

Prüfbericht - Nr.:
Test Report No.:
16014488 001
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Auftraggeber: Seikaku Technical Group Limited
Client:
 Offshore Chambers, P. O. Box 217,
 Apia, Samoa

Gegenstand der Prüfung: Wireless Microphone Receiver
Test item:

Bezeichnung: <i>Identification:</i>	UEM-8DR	FCC ID: <i>FCC ID</i>	H38UEM-8DR
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Wareneingangs-Nr.: <i>Receipt No.:</i>	173034960 173050057	Eingangsdatum: <i>Date of receipt:</i>	29.12.2009
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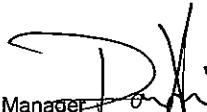
Prüfort: <i>Testing location:</i>	TÜV Rheinland (Guangdong) Ltd. EMC Laboratory Guangzhou Auto Market, Yuan Gang Section of Guangshan Road, Guangzhou 510650, P. R. China	Listed test laboratory according to FCC rules section 2.948 for measuring devices under Parts 15
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Prüfgrundlage: <i>Test specification:</i>	ANSI C63.4:2003 FCC Part 15: 20, Sep. 2007 Subpart B section 15.109
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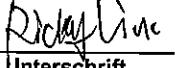
Prüfergebnis: <i>Test Result:</i>	Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n). <i>The test item passed the test specification(s).</i>
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Prüflaboratorium: <i>Testing Laboratory:</i>	TÜV Rheinland (Guangdong) Ltd.
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geprüft/ tested by:	kontrolliert/ reviewed by:
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25. Feb. 2010 Liangdong Xie/Project Manager 

Datum Date	Name/Stellung Name/Position	Unterschrift Signature
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26. Feb. 2010 Ricky Liu/Project Manager 

Datum Date	Name/Stellung Name/Position	Unterschrift Signature
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Sonstiges/ Other Aspects:

Abkürzungen: P(pass) = entspricht Prüfgrundlage
 F(fail) = entspricht nicht Prüfgrundlage
 N/A = nicht anwendbar
 N/T = nicht getestet

Abbreviations: P(pass) = passed
 F(fail) = failed
 N/A = not applicable
 N/T = not tested

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.

This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.

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TEST SUMMARY

5.1 CONDUCTED EMISSION FOR FCC PART 15 PER SECTION 15.107(A)
RESULT: N/A

5.2 RADIATED EMISSION FOR FCC PART 15 PER SECTION 15.109(A)
RESULT: Pass

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1 General Remarks

1.1 Complementary Materials

No appendix attached in this report.

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Guangdong) Ltd. EMC Laboratory

Guangzhou Auto Market, Yuan Gang Section of Guangshan Road
Guangzhou 510650

P. R. China

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2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Equipment	Manufacturer	Type	Serial No.	Calibrated until
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EMI Test Receiver	Rohde & Schwarz	ESCI-3	100216	16.Mar.2011
Spectrum Analyzer	Rohde & Schwarz	FSP30	100286	16.Mar.2011
Trilog-Broadband Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9168	209	07.Nov.2010
Trilog-Broadband Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9168	210	26.Jun.2011
Double-Ridged Waveguide Horn Antenna	Rohde & Schwarz	HF906	100385	18.Jul.2011
Double-Ridged Waveguide Horn Antenna	Rohde & Schwarz	HF906	100407	26.Jun.2011
Pre-amplifier	MITEQ	AFS42-00101800-25-S-42	1101599	31.Jul.2010
Standard Gain Horn Antenna	EMCO	3160-09	21642	26.Jun.2014
Standard Gain Horn Antenna	EMCO	3160-09	21645	N/A
Pre-amplifier	MITEQ	AFS33-18002650-30-8P-44	1108282	16.Mar.2011
3m Anechoic Chamber	Albatross Project GmbH	N/A	N/A	16.Apr.2011

2.3 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations

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2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

Uncertainty for conducted emissions measurements is $\pm 2.51\text{dB}$.
Uncertainty for radiated emissions measurements is $\pm 4.9\text{dB}$ (30MHz-1GHz), $\pm 4.84\text{dB}$ ($>1\text{GHz}$).

The reported expanded uncertainty is based on a standard uncertainty multiply by a coverage factor $k=2$, providing a level of confidence of approximately 95%.

2.6 Location of original data

The original copies of all test data taken during actual testing were attached at Appendix 1 of this report and delivered to the applicant. A copy has been retained in the TUV Rheinland (Guangzhou) file for certification follow-up purposes.

2.7 Status of facility used for testing

TÜV Rheinland (Guangdong) Ltd. EMC Laboratory; Guangzhou Auto Market, Yuan Gang Section of Guangshan Road, Guangzhou 510650, P. R. China is listed on the US Federal Communications Commission list of facilities approved to perform measurements, the register no. 833845

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3 General Product Information

The submitted sample UEM-8DR is wireless microphones receiver operating within the frequency range of 535 MHz to 546 MHz.

The frequency can be adjusted manually by turntable channel switch.

3.1 Product Function and Intended Use

For details, refer to User Manual.

3.2 Ratings and System Details

Frequency range	:	535 MHz – 546 MHz
Type of antenna	:	Integral
FCC ID	:	H38UEM-8DR
Power supply	:	DC 9V (Powered by Duracell MN1604 9-volt alkaline)
Ports	:	audio output to earphone
Protection Class	:	III

Refer to the technical document and user manual for further information.

3.3 Independent Operation Modes

The basic operation mode is:

Receiving

For further information refer to User Manual

3.4 Submitted Documents

Block Diagram
Circuit Diagram
PCB Layout
FCC Label
User Manual
Photo Document

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4 Test Set-up and Operation Mode

4.1 Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Refer to Test set-up in chapter 5.

4.3 Special Accessories and Auxiliary Equipment

Transmitter UEM-8T was provided by client.

4.4 Countermeasures to achieve EMC Compliance

The test sample, which has been tested, contained the noise suppression parts as described in the Constructional Data Form or the Technical document. No additional measures were employed to achieve compliance.

4.5 Test set-up

Diagram 1 of Configuration for Testing Radiated Emission below 1 GHz

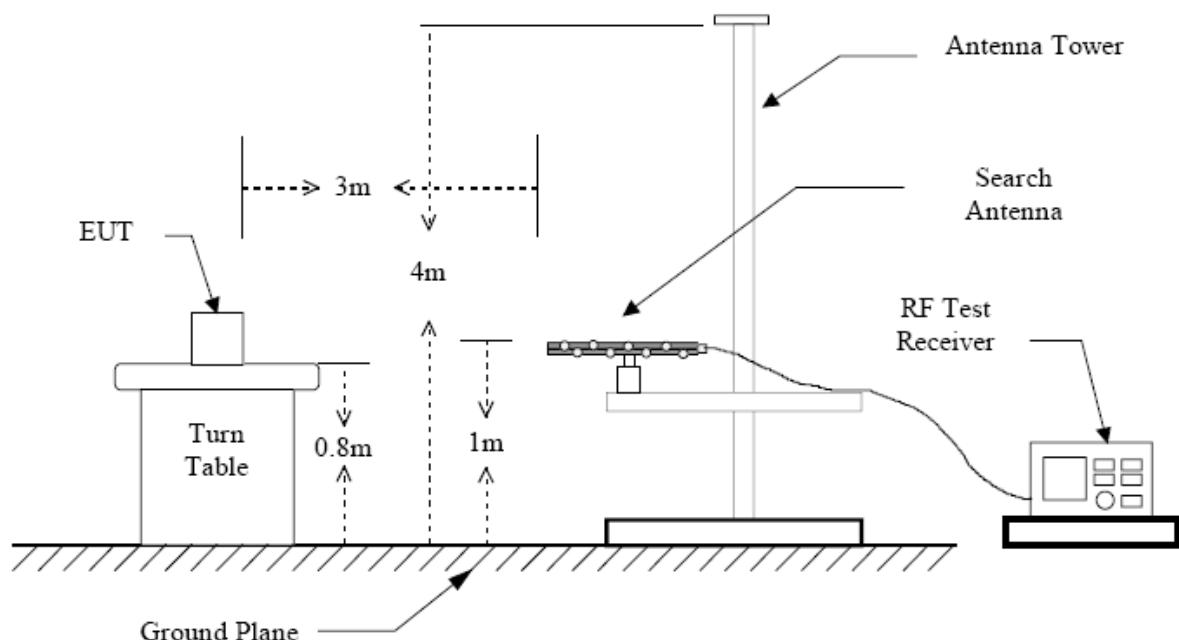
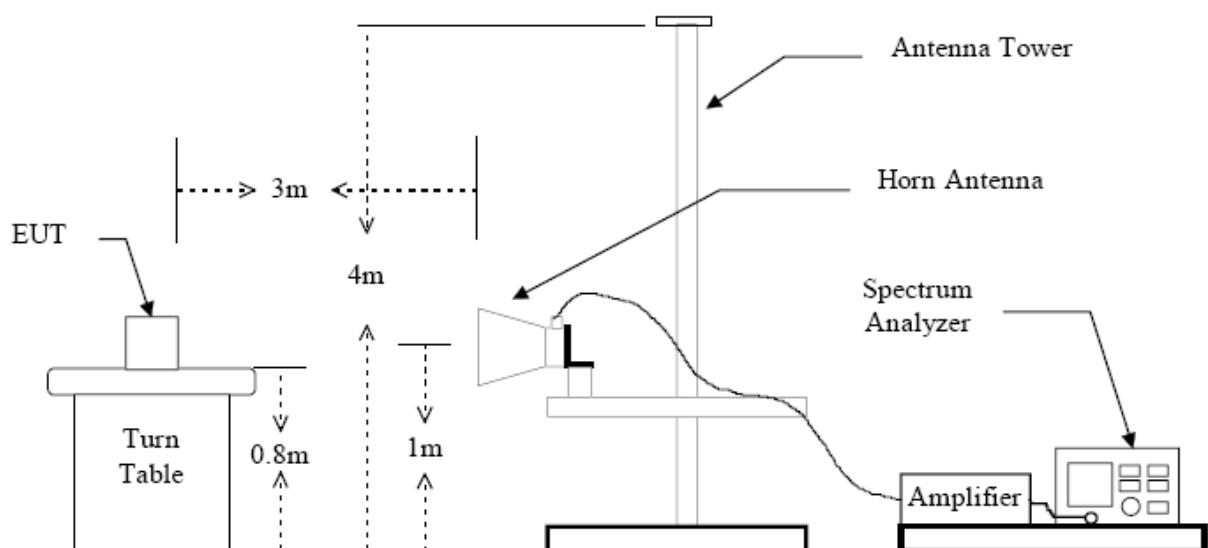


Diagram 2 of Configuration for Testing Radiated Emission above 1 GHz

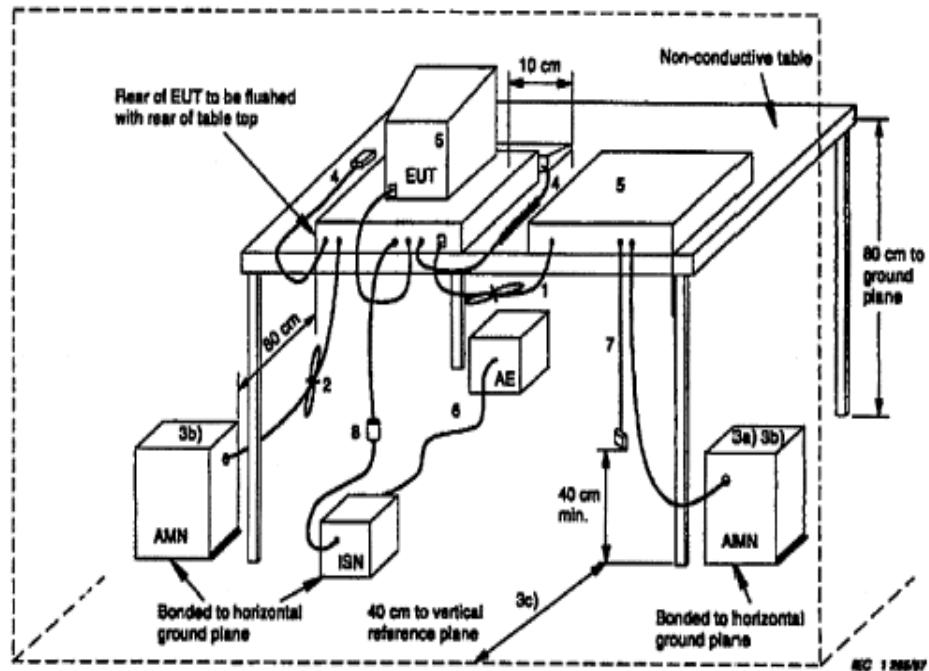


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Diagram 3 of Equipment Configuration for Testing Conducted Emission



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5 Test Results EMISSION

5.1 Conducted Emission for FCC Part 15 Per Section 15.107(a)

RESULT:

N/A

Date of testing	:	---
Test specification	:	FCC Part 15 Per Section 15.107(a)
Limits	:	FCC Part 15 Per Section 15.107(a)
Test procedure	:	Procedure specified in ANSI C63.4 were followed
Deviations from Standard Test procedures	:	None
Kind of test site	:	Shielded room
Operation mode	:	Receiving
Temperature	:	23°C
Humidity	:	50%

There is no direct or indirect connection to AC mains. Therefore, the test had been skipped.

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5.2 Radiated Emission for FCC Part 15 Per Section 15.109(a)

RESULT:

Pass

Date of testing : 30.Jan.2010
Test specification : FCC Part 15 Per Section 15.109(a)
Limits : FCC Part 15 Per Section 15.109(a)
Test procedure : Procedure specified in ANSI C63.4 were followed
Deviations from Standard Test procedures : None
Kind of test site : 3m Semi-anechoic chamber
Operation mode : Receiving at high, middle and low channels
Temperature : 23°C
Humidity : 50%

Test procedure:

1. The EUT was turned on and placed on the top of a rotatable table 0.8 meters above the ground with 3-orthogonal XYZ direction and be kept close enough to the measurement receiving antenna (especially for the measurement frequency range above 1 GHz). The table was then rotated 360 degrees to detect the suspected emission frequency points. The position of the worst radiation case with both horizontal and vertical receiving antenna polarization was then recorded together with the suspected emission frequency points above-mentioned.
2. The EUT was set 3 meters away from the receiving antenna; the earphone line was fixed along the support stick.
3. The transmitter provided by client was placed under the rotatable table, then connection was set up between EUT and transmitter.
4. For each suspected emission frequency point recorded in step 1, the EUT was arranged to its worst case that the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to read the maximum emission.

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Test procedure:

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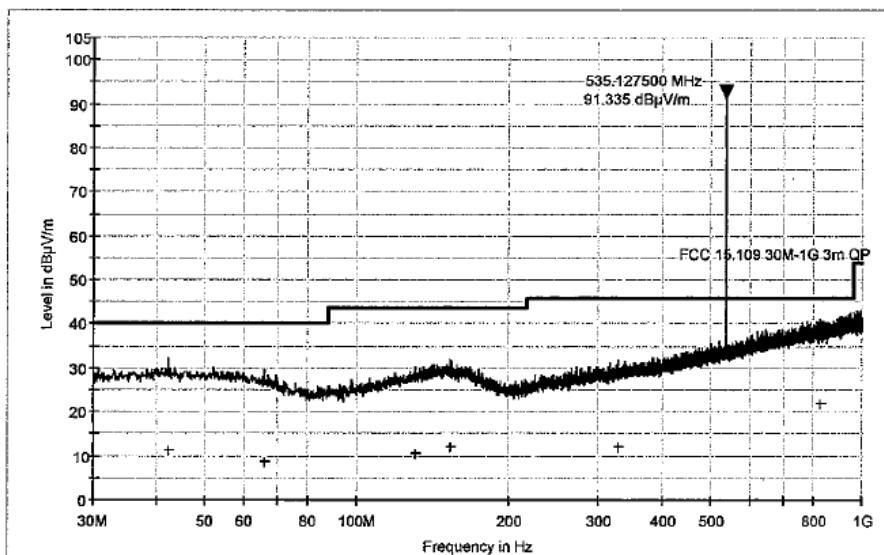
EMC Test Record (EMISSION)

Test Information

Manufacturer: Wireless receiver
Test Item: UEM-8M UEM-8PR 
Identification FCC Part 15.109
Test Standard:
Test Detail: RE
Operation Mode: Receiving @ Lowest frequency
Climate Condition: 23 °C; 50%RH; 101 kPa.
Test Voltage / Freq.: DC 9V
Receipt No.: 173050057
Report No.
Result: Pass
Comment: Horizontal

Subrange 1

Frequency Range: 30MHz - 1GHz
Receiver: TUV ESCI 3
Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
42.200000	11.2	14.7	28.8	40.0	H
65.800000	8.7	12.6	31.3	40.0	H
130.400000	10.5	14.2	33.0	43.5	H
152.900000	12.2	15.7	31.3	43.5	H
330.200000	12.2	15.9	33.8	46.0	H
823.700000	22.1	24.7	23.9	46.0	H

Date: 1/29/2010 - Time: 8:22:21 PM

Tested by:



Reviewed by:



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EMC Test Record (EMISSION)

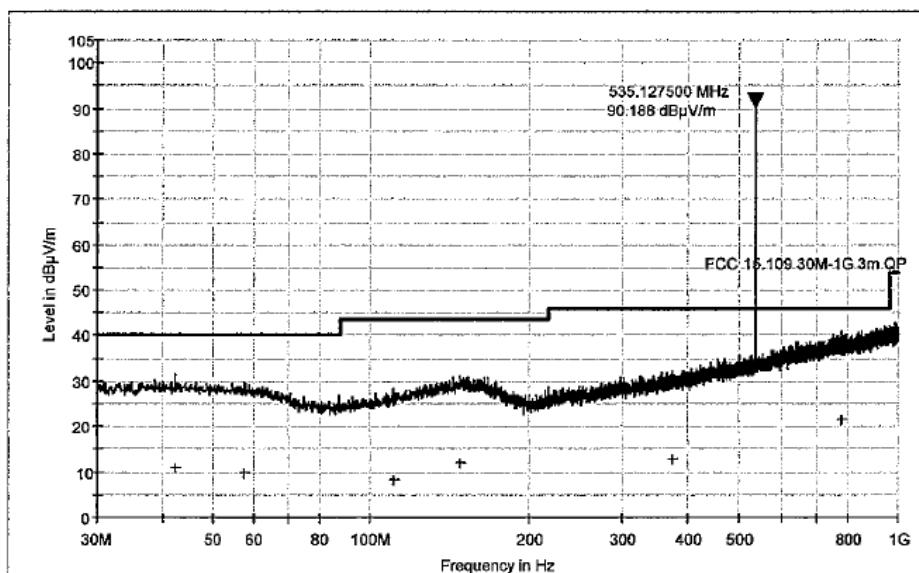
Test Information

Manufacturer: Wireless receiver
Test Item: UEM-8DR
Identification: UEM-8M
Test Standard: FCC Part 15.109
Test Detail: RE
Operation Mode: Receiving @ Lowest frequency
Climate Condition: 23 °C; 50%RH; 101 kPa.
Test Voltage / Freq.: DC 9V
Receipt No.: 173050057
Report No.
Result: Pass
Comment: Vertical



Subrange 1

Frequency Range: 30MHz - 1GHz
Receiver: TUV ESCI 3
Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dB μ V/m)	Corr. (dB)	Margin (dB)	Limit (dB μ V/m)	Polarity
42.300000	10.9	14.7	29.1	40.0	V
57.300000	9.8	13.9	30.2	40.0	V
109.800000	8.5	12.4	35.0	43.5	V
146.900000	12.1	15.4	31.4	43.5	V
374.600000	13.0	16.8	33.0	46.0	V
775.100000	21.5	24.3	24.5	46.0	V

Date: 1/29/2010 - Time: 8:27:06 PM

Tested by:



Reviewed by:



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EMC Test Record (EMISSION)

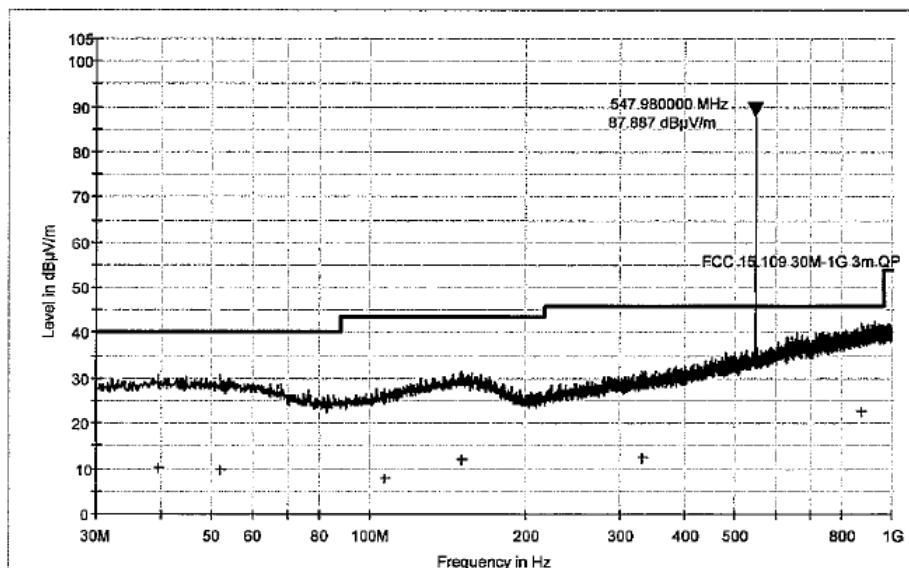
Test Information

Manufacturer: Wireless receiver
Test Item: UEM-8M UEM-8PR
Identification FCC Part 15.109
Test Standard:
Test Detail: RE
Operation Mode: Receiving @ Middle frequency
Climate Condition: 23 °C; 50%RH; 101 kPa.
Test Voltage / Freq. : DC 9V
Receipt No.: 173050057
Report No.
Result: Pass
Comment: Vertical



Subrange 1

Frequency Range: 30MHz - 1GHz
Receiver: TUV ESCI 3
Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
39.500000	10.4	14.8	29.6	40.0	V
52.000000	9.8	14.2	30.2	40.0	V
106.800000	8.1	12.0	35.4	43.5	V
151.000000	12.0	15.7	31.5	43.5	V
331.300000	12.4	15.9	33.6	46.0	V
873.050000	22.8	25.3	23.2	46.0	V

Date: 1/30/2010 - Time: 10:06:00 AM

Tested by:



Reviewed by:



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EMC Test Record (EMISSION)

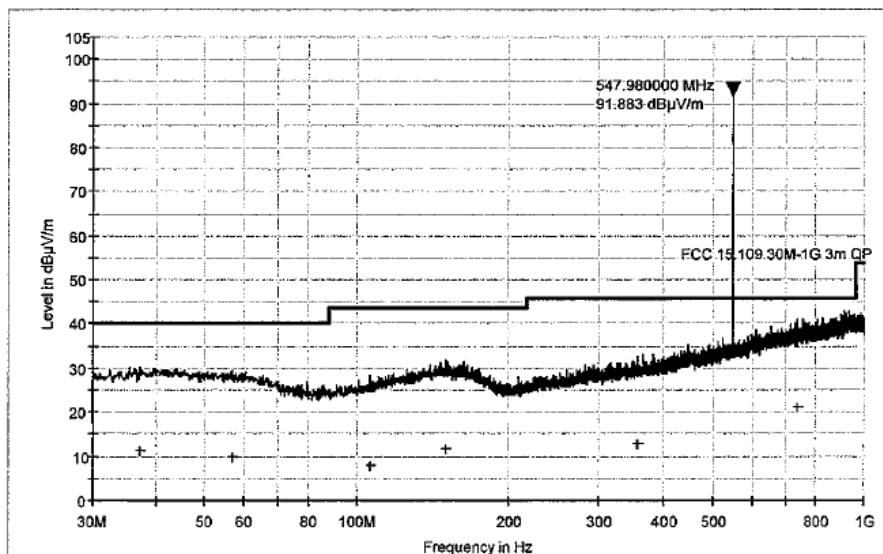
Test Information

Manufacturer: Wireless receiver
Test Item: UEM-8M UEM-8DR
Identification: FCC Part 15.109
Test Standard: RE
Test Detail: Receiving @ Middle frequency
Operation Mode: 23 °C; 50%RH; 101 kPa.
Climate Condition: DC 9V
Test Voltage / Freq.: 173050057
Receipt No.:
Report No.:
Result: Pass
Comment: Horizontal



Subrange 1

Frequency Range: 30MHz - 1GHz
Receiver: TUV ESCI 3
Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
37.200000	11.3	14.4	28.7	40.0	H
56.900000	9.7	13.9	30.3	40.0	H
105.900000	8.0	12.0	35.5	43.5	H
149.050000	11.6	15.6	31.9	43.5	H
359.200000	12.9	16.5	33.1	46.0	H
738.950000	21.4	23.8	24.6	46.0	H

Date: 1/30/2010 - Time: 10:10:38 AM

Tested by:



Reviewed by:



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EMC Test Record (EMISSION)

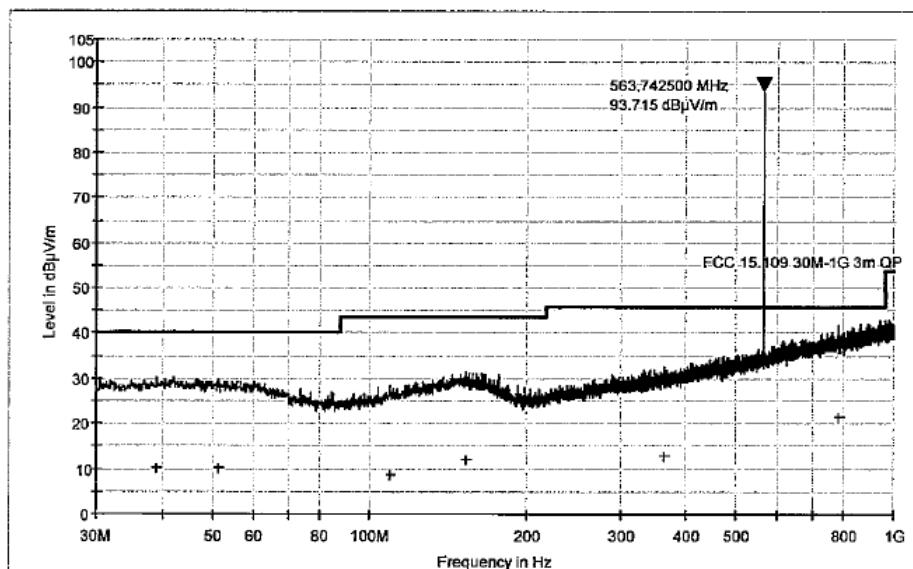
Test Information

Manufacturer: Wireless receiver
Test Item: UEM-8M UEM-8PR
Identification FCC Part 15.109
Test Standard: RE
Test Detail: Receiving @ Highest frequency
Operation Mode: 23 °C; 50%RH; 101 kPa.
Climate Condition:
Test Voltage / Freq.: DC 9V
Receipt No.: 173050057
Report No.
Result: Pass
Comment: Horizontal



Subrange 1

Frequency Range: 30MHz - 1GHz
Receiver: TUV ESCI 3
Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
39.000000	10.2	14.7	29.8	40.0	H
51.000000	10.2	14.2	29.8	40.0	H
109.300000	8.6	12.3	34.9	43.5	H
152.600000	12.3	15.7	31.2	43.5	H
363.050000	12.9	16.5	33.1	46.0	H
783.350000	21.6	24.4	24.4	46.0	H

Date: 1/30/2010 - Time: 10:19:27 AM

Tested by:



Reviewed by:



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EMC Test Record (EMISSION)

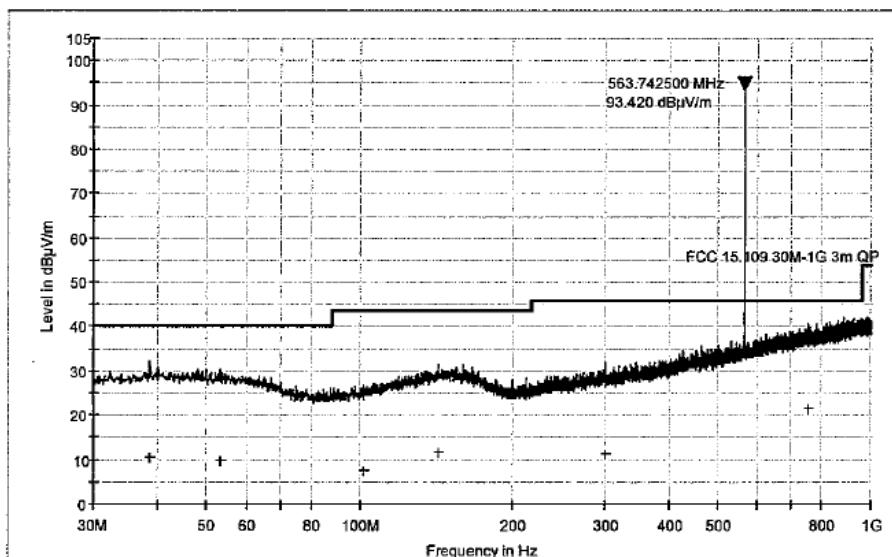
Test Information

Manufacturer: Wireless receiver
Test Item: UEM-8M UEM-8DR
Identification: FCC Part 15.109
Test Standard: RE
Test Detail: Receiving @ Highest frequency
Operation Mode: 23 °C; 50%RH; 101 kPa.
Climate Condition: DC 9V
Test Voltage / Freq.: 173050057
Receipt No.:
Report No.
Result: Pass
Comment: Vertical



Subrange 1

Frequency Range: 30MHz - 1GHz
Receiver: TUV ESCI 3
Transducer: TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
38.600000	10.5	14.6	29.5	40.0	V
52.900000	10.0	14.1	30.0	40.0	V
101.000000	7.4	11.4	36.1	43.5	V
142.300000	11.8	15.1	31.7	43.5	V
300.200000	11.3	15.0	34.7	46.0	V
756.300000	21.6	24.1	24.4	46.0	V

Date: 1/30/2010 - Time: 10:23:39 AM

Tested by:



Reviewed by:



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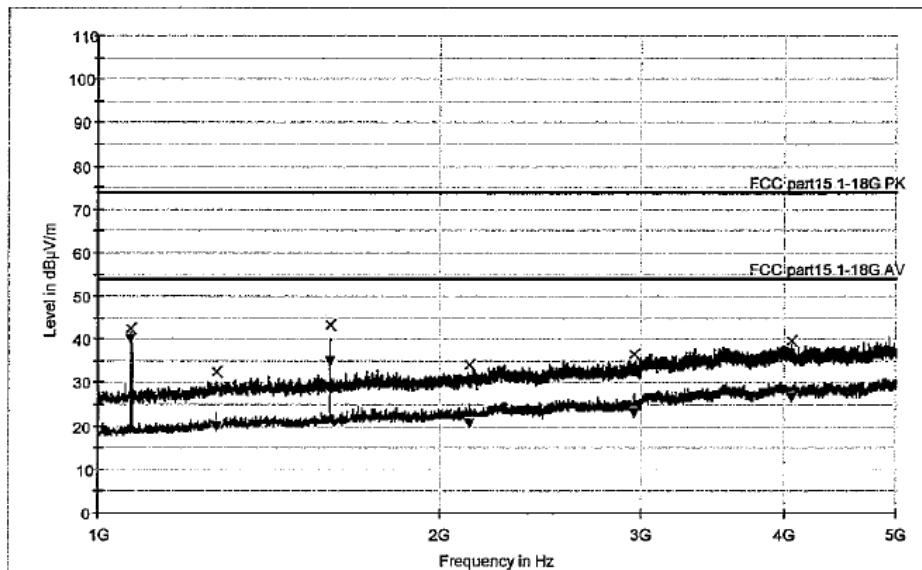
Test Information

Manufacturer: Wireless receiver
Test Item: UEM-8M UEM-8DR
Identification FCC Part 15.109
Test Standard:
Test Detail: RE
Operation Mode: Receiving @ Lowest frequency
Climate Condition: 23 °C; 50%RH; 101 kPa.
Test Voltage / Freq. : DC 9V
Receipt No.: 173050057
Report No.
Result: Pass
Comment: Vertical



Subrange 1

Frequency Range: 1GHz - 5GHz
Receiver: TUV FSP 30
Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



Limit and Margin PK

Frequency (MHz)	MaxPeak (dB _A V/m)	Margin (dB)	Limit (dB _A V/m)	Polarity	Corr. (dB)
1070.000000	42.3	31.7	74.0	V	-16.8
1273.500000	32.4	41.6	74.0	V	-16.0
1605.000000	43.2	30.8	74.0	V	-14.8
2120.000000	34.3	39.7	74.0	V	-12.5
2958.500000	36.7	37.3	74.0	V	-10.1
4048.500000	39.6	34.4	74.0	V	-7.2

Date: 1/30/2010 - Time: 11:37:50 AM

Tested by:



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Limit and Margin AV

Frequency (MHz)	Average (dB μ V/m)	Margin (dB)	Limit (dB μ V/m)	Polarity	Corr. (dB)
1070.000000	40.0	14.0	54.0	V	-16.8
1273.500000	19.8	34.2	54.0	V	-16.0
1605.000000	35.0	19.0	54.0	V	-14.8
2120.000000	20.8	33.2	54.0	V	-12.5
2958.500000	23.0	31.0	54.0	V	-10.1
4048.500000	26.6	27.4	54.0	V	-7.2

Date: 1/30/2010 - Time: 11:37:50 AM

Tested by:



Reviewed by:



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EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

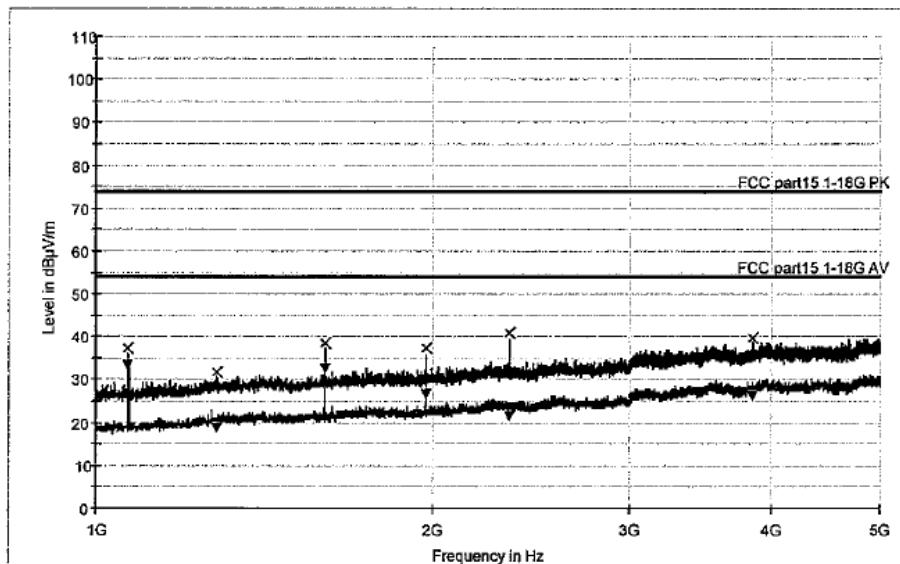
Test Information

Manufacturer: Wireless receiver
Test Item: UEM-8M UEM-8PR
Identification FCC Part 15.109
Test Standard: RE
Test Detail: Receiving @ Lowest frequency
Operation Mode: 23 °C; 50%RH; 101 kPa.
Climate Condition: DC 9V
Test Voltage / Freq.: 173050057
Receipt No.:
Report No.: Pass
Result: Horizontal
Comment:



Subrange 1

Frequency Range: 1GHz - 5GHz
Receiver: TUV FSP 30
Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



Limit and Margin PK

Frequency (MHz)	MaxPeak (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
1070.000000	37.4	36.6	74.0	H	-16.8
1287.000000	31.7	42.3	74.0	H	-15.9
1605.000000	38.6	35.4	74.0	H	-14.8
1973.000000	37.5	36.5	74.0	H	-12.8
2341.500000	40.8	33.2	74.0	H	-11.7
3849.000000	39.6	34.4	74.0	H	-7.4

Date: 1/30/2010 - Time: 11:31:00 AM

Tested by:



Reviewed by:



Prüfbericht - Nr.:
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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dB μ V/m)	Margin (dB)	Limit (dB μ V/m)	Polarity	Corr. (dB)
1070.000000	33.3	20.7	54.0	H	-16.8
1287.000000	18.5	35.5	54.0	H	-15.9
1605.000000	32.5	21.5	54.0	H	-14.8
1973.000000	26.8	27.2	54.0	H	-12.8
2341.500000	21.6	32.4	54.0	H	-11.7
3849.000000	26.0	28.0	54.0	H	-7.4

Date: 1/30/2010 - Time: 11:31:00 AM

Tested by:



Reviewed by:



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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

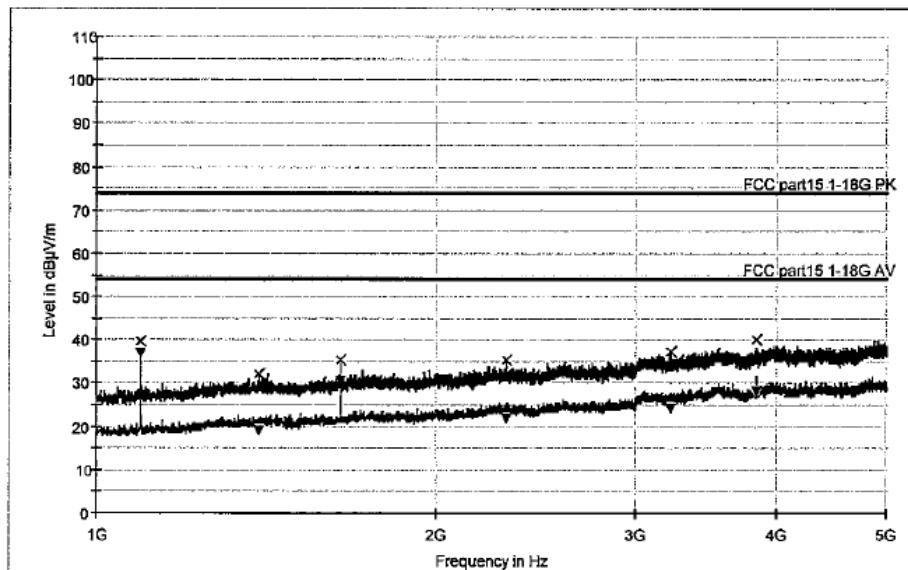
Test Information

Manufacturer:
Test Item:
Identification:
Test Standard:
Test Detail:
Operation Mode:
Climate Condition:
Test Voltage / Freq. :
Receipt No.:
Report No.
Result:
Comment:

Wireless receiver
UEM-8M **UEM-8PR** 
FCC Part 15.109
RE
Receiving @ Middle frequency
23 °C; 50%RH; 101 kPa.
DC 9V
173050057
Pass
Horizontal

Subrange 1

Frequency Range: 1GHz - 5GHz
Receiver: TUV FSP 30
Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



Limit and Margin PK

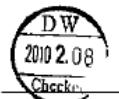
Frequency (MHz)	MaxPeak (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
1096.000000	39.9	34.1	74.0	H	-16.7
1394.500000	32.3	41.7	74.0	H	-15.5
1644.000000	35.3	38.7	74.0	H	-14.6
2310.500000	35.3	38.7	74.0	H	-11.7
3212.000000	37.4	36.6	74.0	H	-9.6
3835.500000	40.3	33.7	74.0	H	-7.5

Date: 1/30/2010 - Time: 11:22:28 AM

Tested by:



Reviewed by:



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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dB μ V/m)	Margin (dB)	Limit (dB μ V/m)	Polarity	Corr. (dB)
1096.000000	37.0	17.0	54.0	H	-16.7
1394.500000	19.0	35.0	54.0	H	-15.5
1644.000000	30.6	23.4	54.0	H	-14.6
2310.500000	21.7	32.3	54.0	H	-11.7
3212.000000	24.3	29.7	54.0	H	-9.6
3835.500000	28.1	25.9	54.0	H	-7.5

Date: 1/30/2010 - Time: 11:22:28 AM

Tested by:



Reviewed by:



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EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

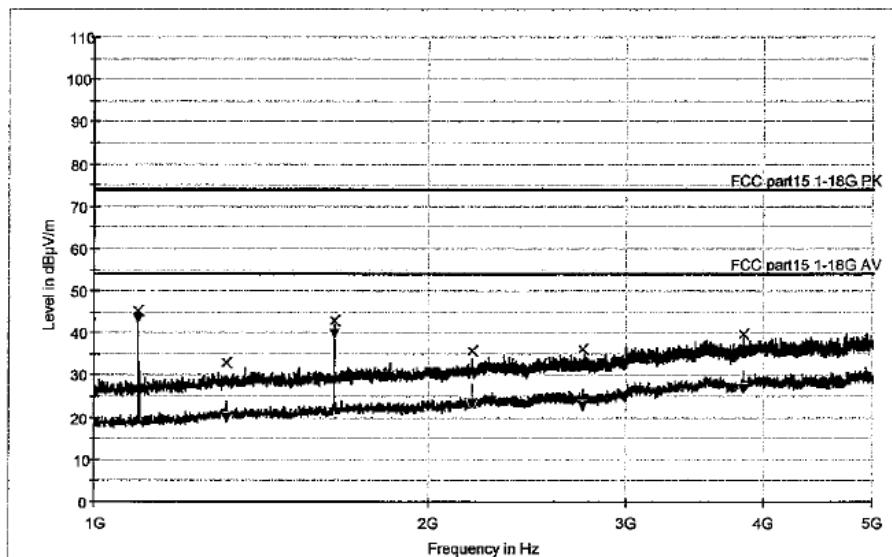
Test Information

Manufacturer: Wireless receiver
Test Item: UEM-8M UEM-8DR
Identification: FCC Part 15.109
Test Standard: RE
Test Detail: Receiving @ Middle frequency
Operation Mode: 23 °C; 50%RH; 101 kPa.
Climate Condition: DC 9V
Test Voltage / Freq.: 173050057
Receipt No.: Report No.
Result: Pass
Comment: Vertical



Subrange 1

Frequency Range: 1GHz - 5GHz
Receiver: TUV FSP 30
Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



Limit and Margin PK

Frequency (MHz)	MaxPeak (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
1096.000000	45.3	28.7	74.0	V	-16.7
1312.000000	33.1	40.9	74.0	V	-15.9
1644.000000	43.0	31.0	74.0	V	-14.6
2192.000000	35.9	38.1	74.0	V	-12.4
2739.500000	36.0	38.0	74.0	V	-10.8
3835.500000	39.7	34.3	74.0	V	-7.5

Date: 1/30/2010 - Time: 11:16:03 AM

Tested by:



Reviewed by:



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Limit and Margin AV

Frequency (MHz)	Average (dB μ V/m)	Margin (dB)	Limit (dB μ V/m)	Polarity	Corr. (dB)
1096.000000	43.2	10.8	54.0	V	-16.7
1312.000000	19.8	34.2	54.0	V	-15.9
1644.000000	39.6	14.4	54.0	V	-14.6
2192.000000	23.4	30.6	54.0	V	-12.4
2739.500000	22.6	31.4	54.0	V	-10.8
3835.500000	26.6	27.4	54.0	V	-7.5

Date: 1/30/2010 - Time: 11:16:03 AM

Tested by:



Reviewed by:



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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

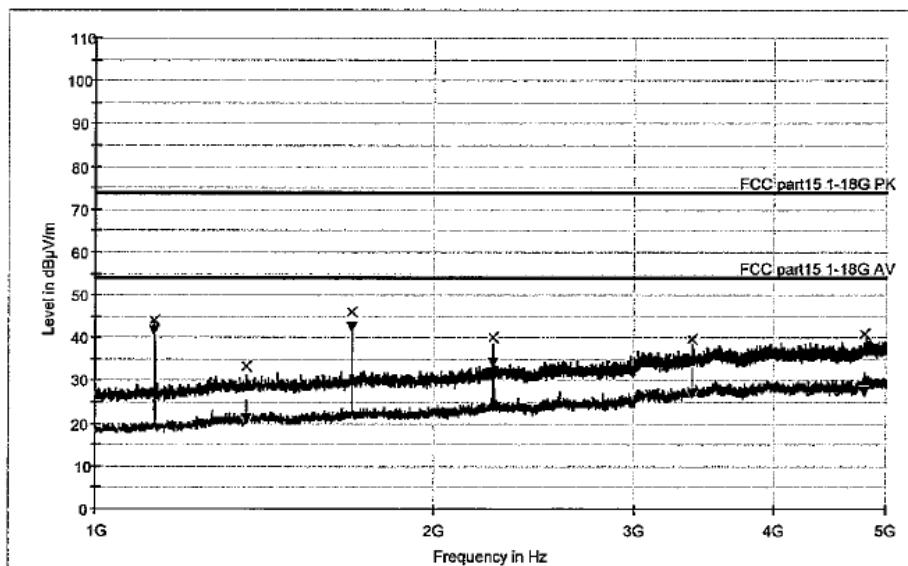
Test Information

Manufacturer:
Test Item:
Identification:
Test Standard:
Test Detail:
Operation Mode:
Climate Condition:
Test Voltage / Freq. :
Receipt No.:
Report No.
Result:
Comment:

Wireless receiver
UEM-8M 
FCC Part 15.109
RE
Receiving @ Highest frequency
23 °C; 50%RH; 101 kPa.
DC 9V
173050057
Pass
Vertical

Subrange 1

Frequency Range: 1GHz - 5GHz
Receiver: TUV FSP 30
Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



Limit and Margin PK

Frequency (MHz)	MaxPeak (dB μV/m)	Margin (dB)	Limit (dB μV/m)	Polarity	Corr. (dB)
1127.000000	43.9	30.1	74.0	V	-16.7
1359.000000	33.3	40.7	74.0	V	-15.8
1691.000000	45.9	28.1	74.0	V	-14.4
2255.000000	40.2	33.8	74.0	V	-11.5
3382.000000	39.8	34.2	74.0	V	-8.5
4792.000000	41.1	32.9	74.0	V	-5.9

Date: 1/30/2010 - Time: 11:07:37 AM

Tested by:



Reviewed by:



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EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dB μ V/m)	Margin (dB)	Limit (dB μ V/m)	Polarity	Corr. (dB)
1127.000000	41.7	12.3	54.0	V	-16.7
1359.000000	21.0	33.0	54.0	V	-15.8
1691.000000	42.6	11.4	54.0	V	-14.4
2255.000000	34.2	19.8	54.0	V	-11.5
3382.000000	27.0	27.0	54.0	V	-8.5
4792.000000	27.5	26.5	54.0	V	-5.9

Date: 1/30/2010 - Time: 11:07:37 AM

Tested by:



Reviewed by:



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EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

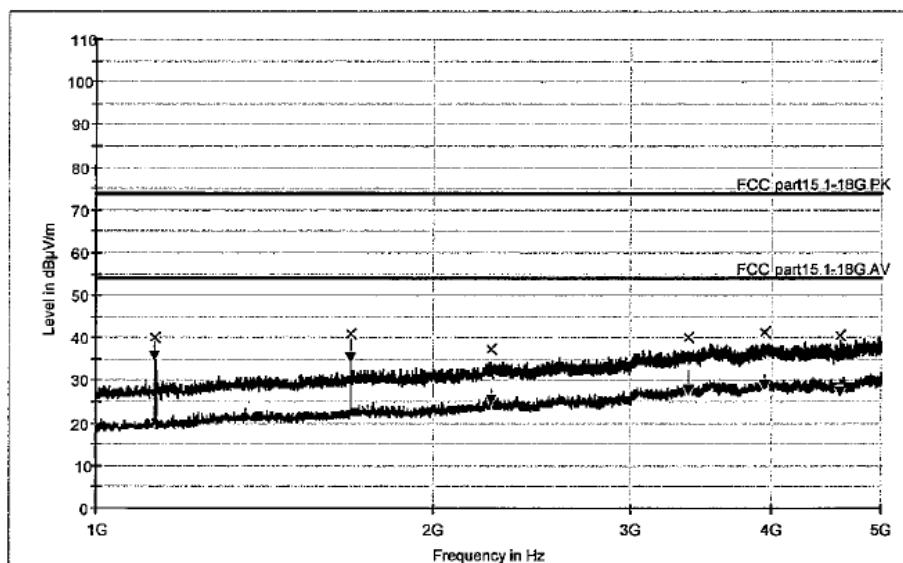
Test Information

Manufacturer: Wireless receiver
Test Item: UEM-8M UEM-8DR
Identification: FCC Part 15.109
Test Standard: RE
Test Detail: Receiving @ Highest frequency
Operation Mode: 23 °C; 50%RH; 101 kPa.
Climate Condition: DC 9V
Test Voltage / Freq.: 173050057
Receipt No.:
Report No.: Pass
Result: Comment: Horizontal



Subrange 1

Frequency Range: 1GHz - 5GHz
Receiver: TUV FSP 30
Transducer: TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



Limit and Margin PK

Frequency (MHz)	MaxPeak (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
1127.000000	40.1	33.9	74.0	H	-16.7
1691.000000	41.1	32.9	74.0	H	-14.4
2255.000000	37.3	36.7	74.0	H	-11.5
3382.500000	40.1	33.9	74.0	H	-8.5
3946.000000	41.5	32.5	74.0	H	-6.8
4604.500000	40.6	33.4	74.0	H	-6.6

Date: 1/30/2010 - Time: 10:58:02 AM

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TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin AV

Frequency (MHz)	Average (dB μ V/m)	Margin (dB)	Limit (dB μ V/m)	Polarity	Corr. (dB)
1127.000000	35.7	18.3	54.0	H	-16.7
1691.000000	35.2	18.8	54.0	H	-14.4
2255.000000	25.5	28.5	54.0	H	-11.5
3382.500000	27.6	26.4	54.0	H	-8.5
3946.000000	28.8	25.2	54.0	H	-6.8
4604.500000	27.2	26.8	54.0	H	-6.6

Date: 1/30/2010 - Time: 10:58:02 AM

Tested by:



Reviewed by:



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Disturbances other than those mentioned above are far below the limit or not detectable.

The final measurement for frequencies below 1000MHz is performed with Quasi Peak detector; the final measurement for frequencies above 1000MHz is performed with Average and Peak detector.

The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test.

The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz at frequency below 1GHz.

The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz at frequency above 1GHz.

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6 Photographs of the Test Set-Up

Photograph 1: Set-up for Radiation Measurement Below 1GHz



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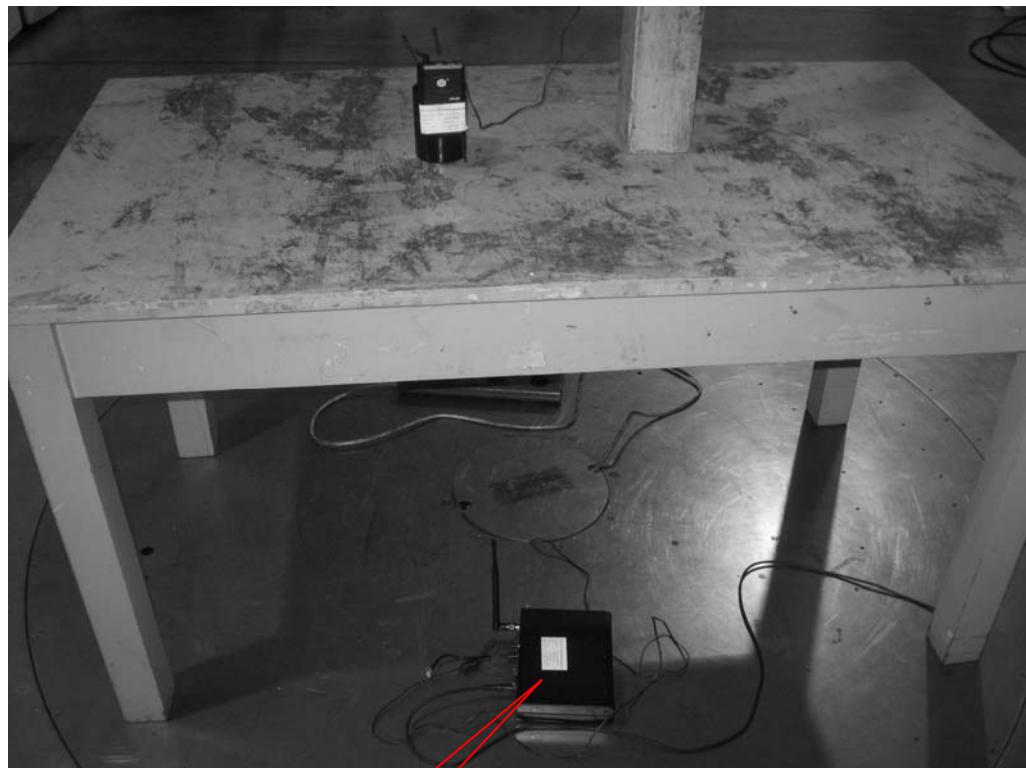
Photograph 2: Set-up for Radiation Measurement Above 1GHz



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Transmitter

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