



# SBM1045VDC

## ULTRA LOW VF SCHOTTKY RECTIFIER

**VOLTAGE** 45 Volt **CURRENT** 10 Ampere

**TO-263 / D<sup>2</sup>PAK** Unit : inch(mm)

### FEATURES

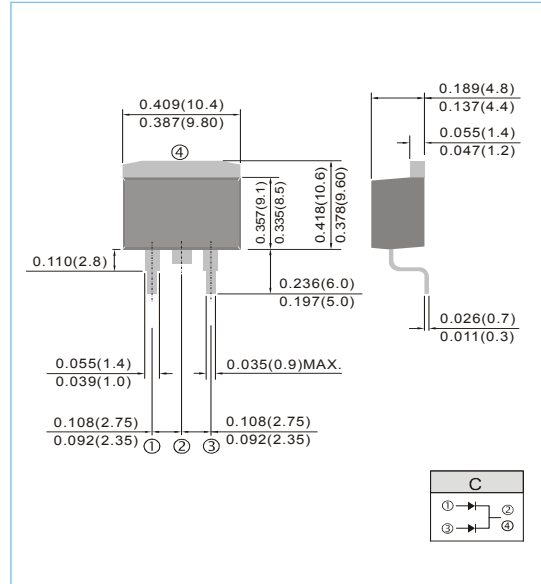
- Ultra low forward voltage drop, low power loss
- High efficiency operation
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

Case : TO-263/D<sup>2</sup>PAK, Plastic

Terminals : Solderable per MIL-STD-750, Method 2026

Weight: 0.049 ounces, 1.38 grams.



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

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	45	V
Maximum average forward rectified current	I <sub>F(AV)</sub>	10 5	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	150	A
Typical junction capacitance (V <sub>R</sub> =4V, f=1MHz)	C <sub>J</sub>	500	pF
Typical thermal resistance per diode	R <sub>θJC</sub>	3.5	°C/W
Operating junction temperature range	T <sub>J</sub>	-55 to + 150	°C
Storage temperature range	T <sub>STG</sub>	-55 to + 150	°C

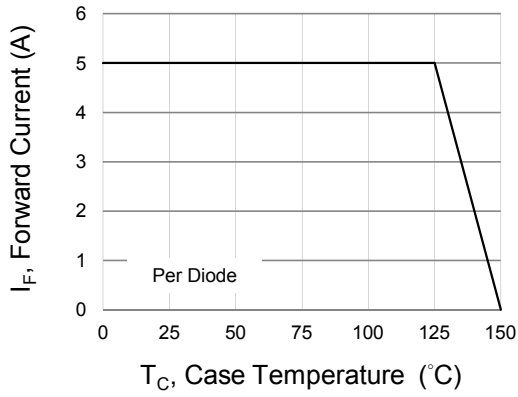
Note : 1. Mounted on infinite heatsink.

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

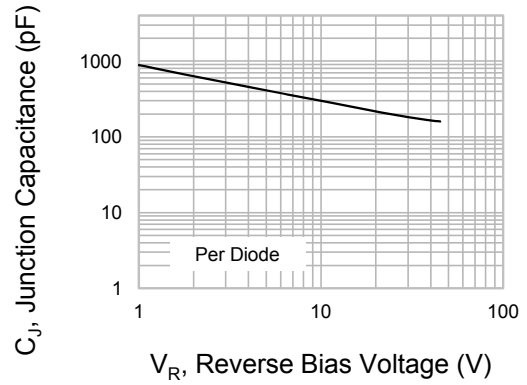
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Breakdown voltage per diode	V <sub>BR</sub>	I <sub>R</sub> =0.5mA	45	-	-	V
Instantaneous forward voltage per diode	V <sub>F</sub>	I <sub>F</sub> =1A	-	0.3	-	V
		I <sub>F</sub> =5A	-	0.4	0.46	V
		I <sub>F</sub> =1A	-	0.21	-	V
		I <sub>F</sub> =5A	-	0.35	-	V
Reverse current per diode	I <sub>R</sub>	V <sub>R</sub> =36V	-	100	-	μA
		V <sub>R</sub> =45V	-	-	250	μA
		T <sub>J</sub> =25°C T <sub>J</sub> =125°C	-	20	-	mA



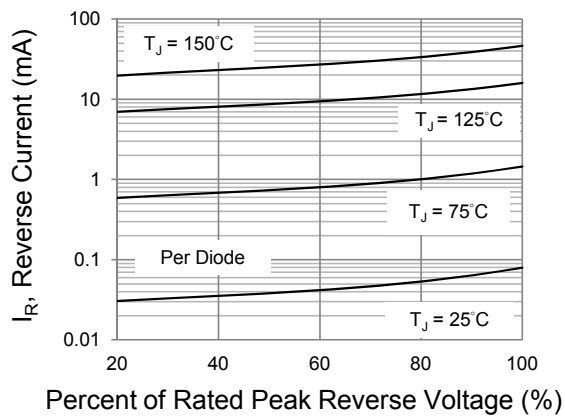
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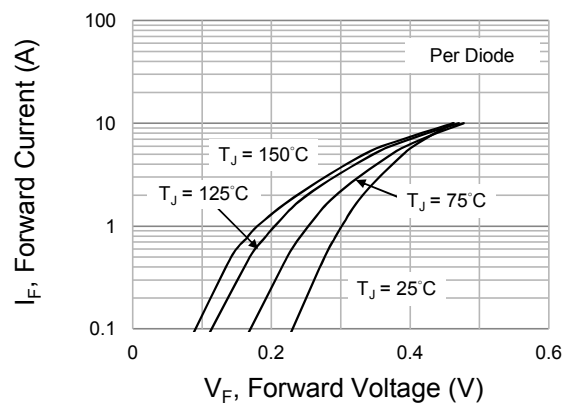
**Fig.1 Forward Current Derating Curve**



**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**

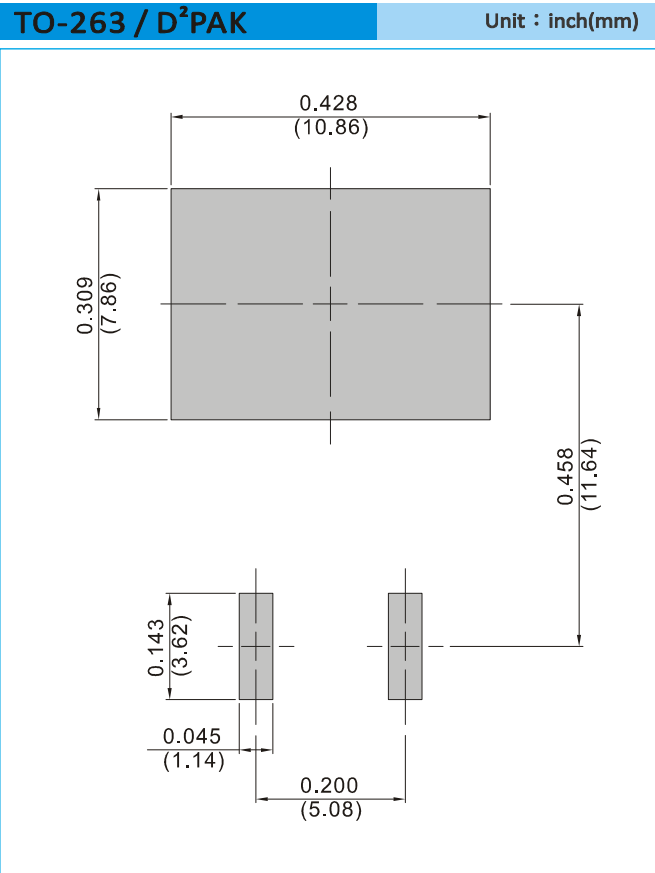


**Fig.4 Typical Forward Characteristics**



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

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



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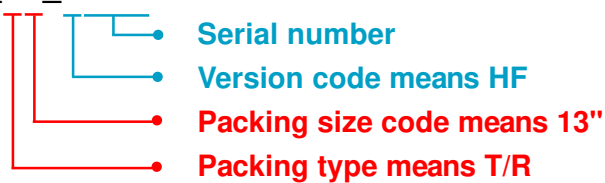
Part No\_packing code\_Version

SBM1045VDC\_R2\_00001

For example :

**RB500V-40** **R2** **00001**

Part No.



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)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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