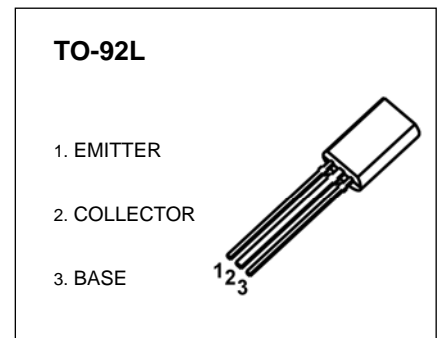


TO-92L Plastic-Encapsulate Transistors

KTA1281 TRANSISTOR (PNP)

FEATURES

- Low Collector Saturation Voltage: $V_{CE(sat)} = -0.5V(\text{Max.})(I_C = -1A)$
- High Speed Switching Time: $t_{stg} = 1.0 \mu S(\text{Typ.})$.
- Complementary to KTC3209.



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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-2	A
P_C	Collector Power Dissipation	1	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	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100 \mu\text{A}, I_E = 0$	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10\text{mA}, I_B = 0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100 \mu\text{A}, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -50\text{V}, I_E = 0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$			-0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = -2\text{V}, I_C = -0.5\text{A}$	70		240	
	$h_{FE(2)}$	$V_{CE} = -2\text{V}, I_C = -1.5\text{A}$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1\text{A}, I_B = -0.05\text{A}$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -1\text{A}, I_B = -0.05\text{A}$			-1.2	V
Transition frequency	f_T	$V_{CE} = -2\text{V}, I_C = -0.5\text{A}$		100		MHz
Out capacitance	C_{ob}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$		40		pF
Turn-on time	t_{on}	$V_{CC} = -30\text{V}, I_{B1} = -I_{B2} = -0.05\text{A}, I_C = -1\text{A}$		0.1		μs
Storage time	t_s			1		μs
Fall time	t_f			0.1		μs

CLASSIFICATION OF $h_{FE(1)}$

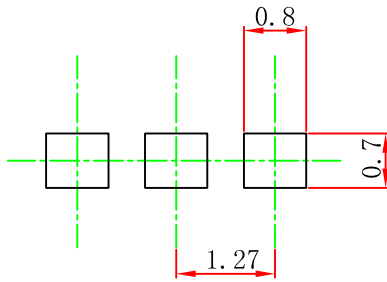
Rank	O	Y
Range	70-140	120 - 240

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

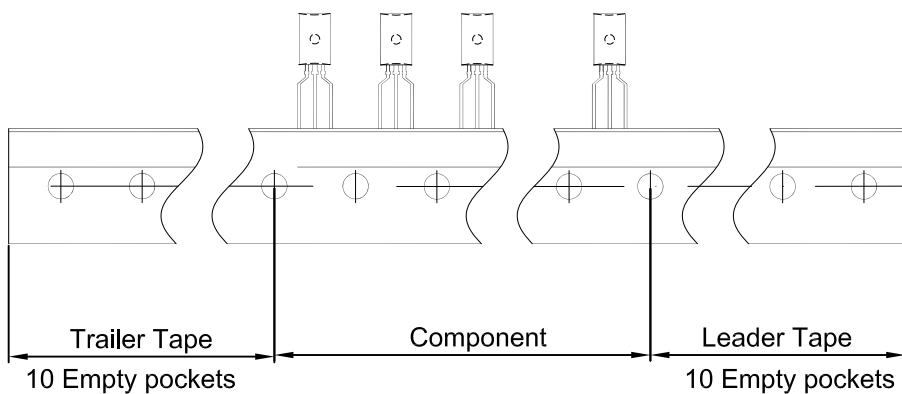
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TO-92L PACKAGE TAPEING DIMENSION



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