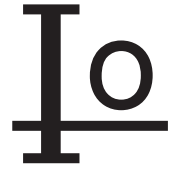


SM4001 THRU SM4007



1.0 AMP SURFACE MOUNT SILICON RECTIFIERS



FEATURES

- * Low forward voltage drop
- * Low leakage current
- * High reliability

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Metallurgically bonded construction
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.015 grams

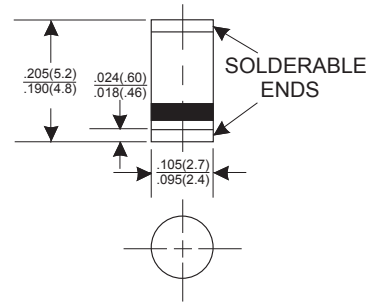
VOLTAGE RANGE

50 to 1000 Volts

CURRENT

1.0 Ampere

SM-1



Dimensions in inches and (millimeters)

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 | SM4001 | SM4002 | SM4003 | SM4004 | SM4005 | SM4006 | SM4007 | UNITS | |
|--|--------|--------|--------|--------|--------|--------|--------|------------|------|
| Maximum Recurrent Peak Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| Maximum RMS Voltage | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V | |
| Maximum DC Blocking Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| Maximum Average Forward Rectified Current | | | | | | | | | |
| See Fig. 2 | | | | | | | | 1.0 | A |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | | | | | | | | 30 | A |
| Maximum Instantaneous Forward Voltage at 1.0A | | | | | | | | 1.1 | V |
| Maximum DC Reverse Current | | | | | | | | 5.0 | μA |
| at Rated DC Blocking Voltage | | | | | | | | 50 | μA |
| Typical Junction Capacitance (Note 1) | | | | | | | | 15 | pF |
| Typical Thermal Resistance RθJA (Note 2) | | | | | | | | 50 | °C/W |
| Operating and Storage Temperature Range T _J , T _{STG} | | | | | | | | -65 — +175 | °C |

NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance from Junction to Ambient.

RATING AND CHARACTERISTIC CURVES (SM4001 THRU SM4007)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

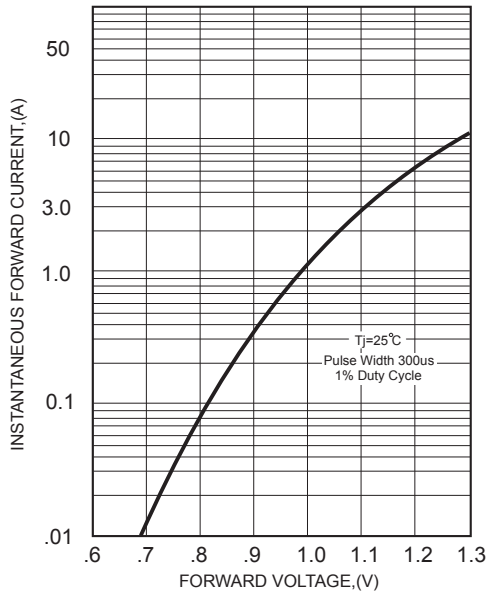


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

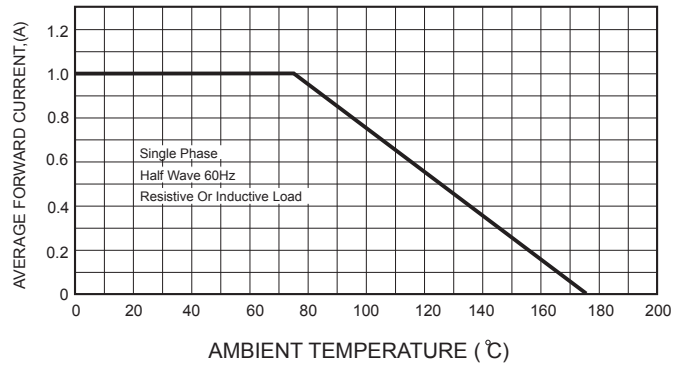


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

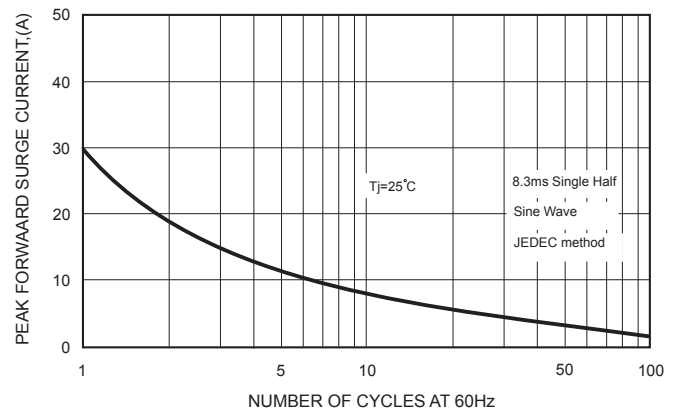


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

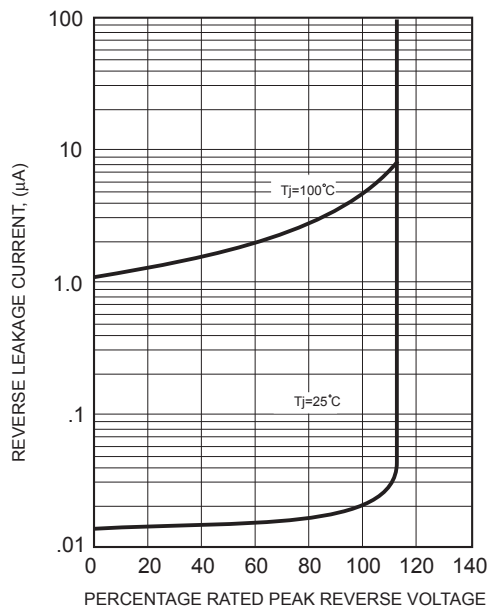


FIG.5-TYPICAL JUNCTION CAPACITANCE

