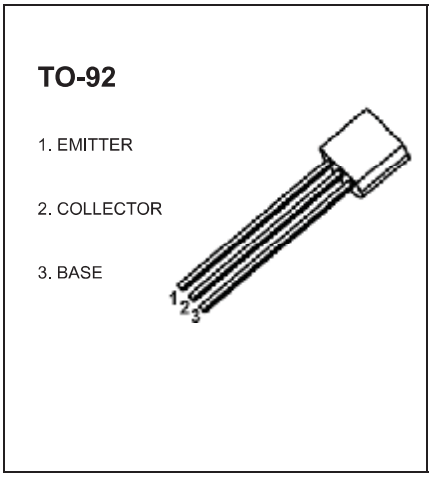
DONGGUAN NANJING ELECTRONICS LTD.,

TO-92 Plastic-Encapsulate Transistors

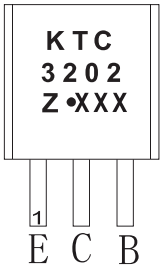
KTC3202 TRANSISTOR (NPN)



FEATURES

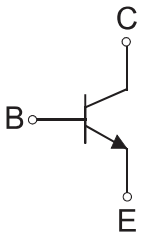
- General Purpose Application Switching Application

MARKING



KTC3202=Device code
Solid dot=Green molding compound device, if none,the normal device
Z=Rank of h_{FE},
XXX=Code

Equivalent Circuit



ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
KTC3202	TO-92	Bulk	1000pcs/Bag
KTC3202-TA	TO-92	Tape	2000pcs/Box

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	35	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	0.5	A
P_D	Collector Power Dissipation	625	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	200	℃ /W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~+150	℃

ELECTRICAL CHARACTERISTICS

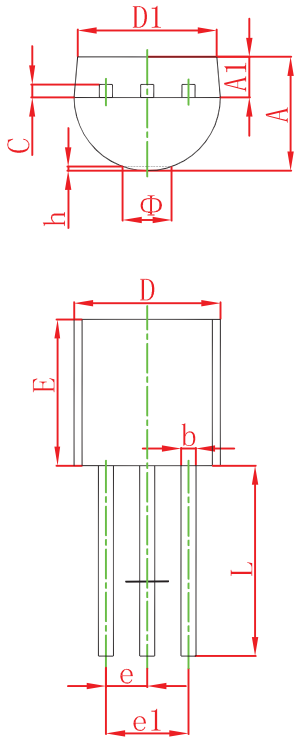
T_a=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-BASE breakdown voltage	$V_{(BR)CBO}$	I_C = 0.1mA, I_B=0	35			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C = 1mA, I_B=0	30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E= 0.1mA, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}= 35V, I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}= 5V, I_C=0			0.1	μA
DC current gain	$h_{FE(1)}$	V_{CE}= 1V, I_C= 100mA	70		400	
	$h_{FE(2)}$	V_{CE}= 6V, I_C= 400mA	25			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=100mA, I_B= 10mA			0.25	V
Base-Emitter Saturation Voltage	V_{BE}	V_{CE}=1V, I_C= 100mA			1.0	V
Transition frequency	f_T	V_{CE}= 6V, I_C= 20mA		300		MHz
Collector Output Capacitance	C_{ob}	V_{CB}= 6V, I_E= 0,f=1 MHz		7.0		pF

CLASSIFICATION OF h_{FE}

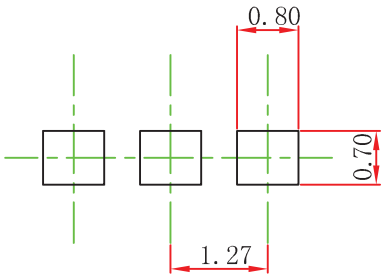
Rank	O	Y	GR
Range $h_{FE(1)}$	70-140	120-240	
Range $h_{FE(2)}$	25	40	

TO-92 Package Outline Dimensions



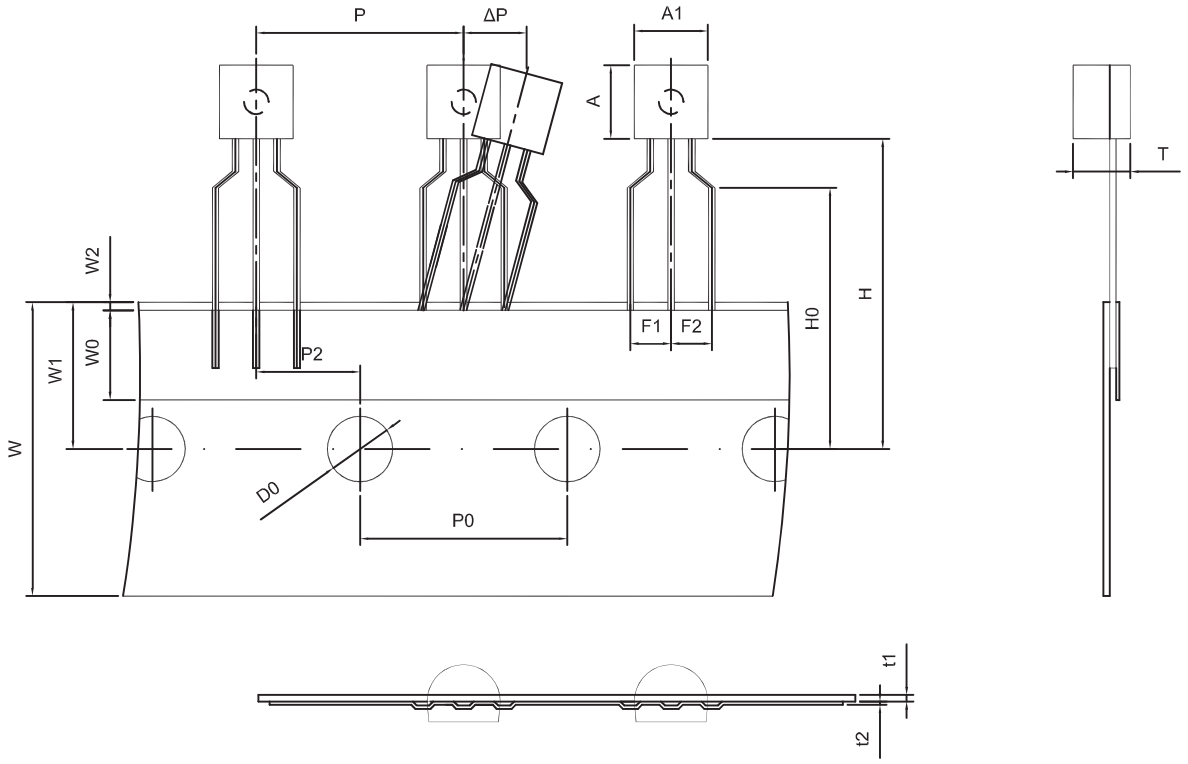
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.300	4.700	0.169	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Φ		1.600		0.063
h	0.000	0.380	0.000	0.015

TO-92 Suggested Pad Layout

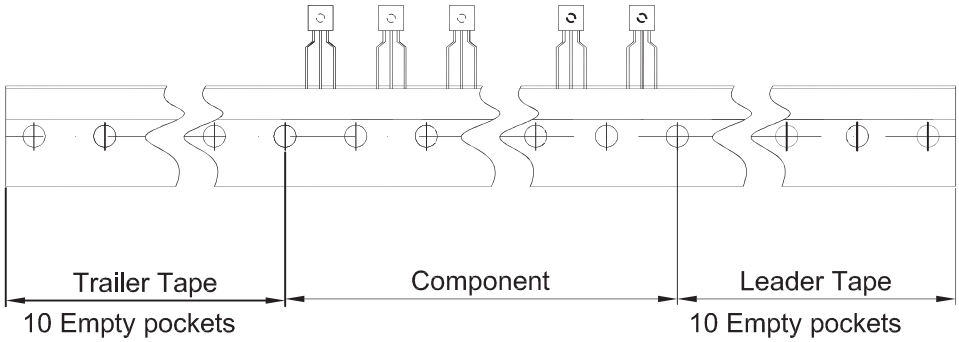


Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

TO-92 PACKAGE TAPEING DIMENSION



Dimiensions are in millimeter								
A1	A	T	P	P0	P2	F1	F2	W
4.5	4.5	3.5	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 MAX.	19.0	16.0	4.0	0.4	0.2	0



Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	2000 pcs	333×162×43	20,000 pcs	350×340×250