Schottky Barrier Rectifiers

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

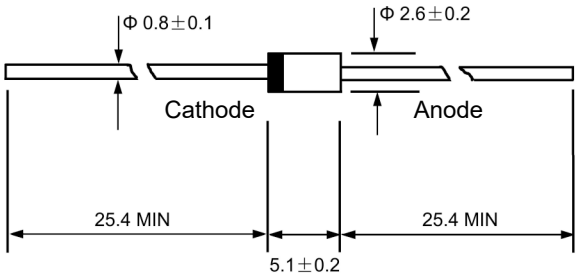
Maximum Ratings and Electrical Characteristics

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)	$R_{\theta JA}$	50			°C
Operating junction temperature range	T_J	- 55 to + 125			
Storage temperature range	T_{STG}	- 55 to + 150			

NOTE: 1. Pulse test : 300 μs pulse width,1% duty cycle.
2. Measured at 1MHZ and applied reverse voltage of 4V DC.
3. Thermal resistance junction to ambient

DO - 41



Dimensions : Millimetres

FIG.1 – FORWARD DERATING CURVE

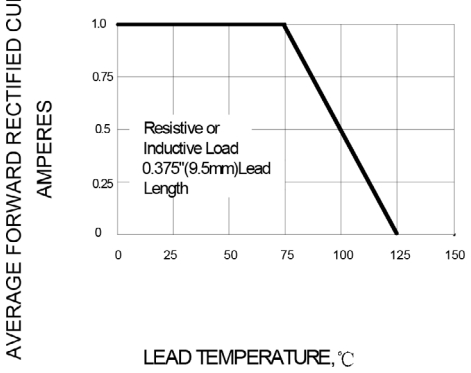


FIG.2 – PEAK FORWARD SURGE CURRENT

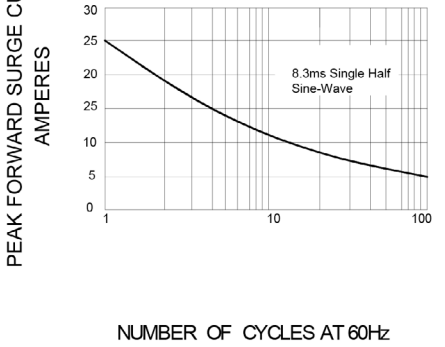


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

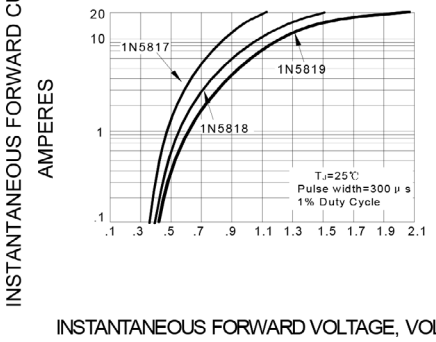


FIG.4 – TYPICAL JUNCTION CAPACITANCE