



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

SSR10020S.22 / S.22T
SSR10030S.22 / S.22T

10 AMP
HERMETIC SURFACE MOUNT
SCHOTTKY RECTIFIER
20 - 30 VOLTS

Designer's Data Sheet

Part Number / Ordering Information^{1/}

SSR10

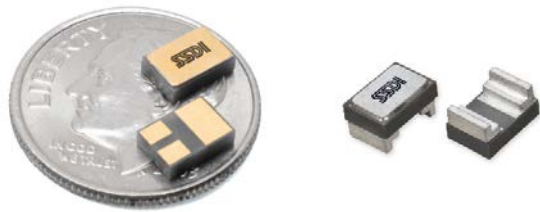
- Screening^{2/}
 - ___ = Not Screened
 - TX = TX Level
 - TXV = TXV Level
 - S = S Level
- Package
 - S.22 = SMD.22
 - S.22T = Surface Mount Square Tab
- Voltage
 - 020 = 20 V
 - 030 = 30 V

- FEATURES:**
- Extremely small footprint
 - Extremely low forward voltage drop
 - Low reverse leakage
 - Hermetically sealed surface mount package
 - 150°C operating junction temperature
 - Weight: 0.12 g (typical)
 - TX, TXV, and S level screening available - consult factory^{2/}

MAXIMUM RATINGS^{3/ 4/}		Symbol	Value	Unit
Peak Repetitive Reverse and DC Blocking Voltage	SSR10020 SSR10030	V_{RRM} V_{RWM} V_R	20 30	V
Average Rectified Forward Current (Resistive load, 60 Hz, sine wave, $T_A = 25^\circ\text{C}$)		I_o	10	A
Peak Surge Current (8.3 ms pulse, half sine wave, allow junction to reach equilibrium between pulses, $T_A = 25^\circ\text{C}$)		I_{FSM}	100	A
Operating Temperature		T_{OP}	-65 to +125	°C
Storage Temperature		T_{STG}	-65 to +150	°C
Maximum Thermal Resistance (Junction to Case)		$R_{\theta JC}$	20	°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/} Unless otherwise specified, all electrical characteristics @ 25°C.
^{4/} For optimal performance, connect anode terminals together.

SMD.22 (S.22) **SM Square Tab (S.22T)**



(dime used for size reference)



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ELECTRICAL CHARACTERISTICS ^{4/}		Symbol	Min	Typ	Max	Unit
Instantaneous Forward Voltage Drop (T _A = 25°C, pulsed)	I _F = 0.5 A	V _{F1}	-	0.36	-	V _{DC}
	I _F = 1.0 A	V _{F2}	-	0.39	0.47	
	I _F = 3.0 A	V _{F3}	-	0.47	-	
	I _F = 5.0 A	V _{F4}	-	0.54	0.62	
	I _F = 10.0 A	V _{F5}	-	0.70	-	
Instantaneous Forward Voltage Drop (T _A = 100°C, pulsed)	I _F = 0.5 A	V _{F6}	-	0.25	-	V _{DC}
	I _F = 1.0 A	V _{F7}	-	0.29	0.37	
	I _F = 3.0 A	V _{F8}	-	0.40	-	
	I _F = 5.0 A	V _{F9}	-	0.48	0.57	
	I _F = 10.0 A	V _{F10}	-	0.68	-	
Instantaneous Forward Voltage Drop (T _A = 125°C, pulsed)	I _F = 0.5 A	V _{F11}	-	0.23	-	V _{DC}
	I _F = 1.0 A	V _{F12}	-	0.27	0.35	
	I _F = 3.0 A	V _{F13}	-	0.38	-	
	I _F = 5.0 A	V _{F14}	-	0.48	0.57	
	I _F = 10.0 A	V _{F15}	-	0.70	-	
Instantaneous Forward Voltage Drop (T _A = -55°C, pulsed)	I _F = 0.5 A	V _{F16}	-	0.45	-	V _{DC}
	I _F = 1.0 A	V _{F17}	-	0.48	-	
	I _F = 3.0 A	V _{F18}	-	0.55	-	
	I _F = 5.0 A	V _{F19}	-	0.62	-	
	I _F = 10.0 A	V _{F20}	-	0.77	-	
Reverse Leakage Current (Rated V _R , T _A = 25°C, pulsed)	V _R = 6 V	I _{R1}	-	5	-	μA
	V _R = 12 V	I _{R2}	-	10	-	
	V _R = 20 V	I _{R3}	-	30	200	
	V _R = 30 V	I _{R4}	-	200	1000	
Reverse Leakage Current (Rated V _R , T _A = 100°C, pulsed)	V _R = 6 V	I _{R5}	-	1	-	mA
	V _R = 12 V	I _{R6}	-	2	5	
	V _R = 20 V	I _{R7}	-	3.5	-	
Reverse Leakage Current (Rated V _R , T _A = 125°C, pulsed)	V _R = 6 V	I _{R8}	-	10	-	mA
	V _R = 12 V	I _{R9}	-	20	-	
Junction Capacitance (f = 1 MHz, T _A = 25°C)	V _R = 5 V	C _J	-	230	350	pF

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- 3/ Unless otherwise specified, all electrical characteristics @ 25°C.
- 4/ For optimal performance, connect anode terminals together.

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

DATA SHEET #: SH0124E

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SSR10020S.22 / S.22T SSR10030S.22 / S.22T

Package Outline: SMD.22 (S.22)

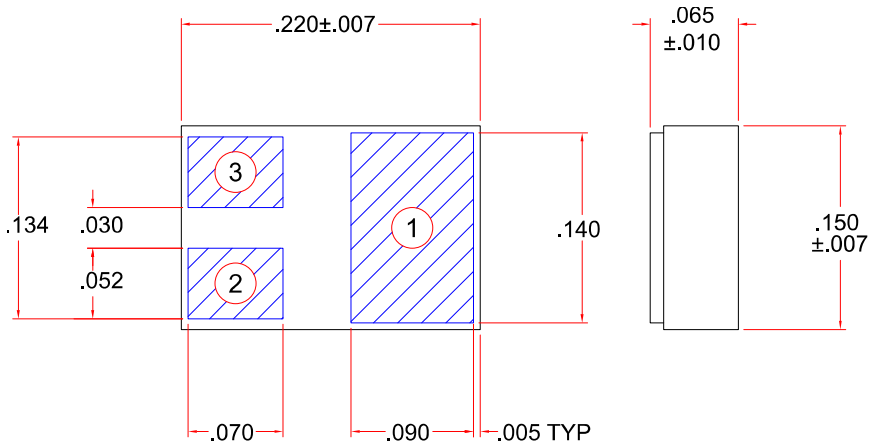
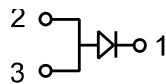
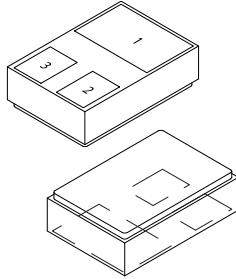
PIN OUT:

PIN 1: CATHODE

PIN 2: ANODE

PIN 3: ANODE

Note: For optimal performance, connect anode terminals together.

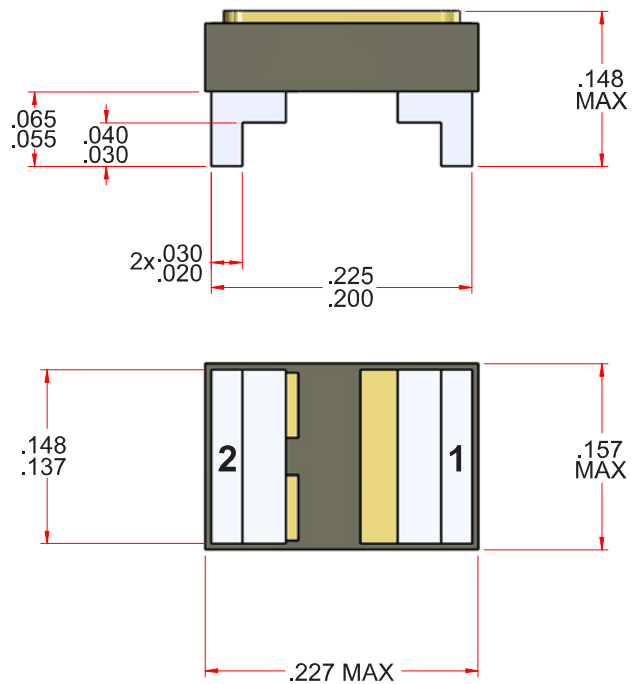
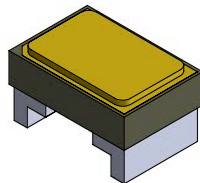


Package Outline: SMD.22T (S.22T)

PIN OUT:

PIN 1: CATHODE

PIN 2: ANODE



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