



HMBTH10

NPN EPITAXIAL PLANAR TRANSISTOR

Description

The HMBTH10 is designed for use in VHF & UHF oscillators and VHF mixer in tuner of a TV receiver.

Features

- High frequency
- Very low capacitance

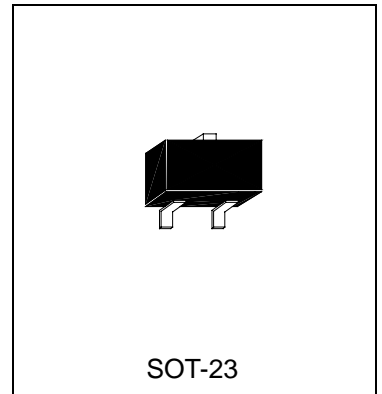
Absolute Maximum Ratings

- 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 20 V
 VCEO Collector to Emitter Voltage..... 15 V
 VEBO Emitter to Base Voltage..... 3 V
 IC Collector Current 50 mA

Characteristics (Ta=25°C)

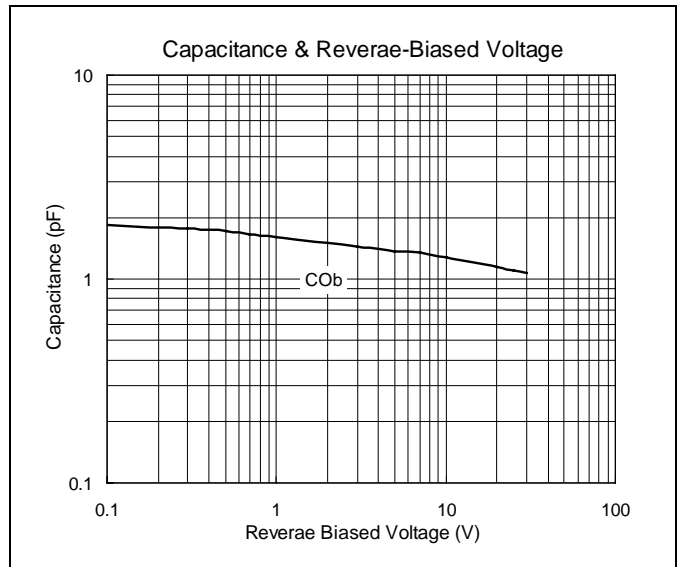
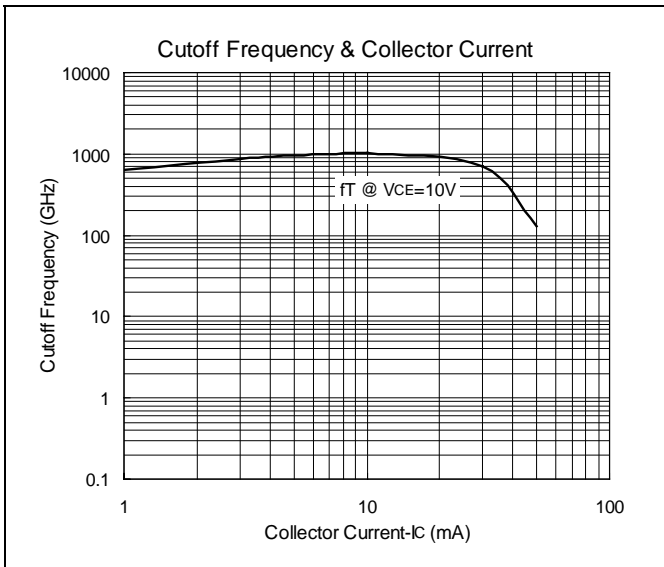
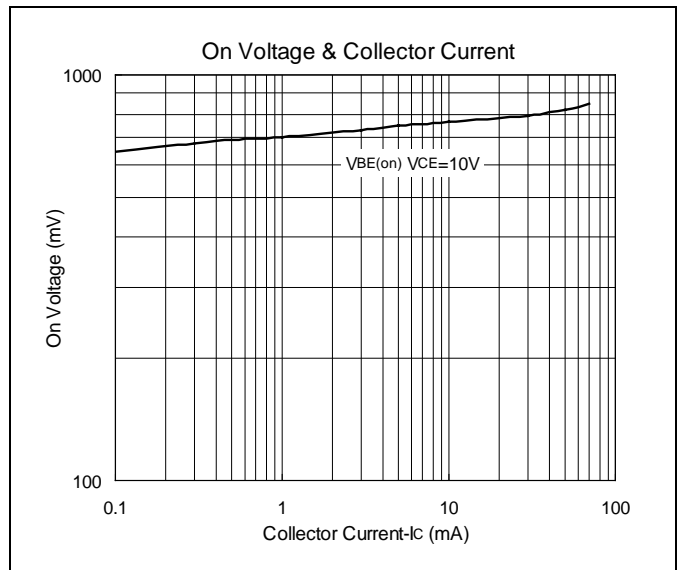
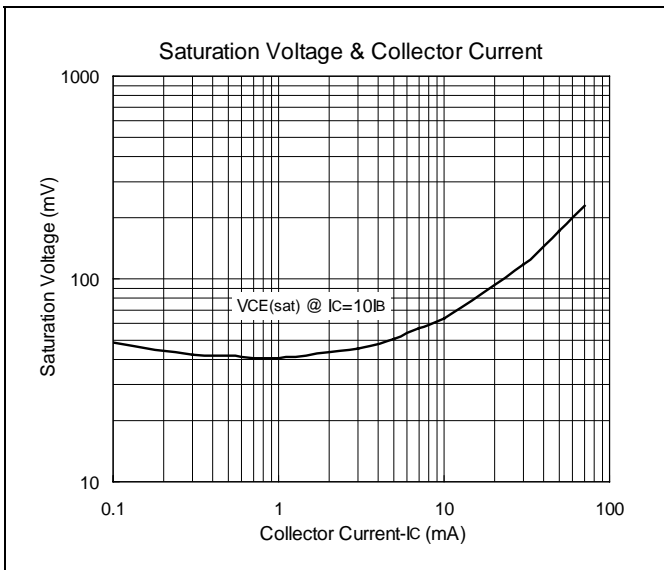
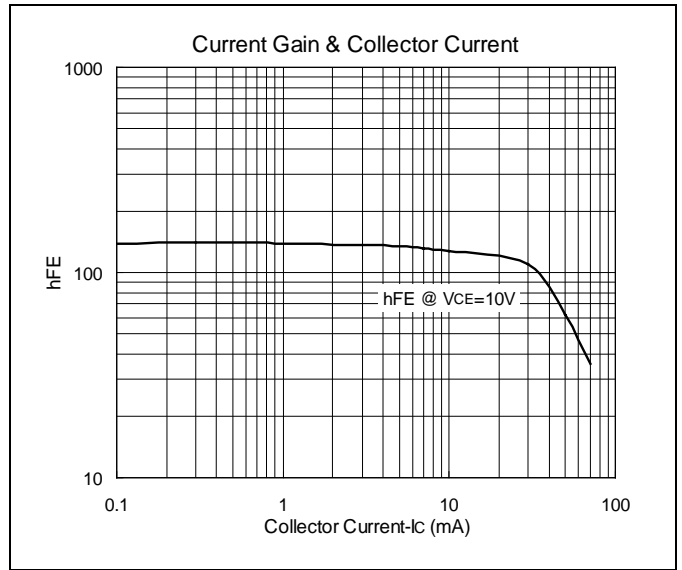
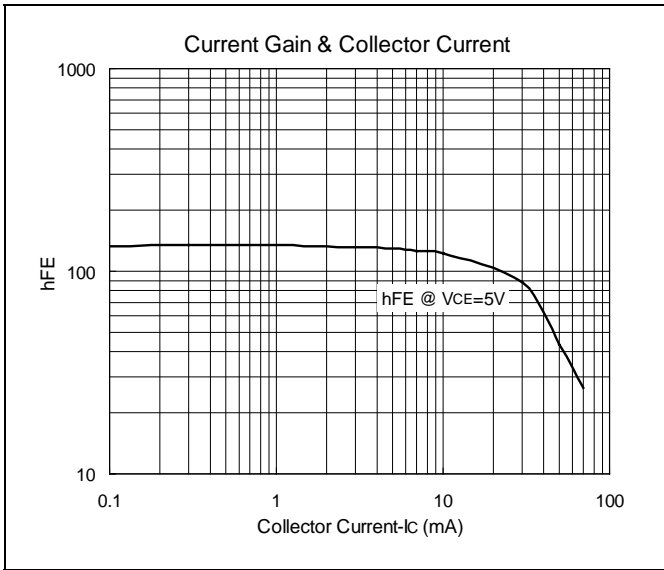
| Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|-----------|------|------|------|------|---------------------------|
| BVCBO | 20 | - | - | V | IC=100uA |
| BVCEO | 15 | - | - | V | IC=1mA |
| BVEBO | 3 | - | - | V | IC=10uA |
| ICBO | - | - | 100 | nA | VCB=20V |
| IEBO | - | - | 100 | nA | VEB=2V |
| *VCE(sat) | - | - | 500 | mV | IC=4mA, IB=0.4mA |
| VBE(on) | - | - | 0.95 | V | VCE=10V, IC=4mA |
| *hFE | 60 | - | - | | VCE=10V, IC=4mA |
| Cob | - | 1.5 | - | pF | VCB=10V, f=1MHz |
| fT | 650 | - | - | MHz | VCB=10V, IC=4mA, f=100MHz |

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



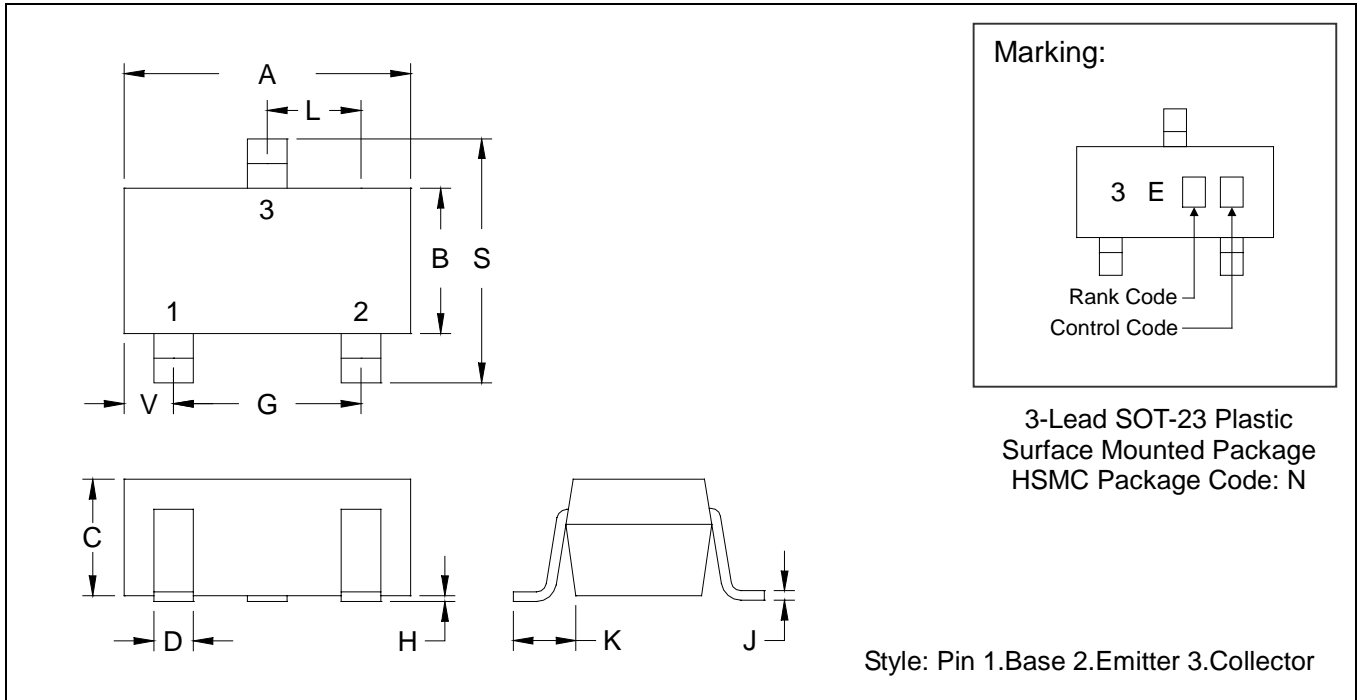


Characteristics Curve





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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