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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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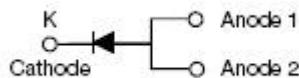
## ST1545S SCHOTTKY RECTIFIER


**TO-277B**

### Features

- 150°C  $T_J$  operation
- Center tap configuration
- Low 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
- “-A” is an AEC-Q101 qualified device
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Applications

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

### Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	-	45	V
Average Rectified Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_L = 125^\circ C$ , rectangular wave form	15	A
Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3ms, Half Sine pulse, $T_c = 25^\circ C$	200	A

### Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	$V_{F1}$	@ 5A, Pulse, $T_J = 25^\circ C$	0.38	0.50	V
		@ 7.5A, Pulse, $T_J = 25^\circ C$	0.40	0.52	
		@ 15A, Pulse, $T_J = 25^\circ C$	0.46	0.58	
Reverse Current*	$I_{R2}$	@ $V_R$ = rated $V_R$ , $T_J = 125^\circ C$	0.25	0.39	V
		@ $V_R$ = rated $V_R$ , $T_J = 125^\circ C$	0.28	0.42	
		@ 15A, Pulse, $T_J = 125^\circ C$	0.37	0.51	
Reverse Current*	$I_{R1}$	@ $V_R$ = rated $V_R$ , $T_J = 25^\circ C$	0.2	1.5	mA
	$I_{R2}$	@ $V_R$ = rated $V_R$ , $T_J = 125^\circ C$	110	150	mA
Junction Capacitance	$C_T$	@ $V_R = 5V$ , $T_c = 25^\circ C$ $f_{SIG} = 1MHz$	868	-	pF

\* Pulse width < 300  $\mu s$ , duty cycle < 2%

**Thermal-Mechanical Specifications:**

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

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

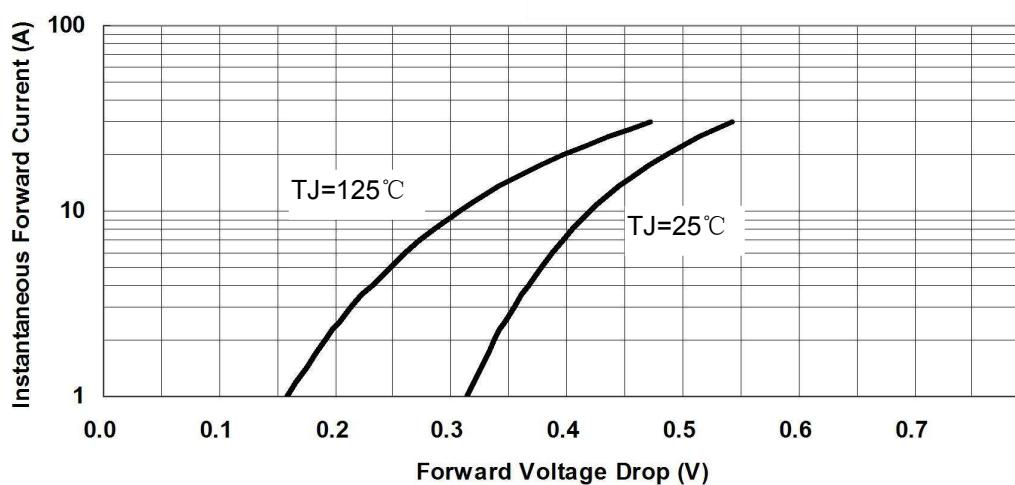
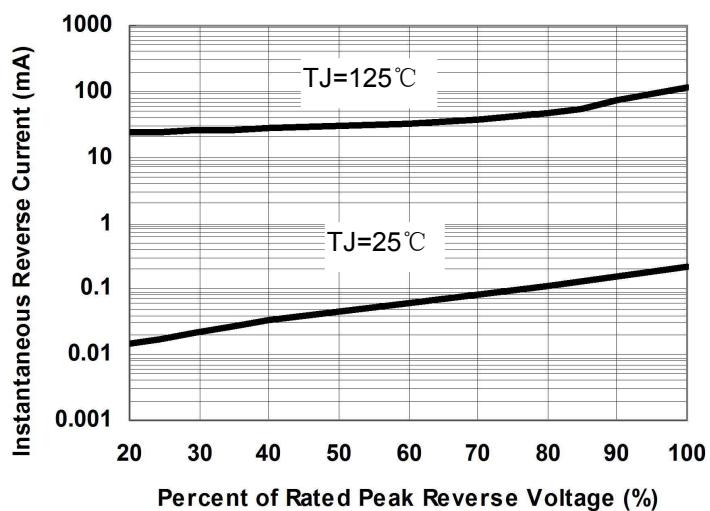
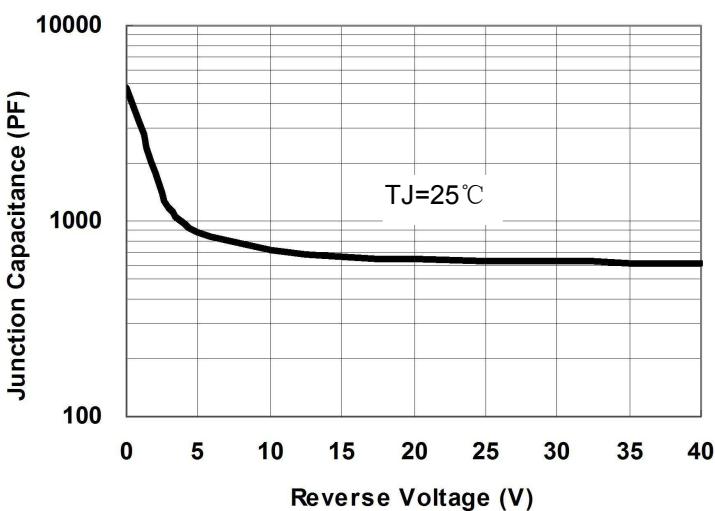
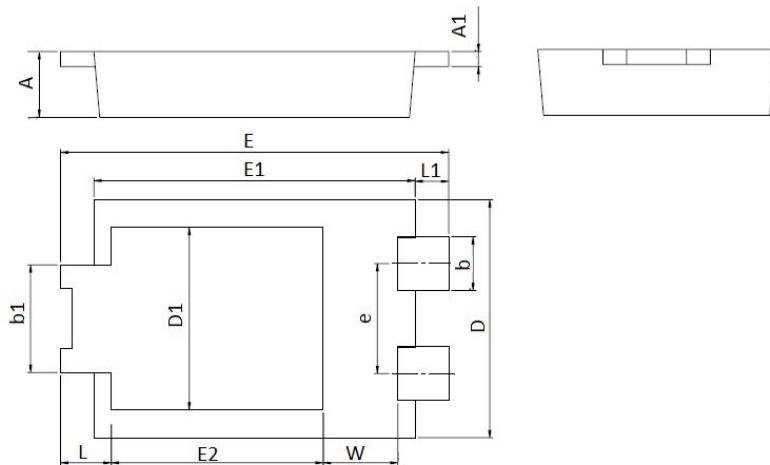
**Ratings and Characteristics Curves**


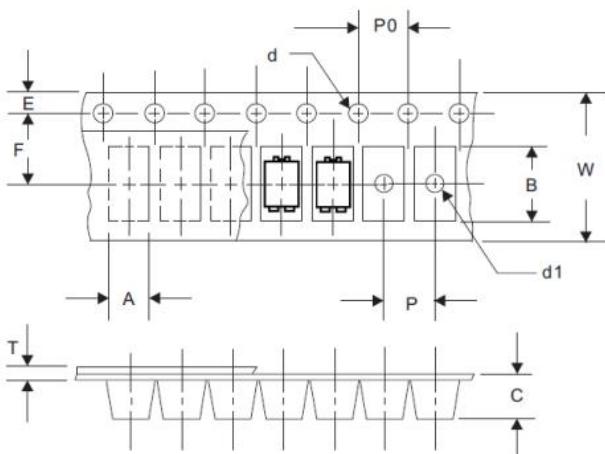
Fig.3-Typical Instantaneous Forward Voltage Characteristics

### Mechanical Dimensions TO-277B



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.95	1.25	0.037	0.049
A1	0.20	0.30	0.008	0.012
b	0.85	0.95	0.033	0.037
b1	1.70	1.90	0.067	0.075
D	3.88	4.08	0.153	0.161
D1	2.90	3.20	0.114	0.126
e	1.74	1.94	0.069	0.076
E	6.30	6.70	0.248	0.264
E1	5.28	5.48	0.208	0.216
E2	3.40	3.70	0.134	0.146
L	0.70	1.00	0.028	0.039
L1	0.41	0.71	0.016	0.028
W	1.10	1.40	0.043	0.055

### Carrier Tape Specification TO-277B



SYMBOL	Millimeters	
	Min.	Max.
A	4.28	4.48
B	6.80	7.10
C	1.30	1.50
d	1.40	1.60
d1	-	1.50
E	1.65	1.85
F	5.40	5.60
P	7.90	8.10
P0	3.90	4.10
T	0.24	0.44
W	11.70	12.30

### 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.

### Marking Diagram



Where XXXXX is YYWWL

ST = Device Type  
 15 = Forward Current (15A)  
 45 = Reverse Voltage (45V)  
 S = Package type  
 -A = AEC-Q101  
 YY = Year  
 WW = Week  
 L = Lot Number

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

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