



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

**SFT2222A2
Series**

**Dual Microminiature Package
800 mA 75 Volts
Dual NPN Transistor**

DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SFT2222A2

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

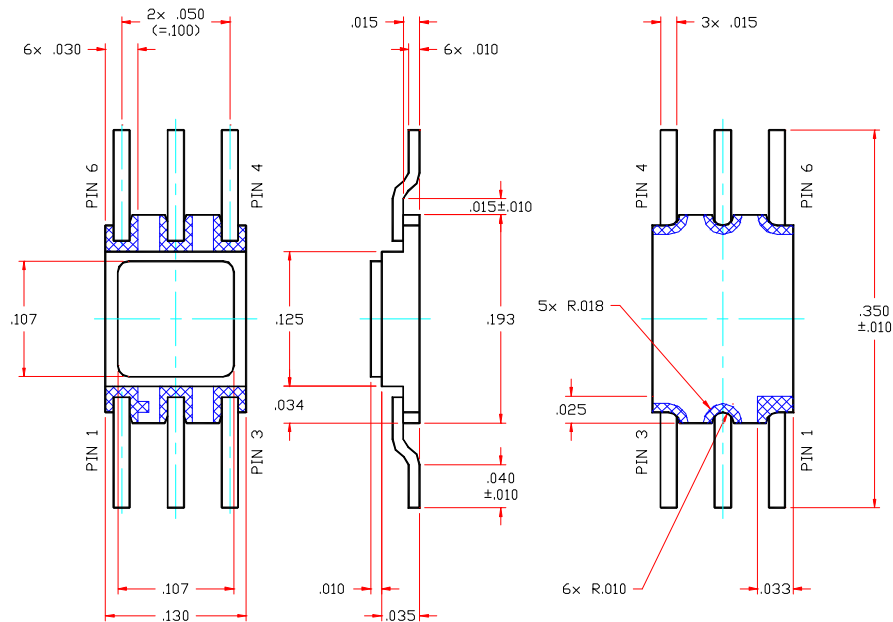
* Package GW = Gullwing

Features:

- High Speed Switching Transistor
- Multiple Devices Reduce Board Space
- High Power Dissipation: Up to 660 mW
- Replacement for 2N2222AU
- TX, TXV, S-Level Screening Available
- PNP Complimentary Parts Available (SFT2907A2)

Maximum Ratings	Symbol	Value	Units
Collector – Emitter Voltage	V_{CEO}	50	Volts
Collector – Base Voltage	V_{CBO}	75	Volts
Emitter – Base Voltage	V_{EBO}	6	Volts
Continuous Collector Current	I_C	800	mA
Power Dissipation @ $T_A=25^\circ\text{C}$	P_D	500 660	mW
Operating & Storage Temperature	$T_{op} \ \& \ T_{stg}$	-65 to +200	$^\circ\text{C}$
Maximum Thermal Resistance (Junction to PCB)	R_{qJ-PCB}	245	$^\circ\text{C/W}$

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 #: TR0030D

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Electrical Characteristics ^{4/}		Symbol	Min	Max	Units
Collector – Emitter Sustaining Voltage	$I_C = 10 \text{ mA}$	BV_{CEO}	50	—	Volts
Collector Cutoff Current	$V_{CE} = 50 \text{ V}$	I_{CES}	—	50	nA
Collector Cutoff Current	$V_{CB} = 60 \text{ V}$	I_{CBO}	—	10	nA
	$V_{CB} = 75 \text{ V}$		—	10	mA
	$V_{CB} = 60 \text{ V}, T_A = 150^\circ\text{C}$		—	10	mA
Emitter Cutoff Current	$V_{EB} = 4.0 \text{ V}$	I_{EBO}	—	10	nA
	$V_{EB} = 6.0 \text{ V}$		—	10	mA
DC Forward Current Transfer Ratio *	$V_{CE} = 10\text{V}, I_C = 0.1 \text{ mA}$	H_{FE}	50	—	
	$V_{CE} = 10\text{V}, I_C = 1.0 \text{ mA}$		75	325	
	$V_{CE} = 10\text{V}, I_C = 10 \text{ mA}$		100	—	
	$V_{CE} = 10\text{V}, I_C = 150 \text{ mA}$		100	300	
	$V_{CE} = 10\text{V}, I_C = 500 \text{ mA}$		30	—	
	$V_{CE} = 10\text{V}, I_C = 10 \text{ mA}, T_A = -55^\circ\text{C}$		35	—	
Collector – Emitter Saturation Voltage *	$I_C = 150\text{mA}, I_B = 15\text{mA}$	$V_{CE(Sat)}$	—	0.3	Volts
	$I_C = 500\text{mA}, I_B = 50\text{mA}$		—	1.0	
Base – Emitter Saturation Voltage *	$I_C = 150\text{mA}, I_B = 15\text{mA}$	$V_{BE(Sat)}$	0.6	1.2	Volts
	$I_C = 500\text{mA}, I_B = 50\text{mA}$		—	2.0	
Frequency Transition (Small Signal Current Gain) @ $f = 100 \text{ MHz}$	$V_{CE} = 20\text{V}, I_C = 20\text{mA}$	f_T	250	—	MHz
Output Capacitance	$V_{CE} = 10\text{V}, f = 1\text{MHz}$	c_{ob}	—	8.0	pF
Input Capacitance	$V_{CE} = 0.5\text{V}, f = 1\text{MHz}$	c_{ib}	—	25	pF
Small Signal Current Gain	$V_{CE} = 10\text{V}, I_C = 1.0 \text{ mA}, f = 1 \text{ kHz}$	h_{fe}	50	300	
Switching Times	$V_{CC} = 30\text{V}, I_C = 150 \text{ mA}$	t_{on}	—	35	ns
	$I_{B1} = I_{B2} = 15 \text{ mA}, V_{BE(off)} = 3\text{V}$	t_{off}	—	300	ns

NOTES:

- * Pulse Test: Pulse Width = 300μsec, 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.

Available Part Numbers:

SFT2222A2GW

PIN ASSIGNMENT

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

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