



# SB250US

## EXTREME LOW VF SCHOTTKY RECTIFIER

**VOLTAGE** 50 Volt **CURRENT** 2 Ampere

**DO-41** Unit : inch(mm)

### FEATURES

- Ideal for automated placement
- Extreme low forward voltage drop, low power loss
- High efficiency operation
- Low thermal resistance
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

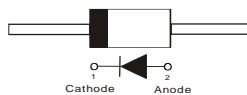
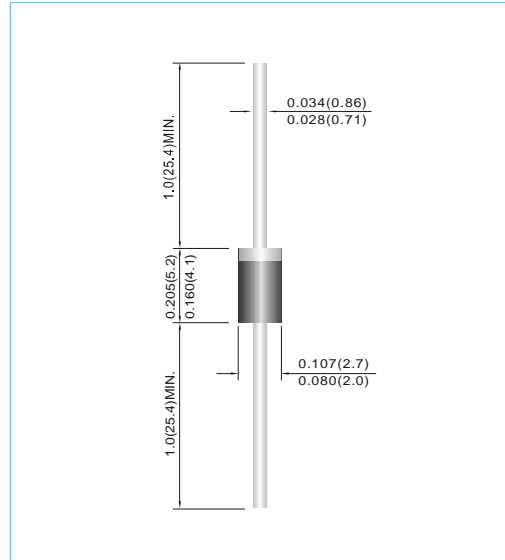
### MECHANICAL DATA

Case: DO-41 Molded plastic

Terminals: Axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode

Weight: 0.012 ounces, 0.3grams



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

PARAMETER	SYMBOL	VALUE	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	V
Maximum DC Blocking Voltage	V <sub>R</sub>	50	V
Maximum Average Rectified Output Current	I <sub>F(AV)</sub>	2	A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	50	A
Typical Thermal Resistance (Note 1)	R <sub>θJA</sub>	85	°C/W
(Note 2)	R <sub>θJL</sub>	42	
Operating Junction Temperature Range And Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to + 150	°C

NOTES:1.Mounted on a FR4 PCB, single-sided copper, mini pad.

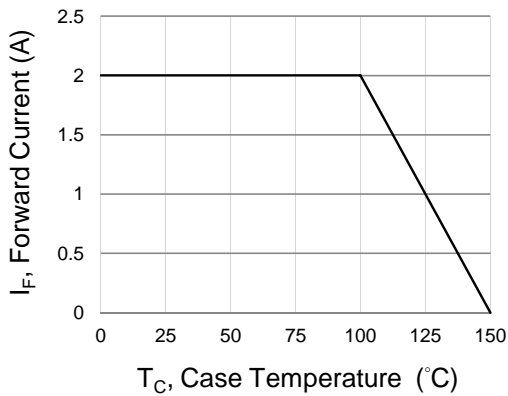
2.The testing condition of the thermal resistance (junction to ambient and junction to lead) is based on 10mm lead length between two 10x10cm copper pad heatsinks.



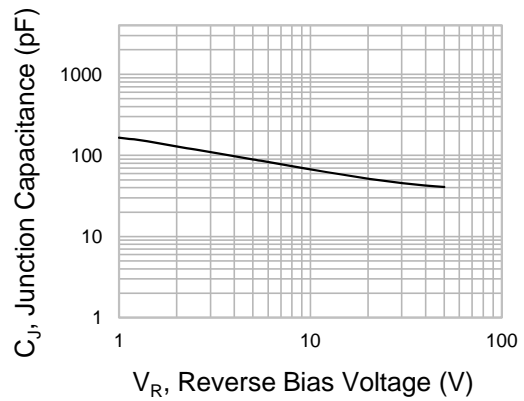
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## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

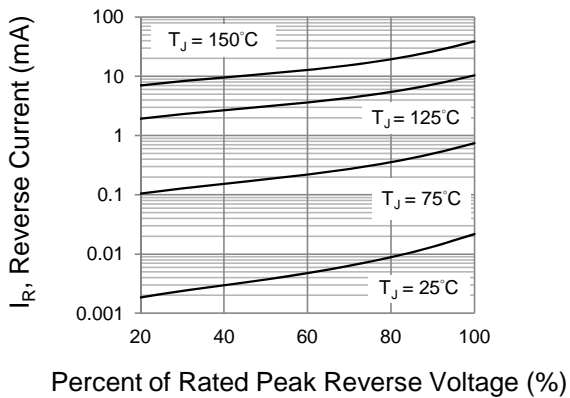
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Breakdown voltage	V <sub>BR</sub>	I <sub>R</sub> =0.5mA T <sub>J</sub> =25°C	50	-	-	V
Instantaneous forward voltage	V <sub>F</sub>	I <sub>F</sub> =1A	-	0.41	-	V
		I <sub>F</sub> =2A	-	0.47	0.56	V
		I <sub>F</sub> =1A	-	0.32	-	V
		I <sub>F</sub> =2A	-	0.41	-	V
Reverse current	I <sub>R</sub>	V <sub>R</sub> =40V T <sub>J</sub> =25°C	-	10	-	μA
		V <sub>R</sub> =50V T <sub>J</sub> =25°C T <sub>J</sub> =125°C	-	- 11	100 -	μA mA



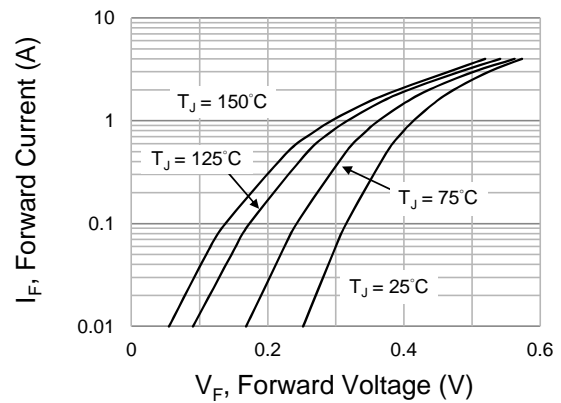
**Fig.1 Forward Current Derating Curve**



**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**



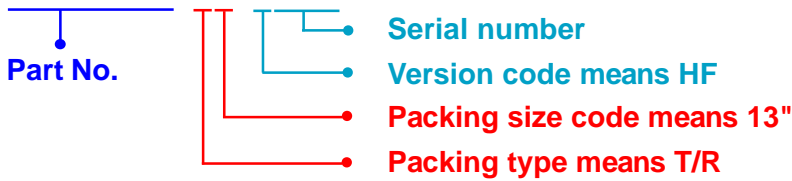
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## Part No\_packing code\_Version

SB250US\_AY\_00001  
 SB250US\_AY\_10001  
 SB250US\_B0\_00001  
 SB250US\_B0\_10001  
 SB250US\_R2\_00001  
 SB250US\_R2\_10001

For example :

**RB500V-40\_R2\_00001**



Packing type	Packing Code <b>XX</b>			Version Code <b>XXXXX</b>		
	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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