

**SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE 20 to 40 Volts CURRENT 1.0 Ampere**

**FEATURES**

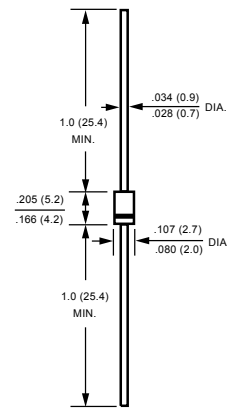
- \* Low power loss, high efficiency
- \* Low leakage
- \* Low forward voltage
- \* High current capability
- \* High speed switching
- \* High surge capability
- \* High reliability

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 0.33 gram



**DO-41**



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings 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%.

**MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)**

RATINGS	SYMBOL	1N5817	1N5818	1N5819	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	Volts
Maximum Average Forward Rectified Current .375" (9.5mm) lead length at T <sub>L</sub> =90°C	I <sub>O</sub>	1.0			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	25			Amps
Typical Thermal Resistance (Note 3)	R <sub>θJA</sub>	50			°C/W
	R <sub>θJL</sub>	15			
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	110			pF
Operating Temperature Range	T <sub>J</sub>	150			°C
Storage Temperature Range	T <sub>STG</sub>	-55 to + 150			°C

**ELECTRICAL CHARACTERISTICS(@TA=25 °C unless otherwise noted)**

CHARACTERISTICS	SYMBOL	1N5817	1N5818	1N5819	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	V <sub>F</sub>	.45	.55	.60	Volts
Maximum Instantaneous Forward Voltage at 3.1A DC	V <sub>F</sub>	.75	0.875	0.90	Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@T <sub>A</sub> = 25°C	0.2			mAmps
	@T <sub>A</sub> = 100°C	10			mAmps

- NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".  
3. Thermal Resistance : At 9.5mm lead lengths, PCB mounted.

## RATING AND CHARACTERISTICS CURVES ( 1N5817 THRU 1N5819 )

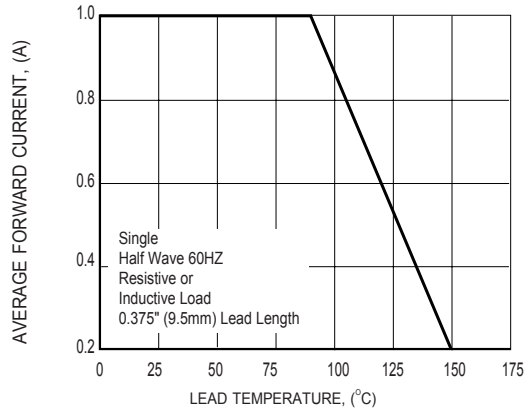


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

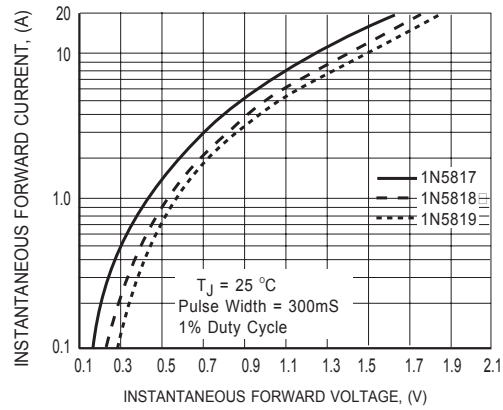


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

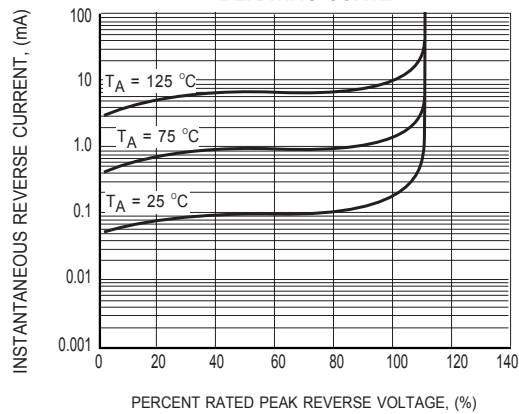


FIG.3 TYPICAL REVERSE CHARACTERISTICS

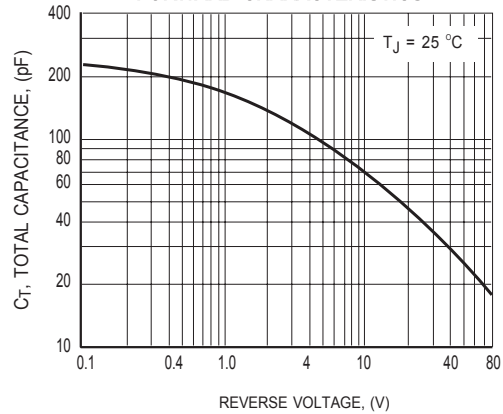


FIG.4 TYPICAL JUNCTION CAPACITANCE

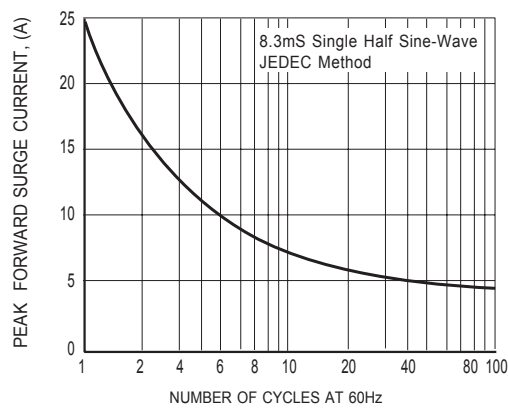


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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