

# FCC Test Report

Product Name : Tire Pressure Monitoring System  
Trade Name : ORO  
Model No. : W206  
FCC ID. : W55206FM1B2

Applicant : Oro Technology Co., LTD  
Address : 3F, No.29, 21th Road, Industrial Park,  
Taichung 408, Taiwan

Date of Receipt : Dec. 13, 2016  
Issued Date : Feb. 23, 2017  
Report No. : 16C0270R-RFUSP14V00  
Report Version : V1.0



The declaration results relate only to the samples calculated.

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# Test Report Certification

Issued Date : Feb. 23, 2017

Report No. : 16C0270R-RFUSP14V00



Product Name : Tire Pressure Monitoring System  
Applicant : Oro Technology Co., LTD  
Address : 3F, No.29, 21th Road, Industrial Park, Taichung 408, Taiwan  
Manufacturer : Oro Technology Co., LTD  
Model No. : W206  
FCC ID. : W55206FM1B2  
EUT Voltage : DC 3V (Power by Battery)  
Testing Voltage : DC 3V (Power by Battery)  
Trade Name : ORO  
Applicable Standard : FCC 15 Subpart C Section 15.231(b): 2015  
Test Lab : Hsin Chu Laboratory  
Test Result : Complied

The test results relate only to the samples tested.

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Documented By :



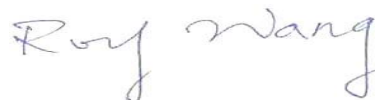
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Reviewed By :



(Elwin Lin / Assistant Engineer)

Approved By :



( Roy Wang / Director )

**Revision History**

Report No.	Version	Description	Issued Date
16C0270R-RFUSP14V00	V1.0	Initial issue of report.	Feb. 23, 2017

## Laboratory Information

We, **DEKRA Testing and Certification Co., Ltd.**, are an independent RF consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025 specified testing scopes:

<b>Taiwan R.O.C.</b>	<b>:</b>	<b>TAF, Accreditation Number: 3024</b>
<b>USA</b>	<b>:</b>	<b>FCC, Registration Number: 834100</b>
<b>Canada</b>	<b>:</b>	<b>IC, Submission No: 181665 / IC Registration Number: 22397-1 / 22397-2 / 22397-3</b>

The related certificate for our laboratories about the test site and management system can be downloaded from DEKRA Testing and Certification Co., Ltd. Web Site:

<http://www.dekra.com.tw/english/about/certificates.aspx?bval=5>

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site : [http://www.dekra.com.tw/index\\_en.aspx](http://www.dekra.com.tw/index_en.aspx)

If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

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## 1. General Information

### 1.1. EUT Description

Product Name	Tire Pressure Monitoring System
Trade Name	ORO
Model No.	W206
Frequency Range	433.92 MHz
Channel Number	1
Type of Modulation	FSK, ASK

Antenna Information	
Antenna Type	Monopole Antenna
Antenna Gain	0 dBi

Working Frequency of Each Channel	
Channel	Frequency
001	433.92 MHz

#### Note:

1. This device is a Tire Pressure Monitoring System included a 433.92MHz transceiver function.
2. These tests are conducted on a sample for the purpose of demonstrating compliance with Part 15 Subpart C Paragraph 15.231.
3. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.
4. This device is a composite device in accordance with Part 15 regulations. The function receiving was measured and made a test report that the report number is 16C0270R-RFUSP01V00 under Declaration of Conformity.

## 1.2. Test Mode

DEKRA verified the construction and function in typical operation. All the test modes are performed in normal operation and are defined as:

Pre-Test Mode	
TX	Mode 1: Transmit
Final Test Mode	
TX	Mode 1: Transmit

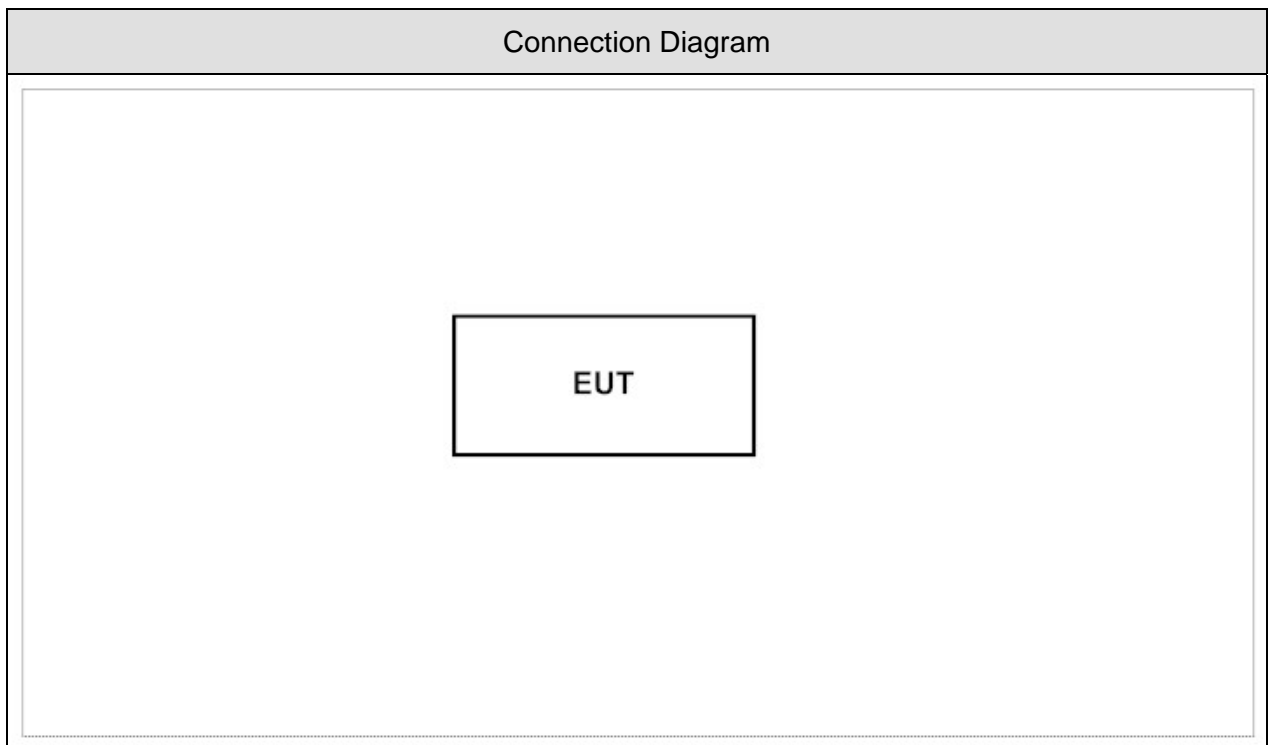
Emission	
Performed Item	Mode 1
Conducted Emission	No
Radiated Emission	Yes
Occupied Bandwidth	Yes
Duty cycle	Yes
Transmitter time	Yes

### 1.3. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product	Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
N/A					

### 1.4. Configuration of tested System



### 1.5. EUT Exercise Software

1	Setup the EUT as shown in section 1.4.
2	The EUT will transmit automatically.
3	Verify that the EUT works properly.



## 2. Radiated Emission

### 2.1. Test Equipment

The following test equipments are used during the test:

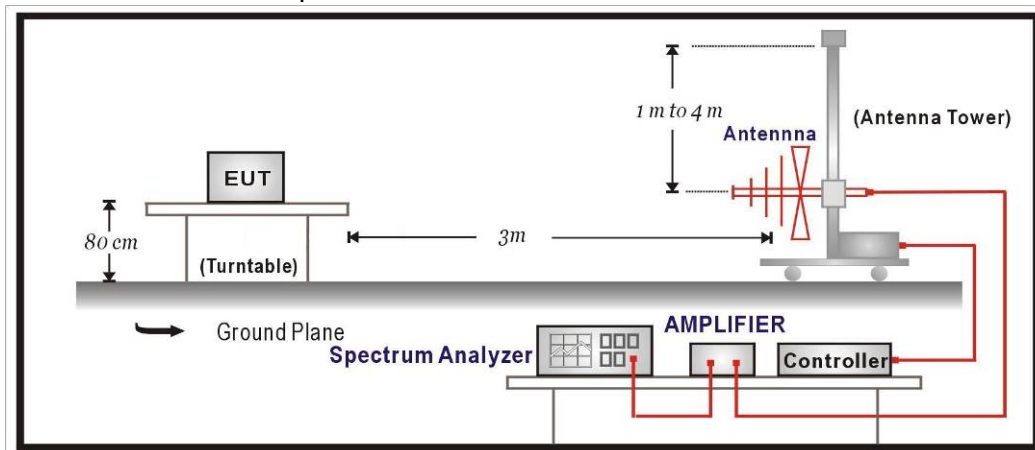
#### Radiated Emission / CB4-H

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Bilog Antenna	Schaffner	CBL6112B	2891	2017/08/14
Horn Antenna	Schwarzbeck	BBHA 9120	D312	2017/10/25
Pre-Amplifier	EMCI	EMC0031835	980233	2018/02/02
Pre-Amplifier	Schwarzbeck	DBL-1840N506	013	2017/09/29
Pre-Amplifier	Miteq	JS41-001040000-58-5P	1573954	2017/10/04
Horn Antenna	Schwarzbeck	BBHA 9170	203	2017/08/28
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/01/22

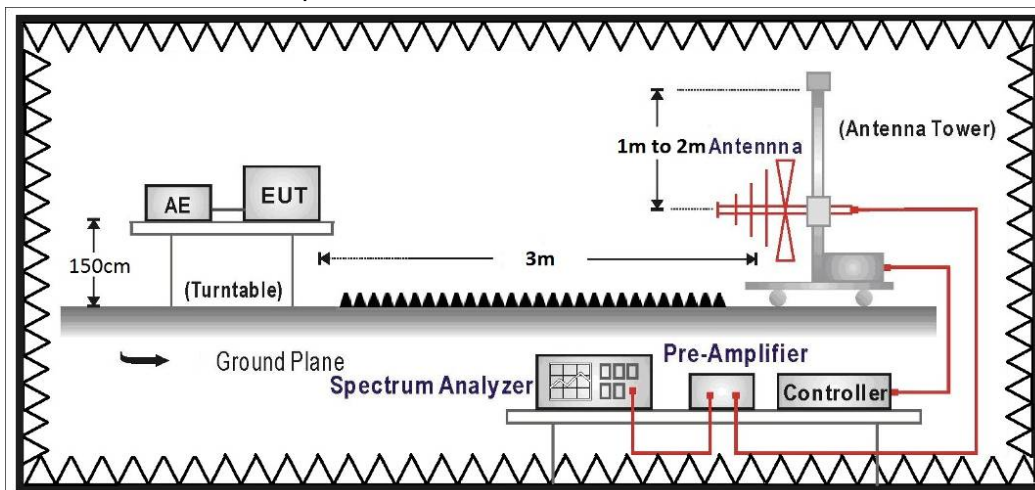
Note: All equipments that need to calibrate are with calibration period of 1 year.

### 2.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



## 2.3. Limits

### ➤ Fundamental and Harmonics Emission Limits

<b>FCC Part 15 Subpart C Paragraph 15.231(b) Limits</b>				
Fundamental Frequency MHz	Field Strength of Fundamental		Field Strength of Harmonics	
	uV/m	dBuV/m	uV/m	dBuV/m
40.66 - 40.70	2250	67.04	225	47.04
70 - 130	1250	61.94	125	41.94
130 - 174	1250 - 3750	61.94 - 71.48	125 - 375	41.94 - 51.48
174 - 260	3750	71.48	375	51.48
260 - 470	3750 - 12500	71.48 - 81.94	375 - 1250	51.48 - 61.94
above 470	12500	81.94	1250	61.94

Remarks: 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.

### ➤ Spurious electric field strength limits

<b>FCC Part 15 Subpart C Paragraph 15.209 Limits</b>			
Frequency MHz	uV/m	dBuV/m	Measurement distance (meter)
0.009 - 0.490	2400/F(kHz)	See Remark <sup>1</sup>	300
0.490 - 1.705	24000/F(kHz)	See Remark <sup>1</sup>	30
1.705 - 30	30	29.5	30
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
Above 960	500	54	3

Remarks : 1. RF Voltage (dBuV) = 20 log 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 and the closed point of any part of the device or system.

## 2.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 and 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

Radiated emission measurements below 1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB beamwidth of the antenna.

The worst radiated emission is measured on the Final Measurement.

The frequency range from 30MHz to 10th harmonics is checked.

## 2.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.231(b): 2015

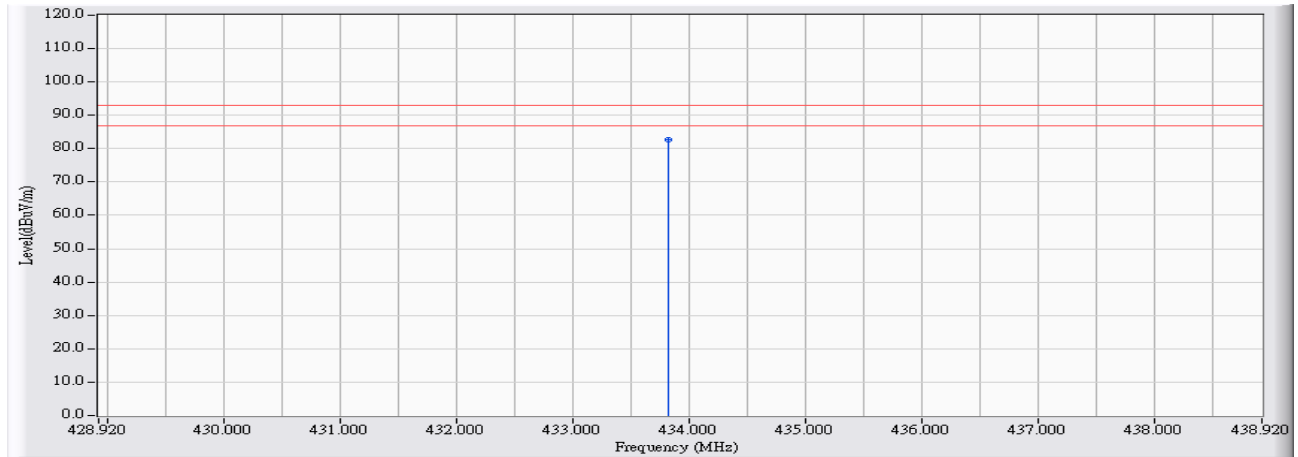
## 2.6. Uncertainty

± 3.8 dB below 1GHz

± 3.9 dB above 1GHz

## 2.7. Test Result

Site : CB4-H	Time : 2017/02/10
Limit : FCC_SpartC_15.231(e)_F_433.92MHz_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_S2_30M-1GHz_1116 - HORIZONTAL	Power : DC 3V (Power by Battery)
EUT : Tire Pressure Monitoring System	Note : 433.92MHz_X-axis

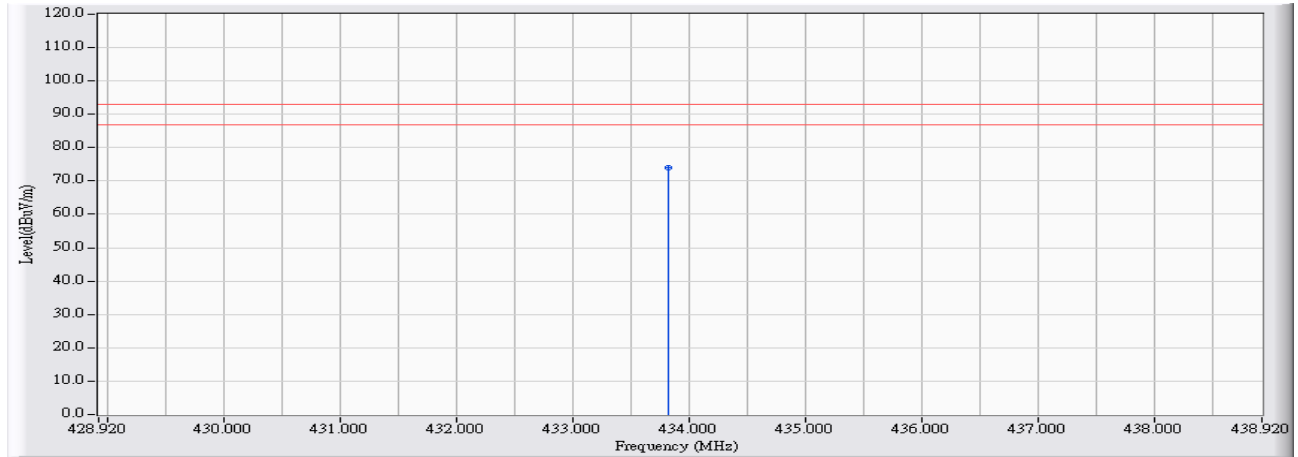


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	433.819	25.916	56.642	82.558	-10.312	92.870	PEAK

Note:

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB4-H	Time : 2017/02/10
Limit : FCC_SpartC_15.231(e)_F_433.92MHz_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_S2_30M-1GHz_1116 - VERTICAL	Power : DC 3V (Power by Battery)
EUT : Tire Pressure Monitoring System	Note : 433.92MHz_X-axis

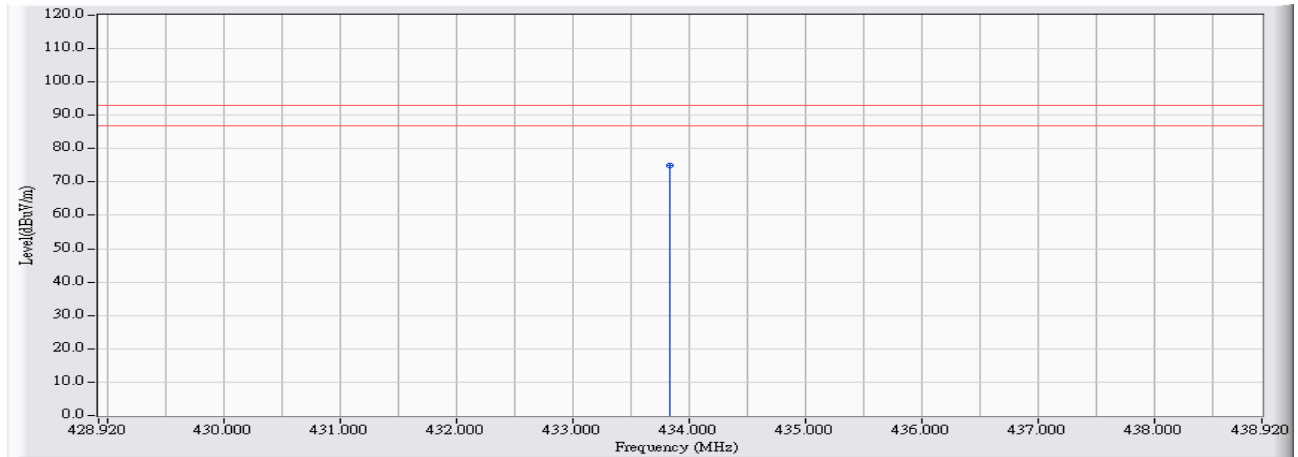


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	433.819	25.916	47.940	73.856	-19.014	92.870	PEAK

Note:

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

<b>Site : CB4-H</b>	<b>Time : 2017/02/10</b>
<b>Limit : FCC_SpartC_15.231(e)_F_433.92MHz_03M_PK</b>	<b>Margin : 6</b>
<b>Probe : CB4-H_FCC_EFS_S2_30M-1GHz_1116 - HORIZONTAL</b>	<b>Power : DC 3V (Power by Battery)</b>
<b>EUT : Tire Pressure Monitoring System</b>	<b>Note : 433.92MHz_Y-axis</b>

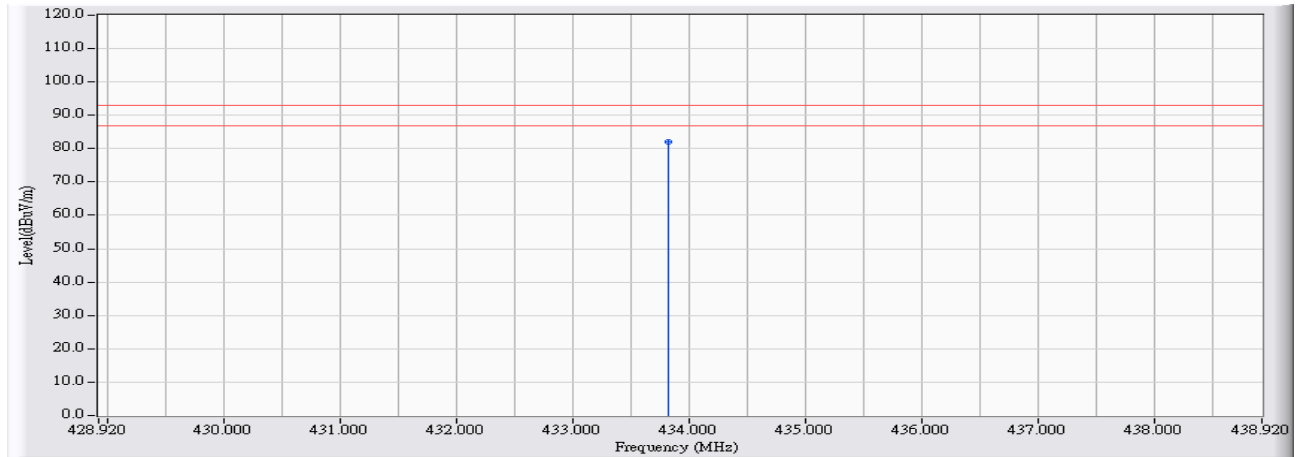


		<b>Frequency (MHz)</b>	<b>Correct Factor (dB)</b>	<b>Reading Level (dBuV)</b>	<b>Measure Level (dBuV/m)</b>	<b>Margin (dB)</b>	<b>Limit (dBuV/m)</b>	<b>Detector Type</b>
1	*	433.824	25.917	48.903	74.819	-18.051	92.870	PEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

<b>Site : CB4-H</b>	<b>Time : 2017/02/10</b>
<b>Limit : FCC_SpartC_15.231(e)_F_433.92MHz_03M_PK</b>	<b>Margin : 6</b>
<b>Probe : CB4-H_FCC_EFS_S2_30M-1GHz_1116 - VERTICAL</b>	<b>Power : DC 3V (Power by Battery)</b>
<b>EUT : Tire Pressure Monitoring System</b>	<b>Note : 433.92MHz_Y-axis</b>

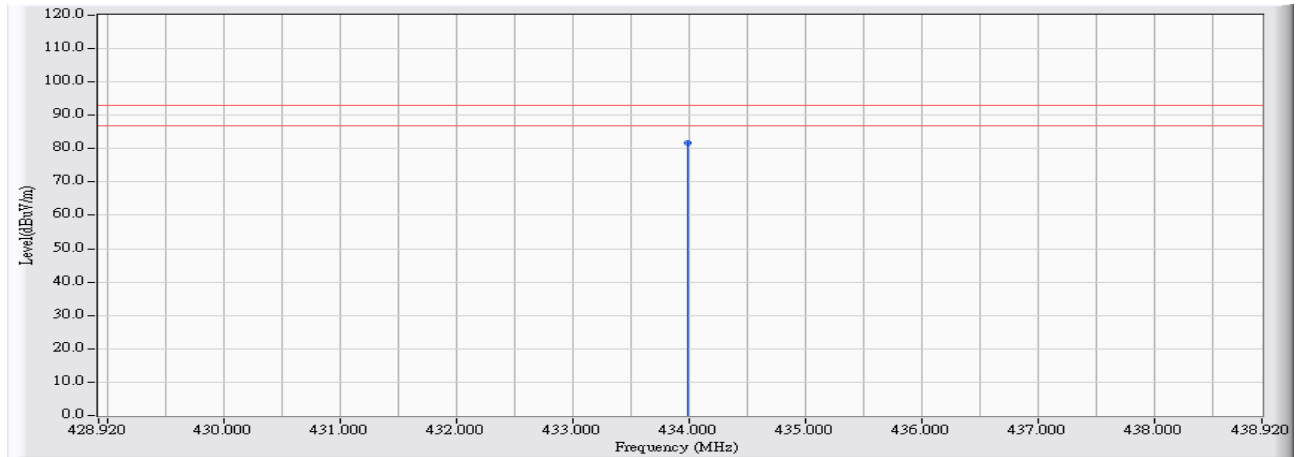


		<b>Frequency (MHz)</b>	<b>Correct Factor (dB)</b>	<b>Reading Level (dBuV)</b>	<b>Measure Level (dBuV/m)</b>	<b>Margin (dB)</b>	<b>Limit (dBuV/m)</b>	<b>Detector Type</b>
1	*	433.819	25.916	55.998	81.914	-10.956	92.870	PEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

<b>Site : CB4-H</b>	<b>Time : 2017/02/10</b>
<b>Limit : FCC_SpartC_15.231(e)_F_433.92MHz_03M_PK</b>	<b>Margin : 6</b>
<b>Probe : CB4-H_FCC_EFS_S2_30M-1GHz_1116 - HORIZONTAL</b>	<b>Power : DC 3V (Power by Battery)</b>
<b>EUT : Tire Pressure Monitoring System</b>	<b>Note : 433.92MHz_Z-axis</b>



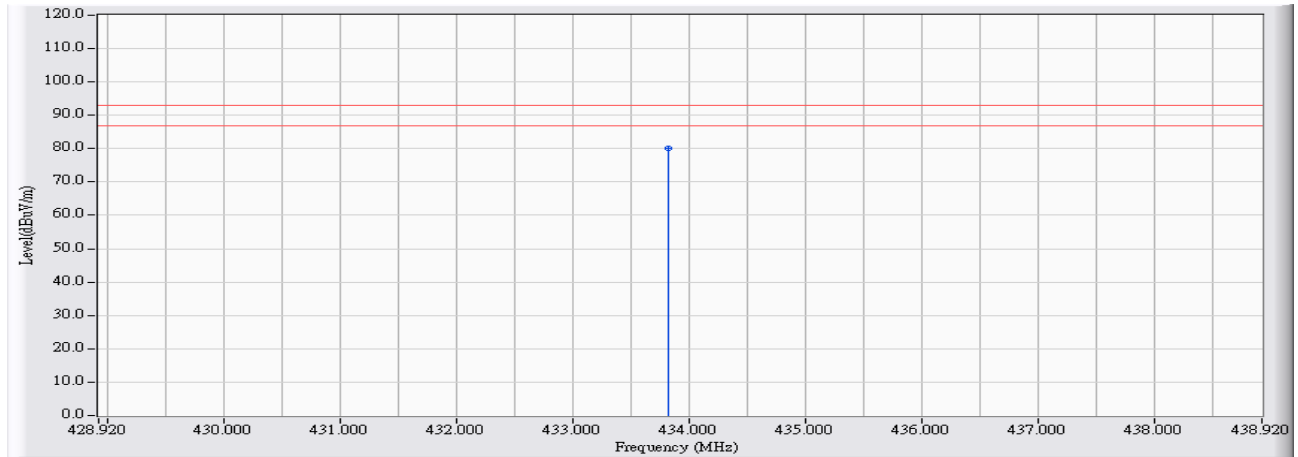
		<b>Frequency (MHz)</b>	<b>Correct Factor (dB)</b>	<b>Reading Level (dBuV)</b>	<b>Measure Level (dBuV/m)</b>	<b>Margin (dB)</b>	<b>Limit (dBuV/m)</b>	<b>Detector Type</b>
1	*	433.980	25.919	55.935	81.854	-11.016	92.870	PEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.



<b>Site : CB4-H</b>	<b>Time : 2017/02/10</b>
<b>Limit : FCC_SpartC_15.231(e)_F_433.92MHz_03M_PK</b>	<b>Margin : 6</b>
<b>Probe : CB4-H_FCC_EFS_S2_30M-1GHz_1116 - VERTICAL</b>	<b>Power : DC 3V (Power by Battery)</b>
<b>EUT : Tire Pressure Monitoring System</b>	<b>Note : 433.92MHz_Z-axis</b>



		<b>Frequency (MHz)</b>	<b>Correct Factor (dB)</b>	<b>Reading Level (dBuV)</b>	<b>Measure Level (dBuV/m)</b>	<b>Margin (dB)</b>	<b>Limit (dBuV/m)</b>	<b>Detector Type</b>
1	*	433.820	25.917	54.276	80.192	-12.678	92.870	PEAK

**Note:**

1. All Reading Levels are Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Product	Tire Pressure Monitoring System		
Test Item	Fundamental Radiated Emission		
Test Mode	Mode 1: Transmit		
Date of Test	2017/02/10	Test Site	CB4-H

Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Peak Measurement Level (dBuV/m)	Average Measurement Level (dBuV/m)	Average Limit (dBuV/m)
<b>Horizontal</b>					
433.920(X-axis)	25.916	56.642	82.558	62.558	72.870
433.920(Y-axis)	25.917	48.903	74.819	54.819	72.870
433.920(Z-axis)	25.919	55.935	81.854	61.854	72.870
<b>Vertical</b>					
433.920(X-axis)	25.916	47.940	73.856	53.856	72.870
433.920(Y-axis)	25.916	55.998	81.914	61.914	72.870
433.920(Z-axis)	25.917	54.276	80.192	60.192	72.870

Note1:

Peak Measurement Level = Reading Level +Correct factor

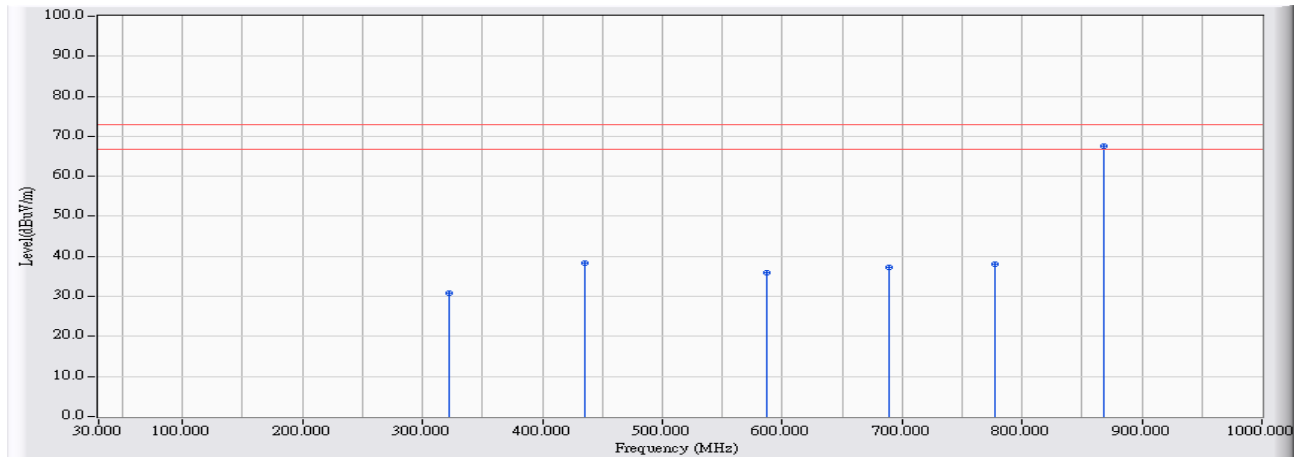
Average Measurement Level = Peak Measurement Level +20Log(Duty Cycle)

(Duty Cycle)=(Ton/(Ton+Toff))=8.62/93.5=0.09219

20Log(Duty Cycle)= -20.715

**30MHz-1GHz Spurious :**

Site : CB4-H	Time : 2017/02/10
Limit : FCC_SpartC_15.231(e)_H_433.92MHz_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_S2_30M-1GHz_1116 - HORIZONTAL	Power : DC 3V (Power by Battery)
EUT : Tire Pressure Monitoring System	Note : 433.92MHz

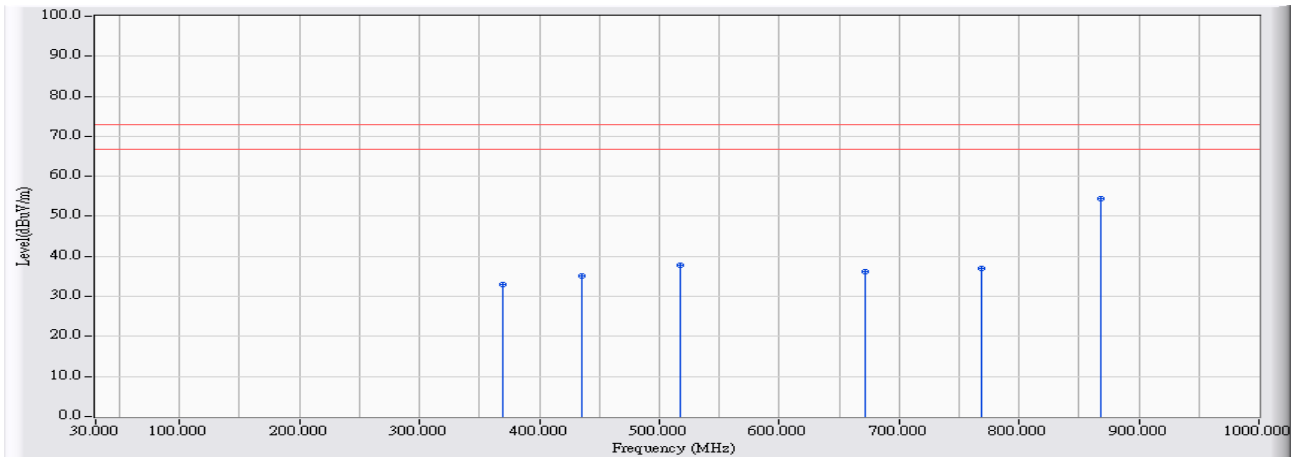


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	322.717	22.938	7.847	30.785	-42.085	72.870	QUASPEAK
2	435.710	25.946	12.498	38.444	-34.426	72.870	QUASPEAK
3	587.112	28.082	7.758	35.840	-37.030	72.870	QUASPEAK
4	688.564	28.853	8.327	37.181	-35.689	72.870	QUASPEAK
5	777.698	29.893	8.134	38.028	-34.842	72.870	QUASPEAK
6	* 867.608	30.886	36.708	67.594	-5.276	72.870	QUASPEAK

**Note:**

1. All Reading Levels are Quasi-Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB4-H	Time : 2017/02/10
Limit : FCC_SpartC_15.231(e)_H_433.92MHz_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_S2_30M-1GHz_1116 - VERTICAL	Power : DC 3V (Power by Battery)
EUT : Tire Pressure Monitoring System	Note : 433.92MHz



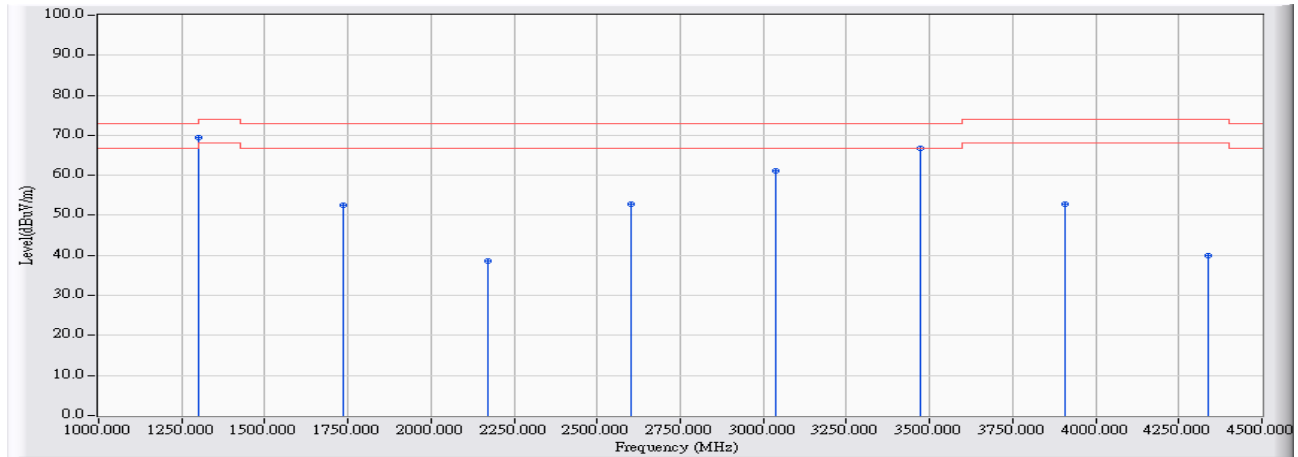
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	368.884	24.353	8.565	32.918	-39.952	72.870	QUASPEAK
2	435.613	25.945	9.236	35.181	-37.689	72.870	QUASPEAK
3	517.182	27.208	10.574	37.782	-35.088	72.870	QUASPEAK
4	671.979	28.805	7.487	36.292	-36.578	72.870	QUASPEAK
5	768.290	29.734	7.234	36.967	-35.903	72.870	QUASPEAK
6	* 867.899	30.885	23.626	54.511	-18.359	72.870	QUASPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

**Above 1GHz Spurious:**

Site : CB4-H	Time : 2017/02/15
Limit : FCC_SpartC_15.231(e)_H_433.92MHz_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	Power : DC 3V (Power by Battery)
EUT : Tire Pressure Monitoring System	Note : 433.92MHz



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	1301.670	-6.618	75.957	69.339	-4.661	74.000	PEAK
2		1735.274	-5.063	57.560	52.497	-20.373	72.870	PEAK
3		2169.233	-3.375	42.101	38.726	-34.144	72.870	PEAK
4		2602.492	-1.643	54.532	52.890	-19.980	72.870	PEAK
5		3036.796	-0.591	61.739	61.147	-11.723	72.870	PEAK
6		3470.403	0.166	66.475	66.641	-6.229	72.870	PEAK
7		3905.760	1.720	51.084	52.803	-21.197	74.000	PEAK
8		4339.716	3.420	36.528	39.948	-34.052	74.000	PEAK

**Note:**

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. “ \* ”, means this data is the worst emission level.
4. Measurement Level = Reading Level + Correct Factor.
5. Average Measurement Level = Peak Measurement Level + 20Log (Duty Cycle)  
 Duty Cycle(Only Ton)= Ton/ (Ton+off)=8.45/100=0.0845  
 20\*Log(Duty Cycle) = -21.463
6. The average measurement was not performed when the peak measured data under the limit of peak detection.

Site : CB4-H	Time : 2017/02/16
Limit : FCC_SpartC_15.231(e)_H_433.92MHz_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B091_1-18GHz_3M_0117 - HORIZONTAL	Power : DC 3V (Power by Battery)
EUT : Tire Pressure Monitoring System	Note : 433.92MHz

Frequency MHz	Peak Measurement dBuV/m	Duty Cycle Factor dB	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
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**Horizontal**

**Average Detector:**

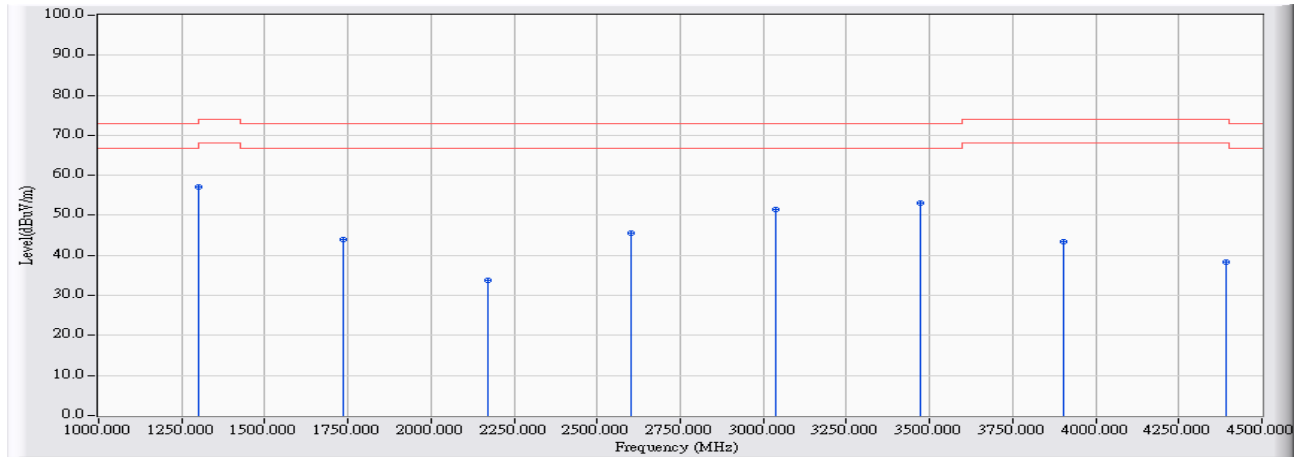
1301.67	69.339	-20.000	49.339	-4.661	54.000
3036.796	61.147	-20.000	41.147	-11.723	52.870
3470.403	66.641	-20.000	46.641	-6.229	52.870

Average Measurement Level = Peak Measurement Level + 20Log (Duty Cycle)

Duty Cycle(Only Ton)= Ton/ (Ton+off)=8.45/100=0.0845

20\*Log(Duty Cycle) = -21.463

Site : CB4-H	Time : 2017/02/15
Limit : FCC_SpartC_15.231(e)_H_433.92MHz_03M_PK	Margin : 6
Probe : CB4-H_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	Power : DC 3V (Power by Battery)
EUT : Tire Pressure Monitoring System	Note : 433.92MHz



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	1301.670	-6.618	63.620	57.002	-16.998	74.000	PEAK
2		1735.276	-5.063	49.132	44.069	-28.801	72.870	PEAK
3		2170.283	-3.370	37.093	33.723	-39.147	72.870	PEAK
4		2603.889	-1.639	47.223	45.585	-27.285	72.870	PEAK
5		3036.796	-0.591	52.103	51.511	-21.359	72.870	PEAK
6		3470.404	0.166	52.811	52.977	-19.893	72.870	PEAK
7		3904.009	1.713	41.694	43.406	-30.594	74.000	PEAK
8		4391.161	3.637	34.771	38.407	-35.593	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. “ \* ”, means this data is the worst emission level.
4. Measurement Level = Reading Level + Correct Factor.
5. Average Measurement Level = Peak Measurement Level + 20Log (Duty Cycle)  
 Duty Cycle(Only Ton)= Ton/ (Ton+off)=8.45/100=0.0845  
 20\*Log(Duty Cycle) = -21.463
6. The average measurement was not performed when the peak measured data under the limit of peak detection.

Site : CB4-H	Time : 2017/02/16
Limit : FCC_SpartC_15.231(e)_H_433.92MHz_03M_AV	Margin : 6
Probe : CB4-H_FCC_EFS_B091_1-18GHz_3M_0117 - VERTICAL	Power : DC 3V (Power by Battery)
EUT : Tire Pressure Monitoring System	Note : 433.92MHz

Frequency MHz	Peak Measurement dBuV/m	Duty Cycle Factor dB	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Average Detector:</b>					
1301.67	57.002	-20.000	37.002	-16.998	54.000
3470.404	52.977	-20.000	32.977	-19.893	52.870

Average Measurement Level = Peak Measurement Level + 20Log (Duty Cycle)

Duty Cycle(Only Ton)= Ton/ (Ton+off)=8.45/100=0.0845

20\*Log(Duty Cycle) = -21.463



### 3. Occupied Bandwidth

#### 3.1. Test Equipment

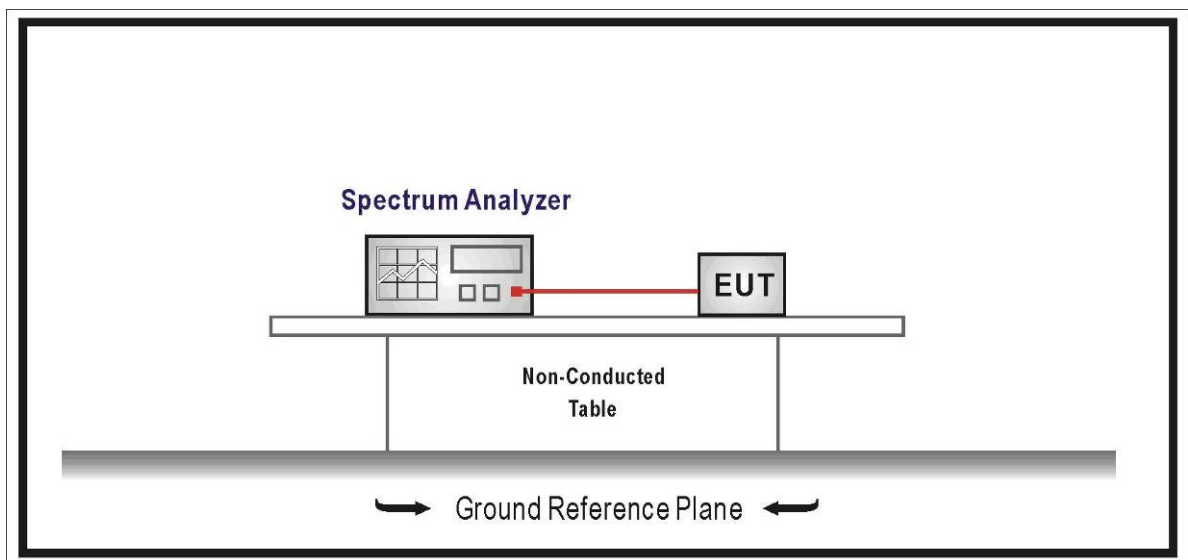
The following test equipments are used during the radiated emission tests:

Occupied Bandwidth / SR10-H

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A	US47140172	2016/08/09

Note: All equipments that need to calibrate are with calibration period of 1 year.

#### 3.2. Test Setup



#### 3.3. Limits

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.

#### 3.4. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.231(b): 2015

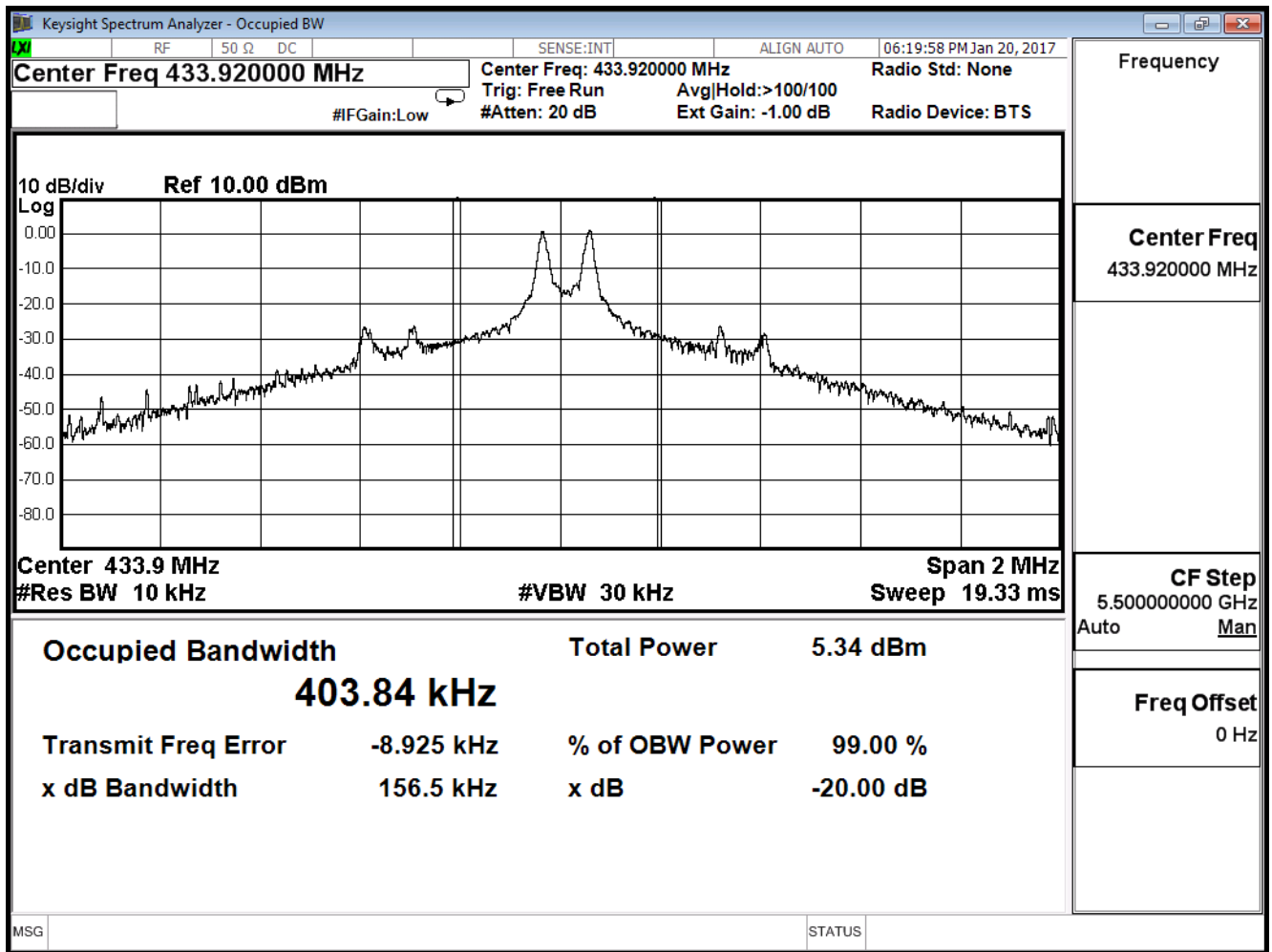
#### 3.5. Uncertainty

± 150Hz

### 3.6. Test Result

Product	Tire Pressure Monitoring System		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Transmit		
Date of Test	2017/01/20	Test Site	SR10-H

Channel No.	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)
01	433.92	0.157	1.0848



**4. Duty cycle**

**4.1. Test Equipment**

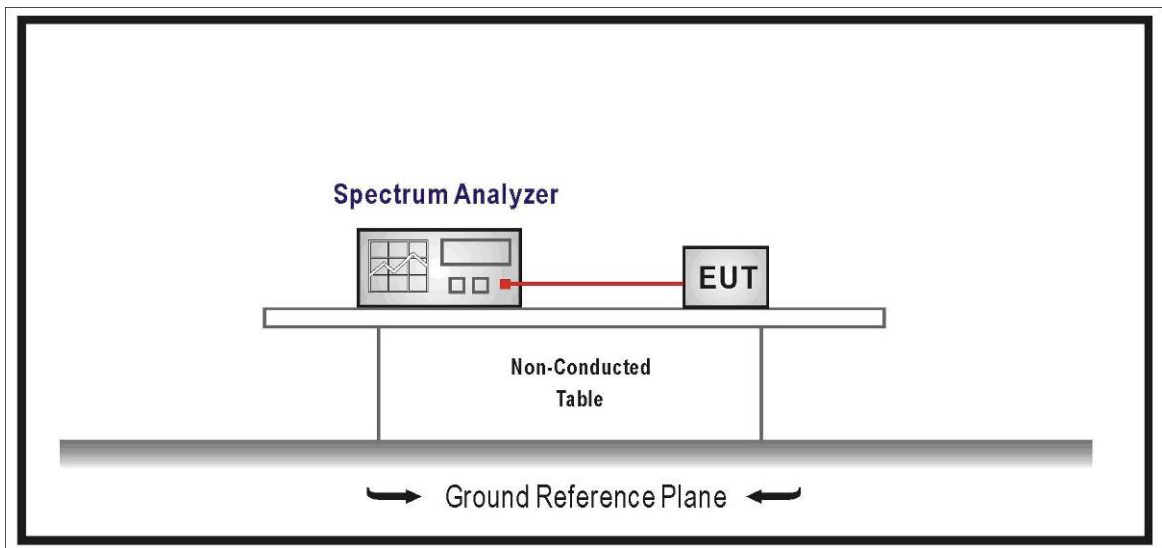
The following test equipments are used during the radiated emission tests:

Duty cycle / SR10-H

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A	US47140172	2016/08/09

Note: All equipments that need to calibrate are with calibration period of 1 year.

**4.2. Test Setup**



**4.3. Limits**

N/A

**4.4. Test Specification**

According to FCC Part 15 Subpart C Paragraph 15.231(b): 2015

**4.5. Uncertainty**

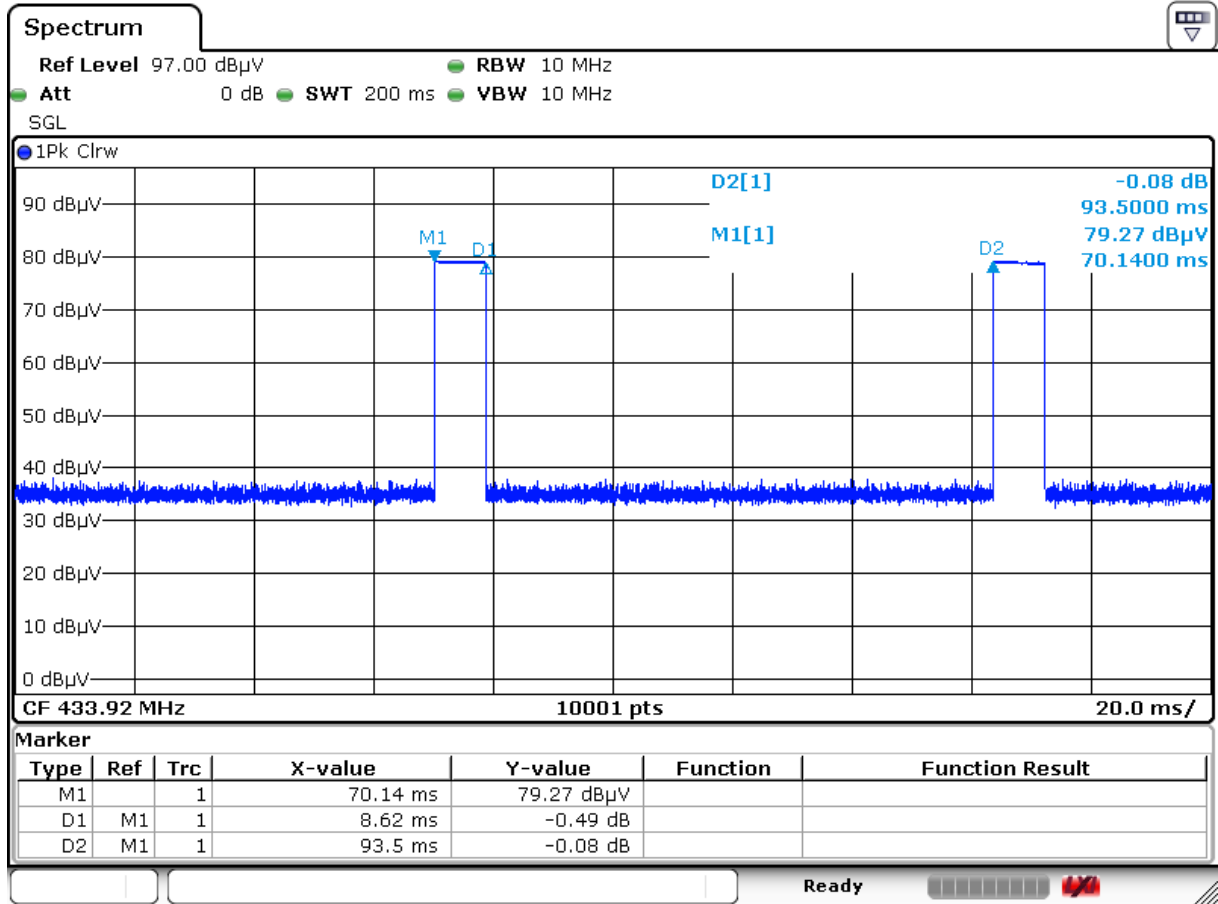
± 25msec

**4.6. Test Result**

Product	Tire Pressure Monitoring System
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Test Item	Duty Cycle		
Test Mode	Mode 1: Transmit		
Date of Test	2017/02/16	Test Site	SR10-H

433.92MHz				
Mode	On Time(ms)	On+Off Time(ms)	Duty Cycle(%)	Duty Factor(dB)
433.92MHz	8.620	93.500	9.21	20.715



Date: 16.FEB.2017 02:51:47

**5. Transmitter time**

**5.1. Test Equipment**

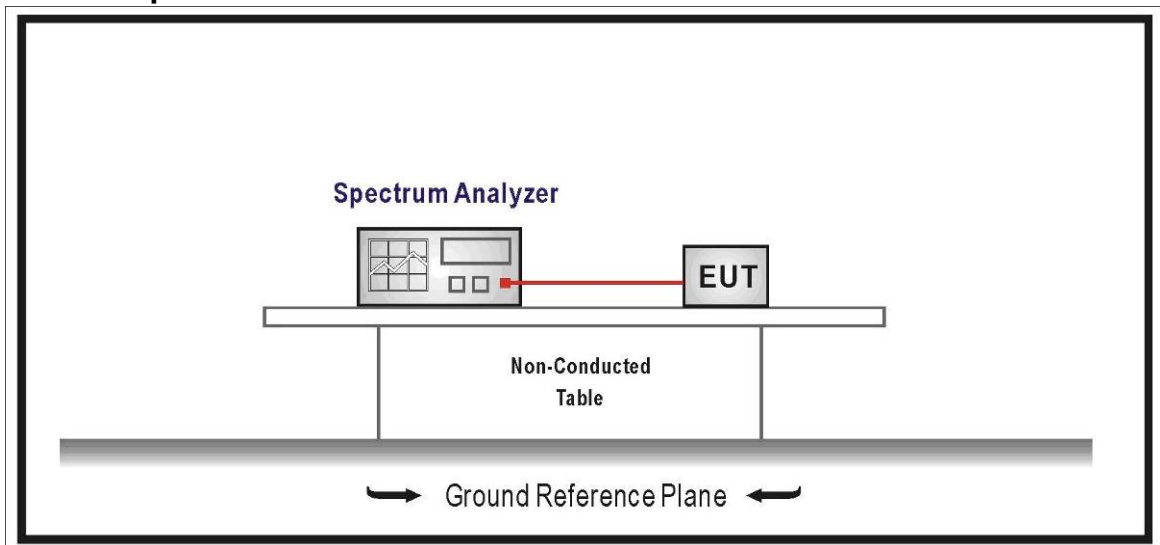
The following test equipments are used during the radiated emission tests:

Transmitter time / SR10-H

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A	US47140172	2016/08/09

Note: All equipments that need to calibrate are with calibration period of 1 year.

**5.2. Test Setup**



**5.3. Limits**

A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released. A transmitter activated automatically shall cease transmission within 5 seconds after activation.

**5.4. Test Specification**

According to FCC Part 15 Subpart C Paragraph 15.231(b): 2015

**5.5. Uncertainty**

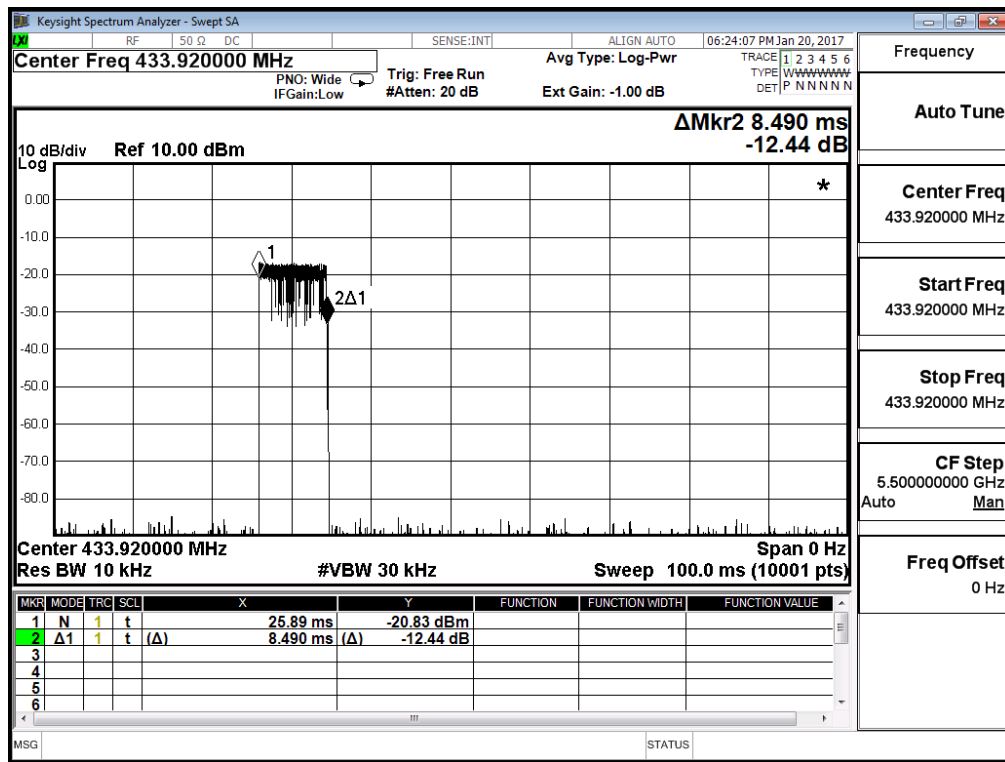
± 25msec

### 5.6. Test Result

Product	Tire Pressure Monitoring System		
Test Item	Transmitter time		
Test Mode	Mode 1: Transmit		
Date of Test	2017/02/16	Test Site	SR10-H

Frequency (MHz)	Transmitter time (ms.)	
	Measure value	Limit
433.92	8.49	$\leq 1000$
Frequency (MHz)	Silent period (sec.)	
	Measure value	Limit
433.92	59.58	$\geq 10$
Frequency (MHz)	Total duration of transmissions per hour (sec.)	
	Measure value	Limit
433.92	0.513	$\leq 2$

#### Transmitter time



**Transmitter time**

