



## SX32 thru SX39

### SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

**VOLTAGE** 20 to 90 Volts **CURRENT** 3.0 Amperes

SMA/DO-214AC

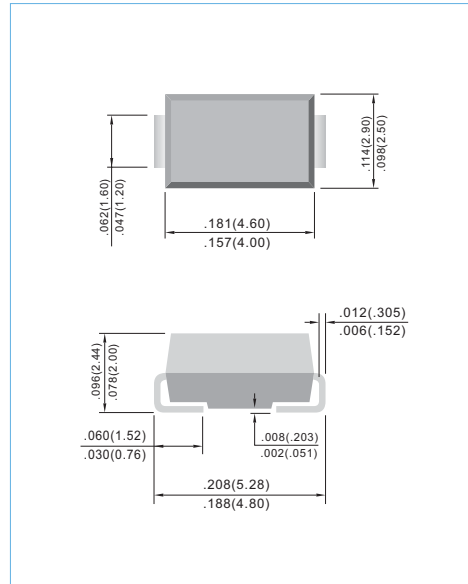
Unit: inch (mm)

#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal to silicon rectifier. majority carrier conduction
- 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: JEDEC DO-214AC molded plastic  
 Terminals:Solder plated, solderable per MIL-STD-750, Method 2026  
 Polarity: Color band denotes positive end (cathode)  
 Standard packaging: 12mm tape (EIA-481)  
 Weight: 0.002 ounce, 0.064 gram



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
 Resistive or inductive load.

| PARAMETER  | SYMBOL                             | SX32        | SX33 | SX34 | SX35 | SX36 | SX38 | SX39 | UNITS  |
|--|------------------------------------|-------------|------|------|------|------|------|------|--------|
| Maximum Recurrent Peak Reverse Voltage   | $V_{RRM}$                          | 20          | 30   | 40   | 50   | 60   | 80   | 90   | V      |
| Maximum RMS Voltage  | $V_{RMS}$                          | 14          | 21   | 28   | 35   | 42   | 56   | 64   | V      |
| Maximum DC Blocking Voltage  | $V_{DC}$                           | 20          | 30   | 40   | 50   | 60   | 80   | 90   | V      |
| Maximum Average Forward )<br>lead length at TL=75°C  | $I_{F(AV)}$                        | 3.0         |      |      |      |      |      |      | A      |
| Peak Forward Surge Current : 8.3ms single half sine-wave<br>superimposed on rated load(JEDEC method) | $I_{FSM}$                          | 80          |      |      |      |      |      |      | A      |
| Maximum Forward Voltage at 3.0A ( Note 1)  | $V_F$                              | 0.5         |      | 0.68 |      | 0.85 |      | V    |        |
| Maximum DC Reverse Current TA=25°C<br>at Rated DC Blocking Voltage TA=100°C                          | $I_R$                              | 0.5         |      |      |      | 20   |      |      | mA     |
| Maximum Thermal Resistance ( Note 2)   | $R_{\theta JL}$<br>$R_{\theta JA}$ | 20          |      |      |      | 75   |      |      | °C / W |
| Operating Junction Temperature Range   | $T_J$                              | -55 TO +125 |      |      |      |      |      |      | °C     |
| Storage Temperature Range  | $T_{STG}$                          | -55 TO +150 |      |      |      |      |      |      | °C     |

NOTES:

1. Pulse Test with PW =300µsec, 1% Duty Cycle.
2. Mounted on P.C. Board with 8.0mm<sup>2</sup> (.013mm thick) copper pad areas.



# SX32 thru SX39

## RATING AND CHARACTERISTIC CURVES

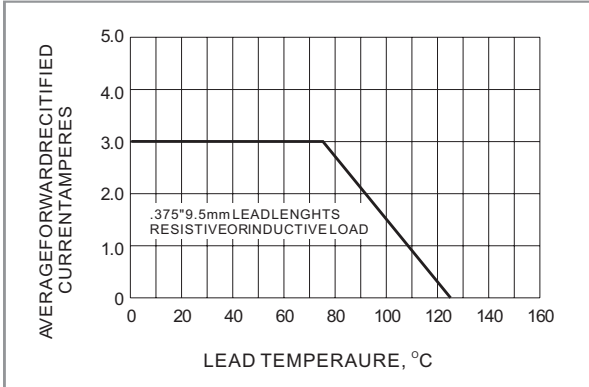


Fig.1- FORWARD CURRENT DERATING CURVE

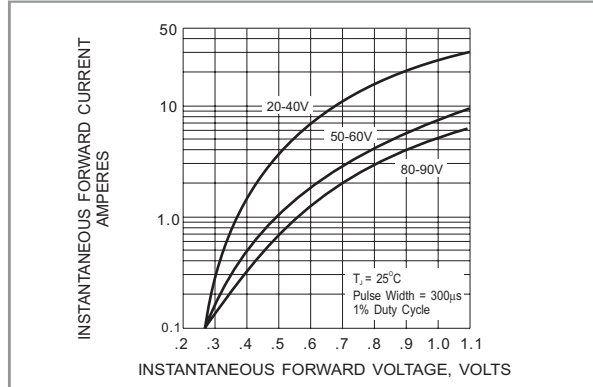


Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

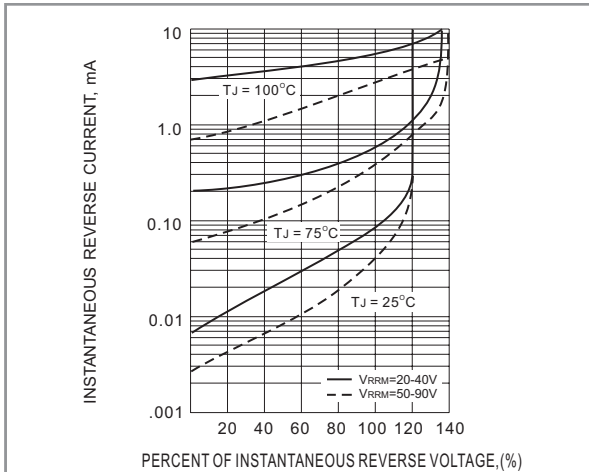


Fig.3- TYPICAL REVERSE CHARACTERISTIC

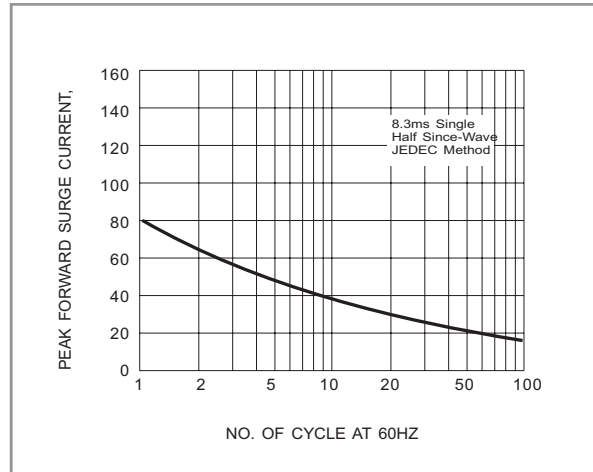


Fig.4- MAXIMUM NON - REPETITIVE SURGE CURRENT