

### TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SILICON RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 1.5 Amperes

#### FEATURES

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

#### MECHANICAL DATA

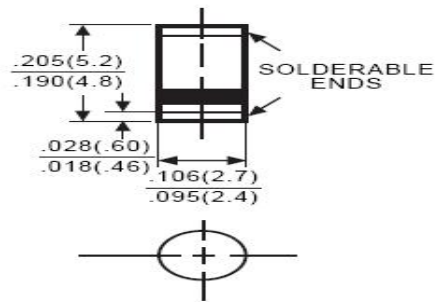
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Mounting position: Any
- \* Weight: 0.12 gram
- \* Terminals: Solder plated solderable per MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Color band denotes cathode end

#### 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%.



SM-1(DO-213AB)



Dimensions in inches and (millimeters)

	SYMBOL	SM5391	SM5392	SM5393	SM5395	SM5397	SM5398	SM5399	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current T <sub>A</sub> = 75°C	I <sub>O</sub>	1.5							Amps
Peak Forward Surge Current I <sub>FM</sub> (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	50							Amps
Maximum Forward Voltage at 1.5A DC	V <sub>F</sub>	1.4							Volts
Maximum DC Reverse Current at @T <sub>A</sub> = 25°C	I <sub>R</sub>	5.0							μAmps
Rated DC Blocking Voltage @T <sub>A</sub> = 125°C		100							
Typical Thermal Resistance (Note 2)	R <sub>θJC</sub>	60							°C/W
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	30							pF
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150							°C

Note : 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 (SM5391 THRU SM5399)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

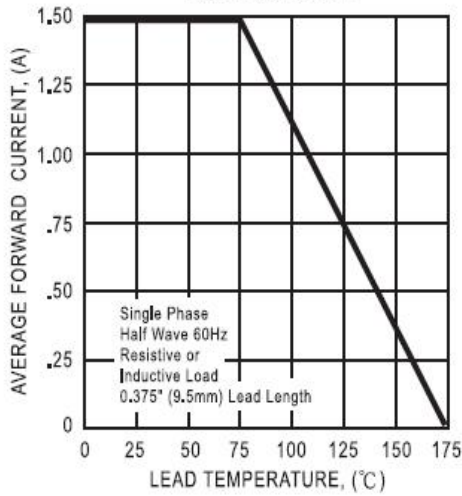


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

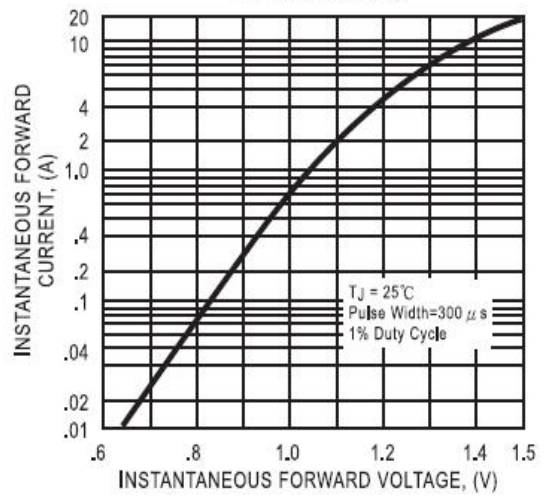


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

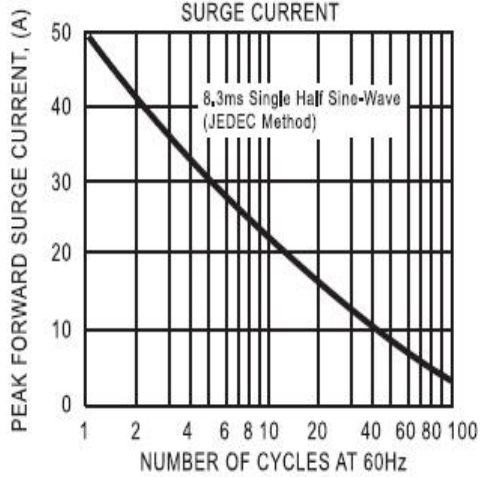


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

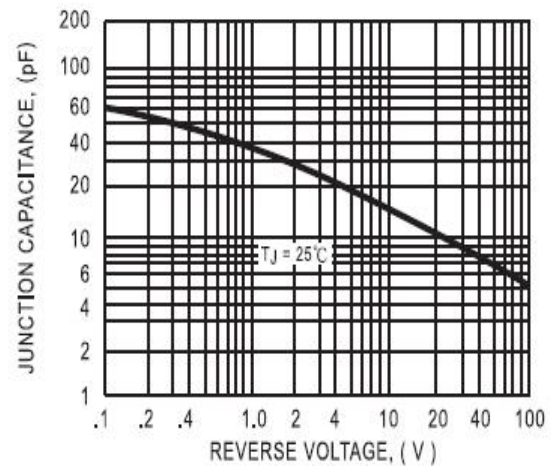


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

