

Schottky Barrier Rectifiers multicomp^{PRO}

RoHS
Compliant



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

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, halfwave, 60Hz, 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	
Maximum DC blocking voltage	V _{DC}	20	30	40	
Maximum average forward rectified current 9.5mm lead length, @TA=75	I _{F(AV)}	1			A
Peak forward surge current 8.3ms single half -sine-wave superimposed on rated load	I _{FSM}	25			
Maximum instantaneous forward voltage @ 1A (Note 1) @ 3A	V _F	0.45 0.75	0.55 0.875	0.6 0.9	V
Maximum reverse current @TA=25 at rated DC blocking voltage @TA=100	I _R	1 10.0			mA
Typical junction capacitance (Note2)	C _J	35			pF
Typical thermal resistance (Note3)	R _{θJA}	50			°C
Operating junction temperature range	T _J	- 55 to + 125			
Storage temperature range	T _{STG}	- 55 to + 150			

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

2. Measured at 1MHZ and applied reverse voltage of 4V DC.

3. Thermal resistance junction to ambient

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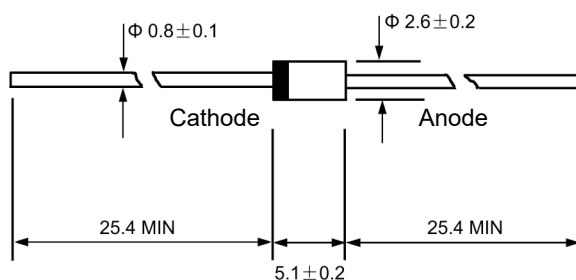


FIG.1 – FORWARD DERATING CURVE

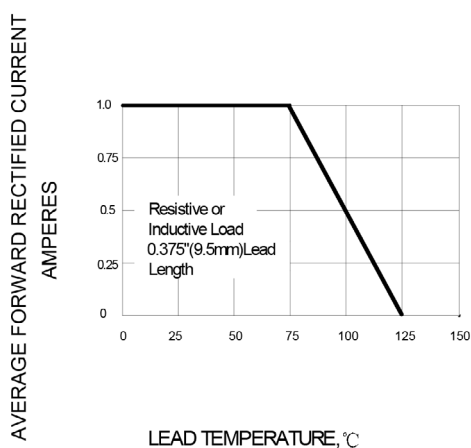


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

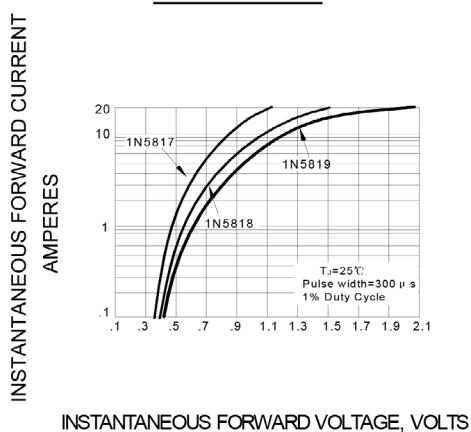


FIG.2 – PEAK FORWARD SURGE CURRENT

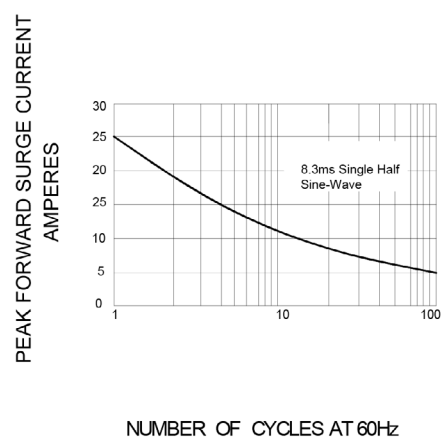
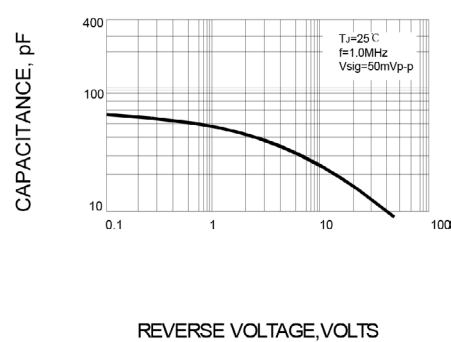


FIG.4 – TYPICAL JUNCTION CAPACITANCE



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