

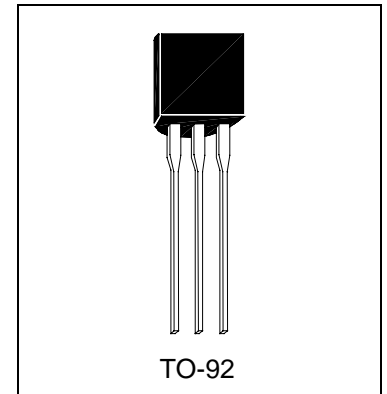


# HE8051S

NPN EPITAXIAL PLANAR TRANSISTOR

## Description

The HE8051S 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
BVCEO	20	-	-	V	IC=1mA
BVEBO	5	-	-	V	IE=10uA
ICBO	-	-	1	uA	VCB=20V
IEBO	-	-	100	nA	VEB=6V
*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

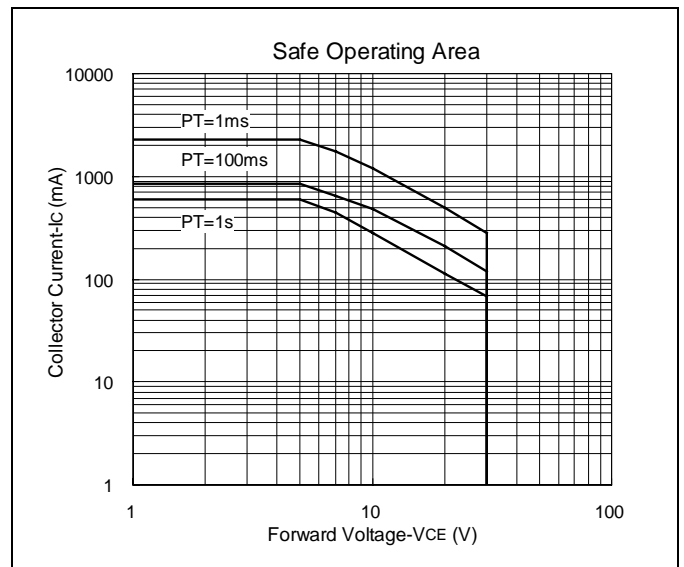
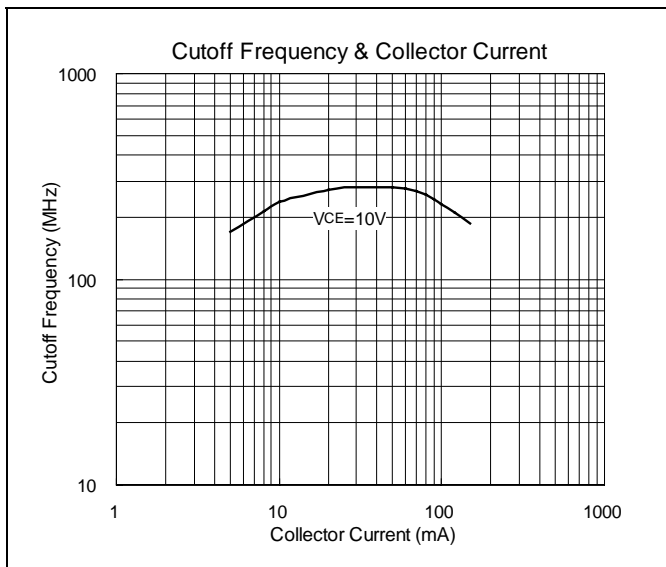
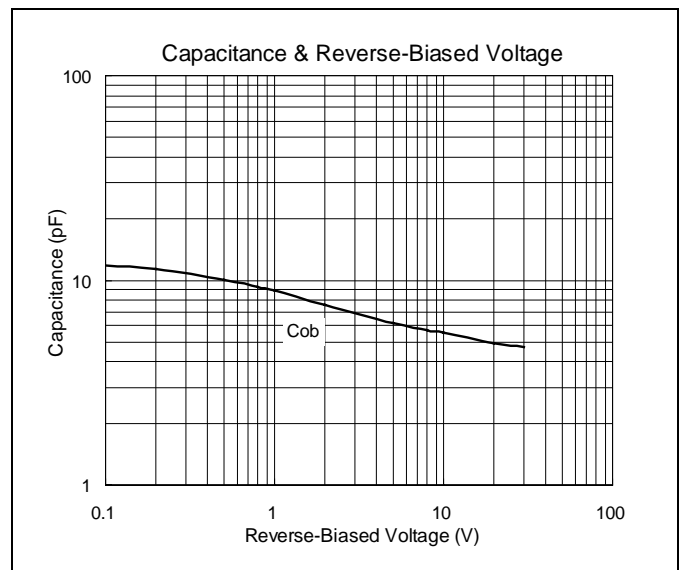
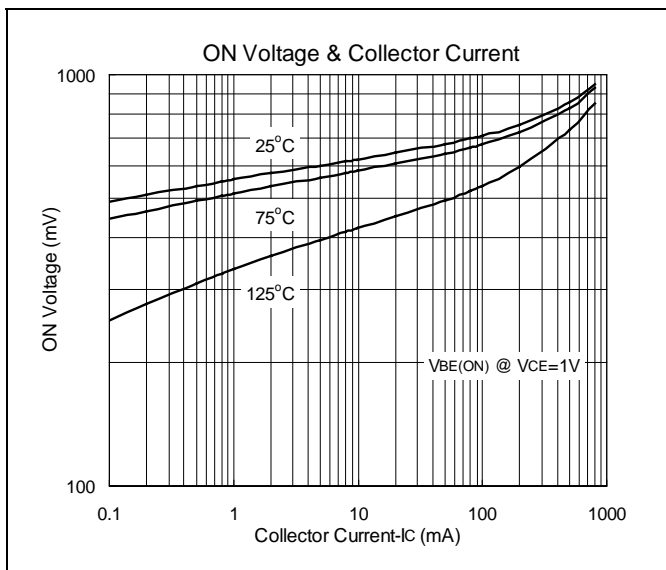
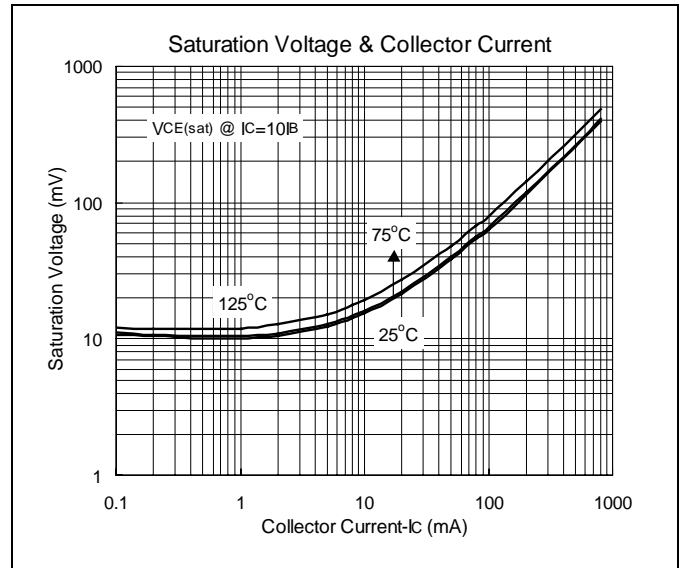
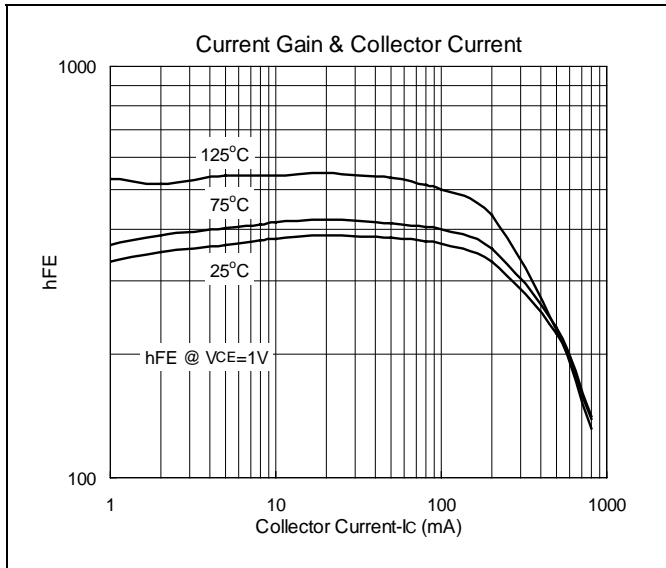
\*Pulse Test: Pulse Width ≤380us, Duty Cycle≤2%

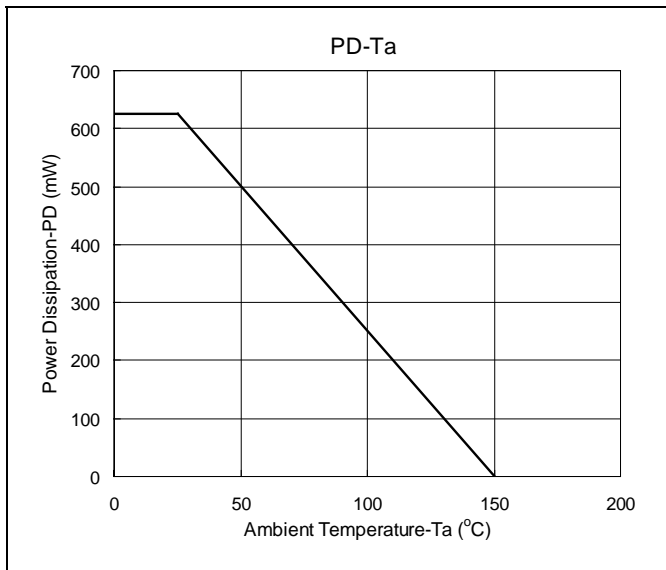
## Classification Of hFE

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



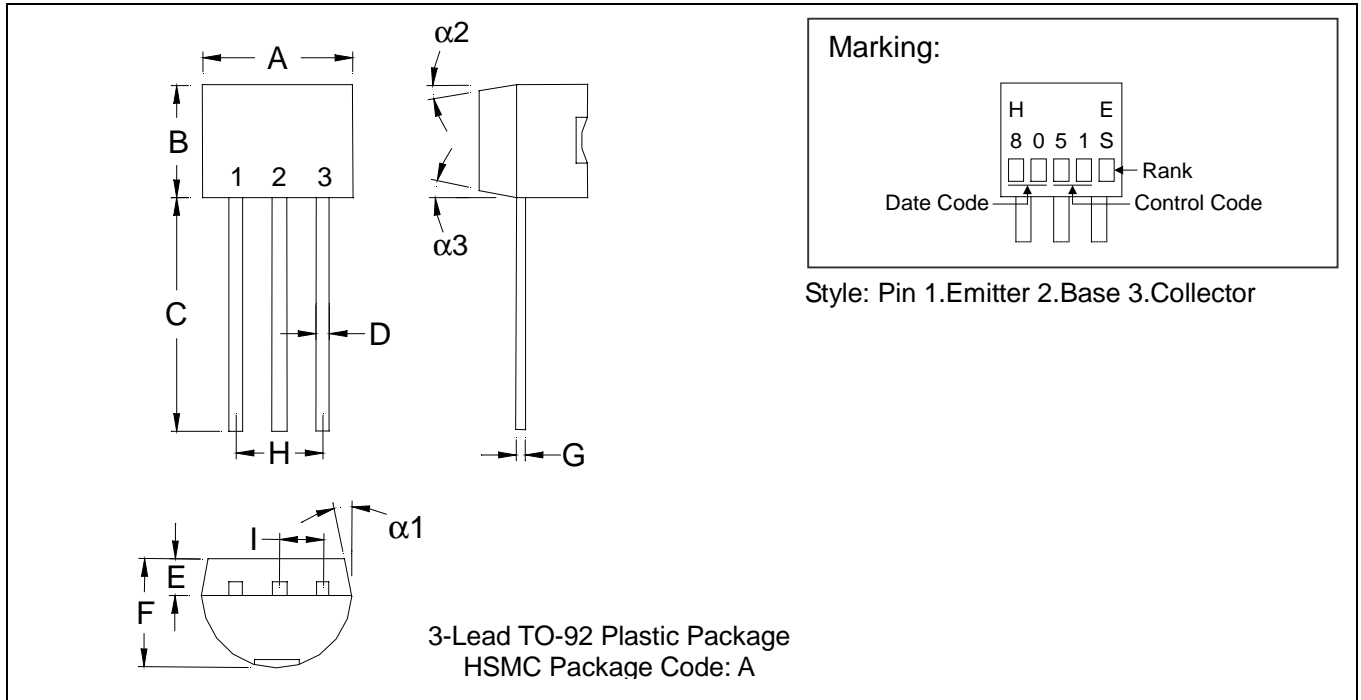
### Characteristics Curve







### 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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