

TO-92L Plastic-Encapsulate Transistors

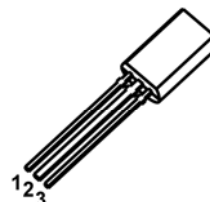
KTC3206 TRANSISTOR (NPN)

FEATURE

- High Breakdown Voltage : $V_{CE0}=150V(\text{Min.})$
- Low Output Capacitance : $C_{ob}=5.0pF(\text{Max.})$
- High Transition Frequency : $f_T=120MHz(\text{Typ.})$.

TO-92L

1. EMITTER
2. COLLECTOR
3. BASE



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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	200	V
V_{CEO}	Collector-Emitter Voltage	150	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	50	mA
P_C	Collector Power Dissipation	1	W
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-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	$V(BR)_{CBO}$	$I_C=100\mu A, I_E=0$	200			V
Collector-emitter breakdown voltage	$V(BR)_{CEO}$	$I_C=1mA, I_B=0$	150			V
Emitter-base breakdown voltage	$V(BR)_{EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=200V, I_E=0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			0.1	μA
DC current gain	h_{FE}	$V_{CE}=5V, I_C=10mA$	70		240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10mA, I_B=1mA$			0.5	V
Base-emitter voltage	$V_{BE(sat)}$	$I_C=10mA, I_B=1mA$			1	V
Transition frequency	f_T	$V_{CE}=30V, I_C=10mA$		120		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$			5.0	pF

CLASSIFICATION OF h_{FE}

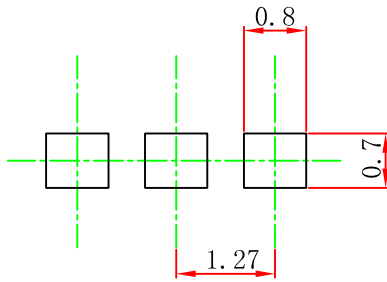
Rank	O	Y
Range	70-140	120-240

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

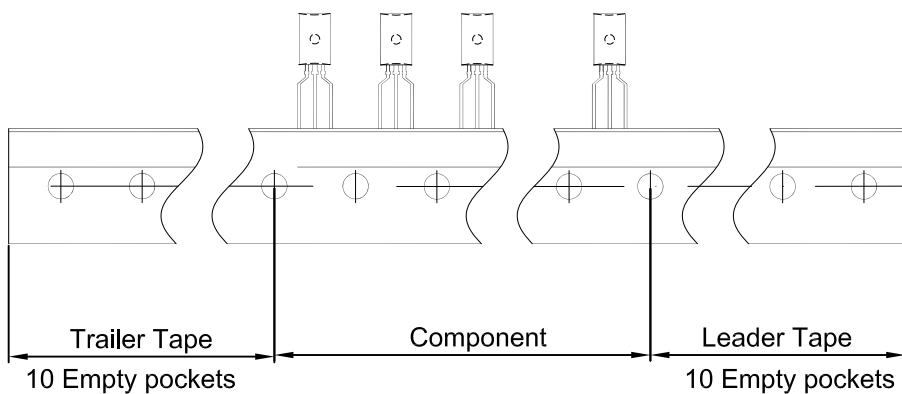
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TO-92L PACKAGE TAPEING DIMENSION



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