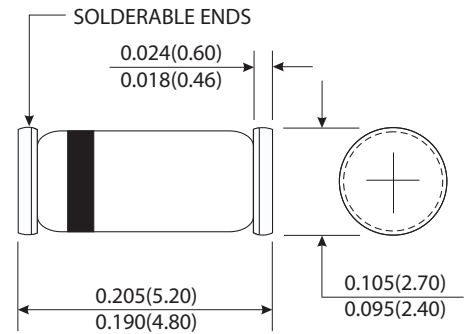


### Features

- The plastic package carries Underwrites Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Glass passivated junction
- High temperature soldering guaranteed: 250°C/10 seconds, at terminals

### MELF (DO-41)



Dimensions in inches and (millimeters)

### Mechanical Data

- Case : JEDEC MELF(DO-41) molded plastic body
- Terminals : Lead solderable per MIL-STD-750, method 2026
- Polarity : Color band denotes cathode end
- Mounting Position : Any
- Weight : 0.0041 ounce, 0.116 gram

### Maximum Ratings And Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified, Single phase, half wave 60Hz, resistive or inductive load. For capacitive load, derate by 20%)

	Symbols	SM 4001	SM 4002	SM 4003	SM 4004	SM 4005	SM 4006	SM 4007	Units
Maximum recurrent peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current 0.375"(9.5mm) lead length at T <sub>A</sub> =75°C	I <sub(av)< sub=""></sub(av)<>	1.0							Amp
Peak forward surge current 8.3ms half sine wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	30.0							Amps
Maximum instantaneous forward voltage at 1.0A	V <sub>F</sub>	1.1							Volts
Maximum reverse current at rated voltage	T <sub>A</sub> =25°C	5.0							μ A
	T <sub>A</sub> =125°C	50.0							
Typical thermal resistance (Note 2) (Note 3)	R <sub>θ JA</sub>	75.0							°C/W
	R <sub>θ JL</sub>	30.0							
Typical junction capacitance (Note 1)	C <sub>J</sub>	15.0							pF
Maximum DC blocking voltage temperature	T <sub>A</sub>	+150							°C
Operating and storage temperature range	T <sub>J</sub> T <sub>STG</sub>	-65 to +150							°C

#### Notes:

- (1) Measured at 1MHz and applied reverse voltage of 4.0V DC.
- (2) Thermal resistance from junction to ambient, 0.24 × 0.24"(6.0 × 6.0mm) copper pads to each terminals
- (3) Thermal resistance from junction to terminals, 0.24 × 0.24"(6.0 × 6.0mm) copper pads to each terminals

## RATINGS AND CHARACTERISTIC CURVES SM4001 THRU SM4007

FIG.1-FORWARD CURRENT DERATING CURVE

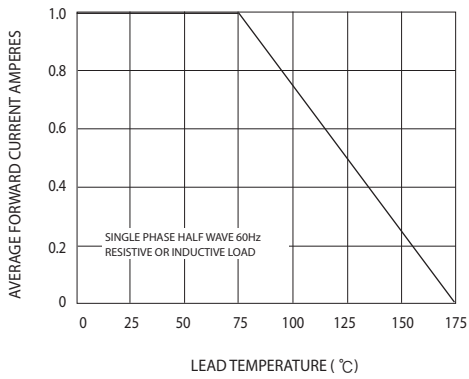


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

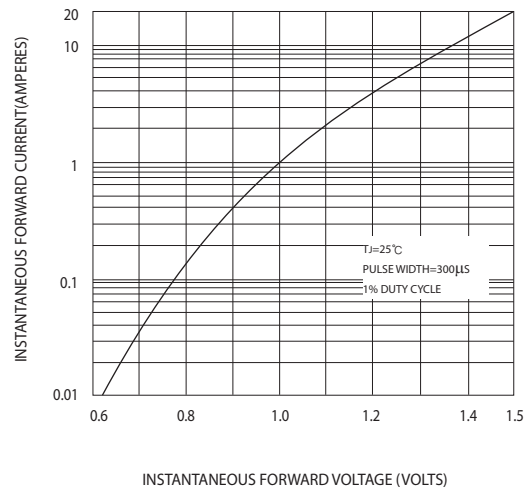


FIG.3-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

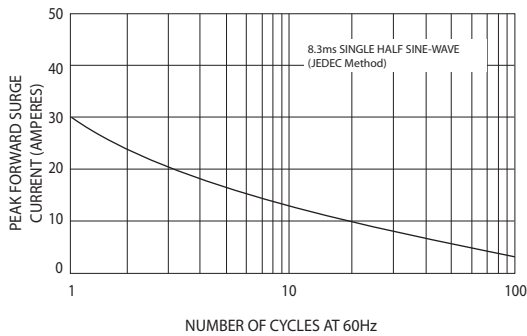


FIG.4-TYPICAL REVERSE CHARACTERISTICS

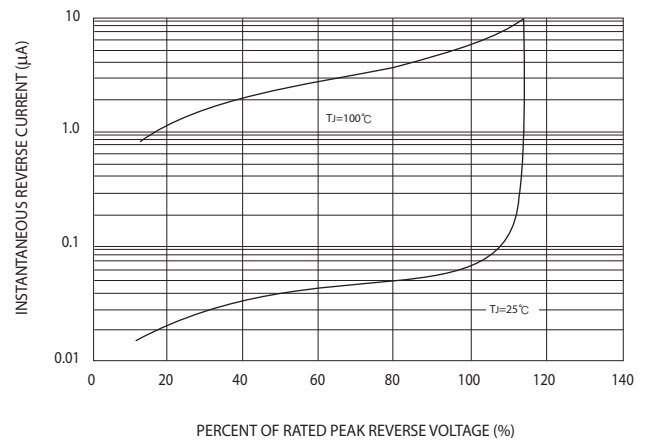


FIG.5-TYPICAL JUNCTION CAPACITANCE

