



Micro Commercial Components

Micro Commercial Components  
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## BC327-16/25/40 BC328-16/25/40

### Features

- Capable of 0.625Watts of Power Dissipation.
- Collector-current : -0.8A
- Collector-base Voltage :  $V_{CBO} = -50V$  (BC327) ,  $V_{CBO} = -30V$  (BC328)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL rating 1
- Lead Free Finish/Rohs Compliant ("P" Suffix designates Compliant. See ordering information)

### Maximum Ratings

- Operating temperature :  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Storage temperature :  $-55^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$

#### Electrical Characteristics @ $25^{\circ}\text{C}$ Unless Otherwise Specified

| Symbol | Parameter | Min | Max | Units |
|--------|-----------|-----|-----|-------|
|--------|-----------|-----|-----|-------|

#### OFF CHARACTERISTICS

|               |                                                                                                                  |                              |              |               |
|---------------|------------------------------------------------------------------------------------------------------------------|------------------------------|--------------|---------------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage<br>( $I_C = -10\text{mA}$ , $I_B = 0$ )                                      | BC327<br>-45<br>BC328<br>-25 | ---          | Vdc           |
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage<br>( $I_C = -100\mu\text{A}$ , $I_E = 0$ )                                      | BC327<br>-50<br>BC328<br>-30 | ---          | Vdc           |
| $V_{(BR)EBO}$ | Collector-Emitter Breakdown Voltage<br>( $I_E = -10\mu\text{A}$ , $I_C = 0$ )                                    | -5.0                         | ---          | Vdc           |
| $I_{CBO}$     | Collector Cutoff Current<br>( $V_{CB} = -45\text{Vdc}$ , $I_E = 0$ )<br>( $V_{CB} = -25\text{Vdc}$ , $I_E = 0$ ) | BC327<br>---<br>BC328<br>--- | -0.1<br>-0.1 | $\mu\text{A}$ |
| $I_{CEO}$     | Collector Cutoff Current<br>( $V_{CE} = -40\text{Vdc}$ , $I_B = 0$ )<br>( $V_{CE} = -20\text{Vdc}$ , $I_B = 0$ ) | BC327<br>---<br>BC328<br>--- | -0.2<br>-0.2 | $\mu\text{A}$ |
| $I_{EBO}$     | Emitter Cutoff Current<br>( $V_{EB} = -4.0\text{Vdc}$ , $I_C = 0$ )                                              | ---                          | -0.1         | $\mu\text{A}$ |

#### ON CHARACTERISTICS

|               |                                                                                          |     |      |     |
|---------------|------------------------------------------------------------------------------------------|-----|------|-----|
| $h_{FE(1)}$   | DC Current Gain<br>( $I_C = -100\text{mA}$ , $V_{CE} = -1.0\text{Vdc}$ )                 | 100 | 630  | --- |
| $h_{FE(2)}$   | DC Current Gain<br>( $I_C = -300\text{mA}$ , $V_{CE} = -1.0\text{Vdc}$ )                 | 40  | ---  | --- |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage<br>( $I_C = -500\text{mA}$ , $I_B = -50\text{mA}$ ) | --- | -0.7 | Vdc |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage<br>( $I_C = -500\text{mA}$ , $I_B = -50\text{mA}$ )      | --- | -1.2 | Vdc |

#### SMALL SIGNAL CHARACTERISTICS

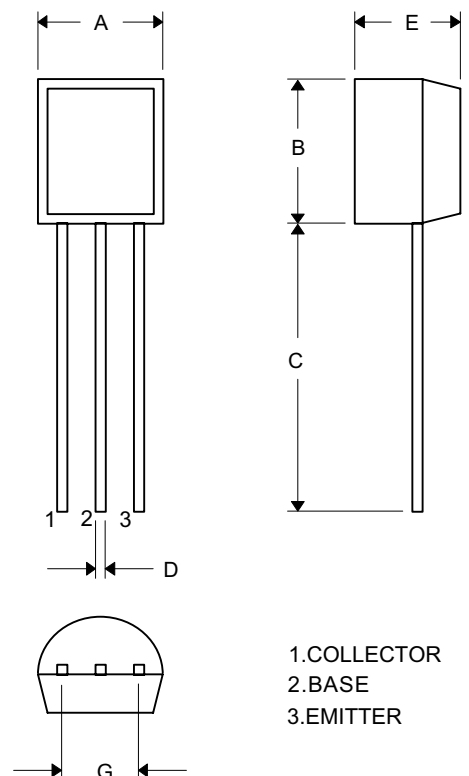
|       |                                                                                                          |     |     |     |
|-------|----------------------------------------------------------------------------------------------------------|-----|-----|-----|
| $f_T$ | Current-Gain-Bandwidth Product<br>( $V_{CE} = 5.0\text{V}$ , $f = 100\text{MHz}$ , $I_C = 10\text{mA}$ ) | 260 | --- | MHz |
|-------|----------------------------------------------------------------------------------------------------------|-----|-----|-----|

#### hFE CLASSIFICATION

| Classification | 16      | 25      | 40      |
|----------------|---------|---------|---------|
| $h_{FE(1)}$    | 100~250 | 160~400 | 250~630 |
| Marking Code   | A 011   | B 011   | C 011   |

## PNP Plastic-Encapsulate Transistors

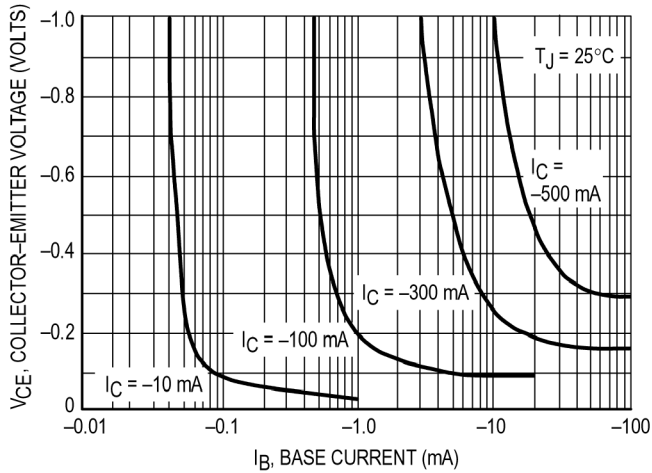
### TO-92



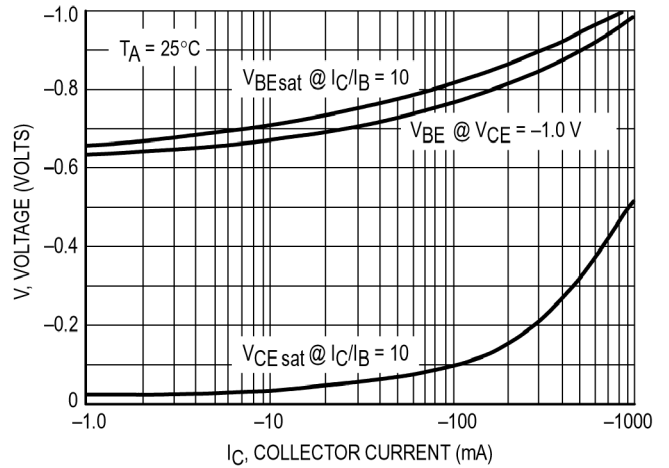
| DIMENSIONS |        |      |       |       |      |
|------------|--------|------|-------|-------|------|
| DIM        | INCHES |      | MM    |       | NOTE |
|            | MIN    | MAX  | MIN   | MAX   |      |
| A          | .170   | .190 | 4.33  | 4.83  |      |
| B          | .170   | .190 | 4.30  | 4.83  |      |
| C          | .550   | .590 | 13.97 | 14.97 |      |
| D          | .010   | .020 | 0.36  | 0.56  |      |
| E          | .130   | .160 | 3.30  | 3.96  |      |
| G          | .010   | .104 | 2.44  | 2.64  |      |

## Typical Characteristics

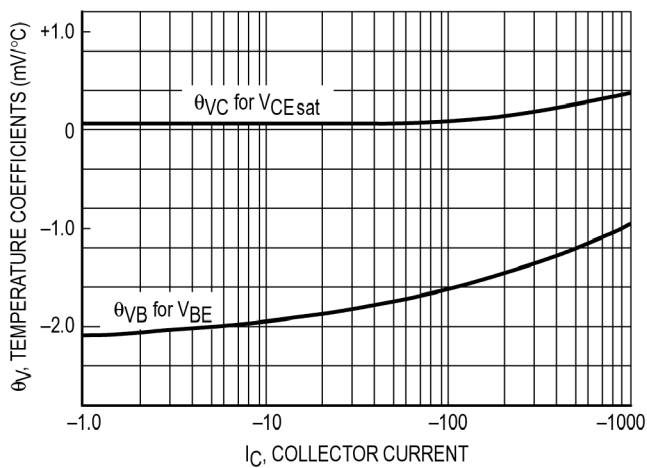
## BC327



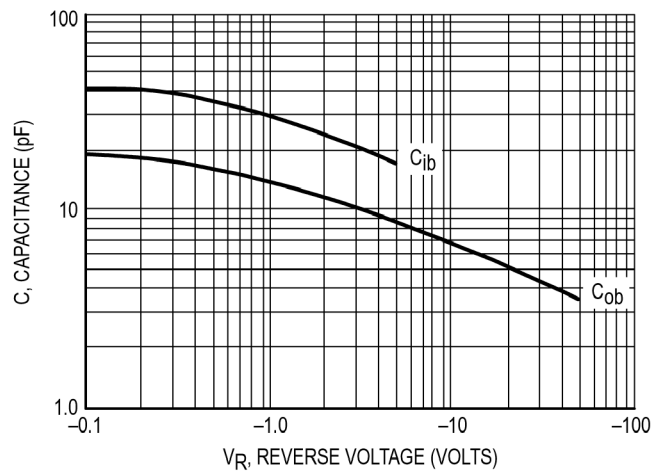
Saturation Region



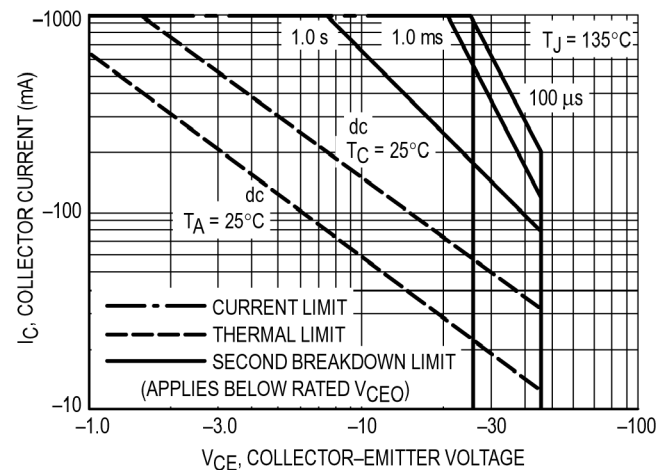
"On" Voltages



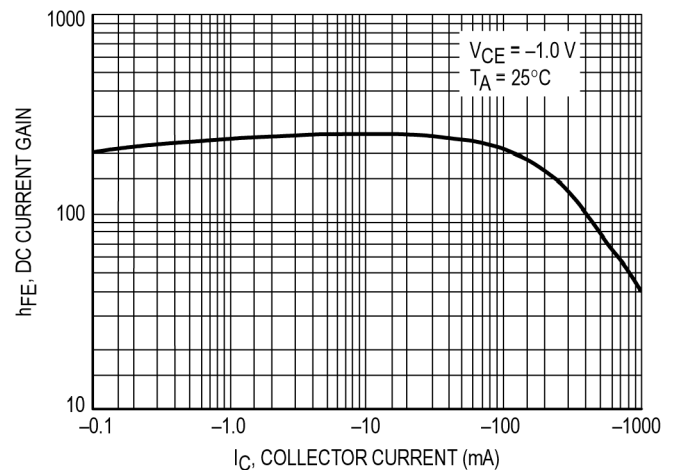
Temperature Coefficients



Capacitances



Active Region — Safe Operating Area



DC Current Gain

## Ordering Information

| Device           | Packing                    |
|------------------|----------------------------|
| (Part Number)-AP | Ammo Packing;2Kpcs/AmmoBox |
| (Part Number)-BP | Bulk;1Kpcs/Bag             |

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