

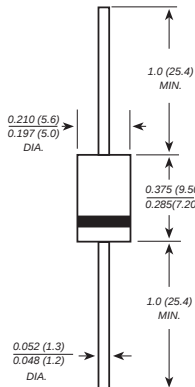


# 1N5824

## SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 40 Volts Forward Current - 5.0 Amperes

### DO-201AD



Dimensions in inches and (millimeters)

### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ 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

### 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%.

| YXW Catalog Number                                                                                        | SYMBOLS         | 1N5824      | UNITS              |
|-----------------------------------------------------------------------------------------------------------|-----------------|-------------|--------------------|
| Maximum repetitive peak reverse voltage                                                                   | $V_{RRM}$       | 40          | VOLTS              |
| Maximum RMS voltage                                                                                       | $V_{RMS}$       | 28          | VOLTS              |
| Maximum DC blocking voltage                                                                               | $V_{DC}$        | 40          | VOLTS              |
| Maximum average forward rectified current<br>0.375" (9.5mm) lead length (see fig.1)                       | $I_{AV}$        | 5.0         | Amps               |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)    | $I_{FSM}$       | 150.0       | Amps               |
| Maximum instantaneous forward voltage at 5.0A                                                             | $V_F$           | 0.55        | Volts              |
| Maximum DC reverse current $T_A=25^\circ\text{C}$<br>at rated DC blocking voltage $T_A=100^\circ\text{C}$ | $I_R$           | 0.5<br>20.0 | mA                 |
| Typical junction capacitance (NOTE 1)                                                                     | $C_J$           | 500         | pF                 |
| Typical thermal resistance (NOTE 2)                                                                       | $R_{\theta JA}$ |             | $^\circ\text{C/W}$ |
| Operating junction temperature range                                                                      | $T_J$           | -65 to +125 | $^\circ\text{C}$   |
| Storage temperature range                                                                                 | $T_{STG}$       | -65 to +150 | $^\circ\text{C}$   |

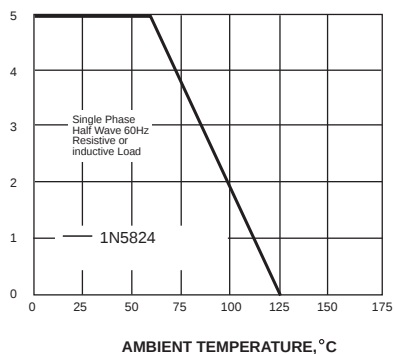
**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

# RATINGS AND CHARACTERISTIC CURVES 1N5824

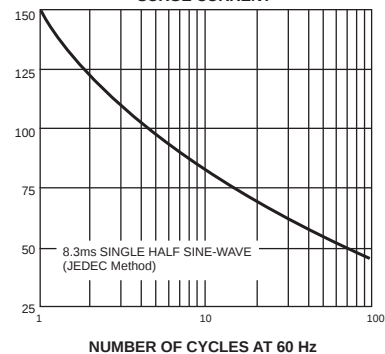
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



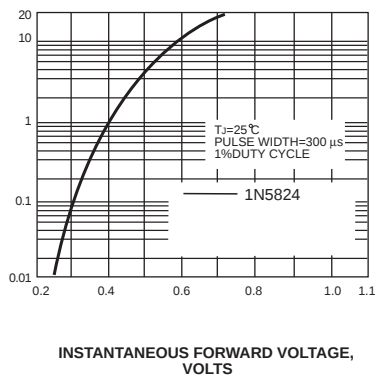
PEAK FORWARD SURGE CURRENT,  
AMPERES

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



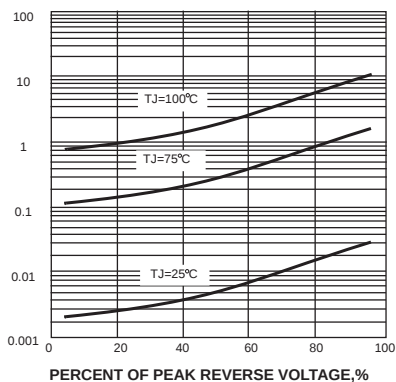
INSTANTANEOUS FORWARD  
CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



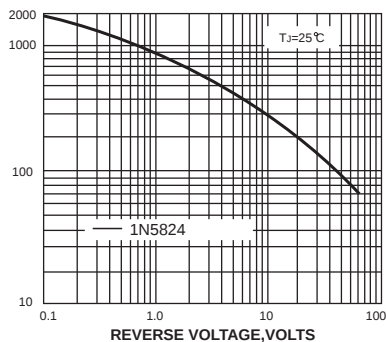
INSTANTANEOUS REVERSE CURRENT,  
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

