



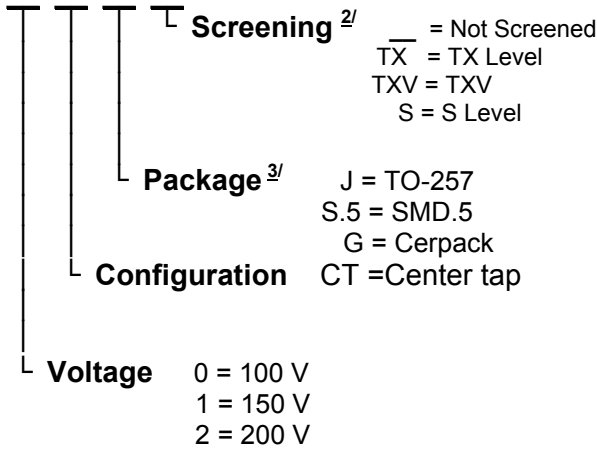
**Solid State Devices, Inc.**

14830 Valley View Blvd \* La Mirada, Ca 90638  
 Phone: (562) 404-7855 \* Fax: (562) 404-1773  
 ssdi@ssdi-power.com \* www.ssdi-power.com

**DESIGNER'S DATA SHEET**

**Part Number / Ordering Information <sup>1/</sup>**

**SDR52**



**SDR520CT Series**

**12A 28nsec  
100 to 200 V**

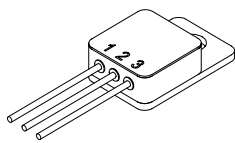
**Hyper Fast Center tap Rectifier**

**Features:**

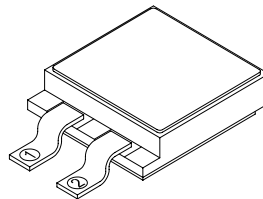
- Hyper Fast Recovery: 28nsec Maximum
- High Surge Rating
- Low Reverse Leakage Current
- Low Junction Capacitance
- Hermetically Sealed Package
- Eutectic Die Attach
- TX, TXV, and S Level Screening Available
- Higher Voltages Available

Maximum Ratings		Symbol	Value	Units
Peak Repetitive Reverse Voltage	SDR520CT	V <sub>RRM</sub>	100	Volts
	SDR521CT		150	
	SDR522CT		200	
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, T <sub>C</sub> = 100 °C, TO-257 = 90 °C)	Total	I <sub>O</sub>	12	Amps
	Per Leg		6	
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, T <sub>A</sub> = 25 °C)	Per Leg	I <sub>FSM</sub>	90	Amps
Operating & Storage Temperature		T <sub>OP</sub> & T <sub>STG</sub>	-65 to +200	°C
Maximum Total Thermal Resistance Junction to Case	TO-257	R <sub>θJC</sub>	2.4	°C/W
	SMD.5 & Cerpack		1.9	

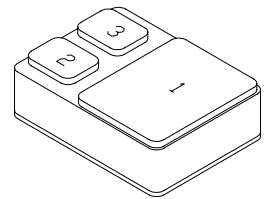
**TO-257 (J)**



**CERPACK (G)**



**SMD.5 (S.5)**



**NOTE:** All specifications are subject to change without notification.  
 SSD's for these devices should be reviewed by SSDI prior to release.

**DATA SHEET #: RC0088B**

**DOC**



**Solid State Devices, Inc.**

14830 Valley View Blvd \* La Mirada, Ca 90638  
 Phone: (562) 404-7855 \* Fax: (562) 404-1773  
 ssdi@ssdi-power.com \* www.ssdi-power.com

**SDR520CT  
Series**

Electrical Characteristic <sup>4/</sup>	Symbol	Min	Max	Units
<b>Instantaneous Forward Voltage Drop</b> (T <sub>A</sub> = 25°C, 300 – 500 µsec Pulse)	I <sub>F</sub> = 6A <b>V<sub>F1</sub></b>	—	1.02	V <sub>DC</sub>
<b>Instantaneous Forward Voltage Drop</b> (I <sub>F</sub> = 6A, 300 – 500 µsec Pulse)	T <sub>A</sub> = -55 °C <b>V<sub>F2</sub></b>	—	1.10	V <sub>DC</sub>
<b>Reverse Leakage Current</b> (100% of rated V <sub>R</sub> , 300 µs pulse min.)	T <sub>A</sub> = 25 °C <b>I<sub>R1</sub></b>	—	2	µA
	T <sub>A</sub> = 100 °C <b>I<sub>R2</sub></b>	—	20	µA
<b>Reverse Recovery Time</b> (I <sub>F</sub> = 0.5A, I <sub>R</sub> = 1A, I <sub>RR</sub> = 0.25A, T <sub>A</sub> = 25°C)	<b>t<sub>RR</sub></b>	—	28	nsec
<b>Junction Capacitance</b> (V <sub>R</sub> = 10V <sub>DC</sub> , T <sub>A</sub> = 25°C, f = 1MHz)	<b>C<sub>J</sub></b>	—	80	pF

**NOTES:**

1/ For Ordering Information, Price, and Availability Contact Factory.  
 2/ Screening per MIL-PRF-19500.  
 3/ For Package Outlines Contact Factory.  
 4/ All Electrical Characteristics Per Leg @25 °C, Unless Otherwise Specified.

<b>Available Part Numbers:</b> <b>SDR520CTS.5; SDR520CTG; SDR520CTJ;</b> <b>SDR521CTS.5; SDR521CTG; SDR521CTJ;</b> <b>SDR522CTS.5; SDR522CTG; SDR522CTJ</b>	PIN ASSIGNMENT			
	PACKAGE	Pin 1	Pin 2	Pin 3
	<b>SMD.5 (S.5)</b>	Cathode (Base)	Anode 1	Anode 2
	<b>CERPACK (G)</b>	Anode 1	Anode 2	Cathode (Base)
	<b>TO-257 (J)</b>	Anode 1	Cathode	Anode 2