



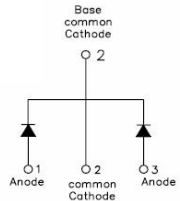
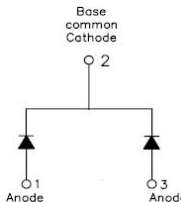
ST3060C/STB3060C SCHOTTKY RECTIFIER

Applications

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

Features

- 150 °C T_J operation
- Center tap configuration
- Ultralow forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- 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

ST3060C	STB3060C
	
	
TO-220AB	D ² PAK

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{VRWM} V _R	-	60	V
Average Rectified Forward Current	I _{F(AV)}	50% duty cycle @T _c =100°C, rectangular wave form	15(Per Leg) 30(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I _{FSM}	8.3ms, Half Sine pulse	170	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(Per Leg)*	V _{F1}	@ 5A, Pulse, T _J = 25°C	0.42	-	V
		@ 7.5A, Pulse, T _J = 25°C	0.48	-	
@ 15A, Pulse, T _J = 25°C		0.59	0.70		
	V _{F2}	@ 5A, Pulse, T _J = 25°C	0.35	-	V
		@ 7.5A, Pulse, T _J = 125°C	0.41	-	
		@ 15A, Pulse, T _J = 125°C	0.55	0.65	
Reverse Current(Per Leg)*	I _{R1}	@V _R = rated V _R , T _J = 25°C	0.03	1.2	mA
	I _{R2}	@V _R = rated V _R , T _J = 125°C	14	45	mA
Junction Capacitance	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	712	-	pF

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

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(Per Leg)	R _{θJC}	DC operation	2.2	°C/W

Ratings and Characteristics Curves

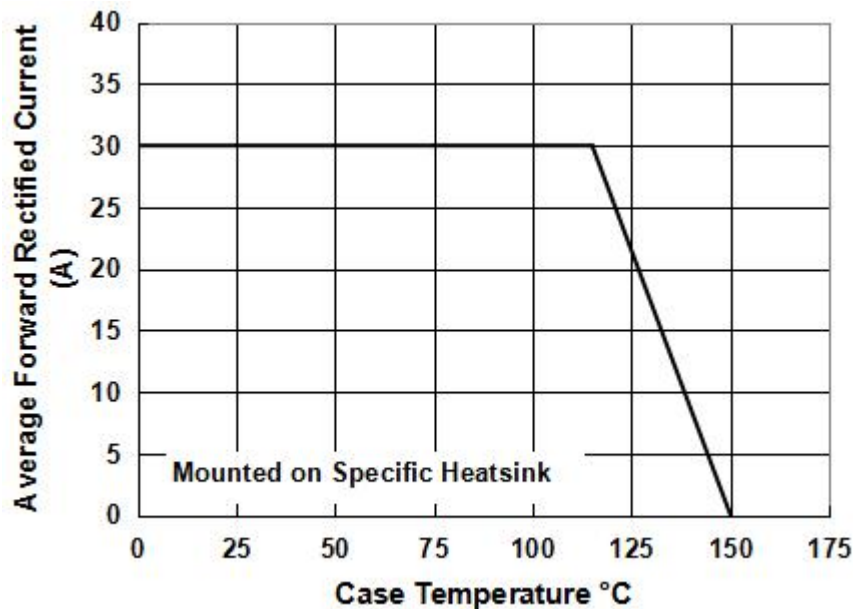


Figure 1. Maximum Forward Current Derating Curve

Figure 2
Typical Forward Characteristics

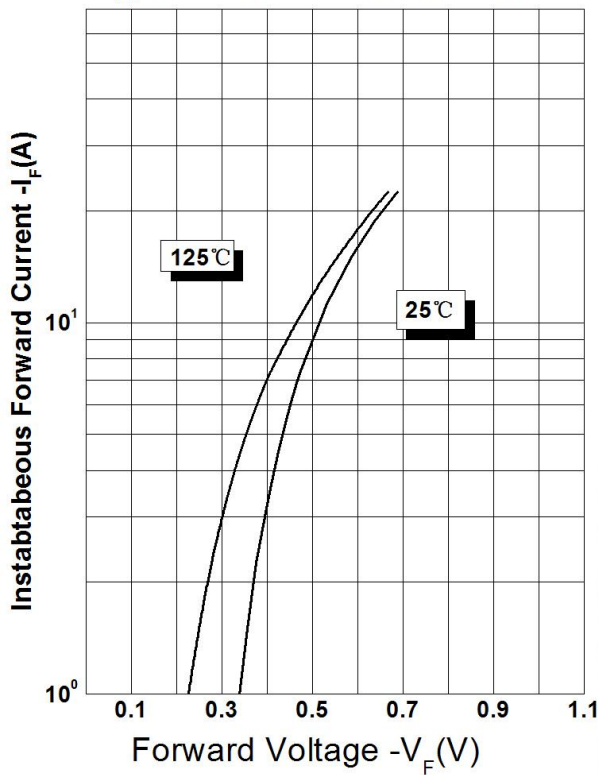


Figure 3
Typical Reverse Characteristics

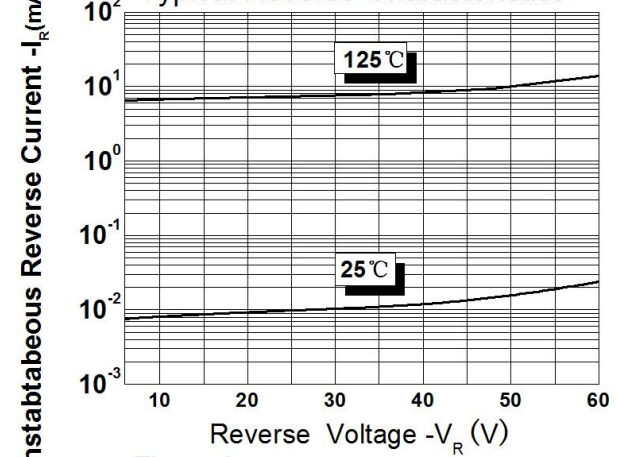
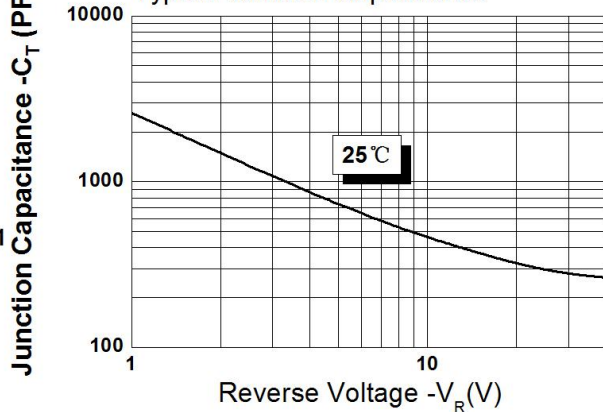


Figure 4
Typical Junction Capacitance

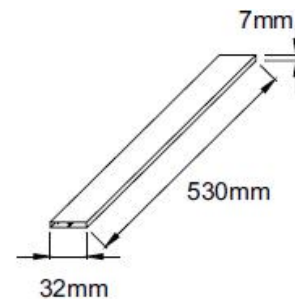


Tube Specification

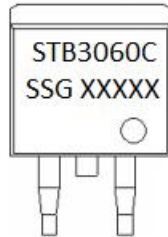
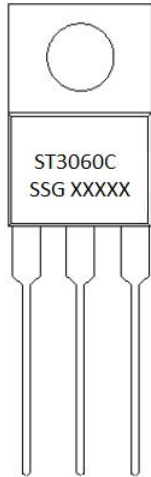
Device	Package	Weight	Shipping
ST3060C	TO-220AB	2.0	50pcs / tube
STB3060C	D ² PAK	1.85	800pcs / reel

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

Tube Specification(TO-220AB)



Marking Diagram

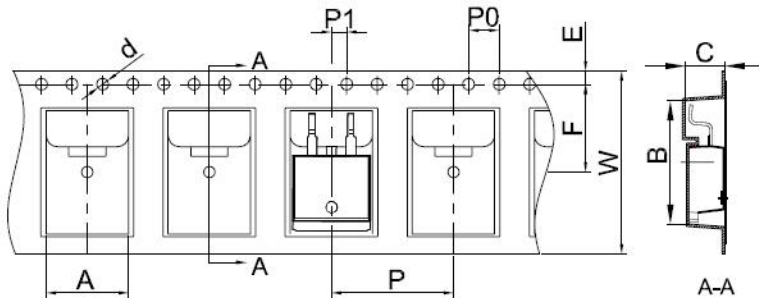


Where XXXXX is YYWWL

ST = Device Type
 B = Package type
 30 = Forward Current (30A)
 60 = Reverse Voltage (60V)
 C = Configuration
 SSG = SSG
 YY = Year
 WW = Week
 L = Lot Number

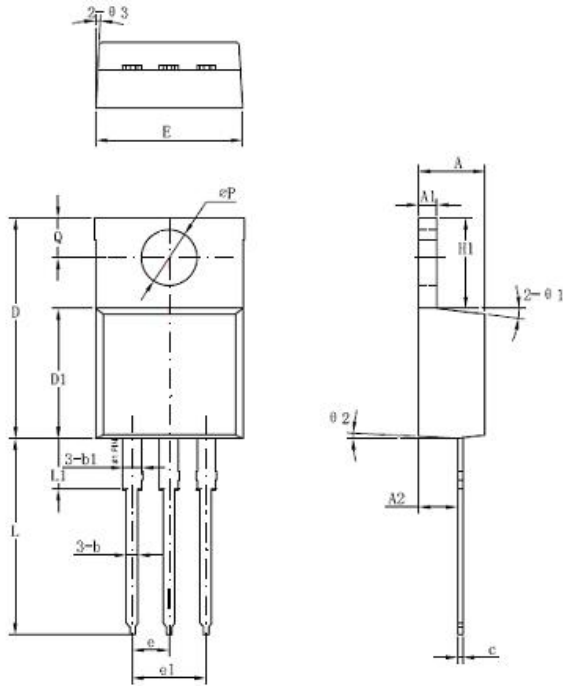
Cautions: Molding resin
 Epoxy resin UL:94V-0

Carrier Tape Specification D2PAK



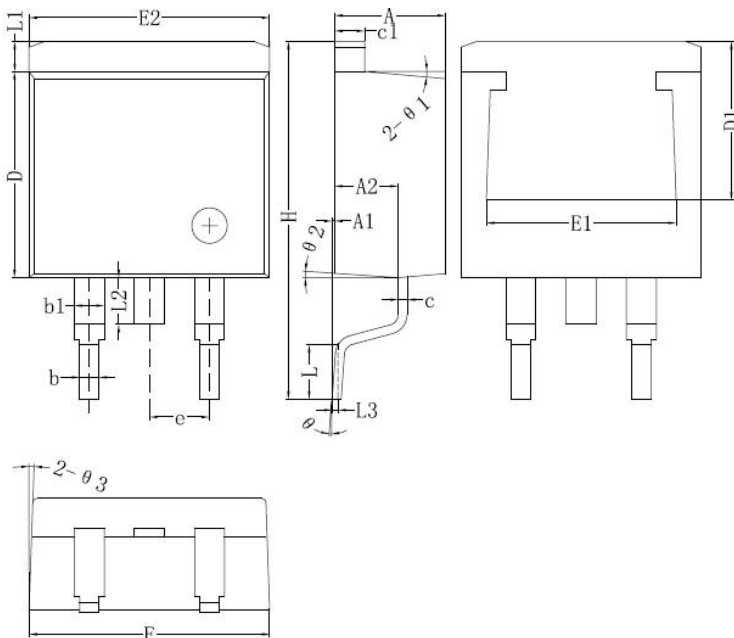
SYMBOL	Millimeters	
	Min.	Max.
A	10.70	10.90
B	16.03	16.23
C	5.11	5.31
d	1.45	1.65
E	1.65	1.85
F	11.40	11.60
P0	3.90	4.10
P	15.90	16.10
P1	1.90	2.10
W	23.90	24.30

Mechanical Dimensions TO-220AB



Symbol	Dimensions in millimeters		
	Min	Typical	Max
A	4.42	4.57	4.72
A1	1.17	1.27	1.37
A2	2.52	2.69	2.89
b	0.71	0.81	0.96
b1	1.17	1.27	1.37
c	0.31	0.38	0.61
D	14.94	15.24	15.54
D1	8.85	9.00	9.15
E	10.01	10.16	10.31
e		2.54	
e1	4.98	5.06	5.18
H1	6.04	6.24	6.44
L	12.7	13.56	13.80
L1	3.56	3.5	3.96
ΦP	3.74	3.84	4.04
Q	2.54	2.74	2.94
θ1		7°	
θ2		3°	
θ3		4°	

Mechanical Dimensions D²PAK



SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.40	0.087	0.094
A1	0.00	0.127	0.000	0.005
b	0.66	0.86	0.026	0.034
c	0.46	0.60	0.018	0.024
D	6.50	6.70	0.256	0.264
D1	5.13	5.46	0.202	0.215
D2	4.83 REF.		0.190 REF.	
E	6.00	6.20	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.70	10.40	0.381	0.409
L1	2.90 REF.		0.144 REF.	
L2	1.40	1.70	0.055	0.067
L3	1.60 REF.		0.063 REF.	
L4	0.60	1.00	0.024	0.039
Φ	1.10	1.30	0.043	0.051
θ	0°	8°	0°	8°
h	0.00	0.30	0.000	0.012
V	5.35 REF.		0.211 REF.	

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