



Solid State Devices, Inc.

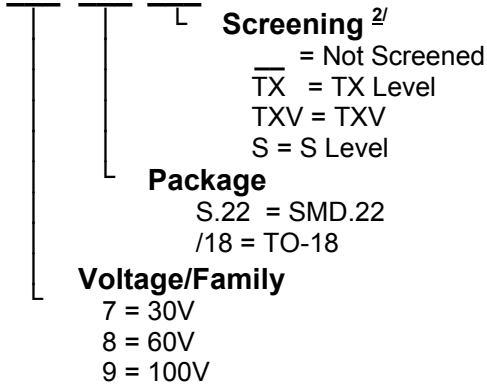
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SFS3027 - SFS3029 Series

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SFS302



0.5 AMP, 30 - 100 Volt SILICON CONTROLLED RECTIFIER

FEATURES:

- Passivated planar construction
- Low on-state voltage and fast switching
- Hermetically Sealed surface mount power package

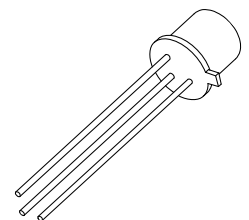
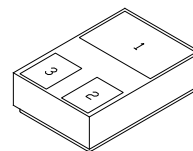
MAXIMUM RATINGS ^{3/}		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SFS3027	V_{DRM} V_{RRM}	30	Volts
	SFS3028		60	
	SFS3029		100	
Non-Repetitive Peak Reverse Blocking Voltage (t < 5.0 ms)	SFS3027	V_{RSM}	50	Volts
	SFS3028		100	
	SFS3029		200	
RMS On-State Current, (All Conduction Angles, T _C = 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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TO-18



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

DATA SHEET #: SCR010C

DOC



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ELECTRICAL CHARACTERISTICS ^{3/}	Symbol	Min	Typical	Max	Unit
Peak Reverse Blocking Current Rated V_{RRM} , $R_{GK} = 1000 \Omega$	I_{RRM}	—	0.08 0.15	0.1 50	μA
$T_C = 25^\circ C$ $T_C = 150^\circ C$					
Peak Forward Blocking Current Rated V_{DRM} , $R_{GK} = 1000 \Omega$	I_{DRM}	—	0.08 0.15	0.1 20	μA
$T_C = 25^\circ C$ $T_C = 150^\circ C$					
Peak On-State Voltage $I_F = 1.0 A$ pulse	V_{TM}	0.8	1.1	1.5	V
Gate Trigger Current $V_D = 5 V_{DC}$, $R_L = 100 \Omega$, $R_e = 10 k\Omega$	I_{GT}	— —	25 50	200 1200	μA
$T_C = 25^\circ C$ $T_C = -65^\circ C$					
Gate Trigger Voltage $V_D = 5 V_{DC}$, $R_L = 100 \Omega$, $R_e = 100 \Omega$	V_{GT}	0.4 0.6 0.1	0.55 0.75 0.20	0.8 1.1 0.6	V
$T_C = 25^\circ C$ $T_C = -65^\circ C$ $T_C = 150^\circ C$					
Holding Current $V_D = 5 V_{DC}$, $R_{GK} = 1000 \Omega$	I_H	0.3 0.5 0.05	1.0 1.5 0.38	5.0 10.0 1.0	mA
$T_C = 25^\circ C$ $T_C = -65^\circ C$ $T_C = 150^\circ C$					

