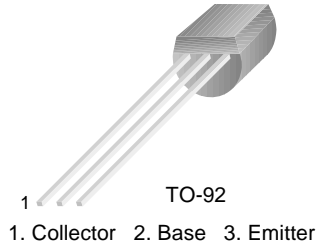


## BC556/557/558/559/560

### Switching and Amplifier

- High Voltage: BC556,  $V_{CE0} = -65V$
- Low Noise: BC559, BC560
- Complement to BC546 ... BC 550



### PNP Epitaxial Silicon Transistor

#### Absolute Maximum Ratings $T_a = 25^\circ C$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage		
	: BC556	-80	V
	: BC557/560	-50	V
	: BC558/559	-30	V
$V_{CEO}$	Collector-Emitter Voltage		
	: BC556	-65	V
	: BC557/560	-45	V
	: BC558/559	-30	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current (DC)	-100	mA
$P_C$	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	-300	mV
		$I_C = -100mA, I_B = -5mA$		-250	-650	mV
$V_{BE} (sat)$	Collector-Base 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	$V_{CE} = -5V, I_C = -2mA$	-600	-660	-750	mV
		$V_{CE} = -5V, I_C = -10mA$			-800	mV
$f_T$	Current Gain Bandwidth Product	$V_{CE} = -5V, I_C = -10mA, f = 10MHz$		150		MHz
$C_{ob}$	Output Capacitance	$V_{CB} = -10V, I_E = 0, f = 1MHz$			6	pF
NF	Noise Figure	: BC556/557/558		2	10	dB
		: BC559/560	$f = 1KHz, R_G = 2K\Omega$	1	4	dB
		: BC559	$V_{CE} = -5V, I_C = -200\mu A$	1.2	4	dB
		: BC560	$R_G = 2K\Omega, f = 30 \sim 15000MHz$	1.2	2	dB

### $h_{FE}$ Classification

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

# Typical Characteristics

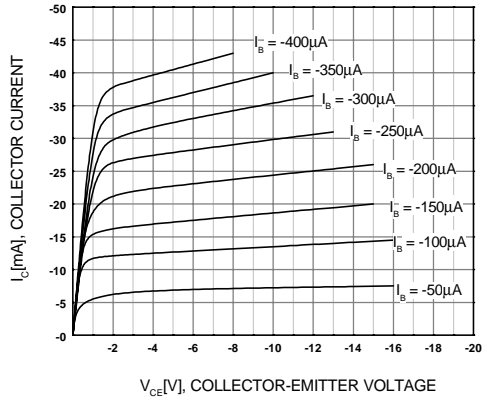


Figure 1. Static Characteristic

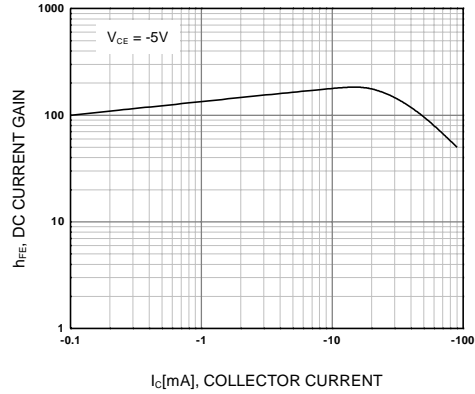


Figure 2. DC current Gain

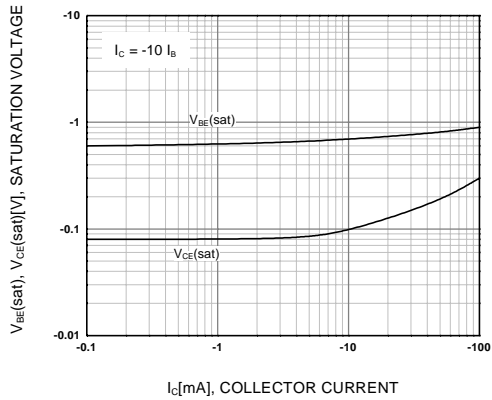


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

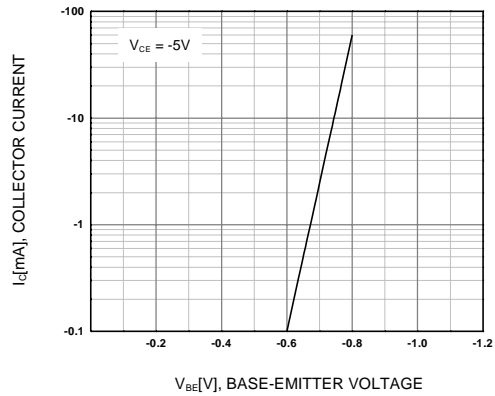


Figure 4. Base-Emitter On Voltage

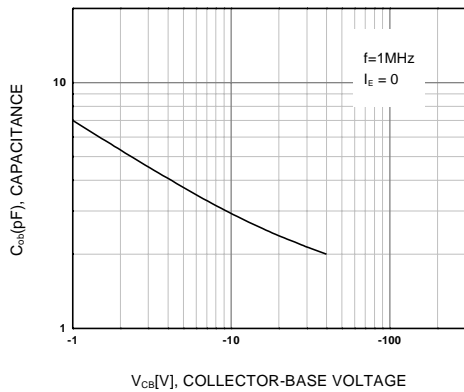


Figure 5. Collector Output Capacitance

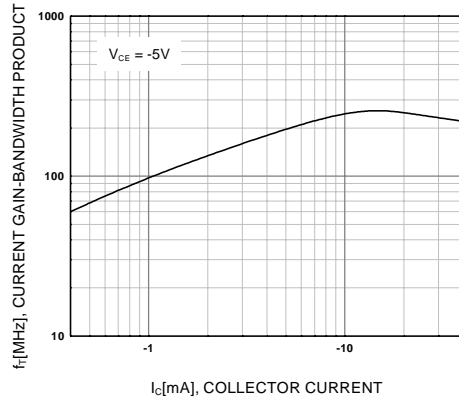
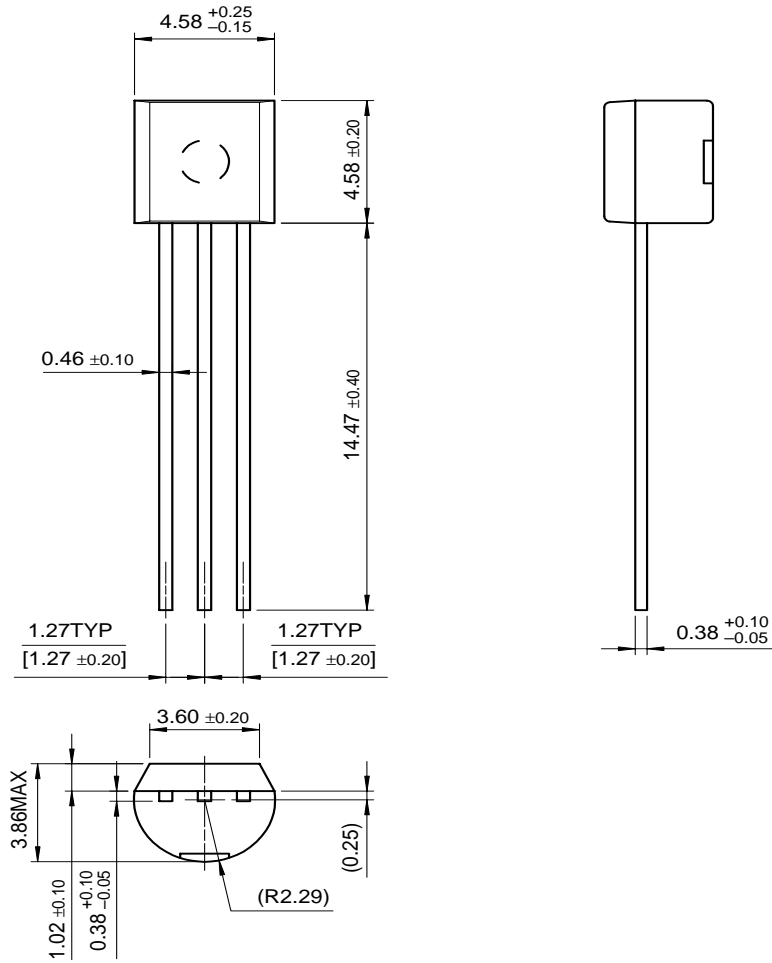


Figure 6. Current Gain Bandwidth Product

# Package Dimensions

## TO-92



Dimensions in Millimeters

BC556/557/558/559/560

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Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
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BC556ATA	Full Production		\$0.0253	<a href="#">TO-92</a>	3	AMMO	Line 1: BC556 Line 2: A Line 3: -&3
BC556B	Full Production		\$0.063	<a href="#">TO-92</a>	3	BULK	Line 1: <b>\$Y</b> (Fairchild logo) & <b>Z</b> (Asm. Plant Code) & <b>3</b> (3-Digit Date Code) Line 2: BC Line 3: 556B
BC556BBU	Full Production		\$0.0253	<a href="#">TO-92</a>	3	BULK	Line 1: BC556 Line 2: B Line 3: -&3
BC556BTA	Full Production		\$0.0253	<a href="#">TO-92</a>	3	AMMO	Line 1: BC556 Line 2: B Line 3: -&3
BC556BTAR	Full Production		\$0.0253	<a href="#">TO-92</a>	3	AMMO	Line 1: BC556 Line 2: B Line 3: -&3
BC556BTF	Full Production		\$0.0253	<a href="#">TO-92</a>	3	TAPE REEL	Line 1: BC556 Line 2: B Line 3: -&3
BC556BTFR	Full Production		\$0.0253	<a href="#">TO-92</a>	3	TAPE REEL	Line 1: BC556 Line 2: B Line 3: -&3
BC556BU	Full Production		\$0.0253	<a href="#">TO-92</a>	3	BULK	Line 1: BC556 Line 3: -&3
BC556B_J18Z	Full Production		N/A	<a href="#">TO-92</a>	3	BULK	Line 1: <b>\$Y</b> (Fairchild logo) & <b>Z</b> (Asm. Plant Code) & <b>3</b> (3-Digit Date Code) Line 2: BC Line 3: 556B
BC556CBU	Full Production		\$0.0253	<a href="#">TO-92</a>	3	BULK	Line 1: BC556 Line 2: C Line 3: -&3
BC556CTA	Full Production		\$0.0253	<a href="#">TO-92</a>	3	AMMO	Line 1: BC556 Line 2: C Line 3: -&3

BC556TF	Full Production		\$0.0253	<a href="#">TO-92</a>	3	TAPE REEL	Line 1: BC556 Line 3: -&3
BC556TFR	Full Production		\$0.0253	<a href="#">TO-92</a>	3	TAPE REEL	Line 1: BC556 Line 3: -&3
BC556_J18Z	Full Production		N/A	<a href="#">TO-92</a>	3	BULK	Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &3 (3-Digit Date Code) Line 2: BC556

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<a href="#">BC556BTA</a>
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