
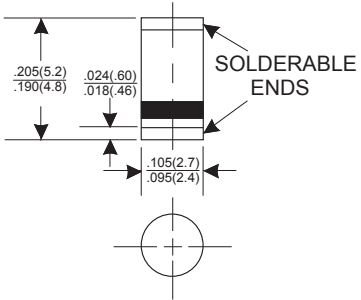


# SM4001 THRU SM4007

## 1.0 AMP SURFACE MOUNT SILICON RECTIFIERS

<div style="text-align: center; margin-bottom: 10px;">  </div> <h3>FEATURES</h3> <ul style="list-style-type: none"> <li>* Low forward voltage drop</li> <li>* Low leakage current</li> <li>* High reliability</li> </ul> <h3>MECHANICAL DATA</h3> <ul style="list-style-type: none"> <li>* Case: Molded plastic</li> <li>* Epoxy: UL 94V-0 rate flame retardant</li> <li>* Metallurgically bonded construction</li> <li>* Polarity: Color band denotes cathode end</li> <li>* Mounting position: Any</li> <li>* Weight: 0.015 grams</li> </ul>	<div style="text-align: center;"> <h3>VOLTAGE RANGE</h3> <p>50 to 1000 Volts</p> <h3>CURRENT</h3> <p>1.0 Ampere</p> </div> <div style="text-align: center;"> <p><b>SM-1</b></p>  </div> <p style="text-align: center; font-size: small;">Dimensions in inches and (millimeters)</p>
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## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

TYPE NUMBER	SM4001	SM4002	SM4003	SM4004	SM4005	SM4006	SM4007	UNITS	
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	35	70	140	280	420	560	700	V	
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V	
Maximum Average Forward Rectified Current									
See Fig. 2								1.0	A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)								30	A
Maximum Instantaneous Forward Voltage at 1.0A								1.1	V
Maximum DC Reverse Current at Rated DC Blocking Voltage								5.0	μA
Ta=25°C								50	μA
Ta=100°C								15	pF
Typical Junction Capacitance (Note 1)								50	°C/W
Typical Thermal Resistance RθJA (Note 2)								-65 — +175	°C
Operating and Storage Temperature Range T <sub>J</sub> , T <sub>STG</sub>									

**NOTES:**

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance from Junction to Ambient.

## RATING AND CHARACTERISTIC CURVES (SM4001 THRU SM4007)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

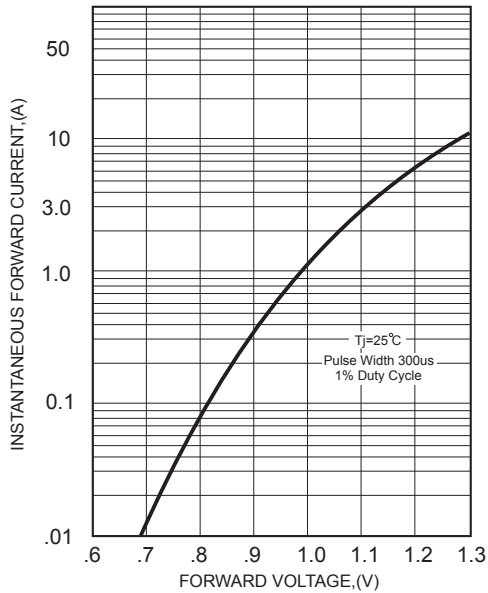


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

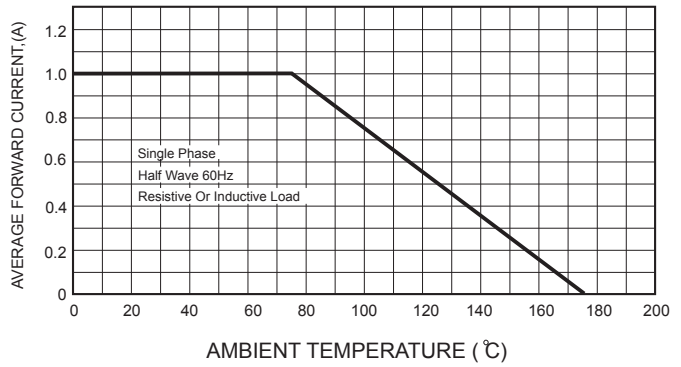


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

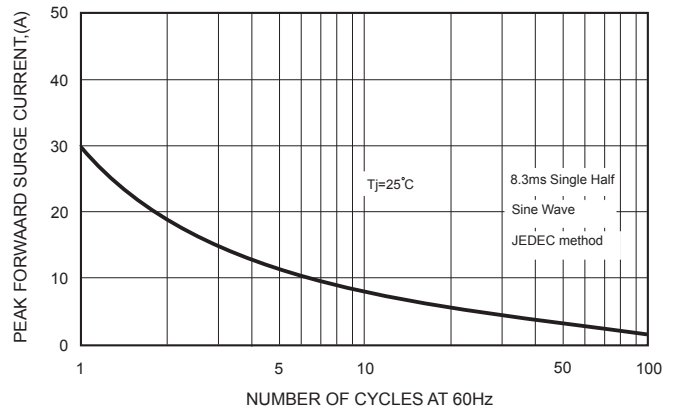


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

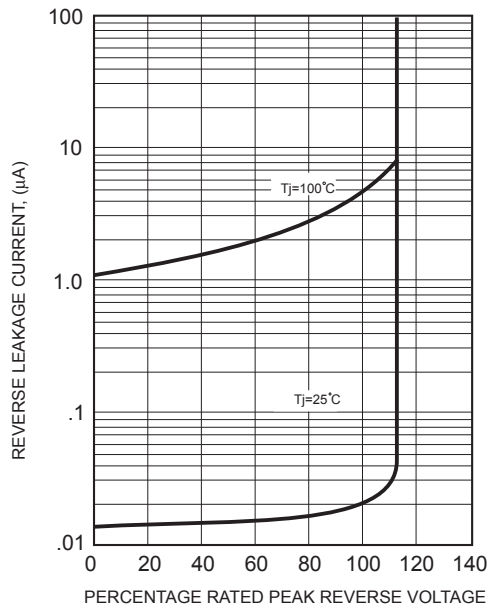


FIG.5-TYPICAL JUNCTION CAPACITANCE

