No.QEC-1311106



天線客服報告書

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1.目的:



以 AT3216-T2R4PAA 完成阻抗匹配&場型量測。

2.結論與建議

2.1 天線增益如下表所示:

Gain Table

Unit in dBi @2.44GHz	XY-j	olane	XZ-r	olane	YZ-r	olane	Efficiency
Ollit III dB1 @2:44OHZ	Peak	Avg.	Peak	Avg.	Peak	Avg.	Efficiency
Ant2	-2.9	-7.6	-5.5	-10.0	-5.2	-9.8	16 %
Ant1	-2.1	-6.1	-2.5	-8.6	-6.1	-9.4	20 %

2.2 結論與建議:

AT3216-T2R4PAA 經場型量測後其天線增益如上表所示,天線淨空區下方放 置電池以致效率不佳,建議客戶可將電池改小或移開,客戶可依附件二匹配值 先進行實測。

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

<u>附件</u>

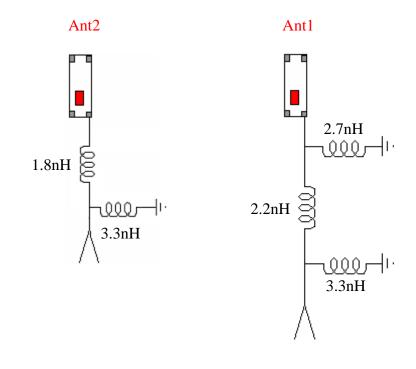


1. PCB 與外殼:

AT3216-T2R4PAA



2. 天線匹配電路示意圖:



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):

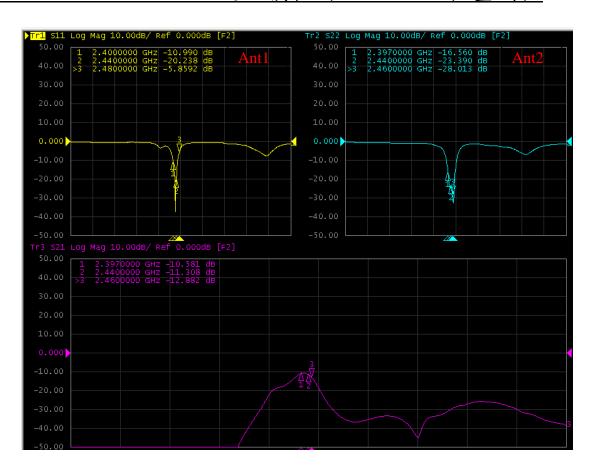
◆量測儀器: vector network analyzer – Agilent E5071C

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

▲3D Radiation Pattern:

♦NSI 800F-10 Far Field antenna measurement system

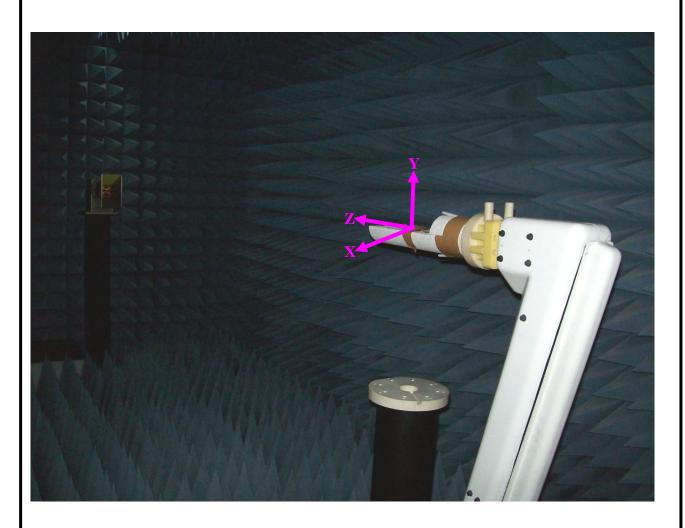
B. AT3216-T2R4PAA 之返回損耗 (Return Loss) 量測值



C.輻射場型圖



◆量測座標圖



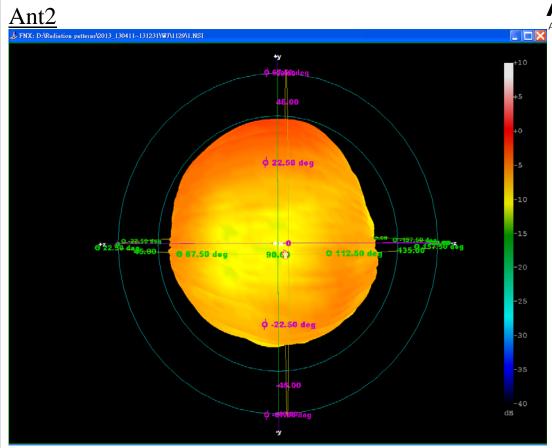
◆各平面定義

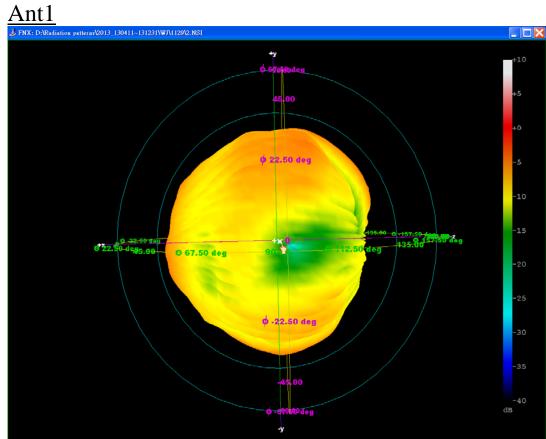
XY-plane	Theta=90°
XZ-plane	Phi=0°
YZ-plane	Phi=90°

◆3D 輻射場型圖







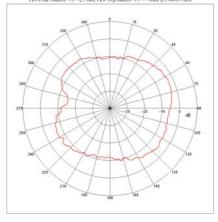


Ant2 之 2D 輻射場型圖



♦XY-plane

Far-field Power Distribution(H+V) on X-Y Plane Plot Peak Gain(H+V)=-2.9 dBi, Plot AvgGain(H+V)=-7.6dBi @2.44000 GHz

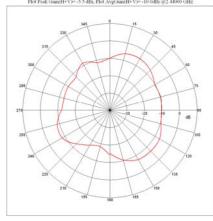


Unit: dBi

	Peak gain	Avg. gain
XY-plane	-2.9	-7.6

♦XZ-plane

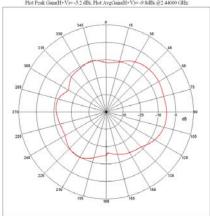
Far-field Power Distribution(H+V) on X-Z Plane Plot Peak Gain(H+V)=-5.5 dBi. Plot AvgGain(H+V)=-10.0dBi. @2.44000 GHz



	Peak gain	Avg. gain
XZ-plane	-5.5	-10.0

♦YZ-plane

Far-field Power Distribution(H+V) on Y-Z Plane Ptot Peak Gain(H+V)=-5.2 dBi, Ptot AvgGain(H+V)=-9.8dBi @2.44000 GHz



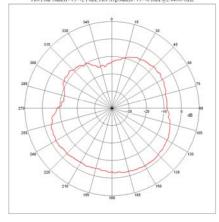
	Peak gain	Avg. gain
YZ-plane	-5.2	-9.8

Ant1 之 2D 輻射場型圖



♦XY-plane

Far-field Power Distribution(H+V) on X-Y Plane Plot Peak Gnin(H+V)=-2.1 dBi, Plot AvgGnin(H+V)=-6.1dBi @2.44000 GHz

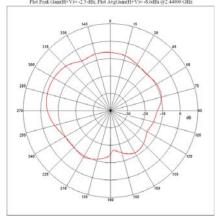


Unit: dBi

	Peak gain	Avg. gain
XY-plane	-2.1	-6.1

♦XZ-plane

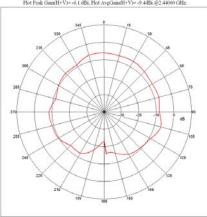
Far-field Power Distribution(H+V) on X-Z Plane Plot Peak Gain(H+V)= -2.5 dBi, Plot AvgGain(H+V)= -8.6dBi @2.44000 GHz



	Peak gain	Avg. gain
XZ-plane	-2.5	-8.6

♦YZ-plane

Far-field Power Distribution(H+V) on Y-Z Plane Ptot Peak Gain(H+V)=-6.1 dBi, Ptot AvgGain(H+V)=-9.4dBi @2.44000 GHz



	Peak gain	Avg. gain
YZ-plane	-6.1	-9.4