

# DIODE(THREE PHASES BRIDGE TYPE)

## DF40BA40/80

TOP



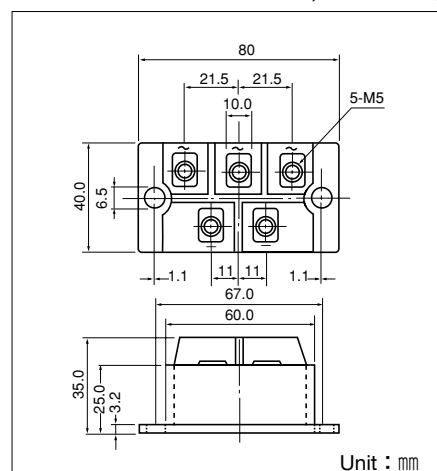
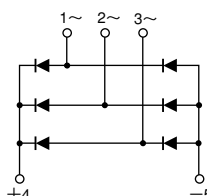
UL;E76102 (M)

Power Diode Module **DF40BA** 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 40Amp ( $T_c=119^{\circ}\text{C}$ ) Repetitive peak reverse voltage is up to 800V.

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

### (Applications)

AC. DC Motor Drive/AVR/Switching  
—for three phase rectification



Unit : mm

### Maximum Ratings

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

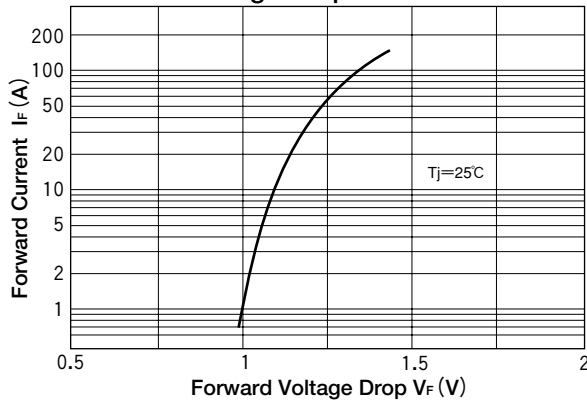
| Symbol    | Item                                | Ratings  |          | Unit |
|-----------|-------------------------------------|----------|----------|------|
|           |                                     | DF40BA40 | DF40BA80 |      |
| $V_{RRM}$ | Repetitive Peak Reverse Voltage     | 400      | 800      | V    |
| $V_{RSM}$ | Non-Repetitive Peak Reverse Voltage | 480      | 960      | V    |

| Symbol    | Item                                 | Conditions                                        | Ratings                           | Unit               |
|-----------|--------------------------------------|---------------------------------------------------|-----------------------------------|--------------------|
| $I_D$     | Output current (D.C.)                | Three phase. full wave. $T_c=119^{\circ}\text{C}$ | 40                                | A                  |
| $I_{FSM}$ | Surge Forward Current                | 1 cycle, 50/60Hz, peak value, non-repetitive      | 640/700                           | A                  |
| $T_j$     | 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.) | Main Terminal to case 1minute                     | 2500                              | V                  |
|           | Mounting Torque                      | Mounting (M6)                                     | Recommended Value 2.5-3.9 (25-40) | 4.7 (48)           |
|           |                                      | Terminal (M5)                                     | Recommended Value 1.5-2.5 (15-25) | 2.7 (28)           |
|           | Mass                                 | Typical Value                                     | 200                               | g                  |

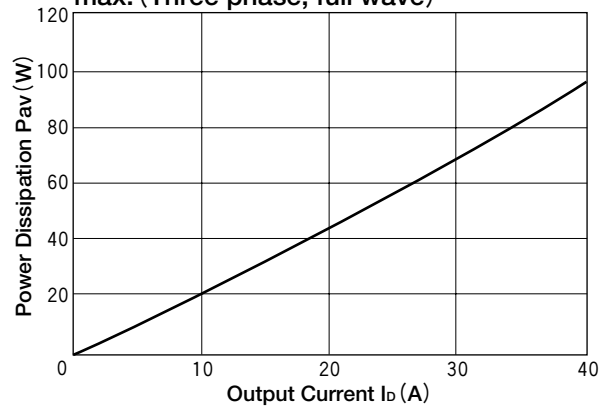
### Electrical Characteristics

| Symbol        | Item                                  | Conditions                                                       | Ratings | Unit                 |
|---------------|---------------------------------------|------------------------------------------------------------------|---------|----------------------|
| $I_{RRM}$     | Repetitive Peak Reverse Current, max. | $T_j=150^{\circ}\text{C}$ at $V_{RRM}$                           | 4.0     | mA                   |
| $V_{FM}$      | Forward Voltage Drop, max.            | $I_{FM}=40\text{A}$ , $T_j=25^{\circ}\text{C}$ Inst. measurement | 1.2     | V                    |
| $R_{th(j-c)}$ | Thermal Impedance, max.               | Junction to case                                                 | 0.32    | $^{\circ}\text{C/W}$ |

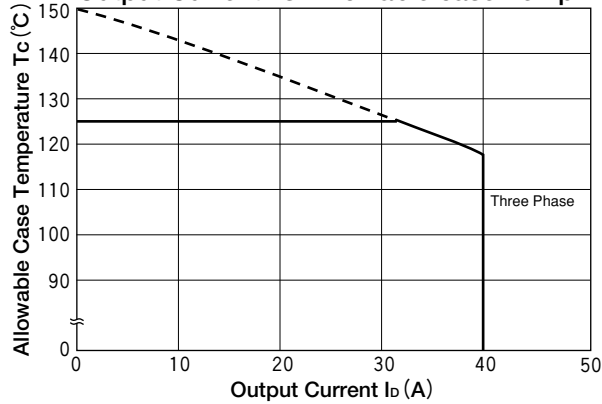
Forward Voltage Drop max.



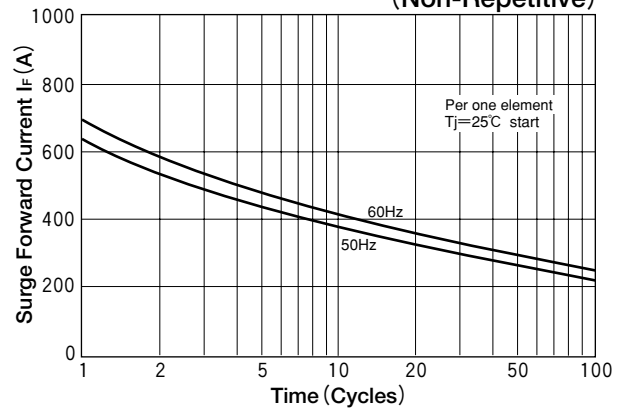
Output Current vs. Power Dissipation, max. (Three phase, full wave)



Output Current vs. Allowable case Temp



Cycle Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance (max)

