



Solid State Devices, Inc.

14830 Valley View Blvd * La Mirada, Ca 90638

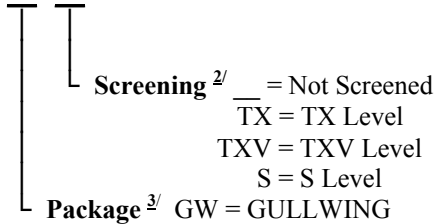
Phone: (562) 404-7855 * Fax: (562) 404-1773

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DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SFF4393A2



SFF4393A2GW

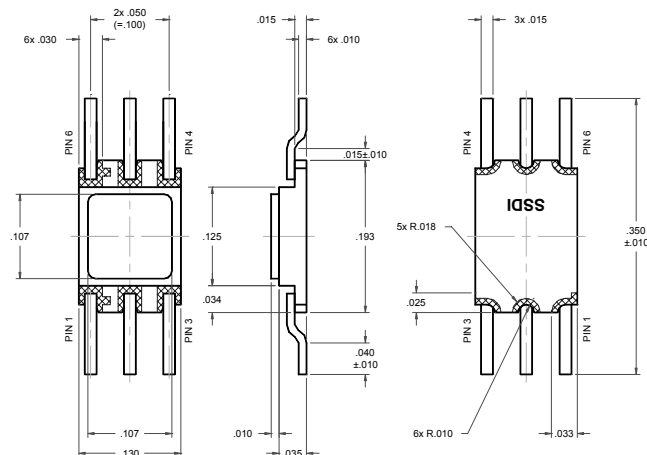
Dual Microminiature Package 50 mA 40 Volts Dual N-Channel JFET Transistor

Features:

- Low ON Resistance
- Low Capacitance, < 4 pF
- Fast Switching, $t_{on} < 5$ ns
- Used for Analog Switches, Choppers, Current Limiters, and Sample-and-Hold Applications
- TX, TXV, and S-Level Screening Available. Consult Factory.

Maximum Ratings		Symbol	Value	Units
Drain – Source Voltage		V_{DS}	40	Volts
Drain – Gate Voltage		V_{DG}	40	Volts
Reverse Gate – Source Voltage		V_{SG}	40	Volts
Drain Current		I_D	50	mA
Power Dissipation @ $T_A = 25^\circ\text{C}$	Per Device Total	P_D	500 660	mW mW
Maximum Thermal Resistance Junction to Ambient		$R_{\theta JA}$ ^{5/}	245	$^\circ\text{C/W}$
Lead Temperature (1/16" from the seated surface for 60 seconds)		T_L	300	$^\circ\text{C}$
Operating & Storage Temperature		T_{OP} & T_{STG}	-65 to +200	$^\circ\text{C}$

PACKAGE OUTLINE: GULLWING (GW)



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

DATA SHEET #: FT0010A

DOC

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Electrical Characteristics ^{4/}		Symbol	Min	Max	Units
Gate – Source Breakdown Voltage	$I_G = -1\mu A, V_{DS} = 0 V$	BV_{GSS}	-40	—	Volts
Static, Drain – Source ON State Resistance	$I_D = 1 mA, V_{GS} = 0 V$	$r_{DS(ON)}$		100	Ohms
Gate to Source Cutoff Voltage	$V_{DS} = 20 V, I_D = 1 nA$	$V_{GS(OFF)}$	-0.5	-3.0	Volts
Gate to Source Leakage Current	$V_{GS} = -20 V, V_{DS} = 0 V$ $V_{DG} = -20 V, V_{DS} = 0 V, T_A = 150^\circ C$	I_{GSS}		-100 -200	pA nA
Zero Gate Voltage Drain Current	$V_{DS} = 20 V, V_{GS} = 0 V$	I_{DSS}		30	mA
Drain Cutoff Current	$V_{DS} = 20 V, V_{GS} = -5 V$ $V_{DS} = 20 V, V_{GS} = -5 V, T_A = 150^\circ C$	$I_{D(OFF)}$		100 200	pA nA
Gate to Source Forward Voltage	$I_G = 1 mA, V_{DS} = 0 V$	$V_{GS(F)}$		1.0	Volts
Drain to Source “ON” Voltage	$I_D = 3.0 mA, V_{GS} = 0 V$	$V_{DS(ON)}$		0.4	Volts
Small Signal, Drain – Source ON Resistance	$V_{GS} = 0 V, I_D = 0 A, f = 1 kHz$	$r_{ds(on)}$		100	Ohms
Small Signal, Common-Source, Short-Circuit Input Capacitance	$V_{DS} = 20 V, V_{GS} = 0 V, f = 1 MHz$	C_{iss}	—	16	pF
Small Signal, Common-Source, Short-Circuit Reverse Transfer Capacitance	$V_{DS} = 0 V, V_{GS} = -5 V, f = 1 MHz$	C_{rss}	—	4.5	pF
Turn ON Delay Time	$V_{DD} = 10 V, V_{GS(on)} = 0 V,$ $I_{D(on)} = 3.0 mA, V_{GS(off)} = -5 V$	$t_{d(on)}$	—	15	ns
Rise Time		t_r	—	5	ns
Turn OFF Delay Time	$V_{DD} = 10 V, V_{GS(on)} = 0 V,$ $I_{D(on)} = 3.0 mA, V_{GS(off)} = -5 V$	$t_{d(off)}$	—	50	ns
Fall Time		t_f	—	30	ns

NOTES:* Pulse Test: Pulse Width = 100 μ sec, Duty Cycle = 2%

1/ For Ordering Information, Price, and Availability Contact Factory.

2/ Screening per MIL-PRF-19500

3/ For Package Outlines Contact Factory.

4/ Unless Otherwise Specified, All Electrical Characteristics @25°C

5/ Mounted on FR1 PCB

Available Part Numbers:
SFF4393A2GW

PIN ASSIGNMENT						
Package	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6
Gullwing	Gate	Source	Drain	Gate	Source	Drain