



## Solid State Devices, Inc.

14701 Firestone Blvd \* La Mirada, CA 90638

Phone: (562) 404-4474 \* Fax: (562) 404-1773

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### DESIGNER'S DATA SHEET

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

**SSR10C 30 S.5 TX**

**Screening**    \_\_\_ = Not Screened  
                    TX = TX Level  
                    TXV = TXV Level  
                    S = S Level

**Package**    S.5 = SMD.5  
                    G = Cerpack

**Configuration**

**Voltage**    20 = 200 V  
                    30 = 300 V

## SSR10C30 Series

### 10 Amp, 300 Volts Schottky Silicon Carbide

#### Features:

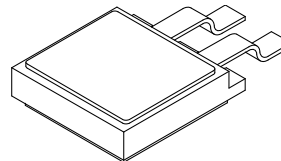
- High Voltage 300 V
- Very High Operating Temperature, 250°C
- No Recovery Time (tfr or trr)
- High Current Operation, 10 A
- Hermetic Packaging
- TX, TXV, S Level Screening Available

Maximum Ratings <sup>2/</sup>		Symbol	Value	Unit
Peak Repetitive and Peak Surge Reverse Voltage	SSR10C20	$V_{RRM}$	200	V
	SSR10C30	$V_{RSM}$	300	V
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave)		$I_o$	10	A
Non Repetitive Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on $I_o$ )		$I_{FSM}$	18	A
Power Dissipation		$P_D$	15	W
Operating & Storage Temperature <sup>3/</sup>		$T_{op}$ & $T_{stg}$	-55 to +250	°C
Maximum Thermal Resistance Junction to Case		$R_{\theta JC}$	4.4	°C/W

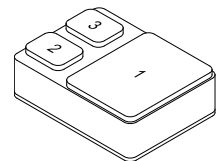
#### NOTES:

- <sup>1/</sup> For ordering information, price, and availability, contact factory.
- <sup>2/</sup> All electrical characteristics @ 25°C unless otherwise specified.
- <sup>3/</sup> If high temperature operation is desired (> 175°C), consult factory for soldering consideration.

#### Cerpack (G)



#### SMD.5 (S.5)



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

**DATA SHEET #: RS0032D**

**DOCX**



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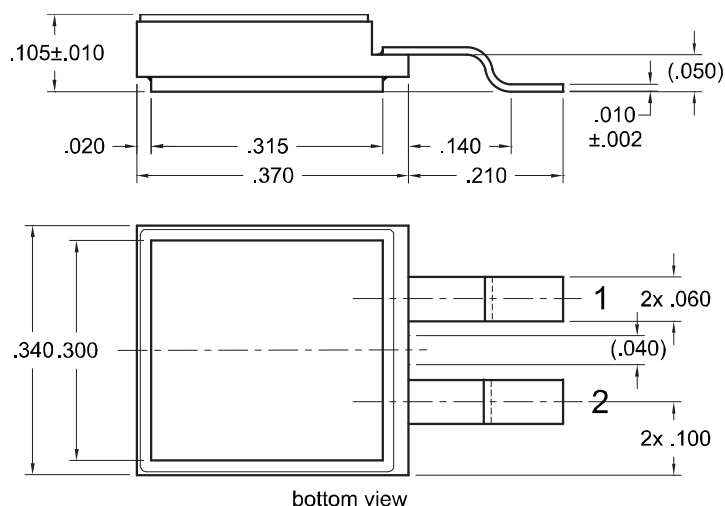
# SSR10C30 Series

Electrical Characteristic <sup>2/</sup>	Symbol	Min	Typ	Max	Unit
<b>Instantaneous Forward Voltage Drop</b> (T <sub>J</sub> = 25°C, 300 μsec pulse)	I <sub>F</sub> = 5 A <b>V<sub>F1</sub></b>	---	1.20	1.32	V
	I <sub>F</sub> = 10 A <b>V<sub>F2</sub></b>	---	1.50	1.65	V
<b>Instantaneous Forward Voltage Drop</b> (T <sub>J</sub> = 150°C, 300 μsec pulse)	I <sub>F</sub> = 5 A <b>V<sub>F3</sub></b>	---	1.18	1.28	V
	I <sub>F</sub> = 10 A <b>V<sub>F4</sub></b>	---	1.65	1.85	V
<b>Instantaneous Forward Voltage Drop</b> (T <sub>J</sub> = -55°C, 300 μsec pulse)	I <sub>F</sub> = 5 A <b>V<sub>F5</sub></b>	---	1.35	1.45	V
	I <sub>F</sub> = 10 A <b>V<sub>F6</sub></b>	---	1.60	1.75	V
<b>Reverse Leakage Current</b> (V <sub>R</sub> = Rated V <sub>R</sub> , T <sub>J</sub> = 25°C, 300 μsec min pulse)	<b>I<sub>R1</sub></b>	---	25	100	μA
<b>Reverse Leakage Current</b> (V <sub>R</sub> = Rated V <sub>R</sub> , T <sub>J</sub> = 150°C, 300 μsec min pulse)	<b>I<sub>R2</sub></b>	---	100	250	μA
<b>Junction Capacitance</b> (V <sub>R</sub> = 10 Vdc, T <sub>C</sub> = 25°C, f = 1 MHz)	<b>C<sub>J</sub></b>	---	350	500	pF
<b>Total Capacitive Charge</b> (V <sub>R</sub> = 400 V, I <sub>F</sub> = 5 A, di/dt = 200 A/μs, T <sub>J</sub> = 150°C)	<b>Q<sub>C</sub></b>	---	13	---	nC

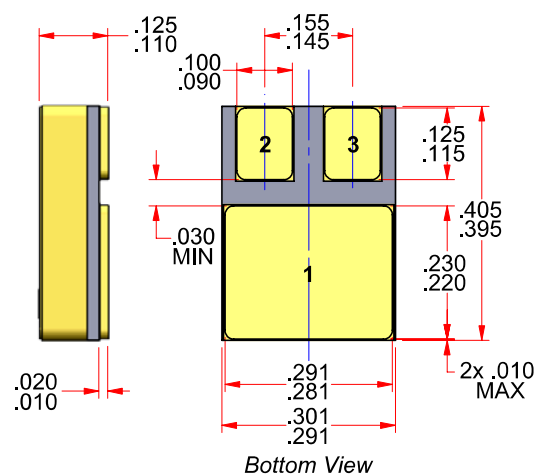
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### Case Outlines: Cerpack



### Case Outline: SMD.5



### Available Part Numbers:

**SSR10C20S.5 SSR10C20G**  
**SSR10C30S.5 SSR10C30G**

### PIN ASSIGNMENT

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

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