

# DIODE MODULE

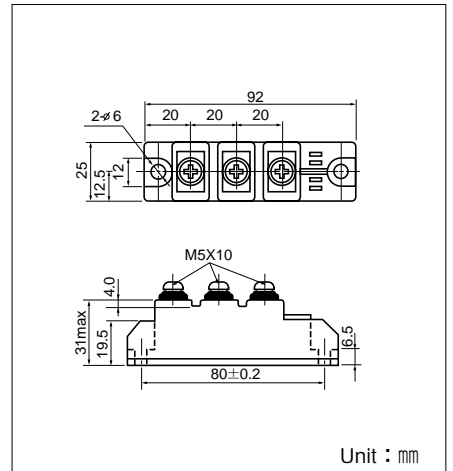
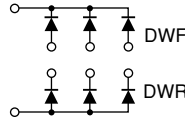
# DWF(R)50A30/40

DWF(R)50A is a non-isolated diode module designed for 3 phase rectification.

- $I_{F(AV)}=50A$ ,  $V_{RRM}=400V$
- Easy Construction with Joint-Cathode (F) Type and Joint-Anode (R) type.
- Non-isolated. (Mounting Base as terminals.)
- High Surge Capability

**(Applications)**

Welding Power Supply  
3 Phase Rectifier



**Maximum Ratings**

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

| Symbol      | Item                                | Ratings     |             | Unit |
|-------------|-------------------------------------|-------------|-------------|------|
|             |                                     | DWF(R)50A30 | DWF(R)50A40 |      |
| $V_{RRM}$   | Repetitive Peak Reverse Voltage     | 300         | 400         | V    |
| $V_{RSM}$   | Non-Repetitive Peak Reverse Voltage | 360         | 480         | V    |
| $V_{R(DC)}$ | D.C. Reverse Voltage                | 240         | 320         | V    |

| Symbol       | Item                           | Conditions  | Ratings                           | Unit             |                 |
|--------------|--------------------------------|---|-----------------------------------|------------------|-----------------|
| $I_{F(AV)}$  | Average Forward Current        | Single phase, half wave, $180^{\circ}$ conduction, $T_c : 122^{\circ}C$ | 50                                | A                |                 |
| $I_{F(RMS)}$ | R.M.S. Forward Current         | Single phase, half wave, $180^{\circ}$ conduction, $T_c : 122^{\circ}C$ | 78                                | A                |                 |
| $I_{FSM}$    | Surge Forward Current          | $\frac{1}{2}$ cycle, 60Hz, peak value, non-repetitive                   | 1000                              | A                |                 |
| $I^2t$       | $I^2t$                         | Value for one cycle of surge current                                    | 4150                              | A <sup>2</sup> S |                 |
| $T_j$        | Operating Junction Temperature |   | -30 to +150                       | $^{\circ}C$      |                 |
| $T_{stg}$    | Storage Temperature            |   | -30 to +125                       | $^{\circ}C$      |                 |
|              | 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                           |   | 170                               | g                |                 |

**Electrical Characteristics**

| Symbol        | Item                                  | Conditions  | Ratings | Unit          |
|---------------|---------------------------------------|---|---------|---------------|
| $I_{RRM}$     | Repetitive Peak Reverse Current, max. | at $V_{DRM}$ , single phase, half wave, $T_j=150^{\circ}C$  | 10      | mA            |
| $V_{FM}$      | Forward Voltage Drop, max.            | Forward current 150A, $T_j=25^{\circ}C$ , Inst. measurement | 1.15    | V             |
| $R_{th(j-c)}$ | Thermal Impedance, max.               | Junction to case  | 0.50    | $^{\circ}C/W$ |

