

BC327/328

BC327/328

Switching and Amplifier Applications

- Suitable for AF-Driver stages and low power output stages
- Complement to BC337/BC338



PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|-----------|-----------------------------|-----------|------------------|
| V_{CES} | Collector-Emitter Voltage | | |
| | : BC327 | -50 | V |
| | : BC328 | -30 | V |
| V_{CEO} | Collector-Emitter Voltage | | |
| | : BC327 | -45 | V |
| | : BC328 | -25 | V |
| V_{EBO} | Emitter-Base Voltage | -5 | V |
| I_C | Collector Current (DC) | -800 | mA |
| P_C | Collector Power Dissipation | 625 | mW |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature | -55 ~ 150 | $^\circ\text{C}$ |

Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|------------------------|--------------------------------------|--|------|------|------|-------|
| BV_{CEO} | Collector-Emitter Breakdown Voltage | $I_C = -10\text{mA}, I_B = 0$ | -45 | | | V |
| | | | -25 | | | V |
| BV_{CES} | Collector-Emitter Breakdown Voltage | $I_C = -0.1\text{mA}, V_{BE} = 0$ | -50 | | | V |
| | | | -30 | | | V |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E = -10\mu\text{A}, I_C = 0$ | -5 | | | V |
| I_{CES} | Collector Cut-off Current | $V_{CE} = -45\text{V}, V_{BE} = 0$ $V_{CE} = -25\text{V}, V_{BE} = 0$ | | -2 | -100 | nA |
| | | | | -2 | -100 | nA |
| h_{FE1} h_{FE2} | DC Current Gain | $V_{CE} = -1\text{V}, I_C = -100\text{mA}$ | 100 | | 630 | |
| | | $V_{CE} = -1\text{V}, I_C = -300\text{mA}$ | 40 | | | |
| $V_{CE}(\text{sat})$ | Collector-Emitter Saturation Voltage | $I_C = -500\text{mA}, I_B = -50\text{mA}$ | | | -0.7 | V |
| $V_{BE}(\text{on})$ | Base-Emitter On Voltage | $V_{CE} = -1\text{V}, I_C = -300\text{mA}$ | | | -1.2 | V |
| f_T | Current Gain Bandwidth Product | $V_{CE} = -5\text{V}, I_C = -10\text{mA}, f = 20\text{MHz}$ | | 100 | | MHz |
| C_{ob} | Output Capacitance | $V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$ | | 12 | | pF |

h_{FE} Classification

| Classification | 16 | 25 | 40 |
|----------------|-----------|-----------|-----------|
| h_{FE1} | 100 ~ 250 | 160 ~ 400 | 250 ~ 630 |
| h_{FE2} | 60- | 100- | 170- |

Typical Characteristics

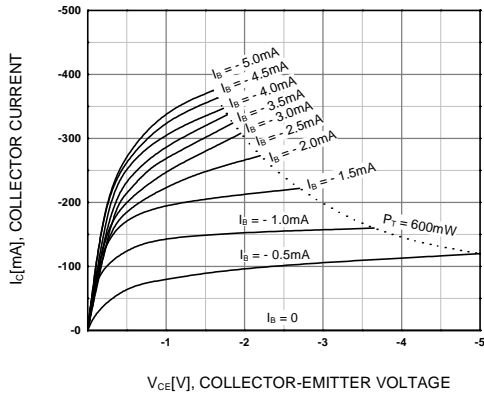


Figure 1. Static Characteristic

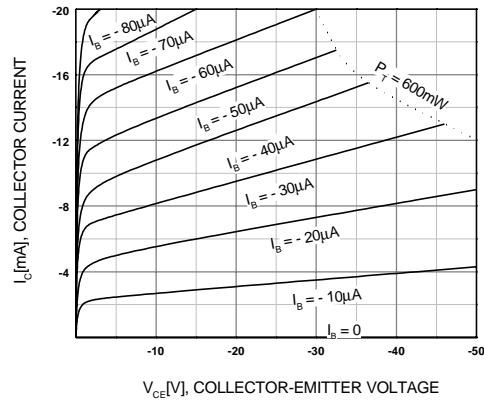


Figure 2. Static Characteristic

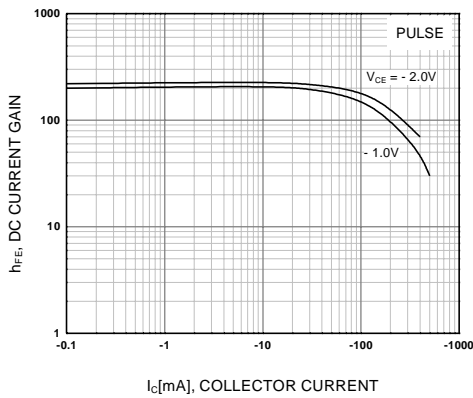


Figure 3. DC current Gain

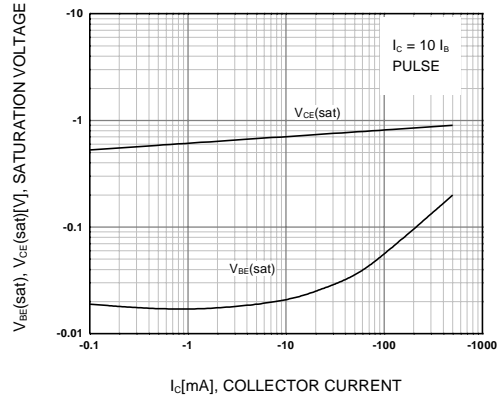


Figure 4. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

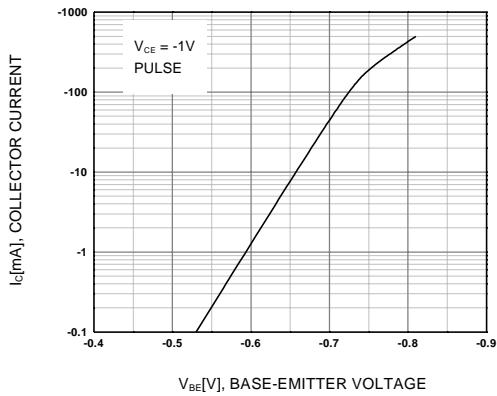


Figure 5. Base-Emitter On Voltage

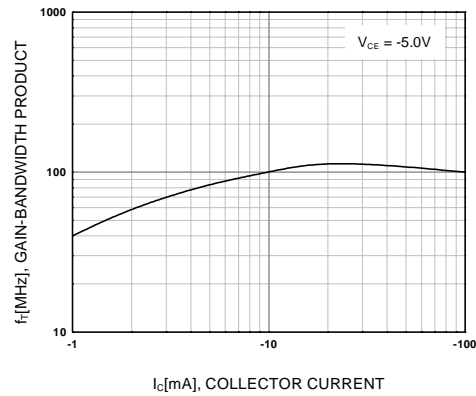
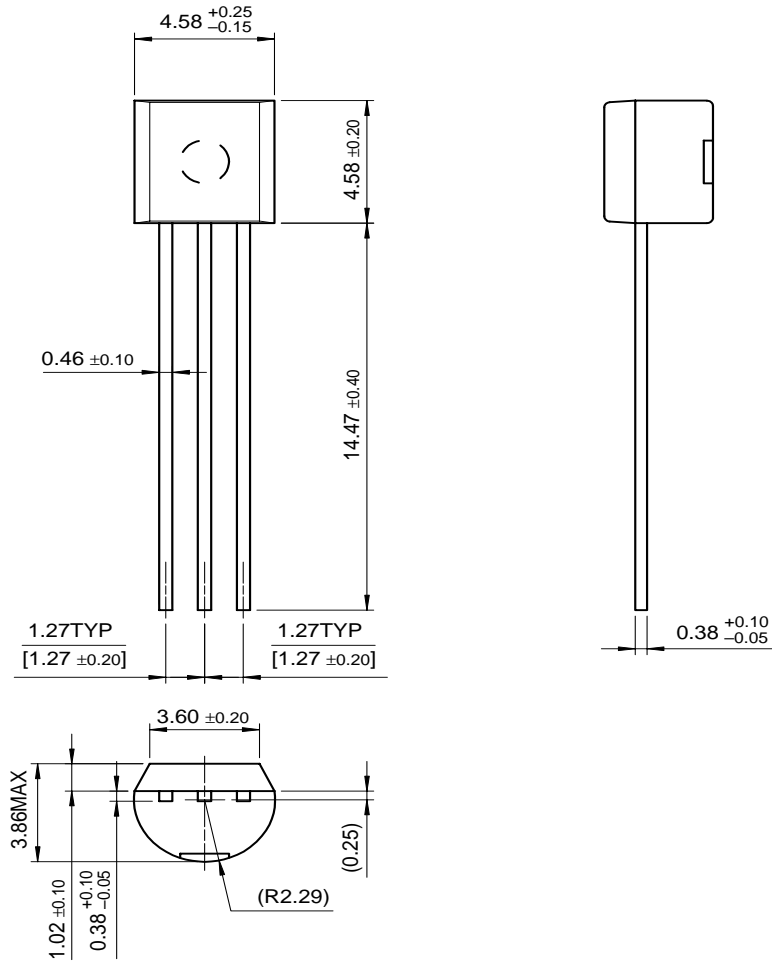


Figure 6. Gain Bandwidth Product

Package Dimensions

BC327/328

TO-92



Dimensions in Millimeters

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| Datasheet Identification | Product Status | Definition |
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| Advance Information | Formative or In Design | This datasheet contains the design specifications for product development. Specifications may change in any manner without notice. |
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BC328

PNP Epitaxial Silicon Transistor

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- Complement to BC337/BC338

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| Product | Product status | Pb-free Status | Pricing* | Package type | Leads | Packing method | Package Marking Convention** |
|-----------|-----------------|-----------------|----------|-----------------------|-------|----------------|---|
| BC328 | Full Production | Full Production | \$0.083 | TO-92 | 3 | BULK | Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &3 (3-Digit Date Code) Line 2: BC328 |
| BC32816BU | Full Production | Full Production | \$0.0296 | TO-92 | 3 | BULK | Line 1: BC328 Line 2: 16 Line 3: -&3 |
| BC32816TA | Full Production | | \$0.0296 | TO-92 | 3 | AMMO | Line 1: BC328 Line 2: 16 Line 3: -&3 |

| | | | | | | | |
|-----------|-----------------|---|----------|-----------------------|---|-----------|---|
| | |  Full Production | | | | | |
| BC32825 | Full Production |  Full Production | \$0.083 | TO-92 | 3 | BULK | Line 1: \$Y (Fairchild logo) &Z (Asm. Plant Code) &3 (3-Digit Date Code) Line 2: BC328 Line 3: -25 |
| BC32825BU | Full Production |  Full Production | \$0.0296 | TO-92 | 3 | BULK | Line 1: BC328 Line 2: 25 Line 3: -&3 |
| BC32825TA | Full Production |  Full Production | \$0.0296 | TO-92 | 3 | AMMO | Line 1: BC328 Line 2: 25 Line 3: -&3 |
| BC32840BU | Full Production |  Full Production | \$0.0296 | TO-92 | 3 | BULK | Line 1: BC328 Line 2: 40 Line 3: -&3 |
| BC32840TA | Full Production |  Full Production | \$0.0296 | TO-92 | 3 | AMMO | Line 1: BC328 Line 2: 40 Line 3: -&3 |
| BC328BU | Full Production |  Full Production | \$0.0296 | TO-92 | 3 | BULK | Line 1: BC328 Line 3: -&3 |
| BC328TA | Full Production |  Full Production | \$0.0296 | TO-92 | 3 | AMMO | Line 1: BC328 Line 3: -&3 |
| BC328TAR | Full Production |  Full Production | \$0.0296 | TO-92 | 3 | AMMO | Line 1: BC328 Line 3: -&3 |
| BC328TF | Full Production |  Full Production | \$0.0296 | TO-92 | 3 | TAPE REEL | Line 1: BC328 Line 3: -&3 |
| BC328TFR | Full Production |  Full Production | \$0.0296 | TO-92 | 3 | TAPE REEL | Line 1: BC328 Line 3: -&3 |

* Fairchild 1,000 piece Budgetary Pricing

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| Product |
|---------------------------|
| BC328 |
| BC32816BU |
| BC32816TA |
| BC32825 |
| BC32825BU |
| BC32825TA |
| BC32840BU |
| BC32840TA |
| BC328BU |
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