



HBC546

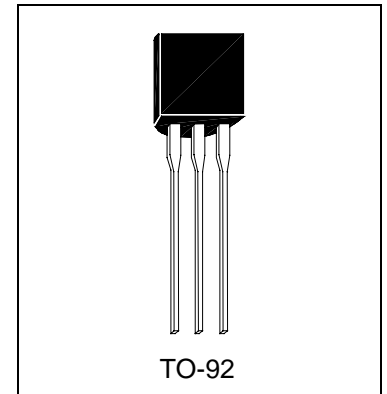
NPN EPITAXIAL PLANAR TRANSISTOR

Description

The HBC546 is primarily intended for use in driver stage of audio amplifiers.

Features

- High Breakdown Voltage: 65V
- High DC Current Gain: 110-800 at $I_C=2\text{mA}$ $V_{CE}=5\text{V}$



Absolute Maximum Ratings

- Maximum Temperatures
 Storage Temperature -55 ~ +150 °C
 Junction Temperature +150 °C Maximum
- Maximum Power Dissipation
 Total Power Dissipation ($T_a=25^\circ\text{C}$) 625 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 6 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	6	-	-	V	$I_E=10\mu\text{A}$, $I_C=0$
ICBO	-	-	15	nA	$V_{CB}=30\text{V}$, $I_E=0$
$V_{BE(on)1}$	-	-	770	mV	$I_C=10\text{mA}$, $V_{CE}=5\text{V}$
$V_{BE(on)2}$	580	-	700	mV	$I_C=2\text{mA}$, $V_{CE}=5\text{V}$
* $V_{CE(sat)1}$	-	-	250	mV	$I_C=10\text{mA}$, $I_B=0.5\text{mA}$
* $V_{CE(sat)2}$	-	-	600	mV	$I_C=100\text{mA}$, $I_B=5\text{mA}$
* $V_{BE(sat)1}$	-	700	-	mV	$I_C=10\text{mA}$, $I_B=0.5\text{mA}$
* $V_{BE(sat)2}$	-	900	-	mV	$I_C=100\text{mA}$, $I_B=5\text{mA}$
*hFE	110	-	800		$V_{CE}=5\text{V}$, $I_C=2\text{mA}$
fT	-	300		MHz	$V_{CE}=5\text{V}$, $I_C=10\text{mA}$, $f=100\text{MHz}$
Cob	-	-	4.5	PF	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$

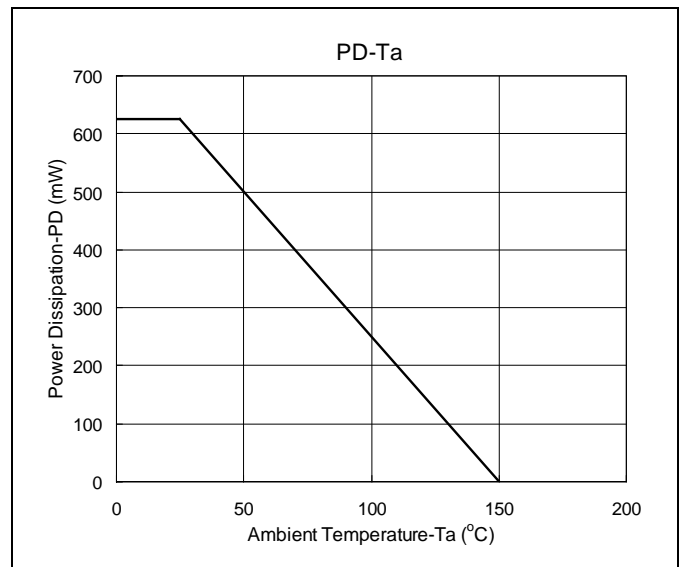
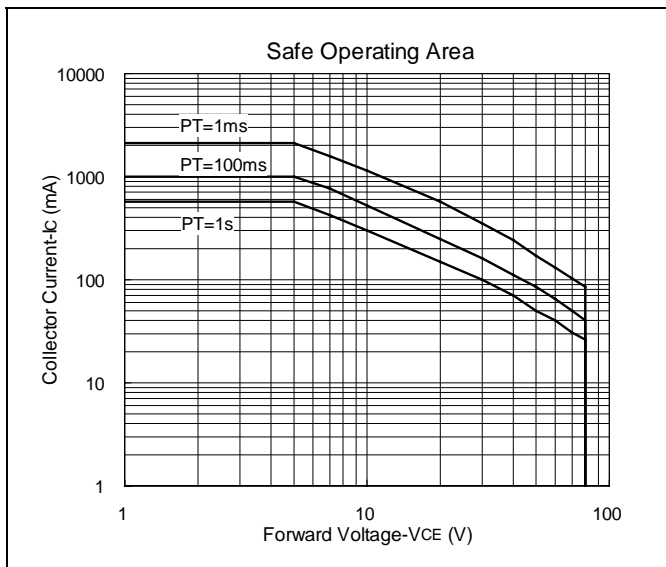
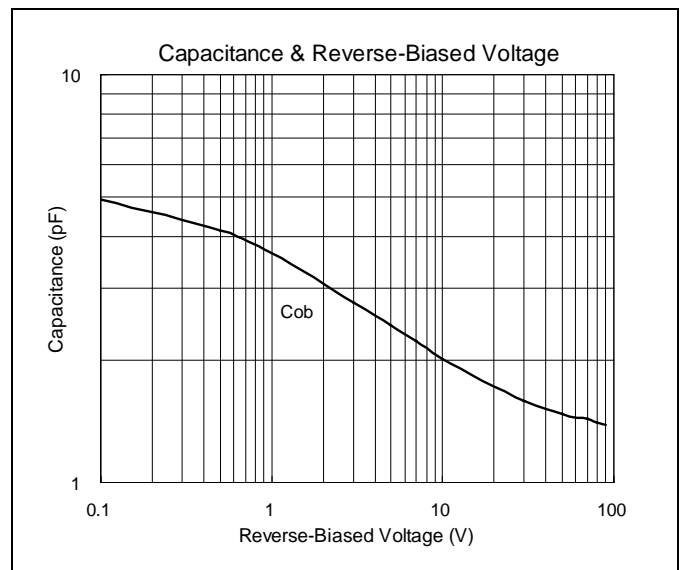
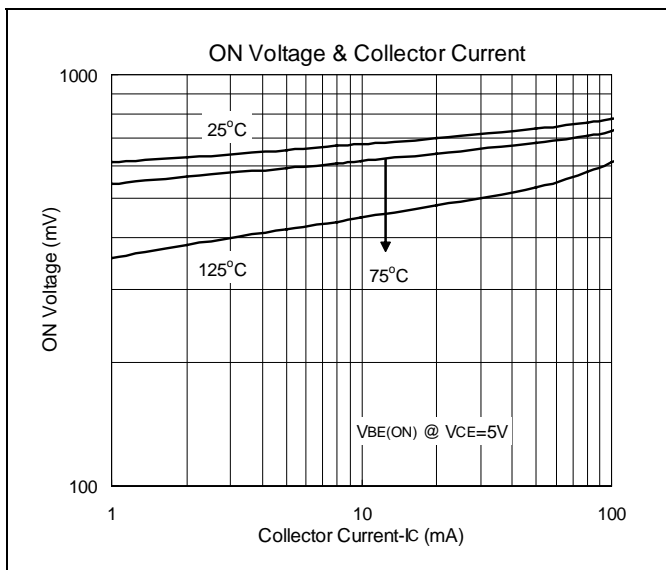
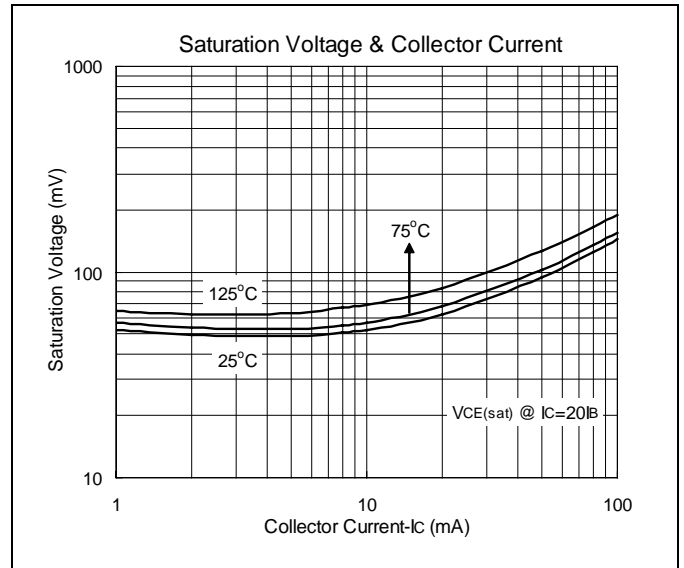
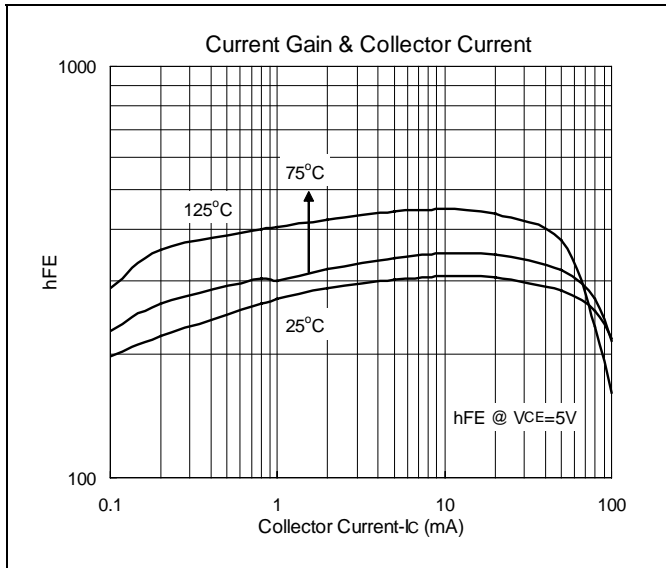
*Pulse Test: Pulse Width $\leq 380\mu\text{s}$, Duty Cycle $\leq 2\%$

Classification of hFE

Rank	A	B	C
Range	110-220	200-450	420-800

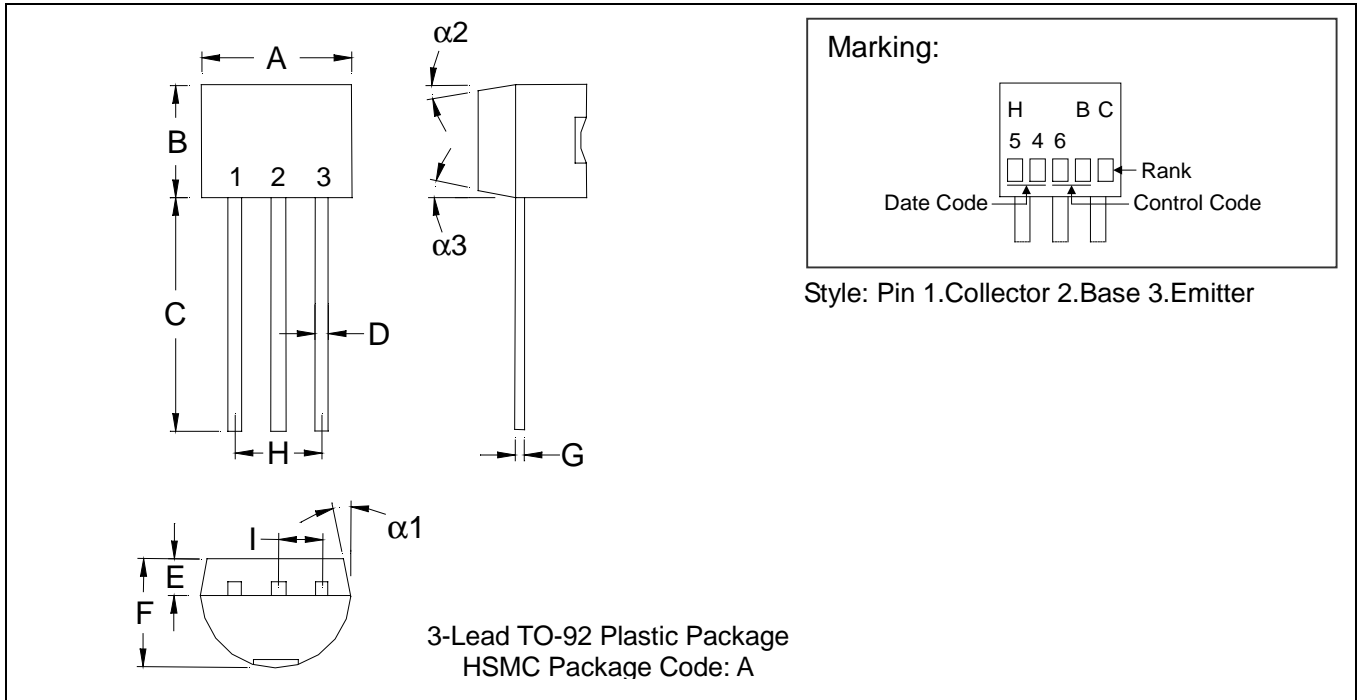


Characteristics Curve





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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