



HTIP102

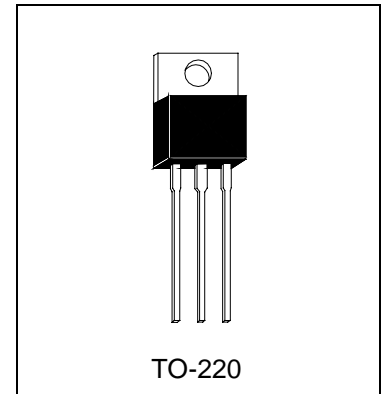
NPN EPITAXIAL PLANAR TRANSISTOR

Description

The HTIP102 is designed for use in general purpose amplifier and low-speed switching applications.

Absolute Maximum Ratings (Ta=25°C)

- Maximum Temperatures
 - Storage Temperature -55 ~ +150 °C
 - Junction Temperature +150 °C Maximum
- Maximum Power Dissipation
 - Total Power Dissipation (Tc=25°C) 80 W
 - Total Power Dissipation (Ta=25°C) 2 W
- Maximum Voltages and Currents
 - BVCBO Collector to Base Voltage 100 V
 - BVCEO Collector to Emitter Voltage 100 V
 - BVEBO Emitter to Base Voltage 5 V
 - IC Collector Current 8 A

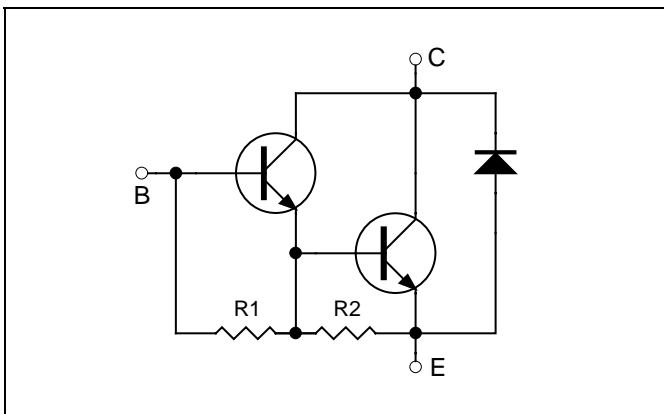


Characteristics (Ta=25°C)

| Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|------------|------|------|------|------|-------------------|
| BVCBO | 100 | - | - | V | IC=1mA, IE=0 |
| BVCEO | 100 | - | - | V | IC=30mA, IB=0 |
| ICBO | - | - | 50 | uA | VCB=100V, IE=0 |
| ICEO | - | - | 50 | uA | VCE=50V, IB=0 |
| IEBO | - | - | 8 | mA | VEB=5V, IC=0 |
| *VCE(sat)1 | - | - | 2 | V | IC=3A, IB=6mA |
| *VCE(sat)2 | - | - | 2.5 | V | IC=8A, IB=80mA |
| *VBE(on) | - | - | 2.8 | V | IC=8A, VCE=4V |
| *hFE1 | 1 | - | 20 | K | IC=3A, VCE=4V |
| *hFE2 | 200 | - | - | | IC=8A, VCE=4V |
| Cob | - | - | 200 | pF | VCB=10V, f=0.1MHz |

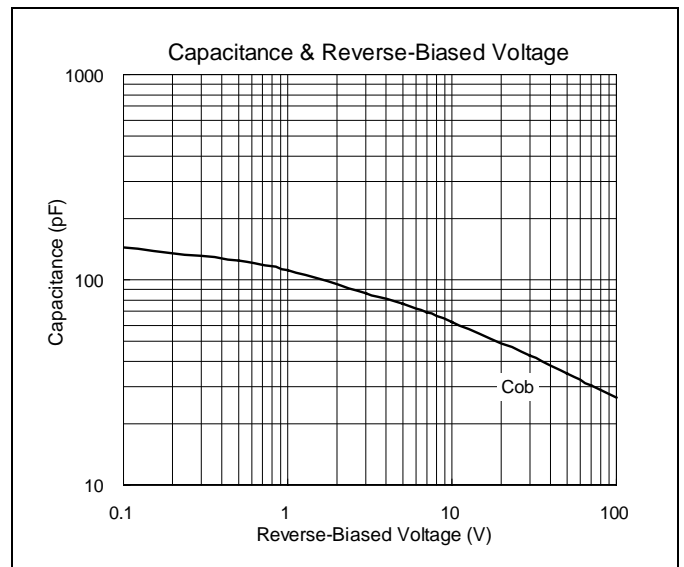
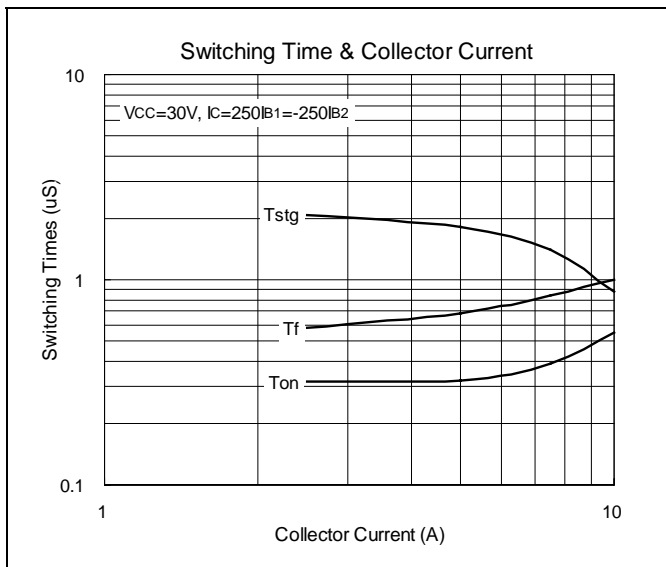
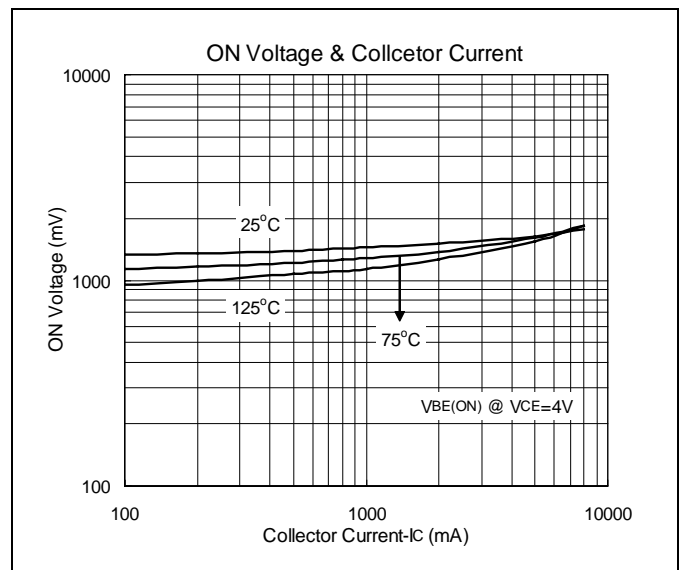
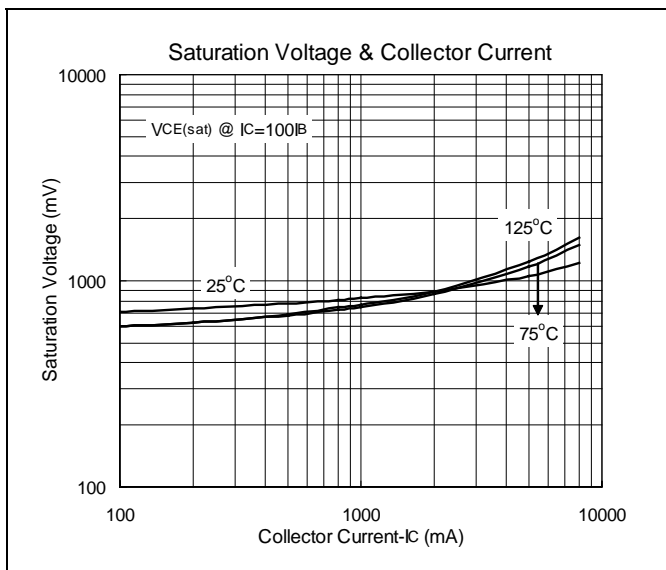
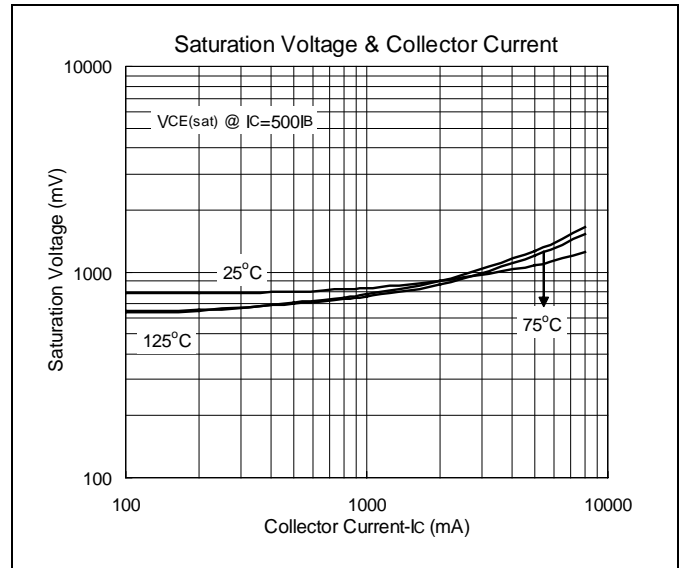
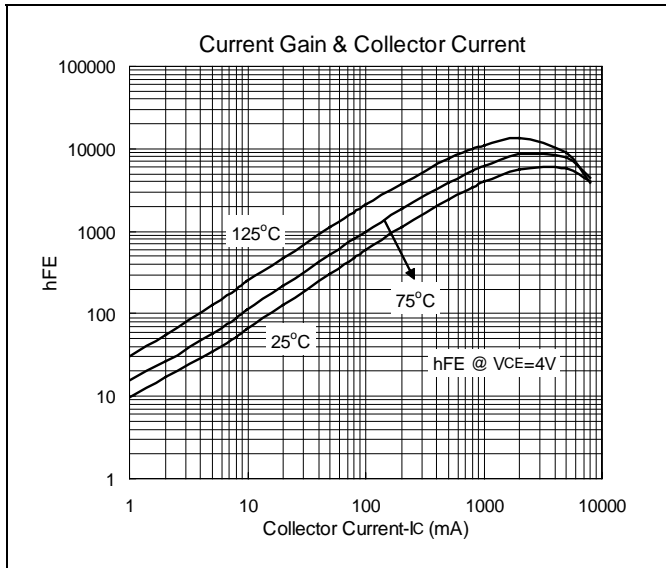
*Pulse Test: Pulse Width ≤380us, Duty Cycle≤2%

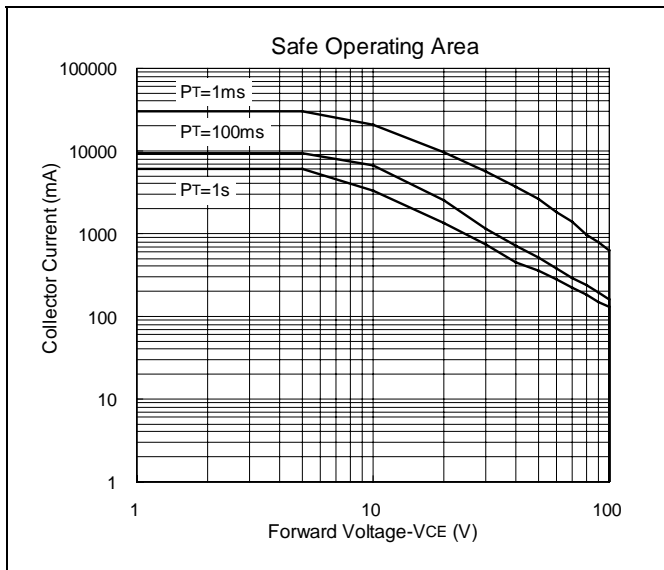
Darlington Schematic





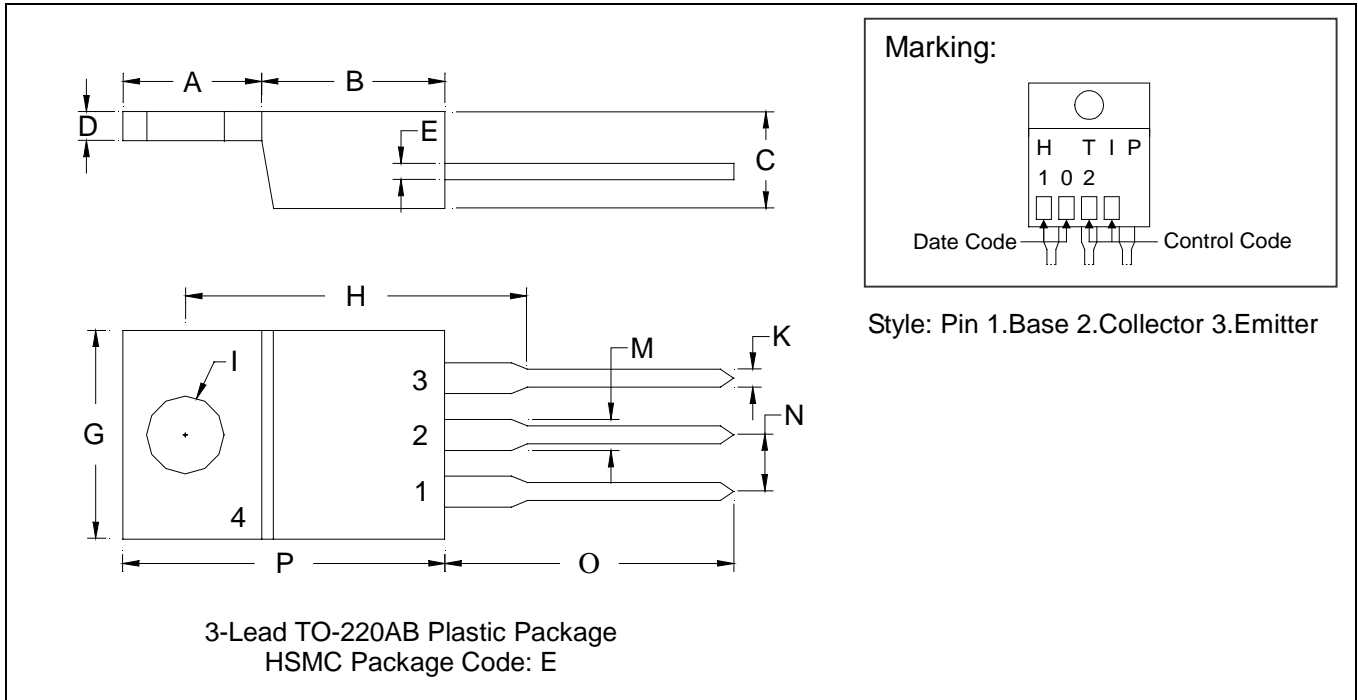
Characteristics Curve







TO-220AB Dimension



*: Typical

| DIM | Inches | | Millimeters | | DIM | Inches | | Millimeters | |
|-----|--------|---------|-------------|--------|-----|--------|---------|-------------|-------|
| | Min. | Max. | Min. | Max. | | Min. | Max. | Min. | Max. |
| A | 0.2197 | 0.2949 | 5.58 | 7.49 | I | - | *0.1508 | - | *3.83 |
| B | 0.3299 | 0.3504 | 8.38 | 8.90 | K | 0.0295 | 0.0374 | 0.75 | 0.95 |
| C | 0.1732 | 0.185 | 4.40 | 4.70 | M | 0.0449 | 0.0551 | 1.14 | 1.40 |
| D | 0.0453 | 0.0547 | 1.15 | 1.39 | N | - | *0.1000 | - | *2.54 |
| E | 0.0138 | 0.0236 | 0.35 | 0.60 | O | 0.5000 | 0.5618 | 12.70 | 14.27 |
| G | 0.3803 | 0.4047 | 9.66 | 10.28 | P | 0.5701 | 0.6248 | 14.48 | 15.87 |
| H | - | *0.6398 | - | *16.25 | | | | | |

- 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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