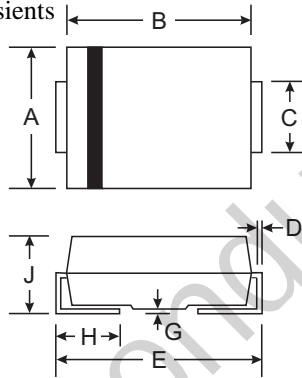


Features

- Pb-Free Package is Available
- Small Compact Surface Mountable Package with J-Bend Leads
- Rectangular Package for Automated Handling
- Highly Stable Oxide Passivated Junction
- Excellent Ability to Withstand Reverse Avalanche Energy Transients
- Guardring for Stress Protection

Mechanical Data

- Case: Epoxy, Molded, Epoxy Meets UL 94 V-0 @ 0.125 in
- Weight: 217 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
- Polarity: Notch in Plastic Body Indicates Cathode Lead
- ESD Rating: Machine Model, C (> 400 V)
Human Body Model, 3B (> 8000 V)
- Device Meets MSL 1 Requirements

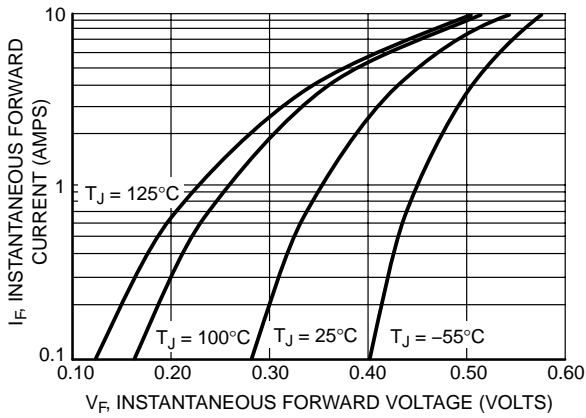
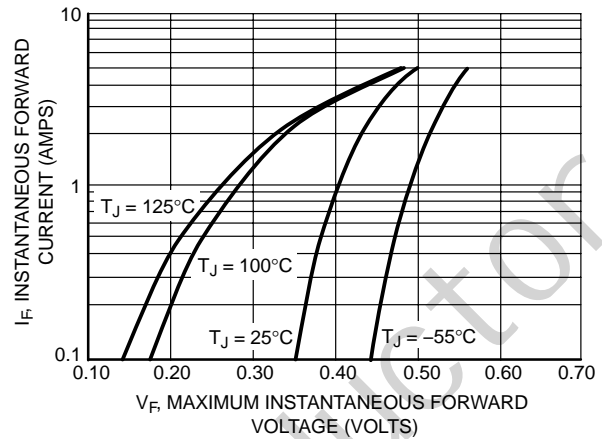
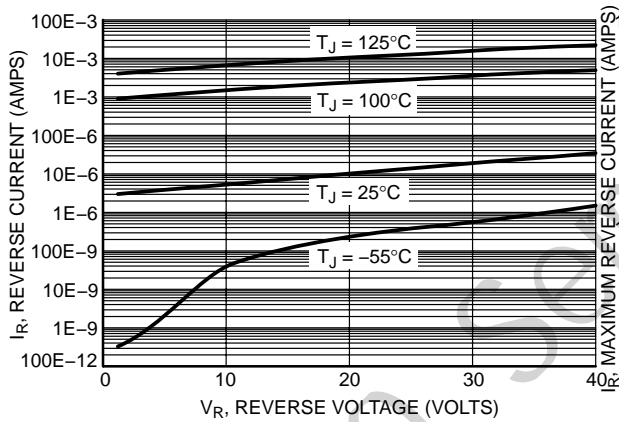
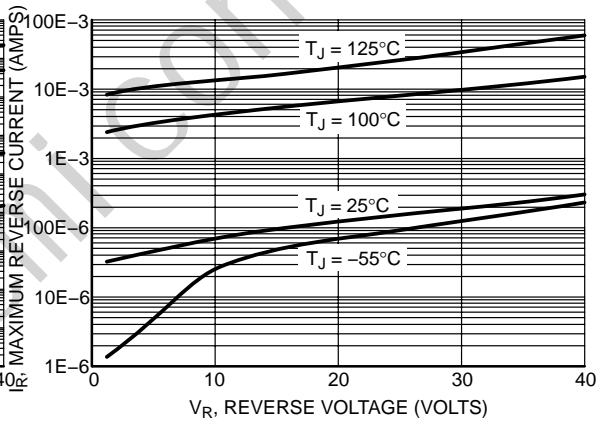
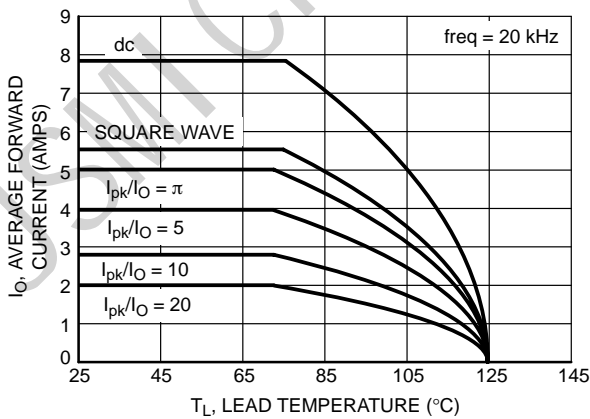
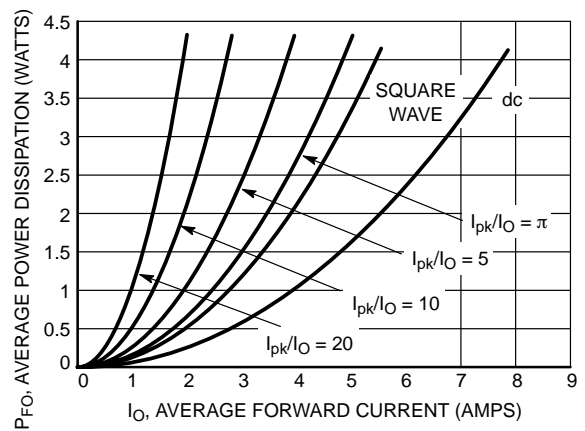


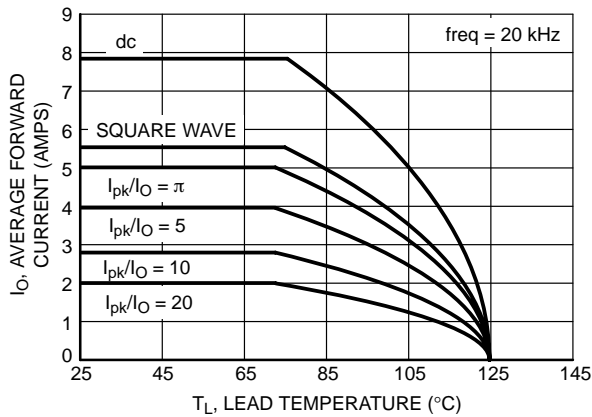
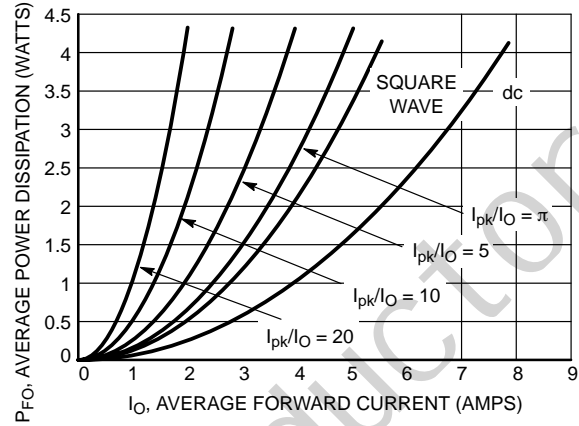
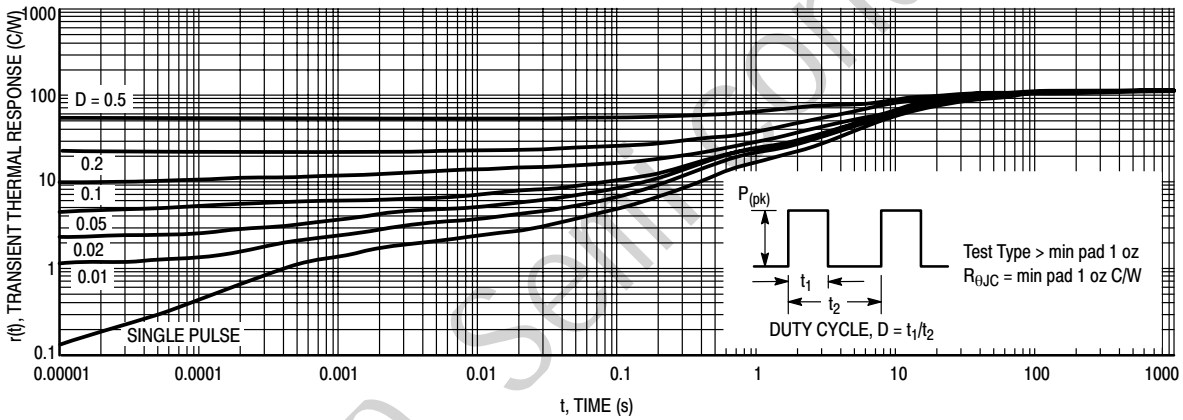
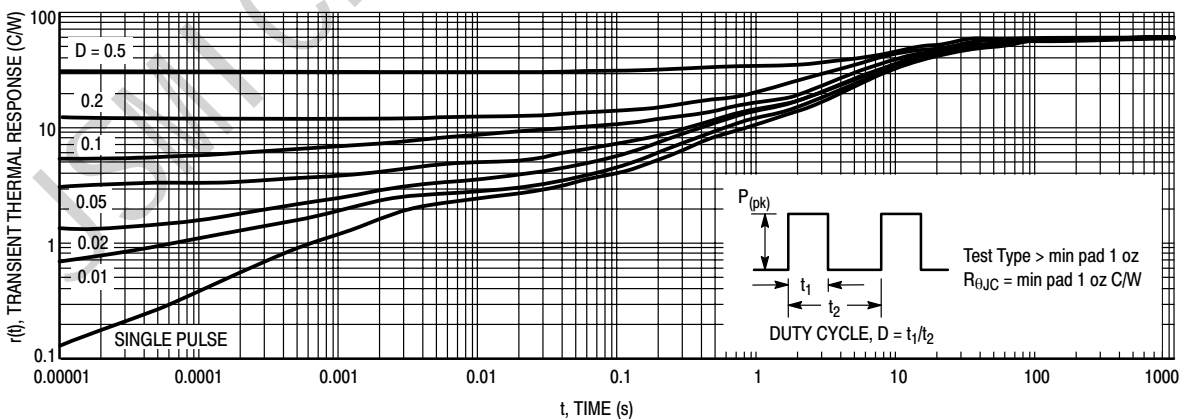
SMC		
Dim	Min	Max
A	5.59	6.22
B	6.60	7.11
C	2.75	3.18
D	0.15	0.31
E	7.75	8.13
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

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

Rating	Symbol	Value	Unit		
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	40	V		
Average Rectified Forward Current (At Rated V _R , T _C = 105°C)	I _{F(AV)}	5	A		
Peak Repetitive Forward Current (At Rated V _R , Square Wave, 20 KHz, T _C = 80°C)	I _{FRM}	10	A		
Non-Repetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60 Hz)	I _{FSM}	190	A		
Storage Temperature Range	T _{stg}	-65 to +150	°C		
Operating Junction Temperature	T _J	-65 to +125	°C		
Voltage Rate of Change (Rated V _R)	dv/dt	10,000	V/μs		
Maximum Instantaneous Forward Voltage (Note 2)	(i _F = 5.0 A, T _C = 25°C)		V _F	0.50	V
Maximum Instantaneous Reverse Current (Note 2)	(Rated dc Voltage, T _C = 25°C) (Rated dc Voltage, T _C = 100°C)		i _R	0.3 15	mA

1. Rating applies when surface mounted on the minimum pad size recommended.
2. Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 2.0%.


Figure 1. Typical Forward Voltage

Figure 2. Maximum Forward Voltage

Figure 3. Typical Reverse Current

Figure 4. Maximum Reverse Current

Figure 5. Current Derating

Figure 6. Forward Power Dissipation


Figure 5. Current Derating

Figure 6. Forward Power Dissipation

Figure 9. Thermal Response – MBR540T3G on min pad

Figure 10. Thermal Response – MBR540T3G” pad