



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

1N5820  
THRU  
1N5822

**TECHNICAL SPECIFICATIONS OF SCHOTTKY BARRIER RECTIFIER**

VOLTAGE RANGE - 20 to 40 Volts

CURRENT - 3.0 Amperes

**FEATURES**

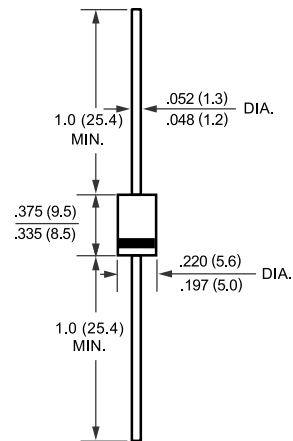
- \* Low switching noise
- \* Low forward voltage drop
- \* High current capability
- \* High switching capability
- \* High surge capability
- \* High reliability

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 1.18 grams



DO-27



Dimensions in inches and (millimeters)

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings 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%.

	SYMBOL	1N5820	1N5821	1N5822	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	Volts
Maximum Average Forward Rectified Current .375*(9.5mm) lead length at T <sub>L</sub> = 95°C	I <sub>O</sub>	3.0			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	80			Amps
Maximum Instantaneous Forward Voltage at 3.0A DC (Note 1)	V <sub>F</sub>	.475	.500	.525	Volts
Maximum Instantaneous Forward Voltage at 9.4A DC (Note 1)	V <sub>F</sub>	.850	.900	.950	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage (Note 1)	I <sub>R</sub>	2.0			mAmps
		@TA = 100°C			
Typical Thermal Resistance (Note 2)	R <sub>θJA</sub>	28			°C/W
Typical Junction Capacitance (Note 3)	C <sub>J</sub>	250			pF
Storage and Operating Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to + 125			°C

NOTES : 1. Measured at Pulse Width 300 uS, Duty 2%.

2. Thermal Resistance (Junction to Ambient): Vertical PC Board Mounting, 0.5\*(12.7mm) Lead Length.

3. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

# RATING AND CHARACTERISTIC CURVES (1N5820 THRU 1N5822)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

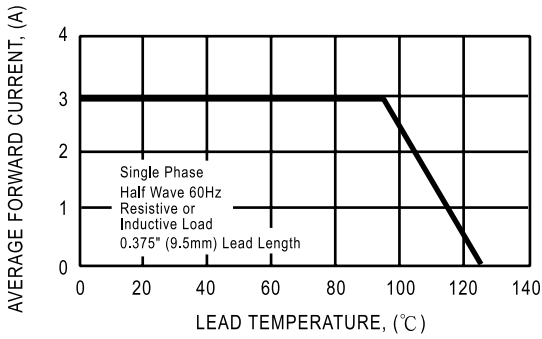


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

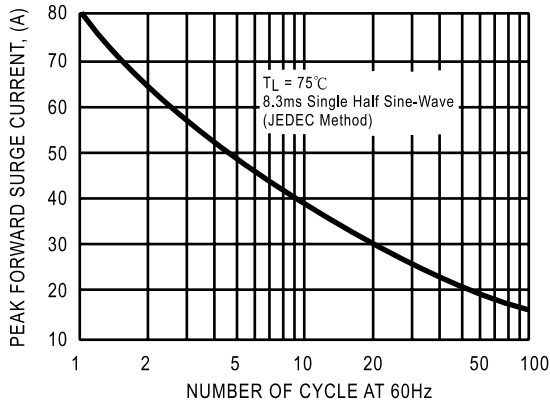


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

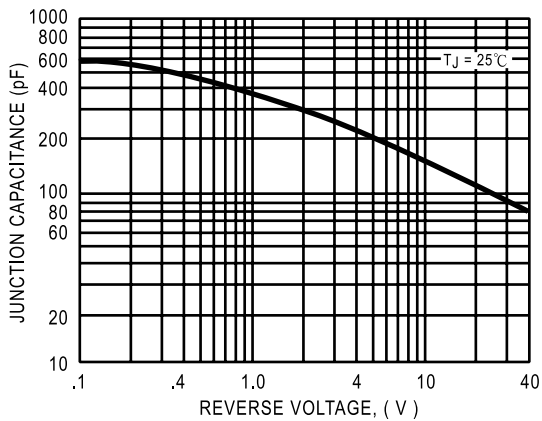


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

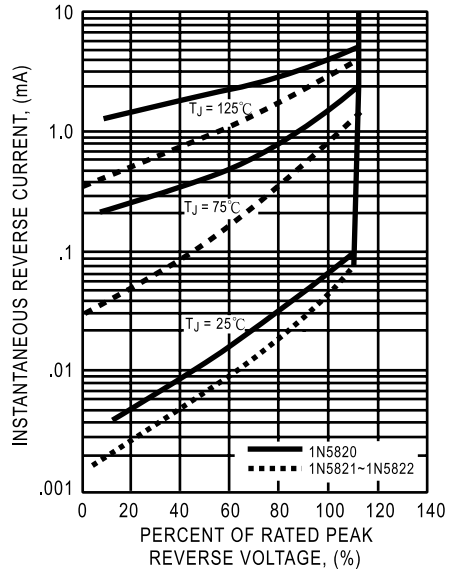
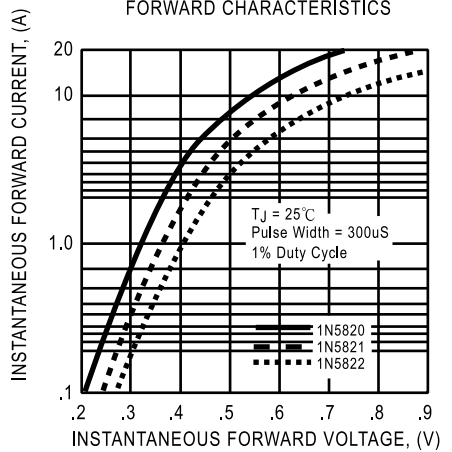


FIG. 5 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



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