



**Solid State Devices, Inc.**

14830 Valley View Blvd \* La Mirada, Ca 90638

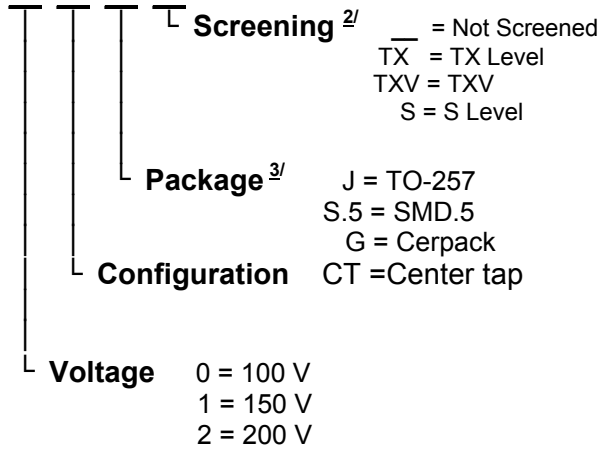
Phone: (562) 404-7855 \* Fax: (562) 404-1773

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**

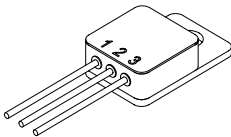
**Hyper Fast Center tap Rectifier**

**Features:**

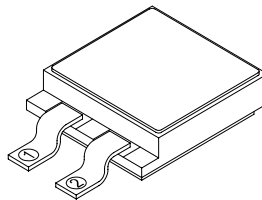
- Hyper Fast Recovery: 28nsec Maximum
- High Surge Rating
- Low Reverse Leakage Current
- Low Junction Capacitance
- Hermetically Sealed Package
- Eutectic Die Attach
- TX, TXV, and S Level Screening Available
- Higher Voltages Available

Maximum Ratings		Symbol	Value	Units
<b>Peak Repetitive Reverse Voltage</b>	SDR520CT	$V_{RRM}$	100	Volts
	SDR521CT		150	
	SDR522CT		200	
<b>Average Rectified Forward Current</b> (Resistive Load, 60 Hz Sine Wave, $T_C = 100\text{ }^\circ\text{C}$ , TO-257 = $90\text{ }^\circ\text{C}$ )	Total	$I_o$	12	Amps
	Per Leg		6	
<b>Peak Surge Current</b> (8.3 ms Pulse, Half Sine Wave, $T_A = 25\text{ }^\circ\text{C}$ )	Per Leg	$I_{FSM}$	90	Amps
<b>Operating &amp; Storage Temperature</b>		$T_{OP}$ & $T_{STG}$	-65 to +200	$^\circ\text{C}$
<b>Maximum Total Thermal Resistance</b> Junction to Case	TO-257	$R_{\theta JC}$	2.4	$^\circ\text{C/W}$
	SMD.5 & Cerpack		1.9	

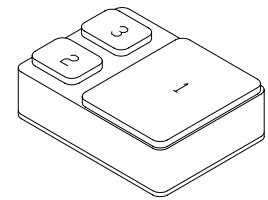
**TO-257 (J)**



**CERPACK (G)**



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



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

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**DOC**

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<b>SDR520CT Series</b>
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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	V <sub>F1</sub>	—	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	V <sub>F2</sub>	—	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	—	2	μA
	T <sub>A</sub> = 100 °C	—	20	
<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)	t <sub>RR</sub>	—	28	nsec
<b>Junction Capacitance</b> (V <sub>R</sub> = 10V <sub>DC</sub> , T <sub>A</sub> = 25°C, f = 1MHz)	C <sub>J</sub>	—	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.

**Available Part Numbers:**

**SDR520CTS.5; SDR520CTG; SDR520CTJ;**  
**SDR521CTS.5; SDR521CTG; SDR521CTJ;**  
**SDR522CTS.5; SDR522CTG; SDR522CTJ**

**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

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