Certificate Number: Q10561

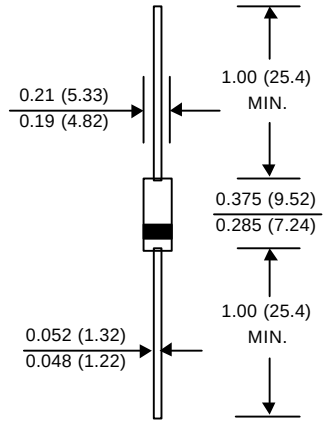
Certificate Number: E17276

1N5820 - 1N5822

SCHOTTKY BARRIER RECTIFIER DIODES

PRV : 20 - 40 Volts
I_O : 3.0 Ampere

DO-201AD



Dimensions in inches and (millimeters)

FEATURES :

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

MECHANICAL DATA :

* Case : DO-201AD 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 : 1.1 grams

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	1N5820	1N5821	1N5822	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 Ta = 25 °C	I_R	2.0			mA
Rated DC Blocking Voltage (Note 1) Ta = 100 °C	$I_{R(H)}$	20			mA
Typical Thermal Resistance (Note 2)	$R\theta JL$	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 in^2 (63.5mm^2) copper pads.

UPDATE : SEPTEMBER 12, 1998

RATING AND CHARACTERISTIC CURVES (1N5820 - 1N5822)

FIG.1 - FORWARD CURRENT DERATING CURVE

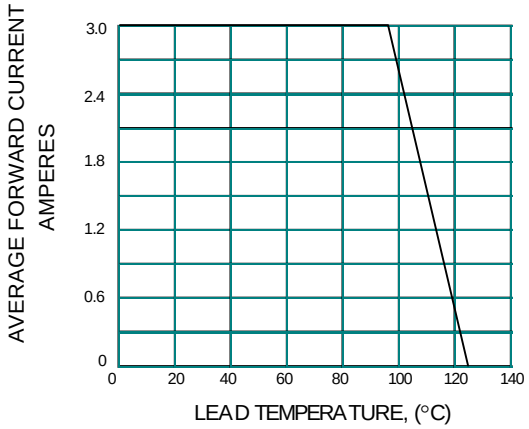


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

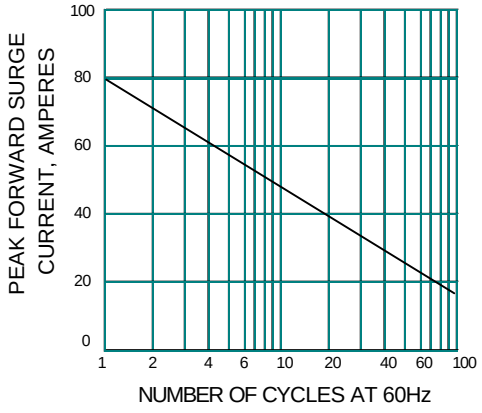


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

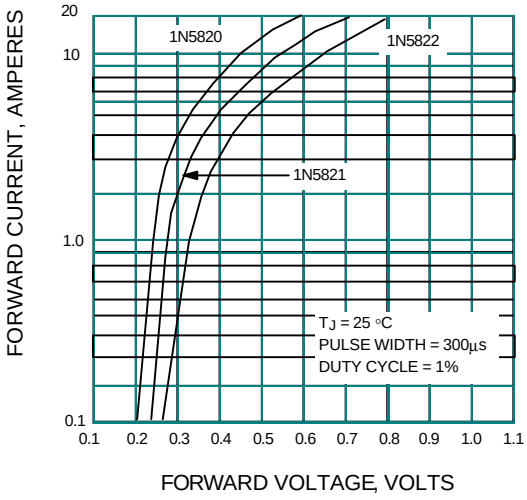


FIG.4 - TYPICAL REVERSE CHARACTERISTICS