SOT89 NPN SILICON PLANAR HIGH VOLTAGE TRANSISTOR

BST39

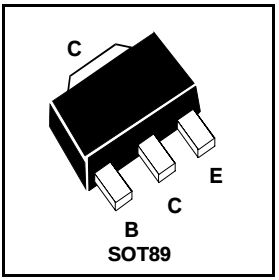
ISSUE 4 – JUNE 1996 ✪

FEATURES

* Fast Switching
* High h_{FE}.

COMPLEMENTARY TYPE – BST16

PARTMAKING DETAIL – AT1



SOT89

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°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	$V_{(BR)CBO}$	400		V	I_C=10μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	350		V	I_C=1mA*
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5		V	I_E=10μA
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=300μs. Duty cycle ≤ 2%
For typical characteristics graphs see FMMT458 datasheet.

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