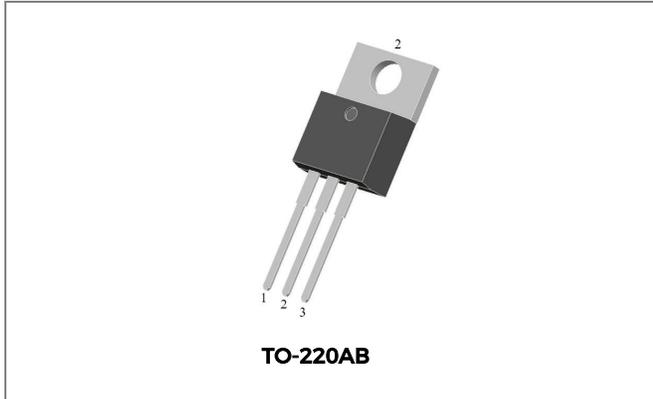


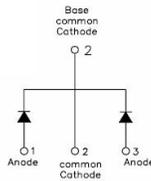
## ST6060C SCHOTTKY RECTIFIER



### Features

- 150 °C T<sub>J</sub> operation
- Ultralow forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Terminals finish: 100% Pure Tin
- Trench MOS Schottky technology
- 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	$V_{RRM}$ $V_{RWM}$ $V_R$	-	60	V
Average Rectified Forward Current	$I_{F(AV)}$	$T_c=125^\circ\text{C}$ , In DC	30(Per Leg) 60(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	$I_{FSM}$	8.3ms, Half Sine pulse	350	A

### Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (Per Leg)*	$V_{F1}$	@ 20A, Pulse, $T_J = 25^\circ\text{C}$	0.54	-	V
		@ 30A, Pulse, $T_J = 25^\circ\text{C}$	0.60	0.70	V
	$V_{F2}$	@ 20A, Pulse, $T_J = 125^\circ\text{C}$	0.50	-	V
		@ 30A, Pulse, $T_J = 125^\circ\text{C}$	0.59	0.65	V
Reverse Current(Per Leg)*	$I_{R1}$	@ $V_R = \text{rated } V_R, T_J = 25^\circ\text{C}$	10	100	$\mu\text{A}$
	$I_{R2}$	@ $V_R = \text{rated } V_R, T_J = 125^\circ\text{C}$	8	50	mA
Junction Capacitance	$C_T$	@ $V_R = 5\text{V}, T_C = 25^\circ\text{C}$ $f_{\text{SIG}} = 1\text{MHz}$	1056	-	pF

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

### Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	$T_J$	-	-55 to +150	$^\circ\text{C}$
Storage Temperature	$T_{\text{stg}}$	-	-55 to +150	$^\circ\text{C}$
Typical Thermal Resistance Junction to Case(Per Leg)	$R_{\theta\text{JC}}$	DC operation	1.2	$^\circ\text{C/W}$
Approximate Weight	wt	-	2	g
Case Style	TO-220AB			

**Ratings and Characteristics Curves**

Figure 1 Typical Forward Characteristics

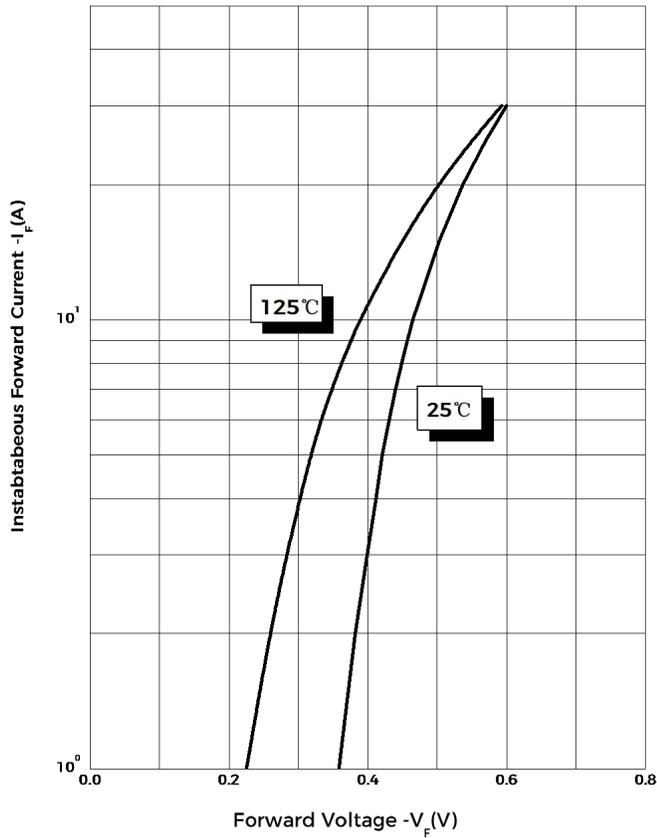


Figure 2 Typical Reverse Characteristics

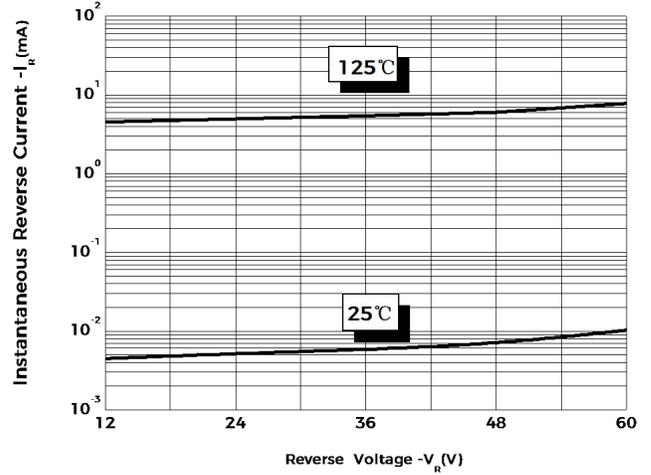
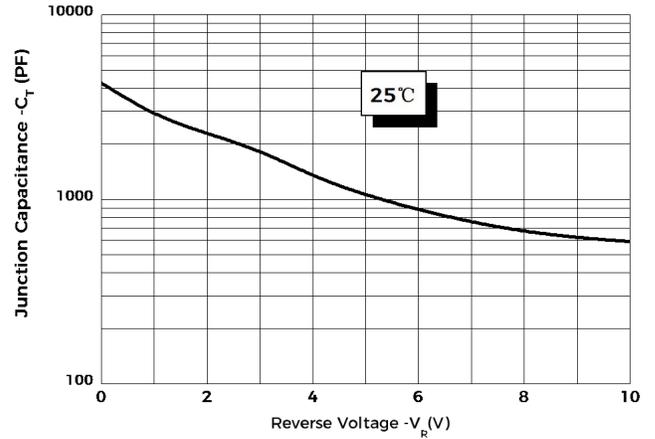
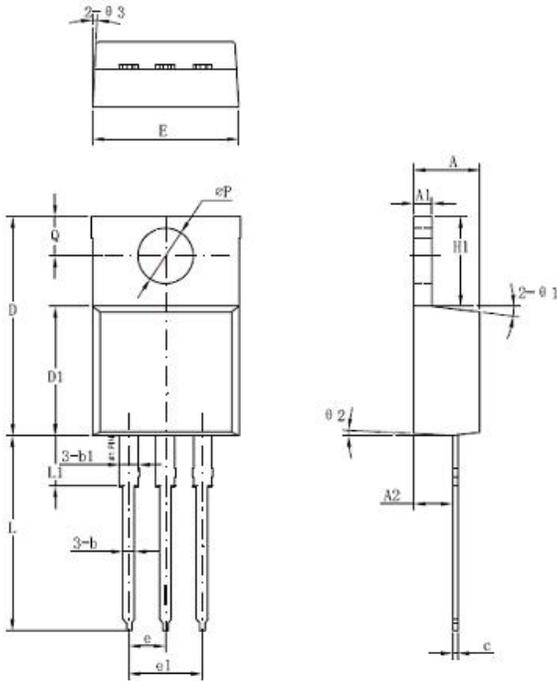


Figure 3 Typical Junction Capacitance



**Mechanical Dimensions TO-220AB**



Symbol	Dimensions in millimeters		
	Min	Typical	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	9.65	-	10.67
e	-	2.54	-
e1	-	5.08	-
H1	5.84	-	6.86
L	12.7	-	14.73
L1	-	-	6.35
φP	-	3.56	-
Q	2.54	-	3.43

**Marking Diagram**

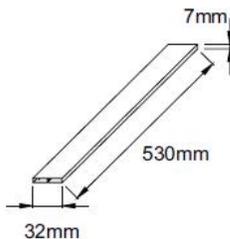


Where XXXXX is YYWWL

- ST = Device Type
- 60 = Forward Current (60A)
- 60 = Reverse Voltage (60V)
- C = Configuration
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

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

**Tube Specification**



**Ordering Information**

Device	Package	Shipping
ST6060C	TO-220AB (Pb-Free)	50 pcs/ tube

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