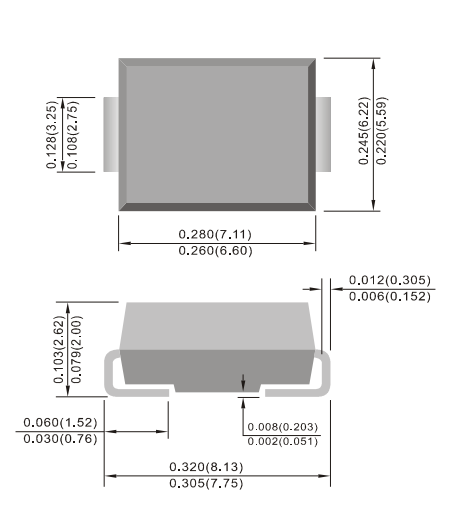
MB54~MB520

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°C T_J=100°C	I_R	0.05 10									mA
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	55 17									°C / W
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 14mm^2 (0.013mm thick) copper pad areas.

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RATING AND CHARACTERISTIC CURVES

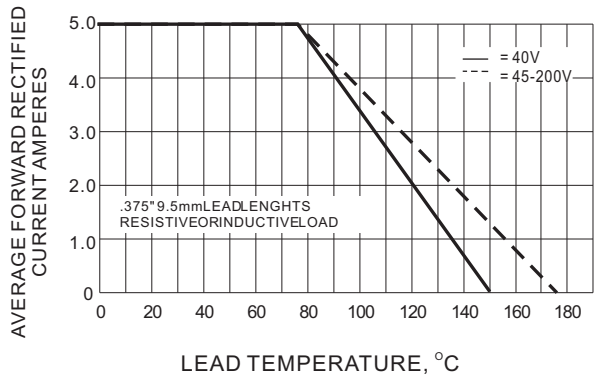

Fig.1 FORWARD CURRENT DERATING CURVE

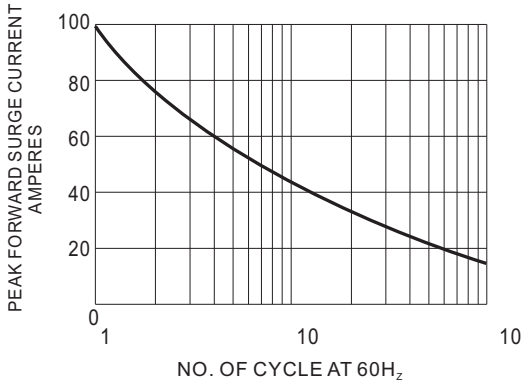

Fig.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

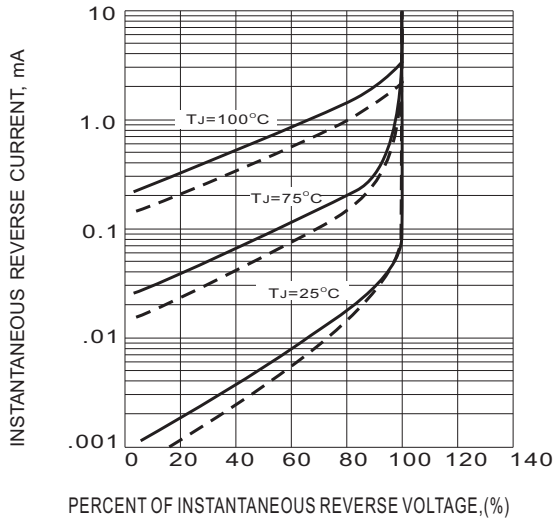

Fig.3 TYPICAL REVERSE CHARACTERISTIC

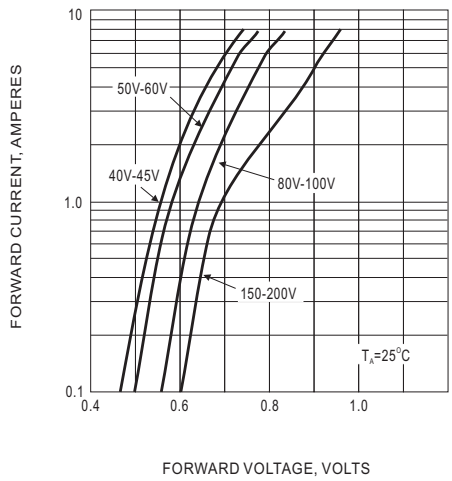

Fig.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

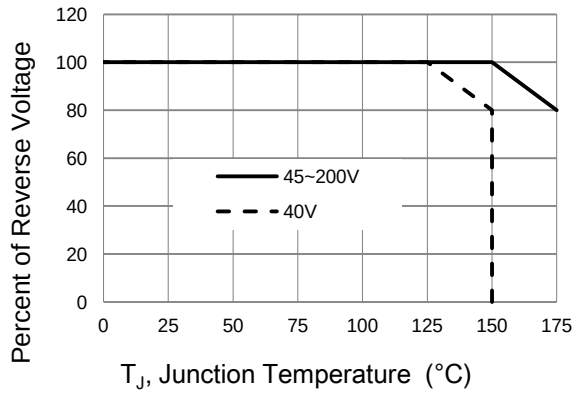

Fig.5 Operating Temperature Derating Curve

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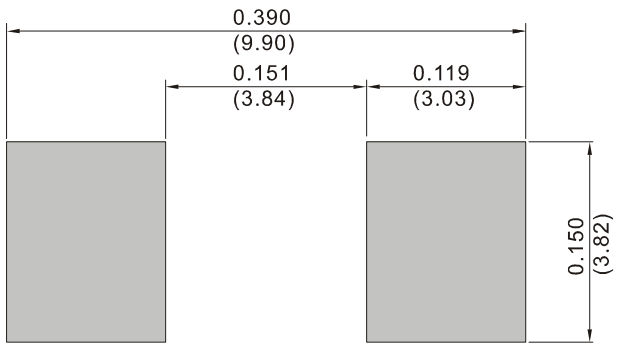
MOUNTING PAD LAYOUT

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

MB54~MB520

Part No_packing code_Version

MB54_R1_00001

MB54_R2_00001

For example :

RB500V-40_R2_00001

- **Part No.**
- **Serial number**
- **Version code means HF**
- **Packing size code means 13"**
- **Packing type means T/R**

Packing Code XX				Version Code XXXXX		
Packing type	1st Code	Packing size code	2nd Code	HF or RoHS	1st Code	2nd~5th Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			

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