



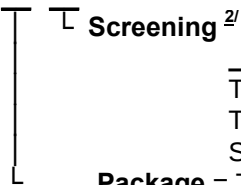
Solid State Devices, Inc.

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 Phone: (562) 404-4474 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SFT4300A



Screening ^{2/}

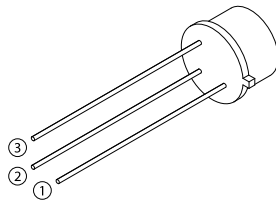
— = Not Screened

TX = TX Level

TXV = TXV Level

S = S Level

Package = TO-5



TO-5

FEATURES:

- Radiation Tolerant
- Fast Switching
- High Frequency
- Low Saturation Voltage
- 200°C Operating, Gold Eutectic Die Attach
- Complementary use with SFT5333

NOTES:

^{1/} For ordering information, price, operating curves, and availability - contact factory.

^{2/} Screening based on MIL-PRF-19500. Screening flows available on request.

Maximum Ratings	Symbol	Value	Units
Collector – Emitter Voltage	V_{CEO}	80	V
Collector – Base Voltage	V_{CBO}	150	V
Emitter – Base Voltage	V_{EBO}	8	V
Collector Current	I_C	2	A
Base Current	I_B	1	A
Total Device Dissipation @ TC = 100° C Derate above TC = 100° C	P_D	6.6 66	W mW/°C
Operating and Storage Temperature	T_j, T_{stg}	-65 to +200	°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	15.2	°C/W

		All dimensions are in inches Tolerances: (unless otherwise specified) XX: ±0.01", XXX: ±0.005" Pin 1: Emitter Pin 2: Base Pin 3/Case: Collector
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NOTE: All specifications are subject to change without notification.
 SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: XN0029E

DOC

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SFT4300

Electrical Characteristic		Symbol	Min	Max	Units
Collector – Emitter Breakdown Voltage	(IC= 30mAdc)	BV_{CEO}	80	—	V
Collector–Base Breakdown Voltage	(IC= 200μAdc)	BV_{CBO}	150	—	V
Emitter–Base Breakdown Voltage	(IE= 200μAdc)	BV_{EBO}	6	—	V
Collector Cutoff Current	(VCB= 90V, TC= 25°C) (VCB= 90V, TC= 100°C)	I_{CBO}	—	$\frac{1}{75}$	μAdc
Collector Cutoff Current	(VCE= 40 Vdc)	I_{CEO}	—	5	μAdc
Emitter Cutoff Current	(VEB= 6V)	I_{EBO}	—	1	μAdc
DC Current Gain*	(IC= 1.0Adc, VCE= 5Vdc) (IC= 2.0Adc, VCE= 5Vdc)	h_{FE}	50 50	200	
Collector – Emitter Saturation Voltage*	(IC= 1.0Adc, IB= 100mAdc) (IC= 2.0Adc, IB= 200mAdc)	V_{CE(Sat)}	— —	0.3 0.5	Vdc
Base – Emitter Voltage	(IC= 2.0Adc, VCE= 2Vdc)	V_{BE(ON)}	—	1.2	Vdc
Current Gain Bandwidth Product (IC= 0.5Adc, VCE= 5Vdc, f= 10MHz)		f_T	80	—	MHz
Output Capacitance	(VCB= 30Vdc, IE= 0 Adc, f= 1.0MHz)	Cob	—	45	pF
Input Capacitance	(VBE= 8Vdc, IC= 0 Adc, f= 1.0MHz)	Cib	—	225	pF
Turn On Time	VCC = 20Vdc, IC = 1.0Adc, VEB(off) = 3.7Vdc IB1 = IB2 = 100mAdc, RL – 20 Ohms	t(on)	---	130	nsec
Turn Off Time		t(off)	---	1.5	μsec

For thermal derating curves and other characteristic curves please contact SSDI Marketing Department.

Notes:

* Pulse Test: Pulse Width = 300 μS, Duty Cycle = 2%

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