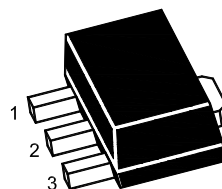


PNP Silicon Epitaxial Planar Transistor

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

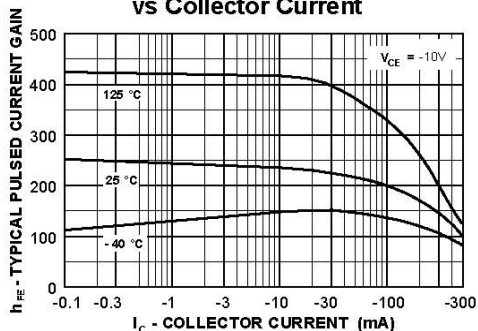
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

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

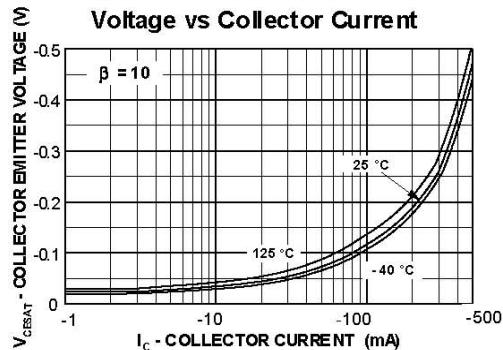
Characteristics at $T_a = 25^\circ\text{C}$

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain					
at $-I_C = 0.1\text{ mA}$, $-V_{CE} = 10\text{ V}$	2N2907U	h_{FE}	35	-	-
	2N2907AU	h_{FE}	75	-	-
at $-I_C = 1\text{ mA}$, $-V_{CE} = 10\text{ V}$	2N2907U	h_{FE}	50	-	-
	2N2907AU	h_{FE}	100	-	-
at $-I_C = 10\text{ mA}$, $-V_{CE} = 10\text{ V}$	2N2907U	h_{FE}	75	-	-
	2N2907AU	h_{FE}	100	-	-
at $-I_C = 150\text{ mA}$, $-V_{CE} = 10\text{ V}$		h_{FE}	100	300	-
at $-I_C = 500\text{ mA}$, $-V_{CE} = 10\text{ V}$	2N2907U	h_{FE}	30	-	-
	2N2907AU	h_{FE}	50	-	-
Collector Base Cutoff Current					
at $-V_{CB} = 50\text{ V}$	2N2907U	$-I_{CBO}$	-	20	nA
	2N2907AU	$-I_{CBO}$	-	10	nA
Collector Base Breakdown Voltage					
at $-I_C = 10\text{ }\mu\text{A}$		$-V_{(BR)CBO}$	60	-	V
Collector Emitter Breakdown Voltage					
at $-I_C = 10\text{ mA}$	2N2907U	$-V_{(BR)CEO}$	40	-	V
	2N2907AU	$-V_{(BR)CEO}$	60	-	V
Emitter Base Breakdown Voltage					
at $-I_E = 10\text{ }\mu\text{A}$		$-V_{(BR)EBO}$	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					
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

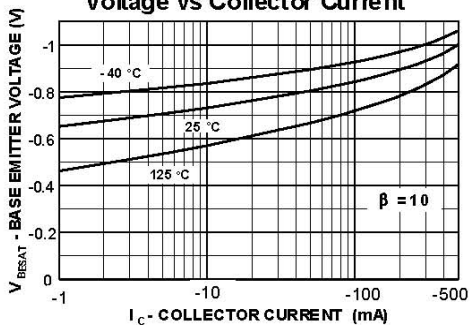
**Typical Pulsed Current Gain
vs Collector Current**



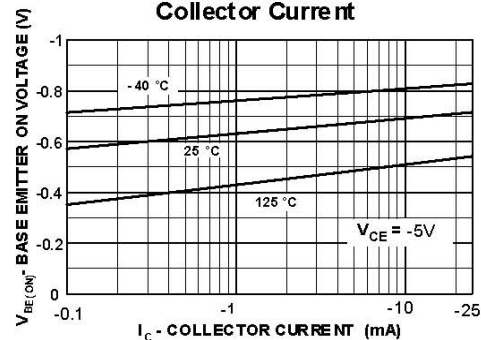
**Collector-Emitter Saturation
Voltage vs Collector Current**



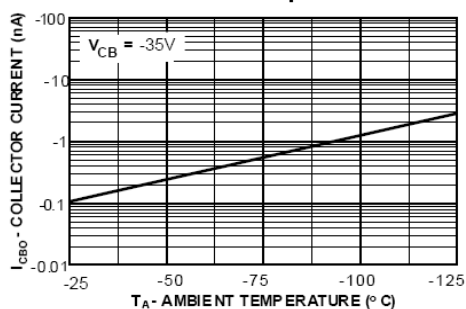
**Base-Emitter Saturation
Voltage vs Collector Current**



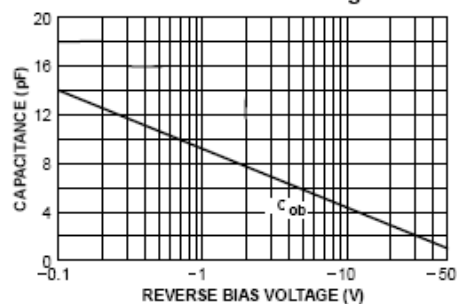
**Base Emitter ON Voltage vs
Collector Current**



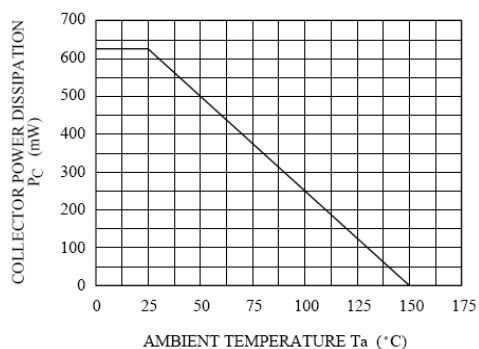
**Collector-Cutoff Current
vs Ambient Temperature**



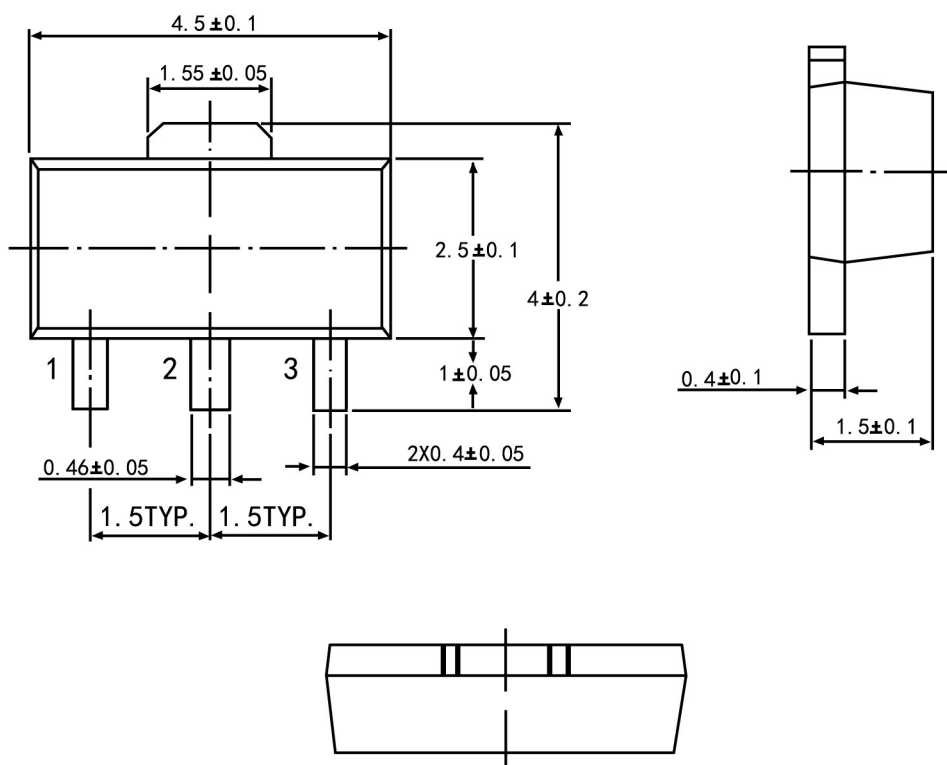
**Input and Output Capacitance
vs Reverse Bias Voltage**



Pc - Ta



SOT-89 PACKAGE OUTLINE



Symbol	Dimension in Millimeters	
	Min	Max
A	1.40	1.60
B	0.44	0.62
B1	0.35	0.54
C	0.35	0.44
D	4.40	4.60
D1	1.62	1.83
E	2.29	2.60
e	1.50 Typ	
H	3.94	4.25
H1	2.63	2.93
L	0.89	1.20
All Dimensions In mm		