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

SSR05020S.22

5 AMP
HERMETIC SURFACE MOUNT
SCHOTTKY RECTIFIER
20 VOLTS

Designer's Data Sheet

Part Number / Ordering Information[1/]

SSR05 ___ ___ ___

Screening[2/]
__ = Not Screened
TX = TX Level
TXV = TXV Level
S = S Level

Package
S.22 = SMD.22

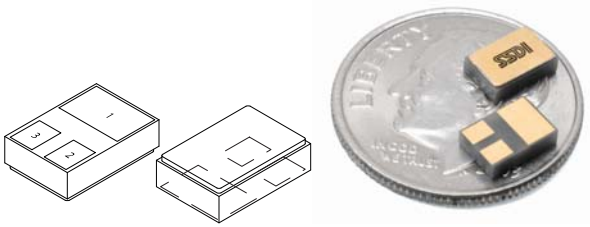
Voltage
020 = 20 V

FEATURES:
- Extremely small footprint
- Extremely low forward voltage drop
- Low reverse leakage
- Hermetically sealed surface mount package
- Equivalent for 1N5817 and 1N5822 applications
- 125°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	V_{RRM} V_{RWM} V_R	20	**V**
Average Rectified Forward Current (Resistive load, 60 Hz, sine wave, T_A = 25°C)	I_O	5	**A**
Peak Surge Current (8.3 ms pulse, half sine wave, allow junction to reach equilibrium between pulses, T_A = 25°C)	I_{FSM}	50	**A**
Operating & Storage Temperature	T_{OP} & T_{stg}	-65 to +125	**°C**
Maximum Thermal Resistance (Junction to Case)	$R_{\theta JC}$	5 (typ 3)	**°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.
4/ For optimal performance, connect anode terminals together.

SMD.22 (S.22)



(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, 300 µsec pulse)	I_F = 0.1 A	V_{F1}	-	0.32	-	V_{DC}
	I_F = 0.3 A	V_{F2}	-	0.36	0.45	
	I_F = 0.5 A	V_{F3}	-	0.39	-	
	I_F = 1.0 A	V_{F4}	-	0.43	0.55	
	I_F = 3.0 A	V_{F5}	-	0.55	-	
	I_F = 5.0 A	V_{F6}	-	0.66	-	
Instantaneous Forward Voltage Drop (T_A = 100°C, 300 µsec pulse)	I_F = 0.1 A	V_{F7}	-	0.21	-	V_{DC}
	I_F = 0.3 A	V_{F8}	-	0.26	0.32	
	I_F = 0.5 A	V_{F9}	-	0.29	-	
	I_F = 1.0 A	V_{F10}	-	0.33	0.44	
	I_F = 3.0 A	V_{F11}	-	0.43	-	
	I_F = 5.0 A	V_{F12}	-	0.51	-	
Instantaneous Forward Voltage Drop (T_A = 125°C, 300 µsec pulse)	I_F = 0.1 A	V_{F13}	-	0.18	-	V_{DC}
	I_F = 0.3 A	V_{F14}	-	0.23	0.30	
	I_F = 0.5 A	V_{F15}	-	0.26	-	
	I_F = 1.0 A	V_{F16}	-	0.30	0.42	
	I_F = 3.0 A	V_{F17}	-	0.40	-	
	I_F = 5.0 A	V_{F18}	-	0.50	-	
Instantaneous Forward Voltage Drop (T_A = -55°C, 300 µsec pulse)	I_F = 0.1 A	V_{F19}	-	0.43	-	V_{DC}
	I_F = 0.3 A	V_{F20}	-	0.46	-	
	I_F = 0.5 A	V_{F21}	-	0.47	-	
	I_F = 1.0 A	V_{F22}	-	0.50	-	
	I_F = 3.0 A	V_{F23}	-	0.56	-	
	I_F = 5.0 A	V_{F24}	-	0.61	-	
Reverse Leakage Current (Rated V_R, T_A = 25°C, 300 µsec pulse minimum)	V_R = 6 V	I_{R1}	-	2	-	µA
	V_R = 12 V	I_{R2}	-	3.5	-	
	V_R = 20 V	I_{R3}	-	9	200	
	V_R = 25 V	I_{R4}	-	20	-	
Reverse Leakage Current (Rated V_R, T_A = 100°C, 300 µsec pulse minimum)	V_R = 6 V	I_{R5}	-	0.4	-	mA
	V_R = 12 V	I_{R6}	-	0.65	5	
	V_R = 20 V	I_{R7}	-	1.15	-	
	V_R = 25 V	I_{R8}	-	2.0	-	
Reverse Leakage Current (Rated V_R, T_A = 125°C, 300 µsec pulse minimum)	V_R = 6 V	I_{R9}	-	1.6	-	mA
	V_R = 12 V	I_{R10}	-	2.4	-	
	V_R = 20 V	I_{R11}	-	4.0	-	
	V_R = 25 V	I_{R12}	-	7.0	-	
Junction Capacitance (f = 1 MHz, T_A = 25°C)	V_R = 5 V	C_J	-	110	150	pF

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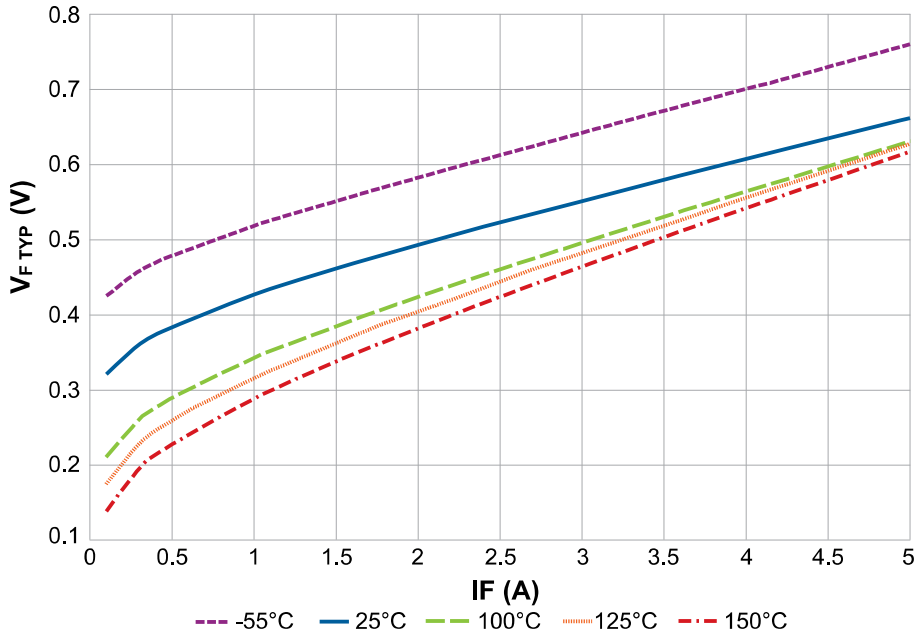
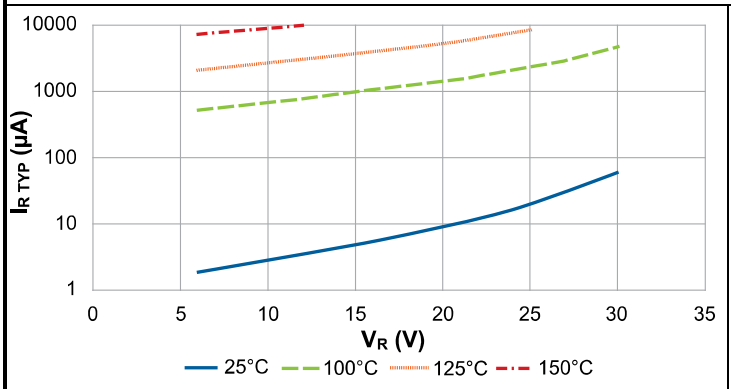
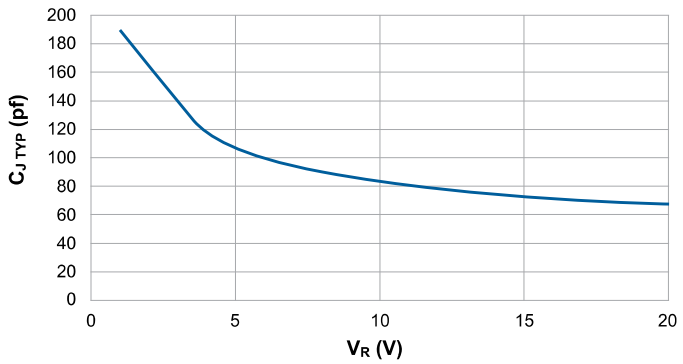
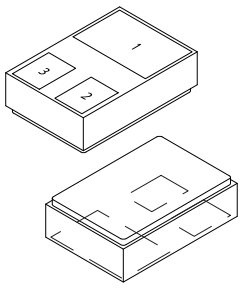


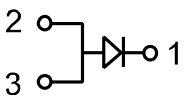


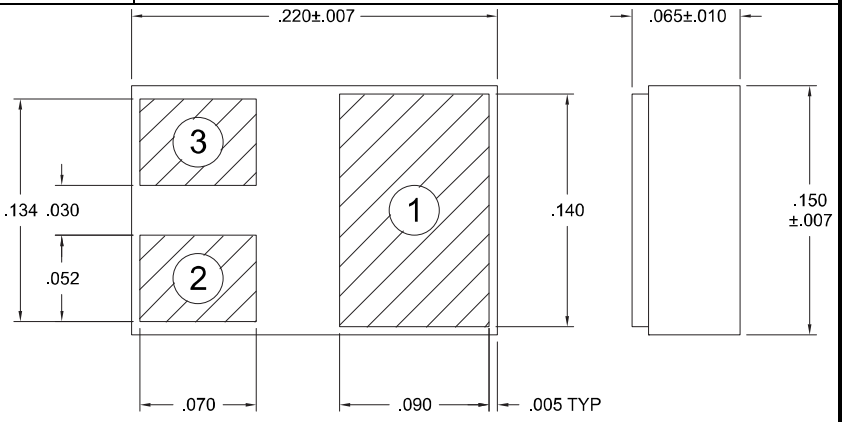


Package Outline:
SMD.22 (S.22)

PIN OUT:
PIN 1: CATHODE
PIN 2: ANODE
PIN 3: ANODE
Note: For optimal performance, connect anode terminals together.







NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	**DATA SHEET #: SH0126A**	**DOCX**