



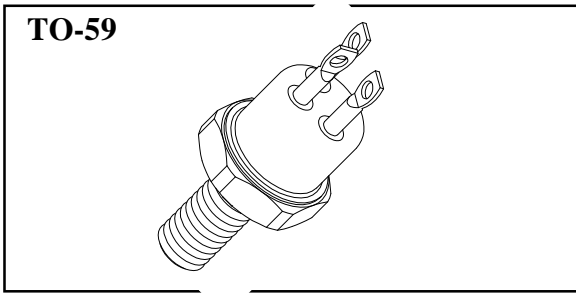
SOLID STATE DEVICES, INC.

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DESIGNER'S DATA SHEET

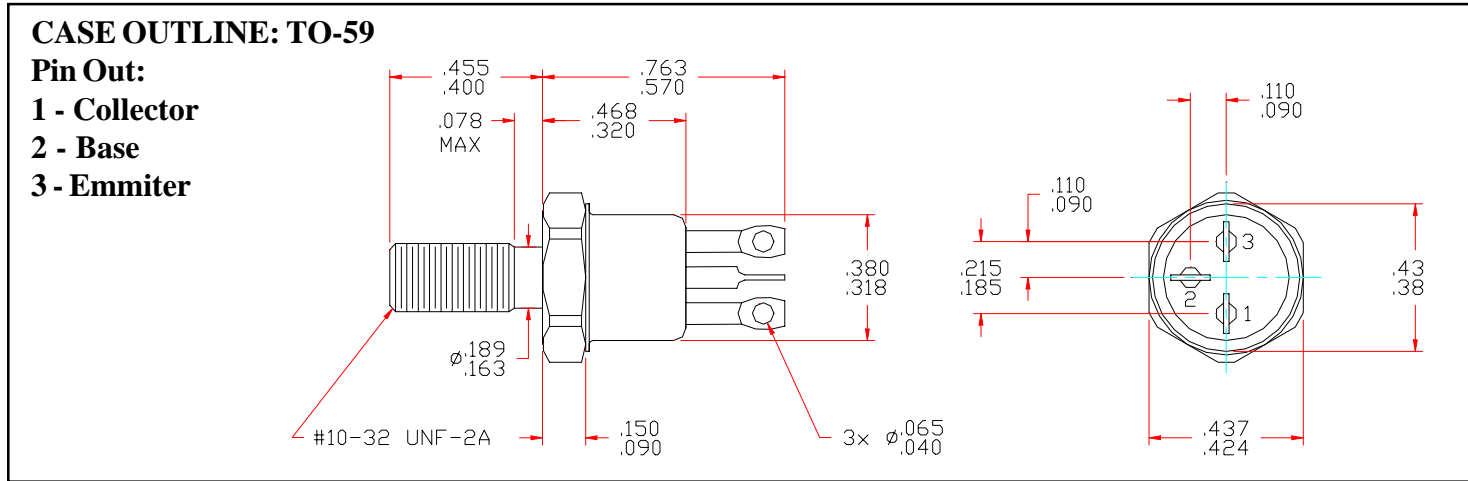
SFT1192/59

**2 AMP
 500 VOLTS
 PNP TRANSISTOR**



- FEATURES:**
- **BV_{CEO} 400V.**
 - **Fast Switching.**
 - **High Frequency.**
 - **Low Saturation Voltage.**
 - **200°C Operating, Gold Eutectic Die Attach.**
 - **Designed for Complementary Use with SFT6800.**

| MAXIMUM RATINGS | SYMBOL | VALUE | UNITS |
|---|--------------------------------------|-------------|------------|
| Collector-Emitter Voltage R _{BE} = 1 kOhms | V _{CEO} V _{CER} | 400 500 | Volts |
| Collector-Base Voltage | V _{CB0} | 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 | T _J , T _{STG} | -65 to +200 | °C |
| Thermal Resistance, Junction to Case | R _{θJC} | 7.5 | °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 #: TR0008C

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| ELECTRICAL CHARACTERISTICS | | SYMBOL | MIN | MAX | UNITS |
|---|---|---------------|-----|------|---------------|
| Collector-Emitter Breakdown Voltage ($I_C = 5\text{mA}_{DC}$) ($I_C = 100\text{mA}_{DC}$, $R_{BE} = 1\text{k}\Omega$) | | BV_{CEO} | 400 | - | V |
| | | BV_{CER} | 500 | - | |
| 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 ($V_{CB} = 450\text{V}_{DC}$) | | I_{CBO} | - | 1.0 | μA |
| Collector Cutoff Current ($V_{CE} = 400\text{V}_{DC}$, $V_{EB} = 1.5\text{V}_{DC}$) | | I_{CEV} | - | 10 | μA |
| Emitter Cutoff Current ($V_{EB} = 6\text{V}_{DC}$) | | I_{EBO} | - | 10 | μA |
| DC Current Gain* ($V_{CE} = 10\text{V}_{DC}$) | ($I_C = 1.0\text{mA}_{DC}$) | H_{FE} | 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 | V_{DC} |
| | | | - | 2.0 | |
| 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 | V_{DC} |
| | | | - | 2.0 | |
| Current Gain Bandwidth Product ($I_C = 70\text{mA}_{DC}$, $V_{CE} = 30\text{V}_{DC}$, $f = 20\text{MHz}$) | | fT | 50 | - | MHz |
| Output Capacitance ($V_{CB} = 20\text{V}_{DC}$, $I_E = 0\text{A}_{DC}$, $f = 1.0\text{MHz}$) | | C_{ob} | - | 75 | pf |
| Input Capacitance ($V_{BE} = 2\text{V}_{DC}$, $I_C = 0\text{A}_{DC}$, $f = 1.0\text{MHz}$) | | C_{ib} | - | 300 | pf |
| Turn On Time | ($V_{CC} = 100\text{V}_{DC}$, $I_C = 500\text{mA}_{DC}$, $V_{EB(OFF)} = 3.7\text{V}_{DC}$, $I_{B1} = I_{B2} = 50\text{mA}_{DC}$) | $t_{(on)}$ | - | 250 | ns |
| Turn Off Time | | $t_{(off)}$ | - | 2500 | ns |

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