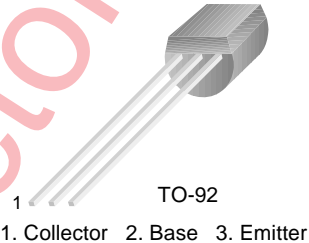


## BC556/557/558/559/560

### 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

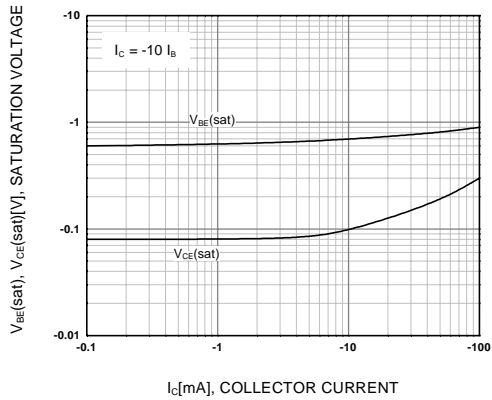


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

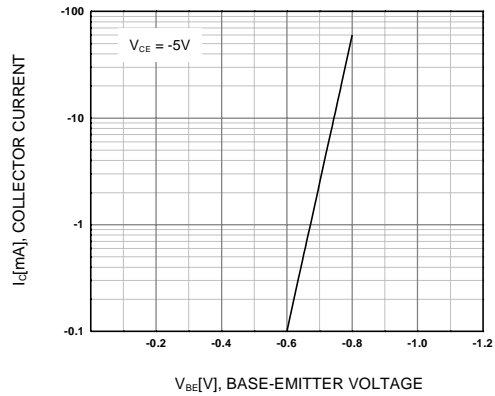


Figure 4. Base-Emitter On Voltage

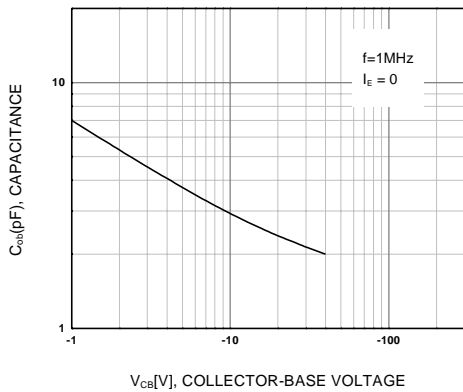


Figure 5. Collector Output Capacitance

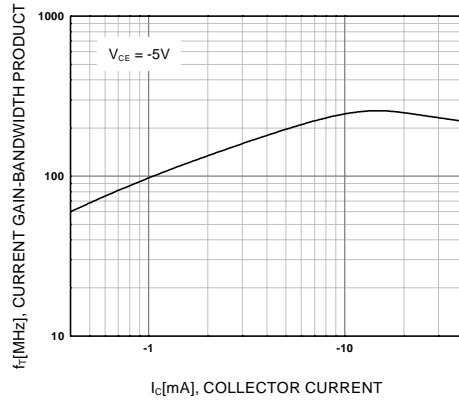


Figure 6. Current Gain Bandwidth Product

# Package Dimensions

## TO-92



Dimensions in Millimeters

BC556/557/558/559/560

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Bottomless <sup>™</sup>	FAST <sup>®</sup>	LittleFET <sup>™</sup>	Power247 <sup>™</sup>	SuperSOT <sup>™</sup> -3
CoolFET <sup>™</sup>	FAST <sup>™</sup>	MicroFET <sup>™</sup>	PowerTrench <sup>®</sup>	SuperSOT <sup>™</sup> -6
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The Power Franchise <sup>™</sup>		OPTOLOGIC <sup>®</sup>	SILENT SWITCHER <sup>®</sup>	VCX <sup>™</sup>
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