



MELFSMA4001-4007

SURFACE MOUNT SILICON RECTIFIER

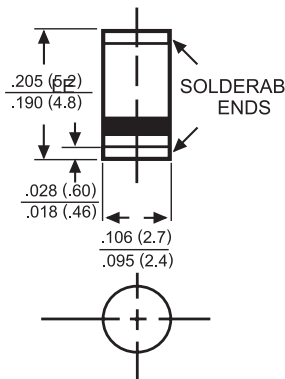
VOLTAGE RANGE - 50 to 1000 Volts CURRENT - 1.0 Ampere

MECHANICAL DATA

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

FEATURES

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



SM-1(DO-213AB)



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	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 $T_A = 25^\circ C$	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	@ $T_A = 25^\circ C$	5.0							uAmps
	@ $T_A = 125^\circ C$	50							
Typical Junction Capacitance (Note 1)	C_J	15							pF
Typical Thermal Resistance (Note 2)	$R \theta_{JL}$	20							$^\circ C/W$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 TO +175							$^\circ C$

Notes: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V_{DC}.
 2. Thermal Resistance from Junction to Ambient, .24²(6.0mm²) copper pad to each Terminal.



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RATING AND CHARACTERISTIC CURVES

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

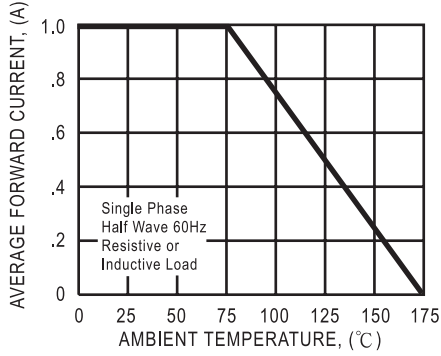


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

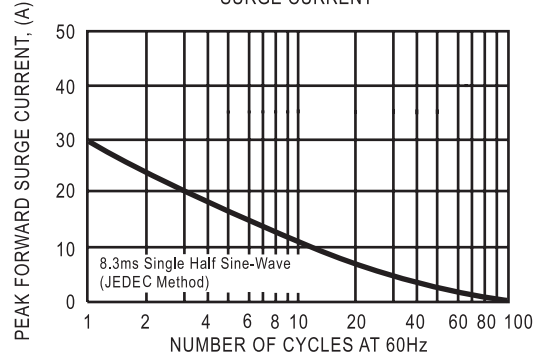


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

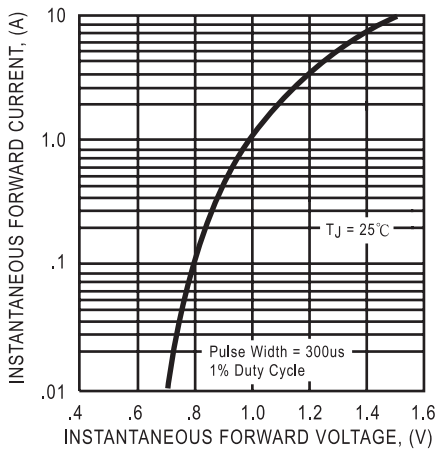


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

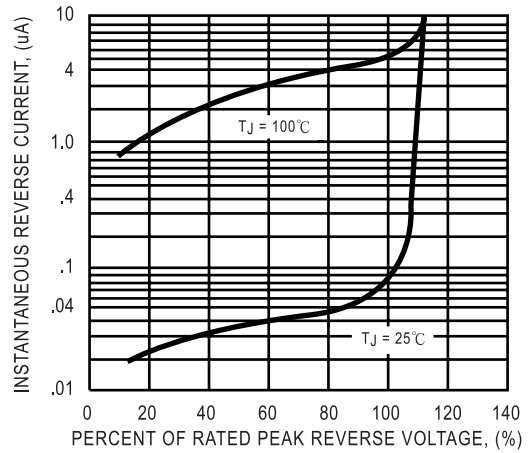


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

