

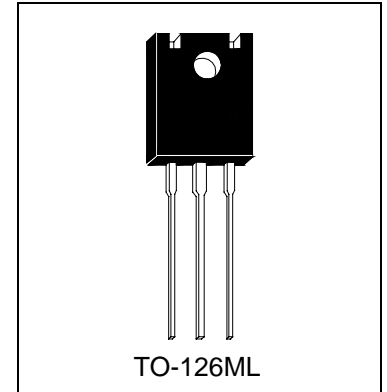


# HSB857D

PNP EPITAXIAL PLANAR TRANSISTOR

## Description

Low frequency power amplifier.



## Absolute Maximum Ratings (Ta=25°C)

- Maximum Temperatures
  - Storage Temperature ..... -50~+150 °C
  - Junction Temperature ..... +150 °C Maximum
- Maximum Power Dissipation
  - Total Power Dissipation (Ta=25°C)..... 1.5 W
  - Total Power Dissipation (Tc=25°C) ..... 10 W
- Maximum Voltages and Currents
  - BVCBO Collector to Base Voltage.....-60 V
  - BVCEO Collector to Emitter Voltage..... -50 V
  - BVEBO Emitter to Base Voltage..... -5 V
  - IC Collector Current..... -3 A
  - IC Collector Current (IC Peak)..... -4.5 A

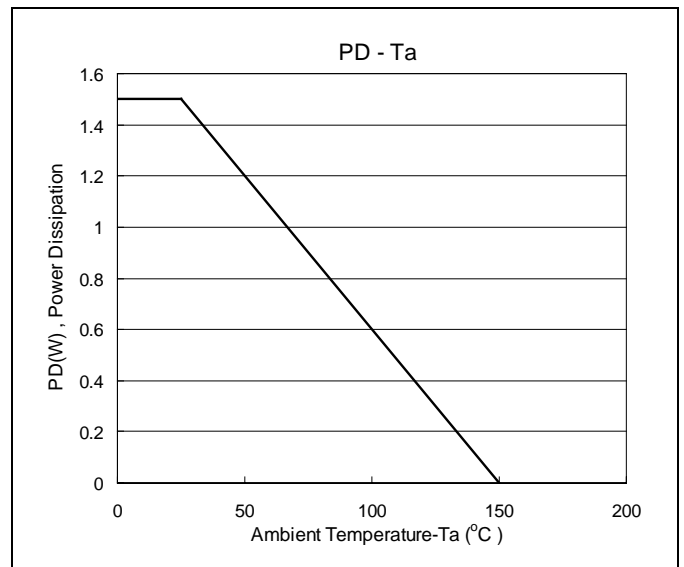
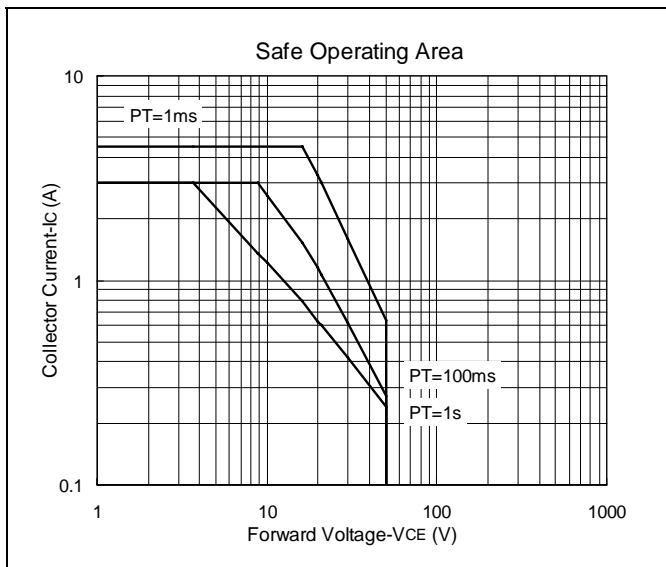
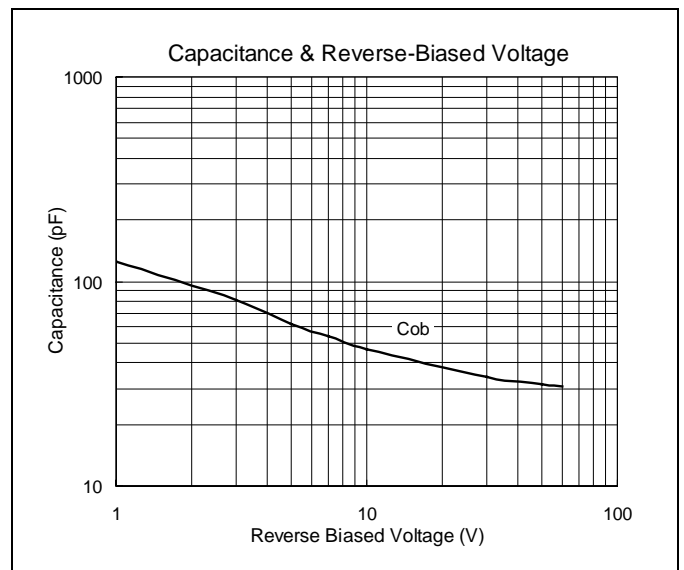
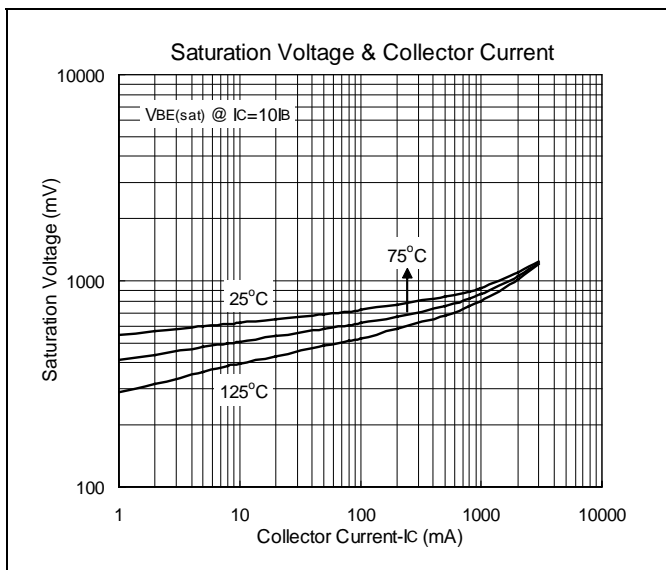
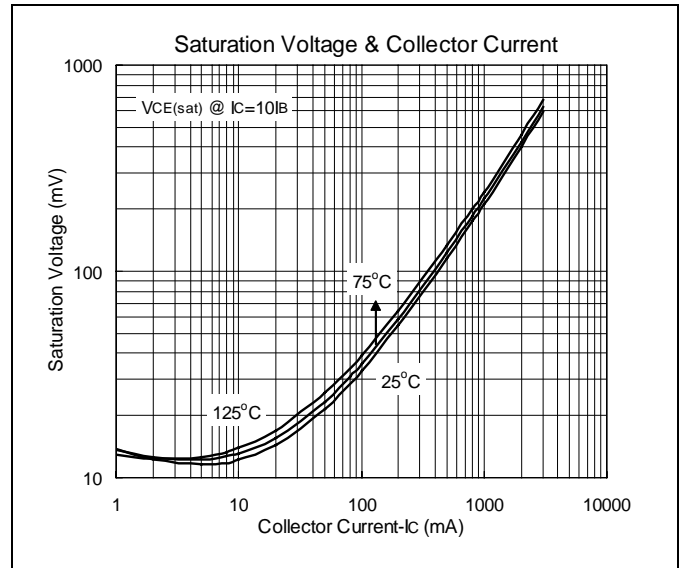
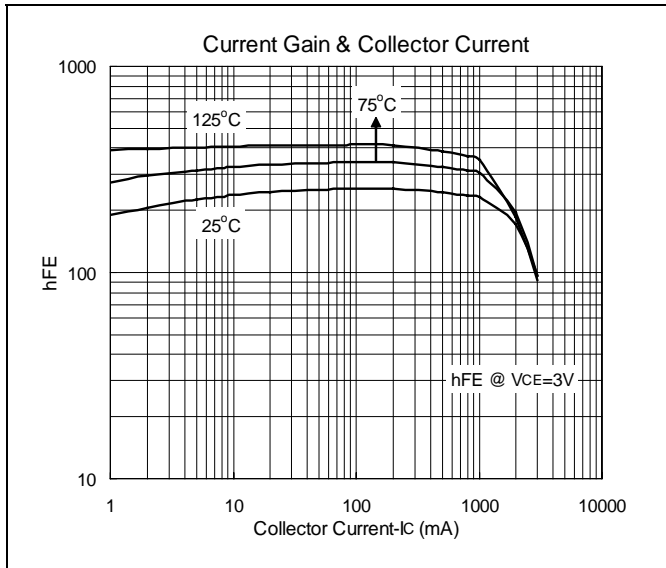
## Electrical Characteristics (Ta=25°C)

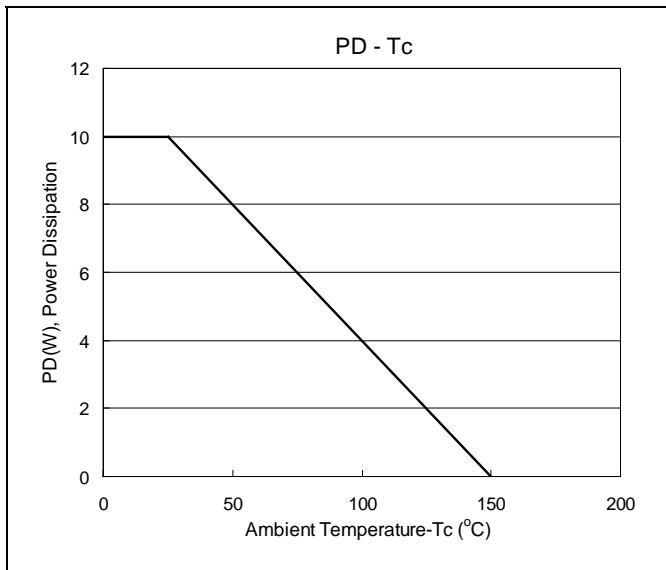
| Symbol    | Min. | Typ. | Max. | Unit | Test Conditions              |
|-----------|------|------|------|------|------------------------------|
| BVCBO     | -60  | -    | -    | V    | IC=-50uA                     |
| BVCEO     | -50  | -    | -    | V    | IC=-1mA                      |
| BVEBO     | -5   | -    | -    | V    | IE=-50uA                     |
| ICBO      | -    | -    | -1   | uA   | VCB=-50V                     |
| ICEO      | -    | -    | -1   | uA   | VCE=-40V                     |
| IEBO      | -    | -    | -1   | uA   | VEB=-4V                      |
| *VCE(sat) | -    | -0.3 | -1   | V    | IC=-2A, IB=-0.2A             |
| *VBE(sat) | -    | -    | -1.5 | V    | IC=-2A, IB=-0.2A             |
| *hFE      | 170  | -    | 400  |      | IC=-500mA, VCE=-3V           |
| fT        | -    | 15   | -    | MHz  | VCE=-5V, IC=-500mA, f=100MHz |

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



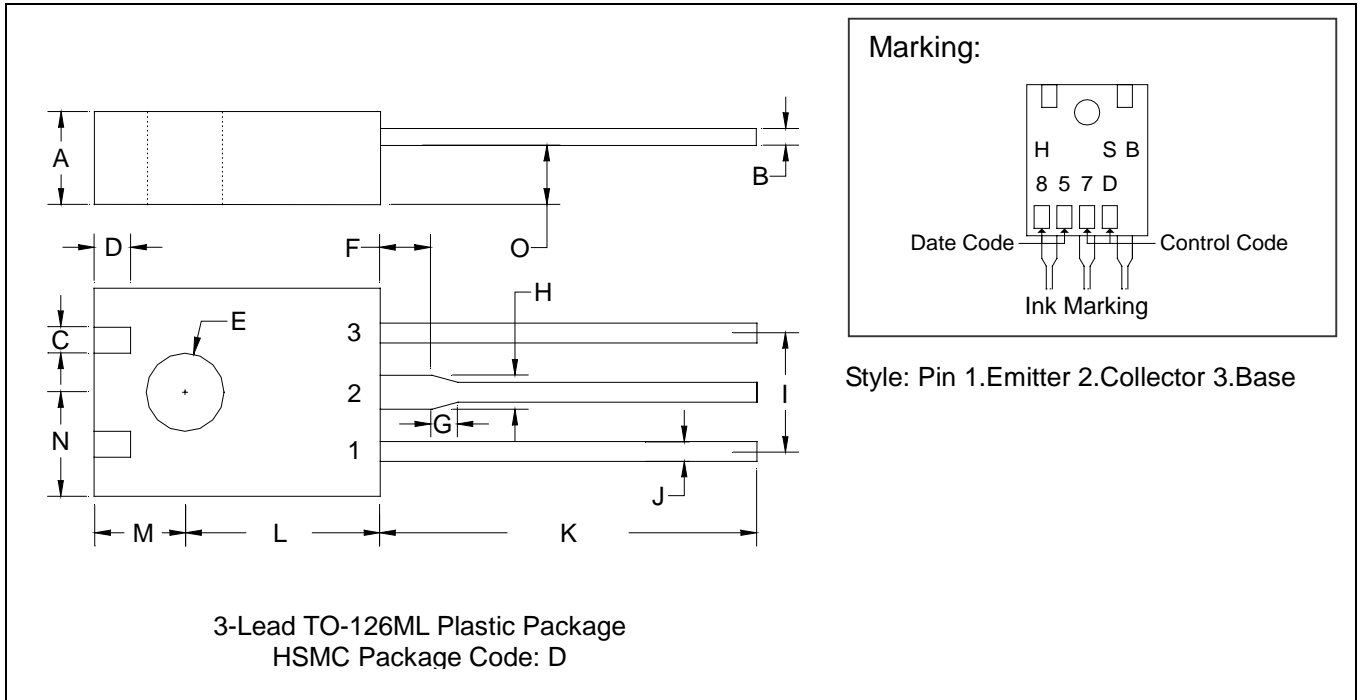
### Characteristics Curve







### TO-126ML Dimension



\*: Typical

| DIM | Inches |        | Millimeters |      | DIM | Inches |         | Millimeters |       |
|-----|--------|--------|-------------|------|-----|--------|---------|-------------|-------|
|     | Min.   | Max.   | Min.        | Max. |     | Min.   | Max.    | Min.        | Max.  |
| A   | 0.1356 | 0.1457 | 3.44        | 3.70 | I   | -      | *0.1795 | -           | *4.56 |
| B   | 0.0170 | 0.0272 | 0.43        | 0.69 | J   | 0.0268 | 0.0331  | 0.68        | 0.84  |
| C   | 0.0344 | 0.0444 | 0.87        | 1.12 | K   | 0.5512 | 0.5906  | 14.00       | 15.00 |
| D   | 0.0501 | 0.0601 | 1.27        | 1.52 | L   | 0.2903 | 0.3003  | 7.37        | 7.62  |
| E   | 0.1131 | 0.1231 | 2.87        | 3.12 | M   | 0.1378 | 0.1478  | 3.50        | 3.75  |
| F   | 0.0737 | 0.0837 | 1.87        | 2.12 | N   | 0.1525 | 0.1625  | 3.87        | 4.12  |
| G   | 0.0294 | 0.0494 | 0.74        | 1.25 | O   | 0.0740 | 0.0842  | 1.88        | 2.14  |
| H   | 0.0462 | 0.0562 | 1.17        | 1.42 |     |        |         |             |       |

Notes: 1. Dimension and tolerance based on our Spec. dated Mar. 6, 1995.  
 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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