DEC

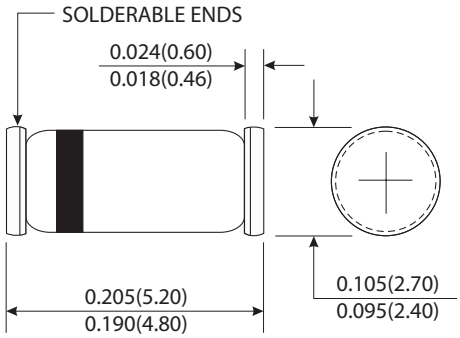
SM101 THRU SM107

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℃/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℃ 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	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 0.375"(9.5mm) lead length at T_A=55℃	$I_{(AV)}$	1.0							Amp
Peak forward surge current 8.3ms half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	30.0							Amps
Maximum instantaneous forward voltage at 1.0A	V_F	1.3							Volts
Maximum DC reverse current at rated DC blocking voltage, T_A=25℃	I_R	50							μA
Maximum DC reverse current at rated DC blocking voltage, T_A=100℃	I_R	100							μA
Maximun reverse recovery time (Note 1)	trr	150				250	500		ns
Typical thermal resistance (Note 2)	$R_{\Theta JA}$	5.0							℃/W
Operating and storage temperature range	T_J T_{STG}	-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.

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RATINGS AND CHARACTERISTIC CURVES SM101 THRU SM107

FIG.1-TYPICAL FORWARDCHARACTERISTICS

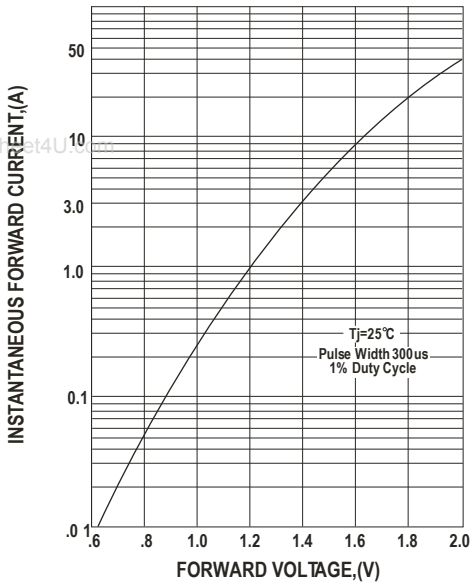


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

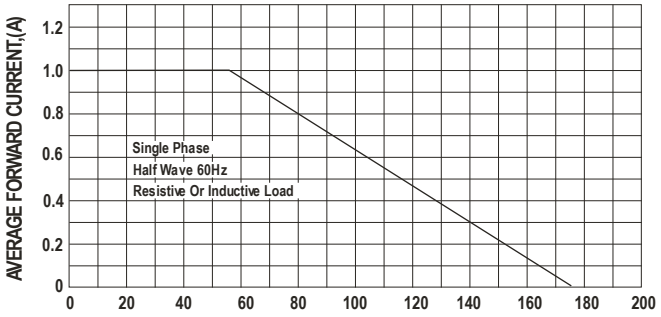
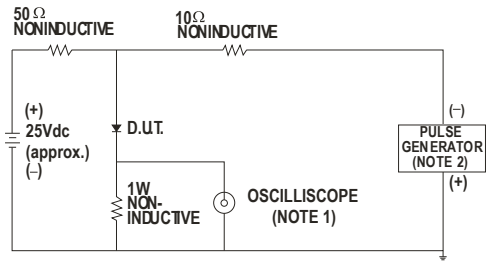
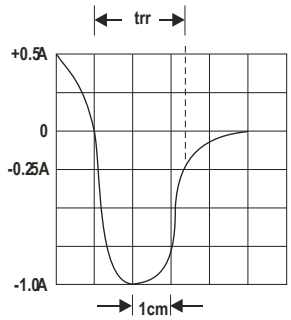


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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



SET TIME BASE FOR 50 / 10ns / cm

FIG.4-MAXIMUM NON-REPETITIVE FORWARDSURGE CURRENT

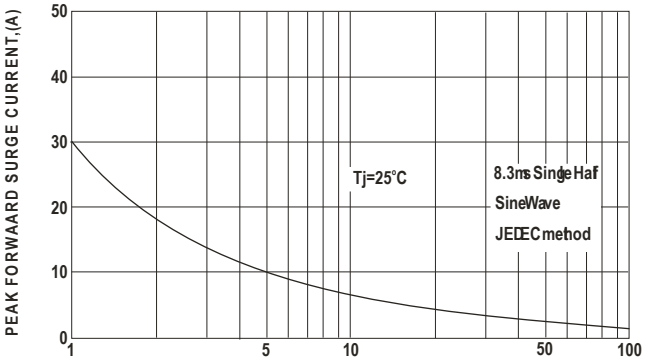


FIG.5-TYPICAL JUNCTION CAPACITANCE