



PRELIMINARY

SOLID STATE DEVICES, INC.

14005 Stage Road * Santa Fe Springs, Ca 90670
Phone: (562) 404-4474 * Fax: (562) 404-1773

SFS2004/59

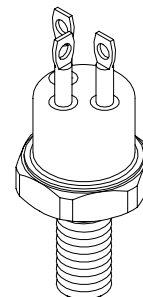
**10 AMP
800 VOLTS
HIGH VOLTAGE THYRISTOR**

DESIGNER'S DATA SHEET

FEATURES:

- **Designed for Pulse Modulators in Radar Applications.**
- **High Surge Current, 100A.**
- **High Blocking Voltage, 600V min.**
- **High dv/dt, 200V/us min.**
- **di/dt = 100A/us.**
- **Fast Switching Time.**
- **Isolated Stud.**
- **Hermetically sealed.**

TO-59



MAXIMUM RATINGS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Peak Repetitive Forward Blocking Voltage	V_{DRM}	800	Volts
Peak Repetitive Reverse Blocking Voltage	V_{RRM}	600	Volts
RMS On-State Current (All Condition Angles, $T_C = 85^\circ\text{C max}$)	$I_{T(RMS)}$	10	Amps
Peak Repetitive Surge Current (One Cycle, 60Hz, Pulse width 2μsec, Duty Cycle 0.6%, $T_C = 85^\circ\text{C max}$)	$I_{TFM(REP)}$	100	Amps
Peak Gate Power	P_{GM}	20	Watts
Average Gate Power (Pulse width 2μsec)	$P_{G(AV)}$	1.0	Watts
Peak Gate Current	I_{GM}	5.0	Amps
Peak Gate Voltage	V_{GM}	10	Volts
Operating Junction Temperature Range	T_J	-65 TO +105	°C
Storage Temperature Range	T_{STG}	-65 TO +200	°C
Thermal Resistance Junction to Case	Θ_{JC}	3.0	°C/W

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

DATA SHEET #: **SCR0002A**

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ELECTRICAL CHARACTERISTICS @ T_J=25°C (Unless Otherwise Specified)

RATING		SYMBOL	MIN	MAX	UNIT
Peak Reverse Blocking Current (Rated V _R RM)	T _J = 25°C T _J = 105°C	I _{RRM}	-	0.5 2.0	mA
Peak Forward Blocking Current (Rated V _D RM)	T _J = 25°C T _J = 105°C	I _{DRM}	-	0.5 2.0	mA
Forward On-State Voltage (I _F = 2.0A Peak, t = 1ms, Duty Cycle ≤ 1%)		V _F	-	1.50	Volts
Gate Trigger Current (V _A = 7Vdc, R _L = 100Ω)	T _J = 25°C T _J = 105°C	I _{GT}	- -	50 100	mA
Gate Trigger Voltage (V _A = 7Vdc, R _L = 100Ω)	T _J = 25°C T _J = -65°C T _J = 105°C	V _{GT}	- - 0.2	1.5 2.5 -	Volts
Holding Current (V _A = 7Vdc, R _K G - Open, T _J = 105°C)		I _H	0.2	-	mA
Switch Time (I _F = 30A min Pulse; I _R = 5A; T _C = 85°C; dV/dt = 250V/μs to 600V; V _{RA} (OFF) = 0V; V _{RG} (OFF) = 6V)	Delay Time Rise Time Turn Off Time	t _d t _r t _{off}	- - 0.2	1.5 2.5 -	μsec

PACKAGE OUTLINE: TO-59

PIN OUT:

1. CATHODE
2. GATE
3. ANODE

