



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

World's First Silicon Carbide Centertap Rectifier SSR40C30CT Series

40A / 300V Schottky Silicon Carbide Centertap Rectifier

DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SSR40C 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
 M = TO-254
- Configuration CT = Centertap
- Voltage 20 = 200 V
 30 = 300 V

- Features:**
- World's 1st Hermetic 40A SiC Centertap Rectifier
 - High Voltage 300V
 - Very High Operating Temperature, 250°C
 - No Recovery Time (tfr or trr)
 - High Current Operation, 40A
 - Hermetic Packaging
 - TX, TXV, S Level screening available
 - Higher Voltage upon Request

Maximum Ratings		Symbol	Value	Units
Peak Repetitive and Peak Surge Reverse Voltage	SSR40C20	V_{RRM}	200	Volts
	SSR40C30	V_{RSM}	300	
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave)	Per Leg Total	I_o	20	Amps
			40	
Non Repetitive Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on I_o , per leg)		I_{FSM}	36	Amps
Power Dissipation	S.5 & G Package	P_D	60	Watts
	M Package		45	
Operating & Storage Temperature		Top & Tstg	-55 to +250	°C
Maximum Thermal Resistance Junction to Case	S.5 & G Package	$R_{\theta JC}$	1.3	°C/W
	M Package		1.6	

<p>TO-254 (M)</p>	<p>Cerpack (G)</p>	<p>SMD .5 (S.5)</p>
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Electrical Characteristic (Per Leg)		Symbol	Min	Typ	Max	Units
Instantaneous Forward Voltage Drop (T _j = 25°C, 300 – 500 μsec pulse)	I _f = 10A	Vf1	---	1.25	1.35	Volts
	I _f = 20A	Vf2	---	1.57	1.70	
Instantaneous Forward Voltage Drop (T _j = 150°C, 300 – 500 μsec pulse)	I _f = 10A	Vf3	---	1.22	1.30	Volts
	I _f = 20A	Vf4	---	1.55	1.80	
Instantaneous Forward Voltage Drop (T _j = -55°C, 300 – 500 μsec pulse)	I _f = 10A	Vf5	---	1.35	1.45	Volts
	I _f = 20A	Vf6	---	1.60	1.75	
Reverse Leakage Current (V _r = Rated V _r , T _j = 25°C, 300 μsec min pulse)		Ir1	---	50	200	μA
Reverse Leakage Current (V _r = Rated V _r , T _j = 150°C, 300 μsec min pulse)		Ir2	---	200	500	μA
Junction Capacitance (V _r =10 Vdc, T _c =25°C, f=1MHz)		Cj	---	700	1000	pF
Total Capacitive Charge (V _R = 400V, I _F = 5A, di/dt = 200A/μs, T _J = 150°C)		Qc	---	26	---	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°C) Consult Factory for Soldering Consideration.

Available Part Numbers:

SSR40C20CTS.5 SSR40C20CTG SSR40C20CTM
 SSR40C30CTS.5 SSR40C30CTG SSR40C30CTM

PIN ASSIGNMENT

Package	Pin 1	Pin 2	Pin 3 (Tab)
SMD .5 (S.5)	Cathode	Anode	Anode
Cerpack (G)	Anode	Anode	Cathode
TO-254 (M)	Anode	Cathode	Anode