

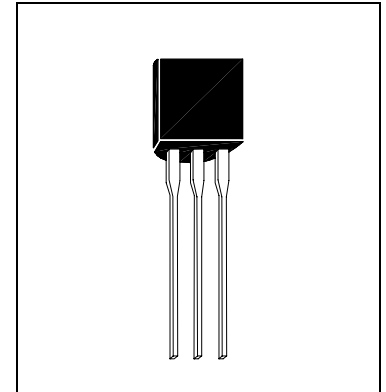


# HE8050S

NPN EPITAXIAL PLANAR TRANSISTOR

## Description

The HE8050S is designed for general purpose amplifier applications.



## Absolute Maximum Ratings

- Maximum Temperatures  
 Storage Temperature ..... -55 ~ +150 °C  
 Junction Temperature ..... +150 °C Maximum
- Maximum Power Dissipation  
 Total Power Dissipation (Ta=25°C) ..... 625 mW
- Maximum Voltages and Currents (Ta=25°C)  
 VCBO Collector to Base Voltage ..... 25 V  
 VCEO Collector to Emitter Voltage ..... 20 V  
 VEBO Emitter to Base Voltage ..... 5 V  
 IC Collector Current ..... 700 mA

## Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	25	-	-	V	IC=10uA, IE=0
BVCEO	20	-	-	V	IC=1mA, IB=0
VEBO	5	-	-	V	IE=10uA, IC=0
ICBO	-	-	1	uA	VCB=20V, IE=0
IEBO	-	-	100	nA	VEB=5V, IC=0
*VCE(sat)	-	-	0.5	V	IC=0.5A, IB=50mA
VBE(on)	-	-	1	V	VCE=1V, IC=150mA
*hFE1	100	-	500		VCE=1V, IC=150mA
*hFE2	-	140	-		VCE=1V, IC=500mA
fT	150	-	-	MHz	VCE=10V, IC=20mA, f=100MHz
Cob	-	-	10	pF	VCB=10V, f=1MHz, IE=0

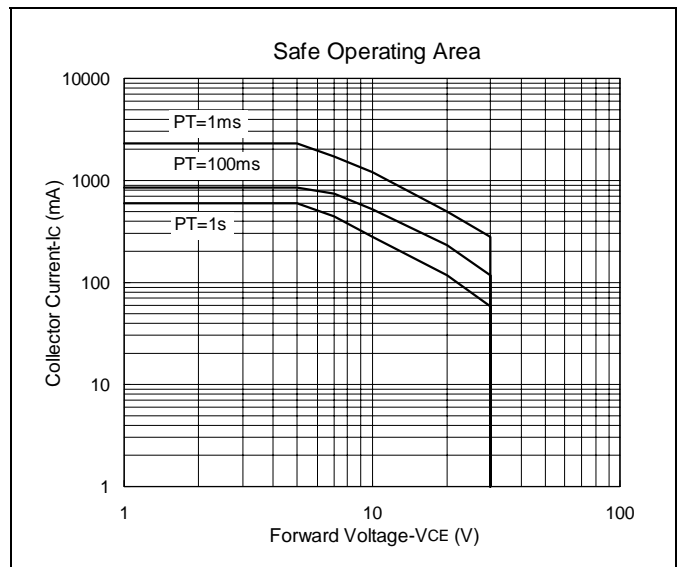
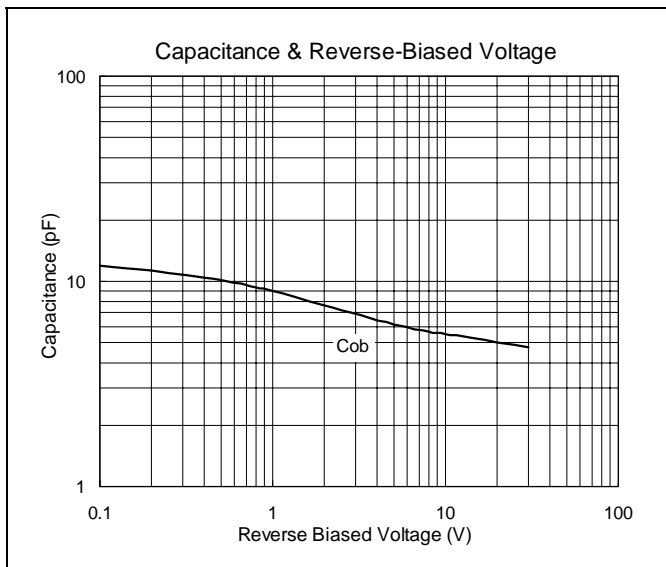
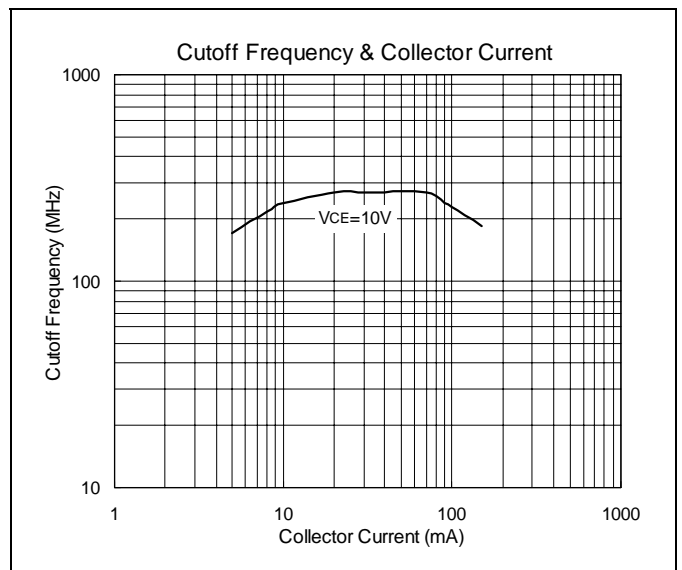
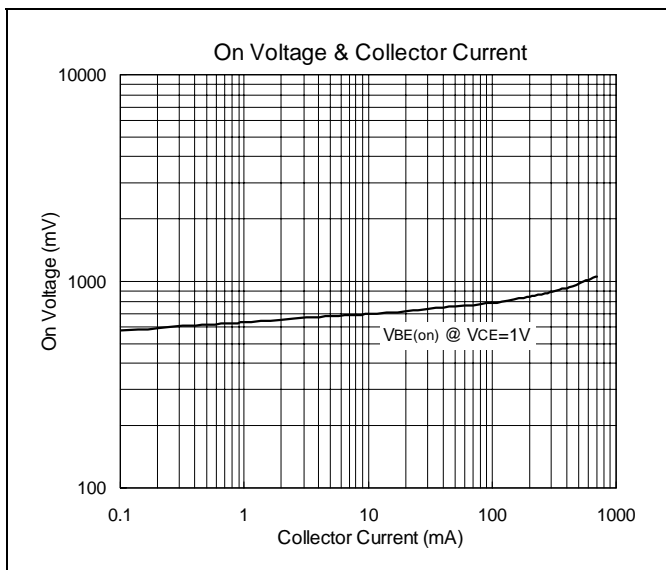
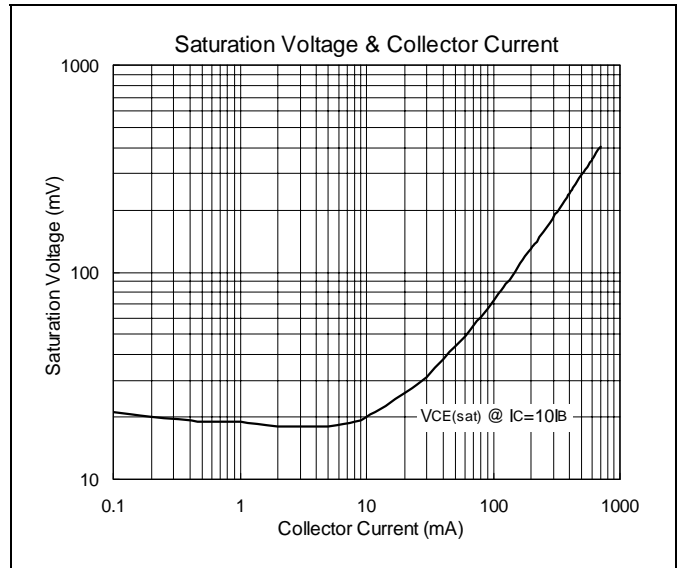
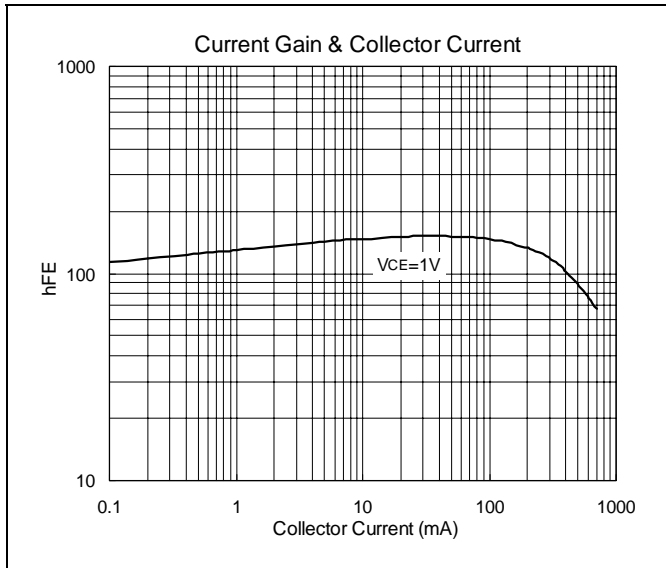
\*Pulse Test : Pulse Width ≤380us, Duty Cycle≤2%

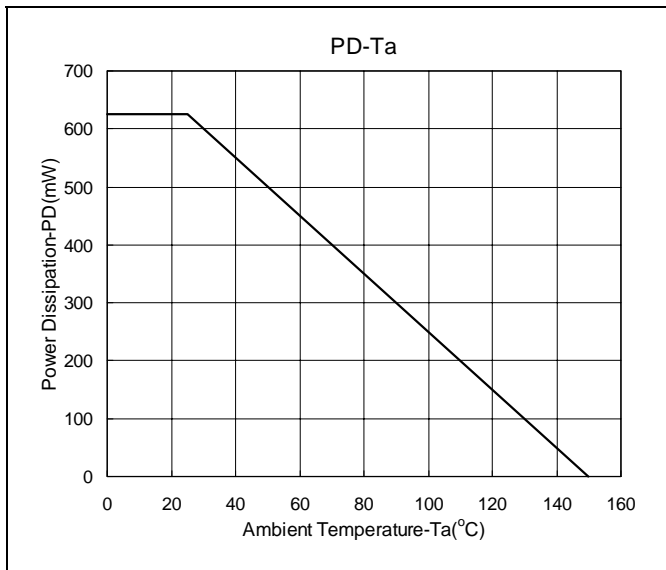
## Classifications of hFE

Rank	C	C1	D	D1	E
hFE1	100-180	100-180	160-300	160-300	250-500
hFE2	-	>50	-	>50	-



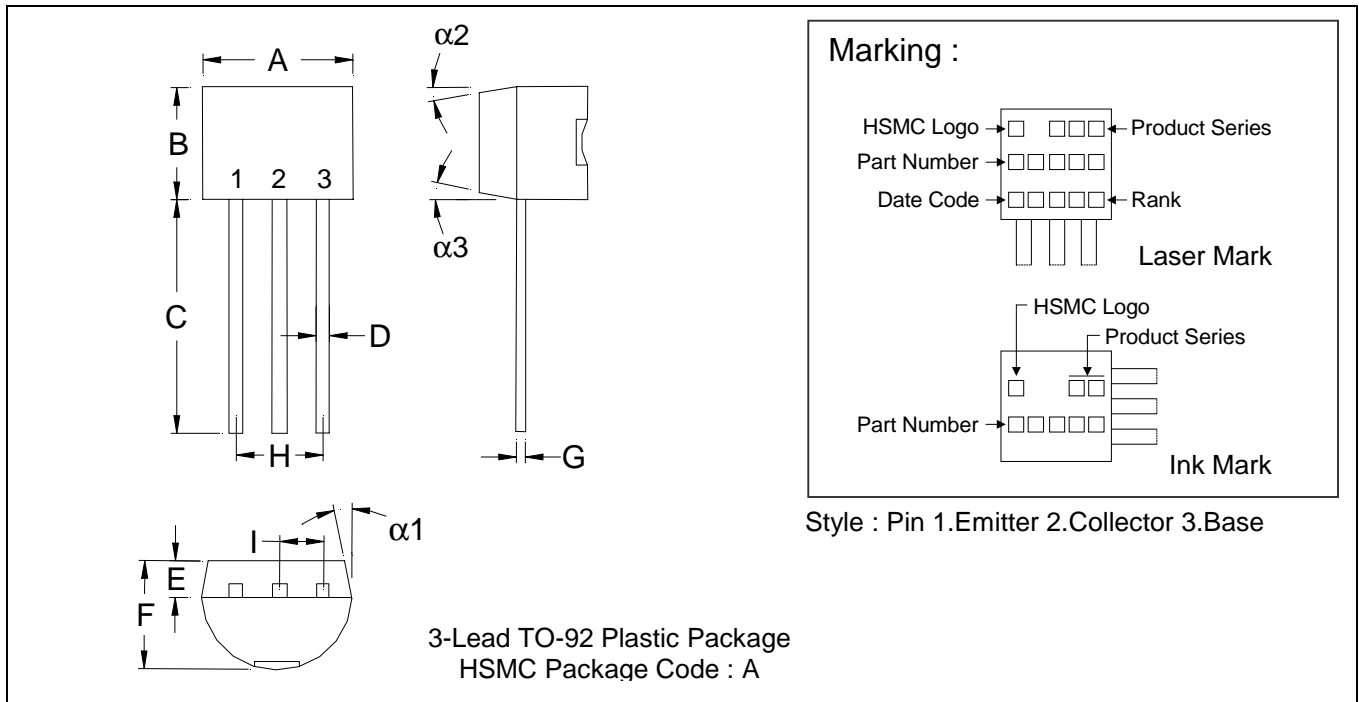
### Characteristics Curve







### 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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