

1N5820S - 1N5822S

SCHOTTKY BARRIER RECTIFIER DIODES

PRV : 20 - 40 Volts

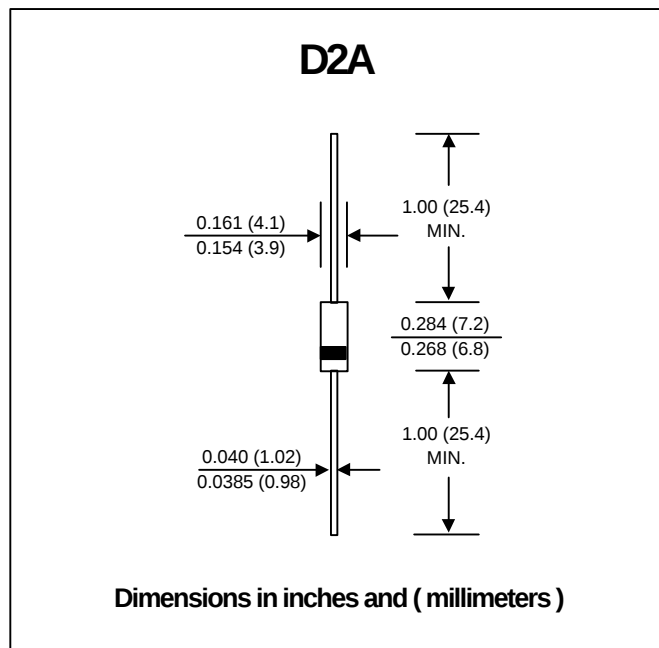
I_o : 3.0 Ampere

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 _{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 Current 0.375", 9.5mm Lead Length at T _L = 95 °C	I _{F(AV)}	3.0			Amps.
Peak Forward Surge Current, 8.3ms single half sine wave Superimposed on rated load (JEDEC Method) T _L = 75°C	I _{FSM}	80			Amps.
Maximum Forward Voltage at I _F = 3.0 Amp. (Note 1)	V _F	0.475	0.500	0.525	Volt.
Maximum Reverse Current at T _a = 25 °C	I _R	2.0			mA
Rated DC Blocking Voltage (Note 1) T _a = 100 °C	I _{R(H)}	20			mA
Typical Thermal Resistance (Note 2)	R _{θJL}	20			°C/W
Junction Temperature Range	T _J	- 65 to + 125			°C
Storage Temperature Range	T _{STG}	- 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 in² (63.5mm²) copper pads.

UPDATE : MAY 10, 1999

RATING AND CHARACTERISTIC CURVES (1N5820S - 1N5822S)

FIG.1 - FORWARD CURRENT DERATING CURVE

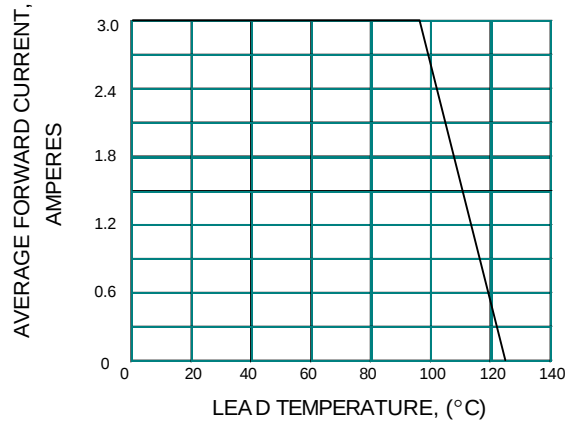


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

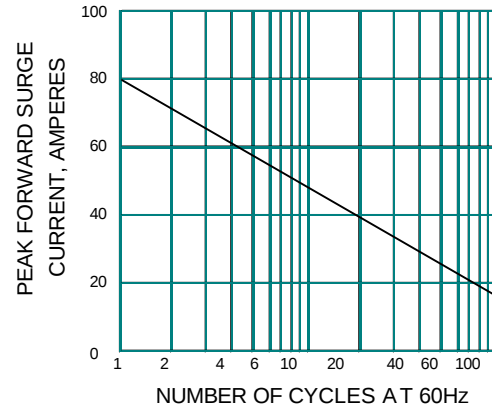


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

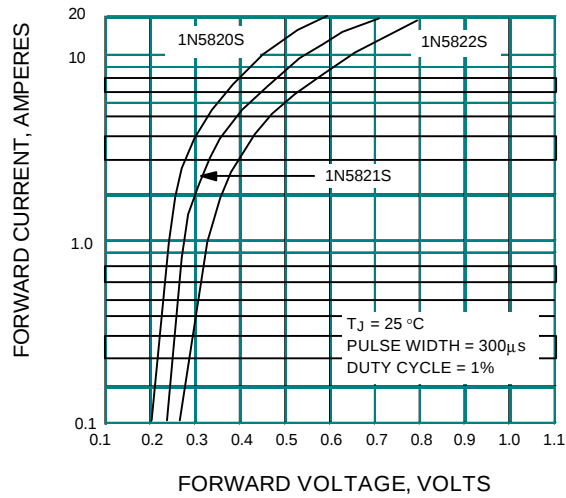


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

