

天線客服報告書

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1.目的:

使用 AT1608-A2R4HAA 調試並量測場型。

2.結論與建議

2.1 天線增益如下表所示:

Gain Table

Unit in dBi	XY-plane		XZ-plane		YZ-plane		Efficiency
	Peak	Avg.	Peak	Avg.	Peak	Avg.	
@2400MHz	-8.8	-12.7	-6.5	-13.7	-6.7	-10.6	7.0%
@2450MHz	-8.0	-10.8	-5.1	-12.5	-4.9	-9.9	8.0%
@2500MHz	-11.1	-14.6	-7.9	-15.8	-8.1	-13.3	4.0%

2.2 結論:

AT1608-A2R4HAA 量測結果如上表所示，因板子較小且淨空區周圍被電池遮蔽，導致效率較差，建議客戶使用附件二的匹配值進行實測。

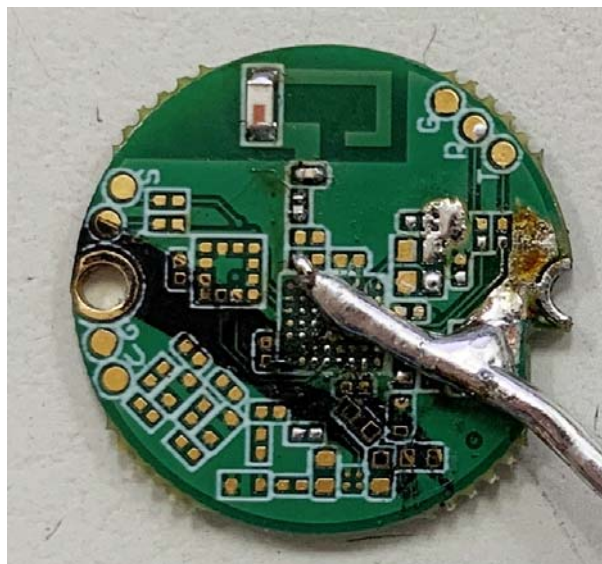
3.建議 Matching 值： 詳見附件 2

4.場形及各項量測方法、結果:詳見附件 3

附件

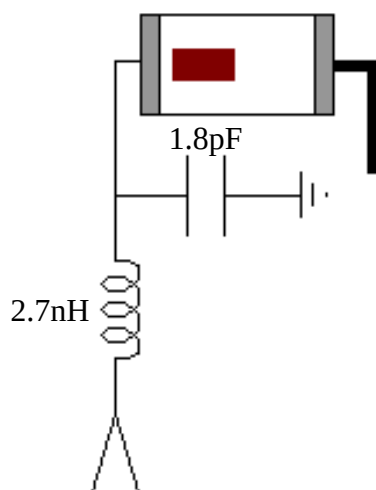
1. PCB 和外殼結構圖:

AT1608-A2R4HAA



2. 天線匹配電路示意圖:

AT1608-A2R4HAA



匹配電路使用之元件:

AT1608-A2R4HAA	1.8pF	2.7nH
	250R05L1R8BV4S	HI0603-1B2N7SHT

3. 場型及各項量測方法、結果

A. 儀器設定

▲ 返回損耗(Return Loss) / 駐波比(VSWR):

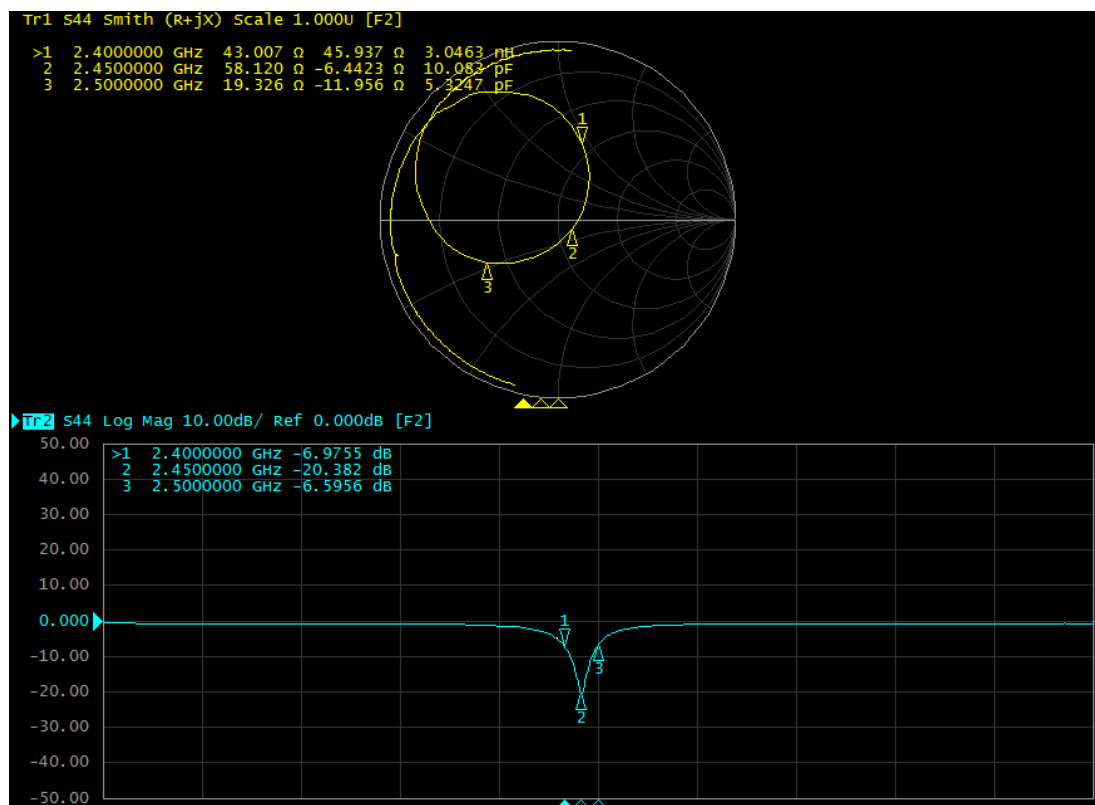
◆ 量測儀器 : vector network analyzer - AG

◆ 校正方法 : open/short/load - Cal. Kit 85052D

▲ 3D Radiation Pattern :

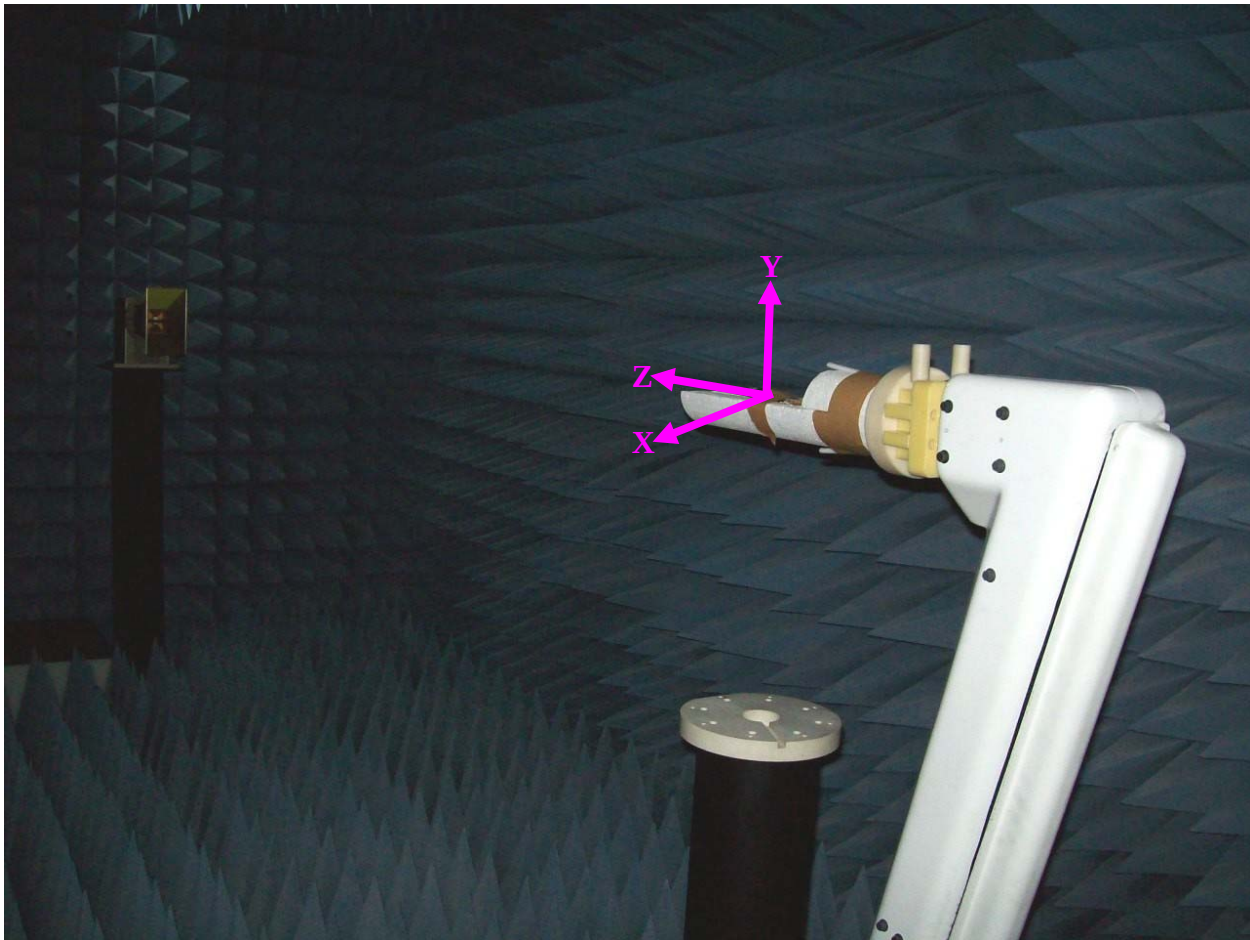
◆ NSI 800F-10 Far Field antenna measurement system

B. AT1608-A2R4HAA 之 Return Loss 量測值



C. 輻射場型圖

◆量測座標圖

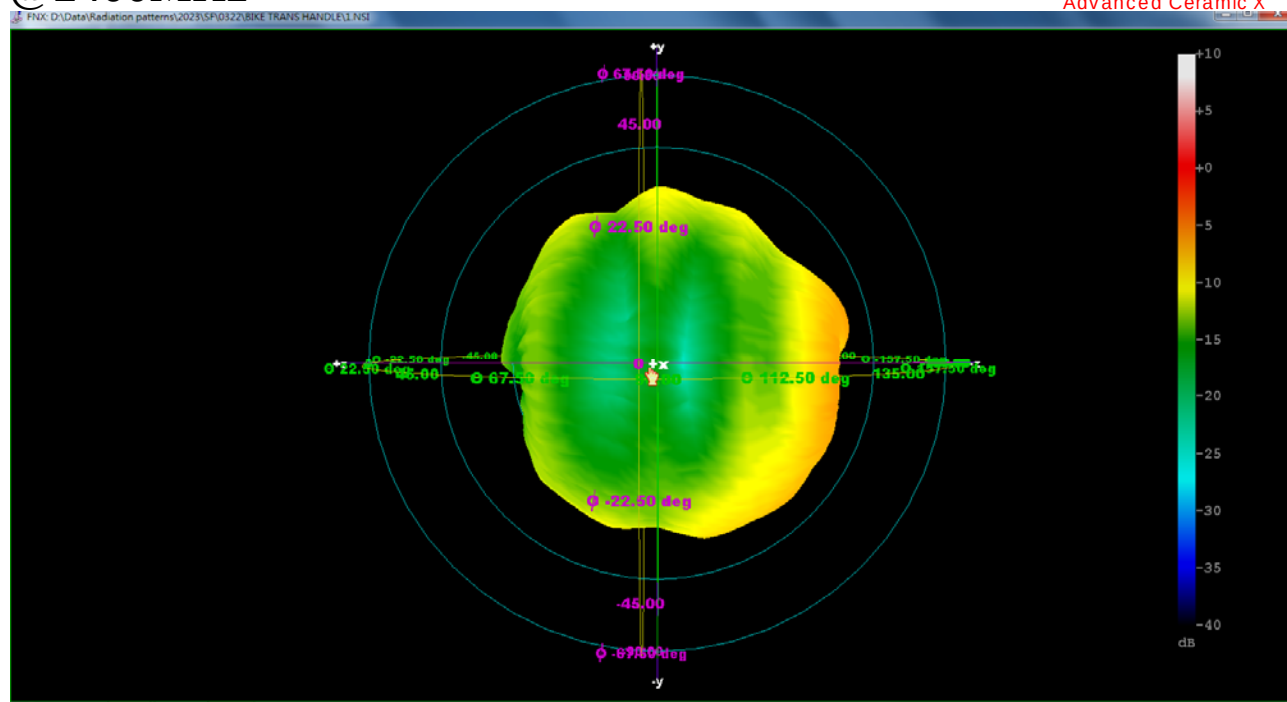


◆各平面定義

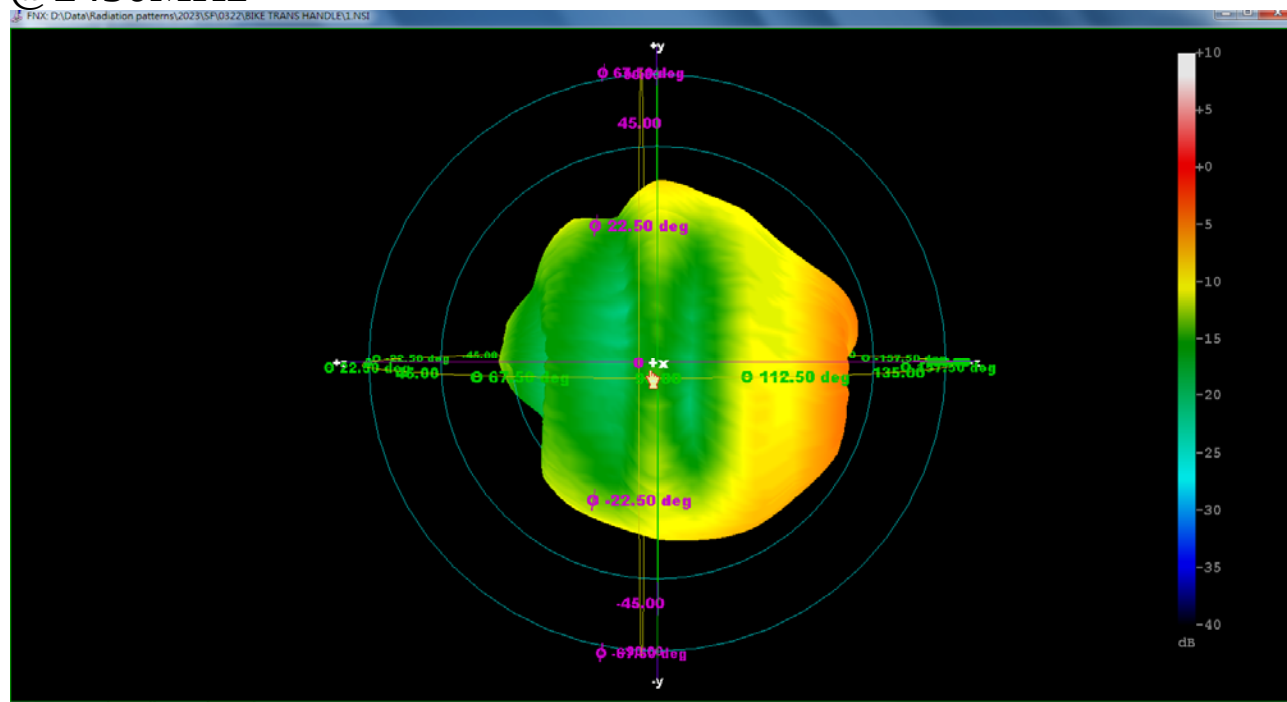
XY-plane	Theta=90°
XZ-plane	Phi=0°
YZ-plane	Phi=90°

◆3D 輻射場型圖

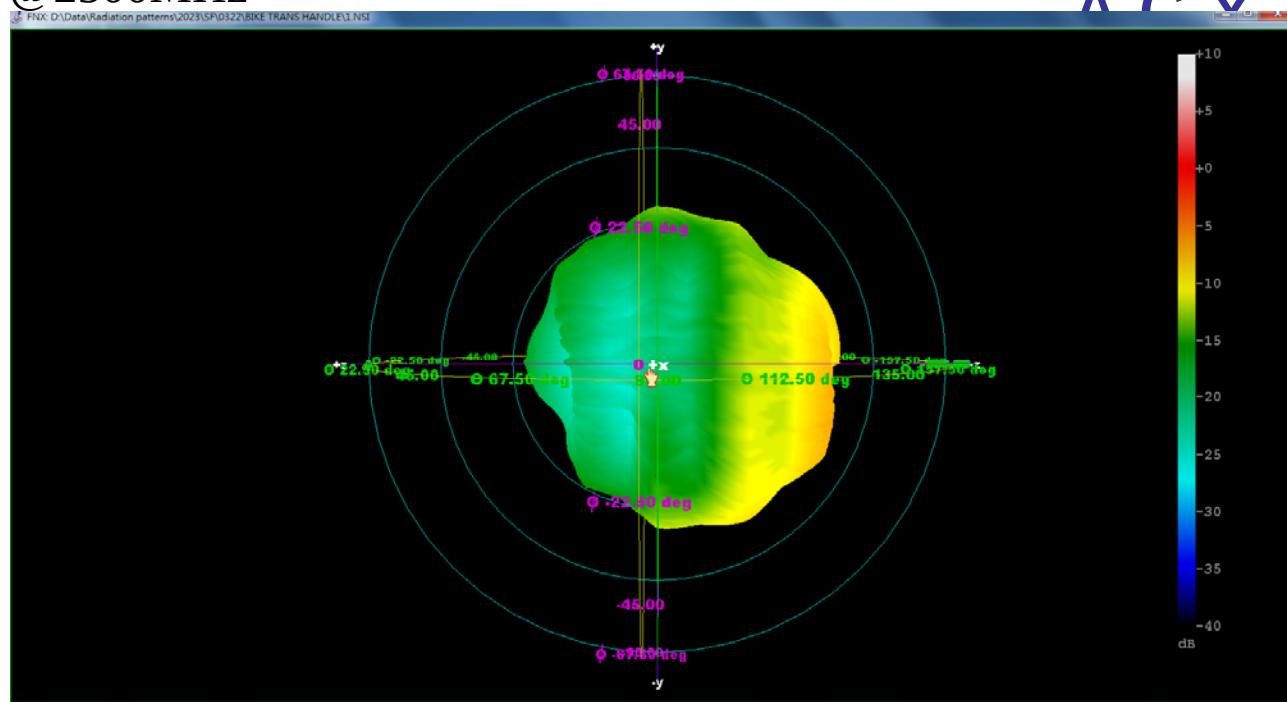
@2400MHz



@2450MHz

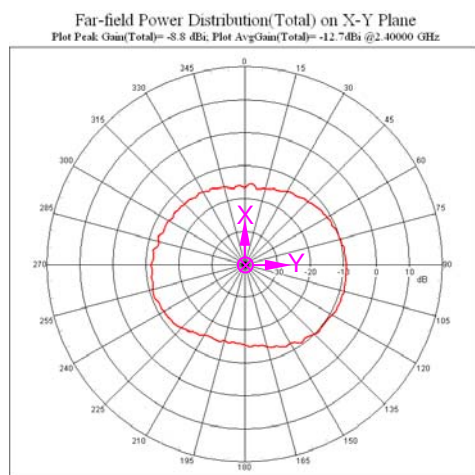


@2500MHz



@2400MHz 之輻射場型圖

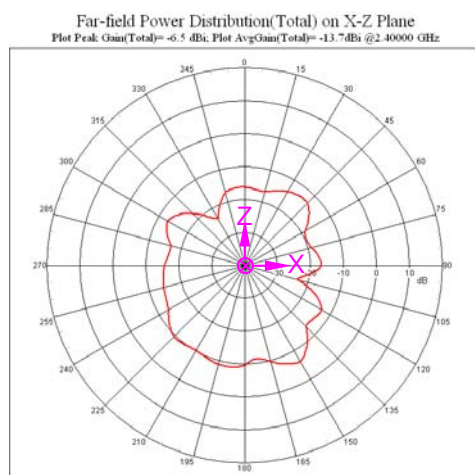
◆XY-plane



Unit : dBi

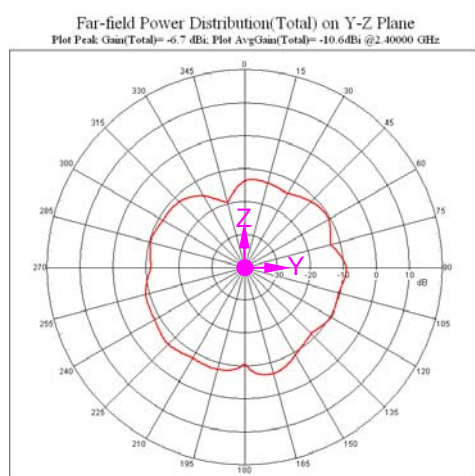
	Peak gain	Avg. gain
XY-plane	-8.8	-12.7

◆XZ-plane



	Peak gain	Avg. gain
XZ-plane	-6.5	-13.7

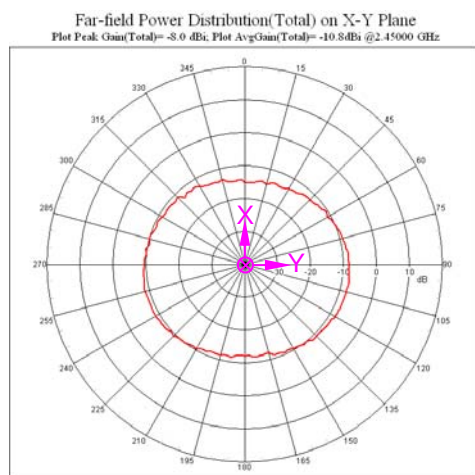
◆YZ-plane



	Peak gain	Avg. gain
YZ-plane	-6.7	-10.6

@2450MHz 之輻射場型圖

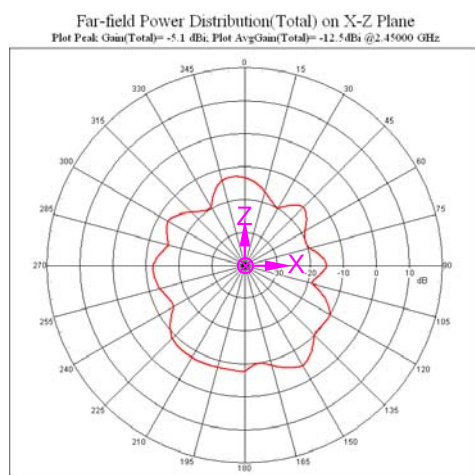
◆XY-plane



Unit : dBi

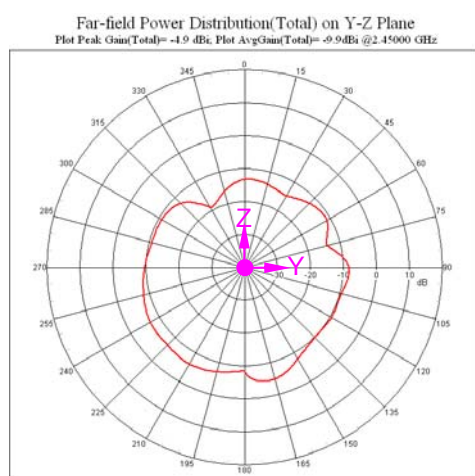
	Peak gain	Avg. gain
XY-plane	-8.0	-10.8

◆XZ-plane



	Peak gain	Avg. gain
XZ-plane	-5.1	-12.5

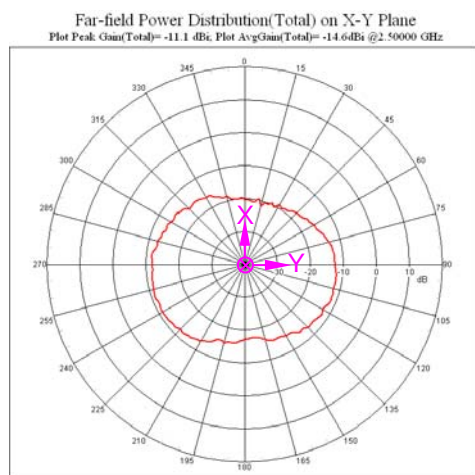
◆YZ-plane



	Peak gain	Avg. gain
YZ-plane	-4.9	-9.9

@2500MHz 之輻射場型圖

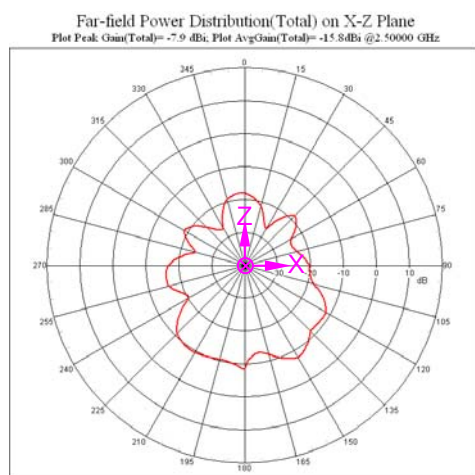
◆XY-plane



Unit : dBi

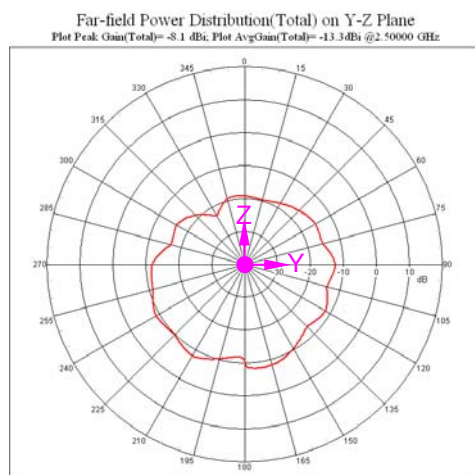
	Peak gain	Avg. gain
XY-plane	-11.1	-14.6

◆XZ-plane



	Peak gain	Avg. gain
XZ-plane	-7.9	-15.8

◆YZ-plane



	Peak gain	Avg. gain
YZ-plane	-8.1	-13.3