

## DIODE(THREE PHASES BRIDGE TYPE)

# DF200AA120/160

TOP



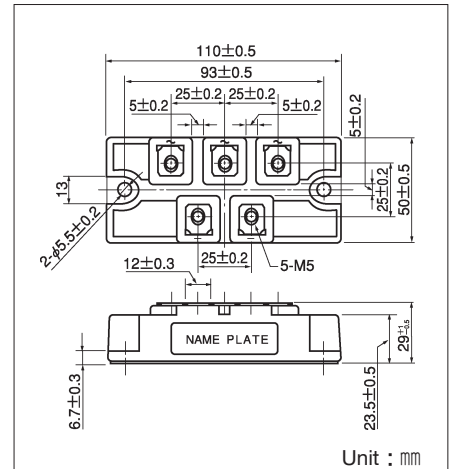
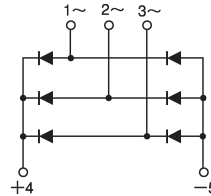
UL;E76102 (M)

Power Diode Module **DF200AA** 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 200Amp ( $T_c = 96^\circ\text{C}$ ) 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

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

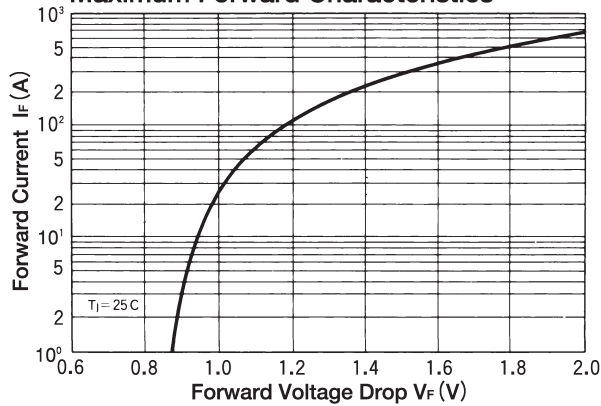
| Symbol    | Item                                | Ratings    |            | Unit |
|-----------|-------------------------------------|------------|------------|------|
|           |                                     | DF200AA120 | DF200AA160 |      |
| $V_{RRM}$ | Repetitive Peak Reverse Voltage     | 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. $T_c = 96^\circ\text{C}$ | 200             | A                                                             |
| $I_{FSM}$ | Surge Forward Current                |               | 1 cycle, 50/60Hz, peak value, non-repetitive    | 1850/2000       | A                                                             |
| $I^2t$    | $I^2t$                               |               | Value for one cycle of surge current            | 6000            | $\text{A}^2\text{S}$                                          |
| $T_j$     | 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)        | $\text{N} \cdot \text{m}$<br>( $\text{kgf} \cdot \text{cm}$ ) |
|           |                                      | Terminal (M5) | Recommended Value 1.5~2.5 (15~25)               | 2.7 (28)        |                                                               |
|           | Mass                                 |               | Typical Value                                   | 360             | g                                                             |

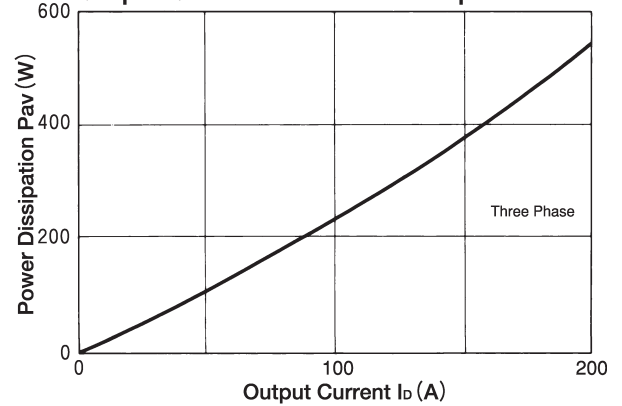
### Electrical Characteristics

| Symbol        | Item                                  | Conditions                                                            | Ratings | Unit                      |
|---------------|---------------------------------------|-----------------------------------------------------------------------|---------|---------------------------|
| $I_{RRM}$     | Repetitive Peak Reverse Current, max. | $T_j = 150^\circ\text{C}$ at $V_{RRM}$                                | 15.0    | mA                        |
| $V_{FM}$      | Forward Voltage Drop, max.            | $T_j = 25^\circ\text{C}$ , $I_{FM} = 200\text{A}$ , Inst. measurement | 1.35    | V                         |
| $R_{th(j-c)}$ | Thermal Impedance, max.               | Junction to case                                                      | 0.10    | $^\circ\text{C}/\text{W}$ |

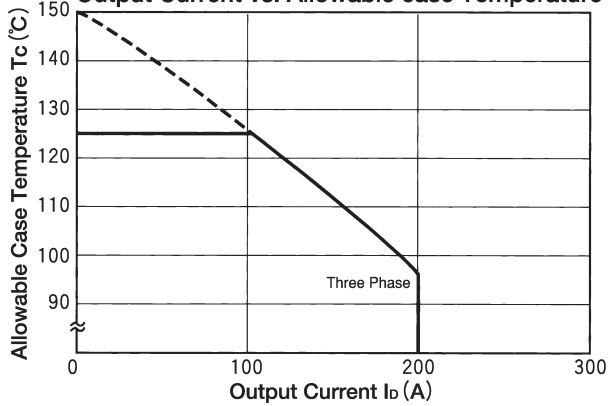
### Maximum Forward Characteristics



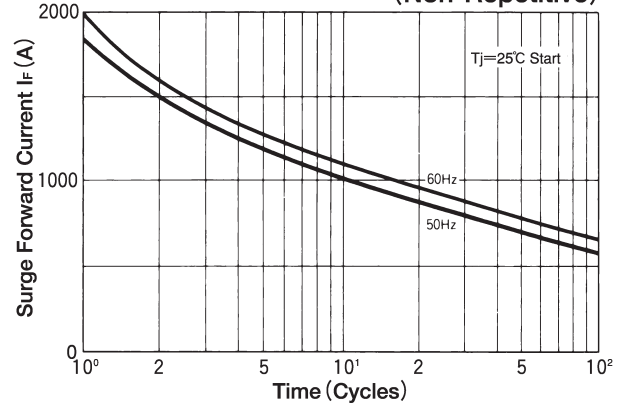
### Output Current vs. Power Dissipation



### Output Current vs. Allowable case Temperature



### Cycle Surge Forward Current Rating (Non-Repetitive)



### Transient Thermal Impedance (max)

