



**Solid State Devices, Inc.**

14701 Firestone Blvd \* La Mirada, CA 90638-5223  
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**SSR10C120 Series**

**10 A / 1200 V  
Schottky Silicon Carbide  
Rectifier**

**Designer's Data Sheet**

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

**SSR10C**

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

**Package** <sup>2/</sup>    G = Cerpack  
                   S.5 = SMD.5  
                   GL = Leaded Cerpack

**Configuration**

**Voltage**    080 = 800 V  
                   100 = 1000 V  
                   120 = 1200 V

- FEATURES:**
- 1200 Volt Silicon Carbide Schottky Rectifier
  - Average Output Current 10 Amps
  - No Reverse Recovery
  - No Forward Recovery
  - No Switching Time Change Over Temperature
  - Small Package Size
  - TX, TXV, and Space Level Screening Available. Consult Factory.

MAXIMUM RATINGS		Symbol	Value	Units
Peak Repetitive and Peak Reverse Voltage	SSR05C080 SSR05C100 SSR05C120	$V_{RRM}$ $V_R$	800 1000 1200	Volts
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave)		$I_O$	10	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ\text{C}$ )		$I_{FSM}$	50	Amps
Operating & Storage Temperature		$T_{OP}$ & $T_{stg}$	-55 to +250	$^\circ\text{C}$
Junction Temperature		$T_J$	-55 to +250	$^\circ\text{C}$
Maximum Thermal Resistance (Junction to Case)		$R_{\theta JC}$	3.0	$^\circ\text{C/W}$

CERPACK (G) <sup>2/</sup> Drawing# 60-0149-366	SMD .5 (S.5) <sup>2/</sup> Drawing# 60-0149-507	LEADED CERPACK (GL) <sup>2/</sup> Drawing# 60-0149-366-1
<p>TAB <math>\circ</math> <math>\triangle</math> <math>\circ</math> 2                   <math>\circ</math> 1</p>	<p>1 <math>\circ</math> <math>\triangle</math> <math>\circ</math> 2                   <math>\circ</math> 3</p>	<p>TAB SIZE = 0.250W x 0.360L x 0.005" Thick</p> <p>TAB <math>\circ</math> <math>\triangle</math> <math>\circ</math> 2                   <math>\circ</math> 1</p>



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**SSR10C120 Series**

ELECTRICAL CHARACTERISTICS <sup>3/</sup>		Symbol	Min	Typ	Max	Units
<b>Instantaneous Forward Voltage Drop</b> (T <sub>A</sub> =25°C, 300 - 500 μsec pulse)	I <sub>F</sub> = 2.0 A	V <sub>F1</sub>	—	1.05	1.30	V <sub>DC</sub>
	I <sub>F</sub> = 5.0 A	V <sub>F2</sub>	—	1.25	1.75	
	I <sub>F</sub> = 10.0 A	V <sub>F3</sub>	—	1.50	2.00	
<b>Instantaneous Forward Voltage Drop</b> (300 - 500 μsec pulse)	T <sub>A</sub> = -55°C, I <sub>F</sub> = 10 A T <sub>A</sub> = 150 °C, I <sub>F</sub> =10A	V <sub>F4</sub> V <sub>F5</sub>	— —	1.40 2.00	2.00 2.80	V <sub>DC</sub>
<b>Reverse Leakage Current</b> (Rated V <sub>R</sub> , T <sub>A</sub> = 25°C, 300 μsec pulse minimum)		I <sub>R1</sub>	—	10	100	μA
<b>Reverse Leakage Current</b> (Rated V <sub>R</sub> , T <sub>A</sub> = 150°C, 300 μsec pulse minimum)		I <sub>R2</sub>	—	15	500	μA
<b>Junction Capacitance</b> (V <sub>R</sub> = 10V, f = 1MHz, T <sub>A</sub> = 25°C)		C <sub>J</sub>	—	375	450	pF

**NOTES:** \* Pulse Test: Pulse Width = 300 μsec, Duty Cycle = 2%  
 1/ For Ordering Information, Price, and Availability Contact Factory.  
 2/ For Package Outlines Contact Factory.  
 3/ Unless Otherwise Specified, All Electrical Characteristics @25°C

**Available Part Numbers:**  
**SSR10C080G, SSR10C080GL, SSR10C080S.5**  
**SSR10C100G, SSR10C100GL, SSR10C100S.5**  
**SSR10C120G, SSR10C120GL, SSR10C120S.5**

PIN ASSIGNMENT			
Package	Pin 1	Pin 2	Pin 3
<b>Cerpack (G)</b>	Anode	Anode	Cathode
<b>SMD.5 (S.5)</b>	Cathode	Anode	Anode
<b>Cerpack Leaded (GL)</b>	Anode	Anode	Cathode

