

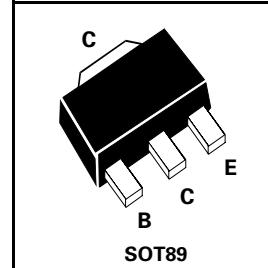
**SOT89 NPN SILICON PLANAR
MEDIUM POWER TRANSISTOR**

ISSUE 5 – MARCH 2001

BCX5616

COMPLEMENTARY TYPE – BCX5316

PARTMARKING DETAIL – BL



ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CEO}	80	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	$V_{(BR)CBO}$	100			V	$I_C = 100\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	80			V	$I_C = 10\text{mA}$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5			V	$I_E = 10\mu\text{A}$
Collector Cut-Off Current	I_{CBO}			0.1 20	μA	$V_{CB} = 30\text{V}$ $V_{CB} = 30\text{V}, T_{amb} = 150^\circ\text{C}$
Emitter Cut-Off Current	I_{EBO}			20	nA	$V_{EB} = 4\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(\text{sat})}$			0.5	V	$I_C = 500\text{mA}, I_B = 50\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$			1.0	V	$I_C = 500\text{mA}, V_{CE} = 2\text{V}^*$
Static Forward Current Transfer Ratio	h_{FE}	25 100 25		250		$I_C = 5\text{mA}, V_{CE} = 2\text{V}^*$ $I_C = 150\text{mA}, V_{CE} = 2\text{V}^*$ $I_C = 500\text{mA}, V_{CE} = 2\text{V}^*$
Transition Frequency	f_T	150			MHz	$I_C = 50\text{mA}, V_{CE} = 10\text{V},$ $f = 100\text{MHz}$
Output Capacitance	C_{obo}			15	pF	$V_{CB} = 10\text{V}, f = 1\text{MHz}$

*Measured under pulsed conditions.

 ZETEX