

## 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
- \* For use in low voltage high frequency inverters, free wheeling, and polarity protection applications

#### MECHANICAL DATA

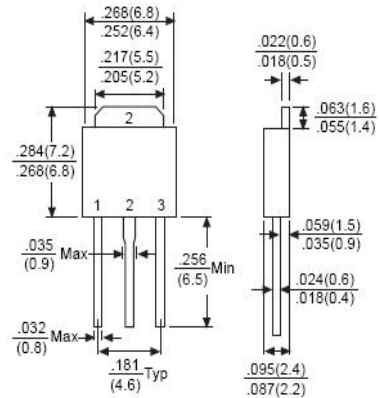
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- \* Mounting position: Any
- \* Weight: 0.4 grams Approx.

#### 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



no suffix	"Y" suffixed
3 ○ — 0 2	1 3 ○ — 0 2

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>bc</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	@T <sub>A</sub> = 25°C	2.0							mAmps
	@T <sub>A</sub> = 100°C	50							
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

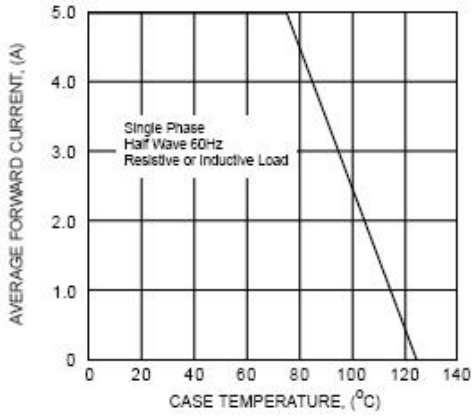


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

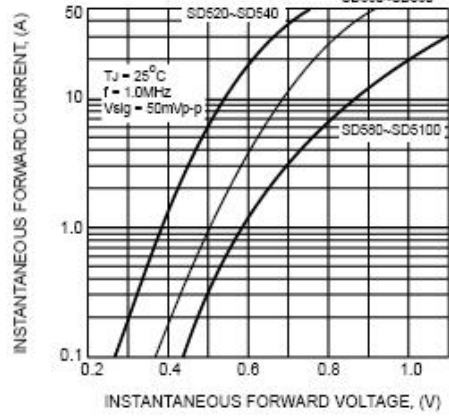


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

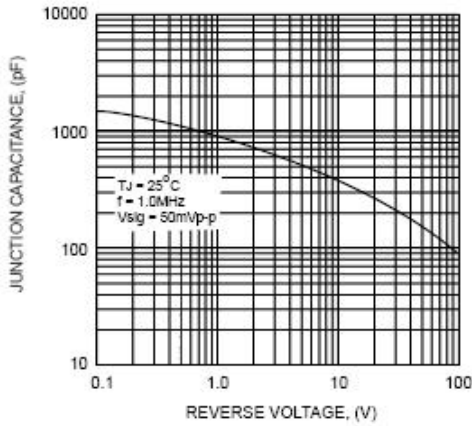


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

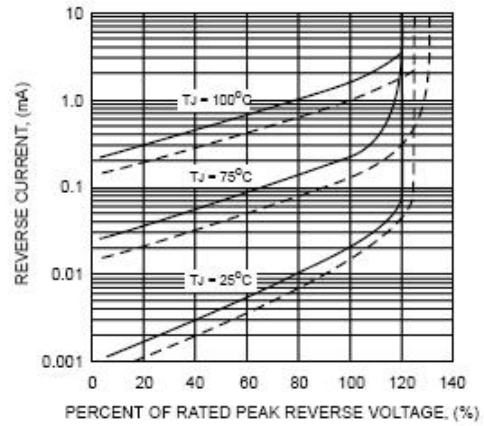


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

