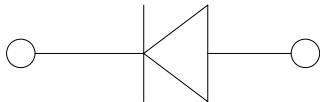
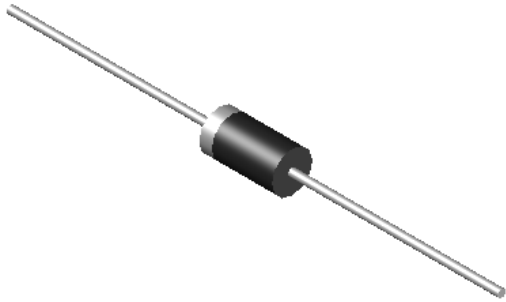


## Schottky Barrier Rectifier



### Features

- Guardring for overvoltage protection
- Low power loss
- Extremely fast switching
- High forward surge capability
- High frequency operation
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### Typical Applications

For use in low voltage high frequency inverters, freewheeling, DC/DC converters, and polarity protection applications.

### Mechanical Data

- **Package:** DO-201AD (DO-27)  
Molding compound meets UL 94 V-0 flammability rating, -
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes the cathode end

### ■Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER                                                                                     | SYMBOL           | UNIT | SR520     | SR540 | SR545 | SR560 | SR5100    | SR5150 | SR5200 |
|-----------------------------------------------------------------------------------------------|------------------|------|-----------|-------|-------|-------|-----------|--------|--------|
| Device marking code                                                                           |                  |      | SR520     | SR540 | SR545 | SR560 | SR5100    | SR5150 | SR5200 |
| Repetitive Peak Reverse Voltage                                                               | V <sub>RRM</sub> | V    | 20        | 40    | 45    | 60    | 100       | 150    | 200    |
| Average Rectified Output Current<br>@60Hz sine wave, Resistance load, T <sub>a</sub> (FIG.1)  | I <sub>O</sub>   | A    | 5.0       |       |       |       |           |        |        |
| Forward Surge Current (Non-repetitive)<br>@60Hz Half-sine wave, 1 cycle, T <sub>a</sub> =25°C | I <sub>FSM</sub> | A    | 120       |       |       |       |           |        |        |
| Storage Temperature                                                                           | T <sub>stg</sub> | °C   | -55 ~+175 |       |       |       |           |        |        |
| Junction Temperature                                                                          | T <sub>j</sub>   | °C   | -55 ~+150 |       |       |       | -55 ~+175 |        |        |

### ■Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER                                                         | SYMBOL         | UNIT | TEST CONDITIONS                                           | SR520 | SR540 | SR545 | SR560 | SR5100 | SR5150 | SR5200 |
|-------------------------------------------------------------------|----------------|------|-----------------------------------------------------------|-------|-------|-------|-------|--------|--------|--------|
| Maximum instantaneous forward voltage drop per diode              | V <sub>F</sub> | V    | I <sub>FM</sub> =5.0A                                     | 0.55  |       |       | 0.7   | 0.85   |        |        |
| Maximum DC reverse current at rated DC blocking voltage per diode | I <sub>R</sub> | mA   | T <sub>a</sub> =25°C                                      | 0.2   |       |       |       | 0.1    |        |        |
|                                                                   |                |      | T <sub>a</sub> =100°C                                     | 20    |       |       |       | 5      |        |        |
| Typical junction capacitance                                      | C <sub>j</sub> | pF   | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | 280   |       |       | 220   | 180    | 100    |        |

Note1:Pulse test:300uS pulse width,1% duty cycle

Note2:Pulse test:pulse width 40mS

# SR520 THRU SR5200

## ■ Thermal Characteristics ( $T_a=25^{\circ}\text{C}$ Unless otherwise specified)

| PARAMETER          | SYMBOL          | UNIT                 | SR520 | SR530 | SR540 | SR545 | SR550 | SR560 | SR580 | SR5100 | SR5150 | SR5200 |
|--------------------|-----------------|----------------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| Thermal Resistance | $R_{\theta JA}$ | $^{\circ}\text{C/W}$ | 20    |       |       |       |       |       |       |        |        |        |

## ■ Ordering Information (Example)

| PREFERED P/N | PACKAGE CODE | UNIT WEIGHT(g)   | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|--------------|--------------|------------------|----------------------|-------------------------|----------------------------|---------------|
| SR520~SR5200 | D1           | Approximate 1.05 | 1250                 | 1250                    | 12500                      | Tape          |
| SR520~SR5200 | C1           | Approximate 1.05 | 250                  | 250                     | 12500                      | Bulk          |

## ■ Characteristics (Typical)

FIG.1:  $I_o$ - $T_a$  Curve

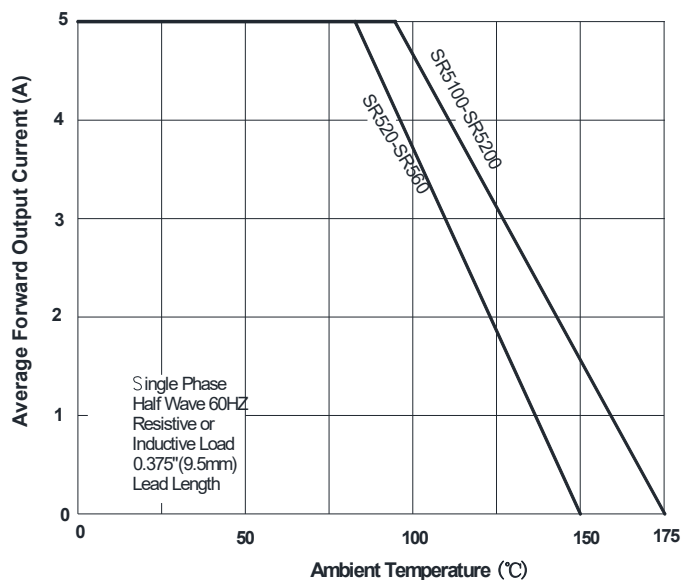


FIG.2: Forward Surge Current Capability

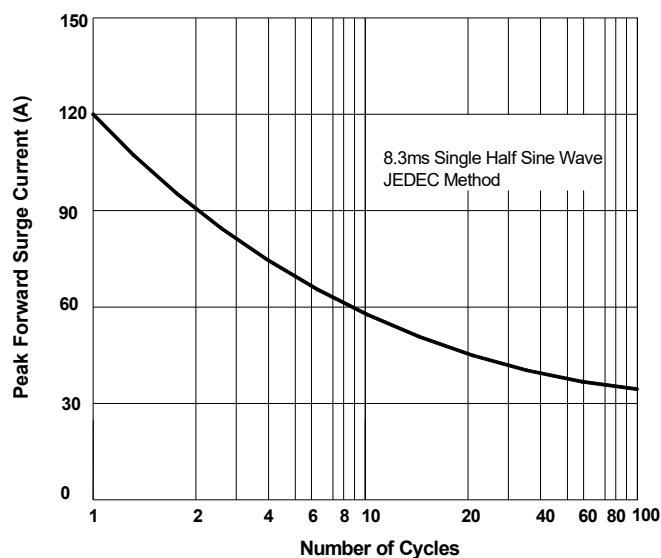


FIG.3: Forward Voltage

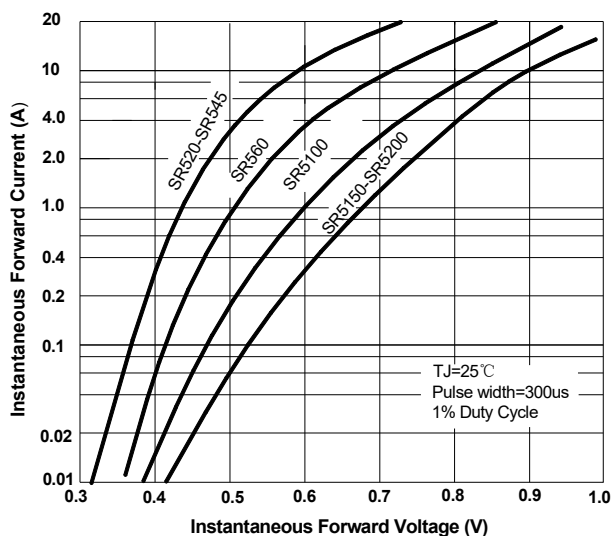
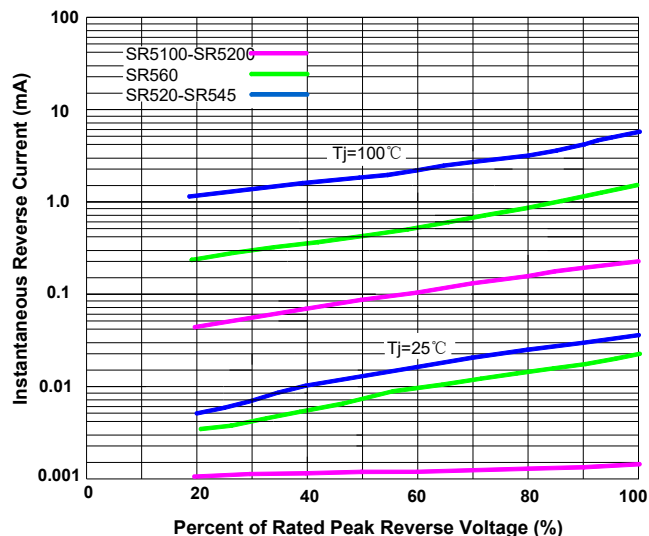
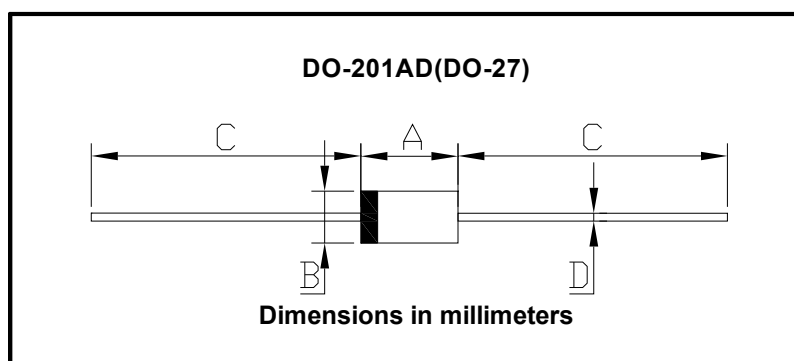


FIG.4: Typical Reverse Characteristics



## ■ Outline Dimensions



| <b>DO-201AD(DO-27)</b> |      |      |
|------------------------|------|------|
| Dim                    | Min  | Max  |
| A                      | 8.50 | 9.50 |
| B                      | 5.00 | 5.60 |
| C                      | 25.4 | /    |
| D                      | 1.20 | 1.30 |

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