

## ST40200T2 SCHOTTKY RECTIFIER

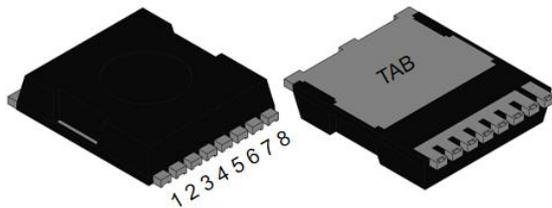
### Applications

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

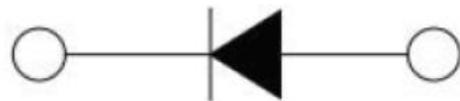
### Features

- 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



TOLL



TAB

Pin2-8

Pin1 not connected

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**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	$V_{RRM}$ $V_{RWM}$ $V_R$	-	200	V
Average Rectified Forward Current	$I_{F(AV)}$	$T_c = 130^\circ\text{C}$ , In DC	40	A
Peak One Cycle Non-Repetitive Surge Current (Per Leg)	$I_{FSM}$	8.3ms, Half Sine pulse	650	A

**Electrical Characteristics:**

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop (Per Leg)*	$V_{F1}$	@ 40A, Pulse, $T_J = 25^\circ\text{C}$	0.84	1.60	V
	$V_{F2}$	@ 40A, Pulse, $T_J = 125^\circ\text{C}$	0.71	0.76	V
Reverse Current (Per Leg)*	$I_{R1}$	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$	0.2	300	$\mu\text{A}$
	$I_{R2}$	@ $V_R = \text{rated } V_R$ $T_J = 125^\circ\text{C}$	0.5	36	mA
Junction Capacitance (per leg)	$C_T$	@ $V_R = 5\text{V}$ , $T_c = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	1050	-	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	$T_{stg}$	-	-55 to +150	$^\circ\text{C}$
Typical Thermal Resistance Junction to Case (Per Leg)	$R_{\theta JC}$	DC operation	0.3	$^\circ\text{C/W}$

**Ordering Information:**

Device	Package	Shipping
ST40200T2	TOLL	1800pcs/reel

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

**Ratings and Characteristics Curves**

Figure1 Typical Forward Characteristics

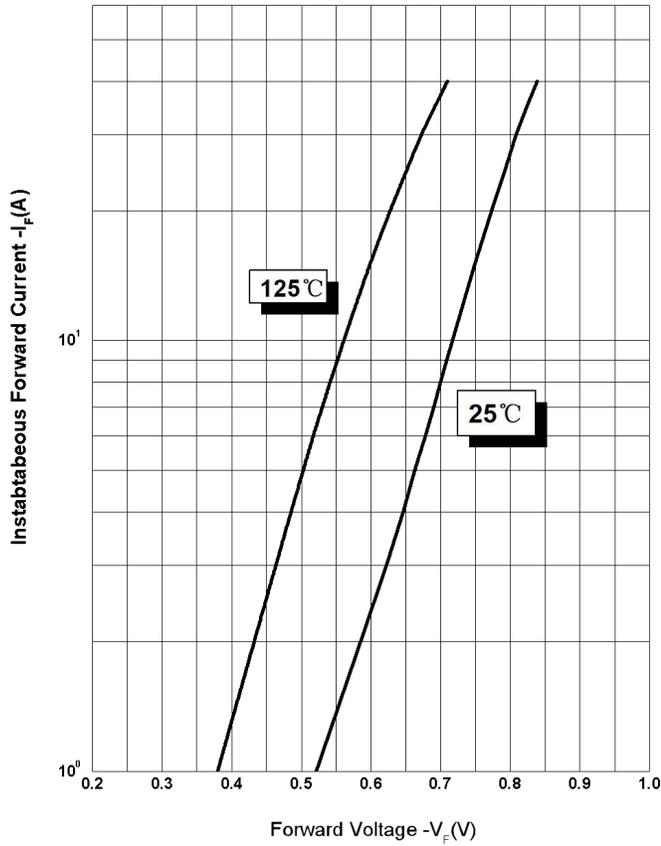


Figure 2 Typical Reverse Characteristics

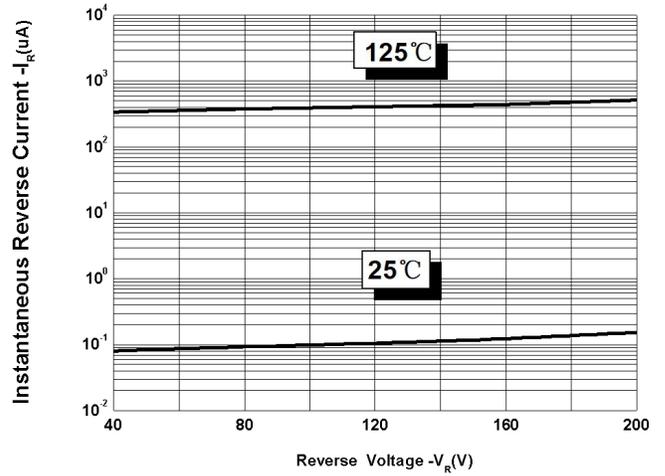
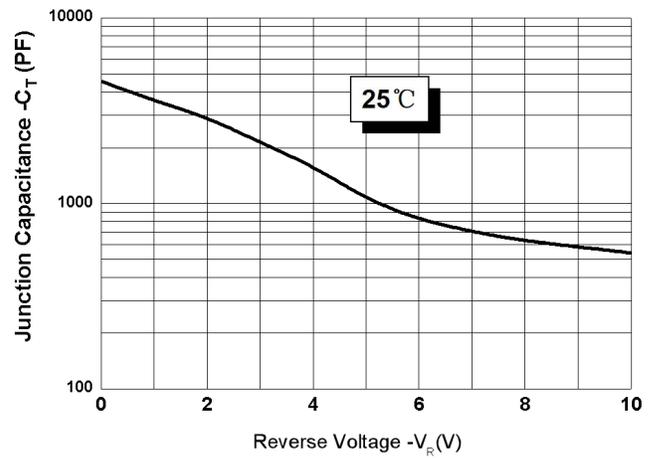


Figure 3 Typical Junction Capacitance



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**Marking Diagram**

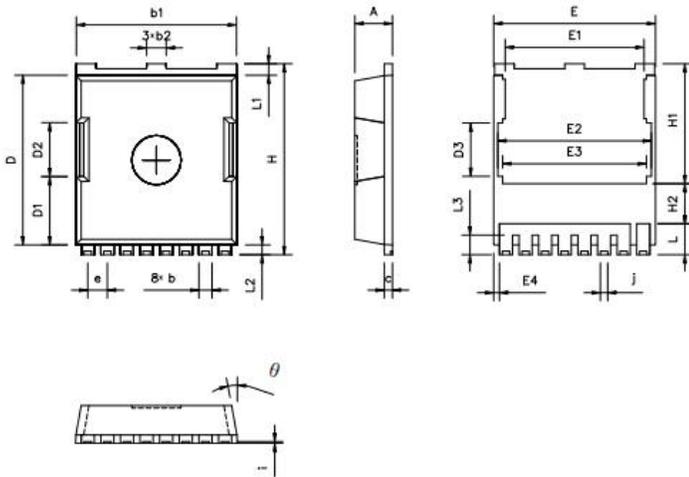


Where XXXXX is YYWWL

- ST = Device Type
- 40 = Forward Current (40A)
- 200 = Reverse Voltage (200V)
- T2 = Package Type
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

**Cautions:** Molding resin  
Epoxy resin UL94V-0

**Mechanical Dimensions TOLL**



SYMBOL	Dimensions In Millimeters		
	Min.	NOM.	Max.
A	2.20	2.30	2.40
b	0.70	0.80	0.90
b1	9.70	9.80	9.90
b2	1.20 REF.		
c	0.40	0.50	0.60
D	10.28	10.38	10.48
D1	4.08	4.18	4.28
D2	3.20	3.30	3.40
D3	3.16	3.26	3.36
E	9.80	9.90	10.00
E1	8.40	8.50	8.60
E2	9.30	9.40	9.50
E3	8.8 REF.		
E4	0.25	0.35	0.45
e	1.20 BASIC		
H	11.58	11.68	11.78
H1	7.23	7.33	7.43
H2	2.45 REF.		
i	0.10	-	-
j	0.45 REF.		
L	1.60	1.90	2.10
L1	0.60	0.70	0.80
L2	0.50	0.60	0.70
L3	1.05	1.20	1.30
theta	10° REF.		

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