

# DATA SHEET

## SD820CS~SD8100CS

### SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE** 20 to 100 Volts **CURRENT** 8 Amperes

TO-252 / DPAK

Unit : inch (mm)

#### FEATURES

- For surface mounted applications
- Low power loss, High efficiency
- Built-in strain relief
- Easy pick and place
- High surge capacity
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- Both normal and Pb free product are available :  
Normal : 80~95% Sn, 5~20% Pb  
Pb free: 98.5% Sn above

#### MECHANICAL DATA

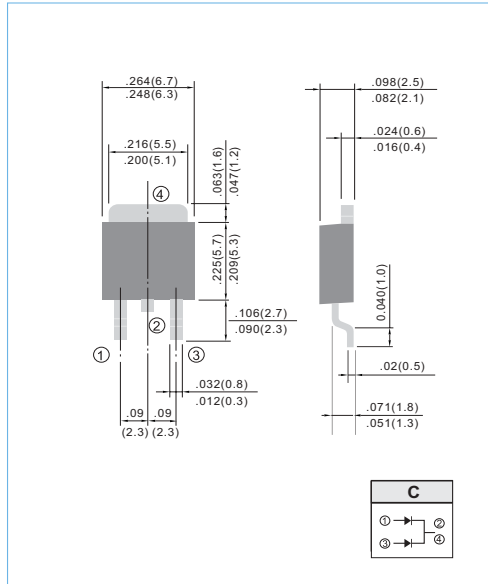
Case: D PAK/TO-252 molded plastic

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode

Standard packaging: 16mm tape (EIA-481)

Weight: 0.015 ounce, 0.4 gram.



### 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                               | SD820<br>CT | SD830<br>CT | SD840<br>CT | SD860<br>CT | SD880<br>CT | SD8100<br>CT | UNITS  |
|--------------------------------------------------------------------------------------------------|--------------------------------------|-------------|-------------|-------------|-------------|-------------|--------------|--------|
| Maximum Recurrent Peak Reverse Voltage                                                           | V <sub>RRM</sub>                     | 20          | 30          | 40          | 60          | 80          | 100          | V      |
| Maximum RMS Voltage                                                                              | V <sub>RMS</sub>                     | 14          | 21          | 28          | 42          | 56          | 70           | V      |
| Maximum DC Blocking Voltage                                                                      | V <sub>DC</sub>                      | 20          | 30          | 40          | 60          | 80          | 100          | V      |
| Maximum Average Forward Rectified Current .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 Instantaneous Forward Voltage at 4.0A (Note 1)                                           | V <sub>F</sub>                       | 0.55        |             |             | 0.75        | 0.85        |              | V      |
| Maximum DC Reverse Current TC=25 °C at Rated DC Blocking Voltage TC=100 °C                       | I <sub>R</sub>                       | 0.2<br>20   |             |             |             |             |              | mA     |
| Maximum Thermal Resistance                                                                       | R <sub>θJC</sub><br>R <sub>θJA</sub> | 3.0<br>80   |             |             |             |             |              | °C / W |
| Operating Junction and Storage Temperature Range                                                 | T <sub>J</sub> , T <sub>STG</sub>    | -50 TO +125 |             |             |             |             |              | °C     |

## RATING AND CHARACTERISTIC CURVES

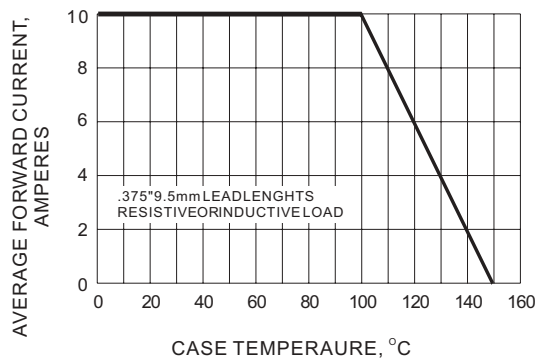


Fig.1- FORWARD CURRENT DERATING CURVE

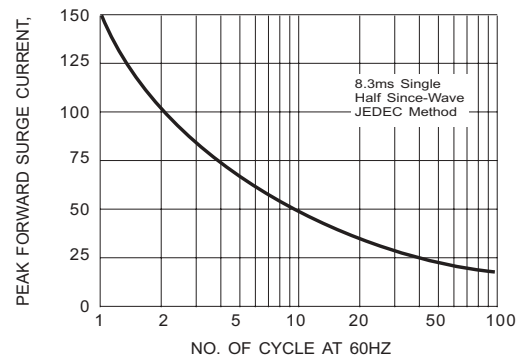


Fig.2- MAXIMUM NON - REPETITIVE SURGE CURRENT

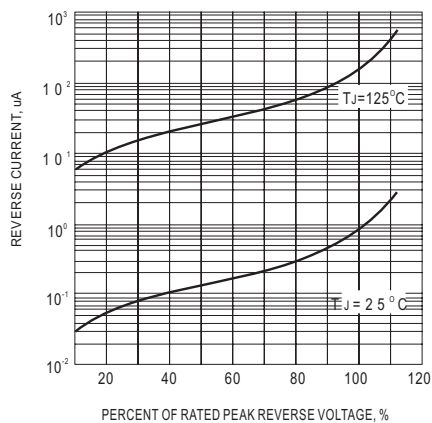


Fig.3- TYPICAL REVERSE CHARACTERISTIC

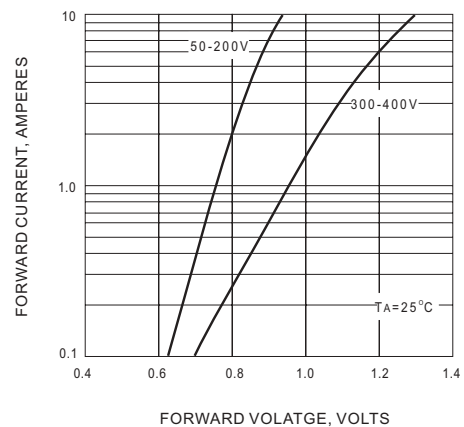


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC