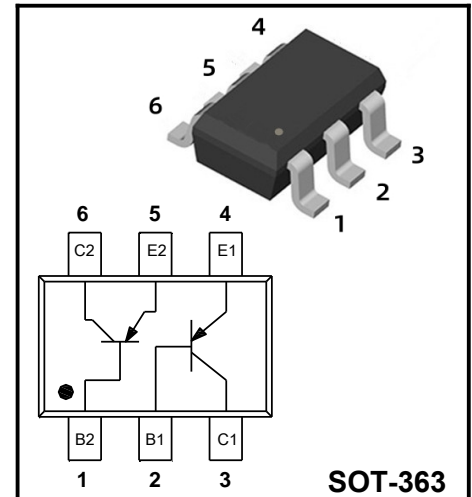


Plastic-Encapsulate Transistors
DUAL TRANSISTOR (PNP+PNP)
FEATURES

- ◆ Epitaxial planar die construction
- ◆ Ideal for low power amplification and switching



| Marking Code | |
|---------------------|------------|
| DMMT3906W | K4B |

MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

| Parameter | Symbol | Value | Units |
|---|-----------------|---------|-------|
| Collector-Base Voltage | V_{CBO} | -40 | V |
| Collector-Emitter Voltage | V_{CEO} | -40 | V |
| Emitter-Base Voltage | V_{EBO} | -5 | V |
| Collector Current -Continuous | I_C | -0.2 | A |
| Collector Power Dissipation | P_C | 0.2 | W |
| Thermal Resistance. Junction to Ambient Air | $R_{\theta JA}$ | 625 | °C/W |
| Junction Temperature | T_J | 150 | °C |
| Storage Temperature | T_{stg} | -55-150 | °C |

MAXIMUM RATINGS(Ta=25°C unless otherwise noted)

| Parameter | Test conditions | Symbol | Min | Typ | Max | Unit |
|--------------------------------------|---|----------------|-------|-----|-------|------|
| Collector-base breakdown voltage | $I_C = -10\mu A, I_E = 0$ | $V_{(BR)CBO}$ | -40 | | | V |
| Collector-emitter breakdown voltage | $I_C = -1mA, I_B = 0$ | $V_{(BR)CEO}$ | -40 | | | V |
| Emitter-base breakdown voltage | $I_E = -10\mu A, I_C = 0$ | $V_{(BR)EBO}$ | -5 | | | V |
| Collector cut-off current | $V_{CE} = -30V, V_{EB(OFF)} = -3V$ | I_{CEX} | | | -50 | nA |
| Base cut-off current | $V_{EB} = -5V, I_C = 0$ | I_{EBO} | | | -50 | nA |
| DC current gain | $V_{CE} = -1V, I_C = -0.1mA$ | $h_{FE(1)}$ | 60 | | | |
| | $V_{CE} = -1V, I_C = -1mA$ | $h_{FE(2)}$ | 80 | | | |
| | $V_{CE} = -1V, I_C = -10mA$ | $h_{FE(3)}$ | 100 | | 300 | |
| | $V_{CE} = -1V, I_C = -50mA$ | $h_{FE(4)}$ | 60 | | | |
| | $V_{CE} = -1V, I_C = -100mA$ | $h_{FE(5)}$ | 30 | | | |
| Collector-emitter saturation voltage | $I_C = -10mA, I_B = -1mA$ | $V_{CE(sat)1}$ | | | -0.25 | V |
| | $I_C = -50mA, I_B = -5mA$ | $V_{CE(sat)2}$ | | | -0.4 | V |
| Base-emitter saturation voltage | $I_C = -10mA, I_B = -1mA$ | $V_{BE(sat)1}$ | -0.65 | | -0.85 | V |
| | $I_C = -50mA, I_B = -5mA$ | $V_{BE(sat)2}$ | | | -0.95 | V |
| Transition frequency | $V_{CE} = -20V, I_C = -10mA, f = 100MHz$ | f_T | 250 | | | MHz |
| Collector output capacitance | $V_{CB} = -5V, I_E = 0, f = 1MHz$ | C_{ob} | | | 4.5 | pF |
| Noise figure | $V_{CE} = -5V, I_C = -0.1mA, f = 1KHz, R_g = 1K\Omega$ | NF | | | 4 | dB |
| Delay time | $V_{CC} = -3V, V_{BE} = 0.5V$ $I_C = -10mA, I_{B1} = -I_{B2} = -1mA$ | t_d | | | 35 | nS |
| Rise time | | t_r | | | 35 | nS |
| Storage time | | t_s | | | 225 | nS |
| Fall time | | t_f | | | 75 | nS |

Typical Characteristics

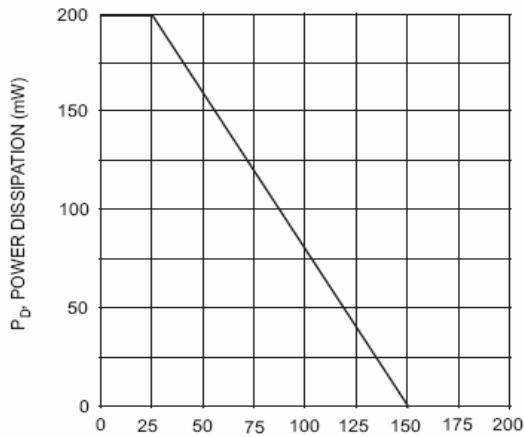


Fig. 1, Max Power Dissipation vs Ambient Temperature

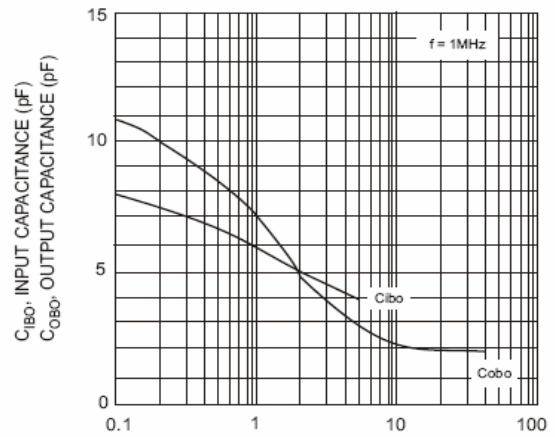


Fig. 2, Input and Output Capacitance vs. Collector-Base Voltage

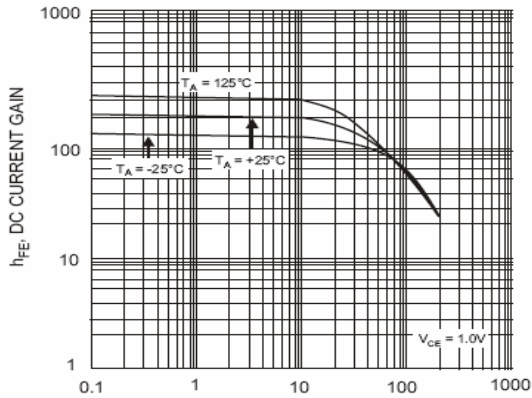


Fig. 3, Typical DC Current Gain vs Collector Current

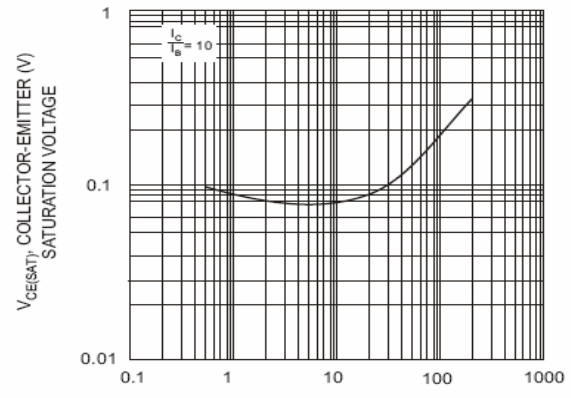


Fig. 4, Typical Collector-Emitter Saturation Voltage vs. Collector Current

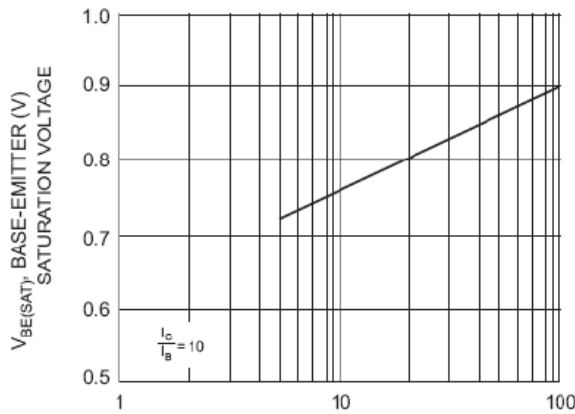


Fig. 5, Typical Base-Emitter Saturation Voltage vs. Collector Current

Ordering information

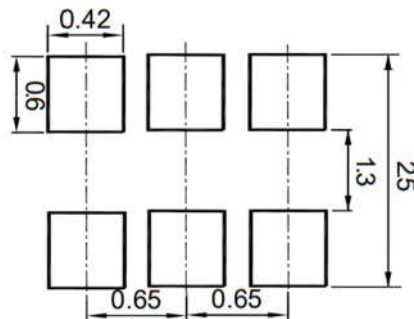
| Package | Packing Description | Packing Quantity |
|---------|---------------------|-------------------------------|
| SOT-363 | Tape/Reel, 7" reel | 3000PCS/Reel 120000PCS/Carton |

Package Dimensions

SOT-363

| Dim. | Millimeter(mm) | | mil | |
|------|----------------|------|-------|-------|
| | Min. | Max. | Min. | Max. |
| A | 0.8 | 1.1 | 32 | 43 |
| A1 | - | 0.1 | - | 3.94 |
| bp | 0.20 | 0.30 | 7.87 | 11.81 |
| c | 0.10 | 0.25 | 3.94 | 9.84 |
| D | 1.8 | 2.2 | 70.87 | 86.61 |
| E | 1.15 | 1.35 | 45.28 | 53.15 |
| e | 1.3 | | 51.18 | |
| e1 | 0.65 | | 25.6 | |
| HE | 2.0 | 2.2 | 78.74 | 86.6 |
| Lp | 0.15 | 0.45 | 5.90 | 17.71 |
| Q | 0.15 | 0.25 | 5.90 | 9.84 |
| v | 0.2 | | 7.78 | |
| w | 0.2 | | 7.78 | |
| y | 0.1 | | 3.94 | |

The recommended mounting pad size



Disclaimer

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