Solid State Devices, Inc.
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SFS07050 thru SFS07400
Series

Designer's Data Sheet

Part Number/Ordering Information [1/]

SFS07 ___ ___ ___

- **Screening**[2/] ___ = Not Screened; TX = TX Level; TXV = TXV Level; S = S Level
- **Package** ___ = TO-5; S.5 = SMD.5; G = Cerpack
- **Voltage/Family**: 050 = 50 V; 100 = 100 V; 200 = 200 V; 250 = 250 V; 300 = 300 V; 400 = 400 V

7 AMP
SILICON CONTROLLED RECTIFIER
50 – 400 VOLTS

FEATURES:
- Low-Level Gate Characteristics
- I_{GT} = 20 µA (typical) @ 25°C
- Low Holding Current I_H = 1.25 mA (typ) @ 25°C
- Anode Common to Case
- Hermetically Sealed

MAXIMUM RATINGS		Symbol	Value	Unit
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SFS07050 SFS07100 SFS07200 SFS07250 SFS07300 SFS07400	V_{DRM} V_{RRM}	50 100 200 250 300 400	V
Non-Repetitive Peak Reverse Blocking Voltage t < 5.0 ms	SFS07050 SFS07100 SFS07200 SFS07250 SFS07300 SFS07400	V_{RSM}	75 150 300 350 400 500	V
RMS On-State Current All Conduction Angles		$I_{T\ (RMS)}$	7	A
Peak Non-Repetitive Surge Current One Cycle, 60 Hz, T_C = 80°C		I_{TSM}	80	A
Peak Gate Power		P_{GM}	20	W
Average Gate Power		$P_{G\ (AV)}$	0.5	W
Peak Gate Current		I_{GM}	1	A
Peak Gate Voltage		V_{GM}	6.0	V
Operating Junction Temperature Range		T_J	-55 to +125	°C
Storage Temperature Range		T_{stg}	-55 to +150	°C
Thermal Resistance, Junction to Case	TO-5 SMD.5, Cerpack	$R_{\theta JC}$	10 (6 typ) 3.5 (2 typ)	°C/W

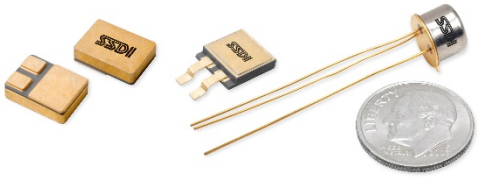
NOTES:

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.

SMD.5 (S.5) **Cerpack (G)** **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 #: SCR011D	DOCX

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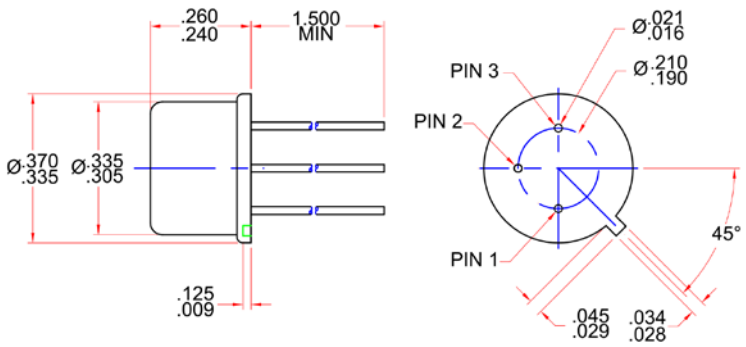
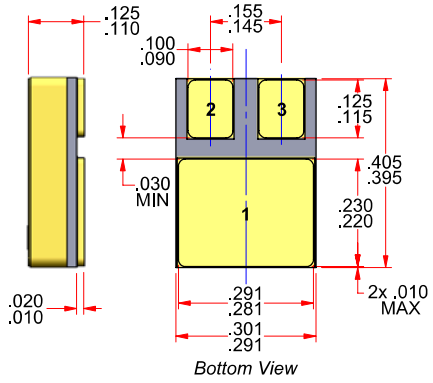
ELECTRICAL CHARACTERISTICS		Symbol	Min	Typical	Max	Unit
Peak Reverse Blocking Current	Rated V_{RRM}, T_C = 25°C Rated V_{RRM}, T_C = 110°C	I_{RRM}	— —	0.2 25	1 500	**µA**
Peak Forward Blocking Current	Rated V_{RRM}, T_C = 25°C Rated V_{RRM}, T_C = 110°C	I_{DRM}	— —	0.2 40	1 750	**µA**
Peak On-State Voltage I_F = 7 A, T_C = 25°C		V_{TM}	—	2.1	2.2	**V**
Gate Trigger Current V_D = 6 V_{DC}, R_L = 100 Ω, T_C = 25°C		I_{GT}	—	20	200	**µA**
Gate Trigger Voltage V_D = 6 V_{DC}, R_L = 100 Ω, T_C = 25°C		V_{GT}	—	0.51	0.8	**V**
Gate Controlled Turn-on Time I_G = 10 mA, T_C = 25°C		t_{GT}	—	0.6	1.2	**µsec**
Critical Rate of Rise of Off-State Voltage Open gate, V = 100 V, T_C = 100°C		**dV/dt**	100	270	—	**V/µsec**
Holding Current V_D = 6 V_{DC}, T_C = 25°C		I_{HO}	—	1.25	10	**mA**

NOTES: * RGK current is not included in measurement

Case Outline: TO-5

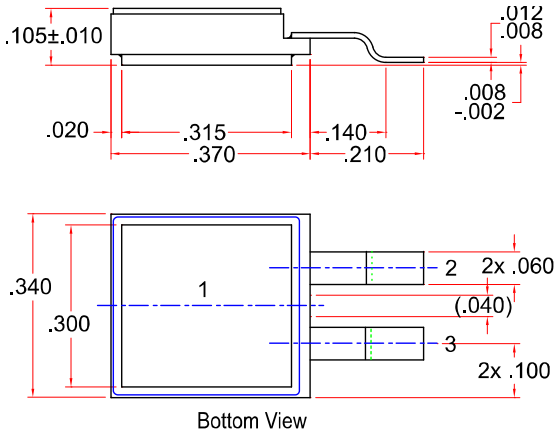


Case Outline: SMD.5



Bottom View

Case Outline: Cerpack



Bottom View

PACKAGE	PIN 1 / Bottom Pad:	PIN 2:	PIN 3:
TO-5	CATHODE	GATE	ANODE
SMD.5	ANODE	CATHODE	GATE
Cerpack	ANODE	CATHODE	GATE

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

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