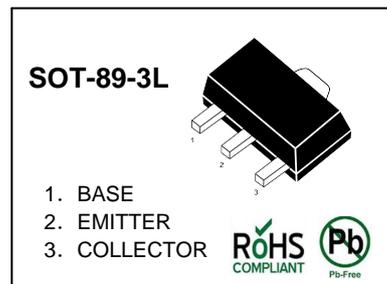


### PNP Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications.

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

**MARKING: 2N2907U:2907**  
**2N2907AU:2907A**



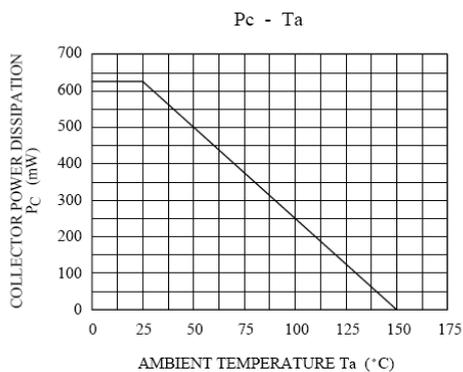
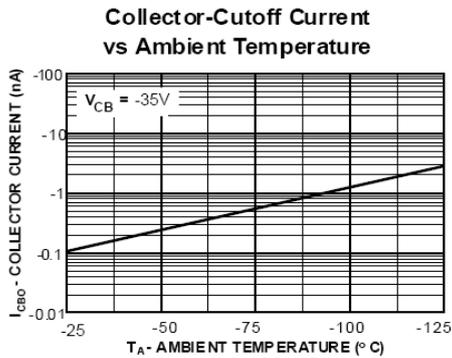
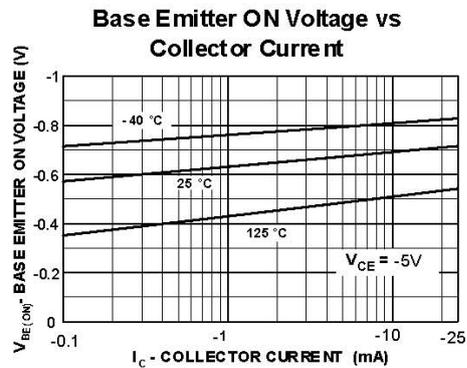
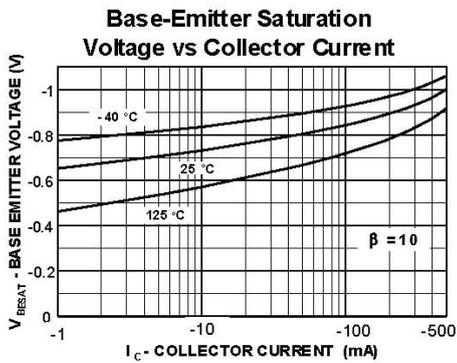
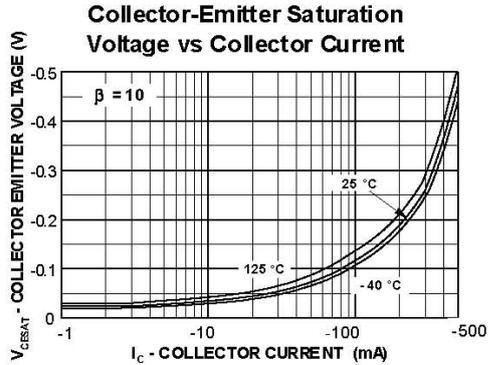
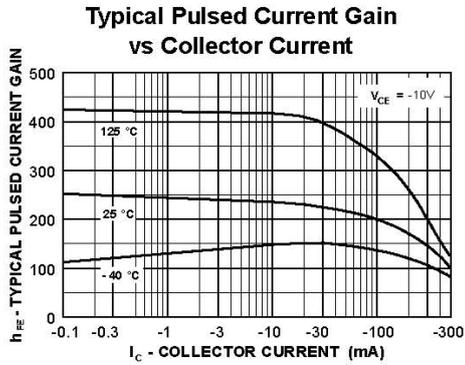
#### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	60	V
Collector Emitter Voltage	$-V_{CEO}$	40 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	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

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

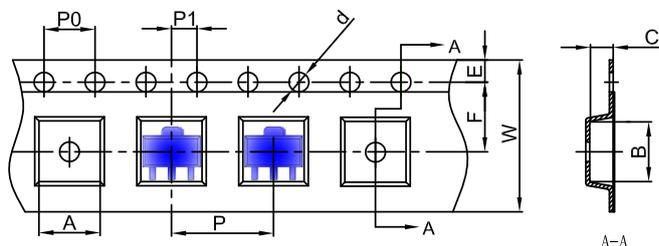
Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $-I_C = 0.1\text{ mA}$ , $-V_{CE} = 10\text{ V}$	2N2907U $h_{FE}$	35	-	-
	2N2907AU $h_{FE}$	75	-	-
at $-I_C = 1\text{ mA}$ , $-V_{CE} = 10\text{ V}$	2N2907U $h_{FE}$	50	-	-
	2N2907AU $h_{FE}$	100	-	-
at $-I_C = 10\text{ mA}$ , $-V_{CE} = 10\text{ V}$	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 Characteristics



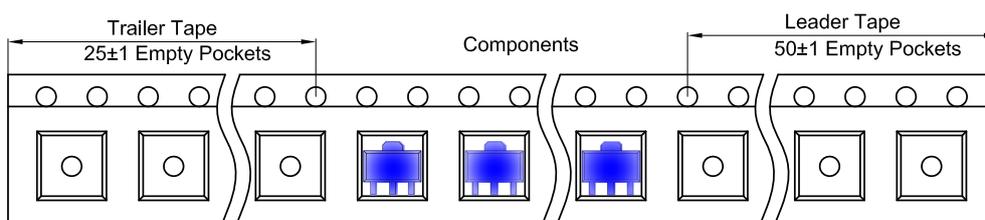
### SOT-89-3L Tape and Reel

#### SOT-89-3L Embossed Carrier Tape

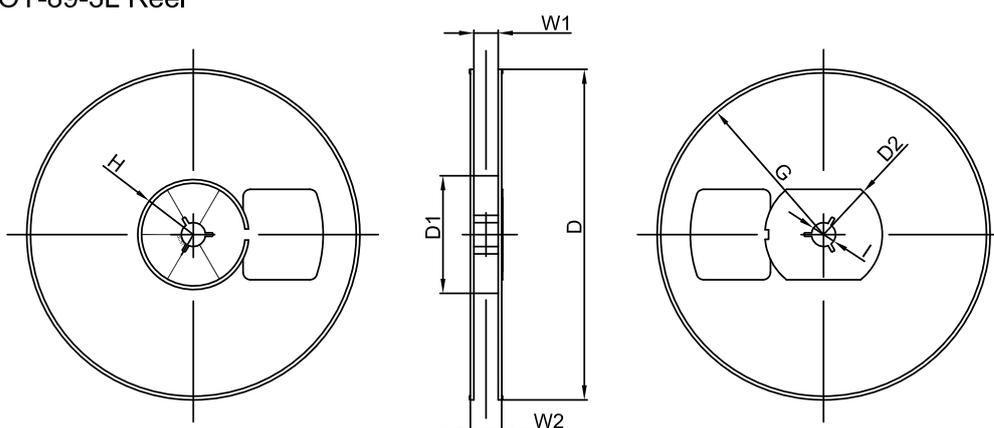


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-89-3L	4.85	4.45	1.85	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

#### SOT-89-3L Tape Leader and Trailer

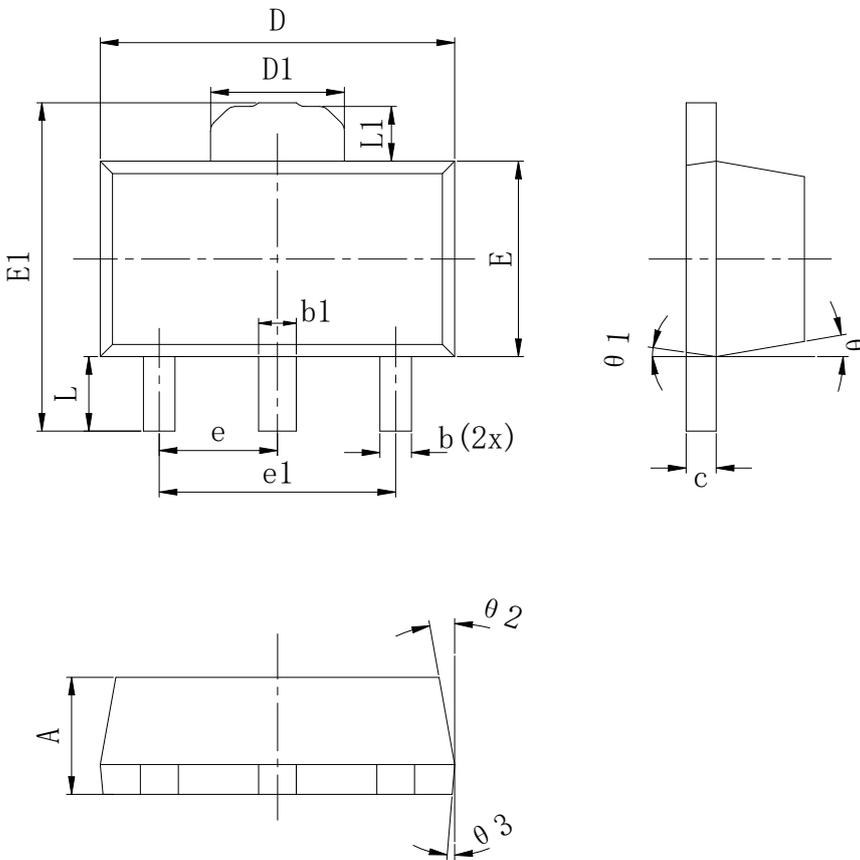


#### SOT-89-3L Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø180.00	60.00	R32.00	R86.50	R30.00	Ø13.00	13.20	16.50

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
1000 pcs	7 inch	10,000 pcs	203×203×195	40,000 pcs	438×438×220	



SYMBOL	MILLIMETER		
	MIN	TYP.	MAX
A	1.400	1.500	1.600
b	0.320	0.400	0.520
b1	0.400	0.480	0.580
c	0.350	0.381	0.440
D	4.400	4.500	4.600
D1	1.700REF		
E	2.400	2.500	2.600
E1	4.050	4.200	4.350
e	1.500TYP.		
e1	3.000TYP.		
L	0.800	0.950	1.200
L1	0.700REF		
$\theta$	10° REF		
$\theta 1$	8° REF		
$\theta 2$	10° REF		
$\theta 3$	5° REF		

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