No.QEC-1707009

Advanced Ceramic X

Confidential

天線客服報告書

客戶名稱：樺緯物聯

撰寫者：*C.Y CHEN*

核准者：*Jess Lee*

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Advanced Ceramic X Corp.

16 Tzu Chiang Road, Hsinchu Industrial District Hsinchu Hsien 303, Taiwan

TEL:886-3-5987008 FAX:886-3-5987001

E-mail: acx@acxc.com.tw

http://www.acxc.com.tw

1.目的:

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使用 AT3216-T2R4PAA 來調試並量測場型。
Case1:DK-9196
Case2:DK-9197

2.結論與建議

2.1 天線增益如下表所示:

Gain Table

Unit in dBi @2440MHz	XY-plane		XZ-plane		YZ-plane		Efficiency
	Peak	Avg.	Peak	Avg.	Peak	Avg.	
Case1	-2.8	-4.2	-1.0	-3.4	-1.6	-3.7	46.0%
Case2	-2.5	-4.2	-1.2	-3.5	-1.5	-4.0	44.0%

2.2 結論

AT3216-T2R4PAA 經場型量測後其天線增益如上表所示，建議客戶可先依附件 2 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:

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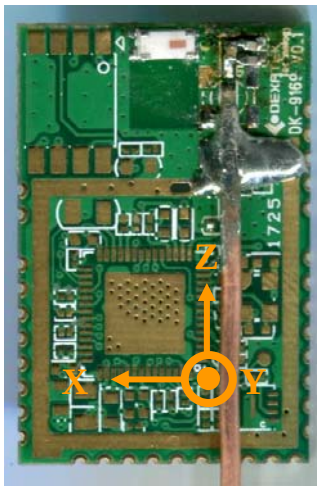
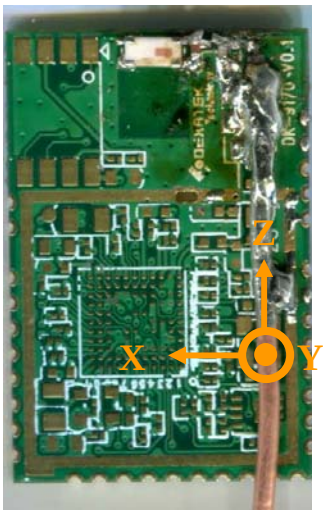
Case1

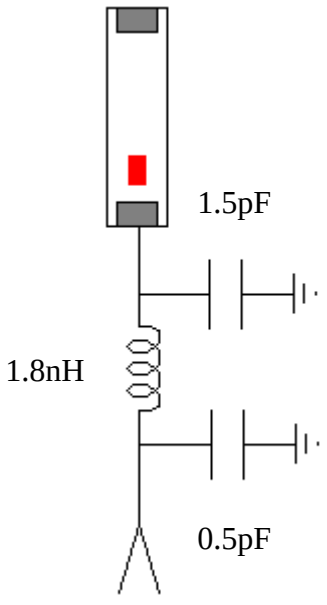


Case2

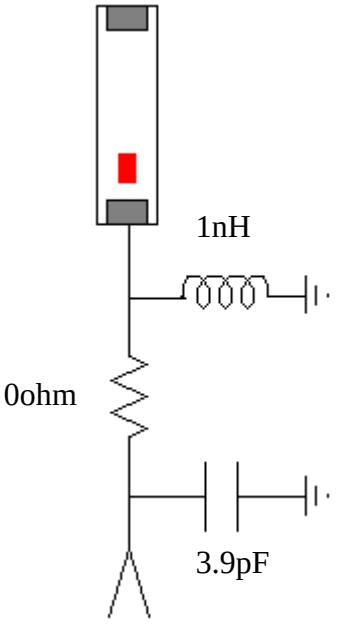


2. 天線匹配電路示意圖:

Case1



Case2



匹配電路使用之元件:

Case1	1.5pF	1.8nH	0.5pF
	201R07S1R5BV4S	HI1005-1B1N8SMT	201R07S0R5BV4S
Case2	1nH	0ohm	3.9pF
	HI1005-1B1N0CMT	RK1005000J20T	201R07S3R9BV4S

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):

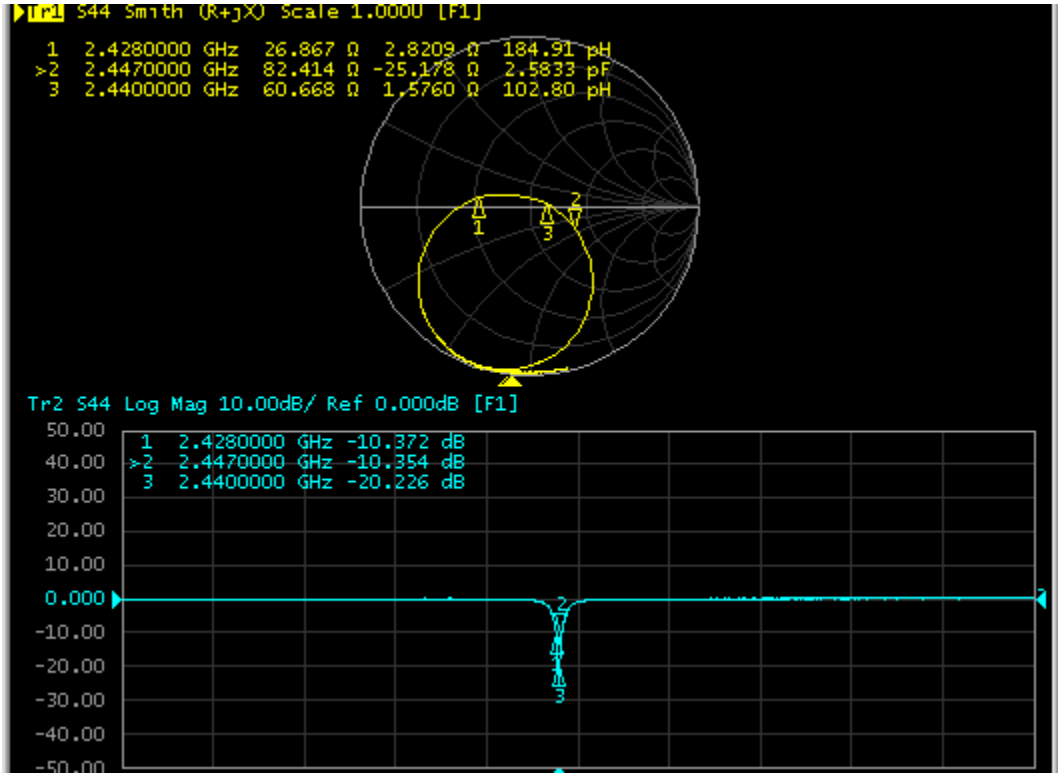
◆量測儀器 ：vector network analyzer - AG

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

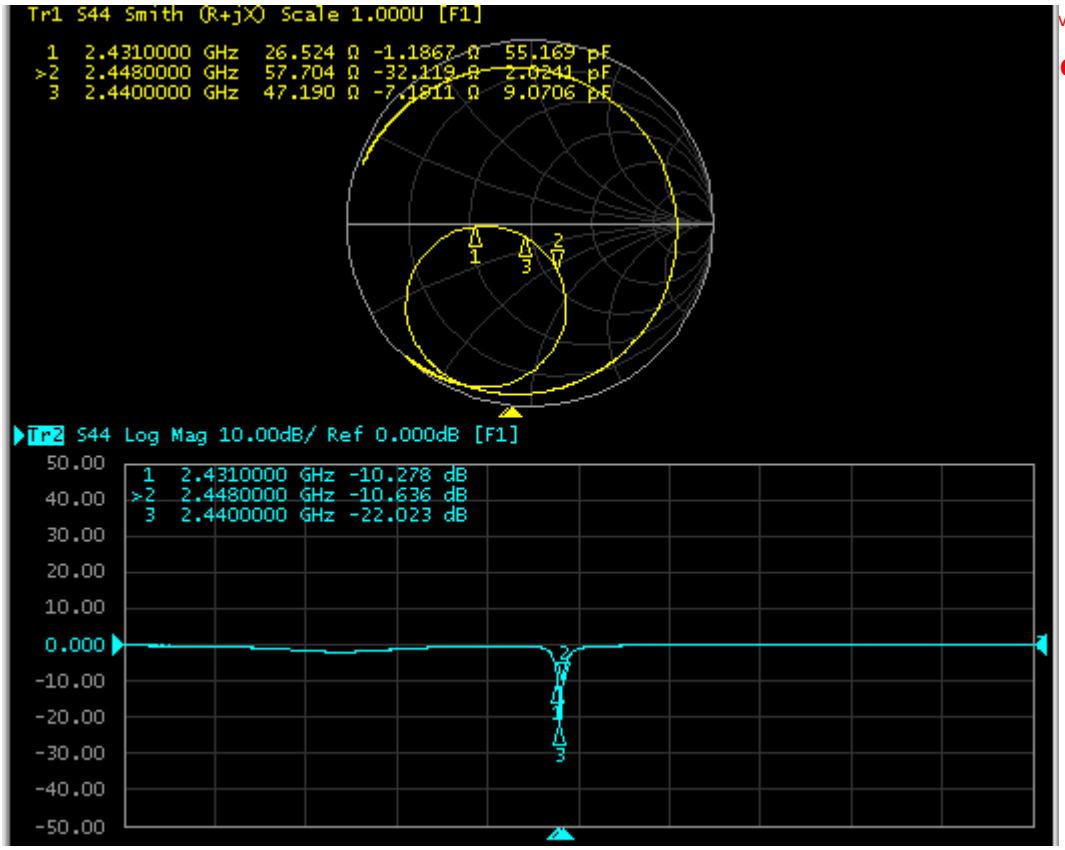
▲3D Radiation Pattern :

◆NSI 800F-10 Far Field antenna measurement system

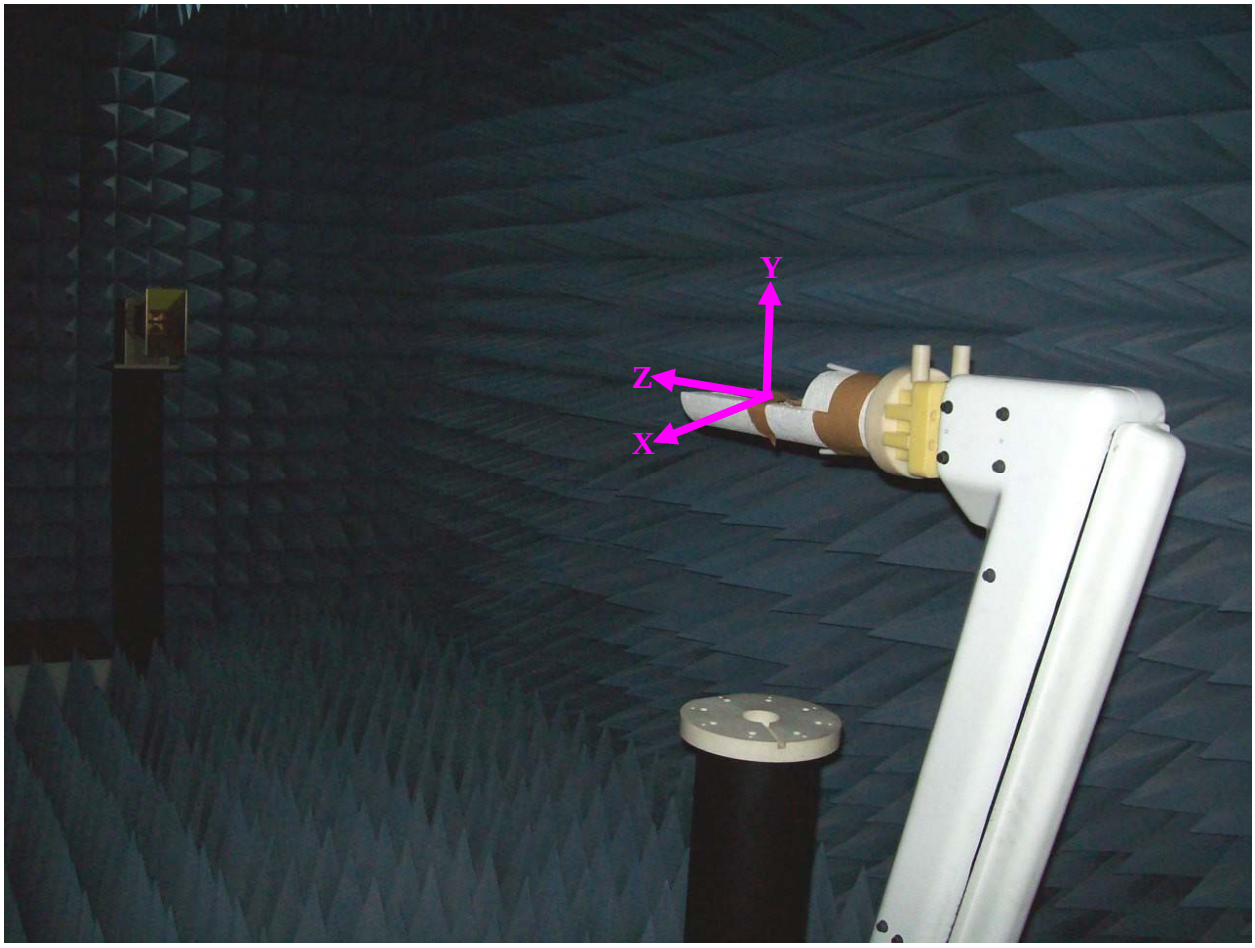
B. Case1 之 Return Loss 量測值



C. Case2 之 Return Loss 量測值



◆量測座標圖

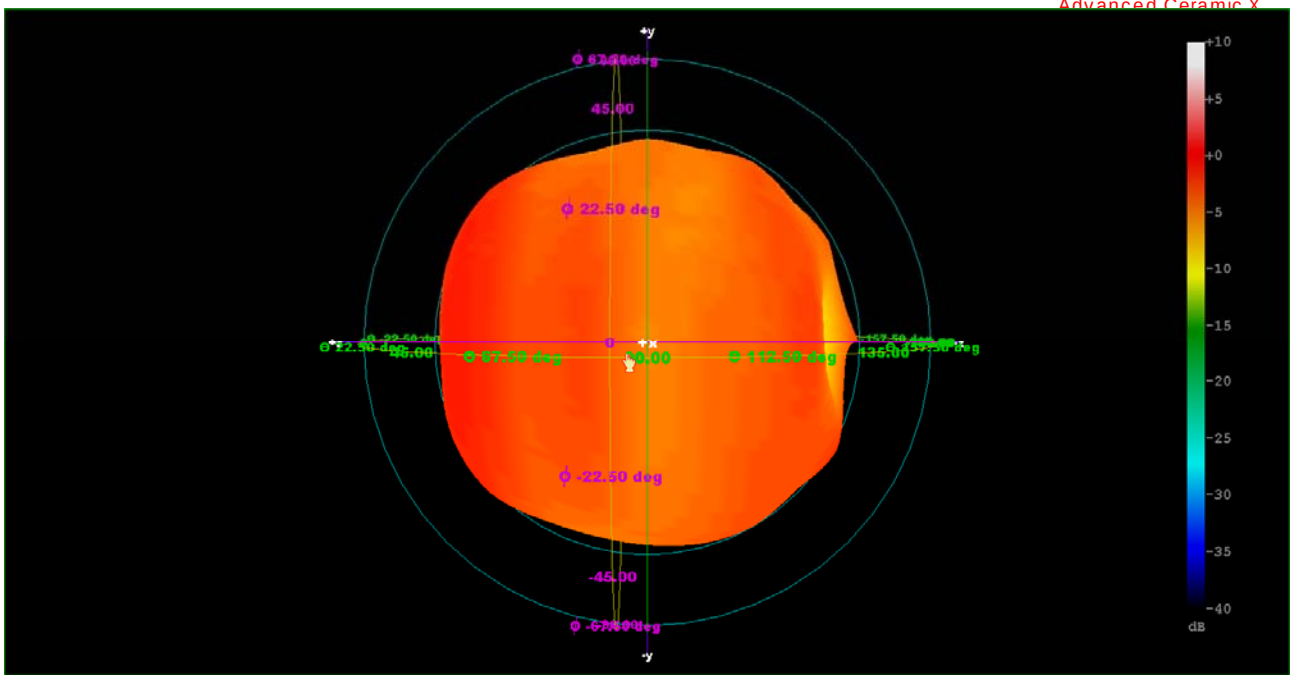


◆各平面定義

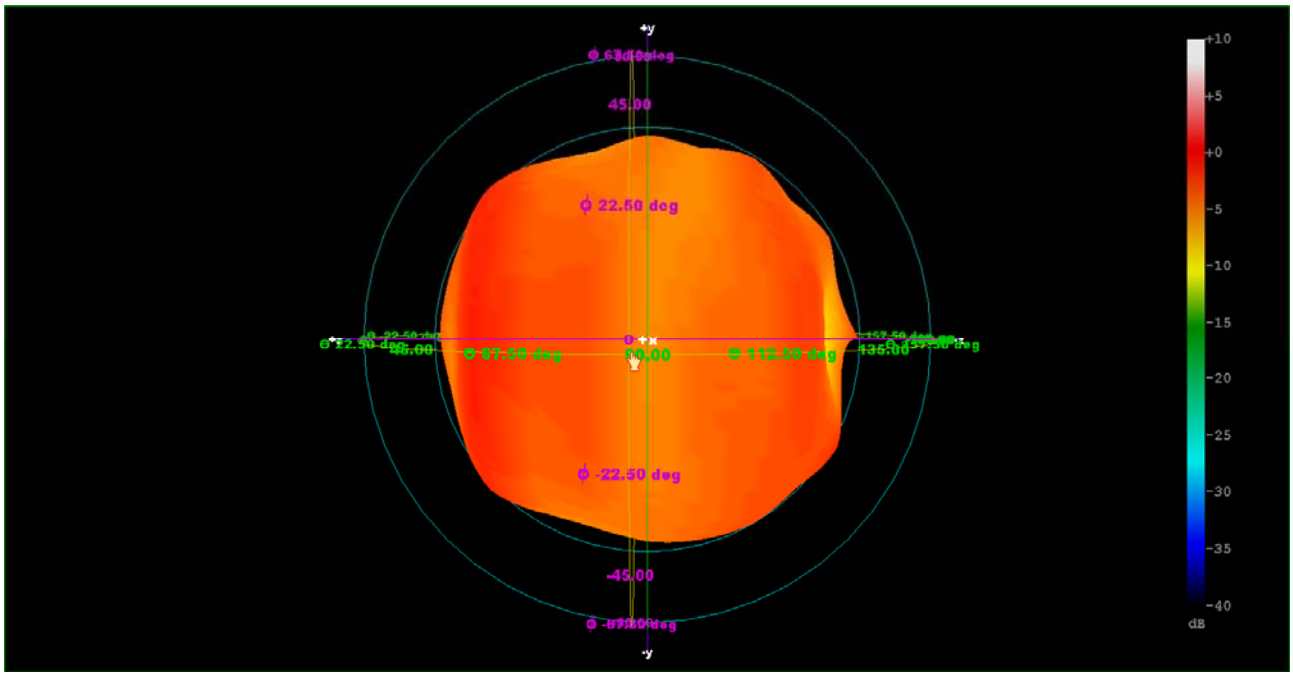
XY-plane	**Theta=90˚**
XZ-plane	**Phi=0˚**
YZ-plane	**Phi=90˚**

◆3D 輻射場型圖

Case1



Case2



Case1 之輻射場型圖

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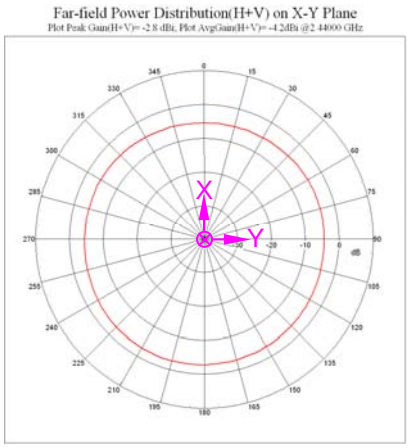
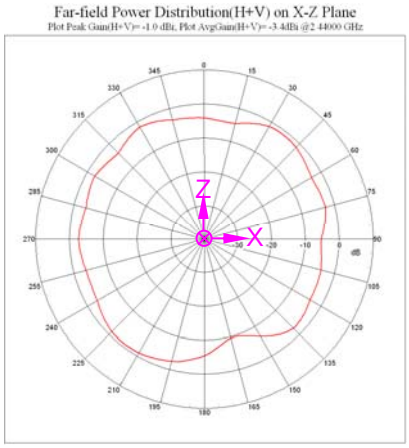
◆XY-plane



Unit : dBi

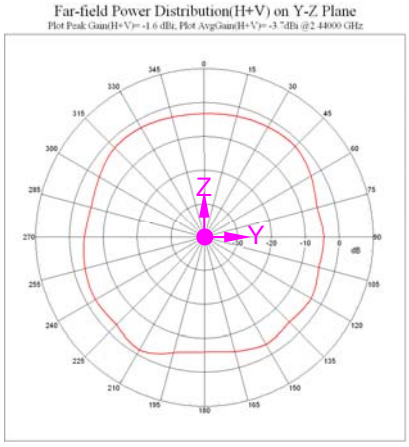
	Peak gain	Avg. gain
XY-plane	-2.8	-4.2

◆XZ-plane



	Peak gain	Avg. gain
XZ-plane	-1.0	-3.4

◆YZ-plane



	Peak gain	Avg. gain
YZ-plane	-1.6	-3.7

Case2 之輻射場型圖

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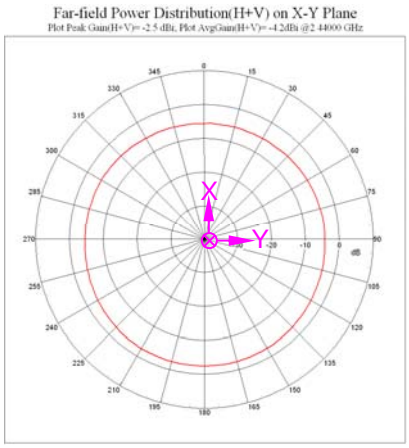
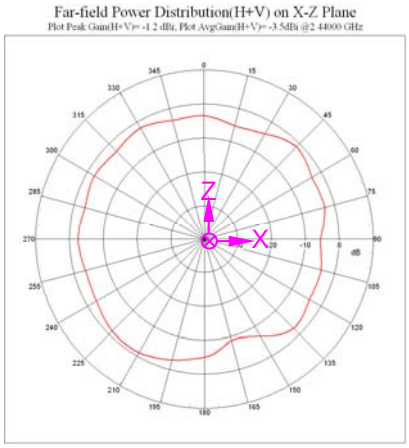
◆XY-plane



Unit : dBi

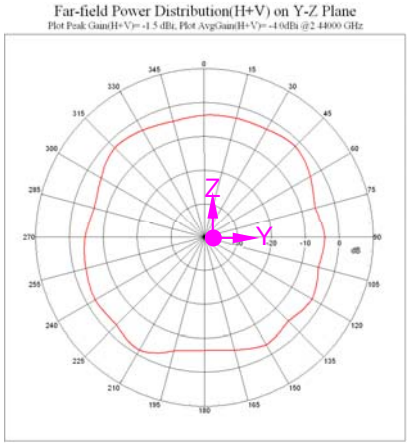
	Peak gain	Avg. gain
XY-plane	-2.5	-4.2

◆XZ-plane



	Peak gain	Avg. gain
XZ-plane	-1.2	-3.5

◆YZ-plane



	Peak gain	Avg. gain
YZ-plane	-1.5	-4.0