



Features

- ✧ Low power loss, high efficiency
- ✧ High current capability, Low VF
- ✧ High reliability
- ✧ High surge current capability
- ✧ Exitaxial construction
- ✧ Guard-ring for transient protection
- ✧ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

- ✧ Cases: DO-201AD molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode end
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 1.10 grams

Maximum Ratings and Electrical Characteristics

Rating 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%

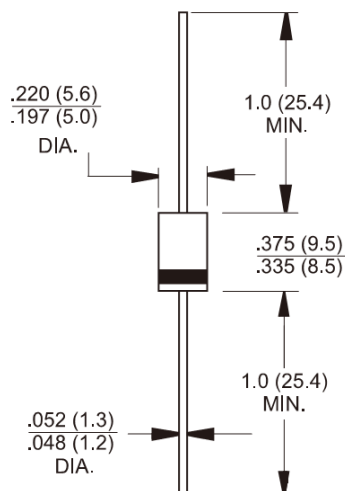
Type Number	Symbol	1N5820	1N5821	1N5822	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	V
Maximum RMS Voltage	V_{RMS}	14	21	28	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @ $T_L=90^\circ\text{C}$	$I_{F(AV)}$	3			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	70			A
Maximum Instantaneous Forward Voltage (Note 1) @ 3 A	V_F	0.475	0.500	0.525	V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$	I_R	0.5 10			mA mA
Typical Junction Capacitance (Note 2)	C_j	200			pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	40			$^\circ\text{C/W}$
Operating Temperature Range	T_J	- 65 to + 125			$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 65 to + 125			$^\circ\text{C}$

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Measure at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

Note 3: Mount on Cu-Pad Size 16mm x 16mm on P.C.B.

1N5820 - 1N5822 3.0AMPS. Schottky Barrier Rectifiers DO-201AD



Dimensions in inches and (millimeters)

Marking Diagram



- 1N582X = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

RATINGS AND CHARACTERISTIC CURVES (1N5820 THRU 1N5822)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

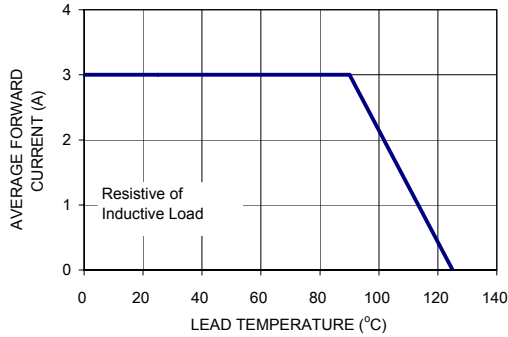


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

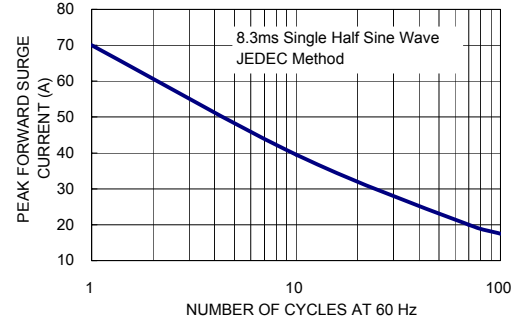


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

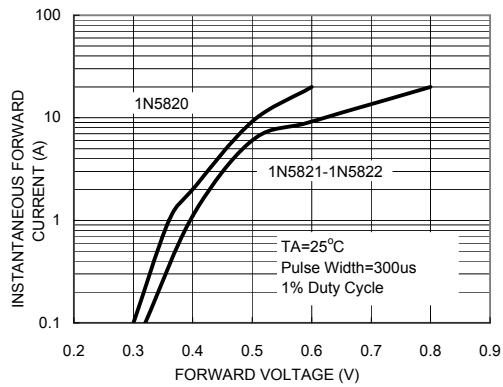


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

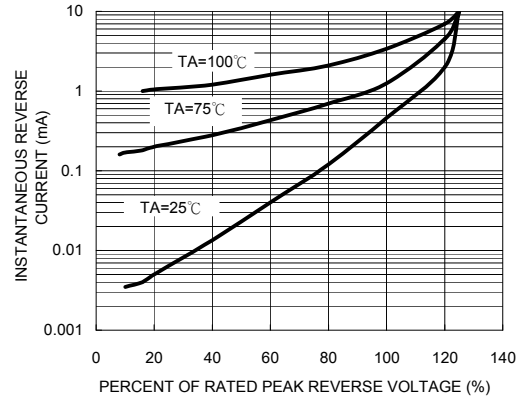


FIG. 5- TYPICAL JUNCTION CAPACITANCE

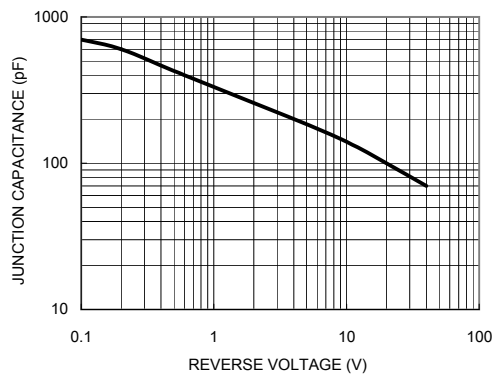


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

