



HMP5A44

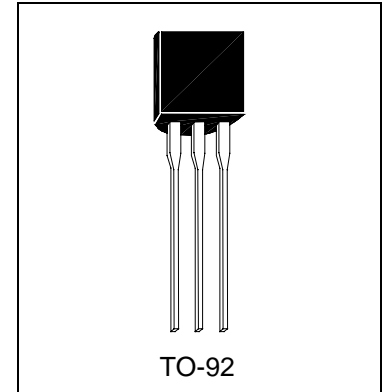
NPN EPITAXIAL PLANAR TRANSISTOR

Description

The HMP5A44 is designed for application that requires high voltage.

Features

- High Breakdown Voltage: 400(Min) at IC=1mA
- High Current Gain: IC=300mA at 25°C
- Complementary to HMP5A94



Absolute Maximum Ratings

- Maximum Temperatures
 - Storage Temperature -55 ~ +150 °C
 - Junction Temperature +150 °C Maximum
- Maximum Power Dissipation
 - Total Power Dissipation (Ta=25°C)..... 625 mW
- Maximum Voltages and Currents (Ta=25°C)
 - VCBO Collector to Base Voltage..... 400 V
 - VCEO Collector to Emitter Voltage 400 V
 - VCBO Emitter to Base Voltage 6 V
 - IC Collector Current 300mA

Characteristics (Ta=25°C)

| Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|------------|------|------|------|------|-----------------------|
| BVCBO | 400 | - | - | V | IC=100uA, IE=0 |
| BVCEO | 400 | - | - | V | IC=1mA, IB=0 |
| BVEBO | 6 | - | - | V | IE=10uA, IC=0 |
| ICBO | - | - | 100 | nA | VCB=400V, IE=0 |
| IEBO | - | - | 100 | nA | VEB=4V, IC=0 |
| ICES | - | - | 500 | nA | VCE=400V, VBE=0 |
| *VCE(sat)1 | - | - | 350 | mV | IC=1mA, IB=0.1mA |
| *VCE(sat)2 | - | - | 350 | mV | IC=20mA, IB=2mA |
| *VCE(sat)3 | - | - | 750 | mV | IC=50mA, IB=5mA |
| *VBE(sat) | - | - | 750 | mV | IC=10mA, IB=1mA |
| *hFE1 | 40 | - | - | | IC=1mA, VCE=10V |
| *hFE2 | 50 | - | 300 | | IC=10mA, VCE=10V |
| *hFE3 | 45 | - | - | | IC=50mA, VCE=10V |
| *hFE4 | 40 | - | - | | IC=100mA, VCE=10V |
| Cob | - | - | 6 | pF | VCB=20V, f=1MHz, IE=0 |

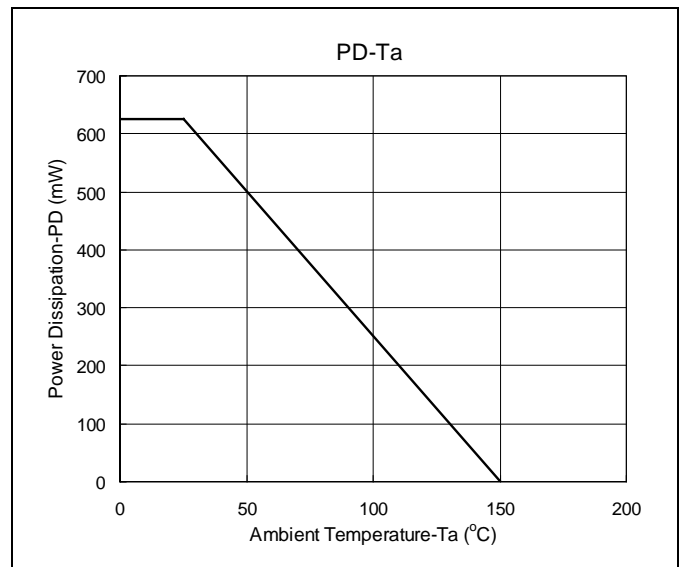
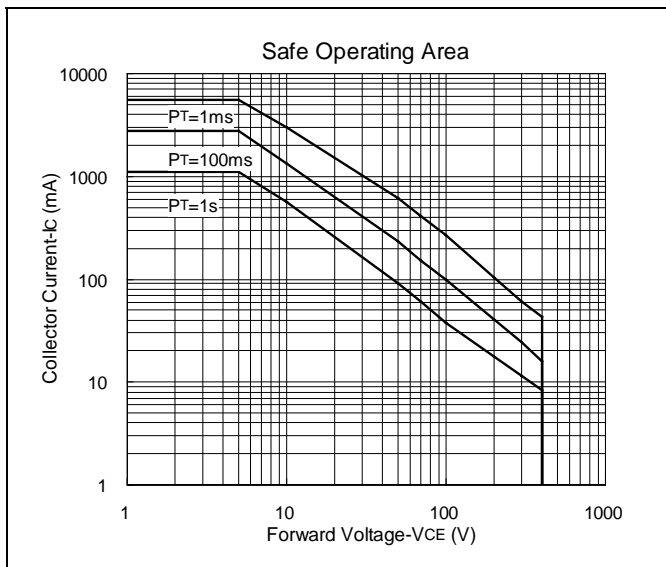
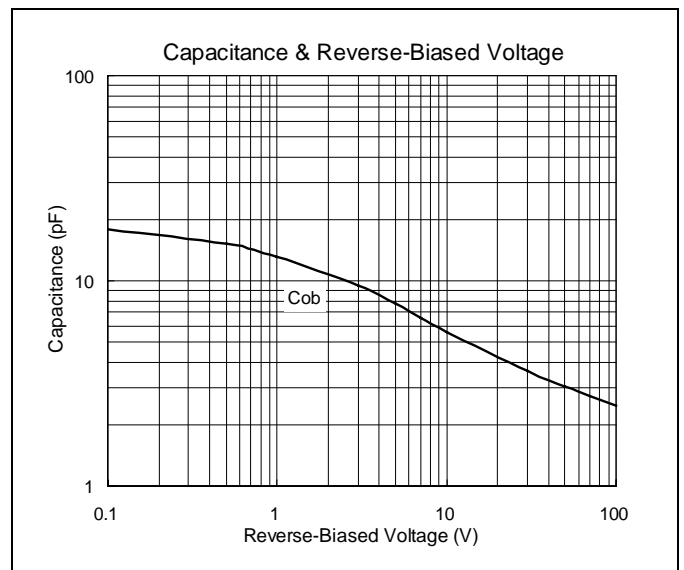
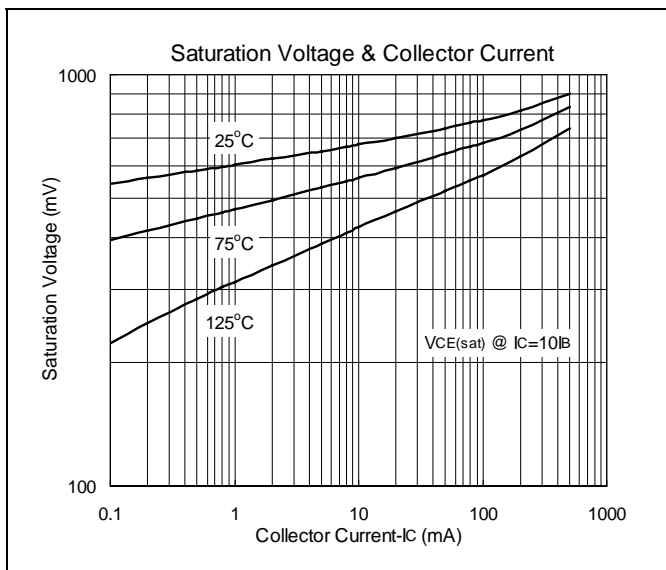
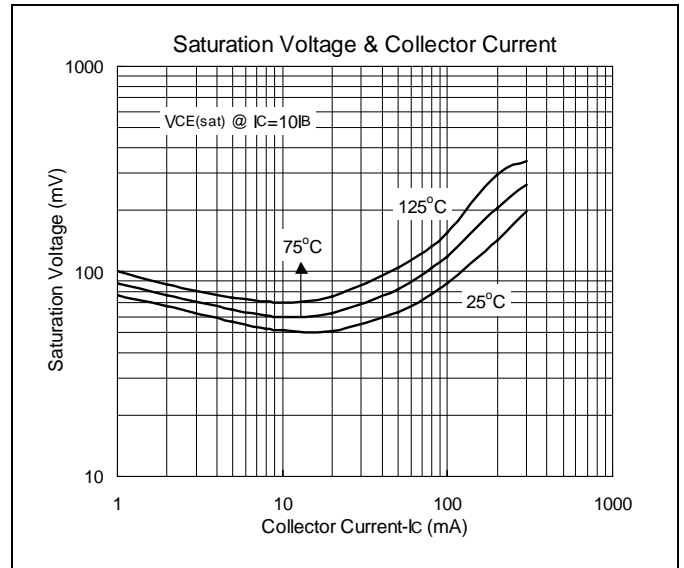
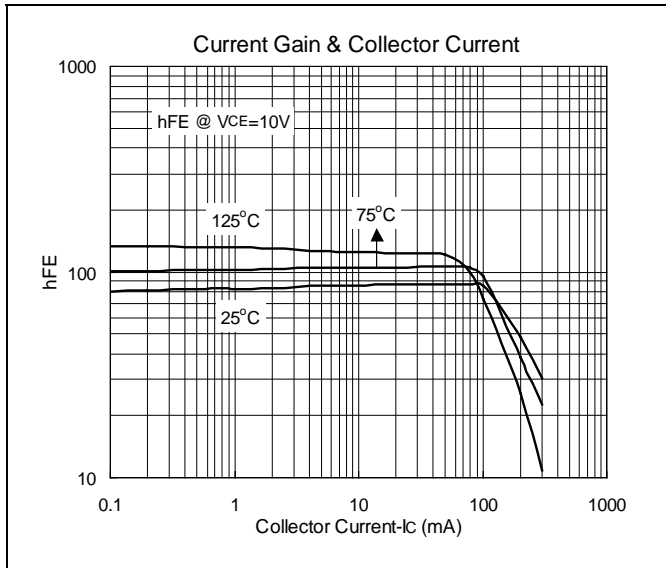
*Pulse Test: Pulse Width ≤380us, Duty Cycle≤2%

Classification Of hFE2

| Rank | N | SD | SUM |
|-------|--------|--------|---------|
| Range | 50-300 | 70-210 | 120-300 |

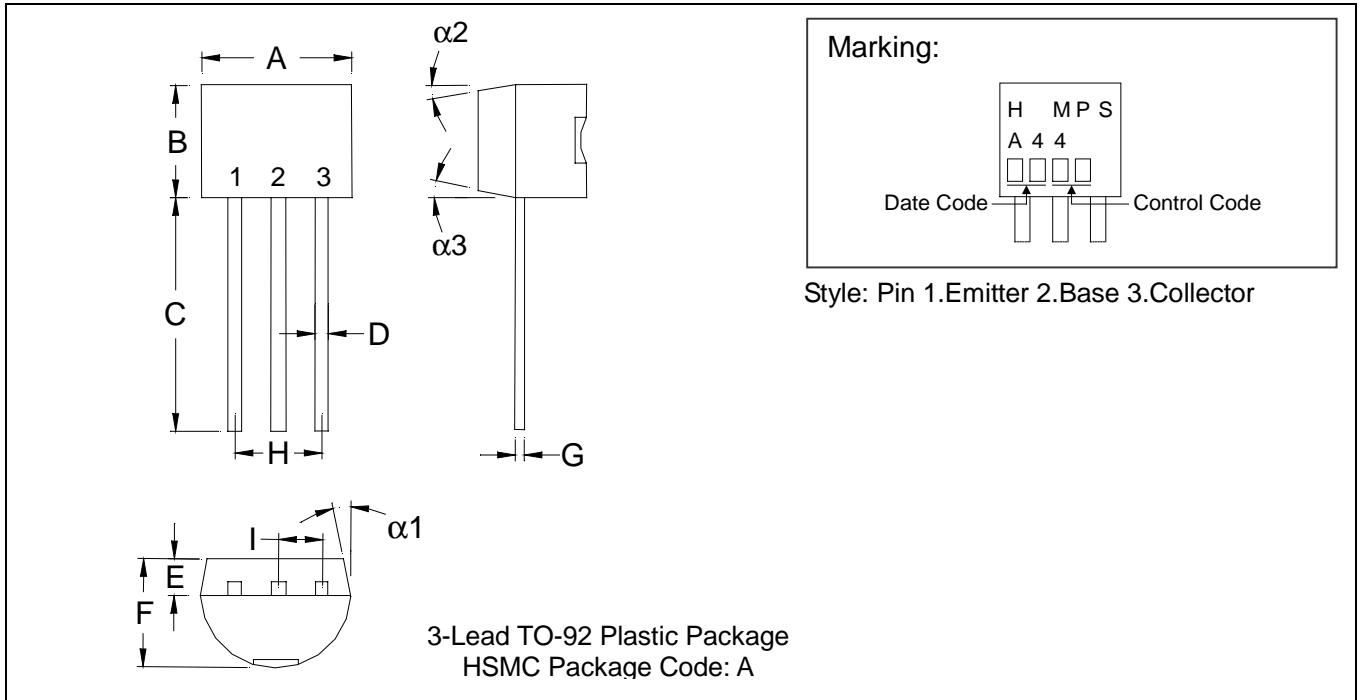


Characteristics Curve





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 | $\alpha 1$ | - | *5° | - | *5° |
| E | - | *0.0500 | - | *1.27 | $\alpha 2$ | - | *2° | - | *2° |
| F | 0.1323 | 0.1480 | 3.36 | 3.76 | $\alpha 3$ | - | *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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