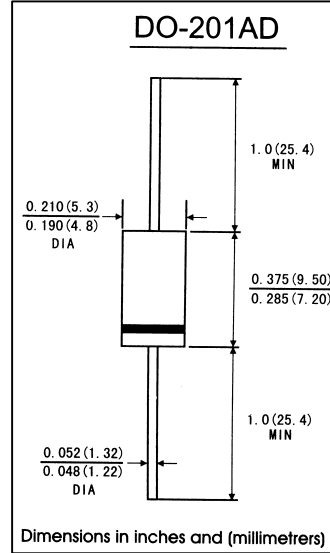


### FEATURES

- . Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- . Metal silicon junction ,majority carrier conduction
- . Guard ring for overvoltage protection
- . Low power loss,high efficiency
- . High current capability ,Low forward voltage drop
- . High surge capability
- . For use in low voltage ,high frequency inverters, free wheeling , and polarity protection applications
- . High temperature soldering guaranteed: 250°C/10 seconds at terminals, 0.375"(9.5mm)lead length,5lbs.(2.3kg)tension

### MECHANICAL DATA

- . **Case:** JEDEC DO-201AD molded plastic body
- . **Terminals:** Solder plated,solderable per MIL-STD-750,method 2026
- . **Polarity:** color band denotes cathode end
- . **Mounting Position:** Any
- . **Weight:** 0.0041 ounce, 1.15 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified,Single phase,half wave,resistive or inductive) load. For capacitive load,derate by 20%)

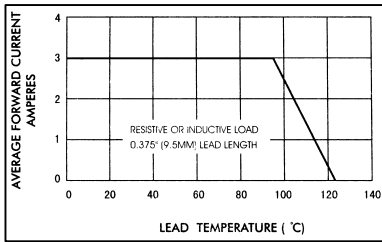
	Symbols	1N5820	1N5821	1N5822	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	Volts
Maximum RMS voltage	$V_{RMS}$	14	21	28	Volts
Maximum DC blocking voltage	$V_{DC}$	20	30	40	Volts
Maximum non-repetitive peak reverse voltage	$V_{RSM}$	24	36	48	Volts
Maximum average forward rectified current 0.375"(9.5mm)lead length at $T_L=90^\circ C$	$I_{(AV)}$	3.0			Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) at $T_L=75^\circ C$	$I_{FSM}$	80.0			Amps
Maximum instantaneous forward voltage at 1.0 A(Note 1)	$V_F$	0.475	0.500	0.525	Volts
Maximum instantaneous forward voltage at 3.1 A(Note 1)	$V_F$	0.850	0.900	0.950	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	$T_A=25^\circ C$	1.5			mA
	$T_A=100^\circ C$	20.0			
Typical thermal resistance(Note 2)	$R_{\theta JA}$	40.0			$^\circ C/W$
	$R_{\theta JL}$	10.0			
Operating junction and storage temperature range	$T_J/T_{STG}$	-65 to +125			$^\circ C$

**Notes:** 1. Pulse test: 300  $\mu s$  pulse width,1% duty cycle

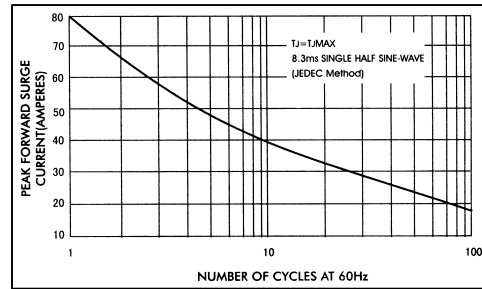
2.Thermal resistance (from junction to ambient)Vertical P.C.B. Mounted,0.500"(12.7mm)lead length with 2.5X2.5(63.5X63.5mm)copper pads

### RATINGS AND CHARACTERISTIC CURVES 1N5820 THRU 1N5822

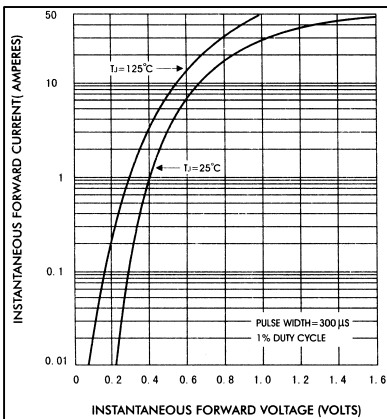
**FIG.1-FORWARD CURRENT DERATING CURVE**



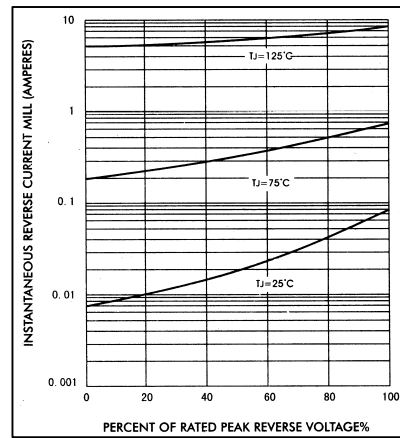
**FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



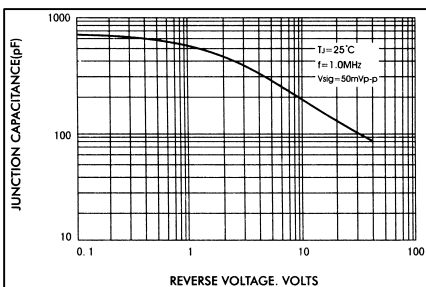
**FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4-TYPICAL REVERSE CHARACTERISTICS**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**



**FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE**

