

FEATURES

For general AF applications

High collector current

High current gain

Low collector-emitter saturation voltage

Complementary types: BC807 (PNP)

BC817-16 (NPN)

BC817-25 (NPN)

BC817-40 (NPN)

Marking

| | | |
|----------|----------|----------|
| BC817-16 | BC817-25 | BC817-40 |
| 6A | 6B | 6C |

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

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



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

| Parameter | Symbol | Test conditions | Min | Max | Unit |
|--------------------------------------|---------------|---|-----|-----|---------|
| Collector-base breakdown voltage | V_{CB} | $I_C = 10\mu A, I_E = 0$ | 50 | | V |
| Collector-emitter breakdown voltage | V_{CE} | $I_C = 10mA, I_B = 0$ | 45 | | V |
| Emitter-base breakdown voltage | V_{EB} | $I_E = 1\mu A, I_C = 0$ | 5 | | V |
| Collector cut-off current | I_{CB} | $V_{CB} = 45V, I_E = 0$ | | 0.1 | μA |
| Emitter cut-off current | I_{EB} | $V_{EB} = 4V, I_C = 0$ | | 0.1 | μA |
| DC current gain | $h_{FE(1)}$ | $V_{CE} = 1V, I_C = 100mA$ | 100 | 600 | |
| | $h_{FE(2)}$ | $V_{CE} = 1V, I_C = 500mA$ | 40 | | |
| 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 |
| Base-emitter voltage | V_B | $V_{CE} = 1V, I_C = 500mA$ | | 1.2 | V |
| Collector capacitance | C_{ob} | $V_{CB} = 10V, f = 1MHz$ | | 10 | pF |
| Transition frequency | f_T | $V_{CE} = 5V, I_C = 10mA$ $f = 100MHz$ | 100 | | MHz |

CLASSIFICATION OF h_{FE}

| Rank | 6A | 6B | 6C |
|-------|---------|---------|---------|
| Range | 100-250 | 160-400 | 250-600 |

BC817-16

BC817-25 Typical Characteristics

BC817-40

