

# SOT89 PNP SILICON PLANAR DARLINGTON TRANSISTOR

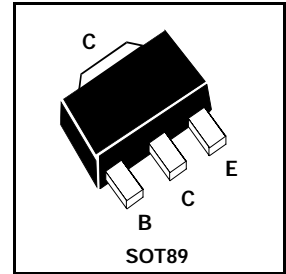
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## BCV48

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 $T_{amb}=25^\circ\text{C}$	$P_{tot}$	1	W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-65 to +150	$^\circ\text{C}$

### ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^\circ\text{C}$ unless otherwise stated).

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

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

$\dagger$  Periodic Sample Test Only.