

SUF4001-SUF4007

Surface Mount Rectifiers

REVERSE VOLTAGE: 50 - 1000 V

CURRENT: 1.0 A



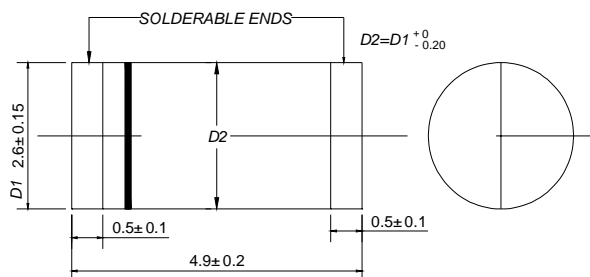
DO - 213AB

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			μA
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 mm² copper pads to each terminal.

3. Thermal resistance junction to ambient, 6.0 mm² copper pads to each terminal.

Ratings AND Characteristic Curves

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

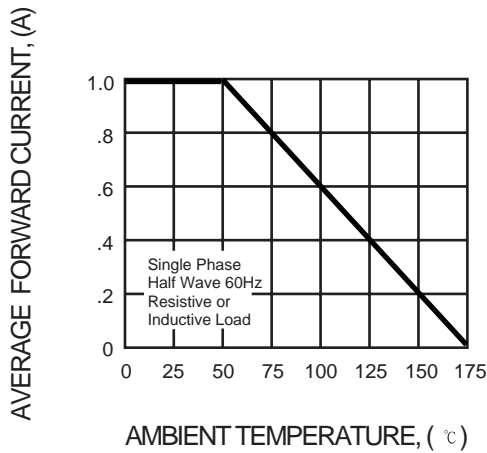


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

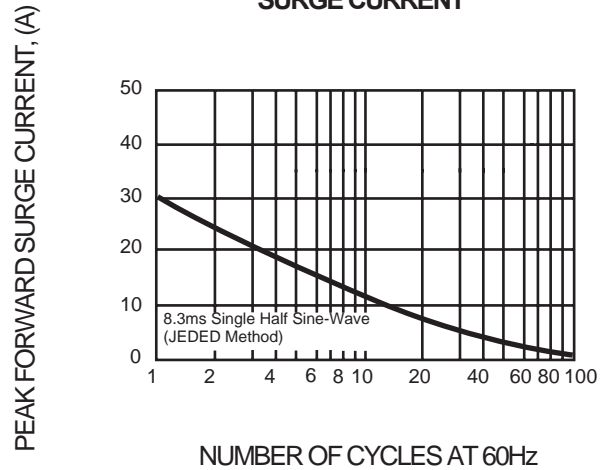


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

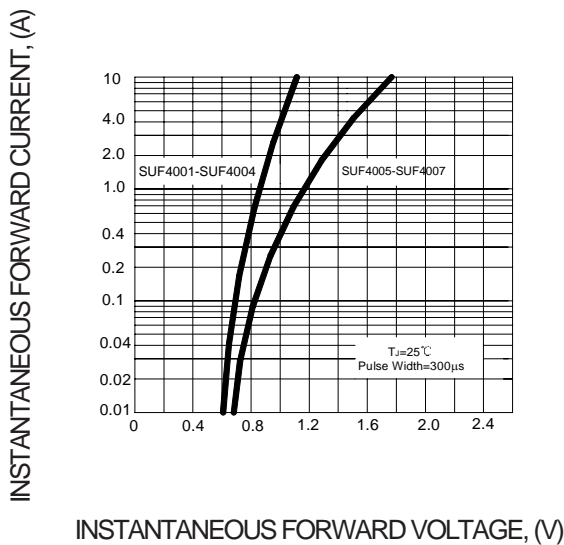


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

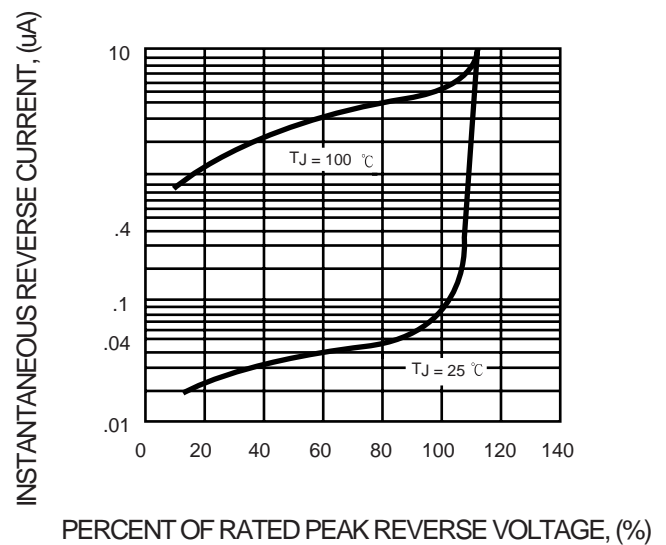
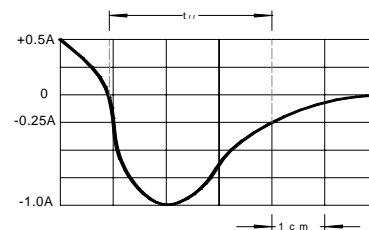
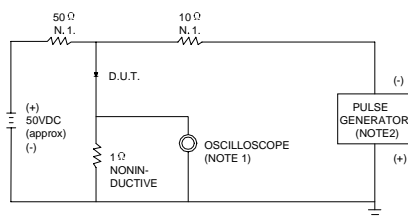


FIG.5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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