

Standard Surface Mounted Rectifiers

Reverse Voltage - 50 to 1000 V

Forward Current - 1.0 A

FEATURES

- ◆The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆Idea for surface mounted application
- ◆Glass passivated junction chip
- ◆Low reverse leakage
- ◆High forward surge current capability
- ◆High temperature soldering guaranteed 260°C/10 seconds at terminals

MECHANICAL DATA

- ◆Case : Molded plastic body
- ◆Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- ◆Polarity : Polarity symbol marking on body
- ◆Mounting Position : Any
- ◆Weight : 0.0045 ounce, 0.1296 grams

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%.



DO-213AB/MELF

Parameter	Symbols	SM4001	SM4002	SM4003	SM4004	SM4005	SM4006	SM4007	Units
Maximum Repetitive 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 at $T_L=100^\circ\text{C}$	$I_{(AV)}$	1.0							A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage at 1.0 A	V_F	1.0							V
Maximum DC reverse current at rated DC blocking voltage $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	I_R	2 200							μA
Typical junction capacitance (Note1)	C_J	15							pF
Typical Thermal Resistance	$R_{\theta JA}$	75							$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-55 ~ +150							$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 ~ +150							$^\circ\text{C}$

Note:1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

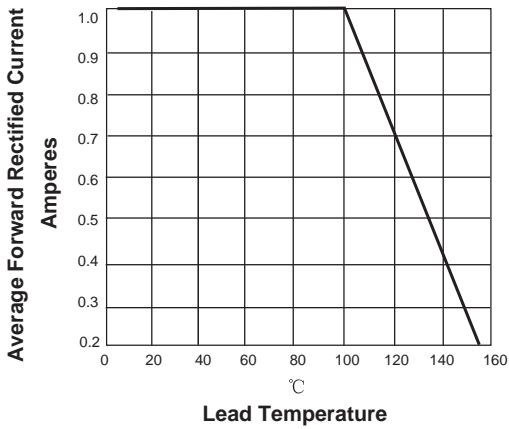


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG

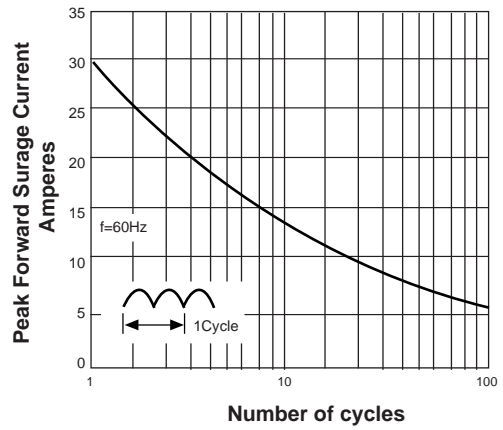


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

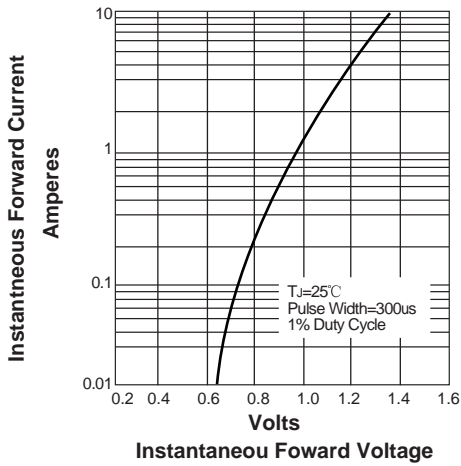
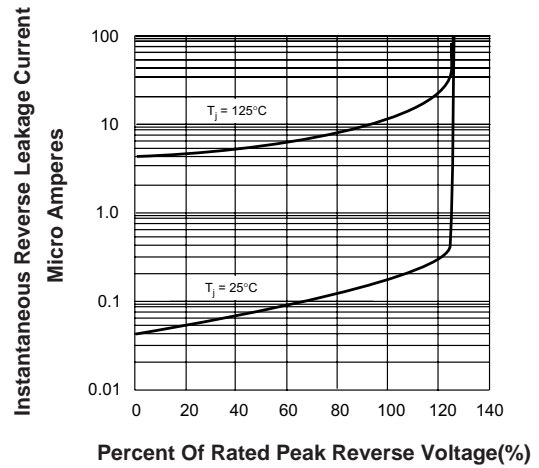
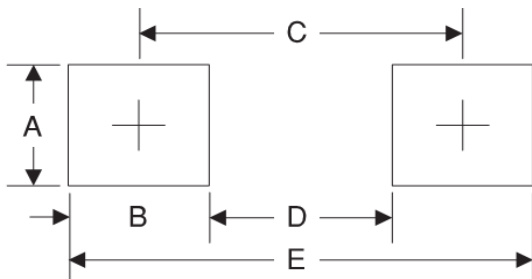


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



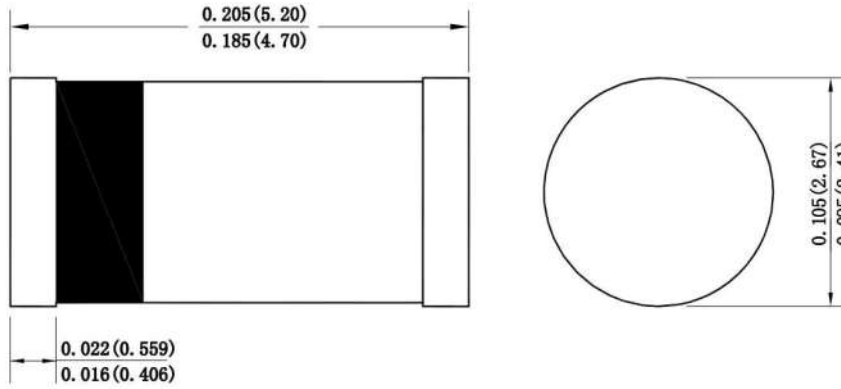
Suggested Pad Layout



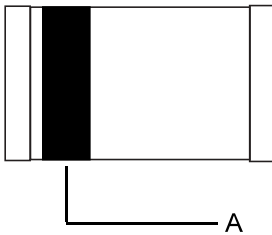
Symbol	Unit (mm)	Unit (inch)
A	3.00	0.118
B	1.52	0.060
C	4.50	0.177
D	3.00	0.118
E	6.00	0.236

Package Outline

DO-213AB/MELF



Marking



Symbol	Explanation
A	Color Band Denotes Cathode

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
DO-213AB MELF	Tape/Reel, 13" reel	5000	EIA-481-1