



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

Designer's Data Sheet

Part Number/Ordering Information^{1/}

S6189F

Screening^{3/}

— = Not Screened

TX = TX Level

TXV = TXV

S = S Level

Package

C = Ministud

V = Isolated Ministud

Voltage

6 = 600V

8 = 800V

10 = 1000V

**S6189F6
thru
S6189F10**

**9 Amp
Fast Recovery Rectifier
600 - 1000 Volts**

Features:

- Fast Recovery: 250 nsec Maximum
- PIV to 1000 Volts
- Low Reverse Leakage Current
- Hermetically Sealed Ministud Packages
- Single Chip Construction
- High Surge Rating
- Low Thermal Resistance
- TX, TXV, and Space Level Screening Available
- Available in Ultrafast and Hyperfast Versions

Maximum Ratings^{2/}

		Symbol	Value	Units
Peak Repetitive Reverse Voltage and DC Blocking Voltage	S6189F6C, V	V_{RRM}	600	Volts
	S6189F8C, V	V_{RWM}	800	
	S6189F10C, V	V_R	1000	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave, $T_C \leq 100^\circ\text{C}$)		I_O	9	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_C \leq 100^\circ\text{C}$)		I_{FSM}	125	Amps
Operating & Storage Temperature		$T_{OP} \text{ \& } T_{STG}$	-65 to +175	$^\circ\text{C}$
Maximum Thermal Resistance (Junction to Case)	"V" Isolated	$R_{\theta JC}$	7.5	$^\circ\text{C/W}$
	"C" Hot Case		4.5	

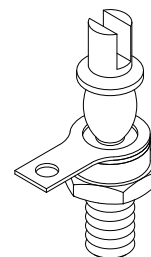
Notes:

- 1/ For ordering information, price, operating curves, and availability - contact factory.
- 2/ Unless otherwise specified, all electrical characteristics @ 25°C
- 3/ Screening based on MIL-PRF-19500. Screening flows available on request.

Ministud (C)



Isolated Ministud (V)



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

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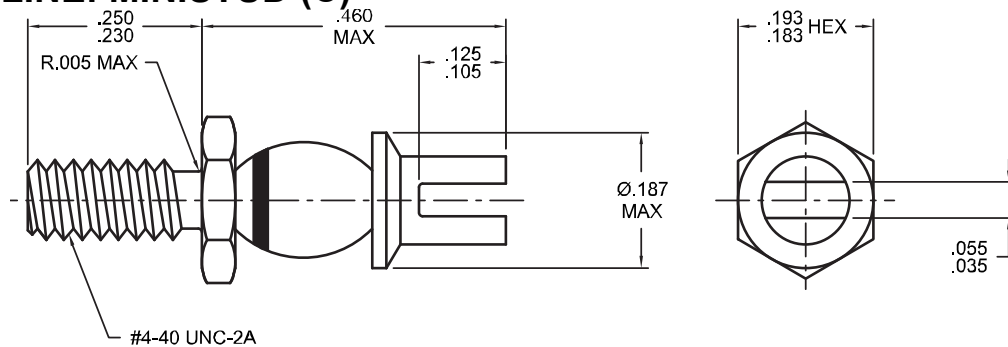
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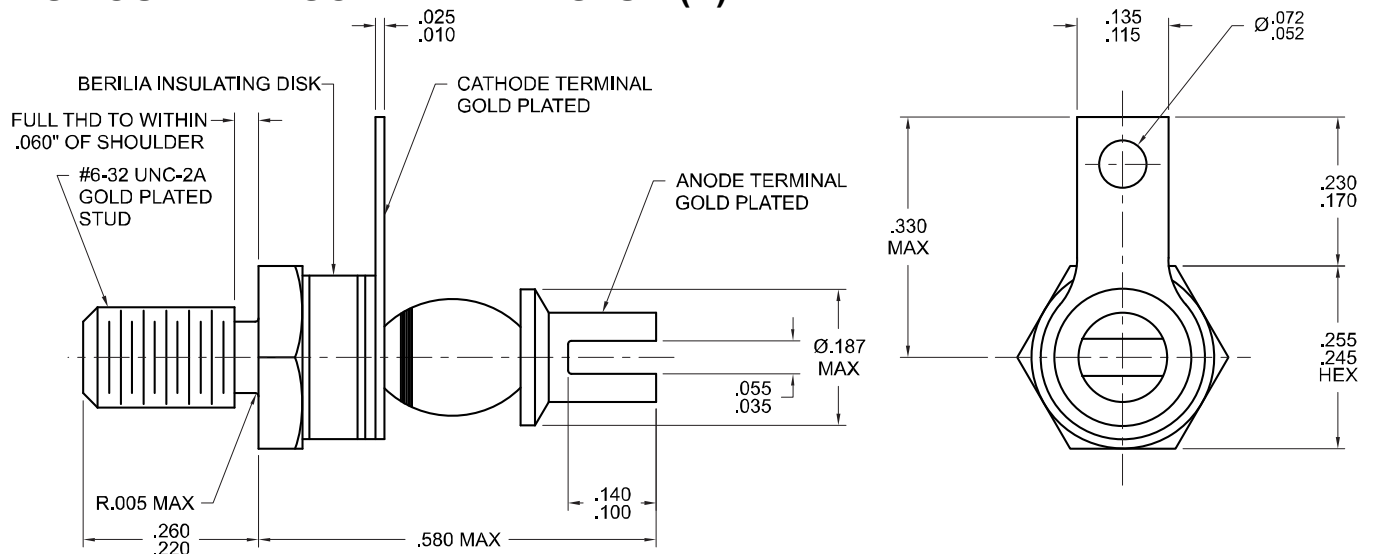
S6189F6 thru S6189F10

Electrical Characteristics	Symbol	Max	Units
Instantaneous Forward Voltage Drop ($I_F = 9 \text{ Adc}$, $T_A = 25^\circ\text{C}$, 300 μs pulse)	V_F	1.2	V_{DC}
Instantaneous Forward Voltage Drop ($I_F = 9 \text{ Adc}$, $T_A = -55^\circ\text{C}$, 300 μs pulse)	V_F	1.3	V_{DC}
Reverse Leakage Current (Rated V_R , $T_A = 25^\circ\text{C}$, 300 μs minimum pulse)	I_R	10	μA
Reverse Leakage Current (Rated V_R , $T_A = 100^\circ\text{C}$, 300 μs minimum pulse)	I_R	50	μA
Junction Capacitance ($V_R = 10 V_{DC}$, $T_A = 25^\circ\text{C}$, $f = 1 \text{ MHz}$)	C_J	50	pF
Reverse Recovery Time ($I_F = 500 \text{ mA}$, $I_R = 1 \text{ A}$, $I_{RR} = 250 \text{ mA}$, $T_A = 25^\circ\text{C}$)	t_{RR}	250	nsec

CASE OUTLINE: MINISTUD (C)



CASE OUTLINE: ISOLATED MINISTUD (V)



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