



**Solid State Devices, Inc.**

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**SFT2222A2  
 Series**

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

**DESIGNER'S DATA SHEET**

**Part Number / Ordering Information <sup>1/</sup>**

SFT2222A2

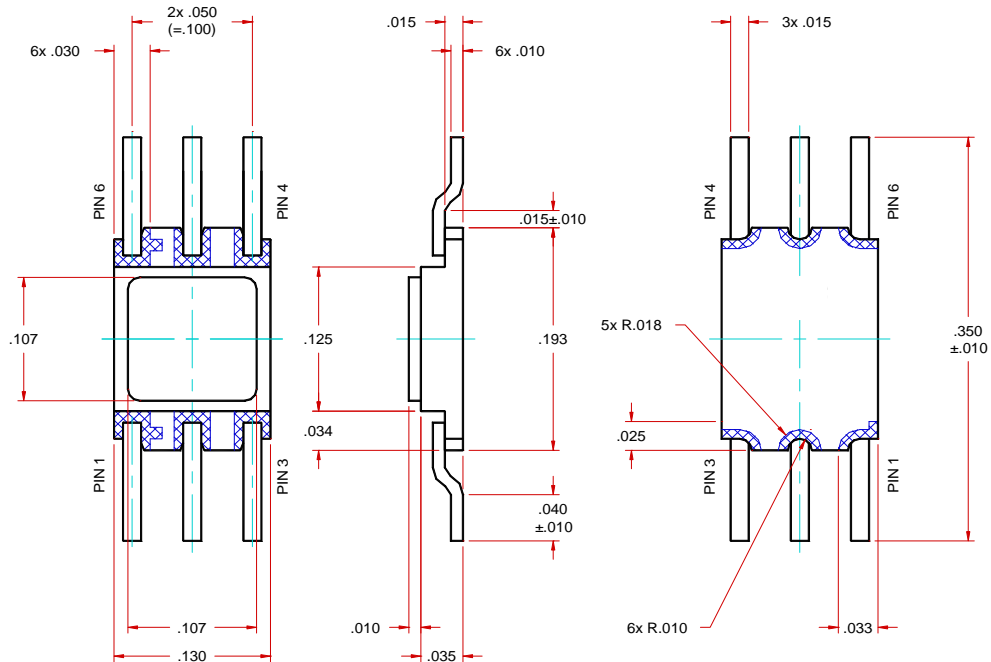
$\square$  Screening <sup>2/</sup> = Commercial  
 $\overline{\text{TX}}$  = TX Level  
 $\overline{\text{TXV}}$  = TXV Level  
 $\text{S}$  = S Level  
 Package GW = Gullwing

**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 <sup>2/</sup>
- NPN Complimentary Parts Available (SFT2907A2)

Maximum Ratings	Symbol	Value	Units
Collector – Emitter Voltage	V <sub>CEO</sub>	50	Volts
Collector – Base Voltage	V <sub>CBO</sub>	75	Volts
Emitter – Base Voltage	V <sub>EBO</sub>	6	Volts
Continuous Collector Current	I <sub>C</sub>	800	mA
Power Dissipation @ T <sub>A</sub> = 25°C	P <sub>D</sub>	500 660	mW
Operating & Storage Temperature	T <sub>OP</sub> & T <sub>stg</sub>	-65 to +200	°C
Maximum Thermal Resistance (Junction to PCB)	R <sub>θJ-PCB</sub>	245	°C/W

**Gullwing (GW)**



Tolerances:  
 .xx ±.01  
 .xxx ±.005

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

**DATA SHEET #: TR0030F**

**DOC**



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Series**

Electrical Characteristic <sup>4/</sup>	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	$\mu\text{A}$
Emitter Cutoff Current	$V_{EB} = 4.0 \text{ V}$ $V_{EB} = 6.0 \text{ V}$ $I_{EBO}$	—	0.01 10	$\mu\text{A}$
DC Forward Current Transfer Ratio <sup>5/</sup>	$V_{CE} = 10 \text{ V}, I_C = 0.1 \text{ mA}$ $V_{CE} = 10 \text{ V}, I_C = 1.0 \text{ mA}$ $V_{CE} = 10 \text{ V}, I_C = 10 \text{ mA}$ $V_{CE} = 10 \text{ V}, I_C = 150 \text{ mA}$ $V_{CE} = 10 \text{ V}, I_C = 500 \text{ mA}$ $V_{CE} = 10 \text{ V}, I_C = 10 \text{ mA}, T_A = -55^\circ\text{C}$ $H_{FE}$	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 <sup>5/</sup>	$I_C = 150 \text{ mA}, I_B = 15 \text{ mA}$ $I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$ $V_{CE(Sat)}$	— —	0.3 1.0	Volts
Base – Emitter Saturation Voltage <sup>5/</sup>	$I_C = 150 \text{ mA}, I_B = 15 \text{ mA}$ $I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$ $V_{BE(Sat)}$	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= 300 $\mu\text{sec}$ , 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

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