



DC COMPONENTS CO., LTD.
RECTIFIER SPECIALISTS

**SM4001
THRU
SM4007**

TECHNICAL SPECIFICATIONS OF GENERAL PURPOSE SILICON RECTIFIER
VOLTAGE RANGE - 50 to 1000 Volts **CURRENT - 1.0 Ampere**

FEATURES

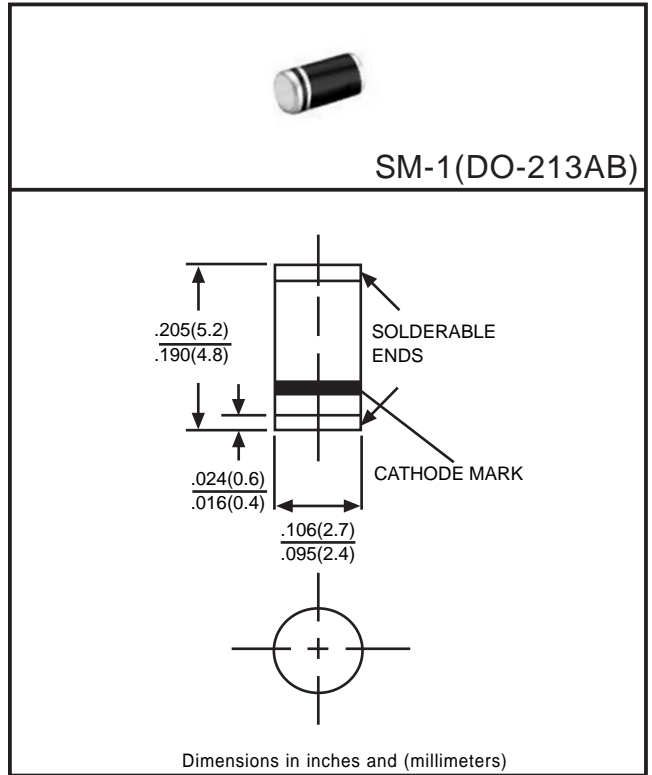
- * Ideal for surface mounted applications
- * Glass passivated junction
- * Low leakage current
- * Low profile package

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rated flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.12 gram approx.

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%.



	SYMBOL	SM4001	SM4002	SM4003	SM4004	SM4005	SM4006	SM4007	UNITS
Maximum Recurrent 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 _A = 75°C	I _O	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	30							Amps
Maximum Instantaneous Forward Voltage at 1.0A DC	V _F	1.1							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ T _A =25°C	5.0							μAmps
	@ T _A =100°C	50							
Typical Junction Capacitance (Note 1)	C _J	9.0							pF
Typical Thermal Resistance (Note 2)	R _{θJL}	50							°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150							°C

Note 1: Measured at 1 MHz and applied reverse voltage of 4.0 volts.

Note 2: Typical thermal resistance from junction to lead, with 32in²(8.0mm)² copper pads to each terminal.

RATING AND CHARACTERISTIC CURVES (SM4001 THRU SM4007)

FIG. 1
TYPICAL FORWARD CURRENT
DERATING CURVE

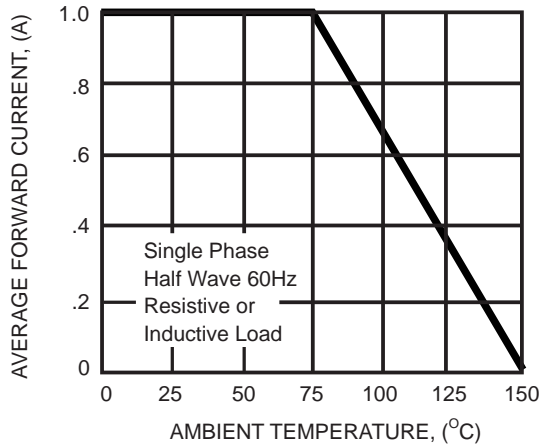


FIG. 2
MAXIMUM NON-REPETITIVE FORWARD
SURGE CURRENT

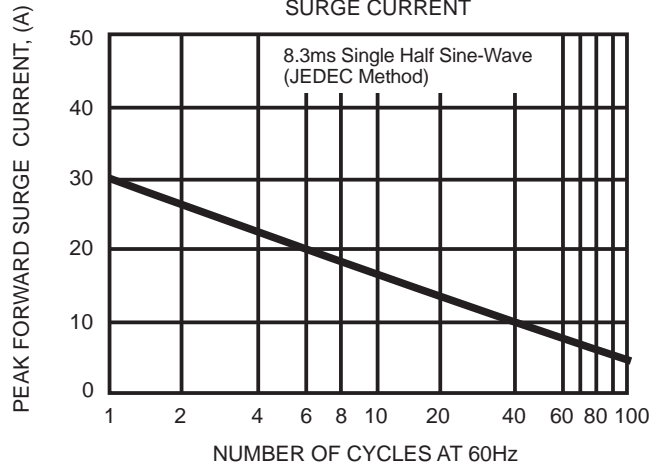


FIG. 3
TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

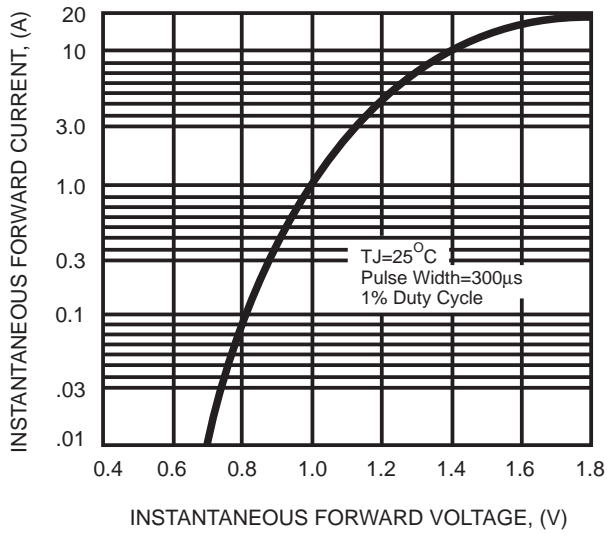


FIG. 4
TYPICAL REVERSE CHARACTERISTICS

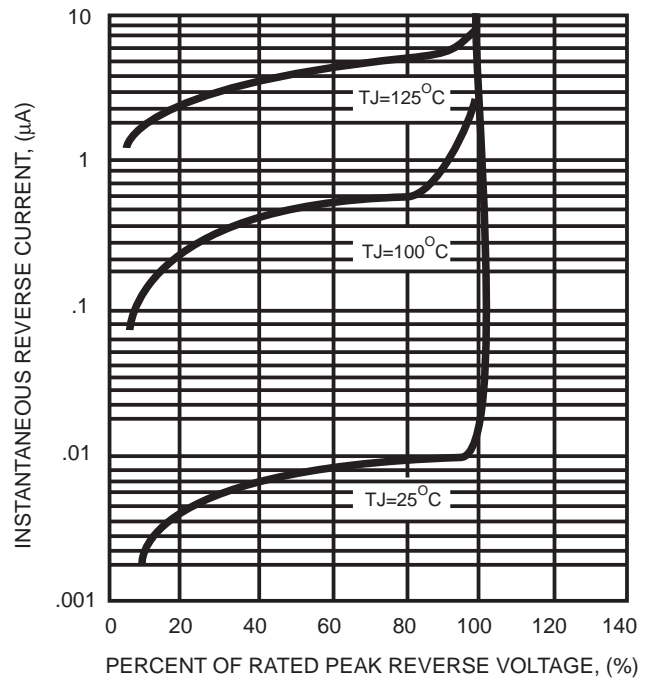
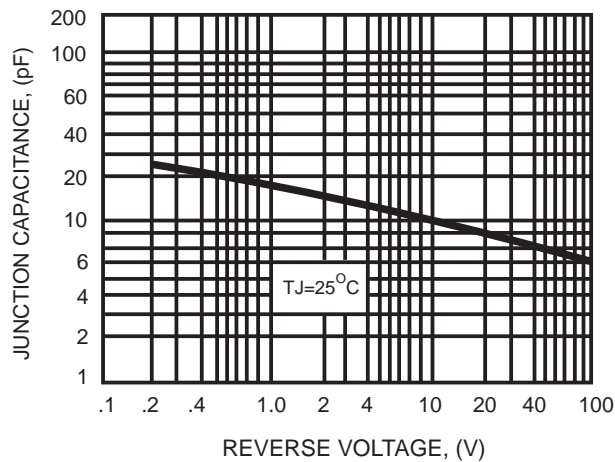


FIG. 5
TYPICAL JUNCTION CAPACITANCE



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