



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

SSR24C60CT Series

**24 Amp
 Schottky Silicon Carbide
 Centertap Rectifier
 600 Volts**

DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}
SSR24C 60 CT S.5 TX

Screening ^{2/}
 — = Not Screened
 TV = TX Level
 TXV = TXV Level
 S = S Level

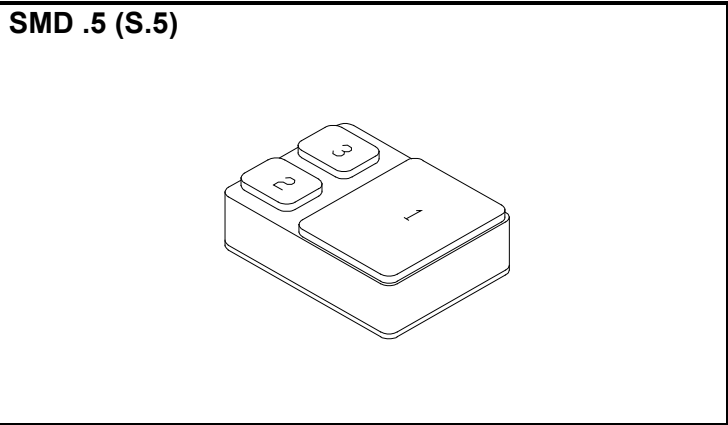
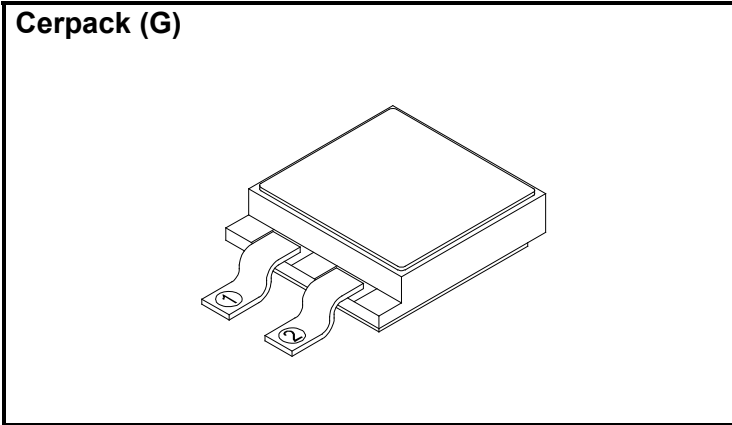
Package S.5 = SMD.5
 G = Cerpack

Configuration CT = Centertap

Voltage 50 = 500 V
 60 = 600 V

- 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, and S Level screening available

Maximum Ratings ^{3/}		Symbol	Value	Units
Peak Repetitive and Peak Surge Reverse Voltage	SSR24C50	V_{RRM}	500	Volts
	SSR24C60	V_{RSM}	600	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave)	Per Leg Total	I_o	12	Amps
			24	
Non Repetitive Peak Surge Current (8.3 ms Pulse, Non-repetitive Half Sine Wave, per leg)		I_{FSM}	50	Amps
Power Dissipation ($T_c = 25^\circ C$)		P_D	120	Watts
Operating & Storage Temperature ^{4/}		Top & Tstg	-55 to +250	°C
Maximum Thermal Resistance	Junction to Ambient	$R_{\theta JC}$	1.9	°C/W
	Junction to Case			



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

DATA SHEET #: RS0020E

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Electrical Characteristic (Per Leg)		Symbol	Min	Typ	Max	Units
Instantaneous Forward Voltage Drop ($T_J = 25^\circ\text{C}$, 300 μsec pulse)	$I_F = 6\text{A}$	V_{F1}	—	1.30	1.38	Volts
	$I_F = 12\text{A}$			1.70	1.90	
Instantaneous Forward Voltage Drop ($T_J = 150^\circ\text{C}$, 300 μsec pulse)	$I_F = 6\text{A}$	V_{F2}	—	1.30	1.35	Volts
	$I_F = 12\text{A}$			1.70	1.85	
Instantaneous Forward Voltage Drop ($T_J = -55^\circ\text{C}$, 300 μsec pulse)	$I_F = 6\text{A}$	V_{F3}	—	1.30	1.40	Volts
	$I_F = 12\text{A}$			1.60	1.68	
Reverse Leakage Current ($V_R = \text{Rated } V_R$, $T_J = 25^\circ\text{C}$, 300 μsec pulse)		I_{R1}	—	100	200	μA
Reverse Leakage Current ($V_R = \text{Rated } V_R$, $T_J = 150^\circ\text{C}$, 300 μsec pulse)		I_{R2}	—	400	1000	μA
Junction Capacitance ($V_R = 10 \text{Vdc}$, $T_C = 25^\circ\text{C}$, $f=1\text{MHz}$)		C_j	—	200	—	pF
Total Capacitive Charge ($V_R = 400 \text{Vdc}$, $I_F = 5\text{A}$, $di/dt = 200\text{A}/\mu\text{s}$, $T_J = 150^\circ\text{C}$)		Q_c	—	26	—	nC

NOTES:

- 1/ For ordering information, price, operating curves, and availability – contact factory.
- 2/ Screening based on MIL-PRF-19500. Screening flows available on request.
- 3/ All Electrical Characteristics @25°C Unless Otherwise Specified.
- 4/ If high temp operation is desired (>175°C) consult factory for soldering consideration.

Available Part Numbers:

SSR24C60CTS.5 SSR24C50CTS.5
SSR24C60CTG SSR24C50CTG

PIN ASSIGNMENT

Package	Pin 1	Pin 2	Pin 3
SMD .5 (S.5)	Cathode	Anode	Anode
Cerpack (G)	Anode	Anode	Cathode

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