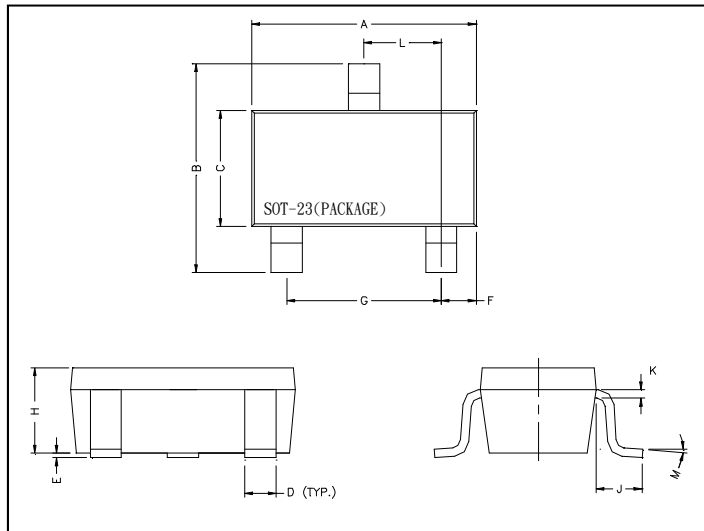
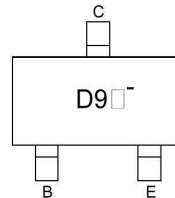


**GMBT8050****NPN EPITAXIAL TRANSISTOR****Description**

The GMBT8050 is designed for general purpose amplifier applications.

**Package Dimensions**

Marking:



□ : hFE Rank Code

| 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         | T <sub>j</sub>   | +150     | °C   |
| Storage Temperature          | T <sub>stg</sub> | -55~+150 | °C   |
| Collector to Base Voltage    | V <sub>CB0</sub> | 25       | V    |
| Collector to Emitter Voltage | V <sub>CEO</sub> | 20       | V    |
| Emitter to Base Voltage      | V <sub>EBO</sub> | 5        | V    |
| Collector Current            | I <sub>C</sub>   | 700      | mA   |
| Total Power Dissipation      | P <sub>D</sub>   | 225      | mW   |

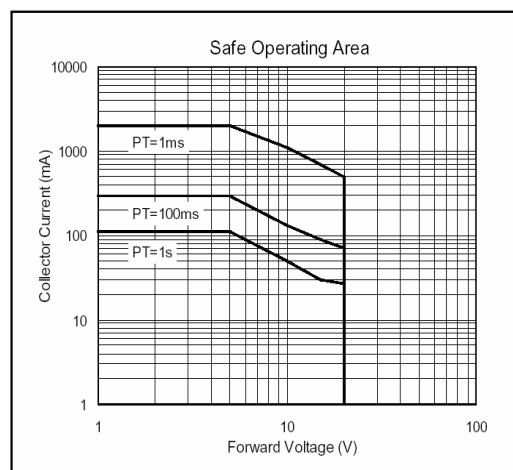
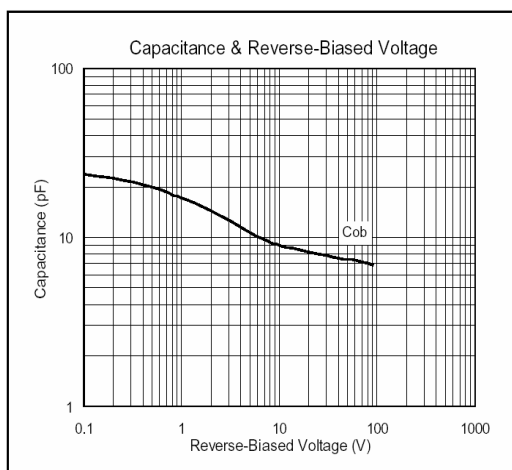
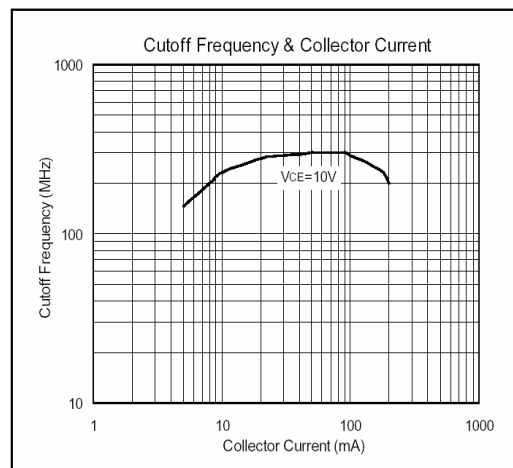
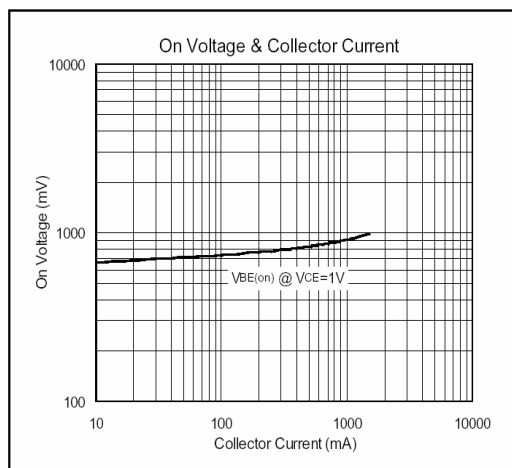
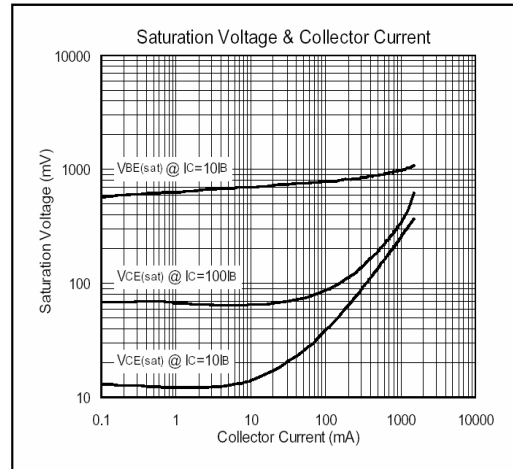
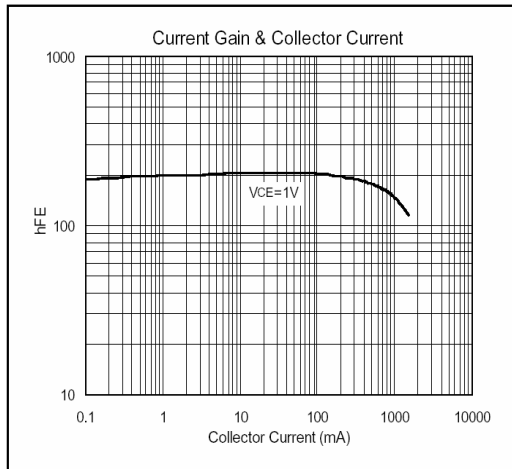
**Electrical Characteristics**(Ta = 25°C, unless otherwise noted)

| Symbol               | Min. | Typ. | Max. | Unit | Test Conditions                                      |
|----------------------|------|------|------|------|------------------------------------------------------|
| V <sub>CB0</sub>     | 25   | -    | -    | V    | I <sub>C</sub> =10uA, I <sub>E</sub> =0              |
| V <sub>CEO</sub>     | 20   | -    | -    | V    | I <sub>C</sub> =1mA, I <sub>B</sub> =0               |
| V <sub>EBO</sub>     | 5    | -    | -    | V    | I <sub>E</sub> =10uA, I <sub>C</sub> =0              |
| I <sub>CB0</sub>     | -    | -    | 1    | uA   | V <sub>CB</sub> =30V, I <sub>E</sub> =0              |
| I <sub>EBO</sub>     | -    | -    | 100  | nA   | V <sub>EB</sub> =5V, I <sub>C</sub> =0               |
| V <sub>CE(sat)</sub> | -    | -    | 500  | mV   | I <sub>C</sub> =500mA, I <sub>B</sub> =50mA          |
| V <sub>BE(on)</sub>  | -    | -    | 1    | V    | V <sub>CE</sub> =1V, I <sub>C</sub> =150mA           |
| h <sub>FE</sub>      | 120  | -    | 500  |      | V <sub>CE</sub> =1V, I <sub>C</sub> =150mA           |
| f <sub>T</sub>       | 150  | -    | -    | MHz  | V <sub>CE</sub> =10V, I <sub>C</sub> =20mA, f=100MHz |
| C <sub>ob</sub>      | -    | -    | 10   | pF   | V <sub>CB</sub> =10V, f=1MHz                         |

**Classification Of hFE**

| Rank | D9C       | D9D       | D9E       |
|------|-----------|-----------|-----------|
| hFE  | 120 ~ 200 | 150 ~ 300 | 250 ~ 500 |

## Characteristics Curve



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