Regulatory Antenna Information

Project Name : Neon
Host System : Notebook PC
Antenna Vendor : Amphenol KAE

Samsung Electronics Co., Ltd.

Antenna Information

Antenna Assembly Specifications

Antenna assembly overview: Peak Gain including cable loss

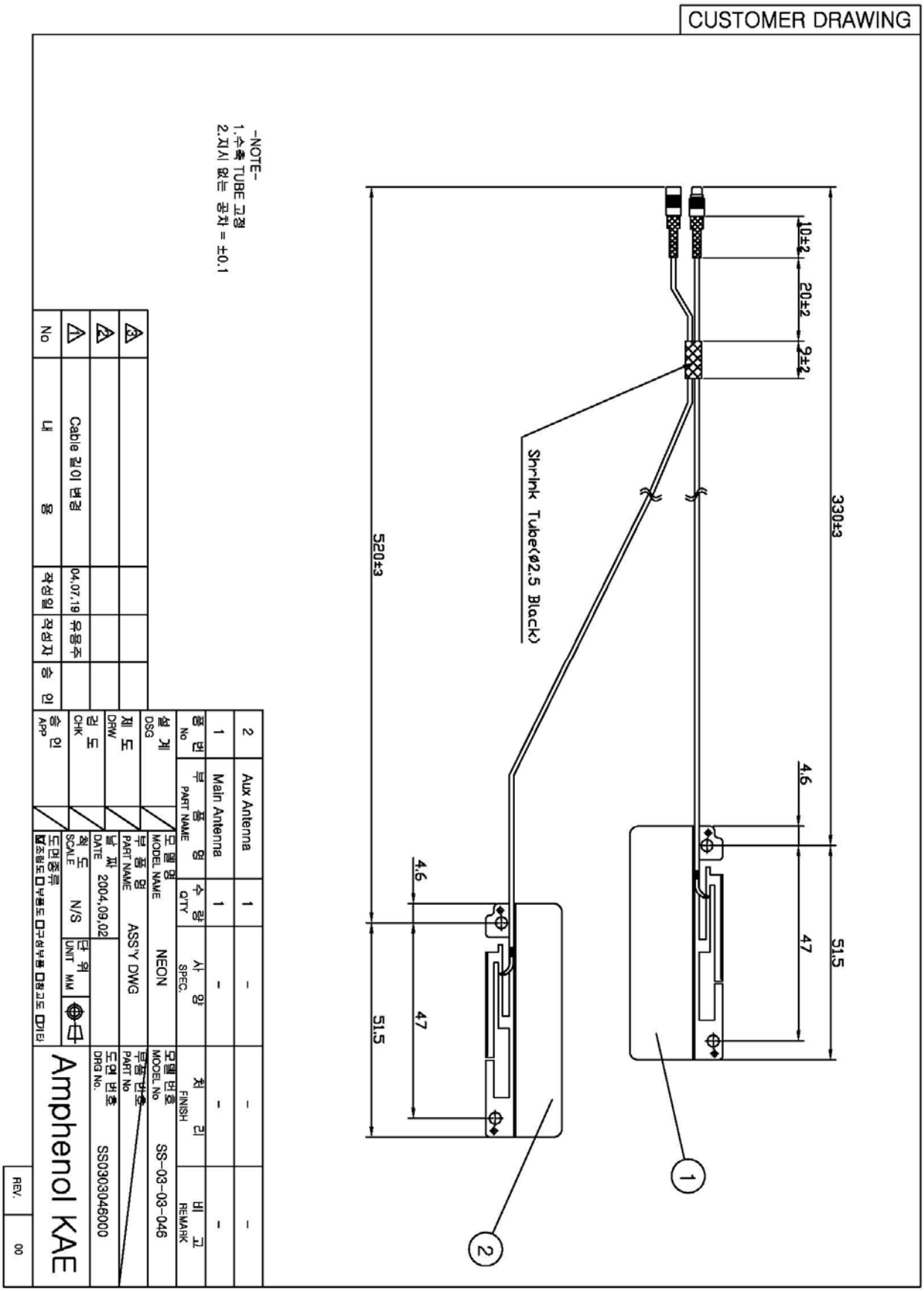
Designator	Manufacture	Antenna type	Cable Assembly Info.	Peak Gain W/ Cable loss (dBi)
(P/N : SS-03-03-046) Main antenna (Right Antenna)	Amphenol KAE Co., Ltd	PIFA	(P/N: SS-03-03-046) 50 ohm Coaxial. length: 550mm diameter: 1.13mm Connector: MHC-231(KAE)	2400-2500MHz 0.45 dBi (peak)
				5150-5350MHz 2.83 dBi (peak)
				5470-5725MHz 2.89 dBi (peak)
				5725-5850MHz 4.12 dBi (peak)
(P/N: SS-03-03-046) Auxiliary antenna (Left Antenna)	Amphenol KAE Co., Ltd	PIFA	(P/N: SS-03-03-046) 50 ohm Coaxial. length: 740mm diameter: 1.13mm Connector: MHC-231(KAE)	2400-2500MHz -0.11 dBi (peak)
				5150-5350MHz 2.37 dBi (peak)
				5470-5725MHz 2.59 dBi (peak)
				5725-5850MHz 2.51 dBi (peak)

Cable assembly overview: Cable loss (including connector)

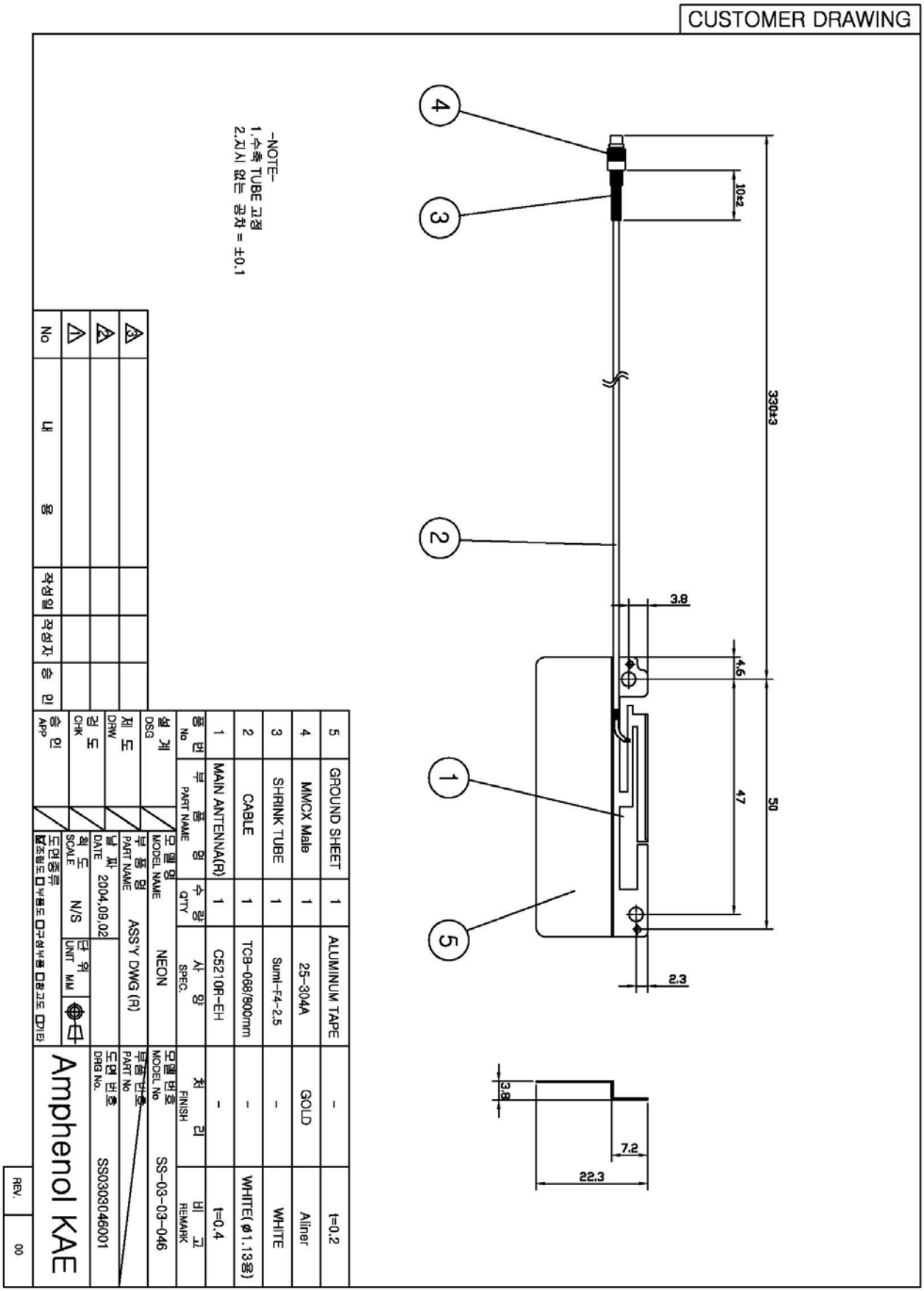
Designator	Manufacture	Cable type and length	VSWR	Cable Loss (dBi)
(P/N: SS-03-03-046) For use with the Main antenna	Amphenol KAE Co., Ltd	(P/N: SS-03-03-046) 50 ohm Coaxial. length: 550mm diameter: 1.13mm Connector: MHC-231(KAE)	2400-2500MHz 1.07 max	2400-2500MHz 1.67 dB (peak)
			5150-5350MHz 1.19 max	5150-5350MHz 2.56 dB (peak)
			5470-5725MHz 1.27 max	5470-5725MHz 2.68 dB (peak)
			5725-5850MHz 1.16 max	5725-5850MHz 2.79 dB (peak)
(P/N: SS-03-03-046) For use with the Auxiliary antenna	Amphenol KAE Co., Ltd	(P/N: SS-03-03-046) 50 ohm Coaxial. length: 740mm diameter: 1.13mm Connector: MHC-231(KAE)	2400-2500MHz 1.07 max	2400-2500MHz 2.24 dB (peak)
			5150-5350MHz 1.19 max	5150-5350MHz 3.45 dB (peak)
			5470-5725MHz 1.27 max	5470-5725MHz 3.57 dB (peak)
			5725-5850MHz 1.16 max	5725-5850MHz 3.66 dB (peak)

Mechanical drawings of antenna

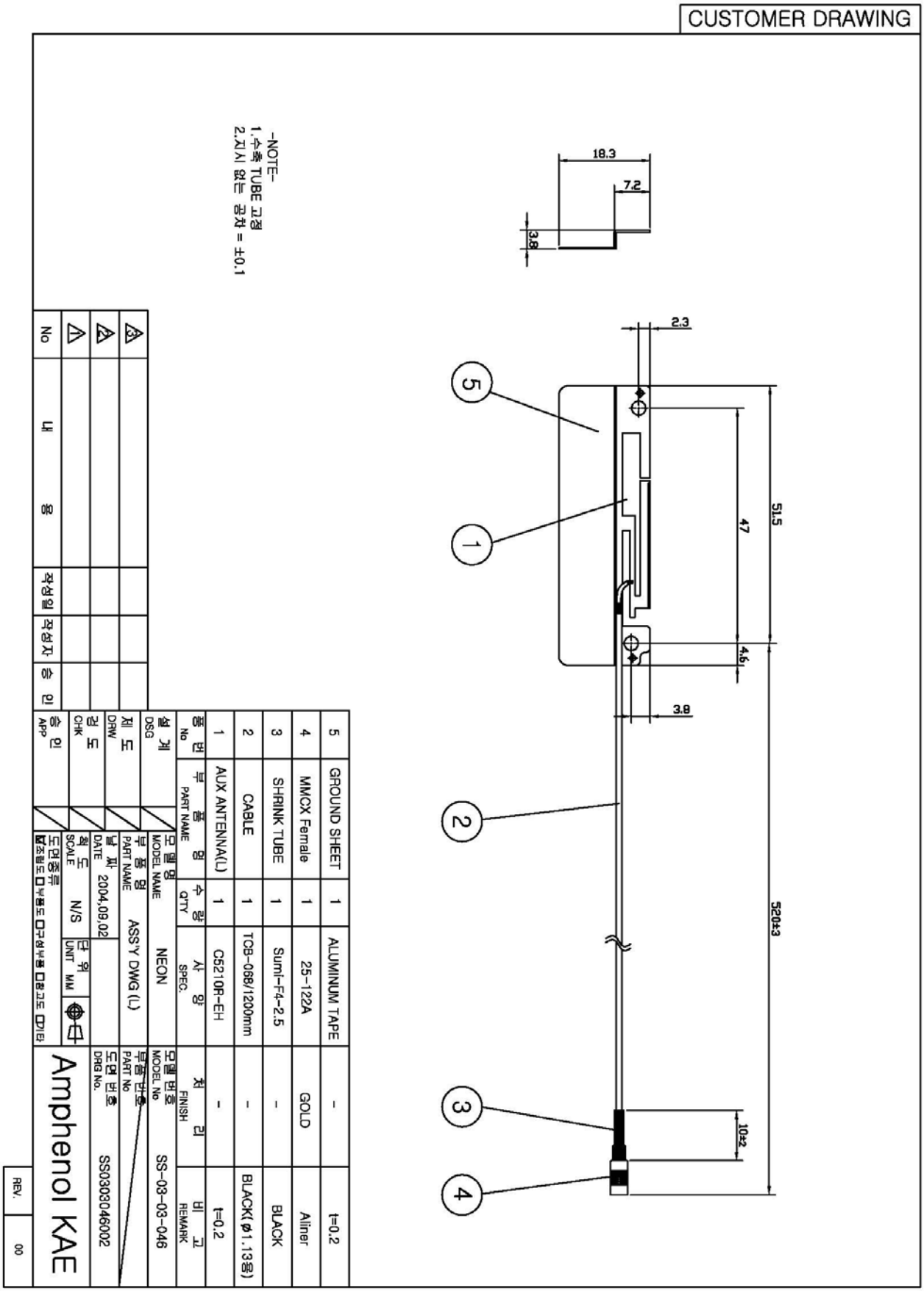
Antenna Ass'y



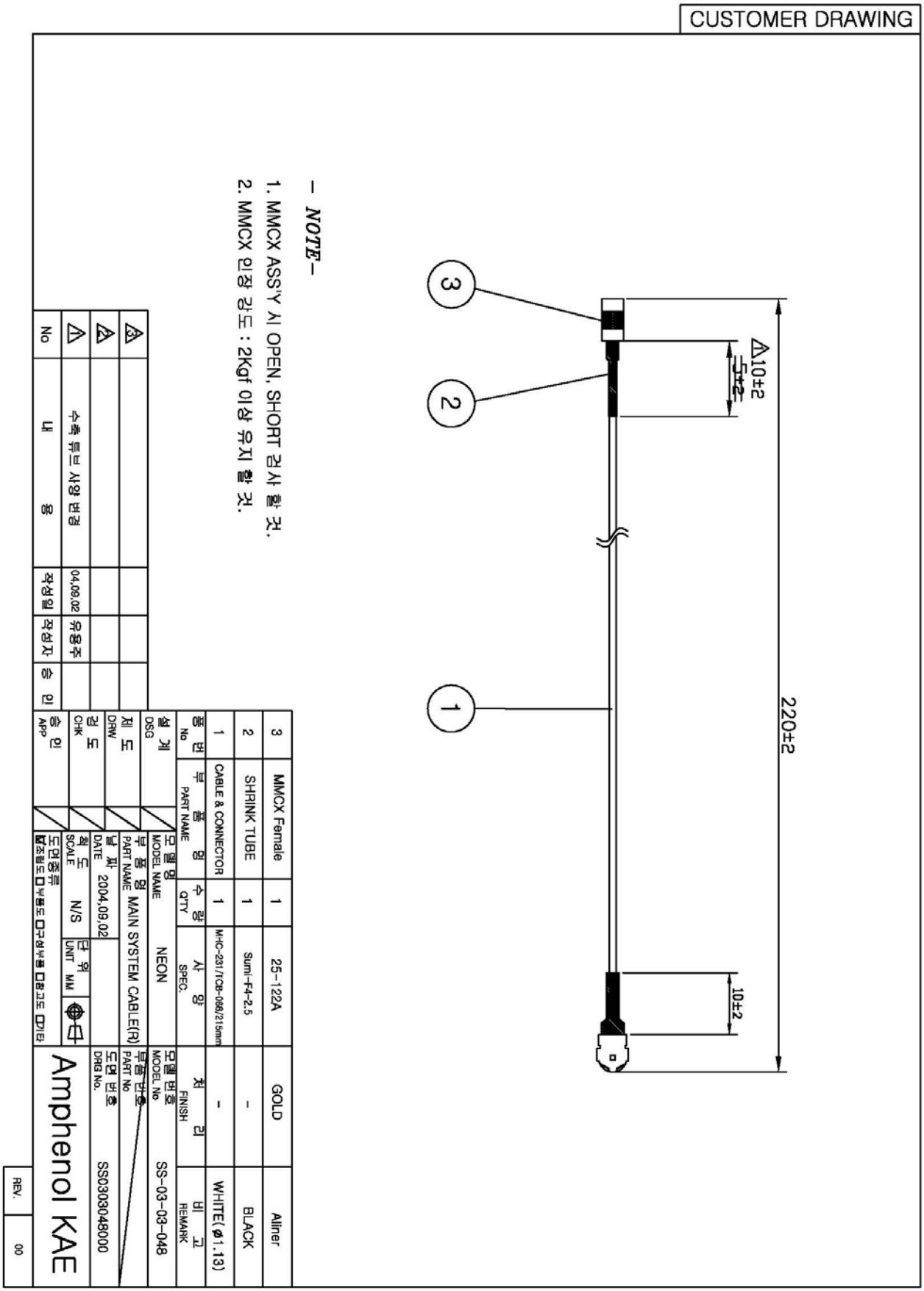
Main Antenna



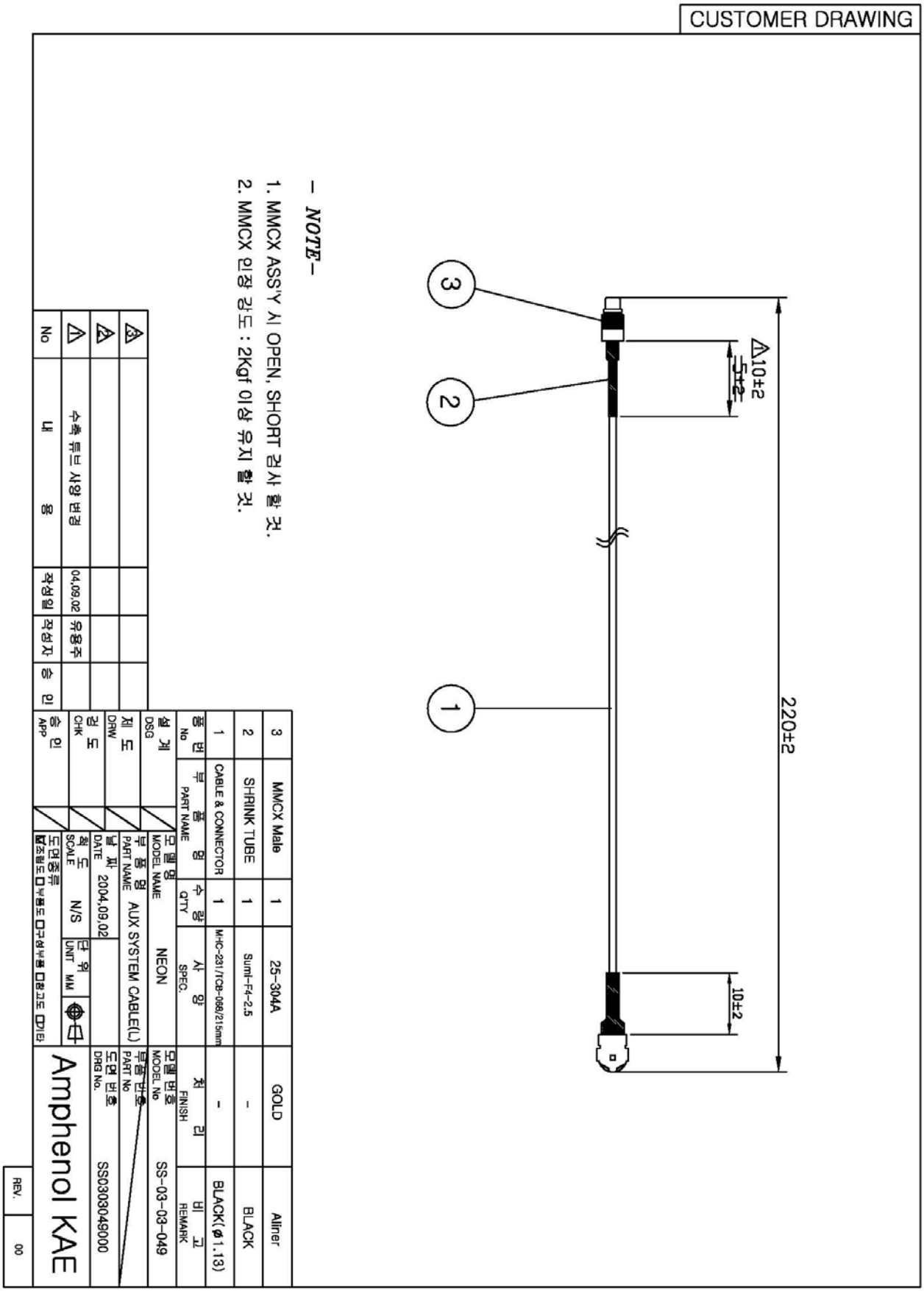
Aux antenna


CUSTOMER DRAWING
18.3
7.2
3.8
2.3
51.5
47
4.6
3.8
520±3
10±2
5
1
2
3
4
-NOTE-
1.수축 TUBE 고정
2.지시 없는 공차 = ±0.1
No
내 용
작성일
작성자
승 인
5 GROUND SHEET 1 ALUMINUM TAPE - t=0.2
4 MMCX Female 1 25-122A GOLD Aliner
3 SHRINK TUBE 1 Sumi-F4-2.5 - BLACK
2 CABLE 1 TCB-068/1200mm - BLACK(ø1.13용)
1 AUX ANTENNA(L) 1 C5210R-EH - t=0.2
품 번 No
부 품 명 PART NAME
수 량 QTY
사 양 SPEC.
처 리 FINISH
비 고 REMARK
설 계 DSG
모델명 MODEL NAME
NEON
모델 번호 MODEL No
SS-03-03-046
제 도 DRW
부 품 명 PART NAME
ASS'Y DWG (L)
부품 번호 PART No
검 도 CHK
날 짜 DATE
2004.09.02
도면 번호 DRG No.
SS03030460002
승 인 APP
축 도 SCALE
N/S
단 위 UNIT MM
도면종류
Amphenol KAE
REV.
00

Main Cable


CUSTOMER DRAWING
220±2
10±2
10±2
5±2
1
2
3
- NOTE -
1. MMCX ASS'Y 시 OPEN, SHORT 검사 할 것.
2. MMCX 인장 강도 : 2Kgf 이상 유지 할 것.
No
내 용
작성일
작성자
승 인
04.09.02
유용주
수축 튜브 사양 변경
3 MMCX Female 1 25-122A GOLD Aliner
2 SHRINK TUBE 1 Sumi-F4-2.5 - BLACK
1 CABLE & CONNECTOR 1 M-HC-231/TCB-068/215mm - WHITE(Ø1.13)
No 품 명 PART NAME 수 량 QTY 사 양 SPEC. 처 리 FINISH 비 고 REMARK
설 계 DSG
제 도 DRW
검 도 CHK
승 인 APP
모델명 MODEL NAME NEON
모델 번호 MODEL No SS-03-03-048
부 품 명 PART NAME MAIN SYSTEM CABLE(R)
부품 번호 PART No
날 짜 DATE 2004.09.02
도면 번호 DRG No. SS0303048000
척도 SCALE N/S
단 위 UNIT MM
도면종류
Amphenol KAE
REV. 00

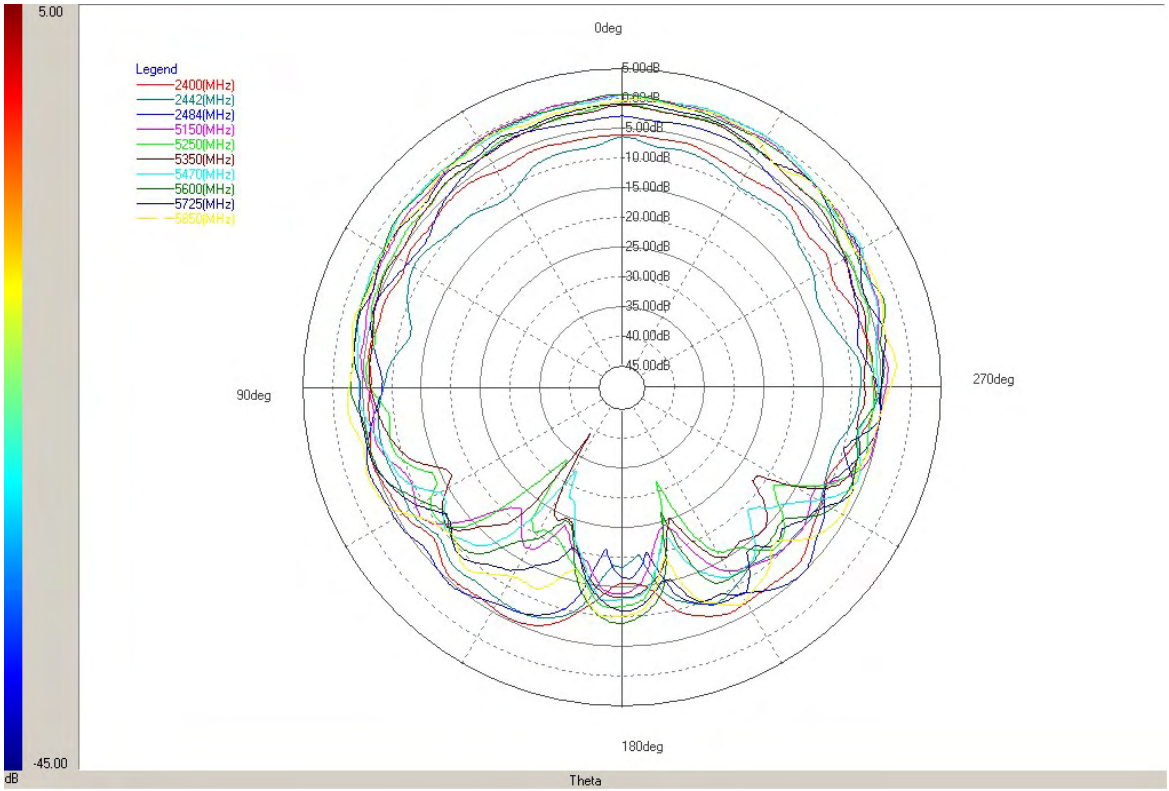
Aux Cable


CUSTOMER DRAWING
- NOTE -
1. MMCX ASS'Y 시 OPEN, SHORT 검사 할 것.
2. MMCX 인장 강도 : 2Kgf 이상 유지 할 것.
3
2
1
10±2
5±2
220±2
10±2
3 MMCX Male 1 25-304A GOLD Aliner
2 SHRINK TUBE 1 Sumi-F4-2.5 - BLACK
1 CABLE & CONNECTOR 1 MHC-231/TCB-066/215mm - BLACK(ø1.13)
품번 No
부품명 PART NAME
수량 Q'TY
사양 SPEC.
처리 FINISH
비고 REMARK
설계 DSG
모델명 MODEL NAME NEON
모델번호 MODEL No SS-03-03-049
제도 DRW
부품명 PART NAME AUX SYSTEM CABLE(L)
부품번호 PART No
검도 CHK
날짜 DATE 2004,09,02
도면번호 DRG No. SS0303049000
척도 SCALE N/S
단위 UNIT MM
승인 APP
도면종류
Amphenol KAE
REV. 00

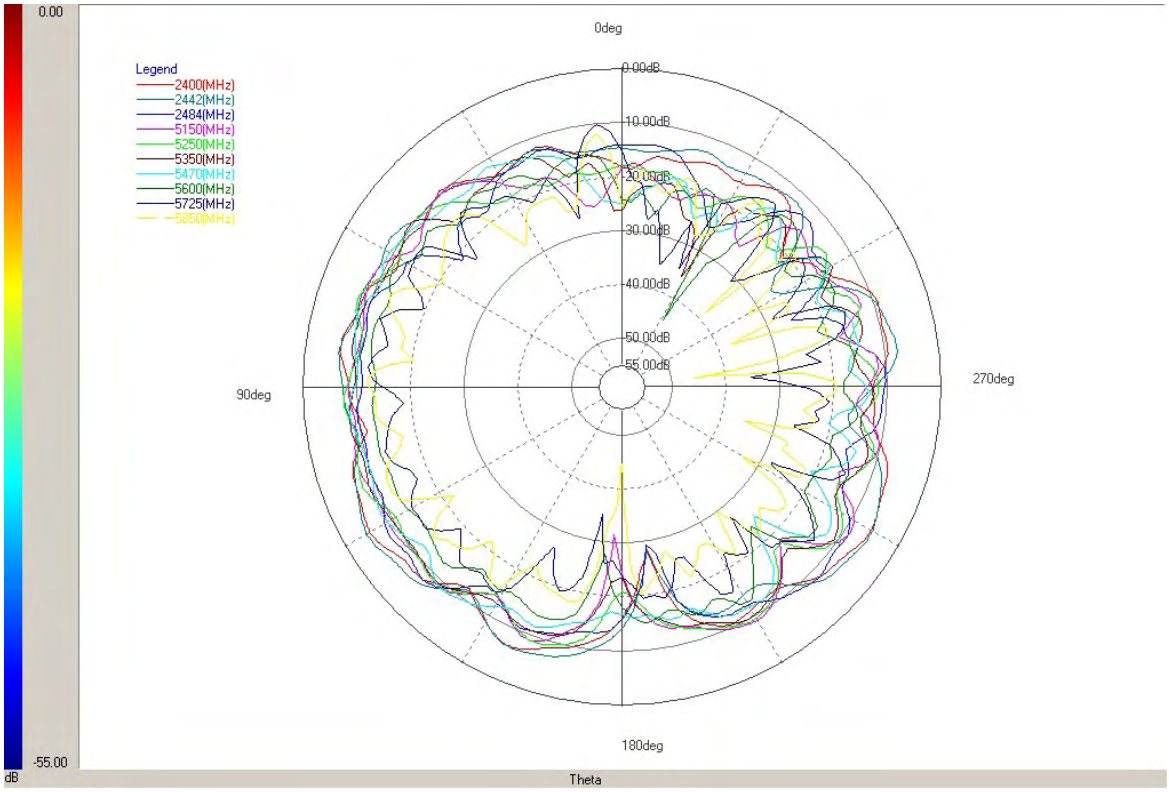
Radiation characteristic of antenna Loaded (In Host System)

1. Main antenna Radiation pattern and gain

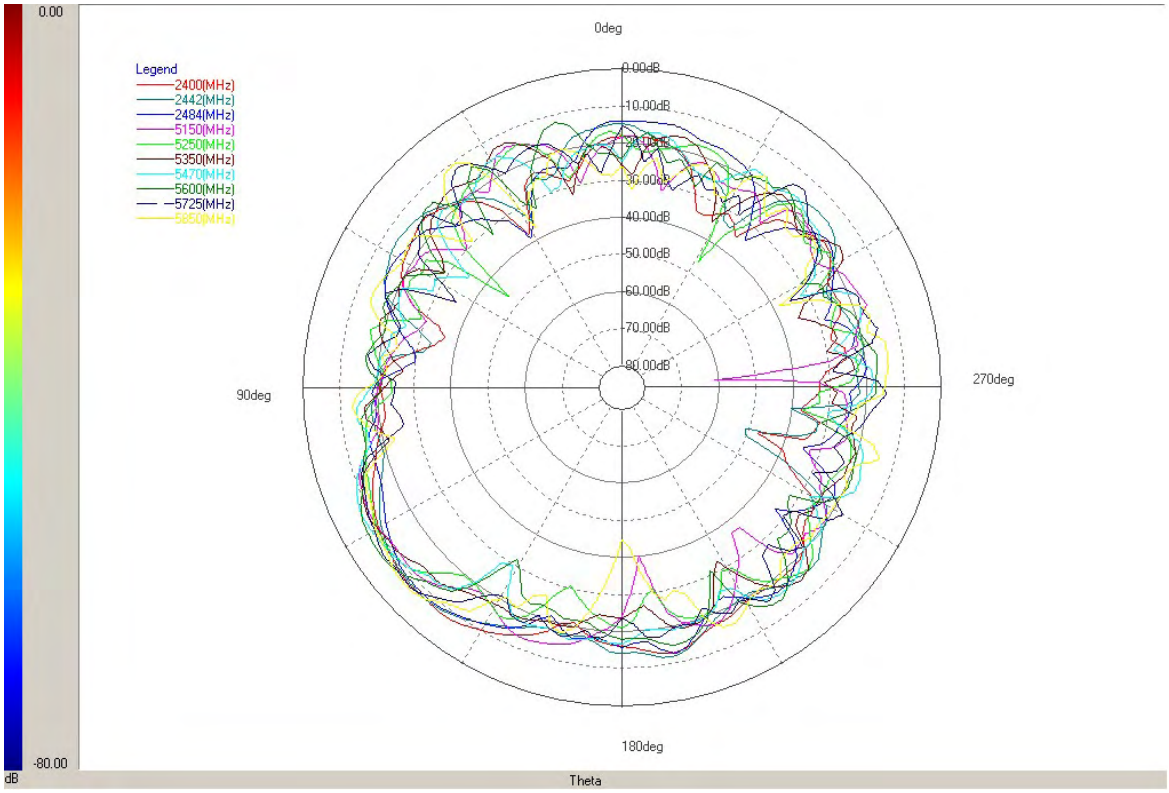
1.1 E1-Phi



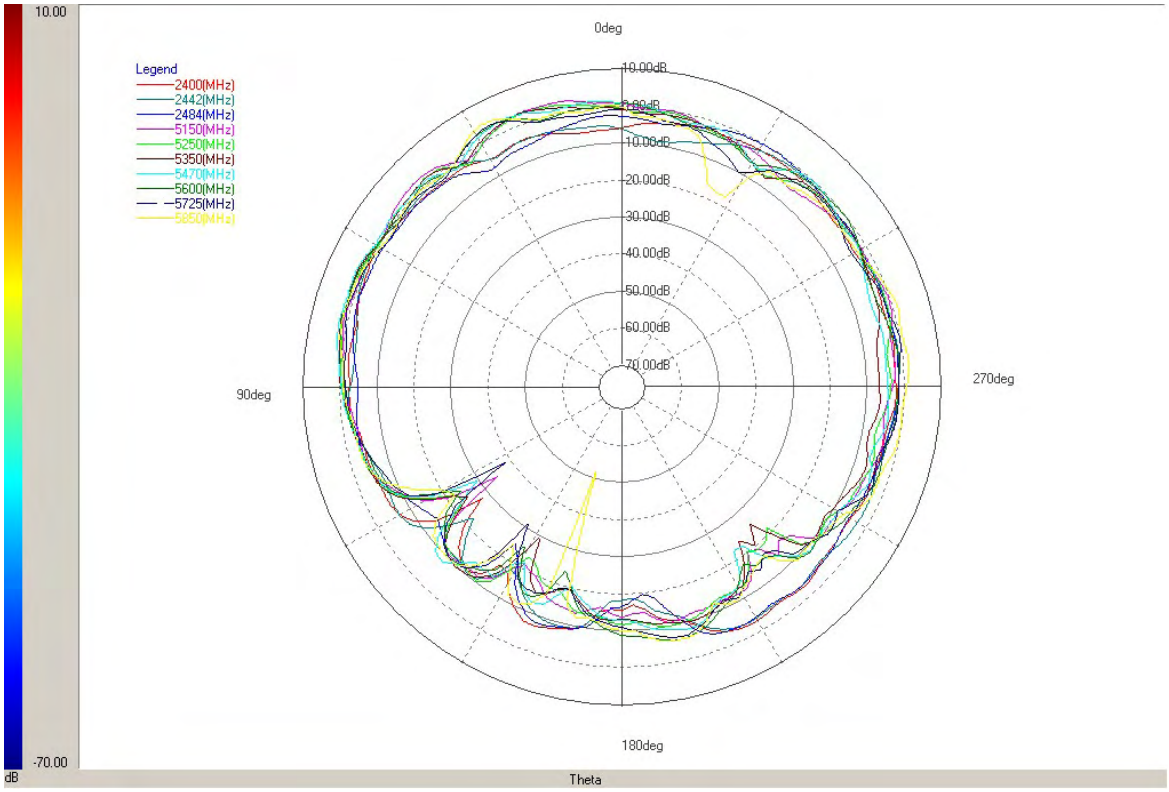
1.2 E1-Theta



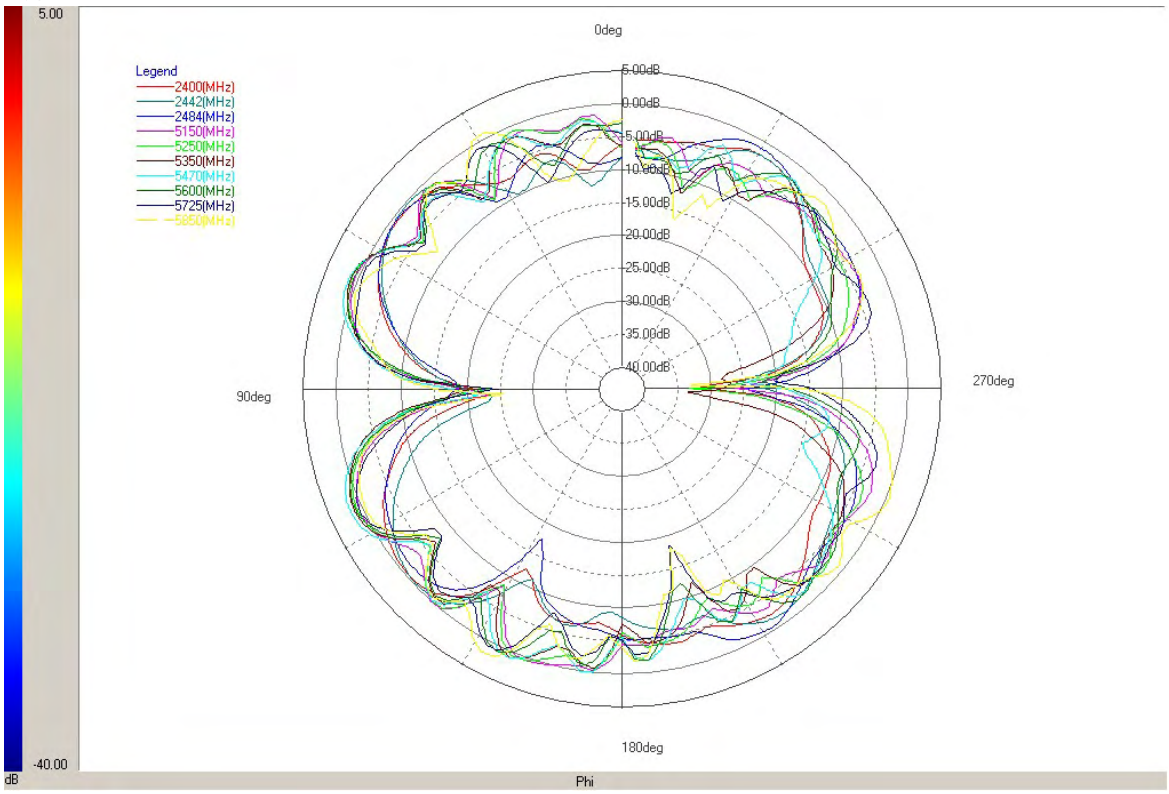
1.3 E2-Phi



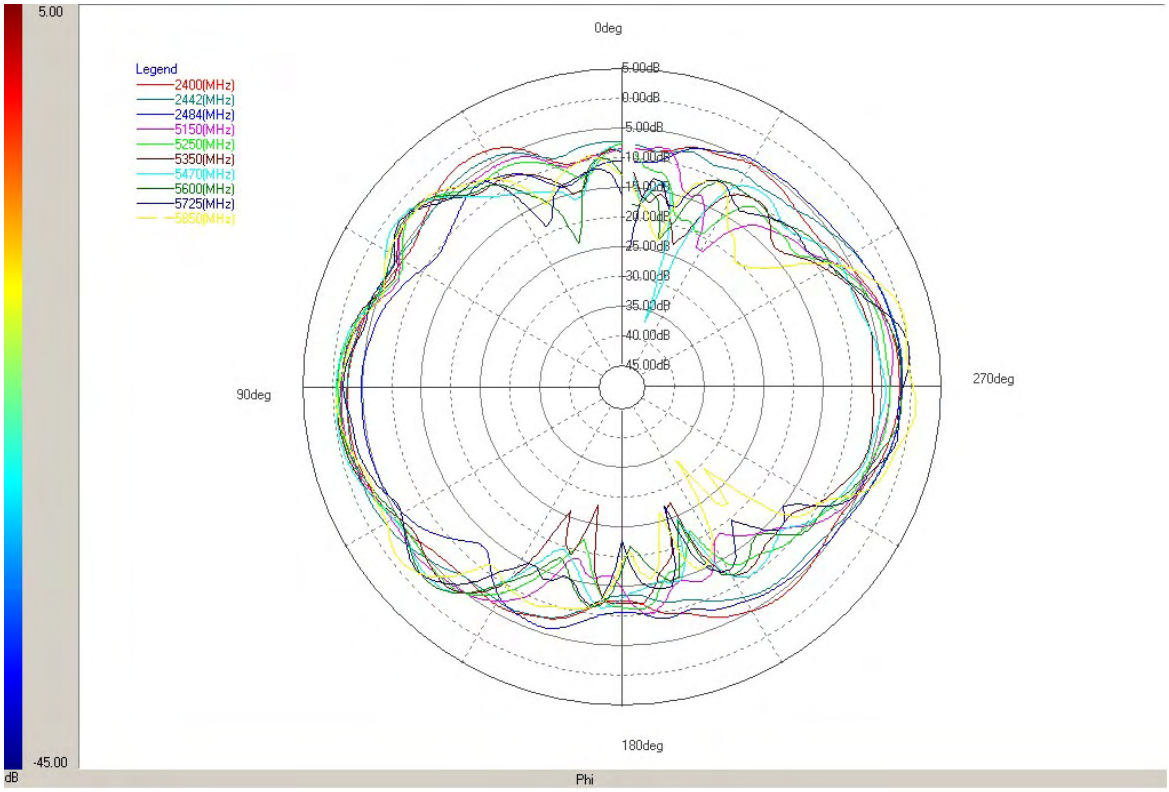
1.4 E2-Theta



1.5 H-Phi



1.6 H-Theta


5.00
-45.00
dB
Phi
0deg
90deg
270deg
180deg
Legend
2400(MHz)
2442(MHz)
2484(MHz)
5150(MHz)
5250(MHz)
5350(MHz)
5470(MHz)
5600(MHz)
5725(MHz)
5850(MHz)
5.00dB
0.00dB
-5.00dB
-10.00dB
-15.00dB
-20.00dB
-25.00dB
-30.00dB
-35.00dB
-40.00dB
-45.00dB

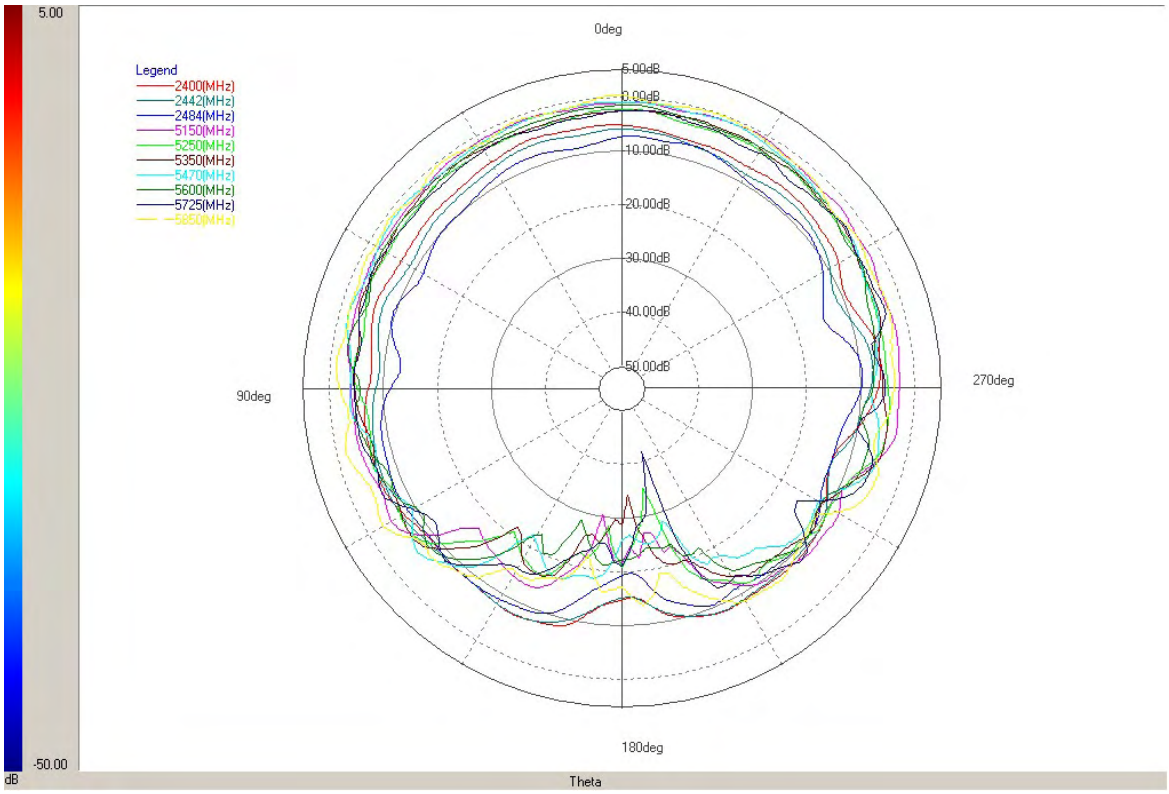
1.7 Peak gain (dBi) summary

Frequency (MHz)	E1-Phi	E2- Phi	H- Phi
2400	-4.85 dB	-7.88 dB	-0.46 dB
2442	-6.59 dB	-8.12 dB	-0.38 dB
2484	-2.84 dB	-8.71 dB	-0.66 dB
5150	0.42 dB	-9.83 dB	0.49 dB
5250	-1.00 dB	-9.46 dB	0.93 dB
5350	-1.25 dB	-9.20 dB	1.19 dB
5470	0.43 dB	-7.86 dB	1.77 dB
5600	0.46 dB	-6.78 dB	0.95 dB
5725	-0.98 dB	-7.46 dB	0.53 dB
5850	-0.20 dB	-7.01 dB	1.85 dB

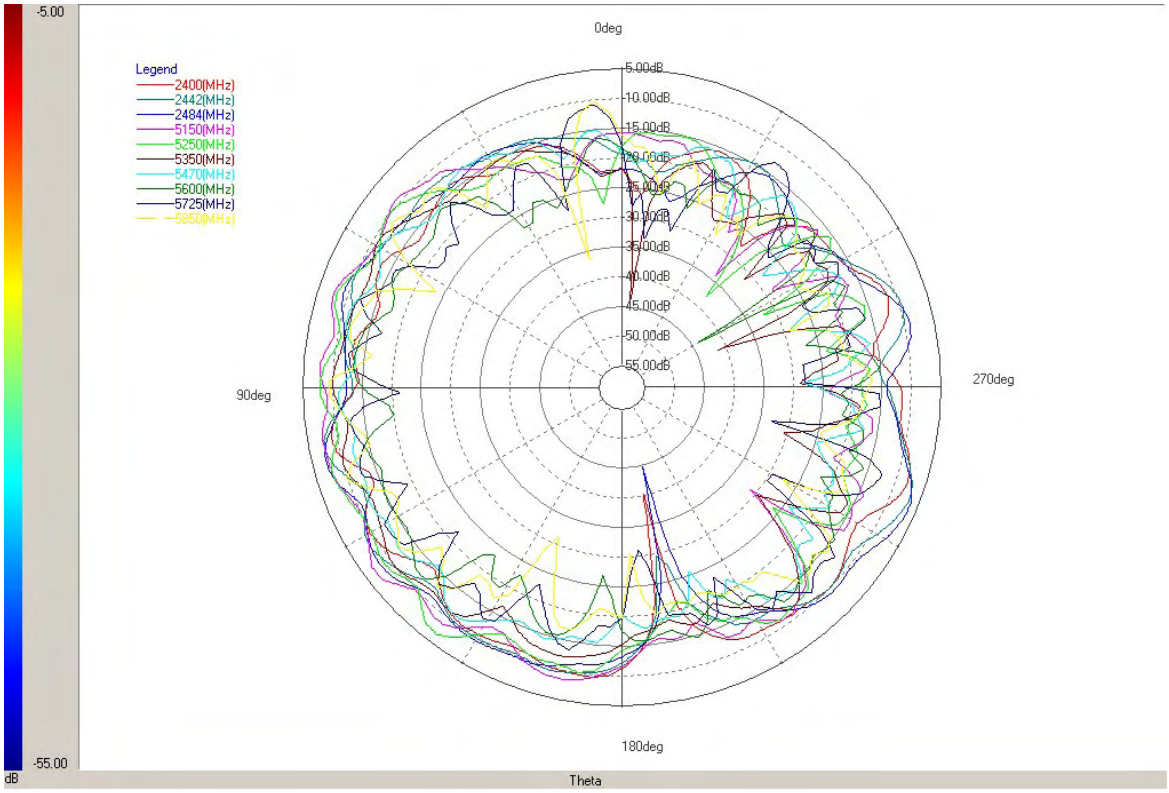
Frequency (MHz)	E1-Theta	E2- Theta	H- Theta
2400	-5.17 dB	0.22 dB	-2.05 dB
2442	-4.46 dB	0.45 dB	-1.46 dB
2484	-7.76 dB	-0.26 dB	-1.59 dB
5150	-8.00 dB	2.83 dB	-1.42 dB
5250	-7.51 dB	2.52 dB	-0.90 dB
5350	-8.36 dB	2.71 dB	-0.56 dB
5470	-8.33 dB	2.86 dB	-0.46 dB
5600	-11.47 dB	2.82 dB	-1.20 dB
5725	-10.19 dB	2.89 dB	-0.02 dB
5850	-11.82 dB	4.12 dB	0.90 dB

2. Aux antenna Radiation pattern and gain

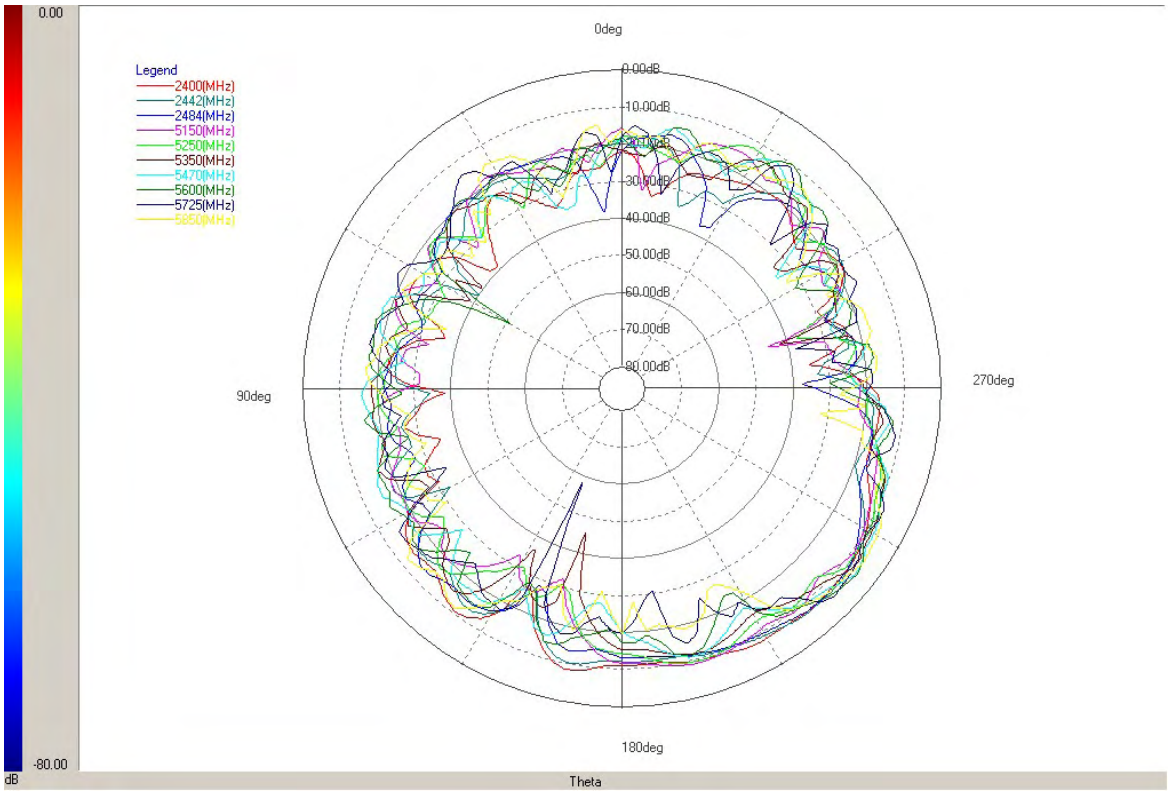
2.1 E1-Phi



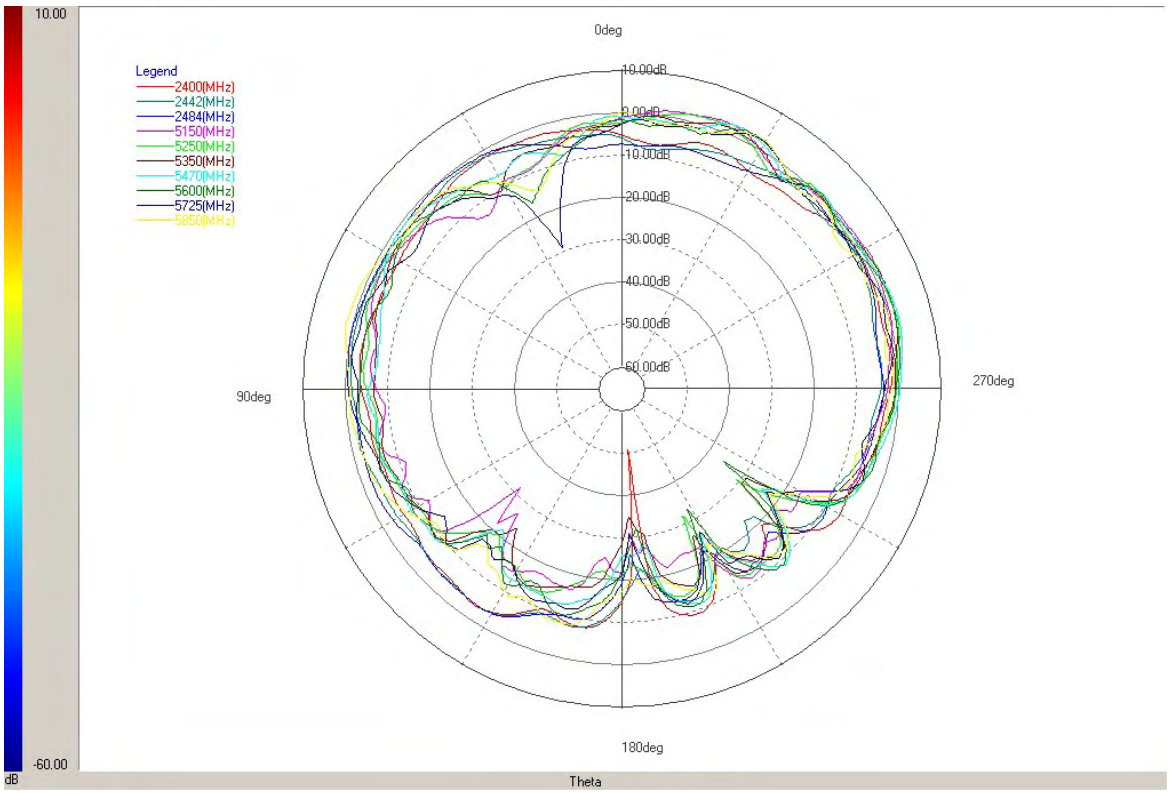
2.2 E1-Theta



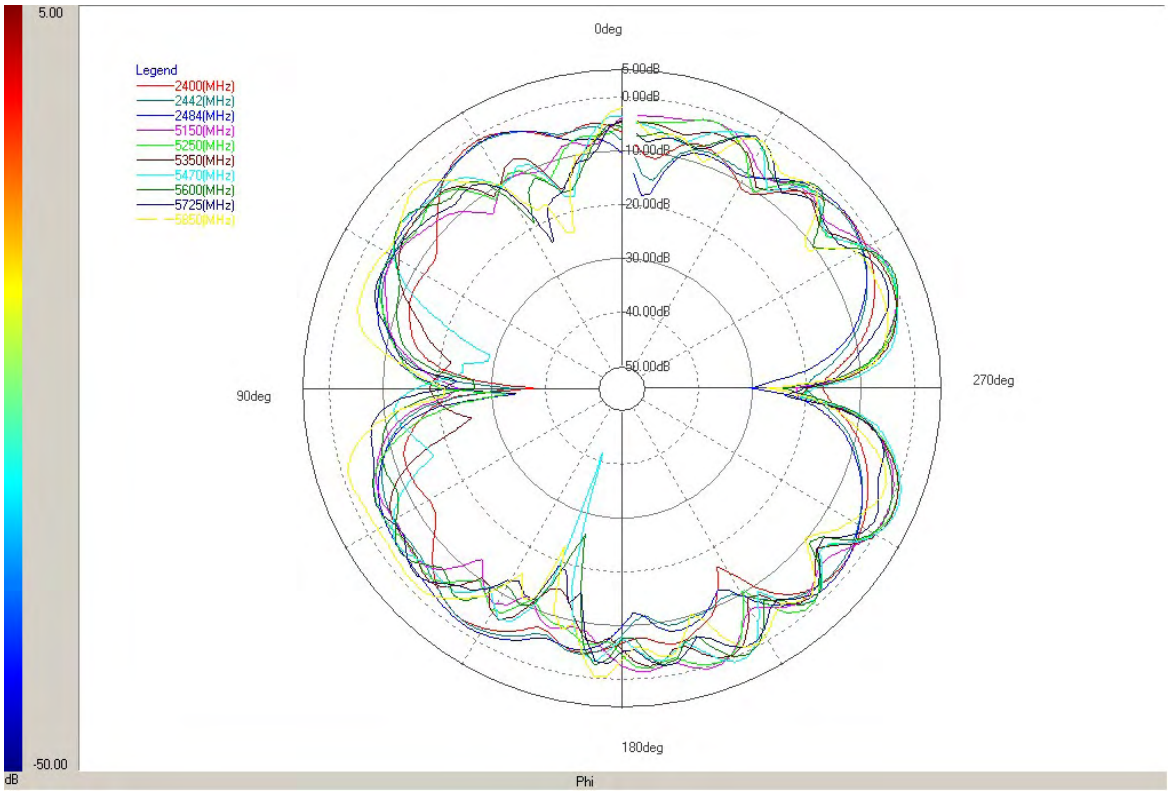
2.3 E2-Phi



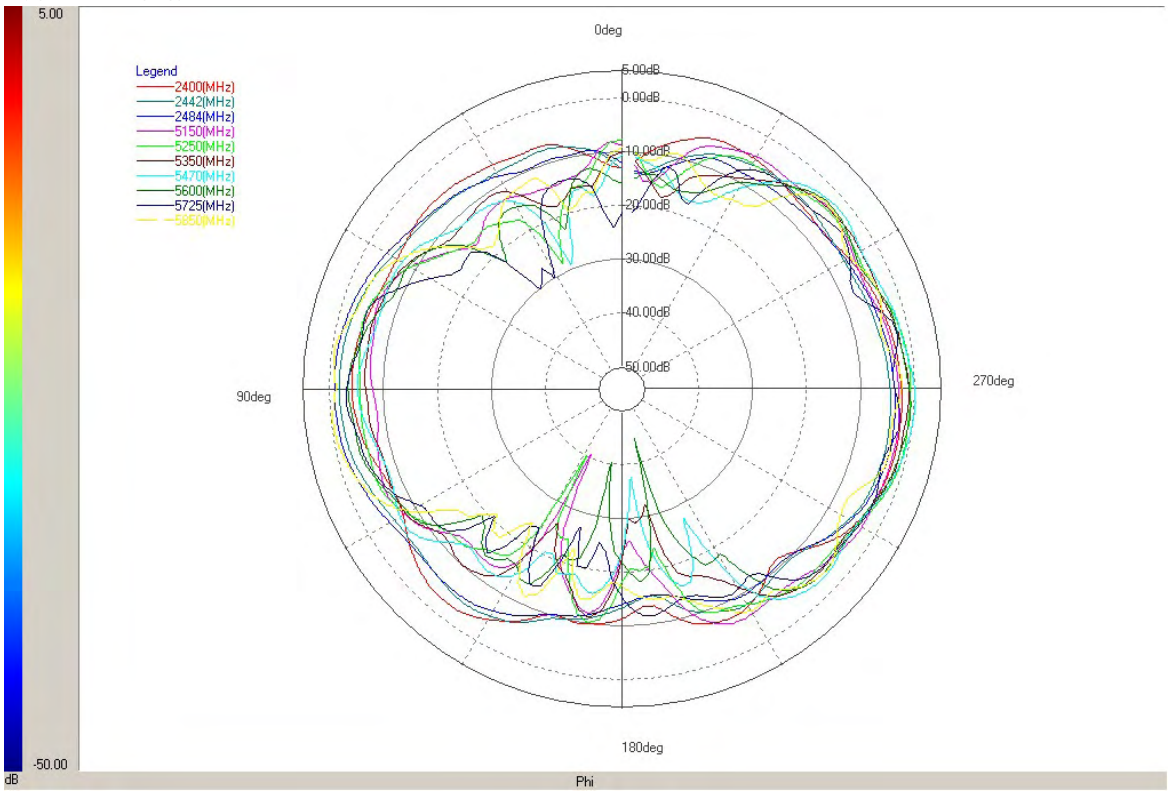
2.4 E2-Theta



2.5 H-Phi



2.6 H-Theta



2.7 Peak gain (dBi) summary

Frequency (MHz)	E1-Phi	E2- Phi	H- Phi
2400	-5.01 dB	-7.80 dB	-0.97 dB
2442	-6.09 dB	-7.38 dB	-1.72 dB
2484	-7.27 dB	-7.81 dB	-1.33 dB
5150	-0.63 dB	-9.26 dB	0.18 dB
5250	-2.45 dB	-8.75 dB	0.96 dB
5350	-2.29 dB	-7.08 dB	1.11 dB
5470	-0.96 dB	-5.61 dB	1.49 dB
5600	-1.63 dB	-5.32 dB	0.58 dB
5725	-2.51 dB	-5.92 dB	-1.08 dB
5850	0.13 dB	-5.74 dB	-0.53 dB

Frequency (MHz)	E1-Theta	E2- Theta	H- Theta
2400	-8.09 dB	-0.94 dB	-2.12 dB
2442	-6.78 dB	-0.79 dB	-1.74 dB
2484	-6.39 dB	-0.11 dB	-0.88 dB
5150	-6.94 dB	2.37 dB	-2.42 dB
5250	-6.73 dB	1.75 dB	-0.66 dB
5350	-9.99 dB	1.51 dB	-0.95 dB
5470	-10.91 dB	2.59 dB	0.26 dB
5600	-12.45 dB	2.40 dB	-0.49 dB
5725	-10.90 dB	2.20 dB	-2.18 dB
5850	-9.42 dB	2.51 dB	-0.23 dB

Host PC Information

Host System : Notebook PC
(Project and Model Name : Cygnus)

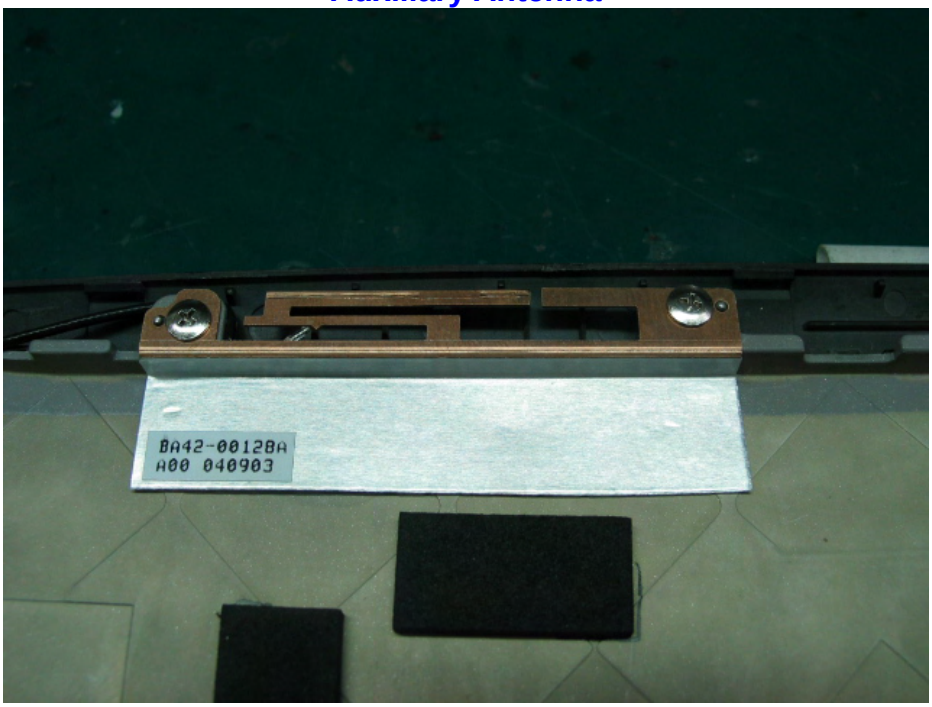
Antenna location : Top of the LCD of
Antenna : Main = Left , Aux = Right

Photographs of the antenna location in the Neon

Antenna location

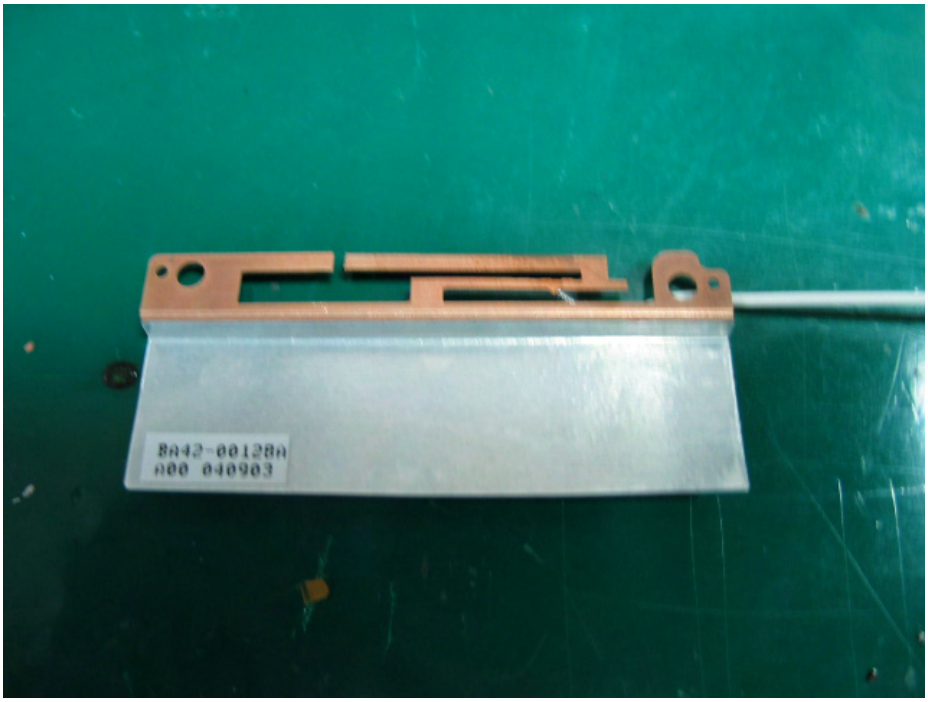
Main Antenna

Auxiliary Antenna



Full antenna picture

Main Antenna



Auxiliary Antenna