

客戶名稱 : **ASUSTEK**
CUSTOMER

Documnet No.: **ENS000169150**

Approval Sheet Rev.: **A1**

Spec. Rev. **P1**

承認書

APPROVAL SHEET

產品品名/Product Model No. : **WAG-F-LA-00-185**

客戶料號/Customer No. : **14008-05200000**

案名/Model Name: **AURORA**

發行日期/ Issue Date : **2022/08/16**

承認日期/ Approved Date :

Approved by customer: (signing or stamping here)



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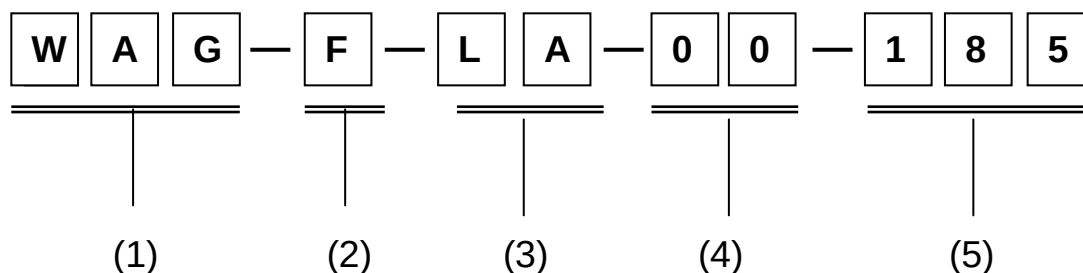
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Embedded Single-band BLE Antenna for WAG-F-LA-00-185

1. Explanation of part number :



- (1) Product Type : Wireless Antenna (PIFA)
- (2) Material : FPCB
- (3) Frequency : 2.4~2.5GHz
- (4) Coaxial Cable Type : NO
- (5) Suffix : 185

2. Electrical Specification :

Ant. Part Number (main & aux parts)	Type	Highest Peak Gain with Cable Loss (dBi)	Cable loss (dB)	Connector Type	Cable length	Laptop/ Host Model
INPAQ P/N: WAG-F-LA-00-185 ASUS P/N: 14008-05200000	PIFA	N/A	N/A	N/A	N/A	AURORA

Antenna Type	PIFA Antenna For BT
Connector Type	N/A
Cable Type	N/A
Impedance	50Ω
Polarization	Linear
Radiation Pattern	Omni-directional
Frequency Range	BT:2.4~2.5GHz
VSWR	≤2.0
Operation Temperature	-10℃~+55℃
Storage Temperature	-30℃~+75℃
Return Loss	≤ -10dB
Max Power	1W

UNLESS OTHER SPECIFIED TOLERANCES ON :

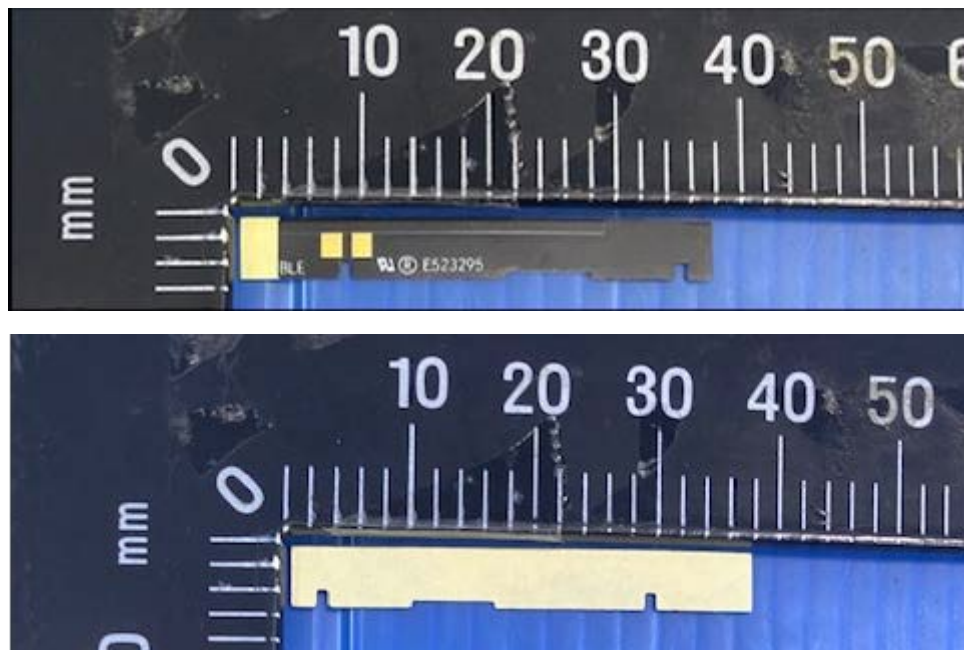
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$ANGLES=\pm$		$HOLEDIA=\pm$



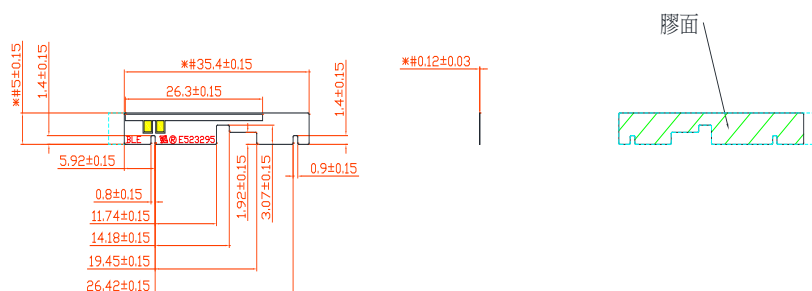
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DESIGNED BY: 張建焜	APPROVED BY:宋承翰			
TITLE : Embedded Single-band BLE Antenna for WAG-F-LA-00-185		DOCUMENT NO.	ENS000169150	SPEC REV P1

3. Antenna Picture :



4. Antenna Drawing :



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.

Drawing Rev P3

ITEM	DESCRIPTION	MATERIAL SPECIFICATION	QUANTITY	UNIT	SUPPLIER	UL File NO
1	FPCB	35.4x5X0.12mm	1	PCS	HA1079	E523295

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 WAG-F-LA-00-185

DOCUMENT
 NO.

ENS000169150

SPEC REV.
 P1

5. Electrical Specification :

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

5-1. Frequency Band :

Frequency Band	MHz
BT	2400~2500

5-2. Impedance :

50 ohm nominal

5-3. Matching circuit :

None

5-4.-1 Return loss/VSWR :

Frequency(MHz)	2400	2500
BT S11 (dB)	-15.76	-20.96



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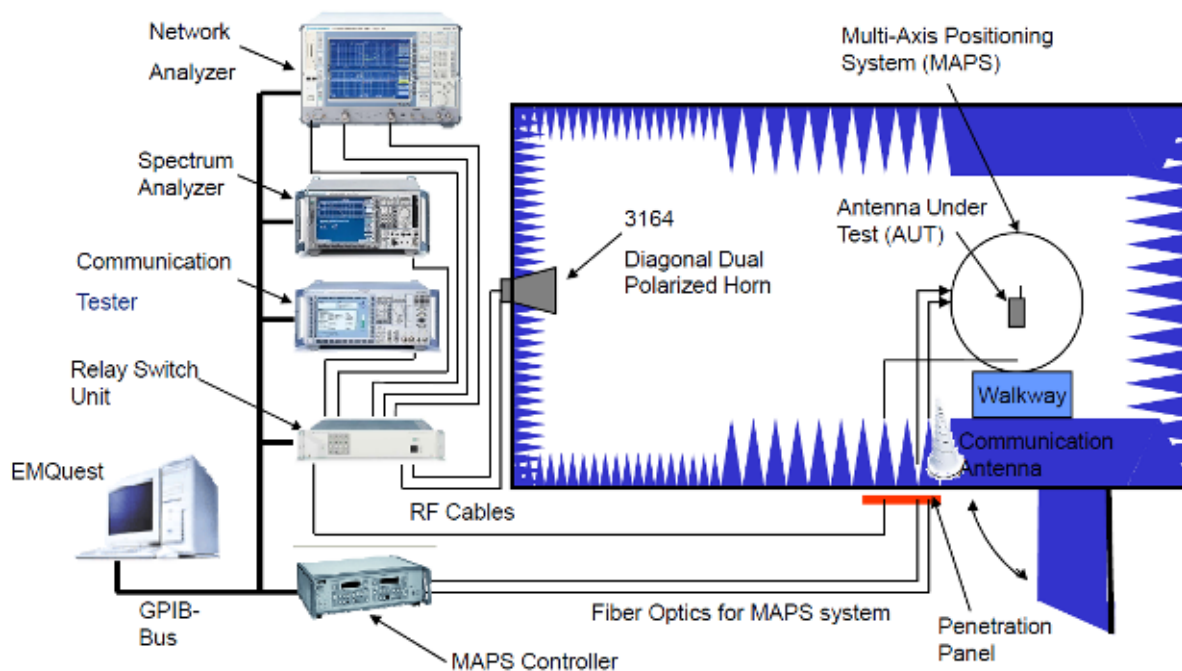
SPEC REV.
 P1

5-5 Gain and Radiation Pattern

5-5.1 Measure method

1. Using a low loss coaxial cable to link a standard handset jig
2. Fixed this handset jig on chamber's rotator plane
3. Linking jig into network analyzer port and using a probing horn antenna to collect data.
4. Using another standard gain horn antenna to calibrated those data

5-5.2 Chamber definition



1. An anechoic chamber (10mx3mx3m) which satisfied far-field condition was applied to avoid multi-path effect
2. The quite room region is 50cmx50cmx50cm at the center of rotator
3. The distance between DUT and standard antenna is 9.14m
4. Two measurement antennas is 3164-06 (300MHz - 6GHz) and 3164-05 (2 - 18GHz)

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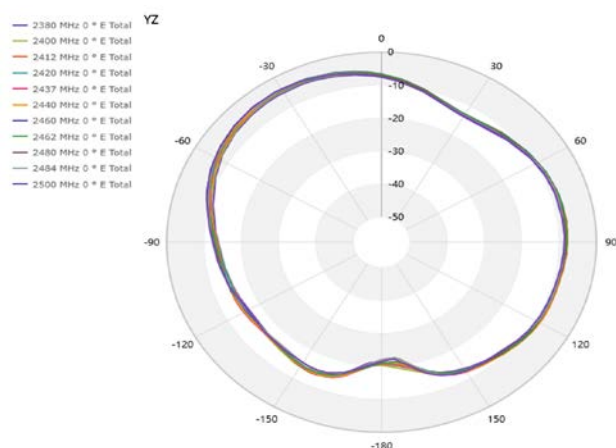
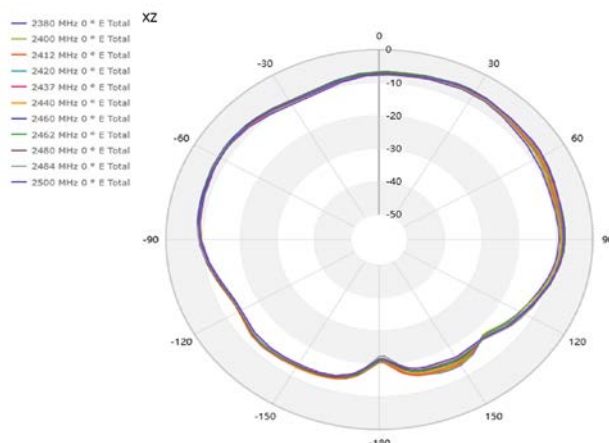
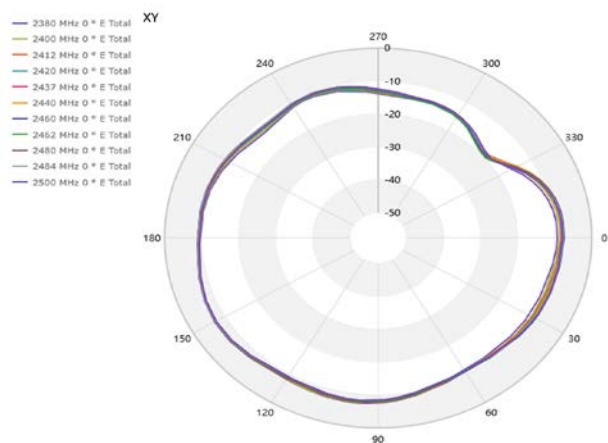
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SPEC REV.
 P1

5-5.3 Gain data and radiation pattern

Antenna gain is marked (dBi) and is based on **STANDARD HORN** antenna. The data shows Peak-Gain and Average-Gain.

Freq. [unit: MHz]	Three-dimensional peak (dBi)	Average [dBi]	Efficiency [%]
2400	-4.22	-9.97	10
2412	-4.1	-9.75	11
2437	-3.7	-9.47	11
2440	-3.8	-9.48	11
2462	-3.7	-9.46	11
2484	-3.78	-9.54	11
2500	-3.6	-9.61	11



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SPEC REV.
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ZPKX2.E523295 - Wiring, Printed - Flexible Material Constructions - Component

Wiring, Printed - Flexible Material Constructions - Component

Dongguan Boyongkai Electronic Technology Co., Ltd
Fenghuang East Road, Shajiao Community, Humen Town
Dongguan, Guangdong 523936 China

E523295

Type	Cond Width			Max				Max					
	Min		Cond	SS/	Area	Solder	Assembly	Solder	Oper		Meets	C	
	Min	Edge	Thk	DS/	Diam	Limits	Process (IPC)		Temp	Flame	UL796F	T	
	mm(in)	mm(in)	mic(mil)	DSO	mm(in)	°C sec	°C Cycles		°C	Class	DSR	I	
Single layer flexible materials interconnect constructions, Flammability Recognition only													
BYK-D	-	-	-	DS	-	288 10	- -	-	-	V-0	-	-	-

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Last Updated on 2021-08-11

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Wiring, Printed - Flexible Material Constructions

E523295

Guide Information

Dongguan Boyongkai Electronic Technology Co., Ltd

Fenghuang East Road, Shajiao Community, Humen Town, Dongguan Guangdong 523936 CN

Type dsG: BYK-D

Single layer flexible materials interconnect constructions, Flammability Recognition only

<u>Cond</u> <u>Width</u> <u>Min</u> <u>(mm)</u>	<u>Cond</u> <u>Width</u> <u>Edge</u> <u>(mm)</u>	<u>Cond</u> <u>Thk</u> <u>Min</u> <u>(mic)</u>	<u>Cond</u> <u>Thk</u> <u>Max Int</u> <u>(mic)</u>	<u>Cond</u> <u>Thk</u> <u>Max Ext</u> <u>(mic)</u>	<u>SS/</u> <u>DS/</u> <u>DSO</u>	<u>Max</u> <u>Area</u> <u>Diam</u> <u>(mm)</u>	<u>Assembly</u> <u>Solder</u> <u>Process</u> <u>Temp(°C)</u>	<u>Assembly</u> <u>Solder</u> <u>Process</u> <u>Cycles</u>	<u>Solder</u> <u>Limits</u> <u>Temp</u> <u>(°C)</u>	<u>Solder</u> <u>Limits</u> <u>Time</u> <u>(sec)</u>	<u>Max</u> <u>Oper</u> <u>Temp</u> <u>(°C)</u>	<u>Flame</u> <u>Class</u>	<u>Meets</u> <u>UL796F</u> <u>DSR</u>	<u>CTI</u>
-	-	-	-	-	DS	-	-	-	288	10	-	V-0	-	-

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INPAQ TECHNOLOGY (SUZHOU) CO LTD

E350554

No 5 Chunqiu Rd
Panyang Industrial Park
Huangdai Town Xiangcheng Zone
Suzhou, Jiangsu 215001 CHINA

Subassemblies. Recognition based on the traceability of components and materials used in the subassembly. UL assigned code designation SBA006K.

Marking: Company name, subassembly identification, UL assigned code designation and the Recognized Component Mark



on the shipping container or specification sheet in the shipping container.

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