



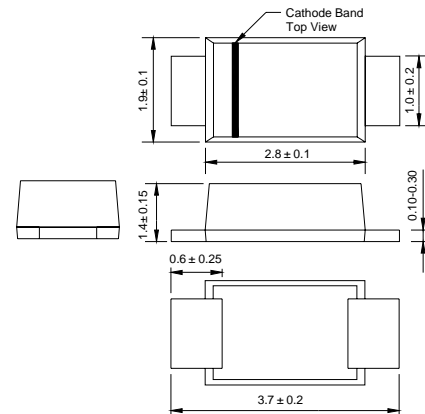
SOD-123FL

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 SOD-123FL, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.0008 ounces, 0.22 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%.

		SX5817	SX5818	SX5819	UNITS
Device marking code		S2	S3	S4	
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 9.5mm lead length, @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	1.0			A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=70^\circ\text{C}$	I_{FSM}	25.0			A
Maximum instantaneous forward voltage @ 1.0A (Note 1) @ 3.0A	V_F	0.45	0.55	0.60	V
		0.75	0.875	0.90	
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	I_R	1.0			mA
		10.0			
Typical junction capacitance (Note2)	C_J	110			pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	50			°C/W
Operating junction temperature range	T_J	- 55 ---- + 125			°C
Storage temperature range	T_{STG}	- 55 ---- + 150			°C

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

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

3. Thermal resistance junction to ambient

Ratings AND Characteristic Curves

FIG.1 – FORWARD DERATING CURVE

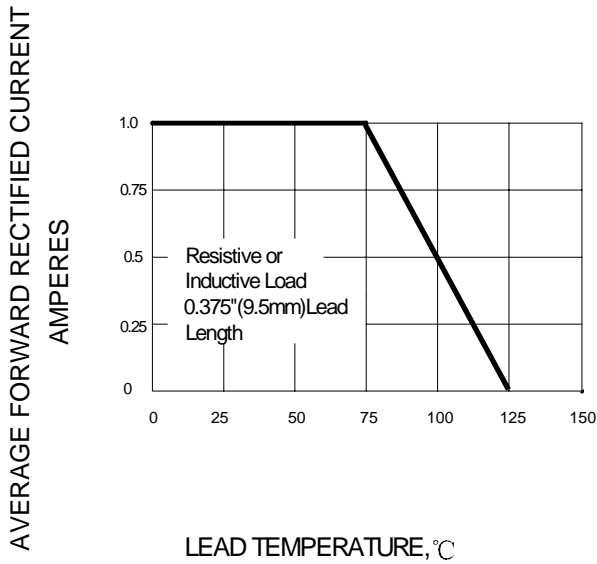


FIG.2 – PEAK FORWARD SURGE CURRENT

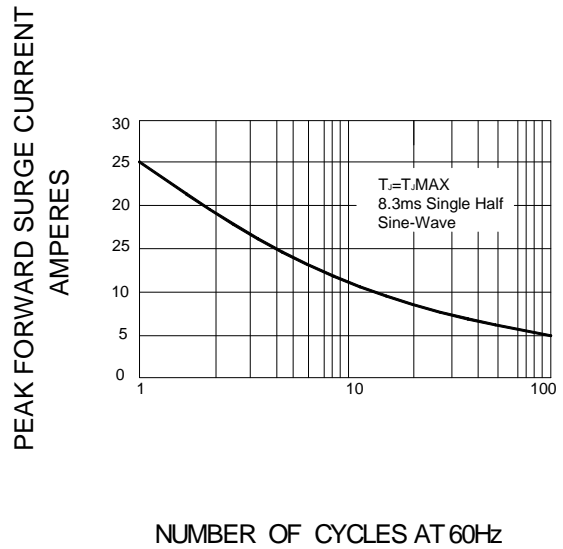


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

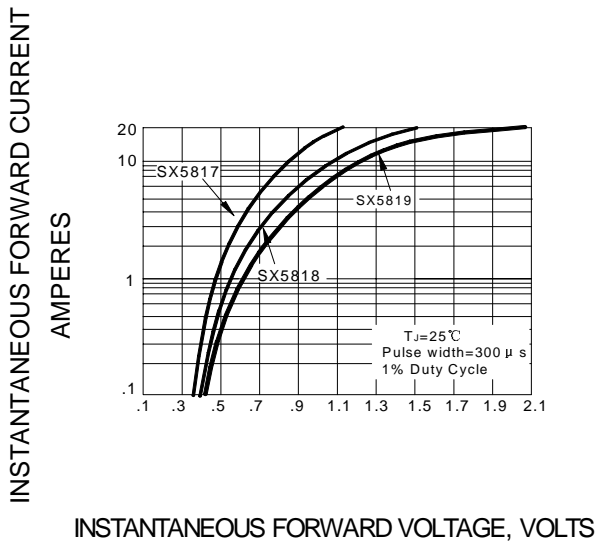


FIG.4 – TYPICAL JUNCTION CAPACITANCE

