



# DATA SHEET

## SX32E thru SX39E

### 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-O
- 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 diective request
- ESD passed devices : Air mode 15KV ,human body mode 8KV

#### MECHANICAL DATA

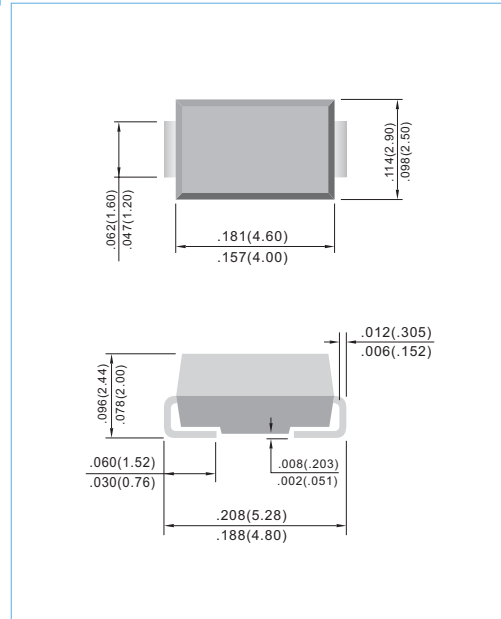
Case: JEDEC DO-214AC molded plastic

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.

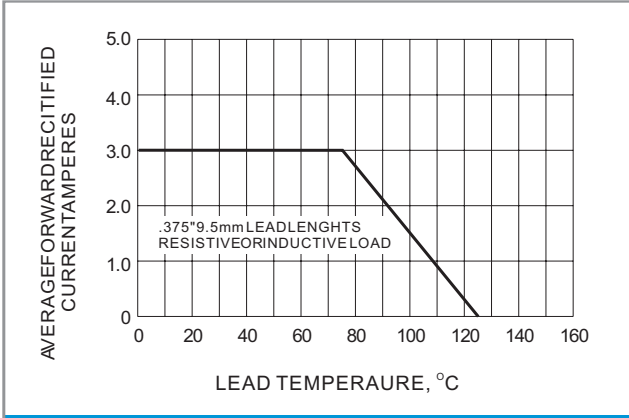
| PARAMETER  | SYMBOL                               | SX32E | SX33E | SX34E | SX35E | SX36E       | SX38E | SX39E | UNITS     |
|--|--------------------------------------|-------|-------|-------|-------|-------------|-------|-------|-----------|
| Maximum Recurrent Peak Reverse Voltage   | V <sub>RRM</sub>                     | 20    | 30    | 40    | 50    | 60          | 80    | 90    | V         |
| Maximum RMS Voltage  | V <sub>RMS</sub>                     | 14    | 21    | 28    | 35    | 42          | 56    | 64    | V         |
| Maximum DC Blocking Voltage  | V <sub>DC</sub>                      | 20    | 30    | 40    | 50    | 60          | 80    | 90    | V         |
| Maximum Average Forward Current .375" (9.5mm) lead length at T <sub>L</sub> =75°C                  | I <sub>AV</sub>                      | 3.0   |       |       |       |             |       |       | A         |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub>                     | 80    |       |       |       |             |       |       | A         |
| Maximum Forward Voltage at 3.0A (Note 1)   | V <sub>F</sub>                       | 0.5   |       |       | 0.75  |             | 0.85  |       | V         |
| Maximum DC Reverse Current T <sub>A</sub> =25°C at Rated DC Blocking Voltage T <sub>A</sub> =100°C | I <sub>R</sub>                       |       |       |       |       | 0.5<br>20   |       |       | mA        |
| Maximum Thermal Resistance (Note 2)  | R <sub>θJL</sub><br>R <sub>θJA</sub> |       |       |       |       | 20<br>75    |       |       | °C /<br>W |
| Operating Junction Temperature Range   | T <sub>J</sub>                       |       |       |       |       | -55 TO +125 |       |       | °C        |
| Storage Temperature Range  | T <sub>STG</sub>                     |       |       |       |       | -55 TO +150 |       |       | °C        |

#### NOTES:

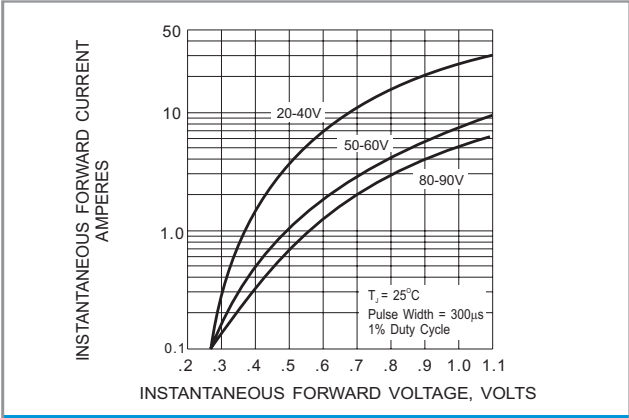
1. Pulse Test with PW =300µsec, 1% Duty Cycle.
2. Mounted on P.C. Board with 8.0mm<sup>2</sup> (.013mm thick) copper pad areas.



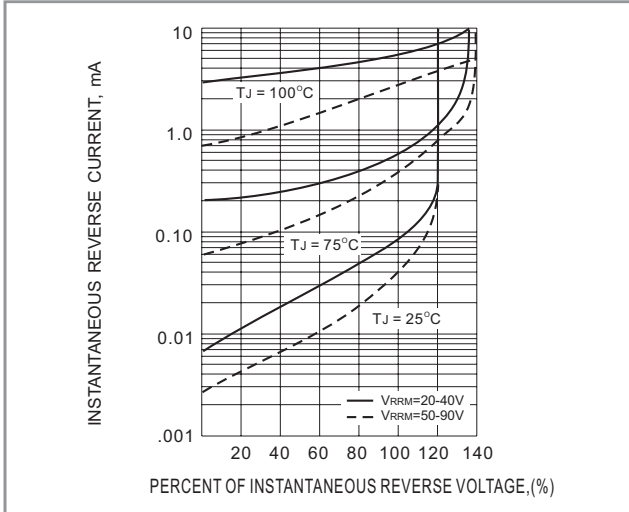
**RATING AND CHARACTERISTIC CURVES**



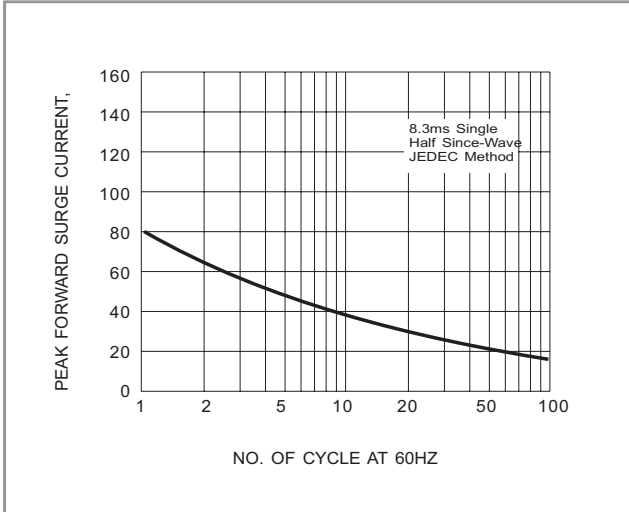
**Fig.1- FORWARD CURRENT DERATING CURVE**



**Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC**



**Fig.3- TYPICAL REVERSE CHARACTERISTIC**



**Fig.4- MAXIMUM NON - REPETITIVE SURGE CURRENT**