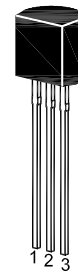


NPN Silicon Epitaxial Planar Transistor

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 PNP transistor 9015 is recommended.

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



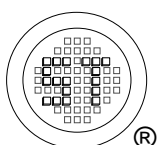
1. Emitter 2. Base 3. Collector
TO-92 Plastic Package

Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	50	V
Collector Emitter Voltage	V_{CEO}	45	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	100	mA
Power Dissipation	P_{tot}	450	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $V_{CE} = 5\text{ V}$, $I_C = 1\text{ mA}$ Current Gain Group	A	h_{FE}	60	-	150	-
	B	h_{FE}	100	-	300	-
	C	h_{FE}	200	-	600	-
	D	h_{FE}	400	-	1000	-
Collector Base Cutoff Current at $V_{CB} = 50\text{ V}$	I_{CBO}	-	-	50	nA	
Emitter Base Cutoff Current at $V_{EB} = 5\text{ V}$	I_{EBO}	-	-	50	nA	
Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$	$V_{(BR)CBO}$	50	-	-	V	
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{(BR)CEO}$	45	-	-	V	
Emitter Base Breakdown Voltage at $I_E = 100\text{ }\mu\text{A}$	$V_{(BR)EBO}$	5	-	-	V	
Collector Emitter Saturation Voltage at $I_C = 100\text{ mA}$, $I_B = 10\text{ mA}$	$V_{CE(sat)}$	-	-	0.25	V	
Gain Bandwidth Product at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$	f_T	-	300	-	MHz	
Output Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	-	6	pF	

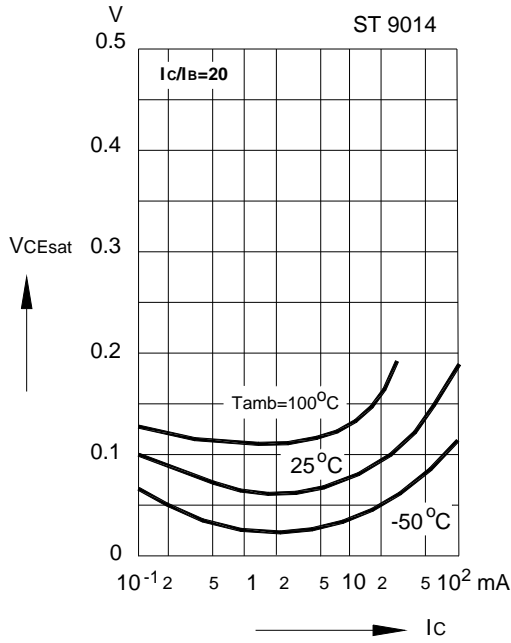


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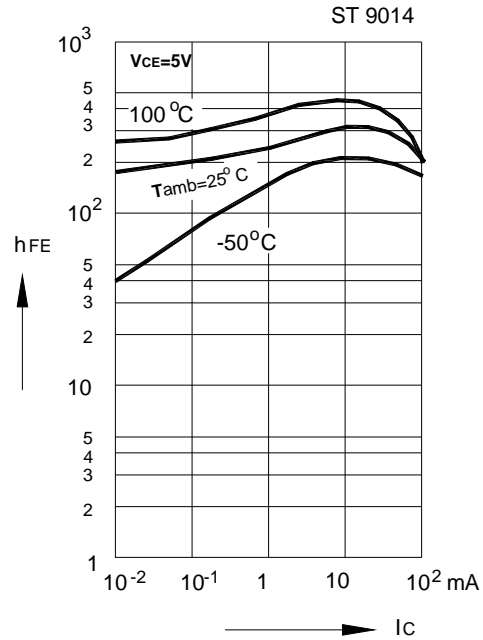


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 BS OHSAS 18001 : 2007 Certificate No. 71116
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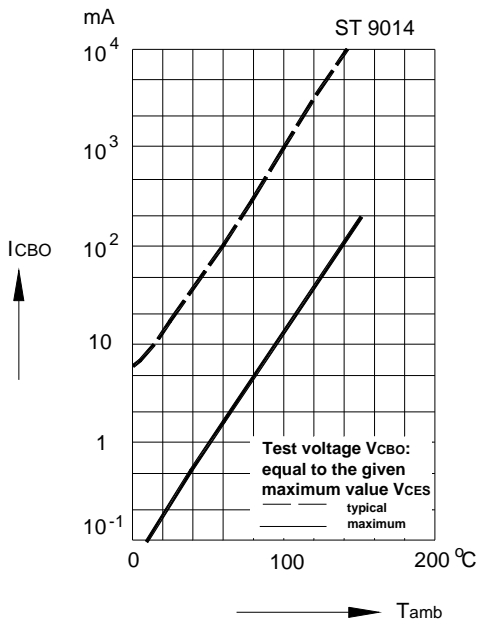
Collector saturation voltage versus collector current



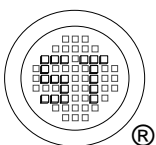
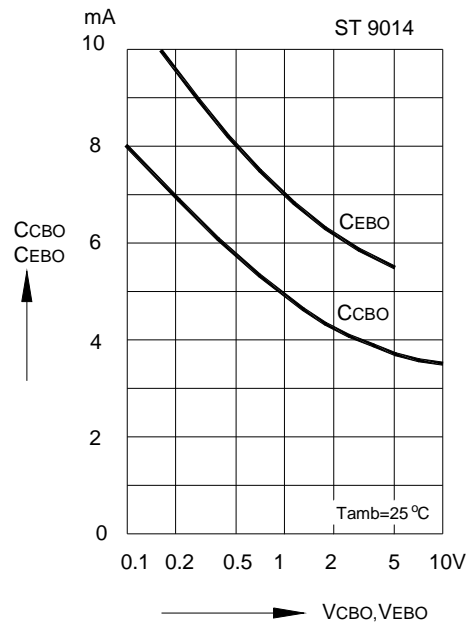
DC current gain versus collector current



Collector cutoff current versus ambient temperature



Collector base capacitance, Emitter base capacitance versus reverse bias voltage



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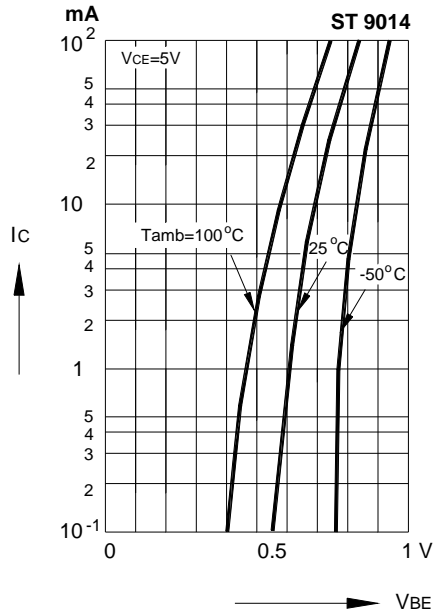


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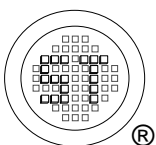
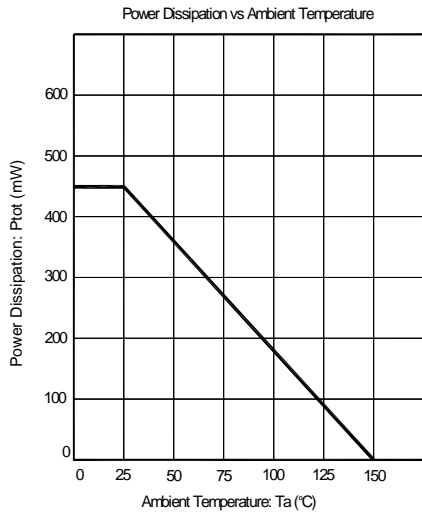
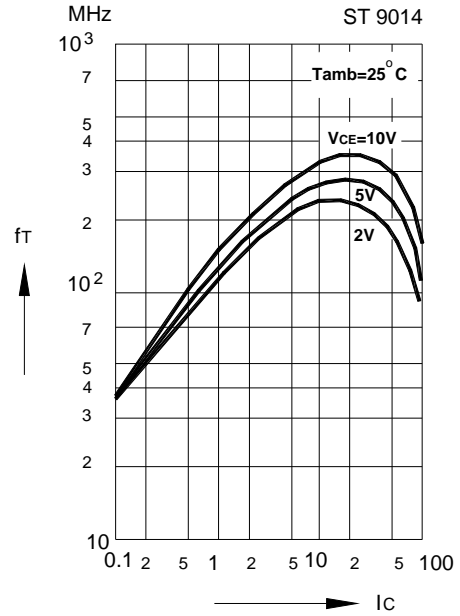


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Collector current versus base emitter voltage



Gain bandwidth product versus collector current



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