



1N5820 THRU 1N5822

3.0 AMPS. SCHOTTKY BARRIER RECTIFIERS

FEATURES

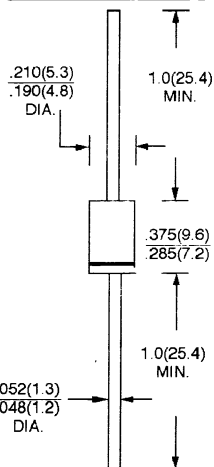
- * Low forward voltage drop
- * High current capability
- * High reliability
- * High surge current capability

MECHANICAL DATA

- * Case: DO-201 AD Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: Axial leads, solderable per MIL - STD - 202, method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Weight: 1.10grams

VOLTAGE RANGE
20 to 40 volts
CURRENT
3.0 Amperes

DO-201AD



Dimensions in inches and (millimeters)

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	SYMBOLS	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 @ $T_L = 90^\circ\text{C}$	$I_{F(AV)}$	3.0			A
Peak Forward Surge Current (8.3 ms half sine)	I_{FSM}	80			A
Maximum Instantaneous Forward Voltage @ 3.0A (Note 1)	V_F	0.475	0.500	0.525	V
Maximum Instantaneous Forward Voltage @ 9.0A	V_{FM}	0.850	0.900	0.950	V
Maximum D. C Reverse Current at Rated D. C Blocking Voltage	I_R	@ $T_A = 25^\circ\text{C}$ 20 @ $T_A = 100^\circ\text{C}$			mA
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	40			$^\circ\text{C}/\text{W}$
Typical Junction Capacitance (Note 3)	C_J	300			pF
Operating and Storage Temperature Range	T_J	- 65 to + 125			$^\circ\text{C}$

NOTE: (1) Pulse test: 300 μ s pulse width, 1% duty cycle
(2) Thermal Resistance Junction to Ambient Vertical PC Board Mounted, .0500" (12.7mm) Lead Length with 2.5 x 2.5" (63.5 x 63.5mm) copper pads.
(3) Measured at 1 MHz and applied reverse voltage of 4.0V D. C.

RATINGS AND CHARACTERISTIC CURVES (1N5820 THRU 1N5822)

FIG. 1 – TYPICAL FORWARD CURRENT DERATING CURVE

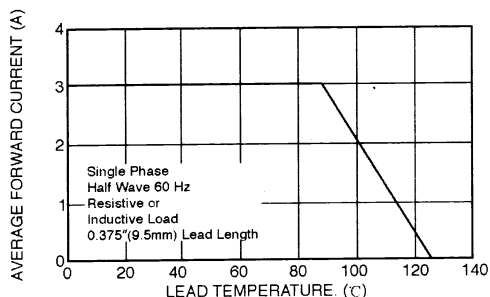


FIG. 3 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

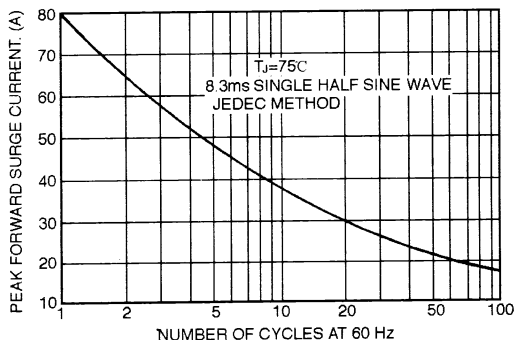


FIG. 5 – TYPICAL JUNCTION CAPACITANCE

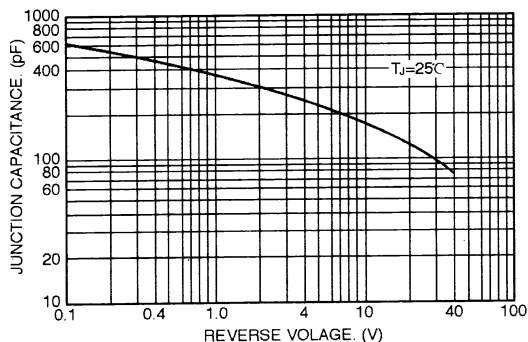


FIG. 2 – TYPICAL REVERSE CHARACTERISTICS

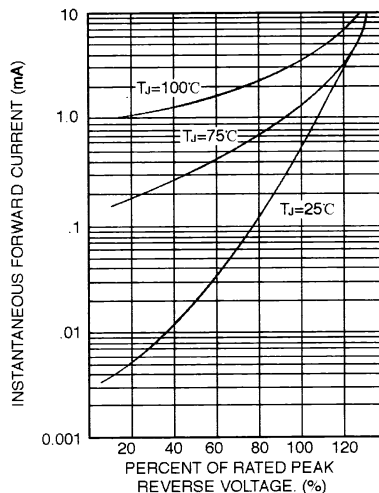


FIG. 4 – TYPICAL FORWARD CHARACTERISTICS

