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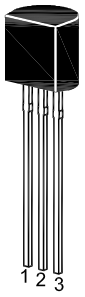
2N2907 - 2N2907A

PNP Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications.

The transistor is subdivided into one group according to its DC current gain. As complementary type the NPN transistor ST 2N2222 and ST 2N2222A are 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 °C)

Parameter		Symbol	Value	Unit
Collector Base Voltage		$-V_{CBO}$	60	V
Collector Emitter Voltage	2N2907 2N2907A	$-V_{CEO}$	40 60	V
Emitter Base Voltage		$-V_{EBO}$	5	V
Collector Current		$-I_C$	600	mA
Power Dissipation		P_{tot}	625	mW
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	- 55 to + 150	°C

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Characteristics at T_a = 25 °C

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain					
at $-V_{CE}$ = 10 V, $-I_C$ = 0.1 mA	2N2907	h_{FE}	35	-	-
	2N2907A	h_{FE}	75	-	-
at $-V_{CE}$ = 10 V, $-I_C$ = 1 mA	2N2907	h_{FE}	50	-	-
	2N2907A	h_{FE}	100	-	-
at $-V_{CE}$ = 10 V, $-I_C$ = 10 mA	2N2907	h_{FE}	75	-	-
	2N2907A	h_{FE}	100	-	-
at $-V_{CE}$ = 10 V, $-I_C$ = 150 mA		h_{FE}	100	300	-
at $-V_{CE}$ = 10 V, $-I_C$ = 500 mA	2N2907	h_{FE}	30	-	-
	2N2907A	h_{FE}	50	-	-
Collector Base Cutoff Current					
at $-V_{CB}$ = 50 V	2N2907	$-I_{CBO}$	-	20	nA
	2N2907A		-	10	
Collector Base Breakdown Voltage					
at $-I_C$ = 10 µA		$-V_{(BR)CBO}$	60	-	V
Collector Emitter Breakdown Voltage					
at $-I_C$ = 10 mA	2N2907	$-V_{(BR)CEO}$	40	-	V
	2N2907A		60	-	
Emitter Base Breakdown Voltage					
at $-I_E$ = 10 µA		$-V_{(BR)EBO}$	5	-	V
Collector Emitter Saturation Voltage					
at $-I_C$ = 150 mA, $-I_B$ = 15 mA		$-V_{CE(sat)}$	-	0.4	V
at $-I_C$ = 500 mA, $-I_B$ = 50 mA			-	1.6	
Base Emitter Saturation Voltage					
at $-I_C$ = 150 mA, $-I_B$ = 15 mA		$-V_{BE(sat)}$	-	1.3	V
at $-I_C$ = 500 mA, $-I_B$ = 50 mA			-	2.6	
Gain Bandwidth Product					
at $-I_C$ = 50 mA , $-V_{CE}$ = 20 V, f = 100 MHz		f_T	200	-	MHz
Collector Output Capacitance					
at $-V_{CB}$ = 10 V, f = 1 MHz		C_{ob}	-	8	pF
Input Capacitance					
at $-V_{BE}$ = 2 V, f = 1 MHz		C_{ib}	-	30	pF

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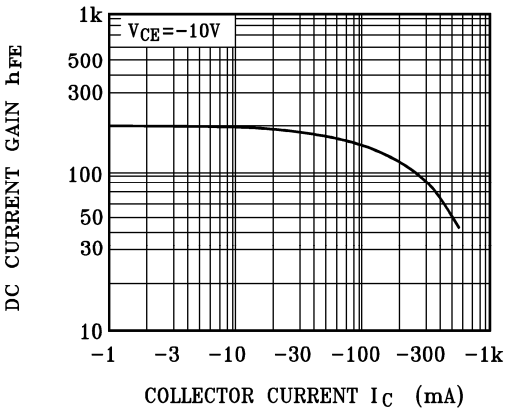
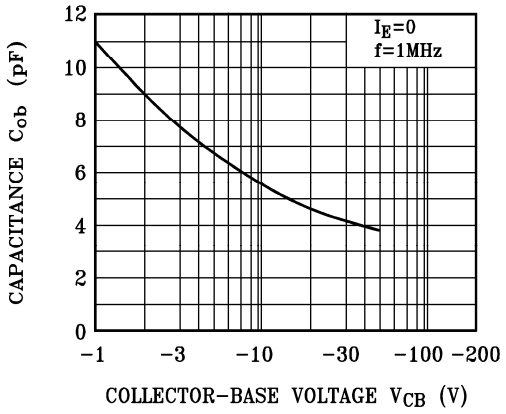
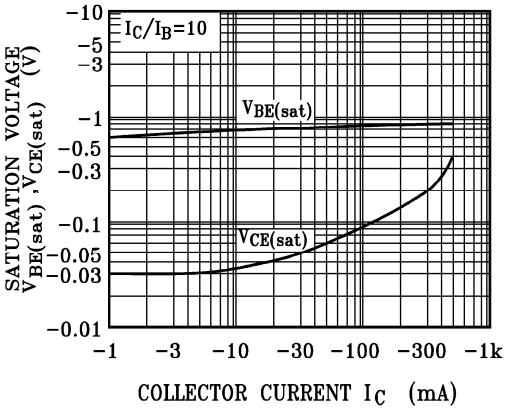
h_{FE} – I_C



C_{ob} – V_{CB}



$V_{BE(sat)}$,$V_{CE(sat)}$ – I_C



P_C – Ta