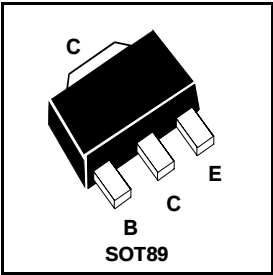


SOT89 NPN SILICON PLANAR
HIGH VOLTAGE TRANSISTOR
ISSUE 3 – JANUARY 1996

BST40

COMPLEMENTARY TYPE – BST15
PARTMAKING DETAIL — AT2



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	300	V
Collector-Emitter Voltage	V_{CEO}	250	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	$V_{(BR)CBO}$	300		V	$I_C=100\mu A, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	250		V	$I_C=1mA, I_B=0^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5		V	$I_E=100\mu A, I_C=0$
Emitter Cut-Off Current	I_{EBO}		10	μA	$V_{EB}=5V, I_E=0$
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			$I_C=20mA, V_{CE}=10V^*$
Transition Frequency	f_T	70		MHz	$I_C=10mA, V_{CE}=10V, f=5MHz$
Output Capacitance	C_{obo}		2	pF	$V_{CB}=10V, f=1MHz$
Input Capacitance	C_{ibo}		30	pF	$V_{EB}=5V, f=1MHz$

* Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$
For typical characteristics graphs see FMMA42 datasheet.