



Wistron NeWeb Corporation

Pebble Antenna Regulatory Information

Document Revision: 1

Customer Name	Wistron Corporation
Customer P/N	25.90077.001 / 25.90078.001
WNC P/N	81.CAB15.001 / 81.CAB15.002
Description	Triple-band antenna for Pebble

Provided By Wistron NeWeb Corp	Reviewed By Wistron NeWeb Corp
Sophia Lin	Weili Cheng

wistron

Wistron NeWeb Corporation
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新竹市 300 科學園路力行一路 10-1 號
電話：(03) 666-7799
傳真：(03) 666-7711

Release Date: 2003/3/20



Wistron NeWeb Corporation

1. Antenna Model Number

Model number: CAB-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

	Main Antenna	Aux Antenna
Position	Left-side	Right-side
Antenna Type	PIFA	PIFA
Material	1. Stamped metal 2. Junkosha cable and IPEX connector (Or Nissei cable and HRS connector) 3. Sponge 4. Tape	1. Stamped metal 2. Junkosha cable and IPEX connector (Or Nissei cable and HRS connector) 3. Sponge 4. Tape
Cable Length #1	1.13 (dia.) x 273 mm	1.13 (dia.) x 325 mm

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

4. Pictures of Antennas

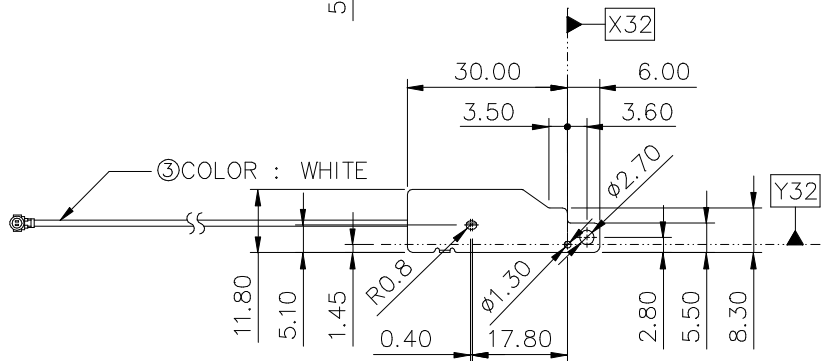
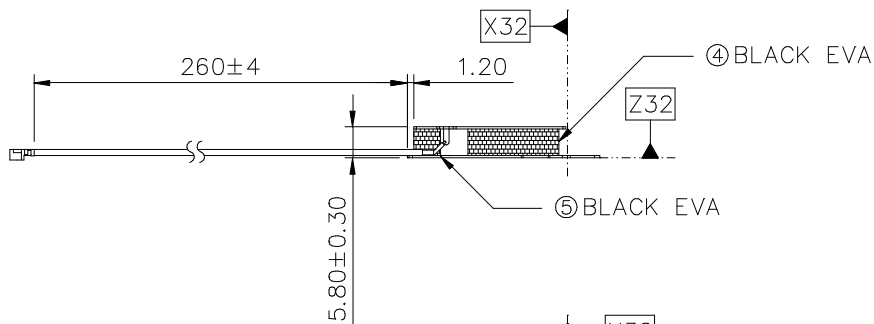
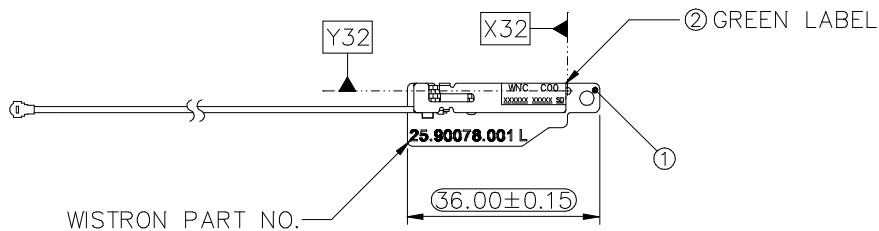
Main Antenna	Aux Antenna
	

5. Antenna Dimensions (Mechanical drawings)

(See Next 2 Pages)

1

PART NUMBER BLOCK	
PART NUMBER	REV
57.CAB15.001	SD



NOTES :
1.  ARE CPK DIMENSIONS.

5	3B.CAB80.111	BUFFER, CAB-A	EA	1	CHEVAL CO.
4	3B.CZ280.111	BUFFER, ANTENNA, CZ2-A	EA	1	
3	50.CAB05.001	CABLE WN-S-1.13W-273mm-(2-2-1)	EA	1	CABLE : JUNKOSHA CO. CONNECTOR : IPEX CO.
2	45.CA513.002	LABEL, GREEN, 12x4, CA5-Q	EA	1	JENG LONG TECHNOLOGY CO.
1	3A.CAB45.111	ANTENNA, LEFT, CAB-A	EA	1	MUTUAL SUPPORT PRESS CO.
ITEM	PART NO.	DESCRIPTION	UNIT	QTY	SUPPLIER

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS
ARE IN mm AND TOLERANCES ARE:
INTEGRAL DIMENSIONS ±
1 PLACE DECIMAL ±
2 PLACE DECIMALS ±0.3
ANGULAR DIMENSIONS ±1°
HOLES UNDER Ø5.00 ±0.05

MATERIAL: NA

FINISH: NA

THIRD ANGLE PROJECTION



DRAWN

ARSENE YU

02/26/03

ENGR

ARSENE YU

02/26/03

APVD

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Tel: 886-3-6667799 Fax: 886-3-6667711

DWG TITLE

OUTLINE, MAIN, CAB-A

SIZE DWG NO.

A3

57.CAB15.001

REV

SD

SCALE

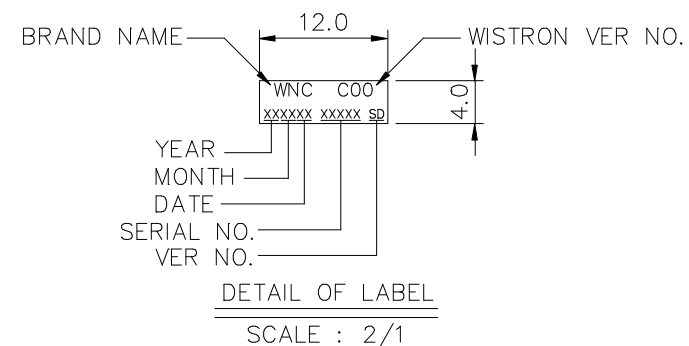
1/1

SHEET

1 OF 1

2

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	SA	APPROVE SHEET	08/14/02	
	SB	APPROVE SHEET	11/14/02	
	SC	APPROVE SHEET	01/30/03	
	SD	APPROVE SHEET	02/26/03	



Frequency Specification		
Applicable Frequency (GHz)	2.4 - 2.484	5.15 - 5.725
V.S.W.R.	< 2.0	< 2.5

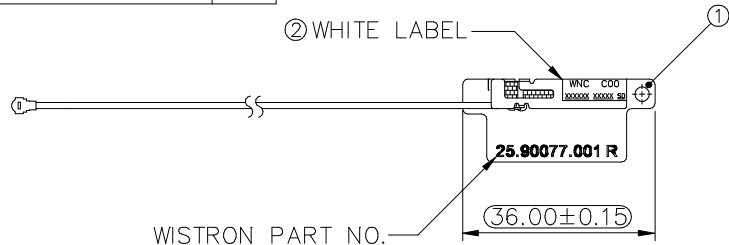
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2

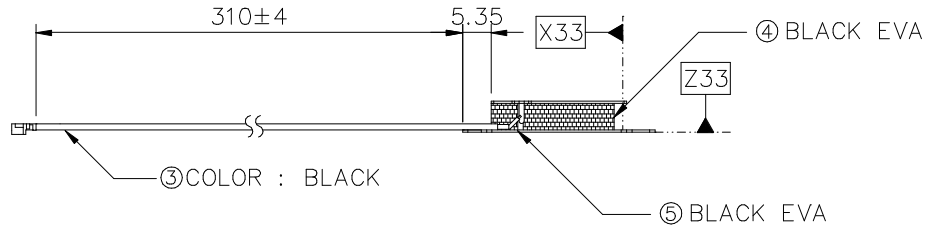
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PART NUMBER BLOCK	
PART NUMBER	REV
57.CAB15.002	SD

② WHITE LABEL

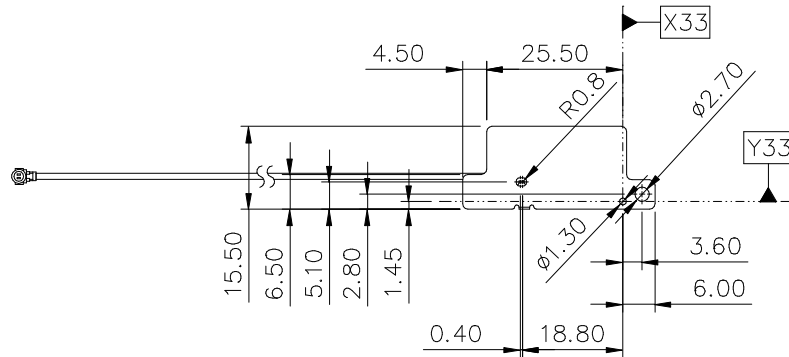


WISTRON PART NO.



③ COLOR : BLACK

⑤ BLACK EVA



NOTES :

1.  ARE CPK DIMENSIONS.

5	3B.CAB80.111	BUFFER, CAB-A	EA	1	CHEVAL CO.
4	3B.CZ280.111	BUFFER, ANTENNA, CZ2-A	EA	1	
3	50.CAB02.001	CABLE WN-S-1.13B-325MM-(2-2-1)	EA	1	CABLE : JUNKOSHA CO. CONNECTOR : IPEX CO.
2	45.CA513.001	LABEL, WHITE, 12x4, CA5-Q	EA	1	JENG LONG TECHNOLOGY CO.
1	3A.CAB45.112	ANTENNA, RIGHT, CAB-A	EA	1	MUTUAL SUPPORT PRESS CO.
ITEM	PART NO.	DESCRIPTION	UNIT	QTY	SUPPLIER

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS
ARE IN mm AND TOLERANCES ARE:
INTEGRAL DIMENSIONS ±
1 PLACE DECIMAL ±
2 PLACE DECIMALS ±0.3

ANGULAR DIMENSIONS ±1°
HOLES UNDER Ø5.00 ±0.05

MATERIAL: NA

FINISH: NA

THIRD ANGLE PROJECTION



DRAWN

ARSENE YU

02/26/03

ENGR

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APVD

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DWG TITLE

OUTLINE, AUX, CAB-A

SIZE DWG NO.

A3

57.CAB15.002

REV

SD

SCALE

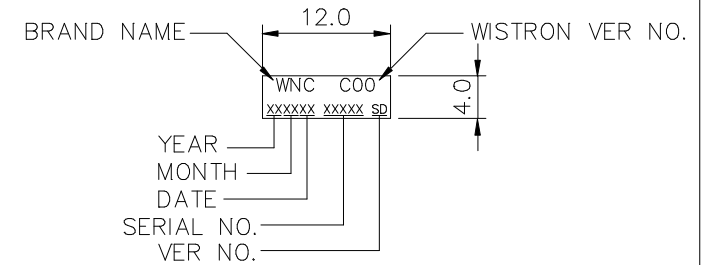
1/1

SHEET

1 OF 1

2

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	SA	APPROVE SHEET	08/14/02	
	SB	APPROVE SHEET	11/14/02	
	SC	APPROVE SHEET	01/30/03	
	SD	APPROVE SHEET	02/26/03	



DETAIL OF LABEL

SCALE : 2/1

Frequency Specification		
Applicable Frequency (GHz)	2.4 - 2.484	5.15 - 5.725
V.S.W.R.	< 2.0	< 2.5

1

2



Wistron NeWeb Corporation

6. Antenna Gain

Antenna Gain dBi @ GHz		2G4 ISM band			U-NII band			HyperLAN band		
		2.40	2.45	2.50	5.15	5.25	5.35	5.47	5.5975	5.725
MAIN	Peak Gain	0.01	2.25	2.59	4.09	3.44	3.97	3.65	3.03	1.81
	Avg. Gain	-3.71	-2.86	-3.84	-3.50	-2.90	-3.39	-2.81	-3.90	-3.32
AUX	Peak Gain	0.34	0.86	0.82	1.80	0.61	2.64	3.85	3.89	2.53
	Avg. Gain	-3.27	-3.18	-2.92	-3.50	-3.53	-1.97	-2.90	-2.73	-4.69

7. Cable Loss (including connector)

Unit: dBm	2G4 band	U-NII band	HyperLAN band
273 mm (MAIN)	-1.13	-1.69	-1.74
325 mm (AUX)	-1.29	-1.94	-2.00

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°C): 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

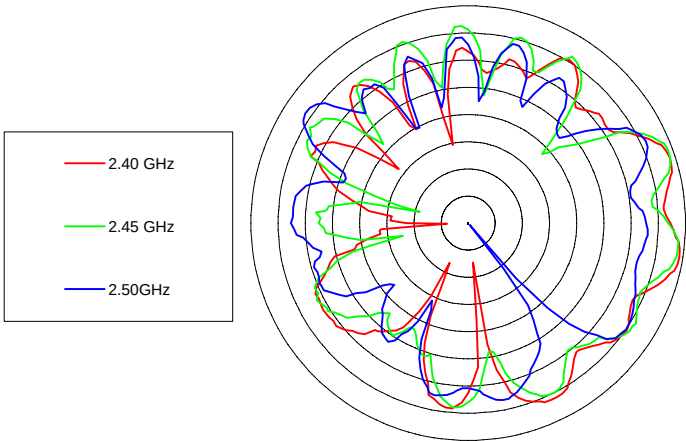
9. Radiation Pattern

(See the following Pages)

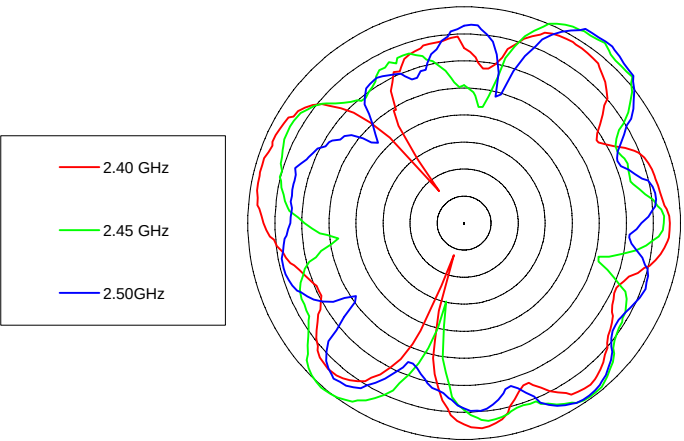
Platform: Pebble Configuration:1
Supplier: Wistron NeWeb coporation
Date: 2003/3/17

2G4 ISM (2.400 GHz - 2.4835 GHz) Antenna Radiation Patterns

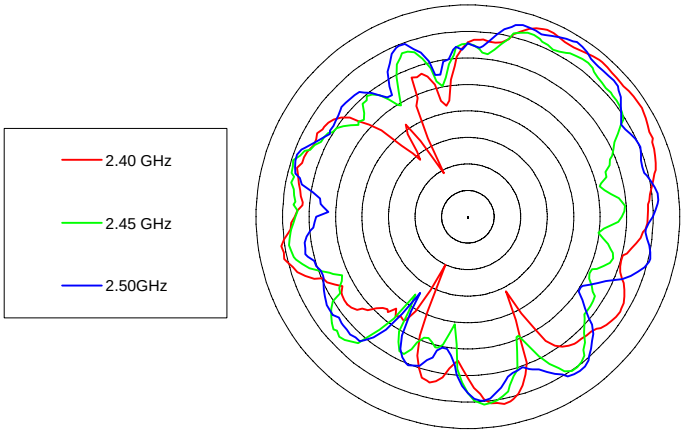
Main Horizontal



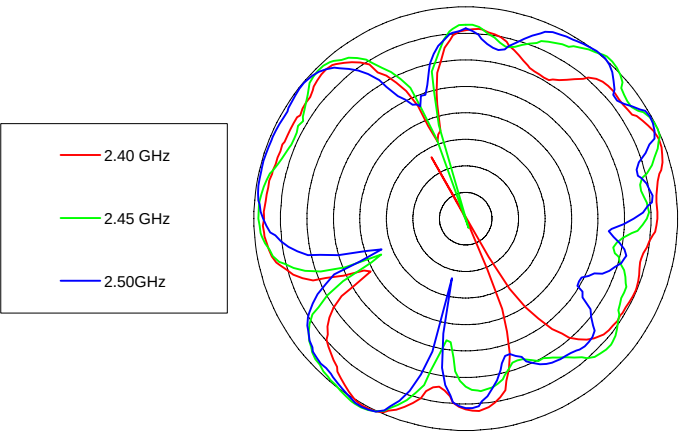
Main Vertical



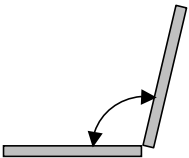
Aux Horizontal



Aux Vertical



2G4 ISM (2.400 GHz - 2.4835 GHz)			
CONFIG	FREQ GHz	Avg dBi	Pk dBi
Main Horz	2.4	-7.24	-0.63
	2.45	-7.12	-0.82
	2.5	-8.99	-3.82
Main Vert	2.4	-4.70	-0.94
	2.45	-3.78	2.25
	2.5	-4.45	2.59
Aux Horz	2.4	-6.46	-1.25
	2.45	-8.01	-3.17
	2.5	-6.57	-1.10
Aux Vert	2.4	-4.33	0.34
	2.45	-3.64	0.80
	2.5	-3.77	0.59



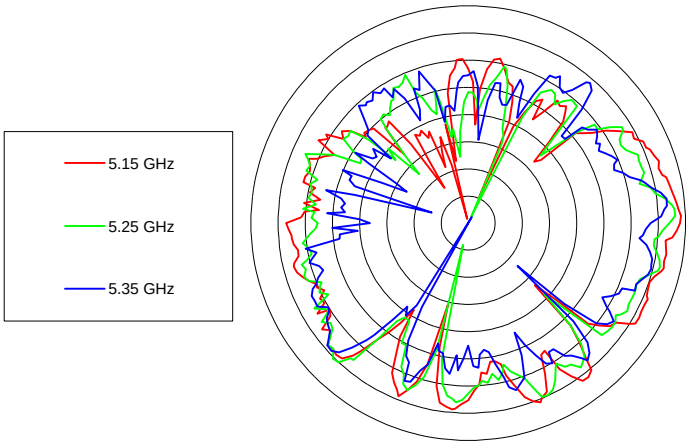
VSWR open = lid/keyboard angle 110°

Note: The outer circle approximately represents the 0 dBi gain circle
Each circle with 5 dBi difference (Max=0 dBi and Min=-40 dBi)

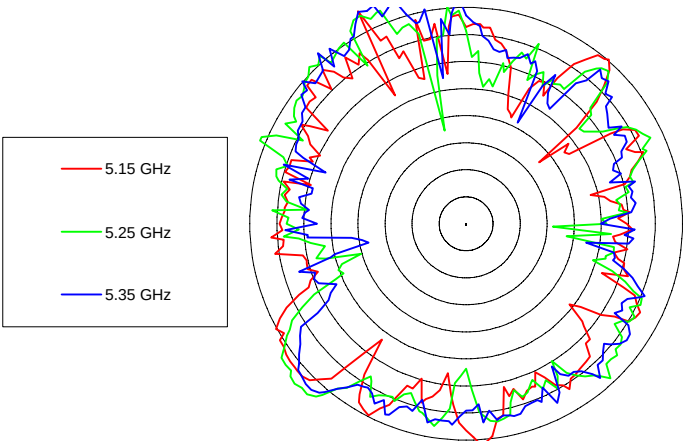
Platform: Pebble Configuration:1
Supplier: Wistron NeWeb coporation
Date: 2003/3/17

U-NII (5.150 GHz - 5.350 GHz) Antenna Radiation Patterns

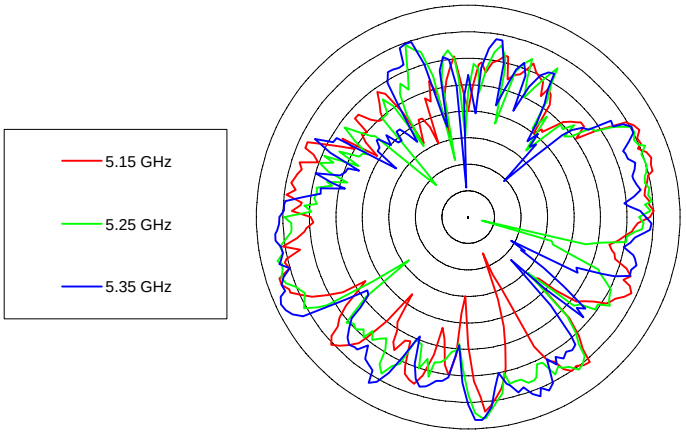
Main Horizontal



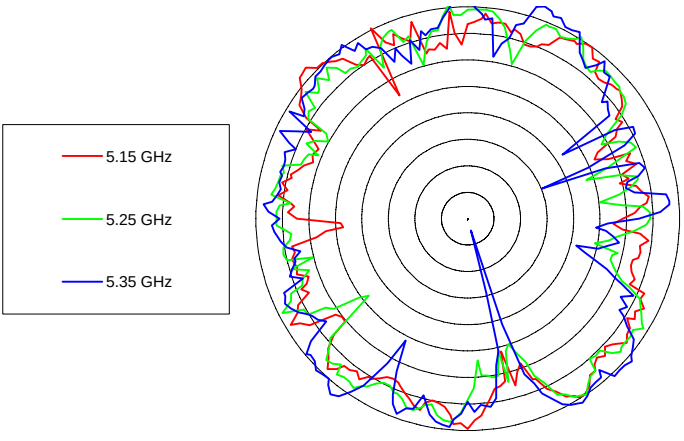
Main Vertical



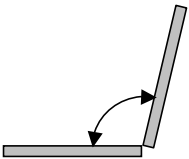
Aux Horizontal



Aux Vertical



U-NII (5.150 GHz - 5.350 GHz)			
CONFIG	FREQ GHz	Avg dBi	Pk dBi
Main Horz	5.15	-7.69	-0.83
	5.25	-8.99	-1.86
	5.35	-10.42	-3.19
Main Vert	5.15	-4.57	4.09
	5.25	-3.54	3.38
	5.35	-3.74	3.96
Aux Horz	5.15	-8.70	-2.53
	5.25	-8.62	-1.89
	5.35	-7.86	-0.98
Aux Vert	5.15	-4.01	1.80
	5.25	-3.95	0.61
	5.35	-2.66	2.64



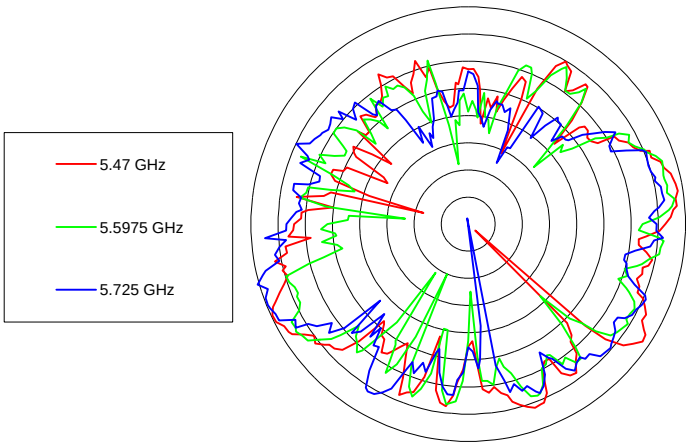
VSWR open = lid/keyboard angle 110°

Note: The outer circle approximately represents the 0 dBi gain circle
Each circle with 5 dBi difference (Max=0 dBi and Min=-40 dBi)

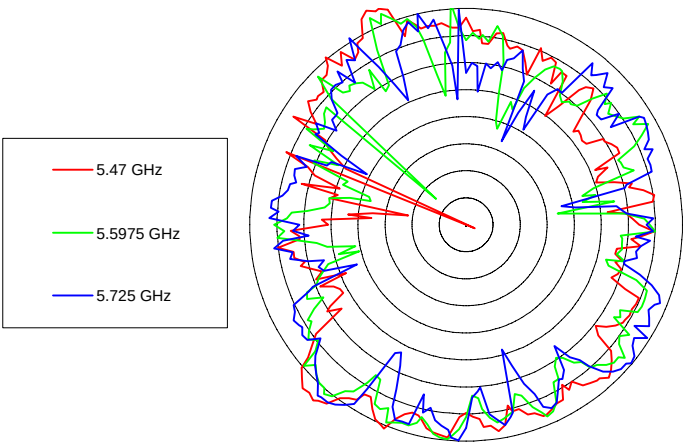
Platform: Pebble Configuration:1
Supplier: Wistron NeWeb coporation
Date: 2003/3/17

HyperLAN (5.470 GHz - 5.725 GHz) Antenna Radiation Patterns

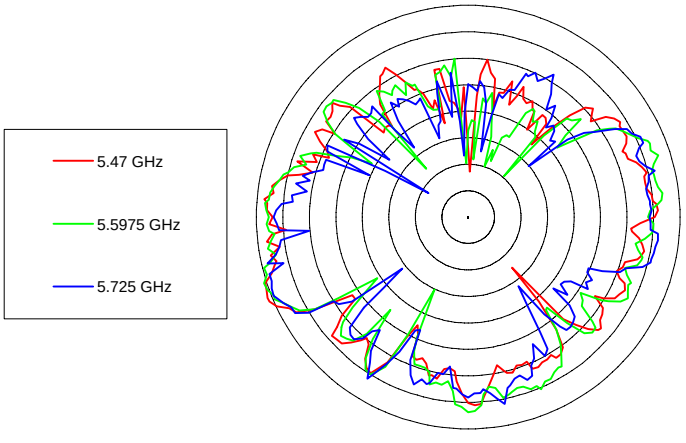
Main Horizontal



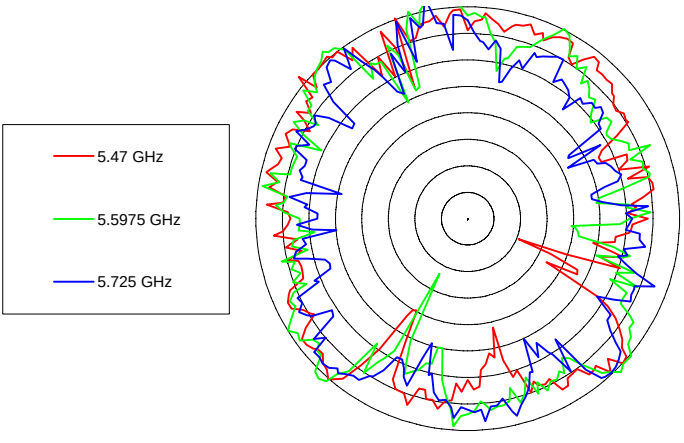
Main Vertical



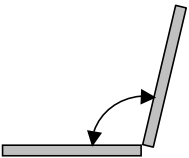
Aux Horizontal



Aux Vertical



HyperLAN (5.470 GHz - 5.725 GHz)			
CONFIG	FREQ GHz	Avg dBi	Pk dBi
Main Horz	5.47	-7.04	-0.21
	5.5975	-8.56	-1.69
	5.725	-7.66	0.32
Main Vert	5.47	-3.72	3.65
	5.5975	-5.00	2.17
	5.725	-4.51	1.81
Aux Horz	5.47	-7.26	0.86
	5.5975	-6.73	0.52
	5.725	-8.03	-0.35
Aux Vert	5.47	-3.93	1.66
	5.5975	-3.75	3.89
	5.725	-5.58	2.53



VSWR open = lid/keyboard angle 110°

Note: The outer circle approximately represents the 0 dBi gain circle
Each circle with 5 dBi difference (Max=0 dBi and Min=-40 dBi)