

APPLICATION CERTIFICATION FCC Part 15B
On Behalf of
Fitwave International Technologies, LLC

900MHz Wireless Receiver
Model No.: FW900WC

FCC ID: Z5S-FW900WC

Prepared for : Fitwave International Technologies, LLC
Address : 5020 Clark Road, #411, Sarasota, FL 34233, USA

Prepared by : ACCURATE TECHNOLOGY CO. LTD
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Report Number : ATE20112124
Date of Test : Oct. 10-18, 2011
Date of Report : Oct. 18, 2011

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Test Report Certification

Applicant : Fitwave International Technologies, LLC
Manufacturer : Mangrove Technology Co., Ltd.
EUT Description : 900MHz Wireless Receiver
(A) MODEL NO.: FW900WC
(B) SERIAL NO.: N/A
(C) POWER SUPPLY: 9V DC (Adapter input)

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart B
ANSI C63.4: 2003

The device described above is tested by ACCURATE TECHNOLOGY CO. LTD to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B limits. The measurement results are contained in this test report and ACCURATE TECHNOLOGY CO. LTD is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of ACCURATE TECHNOLOGY CO. LTD.

Date of Test : Oct. 10-18, 2011

Prepared by :



(Apple Lv, Engineer)

Approved & Authorized Signer :



(Sean Liu, Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT	:	900MHz Wireless Receiver
Model Number	:	FW900WC
Power Supply	:	9V DC (Adapter input)
Adapter	:	Model number: SWPP-09000300-US Input: AC 100-240V; 50/60Hz 1.8A Output: DC 9V; 300mA Output line: Non-shielded, Non-detachable, 1.4m
Receiver Frequency	:	905.0050-926.6050MHz
Applicant	:	Fitwave International Technologies, LLC
Address	:	5020 Clark Road, #411, Sarasota, FL 34233, USA
Manufacturer	:	Mangrove Technology Co., Ltd.
Address	:	Room 510, Block 3, Nan Fung Industrial City, 18 Tin Hau Road, Tuen Mun, N.T., Hong Kong
Date of sample received	:	Oct. 10, 2011
Date of Test	:	Oct. 10-18, 2011

1.2. Accessory and Auxiliary Equipment

Headphone

Model Number	:	----
Serial Number	:	----
Manufacturer	:	----
Signal Cable	:	6m

1.3. Description of Test Facility

EMC Lab	:	Accredited by TUV Rheinland Shenzhen
		Listed by FCC
		The Registration Number is 752051
		Listed by Industry Canada
		The Registration Number is 5077A-2
		Accredited by China National Accreditation Committee for Laboratories
		The Certificate Registration Number is L3193
Name of Firm	:	ACCURATE TECHNOLOGY CO. LTD
Site Location	:	F1, Bldg. A, Changyuan New Material Port, Keyuan Rd. Science & Industry Park, Nanshan, Shenzhen, Guangdong P.R. China

1.4. Measurement Uncertainty

Conducted Emission Expanded Uncertainty	=	2.23dB, k=2
Radiated emission expanded uncertainty (9kHz-30MHz)	=	3.08dB, k=2
Radiated emission expanded uncertainty (30MHz-1000MHz)	=	4.42dB, k=2
Radiated emission expanded uncertainty (Above 1GHz)	=	4.06dB, k=2

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 15, 2012
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 15, 2012
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 15, 2012
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 15, 2012
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 15, 2012
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 15, 2012
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 15, 2012
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 15, 2012
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 15, 2012
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 15, 2012

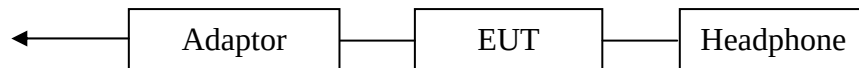
3. OPERATION OF EUT DURING TESTING

3.1.Operating Mode

The modes are used: Rx

3.2.Configuration and peripherals

AC 120V/60Hz



(EUT: 900MHz Wireless Receiver)

4. TEST PROCEDURES AND RESULTS

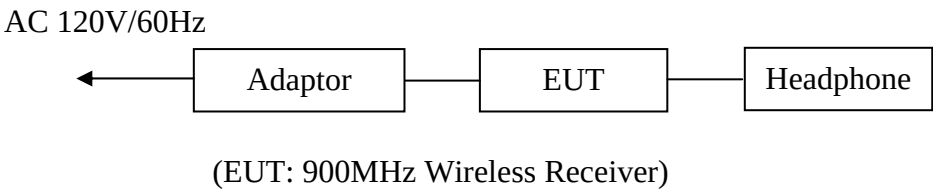
FCC Rules	Description of Test	Result
Section 15.107	Conducted Emission Test	Compliant
Section 15.109	Radiated Emission Test	Compliant

5. CONDUCTED EMISSION FOR FCC PART 15 SECTION

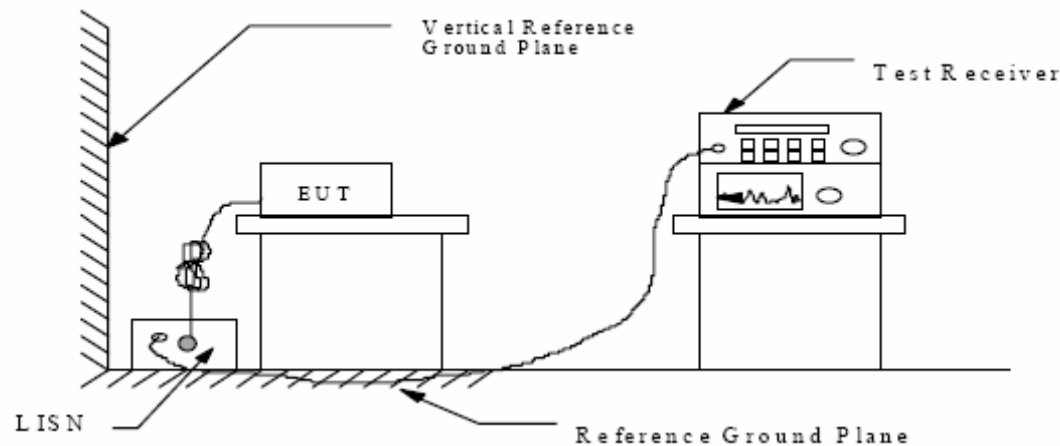
15.107(A)

5.1. Block Diagram of Test Setup

5.1.1. Block diagram of connection between the EUT and simulators



5.1.2. Shielding Room Test Setup Diagram



(EUT: 900MHz Wireless Receiver)

5.2. The Emission Limit

5.2.1. Conducted Emission Measurement Limits According to Section 15.107(a)

Frequency (MHz)	Limit dB(μV)	
	Quasi-peak Level	Average Level
0.15 - 0.50	66.0 – 56.0 *	56.0 – 46.0 *
0.50 - 5.00	56.0	46.0
5.00 - 30.00	60.0	50.0

* Decreases with the logarithm of the frequency.

5.3.Configuration of EUT on Measurement

The following equipment are installed on the Conducted Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

5.3.1.900MHz Wireless Receiver (EUT)

Model Number	:	FW900WC
Serial Number	:	N/A
Manufacturer	:	Mangrove Technology Co., Ltd.

5.4.Operating Condition of EUT

5.4.1.Setup the EUT and simulator as shown as Section 5.1.

5.4.2.Turn on the power of all equipment.

5.4.3.Let the EUT work in modes (Rx) and measure it.

5.5.Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2003 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

5.6. Power Line Conducted Emission Measurement Results

PASS.

The frequency range from 150kHz to 30MHz is checked.

Date of Test:	October 17, 2011	Temperature:	25°C
	900MHz Wireless		
EUT:	Receiver	Humidity:	50%
Model No.:	FW900WC	Power Supply:	AC 120V/60Hz
Test Mode:	Rx	Test Engineer:	PEI

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	56.60	11.0	66	9.4	QP	L1	GND
0.476287	37.10	12.0	56	19.3	QP	L1	GND
0.908179	34.70	11.9	56	21.3	QP	L1	GND
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.177322	41.30	11.1	55	13.3	AV	L1	GND
0.227007	36.00	11.3	53	16.6	AV	L1	GND
0.595338	22.80	12.0	46	23.2	AV	L1	GND
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	55.40	11.0	66	10.6	QP	N	GND
0.472507	35.10	12.0	57	21.4	QP	N	GND
0.900971	34.70	11.9	56	21.3	QP	N	GND
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.175915	39.10	11.1	55	15.6	AV	N	GND
0.225205	31.20	11.3	53	21.4	AV	N	GND
0.600100	21.80	12.0	46	24.2	AV	N	GND

Emissions attenuated more than 20 dB below the permissible value are not reported.
The spectral diagrams are attached as below.

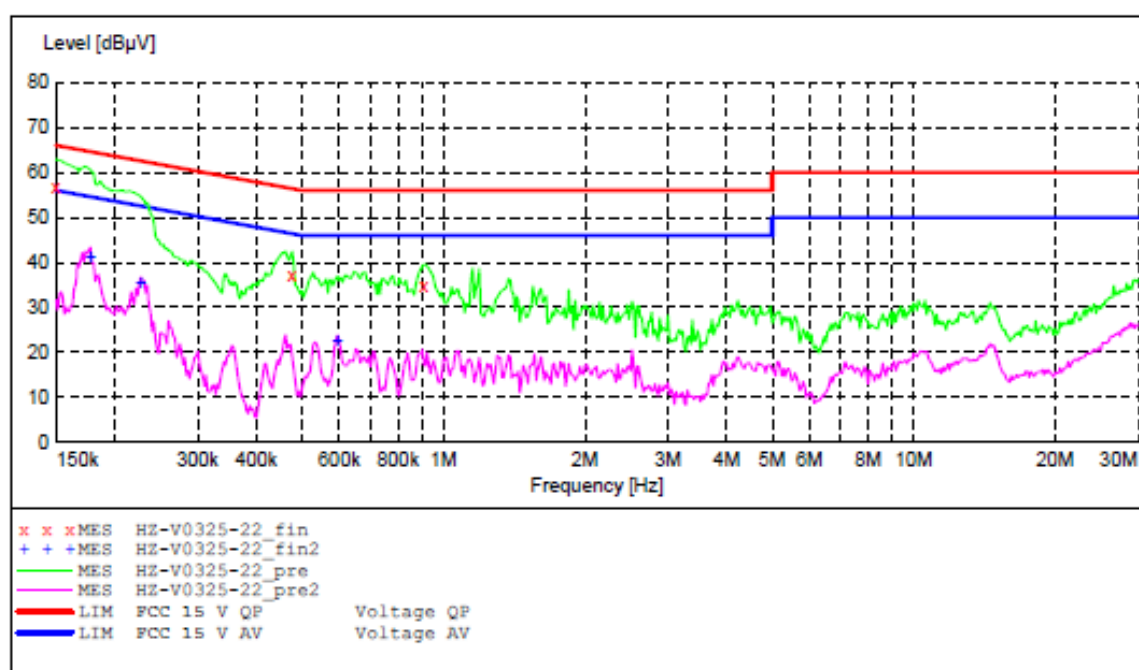
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: 900MHz wireless receive M/N:FW900wc
 Manufacturer: Mangrove
 Operating Condition: RX
 Test Site: 1#Shielding Room
 Operator: Kai
 Test Specification: L 120V/60Hz
 Comment: Mains port
 Start of Test: Report No.:ATE20112124

SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB_STD_VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 0.8 % QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average



MEASUREMENT RESULT: "HZ-V0325-22_fin"

10/17/2011 2:39PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.150000	56.60	11.0	66	9.4	QP	L1	GND
0.476287	37.10	12.0	56	19.3	QP	L1	GND
0.908179	34.70	11.9	56	21.3	QP	L1	GND

MEASUREMENT RESULT: "HZ-V0325-22_fin2"

10/17/2011 2:39PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.177322	41.30	11.1	55	13.3	AV	L1	GND
0.227007	36.00	11.3	53	16.6	AV	L1	GND
0.595338	22.80	12.0	46	23.2	AV	L1	GND

ACCURATE TECHNOLOGY CO., LTD

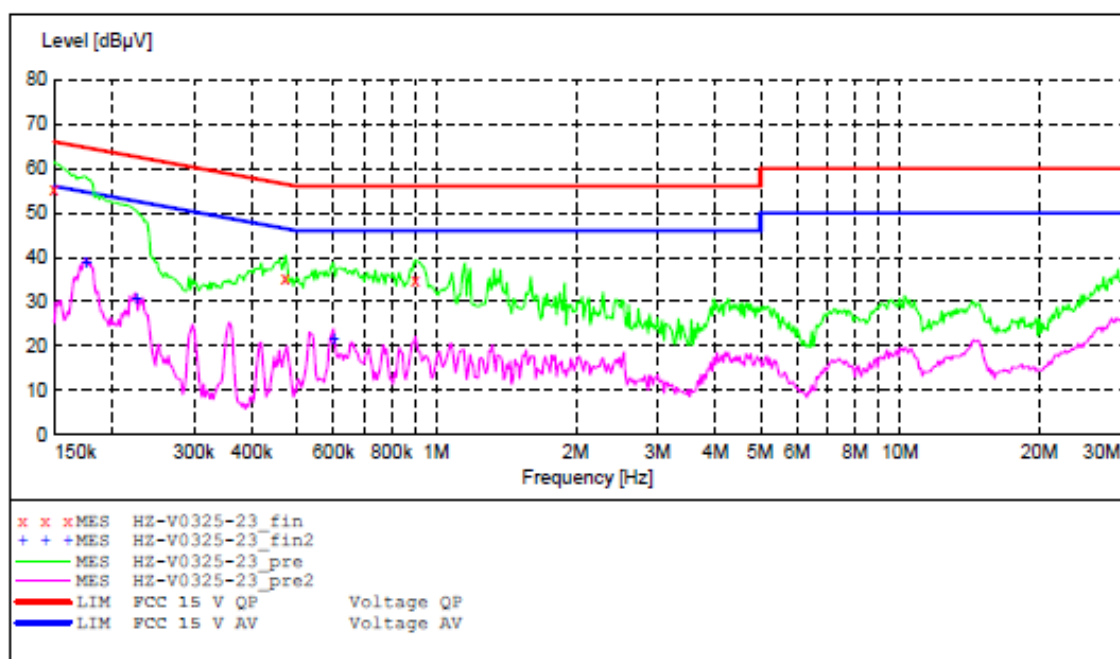
CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: 900MHz wireless receive M/N:FW900WC
 Manufacturer: Mangrove
 Operating Condition: RX
 Test Site: 1#Shielding Room
 Operator: KaiI
 Test Specification: N 120V/60Hz
 Comment: Mains port
 Start of Test: Report No.:ATE20112124

SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB_STD_VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
150.0 kHz	30.0 MHz	0.8 %	QuasiPeak	1.0 s	9 kHz	NSLK9126 2008
Average						



MEASUREMENT RESULT: "HZ-V0325-23_fin"

10/17/2011 2:42PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.150000	55.40	11.0	66	10.6	QP	N	GND
0.472507	35.10	12.0	57	21.4	QP	N	GND
0.900971	34.70	11.9	56	21.3	QP	N	GND

MEASUREMENT RESULT: "HZ-V0325-23_fin2"

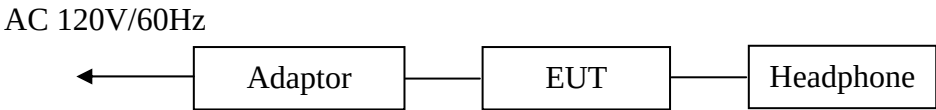
10/17/2010 2:42PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.175915	39.10	11.1	55	15.6	AV	N	GND
0.225205	31.20	11.3	53	21.4	AV	N	GND
0.600100	21.80	12.0	46	24.2	AV	N	GND

6. RADIATED EMISSION FOR FCC PART 15 SECTION 15.109(A)

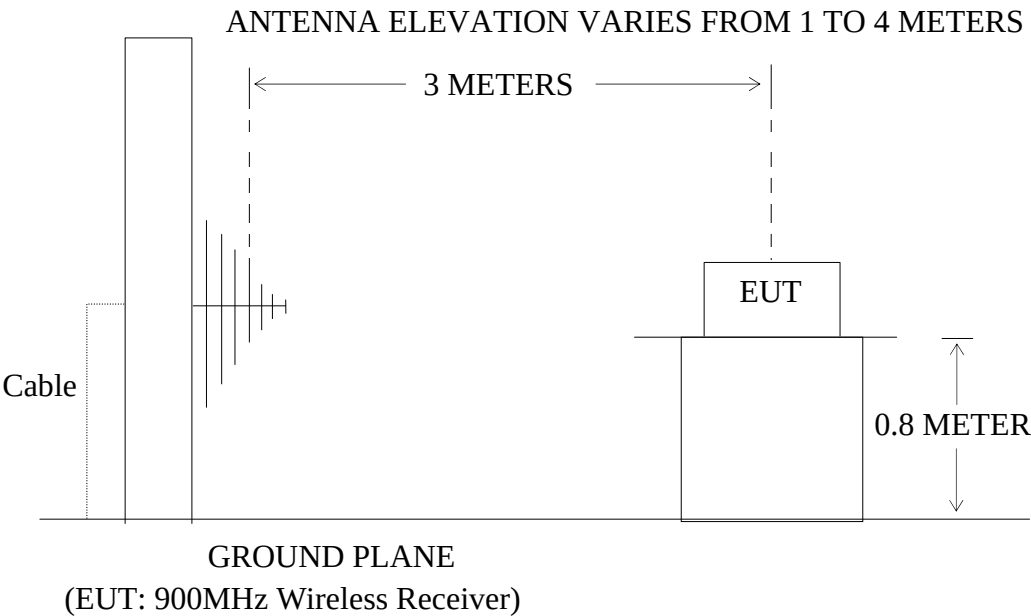
6.1. Block Diagram of Test Setup

6.1.1. Block diagram of connection between the EUT and simulators



(EUT: 900MHz Wireless Receiver)

6.1.2. Semi-Anechoic Chamber Test Setup Diagram



6.2.The Emission Limit For Section 15.109 (a)

6.2.1.Radiation Emission Measurement Limits According to Section 15.109 (a).

Frequency (MHz)	Limit	
	Field Strength of Quasi-peak Value (microvolts/m)	Field Strength of Quasi-peak Value (dBμV/m)
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

6.3.EUT Configuration on Measurement

The following equipment are installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

6.3.1.900MHz Wireless Receiver (EUT)

Model Number : FW900WC
 Serial Number : N/A
 Manufacturer : Mangrove Technology Co., Ltd.

6.4.Operating Condition of EUT

6.4.1.Setup the EUT and simulator as shown as Section 6.1.

6.4.2.Turn on the power of all equipment.

6.4.3. Let the EUT work in RX mode measure it. The receive frequency are 905.0050-926.6050MHz. We are select 905.0050MHz, 914.6050MHz, 926.6050MHz RX frequency to receive.

6.5. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4: 2003 on radiated emission measurement.

The bandwidth of test receiver is set at 120kHz in 30-1000MHz and 1MHz in above 1000MHz.

The frequency range from 30MHz to 5000MHz is checked.

6.6.The Emission Measurement Result

PASS.

Date of Test:	October 15, 2011	Temperature:	25°C
	900MHz Wireless		
EUT:	Receiver	Humidity:	50%
Model No.:	FW900WC	Power Supply:	PC power: AC 120V/60Hz
Test Mode:	Rx 905.0050MHz	Test Engineer:	PEI

Frequency: 30-1000MHz								
Polarization								
Horizontal	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	36.5138	16.91	15.35	32.26	40.00	-7.74	QP
	2	55.4254	18.75	12.99	31.74	40.00	-8.26	QP
	3	987.4428	19.97	29.84	49.81	54.00	-4.19	QP
Vertical	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	32.3234	16.01	15.96	31.97	40.00	-8.03	QP
	2	54.0450	18.04	13.15	31.19	40.00	-8.81	QP
	3	997.7979	20.70	29.90	50.60	54.00	-3.40	QP
Frequency: 1000-5000MHz								
Polarization								
Horizontal	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	1976.399	59.87	-9.15	50.72	74.00	-23.28	peak
	2	1976.400	56.69	-9.15	47.54	54.00	-6.46	AVG
	3	2955.596	55.62	-5.50	50.12	74.00	-23.88	peak
	4	2955.596	53.43	-5.50	47.93	54.00	-6.07	AVG
	5	3940.511	49.63	-1.90	47.73	74.00	-26.27	peak
	6	3940.511	46.27	-1.90	44.37	54.00	-9.63	AVG
	7	4952.666	49.13	0.48	49.61	74.00	-24.39	peak
	8	4952.666	46.79	0.48	47.27	54.00	-6.73	AVG
Vertical	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	1976.399	59.21	-9.15	50.06	74.00	-23.94	peak
	2	1976.400	56.57	-9.15	47.42	54.00	-6.58	AVG
	3	2955.596	54.11	-5.50	48.61	74.00	-25.39	peak
	4	2955.596	52.09	-5.50	46.59	54.00	-7.41	AVG
	5	3940.511	49.95	-1.90	48.05	74.00	-25.95	peak
	6	3940.511	46.71	-1.90	44.81	54.00	-9.19	AVG
	7	4952.666	47.77	0.48	48.25	74.00	-25.75	peak
	8	4952.666	44.86	0.48	45.34	54.00	-8.66	AVG

Date of Test:	<u>October 15, 2011</u>	Temperature:	<u>25°C</u>
	<u>900MHz Wireless</u>		
EUT:	<u>Receiver</u>	Humidity:	<u>50%</u>
Model No.:	<u>FW900WC</u>	Power Supply:	<u>PC power: AC 120V/60Hz</u>
Test Mode:	<u>Rx 914.6050MHz</u>	Test Engineer:	<u>PEI</u>

Frequency: 30-1000MHz								
Polarization								
Horizontal	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	35.8625	16.71	15.50	32.21	40.00	-7.79	QP
	2	55.5349	18.56	12.97	31.53	40.00	-8.47	QP
	3	992.4420	20.92	29.86	50.78	54.00	-3.22	QP
Vertical	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	36.0112	19.00	16.62	35.62	40.00	-4.38	QP
	2	51.0843	18.78	14.16	32.94	40.00	-7.06	QP
	3	992.4420	17.21	29.86	47.07	54.00	-6.93	QP
Frequency: 1000-5000MHz								
Polarization								
Horizontal	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	1007.980	61.12	-12.44	48.68	74.00	-25.32	peak
	2	1007.980	58.75	-12.44	46.31	54.00	-7.69	AVG
	3	1994.791	59.06	-9.03	50.03	74.00	-23.97	peak
	4	1994.791	56.14	-9.03	47.11	54.00	-6.89	AVG
	5	2972.944	55.94	-5.39	50.55	74.00	-23.45	peak
	6	2972.944	52.19	-5.39	46.80	54.00	-7.20	AVG
	7	3976.735	50.43	-1.72	48.71	74.00	-25.29	peak
	8	3976.735	47.54	-1.72	45.82	54.00	-8.18	AVG
	9	5000.000	48.68	0.70	49.38	74.00	-24.62	peak
	10	5000.000	45.16	0.70	45.86	54.00	-8.14	AVG
Vertical	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	1008.371	59.42	-12.45	46.97	74.00	-27.03	peak
	2	1008.371	56.70	-12.45	44.25	54.00	-9.75	AVG
	3	1994.791	59.16	-9.03	50.13	74.00	-23.87	peak
	4	1994.791	56.53	-9.03	47.50	54.00	-6.50	AVG
	5	2972.944	55.04	-5.39	49.65	74.00	-24.35	peak
	6	2972.944	52.74	-5.39	47.35	54.00	-6.65	AVG
	7	3976.735	51.61	-1.72	49.89	74.00	-24.11	peak
	8	3976.735	48.97	-1.72	47.25	54.00	-6.75	AVG
	9	5000.000	49.03	0.70	49.73	74.00	-24.27	peak
	10	5000.000	46.22	0.70	46.92	54.00	-7.08	AVG

Date of Test:	<u>October 15, 2011</u>	Temperature:	<u>25°C</u>
	<u>900MHz Wireless</u>		
EUT:	<u>Receiver</u>	Humidity:	<u>50%</u>
Model No.:	<u>FW900WC</u>	Power Supply:	<u>PC power: AC 120V/60Hz</u>
Test Mode:	<u>Rx 926.6050MHz</u>	Test Engineer:	<u>PEI</u>

Frequency: 30-1000MHz								
Polarization								
Horizontal	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	36.5138	16.91	15.35	32.26	40.00	-7.74	QP
	2	55.4254	18.75	12.99	31.74	40.00	-8.26	QP
	3	987.4428	19.97	29.84	49.81	54.00	-4.19	QP
Vertical	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	32.3234	16.01	15.96	31.97	40.00	-8.03	QP
	2	54.0450	18.04	13.15	31.19	40.00	-8.81	QP
	3	997.7979	20.70	29.90	50.60	54.00	-3.40	QP
Frequency: 1000-5000MHz								
Polarization								
Horizontal	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	1988.368	59.80	-9.07	50.73	74.00	-23.27	peak
	2	1988.368	56.37	-9.07	47.30	54.00	-6.70	AVG
	3	2962.157	54.71	-5.46	49.25	74.00	-24.75	peak
	4	2962.157	51.33	-5.46	45.87	54.00	-8.13	AVG
	5	3950.339	50.29	-1.85	48.44	74.00	-25.56	peak
	6	3950.339	47.28	-1.85	45.43	54.00	-8.57	AVG
	7	4988.772	48.07	0.65	48.72	74.00	-25.28	peak
Vertical	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	1988.368	59.80	-9.07	50.73	74.00	-23.27	peak
	2	1988.368	56.17	-9.07	47.10	54.00	-6.90	AVG
	3	2962.157	56.34	-5.46	50.88	74.00	-23.12	peak
	4	2962.157	53.20	-5.46	47.74	54.00	-6.26	AVG
	5	3950.339	52.40	-1.85	50.55	74.00	-23.45	peak
	6	3950.339	49.61	-1.85	47.76	54.00	-6.24	AVG
	7	4988.772	48.73	0.65	49.38	74.00	-24.62	peak
	8	4988.772	45.27	0.65	45.92	54.00	-8.08	AVG

Note: 1. Emissions attenuated more than 20 dB below the permissible value are not reported.

2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain

3. The spectral diagrams are attached as below display the measurement of peak values.


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Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Kai #1043

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: 900MHz wireless receiver

Mode: RX Channel 1

Model: FW900WC

Manufacturer: Mangrove Technology Co.,Ltd

Polarization: Horizontal

Power Source: AC 120V/60Hz

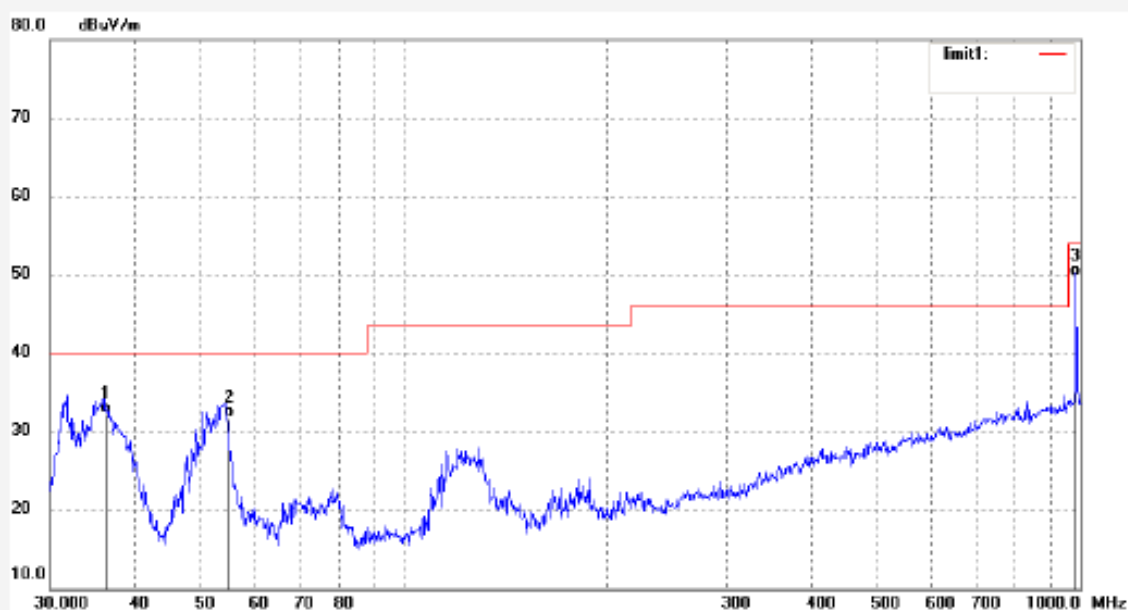
Date: 11/10/15/

Time: 9/34/42

Engineer Signature: Kai

Distance: 3m

Note: Report No.:ATE20112124



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.5138	16.91	15.35	32.26	40.00	-7.74	QP			
2	55.4254	18.75	12.99	31.74	40.00	-8.26	QP			
3	987.4428	19.97	29.84	49.81	54.00	-4.19	QP			



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Site: 966 chamber
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Fax:+86-0755-26503396

Job No.: Kai #1039

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: 900MHz wireless receiver

Mode: RX Channel 1

Model: FW900WC

Manufacturer: Mangrove Technology Co.,Ltd

Polarization: Vertical

Power Source: AC 120V/60Hz

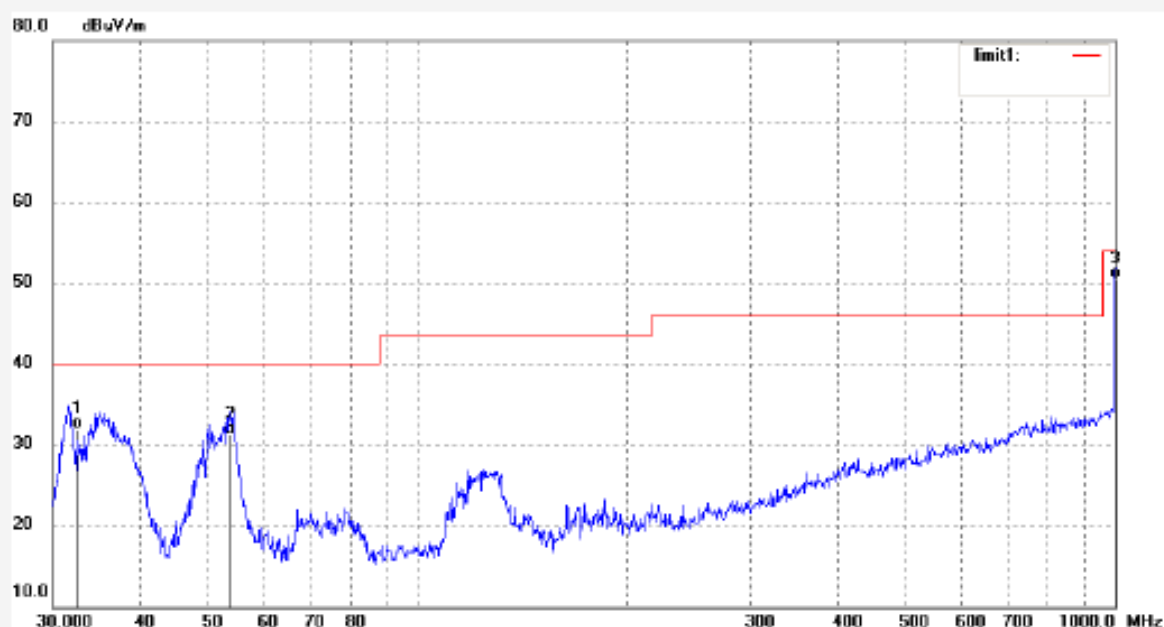
Date: 11/10/15/

Time: 9/08/12

Engineer Signature: Kai

Distance: 3m

Note: Report No.:ATE20112124



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.3234	16.01	15.96	31.97	40.00	-8.03	QP			
2	54.0450	18.04	13.15	31.19	40.00	-8.81	QP			
3	997.7979	20.70	29.90	50.60	54.00	-3.40	QP			



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Site: 966 chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Kai #1069

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: 900MHz wireless receiver

Mode: RX Channel 1

Model: FW900WC

Manufacturer: Mangrove Technology Co.,Ltd

Polarization: Horizontal

Power Source: AC 120V/60Hz

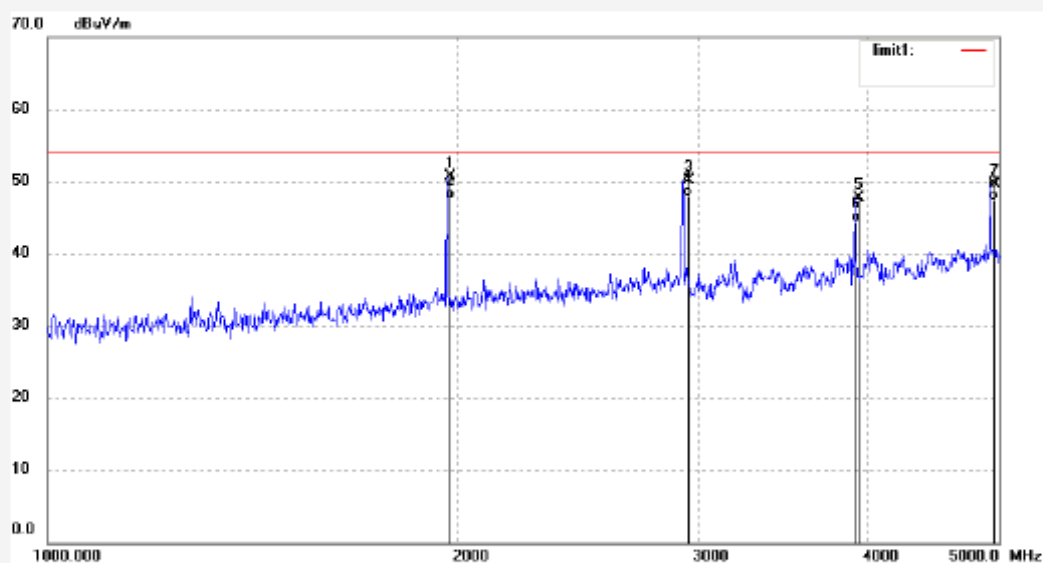
Date: 11/10/20/

Time: 8/39/09

Engineer Signature: Kai

Distance: 3m

Note: Report No.:ATE20112124



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1976.399	59.87	-9.15	50.72	74.00	-23.28	peak			
2	1976.400	56.69	-9.15	47.54	54.00	-6.46	AVG			
3	2955.596	55.62	-5.50	50.12	74.00	-23.88	peak			
4	2955.596	53.43	-5.50	47.93	54.00	-6.07	AVG			
5	3940.511	49.63	-1.90	47.73	74.00	-26.27	peak			
6	3940.511	46.27	-1.90	44.37	54.00	-9.63	AVG			
7	4952.666	49.13	0.48	49.61	74.00	-24.39	peak			
8	4952.666	46.79	0.48	47.27	54.00	-6.73	AVG			



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Job No.: Kai #1070

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: 900MHz wireless receiver

Mode: RX Channel 1

Model: FW900WC

Manufacturer: Mangrove Technology Co.,Ltd

Polarization: Vertical

Power Source: AC 120V/60Hz

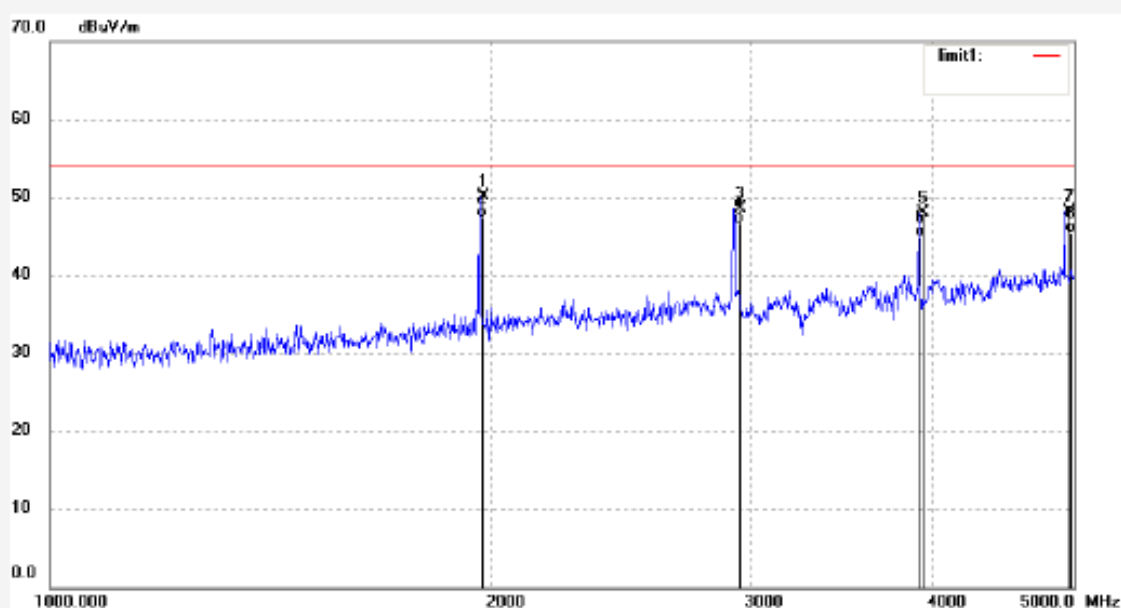
Date: 11/10/20/

Time: 8/41/01

Engineer Signature: Kai

Distance: 3m

Note: Report No.:ATE20112124



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1976.399	59.21	-9.15	50.06	74.00	-23.94	peak			
2	1976.400	56.57	-9.15	47.42	54.00	-6.58	AVG			
3	2955.596	54.11	-5.50	48.61	74.00	-25.39	peak			
4	2955.596	52.09	-5.50	46.59	54.00	-7.41	AVG			
5	3940.511	49.95	-1.90	48.05	74.00	-25.95	peak			
6	3940.511	46.71	-1.90	44.81	54.00	-9.19	AVG			
7	4952.666	47.77	0.48	48.25	74.00	-25.75	peak			
8	4952.666	44.86	0.48	45.34	54.00	-8.66	AVG			



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Site: 966 chamber

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Fax:+86-0755-26503396

Job No.: Kai #1042

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: 900MHz wireless receiver

Mode: RX Channel 19

Model: FW900WC

Manufacturer: Mangrove Technology Co.,Ltd

Polarization: Horizontal

Power Source: AC 120V/60Hz

Date: 11/10/15/

Time: 9/16/40

Engineer Signature: Kai

Distance: 3m

Note: Report No.:ATE20112124



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.8625	16.71	15.50	32.21	40.00	-7.79	QP			
2	55.5349	18.56	12.97	31.53	40.00	-8.47	QP			
3	992.4420	20.92	29.86	50.78	54.00	-3.22	QP			



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Site: 966 chamber
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Fax:+86-0755-26503396

Job No.: Kai #1041

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: 900MHz wireless receiver

Mode: RX Channel 19

Model: FW900WC

Manufacturer: Mangrove Technology Co.,Ltd

Polarization: Vertical

Power Source: AC 120V/60Hz

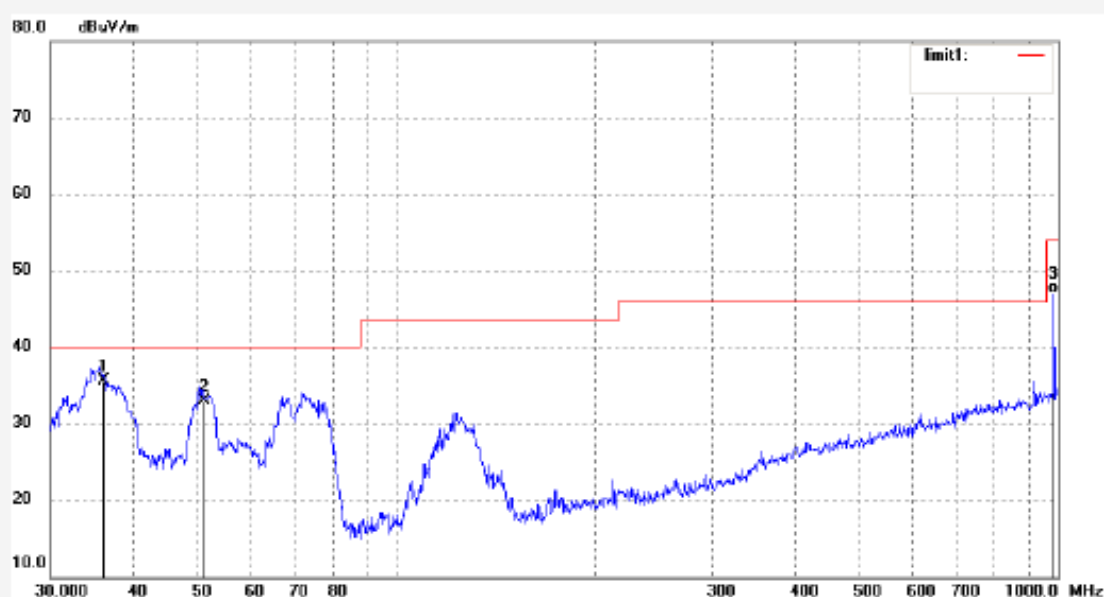
Date: 11/10/15/

Time: 9/14/23

Engineer Signature: Kai

Distance: 3m

Note: Report No.:ATE20112124



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	36.0112	19.00	16.62	35.62	40.00	-4.38	QP			
2	51.0843	18.78	14.16	32.94	40.00	-7.06	QP			
3	992.4420	17.21	29.86	47.07	54.00	-6.93	QP			



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Site: 966 chamber

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Job No.: Kai #1072

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: 900MHz wireless receiver

Mode: RX Channel 19

Model: FW900WC

Manufacturer: Mangrove Technology Co.,Ltd

Polarization: Horizontal

Power Source: AC 120V/60Hz

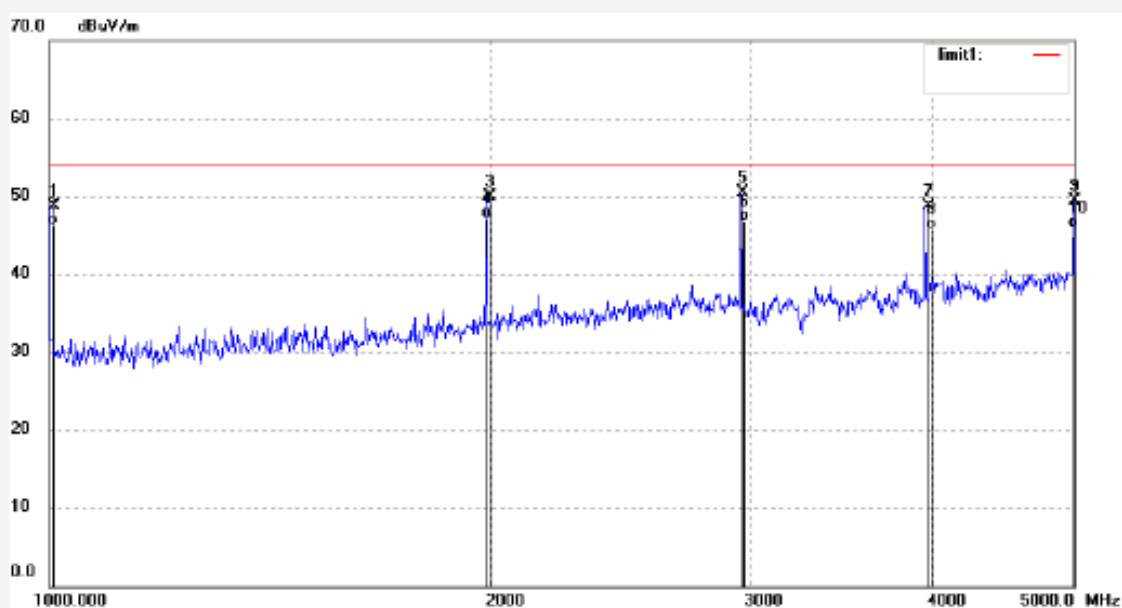
Date: 11/10/20/

Time: 8/47/01

Engineer Signature: Kai

Distance: 3m

Note: Report No.:ATE20112124



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1007.980	61.12	-12.44	48.68	74.00	-25.32	peak			
2	1007.980	58.75	-12.44	46.31	54.00	-7.69	AVG			
3	1994.791	59.06	-9.03	50.03	74.00	-23.97	peak			
4	1994.791	56.14	-9.03	47.11	54.00	-6.89	AVG			
5	2972.944	55.94	-5.39	50.55	74.00	-23.45	peak			
6	2972.944	52.19	-5.39	46.80	54.00	-7.20	AVG			
7	3976.735	50.43	-1.72	48.71	74.00	-25.29	peak			
8	3976.735	47.54	-1.72	45.82	54.00	-8.18	AVG			
9	5000.000	48.68	0.70	49.38	74.00	-24.62	peak			
10	5000.000	45.16	0.70	45.86	54.00	-8.14	AVG			


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Job No.: Kai #1071

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: 900MHz wireless receiver

Mode: RX Channel 19

Model: FW900WC

Manufacturer: Mangrove Technology Co.,Ltd

Polarization: Vertical

Power Source: AC 120V/60Hz

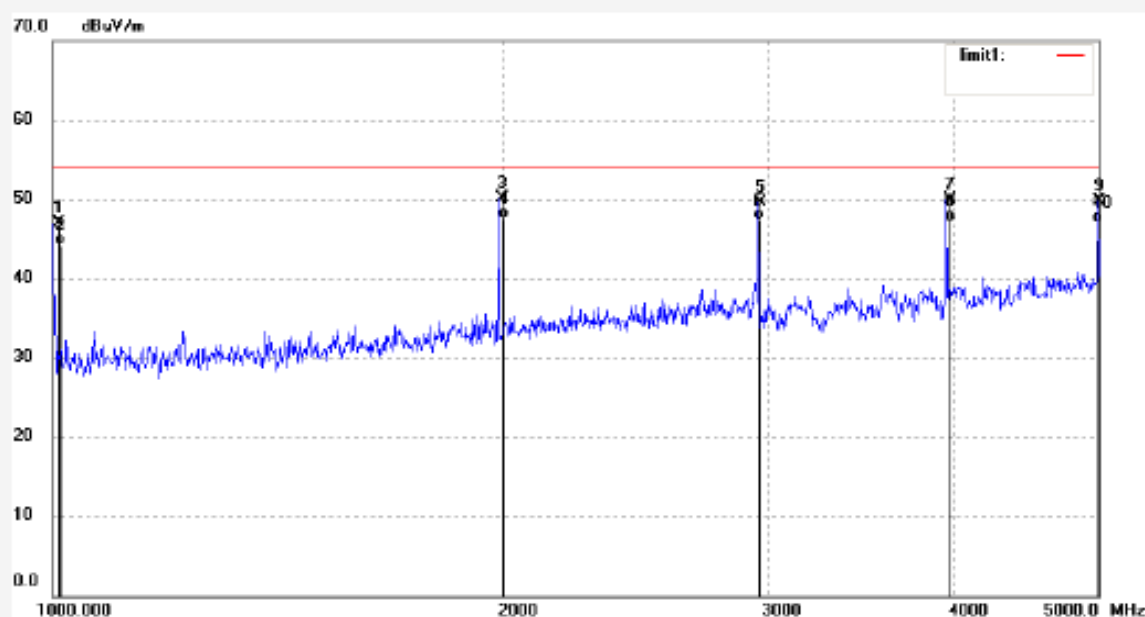
Date: 11/10/20/

Time: 8/45/32

Engineer Signature: Kai

Distance: 3m

Note: Report No.:ATE20112124



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1008.371	59.42	-12.45	46.97	74.00	-27.03	peak			
2	1008.371	56.70	-12.45	44.25	54.00	-9.75	AVG			
3	1994.791	59.16	-9.03	50.13	74.00	-23.87	peak			
4	1994.791	56.53	-9.03	47.50	54.00	-6.50	AVG			
5	2972.944	55.04	-5.39	49.65	74.00	-24.35	peak			
6	2972.944	52.74	-5.39	47.35	54.00	-6.65	AVG			
7	3976.735	51.61	-1.72	49.89	74.00	-24.11	peak			
8	3976.735	48.97	-1.72	47.25	54.00	-6.75	AVG			
9	5000.000	49.03	0.70	49.73	74.00	-24.27	peak			
10	5000.000	46.22	0.70	46.92	54.00	-7.08	AVG			



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Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: Kai #1040

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: 900MHz wireless receiver

Mode: RX Channel 39

Model: FW900WC

Manufacturer: Mangrove Technology Co.,Ltd

Polarization: Horizontal

Power Source: AC 120V/60Hz

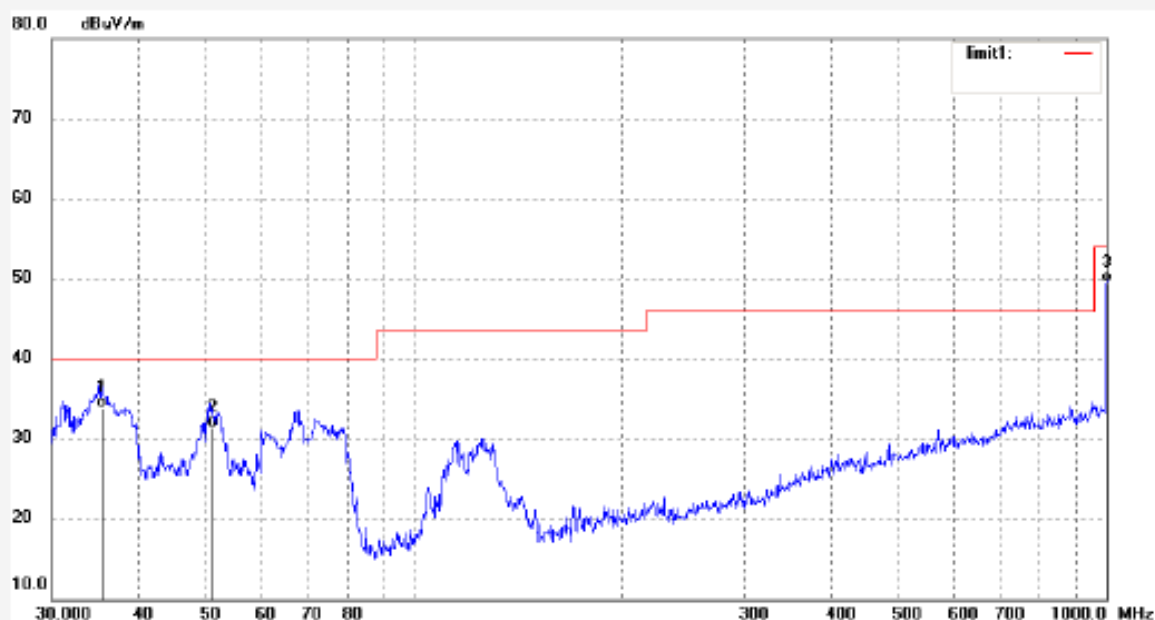
Date: 11/10/15/

Time: 9/11/18

Engineer Signature: Kai

Distance: 3m

Note: Report No.:ATE20112124



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	35.5157	17.25	16.66	33.91	40.00	-6.09	QP			
2	51.6171	17.47	14.01	31.48	40.00	-8.52	QP			
3	997.7979	19.53	29.90	49.43	54.00	-4.57	QP			



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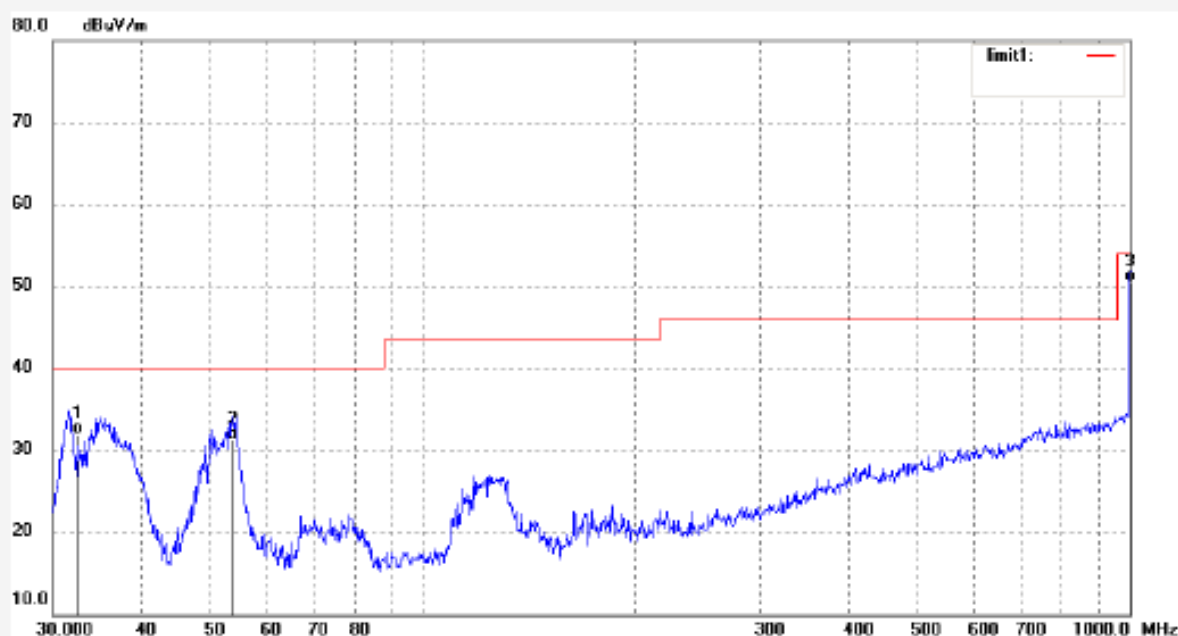
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 966 chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: Kai #1039
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 24 C / 48 %
EUT: 900MHz wireless receiver
Mode: RX Channel 39
Model: FW900WC
Manufacturer: Mangrove Technology Co.,Ltd

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 11/10/15/
Time: 9/08/07
Engineer Signature: Kai
Distance: 3m

Note: Report No.: ATE20112124



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	32.3234	16.01	15.96	31.97	40.00	-8.03	QP			
2	54.0450	18.04	13.15	31.19	40.00	-8.81	QP			
3	997.7979	20.70	29.90	50.60	54.00	-3.40	QP			



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Site: 966 chamber

Tel:+86-0755-26503290

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Job No.: Kai #1073

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: 900MHz wireless receiver

Mode: RX Channel 39

Model: FW900WC

Manufacturer: Mangrove Technology Co.,Ltd

Polarization: Horizontal

Power Source: AC 120V/60Hz

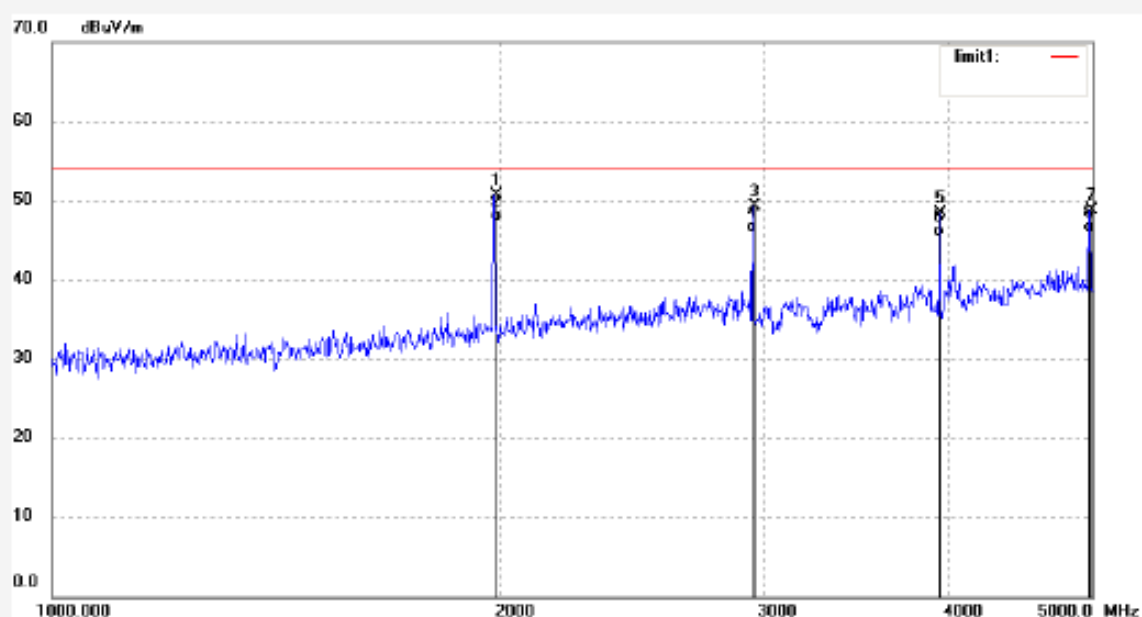
Date: 11/10/20/

Time: 8/50/07

Engineer Signature: Kai

Distance: 3m

Note: Report No.: ATE20112124



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1988.368	59.80	-9.07	50.73	74.00	-23.27	peak			
2	1988.368	56.37	-9.07	47.30	54.00	-6.70	AVG			
3	2962.157	54.71	-5.46	49.25	74.00	-24.75	peak			
4	2962.157	51.33	-5.46	45.87	54.00	-8.13	AVG			
5	3950.339	50.29	-1.85	48.44	74.00	-25.56	peak			
6	3950.339	47.28	-1.85	45.43	54.00	-8.57	AVG			
7	4988.772	48.07	0.65	48.72	74.00	-25.28	peak			
8	4988.772	45.33	0.65	45.98	54.00	-8.02	AVG			


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Job No.: Kai #1074

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 24 C / 48 %

EUT: 900MHz wireless receiver

Mode: RX Channel 39

Model: FW900WC

Manufacturer: Mangrove Technology Co.,Ltd

Polarization: Vertical

Power Source: AC 120V/60Hz

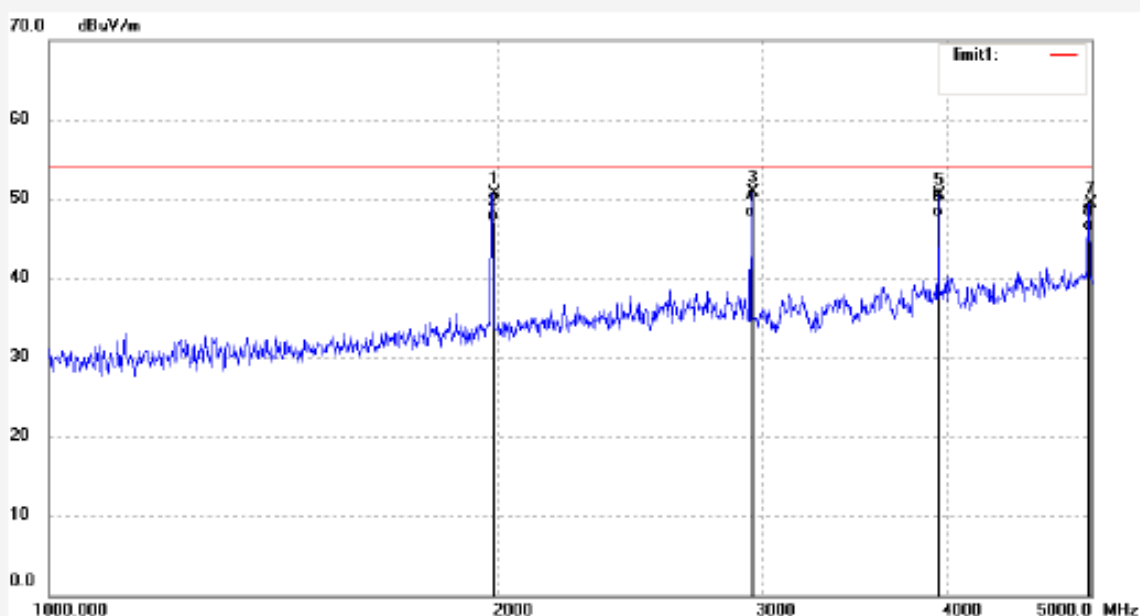
Date: 11/10/20/

Time: 8/51/37

Engineer Signature: Kai

Distance: 3m

Note: Report No.:ATE20112124



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1988.368	59.80	-9.07	50.73	74.00	-23.27	peak			
2	1988.368	56.17	-9.07	47.10	54.00	-6.90	AVG			
3	2962.157	56.34	-5.46	50.88	74.00	-23.12	peak			
4	2962.157	53.20	-5.46	47.74	54.00	-6.26	AVG			
5	3950.339	52.40	-1.85	50.55	74.00	-23.45	peak			
6	3950.339	49.61	-1.85	47.76	54.00	-6.24	AVG			
7	4988.772	48.73	0.65	49.38	74.00	-24.62	peak			
8	4988.772	45.27	0.65	45.92	54.00	-8.08	AVG			