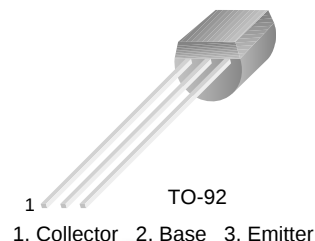


BC556/557/558/559/560

PNP Epitaxial Silicon Transistor

Features

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



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 : BC559/560 $V_{CE} = -5V, I_C = -200\mu A$ $f = 1KHz, R_G = 2K\Omega$		2	10	dB
				1	4	dB
		: BC559 : BC560 $V_{CE} = -5V, I_C = -200\mu A$ $R_G = 2K\Omega, f = 30 \sim 15000MHz$		1.2	4	dB
				1.2	2	dB

h_{FE} Classification

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

Typical Performance Characteristics

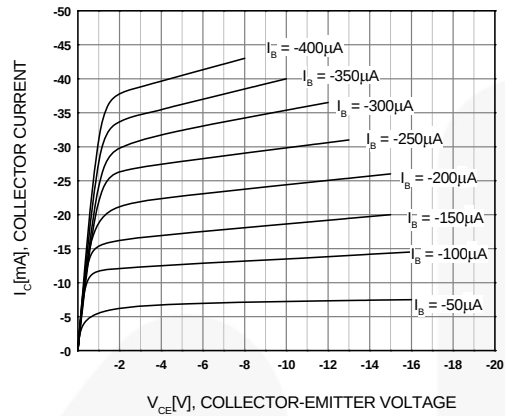


Figure 1. Static Characteristic

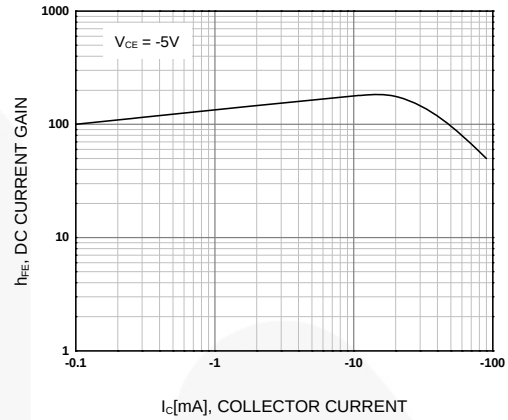


Figure 2. DC current Gain

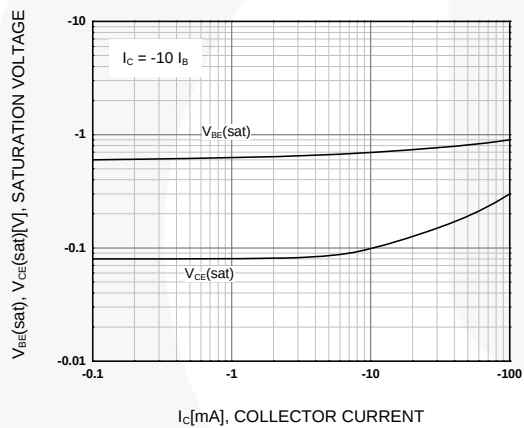


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

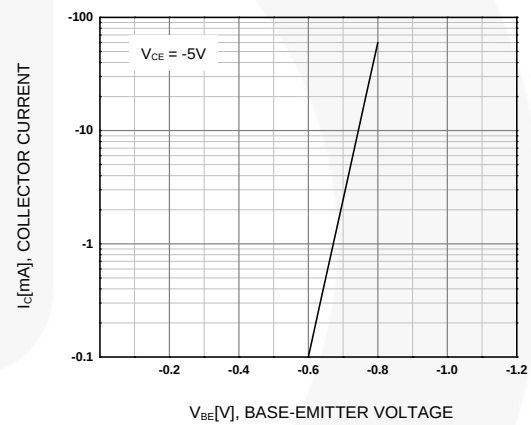


Figure 4. Base-Emitter On Voltage

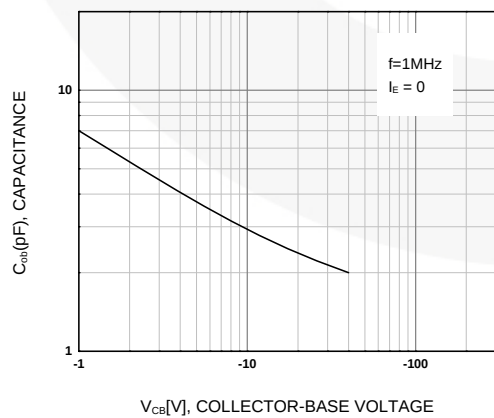


Figure 5. Collector Output Capacitance

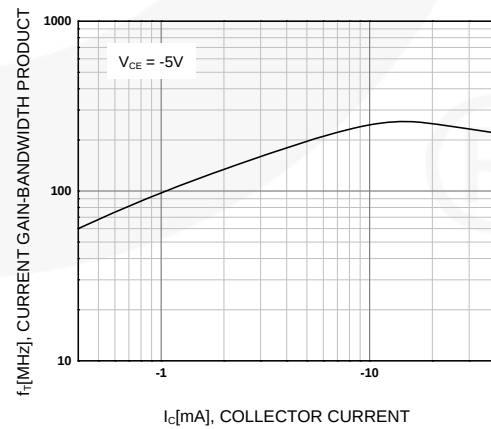
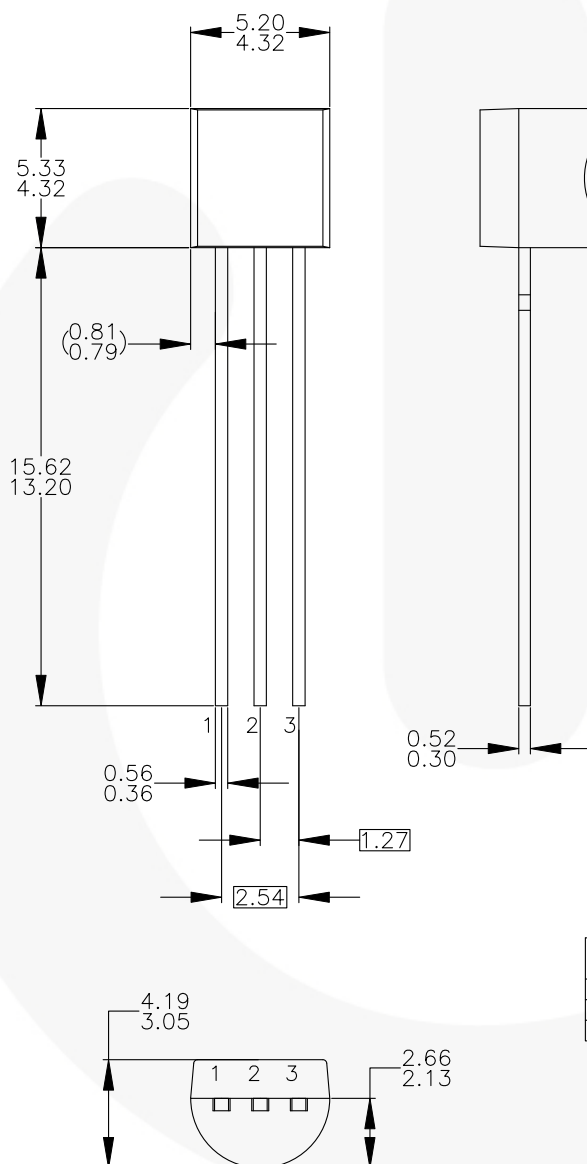


Figure 6. Current Gain Bandwidth Product

Physical Dimensions

TO-92



NOTES: UNLESS OTHERWISE SPECIFIED

- A) DRAWING WITH REFERENCE TO JEDEC TO-92 RECOMMENDATIONS.
 B) ALL DIMENSIONS ARE IN MILLIMETERS.
 C) DRAWING CONFORMS TO ASME Y14.5M-1994.
 D) TO-92 (92,94,96,97,98) PIN CONFIGURATION:

Pin	92	94	96	97	98
1	E	S	S	E	S
2	B	D	G	C	G
3	C	G	D	B	D

LEGEND:

P - BIPOLAR E - EMITTER D - DRAIN
 F - JFET B - BASE S - SOURCE
 M - DMOS C - COLLECTOR G - GATE

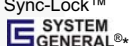
- E) FOR PACKAGE 92, 94, 96, 97 AND 98:
 PIN CONFIGURATION DRAIN "D" AND SOURCE "S"
 ARE INTERCHANGEABLE AT JFET "F" OPTION.
 F) DRAWING FILENAME: MKT-ZA03DREV3.

Dimensions in Millimeters



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CorePLUS™	Green FPS™ e-Series™	Quiet Series™	TinyLogic®
CorePOWER™	Gmax™	RapidConfigure™	TINYOPTO™
CROSSVOL™	GTO™		TinyPower™
CTL™	IntelliMAX™	Saving our world, 1mW/W/kW at a time™	TinyPower™
Current Transfer Logic™	ISOPLANAR™	SignalWise™	TinyPWM™
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