



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

1S2  
THRU  
1S10

**TECHNICAL SPECIFICATIONS OF 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**

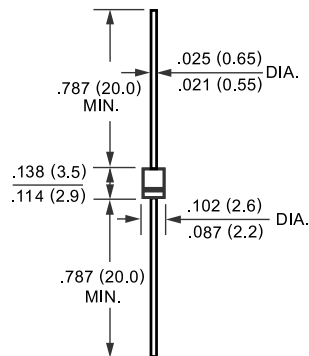
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.12 gram

**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%.



R-1



Dimensions in inches and (millimeters)

|  |             | SYMBOL           | 1S2          | 1S3 | 1S4 | 1S5 | 1S6 | 1S8  | 1S10 | 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<br>.375*(9.5mm) lead length                                |             | I <sub>O</sub>   | 1.0          |     |     |     |     |      |      | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC Method) |             | I <sub>FSM</sub> | 35           |     |     |     |     |      |      | Amps  |
| Maximum Instantaneous Forward Voltage at 1.0A DC   |             | V <sub>F</sub>   | .55          |     |     | .70 |     | 0.85 |      | Volts |
| Maximum DC Reverse Current<br>at Rated DC Blocking Voltage   | @TA = 25°C  | I <sub>R</sub>   | 1.0          |     |     |     |     |      |      | mAmps |
|  | @TA = 100°C |                  | 10           |     |     |     |     |      |      | mAmps |
| Typical Thermal Resistance (Note 1)  |             | RθJA             | 50           |     |     |     |     |      |      | °C/W  |
| Typical Junction Capacitance (Note 2)  |             | C <sub>J</sub>   | 110          |     |     |     |     |      |      | pF    |
| Operating Temperature Range  |             | T <sub>J</sub>   | -65 to + 150 |     |     |     |     |      |      | °C    |
| Storage Temperature Range  |             | T <sub>STG</sub> | -65 to + 150 |     |     |     |     |      |      | °C    |

NOTES : 1. Thermal Resistance (Junction to Ambient): Vertical PC Board Mounting, 0.375"(9.5 mm) Lead Length.  
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

# RATING AND CHARACTERISTIC CURVES (1S2 THRU 1S10)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

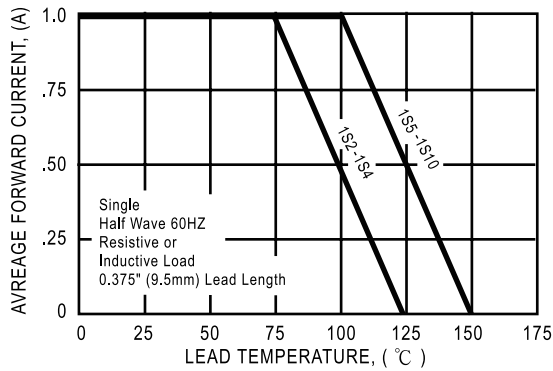


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

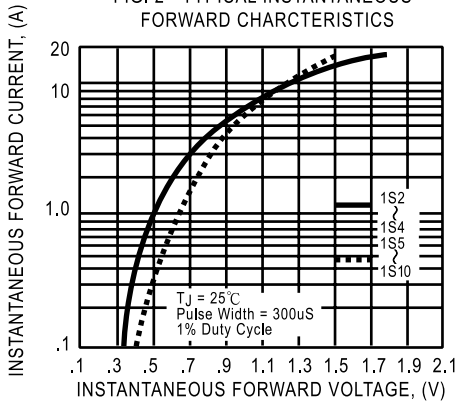


FIG. 3A - TYPICAL REVERSE CHARACTERISTICS

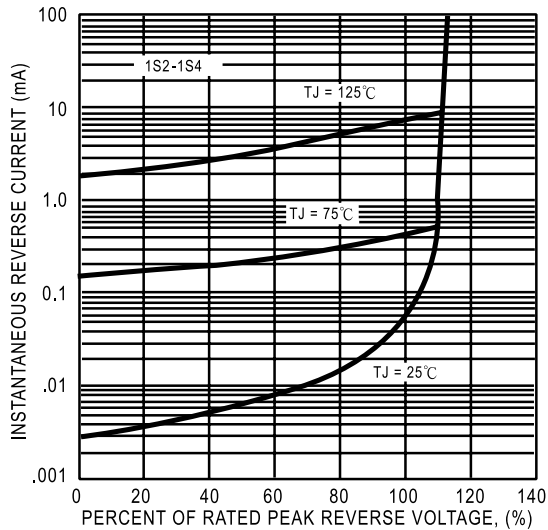


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

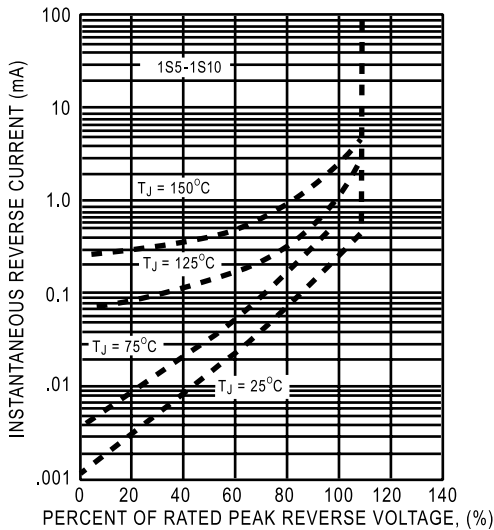


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

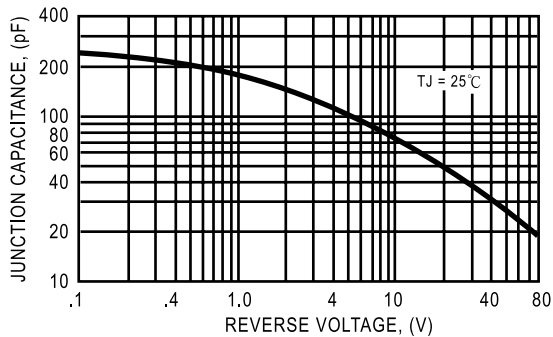


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

