

Kingtronics®

1N5820 THRU 1N5822

SCHOTTKY BARRIER RECTIFIER

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

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Guarding 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

MECHANICAL DATA

Case: JEDEC DO-201AD molded plastic body

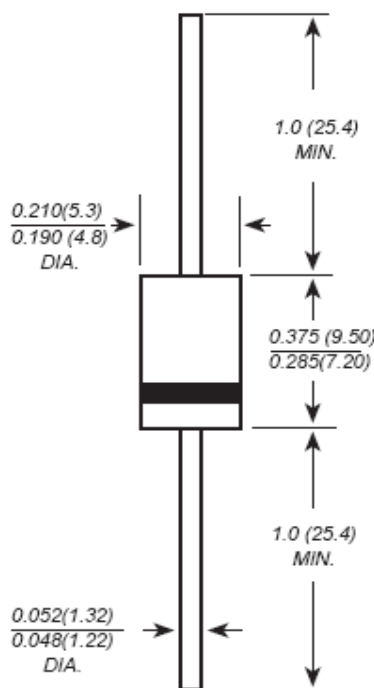
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.04 ounce, 1.10 grams

DO-201AD



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for current 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 average forward rectified current 0.375" (9.5mm) lead length at $T_L=95^\circ\text{C}$	$I_{(AV)}$		3.0		Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}		80.0		Amps
Maximum instantaneous forward voltage at 3.0A	V_F	0.475	0.500	0.525	Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R		2.0 40.0		mA
Typical junction capacitance (NOTE 1)	C_J		300.0		pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$		40.0		$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	T_J, T_{STG}		-65 to +125		$^\circ\text{C}$

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

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RATINGS AND CHARACTERISTIC CURVES 1N5820 THRU 1N5822

FIG. 1- FORWARD CURRENT DERATING CURVE

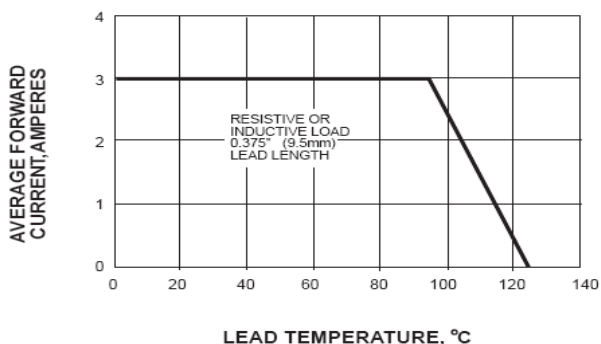


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

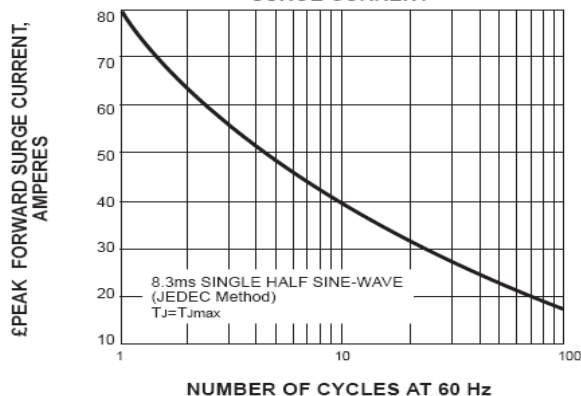


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

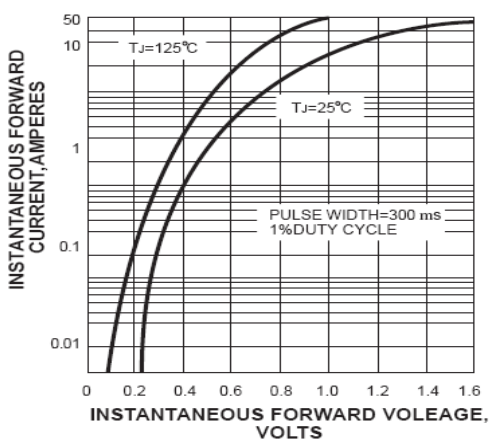


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

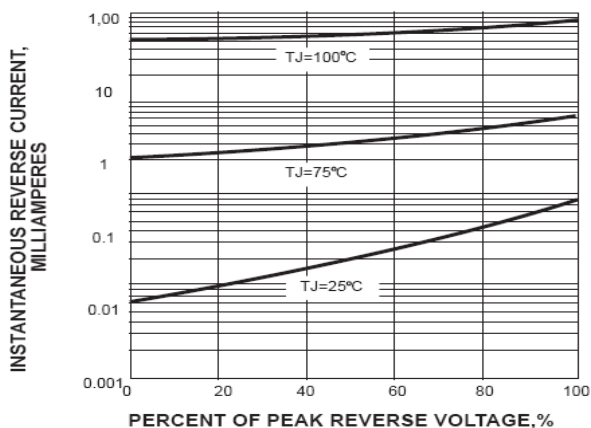


FIG. 5-TYPICAL JUNCTION CAPACITANCE

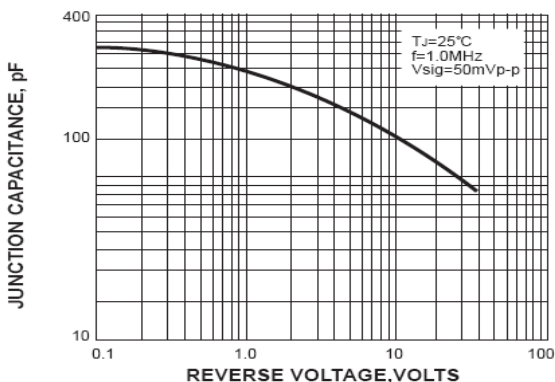
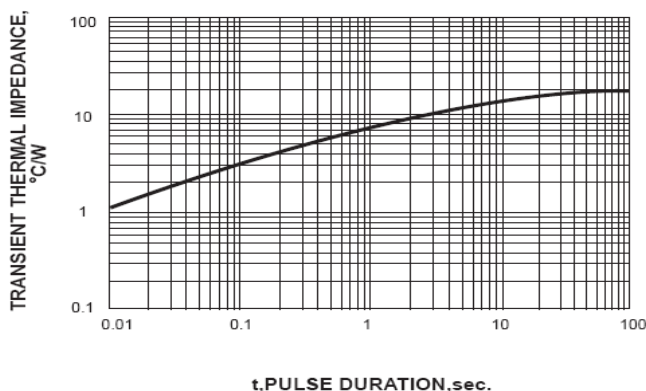


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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