

# SUF4001-SUF4007

Surface Mount Rectifiers

**REVERSE VOLTAGE: 50 - 1000 V**  
**CURRENT: 1.0 A**



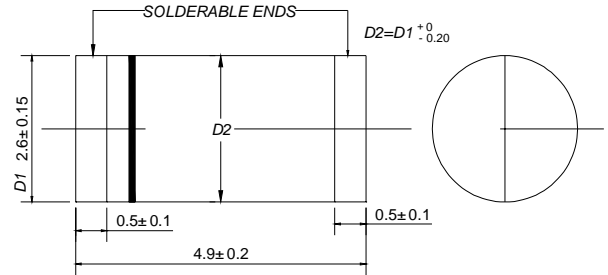
**DO - 213AB**

## 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
- Polarity: Color band denotes cathode end
- Weight: 0.0046 ounces, 0.116 gram
- Mounting position: Any



Dimensions in millimeters

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 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 $T_A=50$	$I_{(AV)}$	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	$V_F$	1.0				1.7			V
Maximum DC reverse current @ $T_j=25$ at rated DC blockjng voltage @ $T_j=100$	$I_R$	10				50			$\mu A$
Maximum reverse recovery time (Note1)	$t_{rr}$	50				75			ns
Typical thermal resistance (NOTE 2)	$R_{\theta JT}$	10							K/W
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	45							K/W
Operating temperature range	$T_j$	- 55 --- + 175							
Storage temperature range	$T_{STG}$	- 55 --- + 175							

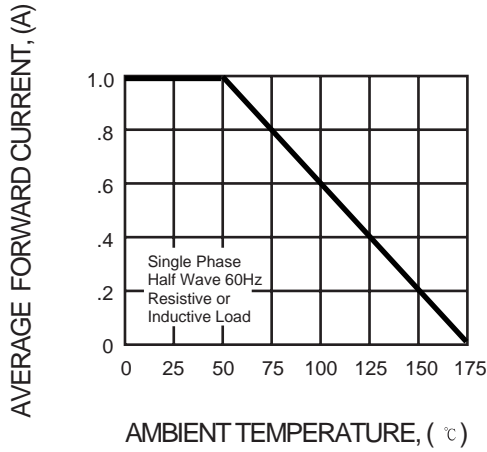
NOTES:1. Measured with  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{rr}=0.25A$ .

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

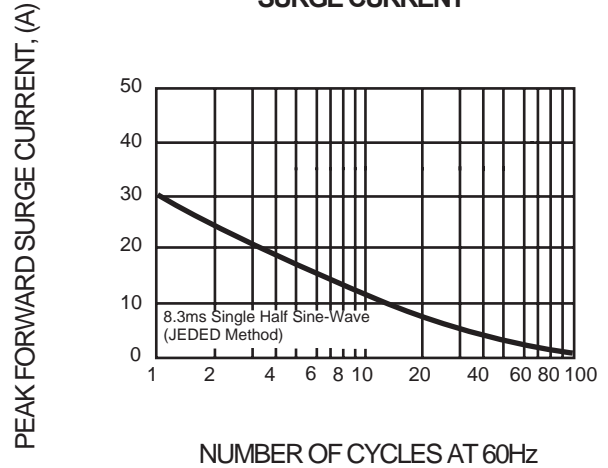
3. Thermal resistance junction to ambient, 6.0 mm<sup>2</sup> copper pads to each terminal.

## Ratings AND Characteristic Curves

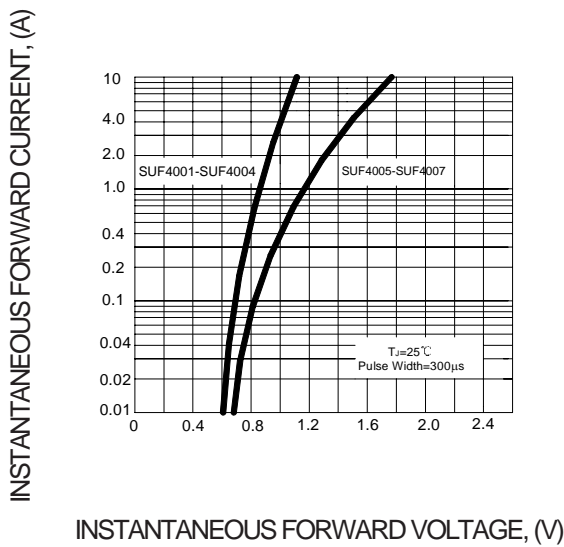
**FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE**



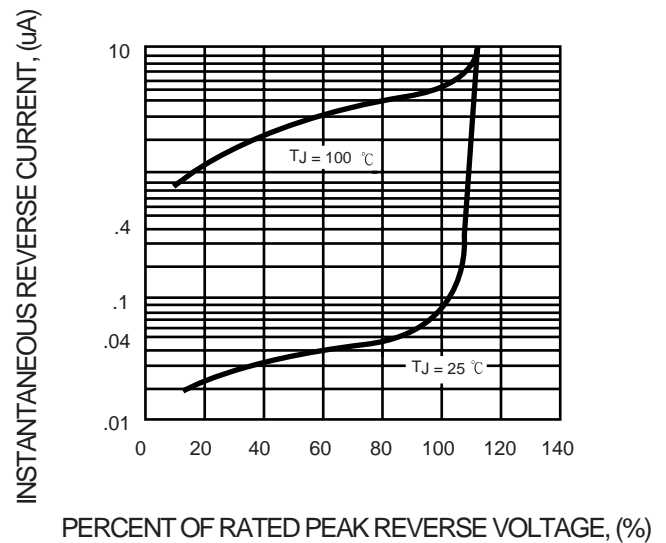
**FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



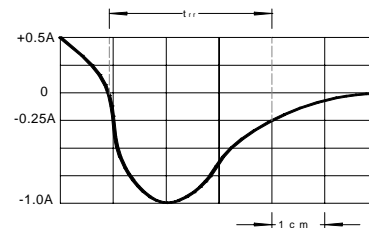
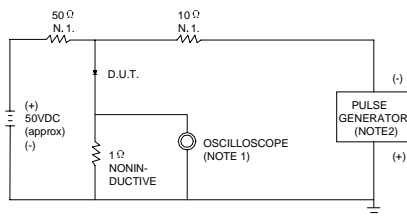
**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**



**FIG.5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**



NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1M Ω 22pF. SET TIME BASE FOR 25 ns/cm

2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω