# DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

**1N5820 THRU 1N5822**

## *TECHNICAL SPECIFICATIONS OF SCHOTTKY BARRIER RECTIFIER*

*VOLTAGE RANGE - 20 to 40 Volts* *CURRENT - 3.0 Amperes*

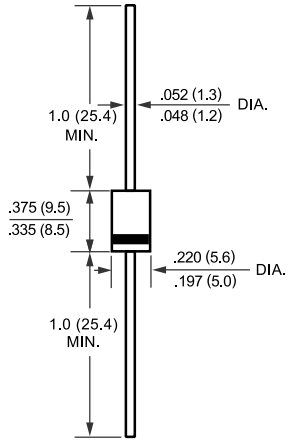
### FEATURES

* Low switching noise
* Low forward voltage drop
* High current capability
* High switching capabitity
* 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: 1.18 grams

DO-27




Dimensions in inches and (millimeters)

### 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%.

| | | SYMBOL | 1N5820 | 1N5821 | 1N5822 | UNITS |
|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | | $V_{RRM}$ | 20 | 30 | 40 | Volts |
| Maximum RMS Voltage | | $V_{RMS}$ | 14 | 21 | 28 | Volts |
| Maximum DC Blocking Voltage | | $V_{DC}$ | 20 | 30 | 40 | Volts |
| Maximum Average Forward Rectified Current .375*(9.5mm) lead length at $T_L$ = 95°C | | $I_O$ | 3.0 | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | | $I_{FSM}$ | 80 | | | Amps |
| Maximum Instantaneous Forward Voltage at 3.0A DC (Note 1) | | $V_F$ | .475 | .500 | .525 | Volts |
| Maximum Instantaneous Forward Voltage at 9.4A DC (Note 1) | | $V_F$ | .850 | .900 | .950 | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage (Note 1) | @TA= 25°C | $I_R$ | 2.0 | | | mAmps |
| | @TA= 100°C | | 20 | | | |
| Typical Thermal Resistance (Note 2) | | $R_{\theta JA}$ | 28 | | | °C/W |
| Typical Junction Capacitance (Note 3) | | $C_J$ | 250 | | | pF |
| Storage and Operating Temperature Range | | $T_J$, $T_{STG}$ | -65 to + 125 | | | °C |

NOTES : 1. Measured at Pulse Width 300 uS, Duty 2%.
2. Thermal Resistance (Junction to Ambient): Vertical PC Board Mounting, 0.5"(12.7mm) Lead Length.
3. Measured at 1 MHz and applied reverse voltage of 4.0 volts.



NEXT BACK EXIT

# RATING AND CHARACTERISTIC CURVES (1N5820 THRU 1N5822)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

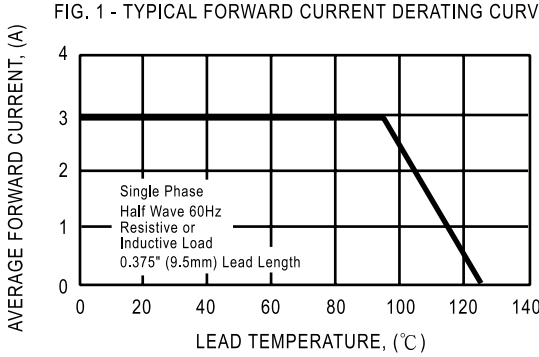



FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

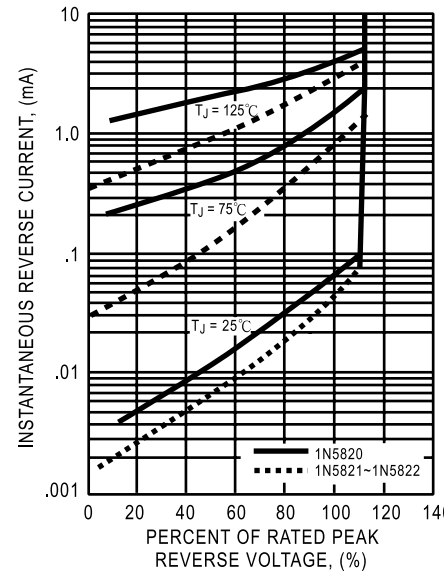



FIG. 3 - MAXIMUM NON-REPETITIVE
FORWARD SURGE CURRENT

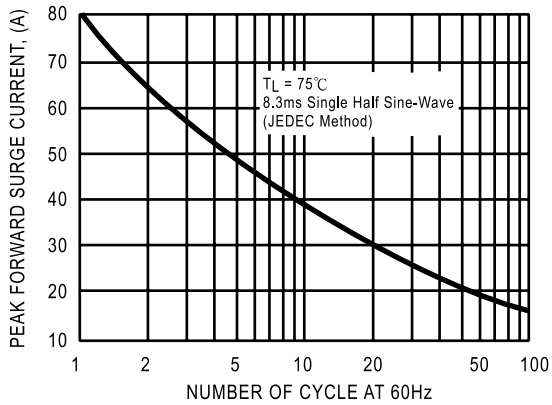



FIG. 4 - TYPICAL JUNCTION CAPACITANCE

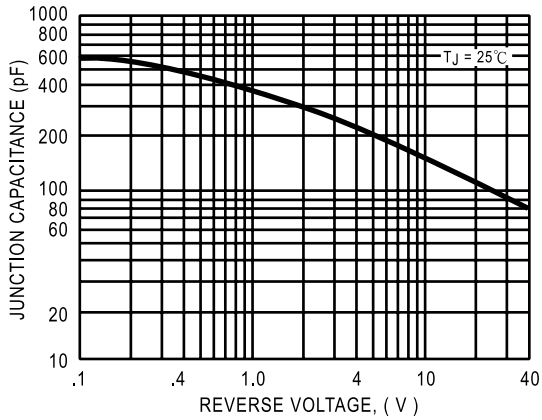



FIG. 5 - TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS