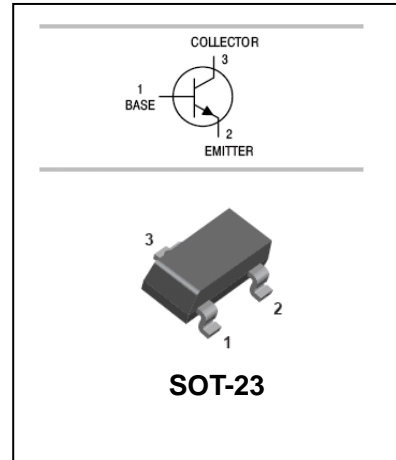


Silicon Epitaxial Planar Transistor

MMBTH10

FEATURES

- High transition frequency.
- Power dissipation.($P_C=350mW$)



APPLICATIONS

- VHF/UHF Transistor.

ORDERING INFORMATION

| Type No. | Marking | Package Code |
|----------|---------|--------------|
| MMBTH10 | 3EM | SOT-23 |

MAXIMUM RATING @ $T_a=25^\circ C$ unless otherwise specified

| Symbol | Parameter | Value | Units |
|----------------|----------------------------------|---------|------------|
| V_{CBO} | Collector-Base Voltage | 30 | V |
| V_{CEO} | Collector-Emitter Voltage | 25 | V |
| V_{EBO} | Emitter-Base Voltage | 3 | V |
| I_C | Collector Current -Continuous | 50 | mA |
| P_C | Collector Dissipation | 350 | mW |
| T_j, T_{stg} | Junction and Storage Temperature | -55~150 | $^\circ C$ |

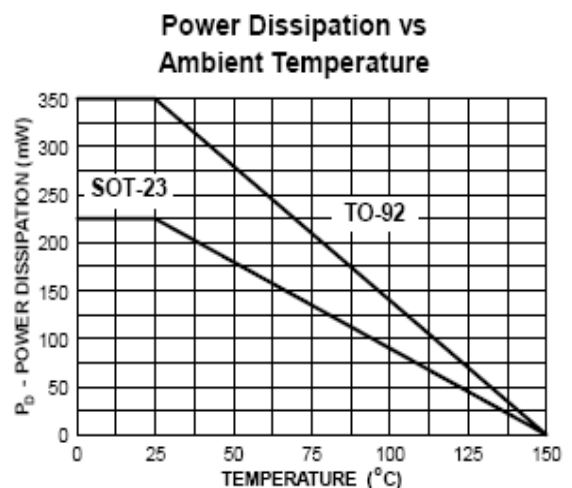
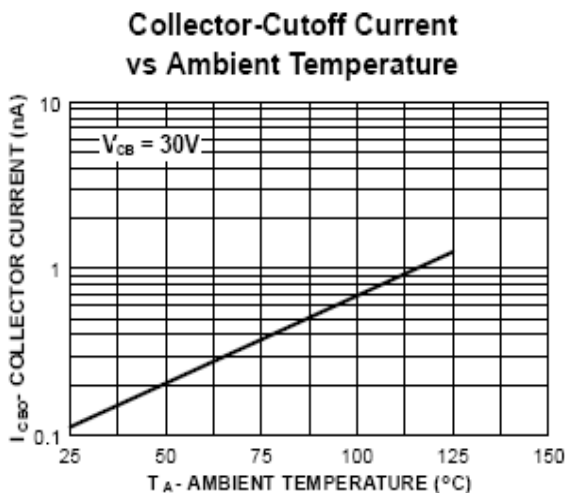
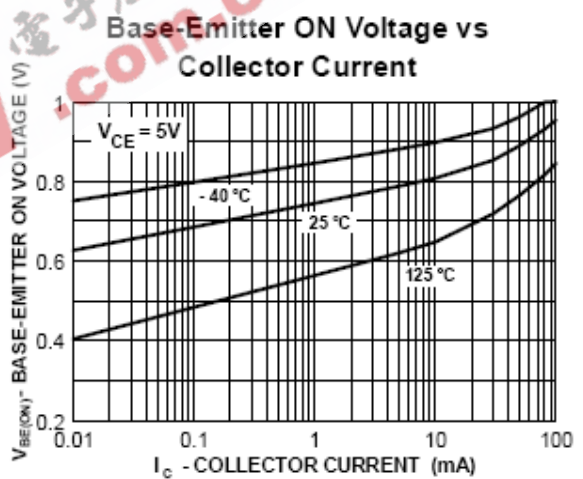
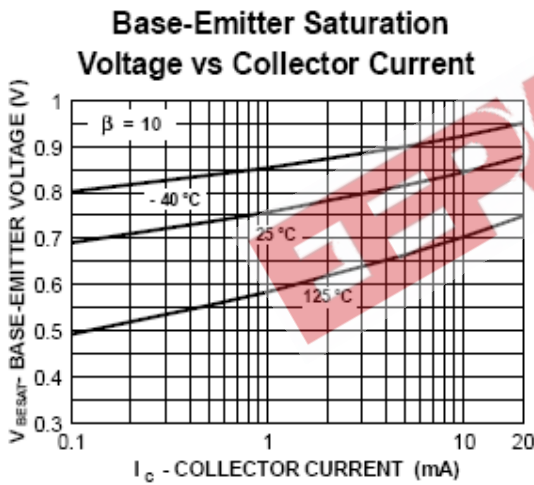
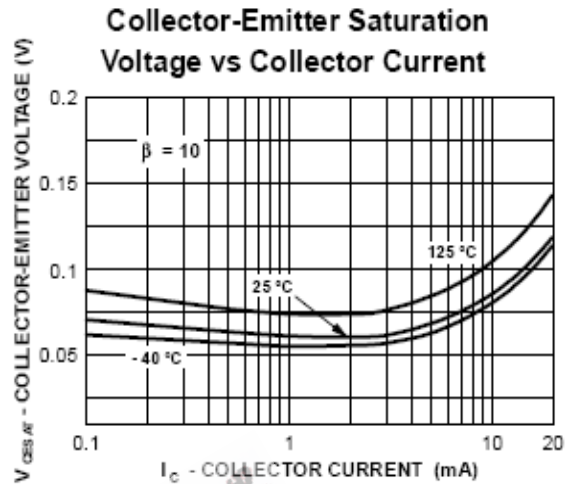
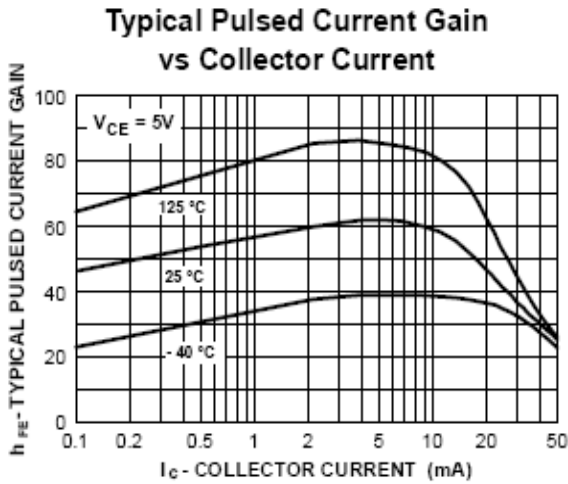
ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ C$ unless otherwise specified

| Parameter | Symbol | Test conditions | MIN | MAX | UNIT |
|--------------------------------------|---------------|---------------------------------------|-----|------|---------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=100\mu A, I_E=0$ | 30 | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=0.1mA, I_B=0$ | 25 | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=10\mu A, I_C=0$ | 3 | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=25V, I_E=0$ | | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=2V, I_C=0$ | | 0.1 | μA |
| DC current gain | h_{FE} | $V_{CE}=10V, I_C=4.0mA$ | 60 | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=4.0mA, I_B=0.4mA$ | | 0.5 | V |
| Base-emitter on voltage | $V_{BE(on)}$ | $I_C=4.0mA, V_{CE}=10V$ | | 0.95 | V |
| Transition frequency | f_T | $V_{CE}=10V, I_C=4.0mA$ $f=100MHz$ | 650 | | MHz |

Silicon Epitaxial Planar Transistor

MMBTH10

TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified



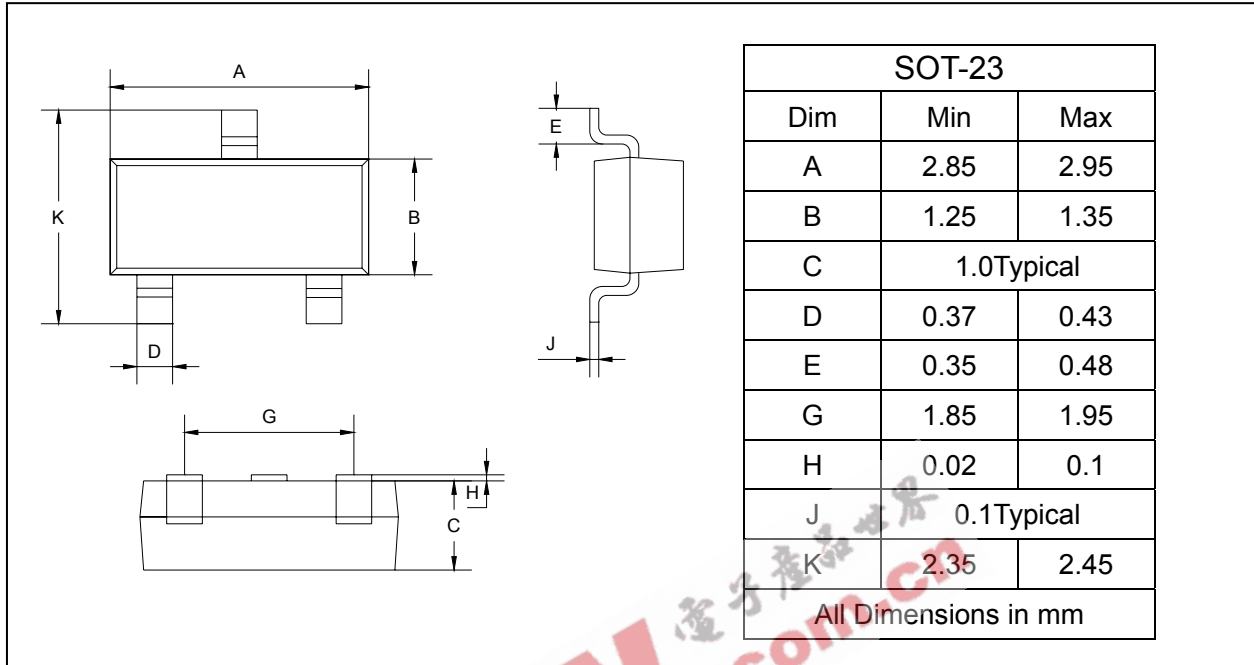
Silicon Epitaxial Planar Transistor

MMBTH10

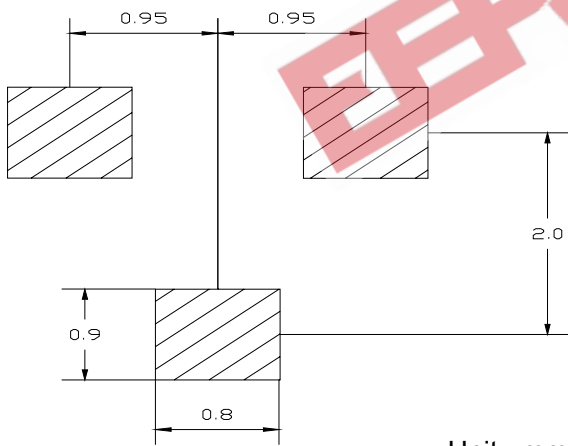
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

| Device | Package | Shipping |
|---------|---------|----------------|
| MMBTH10 | SOT-23 | 3000/Tape&Reel |