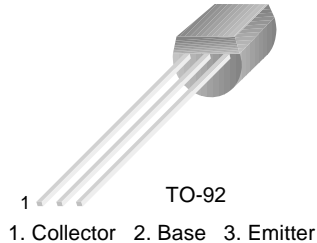


BC556/557/558/559/560

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

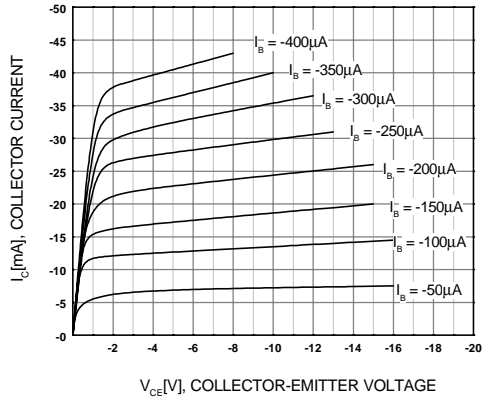


Figure 1. Static Characteristic

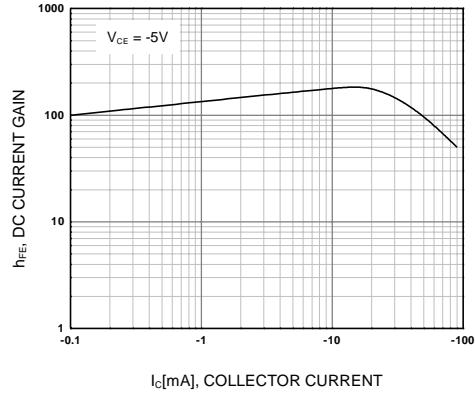


Figure 2. DC current Gain

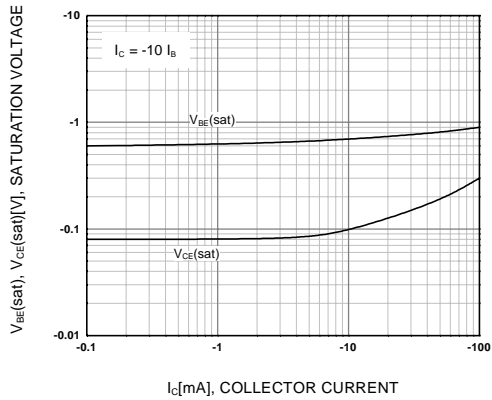


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

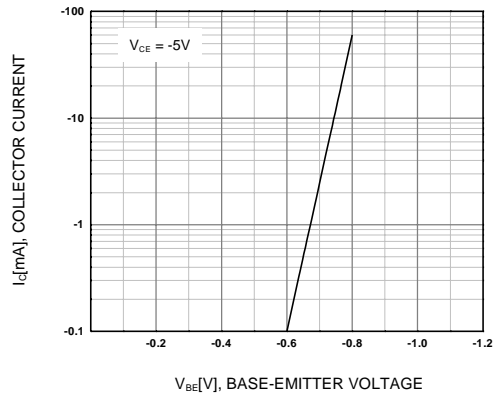


Figure 4. Base-Emitter On Voltage

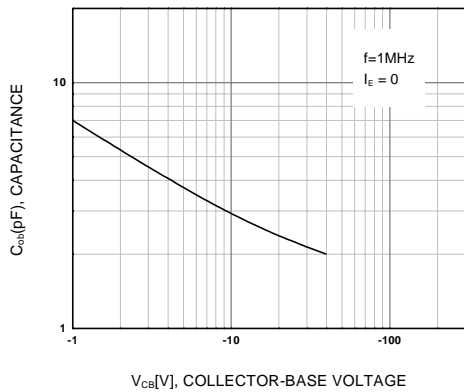


Figure 5. Collector Output Capacitance

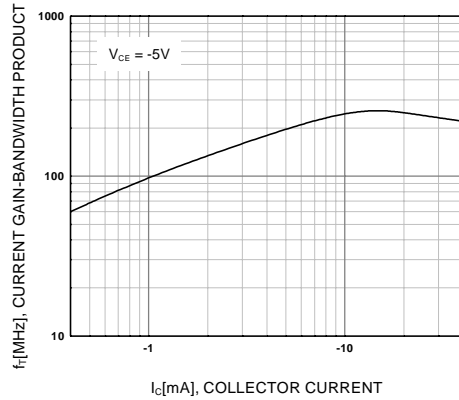
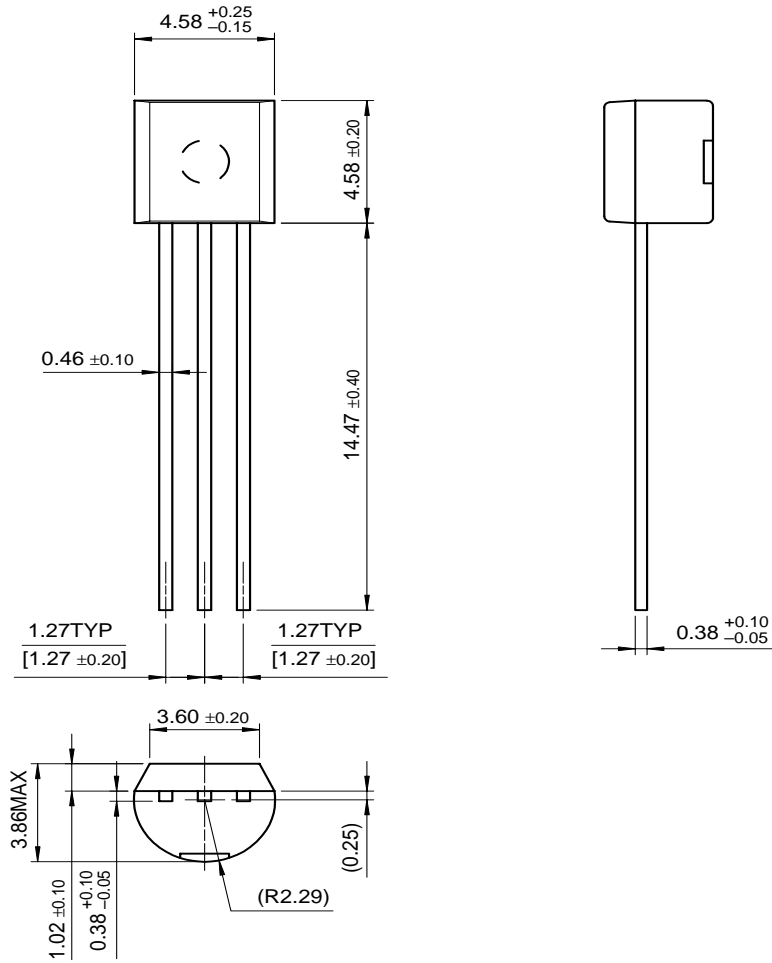


Figure 6. Current Gain Bandwidth Product

Package Dimensions

TO-92



Dimensions in Millimeters

BC556/557/558/559/560

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Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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BC558BBU	Full Production	\$0.045	TO-92	3	N/A	BULK
BC558BTA	Full Production	\$0.045	TO-92	3	N/A	TAPE REEL
BC558B	Full Production	\$0.075	TO-92	3	\$Y&3 BC 558B	BULK
BC558	Full Production	\$0.075	TO-92	3	\$Y&3 BC558	BULK
BC558CBU	Full Production	\$0.045	TO-92	3	N/A	BULK
BC558BTF	Full Production	\$0.045	TO-92	3	N/A	TAPE REEL
BC558ABU	Full Production	\$0.045	TO-92	3	N/A	BULK
BC558CTA	Full Production	\$0.045	TO-92	3	N/A	TAPE REEL
BC558ATA	Full Production	\$0.045	TO-92	3	N/A	TAPE REEL

BC558C	Full Production	\$0.07	TO-92	3	\$Y&3 BC 558C	BULK
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BC559ABU	Full Production	\$0.045	TO-92	3	N/A	BULK
BC559ATA	Full Production	\$0.045	TO-92	3	N/A	TAPE REEL
BC559BBU	Full Production	\$0.045	TO-92	3	N/A	BULK
BC559CBU	Full Production	\$0.045	TO-92	3	N/A	BULK
BC559BTA	Full Production	\$0.045	TO-92	3	N/A	TAPE REEL
BC559B	Full Production	\$0.075	TO-92	3	\$Y&3 BC 559B	BULK

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BC560ABU	Full Production	\$0.045	TO-92	3	N/A	BULK
BC560BBU	Full Production	\$0.045	TO-92	3	N/A	BULK
BC560C_D74Z	Full Production	\$0.071	TO-92	3	\$Y&3 BC 560C	AMMO
BC560BTA	Full Production	\$0.045	TO-92	3	N/A	TAPE REEL
BC560ATA	Full Production	\$0.045	TO-92	3	N/A	TAPE REEL
BC560C	Full Production	\$0.078	TO-92	3	\$Y&3 BC 560C	BULK
BC560CBU	Full Production	\$0.045	TO-92	3	N/A	BULK
BC560CTA	Full Production	\$0.045	TO-92	3	N/A	TAPE REEL

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BC557ATA	Full Production	\$0.045	TO-92	3	N/A	TAPE REEL
BC557CTA	Full Production	\$0.045	TO-92	3	N/A	TAPE REEL
BC557	Full Production	\$0.075	TO-92	3	Y&3 BC557	BULK
BC557B	Full Production	\$0.075	TO-92	3	Y&3 BC 557B	BULK
BC557BBU	Full Production	\$0.045	TO-92	3	N/A	BULK
BC557CBU	Full Production	\$0.045	TO-92	3	N/A	BULK
BC557BTA	Full Production	\$0.045	TO-92	3	N/A	TAPE REEL

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BC556CTA	Full Production	\$0.045	TO-92	3	N/A	TAPE REEL
BC556BBU	Full Production	\$0.045	TO-92	3	N/A	BULK
BC556ATA	Full Production	\$0.045	TO-92	3	N/A	TAPE REEL
BC556ABU	Full Production	\$0.045	TO-92	3	N/A	BULK
BC556BTA	Full Production	\$0.045	TO-92	3	N/A	TAPE REEL
BC556B	Full Production	\$0.075	TO-92	3	\$Y&3 BC 556B	BULK
BC556	Full Production	\$0.075	TO-92	3	\$Y&3 BC556	BULK

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