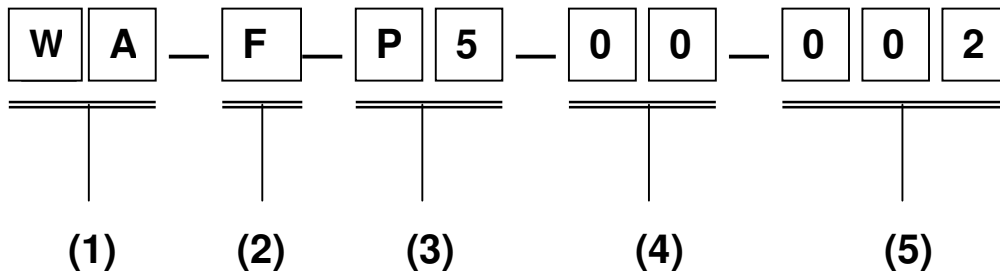


Inserted Penta-Band Antenna for WA-F-P5-00-002

1. Explanation of part number:



- (1) Product type: Wireless Antenna
- (2) Material: FPCB
- (3) Frequency: 850, 900, 1800, 1900, 2100 bands
- (4) Coaxial Cable Type: No Coaxial Cable
- (5) Suffix : 002

2. Electrical Specification:

Those specifications were specially defined for **AzureWave 3G network card**, and all characteristics were measured under the model.

2-1. Frequency Band:

Frequency Band	MHz
850	824~894
900	880~960
1800	1710~1880
1900	1850~1990
2100	1920~2170

2-2. Impedance

50 ohm nominal

UNLESS OTHER SPECIFIED TOLERANCES ON :

X = ± X.X = ± X.XX =
 ANGLES = ± HOLE DIA = ±



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY : 巫冠賢

CHECKED BY: 楊奇峰

DESIGNED BY: 陳星豪

APPROVED BY: 陳智崑

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TITLE : Inserted Penta-Band Antenna for
 WA-F-P5-00-002

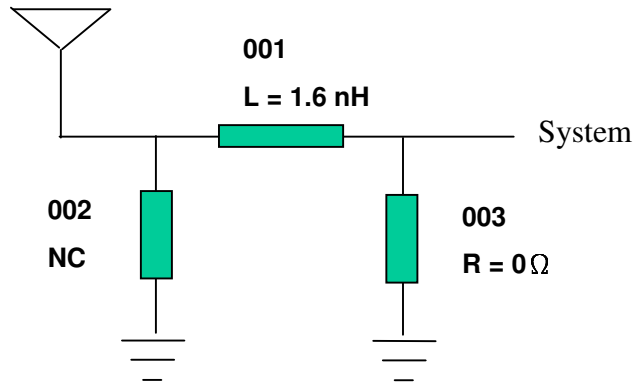
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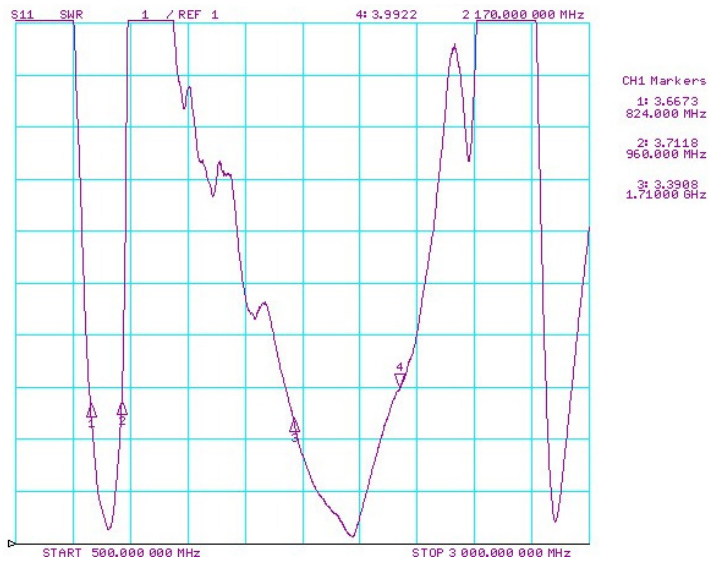
A1

2-3. Matching circuit:



Location	Description	Vendor
001	1.6 nH	Murata
002	N/C	N/C
003	N/C	N/C

2-4 VSWR:



Frequency (Unit MHz)	824	960	1710	2170
VSWR	3.66	3.71	3.39	3.99

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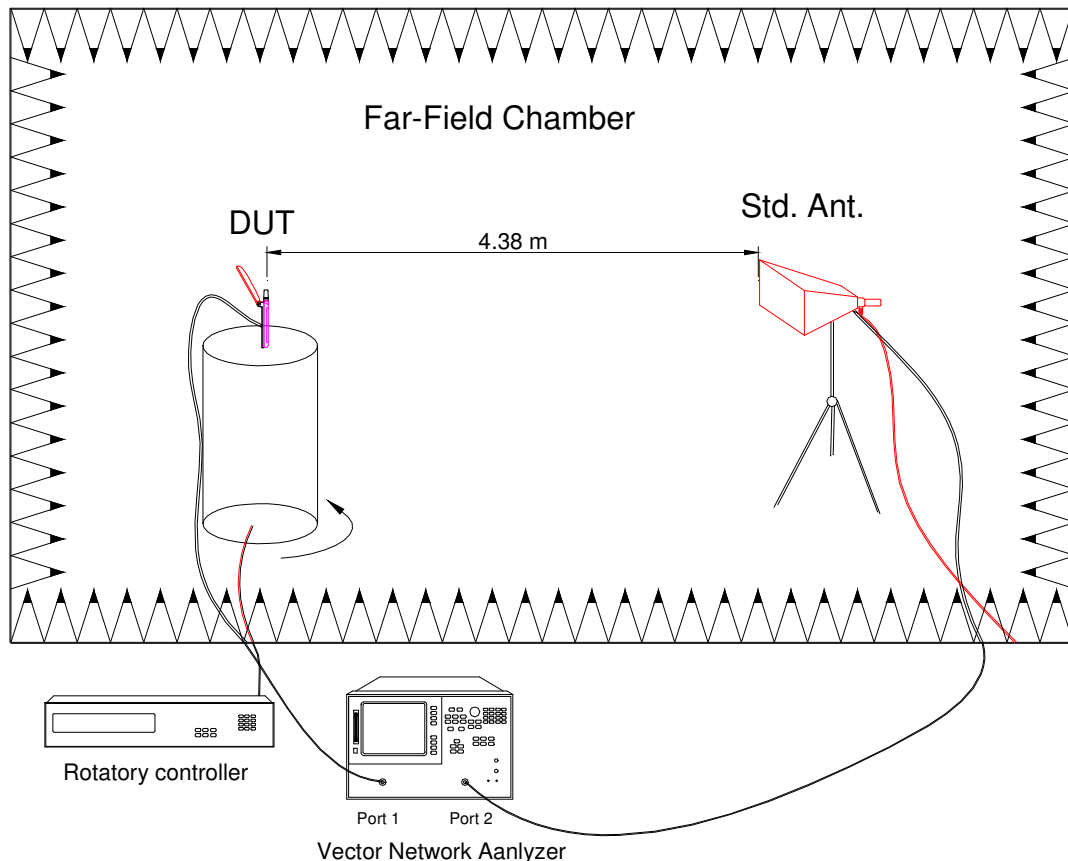
A1

2-5. Gain and Radiation Pattern

2-5.1 Measure method

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

2-5.2 Chamber definition



1. An anechoic chamber (8mx4mx3.5m) which satisfied far-field condition was applied to avoid multi-path effect
2. The quiet 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)

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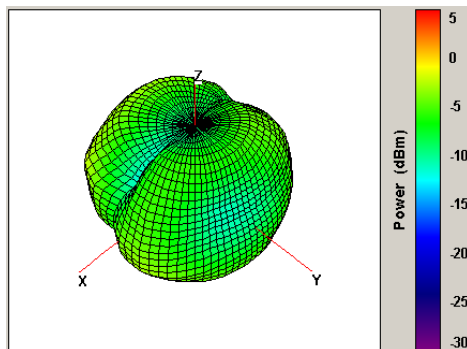
A1

2-5.3 Gain data and radiation pattern

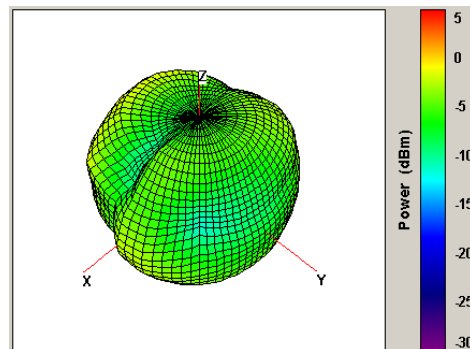
Antenna gain is marked [dBi] and is based on STANDARD HORN antenna. The data shows Peak-Gain and Average-Gain.

Freq. [unit:MHz]	3D Gain Data		
	Gain [dBi]		Efficiency (%)
	Peak	Average	
824	-1.54	-5.09	30.91
960	-1.82	-5.65	27.17
1710	0.06	-4.68	33.99
2170	0.23	-3.92	40.48

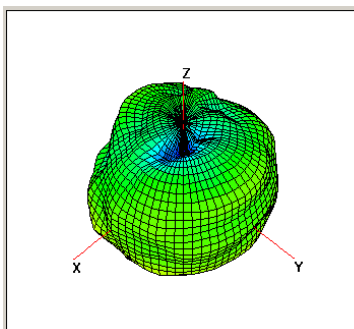
Table2-5-1 Gain data.



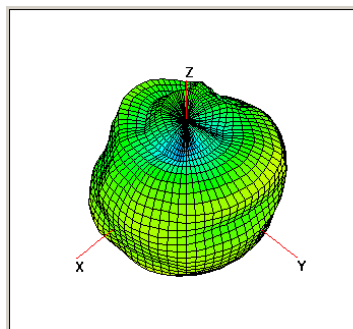
850 MHz



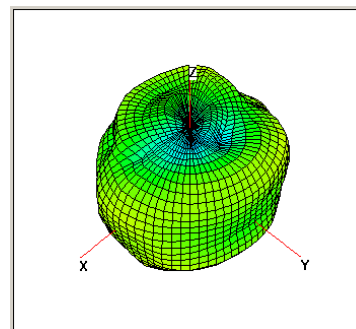
900 MHz



1800 MHz



1900 MHz



2100 MHz

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 ANGLES = ± HOLE DIA = ±



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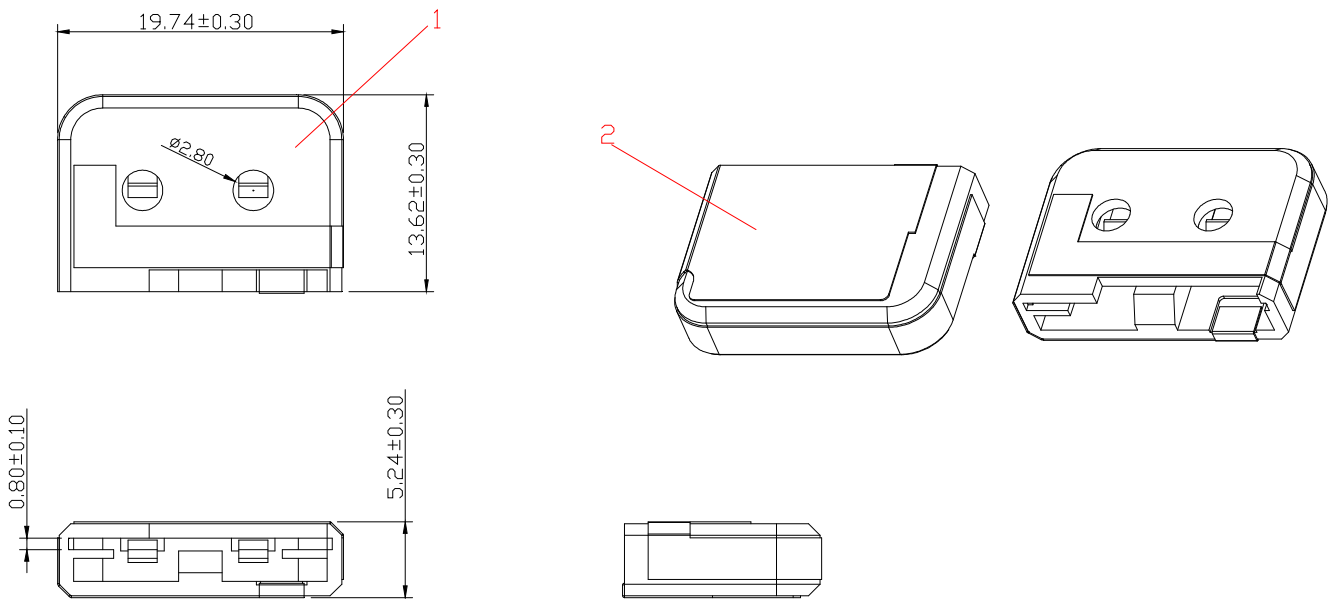
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A1

3. Mechanical Specification:

3-1 Specification Drawing



PARTS LIST			
ITEM NO	DESCRIPTION	MATERIAL SPECIFICATION	Q'TY
1	HOLDER	ABS757	1
2	FPCB	PI substrate + ED copper + 3M467	1

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