



Solid State Devices, Inc.

14830 Valley View Blvd * La Mirada, Ca 90638

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

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World's First Silicon Carbide Centertap Rectifier SSR20C30CT Series

20A / 300V Schottky Silicon Carbide Centertap Rectifier

- Features:**
- World's 1st Hermetic 20A SiC Centertap Rectifier
 - High Voltage 300V
 - Very High Operating Temperature, 250°C
 - No Recovery Time (tfr or trr)
 - High Current Operation, 20A
 - Hermetic Packaging
 - TX, TXV, S Level Screening Available

DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SSR20C 30 CT S.5 TX

Screening = Not Screened
 TV = TX Level
 TXV = TXV Level
 S = S Level

Package ^{2/} S.5 = SMD.5
 G = Cerpack
 J = TO-257

Configuration CT = Centertap

Voltage 20 = 200 V
 30 = 300 V

Maximum Ratings		Symbol	Value	Units
Peak Repetitive and Peak Surge Reverse Voltage	SSR20C20CT	V_{RRM}	200	Volts
	SSR20C30CT	V_{RSM}	300	
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave)	Per Leg Total	I_o	10	Amps
			20	
Non Repetitive Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on I_o , per leg)		I_{FSM}	18	Amps
Power Dissipation		P_D	30	Watts
Operating & Storage Temperature		T_{OP} & T_{stg}	-55 to +250	°C
Maximum Thermal Resistance Junction to Case		$R_{\theta JC}$	2.2	°C/W

<p>Cerpack (G)</p>	<p>SMD .5 (S.5)</p>	<p>TO-257 (J)</p>
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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)	$I_F = 5\text{A}$	V_{F1}	---	1.20	1.32	Volts
	$I_F = 10\text{A}$	V_{F2}	---	1.50	1.65	
Instantaneous Forward Voltage Drop ($T_J = 150^\circ\text{C}$, 300 μsec pulse)	$I_F = 5\text{A}$	V_{F3}	---	1.18	1.28	Volts
	$I_F = 10\text{A}$	V_{F4}	---	1.65	1.85	
Instantaneous Forward Voltage Drop ($T_J = -55^\circ\text{C}$, 300 μsec pulse)	$I_F = 5\text{A}$	V_{F5}	---	1.35	1.45	Volts
	$I_F = 10\text{A}$	V_{F6}	---	1.60	1.75	
Reverse Leakage Current ($V_R = \text{Rated } V_R$, $T_J = 25^\circ\text{C}$, 300 μsec min pulse)		I_{R1}	---	25	100	μA
Reverse Leakage Current ($V_R = \text{Rated } V_R$, $T_J = 150^\circ\text{C}$, 300 μsec min pulse)		I_{R2}	---	100	250	μA
Junction Capacitance ($V_R = 10\text{ Vdc}$, $T_C = 25^\circ\text{C}$, $f = 1\text{MHz}$)		C_J	---	350	500	pF
Total Capacitive Charge ($V_R = 400\text{V}$, $I_F = 5\text{A}$, $di/dt = 200\text{A}/\mu\text{s}$, $T_J = 150^\circ\text{C}$)		Q_C	---	13	---	nC

NOTES:

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

Available Part Numbers:

SSR20C20CTS.5 SSR20C20CTG SSR20C20CTJ
SSR20C30CTS.5 SSR20C30CTG SSR20C30CTJ

PIN ASSIGNMENT

Package	Pin 1	Pin 2	Pin 3 (Tab)
SMD .5 (S.5)	Cathode	Anode	Anode
Cerpack (G)	Anode	Anode	Cathode
TO-257 (J)	Anode	Cathode	Anode