

## SD820S THRU SD8100S

**TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SCHOTTKY BARRIER DIODE**  
**VOLTAGE RANGE - 20 to 100 Volts** **CURRENT - 8.0 Amperes**

### FEATURES

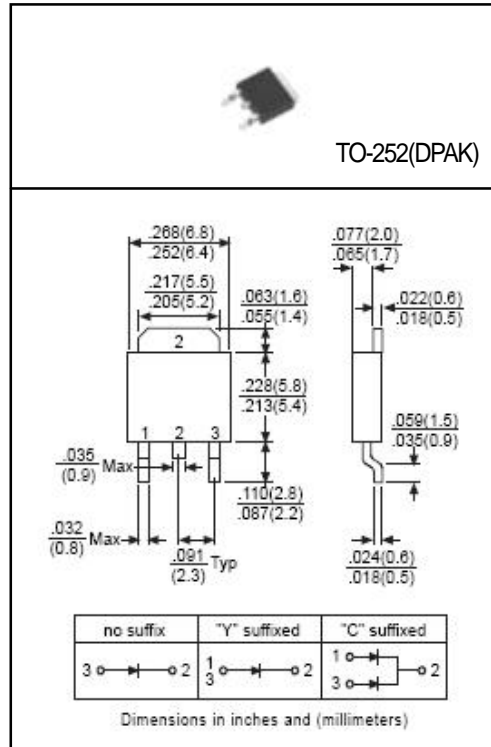
- \* Metal to silicon rectifier majority carrier conduction
- \* Low power loss, High efficiency
- \* High current capability
- \* Low forward voltage drop
- \* High surge capacity
- \* For use in low voltage high frequency inverters, free wheeling, and polarity protection applications

### 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%.



	SYMBOL	SD820S	SD830S	SD840S	SD850S	SD860S	SD880S	SD8100S	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>	8.0							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 4.0A DC for "C suffixed", and at 8.0A DC for "Y suffixed" & "no suffix"	V <sub>F</sub>	0.65		0.75		0.85		Volts	
Maximum DC Reverse Current at @T <sub>A</sub> = 25°C	I <sub>R</sub>	2.0							mAmps
Rated DC Blocking Voltage @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 (SD820S THRU SD8100S)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

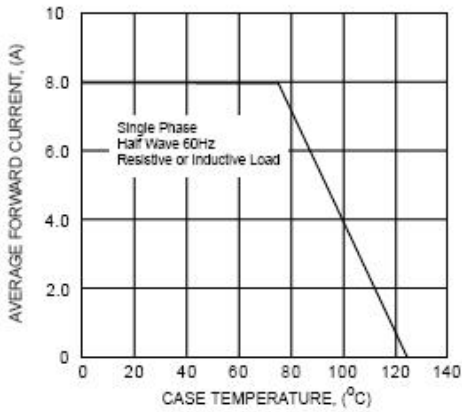


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

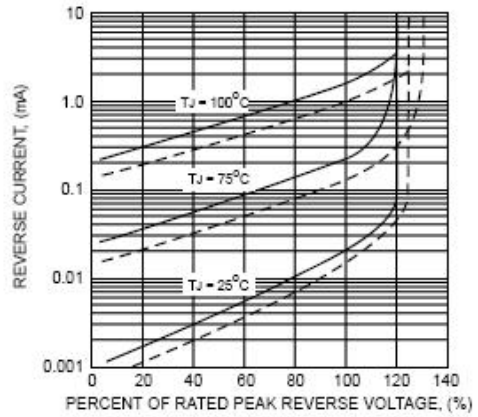


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

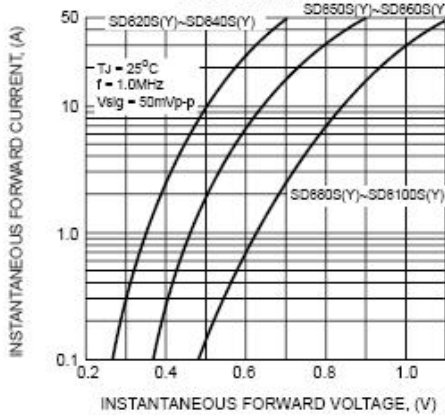


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

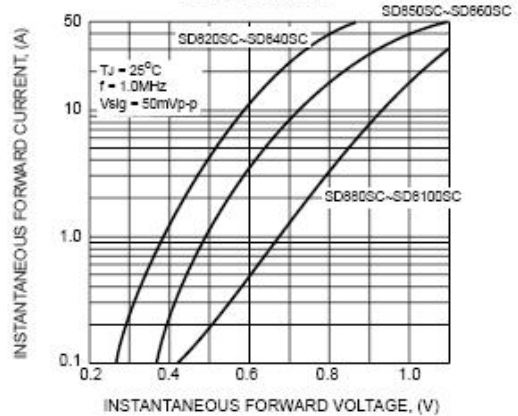


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

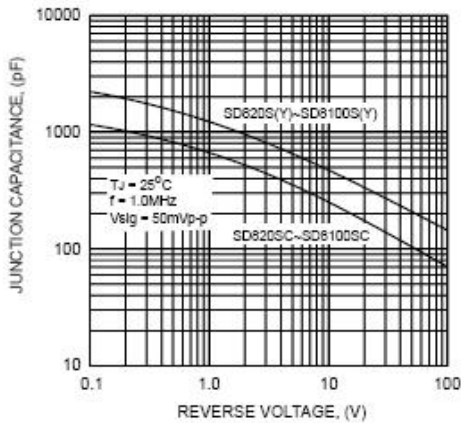


FIG. 6 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

