



# H2N4401

NPN EPITAXIAL PLANAR TRANSISTOR

## Description

The H2N4401 is designed for general purpose switching and amplifier applications.

## Features

- Complementary to H2N4403
- High Power Dissipation : 625 mW at 25°C
- High DC Current Gain : 100-300 at 150mA
- High Breakdown Voltage : 40 V Min.

## 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 ..... 5 V  
IC Collector Current ..... 600 mA

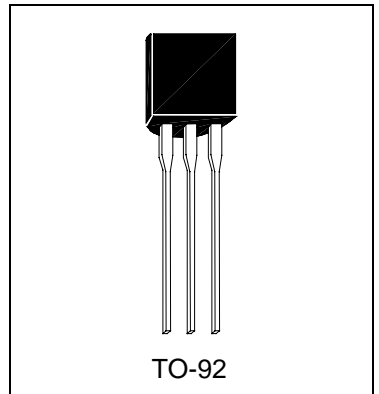
## Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	60	-	-	V	IC=100uA, IE=0
BVCEO	40	-	-	V	IC=1mA, IB=0
BVEBO	5	-	-	V	IE=10uA, IC=0
ICEX	-	-	100	nA	VCE=35V, VBE=0.4V
*VCE(sat)1	-	-	400	mV	IC=150mA, IB=15mA
*VCE(sat)2	-	-	750	mV	IC=500mA, IB=50mA
*VBE(sat)1	750	-	950	mV	IC=150mA, IB=15mA
*VBE(sat)2	-	-	1.2	V	IC=500mA, IB=50mA
*hFE1	20	-	-		VCE=1V, IC=0.1mA
*hFE2	40	-	-		VCE=1V, IC=1mA
*hFE3	80	-	-		VCE=1V, IC=10mA
*hFE4	100	-	300		VCE=1V, IC=150mA
*hFE5	40	-	-		VCE=2V, IC=500mA
fT	250	-	-	MHz	VCE=10V, IC=20mA, f=100MHz
Cob	-	-	6.5	pF	VCB=5V, IE=0, f=1MHz

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

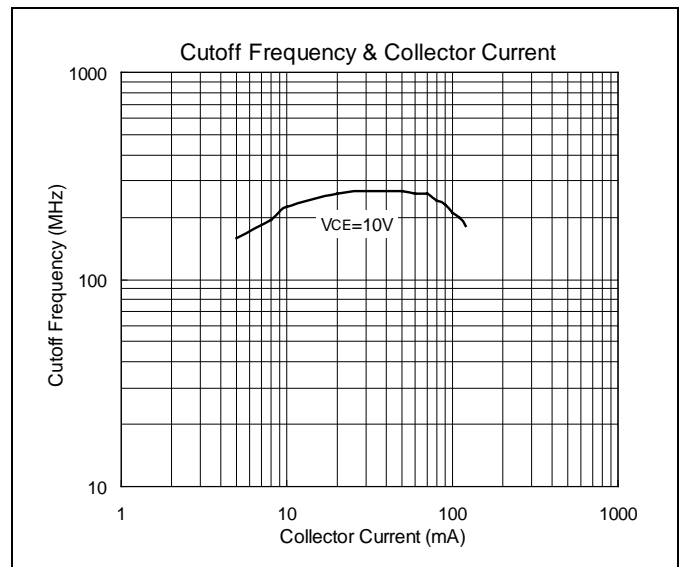
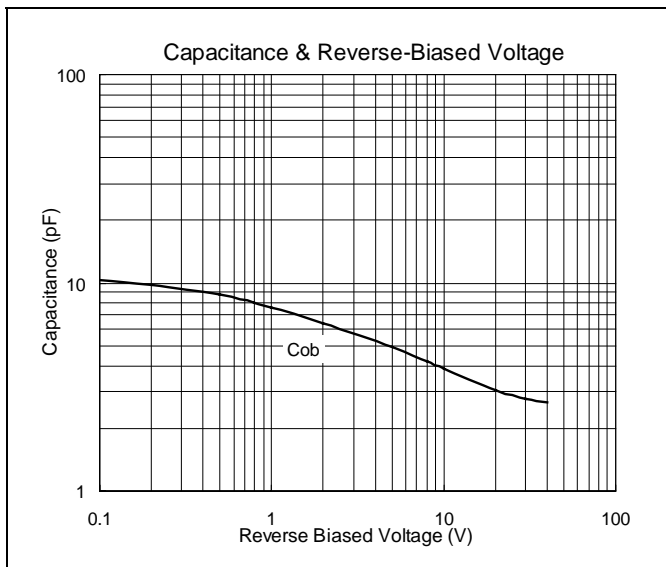
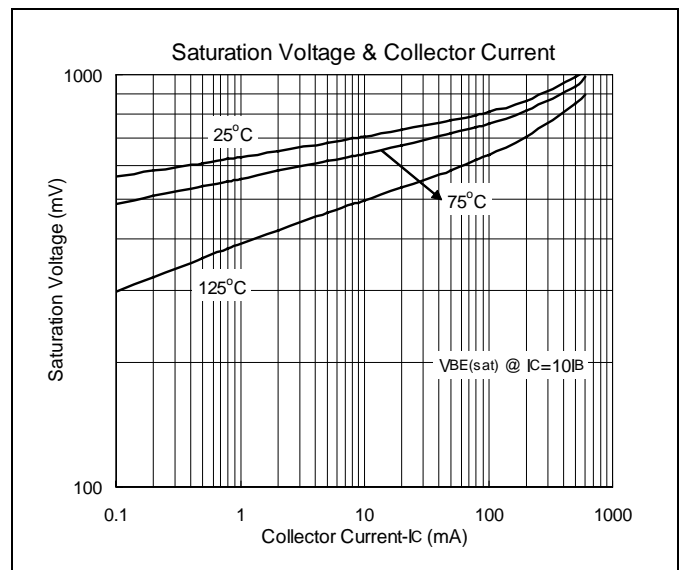
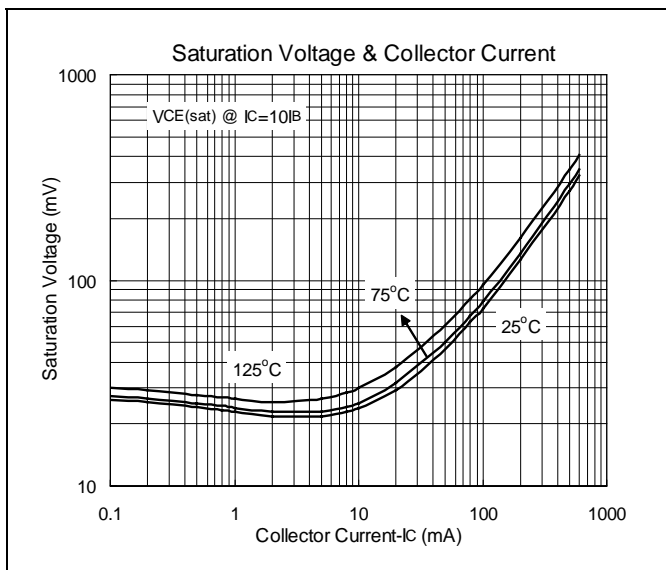
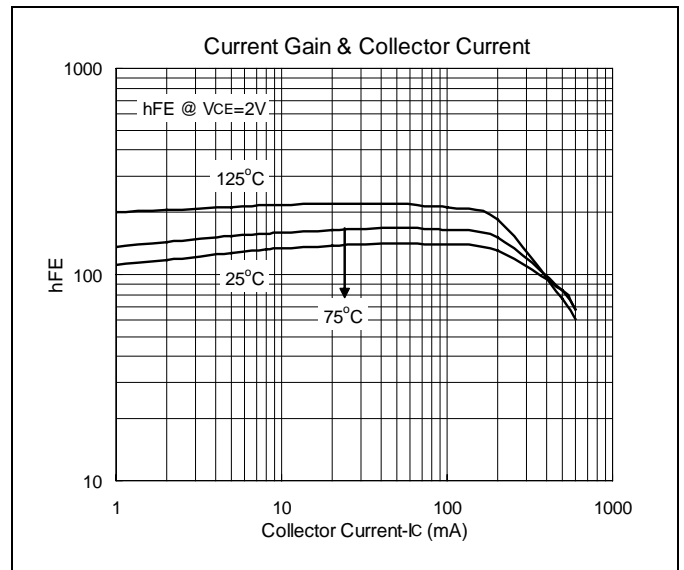
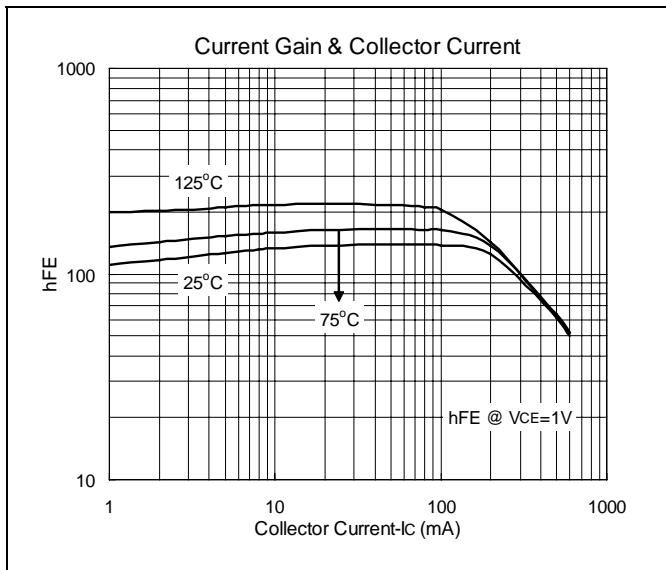
## Classification of hFE4

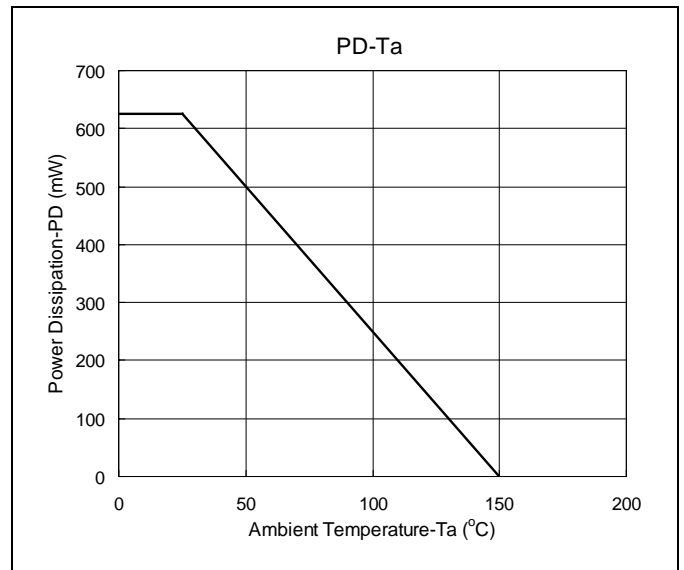
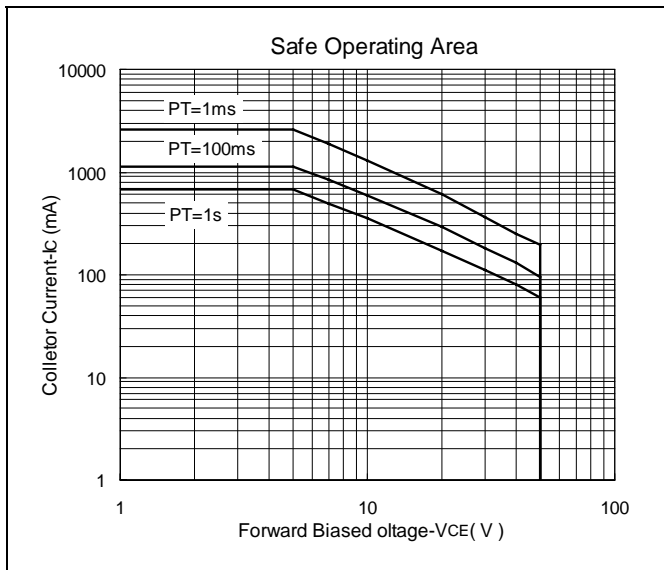
Rank	A	B
Range	100-210	190-300





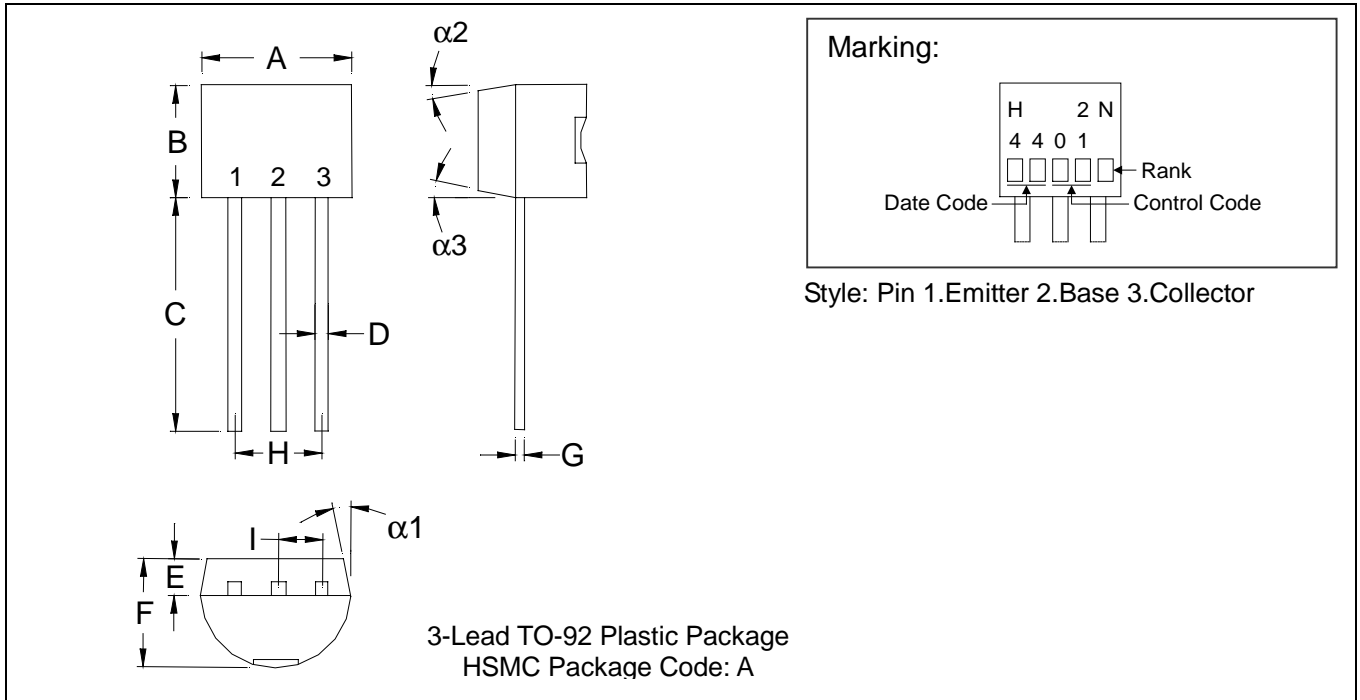
### Characteristics Curve







### 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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