

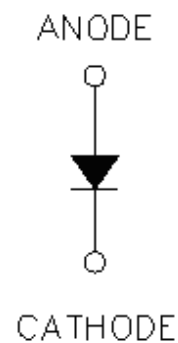
ST1045AX SCHOTTKY RECTIFIER

Applications:

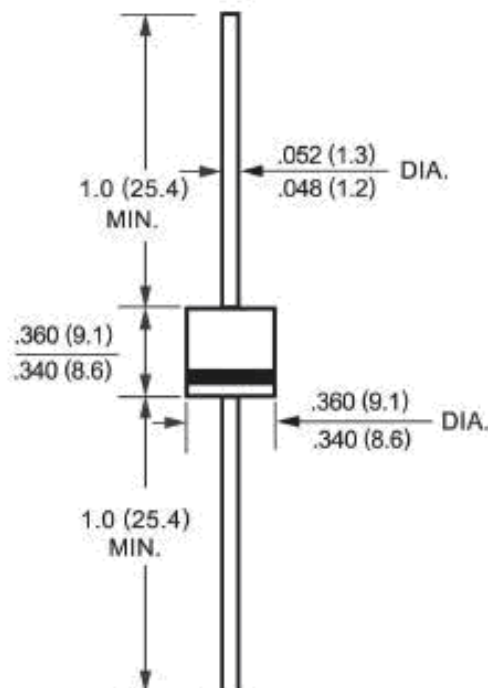
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

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 Inches / mm



R-6

Marking Diagram:



Where XXXXX is YYWWL

- S = Device Type
- T = Ultralow VF
- 10 = Forward Current (10A)
- 45 = Reverse Voltage (45V)
- AX = Package type
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

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

Ordering Information:

| Device | Package | Shipping |
|----------|------------------|---------------|
| ST1045AX | R-6 (Pb-Free) | 500pcs / 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 @ $T_C = 75\text{ }^\circ\text{C}$ rectangular wave form | 10 | A |
| Peak One Cycle Non-Repetitive Surge Current (per leg) | I_{FSM} | 8.3 ms, half Sine pulse | 150 | A |



Electrical Characteristics:

| Characteristics | Symbol | Condition | Max. | Units |
|-----------------------------|----------|--|------|-------|
| Forward Voltage Drop* | V_{F1} | @ 10A, Pulse, $T_J = 25\text{ }^\circ\text{C}$ | 0.56 | V |
| | V_{F2} | @ 10A, Pulse, $T_J = 125\text{ }^\circ\text{C}$ | 0.41 | V |
| Reverse Current (per leg) | I_{R1} | @ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^\circ\text{C}$ | 1.0 | mA |
| Reverse Current (per leg) * | I_{R2} | @ $V_R = \text{rated } V_R$ $T_J = 125\text{ }^\circ\text{C}$ | 30 | mA |

* 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 | $^\circ\text{C}$ |
| Maximum Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | DC operation | 45 | $^\circ\text{C/W}$ |
| Approximate Weight | wt | - | 2.24 | g |
| Case Style | R-6 | | | |



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