SAMYANG ELECTRONICS

1N5817--- 1N5819

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE: 20 --- 40 V
CURRENT: 1.0 A

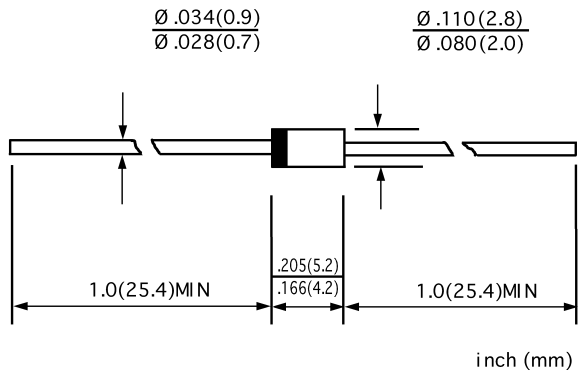
FEATURES

- ◇ 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 DO--41,molded plastic
- ◇ Terminals: Axial lead ,solderable per MIL- STD-202,method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.012 ounces,0.34 grams
- ◇ Mounting position: Any

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MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

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

		1N5817	1N5818	1N5819	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 forw ard rectified current 9.5mm lead length, @T_A=75℃	$I_{F(AV)}$	1.0			A
Peak forw ard surge current 8.3ms single half-sine-w ave superimposed on rated load @T_J=70℃	I_{FSM}	25.0			A
Maximum instantaneous forw ard 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℃ at rated DC blocking voltage @T_A=100℃	I_R	1.0 10.0			mA
Typical junction capacitance (Note2)	C_J	110			pF
Typical thermal resistance (Note3)	R_{JA}	50			℃
Operating junction temperature range	T_J	- 55 ---- + 125			℃
Storage temperature range	T_{STG}	- 55 ---- + 150			℃

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

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

3.Thermal resistance junction to ambient

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FIG.1 -- FORWARD DERATING CURVE

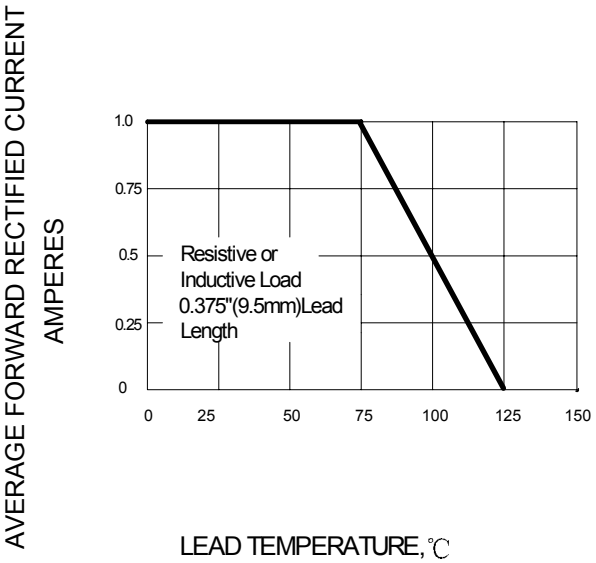


FIG.2 – PEAK FORWARD SURGE CURRENT

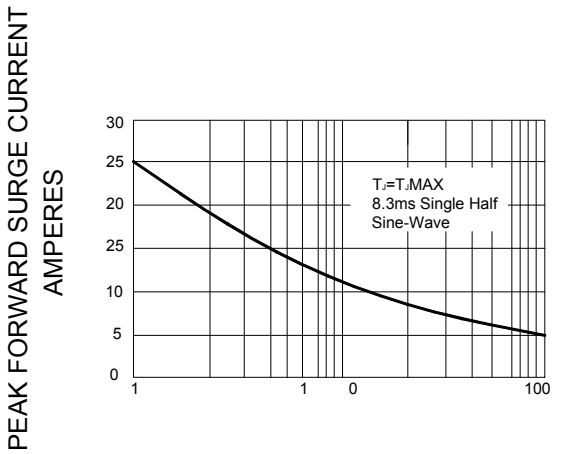


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

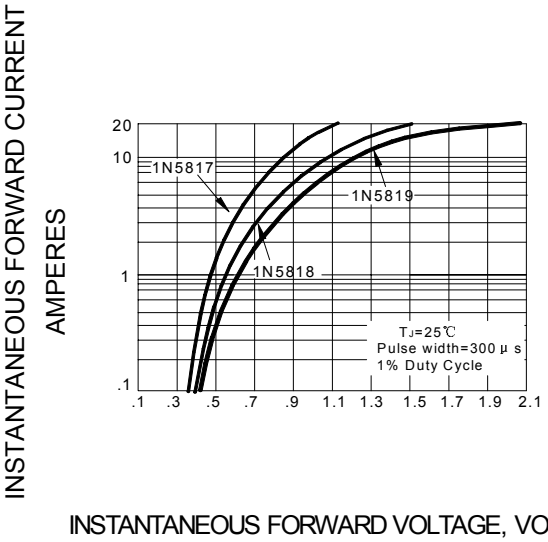


FIG.4 – TYPICAL JUNCTION CAPACITANCE

