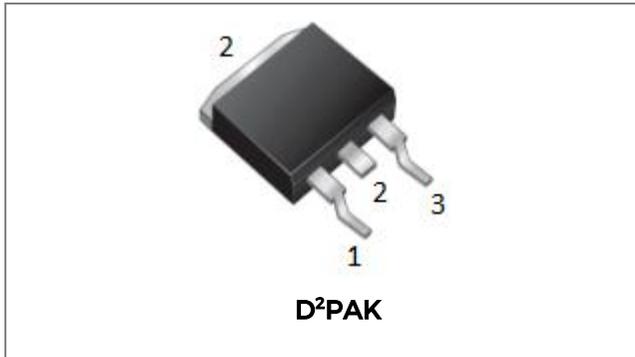


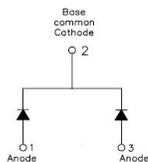
## STB60300C SCHOTTKY RECTIFIER



### 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
- 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	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 (Per Device)	I <sub>F(AV)</sub>	T <sub>c</sub> =116 °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

### Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (Per Leg) *	V <sub>F1</sub>	@ 30A, Pulse, T <sub>J</sub> = 25 °C	0.90	0.94	V
	V <sub>F2</sub>	@ 30A, Pulse, T <sub>J</sub> = 125 °C	0.77	0.82	V
Reverse Current (Per Leg) *	I <sub>R1</sub>	@V <sub>R</sub> = 300V, T <sub>J</sub> = 25 °C	0.1	100	uA
	I <sub>R2</sub>	@V <sub>R</sub> = 300V, T <sub>J</sub> = 125 °C	0.2	10	mA

\* 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(Per Leg)	$R_{\theta JC}$	DC operation	1.2	$^{\circ}\text{C/W}$
Approximate Weight	wt	-	1.85	g
Case Style	D <sup>2</sup> PAK			

**Ratings and Characteristics Curves**

Figure 1 Typical Forward Characteristics

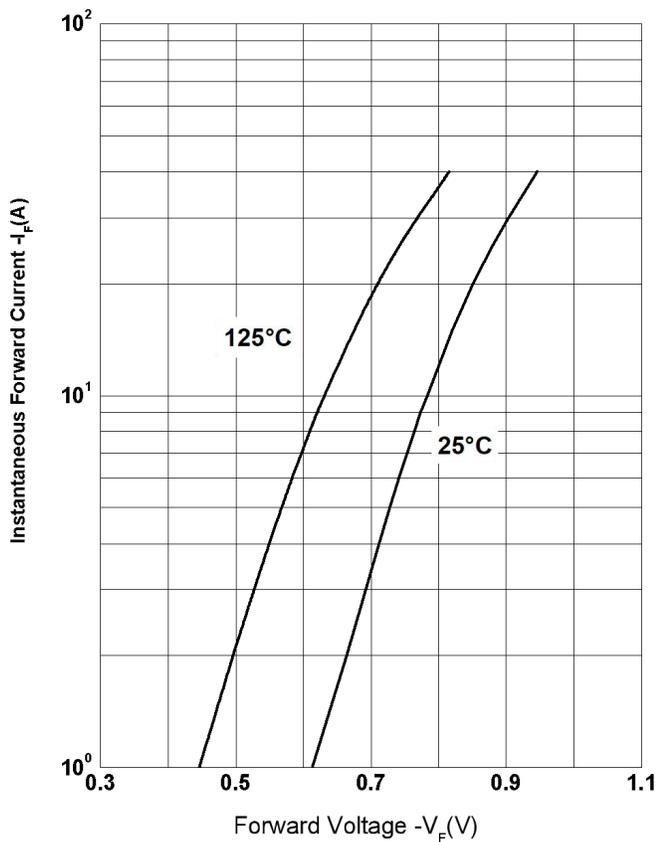


Figure 2 Typical Reverse Characteristics

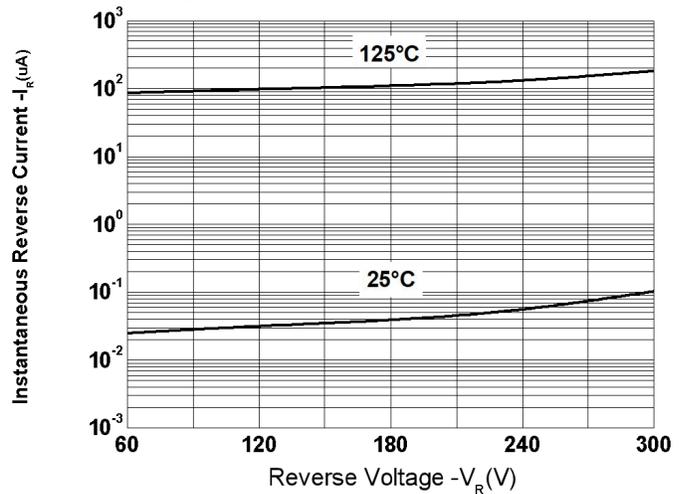
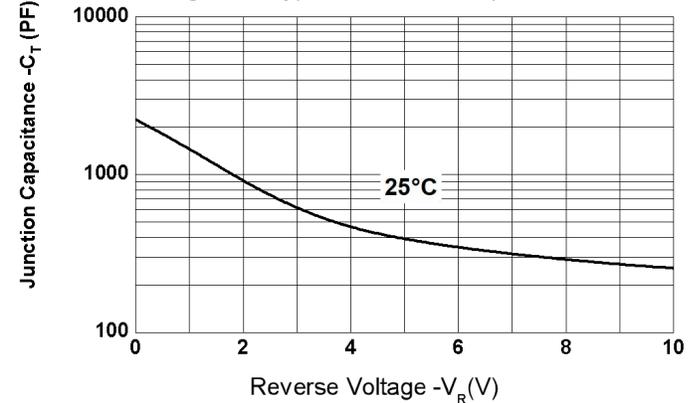
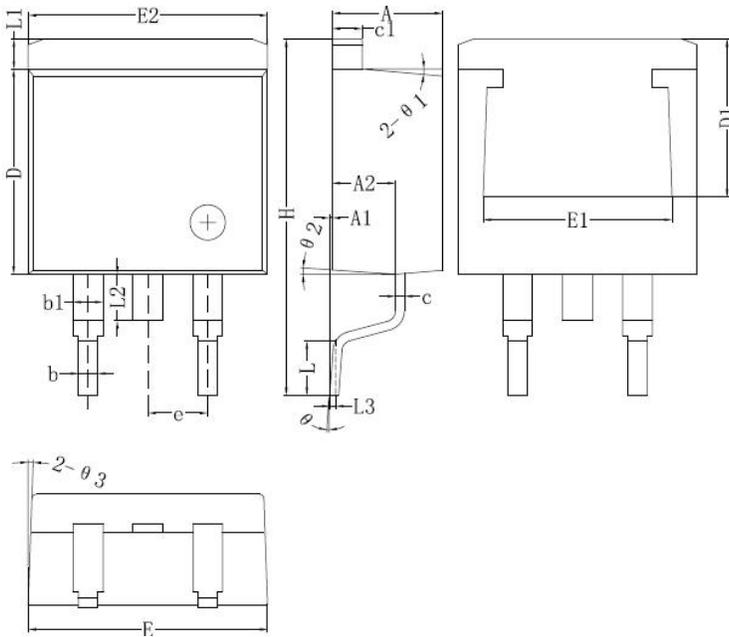


Figure 3 Typical Junction Capacitance



**Mechanical Dimensions D<sup>2</sup>PAK**



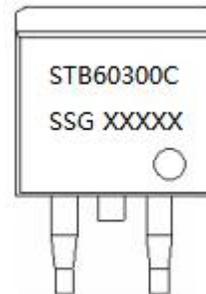
Symbol	Dimensions in millimeters	
	Min.	Max.
A	4.06	4.83
A1	0	0.26
b	0.51	0.99
b1	1.14	1.78
c	0.31	0.74
c1	1.14	1.65
D	8.38	9.65
D1	6.4	
E1	6.22	
E2	9.65	10.67
e	2.54BSC	
H	14.6	15.88
L	1.78	2.8
L1	-	1.68
L2	-	2.2
L3	0.255BSC	
θ	0	8°

**Ordering Information**

Device	Package	Shipping
STB60300C	D <sup>2</sup> PAK	800pcs / reel
STB60300CTR	D <sup>2</sup> PAK	800pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Marking Diagram**

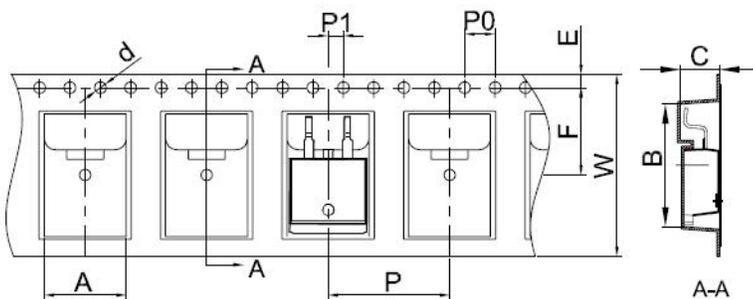


Where XXXXX is YYWWL

- ST = Device Type
- B = Package 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

**Carrier Tape Specification D<sup>2</sup>PAK**



SYMBOL	Millimeters	
	Min.	Max.
A	10.70	10.90
B	16.03	16.23
C	5.11	5.31
d	1.45	1.65
E	1.65	1.85
F	11.40	11.60
P0	3.90	4.10
P	15.90	16.10
P1	1.90	2.10
W	23.90	24.30



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