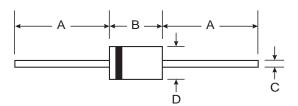




3.0A SCHOTTKY BARRIER RECTIFIERS

Features

- Schottky Barrier Chip
- 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 4)



Mechanical Data

- Case: DO-201AD
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish Bright Tin. Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode BandMounting Position: AnyMarking: Type Number
- Ordering Information: See Last Page
- Weight: 1.1 grams (approximate)

| 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 | | | | | |

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

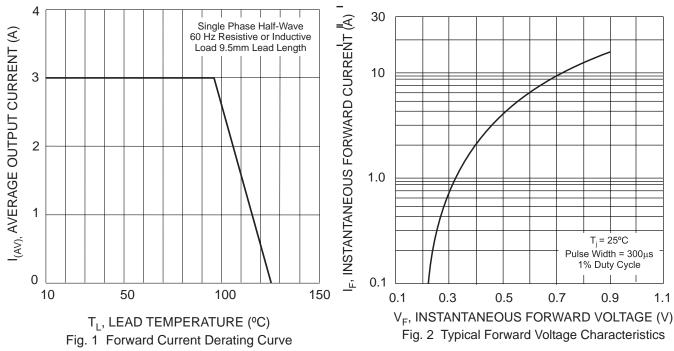
Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

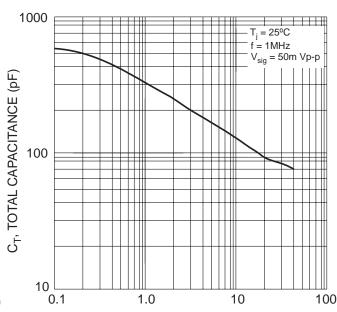
| Characteristic | Symbol | 1N5820 | 1N5821 | 1N5822 | Unit |
|---|--|----------------|----------------|----------------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _R | 20 | 30 | 40 | ٧ |
| RMS Reverse Voltage | V _{R(RMS)} | 14 | 21 | 28 | V |
| Average Rectified Output Current (Note 1) | Io | | 3.0 | | А |
| Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) @ T _L = 75°C | I _{FSM} | | 80 | | А |
| Forward Voltage (Note 2) | V _{FM} | 0.475 0.850 | 0.500 0.900 | 0.525 0.950 | ٧ |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | I _{RM} | 2.0 20 | | mA | |
| Typical Thormal Posistance (Note 2) | | 40 | | -c/w | |
| Typical Thermal Resistance (Note 3) | $R_{\theta JL}$ | 10 | | | C/VV |
| Operating and Storage Temperature Range | T _{j,} T _{STG} | | -65 to +125 | | °C |

Notes: 1. Measured at ambient temperature at a distance of 9.5mm from the case.

- 2. Short duration pulse test used to minimize self-heating effect.
- 3. 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.
- 4. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.







NUMBER OF CYCLES AT 60 Hz Fig. 3 Peak Forward Surge Current

V_R, REVERSE VOLTAGE (V) Fig. 4 Typical Total Capacitance

Ordering Information (Note 5)

| 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 |

Notes: 5. For packaging details, visit our website at http://www.diodes.com/datasheets/ap2008.pdf



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