

## MB34~MB320

### Surface Mount Schottky Barrier Rectifier

**VOLTAGE** 40 to 200 Volt **CURRENT** 3 Ampere

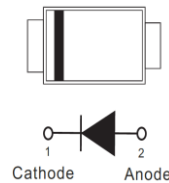
#### FEATURES

- 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)
- Approx. Weight : 0.2325 grams

#### SMC



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

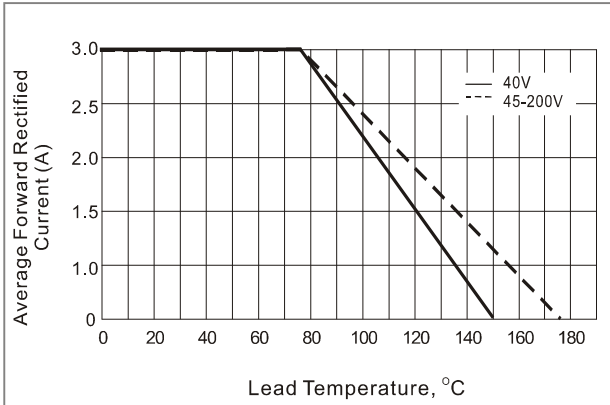
Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load.

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

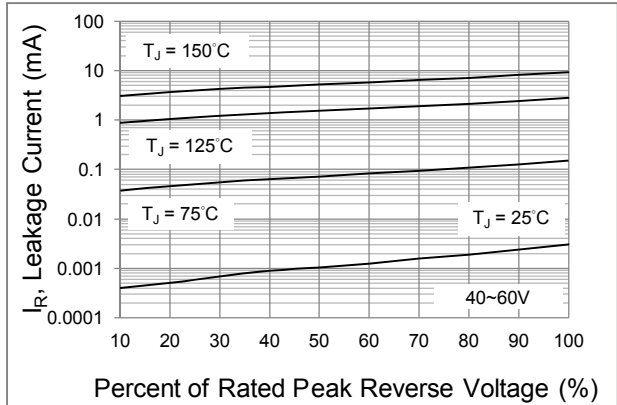
#### NOTES :

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.

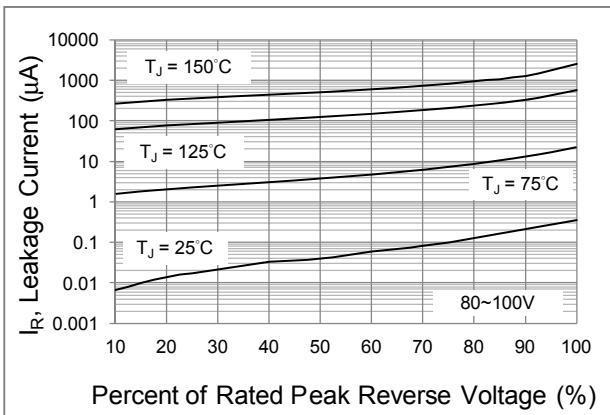
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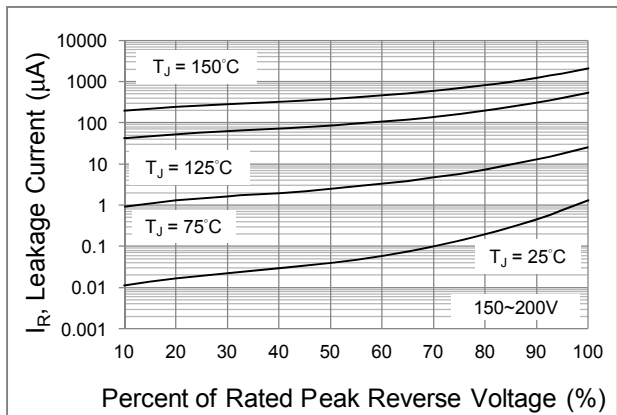
**Fig.1 Forward Current Derating Curve**



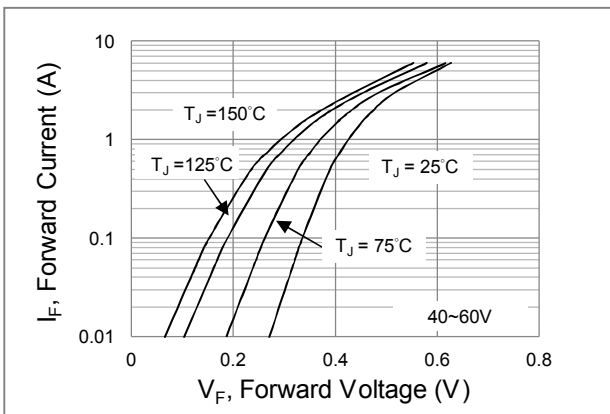
**Fig.2 Typical Reverse Characteristics**



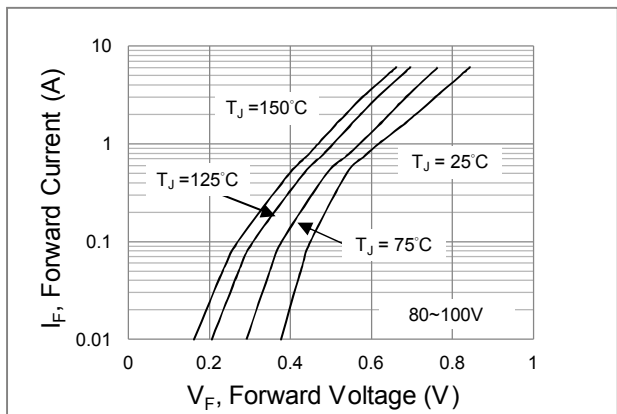
**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Reverse Characteristics**

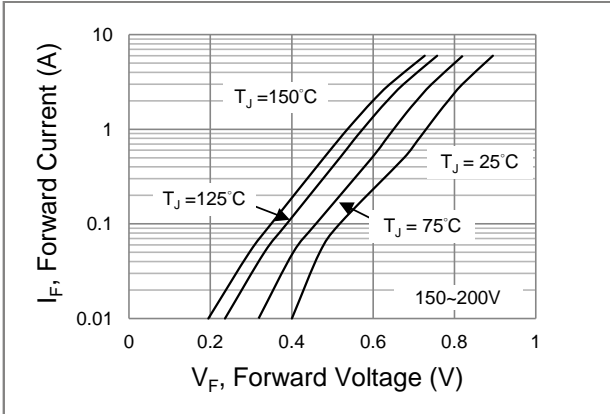


**Fig.5 Typical Forward Characteristics**

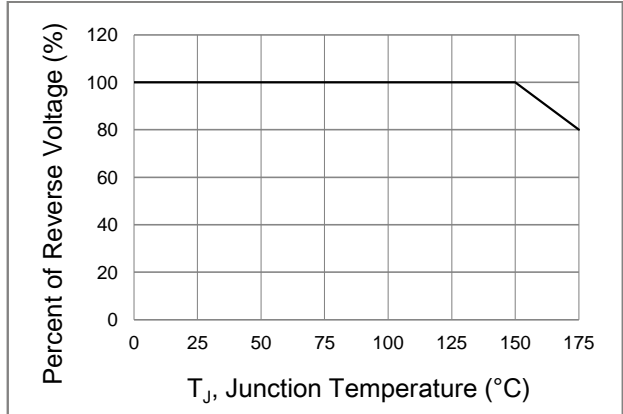


**Fig.6 Typical Forward Characteristics**

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**Fig.7 Typical Forward Characteristics**



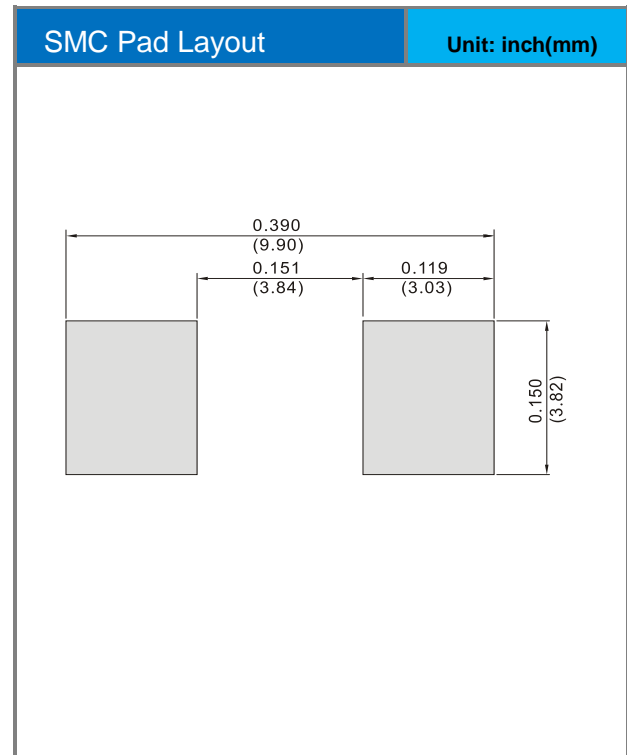
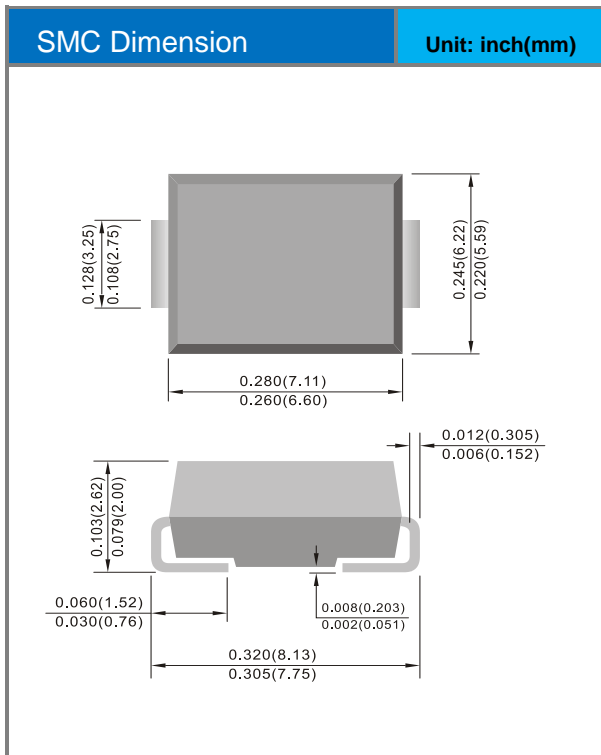
**Fig.8 Operating Temperature Derating Curve**

## MB34~MB320

### Product and Packing Information

Part No.	Package Type	Packing Type	Marking
MB34	SMC	3K pcs / 13" reel	MB34
MB34A	SMC	3K pcs / 13" reel	MB34A
MB35	SMC	3K pcs / 13" reel	MB35
MB36	SMC	3K pcs / 13" reel	MB36
MB38	SMC	3K pcs / 13" reel	MB38
MB39	SMC	3K pcs / 13" reel	MB39
MB310	SMC	3K pcs / 13" reel	MB310
MB315	SMC	3K pcs / 13" reel	MB315
MB320	SMC	3K pcs / 13" reel	MB320

### Packaging Information & Mounting Pad Layout



## MB34~MB320

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