

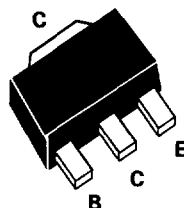
SOT89 NPN SILICON PLANAR DARLINGTON TRANSISTOR

ISSUE 3 – SEPTEMBER 1995

BCV49

COMPLEMENTARY TYPE – BCV48

PARTMARKING DETAILS – EG



SOT89

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 μA	$V_{CB} = 60V$ $V_{CB} = 60V, T_{amb} = 150^{\circ}C$
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		170		MHz	$I_C = 50mA, V_{CE} = 5V$ $f = 20MHz$
Output Capacitance	C_{obo}		3.5		pF	$V_{CB} = 10V, f = 1MHz$

*Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$
 For typical graphs see FMMT38A datasheet † Periodic Sample Test Only.
 Spice parameter data is available upon request for this device