

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.

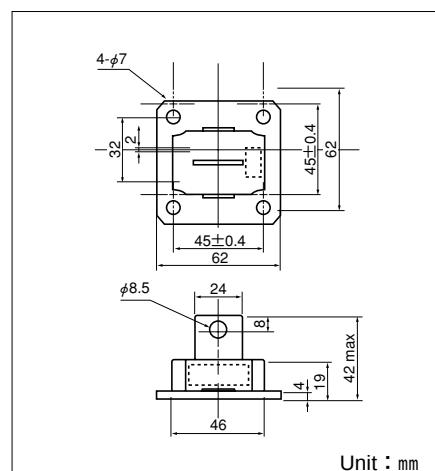
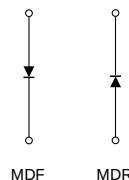
- $I_F(AV)=150A$ $V_{RRM}=200/300/400V$
- Easy Construction with Anode (F) Type and Cathode (R) Type
- Reverse Recovery Time (t_{rr}) L Type: 450ns, M Type: 550ns
- Highly Reliability by Grass passivated Chips
- Non isolated type

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

(Applications)

Switching Power Supply.

Inverter Welding Power Supply



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° conduction, $T_c: 94^{\circ}C$	150	A
$I_F(RMS)$	R.M.S. Forward Current		Single phase, half wave, 180° conduction, $T_c: 94^{\circ}C$	235	A
I_{FMS}	Surge Forward Current		$1\frac{1}{2}$ 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)	$N \cdot m$ ($kgf \cdot cm$)
		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°C		50	mA
V _{FM}	Forward Voltage Drop (max.)	Foward current 470A, T _j =25°C Inst. measurement		1.30	V
R _{th(j-c)}	Thermal Impedancemax (max.)	Junction to case		0.30	°C/W
trr	Reverse Recovery Time (max.)	T _j =25°C, I _F =2A, −di/dt=20A/μs	L	450	ns
			M	550	

