



# SRT5100UF

## EXTREME LOW VF SCHOTTKY BARRIER RECTIFIER

<b>VOLTAGE</b>	<b>100 Volt</b>	<b>CURRENT</b>	<b>5 Ampere</b>
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### FEATURES

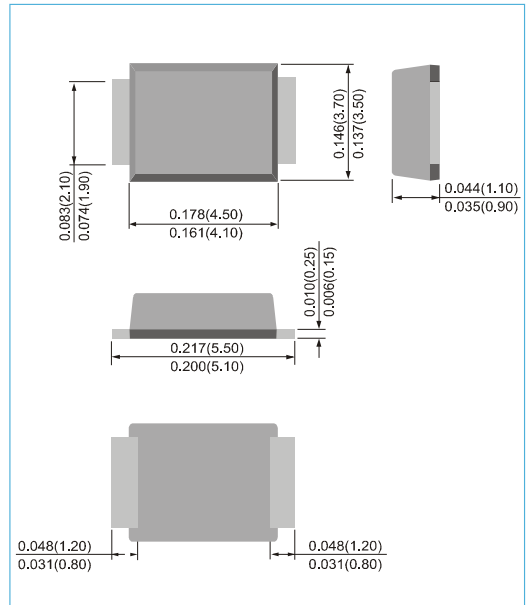
- Ideal for automated placement
- Extreme low forward voltage drop, low power loss
- High efficiency operation
- Low thermal resistance
- Ultra thin profile package for space constrained utilization
- Easy pick and place package suitable for automated handling
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

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



**SMBF** Unit : inch(mm)



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

PARAMETER	SYMBOL	VALUE	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	100	V
Maximum RMS Voltage	V <sub>RMS</sub>	70	V
Maximum DC Blocking Voltage	V <sub>R</sub>	100	V
Maximum Average Rectified Output Current	I <sub>F(AV)</sub>	5	A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	80	A
Typical Junction Capacitance (V <sub>R</sub> =4V, f=1MHz)	C <sub>J</sub>	360	pF
Typical Thermal Resistance (Notes 1) (Notes 2)	R <sub>θJL</sub> R <sub>θJA</sub>	15 135	°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 a 10cm\*10cm\*0.5mm copper pad area  
2. Mounted on a FR4 PCB, single-sided copper, mini pad.



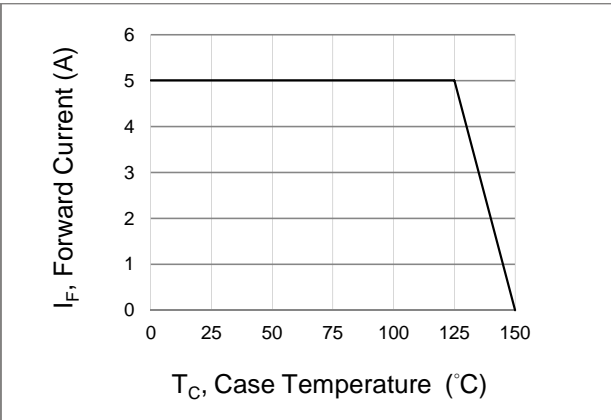
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## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

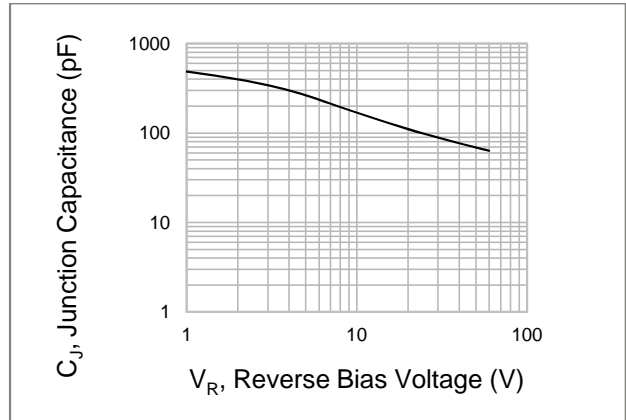
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Break down voltage	V <sub>BR</sub>	I <sub>R</sub> =0.5mA T <sub>A</sub> =25°C	100	-	-	V
Instantaneous forward voltage	V <sub>F</sub>	I <sub>F</sub> =1A T <sub>A</sub> =25°C	-	0.42	-	V
		I <sub>F</sub> =3A	-	0.52	-	
		I <sub>F</sub> =5A	-	0.61	0.66	
		I <sub>F</sub> =1A T <sub>A</sub> =125°C	-	0.33	-	V
I <sub>F</sub> =3A	-	0.48	-			
I <sub>F</sub> =5A	-	0.56	-			
Reverse current	I <sub>R</sub>	V <sub>R</sub> =70V T <sub>A</sub> =25°C	-	5	-	μA
		V <sub>R</sub> =100V T <sub>A</sub> =25°C T <sub>A</sub> =125°C	- -	- 5	50 -	μA mA



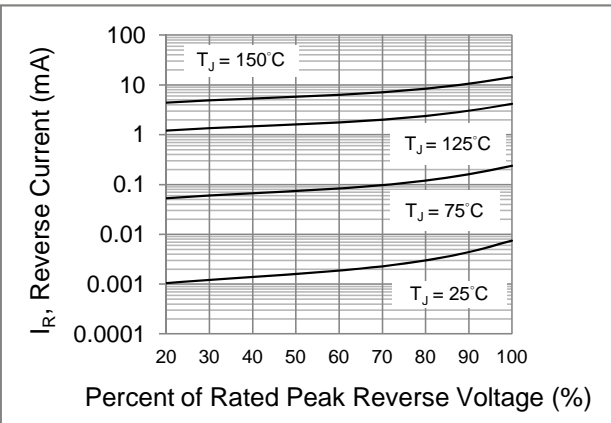
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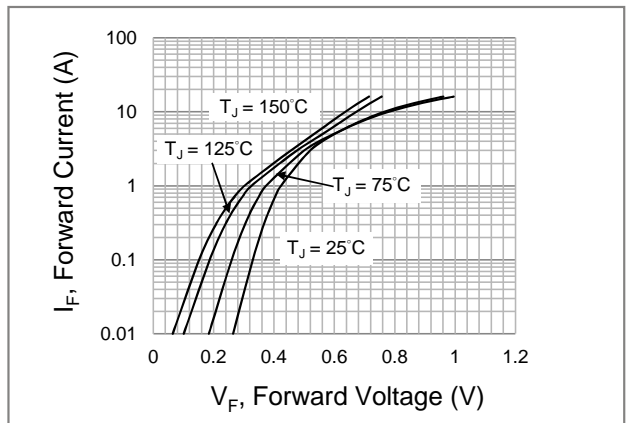
**Fig.1 Forward Current Derating Curve**



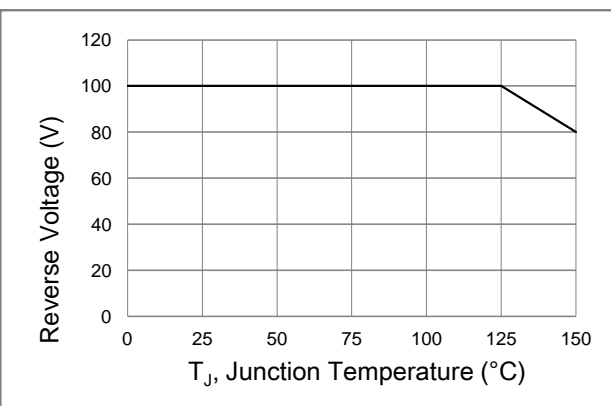
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**

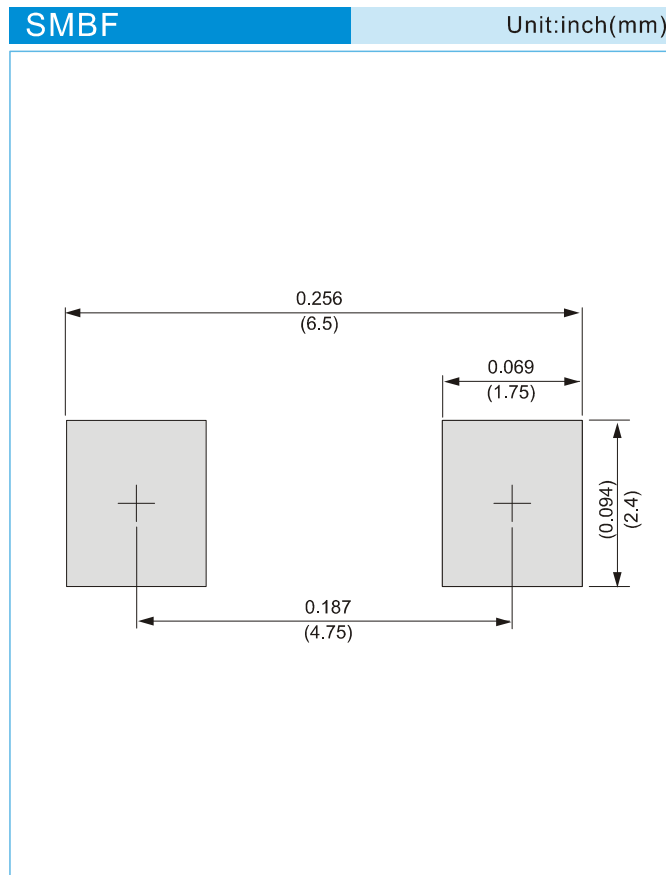


**Fig.5 Operating Temperature Derating Curve**



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

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



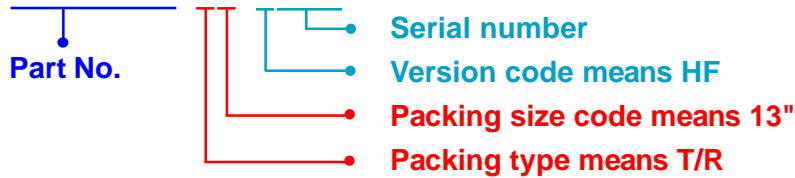
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**Part No\_packing code\_Version**

SRT5100UF\_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)	<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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