



Solid State Devices, Inc.

14830 Valley View Blvd * La Mirada, Ca 90638

Phone: (562) 404-7855 * Fax: (562) 404-1773

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

SSR02C60 Series

2 AMP / 600 V SILICON CARBIDE SCHOTTKY RECTIFIER

DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SSR02C **60** **D1** **HR**

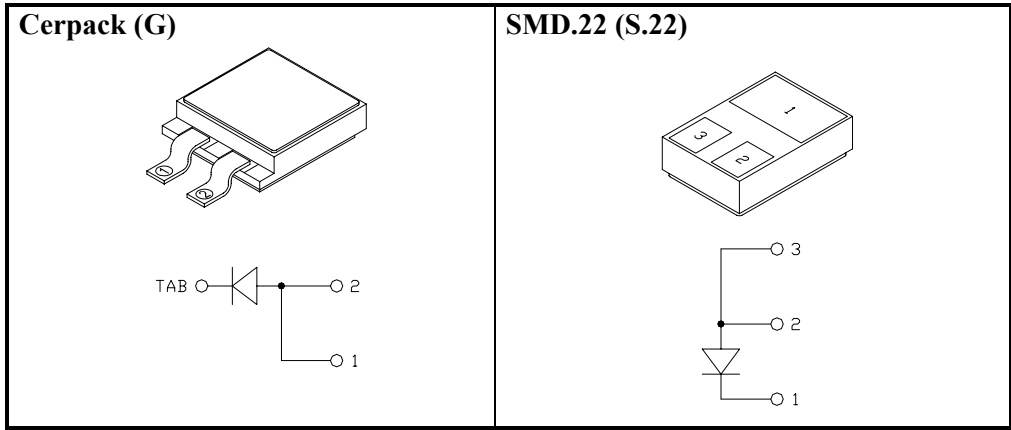
Screening: = Not Screened
 HR = High Rel

Package: G = Cerpack
 S.22 = SMD.22

Voltage 50 = 500 V
 60 = 600 V

- Features:**
- 600V Silicon Carbide Schottky Rectifier
 - New Semiconductor Material
 - Switching Behavior Benchmark
 - No Reverse Recovery
 - No Forward Recovery
 - No Switching Time Change Over Temperature
 - Hermetic Packages Available

Maximum Ratings		Symbol	Value	Units
Peak Repetitive Reverse and Peak Surge Reverse Voltage	SSR02C50	V_{RRM}	500	Volts
	SSR02C60	V_{RSM}	600	
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave)		I_o	2	Amps
Non Repetitive Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on I_o)		I_{FSM}	4	Amps
Repetitive Peak Forward Current ($T_c = 100^\circ\text{C}$; $d/c = 10\%$)		I_{FRM}	7.5	A
Power Dissipation		P_D	12.5	Watts
Operating & Storage Temperature		Top & Tstg	-55 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case		$R_{\theta JC}$	12	$^\circ\text{C/W}$





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Electrical Characteristic	Symbol	Min	Typ	Max	Units
Instantaneous Forward Voltage Drop ($I_F = 0.25A, T_J = 25^\circ C, 300 \mu sec$ pulse)	V_{F1}	—	1.05	—	Volts
Instantaneous Forward Voltage Drop ($I_F = 0.5A, T_J = 25^\circ C, 300 \mu sec$ pulse)	V_{F2}	—	1.15	—	Volts
Instantaneous Forward Voltage Drop ($I_F = 1.0A, T_J = 25^\circ C, 300 \mu sec$ pulse)	V_{F3}	—	1.35	—	Volts
Instantaneous Forward Voltage Drop ($I_F = 2.0A, T_J = 25^\circ C, 300 \mu sec$ pulse)	V_{F4}	—	1.75	2.0	Volts
Instantaneous Forward Voltage Drop ($I_F = 2.0A, T_J = 150^\circ C, 300 \mu sec$ pulse)	V_{F5}	—	2.25	2.6	Volts
Reverse Leakage Current ($V_R = \text{Rated } V_R, T_J = 25^\circ C, 300 \mu sec$ pulse min)	I_{R1}	—	0.2	100	μA
Reverse Leakage Current ($V_R = \text{Rated } V_R, T_J = 100^\circ C, 300 \mu sec$ pulse min)	I_{R2}	—	2	—	μA
Reverse Leakage Current ($V_R = \text{Rated } V_R, T_J = 150^\circ C, 300 \mu sec$ pulse min)	I_{R3}	—	25	500	μA
Junction Capacitance ($T_C = 25^\circ C, f = 1MHz$)	C_J	—	$V_R = 1V$ 50	—	pF
			$V_R = 10V$ 22		
			$V_R = 600V$ 5		
Total Capacitive Charge ($V_R = 400V, I_F = 2A, di/dt = 200A/\mu s, T_J = 150^\circ C$)	Q_C	—	4.6	—	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.

Available Part Numbers:
SSR02C50G SSR02C50S.22
SSR02C60G SSR02C60S.22

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

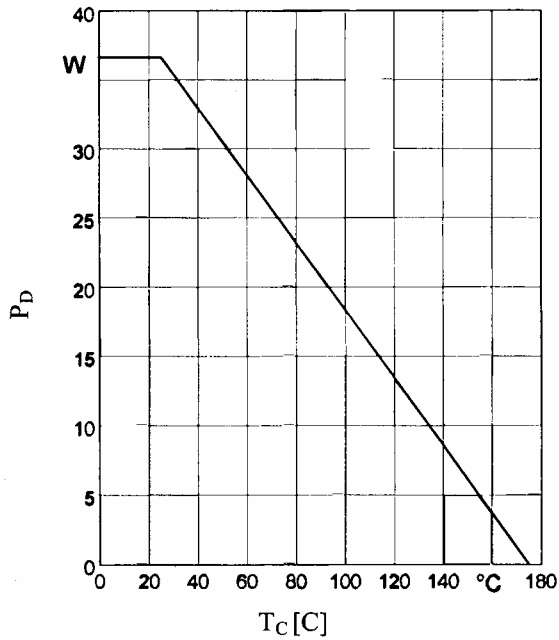


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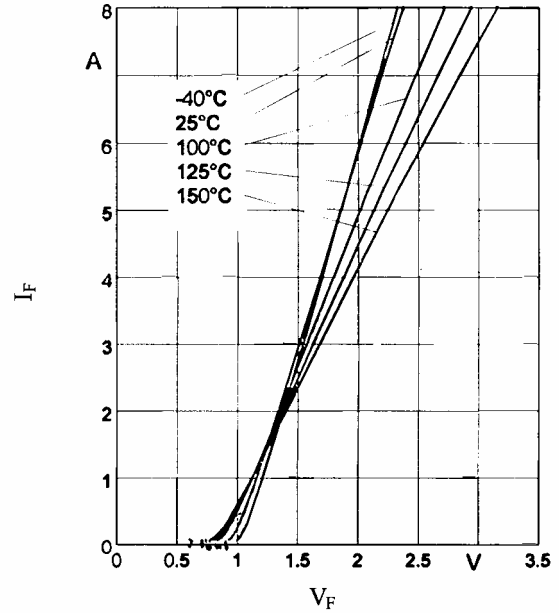
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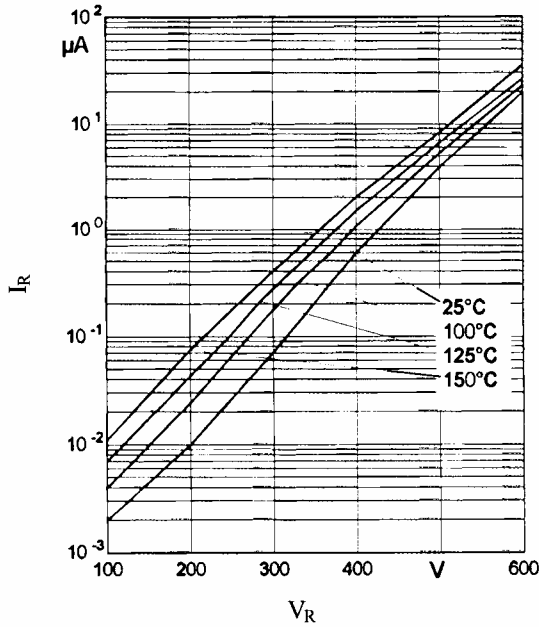
Power Dissipation



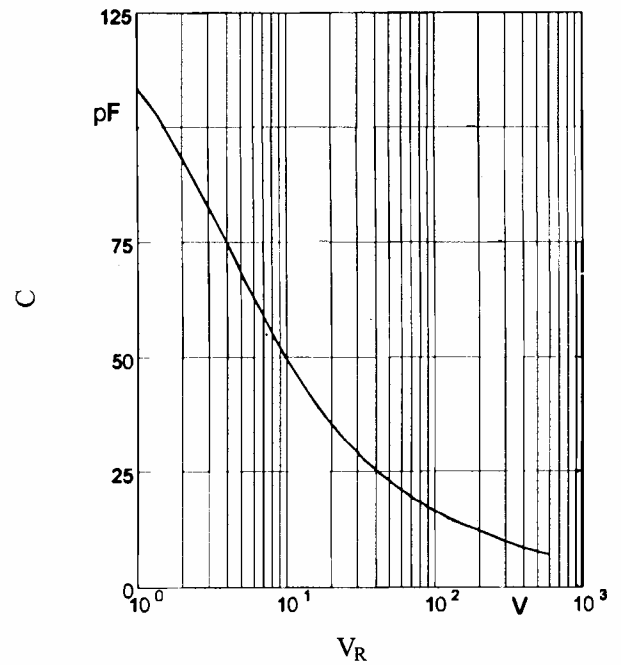
Typical Forward Characteristic



Typical Reverse Current Characteristics



Typical Capacitance vs. Reverse Voltage



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

DATA SHEET #: RS0204A

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