



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

SM4001  
THRU  
SM4007

**TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SILICON RECTIFIER**

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 1.0 Ampere

**FEATURES**

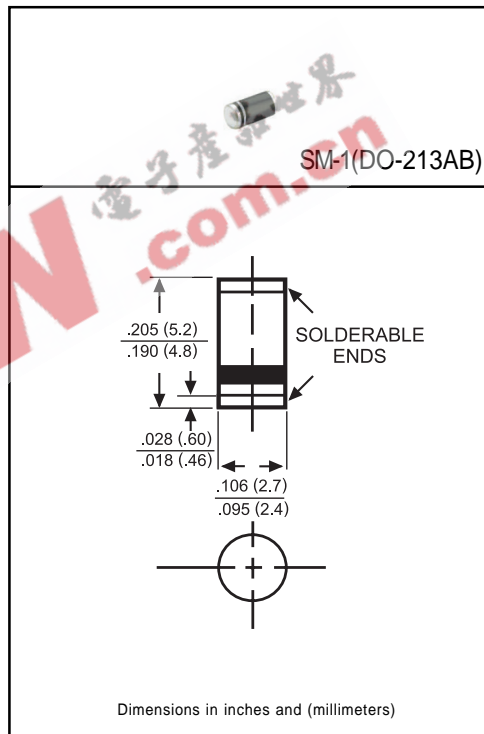
- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Glass passivated junction

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated solderable per MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.12 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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



	SYMBOL	SM4001	SM4002	SM4003	SM4004	SM4005	SM4006	SM4007	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current TA = 75°C	Io	1.0							Amps
Peak Forward Surge Current IFM(surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	30							Amps
Maximum Forward Voltage at 1.0A DC	VF	1.1							Volts
Maximum DC Reverse Current at	IR	5.0							uAmps
Rated DC Blocking Voltage									
Maximum Thermal Resistance (Note 2)	RθJL	20							°C/W
Typical Junction Capacitance (Note 1)	CJ	15							pF
Operating and Storage Temperature Range	TJ, TSTG	-65 to + 175							°C

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0VDC  
2. Thermal resistance (Junction to Ambient), .24in<sup>2</sup> (6.0mm<sup>2</sup>) copper pads to each terminal.

RATING AND CHARACTERISTIC CURVES ( SM4001 THRU SM4007 )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

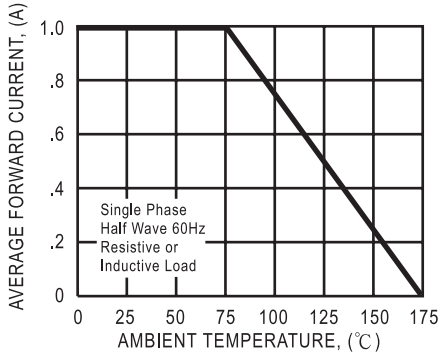


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

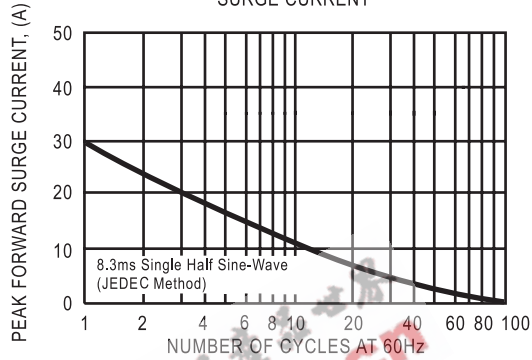


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

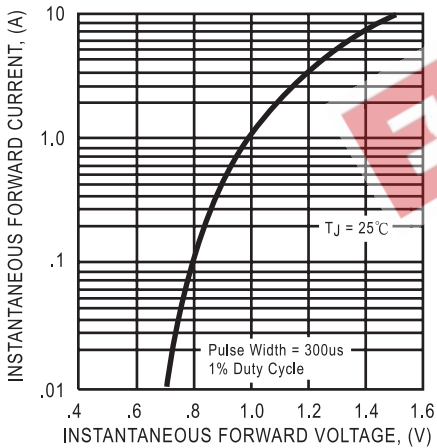


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

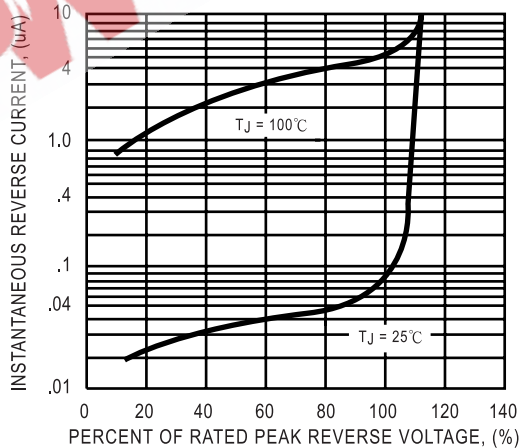


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

