



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

DESIGNER'S DATA SHEET

Part Number /Ordering Information ^{1/}

SSR05C 60 D1 HR

Screening: _ = Not Screened

HR = High Rel

Package: ^{2/} D1 = TO-252 (D-Pack)

G = Cerpack

Voltage: 50 = 500V

60 = 600V

SSR05C60 SERIES

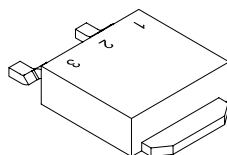
5 AMP 600 VOLTS SILICON CARBIDE SCHOTTKY RECTIFIER

FEATURES:

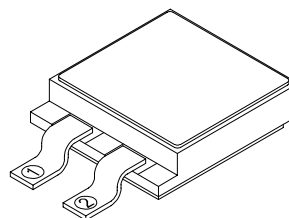
- 600V Silicon Carbide Schottky Rectifier
- New Semiconductor Material
- Switching Behavior Benchmark
- No Reverse Recovery
- No Forward Recovery
- No Switching Time Change over Temperature
- Hermetic Packages Available

Maximum Ratings ^{3/}	SYMBOL	VALUE	UNITS
Peak Repetitive Reverse and Peak Surge Reverse Voltage SSR05C50 SSR05C60	V_{RRM} V_{RSM}	500 600	Volts
Average Rectified Forward Current. (Resistive load, 60Hz, Sine Wave)	I_o	5	Amps
Non Repetitive Peak Surge Current (8.3 ms Pulse, Half Sine Wave Superimposed on I_o)	I_{FSM}	12.5	Amps
I^2t Value	I^2t	0.78	A ² s
Power Dissipation	P_d	36.5	W
Operating and Storage Temperature	T_{OP} & T_{stg}	-55 TO +175	°C
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	4.1	°C/W

TO-252 (D1)



Cerpack (G)



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

DATA SHEET #: RS0016A

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Electrical Characteristics	SYMBOL	MIN	TYP	MAX	UNITS
Instantaneous Forward Voltage Drop ($I_F = 5A$, $T_J = 25^\circ C$, 300 μ sec Pulse)	V_{F1}	--	1.7	1.9	V_{DC}
Instantaneous Forward Voltage Drop ($I_F = 5A$, $T_J = 150^\circ C$, 300 μ sec pulse)	V_{F4}	--	2.0	2.4	V_{DC}
Reverse Leakage Current ($V_R = \text{Rated } V_R$, $T_J = 25^\circ C$, 300 μ s pulse min.)	I_{R1}	--	15	200	μA
Reverse Leakage Current ($V_R = \text{Rated } V_R$, $T_J = 100^\circ C$, 300 μ s pulse min.)	I_{R2}	--	40	1000	μA
Junction Capacitance ($V_R = 10V_{DC}$, $T_C = 25^\circ C$, $f = 1MHz$)	C_J	--	50	-	pF
Total Capasitive Charge ($V_R = 400V$, $I_F = 5A$, $di/dt = 200A/\mu s$, $T_J = 150^\circ C$)	Q_C	--	13	-	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:

SCR05S50D1 SCR05S50G
SCR05S60D1 SCR05S60G

PIN ASSIGNMENT

PACKAGE	Pin 1	Pin 2	Tab
TO-252 (D1)	Cathode	Anode	Cathode
CERPACK (G)	Anode	Anode	Cathode



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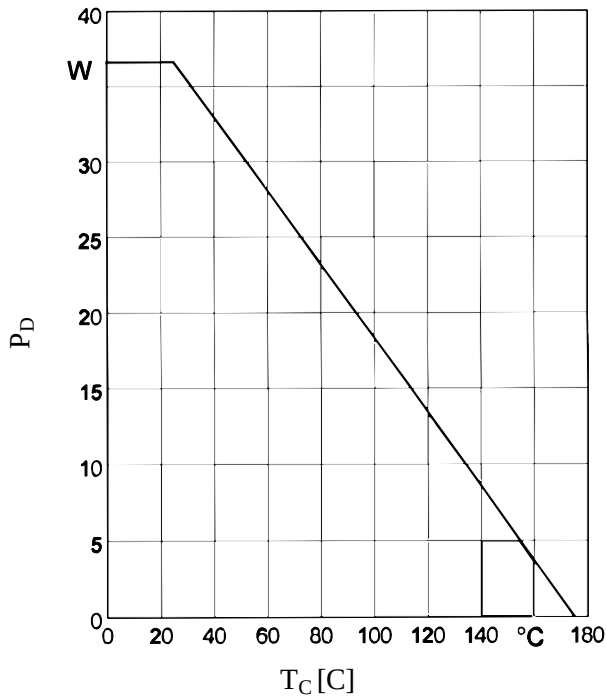
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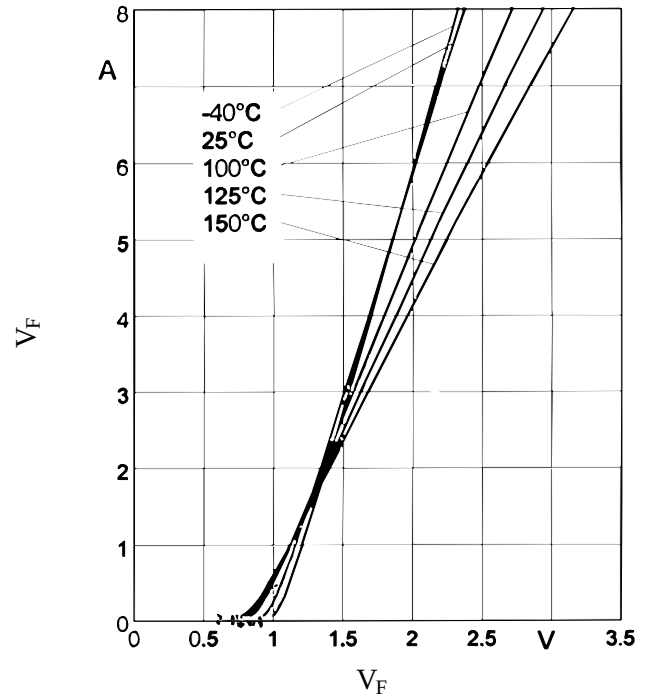
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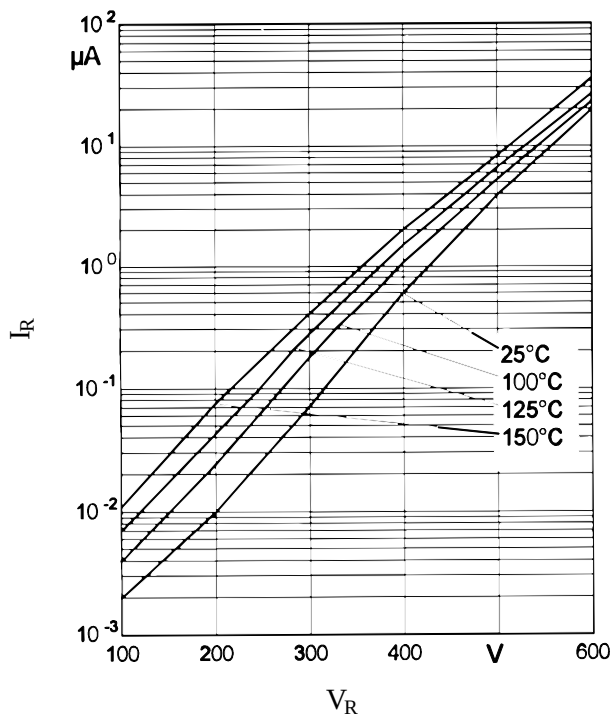
Power Dissipation



Typical Forward Characteristic



Typical Reverse Current Characteristics



Typical Capacitance vs. Reverse Voltage

