



## Solid State Devices, Inc.

14701 Firestone Blvd \* La Mirada, Ca 90638  
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# SSR10C50S.22 SSR10C60S.22

## DESIGNER'S DATA SHEET

### Part Number / Ordering Information <sup>1/</sup>

SSR10C

#### Screening<sup>2/</sup>

— = Not Screened

TX = TX Level

TXV = TXV Level

S = S Level

#### Package

S.22 = SMD.22

#### Voltage

50 = 500 V

60 = 600 V

## 10 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<sup>2/</sup>

### Maximum Ratings<sup>3/</sup>

Peak Repetitive Reverse and  
Peak Surge Reverse Voltage

SSR10C50  
SSR10C60

### Symbol

$V_{RRM}$   
 $V_{RSM}$

### Value

500  
600

### Unit

V

Average Rectified Forward Current  
(Resistive Load, 60 Hz Sine Wave)

$I_o$

10

A

Non Repetitive Peak Surge Current  
(8.3 ms Pulse, Half Sine Wave)

$I_{FSM}$

70

A

Operating & Storage Temperature

$T_{OP}$  &  $T_{STG}$

-55 to +175

°C

Maximum Thermal Resistance  
(Junction to Case)

$R_{\theta JC}$

3

°C/W

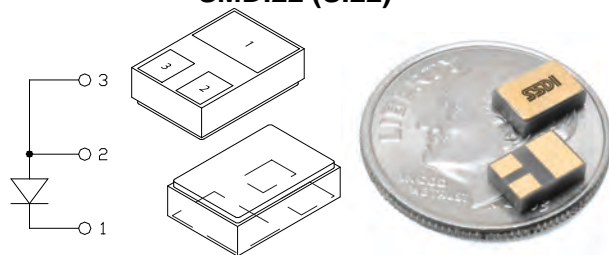
### Notes: \*Pulsed per MIL-STD-750.

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.

### SMD.22 (S.22)



(dime used for size reference)

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

**DATA SHEET #: SH0131A**

**DOCX**



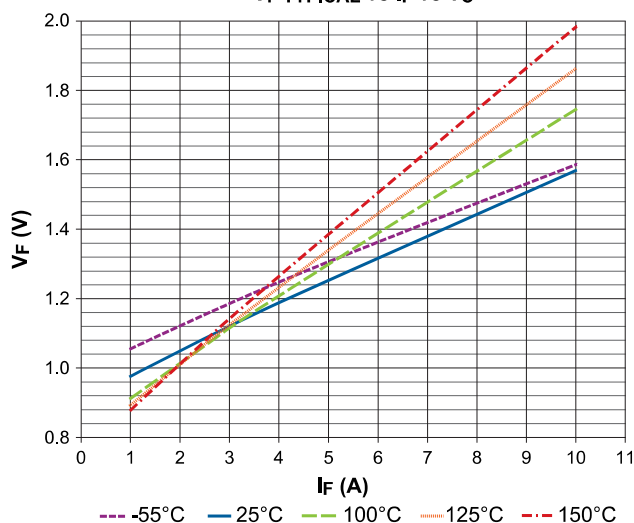
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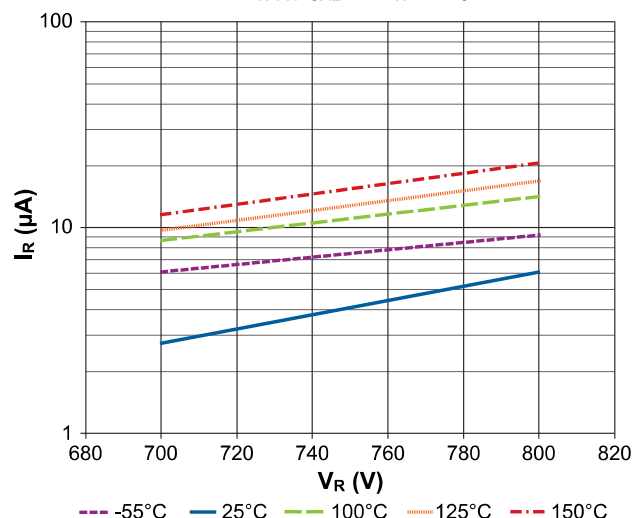
# SSR10C50S.22 SSR10C60S.22

Electrical Characteristic <sup>3/</sup>	Symbol	Min	Typ	Max	Unit
<b>Instantaneous Forward Voltage Drop</b> ( $T_J = 25^\circ\text{C}$ , pulsed)	$I_F = 5\text{ A}$ $I_F = 10\text{ A}$ $V_{F1}$	—	1.30 1.70	1.65 1.90	V
<b>Instantaneous Forward Voltage Drop</b> ( $T_J = 150^\circ\text{C}$ , pulsed)	$I_F = 5\text{ A}$ $I_F = 10\text{ A}$ $V_{F2}$	—	1.35 1.95	1.75 2.20	V
<b>Reverse Leakage Current</b> ( $V_R = \text{Rated } V_R$ , $T_J = 25^\circ\text{C}$ , pulsed)	$I_{R1}$	—	0.1	10	$\mu\text{A}$
<b>Reverse Leakage Current</b> ( $V_R = \text{Rated } V_R$ , $T_J = 100^\circ\text{C}$ , pulsed)	$I_{R2}$	—	0.2	20	$\mu\text{A}$
<b>Junction Capacitance</b> ( $V_R = 10\text{ V}_{DC}$ , $T_C = 25^\circ\text{C}$ , $f = 1\text{ MHz}$ )	$C_J$	—	200	300	pF

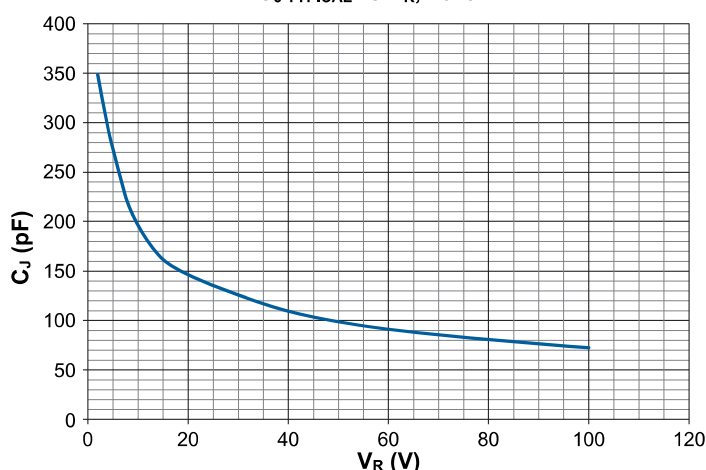
**SSR10C60S.22**  
 **$V_F$  TYPICAL VS  $I_F$  VS  $T_C$**



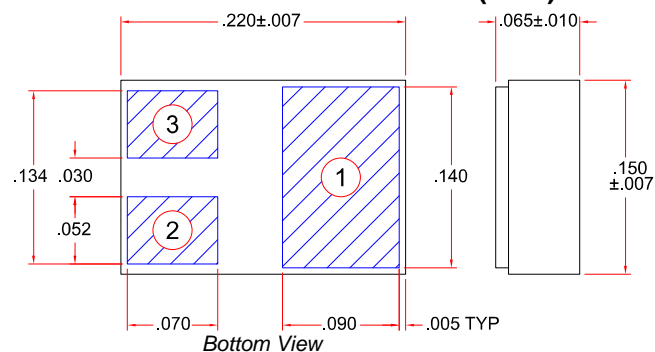
**SSR10C60S.22**  
 **$I_R$  TYPICAL VS  $V_R$  VS  $T_C$**



**SSR10C60S.22**  
 **$C_J$  TYPICAL VS  $V_R$ , 25°C**



**CASE OUTLINE: SMD.22 (S.22)**



**PIN ASSIGNMENT**

Package	Pin 1	Pin 2	Pin 3
SMD.22 (S.22)	Cathode	Anode	Anode

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