

SOT89 NPN SILICON PLANAR HIGH VOLTAGE TRANSISTOR

ISSUE 4 – JUNE 1996



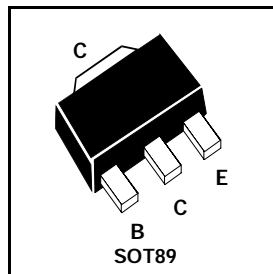
BST39

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

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

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

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