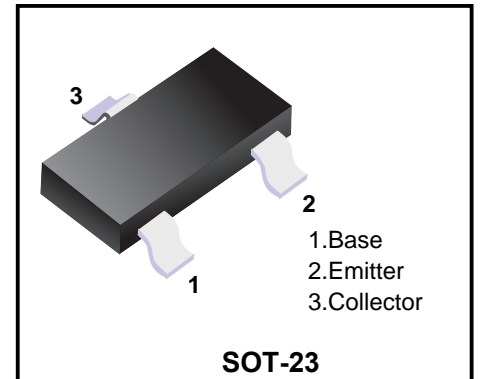


PNP Transistors

Features

- Epitaxial Planar Die Construction
- Complementary NPN Type Available(MMBT2222A)

| Marking Code | |
|--------------|----|
| MMBT2907A | 2F |



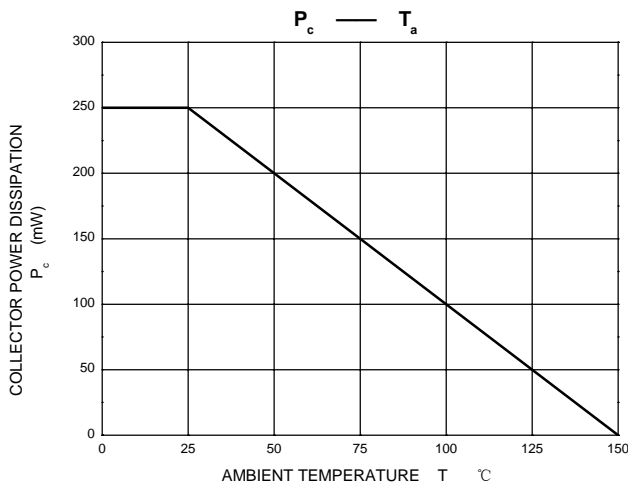
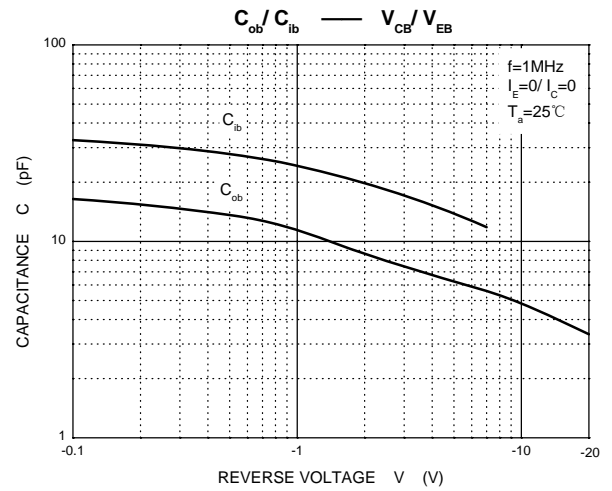
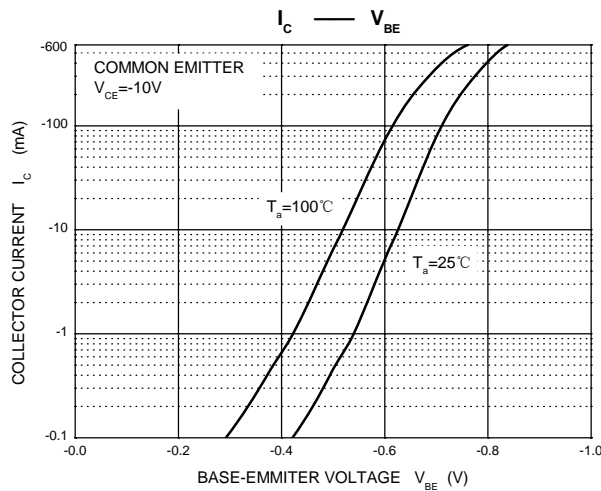
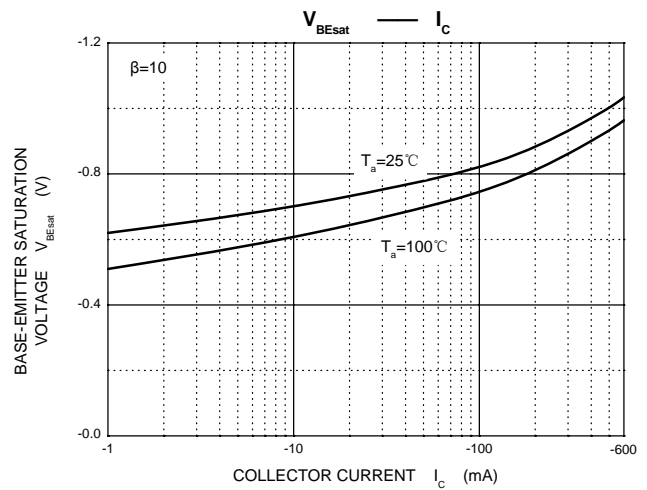
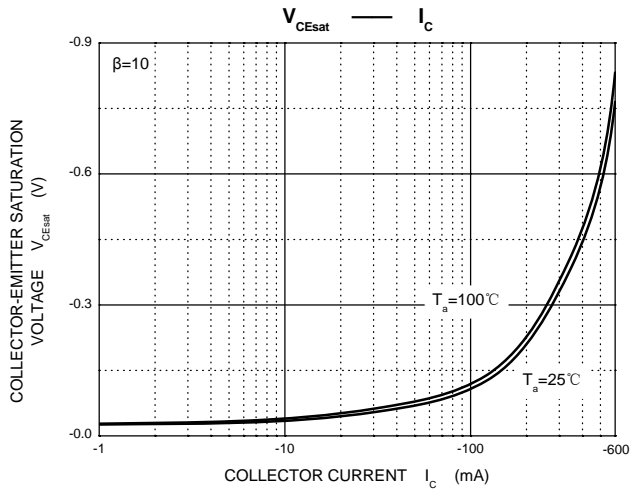
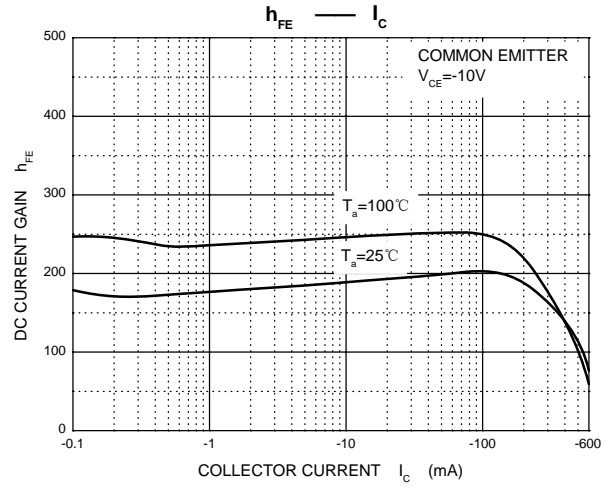
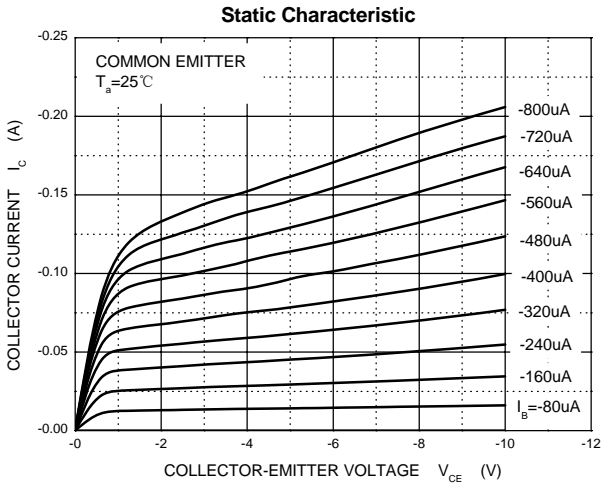
Absolute Maximum Ratings (Ta=25°C)

| Parameter | Symbol | Rating | Unit |
|---|------------------|------------|------|
| Collector - Base Voltage | V _{CB0} | -60 | V |
| Collector - Emitter Voltage | V _{CEO} | -60 | |
| Emitter - Base Voltage | V _{EBO} | -5 | |
| Collector Current - Continuous | I _c | 600 | mA |
| Power Dissipation | P _d | 250 | mW |
| Thermal resistance from junction to ambient | R _{θJA} | 500 | °C/W |
| Junction Temperature | T _J | 150 | °C |
| Storage Temperature Range | T _{stg} | -55 to 150 | |

Electrical Characteristics (Ta=25°C unless otherwise specified.)

| Parameter | Symbol | Test conditions | Min | Max | Unit |
|--|----------------------|--|-----|------|------|
| Collector-Base Breakdown Voltage | V _{(BR)CBO} | I _C = -100 μA, I _E = 0 | -60 | | V |
| Collector-Emitter Breakdown Voltage* | V _{(BR)CEO} | I _C = -10 mA, I _B = 0 | -60 | | V |
| Emitter-Base Breakdown Voltage | V _{(BR)EBO} | I _E = -100 μA, I _C = 0 | -5 | | V |
| Collector Cutoff Current | I _{CBO} | V _{CB} = -50 V, I _E = 0 | | -20 | nA |
| Collector Cutoff Current | I _{CEx} | V _{CE} = -30 V, V _{EB(off)} = 0.5V | | -50 | nA |
| DC Current Gain | h _{FE} | V _{CE} = -10V, I _C = -0.1mA | 75 | | |
| | | V _{CE} = -10V, I _C = -1mA | 100 | | |
| | | V _{CE} = -10V, I _C = -10mA | 100 | | |
| | | V _{CE} = -10V, I _C = -150mA | 100 | 300 | |
| | | V _{CE} = -10V, I _C = -500mA | 50 | | |
| Collector-Emitter Saturation Voltage * | V _{CE(sat)} | I _C = -150 mA, I _B = -15 mA | | -0.4 | V |
| | | I _C = -500 mA, I _B = -50 mA | | -1.6 | V |
| Base-Emitter Saturation Voltage * | V _{BE(sat)} | I _C = -150 mA, I _B = -15 mA | | -1.3 | V |
| | | I _C = -500 mA, I _B = -50 mA | | -2.6 | V |
| Current Gain - Bandwidth Product | f _T | V _{CE} = -20V, I _C = -50mA, f = 100MHz | 200 | | MHz |
| Delay Time | t _d | V _{CC} = -30 V, I _C = -150 mA, I _{B1} = -15 mA | | 10 | ns |
| Rise Time | t _r | | | 40 | ns |
| Storage Time | t _s | V _{CC} = -6.0 V, I _C = -150 mA, I _{B1} = I _{B2} = -15 mA | | 80 | ns |
| Fall Time | t _f | | | 30 | ns |

* Pulse test: Pulse width ≤ 300 μs, duty cycle ≤ 2.0%



Ordering information

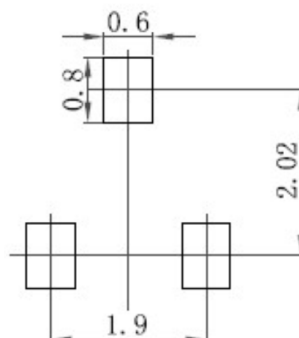
| Package | Packing Description | Base Quantity | Packing Quantity |
|---------|---------------------|---------------|-------------------------------|
| SOT-23 | Tape/Reel,7"reel | 3000pcs/Reel | 24000PCS/Box 120000PCS/Carton |

Package Dimensions

SOT-23

| Dim. | Millimeter (mm) | | mil | |
|------|-----------------|------|------|------|
| | Min. | Max. | Min. | Max. |
| A | 0.9 | 1.15 | 35 | 45 |
| A1 | 0.1 | | 3.9 | |
| bp | 0.38 | 0.48 | 15 | 19 |
| C | 0.09 | 0.15 | 3.54 | 5.9 |
| D | 2.8 | 3.0 | 110 | 118 |
| E | 1.2 | 1.4 | 47 | 55 |
| E | 1.9 | | 75 | |
| E1 | 0.95 | | 37 | |
| HE | 2.1 | 2.55 | 83 | 100 |
| Lp | 0.15 | 0.45 | 5.9 | 18 |
| Q | 0.45 | 0.55 | 18 | 22 |
| v | 0.2 | | 7.9 | |
| W | 0.1 | | 4 | |

The recommended mounting pad size



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