

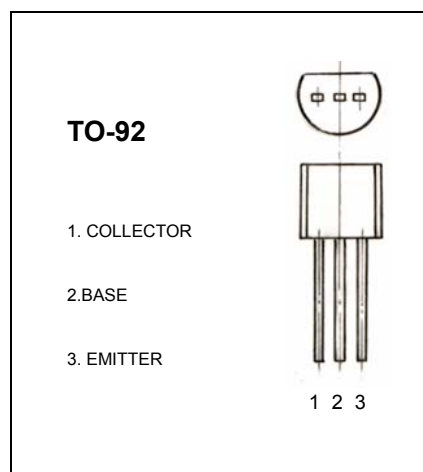
## BC327/ BC328 TRANSISTOR (PNP)

### FEATURES

Power dissipation

### MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ unless otherwise noted)

| Symbol    | Parameter                     | Value        | Units            |
|-----------|-------------------------------|--------------|------------------|
| $V_{CBO}$ | Collector-Base Voltage        | <b>BC327</b> | -50              |
|           |                               | <b>BC328</b> | -30              |
| $V_{CEO}$ | Collector-Emitter Voltage     | <b>BC327</b> | -45              |
|           |                               | <b>BC328</b> | -25              |
| $V_{EBO}$ | Emitter-Base Voltage          | -5           | V                |
| $I_C$     | Collector Current -Continuous | -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 ( $T_{amb}=25^\circ\text{C}$ unless otherwise specified)

| Parameter                            | Symbol        | Test conditions  | MIN | TYP | MAX  | UNIT          |
|--------------------------------------|---------------|--|-----|-----|------|---------------|
| Collector-base breakdown voltage     | $V_{CBO}$     | $I_C = -100\mu\text{A}, I_E = 0$                                   | -50 |     |      | V             |
|                                      |               |  | -30 |     |      |               |
| Collector-emitter breakdown voltage  | $V_{CEO}$     | $I_C = -10\text{mA}, I_B = 0$                                      | -45 |     |      | V             |
|                                      |               |  | -25 |     |      |               |
| Emitter-base breakdown voltage       | $V_{EBO}$     | $I_E = -10\mu\text{A}, I_C = 0$                                    |     |     |      | V             |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = -45\text{V}, I_E = 0$<br>$V_{CB} = -25\text{V}, I_E = 0$ |     |     | -0.1 | $\mu\text{A}$ |
|                                      |               |  |     |     | -0.1 |               |
| Collector cut-off current            | $I_{CEO}$     | $V_{CE} = -40\text{V}, I_B = 0$<br>$V_{CE} = -20\text{V}, I_B = 0$ |     |     | -0.2 | $\mu\text{A}$ |
|                                      |               |  |     |     | -0.2 |               |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = -4\text{V}, I_C = 0$                                     |     |     | -0.1 | $\mu\text{A}$ |
| DC current gain                      | $h_{FE(1)}$   | $V_{CE} = -1\text{V}, I_C = -100\text{mA}$                         | 100 |     | 630  |               |
|                                      | $h_{FE(2)}$   | $V_{CE} = -1\text{V}, I_C = -300\text{mA}$                         | 40  |     |      |               |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -500\text{mA}, I_B = -50\text{mA}$                          |     |     | -0.7 | V             |
| Base-emitter saturation voltage      | $V_{BE(sat)}$ | $I_C = -500\text{mA}, I_B = -50\text{mA}$                          |     |     | -1.2 | V             |
| Base-emitter voltage                 | $V_{BE}$      | $V_{CE} = -1\text{V}, I_C = -300\text{mA}$                         |     |     | -1.2 | V             |
| Transition frequency                 | $f_T$         | $V_{CE} = -5\text{V}, I_C = -10\text{mA}$<br>$f = 100\text{MHz}$   | 260 |     |      | MHz           |
| Collector Output Capacitance         | $C_{ob}$      | $V_{CB} = -10\text{V}, I_E = 0$<br>$f = 1\text{MHz}$               | 12  |     |      | pF            |

### CLASSIFICATION OF $h_{FE}$

| Rank  | 16      | 25      | 40      |
|-------|---------|---------|---------|
| Range | 100-250 | 160-400 | 250-630 |

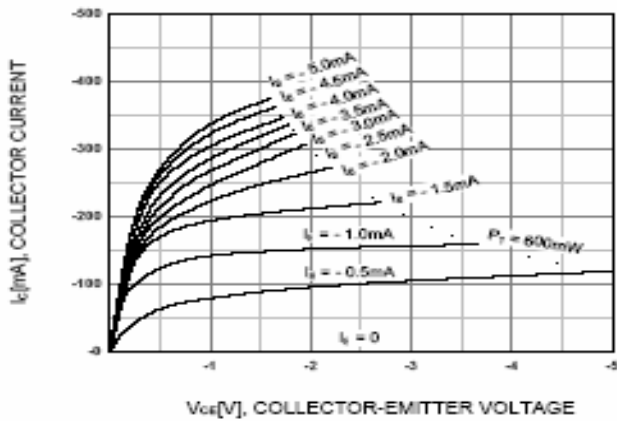


Figure 1. Static Characteristic

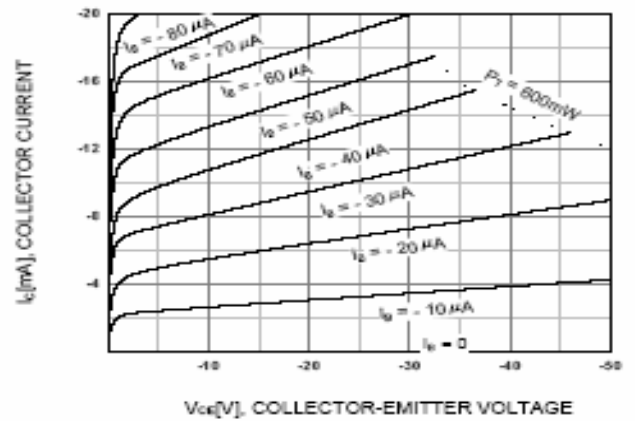


Figure 2. Static Characteristic

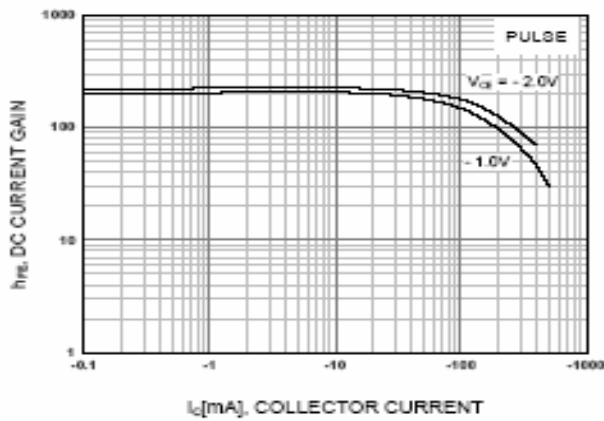


Figure 3. DC current Gain

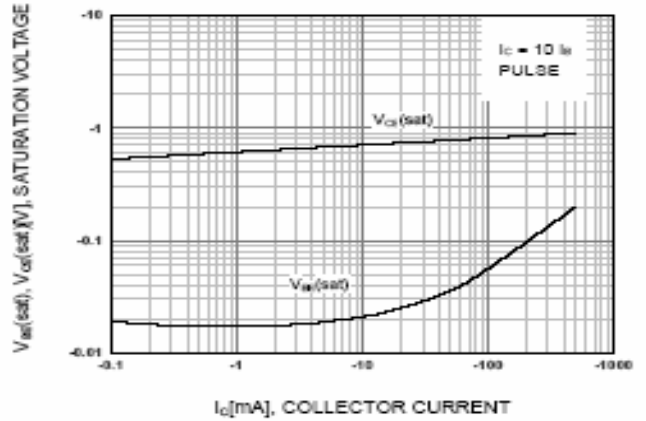


Figure 4. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

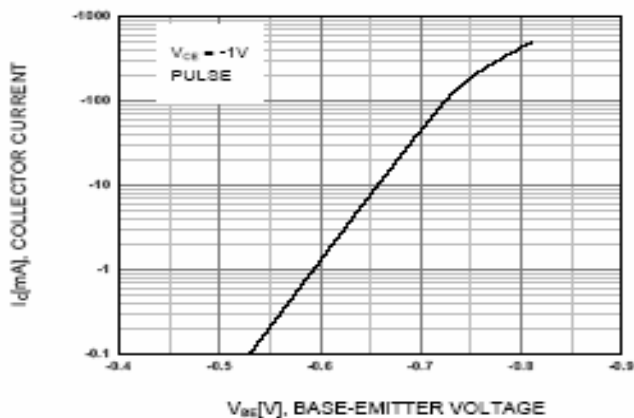


Figure 5. Base-Emitter On Voltage

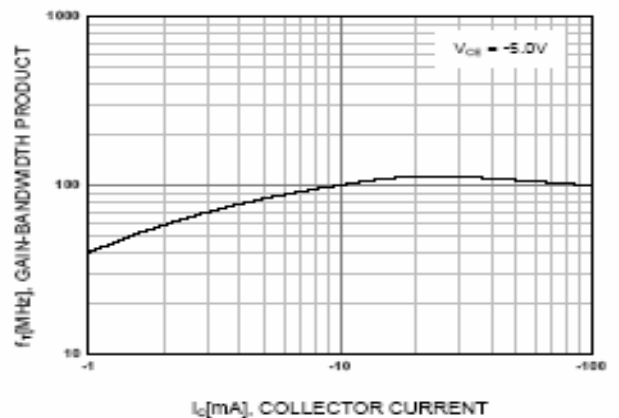


Figure 6. Gain Bandwidth Product

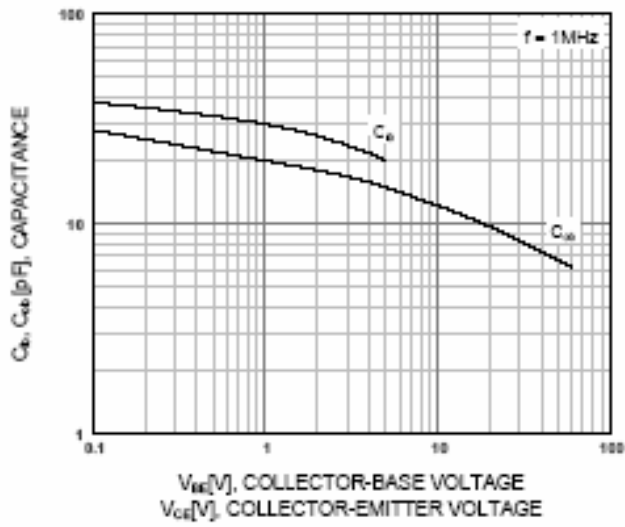


Figure 7. Input and Output Capacitance vs. Reverse Voltage

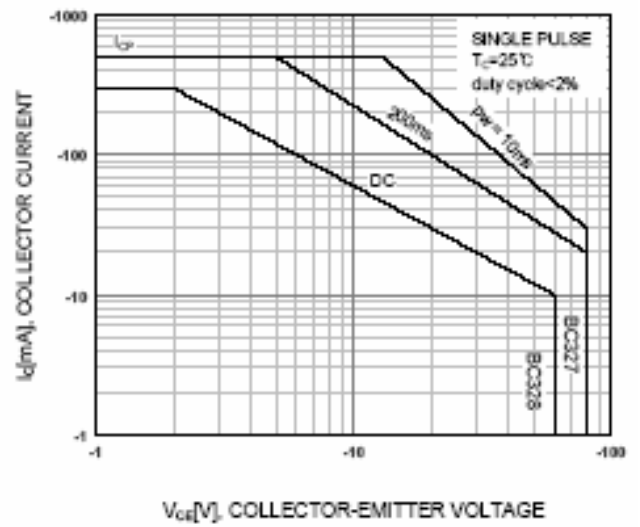


Figure 8. Safe Operating Area