



SOLID STATE DEVICES, INC.

14830 Valley View Blvd * La Mirada, Ca 90638

Phone: (562) 404-7855 * Fax: (562) 404-1773

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DESIGNER'S DATA SHEET

Part Number /Ordering Information ^{1/}

SFT3019 -4 TX

Screening ^{2/}: _ = Not Screened

TX = TX Level

TXV = TXV Level

S = Space Level

Package: ^{3/} -4 = LCC4

/18 = TO-18

SFT3019 SERIES

1 A 80 VOLTS NPN HIGH SPEED TRANSISTOR

FEATURES

- V_{CE0} 80V min.
- Fast Switching
- High Frequency
- High Linear Gain, Low Saturation Voltage.
- Replaces 2N3019 type
- TX, TXV, and S Level Available

MAXIMUM RATINGS	SYMBOL	VALUE	UNITS
Collector-Base Voltage	V_{CBO}	140	Volts
Collector-Emitter Voltage	V_{CEO}	80	Volts
Emitter-Base Voltage	V_{EBO}	7.0	Volts
Continuous Collector Current	I_C	1	Amp
Operating and Storage Temperature	T_J, T_{STG}	-65 to +175	°C
Total Device Dissipation @ $T_C \leq 25^\circ\text{C}$ Derate above 25°C	P_D	5.0 28.6	W mW/°C

Available Part Numbers:

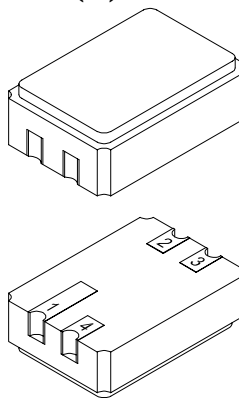
SFT3019-4

SFT3019/18

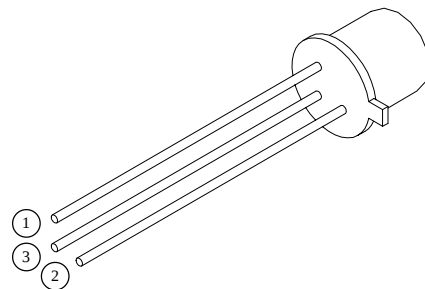
PIN ASSIGNMENT

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 #: TR0024A

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ELECTRICAL CHARACTERISTICS ^{4/}	SYMBOL	MIN	MAX	UNITS
Collector-Emitter Breakdown Voltage * ($I_C = 30\text{mA}$)	BV_{CEO}	80	-	V_{DC}
Collector-Base Sustaining Voltage * ($I_C = 100\mu A_{DC}$)	BV_{CBO}	140	-	V_{DC}
Emitter-Base Sustaining Voltage * ($I_E = 100\mu A_{DC}$)	BV_{EBO}	7	-	V_{DC}
Emitter Current ($V_{BE} = 5V_{DC}$)	I_{EBO}	-	10	nA_{DC}
Collector Cutoff Current ($V_{CB} = 90V_{DC}$)	I_{CBO}	- -	10 10	nA_{DC} μA_{DC}
DC Current Gain* ($V_{CE} = 10V_{DC}$)		$I_C = 0.1\text{mA}_{DC}, T_C = 25^\circ C$ $I_C = 10\text{mA}_{DC}, T_C = 25^\circ C$ $I_C = 150\text{mA}_{DC}, T_C = 25^\circ C$ $I_C = 500\text{mA}_{DC}, T_C = 25^\circ C$ $I_C = 1.0A_{DC}, T_C = 25^\circ C$ $I_C = 150\text{mA}_{DC}, T_C = -55^\circ C$	50 90 100 50 15 40	- - 300 - - -
Collector-Emitter Saturation Voltage * $I_C = 150\text{mA}_{DC}, I_B = 15\text{mA}_{DC}$ $I_C = 500\text{mA}_{DC}, I_B = 50\text{mA}_{DC}$	$V_{CE(SAT)}$	- -	0.2 0.5	V_{DC}
Base-Emitter Saturation Voltage * ($I_C = 150\text{mA}_{DC}, I_B = 15\text{mA}_{DC}$)	$V_{BE(SAT)}$	-	1.1	V_{DC}
AC Current Gain $I_C = 50\text{mA}, V_{CE} = 10V, f = 20\text{MHz}$ $I_C = 1\text{mA}, V_{CE} = 5V, f = 1\text{kHz}$	h_{fe}	5 80	- 400	
Input Capacitance ($V_{BE} = 0.5V, I_C = 0, f = 1\text{MHz}$)	C_{ib}	-	60	pF
Output Capacitance ($V_{CB} = 10V, I_E = 0, f = 1\text{MHz}$)	C_{ob}	-	8	pF
Collector-Base Time Constant ($V_{CB} = 10V, I_C = 10\text{mA}, f = 4\text{MHz}$)	$r_b * r_c$	-	400	$psec$
Noice Figure ($V_{CE} = 10V_{DC}, I_C = 100\mu A, R_g = 1k\Omega, f = 1\text{MHz}$)	NF	-	4	db

NOTES:

- 1/ For Ordering Information, Price, and Availability Contact Factory.
- 2/ Screening per MIL-PRF-19500.
- 3/ For Package Outlines Contact Factory.
- 4/ $T_C = 25^\circ C$, 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