



1N5820 THRU 1N5822

SCHOTTKY BARRIER RECTIFIER

REVERSE VOLTAGE: 20 to 40 VOLTS
FORWARD CURRENT: 3.0 AMPERE

FEATURES

- High current capability
- 3.0 ampere operation at $T_L=95^\circ\text{C}$ with no thermal runaway.
- Exceeds environmental standards of MIL-S-19500/228
- For use in low voltage, high frequency inverters free wheeling, and porlarity protection applications
- Suffix "H" indicates Halogen-free parts, ex. 1N5820H.

MECHANICAL DATA

Case : Molded plastic, DO-201AD

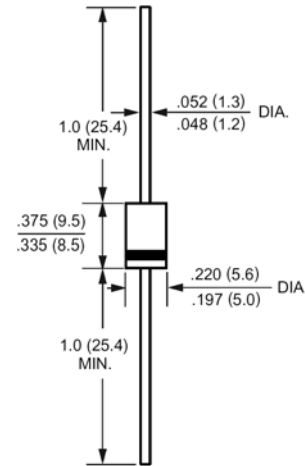
Epoxy : UL 94V-O rate flame retardant

Lead : Axial leads, solderable per MIL-STD-202, method 208 guaranteed

Polarity : Color band denotes cathode end

Mounting position : Any

DO-201AD



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

Parameter	Symbols	1N5820	1N5821	1N5822	Units
Maximum Recerrent 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 $T_L=95^\circ\text{C}$	$I_{(AV)}$	3.0			Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	80.0			Amp
Maximum Forward Voltage at 3.0A DC	V_F	0.475	0.500	0.525	Volts
Maximum Forward Voltage at 9.4A DC		0.850	0.900	0.950	
Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=100^\circ\text{C}$	I_R	0.2 10			mAmp
Typical Junction Capacitance (Note 1)	C_J	250			pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	40.0			$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{stg}	-55 to +150			$^\circ\text{C}$

NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance Junction to Ambient and form junction to lead at 0.5"(12.7mm) lead length P.C.B. Mounted.



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RATINGS AND CHARACTERISTIC CURVES

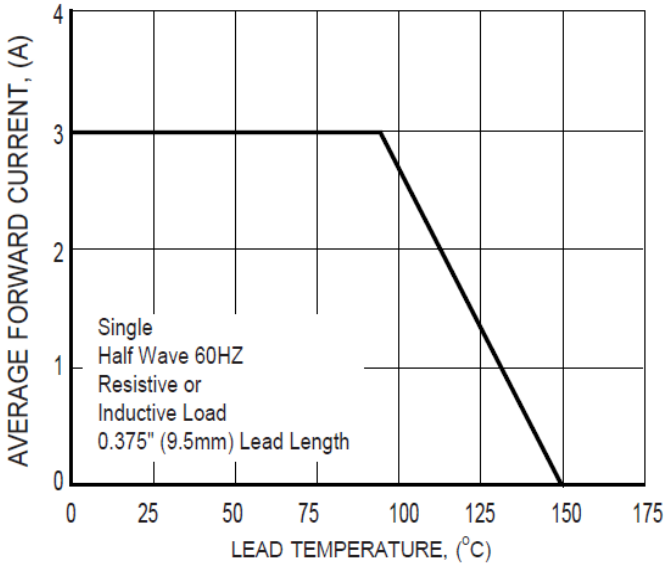


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

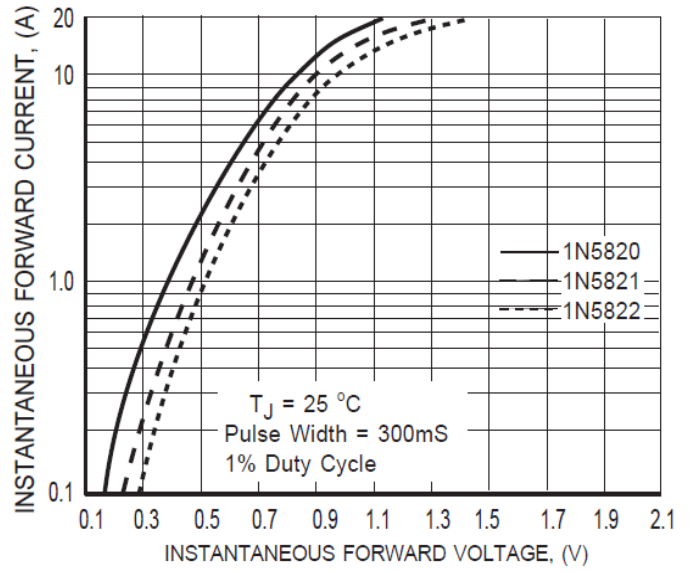


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

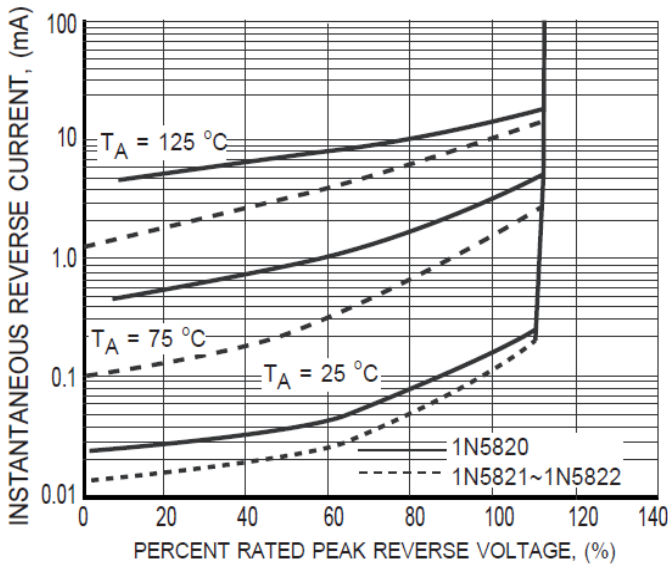


FIG.3 TYPICAL REVERSE CHARACTERISTICS

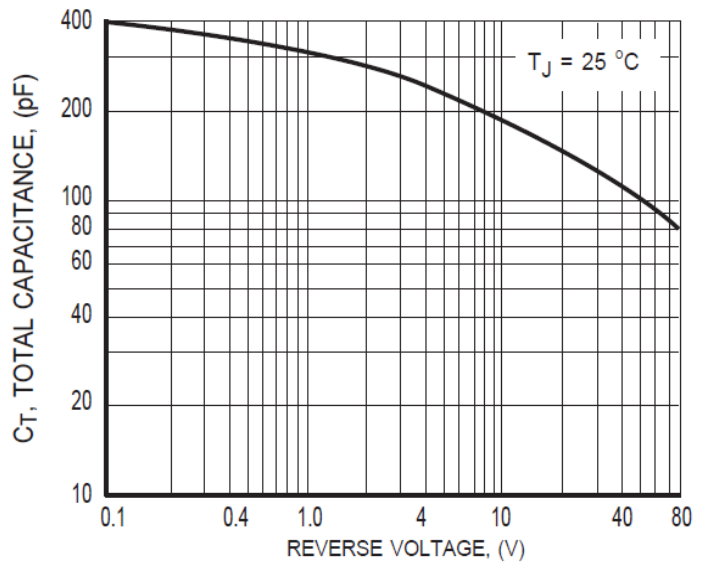


FIG.4 TYPICAL JUNCTION CAPACITANCE

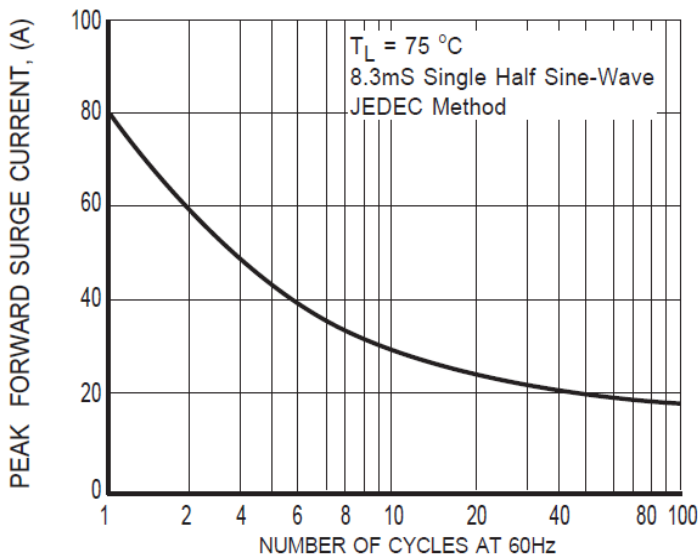


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT