

ACA-3216-D1-MF-S

1. Explanation of Part Number :

$$\frac{AC}{(1)} \quad \frac{A}{(2)} - \frac{3216}{(3)} \quad \frac{D1}{(4)} - \frac{MF}{(5)} - \frac{S}{(6)} - (7)$$

- (1) Product Type : Chip Antenna
- (2) Center Frequency/Band Code : A -2.45GHz
- (3) Size Code : 3.2mm(length) x 1.6mm(width)
- (4) Design Revision Code : D1= Rev. 1
- (5) Series No. : MF=MONOPOLE PCB type
- (6) Special Code : S= RoHS Compliant
- (7) Suffix For Special Requirements

2. Electrical Specification :

ITEM	SPECIFICATION
Frequency Band	2400-2500MHz
Return Loss	Less than -10
Polarization	Linear
Impedance	50 ohm Typ.
Operating temperature	-45 ~85 °C
Dimension	3.2 x 1.6 x 1.6mm

* Test condition : Test board size 50*20 mm
Matching circuit may be required

UNLESS OTHER SPECIFIED TOLERANCES ON :
 X=N/R X.X=N/R X.XX =N/R
 ANGLES=N/R HOLEDIA=N/R



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/R

UNIT : mm

DRAWN BY : 黃建棠

CHECKED BY : 鄭榮謀

DESIGNED BY : 彭少君

APPROVED BY : 謝立庭

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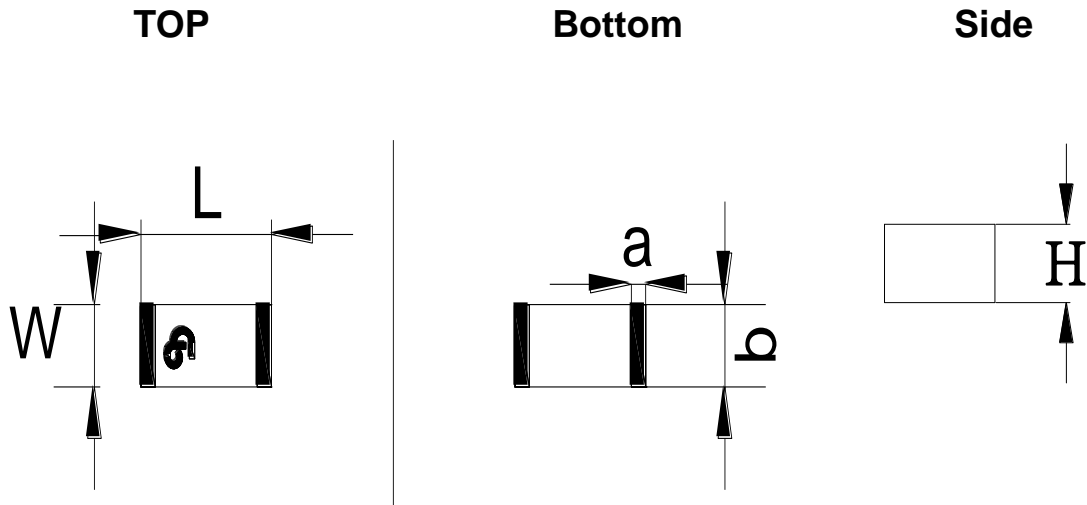
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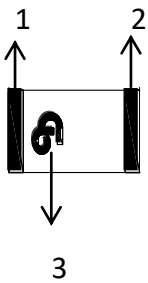
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3. Physical Dimension :



Chip Antenna	L	W	H	a	b
ACA-3216-D1-MF-S	3.2±0.2	1.6±0.2	1.6±0.2	0.35±0.2	1.6±0.2



- 1. feeding
- 2. soldering terminal
- 3. identification mark

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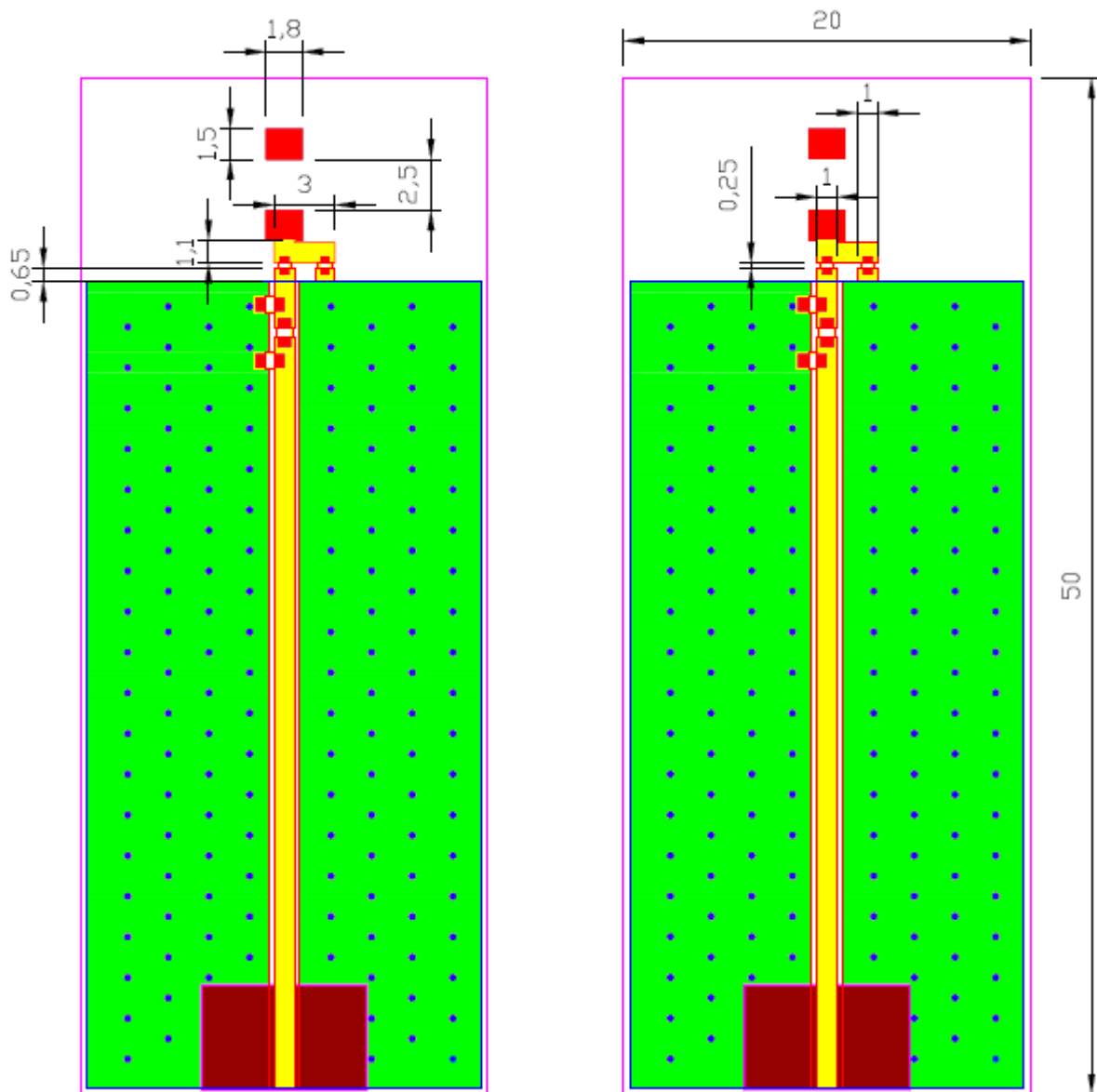
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4. Recommend PCB Layout :



Unit:mm

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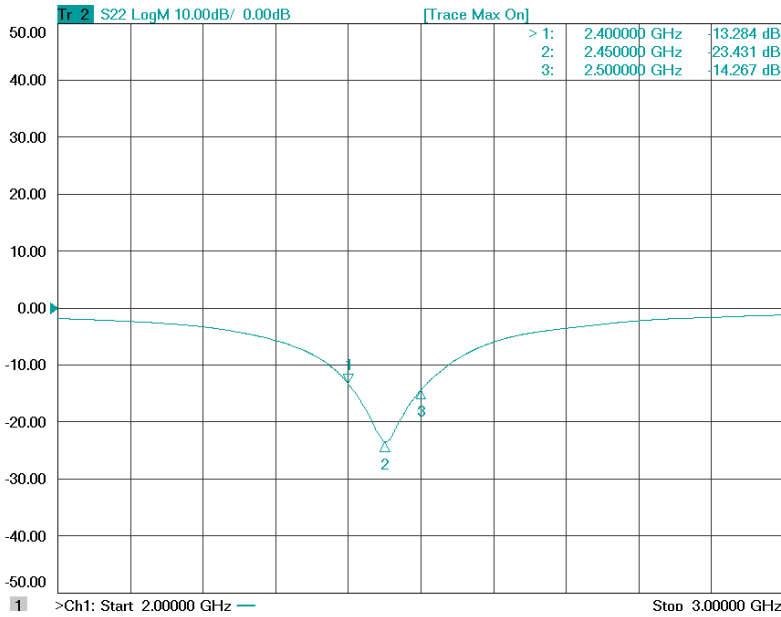
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5. Electrical Characteristics :

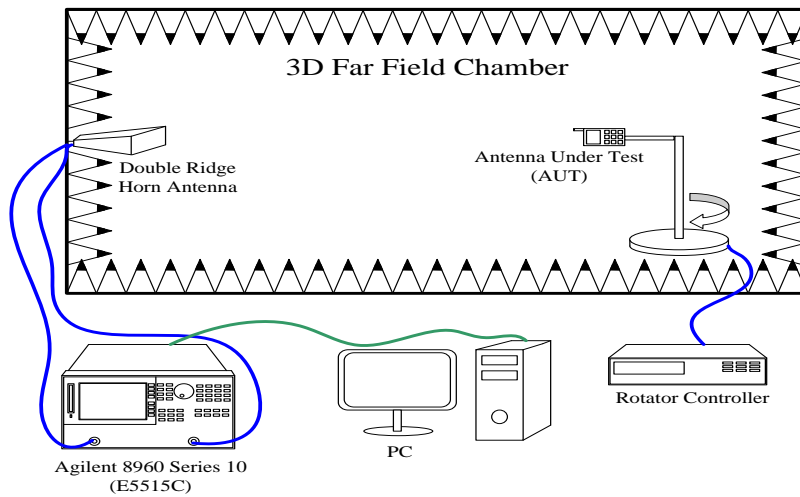
Return Loss



Frequency (MHz)	S11 (dB)	VSWR
2400	-13.3	1.6
2450	-23.4	1.1
2500	-14.2	1.5

Radiation Pattern

The Gain pattern is measured in INPAQ’s FAR-field chamber. DUT is placed on the table of rotator, a standard horn antenna and Vector Network Analyzer is used to collect data.



3D Chamber Definition

UNLESS OTHER SPECIFIED TOLERANCES ON :	
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	HOLEDIA=N/R
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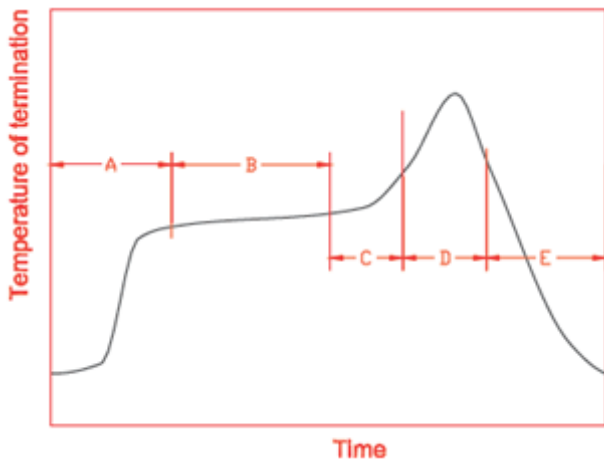
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Efficiency & Peak Gain

Frequency (MHz)	Peak Gain (dBi)	Efficiency (%)
2400	4.1	56.36
2410	4.14	57.29
2420	4.09	57.2
2430	4.16	58.91
2440	4.12	59.26
2450	4.12	59.76
2460	4.11	59.78
2470	4.11	59.69
2480	4.04	59.17
2490	4	58.83
2500	4.09	58.2

6. Recommended reflow soldering :



A	1 st rising temperature	The normal to Preheating temperature	30s to 60s
B	Preheating	140°C to 200°C	90s to 120s
C	2 nd rising temperature	Preheating to 217°C	30s to 60s
D	Main heating	240°C ~ 260°C	20s to 40s
E	Regular cooling	200°C to 100°C	3°C/s ~ 6C/s

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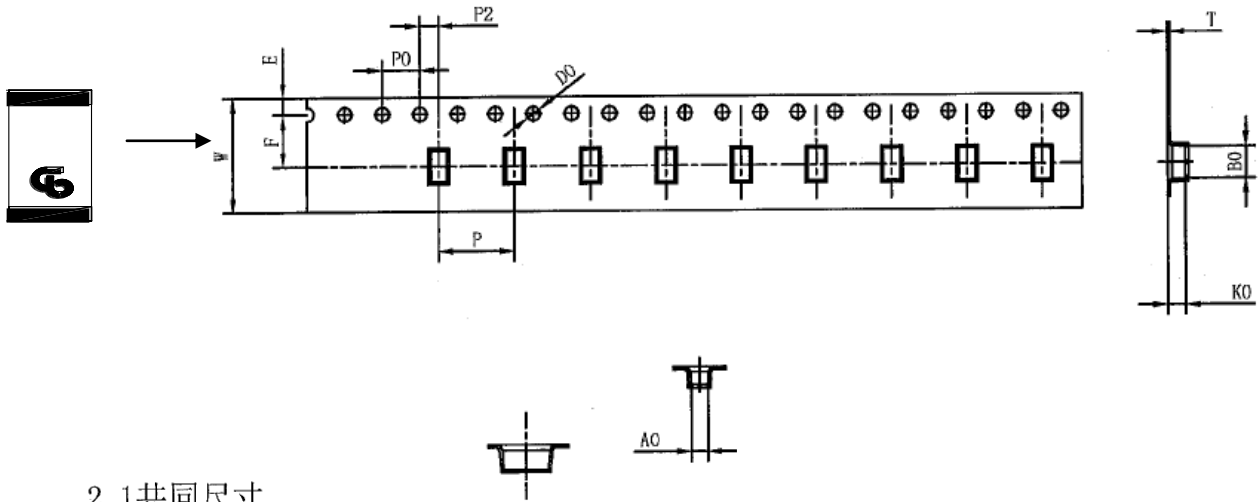
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7. Taping Package and Label Marking: (unit: mm)

- (1) Quantity/Reel: 2000pcs/Reel
- (2) Carrier tape dimensions



2.1 共同尺寸

外觀	規格	公差
W	12.00	±0.30
P	8.00	±0.10
E	1.75	±0.10
F	5.50	±0.10
P2	2.00	±0.10
D0	1.50	+0.10 -0.00
D1	----	----
Po	4.00	±0.10
10Po	40.00	±0.20

2.2 口袋尺寸

外觀	規格	公差
Ao	2.00	±0.10
Bo	3.60	±0.10
Ko	2.00	±0.10
t	0.30	±0.05

1. 10 sprocket hole pitch cumulative tolerance ±0.20mm.
2. Carrier camber not to exceed 1mm in 100mm
3. Ao and Bo measured on a plane 0.3mm above the bottom of the pocket.
4. Ko measured from a plane on the inside bottom of the pocket to the top surface of the carrier.
5. All dimensions meet EIA-481-D requirements.
6. Material: Clear Non Anti-Static Polystyrene.
 Black Conductive Polystyrene.
7. Packing length per 13" reel : 30.5 Meters.
8. Component load per 13" reel : 3800 pcs .

1. 產品編號: ACA-3216
2. 檢驗項目及規格: (單位:mm)
3. 注意事項: 尺寸標準以投影機為依據

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