1N5820 THRU 1N5822

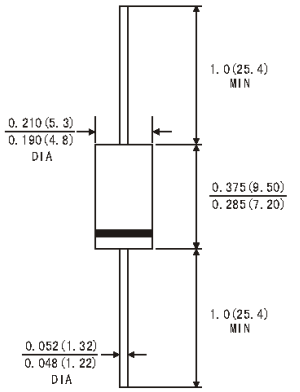
SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage - 20 to 40 V
Forward Current - 3 A

Features

- Plastic package has Underwriters Laboratory 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

DO-201AD



Dimensions in inches and (millimetrers)

Mechanical Data

- **Case:** DO-201AD molded plastic case
- **Terminals:** Plated axial leads, solderable per MIL-STD -750, method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any

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%

Parameter	Symbols	1N5820	1N5821	1N5822	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	V
Maximum RMS Voltage	V_{RMS}	14	21	28	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	V
Maximum Average Forward Rectified Current 0.375" (9.5 mm) Load Length at T_L = 95 °C	$I_{(AV)}$	3			A
Peak Forward Surge Current 8.3mS Single Half Sine-wave Superimposed on Rated Load (JEDEC Method) at T_L = 75 °C	I_{FSM}	80			A
Maximum Instantaneous Forward Voltage at 3 A [1)] Maximum Instantaneous Forward Voltage at 9.4 A [1)]	V_F	0.475 0.85	0.5 0.9	0.525 0.95	V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage at T_A = 25 °C	I_R	0.5			mA
at T_A =100 °C		20			mA
Typical Thermal Resistance [2)]	$R_{\theta JA}$ $R_{\theta JL}$	40 10			°C/W
Operating and Storage Temperature Range	T_J ,T_{Stg}	- 65 to + 125			°C

[1)] Pulse test: 300 µs pulse width, 1% duty cycle

[2)] Thermal Resistance (from Junction to Ambient) Vertical P.C.B Mounted, 0.5" (12.7 mm) lead length with 2.5 X 2.5" (63.5 X 63.5 mm)copper pads.

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Dated : 02/08/2008 J

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FIG.1-FORWARD CURRENT DERATING CURVE

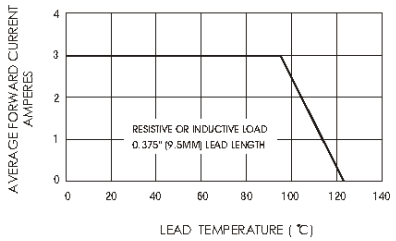

FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

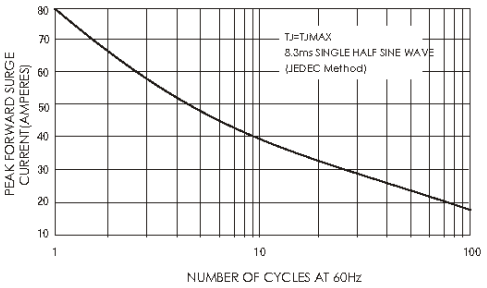

FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

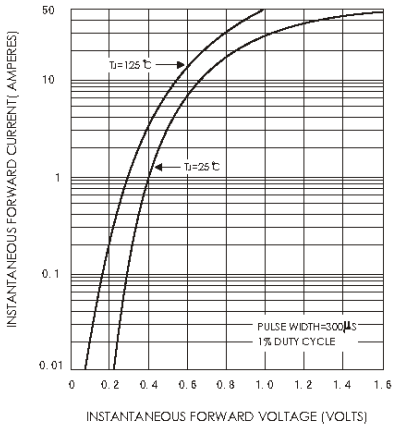

FIG.4-TYPICAL REVERSE CHARACTERISTICS

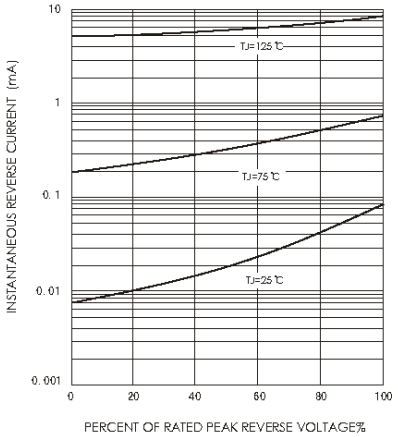

FIG.5-TYPICAL JUNCTION CAPACITANCE

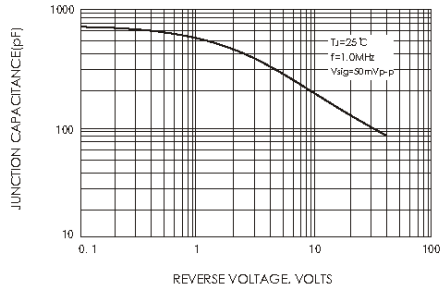

FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE