



SOLID STATE DEVICES, INC.

14830 Valley View Blvd * La Mirada, Ca 90638

Phone: (562) 404-7855 * Fax: (562) 404-1773

ssdi@ssdi-power.com * www.ssdi-power.com

DESIGNER'S DATA SHEET

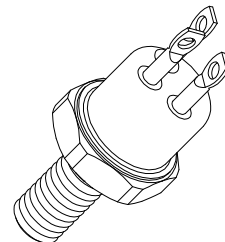
FEATURES:

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

SFT6800/59

**2 AMP
500 VOLTS
NPN TRANSISTOR**

TO-59

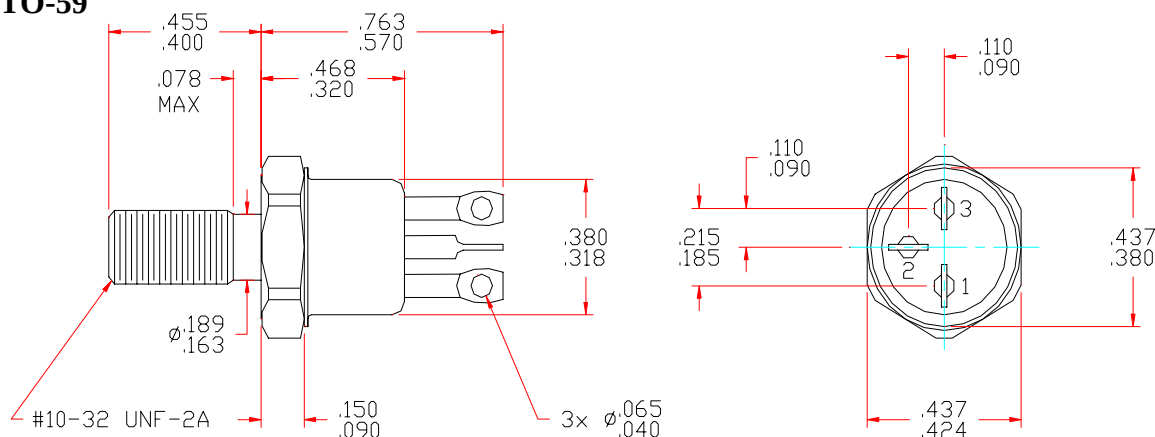


MAXIMUM RATINGS	SYMBOL	VALUE	UNITS
Collector-Emitter Voltage $R_{BE} = 1 \text{ k}\Omega$	V_{CEO} V_{CER}	360 600	Volts
Collector-Base Voltage	V_{CBO}	600	Volts
Emitter-Base Voltage	V_{EBO}	10	Volts
Collector Current	I_C	2	Amps
Base Current	I_B	0.5	Amps
Total Device Dissipation @ $T_C=100^\circ\text{C}$ Derate above 25°C	P_D	20 133	W mW/°C
Operating and Storage Temperature	T_J, T_{STG}	-65 to +200	°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	7.5	°C/W

CASE OUTLINE: TO-59

Pin Out:

- 1 - Collector**
2 - Base
3 - Emmitter



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

DATA SHEET #: TR0009C

SFT6800/59



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ELECTRICAL CHARACTERISTICS		SYMBOL	MIN	MAX	UNITS
Collector-Emitter Breakdown Voltage (I _C =5mA _{DC}) (I _C =100mA _{DC} , R _{BE} =1kΩ)		BV _{CEO} BV _{CER}	360 600	- -	V
Collector-Base Breakdown Voltage (I _C = 100μA _{DC})		BV _{CBO}	600	-	V
Emitter-Base Breakdown Voltage (I _E = 20μA _{DC})		BV _{EBO}	10	-	V
Collector Cutoff Current (V _{CB} = 400V _{DC})		I _{CBO}	-	200	nA
Collector Cutoff Current (V _{CE} = 400V _{DC} , V _{EB} = 1.5V _{DC})		I _{CEV}	-	200	nA
Emitter Cutoff Current (V _{EB} = 6V _{DC})		I _{EBO}	-	200	nA
DC Current Gain* (I _C = 50mA _{DC}) (V _{CE} = 5V _{DC}) (I _C = 500mA _{DC}) (I _C = 1.0A _{DC})		H _{FE}	50 40 15	- - -	
Collector-Emitter Saturation Voltage* (I _C = 500mA _{DC} , I _B = 50mA _{DC})		V _{CE(SAT)}	-	500	mV _{DC}
Base-Emitter Saturation Voltage* (I _C = 500mA _{DC} , I _B = 50mA _{DC})		V _{BE (SAT)}	-	1.0	V _{DC}
Current Gain Bandwidth Product (I _C = 50mA _{DC} , V _{CE} = 10V _{DC} , f = 20MHz)		f _T	25	-	MHz
Output Capacitance (V _{CB} = 30V _{DC} , I _E = 0A _{DC} , f = 2.0MHz)		C _{ob}	-	40	pf
Turn On Time	(V _{CC} = 330V _{DC} , I _C = 500mA _{DC} , I _{B1} = I _{B2} = 100mA _{DC} R _{B1} = R _{B2} = 330Ω)	t _(on)	-	700	ns
Turn Off Time		t _(off)	-	4000	ns

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