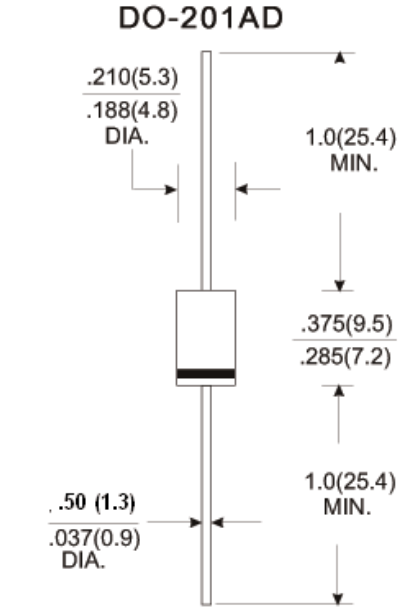
SCHOTTKY BARRIER RECTIFIER

1N5820 THRU 1N5822 20 to 40 V 3.0 A

Central Plate
Electronics Co.,Ltd.

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for over voltage 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



Dimensions in inches and (millimeters)

Mechanical Data

- Case: JEDEC DO-41 molded plastic body
- Terminals: Plated axial leads, Solder able per MIL-STD-750, method 2026
- Polarity: color band denotes cathode end
- Mounting Position: Any
- Weight: 0.041ounce, 1.15 grams

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified. Single phase, half wave, 60HZ, resistive or inductive load. For capacitive load, derate current by 20%.

	Symbols	1N5820	1N5821	1N5822	Units
Maximum Recurrent 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 TL=95℃	$I_{(AV)}$	3.0			Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method) TL=75℃	I_{FSM}	80.0			Amp
Maximum instantaneous forward voltage at3.0 A(note 1) Maximum instantaneous forward voltage at 9.4 A(note 1)	V_F	0.475 0.850	0.500 0.900	0.525 0.950	Volts
Maximum Reverse Current TA=25℃ at Rated DC Blocking Voltage TA=100℃	I_R	1.5 20			μ Amp
Typical Thermal Resistance (Note 2)	$R_{\Theta}JA$ $R_{\Theta}JL$	40 10			℃/W
Operating and Storage Temperature Range	T_J T_{STG}	-65 to +125			℃

NOTES:

1. Pulse test: 300 μs 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 1N5820)

FIG.1-FORWARD CURRENT DERATING CURVE

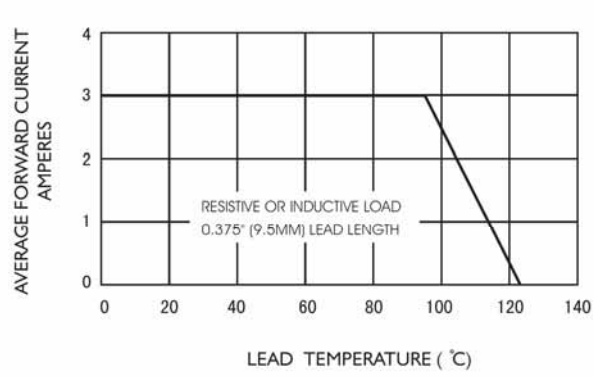


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

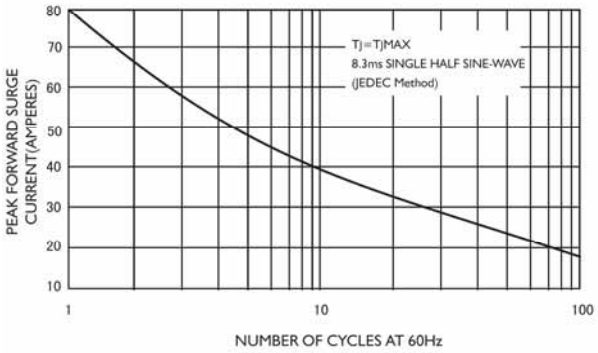


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

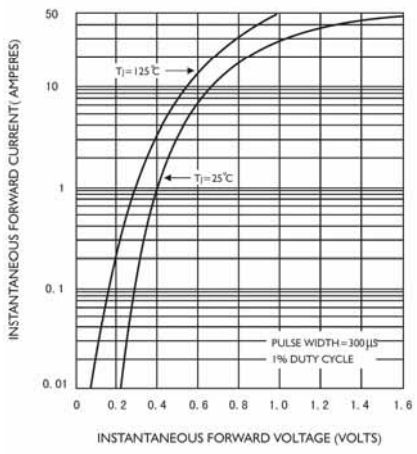


FIG.4-TYPICAL REVERSE CHARACTERISTICS

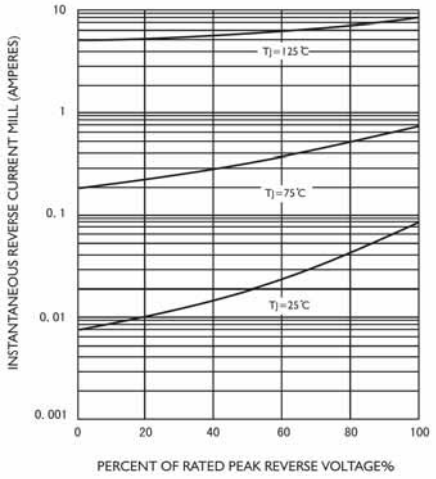


FIG.5-TYPICAL JUNCTION CAPACITANCE

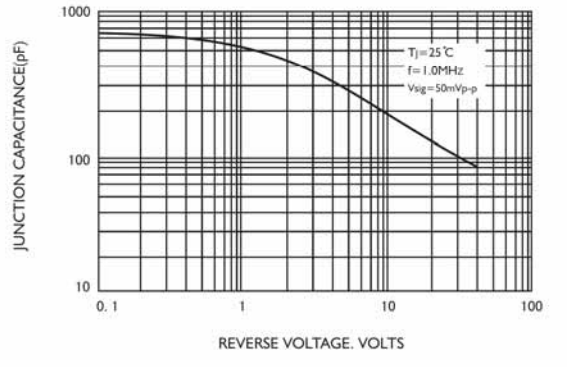


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE