



Solid State Devices, Inc.

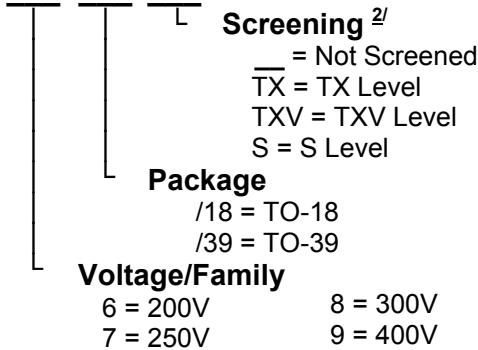
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SFS1826 – SFS1829 Series

Designer's Data Sheet

Part Number/Ordering Information ^{1/}

SFS182



1.6 AMP SILICON CONTROLLED RECTIFIER 200 - 400 Volts

FEATURES:

- Low-Level Gate Characteristics
- Low Holding Current $I_H = 5 \text{ mA (Max) @ } 25^\circ\text{C}$
- Anode Common to Case
- Hermetically Sealed
- TX, TXV, S-Level Screening Available – Consult Factory

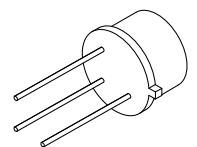
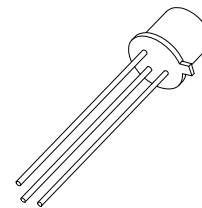
MAXIMUM RATINGS ^{3/}		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SFS1826	V_{DRM} V_{RRM}	200	Volts
	SFS1827		250	
	SFS1828		300	
	SFS1829		400	
Non-Repetitive Peak Reverse Blocking Voltage ($t < 5.0 \text{ ms}$)	SFS1826	V_{RSM}	300	Volts
	SFS1827		350	
	SFS1828		400	
	SFS1829		500	
RMS On-State Current (All Conduction Angles)		$I_{T(RMS)}$	1.6	Amps
Average On-State Current	$T_C = 50^\circ\text{C}$	$I_{T(AV)}$	1.0	Amps
	$T_A = 25^\circ\text{C}$		0.7	
Peak Non-Repetitive Surge Current (One Cycle, 60 Hz, $T_C = 80^\circ\text{C}$)		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	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-65 to +200	$^\circ\text{C}$
Thermal Resistance, Junction to Case		$R_{\theta JC}$	72	$^\circ\text{C/W}$

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, $R_{GK} = 1\text{K } \Omega$.
- 4/ RGK current is not included in measurement.
- 5/ 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.
- 6/ Thyristor devices shall not have a positive bias applied to the gate concurrently with a negative potential applied to the anode.

TO-18 (/18)

TO-39 (/39)



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

DATA SHEET #: SCR005C

DOC



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ELECTRICAL CHARACTERISTICS ^{3/}	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 $V_D = 6 V_{DC}$, $R_L = 100 \Omega$, $T_C = -65^\circ C$	I_{GT}	—	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	— —	5 2.0	mA

Case Outline: TO-18

PIN 1: ANODE
 PIN 2: CATHODE
 PIN 3: GATE

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

Case Outline: TO-39

PIN 1: ANODE
 PIN 2: CATHODE
 PIN 3: GATE

Available Part Numbers:
 SFS1826/39; SFS1827/39;
 SFS1828/39; SFS1829/39

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