

Reverse Voltage 20 to 60 Volts

**R-1** 

Schottky Barrier Rectifiers Forward Current 1.0 Ampere

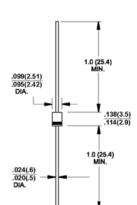
## **Features**

- 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, hing frequency invertrs, 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



- ◆ 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 <sub>RRM</sub>	20	30	40	50	60	Volts
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	35	42	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	50	60	Volts
Maximum average forward rectified current See Fig. 1	I <sub>(AV)</sub>	1.0					Amp
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	40.0					Amps
Maximum instantaneous forward voltage @ 1.0A	V <sub>F</sub>	0.55			0.70		Volts
Maximum DC reverse current @ T <sub>A</sub> =25°C at rated DC blocking voltage @ T <sub>A</sub> =100°C	I <sub>R</sub>	0.5 10.0					mA
Typical thermal resistance (Note 1)	R <sub>eJA</sub>	50					°C/W
Typical junction capacitance ( Note 2 )	C	110			80		pF
Operating junction temperature range	T <sub>J</sub>	-55 to +125			-55 to +150		°C
Storage temperature range	T <sub>STG</sub>	-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<sub>p</sub>=4.0 Volts

## **RATINGS AND CHARACTERISTIC CURVES**

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

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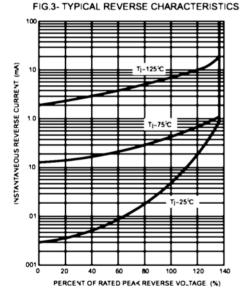


FIG.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

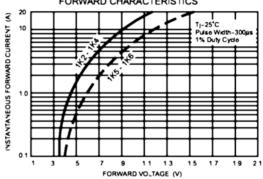


FIG.4- TYPICAL JUNCTION CAPACITANCE

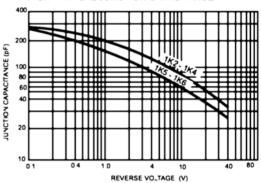


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE

