

DIODE(NON-ISOLATED TYPE)

MDF(R)100A

TOP

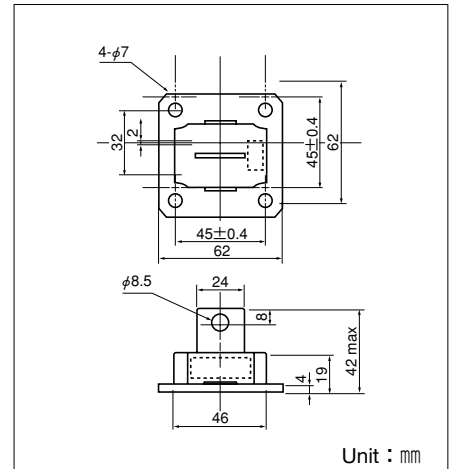
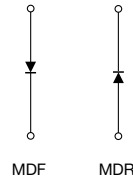


MDF(R)100A is a diode with flat mounting base which is designed for use in various rectifier applications.

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

(Applications)

Various Rectifiers
Welding Power Supply



Maximum Ratings

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

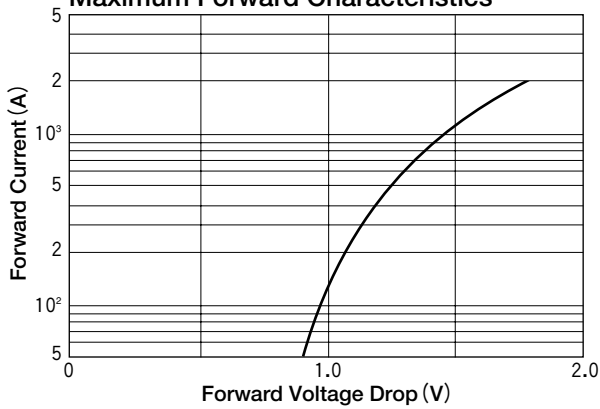
Symbol	Item	Ratings			Unit
		MDF(R)100A30	MDF(R)100A40	MDF(R)100A50	
V_{RRM}	Repetitive Peak Reverse Voltage	300	400	500	V
V_{RSM}	Non-Repetitive Peak Reverse Voltage	360	480	600	V
$V_{R(DC)}$	D.C. Reverse Voltage	240	320	400	V

Symbol	Item	Conditions	Ratings	Unit	
$I_{F(AV)}$	Average Forward Current	Single phase, half wave, 180° conduction, $T_c : 109^\circ\text{C}$	100	A	
$I_{F(RMS)}$	R.M.S. Forward Current	Single phase, half wave, 180° conduction, $T_c : 109^\circ\text{C}$	157	A	
I_{FSM}	Surge Forward Current	$1/2$ 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 $+150$	$^\circ\text{C}$	
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)	N·m (kgf·cm)
		Terminal (M8)	Recommended Value 8.8-10 (90-105)	11 (115)	
	Mass		170	g	

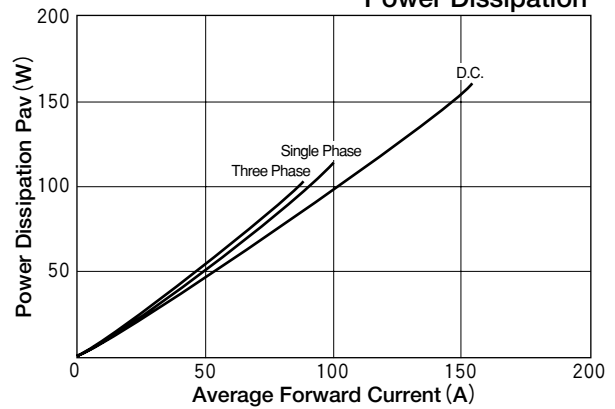
Electrical Characteristics

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

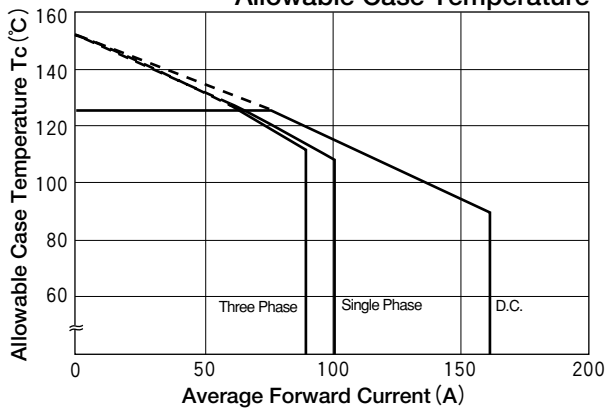
Maximum Forward Characteristics



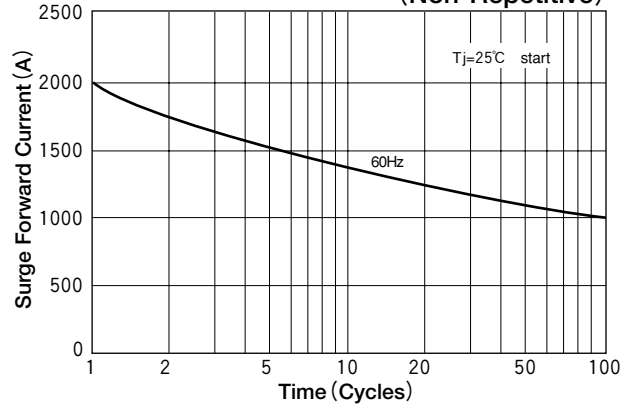
Average Forward Current vs. Power Dissipation



Average Forward Current vs. Allowable Case Temperature



Cycle Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance

