



HE8051

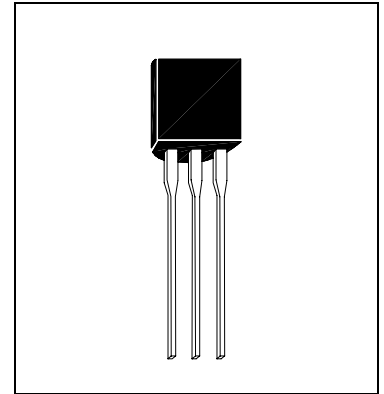
NPN EPITAXIAL PLANAR TRANSISTOR

Description

The HE8051 is designed for use in 2W output amplifier of portable radios in class B push-pull operation.

Features

- High Total Power Dissipation (PT: 2W, TC=25°C)
- High Collector Current (IC: 1.5A)



Absolute Maximum Ratings

- Maximum Temperatures
Storage Temperature -55 ~ +150 °C
Junction Temperature +150 °C Maximum
- Maximum Power Dissipation
Total Power Dissipation (Ta=25°C) 1 W
- Maximum Voltages and Currents (Ta=25°C)
VCBO Collector to Base Voltage 40 V
VCEO Collector to Emitter Voltage 25 V
VEBO Emitter to Base Voltage 6 V
IC Collector Current 1.5 A
IB Base Current 500mA

Characteristics (Ta=25°C)

| Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|-----------|------|------|------|------|------------------|
| BVCBO | 40 | - | - | V | IC=100uA |
| BVCEO | 25 | - | - | V | IC=2mA |
| BVEBO | 6 | - | - | V | IE=100uA |
| ICBO | - | - | 100 | nA | VCB=35V |
| IEBO | - | - | 100 | nA | VEB=6V |
| *VCE(sat) | - | - | 0.5 | V | IC=0.8A, IB=80mA |
| *VBE(sat) | - | - | 1.2 | V | IC=0.8A, IB=80mA |
| VBE(on) | - | - | 1 | V | VCE=1V, IC=10mA |
| *hFE1 | 45 | - | - | | VCE=1V, IC=5mA |
| *hFE2 | 85 | - | 500 | | VCE=1V, IC=100mA |
| *hFE3 | 40 | - | - | | VCE=1V, IC=800mA |
| fT | 100 | - | - | MHz | VCE=10V, IC=50mA |

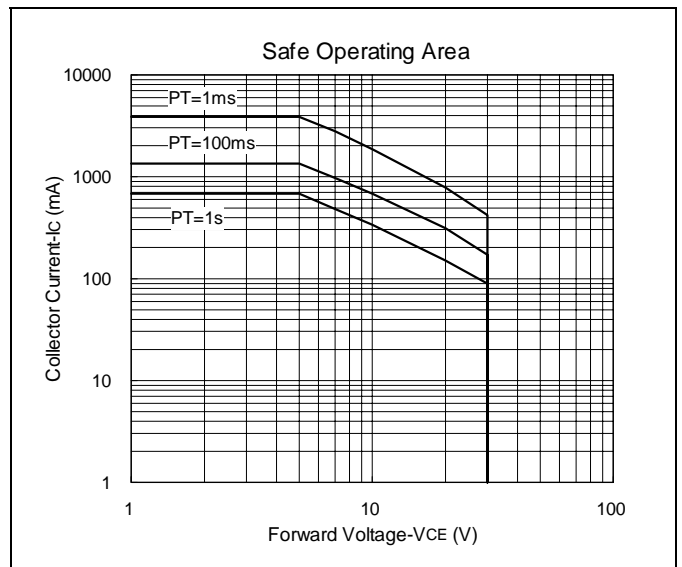
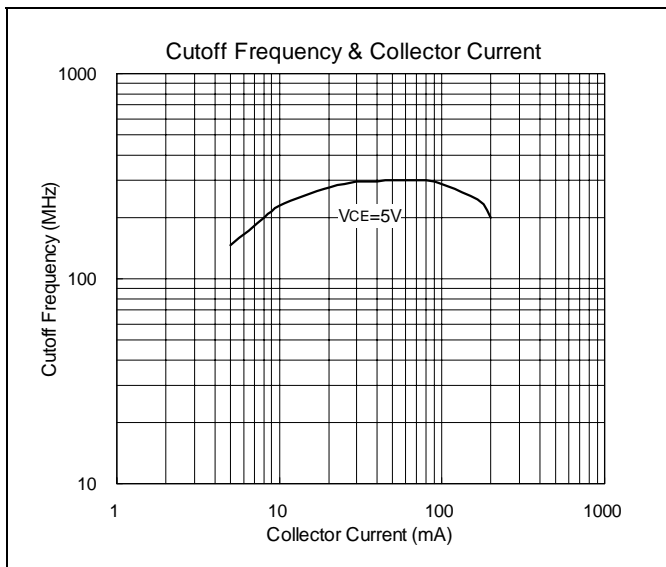
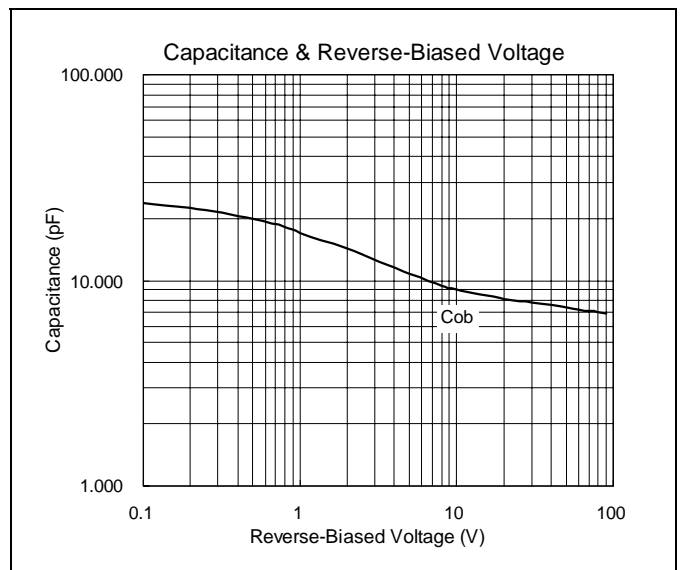
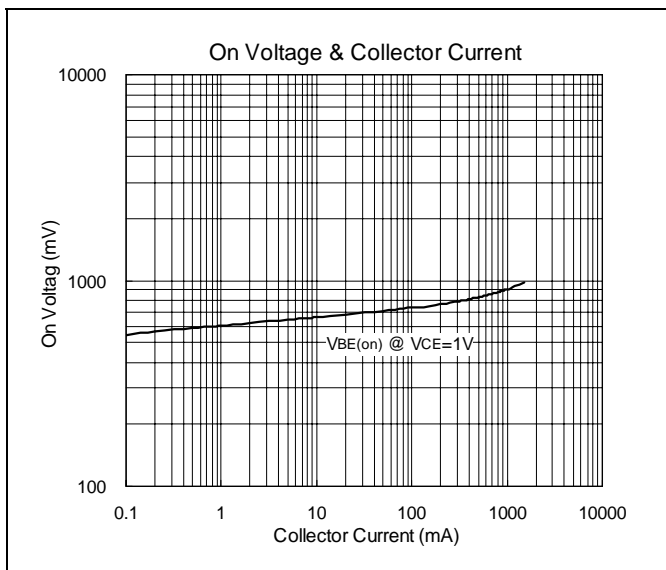
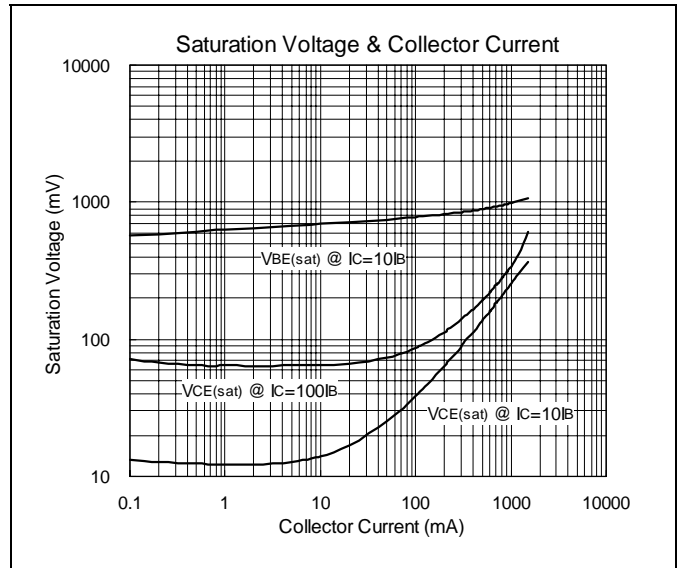
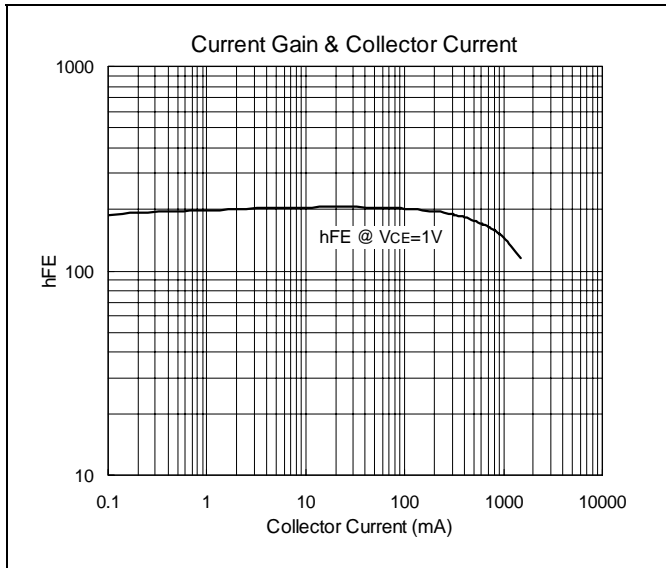
*Pulse Test : Pulse Width ≤380us, Duty Cycle≤2%

Classification of hFE2

| Rank | B | C | D | E |
|-------|--------|---------|---------|---------|
| Range | 85-160 | 120-200 | 160-300 | 250-500 |

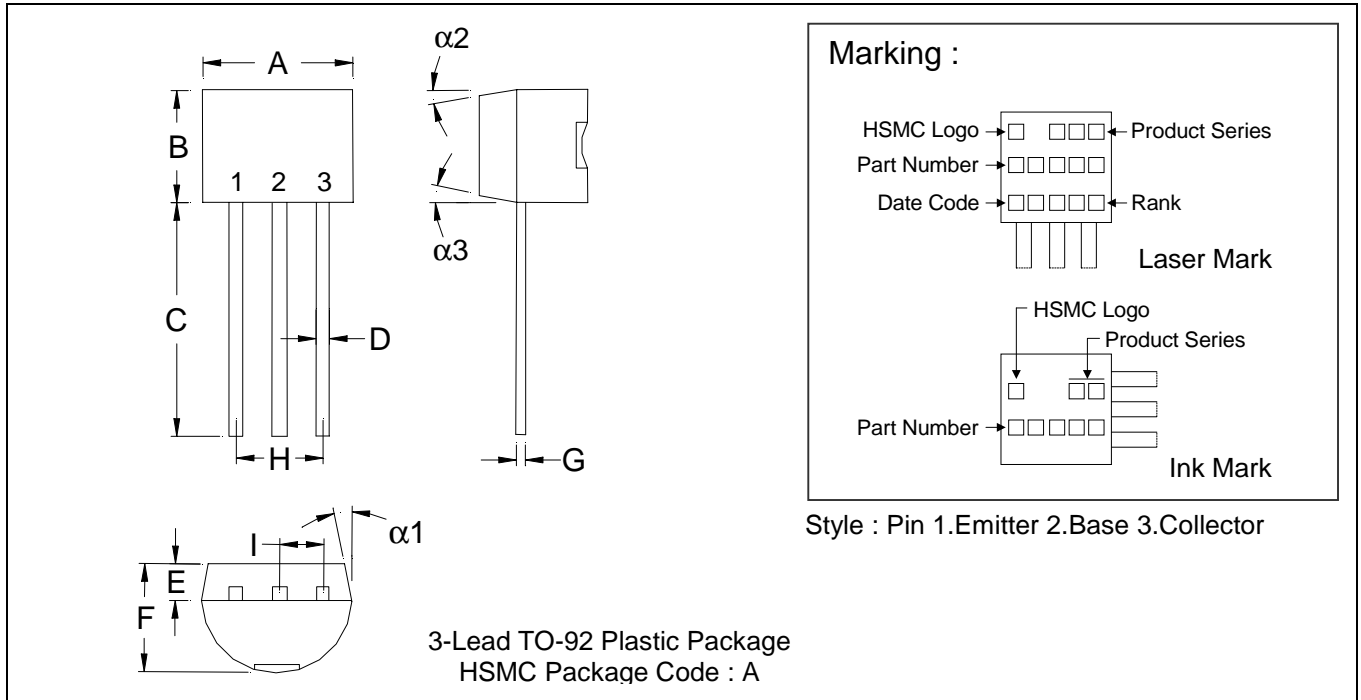


Characteristics Curve





TO-92 Dimension



*:Typical

| DIM | Inches | | Millimeters | | DIM | Inches | | Millimeters | |
|-----|--------|---------|-------------|-------|-----|--------|---------|-------------|-------|
| | Min. | Max. | Min. | Max. | | Min. | Max. | Min. | Max. |
| A | 0.1704 | 0.1902 | 4.33 | 4.83 | G | 0.0142 | 0.0220 | 0.36 | 0.56 |
| B | 0.1704 | 0.1902 | 4.33 | 4.83 | H | - | *0.1000 | - | *2.54 |
| C | 0.5000 | - | 12.70 | - | I | - | *0.0500 | - | *1.27 |
| D | 0.0142 | 0.0220 | 0.36 | 0.56 | α1 | - | *5° | - | *5° |
| E | - | *0.0500 | - | *1.27 | α2 | - | *2° | - | *2° |
| F | 0.1323 | 0.1480 | 3.36 | 3.76 | α3 | - | *2° | - | *2° |

Notes : 1.Dimension and tolerance based on our Spec. dated Apr. 25,1996.
 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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