



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**SD1020  
THRU  
SD10200**

**TECHNICAL SPECIFICATIONS OF SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE - 20 to 200 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**

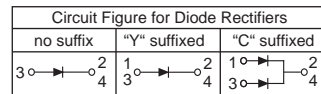
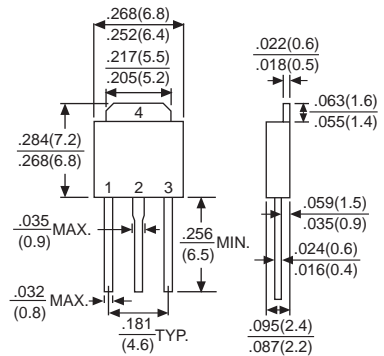
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- \* Mounting position: Any
- \* Weight: 0.4 grams Approx.

**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	SD10150	SD10200	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	150	200	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	56	70	105	140	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	80	100	150	200	Volts
Maximum Average Forward Rectified Current at T <sub>A</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>	0.70		0.80		0.85		0.95		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>	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 SD10200)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

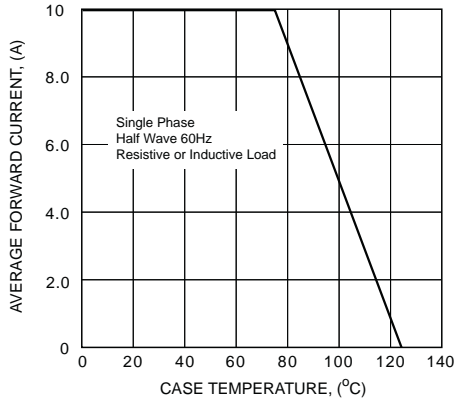


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

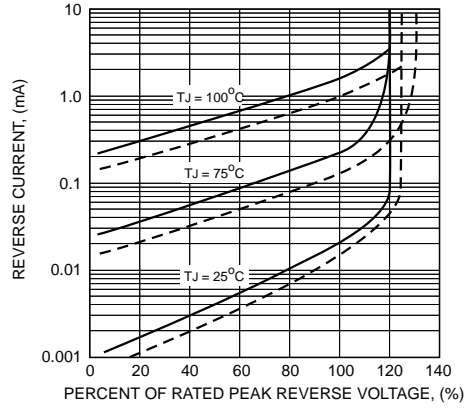


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

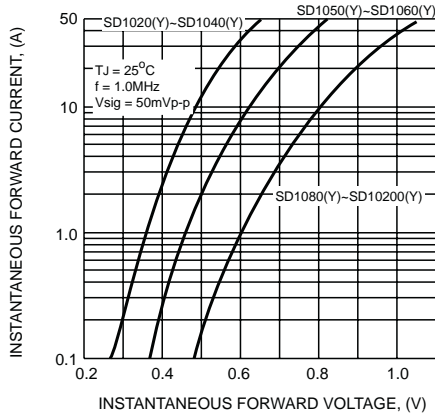


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

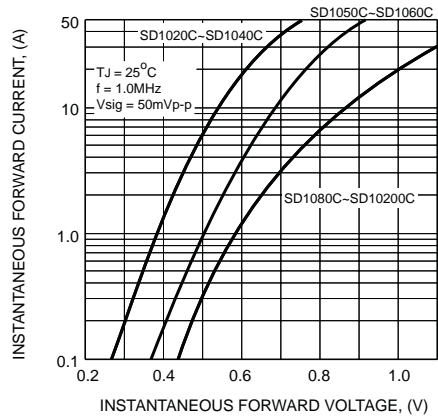


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

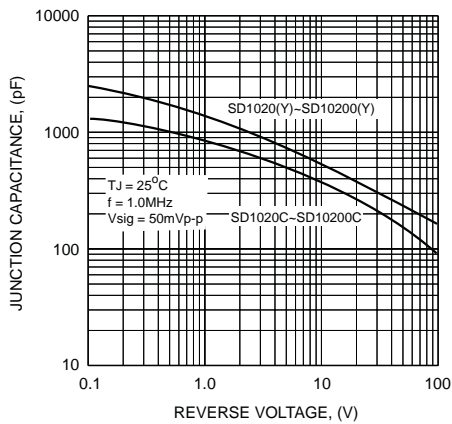
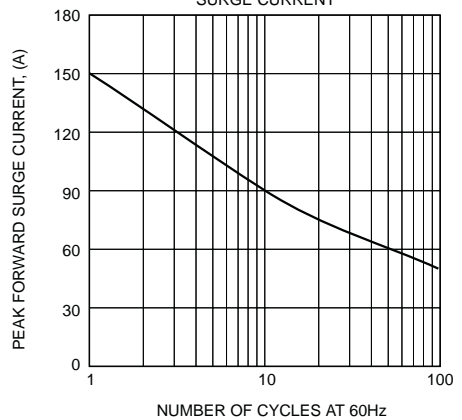


FIG. 6 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



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