

SOT89 PNP SILICON PLANAR DARLINGTON TRANSISTOR

BST61

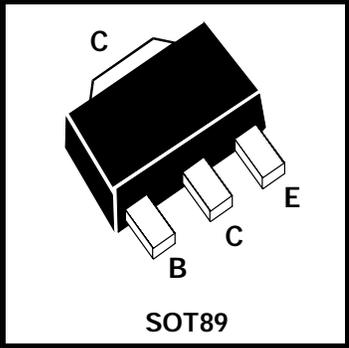
ISSUE 4 – MARCH 1996



FEATURES

- * Fast Switching
- * High h_{FE}

PARTMAKING DETAIL — BS2



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 $T_{amb}=25^\circ\text{C}$	P_{tot}	1	W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-65 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^\circ\text{C}$ unless otherwise stated).

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

* Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$

For typical characteristics graphs see FZTA63 (SOT223) datasheet.