

We connect • We Protect

We offer suitable solutions to meet customer's specific requirements

Application Note no.031

Chip Antenna Series

2.4 / 5 GHz Dual Band Chip Antenna

ACM3-5036-A1-CC-S

Prepared	Checked	Approved
Tommy	Enzo	Jimmy



INPAQ Technology Co., LTD

<http://www.inpaq.com.tw>

TEL :+886-37-585-555

FAX : +886-37-585-511

Innovation 、 Nature 、

People 、 Advance 、 Quality

Application Note

2.4 / 5 GHz Dual Band Chip Antenna – ACM3-5036-A1-CC-S

Revision History: 2014-01-06 Rev.A0

2014-06-03 Rev.A1

2015-01-16 Rev.A2

Previous Version :

Page	Subjects (major changes since last revision)	Version
All	Make up all document	A0
P2	1. Remove L1 、W1 2. Add pad configuration and pad assignments	A1
P3	Add pad number	
P2	Add pad dimension	A2

ACM3-5036-A1-CC-S Application Note

Catalog

Applications	1
Features	1
Electrical Characteristic	1
Antenna Dimension	2
Recommended PCB Layout	3
Performance on Middle of Long Side	4
VSWR	4
3D Radiation Pattern	5
Efficiency and Peak Gain	6
2D Radiation Pattern	7
The Efficiency and Bandwidth for Different Location	8
Contact Information	9

Applications

This antenna is designed for 2.4/5 GHz dual band application and it's suitable for cellular phones, PDA, notebook, navigator, and all devices which have 2.4/5 GHz dual band WiFi, Zigbee, Bluetooth function.

Features

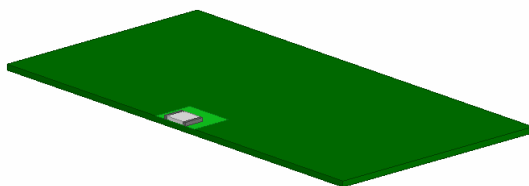
- Omni-directional radiation
- High Efficiency
- Low profile and compact size(5.2 x 3.7 x 0.7mm)
- Low cost
- Lead free soldering compatible
- RoHS compliant
- Tape and reel packing

Electrical Characteristics

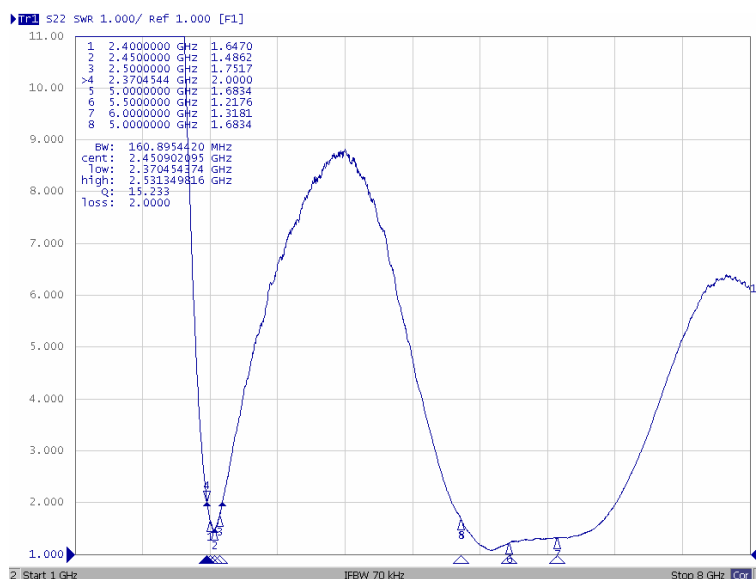
Item	Specification	
Frequency Band	2400 ~ 2500 MHz	5000 ~ 6000 MHz
Polarization	Linear	
Impedance	50 ohm Typ.	
VSWR	Less than 2.0	Less than 2.0
*Peak Gain	3.0 dBi Typ.	3.3 dBi Typ.
*Peak Efficiency	73.4% Typ.	80.2% Typ.

* Test condition: Test board size 80*40 mm
Matching circuit may be required

Performance on Middle of Long Side

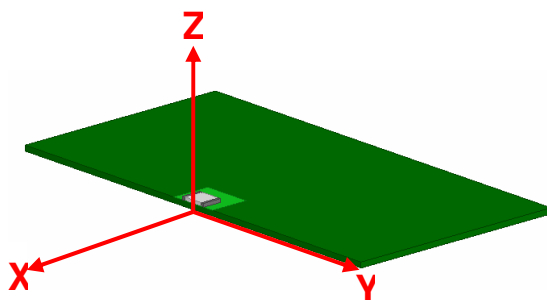


VSWR



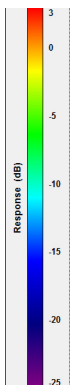
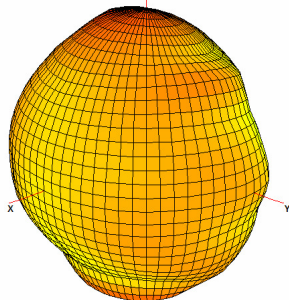
Frequency (MHz)	VSWR
2400	1.7
2450	1.5
2500	1.7
5000	1.7
5500	1.2
6000	1.3

3D Radiation Pattern

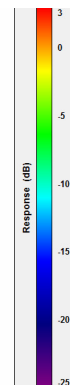
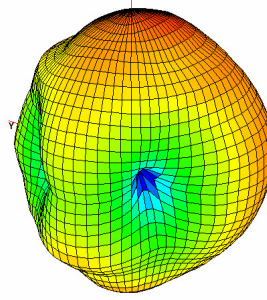


2450 MHz

Azimuth = 109.4
 Elevation = -41.6
 Roll = -61.9

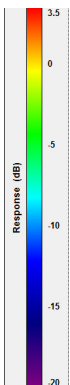
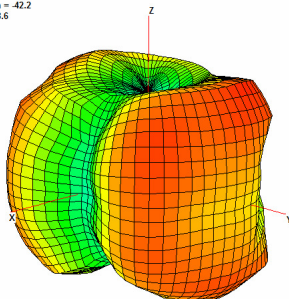


Azimuth = 74.4
 Elevation = 31.9
 Roll = 61.8

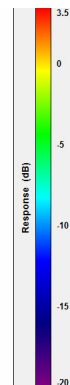
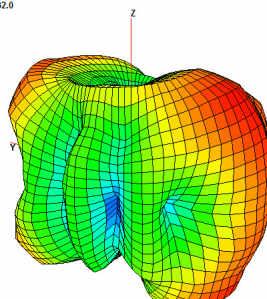


5500 MHz

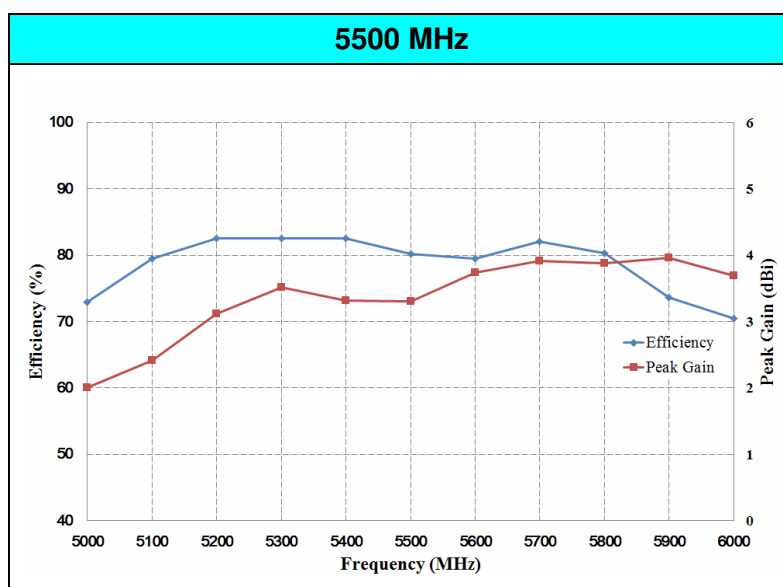
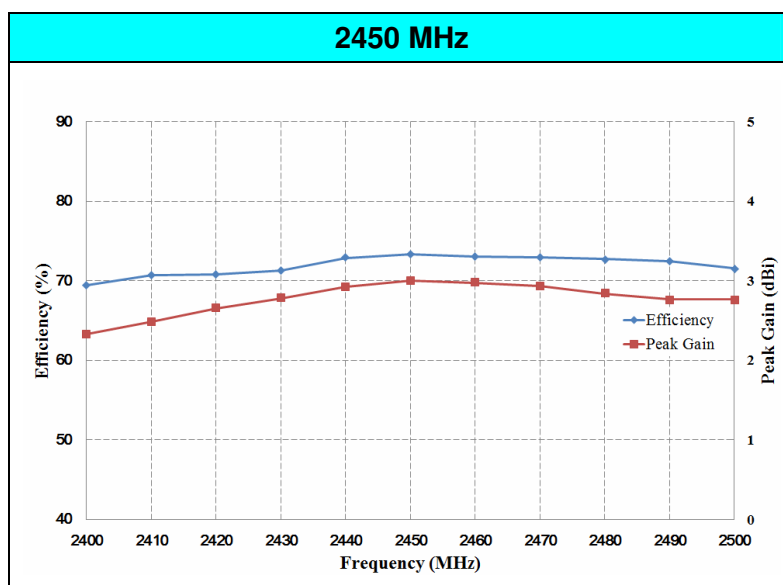
Azimuth = 105.4
 Elevation = -42.2
 Roll = -68.6



Azimuth = 74.6
 Elevation = 32.0
 Roll = 62.0

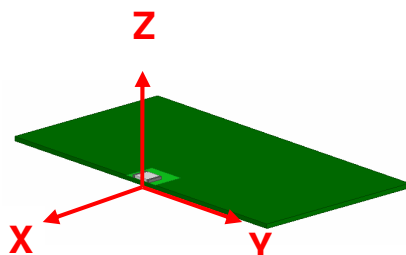


Efficiency and Peak Gain

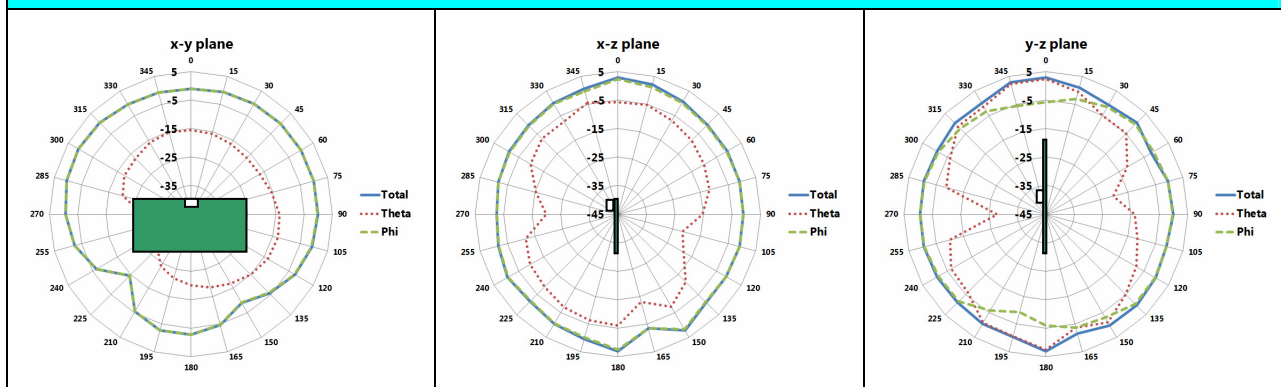


Frequency (MHz)	Efficiency (%)	Peak Gain (dBi)
2400	69.5	2.3
2450	73.4	3.0
2500	71.5	2.7
5000	72.9	2.0
5500	80.2	3.3
6000	70.5	3.6

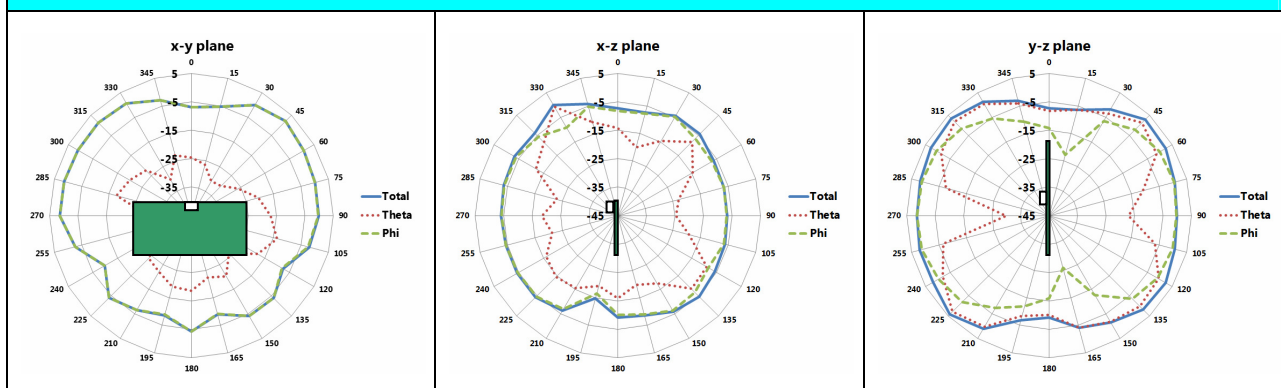
2D Radiation Pattern



2450 MHz



5500 MHz



Contact Information

INPAQ Technology Co, LTD

Taiwan Chunan

ADD : No.11, Ke-Yi St., Chunan, Miaoli 35059, Taiwan (R.O.C.)

TEL : +886-37-585-555

FAX : +886-37-585-511

E-Mail : info@inpaq.com.tw

Web site : <http://www.inpaq.com.tw>

China Office

ADD : No. 1800 Zhongshan West Road, 4th Floor, Zhao Feng Universe Building

Block D ,Xuhui District, Shanghai City 200235, Jiangsu Province, China

TEL : +86-21-6440-0398

FAX : +86-21-6440-0138

ADD : Room 402, Bld.212, Tairan Industrial Zone, CheGongMiao, FuTian District,
Shenzhen City 518000, Guangdong Province, China

TEL : +86-755-8279-4585

FAX : +86-755-8279-4565

ADD : Room No.608,Plaza B, GreenLand SOHO Association, Zhangbayi Road,
Gaoxin Area , Xi'an City

TEL : +86-029-6569-1168

FAX : +86-029-6569-1158

USA Office

ADD : 21 Echo Brook Road, Rochester, NH 03839, U.S.A.
TEL : +1-603-332-6222
FAX : +1-603-509-2900

Japan Office

ADD : 2-13-1, Stokanda, Chiyoda-ku, Tokyo, 1010021, Japan
TEL : +81-03-3255-6691
FAX : +81-03-3255-6601

Korea Office

ADD : 221 Raemian Seocho Univill, 1445-4, Secho-Dong, Secho_gu, Seoul, Korea
130-070
TEL : +82-2-584-8959
FAX : +82-2-584-8951

