

# SM4001-SM4007

Surface Mount Rectifiers

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



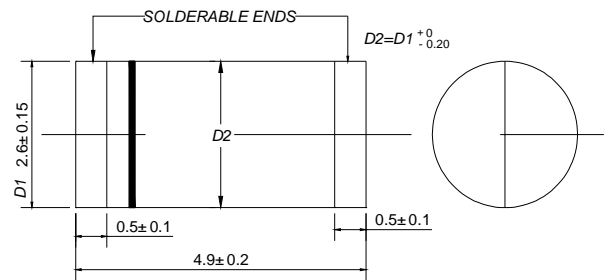
**DO - 213AB**

## Features

- Glass passivated device
- Ideal for surface mounted 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 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

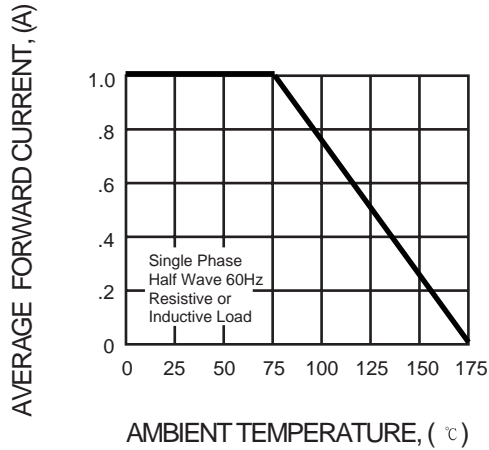
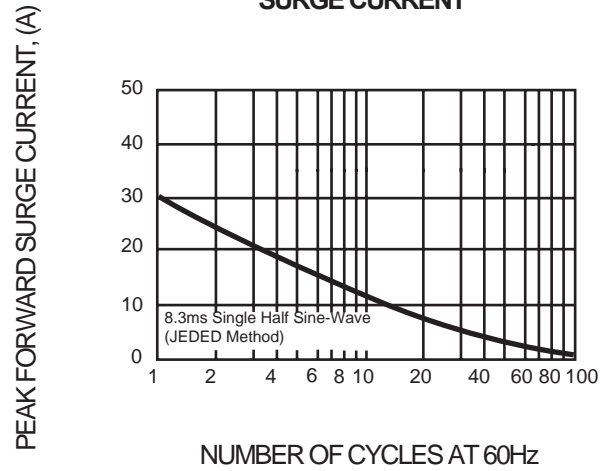
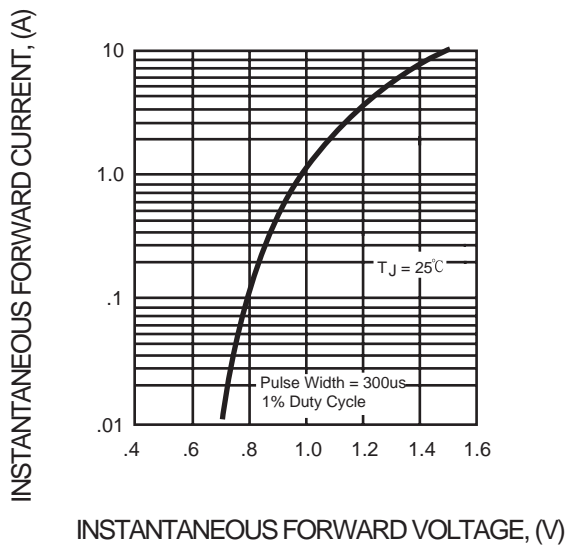
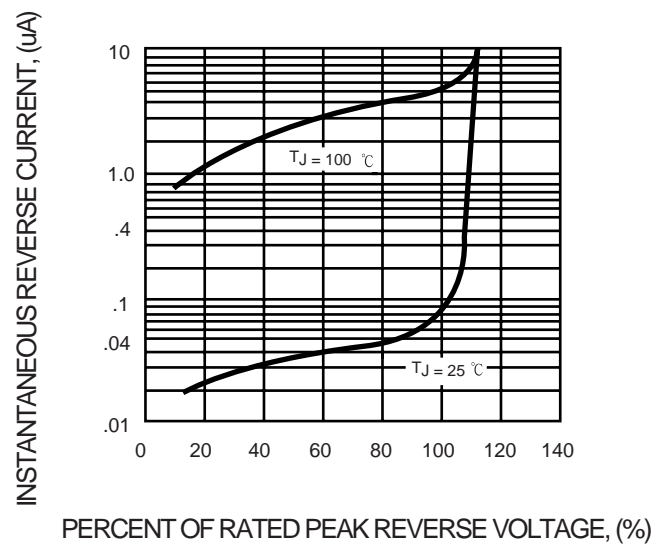
		SM 4001	SM 4002	SM 4003	SM 4004	SM 4005	SM 4006	SM 4007	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current $T_A=75$	$I_{(AV)}$	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 blocking voltage @ $T_A=125$	$I_R$	5.0 50							$\mu A$
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.

2. Thermal resistance junction to lead, 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-REPETTIVE FORWARD SURGE CURRENT**

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

**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**

**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**
