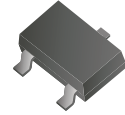


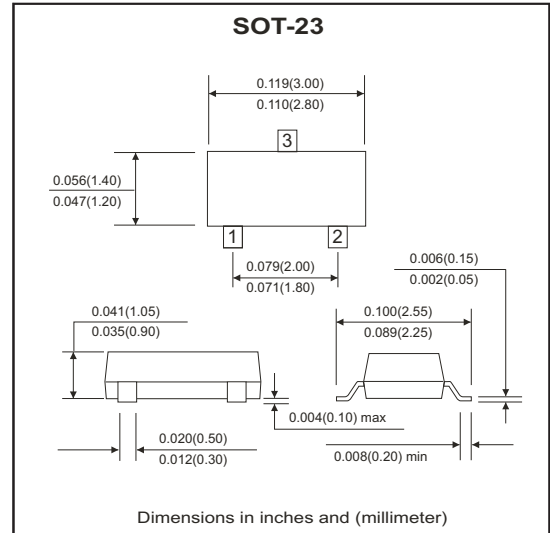
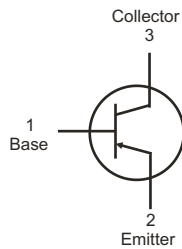
## MMBT5401-G (PNP) RoHS Device



### Features

- Epitaxial planar die construction.
- Complementary NPN type available (MMBT5551-G).
- Ideal for medium power amplification and switching.

### Diagram:



### Marking: 2L

### Maximum Ratings (at TA=25°C unless otherwise noted)

| Parameter                        | Symbol         | Value      | Unit |
|----------------------------------|----------------|------------|------|
| Collector-base voltage           | $V_{CBO}$      | -160       | V    |
| Collector-emitter voltage        | $V_{CEO}$      | -150       | V    |
| Emitter-base voltage             | $V_{EBO}$      | -5         | V    |
| Collector current - continuous   | $I_C$          | -0.6       | A    |
| Collector dissipation            | $P_C$          | 0.3        | W    |
| Junction and storage temperature | $T_J, T_{STG}$ | -55 ~ +150 | °C   |

### Electrical Characteristics (at TA=25°C unless otherwise noted)

| Parameter                            | Conditions                             | Symbol        | Min  | Max  | Unit    |
|--------------------------------------|--|---------------|------|------|---------|
| Collector-base breakdown voltage     | $I_C = -100\mu A, I_E = 0$             | $V_{(BR)CBO}$ | -160 |      | V       |
| Collector-emitter breakdown voltage  | $I_C = -1mA, I_B = 0$                  | $V_{(BR)CEO}$ | -150 |      | V       |
| Emitter-base breakdown voltage       | $I_E = -10\mu A, I_C = 0$              | $V_{(BR)EBO}$ | -5   |      | V       |
| Collector cut-off current            | $V_{CB} = -120V, I_E = 0$              | $I_{CBO}$     |      | -0.1 | $\mu A$ |
| Emitter cut-off current              | $V_{EB} = -4V, I_C = 0$                | $I_{EBO}$     |      | -0.1 | $\mu A$ |
| DC current gain                      | $V_{CE} = -5V, I_C = -1mA$             | $h_{FE(1)}$   | 80   |      |         |
|                                      | $V_{CE} = -5V, I_C = -10mA$            | $h_{FE(2)}$   | 100  | 200  |         |
|                                      | $V_{CE} = -5V, I_C = -50mA$            | $h_{FE(3)}$   | 50   |      |         |
| Collector-emitter saturation voltage | $I_C = -50mA, I_B = -5mA$              | $V_{CE(sat)}$ |      | -0.5 | V       |
| Base-emitter saturation voltage      | $I_C = -50mA, I_B = -5mA$              | $V_{BE(sat)}$ |      | -1   | V       |
| Transition frequency                 | $V_{CE} = -5V, I_C = -10mA, f = 30MHz$ | $f_T$         | 100  |      | Mhz     |

## RATING AND CHARACTERISTIC CURVES (MMBT5401-G)

Fig.1 Max Power Dissipation vs. Ambient Temperature

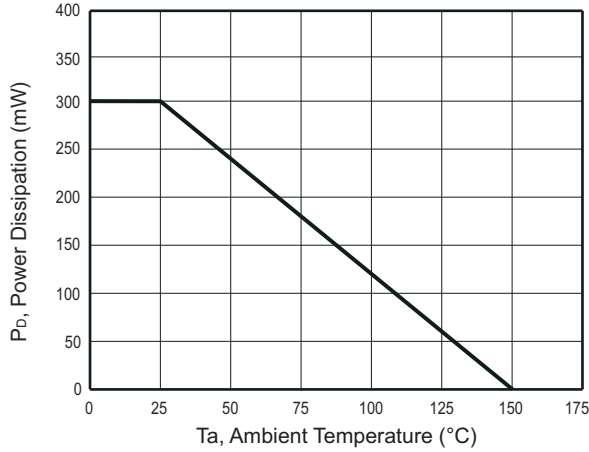


Fig.2 Collector Emitter Saturation Voltage vs. Collector Current

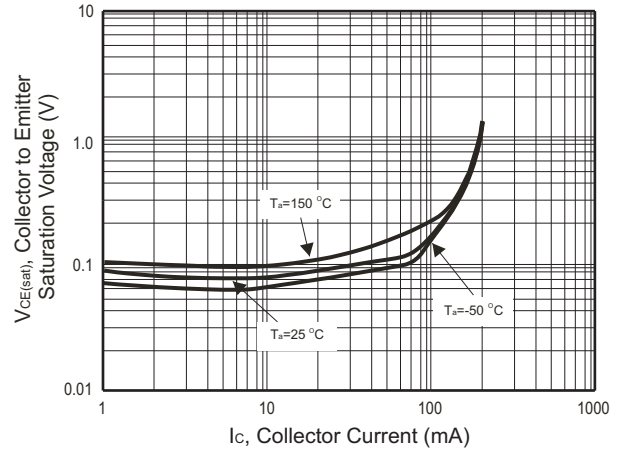


Fig.3 DC Current Gain vs. Collector Current

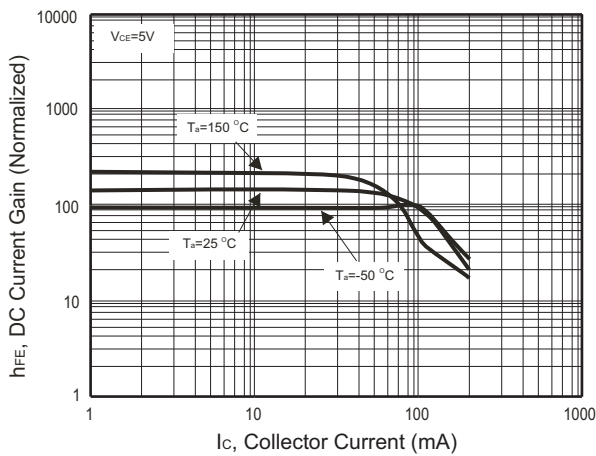


Fig.4 Base Emitter Voltage vs. Collector Current

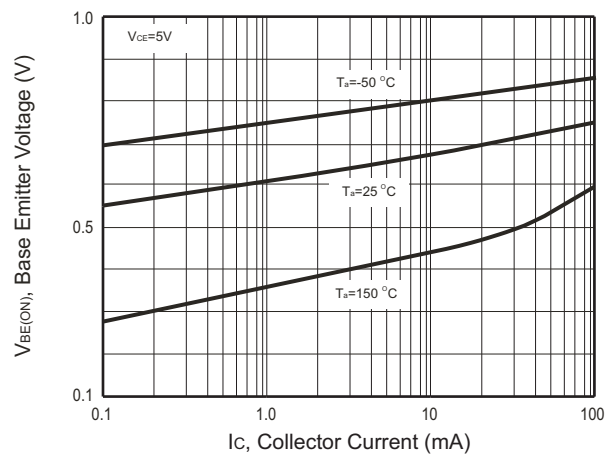
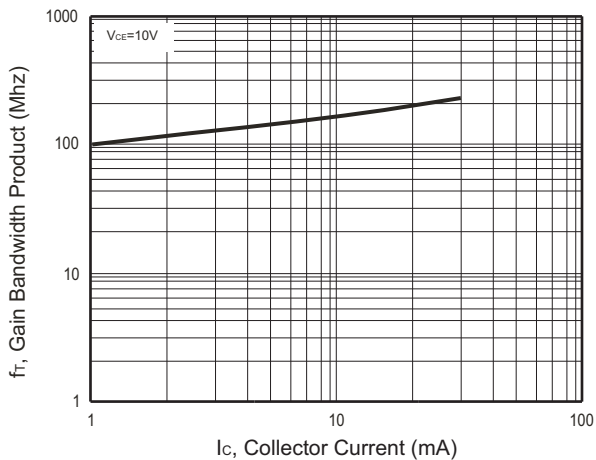
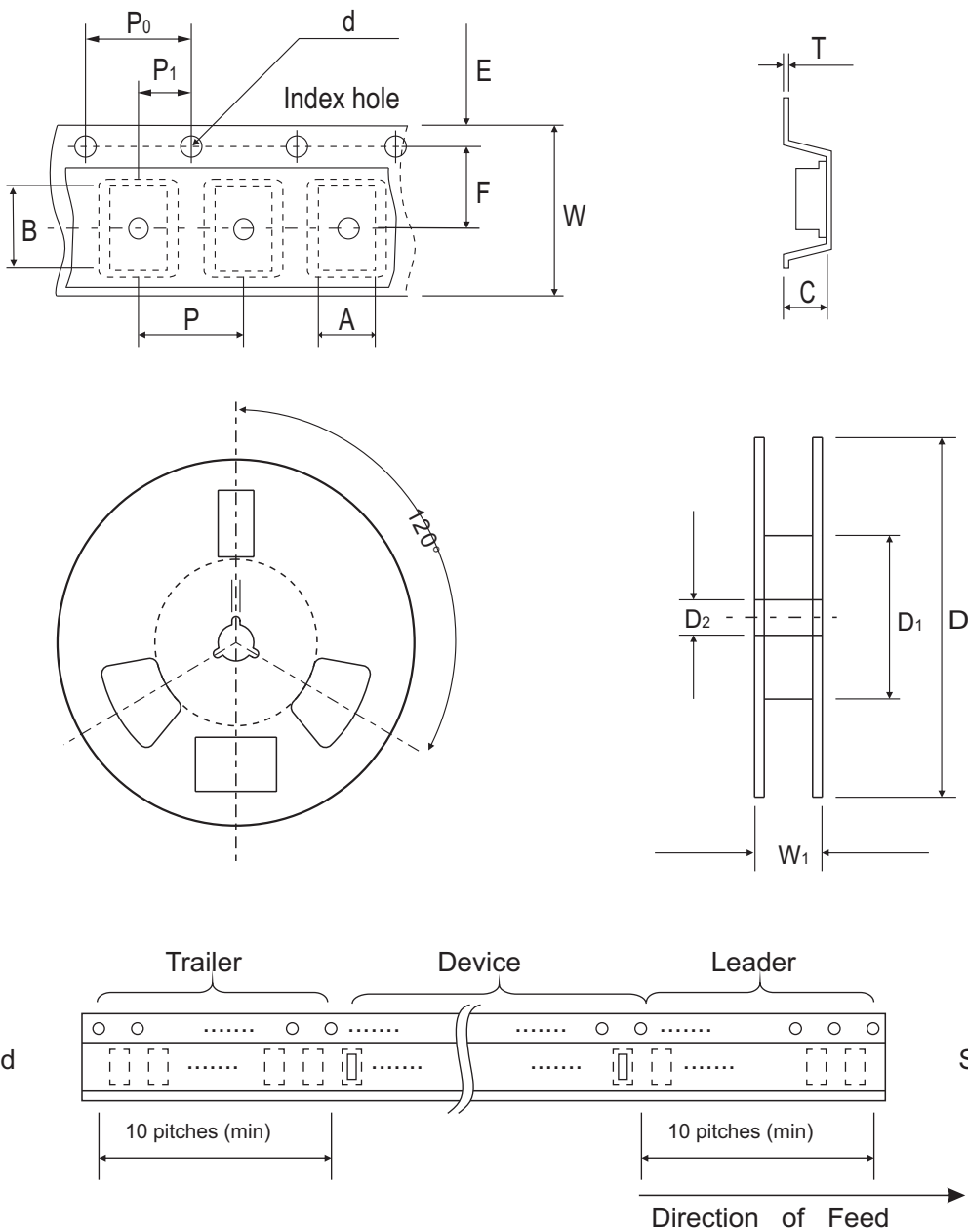


Fig.5 Gain Bandwidth Product vs. Collector Current



## Reel Taping Specification

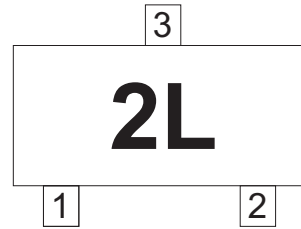


| SOT-23 | SYMBOL | A             | B             | C             | d             | D            | D <sub>1</sub> | D <sub>2</sub> |
|--------|--------|---------------|---------------|---------------|---------------|--------------|----------------|----------------|
|        | (mm)   | 3.10 ± 0.10   | 2.85 ± 0.10   | 1.40 ± 0.10   | 1.55 ± 0.10   | 178 ± 1      | 50.0 MIN.      | 13.0 ± 0.20    |
|        | (inch) | 0.122 ± 0.004 | 0.112 ± 0.004 | 0.055 ± 0.004 | 0.061 ± 0.004 | 7.008 ± 0.04 | 1.969 MIN.     | 0.512 ± 0.008  |

| SOT-23 | SYMBOL | E             | F             | P             | P <sub>0</sub> | P <sub>1</sub> | W             | W <sub>1</sub> |
|--------|--------|---------------|---------------|---------------|----------------|----------------|---------------|----------------|
|        | (mm)   | 1.75 ± 0.10   | 3.50 ± 0.05   | 4.00 ± 0.10   | 4.00 ± 0.10    | 2.00 ± 0.05    | 8.00 ± 0.30   | 14.4 MAX.      |
|        | (inch) | 0.069 ± 0.004 | 0.138 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.004  | 0.079 ± 0.002  | 0.315 ± 0.012 | 0.567 MAX.     |

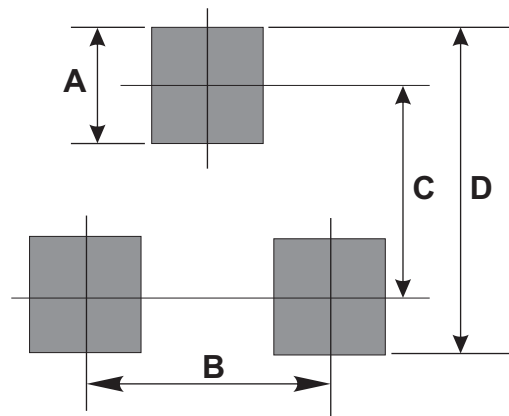
## Marking Code

| Part Number | Marking Code |
|-------------|--------------|
| MMBT5401-G  | 2L           |



## Suggested PAD Layout

| SIZE | SOT-23 |        |
|------|--------|--------|
|      | (mm)   | (inch) |
| A    | 0.80   | 0.031  |
| B    | 1.90   | 0.075  |
| C    | 2.02   | 0.080  |
| D    | 2.82   | 0.111  |



## Standard Packaging

| Case Type | REEL PACK    |                  |
|-----------|--------------|------------------|
|           | REEL ( pcs ) | Reel Size (inch) |
| SOT-23    | 3,000        | 7                |

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Comchip Technology:](#)

[MMBT5401-G](#)