



## DATA SHEET

### SD820YT~SD8150YT

#### SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE** 20 to 150 Volts **CURRENT** 8 Amperes

TO-251AB

Unit : inch (mm)

#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Low power loss, High efficiency
- High surge capacity
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- Pb free product are available : 99% Sn above can meet Rohs environment substance directive request

#### MECHANICAL DATA

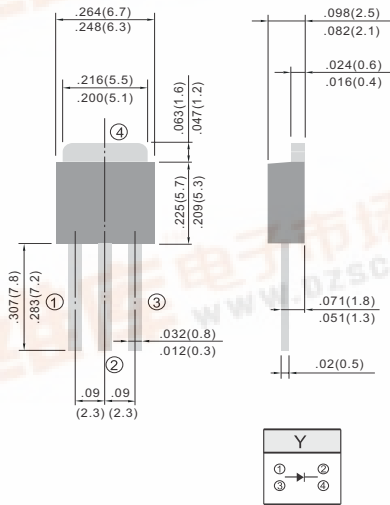
Case: D PAK/TO-251AB molded plastic

Terminals: Solder plated, solderable per MIL-STD-202G, Method 206

Polarity: As marking

Standard packaging: 16mm tape (EIA-481)

Weight: 0.015 ounces, 0.4grams.



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

| PARAMETER                                                                                        | SYMBOL                           | SD820YT     | SD830YT | SD840YT | SD850YT | SD860YT | SD880YT | SD8100YT | SD8150YT | UNITS  |
|--------------------------------------------------------------------------------------------------|----------------------------------|-------------|---------|---------|---------|---------|---------|----------|----------|--------|
| Maximum Recurrent Peak Reverse Voltage                                                           | V <sub>RRM</sub>                 | 20          | 30      | 40      | 50      | 60      | 80      | 100      | 150      | V      |
| Maximum RMS Voltage                                                                              | V <sub>RMS</sub>                 | 14          | 21      | 28      | 35      | 42      | 56      | 70       | 105      | V      |
| Maximum DC Blocking Voltage                                                                      | V <sub>DC</sub>                  | 20          | 30      | 40      | 50      | 60      | 80      | 100      | 150      | V      |
| Maximum Average Forward Current .375"(9.5mm) lead length at Tc =85°C                             | I <sub>AV</sub>                  | 8           |         |         |         |         |         |          |          | A      |
| Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method) | I <sub>FSM</sub>                 | 85          |         |         |         |         |         |          |          | A      |
| Maximum Forward Voltage at 8.0A                                                                  | V <sub>F</sub>                   | 0.55        |         |         | 0.75    |         | 0.85    |          | 0.92     | V      |
| Maximum DC Reverse Current TJ=25°C at Rated DC Blocking Voltage TJ=100°C                         | I <sub>R</sub>                   | 0.5<br>20   |         |         |         |         |         |          |          | mA     |
| Typical Thermal Resistance                                                                       | RθJC                             | 5           |         |         |         |         |         |          |          | °C / W |
| Operating Junction Temperature Rang                                                              | T <sub>J</sub>                   | -50 to +125 |         |         |         |         |         |          |          | °C     |
| Storage Temperature Rang                                                                         | T <sub>J</sub> ,T <sub>STG</sub> | -50 to +150 |         |         |         |         |         |          |          | °C     |

## RATING AND CHARACTERISTIC CURVES

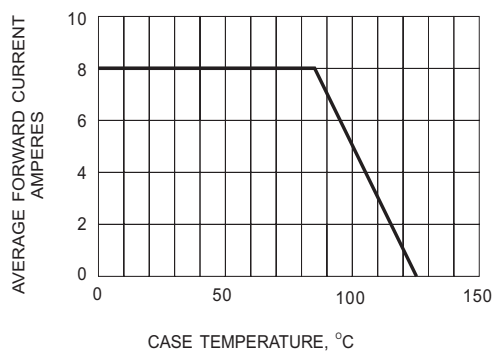


Fig.1- FORWARD CURRENT DERATING CURVE

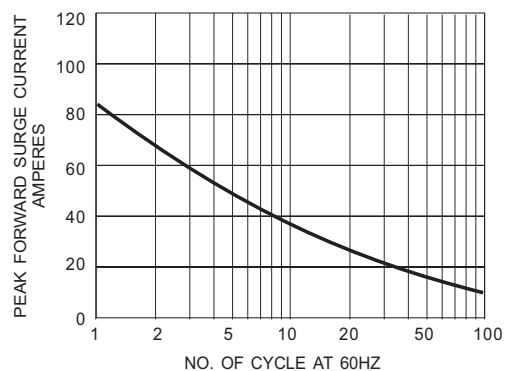


Fig.2- MAXIMUM NON - REPETITIVE SURGE CURRENT

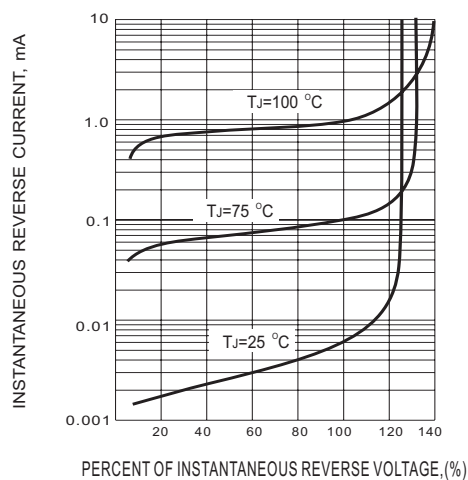


Fig.3- TYPICAL REVERSE CHARACTERISTICS

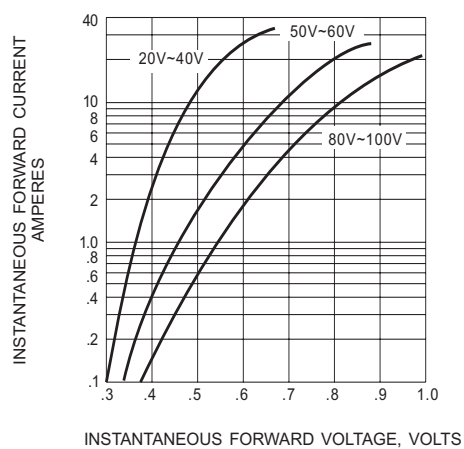


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS