

VOLTAGE RANGE: 20 - 40V

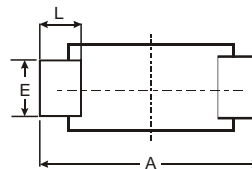
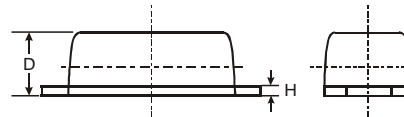
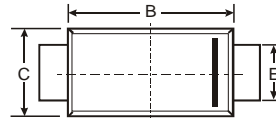
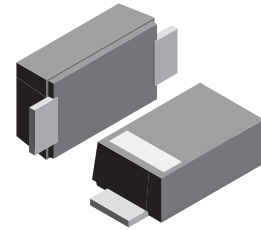
CURRENT: 1.0 A

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 body over passivated junction
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.0007 ounce, 0.02 grams



SOD-123FL			
Dim	Min	Max	Typ
A	3.58	3.72	3.65
B	2.72	2.78	2.75
C	1.77	1.83	1.80
D	1.02	1.08	1.05
E	0.097	1.03	1.00
H	0.13	0.17	0.15
L	0.53	0.57	0.55
All Dimensions in mm			

Maximum Ratings and Electrical Characteristics T_A = 25°C unless otherwise specified

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

Characteristic	Symbol	SX5817	SX5818	SX5819	Unit
	Marking	SX7	SX8	SX9	
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°C	I _{F(AV)}	1.0			A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @T _J =70°C	I _{FSM}	25.0			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°C at rated DC blocking voltage @T _A =100°C	I _R	1.0 10.0			mA
Typical junction capacitance (Note2)	C _J	110			pF
Typical thermal resistance (Note3)	R _{θJA}	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.

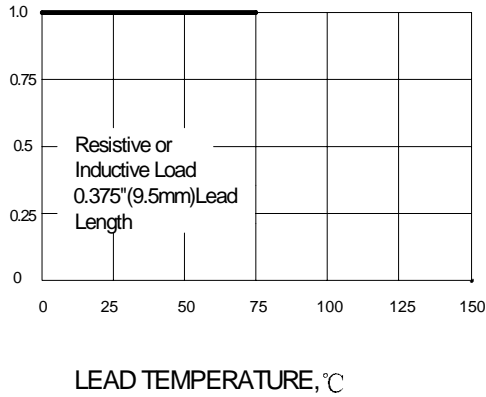
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to ambient

RATINGS AND CHARACTERISTIC CURVES SX5817THRU SX5819

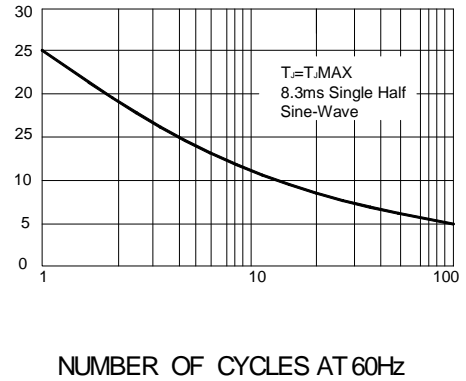
AVERAGE FORWARD RECTIFIED CURRENT
AMPERES

FIG.1 – FORWARD DERATING CURVE



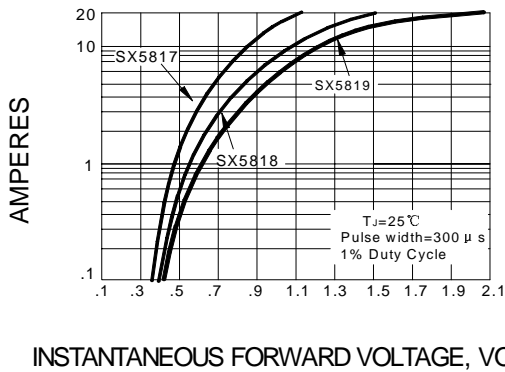
PEAK FORWARD SURGE CURRENT
AMPERES

FIG.2 – PEAK FORWARD SURGE CURRENT



INSTANTANEOUS FORWARD CURRENT
AMPERES

FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



CAPACITANCE, pF

FIG.4 – TYPICAL JUNCTION CAPACITANCE

