

**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**

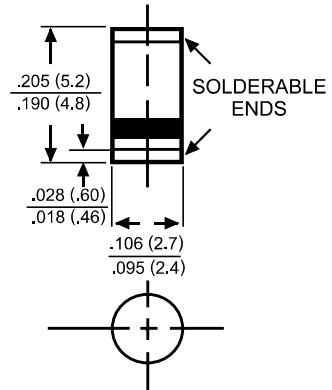
- * Ideal for surface mounted applications
- * Low leakage current
- * Glass passivated junction

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%.

**SM-1(DO-213AB)**

Dimensions in inches and (millimeters)

	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 _D C	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current TA = 75°C	I _O				1.0				Amps
Peak Forward Surge Current IFM(surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}				30				Amps
Maximum Forward Voltage at 1.0A DC	V _F				1.1				Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	@TA = 25°C			5.0				uAmps
@TA = 125°C					50				°C/W
Maximum Thermal Resistance (Note 2)	R _θ JL				20				
Typical Junction Capacitance (Note 1)	C _J				15				pF
Operating and Storage Temperature Range	T _J , T _{STG}				-65 to + 175				°C

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0VDC

2. Thermal resistance (Junction to Ambient), .24in² (6.0mm²) copper pads to each terminal.

RATING AND CHARACTERISTIC CURVES (SM4001 THRU SM4007)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

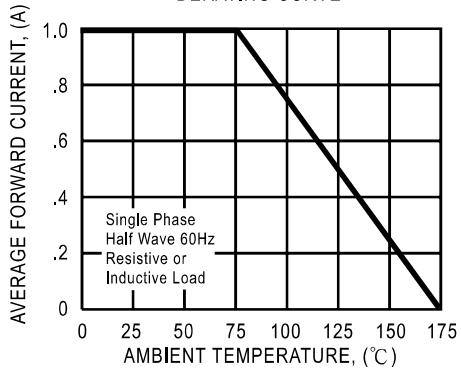


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

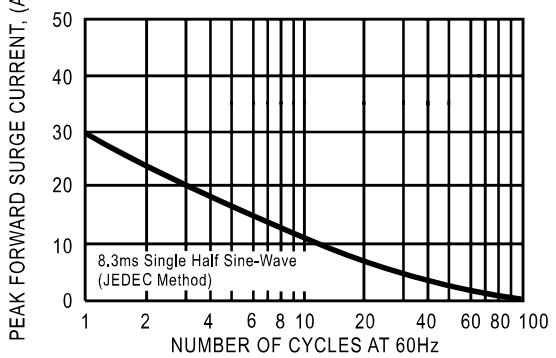


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

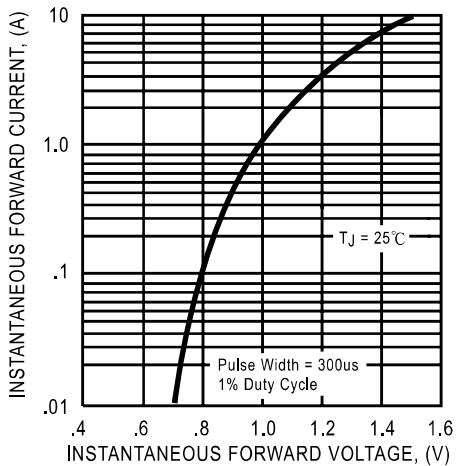


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

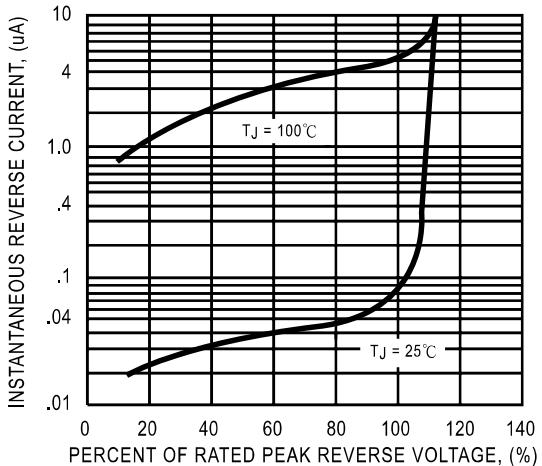
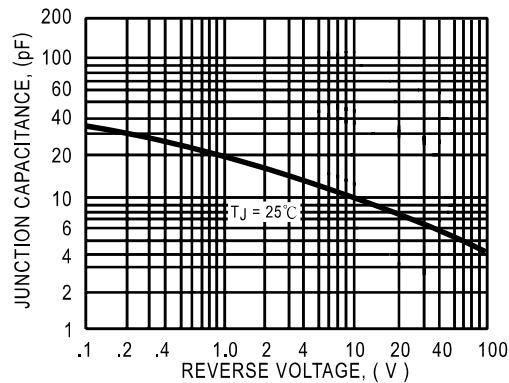


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



DC COMPONENTS CO., LTD.