

SM101 THRU SM107

CURRENT 1.0 Ampere
VOLTAGE 50 to 1000 Volts

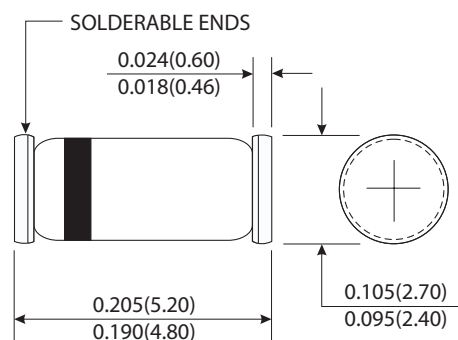
Features

- 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

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

MELF (DO-41)



Dimensions in inches and (millimeters)

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	SM101	SM102	SM103	SM104	SM105	SM106	SM107	Units
Maximum recurrent peak reverse voltage		VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage		VRMS	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage		VDC	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current 0.375"(9.5mm) lead length at TA=55℃		IAV)	1.0							Amp
Peak forward surge current 8.3ms half sine wave superimposed on rated load (JEDEC method)		IFSM	30.0							Amps
Maximum instantaneous forward voltage at 1.0A		VF	1.3							Volts
Maximum DC reverse current at rated DC blocking voltage	TA=25℃	IR	50							μA
	TA=100℃		100							
Maximun reverse recovery time (Note 1)		trr	150				250	500		ns
Typical thermal resistance (Note 2)		RθJA	5.0							℃/W
Operating and storage temperature range		TJ TSTG	-55 to +175							℃

Notes:

- (1) Reverse recovery time test condition : $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$
- (2) Measured at 1MHz and applied reverse voltage of 4.0V DC.

RATINGS AND CHARACTERISTIC CURVES SM101 THRU SM107

FIG.1-TYPICAL FORWARD CHARACTERISTICS

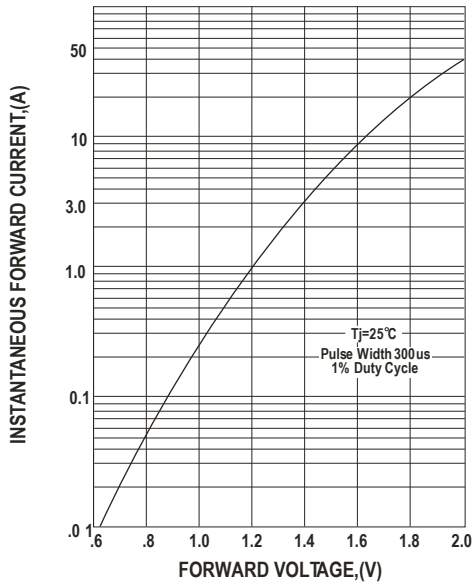


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

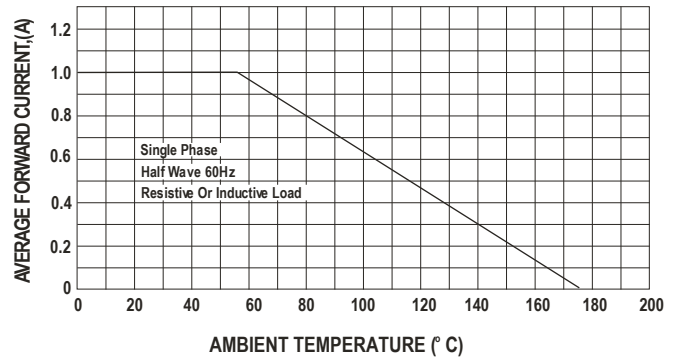
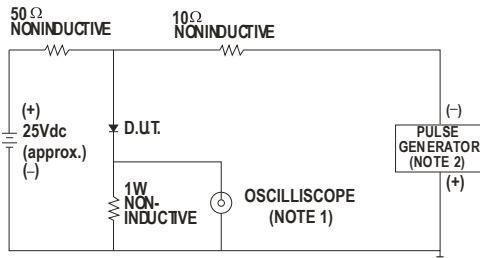


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time = 7ns max., Input Impedance = 1 megohm. 22pF.
2. Rise Time = 10ns max., Source Impedance = 50 ohms.

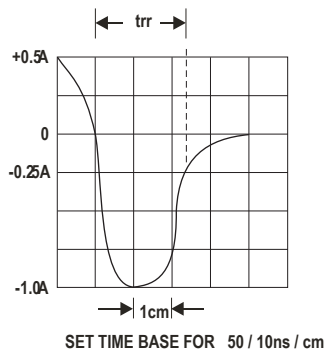


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

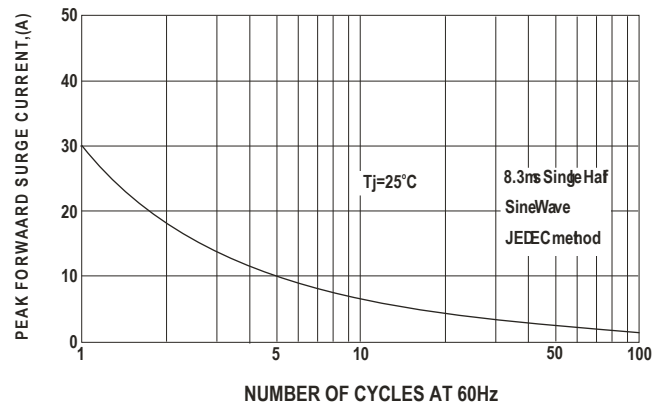


FIG.5-TYPICAL JUNCTION CAPACITANCE

