

TO-92L Plastic-Encapsulate Transistors

2SB892 TRANSISTOR (PNP)

FEATURE

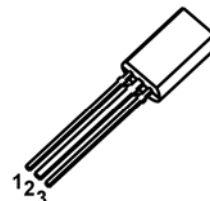
- Power Supplies, Relay Drivers, Lamp Drivers, and Automotive Wiring
- Low Saturation Voltage.
- Large Current Capacity and Wide ASO.

TO-92L

1. EMITTER

2. COLLECTOR

3. BASE



MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CB0}	Collector-Base Voltage	-60	V
V_{CE0}	Collector-Emitter Voltage	-50	V
V_{EB0}	Emitter-Base Voltage	-6	V
I_C	Collector Current -Continuous	-2	A
P_C	Collector Dissipation	0.75	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55-150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

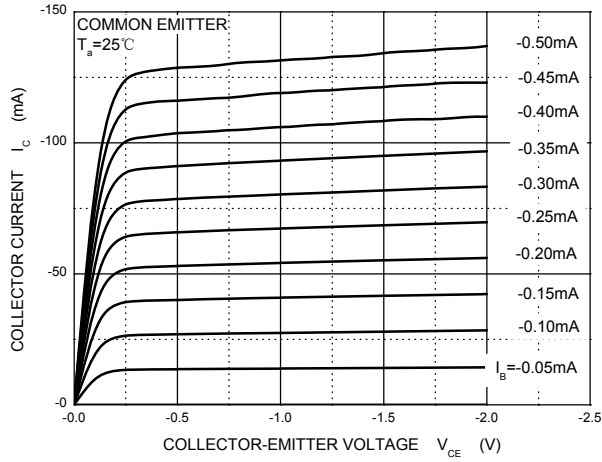
Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V(BR)_{CB0}$	$I_C = -100\mu\text{A}$, $I_E = 0$	-60		V
Collector-emitter breakdown voltage	$V(BR)_{CE0}$	$I_C = -1\text{mA}$, $I_B = 0$	-50		V
Emitter-base breakdown voltage	$V(BR)_{EB0}$	$I_E = -100\mu\text{A}$, $I_C = 0$	-6		V
Collector cut-off current	I_{CB0}	$V_{CB} = -50\text{V}$, $I_E = 0$		-0.1	μA
Emitter cut-off current	I_{EB0}	$V_{EB} = -4\text{V}$, $I_C = 0$		-0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = -2\text{V}$, $I_C = -100\text{mA}$	100	560	
	$h_{FE(2)}$	$V_{CE} = -2\text{V}$, $I_C = -1.5\text{A}$	40		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1\text{A}$, $I_B = -50\text{mA}$		-0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -1\text{A}$, $I_B = -50\text{mA}$		-1.2	V
Transition frequency	f_T	$V_{CE} = -10\text{V}$, $I_C = -50\text{mA}$	150		MHz

CLASSIFICATION OF $h_{FE(1)}$

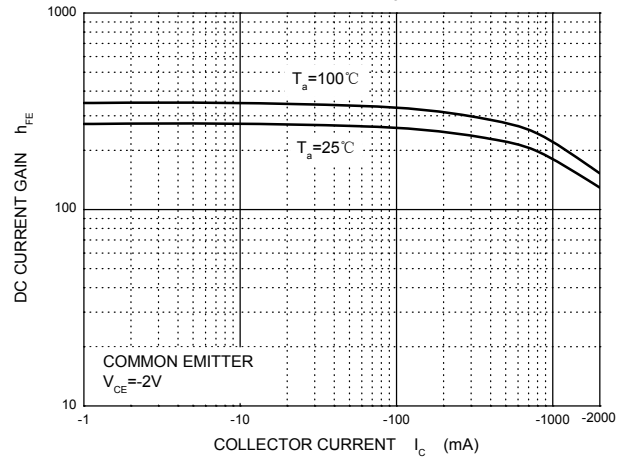
Rank	R	S	T	U
Range	100-200	140-280	200-400	280-560

Typical Characteristics

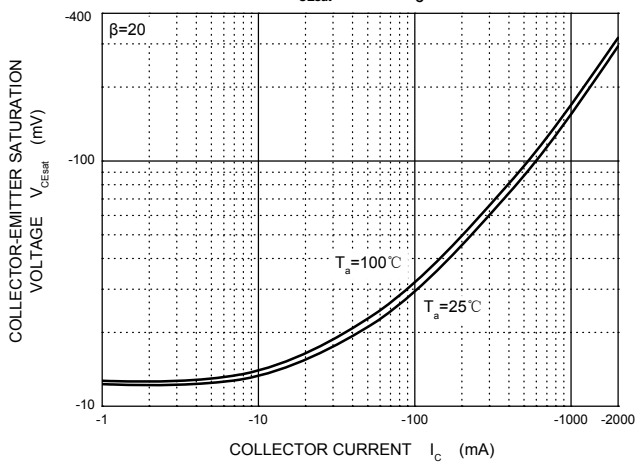
Static Characteristic



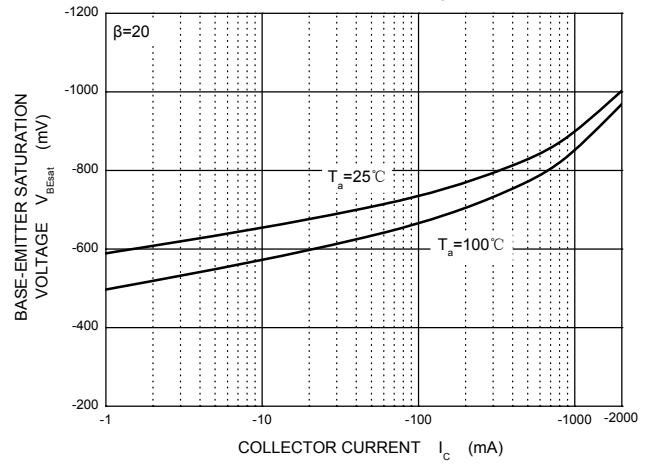
h_{FE} — I_c



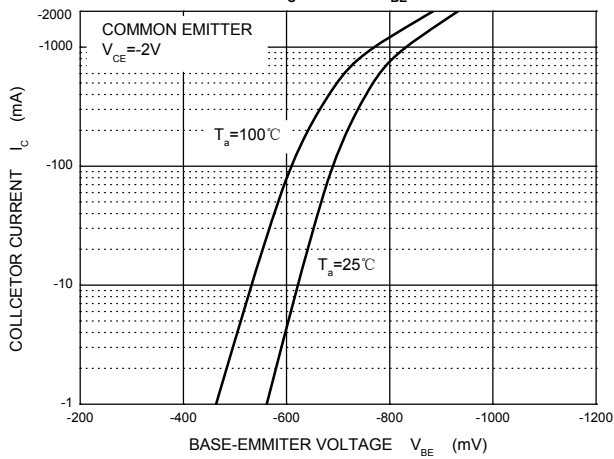
V_{CEsat} — I_c



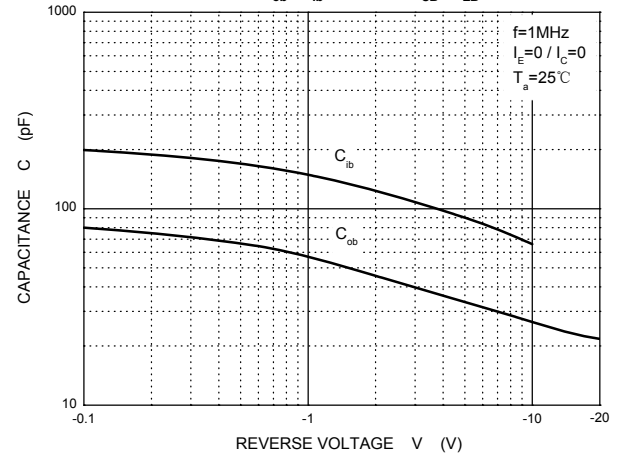
V_{BEsat} — I_c



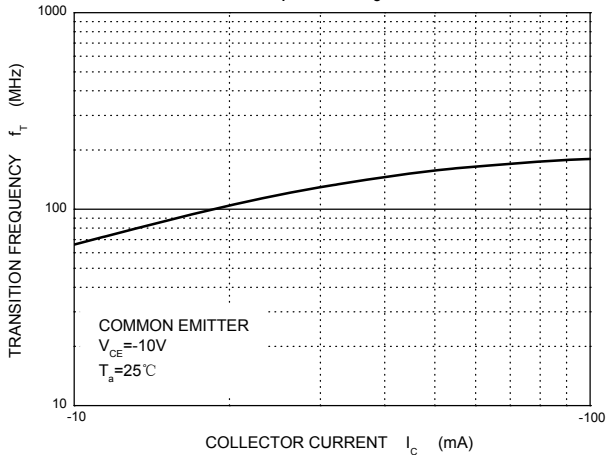
I_c — V_{BE}



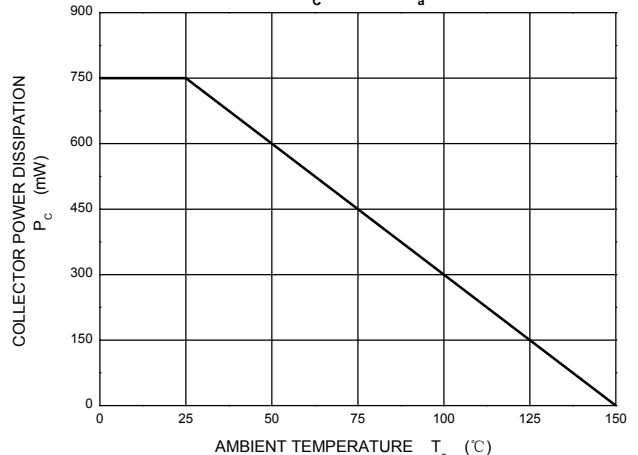
C_{ob}/C_{ib} — V_{CB}/V_{EB}



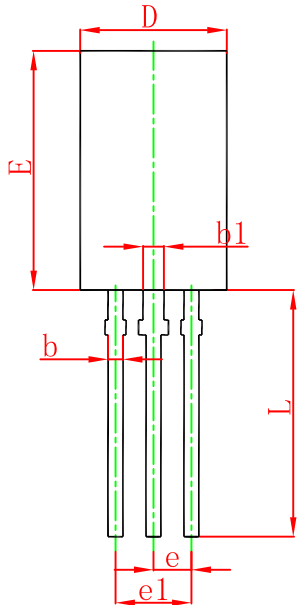
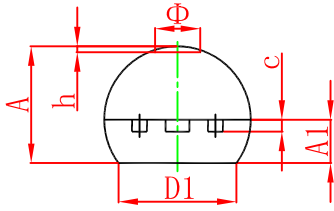
f_T — I_c



P_c — T_a

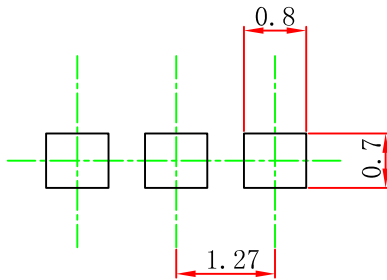


TO-92L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	3.750	4.050	0.148	0.159
A1	1.280	1.580	0.050	0.062
b	0.380	0.550	0.015	0.022
b1	0.620	0.780	0.024	0.031
c	0.350	0.450	0.014	0.018
D	4.750	5.050	0.187	0.199
D1	4.000		0.157	
E	7.850	8.150	0.309	0.321
e	1.270 TYP.		0.050 TYP.	
e1	2.440	2.640	0.096	0.104
L	13.800	14.200	0.543	0.559
Φ		1.600		0.063
h	0.000	0.300	0.000	0.012

TO-92L Suggested Pad Layout



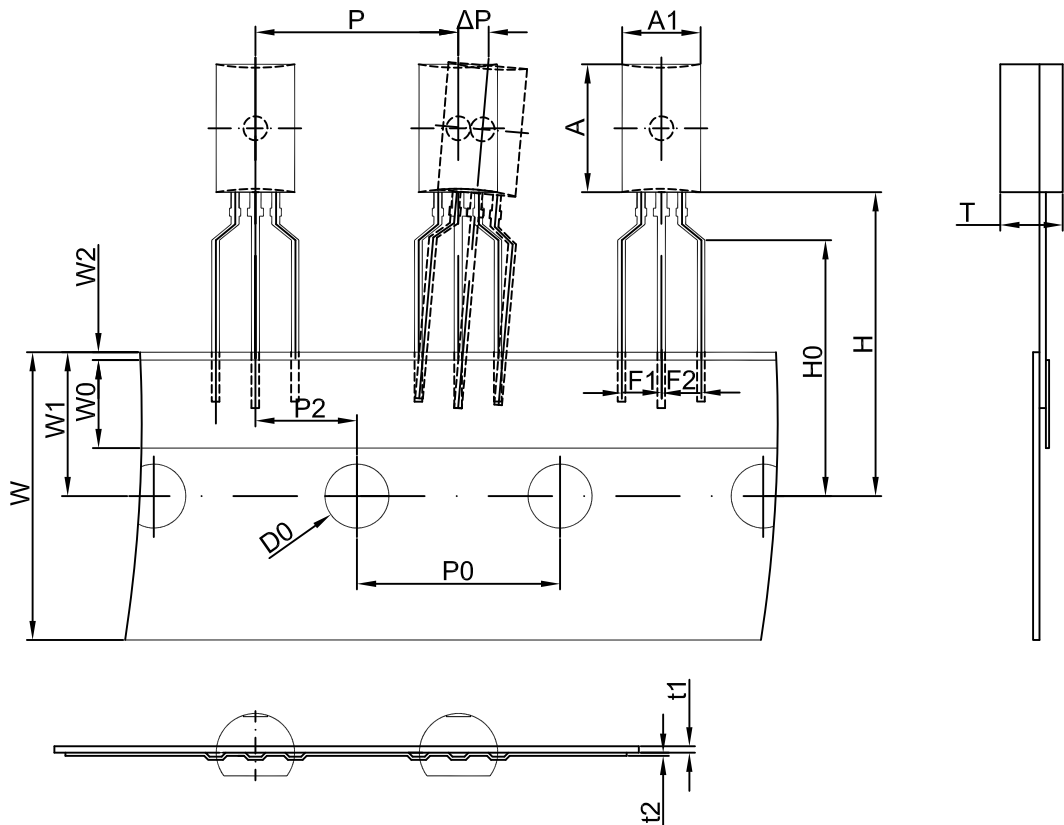
Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

NOTICE

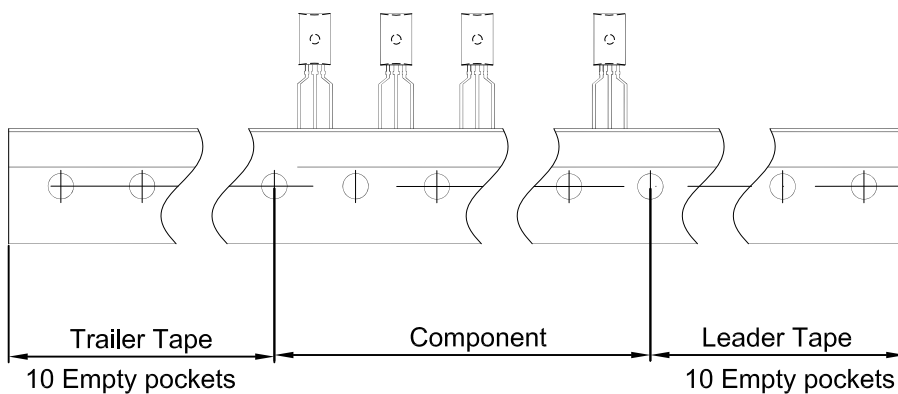
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TO-92L PACKAGE TAPING DIMENSION



Dimensions are in millimeter

A1	A	T	P	P0	P2	F1	F2	W
4.9	8.0	3.9	12.7	12.7	6.35	2.5	2.5	18.0
W0	W1	W2	H	H0	D0	t1	t2	ΔP
6.0	9.0	1.0	19.0	16.0	4.0	0.4	0.2	0



Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92L	2000 pcs	333×203×42	20,000 pcs	493×400×264