



# HMP5A42

NPN EPITACIAL PLANAR TRANSISTOR

## Description

The HMP5A42 is high voltage transistor.

## Features

- High Collector-Emitter Breakdown Voltage
- Low Collector-Emitter Saturation Voltage
- For Complementary Use with PNP Type HMP5A92



## 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 ..... 300 V  
 VCEO Collector to Emitter Voltage ..... 300 V  
 VEBO Emitter to Base Voltage ..... 6 V  
 IC Collector Current ..... 500 mA

## Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	300	-	-	V	IC=100uA, IE=0
BVCEO	300	-	-	V	IC=1mA, IB=0
BVEBO	6	-	-	V	IE=10uA, IC=0
ICBO	-	-	100	nA	VCB=260V, IE=0
IEBO	-	-	100	nA	VEB=6V, IC=0
*VCE(sat)	-	-	350	mV	IC=20mA, IB=2mA
*VBE(sat)	-	-	900	mV	IC=20mA, IB=2mA
*hFE1	25	-	-		IC=1mA, VCE=10V
*hFE2	40	-	-		IC=10mA, VCE=10V
*hFE3	40	-	-		IC=30mA, VCE=10V
fT	50	-	-	MHz	IC=10mA, VCE=20V, f=100MHZ
Cob	-	-	3	pF	VCB=20V, f=1MHz, IE=0

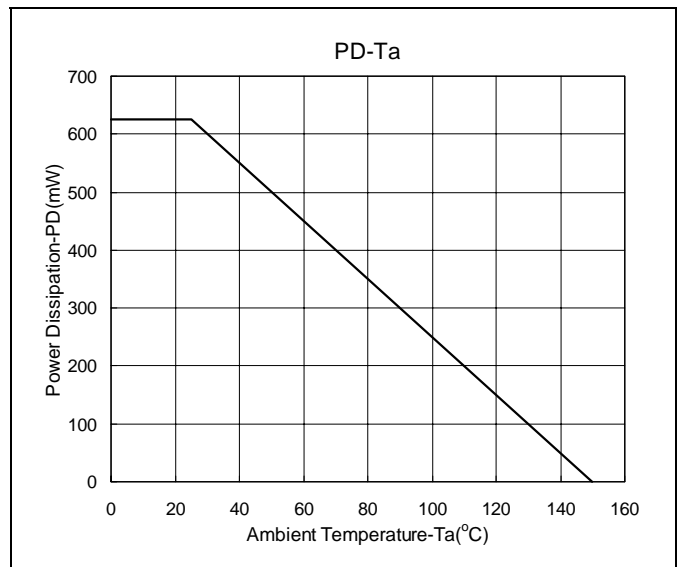
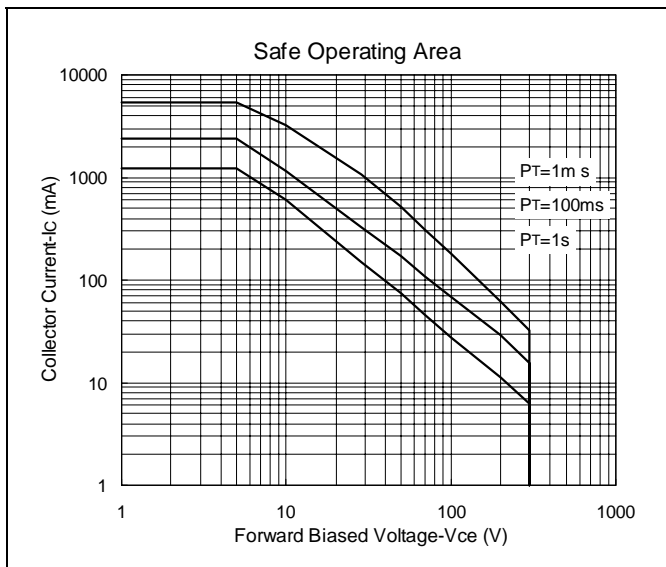
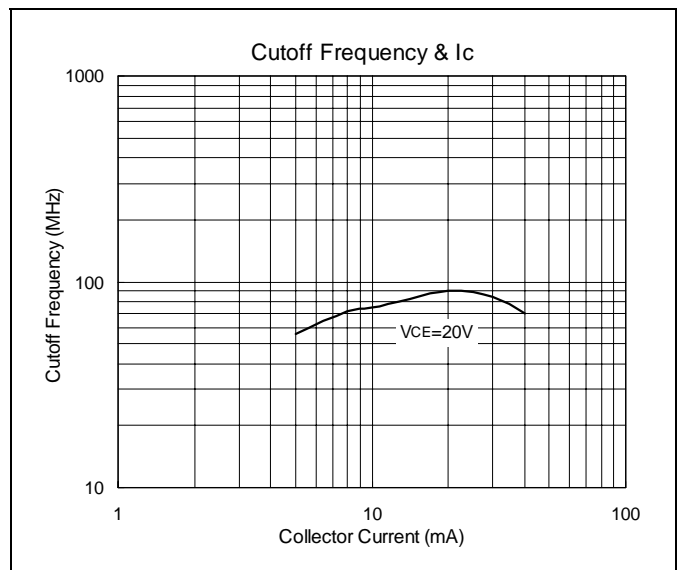
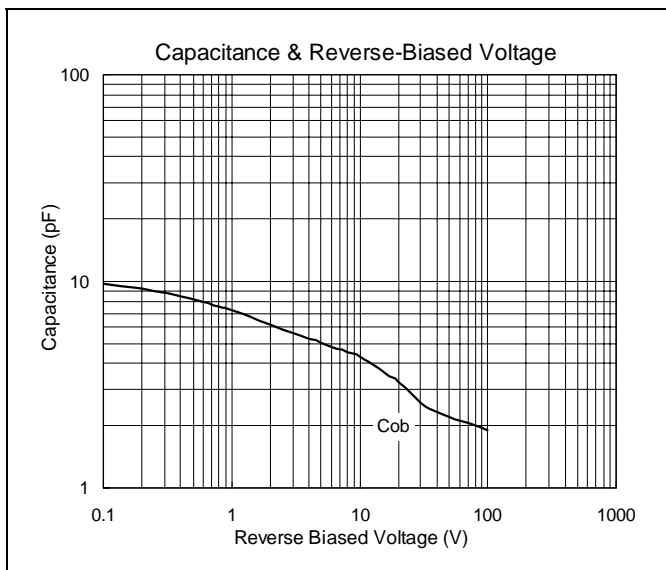
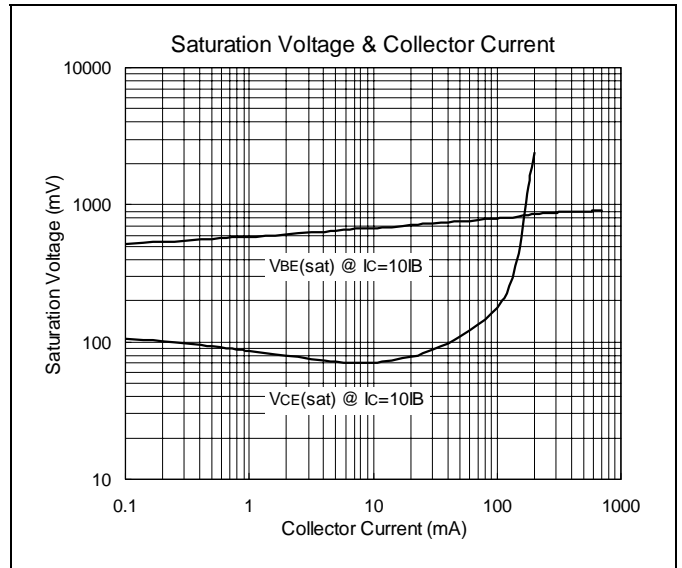
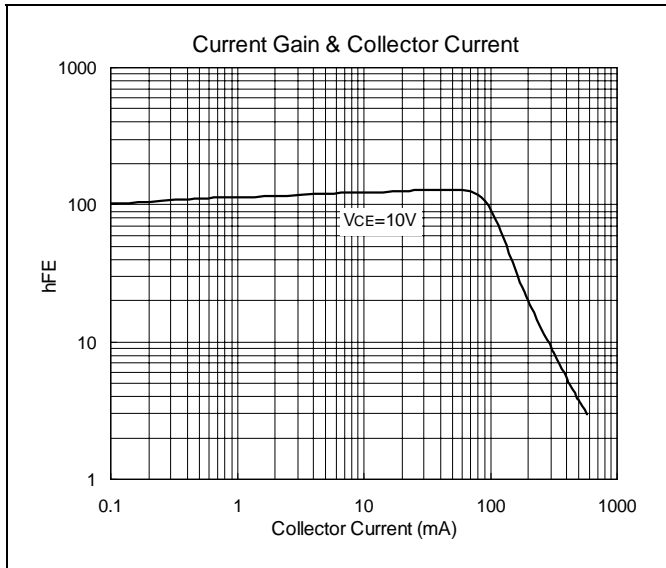
\*Pulse Test : Pulse Width ≤380us, Duty Cycle≤2%

## Classification Of Rank

Rank	hFE1	hFE2	hFE3	VCE(sat)
NS	>80	>120	>120	<200mV
N	>25	>40	>40	<350mV

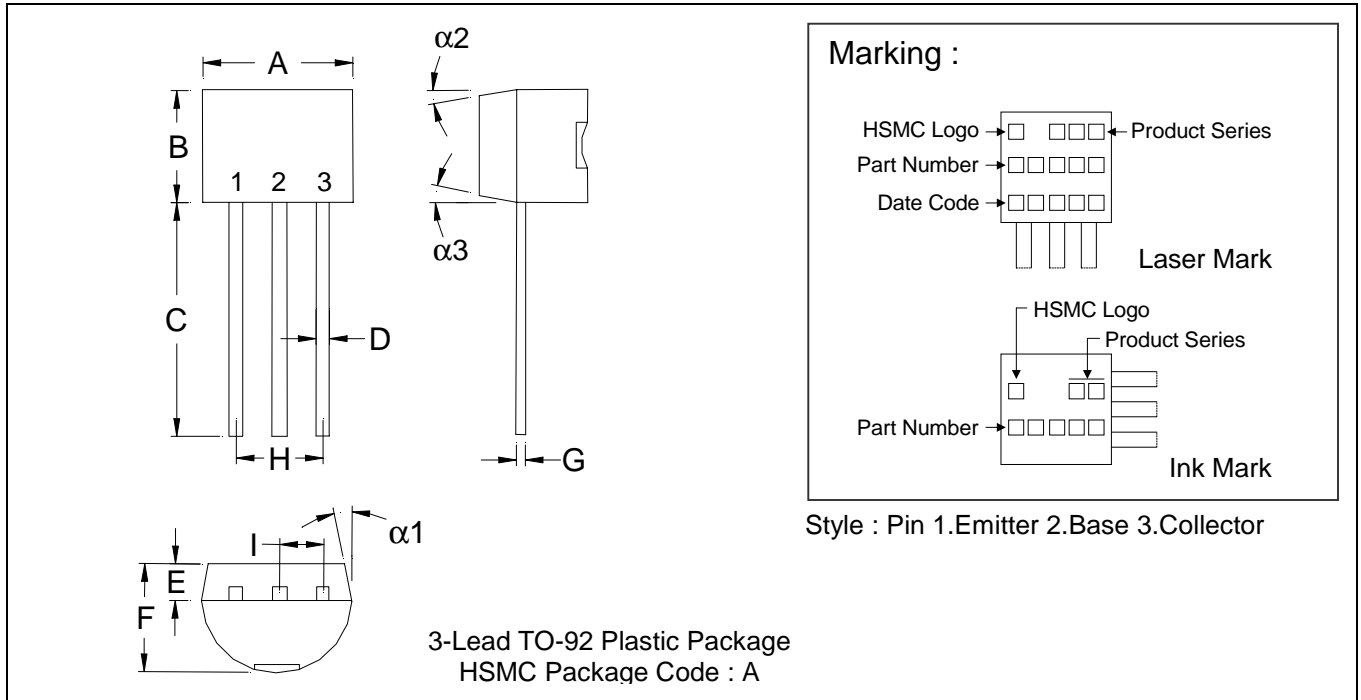


### Characteristics Curve





### 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	α1	-	*5°	-	*5°
E	-	*0.0500	-	*1.27	α2	-	*2°	-	*2°
F	0.1323	0.1480	3.36	3.76	α3	-	*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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**Head Office And Factory :**

- **Head Office** (Hi-Sincerity Microelectronics Corp.) : 10F.,No. 61, Sec. 2, Chung-Shan N. Rd. Taipei Taiwan R.O.C.  
 Tel : 886-2-25212056 Fax : 886-2-25632712, 25368454
- **Factory 1** : No. 38, Kuang Fu S. Rd., Fu-Kou Hsin-Chu Industrial Park Hsin-Chu Taiwan. R.O.C  
 Tel : 886-3-5983621~5 Fax : 886-3-5982931