


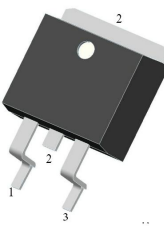
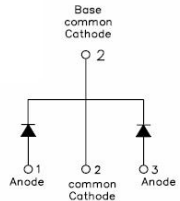
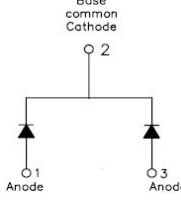
ST40200C/STB40200C SCHOTTKY RECTIFIER

Applications

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

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
- Guard ring for enhanced ruggedness and long term reliability
- 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

<p style="text-align: center;">ST40200C</p> 	<p style="text-align: center;">STB40200C</p> 
<p style="text-align: center;">Base common Cathode</p>  <p style="text-align: center;">Anode common Cathode Anode</p>	<p style="text-align: center;">Base common Cathode</p>  <p style="text-align: center;">Anode Anode</p>
TO-220AB	D ² PAK

Maximum Ratings (limiting values, at 25 °C unless otherwise specified)

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	V _{RRM}	-	200	V
Working Peak Reverse Voltage	V _{VRWM}			
DC Blocking Voltage	V _R			
Average Rectified Forward Current	I _{F(AV)}	T _c =93°C, In DC	20(Per Leg)	A
			40(Per Device)	
Peak One Cycle Non-Repetitive Surge Current(Per Leg)	I _{FSM}	8.3ms, Half Sine pulse	250	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(Per Leg)*	V_{F1}	@ 20A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.86	1.60	V
	V_{F2}	@ 20A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.72	0.76	V
Reverse Current(Per Leg)*	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^\circ\text{C}$	0.0002	0.3	mA
	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 125\text{ }^\circ\text{C}$	0.5	36	mA

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

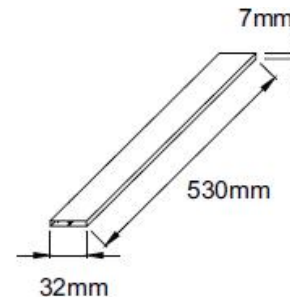
Thermal-Mechanical Specifications:

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)	$R_{\theta\text{JC}}$	DC operation	1.8	$^\circ\text{C/W}$

Tube Specification

Device	Package	Weight	Shipping
ST40200C	TO-220AB	2.0	50pcs / tube
STB40200C	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)


Ratings and Characteristics Curves

Figure 1 Typical Forward Characteristics

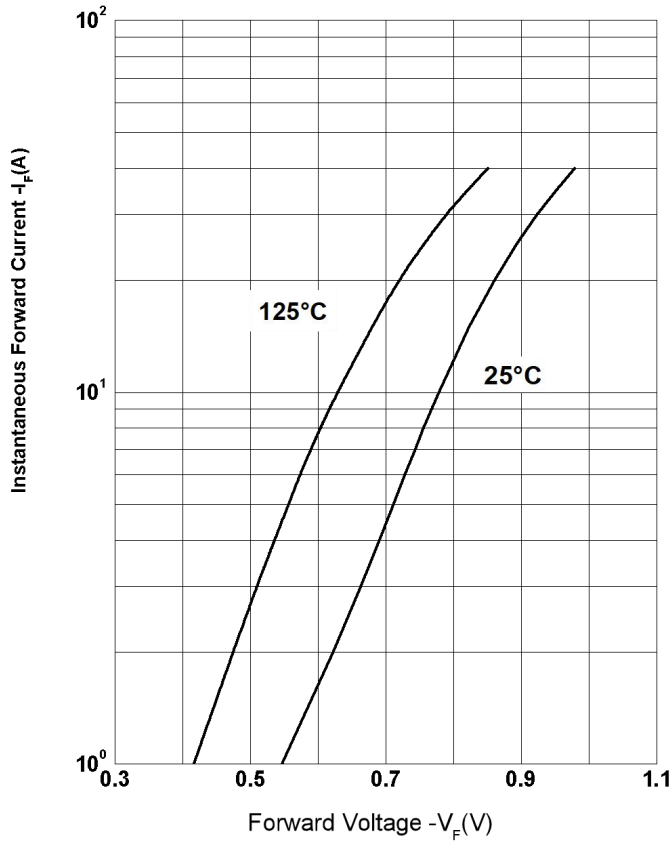


Figure 2 Typical Reverse Characteristics

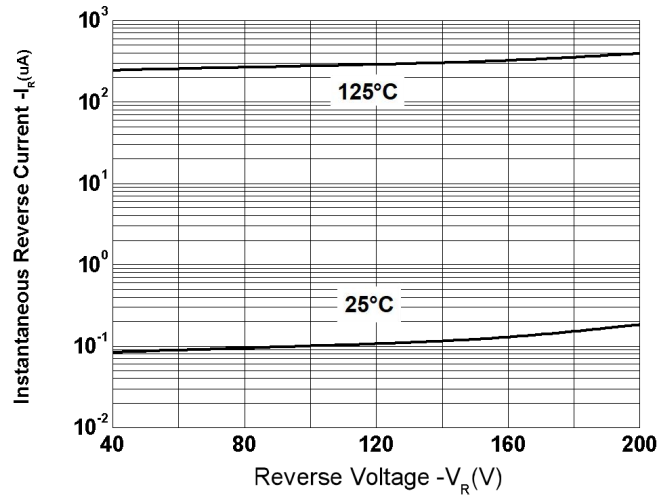
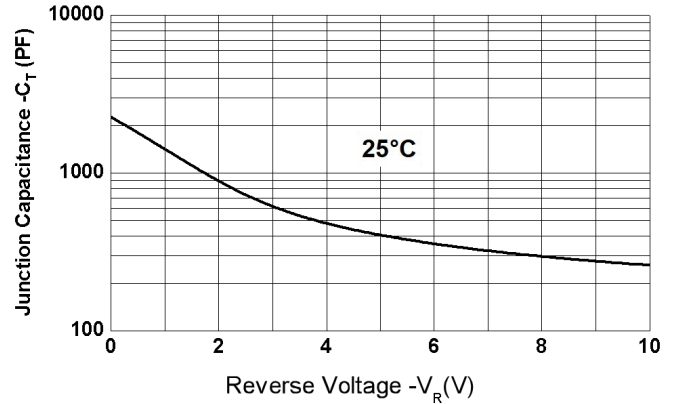
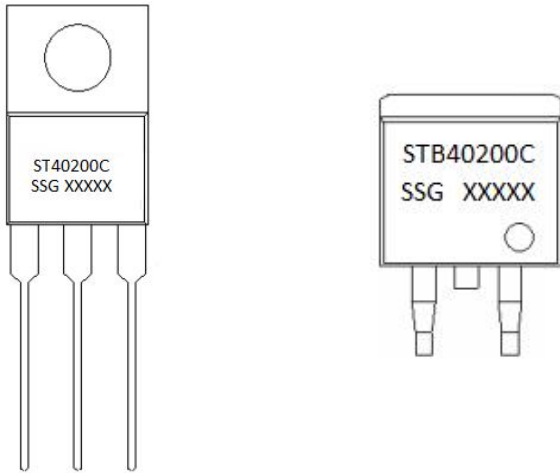


Figure 3 Typical Junction Capacitance



Marking Diagram

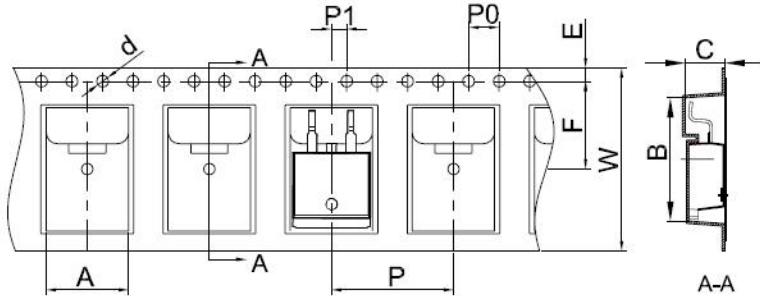


Where XXXXX is YYWWL

- ST = Device Type
- B = Package type
- 40 = Forward Current (40A)
- 200 = Reverse Voltage (200V)
- C = Configuration
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

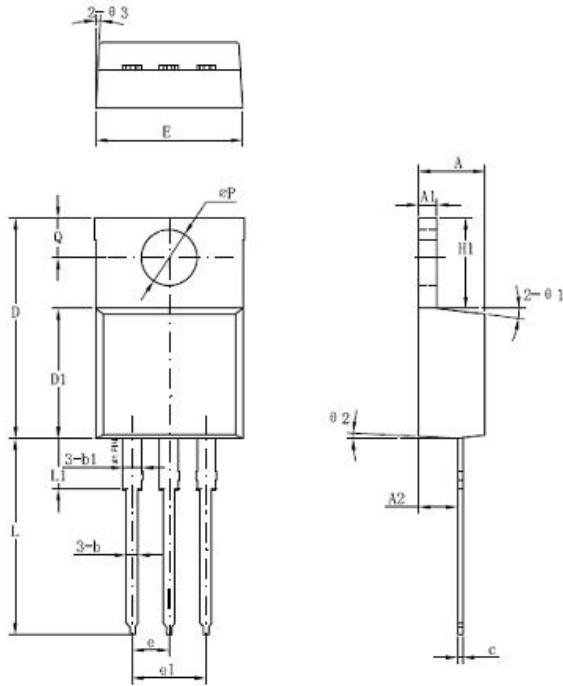
Cautions: Molding resin
Epoxy resin UL:94V-0

Carrier Tape Specification D2PAK



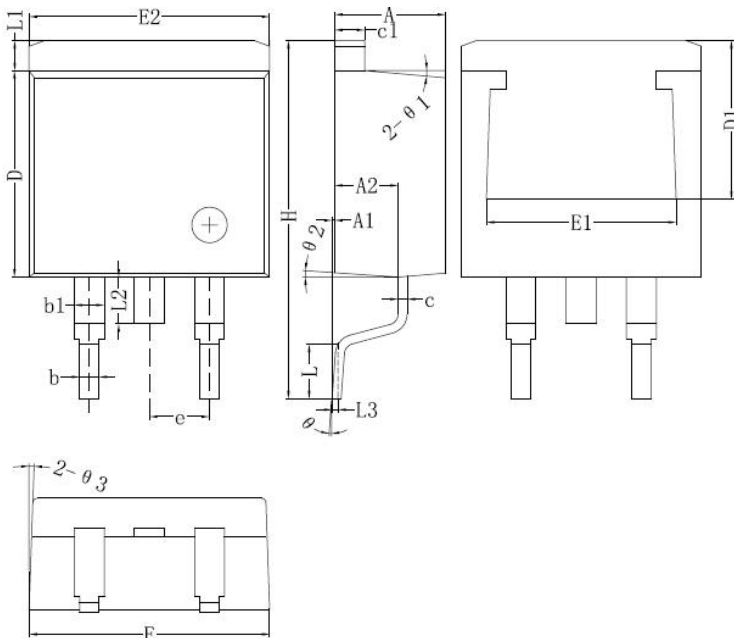
SYMBOL	Millimeters	
	Min.	Max.
A	10.70	10.90
B	16.03	16.23
C	5.11	5.31
d	1.45	1.65
E	1.65	1.85
F	11.40	11.60
P0	3.90	4.10
P	15.90	16.10
P1	1.90	2.10
W	23.90	24.30

Mechanical Dimensions TO-220AB



Symbol	Dimensions in millimeters		
	Min	Typical	Max
A	3.56	-	4.83
A1	0.51	-	1.40
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	12.70	-	14.73
L1	-	-	6.35
ΦP	-	3.56	-
Q	2.54	-	3.43

Mechanical Dimensions D²PAK



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	8.65
D1	6.86	
E1	6.22	
E2	9.65	10.67
e	2.54BSC	
H	14.60	15.88
L	1.78	2.80
L1	-	1.68
L2	-	1.78
L3	0.255BSC	
Θ	0	8°

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