



Solid State Devices, Inc.

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SFT1192S.5

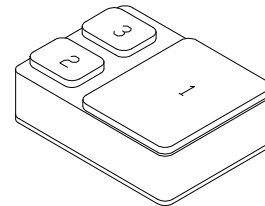
2 AMP 500 VOLTS PNP TRANSISTOR

DESIGNER'S DATA SHEET

FEATURES:

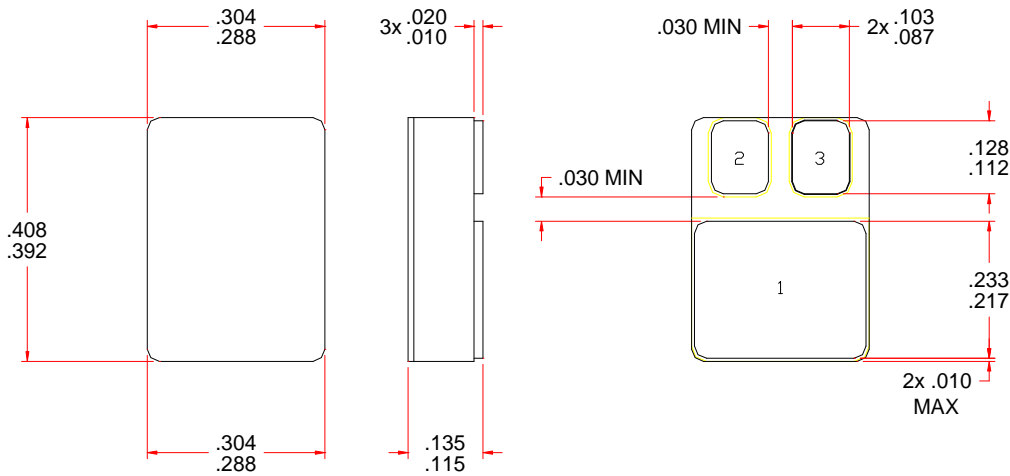
- BV_{CEO} 400 V minimum
- Fast Switching: 250 ns max t(on)
- High Frequency: minimum 50 MHz
- Low Saturation Voltage
- 200°C Operating, Gold Eutectic Die Attach
- Designed for Complementary Use with SFT6800

SMD.5



MAXIMUM RATINGS	Symbol	Value	Units
Collector – Emitter Voltage	V_{CEO}	400	Volts
Collector – Base Voltage	V_{CBO}	500	Volts
Emitter – Base Voltage	V_{CEO}	10	Volts
Collector Current	I_C	2	Amps
Base Current	I_B	0.5	Amps
Total Device Dissipation @ $T_C = 175^\circ\text{C}$ Derate above 175°C	P_D	5 200	W mW/°C
Operating and Storage Temperature Range	T_J & T_{STG}	-65 to +200	°C
Thermal Resistance, Junction to Case	R_{qJC}	5.0	°C/W

FIGURE 1: OUTLINE AND DIMENSIONS



All dimensions are in inches
Tolerances: (unless otherwise specified)
XX: ±0.01"
XXX: ±0.005"

PACKAGE OUTLINE:
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PINOUT:
Pin 1: Collector
Pin 2: Emitter
Pin 3: Base

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

DATA SHEET #: TR0082A

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ELECTRICAL CHARACTERISTICS		Symbol	Min	Max	Units
Collector – Emitter Breakdown Voltage ($I_C = 5 \text{ mA}$)		BV_{CEO}	400	—	V
Collector – Base Breakdown Voltage ($I_C = 100 \mu A_{DC}$)		BV_{CBO}	500	—	V
Emitter – Base Breakdown Voltage ($I_E = 20 \mu A_{DC}$)		BV_{EBO}	10	—	V
Collector Cutoff Current ($V_{CB} = 450 V_{DC}$)		I_{CBO}	—	1.0	mA
Collector Cutoff Current ($V_{CE} = 400 V_{DC}$, $V_{EB} = 1.5 V_{DC}$)		I_{CEV}	—	10	mA
Emitter Cutoff Current ($V_{EB} = 6 V_{DC}$)		I_{EBO}	—	10	mA
DC Current Gain* ($V_{CE} = 10 V_{DC}$)		H_{FE}	($I_C = 1.0 \text{ mA}_{DC}$) 80	—	
			($I_C = 50 \text{ mA}_{DC}$) 60	—	
			($I_C = 500 \text{ mA}_{DC}$) 40	—	
Collector – Emitter Saturation Voltage* ($I_C = 50 \text{ mA}_{DC}$, $I_B = 5 \text{ mA}_{DC}$) ($I_C = 500 \text{ mA}_{DC}$, $I_B = 50 \text{ mA}_{DC}$)		$V_{CE(SAT)}$	—	0.4 1.0	V_{DC}
Base – Emitter Saturation Voltage* ($I_C = 50 \text{ mA}_{DC}$, $I_B = 5 \text{ mA}_{DC}$) ($I_C = 500 \text{ mA}_{DC}$, $I_B = 50 \text{ mA}_{DC}$)		$V_{BE(SAT)}$	—	1.5 2.0	V_{DC}
Current Gain Bandwidth Product ($I_C = 70 \text{ mA}_{DC}$, $V_{CE} = 30 V_{DC}$, $f = 20 \text{ MHz}$)		f_T	50	—	MHz
Output Capacitance ($V_{CB} = 20 V_{DC}$, $I_E = 0 A_{DC}$, $f = 1.0 \text{ MHz}$)		C_{ob}	—	75	pf
Input Capacitance ($V_{EB} = 2 V_{DC}$, $I_C = 0 A_{DC}$, $f = 1.0 \text{ MHz}$)		C_{ib}	—	300	pf
Turn On Time	($V_{CC} = 100 V_{DC}$, $I_C = 500 \text{ mA}_{DC}$, $V_{EB(OFF)} = 3.7 V_{DC}$ $I_{B1} = I_{B2} = 50 \text{ mA}_{DC}$	$t_{(on)}$	—	250	ns
Turn Off Time		$t_{(off)}$	—	2500	ns

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

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

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