MAXIMUM RATINGS

Rating	Symbol	BCX54	BCX55	BCX56	Unit
Collector-Emitter Voltage	V_{CEO}	45	60	80	V
Collector-Emitter Voltage	V_{CER}	45	60	100	V
Collector-Base Voltage	V_{CBO}	45	60	100	V
Emitter-Base Voltage	V_{EBO}	5.0	5.0	5.0	V
Base Current	I_B	0.1	0.1	0.1	A
Collector Current — Continuous	I_C	1.0	1.0	1.0	A

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
*Total Device Dissipation, $T_A = 25°C$ Derate above 25°C	P_D	1.0 8.0	Watt mW/°C
Storage Temperature	T_{stg}	150	°C
*Thermal Resistance Junction to Ambient	$R_{\theta JA}$	125	°C/W

*Package mounted on 99.5% alumina 10 x 12 x 0.6 mm.

BCX54
BCX55
BCX56

CASE 345-01, STYLE 1
SOT-89

GENERAL PURPOSE TRANSISTOR

NPN SILICON

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ELECTRICAL CHARACTERISTICS ($T_A = 25°C$ unless otherwise noted.)

Characteristic		Symbol	Min	Max	Unit
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$		—	V
($I_C = 10$ mA)	BCX54		45		
($I_C = 10$ mA)	BCX55		60	—	
($I_C = 10$ mA)	BCX56		80	—	
Collector-Base Breakdown Voltage		$V_{(BR)CBO}$			V
($I_C = 10$ μA)	BCX54		45	—	
($I_C = 10$ μA)	BCX55		60	—	
($I_C = 10$ μA)	BCX56		100	—	
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$			V
($I_E = 500$ mA, $I_B = 50$ mA)	BCX54		5.0	—	
($I_E = 10$ μA)	BCX55		5.0	—	
($I_E = 10$ μA)	BCX56		5.0	—	
Collector Cutoff Current		I_{CBO}			
($V_{CB} = 30$ V)			—	100	nA
($V_{CB} = 30$ V, $T_J = 125°C$)			—	10	μA
Emitter Cutoff Current		I_{EBO}	—	100	nA
($V_{EB} = 3.0$ V)					
ON CHARACTERISTICS					
DC Current Gain		h_{FE}		—	—
($I_C = 5.0$ mA, $V_{CE} = 2.0$ V)			25	—	
($I_C = 150$ mA, $V_{CE} = 2.0$ V)			40	250	
($I_C = 500$ mA, $V_{CE} = 2.0$ V)			25	—	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	—	0.5	V
($I_C = 500$ mA, $I_B = 50$ mA)					
Base-Emitter On Voltage		$V_{BE(on)}$	—	1.0	V
($I_C = 500$ mA, $V_{CE} = 2.0$ V)					
SMALL SIGNAL CHARACTERISTICS					
Current-Gain — Bandwidth Product		f_T	50	—	MHz
($V_{CE} = 5.0$ V, $I_C = 10$ mA, f = 35 MHz)					