



PRELIMINARY

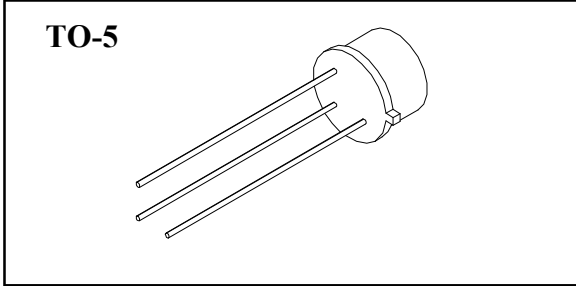
SOLID STATE DEVICES, INC.

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

DESIGNER'S DATA SHEET

SFT5333

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



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 _{CB0}	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°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 mA _{DC})	BV _{CEO}	70	-	Volts
Collector-Base Breakdown Voltage (I _C = 200 μA _{DC})	BV _{CB0}	100	-	Volts
Emitter-Base Breakdown Voltage (I _E = 200 μA _{DC})	BV _{EBO}	6	-	Volts
Collector Cutoff Current (V _{CB} = 90V _{DC} , T _C = 25°C) (V _{CB} = 90V _{DC} , T _C = 100°C)	I _{CB0}	-	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	(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 = 300ms, Duty Cycle = 2%

CASE OUTLINE: TO-5

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

