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CUSTOMER NAME	聯發科技
CUSTOMER PART NO.	
TAITIEN P/N (Spec NO.)	17072-X-013-3
TAITIEN Product description	XXNBBCNANF-26.000000MHz

**DESCRIPTION:**

- X' TAL     XO     VCXO     TCXO/VCTCXO
- OCXO     SAW FILTER     SAW RESONATOR     OTHERS

DATE OF APPROVAL	(MM/DD/YY)
APPROVED BY	

◎Please return one copy with approval.

TAITIEN ELECTRONICS CO., LTD.

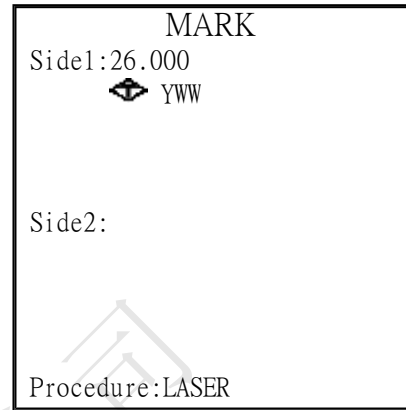
Meet RoHS

PE 楊俊華副理 04/07/2010

AUTHORIZED SIGNATURE

# SPECIFICATIONS

Taitien SPEC\_NO : 17072-X-013-3  
Ver. : 01  
Taitien Model : XXNBBCNANF



## 1. GENERAL

1-1 Oscillation Mode : A1,Fundamental  
1-2 Nominal Frequency : 26.000000 MHz  
1-3 Load Capacitance(CL) : 7.7 pF  
1-4 Storage Temperature : from -40 to +85 °C  
1-5 Operable Temperature : from -20 to +75 °C

## 2. ELECTRICAL PERFORMANCE

2-1 Frequency Tolerance : -10 / +10 ppm at 25°C +/-2°C  
2-2 Temperature Characteristics : a) -10 / +10 ppm from -20 to +75 °C  
2-3 Series Resistance(RS) : 30 Ohm max.  
2-4 Load Resistance(RL) : Not specified  
2-5 Shunt Capacitance(C0) : 5.0 pF max.  
2-6 Motion Capacitance(C1) : Not specified  
2-7 C0/C1 Ratio : Not specified  
2-8 Motion Inductance(L1) : Not specified  
2-9 Q Factor : Not specified  
2-10 Spurious Response : Not specified  
2-11 Frequency Pullability : >32  
2-12 Aging : +/-1ppm/YEAR  
2-13 Insulation Resistance : 500MΩ at DC 100V  
2-14 Drive Level Nominal : 100 uw INTO 25 Ω  
2-14.1 Dependency Condition : Not specified  
2-14.2 Resistance Drift(DR) : Not specified  
2-14.3 Frequency Drift(DF) : Not specified  
2-14.4 DLD : Not specified

## 3. MECHANICAL

3-1 SMD Lead DRW : Not specified  
3-2 Lead Length : Not specified  
3-3 Lead Forming DRW# : Not specified  
3-4 Insulation DRW# : Not specified  
3-5 Top Pin : Not specified  
3-6 Package Spec : T&R

## 4. CUSTOMER SPECIAL REQUIREMENT

CL:7.7pF ; TS : >32ppm/pF

## 5. REMARK

EXCEL EXPORT PRINTOUT FORMAT

Run Name: NORMAL

Run Date : 24-03-2010 11:26 am

S&A 250B: 10.11 Report: 4.62

Description:

Reference Fr: 26,000,000.00 (Using Measured FL)

Power: 10.00 uW Into 25.0 ohms

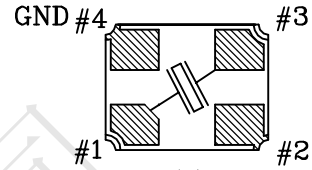
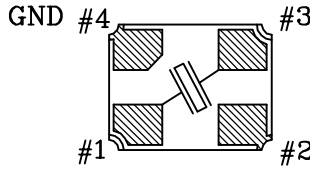
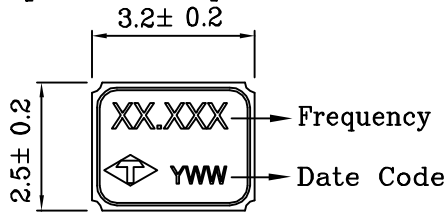
PL: No Load CL: 7.70 pF

Crystal	First Failure	FL ppm	RR Ohms	C0 pF	C1 fF	L mH	C0/C1	TS ppm/pF	Q k
High Limit		10.0		60					
Low Limit		-10.0							
1	PASS	10.06	9.24	1.19	4.82	7.77	246.25	30.53	137.36
2	PASS	9.63	9.82	1.17	5.04	7.44	232.52	32.00	123.80
3	PASS	9.34	8.72	1.18	4.81	7.80	245.39	30.49	146.03
4	PASS	10.44	6.73	1.18	4.88	7.68	241.17	30.97	186.50
5	PASS	8.53	8.36	1.17	5.09	7.36	230.08	32.34	143.93
6	PASS	10.09	6.79	1.17	4.84	7.74	242.14	30.76	186.17
7	PASS	10.98	8.05	1.17	5.00	7.49	232.96	31.83	152.04
8	PASS	9.93	9.03	1.17	5.09	7.37	229.57	32.34	133.32
9	PASS	9.02	9.07	1.17	5.03	7.45	231.81	32.02	134.06
10	PASS	8.80	9.71	1.16	4.94	7.59	235.67	31.43	127.74

深圳市飞科电子有限公司  
 代理 提供  
<http://www.szfk.cn>

REV.	DATE	DESCRIPTION	ECO NO.	DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY
4	07/16/08'	增加 Rangr	112871	徐秋媚	魏玉春	簡嘉皇	賴俊銘
5	10/02/08'	修改圖名	00000763	徐秋媚	簡嘉皇	吳美玉	賴俊銘
6	03/09/09'	修改尺寸	00001558	徐秋媚	簡嘉皇	陳恩仕	楊俊華

[ TOP VIEW ]

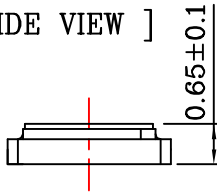


(A)

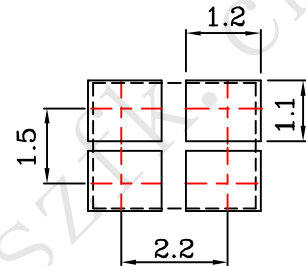
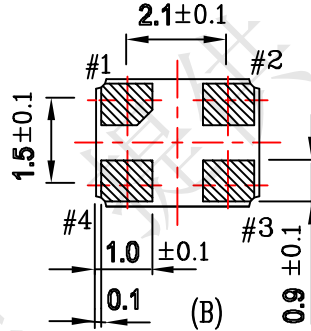
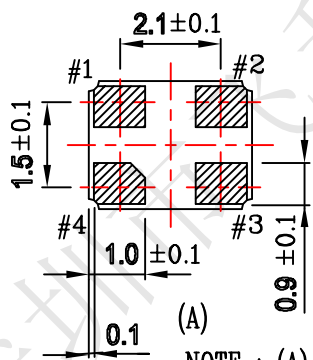
(B)

Marking #2 and #4 is connected with metal cap of top

[ SIDE VIEW ]



[ BOTTOM VIEW ]



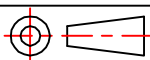
NOTE : (A),(B) differ package supplier

Recommend Soldering Pattern

MARK	
1.	MARK BY TAITIEN NOTE : 1.XX.XXX =FREQUENCY(MHz) 2.DATE CODE Y=LAST DIGIT OF YEAR WW=WEEK NO.
2.	MARK BY CUSTOMER NOTE: 1.MAX LINE : 2 LINES. 2.MAX CODE OF LINE : 6 CODES.

2.PART NUMBER INFORMATION

<b>Load Capacitance</b> A : 8PF B : 9PF C : 10PF D : 12PF E : 15PF F : 16PF G : 18PF H : 20PF I : 30PF J : 32PF K : 50PF S : Series L : 8PF M : 12.5PF	<b>Frequency Tolerance</b> A : ±5PPM B : ±10PPM C : ±20PPM D : ±25PPM E : ±30PPM F : ±40PPM G : ±50PPM H : ±100PPM I : ±150PPM P : ±15PPM Z : OVER ±150PPM	<b>Frequency Stability</b> A : ±5PPM B : ±10PPM C : ±20PPM D : ±25PPM E : ±30PPM F : ±40PPM G : ±50PPM H : ±100PPM I : ±150PPM P : ±15PPM Z : OVER ±150PPM	<b>Temperature Range</b> B : +0°C ~ +55°C B : +0°C ~ +50°C C : -20°C ~ +70°C C : +0°C ~ +70°C C : -15°C ~ +75°C D : -30°C ~ +80°C E : +0°C ~ +85°C F : -55°C ~ +125°C G : -40°C ~ +150°C I : -10°C ~ +60°C L : -40°C ~ +85°C	<b>Special Requirement</b> B : Spurious Requested D : DLD Requested H : High C1 Requested L : Low C1 Requested N : No Special Requested P : Pullability Requested Q : Q Value Requested S : Several Requested
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UNIT	SCALE
mm	10:1

TAITIEN ELECTRONICS CO.,LTD.

圖名  
圖號

XX TYPE 成品圖

30008652

**PRODUCT & PACKAGING CODE**

Product	Tape(Carrier)	Reel	Tray	Unit	Remark
XY, PY, OY	C27	R15	-	1000/2000/3000PCS/Reel	Standard Carrier
XX, PX, OX, TX	C25	R15	-	1000/2000/3000PCS/Reel	Standard Carrier
XW	C26	R13	-	1000PCS/Reel	Optional Carrier
	C26	R13	-	2000/3000PCS/Reel	Optional Carrier
	C26	R14	-	5000PCS/Reel	Standard Carrier
XV, OV, OE	C24	R13	-	1000PCS/Reel	Optional Carrier
	C24	R14	-	2000/3000PCS/Reel	Optional Carrier
	C24	R14	-	5000PCS/Reel	Standard Carrier
TV	C14	R2	-	1000PCS/Reel	Optional Carrier
	C14	R9	-	2000/3000PCS/Reel	Optional Carrier
	C14	R9	-	5000PCS/Reel	Standard Carrier
XR	C5	R2	-	1000PCS/Reel	Optional Carrier
	C5	R9	-	2000/3000PCS/Reel	Optional Carrier
	C5	R9	-	5000PCS/Reel	Standard Carrier
OC, TC, OT, VT, VC, TS	C3	R2	-	3000PCS/Reel	Optional Carrier
	C3	R9	-	1000PCS/Reel	Standard Carrier
XS	C24	R13	-	1000PCS/Reel	Standard Carrier
	C10	R9	-	2000/3000/5000PCS/Reel	Optional Carrier
XQ	C4	R2	-	1000PCS/Reel	Standard Carrier
	C4	R9	-	3000PCS/Reel	Optional Carrier
XI	-	-	-	200/500 PCS Plastic Bag	
	A2	-	-	1000(800)PCS/Ammopack	
XJ	C8	R1	-	1000PCS/Reel	Optional Carrier
	C2	R6	-	1000PCS/Reel	Standard Carrier
OH, VH	C19	R12	-	250 PCS/Reel	Gull Wing
	-	-	A1	50 PCS/Tray	Through Hole
OF, VF	C20	R12	-	250 PCS/Reel	Gull Wing
	-	-	A1	50 PCS/Tray	Through Hole
TF	-	-	-	Box	Through Hole
TK, VK	C22	R6	-	500PCS/Reel	
XD 32 × 15 mm	C28	R17	-	3000PCS/Reel	Standard Carrier
XD 42 × 15 mm	C29	R17	-	3000PCS/Reel	Standard Carrier

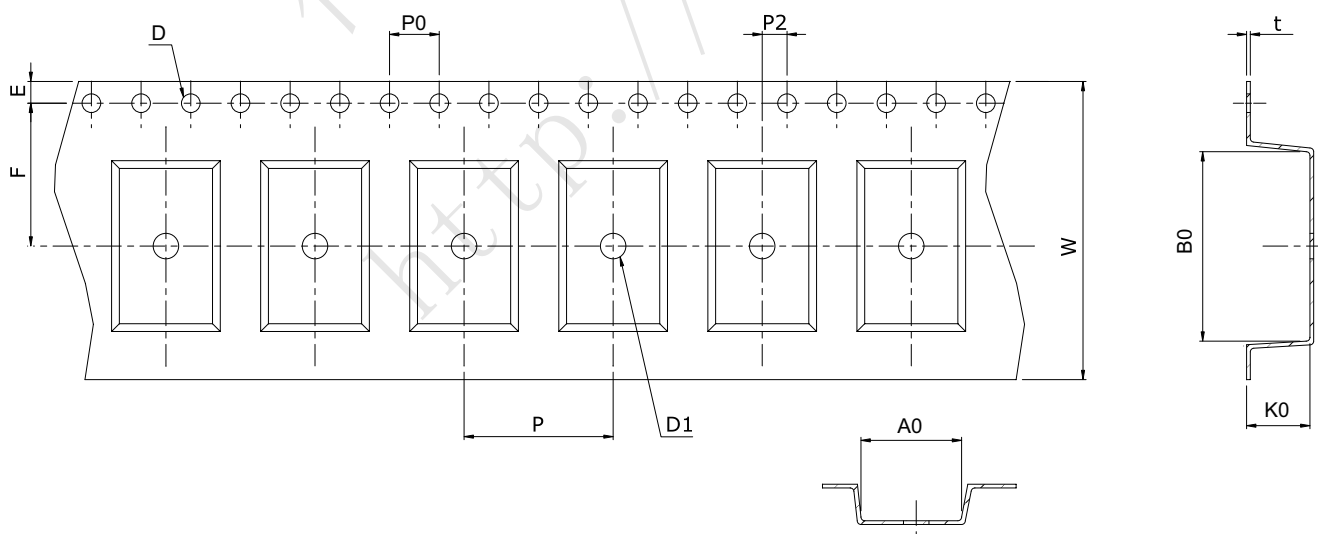


## TAPE(CARRIER) DIMENSIONS Unit:mm

Code	A0	B0	D	D1	E	F
C3	5.56 ±0.1	8.18 ±0.1	Ø1.50 +0.1 -0.0	Ø1.50 +0.25 -0.0	1.75 ±0.1	7.50 ±0.1
C4	5.00 ±0.1	8.40 ±0.1	Ø1.50 ±0.1	Ø1.50 +0.5 -0.0	1.75 ±0.1	7.50 ±0.1
C5	3.95 ±0.1	6.50 ±0.1	Ø1.50 +0.1 -0.0	Ø1.50 +0.25 -0.0	1.75 ±0.1	7.50 ±0.1
C10	3.80 ±0.1	5.70 ±0.1	Ø1.50 +0.1 -0.0	-	1.75 ±0.1	7.50 ±0.1
C14	3.60 ±0.1	5.40 ±0.2	Ø1.50 ±0.1	Ø1.50 +0.25 -0.0	1.75 ±0.1	7.50 ±0.1
C19	15.50 ±0.1	13.70 ±0.1	Ø1.50 +0.1 -0	Ø2.00 MIN	1.75 ±0.1	14.25 ±0.1
C20	18.00 ±0.1	20.50 ±0.1	Ø1.50 +0.1 -0	Ø2.00 MIN	1.75 ±0.1	14.25 ±0.1
C21	10.0 ±0.1	11.9 ±0.1	Ø1.50	Ø1.50	1.75	11.5 ±0.1
C22	10.20 ±0.1	15.0 ±0.1	Ø1.50	Ø1.50	1.75	11.5 ±0.1
C24	3.60 ±0.1	5.40 ±0.1	1.55 ±0.05	Ø1.50 Min	1.75 ±0.1	5.50 ±0.1
C25	2.70 ±0.1	3.40 ±0.1	1.55 ±0.05	Ø1.50	1.75 ±0.1	3.50 ±0.1
C26	2.90 ±0.1	4.40 ±0.1	Ø1.50 +0.1 -0.0	Ø1.50	1.75 ±0.1	5.50 ±0.1
C27	2.25 ±0.05	2.7 ±0.05	Ø1.55 ±0.05	Ø1.1 ±0.1	1.75 ±0.1	3.5 ±0.05
C28	1.9 ±0.1	3.6 ±0.1	Ø1.5 ±0.05	Ø1.0 ±0.1	1.75 ±0.1	5.5 ±0.1
C29	1.9 ±0.1	4.5 ±0.1	Ø1.5 ±0.05	Ø1.0 ±0.1	1.75 ±0.1	5.5 ±0.1

### TAPE CARRIER

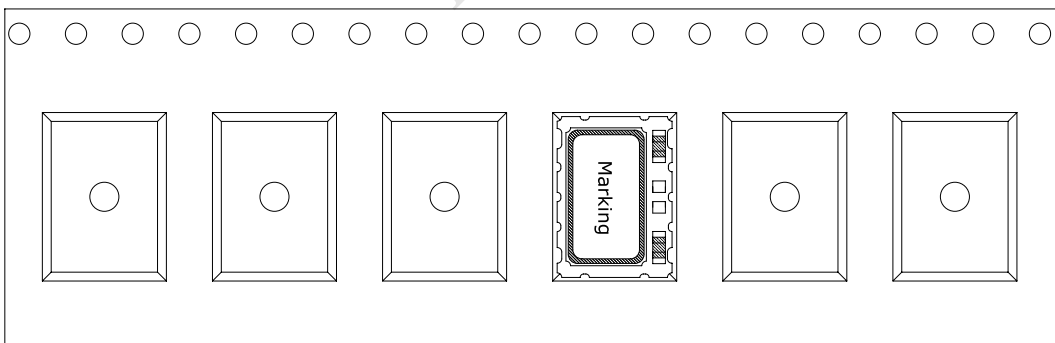
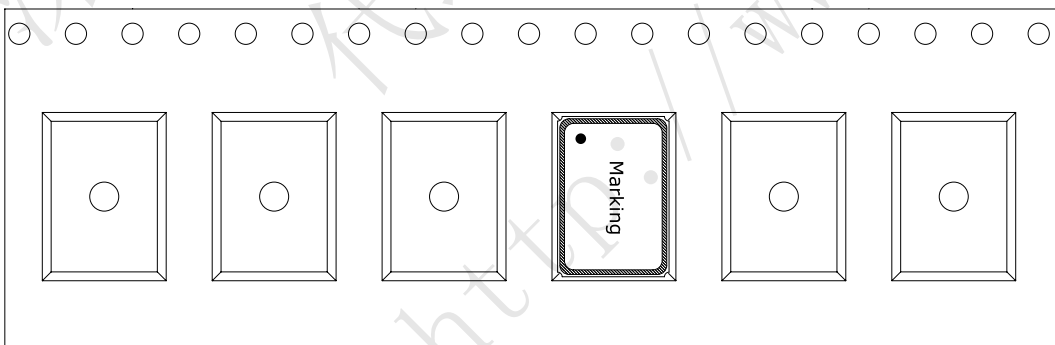
**C3, C4, C5, C10, C14, C19, C20, C21, C22, C24, C25, C26, C27, C28, C29**





K0	P	P0	P2	t	w
2.16	8.00	4.00	2.0	0.315	16.00
±0.1	±0.1	±0.1	±0.1	±0.01	±0.2
2.00	8.00	4.00	2.0	0.315	16.00
±0.1	±0.1	±0.1	±0.1	±0.01	±0.30
1.35	8.00	4.00	2.0	0.31	16.00
±0.1	±0.1	±0.1	±0.1	±0.1	±0.30
1.40	8.00	4.00	2.00	0.35	16.00
±0.1	±0.1	±0.1	±0.1	±0.1	±0.30
1.40	8.00	4.00	2.00	0.35	16.00
±0.1	±0.1	±0.1	±0.1	±0.1	±0.30
5.20	24.00	4.00	2.00	0.35	32.00
±0.1	±0.15	+0.1 -0	-0	±0.05	±0.3
5.20	24.00	4.00	2.00	0.35	32.00
±0.1	±0.15	+0.1 -0	-0	±0.05	±0.3
2.50	16.00	4.00	2.00	0.30	24.0
	±0.1	±0.1	±0.1	±0.05	±0.3
5.50	16.00	4.00	2.00	0.5	24.0
	±0.1			±0.05	±0.2
1.40	8.0	4.0	2.0	0.30	12.0
±0.1	±0.1	±0.1	±0.1	±0.05	±0.2
1.40	4.0	4.00	2.0	0.25	8.0
±0.1	±0.1	±0.1	±0.1	±0.05	±0.2
1.00	8.0	4.0	2.0	0.30	12.0
±0.1	±0.1	±0.1	±0.1	±0.05	±0.2
1.15	4.0	4.0	2.0	0.25	8.0
±0.05	±0.1	±0.1	±0.05	±0.05	±0.2
1.0	4.0	4.0	2.0	0.3	12.0
±0.05	±0.1	±0.1	±0.1	±0.05	±0.1
0.85	4.0	4.0	2.0	0.25	12.0
±0.05	±0.1	±0.1	±0.1	±0.05	±0.1

### THE DIRECTION OF PACKING

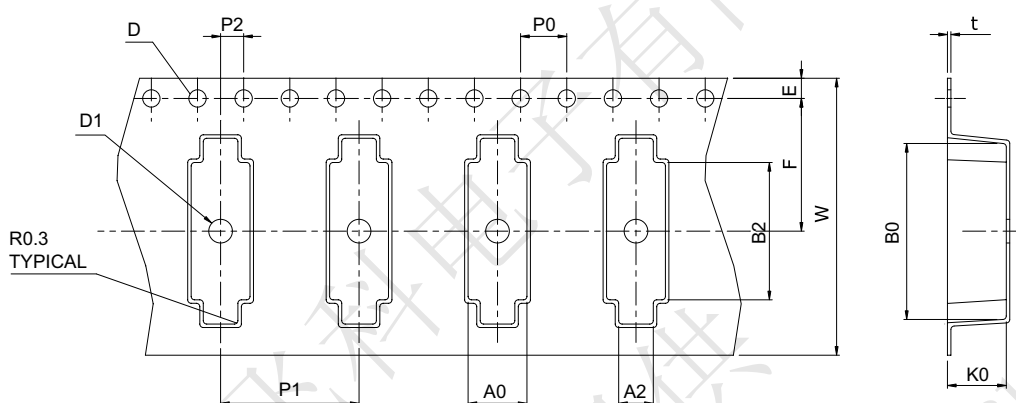




## TAPE(CARRIER) DIMENSIONS Unit:mm

Code	A0	A2	B0	B2	D	D1	E
C2	5.10	3.00	16.10	11.90	Ø1.5	Ø2.0	1.75
	±0.1	±0.1	±0.1	-0.0	±0.1	±0.1	±0.1
C8	5.10	3.00	16.10	11.90	Ø1.55	Ø1.60	1.75
	±0.1	±0.1	±0.1	-0.0	±0.05	±0.1	±0.1

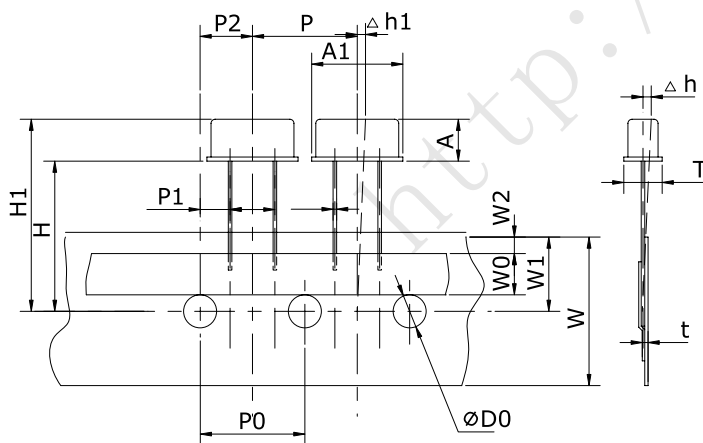
## TAPE CARRIER



## AMMOPACK DIMENSIONS (mm)

Code	h1	t	D0	H1	H	W2	W1	W0	W
A2	0 ± 2.0	0.9max.	Ø4.00 ±0.20	22.5max.	18.0 ±0.75	2.0max	9.0 +0.75 -0.5	5.0 ±0.5	18.0 +1.0 -0.5

## AMMOPACK



## A2





F	K0	P0	P1	P2	t	W
11.50	4.30	4.0	12.00	2.0	0.40	24.00
±0.1	±0.1	±0.1	±0.1	±0.1	±0.05	±0.3
11.50	4.30	4.0	8.00	2.0	0.40	24.00
±0.1	±0.1	±0.1	-0.0	±0.1	±0.05	±0.3

h	P2	P1	P0	P	T	A1 x A
0 ± 2.0	6.35	3.85	12.70	12.70	4.68max	11.05max. x 3.51max.
	±0.7	±0.70	±0.30	±1.0		

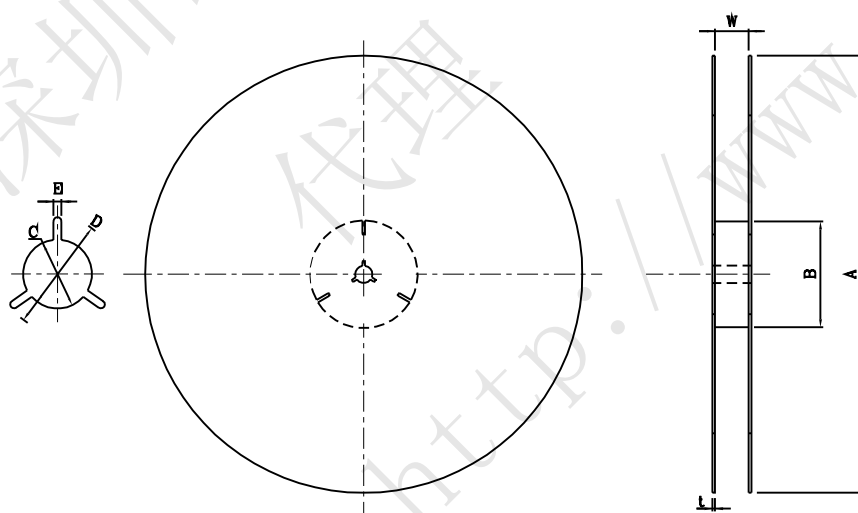


Packaging Information

**REEL DIMENSIONS Unit:mm**

Code	A	B	C	D	E	t	W
R1	330	100	13.00 ±0.5	20.20	1.50	-	24.40 +2.0 -0.0
R2	180	60	13.00 ±0.5	20.20	1.50	-	16.40 +2.0 -0
R6	330	80	13.00 ±0.5	21.00 ±0.5	21.00 ±0.50	2.00	24.40 +2.0 -0.0
R9	330	100	13.50 ±0.5	20.20	1.50	-	16.40 +2.0 -0.0
R12	330	100	-	21.50 ±0.2	2.30 ±0.5	2.00	32.5 +0.1 -0.0
R13	180	60	13.50 ±0.5	-	2.30 ±0.5	1.40	12.50 +3.0 -0.0
R14	330	100	13.50 ±0.5	21.00 ±0.5	2.00 ±0.5	2.30	12.50 +3.0 -0.0
R15	180	60	13.50 ±0.5	-	2.30 ±0.5	-	8.00 +1.0 -0.0
R16	330	100	13.50 ±0.5	21.00 ±0.5	2.30 ±0.5	2.30	8.00 +1.0 -0.0
R17	180	60	13.00 ±0.5	21.00 ±0.5	2.00 ±0.5	2.00	13.00 +2.0 -0.0

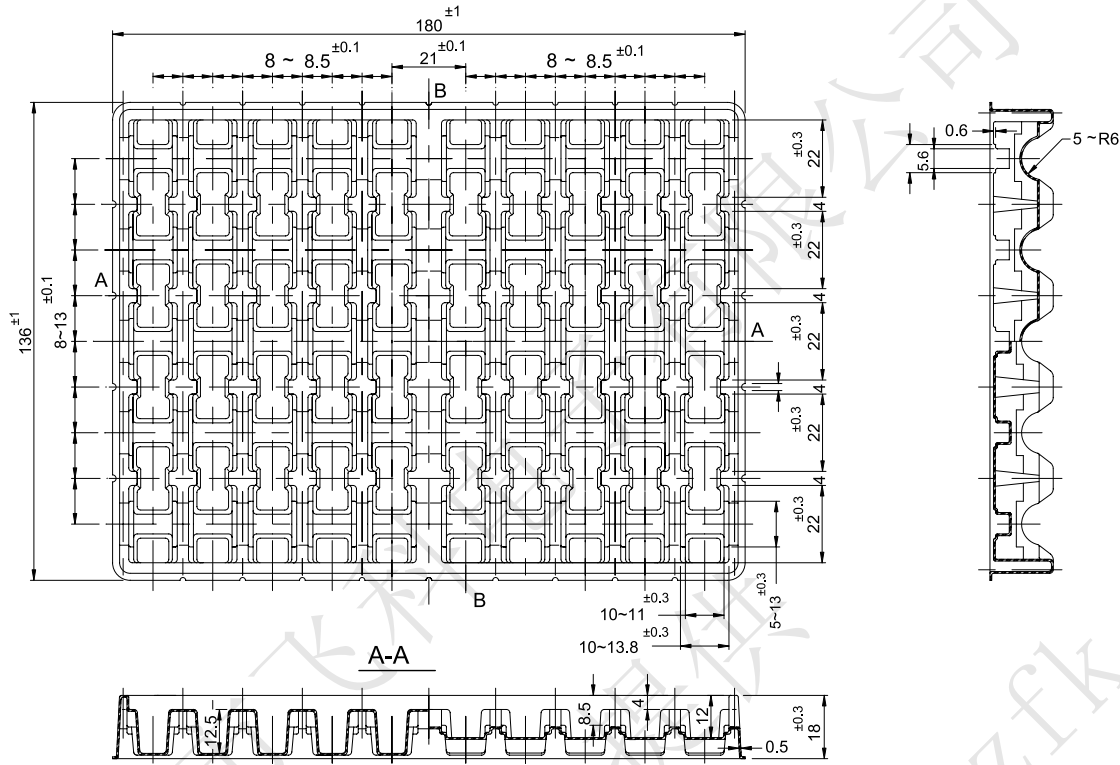
**REEL  
R1, R2, R6, R9, R12, R13, R14, R15, R16, R17**





TRAY DIMENSIONS Unit:mm

(A1)



Packaging Information

# SPECIFICATIONS OF RELIABILITY FOR XR/XX/XV/XW/XY

Environmental	Test Condition	Reference Std.
Fine Leak	Mass spectrometer leak rate less than $2 \times 10^{-8}$ atm.cc/sec of Helium.	MIL-STD-883 1014 Condition A
Gross Leak	1. IPA 4kgf/cm <sup>2</sup> for 4hrs. 2. Two parts air rate to compare.	MIL-STD-883 1014 Condition A
Thermal Shock	-55°C / 125°C, soak time 10 mins, total 200 cycles.	MIL-STD-883 1010 Condition B
IR Reflow	Pre-heating: 150 to 200°C / 60~120sec. Heating: 217°C, 60~150sec. Peak temp. 260±5°C / 25±5sec. Go through twice.	J-STD-020
High Temp. Storage	85°C, 500 hrs	MIL-STD-202 108 Condition C
High Temperature & Humidity Storage	85°C, 85%RH, 500hrs	JESD22-A101
Low Temp. Storage	-40°C, 500hrs	IEC 60068-2-1

Mechanical	Test Condition	Reference Std.
Mechanical Shock	1500g, half-sine, 0.5ms ; each direction for 3 times in X,Y,Z	MIL-STD-883 2002 Condition B
Vibration	10-2000Hz, 20g, 1.52mm ; each direction for 4 hrs in X,Y,Z	MIL-STD-883 2007 Condition A

The samples for testing should be oscillated, no leakage and evidence damage & good hermetically.

The result of measurement should comply with following data:

Item	Test Conditions	Remark
Frequency	$\Delta F \leq \pm 2\text{PPM}$	
Resistance	$\Delta \text{ESR} \leq \pm 2\Omega$ or 20%	

QC1001-05T-11