

### Features

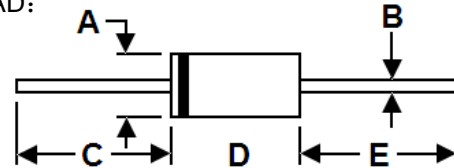
- \* Low Forward Voltage Drop
- \* High Current Capability
- \* High Reliability
- \* High Surge Current Capability



RoHS  
COMPLIANT

### Package Outline Dimensions

DO-201AD:



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	4.8	5.3	0.189	0.209
B	1.2	1.3	0.047	0.051
C	25.4	-	1.0	-
D	7.2	9.6	0.283	0.378
E	25.4	-	1.0	-

### Mechanical Data

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: Color band denotes cathode end

### 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%.

Type Number	Symbols	1N5820	1N5821	1N5822	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	V
Maximum D.C Blocking Voltage	$V_{DC}$	20	30	40	V
Maximum Average Forward Rectified Current @ $T_L=90^\circ\text{C}$	$I_{F(AV)}$	3.0			A
Peak Forward Surge Current, 8.3ms single half sine-wave	$I_{FSM}$	80			A
Maximum Instantaneous Forward Voltage at 3.0A(Note1) at 9.0A	$V_F$	0.475 0.850	0.500 0.900	0.525 0.950	V
Maximum D.C Reverse Current @ $T_A=25^\circ\text{C}$ at Rated D.C Blocking Voltage @ $T_A=100^\circ\text{C}$	$I_R$	2.0 20			mA mA
Typical Thermal Resistance(Note2)	$R_{\theta JA}$	40			$^\circ\text{C/W}$
Typical Junction Capacitance(Note3)	$C_J$	300			pF
Operating and Storage Temperature Range	$T_J/T_{STG}$	-55 to +125 / -55 to +150			$^\circ\text{C}$

NOTE: 1、 Pulse test:  $t_p=300\ \mu\text{s}$ , 1% duty cycle

2、 Thermal Resistance Junction to Ambient Vertical PC Board Mounting, .500" (12.7mm)Lead Length with 2.5×2.5cm(63.5×63.5mm)copper pads.

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

### Ratings and Characteristic Curves

FIG. 1 – TYPICAL FORWARD CURRENT DERATING CURVE

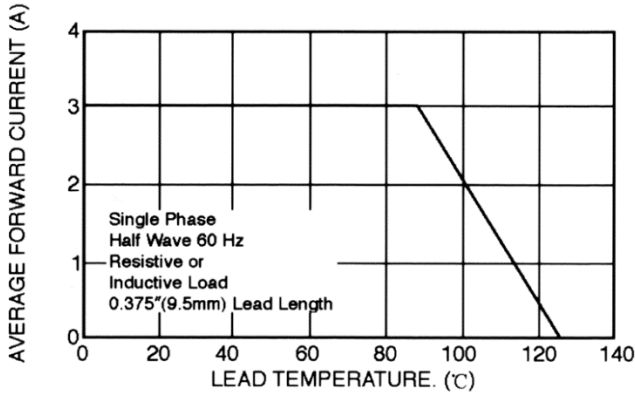


FIG. 3 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

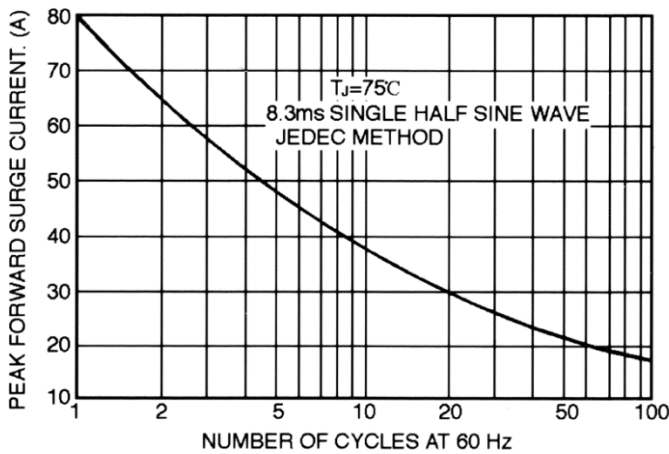


FIG. 5 – TYPICAL JUNCTION CAPACITANCE

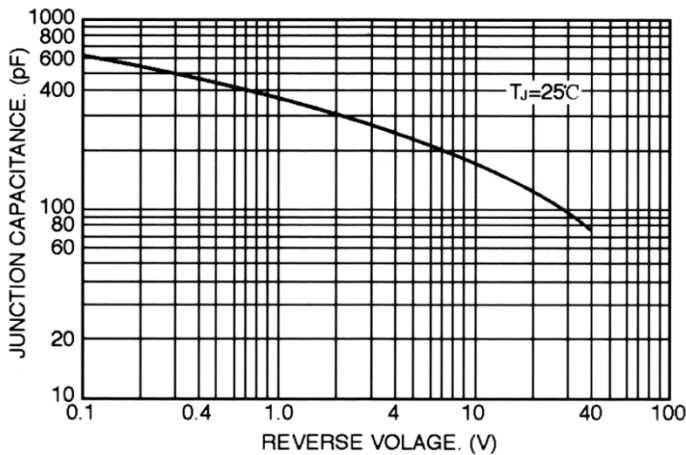


FIG. 2 – TYPICAL REVERSE CHARACTERISTICS

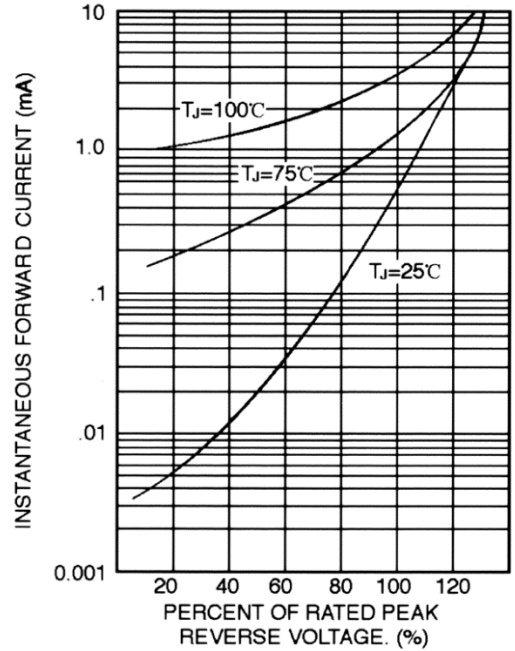
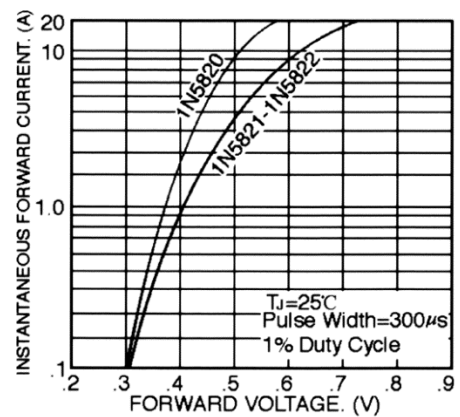


FIG. 4 – TYPICAL FORWARD CHARACTERISTICS





**1N5820 THRU 1N5822**  
**3.0 Amp. Schottky Barrier Rectifiers**

**Ordering Information**

<b>Part No.</b>	<b>Package</b>	<b>Packing</b>
1N5820~1N5822	DO-201AD	0.8K/AMMO box
1N5820~1N5822	DO-201AD	1.2K/AMMO box
1N5820~1N5822	DO-201AD	1.2K/13" Paper reel
1N5820~1N5822	DO-201AD	0.5K/Bulk packing