



1N5817 THRU 1N5819

SCHOTTKY BARRIER RECTIFIER

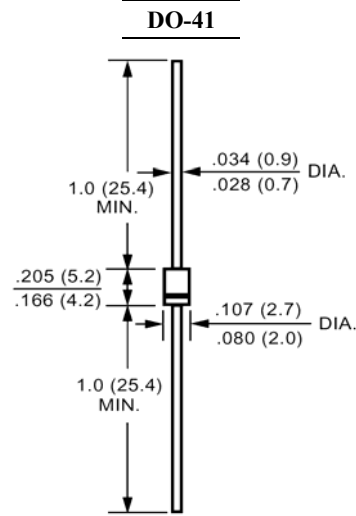
REVERSE VOLTAGE: 20 to 40 VOLTS
FORWARD CURRENT: 1.0 AMPERE

FEATURES

- High current capability
- 1.0 ampere operation at $T_L=90^\circ\text{C}$ with no thermal runaway.
- Exceeds environmental standards of MIL-S-19500/228
- For use in low voltage, high frequency inverters free wheeling, and porlarlity protection applications
- Suffix "H" indicates Halogen-free parts, ex. 1N5817H.

MECHANICAL DATA

Case : Molded plastic, DO-41
 Epoxy : UL 94V-O rate flame retardant
 Lead : Axial leads, solderable per MIL-STD-202, method 208 guaranteed
 Polarity : Color band denotes cathode end
 Mounting position : Any



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz , resistive or inductive load.

For capacitive load, derate current by 20%.

Parameter	Symbols	1N5817	1N5818	1N5819	Units
Maximum Recerrent Peak Reverse Voltage	V_{RRM}	20	30	40	Volts
Maximum RMS Voltage	V_{RMS}	14	21	28	Volts
Maximum DC Blocking Voltage	V_{DC}	20	30	40	Volts
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at $T_L=90^\circ\text{C}$	$I_{(AV)}$	1.0			Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	25.0			Amp
Maximum Forward Voltage at 1.0A DC	V_F	0.450	0.550	0.600	Volts
Maximum Forward Voltage at 3.0A DC		0.750	0.875	0.900	
Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=100^\circ\text{C}$	I_R	0.2 10			mAmp
Typical Junction Capacitance (Note 1)	C_J	110			pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	50.0			$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{stg}	-55 to +150			$^\circ\text{C}$

NOTES:

1- Measured at 1MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance Junction to Ambient and form junction to lead at 0.5"(12.7mm) lead length P.C.B. Mounted.



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RATINGS AND CHARACTERISTIC CURVES

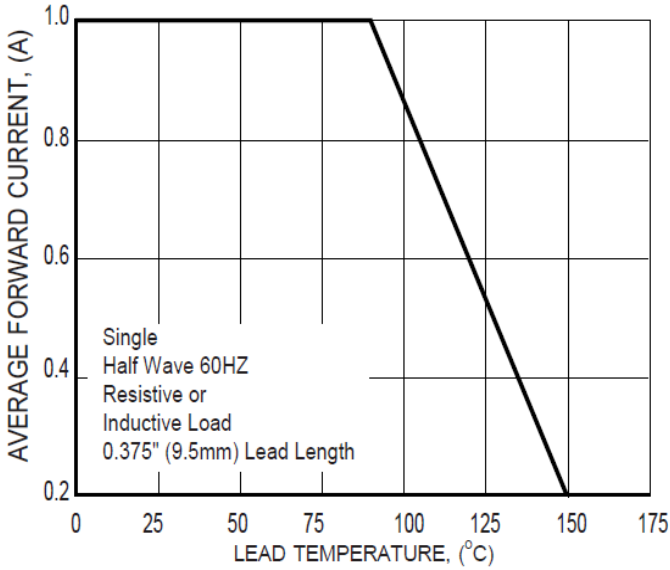


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

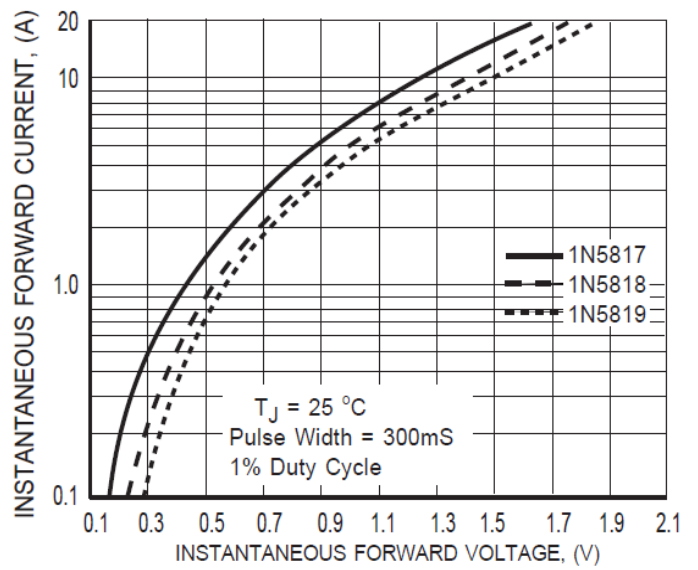


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

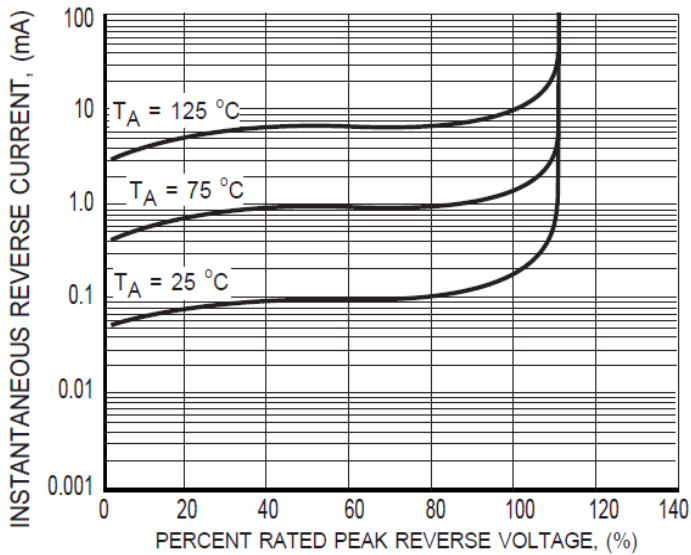


FIG.3 TYPICAL REVERSE CHARACTERISTICS

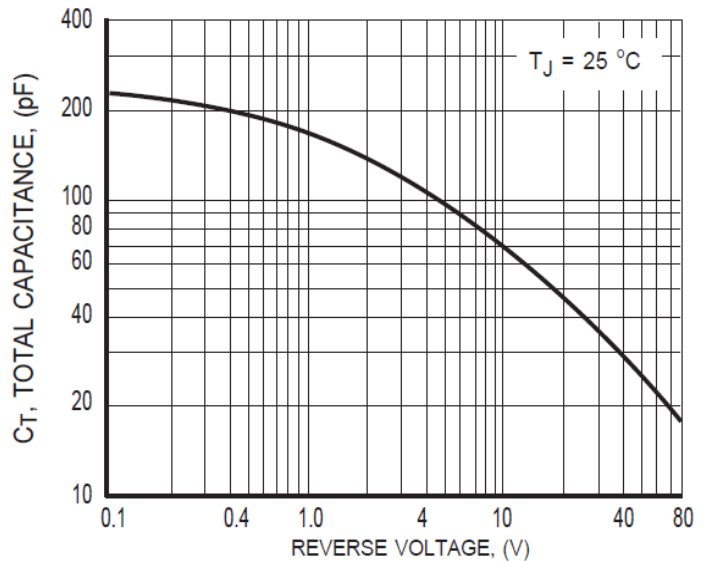


FIG.4 TYPICAL JUNCTION CAPACITANCE

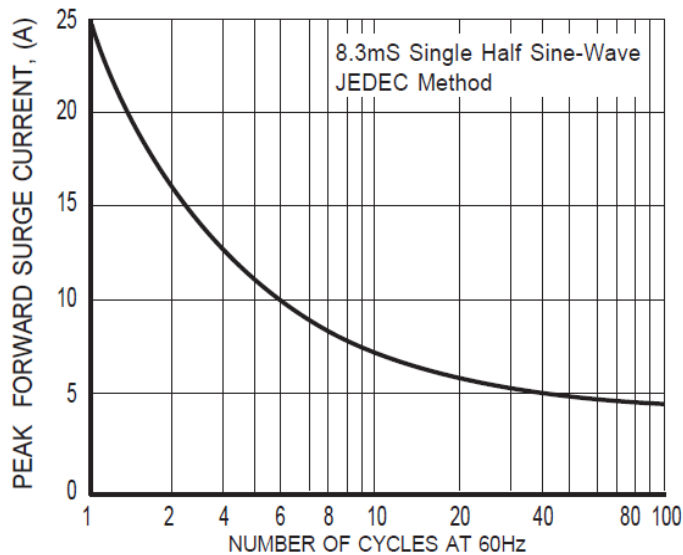


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT