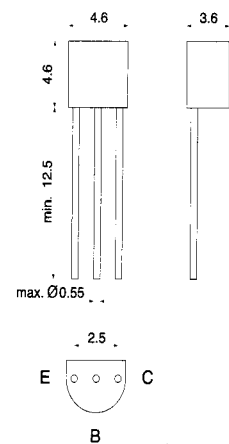


NPN Silicon Expitaxial Planar Transistor

for switching and amplifier applications. Especially suitable for AF-driver stages and low power output stages.

The transistor is subdivided into two groups, C and D, according to its DC current gain. As complementary type the PNP transistor HN 8550 is 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.



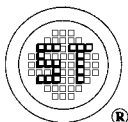
TO-92 Plastic Package
Weight approx. 0.18 g
Dimensions in mm

Absolute Maximum Ratings

	Symbol	Value	Unit
Collector Emitter Voltage	V _{CEO}	25	V
Collector Base Voltage	V _{CB0}	40	V
Emitter Base Voltage	V _{EBO}	6	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 °C	P _{tot}	625 ¹⁾	mW
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _S	-55 to +150	°C

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

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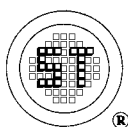


Characteristics at $T_{amb} = 25^{\circ}\text{C}$

	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 1\text{ V}$, $I_C = 100\text{ mA}$ at $V_{CE} = 1\text{ V}$, $I_C = 350\text{ mA}$	HN 8050C h_{FE}	120	-	200	-
	HN 8050D h_{FE}	160	-	300	-
	h_{FE}	60	-	-	-
Collector Cutoff Current at $V_{CB} = 35\text{ V}$	I_{CBO}	-	-	100	nA
Collector Saturation Voltage at $I_C = 500\text{ mA}$, $I_B = 50\text{ mA}$	V_{CEsat}	-	-	0.5	V
Base Saturation Voltage at $I_C = 500\text{ mA}$, $I_B = 50\text{ mA}$	V_{BEsat}	-	-	1.2	V
Collector Emitter Breakdown Voltage at $I_C = 2\text{ mA}$	$V_{(BR)CEO}$	25	-	-	V
Collector Base Breakdown Voltage at $I_C = 10\text{ }\mu\text{A}$	$V_{(BR)CBO}$	40	-	-	V
Emitter Base Breakdown Voltage at $I_E = 100\text{ }\mu\text{A}$	$V_{(BR)EBO}$	6	-	-	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	R_{thA}	-	-	200 ¹⁾	K/W

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

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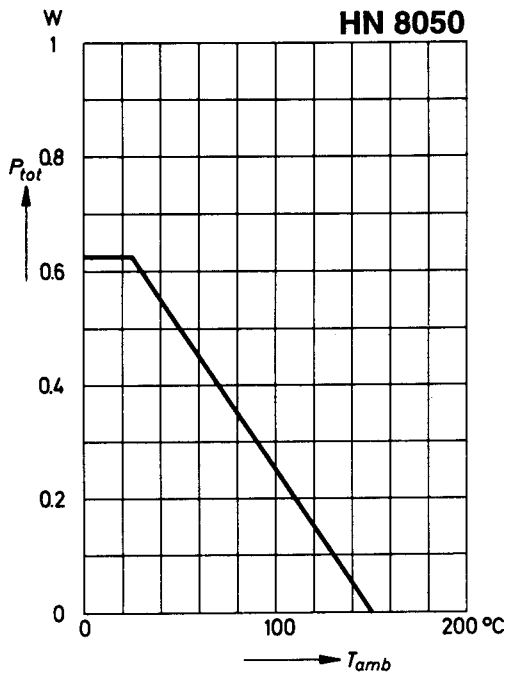
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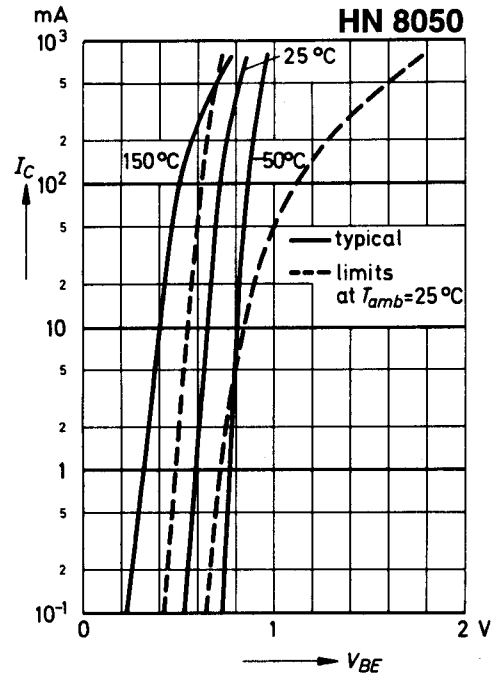


Admissible power dissipation versus ambient temperature

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

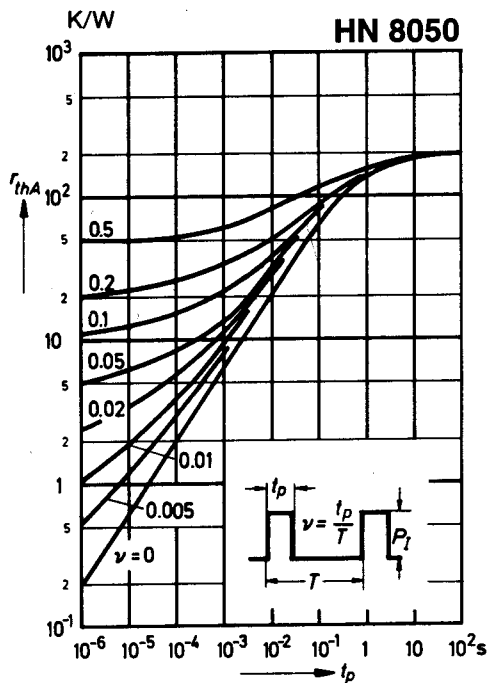


Collector current versus base emitter voltage

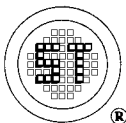
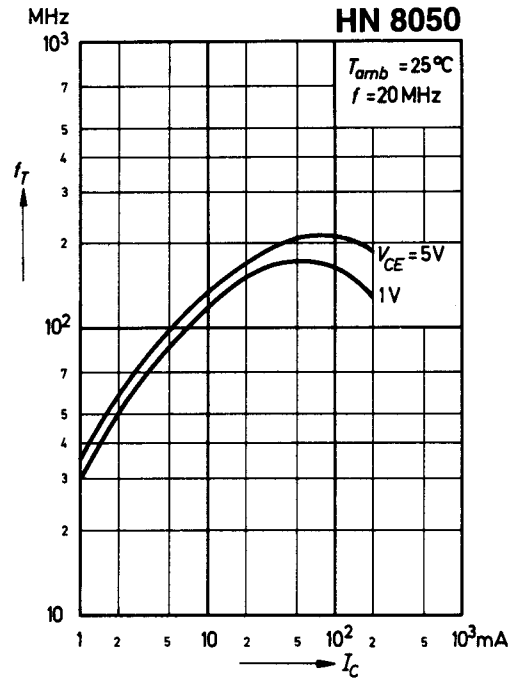


Pulse thermal resistance versus pulse duration

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



Gain bandwidth product versus collector current

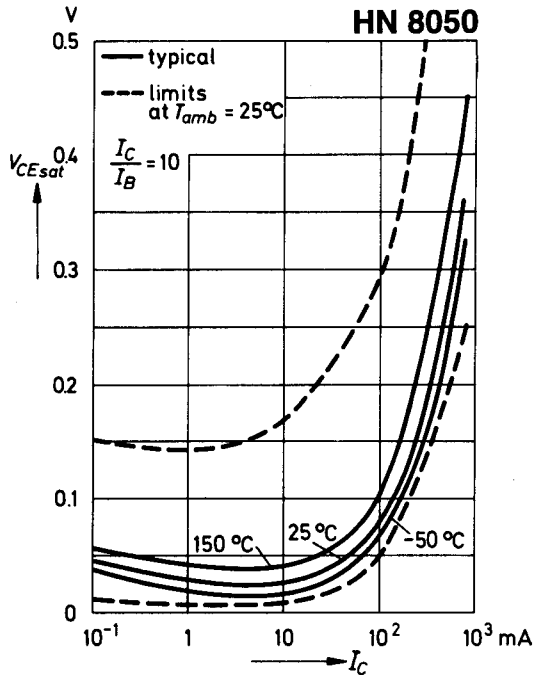


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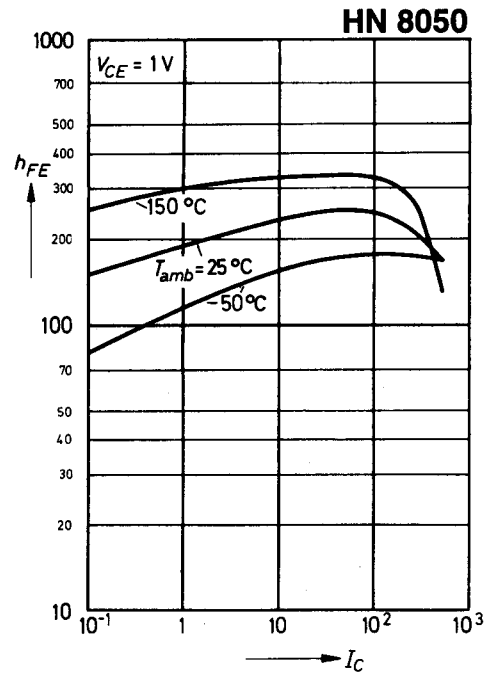
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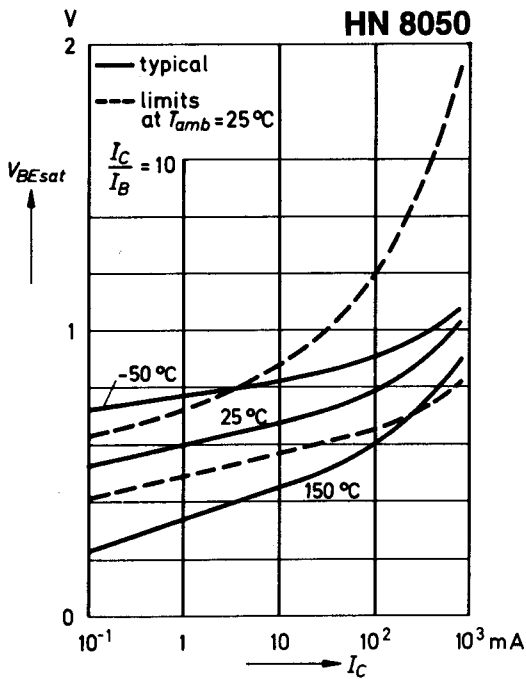
Collector saturation voltage
versus collector current



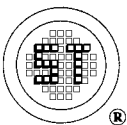
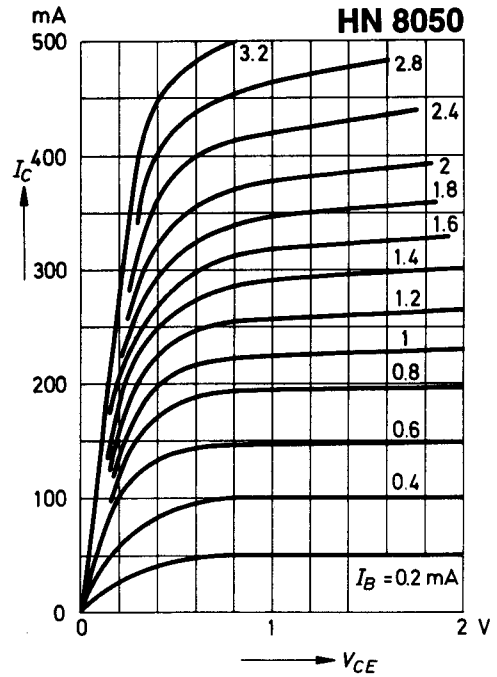
DC current gain
versus collector current



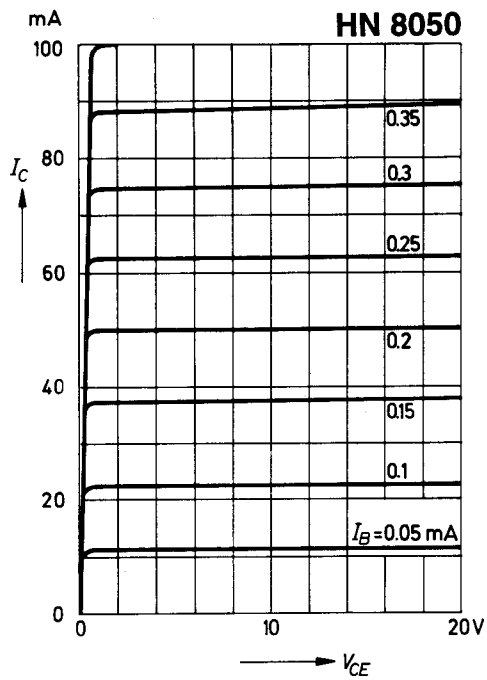
Base saturation voltage
versus collector current



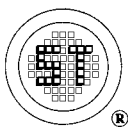
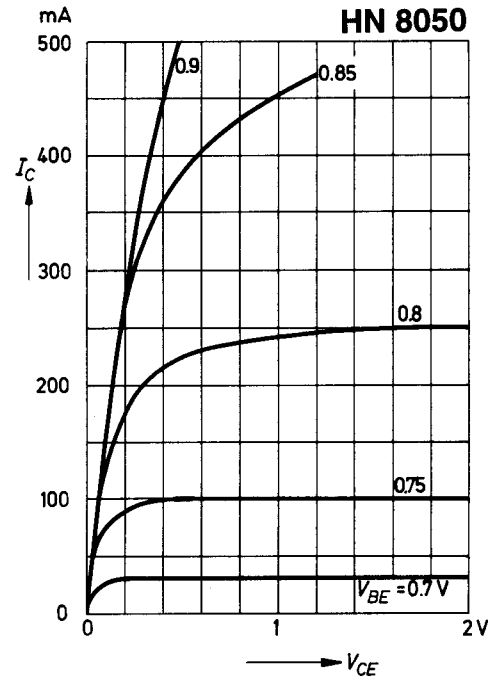
Common emitter
collector characteristics



Common emitter
collector characteristics



Common emitter
collector characteristics



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