



PRELIMINARY

SOLID STATE DEVICES, INC.

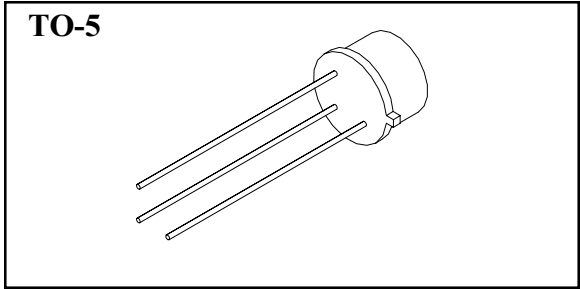
14005 Stage Road * Santa Fe Springs, Ca 90670
Phone: (562) 404-4474 * Fax: (562) 404-1773

DESIGNER'S DATA SHEET

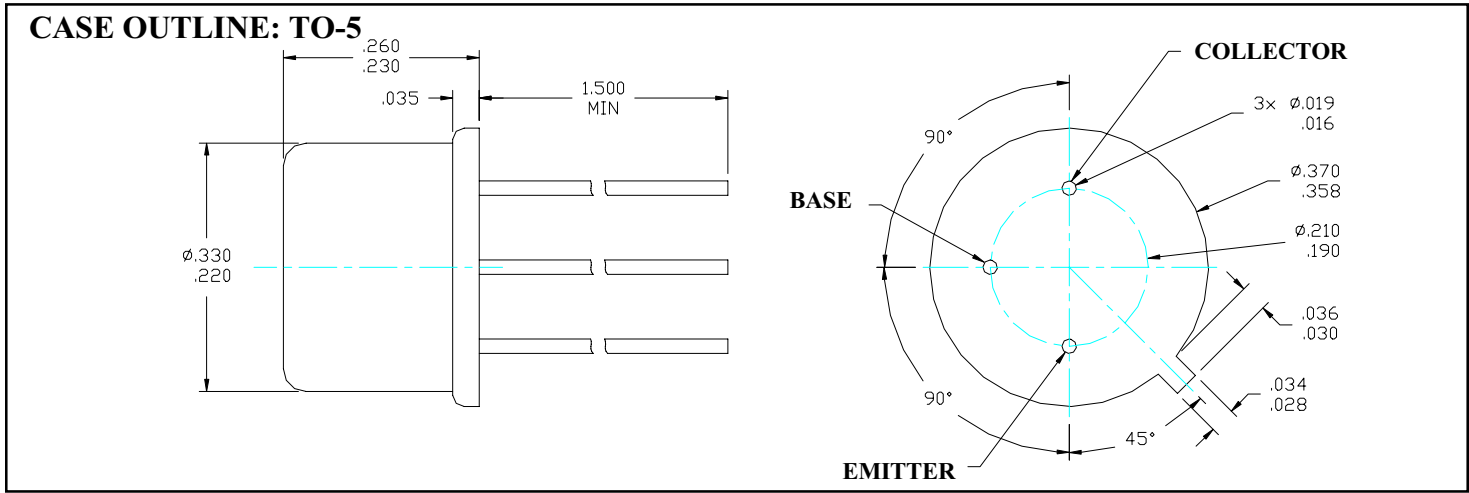
- FEATURES:**
- **V_{CEO} 400V.**
 - **Fast Switching.**
 - **Very Low Leakage.**
 - **Low Saturation Voltage.**
 - **200°C Operating, Gold Eutectic Die Attach.**
 - **Designed for Complementary Use with SFT1192.**

SFT6800

2 AMP 500 VOLTS NPN TRANSISTOR



MAXIMUM RATINGS	SYMBOL	VALUE	UNITS
Collector-Emitter Voltage	V_{CEO}	400	Volts
Collector-Base Voltage	V_{CBO}	500	Volts
Emitter-Base Voltage	V_{EBO}	10	Volts
Collector Current	I_C	2	Amps
Base Current	I_B	0.5	Amps
Total Device Dissipation @ $T_C=100^\circ\text{C}$ Derate above 100°C	P_D	6.67 150	W mW/°C
Operating and Storage Temperature	T_J, T_{STG}	-65 to +200	°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	15	°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 #: TR0005B

SFT6800

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ELECTRICAL CHARACTERISTICS		SYMBOL	MIN	MAX	UNITS
Collector-Emitter Breakdown Voltage ($I_C = 20\text{mA}_{DC}$)		BV_{CEO}	400	-	V
Collector-Base Breakdown Voltage ($I_C = 100\mu\text{A}_{DC}$)		BV_{CBO}	500	-	V
Emitter-Base Breakdown Voltage ($I_E = 20\mu\text{A}_{DC}$)		BV_{EBO}	10	-	V
Collector Cutoff Current ($V_{CB} = 400\text{V}_{DC}$)		I_{CBO}	-	200	nA
Collector Cutoff Current ($V_{CE} = 400\text{V}_{DC}$, $V_{EB} = 1.5\text{V}_{DC}$)		I_{CEV}	-	200	nA
Emitter Cutoff Current ($V_{EB} = 6\text{V}_{DC}$)		I_{EBO}	-	200	nA
DC Current Gain* ($V_{CE} = 5\text{V}_{DC}$) ($I_C = 50\text{mA}_{DC}$) ($I_C = 500\text{mA}_{DC}$) ($I_C = 1.0\text{A}_{DC}$)		H_{FE}	50 40 15	- - -	
Collector-Emitter Saturation Voltage* ($I_C = 500\text{mA}_{DC}$, $I_B = 50\text{mA}_{DC}$)		$V_{CE(SAT)}$	-	500	mV_{DC}
Base-Emitter Saturation Voltage* ($I_C = 500\text{mA}_{DC}$, $I_B = 50\text{mA}_{DC}$)		$V_{BE(SAT)}$	-	1.0	V_{DC}
Current Gain Bandwidth Product ($I_C = 50\text{mA}_{DC}$, $V_{CE} = 10\text{V}_{DC}$, $f = 20\text{MHz}$)		fT	25	-	MHz
Output Capacitance ($V_{CB} = 30\text{V}_{DC}$, $I_E = 0\text{A}_{DC}$, $f = 2.0\text{MHz}$)		C_{ob}	-	40	pf
Turn On Time	($V_{CC} = 330\text{V}_{DC}$, $I_C = 500\text{mA}_{DC}$, $I_{B1} = I_{B2} = 100\text{mA}_{DC}$ $R_{B1} = R_{B2} = 330\Omega$)	$t_{(on)}$	-	700	ns
Turn Off Time		$t_{(off)}$	-	2000	ns

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