

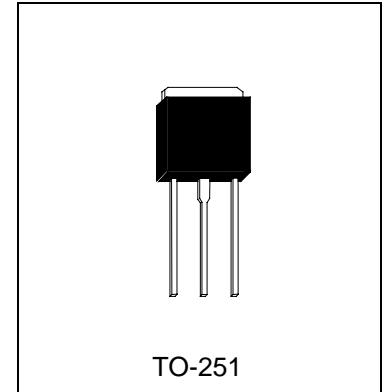


# HI50

NPN EPITAXIAL PLANAR TRANSISTOR

## Description

The HI50 is designed for line operated audio output amplifier switch mode power supply drivers and other switching applications.



## Absolute Maximum Ratings (Ta=25°C)

- Maximum Temperatures
  - Storage Temperature ..... -55 ~ +150 °C
  - Junction Temperature ..... +150 °C
- Maximum Power Dissipation
  - Total Power Dissipation (Tc=25°C) ..... 20 W
- Maximum Voltages and Currents
  - BVCBO Collector to Base Voltage ..... 500 V
  - BVCEO Collector to Emitter Voltage ..... 400 V
  - BVEBO Emitter to Base Voltage ..... 5 V
  - IC Collector Current ..... 1 A

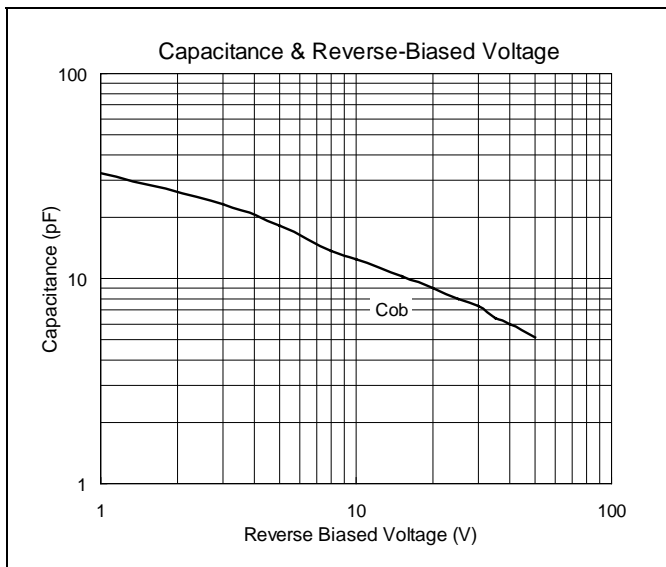
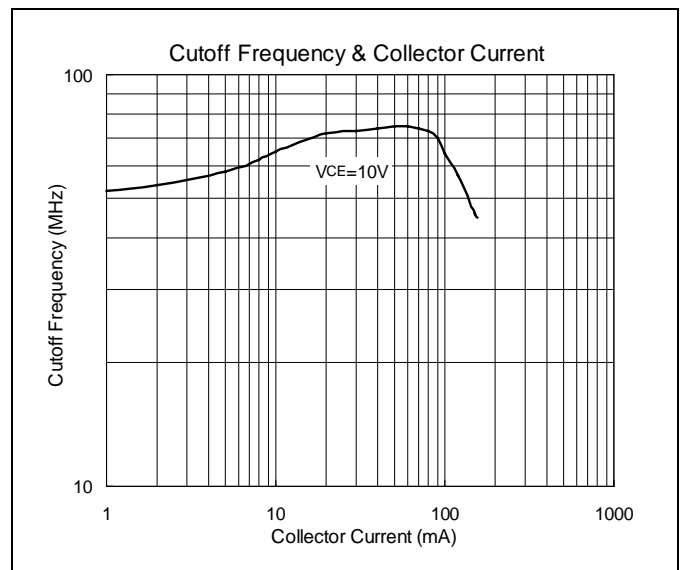
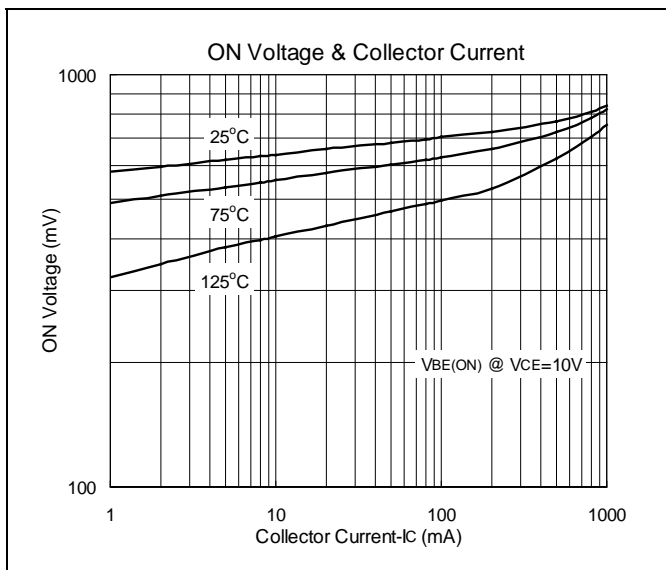
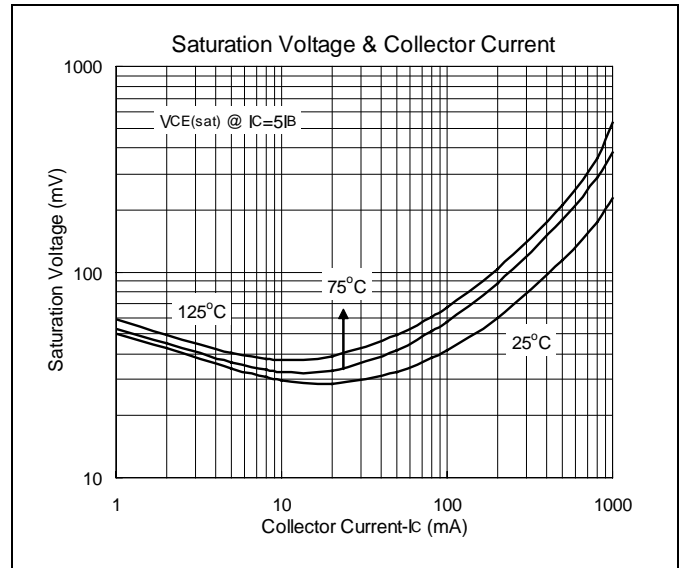
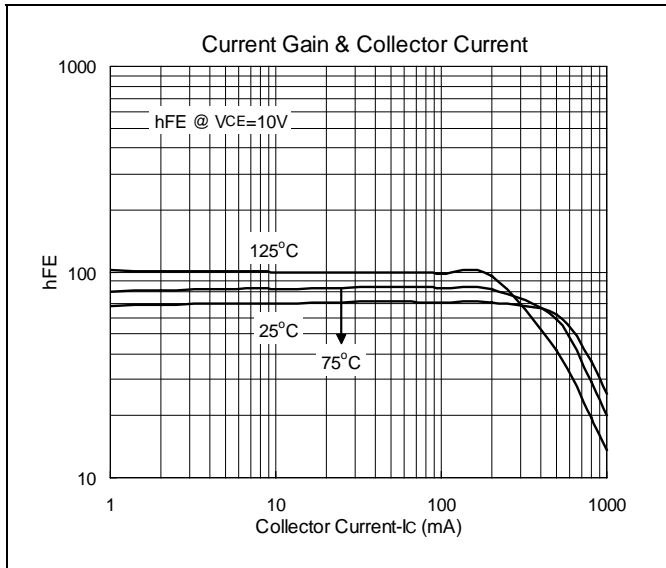
## Characteristics (Ta=25°C)

| Symbol    | Min. | Typ. | Max. | Unit | Test Conditions           |
|-----------|------|------|------|------|---------------------------|
| BVCBO     | 500  | -    | -    | V    | IC=1mA                    |
| BVCEO     | 400  | -    | -    | V    | IC=30mA                   |
| BVEBO     | 5    | -    | -    | V    | IC=100uA                  |
| ICES      | -    | -    | 100  | uA   | VCE=500V                  |
| ICEO      | -    | -    | 200  | uA   | VCE=300V                  |
| IEBO      | -    | -    | 1    | mA   | VEB=5V                    |
| *VCE(sat) | -    | -    | 1    | V    | IC=1A, IB=0.2A            |
| *VBE(on)  | -    | -    | 1.5  | V    | VCE=10V, IC=1A            |
| *hFE1     | 30   | -    | 150  |      | VCE=10V, IC=0.3A          |
| *hFE2     | 10   | -    | -    |      | VCE=10V, IC=1A            |
| fT        | 10   | -    | -    | MHz  | VCE=10V, IC=200mA, f=2MHz |

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

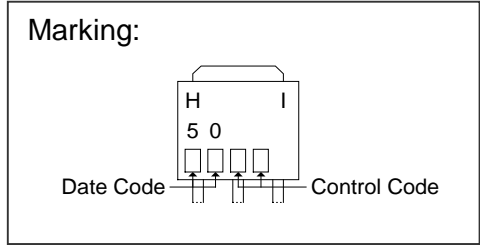
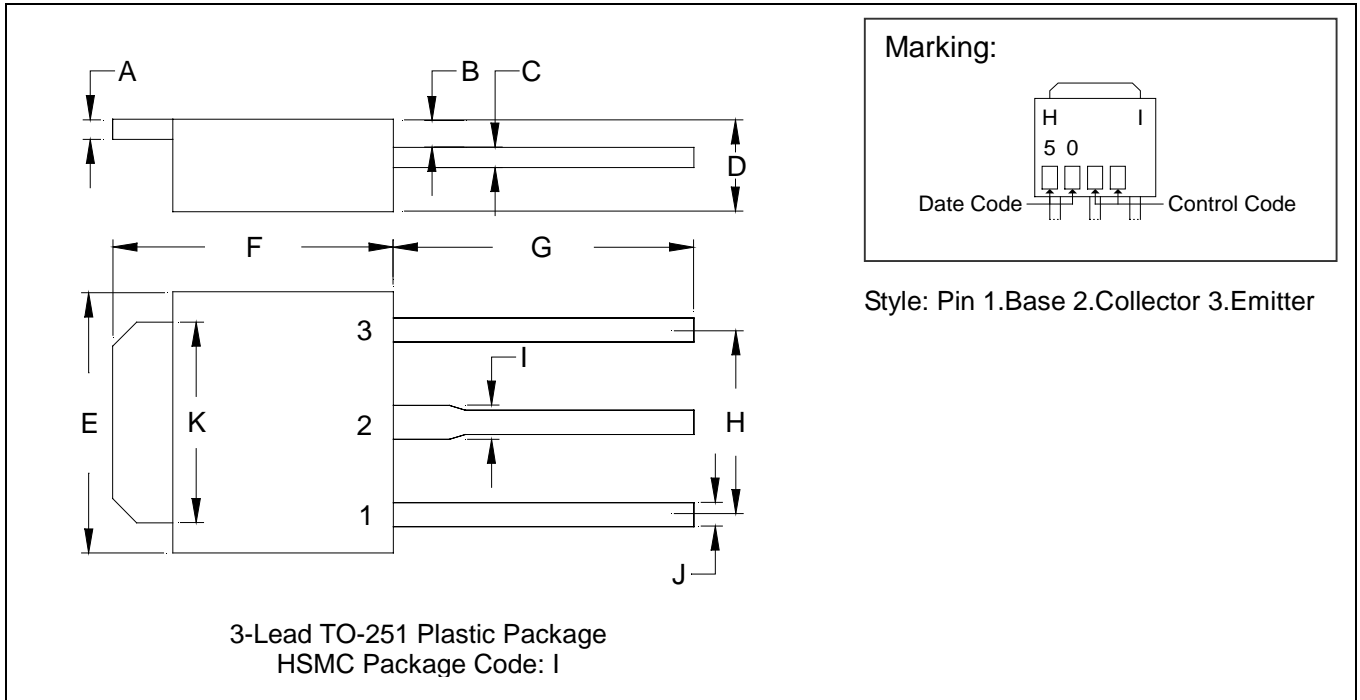


### Characteristics Curve





### TO-251 Dimension



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

\*: Typical

| DIM | Inches |        | Millimeters |      | DIM | Inches |         | Millimeters |       |
|-----|--------|--------|-------------|------|-----|--------|---------|-------------|-------|
|     | Min.   | Max.   | Min.        | Max. |     | Min.   | Max.    | Min.        | Max.  |
| A   | 0.0177 | 0.0217 | 0.45        | 0.55 | G   | 0.2559 | -       | 6.50        | -     |
| B   | 0.0354 | 0.0591 | 0.90        | 1.50 | H   | -      | *0.1811 | -           | *4.60 |
| C   | 0.0177 | 0.0236 | 0.45        | 0.60 | I   | -      | 0.0354  | -           | 0.90  |
| D   | 0.0866 | 0.0945 | 2.20        | 2.40 | J   | -      | 0.0315  | -           | 0.80  |
| E   | 0.2520 | 0.2677 | 6.40        | 6.80 | K   | 0.2047 | 0.2165  | 5.20        | 5.50  |
| F   | 0.2677 | 0.2835 | 6.80        | 7.20 |     |        |         |             |       |

- Notes: 1.Dimension and tolerance based on our Spec. dated May. 24,1995.  
 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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