

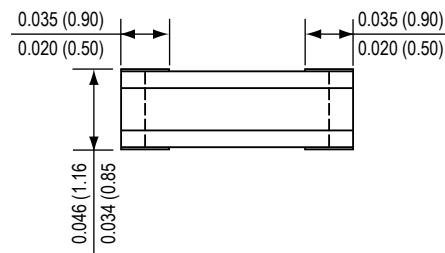
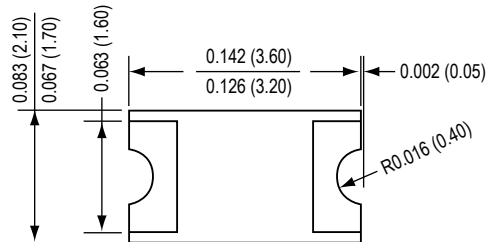
A suffix of "-C" indicates halogen-free & RoHS Compliant



1206 (SOD-123)

## FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low profile package
- Built-in strain relief
- Metal to silicon rectifier , majority carrier conduction
- Low power loss , High efficiency
- High current capability
- High surge capacity
- RoHS Compliant Product



Dimensions in inches and (millimeters)

## MECHANICAL DATA

**Case** : Packed with FRP substrate and epoxy underfilled

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

**Polarity** : Laser marking

**Weight** : 0.02 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| TYPE NUMBER   | SYMBOLS    | SCDS101    | SCDS102 | SCDS103 | UNIT        |
|---|------------|------------|---------|---------|-------------|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$  | 50         | 100     | 200     | V           |
| Working Peak Reverse Voltage  | $V_{RMS}$  | 50         | 100     | 200     | V           |
| Maximum DC Blocking Voltage   | $V_{DC}$   | 50         | 100     | 200     | V           |
| Maximum Average Forward Rectified Current   | $I_{(AV)}$ | 1          |         |         | A           |
| Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$  | 30         |         |         | A           |
| Maximum Instantaneous Forward Voltage at 2.0A (Note1)   | $V_F$      | 0.95       |         |         | V           |
| Maximum DC Reverse Current $T_a=25^{\circ}C$<br>at Rated DC Blocking Voltage $T_a=125^{\circ}C$   | $I_R$      | 1<br>50    |         |         | $\mu A$     |
| Maximum reverse recovery time   | $T_{rr}$   | 25         |         |         | nS          |
| Typical Junction Capacitance (Note 1.)  | $C_j$      | 10         |         |         | pF          |
| Operating Temperature Range   | $T_J$      | -50 ~ +125 |         |         | $^{\circ}C$ |
| Storage Temperature Range   | $T_{STG}$  | -65 ~ +150 |         |         | $^{\circ}C$ |

### NOTES:

1. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.

2. Marking:

SCDS101 : 77ZA

SCDS102 : 77ZB

SCDS103 : 77ZD

FIG.1 - FORWARD CURRENT DERATING CURVE

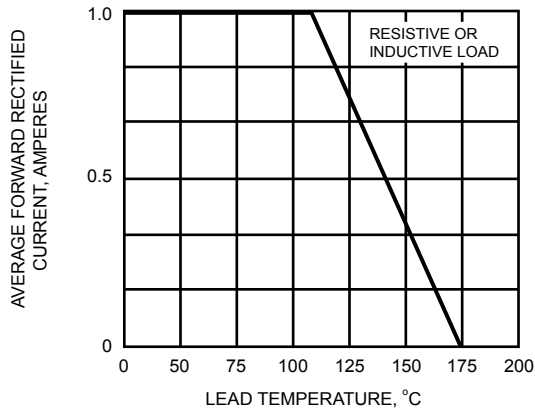


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

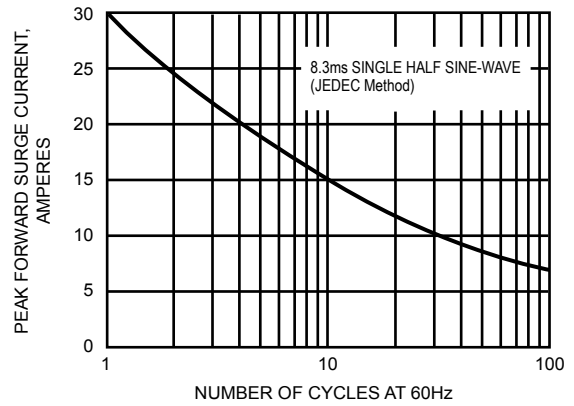


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

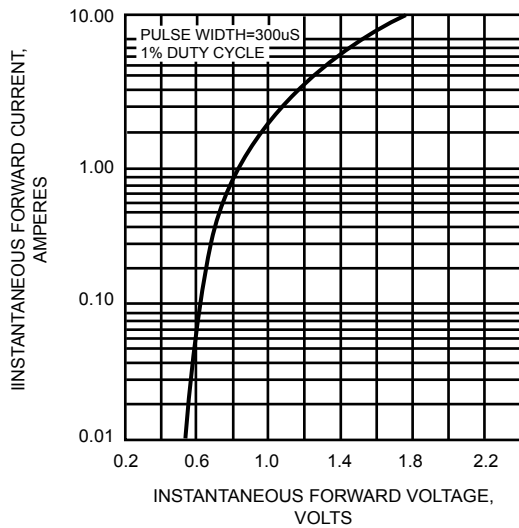


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

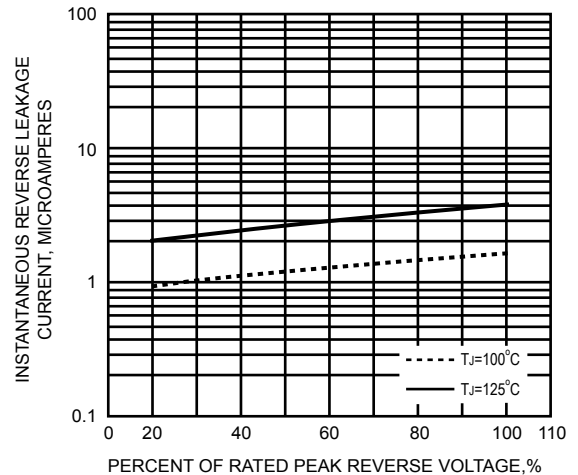


FIG.5 - TYPICAL JUNCTION CAPACITANCE

