

MB54~MB520

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE 40 to 200 Volt **CURRENT** 5 Ampere

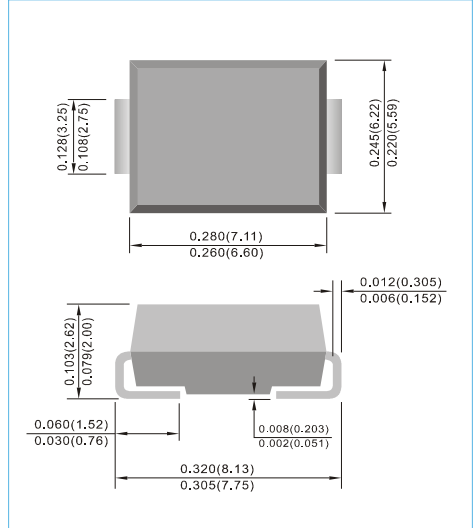
SMC / DO-214AB Unit : inch(mm)

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications in order to optimize board space
- Low power loss,high efficiency
- High surge capacity
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

MECHANICAL DATA

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



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									A
Non-Repetitive Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	100									A
Forward Voltage at 5A (Note 1)	V_F	0.7		0.74		0.8		0.9			V
Peak Reverse Current at Rated DC Blocking Voltage $T_J=25^{\circ}C$ $T_J=100^{\circ}C$	I_R					0.05		10			mA
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$					55		17			$^{\circ}C / W$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150				-65 to +175					$^{\circ}C$

NOTES :

1. Pulse Test with PW =300µsec, 1% Duty Cycle.
2. Mounted on P.C. Board with 14mm² (0.013mm thick) copper pad areas.

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RATING AND CHARACTERISTIC CURVES

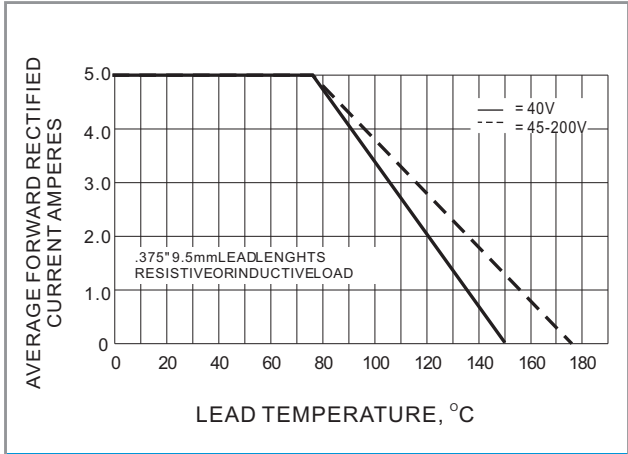


Fig.1 FORWARD CURRENT DERATING CURVE

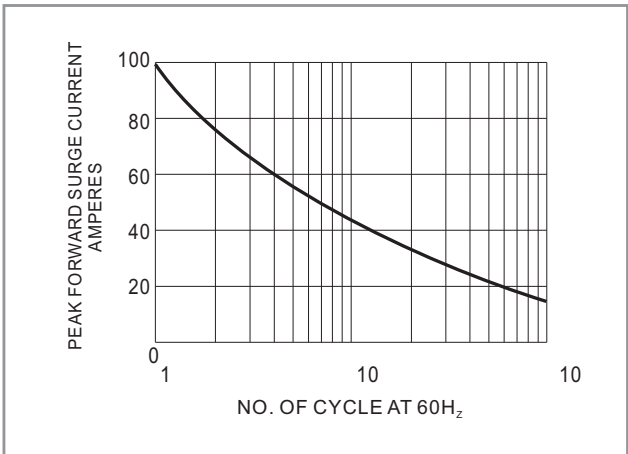


Fig.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

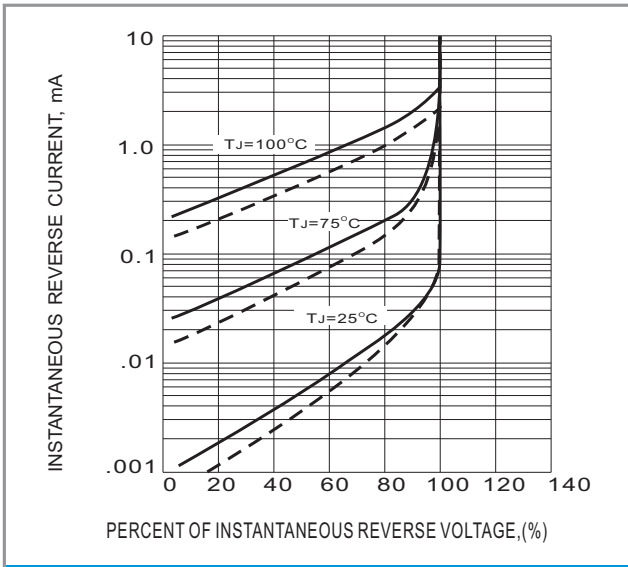


Fig.3 TYPICAL REVERSE CHARACTERISTIC

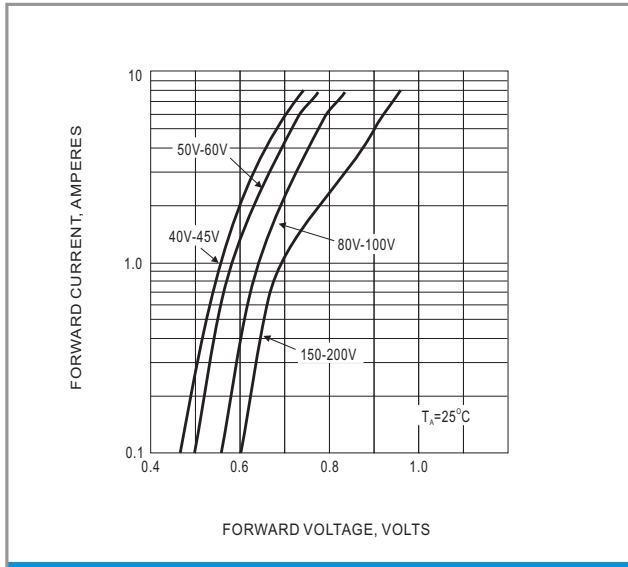


Fig.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

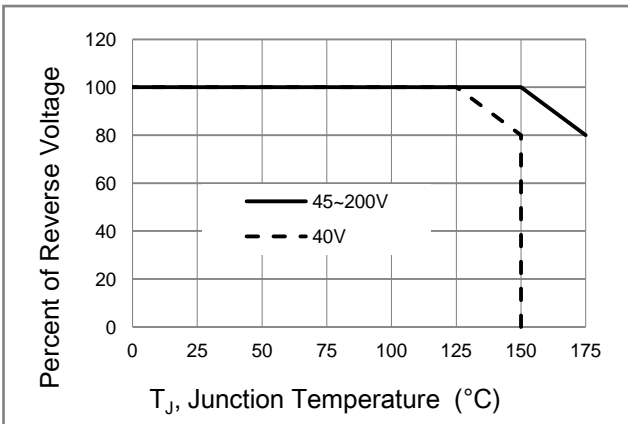


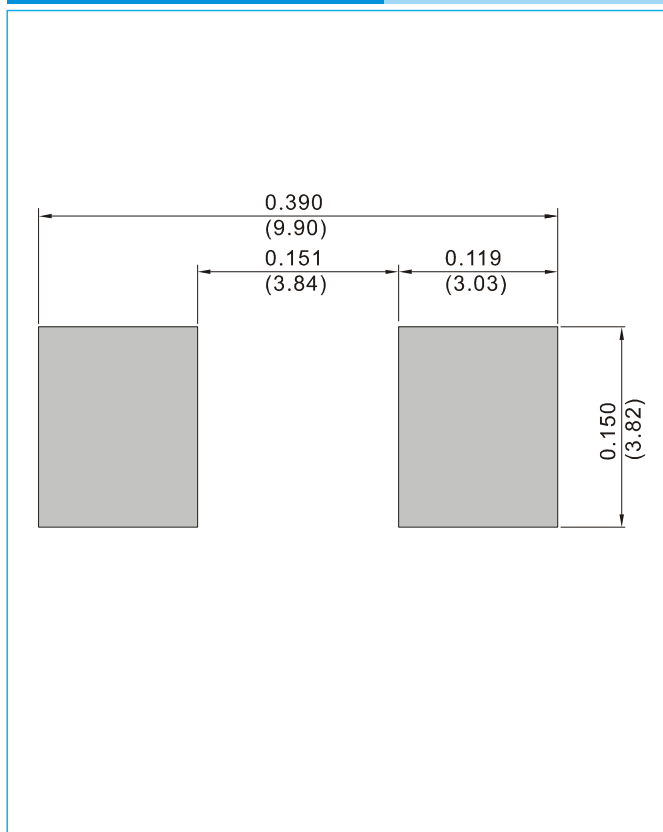
Fig.5 Operating Temperature Derating Curve

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MOUNTING PAD LAYOUT

SMC / DO-214AB

Unit : inch(mm)



ORDER INFORMATION

- Packing information
T/R - 3K per 13" plastic Reel
T/R - 0.8K per 7" plastic Reel

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