

SURFACE MOUNT SILICON RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere

FEATURES

- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.016 gram

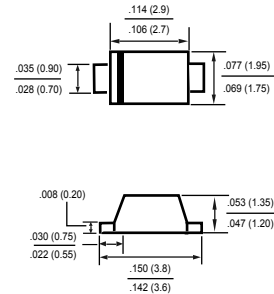
MECHANICAL DATA

- * Epoxy : Device has UL flammability classification 94V-0

NEW RELEASE



SOD-123F



Dimensions in inches and (millimeters)

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%.

MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

| RATINGS | SYMBOL | SA1 | SA2 | SA3 | SA4 | SA5 | SA6 | SA7 | UNITS |
|---|-----------------------------------|--------------|-----|-----|-----|-----|-----|------|-------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Current at TA = 55°C | I _O | 1.0 | | | | | | | Amps |
| Peak Forward Surge Current I _{FSM} (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 25 | | | | | | | Amps |
| Typical Thermal Resistance (Note 3) | R _{θJA} | 85 | | | | | | | °C/W |
| | R _{θJL} | 25 | | | | | 30 | | |
| Typical Junction Capacitance (Note 1) | C _J | 8 | | | | | | | pF |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55 to + 150 | | | | | | | °C |

ELECTRICAL CHARACTERISTICS(@TA=25 °C unless otherwise noted)

| CHARACTERISTICS | SYMBOL | SA1 | SA2 | SA3 | SA4 | SA5 | SA6 | SA7 | UNITS | |
|---|----------------|-------------------------|-----|-----|-----|-----|-----|-----|-------|-------|
| Maximum Forward Voltage at 1.0A DC | V _F | 1.1 | | | | | | | Volts | |
| Maximum DC Average Reverse Current at Rated DC Blocking Voltage | I _R | @T _A = 25°C | | | | | | | 2.0 | μAmps |
| | | @T _A = 100°C | | | | | | | 50 | μAmps |

- NOTES : 1. Measured at 1.0 MHz and applied average voltage of 4.0VDC
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".
3. Thermal Resistance: Mounted on PCB.

RATING AND CHARACTERISTICS CURVES (SA1 THRU SA7)

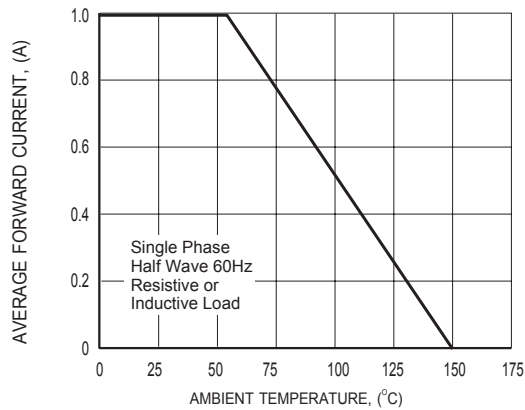


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

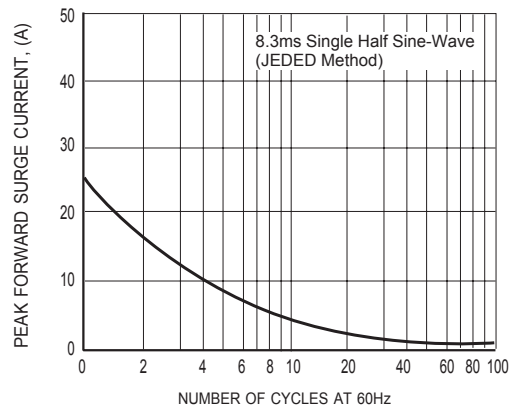


FIG.2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

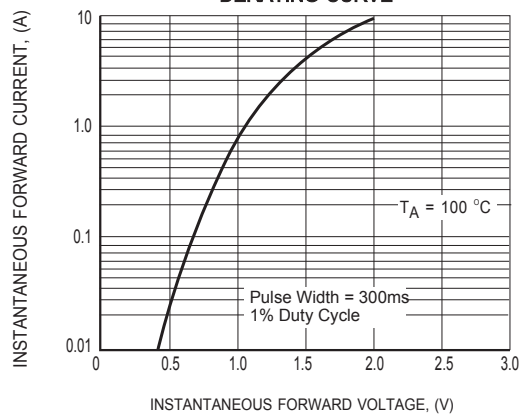


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

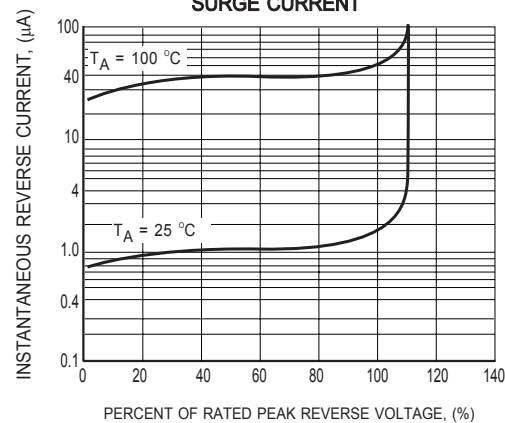


FIG.4 TYPICAL REVERSE CHARACTERISTICS

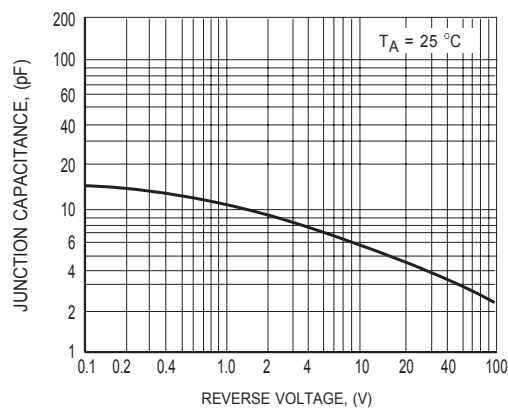
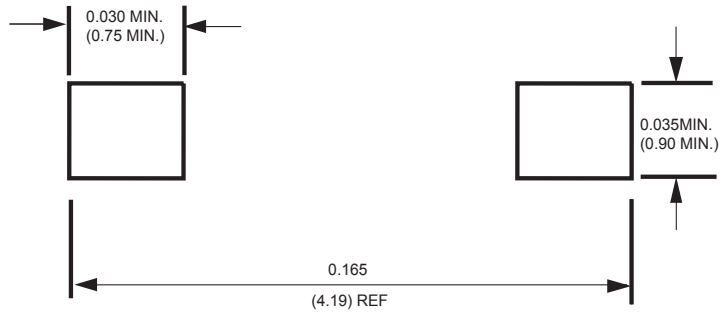


FIG.5 TYPICAL JUNCTION CAPACITANCE

Mounting Pad Layout



Dimensions in inches and (millimeters)

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