

1S20 THRU 1S100

MINIATURE SCHOTTKY BARRIER RECTIFIER



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HORNBY ELECTRONIC

REVERSE VOLTAGE: 20 to 100 VOLTS

FORWARD CURRENT: 1.0 AMPERE

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound
- Exceeds environmental standards of MIL-S-19500/228
- For use in low voltage, high frequency inverters free wheeling, and porlarlity protection applications

MECHANICAL DATA

Case: Molded plastic, R-1

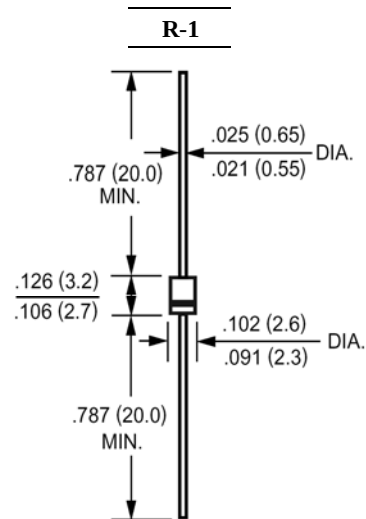
Epoxy: UL 94V-O rate flame retardant

Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed

Polarity: Color band denotes cathode end

Mounting position: Any

Weight: 0.0064ounce, 0.181gram



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, derate current by 20%.

	Symbols	1S20	1S30	1S40	1S50	1S60	1S80	1S100	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	20	30	40	50	60	80	100	Volts
Maximum RMS Voltage	V _{RMS}	14	21	28	35	42	56	70	Volts
Maximum DC Blocking Voltage	V _{DC}	20	30	40	50	60	80	100	Volts
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length	I _(AV)	1.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	35							Amp
Maximum Forward Voltage at 1.0A DC and 25℃	V _F	0.55			0.70		0.85		Volts
Maximum Reverse Current at T _A =25℃ at Rated DC Blocking Voltage T _A =100℃	I _R	0.5 10							mAmp
Typical Junction Capacitance (Note 1)	C _J	110							pF
Typical Thermal Resistance (Note 2)	R _{θJA}	80							℃/W
Operating Junction Temperature Range	T _J	-55 to +125			-55 to +150				℃
Storage Temperature Range	T _{stg}	-55 to +150							℃

NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance From Junction to Ambient 0.375"(9.5mm) lead length P.C.B. Mounted with 0.22x0.22" (5.5x5.5mm) copper pads

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RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

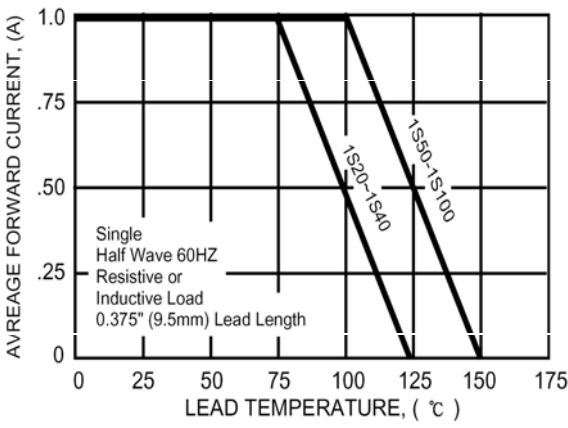


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

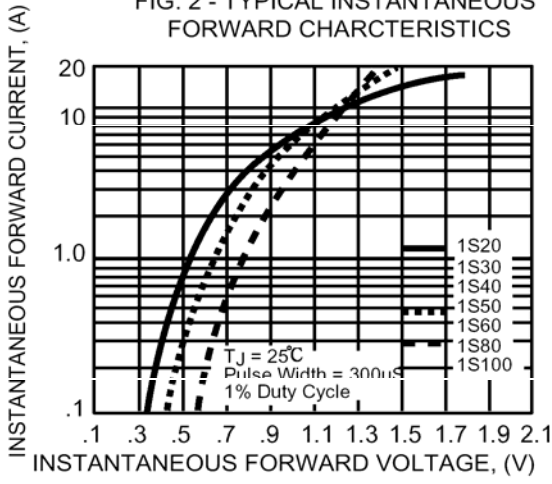


FIG. 3A - TYPICAL REVERSE CHARACTERISTICS

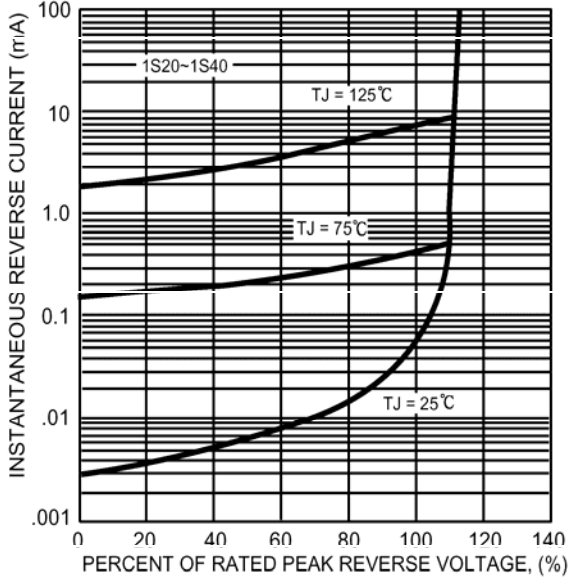


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

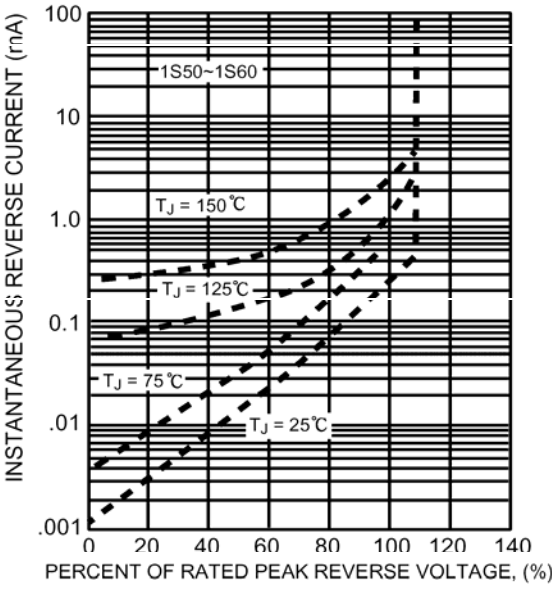


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

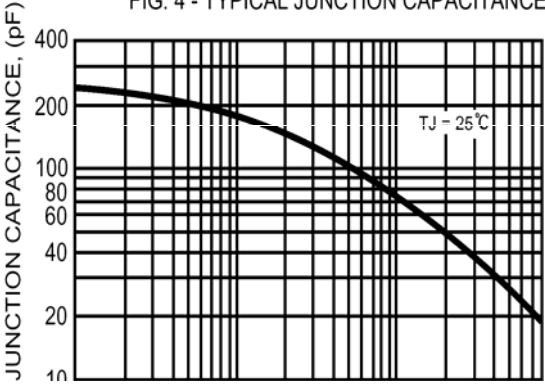


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

