

Schottky Plastic Rectifiers

Reverse Voltage: 20 to 40V  
Forward Current: 3.0 Amp

Features

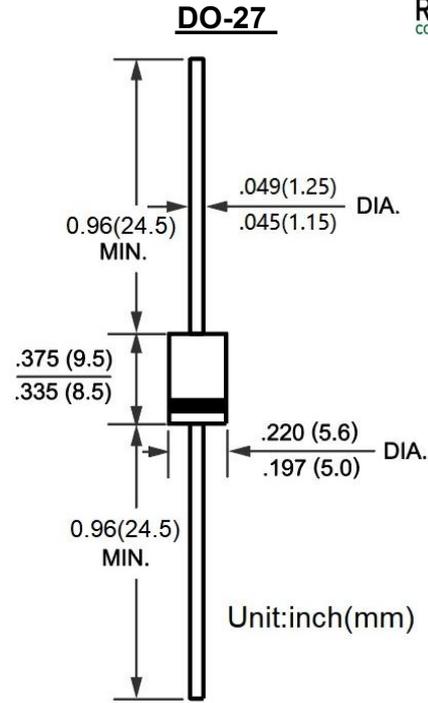
- Schottky Barrier Chip
- Guardring for overvoltage protection
- Low forward voltage drop
- High forward surge capability
- High temperature soldering guaranteed  
260°C/10 seconds at terminals

Mechanical Data

- **Package:** DO-27, Molded plastic body  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per MIL-STD-750, Method 2026
- **Polarity:** Cathode line denotes the cathode end

Typical Applications

For use in low voltage high frequency inverters, freewheeling, DC/DC converters, and polarity protection applications.



Package Outline Dimensions in Inches (Millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter&Test Conditions	SYM.	1N5820	1N5821	1N5822	Unit
Device marking code		1N5820	1N5821	1N5822	
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	V
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	V
Average rectified output current @60Hz sine wave, Resistance load, TL (FIG.1)	I <sub>O(AV)</sub>	3.0			A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load	I <sub>FSM</sub>	80			A
Maximum Thermal Resistance, Junction To Ambient (Note1)	R <sub>θJA</sub>	40			°C/W
Operating junction range	T <sub>j</sub>	-55 to+125			°C
Storage temperature range	T <sub>STG</sub>	-55 to+150			°C

Electrical Characteristics (Ta=25°C Unless otherwise specified)

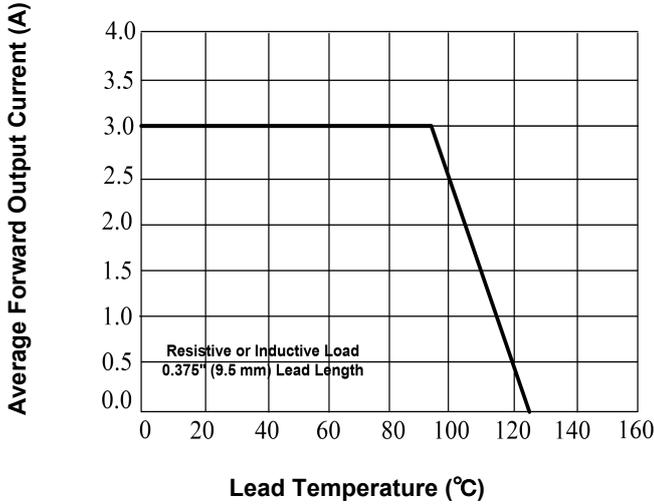
Parameter&Test Conditions	SYM.	1N5820	1N5821	1N5822	Unit
Maximum Instantaneous Forward Voltage IFM =3A	V <sub>FM</sub>	0.48	0.50	0.53	V
Maximum DC reverse current at rated DC blocking voltage	TA = 25°C	0.2			mA
	TA = 100°C	20			

Notes:

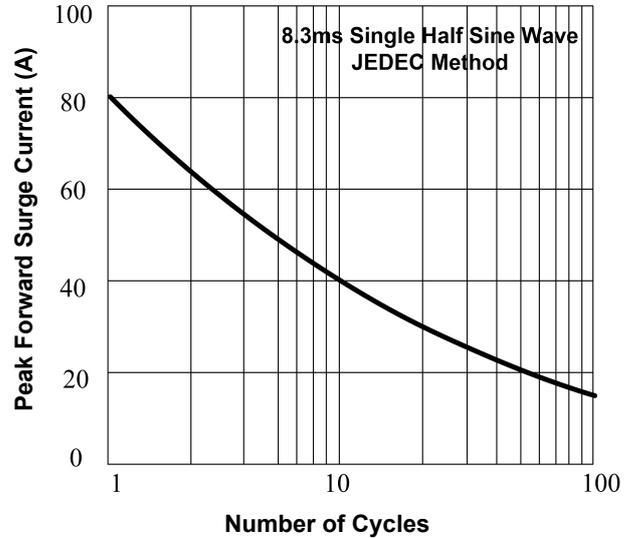
1. Thermal resistance from junction to lead vertical PCB mounted, 0.500" (12.7 mm) lead length with 2.5" x 2.5" (63.5 mm x 63.5 mm) copper pad.
2. The typical data above is for reference only.

**Rating and Characteristic Curves**

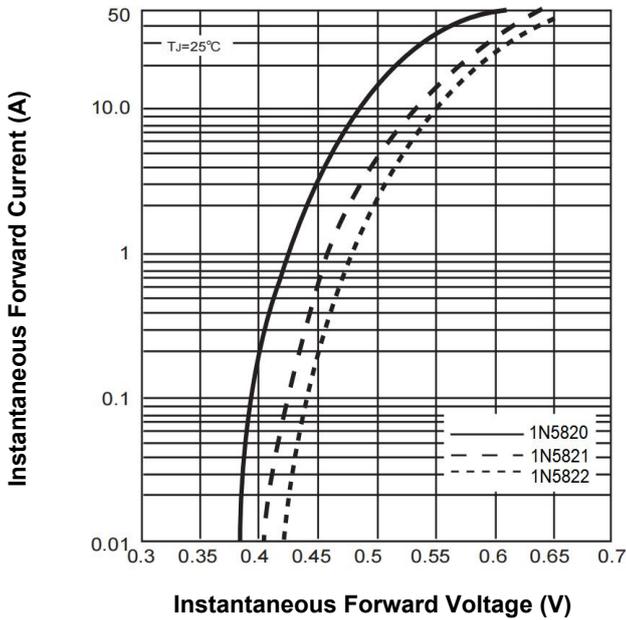
**FIG. 1- DERATING CURVE OUTPUT RECTIFIED**



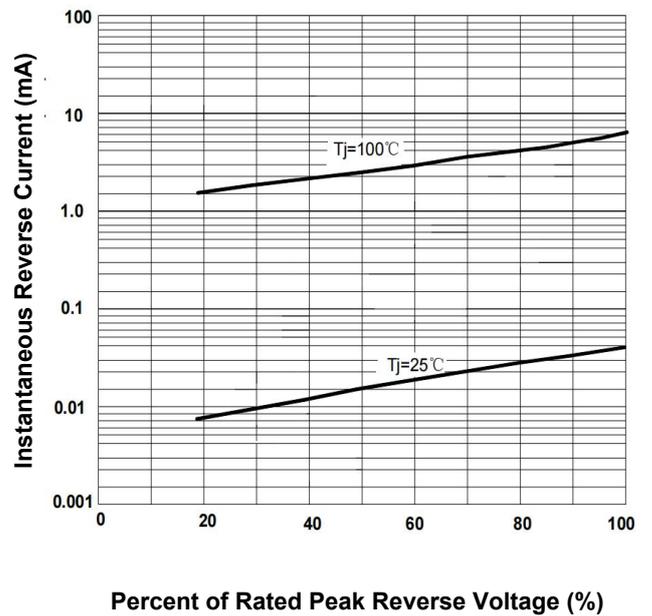
**FIG. 2- -MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG**



**FIG. 3- TYPICAL FORWARD VOLTAGE**



**FIG. 4- TYPICAL REVERSE LEAKAGE**



The curve above is for reference only.



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