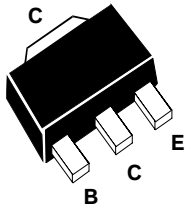
SOT89 NPN SILICON PLANAR DARLINGTON TRANSISTOR

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°C	P_{tot}	1	W
Operating and Storage Temperature Range	T_j:T_{stg}	-65 to +150	°C

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	80			V	I_C=100μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	60			V	I_C=10mA*
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	10			V	I_E=10μA
Collector Cut-Off Current	I_{CBO}			100 10	nA μA	V_{CB}=60V V_{CB}=60V, T_{amb}=150°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=100μA, V_{CE}=1V† 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=300μs. Duty cycle ≤2%
For typical graphs see FMMT38A datasheet † Periodic Sample Test Only.
Spice parameter data is available upon request for this device

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