



FUKUCOM COMPANY LTD.

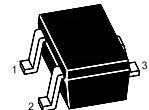
福 靈 有 限 公 司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.

TEL: 852-2790 0314 FAX: 852-2790 0206

MMBT4403W

PNP Silicon General Purpose Transistor



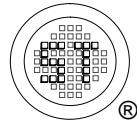
1.Base 2.Emitter 3.Collector
SOT-323 Plastic Package

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

| Parameter | Symbol | Value | Unit |
|---------------------------|------------|---------------|------------------|
| Collector Base Voltage | $-V_{CBO}$ | 40 | V |
| Collector Emitter Voltage | $-V_{CEO}$ | 40 | V |
| Emitter Base Voltage | $-V_{EBO}$ | 5 | V |
| Collector Current | $-I_C$ | 600 | mA |
| Total Power Dissipation | P_{tot} | 200 | mW |
| Junction Temperature | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_s | - 55 to + 150 | $^\circ\text{C}$ |

Characteristics at $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Min. | Max. | Unit |
|--|----------------|------|-------------|---------------|
| DC Current Gain at $-V_{CE} = 1 \text{ V}$, $-I_C = 0.1 \text{ mA}$ | h_{FE} | 30 | - | - |
| at $-V_{CE} = 1 \text{ V}$, $-I_C = 1 \text{ mA}$ | h_{FE} | 60 | - | - |
| at $-V_{CE} = 1 \text{ V}$, $-I_C = 10 \text{ mA}$ | h_{FE} | 100 | - | - |
| at $-V_{CE} = 2 \text{ V}$, $-I_C = 150 \text{ mA}$ | h_{FE} | 100 | 300 | - |
| at $-V_{CE} = 2 \text{ V}$, $-I_C = 500 \text{ mA}$ | h_{FE} | 20 | - | - |
| Collector Cutoff Current at $-V_{CB} = 35 \text{ V}$ | $-I_{CBO}$ | - | 0.1 | μA |
| Base Cutoff Current at $-V_{EB} = 5 \text{ V}$ | $-I_{EBO}$ | - | 0.1 | μA |
| Collector Base Breakdown Voltage at $-I_C = 0.1 \text{ mA}$ | $-V_{(BR)CBO}$ | 40 | - | V |
| Collector Emitter Breakdown Voltage at $-I_C = 1 \text{ mA}$ | $-V_{(BR)CEO}$ | 40 | - | V |
| Emitter Base Breakdown Voltage at $-I_E = 0.1 \text{ mA}$ | $-V_{(BR)EBO}$ | 5 | - | V |
| Collector Emitter Saturation Voltage at $-I_C = 150 \text{ mA}$, $-I_B = 15 \text{ mA}$ at $-I_C = 500 \text{ mA}$, $-I_B = 50 \text{ mA}$ | $-V_{CEsat}$ | - | 0.4 0.75 | V |
| Base Emitter Saturation Voltage at $-I_C = 150 \text{ mA}$, $-I_B = 15 \text{ mA}$ at $-I_C = 500 \text{ mA}$, $-I_B = 50 \text{ mA}$ | $-V_{BEsat}$ | - | 0.95 1.3 | V |
| Current Gain Bandwidth Product at $-V_{CE} = 10 \text{ V}$, $-I_C = 20 \text{ mA}$, $f = 100 \text{ MHz}$ | f_T | 200 | - | MHz |
| Collector Base Capacitance at $-V_{CB} = 10 \text{ V}$, $-I_E = 0$, $f = 1 \text{ MHz}$ | C_{cb} | - | 8.5 | pF |



Dated : 26/12/2006



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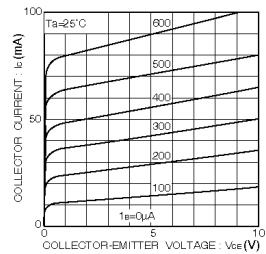


Fig.1 Grounded emitter output characteristics

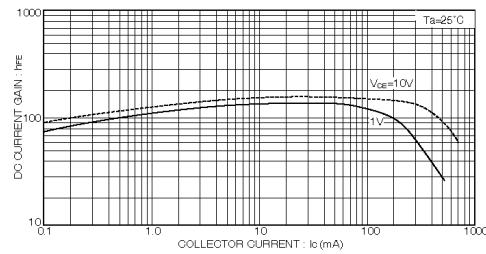


Fig.3 DC current gain vs. collector current (I)

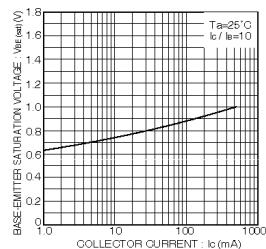


Fig.2 Base-emitter saturation voltage vs. collector current

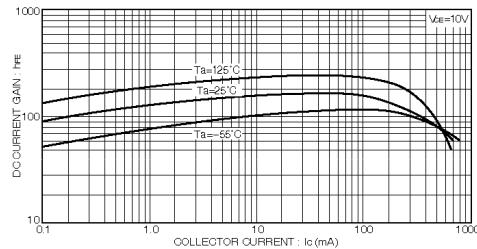


Fig.4 DC current gain vs. collector current (II)

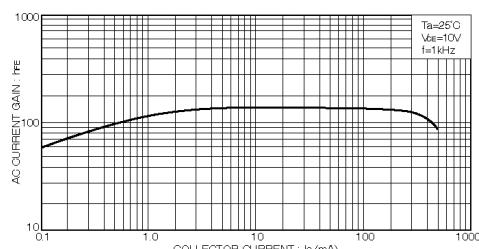


Fig.5 AC current gain vs. collector current

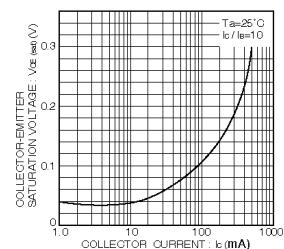
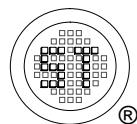


Fig.6 Collector-emitter saturation voltage vs. collector current



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