage | 1200 | 1600 | V |
| V_{RSM} | Non-Repetitive Peak Reverse Voltage | 1300 | 1700 | V |

| Symbol | Item | Conditions | Ratings | Unit | |
|-----------|--------------------------------------|--|-----------------------------------|----------------------|-----------------|
| I_D | Output Current (D.C.) | Three Phase full wave. $T_c=100^\circ\text{C}$ | 75 | A | |
| I_{FSM} | Surge Forward Current | 1 cycle, 50/60Hz, peak value, non-repetitive | 910/1000 | A | |
| I^2t | I^2t | Value for one of surge current | 4100 | A^2S | |
| T_j | Operating Junction Temperature | | -40 to +150 | $^\circ\text{C}$ | |
| T_{stg} | Storage Temperature | | -40 to +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 | |

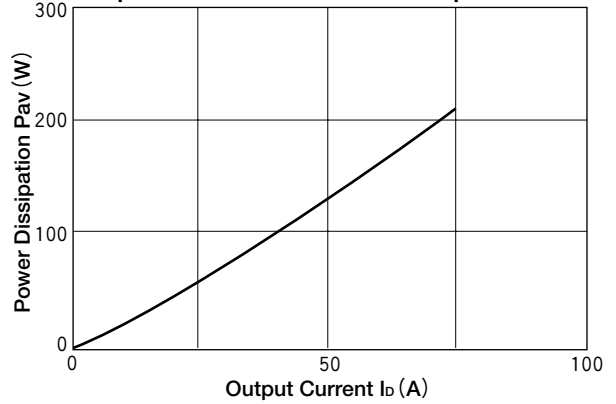
Electrical Characteristics

| Symbol | Item | Conditions | Ratings | Unit |
|---------------|---------------------------------------|--|---------|---------------------------|
| I_{RRM} | Repetitive Peak Reverse Current, max. | $T_j=150^\circ\text{C}$ at V_{RRM} | 10.0 | mA |
| V_{FM} | Forward Voltage Drop, max. | $T_j=25^\circ\text{C}$, $I_{FM}=75\text{A}$, Inst. measurement | 1.40 | V |
| $R_{th(j-c)}$ | Thermal Impedance, max. | Junction to case | 0.24 | $^\circ\text{C}/\text{W}$ |

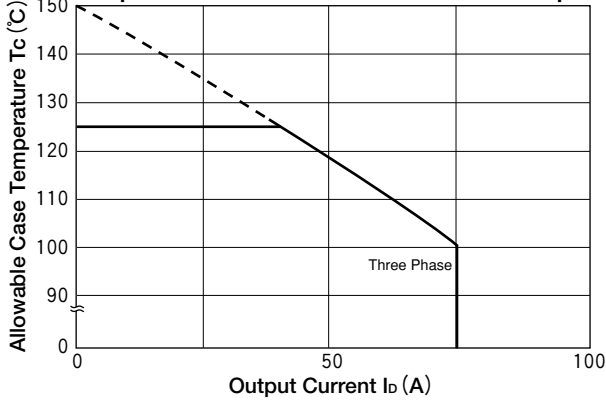
Maximum Forward Characteristics



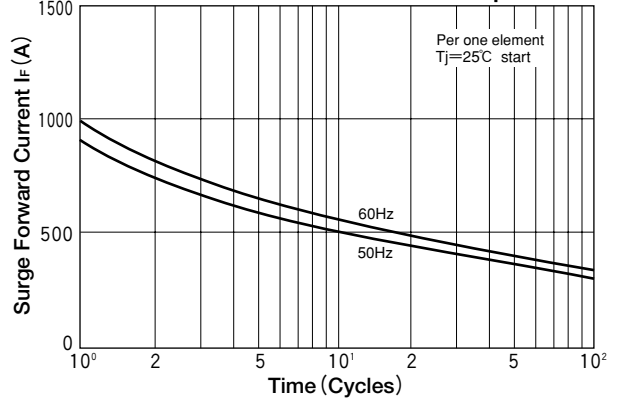
Output Current vs. Power Dissipation



Output Current vs. Allowable case Temp



Cycle Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance (max)

