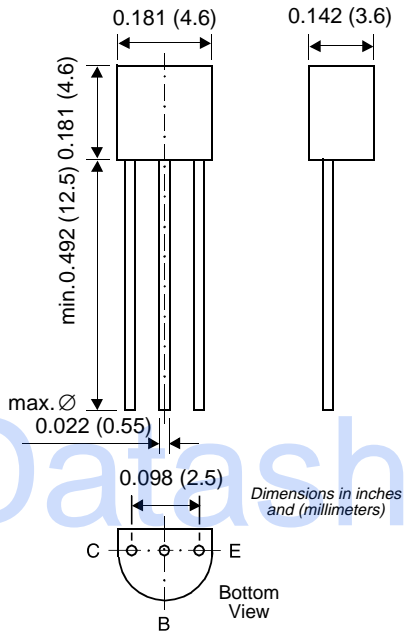




TO-226AA (TO-92)



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

E7/4K per Ammo tape

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

Parameters		Symbols	Value	Units
Collector-Emitter Voltage	BC327 BC328	-V _{CES}	50 30	V
Collector-Emitter Voltage	BC327 BC328	-V _{CEO}	45 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 Tamb = 25°C		P _{tot}	625 ⁽¹⁾	mW
Thermal Resistance Junction to Ambient Air		R _{θJA}	200 ⁽¹⁾	°C/W
Junction Temperature		T _j	150	°C
Storage Temperature Range		T _s	- 65 to +150	°C

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

Small Signal Transistors (PNP)

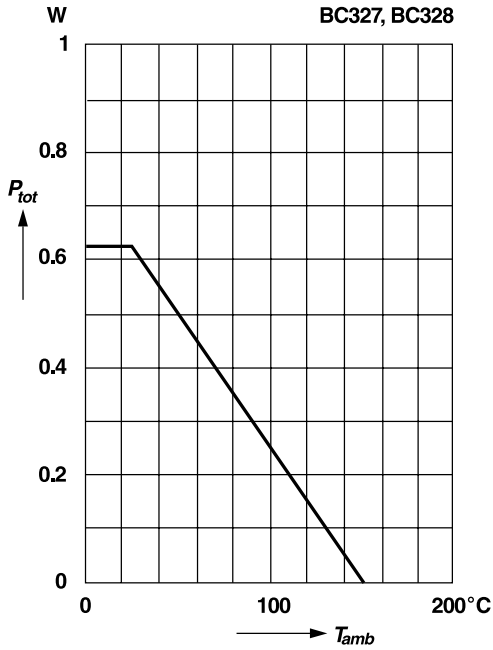
Electrical Characteristics (T_J = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit	
DC Current Gain	hFE	-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	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} = 45 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	C _{CB0}	-V _{CB} = 10 V, f = 1 MHz	—	12	—	pF	

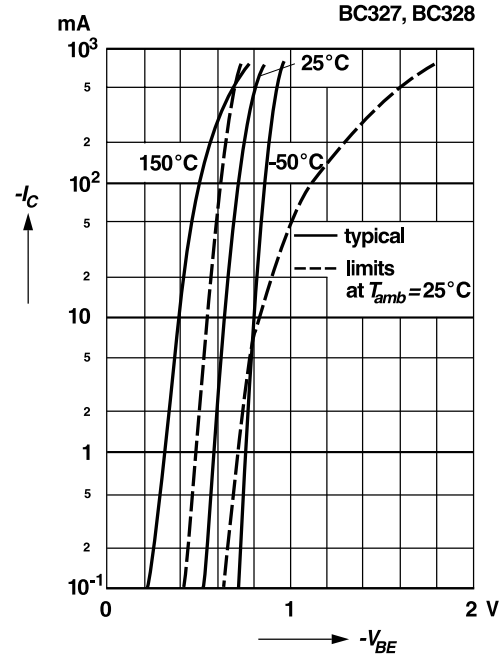
Ratings and Characteristic Curves

Admissible power dissipation versus ambient temperature

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

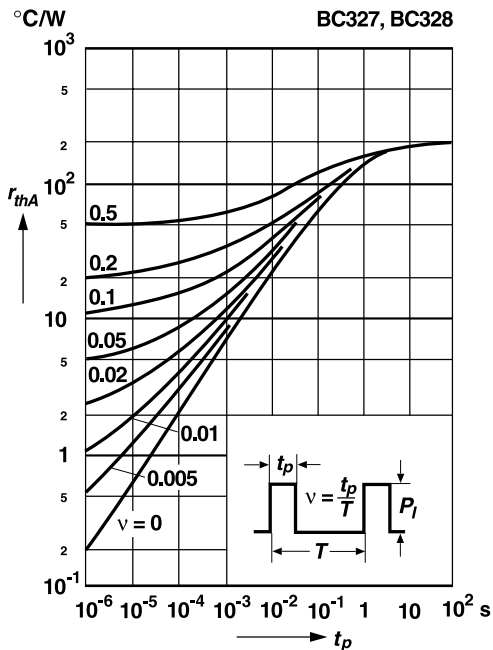


Collector current versus base-emitter voltage

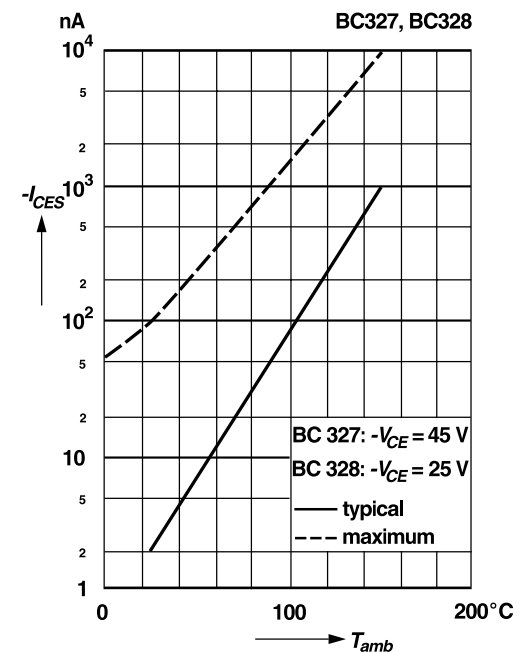


Pulse thermal resistance versus pulse duration

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

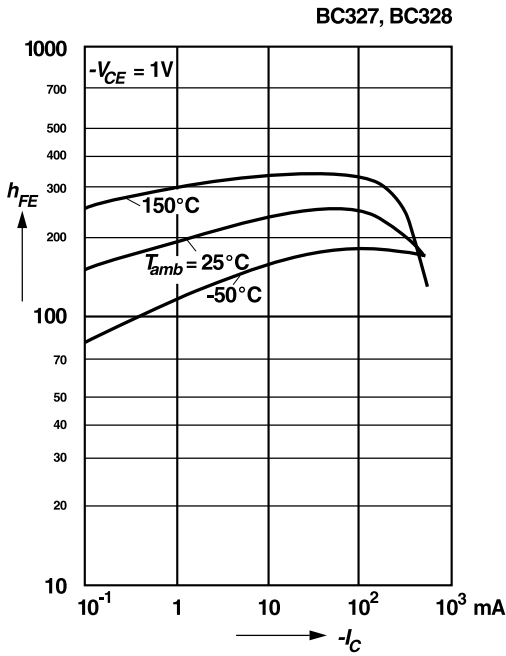


Collector-emitter cutoff current versus ambient temperature

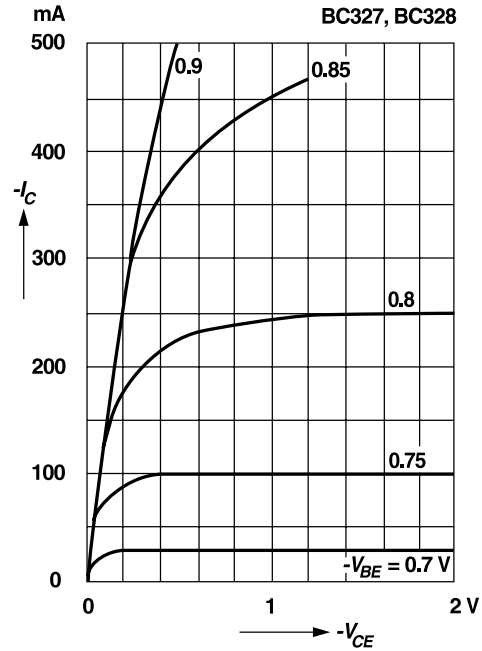


Ratings and Characteristic Curves

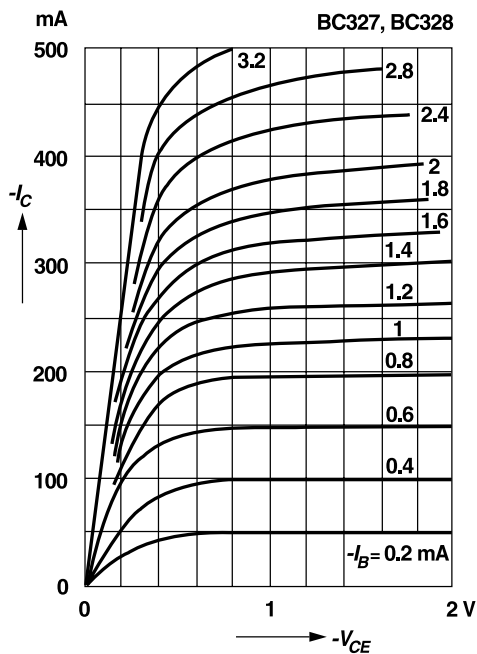
DC current gain versus collector current



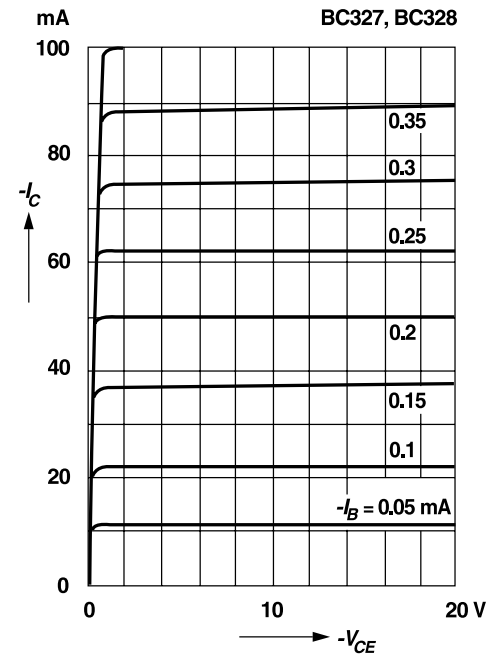
Common emitter collector characteristics



Common emitter collector characteristics

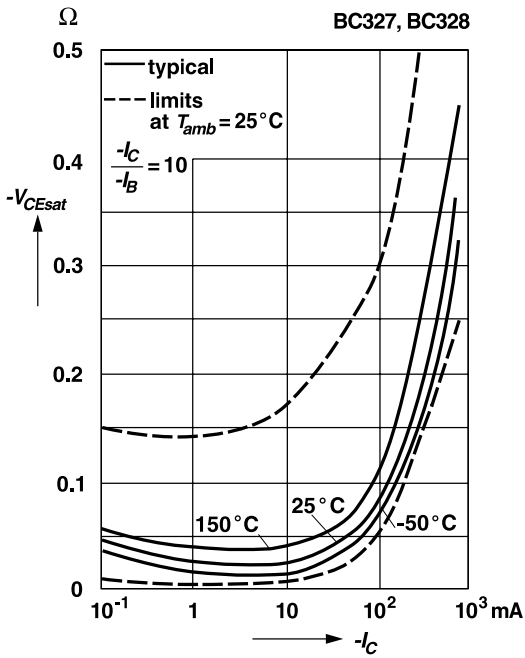


Common emitter collector characteristics

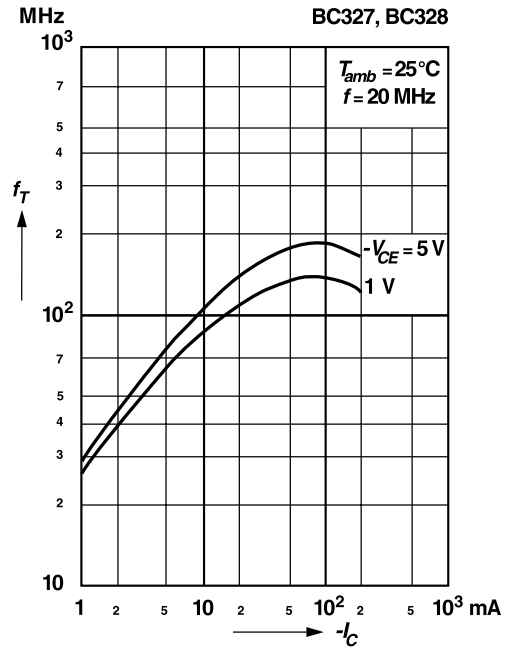


Ratings and Characteristic Curves

Collector saturation voltage versus collector current



Gain-bandwidth product versus collector current



Base saturation voltage versus collector current

