



Solid State Devices, Inc.

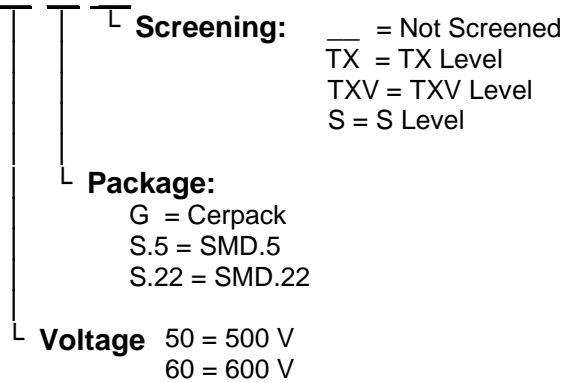
14701 Firestone Blvd * La Mirada, Ca 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

SSR05C50 thru SSR05C60 Series

DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SSR05C



5 AMP / 500 – 600 VOLTS SILICON CARBIDE SCHOTTKY RECTIFIER

Features:

- 500 – 600 V Silicon Carbide Schottky Rectifier
- New Semiconductor Material
- Switching Behavior Benchmark
- No Reverse Recovery
- No Forward Recovery
- No Switching Time Change Over Temperature
- Hermetic Packages
- TX, TXV, and S-Level Screening Available^{2/}

Maximum Ratings ^{3/}		Symbol	Value	Unit
Peak Repetitive Reverse and Peak Surge Reverse Voltage	SSR05C50	V_{RRM}	500	V
	SSR05C60	V_{RSM}	600	
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave)		I_o	5	A
Non Repetitive Peak Surge Current (8.3 ms Pulse, Half Sine Wave)		I_{FSM}	40	A
Power Dissipation		P_D	36.5	W
Operating & Storage Temperature		$T_{OP} \& T_{STG}$	-55 to +175	°C
Maximum Thermal Resistance (Junction to Case)		$R_{\theta JC}$	4.1	°C/W

Cerpack (G)	SMD.5 (S.5)	SMD.22 (S.22)
<p>Diagram showing a cerpack package with pins 1 and 2. The pinout diagram shows a Schottky diode with the cathode connected to pin 2 and the anode to pin 1. A tab is also shown.</p>	<p>Diagram showing an SMD.5 package with pins 1, 2, and 3. The pinout diagram shows a Schottky diode with the cathode connected to pin 2 and the anode to pin 1. Pin 3 is the tab.</p>	<p>Diagram showing an SMD.22 package with pins 1, 2, and 3. The pinout diagram shows a Schottky diode with the cathode connected to pin 2 and the anode to pin 1. Pin 3 is the tab.</p>

Notes:

- 1/ For ordering information, price, and availability, contact factory.
- 2/ Screening based on MIL-PRF-19500. Screening flows available on request.
- 3/ All electrical characteristics @ 25°C unless otherwise specified.

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

DATA SHEET #: SH0113C

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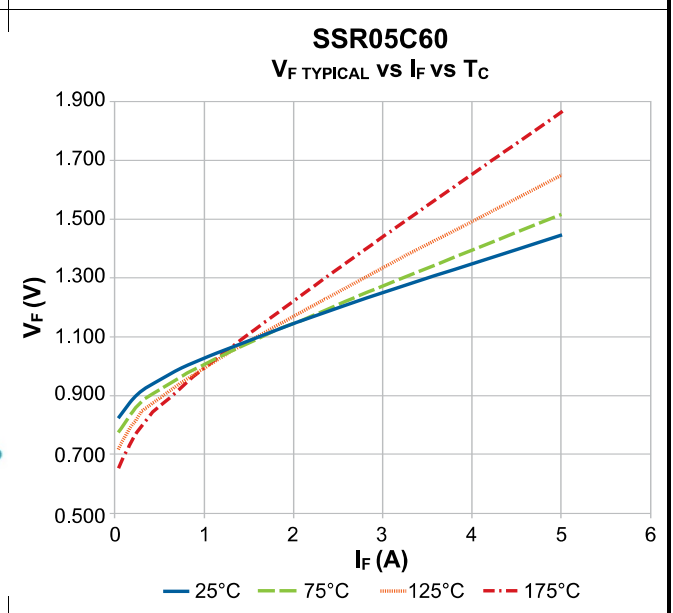
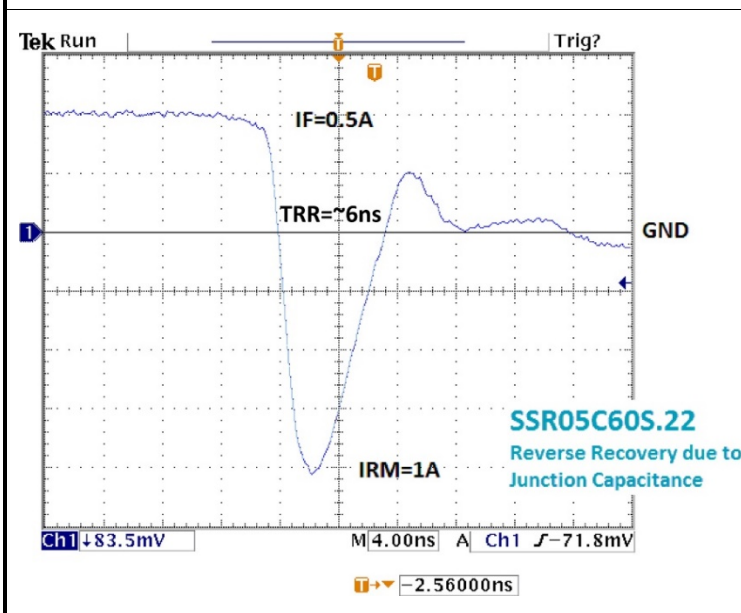
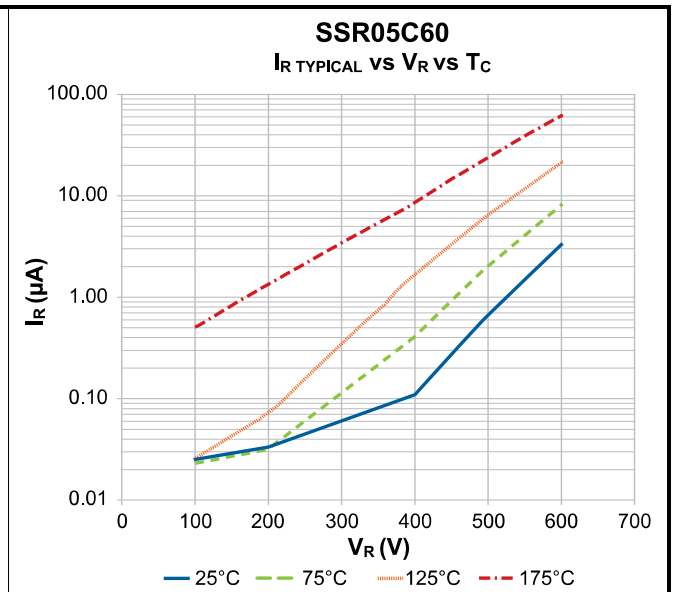
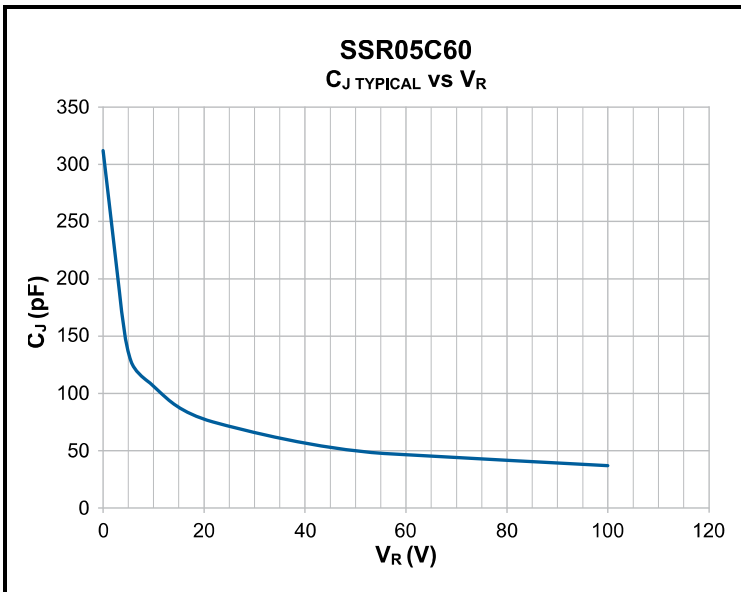


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Electrical Characteristic ^{3/}	Symbol	Min	Typ	Max	Unit
Instantaneous Forward Voltage Drop ($I_F = 5\text{ A}$, $T_J = 25^\circ\text{C}$, 300 μsec pulse)	V_{F1}	—	1.4	1.8	V
Instantaneous Forward Voltage Drop ($I_F = 5\text{ A}$, $T_J = 150^\circ\text{C}$, 300 μsec pulse)	V_{F2}	—	1.7	2.5	V
Reverse Leakage Current ($V_R = \text{Rated } V_R$, $T_J = 25^\circ\text{C}$, 300 μsec pulse min)	I_{R1}	—	0.1	10	μA
Reverse Leakage Current ($V_R = \text{Rated } V_R$, $T_J = 100^\circ\text{C}$, 300 μsec pulse min)	I_{R2}	—	0.2	20	μA
Junction Capacitance ($V_R = 10\text{ V}_{\text{DC}}$, $T_C = 25^\circ\text{C}$, $f = 1\text{ MHz}$)	C_J	—	110	200	pF



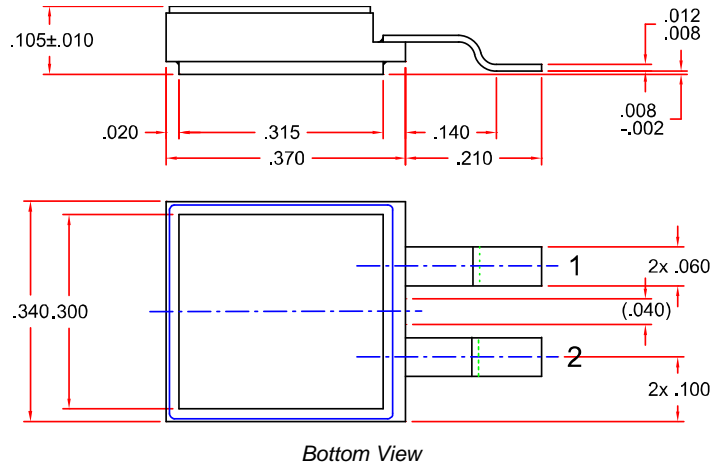


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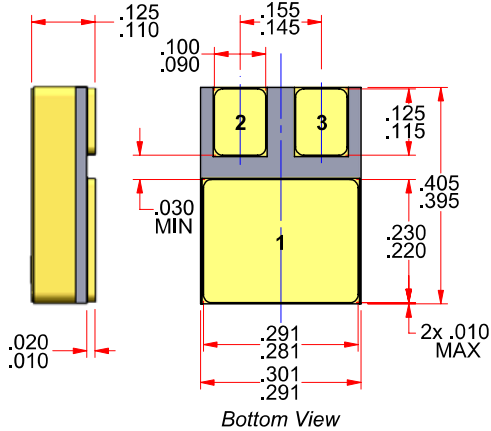
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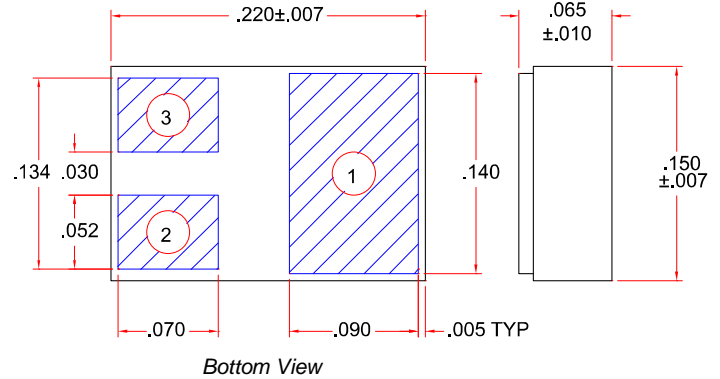
CASE OUTLINE: Cerpack (G)



CASE OUTLINE: SMD.5 (S.5)



CASE OUTLINE: SMD.22 (S.22)



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Available Part Numbers:

**SSR05C50G SSR05C50S.5 SSR05C50S.22
 SSR05C60G SSR05C60S.5 SSR05C60S.22**

PIN ASSIGNMENT

Package	Pin 1	Pin 2	Pin 3	Tab
Cerpack (G)	Anode	Anode	N/A	Cathode
SMD.5 (S.5)	Cathode	Anode	Anode	N/A
SMD.22 (S.22)	Cathode	Anode	Anode	N/A

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