Wistron NeWeb Corporation

Gannet Antenna Reguratory Information

Document Revision: 1

Customer Name	Wistron Corporation
Customer P/N	25.90137.011 / 25.90138.011
WNC P/N	25.90137.011 / 25.90138.011
Description	Triple-band antenna for Gannet

Provided By Wistron NeWeb Corp	Reviewed By Wistron NeWeb Corp
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Release Date: 2003/11/3

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1. Antenna Model Number

   Model number: EBO-A

2. Manufacturing Information

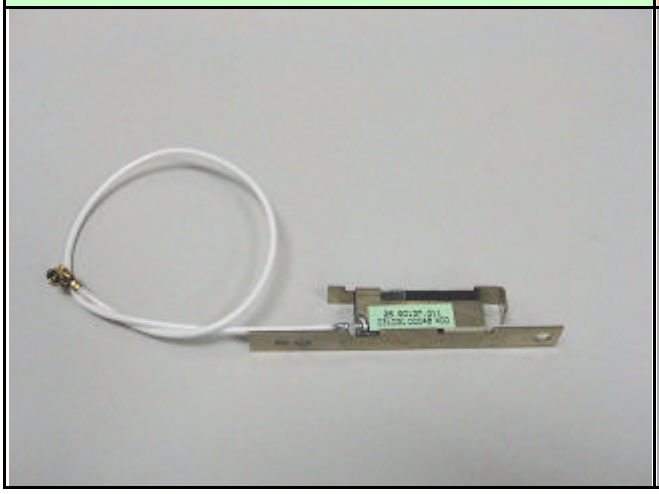
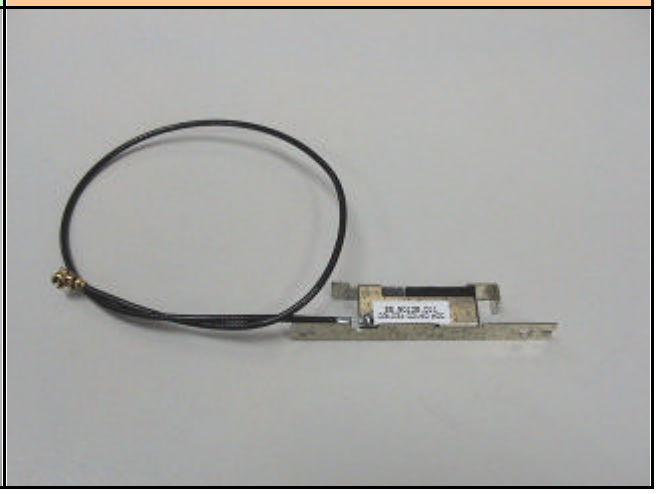
   Wistron NeWeb Corporation
   No. 10-1,Li-hsin Road I, Science-base Industrial Park, Hsinchu 300,Taiwan, R.O.C.

3. Antenna Configuration

	Aux Antenna	Main Antenna
Position	Left-side	Right-side
Antenna Type	PIFA	PIFA
Material	1. Stamped metal 2. Junkosha cable and IPEX connector 3. Sponge 4. FR4 board	1. Stamped metal 2. Junkosha cable and IPEX connector 3. Sponge 4. FR4 board
Cable Length #1	1.13 (dia.) x 150 mm (white)	1.13 (dia.) x 190 mm (black)

#1: Cable length is measured from the center of connector to the end of cable.

4. Antenna Photos

Aux Antenna	Main Antenna
	

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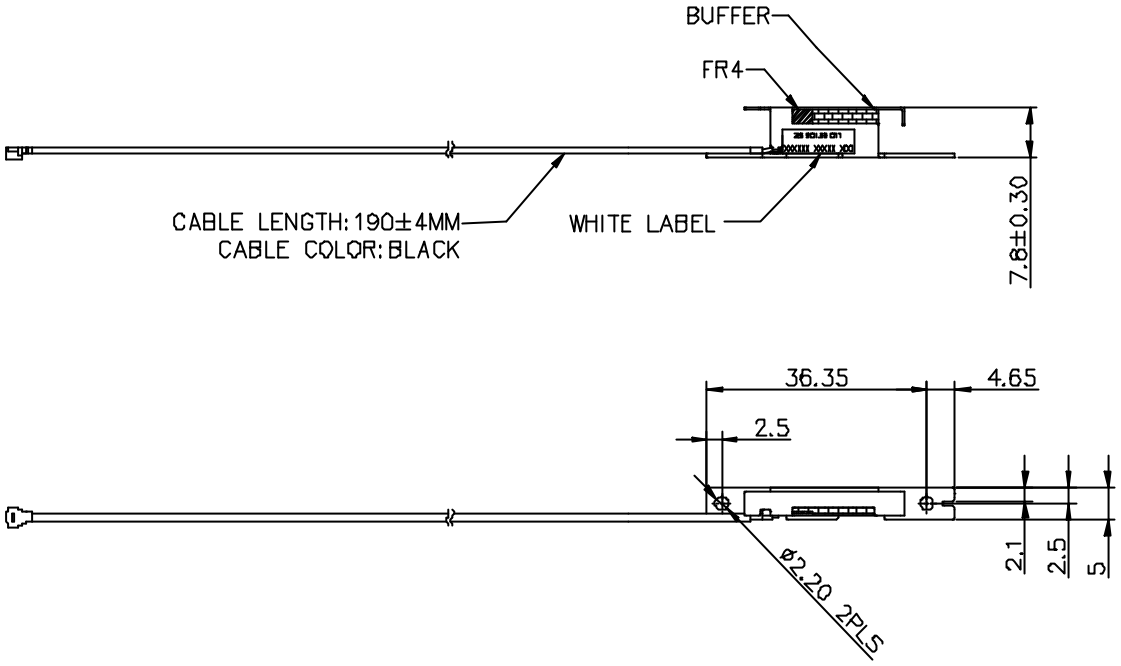
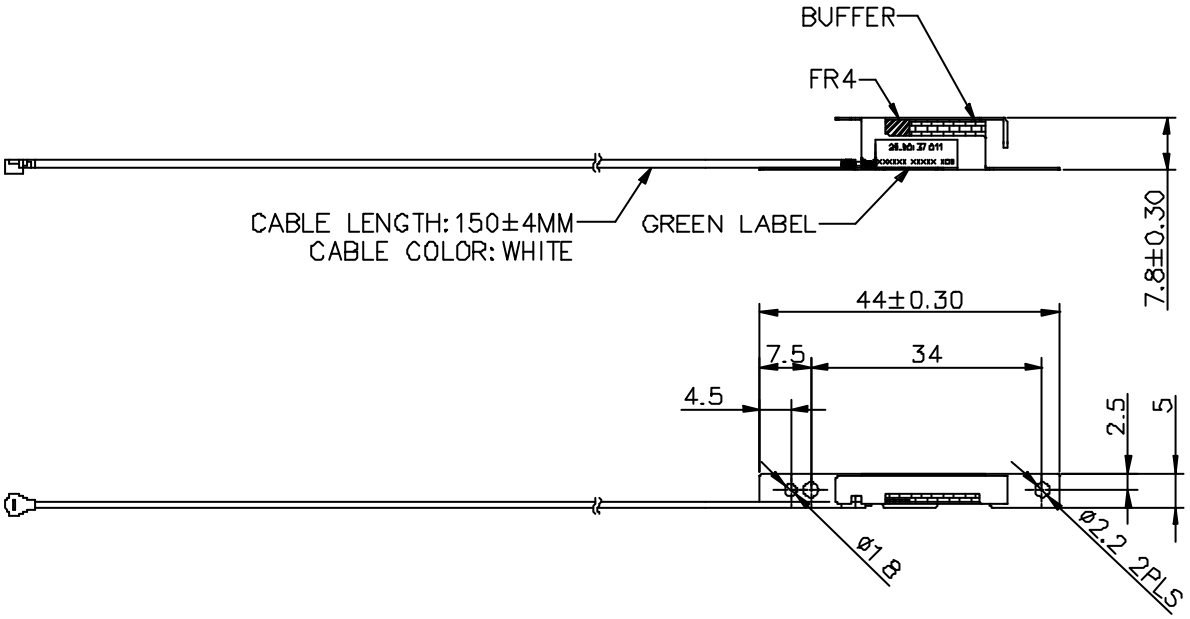
5. Antenna Dimensions (Mechanical drawings)

Main antenna (Right antenna)



AUX antenna (Left antenna)



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6. Antenna Gain

AUX (left) Antenna			Main (right) Antenna		
Frequency	Max value	Average	Frequency	Max value	Average
2400(MHz)	-1.40 dB	-4.30 dB	2400(MHz)	1.29 dB	-3.56 dB
2450(MHz)	-0.78 dB	-4.19 dB	2450(MHz)	1.97 dB	-3.32 dB
2500(MHz)	-0.77 dB	-4.44 dB	2500(MHz)	2.89 dB	-3.44 dB
5150(MHz)	3.05 dB	-3.23 dB	5150(MHz)	3.68 dB	-3.26 dB
5250(MHz)	2.95 dB	-3.40 dB	5250(MHz)	4.00 dB	-2.91 dB
5350(MHz)	2.39 dB	-3.43 dB	5350(MHz)	4.82 dB	-2.85 dB
5470(MHz)	1.51 dB	-4.11 dB	5470(MHz)	3.56 dB	-3.50 dB
5647.5(MHz)	3.38 dB	-4.50 dB	5647.5(MHz)	2.47 dB	-3.90 dB
5825(MHz)	2.66 dB	-4.46 dB	5825(MHz)	1.25 dB	-3.69 dB

7. Cable Loss (including connector)

Unit: dBm	2G4 band	U-NII band	HyperLAN band
190 mm (Main)	-0.87	-1.36	-1.40
150 mm (Aux)	-0.74	-1.18	-1.21

8. Connector Info (general description)

Description (Cable)	Inner Conductor: AWG#32(7/0.8), Silver plating annealed copper wire Dielectric core: D0.68mm Outer conductor: 16/4/0.05 D0.93mm, Silver plating annealed copper wire Jacket: D1.13mm		
Requirements	Characteristic impedance: 50(+2, -2) ohm Nominal capacitance: 97pF/m Conductor resistance of inner conductor at 293K(20℃): 520ohm/km MAX Insulation resistance: 1500mega-ohm.km MIN Dielectric withstand voltage: no breakdown at AC1000V for 1min.		
Ratings	Rated voltage: AC60Vrms Nominal characteristics impedance: 50ohm VSWR: 1.3MAX DC~3GHz, 1.7MAX 3~6GHz		
Electric characteristics	Contact resistance	10mA MAX (DC or 1000Hz)	Center contact 74mohm MAX. Outer contact 27mohm MAX.
	Insulation resistance	100V DC	500Mohm MIN
	Voltage proof	200V AC for 1 min. Current leakage 2mA MAX	No flashover or breakdown

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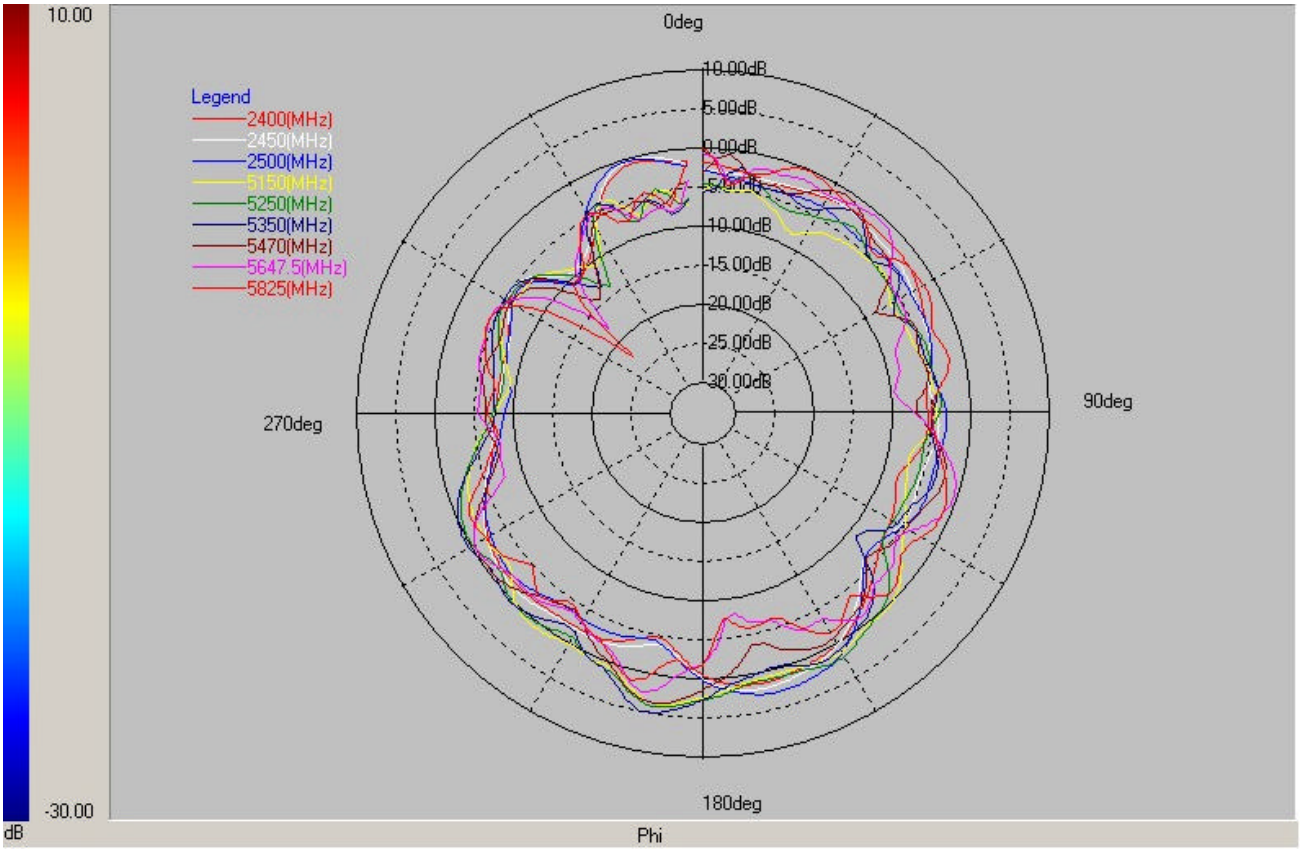
9. Radiation Pattern

Main antenna (Right antenna)

E Total. dB



Layer	Max value	Position	Min value	Position	Average
2400(MHz)	1.29 dB	167.98 deg	-11.01 dB	318.00 deg	-3.56 dB
2450(MHz)	1.97 dB	167.98 deg	-9.76 dB	318.00 deg	-3.32 dB
2500(MHz)	2.89 dB	165.00 deg	-11.21 dB	315.02 deg	-3.44 dB
5150(MHz)	3.68 dB	188.98 deg	-10.97 dB	324.01 deg	-3.26 dB
5250(MHz)	4.00 dB	189.01 deg	-14.17 dB	323.99 deg	-2.91 dB
5350(MHz)	4.82 dB	191.99 deg	-13.60 dB	321.01 deg	-2.85 dB
5470(MHz)	3.56 dB	189.01 deg	-14.58 dB	318.00 deg	-3.50 dB
5647.5(MHz)	2.47 dB	191.99 deg	-18.31 dB	312.01 deg	-3.90 dB
5825(MHz)	1.25 dB	195.00 deg	-23.12 dB	309.00 deg	-3.69 dB

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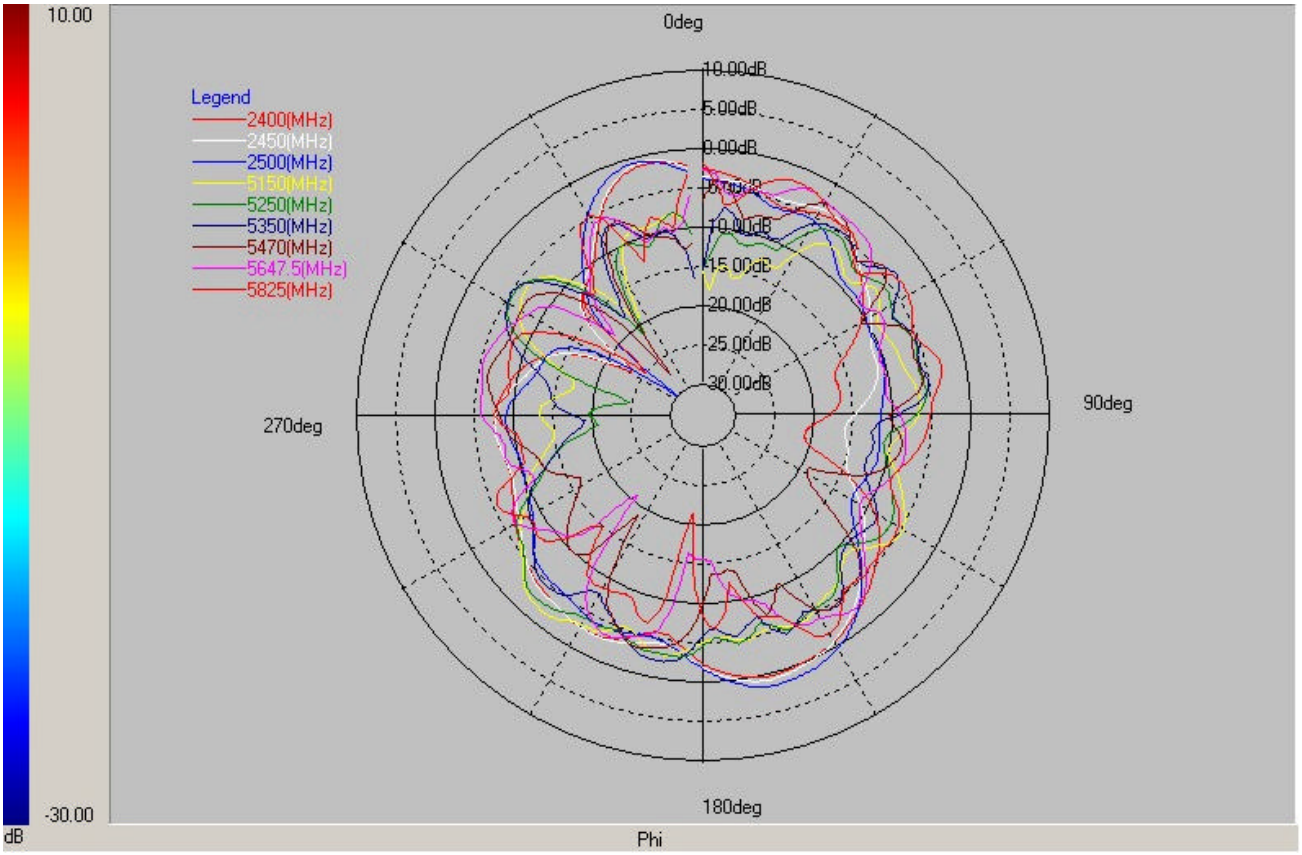
E(Theta) . Amp dB



Layer	Max value	Position	Min value	Position	Average
2400(MHz)	0.24 dB	165.00 deg	-23.53 dB	300.00 deg	-6.26 dB
2450(MHz)	0.71 dB	165.00 deg	-22.55 dB	302.98 deg	-6.00 dB
2500(MHz)	1.56 dB	165.00 deg	-33.06 dB	305.99 deg	-6.28 dB
5150(MHz)	-1.74 dB	219.01 deg	-19.35 dB	327.00 deg	-7.86 dB
5250(MHz)	-2.59 dB	222.02 deg	-24.73 dB	279.00 deg	-7.74 dB
5350(MHz)	-2.30 dB	189.01 deg	-19.07 dB	267.00 deg	-7.80 dB
5470(MHz)	-3.03 dB	32.97 deg	-28.14 dB	321.01 deg	-8.45 dB
5647.5(MHz)	-2.51 dB	26.99 deg	-21.01 dB	219.01 deg	-7.50 dB
5825(MHz)	-1.77 dB	149.99 deg	-25.44 dB	306.02 deg	-7.03 dB

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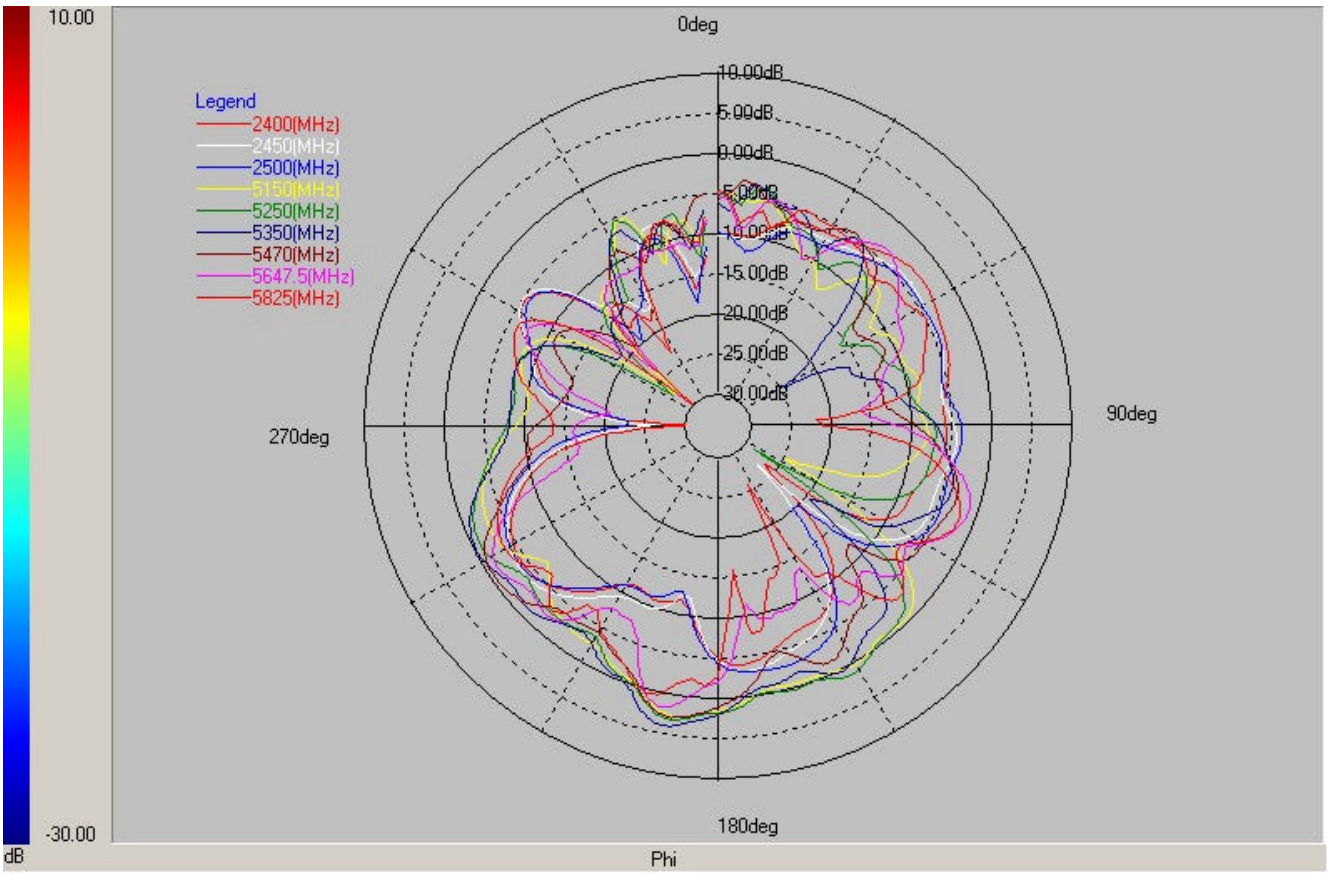
E(Phi) . Amp dB



Layer	Max value	Position	Min value	Position	Average
2400(MHz)	-2.85 dB	54.01 deg	-32.39 dB	270.01 deg	-8.19 dB
2450(MHz)	-3.28 dB	174.00 deg	-27.78 dB	135.00 deg	-7.72 dB
2500(MHz)	-2.93 dB	165.00 deg	-22.96 dB	272.99 deg	-7.68 dB
5150(MHz)	2.65 dB	188.98 deg	-27.36 dB	308.97 deg	-5.60 dB
5250(MHz)	3.10 dB	189.01 deg	-29.41 dB	123.00 deg	-5.19 dB
5350(MHz)	3.88 dB	191.99 deg	-24.91 dB	59.99 deg	-5.09 dB
5470(MHz)	2.75 dB	189.01 deg	-20.06 dB	314.99 deg	-5.83 dB
5647.5(MHz)	1.78 dB	191.99 deg	-24.89 dB	312.01 deg	-7.18 dB
5825(MHz)	0.48 dB	195.00 deg	-36.39 dB	309.00 deg	-7.17 dB

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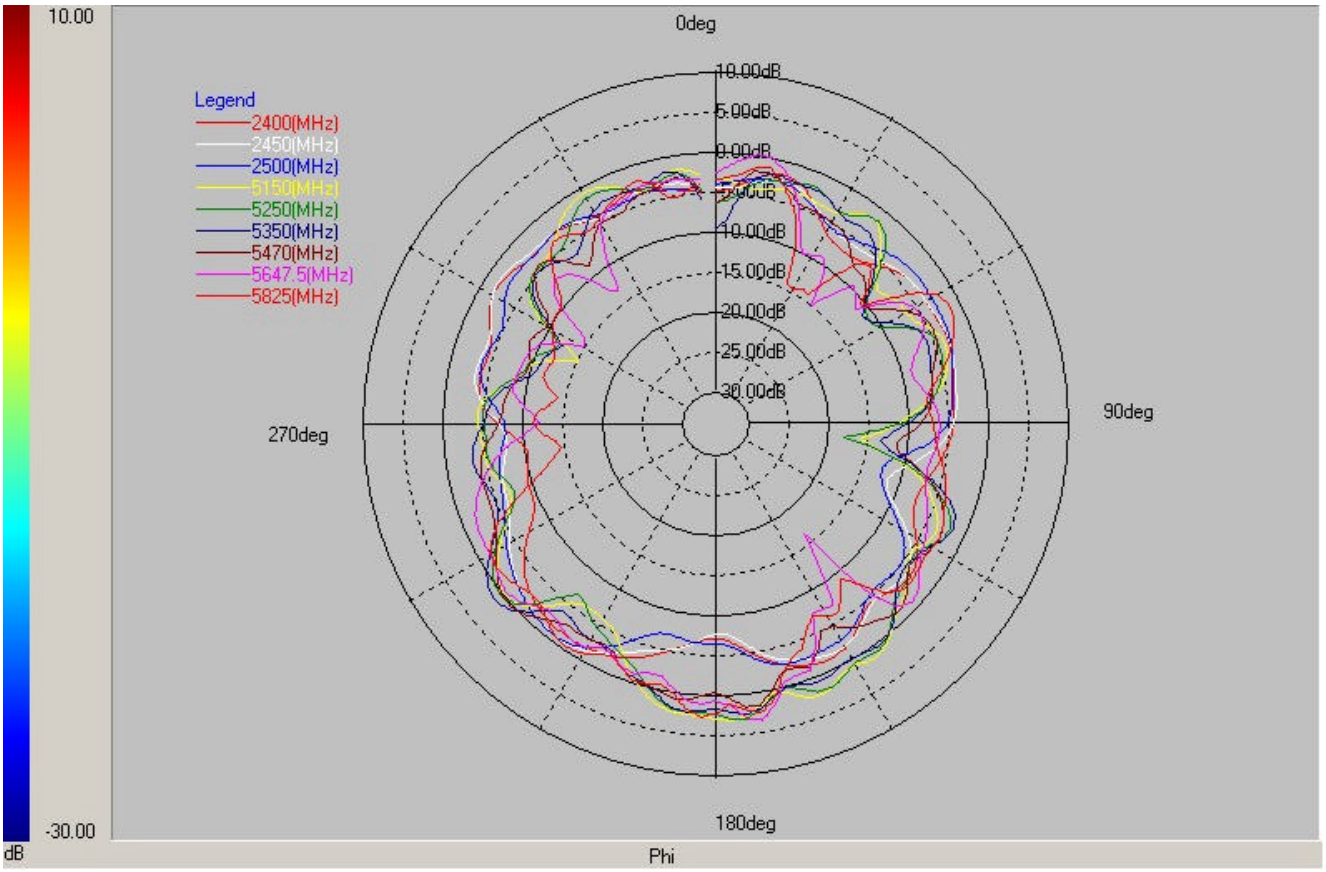
AUX antenna (Left antenna)

E Total. dB



Layer	Max value	Position	Min value	Position	Average
2400(MHz)	-1.40 dB	153.03 deg	-10.38 dB	260.98 deg	-4.30 dB
2450(MHz)	-0.78 dB	216.00 deg	-11.63 dB	108.01 deg	-4.19 dB
2500(MHz)	-0.77 dB	218.97 deg	-12.68 dB	105.00 deg	-4.44 dB
5150(MHz)	3.05 dB	177.01 deg	-15.92 dB	96.01 deg	-3.23 dB
5250(MHz)	2.95 dB	174.03 deg	-17.96 dB	96.01 deg	-3.40 dB
5350(MHz)	2.39 dB	174.00 deg	-13.40 dB	96.01 deg	-3.43 dB
5470(MHz)	1.51 dB	171.02 deg	-11.41 dB	96.01 deg	-4.11 dB
5647.5(MHz)	3.38 dB	171.02 deg	-16.68 dB	141.03 deg	-4.50 dB
5825(MHz)	2.66 dB	183.00 deg	-14.86 dB	30.00 deg	-4.46 dB

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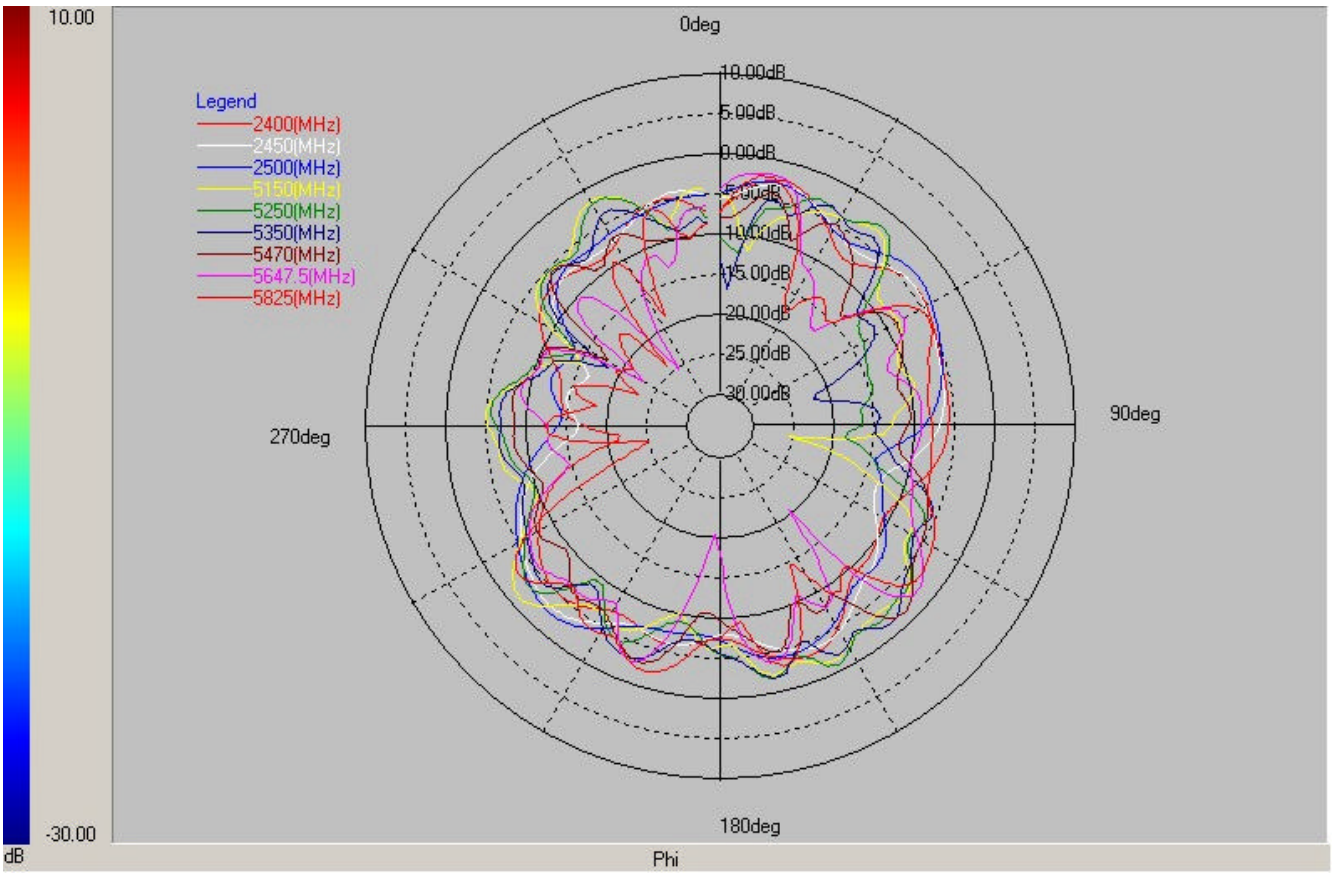
E(Theta) . Amp dB



Layer	Max value	Position	Min value	Position	Average
2400(MHz)	-2.66 dB	14.98 deg	-21.57 dB	263.99 deg	-7.14 dB
2450(MHz)	-3.22 dB	15.02 deg	-16.73 dB	290.97 deg	-6.98 dB
2500(MHz)	-2.59 dB	222.02 deg	-14.48 dB	273.02 deg	-6.71 dB
5150(MHz)	-1.25 dB	228.00 deg	-25.55 dB	99.02 deg	-6.30 dB
5250(MHz)	-0.83 dB	153.00 deg	-18.51 dB	95.98 deg	-6.64 dB
5350(MHz)	-1.51 dB	138.01 deg	-22.06 dB	74.97 deg	-6.90 dB
5470(MHz)	-1.34 dB	135.00 deg	-18.10 dB	300.01 deg	-7.85 dB
5647.5(MHz)	-2.04 dB	129.02 deg	-25.76 dB	323.99 deg	-8.85 dB
5825(MHz)	-2.05 dB	198.01 deg	-25.16 dB	258.01 deg	-8.30 dB

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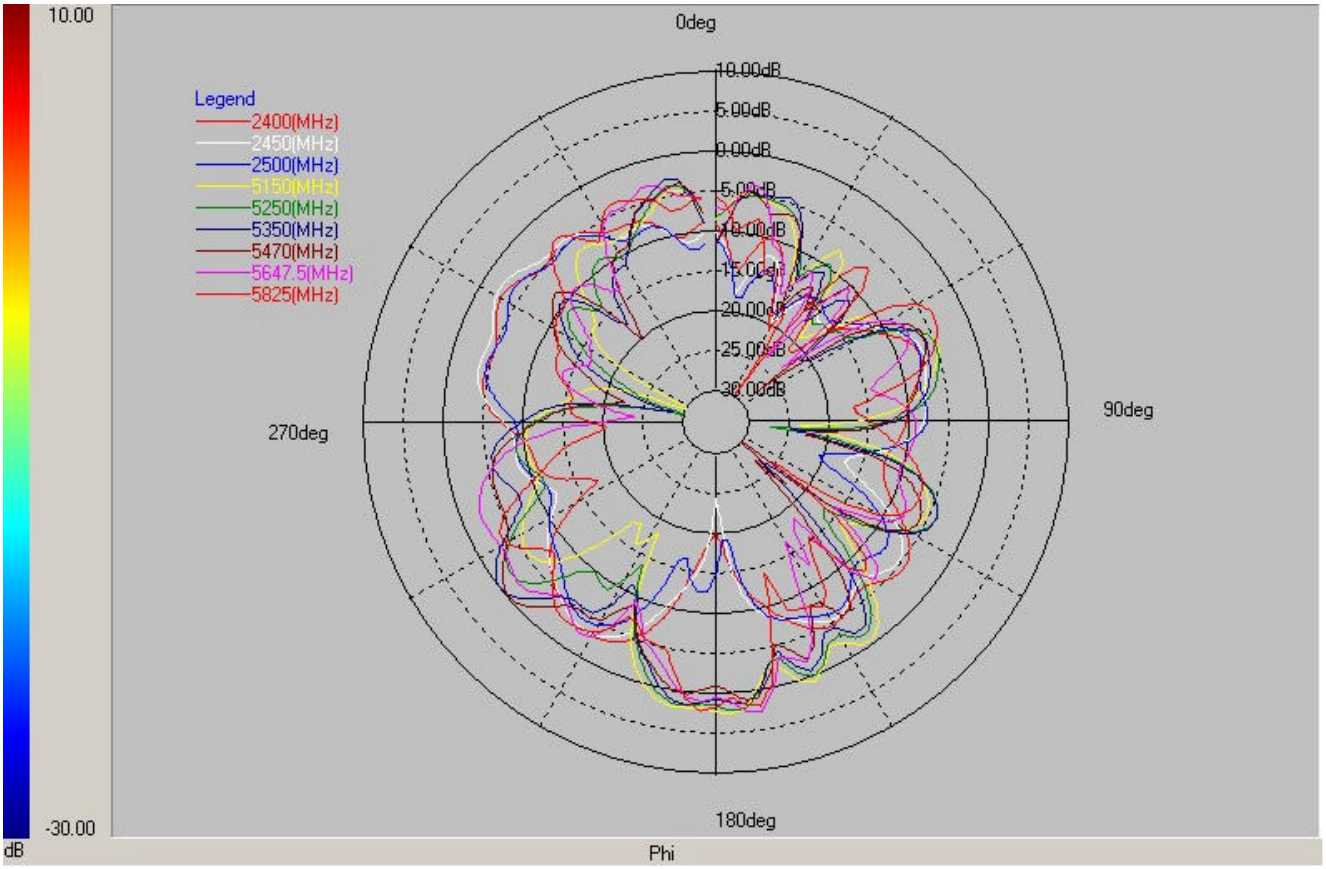
E(Phi) . Amp dB



Layer	Max value	Position	Min value	Position	Average
2400(MHz)	-3.08 dB	300.01 deg	-21.47 dB	47.99 deg	-8.35 dB
2450(MHz)	-2.40 dB	302.98 deg	-24.51 dB	179.99 deg	-8.30 dB
2500(MHz)	-3.82 dB	303.02 deg	-20.59 dB	108.01 deg	-9.18 dB
5150(MHz)	2.58 dB	177.00 deg	-37.78 dB	293.99 deg	-7.08 dB
5250(MHz)	2.13 dB	176.97 deg	-32.04 dB	282.01 deg	-7.01 dB
5350(MHz)	1.56 dB	186.00 deg	-28.79 dB	282.01 deg	-6.79 dB
5470(MHz)	0.97 dB	174.00 deg	-35.62 dB	129.02 deg	-7.30 dB
5647.5(MHz)	2.69 dB	171.02 deg	-23.89 dB	272.98 deg	-7.19 dB
5825(MHz)	2.21 dB	183.00 deg	-32.96 dB	35.99 deg	-7.59 dB