1N5820 THRU 1N5822

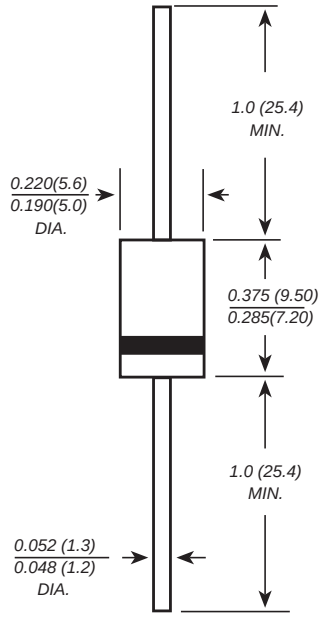
Reverse Voltage - 20 to 40 Volts Forward Current - 3.0 Ampere

SCHOTTKY BARRIER RECTIFIER

Features

DO-201AD

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction,majority carrier conduction
- Guardring 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,0.375”(9.5mm) lead length, 5 lbs. (2.3kg) tension



Dimensions in inches and (millimeters)

Mechanical Data

Case : JEDEC DO-201AD Molded plastic body
Terminals : Solder plated, solderable per MIL-STD-750,Method 2026
Polarity : Polarity symbol marking on body
Mounting Position : Any
Weight : 0.04 ounce, 1.1 grams

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unlss otherwise specified.

Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

Parameter / Marking Code	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”(9.5mm) lead length at T_L=95℃	$I_{(AV)}$	3.0			A
Peak forward surge current 8.3ms single half sine-wave superimposed onrated load (JEDEC Method)	I_{FSM}	80			A
Maximum instantaneous forward voltage at 3.0A	V_F	0.475	0.500	0.525	V
Maximum DC reverse current T_A=25℃ / at rated DC blocking voltage T_A=100℃	I_R	0.5 / 40.0			mA
Typical junction capacitance (NOTE 1)	C_J	300.0			pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	40.0			℃/W
Operating junction and storage temperature range	T_J,T_{STG}	-65 to +125			℃

Note: 1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2.Thermal resistance from junction to ambient at 0.375” (9.5mm)lead length,P.C.B. mounted

Ratings And Characteristic Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

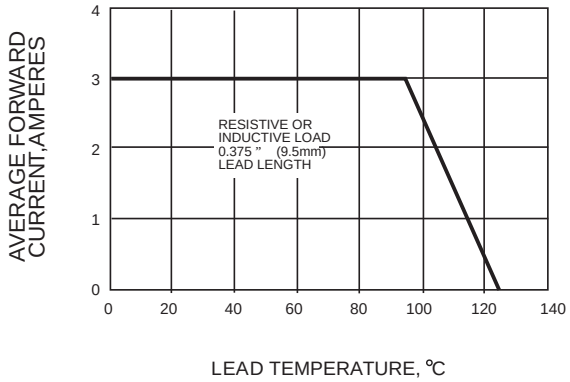


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

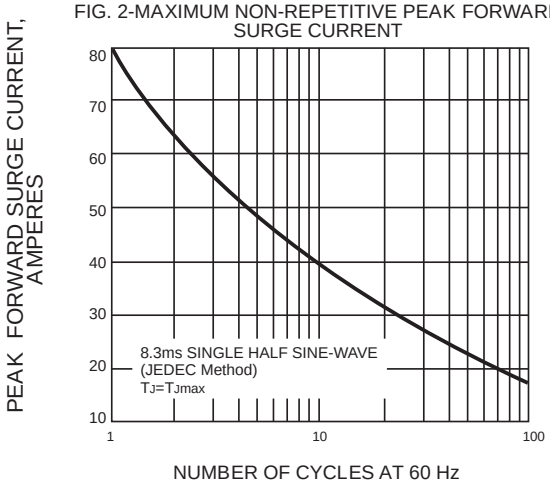


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

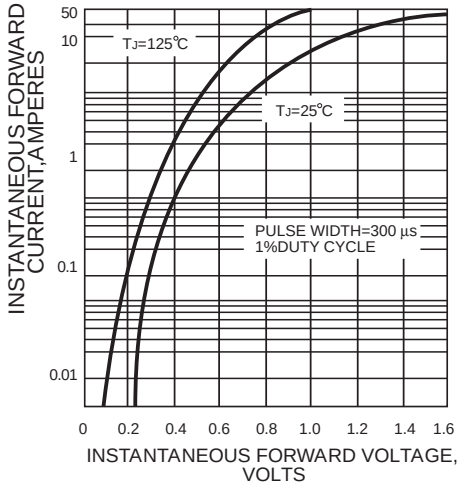


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

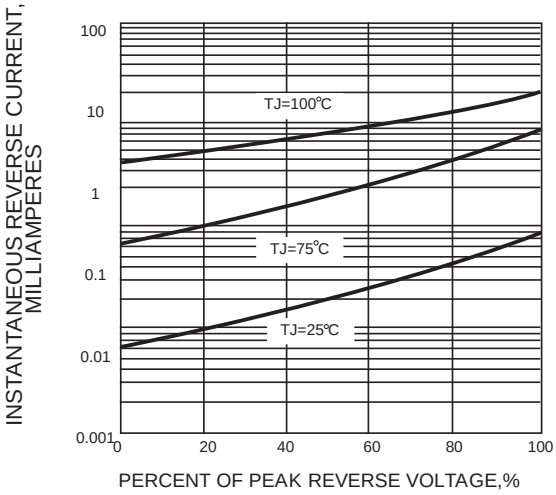


FIG. 5-TYPICAL JUNCTION CAPACITANCE

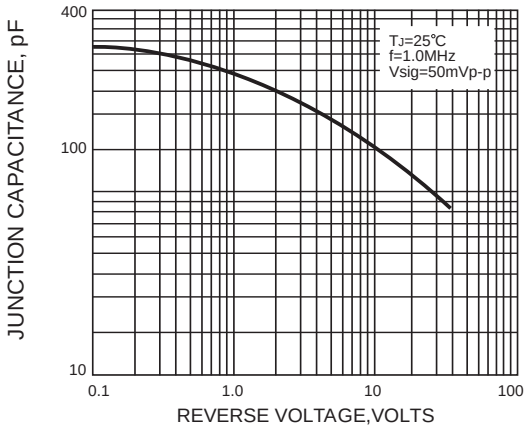
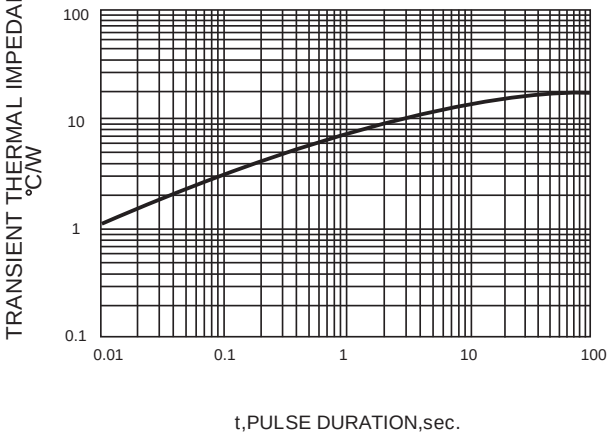


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.