



# MB220F

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

**VOLTAGE** 200 Volts **CURRENT** 2 Amperes

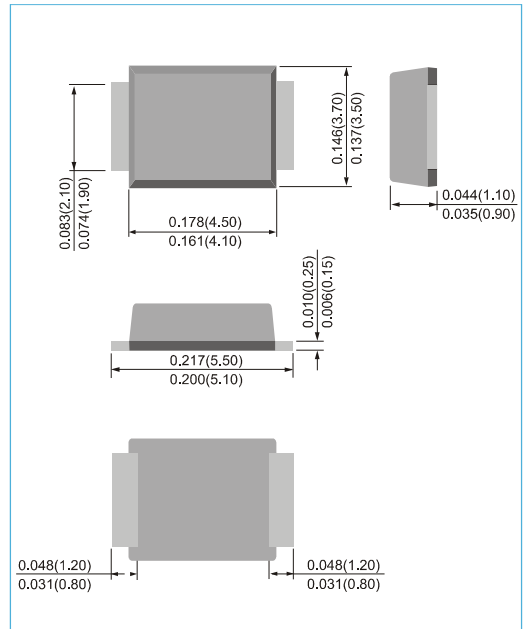
**SMBF** Unit : inch(mm)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal to silicon rectifier. majority carrier conduction
- Low power loss, high efficiency
- High surge capacity
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- Lead free in comply with EU RoHS 2002/95/EC directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

- Case: SMBF molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0018 ounces, 0.05 grams
- Polarity : Color band denotes cathode end



### MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise noted)

PARAMETER	SYMBOL	J5 @ 9	UNITS
Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	200	V
RMS Voltage	V <sub>RMS</sub>	140	V
DC Blocking Voltage	V <sub>R</sub>	200	V
Average Forward Current	I <sub>F(AV)</sub>	2	A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I <sub>FSM</sub>	50	A
Typical Thermal Resistance ,Junction to Lead (Note 1) Junction to Ambient (Note 1)	R <sub>θJL</sub> R <sub>θJA</sub>	20 62.5	°C / W
Operating Junction Temperature and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

### NOTES :

1. Mounted on 48cm<sup>2</sup> FR-4 PCB.



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## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Breakdown voltage	V <sub>BR</sub>	I <sub>R</sub> =1mA T <sub>A</sub> =25°C	200	-	-	V
Instantaneous forward voltage	V <sub>F</sub>	I <sub>F</sub> =0.1A T <sub>A</sub> =25°C	-	0.57	-	V
		I <sub>F</sub> =1A T <sub>A</sub> =25°C	-	0.77	-	V
		I <sub>F</sub> =2A T <sub>A</sub> =25°C	-	0.83	0.9	V
Instantaneous forward voltage	V <sub>F</sub>	I <sub>F</sub> =0.1A T <sub>A</sub> =125°C	-	0.43	-	V
		I <sub>F</sub> =1A T <sub>A</sub> =125°C	-	0.61	-	V
		I <sub>F</sub> =2A T <sub>A</sub> =125°C	-	0.68	-	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =160V T <sub>A</sub> =25°C	-	0.11	-	μA
		V <sub>R</sub> =200V T <sub>A</sub> =25°C	-	0.28	50	μA
Reverse current	I <sub>R</sub>	V <sub>R</sub> =200V T <sub>A</sub> =125°C	-	140.7	-	μA

### RATING AND CHARACTERISTIC CURVES

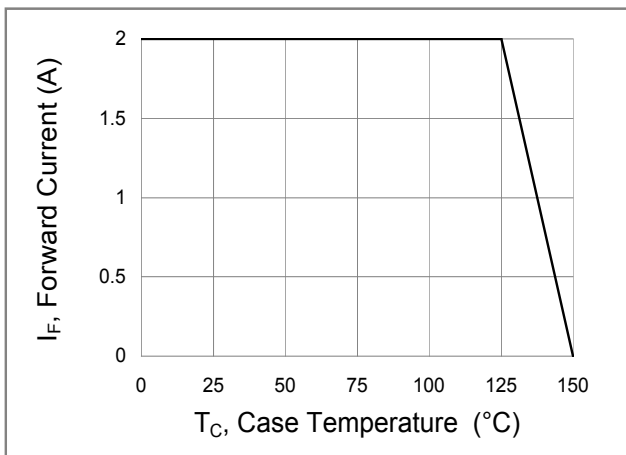


Fig.1 Forward Current Derating Curve

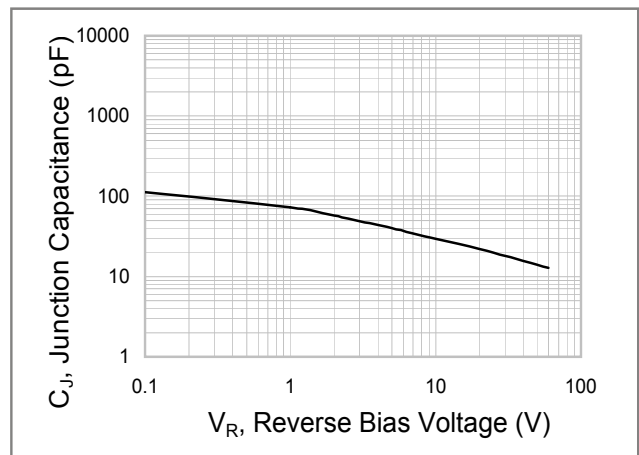


Fig.2 Typical Junction Capacitance

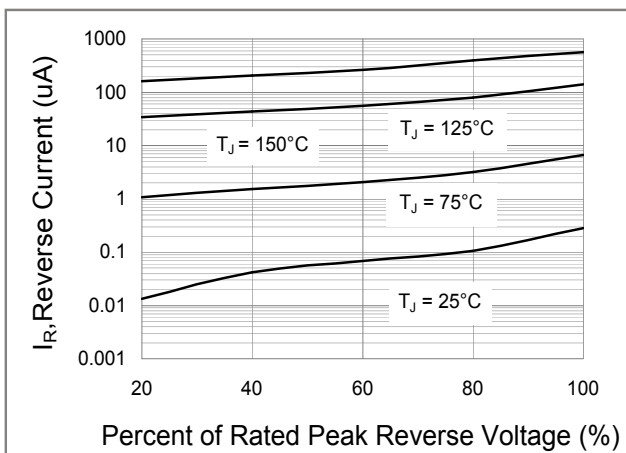


Fig.3 Typical Reverse Characteristics

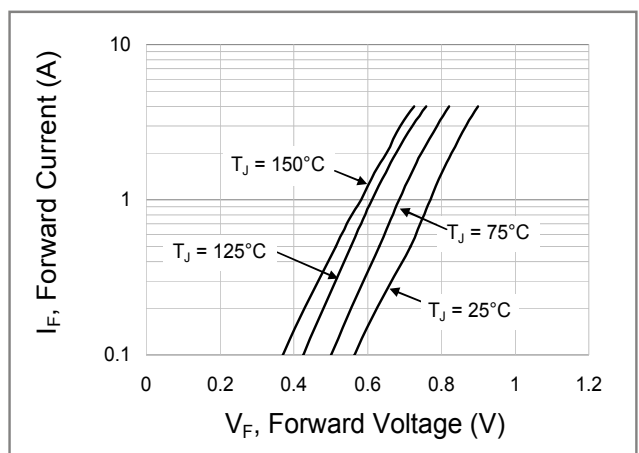
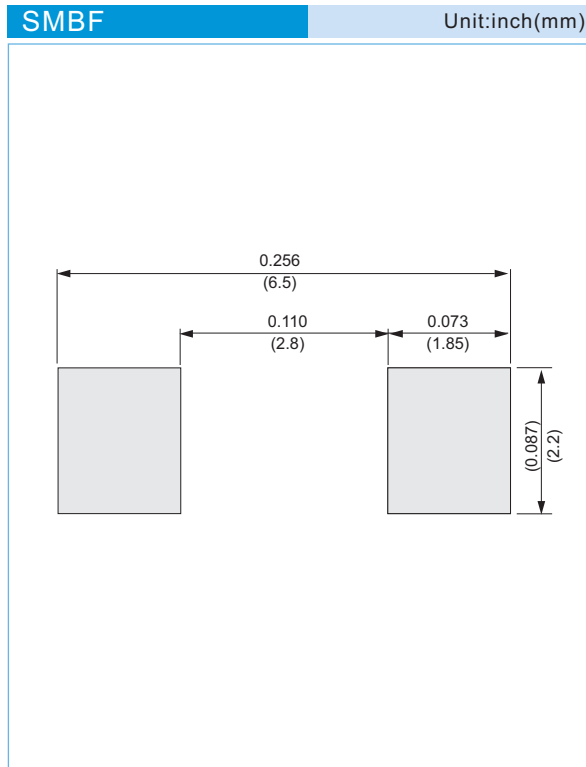


Fig.4 Typical Forward Characteristics



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information  
T/R - 5K per 13" plastic Reel

## LEGAL STATEMENT

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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
T/B	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
T/R	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
B/P	<b>B</b>	13"	<b>2</b>			
T/P	<b>T</b>	26mm	<b>X</b>			
TRR	<b>S</b>	52mm	<b>Y</b>			
TRL	<b>L</b>	PBCU	<b>U</b>			
FORMING	<b>F</b>	PBCD	<b>D</b>			

**Part No\_packing code\_Version**

MB220F\_R1\_00001

MB220F\_R2\_00001

MB220F\_00001