



# HBF423

PNP EPITAXIAL PLANAR TRANSISTOR

## Description

Video B-class Power stages in TV-receivers

## 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..... -250 V  
VCEO Collector to Emitter Voltage ..... -250 V  
VEBO Emitter to Base Voltage..... -5 V  
IC Collector Current ..... -50 mA  
IC Collector Current (Pulse)..... -100 mA  
IB Base Current (Pulse)..... -50 mA

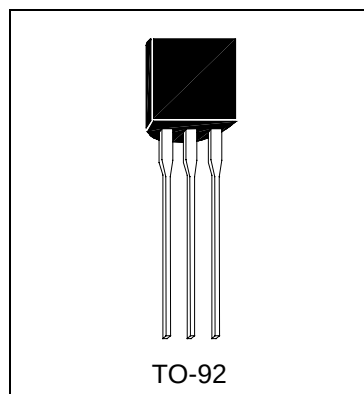
## Electrical Characteristics (Ta=25°C)

| Symbol    | Min. | Typ. | Max. | Unit | Test Conditions              |
|-----------|------|------|------|------|------------------------------|
| BVCBO     | -250 | -    | -    | V    | IC=-100uA, IE=0              |
| BVCEO     | -250 | -    | -    | V    | IC=-1mA, IB=0                |
| BVEBO     | -5   | -    | -    | V    | IE=-10uA, IC=0               |
| ICBO      | -    | -    | -100 | nA   | VCB=-200V, IE=0              |
| IEBO      | -    | -    | -50  | nA   | VEB=-5V, IE=0                |
| *VCE(sat) | -    | -    | -0.6 | V    | IC=-30mA, IB=-3mA            |
| *hFE      | 50   | -    | -    |      | VCE=-20V, IC=-25mA           |
| fT        | 60   | -    | -    | MHz  | IE=-10mA, VCE=-10V, f=100MHz |

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

## Thermal Characteristics

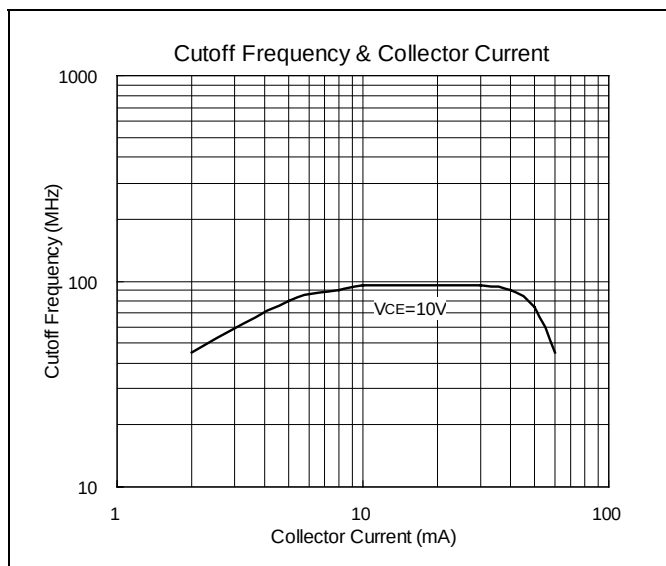
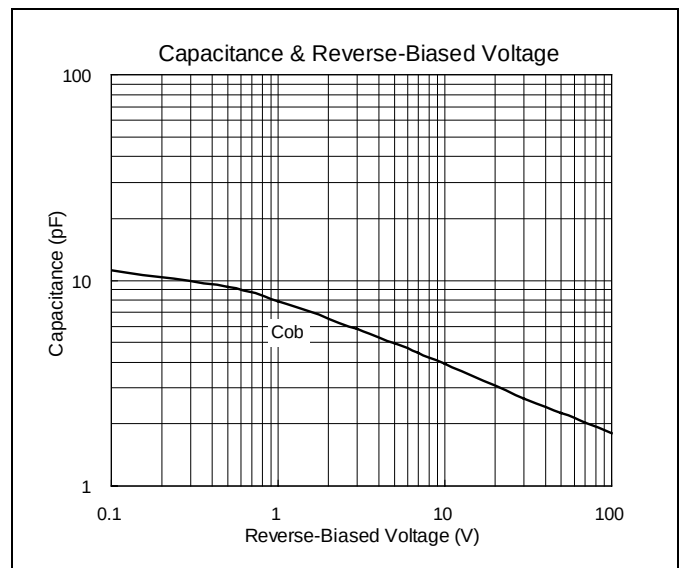
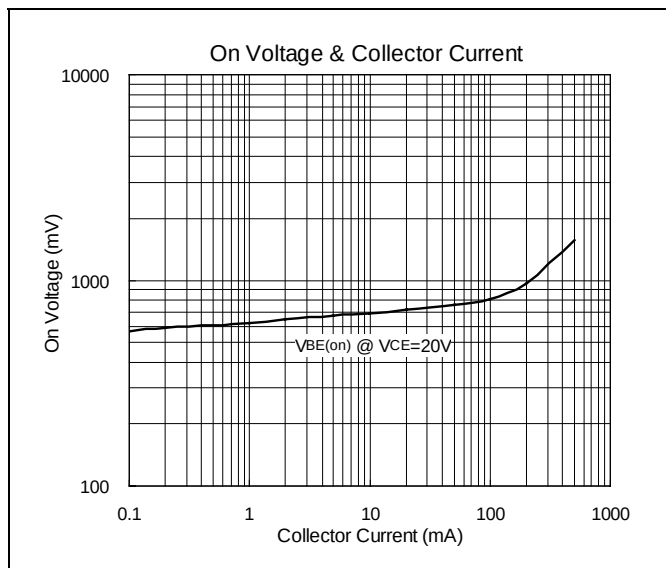
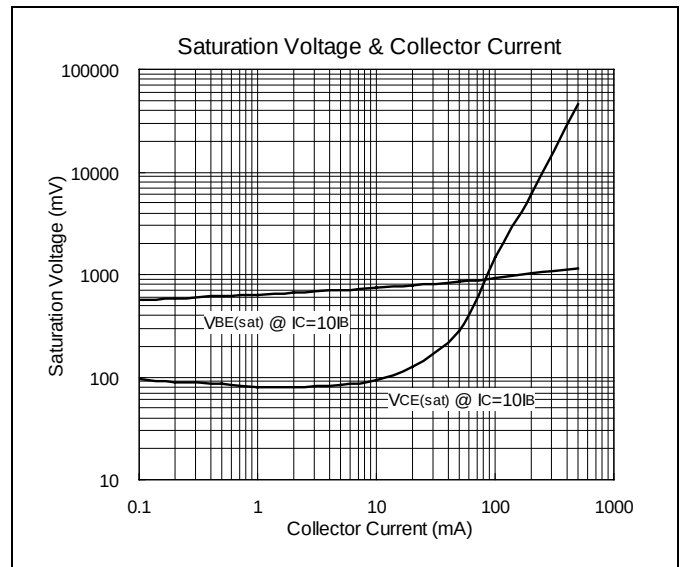
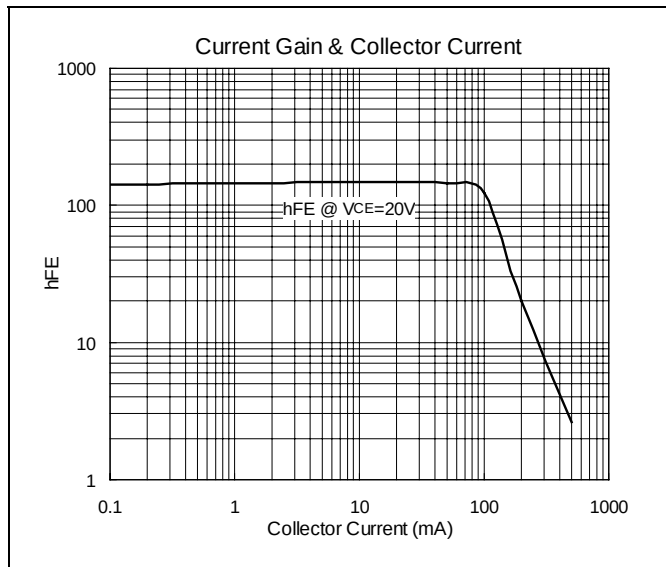
| Symbol | Parameter                                   | Value | Unit |
|--------|---------------------------------------------|-------|------|
| Rth-ja | Thermal resistance from junction to ambient | 200   | °C/W |



TO-92

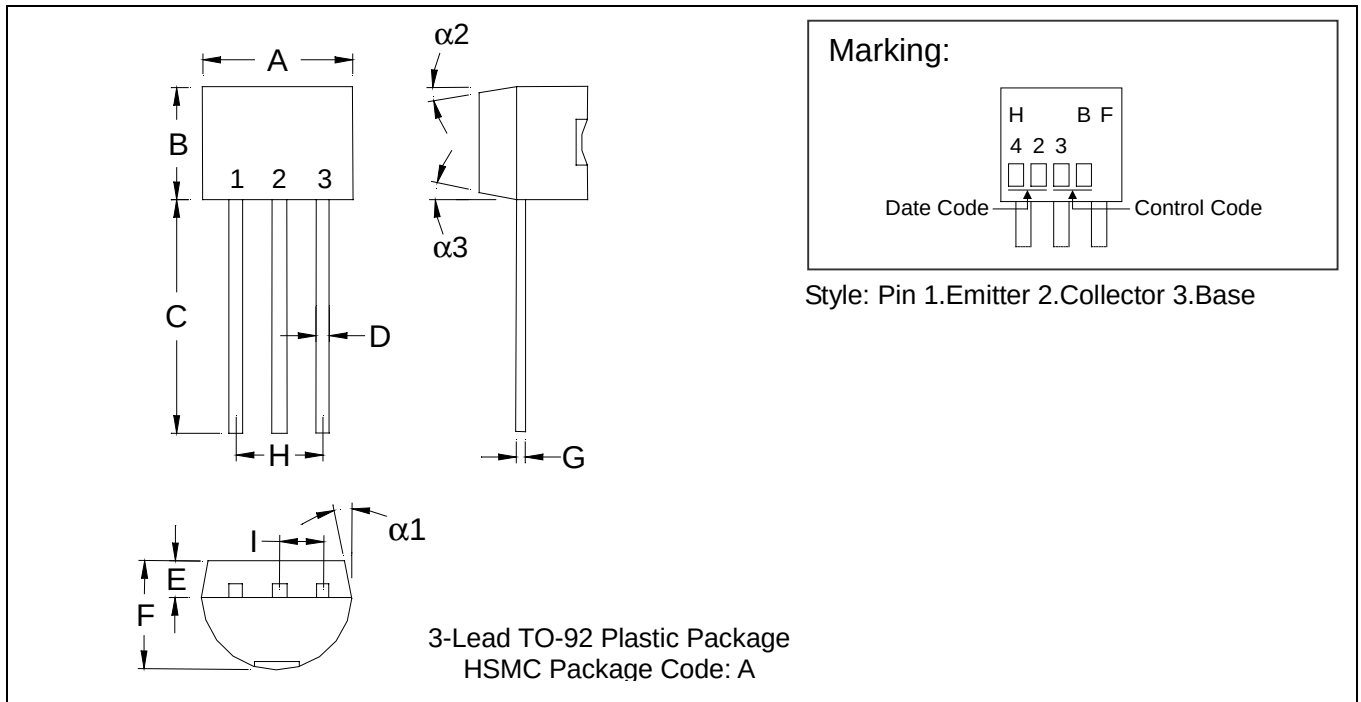


## Characteristics Curve





### 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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