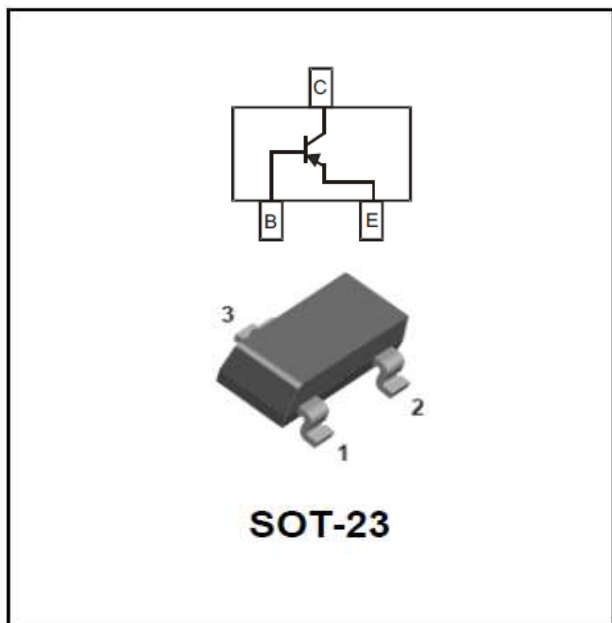


PNP General Purpose Amplifier



Features

- Epoxy meets UL-94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: 2T



■ Maximum Ratings (Ta=25°C unless otherwise noted)

| Item | Symbol | Unit | Conditions | Value |
|-------------------------------|--------|------|------------|-------------|
| Collector-Base Voltage | VCBO | V | | -40 |
| Collector-Emitter Voltage | VCEO | V | | -40 |
| Emitter-Base Voltage | VEBO | V | | -5 |
| Collector Current -Continuous | IC | A | | -0.6 |
| Total Device Dissipation | PC | W | | 0.3 |
| Junction Temperature | Tj | °C | | 150 |
| Storage Temperature | TSTG | °C | | -55 to +150 |

■ Electrical Characteristics (Ta=25°C unless otherwise noted)

| Item | Symbol | Unit | Conditions | Min | Max |
|--------------------------------------|-----------------------|------|---------------------|-----|-------|
| Collector-base breakdown voltage | V _{(BR)CBO} | V | IC=-100µA, IE=0 | -40 | |
| Collector-emitter breakdown voltage | V _{(BR)CEO} | V | IC=-1mA, IB=0 | -40 | |
| Emitter-base breakdown voltage | V _{(BR)EBO} | V | IE=-100µA, IC=0 | -5 | |
| Collector cut-off current | I _{CBO} | µA | VCB=-35V, IB=0 | | -0.1 |
| Base cut-off current | I _{CEO} | µA | VCE=-35V, IE=0 | | -0.1 |
| Collector cut-off current | I _{EBO} | µA | VCE=-4V, V IC=0V | | -0.1 |
| DC current gain | h _{FE} | V | VCE=-2V, IC=-150mA | 100 | 300 |
| Collector-emitter saturation voltage | V _{CE(sat)} | V | IC=-150mA, IB=-15mA | | -0.4 |
| Base-emitter saturation voltage | V _{BE(sat)*} | V | IC=-150mA, IB=-15mA | | -0.95 |

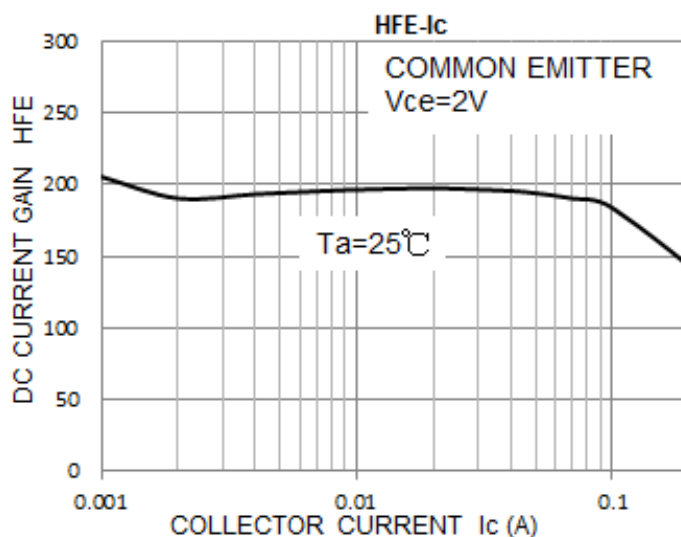
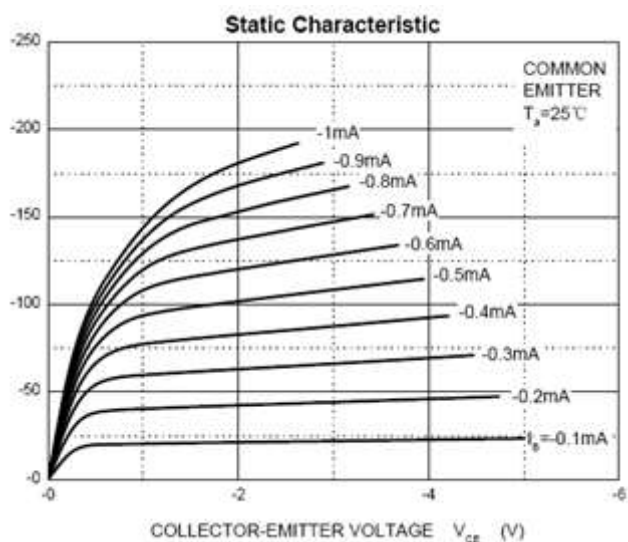
■ Electrical Characteristics (Ta=25°C unless otherwise noted)

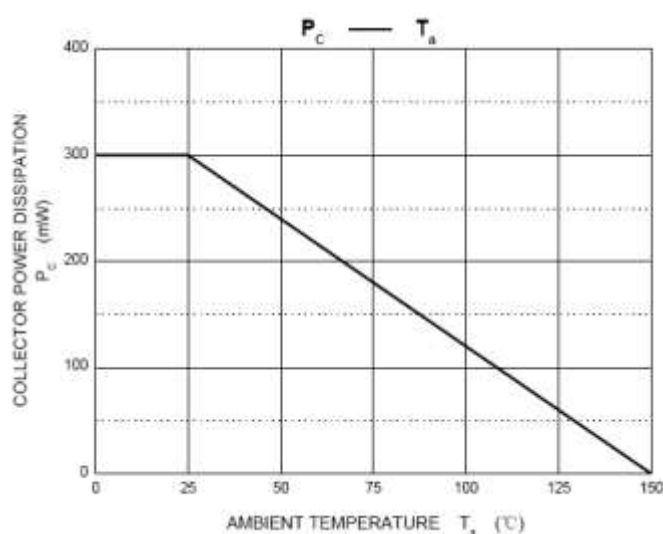
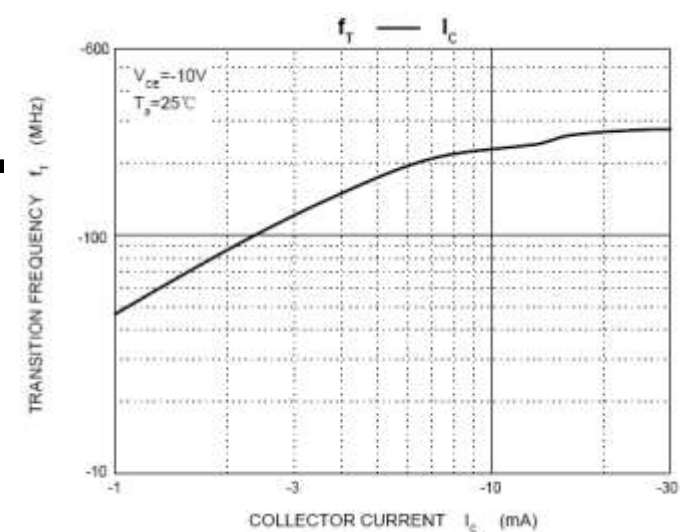
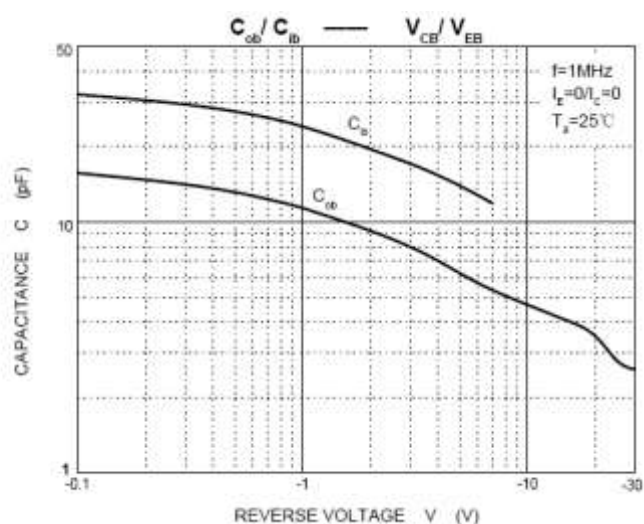
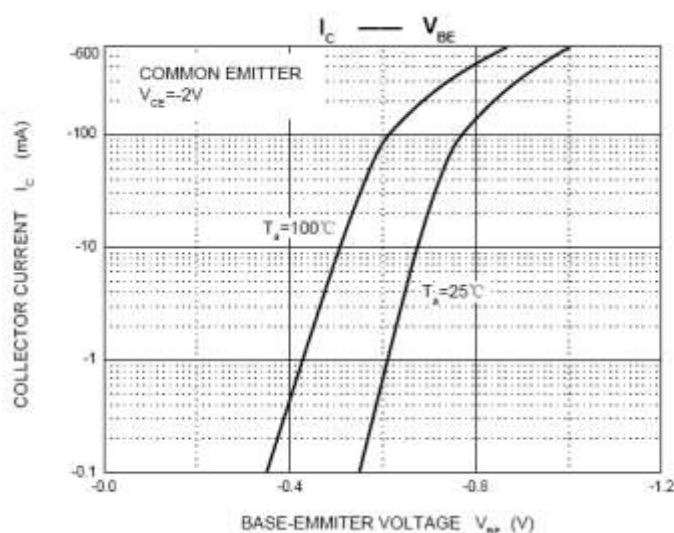
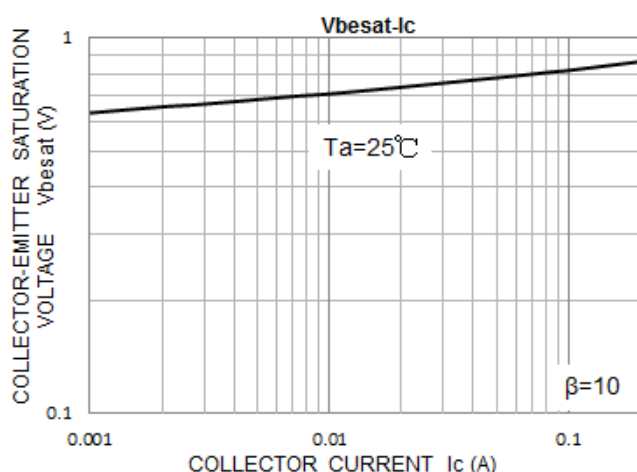
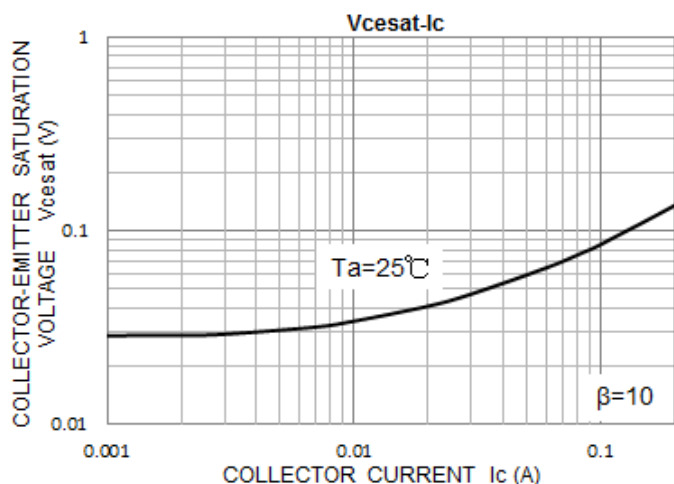
| Item | Symbol | Unit | Conditions | Min | Max |
|----------------------|--------|------|--|-----|-----|
| Transition frequency | Ft | MHz | VCE=-10V, IC=-20mA, f=100MHz | 200 | |
| Delay time | td | ns | VCC=-3V, VEB=-2V 150mA, IB1=-15mA | | 15 |
| Rise time | tr | ns | | | 20 |
| Storage time | ts | ns | VCC=-3V, IC=-150mA, IB1=- IB2=-15mA | | 225 |
| Fall time | tf | ns | | | 30 |

■ Ordering Information (Example)

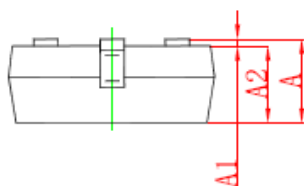
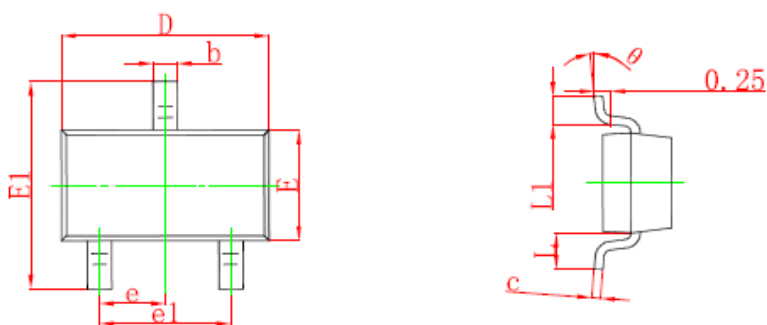
| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| MMBT4403 | F2 | Approximate 0.008 | 3000 | 30000 | 120000 | 7" reel |

■ Characteristics (Typical)



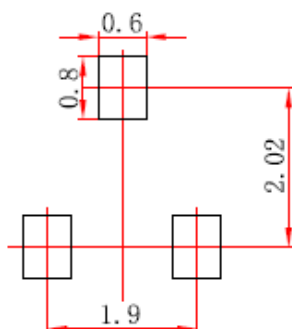


■ SOT-23 Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 0.900 | 1.150 | 0.035 | 0.045 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.050 | 0.035 | 0.041 |
| b | 0.300 | 0.500 | 0.012 | 0.020 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 2.800 | 3.000 | 0.110 | 0.118 |
| E | 1.200 | 1.400 | 0.047 | 0.055 |
| E1 | 2.250 | 2.550 | 0.089 | 0.100 |
| e | 0.950 TYP | | 0.037 TYP | |
| e1 | 1.800 | 2.000 | 0.071 | 0.079 |
| L | 0.550 REF | | 0.022 REF | |
| L1 | 0.300 | 0.500 | 0.012 | 0.020 |
| θ | 0° | 8° | 0° | 8° |

■ SOT-23 Suggested Pad Layout



- Note:
1. Controlling dimension: In millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.

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