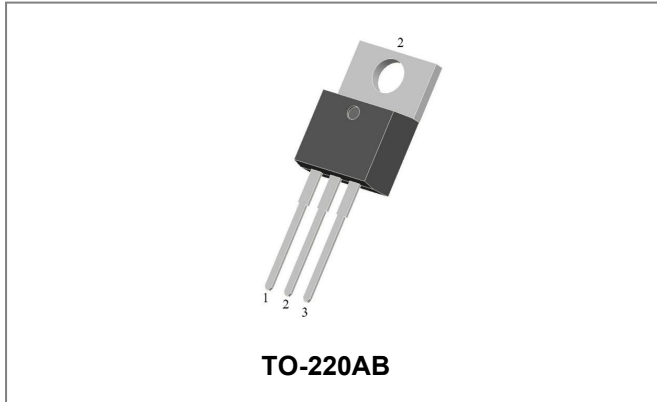


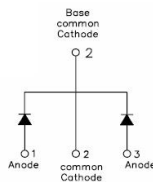
## ST60300C SCHOTTKY RECTIFIER



### Features

- 175 °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	V <sub>RRM</sub>	-	300	V
Working Peak Reverse Voltage	V <sub>RWM</sub>			
DC Blocking Voltage	V <sub>R</sub>			
Average Rectified Forward Current	I <sub>F(AV)</sub>	T <sub>c</sub> =141°C, In DC	30(Per Leg) 60(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I <sub>FSM</sub>	8.3ms, Half Sine pulse	440	A

### Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T <sub>J</sub>	-	-55 to +175	°C
Storage Temperature	T <sub>stg</sub>	-	-55 to +175	°C
Typical Thermal Resistance Junction to Case(Per Leg)	R <sub>θJC</sub>	DC operation	1.2	°C/W
Approximate Weight	wt	-	2	g
Case Style		TO-220AB		

**Electrical Characteristics:**

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (Per Leg)*	$V_{F1}$	@ 30A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.90	0.94	V
	$V_{F2}$	@ 30A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.77	0.82	V
Reverse Current(Per Leg)*	$I_{R1}$	@ $V_R = 300\text{V}$ , $T_J = 25\text{ }^\circ\text{C}$	0.1	100	$\mu\text{A}$
	$I_{R2}$	@ $V_R = 300\text{V}$ , $T_J = 125\text{ }^\circ\text{C}$	0.2	10	mA

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

**Ratings and Characteristics Curves**

Figure 1 Typical Forward Characteristics

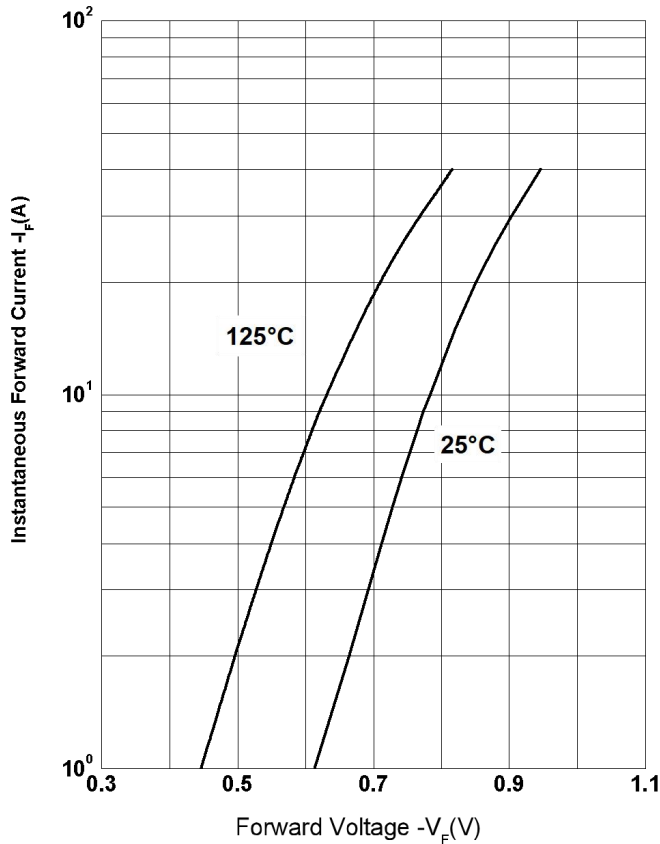


Figure 2 Typical Reverse Characteristics

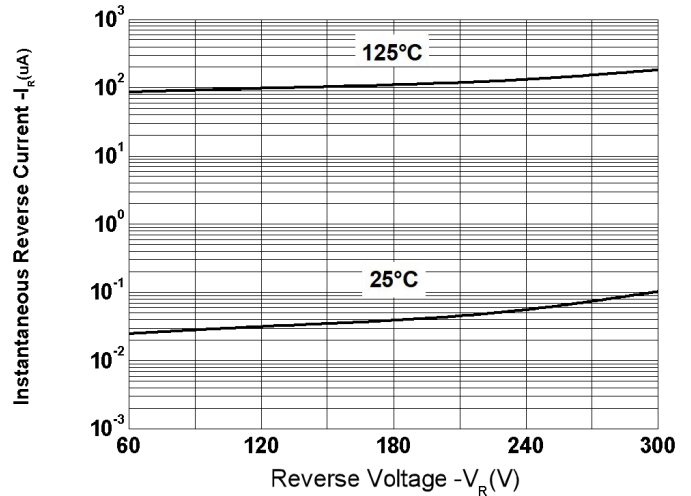
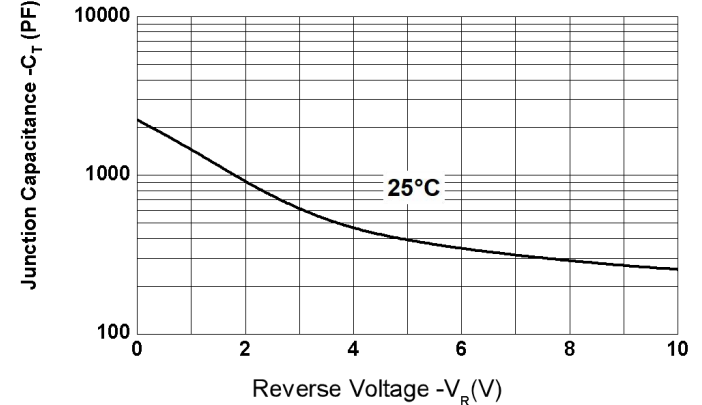
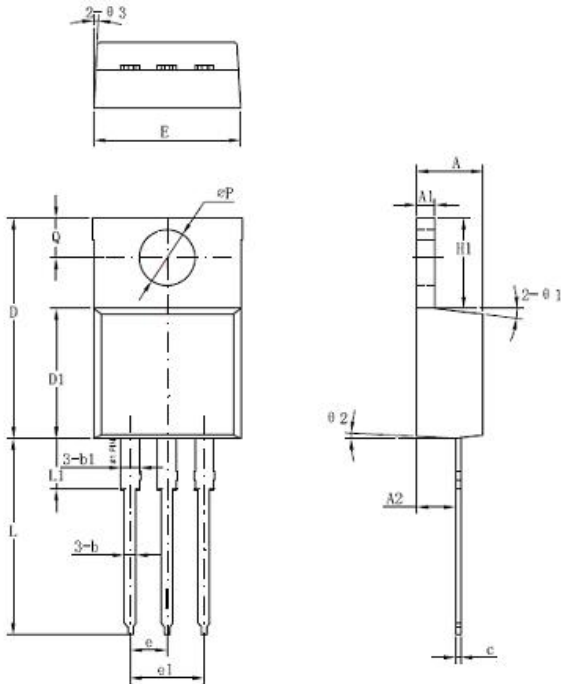


Figure 3 Typical Junction Capacitance



**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**

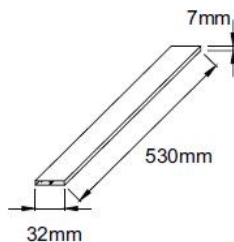


Where XXXXX is YYWWL

- ST = Device Type
- 60 = Forward Current (60A)
- 300 = Reverse Voltage (300V)
- 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
ST60300C	TO-220AB (Pb-Free)	50 pcs/ tube

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