

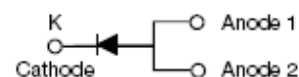
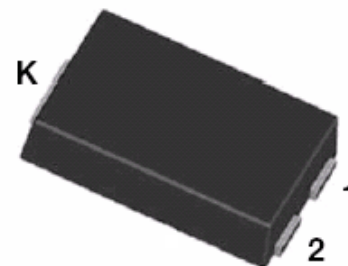
ST1545S SCHOTTKY RECTIFIER

Applications:

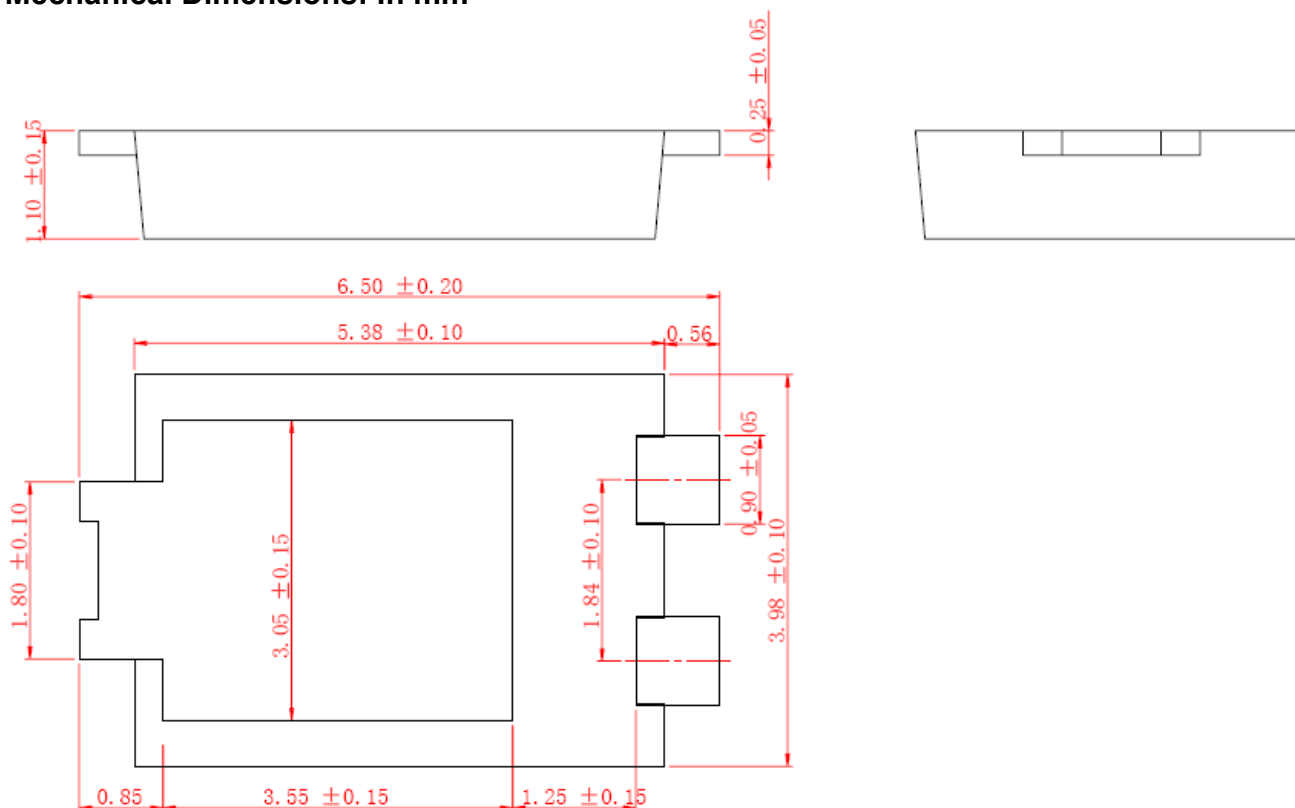
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

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
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request



Mechanical Dimensions: In mm



TO-277B(JK)

Marking Diagram:



Where XXXXX is YYWWL

- S = Device Type
- T = Ultralow VF
- 15 = Forward Current (15)
- 45 = Reverse Voltage (45V)
- S = Package type
- YY = Year
- WW = Week
- L = Lot Number

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

Ordering Information:

| Device | Package | Shipping |
|---------|----------------------|---------------|
| ST1545S | TO-277B (Pb-Free) | 5000pcs/ reel |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

Maximum Ratings:

| Characteristics | Symbol | Condition | Max. | Units |
|---|-------------|--|------|-------|
| Peak Inverse Voltage | V_{RWM} | - | 45 | V |
| Average Forward Current | $I_{F(AV)}$ | 50% duty cycle @ $T_C=80\text{ }^\circ\text{C}$ rectangular wave form | 15 | A |
| Peak One Cycle Non-Repetitive Surge Current (per leg) | I_{FSM} | 8.3 ms, half Sine pulse | 200 | A |



Electrical Characteristics:

| Characteristics | Symbol | Condition | Typ. | Max. | Units |
|--|----------|---|------|------|-------|
| Forward Voltage Drop* | V_{F1} | @ 5A, Pulse, $T_J = 25\text{ }^\circ\text{C}$ | 0.38 | 0.50 | V |
| | | @ 7.5A, Pulse, $T_J = 25\text{ }^\circ\text{C}$ | 0.40 | 0.52 | |
| @ 15A, Pulse, $T_J = 25\text{ }^\circ\text{C}$ | | 0.46 | 0.58 | | |
| | V_{F2} | @ 5A, Pulse, $T_J = 125\text{ }^\circ\text{C}$ | 0.25 | 0.39 | V |
| | | @ 7.5A, Pulse, $T_J = 125\text{ }^\circ\text{C}$ | 0.28 | 0.42 | |
| | | @ 15A, Pulse, $T_J = 125\text{ }^\circ\text{C}$ | 0.37 | 0.51 | |
| Reverse Current (per leg) | I_{R1} | @ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^\circ\text{C}$ | 0.21 | 1.5 | mA |
| Reverse Current (per leg) * | I_{R2} | @ $V_R = \text{rated } V_R$ $T_J = 125\text{ }^\circ\text{C}$ | 150 | 150 | mA |
| Junction Capacitance (per leg) | C_T | @ $V_R = 5\text{V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$ | 868 | - | pF |

* Pulse Width < 300 μ 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 | $^\circ\text{C}$ |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | DC operation | 75 | $^\circ\text{C/W}$ |
| Approximate Weight | wt | - | 0.08 | g |
| Case Style | TO-277B | | | |

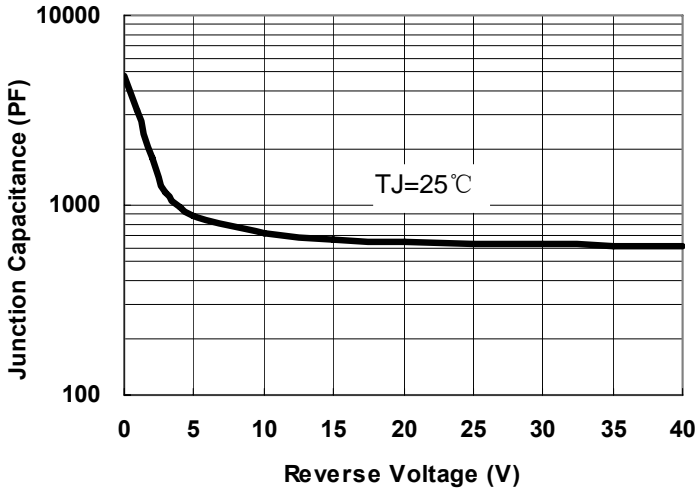


Fig.1-Typical Junction Capacitance

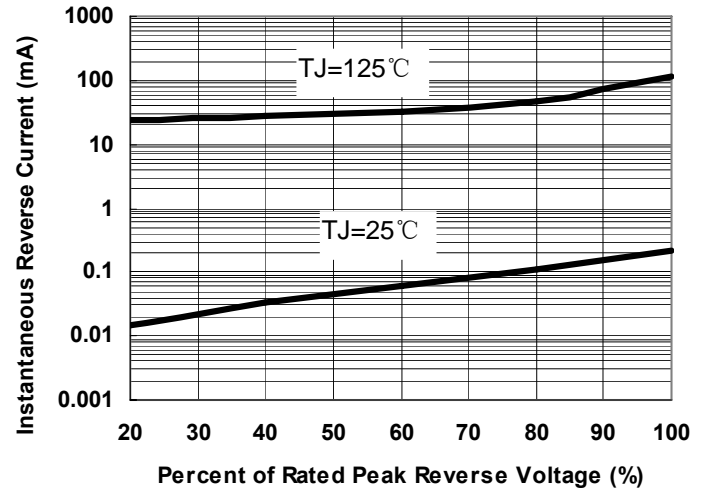


Fig.2-Typical Reverse Characteristics

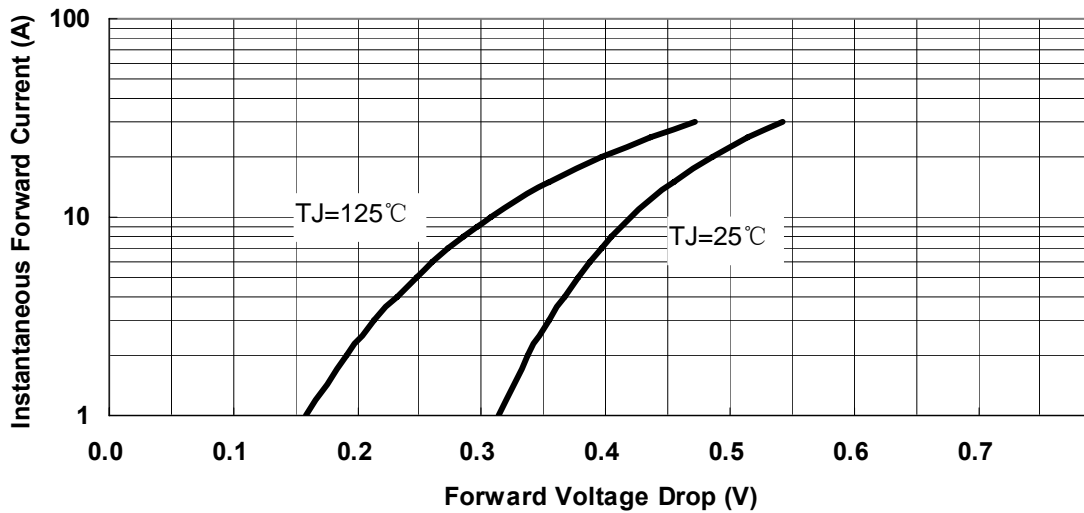


Fig.3-Typical Instantaneous Forward Voltage Characteristics



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