

# 1N5820S - 1N5822S

# SCHOTTKY BARRIER RECTIFIER DIODES

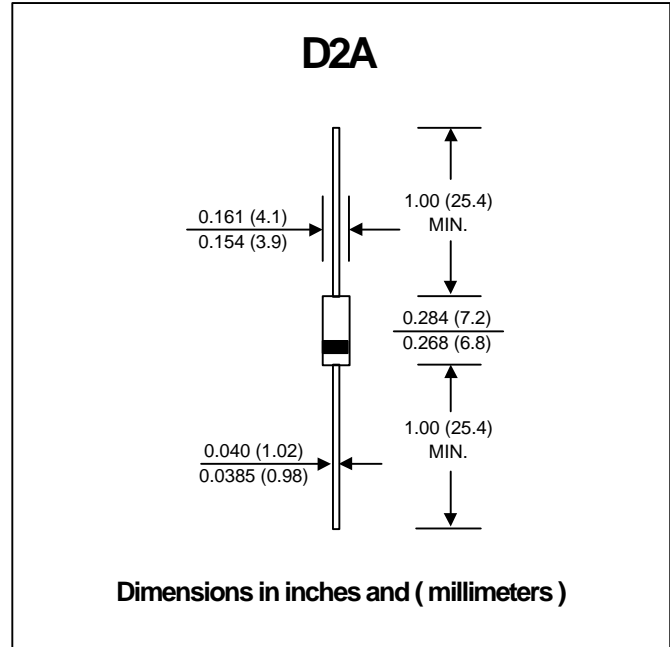
**PRV : 20 - 40 Volts**  
**I<sub>o</sub> : 3.0 Ampere**

**FEATURES :**

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* High efficiency
- \* Low power loss
- \* Low cost
- \* Low forward voltage drop

**MECHANICAL DATA :**

- \* Case : D2A Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.645 gram



**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%.

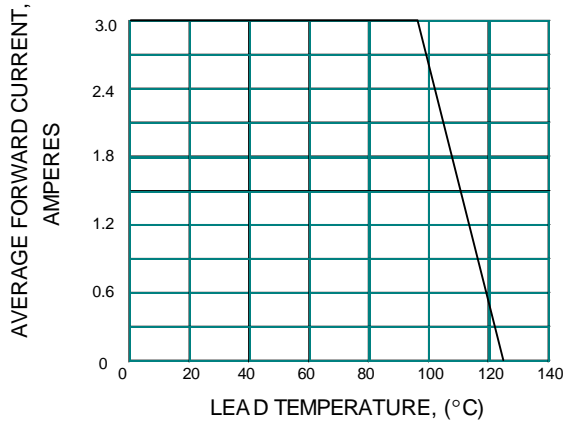
RATING	SYMBOL	1N5820S	1N5821S	1N5822S	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	Volts
Maximum Average Forward Current 0.375", 9.5mm Lead Length at T <sub>L</sub> = 95 °C	I <sub>F(AV)</sub>	3.0			Amps.
Peak Forward Surge Current, 8.3ms single half sine wave Superimposed on rated load (JEDEC Method) T <sub>L</sub> = 75°C	I <sub>FSM</sub>	80			Amps.
Maximum Forward Voltage at I <sub>F</sub> = 3.0 Amp. (Note 1)	V <sub>F</sub>	0.475	0.500	0.525	Volt.
Maximum Reverse Current at T <sub>a</sub> = 25 °C	I <sub>R</sub>	2.0			mA
Rated DC Blocking Voltage (Note 1) T <sub>a</sub> = 100 °C	I <sub>R(H)</sub>	20			mA
Typical Thermal Resistance (Note 2)	R <sub>θJL</sub>	20			°C/W
Junction Temperature Range	T <sub>J</sub>	- 65 to + 125			°C
Storage Temperature Range	T <sub>STG</sub>	- 65 to + 125			°C

**Notes :**

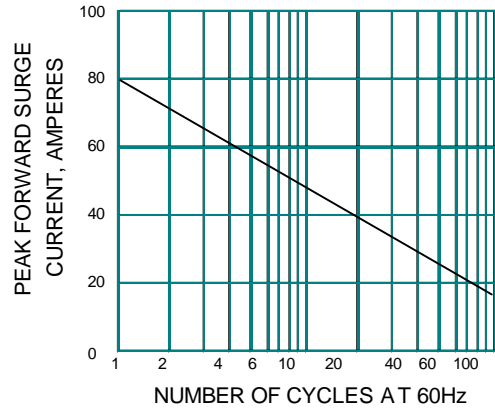
- (1) Pulse Test : Pulse Width = 300 μs, Duty Cycle = 2%.
- (2) Thermal Resistance from Junction to Lead Vertical PC Board Mounting, 0.5" (12.5mm) Lead Lengths with 2.5 in<sup>2</sup> (63.5mm<sup>2</sup>) copper pads.

## RATING AND CHARACTERISTIC CURVES ( 1N5820S - 1N5822S )

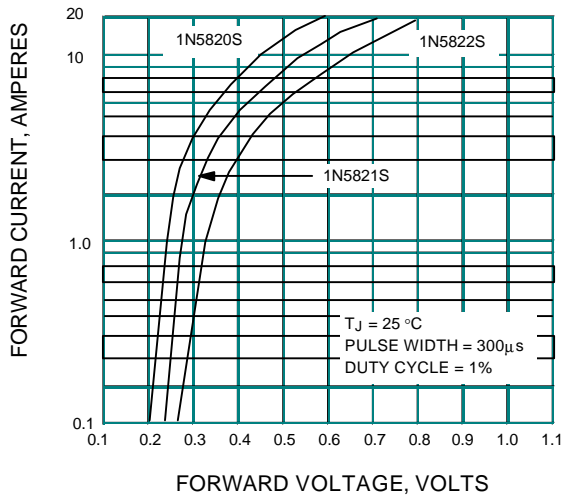
**FIG.1 - FORWARD CURRENT DERATING CURVE**



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



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

