



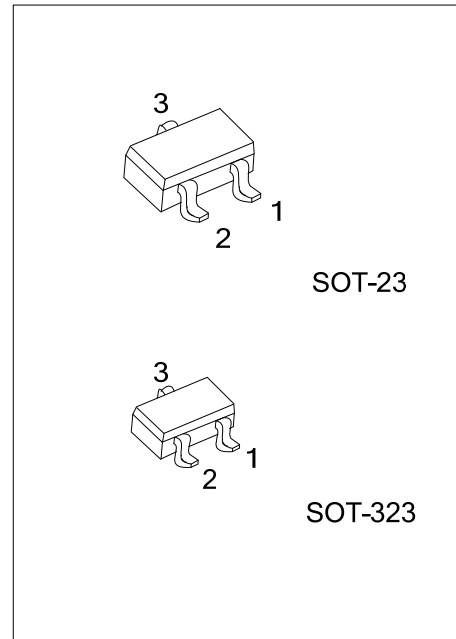
BC817

NPN SILICON TRANSISTOR

NPN GENERAL PURPOSE AMPLIFIER

■ DESCRIPTION

The UTC **BC817** is designed for general purpose medium power amplifiers and switches requiring collector currents to 1.2A.



Lead-free: BC817L
Halogen-free: BC817G

■ ORDERING INFORMATION

| Ordering Number | | | Package | Pin Assignment | | | Packing |
|-----------------|----------------|----------------|---------|----------------|---|---|-----------|
| Normal | Lead Free | Halogen Free | | 1 | 2 | 3 | |
| BC817-x-AE3-R | BC817L-x-AE3-R | BC817G-x-AE3-R | SOT-23 | E | B | C | Tape Reel |
| BC817-x-AL3-R | BC817L-x-AL3-R | BC817G-x-AL3-R | SOT-323 | E | B | C | Tape Reel |

| | |
|--|--|
| <p>BC817L-x-AE3-R</p> <p>(1)Packing Type (2)Package Type (3)Rank (4)Lead Plating</p> | <p>(1) R: Tape Reel (2) AE3: SOT-23, AL3: SOT-323 (3) x: refer to Classification of h_{FE} (4) G: Halogen Free, L: Lead Free, Blank: Pb/Sn</p> |
|--|--|

■ MARKING

| BC817-16 | BC817-25 | BC817-40 |
|---|---|---|
| <p>L: Lead Free G: Halogen Free</p> | <p>L: Lead Free G: Halogen Free</p> | <p>L: Lead Free G: Halogen Free</p> |

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C, unless otherwise specified)

| PARAMETER | | SYMBOL | RATINGS | UNIT |
|-------------------------------|---------|-----------|------------|------|
| Collector-Base Voltage | | V_{CES} | 50 | V |
| Collector-Emitter Voltage | | V_{CEO} | 45 | V |
| Emitter-Base Voltage | | V_{EBO} | 5.0 | V |
| Collector Current -Continuous | | I_C | 1.5 | A |
| Collector Dissipation | SOT-23 | P_C | 310 | mW |
| | SOT-323 | | 200 | mW |
| Junction Temperature | | T_J | +150 | °C |
| Storage Temperature | | T_{STG} | -65 ~ +150 | °C |

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

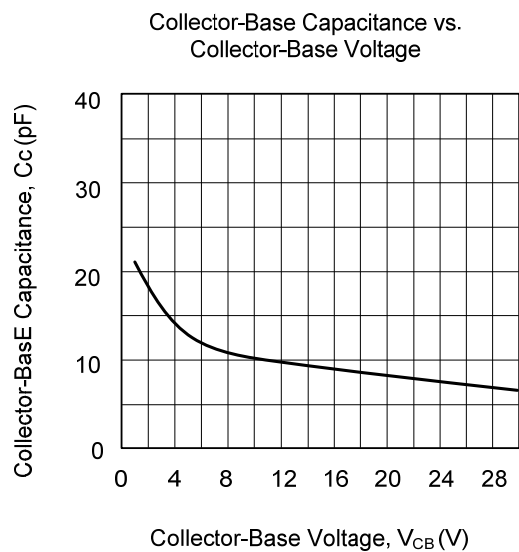
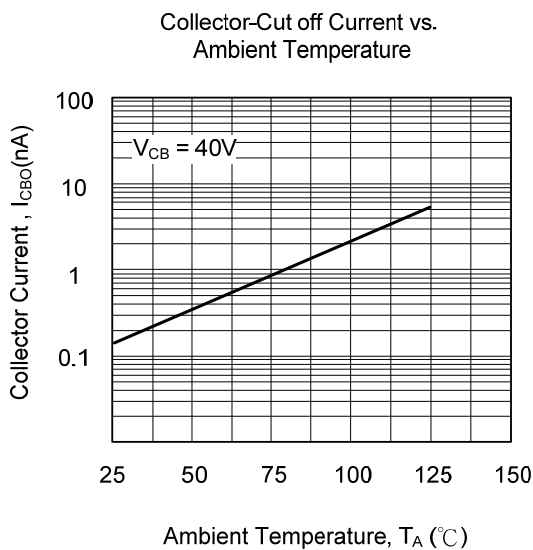
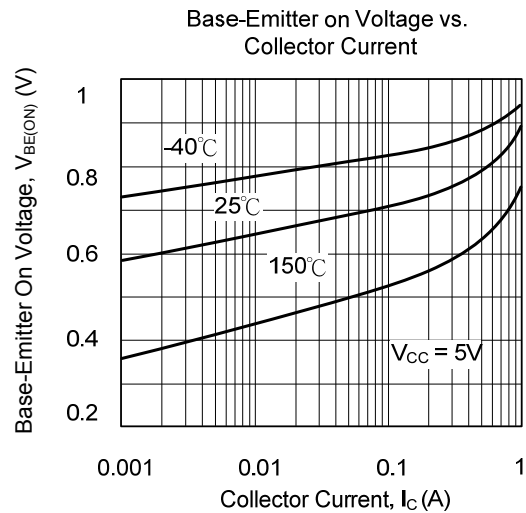
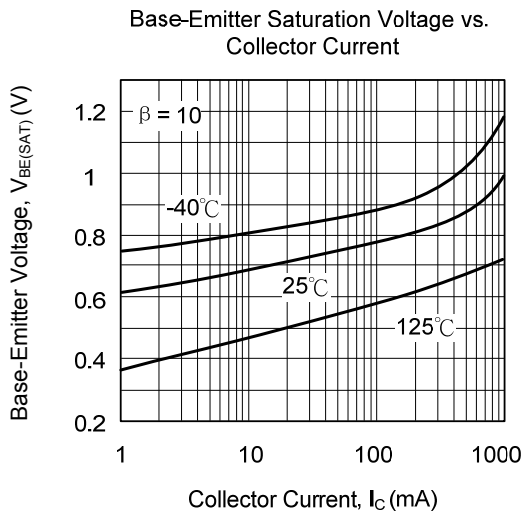
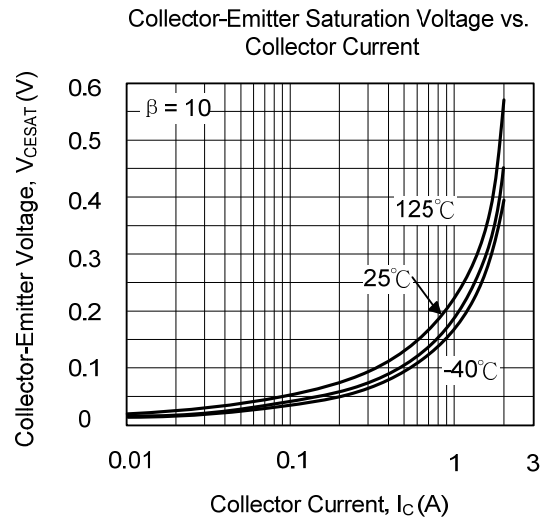
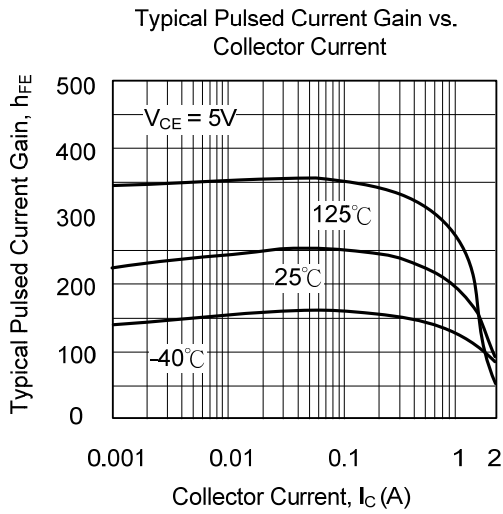
■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|-------------------------------|--------------------|-----|-----|---------|
| OFF CHARACTERISTICS | | | | | | |
| Collector-Emitter Breakdown Voltage | BV_{CEO} | $I_C=10mA, I_B=0$ | 45 | | | V |
| Collector-Base Breakdown Voltage | BV_{CES} | $I_C=100\mu A, I_E=0$ | 50 | | | V |
| Emitter-Base Breakdown Voltage | BV_{EBO} | $I_E=10\mu A, I_C=0$ | 5 | | | V |
| Collector Cut-OFF Current | I_{CBO} | $V_{CB}=20V$ | | | 100 | nA |
| | | $V_{CB}=20V, T_a=150^\circ C$ | | | 5 | μA |
| ON CHARACTERISTICS | | | | | | |
| DC Current Gain | h_{FE1} | $I_C=100mA, V_{CE}=1.0V$ | See Classification | | | |
| | h_{FE2} | $I_C=500mA, V_{CE}=1.0V$ | 40 | | | |
| Collector-Emitter Saturation Voltage | $V_{CE(SAT)}$ | $I_C=500mA, I_B=50mA$ | | | 0.7 | V |
| Base-Emitter On Voltage | $V_{BE(ON)}$ | $I_C=500mA, V_{CE}=1.0V$ | | | 1.2 | V |

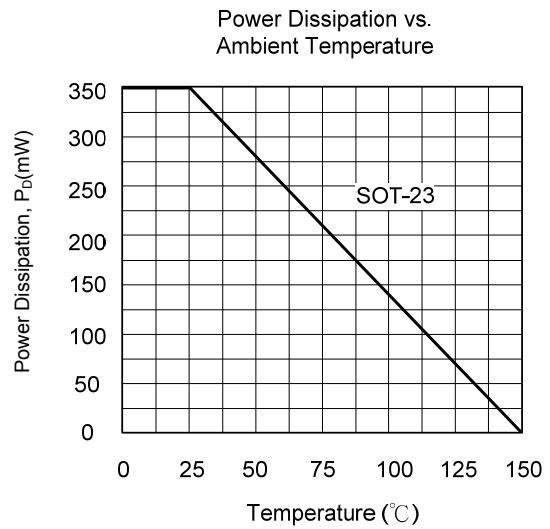
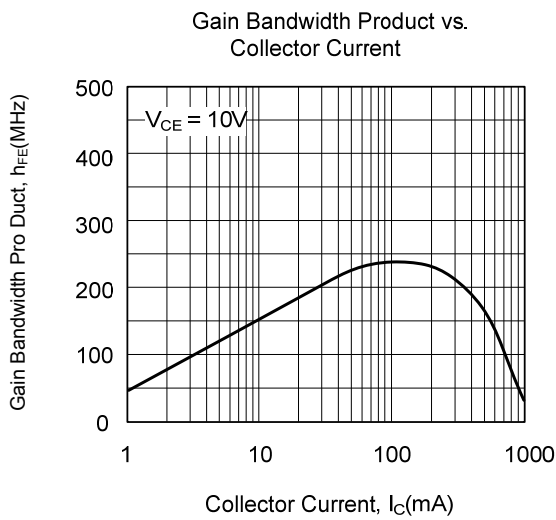
■ CLASSIFICATION OF h_{FE1}

| RANK | 16 | 25 | 40 |
|-------|---------|---------|---------|
| RANGE | 100-250 | 160-400 | 250-600 |

TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



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