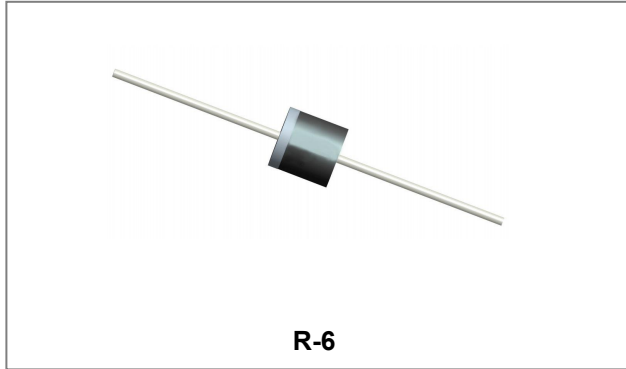


ST1545AX SCHOTTKY BARRIER RECTIFIER



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 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	V _{RRM}	-	45	V
Working Peak Reverse Voltage	V _{RWM}			
DC Blocking Voltage	V _R			
Average Rectified Forward Current	I _{F (AV)}	50% duty cycle @T _C = 75°C, rectangular wave form	15	A
Peak One Cycle Non-Repetitive Surge Current	I _{FSM}	8.3 ms, half Sine pulse, T _C = 25°C	200	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V _{F1}	@ 5A, Pulse, T _J = 25 °C	0.38	-	V
		@ 7.5A, Pulse, T _J = 25 °C	0.40	-	
		@ 15A, Pulse, T _J = 25 °C	0.46	0.59	
	V _{F2}	@ 5A, Pulse, T _J = 125 °C	0.25	-	V
		@ 7.5A, Pulse, T _J = 125 °C	0.28	-	
		@ 15A, Pulse, T _J = 125 °C	0.37	0.54	
Reverse Current*	I _{R1}	@V _R = rated V _R , T _J = 25 °C	0.2	0.8	mA
	I _{R2}	@V _R = rated V _R , T _J = 125 °C	110	150	mA
Junction Capacitance	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	868	-	pF

* Pulse width < 300 μs, duty cycle < 2%

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

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	$R_{\theta JA}$	DC operation	55	°C/W
Approximate Weight	wt	-	2.24	g
Case Style	R-6			

Ratings and Characteristics Curves

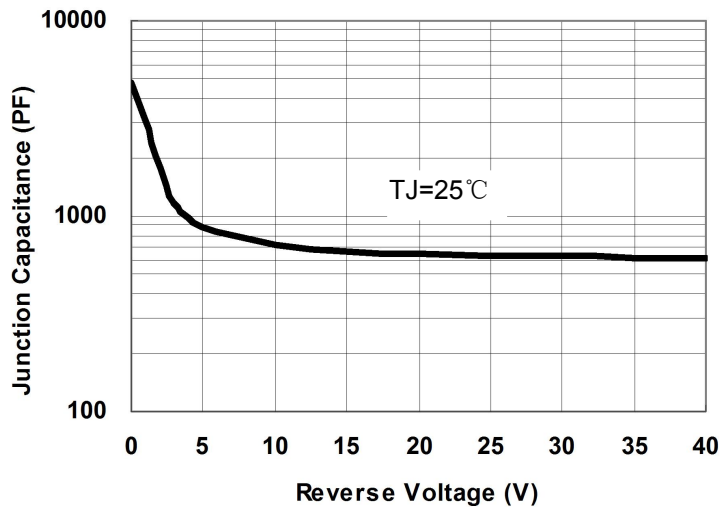


Fig.1-Typical Junction Capacitance

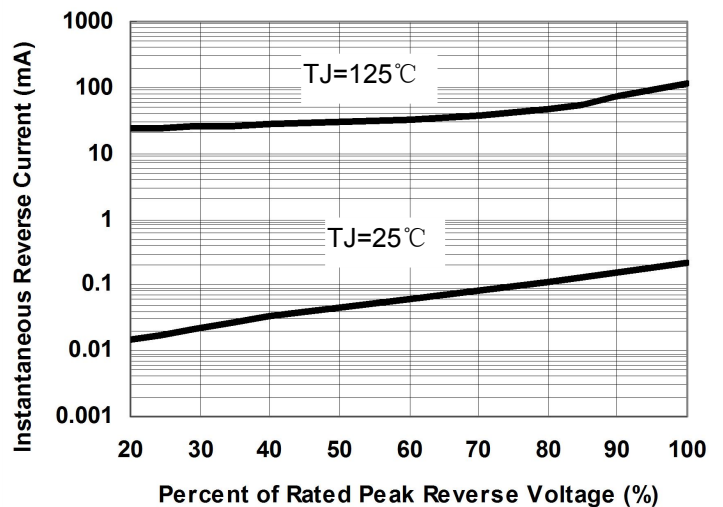


Fig.2-Typical Reverse Characteristics

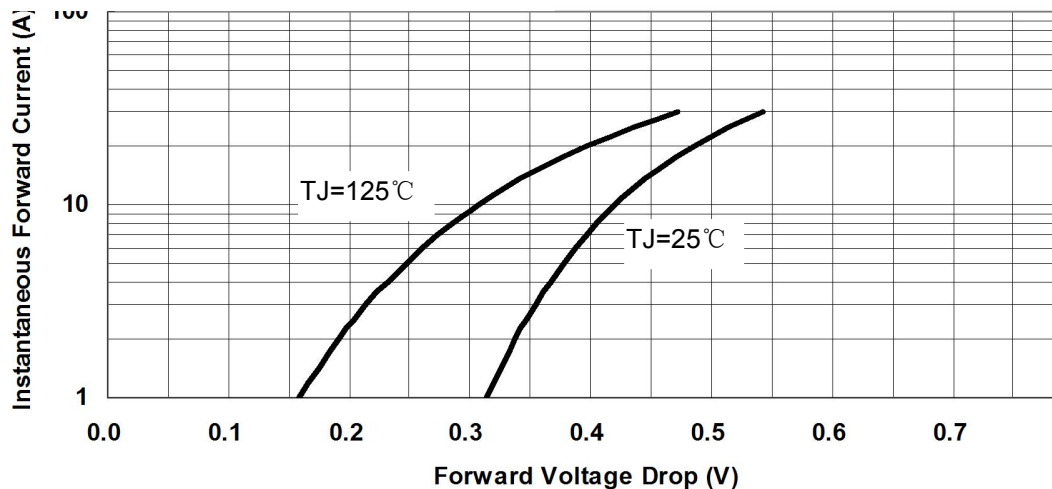
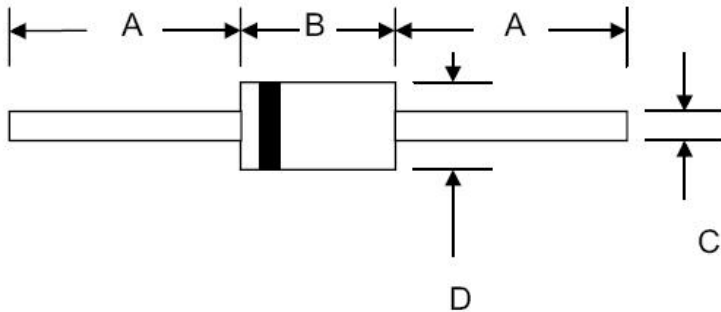


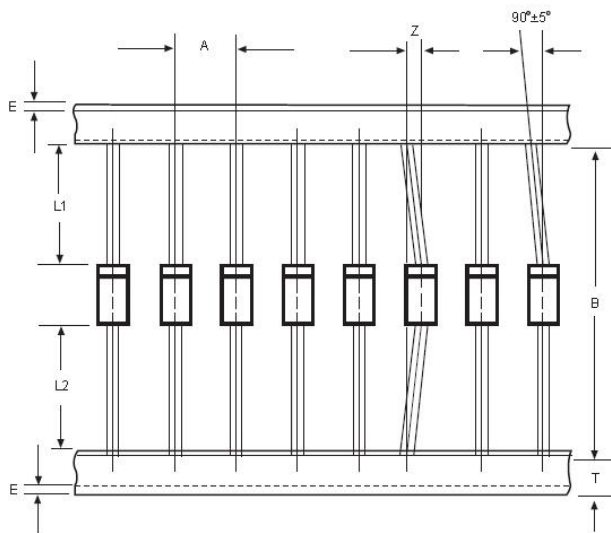
Fig.3-Typical Instantaneous Forward Voltage Characteristics

Mechanical Dimensions R-6



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	8.60	9.10	0.340	0.360
C	1.2	1.3	0.048	0.052
D	8.60	9.10	0.340	0.360

Carrier Tape Specification R-6



SYMBOL	Millimeters	
	Min.	Max.
A	9.50	10.50
B	50.9	53.9
Z	-	1.20
T	5.60	6.40
E	-	0.80
IL1-L2I	-	1.0

Ordering Information

Device	Package	Shipping
ST1545AX	R-6(Pb-Free)	500pcs / 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

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

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

Technical Data
Data Sheet N1032, Rev. B



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