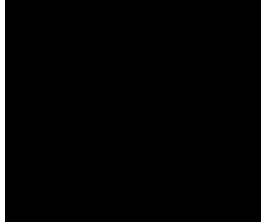
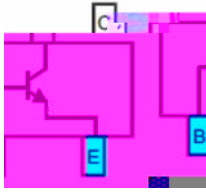




NPN General Purpose Amplifier



SOT-323

Features

Epoxy meets UL-94 V-0 flammability rating and halogen free
a is -

Mechanical Data

Case: SOT-323

Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102

Marking:

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

Maximum Ratings (Ta=25 unless otherwise noted)

| Item | Symbol | Unit | Value |
|--|------------|------|-------------|
| Collector-Emitter Voltage | V_{CE0} | V | 45 |
| Collector-Base Voltage | V_{CBO} | V | 50 |
| Emitter-Base Voltage | V_{EBO} | V | 5 |
| Collector Current -Continuous | I_C | mA | 500 |
| Total Device Dissipation (*) | P_D | mW | 200 |
| Thermal Resistance Junction to Ambient (*) | R_{thJA} | K/W | 625 |
| Junction Temperature | T_j | | -55 to +150 |
| Storage Temperature | T_{STG} | | -55 to +150 |

(*) Device mounted on FR-4 PCB 1.0 x 1.0 x 0.06 inch.



BC817-16WQ THRU BC817-40WQ

Electrical Characteristics (Ta=25 unless otherwise noted)

| Item | Symbol | Unit | Conditions | Min | Typ | Max |
|--------------------------------------|---------------|---------|------------------------|------------------------|-----|-----|
| Collector-emitter breakdown voltage | V_{CEO} | V | $I_C=10mA, I_B=0$ | 45 | | |
| Collector-base breakdown voltage | V_{CBO} | V | $I_C=10\mu A, I_E=0$ | 50 | | |
| Emitter-base breakdown voltage | V_{EBO} | V | $I_E=1\mu A, I_C=0$ | 5 | | |
| Emitter-base cut-off current | I_{EBO} | μA | $V_{EB}=4V, I_C=0$ | | | 0.1 |
| Collector-base cut-off current | I_{CBO} | μA | $V_{CB}=45V, I_E=0$ | | | 0.1 |
| DC current gain | h_{FE} | | BC817-16WQ | $V_{CE}=1V, I_C=100mA$ | 100 | 250 |
| | | | BC817-25WQ | | 160 | 400 |
| | | | BC817-40WQ | | 250 | 600 |
| DC current gain | h_{FE} | | $V_{CE}=1V, I_C=500mA$ | 40 | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | V | $I_C=500mA, I_B=50mA$ | | | 0.7 |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | V | $I_C=500mA, I_B=50mA$ | | | 1.2 |

Other

| Item | Symbol | Unit | Conditions | Min | Typ | Max |
|----------------------|--------|------|---------------------------------|-----|-----|-----|
| Transition frequency | f_T | MHz | $V_{CE}=5V, I_C=10mA, f=100MHz$ | 100 | | |

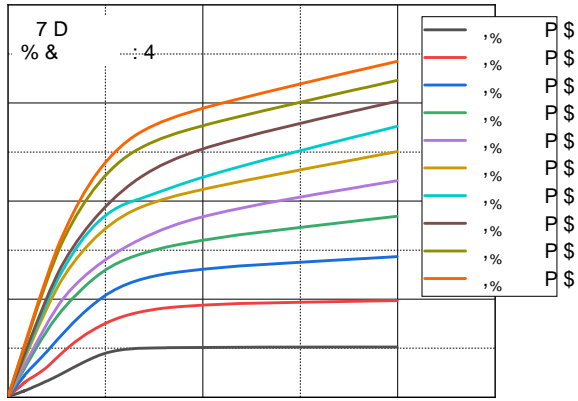
Ordering Information (Example)

| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|----------------------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| BC817-16WQ THRU BC817-40WQ | F2 | Approximate 0.005 | 3000 | 30000 | 120000 | 7" reel |

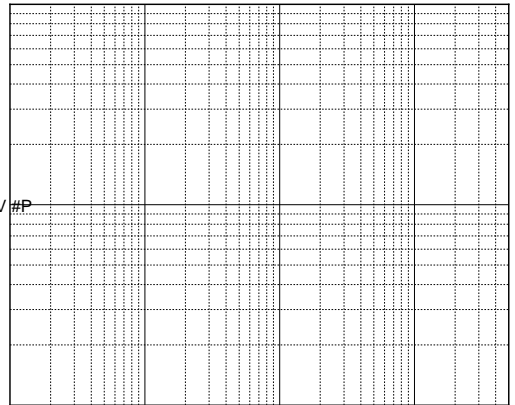
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& ROOHFWRU & XUHHQW , F

)LJ 6WDWLF & KDUDFWHULVWLF



•, V #P



& ROOHFW (PLWWHU99ROWDJH 9



BC817-16WQ THRU BC817-40WQ

Fig 7 - Collect-Emittter Saturation Voltage

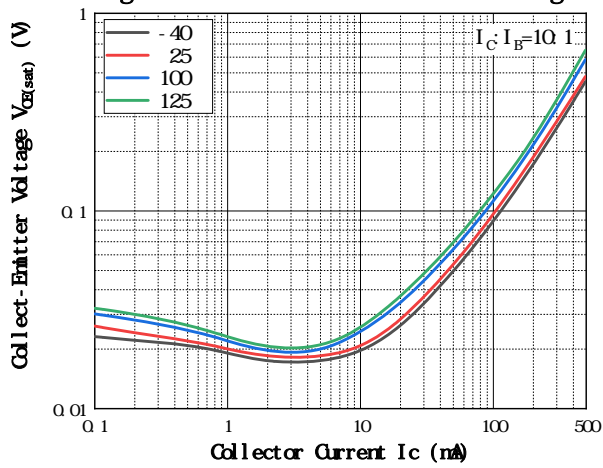
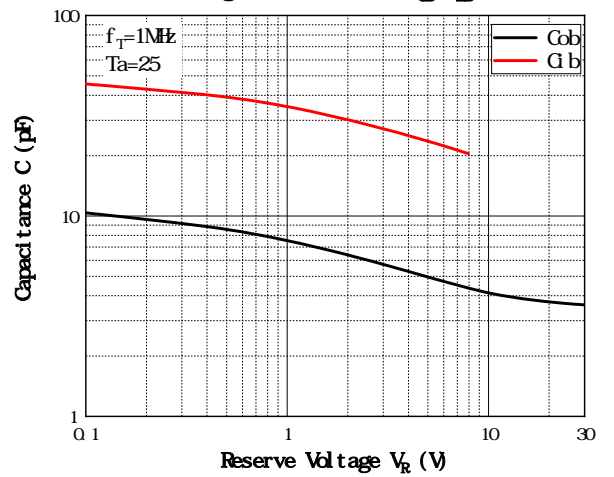


Fig 10 - $C_{ob}/C_{cb} - V_{CE}/V_{BE}$





BC817-16WQ THRU BC817-40WQ

SOT-323 Package Outline Dimensions



Disclaimer