Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773
ssdi@ssdi-power.com * www.ssdi-power.com

SFT6800/59

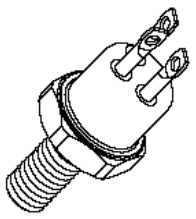
2 AMP
500 VOLTS
NPN TRANSISTOR

DESIGNER'S DATA SHEET

FEATURES:

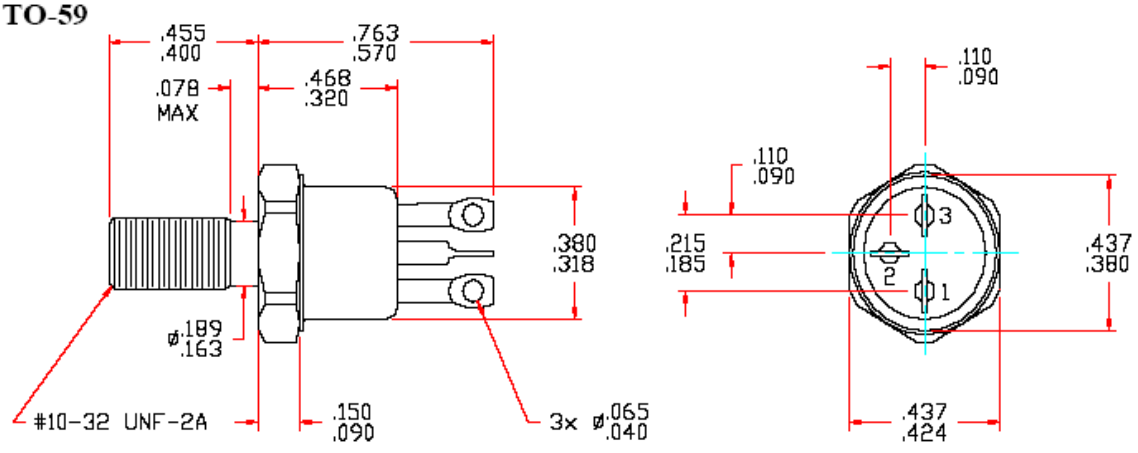
- BV_{CEO} TO 400 V
- Fast Switching
- Very Low Leakage
- Low Saturation Voltage
- 200°C Operating, Gold Eutectic Die Attach
- Designed for Complementary Use with SFT1192

TO-59



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°C Derate above 25°C	P_D	20 133	W mW/°C
Operating and Storage Temperature Range	T_{OP} & 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 - Emmiter



NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	DATA SHEET #: TR0009E	DOC

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ELECTRICAL CHARACTERISTICS		Symbol	Min	Max	Units
Collector – Emitter Breakdown Voltage (I_C = 20 mA)		BV_{CEO}	400	—	V
Collector – Base Breakdown Voltage (I_C = 100 μA_{DC})		BV_{CBO}	500	—	V
Emitter – Base Breakdown Voltage (I_E = 20 μA_{DC})		BV_{EBO}	10	—	V
Collector Cutoff Current (V_{CB} = 400 V_{DC})		I_{CBO}	—	200	nA
Collector Cutoff Current (V_{CE} = 400 V_{DC}, V_{EB} = 1.5 V_{DC})		I_{CEV}	—	200	nA
Emitter Cutoff Current (V_{EB} = 6 V_{DC})		I_{EBO}	—	200	nA
DC Current Gain* (V_{CE} = 5 V_{DC})	(I_C = 50 mA_{DC}) (I_C = 500 mA_{DC}) (I_C = 1.0 A_{DC})	H_{FE}	50 40 15	— — —	
Collector – Emitter Saturation Voltage* (I_C = 500 mA_{DC}, I_B = 50 mA_{DC})		$V_{CE\ (SAT)}$	—	500	mV_{DC}
Base – Emitter Saturation Voltage* (I_C = 500 mA_{DC}, I_B = 50 mA_{DC})		$V_{BE\ (SAT)}$	—	1.0	V_{DC}
Current Gain Bandwidth Product (I_C = 50 mA_{DC}, V_{CE} = 10 V_{DC} , f = 20 MHz)		f_T	25	—	MHz
Output Capacitance (V_{CB} = 30 V_{DC}, I_E = 0 A_{DC} , f = 2.0 MHz)		C_{obo}	—	40	pf
Turn On Time	(V_{CC} = 330 V_{DC}, I_C = 500 mA_{DC} , I_{B1} = I_{B2} = 100 mA_{DC} R_{B1} = R_{B2} = 330 Ω	$t_{(on)}$	—	700	ns
Turn Off Time		$t_{(off)}$	—	2000	ns

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