MELFSMA4001-4007 *SURFACE MOUNT SILICON RECTIFIER*

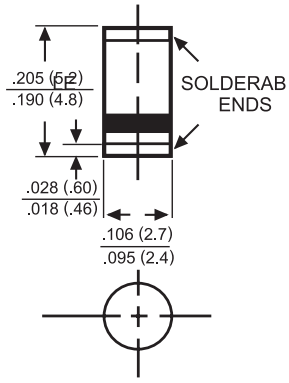
VOLTAGE RANGE - 50 to 1000 Volts CURRENT - 1.0 Ampere

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

Notes: 1.Measured at 1.0 MHz and applied reverse voltage of 4.0V_{DC}.
2. Thermal Resistance from Junction to Ambient, .24$^{in^2}$(6.0mm^2) copper pad to each Terminal.

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RATING AND CHARACTERISTIC CURVES

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

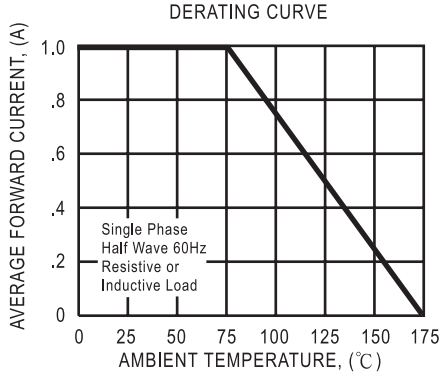


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

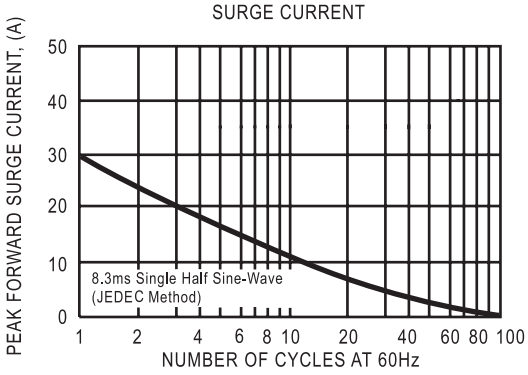


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

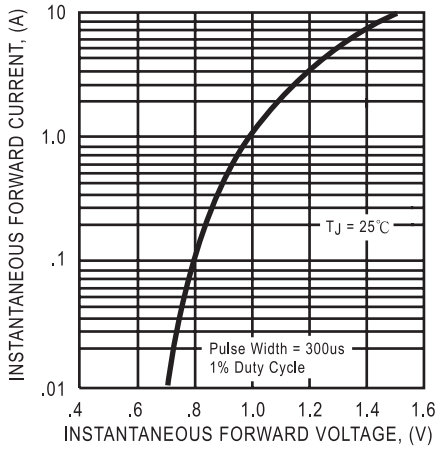


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

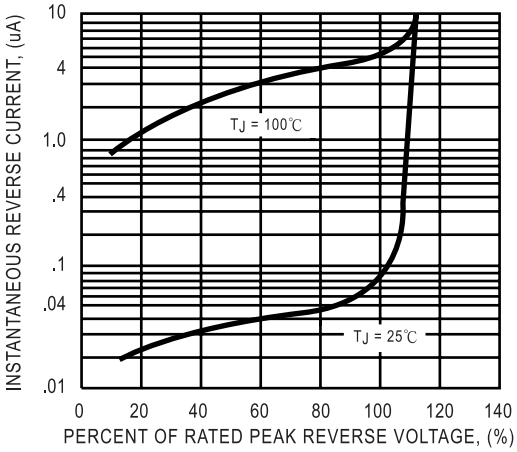
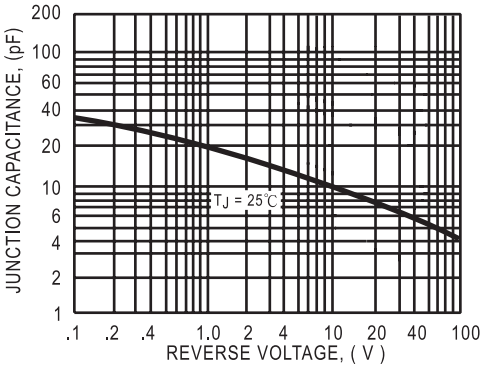


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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