LITE ON POWER SEMICONDUCTOR

SM4001 thru SM4007

SURFACE MOUNTED RECTIFIERS

REVERSE VOLTAGE - **50** to **1000** Volts
FORWARD CURRENT - **1.0** Ampere

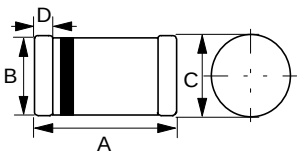
FEATURES

- Glass Passivated junction
- Low forward voltage
- Low forward voltage drop
- For surface mounted applications
- Plastic material has UL flammability classification 94V-0

MECHANICAL DATA

- Case : MELF, Molded plastic
- Polarity : Indicated by cathode band
- Weight : 0.005 ounces, 0.016 grams
- Mounting position: Any

SM-1



SM-1		
DIM.	MIN.	MAX.
A	4.80	5.20
B	2.20	2.50
C	2.30	2.70
D	0.40	0.60
All Dimensions in millimeter		

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 current by 20%

CHARACTERISTICS	SYMBOL	SM4001	SM4002	SM4003	SM4004	SM4005	SM4006	SM4007	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @T_A =75 ℃	$I_{(AV)}$	1.0							A
Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load (JEDEC METHOD)	I_{FSM}	30							A
Maximum forward Voltage at 1.0A DC	V_F	1.1							V
Maximum DC Reverse Current @T_J =25℃	I_R	5.0							uA
at Rated DC Blocking Voltage @T_J =100℃		50							uA
Typical Junction Capacitance (Note 1)	C_J	15							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	50							℃/W
Operating Temperature Range	T_J	-55 to +150							℃
Storage Temperature Range	T_{STG}	-55 to +150							℃

NOTES : 1.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2.Thermal Resistance junction to Ambient.

REV. 1, 24-May-2000

FIG.1 - FORWARD CURRENT DERATING CURVE

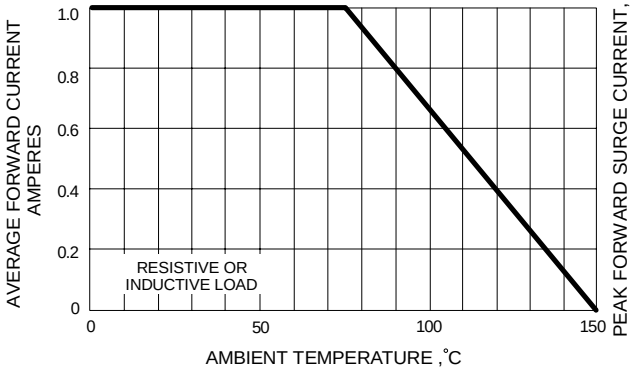


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

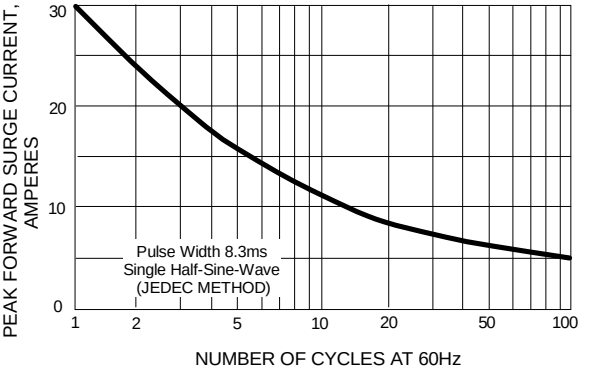


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

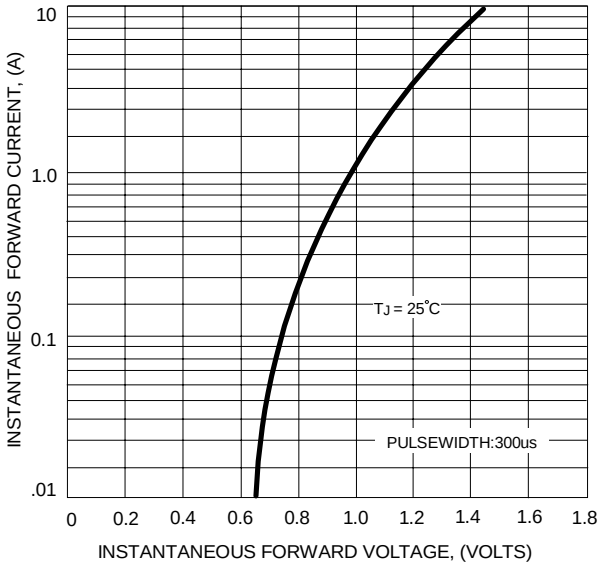


FIG.4 - TYPICAL JUNCTION CAPACITANCE