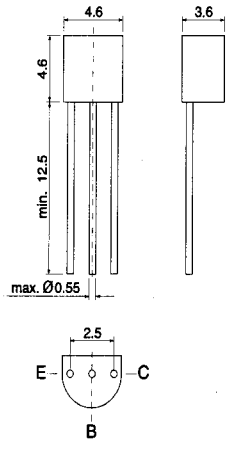
HN 9015

PNP Silicon Expitaxial Planar Transistor
for switching and AF amplifier applications.

The transistor is subdivided into four groups, A, B, C, and D, according to its DC current gain. As complementary type the NPN transistor HN 9014 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 Base Voltage	$-V_{CBO}$	30	V
Collector Emitter Voltage	$-V_{CES}$	30	V
Collector Emitter Voltage	$-V_{CEO}$	30	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	100	mA
Peak Collector Current	$-I_{CM}$	200	mA
Peak Base Current	$-I_{BM}$	200	mA
Peak Emitter Current	I_{EM}	200	mA
Power Dissipation at T_{amb} = 25 °C	P_{tot}	500[1)]	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	-65 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 $-V_{CE}$ = 5 V, $-I_C$ = 1 mA					
Current Gain Group A	h_{FE}	60	-	150	-
B	h_{FE}	100	-	300	-
C	h_{FE}	200	-	600	-
D	h_{FE}	400	-	1000	-
Collector Saturation Voltage					
at $-I_C$ = 10 mA, $-I_B$ = 0.5 mA	$-V_{CEsat}$	-	80	300	mV
at $-I_C$ = 100 mA, $-I_B$ = 5 mA	$-V_{CEsat}$	-	250	650	mV
Base Saturation Voltage					
at $-I_C$ = 10 mA, $-I_B$ = 0.5 mA	$-V_{BEsat}$	-	700	-	mV
at $-I_C$ = 100 mA, $-I_B$ = 5 mA	$-V_{BEsat}$	-	900	-	mV
Base Emitter Voltage					
at $-V_{CE}$ = 5 V, $-I_C$ = 2 mA	$-V_{BE}$	600	660	750	mV
at $-V_{CE}$ = 5 V, $-I_C$ = 10 mA	$-V_{BE}$	-	-	800	mV
Collector Cutoff Current					
at $-V_{CE}$ = 30 V	$-I_{CES}$	-	0.2	15	nA
at $-V_{CE}$ = 30 V, T_j = 125 C	$-I_{CES}$	-	-	4	µA
at $-V_{CB}$ = 30 V	$-I_{CBO}$	-	-	15	nA
at $-V_{CB}$ = 30 V, T_j = 150 C	$-I_{CBO}$	-	-	5	µA
Gain Bandwidth Product at $-V_{CE}$ = 5 V, $-I_C$ = 10 mA, f = 100 MHz	f_T	-	150	-	MHz
Collector Base Capacitance at $-V_{CB}$ = 10 V, f = 1 MHz	C_{CBO}	-	-	6	pF
Noise Figure at $-V_{CE}$ = 5 V, $-I_C$ = 200 µA, R_G = 2 kΩ f = 1 kHz, Δf = 200 Hz	F	-	2	10	dB
Thermal Resistance Junction to Ambient	R_{thA}	-	-	250[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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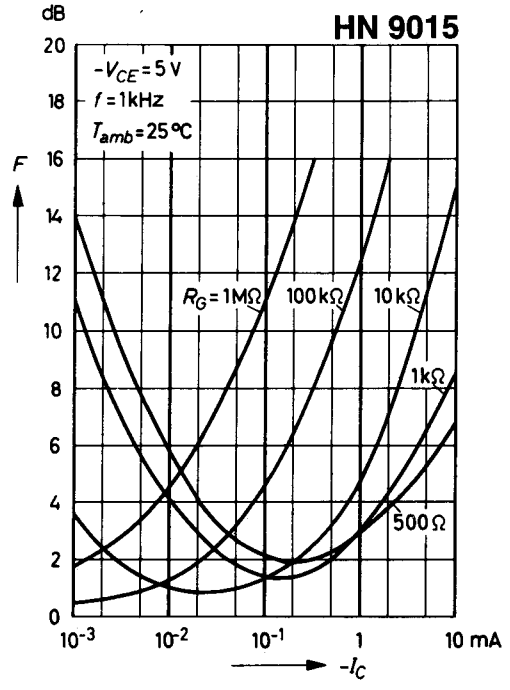
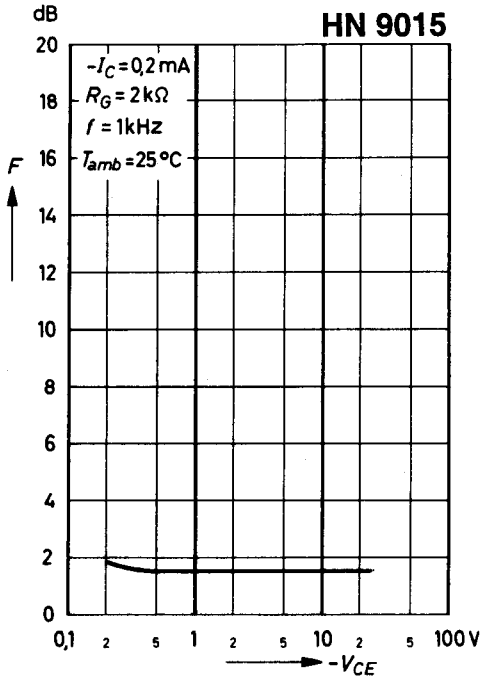
Noise figure
versus collector current

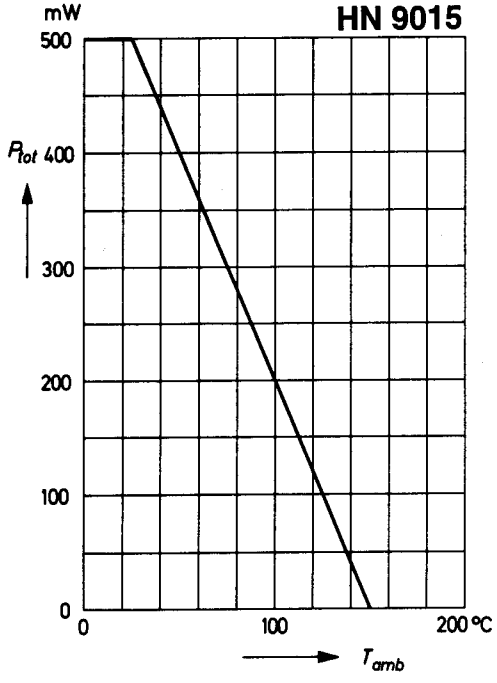


Noise figure
versus collector emitter voltage



Admissible power dissipation
versus temperature

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



Pulse thermal resistance
versus pulse duration

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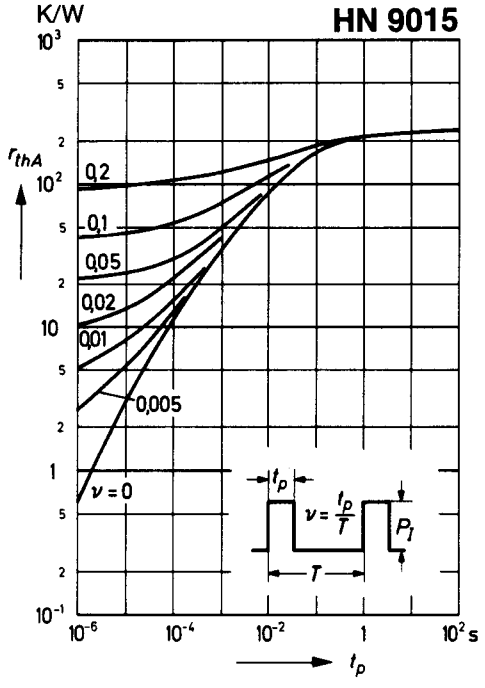
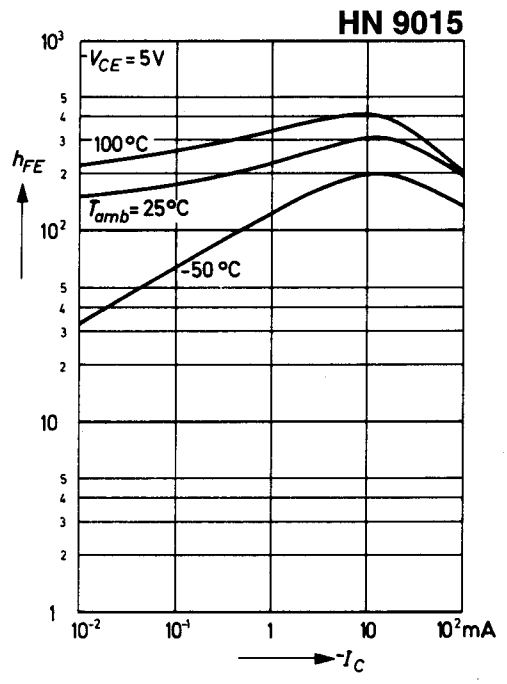
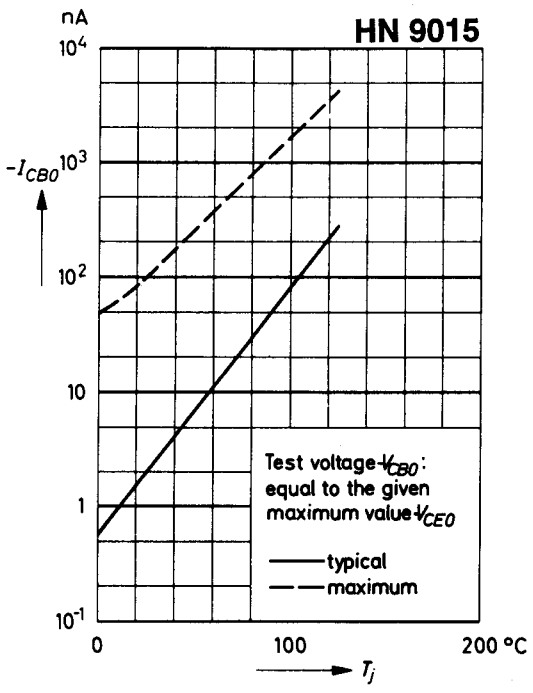


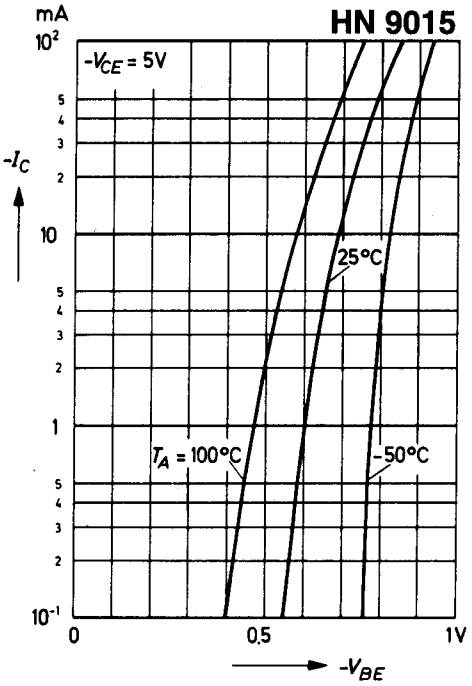
DC current gain versus collector current



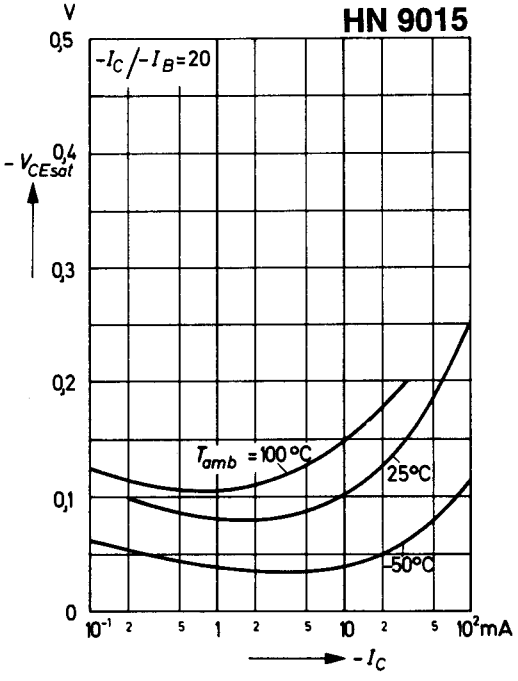
Collector cutoff current versus junction temperature



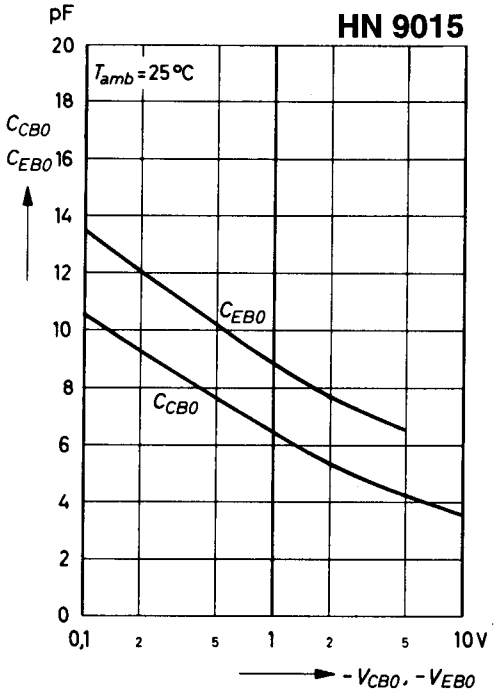
Collector current versus base emitter voltage



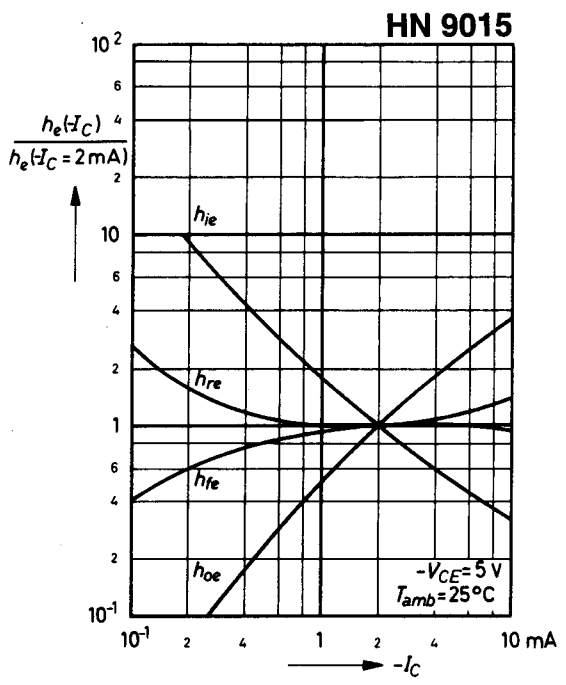
Collector saturation voltage versus collector current



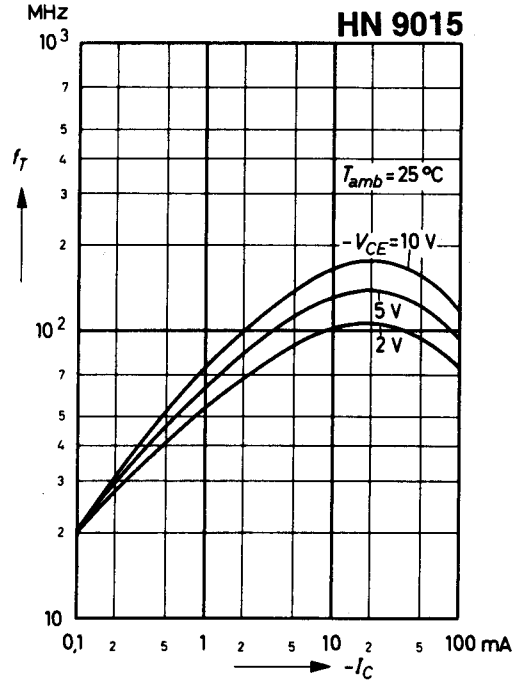
Collector base capacitance, Emitter base capacitance versus reverse bias voltage



Relative h-parameters versus collector current



Gain bandwidth product versus collector current



Noise figure versus collector current