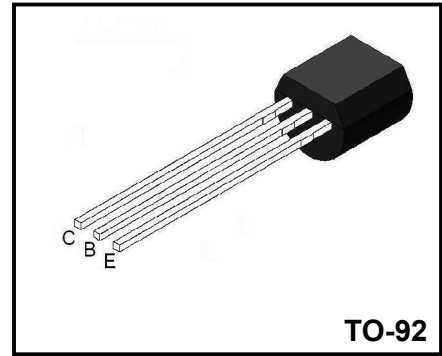


**NPN Plastic-Encapsulate Transistors**

**Switching and Applications**

**Features**

- ◆High Voltage: BC546,  $V_{CEO}=65V$
- ◆Low Noise: BC549, BC550
- ◆Complement to BC556/557/558/559/BC560



**Absolute Maximum Ratings (Ta=25°C)**

Parameter		Symbol	Value	Unit
Collector-Base Voltage	BC546	$BV_{CBO}$	80	V
	BC547/550		50	
	BC548/549		30	
Collector-Emitter Voltage	BC546	$BV_{CEO}$	65	V
	BC547/550		45	
	BC548/549		30	
Emitter-Base Voltage	BC546/547	$BV_{EBO}$	6	V
	BC548/549/550		5	
Collector Current		$I_C$	100	mA
Collector Power Dissipation		$P_C$	500	mW
Junction Temperature Storage Temperature		$T_j, T_{stg}$	150 -55~+150	°C

**Electrical Characteristics (Ta=25°C)**

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector cut-off current	$I_{CBO}$	$V_{CB} = 30V, I_E = 0$			15	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$			15	nA
DC current gain	$h_{FE}$	$V_{CE} = 5V, I_C = 2mA$	110		800	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10mA, I_B = 0.5mA$ $I_C = 100mA, I_B = 5mA$			0.25 0.60	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 10mA, I_B = 0.5mA$ $I_C = 100mA, I_B = 5mA$			1.0	V
Transition frequency	$f_T$	$V_{CE} = 5V, I_B = 10mA$		200		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$			6	pF

**$h_{FE}$  Classification**

Classification	A	B	C
$h_{FE}$	110-220	200-450	420-800

Typical Characteristics

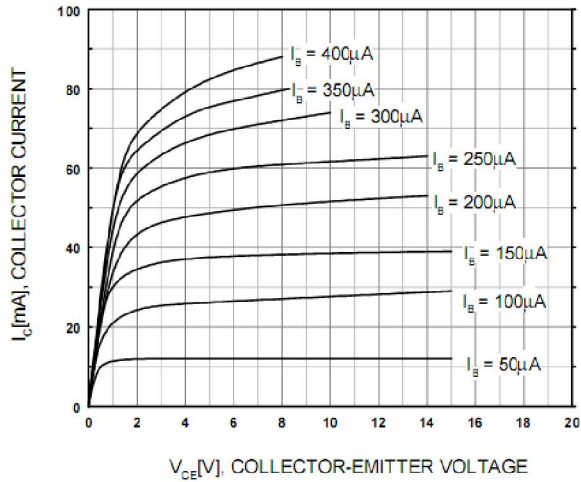


Figure 1. Static Characteristic

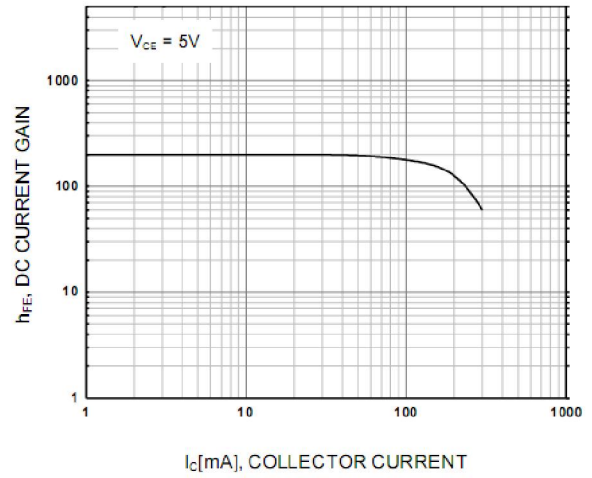


Figure 2. DC current Gain

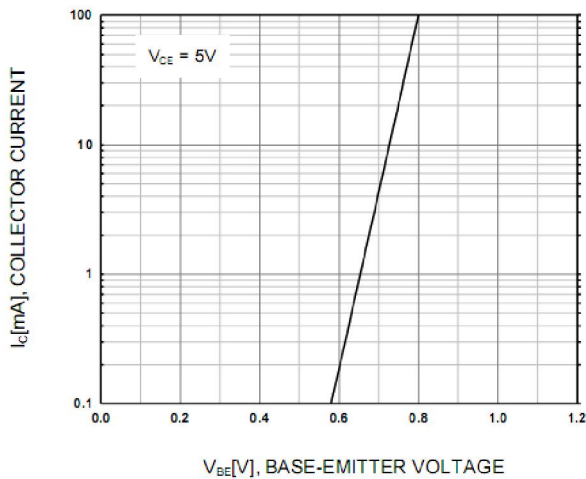


Figure 3. Transfer Characteristic

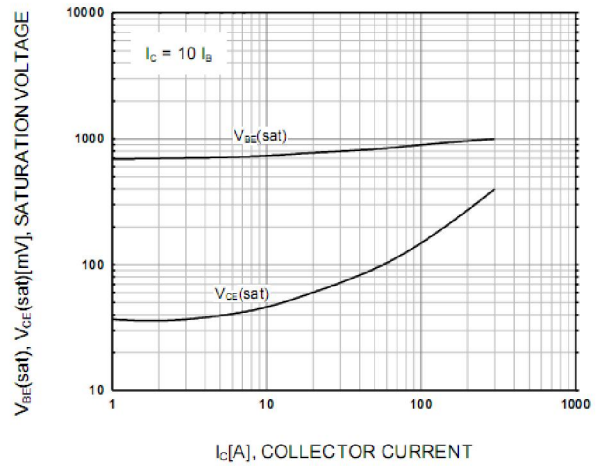


Figure 4. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

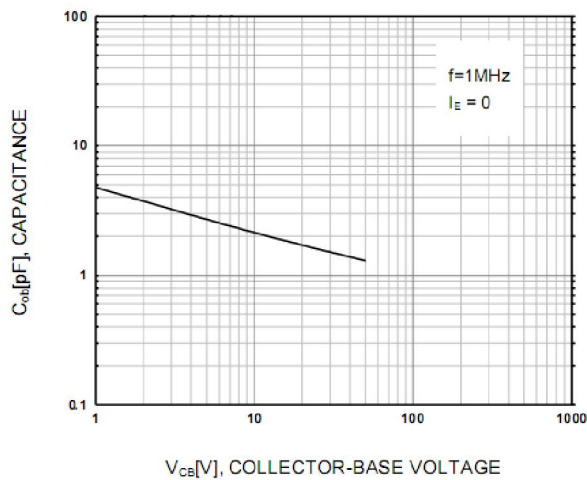


Figure 5. Output Capacitance

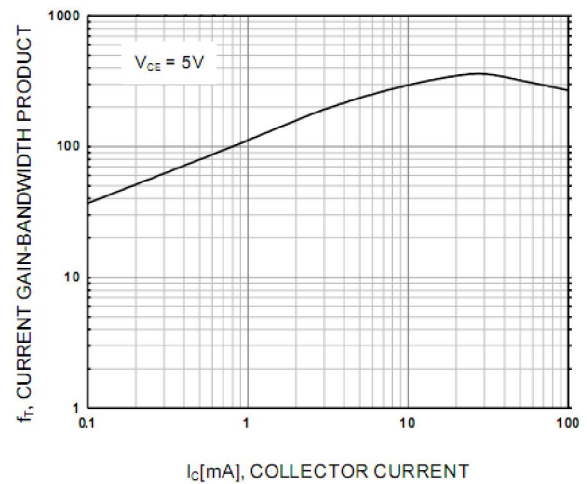


Figure 6. Current Gain Bandwidth Product

Package Dimensions

TO-92

Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.70	0.130	0.146
A1	2.30	2.70	0.091	0.106
b	0.40	0.50	0.016	0.020
b1	0.50	0.70	0.020	0.028
c	0.35	0.45	0.014	0.018
D	4.45	4.70	0.175	0.185
E	4.40	4.65	0.173	0.183
e	1.17	1.37	0.046	0.054
e1	2.34	2.64	0.092	0.104
L	13.50	14.50	0.531	0.571
L1	1.80	2.20	0.071	0.087

Package	Packing Method	Pack uantity
TO-92	Bulk	1000pcs/Bag
TO-92	Tape	2000pcs/Box