

# SOT89 PNP SILICON PLANAR DARLINGTON TRANSISTOR

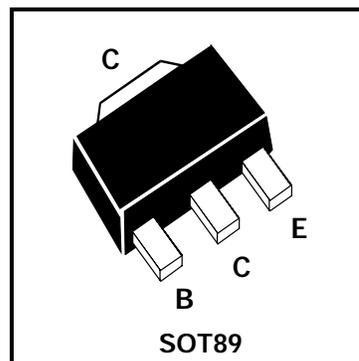
ISSUE 3 – SEPTEMBER 1995



## BCV48

COMPLEMENTARY TYPE – BCV49

PARTMARKING DETAIL – EE



### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	-80	V
Collector-Emitter Voltage	$V_{CEO}$	-60	V
Emitter-Base Voltage	$V_{EBO}$	-10	V
Peak Pulse Current	$I_{CM}$	-800	mA
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.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-80			V	$I_C = -100\mu A$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-60			V	$I_C = -10mA^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-10			V	$I_E = -10\mu A$
Collector Cut-Off Current	$I_{CBO}$			-100 -10	nA $\mu A$	$V_{CB} = -60V$ $V_{CB} = -60V, T_{amb} = 150^{\circ}C$
Emitter Cut-Off Current	$I_{EBO}$			-100	nA	$V_{EB} = -4V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-1	V	$I_C = -100mA, I_B = 0.1mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			-1.5	V	$I_C = -100mA, I_B = -0.1mA^*$
Static Forward Current Transfer Ratio	$h_{FE}$	2000 4000 10000 2000				$I_C = -100\mu A, V_{CE} = -1V \dagger$ $I_C = -10mA, V_{CE} = -5V^*$ $I_C = -100mA, V_{CE} = -5V^*$ $I_C = -500mA, V_{CE} = -5V^*$
Transition Frequency	$f_T$		200		MHz	$I_C = -50mA, V_{CE} = -5V$ $f = 20MHz$
Output Capacitance	$C_{obo}$		4.5		pF	$V_{CB} = -10V, f = 1MHz$

\*Measured under pulsed conditions. Pulse width=300 $\mu s$ . Duty cycle  $\leq 2\%$

† Periodic Sample Test Only.