



Solid State Devices, Inc.

14830 Valley View Blvd * La Mirada, Ca 90638

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**World's First Silicon Carbide
SSR10C30 Series**

**10A / 300V
Schottky Silicon Carbide**

DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SSR10C **30** **S.5** **TX**

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

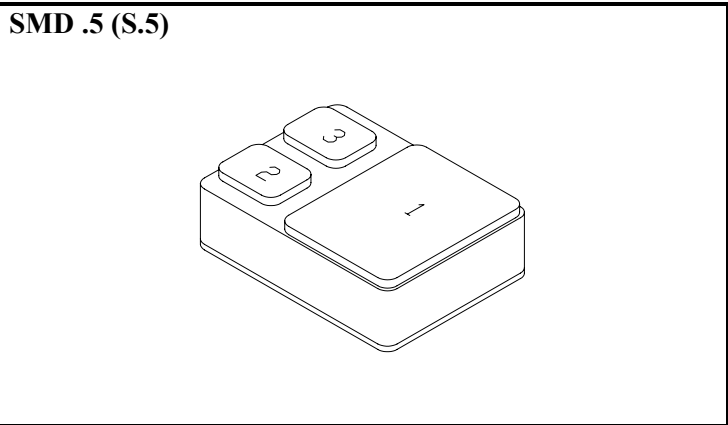
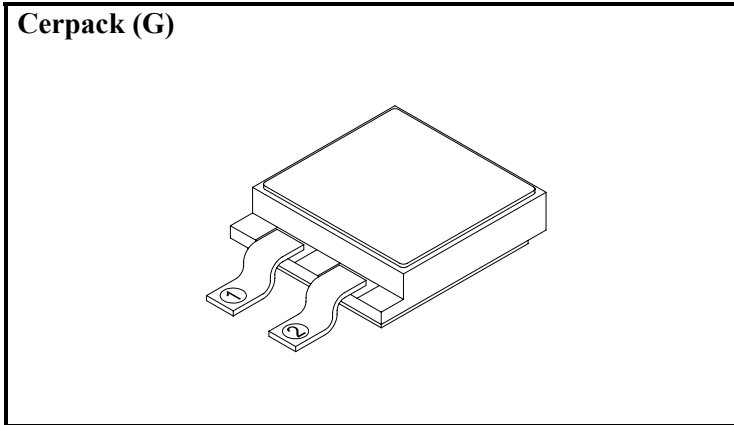
Package ^{2/} S.5 = SMD.5
 G = Cerpack

Configuration

Voltage 20 = 200 V
 30 = 300 V

- Features:**
- World's 1st Hermetic 10A SiC
 - High Voltage 300V
 - Very High Operating Temperature, 250°C
 - No Recovery Time (tfr or trr)
 - High Current Operation, 10A
 - Hermetic Packaging
 - TX, TXV, S Level screening available

Maximum Ratings		Symbol	Value	Units
Peak Repetitive and Peak Surge Reverse Voltage	SSR10C20	V_{RRM}	200	Volts
	SSR10C30	V_{RSM}	300	
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave)		I_o	10	Amps
Non Repetitive Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on I_o)		I_{FSM}	18	Amps
Power Dissipation		P_D	15	Watts
Operating & Storage Temperature		Top & Tstg	-55 to +250	°C
Maximum Thermal Resistance Junction to Case		$R_{\theta JC}$	4.4	°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 #: RS0032B

DOC



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Electrical Characteristic		Symbol	Min	Typ	Max	Units
Instantaneous Forward Voltage Drop (T _j = 25°C, 300 μsec pulse)	If = 5A	Vf1	---	1.20	1.32	Volts
	If = 10A	Vf2	---	1.50	1.65	
Instantaneous Forward Voltage Drop (T _j = 150°C, 300 μsec pulse)	If = 5A	Vf3	---	1.18	1.28	Volts
	If = 10A	Vf4	---	1.65	1.85	
Instantaneous Forward Voltage Drop (T _j = -55°C, 300 μsec pulse)	If = 5A	Vf5	---	1.35	1.45	Volts
	If = 10A	Vf6	---	1.60	1.75	
Reverse Leakage Current (V _r = Rated V _r , T _j = 25°C, 300 μsec min pulse)		Ir1	---	25	100	μA
Reverse Leakage Current (V _r = Rated V _r , T _j = 150°C, 300 μsec min pulse)		Ir2	---	100	250	μA
Junction Capacitance (V _r =10 Vdc, T _c =25°C, f=1MHz)		Cj	---	350	500	pF
Total Capacitive Charge (V _R = 400V, I _F = 5A, di/dt = 200A/μs, T _J = 150°C)		Qc	---	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°C) Consult Factory for Soldering Consideration.

Available Part Numbers:

SSR10C20S.5 SSR10C20G
SSR10C30S.5 SSR10C30G

PIN ASSIGNMENT

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