

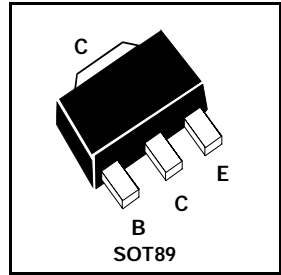
# SOT89 NPN SILICON PLANAR HIGH VOLTAGE TRANSISTOR

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	$\mu A$	$V_{EB}=5V, I_E=0$
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 $\mu s$ . Duty cycle  $\leq 2\%$   
For typical characteristics graphs see FMMTA42 datasheet.