



SVT20120U

EXTREME LOW VF SCHOTTKY BARRIER RECTIFIER

Voltage

120 V

Current

20 A

TO-277

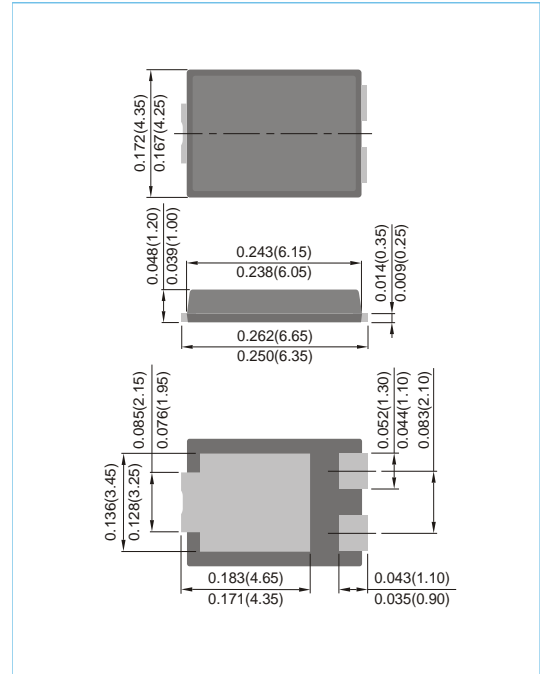
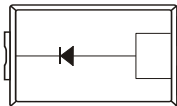
Unit : inch(mm)

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: TO-277 package
- Terminals: solder plated, solderable per MIL-STD-750, Method 2026
- Weight: 0.00379 ounces, 0.1073 grams.
- Marking: Part number



Maximum Ratings And Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	120	V
Maximum rms voltage	V_{RMS}	84	V
Maximum dc blocking voltage	V_R	120	V
Maximum average forward rectified current	$I_{F(AV)}$	20	A
Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	250	A
Typical thermal resistance	(Note 1) $R_{\theta JA}$	110	$^{\circ}\text{C/W}$
	(Note 2) $R_{\theta JC}$	3	
Operating junction temperature range	T_J	-55 to +150	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

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

2. Mounted on a 10cm*10cm*1mm copper pad area



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Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION		MIN.	TYP.	MAX.	UNITS
Breakdown voltage	V_{BR}	$I_R=0.5\text{mA}$	$T_J=25^{\circ}\text{C}$	120	-	-	V
Instantaneous forward voltage	V_F	$I_F=1\text{A}$	$T_J=25^{\circ}\text{C}$	-	0.43	-	V
		$I_F=5\text{A}$		-	0.57	-	
		$I_F=20\text{A}$		-	0.74	0.79	
		$I_F=1\text{A}$	$T_J=125^{\circ}\text{C}$	-	0.32	-	V
$I_F=5\text{A}$	-	0.47		-			
Reverse current	I_R	$V_R=96\text{V}$	$T_J=25^{\circ}\text{C}$	-	5	-	μA
		$V_R=120\text{V}$	$T_J=25^{\circ}\text{C}$	-	-	35	μA
			$T_J=125^{\circ}\text{C}$	-	10	-	mA



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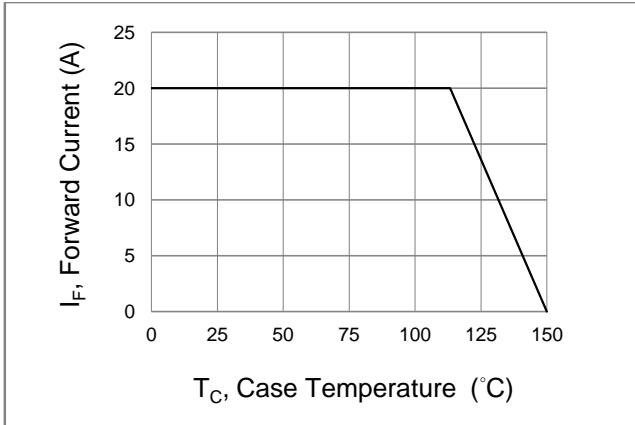


Fig.1 Forward Current Derating Curve

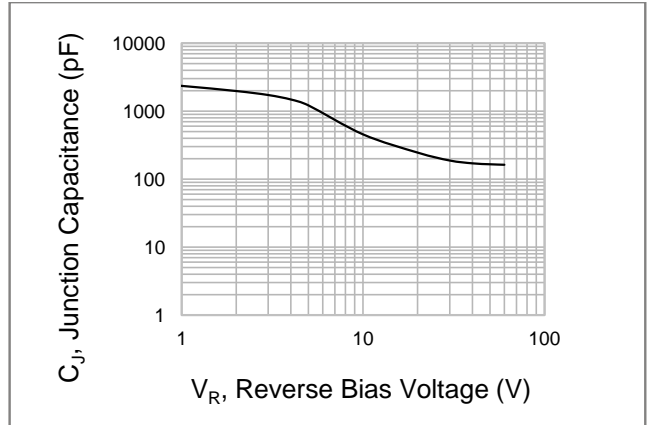


Fig.2 Typical Junction Capacitance

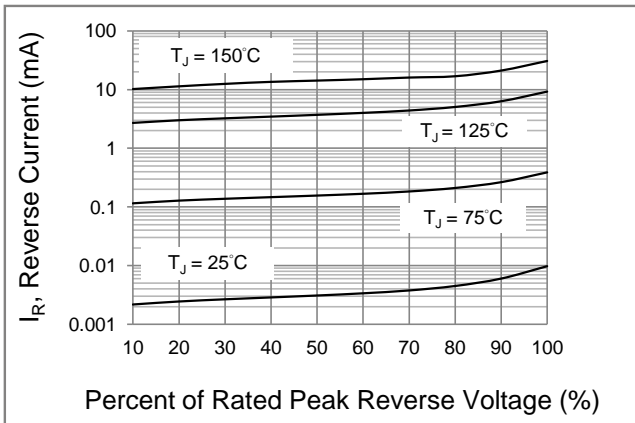


Fig.3 Typical Reverse Characteristics

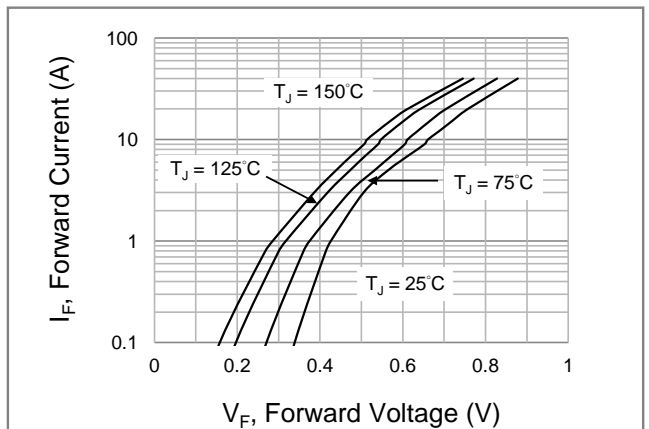


Fig.4 Typical Forward Characteristics

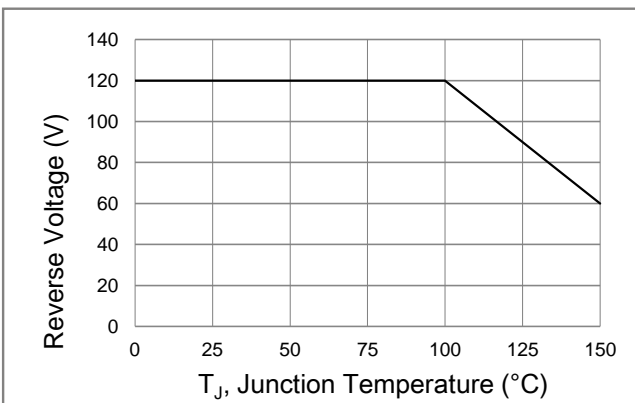
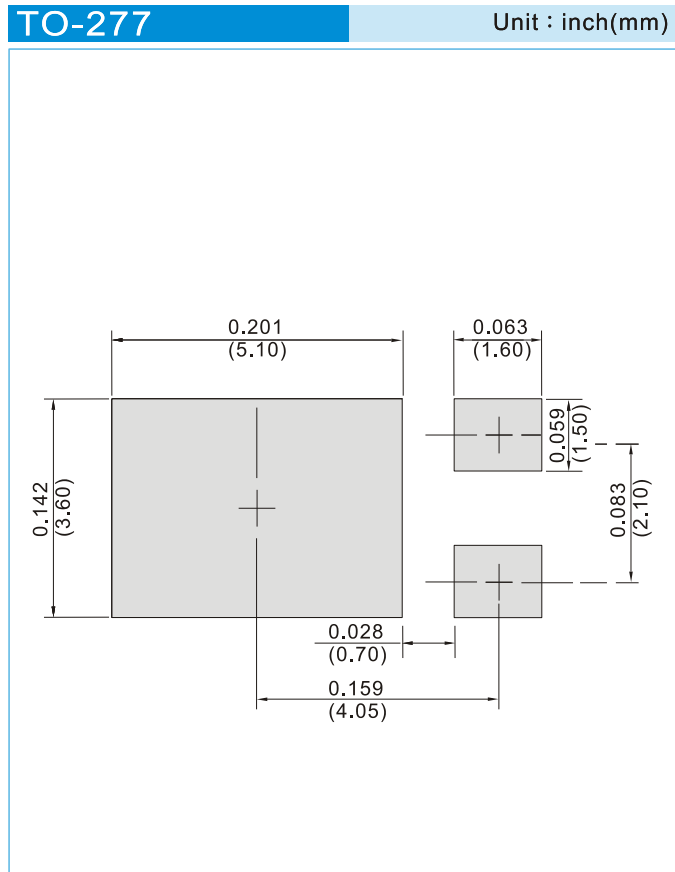


Fig.5 Operating Temperature Derating Curve



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MOUNTING PAD LAYOUT



ORDER INFORMATION

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



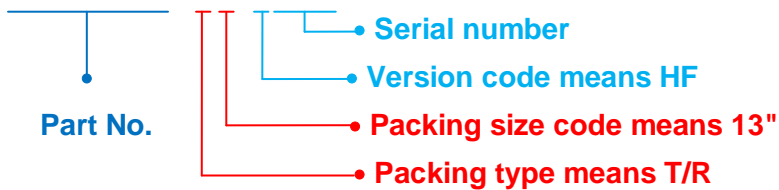
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Part No_packing code_Version

SVT20120U_R2_00001

For example :

RB500V-40_R2_00001



Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd -5 th 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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