

## 1N5820 ~ 1N5822

### FEATURES

- Fast switching speed
- Low forward voltage
- Low power loss, high efficiency
- High surge current capability
- High temperature soldering guaranteed: 260°C/10 seconds, 0.375" (9.5mm) lead length
- RoHS and REACH Compliance



DO201AD  
(DO-27)



### MECHANICAL DATA

<b>Case</b>	DO-201AD(DO-27), transfer molded plastic
<b>Epoxy</b>	UL94V – 0 rate flame retardant
<b>Lead</b>	Plated axial leads, solderable per MIL-STD-202E, Method 208C
<b>Polarity</b>	Color band denotes cathode end
<b>Mounting position</b>	Any
<b>Weight</b>	0.042 Ounce, 1.19 gram

### MAXIMUM RATINGS (T<sub>Ambient</sub>=25°C unless noted otherwise)

Parameter [Conditions]	Symbol	1N5820	1N5821	1N5822	Unit
Max Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	V
Max RMS Voltage	V <sub>RMS</sub>	14	21	28	V
Max DC Blocking Voltage	V <sub>DC</sub>	20	30	40	V
Max Average Forward Rectified Current [.0375" (9.5mm), T <sub>L</sub> =95°C (Note 1)]	I <sub>F(AV)</sub>	3.0			A
Peak Forward Surge Current [JEDEC method]	I <sub>FSM</sub>	80			A
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +125			°C

### ELECTRICAL CHARACTERISTICS (T<sub>Ambient</sub>=25°C unless noted otherwise)

Parameter [Conditions]	Symbol	1N5820	1N5821	1N5822	Unit
Max Instantaneous Forward Voltage [3.0A] [9.4A]	V <sub>F</sub>	0.475 0.850	0.500 0.900	0.525 0.950	V
Max DC Reverse Current at Rated DC Blocking Voltage [T <sub>A</sub> =25°C] [T <sub>A</sub> =100°C]	I <sub>R</sub>	2.0 20			mA
Typical Junction Capacitance [At 1MHz, reversed voltage of 4V]	C <sub>J</sub>	250			pF
Typical Thermal Resistance [Note 1]	R <sub>θJA</sub>	40			°C/W

Note : (1) Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length, PCB mounted, with 1.5" x 1.5" (38cm x 38cm) copper pads

## TYPICAL CHARACTERISTICS CURVES

FIG.1 - FORWARD CURRENT DERATING CURVE

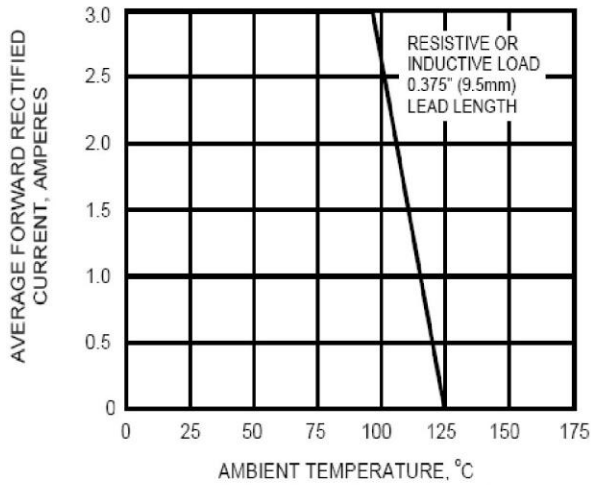


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

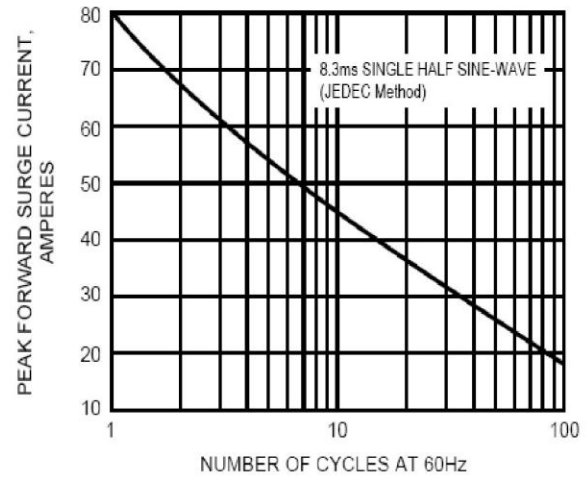


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

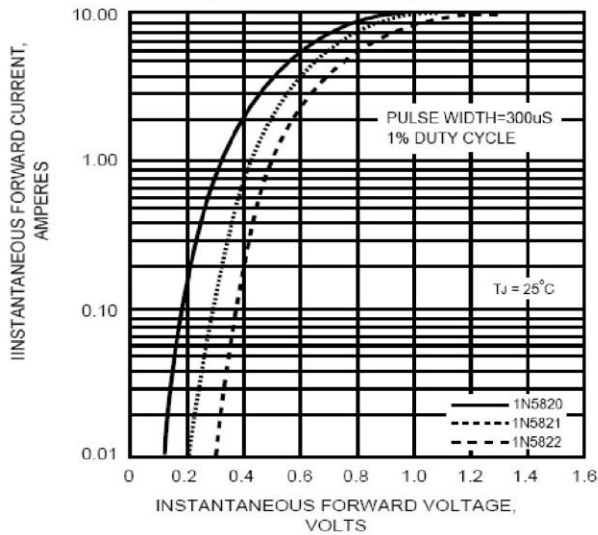


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

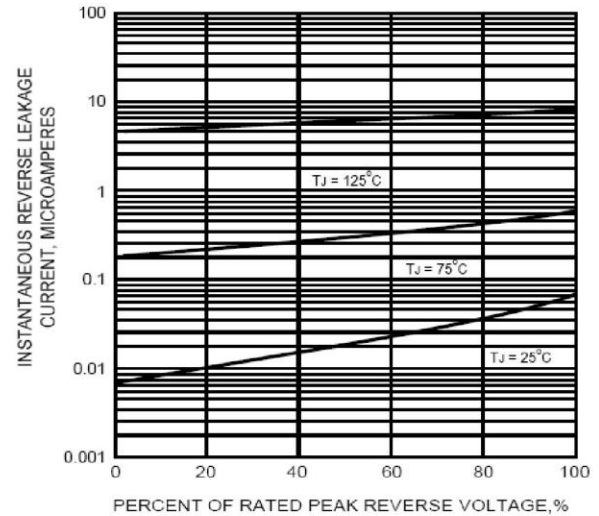


FIG.5 - TYPICAL JUNCTION CAPACITANCE

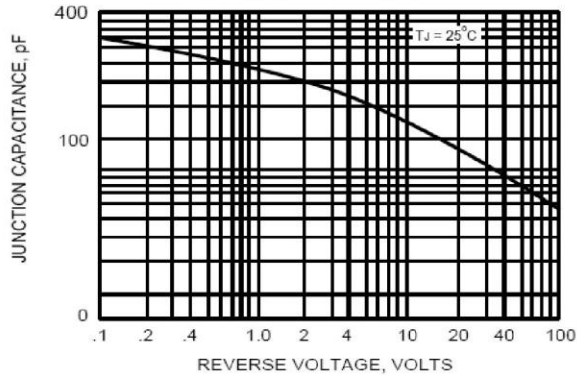
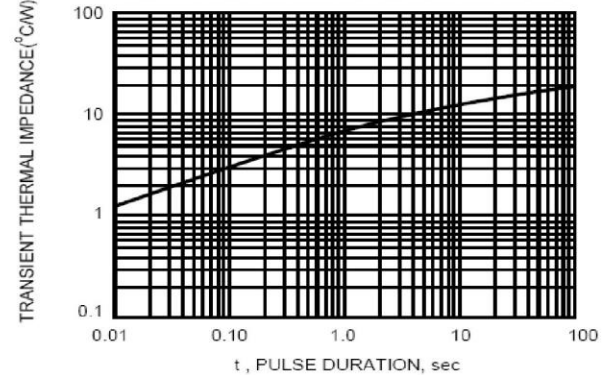
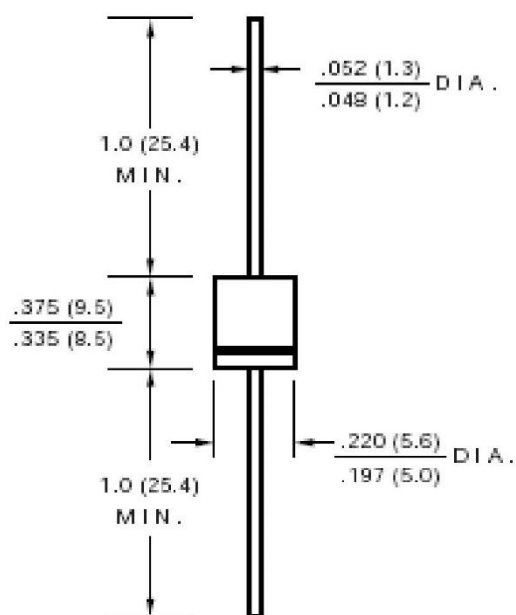


FIG.6 - TYPICAL TRANSIENT THERMAL IMPEDANCE



All products, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.

## DIMENSIONS in inch (mm)

**DO201AD**  
**(DO-27)**