Kingtronics®

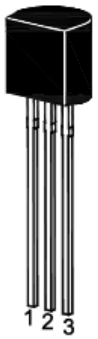
BC546···BC550

FEATURE

NPN Silicon Epitaxial Planar Transistor

for switching and AF amplifier application

These transistors are subdivided into three groups A, B and C according to their current gain.



1. Collector 2. Base 3. Emitter
TO-92 Plastic Package

Absolute Maximum Ratings(Ta=25℃)

Parameter		SYMBOLS	Value	UNITS
Collector Base Voltage	BC46		80	
	BC547 BC550	V_{CBO}	50	V
	BC548 BC549		30	
Collector Emitter Voltage	BC546		65	
	BC547 BC550	V_{CEO}	45	V
	BC548 BC549		30	
Emitter Base Voltage		V_{EBO}	6	V
Collector Current (DC)		I_C	100	mA
Peak Collector Current		I_{CM}	200	mA
Total Power Dissipation		Ptot	500	mW
Junction Temperature		Tj	150	℃
Storage Temperature Range		Tstg	-65 to +150	℃

Characteristics at Ta=25℃

Parameter		SYMBOLS	Min	Max	UNITS
DC Current Gain At V_{CE}=5V, I_C=2mA	Current Gain Group A B C	h_{FE} h_{FE} h_{FE}	110 200 420	220 450 800	- - -
Collector Base Cutoff Current At V_{CB}=30V		I_{CBO}	-	15	nA
Emitter Base Cutoff Current At V_{EB}=5V		I_{EBO}	-	100	V
Collector Base Breakdown Voltage at I_C = 100 μA	BC546 BC547, BC550 BC548, BC549	$V_{(BR)CBO}$	80 50 30- -		V
Collector Emitter Breakdown Voltage at I_C = 1 mA	BC546 BC547, BC550 BC548, BC549	$V_{(BR)CEO}$	65 45 30		V
Emitter Base Breakdown Voltage at I_E = 10 μA		$V_{(BR)EBO}$	6	-	V
Collector Emitter Saturation Voltage at I_C = 10 mA, I_B = 0.5 mA at I_C = 100 mA, I_B = 5 mA		$V_{CE(sat)}$		0.25 0.6	V
Base Emitter On Voltage at V_{CE} = 5 V, I_C = 2 mA at V_{CE} = 5 V, I_C = 10 mA		$V_{BE(on)}$	0.55 -	0.7 0.77	V
Transition Frequency at V_{CE} = 5 V, I_C = 10 mA, f = 100 MHz		f_T	100	-	MHz
Collector Base Capacitance at V_{CB} = 10 V, f = 1 MHz		C_{cb}	-	6	pF

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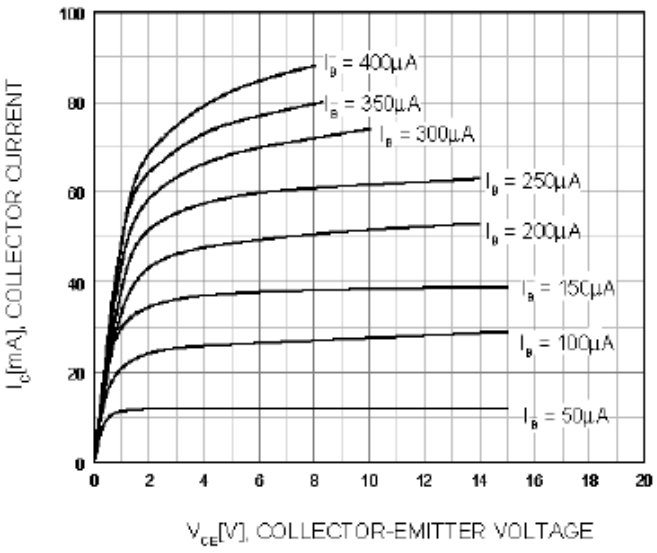

Figure 1. Static Characteristic

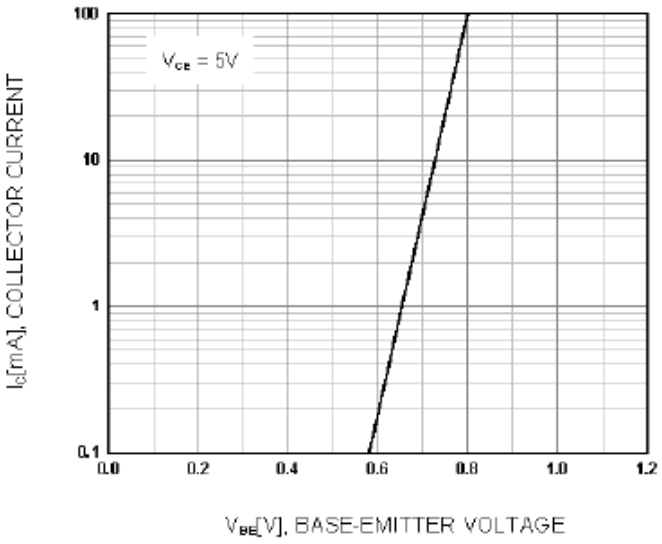

Figure 2. Transfer Characteristic

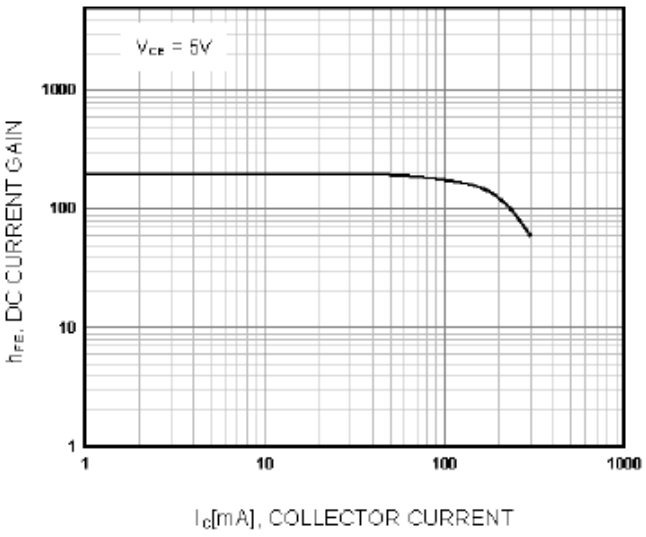

Figure 3. DC current Gain

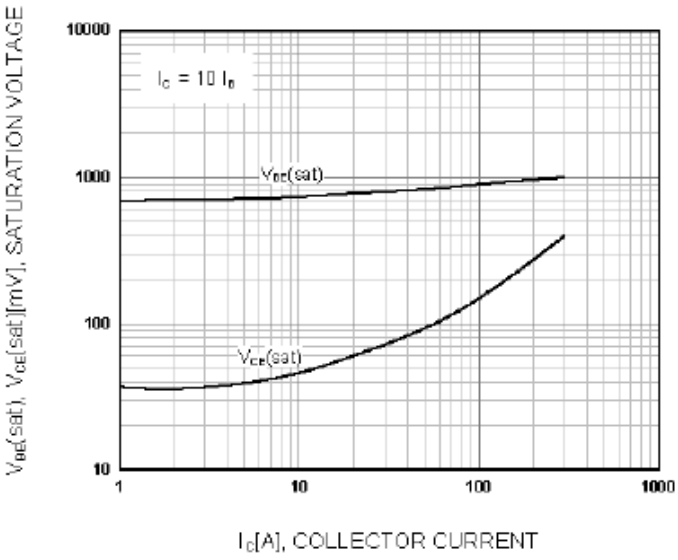

Figure 4. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage