



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638

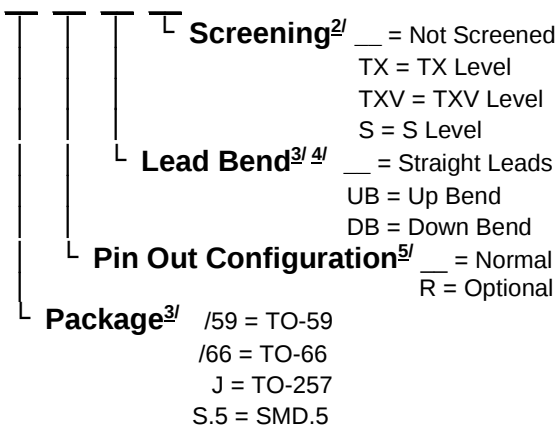
Phone: (562) 404-7855 * Fax: (562) 404-1773

ssdi@ssdi-power.com * www.ssdi-power.com

DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SFT5001



SFT5001

**5 AMP
High Speed
PNP Transistor
125 Volts**

Features:

- Radiation Tolerant
- Superior to JEDEC 2N5001 Series
- High Frequency, $f_T > 80$ MHz
- Very Low Saturation
- Fast Switching, 130 ns Max t_{on}
- Designed for Complementary Use with SFT3997
- TX, TXV, S-Level Screening Available. Consult Factory.

Maximum Ratings	Symbol	Value	Unit
Collector – Emitter Voltage	V_{CEO}	80	V
Collector – Base Voltage	V_{CBO}	125	V
Emitter – Base Voltage	V_{EBO}	7	V
Collector Current	I_C	5	A
Base Current	I_B	1	A
Total Power Dissipation @ $T_C = 100^\circ\text{C}$ Derate Above 100°C	P_D	30 0.3	W W/ $^\circ\text{C}$
Operating & Storage Temperature	T_J & T_{STG}	-65 to +200	$^\circ\text{C}$
Maximum Thermal Resistance (Junction to Case)	$R_{\theta JC}$	3.33	$^\circ\text{C/W}$

TO-59 (/59)	TO-66 (/66)	TO-257 (J)	SMD .5 (S.5)

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

DATA SHEET #: TR0099B

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Electrical Characteristics		Symbol	Min	Max	Unit
Collector – Emitter Blocking Voltage*	(I _C = 10 mA)	BV _{CEO}	80	—	V
Collector – Base Blocking Voltage	(I _C = 20 μA)	BV _{CBO}	125	—	V
Emitter – Base Blocking Voltage	(I _E = 20 μA)	BV _{EBO}	7	—	V
Collector Cutoff Current	(V _{CE} = 40 V)	I _{CEO}	—	10	μA
Collector Cutoff Current	(V _{CB} = 100 V)	I _{CBO}	—	1.0	μA
Emitter Cutoff Current	(V _{EB} = 6 V)	I _{EBO}	—	1.0	μA
DC Current Gain*	(I _C = 50 mA, V _{CE} = 5 V)	h _{FE}	50	—	
	(I _C = 1.0 A, V _{CE} = 5 V)		50	—	
	(I _C = 5.0 A, V _{CE} = 5 V)		30	—	
Collector-Emitter Saturation Voltage*	(I _C = 1.0 A, I _B = 100 mA)	V _{CE(SAT)}	—	0.5	V
	(I _C = 5.0 A, I _B = 500 mA)		—	1.0	
Base-Emitter Saturation Voltage*	(I _C = 1.0 A, I _B = 100 mA)	V _{BE(SAT)}	—	0.9	V
	(I _C = 5.0 A, I _B = 500 mA)		—	1.2	
Current Gain – Bandwidth Product	V _{CE} = 5 V, I _C = 0.5 A, f = 10 MHz	f _T	80	—	MHz
Output Capacitance	V _{CB} = 10 V, I _E = 0 A, f = 1.0 MHz	C _{ob}	—	75	pF
Delay Time	(V _{CC} = 20 V, I _C = 1.0 A, V _{BE(off)} = 3.7 V, I _{B1} = I _{B2} = 100 mA, R _L = 20 Ω)	t _(on)	t _d	—	150
Rise Time			t _r	—	
Storage Time		t _(off)	t _s	—	500
Fall Time			t _f	—	

NOTES:

- * Pulse Test: Pulse Width = 300μsec, Duty Cycle = 2%
- 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/ Up and down bend configurations are available for 'J' (TO-257) packages only.
- 5/ Optional pin out configurations are available for 'J' (TO-257) packages only.
- 6/ Unless otherwise specified, all electrical characteristics @ 25°C.

Available Part Numbers:

SFT5001/59
SFT5001/66
SFT5001J, SFT5001JUB, SFT5001JDB
SFT5001JR, SFT5001JRUB, SFT5001JRDB
SFT5001S.5

PIN ASSIGNMENT (Standard)

Package	Collector	Emitter	Base
TO-59 (/59)	Pin 1	Pin 2	Pin 3
TO-66 (/66)	Case	Pin 2	Pin 3
TO-257 (J)	Pin 1	Pin 2	Pin 3
SMD.5 (S.5)	Pin 1	Pin 2	Pin 3

PIN ASSIGNMENT (Optional)

Package	Collector	Emitter	Base
TO-257 (JR)	Pin 2	Pin 3	Pin 1

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