

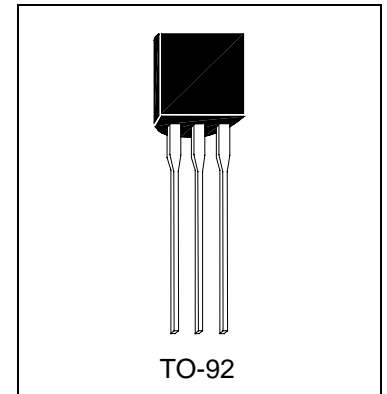


# H2N3904

NPN EPITAXIAL PLANAR TRANSISTOR

## Description

The H2N3904 is designed for general purpose switching and 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 ..... 60 V  
 VCEO Collector to Emitter Voltage..... 40 V  
 VEBO Emitter to Base Voltage..... 6 V  
 IC Collector Current..... 200 mA

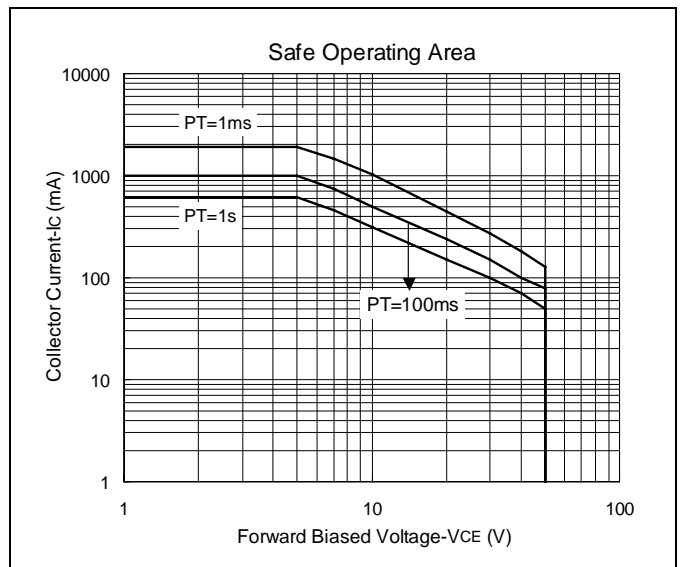
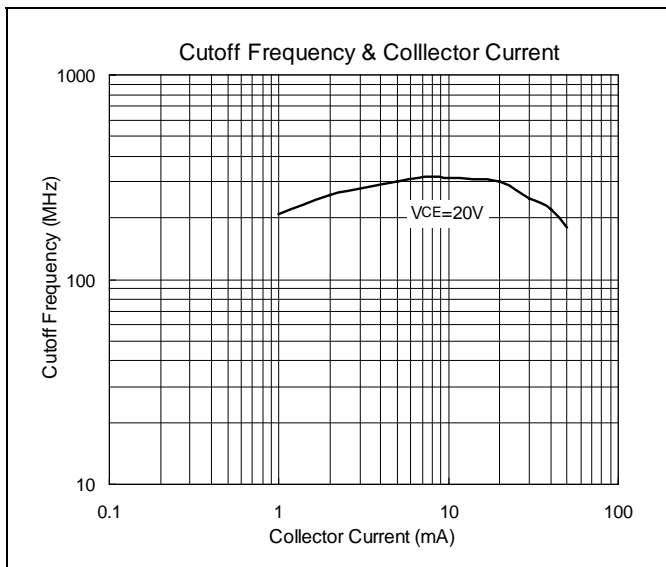
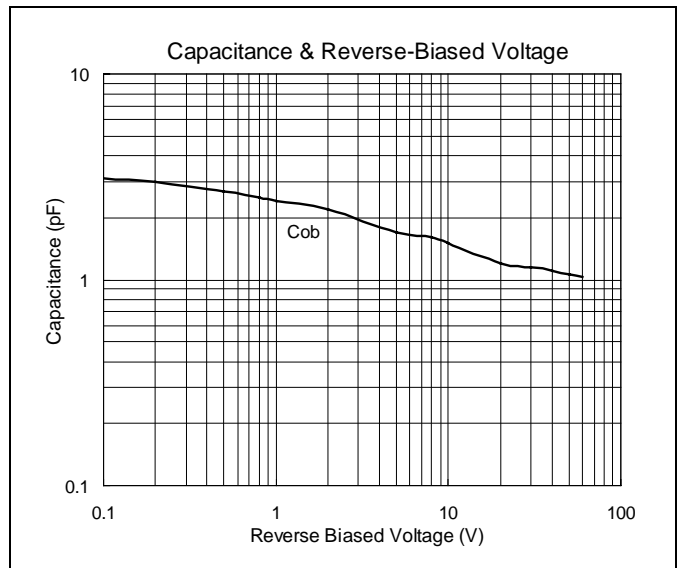
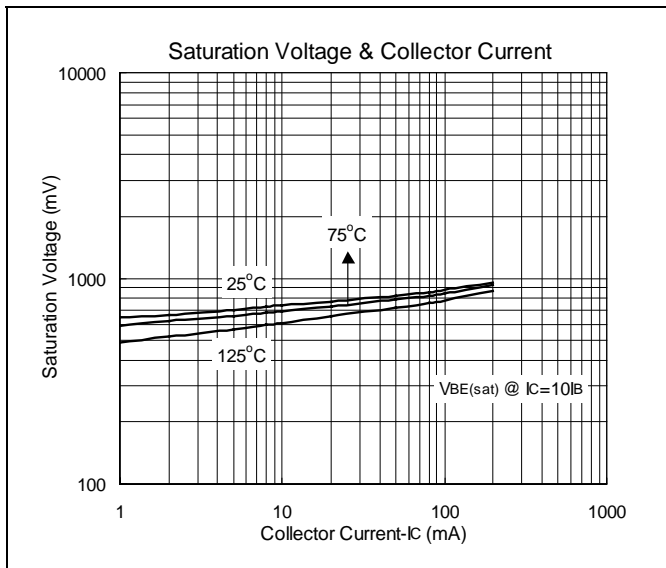
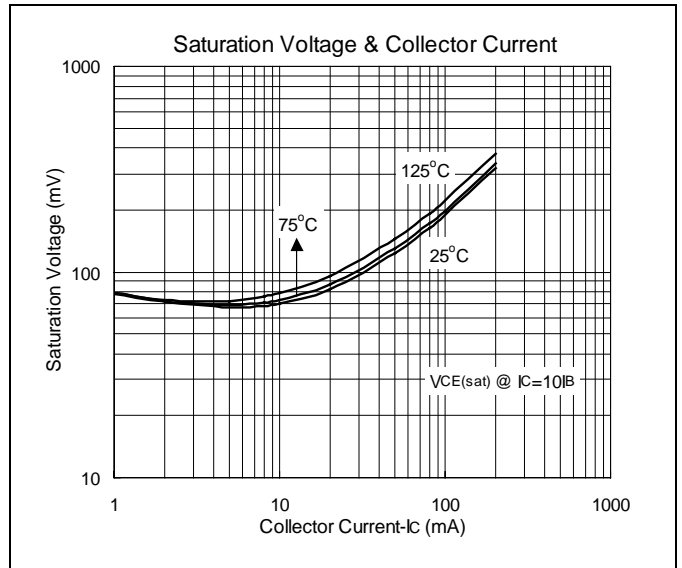
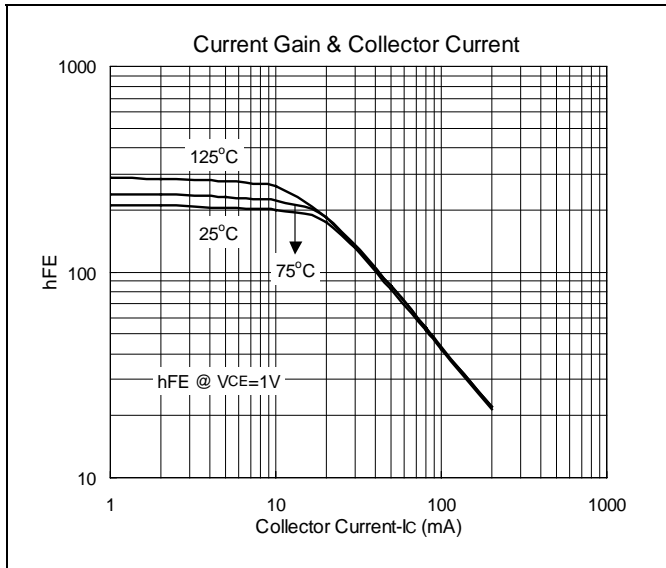
## Characteristics (Ta=25°C)

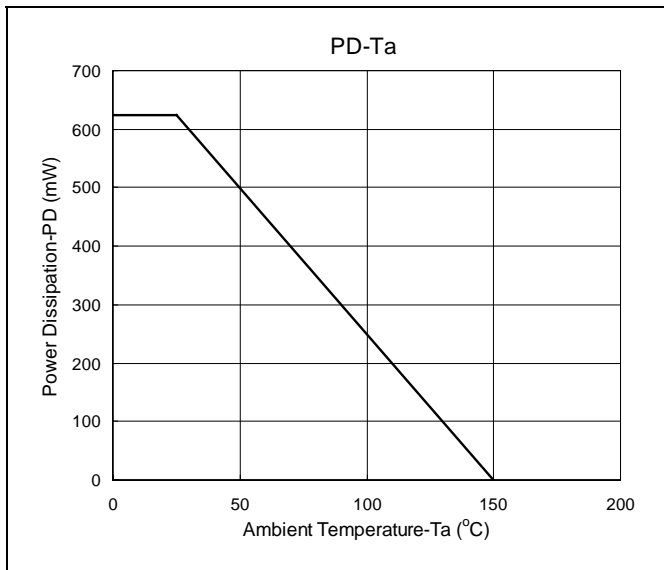
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	60	-	-	V	IC=10uA, IE=0
BVCEO	40	-	-	V	IC=1mA, IB=0
BVEBO	6	-	-	V	IE=10uA, IC=0
ICEX	-	-	50	nA	VCE=30V, VBE=3V
*VCE(sat)1	-	-	200	mV	IB=1mA, IC=10mA
*VCE(sat)2	-	-	300	mV	IB=5mA, IC=50mA
*VBE(sat)1	650	-	850	mV	IB=1mA, IC=10mA
*VBE(sat)2	-	-	950	mV	IB=5mA, IC=50mA
*hFE1	40	-	-		VCE=1V, IC=100uA
*hFE2	70	-	-		VCE=1V, IC=1mA
*hFE3	100	-	300		VCE=1V, IC=10mA
*hFE4	60	-	-		VCE=1V, IC=50mA
*hFE5	30	-	-		VCE=1V, IC=100mA
fT	300	-	-	MHz	IC=10mA, VCE=20V, f=100MHz
Cob	-	-	4	pF	VCB=5V, f=1MHz, IE=0

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



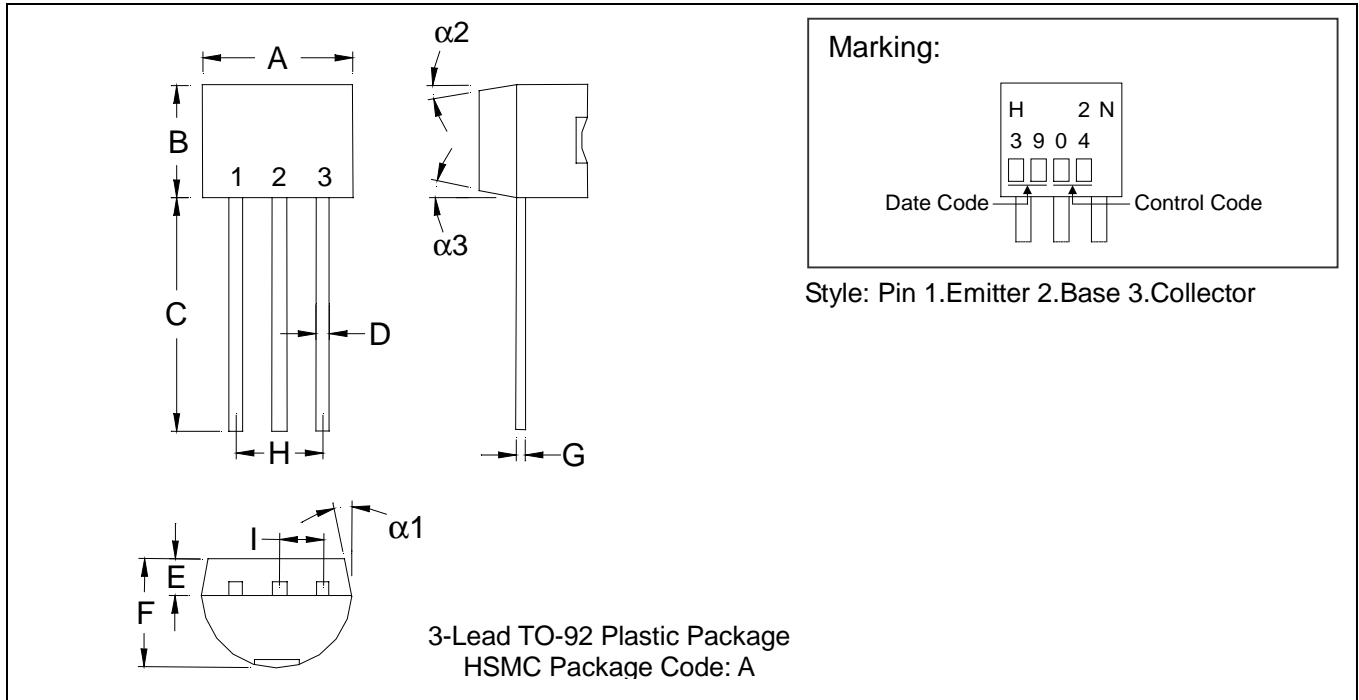
### Characteristics Curve







### 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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