

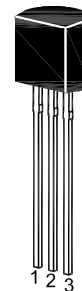
# 2N2907 / 2N2907A

## 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.

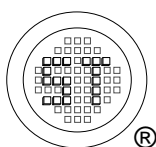
On special request, these transistors can be manufactured in different pin configurations.



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

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{\text{CBO}}$	60	V
Collector Emitter Voltage	$-V_{\text{CEO}}$	40 60	V
Emitter Base Voltage	$-V_{\text{EBO}}$	5	V
Collector Current	$-I_{\text{C}}$	600	mA
Power Dissipation	$P_{\text{tot}}$	625	mW
Junction Temperature	$T_{\text{j}}$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{\text{stg}}$	- 55 to + 150	$^\circ\text{C}$



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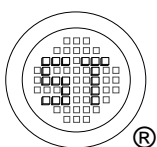


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# 2N2907 / 2N2907A

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

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain at $-I_C = 0.1 \text{ mA}$ , $-V_{CE} = 10 \text{ V}$ at $-I_C = 1 \text{ mA}$ , $-V_{CE} = 10 \text{ V}$ at $-I_C = 10 \text{ mA}$ , $-V_{CE} = 10 \text{ V}$ at $-I_C = 150 \text{ mA}$ , $-V_{CE} = 10 \text{ V}$ at $-I_C = 500 \text{ mA}$ , $-V_{CE} = 10 \text{ V}$	2N2907	$h_{FE}$	35	-	-
	2N2907A	$h_{FE}$	75	-	-
	2N2907	$h_{FE}$	50	-	-
	2N2907A	$h_{FE}$	100	-	-
	2N2907	$h_{FE}$	75	-	-
	2N2907A	$h_{FE}$	100	-	-
Collector Base Cutoff Current at $-V_{CB} = 50 \text{ V}$	2N2907	$-I_{CBO}$	-	20	nA
	2N2907A	$-I_{CBO}$	-	10	nA
Collector Base Breakdown Voltage at $-I_C = 10 \mu\text{A}$		$-V_{(BR)CBO}$	60	-	V
Collector Emitter Breakdown Voltage at $-I_C = 10 \text{ mA}$	2N2907	$-V_{(BR)CEO}$	40	-	V
	2N2907A	$-V_{(BR)CEO}$	60	-	V
Emitter Base Breakdown Voltage at $-I_E = 10 \mu\text{A}$		$-V_{(BR)EBO}$	5	-	V
Collector Saturation Voltage at $-I_C = 150 \text{ mA}$ , $-I_B = 15 \text{ mA}$ at $-I_C = 500 \text{ mA}$ , $-I_B = 50 \text{ mA}$		$-V_{CE(sat)}$	-	0.4	V
		$-V_{CE(sat)}$	-	1.6	V
Base Saturation Voltage at $-I_C = 150 \text{ mA}$ , $-I_B = 15 \text{ mA}$ at $-I_C = 500 \text{ mA}$ , $-I_B = 50 \text{ mA}$		$-V_{BE(sat)}$	-	1.3	V
		$-V_{BE(sat)}$	-	2.6	V
Gain Bandwidth Product at $-I_C = 50 \text{ mA}$ , $-V_{CE} = 20 \text{ V}$ , $f = 100 \text{ MHz}$		$f_T$	200	-	MHz
Collector Output Capacitance at $-V_{CB} = 10 \text{ V}$ , $f = 1 \text{ MHz}$		$C_{ob}$	-	8	pF
Turn-on Time at $-V_{CC} = 30 \text{ V}$ , $-I_C = 150 \text{ mA}$ , $-I_{B1} = 15 \text{ mA}$		$t_{on}$	-	45	ns
Delay Time at $-V_{CC} = 30 \text{ V}$ , $-I_C = 150 \text{ mA}$ , $-I_{B1} = 15 \text{ mA}$		$t_d$	-	10	ns
Rise Time at $-V_{CC} = 30 \text{ V}$ , $-I_C = 150 \text{ mA}$ , $-I_{B1} = 15 \text{ mA}$		$t_r$	-	40	ns
Turn-off Time at $-V_{CC} = 6 \text{ V}$ , $-I_C = 150 \text{ mA}$ , $-I_{B1} = -I_{B2} = 15 \text{ mA}$		$t_{off}$	-	100	ns
Storage Time at $-V_{CC} = 6 \text{ V}$ , $-I_C = 150 \text{ mA}$ , $-I_{B1} = -I_{B2} = 15 \text{ mA}$		$t_s$	-	80	ns
Fall Time at $-V_{CC} = 6 \text{ V}$ , $-I_C = 150 \text{ mA}$ , $-I_{B1} = -I_{B2} = 15 \text{ mA}$		$t_f$	-	30	ns



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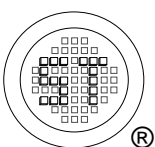
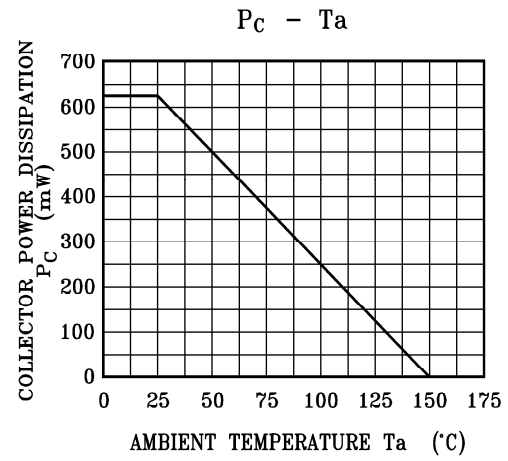
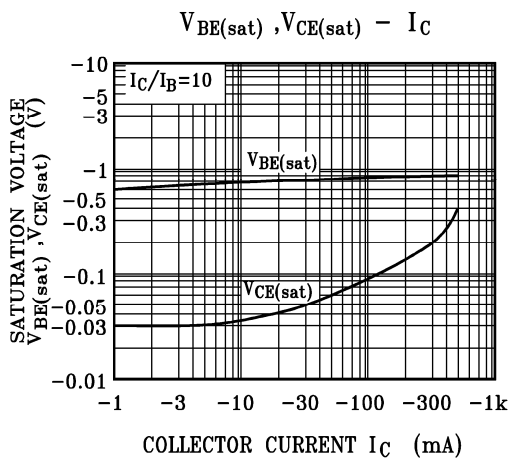
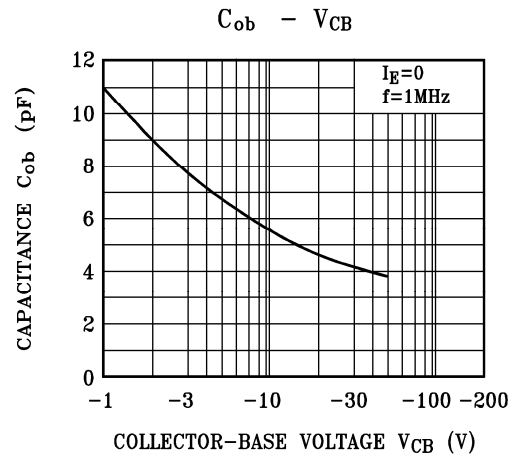
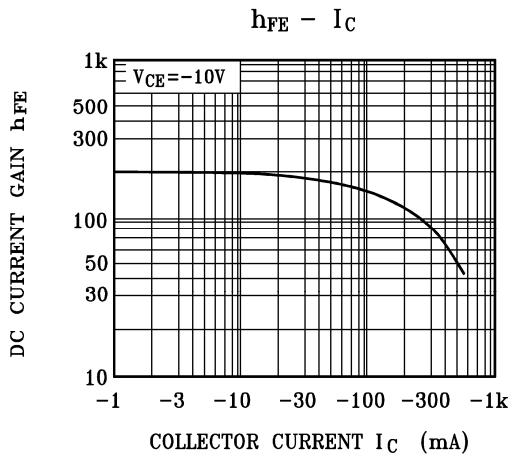
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