# SOT89 PNP SILICON PLANAR DARLINGTON TRANSISTOR

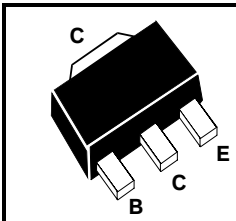
# BST61

**ISSUE 4 – MARCH 1996** ✪

FEATURES

* Fast Switching
* High $h_{FE}$

PARTMAKING DETAIL — BS2




SOT89

## ABSOLUTE MAXIMUM RATINGS.

| PARAMETER | SYMBOL | VALUE | UNIT |
|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | -80 | V |
| Collector-Emitter Voltage | $V_{CEO}$ | -60 | V |
| Emitter-Base Voltage | $V_{EBO}$ | -10 | V |
| Pea Pulse Current | $I_{CM}$ | -1.5 | A |
| Continuous Collector Current | $I_C$ | -500 | mA |
| Base Current | $I_B$ | -100 | mA |
| Power Dissipation at $T_{amb}$=25°C | $P_{tot}$ | 1 | W |
| Operating and Storage Temperature Range | $T_j$:$T_{stg}$ | -65 to +150 | °C |

## ELECTRICAL CHARACTERISTICS (at $T_{amb}$ = 25°C unless otherwise stated).

| PARAMETER | SYMBOL | MIN. | MAX. | UNIT | CONDITIONS. |
|---|---|---|---|---|---|
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | -80 | | V | $I_C$=-10μA, $I_E$=0 |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | -60 | | V | $I_C$=-10mA, $I_B$=0* |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | -10 | | V | $I_E$=-10μA, $I_C$=0 |
| Emitter Cut-Off Current | $I_{EBO}$ | | -10 | μA | $V_{EB}$=-8V, $I_E$=0 |
| Collector-Emitter Cut-Off Current | $I_{CES}$ | | -10 | μA | $V_{CE}$=-60V, $I_C$=0 |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | | -1.3<br>-1.3 | V<br>V | $I_C$=500mA, $I_B$=-0.5mA<br>$I_C$=500mA, $I_B$=-0.5mA<br>$T_j$=150°C |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | | -1.9 | V | $I_C$=-500mA, $I_B$=-0.5mA |
| Static Forward Current Transfer Ratio | $h_{FE}$ | 1K<br>2K | | | $I_C$=-150mA, $V_{CE}$=-10V*<br>$I_C$=-500mA, $V_{CE}$=-10V* |
| Turn On Time | $t_{on}$ | 400 Typical | | ns | $I_C$=500mA<br>$I_{Bon}$=$I_{Boff}$=-0.5mA |
| Turn Off Time | $t_{off}$ | 1.5K Typical | | ns | |

* Measured under pulsed conditions. Pulse width=300μs. Duty cycle ≤ 2%

For typical characteristics graphs see FZTA63 (SOT223) datasheet.

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