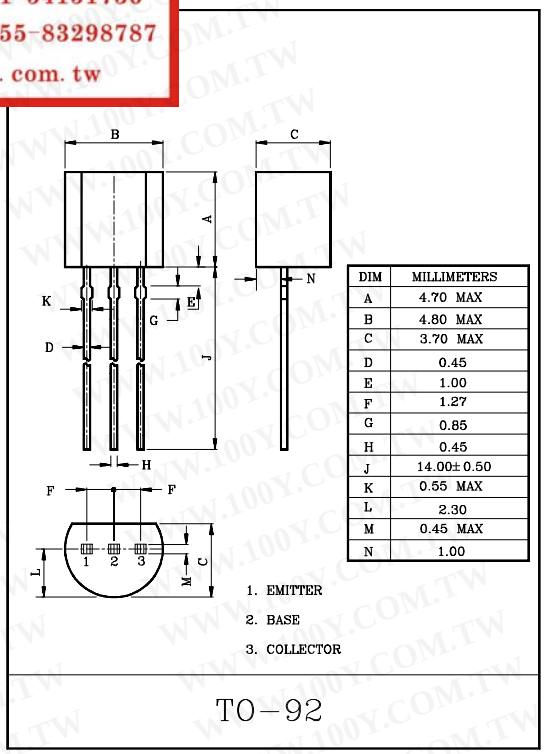
GENERAL PURPOSE APPLICATION.
SWITCHING APPLICATION.

FEATURES

- Excellent h_{FE} Linearity
  : $h_{FE}(I_C=0.1mA)/h_{FE}(I_C=2mA)=0.95$(Typ.).
- Low Noise :NF=1dB(Typ.) at f=1kHz.
- Complementary to KTC9015.



DIM	MILLIMETERS
A	4.70 MAX
B	4.80 MAX
C	3.70 MAX
D	0.45
E	1.00
F	1.27
G	0.85
H	0.45
J	14.00± 0.50
K	0.55 MAX
L	2.30
M	0.45 MAX
N	1.00

TO-92

MAXIMUM RATINGS (Ta=25℃)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	150	mA
Emitter Current	I_E	-150	mA
Collector Power Dissipation	P_C	625	mW
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55~150	℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

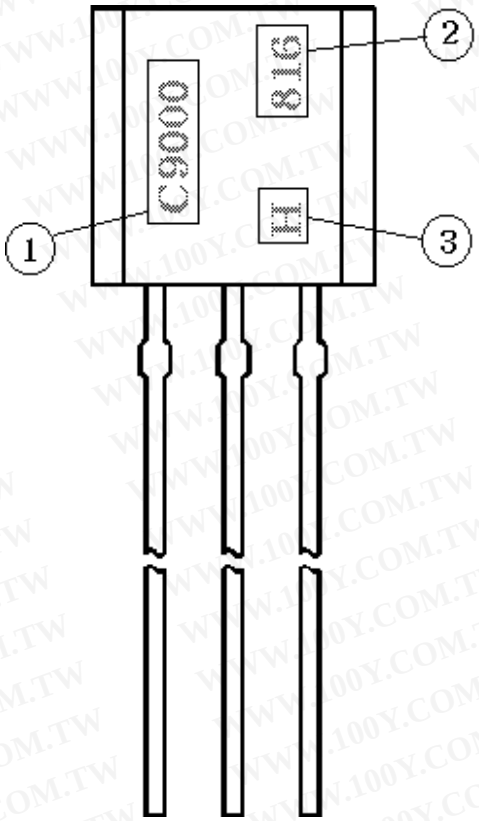
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB}=50V, I_E=0	-	-	50	nA
Emitter Cut-off Current	I_{EBO}	V_{EB}=5V, I_C=0	-	-	100	nA
DC Current Gain	h_{FE}(Note)	V_{CE}=5V, I_C=1mA	60	-	1000	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=100mA, I_B=10mA	-	0.1	0.25	V
Transition Frequency	f_T	V_{CE}=10V, I_C=1mA, f=100MHz	60	-	-	MHz
Collector Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz	-	2.0	3.5	pF
Noise Figure	NF	V_{CE}=6V, I_C=0.1mA, Rg=10kΩ, f=1kHz	-	1.0	10	dB

Note : h_{FE} Classification A:60~150, B:100~300, C:200~600, D:400~1000

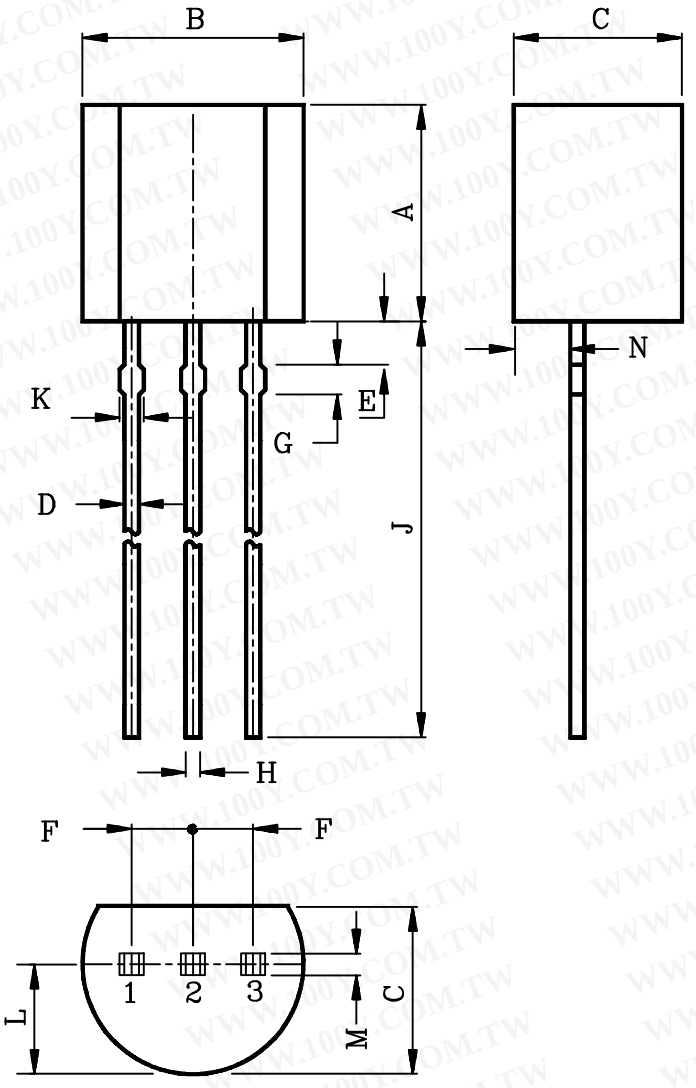
1. Marking method

Laser Marking

2. Marking



No.	Item	Marking	Description		
1	Device Name	**C9014**	KTC9014		
2	Lot No.	**816**	8	Year	0 ~ 9 : 1900~1999
			16	Week	16 : 16th Week
3	hFE Grade	**B**	A,B,C,D		



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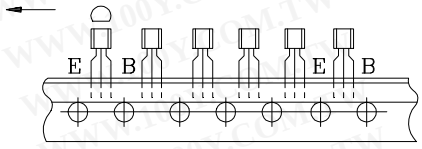
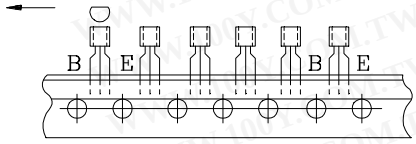
K	0.55 MAX
L	2.30
M	0.45 MAX
N	1.00

1. List of Packing Forms

Item	Taping spec.	Device	Dimension outline	Outline	Quantity
AMMO	AT		TAPE PULL DIRECTION 		2,000pcs
	ATR		TAPE PULL DIRECTION 		

2. Taping specifications

Taping spec.	Package classification	Taping classification		Package quantity (pcs)
	AMMO packing	Taping in forward direction	Taping in reverse direction	
AT	○	○		2,000
ATR	○		○	2,000

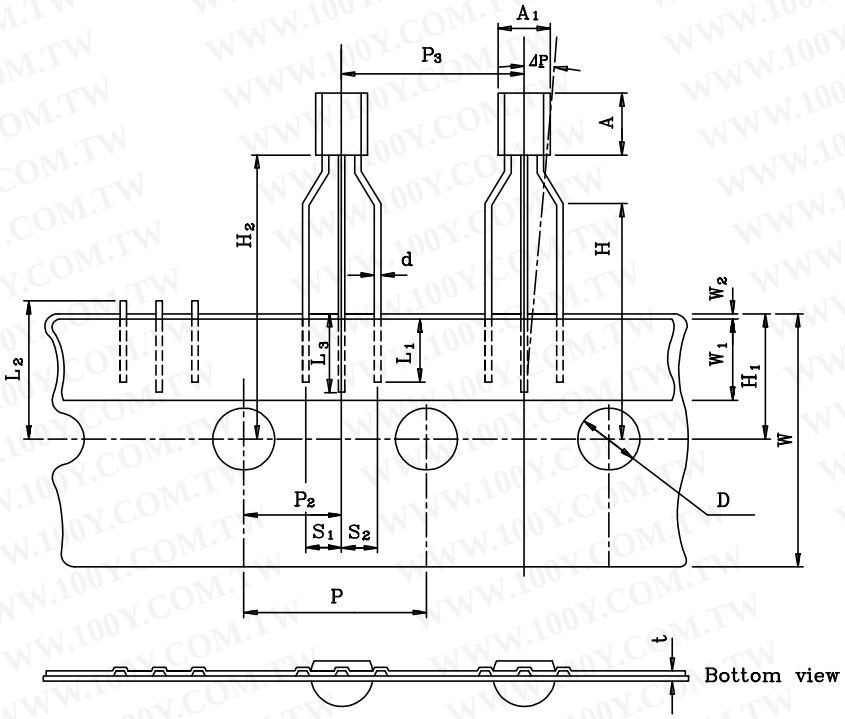
*Spec. example : AT①, R② ① : Taping of AMMO PACK type ② : Reverse direction type

3. Taping dimensions

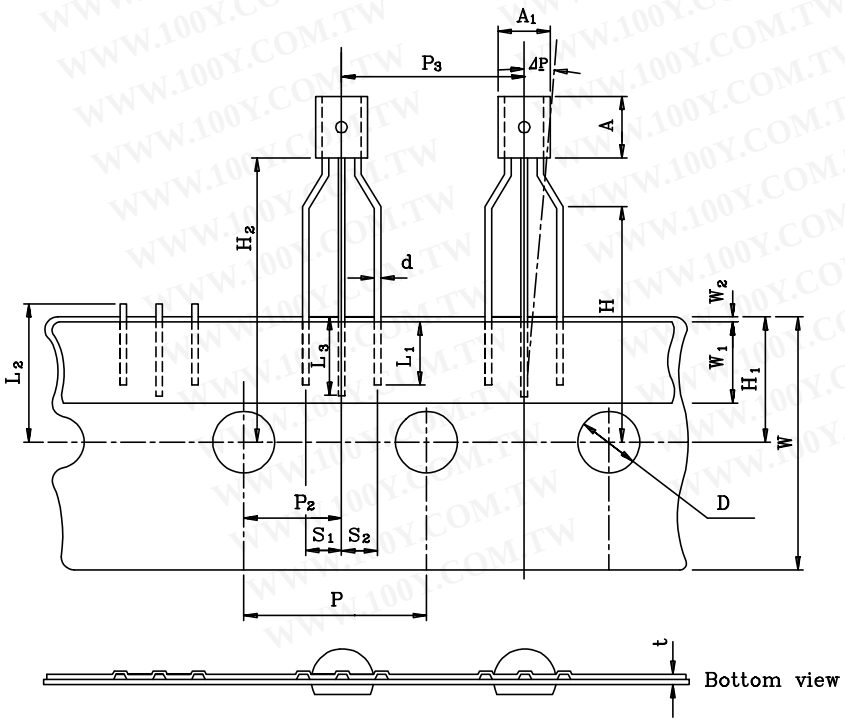
Item	Symbol	Value & tolerance	Remarks
Body width	A_1	5.1 (max.)	
Body height	A	4.7 (max.)	
Body thickness	T	4.1 (max.)	
Lead wire diameter	d	0.45+0.05/-0.04	
Lead retention	L_1	2.5 (min.)	
Component center pitch	P_3	12.7±1.0	
Sprocket hole pitch	P	12.7±0.2	±1mm/20pitch
Center lead location	P_2	6.35±0.4	
Center leg spacing	S_1, S_2	2.5+0.3/-0.1	
Component alignment(1)	⊿h	0±1.0	
Component alignment(2)	⊿P	0±0.5	
Carrier tape width	W	18.0+1.0/-0.5	
Retention tape width	W_1	6.0±0.3	
Sprocket hole location	H_1	9.0±0.3	
Adhesive tape bonder	W_2	0+0/-0.5	
Height of component from tape center	H_2	19.0±0.5	
Length from seating plane	H	16.0±0.5	
Sprocket hole diameter	D	4.0±0.2	
Overall type thickness	t	0.7±0.2	Board(0.4±0.1mm)
Length of snipped lead	L_2	11.0 (max.)	
Center lead retention	L_3	2.7(typ)	

4. Taping direction

(1) Taping in forward direction (AT Taping)



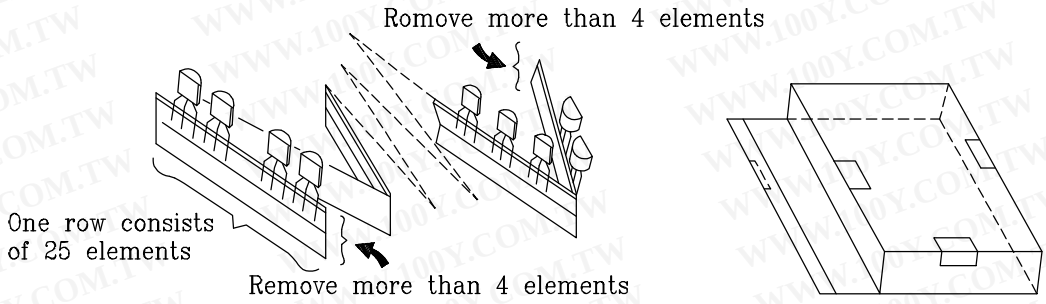
(2) Taping in reverse direction (ATR Taping)



5. Package method

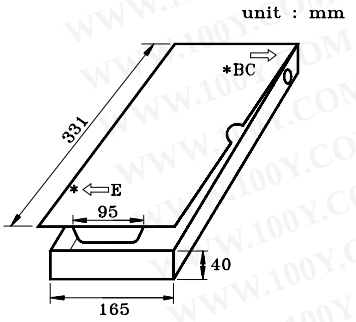
(1) AMMO pack (AT, ATR)

• AMMO pack method



- Fold the taping in zigzag for every 25 elements in the tape dimensions.
- Remove more than 4 elements at the beginning and ending of the taping

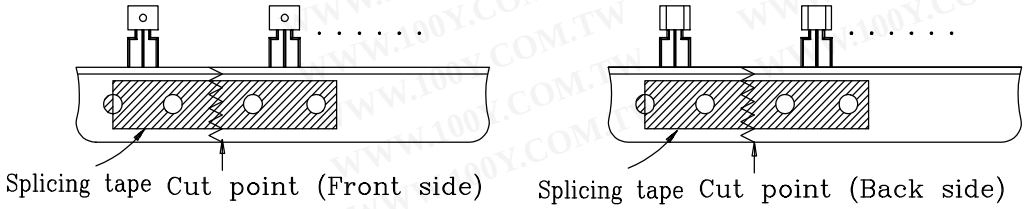
• Dimensions of package



＊ : Indicates the first-out electrode of lead.		
Example	E	Emitter first-out
	BC	Base,Collector first-out

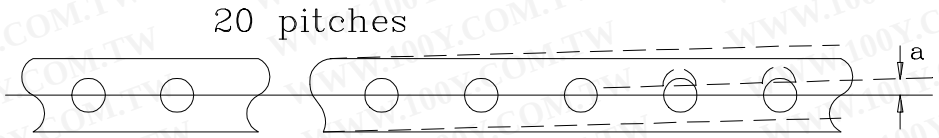
6. Other standard

(1) How to splice tape ; a tape is cut and splicing tape as illustrated below.
(when a tape is completed or cut)



(2) Accuracy of spliced

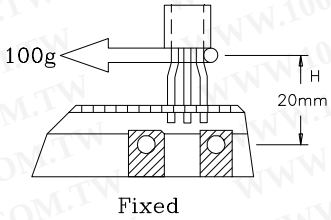
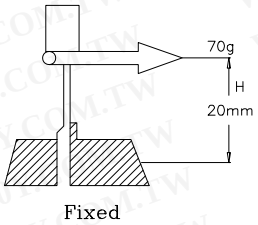
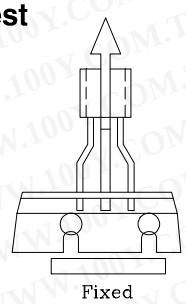
Dimension of "a" must be less than 1mm/20 pitches.



(3) Missing element

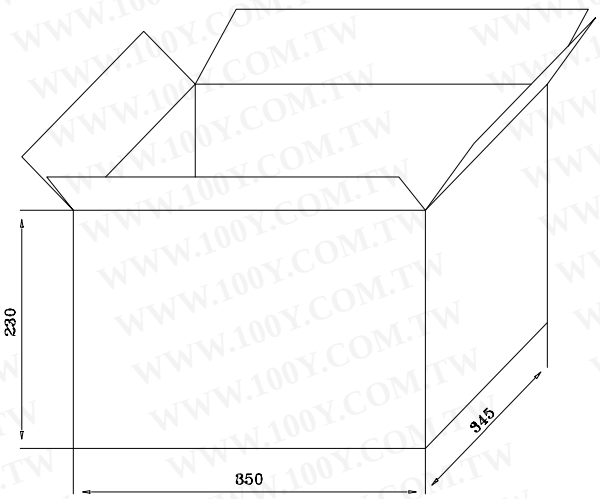
Missing element must be less than 3 continuous elements.

(4) Taping element adherent strength test.

Item	Test method	Performance
Lead wire strength	**Lateral direction**  Apply a load of 100g in the direction of arrow for 3±1 sec.	Specifications for inserting parts must satisfied.
	Longitudinal direction  Apply a load of 70g in the direction of arrow for 3±1 sec.	Specifications for inserting parts must be satisfied.
Adhesiveness	**Strength test**  Apply a load of 500g in the direction of arrow.	Lead wires should not shift or come off.
	Life test Leave the taping in normal temp. and humidity for 6 months.	Performance in lead wire strength test (lateral direction) must be satisfied.

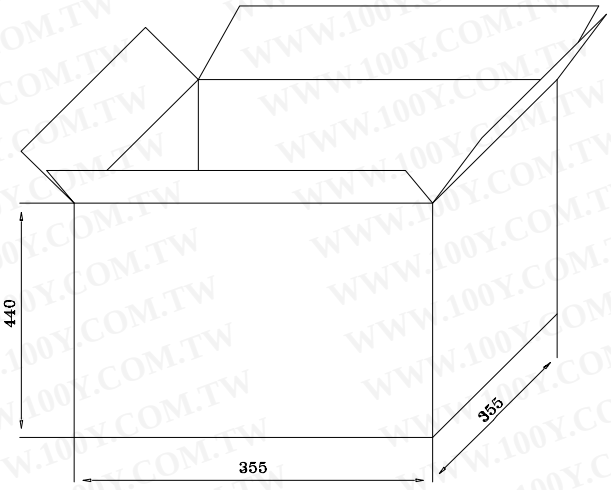
7. Demensions of carton box

[unit : mm]



Inner Case×10 = 2,000pcs×10 = 20,000pcs

[unit : mm]



Inner Case×20 = 2,000pcs×20 = 40,000pcs