



## SURFACE MOUNT GLASS PASSIVATED RECTIFIER

**SM4001 THRU SM4007**

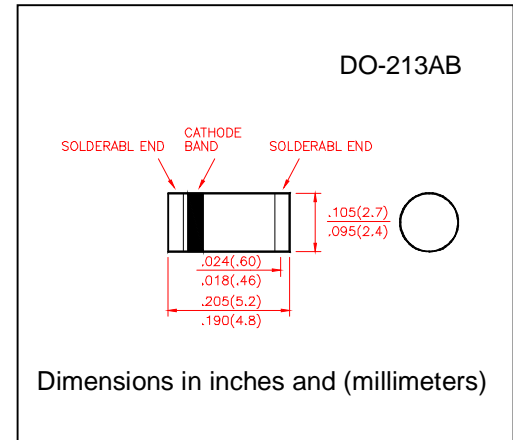
**VOLTAGE RANGE**      **50 to 1000 Volts**  
**CURRENT**              **1.0 Ampere**

### FEATURES

- For surface mounted applications
- Glass passivated chip junction
- Low leakage current
- Plastic package has underwrites laboratory flammability Classification 94V-0
- High temperature soldering guaranteed 250°C/10 second at terminals

### MECHANICAL DATA

- Case: molded plastic
- Polarity: band indicate cathode
- Mounting position: Any
- Weight: 0.12 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 derate current by 20%

	SYMBOLS	SM 4001	SM 4002	SM 4003	SM 4004	SM 4005	SM 4006	SM 4007	UNIT
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
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at $T_T=100^\circ\text{C}$	$I_{(AV)}$	1.0							Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30							Amps
Maximum Instantaneous Forward Voltage at 1.0A	$V_F$	1.1							Volts
Maximum DC Reverse Current at rated DC Blocking Voltage at	$T_A = 25^\circ\text{C}$	5.0							$\mu\text{A}$
	$T_A = 125^\circ\text{C}$	100							
Typical Junction Capacitance (Note 1)	$R_{\theta JT}$	15							PF
Typical Thermal Resistance (Note 2)	$T_{IT}$	40							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

**Notes:**

1. Measured at 1.0MHz and applied reverse voltage of 4.0 volts DC.
2. Thermal resistance from Junction to terminal 6.0mm<sup>2</sup> copper pads to each terminal.

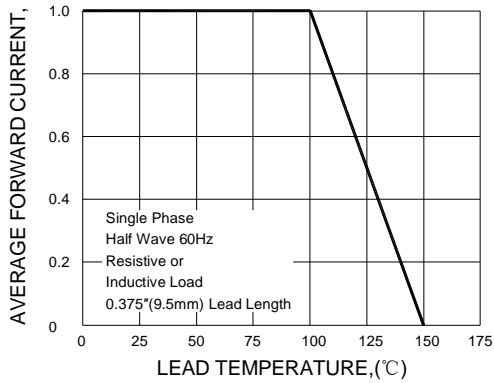


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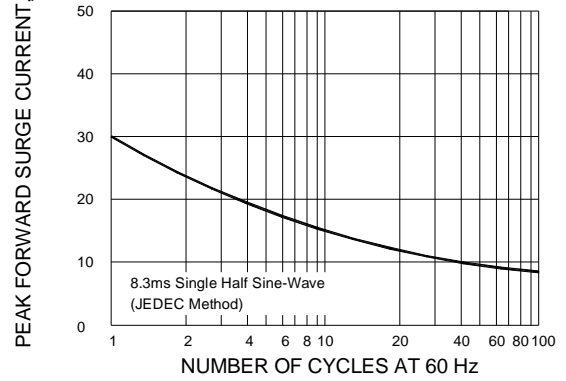
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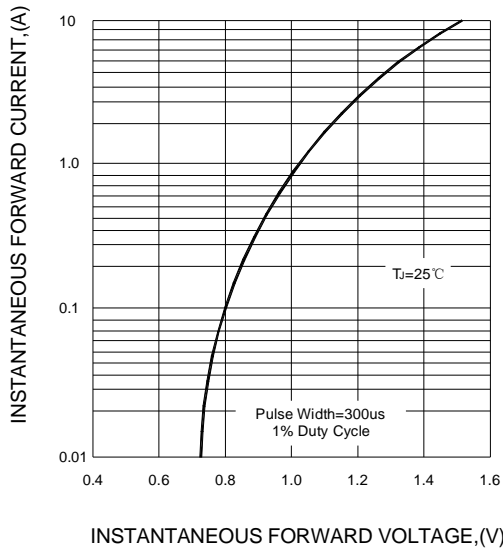
**FIG.1-FORWARD CURRENT DERATING CURVE**



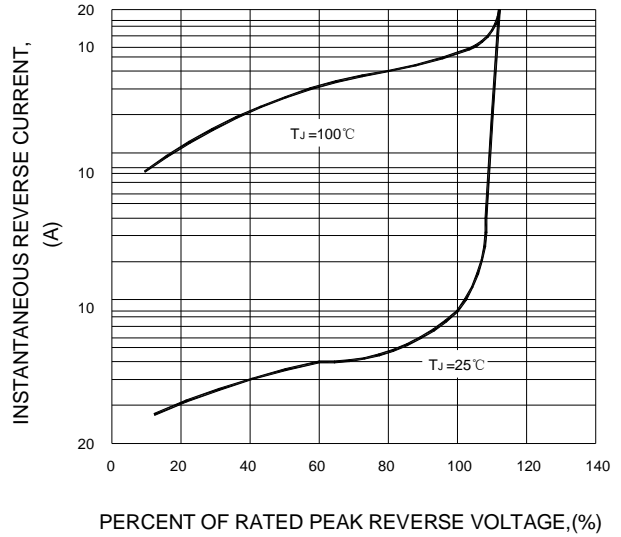
**FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4-TYPICAL REVERSE CHARACTERISTICS**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**

