

SOT89 PNP SILICON PLANAR MEDIUM POWER TRANSISTORS

ISSUE 3 – FEBRUARY 1996



BCX51
BCX52
BCX53

COMPLEMENTARY TYPE – BCX51 – BCX54

BCX52 – BCX55

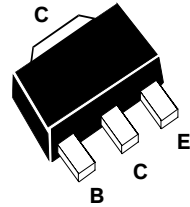
BCX53 – BCX56

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



SOT89

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	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 40 25 63 100 -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 μs . Duty cycle $\leq 2\%$