



1K2 thru 1K6

Reverse Voltage 20 to 60 Volts Forward Current 1.0 Ampere

Features

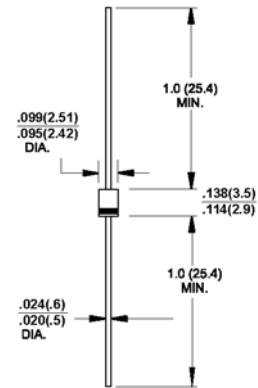
- ◆ Plastic material used carries Underwriters Laboratory Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High current capability, low forward voltage drop
- ◆ High surge capability
- ◆ Guardring for overvoltage protection
- ◆ For use 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

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



Dimensions in inches and (millimeters)

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°C at rated DC blocking voltage @ T _A =100°C	I _r	0.5 10.0					mA
Typical thermal resistance (Note 1)	R _{θJA}	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

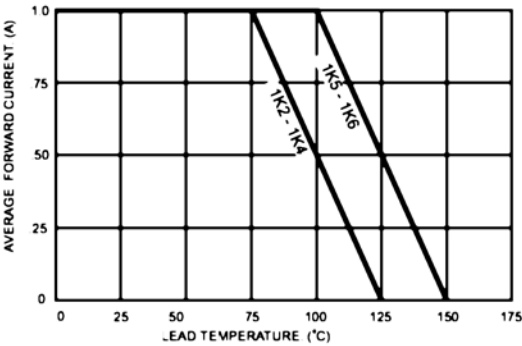


FIG.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

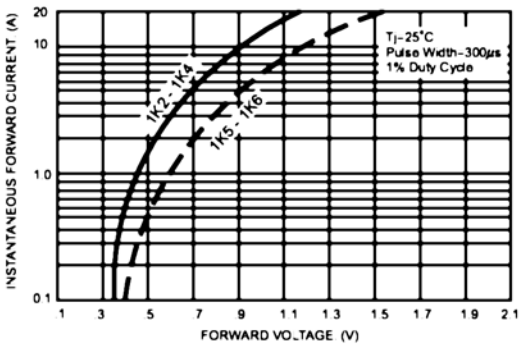


FIG.3- TYPICAL REVERSE CHARACTERISTICS

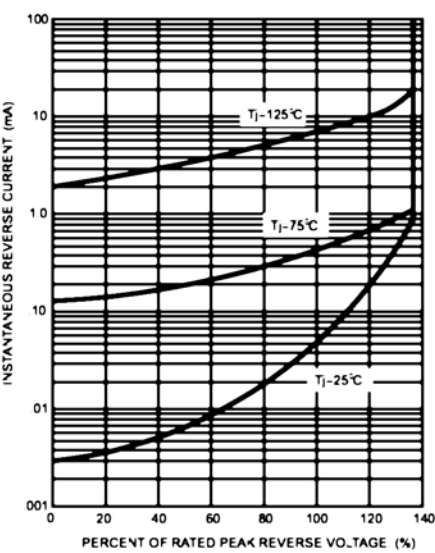


FIG.4- TYPICAL JUNCTION CAPACITANCE

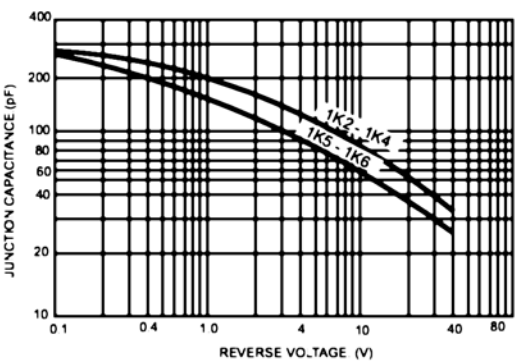


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

