

DIODE(THREE PHASES BRIDGE TYPE)

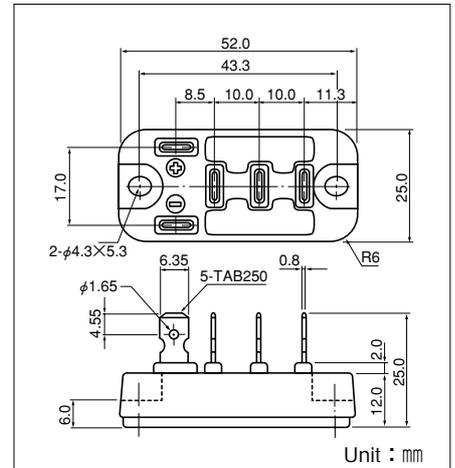
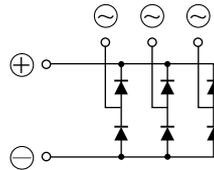
DF20DB40/80

Power Diode Module **DF20DB** 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 20Amp ($T_c=97^\circ\text{C}$) 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
- Easy Assemble by the #250 terminal Tab

(Applications)

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



Maximum Ratings

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

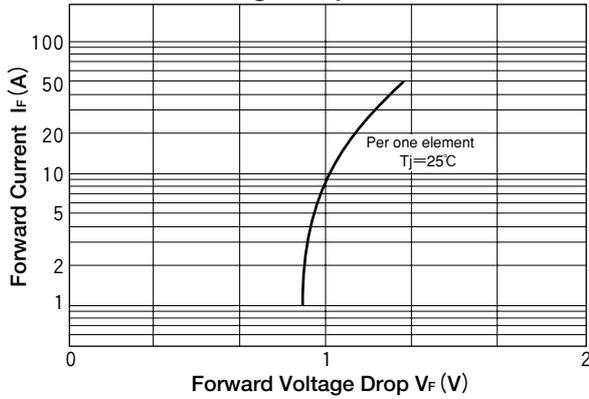
| Symbol | Item | Ratings | | Unit |
|-----------|-------------------------------------|----------|----------|------|
| | | DF20DB40 | DF20DB80 | |
| V_{RRM} | Repetitive Peak Reverse Voltage | 400 | 800 | V |
| V_{RSM} | Non-Repetitive Peak Reverse Voltage | 500 | 900 | V |

| Symbol | Item | Conditions | Ratings | Unit |
|-----------|--------------------------------------|--|-------------|------------------|
| I_D | Output current (D.C.) | Three phase. full wave. $T_c=97^\circ\text{C}$ | 20 | A |
| I_{FSM} | Surge Forward Current | 1 cycle, 50/60Hz, peak value, non-repetitive | 320/350 | 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 | 2000 | V |
| | Mounting Torque (M4) | Recommended Value 1.0-1.4 (10-14) | 1.5 (15) | N·m (kgf·cm) |
| | Mass | Typical Value | 32 | g |

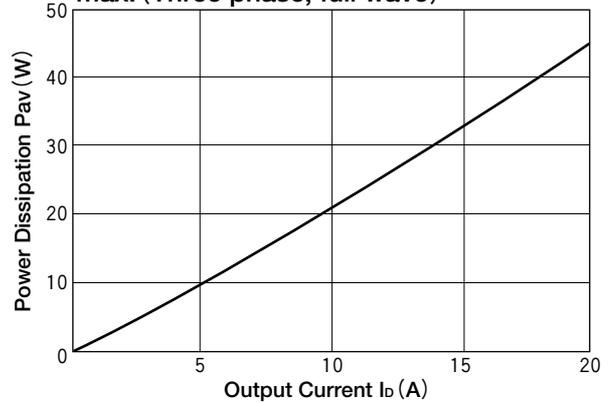
Electrical Characteristics

| Symbol | Item | Conditions | Ratings | Unit |
|---------------|---------------------------------------|--|---------|--------------------|
| I_{RRM} | Repetitive Peak Reverse Current, max. | $T_j=150^\circ\text{C}$ at V_{RRM} | 1.5 | mA |
| V_{FM} | Forward Voltage Drop, max. | $I_{FM}=20\text{A}$, $T_j=25^\circ\text{C}$ Inst. measurement | 1.1 | V |
| $R_{th(j-c)}$ | Thermal Impedance, max. | Junction to case | 1.2 | $^\circ\text{C/W}$ |

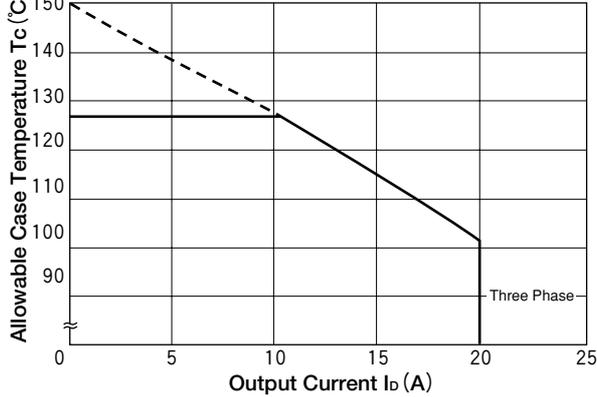
Forward Voltage Drop max.



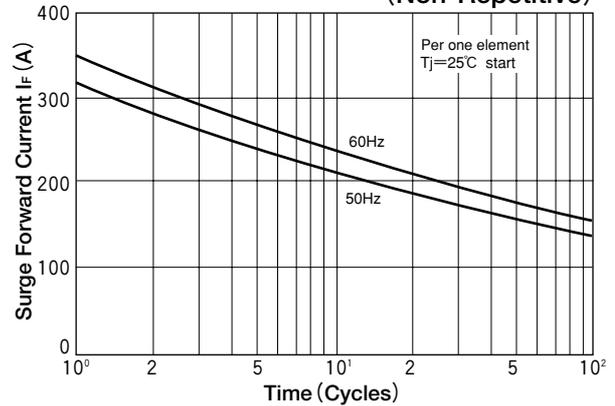
Output Current vs. Power Dissipation, max. (Three phase, full wave)



Output Current vs. Allowable case Temp



Cycle Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance (max)

