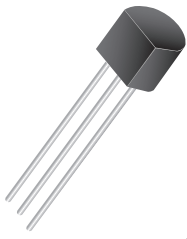
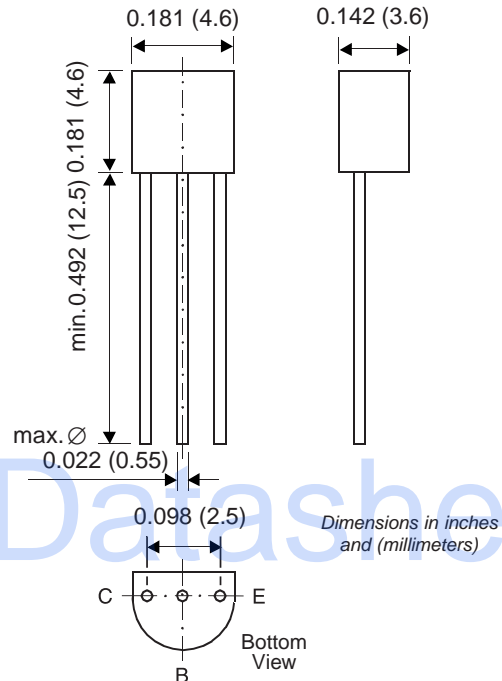


Small Signal Transistors (PNP)


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 ⁽¹⁾	mW
Thermal Resistance Junction to Ambient Air		$R_{\theta JA}$	200 ⁽¹⁾	°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_J = 25°C unless otherwise noted)

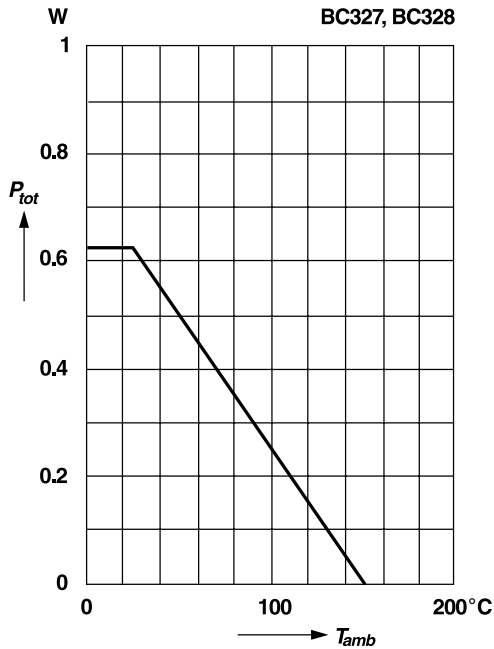
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit	
DC Current Gain	h _{FE}	-V _{CE} = 1 V, -I _C = 100 mA	Current Gain Group -16	100	160	250	—
			-25	160	250	400	
			-40	250	400	630	
		Current Gain Group -16	-V _{CE} = 1 V, -I _C = 300 mA	60	130	—	
			-25	100	200	—	
			-40	170	320	—	
Collector-Emitter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



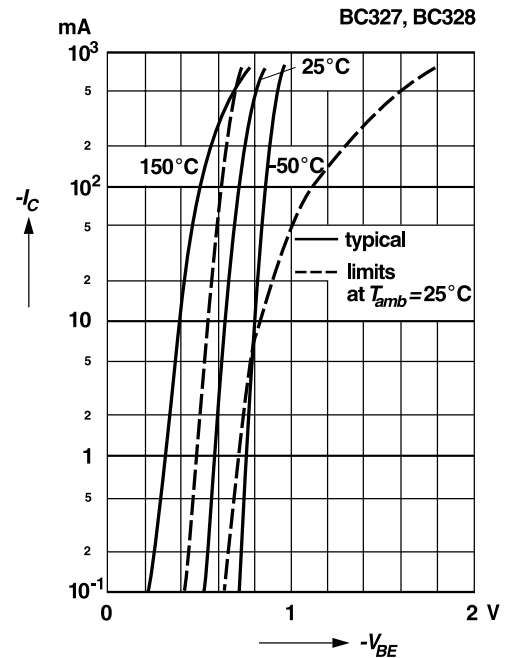
Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Admissible power dissipation versus ambient temperature

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

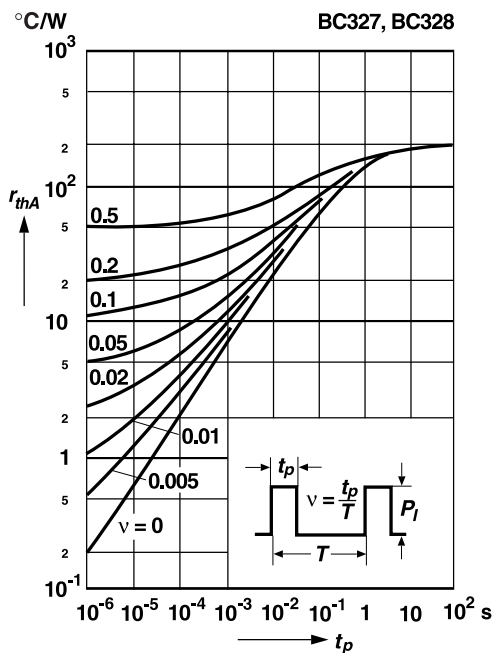


Collector current versus base-emitter voltage

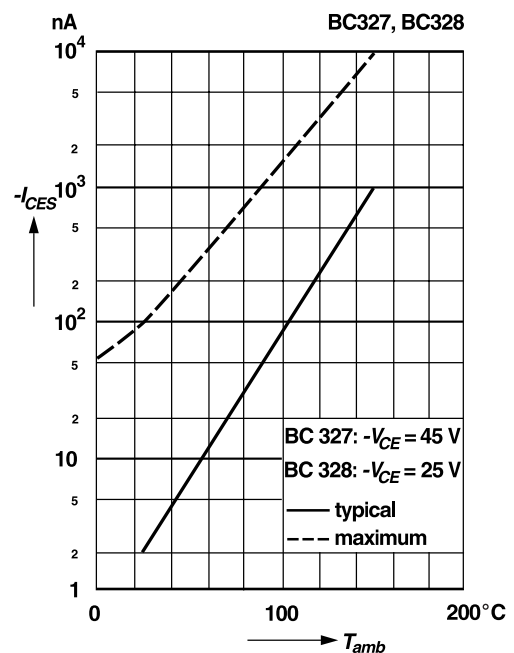


Pulse thermal resistance versus pulse duration

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



Collector-emitter cutoff current versus ambient temperature



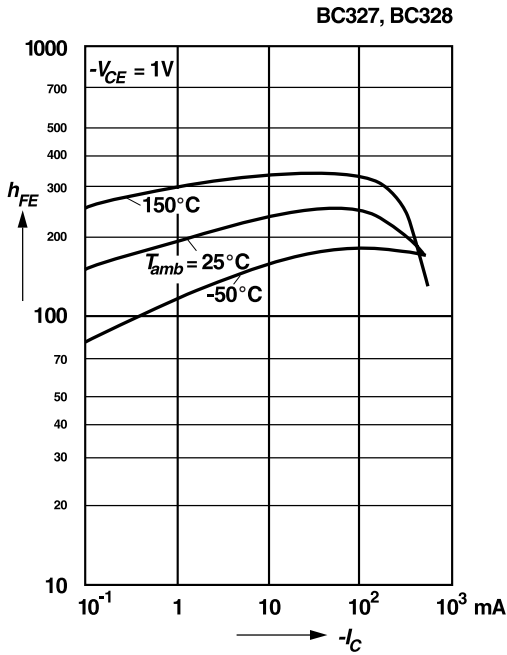
BC327 thru BC328



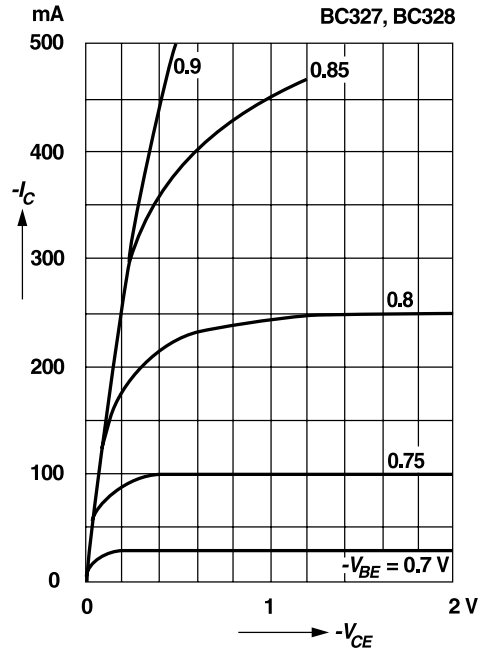
Vishay Semiconductors
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Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

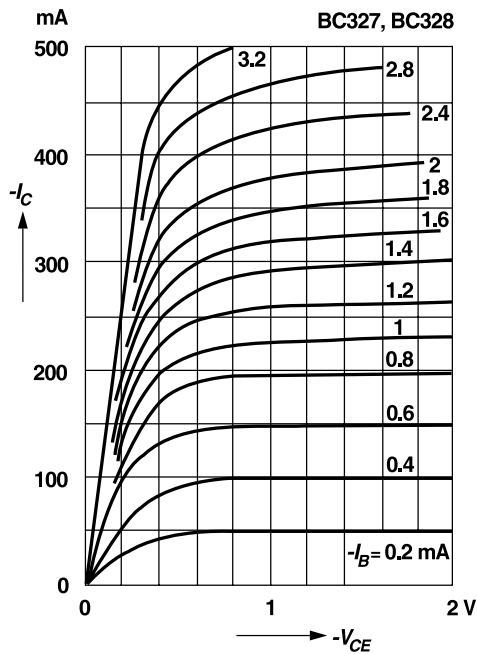
DC current gain versus collector current



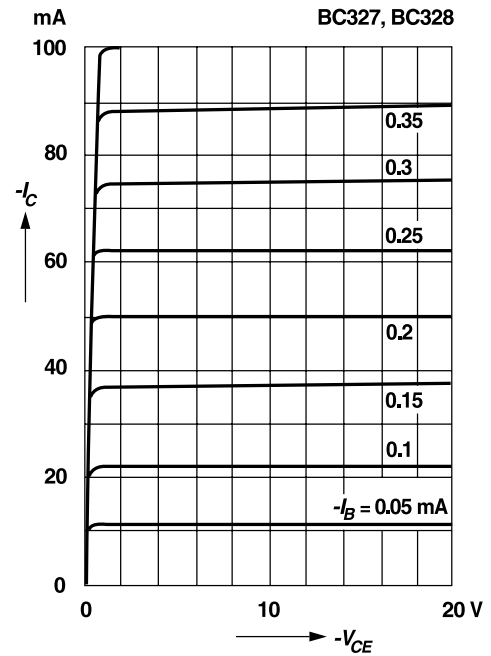
Common emitter collector characteristics



Common emitter collector characteristics

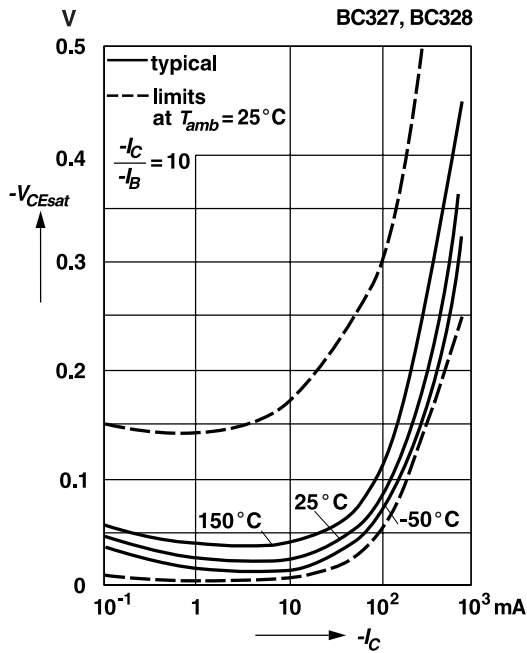


Common emitter collector characteristics

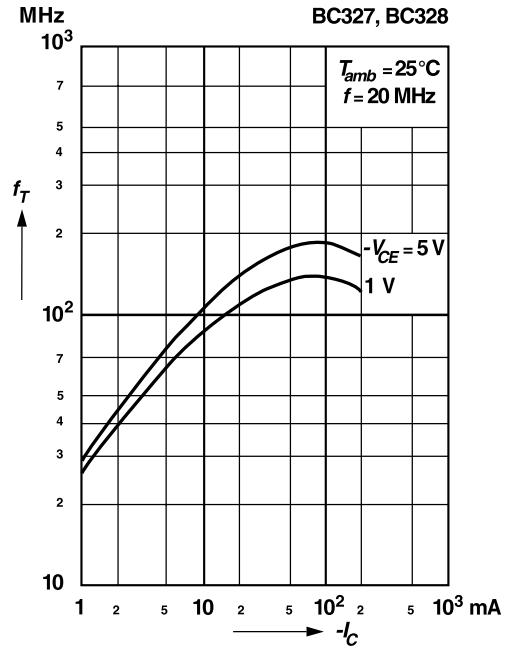


Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Collector saturation voltage versus collector current



Gain-bandwidth product versus collector current



Base saturation voltage versus collector current

