



客戶名稱 : **ASUSTEK**
CUSTOMER

Document No.: ENS000184650

Approval Sheet Rev.: A3

Spec.Rev.: A1

承認書

APPROVAL SHEET

產品品名/Product Model No. : **WA-C2-LA-00-002**

客戶料號/Customer No. : **14008-05860100**

專案名稱/Project Name: **GUSTO**

發行日期/ Issue Date : **2024/11/5**

承認日期/ Approved Date :

Approved by customer: (signing or stamping here)



Embedded Single-Band Antenna for WA-C2-LA-00-002

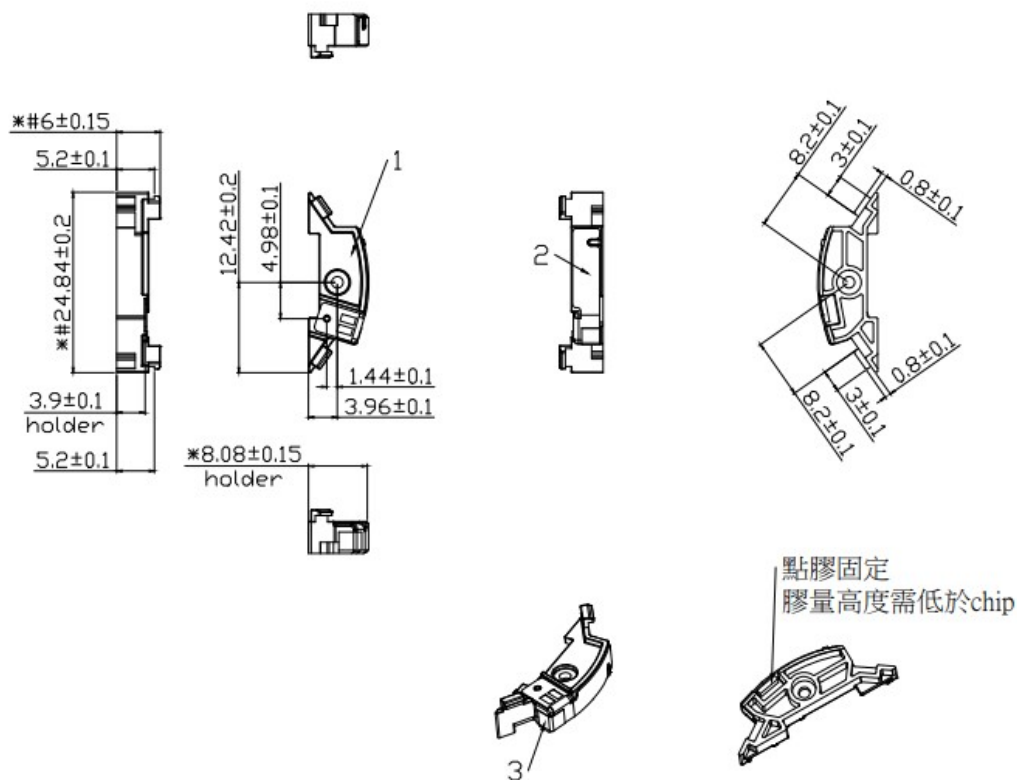
1. Explanation of part number :

WA	C2	LA	00	002
(1)	(2)	(3)	(4)	(5)

- (1) Product type : Wireless Antenna
 (2) Material : Combo-Holder+FPCB+Chip
 (3) Frequency : 2.4G
 (4) Coaxial Cable Color : No Coaxial Cable
 (5) Suffix : 002

2. Mechanical Specification :

The appearance of the antenna is according to drawing Figure 2-1-1.



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.

SCALE : N/A

UNIT : mm

DRAWN BY : 周敬晨

CHECKED BY : 鄭榮謀

DESIGNED BY : 洪賢修

APPROVED BY : 謝立庭

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TITLE : Embedded Single-Band Antenna for
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NOTE:

1. 工程圖上*為重點尺寸標註指示
Mark * are the key dimensions.
2. 工程圖上#為Cpk量測尺寸標註指示
Mark # are CPK dimensions.

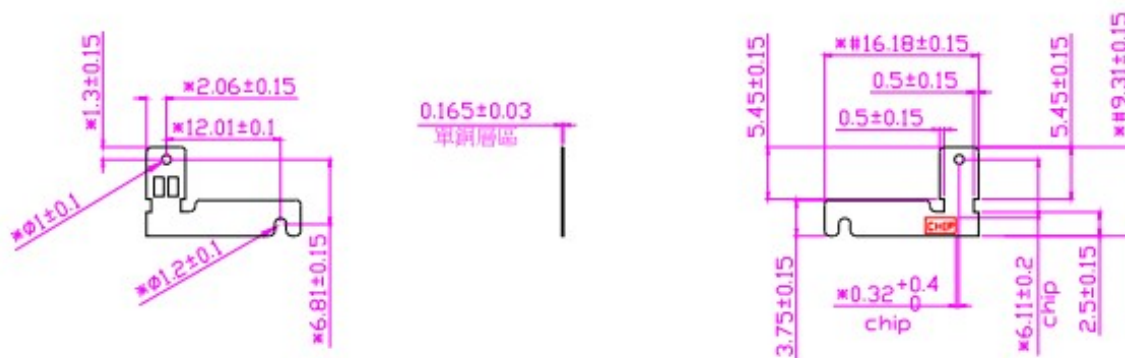


Figure 2-1-1 The antenna drawing

ITEM	DESCRIPTION	MATERIAL SPECIFICATION	QUANTITY	UNIT	SUPPLIER	UL NO.
1	Holder	材質:FR450 尺寸: 24.84x8.08x6	1	PCS	HA0017	E335478
2	FPCB+Chip	FPCB,T0.15mm,18.58x9.31mm Chip,ACA-3216-A2-MC-S	1	PCS	HA0081	E216543
3	Acetate tape	5x2.5x0.08mm	1	PCS	HA0026	N/A

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3. Electrical Specification :

Those specifications were specially defined for **GUSTO** model **Wireless Antenna**, and all characteristics were measured under the model's handset testing jig.

3-1. Frequency Band :

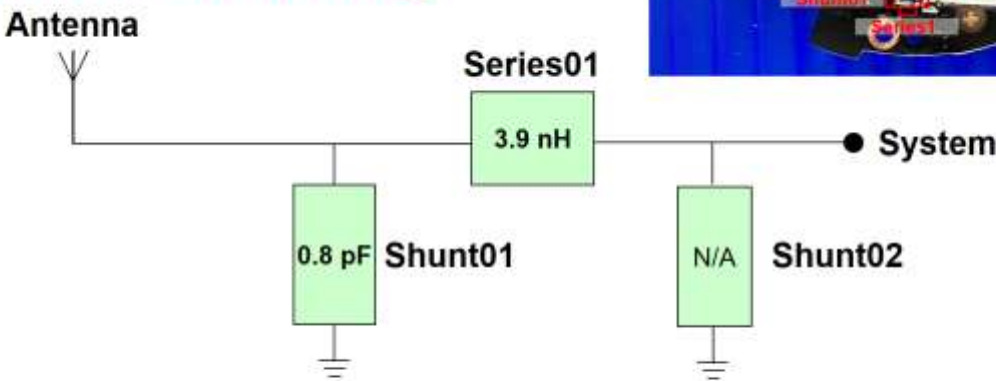
Frequency Band	MHz
BT	2400~2500

3-2. Impedance :

50 ohm nominal

3-3. Matching circuit :

Fine Tune Matching



Location	Description	Vendor
Series01	3.9 nH	Murata
Shunt01	0.8 pF	Murata
Shunt02	N/A	N/A

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



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SCALE : N/A UNIT : mm
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DESIGNED BY : 洪賢修 APPROVED BY : 謝立庭

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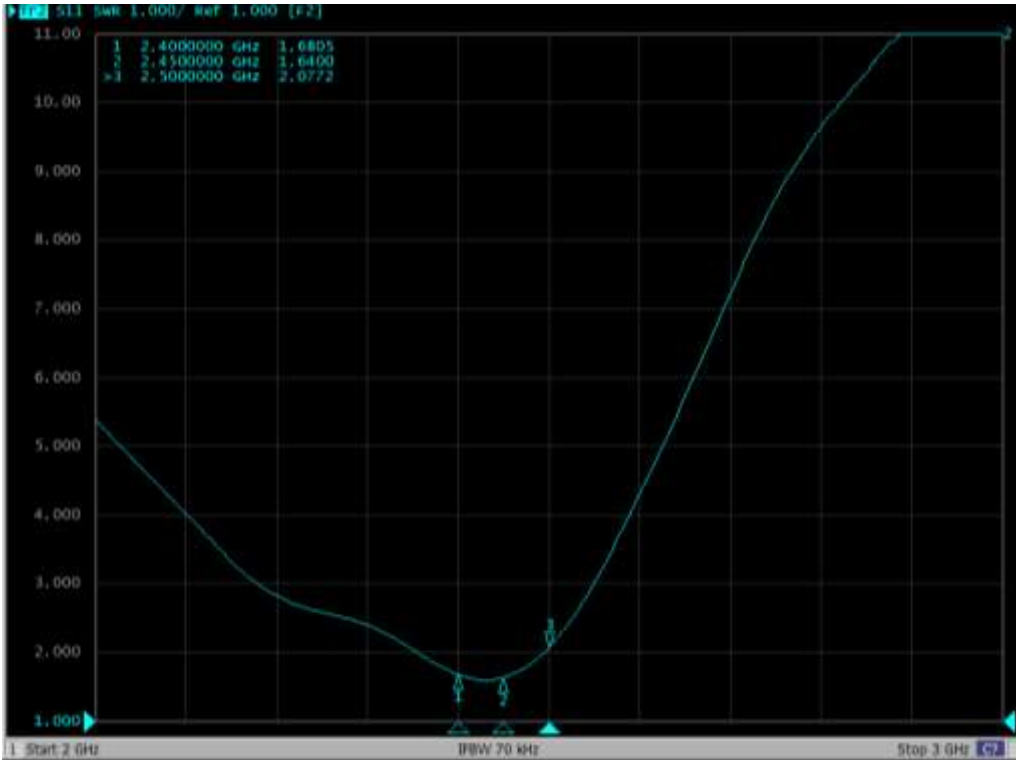
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3-4. VSWR



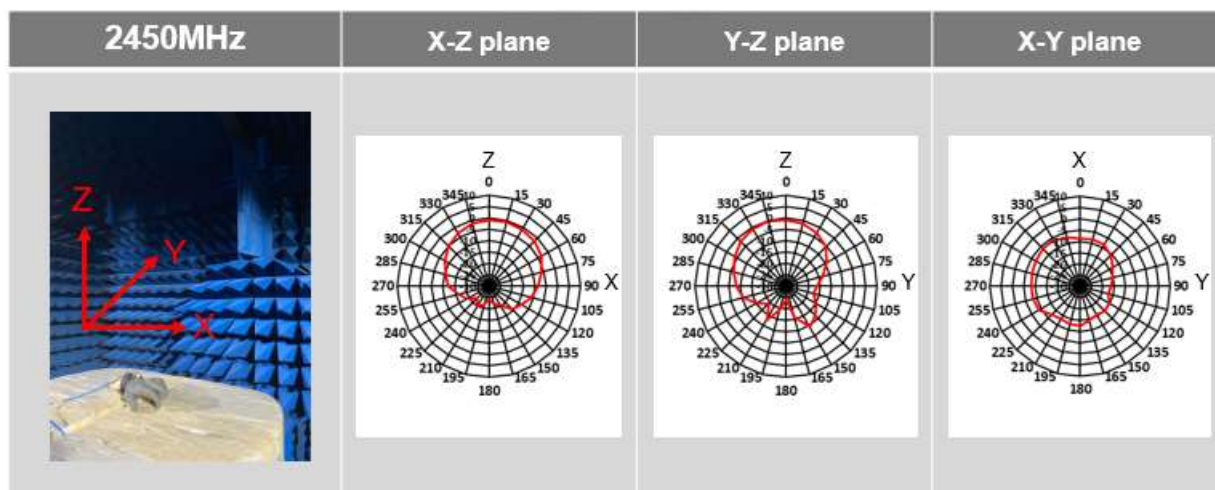
UNLESS OTHER SPECIFIED TOLERANCES ON : X=N/A X.X=N/A X.XX=N/A ANGLES=N/A HOLEDIA=N/A			INPAQ TECHNOLOGY CO., LTD.		
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3-5. Efficiency

GUSTO		
Frequency (MHz)	Peak Gain (dBi)	Efficiency (dBi)
2400	-4.78	-10.47
2450	-4.52	-10.08
2500	-4.20	-10.34

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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3-6. 2D Radiation



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.

SCALE : N/A

UNIT : mm

DRAWN BY : 周敬晨

CHECKED BY : 鄭榮謀

DESIGNED BY : 洪賢修

APPROVED BY : 謝立庭

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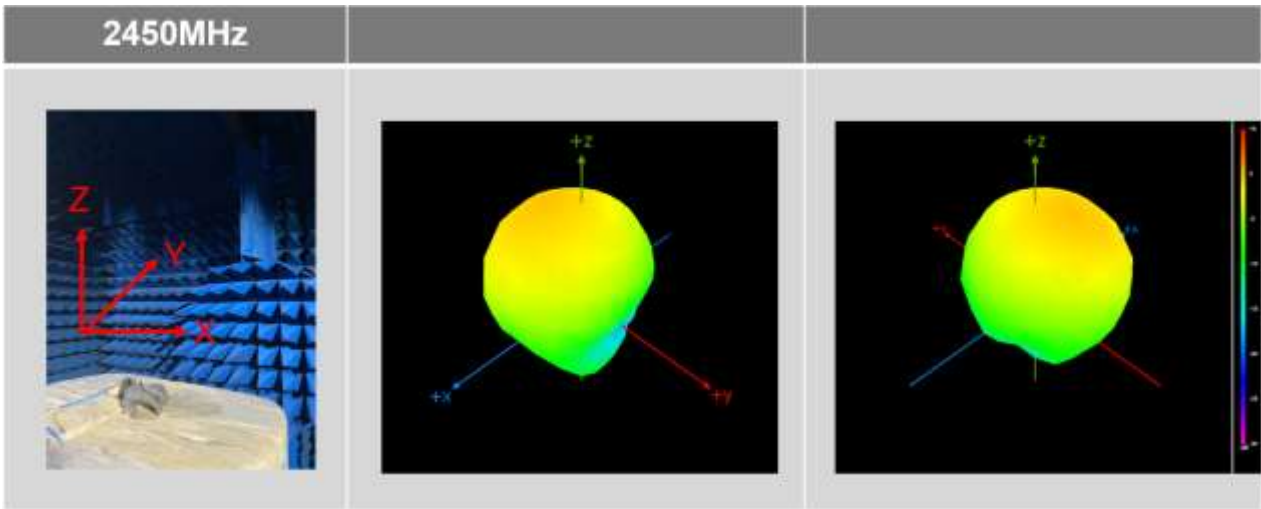
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3-7. 3D Radiation



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ZPK2.E216543 - Wiring, Printed - Flexible Material Constructions - Component

Wiring, Printed - Flexible Material Constructions - Component

SUZHOU FLEXIBLE PCB ELE. CO LTD
No.18 Zhongcheng Rd. Meili Town
(Tonggang Industrial Park Meili Town)
Changshu, JIANGSU 215518 China

E216543

Cond Width		Max		Report		Max									
Min		Cond	SS/	Area	Date	Surface	Assembly	Solder	Solder	Oper	Meets		C		
Min	Edge	Thk	DS/	Diam	After	Mount	Process	Process	Limits	Temp	Flame	UL796F	T		
Type	mm	mm	mic	DSO	mm	2022-01-01	Technology	Temp °C	Cycles	°C	sec	°C	Class	DSR	I
Single layer flexible material construction printed-wiring boards for use in flexible applications															
F-1	0.08	0.08	35	DS	20.3	No	-	-	-	263	15	105	V-0	All	-
Single layer flexible materials interconnect constructions, Flammability Recognition only															
F-1a	-	-	-	SS	-	No	-	-	-	260	10	-	V-0	-	-
F-2 (ASP 1)	-	-	-	SS	-	Yes	Yes	260	6	-	-	-	V-0	-	-

ASP 1 - Assembly solder process evaluated to IPC-TM-650, 2.6.27 Thermal Stress Assembly Simulation.

Marking: Company name or file number and type designation. May be followed by a suffix to denote factory identification or flammability classification..

Last Updated on 2022-08-17

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Plastics - Component

COMPANY

HONG KONG SINOPLAST GROUP LIMITED

Room D,10/F, Tower A, Billion Centre
1 Wang Kwong Road, Kowloon Bay
Kowloom, Hong Kong

E335478

		Min		H	H	RTI			H	D	
		Thk	Flame	W	A	Elec	Mech		T	9	T
Dsg	Color	mm	Class	I	I	Str	Imp	Str	R	5	I
Acrylonitrile Butadiene Styrene (ABS) "POLYKING" furnished as pellets											
951-(xx)	ALL	1.5	V-0	2	1	60	60	60	2	7	1
		3.0	V-0	0	0	60	60	60	-	-	-
Acrylonitrile Butadiene Styrene/Polycarbonate (ABS/PC) furnished as Pellets, rolls or sheets											
FR450	ALL	1.5	V-0	-	-	60	60	60	-	-	-
		3.0	V-0	-	-	60	60	60	-	-	-
Acrylonitrile Butadiene Styrene/Polymethyl Methacrylate (ABS/PMMA) furnished as Pellets, rolls or sheets											
MA915-(xx)	ALL	1.5	HB	-	-	50	50	50	-	-	-
		3.0	HB	-	-	50	50	50	-	-	-
Polyamide (PA), Semi Aromatic Resin, "POLYKING" furnished as granular material											
HT-(xx)	NC, BK	0.75	V-0	0	0	65	65	65	4	-	-
		1.5	V-0	0	0	65	65	65	-	-	-
		3.0	V-0	0	0	65	65	65	-	-	-
Polyamide (PA) furnished as pellets											
221-(xx)	ALL	0.75	HB	4	0	65	65	65	1	4	0
		1.5	HB	4	0	65	65	65	-	-	-
		3.0	HB	3	0	65	65	65	-	-	-
Polybutylene Terephthalate (PBT) "POLYKING" furnished as pellets, rolls or sheets											
BT201-(xx)	ALL	0.8	V-0	1	-	75	75	75	-	-	1
		1.5	V-0	0	-	75	75	75	-	-	-
		3.0	V-0	0	-	75	75	75	-	-	-

Feedback

Polycarbonate (PC) "POLYKING" furnished as pellets											
6010-(xx)	ALL	0.8	V-0	4	0	80	80	80	-	-	1
		3.0	V-0	3	0	80	80	80	-	-	-
Polycarbonate (PC) "POLYKING" furnished as pellets, rolls and sheets											
3010-(z)(f2)	NC	0.8	-	2	0	80	80	80	2	-	2
	WT	0.8	V-2	2	0	80	80	80	-	-	-
	NC	0.85	V-2	2	0	80	80	80	-	-	-
	NC, WT	3.0	V-2	2	0	80	80	80	-	-	-
	BK	3.0-3.3	V-2	2	0	80	80	80	-	-	-
Polycarbonate (PC) furnished as pellets											
5010-(xx)	ALL	1.5	V-0	-	-	80	80	80	-	-	-
		3.0	V-0	-	-	80	80	80	-	-	-
Polycarbonate (PC)											
7015-(xx)	ALL	1.5	HB	3	1	80	80	80	3	-	-
		3.0	HB	2	1	80	80	80	-	-	-
Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS)											
FR650-(xx)	ALL	0.8	V-0	1	-	60	60	60	-	-	3
		1.5	V-0, 5VB	0	-	60	60	60	-	-	-
		3.0	V-0, 5VA	0	-	60	60	60	-	-	-
Polyethylene Terephthalate (PET) furnished as pellets, rolls or sheets											
ET301-(xx)	ALL	1.5	V-0	0	0	-	75	75	-	-	-
		3.0	V-0	0	0	-	75	75	-	-	-
Polyphenylene Sulfide (PPS), modified, "POLYKING" furnished as pellets											
HPA-(xx)	ALL	0.8	V-0	3	1	130	130	130	-	-	4
		1.5	V-0	0	1	130	130	130	-	-	-

(f2) - Subjected to one or more of the following tests: Ultraviolet Light, Water Exposure or Immersion in accordance with UL 746C, where the acceptability for outdoor use is to be determined by UL.

(xx) - Represents a one, two, three or four digit number or letter combination or any combination of numbers or letters to denote a customer code.

(z) - Represents a one, two, three, four, five or six digit number or letter combination or any combination of numbers or letters to denote a customer code.

Marking: Company name, material designation On container, wrapper Or finished part.

Last Updated on 2022-12-13

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Model FR450
File Number: E335478



COMPANY

HONG KONG SINOPLAST GROUP LIMITED
Room D,10/F, Tower A, Billion Centre
1 Wang Kwong Road, Kowloon Bay
Kowloom, Hong Kong

MODEL INFO

FR450
Acrylonitrile Butadiene Styrene/Polycarbonate (ABS/PC), furnished as Pellets, rolls or sheets

FLAMMABILITY PROPERTIES	额定值	测试方法
Flammability		ANSI/UL 94
1.5 mm, Color: ALL	V-0	
3.0 mm, Color: ALL	V-0	
ISO/IEC FLAMMABILITY PROPERTIES	额定值	测试方法
Flammability		IEC 60695-11-10
1.5 mm, Color: ALL	V-0	
3.0 mm, Color: ALL	V-0	
THERMAL PROPERTIES	额定值	测试方法
Relative Thermal Index - Electrical Strength		UL 746B
1.5 mm	60 °C	
3.0 mm	60 °C	
Relative Thermal Index - Mechanical Impact		UL 746B
1.5 mm	60 °C	
3.0 mm	60 °C	
Relative Thermal Index - Mechanical Strength		UL 746B

Feedback

1.5 mm	60 °C
3.0 mm	60 °C

Report Date: 2010-06-14

Revision Date: 2022-12-13

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