

# SOT89 PNP SILICON PLANAR MEDIUM POWER TRANSISTORS

**BCX51  
BCX52  
BCX53**

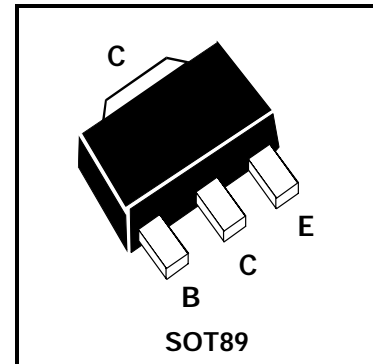
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COMPLEMENTARY TYPE – BCX51 – BCX54  
BCX52 – BCX55  
BCX53 – BCX56

PARTMARKING DETAILS –

BCX51 – AA      BCX52 – AE      BCX53 – AH  
BCX51-10 – AC      BCX52-10 – AG      BCX53-10 – AK  
BCX51-16 – AD      BCX52-16 – AM      BCX53-16 – AL



## ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	BCX51	BCX52	BCX53	UNIT
Collector-Base Voltage	$V_{CBO}$	-45	-60	-100	V
Collector-Emitter Voltage	$V_{CEO}$	-45	-60	-80	V
Emitter-Base Voltage	$V_{EBO}$		-5		V
Peak Pulse Current	$I_{CM}$		-1.5		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 -60 -45			V V V	$I_C = -100\mu A$ $I_C = -100\mu A$ $I_C = -100\mu A$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-80 -60 -45			V	$I_C = -10mA^*$ $I_C = -10mA^*$ $I_C = -10mA^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	$I_E = -10\mu A$
Collector Cut-Off Current	$I_{CBO}$			-0.1 -20	$\mu A$ $\mu A$	$V_{CB} = -30V$ $V_{CB} = -30V, T_{amb} = 150^{\circ}C$
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 40 25 -10 -16		250 160 250		$I_C = -5mA, V_{CE} = -2V^*$ $I_C = -150mA, V_{CE} = -2V^*$ $I_C = -500mA, V_{CE} = -2V^*$ $I_C = -150mA, V_{CE} = -2V^*$ $I_C = -150mA, V_{CE} = -2V^*$
Transition Frequency	$f_T$	150			MHz	$I_C = -50mA, V_{CE} = -10V, f = 100MHz$
Output Capacitance	$C_{obo}$			25	pF	$V_{CB} = -10V, f = 1MHz$

\*Measured under pulsed conditions. Pulse width=300 $\mu s$ . Duty cycle  $\leq 2\%$