



SOLID STATE DEVICES, INC.

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DESIGNER'S DATA SHEET

Part Number /Ordering Information ^{1/}

SFT2907A -4 TX

Screening ^{2/}: _ = Not Screened

TX = TX Level

TXV = TXV Level

S = Space Level

Package: ^{3/} -4 = LCC4

/18 = TO-18

SFT2907A SERIES

**600 mA
60 VOLTS
PNP HIGH SPEED
LOW POWER TRANSISTOR**

FEATURES

- BV_{CEO} 60V min.
- Fast Switching
- High Frequency
- High Linear Gain, Low Saturation Voltage.
- 200°C Operating, Gold Eutectic Die Attach.
- Replaces 2N2907 types
- Design for Complimentary Use with SFT2222A
- TX, TXV, and S Level Available

| MAXIMUM RATINGS | SYMBOL | VALUE | UNITS |
|---|-----------------------------------|-------------|------------|
| Collector-Base Voltage | V _{CBO} | 60 | Volts |
| Collector-Emitter Voltage | V _{CEO} | 60 | Volts |
| Emitter-Base Voltage | V _{EBO} | 5.0 | Volts |
| Continuous Collector Current | I _C | 600 | mAmps |
| Base Current | I _B | 50 | mAmps |
| Operating and Storage Temperature | T _J , T _{STG} | -65 to +175 | °C |
| Total Device Dissipation @ T _C ≤ 25°C Derate above 25°C | P _D | 1.8 10.3 | W mW/°C |

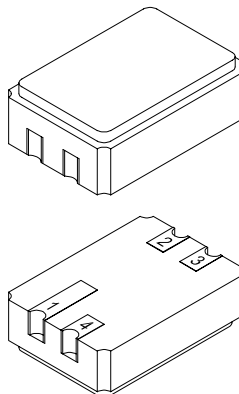
Available Part Numbers:

SFT2907A-4
SFT2907A/18

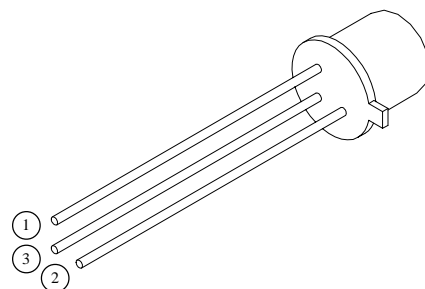
PIN ASSIGNMENT

| Code | Function | Collector | Emitter | Base |
|------|----------|-----------|---------|-------|
| -4 | Normal | Pin 1 | Pin 2 | Pin 3 |
| /18 | Normal | Pin 1 | Pin 2 | Pin 3 |
| | | | | |
| | | | | |

LCC-4 (-4)



TO-18 (/18)



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

DATA SHEET #: TR0022A

SFT2907A SERIES



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| ELECTRICAL CHARACTERISTICS ^{4/} | | SYMBOL | MIN | MAX | UNITS |
|---|---|---------------|---------------------------|------------|-----------|
| Collector-Emitter Breakdown Voltage ($I_C = 10\text{mA}$) | | BV_{CEO} | 60 | - | V_{DC} |
| Collector-Base Sustaining Voltage ($I_C = 10\mu\text{A}$) | | BV_{CBO} | 60 | - | V_{DC} |
| Emitter-Base Sustaining Voltage ($I_E = 10\mu\text{A}$) | | BV_{EBO} | 5 | - | V_{DC} |
| Collector Cutoff Current ($V_{CE} = 30V_{DC}$, $V_{BE} = 0.5V_{DC}$) | | I_{CEX} | - | 50 | nA_{DC} |
| Collector Cutoff Current ($V_{CB} = 50V_{DC}$) | | I_{CBO} | - | 10 | nA_{DC} |
| DC Current Gain* ($V_{CE} = 10V_{DC}$) | | H_{FE} | $I_C = 0.1\text{mA}_{DC}$ | 75 | - |
| | | | $I_C = 1\text{mA}_{DC}$ | 100 | - |
| | | | $I_C = 10\text{mA}_{DC}$ | 100 | - |
| | | | $I_C = 150\text{mA}_{DC}$ | 100 | 300 |
| | | | $I_C = 500\text{mA}_{DC}$ | 50 | - |
| Collector-Emitter Saturation Voltage * | $I_C = 150\text{mA}_{DC}$, $I_B = 15\text{mA}_{DC}$ $I_C = 500\text{mA}_{DC}$, $I_B = 50\text{mA}_{DC}$ | $V_{CE(SAT)}$ | - | 0.4 1.6 | V_{DC} |
| Base-Emitter Saturation Voltage * | $I_C = 150\text{mA}_{DC}$, $I_B = 15\text{mA}_{DC}$ $I_C = 500\text{mA}_{DC}$, $I_B = 50\text{mA}_{DC}$ | $V_{BE(SAT)}$ | - | 1.3 2.6 | V_{DC} |
| AC Current Gain ($I_C = 50\text{mA}_{DC}$, $V_{CE} = 20V_{DC}$, $f = 100\text{MHz}$) | | h_{FE} | 2.0 | - | |
| Input Capacitance ($V_{BE} = 0.5V_{DC}$, $I_E = 0$, $f = 100\text{kHz}$) | | C_{ib} | - | 30 | pF |
| Output Capacitance ($V_{CB} = 10V_{DC}$, $I_E = 0$, $f = 100\text{kHz}$) | | C_{ob} | - | 8 | pF |
| Delay Time | $V_{CC} = -30V_{DC}$, $I_{CS} = 150\text{mA}_{DC}$, $I_{B1} = 15\text{mA}_{DC}$, | t_d | - | 10 | $nsec$ |
| Rise Time | | t_r | - | 40 | $nsec$ |
| Storage Time | $V_{CC} = -6V_{DC}$, $I_{CS} = 150\text{mA}_{DC}$, $I_{B1} = 15\text{mA}_{DC}$, $I_{B2} = 15\text{mA}_{DC}$ | t_s | - | 80 | $nsec$ |
| Fall Time | | t_f | - | 30 | $nsec$ |

NOTES:

- 1/ For Ordering Information, Price, and Availability Contact Factory.
- 2/ Screening per MIL-PRF-19500.
- 3/ For Package Outlines Contact Factory.
- 4/ $T_C = 25^\circ\text{C}$, Unless Otherwise Specified.
- * Pulse Test: Pulse Width = 300us, Duty Cycle = 2%

Package Outline

| Part Number | Document |
|-------------|-------------|
| SFT2907A-4 | 60-0149-323 |
| SFT2907A/18 | 60-0149-018 |
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