SM513-SM2000

Surface Mount Rectifiers

REVERSE VOLTAGE:1300-2000V

CURRENT: 1.0 A

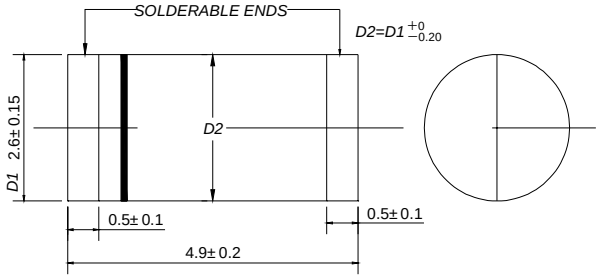
DO - 213AB

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 capactive load,derate current by 20%.

		SM 513	SM 516	SM 518	SM 2000	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	1300	1600	1800	2000	V
Maximum RMS voltage	V_{RMS}	910	1120	1260	1400	V
Maximum DC blocking voltage	V_{DC}	1300	1600	1800	2000	V
Maximum average forword 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}	40				A
Maximum forward voltage at 1.0A	V_F	1.1				V
Maximum DC reverse current @T_A=25℃ at rated DC blockjing voltage @T_A=125℃	I_R	5.0 50				μA
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^2 coppeer pads to each terminal.

3. Thermal resistance junction to ambient, 6.0 mm^2 coppeer pads to each terminal.

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Ratings AND Charactieristic Curves

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

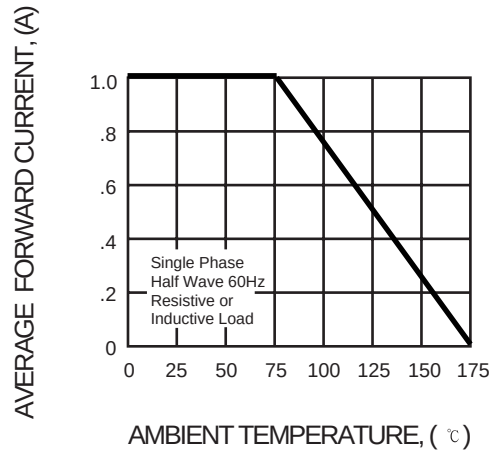

FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

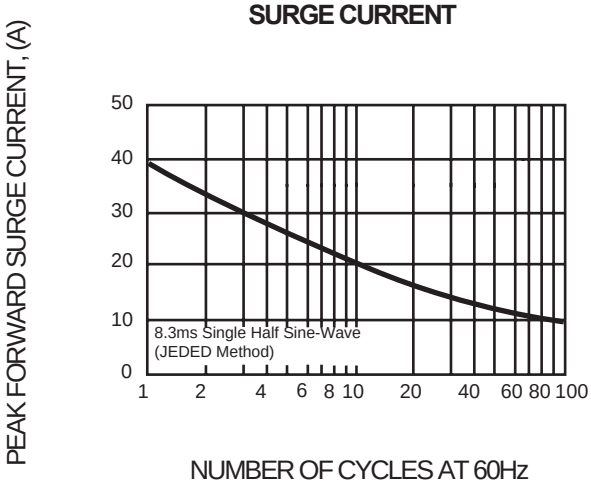

FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

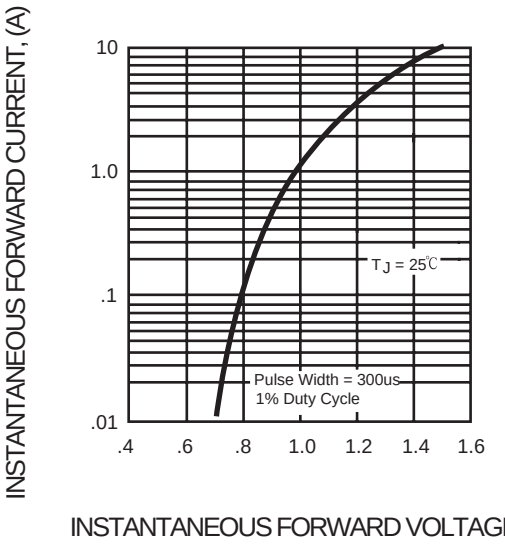

FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

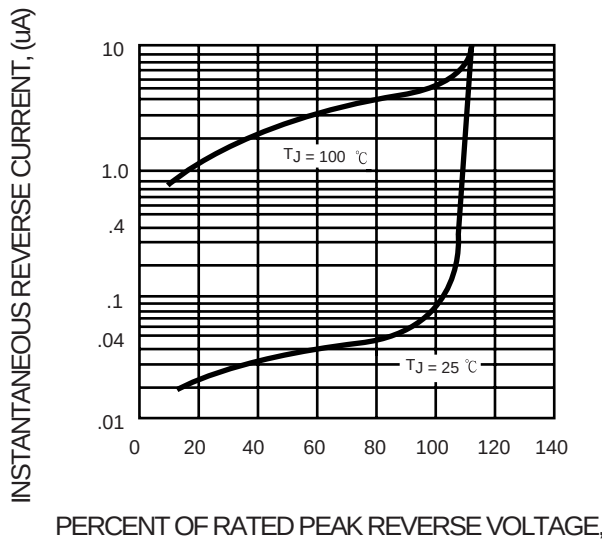

FIG. 5 - TYPICAL JUNCTION CAPACITANCE