



Solid State Devices, Inc.

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**SFS3027S.22 through
SFS3029S.22**

**0.5 AMP, 30 - 100 Volt
SILICON CONTROLLED
RECTIFIER**

Designer's Data Sheet

Part Number/Ordering Information ^{1/}
SFS302x

Screening ^{2/}
 — = Not Screened
 TX = TX Level
 TXV = TXV
 S = S Level

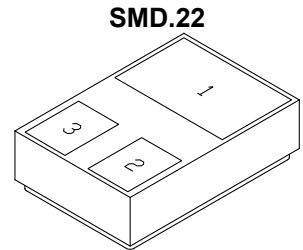
Voltage/Family
 7 = 30V
 8 = 60V
 9 = 100V

- FEATURES:**
- Passivated planar construction
 - Low on-state voltage and fast switching
 - Hermetically Sealed surface mount power package
 - Pulse current up to 30A

MAXIMUM RATINGS		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SFS3027	V_{DRM}	30	Volts
	SFS3028		60	
	SFS3029	V_{RRM}	100	
Non-Repetitive Peak Reverse Blocking Voltage (t < 5.0 ms)	SFS3027		50	Volts
	SFS3028	V_{RSM}	100	
	SFS3029		200	
RMS On-State Current, (All Conduction Angles, Tc= 100°C)		$I_T (RMS)$	0.5	Amps
Peak Non-Repetitive Surge Current (One Cycle, 60 Hz)		I_{TSM}	8	Amps
Peak Gate Power		P_{GM}	0.1	Watts
Average Gate Current		$I_{G(ave)}$	0.025	Amps
Peak Gate Current		I_{GM}	0.25	Amps
Reverse Gate Current		I_{GR}	0.003	Amps
Reverse Gate Voltage		V_{GM}	5.0	Volts
Operating Junction Temperature Range		T_J	-65 to +150	°C
Storage Temperature Range		T_{stg}	-65 to +200	°C
Thermal Resistance, Junction to Case		$R_{\theta JC}$	15	°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/} Unless otherwise specified, all electrical characteristics @25°C.





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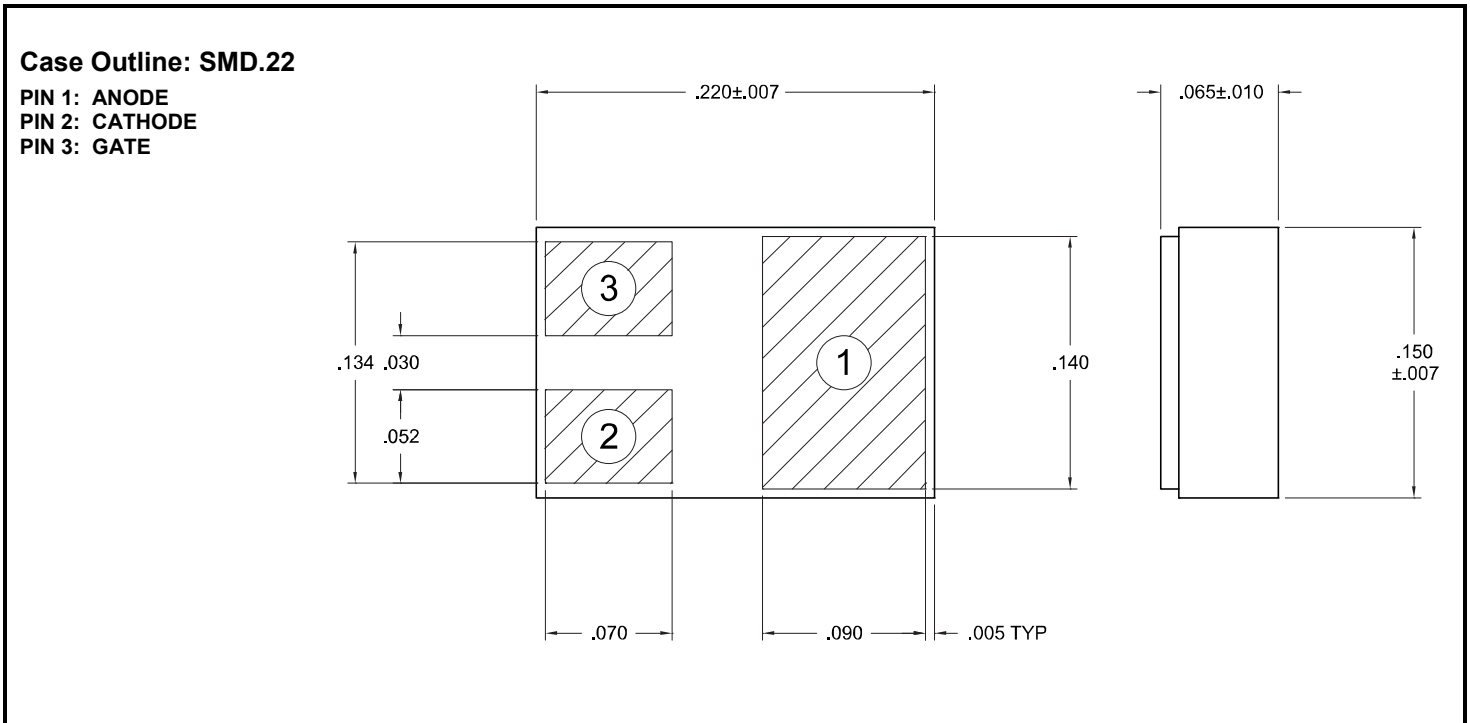
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ELECTRICAL CHARACTERISTICS	Symbol	Min	Typical	Max	Unit
Peak Reverse Blocking Current (Rated V_{RRM} , $T_C = 25^\circ\text{C}$) (Rated V_{RRM} , $T_C = 150^\circ\text{C}$)	I_{RRM}	—	0.08 0.15	0.1 50	μA
Peak Forward Blocking Current (Rated V_{RRM} , $T_C = 25^\circ\text{C}$) (Rated V_{RRM} , $T_C = 150^\circ\text{C}$)	I_{DRM}	—	0.08 0.15	0.1 20	μA
Peak On-State Voltage ($I_F = 1.0$ A Peak)	V_{TM}	0.8	1.1	1.5	Volts
Gate Trigger Current ($V_D = 5 V_{DC}$, $R_L = 10,000 \Omega$, $T_C = 25^\circ\text{C}$) ($V_D = 5 V_{DC}$, $R_L = 10,000 \Omega$, $T_C = -65^\circ\text{C}$)	I_{GT}	— —	25 50	200 1200	μA
Gate Trigger Voltage ($V_D = 5 V_{DC}$, $R_L = 100 \Omega$, $T_C = 25^\circ\text{C}$) ($V_D = 5 V_{DC}$, $R_L = 100 \Omega$, $T_C = -65^\circ\text{C}$) ($V_D = 5 V_{DC}$, $R_L = 100 \Omega$, $T_C = 150^\circ\text{C}$)	V_{GT}	0.4 0.6 0.1	0.55 0.75 0.20	0.8 1.1 0.6	Volts
Holding Current ($V_D = 5 V_{DC}$, $R_L = 1000 \Omega$, $T_C = 25^\circ\text{C}$) ($V_D = 5 V_{DC}$, $R_L = 1000 \Omega$, $T_C = -65^\circ\text{C}$) ($V_D = 5 V_{DC}$, $R_L = 1000 \Omega$, $T_C = 150^\circ\text{C}$)	I_H	0.3 0.5 0.05	1.0 1.5 0.38	5.0 10.0 1.0	mA

NOTES:

* RGK current is not included in measurement



*For information on curves, contact the Factory Representative for Engineering Assistance.

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

DATA SHEET #: SCR010A

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