FCC TEST REPORT

FCC ID : VU5N5CO-001T

Applicant : Storm Electronics Co. Ltd

Address : 22/F., Com Web Plaza, 12 Cheung Yue Street, Lai Ch, Kowloon, Hong Kong

Equipment Under Test (EUT):

Product description : WII Wireless Nunchuk

Model No. : N5CO-001

Standards : FCC 15 Paragraph 15.249

Date of Test : Dec.11, 2008

Test Engineer : Olic.Huang

Reviewed By : Thelo 24 on

PERPARED BY:

Waltek Services (Shenzhen) Co., Ltd.

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3 Test Summary

Test Items	Test Requirement	Test Method	Class / Severity	Result
Radiated Emission (30MHz to 25GHz)	FCC PART 15: 2007	ANSI C63.4: 2003	Class B	PASS
Conducted Emission (150KHz to 30MHz)	FCC PART 15: 2007	ANSI C63.4: 2003	N/A	N/A
20-dB BandWidth	FCC PART 15: 2007	ANSI C63.4: 2003	Note	PASS
Restricted Band	FCC PART 15: 2007	ANSI C63.4: 2003	Note	PASS

Note: denote that for more details of the EUT, please refer to the relating test items as below.

Remark: the methods of measurement in all the test items were according to the ANSI C63.4: 2003.

4 General Information

4.1 Client Information

Applicant: Storm Electronics Co. Ltd

Address of Applicant: 22/F., Com Web Plaza, 12 Cheung Yue Street, Lai

Ch,Kowloon, Hong Kong

Manufacturer: Asoka Electronic (Shenzhen) Company Limited
Address: Da Yang Industrial Park, Lou Gang Road, Song Gang

Town, Bao An District, Shen Zhen City, China.

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4.2 General Description of E.U.T.

Product description: WII Wireless Nunchuk

Model No.: N5CO-001

4.3 Details of E.U.T.

Power Supply: DC 2*1.2V, 1800mA

USB Charging Cable

4.4 Description of Support Units

The EUT has been tested as an independent unit.

4.5 Standards Applicable for Testing

The customer requested FCC tests for a WII Wireless Nunchuk. The standards used were FCC Part 15 Paragraph 15.249, Paragraph 15.207, Paragraph 15.209,

Paragraph 15.31, Paragraph 15.33, Paragraph 15.35.

4.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• FCC – Registration No.: 880581

Waltek Services(Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 880581,June 24, 2008.

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• IC – Registration No.: 7760

Waltek Services(Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files. Registration IC7760,July 24, 2008.

4.7 Test Location

All Emissions testswere performed at:-1/F, Fukangtai Building, West Baima Rd., Songgang Street, Baoan District, Shenzhen 518105, Guangdong, China.

5 Equipment Used during Test

Equipment	Brand Name	Model	Related standards	Cal.Intal Months	Last Cal. Date	Serial No
3m Semi-anechoic cha	mber					
EMC Analyzer	Agilent	E7405A	ISO9001:2000	12	Jan-08	MY451149 43
Trilog Broadband Antenne 30-3000 MHz	SCHWARZB ECK MESS-ELEK TROM	VULB9163	EN/ISO/IEC 17025 DIN EN ISO9001	12	Jan-08	336
Broad-band Horn Antenna	SCHWARZB ECK MESS-ELEK TROM	BBHA 9120 D	EN/ISO/IEC 17025 DIN EN ISO9001	12	Jan-08	667
Broadband Preamplifier	SCHWARZB ECK MESS-ELEK TROM	BBV 9718	EN/ISO/IEC 17025 DIN EN ISO9001	12	Jan-08	9718-148
10m Coaxial Cable with N-male Connectors usable	SCHWARZB ECK MESS-ELEK TROM	AK 9515 H	EN/ISO/IEC 17025 DIN EN ISO9001	12	Jan-08	-
10m 50 Ohm Coaxial Cable with N-plug,individual length,usable up to 3(5)GHz, Connectors	SCHWARZB ECK MESS-ELEK TROM	AK 9513	EN/ISO/IEC 17025 DIN EN ISO9001	12	Jan-08	-
Positioning Controller	C&C LAB	CC-C-IF	ISO9001	12	Jan-08	MF7802108
Color Monitor	SUNSPO	SP-14C	ISO9001	12	Jan-08	-
EMI Shielded Room						
Test Receiver	ROHDE&SC HWARZ	ESPI	ISO9001	12	Jan-08	101155
Two-Line V-Network	ROHDE&SC HWARZ	ENV216	ISO9001 EN/ISO/IEC 17025	12	Jan-08	100115
Absorbing Clamp	ROHDE&SC HWARZ	MDS-21	ISO9001 EN/ISO/IEC 17025	12	Jan-08	100205
10m 50 Ohm Coaxial Cable with N-plug,individual length,usable up to 3(5)GHz, Connectors	SCHWARZB ECK MESS-ELEK TROM	AK 9514	EN/ISO/IEC 17025 DIN EN ISO9001	12	Jan-08	-

6 Conducted Emission Test

Product Name: WII Wireless Nunchuk

Test Requirement: FCC Part15 Paragraph 15.207
Test Method: Based on ANSI C63.4: 2003

Test Date: ------

Frequency Range: 150 kHz to 30MHz

Class: Class B

Detector: Peak for pre-scan (9 kHz Resolution Bandwidth)

Quasi-Peak & Average if maximised peak within 6dB

of Average Limit

6.1 Test Equipment

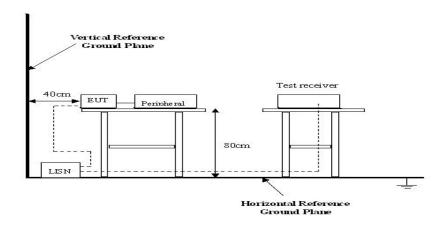
Please refer to Section 5 this report.

6.2 Test Procedure

- 1. The EUT was tested according to ANSI C63.4: 2003. The frequency spectrum from 150kHz to 30MHz was investigated.
- 2. The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

6.3 Conducted Test Setup

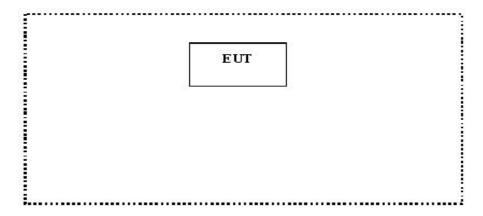
The conducted emission tests were performed using the setup accordance with the ANSI C63.4:2003, The specification used in this report was the FCC Part15 Paragraph 15.207 limits.



6.4 EUT Operating Condition

Operating condition is according to ANSI C63.4: 2003.

- A. Setup the EUT and simulators as shown on follow.
- B. Enable RF signal and confirm EUT active.
- C. Modulate output capacity of EUT up to specification.



6.5 Conducted Emission Limits

 $66\text{-}56~dB\mu V$ between 0.15MHz~&~0.5MHz $56~dB\mu V$ between 0.5MHz~&~5MHz $60~dB\mu V$ between 5MHz~&~30MHz

Note: In the above limits, the tighter limit applies at the band edges.

Owing to the DC operation of EUT, this test was not performed.

7 Radiation Emission Test

Product Name: WII Wireless Nunchuk

Test Requirement: FCC Part15 Paragraph 15.249

Test Method: Based on FCC Part15 Paragraph 15.31 and

Paragraph 15.33

Test Date: Dec.11, 2008

Frequency Range: 30MHz to 25GHz

Measurement Distance: 3m

Detector: Peak for pre-scan (120kHz resolution bandwidth)

Quasi-Peak if maximised peak within 6dB of limit

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7.1 Test Equipment

Please refer to Section 5 this report.

7.2 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in the field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase centre variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on ANSI C63.4: 2003, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at Solid EMC Lab is ±2.9dB.

7.3 Test Procedure

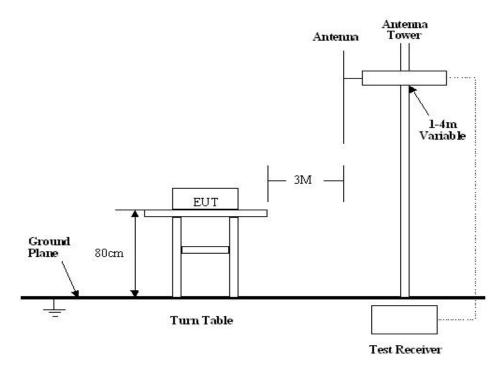
- 1. New battery were installed in the equipment under test for radiated emissions test.
- 2. This is a handhold device, The radiation emission should be tested under 3-axes(X,Y,Z) position(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand), After pre-test, It was found that the worse radiation emission was get at the X position. So the data shown was the X position only.
- 3. Maximizing procedure was performed on the six (6) highest emissions to ensure EUT is compliant with all installation combinations.
- 4. All data was recorded in the peak and average detection mode.

5. The EUT was under working mode during the final qualification test and the configuration was used to represent the worst case results.

7.4 Radiated Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site,

using the setup accordance with the ANSI C63.4: 2003, The specification used in this report was the FCC Part15 Paragraph 15.249 and Paragraph 15.209 limits.



7.5 Spectrum Analyzer Setup

According to FCC Part15 Paragraph 15.249 Rules, the system was tested to 25 GHz. Below 1GHz

Start Frequency	.30 MHz
Stop Frequency	. 1000 MHz
Sweep Speed Auto	
IF Bandwidth	. 120 kHz
Video Bandwidth	. 100KHz
Quasi-Peak Adapter Bandwidth	. 120 kHz
Quasi-Peak Adapter Mode	. Normal
Resolution Bandwidth	. 100KHz

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Above 1GHz

Start Frequency	. 1000 MHz
Stop Frequency	.25000MHz
Sweep Speed Auto	
IF Bandwidth	. 120 kHz
Video Bandwidth	. 1MHz
Quasi-Peak Adapter Bandwidth	. 120 kHz
Quasi-Peak Adapter Mode	. Normal
Resolution Bandwidth	. 1MHz

7.6 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Indicated Reading + Antenna Factor + Cable Factor - Amplifier Gain

The "Margin" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of $-7dB\mu V$ means the emission is $7dB\mu V$ below the maximum limit for Class B. The equation for margin calculation is as follows:

Margin = Corr. Ampl. – Class B Limit

7.7 Summary of Test Results

According to the data in section 7.10, the EUT complied with the FCC Part15 Paragraph 15.249 standards.

7.8 EUT Operating Condition

Same as section 6.4 of this report.

7.9 Radiated Emissions Limit

A. FCC Part 15 subpart C Paragraph 15.249 Limit

Fundamental Frequency		Strength of lamental	Field Strength of Harmonics		
Tundamental Frequency	mV/m	dBuV/m	uV/m	dBuV/m	
902-928MHz	50	94	500	54	
2400-2483.5 MHz	50	94	500	54	
5725-5875 MHz	50	94	500	54	
24.0-24.25GHz	250	108	2500	68	

Note:

- (1) RF Voltage(dBuV)=20 log RF Voltage(uV)
- (2) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
- (3) The emission limit in this paragraph is based on measurement instrumentation employing an average detector. Measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.
- (4) Above 1GHz,do a Peak and average measurements for all emissions, Limit for peak is 74dBuV/m,According to Part15.35(b) and average is 54BuV/m.

B. Frequencies in restricted band are complied to limit on Paragraph 15.209

Frequency(MHZ)	Distance(m)	Field strength(dBuV/m)
30-88	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

Note:

- (1) RF Voltage(dBuV)=20 log₁₀ RF Voltage(uV)
- (2) In the Above Table, the tighter limit applies at the band edges.
- (3)Distance refers to the distance in meters between the measuring instrument antenna.

7.10 Radiated Emissions Test Result

Formula of conversion factors: the field strength at 3m was established by adding. The meter reading of the spectrum analyzer (which is set to read in units of dBuV/m). To the antenna correction factor supplied by the antenna manufacturer. The antenna. Correction factors are stared in terms of dB. The gain of the press letor was accounted

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For in the spectrum analyser meter reading.

Example:

Freq(MHz) Meter Reading +ACF=FS

33 20dBuV+10.36dB=30.36dBuV/m @3m

Radiated Emission Test Data

Test Voltage: 2.4V DC
Test Mode: TX On
Temperature: 24 °C
Humidity: 52%RH
Test Result: PASS

Remarks: 30-1000MHz radiation test no significant emissions above the equipment noise floor were detected.

Frequency(MHz)	Detector	Antenna Polarization	Emission Level (dBuV/m)	FCC 15 Subpart C Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Turntable Angle (°)				
	Low frequency										
2402.00	AV	Vertical	86.39	94.00	7.61	1.2	0				
4804.00	AV	Vertical	44.38	54.00	9.62	1.5	60				
7206.00	AV	Vertical	44.25	54.00	9.75	1.0	0				
9608.00	AV	Vertical	44.73	54.00	9.27	1.0	30				
12010.00	AV	Vertical	45.64	54.00	8.36	1.5	60				
14412.00	AV	Vertical	45.89	54.00	8.11	1.2	10				
16814.00	AV	Vertical	46.12	54.00	7.88	1.8	110				
19216.00	AV	Vertical	46.73	54.00	7.27	1.2	60				
21618.00	AV	Vertical	46.88	54.00	7.12	1.5	90				
24020.00	AV	Vertical	45.54	54.00	8.46	1.0	120				
2402.00	AV	Horizontal	82.32	94.00	11.68	1.0	30				
4804.00	AV	Horizontal	43.11	54.00	10.89	1.6	100				
7206.00	AV	Horizontal	43.65	54.00	10.38	1.5	120				

9608.00 AV Horizontal 44.27 54.00 9.73 1.6 220 12010.00 AV Horizontal 43.55 54.00 10.45 1.5 10 14412.00 AV Horizontal 39.71 54.00 10.04 1.1 0 16814.00 AV Horizontal 43.96 54.00 10.04 1.1 0 19216.00 AV Horizontal 46.71 54.00 7.29 1.0 90 21618.00 AV Horizontal 46.82 54.00 7.18 1.5 60 2402.00 AV Horizontal 46.82 54.00 7.02 1.2 100 2402.00 PK Vertical 96.36 114.00 17.64 1.0 135 4804.00 PK Vertical 50.38 74.00 23.83 1.8 60 7206.00 PK Vertical 51.15 74.00 22.85 1.2 180 14412										
14412.00 AV Horizontal 39.71 54.00 14.29 1.2 20 16814.00 AV Horizontal 43.96 54.00 10.04 1.1 0 19216.00 AV Horizontal 46.71 54.00 7.29 1.0 90 21618.00 AV Horizontal 46.82 54.00 7.18 1.5 60 2402.00 AV Horizontal 46.98 54.00 7.02 1.2 100 2402.00 PK Vertical 96.36 114.00 17.64 1.0 135 4804.00 PK Vertical 50.38 74.00 23.62 1.5 0 7206.00 PK Vertical 50.65 74.00 23.33 1.8 60 9608.00 PK Vertical 51.15 74.00 22.23 1.5 60 16814.00 PK Vertical 52.24 74.00 21.76 1.8 100 19216.00<	9608.00	AV	Horizontal	44.27	54.00	9.73	1.6	220		
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19216.00	14412.00	AV	Horizontal	39.71	54.00	14.29	1.2	20		
21618.00 AV Horizontal 46.82 54.00 7.18 1.5 60	16814.00	AV	Horizontal	43.96	54.00	10.04	1.1	0		
24020.00 AV Horizontal 46.98 54.00 7.02 1.2 100 2402.00 PK Vertical 96.36 114.00 17.64 1.0 135 4804.00 PK Vertical 50.38 74.00 23.62 1.5 0 7206.00 PK Vertical 50.17 74.00 23.83 1.8 60 9608.00 PK Vertical 50.65 74.00 23.35 1.0 10 12010.00 PK Vertical 51.15 74.00 22.85 1.2 180 14412.00 PK Vertical 51.77 74.00 22.23 1.5 60 16814.00 PK Vertical 52.24 74.00 21.76 1.8 100 19216.00 PK Vertical 53.88 74.00 21.34 1.2 120 21618.00 PK Vertical 53.94 74.00 20.06 1.0 90 24020.00 <td>19216.00</td> <td>AV</td> <td>Horizontal</td> <td>46.71</td> <td>54.00</td> <td>7.29</td> <td>1.0</td> <td>90</td>	19216.00	AV	Horizontal	46.71	54.00	7.29	1.0	90		
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9608.00 PK Vertical 50.65 74.00 23.35 1.0 10 12010.00 PK Vertical 51.15 74.00 22.85 1.2 180 14412.00 PK Vertical 51.77 74.00 22.23 1.5 60 16814.00 PK Vertical 52.24 74.00 21.76 1.8 100 19216.00 PK Vertical 52.66 74.00 21.34 1.2 120 21618.00 PK Vertical 53.88 74.00 20.12 1.8 100 24020.00 PK Vertical 53.88 74.00 20.06 1.0 90 2402.00 PK Horizontal 93.21 114.00 20.79 1.0 130 4804.00 PK Horizontal 47.22 74.00 26.78 1.6 180 7206.00 PK Horizontal 49.33 74.00 25.35 1.5 120 960	4804.00	PK	Vertical	50.38	74.00	23.62	1.5	0		
12010.00 PK Vertical 51.15 74.00 22.85 1.2 180 14412.00 PK Vertical 51.77 74.00 22.23 1.5 60 16814.00 PK Vertical 52.24 74.00 21.76 1.8 100 19216.00 PK Vertical 52.66 74.00 21.34 1.2 120 21618.00 PK Vertical 53.88 74.00 20.12 1.8 100 24020.00 PK Vertical 53.94 74.00 20.06 1.0 90 2402.00 PK Horizontal 93.21 114.00 20.79 1.0 130 4804.00 PK Horizontal 47.22 74.00 26.78 1.6 180 7206.00 PK Horizontal 49.33 74.00 25.35 1.5 120 9608.00 PK Horizontal 50.26 74.00 23.74 1.8 180	7206.00	PK	Vertical	50.17	74.00	23.83	1.8	60		
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16814.00 PK Vertical 52.24 74.00 21.76 1.8 100 19216.00 PK Vertical 52.66 74.00 21.34 1.2 120 21618.00 PK Vertical 53.88 74.00 20.12 1.8 100 24020.00 PK Vertical 53.94 74.00 20.06 1.0 90 2402.00 PK Horizontal 93.21 114.00 20.79 1.0 130 4804.00 PK Horizontal 47.22 74.00 26.78 1.6 180 7206.00 PK Horizontal 48.65 74.00 25.35 1.5 120 9608.00 PK Horizontal 50.26 74.00 23.74 1.8 180 12010.00 PK Horizontal 50.26 74.00 23.74 1.8 180 14412.00 PK Horizontal 51.44 74.00 22.56 1.5 100	12010.00	PK	Vertical	51.15	74.00	22.85	1.2	180		
19216.00 PK Vertical 52.66 74.00 21.34 1.2 120 21618.00 PK Vertical 53.88 74.00 20.12 1.8 100 24020.00 PK Vertical 53.94 74.00 20.06 1.0 90 2402.00 PK Horizontal 93.21 114.00 20.79 1.0 130 4804.00 PK Horizontal 47.22 74.00 26.78 1.6 180 7206.00 PK Horizontal 48.65 74.00 25.35 1.5 120 9608.00 PK Horizontal 49.33 74.00 24.67 1.6 90 12010.00 PK Horizontal 50.26 74.00 23.74 1.8 180 14412.00 PK Horizontal 51.44 74.00 22.56 1.5 100 19216.00 PK Horizontal 52.45 74.00 21.55 1.0 45	14412.00	PK	Vertical	51.77	74.00	22.23	1.5	60		
21618.00 PK Vertical 53.88 74.00 20.12 1.8 100 24020.00 PK Vertical 53.94 74.00 20.06 1.0 90 2402.00 PK Horizontal 93.21 114.00 20.79 1.0 130 4804.00 PK Horizontal 47.22 74.00 26.78 1.6 180 7206.00 PK Horizontal 48.65 74.00 25.35 1.5 120 9608.00 PK Horizontal 49.33 74.00 24.67 1.6 90 12010.00 PK Horizontal 50.26 74.00 23.74 1.8 180 14412.00 PK Horizontal 50.83 74.00 23.17 1.2 120 16814.00 PK Horizontal 52.45 74.00 22.56 1.5 100 19216.00 PK Horizontal 52.78 74.00 21.22 1.5 30	16814.00	PK	Vertical	52.24	74.00	21.76	1.8	100		
24020.00 PK Vertical 53.94 74.00 20.06 1.0 90 2402.00 PK Horizontal 93.21 114.00 20.79 1.0 130 4804.00 PK Horizontal 47.22 74.00 26.78 1.6 180 7206.00 PK Horizontal 48.65 74.00 25.35 1.5 120 9608.00 PK Horizontal 49.33 74.00 24.67 1.6 90 12010.00 PK Horizontal 50.26 74.00 23.74 1.8 180 14412.00 PK Horizontal 50.83 74.00 23.17 1.2 120 16814.00 PK Horizontal 51.44 74.00 22.56 1.5 100 19216.00 PK Horizontal 52.78 74.00 21.55 1.0 45 21618.00 PK Horizontal 52.18 74.00 21.82 1.0 270	19216.00	PK	Vertical	52.66	74.00	21.34	1.2	120		
2402.00 PK Horizontal 93.21 114.00 20.79 1.0 130 4804.00 PK Horizontal 47.22 74.00 26.78 1.6 180 7206.00 PK Horizontal 48.65 74.00 25.35 1.5 120 9608.00 PK Horizontal 49.33 74.00 24.67 1.6 90 12010.00 PK Horizontal 50.26 74.00 23.74 1.8 180 14412.00 PK Horizontal 50.83 74.00 23.17 1.2 120 16814.00 PK Horizontal 51.44 74.00 22.56 1.5 100 19216.00 PK Horizontal 52.45 74.00 21.55 1.0 45 21618.00 PK Horizontal 52.78 74.00 21.82 1.0 270 Middle frequency 2439.00 AV Vertical 43.44 54.00 10.56	21618.00	PK	Vertical	53.88	74.00	20.12	1.8	100		
4804.00 PK Horizontal 47.22 74.00 26.78 1.6 180 7206.00 PK Horizontal 48.65 74.00 25.35 1.5 120 9608.00 PK Horizontal 49.33 74.00 24.67 1.6 90 12010.00 PK Horizontal 50.26 74.00 23.74 1.8 180 14412.00 PK Horizontal 50.83 74.00 23.17 1.2 120 16814.00 PK Horizontal 51.44 74.00 22.56 1.5 100 19216.00 PK Horizontal 52.45 74.00 21.55 1.0 45 21618.00 PK Horizontal 52.78 74.00 21.22 1.5 30 24020.00 PK Horizontal 52.18 74.00 21.82 1.0 270 2439.00 AV Vertical 86.36 94.00 7.64 1.0 10	24020.00	PK	Vertical	53.94	74.00	20.06	1.0	90		
7206.00 PK Horizontal 48.65 74.00 25.35 1.5 120 9608.00 PK Horizontal 49.33 74.00 24.67 1.6 90 12010.00 PK Horizontal 50.26 74.00 23.74 1.8 180 14412.00 PK Horizontal 50.83 74.00 23.17 1.2 120 16814.00 PK Horizontal 51.44 74.00 22.56 1.5 100 19216.00 PK Horizontal 52.45 74.00 21.55 1.0 45 21618.00 PK Horizontal 52.78 74.00 21.22 1.5 30 24020.00 PK Horizontal 52.18 74.00 21.82 1.0 270 Middle frequency 2439.00 AV Vertical 43.44 54.00 10.56 1.5 45 7317.00 AV Vertical 44.37 54.00 9.63	2402.00	PK	Horizontal	93.21	114.00	20.79	1.0	130		
9608.00 PK Horizontal 49.33 74.00 24.67 1.6 90 12010.00 PK Horizontal 50.26 74.00 23.74 1.8 180 14412.00 PK Horizontal 50.83 74.00 23.17 1.2 120 16814.00 PK Horizontal 51.44 74.00 22.56 1.5 100 19216.00 PK Horizontal 52.45 74.00 21.55 1.0 45 21618.00 PK Horizontal 52.78 74.00 21.22 1.5 30 24020.00 PK Horizontal 52.18 74.00 21.82 1.0 270 Middle frequency 2439.00 AV Vertical 48.36 94.00 7.64 1.0 10 4878.00 AV Vertical 44.37 54.00 9.63 1.6 90 9756.00 AV Vertical 44.69 54.00 9.31 <	4804.00	PK	Horizontal	47.22	74.00	26.78	1.6	180		
12010.00 PK Horizontal 50.26 74.00 23.74 1.8 180 14412.00 PK Horizontal 50.83 74.00 23.17 1.2 120 16814.00 PK Horizontal 51.44 74.00 22.56 1.5 100 19216.00 PK Horizontal 52.45 74.00 21.55 1.0 45 21618.00 PK Horizontal 52.78 74.00 21.22 1.5 30 24020.00 PK Horizontal 52.18 74.00 21.82 1.0 270 Middle frequency 2439.00 AV Vertical 86.36 94.00 7.64 1.0 10 4878.00 AV Vertical 44.37 54.00 9.63 1.6 90 9756.00 AV Vertical 44.69 54.00 9.31 1.5 180 12195.00 AV Vertical 45.21 54.00 8.79 <t< td=""><td>7206.00</td><td>PK</td><td>Horizontal</td><td>48.65</td><td>74.00</td><td>25.35</td><td>1.5</td><td>120</td></t<>	7206.00	PK	Horizontal	48.65	74.00	25.35	1.5	120		
14412.00 PK Horizontal 50.83 74.00 23.17 1.2 120 16814.00 PK Horizontal 51.44 74.00 22.56 1.5 100 19216.00 PK Horizontal 52.45 74.00 21.55 1.0 45 21618.00 PK Horizontal 52.78 74.00 21.22 1.5 30 24020.00 PK Horizontal 52.18 74.00 21.82 1.0 270 Middle frequency 2439.00 AV Vertical 86.36 94.00 7.64 1.0 10 4878.00 AV Vertical 43.44 54.00 10.56 1.5 45 7317.00 AV Vertical 44.37 54.00 9.63 1.6 90 9756.00 AV Vertical 44.69 54.00 9.31 1.5 180 12195.00 AV Vertical 45.21 54.00 8.79 1.	9608.00	PK	Horizontal	49.33	74.00	24.67	1.6	90		
16814.00 PK Horizontal 51.44 74.00 22.56 1.5 100 19216.00 PK Horizontal 52.45 74.00 21.55 1.0 45 21618.00 PK Horizontal 52.78 74.00 21.22 1.5 30 24020.00 PK Horizontal 52.18 74.00 21.82 1.0 270 Middle frequency 2439.00 AV Vertical 86.36 94.00 7.64 1.0 10 4878.00 AV Vertical 43.44 54.00 10.56 1.5 45 7317.00 AV Vertical 44.37 54.00 9.63 1.6 90 9756.00 AV Vertical 44.69 54.00 9.31 1.5 180 12195.00 AV Vertical 45.21 54.00 8.79 1.2 120	12010.00	PK	Horizontal	50.26	74.00	23.74	1.8	180		
19216.00 PK Horizontal 52.45 74.00 21.55 1.0 45 21618.00 PK Horizontal 52.78 74.00 21.22 1.5 30 24020.00 PK Horizontal 52.18 74.00 21.82 1.0 270 Middle frequency 2439.00 AV Vertical 86.36 94.00 7.64 1.0 10 4878.00 AV Vertical 43.44 54.00 10.56 1.5 45 7317.00 AV Vertical 44.37 54.00 9.63 1.6 90 9756.00 AV Vertical 44.69 54.00 9.31 1.5 180 12195.00 AV Vertical 45.21 54.00 8.79 1.2 120	14412.00	PK	Horizontal	50.83	74.00	23.17	1.2	120		
21618.00 PK Horizontal 52.78 74.00 21.22 1.5 30 24020.00 PK Horizontal 52.18 74.00 21.82 1.0 270 Middle frequency 2439.00 AV Vertical 86.36 94.00 7.64 1.0 10 4878.00 AV Vertical 43.44 54.00 10.56 1.5 45 7317.00 AV Vertical 44.37 54.00 9.63 1.6 90 9756.00 AV Vertical 44.69 54.00 9.31 1.5 180 12195.00 AV Vertical 45.21 54.00 8.79 1.2 120	16814.00	PK	Horizontal	51.44	74.00	22.56	1.5	100		
24020.00 PK Horizontal 52.18 74.00 21.82 1.0 270 Middle frequency 2439.00 AV Vertical 86.36 94.00 7.64 1.0 10 4878.00 AV Vertical 43.44 54.00 10.56 1.5 45 7317.00 AV Vertical 44.37 54.00 9.63 1.6 90 9756.00 AV Vertical 44.69 54.00 9.31 1.5 180 12195.00 AV Vertical 45.21 54.00 8.79 1.2 120	19216.00	PK	Horizontal	52.45	74.00	21.55	1.0	45		
Middle frequency 2439.00 AV Vertical 86.36 94.00 7.64 1.0 10 4878.00 AV Vertical 43.44 54.00 10.56 1.5 45 7317.00 AV Vertical 44.37 54.00 9.63 1.6 90 9756.00 AV Vertical 44.69 54.00 9.31 1.5 180 12195.00 AV Vertical 45.21 54.00 8.79 1.2 120	21618.00	PK	Horizontal	52.78	74.00	21.22	1.5	30		
2439.00 AV Vertical 86.36 94.00 7.64 1.0 10 4878.00 AV Vertical 43.44 54.00 10.56 1.5 45 7317.00 AV Vertical 44.37 54.00 9.63 1.6 90 9756.00 AV Vertical 44.69 54.00 9.31 1.5 180 12195.00 AV Vertical 45.21 54.00 8.79 1.2 120	24020.00	PK	Horizontal	52.18	74.00	21.82	1.0	270		
4878.00 AV Vertical 43.44 54.00 10.56 1.5 45 7317.00 AV Vertical 44.37 54.00 9.63 1.6 90 9756.00 AV Vertical 44.69 54.00 9.31 1.5 180 12195.00 AV Vertical 45.21 54.00 8.79 1.2 120	Middle frequency									
7317.00 AV Vertical 44.37 54.00 9.63 1.6 90 9756.00 AV Vertical 44.69 54.00 9.31 1.5 180 12195.00 AV Vertical 45.21 54.00 8.79 1.2 120	2439.00	AV	Vertical	86.36	94.00	7.64	1.0	10		
9756.00 AV Vertical 44.69 54.00 9.31 1.5 180 12195.00 AV Vertical 45.21 54.00 8.79 1.2 120	4878.00	AV	Vertical	43.44	54.00	10.56	1.5	45		
12195.00 AV Vertical 45.21 54.00 8.79 1.2 120	7317.00	AV	Vertical	44.37	54.00	9.63	1.6	90		
	9756.00	AV	Vertical	44.69	54.00	9.31	1.5	180		
14634.00 AV Vertical 45.68 54.00 8.32 1.0 100	12195.00	AV	Vertical	45.21	54.00	8.79	1.2	120		
	14634.00	AV	Vertical	45.68	54.00	8.32	1.0	100		

17073.00	AV	Vertical	46.11	54.00	7.89	1.5	90			
19512.00	AV	Vertical	46.23	54.00	7.77	1.8	45			
21951.00	AV	Vertical	45.31	54.00	8.69	1.2	60			
24390.00	AV	Vertical	46.72	54.00	7.28	1.6	120			
2439.00	AV	Horizontal	85.36	94.00	8.64	1.0	10			
4878.00	AV	Horizontal	43.22	54.00	10.78	1.5	180			
7317.00	AV	Horizontal	44.12	54.00	9.88	1.0	130			
9756.00	AV	Horizontal	44.58	54.00	9.42	1.2	90			
12195.00	AV	Horizontal	44.88	54.00	9.12	1.5	60			
14634.00	AV	Horizontal	45.36	54.00	8.64	1.0	100			
17073.00	AV	Horizontal	45.75	54.00	8.25	1.5	90			
19512.00	AV	Horizontal	45.18	54.00	8.82	1.8	120			
21951.00	AV	Horizontal	45.22	54.00	8.78	1.5	180			
24390.00	AV	Horizontal	46.47	54.00	7.53	1.8	270			
2439.00	PK	Vertical	96.54	114.00	17.36	1.0	130			
4878.00	PK	Vertical	48.11	74.00	25.89	1.5	60			
7317.00	PK	Vertical	48.48	74.00	25.52	1.5	120			
9756.00	PK	Vertical	49.59	74.00	24.41	1.2	270			
12195.00	PK	Vertical	50.17	74.00	23.83	1.8	100			
14634.00	PK	Vertical	50.62	74.00	23.38	1.5	180			
17073.00	PK	Vertical	50.89	74.00	23.11	1.2	90			
19512.00	PK	Vertical	51.88	74.00	22.12	1.8	45			
21951.00	PK	Vertical	52.62	74.00	21.38	1.2	100			
24390.00	PK	Vertical	52.88	74.00	21.12	1.0	90			
2439.00	PK	Horizontal	94.25	114.00	19.75	1.1	10			
4878.00	PK	Horizontal	48.06	74.00	25.94	1.8	90			
7317.00	PK	Horizontal	48.26	74.00	25.74	1.5	120			
9756.00	PK	Horizontal	49.22	74.00	24.78	1.5	100			
12195.00	PK	Horizontal	49.43	74.00	24.57	1.8	45			
14634.00	PK	Horizontal	50.37	74.00	23.63	1.5	90			
17073.00	PK	Horizontal	50.46	74.00	23.54	1.5	180			
19512.00	PK	Horizontal	51.73	74.00	22.27	1.6	120			
21951.00	PK	Horizontal	52.52	74.00	21.48	1.2	270			
24390.00	24390.00 PK Horizontal 50.32 74.00 23.68 1.0 110									
			High	frequency						

4952.00 AV Vertical 47.71 54.00 6.29 1.5 90 7428.00 AV Vertical 45.36 54.00 8.74 1.5 45 9904.00 AV Vertical 45.36 54.00 8.23 1.5 100 12380.00 AV Vertical 46.51 54.00 7.49 1.2 100 14856.00 AV Vertical 48.68 54.00 5.32 1.6 170 17353.00 AV Vertical 46.35 54.00 6.87 1.8 45 19512.00 AV Vertical 46.35 54.00 7.65 1.0 0 22284.00 AV Vertical 46.26 54.00 7.02 1.5 90 24760.00 AV Horizontal 48.26 54.00 8.74 1.0 180 4952.00 AV Horizontal 45.52 54.00 8.48 1.5 60 7428.00						T		Γ
7428.00 AV Vertical 45.36 54.00 8.74 1.5 45 9904.00 AV Vertical 45.36 54.00 8.23 1.5 100 12380.00 AV Vertical 46.51 54.00 7.49 1.2 100 14856.00 AV Vertical 48.68 54.00 5.32 1.6 170 17353.00 AV Vertical 47.13 54.00 6.87 1.8 45 19512.00 AV Vertical 46.35 54.00 7.65 1.0 0 22284.00 AV Vertical 46.98 54.00 7.02 1.5 90 24760.00 AV Vertical 45.26 54.00 8.74 1.0 180 2476.00 AV Horizontal 45.52 54.00 8.48 1.5 60 7428.00 AV Horizontal 47.11 54.00 6.89 1.5 120 9904.00	2476.00	AV	Vertical	86.96	94.00	7.04	1.0	10
9904.00 AV Vertical 45.36 54.00 8.23 1.5 100 12380.00 AV Vertical 46.51 54.00 7.49 1.2 100 14856.00 AV Vertical 48.68 54.00 5.32 1.6 170 17353.00 AV Vertical 46.35 54.00 7.65 1.0 0 22284.00 AV Vertical 46.98 54.00 7.02 1.5 90 24760.00 AV Vertical 45.26 54.00 8.74 1.0 180 2476.00 AV Horizontal 45.26 54.00 8.74 1.0 180 2476.00 AV Horizontal 45.52 54.00 8.48 1.5 60 7428.00 AV Horizontal 46.52 54.00 7.48 1.8 270 12380.00 AV Horizontal 46.35 54.00 7.65 1.2 180 14856.00	4952.00	AV	Vertical	47.71	54.00	6.29	1.5	90
12380.00 AV Vertical 46.51 54.00 7.49 1.2 100 14856.00 AV Vertical 48.68 54.00 5.32 1.6 170 17353.00 AV Vertical 47.13 54.00 6.87 1.8 45 19512.00 AV Vertical 46.35 54.00 7.65 1.0 0 22284.00 AV Vertical 46.98 54.00 7.02 1.5 90 24760.00 AV Vertical 45.26 54.00 8.74 1.0 180 2476.00 AV Horizontal 45.52 54.00 8.48 1.5 60 7428.00 AV Horizontal 45.52 54.00 8.48 1.5 60 7428.00 AV Horizontal 46.52 54.00 7.48 1.8 270 12380.00 AV Horizontal 46.35 54.00 7.65 1.2 180 19512.00	7428.00	AV	Vertical	45.36	54.00	8.74	1.5	45
14856.00 AV Vertical 48.68 54.00 5.32 1.6 170 17353.00 AV Vertical 47.13 54.00 6.87 1.8 45 19512.00 AV Vertical 46.35 54.00 7.65 1.0 0 22284.00 AV Vertical 46.98 54.00 7.02 1.5 90 24760.00 AV Vertical 45.26 54.00 8.74 1.0 180 24760.00 AV Horizontal 45.52 54.00 8.48 1.5 60 7428.00 AV Horizontal 45.52 54.00 8.48 1.5 60 7428.00 AV Horizontal 46.52 54.00 7.48 1.8 270 12380.00 AV Horizontal 46.35 54.00 7.65 1.2 180 17353.00 AV Horizontal 48.25 54.00 7.55 1.8 120 19512.00 <td>9904.00</td> <td>AV</td> <td>Vertical</td> <td>45.36</td> <td>54.00</td> <td>8.23</td> <td>1.5</td> <td>100</td>	9904.00	AV	Vertical	45.36	54.00	8.23	1.5	100
17353.00 AV Vertical 47.13 54.00 6.87 1.8 45 19512.00 AV Vertical 46.35 54.00 7.65 1.0 0 22284.00 AV Vertical 46.98 54.00 7.02 1.5 90 24760.00 AV Vertical 45.26 54.00 8.74 1.0 180 24760.00 AV Horizontal 83.95 94.00 10.05 1.0 100 4952.00 AV Horizontal 45.52 54.00 8.48 1.5 60 7428.00 AV Horizontal 46.52 54.00 7.48 1.8 270 12380.00 AV Horizontal 46.35 54.00 7.65 1.2 180 14856.00 AV Horizontal 46.35 54.00 7.66 1.6 90 17353.00 AV Horizontal 47.25 54.00 5.75 1.8 120 19512.00	12380.00	AV	Vertical	46.51	54.00	7.49	1.2	100
19512.00	14856.00	AV	Vertical	48.68	54.00	5.32	1.6	170
22284.00 AV Vertical 46.98 54.00 7.02 1.5 90 24760.00 AV Vertical 45.26 54.00 8.74 1.0 180 2476.00 AV Horizontal 83.95 94.00 10.05 1.0 100 4952.00 AV Horizontal 45.52 54.00 8.48 1.5 60 7428.00 AV Horizontal 47.11 54.00 6.89 1.5 120 9904.00 AV Horizontal 46.52 54.00 7.48 1.8 270 12380.00 AV Horizontal 46.35 54.00 7.65 1.2 180 14856.00 AV Horizontal 46.34 54.00 7.66 1.6 90 17353.00 AV Horizontal 47.25 54.00 5.75 1.8 120 19512.00 AV Horizontal 45.63 54.00 7.64 1.2 45 2476	17353.00	AV	Vertical	47.13	54.00	6.87	1.8	45
24760.00 AV Vertical 45.26 54.00 8.74 1.0 180 2476.00 AV Horizontal 83.95 94.00 10.05 1.0 100 4952.00 AV Horizontal 45.52 54.00 8.48 1.5 60 7428.00 AV Horizontal 47.11 54.00 6.89 1.5 120 9904.00 AV Horizontal 46.52 54.00 7.48 1.8 270 12380.00 AV Horizontal 46.35 54.00 7.65 1.2 180 14856.00 AV Horizontal 46.34 54.00 7.66 1.6 90 17353.00 AV Horizontal 47.25 54.00 5.75 1.8 120 19512.00 AV Horizontal 46.36 54.00 7.64 1.2 45 24760.00 AV Horizontal 45.63 54.00 7.64 1.2 10 49	19512.00	AV	Vertical	46.35	54.00	7.65	1.0	0
2476.00 AV Horizontal 83.95 94.00 10.05 1.0 100 4952.00 AV Horizontal 45.52 54.00 8.48 1.5 60 7428.00 AV Horizontal 47.11 54.00 6.89 1.5 120 9904.00 AV Horizontal 46.52 54.00 7.48 1.8 270 12380.00 AV Horizontal 46.35 54.00 7.65 1.2 180 14856.00 AV Horizontal 46.34 54.00 7.66 1.6 90 17353.00 AV Horizontal 48.25 54.00 5.75 1.8 120 19512.00 AV Horizontal 47.25 54.00 6.75 1.5 100 22284.00 AV Horizontal 45.63 54.00 7.64 1.2 45 24760.00 PK Vertical 97.25 114.00 16.75 1.2 10	22284.00	AV	Vertical	46.98	54.00	7.02	1.5	90
4952.00 AV Horizontal 45.52 54.00 8.48 1.5 60 7428.00 AV Horizontal 47.11 54.00 6.89 1.5 120 9904.00 AV Horizontal 46.52 54.00 7.48 1.8 270 12380.00 AV Horizontal 46.35 54.00 7.65 1.2 180 14856.00 AV Horizontal 46.34 54.00 7.66 1.6 90 17353.00 AV Horizontal 48.25 54.00 5.75 1.8 120 19512.00 AV Horizontal 47.25 54.00 5.75 1.8 120 19512.00 AV Horizontal 46.36 54.00 7.64 1.2 45 24760.00 AV Horizontal 45.63 54.00 8.37 1.6 90 2476.00 PK Vertical 50.51 74.00 23.49 1.5 220 74	24760.00	AV	Vertical	45.26	54.00	8.74	1.0	180
7428.00 AV Horizontal 47.11 54.00 6.89 1.5 120 9904.00 AV Horizontal 46.52 54.00 7.48 1.8 270 12380.00 AV Horizontal 46.35 54.00 7.65 1.2 180 14856.00 AV Horizontal 46.34 54.00 7.66 1.6 90 17353.00 AV Horizontal 48.25 54.00 5.75 1.8 120 19512.00 AV Horizontal 47.25 54.00 6.75 1.5 100 22284.00 AV Horizontal 45.63 54.00 7.64 1.2 45 2476.00 AV Horizontal 45.63 54.00 8.37 1.6 90 2476.00 PK Vertical 50.51 74.00 23.49 1.5 220 7428.00 PK Vertical 51.22 74.00 22.78 1.5 45 9904	2476.00	AV	Horizontal	83.95	94.00	10.05	1.0	100
9904.00 AV Horizontal 46.52 54.00 7.48 1.8 270 12380.00 AV Horizontal 46.35 54.00 7.65 1.2 180 14856.00 AV Horizontal 46.34 54.00 7.66 1.6 90 17353.00 AV Horizontal 48.25 54.00 5.75 1.8 120 19512.00 AV Horizontal 47.25 54.00 6.75 1.5 100 22284.00 AV Horizontal 46.36 54.00 7.64 1.2 45 2476.00 AV Horizontal 45.63 54.00 8.37 1.6 90 2476.00 PK Vertical 97.25 114.00 16.75 1.2 10 4952.00 PK Vertical 50.51 74.00 23.49 1.5 220 7428.00 PK Vertical 53.36 74.00 22.78 1.5 45 9904.	4952.00	AV	Horizontal	45.52	54.00	8.48	1.5	60
12380.00 AV Horizontal 46.35 54.00 7.65 1.2 180 14856.00 AV Horizontal 46.34 54.00 7.66 1.6 90 17353.00 AV Horizontal 48.25 54.00 5.75 1.8 120 19512.00 AV Horizontal 47.25 54.00 6.75 1.5 100 22284.00 AV Horizontal 46.36 54.00 7.64 1.2 45 24760.00 AV Horizontal 45.63 54.00 8.37 1.6 90 2476.00 PK Vertical 97.25 114.00 16.75 1.2 10 4952.00 PK Vertical 50.51 74.00 23.49 1.5 220 7428.00 PK Vertical 51.22 74.00 22.78 1.5 45 9904.00 PK Vertical 53.36 74.00 20.64 1.2 90 12380.	7428.00	AV	Horizontal	47.11	54.00	6.89	1.5	120
14856.00 AV Horizontal 46.34 54.00 7.66 1.6 90 17353.00 AV Horizontal 48.25 54.00 5.75 1.8 120 19512.00 AV Horizontal 47.25 54.00 6.75 1.5 100 22284.00 AV Horizontal 46.36 54.00 7.64 1.2 45 2476.00 AV Horizontal 45.63 54.00 8.37 1.6 90 2476.00 PK Vertical 97.25 114.00 16.75 1.2 10 4952.00 PK Vertical 50.51 74.00 23.49 1.5 220 7428.00 PK Vertical 51.22 74.00 22.78 1.5 45 9904.00 PK Vertical 53.36 74.00 20.64 1.2 90 12380.00 PK Vertical 54.26 74.00 19.74 1.8 60 17353.00<	9904.00	AV	Horizontal	46.52	54.00	7.48	1.8	270
17353.00 AV Horizontal 48.25 54.00 5.75 1.8 120 19512.00 AV Horizontal 47.25 54.00 6.75 1.5 100 22284.00 AV Horizontal 46.36 54.00 7.64 1.2 45 24760.00 AV Horizontal 45.63 54.00 8.37 1.6 90 2476.00 PK Vertical 97.25 114.00 16.75 1.2 10 4952.00 PK Vertical 50.51 74.00 23.49 1.5 220 7428.00 PK Vertical 51.22 74.00 22.78 1.5 45 9904.00 PK Vertical 53.36 74.00 20.64 1.2 90 12380.00 PK Vertical 53.48 74.00 20.52 1.6 180 14856.00 PK Vertical 54.26 74.00 19.74 1.8 60 17353.00	12380.00	AV	Horizontal	46.35	54.00	7.65	1.2	180
19512.00 AV Horizontal 47.25 54.00 6.75 1.5 100 22284.00 AV Horizontal 46.36 54.00 7.64 1.2 45 24760.00 AV Horizontal 45.63 54.00 8.37 1.6 90 2476.00 PK Vertical 97.25 114.00 16.75 1.2 10 4952.00 PK Vertical 50.51 74.00 23.49 1.5 220 7428.00 PK Vertical 51.22 74.00 22.78 1.5 45 9904.00 PK Vertical 53.36 74.00 20.64 1.2 90 12380.00 PK Vertical 53.48 74.00 20.52 1.6 180 14856.00 PK Vertical 54.26 74.00 19.74 1.8 60 17353.00 PK Vertical 54.77 74.00 19.23 1.2 180 22284.00<	14856.00	AV	Horizontal	46.34	54.00	7.66	1.6	90
22284.00 AV Horizontal 46.36 54.00 7.64 1.2 45 24760.00 AV Horizontal 45.63 54.00 8.37 1.6 90 2476.00 PK Vertical 97.25 114.00 16.75 1.2 10 4952.00 PK Vertical 50.51 74.00 23.49 1.5 220 7428.00 PK Vertical 51.22 74.00 22.78 1.5 45 9904.00 PK Vertical 53.36 74.00 20.64 1.2 90 12380.00 PK Vertical 53.48 74.00 20.52 1.6 180 14856.00 PK Vertical 54.26 74.00 19.74 1.8 60 17353.00 PK Vertical 54.77 74.00 19.23 1.2 180 22284.00 PK Vertical 55.51 74.00 18.49 1.0 270 2476.00 <td>17353.00</td> <td>AV</td> <td>Horizontal</td> <td>48.25</td> <td>54.00</td> <td>5.75</td> <td>1.8</td> <td>120</td>	17353.00	AV	Horizontal	48.25	54.00	5.75	1.8	120
24760.00 AV Horizontal 45.63 54.00 8.37 1.6 90 2476.00 PK Vertical 97.25 114.00 16.75 1.2 10 4952.00 PK Vertical 50.51 74.00 23.49 1.5 220 7428.00 PK Vertical 51.22 74.00 22.78 1.5 45 9904.00 PK Vertical 53.36 74.00 20.64 1.2 90 12380.00 PK Vertical 53.48 74.00 20.52 1.6 180 14856.00 PK Vertical 54.26 74.00 19.74 1.8 60 17353.00 PK Vertical 54.46 74.00 19.54 1.5 90 19512.00 PK Vertical 55.51 74.00 19.23 1.2 180 22284.00 PK Vertical 55.51 74.00 18.49 1.0 270 2476.00 <td>19512.00</td> <td>AV</td> <td>Horizontal</td> <td>47.25</td> <td>54.00</td> <td>6.75</td> <td>1.5</td> <td>100</td>	19512.00	AV	Horizontal	47.25	54.00	6.75	1.5	100
2476.00 PK Vertical 97.25 114.00 16.75 1.2 10 4952.00 PK Vertical 50.51 74.00 23.49 1.5 220 7428.00 PK Vertical 51.22 74.00 22.78 1.5 45 9904.00 PK Vertical 53.36 74.00 20.64 1.2 90 12380.00 PK Vertical 53.48 74.00 20.52 1.6 180 14856.00 PK Vertical 54.26 74.00 19.74 1.8 60 17353.00 PK Vertical 54.46 74.00 19.54 1.5 90 19512.00 PK Vertical 55.51 74.00 19.23 1.2 180 22284.00 PK Vertical 55.51 74.00 18.49 1.0 270 2476.00 PK Horizontal 94.25 114.00 19.75 1.0 0 4952.00 <td>22284.00</td> <td>AV</td> <td>Horizontal</td> <td>46.36</td> <td>54.00</td> <td>7.64</td> <td>1.2</td> <td>45</td>	22284.00	AV	Horizontal	46.36	54.00	7.64	1.2	45
4952.00 PK Vertical 50.51 74.00 23.49 1.5 220 7428.00 PK Vertical 51.22 74.00 22.78 1.5 45 9904.00 PK Vertical 53.36 74.00 20.64 1.2 90 12380.00 PK Vertical 53.48 74.00 20.52 1.6 180 14856.00 PK Vertical 54.26 74.00 19.74 1.8 60 17353.00 PK Vertical 54.46 74.00 19.54 1.5 90 19512.00 PK Vertical 54.77 74.00 19.23 1.2 180 22284.00 PK Vertical 55.51 74.00 18.49 1.0 270 24760.00 PK Horizontal 94.25 114.00 19.75 1.0 0 4952.00 PK Horizontal 50.42 74.00 23.58 1.5 120 7428.00<	24760.00	AV	Horizontal	45.63	54.00	8.37	1.6	90
7428.00 PK Vertical 51.22 74.00 22.78 1.5 45 9904.00 PK Vertical 53.36 74.00 20.64 1.2 90 12380.00 PK Vertical 53.48 74.00 20.52 1.6 180 14856.00 PK Vertical 54.26 74.00 19.74 1.8 60 17353.00 PK Vertical 54.46 74.00 19.54 1.5 90 19512.00 PK Vertical 54.77 74.00 19.23 1.2 180 22284.00 PK Vertical 55.51 74.00 18.49 1.0 270 24760.00 PK Vertical 55.89 74.00 18.11 1.2 90 2476.00 PK Horizontal 94.25 114.00 19.75 1.0 0 4952.00 PK Horizontal 50.42 74.00 23.58 1.5 120 7428.00 </td <td>2476.00</td> <td>PK</td> <td>Vertical</td> <td>97.25</td> <td>114.00</td> <td>16.75</td> <td>1.2</td> <td>10</td>	2476.00	PK	Vertical	97.25	114.00	16.75	1.2	10
9904.00 PK Vertical 53.36 74.00 20.64 1.2 90 12380.00 PK Vertical 53.48 74.00 20.52 1.6 180 14856.00 PK Vertical 54.26 74.00 19.74 1.8 60 17353.00 PK Vertical 54.46 74.00 19.54 1.5 90 19512.00 PK Vertical 54.77 74.00 19.23 1.2 180 22284.00 PK Vertical 55.51 74.00 18.49 1.0 270 24760.00 PK Vertical 55.89 74.00 18.11 1.2 90 2476.00 PK Horizontal 94.25 114.00 19.75 1.0 0 4952.00 PK Horizontal 50.42 74.00 23.58 1.5 120 7428.00 PK Horizontal 51.11 74.00 22.89 1.5 180	4952.00	PK	Vertical	50.51	74.00	23.49	1.5	220
12380.00 PK Vertical 53.48 74.00 20.52 1.6 180 14856.00 PK Vertical 54.26 74.00 19.74 1.8 60 17353.00 PK Vertical 54.46 74.00 19.54 1.5 90 19512.00 PK Vertical 54.77 74.00 19.23 1.2 180 22284.00 PK Vertical 55.51 74.00 18.49 1.0 270 24760.00 PK Vertical 55.89 74.00 18.11 1.2 90 2476.00 PK Horizontal 94.25 114.00 19.75 1.0 0 4952.00 PK Horizontal 50.42 74.00 23.58 1.5 120 7428.00 PK Horizontal 51.11 74.00 22.89 1.5 180	7428.00	PK	Vertical	51.22	74.00	22.78	1.5	45
14856.00 PK Vertical 54.26 74.00 19.74 1.8 60 17353.00 PK Vertical 54.46 74.00 19.54 1.5 90 19512.00 PK Vertical 54.77 74.00 19.23 1.2 180 22284.00 PK Vertical 55.51 74.00 18.49 1.0 270 24760.00 PK Vertical 55.89 74.00 18.11 1.2 90 2476.00 PK Horizontal 94.25 114.00 19.75 1.0 0 4952.00 PK Horizontal 50.42 74.00 23.58 1.5 120 7428.00 PK Horizontal 51.11 74.00 22.89 1.5 180	9904.00	PK	Vertical	53.36	74.00	20.64	1.2	90
17353.00 PK Vertical 54.46 74.00 19.54 1.5 90 19512.00 PK Vertical 54.77 74.00 19.23 1.2 180 22284.00 PK Vertical 55.51 74.00 18.49 1.0 270 24760.00 PK Vertical 55.89 74.00 18.11 1.2 90 2476.00 PK Horizontal 94.25 114.00 19.75 1.0 0 4952.00 PK Horizontal 50.42 74.00 23.58 1.5 120 7428.00 PK Horizontal 51.11 74.00 22.89 1.5 180	12380.00	PK	Vertical	53.48	74.00	20.52	1.6	180
19512.00 PK Vertical 54.77 74.00 19.23 1.2 180 22284.00 PK Vertical 55.51 74.00 18.49 1.0 270 24760.00 PK Vertical 55.89 74.00 18.11 1.2 90 2476.00 PK Horizontal 94.25 114.00 19.75 1.0 0 4952.00 PK Horizontal 50.42 74.00 23.58 1.5 120 7428.00 PK Horizontal 51.11 74.00 22.89 1.5 180	14856.00	PK	Vertical	54.26	74.00	19.74	1.8	60
22284.00 PK Vertical 55.51 74.00 18.49 1.0 270 24760.00 PK Vertical 55.89 74.00 18.11 1.2 90 2476.00 PK Horizontal 94.25 114.00 19.75 1.0 0 4952.00 PK Horizontal 50.42 74.00 23.58 1.5 120 7428.00 PK Horizontal 51.11 74.00 22.89 1.5 180	17353.00	PK	Vertical	54.46	74.00	19.54	1.5	90
24760.00 PK Vertical 55.89 74.00 18.11 1.2 90 2476.00 PK Horizontal 94.25 114.00 19.75 1.0 0 4952.00 PK Horizontal 50.42 74.00 23.58 1.5 120 7428.00 PK Horizontal 51.11 74.00 22.89 1.5 180	19512.00	PK	Vertical	54.77	74.00	19.23	1.2	180
2476.00 PK Horizontal 94.25 114.00 19.75 1.0 0 4952.00 PK Horizontal 50.42 74.00 23.58 1.5 120 7428.00 PK Horizontal 51.11 74.00 22.89 1.5 180	22284.00	PK	Vertical	55.51	74.00	18.49	1.0	270
4952.00 PK Horizontal 50.42 74.00 23.58 1.5 120 7428.00 PK Horizontal 51.11 74.00 22.89 1.5 180	24760.00	PK	Vertical	55.89	74.00	18.11	1.2	90
7428.00 PK Horizontal 51.11 74.00 22.89 1.5 180	2476.00	PK	Horizontal	94.25	114.00	19.75	1.0	0
	4952.00	PK	Horizontal	50.42	74.00	23.58	1.5	120
0004 00 DV Horizontol 52 25 74 00 21 75 1 2 00	7428.00	PK	Horizontal	51.11	74.00	22.89	1.5	180
9904.00 FK Horizontal 32.23 74.00 21.73 1.2 90	9904.00	PK	Horizontal	52.25	74.00	21.75	1.2	90

12380.00	PK	Horizontal	53.16	74.00	20.84	1.0	270
14856.00	PK	Horizontal	54.22	74.00	19.78	1.2	120
17353.00	PK	Horizontal	54.38	74.00	19.62	1.5	90
19512.00	PK	Horizontal	54.55	74.00	19.45	1.8	60
22284.00	PK	Horizontal	54.42	74.00	19.58	1.3	180
24760.00	PK	Horizontal	50.32	74.00	23.68	1.2	200

Note: Above 1GHz,do a Peak and average measurements for all emissions,Limit for peak is 74dBuV/m,According to Part15.35(b) and average is 54BuV/m.

8 20-dB Bandwidth

Test Requirement: FCC Part15 C

Test Method: Based on FCC Part15 Paragraph 15.249

Test Date: Dec.11, 2008

Test mode: The EUT work in test mode(Tx) and test it

Test Procedure

1. The transmitter output (antenna port) was connected to the spectrum analyzer. and antenna output port as show in the block diagram below:



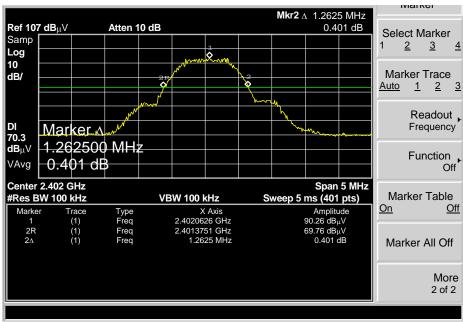
FCC ID: VU5N5CO-001T

2. The bandwidth of the fundamental frequency was measure by spectrum analyser with 100KHz RBW and 100KHz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power 20dB.

Test Result

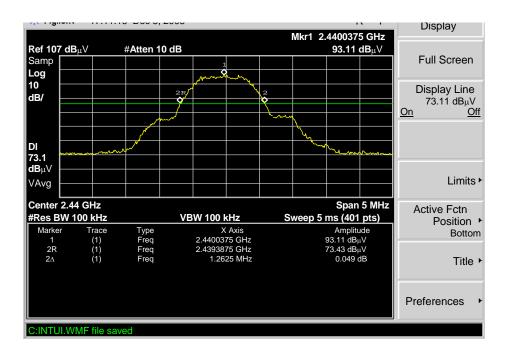
Please refer the graph as below:

Lower Channel 2402MHz

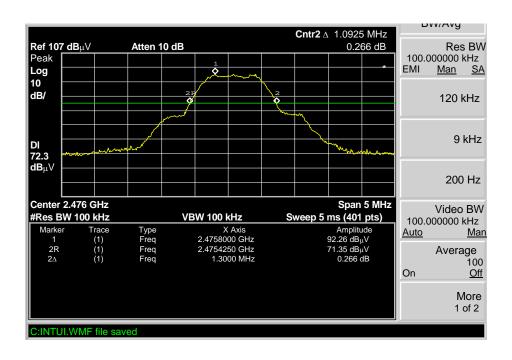


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Mid Channel 2439MHz



Upper Channel 2476MHz



9 Radiated spurious emissions into adjacent restricted band

FCC ID: VU5N5CO-001T

Test Requirement: FCC Part15 Paragraph 15.205

Test Method: Based on FCC Part 15 Paragraph 15.249

Test Date: Dec.11, 2008

Requirements: The EUT work in test mode(Tx) and test it

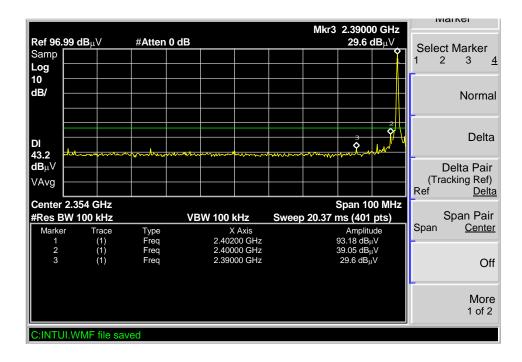
Requirements:

Emissions that fall in the restricted bands(15.205). Above 1000MHz, compliance with the emissions limits in section 15.209 shall be demonstrated based on the average value of the measured emissions, The provisions in section 15.35 apply to these measurements.

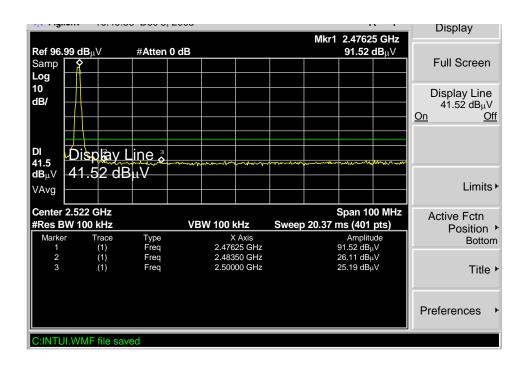
Test procedure:

An in band field strength measurement of the fundamental emission using the RBW and detector function required by C63.4-2003 and FCC Rules. The procedure was repeated with an average detector and a plot made. The calculated field strength in the adjacent restricted band is presented below. Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation. For more details, please refer to the following:

Lower band-edge/ restricted band (peak value)

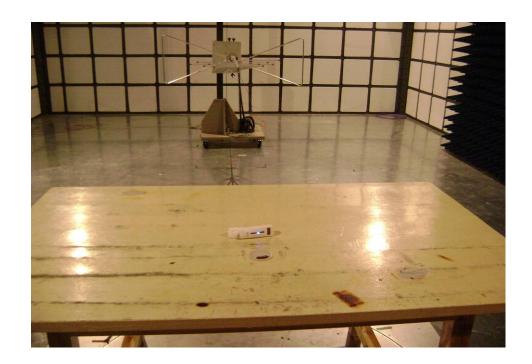


Upper band-edge/ restricted band (peak value)

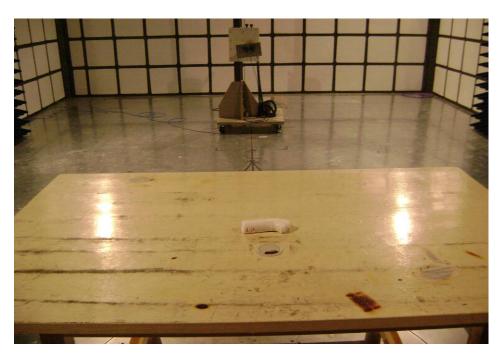


10 Photographs of Testing

10.1 Radiation Emission Test View For 30MHz-1000MHz



10.2 Radiation Emission Test View For 1GHz-25GHz



11 Photographs - Constructional Details

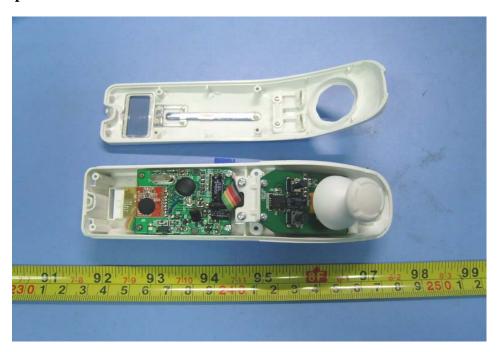
11.1 EUT-Front View



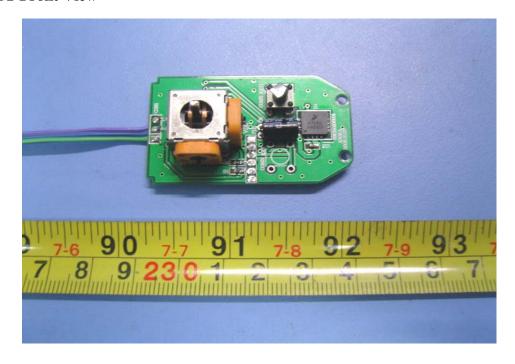
11.2 EUT-Back View



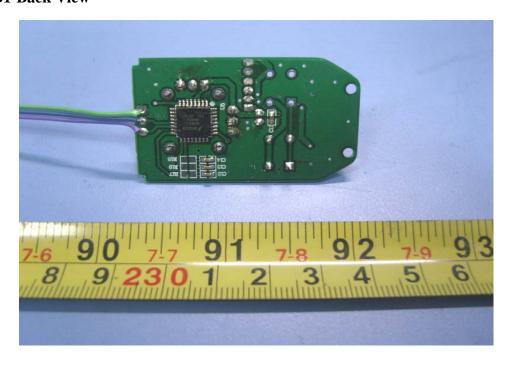
11.3 EUT-Open View



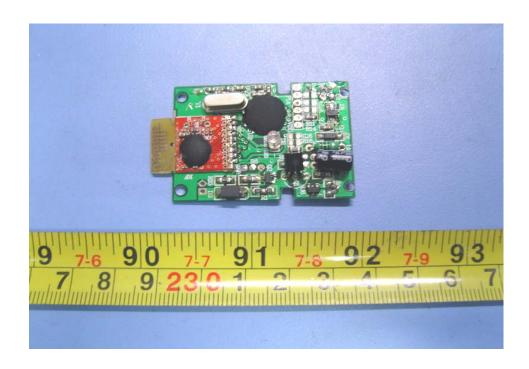
11.4 PCB1-Front View



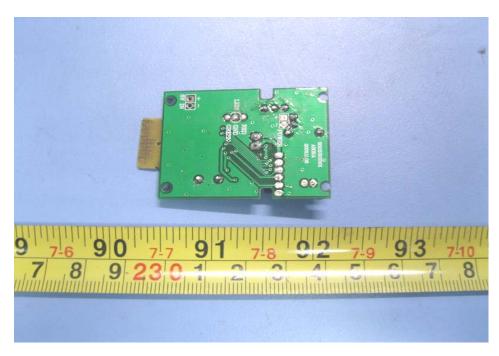
11.5 PCB1-Back View



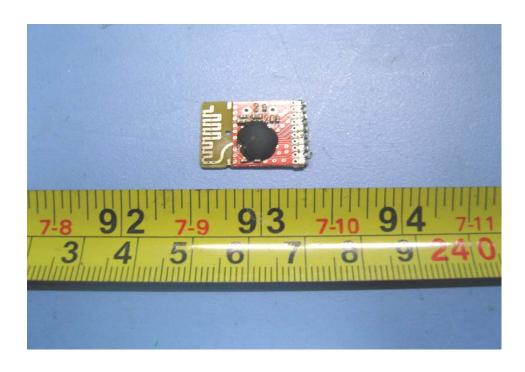
11.6 PCB2-Front View



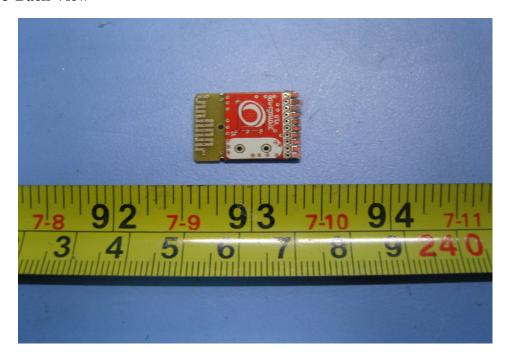
11.7 PCB2-Back View



11.8 PCB3-Front View



11.9 PCB3-Back View



12 FCC ID Label

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:(1)this device may not cause harmful interference,and (2) this device must accept any interference received, including interference that may cause undesired operation.

The Label must not be a stick-on paper. The Label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Proposed Label Location on EUT
EUT Bottom View/proposed FCC Mark Location

