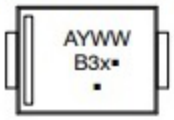
MARKING DIAGRAM



SMC 2–LEAD
CASE 403AC

B3x = Device Code
x = 2, 3 or 4
A = Assembly Location**
Y = Year
WW = Work Week
▪ = Pb–Free Package

Features

- Small Compact Surface Mountable Package with J-Bend Leads
- Rectangular Package for Automated Handling
- Highly Stable Oxide Passivated Junction
- Very Low Forward Voltage Drop
  (0.5 V Max @ 3.0 A, T_J = 25°C)
- Excellent Ability to Withstand Reverse Avalanche Energy Transients
- Guard-Ring for Stress Protection
- Device Passes ISO 7637 Pulse #1
- SBRS8 and NRVB Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC–Q101 Qualified and PPAP Capable*
- These Devices are Pb–Free, Halogen Free/BFR Free and are RoHS Compliant

Mechanical Characteristics

- Case: Epoxy, Molded, Epoxy Meets UL 94 V–0
- 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: Polarity Band on Plastic Body Indicates Cathode Lead
- Device Meets MSL 1 Requirements
- ESD Ratings:
  - Machine Model = C (> 400 V)
  - Human Body Model = 3B (> 8000 V)

Rating	Symbol	MBRS320T3G, SBRS8320T3G	MBRS330T3G, NRVBRS330T3G	MBRS340T3G, SBRS8340T3G	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	40	V
Average Rectified Forward Current	$I_{F(AV)}$	3.0 @ T_L = 110°C 4.0 @ T_L = 105°C			A
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	I_{FSM}	80			A
Operating Junction Temperature	T_J	– 65 to +150			°C
ISO 7637 Pulse #1 (100 V, 10Ω)		5000			Pulses
ESD Ratings: Machine Model = C Human Body Model = 3B		> 400 > 8000			V

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

THERMAL CHARACTERISTICS

Thermal Resistance, Junction–to–Lead	$R_{\theta JL}$	11	°C/W

ELECTRICAL CHARACTERISTICS

Maximum Instantaneous Forward Voltage (Note 1) (i_F = 3.0 A, T_J = 25°C)	V_F	0.50	V
Maximum Instantaneous Reverse Current (Note 1) (Rated dc Voltage, T_J = 25°C) (Rated dc Voltage, T_J = 100°C)	i_R	2.0 20	mA

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

1. Pulse Test: Pulse Width = 300 μs, Duty Cycle ≤ 2.0%.