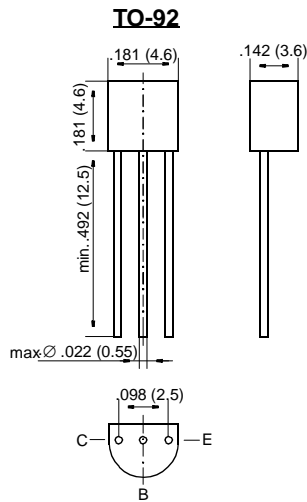


BC327, BC328

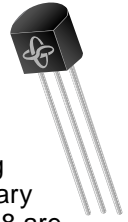
Small Signal Transistors (PNP)



Dimensions in inches and (millimeters)

FEATURES

- ◆ PNP Silicon Epitaxial Planar Transistors for switching and amplifier applications. Especially suitable for AF-driver stages and low-power output stages.
- ◆ These types are also available subdivided into three groups -16, -25, and -40, according to their DC current gain. As complementary types, the NPN transistors BC337 and BC338 are recommended.
- ◆ On special request, these transistors are also manufactured in the pin configuration TO-18.



MECHANICAL DATA

Case: TO-92 Plastic Package

Weight: approx. 0.18 g

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

| | | Symbol | Value | Unit |
|---|-------|------------|-------------------|------|
| Collector-Emitter Voltage | BC327 | $-V_{CES}$ | 50 | V |
| | BC328 | $-V_{CES}$ | 30 | V |
| Collector-Emitter Voltage | BC327 | $-V_{CEO}$ | 45 | V |
| | BC328 | $-V_{CEO}$ | 25 | V |
| Emitter-Base Voltage | | $-V_{EBO}$ | 5 | V |
| Collector Current | | $-I_C$ | 800 | mA |
| Peak Collector Current | | $-I_{CM}$ | 1 | A |
| Base Current | | $-I_B$ | 100 | mA |
| Power Dissipation at $T_{amb} = 25\text{ °C}$ | | P_{tot} | 625 ¹⁾ | mW |
| Junction Temperature | | T_j | 150 | °C |
| Storage Temperature Range | | T_S | -65 to +150 | °C |

¹⁾ Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case.

BC327, BC328

ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

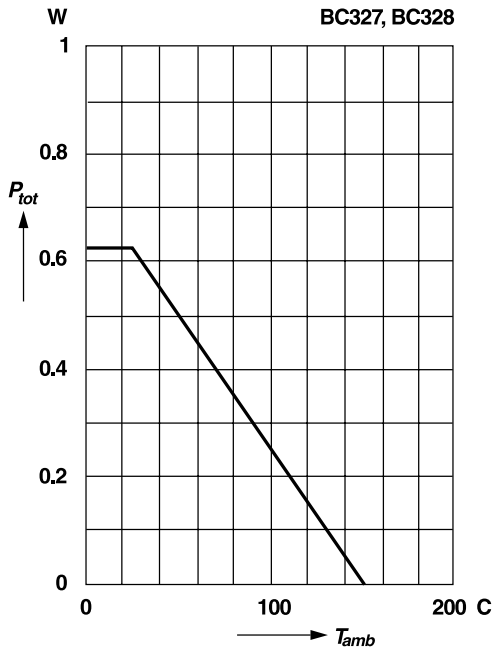
| | Symbol | Min. | Typ. | Max. | Unit |
|--|--|------------------|------------------|------------------------|--|
| DC Current Gain at $-V_{CE} = 1\text{ V}$, $-I_C = 100\text{ mA}$ Current Gain Group-16 | h_{FE} | 100 | 160 | 250 | — |
| -25 | h_{FE} | 160 | 250 | 400 | — |
| -40 | h_{FE} | 250 | 400 | 630 | — |
| at $-V_{CE} = 1\text{ V}$, $-I_C = 300\text{ mA}$ Current Gain Group-16 | h_{FE} | 60 | 130 | — | — |
| -25 | h_{FE} | 100 | 200 | — | — |
| -40 | h_{FE} | 170 | 320 | — | — |
| Thermal Resistance Junction to Ambient Air | R_{thJA} | — | — | 200 ¹⁾ | K/W |
| Collector-Emitter Cutoff Current at $-V_{CE} = 45\text{ V}$ at $-V_{CE} = 25\text{ V}$ at $-V_{CE} = 45\text{ V}$, $T_{amb} = 125\text{ °C}$ at $-V_{CE} = 25\text{ V}$, $T_{amb} = 125\text{ °C}$ | BC327 $-I_{CES}$ BC328 $-I_{CES}$ BC327 $-I_{CES}$ BC328 $-I_{CES}$ | — — — — | 2 2 — — | 100 100 10 10 | nA nA μA μA |
| Collector-Emitter Breakdown Voltage at $-I_C = 10\text{ mA}$ | BC327 $-V_{(BR)CEO}$ BC328 $-V_{(BR)CEO}$ | 45 25 | — — | — — | V V |
| Collector-Emitter Breakdown Voltage at $-I_C = 0.1\text{ mA}$ | BC327 $-V_{(BR)CES}$ BC328 $-V_{(BR)CES}$ | 50 30 | — — | — — | V V |
| Emitter-Base Breakdown Voltage at $-I_E = 0.1\text{ mA}$ | $-V_{(BR)EBO}$ | 5 | — | — | V |
| Collector Saturation Voltage at $-I_C = 500\text{ mA}$, $-I_B = 50\text{ mA}$ | $-V_{CEsat}$ | — | — | 0.7 | V |
| Base-Emitter Voltage at $-V_{CE} = 1\text{ V}$, $-I_C = 300\text{ mA}$ | $-V_{BE}$ | — | — | 1.2 | V |
| Gain-Bandwidth Product at $-V_{CE} = 5\text{ V}$, $-I_C = 10\text{ mA}$, $f = 50\text{ MHz}$ | f_T | — | 100 | — | MHz |
| Collector-Base Capacitance at $-V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$ | C_{CBO} | — | 12 | — | pF |

¹⁾ Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case.

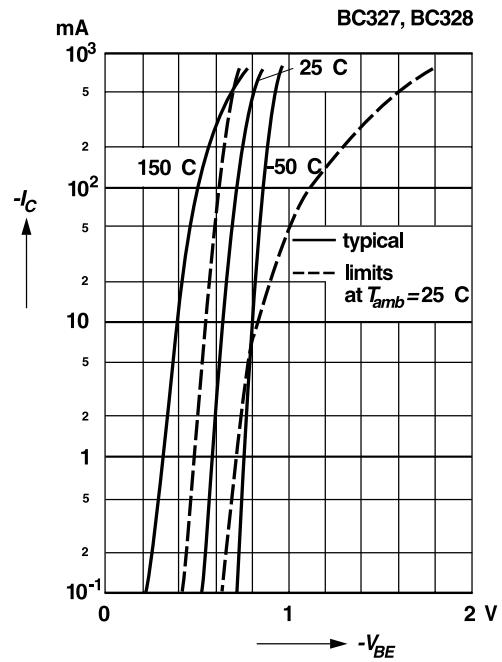
RATINGS AND CHARACTERISTIC CURVES BC327, BC328

Admissible power dissipation versus ambient temperature

Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case

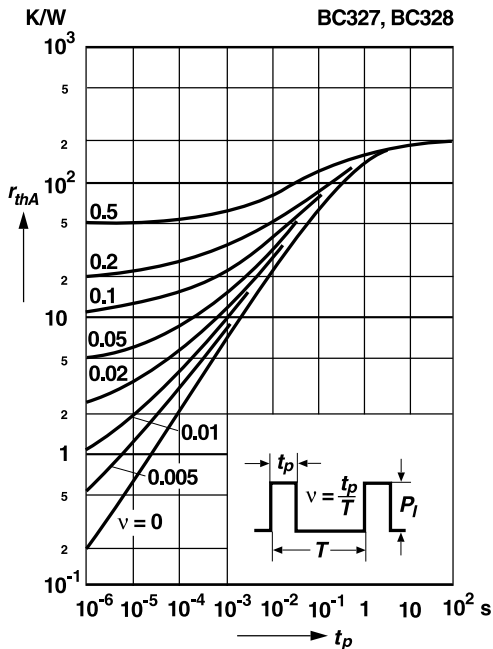


Collector current versus base-emitter voltage

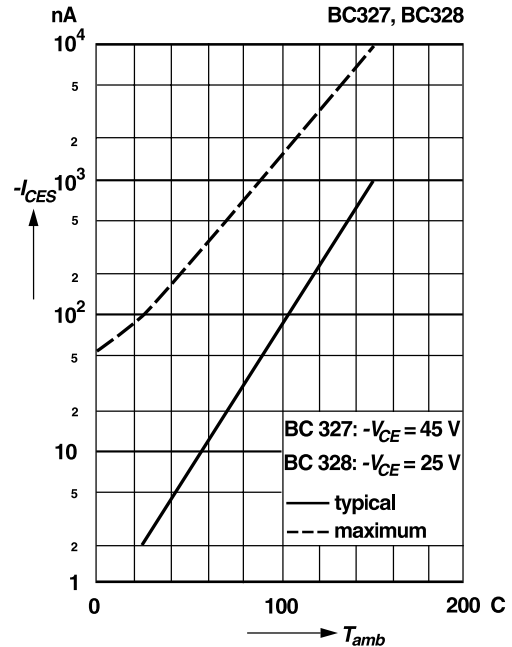


Pulse thermal resistance versus pulse duration

Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case

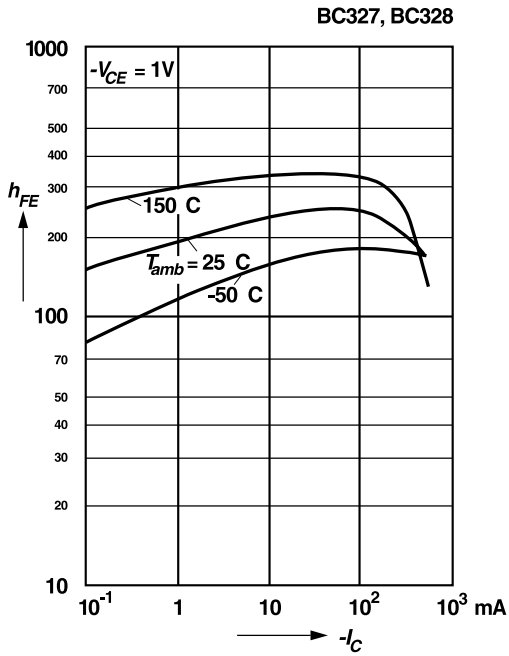


Collector-emitter cutoff current versus ambient temperature

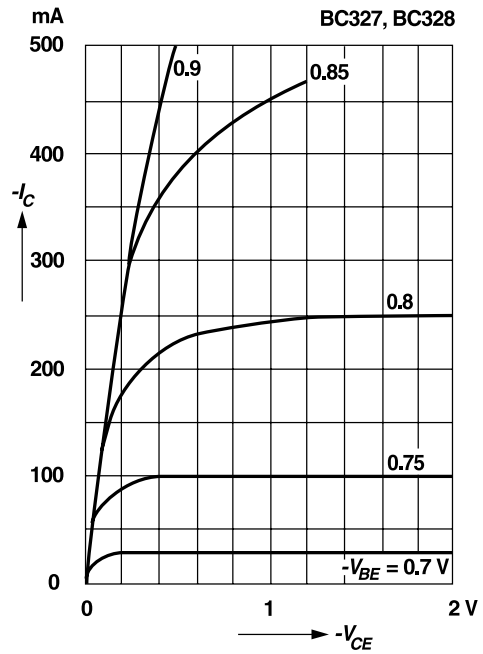


RATINGS AND CHARACTERISTIC CURVES BC327, BC328

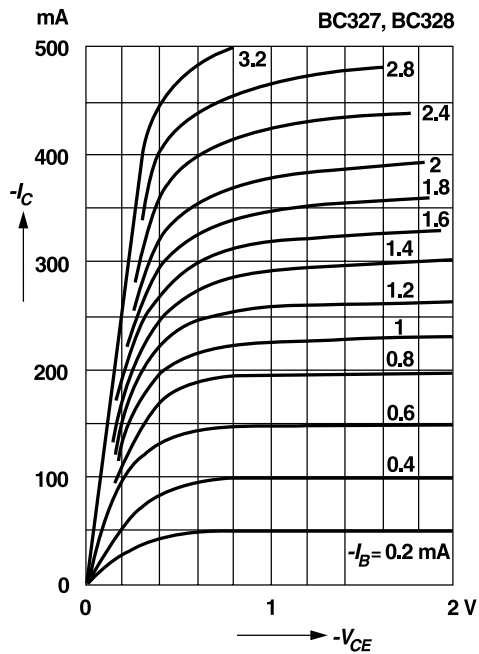
DC current gain
versus collector current



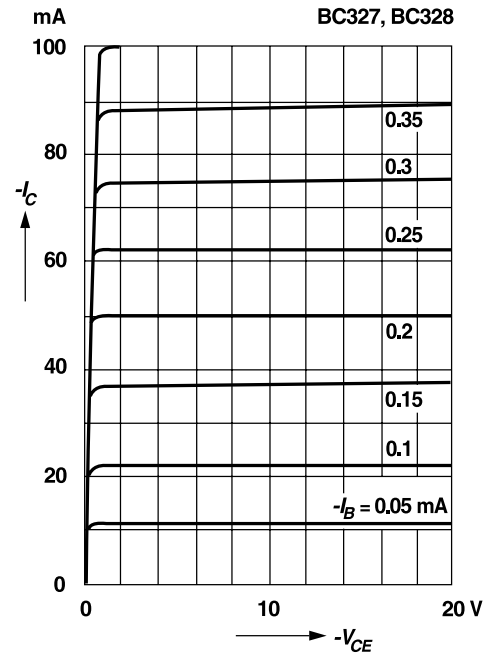
Common emitter
collector characteristics



Common emitter
collector characteristics

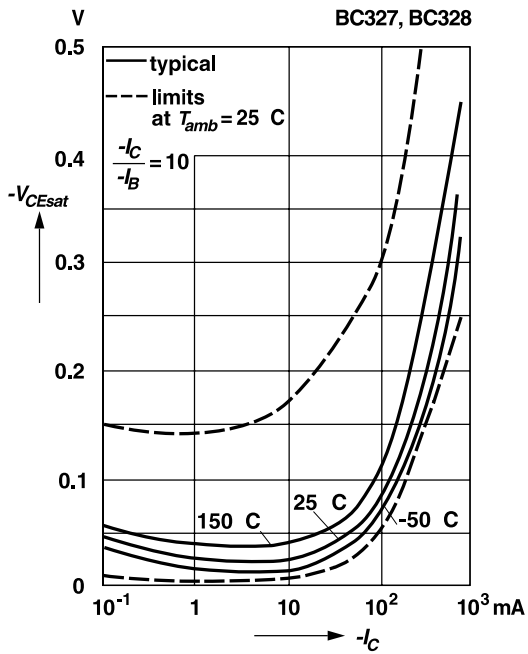


Common emitter
collector characteristics

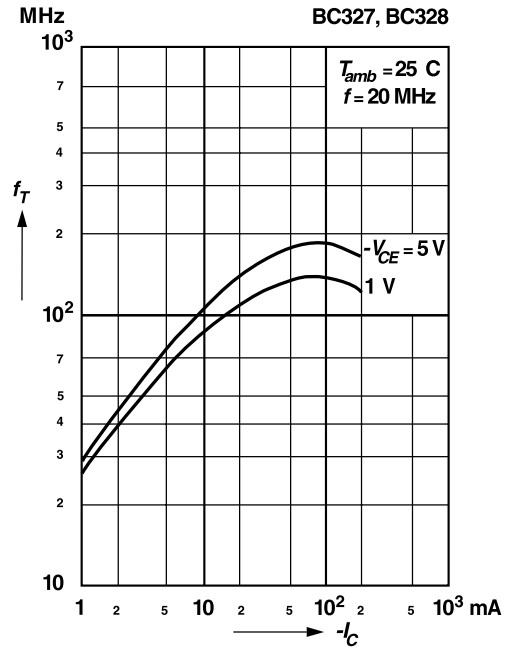


RATINGS AND CHARACTERISTIC CURVES BC327, BC328

Collector saturation voltage
versus collector current



Gain-bandwidth product
versus collector current



Base saturation voltage
versus collector current

