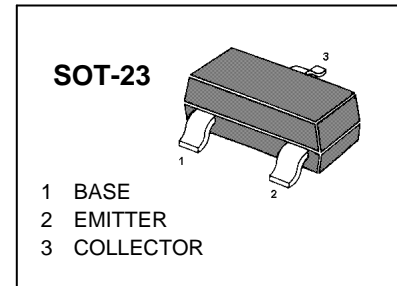


FEATURES

- Epitaxial Planar Die Construction
- Complementary PNP Type Available (MMBT3906)
- Ideal for Medium Power Amplification and Switching

MARKING: 1AM



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

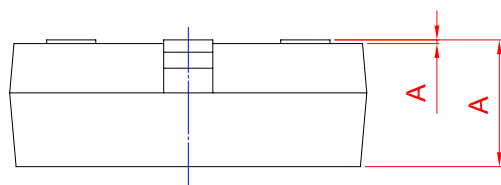
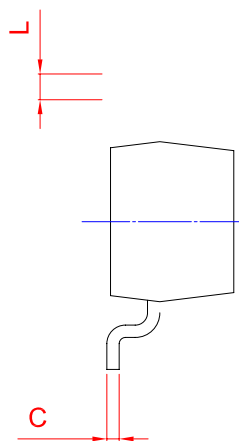
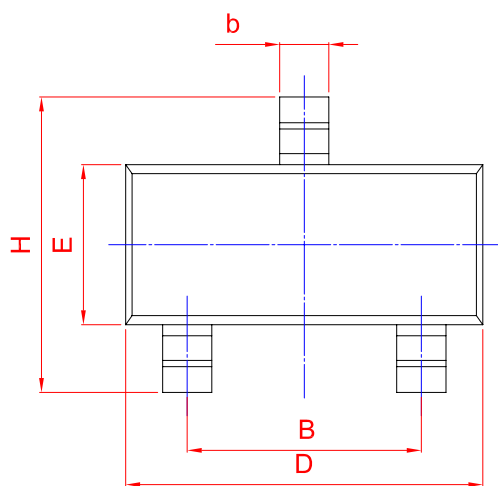
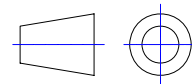
| Symbol | Parameter | Value | Unit |
|------------------|---|------------|------|
| V _{CBO} | Collector-Base Voltage | 60 | V |
| V _{CEO} | Collector-Emitter Voltage | 40 | V |
| V _{EBO} | Emitter-Base Voltage | 6 | V |
| I _C | Collector Current | 200 | mA |
| P _C | Total Device Dissipation | 200 | mW |
| R _{θJA} | Thermal Resistance From Junction to Ambient | 625 | °C/W |
| T _J | Junction Temperature | 150 | °C |
| T _{stg} | Storage Temperature | -55 ~ +150 | °C |

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Max | Unit |
|--------------------------------------|----------------------|--|-----|------|------|
| Collector-base breakdown voltage | V _{(BR)CBO} | I _C = 10μA, I _E =0 | 60 | | V |
| Collector-emitter breakdown voltage | V _{(BR)CEO} | I _C = 1mA, I _B =0 | 40 | | V |
| Emitter-base breakdown voltage | V _{(BR)EBO} | I _E =10μA, I _C =0 | 6 | | V |
| Collector cut-off current | I _{CB0} | V _{CB} =60V, I _E =0 | | 0.1 | μA |
| Collector cut-off current | I _{CEx} | V _{CE} =30V, V _{BE(off)} =3V | | 50 | nA |
| Emitter cut-off current | I _{EBO} | V _{EB} =5V, I _C =0 | | 0.1 | μA |
| DC current gain | h _{FE(1)} | V _{CE} =1V, I _C =10mA | 100 | 300 | |
| | h _{FE(2)} | V _{CE} =1V, I _C = 50mA | 60 | | |
| | h _{FE(3)} | V _{CE} =1V, I _C = 100mA | 30 | | |
| Collector-emitter saturation voltage | V _{CE(sat)} | I _C =50mA, I _B = 5mA | | 0.3 | V |
| Base-emitter saturation voltage | V _{BE(sat)} | I _C = 50mA, I _B = 5mA | | 0.95 | V |
| Transition frequency | f _T | V _{CE} =20V, I _C =10mA, f=100MHz | 300 | | MHz |
| Delay Time | t _d | V _{CC} =3V, V _{BE} =-0.5V | | 35 | nS |
| Rise Time | t _r | I _C =10mA, I _{B1} =-I _{B2} =1.0mA | | 35 | nS |
| Storage Time | t _s | V _{CC} =3V, I _C =10mA, | | 200 | nS |
| Fall Time | t _f | I _{B1} =-I _{B2} =1mA | | 50 | nS |

Typical Characteristics

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| | | | | | | | | | |
|-------------|------------------|--|--|--|----------|---|--|----------------|--|
| UNIT | A | | | | D | E | | A ₁ | |
| mm | 1.4 ^j | | | | | | | | |