



# HMP5A93

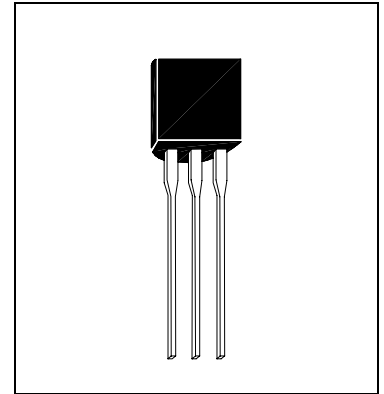
PNP EPITAXIAL PLANAR TRANSISTOR

## Description

The HMP5A93 is designed for application as a video output to drive color CRT, or as a dialer circuit in electronics telephone.

## Features

- High Collector-Emitter Breakdown Voltage
- Low Collector-Emitter Saturation Voltage
- For Complementary Use with NPN Type HMP5A43



## 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 ..... -200 V  
VCEO Collector to Emitter Voltage..... -200 V  
VEBO Emitter to Base Voltage ..... -5 V  
IC Collector Current ..... -500 mA

## Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	-200	-	-	V	IC=-100uA, IE=0
BVCEO	-200	-	-	V	IC=-1mA, IB=0
BVEBO	-5	-	-	V	IE=-10uA, IC=0
ICBO	-	-	-100	nA	VCB=-160V, IE=0
IEBO	-	-	-100	nA	VEB=-3V, 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
*hFE4	-	100	-		IC=-80mA, VCE=-10V
fT	50	-	-	MHz	IC=-10mA, VCE=-20V, f=100MHZ
Cob	-	-	8	pF	VCB=-20V, f=1MHz, IE=0

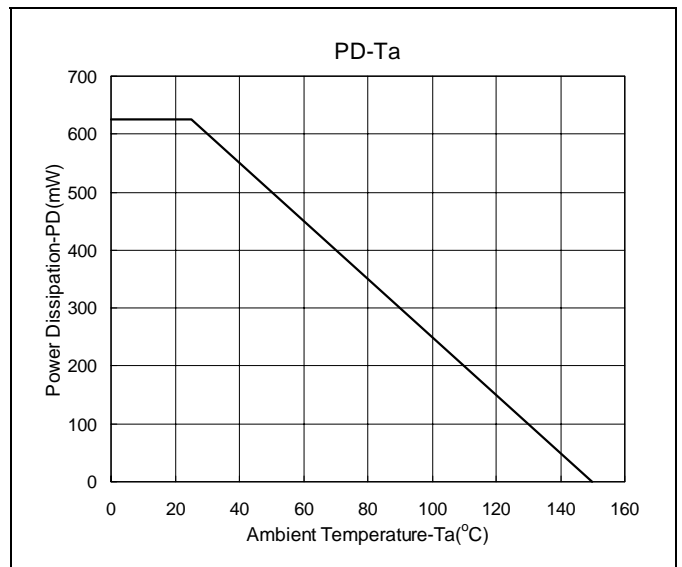
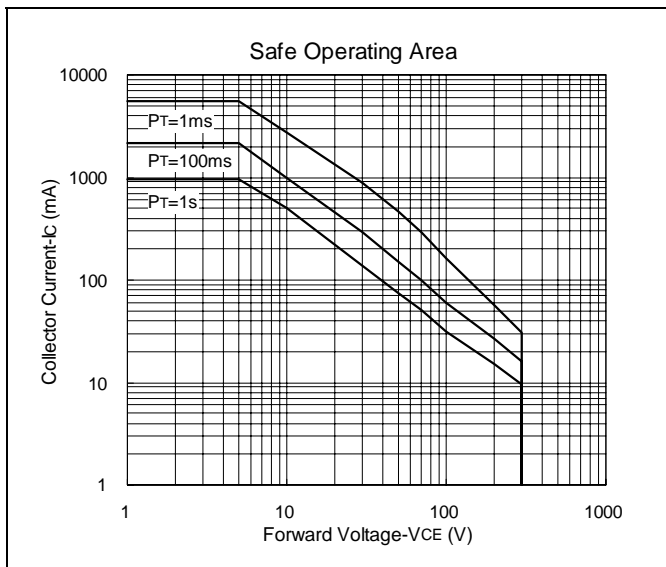
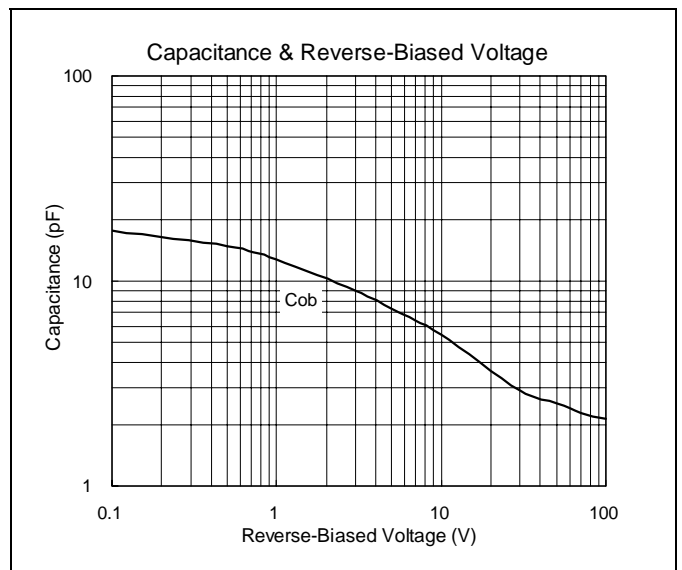
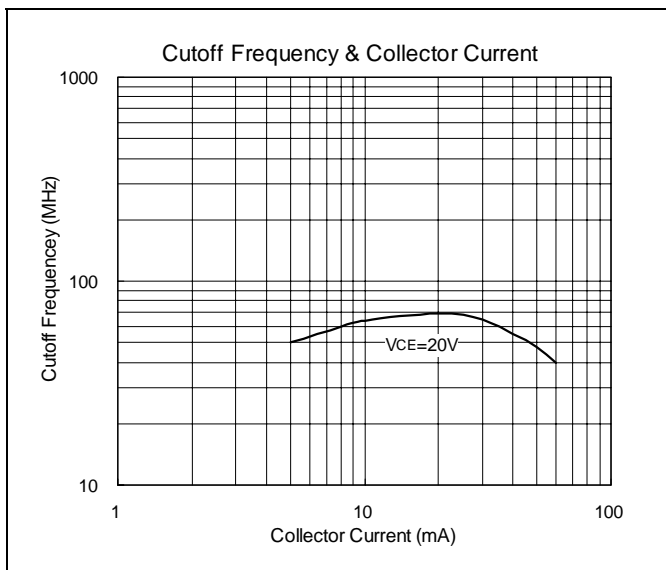
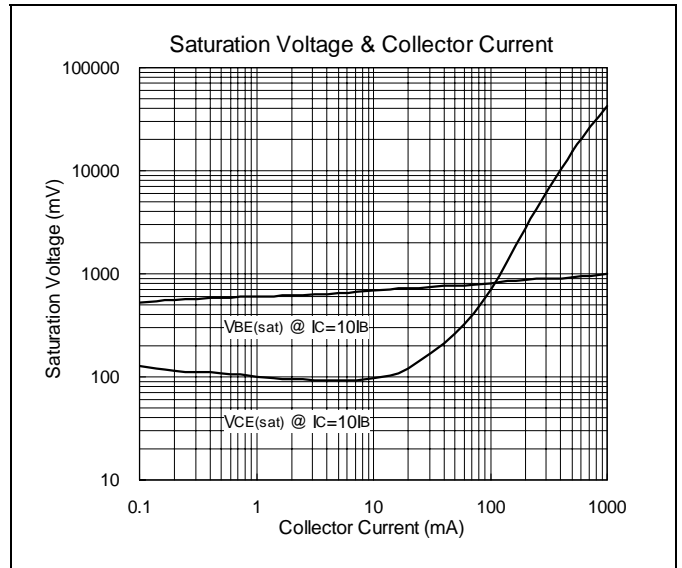
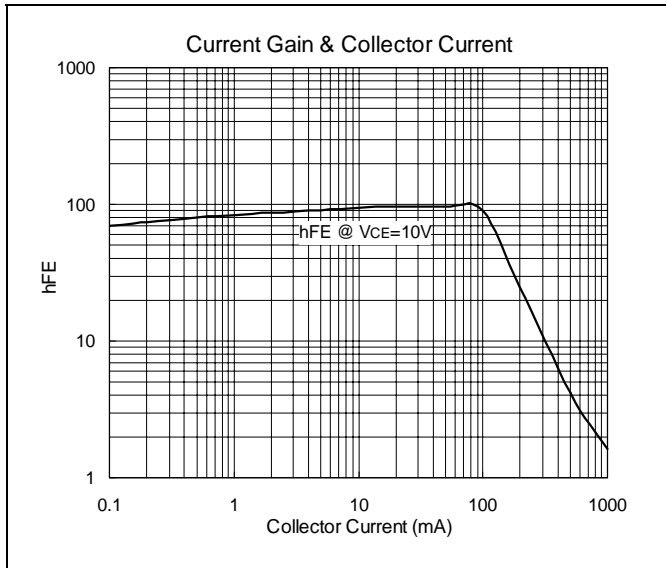
\*Pulse Test : Pulse Width ≤380us, Duty Cycle≤2%

## Classification Of hFE2 & VCE(sat)

Rank	hFE1	hFE2	hFE3	hFE4	VCE(sat)
NS	>60	>80	>80	>80	<200mV
N	>25	>40	>40	-	<350mV



### Characteristics Curve





### TO-92 Dimension

3-Lead TO-92 Plastic Package  
 HSMC Package Code : A

Style : Pin 1. Emitter 2. Base 3. Collector

\*: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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**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
- **Factory 2** : No. 17-1, Ta-Tung Rd., Fu-Kou Hsin-Chu Industrial Park Hsin-Chu Taiwan. R.O.C  
 Tel : 886-3-5977061 Fax : 886-3-5979220