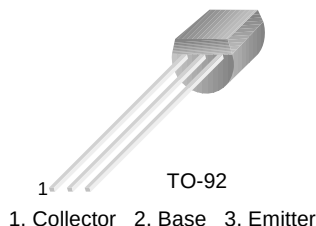


# BC327A

## PNP Epitaxial Silicon Transistor

### Switching and Amplifier Applications

- Suitable for AF-Driver stages and low power output stages



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

| Symbol    | Parameter                   | Value     | Units            |
|-----------|-----------------------------|-----------|------------------|
| $V_{CES}$ | Collector-Emitter Voltage   | -60       | V                |
| $V_{CEO}$ | Collector-Emitter Voltage   | -60       | 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  | $I_C = -10\text{mA}$ , $I_B = 0$                                                               | -60       |      |      | V     |
| $BV_{CES}$             | Collector-Emitter Breakdown Voltage  | $I_C = -100\mu\text{A}$ , $V_{BE} = 0$                                                         | -60       |      |      | V     |
| $BV_{EBO}$             | Emitter-Base Breakdown Voltage       | $I_E = -100\mu\text{A}$ , $I_C = 0$                                                            | -5        |      |      | V     |
| $I_{CES}$              | Collector Cut-off Current            | $V_{CE} = -45\text{V}$ , $V_{BE} = 0$                                                          |           |      | -100 | nA    |
| $h_{FE1}$<br>$h_{FE2}$ | DC Current Gain                      | $V_{CE} = -1\text{V}$ , $I_C = -100\text{mA}$<br>$V_{CE} = -1\text{V}$ , $I_C = -500\text{mA}$ | 100<br>40 |      | 400  |       |
| $V_{CE(sat)}$          | Collector-Emitter Saturation Voltage | $I_C = -500\text{mA}$ , $I_B = -50\text{mA}$                                                   |           |      | -0.7 | V     |
| $V_{BE(on)}$           | 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    |

## Typical Performance Characteristics

Figure 1. Static Characteristic

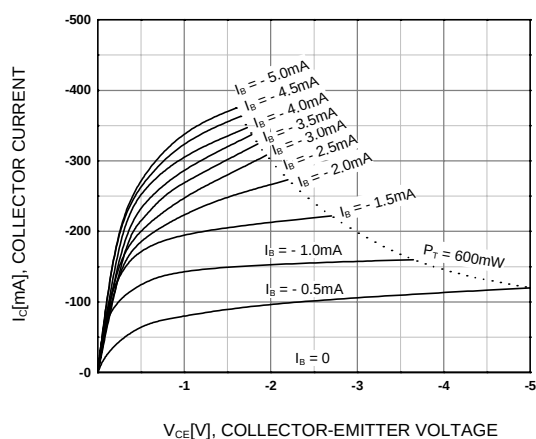


Figure 2. Static Characteristic

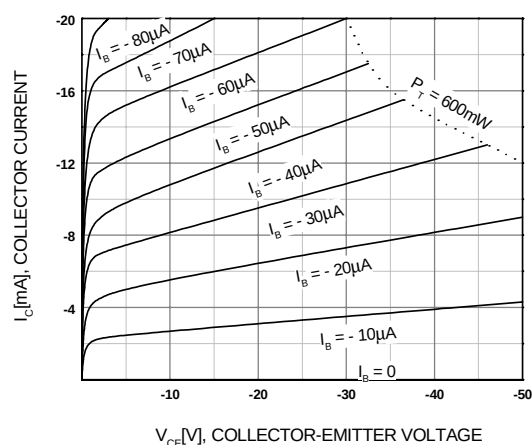


Figure 3. DC Current Gain

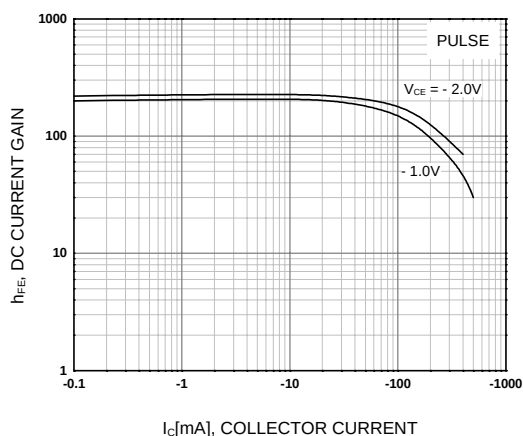


Figure 4. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

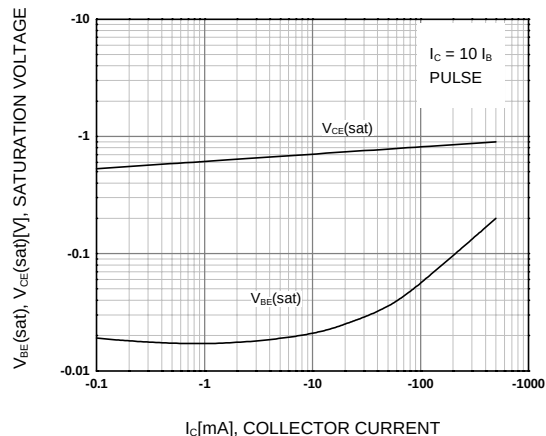


Figure 5. Base-Emitter On Voltage

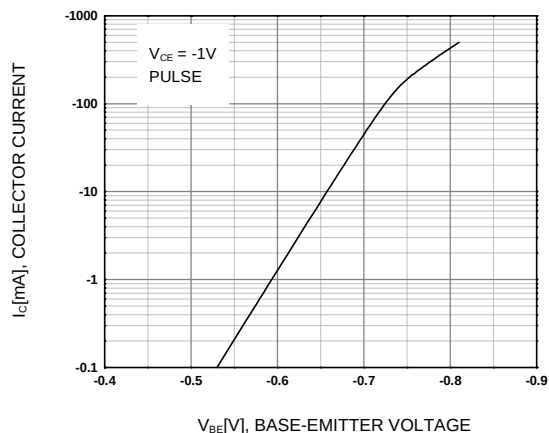
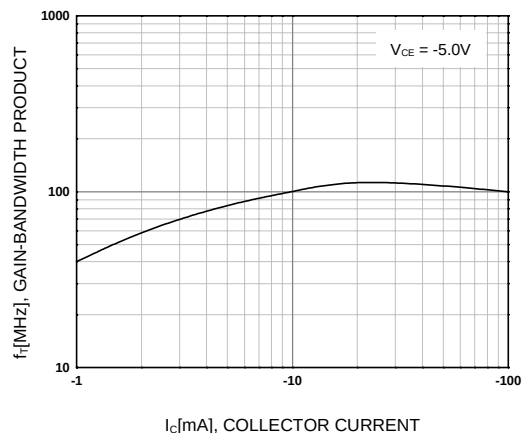
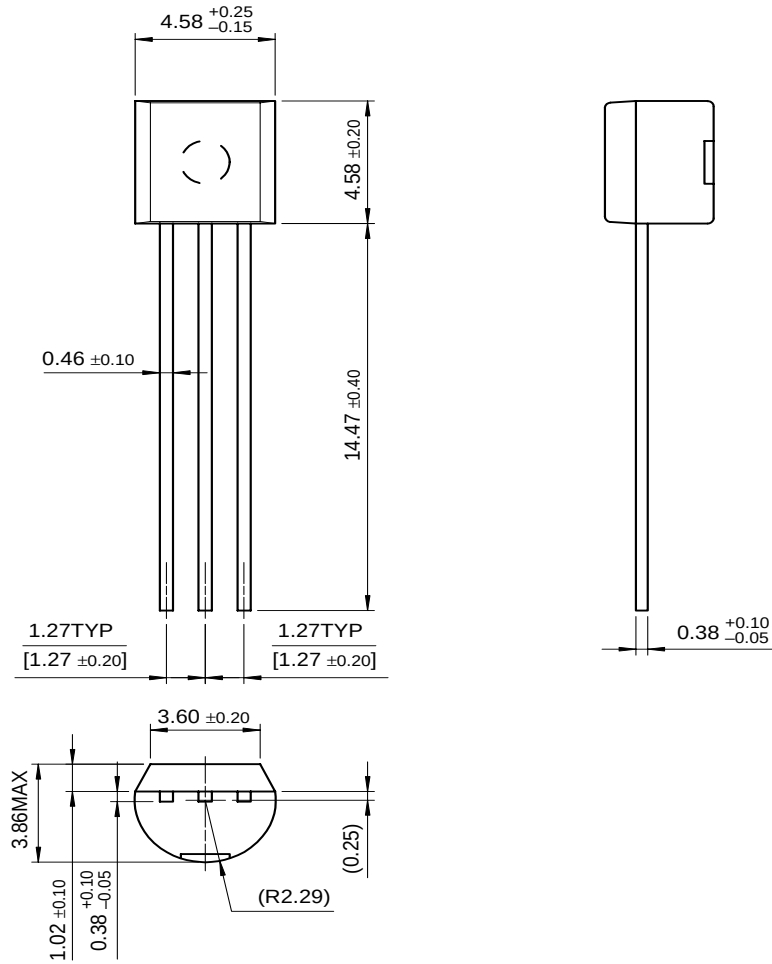


Figure 6. Gain Bandwidth Product



# Mechanical Dimensions

## TO-92



Dimensions in Millimeters

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| ActiveArray™                         | FASTR™              | LittleFET™             | PowerTrench <sup>®</sup>     | SyncFET™               |
| Bottomless™                          | FPS™                | MICROCOUPLER™          | QFET <sup>®</sup>            | TinyLogic <sup>®</sup> |
| Build it Now™                        | FRFET™              | MicroFET™              | QS™                          | TINYOPTO™              |
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| CROSSVOLT™                           | GTO™                | MICROWIRE™             | Quiet Series™                | UHC™                   |
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| E <sup>2</sup> C MOS™                | i-Lo™               | OCX™                   | μSerDes™                     | VCX™                   |
| EnSigna™                             | ImpliedDisconnect™  | OCXPro™                | SILENT SWITCHER <sup>®</sup> | Wire™                  |
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|--------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
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