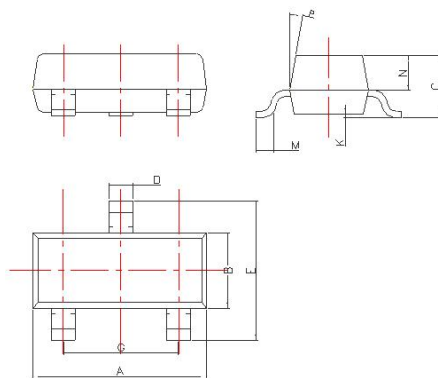
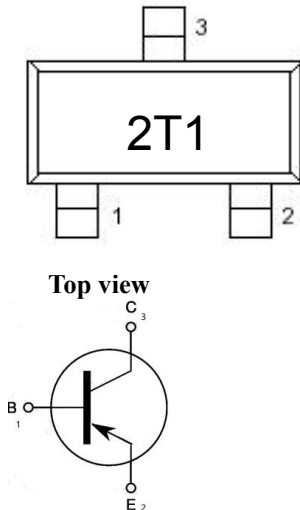


CDT9012-ME

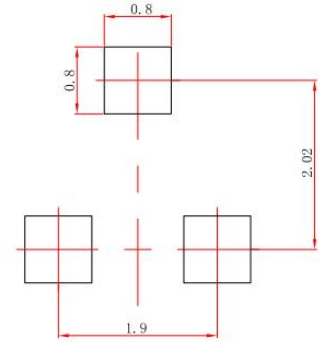
TRANSISTOR

Marking: 2T1

SOT-23 Dimension

SOT-23
Suggested Layout

| DIM | Millimeters |
|-----|-------------|
| A | 2.85~3.04 |
| B | 1.30±0.10 |
| C | 1.00±0.10 |
| D | 0.45±0.05 |
| E | 2.25~2.55 |
| G | 1.90±0.1 |
| K | 0.00~0.10 |
| M | 0.20 min |
| N | 0.60±0.10 |
| P | 7±2° |



mm(±0.05mm)

MAXIMUM RATINGS (Ta=25°C)

| Characteristic | Symbol | Rating | Unit |
|--------------------------------|-----------|--------|------|
| Collector-Emitter Voltage | V_{CEO} | -40 | Vdc |
| Collector-Base Voltage | V_{CBO} | -30 | Vdc |
| Emitter-Base Voltage | V_{EBO} | -5.0 | Vdc |
| Collector Current - Continuous | I_C | -500 | mAdc |
| Base Current | I_B | -50 | mAdc |

THERMAL CHARACTERISTICS

| Characteristic | Symbol | Max | Unit |
|----------------------------------|----------------------|-------------------|------|
| Collector Power Dissipation | P_c | 300 | mW |
| Junction and Storage Temperature | T_j , T_{stg} | 150 , -55 ~150 | °C |

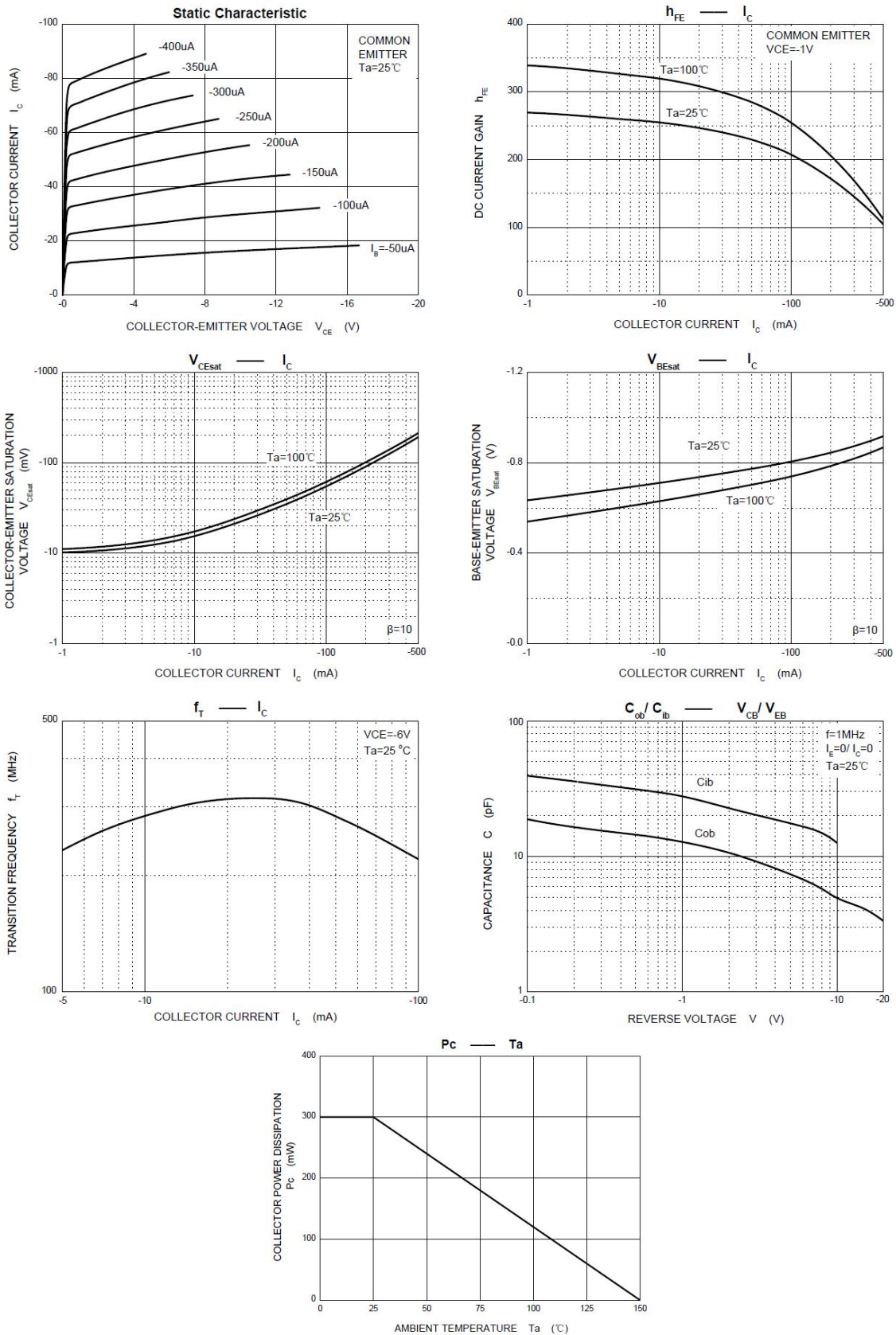
ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise noted)

| Characteristic | Symbol | Test Condition | Min | Type | Max | Unit |
|--------------------------------------|---------------|-----------------------------|-----|------|------|------|
| Collector Cutoff Current | I_{CBO} | $V_{CB}=-35V, I_E=0$ | -- | -- | -0.1 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB}=-5V, I_C=0$ | -- | -- | -0.1 | μA |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C=-1.0mA$ | -30 | -- | -- | V |
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C=-100\mu A$ | -40 | -- | -- | V |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | $I_E=-100\mu A$ | -5 | -- | -- | V |
| DC Current Gain | $h_{FE}(1)$ | $V_{CE}=-1V, I_C=-100mA$ | 200 | -- | 350 | -- |
| | $h_{FE}(2)$ | $V_{CE}=-6V, I_C=-400mA$ | 25 | -- | -- | -- |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=-500mA, I_B=-50mA$ | -- | -- | -0.6 | V |
| Base-Emitter Voltage | V_{BE} | $V_{CE}=-1V, I_C=-100mA$ | -- | -0.8 | -1.0 | V |
| Transition Frequency | f_T | $V_{CE}=-6V, I_C=-20mA$ | 150 | 200 | -- | MHz |
| Collector Output Capacitance | C_{ob} | $V_{CB}=-6V, I_E=0, f=1MHz$ | -- | 13 | -- | pF |

CDT9012-ME

TRANSISTOR

Typical Performance Characteristics



Note: Specifications are subject to change without notice. For more detail and update, please visit our website.