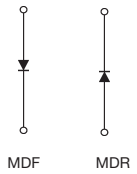
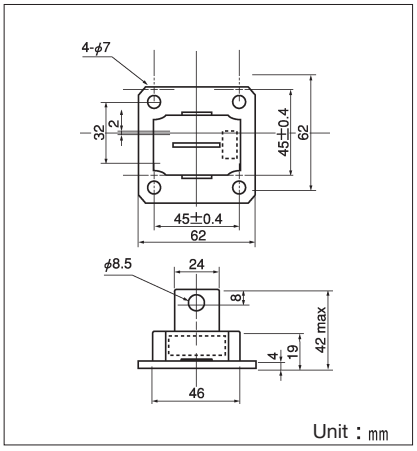
MDF(R)250A-L/M

MDF(R)250A-L/M are high speed diode with flat mounting base which is designed for switching application of high power.

- $I_{F(AV)}$ 250A V_{RRM}=400V
- Easy Construction with Anode (F) Type and Cathode (R) Type
- Reverse Recovery Time (trr) L Type: 450ns, M Type: 550ns
- High Reliability by Glass passivated Chips

(Applications)
Switching Power Supply.
Inverter Welding Power Supply





■Maximum Ratings

Symbol	Item	Ratings			Unit
		MDF(R)250A20L/M	MDF(R)250A30L/M	MDF(R)250A40L/M	
V_{RRM}	Repetitive Peak Reverse Voltage	200	300	400	V
V_{RSM}	Non-Repetitive Peak Reverse Voltage	240	360	480	V
$V_{R(DC)}$	D.C. Reverse Voltage	160	240	320	V

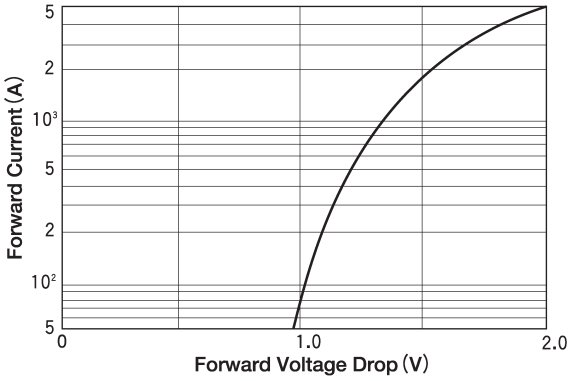
Symbol	Item		Conditions	Ratings	Unit
$I_{F(AV)}$	Average Forward Current		Single phase, half wave, 180°conduction, Tc:L/M 83°/85℃	250	A
$I_{F(RSM)}$	R.M.S. Forward Current		Single phase, half wave, 180°conduction, Tc:L/M 83°/85℃	390	A
I_{FSM}	Surge Forward Current		½ cycle, 50/60Hz, peak value, non-repetitive	4000/4500	A
I^2t	I^2t		Value for one cycle of surge cureent	84000	A^2S
Tj	Operating Junction Temperature			−30～+150	℃
Tstg	Storage Temperature			−30～+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

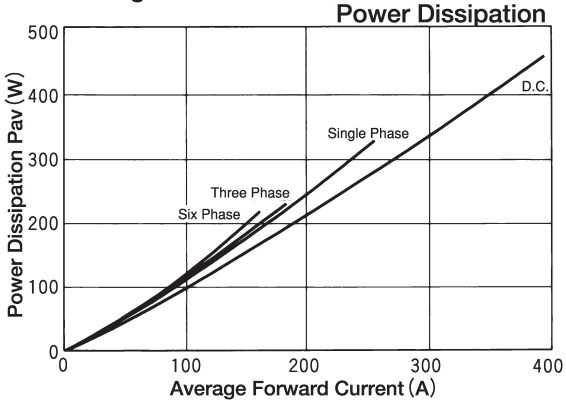
Symbol	Item	Conditions		Ratings	Unit
I_{RRM}	Repetitive Peak Reverse Current, max	at V_{DRM}, single phase, half wave, T_j=150℃		60	mA
V_{FM}	Forward Voltage Drop, max	Foward current 800A, T_j=25℃ Inst, measurement	L	1.4	V
			M	1.3	
Rth(j-c)	Thermal Impedance, max	Junction to case		0.2	℃/W
trr	Reverse Recovery Time, max	T_j=25℃, I_F=2A, di/dt=20A/μs	L	450	ns
			M	550	

M Type

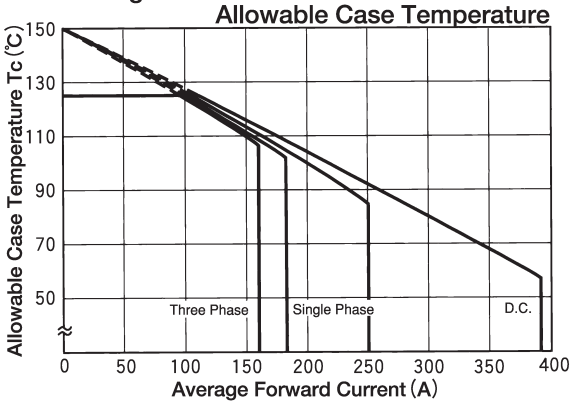
Maximum Forward Characteristics



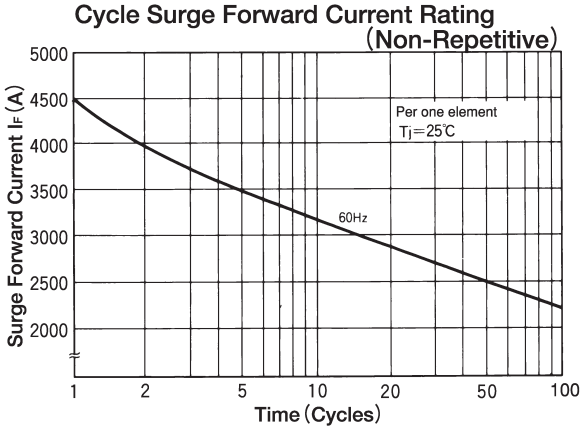
Average Forward Current vs. Power Dissipation



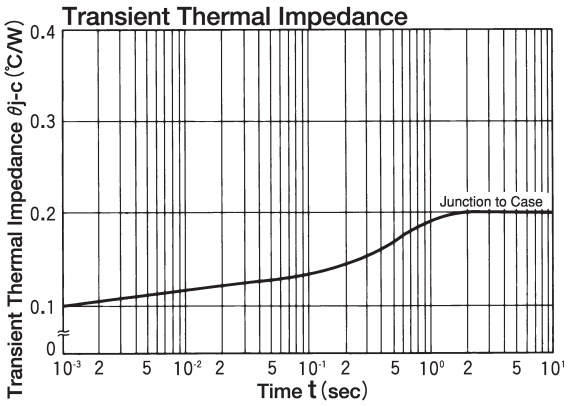
Average Forward Current vs. Allowable Case Temperature



Cycle Surge Forward Current Rating (Non-Repetitive)

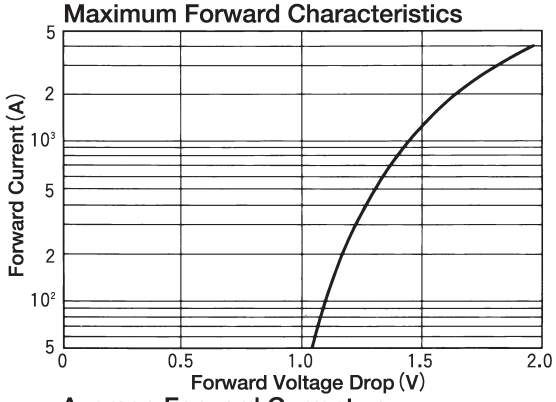


Transient Thermal Impedance

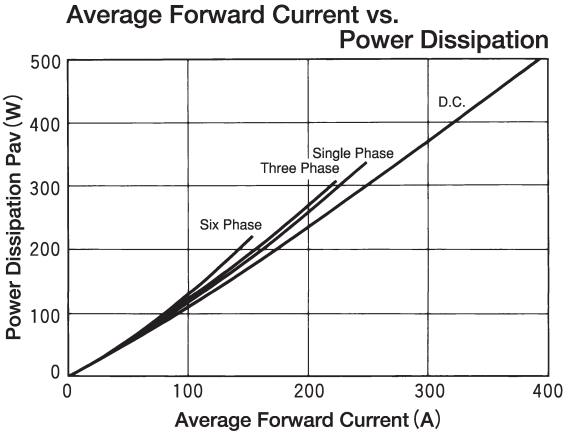


L Type

Maximum Forward Characteristics



Average Forward Current vs. Power Dissipation



Average Forward Current vs. Allowable Case Temperature