# WA-P-LA-01-107 Specification

# 1. Explanation of part number:

$$\frac{WA}{(1)}$$
  $\frac{P}{(2)}$   $\frac{LA}{(3)}$   $\frac{01}{(4)}$   $\frac{107}{(5)}$ 

- (1) Product Type: PCB Antenna
- (2) Material: PCB+ Cable
- (3) Frequency:2400-2500MHz
- (4) Coaxial Cable Type:01
- (5) Suffix:107
- (6) Gain (Peak): 3.4dBi
- (7) Company address: INPAQ TECHNOLOGY(SUZHOU) CO, LTD. No. 5, Chunqiu

Road, Huangdai Town, Xiangcheng District, Suzhou City, Jiangsu Province, China

# 2. Storage Condition:

Temperature -40 to +70 °C Humidity  $65\pm20$  % RH

# 3. Operating Condition:

Temperature -40 to +70 °C Humidity 65±20 % RH

#### 4. Electrical Specification:

Those specifications were specially defined for 迪芬尼 DH400 BT model, and all characteristics were measured under the model's handset testing.

TOLERANCES ON:		た チャイバ に	. HH	r,  -	<b>→</b> 171 <del></del> 1	/1 <del>-</del>	<del></del>
$X.XX=\pm$	G <sub>2</sub>	<b>住</b> 邦 科 孜	(股1	分作	外间	公司	司
HOLEDIA=±		<b>INPAQ TEC</b>	HNOL	_OG	Y CO	., LTI	<b>)</b> .
UNIT: mm							
CHECKED BY:赵付辉	TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR						
APPROVED BY:赵付辉	DEVICES WITH	OUT PERMISSION					
Specification	DOCUMENT					PAGE	REV.
TITLE: WA-P-LA-01-107 Specification						P3	3
			PAGE	1	F	7	
	X.XX=± HOLEDIA=± UNIT: mm CHECKED BY: 赵付辉 APPROVED BY: 赵付辉	X.XX=± HOLEDIA=±  UNIT: mm  CHECKED BY: 赵付辉  APPROVED BY: 赵付辉  DOCUMENT	## CHECKED BY: 赵付辉  APPROVED BY: 赵付辉  Specification  ## APPROVED BY: 赵付辉  DOCUMENT NO.  ## APPROVED BY: 赵付辉  DOCUMENT NO.	## CHECKED BY: 赵付辉  APPROVED BY: 赵付辉  Specification  ## Land Company of the provided HTML Approved By: 赵付辉  APPROVED BY: 赵付辉  DOCUMENT  ## Land Company of the provided HTML Approved By: 赵付辉  DOCUMENT  ## Land Company of the provided HTML Approved By: 赵付辉  DOCUMENT  ## Land Company of the provided HTML Approved By: Without permission  DOCUMENT	## CHECKED BY: 赵付辉  APPROVED BY: 赵付辉  Specification  ## APPROVED BY: 赵付辉  DOCUMENT NO.  ## APPROVED BY: 赵付辉  DOCUMENT NO.  ## APPROVED BY: APPROVED	## CHECKED BY: 赵付辉  APPROVED BY: 赵付辉  Specification  ## Line Approved By: 赵付辉  Approved By: 赵付辉  DOCUMENT NO.  ## NO.  ## Line Approved By: 赵付辉  ## Approved By: 赵付辉  DOCUMENT NO.	は 邦科技股份有限公司

# 4-1. Frequency Band:

Frequency Band	MHz
BT	2400-2500MHz

# 4-2. Impedance

50 ohm nominal

# 4-3. Matching circuit

None

#### 4-4. Return Loss

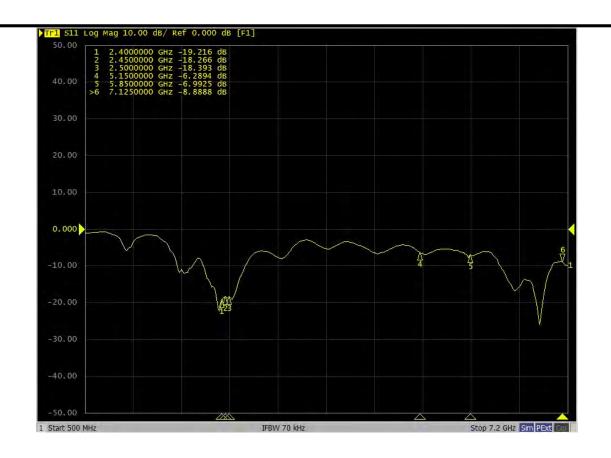
#### 4-4.1 Measuring Method

- 1.A  $50\,\Omega$  coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the Return Loss
- 2. Keeping this jig away from metal at least 20cm

#### 4-4.2 Measurement frequency points and Return Loss value

Frequency (Unit MHz)		2400 2450		2500
Return Loss	ВТ	-19.22	-18.27	-18.39

UNLESS OTHER SPECIFIEI	INLESS OTHER SPECIFIED TOLERANCES ON: (=± X.X=± X.XX=±						
$X=\pm$ $X.X=\pm$	$X.XX=\pm$	G	佳邦科技股	竹分手	1 限	公司	
ANGLES=±	HOLEDIA=±		INPAQ TECHNO	OLOG	Y CO	., LTD.	
SCALE:	UNIT: mm		GS AND SPECIFICATIONS A				
DRAWN BY:骆拓夫	CHECKED BY:赵付辉	TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USE AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OF					
DESIGNED BY:陈光芒	APPROVED BY:赵付辉	DEVICES WITHOUT PERMISSION					
TITLE: WA-P-LA-01-107	DOCUMEN	Т			PAGE REV.		
THEE: WA-1 -EA-01-107 Opecification		NO.				P3	
			PAG	E 2	F	7	

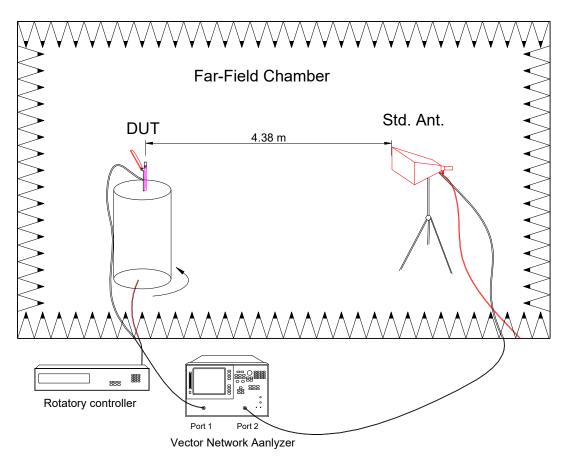


UNLESS OTHER SPECIFIED		たい チャイバーに	ъ пп	/rt -	<b>/</b> → 171=1	· 13 = -1	
$X=\pm$ $X.X=\pm$	$X.XX=\pm$	│ (ᢏ ) 佳邦科技股份有限公				:公司	
ANGLES=±	HOLEDIA=±		<b>INPAQ TEC</b>	HNO	LOG	Y CO	., LTD.
SCALE:	UNIT: mm		S AND SPECIFICATI				
DRAWN BY:骆拓夫	CHECKED BY:赵付辉	TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR					
DESIGNED BY:陈光芒	APPROVED BY:赵付辉	DEVICES WITH	OUT PERMISSION				
TITLE: WA-P-LA-01-107	Specification	DOCUMENT					PAGE REV.
THEE WATTER OF TO	opeomodion -	NO.					P3
				PAGE	3	F	7

### 4-5. Efficiency and Gain

#### 4-5.1 Measure method

- 1. Using a low loss coaxial cable to link a standard handset
- 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



#### 4-5.2 Chamber definition

- 1. An anechoic chamber (7mx4mx3m) which satisfied far-field condition was applied to avoid multi-path effect
- 2. The quite room region is 40cmx40cmx40cm at the center of rotator
- 3. The distance between DUT and standard antenna is 4.38 m
- 4. Probing antenna (9120D horn antenna) and standard gain horn antenna (BBHA9120 LPF 700MHz ~6GHz)

#### 4-5.3 Efficiency and Gain

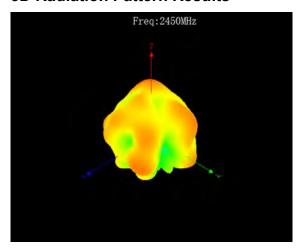
INLESS OTHER SPECIFIED TOLERANCES ON:							
$X=\pm$ $X.X=\pm$	$X.XX = \pm$	G	佳邦科技股	: 份 ?	拜 限	公司	到
ANGLES=±	HOLEDIA=±		INPAQ TECHNO				
SCALE:	UNIT: mm		S AND SPECIFICATIONS A				
DRAWN BY:骆拓夫	CHECKED BY:赵付辉	TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OF					
DESIGNED BY:陈 <del>光芒</del>	APPROVED BY:赵付辉	DEVICES WITH	OUT PERMISSION				
TITLE: WA-P-LA-01-107	Specification	DOCUMENT	Ī			PAGE	REV.
NO.			P3	}			
			PAGI	<u> </u>	F	7	

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

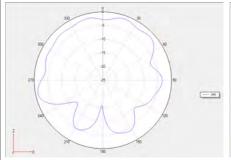
Antenna type	PCB				
Frequency (MHz)	2400	2450	2500		
Efficiency (%)	64.12	61.94	59.57		
Peak Gain (dBi)	3.4	3.05	1.82		
Frequency (MHz)	2400~2500				
Peak Gain (Max)	3.4dBi				

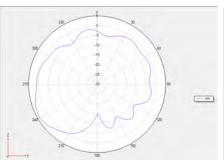
# 4-6. 3D/2D Radiation Pattern Results

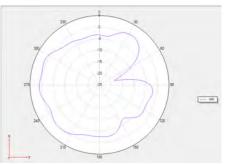
#### > 3D Radiation Pattern Results



#### > 2D Radiation Pattern Results

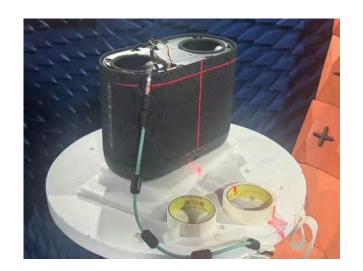






#### > Physical coordinate Image

JNLESS OTHER SPECIFIED TOLERANCES ON :								
	TOLERANCES ON .		/ <del>-</del>	111	<del>//</del> 7¤	<b>/</b> 1 =	<del>_</del>	
$X=\pm$ $X.X=\pm$	$X.XX = \pm$	(Ja	佳邦科技股	1万	月 സ	公	叫	
ANGLES=±	HOLEDIA=±		INPAQ TECHNO	LO	GY CO	., LTI	D.	
SCALE:	UNIT: mm		S AND SPECIFICATIONS A					
DRAWN BY:骆拓夫	CHECKED BY:赵付辉		CO.,LTD.AND SHALL NOT FOR THE MANUFACTURE					
DESIGNED BY:陈光芒	APPROVED BY:赵付辉	DEVICES WITH	OUT PERMISSION					
TITLE: WA-P-LA-01-107 Specification		DOCUMENT	П			PAGE	REV.	
TITLE: WA-F-LA-01-107 Specification		NO.				P	3	
			PAGE	5	F	7		

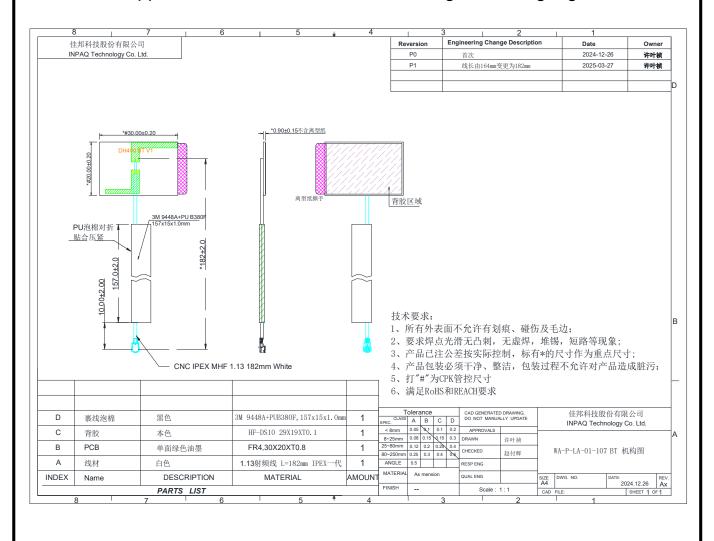


# **Mechanical Specification:**

UNLESS OTHER SPECIFIED TOLERANCES ON :	
$X=\pm$ $X.X=\pm$ $X.XX=\pm$	(
ANGLES=± HOLEDIA=±	INPAQ TECHNOLOGY CO., LTD.
SCALE: UNIT: mm	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ
DRAWN BY:骆拓夫 CHECKED BY:赵付辉	TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR
DESIGNED BY:陈光芒 APPROVED BY:赵付辉	DEVICES WITHOUT PERMISSION
TITLE: WA-P-LA-01-107 Specification	DOCUMENT PAGE REV
Properties WA-1 -LA-01-107 Opecification	NO. P3
	<b>PAGE</b> 6 <b>F</b> 7

# 5-1. Mechanical Configuration (Unit: mm)

The appearance of the antenna is according to drawing Figure 5-1-1



UNLESS OTHER SPECIFIED TOLERANCES ON:				た チャイバ し	L. HH	/.t _	<b>←</b> 17)→	
X=±	$X.X=\pm$	$X.XX=\pm$	(Ja	佳邦科技	<b>支股</b>	分り	月 限	:公司
ANGLES=±		HOLEDIA=±		INPAQ TEC	CHNO	LOG	Y CO	., LTD.
SCALE:		UNIT: mm	THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ					
DRAWN BY:	骆拓夫	CHECKED BY:赵付辉	TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR					
DESIGNED BY	':陈光芒	APPROVED BY:赵付辉	DEVICES WITH	OUT PERMISSION				
TITLE : WA-P-	Ι Δ-01-107	Specification	DOCUMEN.	Т				PAGE REV.
III EE · WA-I -	EA-01-107	Opecinication	NO.					P3
					PAGE	7	F	7