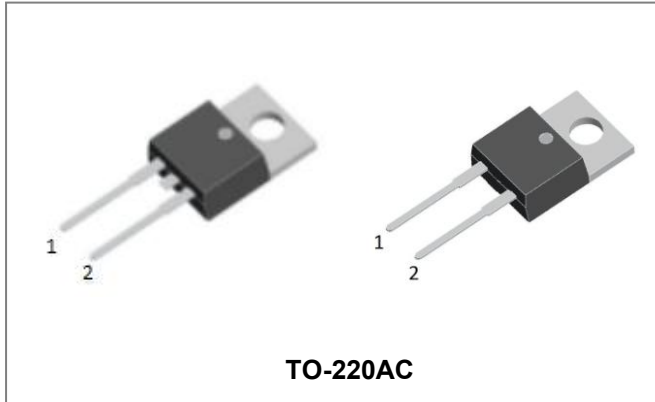


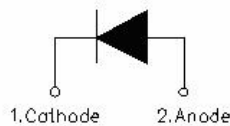
ST40250 SCHOTTKY RECTIFIER



Features

- 150 °C T_J operation
- Ultralow forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Trench MOS Schottky technology
- Terminals finish: 100% Pure Tin
- 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(limiting values, at 25 °C unless otherwise specified)

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	-	250	V
Average Rectified Forward Current	I _{F(AV)}	50% duty cycle @T _c =82°C, rectangular wave form	40	A
Peak One Cycle Non-Repetitive Surge Current	I _{FSM}	8.3ms, Half Sine pulse, T _C = 25 °C	150	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V _{F1}	@ 20A, Pulse, T _J = 25 °C	0.85	0.90	V
		@ 40A, Pulse, T _J = 25 °C	0.95	1.00	
Reverse Current*	I _{R1}	@V _R = rated V _R , T _J = 25 °C	0.20	250	μA
		@V _R = rated V _R , T _J = 125 °C	0.67	30	
Junction Capacitance	C _T	@V _R = 5V, T _C = 25 °C, f _{SIG} = 1MHz	690	-	pF

* Pulse width < 300 μs, 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 Case	$R_{\theta JC}$	DC operation	1.2	$^{\circ}\text{C}/\text{W}$
Approximate Weight	wt	-	2	g
Case Style	TO-220AC			

Ratings and Characteristics Curves

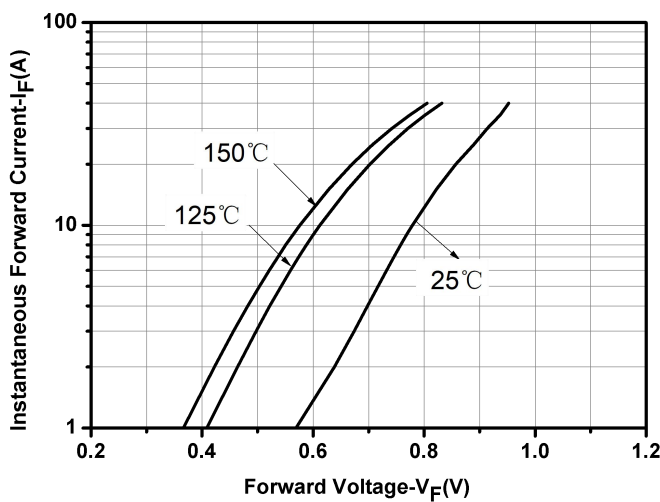


Fig.1-Typical Forward Voltage Characteristics

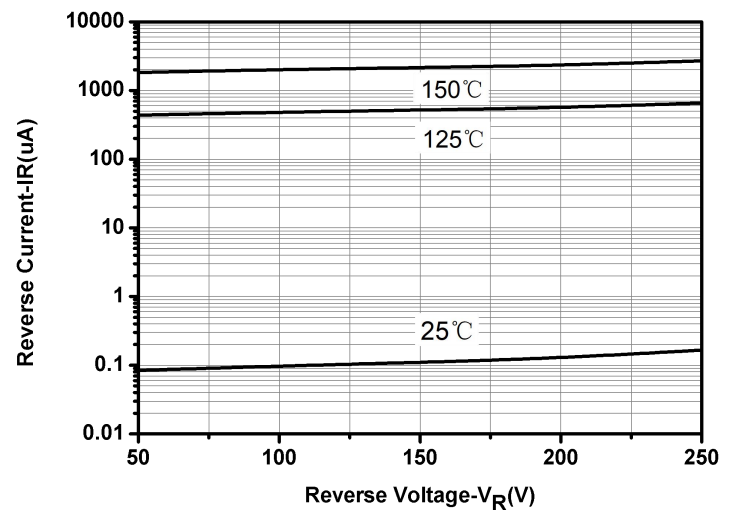


Fig.2-Typical Reverse Characteristics

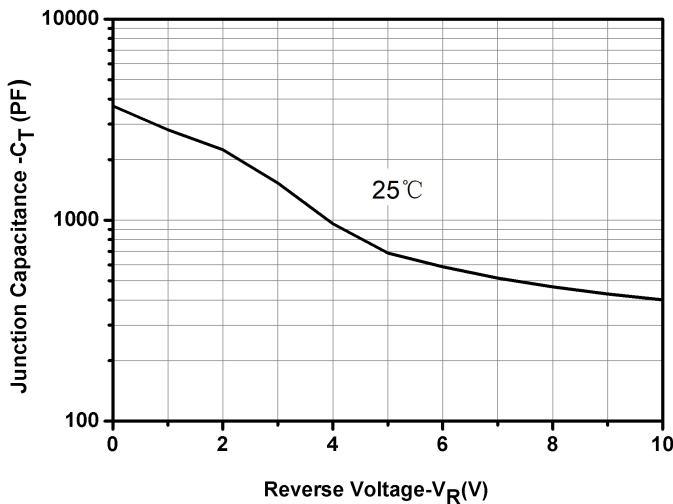
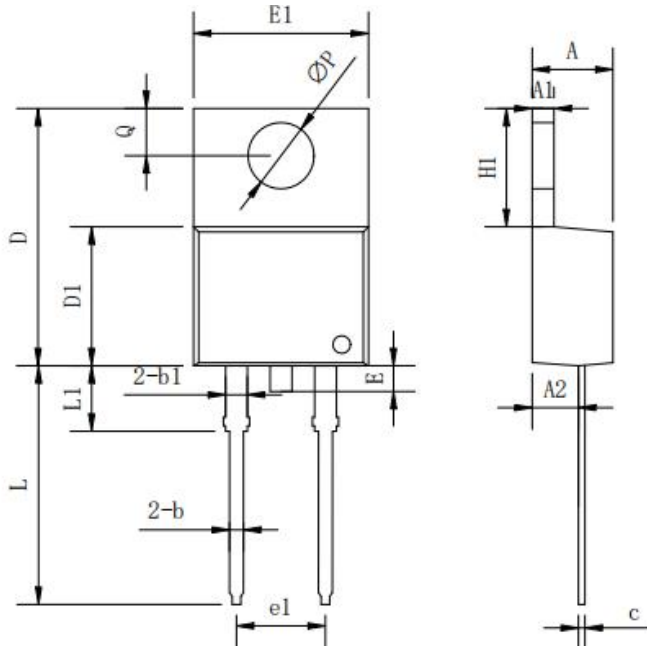


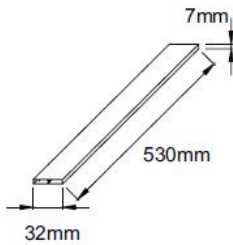
Fig.3-Capacitance vs. Reverse Voltage

Mechanical Dimensions TO-220AC



SYMBOL	Millimeters		
	MIN.	TYP.	MAX.
A	3.56	-	4.83
A1	0.51	-	1.4
A2	2.03	-	2.92
b	0.38	-	1.02
b1	1.14	-	1.78
c	0.31	-	0.61
D	14.22	-	16.51
D1	8.38	-	9.42
E	-	-	1.78
E1	9.65	10.16	10.67
e1	-	5.08	-
H1	5.84	-	6.86
L	12.7	-	14.73
L1	-	-	6.35
ØP	-	3.56	-
Q	2.54	-	3.43

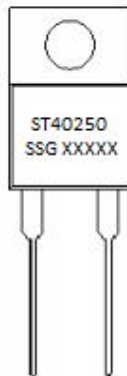
Tube Specification



Ordering Information

Device	Package	Shipping
ST40250	TO-220AC (Pb-Free)	50 pcs/ tube

Marking Diagram



Where XXXXX is YYWWL

- ST = Device Type
- 40 = Forward Current (40A)
- 250 = Reverse Voltage (250V)
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

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



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