

料件首件檢查報告

FAI Report

料 號 Part Number	1710010111110	品 名 Part Name	ANT-WDB-PNF-1011				
製 造 商 Manufacture Name	士 誼	製造商料號 Manufacture Part Number	TPX-026XNFX9-244				
撰寫單位 Department	CE	撰寫人 Writer	Travy	日 期 Date	2022/4/21	文件版本 Revision	C

料件承認作業確認
Approval Checklist

1.工作/儲存溫度查核（五金料件除外） ☒ 已完成 Completed (T_{OP} : -40~85 , T_{STG} : -40~85) ☐ 其他 Other : _____
 Operating/Storage temperature range check(Except metal parts)

2.製程耐溫查核（僅 SMD/DIP 料件） ☐ 已完成 Completed (T_P : _____°C/_____Sec)
 Processing temperature check (Only SMD/DIP Parts) ☐ 參考附件 Temperature Profile Please refer attached temperature profile : _____
☐ 其他 Other : _____
☐ 符合製程要求 Compliance
☐ 不符合製程要求(需 PE 評估) Non-Compliance of the requirement(Need Process Engineer Assessment)

3.連接器鍍金厚度查核 ☐ _____μ" (inch) ☐ _____μm (meter)
 The thickness check of the gold plate for the contacts of connector

4.MTBF Report ☐ _____ H@_____°C@_____ V or ☐ Failure Rate: _____

5. 1106-LED、1109-Switch、1111-Terminal Block、1115-LCM、1121-Fan、1126-Connector、1701~1711-Cable
 (1)料類需設定機構為 Reviewer 且機構需確認尺寸及組裝相容性公差。
 (2)若為執行「料件承認程序單」或 KCL 流程，則無需設定機構為 Review，因於該流程機構已確認尺寸及組裝相容性公差。

6.可用容量查核（僅記憶卡/模組、硬碟類料件） ☐ 已完成 Completed (_____Byte)
 User Capacity Check (Only Flash Memory Card/Module, Hard Disk)

7. RAM Module 的顆粒廠牌、數量及速度查核 ☐ 已完成 Completed Chip Brand: _____ Number of RAM _____
 RAM Module Chip Brand、Number of RAM and Component Config Check Component Config: _____

封裝及包裝說明 Package and Packing Description

IC 封裝方式 Package :

承 認 書

APPROVAL SHEET

CUSTOMER: 四零四科技股份有限公司

CUSTOMER MODEL NO.:

JOYMAX MODEL NO.: TPX-026XNFX9-244

DESCRIPTION: #026 2.4+5GHz Panel Antenna

REV.: A

DATE: 2021/1/19

Customer Approval

Joymax Approval



 士誼科技事業股份有限公司
JOYMAX ELECTRONICS CO., LTD.

Tel: +886-3-4335698 Fax: +886-3-4337898
E-mail: sevice@joymax.com.tw

桃園市中壢區中壢工業區東園二路5號
No.5 Dong Yuan Rd.2, Zhongli industrial Park,
Zhongli Dist, Tao Yuan, Taiwan, R.O.C.
<http://www.joymax.com.tw>

Index

1. Specification & Dimension	-----	3
2. Test Condition & Report		
2.1 V.S.W.R	-----	5
2.2 Pattern		
2.2.1 XY-Plane	-----	6
2.2.2 XZ-Plane	-----	7
2.2.3 YZ-Plane	-----	8
2.3 3D Pattern	-----	9
2.4 Gain and Efficiency	-----	11
2.5 Pattern Test Equipment	-----	12
3. Package	-----	13
4. FAI	-----	14
5. ROHS	-----	15
6. Material proof	-----	16

Modification History:

Rev.	Date	Content
A	2021/12/30	

4	3	2	1
	REV ZONE	DESCRIPTION	ECN NO. ENG APPROVED DATE

Electrical Properties	
Frequency Range	2.4~2.4835 GHz 5.15~5.85 GHz
Impedance	50Ω
V.S.W.R.	≤2.0@2.4~2.4835 GHz ≤3.0@5.15~5.35/5.55~5.85 GHz ≤3.5@5.35~5.55 GHz
Radiation	Directional
Gain	10±1 dBi@2.4~2.4835 11±1 dBi@5.15~5.85
Polarization	Vertical
Wave Length , type	Patch
Beam Width(±3dB)	2.4~2.4835 GHz 35°±5°@E-Plane 30°±5°@H-Plane 5.15~5.85 GHz 40°±5°@E-Plane 30°±5°@H-Plane
Test Ground Size	N/A
Mechanical Properties	
Radome Material	PBT
Connector Type	N Jack
Connector Finish	PIN:Gold plated 1u" min. Body: Ni plate 60 u" min.
IP Level	IP-65
Power Handling	10W
Dimension	L=260mm
Weight	767 g (est)
Operating Temp.	-40℃ ~ +85℃
Storage Temp.	-40℃ ~ +85℃

UNLESS OTHERWISE SPECIFIED
TOLERANCES ON:

X ± 1
X.X ± 0.5
X.XX ± 0.25
ANG. ± 2.0°

THIRD ANGLE PROJECTION

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO JOYMAX AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION.

DRAWN BY: JOAN
DESIGNED BY: SARA
CHECKED BY: KY
APPROVED BY: MATT

MATERIAL:

FINISH:

SCALE:1/1;UNIT:mm

DATE:2020/12/30

REV: A

TITLE : #026 2.4+5GHz Panel Antenna,Page1/3

DRAW NO. : SSP-200192

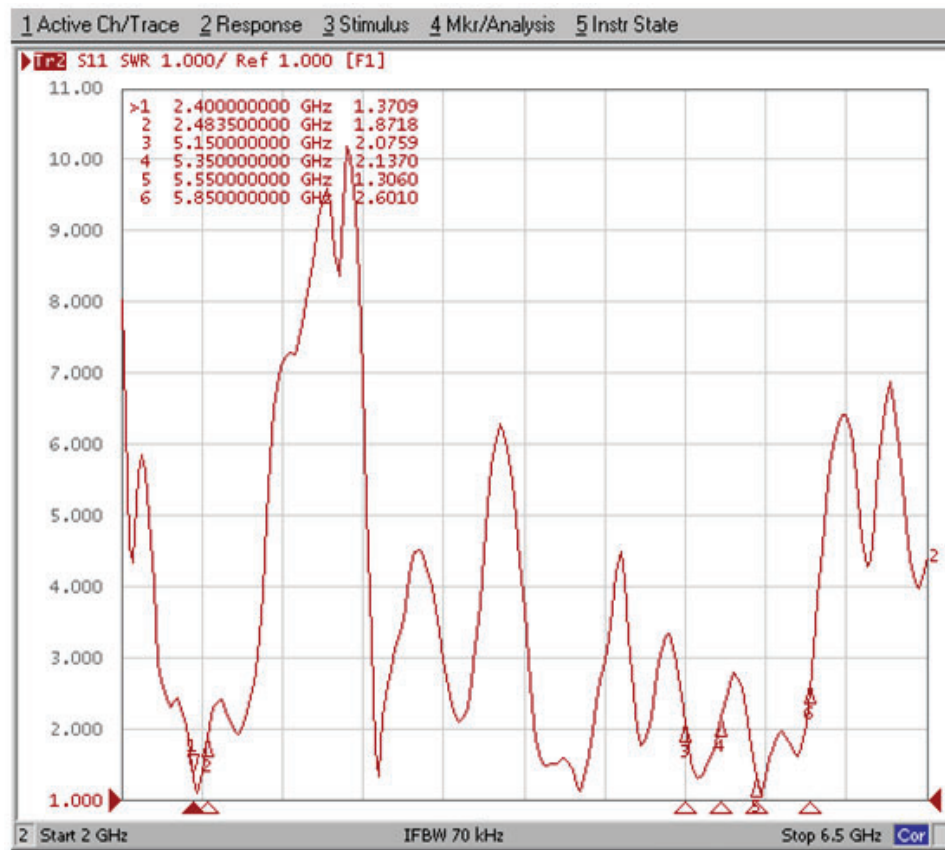
PART NO. : TPX-026XNFX9-244

JOYMAX ELECTRONICS CO.,LTD.

2. Test Condition & Report

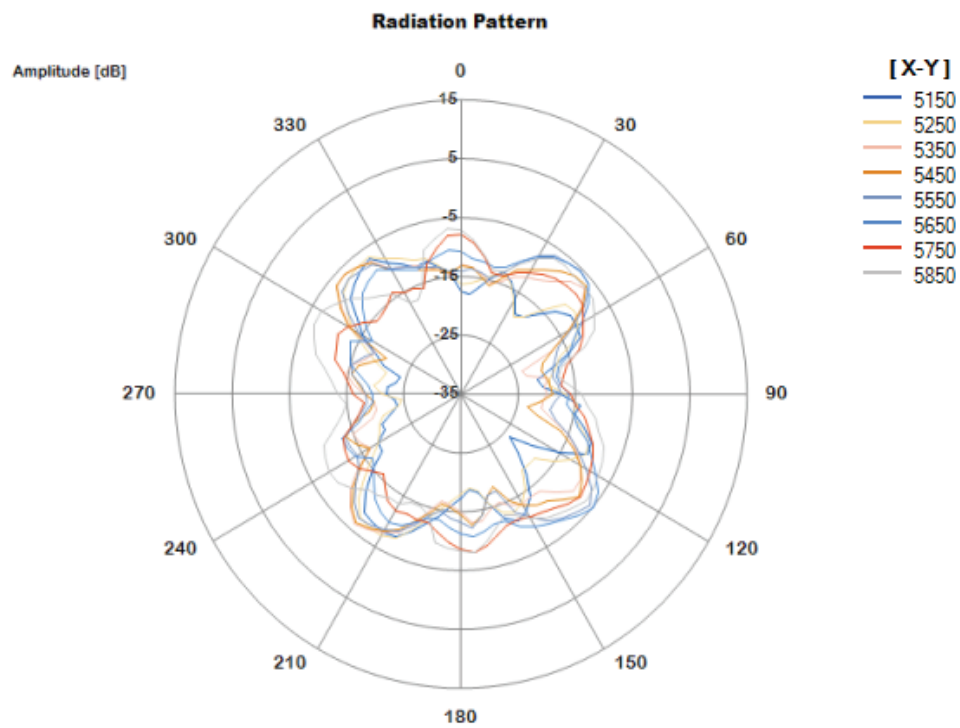
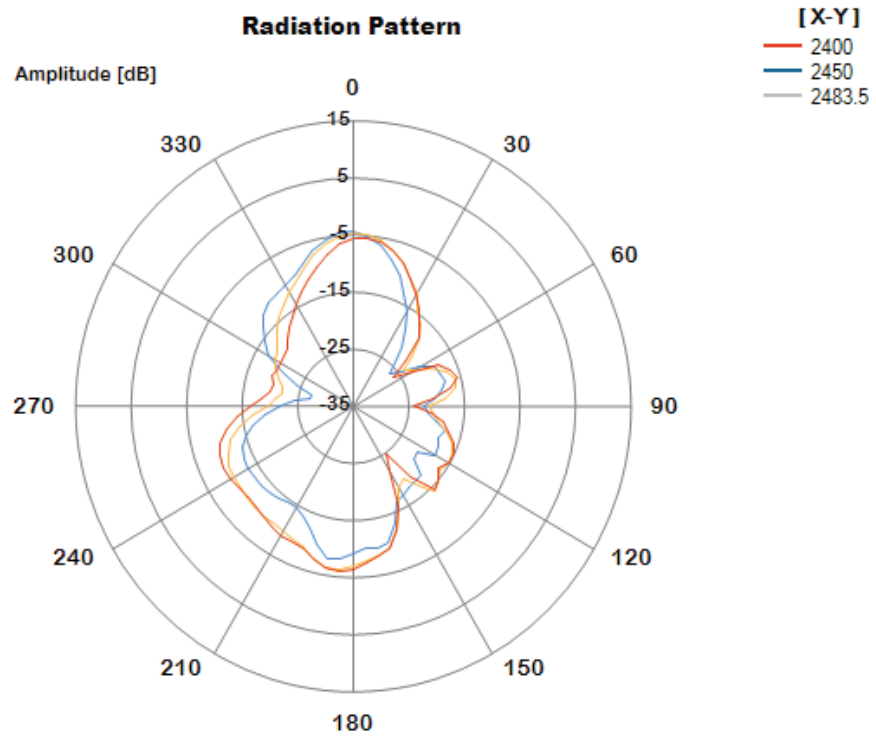
2.1 V.S.W.R

V.S.W.R.



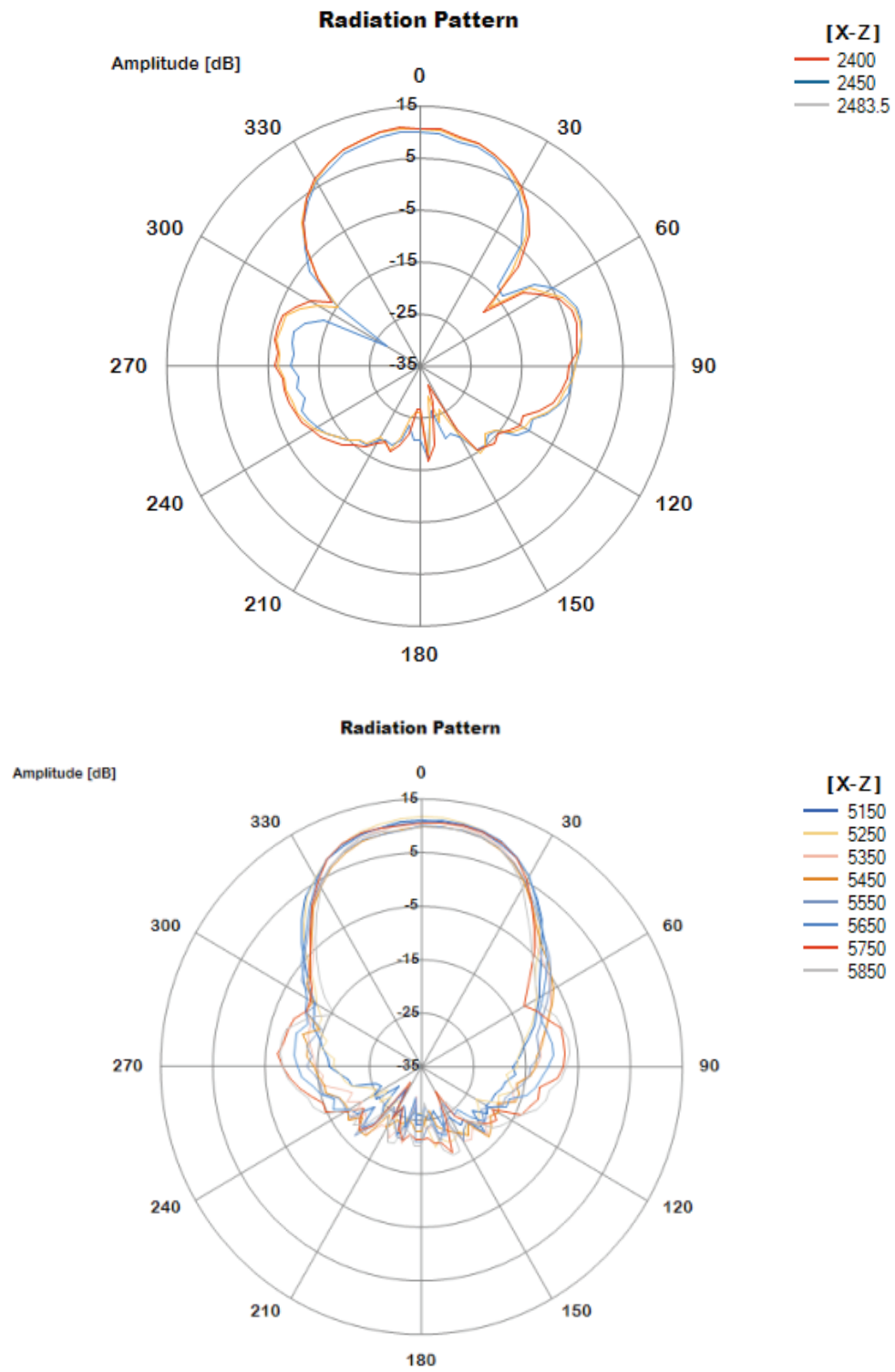
2.2 Pattern

2.2.1 XY-Plane



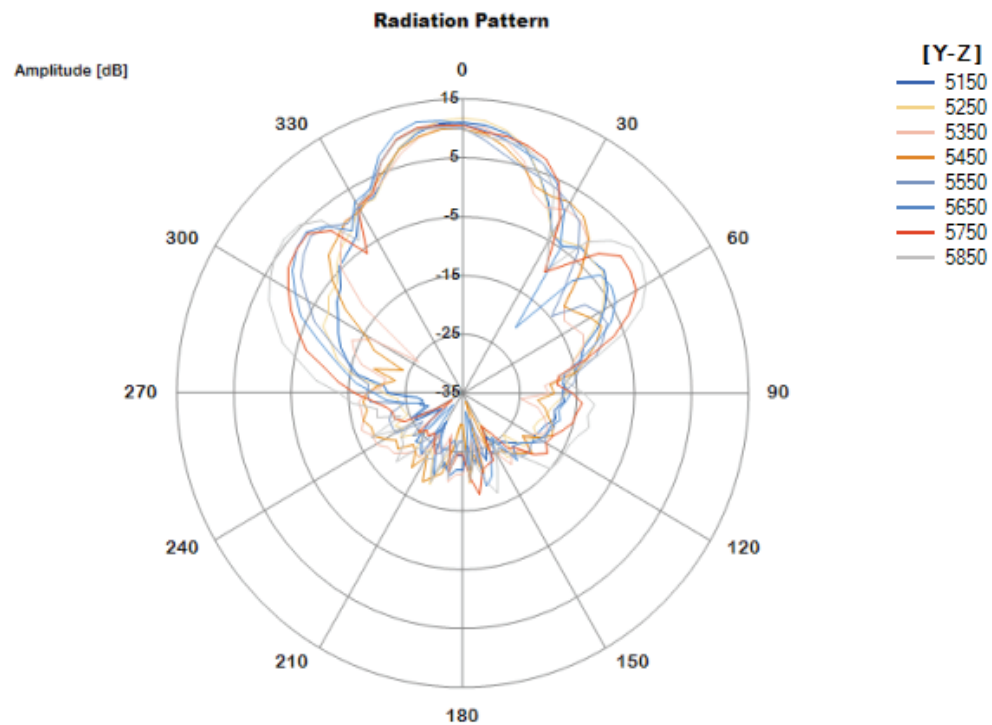
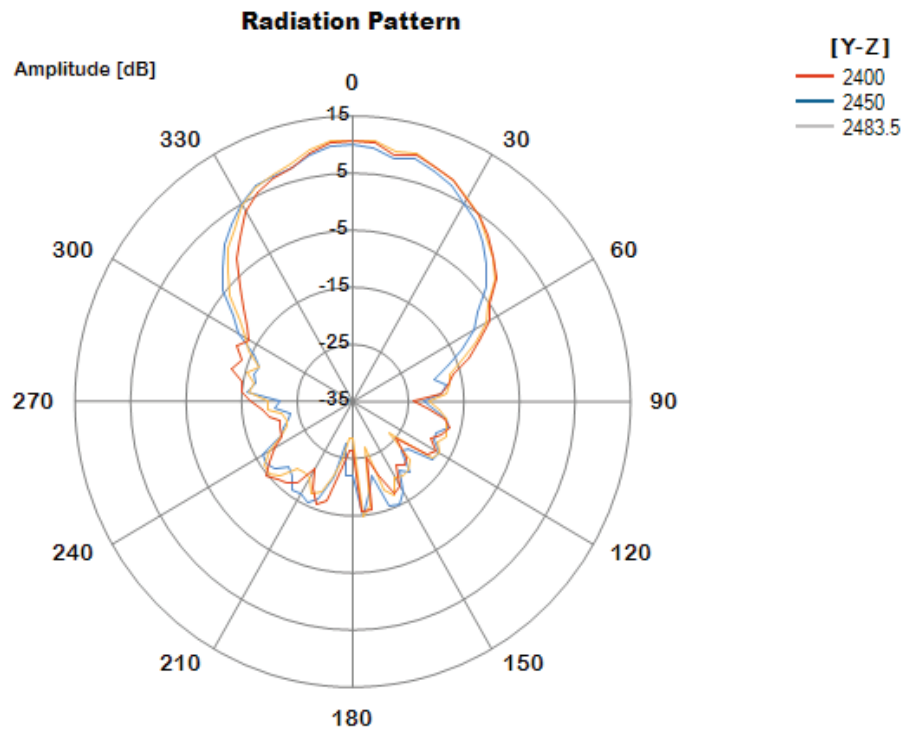
2.2 Pattern

2.2.2 XZ-Plane

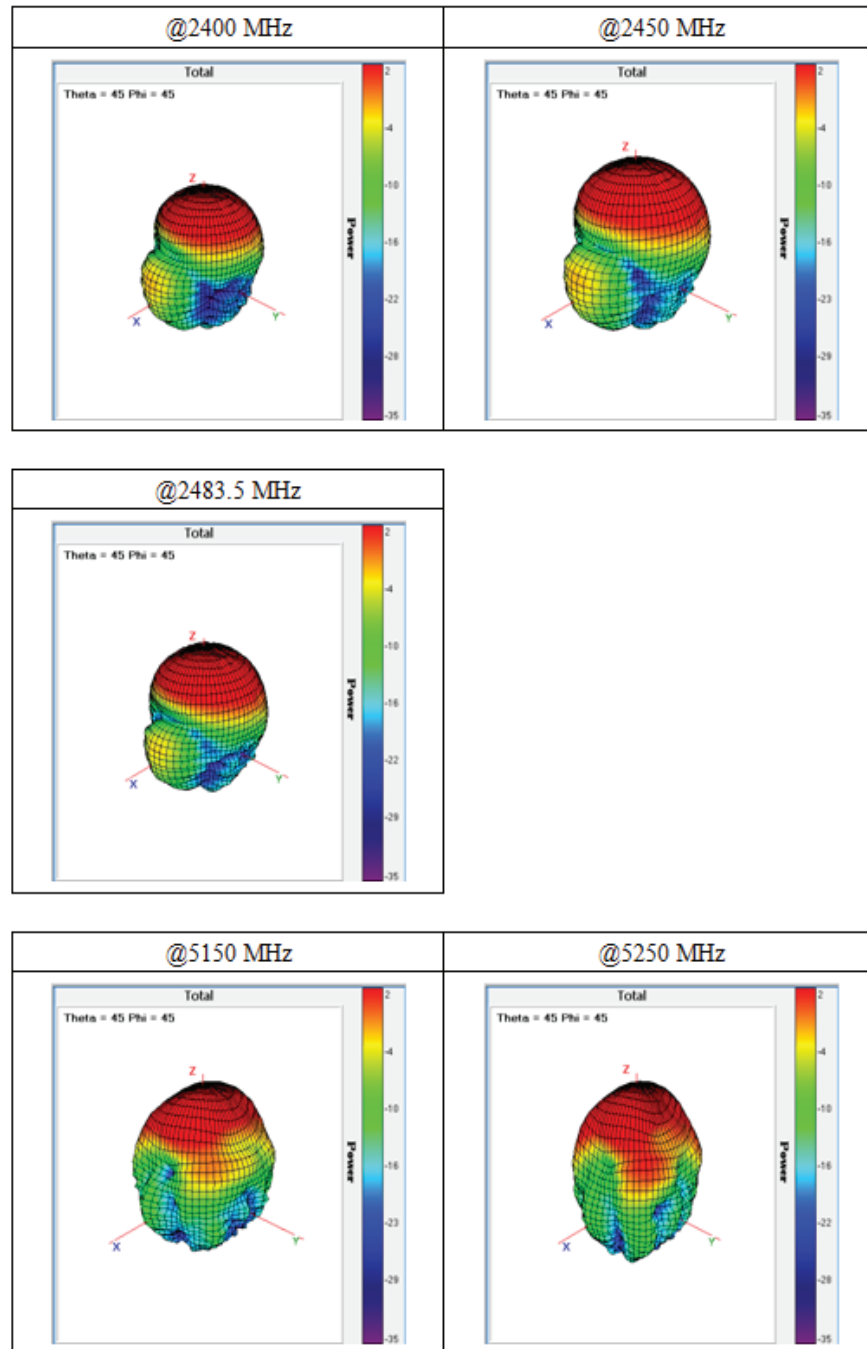


2.2 Pattern

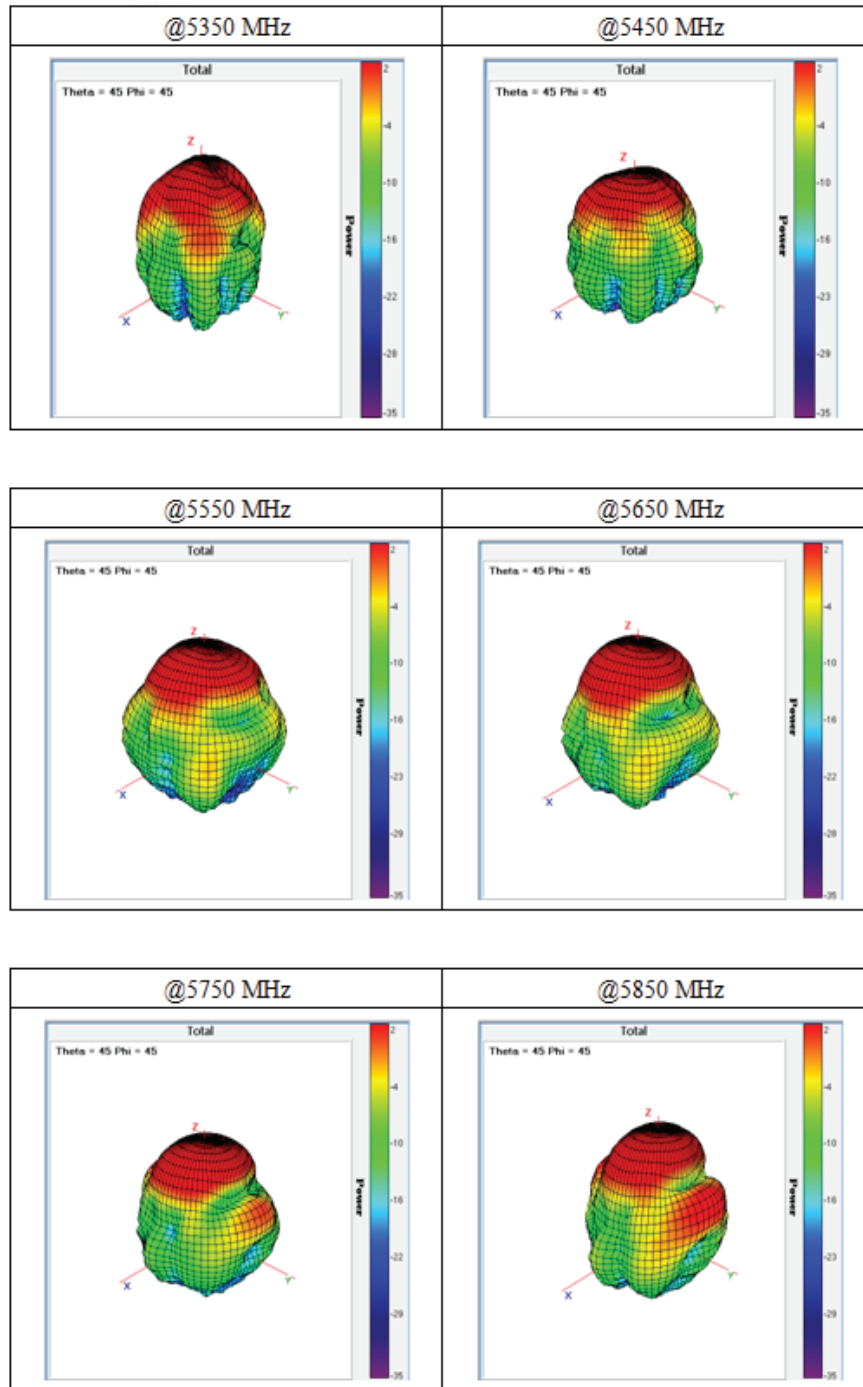
2.2.3 YZ-Plane



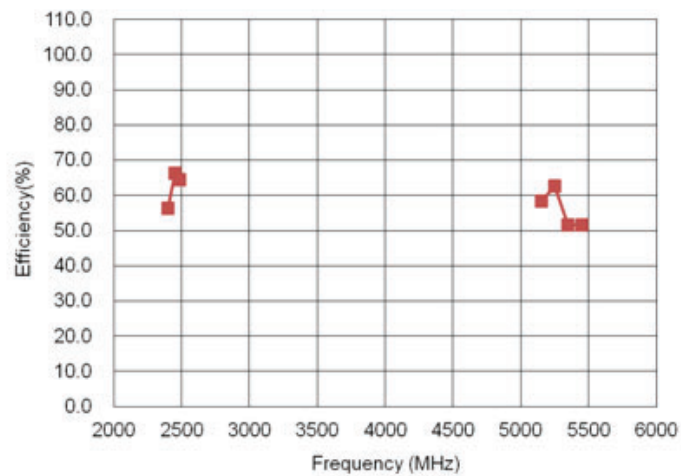
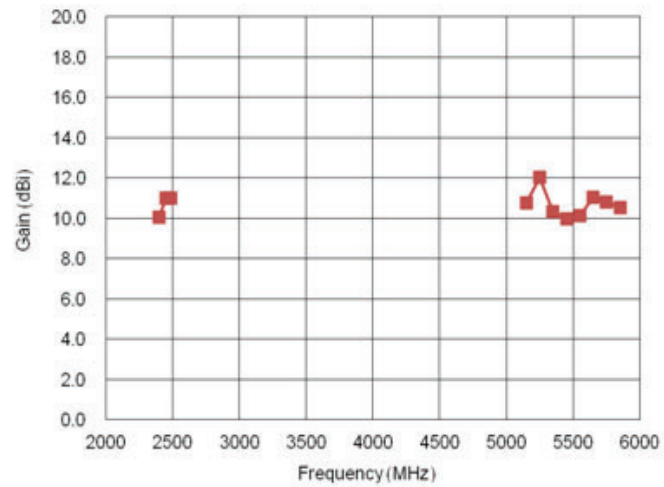
2.3 3D Pattern



2.3 3D Pattern



2.4 Gain and Efficiency



Frequency (MHz)	2400	2450	2483.5
Gain (dBi)	10.04	11.00	10.99
Efficiency (%)	56.4	66.3	64.4

Frequency (MHz)	5150	5250	5350	5450	5550	5650	5750	5850
Gain (dBi)	10.75	12.04	10.35	9.98	10.14	11.06	10.82	10.52
Efficiency (%)	58.3	62.6	51.5	51.5	53.0	57.8	64.1	67.2

2.5 Pattern Test Equipment

Anechoic chamber: 100MHz~6GHz 8*6*6m (※ 1m Quiet zone at 800MHz)

Source Antenna: ETS-3164 Dual Polarized Horn

Network Analyzer: Agilent E5071B 100kHz~8.5GHz

