

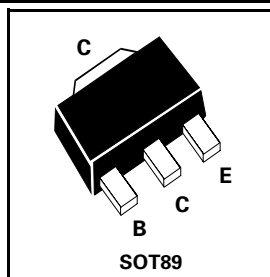
**SOT89 NPN SILICON PLANAR
MEDIUM POWER TRANSISTOR**

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

*Measured under pulsed conditions.

