

## DIODE(THREE PHASES BRIDGE TYPE)

# DF75AA120/160

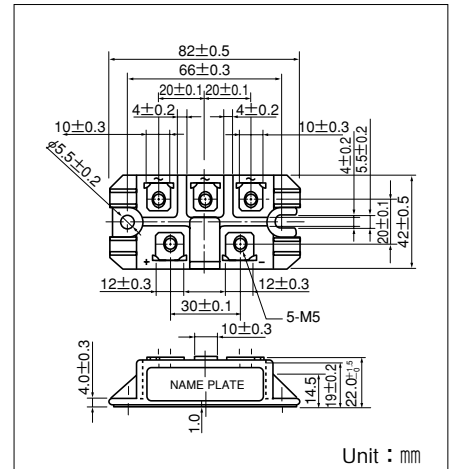
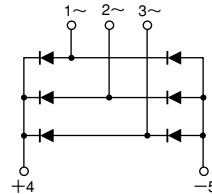
UL:E76102(M)

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)

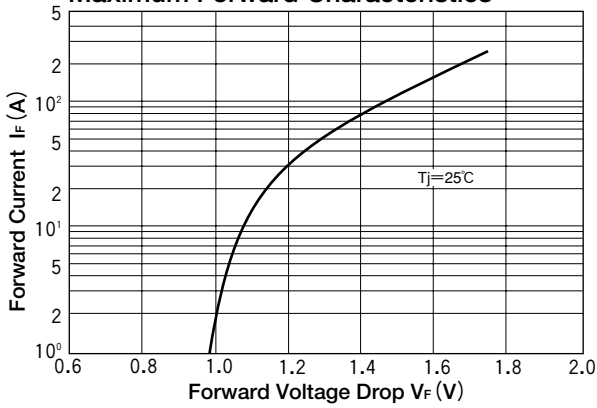
| Symbol    | Item                                | Ratings   |           | Unit |
|-----------|-------------------------------------|-----------|-----------|------|
|           |                                     | DF75AA120 | DF75AA160 |      |
| $V_{RRM}$ | Repetitive Peak Reverse Voltage     | 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                | 1cycle, 50/60Hz, peak value, non-repetitive    | 910/1000                          | A                    |                 |
| $I^2t$    | $I^2t$                               | Value for one of surge current                 | 4100                              | $\text{A}^2\text{S}$ |                 |
| $T_j$     | 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<br>(kgf·cm) |
|           |                                      | Terminal (M5)                                  | Recommended Value 1.5-2.5 (15-25) | 2.7 (28)             |                 |
|           | Mass                                 | Typical Value                                  | 160                               | g                    |                 |

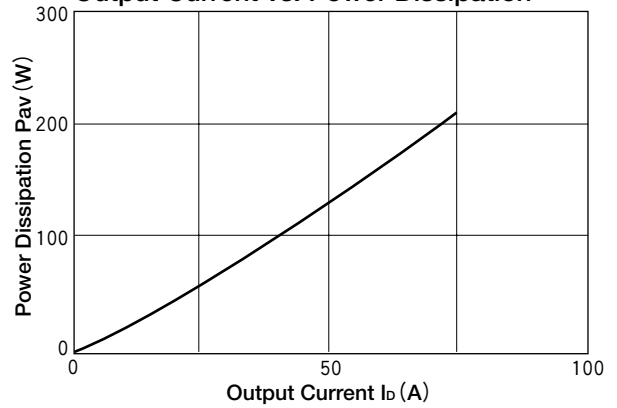
### Electrical Characteristics

| 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    | $^\circ\text{C}/\text{W}$ |

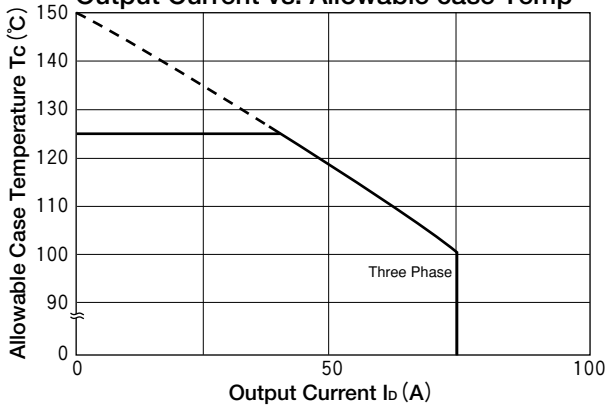
**Maximum Forward Characteristics**



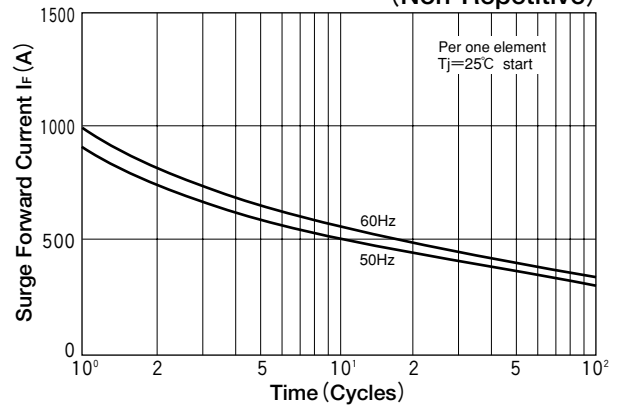
**Output Current vs. Power Dissipation**



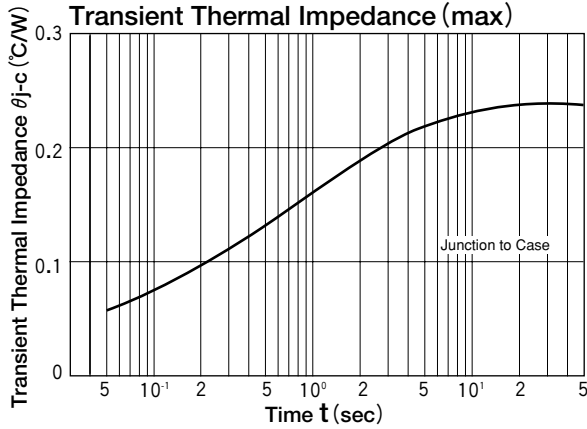
**Output Current vs. Allowable case Temp**



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



**Transient Thermal Impedance (max)**



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[www.datasheetcatalog.com](http://www.datasheetcatalog.com)

Datasheets for electronics components.