



**Solid State Devices, Inc.**

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# SSR04150CTS.22 thru SSR04200CTS.22 Series

## Designer's Data Sheet

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

**SSR04**

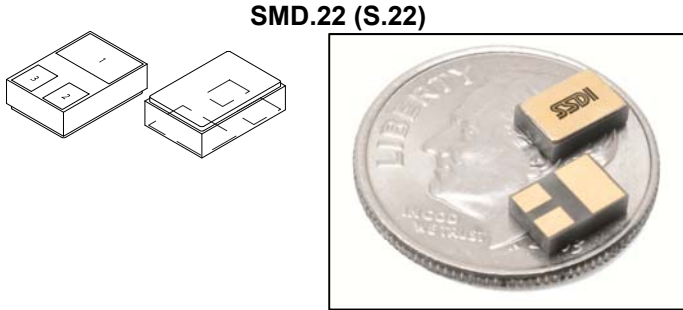
- Screening<sup>2/</sup>
  - = Not Screened
  - TX = TX Level
  - TXV = TXV Level
  - S = S Level
- Package
  - S.22 = SMD.22
- Configuration
  - CT = Centertap Common Cathode
  - CA = Common Anode
  - D = Doubler
- Voltage
  - 150 = 150 V
  - 200 = 200 V

**4 AMP  
HERMETIC SURFACE MOUNT  
CENTERTAP COMMON CATHODE /  
COMMON ANODE / DOUBLER  
SCHOTTKY RECTIFIER  
150 - 200 VOLTS**

- FEATURES:**
- Extremely small footprint
  - Extremely low forward voltage drop
  - Low reverse leakage
  - Hermetically sealed surface mount package
  - Guard ring for overvoltage protection
  - 175°C operating junction temperature
  - Available in centertap common cathode, common anode, and doubler configurations
  - TX, TXV, and S level screening available - consult factory<sup>2/</sup>

MAXIMUM RATINGS <sup>3/</sup>		Symbol	Value	Units
Peak Repetitive Reverse and DC Blocking Voltage	SSR04150 SSR04200	$V_{RRM}$ $V_{RWM}$ $V_R$	150 200	Volts
Average Rectified Forward Current (Resistive load, 60 Hz, sine wave, $T_A = 25^\circ\text{C}$ , per leg)		$I_O$	2	Amps
Peak Surge Current (8.3 ms pulse, half sine wave superimposed on $I_O$ , allow junction to reach equilibrium between pulses, $T_A = 25^\circ\text{C}$ ; per leg)		$I_{FSM}$	20	Amps
Operating & Storage Temperature		$T_{OP}$ & $T_{stg}$	-65 to +175	$^\circ\text{C}$
Maximum Thermal Resistance (Junction to Case, per leg)		$R_{\theta JC}$	13 (typ 10)	$^\circ\text{C/W}$

- NOTES:**
- 1/ For ordering information, price, and availability - contact factory.
  - 2/ Screening based on MIL-PRF-19500. Screening flows available on request.
  - 3/ Unless otherwise specified, all electrical characteristics @25°C.



(dime used for size reference)



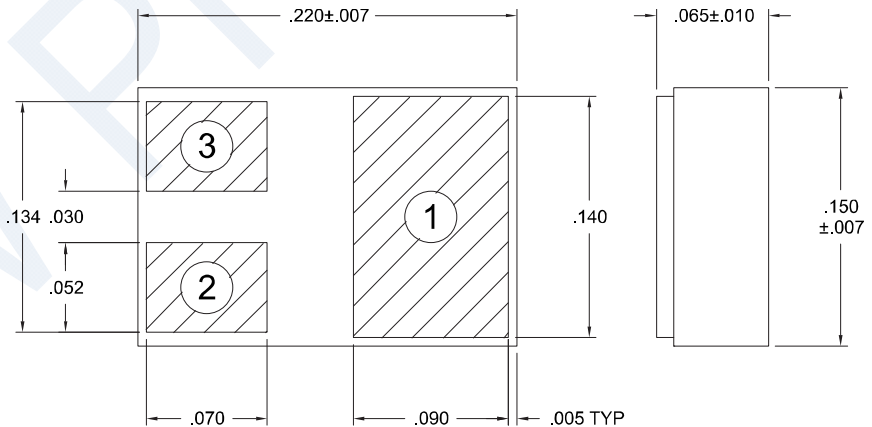
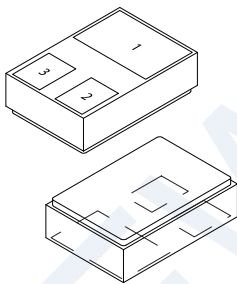
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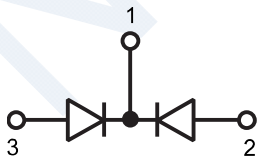
**SSR04150CTS.22 thru  
 SSR04200CTS.22 Series**

ELECTRICAL CHARACTERISTICS (per leg) <sup>3/</sup>		Symbol	Min	Typ	Max	Units
<b>Instantaneous Forward Voltage Drop</b> (T <sub>A</sub> =25°C, 300μsec pulse)	I <sub>F</sub> = 0.1 A	V <sub>F1</sub>		0.65	-	V <sub>DC</sub>
	I <sub>F</sub> = 0.5 A	V <sub>F2</sub>		0.77	0.82	
	I <sub>F</sub> = 1 A	V <sub>F3</sub>	-	0.825	0.87	
	I <sub>F</sub> = 1.5 A	V <sub>F4</sub>		0.865	-	
	I <sub>F</sub> = 2 A	V <sub>F5</sub>		0.90	0.95	
<b>Instantaneous Forward Voltage Drop</b> (T <sub>A</sub> =-55°C, 300μsec pulse)	I <sub>F</sub> = 1 A	V <sub>F6</sub>	-	1.03	-	V <sub>DC</sub>
	I <sub>F</sub> = 2 A	V <sub>F7</sub>		1.34	-	
<b>Instantaneous Forward Voltage Drop</b> (T <sub>A</sub> =125°C, 300μsec pulse)	I <sub>F</sub> = 0.1 A	V <sub>F11</sub>		0.49	-	V <sub>DC</sub>
	I <sub>F</sub> = 0.5 A	V <sub>F12</sub>		0.615	0.69	
	I <sub>F</sub> = 1 A	V <sub>F13</sub>	-	0.685	0.76	
	I <sub>F</sub> = 1.5 A	V <sub>F14</sub>		0.73	-	
	I <sub>F</sub> = 2 A	V <sub>F15</sub>		0.77	0.85	
<b>Reverse Leakage Current</b> (Rated V <sub>R</sub> , T <sub>A</sub> = 25°C, 300μsec pulse minimum)		I <sub>R1</sub>	-	0.075	1	μA
<b>Reverse Leakage Current</b> (Rated V <sub>R</sub> , T <sub>A</sub> = 100°C, 300μsec pulse minimum)		I <sub>R2</sub>	-	12	-	μA
<b>Reverse Leakage Current</b> (Rated V <sub>R</sub> , T <sub>A</sub> = 125°C, 300μsec pulse minimum)		I <sub>R3</sub>	-	55	200	μA
<b>Reverse Leakage Current</b> (Rated V <sub>R</sub> , T <sub>A</sub> = 150°C, 300μsec pulse minimum)		I <sub>R4</sub>	-	250	-	μA
<b>Junction Capacitance</b> (f = 1MHz, T <sub>A</sub> = 25°C)		C <sub>J</sub>		21	-	pF
	V <sub>R</sub> = 5V V <sub>R</sub> = 10V			16	25	

**Package Outline: SMD.22 (S.22)**

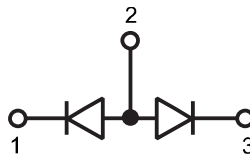


**Centertap Common Cathode**

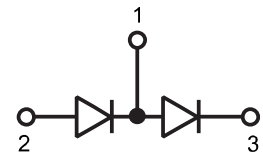


Note: for optimal performance connect anode terminals together.

**Common Anode**



**Doubler**



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

**DATA SHEET #: SH0072B**

**DOC**