

SOT89 NPN SILICON PLANAR MEDIUM POWER TRANSISTORS

ISSUE 3 – FEBRUARY 1996

BCX54
BCX55
BCX56

PARTMARKING DETAILS:-

BCX54 – BA BCX54-10 – BC BCX54-16 – BD
BCX55 – BE BCX55-10 – BG BCX55-16 – BM
BCX56 – BH BCX56-10 – BK BCX56-16 – BL

COMPLEMENTARY TYPES:-

BCX54 – BCX51 BCX55 – BCX52 BCX56 – BCX53

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	BCX54	BCX55	BCX56	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}	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	$V_{(BR)CBO}$	45			V	$I_C = 100\mu A$
	BCX55	60				
	BCX56	100				
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	45			V	$I_C = 10mA^*$
	BCX55	60				
	BCX56	80				
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5			V	$I_E = 10\mu A$
Collector Cut-Off Current	I_{CBO}			0.1	μA	$V_{CB} = 30V$
				20	μA	$V_{CB} = 30V, T_{amb} = 150^{\circ}C$
				20	nA	$V_{EB} = 4V$
Emitter Cut-Off Current	I_{EBO}			0.5	V	$I_C = 500mA, I_B = 50mA^*$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			1.0	V	$I_C = 500mA, V_{CE} = 2V^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$					$I_C = 5mA, V_{CE} = 2V^*$
Static Forward Current Transfer Ratio	h_{FE}	25		250		$I_C = 150mA, V_{CE} = 2V^*$
		40		25		$I_C = 500mA, V_{CE} = 2V^*$
		-10		160		$I_C = 150mA, V_{CE} = 2V^*$
		-16		250		$I_C = 150mA, V_{CE} = 2V^*$
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. Pulse width=300 μs . Duty cycle $\leq 2\%$

