

## DIODE MODULE (F.R.D.)

# MDF(R)150A-L/M

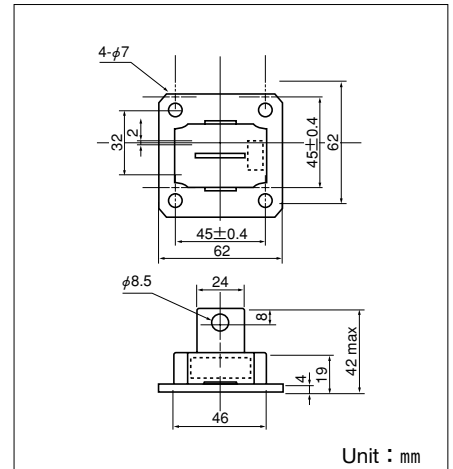
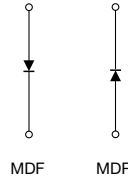
MDF(R)150A-L/M and MDR150-L/M are high speed (fast recovery) diode with flat mounting base which is designed for switching application of high power.

- $I_{F(AV)} = 150A$   $V_{RRM} = 200/300/400V$
- Easy Construction with Anode (F) Type and Cathode (R) Type
- Reverse Recovery Time ( $t_{rr}$ ) L Type: 450ns, M Type: 550ns
- Highly Reliability by Grass passivated Chips
- Non isolated type

[ MDF: anode to terminal (normal polarity)  
MDR: cathode to terminal ]

### (Applications)

Switching Power Supply.  
Inverter Welding Power Supply



Unit : mm

### Maximum Ratings

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

Symbol	Item	Ratings			Unit
		MDF(R)150A20L/M	MDF(R)150A30L/M	MDF(R)150A40L/M	
$V_{RRM}$	Repetitive Peak Reverse Voltage	200	300	400	V
$V_{RMS}$	Non-Repetitive Peak Reverse Voltage	240	360	480	V
$V_{R(DC)}$	D.C. Reverse Voltage	160	240	320	V

Symbol	Item	Conditions	Ratings	Unit	
$I_{F(AV)}$	Average Forward Current	Single phase, half wave, $180^\circ$ conduction, $T_c: 94^\circ C$	150	A	
$I_{F(RMS)}$	R.M.S. Forward Current	Single phase, half wave, $180^\circ$ conduction, $T_c: 94^\circ C$	235	A	
$I_{FMS}$	Surge Forward Current	$1/2$ cycle, 50/60Hz, peak value, non-repetitive	2700/3000	A	
$I^2t$	$I^2t$	Value for one cycle of surge current	37500	$A^2s$	
$T_j$	Operating 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	Typical Value	170	g	

### Electrical Characteristics

Symbol	Item	Conditions	Ratings	Unit	
$I_{RRM}$	Repetitive Peak Reverse Current (max.)	at $V_{RRM}$ , single phase, half wave, $T_j = 150^\circ C$	50	mA	
$V_{FM}$	Forward Voltage Drop (max.)	Forward current 470A, $T_j = 25^\circ C$ Inst. measurement	1.30	V	
$R_{th(j-c)}$	Thermal Impedance (max.)	Junction to case	0.30	$^\circ C/W$	
$t_{rr}$	Reverse Recovery Time (max.)	$T_j = 25^\circ C$ , $I_F = 2A$ , $-di/dt = 20A/\mu s$	L	450	ns
			M	550	

