



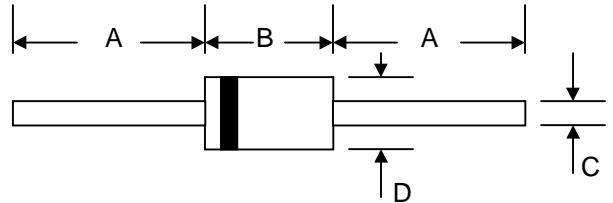
MBR120 – MBR1200

1.0A SCHOTTKY BARRIER DIODE



Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications



Mechanical Data

- Case: DO-41, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.34 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version**

DO-41		
Dim	Min	Max
A	24.5	—
B	4.06	5.21
C	0.60	0.80
D	2.00	3.00
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	MBR 120	MBR 130	MBR 140	MBR 150	MBR 160	MBR 180	MBR 1100	MBR 1150	MBR 1200	Unit	
Peak Repetitive Reverse Voltage	V_{RRM}										V	
Working Peak Reverse Voltage	V_{RWM}	20	30	40	50	60	80	100	150	200		
DC Blocking Voltage	V_R											
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	35	42	56	70	105	140	V	
Average Rectified Output Current @ $T_L = 75^\circ\text{C}$	I_O	1.0									A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30									A	
Forward Voltage @ $I_F = 1.0\text{A}$	V_{FM}	0.55		0.70		0.85		0.92			V	
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	I_{RM}	0.1					20					mA
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$ $R_{\theta JA}$	28					88					$^\circ\text{C/W}$
Operating Temperature Range	T_j	-55 to +150									$^\circ\text{C}$	
Storage Temperature Range	T_{STG}	-55 to +150									$^\circ\text{C}$	

Note: 1. Valid provided that leads are kept at ambient temperature at a distance of 9.5mm from the case.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

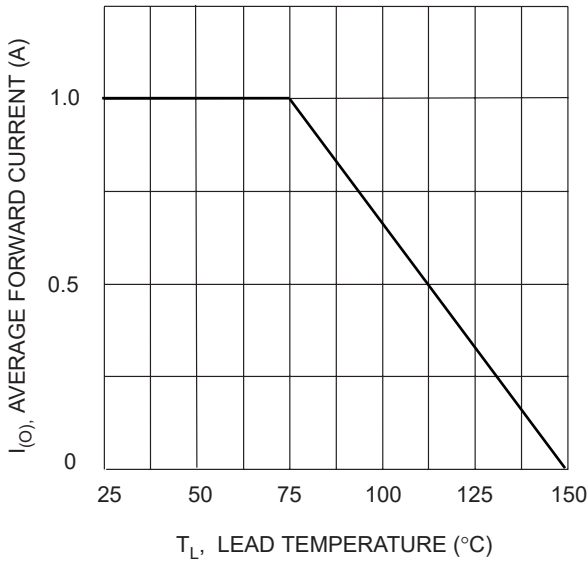


Fig. 1 Forward Current Derating Curve

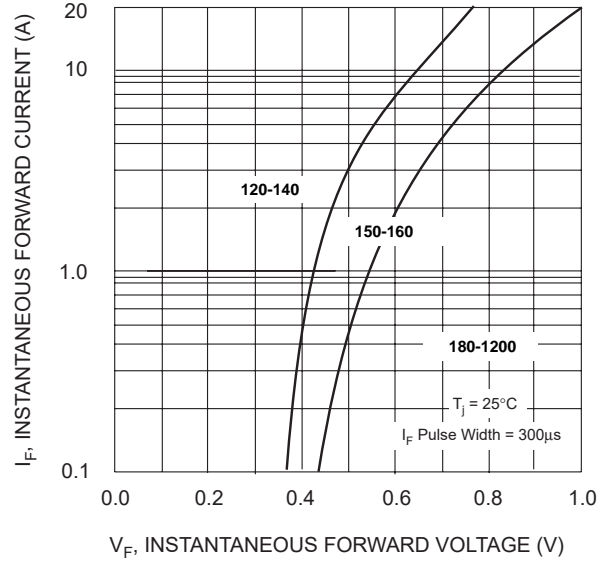


Fig. 2 Typical Forward Characteristics

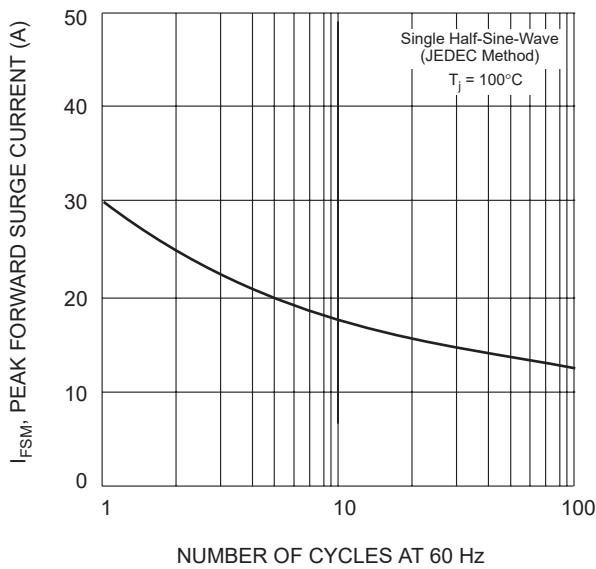


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

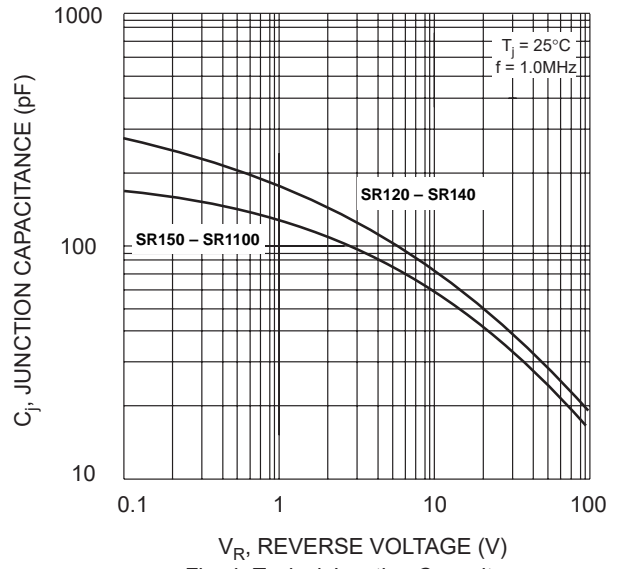


Fig. 4 Typical Junction Capacitance

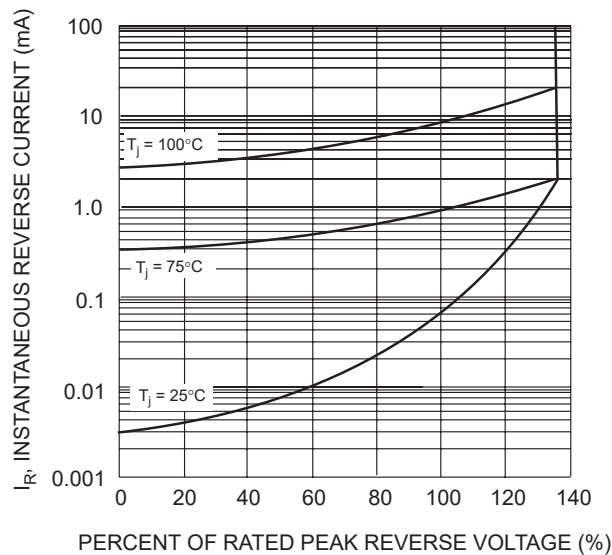


Fig. 5 Typical Reverse Characteristics