RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

1N17 THRU 1N19□

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 to 40 Volts CURRENT 1.0 Ampere

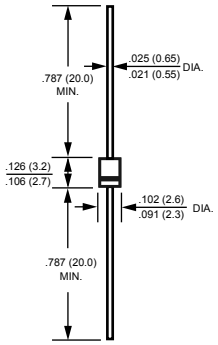
FEATURES

* Low power loss, high efficiency
* Low leakage
* Low forward voltage
* High current capability
* High speed switching
* High surge capabitity
* 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: 0.12 gram

R-1



Dimensions in inches and (millimeters)

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	1N17	1N18	1N19	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}	20			Amps
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	60			°C/W
	$R_{\theta JL}$	20			
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	1N17	1N18	1N19	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.

2006-11

RATING AND CHARACTERISTICS CURVES (1N17 THRU 1N19)

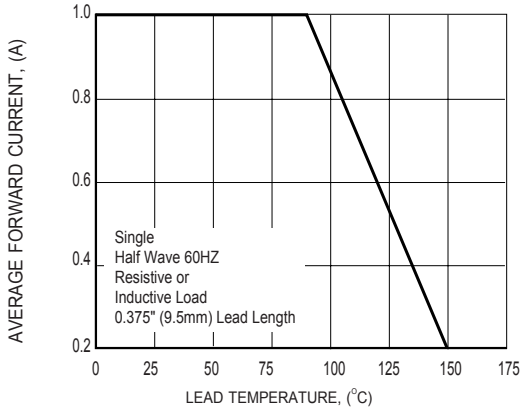


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

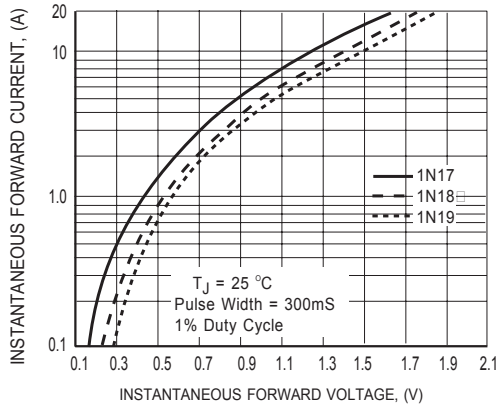


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

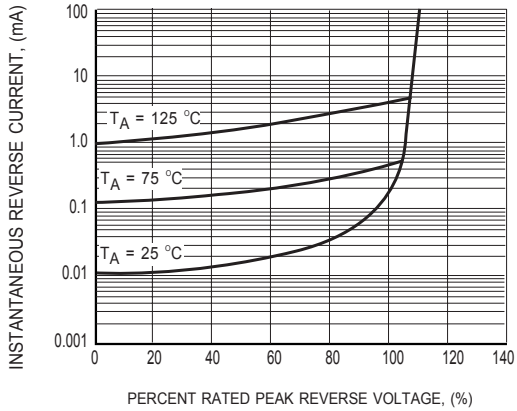


FIG.3 TYPICAL REVERSE CHARACTERISTICS

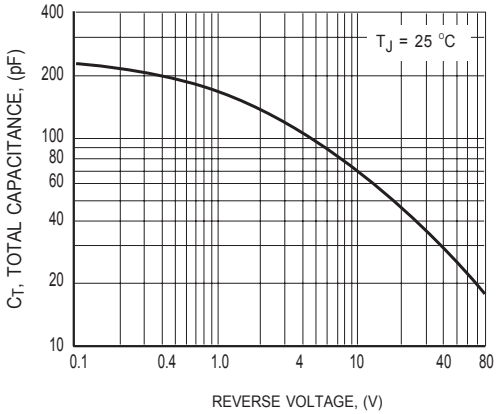


FIG.4 TYPICAL JUNCTION CAPACITANCE

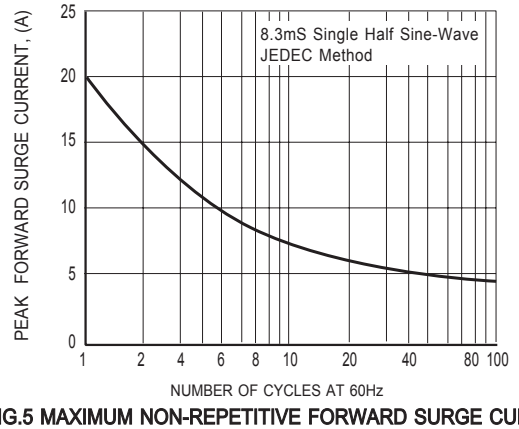


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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