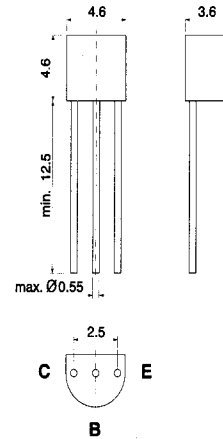


NPN Silicon Expitaxial Planar Transistor

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 PNP transistors BC327 and BC328 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.



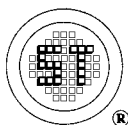
TO-92 Plastic Package
Weight approx. 0.18 g
Dimensions in mm

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

		Symbol	Value	Unit
Collector Emitter Voltage	HN / BC 337	V_{CES}	50	V
	HN / BC 338	V_{CES}	30	V
Collector Emitter Voltage	HN / BC 337	V_{CEO}	45	V
	HN / BC 338	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 ¹⁾	mW
Junction Temperature		T_J	150	$^\circ\text{C}$
Storage Temperature Range		T_S	-65 to + 150	$^\circ\text{C}$

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

G S P FORM A AVAILABLE

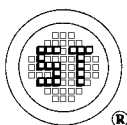


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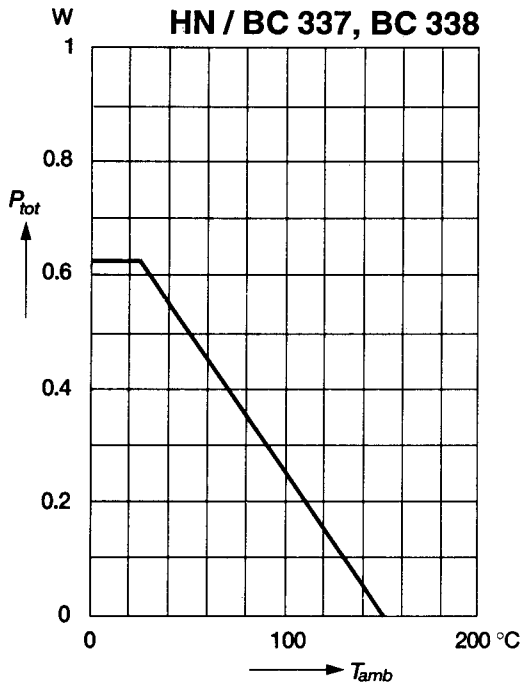
Characteristics at $T_{amb} = 25\text{ }^{\circ}\text{C}$

	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain. at $V_{CE} = 1\text{ V}$, $I_C = 100\text{ mA}$					
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	-	-
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	μA
at $V_{CE} = 25\text{ V}$, $T_{amb} = 125\text{ }^{\circ}\text{C}$	I_{CES}	-	-	10	μA
Collector Emitter Breakdown Voltage at $I_C = 10\text{ mA}$	$V_{(BR)CEO}$	20	-	-	V
	$V_{(BR)CEO}$	45	-	-	V
Collector Emitter Breakdown Voltage at $I_C = 0.1\text{ mA}$	$V_{(BR)CES}$	30	-	-	V
	$V_{(BR)CES}$	50	-	-	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
Thermal Resistance Junction to Ambient Air	R_{thA}	-	-	200 ¹⁾	K/W
1) Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case.					

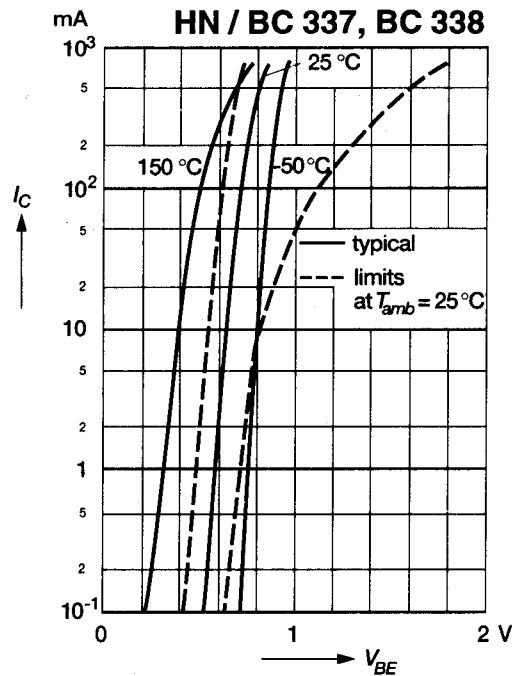


Admissible power dissipation versus ambient temperature

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

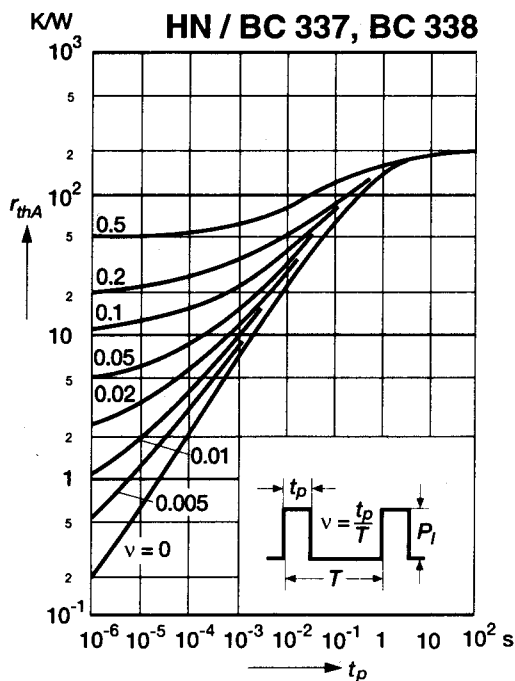


Collector current versus base-emitter voltage

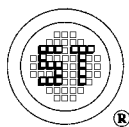
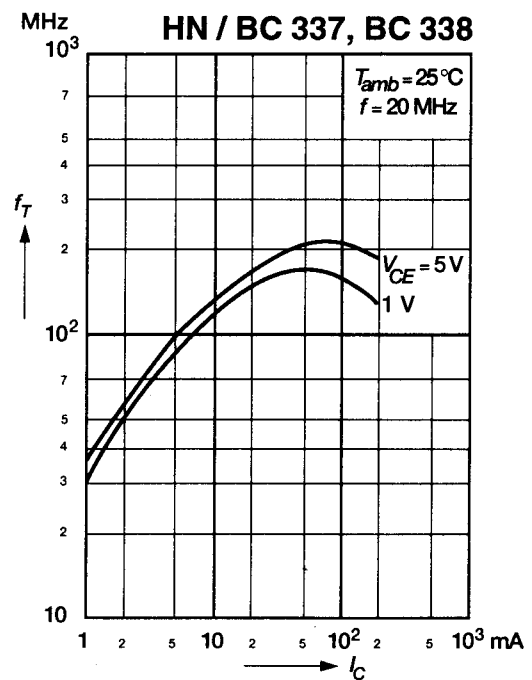


Pulse thermal resistance versus pulse duration

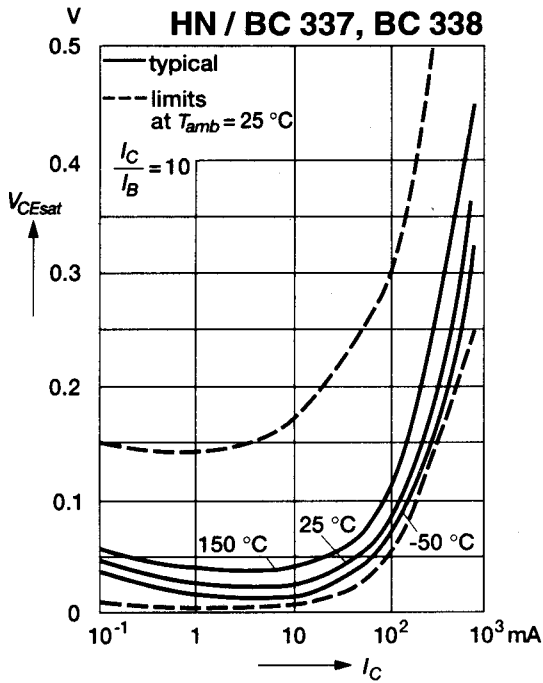
Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case



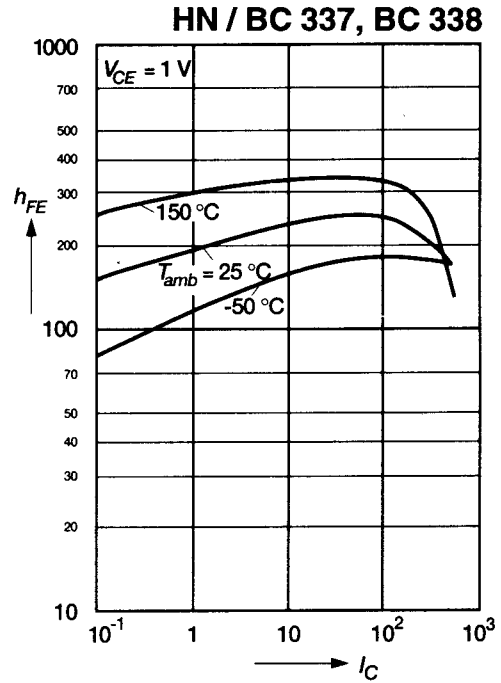
Gain-bandwidth product versus collector current



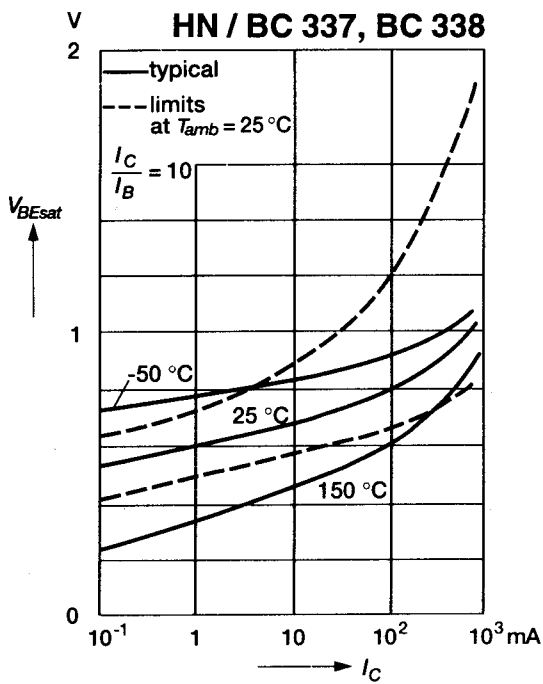
Collector saturation voltage versus collector current



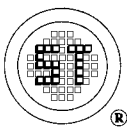
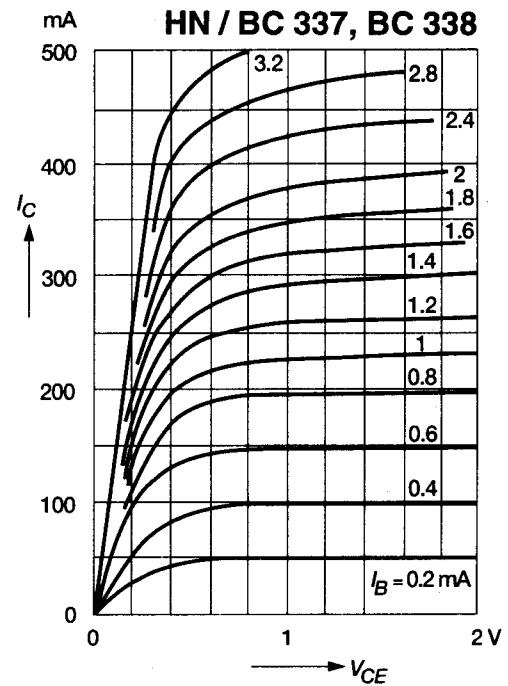
DC current gain versus collector current



Base saturation voltage versus collector current



Common emitter collector characteristics

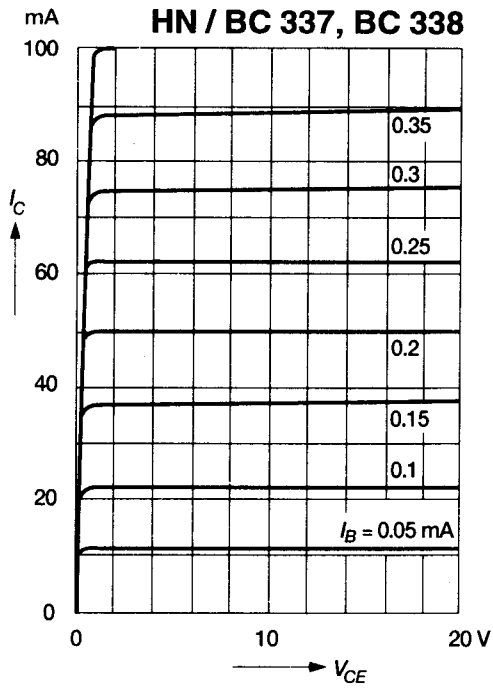


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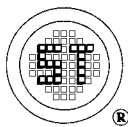
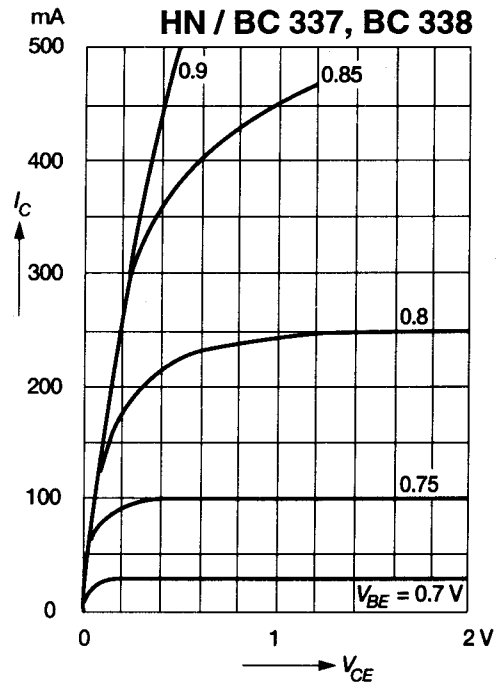
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Common emitter collector characteristics



Common emitter collector characteristics



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