



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

**SD1020  
THRU  
SD10100**

**TECHNICAL SPECIFICATIONS OF SCHOTTKY BARRIER RECTIFIER**  
VOLTAGE RANGE - 20 to 100 Volts      CURRENT - 10 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**

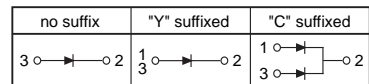
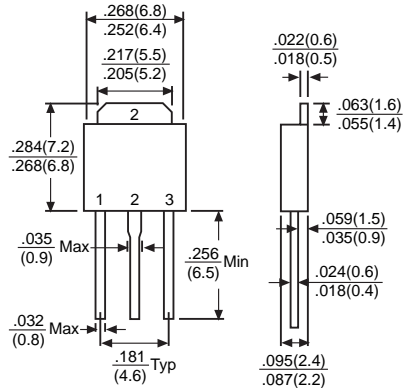
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- \* Mounting position: Any
- \* Weight: 0.4 grams Approx.

**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	SD1020	SD1030	SD1040	SD1050	SD1060	SD1080	SD10100	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>	10							Amps	
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	150							Amps	
Maximum Instantaneous Forward Voltage at 5.0A DC for "C suffixed", and at 10A DC for "Y suffixed" & "no suffix"	V <sub>F</sub>	0.65		0.75		0.85		Volts		
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	@ 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>	700							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 (SD1020 THRU SD10100)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

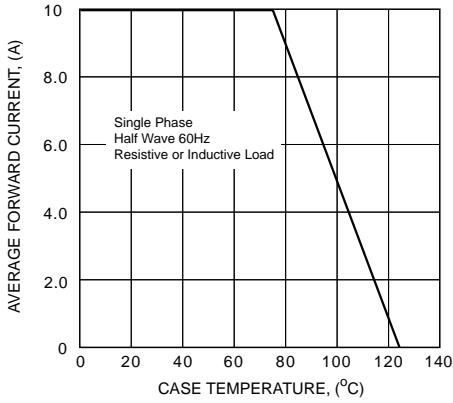


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

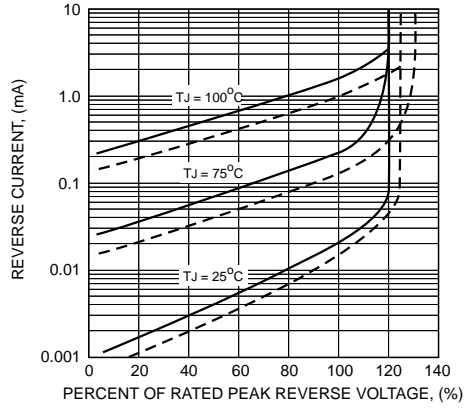


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

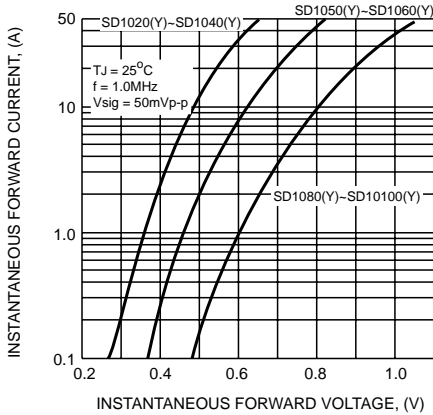


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

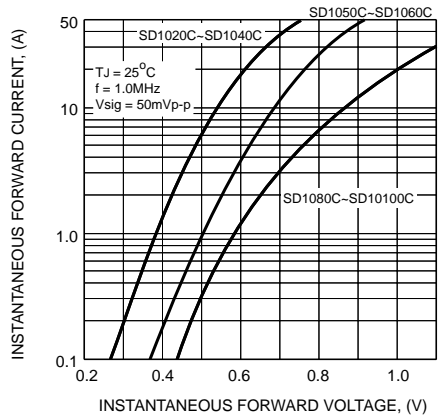


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

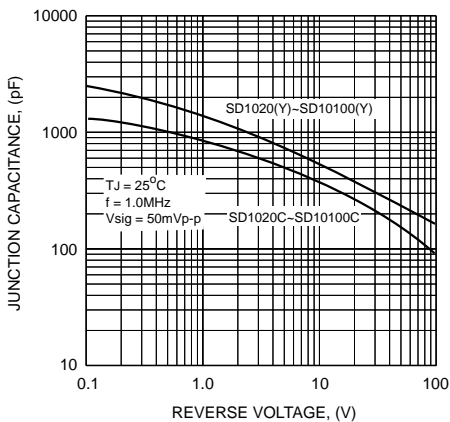


FIG. 6 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

