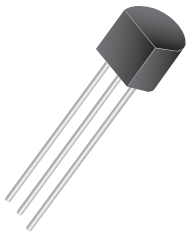
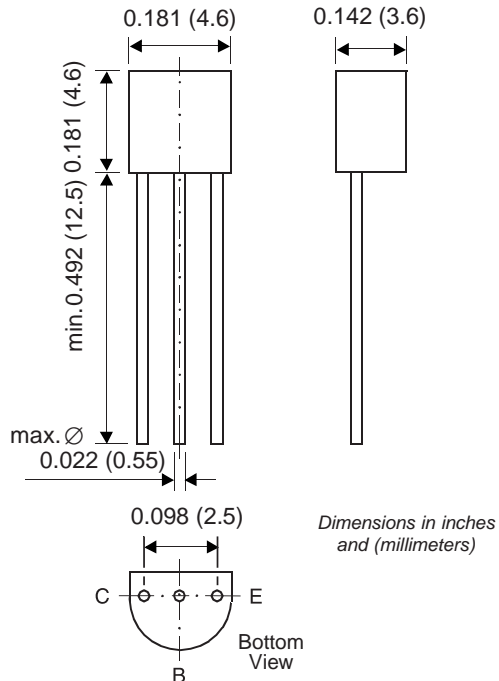


## Small Signal Transistors (PNP)


**TO-226AA (TO-92)**


### 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 BC327 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. 0.18g

**Packaging Codes/Options:**

E6/Bulk – 5K per container, 20K/box

E7/4K per Ammo mag., 20K/box

### Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter		Symbol	Value	Unit
Collector-Emitter Voltage	BC327	$-V_{CES}$	50	V
	BC328		30	
Collector-Emitter Voltage	BC327	$-V_{CEO}$	45	V
	BC328		25	
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 $T_{amb} = 25^\circ\text{C}$		$P_{tot}$	625 <sup>(1)</sup>	mW
Thermal Resistance Junction to Ambient Air		$R_{\theta JA}$	200 <sup>(1)</sup>	°C/W
Junction Temperature		$T_j$	150	°C
Storage Temperature Range		$T_S$	-65 to +150	°C

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

# BC327 thru BC328

Vishay Semiconductors  
formerly General Semiconductor



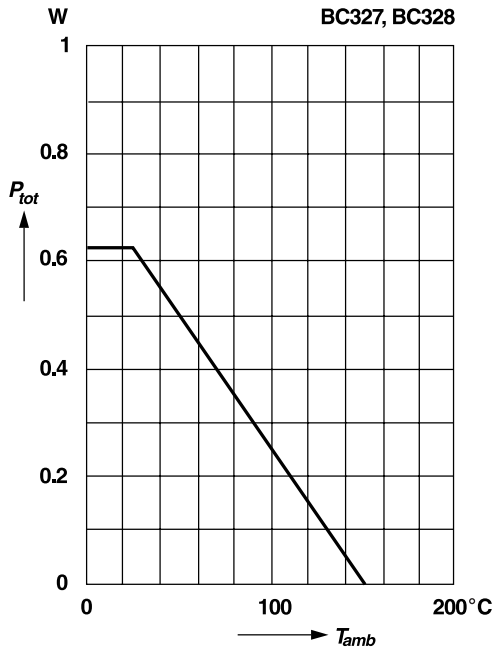
## Electrical Characteristics (T<sub>J</sub> = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit	
DC Current Gain	h <sub>FE</sub>	-V <sub>CE</sub> = 1 V, -I <sub>C</sub> = 100 mA	Current Gain Group -16	100	160	250	—
			-25	160	250	400	
			-40	250	400	630	
		Current Gain Group -16	-V <sub>CE</sub> = 1 V, -I <sub>C</sub> = 300 mA	60	130	—	
			-25	100	200	—	
			-40	170	320	—	
Collector-Emitter Cutoff Current	-I <sub>CES</sub>	-V <sub>CE</sub> = 45 V	BC327	—	2	100	nA
			BC328	—	2	100	nA
		-V <sub>CE</sub> = 25 V, T <sub>amb</sub> = 125°C	BC327	—	—	10	μA
			BC328	—	—	10	μA
Collector Saturation Voltage	-V <sub>CEsat</sub>	-I <sub>C</sub> = 500 mA, -I <sub>B</sub> = 50 mA	—	—	0.7	V	
Base-Emitter Voltage	-V <sub>BE</sub>	-V <sub>CE</sub> = 1 V, -I <sub>C</sub> = 300 mA	—	—	1.2	V	
Collector-Emitter Breakdown Voltage	-V <sub>(BR)CEO</sub>	-I <sub>C</sub> = 10 mA	BC327	45	—	—	V
			BC328	25	—	—	
Collector-Emitter Breakdown Voltage	-V <sub>(BR)CES</sub>	-I <sub>C</sub> = 0.1 mA	BC327	50	—	—	V
			BC328	30	—	—	
Emitter-Base Breakdown Voltage	-V <sub>(BR)EBO</sub>	-I <sub>E</sub> = 0.1 mA	5	—	—	V	
Gain-Bandwidth Product	f <sub>T</sub>	-V <sub>CE</sub> = 5 V, -I <sub>C</sub> = 10 mA f = 50 MHz	—	100	—	MHz	
Collector-Base Capacitance	CC <sub>BO</sub>	-V <sub>CB</sub> = 10 V, f = 1 MHz	—	12	—	pF	

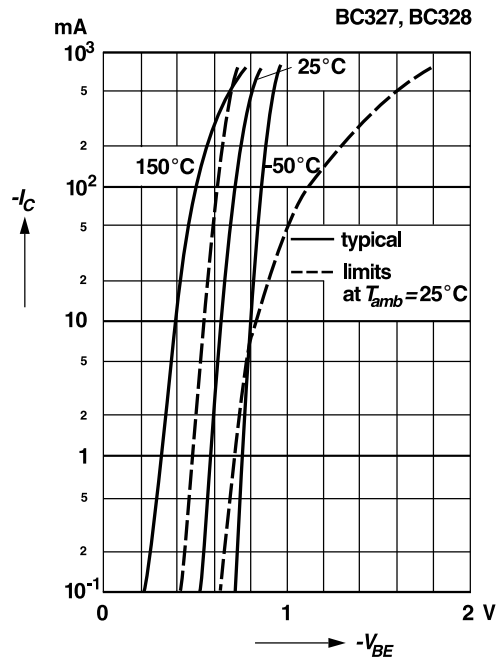
## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

### Admissible power dissipation versus ambient temperature

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

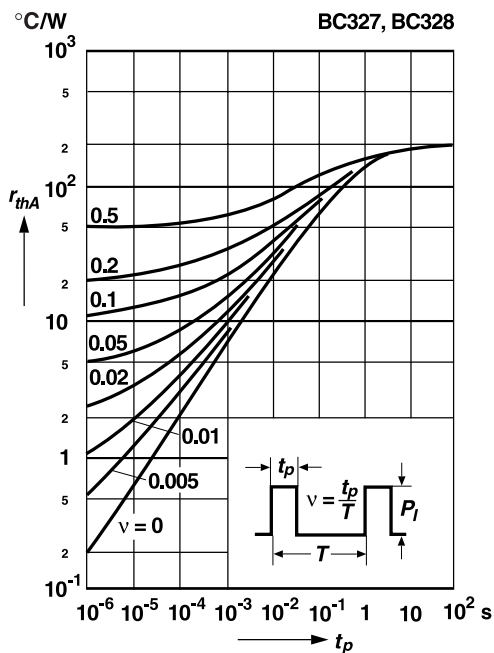


### Collector current versus base-emitter voltage

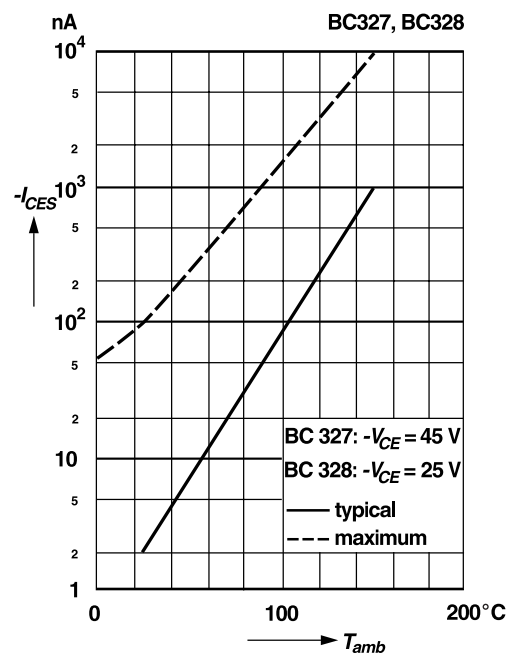


### Pulse thermal resistance versus pulse duration

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



### Collector-emitter cutoff current versus ambient temperature



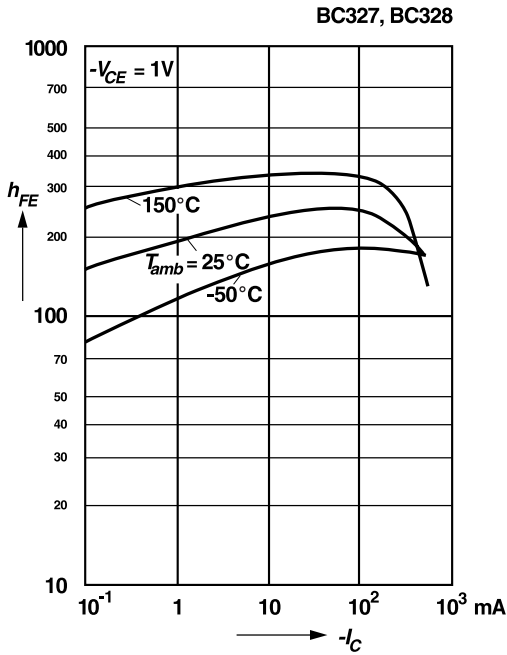
# BC327 thru BC328

Vishay Semiconductors  
formerly General Semiconductor

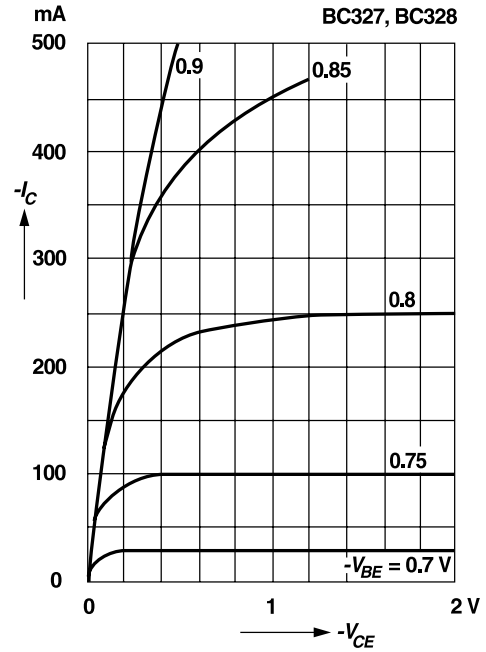


## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

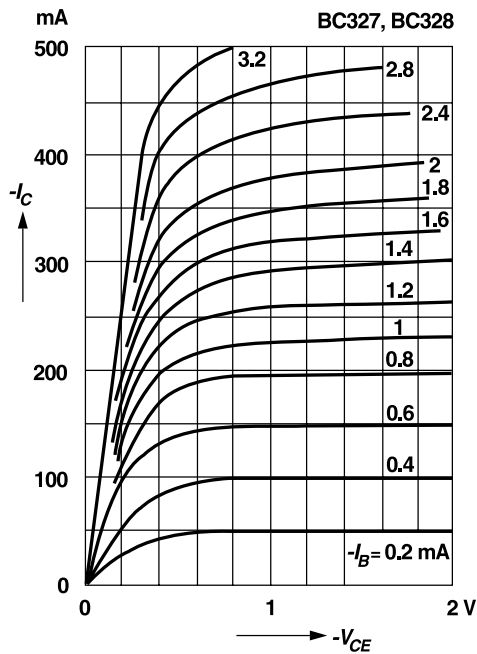
DC current gain  
versus collector current



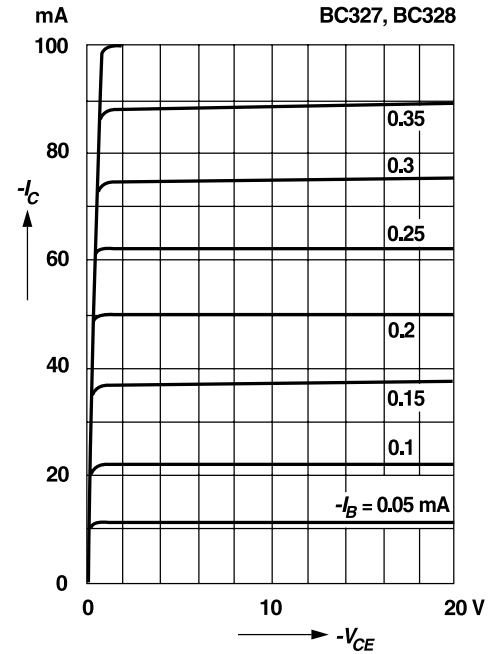
Common emitter  
collector characteristics



Common emitter  
collector characteristics

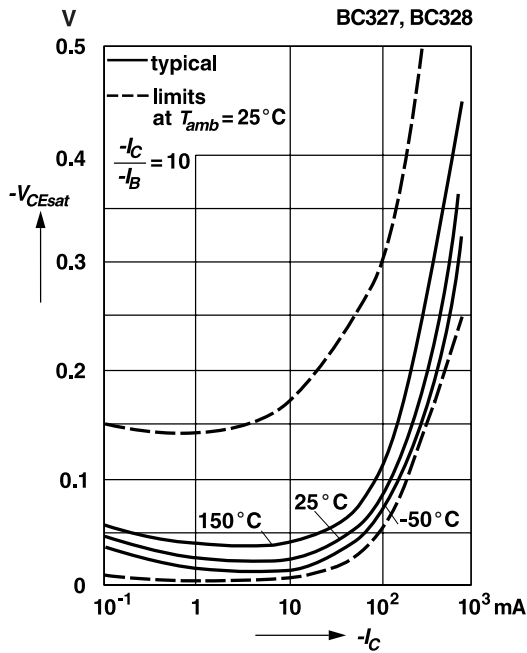


Common emitter  
collector characteristics

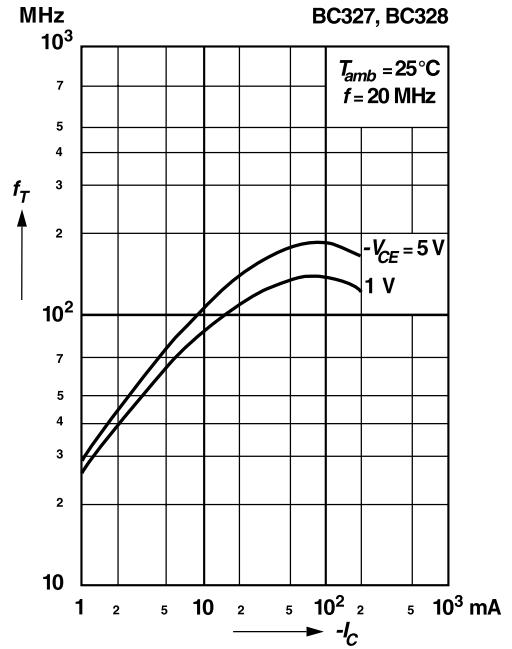


## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

**Collector saturation voltage versus collector current**



**Gain-bandwidth product versus collector current**



**Base saturation voltage versus collector current**

