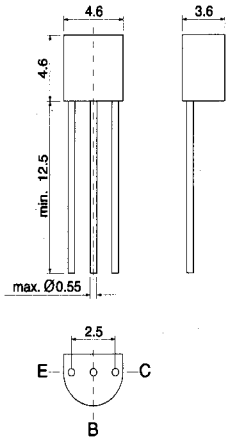
HN 9012

PNP 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, G and H, according to its DC current gain. As complementary type the NPN transistor HN 9013 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	$-V_{CEO}$	30	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 °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

G S P FORM A AVAILABLE

Characteristics at T_{amb} = 25 °C

	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE}$ = 1 V, $-I_C$ = 50 mA					
Current Gain Group G	h_{FE}	110	-	183	-
H	h_{FE}	177	-	250	-
at $-V_{CE}$ = 1 V, $-I_C$ = 500 mA	h_{FE}	40	-	-	-
Collector Cutoff Current at $-V_{CB}$ = 31 V	$-I_{CBO}$	-	-	100	nA
Collector Emitter Breakdown Voltage at $-I_C$ = 1 mA	$-V_{(BR)CEO}$	30	-	-	V
Emitter Base Cutoff Current at $-V_{EB}$ = 5.1 V	$-I_{EBO}$	-	-	100	nA
Collector Saturation Voltage at $-I_C$ = 500 mA, $-I_B$ = 20 mA	$-V_{CEsat}$	-	-	0.7	V
Base Saturation Voltage at $-I_C$ = 500 mA, $-I_B$ = 20 mA	$-V_{BEsat}$	-	-	1.2	V
Base Emitter Voltage at $-V_{CE}$ = 1 V, $-I_C$ = 50 mA	$-V_{BE}$	0.6	-	0.75	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

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

G S P FORM A AVAILABLE

Admissible power dissipation versus ambient temperature

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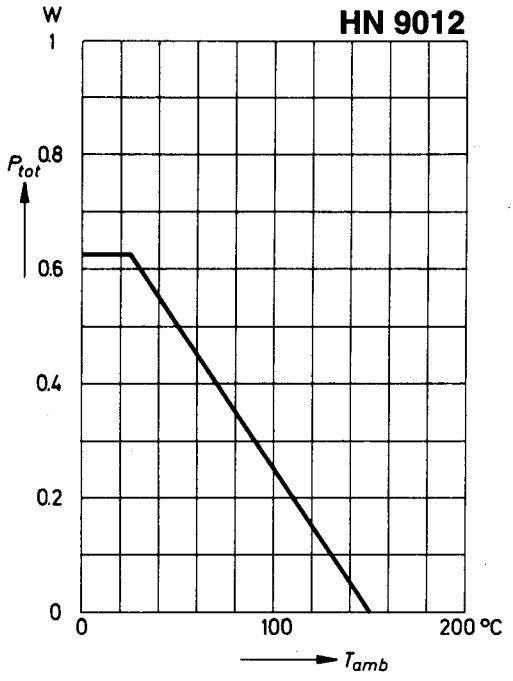
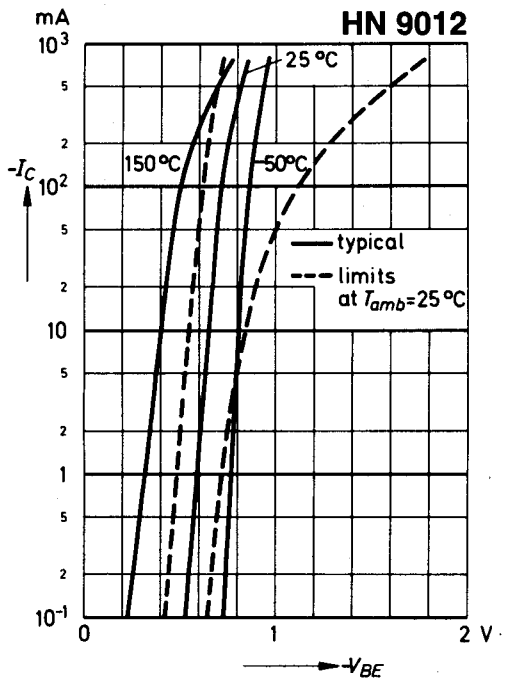


Collector current versus base emitter voltage



Pulse thermal resistance versus pulse duration

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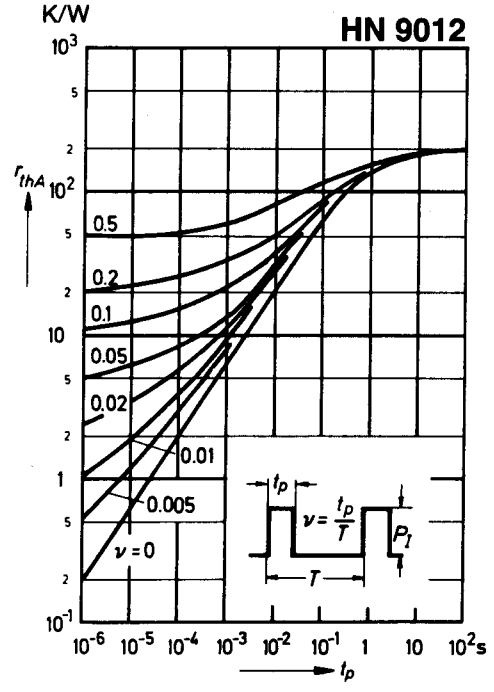
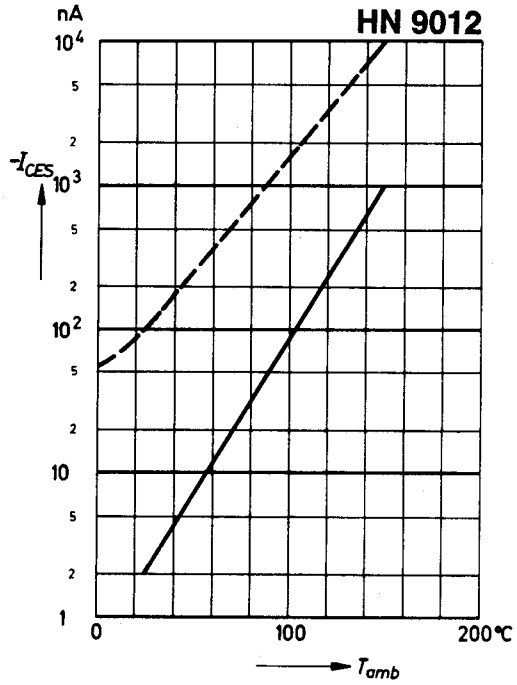
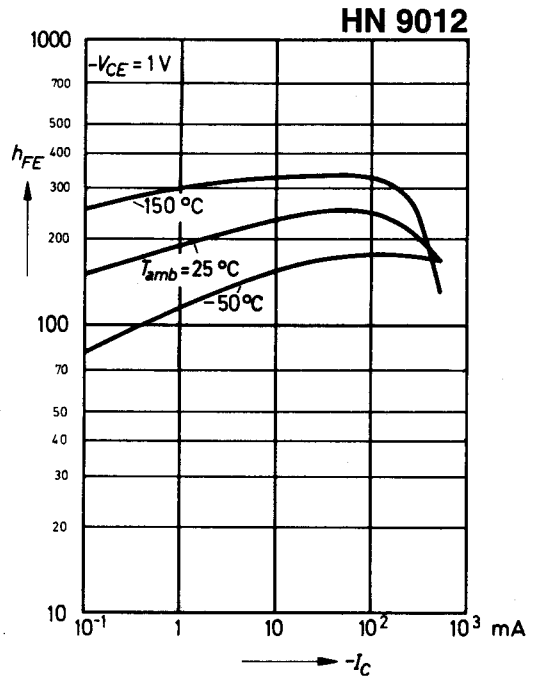


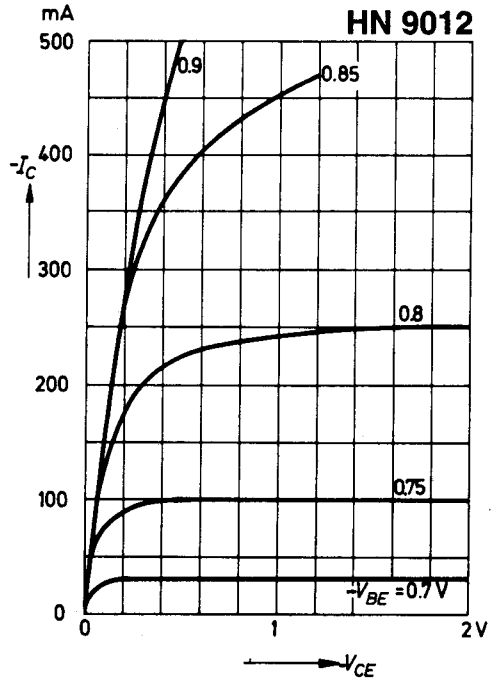
Collector cutoff current versus ambient temperature



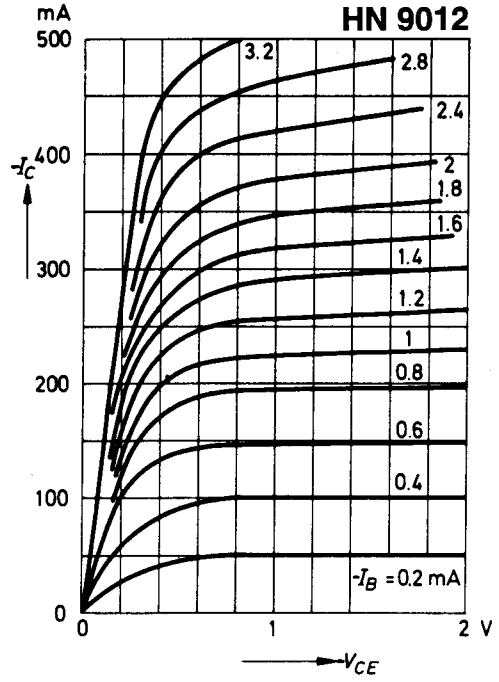
DC current gain versus collector current



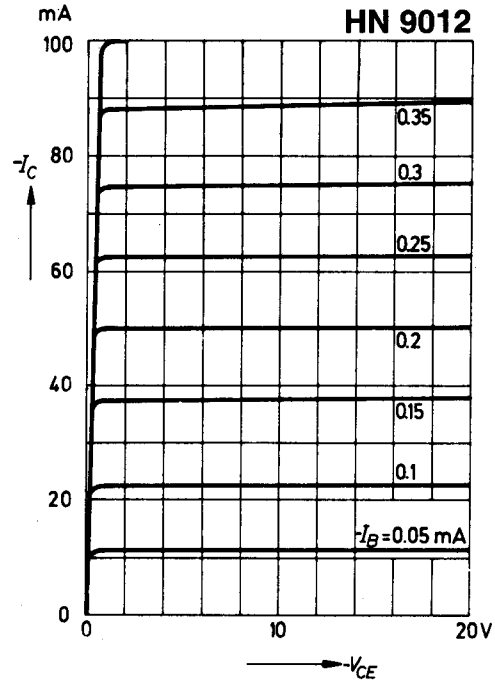
Common emitter collector characteristics



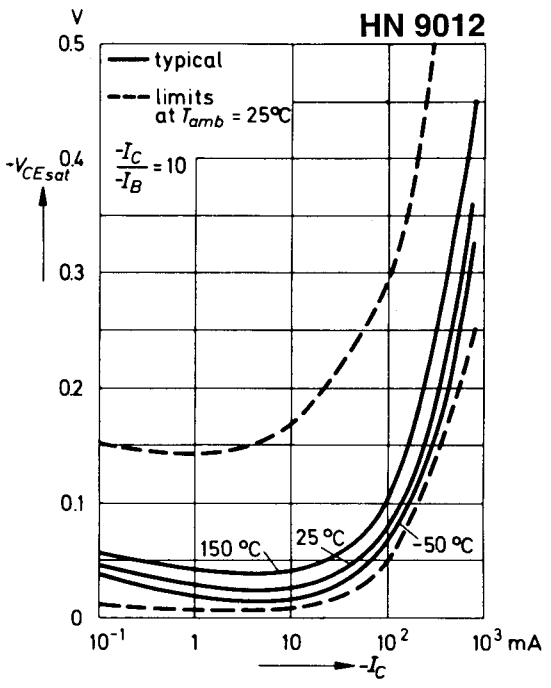
Common emitter collector characteristics



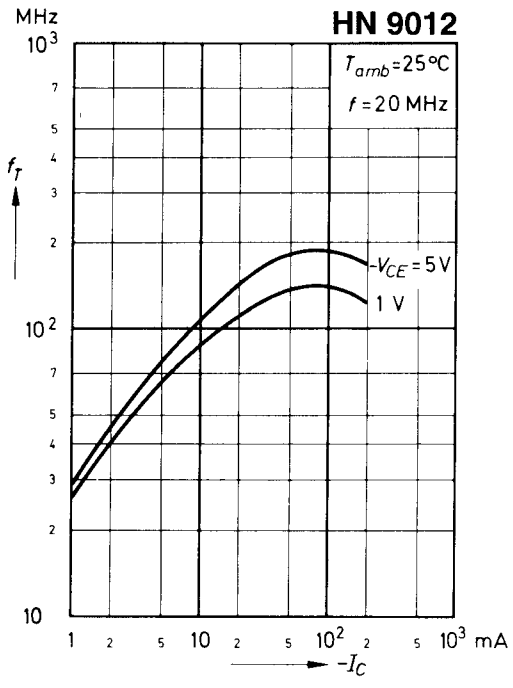
Common emitter collector characteristics



Collector saturation voltage versus collector current



Gain bandwith product versus collector current



Base saturation voltage versus collector current