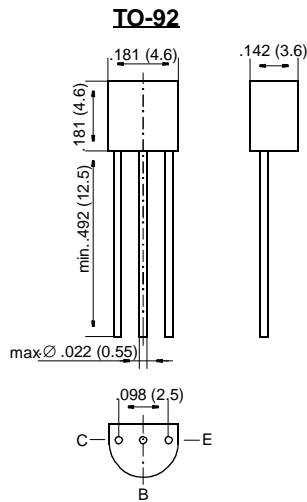


# BC327, BC328

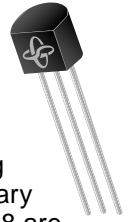
## Small Signal Transistors (PNP)



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 <sup>1)</sup>	mW
Junction Temperature		$T_j$	150	°C
Storage Temperature Range		$T_S$	-65 to +150	°C

<sup>1)</sup> 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

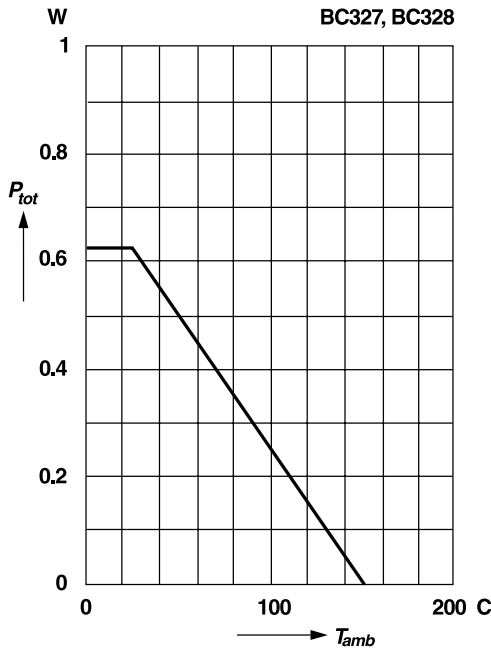
	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE} = 1\text{ V}$ , $-I_C = 100\text{ mA}$ <b>Current Gain Group-16</b>	$h_{FE}$	100	160	250	—
-25	$h_{FE}$	160	250	400	—
-40	$h_{FE}$	250	400	630	—
at $-V_{CE} = 1\text{ V}$ , $-I_C = 300\text{ mA}$ <b>Current Gain Group-16</b>	$h_{FE}$	60	130	—	—
-25	$h_{FE}$	100	200	—	—
-40	$h_{FE}$	170	320	—	—
Thermal Resistance Junction to Ambient Air	$R_{thJA}$	—	—	200 <sup>1)</sup>	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 $-V_{CE} = 25\text{ V}$ , $T_{amb} = 125\text{ °C}$	<b>BC327</b> $-I_{CES}$ <b>BC328</b> $-I_{CES}$ <b>BC327</b> $-I_{CES}$ <b>BC328</b> $-I_{CES}$	— — — —	2 2 — —	100 100 10 10	nA nA $\mu\text{A}$ $\mu\text{A}$
Collector-Emitter Breakdown Voltage at $-I_C = 10\text{ mA}$	<b>BC327</b> $-V_{(BR)CEO}$ <b>BC328</b> $-V_{(BR)CEO}$	45 25	— —	— —	V V
Collector-Emitter Breakdown Voltage at $-I_C = 0.1\text{ mA}$	<b>BC327</b> $-V_{(BR)CES}$ <b>BC328</b> $-V_{(BR)CES}$	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

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

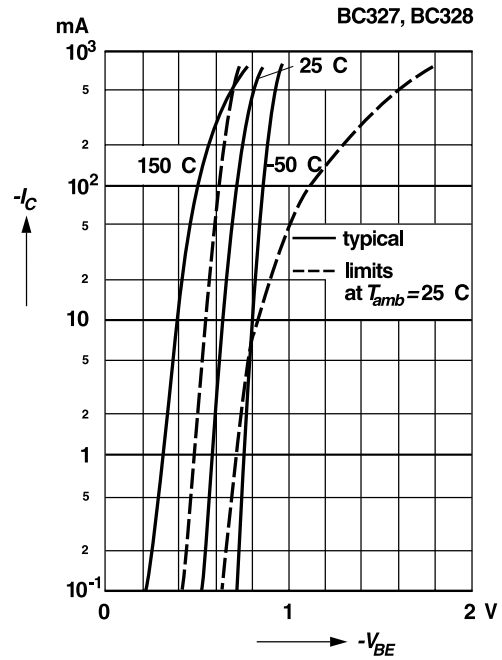
# RATINGS AND CHARACTERISTIC CURVES BC327, BC328

## Admissible power dissipation versus ambient temperature

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

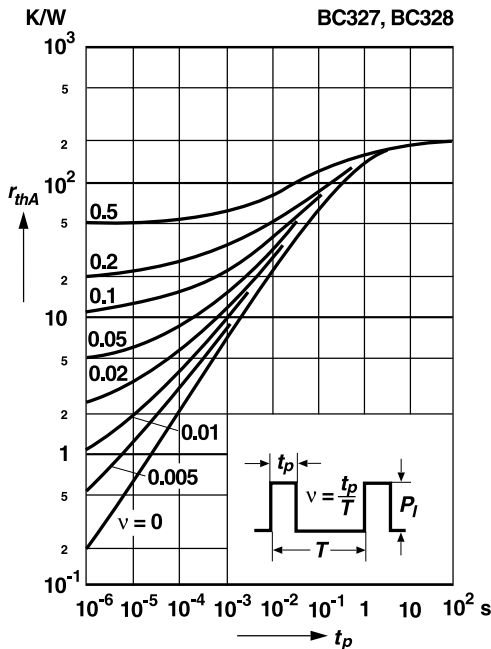


## Collector current versus base-emitter voltage

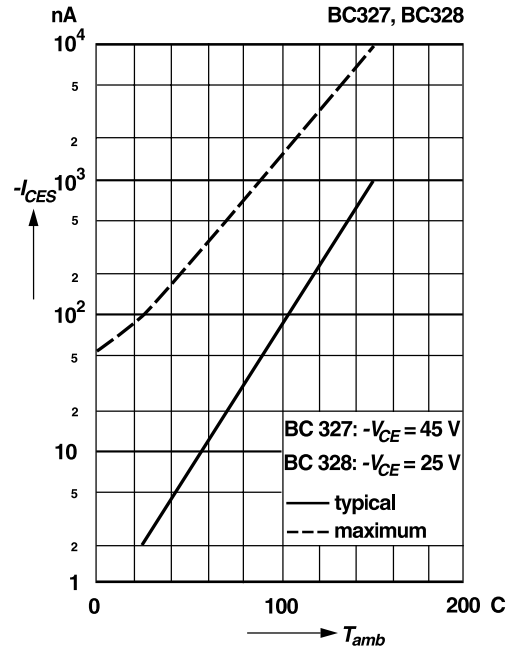


## Pulse thermal resistance versus pulse duration

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

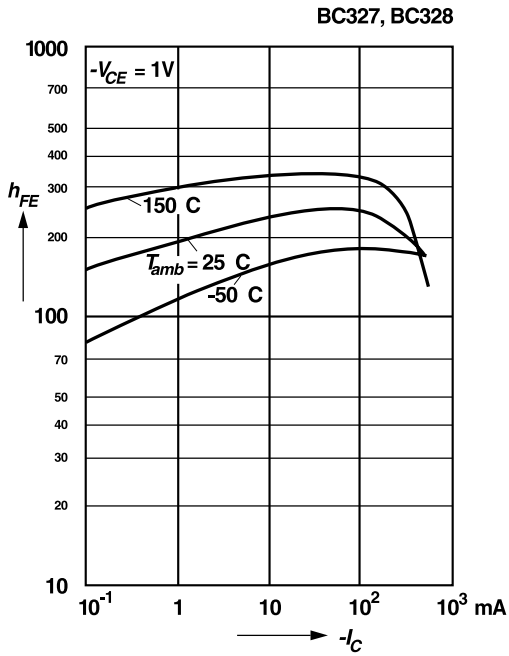


## Collector-emitter cutoff current versus ambient temperature

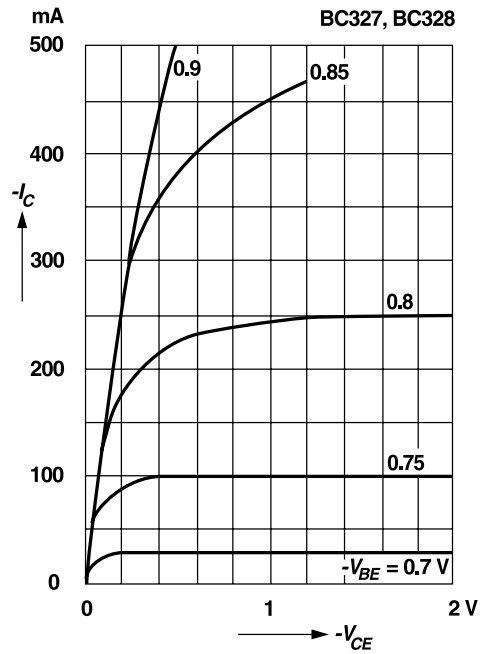


# RATINGS AND CHARACTERISTIC CURVES BC327, BC328

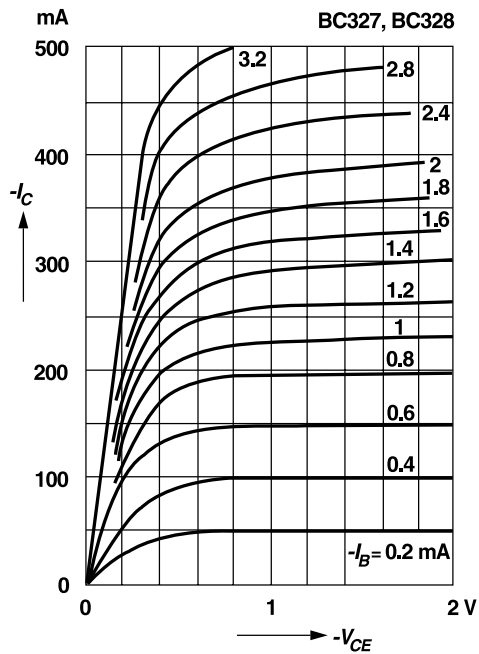
DC current gain  
versus collector current



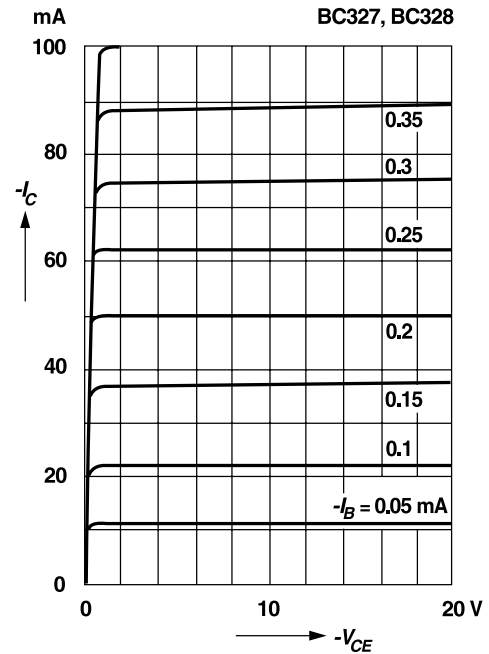
Common emitter  
collector characteristics



Common emitter  
collector characteristics

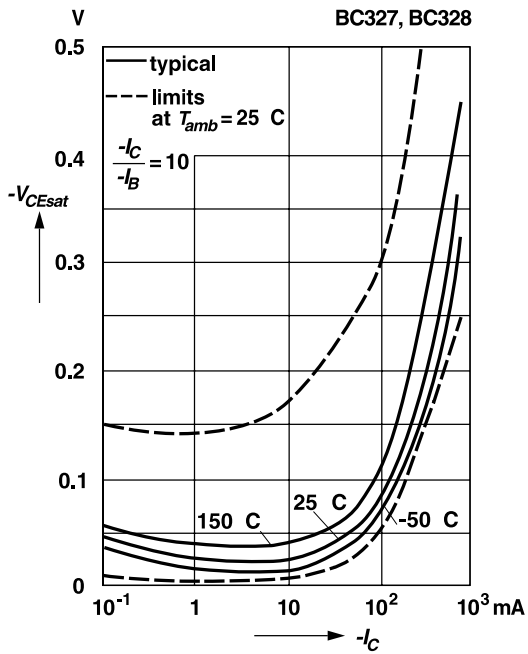


Common emitter  
collector characteristics

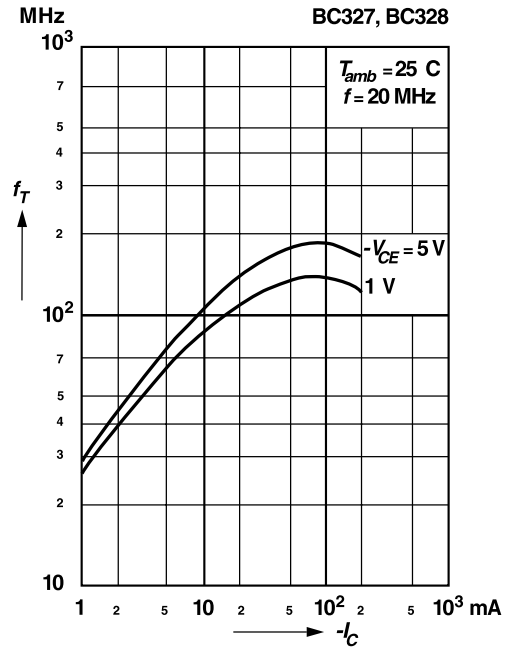


# RATINGS AND CHARACTERISTIC CURVES BC327, BC328

Collector saturation voltage  
versus collector current



Gain-bandwidth product  
versus collector current



Base saturation voltage  
versus collector current

