



Solid State Devices, Inc.

14830 Valley View Blvd * La Mirada, Ca 90638
 Phone: (562) 404-7855 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

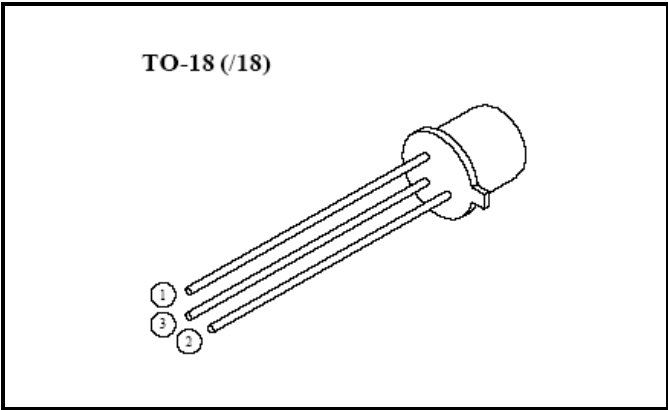
SFS1826 thru SFS1829

**1.6 AMPS
 200 – 400 VOLTS
 SILICON CONTROLLED
 RECTIFIER**

Designer's Data Sheet

FEATURES:

- Low-Level Gate Characteristics
- $I_{GT} = 200 \mu A$ (Max) @ 25°C
- Low Holding Current $I_H = 1 \text{ mA}$ (Max) @ 25°C
- Anode Common to Case
- Hermetically Sealed
- TX, TXV, S-Level Screening Available. Consult Factory



MAXIMUM RATINGS		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SFS1826	V_{DRM}	200	Volts
	SFS1827		250	
	SFS1828	V_{RRM}	300	
	SFS1829		400	
Non-Repetitive Peak Reverse Blocking Voltage (t < 5.0 ms)	SFS1826	V_{RSM}	300	Volts
	SFS1827		350	
	SFS1828		400	
	SFS1829		500	
RMS On-State Current (All Conduction Angles)		$I_T (RMS)$	1.6	Amps
Average On-State Current	$T_C = 50^\circ C$ $T_A = 25^\circ C$	$I_T (AV)$	1.0	Amps
			0.7	
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 +200	°C
Storage Temperature Range		T_{stg}	-65 to +200	°C
Thermal Resistance, Junction to Case		$R_{\theta JC}$	72	°C/W



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ELECTRICAL CHARACTERISTICS	Symbol	Min	Max	Unit
Peak Reverse Blocking Current (Rated V_{RRM})	I_{RRM}	—	1	μA
Peak Forward Blocking Current (Rated V_{DRM} , $R_{GK} = 1K \Omega$)	I_{DRM}	—	1	μA
Peak On-State Voltage ($I_F = 1.6 A$ Peak)	V_{TM}	—	1.3	Volts
Gate Trigger Current ($V_D = 6 V_{DC}$, $R_L = 100 \Omega$, $T_C = 125^\circ C$) ($V_D = 6 V_{DC}$, $R_L = 100 \Omega$, $T_C = -65^\circ C$)	I_{GT}	— —	200 350	μA
Gate Trigger Voltage ($V_D = 6 V_{DC}$, $R_L = 100 \Omega$, $T_C = 25^\circ C$) ($V_D = 6 V_{DC}$, $R_L = 100 \Omega$, $T_C = -65^\circ C$)	V_{GT}	— —	0.7 0.9	Volts
Holding Current ($V_D = 6 V_{DC}$) ($V_D = 6 V_{DC}$, $T_C = -65^\circ C$)	I_H	— —	0.3 2.0	mA

NOTES:

1/ RGK current is not included in measurement.

2/ Thyristor devices shall not be tested with a constant current source for forward and reverse blocking capability such that the voltage applies exceeds the rated blocking voltage.

3/ Thyristor devices shall not have a positive bias applied to the gate concurrently with a negative potential applied to the anode.

4/ Unless Otherwise Specified, All Electrical Characteristics @ $T_C = 25^\circ C$, $R_{GK} = 1K \Omega$.

Available Part Numbers:
SFS1826/18; SFS1827/18; SFS1828/18; SFS1829/18

PIN ASSIGNMENT (Standard)			
Package	Cathode	Gate	Anode
TO-18 (/18)	Pin 2	Pin 3	Pin 1

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