

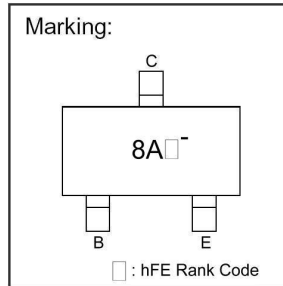
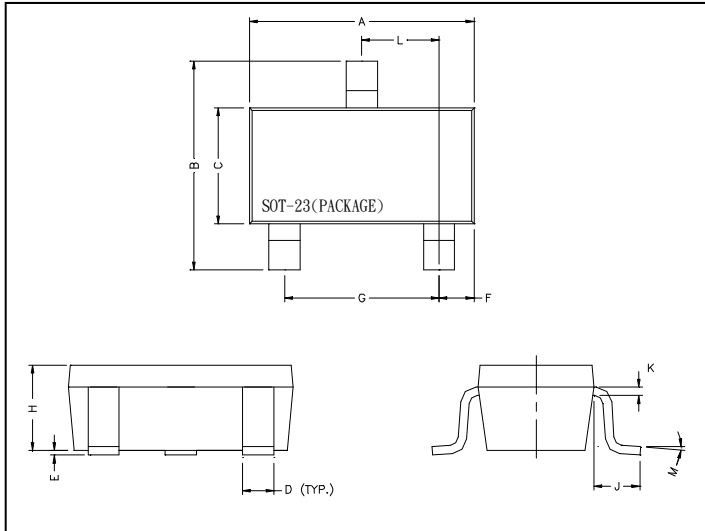
## GBC846

### NPN EPITAXIAL PLANAR TRANSISTOR

#### Description

The GBC846 is designed for switching and AF amplifier application, suitable for automatic insertion in thick and thin-film circuits.

#### Package Dimensions



| REF. | Millimeter |      | REF. | Millimeter |      |
|------|------------|------|------|------------|------|
|      | Min.       | Max. |      | Min.       | Max. |
| A    | 2.70       | 3.10 | G    | 1.90       | REF. |
| B    | 2.40       | 2.80 | H    | 1.00       | 1.30 |
| C    | 1.40       | 1.60 | K    | 0.10       | 0.20 |
| D    | 0.35       | 0.50 | J    | 0.40       | -    |
| E    | 0          | 0.10 | L    | 0.85       | 1.15 |
| F    | 0.45       | 0.55 | M    | 0°         | 10°  |

#### Absolute Maximum Ratings at Ta = 25°C

| Parameter                    | Symbol | Ratings    | Unit |
|------------------------------|--------|------------|------|
| Junction Temperature         | Tj     | +150       | °C   |
| Storage Temperature          | Tstg   | -55 ~ +150 | °C   |
| Collector to Base Voltage    | VCBO   | 80         | V    |
| Collector to Emitter Voltage | VCEO   | 65         | V    |
| Emitter to Base Voltage      | VEBO   | 6          | V    |
| Collector Current            | IC     | 100        | mA   |
| Total Power Dissipation      | PD     | 250        | mW   |

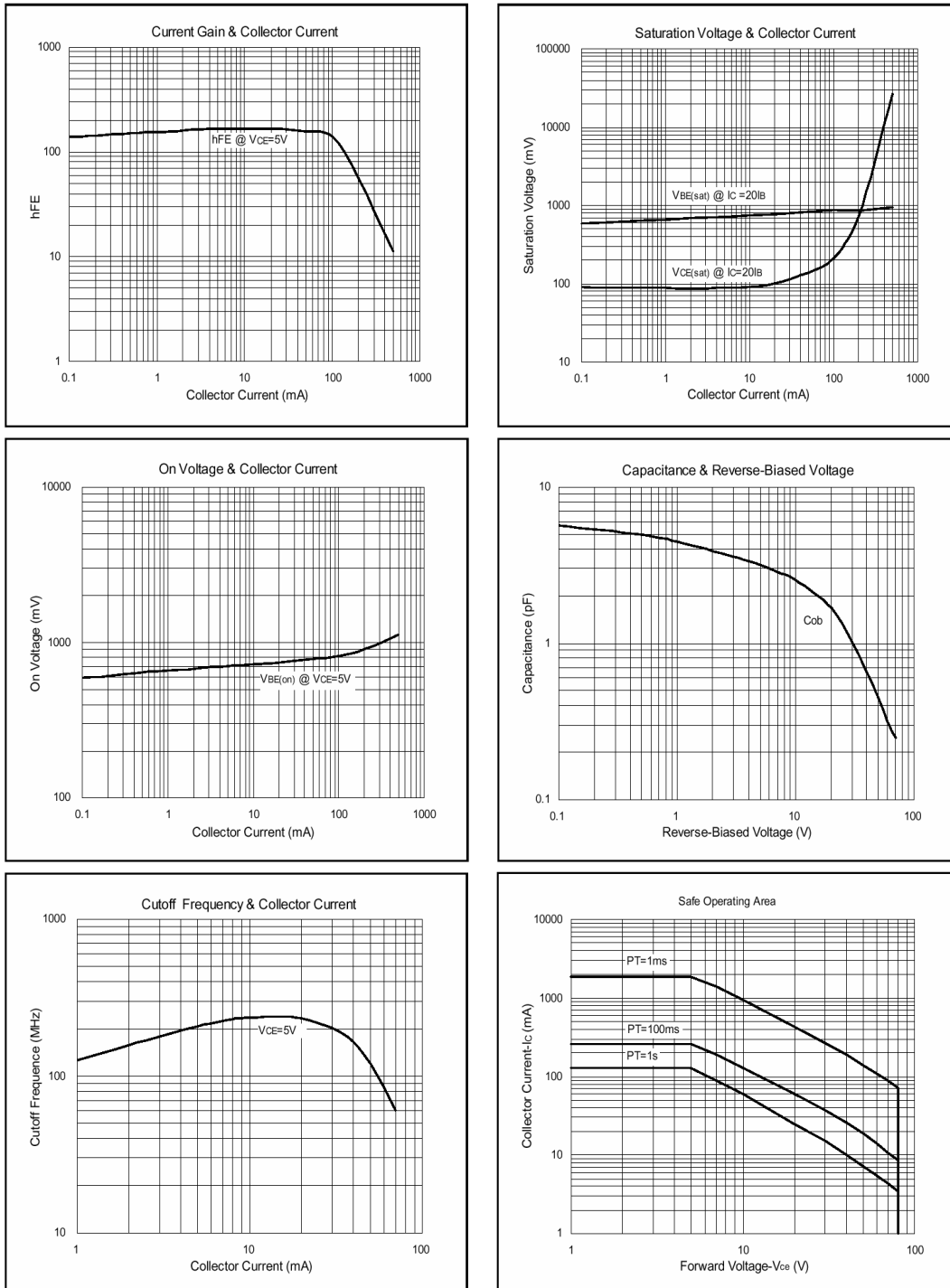
#### Characteristics at Ta = 25°C

| Symbol    | Min. | Typ. | Max. | Unit | Test Conditions        |
|-----------|------|------|------|------|------------------------|
| BVCBO     | 80   | -    | -    | V    | IC=100uA               |
| BVCEO     | 65   | -    | -    | V    | IC=1mA                 |
| BVEBO     | 6    | -    | -    | V    | IE=10uA                |
| ICBO      | -    | -    | 15   | nA   | VCB=30V                |
| VCE(sat)1 | -    | 90   | 250  | mV   | IC=10mA, IB=0.5mA      |
| VCE(sat)2 | -    | 200  | 600  | mV   | IC=100mA, IB=5mA       |
| VBE(sat)1 | -    | 700  | -    | mV   | IC=10mA, IB=0.5mA      |
| VBE(sat)2 | -    | 900  | -    | mV   | IC=100mA, IB=5mA       |
| VBE(on)1  | 580  | -    | 700  | mV   | VCE=5V, IC=2mA         |
| VBE(on)2  | -    | -    | 770  | mV   | VCE=5V, IC=10mA        |
| hFE       | 110  | -    | 800  |      | VCE=5V, IC=2mA         |
| fT        | -    | 300  | -    | MHz  | VCE=5V, IC=10mA        |
| Cob       | -    | 3.5  | 6    | pF   | VCB=10V, f=1MHz, IE=0A |

## Classification Of hFE

| Rank | A       | B       | C       |
|------|---------|---------|---------|
| hFE  | 110-220 | 200-450 | 450-800 |

## Characteristics Curve



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