

APPROVAL SHEET

CUSTOMER :

ITEM : KWBE-2454RD-F

DESCRIPTION : EXTERNAL MONOPOLE ANTENNA

CUSTOMER P/NO :

DATE : 2007. 1. 23

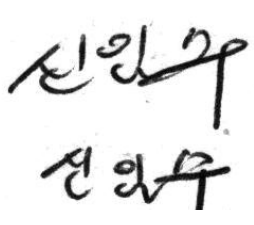
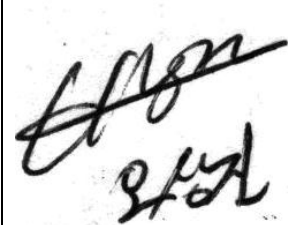
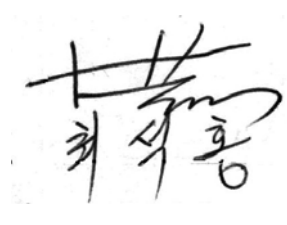
CUSTOMER' S APPROVED

A P P R O V E D			
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	Approval Date		
	Approval No.		
	DESC		

REV NO ;


	CUIT.	MECH.	SAFETY	EMI
CHKD				
APPD				

Document No.	KAT-0310-EX068P	Rev. No.	IR
Model Name	KWBE-2454RD-F	Date	2007. 1. 23
Application System	W-LAN	Customer	
Notice			
<p>KOSAN I & T Co., Ltd.</p> <p>R&D Center : 102-103, Bucheon-technopark, 364, Samjung-Dong, Ojung-Gu, Bucheon-city, Kyounggi-Do, Korea</p> <p>Tel : +82-32-621-1666, Fax : +82-32-621-1670</p>			

		Investigation	Verification	Approval
KOSAN	Im Soo, Shin			
	Approval No.			
	Approval Date			

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1.Revision Hisotry

Rev .NO	Rev. Date	Des .	Page	History	Drafter	Remarks
IR						



Document No.
KAT-0310-EX068P

Rev. No.
IR

Model Name
KWBE-2454RD-F

2. Part List


PARTS LIST											
PRODUCT NAME/MODEL			KET-BT-HW01 (KWBE-2454RD-F)			ESTABLISH. DATE		2007.01.19			
CUSTOMER			HAUWEI-3COM			REVISION DATE					
FREQUENCY			BLUETOOTH			REVISION No		IR			
No	PART NAME	PART NO.	PART SIZE	MATERIAL	MATERIAL PROVIDER	Q'TY	Rev.	CHANGE CONTENT	DIVISION	COMPANY	REMARK
1	PCB	KET-BT-HW01-PB01	52.2 X 8.2 X 1.0T	EPOXY	-	1	IR	-	-	HWAN-DUK, IL-SON	
2	COVER	KET-BT-HW01-CV02	60.0 X 12.4 X 8.0	ABS	-	1	IR	-	-	SUNJIN	
3	BASE	KET-BT-HW01-BS03	11.2 X 12.4 X 8.0	ABS	-	1	IR	-	-	SUNJIN	
4	CONNECTOR ASS'Y	KET-BT-HW01-CA04	φ9.0 X 15.6	SMA-(F)	-	1	IR	-	-	CHOKWANG ENG. HOSUNG	
5	PIN	KET-BT-HW01-CN04-1	φ1.5 X 12.7	BSBM(Au-Plating)	-	1	IR	-	-	CHOKWANG ENG. HOSUNG	
6	INSULATOR	KET-BT-HW01-CA04-2	φ4.0 X 10.7	TEFRON	-	1	IR	-	-	CHOKWANG ENG. HOSUNG	
7	BODY	KET-BT-HW01-CA04-3	φ9.0 X 10.9	BSBM(Au-Plating)	-	1	IR	-	-	CHOKWANG ENG. HOSUNG	
8	C-RING	KET-BT-HW01-CA04-4	φ7.4 X 0.9	SUS303	-	1	IR	-	-	CHOKWANG ENG. HOSUNG	
9	RUBBER O-RING	KET-BT-HW01-CA04-5	φ5.8 X 1.0	SILICON	-	1	IR	-	-	CHOKWANG ENG. HOSUNG	
10	O-RING	KET-BT-HW01-CA04-6	φ6.4 X 0.5	BSBM(Au-Plating)	-	1	IR	-	-	CHOKWANG ENG. HOSUNG	
11	HOUSING	KET-BT-HW01-CA04-7	φ9.0 X 8.4	BSBM(Au-Plating)	-	1	IR	-	-	CHOKWANG ENG. HOSUNG	
12	WRAP	KSB-WP-912-01	110.0 X 350.0 X 0.1T	P.P	-	1	IR	-	-	JS SYSTEM	
13	INNER BOX	KSB-IB-910-01	310.0 X 230.0 X 70.0	E-GLASS	-	-	-	-	-	JS SYSTEM	
14	OUT BOX	KSB-OB-911-01	330.0 X 260.0 X 400.0	DWZ-ABS	-	1	IR	-	-	JS SYSTEM	
15											
16											
17											

KSS-310-07(0) (주)코산아이엔티 A4(210×297)

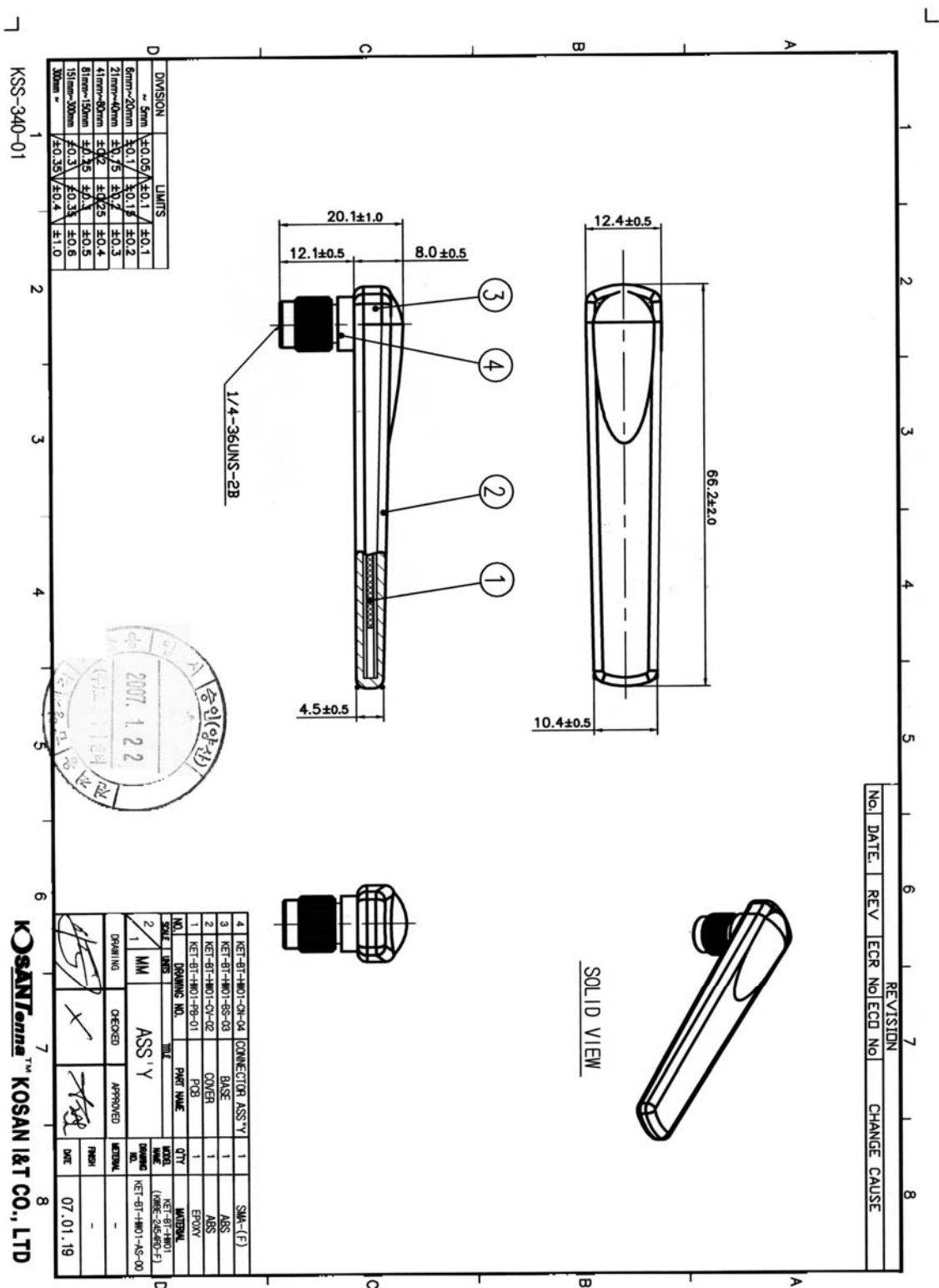
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3. Electrical and Mechanical Specifications

Electrical Specifications		
Frequency Range	2400 ~ 2483.5 MHz	5150 ~ 5875 MHz
V.S.W.R	2.5 : 1 (max)	2.5 : 1 (max)
Gain (max)	3.5 dBi (max)	3.5 dBi (max)
Nominal Impedance	50 ohm	
Radiation Pattern	Omni – Directional	
Polarization	Linear	
Power Handling	3 watts (max)	
Matching Circuit	N/A	
Mechanical Specifications		
Dimensions	65mm x 11 Ø	
Weight	5 g	
Radiator	FR-4	
Operating Temp	-20 ~ 90 °C	
Operating Humidity	0 ~ 95 %	
Option	N/A	

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4. Mechanical Drawing



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5. Measurement Setup

5.1. Test Equipments


Network Analyzer	HP8753ES
Calibration Kit	HP85033E
Adaptor	SMA Type Female ↔ SMA male

5.2 Test Equipments Setting

Split display	On
Sweep setup	Number of points : 201
Test port power	0 dBm
Measure	Channel 1 : S11

5.3 Calibration

Calibration	Cal. Kit : 3.5mmD/E
Calibration menu	→ S11 1-Port
Open	→ Short → Load
Done	

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6. Test Procedures


6.1 VSWR.

Step 1. Connect ANT port with cable included adaptor to port1 of network analyzer.

Step 2. Point out markers on network analyzer display at
1575.42MHz , 1750MHz, 1780MHz, 1840MHz and 1870 MHz

Step 3. Inspect VSWR < 1.9

Step 4. Measurement

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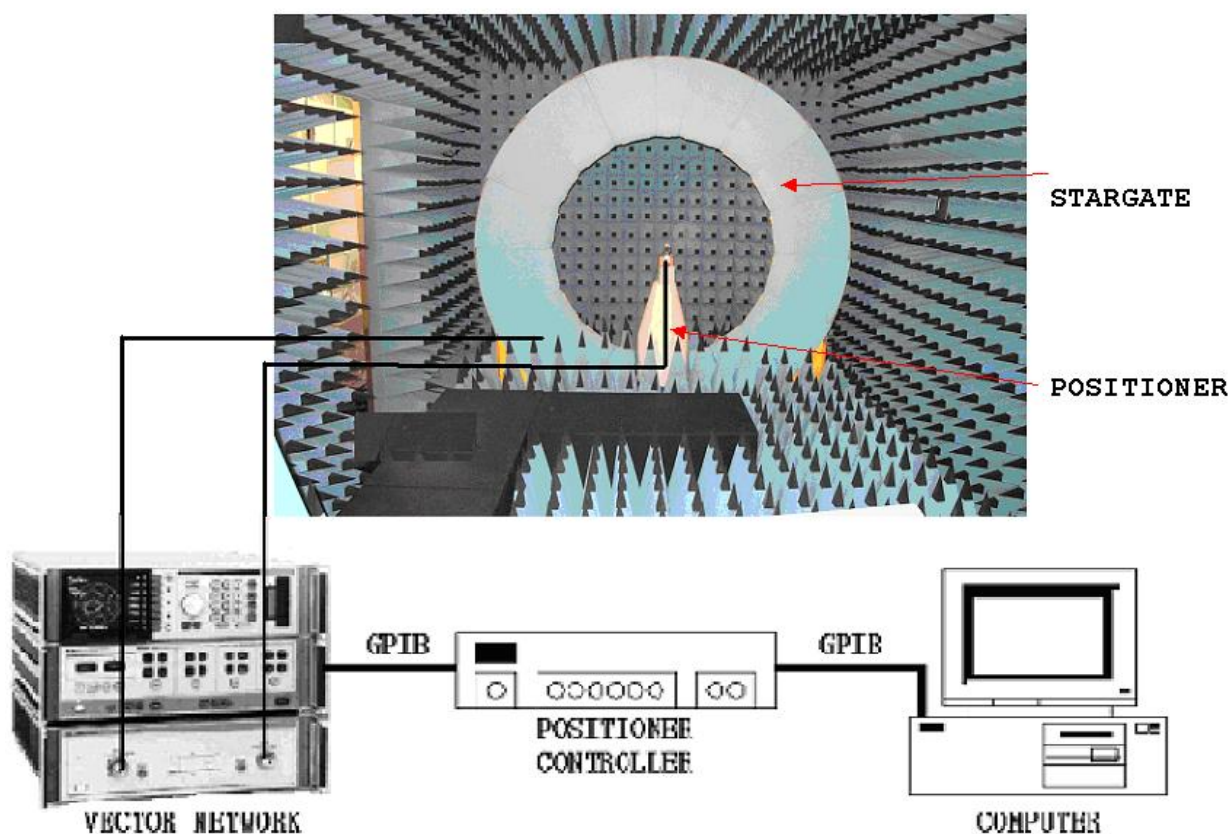
6.2 Radiation pattern and Gain


Step 1. Calibrate chamber system for gain measurement using stargate 32 sensor. At the same time set up software program for chamber system control.

Step 2. Change over from a stargate 32 sensor to measuring antenna on target positioner.

Step 3. Start a software program for chamber system control & measuring


Step 4. Measurement of H-Plane



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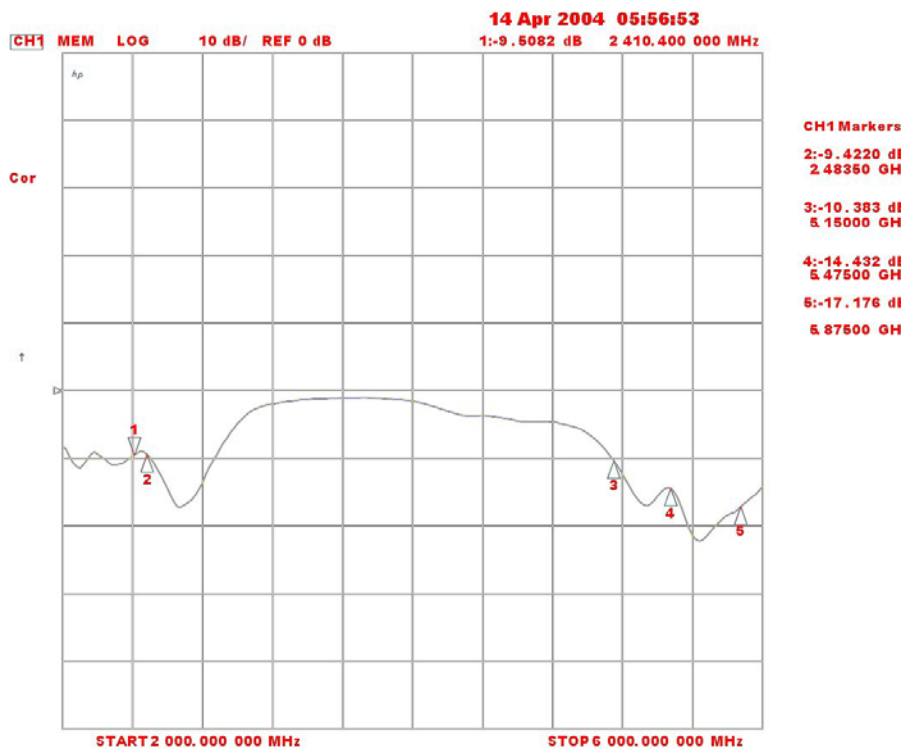
7. Measurement Data

ITEM	Spec.		Test Result
Frequency Range	2400 ~ 2483.5 MHz	5150 ~ 5875 MHz	OK
V.S.W.R	<2.5	<2.5	OK
Gain (max)	<3.5 dBi	<3.5 dBi	OK
Polarization	Linear		OK

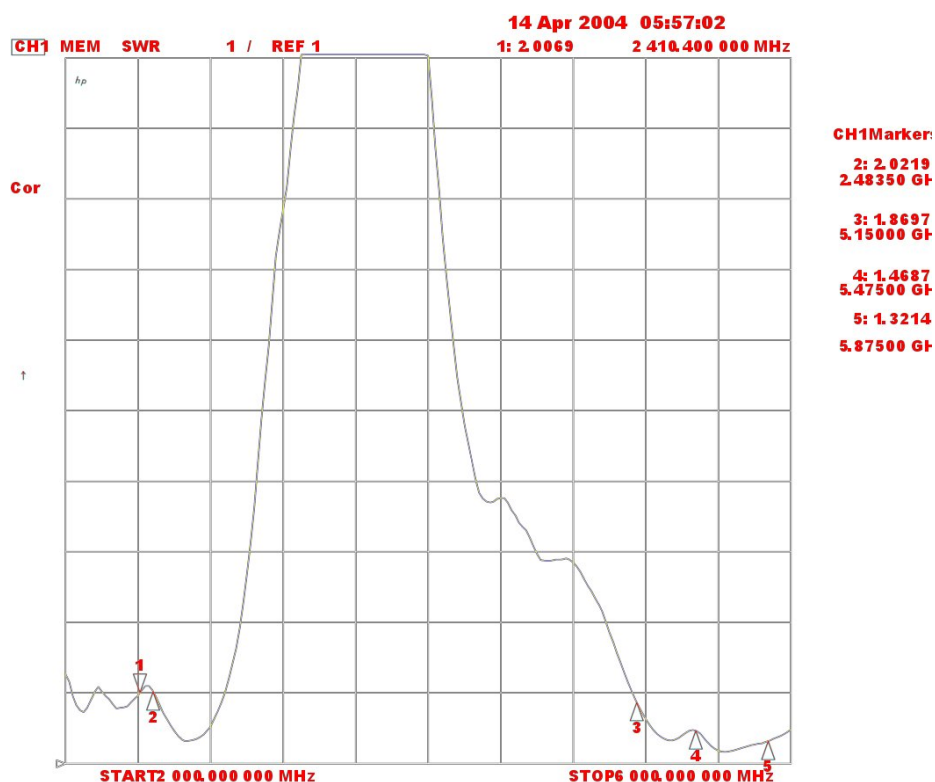
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7.1 S11 & VSWR

S11



VSWR

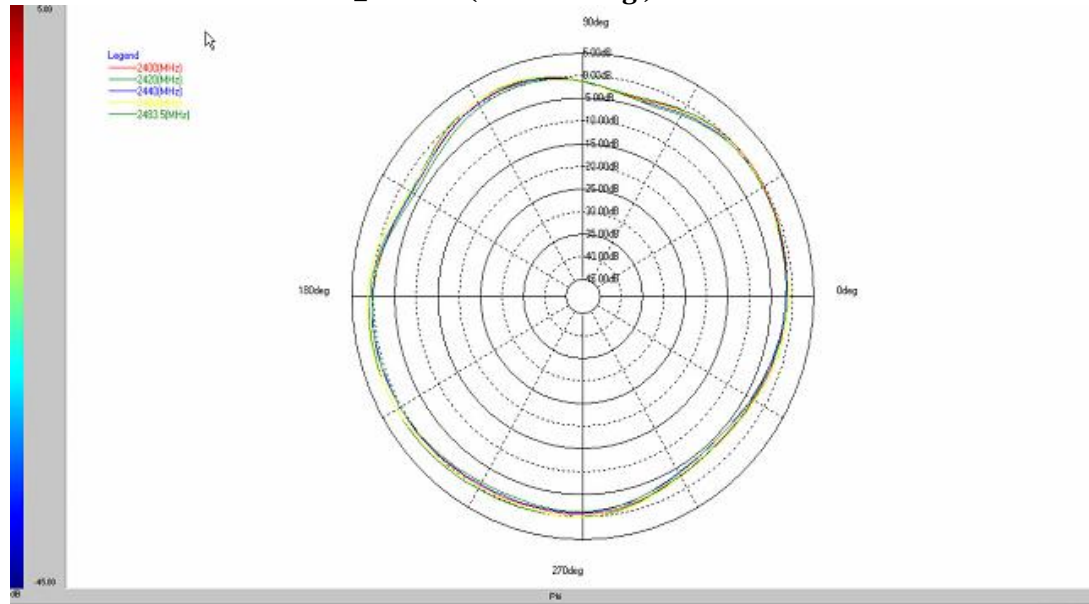


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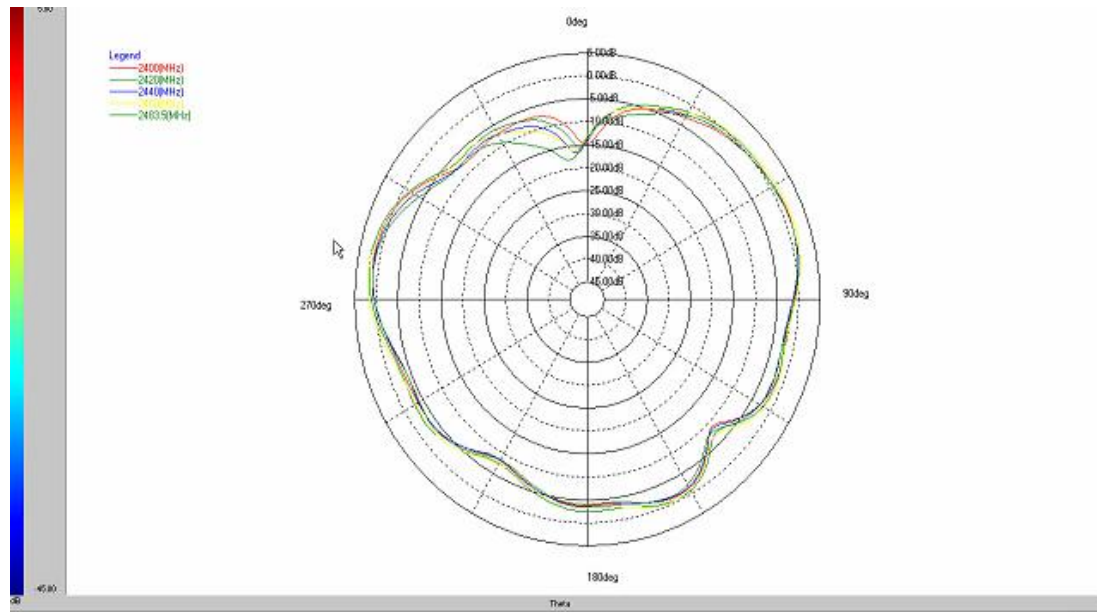
7.2 Radiation pattern and Gain


- 2GHz Band

- Azimuth Pattern_H- Plane(Theta 90 deg.)



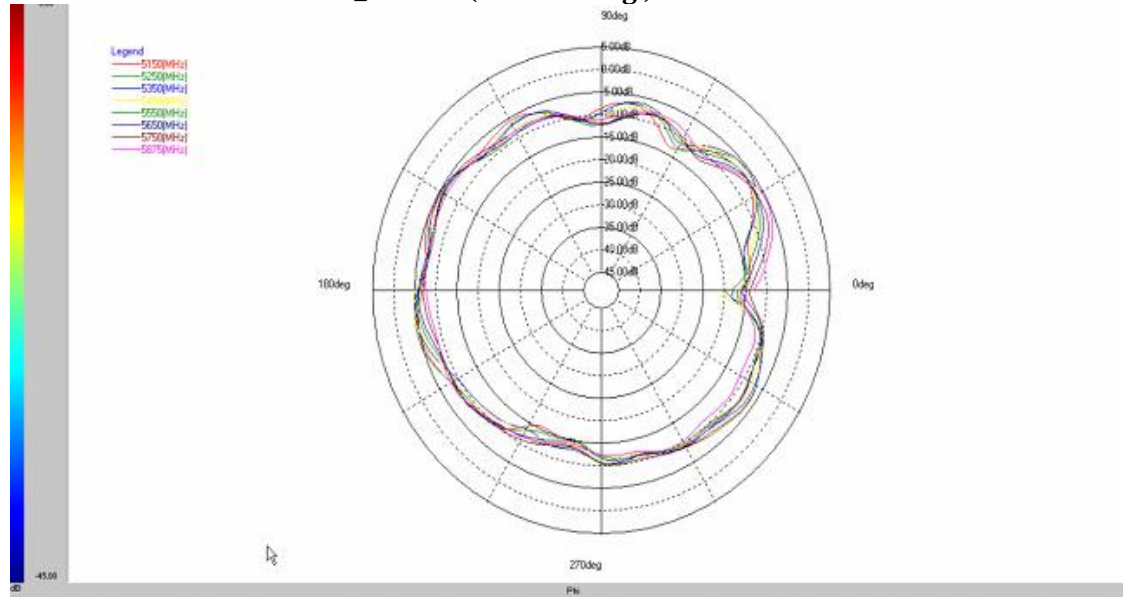
- Elevation Pattern



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- 5GHz Band

- Azimuth Pattern_H- Plane(Theta 90 deg.)



- Elevation Pattern

