



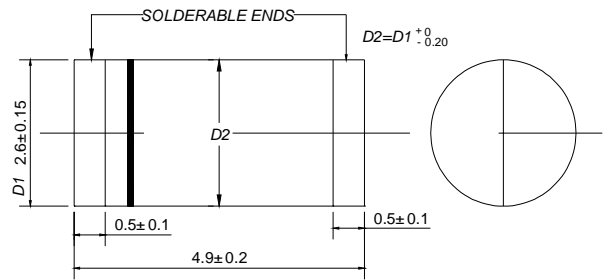
VOLTAGE RANGE: 20 --- 40 V

CURRENT: 1.0 A

DO-213AB

Features

- ◇ Metal-Semiconductor junction with guard ring
- ◇ Epitaxial construction
- ◇ Low forward voltage drop, low switching losses
- ◇ High surge capability
- ◇ For use in low voltage, high frequency inverters free wheeling, and polarity protection applications
- ◇ The plastic material carries U/L recognition 94V-0



Mechanical Data

- ◇ Case: JEDEC DO-213AB, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.0046 ounces, 0.116 grams
- ◇ Mounting position: Any

Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

		SM5817	SM5818	SM5819	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	20	30	40	V
Maximum RMS voltage	V_{RMS}	14	21	28	V
Maximum DC blocking voltage	V_{DC}	20	30	40	V
Maximum average forward rectified current @ $T_A = 90^\circ\text{C}$	$I_{F(AV)}$	1.0			A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load	I_{FSM}	25			A
Maximum instantaneous forward voltage @ 1.0A (Note 1) @ 3.0A	V_F	0.45 0.75	0.55 0.875	0.60 0.90	V
Maximum reverse current @ $T_A = 25^\circ\text{C}$ at rated DC blocking voltage @ $T_A = 100^\circ\text{C}$	I_R	1.0 10.0			mA
Typical junction capacitance (Note2)	C_J	110			pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	80			$^\circ\text{C/W}$
Operating junction temperature range	T_J	- 55 ---- + 150			$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 ---- + 150			$^\circ\text{C}$

NOTE: 1. Pulse test : 300 μ s pulse width, 1% duty cycle.

2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to ambient, vertical PC board mounting, 0.5" (12.7mm) lead length.

Ratings AND Characteristic Curves

FIG.1 – FORWARD DERATING CURVE

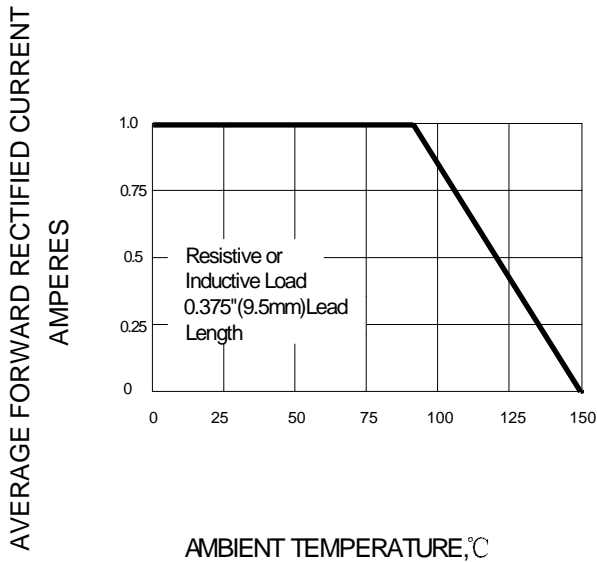


FIG.2 – PEAK FORWARD SURGE CURRENT

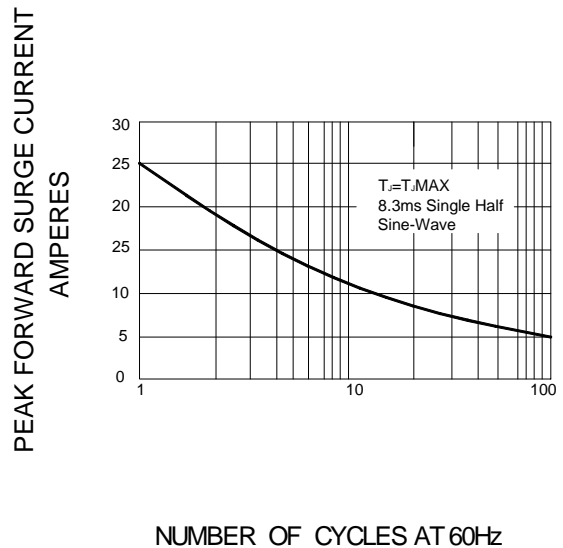


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

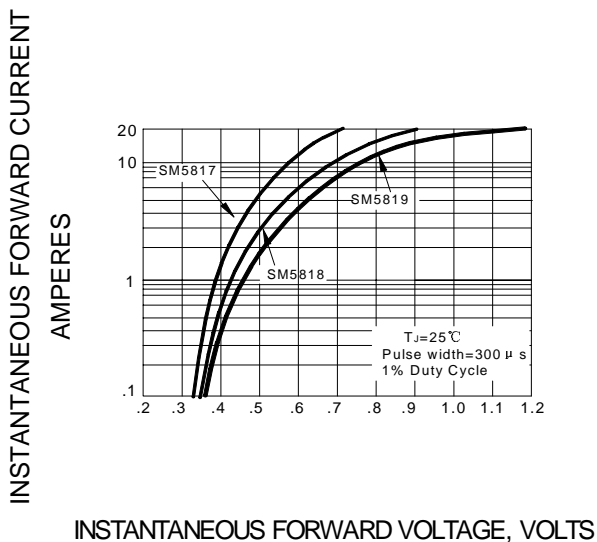
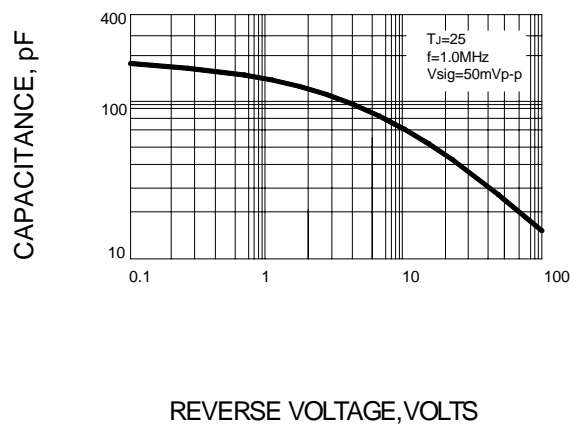


FIG.4 – TYPICAL JUNCTION CAPACITANCE



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
DO-213AB	5000/REEL	80000	36.0X35.8X36.5	18.00	16.00