

## DIODE(NON-ISOLATED TYPE)

# MDF(R)150A

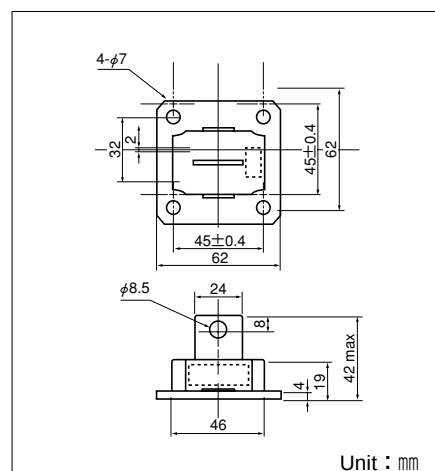
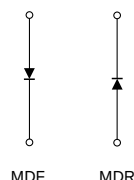
MDF(R)150A is a diode with flat mounting base which is designed for use in various rectifier applications.

- $I_F(AV) = 150A$ ,  $V_{RRM} = 500V$
- Easy Construction with Anode(F) Type and Cathode(R) type.
- High reliability by glass passivation

### (Applications)

Various Rectifiers

Welding Power Supply



Unit : mm

### Maximum Ratings

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

| Symbol    | Item                                | Ratings      |              |              | Unit |
|-----------|-------------------------------------|--------------|--------------|--------------|------|
|           |                                     | MDF(R)150A30 | MDF(R)150A40 | MDF(R)150A50 |      |
| $V_{RRM}$ | 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, $180^\circ$ conduction, $T_c : 98^\circ\text{C}$ | 150             | A                                                         |
| $I_F(RMS)$ | R.M.S. Forward Current  |               | Single phase, half wave, $180^\circ$ conduction, $T_c : 98^\circ\text{C}$ | 235             | A                                                         |
| $I_{FSM}$  | Surage Forward Current  |               | $\frac{1}{2}$ cycle, 50Hz/60Hz, peak value, non-repetitive                | 2700/3000       | A                                                         |
| $I^2t$     | $I^2t$                  |               | Value for one cycle of surge current                                      | 37500           | $\text{A}^2\text{S}$                                      |
| $T_j$      | Junction Temperature    |               |                                                                           | $-30$ to $+150$ | $^\circ\text{C}$                                          |
| $T_{stg}$  | Storage Temperature     |               |                                                                           | $-30$ to $+125$ | $^\circ\text{C}$                                          |
|            | Mounting Torque         | Mounting (M6) | Recommended Value 2.5-3.9 (25-40)                                         | 4.7 (48)        | $\text{N}\cdot\text{m}$<br>( $\text{kgf}\cdot\text{cm}$ ) |
|            |                         | 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, $T_j = 150^\circ\text{C}$ | 10      | mA                        |
| $V_{FM}$      | Forward Voltage Drop, max.            | Foward current 470A, $T_j = 25^\circ\text{C}$ , Inst. measurement | 1.15    | V                         |
| $R_{th}(j-c)$ | Thermal Impedance, max.               | Junction to case                                                  | 0.3     | $^\circ\text{C}/\text{W}$ |

