


品名 : ACG-1204-P1-MF-S

1.Explanation of part number :

AC	G	1204	P1	MF	S
Product Type	Center Frequency/Band Code	Product Code (Unit: mm)	Design Revision Code	Antenna Type	Special Code
Chip Antenna	A: 2.4GHz E: Cellular G:868MHz H:915MHz L:5GHz M3:2G+5GHz N:NFC	Per 2 digits of length, width e.g.: 1204 12*4 (Length * Width)	P1:Rev.1	CC: Coupling Ceramic GF: On Ground, FR4 LC: Loop ceramic MC: Monopole Ceramic MF: Monopole FR4 PF: PIFA FR4	S: RoHS Compliant

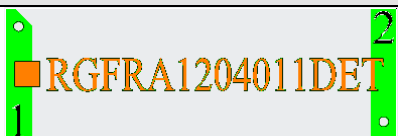
2.Electrical Specification :

	Specification
Working Frequency Range	855~885 MHz
Peak Gain	1.0 dBi (Typical)
Return Loss	-10 dB (Max)
VSWR	2.0 (Max)
Polarization	Linear
Efficiency	60% (Baes on GND 90x120mm ²)
Azimuth Beamwidth	Omni-directional
Feed Impedance	50Ω
Rated Power (max.)	1 W
Operating Temperature	-40 ~ +85 °C

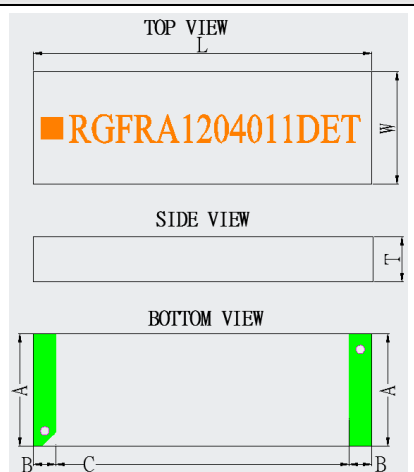
UNLESS OTHER SPECIFIED TOLERANCES ON : X=N/A X.X=N/A X.XX=N/A ANGLES=N/A HOLEDIA=N/A			INPAQ TECHNOLOGY CO., LTD.
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DESIGNED BY : 黃瑞郎	APPROVED BY : 陳振榮		
TITLE : ACG-1204-P1-MF-S		DOCUMENT NO.	ENS070001650-000824000265
			SPEC REV. A0

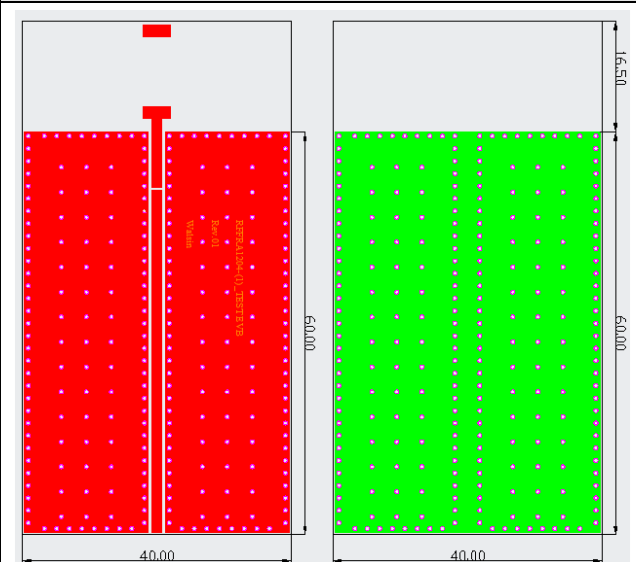
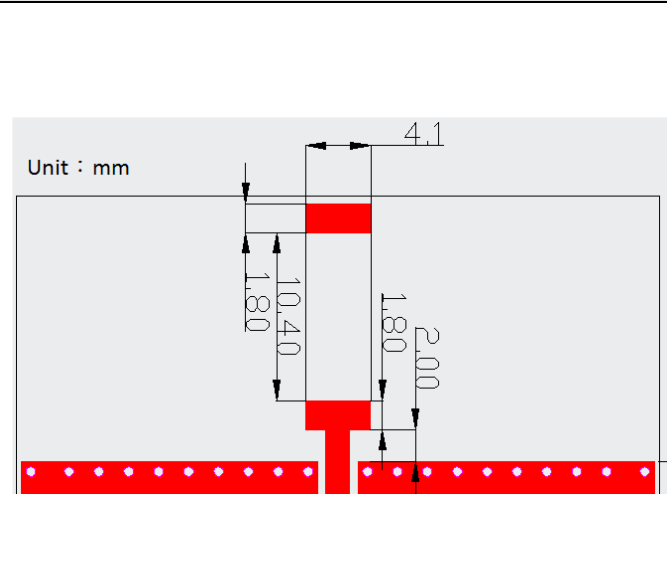
3. Antenna Drawing :

CONSTRUCTION

Figure	PIN	Connection
 RGFRA1204011DET	1	Feeding
	2	Soldering

DIMENSIONS

Figure	Symbol	Dimension (mm)
	L	12.0± 0.15
	W	4.0 ± 0.15
	T	1.6 ± 0.15
	A	4.0 ± 0.15
	B	0.8 ± 0.1
	C	10.4 ± 0.15

Test Board	Land Pattern
 <p>Clearance Area 16.5 X 40 mm² Unit : mm</p>	 <p>Unit : mm</p>

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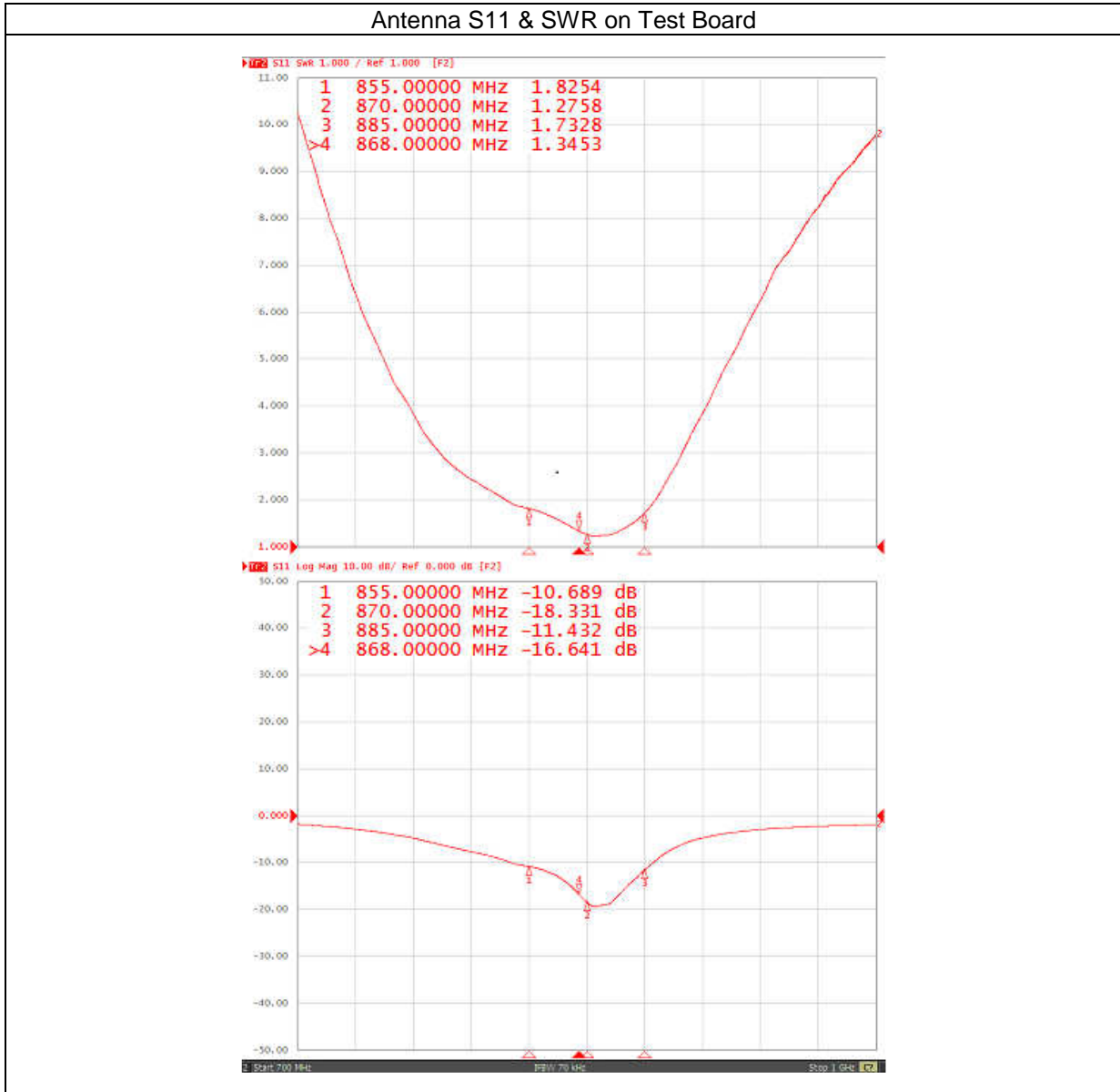
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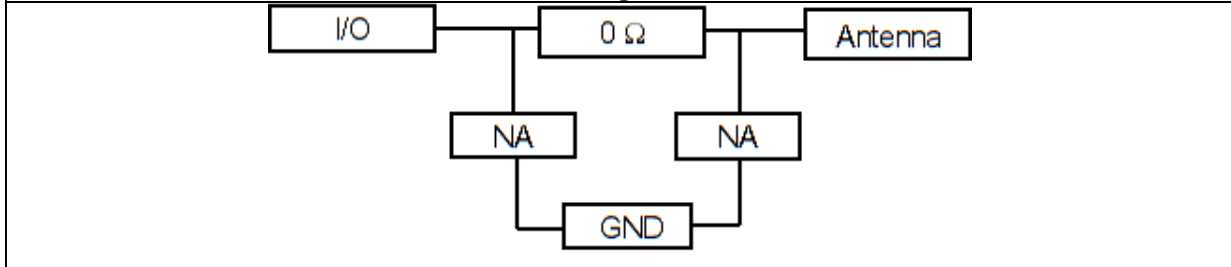
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4. Performance Report :

Antenna on Test Board (Thickness: 0.8mm)



Matching Circuit



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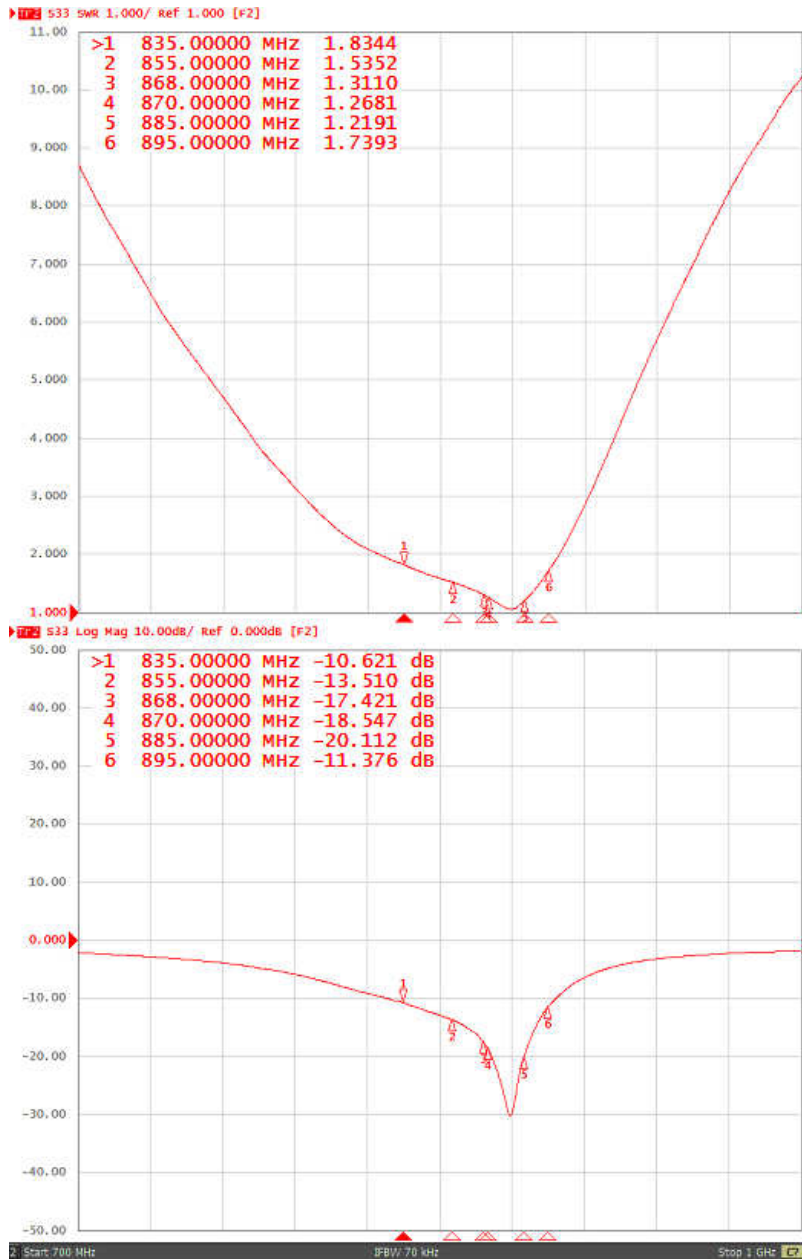
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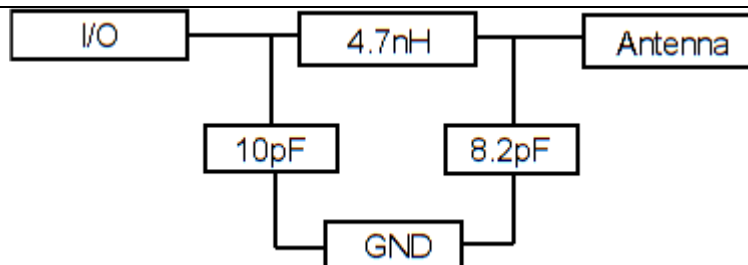
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Antenna S11 & SWR on Test Board



Matching Circuit



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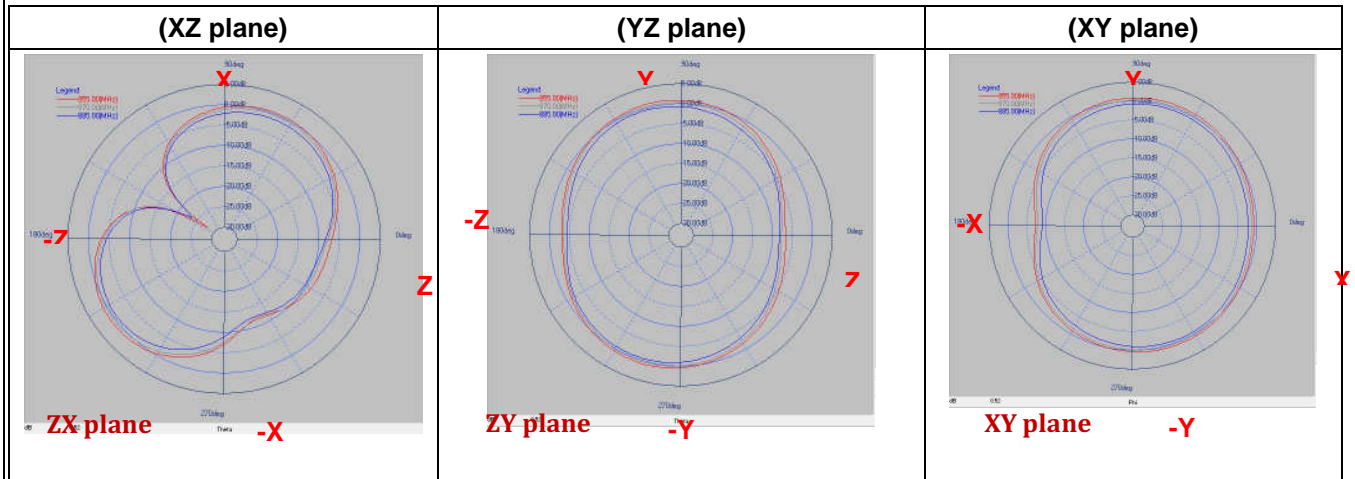
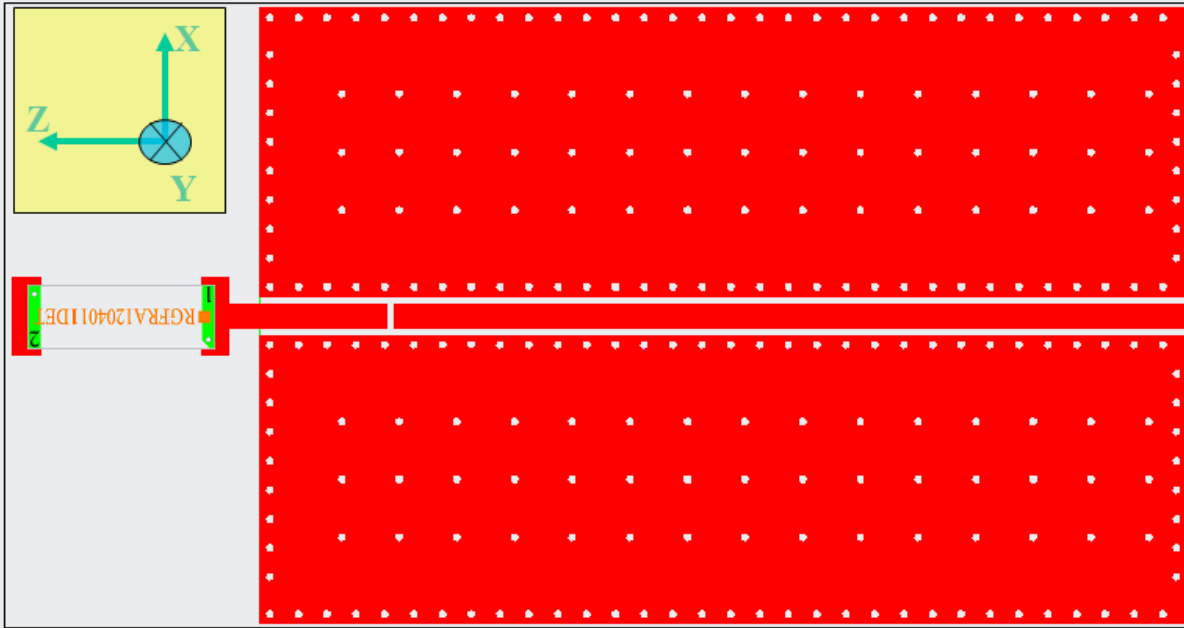
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RADIATION PATTERN



Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
855	1.06	-3.01	0.82	-1.29	0.85	-0.74
870	0.34	-3.65	0.30	-1.86	0.24	-1.31
885	-0.72	-4.59	-0.60	-2.69	-0.66	-2.27

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SCALE : N/A UNIT : mm

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5. RELIABILITY TEST

Test item	Test condition / Test method	Specification
Solderability JIS C 0050-4.6 JESD22-B102D	*Solder bath temperature : 235 ± 5°C *Immersion time : 2 ± 0.5 sec *Solder : Sn3Ag0.5Cu for lead-free	At least 95% of a surface of each terminal electrode must be covered by fresh solder.
Leaching (Resistance to dissolution of metallization) IEC 60068-2-58	*Solder bath temperature : 260 ± 5°C *Leaching immersion time : 30 ± 0.5 sec *Solder : SN63A	Loss of metallization on the edges of each electrode shall not exceed 25%.
Resistance to soldering heat JIS C 0050-5.4	*Preheating temperature : 120~150°C , 1 minute. *Solder temperature : 270±5°C *Immersion time : 10±1 sec *Solder : Sn3Ag0.5Cu for lead-free Measurement to be made after keeping at room temperature for 24±2 hrs	No mechanical damage. Samples shall satisfy electrical specification after test. Loss of metallization on the edges of each electrode shall not exceed 25%.
Drop Test JIS C 0044	*Height : 75 cm *Test Surface : Rigid surface of concrete or steel. *Times : 6 surfaces for each units ; 2 times for each side.	No mechanical damage. Samples shall satisfy electrical specification after test.
Adhesive Strength of Termination JIS C 0051- 7.4.3	*Pressurizing force : 5N(≤0603) ; 10N(>0603) *Test time : 10±1 sec	No remarkable damage or removal of the termination.
Bending test JIS C 0051- 7.4.1	The middle part of substrate shall be pressurized by means of the pressurizing rod at a rate of about 1 mm/s per second until the deflection becomes 1mm/s and then pressure shall be maintained for 5±1 sec. Measurement to be made after keeping at room temperature for 24±2 hours	No mechanical damage. Samples shall satisfy electrical specification after test.

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 ANGLES = N/A HOLEDIA = N/A



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SCALE : N/A

UNIT : mm

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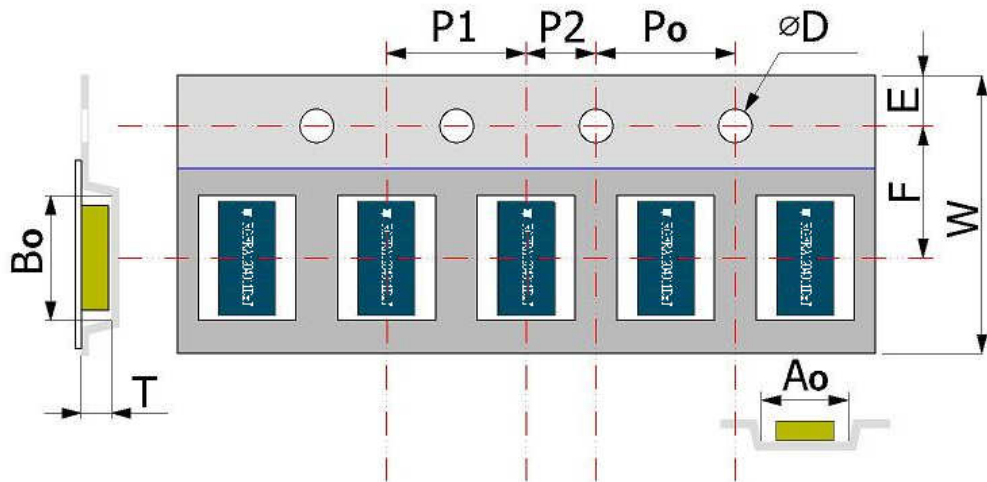
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Temperature cycle JIS C 0025	1. 30±3 minutes at -40°C±3°C, 2. 10~15 minutes at room temperature, 3. 30±3 minutes at +85°C±3°C, 4. 10~15 minutes at room temperature, Total 100 continuous cycles Measurement to be made after keeping at room temperature for 24±2 hrs	No mechanical damage. Samples shall satisfy electrical specification after test.
Vibration JIS C 0040	*Frequency : 10Hz~55Hz~10Hz(1min) *Total amplitude : 1.5mm *Test times : 6hrs.(Two hrs each in three mutually perpendicular directions)	No mechanical damage. Samples shall satisfy electrical specification after test.
High temperature JIS C 0021	*Temperature : 85°C±2°C *Test duration : 1000+24/-0 hours Measurement to be made after keeping at room temperature for 24±2 hrs	No mechanical damage. Samples shall satisfy electrical specification after test.
Humidity (steady conditions) JIS C 0022	*Humidity : 90% to 95% R.H. *Temperature : 40±2°C *Time : 1000+24/-0 hrs. Measurement to be made after keeping at room temperature for 24±2 hrs ※ 500hrs measuring the first data then 1000hrs data	No mechanical damage. Samples shall satisfy electrical specification after test.
Low temperature JIS C 0020	*Temperature : -40°C±2°C *Test duration : 1000+24/-0 hours Measurement to be made after keeping at room temperature for 24±2 hrs	No mechanical damage. Samples shall satisfy electrical specification after test.

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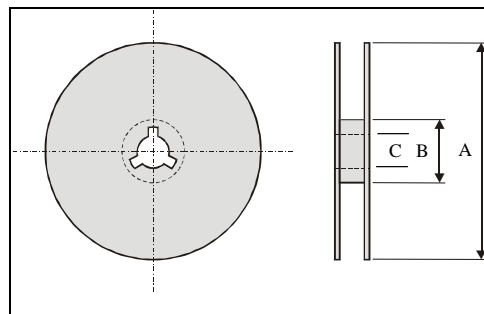
6. Package

Plastic Tape specifications (unit :mm)




Index	Ao	Bo	ΦD	T	W
Dimension (mm)	4.56 ± 0.1	13.2 ± 0.1	1.5 ± 0.1	1.75 ± 0.1	24 ± 0.3
Index	E	F	Po	P1	P2
Dimension (mm)	1.75 ± 0.1	11.5 ± 0.1	4.0 ± 0.1	8 ± 0.1	2.0 ± 0.1

Reel dimensions



Index	A	B	C
Dimension (mm)	Φ330 ± 5.0	Φ100 ± 2.0	Φ13.0 ± 0.5

Typing Quantity: 1000 pieces per 13"-32mm reel

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