

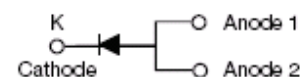
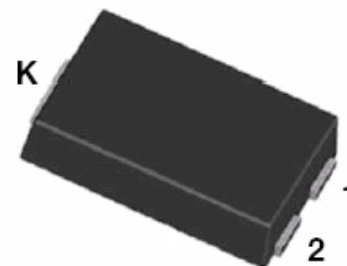
ST1545S SCHOTTKY RECTIFIER

Applications:

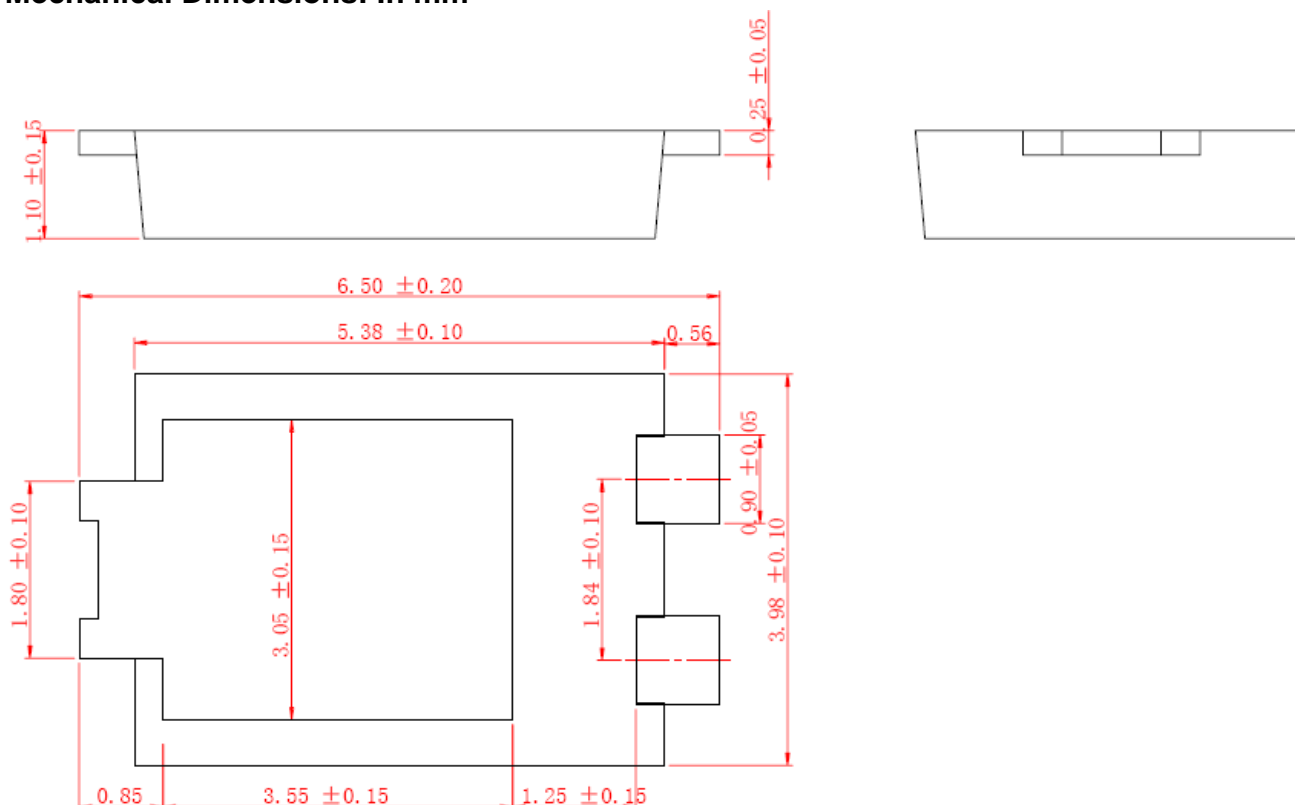
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

Features:

- 150°C T_J operation
- Center tap configuration
- Ultralow forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- This is a Halogen Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request



Mechanical Dimensions: In mm



TO-277B(JK)

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

Marking Diagram:


Where XXXXX is YYWWL

S	= Device Type
T	= Ultralow VF
15	= Forward Current (15)
45	= Reverse Voltage (45V)
S	= Package type
YY	= Year
WW	= Week
L	= Lot Number

Cautions: Molding resin
 Epoxy resin UL:94V-0

Ordering Information:

Device	Package	Shipping
ST1545S	TO-277B (Pb-Free)	5000pcs/ reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	V_{RRM}	-	45	V
Working Peak Reverse Voltage	V_{RWM}			
DC Blocking Voltage	V_R			
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_L = 125^\circ\text{C}$ rectangular wave form	15	A
Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	200	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 5A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.38	0.50	V
		@ 7.5A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.40	0.52	
@ 15A, Pulse, $T_J = 25\text{ }^\circ\text{C}$		0.46	0.58		
	V_{F2}	@ 5A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.25	0.39	V
		@ 7.5A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.28	0.42	
		@ 15A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.37	0.51	
Reverse Current (per leg)	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^\circ\text{C}$	0.21	1.5	mA
Reverse Current (per leg) *	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 125\text{ }^\circ\text{C}$	150	150	mA
Junction Capacitance (per leg)	C_T	@ $V_R = 5\text{V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	868	-	pF

* Pulse Width < 300 μ s, Duty Cycle <2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-	-55 to +150	$^\circ\text{C}$
Typical Thermal Resistance Junction to Ambient (NOTE1)	$R_{\theta JA}$	DC operation	75	$^\circ\text{C/W}$
Typical Thermal Resistance Junction to Lead (NOTE1)	$R_{\theta JL}$	DC operation	4	$^\circ\text{C/W}$
Approximate Weight	wt	-	0.08	g
Case Style	TO-277B			

NOTE: 1. Units mounted on P.C.B., 0.5 x 0.5" (30 x 30mm) copper pads.

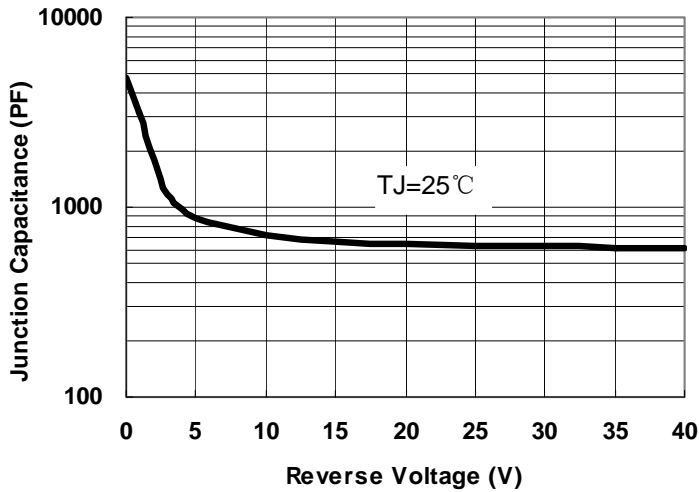


Fig.1-Typical Junction Capacitance

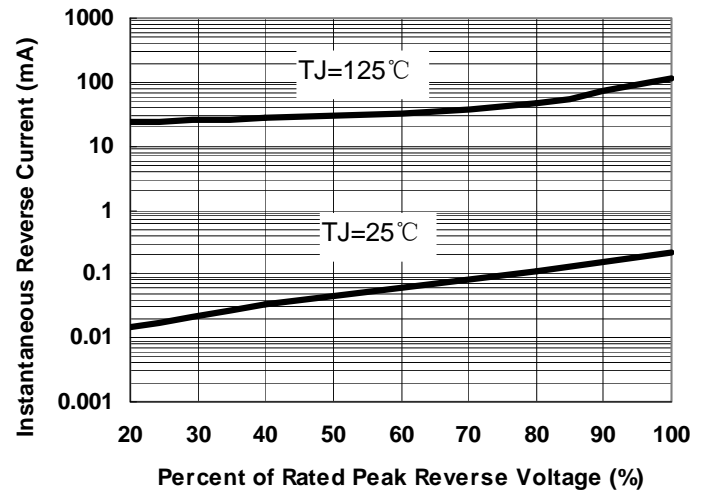


Fig.2-Typical Reverse Characteristics

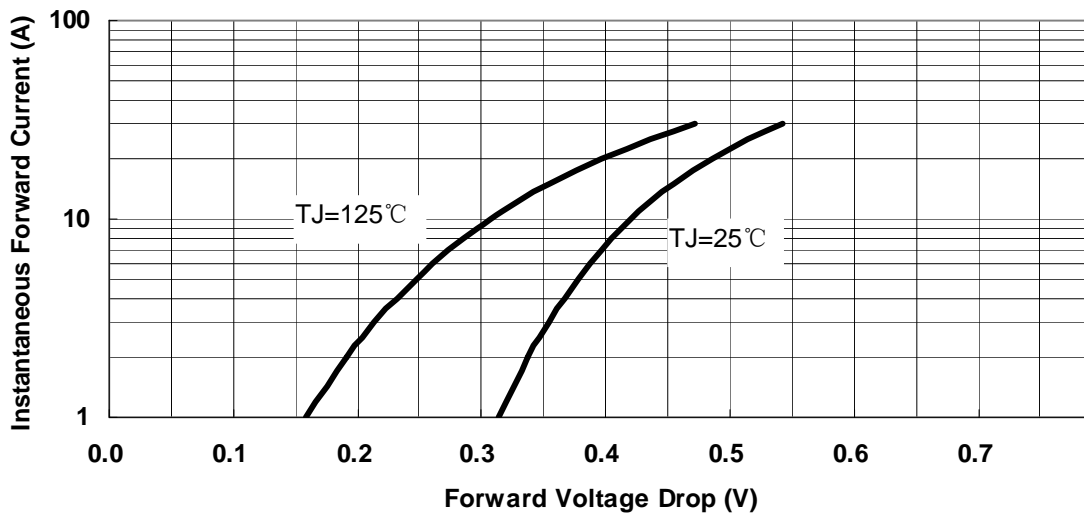


Fig.3-Typical Instantaneous Forward Voltage Characteristics



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