

SOT89 NPN SILICON PLANAR HIGH VOLTAGE TRANSISTOR

ISSUE 4 – JUNE 1996



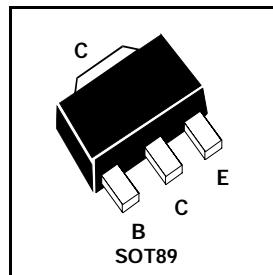
BST39

FEATURES

- * Fast Switching
- * High h_{FE} .

COMPLEMENTARY TYPE – BST16

PARTMAKING DETAIL – AT1



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	400	V
Collector-Emitter Voltage	V_{CEO}	350	V
Emitter-Base Voltage	V_{EBO}	5	V
Peak Pulse Current	I_{CM}	1	A
Continuous Collector Current	I_C	500	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	°C

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

PARAMETER	SYMBOL	MIN.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	400		V	$I_C=10\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	350		V	$I_C=1\text{mA}^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5		V	$I_E=10\mu\text{A}$
Collector Cut-Off Current	I_{CBO}		20	nA	$V_{CB}=300\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(\text{sat})}$		0.5	V	$I_C=50\text{mA}, I_B=4\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(\text{sat})}$		1.3	V	$I_C=50\text{mA}, I_B=4\text{mA}$
Static Forward Current Transfer Ratio	h_{FE}	40			$I_C=20\text{mA}, V_{CE}=10\text{V}^*$
Output Capacitance	C_{obo}		2	pF	$V_{CB}=10\text{V}, f=1\text{MHz}$
Input Capacitance	C_{ibo}		20	pF	$V_{EB}=10\text{V}, f=1\text{MHz}$
Transition Frequency	f_T	70		MHz	$I_C=10\text{mA}, V_{CE}=10\text{V}, f=5\text{MHz}$

* Measured under pulsed conditions. Pulse width=300μs. Duty cycle ≤ 2%
For typical characteristics graphs see FMMT458 datasheet.