

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

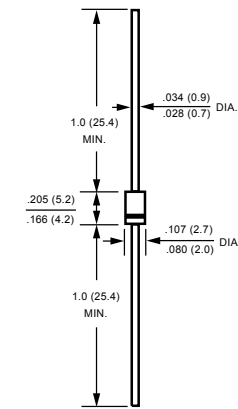
- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification 94V-O
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.33 gram

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%.



DO-41



Dimensions in inches and (millimeters)

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

RATINGS	SYMBOL	1N5817	1N5818	1N5819	UNITS
Maximum Recurrent 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°C	I _O	1.0			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	25			Amps
Typical Thermal Resistance (Note 3)	R _{θJA}	50			°C/W
	R _{θJL}	15			
Typical Junction Capacitance (Note 1)	C _J	110			pF
Operating Temperature Range	T _J	150			°C
Storage Temperature Range	T _{STG}	-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_F	.45	.55	.60	Volts
Maximum Instantaneous Forward Voltage at 3.1A DC	V_F	.75	0.875	0.90	Volts
Maximum Average Reverse Current @ $T_A = 25^\circ\text{C}$	I_R	0.2			mAmps
at Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$		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)

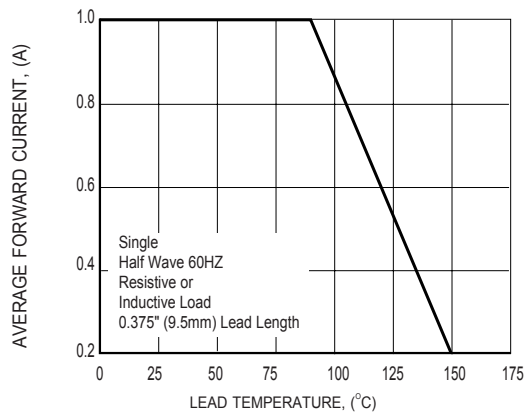


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

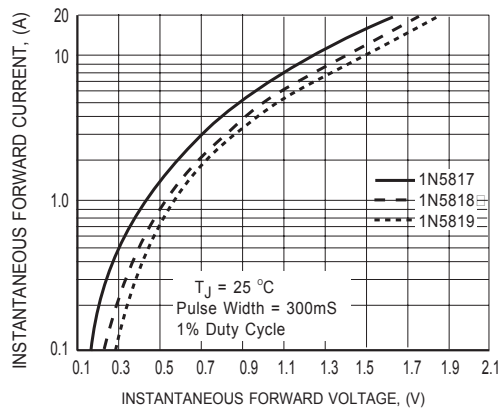


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

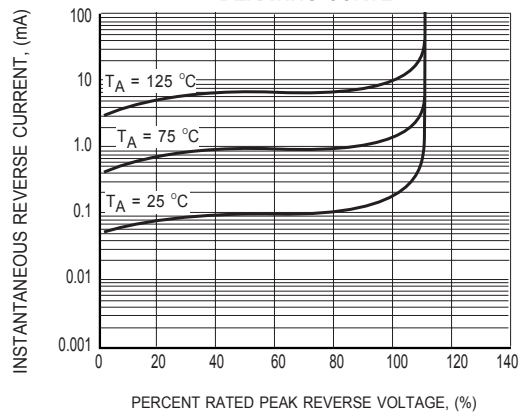


FIG.3 TYPICAL REVERSE CHARACTERISTICS

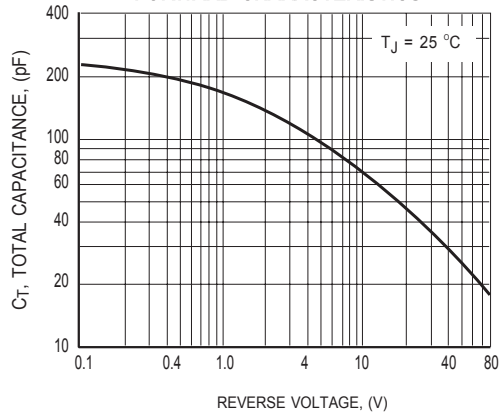


FIG.4 TYPICAL JUNCTION CAPACITANCE

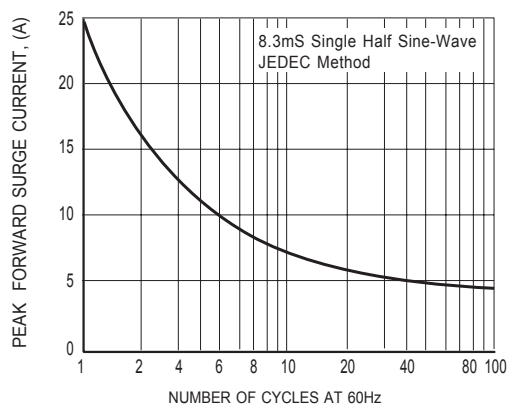


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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