

客戶名稱 : **ASUSTEK**
CUSTOMER

Documnet No.: **ENS000015380**

Approval Sheet Rev.: **A0**

Spec. Rev. : **A1**

承認書

APPROVAL SHEET

產品品名/Product Model No. : **ACA-3216-A2-MC-S**

客戶料號/Customer No. : **07041-00120000**

案名/ Model Name. : **AISSENS 100AW**

發行日期/ Issue Date : **2025/5/7**

承認日期/ Approved Date :

Approved by customer: (signing or stamping here)



佳邦科技股份有限公司
INPAQ TECHNOLOGY CO., LTD.

■ 350 苗栗縣竹南鎮公義里11鄰科義街11號 □ 428 台中市大雅區科雅路27號4樓

電話 : 037-585-555

電話 : 04-2560-6555

傳真 : 037-585-511

傳真 : 04-2560-5151

No. 11, Ke-Yi St., Chunan, Miaoli 350,
Taiwan, R.O.C.

Tel. : +886-37-585-555

Fax : +886-37-585-511

4F, No. 27, Keya Road, Daya Dist., Taichung City
428, Taiwan, R.O.C.

Tel. : +886-4-25606555

Fax : +886-4-25605151

ACA-3216-A2-MC-S SPECIFICATION

1. EXPLANATION OF PART NUMBER :

$\frac{AC}{(1)}$ $\frac{A}{(2)}$ - $\frac{3216}{(3)}$ $\frac{A2}{(4)}$ - $\frac{MC}{(5)}$ - $\frac{S}{(6)}$ - $\frac{}{(7)}$

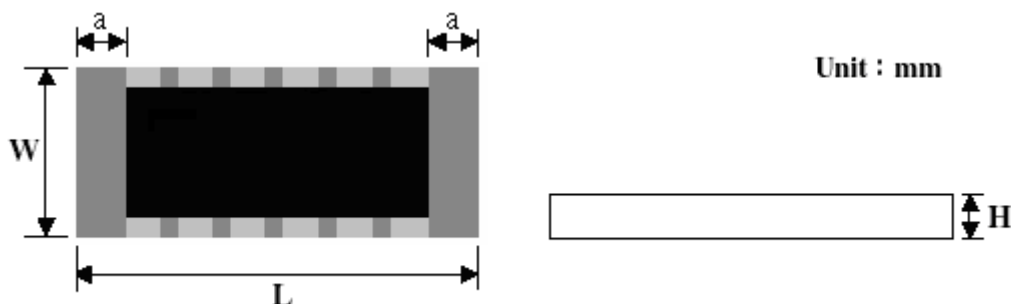
- (1) Product Type : Chip Antenna
- (2) Center Frequency/Band Code : A -2.45GHz
- (3) Size Code : 3.2mm(length) x 1.6mm(width)
- (4) Design Revision Code : A2= Rev. 2
- (5) Series No. : MC=MONOPOLE Ceramics type
- (6) Special Code : S= RoHS Compliant
- (7) Suffix For Special Requirements

2. ELECTRICAL SPECIFICATION :

ITEM	SPECIFICATION
Frequency Band	2400MHz~2500MHz
Return Loss	Less than -10
Polarization	Linear
*Gain	Max peak gain : 0.5 dBi
	Typ peak gain : -0.5 dBi
Impedance	50Ω typ.

*Test condition : Test board size 53*20 mm , ground clearance 13*20 mm
Matching circuit : Pi matching circuit will be required

3. DIMENSIONS :



Mark	L	W	H	a
Dimensions	3.2±0.2	1.6±0.2	0.7±0.15	0.35±0.2

UNLESS OTHER SPECIFIED TOLERANCES ON :

X=± X.X=± X.XX=

ANGLES=± HOLEDIA=±

SCALE : xxxx UNIT : mm

DRAWN BY:彭少君 CHECKED BY:謝立庭

DESIGNED BY:彭少君 APPROVED BY:謝立庭

TITLE : ACA-3216-A2-MC-S SPECIFICATION



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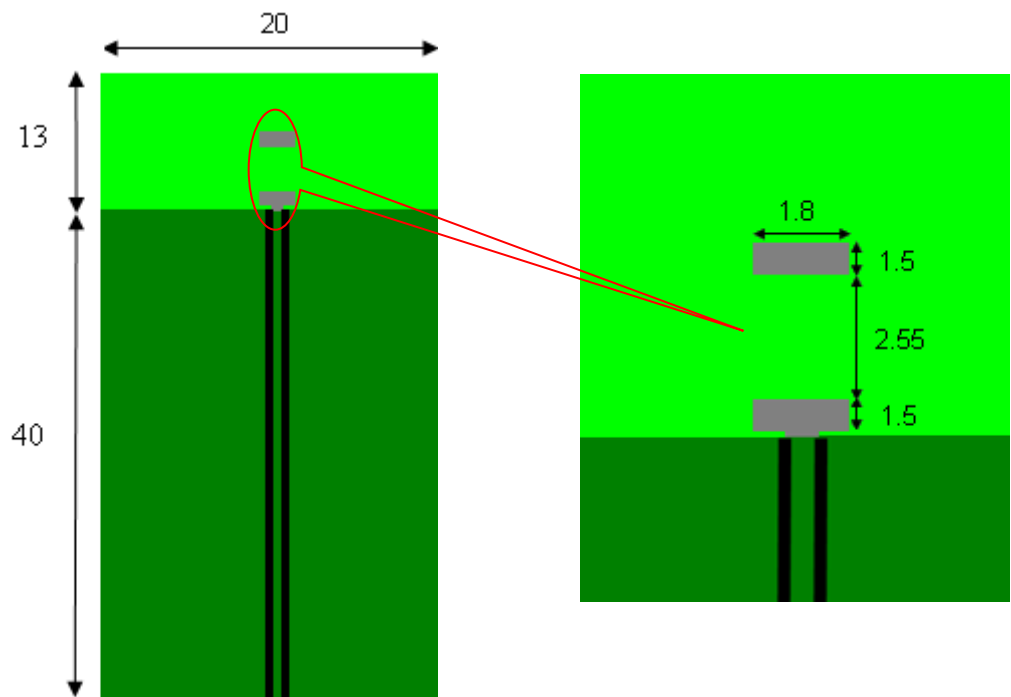
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DOCUMENT
NO.

ENS000015380

SPEC REV.
A1

4. RECOMMENDED PCB LAYOUT : (unit : mm)



5. TERMINAL CONFIGURATION :

Top Layer :



Bottom Layer :



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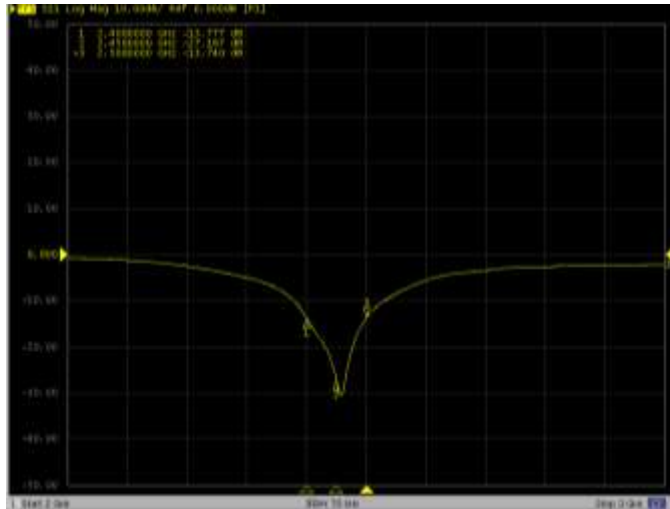
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SPEC REV. A1

6. ELECTRICAL CHARACTERISTICS :

Return Loss

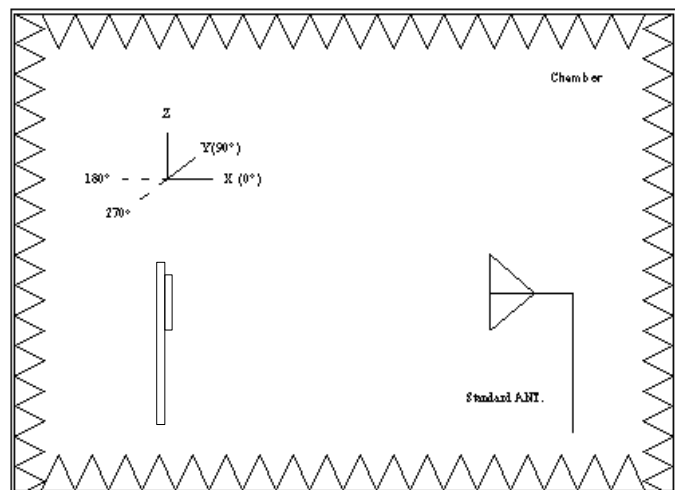
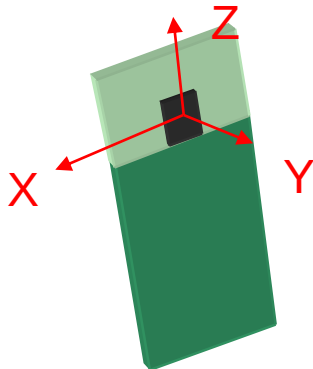


Freq.	Return Loss
2400 MHz	-13.78 dB
2450 MHz	-27.17 dB
2500 MHz	-13.74 dB

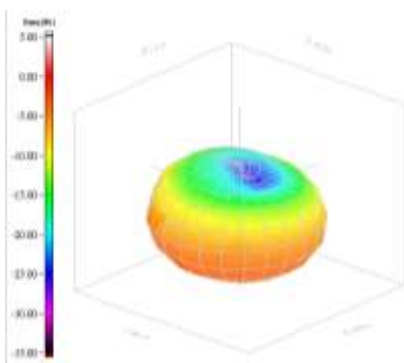
7. RADIATION PATTERN :

The gain pattern is measured in INPAQ's far-field chamber. AUT is placed on the table of rotator, a standard horn antenna and vector network analyzer is used to collect data. (Please contact with INPAQ for more detail)

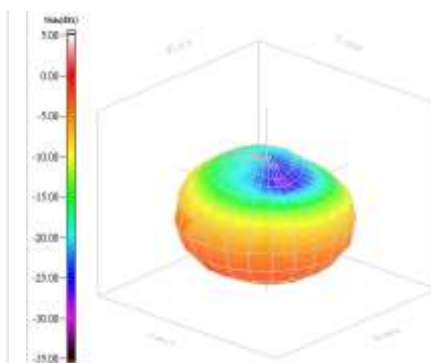
● Measuring factors definition



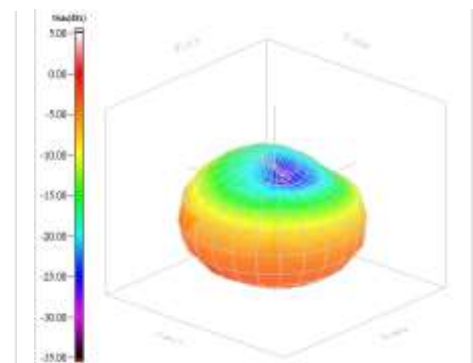
2400MHz



2450MHz



2500MHz



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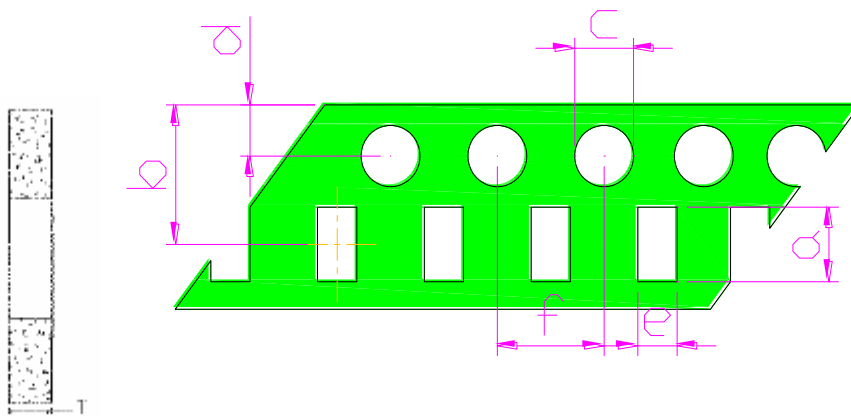
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SPEC REV.
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8. PACKAGING :

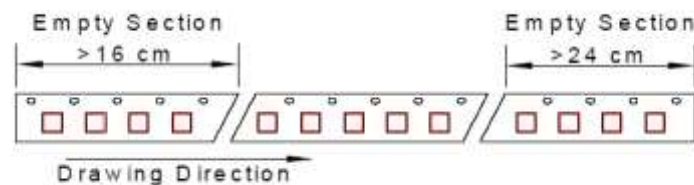
(1) Quantity : 4000pcs/Reel

(2) Carrier Tape Dimensions : (unit : mm)



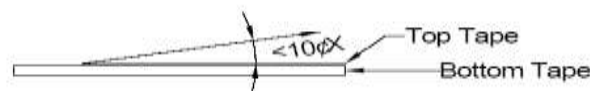
A	3.55±0.5
B	5.25±0.15
C	1.50±0.10
D	1.75±0.10
E	1.98±0.05
F	4.0±0.10
T	0.75±0.05

(3) Tape Packing

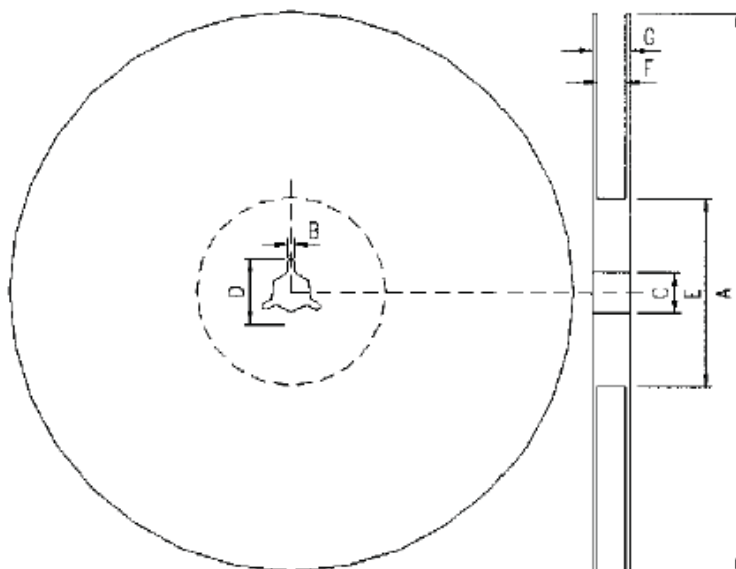


(4) Cover Tape Reel Off Force

$$5g \cdot f \leq \text{Peel-Off Force} \leq 70g \cdot f$$



(5) Reel Dimensions: (unit: mm)



A	178.0±2.0
B	2.0±0.5
C	13.0±0.5
D	21.0±0.8
E	60.0±1.0
F	9.0±0.5
G	12.0±0.2

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9. Environmental Specifications :

(1) Reliability Test

Item	Condition	Specification
Thermal shock	1. 30±3 minutes at -40°C±5°C, 2. Convert to +105°C (5 minutes) 3. 30±3 minutes at +105°C±5°C, 4. Convert to -40°C (5 minutes) 5. Total 24 continuous cycles	No apparent damage Fulfill the electrical spec. after test.
Humidity resistance	1. Humidity: 85% R.H. 2. Temperature: 85±5°C 3. Time: 500 hours.	No apparent damage Fulfill the electrical spec. after test.
High temperature resistance	1. Temperature: 150°C±5°C 2. Time: 1000 hours.	No apparent damage Fulfill the electrical spec. after test.
Low temperature resistance	1. Temperature: -40°C±5°C 2. Time: 1000 hours.	No apparent damage Fulfill the electrical spec. after test.
Soldering heat resistance	1. Solder bath temperature : 260±5°C 2. Bathing time: 10±1 seconds	No apparent damage
Solderability	The dipped surface of the terminal shall be at least 95% covered with solder after dipped in solder bath of 245±5°C for 3±1 seconds.	No apparent damage

(2) Storage condition

(a) At warehouse :

The temperature should be within 0 ~ 30°C and humidity should be less than 75% RH.

The product should be used within 1 year from the time of delivery.

(b) On board :

The temperature should be within -40~85°C and humidity should be less than 85% RH.

(3) Operating temperature range

Operating temperature range : -40°C to +105°C.

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ANGLES=± HOLEDIA=±

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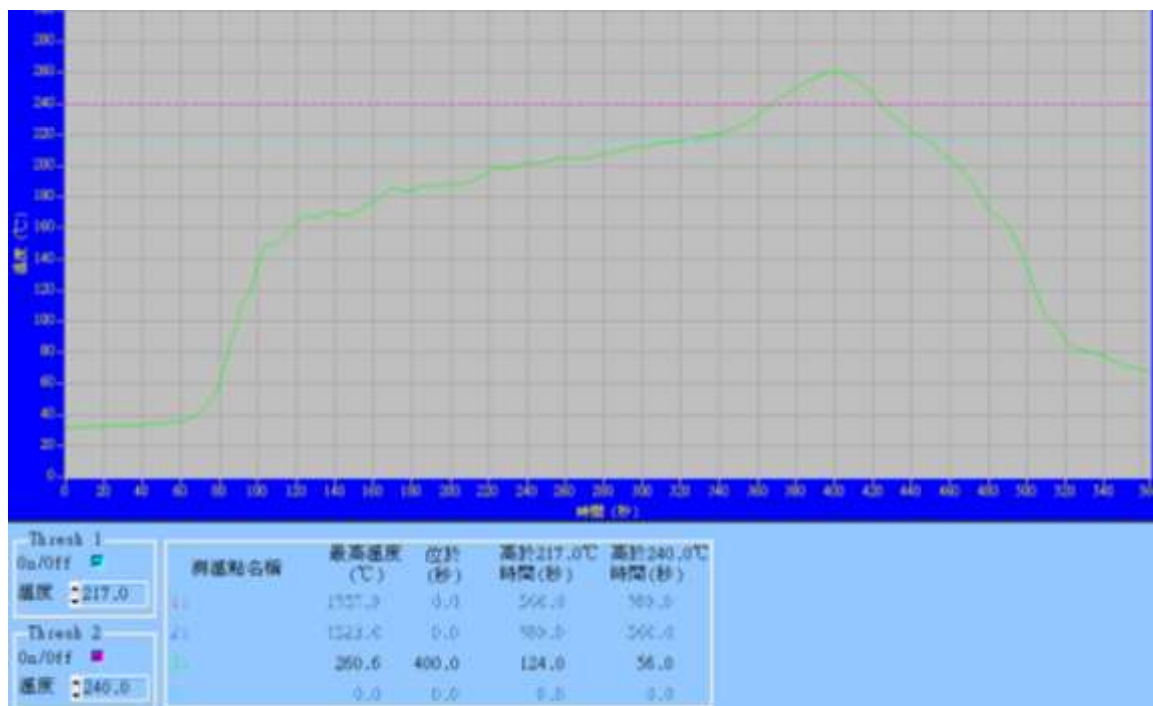
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10. Recommendable reflow soldering :



(1) Soldering gun procedure

Note the follows, in case of using solder gun for replacement.

- (a) The tip temperature must be less than 350°C for the period within 3 seconds by using soldering gun under 30 W.
- (b) The soldering gun tip shall not touch this product directly.

(2) Soldering volume

Note that excess of soldering volume will easily get crack the body of this Product.

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ANGLES=± HOLEDIA=±

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