

承認書

APPROVAL SHEET

客戶名稱： 精英電腦股份有限公司

CUSTOMER

品 名： CABLE.ANTENNA R...400.VSO

DRAWING NAME

鴻呈料號： 82-101-01210110

VSO PART NO.

客戶料號： 14-211-F66021

CUSTOMER PART NO.

APPROVAL BY

業務部門

SALES DIV.:

品管部門

QC DIV.:

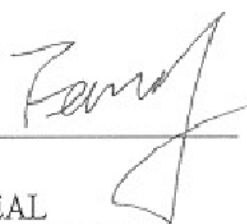
工程部門

TECHNIQUE DIV:

採購部門

PARCHASE DIV:

簡祥銓



吳淑美

洪麗雯

CUSTOMER APPROVEAL

業務部門

SALES DIV.:

品管部門

QC DIV.:

工程部門

TECHNIQUE DIV:

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PARCHASE DIV:

鴻呈實業股份有限公司

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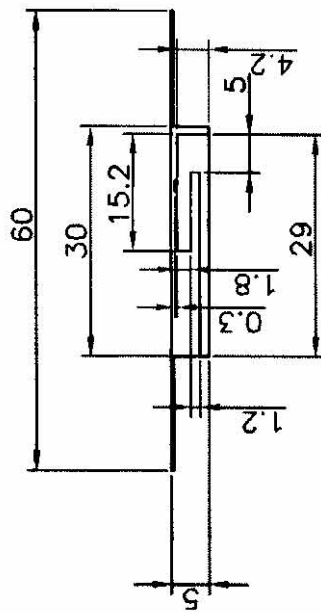
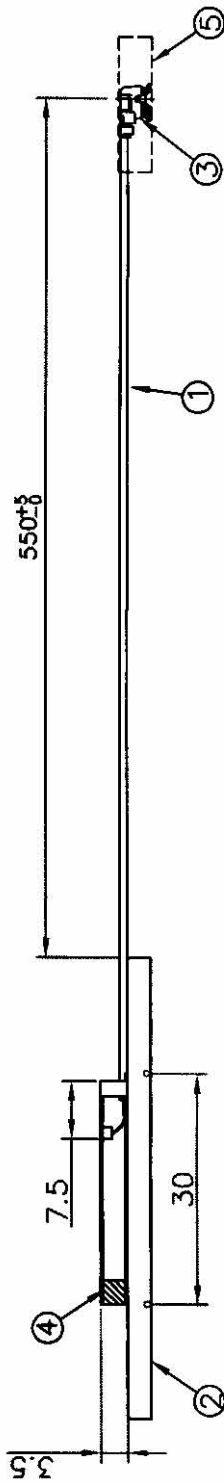
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DRAW ID
CD

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REVISION		
REV.	DESCRIPTION	APPROVAL
B	變更產品長度及裁線尺寸	
		DATE
		05.11.09



NOTE: 用網絡分析義測試

VSO
ELECTRIC CO.,LTD.

ITEM	DESCRIPTION	Q'TY
⑥	雙面膠	1PCS
⑤	TUBE	1PCS
④	支撐膠	1PCS
③	CONN	1PCS
②	PIFA BODY	1PCS
①	RF CABLE	1PCS

XX. ±0.5	±0.5
X. ±0.3	±0.3
.X ±0.1	±0.1
.XX ±0.05	±0.05
⊙	⊙

CUST. P.N:	精英 14-211-F66021	DRAW:	Jon 1/4
TITLE:	PIFA ANTENNA	ENGIN:	
VSO P.N:	82-101-01210110	CHECK:	8/17/09
UNITS	mm	REV.	B
DWG. NO.:	RF0003	PAGE:	1/3
APPR:			

2

3

4

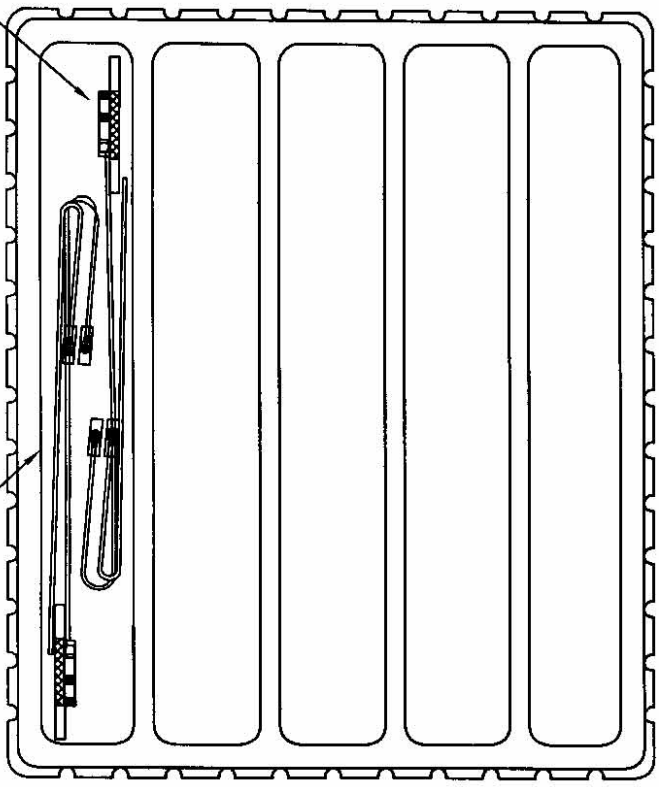
1

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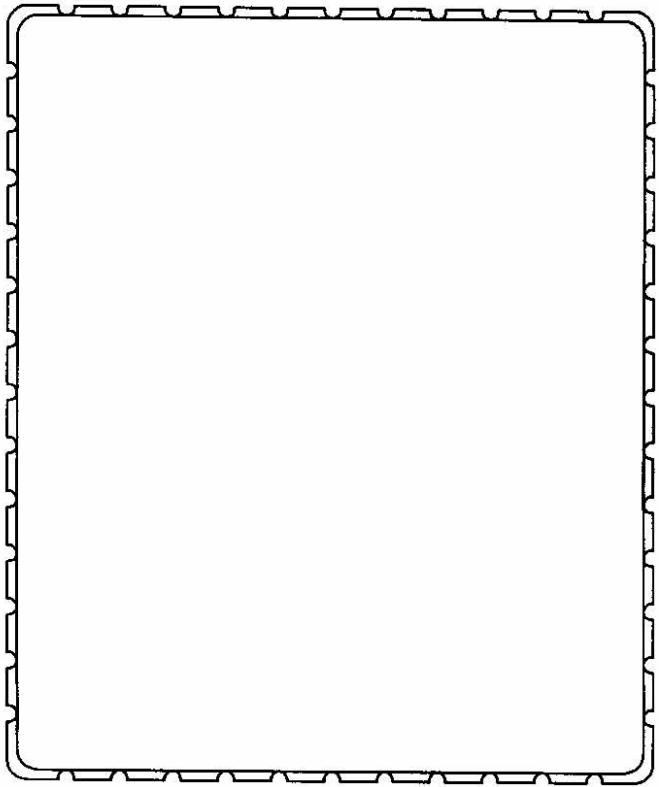
REVISION		
REV.	DESCRIPTION	APPROVAL DATE

40PCS一格



吸塑盤底盤

20PCS一把



吸塑盤上蓋

VSO ELECTRIC CO.,LTD.

XX. ±0.5	CUST. P/N:	精英 14-211-F66021	DRAW:	10/11/99
X. ±0.3	TITLE:	包裝圖	ENGIN:	
.X ±0.1	VSO P/N:	82-101-01210110	CHECK:	10/11/99
.XX ±0.05	UNITS	mm	REV.	A
⊙	DWG. NO.:	3/3	APPR:	10/11/99

NOTE:

- 1.吸塑盤規格:L380*W320*H40mm,紙箱規格:L390*W330*H240mm
- 2.20PCS用橡皮筋捆成一格,一格可放2把40PCS成品
- 3.一個吸塑盤分五格,可放200PCS成品,一箱放五個吸塑盤可裝1000 PCS成品

4

3

2

1

ECSM P/N : 14-211-F66021

Specification

1.Electical Properties

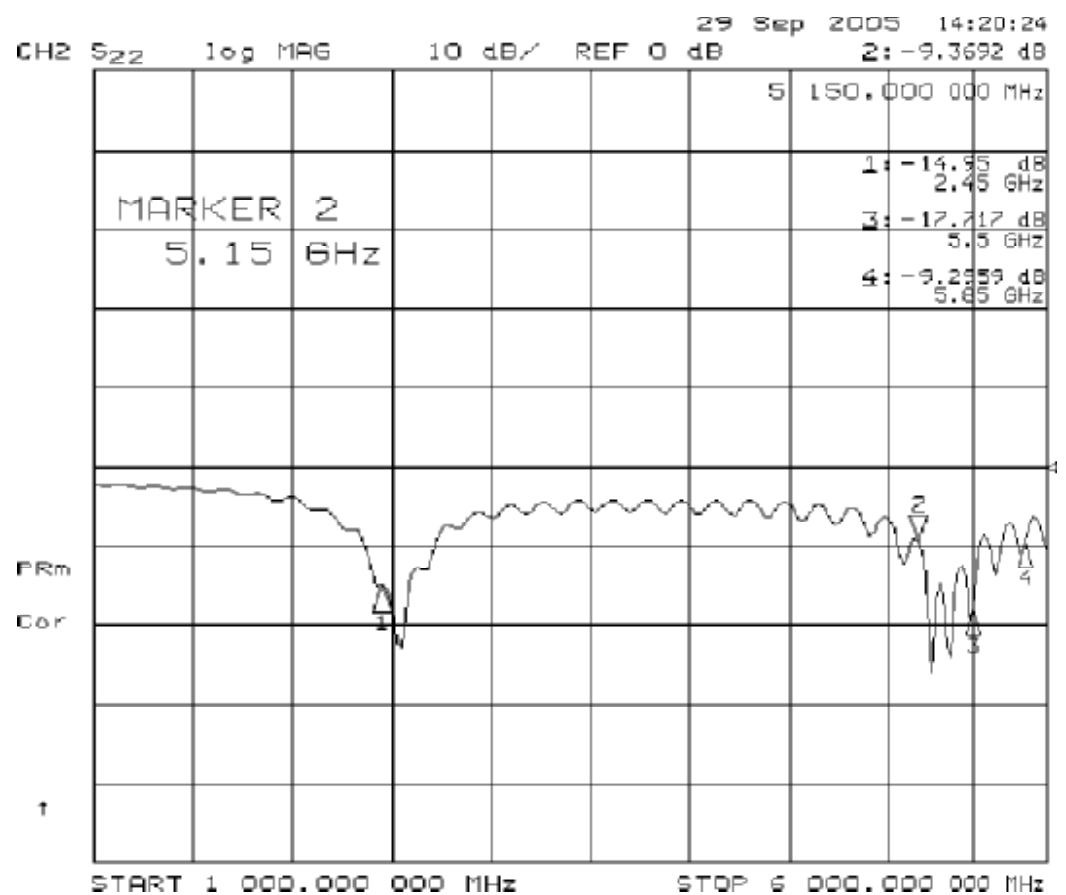
- 1.1 Frequency Range 2.4~2.5GHz ; 5.15~5.85GHz
1.2 Impedance 50
1.3 VSWR 2.0 max
1.4 Return Loss -10 dB max
1.5 Gain

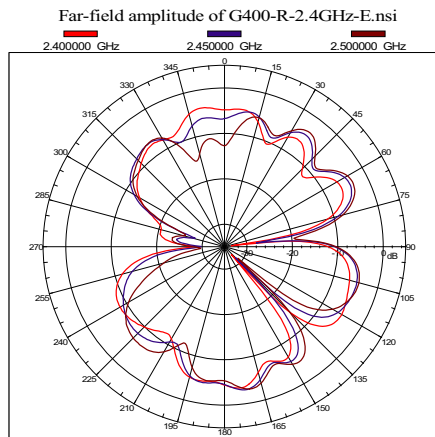
Pattern	Average			Peak		
頻率	Ex	Ey	Ex+Ey	Ex	Ey	Ex+Ey
2.40 GHz	-8.61	-6.07	-4.15	-3.68	-1.17	0.76
2.45 GHz	-8.24	-5.03	-3.34	-3.15	-0.74	1.23
2.50 GHz	-8.55	-4.94	-3.37	-3.15	-0.31	1.51
5.15 GHz	-9.96	-9.12	-6.51	-3.76	-3.04	-0.38
5.55 GHz	-9.23	-8.58	-5.88	-4.53	-3.75	-1.11
5.85 GHz	-8.45	-13.67	-7.31	-2.85	-6.40	-1.26

2.Physical Properties

- 2.1 Cable Type ϕ 1.13 Coaxial ; L : 545 mm
2.2 Cable Color Black
2.3 Cable Attenuations 1.8 dB/m @1.0GHz
2.6 dB/m @2.0GHz
3.7 dB/m @3.0GHz
4.8 dB/m @4.0GHz
5.2 dB/m @5.0GHz
6.4 dB/m @6.0GHz

2.4 Cable Connector I-PEX
2.5 PIFA Metal 洋白銅
2.6 Operating Temperature -20℃ ~ +65℃
2.7 Storage Temperature -30℃ ~ +75℃





Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = -3.68265 dBi
 Max far-field (global) = -50.33877 dB, Max far-field (plot) = -50.33881 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: 174.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

G400-R-2.4GHz-E

NSI2000 V4.0.116, Filename:C:\KUO\New Folder\G400-R-2.4GHz-E.nsi
 Measurement date/time: 9/30/2005 1:42:15 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -8.608 dB
 -3. dB beam width: Not Found
 -6. dB beam width: Not Found
 -10. dB beam width: Not Found
 Left Sidelobe: -3.04 dB at 152.925 deg
 Right Sidelobe: Not Found

Far-field display setup

Azimuth (deg)
 Span = 360.000 deg, Center = 0.000 deg, #pts = 361
 Start = -180.000 deg, Stop = 180.000 deg, Delta = 1.000 deg
 Elevation (deg)
 Center = 0.000 deg, #pts = 1

Selected beam(s) 1 of 3

Beam Frequency Azimuth Elevation Pol

1 2.400 GHz Azimuth Elevation Single-pol

Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
 Gain = -3.15302 dBi
 Max far-field (global) = -50.3222 dB, Max far-field (plot) = -50.32221 dB
 Normalization: Reference, Network offset = 0.000 dB
 Hpeak at: 172.000 deg, Vpeak at: 0.000 deg
 Plot centering: On

G400-R-2.4GHz-E

NSI2000 V4.0.116, Filename:C:\KUO\New Folder\G400-R-2.4GHz-E.nsi
 Measurement date/time: 9/30/2005 1:42:15 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -8.235 dB
 -3. dB beam width: Not Found
 -6. dB beam width: Not Found
 -10. dB beam width: Not Found
 Left Sidelobe: -2.62 dB at 149.916 deg

Right Sidelobe: Not Found
Far-field display setup
Azimuth (deg)
Span = 360.000 deg, Center = 0.000 deg, #pts = 361
Start = -180.000 deg, Stop = 180.000 deg, Delta = 1.000 deg
Elevation (deg)
Center = 0.000 deg, #pts = 1

Selected beam(s) 1 of 3

Beam	Frequency	Azimuth	Elevation	Pol
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2	2.450 GHz	Azimuth	Elevation	Single-pol
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Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -3.15288 dBi
Max far-field (global) = -50.57068 dB, Max far-field (plot) = -50.57077 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: 169.000 deg, Vpeak at: 0.000 deg
Plot centering: On

G400-R-2.4GHz-E

NSI2000 V4.0.116, Filename:C:\KUO\New Folder\G400-R-2.4GHz-E.nsi

Measurement date/time: 9/30/2005 1:42:15 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -8.546 dB
-3. dB beam width: Not Found
-6. dB beam width: Not Found
-10. dB beam width: Not Found
Left Sidelobe: -1.63 dB at 147.911 deg
Right Sidelobe: Not Found

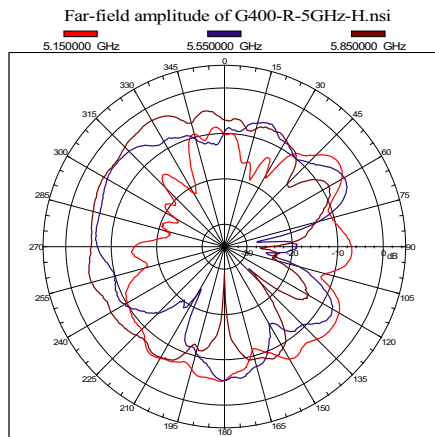
Far-field display setup

Azimuth (deg)
Span = 360.000 deg, Center = 0.000 deg, #pts = 361
Start = -180.000 deg, Stop = 180.000 deg, Delta = 1.000 deg
Elevation (deg)
Center = 0.000 deg, #pts = 1

Selected beam(s) 1 of 3

Beam	Frequency	Azimuth	Elevation	Pol
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3	2.500 GHz	Azimuth	Elevation	Single-pol
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Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -3.75938 dBi
Max far-field (global) = -59.5901 dB, Max far-field (plot) = -59.59016 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: 52.99999 deg, Vpeak at: 0.000 deg
Plot centering: On

G400-R-5GHz-H

NSI2000 V4.0.116, Filename: C:\KUO\New Folder\G400-R-5GHz-H.nsi
Measurement date/time: 9/30/2005 1:30:21 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -9.955 dB
-3. dB beam width: 18.44 deg
-6. dB beam width: 31.60 deg
-10. dB beam width: Not Found
Left Sidelobe: -9.40 dB at 26.574 deg
Right Sidelobe: -3.15 dB at 92.758 deg

Far-field display setup

Azimuth (deg)
Span = 360.00001 deg, Center = 0.000 deg, #pts = 361
Start = -180.00001 deg, Stop = 180.00001 deg, Delta = 1.000 deg
Elevation (deg)
Center = 0.000 deg, #pts = 1

Selected beam(s) 1 of 3

Beam Frequency Azimuth Elevation Pol

1 5.150 GHz Azimuth Elevation Single-pol

Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -4.52887 dBi
Max far-field (global) = -61.53466 dB, Max far-field (plot) = -61.53471 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: 59.99999 deg, Vpeak at: 0.000 deg
Plot centering: On

G400-R-5GHz-H

NSI2000 V4.0.116, Filename: C:\KUO\New Folder\G400-R-5GHz-H.nsi
Measurement date/time: 9/30/2005 1:30:21 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -9.227 dB
-3. dB beam width: 20.59 deg
-6. dB beam width: 73.71 deg
-10. dB beam width: 211.73 deg
Left Sidelobe: -3.87 dB at 32.591 deg

Right Sidelobe: -14.52 dB at 88.747 deg
Far-field display setup
Azimuth (deg)
Span = 360.00001 deg, Center = 0.000 deg, #pts = 361
Start= -180.00001 deg, Stop = 180.00001 deg, Delta = 1.000 deg
Elevation (deg)
Center = 0.000 deg, #pts = 1

Selected beam(s) 1 of 3

Beam	Frequency	Azimuth	Elevation	Pol
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2	5.550 GHz	Azimuth	Elevation	Single-pol
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Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -2.84636 dBi
Max far-field (global) = -60.0086 dB, Max far-field (plot) = -60.00864 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: -30.00001 deg, Vpeak at: 0.000 deg
Plot centering: On

G400-R-5GHz-H

NSI2000 V4.0.116, Filename:C:\KUO\New Folder\G400-R-5GHz-H.nsi

Measurement date/time: 9/30/2005 1:30:21 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -8.446 dB
-3. dB beam width: 93.61 deg
-6. dB beam width: 170.79 deg
-10. dB beam width: 214.18 deg
Left Sidelobe: -1.66 dB at -100.780 deg
Right Sidelobe: -1.92 dB at -8.524 deg

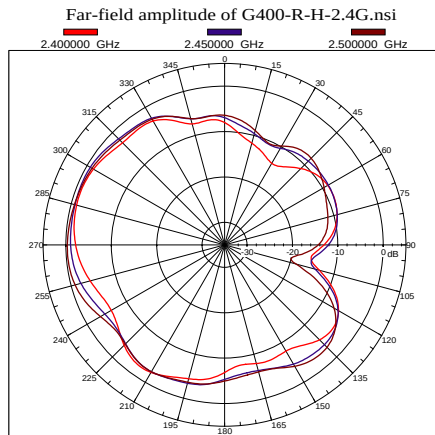
Far-field display setup

Azimuth (deg)
Span = 360.00001 deg, Center = 0.000 deg, #pts = 361
Start= -180.00001 deg, Stop = 180.00001 deg, Delta = 1.000 deg
Elevation (deg)
Center = 0.000 deg, #pts = 1

Selected beam(s) 1 of 3

Beam	Frequency	Azimuth	Elevation	Pol
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3	5.850 GHz	Azimuth	Elevation	Single-pol
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Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -1.1746 dBi
Max far-field (global) = -47.72234 dB, Max far-field (plot) = -47.72234 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: -71.00001 deg, Vpeak at: 0.000 deg
Plot centering: On

G400-R-2.4GHz-H

NSI2000 V4.0.174, Filename: C:\PIFA\ECSM\G400-4mm\Data\G400-R-H-2.4G.nsi
Measurement date/time: 9/30/2005 1:36:54 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -6.068 dB
-3. dB beam width: 77.93 deg
-6. dB beam width: Not Found
-10. dB beam width: Not Found
Left Sidelobe: -1.18 dB at -145.905 deg
Right Sidelobe: -7.53 dB at 61.671 deg

Far-field display setup

Azimuth (deg)
Span = 360.00001 deg, Center = 0.000 deg, #pts = 361
Start = -180.00001 deg, Stop = 180.00001 deg, Delta = 1.000 deg
Elevation (deg)
Center = 0.000 deg, #pts = 1

Selected beam(s) 1 of 3

Beam	Frequency	Azimuth	Elevation	Pol
1	2.400 GHz	Azimuth	Elevation	Single-pol

Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -0.73626 dBi
Max far-field (global) = -48.26367 dB, Max far-field (plot) = -48.26368 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: -67.000 deg, Vpeak at: 0.000 deg
Plot centering: On

G400-R-2.4GHz-H

NSI2000 V4.0.174, Filename: C:\PIFA\ECSM\G400-4mm\Data\G400-R-H-2.4G.nsi
Measurement date/time: 9/30/2005 1:36:54 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -5.027 dB
-3. dB beam width: 90.06 deg
-6. dB beam width: Not Found

-10. dB beam width: Not Found
Left Sidelobe: -1.96 dB at -148.914 deg
Right Sidelobe: -7.86 dB at 54.652 deg
Far-field display setup
Azimuth (deg)
Span = 360.00001 deg, Center = 0.000 deg, #pts = 361
Start= -180.00001 deg, Stop = 180.00001 deg, Delta = 1.000 deg
Elevation (deg)
Center = 0.000 deg, #pts = 1

Selected beam(s) 1 of 3
Beam Frequency Azimuth Elevation Pol

2 2.450 GHz Azimuth Elevation Single-pol

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Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -0.30923 dBi
Max far-field (global) = -48.12359 dB, Max far-field (plot) = -48.1236 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: -91.000 deg, Vpeak at: 0.000 deg
Plot centering: On

G400-R-2.4GHz-H

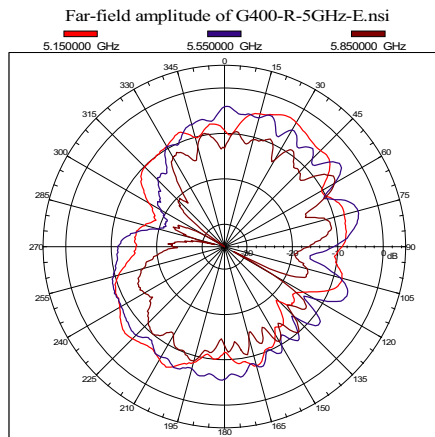
NSI2000 V4.0.174, Filename: C:\PIFA\ECSSM\G400-4mm\Data\G400-R-H-2.4G.nsi
Measurement date/time: 9/30/2005 1:36:54 PM, Filetype: NSI-97

Far-field Cut Analysis:
Avg value: -4.935 dB
-3. dB beam width: 92.20 deg
-6. dB beam width: Not Found
-10. dB beam width: Not Found
Left Sidelobe: -2.38 dB at -148.914 deg
Right Sidelobe: -7.64 dB at 43.621 deg
Far-field display setup
Azimuth (deg)
Span = 360.00001 deg, Center = 0.000 deg, #pts = 361
Start= -180.00001 deg, Stop = 180.00001 deg, Delta = 1.000 deg
Elevation (deg)
Center = 0.000 deg, #pts = 1

Selected beam(s) 1 of 3
Beam Frequency Azimuth Elevation Pol

3 2.500 GHz Azimuth Elevation Single-pol

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Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -3.03579 dBi
Max far-field (global) = -58.86651 dB, Max far-field (plot) = -58.86652 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: 26.99999 deg, Vpeak at: 0.000 deg
Plot centering: On

G400-R-5GHz-E

NSI2000 V4.0.116, Filename:C:\KUO\New Folder\G400-R-5GHz-E.nsi
Measurement date/time: 9/30/2005 1:07:45 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -9.124 dB
-3. dB beam width: 43.78 deg
-6. dB beam width: 52.61 deg
-10. dB beam width: 172.02 deg
Left Sidelobe: -4.75 dB at -6.518 deg
Right Sidelobe: -4.57 dB at 74.708 deg

Far-field display setup

Azimuth (deg)
Span = 360.00001 deg, Center = 0.000 deg, #pts = 361
Start = -180.00001 deg, Stop = 180.00001 deg, Delta = 1.000 deg
Elevation (deg)
Center = 0.000 deg, #pts = 1

Selected beam(s) 1 of 8

Beam Frequency Azimuth Elevation Pol

1 5.150 GHz Azimuth Elevation Single-pol

Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -3.75394 dBi
Max far-field (global) = -60.75973 dB, Max far-field (plot) = -60.75996 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: 53.99999 deg, Vpeak at: 0.000 deg
Plot centering: On

G400-R-5GHz-E

NSI2000 V4.0.116, Filename:C:\KUO\New Folder\G400-R-5GHz-E.nsi
Measurement date/time: 9/30/2005 1:07:45 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -8.576 dB
-3. dB beam width: 10.29 deg
-6. dB beam width: 86.10 deg
-10. dB beam width: 130.71 deg

Left Sidelobe: -2.18 dB at 42.618 deg
Right Sidelobe: -0.76 dB at 76.713 deg
Far-field display setup
Azimuth (deg)
Span = 360.00001 deg, Center = 0.000 deg, #pts = 361
Start= -180.00001 deg, Stop = 180.00001 deg, Delta = 1.000 deg
Elevation (deg)
Center = 0.000 deg, #pts = 1

Selected beam(s) 1 of 8

Beam	Frequency	Azimuth	Elevation	Pol
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5	5.550 GHz	Azimuth	Elevation	Single-pol
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Far-field amplitude, Eprincipal: Linear, Tau = 0.000 deg
Gain = -6.40201 dBi
Max far-field (global) = -63.56425 dB, Max far-field (plot) = -63.56453 dB
Normalization: Reference, Network offset = 0.000 dB
Hpeak at: 56.99999 deg, Vpeak at: 0.000 deg
Plot centering: On

G400-R-5GHz-E

NSI2000 V4.0.116, Filename:C:\KUO\New Folder\G400-R-5GHz-E.nsi

Measurement date/time: 9/30/2005 1:07:45 PM, Filetype: NSI-97

Far-field Cut Analysis:

Avg value: -13.672 dB
-3. dB beam width: 10.80 deg
-6. dB beam width: 16.14 deg
-10. dB beam width: 125.60 deg
Left Sidelobe: -5.07 dB at 43.621 deg
Right Sidelobe: -4.73 dB at 77.716 deg

Far-field display setup

Azimuth (deg)
Span = 360.00001 deg, Center = 0.000 deg, #pts = 361
Start= -180.00001 deg, Stop = 180.00001 deg, Delta = 1.000 deg
Elevation (deg)
Center = 0.000 deg, #pts = 1

Selected beam(s) 1 of 8

Beam	Frequency	Azimuth	Elevation	Pol
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8	5.850 GHz	Azimuth	Elevation	Single-pol
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