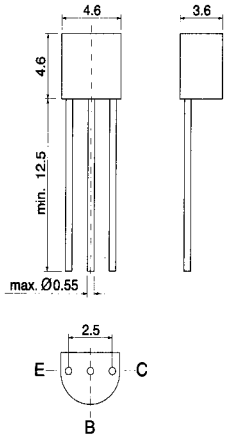
HN / 2N 4402/4403
PNP EPITAXIAL SILICON TRANSISTOR

General purpose transistor

Collector Emitter Voltage: V_{CEO} = 40V
Collector Dissipation: P_C (max) = 625mW

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 (T_a = 25°C)

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-600	mA
Collector Dissipation	P_{tot}	625	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	-55 to + 150	°C

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Characteristics at T_{amb} =25 °C

	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain.					
at $-V_{CE}$ = 1V, $-I_C$ = 0.1 mA					
HN / 2N 4403	h_{FE}	30	-		-
at $-V_{CE}$ = 1V, $-I_C$ = 1 mA					
HN / 2N 4402	h_{FE}	30	-		-
HN / 2N 4403	h_{FE}	60	-		-
at $-V_{CE}$ = 1V, $-I_C$ = 10 mA					
HN / 2N 4402	h_{FE}	50	-		-
HN / 2N 4403	h_{FE}	100	-		-
at $-V_{CE}$ = 1V, $-I_C$ = 150 mA					
HN / 2N 4402	h_{FE}	50	-	150	-
HN / 2N 4403	h_{FE}	100	-	300	-
at $-V_{CE}$ = 2V, $-I_C$ = 500 mA					
HN / 2N 4402	h_{FE}	20	-		-
HN / 2N 4403	h_{FE}	20	-		-
Collector Cutoff Current at $-V_{CE}$ = 35 V, at $-V_{EB}$ = 0.4V	$-I_{CEX}$	-	-	100	nA
Base Cutoff Current at $-V_{CE}$ = 35 V, at $-V_{EB}$ = 0.4V	$-I_{BEV}$	-	-	100	nA
Collector Emitter Breakdown Voltage at $-I_C$ = 1 mA	$-V_{(BR)CEO}$	40	-	-	V
Collector Base Breakdown Voltage at $-I_C$ = 100 µA	$-V_{(BR)CBO}$	40	-	-	V
Collector Saturation Voltage at $-I_C$ = 150 mA, $-I_B$ = 15 mA	$-V_{CEsat}$	-	-	0.4	V
Base Saturation Voltage at $-I_C$ = 150 mA, $-I_B$ = 15 mA	$-V_{BEsat}$	0.75	-	0.95	V
Emitter Base Breakdown Voltage at $-I_E$ = 100 µA	$-V_{BR(EBO)}$	5	-	-	V
Gain Bandwidth Product at $-V_{CE}$ = 10V, $-I_C$ = 20 mA, f = 100MHz					
HN / 2N 4402		150	-	-	MHz
HN / 2N 4403	f_T	200	-	-	MHz
Collector Base Capacitance at $-V_{CB}$ = 10 V, f = 140MHz, $-I_E$ = 0	$C_{(CBO)}$	-	-	8.5	pF
Turn On Time at $-V_{CC}$ = 30 V, $-V_{BE}$ = 2V, $-I_C$ = 150 mA, $-I_B1$ = 15 mA	t_{on}	-	-	35	ns
Turn Off Time at $-V_{CC}$ = 30 V, $-I_C$ = 150 mA, $-I_B1$ = $-I_B2$ = 15mA	t_{off}	-	-	255	ns

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

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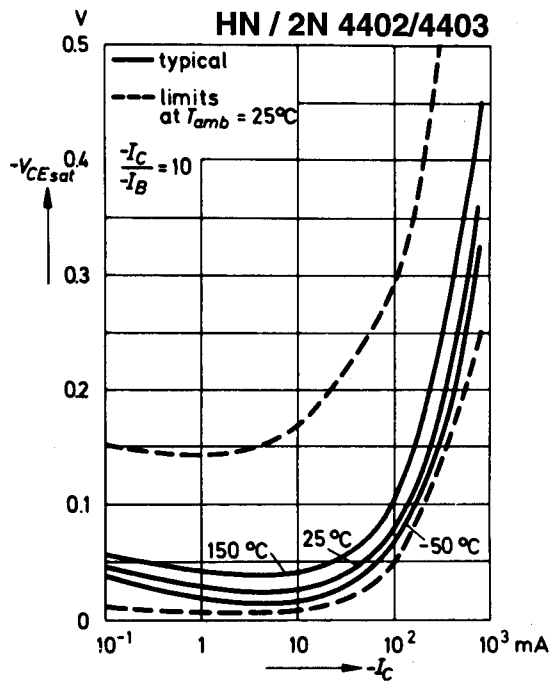
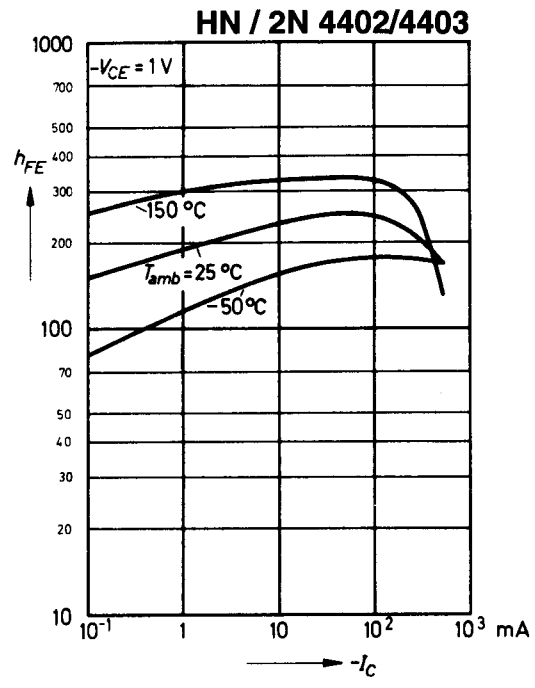
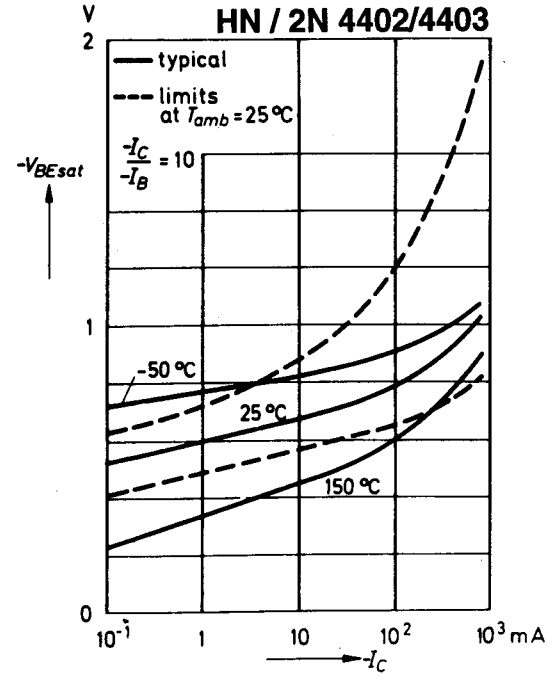
Collector saturation voltage versus collector current



DC current gain versus collector current



Base saturation voltage versus collector current



Common emitter collector characteristics