

## GSMBT2907A

### PNP EPITAXIAL PLANAR TRANSISTOR

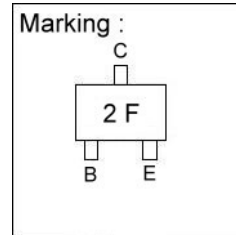
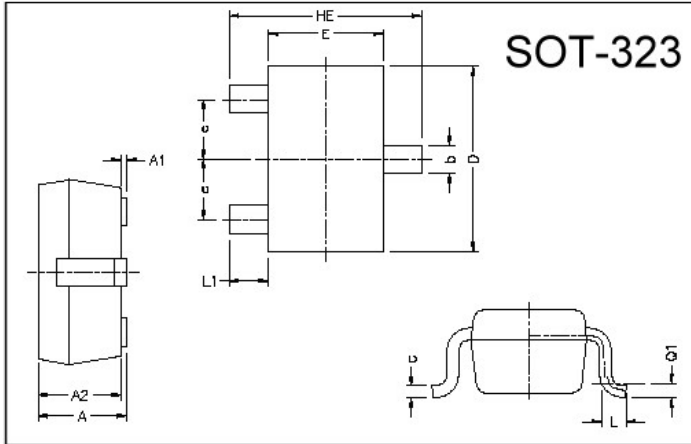
#### Description

The GSMBT2907A is designed for general purpose amplifier and high speed, medium-power switching applications.

#### Features

- Low collector saturation voltage
- High speed switching
- For complementary use with NPN type GSMBT2222A

#### 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

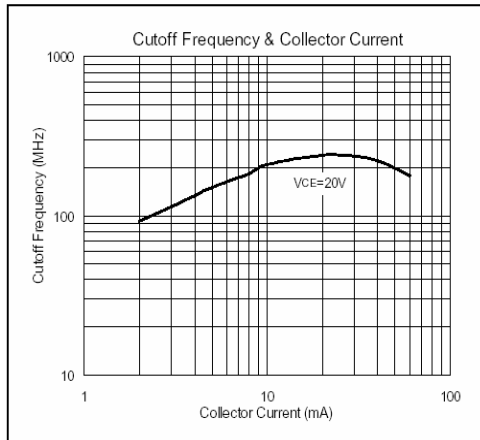
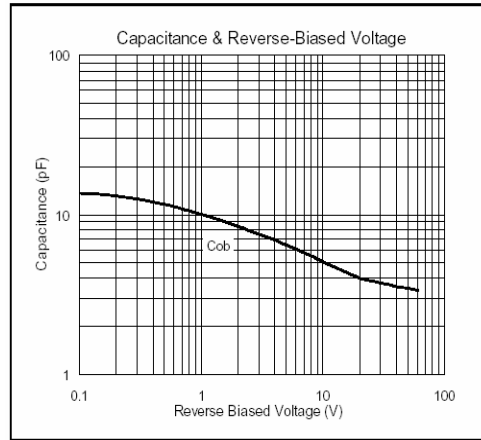
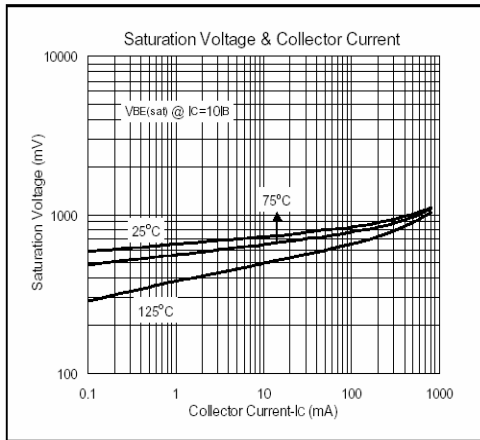
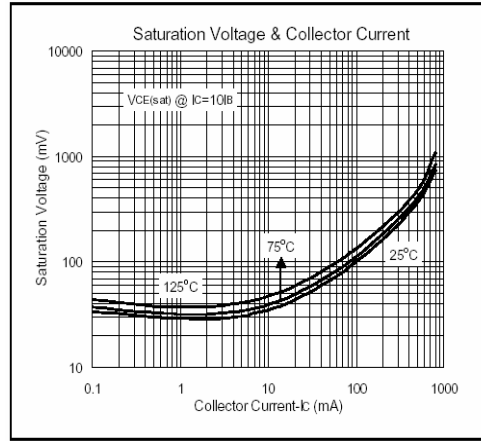
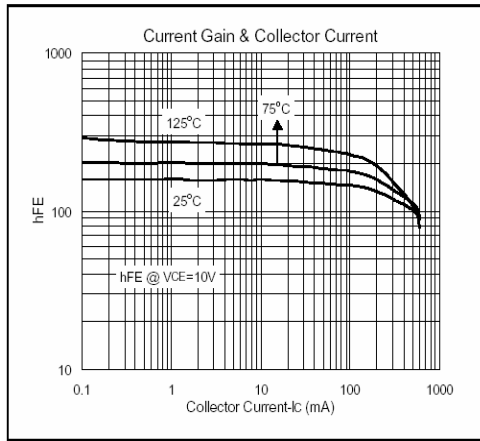
| Parameter                               | Symbol           | Ratings    | Unit |
|---|------------------|------------|------|
| Junction Temperature                    | T <sub>j</sub>   | +150       | °C   |
| Storage Temperature                     | T <sub>stg</sub> | -55 ~ +150 | °C   |
| Collector to Base Voltage at Ta=25°C    | V <sub>CB0</sub> | -60        | V    |
| Collector to Emitter Voltage at Ta=25°C | V <sub>CE0</sub> | -60        | V    |
| Emitter to Base Voltage at Ta=25°C      | V <sub>EB0</sub> | -5         | V    |
| Collector Current at Ta=25°C            | I <sub>C</sub>   | -600       | mA   |
| Total Power Dissipation at Ta=25°C      | PD               | 225        | mW   |

#### Characteristics at Ta = 25°C

| Symbol                  | Min. | Typ. | Max. | Unit | Test Conditions  |
|-------------------------|------|------|------|------|--|
| B <sub>V</sub> CB0      | -60  | -    | -    | V    | I <sub>C</sub> =-10μA                                  |
| B <sub>V</sub> CE0      | -60  | -    | -    | V    | I <sub>C</sub> =-10mA                                  |
| B <sub>V</sub> EB0      | -5   | -    | -    | V    | I <sub>E</sub> =-10μA                                  |
| I <sub>C</sub> B0       | -    | -    | -10  | nA   | V <sub>CE</sub> =-50V                                  |
| I <sub>C</sub> EX       | -    | -    | -50  | nA   | V <sub>CE</sub> =-30V, V <sub>BE</sub> =-0.5V          |
| *V <sub>CE</sub> (sat)1 | -    | -0.2 | -0.4 | V    | I <sub>C</sub> =-150mA, I <sub>B</sub> =-15mA          |
| *V <sub>CE</sub> (sat)2 | -    | -0.5 | -1.6 | V    | I <sub>C</sub> =-500mA, I <sub>B</sub> =-50mA          |
| *V <sub>BE</sub> (sat)1 | -    | -    | -1.3 | mV   | I <sub>C</sub> =-150mA, I <sub>B</sub> =-15mA          |
| *V <sub>BE</sub> (sat)2 | -    | -    | -2.6 | V    | I <sub>C</sub> =-500mA, I <sub>B</sub> =-50mA          |
| *h <sub>FE</sub> 1      | 75   | -    | -    |      | V <sub>CE</sub> =-10V, I <sub>C</sub> =-0.1mA          |
| *h <sub>FE</sub> 2      | 100  | -    | -    |      | V <sub>CE</sub> =-10V, I <sub>C</sub> =-1mA            |
| *h <sub>FE</sub> 3      | 100  | -    | -    |      | V <sub>CE</sub> =-10V, I <sub>C</sub> =-10mA           |
| *h <sub>FE</sub> 4      | 100  | 180  | 300  |      | V <sub>CE</sub> =-10V, I <sub>C</sub> =-150mA          |
| *h <sub>FE</sub> 5      | 50   | -    | -    |      | V <sub>CE</sub> =-10V, I <sub>C</sub> =-500mA          |
| f <sub>T</sub>          | 200  | -    | -    | MHz  | V <sub>CE</sub> =-20V, I <sub>C</sub> =-50mA, f=100MHz |
| C <sub>ob</sub>         | -    | -    | 8.0  | pF   | V <sub>CE</sub> =-10V, f=1MHz                          |

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

## Characteristics Curve



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