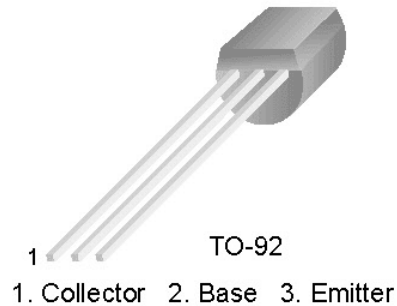


**Switching and Applications**

High voltage: BC546,  $V_{CE0}=65V$   
 Low Noise:BC549,BC550  
 Complement to BC556...BC560



**NPN Epitaxial Silicon Transistor**

**Absolute Maximum Ratings**  $T_a=25^{\circ}C$  unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage :BC546	80	V
	:BC547/550	50	V
	:BC548/549	30	V
$V_{CEO}$	Collector-Emitter Voltage: BC546	65	V
	:BC547/550	45	V
	:BC548/549	30	V
$V_{EBO}$	Emitter-Base Voltage :BC546/547	65	V
	:BC548/549/550	45	V
	:BC548/549	30	V
$I_C$	Collector Current (DC)	100	mA
PC	Collector Power Dissipation	500	mW
$T_J$	Junction Temperature	150	$^{\circ}C$
$T_{STG}$	Storage Temperature	-65~150	$^{\circ}C$

**Electrical Characteristics**  $T_a=25^{\circ}C$  unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$I_{CBO}$	Collector Cut-off Current	$V_{CB}=30V, I_E=0$			15	nA
$h_{FE}$	DC Current Gain	$V_{CE}=5V, I_C=2mA$	110		800	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=10mA, I_B=0.5mA$		90	250	mV
		$I_C=100mA, I_B=5mA$		200	600	mV
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=10mA, I_B=0.5mA$		700		mV
		$I_C=100mA, I_B=5mA$		900		mV
$V_{BE(on)}$	Base-Emitter On Voltage	$V_{CE}=5V, I_C=2mA$	580	660	700	mV
		$V_{CE}=5V, I_C=10mA$			720	mV
$f_T$	Current Gain Bandwidth Product	$V_{CE}=5V, I_C=10mA, f=100MHz$		300		MHz
$C_{ob}$	Output Capacitance	$V_{CB}=0.5V, I_C=0, f=1MHz$		3.5	6	pF
$C_{ib}$	Input Capacitance	$V_{EB}=0.5V, I_C=0, f=1MHz$		9		pF
$N_F$	Noise Figure : BC546/547/548 :BC549/550 :BC549 :BC550	$V_{CE}=5V, I_C=200\mu A$		2	10	dB
		$f=1KHz, R_G=2k \Omega$		1.2	4	dB
		$V_{CE}=5V, I_C=200\mu A$		1.4	4	dB
		$R_G=2k \Omega, f=30\sim 15000MHz$		1.4	3	dB

**$h_{FE}$  Classification**

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

**Typical Characteristics**

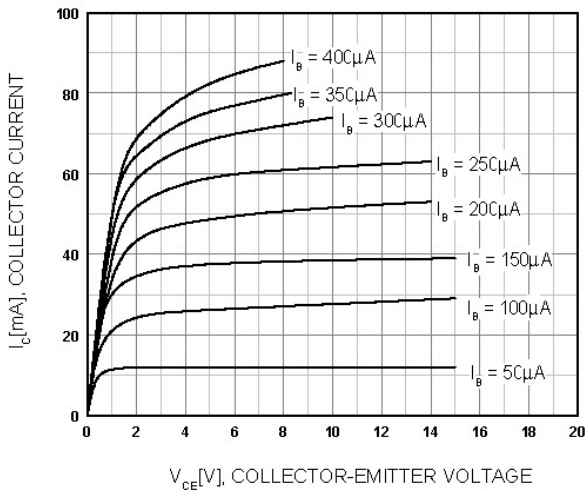


Figure 1. Static Characteristic

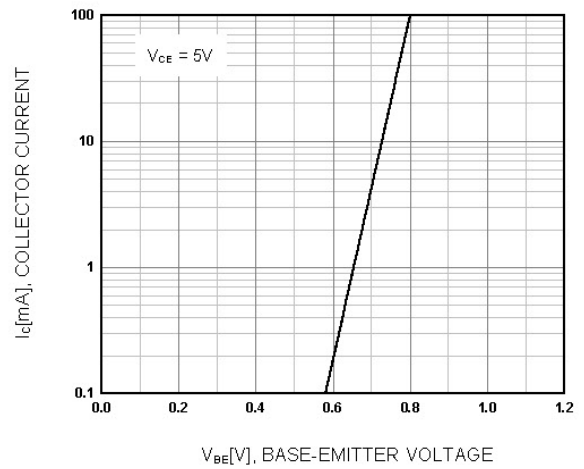


Figure 2. Transfer Characteristic

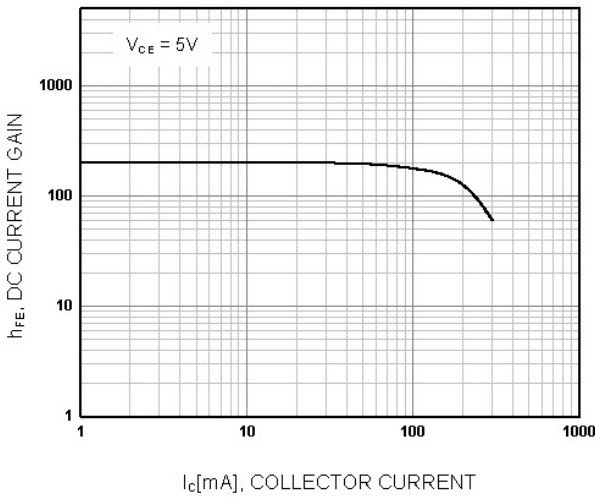


Figure 3. DC current Gain

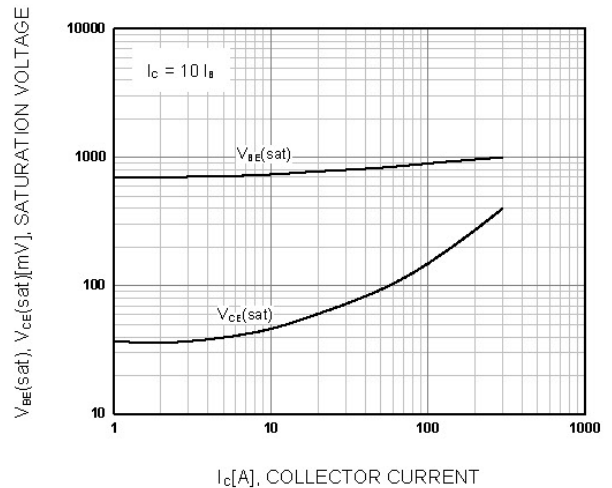


Figure 4. Base-Emitter Saturation Voltage  
 Collector-Emitter Saturation Voltage

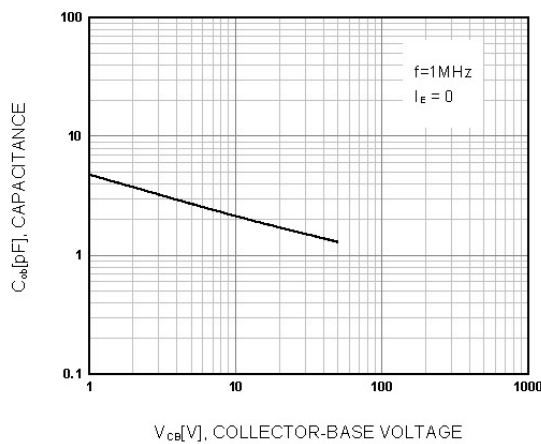


Figure 5. Output Capacitance

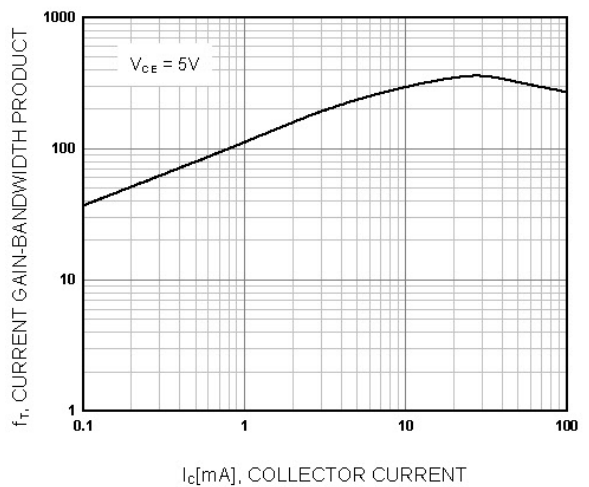


Figure 6. Current Gain Bandwidth Product

Package Dimensions

TO-92

