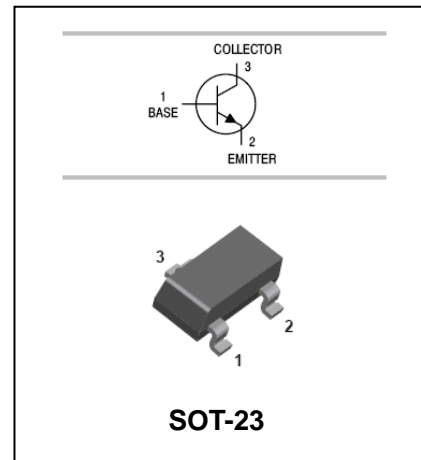


NPN General Purpose Amplifier

MMBT2369

FEATURES

- Epitaxial planar die construction.
- Ultra-small surface mount package.



APPLICATIONS

- Use as a medium power amplifier.

ORDERING INFORMATION

| Type No. | Marking | Package Code |
|----------|---------|--------------|
| MMBT2369 | M1J | SOT-23 |

MAXIMUM RATING @ Ta=25°C unless otherwise specified

| Symbol | Parameter | Value | Unit |
|-----------------|---|------------|------|
| V_{CBO} | Collector-Base Voltage | 40 | V |
| V_{CEO} | Collector-Emitter Voltage | 15 | V |
| V_{EBO} | Emitter-Base Voltage | 4.5 | V |
| I_C | Collector Current -Continuous | 200 | mA |
| P_C | Collector Dissipation | 300 | mW |
| $R_{\theta JA}$ | Thermal resistance, junction to ambient | 417 | °C/W |
| T_J, T_{stg} | Junction and Storage Temperature | -55 to+150 | °C |

NPN General Purpose Amplifier

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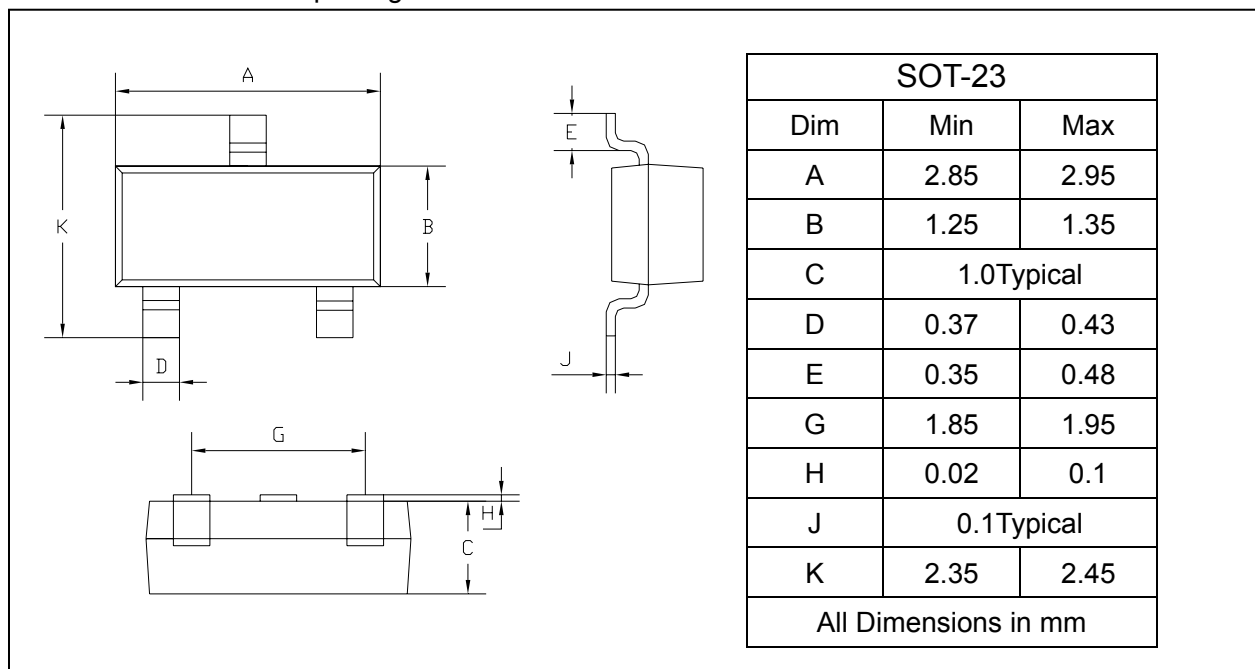
ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

| Parameter | Symbol | Test conditions | MIN | MAX | UNIT |
|--------------------------------------|---------------|---|-----|------|---------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=10\mu A, I_E=0$ | 40 | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=10mA, I_B=0$ | 15 | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=10\mu A, I_C=0$ | 4.5 | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=20V, I_E=0$ | | 0.4 | μA |
| DC current gain | h_{FE} | $V_{CE}=1.0V, I_C=10mA$ | 40 | 120 | |
| | | $V_{CE}=2.0V, I_C=100mA$ | 20 | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=10mA, I_B=1.0mA$ | | 0.25 | V |
| Output capacitance | C_{obo} | $V_{CE}=5.0V, I_E=0, f=1.0MHz$ | | 4.0 | pF |
| Small signal current gain | h_{fe} | $I_C=10mA, V_{CE}=10V, f=100MHz$ | 5.0 | | |
| Storage Time | t_s | $I_{B1}=I_{B2}=I_C=10mA$ | | 13 | ns |
| Turn-on time | t_{on} | $V_{CC}=3V, I_C=10mA, I_{B1}=3mA$ | | 12 | ns |
| Turn-off time | t_{off} | $V_{CC}=3V, I_C=10mA, I_{B1}=3mA, I_{B2}=1.5mA$ | | 18 | ns |

PACKAGE OUTLINE

Plastic surface mounted package

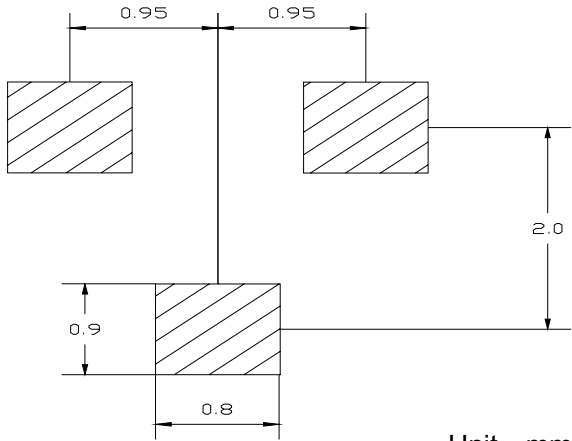
SOT-23



NPN General Purpose Amplifier

MMBT2369

SOLDERING FOOTPRINT



Unit: mm

PACKAGE INFORMATION

| Device | Package | Shipping |
|----------|---------|----------------|
| MMBT2369 | SOT-23 | 3000/Tape&Reel |