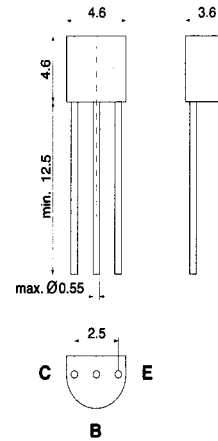


## PNP Silicon Epitaxial Planar Transistor

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 can be manufactured in different pin configurations. Please refer to the "TO-92 TRANSISTOR PACKAGE OUTLINE" on page 80 for the available pin options.



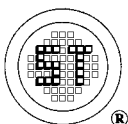
TO-92 Plastic Package  
Weight approx. 0.18 g  
Dimensions in mm

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

		Symbol	Value	Unit
Collector Emitter Voltage	<b>HN / BC 327</b>	$-V_{CES}$	50	V
	<b>HN / BC 328</b>	$-V_{CES}$	30	V
Collector Emitter Voltage	<b>HN / BC 327</b>	$-V_{CEO}$	45	V
	<b>HN / BC 328</b>	$-V_{CEO}$	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 $T_{amb} = 25^\circ\text{C}$		$P_{tot}$	625 <sup>1)</sup>	mW
Junction Temperature		$T_j$	150	$^\circ\text{C}$
Storage Temperature Range		$T_s$	-65 to + 150	$^\circ\text{C}$

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

**G S P FORM A AVAILABLE**

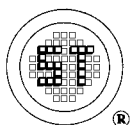


**SEMTECH ELECTRONICS LTD.**  
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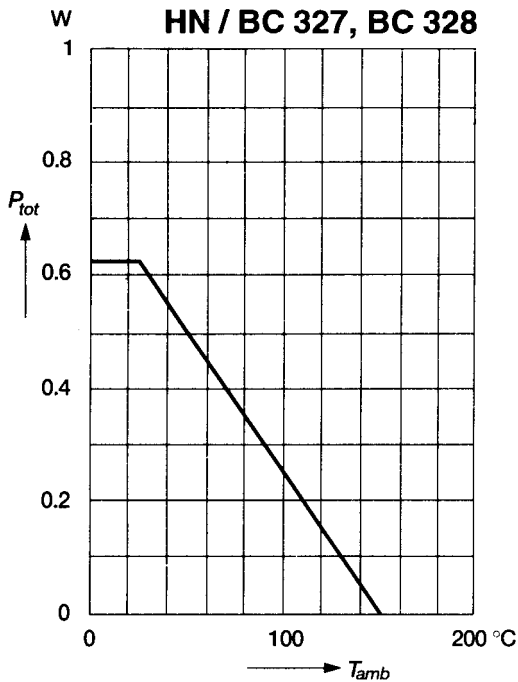
Characteristics at  $T_{amb} = 25\text{ }^{\circ}\text{C}$

	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain. at $-V_{CE} = 1\text{ V}, -I_C = 300\text{ mA}$					
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	$R_{thA}$	-	-	200 <sup>1)</sup>	K/W
Collector Emitter Cutoff Current					
at $-V_{CE} = 45\text{ V}$	$-I_{CES}$	-	2	100	nA
at $-V_{CE} = 25\text{ V}$	$-I_{CES}$	-	2	100	nA
at $-V_{CE} = 45\text{ V}, T_{amb} = 125\text{ }^{\circ}\text{C}$	$-I_{CES}$	-	-	10	$\mu\text{A}$
at $-V_{CE} = 25\text{ V}, T_{amb} = 125\text{ }^{\circ}\text{C}$	$-I_{CES}$	-	-	10	$\mu\text{A}$
Collector Emitter Breakdown Voltage					
at $-I_C = 10\text{ mA}$	$-V_{(BR)CEO}$	45	-	-	V
	$-V_{(BR)CEO}$	25	-	-	V
Collector Emitter Breakdown Voltage					
at $-I_C = 0.1\text{ mA}$	$-V_{(BR)CES}$	50	-	-	V
	$-V_{(BR)CES}$	30	-	-	V
Emitter Base Breakdown Voltage	$-V_{(BR)EBO}$	5	-	-	V
Collector Saturation Voltage	$-V_{CEsat}$	-	-	0.7	V
at $-I_C = 500\text{ mA}, -I_B = 50\text{ mA}$					
Base Emitter Voltage	$-V_{BE}$	-	-	1.2	V
at $-V_{CE} = 1\text{ V}, -I_C = 300\text{ mA}$					
Gain Bandwidth Product	$f_T$	-	100	-	MHz
at $-V_{CE} = 5\text{ V}, -I_C = 10\text{ mA}, f = 50\text{ MHz}$					
Collector Base Capacitance	$C_{CBO}$	-	12	-	pF
at $-V_{CB} = 10\text{ V}, f = 1\text{ MHz}$					
1) Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case.					

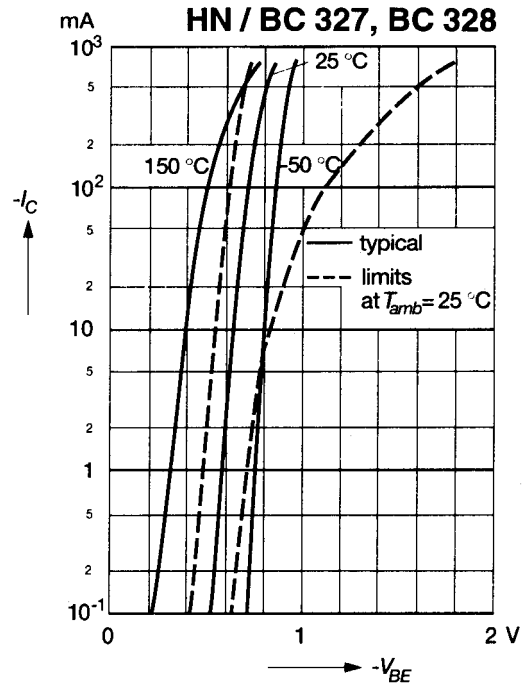


**Admissible power dissipation versus ambient temperature**

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

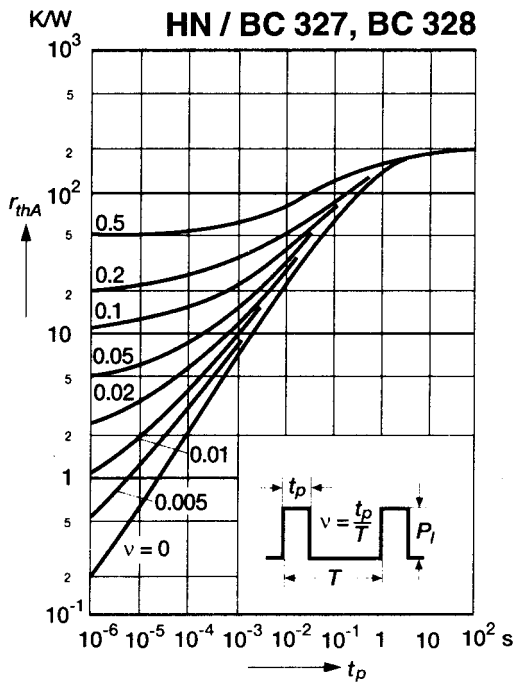


**Collector current versus base-emitter voltage**

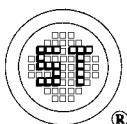
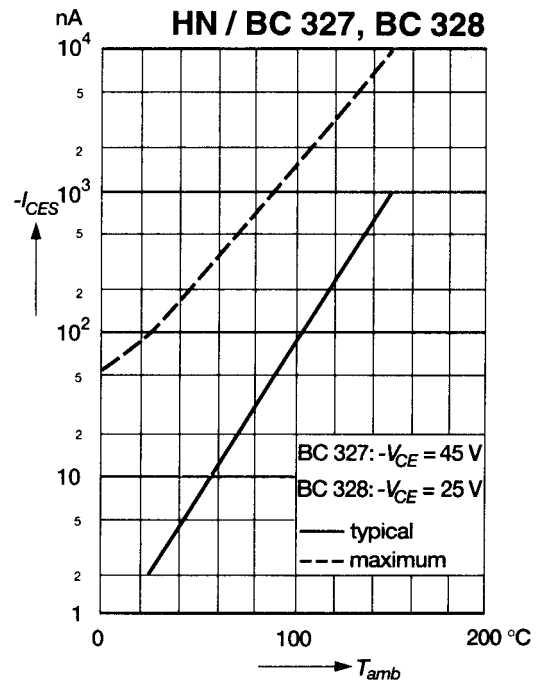


**Pulse thermal resistance versus pulse duration**

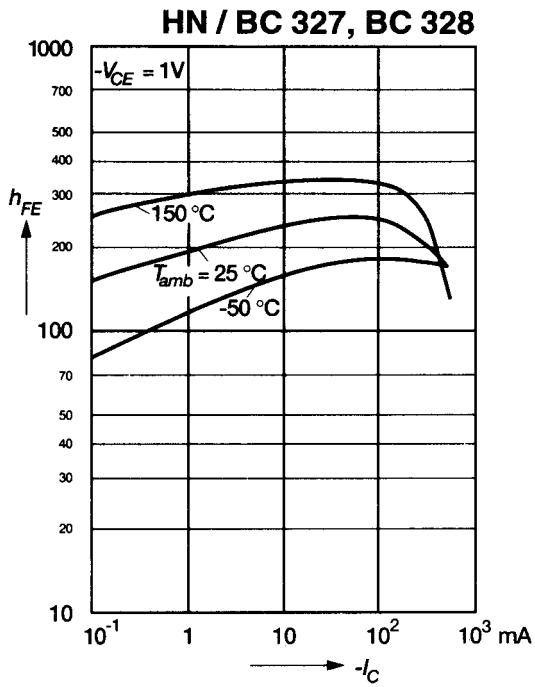
Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case



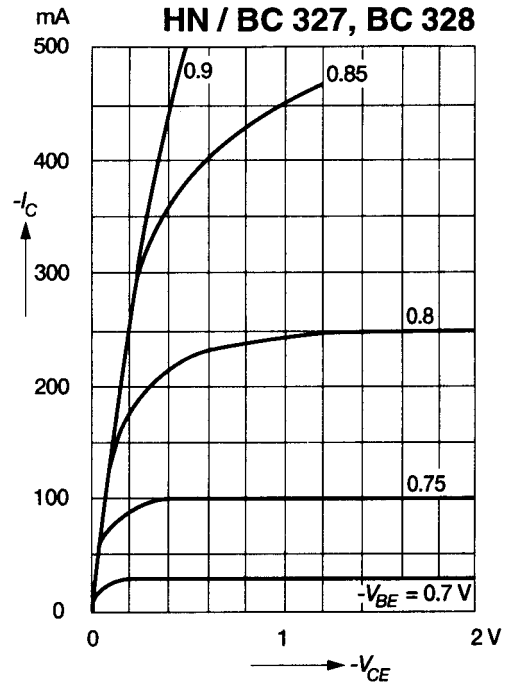
**Collector-emitter cutoff current versus ambient temperature**



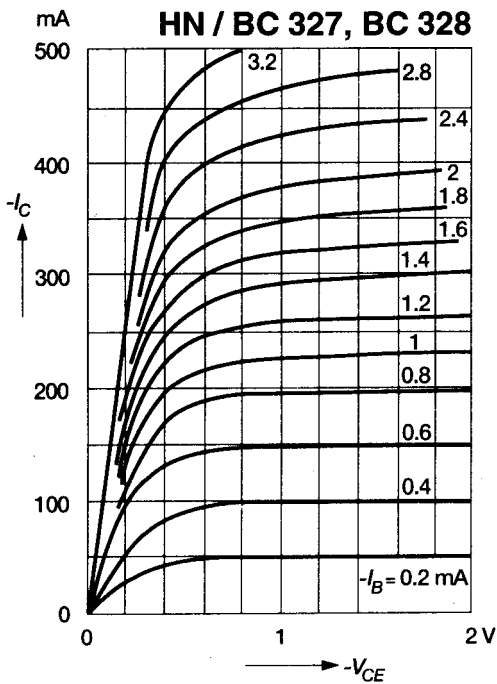
DC current gain versus collector current



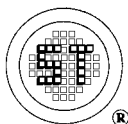
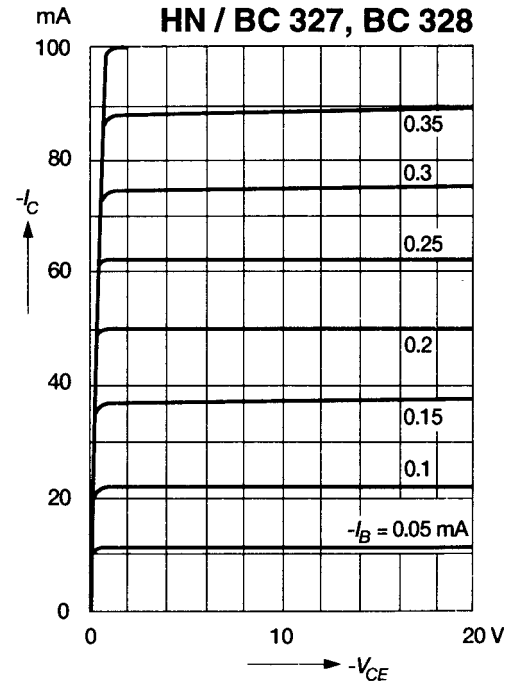
Common emitter collector characteristics



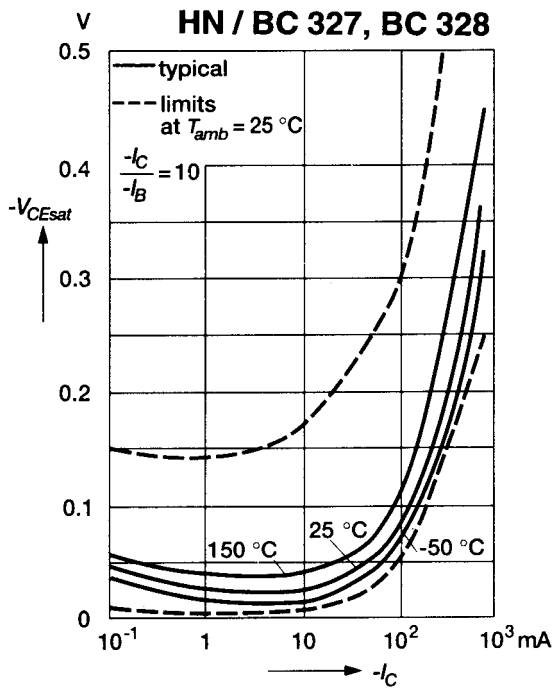
Common emitter collector characteristics



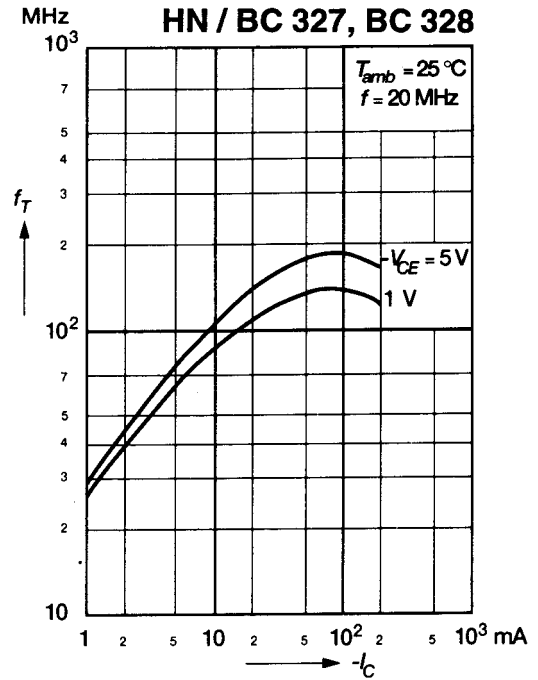
Common emitter collector characteristics



Collector saturation voltage versus collector current



Gain-bandwidth product versus collector current



Base saturation voltage versus collector current

