



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, CA 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
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**SFT2222A2
Series**

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

DESIGNER'S DATA SHEET

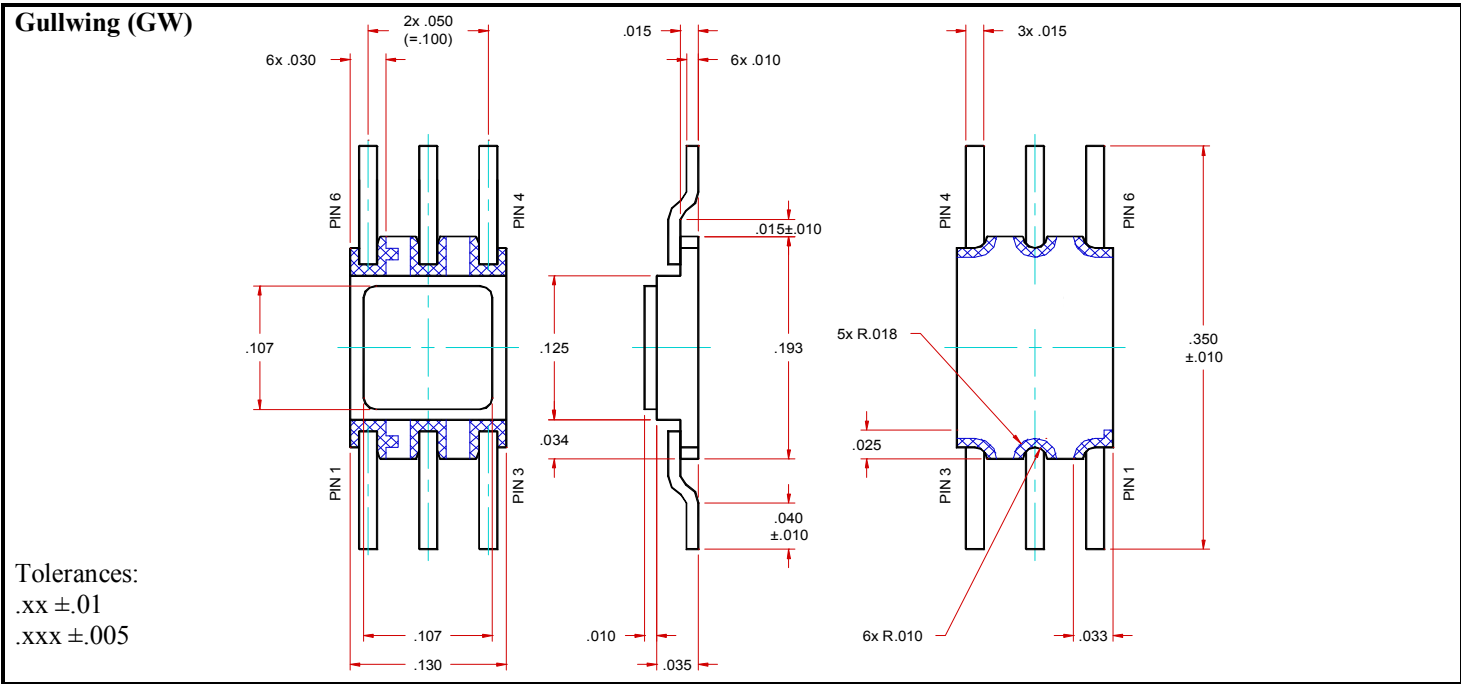
Part Number / Ordering Information^{1/}

SFT2222A2


Screening^{2/} = Commercial
 TX= TX Level
 TXV= 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^{2/}
 - NPN 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°C	Per Device Total	500	mW
		660	
Operating & Storage Temperature	T _{OP} & T _{stg}	-65 to +200	°C
Maximum Thermal Resistance (Junction to PCB)	R _{θJ-PCB}	265	°C/W





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Electrical Characteristic ^{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	$V_{CB} = 60 \text{ V}$ $V_{CB} = 75 \text{ V}$ $V_{CB} = 60 \text{ V}, T_A = 150^\circ\text{C}$	I_{CBO}	—	0.01 10 10	μA
Emitter Cutoff Current	$V_{EB} = 4.0 \text{ V}$ $V_{EB} = 6.0 \text{ V}$	I_{EBO}	—	0.01 10	μA
DC Forward Current Transfer Ratio ^{5/}	$V_{CE} = 10 \text{ V}, I_C = 0.1 \text{ mA}$ $V_{CE} = 10 \text{ V}, I_C = 1.0 \text{ mA}$ $V_{CE} = 10 \text{ V}, I_C = 10 \text{ mA}$ $V_{CE} = 10 \text{ V}, I_C = 150 \text{ mA}$ $V_{CE} = 10 \text{ V}, I_C = 500 \text{ mA}$ $V_{CE} = 10 \text{ V}, I_C = 10 \text{ mA}, T_A = -55^\circ\text{C}$	H_{FE}	50 75 100 100 30 35	— 325 — 300 — —	
Small-signal Forward Current Transfer Ratio	$V_{CE} = 10 \text{ V}, I_C = 1.0 \text{ mA}, f = 1 \text{ kHz}$	h_{fe}	50	—	
Collector – Emitter Saturation Voltage ^{5/}	$I_C = 150 \text{ mA}, I_B = 15 \text{ mA}$ $I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$	$V_{CE(Sat)}$	— —	0.3 1.0	Volts
Base – Emitter Saturation Voltage ^{5/}	$I_C = 150 \text{ mA}, I_B = 15 \text{ mA}$ $I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$	$V_{BE(Sat)}$	0.6 —	1.2 2.0	Volts
Frequency Transition	$V_{CE} = 20 \text{ V}, I_C = 20 \text{ mA}, f = 100 \text{ MHz}$	f_T	250	—	MHz
Switching Times	$V_{CC} = 30 \text{ V}, I_C = 150 \text{ mA}$ $I_{B1} = I_{B2} = 15 \text{ mA}, V_{BE(off)} = 3 \text{ V}$	t_{on} t_{off}	— —	35 300	ns
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

NOTES:

- 1/ For Ordering Information, Price, and Availability Contact Factory.
- 2/ Screening based on MIL-PRF-19500. Screening flows available on request.
- 3/ For Package Outlines Contact Factory.
- 4/ Unless Otherwise Specified, All Electrical Characteristics @ 25°C.
- 5/ Pulse Test: Pulse Width= 300µsec, Duty Cycle= 2%

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