

DIODE(NON-ISOLATED TYPE)

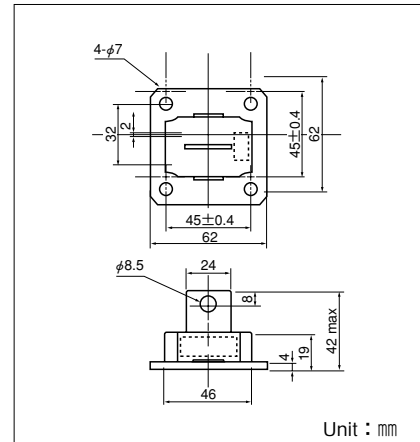
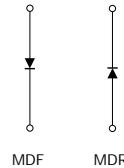
MDF(R)100A

MDF(R)100A is a diode with flat mounting base which is designed for use in various rectifier applications.

- $I_{F(AV)}=100A$, $V_{RRM}=500V$
- Easy Construction with Anode (F) Type and Cathode (R) type.
- High reliability by glass passivation

(Applications)

Various Rectifiers
Welding Power Supply



Maximum Ratings

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

| Symbol | Item | Ratings | | | Unit |
|-------------|-------------------------------------|--------------|--------------|--------------|------|
| | | MDF(R)100A30 | MDF(R)100A40 | MDF(R)100A50 | |
| V_{RRM} | Repetitive Peak Reverse Voltage | 300 | 400 | 500 | V |
| V_{RSM} | Non-Repetitive Peak Reverse Voltage | 360 | 480 | 600 | V |
| $V_{R(DC)}$ | D.C. Reverse Voltage | 240 | 320 | 400 | V |

| Symbol | Item | Conditions | Ratings | Unit | |
|--------------|-------------------------|---|-----------------------------------|-------------|-----------------|
| $I_{F(AV)}$ | Average Forward Current | Single phase, half wave, 180° conduction, $T_c : 109^{\circ}C$ | 100 | A | |
| $I_{F(RMS)}$ | R.M.S. Forward Current | Single phase, half wave, 180° conduction, $T_c : 109^{\circ}C$ | 157 | A | |
| I_{FSM} | Surge Forward Current | $\frac{1}{2}$ cycle, 50Hz/60Hz, peak value, non-repetitive | 1800/2000 | A | |
| I^2t | I^2t | Value for one cycle of surge current | 16700 | A^2S | |
| T_j | Junction Temperature | | -30 to $+150$ | $^{\circ}C$ | |
| T_{stg} | Storage Temperature | | -30 to $+125$ | $^{\circ}C$ | |
| | Mounting Torque | Mounting (M6) | Recommended Value 2.5-3.9 (25-40) | 4.7 (48) | N·m (kgf·cm) |
| | | Terminal (M8) | Recommended Value 8.8-10 (90-105) | 11 (115) | |
| | Mass | | | 170 | g |

Electrical Characteristics

| Symbol | Item | Conditions | Ratings | Unit |
|---------------|---------------------------------------|---|---------|---------------|
| I_{RRM} | Repetitive Peak Reverse Current, max. | at V_{DRM} , single phase, half wave, $T_j=150^{\circ}C$ | 6 | mA |
| V_{FM} | Forward Voltage Drop, max. | Forward current 310A, $T_j=25^{\circ}C$, Inst. measurement | 1.15 | V |
| $R_{th(j-c)}$ | Thermal Impedance, max. | Junction to case | 0.35 | $^{\circ}C/W$ |

