



**Solid State Devices, Inc.**

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**DESIGNER'S DATA SHEET**

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

SFT2369A2

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

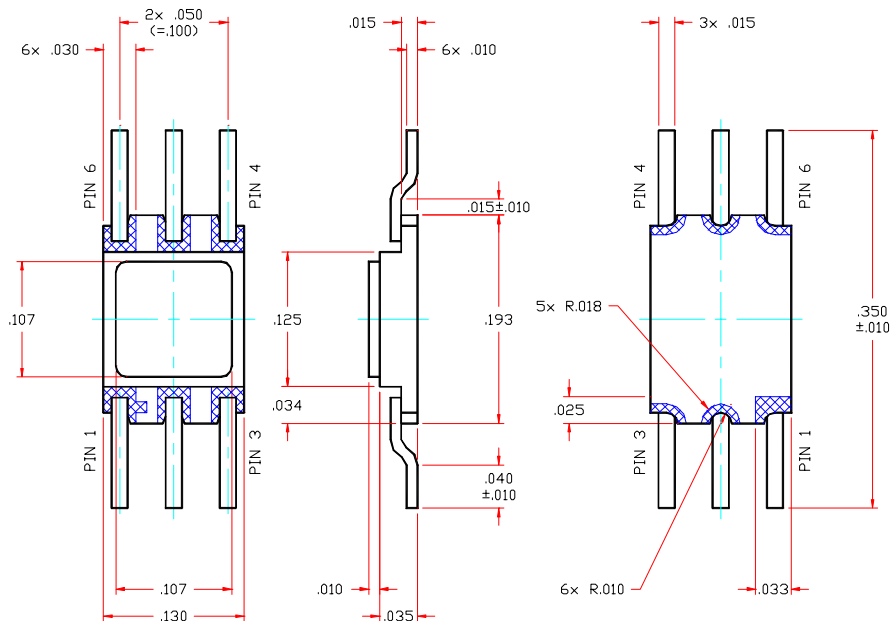
**SFT2369A2  
Series**

**Dual Microminiature Package  
100 mA 15 Volts  
Dual NPN Transistor**

- Features:**
- High Speed Switching Transistor
  - Suitable in chopper, uhf and rf application
  - Multiple Devices Reduce Board Space
  - Replacement for 2N2369AU
  - TX, TXV, S-Level screening available

Maximum Ratings	Symbol	Value	Units
Collector – Emitter Voltage	$V_{CEO}$	15	Volts
Collector – Base Voltage	$V_{CBO}$	40	Volts
Emitter – Base Voltage	$V_{EBO}$	4.5	Volts
Continues Collector Current	$I_C$	100	mAmps
Power Dissipation @ $T_a = 25^\circ C$	$P_D$	360 500	mW
Operating & Storage Temperature	Top & Tstg	-65 to +200	$^\circ C$
Maximum Thermal Resistance (Junction to PCB)	$R_{\theta J-PCB}$	290	$^\circ C/W$

**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 #: TR0045A**



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**SFT2369A2  
Series**

Electrical Characteristic <sup>4/</sup>		Symbol	Min	Max	Units
<b>Collector – Emitter Sustaining Voltage</b>	$I_C = 10 \text{ mA}$	$BV_{CEO}$	15	—	Volts
<b>Collector Cutoff Current</b>	$V_{ce} = 20 \text{ V}$ ,	$I_{CES}$	—	400	nA
<b>Collector Cutoff Current</b>	$V_{cb} = 32 \text{ V}$	$I_{CBO}$	—	200	nA
	$V_{cb} = 40 \text{ V}$			10	$\mu\text{A}$
	$V_{cb} = 20 \text{ V}, T_a = 150 \text{ }^\circ\text{C}$			30	$\mu\text{A}$
<b>Emitter Cutoff Current</b>	$V_{eb} = 4.0 \text{ V}$	$I_{EBO}$	—	250	nA
	$V_{eb} = 4.5 \text{ V}$			10	$\mu\text{A}$
<b>DC Forward Current Transfer Ratio *</b>	$V_{CE} = 0.35\text{V}, I_C = 10 \text{ mA}$	$H_{FE}$		40	120
	$V_{CE} = 0.40\text{V}, I_C = 30 \text{ mA}$			30	120
	$V_{CE} = 1.0\text{V}, I_C = 10 \text{ mA}$			40	120
	$V_{CE} = 1.0\text{V}, I_C = 100 \text{ mA}$			20	120
	$V_{ce} = 1.0\text{V}, I_c = 10 \text{ mA}, T_a = -55 \text{ }^\circ\text{C}$			20	—
<b>Collector – Emitter Saturation Voltage *</b>	$I_C = 10\text{mA}, I_B = 1.0\text{mA}$	$V_{CE(Sat)}$		—	0.20
	$I_C = 30\text{mA}, I_B = 3.0\text{mA}$			—	0.25
	$I_C = 100\text{mA}, I_B = 10\text{mA}$			—	0.45
	$I_C = 10\text{mA}, I_B = 1.0\text{mA}, T_a = 125 \text{ }^\circ\text{C}$			—	0.30
<b>Base – Emitter Saturation Voltage *</b>	$I_C = 10\text{mA}, I_B = 1.0\text{mA}$	$V_{BE(Sat)}$		0.7	0.85
	$I_C = 30\text{mA}, I_B = 3.0\text{mA}$			—	0.9
	$I_C = 100\text{mA}, I_B = 10\text{mA}$			0.8	1.2
	$I_C = 10\text{mA}, I_B = 1.0\text{mA}, T_a = -55 \text{ }^\circ\text{C}$			—	1.02
	$I_C = 10\text{mA}, I_B = 1.0\text{mA}, T_a = 125 \text{ }^\circ\text{C}$			0.59	—
<b>Frequency Transition</b>	$V_{CE} = 10\text{V}, I_C = 10\text{mA}$	$f_T$	500	1000	MHz
<b>Output Capacitance</b>	$V_{CE} = 5\text{V}, f = 1\text{MHz}$	$c_{ob}$	—	4.0	pF
<b>Input Capacitance</b>	$V_{CE} = 0.5\text{V}, f = 1\text{MHz}$	$c_{ib}$	—	5.0	pF
<b>Switch Times</b>	Test Circuit per MIL-PRF-19500/317	$t_{on}$	—	12	nsec
		$t_{off}$	—	18	
		$t_s$	—	13	

**NOTES:**

- \* Pulse Test: Pulse Width = 300 $\mu\text{sec}$ , 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 $^\circ\text{C}$ .

**Available Part Numbers:**

SFT2369A2GW

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