

SOT89 NPN SILICON PLANAR MEDIUM POWER TRANSISTOR

BCX68

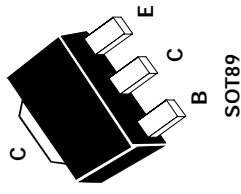
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FEATURES

- * High gain and low saturation voltages

COMPLEMENTARY TYPE – BCX69

PARTMARKING DETAIL – BCX68 – CE
BCX68-16 – CC
BCX68-25 – CD



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	25	V
Collector-Emitter Voltage	V_{CEO}	20	V
Emitter-Base Voltage	V_{EBO}	5	V
Peak Pulse Current	I_{CM}	2	A
Continuous Collector Current	I_C	1	A
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	$V_{(BR)CBO}$	25			V	$I_C = 100\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	20			V	$I_C = 10\text{mA}$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5			V	$I_E = 100\mu\text{A}$
Collector Cut-Off Current	I_{CBO}			0.1	μA	$V_{CB} = 25\text{V}$
Emitter Cut-Off Current	I_{EBO}			10	μA	$V_{CB} = 25\text{V}, T_a = 150^\circ\text{C}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.5	V	$I_C = 1\text{A}, I_B = 100\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$			1.0	V	$I_C = 1\text{A}, V_{CE} = 1\text{V}^*$
Static Forward Current Transfer Ratio	h_{FE}	50				$I_C = 5\text{mA}, V_{CE} = 10\text{V}$
		85		375		$I_C = 500\text{mA}, V_{CE} = 1\text{V}$
		60				$I_C = 1\text{A}, V_{CE} = 1\text{V}^*$
	BCX68-16	100		250		$I_C = 500\text{mA}, V_{CE} = 1\text{V}^*$
	BCX68-25	160	250	400		$I_C = 500\text{mA}, V_{CE} = 1\text{V}$
Transition Frequency	f_T	100			MHZ	$I_C = 100\text{mA}, V_{CE} = 5\text{V}, f = 100\text{MHZ}$
Output Capacitance	C_{obo}			25	pF	$V_{CB} = 10\text{V}, f = 1\text{MHZ}$

*Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$. For typical characteristics graphs see FMMT449 datasheet.