



Solid State Devices, Inc.

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SFS2323 thru SFS2329

1.6 AMP SILICON CONTROLLED RECTIFIER 50 – 400 VOLTS

Designer's Data Sheet

Part Number/Ordering Information ^{1/}
SFS23

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

Voltage/Family

23 = 50V	27 = 250V
24 = 100V	28 = 300V
26 = 200V	29 = 400V

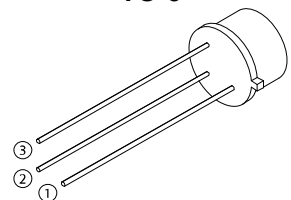
- FEATURES:**
- Low-Level Gate Characteristics
 - $I_{GT} = 200 \mu A$ (Max) @ 25°C
 - Low Holding Current $I^H = 1 mA$ (Max) @ 25°C
 - Anode Common to Case
 - Hermetically Sealed

MAXIMUM RATINGS	Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SFS2323	50	Volts
	SFS2324	100	
	SFS2326	200	
	SFS2327	250	
	SFS2328	300	
	SFS2329	400	
Non-Repetitive Peak Reverse Blocking Voltage ($t < 5.0 ms$)	SFS2323	75	Volts
	SFS2324	150	
	SFS2326	300	
	SFS2327	350	
	SFS2328	400	
	SFS2329	500	
RMS On-State Current (All Conduction Angles)	$I_{T(RMS)}$	1.6	Amps
Peak Non-Repetitive Surge Current (One Cycle, 60 Hz, $T_C = 80^\circ C$)	I_{TSM}	15	Amps
Peak Gate Power	P_{GM}	0.1	Watts
Average Gate Power	$P_{G(AV)}$	0.01	Watts
Peak Gate Current	I_{GM}	0.1	Amps
Peak Gate Voltage	V_{GM}	6.0	Volts
Operating Junction Temperature Range	T_J	-65 to +125	°C
Storage Temperature Range	T_{stg}	-65 to +150	°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	30	°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.

TO-5



NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	DATA SHEET #: SCR004C	DOC
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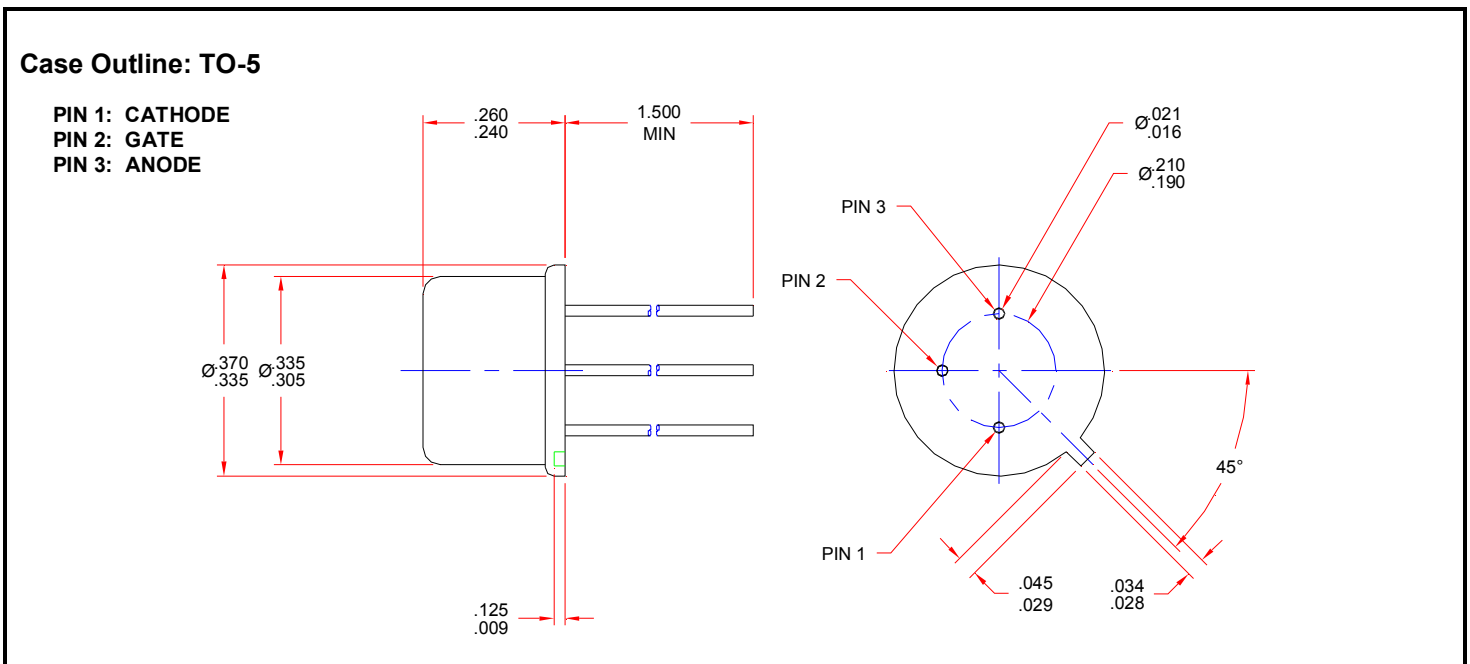
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SFS2323 thru SFS2329

ELECTRICAL CHARACTERISTICS	Symbol	Min	Typical	Max	Unit
Peak Reverse Blocking Current (Rated V_{RRM} , $T_C = 25^\circ\text{C}$) (Rated V_{RRM} , $T_C = 125^\circ\text{C}$)	I_{RRM}	—	0.12 0.1	1 100	μA
Peak Forward Blocking Current (Rated V_{RRM} , $T_C = 25^\circ\text{C}$) (Rated V_{RRM} , $T_C = 125^\circ\text{C}$)	I_{DRM}	—	0.14 1.0	1 100	μA
Peak On-State Voltage ($I_F = 1.6 \text{ A Peak}$)	V_{TM}	—	1.1	1.3	Volts
Gate Trigger Current ($V_D = 6 V_{DC}$, $R_L = 100 \Omega$, $T_C = 25^\circ\text{C}$) ($V_D = 6 V_{DC}$, $R_L = 100 \Omega$, $T_C = -65^\circ\text{C}$)	I_{GT}	— —	3.5 9.2	200 350	μA
Gate Trigger Voltage ($V_D = 6 V_{DC}$, $R_L = 100 \Omega$, $T_C = 25^\circ\text{C}$) ($V_D = 6 V_{DC}$, $R_L = 100 \Omega$, $T_C = -65^\circ\text{C}$) ($V_D = 6 V_{DC}$, $R_L = 100 \Omega$, $T_C = 125^\circ\text{C}$)	V_{GT}	— — 0.1	0.51 0.74 0.25	0.7 0.9 0.9	Volts
Holding Current ($V_D = 6 V_{DC}$, $R_L = 100 \Omega$, $T_C = 25^\circ\text{C}$) ($V_D = 6 V_{DC}$, $R_L = 100 \Omega$, $T_C = -65^\circ\text{C}$) ($V_D = 6 V_{DC}$, $R_L = 100 \Omega$, $T_C = 125^\circ\text{C}$)	I_H	0.8 1.5 0.15	1.0 1.8 0.46	2.0 3.0 —	mA

NOTES:

* RGK current is not included in measurement



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

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