



SOLID STATE DEVICES, INC.

14830 Valley View Avenue * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773

DESIGNER'S DATA SHEET

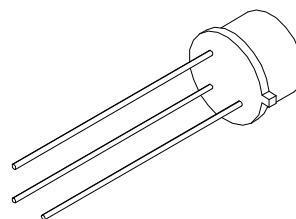
FEATURES:

- Radiation Tolerant
- Fast Switching, 150ns MAX t(on)
- High Frequency, fT 85MHz MIN.
- BVCEO 70Volts MIN.
- Low Saturation Voltage.
- 200°C Operating, Gold Eutectic Die Attach.
- Designed for Complementary Use with SFT4300A.

SFT5333A

**2 AMP
100 VOLTS
HIGH SPEED
PNP TRANSISTOR**

TO-5



MAXIMUM RATINGS	SYMBOL	VALUE	UNITS
Collector-Emitter Voltage	V_{CEO}	70	Volts
Collector-Base Voltage	V_{CBO}	100	Volts
Emitter-Base Voltage	V_{EBO}	6	Volts
Collector Current	I_C	2	Amps
Base Current	I_B	1	Amps
Total Device Dissipation @ $T_C=100^\circ\text{C}$ Derate above 100°C	P_D	15 150	W mW/°C
Operating and Storage Temperature	T_J, T_{STG}	-65 to +200	°C
Thermal Resistance, Junction to Case	R_{qJC}	6.6	°C/W

ELECTRICAL CHARACTERISTICS	SYMBOL	MIN	MAX	UNITS
Collector-Emitter Breakdown Voltage ($I_C = 30\text{mA}_{DC}$)	BV_{CEO}	70	-	V
Collector-Base Breakdown Voltage ($I_C = 200\mu\text{A}_{DC}$)	BV_{CBO}	100	-	V
Emitter-Base Breakdown Voltage ($I_E = 200\mu\text{A}_{DC}$)	BV_{EBO}	6	-	V
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

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

DATA SHEET #: TR0054B

SFT5333A



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ELECTRICAL CHARACTERISTICS		SYMBOL	MIN	MAX	UNITS
Emitter Cutoff Current ($V_{EB} = 6V_{DC}$)		I_{EBO}	-	1	mA
DC Current Gain * ($I_C = 1.0A_{DC}$, $V_{CE} = 5V_{DC}$) ($I_C = 2.0A_{DC}$, $V_{CE} = 5V_{DC}$)		H_{FE}	40 40	250	
Collector-Emitter Saturation Voltage * ($I_C = 1.0A_{DC}$, $I_B = 100mA_{DC}$) ($I_C = 2.0A_{DC}$, $I_B = 200mA_{DC}$)		$V_{CE(SAT)}$		0.45 1.0	V_{DC}
Base-Emitter Voltage * ($I_C = 2.0A_{DC}$, $V_{CE} = 4V_{DC}$)		$V_{BE(ON)}$	-	1.5	V_{DC}
Current Gain Bandwidth Product ($I_C = 1.0A_{DC}$, $V_{CE} = 10V_{DC}$, $f = 10MHz$)		f_T	85	-	MHz
Output Capacitance ($V_{CB} = 30V_{DC}$, $I_E = 0A_{DC}$, $f = 1.0MHz$)		C_{ob}	-	75	pf
Input Capacitance ($V_{BE} = 6V_{DC}$, $I_C = 0A_{DC}$, $f = 1.0MHz$)		C_{ib}	-	300	pf
Turn On Time	(VCC = 20VDC, IC = 1.0ADC, VEB(OFF)=3.7VDC, IB1=IB2=100mA _{DC} , RL=20 Ohms)	$t_{(on)}$		150	ns
Turn Off Time		$t_{(off)}$		450	ns

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

CASE OUTLINE: TO-5

PIN 1: EMITTER

PIN 2: BASE

PIN 3: COLLECTOR

