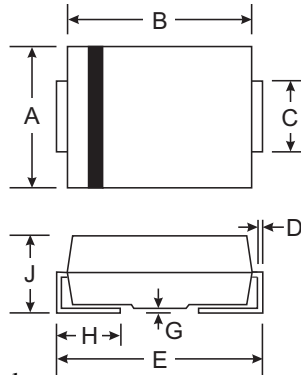


Features

- Pb-Free Packages are Available
- Small Compact Surface Mountable Package with J-Bend Leads
- Rectangular Package for Automated Handling
- Highly Stable Oxide Passivated Junction
- High Blocking Voltage – 100 Volts
- 175°C Operating Junction Temperature
- Guardring for Stress Protection



SMB		
Dim	Min	Max
A	3.30	3.94
B	4.00	4.65
C	1.95	2.21
D	0.15	0.40
E	5.00	6.00
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

Mechanical Data

- Case: Epoxy, Molded
- Weight: 95 mg (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead and Mounting Surface Temperature for Soldering Purposes: 260°C Max. for 10 Seconds
- Shipped in 12 mm Tape and Reel, 2500 units per reel
- Cathode Polarity Band

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

Rating	Symbol	Value	Unit	
Peak Repetitive Reverse Voltage	V _{RRM}		V	
Working Peak Reverse Voltage	V _{RWM}			
DC Blocking Voltage MBRS190T3	V _R	90		
MBRS1100T3		100		
Average Rectified Forward Current	I _{F(AV)}		A	
T _L = 163°C		1.0		
T _L = 148°C		2.0		
Non-Repetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60 Hz)	I _{FSM}	50	A	
Operating Junction Temperature (Note 1)	T _J	-65 to +175	°C	
Voltage Rate of Change	dv/dt	10	V/ns	
Maximum Instantaneous Forward Voltage (Note 1) (I _F = 1.0 A, T _J = 25°C)	V _F	0.75	V	
Maximum Instantaneous Reverse Current (Note 1) (Rated dc Voltage, T _J = 25°C)	I _R	0.5	mA	
(Rated dc Voltage, T _J = 100°C)		5.0		

1. The heat generated must be less than the thermal conductivity from Junction-to-Ambient: $dP_D/dT_J < 1/R_{\theta JA}$.
2. Pulse Test: Pulse Width = 300 μs, Duty Cycle ≤ 2.0%.

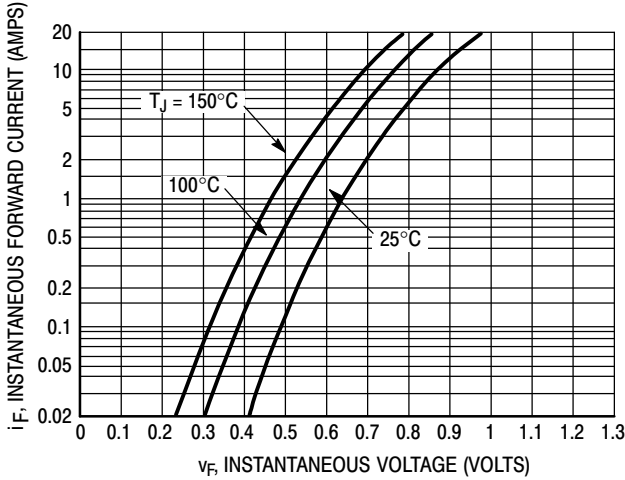


Figure 1. Typical Forward Voltage

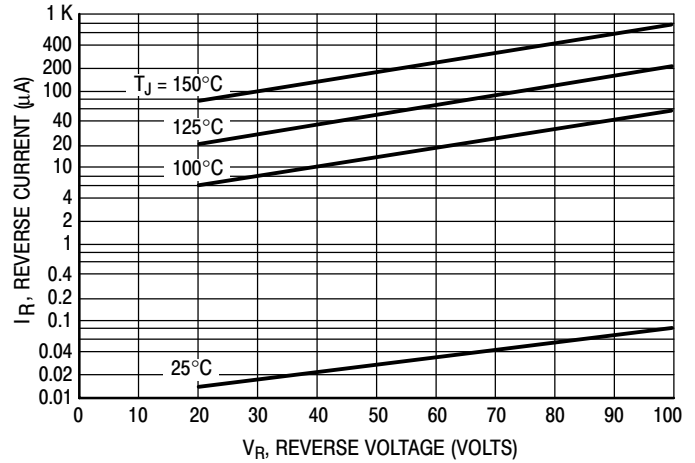


Figure 2. Typical Reverse Current*

*The curves shown are typical for the highest voltage device in the voltage grouping. Typical reverse current for lower voltage selections can be estimated from these curves if V_R is sufficient below rated V_R .

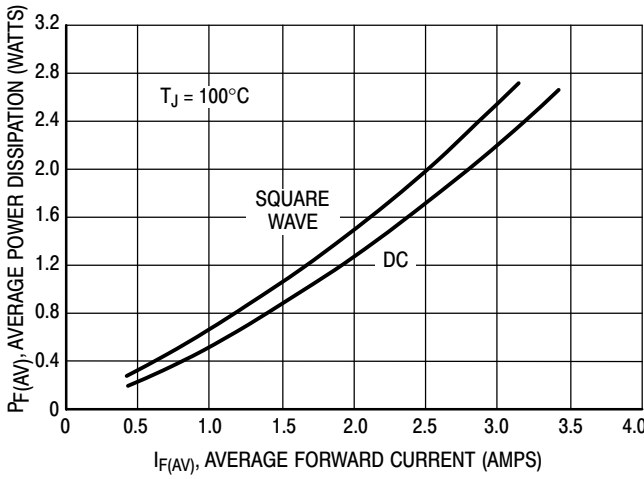


Figure 3. Power Dissipation

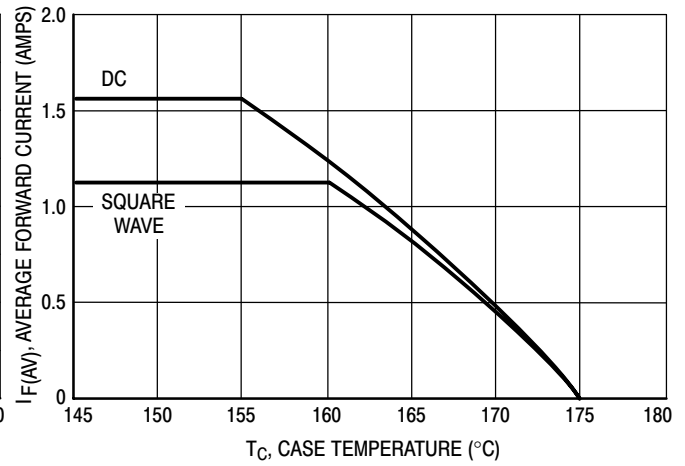


Figure 4. Current Derating, Case, Per Leg

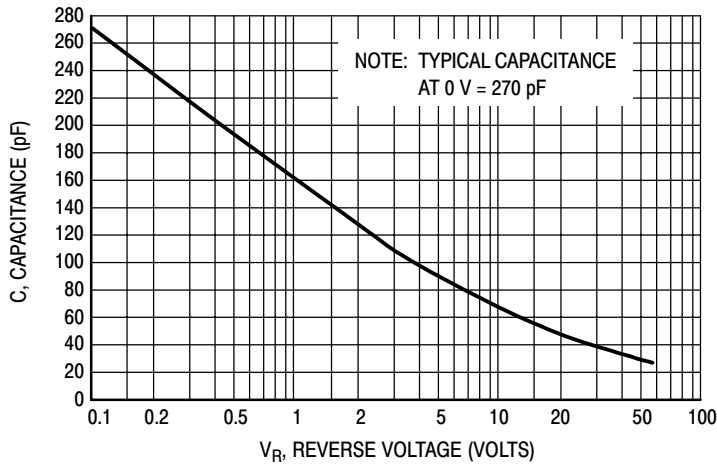


Figure 5. Typical Capacitance