

# SUF 4001 THRU SUF4007

## GENERAL PURPOSE SILICON RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

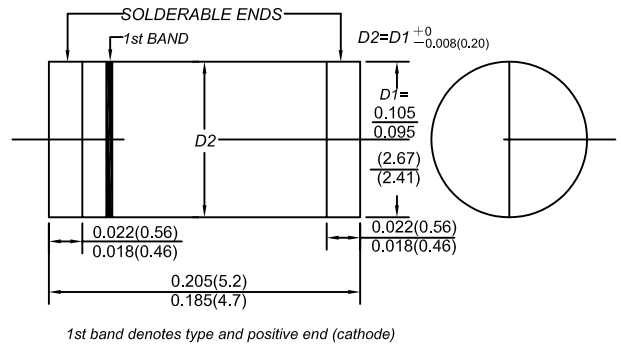
### FEATURES

- Glass passivated device
- Ideal for surface mouted applications
- Low leakage current
- Metallurgically bonded construction

### MECHANICAL DATA

- Case: JEDEC DO-213AB, molded plastic over passivated chip
- Terminals: Solder Plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.0046 ounces, 0.116 gram
- Mounting position: Any

### MELF



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

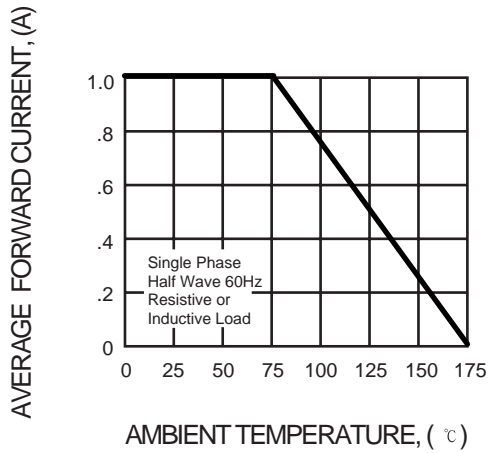
Ratings at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

		SUF 4001	SUF 4002	SUF 4003	SUF 4004	SUF 4005	SUF 4006	SUF 4007	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current $T_A=75$	$I_{(AV)}$	1.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30							A
Maximum forward voltage at 1.0A	$V_F$	1.1							V
Maximum DC reverse current @ $T_A=25$ at rated DC blockjng voltage @ $T_A=125$	$I_R$	5.0							$\mu A$
Typical junction capacitance (NOTE 1)	$C_j$	15							pF
Typical thermal resistance (NOTE 2)	$R_{j\theta L}$	20							/W
Typical thermal resistance (NOTE 3)	$R_{j\theta A}$	50							/W
Operating temperature range	$T_j$	- 55 --- + 175							
Storage temperature range	$T_{STG}$	- 55 --- + 175							

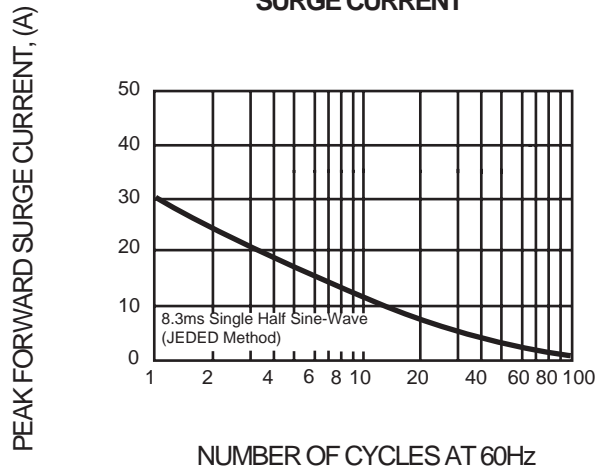
NOTES: 1. Measured at 1.0MHz and applied average voltage of 4.0V DC.

- Thermal resistance junction to lead, 6.0 mm<sup>2</sup> copper pads to each terminal.
- Thermal resistance junction to ambient, 6.0 mm<sup>2</sup> copper pads to each terminal.

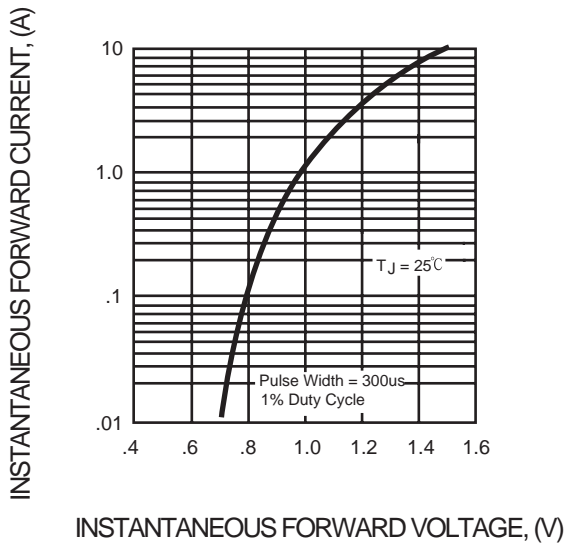
**FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE**



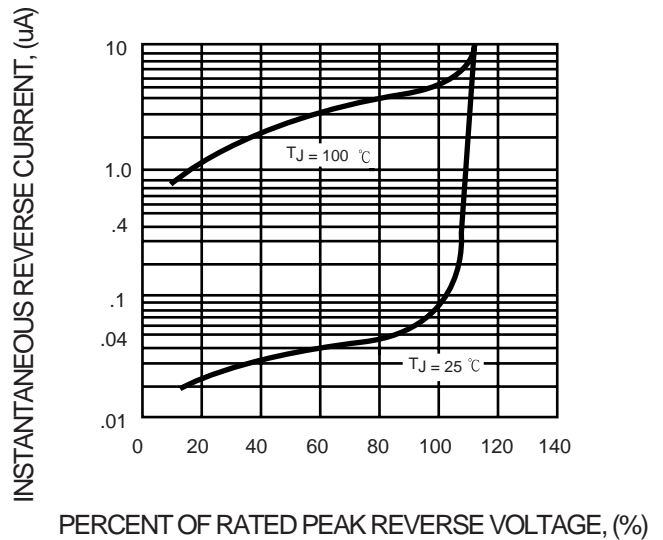
**FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

