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Wistron NeWeb Corporation

APPROVAL SHEET

Customer Name: Samsung Electronics Co., Ltd.

Date: 04/02/2009 Doc. Version :00A

OEM P/N	**BA42-00244A**	**Pebble**
WNC P/N	**81.EJV15.G08**	
Description	**HSPA AUX ANTENNA**	
Version	A00	

Provided By Wistron NeWeb Corp	Reviewed By Wistron NeWeb Corp	Approved By Customer company
Snow Gong	Brandon Tseng	

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1.Antenna Description

1.1

Antennas for Pebble system

S

WWAN AUX antenna

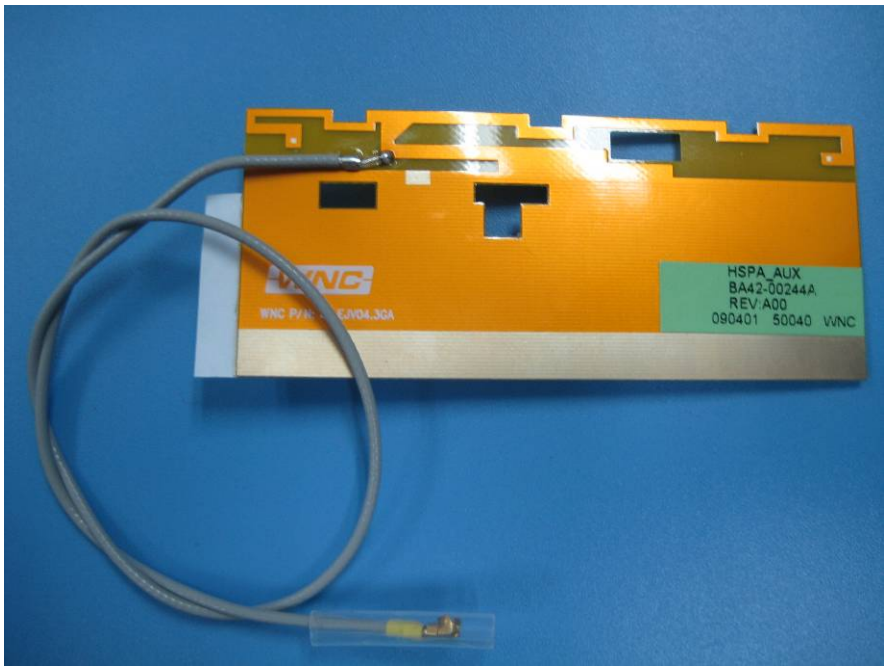
1. **Type: WWAN antenna**
2. **Application: Right bottom of LCD site**
3. **Cable: RF coaxial cable**

1.37 (dia) x 246 mm (Gray)

with IPEX connector

or WNC performance equivalent

1.2 The picture of WWAN Aux antenna

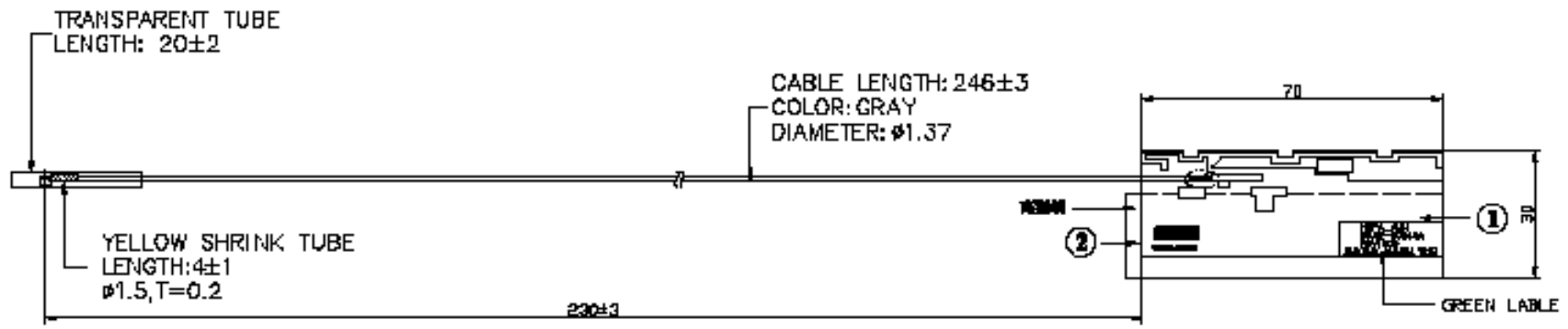


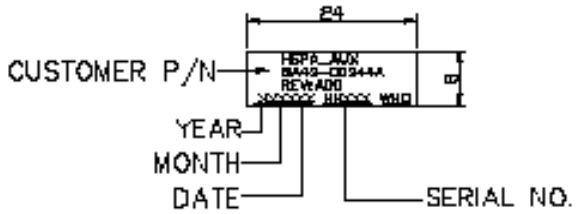
1.3 The outline drawing of antenna

PART NUMBER BLOCK		CUSTOMER P/N BLOCK	
PART NUMBER	REV	PART NUMBER	REV
57.EJV15.G0B	1	BA42-D0244A	ADD

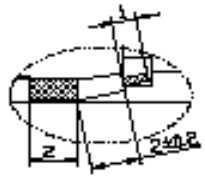
WNC PROPRIETARY

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	1	RELEASE TO FILE	04/01/09	BRANDON TS





DETAIL OF LABEL
SCALE : 3/2



DETAIL A
SCALE: 4/1

ITEM	PART NO.	DESCRIPTION	QTY
2	3T-EJVS1T3-001	TAPE, ADHESIVE, FPC, EJV-S1	1
1	48.EJV04.3GA	PCB FR4,HSDPA WWANAUX,ANTENNA EJV-S1	1
	ONLY ME PARTS REFERENCE		

81.EJV15.G0B	EJV-S1
NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN mm AND TOLERANCES ARE:
INTEGRAL DIMENSIONS ±0.2
1 PLACE DECIMAL ±0.1
2 PLACE DECIMALS ±0.05
ANGULAR DIMENSIONS ±1°
HOLES UNDER Ø5.00 ±0.05

MATERIAL: NA
FINISH: NA
THIRD ANGLE PROJECTION

DRAWN	PENNY YANG	04/01/09
ENGR	JERRY LIU	04/01/09
APVD	BRANDON TS	04/01/09

WNC Wistron NeWeb Corp.
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DWG TITLE
PEBBLE, HSDPA AUX ANTENNA, EJV-S1

SIZE	DWG NO.	REV
A3	57.EJV15.D0B	1
SCALE 1/1	SHEET 1 OF 2	

Wistron NeWeb Corp.

2.Revision History

Date	Version	Change Description
04/02/2009	**00A**	New release

3. Product Specification

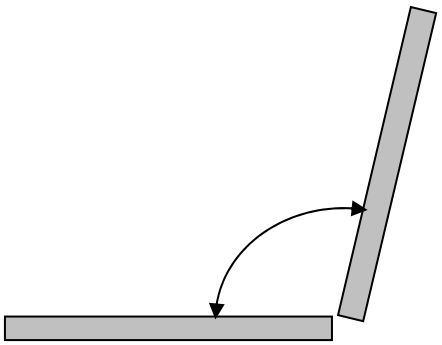
3.1 Antenna VSWR specification

Test Parameter	860MHz to 900MHz	1920MHz to 2190MHz
VSWR → LCD/Lid open (110°) ---**Antenna vendor Spec**	3.5:1 max	3.0:1 max
VSWR → LCD/Lid open (110°) --- **Spec for Mass production**---	4:1 max	3.5:1 max

3.2 Antenna specification

		(860 MHz - 900 MHz)	(1920MHz – 2000MHz)	(2100MHz – 2190MHz)
AUX	**Peak dBi**	<3	<6	<6
	Avg dBi	>-6	>-6	>-6

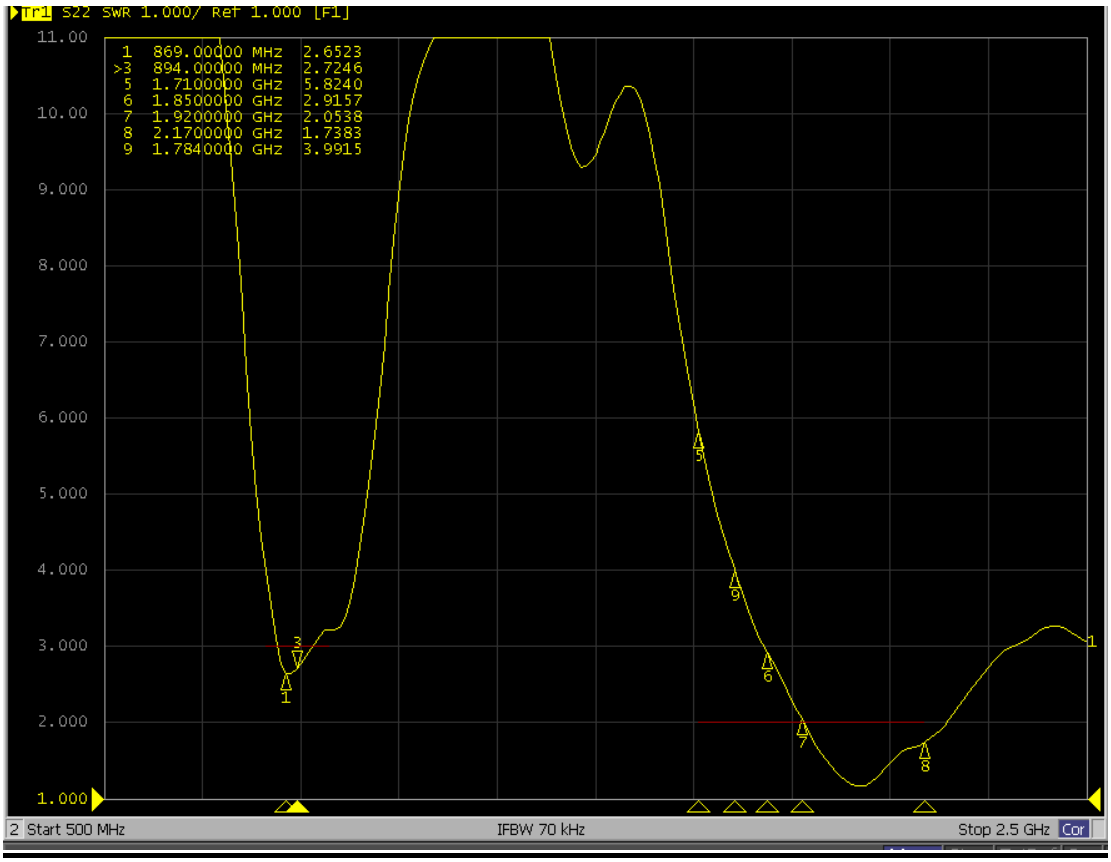
Note: ***Antenna gain includes the connector and cable loss***.



Angle between keyboard and LCD is 110°

4. Antenna Performance Test

VSWR Test Result



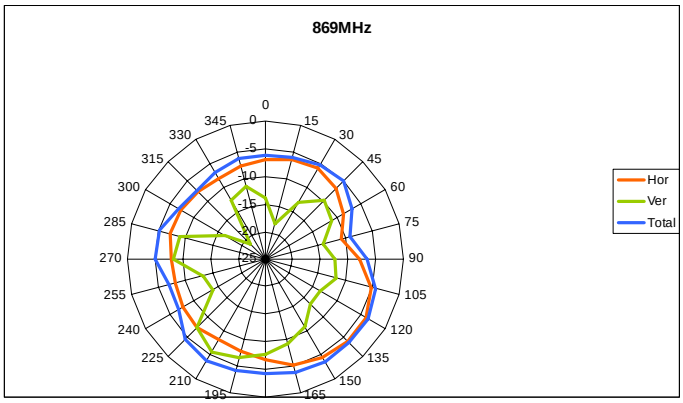
Gain Test Result

Aux antenna Gain						
Frequency (MHz)	Max value			Average		
	H-pol (dBi)	V pol (dBi)	Total(dBi) (H-pol+V-pol)	H-pol (dBi)	V pol (dBi)	Total(dBi) (H-pol+V-pol)
869	-3.86	-5.71	-3.4	-6.69	-10.58	-5.20
880	-3.75	-6.22	-3.24	-6.66	-10.72	-5.22
894	-4.14	-6.17	-3.29	-6.93	-10.61	-5.38
1920	-3.5	-1.31	-0.95	-8.04	-9.26	-5.60
1930	-3.45	-1.07	-0.71	-7.83	-9.00	-5.36
1950	-3.84	-0.93	-0.63	-7.70	-8.78	-5.20
1960	-3.72	-0.83	-0.56	-7.64	-8.60	-5.08
1980	-2.85	-0.64	-0.36	-7.01	-8.03	-4.48
2110	-3.93	-4.3	-1.69	-8.08	-9.15	-5.57
2140	-4.05	-4.8	-2.36	-8.08	-9.47	-5.71
2170	-3.54	-4.26	-2.64	-7.57	-9.43	-5.39

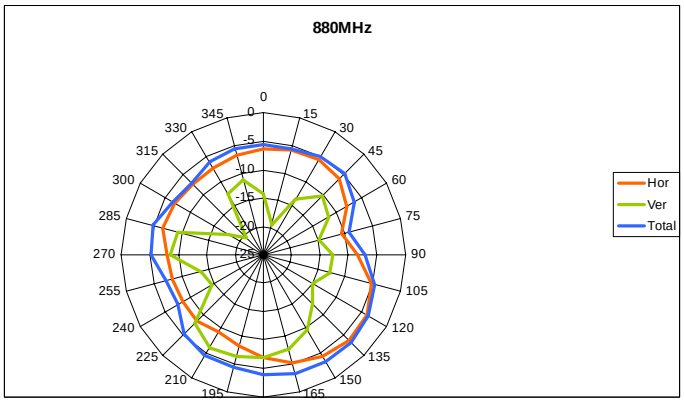
Antenna Radiation Patterns

860-900MHz radiation characteristic

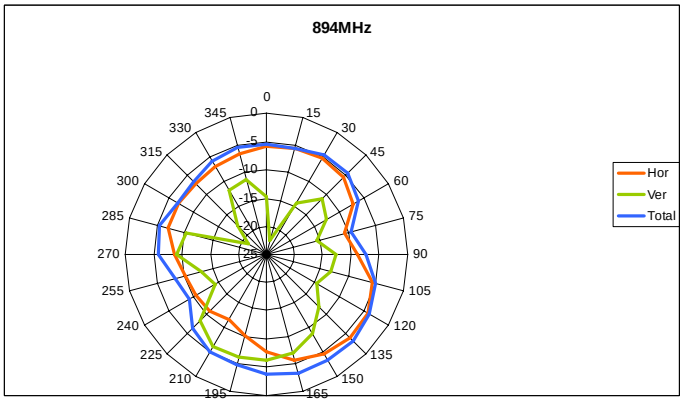
Aux antenna: 869 MHz



Aux antenna: 880 MHz

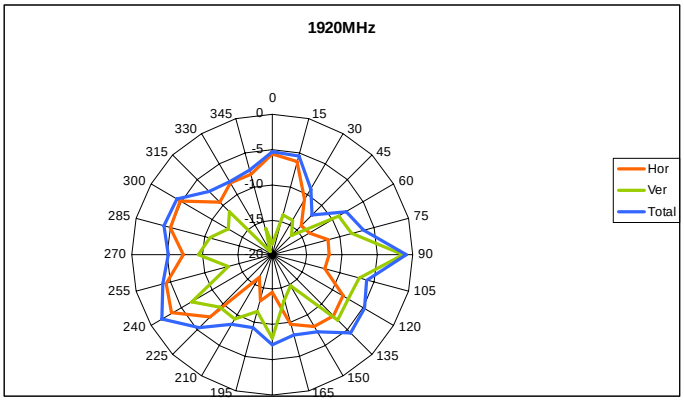


Aux antenna: 894 MHz

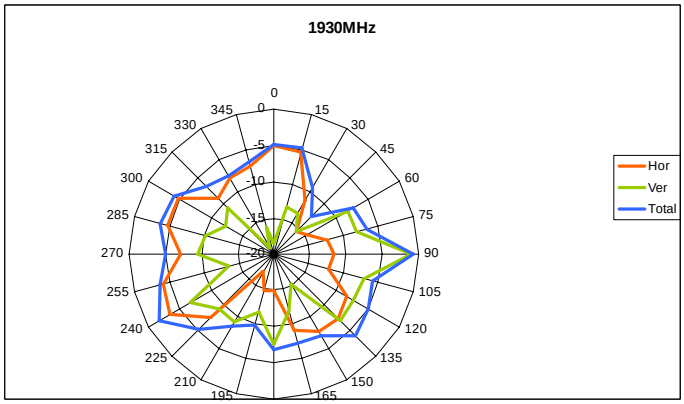


1920-2000MHz radiation characteristic

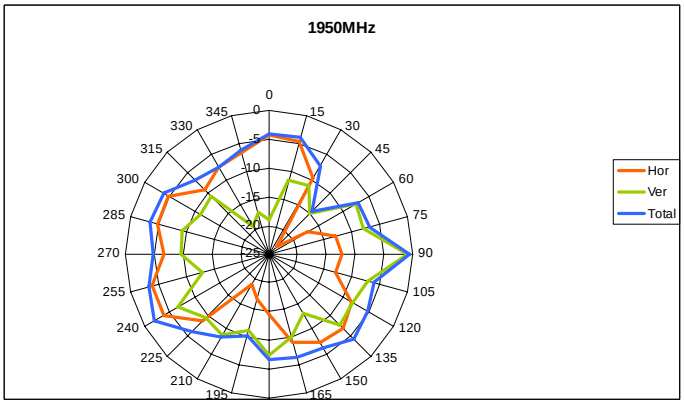
Aux antenna: 1920 MHz



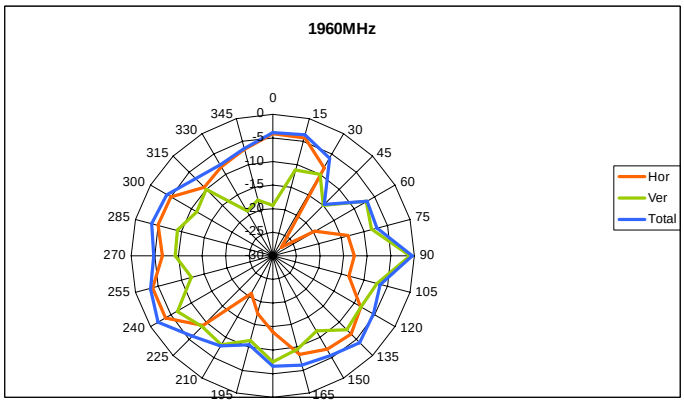
Aux antenna: 1930 MHz



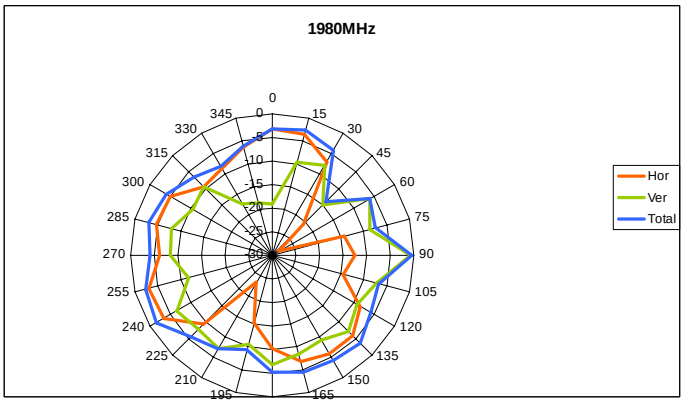
Aux antenna: 1950 MHz



Aux antenna: 1960 MHz

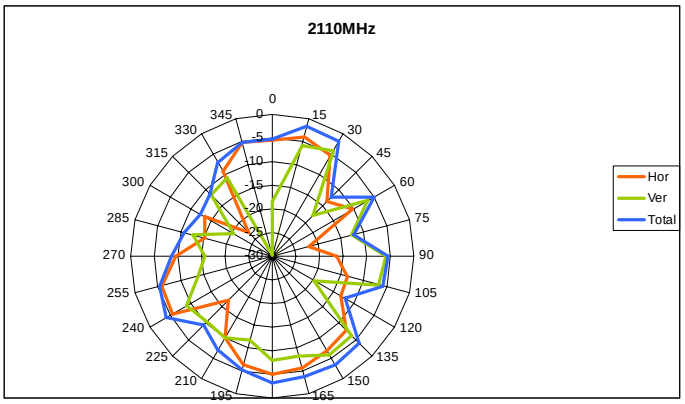


Aux antenna: 1980 MHz

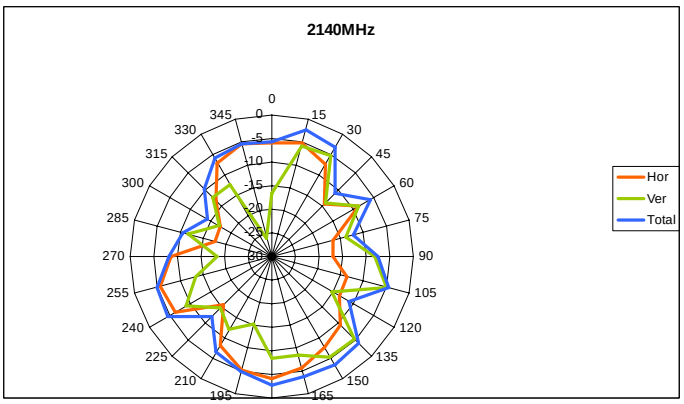


2100-2190 MHz radiation characteristic

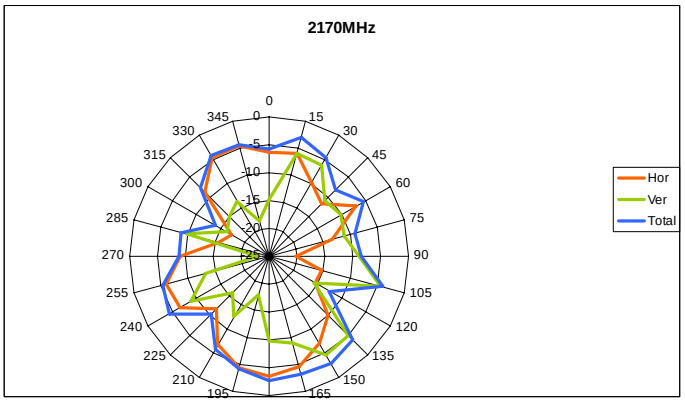
Aux antenna: 2110 MHz



Aux antenna: 2140 MHz



Aux antenna: 2170 MHz



5. Relative Documents

Information of cable and cable ass’y

Approval sheet of IPEX connector

5.1 Information of cable and cable ass’y