

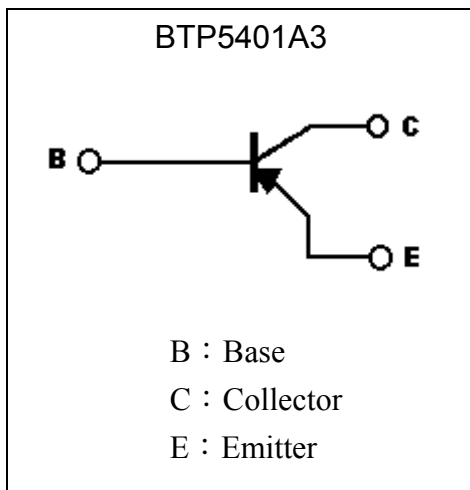
**General Purpose PNP Epitaxial Planar Transistor**

# BTP5401A3

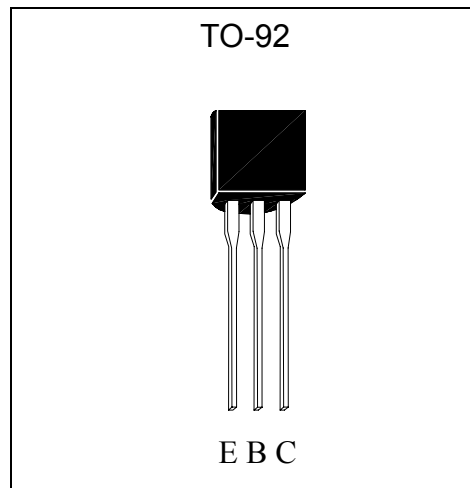
## Description

- The BTP5401A3 is designed for general purpose amplification.
- Large  $I_C$  ,  $I_{C(Max)} = -0.6A$
- High  $BV_{CEO}$ ,  $BV_{CEO} = -150V$
- Complementary to BTN5551A3.

## Symbol



## Outline



## Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	$V_{CBO}$	-160	V
Collector-Emitter Voltage	$V_{CEO}$	-150	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current	$I_C$	-0.6	A
Power Dissipation	$P_d$	625	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	200	°C/W
Junction Temperature	$T_j$	150	°C
Storage Temperature	$T_{stg}$	-55~+150	°C

**Characteristics (Ta=25°C)**

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	-160	-	-	V	IC=-100μA
BVCEO	-150	-	-	V	IC=-1mA
BVEBO	-5	-	-	V	IE=-10μA
ICBO	-	-	-50	nA	V <sub>CB</sub> =-120V
IEBO	-	-	-50	nA	V <sub>EB</sub> =-3V
*V <sub>CE(sat)</sub> 1	-	-	-0.2	V	IC=-10mA, IB=-1mA
*V <sub>CE(sat)</sub> 2	-	-	-0.5	V	IC=-50mA, IB=-5mA
*V <sub>BE(sat)</sub> 1	-	-	-1	V	IC=-10mA, IB=-1mA
*V <sub>BE(sat)</sub> 2	-	-	-1	V	IC=-50mA, IB=-5mA
h <sub>FE</sub> 1	50	-	-	-	V <sub>CE</sub> =-5V, IC=-1mA
h <sub>FE</sub> 2	56	-	390	-	V <sub>CE</sub> =-5V, IC=-10mA
h <sub>FE</sub> 3	50	-	-	-	V <sub>CE</sub> =-5V, IC=-50mA
f <sub>T</sub>	100	-	300	MHz	V <sub>CE</sub> =-10V, IC=-10mA, f=100MHz
Cob	-	-	6	pF	V <sub>CB</sub> =-10V, f=1MHz

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

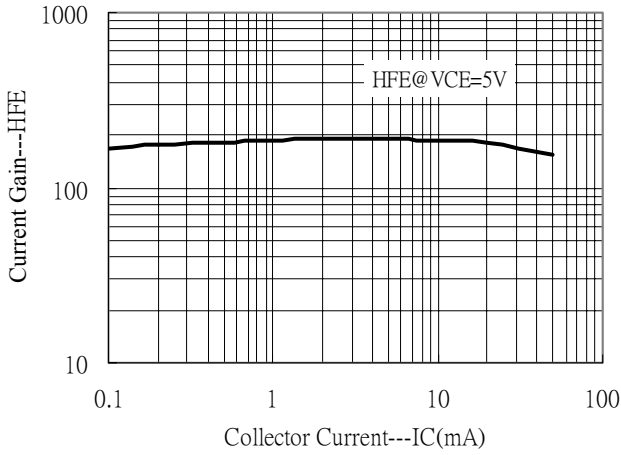
**Classification Of h<sub>FE</sub> 2**

Rank	K	P	Q	R
Range	56~120	82~180	120~270	180~390

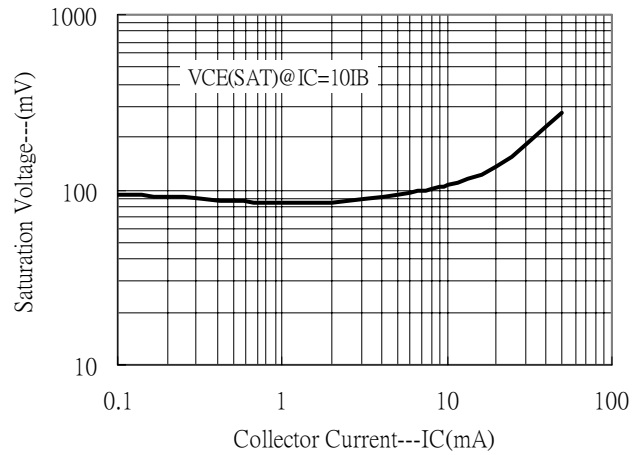


### Characteristic Curves

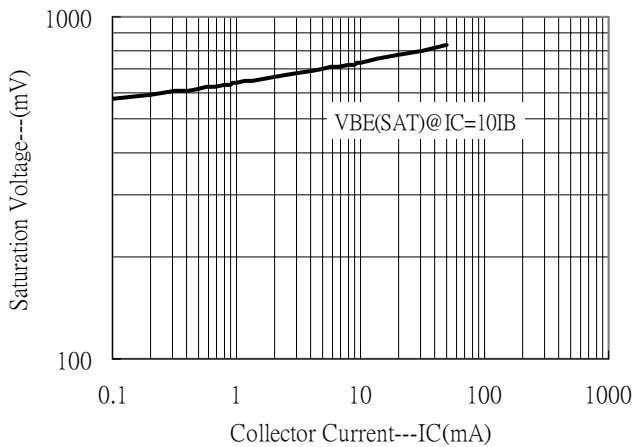
Current Gain vs Collector Current



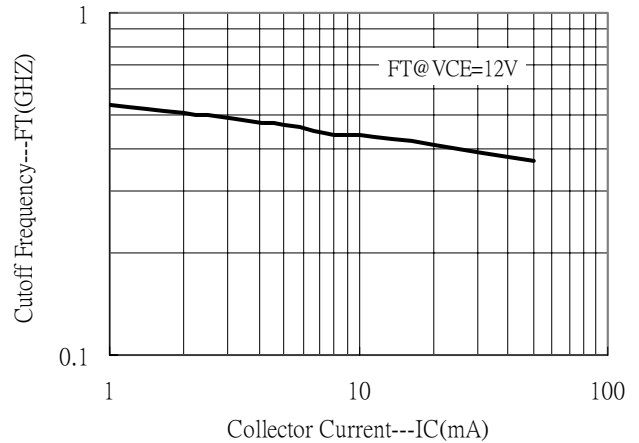
Saturation Voltage vs Collector Current



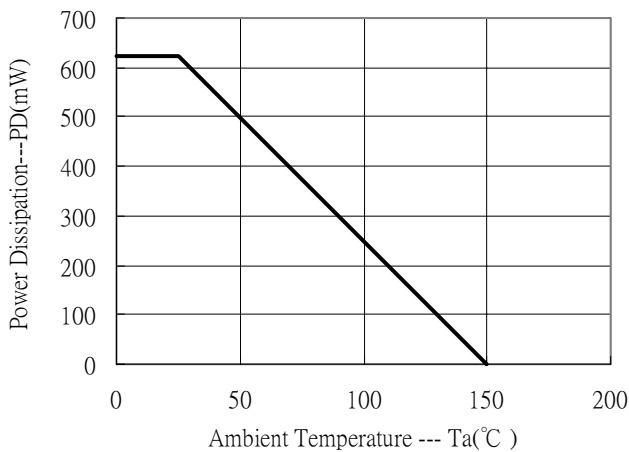
Saturation Voltage vs Collector Current



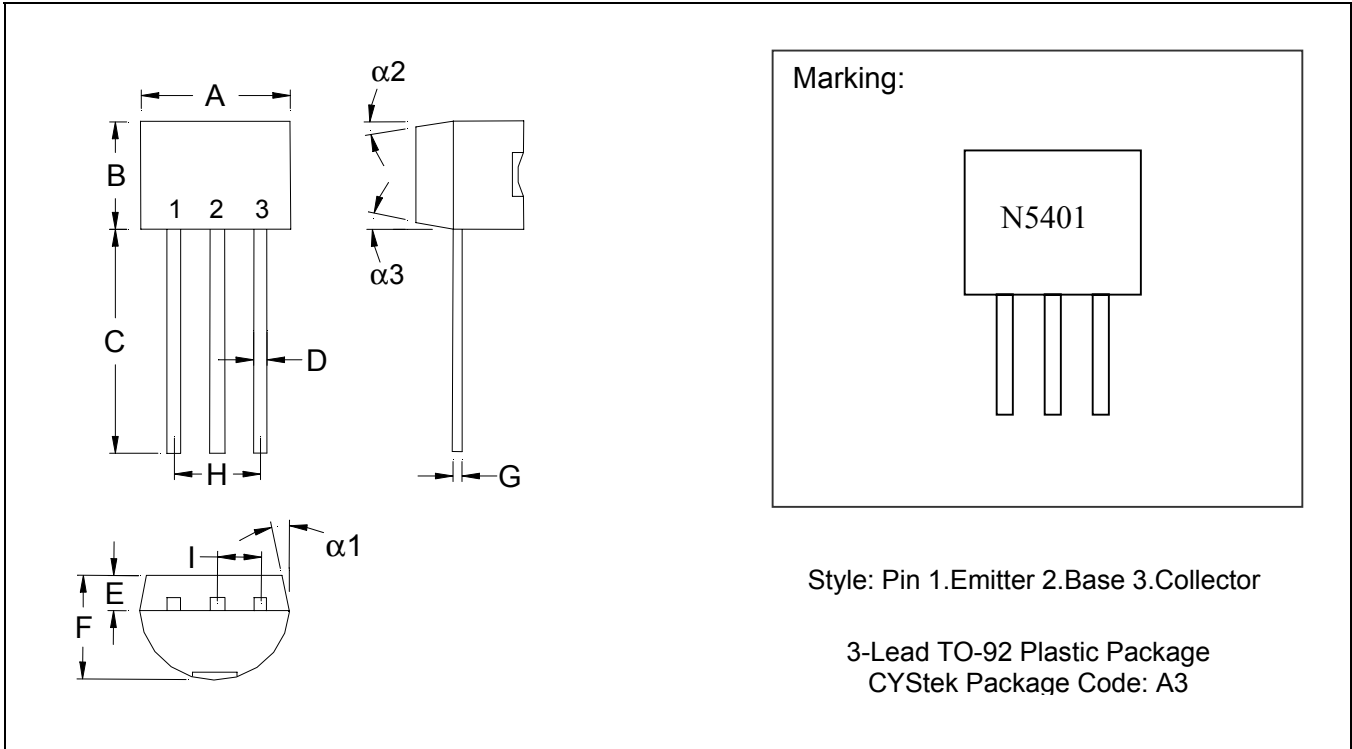
Cutoff Frequency vs Collector Current



Power Derating 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. Controlling dimension: millimeters.  
 2. Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.  
 3. If there is any question with packing specification or packing method, please contact your local CYStek sales office.

**Material:**

- Lead: 42 Alloy ; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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