



PRELIMINARY

SOLID STATE DEVICES, INC.

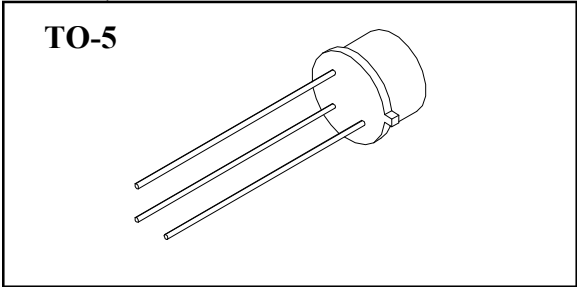
14005 Stage Road * Santa Fe Springs, Ca 90670
Phone: (562) 404-4474 * Fax: (562) 404-1773

SFT5333

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

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 SFT4300.



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	6.6 66	W mW/°C
Operating and Storage Temperature	T_J, T_{STG}	-65 to +200	°C
Thermal Resistance, Junction to Case	R_{qJC}	15.2	°C/W

ELECTRICAL CHARACTERISTICS	SYMBOL	MIN	MAX	UNITS
Collector-Emitter Breakdown Voltage ($I_C = 30 \text{ mA}_{DC}$)	BV_{CEO}	70	-	Volts
Collector-Base Breakdown Voltage ($I_C = 200 \mu\text{A}_{DC}$)	BV_{CBO}	100	-	Volts
Emitter-Base Breakdown Voltage ($I_E = 200 \mu\text{A}_{DC}$)	BV_{EBO}	6	-	Volts
Collector Cutoff Current ($V_{CB} = 90V_{DC}, T_C = 25^\circ\text{C}$) ($V_{CB} = 90V_{DC}, T_C = 100^\circ\text{C}$)	I_{CBO}	-	1 75	mA mA
Collector Cutoff Current ($V_{CE} = 40 V_{DC}$)	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 #: TR0002C

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ELECTRICAL CHARACTERISTICS		SYMBOL	MIN	MAX	UNITS
Emitter Cutoff Current ($V_{EB} = 6V_{DC}$)		I_{EBO}	-	1	mA
DC Current Gain * ($I_C = 1.0 A_{DC}$, $V_{CE} = 5 V_{DC}$) ($I_C = 2.0 A_{DC}$, $V_{CE} = 5 V_{DC}$)		H_{FE}	40 40	250	
Collector-Emitter Saturation Voltage * ($I_C = 1.0 A_{DC}$, $I_B = 100 mA_{DC}$) ($I_C = 2.0 A_{DC}$, $I_B = 200 mA_{DC}$)		$V_{CE(SAT)}$	- -	0.45 1.0	Volts
Base-Emitter Voltage * ($I_C = 2.0 A_{DC}$, $V_{CE} = 4 V_{DC}$)		$V_{BE(ON)}$	-	1.5	Volts
Current Gain Bandwidth Product ($I_C = 1.0 A_{DC}$, $V_{CE} = 10 V_{DC}$, $f = 10 MHz$)		fT	85	-	MHz
Output Capacitance ($V_{CB} = 30V_{DC}$, $I_E = 0A_{DC}$, $f = 1.0 MHz$)		C_{ob}	-	75	pF
Input Capacitance ($V_{BE} = 6V_{DC}$, $I_C = 0A_{DC}$, $f = 1.0 MHz$)		C_{ib}	-	300	pF
Turn On Time	($V_{CC} = 20V_{DC}$, $I_C = 1.0 A_{DC}$, $V_{EB(OFF)} = 3.7V_{DC}$, $I_{B1} = I_{B2} = 100 mA_{DC}$, $R_L = 20 Ohms$)	$t_{(on)}$	-	150	ns
Turn Off Time		$t_{(off)}$	-	450	ns

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

CASE OUTLINE: TO-5

- PIN 1: EMITTER
- PIN 2: BASE
- PIN 3: COLLECTOR

