



**DC COMPONENTS CO., LTD.**  
RECTIFIER SPECIALISTS

**SD520  
THRU  
SD5100**

**TECHNICAL SPECIFICATIONS OF SCHOTTKY BARRIER RECTIFIER**  
VOLTAGE RANGE - 20 to 100 Volts      CURRENT - 5.0 Amperes

**FEATURES**

- \* Metal to silicon rectifier majority carrier conduction
- \* Low power loss, High efficiency
- \* High current capability
- \* Low forward voltage drop
- \* High surge capacity
- \* For use in low voltage high frequency inverters, free wheeling, and polarity protection applications

**MECHANICAL DATA**

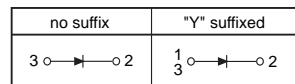
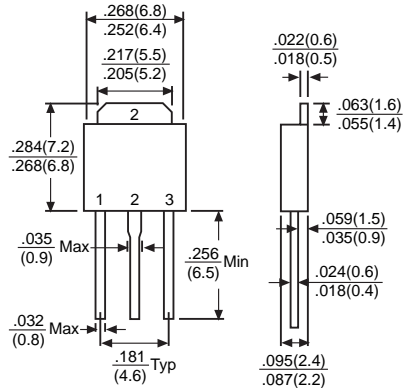
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- \* Mounting position: Any
- \* Weight: 0.4 grams Approx.

**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%.



TO-251



Dimensions in inches and (millimeters)

|   | SYMBOL                            | SD520                   | SD530 | SD540 | SD550 | SD560 | SD580 | SD5100 | 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 at T <sub>C</sub> =75°C                                 | I <sub>O</sub>                    | 5.0                     |       |       |       |       |       |        | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>                  | 100                     |       |       |       |       |       |        | Amps  |
| Maximum Instantaneous Forward Voltage at 5.0A DC  | V <sub>F</sub>                    | 0.55                    |       |       | 0.75  |       | 0.85  |        | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage   | I <sub>R</sub>                    | @T <sub>A</sub> = 25°C  |       |       |       |       |       |        | mAmps |
|   |                                   | @T <sub>A</sub> = 100°C |       |       |       |       |       |        |       |
| Typical Thermal Resistance (Note1)  | R <sub>θJA</sub>                  | 80                      |       |       |       |       |       |        | °C/W  |
| Typical Junction Capacitance (Note 2)   | C <sub>J</sub>                    | 550                     |       |       |       |       |       |        | pF    |
| Storage Operating Temperature Range   | T <sub>J</sub> , T <sub>STG</sub> | -55 to + 125            |       |       |       |       |       |        | °C    |

Note : 1. Mounted on PC Board with 14mm<sup>2</sup>(0.013mm thick) copper pad areas.  
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

# RATING AND CHARACTERISTIC CURVES (SD520 THRU SD5100)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

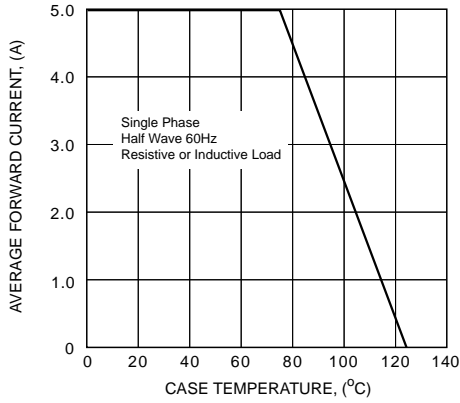


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

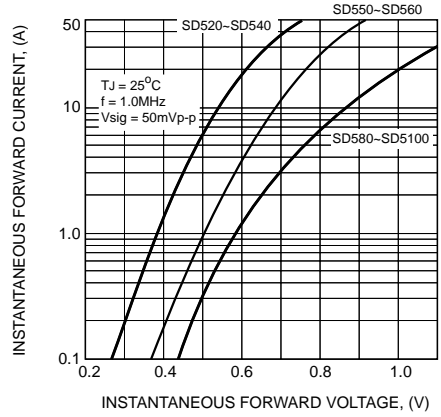


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

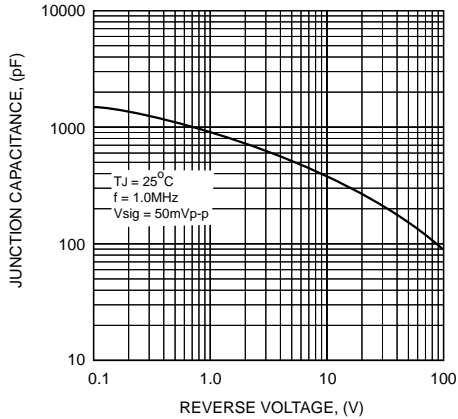


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

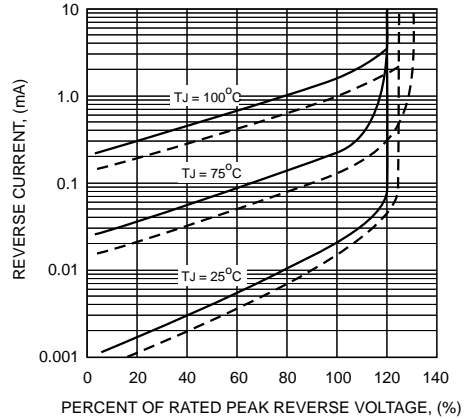


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

