



# HBC556

PNP EPITAXIAL PLANAR TRANSISTOR

## Description

The HBC556 is primarily intended for use in driver stage of audio amplifiers.

## Features

- High Breakdown Voltage: 65V at  $I_C=1\text{mA}$
- High AC Current Gain: 75-500 at  $I_C=2\text{mA}, V_{CE}=5\text{V}, f=1\text{MHz}$



## Absolute Maximum Ratings

- Maximum Temperatures  
Storage Temperature ..... -55 ~ +150 °C  
Junction Temperature ..... +150 °C Maximum
- Maximum Power Dissipation  
Total Power Dissipation ( $T_a=25^\circ\text{C}$ ) ..... 500 mW
- Maximum Voltages and Currents ( $T_a=25^\circ\text{C}$ )  
VCBO Collector to Base Voltage ..... -80 V  
VCEO Collector to Emitter Voltage ..... -65 V  
VEBO Emitter to Base Voltage ..... -5 V  
IC Collector Current ..... -100 mA

## Characteristics ( $T_a=25^\circ\text{C}$ )

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	-80	-	-	V	$I_C=-100\mu\text{A}, I_E=0$
BVCEO	-65	-	-	V	$I_C=-1\text{mA}, I_B=0$
BVEBO	-5	-	-	V	$I_E=-10\mu\text{A}, I_C=0$
ICBO	-	-	-15	nA	$V_{CB}=-30\text{V}, I_E=0$
VBE(on)1	-600	-	-750	mV	$I_C=-2\text{mA}, V_{CE}=-5\text{V}$
VBE(on)2	-	-	-820	mV	$I_C=-10\text{mA}, V_{CE}=-5\text{V}$
*VCE(sat)1	-	-	-300	mV	$I_C=-10\text{mA}, I_B=-0.5\text{mA}$
*VCE(sat)2	-	-	-650	mV	$I_C=-100\text{mA}, I_B=-5\text{mA}$
*hFE	75	-	475		$V_{CE}=-5\text{V}, I_C=-2\text{mA}$ ,
fT	-	300	-	MHZ	$V_{CE}=-5\text{V}, I_C=-10\text{mA}, f=100\text{MHz}$
Cob	-	4.5	-	Pf	$V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$

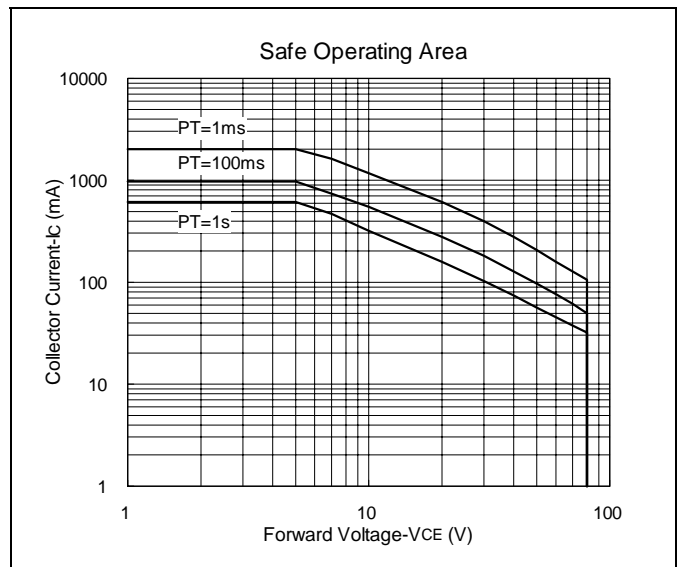
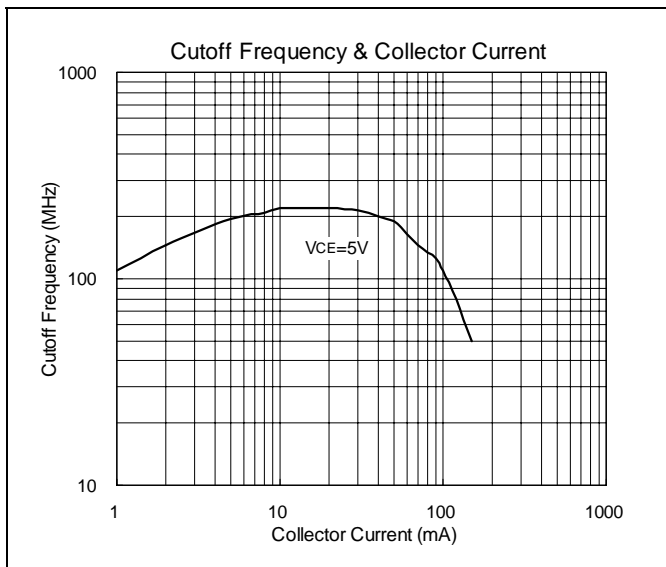
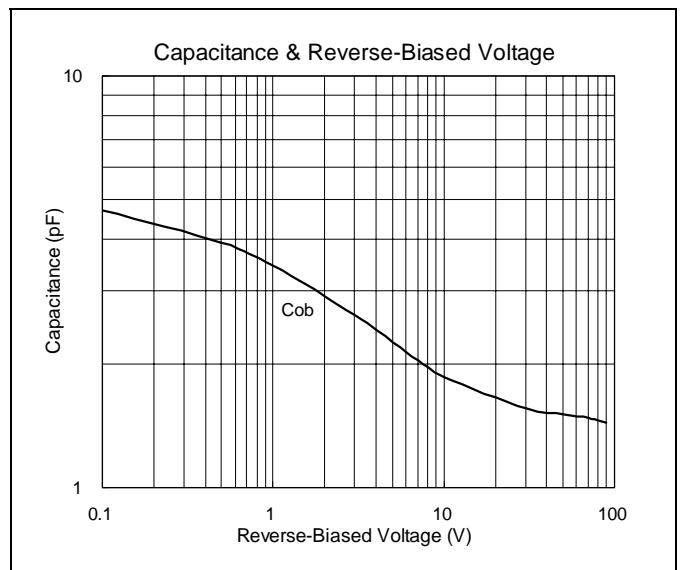
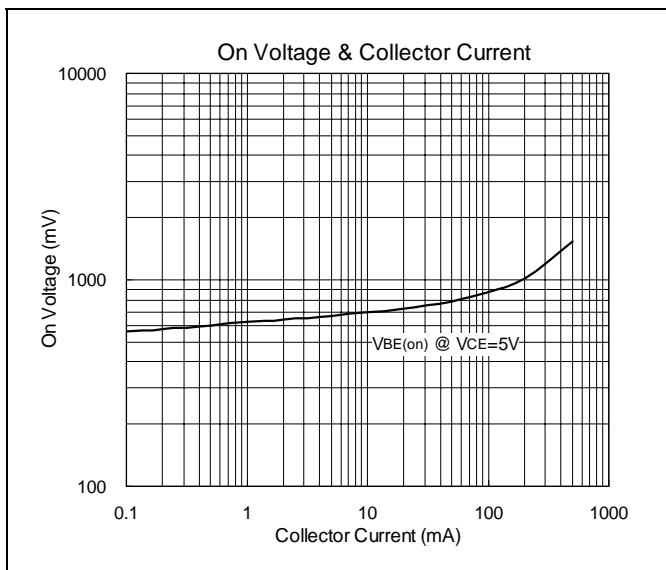
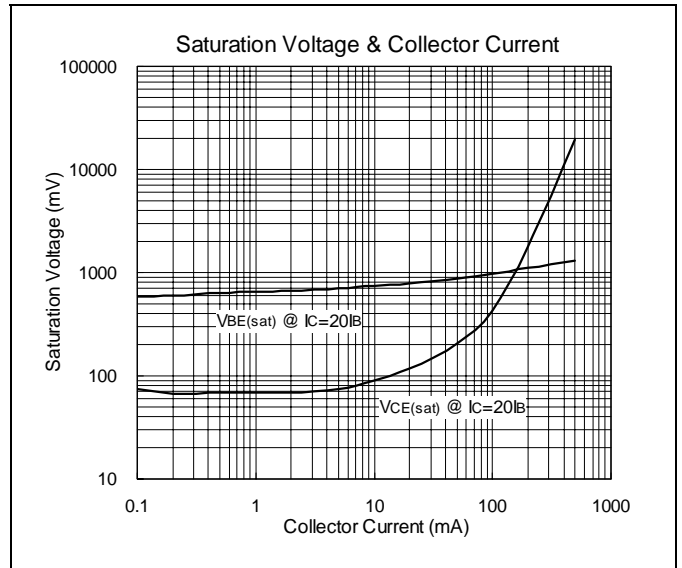
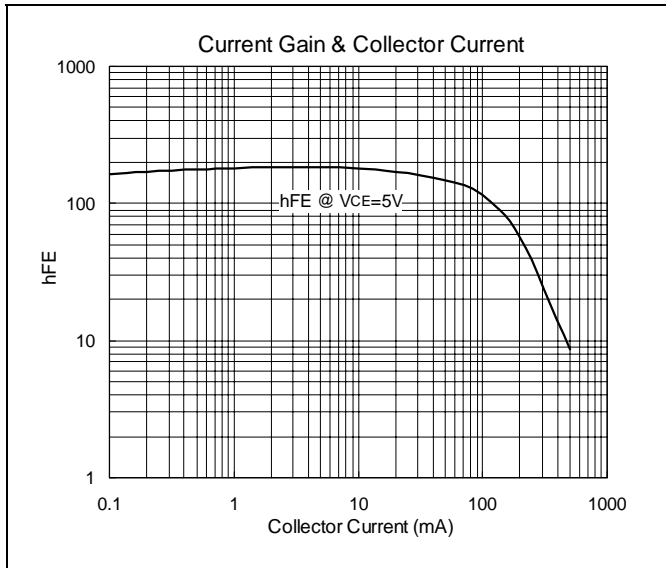
\*Pulse Test : Pulse Width  $\leq 380\mu\text{s}$ , Duty Cycle  $\leq 2\%$

## Classification of hFE

Rank	A	B	Normal
Range	125-250	220-475	75-475

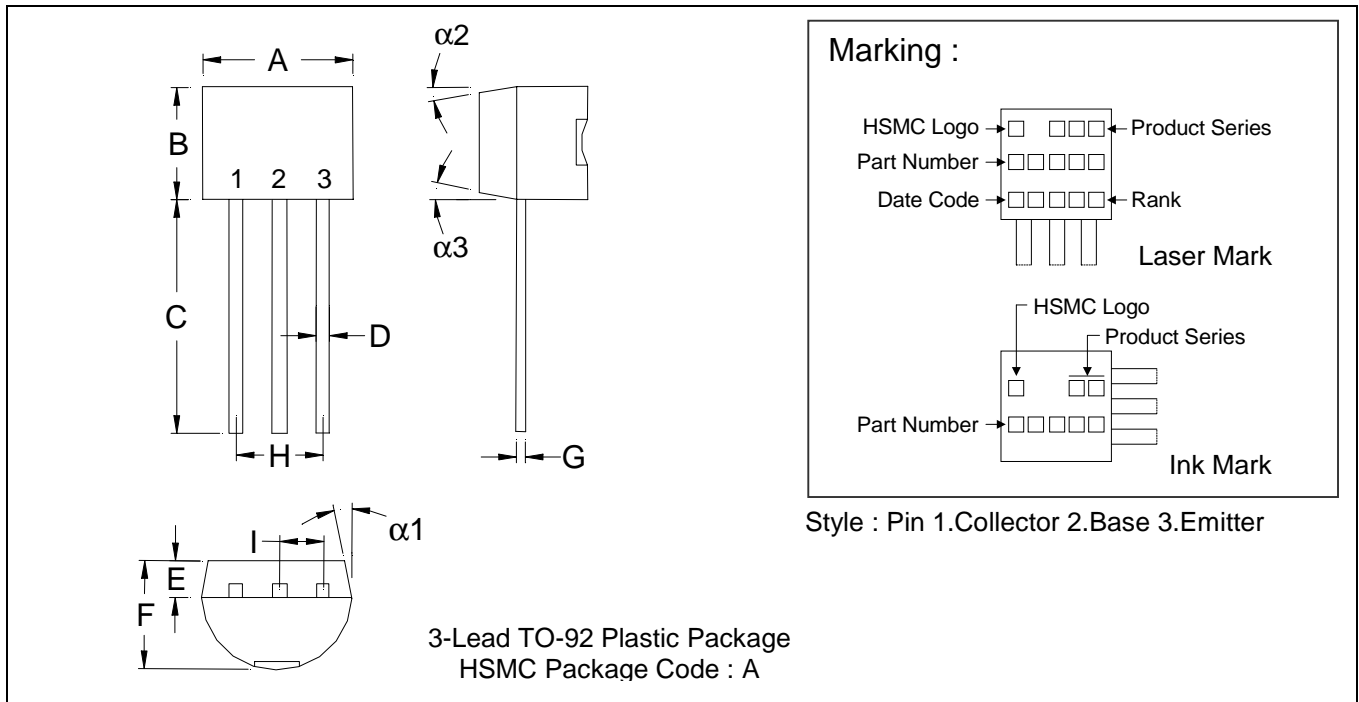


### Characteristics Curve





## TO-92 Dimension



\*:Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1704	0.1902	4.33	4.83	G	0.0142	0.0220	0.36	0.56
B	0.1704	0.1902	4.33	4.83	H	-	*0.1000	-	*2.54
C	0.5000	-	12.70	-	I	-	*0.0500	-	*1.27
D	0.0142	0.0220	0.36	0.56	$\alpha 1$	-	*5°	-	*5°
E	-	*0.0500	-	*1.27	$\alpha 2$	-	*2°	-	*2°
F	0.1323	0.1480	3.36	3.76	$\alpha 3$	-	*2°	-	*2°

**Notes :** 1.Dimension and tolerance based on our Spec. dated Apr. 25,1996.  
 2.Controlling dimension : millimeters.  
 3.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.  
 4.If there is any question with packing specification or packing method, please contact your local HSMC sales office.

**Material :**

- Lead : 42 Alloy ; solder plating
- Mold Compound : Epoxy resin family, flammability solid burning class:UL94V-0

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