



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
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**S6189F6
 thru
 S6189F10**

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

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

- 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

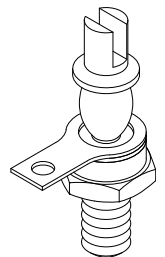
| Maximum Ratings ^{2/} | | Symbol | Value | Units |
|--|--------------|-------------------------|-------------|--------------------|
| Peak Repetitive Reverse Voltage and DC Blocking Voltage | S6189F6C, V | V_{RRM} | 600 | Volts |
| | S6189F8C, V | V_{RWM} | 800 | |
| | S6189F10C, V | V_R | 1000 | |
| 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 | | $T_{OP} \ \& \ T_{STG}$ | -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)





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| 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 |

