



# DATA SHEET

## SD1020S~SD10150S

### SCHOTTKY BARRIER RECTIFIERS

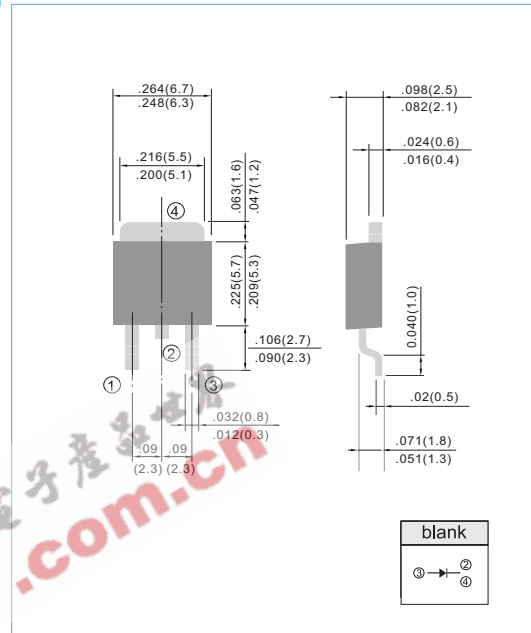
<b>VOLTAGE</b>	<b>20 to 150 Volts</b>	<b>CURRENT</b>	<b>10.0 Amperes</b>	<b>TO-252 / DPAK</b>	<b>Unit : inch (mm)</b>
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#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Low power loss, High efficiency
- High surge capacity
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- Pb free product are available : 99% Sn above can meet Rohs environment substance directive request

#### MECHANICAL DATA

Case: TO-252 molded plastic  
 Terminals: Solder plated, solderable per MIL-STD-202G, Method 208  
 Polarity: As marking  
 Standard packaging: 16mm tape (EIA-481)  
 Weight: 0.015 ounces, 0.4grams.



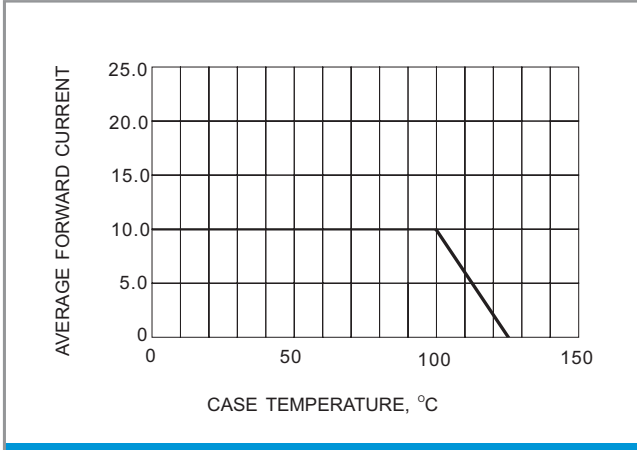
#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%

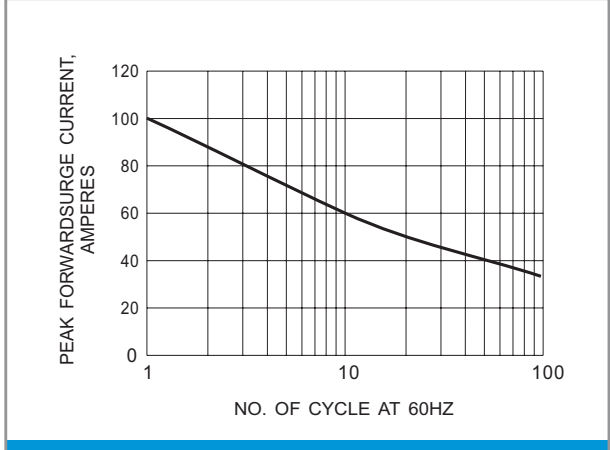
PARAMETER	SYMBOL	SD1020S	SD1030S	SD1040S	SD1050S	SD1060S	SD1080S	SD10100S	SD10150S	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	150	V
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	56	70	105	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	80	100	150	V
Maximum Average Forward Rectified Current .375" (9.5mm) lead length at T <sub>c</sub> = 100°C	I <sub>AV</sub>	10.0								A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	100								A
Maximum Instantaneous Forward Voltage at 10.0A	V <sub>F</sub>	0.55		0.75		0.85		0.92		V
Maximum DC Reverse Current T <sub>A</sub> = 25°C at Rated DC Blocking Voltage T <sub>A</sub> = 100°C	I <sub>R</sub>	0.2 20								mA
Maximum Thermal Resistance	R <sub>θJC</sub> R <sub>θJA</sub>	3.0 80								°C / W
Operating Junction Temperature Range	T <sub>J</sub>	-50 to +125								°C
Storage Temperature Range	T <sub>STG</sub>	-50 to +150								°C



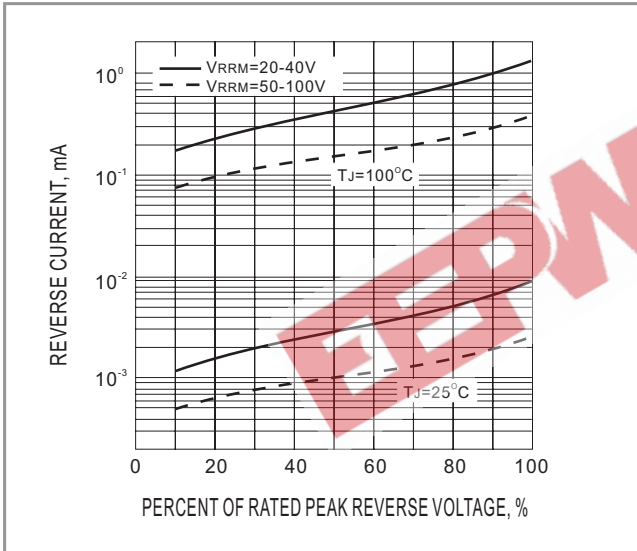
**RATING AND CHARACTERISTIC CURVES**



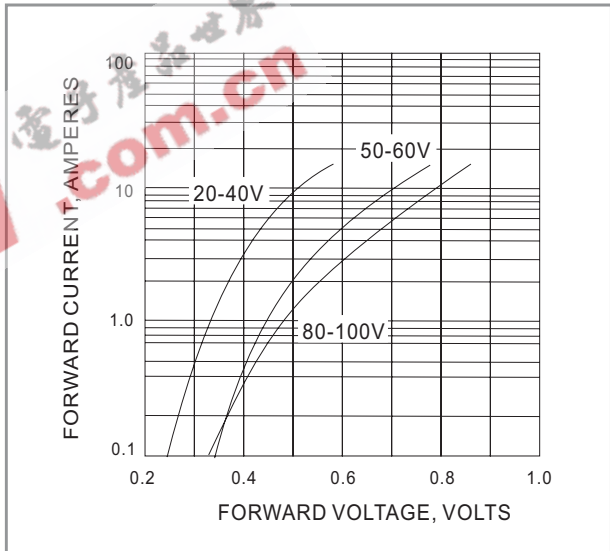
**Fig.1- FORWARD CURRENT DERATING CURVE**



**Fig.2-MAXIMUMNON-REPETITIVEPEAK FORWARD SURGE CURRENT**



**Fig.3- TYPICAL REVERSE CHARACTERISTICS**



**Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC**