

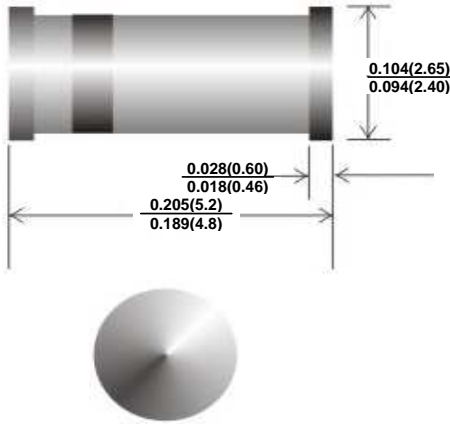


SM4001 THRU SM4007

SURFACE MOUNT GENERAL RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

MELF(DO-213AB)



Dimensions in inches and (millimeters)

FEATURES

- ◆ For surface mounted applications
- ◆ Low profile package
- ◆ Ideal for automated placement
- ◆ High temperature soldering : 260°C /10 seconds at terminals
- ◆ In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

Case: MELF, Molded plastic

Terminals: Solderable per MIL-STD-750 Method 2026

Approx. Weight: 0.15 gram

Mounting position: Any

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 current derate by 20%.

PARAMETER	SYMBOLS	SM 4001	SM 4002	SM 4003	SM 4003	SM 4005	SM 4006	SM 4007	UNITS
Maximum repetitive 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
Minimum Reverse Breakdown Voltage	V_R	50	100	200	400	600	800	1000	Volts
Average Rectified current at $T_L = 75^\circ\text{C}$	$I_{F(AV)}$	1.0							Amp
Non-repetitive Peak Forward Surge Current at 1=8.3ms	I_{FSM}	30							Amps
Maximum Forward Voltage at $I_F=1.0A$	V_F	1.1							Volts
Reverse Leakage Current at V_{RRM}	I_R	5.0							μA
Typical Junction Capacitance (NOTE 1)	C_J	15							pF
Typical Thermal Resistance (NOTE 2)	$R_{\theta JA}$	50							$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	- 55 TO +175							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 55 TO +175							$^\circ\text{C}$

- Note:**
1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 2. Mounted with minimum recommended padsize PCBBoard FR4.
 3. $T_J=25^\circ\text{C}$ unless otherwise specified.



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RATINGS AND CHARACTERISTIC CURVES

FIG. 1- FORWARD CURRENT DERATING CURVE

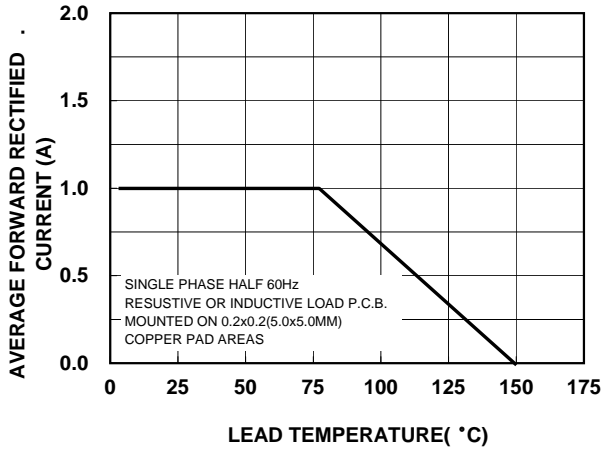


FIG. 2-TYPICAL JUNCTION RATINGS

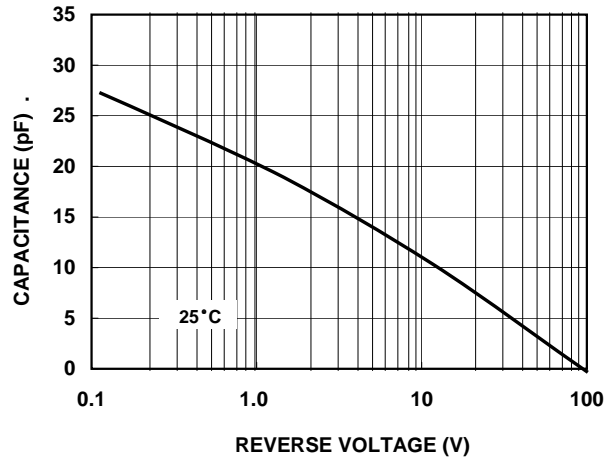


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

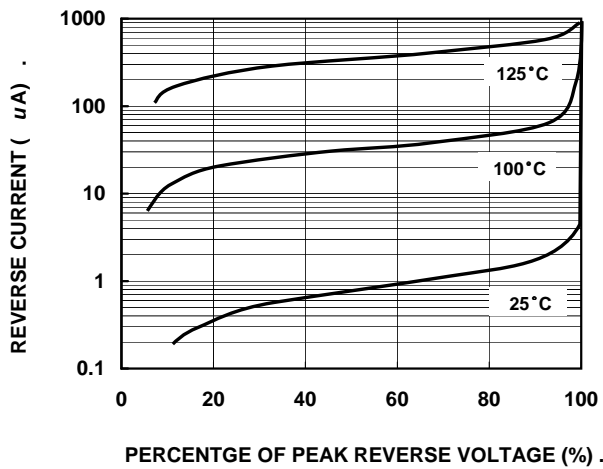


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

