



MB54~MB520

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE 40 to 200 Volts **CURRENT** 5.0 Amperes

SMC / DO-214AB

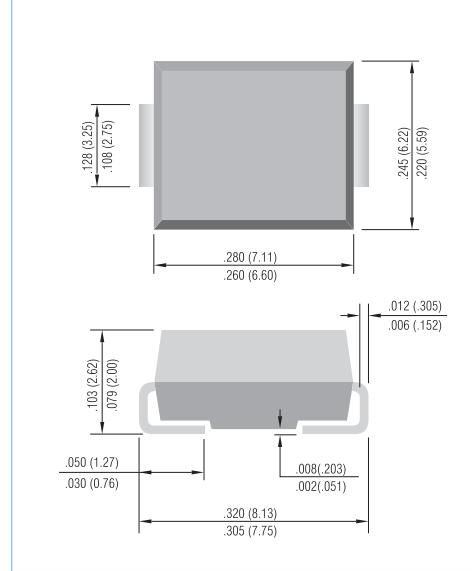
Unit: inch (mm)

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal to silicon rectifier. majority carrier conduction
- Low power loss,high efficiency
- High surge capacity
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

- Case: JEDEC DO-214AB molded plastic
- Terminals:Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes positive end (cathode)
- Standard packaging: 16mm tape (EIA-481)
- Weight: 0.0082 ounce, 0.2325 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load.

PARAMETER	SYMBOL	MB54	MB54A	MB55	MB56	MB58	MB59	MB510	MB515	MB520	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	45	50	60	80	90	100	150	200	V
Maximum RMS Voltage	V_{RMS}	28	31.5	35	42	56	63	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	40	45	50	60	80	90	100	150	200	V
Average Rectified Output Current (See Figure 1)	$I_{F(AV)}$	5.0									A
Non-Repetitive Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	100									A
Forward Voltage at 5.0A(Note 1)	V_F	0.70		0.74		0.80			0.9		V
Peak Reverse Current $T_J=25^{\circ}C$ at Rated DC Blocking Voltage $T_J=100^{\circ}C$	I_R					0.05					mA
Typical Thermal Resistance(Note 2)	$R_{\theta JA}$					17					°C / W
	$R_{\theta JL}$					55					
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150				-65 to +175					°C

NOTES:

1. Pulse Test with PW =300µsec, 1% Duty Cycle.
2. Mounted on P.C. Board with 14mm² (.013mm thick) copper pad areas.



MB54~MB520

RATING AND CHARACTERISTIC CURVES

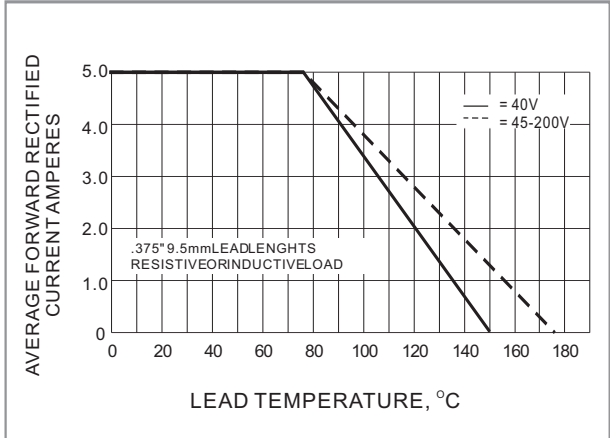


Fig.1- FORWARD CURRENT DERATING CURVE

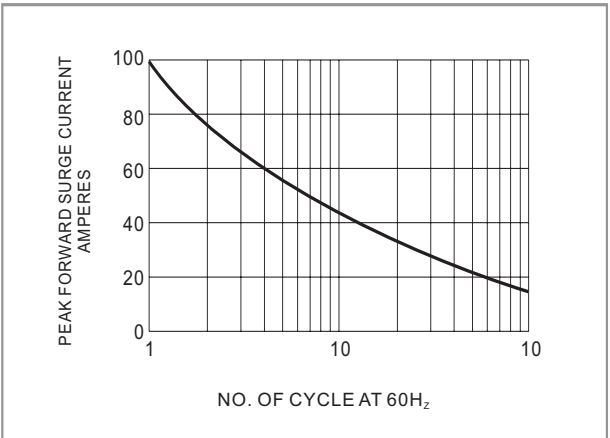


Fig.2 -MAXIMUM NON-REPETITIVE SURGE CURRENT

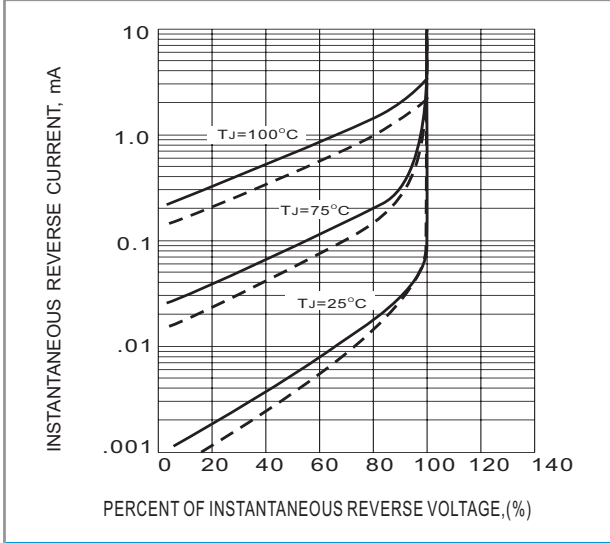


Fig.3-TYPICAL REVERSE CHARACTERISTIC

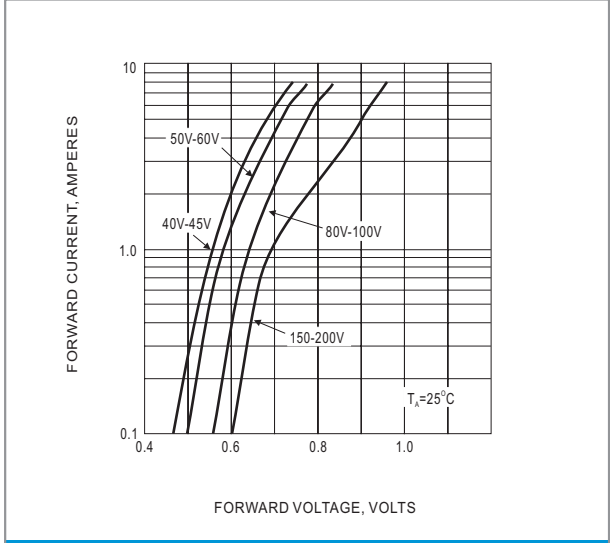
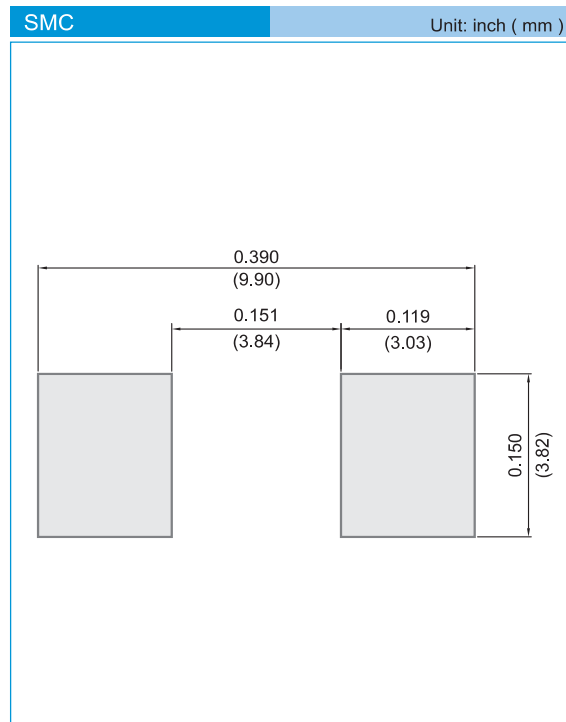


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC



MB54~MB520

MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
 - T/R - 3K per 13" plastic Reel
 - T/R - 0.5Kper 7" plastic Reel

LEGAL STATEMENT

Copyright PanJit International, Inc 2009

The information presented in this document is believed to be accurate and reliable. The specifications and information herein are subject to change without notice. Pan Jit makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose. Pan Jit products are not authorized for use in life support devices or systems. Pan Jit does not convey any license under its patent rights or rights of others.