# 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*

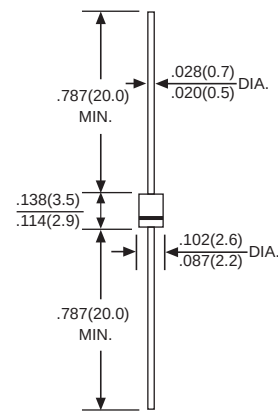
### FEATURES

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

### 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

R-1




Dimensions in inches and (millimeters)

### 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%.

| | | SYMBOL | 1S2 | 1S3 | 1S4 | 1S5 | 1S6 | 1S8 | 1S10 | 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 | | $I_O$ | 1.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | | $I_{FSM}$ | 25 | | | | | | | Amps |
| Maximum Instantaneous Forward Voltage at 1.0A DC | | $V_F$ | .55 | | | .70 | | .85 | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | $@T_A = 25^oC$ | $I_R$ | 1.0 | | | | | | | mAmps |
| | $@T_A = 100^oC$ | | 10 | | | | | | | |
| Typical Thermal Resistance (Note 1) | | $R_{\theta JA}$ | 50 | | | | | | | $^oC/W$ |
| Typical Junction Capacitance (Note 2) | | $C_J$ | 110 | | | | | | | pF |
| Operating Temperature Range | | $T_J$ | -55 to +150 | | | | | | | $^oC$ |
| Storage Temperature Range | | $T_{STG}$ | -55 to +150 | | | | | | | $^oC$ |

NOTES : 1. Thermal Resistance (Junction to Ambient): Vertical PC Board Mounting, 0.375"(9.5mm) 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

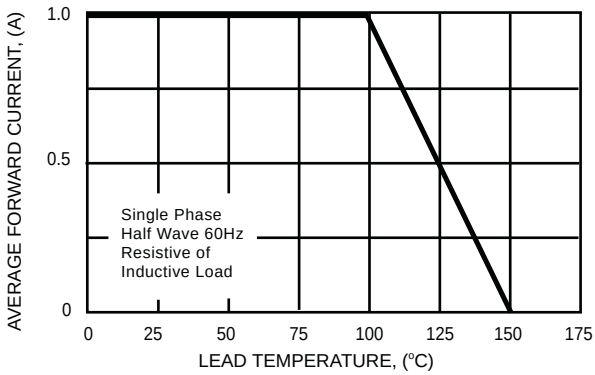



FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

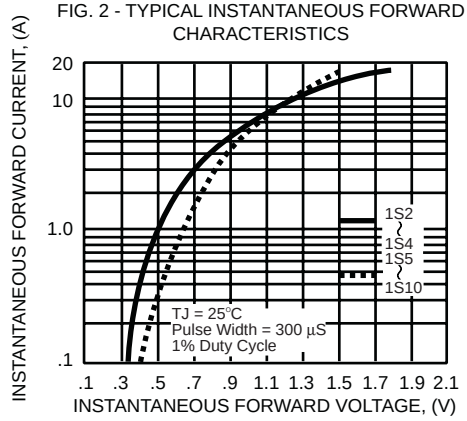



FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

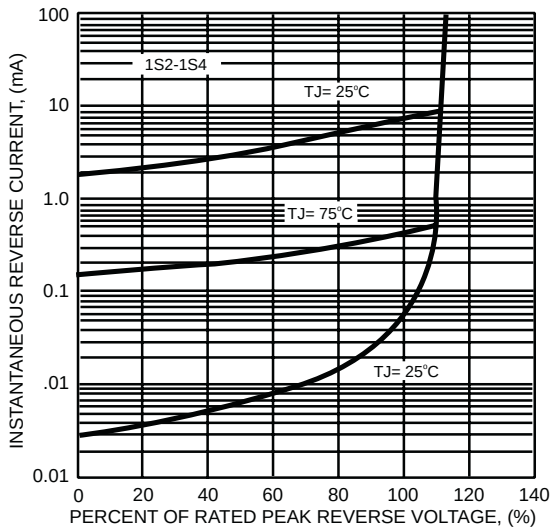



FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

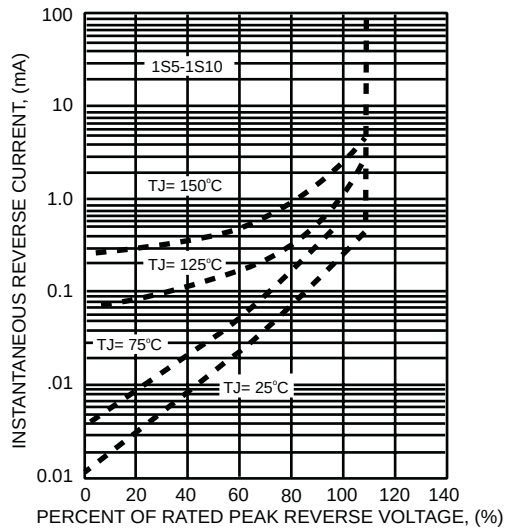



FIG. 4 - TYPICAL JUNCTION CAPACITANCE

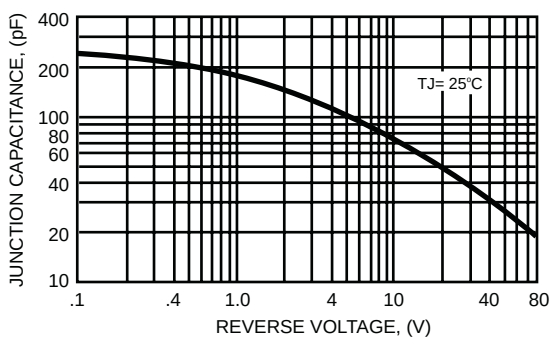
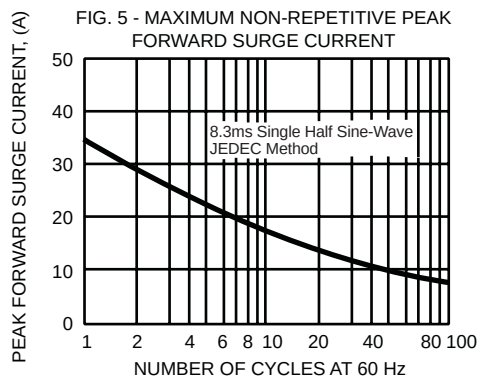



FIG. 5 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



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