

SM4001 THRU SM4007

TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SILICON RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 1.0 Ampere

FEATURES

- * Ideal for surface mounted applications
- * Low leakage current
- * Glass passivated junction

MECHANICAL DATA

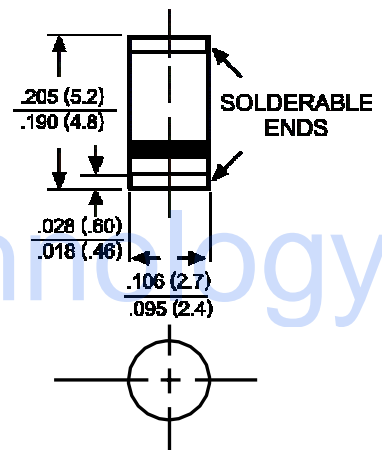
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Solder plated solderable per MIL-STD-202E, Method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.12 gram

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%.



SM-1(DO-213AB)



Dimensions in inches and (millimeters)

| | SYMBOL | SM4001 | SM4002 | SM4003 | SM4004 | SM4005 | SM4006 | SM4007 | 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 T _A = 75°C | I _O | 1.0 | | | | | | | Amps |
| Peak Forward Surge Current I _{FM} (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 30 | | | | | | | Amps |
| Maximum Forward Voltage at 1.0A DC | V _F | 1.1 | | | | | | | Volts |
| Maximum DC Reverse Current at | I _R | 50 | | | | | | | uAmps |
| Rated DC Blocking Voltage | | | | | | | | | |
| Maximum Thermal Resistance (Note 2) | R _{θJL} | 20 | | | | | | | °C/W |
| Typical Junction Capacitance (Note 1) | C _J | 15 | | | | | | | pF |
| Operating and Storage Temperature Range | T _J , T _{STG} | -65 to + 175 | | | | | | | °C |

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0VDC
2. Thermal resistance (Junction to Ambient),.24in² (6.0mm²) copper pads to each terminal.

RATING AND CHARACTERISTIC CURVES (SM4001 THRU SM4007)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

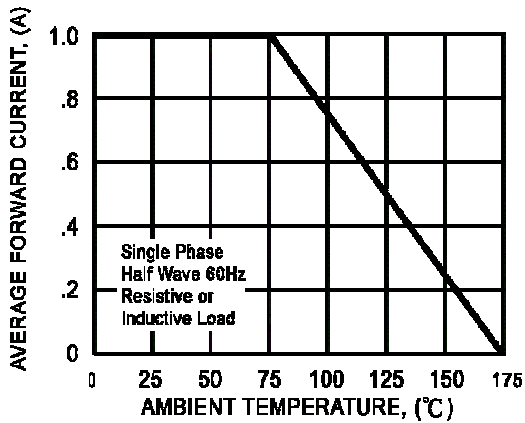


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

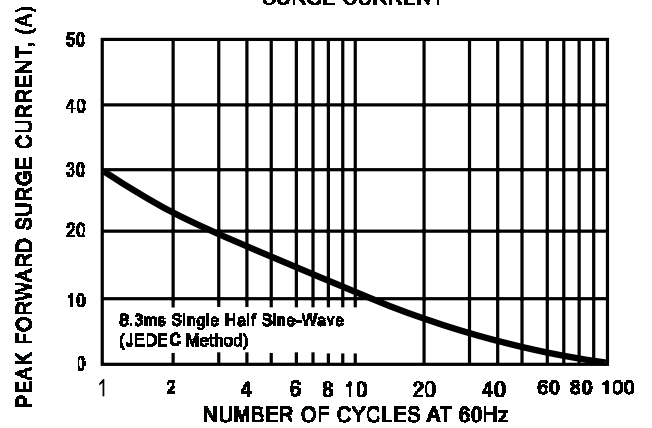


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

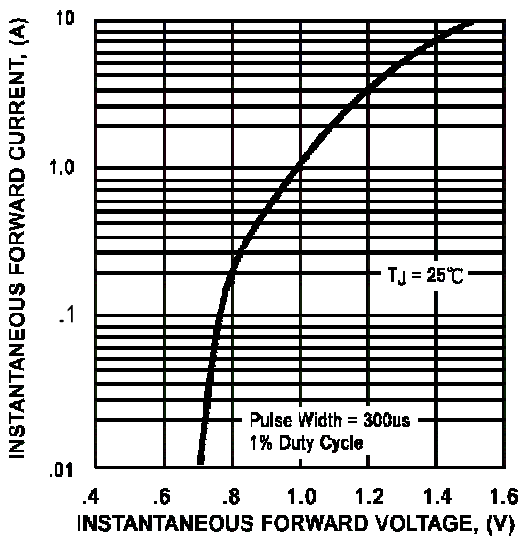


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

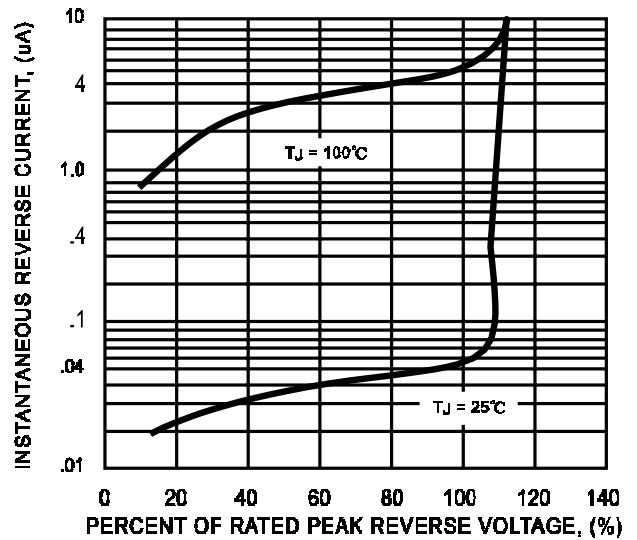


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

