

II. Schottky Rectifier

3.0A Schottky Rectifier 1N5820~1N5822

(Package: DO-201AD)

<p>FEATURES</p> <ul style="list-style-type: none"> • Plastic package has Underwriters Laboratory Flammability Classification 94V-0 • Metal silicon junction, majority carrier conduction • Guardring for overvoltage protection • Low power loss, high efficiency • High current capability, low forward voltage drop • High surge capability • For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications • High temperature soldering guaranteed : 250 /10 seconds, 0.375"(9.5mm) lead length, 5 lbs. (2.3Kg) tension <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • Case : JEDEC DO-201AD molded plastic body • Terminals : Plated axial leads, solderable per MIL-STD-750, Method 2026 • Polarity : Color band denotes cathode end • Mounting Position : Any • Weight : 0.04 ounce, 1.10 grams 	<p>Case: DO-201AD Dimensions in inches and (millimeters)</p>
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Ratings & Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristic	Symbol	1N5820	1N5821	1N5822	Units
Maximum repetitive 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 0.375" (9.5mm) lead length at $T_L = 95$	I_o	3.0			Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	80.0			Amps
Maximum instantaneous forward voltage at 3.0A	V_F	0.475	0.500	0.525	Volts
Maximum DC reverse current at rated DC blocking voltage $T_a = 25$ $T_a = 100$	I_R	2.0 40.0			mA
Typical junction capacitance (Note 1)	C_j	300.0			PF
Typical thermal resistance (Note 2)	R_{th-JA}	40.0			/ W
Operating junction and storage temperature range	T_j, T_{stg}	- 65 to +125			

Notes:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts D.C.

2. Thermal resistance from junction to ambient 0.375"(9.5mm) lead length P.C.B. mounted

Ratings and Characteristic Curves of 1N5820~1N5822

FIG. 1- FORWARD CURRENT DERATING CURVE

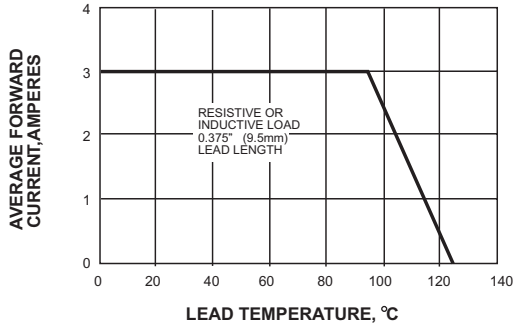


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

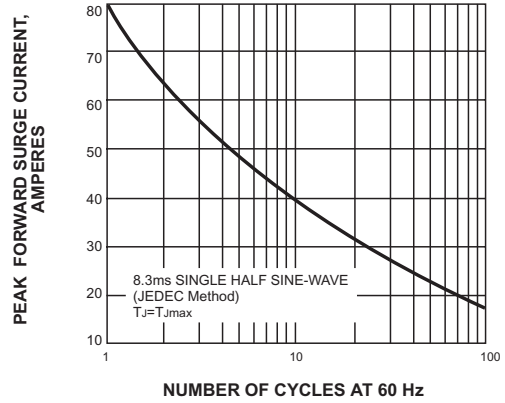


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

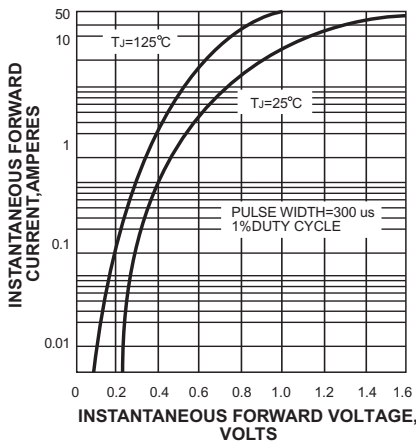


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

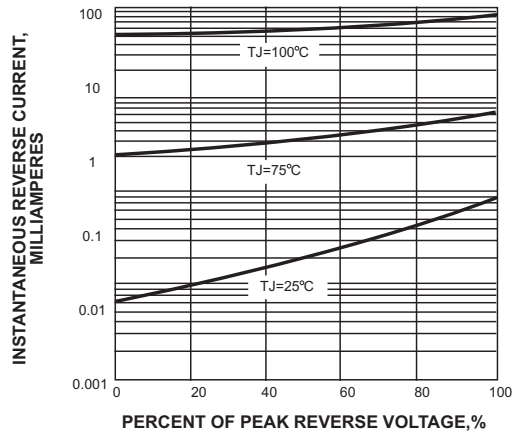


FIG. 5-TYPICAL JUNCTION CAPACITANCE

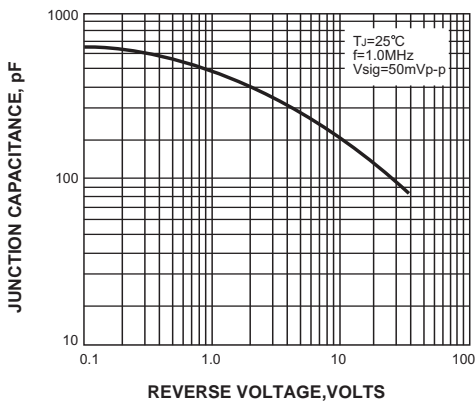


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

