



# MB24~MB220

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

**VOLTAGE** 40 to 200 Volt **CURRENT** 2 Ampere

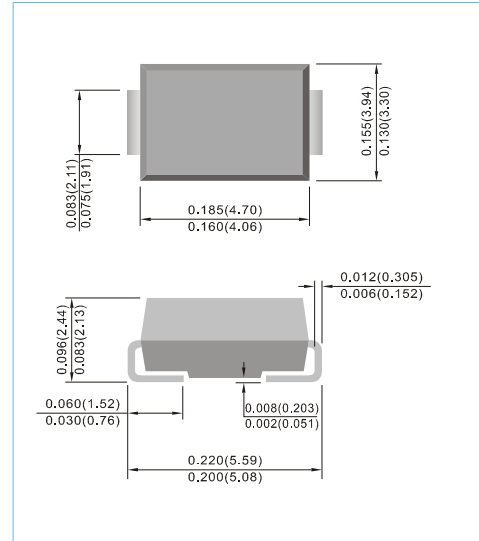
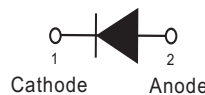
**SMB / DO-214AA** Unit : inch(mm)

### 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-214AA molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Standard packaging: 12mm tape (EIA-481)
- Weight: 0.0032 ounces, 0.092 grams



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

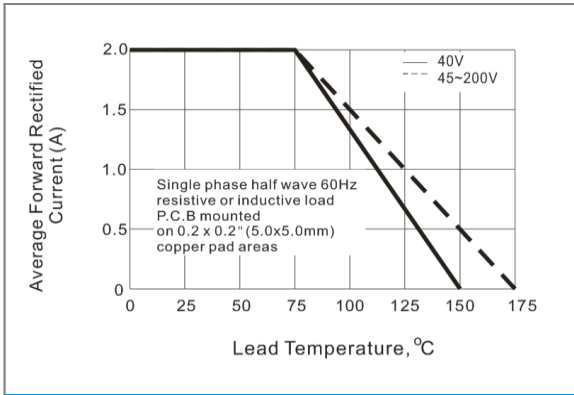
PARAMETER	SYMBOL	MB24	MB24A	MB25	MB26	MB28	MB29	MB210	MB215	MB220	UNITS	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	40	45	50	60	80	90	100	150	200	V	
Maximum RMS Voltage	$V_{RMS}$	28	31.5	35	42	56	63	70	105	140	V	
Maximum DC Blocking Voltage	$V_{DC}$	40	45	50	60	80	90	100	150	200	V	
Maximum Average Forward Current	$I_{F(AV)}$	2									A	
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	50									A	
Maximum Forward Voltage at 2A (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 $T_J=100^\circ\text{C}$	$I_R$	20				1					mA	
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	12										$^\circ\text{C} / \text{W}$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150				-55 to +175					$^\circ\text{C}$	

NOTES :

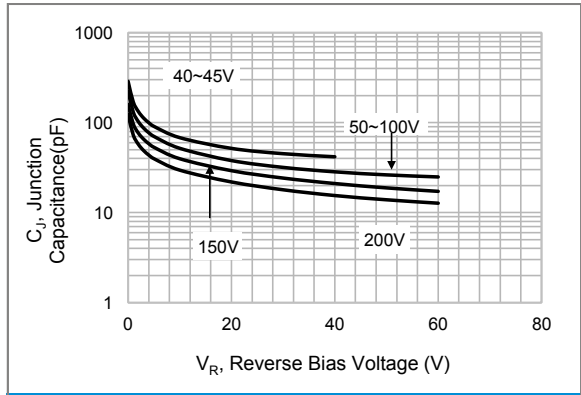
1. Pulse Test with PW = 300μsec, 1% Duty Cycle.
2. Mounted on P.C. Board with 8mm<sup>2</sup> (0.013mm thick) copper pad areas.



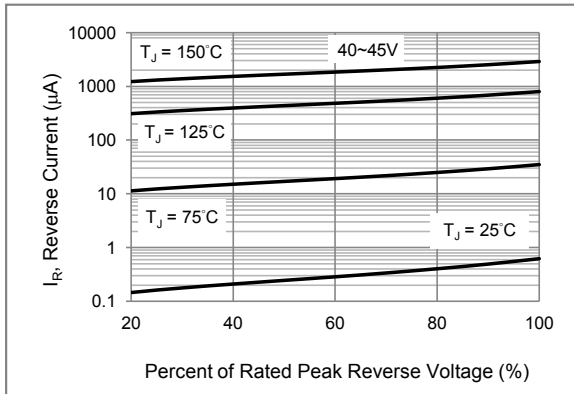
**MB24~MB220**



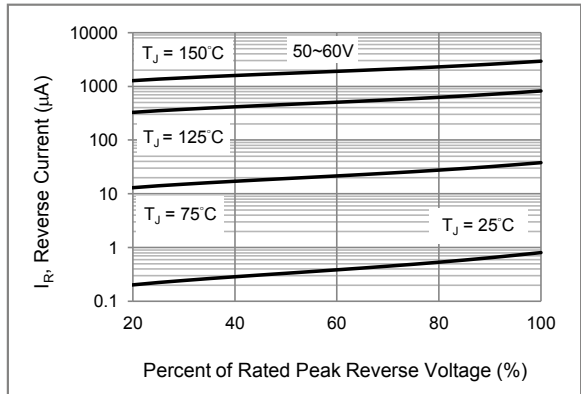
**Fig.1 Forward Current Derating Curve**



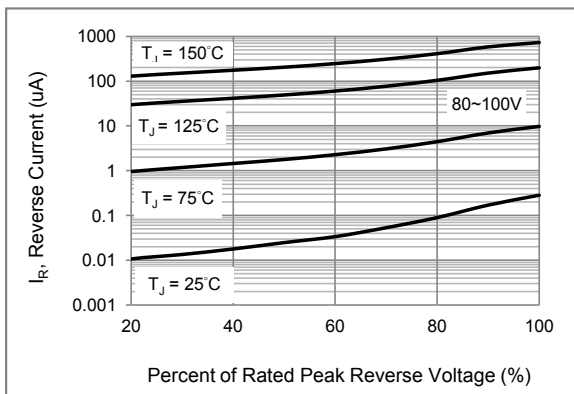
**Fig.2 Typical Junction Capacitance**



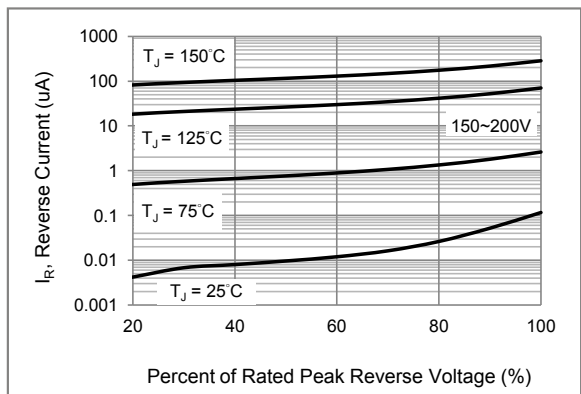
**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Reverse Characteristics**



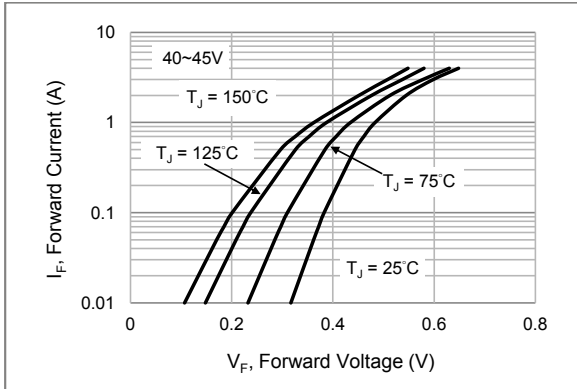
**Fig.5 Typical Reverse Characteristics**



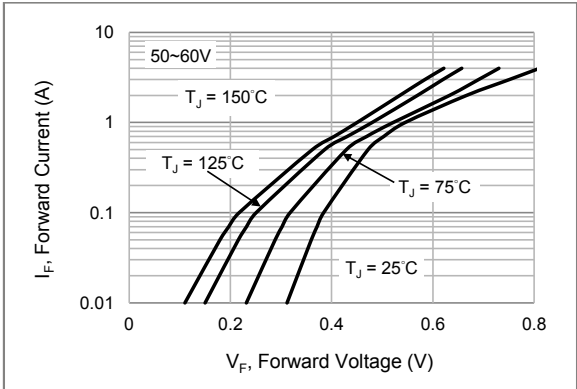
**Fig.6 Typical Reverse Characteristics**



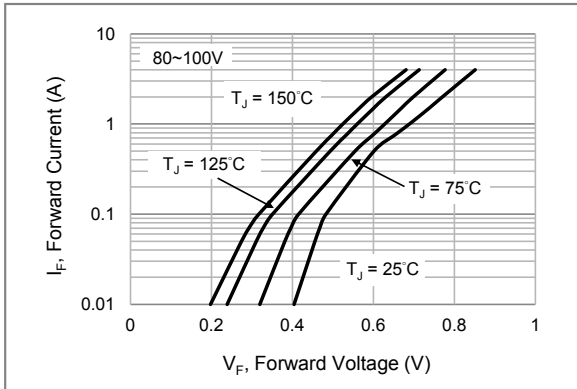
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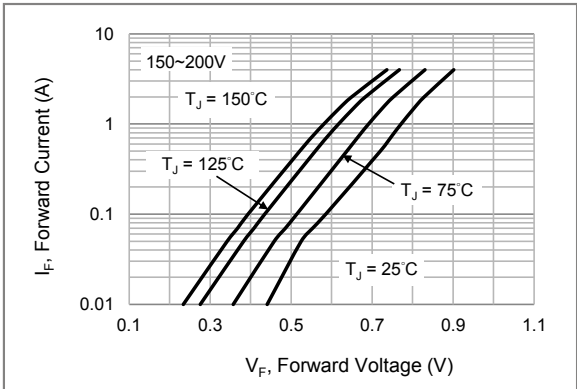
**Fig.7 Typical Forward Characteristics**



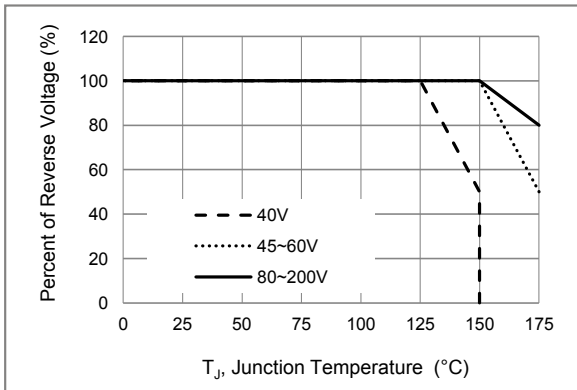
**Fig.8 Typical Forward Characteristics**



**Fig.9 Typical Forward Characteristics**



**Fig.10 Typical Forward Characteristics**

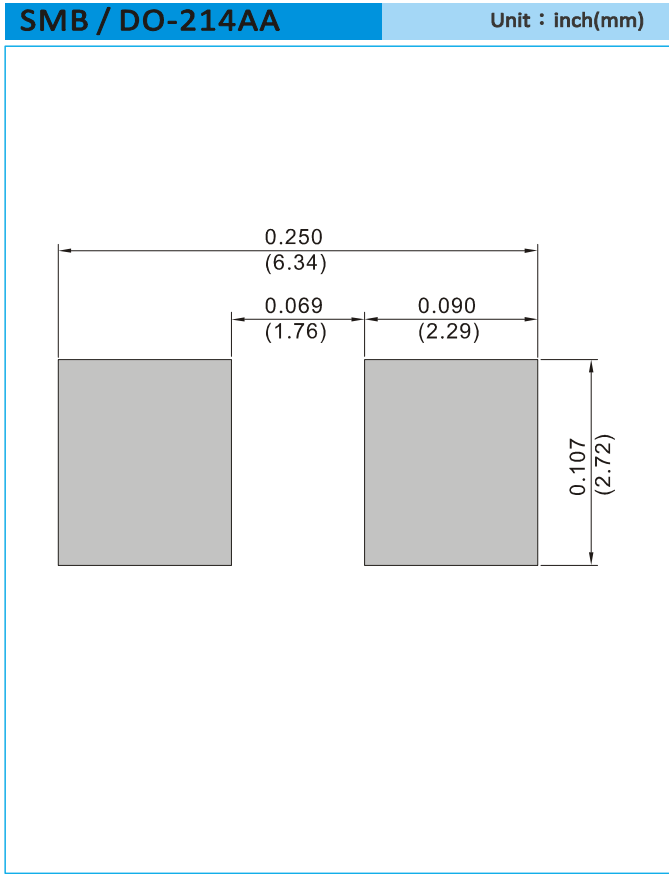


**Fig.11 Operating Temperature Derating**



# MB24~MB220

## MOUNTING PAD LAYOUT



## ORDER INFORMATION

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



**MB24~MB220**

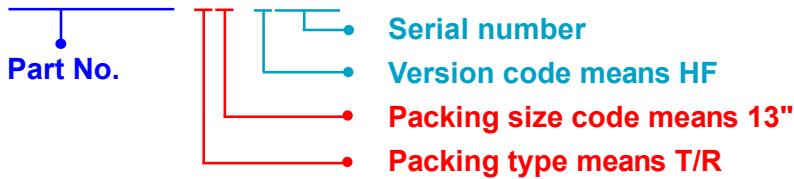
**Part No.\_packing code\_Version**

MB24\_R1\_00001

MB24\_R2\_00001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> 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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