



# SOLID STATE DEVICES, INC.

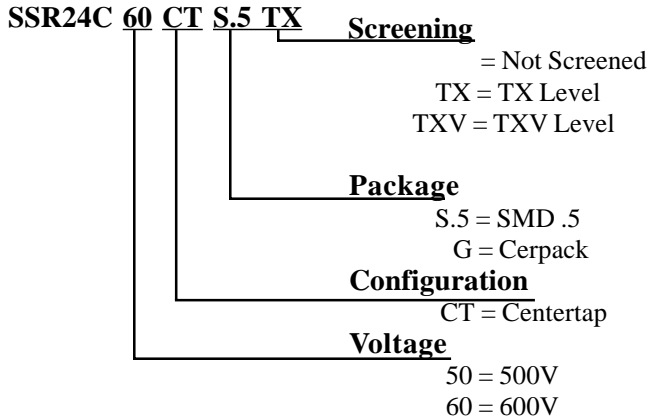
14830 Valley View Blvd \* La Mirada, Ca 90638  
 Phone: (562) 404-7855 \* Fax: (562) 404-1773  
 ssdi@ssdi-power.com \* www.ssdi-power.com

## SSR24C60CT SERIES

### 24 AMP 600 VOLTS SCHOTTKY SILICON CARBIDE CENTER TAP RECTIFIER

#### DESIGNER'S DATA SHEET

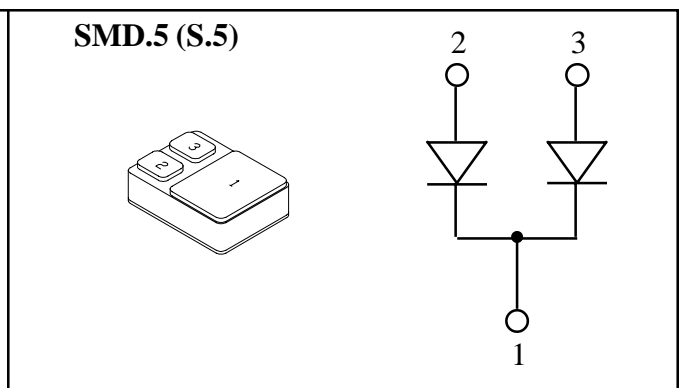
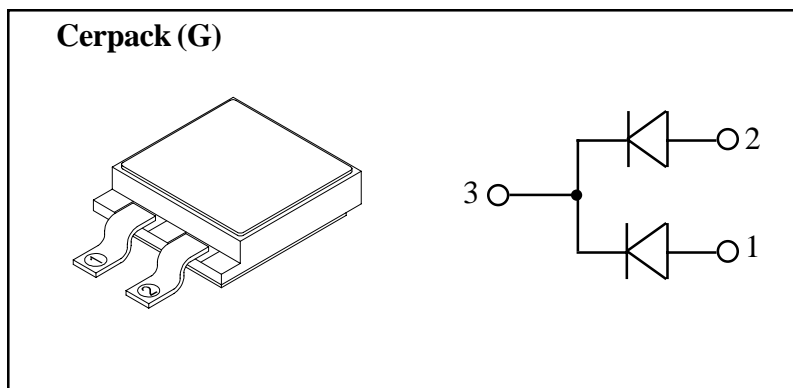
##### Part Number /Ordering Information <sup>1/</sup>



##### FEATURES:

- World's Smallest Hermetic SIC Centertap Rectifier
- High Voltage, 600V
- Very High Operating Temperature, 250°C
- No Recovery Time (tfr or trr)
- High Current Operation, 24A
- Hermetically Sealed Packaging
- TX, TXV, S Level Screening Available

Maximum Ratings <sup>3/</sup>		SYMBOL	VALUE	UNITS
Peak Repetitive Reverse and Peak Surge Reverse Voltage	SSR24C50	$V_{RRM}$	500	Volts
	SSR24C60	$V_{RSM}$	600	
Average Rectified Forward Current (Resistive load, 60Hz, Sine Wave)	Per Leg Total	$I_o$	12	Amps
			24	
Non Repetitive Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on $I_o$ )	Per Leg	$I_{FSM}$	40	Amps
Power Dissipation ( $T_c = 25^\circ C$ )		$P_d$	120	Watts
Operating and Storage Temperature <sup>4/</sup>		$T_{OP} \& T_{stg}$	-55 TO +250°	°C
Maximum Thermal Resistance	Junction to Ambient Junction to Case	$R_{\theta JC}$	1.9	°C/W



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

**DATA SHEET #:** RS0020C

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Electrical Characteristics (Per Leg)	SYMBOL	MIN	TYP	MAX	UNITS
<b>Instantaneous Forward Voltage Drop</b> ( $T_J = 25^\circ\text{C}$ , 300 $\mu\text{sec}$ Pulse) $I_F = 6\text{A}$ $I_F = 12\text{A}$	$V_{F1}$	--	<b>1.30</b> <b>1.70</b>	<b>1.38</b> <b>1.90</b>	Volts
<b>Instantaneous Forward Voltage Drop</b> ( $T_J = 150^\circ\text{C}$ , 300 $\mu\text{sec}$ pulse) $I_F = 6\text{A}$ $I_F = 12\text{A}$	$V_{F2}$	--	<b>1.30</b> <b>1.70</b>	<b>1.35</b> <b>1.85</b>	Volts
<b>Instantaneous Forward Voltage Drop</b> ( $T_J = -55^\circ\text{C}$ , 300 $\mu\text{sec}$ pulse) $I_F = 6\text{A}$ $I_F = 12\text{A}$	$V_{F3}$	--	<b>1.30</b> <b>1.60</b>	<b>1.40</b> <b>1.68</b>	Volts
<b>Reverse Leakage Current</b> ( $V_R = \text{Rated } V_R$ , $T_J = 25^\circ\text{C}$ , 300 $\mu\text{s}$ pulse)	$I_{R1}$	--	<b>100</b>	<b>200</b>	$\mu\text{A}$
<b>Reverse Leakage Current</b> ( $V_R = \text{Rated } V_R$ , $T_J = 150^\circ\text{C}$ , 300 $\mu\text{s}$ pulse)	$I_{R2}$	--	<b>400</b>	<b>1000</b>	$\mu\text{A}$
<b>Junction Capacitance</b> ( $V_R = 10\text{V}_{\text{dc}}$ , $T_c = 25^\circ\text{C}$ , $f = 1\text{Mhz}$ )	$C_J$	--	<b>200</b>	-	pF
<b>Total Capacitive Charge</b> ( $V_R = 400\text{V}_{\text{dc}}$ , $I_F = 5\text{A}$ , $di/dt = 200\text{A}/\mu\text{s}$ , $T_J = 150^\circ\text{C}$ )	$Q_C$	--	<b>26</b>	-	nC

**NOTES:**

- 1/ For Ordering Information, Price, and Availability Contact Factory.
- 2/ For Package Outlines Contact Factory.
- 3/ All Electrical Characteristics @  $25^\circ\text{C}$ , Unless Otherwise Specified.
- 4/ If High Temp Operation is Desired ( $>175^\circ\text{C}$ ) Consult Factory For Soldering Consideration.

**Available Part Numbers:**

**SSR24C60CTS.5 SSR24C50CTS.5**  
**SSR24C60CTG SSR24C50CTG**

PIN ASSIGNMENT			
PACKAGE	Pin 1	Pin 2	Pin 3
Cerpack (G)	Anode	Anode	Cathode
SMD.5 (S.5)	Cathode	Anode	Anode