



1K2 thru 1K6

Reverse Voltage 20 to 60 Volts Forward Current 1.0 Ampere

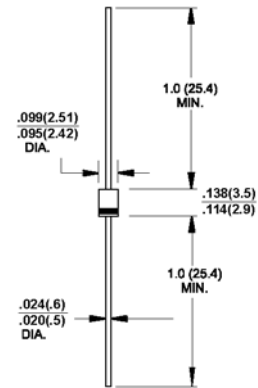
Schottky Barrier Rectifiers

Features

- ◆ Plastic material used carries Underwriters Laboratory Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High current capability, low forward voltage drop
- ◆ High surge capability
- ◆ Guardring for overvoltage protection
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◆ High temperature soldering guaranteed:
250°C/10Seconds, 0.375" (9.5mm) lead length at 5 lbs. (2.3Kg) tension



R-1



Dimensions in inches and (millimeters)

Mechanical Data

- ◆ Cases: Molded plastic body
- ◆ Terminals: Plated Axial leads, solderable per MIL-STD-750, Method 2026
- ◆ Polarity: Color band denotes cathode end
- ◆ Mounting position: Any
- ◆ Weight: 0.007 ounce, 0.20 gram

Maximum Ratings and Electrical Characteristics

Rating 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%

| Parameter | Symbols | 1K2 | 1K3 | 1K4 | 1K5 | 1K6 | Units |
|---|-----------------|-------------|-----|-------------|-------------|-----|-------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 20 | 30 | 40 | 50 | 60 | Volts |
| Maximum RMS voltage | V_{RMS} | 14 | 21 | 28 | 35 | 42 | Volts |
| Maximum DC blocking voltage | V_{DC} | 20 | 30 | 40 | 50 | 60 | Volts |
| Maximum average forward rectified current See Fig. 1 | $I_{(AV)}$ | 1.0 | | | | | Amp |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 40.0 | | | | | Amps |
| Maximum instantaneous forward voltage @ 1.0A | V_F | 0.55 | | 0.70 | | | Volts |
| 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 10.0 | | | mA |
| Typical thermal resistance (Note 1) | $R_{\theta JA}$ | 50 | | | | | °C/W |
| Typical junction capacitance (Note 2) | C_J | 110 | | | 80 | | pF |
| Operating junction temperature range | T_J | -55 to +125 | | | -55 to +150 | | °C |
| Storage temperature range | T_{STG} | -55 to +150 | | | | | °C |

- Notes:**
1. Thermal Resistance from Junction to Ambient at .375" (9.5mm) Lead Length, PC Board Mounted.
 2. Measured at 1.0 MHz and Applied $V_R=4.0$ Volts

RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

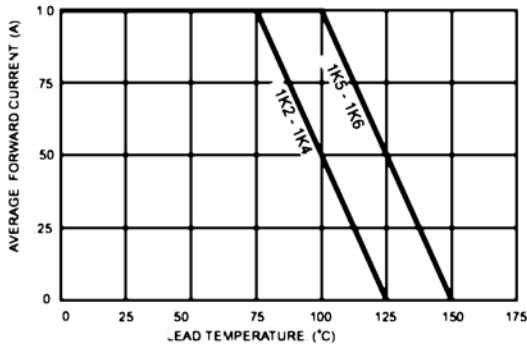


FIG.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

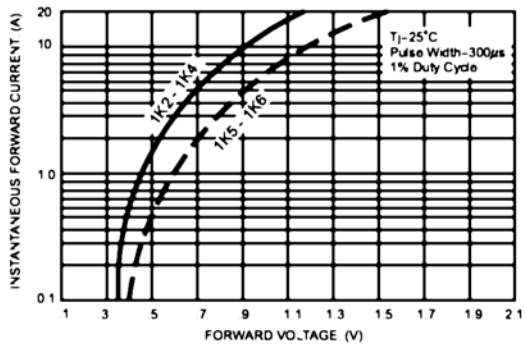


FIG.3- TYPICAL REVERSE CHARACTERISTICS

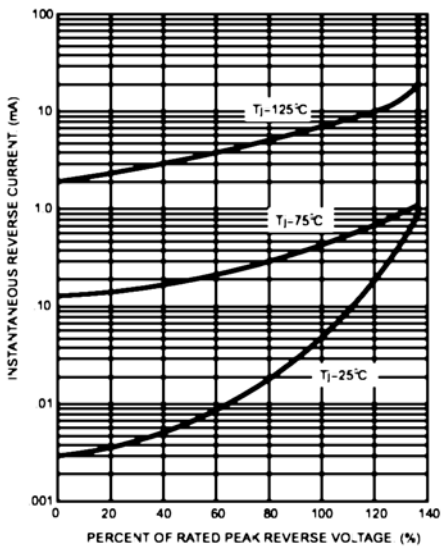


FIG.4- TYPICAL JUNCTION CAPACITANCE

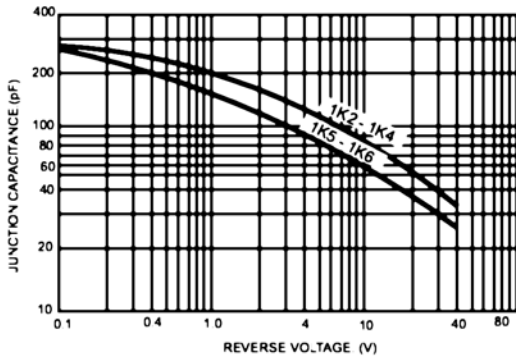


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

