



SMA4001-SMA4007

SURFACE MOUNT SILICON RECTIFIER

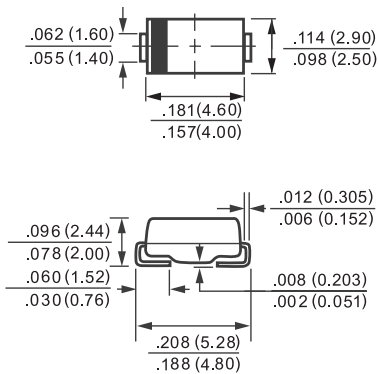
VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 0.064 gram

FEATURES

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



SMA(DO-214AC)



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%.

PARAMETER	SYMBOL	SMA4001	SMA4002	SMA4003	SMA4004	SMA4005	SMA4006	SMA4007	UNITS
		GS1A/M1	GS1B/M2	GS1D/M3	GS1G/M4	GS1J/M5	GS1K/M6	GS1M/M7	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input 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 $T_A = 75^\circ\text{C}$	I_O	1.0							Amps
Peak Forward Surge Current: 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 Rated DC Blocking Voltage	@ $T_A = 25^\circ\text{C}$	5.0							uAmps
	@ $T_A = 125^\circ\text{C}$	50							
Maximum Reverse Recovery Time (Note 1)	t_{rr}	2.5							uSec
Typical Junction Capacitance (Note 2)	C_J	30							pF
Typical Thermal Resistance (Note 3)	$R \theta_{JL}$	15							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							$^\circ\text{C}$

- Notes: 1. Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$
 2. Thermal Resistance from Junction to Ambient, .24" (6.0mm²) copper pads to each Terminal.
 3. Measured at 1.0MHz and applied reverse voltage of 4.0V_{DC}



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RATING AND CHARACTERISTIC CURVES

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

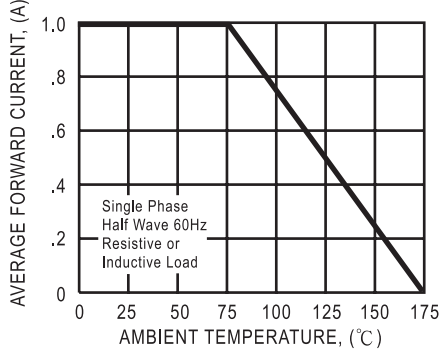


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

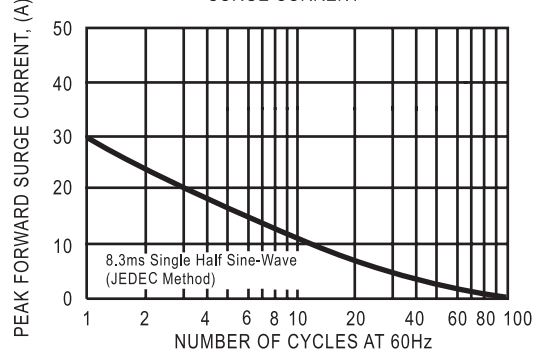


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

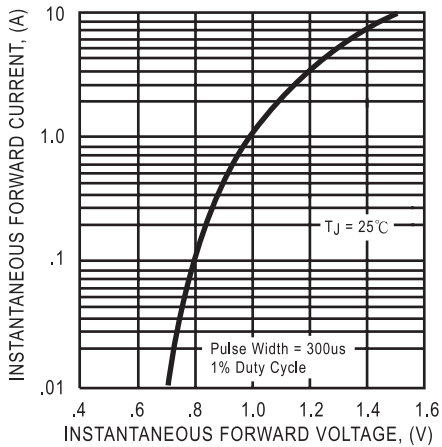


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

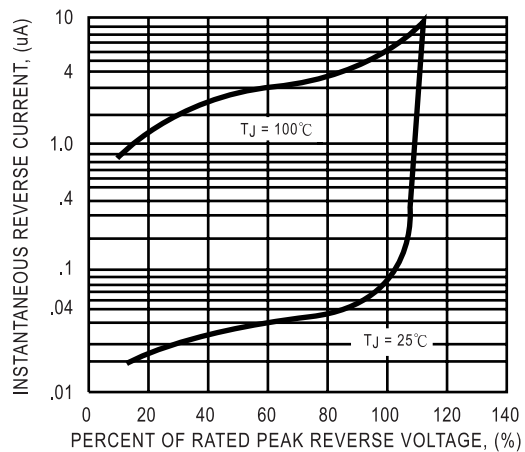


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

