

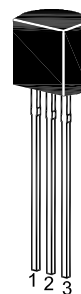
2N2907 / 2N2907A

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.

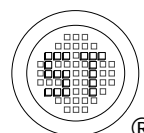
On special request, these transistors can be manufactured in different pin configurations.



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	V
2N2907		60	
2N2907A			
Emitter Base Voltage	$-V_{\text{EBO}}$	5	V
Collector Current	$-I_{\text{C}}$	600	mA
Power Dissipation	P_{tot}	625	mW
Junction Temperature	T_{j}	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$



2N2907 / 2N2907A

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

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain					
at $-I_C = 0.1\text{ mA}$, $-V_{CE} = 10\text{ V}$	2N2907	h_{FE}	35	-	-
	2N2907A	h_{FE}	75	-	-
at $-I_C = 1\text{ mA}$, $-V_{CE} = 10\text{ V}$	2N2907	h_{FE}	50	-	-
	2N2907A	h_{FE}	100	-	-
at $-I_C = 10\text{ mA}$, $-V_{CE} = 10\text{ V}$	2N2907	h_{FE}	75	-	-
	2N2907A	h_{FE}	100	-	-
at $-I_C = 150\text{ mA}$, $-V_{CE} = 10\text{ V}$		h_{FE}	100	300	-
at $-I_C = 500\text{ mA}$, $-V_{CE} = 10\text{ V}$	2N2907	h_{FE}	30	-	-
	2N2907A	h_{FE}	50	-	-
Collector Base Cutoff Current					
at $-V_{CB} = 50\text{ V}$	2N2907	$-I_{CBO}$	-	20	nA
	2N2907A	$-I_{CBO}$	-	10	nA
Collector Base Breakdown Voltage		$-V_{(BR)CBO}$	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		$-V_{(BR)EBO}$	5	-	V
Collector Saturation Voltage					
at $-I_C = 150\text{ mA}$, $-I_B = 15\text{ mA}$		$-V_{CE(sat)}$	-	0.4	V
at $-I_C = 500\text{ mA}$, $-I_B = 50\text{ mA}$		$-V_{CE(sat)}$	-	1.6	V
Base Saturation Voltage					
at $-I_C = 150\text{ mA}$, $-I_B = 15\text{ mA}$		$-V_{BE(sat)}$	-	1.3	V
at $-I_C = 500\text{ mA}$, $-I_B = 50\text{ mA}$		$-V_{BE(sat)}$	-	2.6	V
Gain Bandwidth Product		f_T	200	-	MHz
Collector Output Capacitance		C_{ob}	-	8	pF
Turn-on Time		t_{on}	-	45	ns
at $-V_{CC} = 30\text{ V}$, $-I_C = 150\text{ mA}$, $-I_{B1} = 15\text{ mA}$					
Delay Time		t_d	-	10	ns
at $-V_{CC} = 30\text{ V}$, $-I_C = 150\text{ mA}$, $-I_{B1} = 15\text{ mA}$					
Rise Time		t_r	-	40	ns
at $-V_{CC} = 30\text{ V}$, $-I_C = 150\text{ mA}$, $-I_{B1} = 15\text{ mA}$					
Turn-off Time		t_{off}	-	100	ns
at $-V_{CC} = 6\text{ V}$, $-I_C = 150\text{ mA}$, $-I_{B1} = -I_{B2} = 15\text{ mA}$					
Storage Time		t_s	-	80	ns
at $-V_{CC} = 6\text{ V}$, $-I_C = 150\text{ mA}$, $-I_{B1} = -I_{B2} = 15\text{ mA}$					
Fall Time		t_f	-	30	ns
at $-V_{CC} = 6\text{ V}$, $-I_C = 150\text{ mA}$, $-I_{B1} = -I_{B2} = 15\text{ mA}$					

