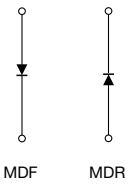
MDF(R)150A-L/M

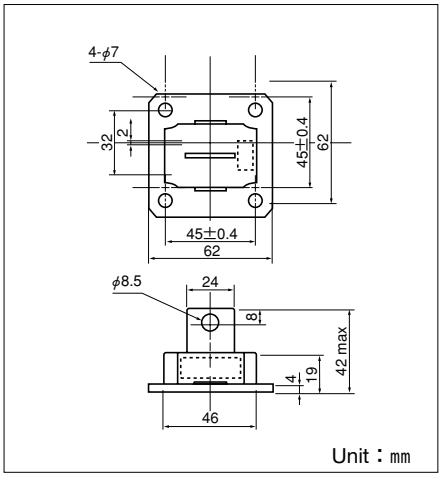
MDF(R)150A-L/M and MDR150-L/M are high speed (fast recovery) diode with flat mounting base which is designed for switching application of high power.

- $I_{F(AV)}$=150A V_{RRM}=200/300/400V
- Easy Construction with Anode(F)Type and Cathode(R)Type
- Reverse Recovery Time(trr)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

(Tj=25℃ unless otherwise specified)

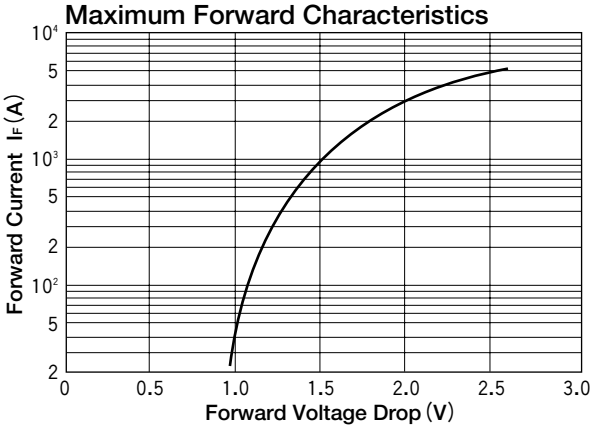
Symbol	Item	Ratings			Unit
		MDF(R)150A20L/M	MDF(R)150A30L/M	MDF(R)150A40L/M	
V_{RRM}	Repetitive Peak Reverse Voltage	200	300	400	V
V_{RMS}	Non-Repetitive Peak Reverse Voltage	240	360	480	V
$V_{R(DC)}$	D.C. Reverse Voltage	160	240	320	V

Symbol	Item		Conditions	Ratings	Unit
$I_{F(AV)}$	Average Forward Current		Single phase, half wave, 180° conduction, Tc: 94℃	150	A
$I_{F(RMS)}$	R.M.S. Forward Current		Single phase, half wave, 180° conduction, Tc: 94℃	235	A
I_{FMS}	Surge Forward Current		½ cycle, 50/60Hz, peak value, non-repetitive	2700/3000	A
I^2t	I^2t		Value for one cycle of surge current	37500	A^2S
Tj	Operating Junction Temperature			−30 to +150	℃
Tstg	Storage Temperature			−30 to +125	℃
	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

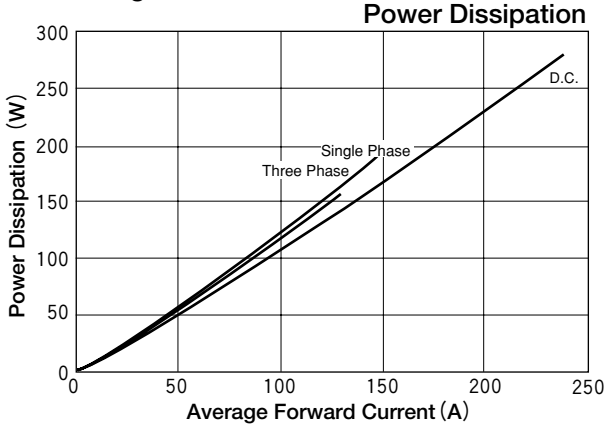
■Electrical Characteristics

Symbol	Item	Conditions		Ratings	Unit
I_{RRM}	Repetitive Peak Reverse Current (max.)	at V_{RRM}, single phase, half wave, T_j=150℃		50	mA
V_{FM}	Forward Voltage Drop (max.)	Foward current 470A, T_j=25℃ Inst. measurement		1.30	V
Rth(j-c)	Thermal Impedancemax (max.)	Junction to case		0.30	℃/W
trr	Reverse Recovery Time (max.)	T_j=25℃, I_F=2A, −di/dt=20A/μs	L	450	ns
			M	550	

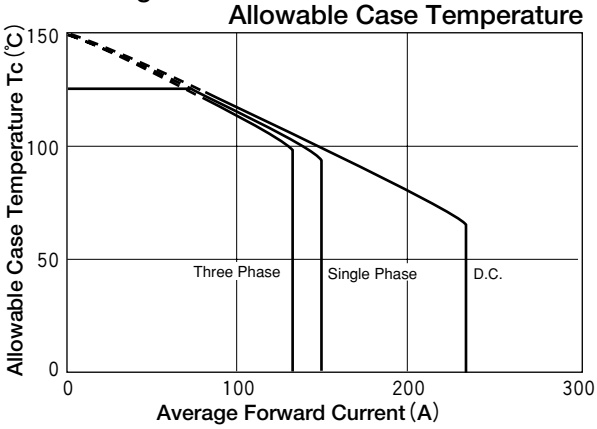
Maximum Forward Characteristics



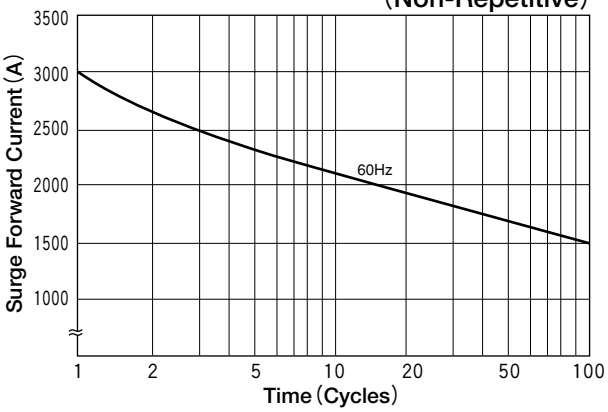
Averge Forward Current vs. Power Dissipation



Average Forward Current vs. Allowable Case Temperature



Cycle Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance