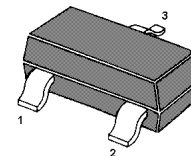


## MMBTSB1197 PNP Silicon Epitaxial Planar Transistor

Low frequency transistor

The transistor is subdivided into two groups Q and R according to its DC current gain.



1.Base 2.Emitter 3.Collector  
SOT-23 Plastic Package

### FEATURES

- Low  $V_{CE(sat)}$ .  $V_{CE(sat)} < -0.5V (I_C / I_B = -0.5A / -50mA)$
- $I_C = -0.8A$ .
- Complements the MMBTSD1781.

### Absolute Maximum Ratings ( $T_a = 25^\circ C$ )

| Parameter                 | Symbol     | Value       | Unit       |
|---------------------------|------------|-------------|------------|
| Collector Base Voltage    | $-V_{CBO}$ | 40          | V          |
| Collector Emitter Voltage | $-V_{CEO}$ | 32          | V          |
| Emitter Base Voltage      | $-V_{EBO}$ | 5           | V          |
| Collector Current         | $-I_C$     | 800         | mA         |
| Power Dissipation         | $P_{tot}$  | 200         | mW         |
| Junction Temperature      | $T_j$      | 150         | $^\circ C$ |
| Storage Temperature Range | $T_s$      | -55 to +150 | $^\circ C$ |

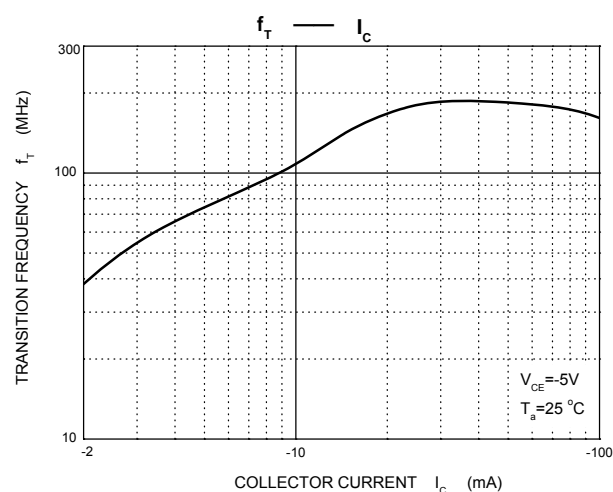
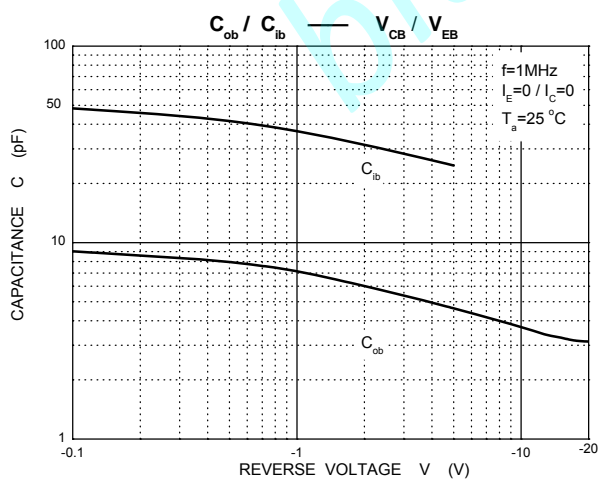
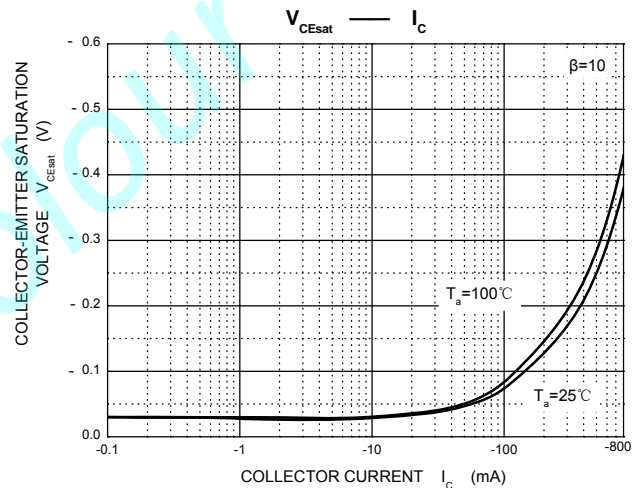
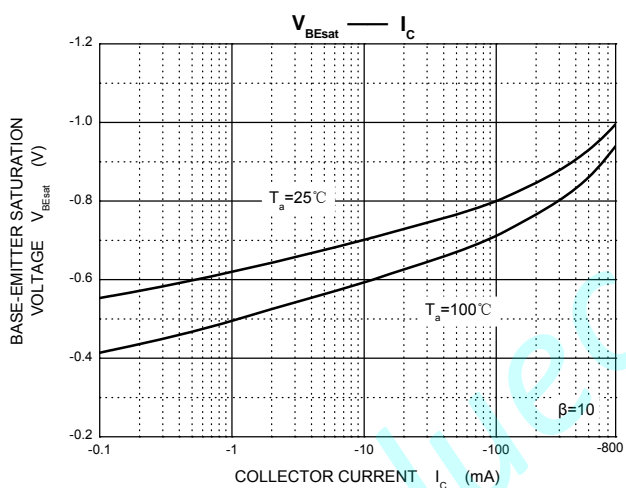
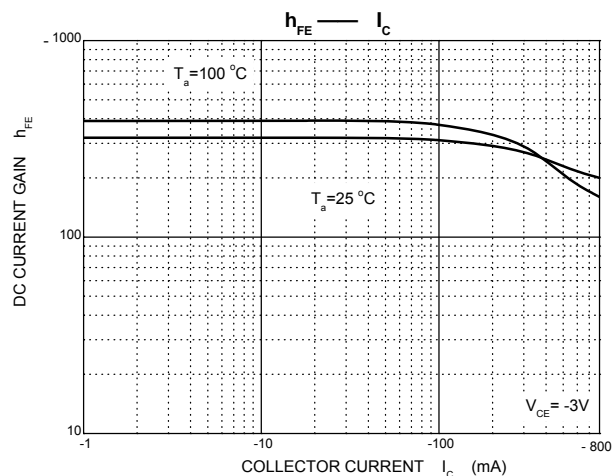
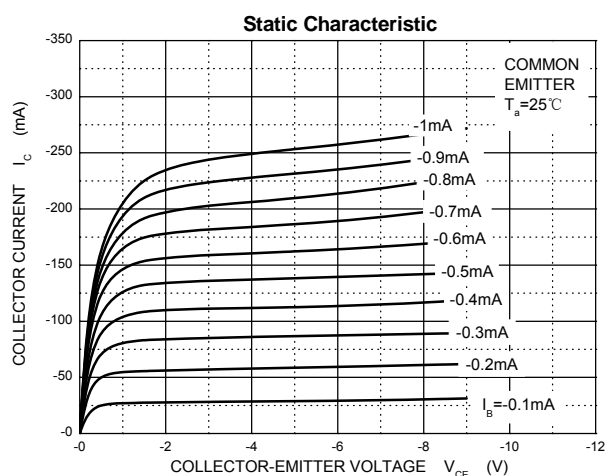
### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ unless otherwise specified)

| Parameter                            | Symbol        | est conditions                               | Min | Typ | Max  | Unit    |
|--------------------------------------|---------------|--|-----|-----|------|---------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C = -50\mu A, I_E = 0$                    | -40 |     |      | V       |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C = -1mA, I_B = 0$                        | -32 |     |      | V       |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E = -50\mu A, I_C = 0$                    | -5  |     |      | V       |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = -20V, I_E = 0$                     |     |     | -0.5 | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = -4V, I_C = 0$                      |     |     | -0.5 | $\mu A$ |
| DC current gain                      | $h_{FE}$      | $V_{CE} = -3V, I_C = -100mA$                 | 120 |     | 390  |         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -500mA, I_B = -50mA$                  |     |     | -0.5 | V       |
| Transition frequency                 | $f_T$         | $V_{CE} = -5V, I_C = -50mA,$<br>$f = 100MHz$ | 50  | 20  |      | MHz     |
| Collector output capacitance         | $C_{ob}$      | $V_{CB} = -10V, I_E = 0, f = 1MHz$           |     | 12  | 30   | pF      |

### CLASSIFICATION OF $h_{FE}$

| Rank    | Q       | R       |
|---------|---------|---------|
| Range   | 120-270 | 180-390 |
| Marking | AHQ     | AHR     |

## Typical Characteristics



## PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23

