3 AMP SCHOTTKY BARRIER RECTIFIER

1N5820 THRU 1N5822

TECHNICAL SPECIFICATION

FEATURES

- *Low power loss, high efficiency*
- *Plastic package has Underwriters Laboratories Flammability Classification 94V-0*
- *High current capability and low forward drop*
- *High surge current capability*
- *Guard ring for transient protection*
- *High temperature soldering capability : 250°C/10 seconds/9.5mm (.375in.) lead length at 2.3kg (5lb) tension*
- *Easily cleaned with Freon, Alcohol, Chlorothene and other similar solvents*

VOLTAGE
20 to 40 Volts

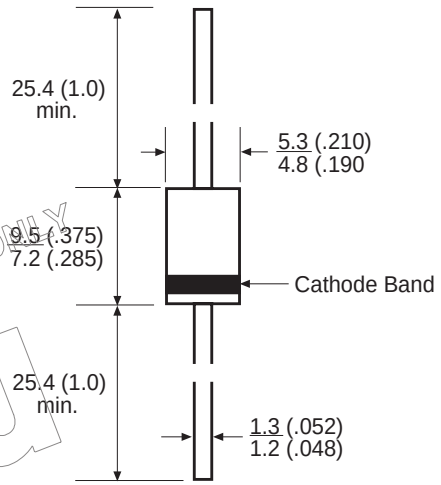
CURRENT
3.0 Amp

MECHANICAL DATA

Case	: JEDEC DO-201AD, moulded plastic.
Terminals	: Plated axial leads, solderable per MIL-STD-202, Method 208.
Polarity	: Colour band denotes cathode end.
Mounting Position	: Any
Weight	: 1.12 grams (0.04ounce)

DIMENSIONS - millimeters

DO-201AD



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Characteristics		Symbols	1N5820	1N5821	1N5822	Units
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	20	30	40	V
Maximum RMS Input Voltage		V_{RMS}	14	21	28	V
Maximum DC Blocking Voltage		V_{DC}	20	30	40	V
Maximum Average Forward Rectified Current @ T_L = 95°C (Note 3) $I_{F(AV)}$ 3.0A		$I_{F(AV)}$	3.0			A
Maximum Average Forward Surge Current, Half Cycle @ 60Hz. Superimposed on rated load JEDEC Method		I_{FSM}	80			A
Storage and Operating Junction Temperature Range		T_j T_{STG}	-60 to + 125			V
Maximum Forward Voltage Drop (Note 1)	@ I_F = 3A	V_F	0.475	0.500	0.525	V
	@ I_F = 9.4A	V_F	0.850	0.900	0.950	V
Maximum Reverse Leakage Current @ V_{RRM}	@ T_A = 25°C	I_R	2.0			mA
	@ T_A = 100°C	I_R	20			mA
Typical Thermal Resistance, Junction to Ambient (Note 1)		R_{thA}	40			°C/W

Notes :

1. Measured at pulse width 300ms, 2% duty cycle.
2. Thermal Resistance from Junction to Ambient with vertical mounting to pc board (9.5mm lead Length).
3. Valid provided that leads are kept at specified temperature at a distance of 9.5mm from case.

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RATING AND CHARACTERISTIC CURVES

FIG. 1 - FORWARD CURRENT DERATING CURVE

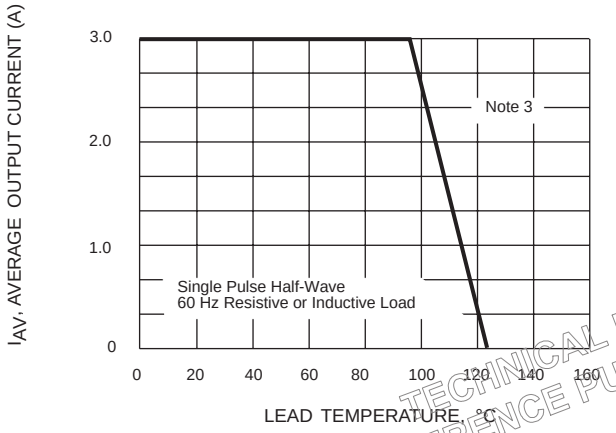

FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

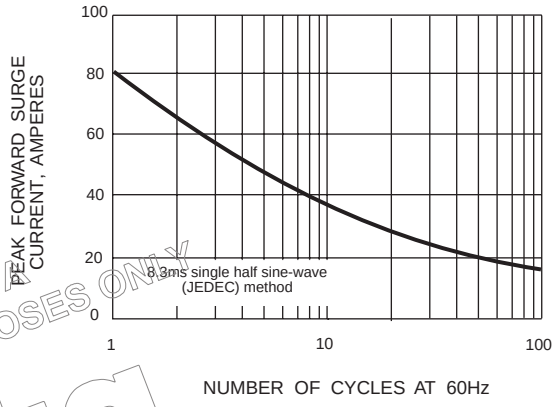

FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

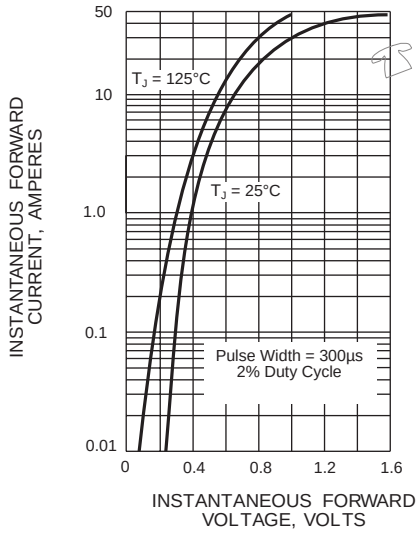

FIG. 4 - TYPICAL JUNCTION CAPACITANCE