



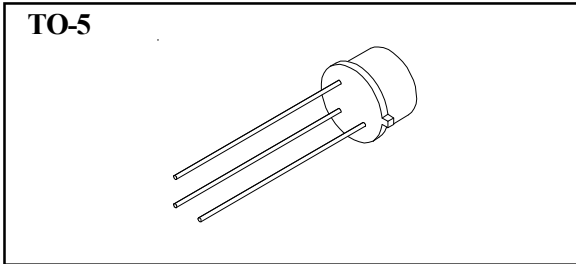
SOLID STATE DEVICES, INC.

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DESIGNER'S DATA SHEET

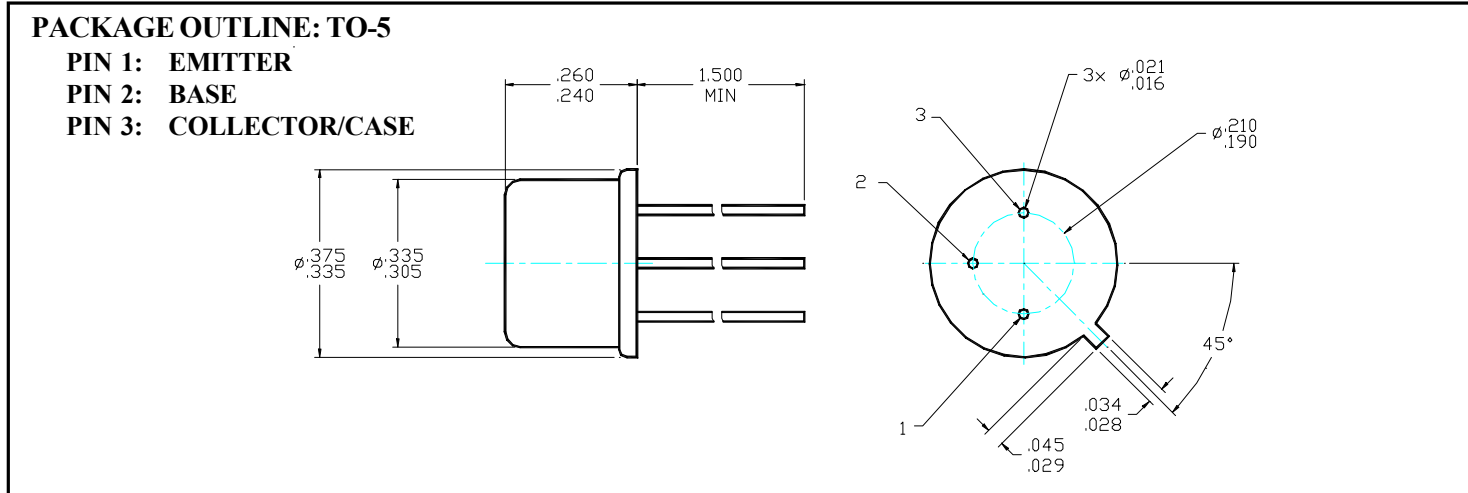
SFT4300

**2 AMP
 150 VOLTS
 NPN TRANSISTOR**



- FEATURES:**
- Radiation Tolerant
 - Fast Switching
 - High Frequency
 - Low Saturation Voltage
 - 200°C Operating, Gold Eutectic Die Attach
 - Complementary use with SFT 5333

MAXIMUM RATINGS	Symbol	Value	Unit
Collector - Emitter Voltage	V _{CEO}	80	Volts
Collector - Base Voltage	V _{CB0}	150	Volts
Emitter - Base Voltage	V _{EBO}	8	Volts
Collector Current	I _C	2	Amps
Base Current Current	I _B	1	Amps
Total Device Dissipation T _C = 100°C Derate above T _C = 100°C	P _D	6.6 66	Watts mW/°C
Operating and Storage Temperature	T _J & T _{STG}	-65 to +200	°C
Thermal Resistance	R _{qJC}	15.2	°C/W



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

DATA SHEET #: XN0029D

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ELECTRICAL CHARACTERISTICS^{1/}		SYMBOL	MIN	MAX	UNIT
Collector-Emitter Breakdown Voltage ($I_C = 30 \text{ mA}_{dc}$)		BV_{CEO}	80	-	Volts
Collector-Base Breakdown Voltage ($I_C = 200 \mu\text{A}_{dc}$)		BV_{CBO}	150	-	Volts
Emitter-Base Breakdown Voltage ($I_E = 200 \mu\text{A}_{dc}$)		BV_{EBO}	8	-	Volts
Collector Cutoff Current ($V_{CB} = 90 \text{ V}_{dc}, T_C = 25^\circ\text{C}$) ($V_{CB} = 90 \text{ V}_{dc}, T_C = 100^\circ\text{C}$)		I_{CBO}	- -	1 75	mA mA
Collector Cutoff Current ($V_{CE} = 40 \text{ V}_{dc}$)		I_{CEO}	-	5	mA
Emitter Cutoff Current ($V_{EB} = 6 \text{ V}_{dc}$)		I_{EBO}	-	1	mA
DC Current Gain* $I_C = 1.0 \text{ A}_{dc}, V_{CE} = 5 \text{ V}_{dc}$ $I_C = 2.0 \text{ A}_{dc}, V_{CE} = 5 \text{ V}_{dc}$		h_{FE}	50 50	200	
Collector-Emitter Saturation Voltage * $I_C = 1.0 \text{ A}_{dc}, I_B = 100 \text{ mA}_{dc}$ $I_C = 2.0 \text{ A}_{dc}, I_B = 200 \text{ mA}_{dc}$		$V_{CE(SAT)}$	- -	0.3 0.5	Volts
Base-Emitter Voltage ($I_C = 2 \text{ A}_{dc}, V_{CE} = 2 \text{ V}_{dc}$)		$V_{BE(ON)}$	-	1.2	Volts
Current Gain Bandwidth Product ($I_C = 1.0 \text{ A}_{dc}, V_{CE} = 5 \text{ V}_{dc}, f = 10\text{MHz}$)		f_T	100	-	MHz
Output Capacitance ($V_{CB} = 30 \text{ V}_{dc}, I_E = 0 \text{ A}_{dc}, f = 1.0\text{MHz}$)		C_{ob}	-	45	pF
Input Capacitance ($V_{BE} = 8 \text{ V}_{dc}, I_C = 0 \text{ A}_{dc}, f = 1.0\text{MHz}$)		C_{ib}	-	225	pF
Turn On Time	$V_{CC} = 20\text{V}_{dc}, I_C = 1.0 \text{ A}_{dc},$ $V_{EB(off)} = 3.7 \text{ V}_{dc}$ $I_{B1} = I_{B2} = 100 \text{ mA}_{dc},$ $R_L = 20 \text{ Ohms}$	$t_{(on)}$	-	130	nsec
Turn Off Time		$t_{(off)}$	-	1.5	msec

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

NOTES:

- * Pulse Test: Pulse Width = 300 μs , Duty Cycle = 2%
- 1/ $T_j = 25^\circ\text{C}$ unless otherwise specified