



# DATA SHEET

## SD620CS~SD6100CS

### SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

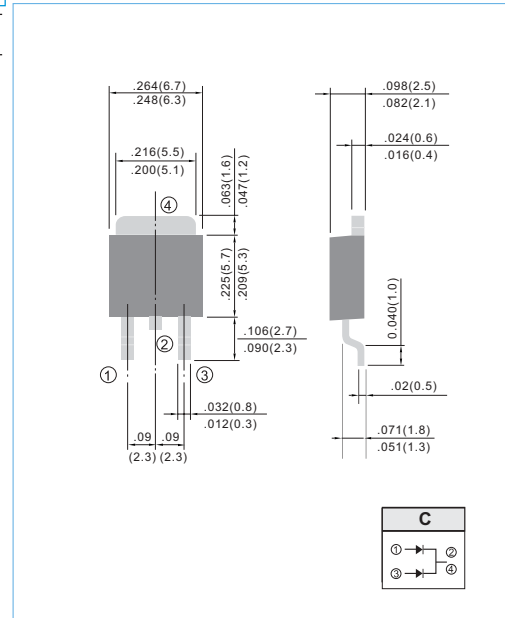
**VOLTAGE** 20 to 100 Volts    **CURRENT** 6.0 Amperes    **TO-252 / DPAK**    Unit : inch (mm)

#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- 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
- High temperature soldering guaranteed: 260 °C/10 seconds at terminals
- Both normal and Pb free product are available :
  - Normal : 80~95% Sn, 5~20% Pb
  - Pb free: 98.5% Sn above

#### MECHANICAL DATA

Case: D PAK/TO-252 molded plastic  
 Terminals: Solder plated, solderable per MIL-STD-750, Method 2026  
 Polarity: As marking  
 Standard packaging: 16mm tape (EIA-481)  
 Weight: 0.015 ounces, 0.4grams.



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

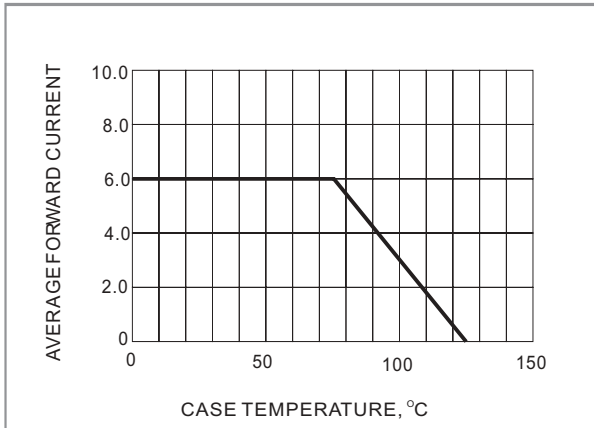
Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%

PARAMETER	SYMBOL	SD620CS	SD630CS	SD640CS	SD650CS	SD660CS	SD680CS	SD6100CS	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	V
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	56	70	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	80	100	V
Maximum Average Forward Current .375"(9.5mm) lead length at T <sub>c</sub> =75°C	I <sub>AV</sub>	6.0							A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I <sub>FSM</sub>	75							A
Maximum Forward Voltage at 3.0A per leg	V <sub>F</sub>	0.55			0.70		0.85		V
Maximum DC Reverse Current T <sub>J</sub> =25°C at Rated DC Blocking Voltage T <sub>J</sub> =100°C	I <sub>R</sub>				0.2				mA
Typical Thermal Resistance	R <sub>θJC</sub>				5				°C / W
Operating Junction Temperature Rang	T <sub>J</sub>				-50 to +125				°C
Storage Temperature Rang	T <sub>J</sub> , T <sub>STG</sub>				-50 to +150				°C

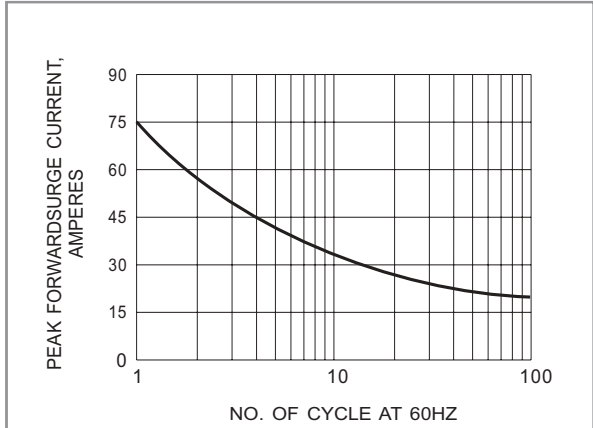
Note: Both Bonding and Chip structure are available.



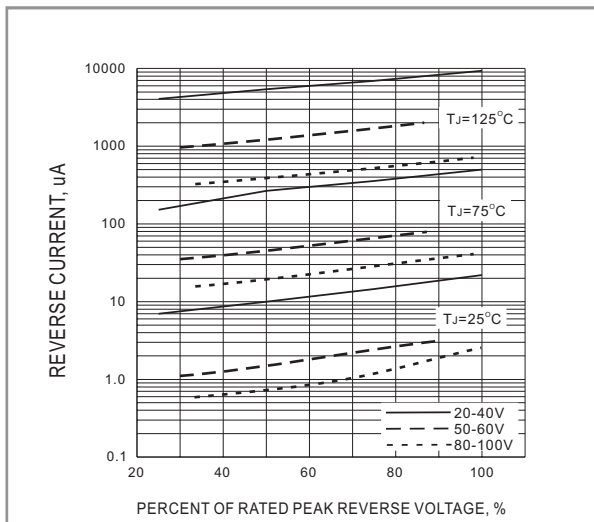
**RATING AND CHARACTERISTIC CURVES**



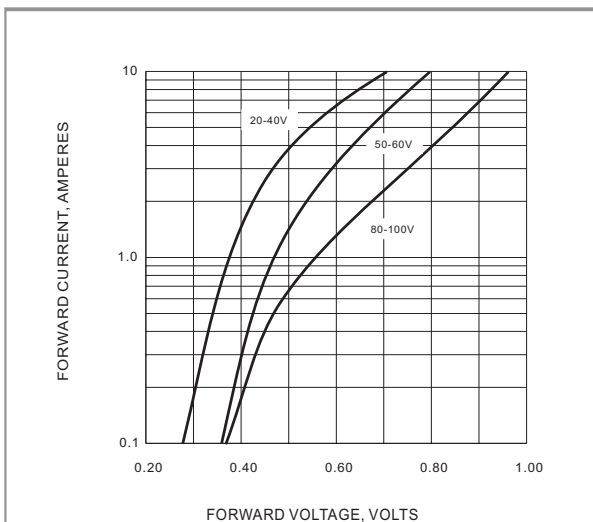
**Fig. 1- FORWARD CURRENT DERATING CURVE**



**Fig. 2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**Fig. 3- TYPICAL REVERSE CHARACTERISTIC**



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