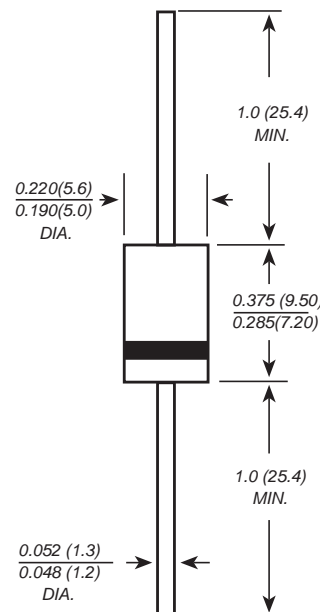


SCHOTTKY BARRIER RECTIFIER

Features

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

DO-201AD



Dimensions in inches and (millimeters)

Mechanical Data

Case : JEDEC DO-201AD Molded plastic body

Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.04 ounce, 1.1 grams

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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

| Parameter | SYMBOLS | MDD 1N5820 | MDD 1N5821 | MDD 1N5822 | UNITS |
|---|-----------------|---------------|---------------|---------------|---------------------------|
| Marking Code | | | | | |
| Maximum repetitive peak reverse voltage | V_{RRM} | 20 | 30 | 40 | V |
| Maximum RMS voltage | V_{RMS} | 14 | 21 | 28 | V |
| Maximum DC blocking voltage | V_{DC} | 20 | 30 | 40 | V |
| Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_L=95^\circ\text{C}$ | $I_{(AV)}$ | 3.0 | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 80 | | | A |
| Maximum instantaneous forward voltage at 3.0A | V_F | 0.475 | 0.500 | 0.525 | V |
| Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$ | I_R | 0.5 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

Ratings And Characteristic Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

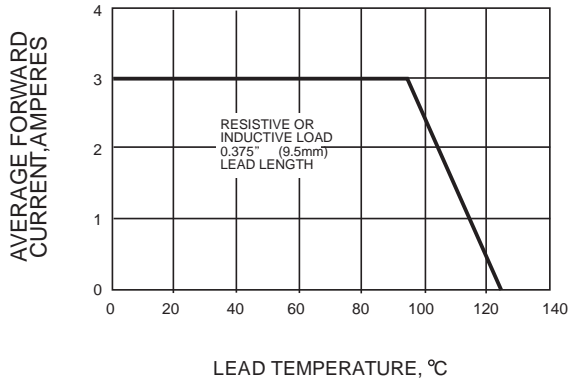


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

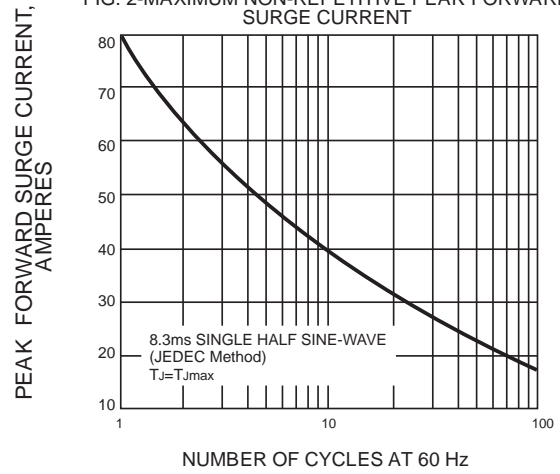


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

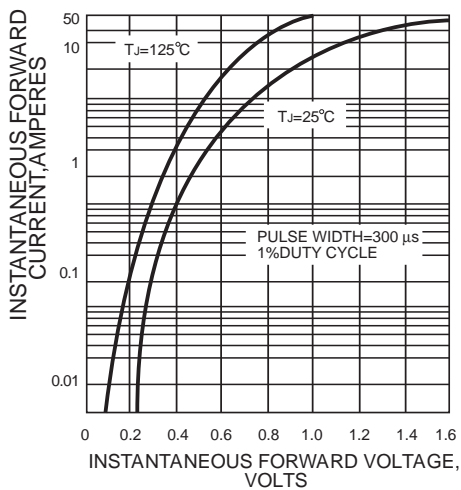


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

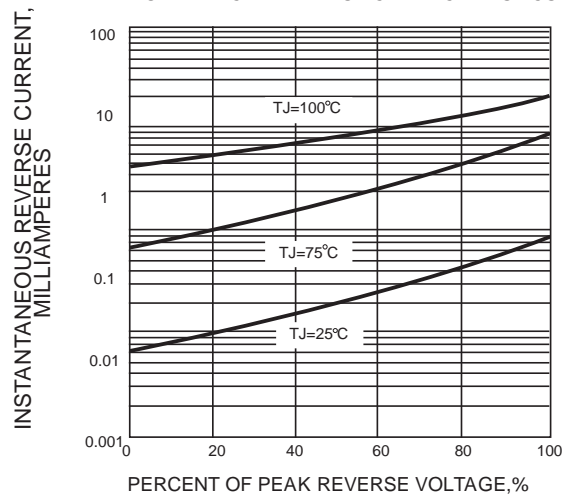


FIG. 5-TYPICAL JUNCTION CAPACITANCE

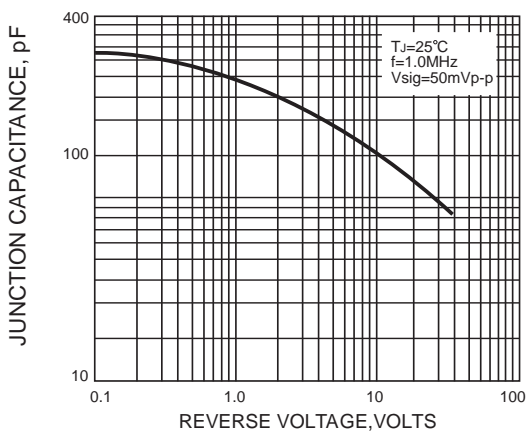
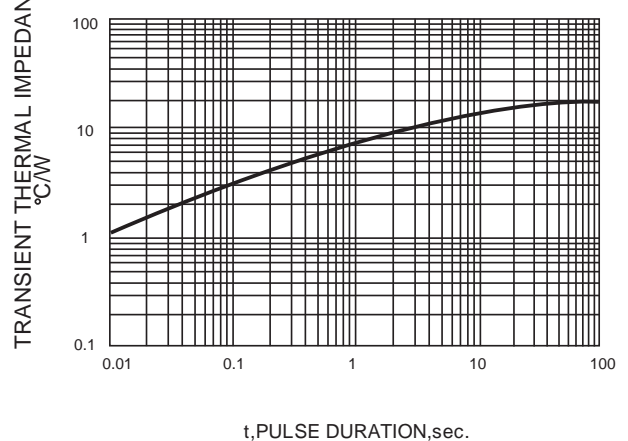


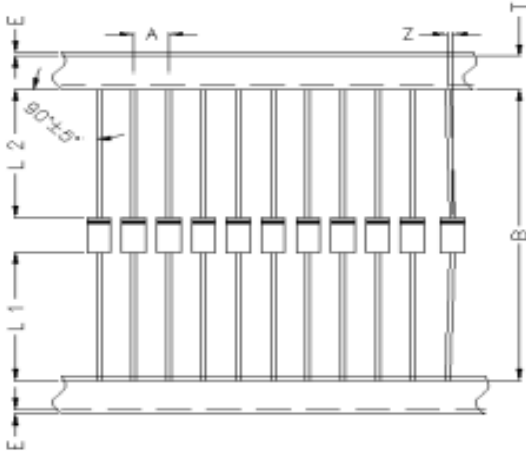
FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.

Package Information

Taping Specifications



| Item | Symbol | Specifications(mm) |
|---------------------|--------|--------------------|
| Component Pitch | A | 10.0±0.5 |
| Inner Tape Pitch | B | 52.4±1.5 |
| Component alignment | Z | 1.2 Max |
| Tape width | T | 6.0±0.5 |
| Exposed adhesive | E | 0.8 Max |
| Body eccentricity | L1-L2 | 1.0 Max |

Ammunition Package Specifications

| Package | Inner Box Size (mm) | QTY/Box (pcs) | Carton Size (mm) | Q'TY/Carton (pcs) |
|------------|---------------------|---------------|------------------|-------------------|
| DO - 201AD | 255*74*145 | 1000 | 410*275*340 | 10000 |

Bulk Package Specifications

| Package | Inner Box Size (mm) | QTY/Box (pcs) | Carton Size (mm) | Q'TY/Carton (pcs) |
|------------|---------------------|---------------|------------------|-------------------|
| DO - 201AD | 198*86*21 | 200 | 460*220*250 | 10000 |