

# 1N5820 THRU 1N5822

# GW

## 3.0 AMP SCHOTTKY BARRIER RECTIFIERS



### FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability
- \* Epitaxial construction

### MECHANICAL DATA

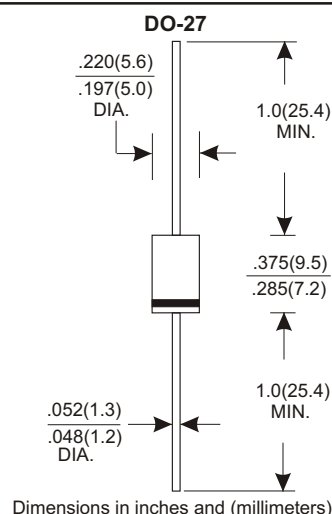
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

### VOLTAGE RANGE

20 to 40 Volts

### CURRENT

3.0 Ampere



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| TYPE NUMBER                                                                                           | 1N5820     | 1N5821 | 1N5822 | UNITS |
|-------------------------------------------------------------------------------------------------------|------------|--------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                | 20         | 30     | 40     | V     |
| Maximum RMS Voltage                                                                                   | 14         | 21     | 28     | V     |
| Maximum DC Blocking Voltage                                                                           | 20         | 30     | 40     | V     |
| Maximum Average Forward Rectified Current<br>.375"(9.5mm) Lead Length at T <sub>L</sub> =90°C         | 3.0        |        |        | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 80         |        |        | A     |
| Maximum Instantaneous Forward Voltage at 3.0A                                                         | .475       | .500   | .525   | V     |
| Maximum DC Reverse Current<br>Ta=25°C                                                                 | 1.0        |        |        | mA    |
| at Rated DC Blocking Voltage<br>Ta=100°C                                                              | 20         |        |        | mA    |
| Typical Junction Capacitance (Note1)                                                                  | 250        |        |        | pF    |
| Typical Thermal Resistance RθJA (Note 2)                                                              | 20         |        |        | °C/W  |
| Operating Temperature Range T <sub>J</sub>                                                            | -65 — +150 |        |        | °C    |
| Storage Temperature Range T <sub>STG</sub>                                                            | -65 — +150 |        |        | °C    |

#### NOTES:

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

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

FIG.1-TYPICAL FORWARD CHARACTERISTICS

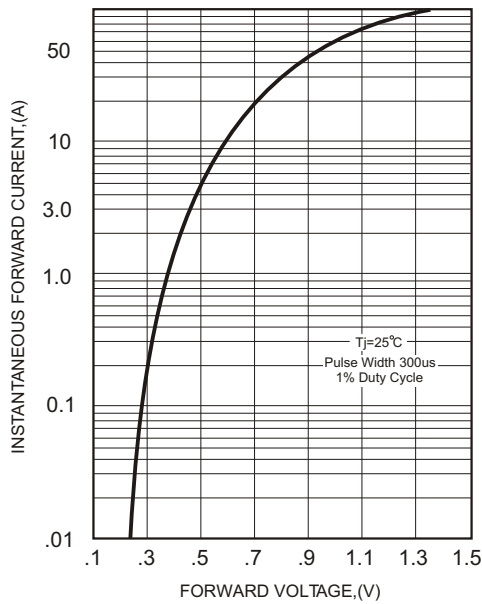


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

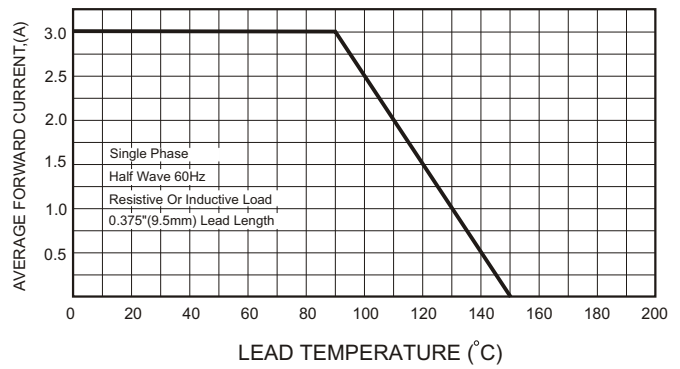


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

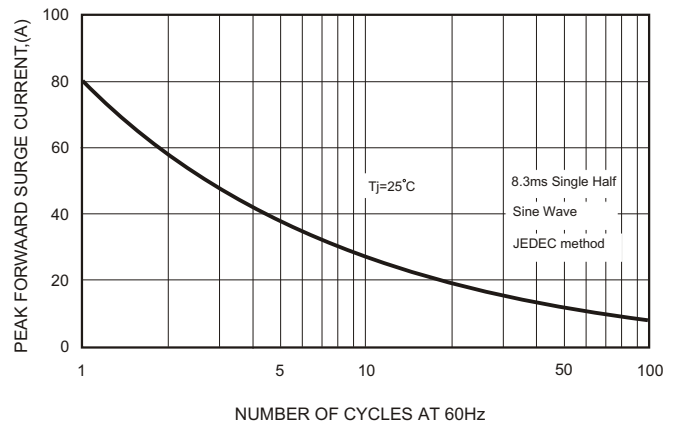


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

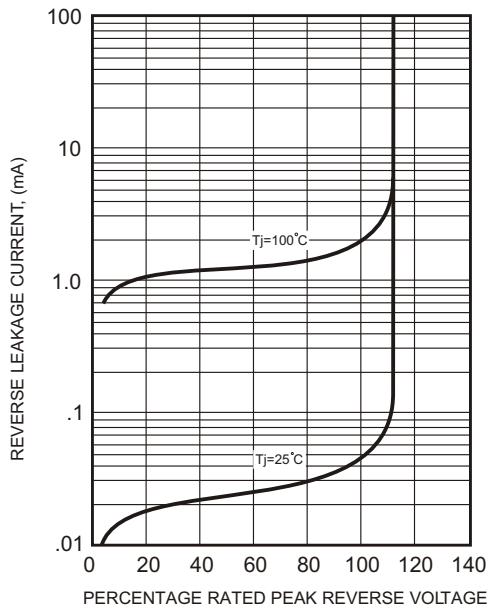
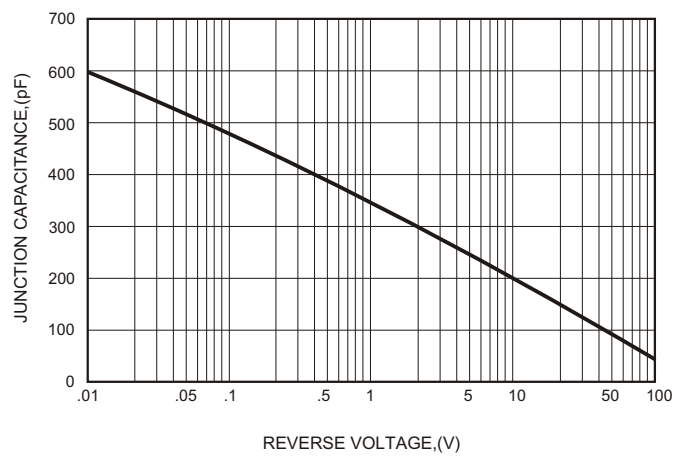


FIG.5-TYPICAL JUNCTION CAPACITANCE



# SR320 THRU SR3100



## 3.0 AMP SCHOTTKY BARRIER RECTIFIERS



### FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability
- \* Epitaxial construction

### MECHANICAL DATA

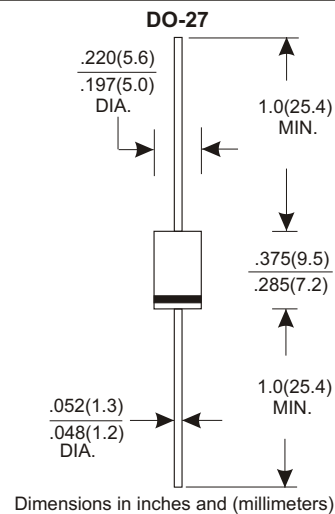
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

### VOLTAGE RANGE

20 to 100 Volts

### CURRENT

3.0 Amperes



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| TYPE NUMBER                                                                                           | SR320      | SR330 | SR340 | SR350 | SR360 | SR380 | SR3100 | UNITS |
|-------------------------------------------------------------------------------------------------------|------------|-------|-------|-------|-------|-------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                | 20         | 30    | 40    | 50    | 60    | 80    | 100    | V     |
| Maximum RMS Voltage                                                                                   | 14         | 21    | 28    | 35    | 42    | 56    | 70     | V     |
| Maximum DC Blocking Voltage                                                                           | 20         | 30    | 40    | 50    | 60    | 80    | 100    | V     |
| Maximum Average Forward Rectified Current<br>.375"(9.5mm) Lead Length at T <sub>L</sub> =100°C        | 3.0        |       |       |       |       |       |        | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 80         |       |       |       |       |       |        | A     |
| Maximum Instantaneous Forward Voltage at 3.0A                                                         | 0.55       |       |       | 0.70  |       | 0.85  |        | V     |
| Maximum DC Reverse Current<br>Ta=25°C                                                                 |            |       |       | 0.5   |       |       |        | mA    |
| at Rated DC Blocking Voltage<br>Ta=100°C                                                              |            |       |       | 20    |       |       |        | mA    |
| Typical Junction Capacitance (Note1)                                                                  |            |       |       | 250   |       |       |        | pF    |
| Typical Thermal Resistance RθJL (Note 2)                                                              | 20         |       |       | 10    |       |       |        | °C/W  |
| Operating Temperature Range T <sub>J</sub>                                                            | -65 — +150 |       |       |       |       |       |        | °C    |
| Storage Temperature Range T <sub>STG</sub>                                                            | -65 — +150 |       |       |       |       |       |        | °C    |

#### NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Lead Vertical PC Board Mounting 0.5"(12.7mm) Lead Length.

## RATING AND CHARACTERISTIC CURVES (SR320 THRU SR3100)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

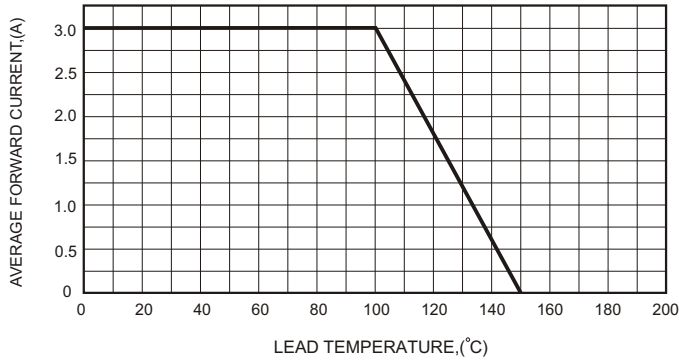


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

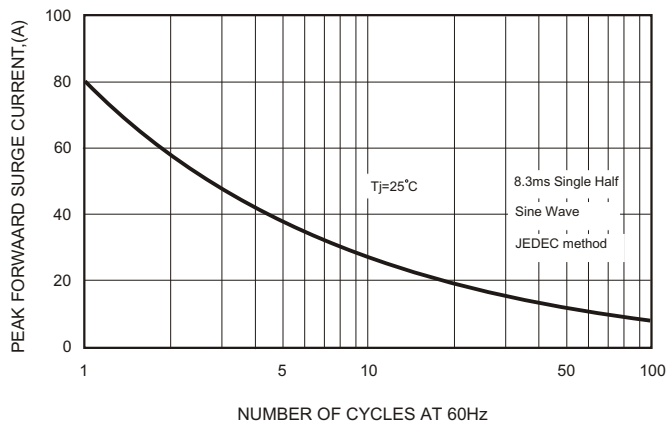


FIG.4-TYPICAL JUNCTION CAPACITANCE

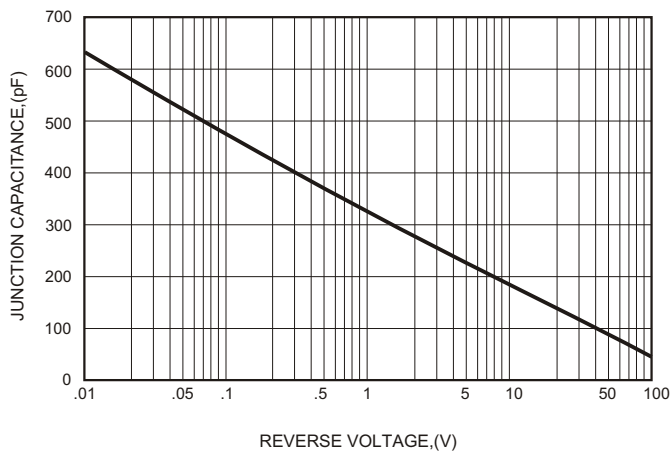


FIG.2-TYPICAL FORWARD CHARACTERISTICS

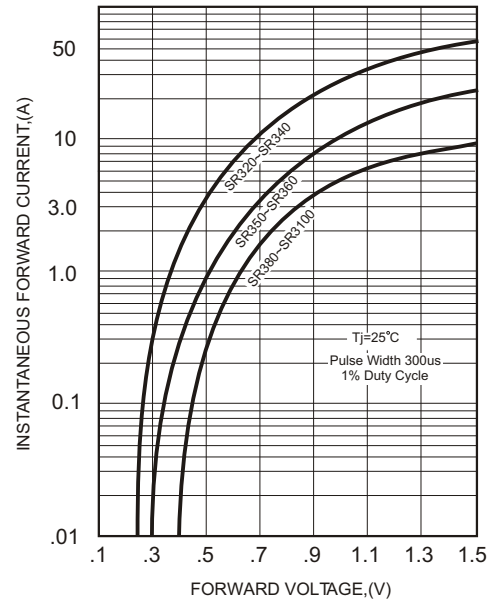
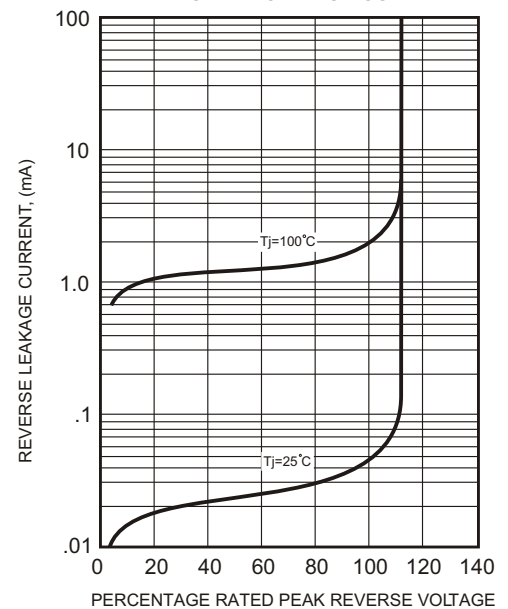


FIG.5 - TYPICAL REVERSE CHARACTERISTICS



# SR520 THRU SR5100



## 5.0 AMP SCHOTTKY BARRIER RECTIFIERS



### FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability
- \* Epitaxial construction

### MECHANICAL DATA

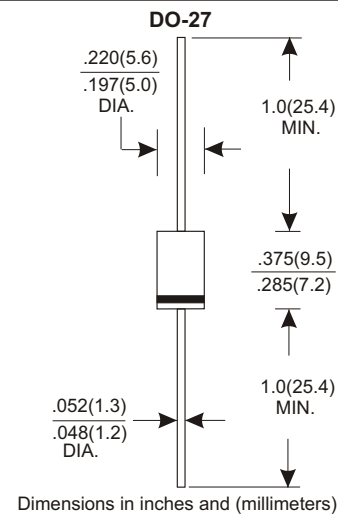
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

### VOLTAGE RANGE

20 to 100 Volts

### CURRENT

5.0 Amperes



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| TYPE NUMBER                                                                                           | SR520 | SR530 | SR540 | SR550      | SR560 | SR580 | SR5100 | UNITS |
|-------------------------------------------------------------------------------------------------------|-------|-------|-------|------------|-------|-------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                | 20    | 30    | 40    | 50         | 60    | 80    | 100    | V     |
| Maximum RMS Voltage                                                                                   | 14    | 21    | 28    | 35         | 42    | 56    | 70     | V     |
| Maximum DC Blocking Voltage                                                                           | 20    | 30    | 40    | 50         | 60    | 80    | 100    | V     |
| Maximum Average Forward Rectified Current<br>.375"(9.5mm) Lead Length at T <sub>L</sub> =95°C         | 5.0   |       |       |            |       |       |        | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 150   |       |       |            |       |       |        | A     |
| Maximum Instantaneous Forward Voltage at 5.0A                                                         | 0.55  |       |       | 0.70       |       | 0.85  |        | V     |
| Maximum DC Reverse Current<br>Ta=25°C                                                                 |       |       |       | 0.5        |       |       |        | mA    |
| at Rated DC Blocking Voltage<br>Ta=100°C                                                              |       |       |       | 50         |       |       |        | mA    |
| Typical Junction Capacitance (Note1)                                                                  |       |       |       | 380        |       |       |        | pF    |
| Typical Thermal Resistance RθJL (Note 2)                                                              |       |       |       | 10         |       |       |        | °C/W  |
| Operating Temperature Range T <sub>J</sub>                                                            |       |       |       | -65 — +150 |       |       |        | °C    |
| Storage Temperature Range T <sub>STG</sub>                                                            |       |       |       | -65 — +150 |       |       |        | °C    |

#### NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Lead Vertical PC Board Mounting 0.375"(9.5mm) Lead Length.

## RATING AND CHARACTERISTIC CURVES (SR520 THRU SR5100)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

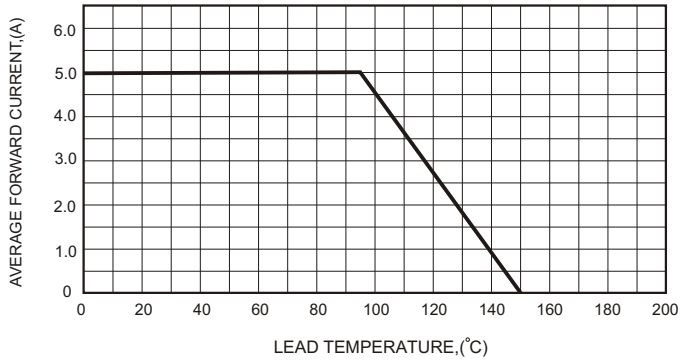


FIG.2-TYPICAL FORWARD CHARACTERISTICS

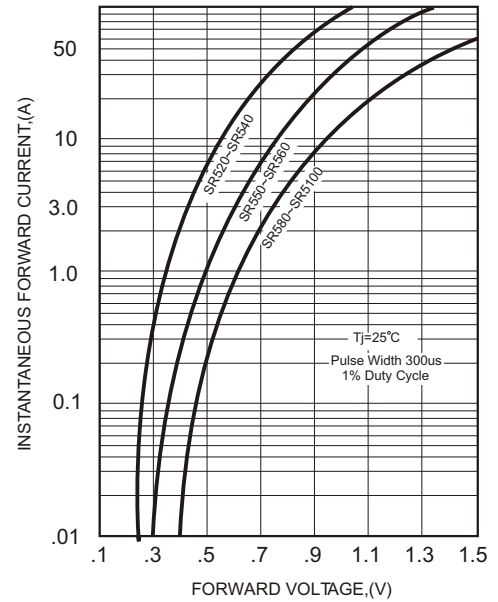


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

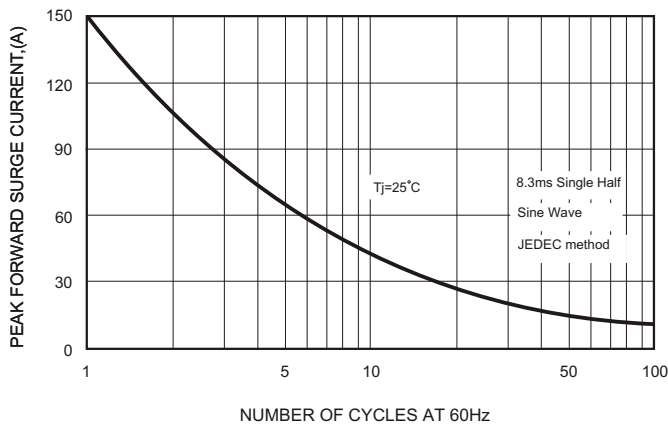


FIG.4-TYPICAL JUNCTION CAPACITANCE

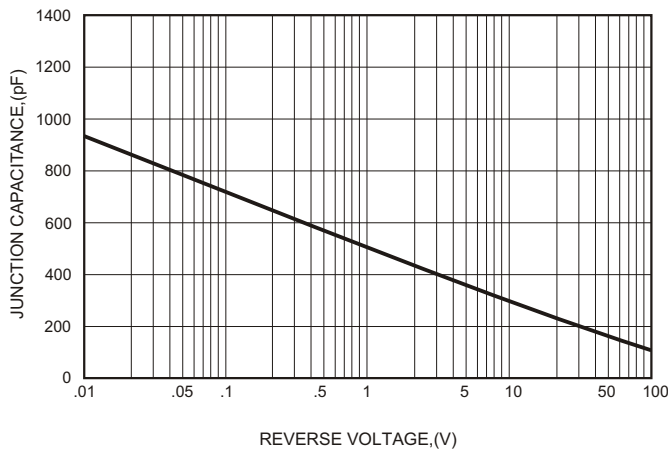


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

