



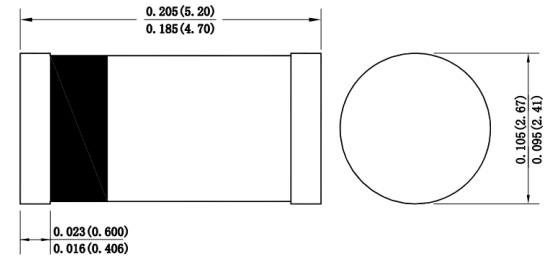
SM4001~SM4007

1.0Amp Standard Surface Mounted Rectifiers

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

DO-213AB/MELF



Dimensions in inches and (millimeters)

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

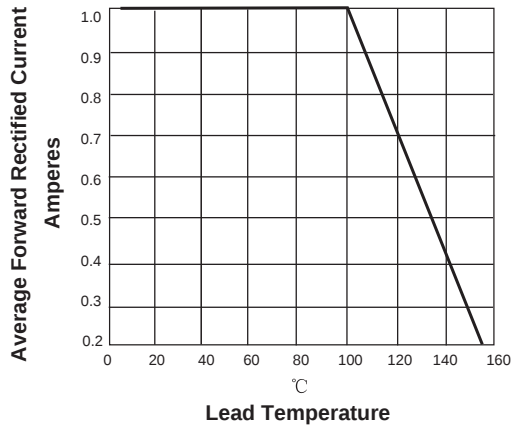
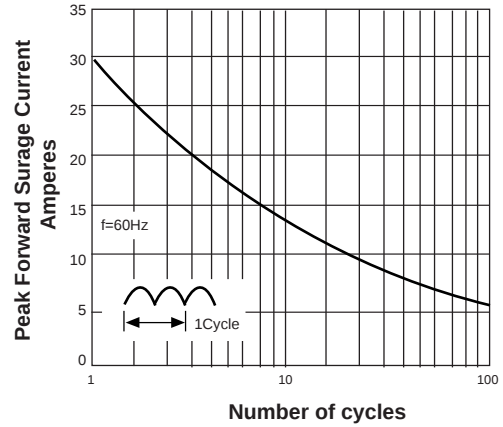
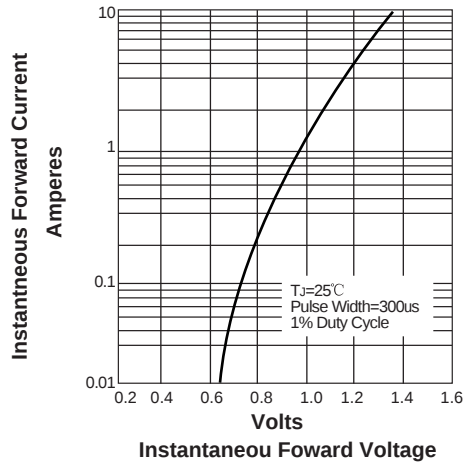
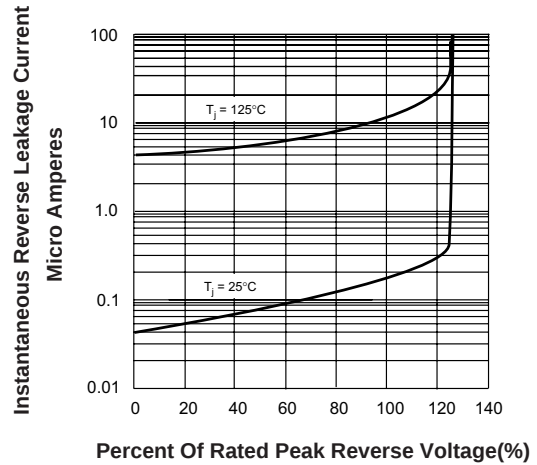
Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

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}	30.0							A
Maximum instantaneous forward voltage at 1.0A	V_F	1.0							V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$	I_R	2.0 200							μA
Typical junction capacitance (Note1)	C_J	15.0							pF
Typical thermal resistance	R_{qJA}	75.0							$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

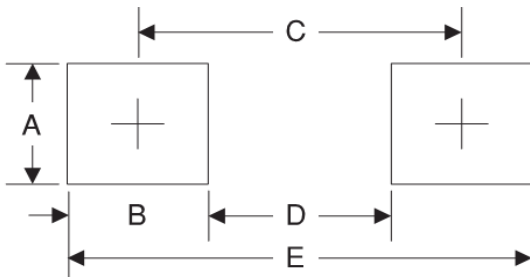
Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.



Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT**FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG****FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS****FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS**

Suggested Pad Layout



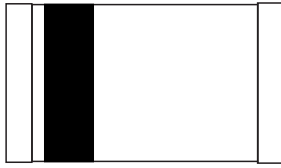
Symbol	Unit (mm)	Unit (inch)
A	3.00	0.118
B	1.52	0.060
C	4.50	0.177
D	3.00	0.118
E	6.00	0.236



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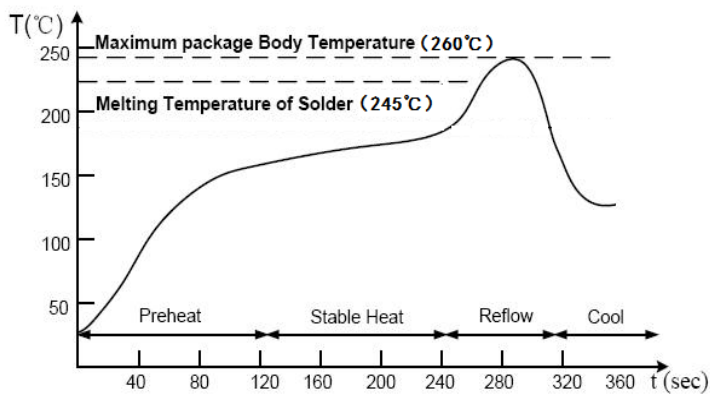
Marking



A

Symbol	Explanation
A	Color Band Denotes Cathode

Suggested Soldering Temperature Profile

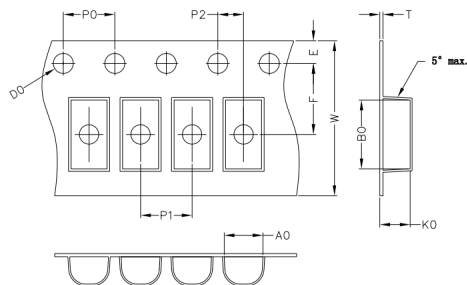


Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 260°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Package Information

Carrier Dimension(mm)



A0	B0	K0	D0	E	F
3.00	5.10	3.00	1.55	1.75	5.50
P0	P1	P2	T	W	Tolerance
4.0	4.0	2.0	0.23	12	0.1

Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
MELF	13'	330	5	285	10	360*360*360	80