

ST1300A SCHOTTKY RECTIFIER

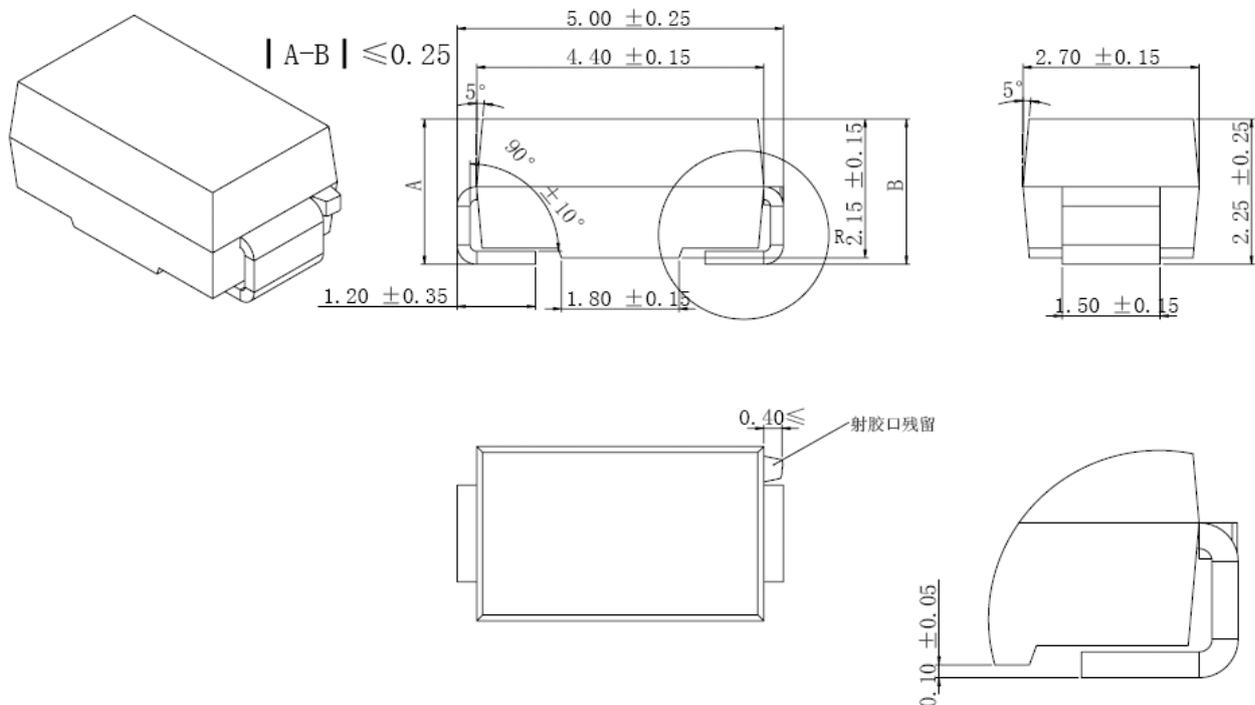
Applications:

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

Features:

- 175 °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
- These Devices are Pb-Free and are RoHS Compliant
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

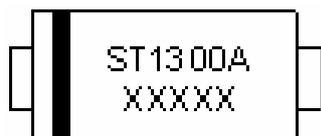
Mechanical Dimensions: In mm



SMA

Marking Diagram:

Where XXXXX is YYWWL



S = Device Type
T = Ultralow VF
1 = Forward Current (1A)
300 = Reverse Voltage (300V)
A = Package type
YY = Year
WW = Week
L = Lot Number

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

Ordering Information:

Device	Package	Shipping
ST1300A	SMA (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 Inverse Voltage	V_{RWM}	-	300	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_A = 75\text{ }^\circ\text{C}$ rectangular wave form	1	A
Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	40	A



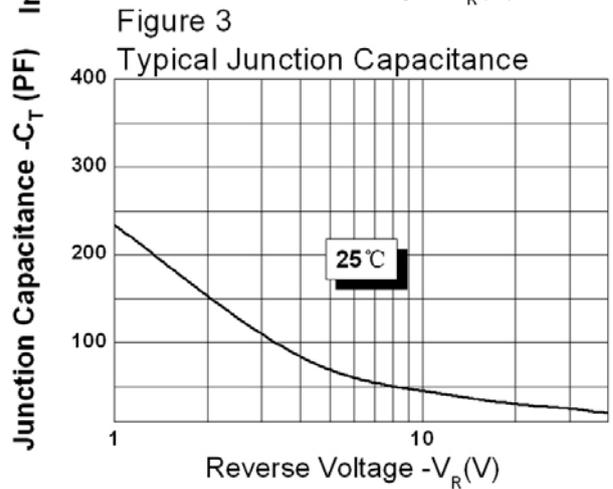
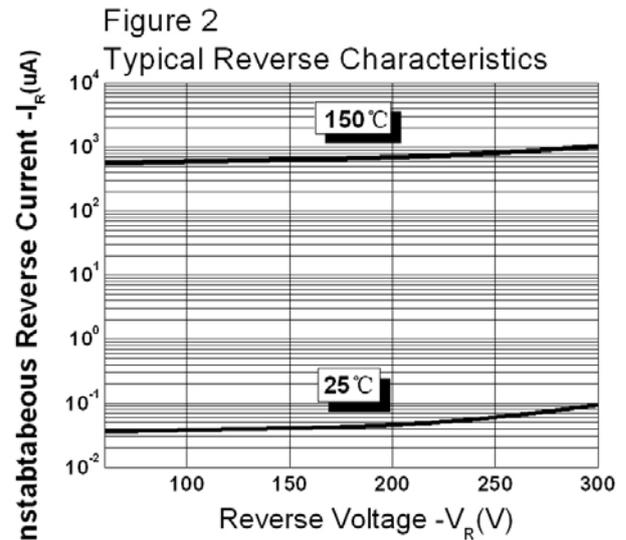
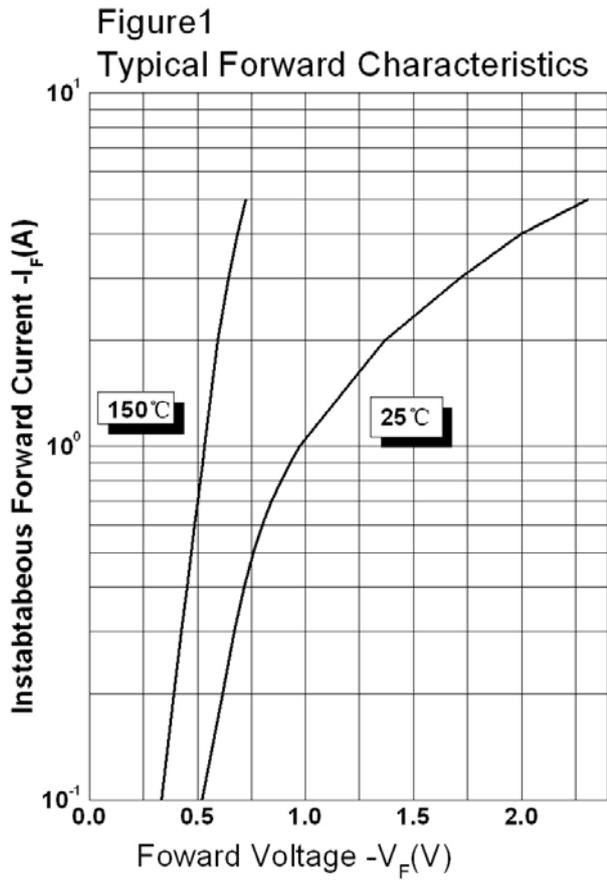
Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 1A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	1.1	V
	V_{F2}	@ 1A, Pulse, $T_J = 150\text{ }^\circ\text{C}$	0.8	V
Reverse Current (per leg)	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^\circ\text{C}$	5	μA
Reverse Current (per leg) *	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 150\text{ }^\circ\text{C}$	5	mA
Reverse Recovery Time	t_{rr1}	$I_F=500\text{mA}$, $I_R=1\text{A}$, and $I_{rm}=250\text{mA}$	35	ns

* Pulse Width < 300 μs , Duty Cycle <2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +175	$^\circ\text{C}$
Storage Temperature	T_{stg}	-	-55 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Ambient	$R_{\theta JA}$	DC operation	216	$^\circ\text{C/W}$
Approximate Weight	wt	-	0.06	g
Case Style	SMA			





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