

# SOT89 NPN SILICON PLANAR HIGH VOLTAGE TRANSISTOR

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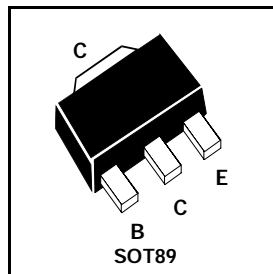
## BST39

### 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 $\mu s$ . Duty cycle  $\leq 2\%$   
For typical characteristics graphs see FMMT458 datasheet.