Solid State Devices, Inc.
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SFF4393A2GW

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

DESIGNER'S DATA SHEET

Part Number / Ordering Information [1/]

SFF4393A2 ___

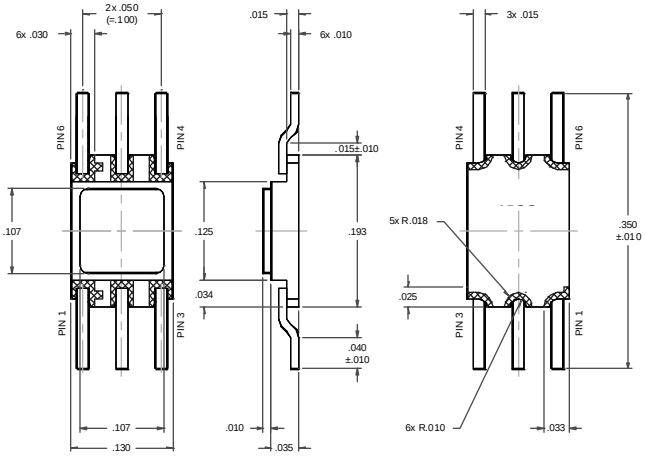
Screening [2/] __ = Not Screened
TX = TX Level
TXV = TXV Level
S = S Level

Package [3/] GW = GULLWING

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°C	Per Device Total	P_D	500 660	**mW** **mW**
Maximum Thermal Resistance	**Junction to Ambient**	$R_{\Theta JA}$ [5/]	245	**°C/W**
Lead Temperature (1/16" from the seated surface for 60 seconds)		T_L	300	**°C**
Operating & Storage Temperature		$T_{OP\ \&}\ T_{STG}$	-65 to +200	**°C**

PACKAGE OUTLINE: GULLWING (GW)



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Electrical Characteristics [4/]		Symbol	Min	Max	Units
Gate – Source Breakdown Voltage	I_G = -1µA, 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 = 150ºC	I_{GSS}		-100 -200	**pA** **nA**
Zero Gate Voltage Drain Current	V_{DS} = 20 V, V_{GS} = 0 V	I_{DSS}		35	**mA**
Drain Cutoff Current	V_{DS} = 20 V, V_{GS} = -5 V V_{DS} = 20 V, V_{GS} = -5 V, T_A = 150ºC	$I_{D(OFF)}$		100 200	**pA** **nA**
Gate to Source Forward Voltage	I_G = 1 mA, V_{DS} = 0 V	$V_{GS(F)}$		1.2	**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 µsec, 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 @25ºC

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