

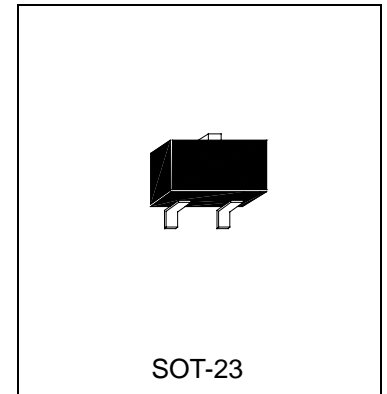


# HMBT8599

PNP EPITAXIAL PLANAR TRANSISTOR

## Description

Amplifier Transistor



## 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 ..... -80 V  
 VCEO Collector to Emitter Voltage..... -80 V  
 VEBO Emitter to Base Voltage..... -5 V  
 IC Collector Current ..... -500 mA

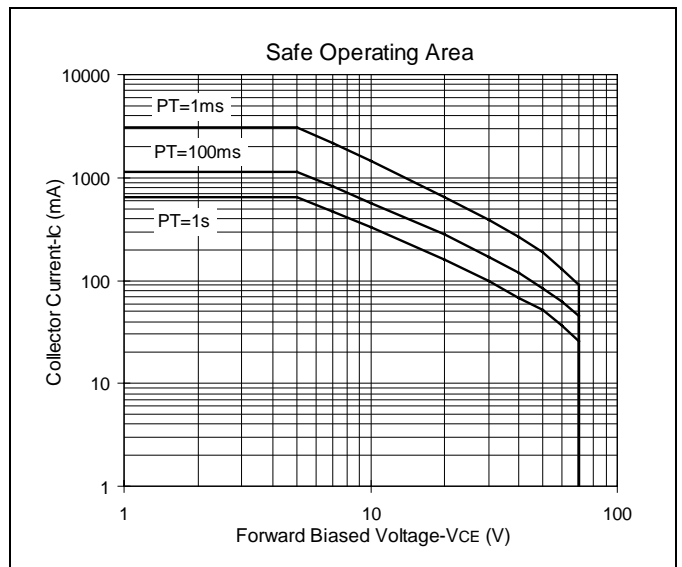
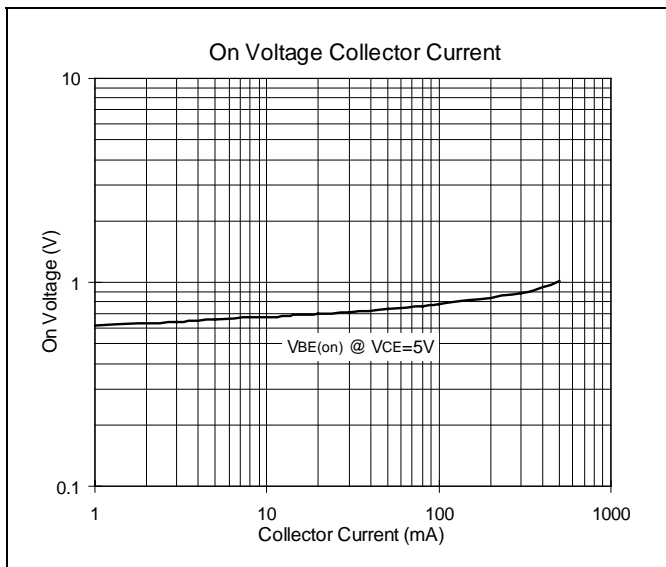
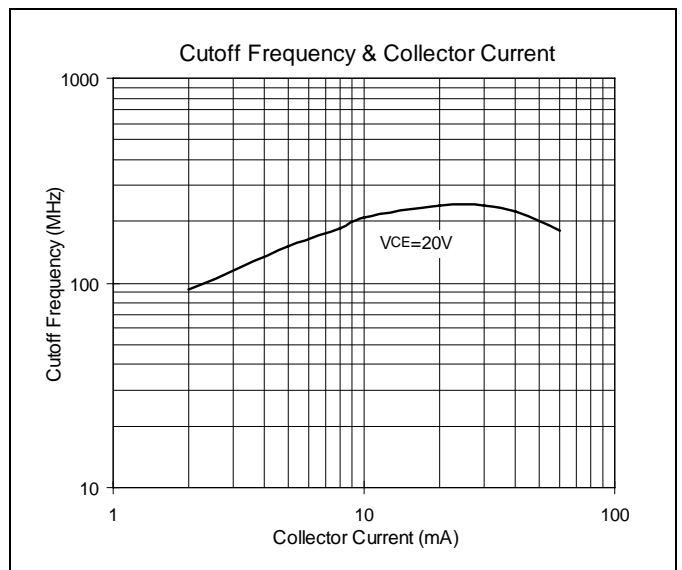
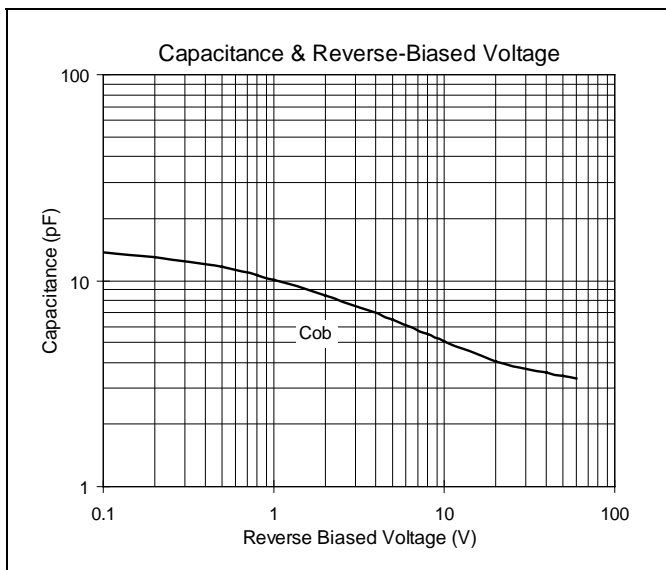
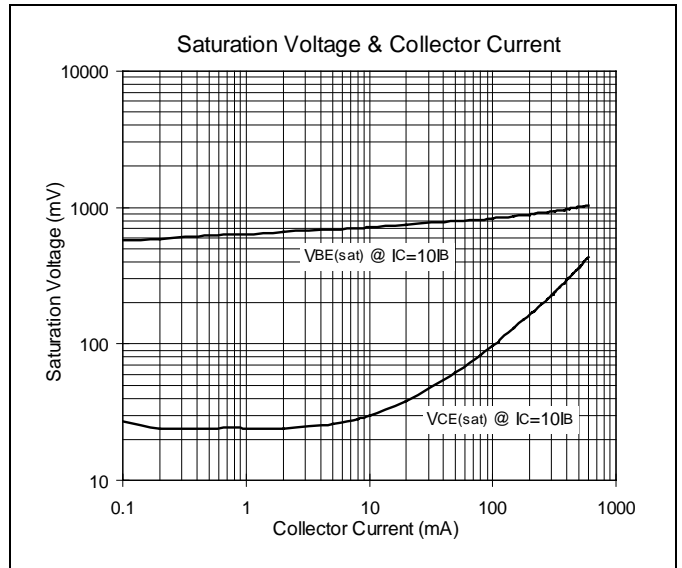
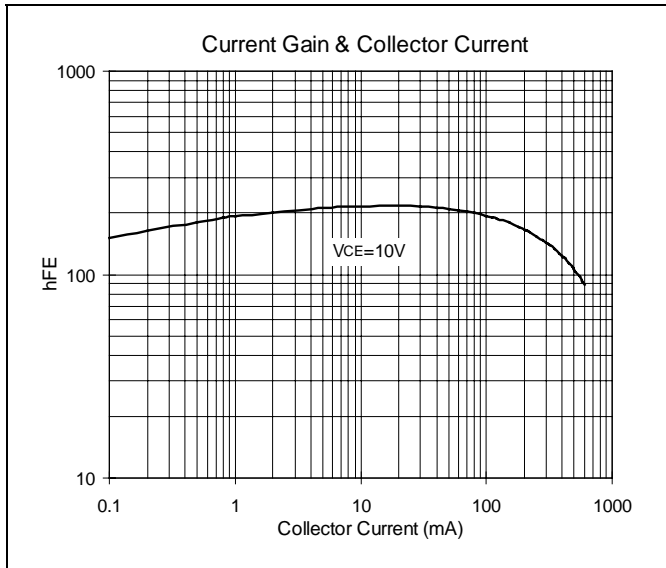
## Characteristics (Ta=25°C)

| Symbol     | Min. | Typ. | Max. | Unit | Test Conditions     |
|------------|------|------|------|------|---------------------|
| BVCBO      | -80  | -    | -    | V    | IC=-100uA           |
| BVCEO      | -80  | -    | -    | V    | IC=-10mA            |
| BVEBO      | 5    | -    | -    | V    | IE=-10uA            |
| ICBO       | -    | -    | -100 | nA   | VCB=-80V            |
| ICEO       | -    | -    | -100 | nA   | VCE=-60V            |
| IEBO       | -    | -    | -100 | nA   | VEB=-4V             |
| *VCE(sat)1 | -    | -    | -400 | mV   | IC=-100mA, IB=-5mA  |
| *VCE(sat)2 | -    | -    | -300 | mV   | IC=-100mA, IB=-10mA |
| VBE(on)    | -600 | -    | -800 | mV   | VCE=-5V, IC=-10mA   |
| *hFE1      | 100  | -    | 300  |      | VCE=-5V, IC=-1mA    |
| *hFE2      | 100  | -    | -    |      | VCE=-5V, IC=-10mA   |
| *hFE3      | 75   | -    | -    |      | VCE=-5V, IC=-100mA  |
| fT         | 150  | -    | -    | MHz  | VCE=-5V, IC=-10mA   |
| Cob        | -    | -    | 4.5  | pF   | VCB=-10V, f=1MHz    |

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

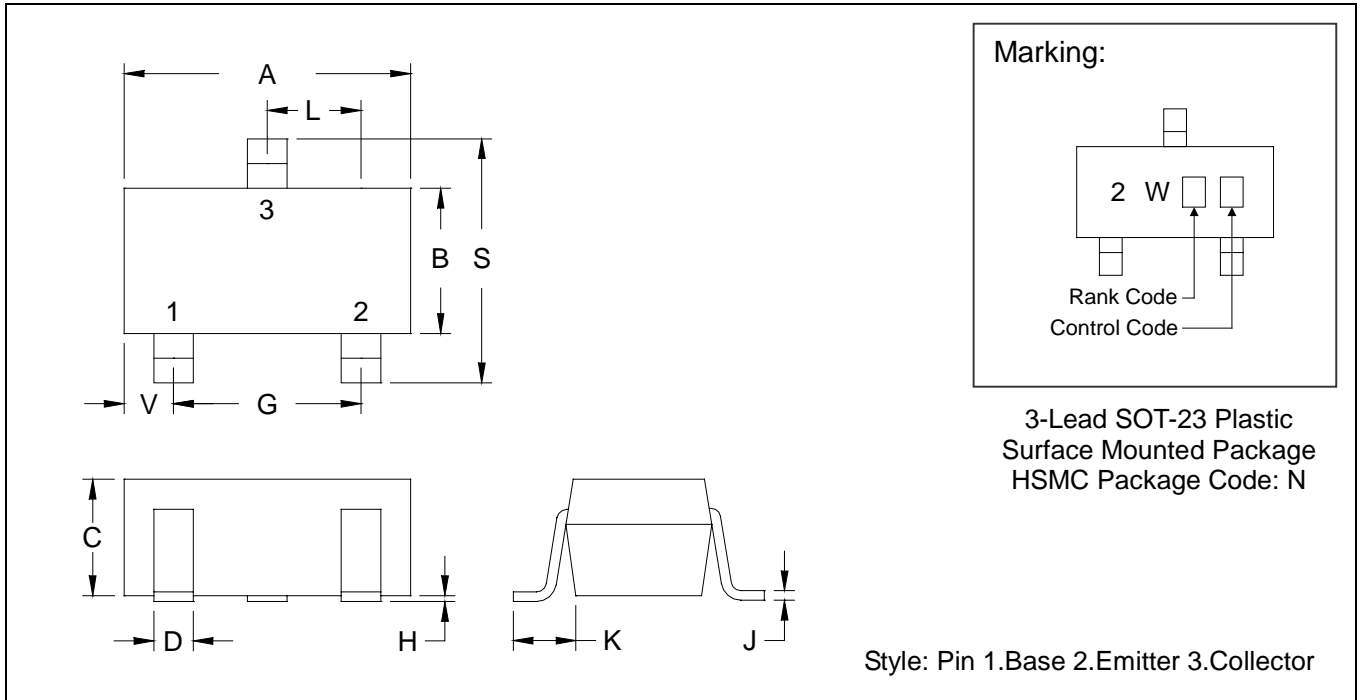


### Characteristics Curve





### SOT-23 Dimension



\*: 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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