

NPN General Purpose Amplifier

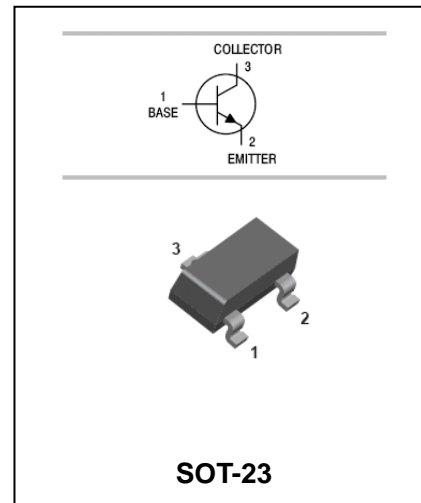
BC817-16/-25/-40

FEATURES

- For general AF application.
- Complementary PNP type available BC807.
- High collector current, high current gain.
- Low collector-emitter saturation voltage.



Lead-free



APPLICATIONS

- General purpose medium power amplifier.
- Switching requiring collector currents up to 1.2mA.

ORDERING INFORMATION

| Type No. | Marking | Package Code |
|----------|---------|--------------|
| BC817-16 | 6A | SOT-23 |
| BC817-25 | 6B | SOT-23 |
| BC817-40 | 6C | SOT-23 |

MAXIMUM RATING @ Ta=25°C unless otherwise specified

| Symbol | Parameter | Value | Unit |
|----------------|----------------------------------|-----------|------|
| V_{CBO} | Collector-Base Voltage | 50 | V |
| V_{CEO} | Collector-Emitter Voltage | 45 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current -Continuous | 500 | mA |
| P_C | Collector Dissipation | 300 | mW |
| T_j, T_{stg} | Junction and Storage Temperature | -55to+150 | °C |

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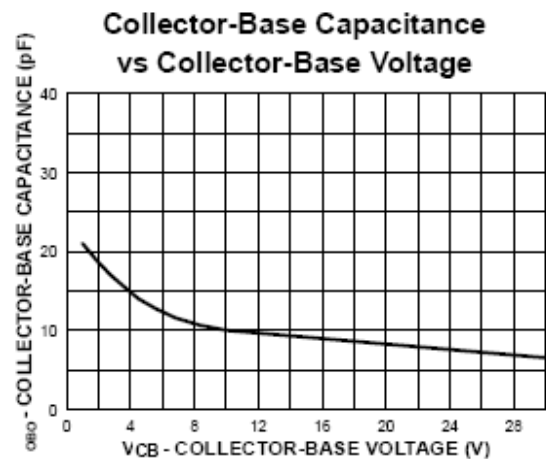
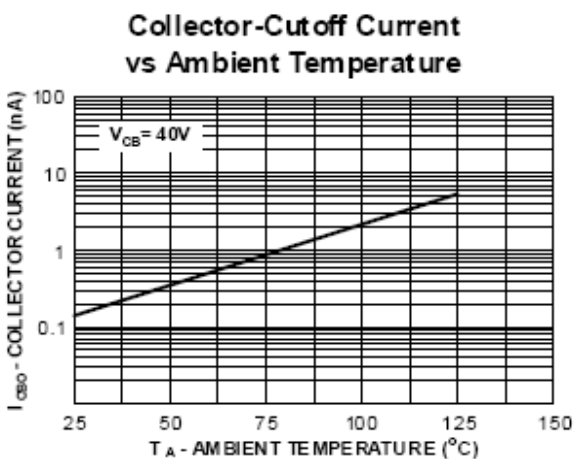
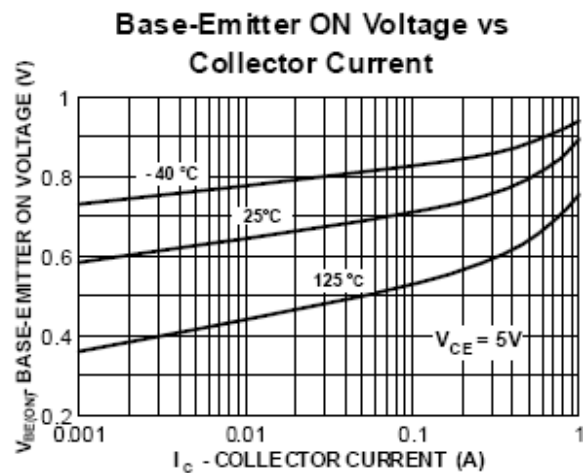
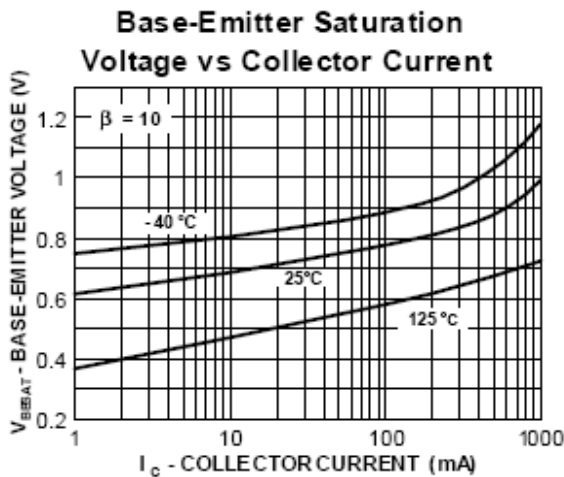
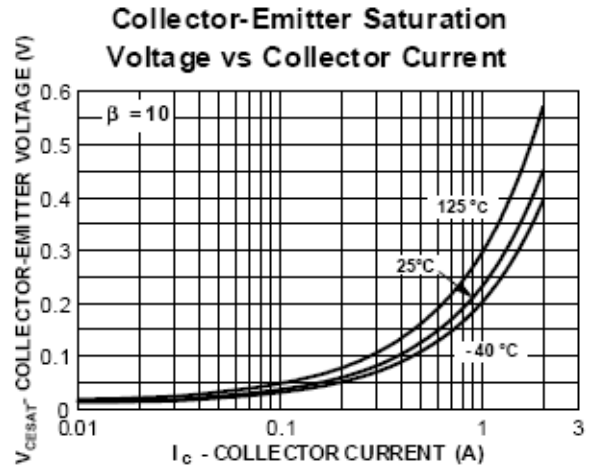
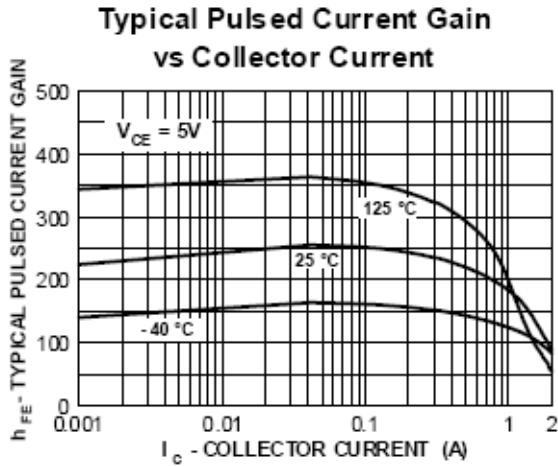
ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

| Parameter | Symbol | Test conditions | MIN | MAX | UNIT |
|--------------------------------------|---------------|--------------------------------------|-------------------|-------------------|---------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=10\mu A$ $I_E=0$ | 50 | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=10mA$ $I_B=0$ | 45 | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=1\mu A$ $I_C=0$ | 5 | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=45V$ $I_E=0$ | | 0.1 | μA |
| Collector cut-off current | I_{CEO} | $V_{CE}=40V$ $I_{BE(off)}=0$ | | 0.2 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=4V$ $I_C=0$ | | 0.1 | μA |
| DC current gain | h_{FE} | $V_{CE}=10V$ $I_C=150mA$ | 100 160 250 | 250 400 600 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=500mA$ $I_B=50mA$ | | 0.7 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C=500mA$ $I_B=50mA$ | | 1.2 | V |
| Transition frequency | f_T | $V_{CE}=5V$ $I_C=10mA$ $f=100MHz$ | 100 | | MHz |

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



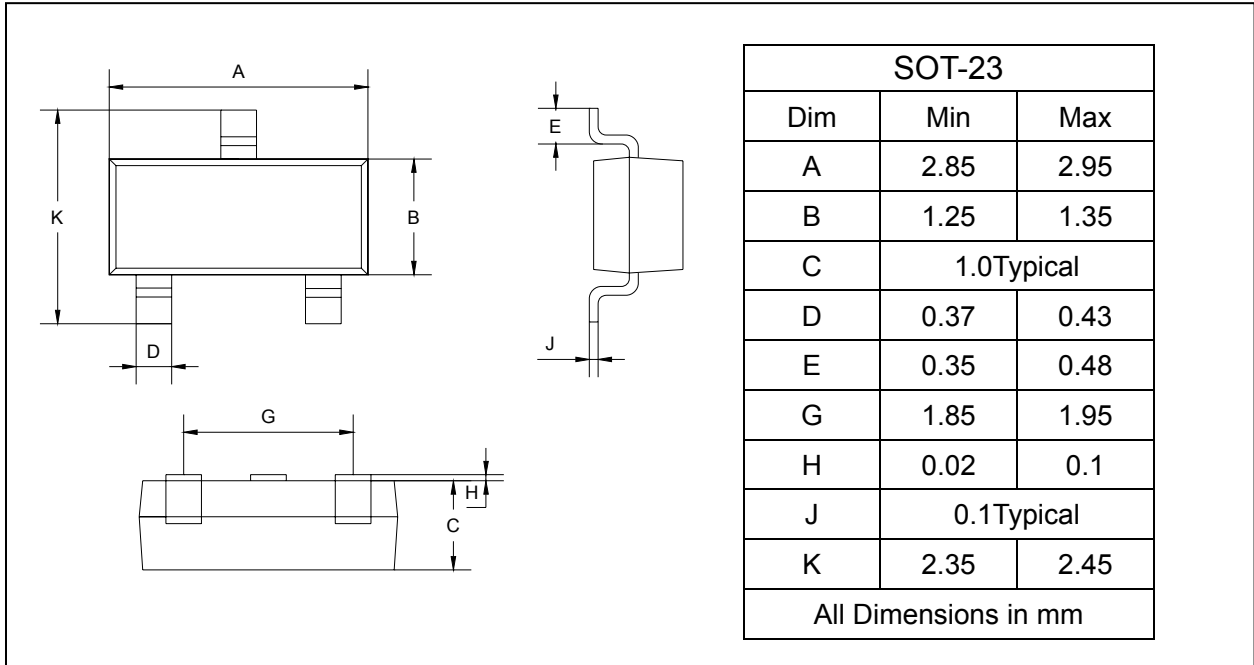
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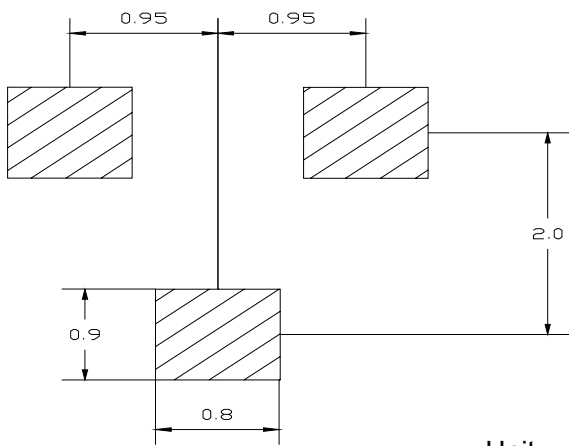
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



Unit: mm

PACKAGE INFORMATION

| Device | Package | Shipping |
|------------------|---------|----------------|
| BC817-16/-25/-40 | SOT-23 | 3000/Tape&Reel |