APPLICATION FOR CERTIFICATION
On Behalf of

Measurement Ltd.

Tire Pressure Measuring System (TPMS)

Model Number: MS-4362

FCC ID: UUIMS-4362TPMS

Prepared for : Measurement Ltd.
Block A, 19/F, Prince Industrial Building, 106 King Fuk Street, San Po Kong, Kowloon, H.K

Prepared By : Audix Technology (Shenzhen) Co., Ltd.
No. 6, Ke Feng Rd., 52 Block,
Shenzhen Science & Industrial Park,
Nantou, Shenzhen, Guangdong, China

Tel: (0755) 26639496

Report Number	:	ACS-F10071
Date of Test	:	Apr.02~07, 2010
Date of Report	:	Apr.09, 2010

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TEST REPORT CERTIFICATION

Applicant	:	Measurement Ltd.
EUT Description	:	Tire Pressure Measuring System (TPMS)
FCC ID	:	UUIMS-4362TPMS
(A)MODEL NO.	:	MS-4362
(B)SERIAL NO.	:	N/A
(C)POWER SUPPLY	:	AC 120V/60Hz
(D)TEST VOLTAGE	:	AC 120V/60Hz

Test Procedure Used:

FCC Rules and Regulations Part 15 Subpart B Class B 2008, ANSI C63.4-2003

The device described above is tested by Audix Technology (Shenzhen) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits for radiated and conducted emissions.

The test results are contained in this test report and Audix Technology (Shenzhen) Co., Ltd. is assumed full responsibility for the accuracy and completeness of tests. Also, this report shows that EUT is technically compliant with FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shenzhen) Co., Ltd.

Date of Test : Apr.02~07, 2010

Prepared by : Edie Huang
Edie Huang / Assistant

Reviewer :
Jamy Yu / Supervisor

AUDIX ®信華科技(深圳)有限公司
Audix Technology (Shenzhen) Co., Ltd.
EMC 部門報告專用章
Stamp only for EMC Dept. Report
Signature: Ken Lu 4/12 10'

Approved & Authorized Signer :
Ken Lu / Manager

1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION			
Description of Test Item	**Standard**	**Limits**	**Results**
Power Line Conducted Emission Test	FCC Part 15: 2008 ANSI C63.4: 2003	Class B	PASS
Radiated Emission Test	FCC Part 15: 2008 ANSI C63.4: 2003	Class B	PASS

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Product name	:	Tire Pressure Measuring System (TPMS)
Model Number	:	MS-4362
FCC ID	:	UUIMS-4362TPMS
Receive frequency	:	433.92MHz
Applicant	:	Measurement Ltd. Block A,19/F, Prince Industrial Building, 106 King Fuk Street, San Po Kong, Kowloon, H.K
Power Adapter	:	Manufacturer: HON-KWANG M/N: D9300CEC Cable: Unshielded, Undetachable, 1.8m
Date of Test	:	Apr.02~07, 2010
Date of Receipt	:	Apr.01, 2010
Sample Type	:	Prototype production

2.2. Test Facility

Site Description

Name of Firm	:	Audix Technology (Shenzhen) Co., Ltd. No. 6, Ke Feng Rd., 52 Block, Shenzhen Science & Industrial Park, Nantou, Shenzhen, Guangdong, China
3m Anechoic Chamber	:	Mar. 31, 2009 File on Federal Communication Commission Registration Number: 90454
3m & 10m Anechoic Chamber	:	Dec. 30, 2009 File on Federal Communication Commission Registration Number: 794232
EMC Lab.	:	Accredited by DATech, German Registration Number: DAT-P-091/99-01 Feb. 02, 2009 Accredited by NVLAP, USA NVLAP Code: 200372-0 Apr.01, 2010

2.3. Test Uncertainty (95% confidence levels, k=2)

Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 1 Conduction	2.40dB
Uncertainty for Radiation Emission test in 3m chamber	3.82 dB (Polarize: V)
	4.32 dB (Polarize: H)
Uncertainty for test site temperature and humidity	0.6℃
	3%

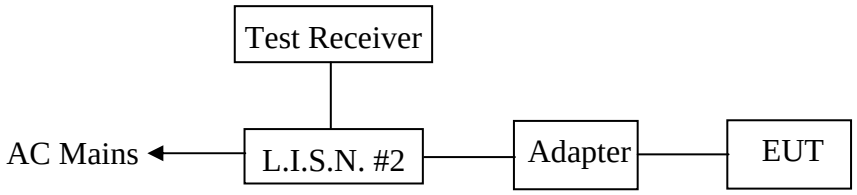
3. POWER LINE CONDUCTED EMISSION TEST

3.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Test Receiver	Rohde & Schwarz	ESHS20	836600/006	May.08, 09	1 Year
2	L.I.S.N.#2	Kyoritsu	KNW-407	8-1636-1	May.08, 09	1 Year
3	Terminator	Hubersuhner	50Ω	No. 1	May.08, 09	1 Year
4	RF Cable	Fujikura	3D-2W	LISN Cable 1#	May.08, 09	1Year
5	Coaxial Switch	Anritsu	MP59B	M55367	May.08, 09	1 Year
6	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	May.08, 09	1 Year

3.2. Block Diagram of Test Setup

3.2.1. Block diagram of connection between the EUT and Supporting System



(EUT: Tire Pressure Measuring System (TPMS))

3.3. Power Line Conducted Emission Test Limits

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. * Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

3.4. Configuration of EUT on Test

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

3.4.1. Tire Pressure Measuring System (TPMS) (EUT)

Model Number : MS-4362
Serial Number : N/A

3.4.2. Support Equipment : As Tested Supporting System Detail, in Section 2.2

3.5. Operating Condition of EUT

3.5.1. Setup the EUT and simulator as shown as Section 3.2.

3.5.2. Turned on the power of all equipment.

3.5.3. Let the EUT worked in test modes (Rx Mode) and measured it.

3.6. Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power Via Adapter connected to the power mains through a line impedance stabilization network (L.I.S.N. 2#). This provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs). The AC line 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 Test.

The bandwidth of test receiver (R & S ESHS20) is set at 10kHz.

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

The test result are reported on Section 3.7.,

3.7. Power Line Conducted Emission Test Results

PASS. **(**All emissions not reported below are too low against the prescribed limits.)

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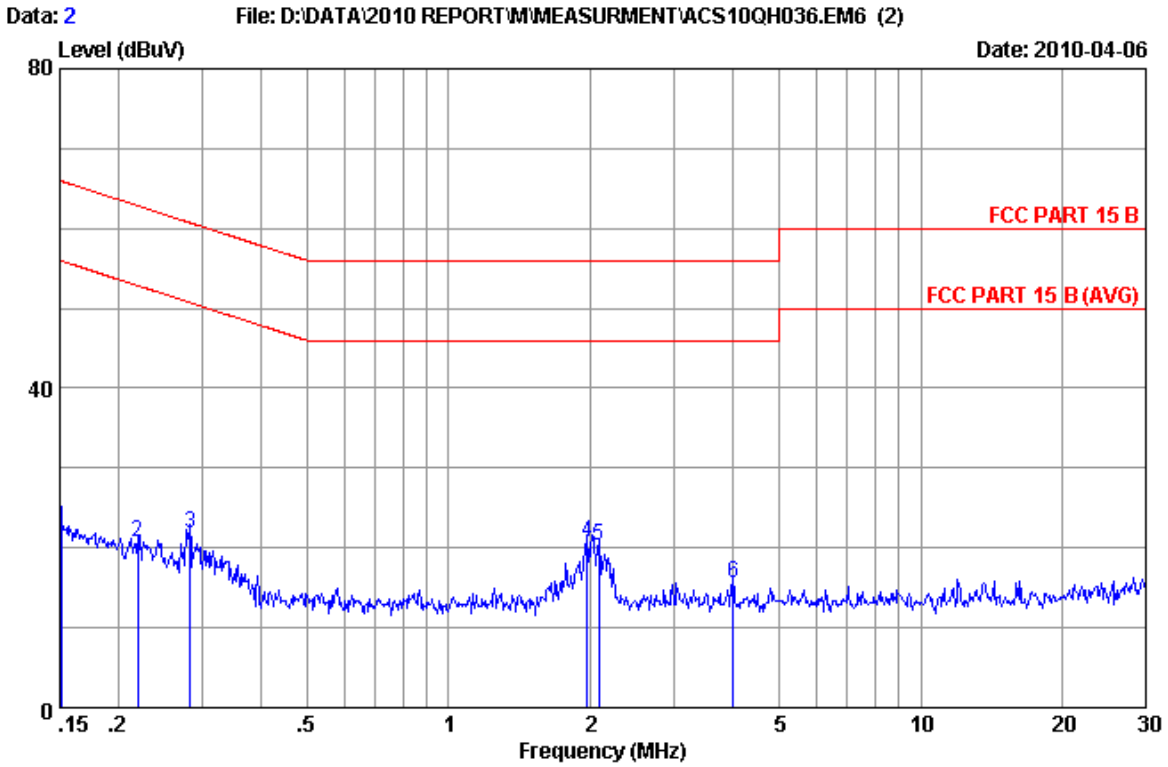

Site no :Audix No.1 Conduction Data no :2
Dis./Ant. :** 2009 ESH2-Z5 LINE
Limit :FCC PART 15 B
Env./Ins. :Temp:23'C Humi:54% Engineer :Leo-Li
EUT :TPMS M/N:MS-4362
Power Rating :AC 120V/60Hz
Test Mode :Rx Mode

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15160	0.21	9.88	12.39	22.48	65.91	43.43	QP
2	0.21967	0.18	9.88	10.61	20.67	62.83	42.16	QP
3	0.28328	0.18	9.88	11.82	21.88	60.72	38.84	QP
4	1.970	0.21	9.90	10.62	20.73	56.00	35.27	QP
5	2.077	0.21	9.90	10.12	20.23	56.00	35.77	QP
6	4.006	0.28	9.91	5.34	15.53	56.00	40.47	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
2.If the average limit is met when useing a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

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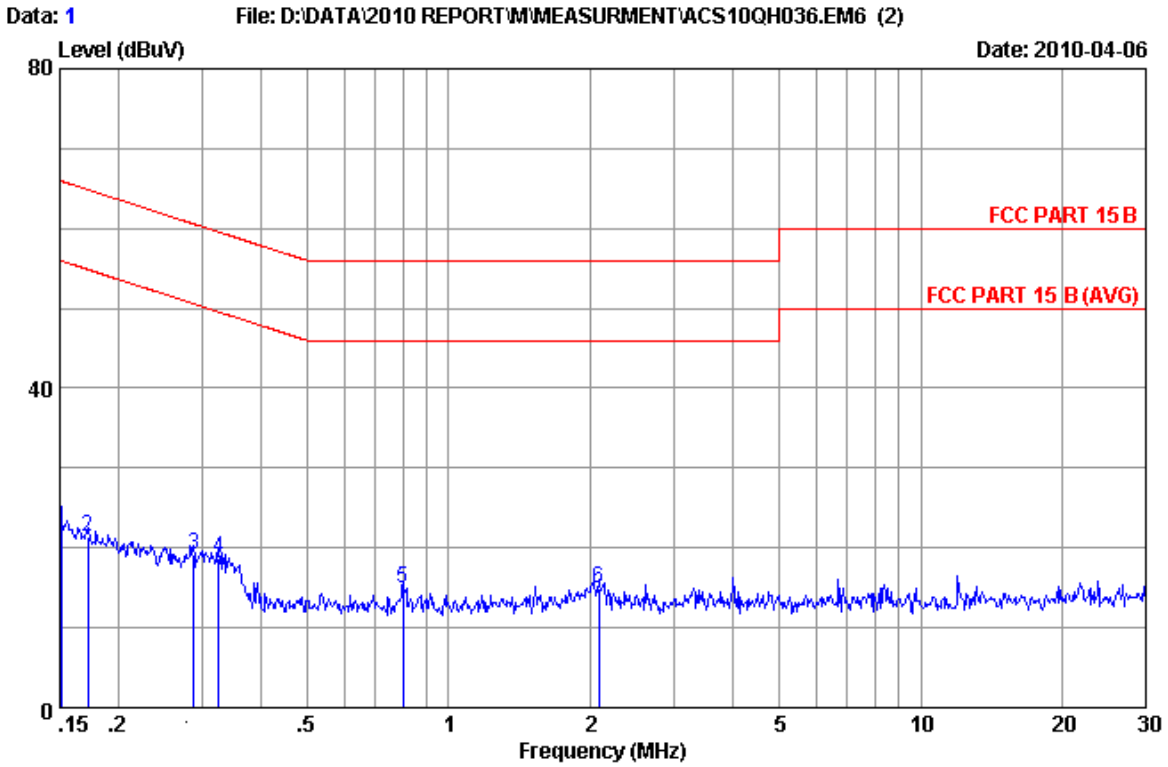


Site no :Audix No.1 Conduction Data no :1
Dis./Ant. :** 2009 ESH2-Z5 NEUTRAL
Limit :FCC PART 15 B
Env./Ins. :Temp:23'C Humi:54% Engineer :Leo-Li
EUT :TPMS M/N:MS-4362
Power Rating :AC 120V/60Hz
Test Mode :Rx Mode

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15160	0.20	9.88	12.45	22.53	65.91	43.38	QP
2	0.17215	0.20	9.88	11.38	21.46	64.86	43.40	QP
3	0.28782	0.20	9.88	9.16	19.24	60.59	41.35	QP
4	0.32512	0.20	9.89	8.73	18.82	59.57	40.75	QP
5	0.80023	0.19	9.89	4.83	14.91	56.00	41.09	QP
6	2.077	0.21	9.90	4.85	14.96	56.00	41.04	QP

Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
2.If the average limit is met when useing a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.

4. RADIATED EMISSION TEST

4.1. Test Equipment

Frequency rang: 30~1000MHz

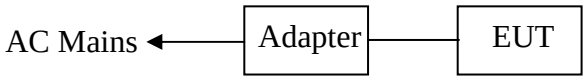
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Dec.05,09	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 09	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 09	1 Year
4	Amplifier	HP	8447D	2648A04738	May.08, 09	1 Year
5	Bilog Antenna	Schaffner	CBL6111C	2598	Dec.14, 09	1 Year
6	RF Cable	MIYAZAKI	8D-FB	3# Chamber No.1	May.08, 09	1 Year
7	Coaxial Switch	Anritsu	MP59B	M73989	May.08, 09	1 Year

Frequency rang: above 1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 09	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	Nov.25, 09	1.5 Year
3	Horn Antenna	EMCO	3116	00060089	Dec.03, 09	1.5 Year
4	Amplifier	Agilent	8449B	3008A00863	May.08, 09	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	Nov.28, 09	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX102	29091/2	Nov.28, 09	1 Year
7	RF Cable	Hubersuhner	SUCOFLEX 102	28618/2	May.08, 09	1Year

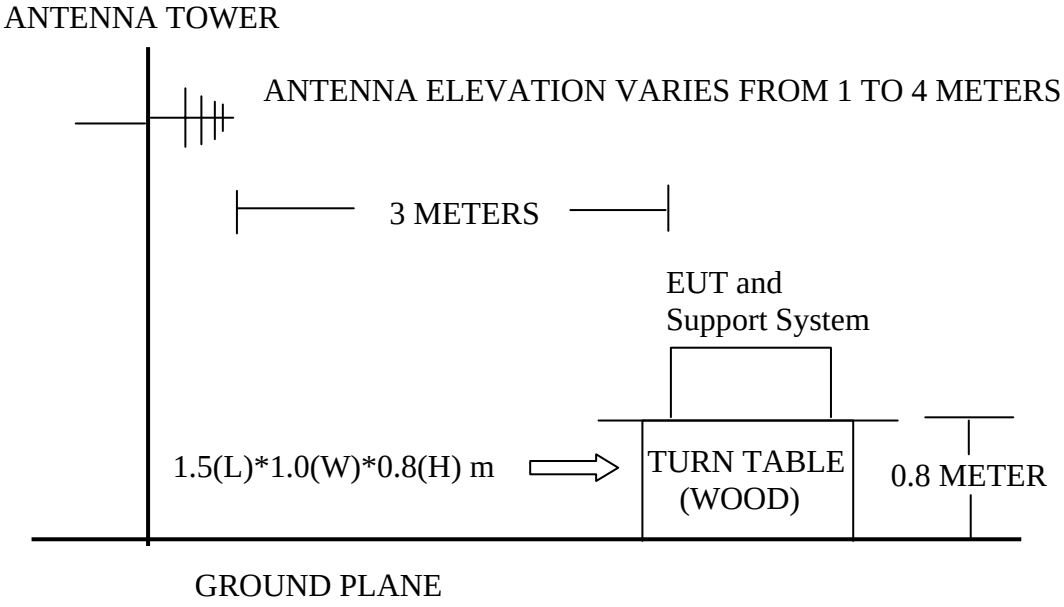
4.2. Block Diagram of Test Setup

4.2.1.Block Diagram of connection between EUT and simulators



(EUT: Tire Pressure Measuring System (TPMS))

4.2.2.Anechoic Chamber Setup Diagram



4.3. Radiated Emission Limit

Frequency MHz	Distance (Meters)	Field Strengths Limits dB(μV)/m
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0

Remark**:** (1) Emission level = Antenna Factor + Cable Loss + Reading
(2) The smaller limit shall apply at the cross point between two frequency bands.
(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

4.4. EUT Configuration on Test

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

4.4.1. Tire Pressure Measuring System (TPMS) (EUT)

Model Number : MS-4362
Serial Number : N/A

4.5. Operating Condition of EUT

4.5.1. Setup the EUT as shown in Section 4.2..

4.5.2. Turned on the power of all equipment.

4.5.3. Let the EUT worked in test mode (Rx Mode) and tested it.

4.6. Test Procedure

The EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 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 polarization of the antenna is set on Test. 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 Test.

The bandwidth setting on the test receiver (R&S TEST RECEIVER ESCI) is 120 kHz.

4.7. Radiated Emission Test Results

PASS.

Test Frequency: 30MHz-1000MHz

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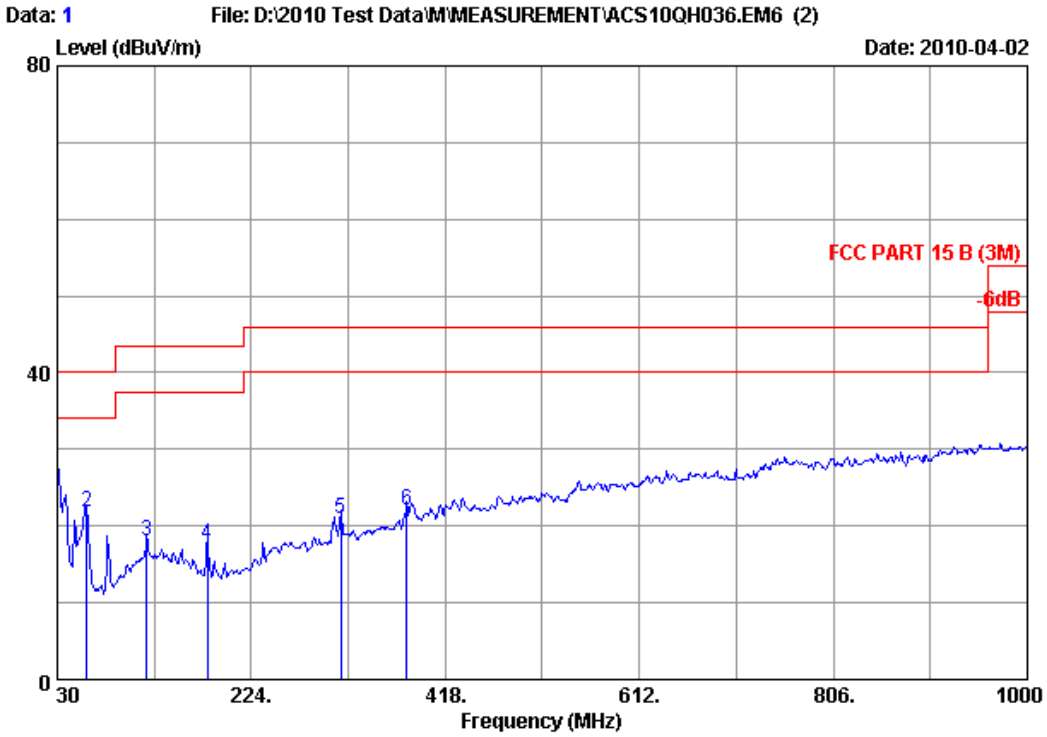

Site no. : 3m chamber
Dis. / Ant. : 3m 2009 CBL6111C
Limit : FCC PART 15 B (3M)
Env. / Ins. : 24*C/56%
EUT : TPMS M/N:MS-4362
Power Rating : AC120V/60Hz
Test Mode : Rx Mode

Data no. : 1
Ant. pol. : HORIZONTAL

Engineer : Leo-Li

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.000	20.00	0.52	6.58	27.10	40.00	12.90	QP
2	59.100	6.22	0.70	14.86	21.78	40.00	18.22	QP
3	119.240	11.86	0.98	5.12	17.96	43.50	25.54	QP
4	180.350	9.40	1.22	7.08	17.70	43.50	25.80	QP
5	313.240	14.06	1.76	5.14	20.96	46.00	25.04	QP
6	379.200	15.68	1.89	4.52	22.09	46.00	23.91	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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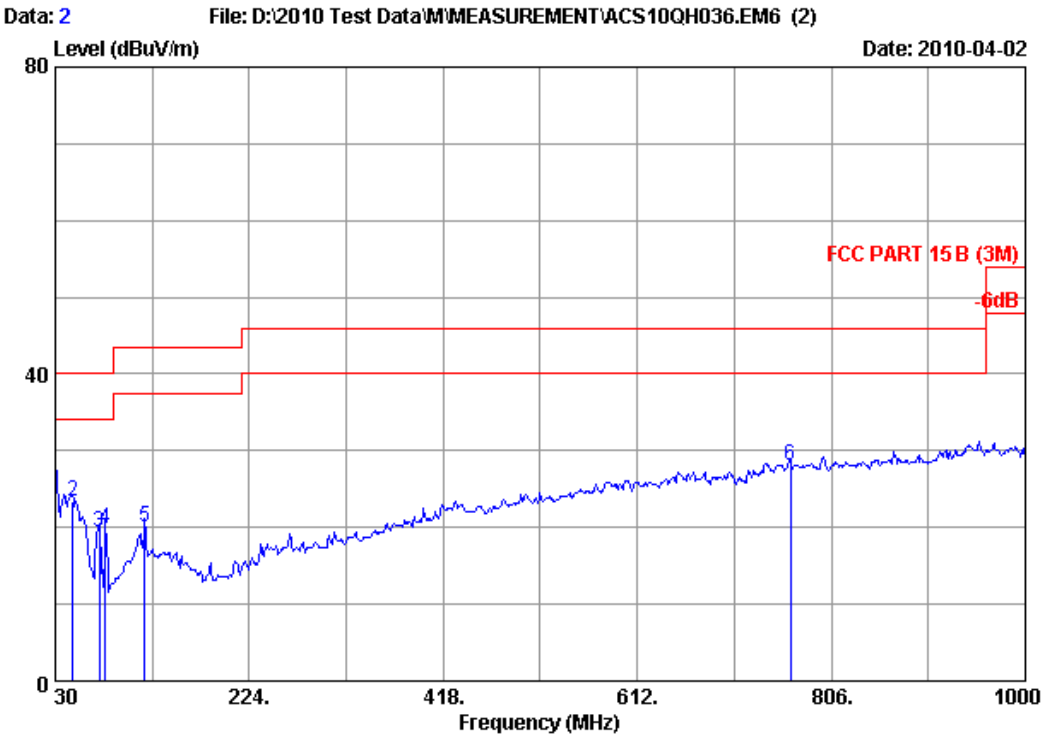

Site no. : 3m chamber
Dis. / Ant. : 3m 2009 CBL6111C
Limit : FCC PART 15 B (3M)
Env. / Ins. : 24*C/56%
EUT : TPMS M/N:MS-4362
Power Rating : AC120V/60Hz
Test Mode : Rx Mode

Data no. : 2
Ant. pol. : VERTICAL

Engineer : Leo-Li

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.000	20.00	0.52	6.86	27.38	40.00	12.62	QP
2	47.460	10.55	0.63	12.13	23.31	40.00	16.69	QP
3	73.650	7.16	0.78	11.47	19.41	40.00	20.59	QP
4	80.440	7.80	0.81	11.32	19.93	40.00	20.07	QP
5	119.240	11.86	0.98	7.29	20.13	43.50	23.37	QP
6	765.260	22.05	2.96	3.04	28.05	46.00	17.95	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Test Frequency: 1GHz-5GHz

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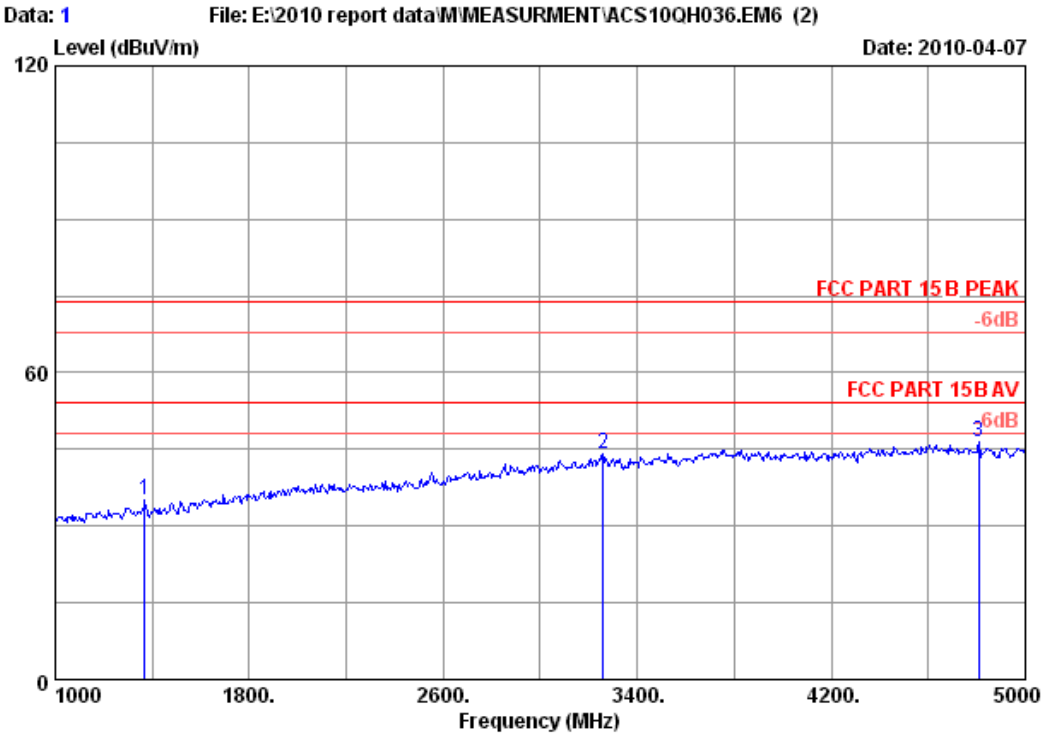

Site no. : 3m Chamber
Dis. / Ant. : 3m 3115(0911)
Limit : FCC PART 15B PEAK
Env. / Ins. : 23*C/54%
EUT : TPMS M/N:MS-4362
Power : AC 120V/60Hz
Test mode : Rx Mode
M/N :

Data no. : 1
Ant. pol. : HORIZONTAL
Engineer : Leo_Li

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1368.000	26.16	6.36	36.40	38.90	35.02	74.00	38.98	Peak
2	3260.000	32.67	10.28	35.79	36.97	44.13	74.00	29.87	Peak
3	4808.000	34.30	12.35	35.37	35.02	46.30	74.00	27.70	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

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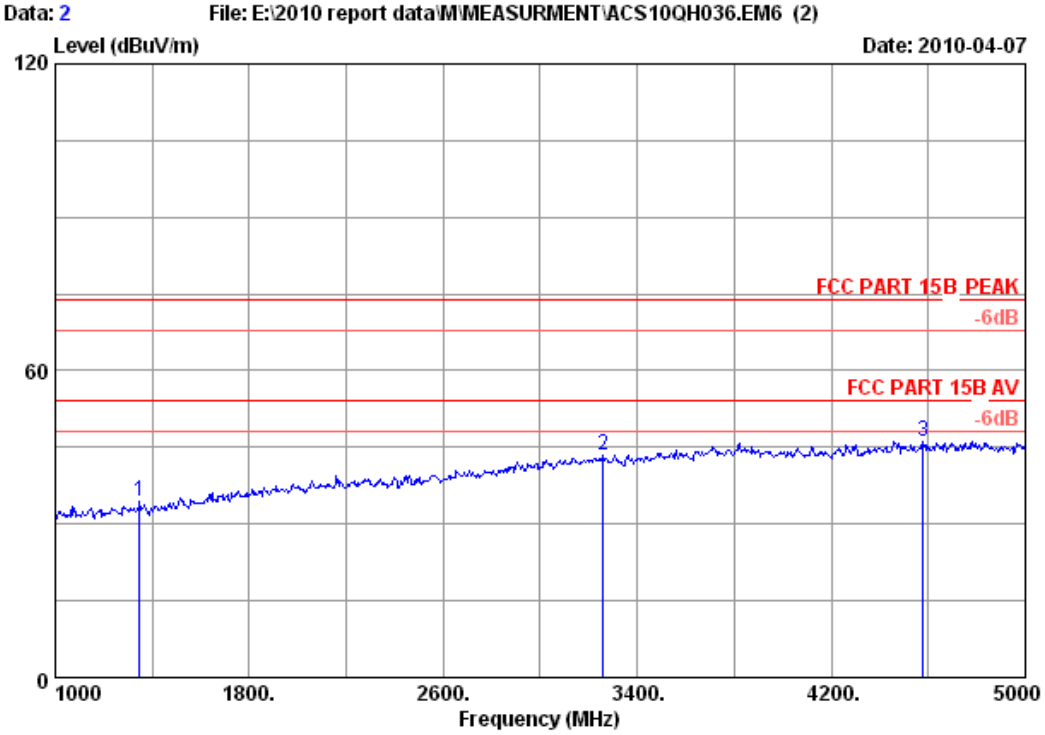

Site no. : 3m Chamber
Dis. / Ant. : 3m 3115(0911)
Limit : FCC PART 15B PEAK
Env. / Ins. : 23*C/54%
EUT : TPMS M/N:MS-4362
Power : AC 120V/60Hz
Test mode : Rx Mode
M/N :

Data no. : 2
Ant. pol. : VERTICAL
Engineer : Leo_Li

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1348.000	26.09	6.36	36.67	38.52	34.30	74.00	39.70	Peak
2	3260.000	32.67	10.28	35.79	36.14	43.30	74.00	30.70	Peak
3	4580.000	33.94	12.08	35.31	35.45	46.16	74.00	27.84	Peak

Remarks:
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

5. DEVIATION TO TEST SPECIFICATIONS

[NONE]