Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, CA 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SFT4300

2 AMP, 150 Volts NPN Transistor

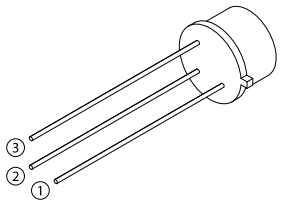
DESIGNER'S DATA SHEET

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:

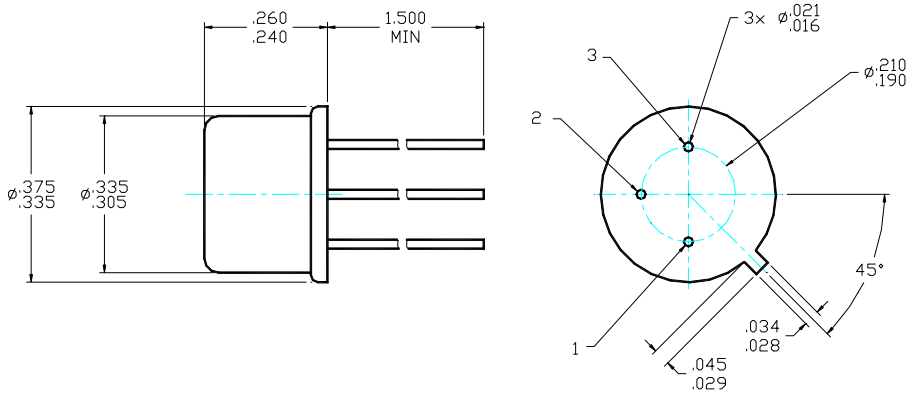
- Radiation Tolerant
- Fast Switching
- High Frequency
- Low Saturation Voltage
- 200°C Operating, Gold Eutectic Die Attach
- Complementary use with SFT5333

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 = 100º C Derate above TC = 100º C	P_D	6.6 66	W mW/ºC
Operating and Storage Temperature	Tj, Tstg	-65 to +200	ºC
Thermal Resistance, Junction to Case	$R_{\theta JC}$	15.2	ºC/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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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}**	—	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%