

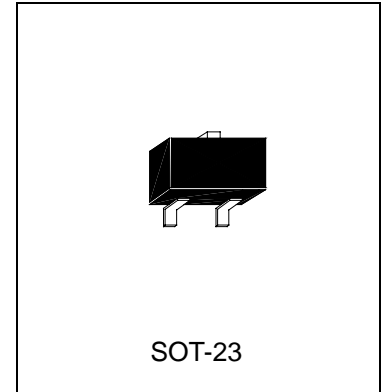


HMBT4124

NPN EPITAXIAL PLANAR TRANSISTOR

Description

The HMBT4124 is designed for general purpose switching and amplifier applications.



Absolute Maximum Ratings

- Maximum Temperatures
 Storage Temperature -55 ~ +150 °C
 Junction Temperature..... +150 °C
- Maximum Power Dissipation
 Total Power Dissipation (Ta=25°C) 225 mW
- Maximum Voltages and Currents (Ta=25°C)
 VCBO Collector to Base Voltage 30 V
 VCEO Collector to Emitter Voltage..... 25 V
 VEBO Emitter to Base Voltage..... 5 V
 IC Collector Current..... 200 mA

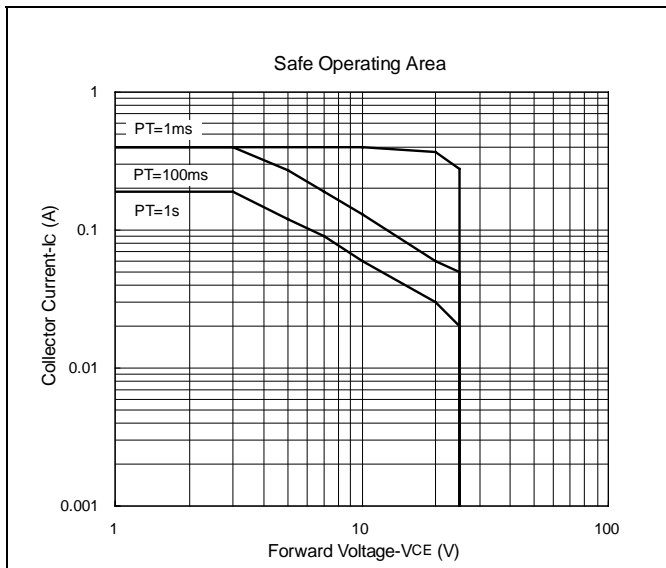
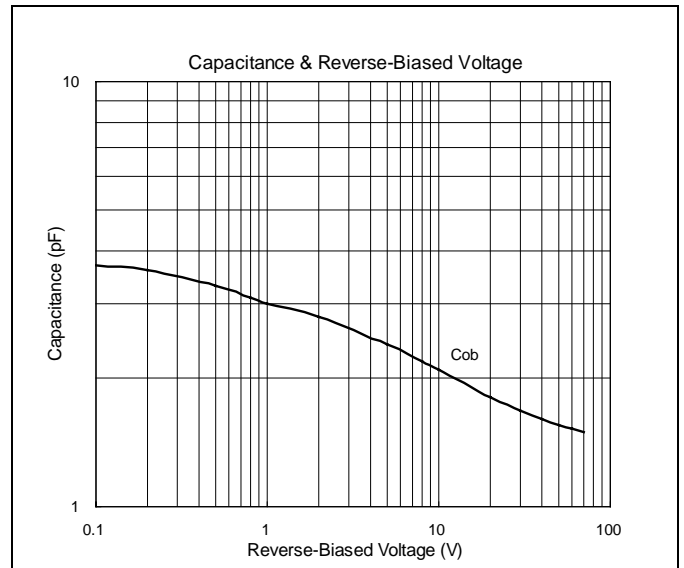
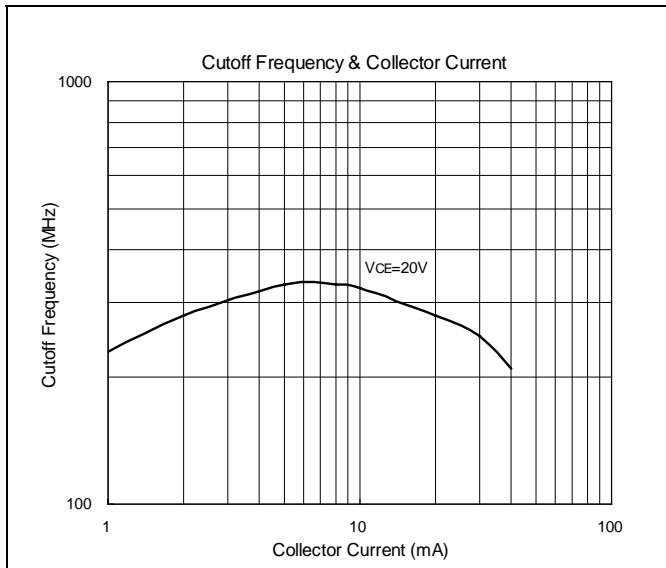
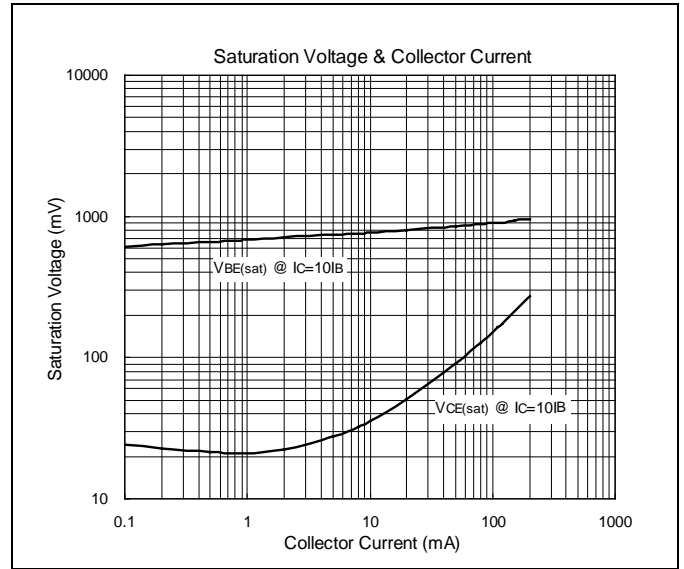
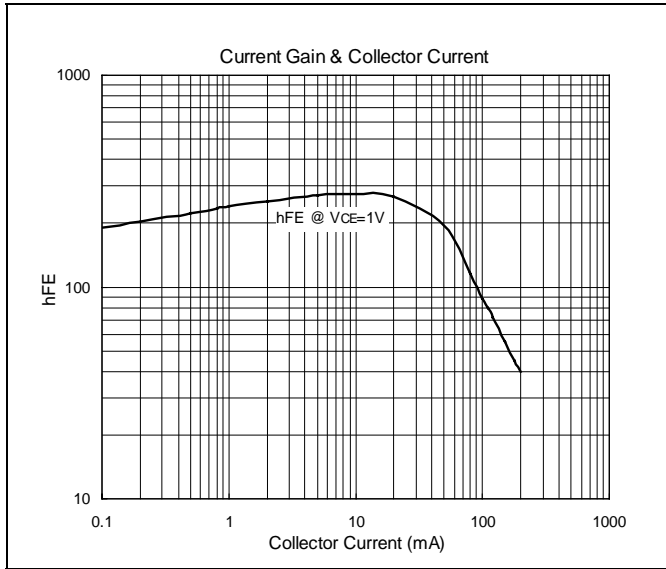
Characteristics (Ta=25°C)

| Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|-----------|------|------|------|------|--------------------------|
| BVCBO | 30 | - | - | V | IC=10uA, IE=0 |
| BVCEO | 25 | - | - | V | IC=1mA, IB=0 |
| BVEBO | 5 | - | - | V | IE=10uA, IC=0 |
| ICBO | - | - | 50 | nA | VCB=20V |
| IEBO | - | - | 50 | nA | VEB=3V |
| *VCE(sat) | - | - | 300 | mV | IC=50mA, IB=5mA |
| *VBE(sat) | - | - | 950 | mV | IC=50mA, IB=5mA |
| *hFE1 | 120 | - | 360 | | VCE=1V, IC=2mA |
| *hFE2 | 60 | - | - | | VCE=1V, IC=50mA |
| fT | 300 | - | - | MHz | VCE=20V, IC=10mA, f=1MHz |
| Cob | - | - | 4 | pF | VCB=5V, IE=0, f=1MHz |

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

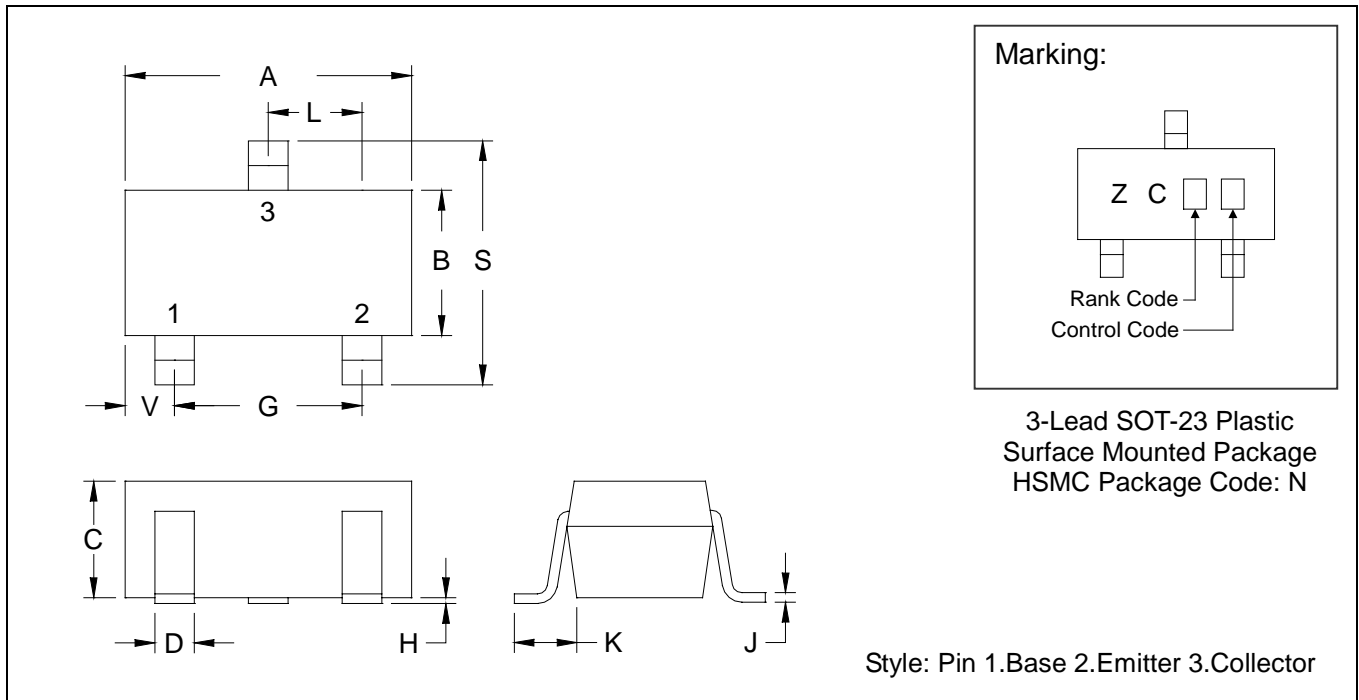


Characteristics Curve





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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