



Solid State Devices, Inc.

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DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SFT3906A2

Screening ^{2/} ___ = Commercial
 TX = TX Level
 TXV = TXV Level
 S = S Level

Package: GW = Gullwing

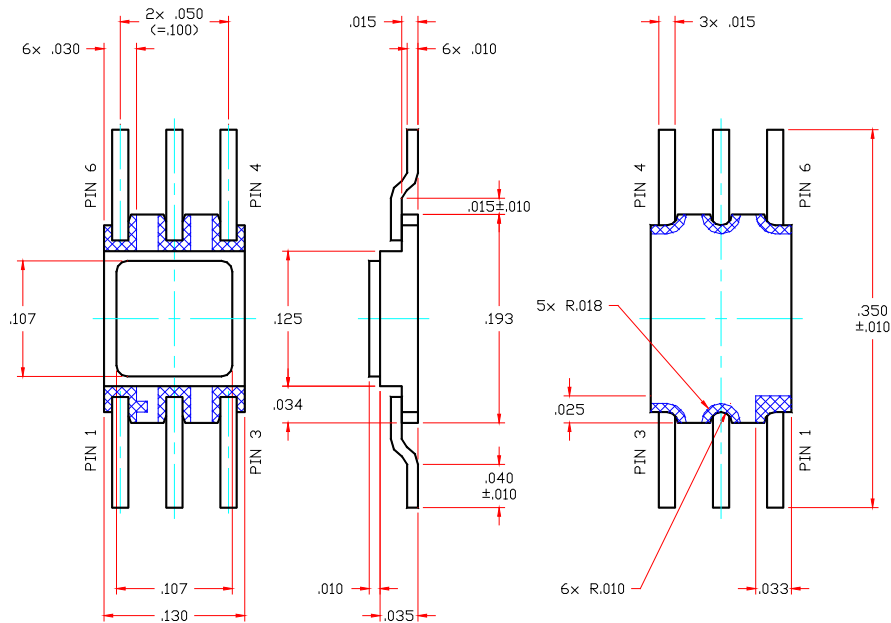
SFT3906A2
Series

Dual Microminiature Package
200 mA 40 Volts
Dual PNP Transistor

- Features:**
- High Speed Switching Transistor
 - Multiple Devices Reduce Board Space
 - High Power Dissipation: Up to 600 mW / device
 - Replacement for 2N3906AU
 - TX, TXV, S-Level screening available
 - NPN complimentary parts available (SFT3904A2)

Maximum Ratings	Symbol	Value	Unit
Collector – Emitter Voltage	V _{CEO}	40	V
Collector – Base Voltage	V _{CBO}	40	V
Emitter – Base Voltage	V _{EBO}	5	V
Continues Collector Current	I _c	200	mA
Power Dissipation @ TC = 25°C	P _D	600	mW
Operating & Storage Temperature	Top & Tstg	-65 to +200	°C
Maximum Thermal Resistance (Junction to Case)	R _{θJC}	0.29	°C/mW

Gullwing (GW)





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SFT3906A2

Series

Electrical Characteristic ^{3/}		Symbol	Min	Max	Unit
Collector – Emitter Sustaining Voltage	$I_C = 1 \text{ mA}$	BV_{CEO}	-40	—	V
Collector – Base Breakdown Voltage	$I_C = 10 \mu\text{A}$	BV_{CBO}	-40	—	V
Emitter – Base Breakdown Voltage	$I_C = 10 \mu\text{A}$	BV_{EBO}	-5	—	V
Collector Cutoff Current	$V_{CE} = -30 \text{ V}, V_{BE} = 3.0 \text{ V}$	I_{CEX}	—	50	nA
Collector Cutoff Current	$V_{CB} = -30 \text{ V}$	I_{CBO}	—	50	nA
Emitter Cutoff Current	$V_{EB} = -3.0 \text{ V}$	I_{EBO}	—	50	nA
DC Forward Current Transfer Ratio*	$V_{CE} = -1.0 \text{ V}, I_C = 0.1 \text{ mA}$	H_{FE}	60	—	
	$V_{CE} = -1.0 \text{ V}, I_C = 1.0 \text{ mA}$		80	—	
	$V_{CE} = -1.0 \text{ V}, I_C = 10 \text{ mA}$		100	300	
	$V_{CE} = -1.0 \text{ V}, I_C = 50 \text{ mA}$		60	—	
	$V_{CE} = -1.0 \text{ V}, I_C = 100 \text{ mA}$		30	—	
Collector – Emitter Saturation Voltage*	$I_C = 10 \text{ mA}, I_B = 1.0 \text{ mA}$	$V_{CE(Sat)}$	—	-0.25	V
	$I_C = 50 \text{ mA}, I_B = 5.0 \text{ mA}$		—	-0.40	
Base – Emitter Saturation Voltage*	$I_C = 10 \text{ mA}, I_B = 1.0 \text{ mA}$	$V_{BE(Sat)}$	-0.65	-0.85	V
	$I_C = 50 \text{ mA}, I_B = 5.0 \text{ mA}$		—	-0.95	
Frequency Transition	$V_{CE} = -20 \text{ V}, I_C = 20 \text{ mA}, f = 100 \text{ MHz}$	f_T	250	—	MHz
Output Capacitance	$V_{CB} = -10 \text{ V}, f = 1 \text{ MHz}$	C_{ob}	—	4.5	pF
Input Capacitance	$V_{EB} = -0.5 \text{ V}, f = 1 \text{ MHz}$	C_{ib}	—	10	pF
Switch Times	Turn-on Delay Time Rise Time Storage Time Fall Time $V_{CC} = -3 \text{ V}, I_C = 10 \text{ mA}$ $I_{B1} = 1 \text{ mA}, I_{B2} = -1 \text{ mA}$ $V_{BE(off)} = 0.5 \text{ V}$	t_d	—	35	nsec
		t_r	—	35	
		t_s	—	225	
		t_f	—	75	
Small Signal Current Gain ($f = 1 \text{ kHz}$)	$V_{CE} = -10 \text{ V}, I_C = 1.0 \text{ mA}$	h_{fe}	100	400	
Noise Figure	$I_C = 100 \mu\text{A}, V_{CE} = -5 \text{ V}, R_s = 1.0 \text{ k}\Omega, f = 1 \text{ kHz}$	NF	—	4.0	db

NOTES:

*Pulse Test: Pulse Width = 300 μsec , Duty Cycle = 2%

^{1/} For ordering information, price, 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.

Available Part Numbers:
SFT3906A2GW

PIN ASSIGNMENT						
Package	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6
GW	Collector1	Base1	Emitter1	Collector2	Base2	Emitter2

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

DATA SHEET #: TR0038C

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