

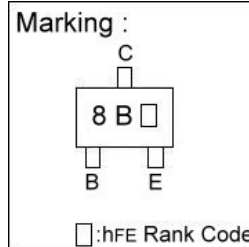
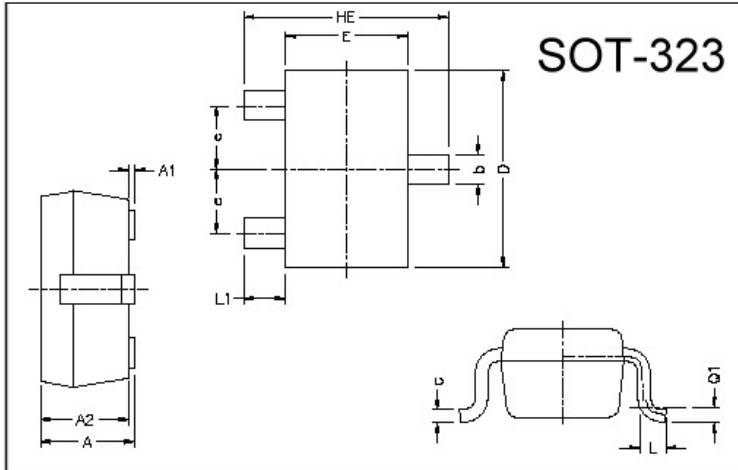
GSBC847

NPN EPITAXIAL PLANAR TRANSISTOR

Description

The GSBC847 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 | 0.80 | 1.10 | L1 | 0.42 REF. | |
| A1 | 0 | 0.10 | L | 0.15 | 0.35 |
| A2 | 0.80 | 1.00 | b | 0.25 | 0.40 |
| D | 1.80 | 2.20 | c | 0.10 | 0.25 |
| E | 1.15 | 1.35 | e | 0.65 REF. | |
| HE | 1.80 | 2.40 | Q1 | 0.15 BSC. | |

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 | 50 | V |
| Collector to Emitter Voltage | VCEO | 45 | V |
| Emitter to Base Voltage | VEBO | 6 | V |
| Collector Current | IC | 100 | mA |
| Total Power Dissipation | PD | 225 | mW |

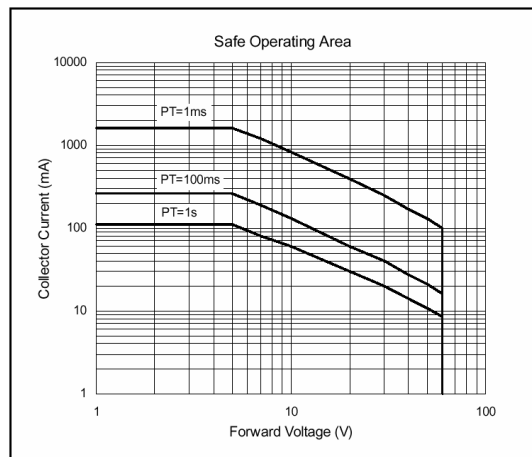
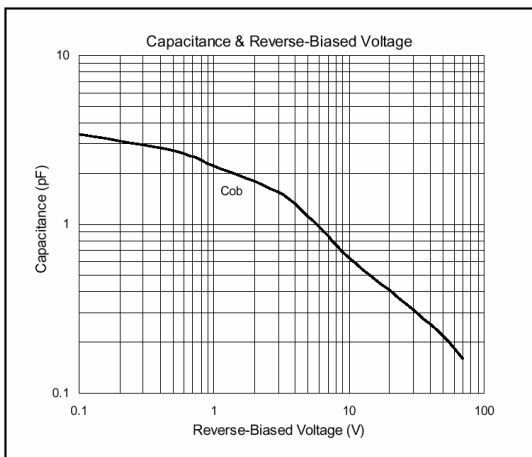
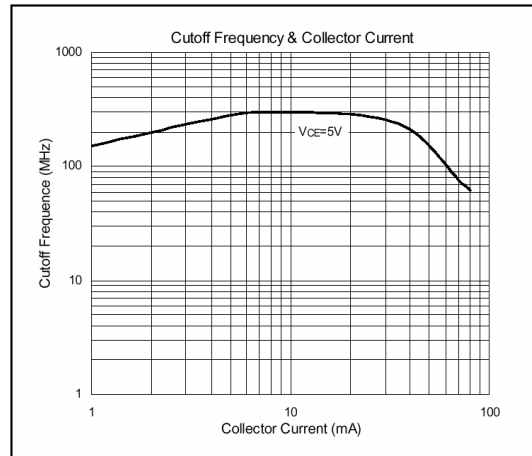
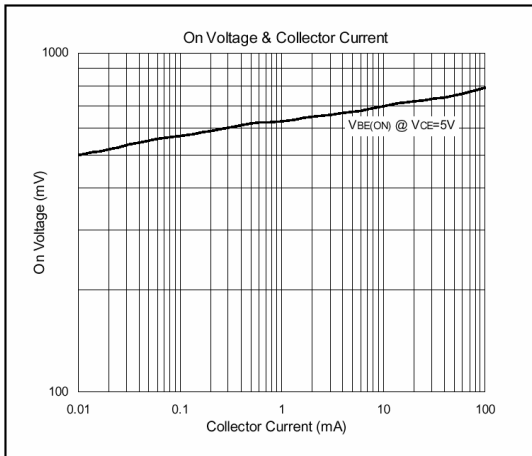
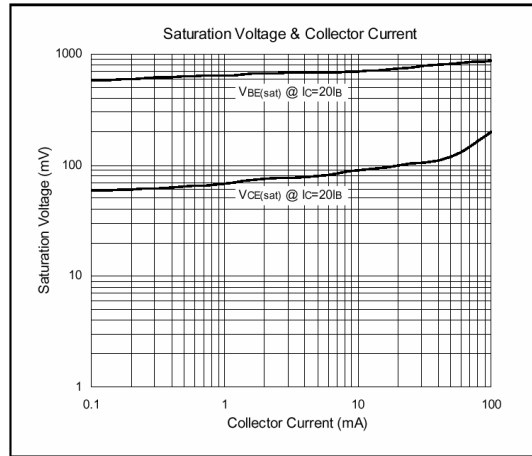
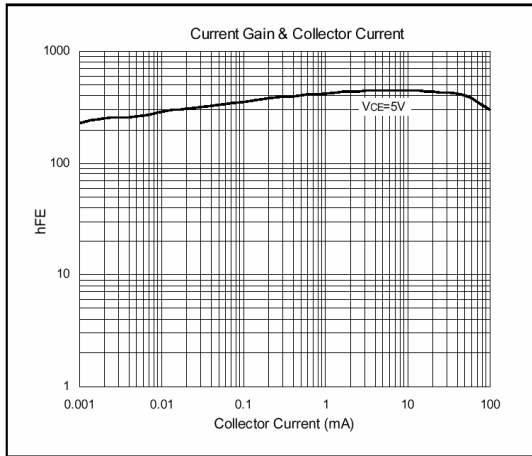
Characteristics at Ta = 25°C

| Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|-----------|------|------|------|------|------------------------|
| BVCBO | 50 | - | - | V | IC=100uA |
| BVCEO | 45 | - | - | 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 | 8BA | 8BB | 8BC |
|-------|-----------|-----------|-----------|
| Range | 110 - 220 | 200 - 450 | 420 - 800 |

Characteristics Curve



Important Notice:

- All rights are reserved. Reproduction in whole or in part is prohibited without the prior written approval of GTM.
- GTM reserves the right to make changes to its products without notice.
- GTM semiconductor products are not warranted to be suitable for use in life-support Applications, or systems.
- GTM assumes no liability for any consequence of customer product design, infringement of patents, or application assistance.

Head Office And Factory:

- **Taiwan:** No. 17-1 Tatung Rd. Fu Kou Hsin-Chu Industrial Park, Hsin-Chu, Taiwan, R. O. C.
- TEL : 886-3-597-7061 FAX : 886-3-597-9220, 597-0785
- **China:** (201203) No.255, Jang-Jiang Tsai-Lueng RD. , Pu-Dung-Hsin District, Shang-Hai City, China
- TEL : 86-21-5895-7671 ~ 4 FAX : 86-21-38950165