Technical Data
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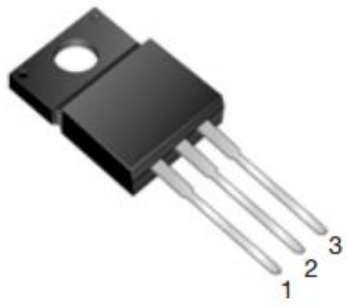
STF40250T SCHOTTKY RECTIFIER

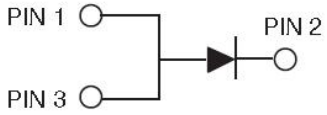


ITO-220AB

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 @Tc=82°C, rectangular wave form	40	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3ms, Half Sine pulse	150	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 20A, Pulse, T_J = 25 °C @ 40A, Pulse, T_J = 25 °C	0.85 0.95	0.90 1.00	V
	V_{F2}	@ 20A, Pulse, T_J = 125 °C @ 40A, Pulse, T_J = 125 °C	0.70 0.83	0.75 0.87	V
Reverse Current*	I_{R1}	@V_R = rated V_R, T_J = 25 °C	0.20	250	μA
	I_{R2}	@V_R = rated V_R, T_J = 125 °C	0.67	30	mA
Junction Capacitance	C_T	@V_R = 5V, T_C = 25 °C, f_{SIG} = 1MHz	690	-	pF

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

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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 Case	$R_{\theta JC}$	DC operation	3.0	°C/W
Approximate Weight	wt	-	2	g
Case Style	ITO-220AB			

Ratings and Characteristics Curves

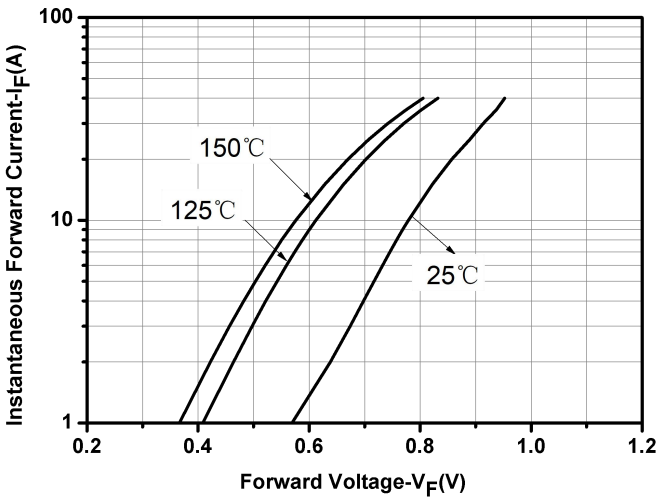

Fig.1-Typical Forward Voltage Characteristics

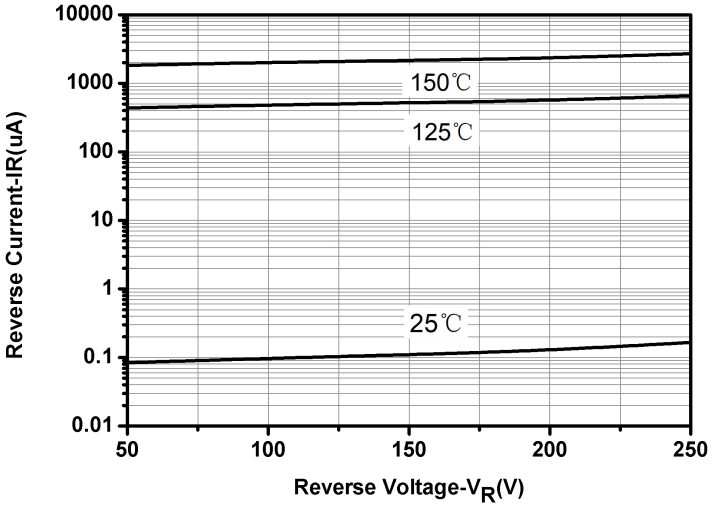

Fig.2-Typical Reverse Characteristics

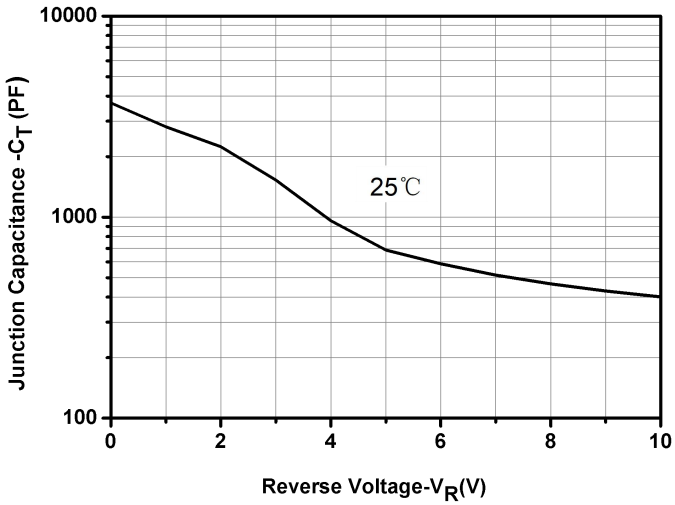

Fig.3-Capacitance vs. Reverse Voltage

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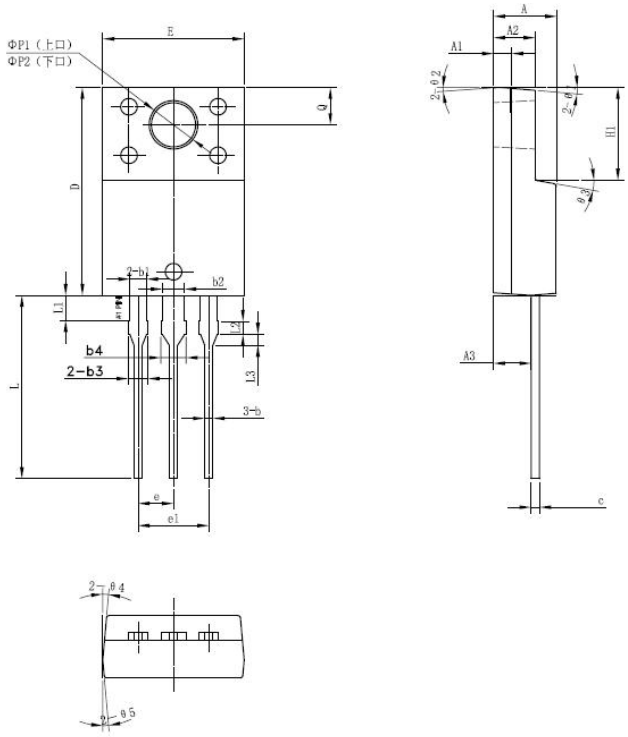
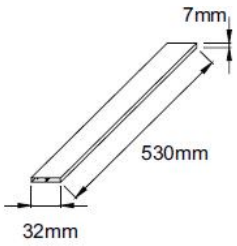
Mechanical Dimensions ITO-220AB



SYMBOL	Millimeters		
	MIN.	TYP.	MAX.
A	4.30	4.50	4.70
A1	1.10	1.30	1.50
A2	2.80	3.00	3.20
A3	2.50	2.70	2.90
b	0.50	0.60	0.75
b1	1.10	1.20	1.35
b2	1.50	1.60	1.75
b3	1.20	1.30	1.45
b4	1.60	1.70	1.85
c	0.50	0.60	0.75
D	14.80	15.00	15.20
E	9.96	10.16	10.36
e		2.55	
e1		5.10	
H1	6.50	6.70	6.90
L	12.70	13.20	13.70
L1	1.60	1.80	2.00
L2	0.80	1.00	1.20
L3	0.60	0.80	1.00
ΦP1(上口)	3.30	3.50	3.70
ΦP2(下口)	2.99	3.19	3.39
Q	2.50	2.70	2.90
Θ1		5°	
Θ2		4°	
Θ3		10°	
Θ4		5°	
Θ5		5°	

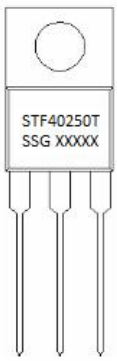
Tube Specification



Ordering Information

Device	Package	Shipping
STF40250T	ITO-220AB (Pb-Free)	50 pcs/ tube

Marking Diagram



Where XXXXX is YYWWL

ST = Device Type
F = Package type
40 = Forward Current (40A)
250 = Reverse Voltage (250V)
T = Three pins
SSG = SSG
YY = Year
WW = Week
L = Lot Number

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

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