

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 to 40 Volts CURRENT 1.0 Ampere

FEATURES

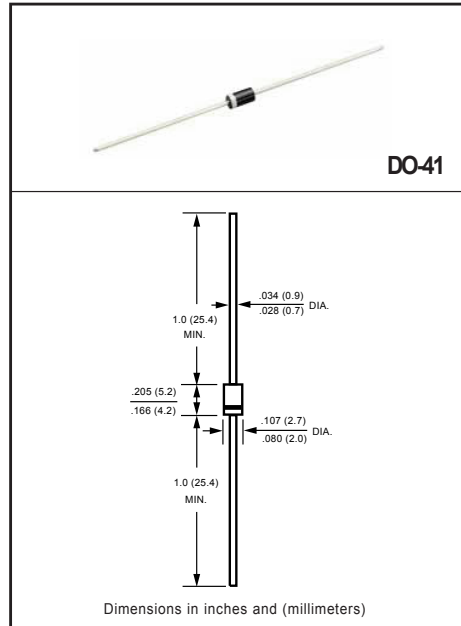
- * Low power loss, high efficiency
- * Low leakage
- * Low forward voltage
- * High current capability
- * High speed switching
- * High surge capability
- * High reliability

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

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 _{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°C	I _R	0.2			mAmps
at Rated DC Blocking Voltage @T _A = 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.

2006-12

RATING AND CHARACTERISTICS CURVES (1N5817 THRU 1N5819)

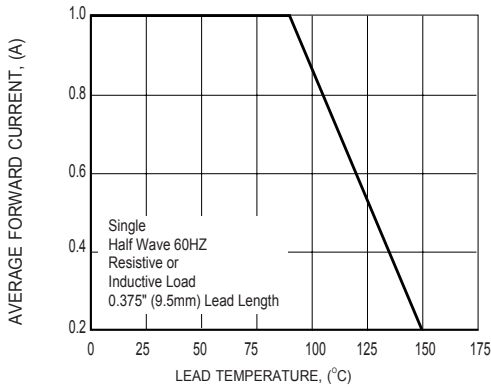


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

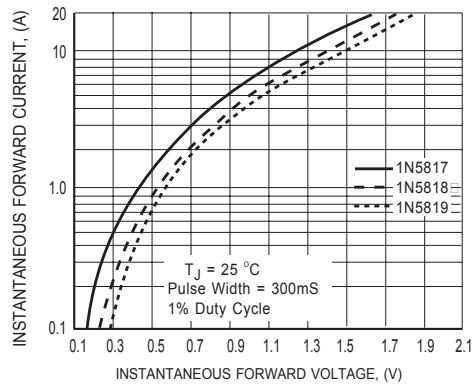


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

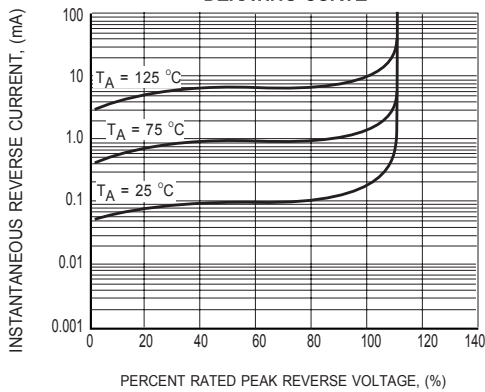


FIG.3 TYPICAL REVERSE CHARACTERISTICS

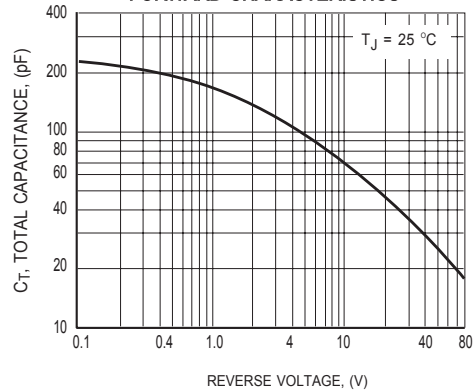


FIG.4 TYPICAL JUNCTION CAPACITANCE

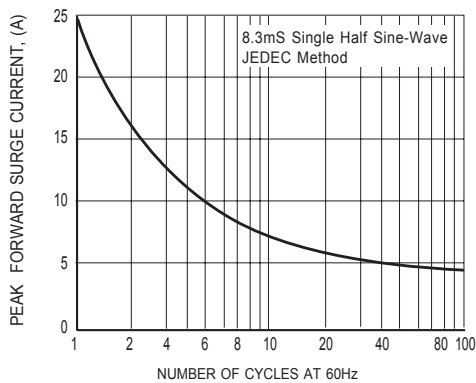


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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