

ST 2N3905 / 2N3906

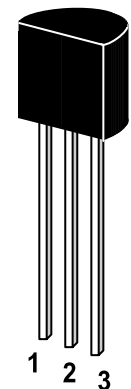
PNP Silicon Epitaxial Planar Transistor

www.DataSheet4U.com

for switching and amplifier applications.

As complementary types the NPN transistors 2N3903 and 2N3904 are recommended.

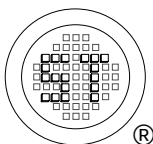
On special request, these transistors can be manufactured in different pin configurations.



1. Emitter 2. Base 3. Collector
TO-92 Plastic Package
Weight approx. 0.19g

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	-V _{CBO}	40	V
Collector Emitter Voltage	-V _{CEO}	40	V
Emitter Base Voltage	-V _{EBO}	6	V
Collector Current	-I _C	200	mA
Power Dissipation	P _{tot}	625	mW
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _s	- 55 to + 150	°C



SEMTECH ELECTRONICS LTD.
(Subsidiary of Sino-Tech International Holdings Limited, a company
listed on the Hong Kong Stock Exchange, Stock Code: 724)



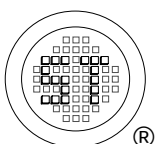
ST 2N3905 / 2N3906

www.DataSheet4U.com

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

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain at $-V_{CE} = 1\text{ V}$, $-I_C = 0.1\text{ mA}$ at $-V_{CE} = 1\text{ V}$, $-I_C = 1\text{ mA}$ at $-V_{CE} = 1\text{ V}$, $-I_C = 10\text{ mA}$ at $-V_{CE} = 1\text{ V}$, $-I_C = 50\text{ mA}$ at $-V_{CE} = 1\text{ V}$, $-I_C = 100\text{ mA}$	2N3905	h_{FE}	30	-	-
	2N3906	h_{FE}	60	-	-
	2N3905	h_{FE}	40	-	-
	2N3906	h_{FE}	80	-	-
	2N3905	h_{FE}	50	150	-
	2N3906	h_{FE}	100	300	-
	2N3905	h_{FE}	30	-	-
	2N3906	h_{FE}	60	-	-
Collector Cutoff Current at $-V_{CB} = 30\text{ V}$	2N3905	h_{FE}	15	-	-
	2N3906	h_{FE}	30	-	-
Emitter Cutoff Current at $-V_{EB} = 6\text{ V}$		$-I_{CBO}$	-	50	nA
Collector Base Breakdown Voltage at $-I_C = 10\text{ }\mu\text{A}$		$-I_{EBO}$	-	50	nA
Collector Emitter Breakdown Voltage at $-I_C = 1\text{ mA}$		$-V_{(BR)CBO}$	40	-	V
Emitter Base Breakdown Voltage at $-I_E = 10\text{ }\mu\text{A}$		$-V_{(BR)CEO}$	40	-	V
Collector Emitter Saturation Voltage at $-I_C = 10\text{ mA}$, $-I_B = 1\text{ mA}$ at $-I_C = 50\text{ mA}$, $-I_B = 5\text{ mA}$		$-V_{(BR)EBO}$	6	-	V
Base Emitter Saturation Voltage at $-I_C = 10\text{ mA}$, $-I_B = 1\text{ mA}$ at $-I_C = 50\text{ mA}$, $-I_B = 5\text{ mA}$		$-V_{CESat}$	-	0.25	V
		$-V_{CESat}$	-	0.4	V
Gain Bandwidth Product at $-V_{CE} = 20\text{ V}$, $-I_C = 10\text{ mA}$, $f = 100\text{ MHz}$	2N3905	$-V_{BESat}$	-	0.85	V
	2N3906	$-V_{BESat}$	-	0.95	V
Collector Base Capacitance at $-V_{CB} = 5\text{ V}$, $f = 100\text{ KHz}$		f_T	200	-	MHz
Emitter Base Capacitance at $-V_{EB} = 0.5\text{ V}$, $f = 100\text{ KHz}$		f_T	250	-	MHz
Thermal Resistance Junction to Ambient		C_{cb}	-	4.5	pF
		C_{eb}	-	10	pF
		R_{thA}	-	250 ¹⁾	K/W

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



SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company
listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949:2002
Certificate No. 05103



ISO 14001:2004
Certificate No. 014

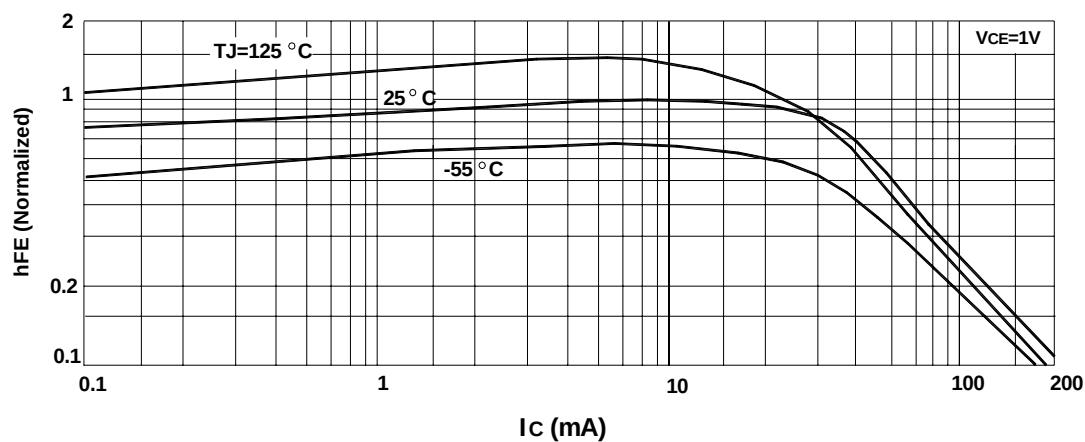


ISO 9001:2000
Certificate No. 014

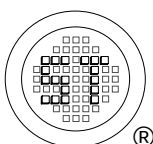
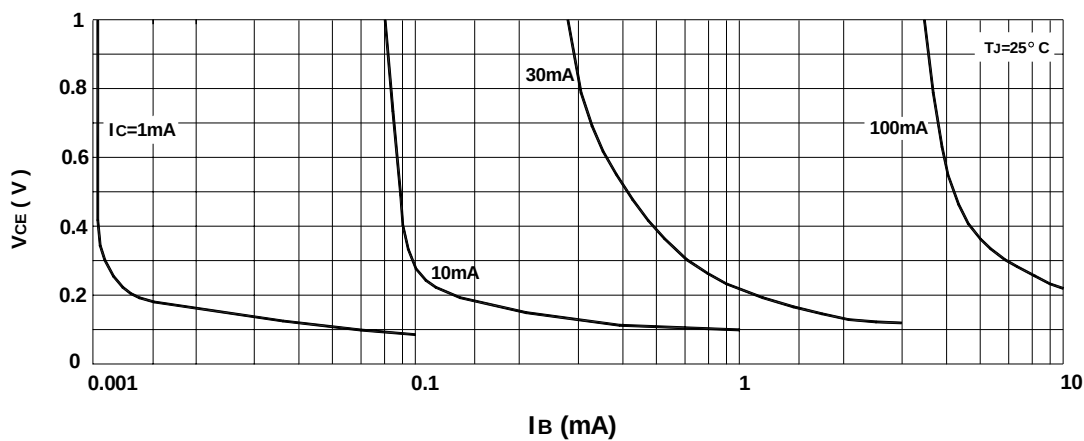
www.DataSheet4U.com

Dated : 09/03/2007

DC Current Gain



Collector Saturation Region



SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949:2002
Certificate No. 05103



ISO 14001:2004
Certificate No. 05104



ISO 9001:2000
Certificate No. 05105