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

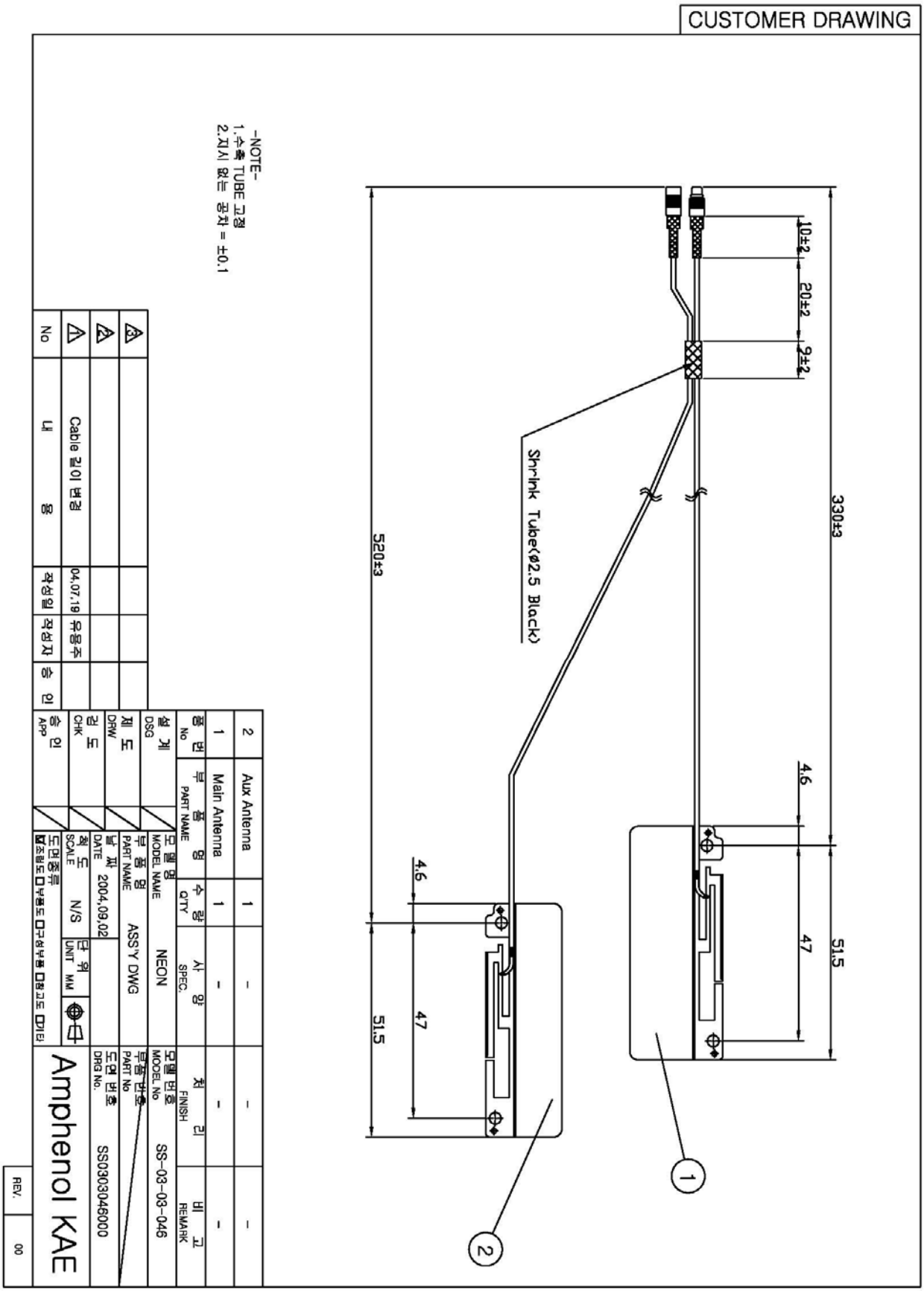
Designator	Manufacture	Antenna type	Cable Assembly Info.	Peak Gain W/ Cable loss (dBi)
(P/N : SS-03-03-046) Main antenna (Right Antenna)	Amphenol KAE Co., Ltd	PIFA	(P/N: SS-03-03-046) 50 ohm Coaxial. length: 550mm diameter: 1.13mm Connector: MHC-231(KAE)	2400-2500MHz 0.45 dBi (peak)
				5150-5350MHz 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)

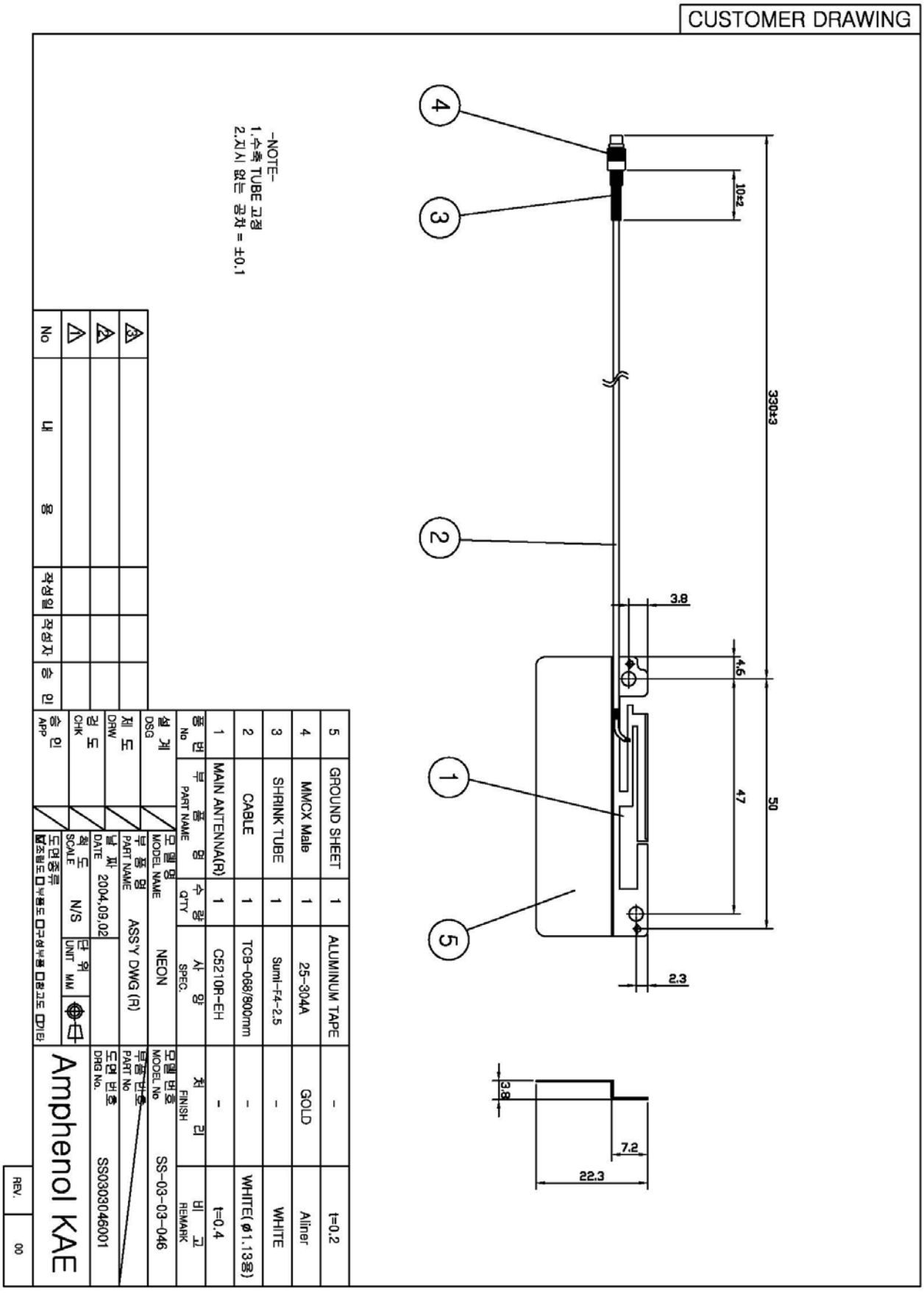
Designator	Manufacture	Cable type and length	VSWR	Cable Loss (dBi)
(P/N: SS-03-03-046) For use with the Main antenna	Amphenol KAE Co., Ltd	(P/N: SS-03-03-046) 50 ohm Coaxial. length: 550mm diameter: 1.13mm Connector: MHC-231(KAE)	2400-2500MHz 1.07 max	2400-2500MHz 1.67 dB (peak)
			5150-5350MHz 1.19 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

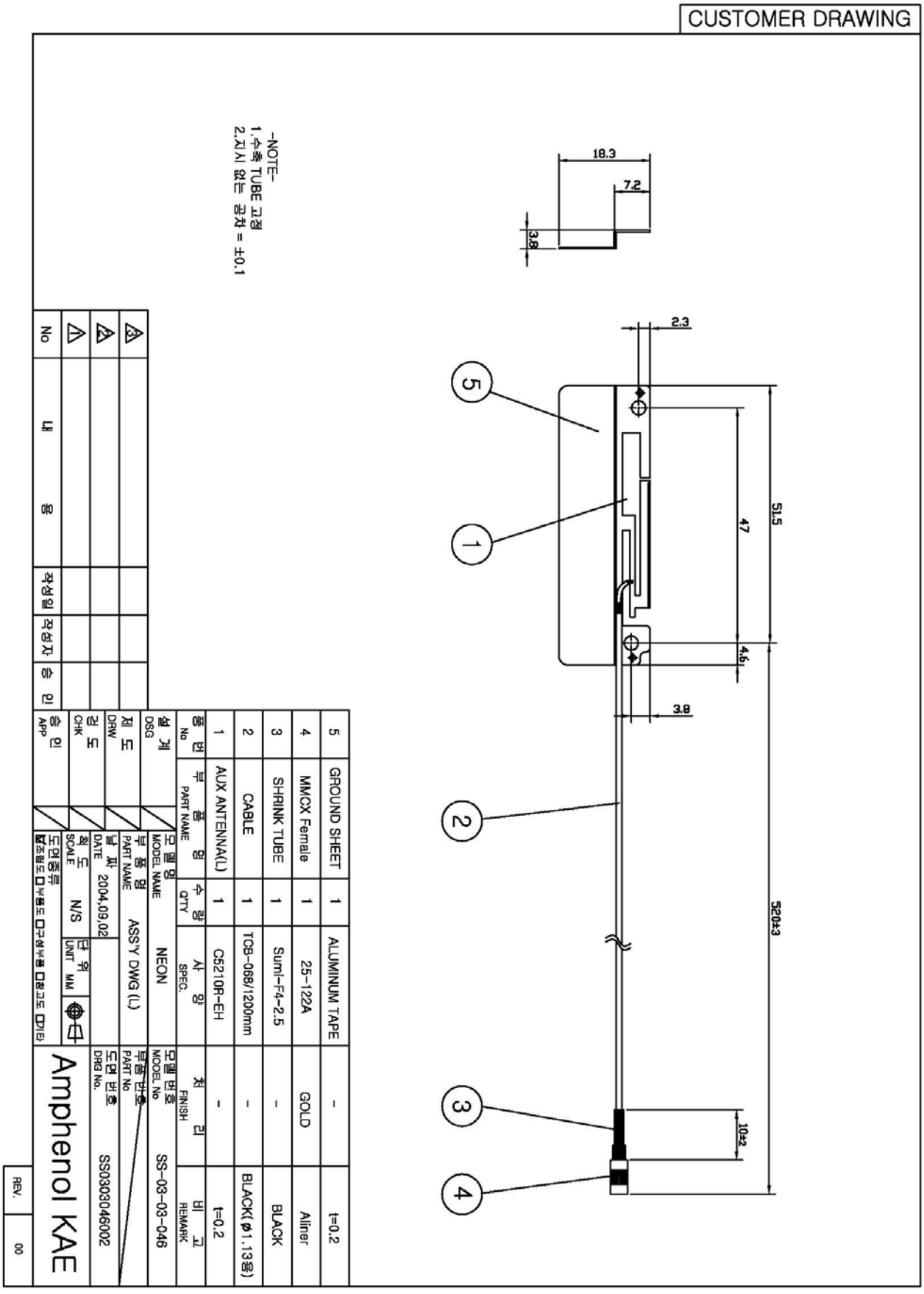
Antenna Ass'y



Main Antenna

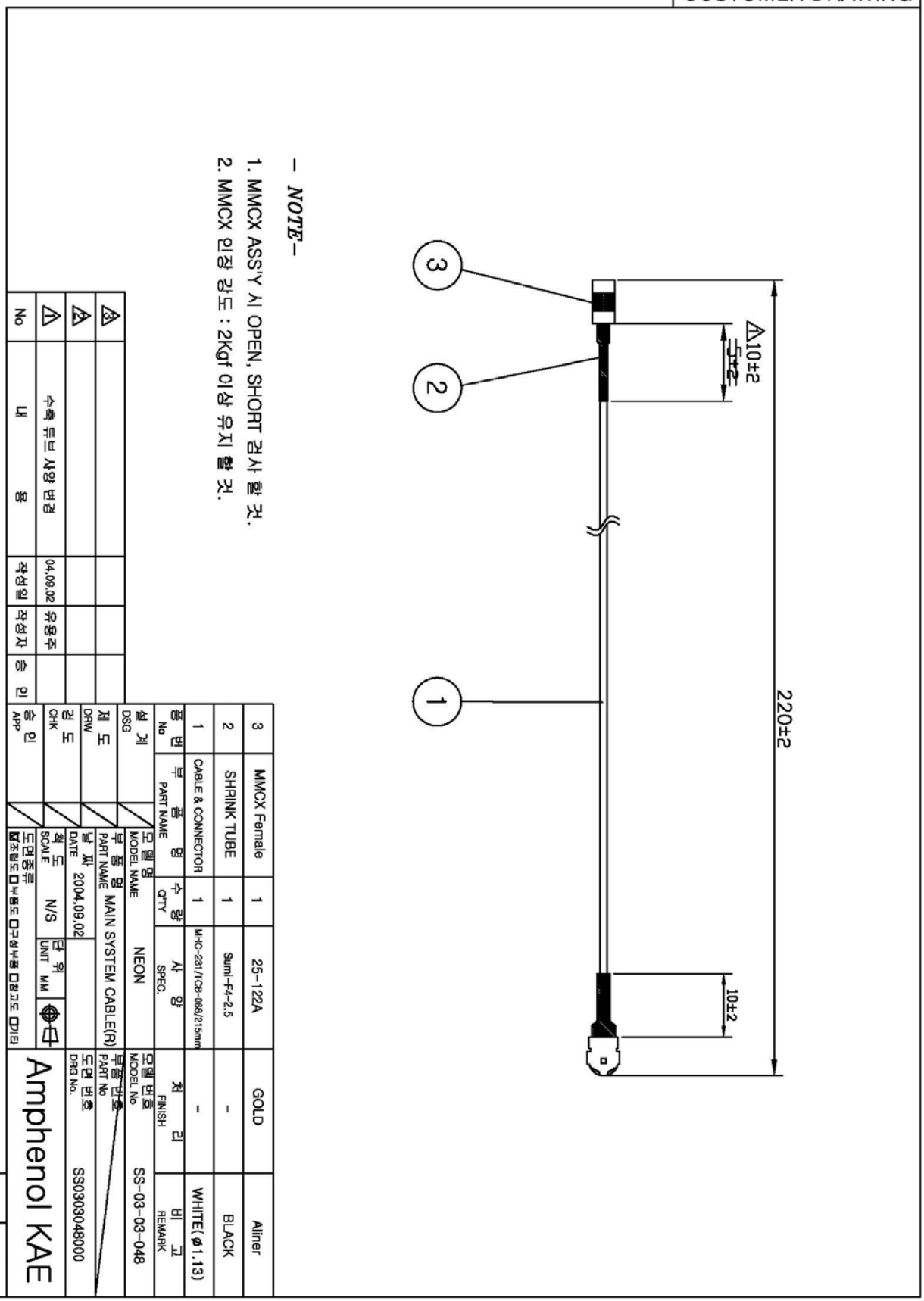


Aux antenna


CUSTOMER DRAWING
-NOTE-
1.슈축 TUBE 고정
2.지시 없는 공차 = ±0.1
18.3
7.2
3.8
2.3
51.5
47
4.6
3.8
520±3
10±2
5
1
2
3
4
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
No 품번 PART NAME 수량 QTY 사양 SPEC. 처리 FINISH 비고 REMARK
No 내용 작성일 작성자 승인
설계 DSG
제도 DRW
검도 CHK
승인 APP
모델명 MODEL NAME NEON
부품명 PART NAME ASS'Y DWG (L)
날짜 DATE 2004.09.02
척도 SCALE N/S
단위 UNIT MM
모델번호 MODEL No SS-03-03-046
부품번호 PART No
도면번호 DRG No. SS0303046002
도면종류
Amphenol KAE
REV. 00

Main Cable

CUSTOMER DRAWING



– 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
3				
2	수축 튜브 사양 변경	04.09.02	유용주	
1				

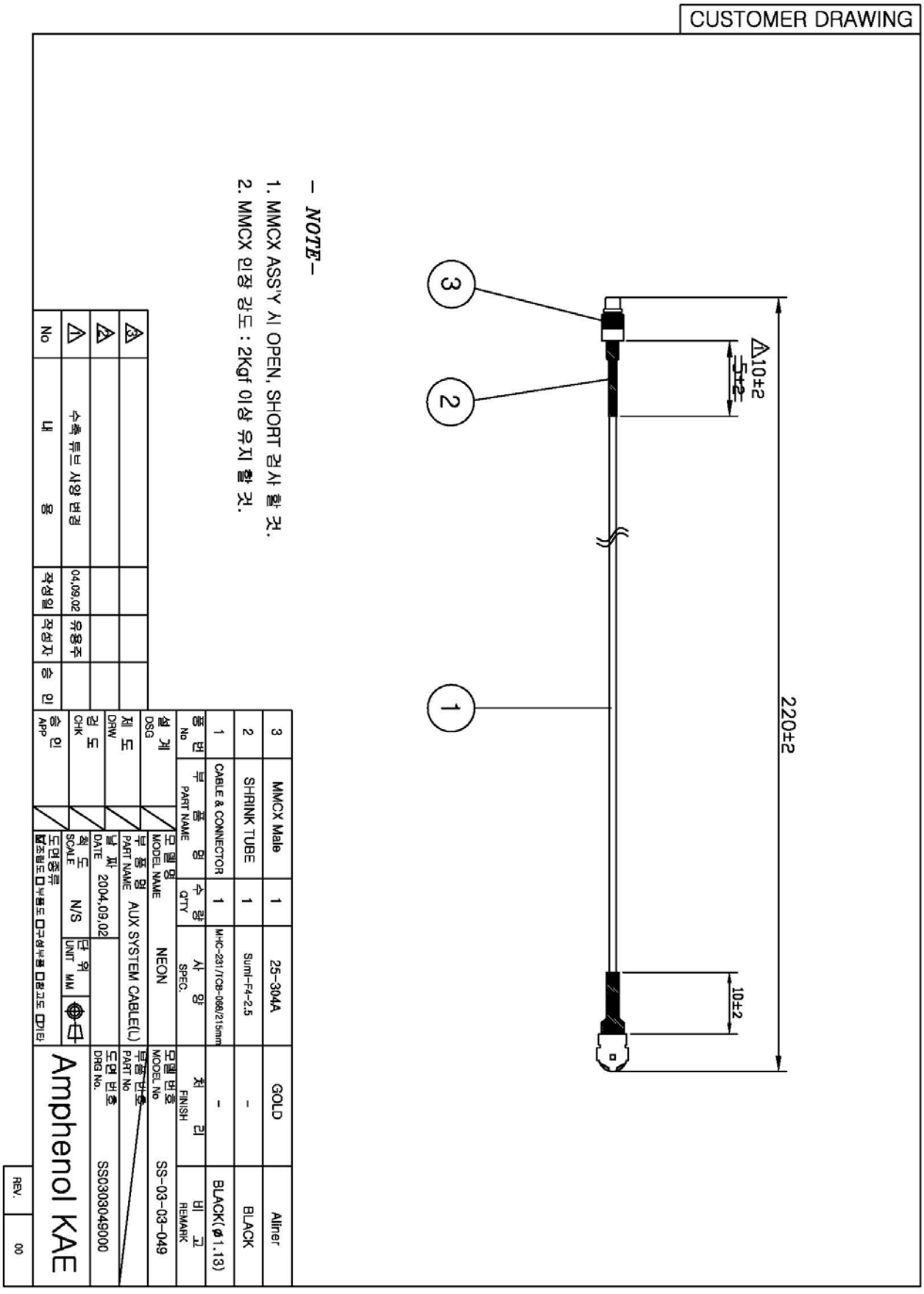
품번 No	부품명 PART NAME	수량 QTY	사양 SPEC.	처리 FINISH	비고 REMARK
3	MMCX Female	1	25-122A	GOLD	Allner
2	SHRINK TUBE	1	Sumi-F4-2.5	-	BLACK
1	CABLE & CONNECTOR	1	MHC-231/TCB-068/215mm	-	WHITE(ø1.13)

설 계 DSG	모델명 MODEL NAME	NEON	모델 번호 MODEL No	SS-03-03-048
제 도 DRW	부품명 PART NAME	MAIN SYSTEM CABLE(R)	부품 번호 PART No	
검 도 CHK	날 짜 DATE	2004.09.02	도면 번호 DRG No.	SS0303048000
승 인 APP	척 도 SCALE	N/S	단 위 UNIT MM	
	도면종류	일반조립도 □부품도 □구성부품 □용고도 □기타		

Amphenol KAE

REV. 00

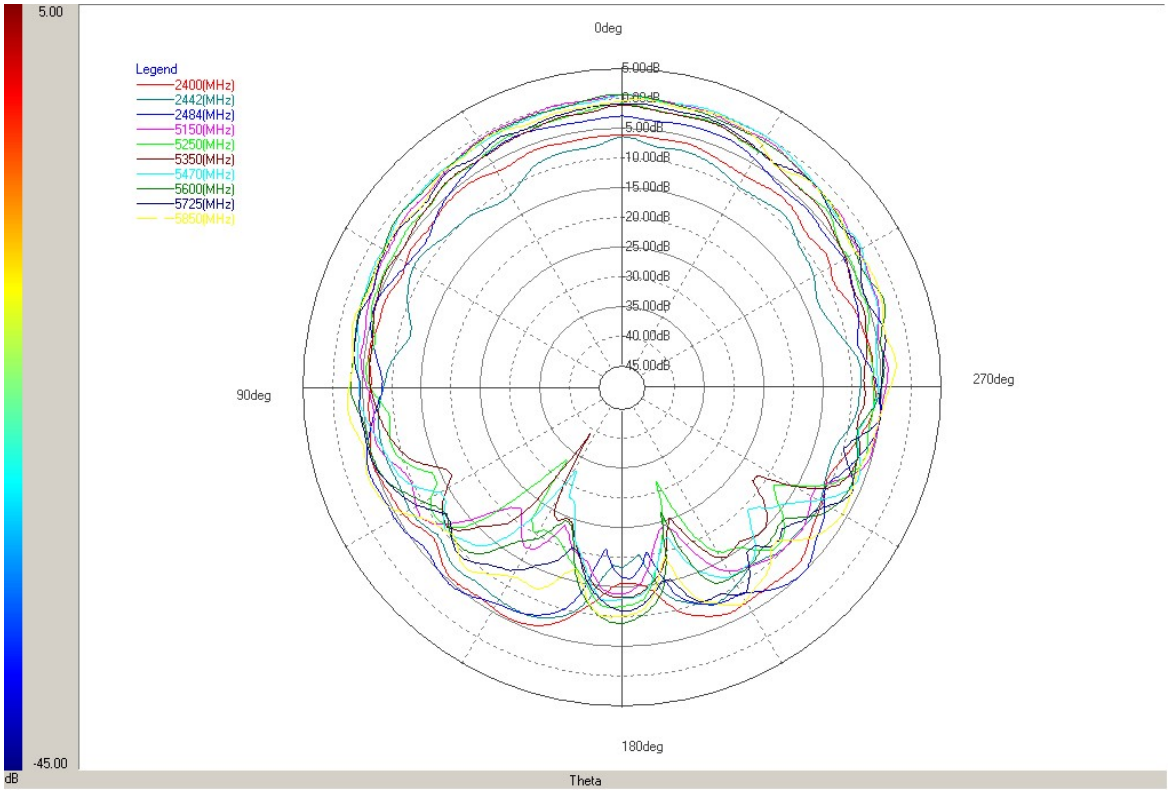
Aux Cable


CUSTOMER DRAWING
220±2
10±2
5±2
10±2
3
2
1
- NOTE -
1. MMCX ASS'Y 시 OPEN, SHORT 검사 할 것.
2. MMCX 인장 강도 : 2Kgf 이상 유지 할 것.
3 MMCX Male 1 25-304A GOLD Aliner
2 SHRINK TUBE 1 Sumi-F4-2.5 - BLACK
1 CABLE & CONNECTOR 1 MHC-231/7CB-068/215mm - BLACK(ø1.13)
No 부품명 PART NAME 수량 QTY 사양 SPEC. 처리 FINISH 비고 REMARK
설계 DSG
제도 DRW
검도 CHK
승인 APP
모델명 MODEL NAME NEON
부품명 PART NAME AUX SYSTEM CABLE(L)
날짜 DATE 2004.09.02
척도 SCALE N/S
단위 UNIT MM
모델번호 MODEL No SS-03-03-049
부품번호 PART No
도면번호 DRG No. SS0303049000
Amphenol KAE
REV. 00
No 내용 작성자 작성일
수축튜브 사양 변경 유용주 04.09.02

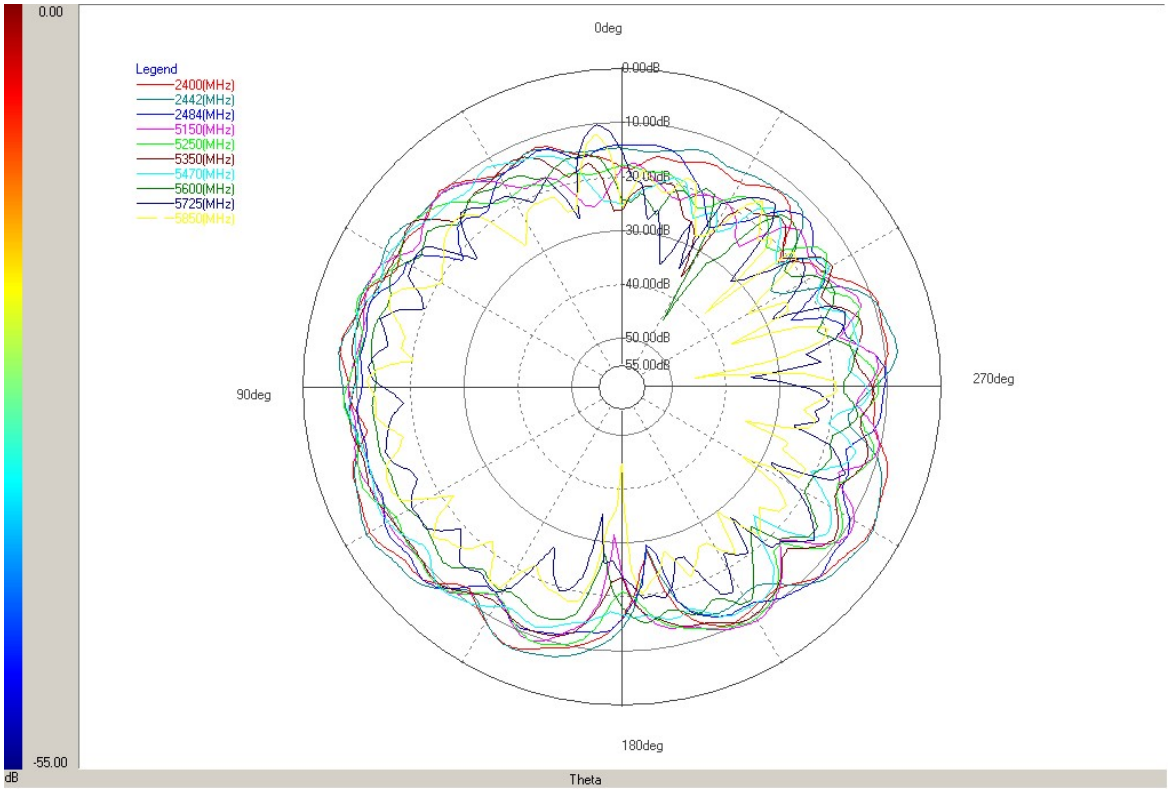
Radiation characteristic of antenna Loaded (In Host System)

1. Main antenna Radiation pattern and gain

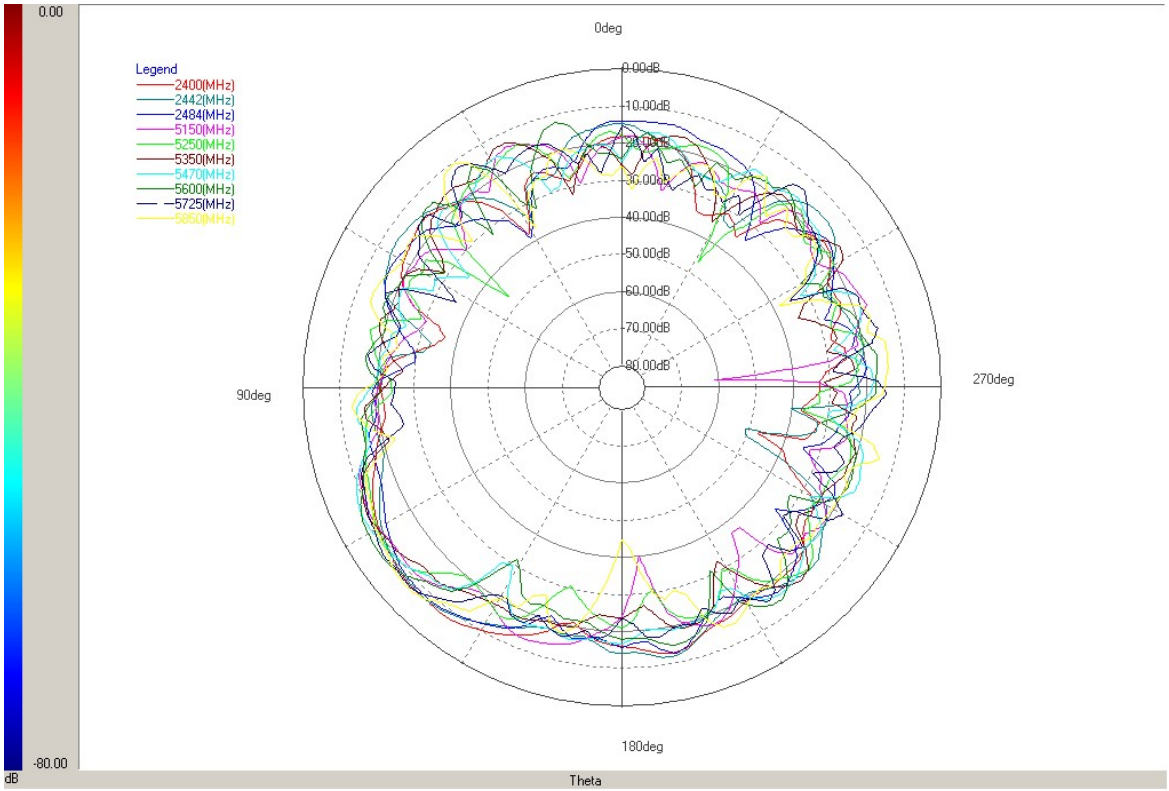
1.1 E1-Phi



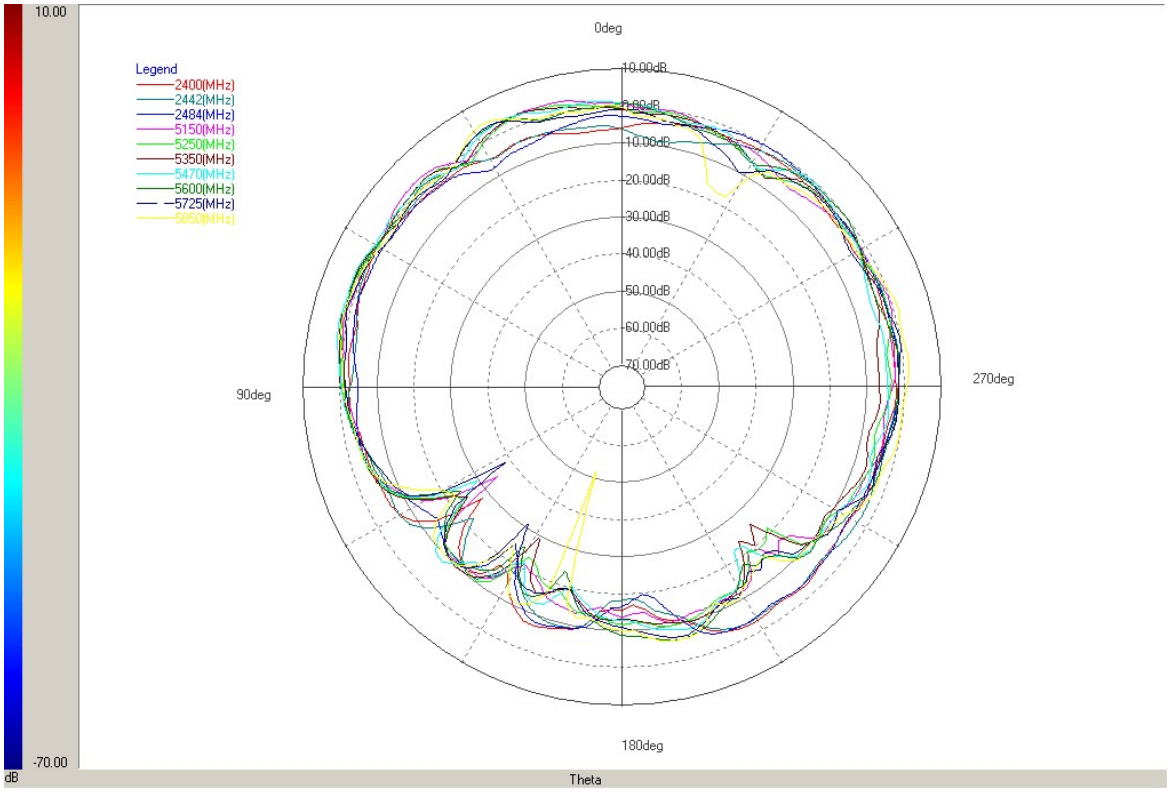
1.2 E1-Theta



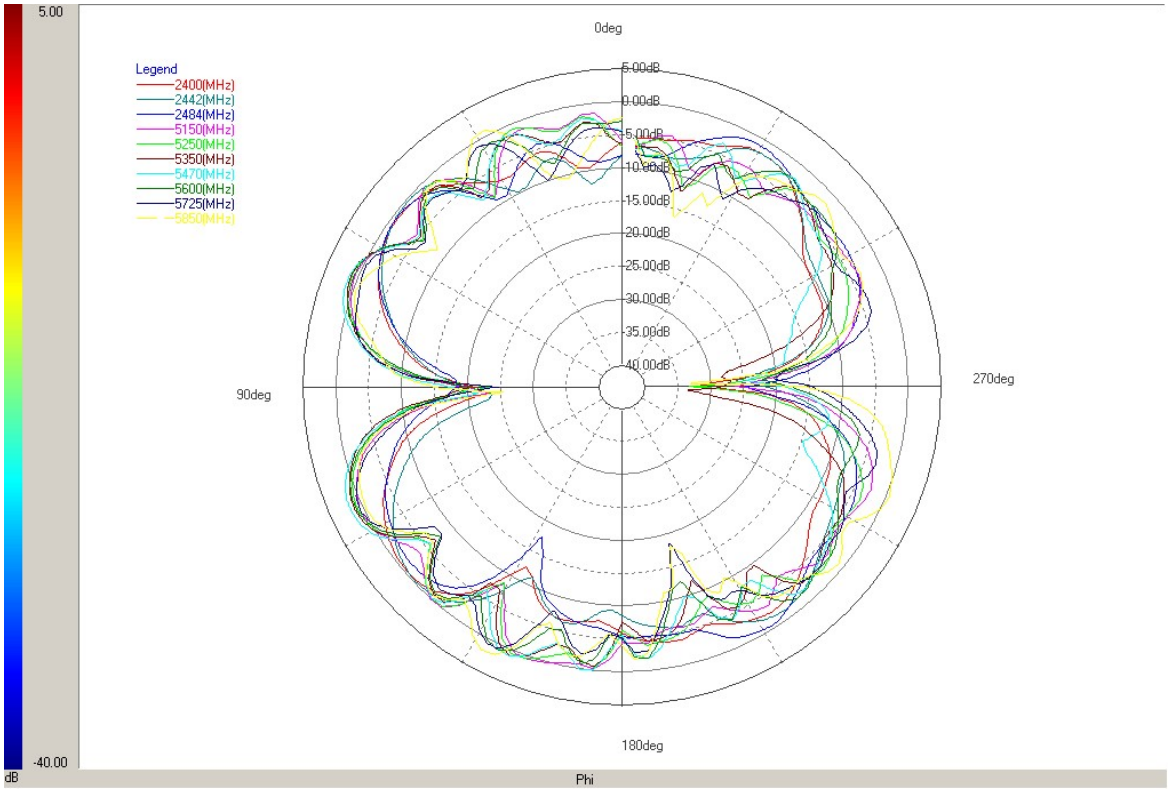
1.3 E2-Phi



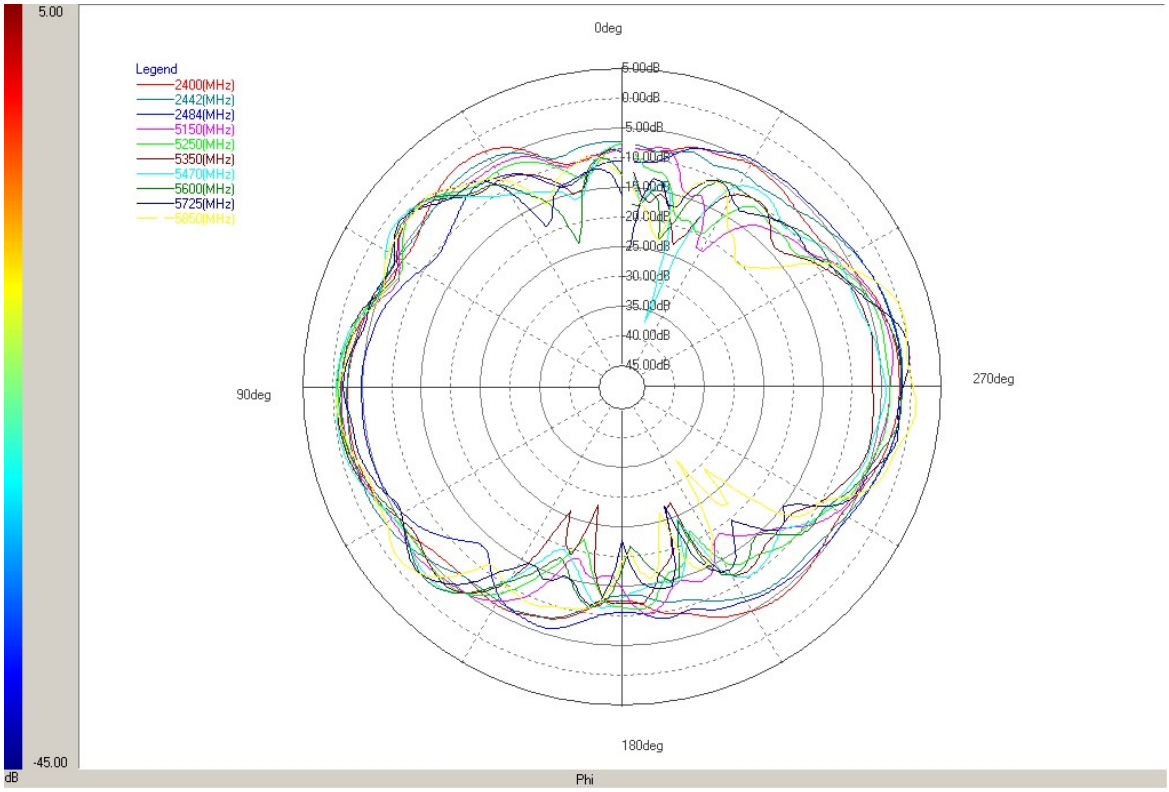
1.4 E2-Theta



1.5 H-Phi



1.6 H-Theta


5.00
-45.00
dB
Phi
0deg
90deg
180deg
270deg
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

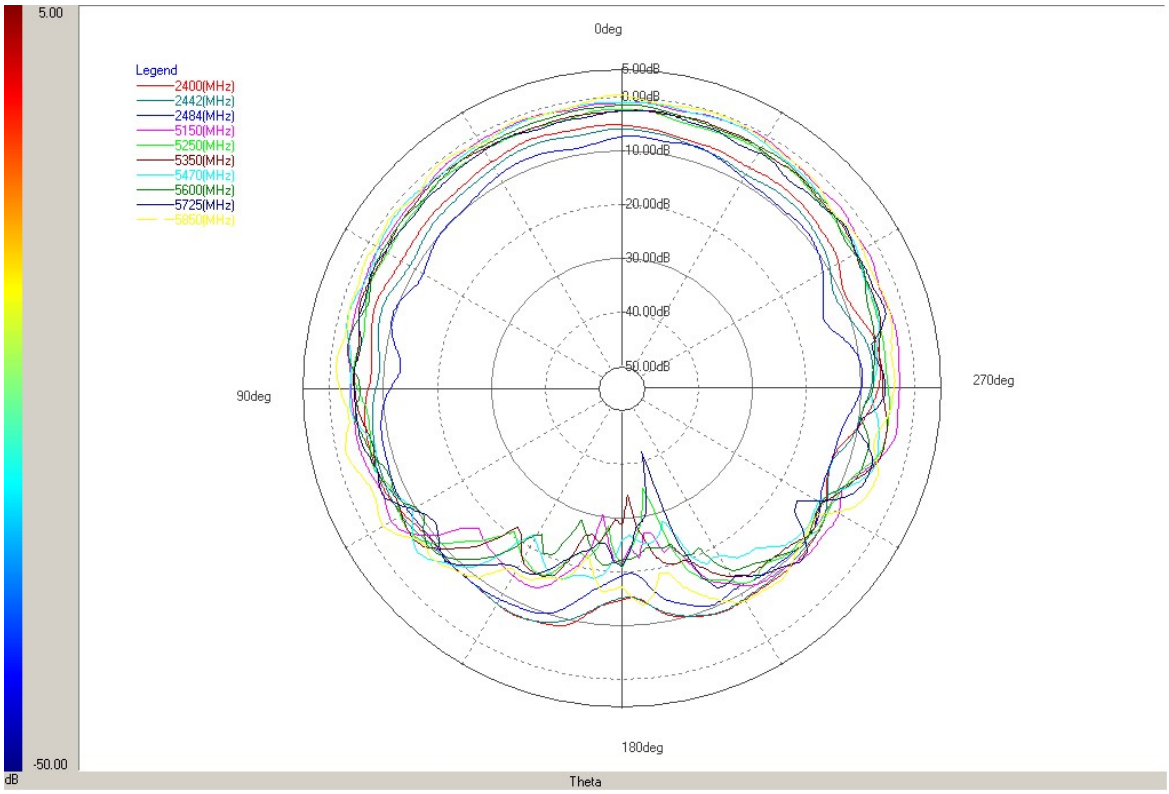
1.7 Peak gain (dBi) summary

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

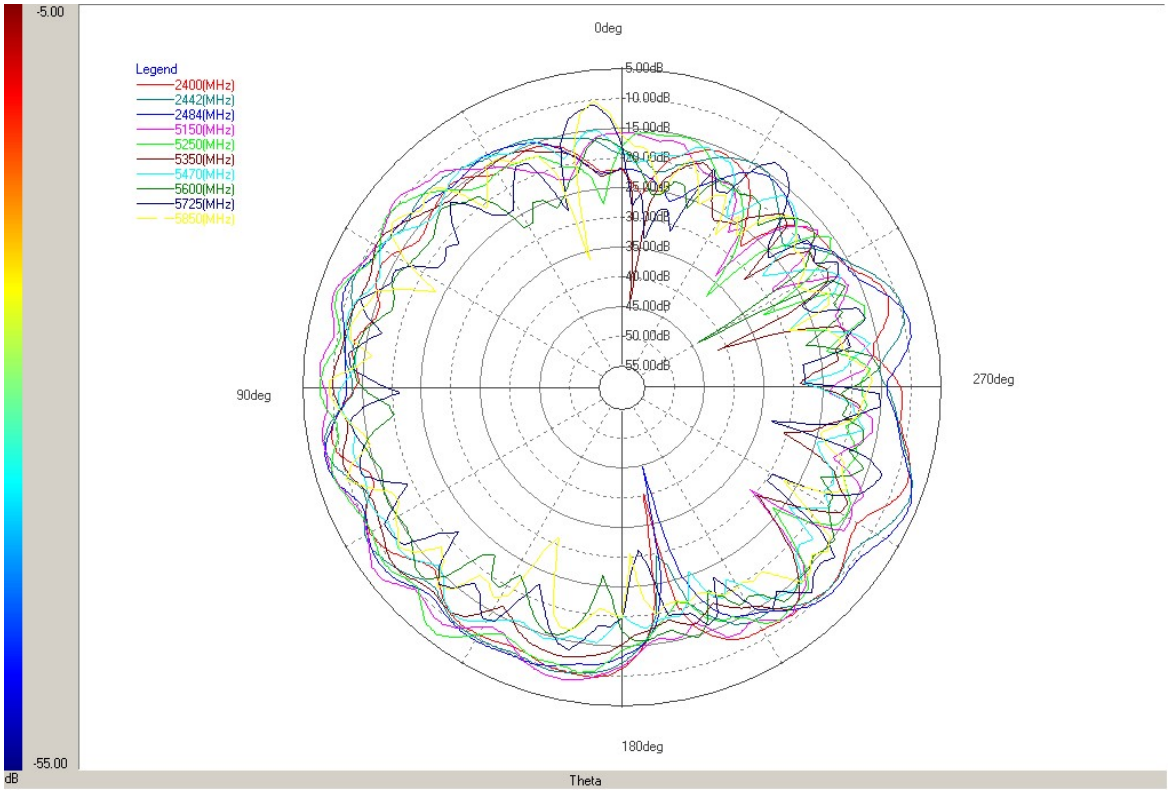
Frequency (MHz)	E1-Theta	E2- Theta	H- Theta
2400	-5.17 dB	0.22 dB	-2.05 dB
2442	-4.46 dB	0.45 dB	-1.46 dB
2484	-7.76 dB	-0.26 dB	-1.59 dB
5150	-8.00 dB	2.83 dB	-1.42 dB
5250	-7.51 dB	2.52 dB	-0.90 dB
5350	-8.36 dB	2.71 dB	-0.56 dB
5470	-8.33 dB	2.86 dB	-0.46 dB
5600	-11.47 dB	2.82 dB	-1.20 dB
5725	-10.19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

2. Aux antenna Radiation pattern and gain

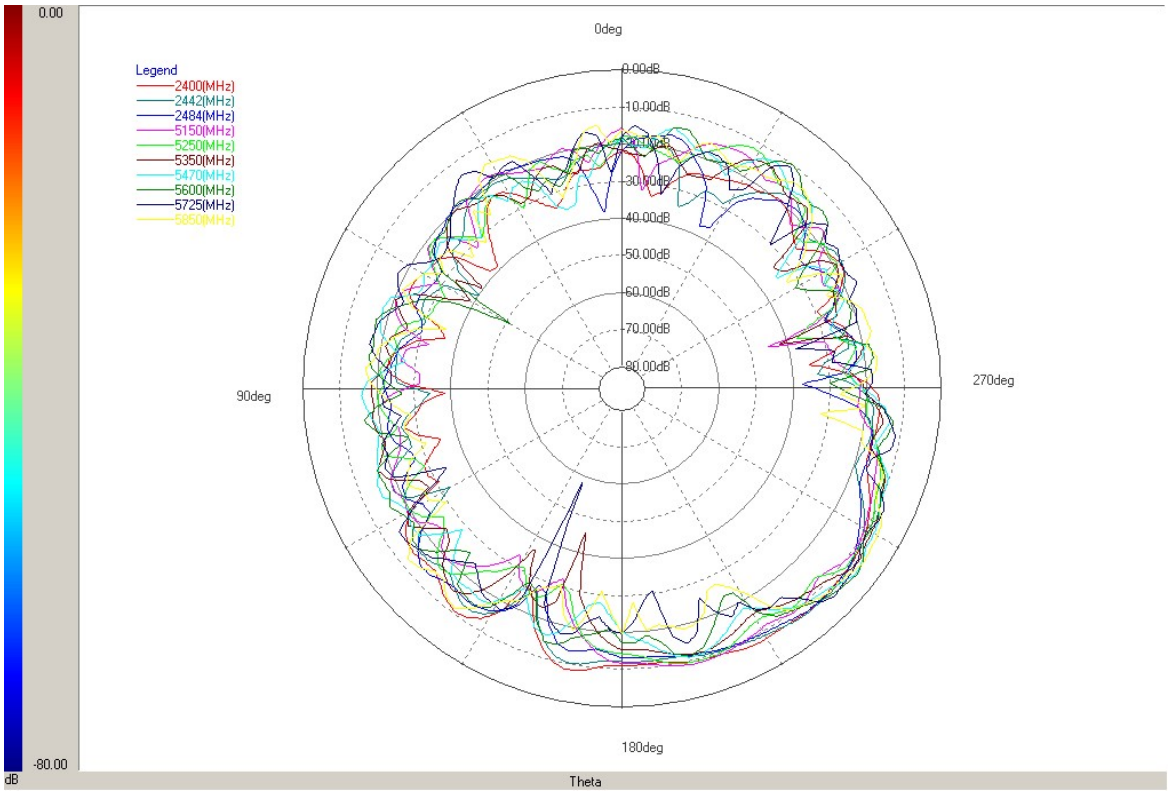
2.1 E1-Phi



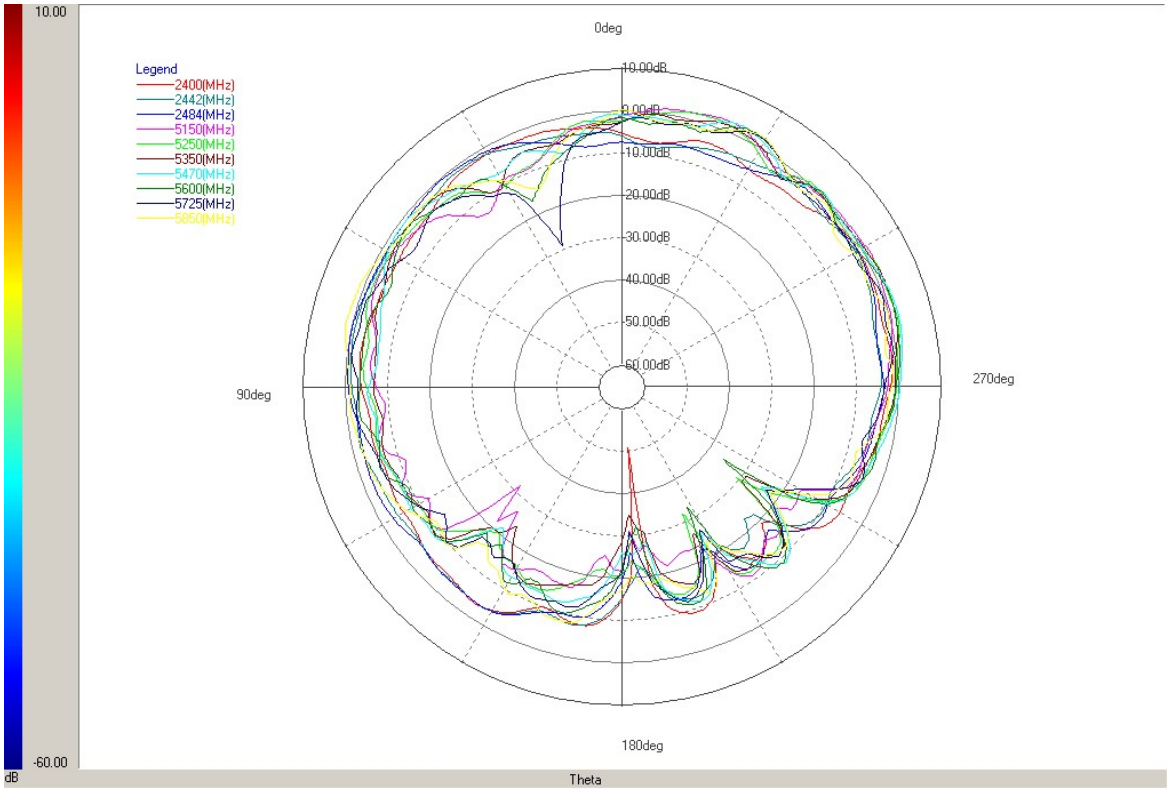
2.2 E1-Theta



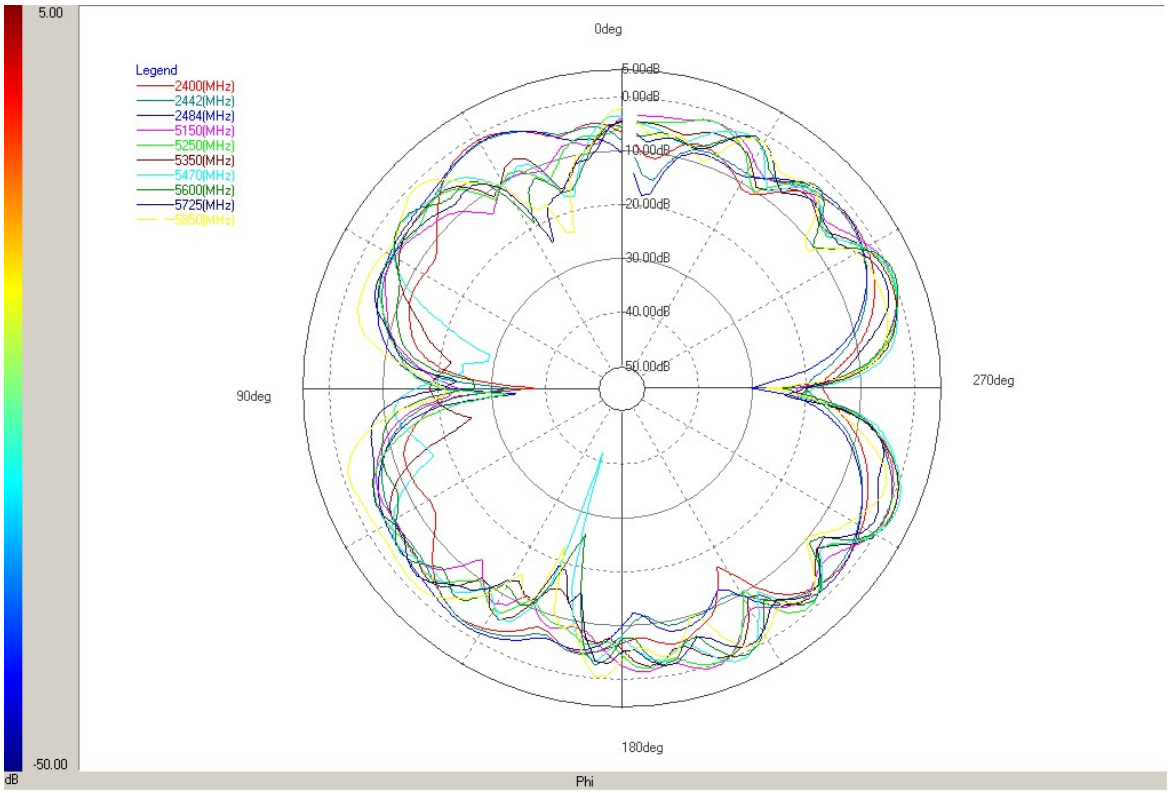
2.3 E2-Phi



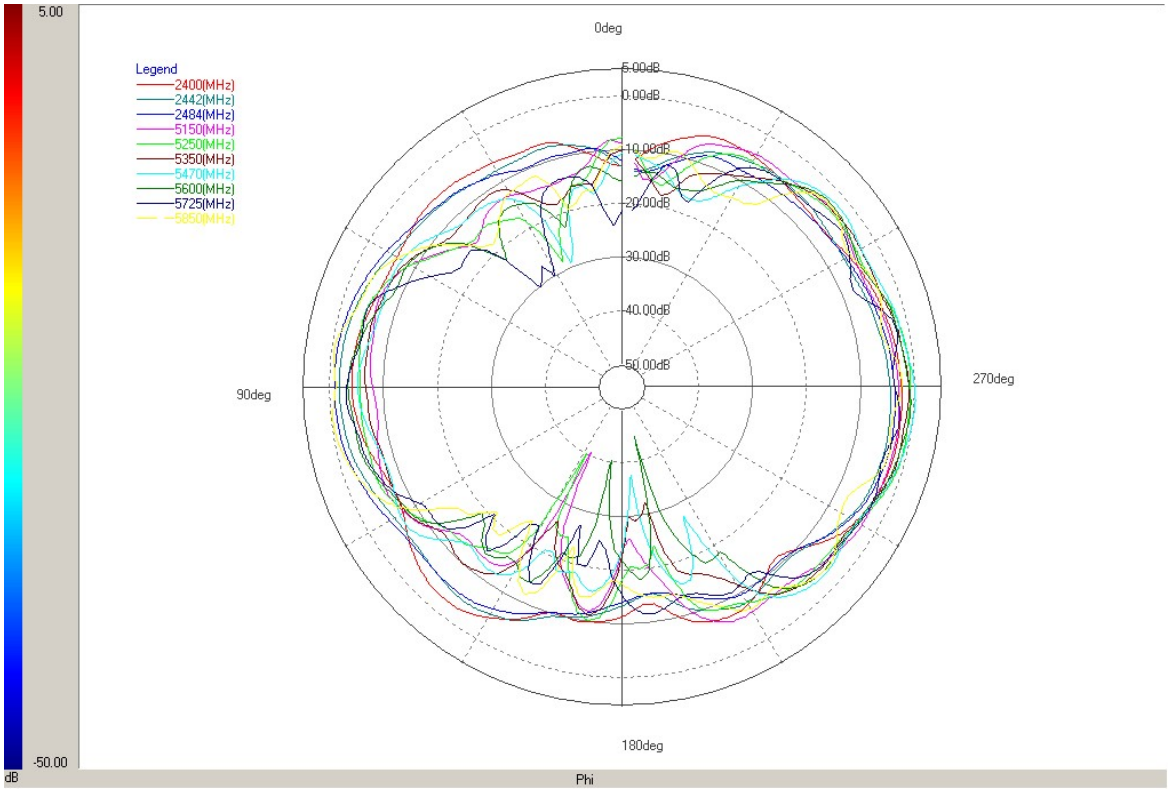
2.4 E2-Theta



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

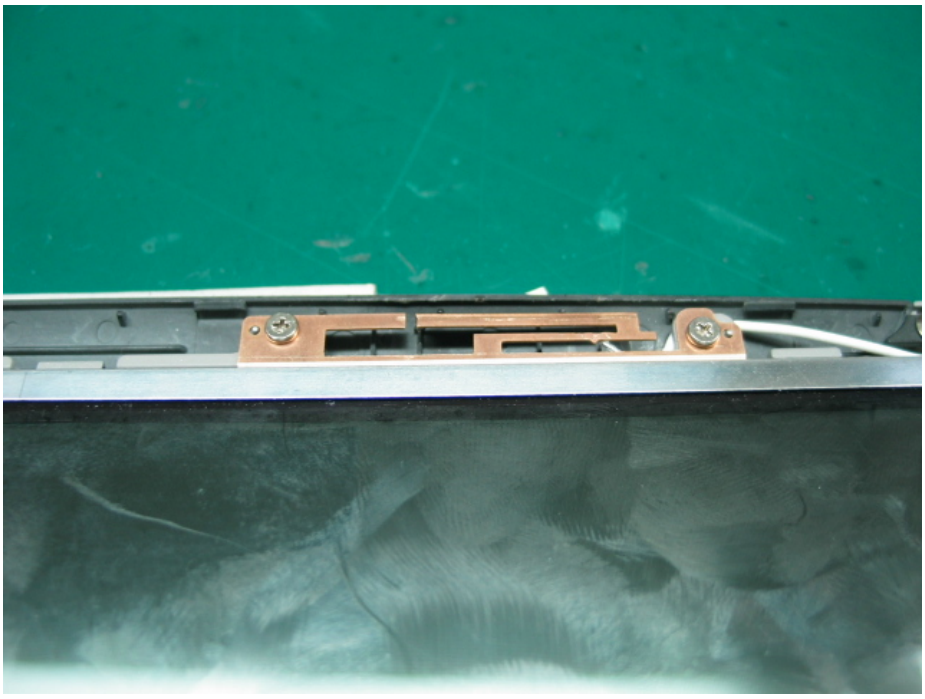
Host System : Notebook PC
(Project and Model Name : Cygnus)

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

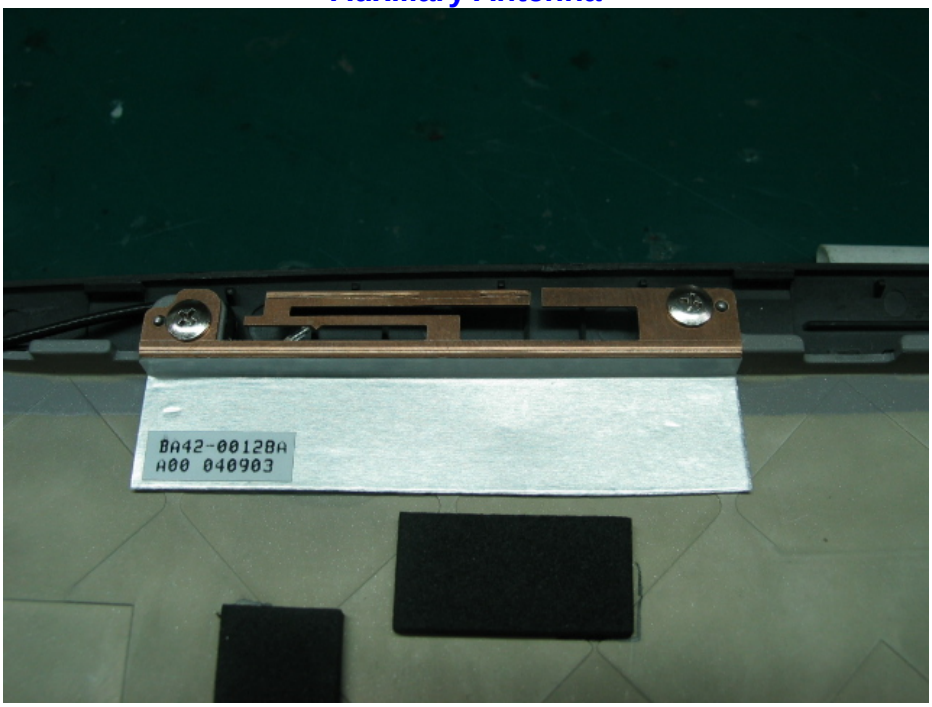
Photographs of the antenna location in the Neon

Antenna location

Main Antenna



Auxiliary Antenna



Full antenna picture

Main Antenna

Auxiliary Antenna