



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638

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

ssdi@ssdi-power.com * www.ssdi-power.com

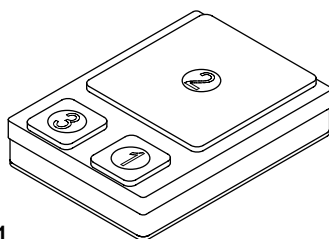
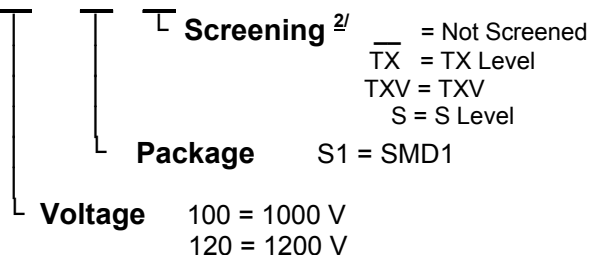
SSR30C100S1 & SSR30C120S1

30 A / 1200 V Schottky Silicon Carbide Rectifier

Designer's Data Sheet

Part Number / Ordering Information ^{1/}

SSR30C



SMD1

FEATURES:

- 1200 Volt Silicon Carbide Schottky Rectifier
- Average Output Current 30 Amps
- No Reverse Recovery
- No Forward Recovery
- No Switching Time Change Over Temperature
- Small Package Size
- TX, TXV, and Space Level Screening Available. ^{2/} Consult Factory.

MAXIMUM RATINGS ^{3/}

		Symbol	Value	Units
Peak Repetitive and Peak Reverse Voltage	SSR30C100S1 SSR30C120S1	V_{RRM} V_R	1000 1200	Volts
Average Rectified Forward Current ^{4/} (Resistive Load, 60 Hz, Sine Wave)	Total	I_O	30	Amps
Peak Surge Current ^{4/} (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ\text{C}$)	Total	I_{FSM}	120	Amps
Operating & Storage Temperature		$T_{OP} \text{ \& } T_{stg}$	-55 to +250	$^\circ\text{C}$
Junction Temperature		T_J	-55 to +250	$^\circ\text{C}$
Maximum Thermal Resistance ^{4/} (Junction to Case)	Total	$R_{\theta JC}$	0.8	$^\circ\text{C/W}$

NOTES:

^{1/} For Ordering Information, Price, and Availability Contact Factory.

^{2/} Screened to MIL-PRF-19500.

^{3/} Unless Otherwise Specified, All Electrical Characteristics @25°C

^{4/} Terminal Pads 1 & 3 Must be connected together for testing and at the Board Level.

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

DATA SHEET #: SH0043B

DOC



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SSR30C100S1 & SSR30C120S1

ELECTRICAL CHARACTERISTICS ^{3/ 4/}		Symbol	Min	Typ	Max	Units
Instantaneous Forward Voltage Drop ($T_A=25^\circ\text{C}$, Pulse)	$I_F = 10\text{ A}$	V_{F1}	—	1.25	1.45	V_{DC}
	$I_F = 20\text{ A}$	V_{F2}	—	1.65	1.75	
	$I_F = 30\text{ A}$	V_{F3}	—	1.8	2.25	
	$I_F = 40\text{ A}$	V_{F4}	—	2.0	---	
Instantaneous Forward Voltage Drop (Pulse)	$T_A = -55^\circ\text{C}$, $I_F = 20\text{ A}$	V_{F5}	—	1.5	2.0	V_{DC}
	$T_A = 150^\circ\text{C}$, $I_F = 20\text{ A}$	V_{F6}	—	2.6	2.9	
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, Pulse)		I_{R1}	—	250	1500	μA
Reverse Leakage Current (Rated V_R , $T_A = 150^\circ\text{C}$, Pulse)		I_{R2}	—	1	5	mA
Junction Capacitance ($V_R = 10\text{V}$, $f = 1\text{MHz}$, $T_A = 25^\circ\text{C}$)		C_J	—	1250	2000	pF

NOTES:

* Pulse Test: Pulse Width = 300 μsec , Duty Cycle = 2%

1/ For Ordering Information, Price, and Availability Contact Factory.

2/ Screened to MIL-PRF-19500.

3/ Unless Otherwise Specified, All Electrical Characteristics @25°C

4/ Terminal Pads 1 & 3 Must be connected together for testing and at the Board Level.

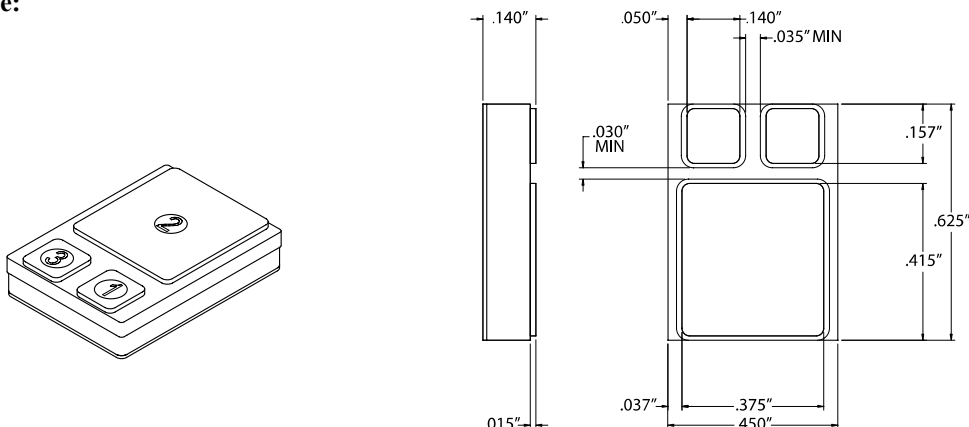
Available Part Numbers:

SSR30C100S1
SSR30C120S1

PIN ASSIGNMENT

Package	Pin 1	Pin 2	Pin 3
SMD1	Anode	Cathode	Anode

SMD1 Outline:



Tolerances (Unless Specified):
.XX = $\pm .030''$
.XXX = $\pm .010''$

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

DATA SHEET #: SH0043B

DOC