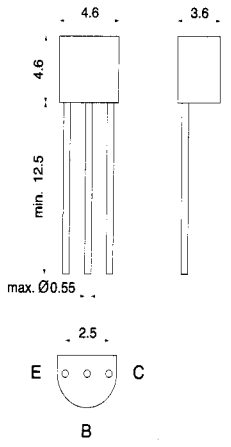
HN 8050

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_{CBO}	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 °C

		Symbol	Min.	Typ.	Max.	Unit
DC Current Gain						
at V_{CE} = 1 V, I_C = 100 mA	HN 8050C	h_{FE}	120	-	200	-
	HN 8050D	h_{FE}	160	-	300	-
at V_{CE} = 1 V, I_C = 350 mA		h_{FE}	60	-	-	-
Collector Cutoff Current at V_{CB} = 35 V		I_{CBO}	-	-	100	nA
Collector Saturation Voltage at I_C = 500 mA, I_B = 50 mA		V_{CEsat}	-	-	0.5	V
Base Saturation Voltage at I_C = 500 mA, I_B = 50 mA		V_{BEsat}	-	-	1.2	V
Collector Emitter Breakdown Voltage at I_C = 2 mA		$V_{(BR)CEO}$	25	-	-	V
Collector Base Breakdown Voltage at I_C = 10 µA		$V_{(BR)CBO}$	40	-	-	V
Emitter Base Breakdown Voltage at I_E = 100 µA		$V_{(BR)EBO}$	6	-	-	V
Gain Bandwidth Product at V_{CE} = 5 V, I_C = 10 mA, f = 50 MHz		f_T	-	100	-	MHz
Collector Base Capacitance at V_{CB} = 10 V, f = 1 MHz		C_{CBO}	-	12	-	pF
Thermal Resistance Junction to Ambient		R_{thA}	-	-	200[1)]	K/W

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Admissible power dissipation versus ambient temperature

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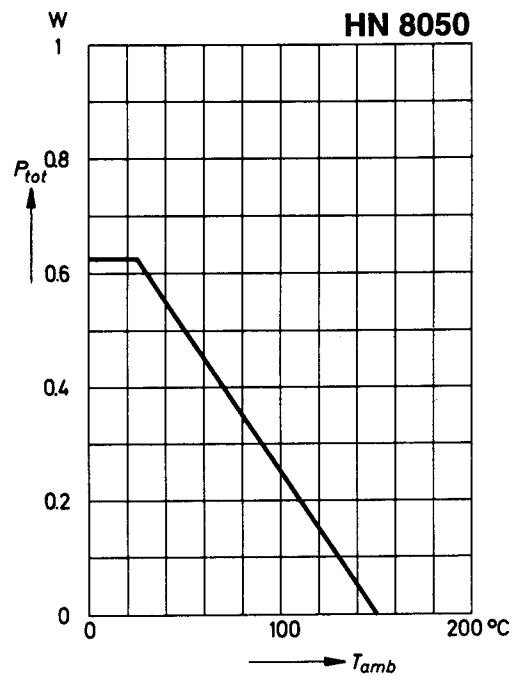
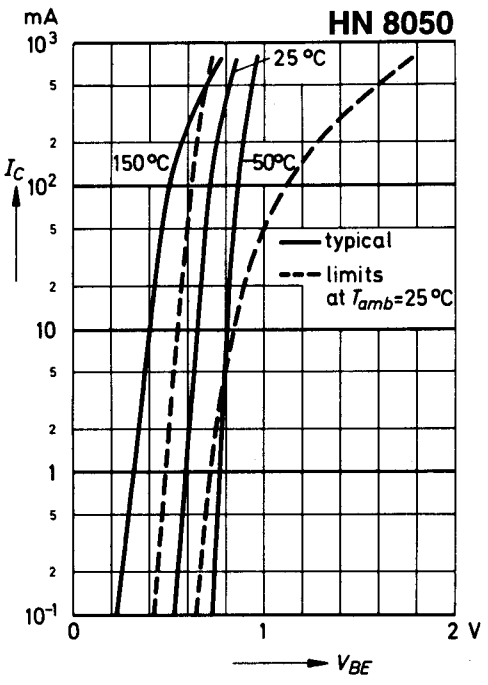


Collector current versus base emitter voltage



Pulse thermal resistance versus pulse duration

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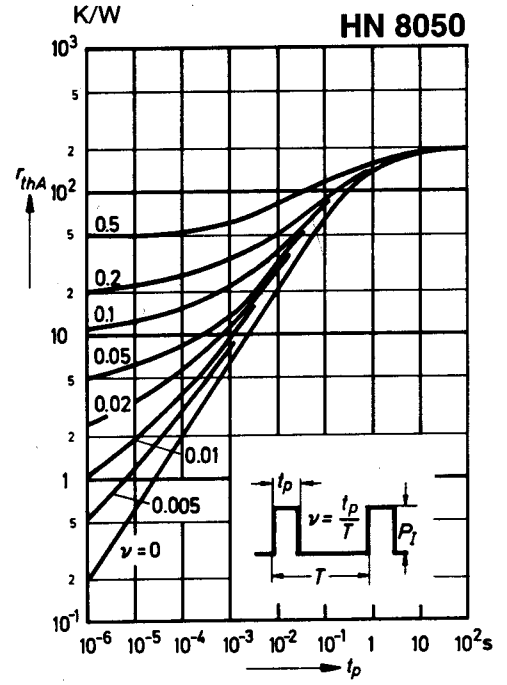
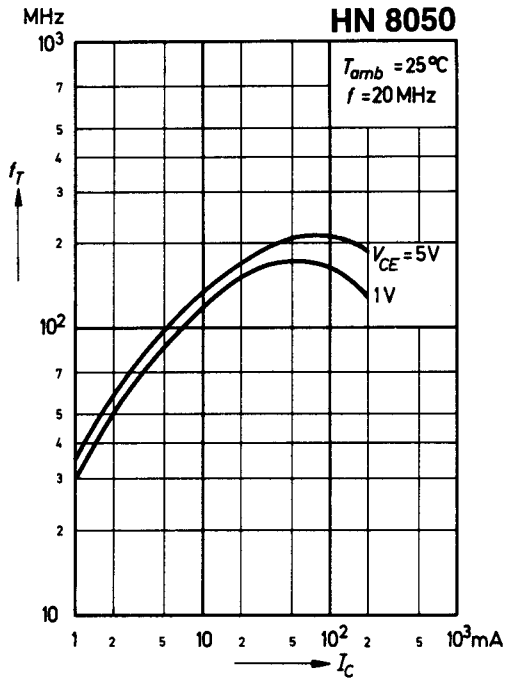
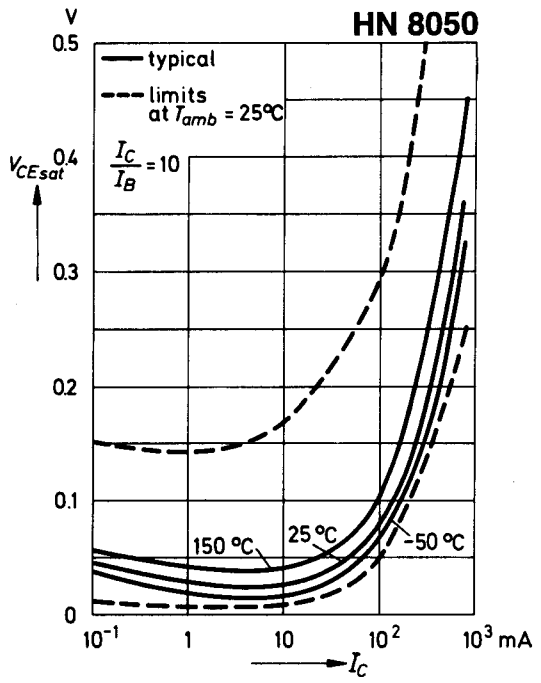


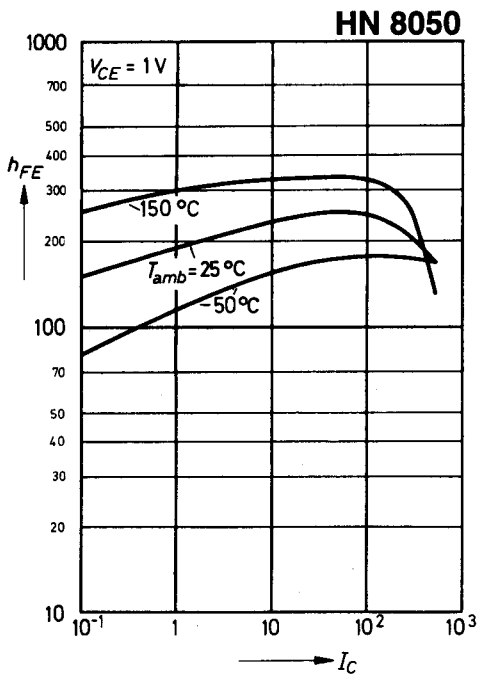
Gain bandwidth product versus collector current



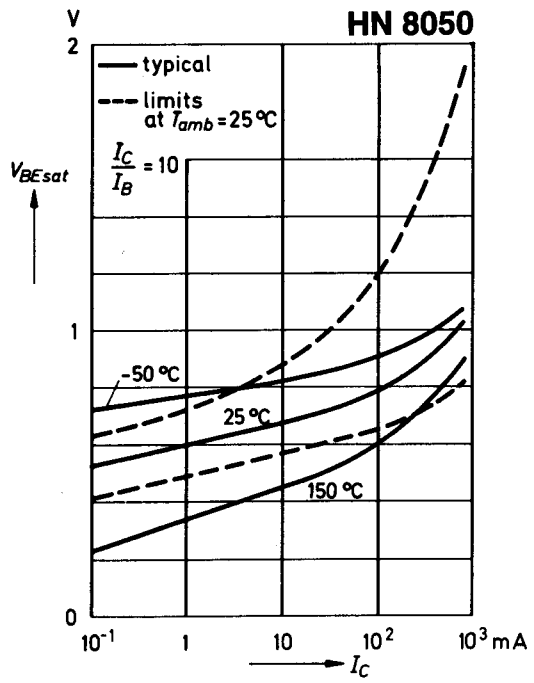
Collector saturation voltage versus collector current



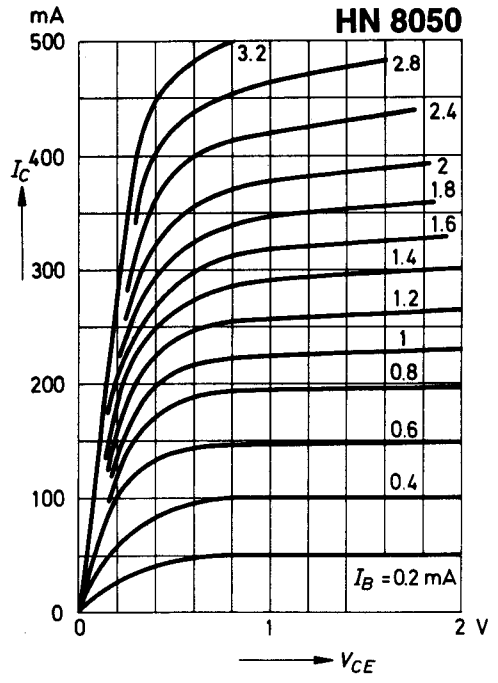
DC current gain versus collector current



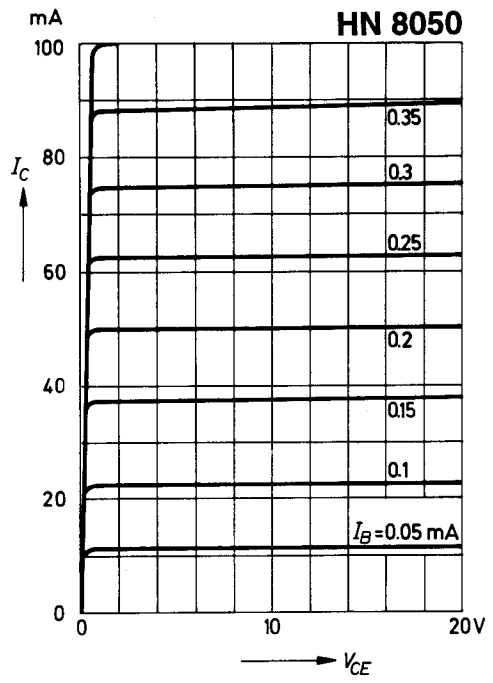
Base saturation voltage versus collector current



Common emitter collector characteristics



Common emitter collector characteristics



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