



# HMBT1015

PNP EPITAXIAL PLANAR TRANSISTOR

## Description

The HMBT1015 is designed for use in driver stage of AF amplifier and general purpose amplification.

## Absolute Maximum Ratings

- Maximum Temperatures  
Storage Temperature ..... -55 ~ +150 °C  
Junction Temperature..... 150 °C Maximum
- Maximum Power Dissipation  
Total Power Dissipation (Ta=25°C) ..... 225 mW
- Maximum Voltages and Currents (Ta=25°C)  
VCBO Collector to Base Voltage ..... -50 V  
VCEO Collector to Emitter Voltage..... -50 V  
VEBO Emitter to Base Voltage ..... -5 V  
IC Collector Current ..... -150 mA

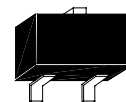
## Characteristics (Ta=25°C)

| Symbol    | Min. | Typ. | Max. | Unit | Test Conditions             |
|-----------|------|------|------|------|-----------------------------|
| BVCBO     | -50  | -    | -    | V    | IC=-100uA                   |
| BVCEO     | -50  | -    | -    | V    | IC=-1mA                     |
| BVEBO     | -5   | -    | -    | V    | IE=-10uA                    |
| ICBO      | -    | -    | -100 | nA   | VCB=-50V                    |
| IEBO      | -    | -    | -100 | nA   | VEB=-5V                     |
| *VCE(sat) | -    | -    | -300 | mV   | IC=-100mA, IB=-10mA         |
| *VBE(sat) | -    | -    | -1.1 | V    | IC=-100mA, IB=-10mA         |
| *hFE1     | 120  | -    | 700  |      | VCE=-6V, IC=-2mA            |
| *hFE2     | 25   | -    | -    |      | VCE=-6V, IC=-150mA          |
| fT        | 80   | -    | -    | MHz  | VCE=-10V, IC=-1mA, f=100MHz |
| Cob       | -    | -    | 7    | pF   | VCB=-10V, f=1MHz, IE=0      |

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

## Classification Of hFE1

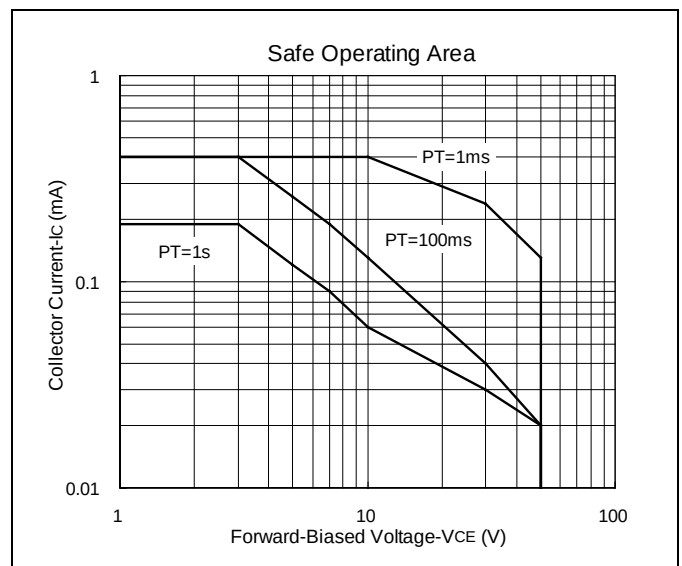
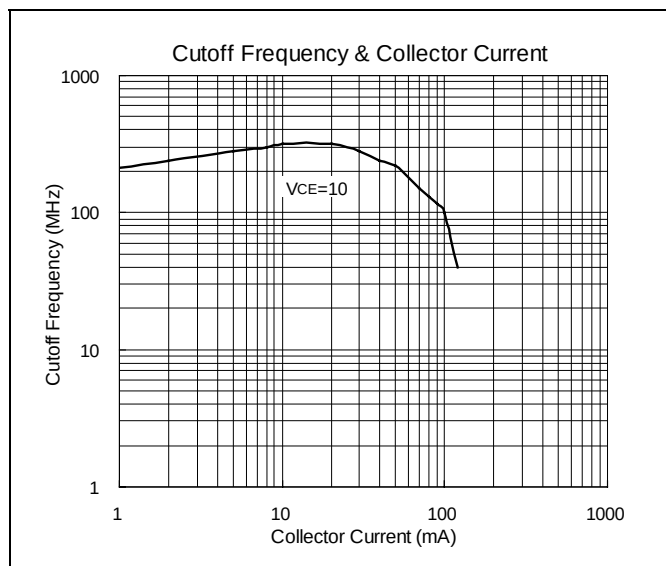
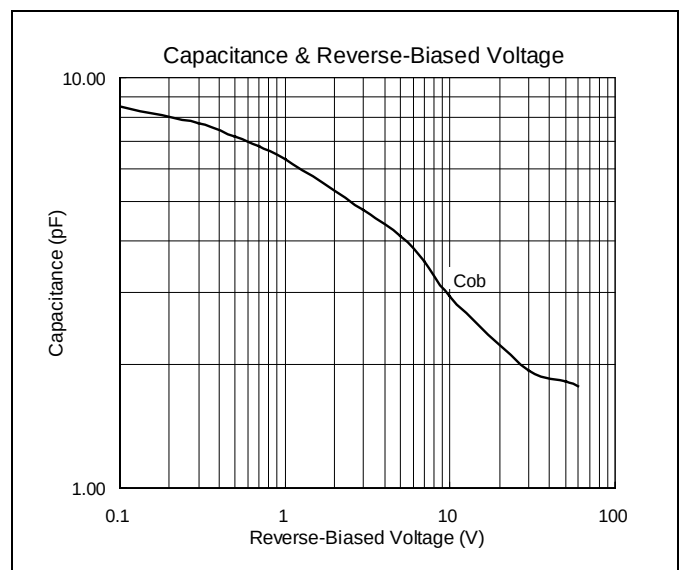
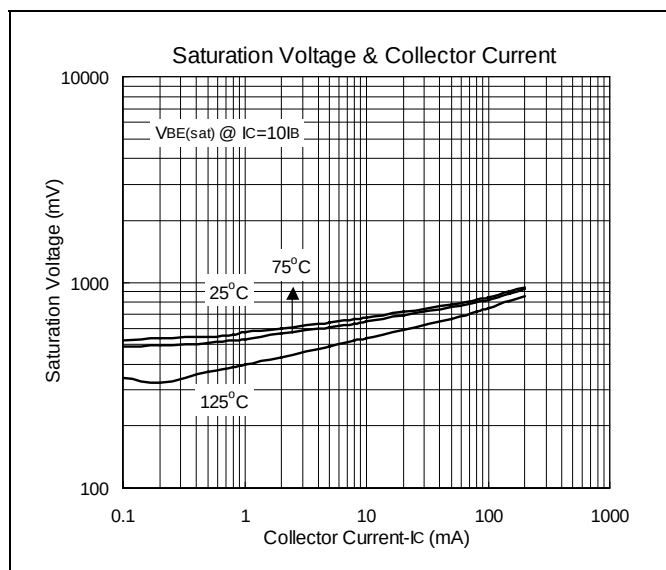
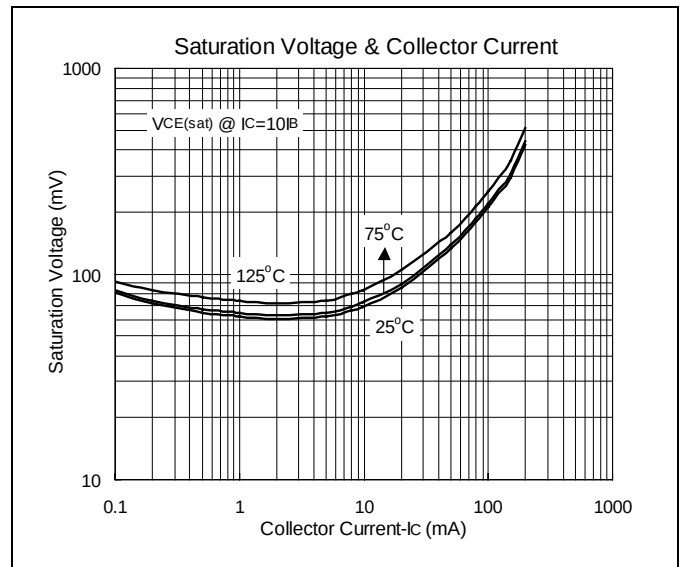
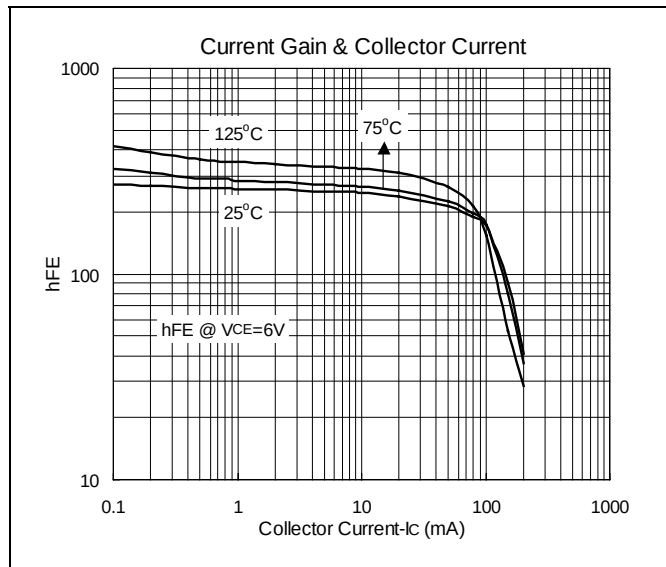
| Rank  | A4Y     | A4G     | A4B     |
|-------|---------|---------|---------|
| Range | 120-240 | 200-400 | 350-700 |



SOT-23

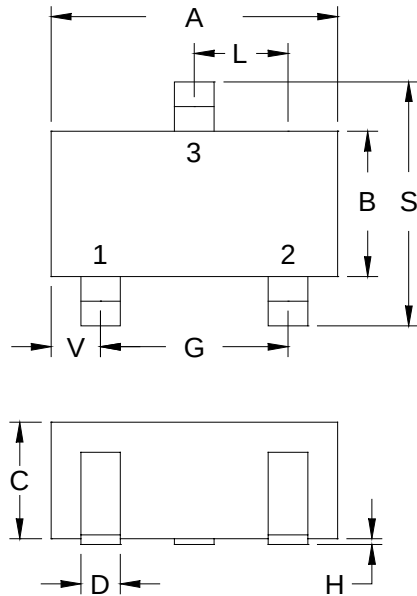


## Characteristics Curve

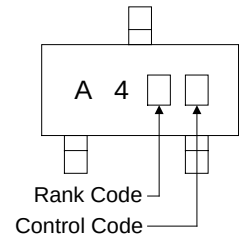




### SOT-23 Dimension



#### Marking:



3-Lead SOT-23 Plastic  
Surface Mounted Package  
HSMC Package Code: N

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

\*: Typical

| DIM | Inches |        | Millimeters |      | DIM | Inches |        | Millimeters |       |
|-----|--------|--------|-------------|------|-----|--------|--------|-------------|-------|
|     | Min.   | Max.   | Min.        | Max. |     | Min.   | Max.   | Min.        | Max.  |
| A   | 0.1102 | 0.1204 | 2.80        | 3.04 | J   | 0.0034 | 0.0070 | 0.085       | 0.177 |
| B   | 0.0472 | 0.0630 | 1.20        | 1.60 | K   | 0.0128 | 0.0266 | 0.32        | 0.67  |
| C   | 0.0335 | 0.0512 | 0.89        | 1.30 | L   | 0.0335 | 0.0453 | 0.85        | 1.15  |
| D   | 0.0118 | 0.0197 | 0.30        | 0.50 | S   | 0.0830 | 0.1083 | 2.10        | 2.75  |
| G   | 0.0669 | 0.0910 | 1.70        | 2.30 | V   | 0.0098 | 0.0256 | 0.25        | 0.65  |
| H   | 0.0005 | 0.0040 | 0.013       | 0.10 |     |        |        |             |       |

Notes: 1.Dimension and tolerance based on our Spec. dated Sep. 07,1997.

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