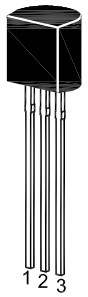
BC546…BC550

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 (T_a = 25 °C)

Parameter		Symbol	Value	Unit
Collector Base Voltage	BC546 BC547, BC550 BC548, BC549	V_{CBO}	80 50 30	V
Collector Emitter Voltage	BC546 BC547, BC550 BC548, BC549	V_{CEO}	65 45 30	V
Emitter Base Voltage		V_{EBO}	6	V
Collector Current (DC)		I_C	100	mA
Peak Collector Current		I_{CM}	200	mA
Total Power Dissipation		P_{tot}	500	mW
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	- 65 to + 150	°C

Characteristics at T_a = 25 °C

Parameter			Symbol	Min.	Max.	Unit
DC Current Gain at V_{CE} = 5 V, I_C = 2 mA	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} = 30 V			I_{CBO}	-	15	nA
Emitter Base Cutoff Current at V_{EB} = 5 V			I_{EBO}	-	100	nA
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

Characteristics at T_a = 25 °C

Parameter	Symbol	Min.	Max.	Unit
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

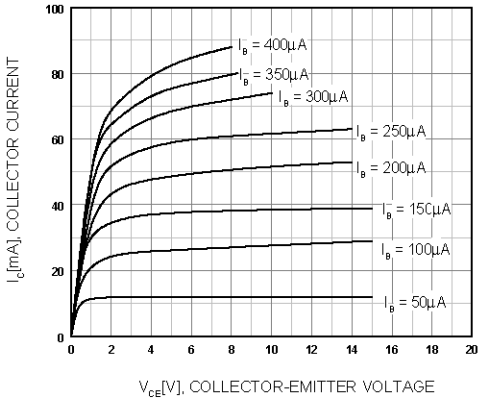


Figure 1. Static Characteristic

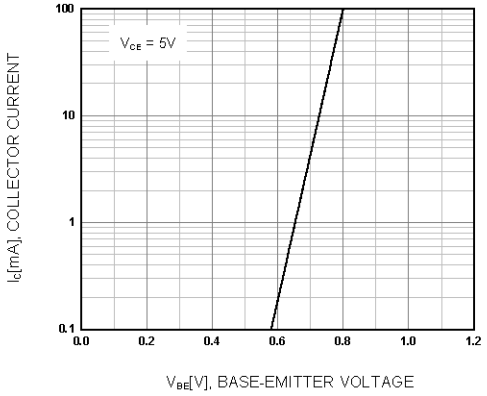


Figure 2. Transfer Characteristic

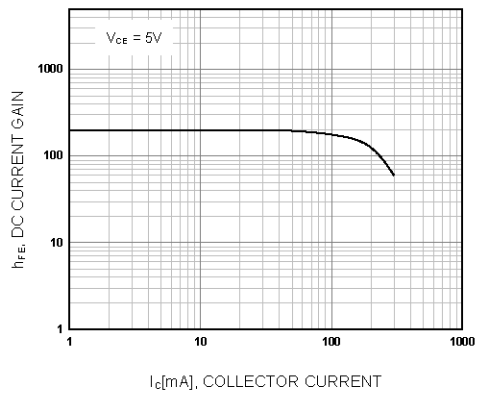


Figure 3. DC current Gain

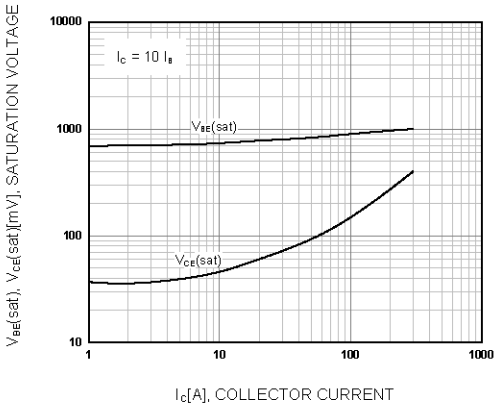
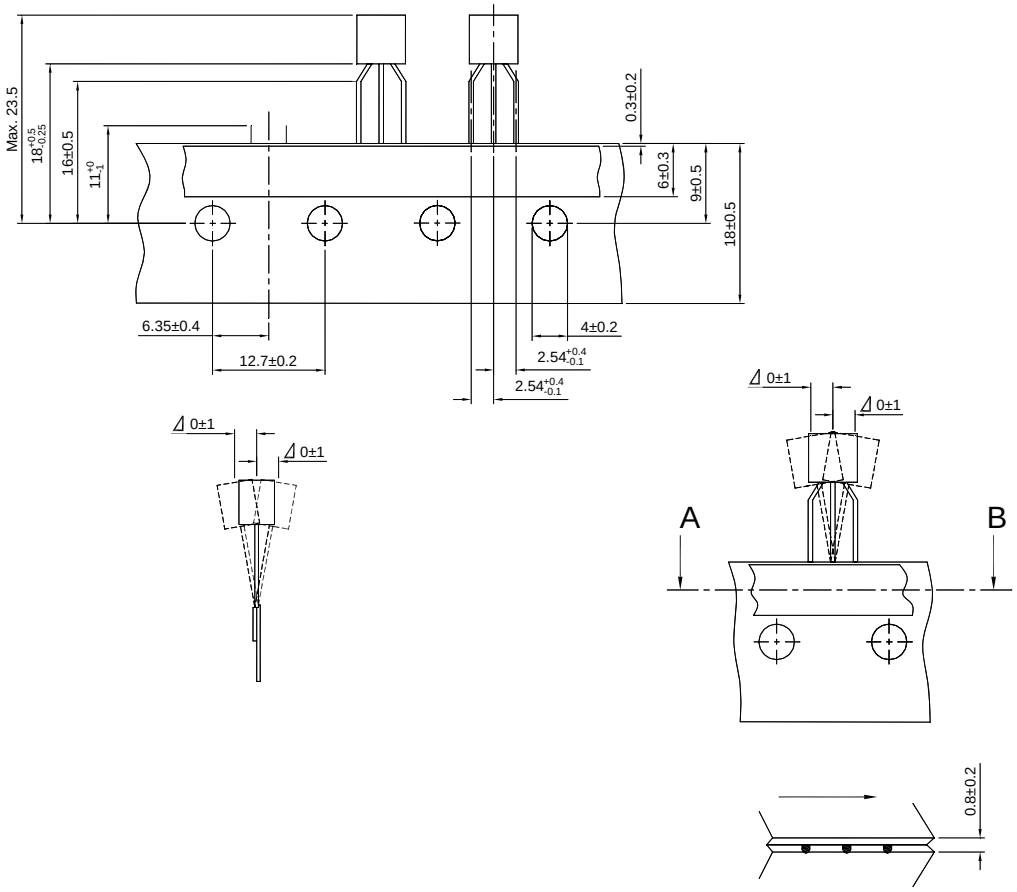


Figure 4. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

TO-92 Ammo-Pack Outline

Unit : mm



SECTION A−B