

1N5820 - 1N5822

3.0A SCHOTTKY BARRIER RECTIFIERS

Features and Benefits

- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- Lead Free Finish, RoHS Compliant (Note 1)

Mechanical Data

- Case: DO-201AD
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish Tin. Plated Leads Solderable per MIL-STD-202, Method 208 (3)
- Polarity: Cathode Band
- Marking: Type Number
- Weight: 1.1 grams (approximate)

Ordering Information (Note 2)

Device	Packaging	Shipping
1N5820-B	DO-201AD	500 Bulk
1N5820-T	DO-201AD	1.2K/Tape & Reel, 13-inch
1N5821-B	DO-201AD	500 Bulk
1N5821-T	DO-201AD	1.2K/Tape & Reel, 13-inch
1N5822-B	DO-201AD	500 Bulk
1N5822-T	DO-201AD	1.2K/Tape & Reel, 13-inch

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	1N5820	1N5821	1N5822	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage (Note 3)	V _{RRM} V _{RWM} V _R	20	30	40	v
RMS Reverse Voltage	V _{R(RMS)}	14	21	28	V
Average Rectified Output Current (Note 4) $@ T_L = 95^{\circ}C$	Io		3.0		А
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load @ $T_L = 75^{\circ}C$	I _{FSM}	SM 80		А	

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance (Note 5)	R ₀ JA	40	°C/W
	R _{θJL}	10	-C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	С°

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic		Symbol	1N5820	1N5821	1N5822	Unit
Forward Voltage	@ I _F = 3.0A @ I _F = 9.4A	V _{FM}	0.475 0.850	0.500 0.900	0.525 0.950	V
Peak Reverse Current at Rated DC Blocking Voltage (Note 3)	@ $T_A = 25^{\circ}C$ @ $T_A = 100^{\circ}C$	I _{RM}		2.0 20		mA

Notes: 1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes.

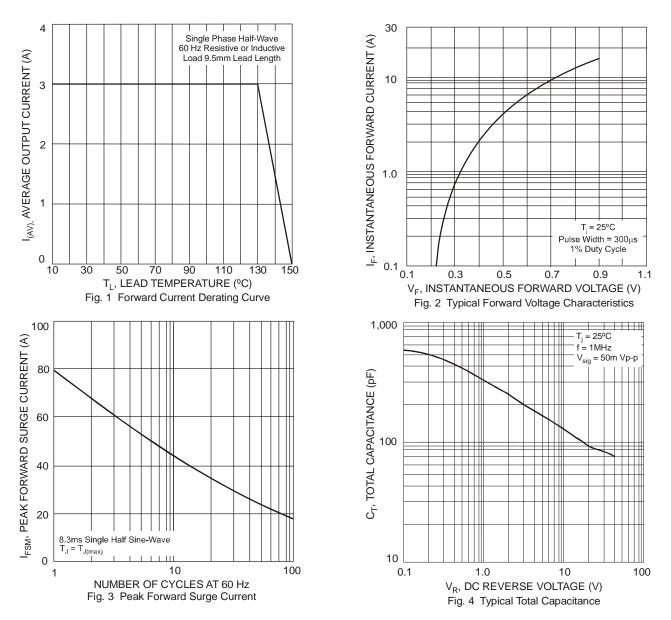
2. For packaging details, go to our website at http://www.diodes.com.

3. Short duration pulse test used to minimize self-heating effect.

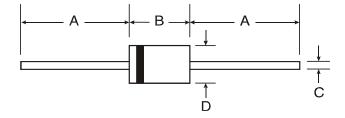
4. Measured at ambient temperature at a distance of 9.5mm from the case

5. Thermal resistance from junction to lead vertical P.C.B. mounted, 0.500" (12.7mm) lead length with 2.5 x 2.5" (63.5 x 63.5mm) copper pad.





Package Outline Dimensions



DO-201AD			
Dim	Min	Max	
Α	25.40		
В	7.20	9.50	
С	1.20	1.30	
D	4.80	5.30	
All Dimensions in mm			



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