

## SCHOTTKY BARRIER RECTIFIER

**VOLTAGE RANGE 20 to 60 Volts CURRENT 1.0 Ampere**

### FEATURES

- \* Low power loss, high efficiency
- \* Low leakage
- \* Low forward voltage
- \* High current capability
- \* High speed switching
- \* High surge capability
- \* High reliability

### MECHANICAL DATA

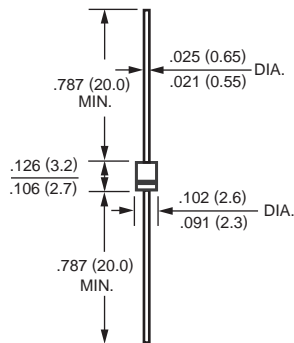
- \* Case: Molded plastic
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 0.12 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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%.



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Dimensions in inches and (millimeters)

### MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	1S20	1S30	1S40	1S50	1S60	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	20	30	40	50	60	Volts
Maximum RMS Voltage	VRMS	14	21	28	35	42	Volts
Maximum DC Blocking Voltage	VDC	20	30	40	50	60	Volts
Maximum Average Forward Rectified Current .375" (9.5mm) lead length	IO	1.0					Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	20					Amps
Typical Thermal Resistance (Note 1)	RθJA	50					°C/W
Typical Junction Capacitance (Note 2)	CJ	110					pF
Operating Temperature Range	TJ	-55 to + 150					°C
Storage Temperature Range	TSTG	-55 to + 150					°C

### ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

CHARACTERISTICS		SYMBOL	1S20	1S30	1S40	1S50	1S60	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC		V <sub>F</sub>	.55			.70		Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@ T <sub>A</sub> = 25°C	I <sub>R</sub>	1.0					mAmps
	@ T <sub>A</sub> = 100°C		10					mAmps

NOTES : 1. Thermal Resistance (Junction to Ambient): Vertical PC Board Mounting, 0.5" (12.7mm) Lead Length.  
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

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# RATING AND CHARACTERISTIC CURVES ( 1S20 THRU 1S60 )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

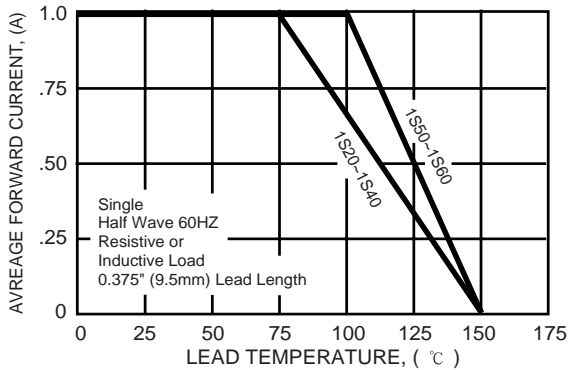


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

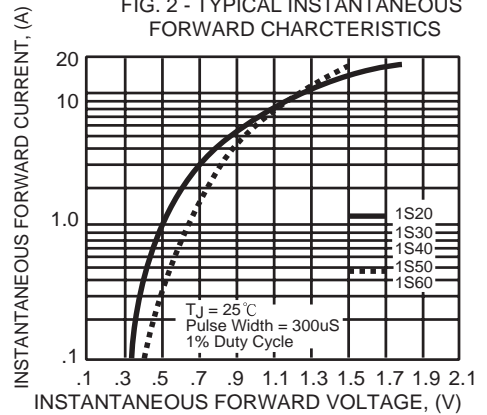


FIG. 3A - TYPICAL REVERSE CHARACTERISTICS

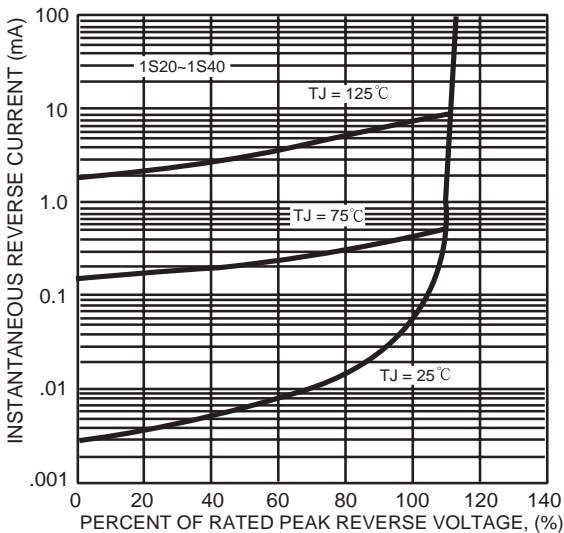


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

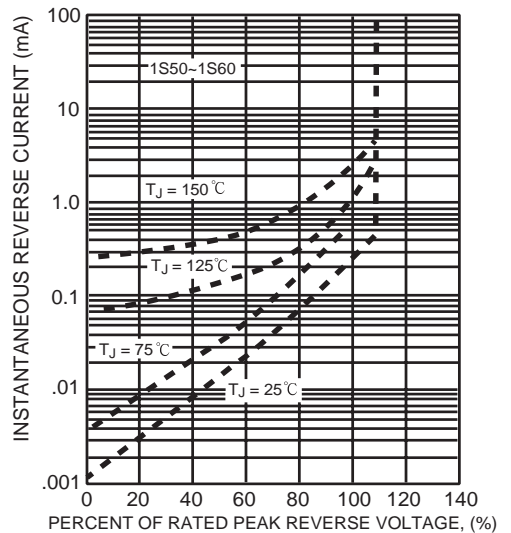


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

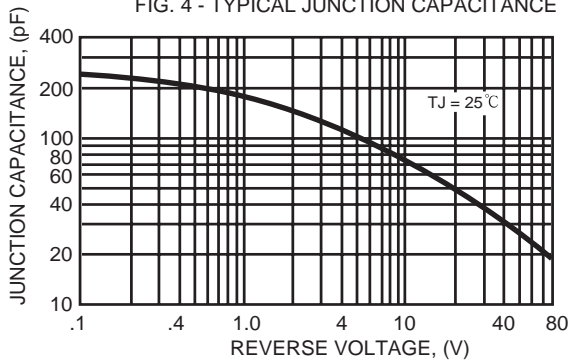


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

