SOLID STATE DEVICES, INC.
14830 Valley View Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SFT3019 SERIES

DESIGNER'S DATA SHEET

1 A 80 VOLTS NPN HIGH SPEED TRANSISTOR

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

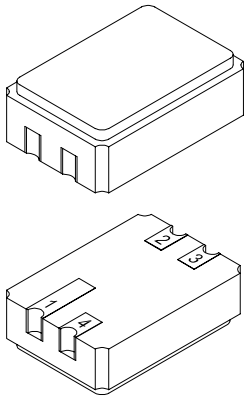
FEATURES
- **BV_{CEO} 80V min.**
- **Fast Switching**
- **High Frequency**
- **High Linear Gain, Low Saturation Voltage.**
- **Replaces 2N3019 type**
- **TX, TXV, and S Level Available**

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 @ $T_C \leq 25°C$ **Derate above 25°C**	P_D	5.0 28.6	W mW/°C

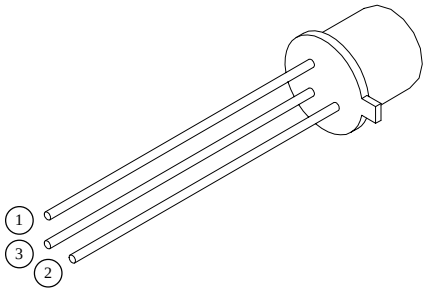
Available Part Numbers:
SFT3019-4
SFT3019/18

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

SFT3019
SERIES

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