1N5820 THRU 1N5822

3.0 AMP SCHOTTKY BARRIER RECTIFIERS

FEATURES

* Low forward voltage drop
* High current capability
* High reliability
* High surge current capability
* Epitaxial construction

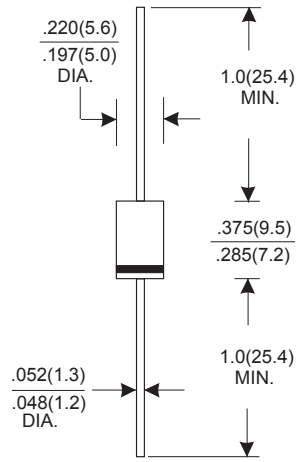
MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Lead: Axial leads, solderable per MIL-STD-202, method 208 guranteed
* Polarity: Color band denotes cathode end
* Mounting position: Any
* Weight: 1.10 grams

*Both normal and Pb free product are available:
*Normal:80~95% Sn,5~20% Pb
*Pb free:99 Sn above can meet Rohs enviroment substance directive request

VOLTAGE RANGE
20 to 40 Volts
CURRENT
3.0 Ampere

DO-27



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

TYPE NUMBER	1N5820	1N5821	1N5822	UNITS
Maximum Recurrent Peak Reverse Voltage	20	30	40	V
Maximum RMS Voltage	14	21	28	V
Maximum DC Blocking Voltage	20	30	40	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Ta=90°C	3.0			A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	80			A
Maximum Instantaneous Forward Voltage at 3.0A	.475	.500	.525	V
Maximum DC Reverse Current Ta=25°C	0.5			mA
at Rated DC Blocking Voltage Ta=100°C	50			mA
Typical Junction Capacitance (Note1)	250			pF
Typical Thermal Resistance RθJA (Note 2)	20			°C/W
Operating Temperature Range T_J	-65 — +125			°C
Storage Temperature Range T_{STG}	-65 — +150			°C

NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal Resistance Junction to Ambient Vertical PC Board Mounting 0.5"(12.7mm) Lead Length.

RATING AND CHARACTERISTIC CURVES (1N5820 THRU 1N5822)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

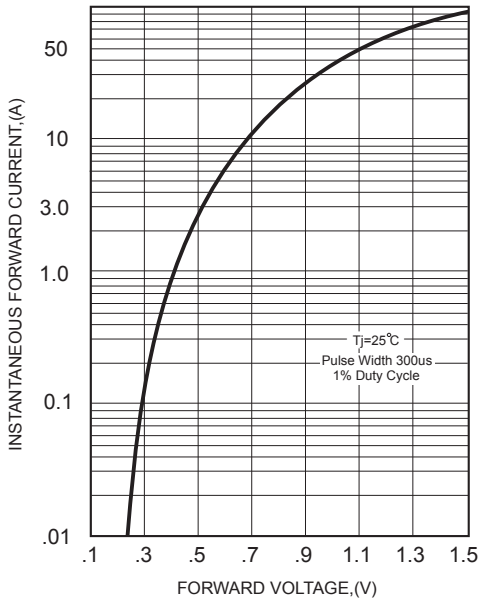


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

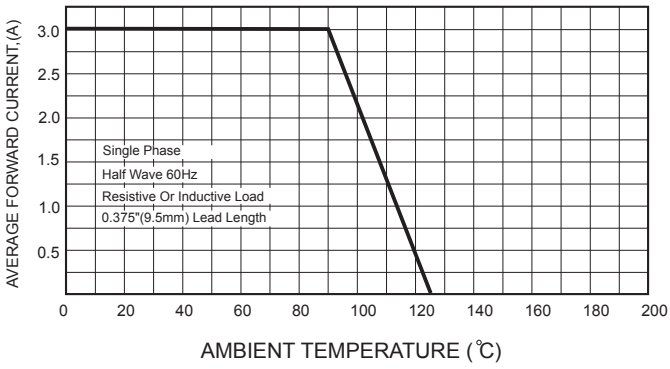


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

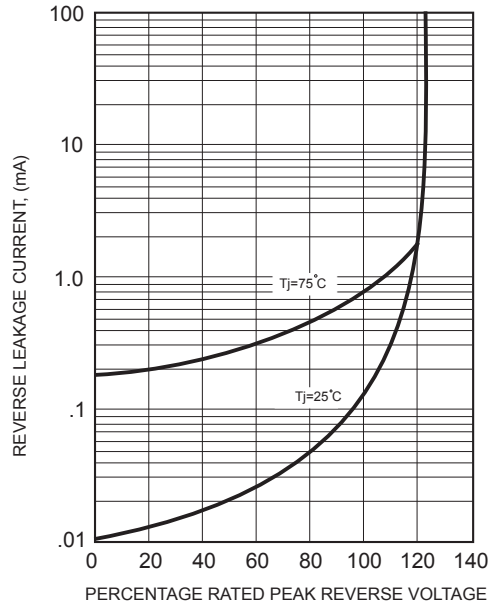


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

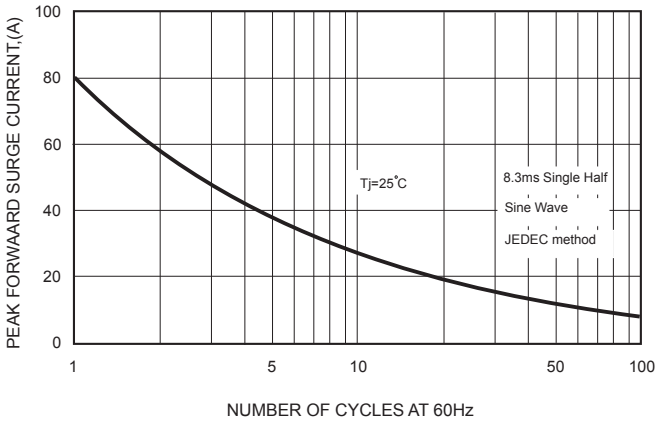
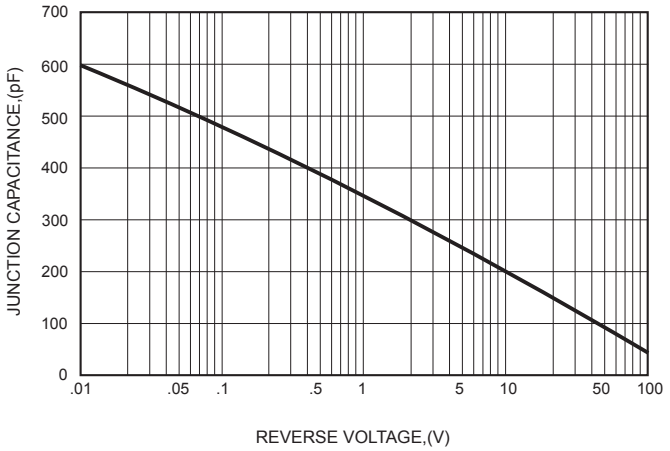



FIG.5-TYPICAL JUNCTION CAPACITANCE