

# MB34~MB320

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

<b>VOLTAGE</b>	<b>40 to 200 Volt</b>	<b>CURRENT</b>	<b>3 Ampere</b>
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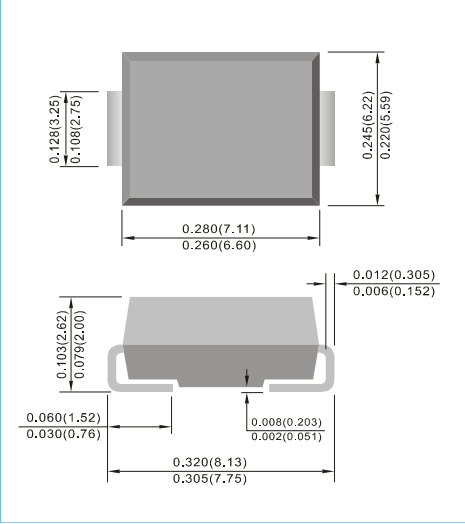
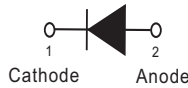
**SMC / DO-214AB** Unit : inch(mm)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- 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



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

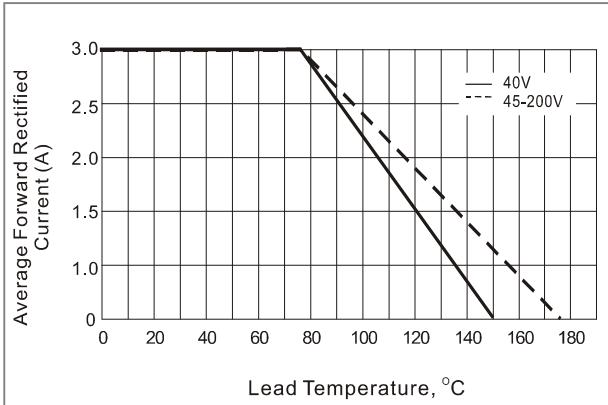
Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load.

PARAMETER	SYMBOL	MB34	MB34A	MB35	MB36	MB38	MB39	MB310	MB315	MB320	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
Maximum Average Forward Current (See figure 1)	$I_{F(AV)}$	3									A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	100									A
Maximum Forward Voltage at 3A (Note 1)	$V_F$	0.7		0.74		0.8		0.9			V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^\circ\text{C}$	$I_R$	0.05									mA
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=100^\circ\text{C}$	$I_R$	2				1					mA
Typical Junction Capacitance ( $V_R=4V, 1\text{MHz}$ )	$C_J$	140									pF
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	15									°C / W
(Note 3)	$R_{\theta JA}$	110									
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150				-65 to +175					°C

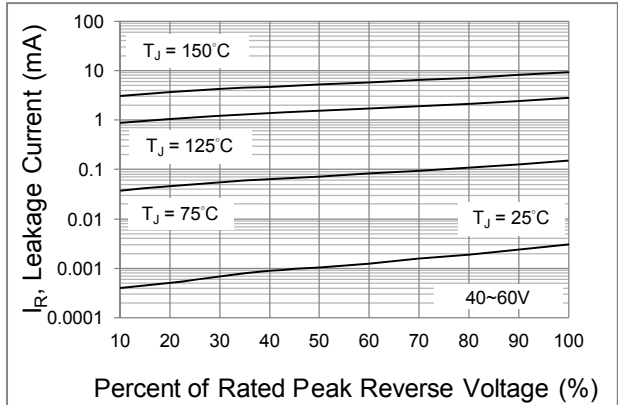
**NOTES :**

1. Pulse Test with PW =300µsec, 1% Duty Cycle.
2. Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area.
3. Mounted on a FR4 PCB, single-sided copper, mini pad.

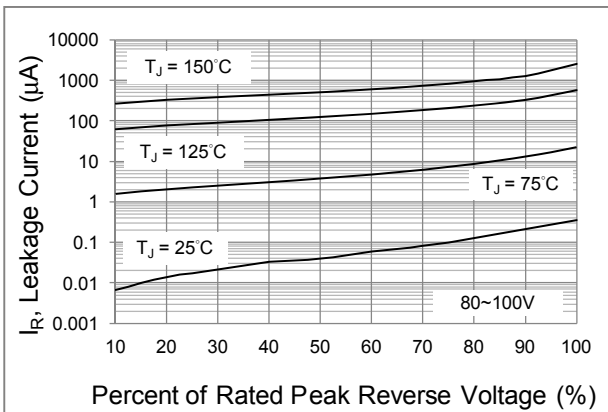
# MB34~MB320



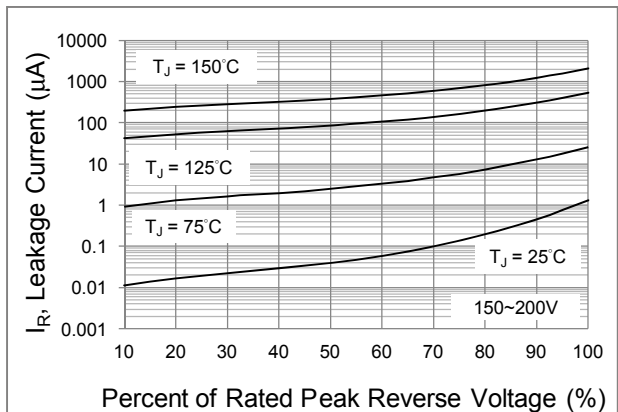
**Fig.1 Forward Current Derating Curve**



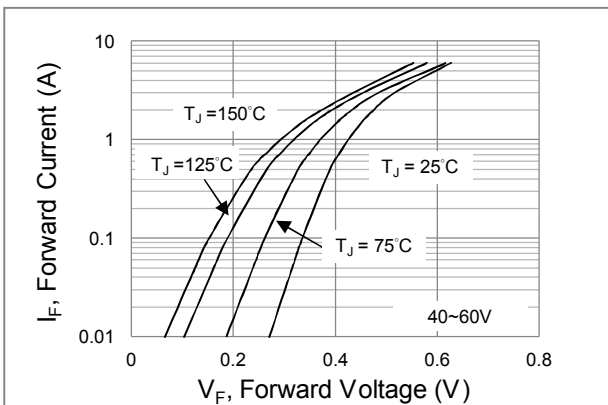
**Fig.2 Typical Reverse Characteristics**



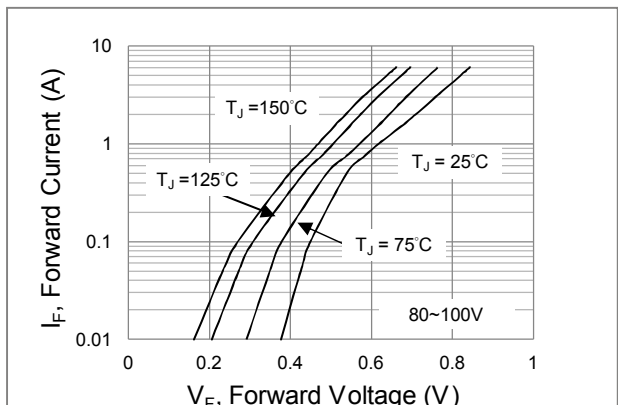
**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Reverse Characteristics**

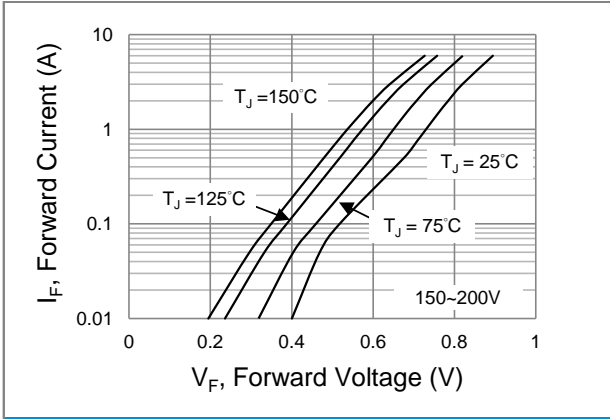


**Fig.5 Typical Forward Characteristics**

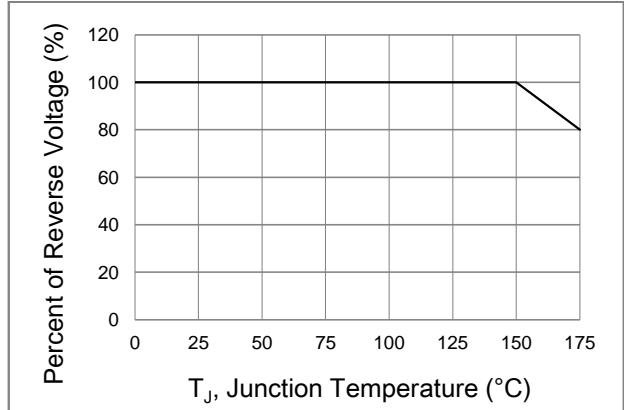


**Fig.6 Typical Forward Characteristics**

## MB34~MB320



**Fig.7 Typical Forward Characteristics**



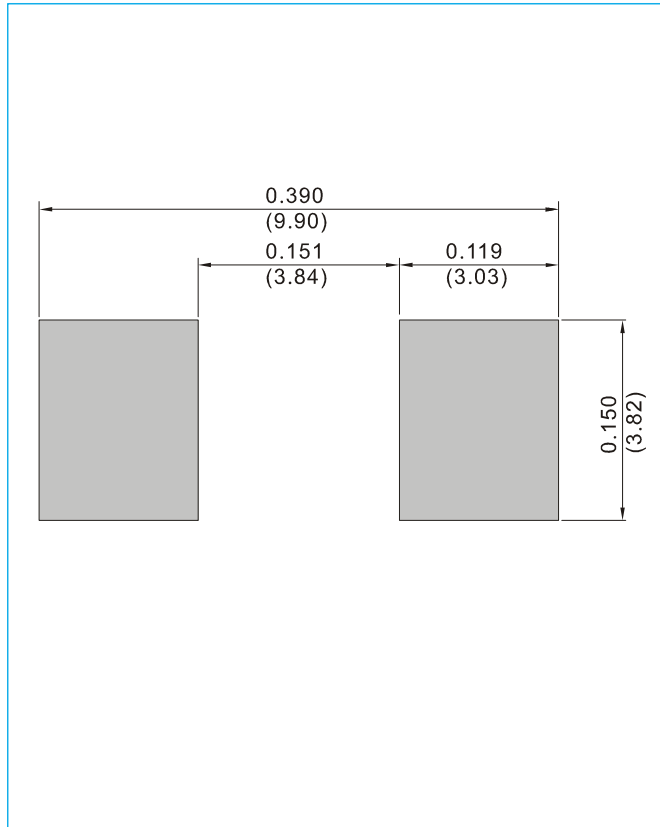
**Fig.8 Operating Temperature Derating Curve**

## MB34~MB320

### 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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