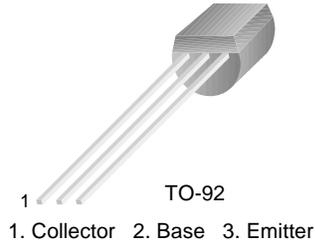


BC556/557/558/559/560

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

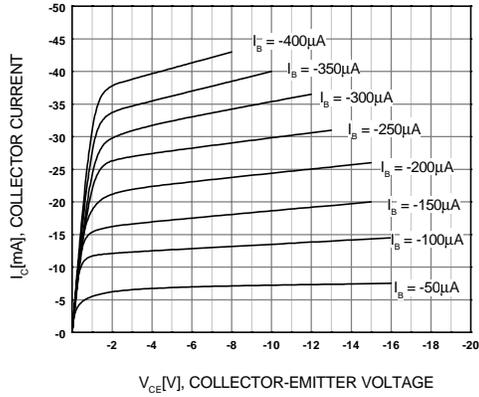


Figure 1. Static Characteristic

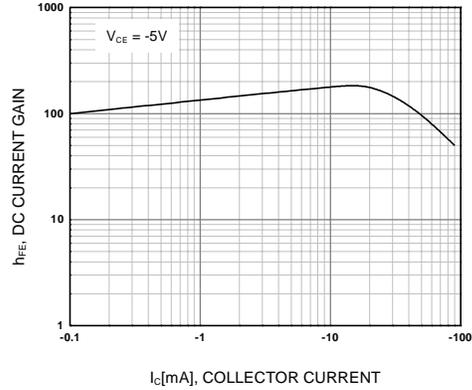


Figure 2. DC current Gain

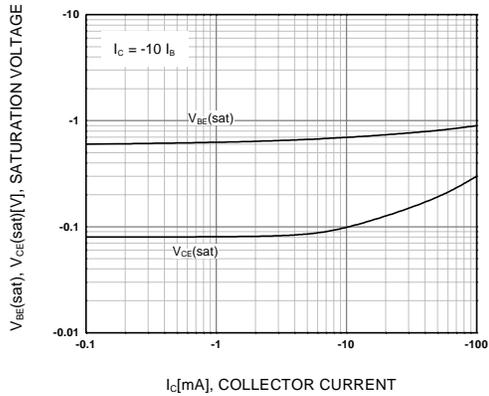


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

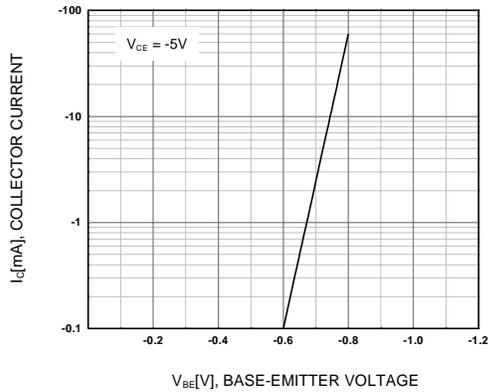


Figure 4. Base-Emitter On Voltage

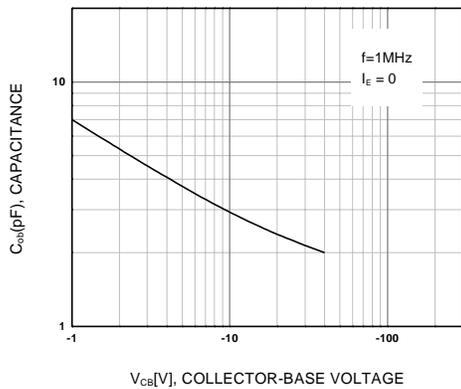


Figure 5. Collector Output Capacitance

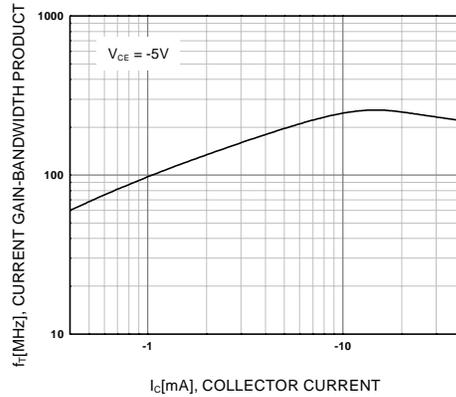
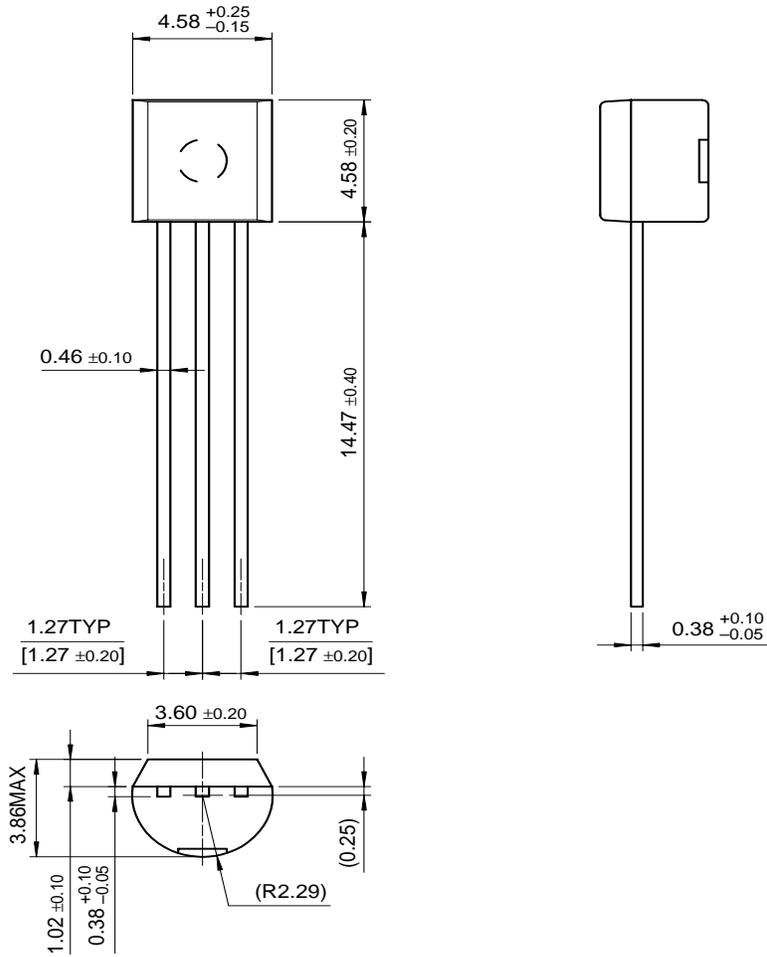


Figure 6. Current Gain Bandwidth Product

Package Dimensions

TO-92



Dimensions in Millimeters

BC556/557/558/559/560

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BC558B	Full Production	 Full Production	\$0.061	TO-92	3	BULK	Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &3 (3-Digit Date Code) Line 2: BC Line 3: 558B
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BC558BTA	Full Production	 Full Production	\$0.0253	TO-92	3	AMMO	Line 1: BC558 Line 2: B Line 3: -&3
BC558BTAR	Full Production	 Full Production	\$0.0253	TO-92	3	AMMO	Line 1: BC558 Line 2: B Line 3: -&3
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BC558BTFR	Full Production	 Full Production	\$0.0253	TO-92	3	TAPE REEL	Line 1: BC558 Line 2: B Line 3: -&3
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BC558CTA	Full Production	 Full Production	\$0.0253	TO-92	3	AMMO	Line 1: BC558 Line 2: C Line 3: -&3

BC558TA	Full Production	 Full Production	\$0.0253	TO-92	3	AMMO	Line 1: BC558 Line 3: -&3
BC558TAR	Full Production	 Full Production	\$0.0253	TO-92	3	AMMO	Line 1: BC558 Line 3: -&3
BC558TF	Full Production	 Full Production	\$0.0253	TO-92	3	TAPE REEL	Line 1: BC558 Line 3: -&3
BC558TFR	Full Production	 Full Production	\$0.0253	TO-92	3	TAPE REEL	Line 1: BC558 Line 3: -&3
BC558_D81Z	Full Production	 Full Production	N/A	TO-92	3	TAPE REEL	Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &3 (3-Digit Date Code) Line 2: BC558

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