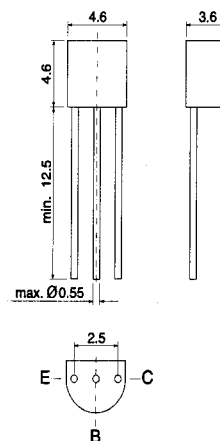


PNP Silicon Expitaxial Planar Transistor
for switching and AF amplifier applications.

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.



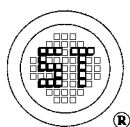
TO-92 Plastic Package
Weight approx. 0.18 g
Dimensions in mm

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 $T_{amb} = 25\text{ }^{\circ}\text{C}$	P_{tot}	500 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



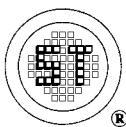
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Characteristics at $T_{amb} = 25\text{ }^{\circ}\text{C}$

	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE} = 5\text{ V}$, $-I_C = 1\text{ mA}$ Current Gain Group	A B C D	h_{FE} h_{FE} h_{FE} h_{FE}	60 100 200 400	- - - -	150 300 600 1000
Collector Saturation Voltage at $-I_C = 10\text{ mA}$, $-I_B = 0.5\text{ mA}$ at $-I_C = 100\text{ mA}$, $-I_B = 5\text{ mA}$	$-V_{CEsat}$ $-V_{CEsat}$	- -	80 250	300 650	mV mV
Base Saturation Voltage at $-I_C = 10\text{ mA}$, $-I_B = 0.5\text{ mA}$ at $-I_C = 100\text{ mA}$, $-I_B = 5\text{ mA}$	$-V_{BEsat}$ $-V_{BEsat}$	- -	700 900	- -	mV mV
Base Emitter Voltage at $-V_{CE} = 5\text{ V}$, $-I_C = 2\text{ mA}$ at $-V_{CE} = 5\text{ V}$, $-I_C = 10\text{ mA}$	$-V_{BE}$ $-V_{BE}$	600 -	660 -	750 800	mV mV
Collector Cutoff Current at $-V_{CE} = 30\text{ V}$ at $-V_{CE} = 30\text{ V}$, $T_j = 125\text{ }^{\circ}\text{C}$ at $-V_{CB} = 30\text{ V}$ at $-V_{CB} = 30\text{ V}$, $T_j = 150\text{ }^{\circ}\text{C}$	$-I_{CES}$ $-I_{CES}$ $-I_{CBO}$ $-I_{CBO}$	- - - -	0.2 - - -	15 4 15 5	nA μA nA μA
Gain Bandwidth Product at $-V_{CE} = 5\text{ V}$, $-I_C = 10\text{ mA}$, $f = 100\text{ MHz}$	f_T	-	150	-	MHz
Collector Base Capacitance at $-V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{CBO}	-	-	6	pF
Noise Figure at $-V_{CE} = 5\text{ V}$, $-I_C = 200\text{ }\mu\text{A}$, $R_G = 2\text{ k}\Omega$ $f = 1\text{ kHz}$, $\Delta f = 200\text{ Hz}$	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					

G S P FORM A AVAILABLE

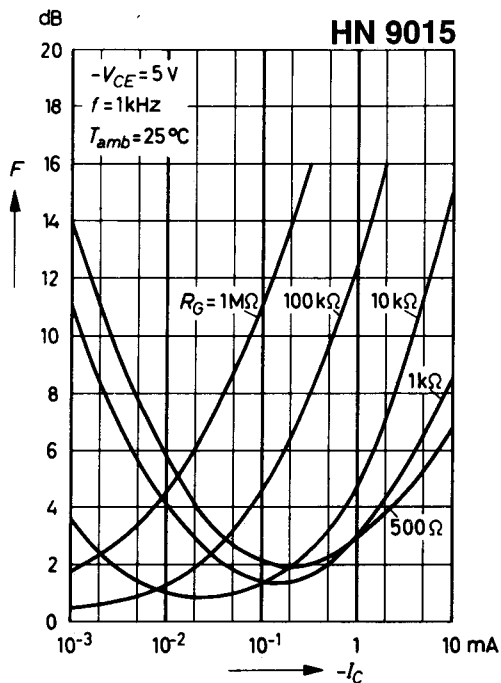


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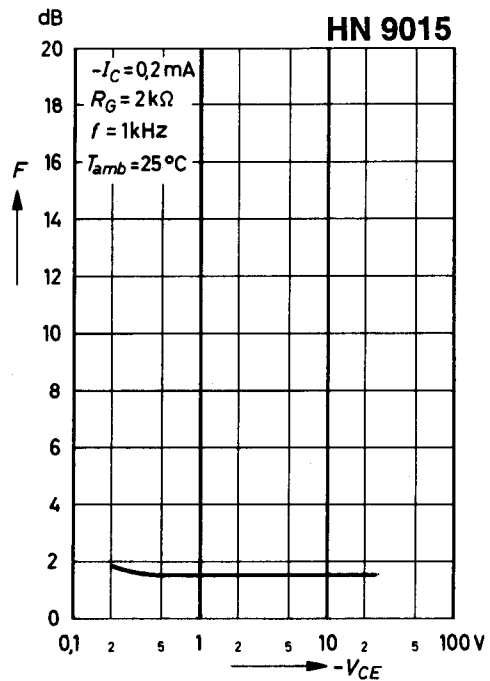
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**Noise figure
versus collector current**

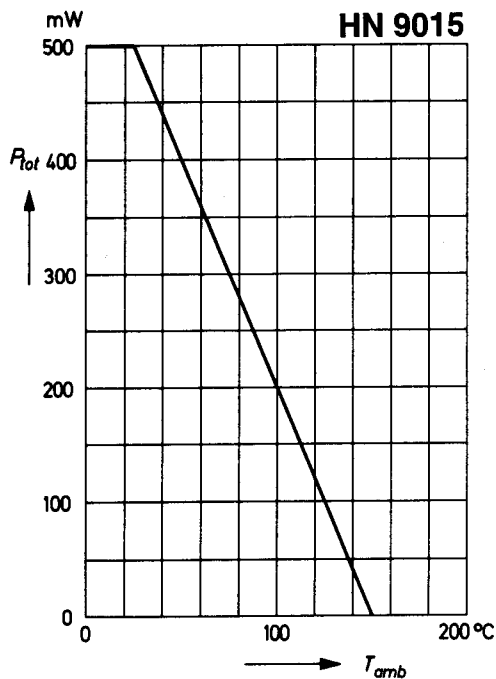


**Noise figure
versus collector emitter voltage**



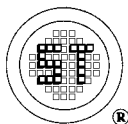
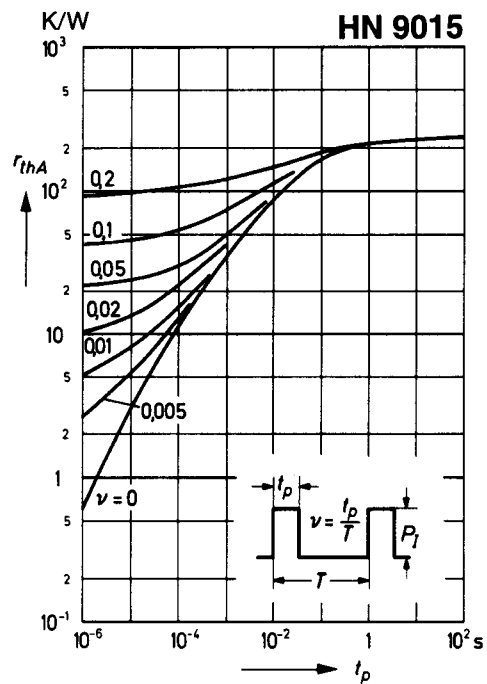
**Admissible power dissipation
versus temperature**

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



**Pulse thermal resistance
versus pulse duration**

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

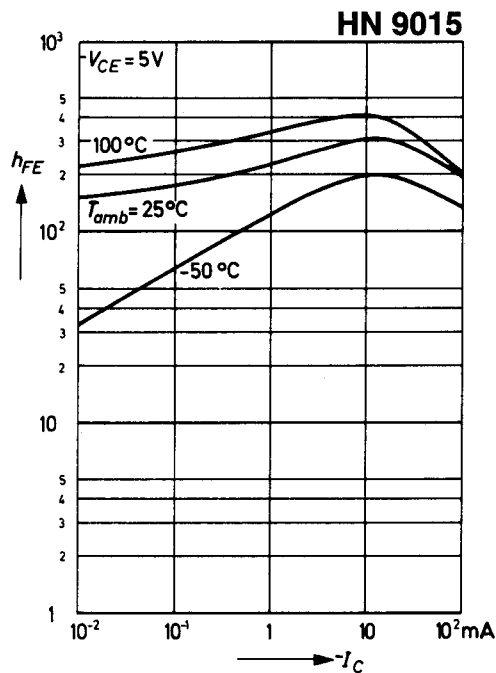


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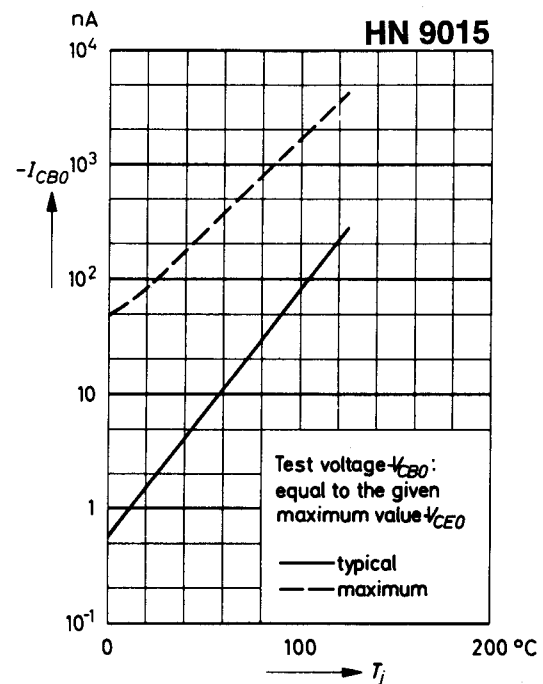
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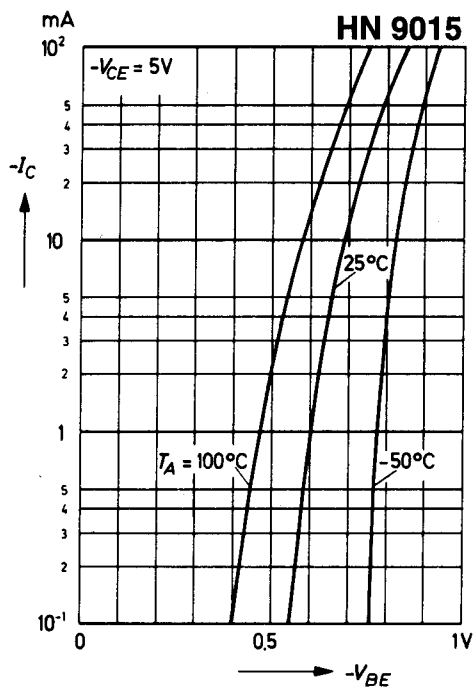
**DC current gain
versus collector current**



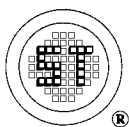
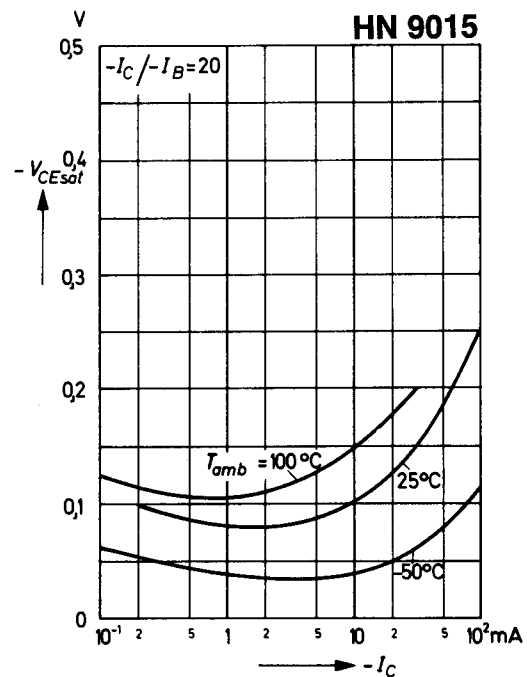
**Collector cutoff current
versus junction temperature**

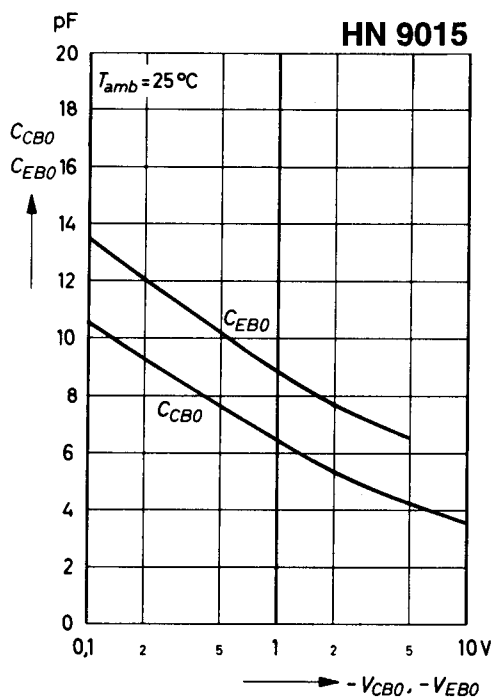
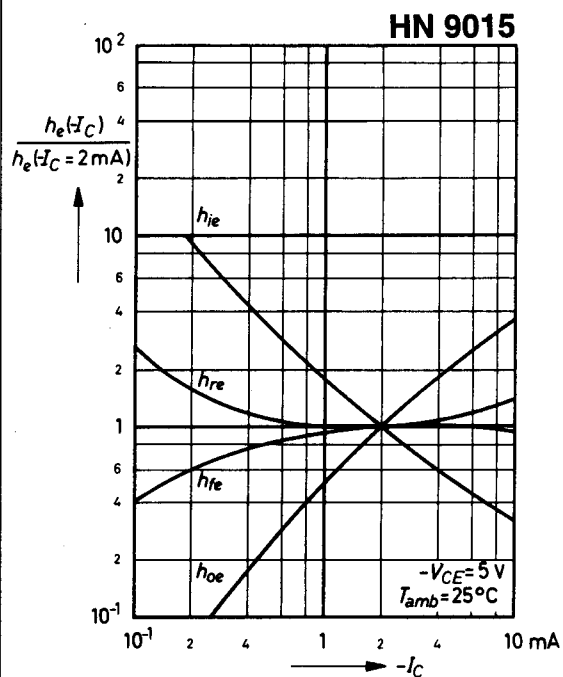
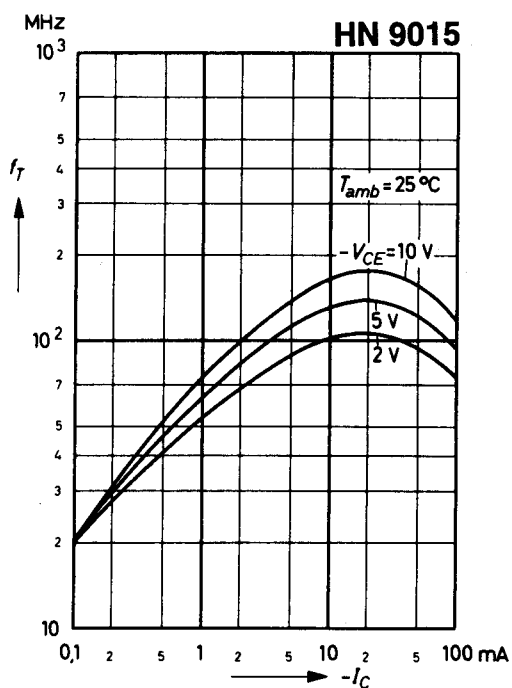


**Collector current
versus base emitter voltage**



**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**
