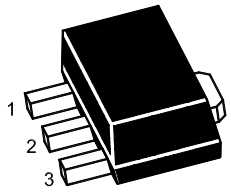
PNP Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications.

The transistor is subdivided into one group according to its DC current gain.

MARKING: 2N2907U:2907
2N2907AU:2907A



1.Base 2.Collector 3.Emitter
SOT-89 Plastic Package

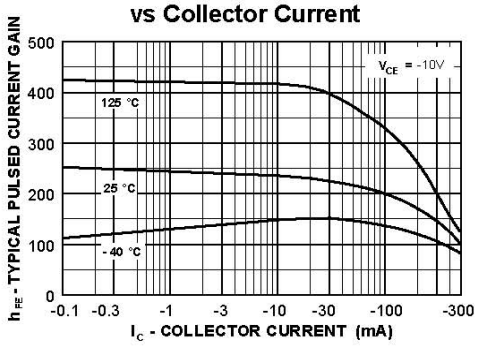
Absolute Maximum Ratings (T_a = 25 °C)

Parameter		Symbol	Value	Unit
Collector Base Voltage		$-V_{CBO}$	60	V
Collector Emitter Voltage	2N2907U 2N2907AU	$-V_{CEO}$	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

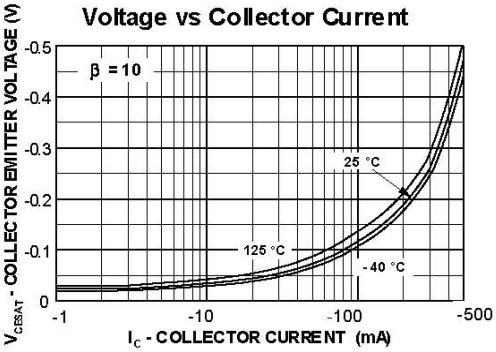
Characteristics at T_a = 25 °C

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain					
at $-I_C$ = 0.1 mA, $-V_{CE}$ = 10 V	2N2907U	h_{FE}	35	-	-
	2N2907AU	h_{FE}	75	-	-
at $-I_C$ = 1 mA, $-V_{CE}$ = 10 V	2N2907U	h_{FE}	50	-	-
	2N2907AU	h_{FE}	100	-	-
at $-I_C$ = 10 mA, $-V_{CE}$ = 10 V	2N2907U	h_{FE}	75	-	-
	2N2907AU	h_{FE}	100	-	-
at $-I_C$ = 150 mA, $-V_{CE}$ = 10 V		h_{FE}	100	300	-
at $-I_C$ = 500 mA, $-V_{CE}$ = 10 V	2N2907U	h_{FE}	30	-	-
	2N2907AU	h_{FE}	50	-	-
Collector Base Cutoff Current					
at $-V_{CB}$ = 50 V	2N2907U	$-I_{CBO}$	-	20	nA
	2N2907AU	$-I_{CBO}$	-	10	nA
Collector Base Breakdown Voltage at $-I_C$ = 10 µA		$-V_{(BR)CBO}$	60	-	V
Collector Emitter Breakdown Voltage					
at $-I_C$ = 10 mA	2N2907U	$-V_{(BR)CEO}$	40	-	V
	2N2907AU	$-V_{(BR)CEO}$	60	-	V
Emitter Base Breakdown Voltage at $-I_E$ = 10 µA		$-V_{(BR)EBO}$	5	-	V
Collector 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		$-V_{CE(sat)}$	-	1.6	V
Base 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		$-V_{BE(sat)}$	-	2.6	V
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
Turn-on Time at $-V_{CC}$ = 30 V, $-I_C$ = 150 mA, $-I_{B1}$ = 15 mA		t_{on}	-	45	ns
Delay Time at $-V_{CC}$ = 30 V, $-I_C$ = 150 mA, $-I_{B1}$ = 15 mA		t_d	-	10	ns
Rise Time at $-V_{CC}$ = 30 V, $-I_C$ = 150 mA, $-I_{B1}$ = 15 mA		t_r	-	40	ns
Turn-off Time at $-V_{CC}$ = 6 V, $-I_C$ = 150 mA, $-I_{B1}$ = $-I_{B2}$ = 15 mA		t_{off}	-	100	ns
Storage Time at $-V_{CC}$ = 6 V, $-I_C$ = 150 mA, $-I_{B1}$ = $-I_{B2}$ = 15 mA		t_s	-	80	ns
Fall Time at $-V_{CC}$ = 6 V, $-I_C$ = 150 mA, $-I_{B1}$ = $-I_{B2}$ = 15 mA		t_f	-	30	ns

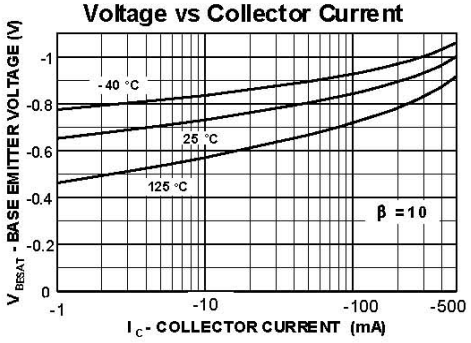
Typical Pulsed Current Gain vs Collector Current



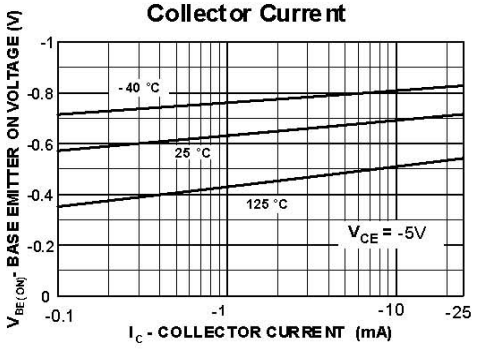
Collector-Emitter Saturation Voltage vs Collector Current



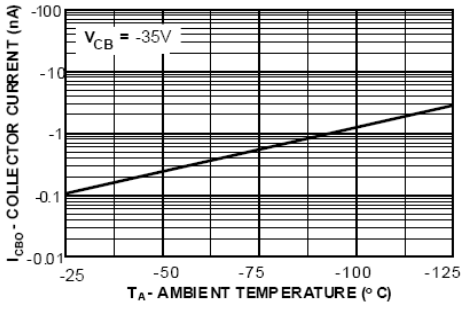
Base-Emitter Saturation Voltage vs Collector Current



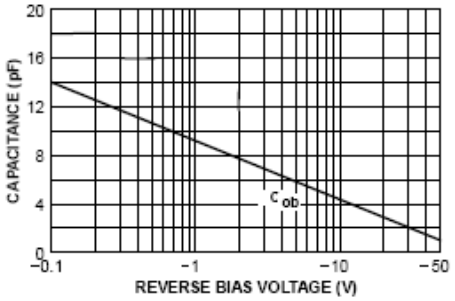
Base Emitter ON Voltage vs Collector Current



Collector-Cutoff Current vs Ambient Temperature



Input and Output Capacitance vs Reverse Bias Voltage



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