

**SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE 20 to 100 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**

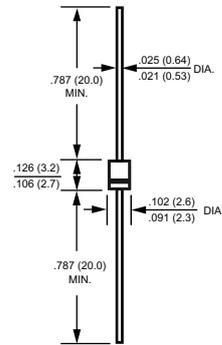
- \* Case: Molded plastic
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 0.12 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
resistive or inductive load.



R-1



Dimensions in inches and (millimeters)

**MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)**

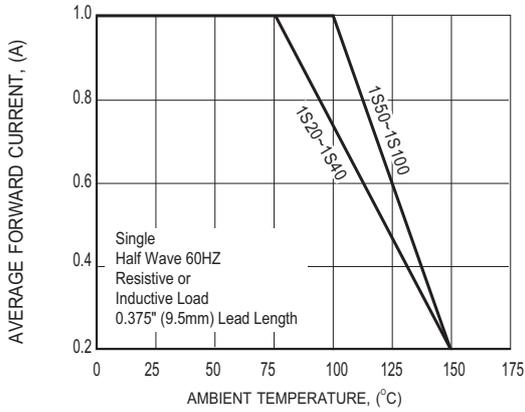
RATINGS	SYMBOL	1S20	1S30	1S40	1S50	1S60	1S80	1S100	UNITS	
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	Volts	
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	56	70	Volts	
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	80	100	Volts	
Maximum Average Forward Rectified Current .375" (9.5mm) lead length	I <sub>O</sub>	1.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	20								Amps
Typical Current Squared Time	I <sup>2</sup> T	1.6								A <sup>2</sup> S
Typical Thermal Resistance (Note 3)	R <sub>θJA</sub>	60								°C/W
	R <sub>θJL</sub>	20								
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	110								pF
Operating Temperature Range	T <sub>J</sub>	150								°C
Storage Temperature Range	T <sub>STG</sub>	-55 to + 150								°C

**ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)**

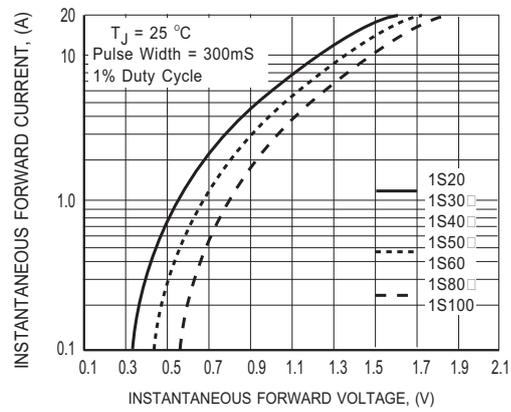
CHARACTERISTICS	SYMBOL	1S20	1S30	1S40	1S50	1S60	1S80	1S100	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	V <sub>F</sub>	.55			.70		.85		Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@T <sub>A</sub> = 25°C	0.2							mAmps
	@T <sub>A</sub> = 100°C	10							mAmps

- NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".  
3. Thermal Resistance : At 9.5mm lead lengths, PCB mounted.

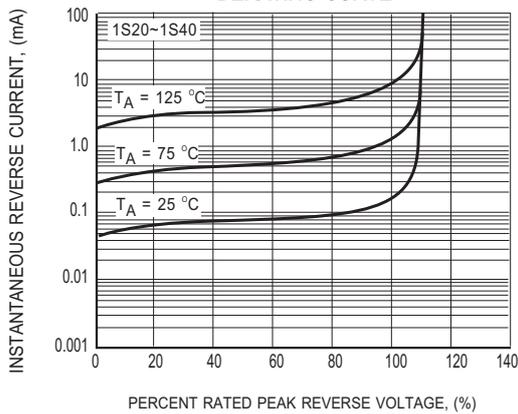
## RATING AND CHARACTERISTICS CURVES ( 1S20 THRU 1S100 )



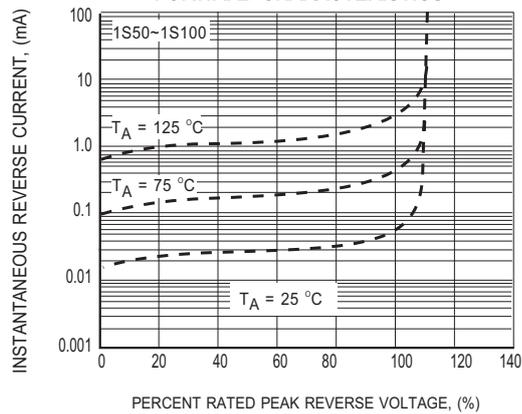
**FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE**



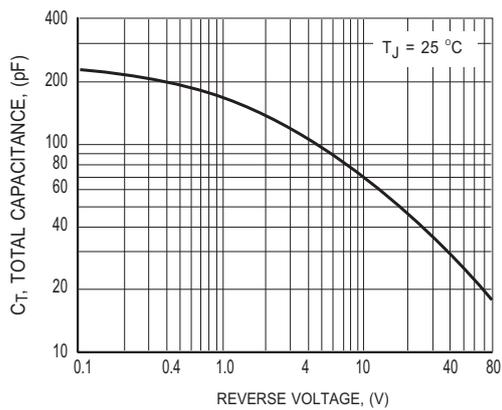
**FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



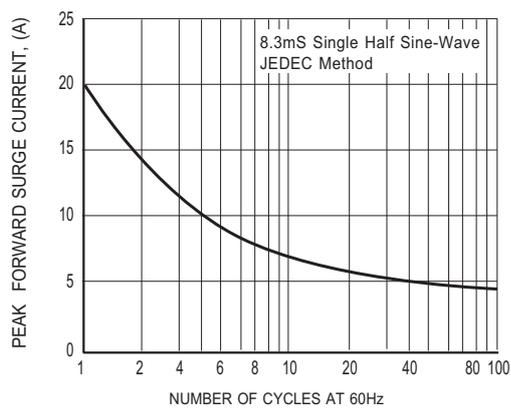
**FIG.3 TYPICAL REVERSE CHARACTERISTICS**



**FIG.3 TYPICAL REVERSE CHARACTERISTICS**

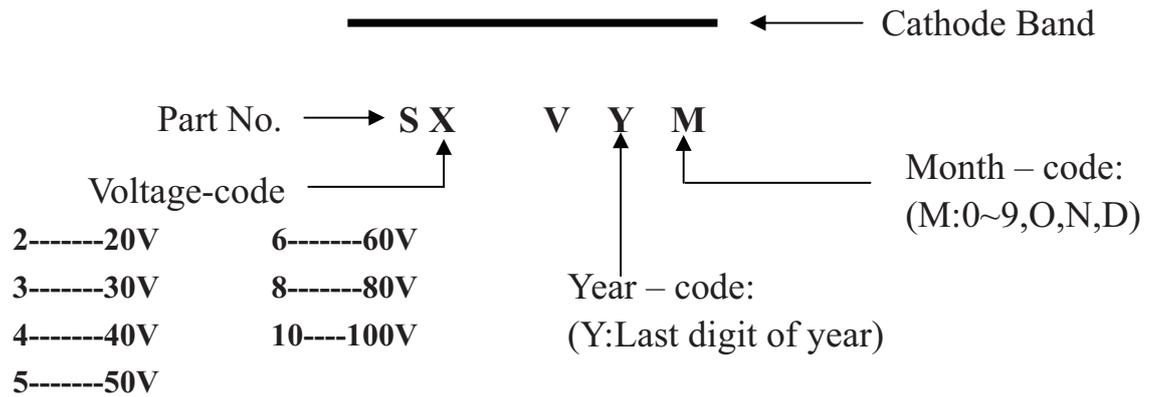


**FIG.4 TYPICAL JUNCTION CAPACITANCE**



**FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**

## Marking Description



## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
R-1	-T	5,000	5,000	5.0	52	330	355*350*335	20,000	7.37

### AMMO PACK

PACKAGE	PACKING CODE	REEL ( EA )	COMPONENT SPACE(mm)	TAPE SPACE (mm)	BOX SIZE (mm)	CARTON SIZE(mm)	CARTON ( EA )	GROSS WEIGHT (Kg)
R-1	-F	3,000	5.0	52	255*73*100	400*268*225	30,000	8.5
R-1	-E	3,000	5.0	26	256*48*94	365*270*217	42,000	8.35
R-1	-J	3,000	12.7	---	325*170*40	355*350*335	42,000	13.93
R-1	-I	2,000	12.7	---	325*170*40	355*350*335	28,000	9.69

### BULK PACK

PACKAGE	PACKING CODE	EA PER BOX	INNER BOX SIZE (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
R-1	-B	1000	192*75*21	415*220*255	50,000	11.74

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