

CURRENT 3.0 Ampere
 VOLTAGE RANG 20 to 40 Volts

1N5820 THRU 1N5822

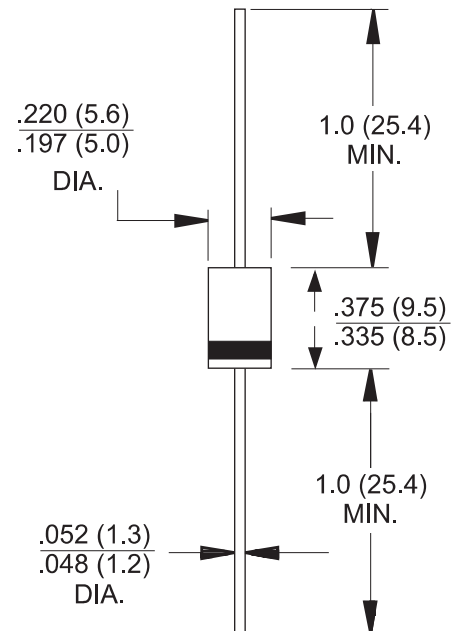
Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- Plastic Material: UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.1 grams (approx)
- Mounting Position: Any
- Marking: Type Number

DO-27 / DO-201AD



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

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

Characteristic	Symbol	1N5820	1N5821	1N5822	Unit
Peak Repetitive Reverse Voltage	V _{RRM}				V
Working Peak Reverse Voltage	V _{RWM}	20	30	40	V
DC Blocking Voltage	V _R				V
RMS Reverse Voltage	V _{R(RMS)}	14	21	28	V
Average Rectified Output Current (Note 1)	I _o		3.0		A
					@ T _L = 95°C
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}		80		A
					@ T _L = 75°C
Forward Voltage (Note 2)	V _{FM}	0.475 0.850	0.500 0.900	0.525 0.950	V
					@ I _F = 3.0A @ I _F = 9.4A
Peak Reverse Current at Rated DC Blocking Voltage (Note 2)	I _{RM}		2.0 20		mA
					@ T _A = 25°C @ T _A = 100°C
Typical Thermal Resistance (Note 3)	R _{θJA}		40		°C/W
	R _{θJL}		10		
Operating and Storage Temperature Range	T _j , T _{STG}		-65 to +125		°C

- Notes:
1. Measured at ambient temperature at a distance of 9.5mm from the case.
 2. Short duration pulse test used to minimize self-heating effect.
 3. Thermal resistance from junction to lead vertical P.C.B. mounted, 0.500" (12.7mm) lead length with 2.5 x 2.5" (63.5 x 63.5mm) copper pad.

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RATING AND CHARACTERISTIC CURVES 1N5820 Thru 1N5822

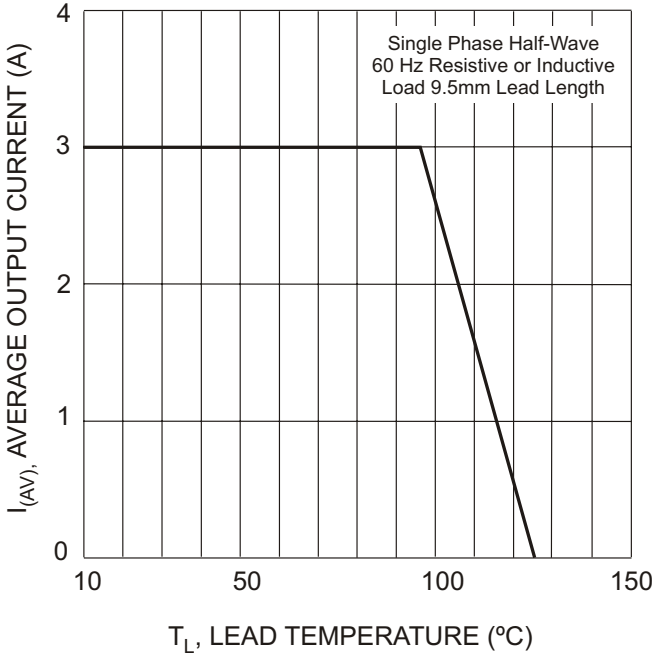


Fig. 1 Forward Current Derating Curve

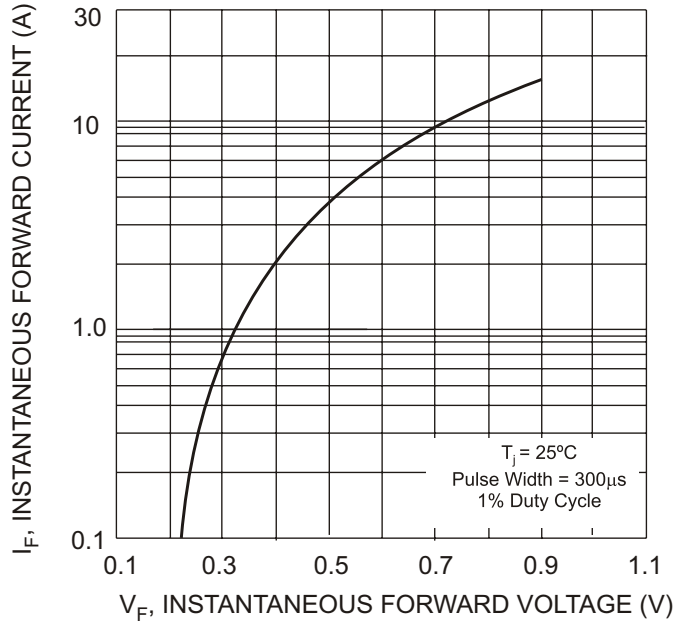


Fig. 2 Typical Forward Voltage Characteristics

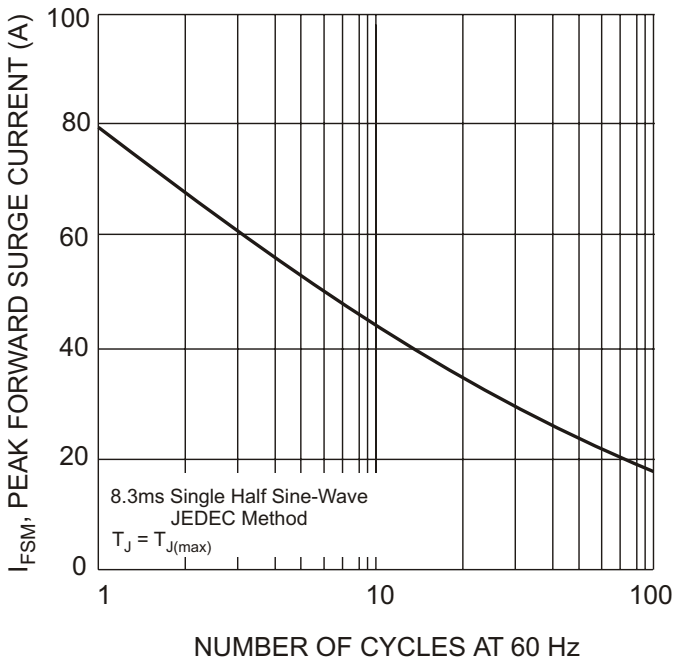


Fig. 3 Peak Forward Surge Current

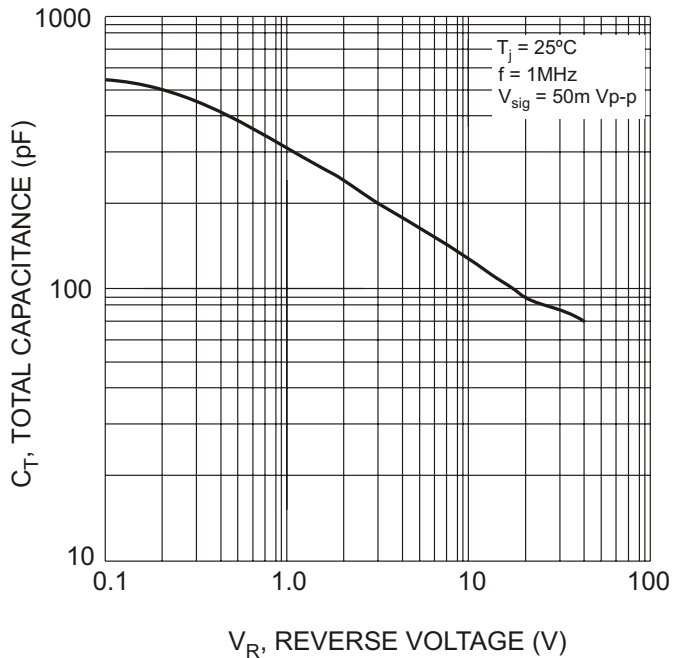


Fig. 4 Typical Total Capacitance