



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

SSR02C60 Series

DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SSR02C 60

Screening^{2/}

___ = Not Screened

TX = TX Level

TXV = TXV Level

S = S Level

Package:

G = Cerpack

S.22 = SMD.22

Voltage 50 = 500 V

60 = 600 V

2 AMP, 600 VOLTS SILICON CARBIDE SCHOTTKY RECTIFIER

Features:

- 600V Silicon Carbide Schottky Rectifier
- Switching Behavior Benchmark
- No Switching Time Change Over Temperature
- Higher Voltages Available – Contact Factory
- TX, TXV, and S Level Screening Available – Consult Factory

Maximum Ratings^{3/}

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

Notes:

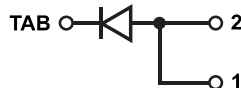
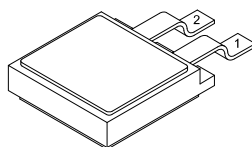
^{1/} For ordering information, price, operating curves, and availability – contact factory.

^{2/} Screening based on MIL-PRF-19500.

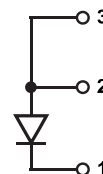
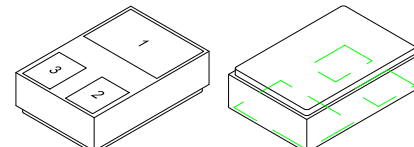
Screening flows available on request.

^{3/} All electrical characteristics @25°C unless otherwise specified.

Cerpack (G)



SMD.22 (S.22)



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

DATA SHEET #: RS0204B

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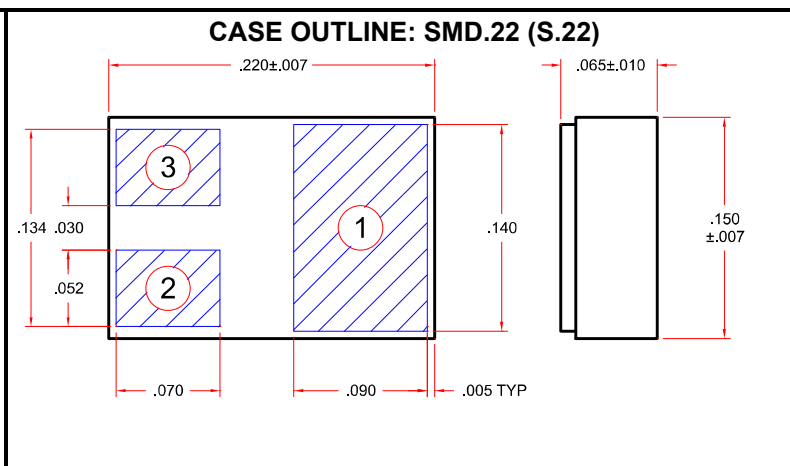
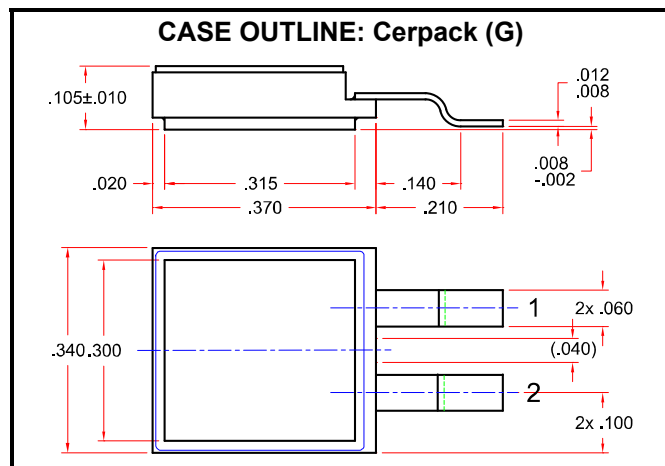


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Electrical Characteristic	Symbol	Min	Typ	Max	Units
Instantaneous Forward Voltage Drop ($I_F = 0.25\text{ A}$, $T_J = 25^\circ\text{C}$, 300 μsec pulse)	V_{F1}	—	1.05	—	V
Instantaneous Forward Voltage Drop ($I_F = 0.5\text{ A}$, $T_J = 25^\circ\text{C}$,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



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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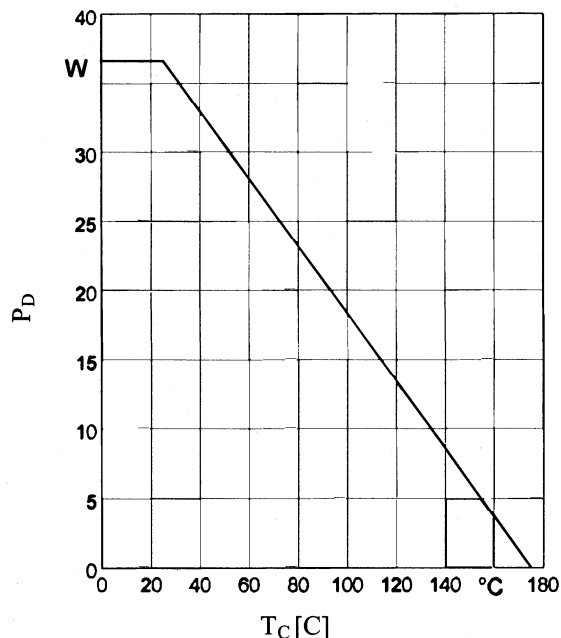


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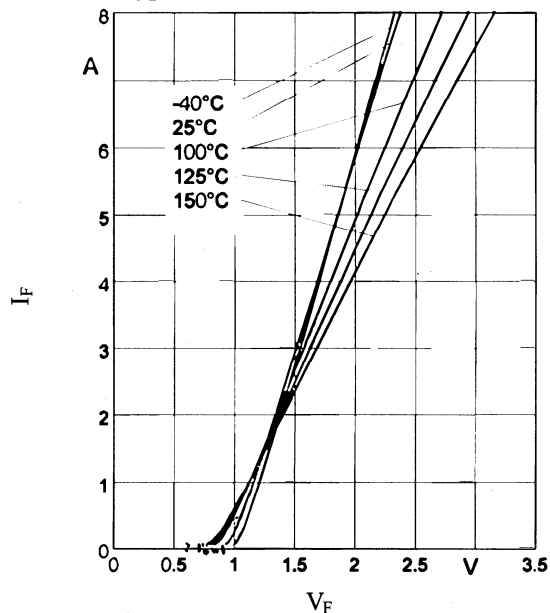
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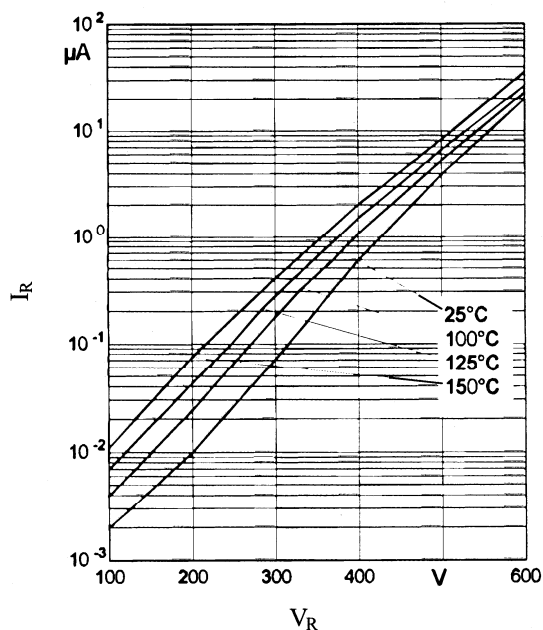
Power Dissipation



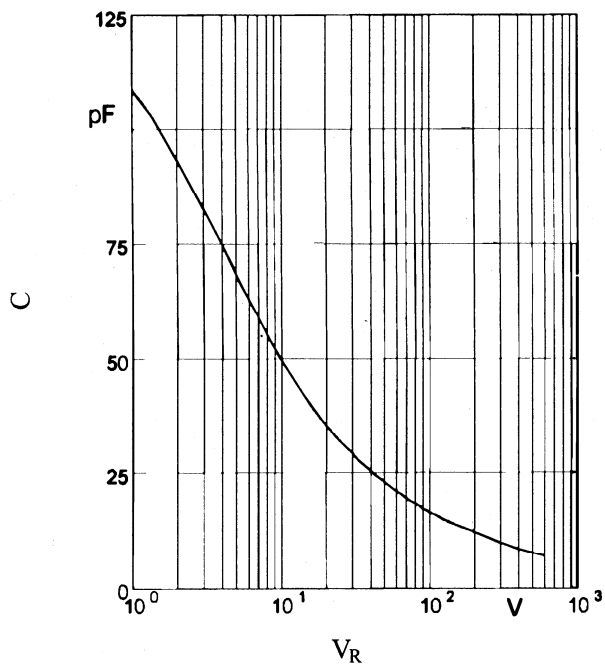
Typical Forward Characteristic



Typical Reverse Current Characteristics



Typical Capacitance vs. Reverse Voltage



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