Preferred Device

Surface Mount Schottky Power Rectifier

... employing the Schottky Barrier principle in a large area metal-to-silicon power diode. State-of-the-art geometry features epitaxial construction with oxide passivation and metal overlay contact. Ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity protection diodes in surface mount applications where compact size and weight are critical to the system.

- Small Compact Surface Mountable Package with J-Bend Leads
- Rectangular Package for Automated Handling
- Highly Stable Oxide Passivated Junction
- Very Low Forward Voltage Drop (0.55 Volts Max @ 1.0 A, T_J = 25°C)
- Excellent Ability to Withstand Reverse Avalanche Energy Transients
- Guardring for Stress Protection

Mechanical Characteristics

- 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
- Marking: B12

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	20	V
Average Rectified Forward Current (T _L = 115°C)	I _{F(AV)}	1.0	A
Non–Repetitive Peak Surge Current (Surge Applied at Rated Load Conditions Halfwave, Single Phase, 60 Hz)	I _{FSM}	40	A
Operating Junction Temperature	TJ	-65 to +125	°C



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SCHOTTKY BARRIER RECTIFIER 1.0 AMPERE 20 VOLTS



SMB CASE 403A PLASTIC

MARKING DIAGRAM



B12 = Device Code

ORDERING INFORMATION

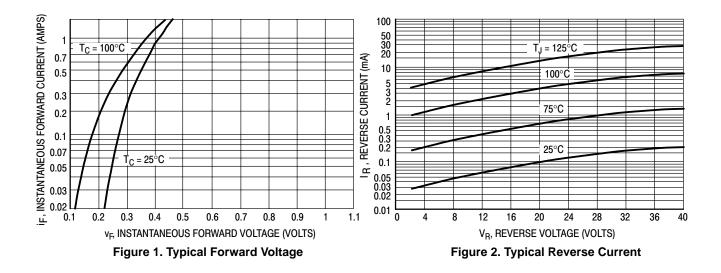
Device	Package	Shipping
MBRS120T3	SMB	2500/Tape & Reel

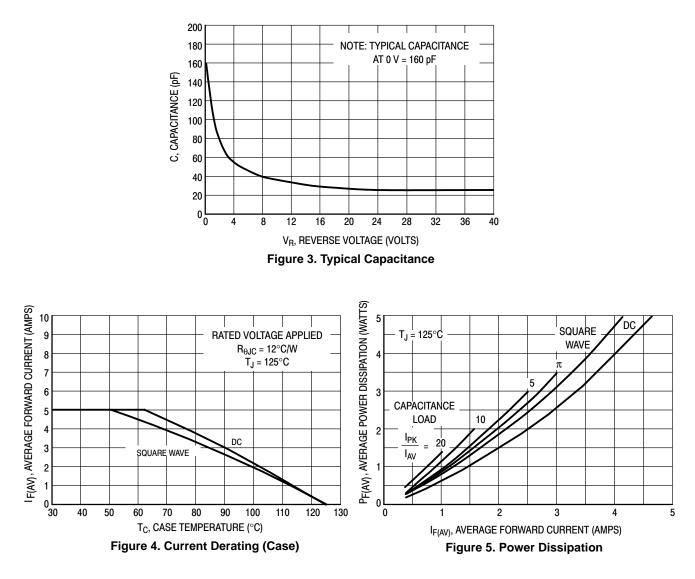
Preferred devices are recommended choices for future use and best overall value.

THERMAL CHARACTERISTICS

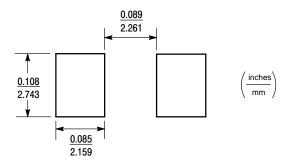
Characteristic	Symbol	Value	Unit			
Thermal Resistance — Junction to Lead $(T_L = 25^{\circ}C)$	R _{θJL}	12	°C/W			
ELECTRICAL CHARACTERISTICS						
Maximum Instantaneous Forward Voltage (Note 1.) $(i_F = 1.0 \text{ A}, \text{ T}_J = 25^{\circ}\text{C})$	V _F	0.6	Volts			
Maximum Instantaneous Reverse Current (Note 1.) (Rated dc Voltage, $T_J = 25^{\circ}C$) (Rated dc Voltage, $T_J = 100^{\circ}C$)	İR	1.0 10	mA			

1. Pulse Test: Pulse Width = 300 μ s, Duty Cycle \leq 2.0%.

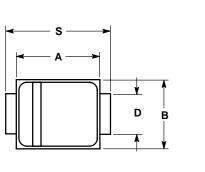


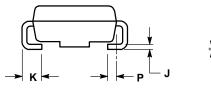


MINIMUM SOLDER PAD SIZES

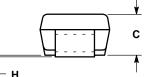


PACKAGE DIMENSIONS





SMB PLASTIC PACKAGE CASE 403A–03 ISSUE D



NOTES:

 DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.

 CONTROLLING DIMENSION: INCH.
D DIMENSION SHALL BE MEASURED WITHIN DIMENSION P.

	INCHES		MILLIMETERS		
DIM	MIN	MAX	MIN	MAX	
Α	0.160	0.180	4.06	4.57	
В	0.130	0.150	3.30	3.81	
С	0.075	0.095	1.90	2.41	
D	0.077	0.083	1.96	2.11	
Н	0.0020	0.0060	0.051	0.152	
J	0.006	0.012	0.15	0.30	
Κ	0.030	0.050	0.76	1.27	
Р	0.020 REF		0.51 REF		
S	0.205	0.220	5.21	5.59	

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