

SSR05C60 Series

**5 AMP / 600V
SILICON CARBIDE
SCHOTTKY RECTIFIER**

DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SSR05C **60** **D1** **HR**

Screening: = Not Screened
HR = High Rel

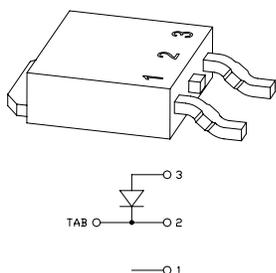
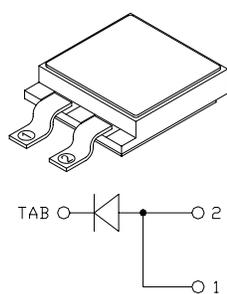
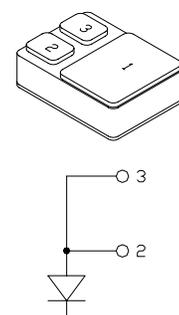
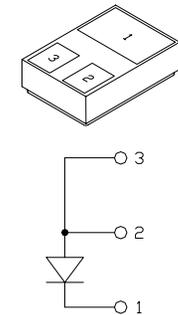
Package: D1 = TO-252 (D-Pack)
G = Cerpack
S.5 = SMD.5
S.22 = SMD.22

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	SSR05C50	V_{RRM}	500	Volts
	SSR05C60	V_{RSM}	600	
Average Rectified Forward Current (Resistive Load, 60 Hz 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^2s
Power Dissipation		P_D	36.5	Watts
Operating & Storage Temperature		Top & Tstg	-55 to +175	$^{\circ}C$
Maximum Thermal Resistance Junction to Case		$R_{\theta JC}$	4.1	$^{\circ}C/W$

TO-252 (D1)	Cerpack (G)	SMD.5 (S.5)	SMD.22 (S.22)
			

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

**Solid State Devices, Inc.**

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SSR05C60 Series

Electrical Characteristic	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	2.0	Volts
Instantaneous Forward Voltage Drop ($I_F = 5A$, $T_J = 150^\circ C$, 300 μ sec pulse)	V_{F2}	—	2.0	2.7	Volts
Reverse Leakage Current ($V_R = \text{Rated } V_R$, $T_J = 25^\circ C$, 300 μ sec pulse min)	I_{R1}	—	15	200	μA
Reverse Leakage Current ($V_R = \text{Rated } V_R$, $T_J = 100^\circ C$, 300 μ sec pulse min)	I_{R2}	—	40	1000	μA
Junction Capacitance ($V_R = 10 V_{DC}$, $T_C = 25^\circ C$, $f = 1MHz$)	C_J	—	50	—	pF
Total Capacitive 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:

SSR05C50D1 SSR05C50G SSR05C50S.5

SSR05C50S.22

SSR05C60D1 SSR05C60G SSR05C60S.5

SSR05C60S.22

PIN ASSIGNMENT

Package	Pin 1	Pin 2	Pin 3	Tab
TO-252 (D1)	N/C	Cathode	Anode	Cathode
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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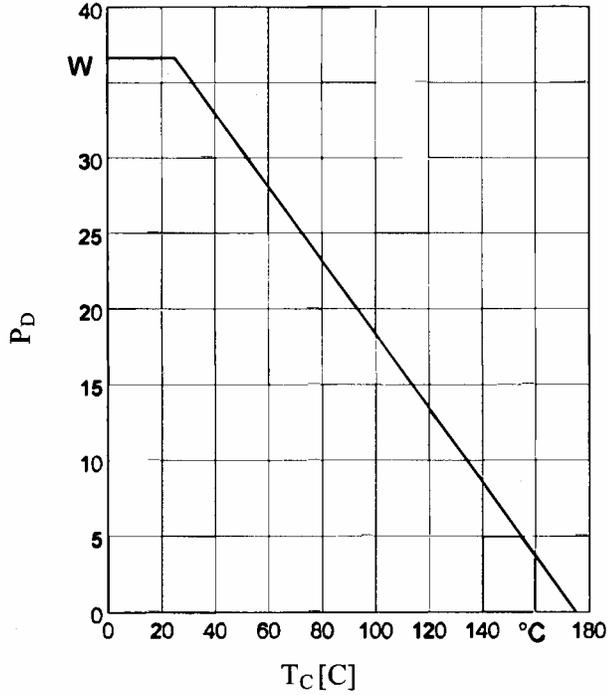
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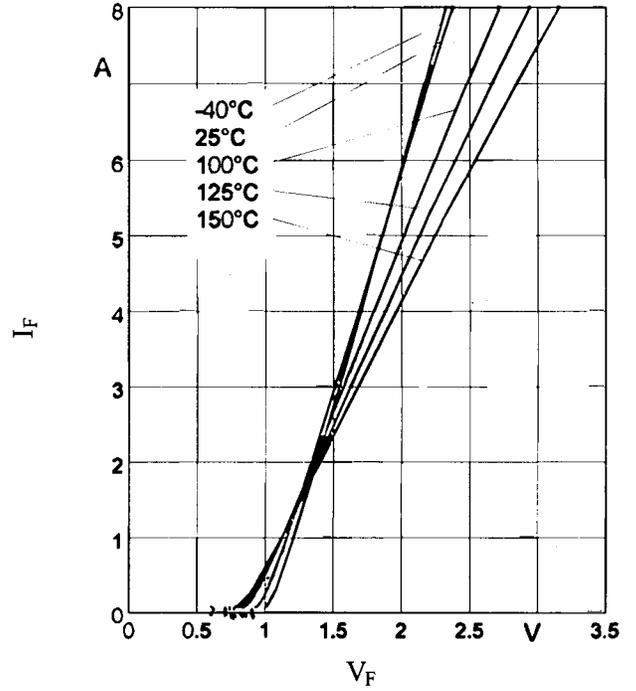
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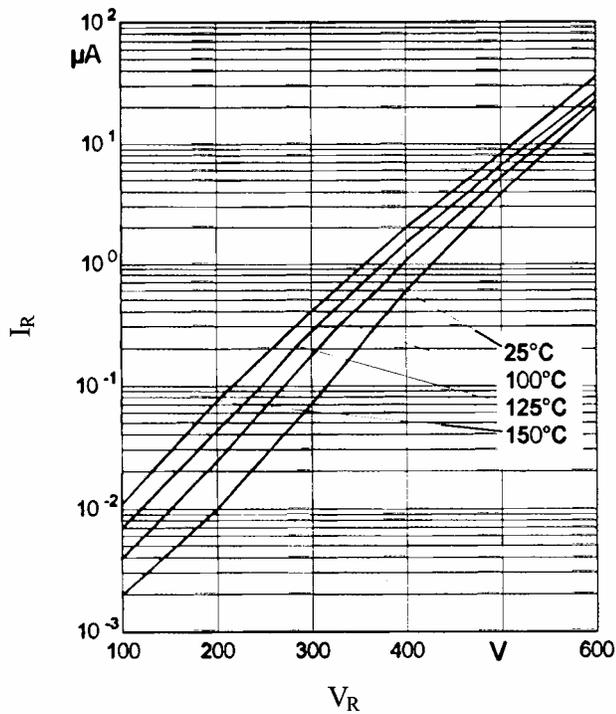
Power Dissipation



Typical Forward Characteristic



Typical Reverse Current Characteristics



Typical Capacitance vs. Reverse Voltage

