



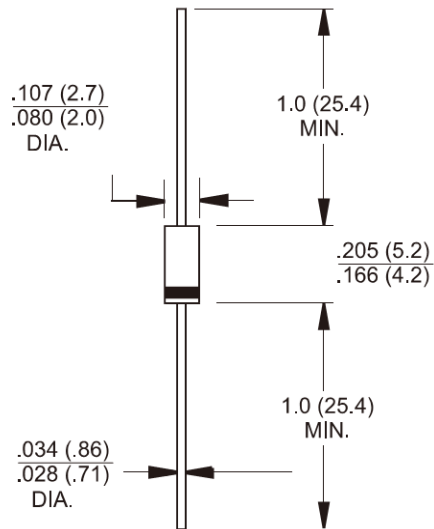
## 1N5817 - 1N5819

### 1.0AMP. Schottky Barrier Rectifiers

#### DO-41

### Features

- ✧ Low power loss, high efficiency
- ✧ High current capability, Low VF
- ✧ High reliability
- ✧ High surge current capability
- ✧ Exitaxial construction
- ✧ Guard-ring for transient protection
- ✧ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode



### Mechanical Data

- ✧ Cases: Molded plastic DO-41
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.375" (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 0.33 grams

### Dimensions in inches and (millimeters)



#### Marking Diagram

- |        |                        |
|--------|------------------------|
| 1N581X | = Specific Device Code |
| G      | = Green Compound       |
| Y      | = Year                 |
| WW     | = Work Week            |

### Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%

Type Number	Symbol	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 Forward Rectified Current .375 (9.5mm) Lead Length @ $T_L=90^\circ\text{C}$	$I_{F(AV)}$	1			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	30			A
Maximum Instantaneous Forward Voltage (Note 1) @ 1 A	$V_F$	0.45	0.550	0.600	V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$	$I_R$	1 10			mA mA
Typical Junction Capacitance (Note 2)	$C_j$	55			pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JC}$	100 45			$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	- 65 to + 125			$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 65 to + 150			$^\circ\text{C}$

Note 1: Pulse Test With PW=300 usec, 1% Duty Cycle

Note 2: Measure at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

Note 3: Mount on Cu-Pad Size 5mm x 5mm on P.C.B.

## RATINGS AND CHARACTERISTIC CURVES (1N5817 THRU 1N5819)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

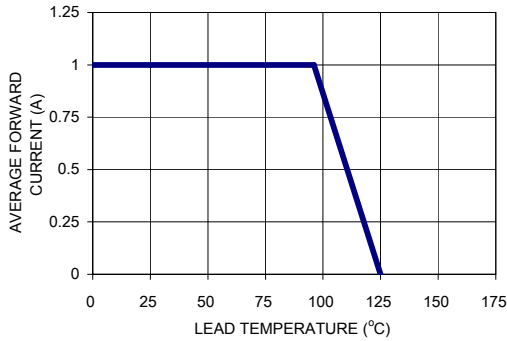


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

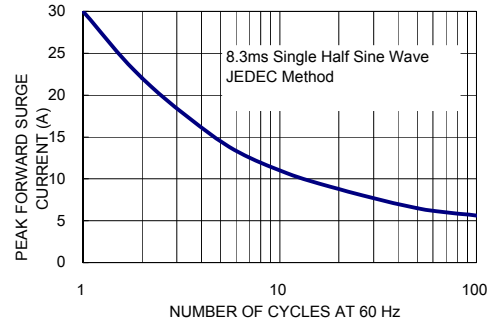


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

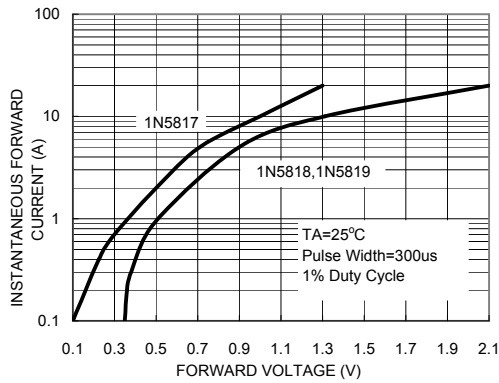


FIG. 4- TYPICAL REVERSE LEAKAGE CHARACTERISTICS PER LEG

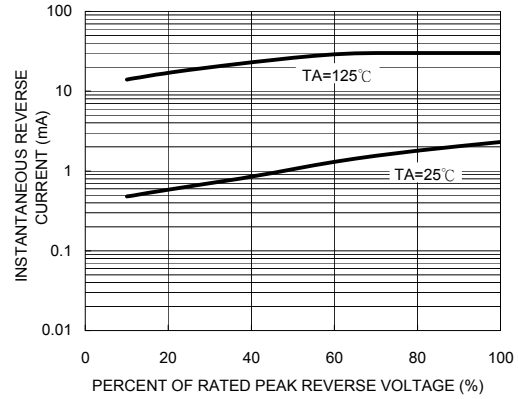


FIG. 5- TYPICAL JUNCTION CAPACITANCE

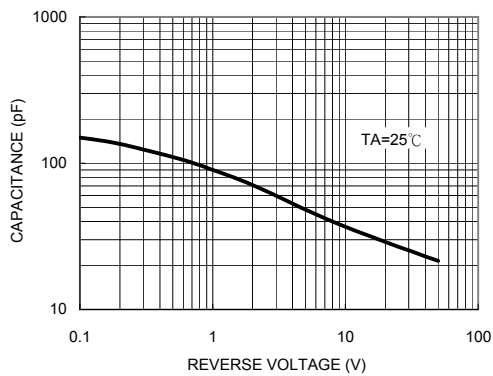


FIG. 6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

