MEASUREMENT REPORT
FCC PART 15 Subpart C Section 231

Report No.: S20250512614301
Issue Date: 07-23-2025

Applicant:	Wenzhou Woma Auto Parts Co..Ltd.
Address:	Floor 5th, Building 2nd, Changqiao Auto Parts Pioneer Park,Tangxia Town, Rui'an City,Wenzhou City, Zhejiang Province, China
FCC ID:	2BPVITPMSTY046
Product:	TPMS SENSOR
Model No.:	TY-0910466
Classification:	Part 15 Inductive devices
FCC Rule Part(s):	Part 15 Subpart C (15.231)
Test Procedure(s):	ANSI C63.10-2013
Result:	Pass
Item Receipt Date:	May. 14, 2025
Test Date:	May. 19 ~ Jul. 09, 2025

Compiled By: Chuang Li
(Chuang Li)
Senior Test Engineer

Approved By: Line chen
(Line Chen)
Engineer Manager

The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 558074 D01. Test results reported herein relate only to the item(s) tested.

Revision History

Report No.	Version	Description	Issue Date
S20250512614301	Rev. 01	/	07-23-2025

CONTENTS

Description Page

§2.1033 General Information

Applicant:	Wenzhou Woma Auto Parts Co..Ltd.
Applicant Address:	Floor 5th, Building 2nd, Changqiao Auto Parts Pioneer Park,Tangxia Town, Rui'an City,Wenzhou City, Zhejiang Province, China
Manufacturer:	Wenzhou Woma Auto Parts Co..Ltd.
Manufacturer Address:	Floor 5th, Building 2nd, Changqiao Auto Parts Pioneer Park,Tangxia Town, Rui'an City,Wenzhou City, Zhejiang Province, China
Test Site:	Fangguang Inspection & Testing Co., Ltd.
LAB ID:	CN5037
Test Site Address:	No.8 Ningyun Rd.,Xinwu District Wuxi,Jiangsu 214000 China
FCC Rule Part(s):	Part 15 Subpart C (15.231)
FCC ID:	2BPVITPMSTY046
Test Device Serial No.:	S/N.:/ ☐ Production ☒ Pre-Production ☐ Engineering
FCC Classification:	Part 15 Inductive devices

1. INTRODUCTION

1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Innovation, Science and Economic Development Canada.

1.2. Fangguang Test Location

These measurement tests were performed at the Fangguang Inspection and testing Co.,LTD located at No.8 Ningyun Rd.,Xinwu District Wuxi,Jiangsu 214000 China. The detailed description of the measurement facility was found to be in compliance with the requirements of ANSI C63.10-2013.

2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name:	TPMS SENSOR
Model Name:	TY-0910466
Trade Mark:	/
Input Voltage Range:	DC 3V (Button Cell)
Software Version:	WM_V3.1_V13
Hardware Version:	ZSN13_V1.5
Note:	This information is provided by the Customer and its authenticty is the responsibility of the Customer.

2.2. Product Specification Subjective to this Report

Operating Frequency	315MHz & 433.92MHz
Channel number	2
Type of modulation	FSK/ASK
Antenna Type:	LOOP Antenna
Antenna Gain:	0dBi

2.3. Test Configuration

The EUT was tested per the guidance of ANSI C63.10-2013 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing.

2.4. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

2.5. EUT Photo

The EUT external photo, internal photo and test setup photo, please refer to the plots in the S202505126143-A1/A2/A3.

2.6. Labeling Requirements

Per 2.1074 & 15.19; Docket 95-19

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase. However, when the device is so small wherein placement of the label with specified statement is not

practical, only the FCC ID must be displayed on the device per Section 15.19(a)(5). Please see attachment for FCC ID label and label location.

2.7. Calculation with all conversion and correction factors used

For AC Line Conducted Emissions Test:

Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

For Radiated Emissions Below 1GHz Test:

Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

For Radiated Emissions Above 1GHz Test:

Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB).

3. DESCRIPTION OF TEST

3.1. Evaluation Procedure

The measurement procedures described in the American National Standard for Testing Unlicensed Wireless Devices (ANSI C63.10-2013), and the guidance provided in Part 15 Subpart C (15.231) were used in the measurement of the EUT.

Deviation from measurement procedure…….....None

3.2. AC Line Conducted Emissions

The line-conducted facility is located inside an 8'x4'x4' shielded enclosure. A 1m x 2m wooden table 80cm high is placed 40cm away from the vertical wall and 80cm away from the sidewall of the shielded room. Two 10kHz-30MHz, 50Ω/50uH Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room floor. Power to the LISNs is filtered by external high-current high-insertion loss power line filters. These filters attenuate ambient signal noise from entering the measurement lines. These filters are also bonded to the shielded enclosure.

The EUT is powered from one LISN and the support equipment is powered from the second LISN. All interconnecting cables more than 1 meter were shortened to a 1 meter length by non-inductive bundling (serpentine fashion) and draped over the back edge of the test table. All cables were at least 40cm above the horizontal reference ground-plane. Power cables for support equipment were routed down to the second LISN while ensuring that that cables were not draped over the second LISN.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the receiver and exploratory measurements were made to determine the frequencies producing the maximum emission from the EUT. The receiver was scanned from 150kHz to 30MHz. The detector function was set to peak mode for exploratory measurements while the bandwidth of the analyzer was set to 9kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Each emission was also maximized by varying: power lines, the mode of operation or data exchange speed, or support equipment whichever determined the worst-case emission. Once the worst case emissions have been identified, the one EUT cable configuration/arrangement and mode of operation that produced these emissions are used for final measurements on the same test site. The analyzer is set to CISPR quasi-peak and average detectors with a 9kHz resolution bandwidth for final measurements.

An extension cord was used to connect to a single LISN which powered by EUT. The extension cord was calibrated with LISN, the impedance and insertion loss are compliance with the requirements as stated in ANSI C63.10-2013.

3.3. Radiated Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, the absorbers are removed. The turntable is used for radiated measurement. It is a continuously rotatable, remote controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm high PVC support structure is placed on top of the turntable.

For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive antenna height using a broadband antenna from 30MHz up to the upper frequency shown in 15.33(b)(1) depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn antennas were used. For frequencies below 30MHz, a calibrated loop antenna was used. When exploratory measurements were necessary, they were performed at 1 meter test distance inside the semi-anechoic chamber using broadband antennas, broadband amplifiers, and spectrum analyzers to determine the frequencies and modes producing the maximum emissions. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up for frequencies below 1GHz was placed on top of the 0.8 meter high, 1 x 1.5 meter table; and test set-up for frequencies 1-25GHz was placed on top of the 1.5 meter high, 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, if applicable, turntable azimuth, and receive antenna height was noted for each frequency found.

Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable containing the EUT was rotated through 360 degrees and the height of the receive antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive antenna, whichever produced the worst-case emissions. According to 3dB Beam-Width of horn antenna, the horn antenna should be always directed to the EUT when rising height.

4. ANTENNA REQUIREMENTS

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”

- Use a unique coupling to the intentional radiator.

5. TEST EQUIPMENT CALIBRATION DATE

Radiated Emission

Instrument	Manufacturer	Type No.	Asset No.	Cali. Due Date
Loop Antenna	Schwarzbeck	FMZB 1519B	FWXGJC-2018-015	2026/06/21
Broadband Antenna	Schwarzbeck	VULB 9168	FGZZ-2024-036	2026/06/21
Broadband Horn Antenna	R&S	HF907	FWXGJC-2016-267-07	2026/06/21
Broadband Horn Antenna	Schwarzbeck	BBHA9170	FWXGJC-2018-016	2026/06/21
EMI Receiver	R&S	ESCI3	FGZZ-2024-033	2026/07/17
EXA Signal Analyzer	Keysight	N9020A	FWXGJC-2025-006	2026/07/13
EXA Signal Analyzer	Keysight	N9010B	FWXGJC-2018-010	2026/07/13
Pre-Amplifier	Tonscend	TAP0118048	FGZZ-2024-037	2026/06/21
Pre-Amplifier	Chengyi	EMC184055SE	FWXGJC-2018-018	2026/06/21
Thermohygrometer	Yuhuaze	HTC-1	FWXDA-2016-387	2025/09/03
Anechoic Chamber	SAEMC	FSAC318	FGZZ-2024-035	2027/06/02

Auxiliary Equipment

Instrument	Manufacturer	Type No.	Asset No.	Cali. Due Date
Filter	Toncend	ZBSF6	07247867	2025/07/26
Filter	Toncend	ZHPF6	07233297	2025/07/26
Attenuator	Toncend	10dB	/	2025/07/26
RF Cable	Toncend	T-1	/	2025/07/26

Test Software

Test Software	Manufacturer	Version	Asset No.	Function
EMI Test Software	Tonscend	5.0.0	/	Emission Test

6. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

AC Conducted Emission Measurement
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.68dB
Radiated Emission Measurement（9kHz - 30MHz）
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 3.06dB
Radiated Emission Measurement（30MHz -1GHz）
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 4.01dB
Radiated Emission Measurement（1-18GHz）
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 4.97dB
Radiated Emission Measurement（18-40GHz）
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 5.32dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 30MHz-1GHz: 1.00 dB 1GHz-12.75GHz: 1.30 dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.60dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.80dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.20MHz
Frequency Stability
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.1×10^{-6}MHz

7. TEST RESULT

7.1. Summary

FCC Part Section(s)	Test Description	Test Result	Reference
§ 15.205, §15.209, §15.231(e)	Radiated Emissions	Pass	Section 7.2
§ 15.231 (e)	Transmission Time	Pass	Section 7.3
§ 15.231 (c)	20dB Emission Bandwidth	Pass	Section 7.4
§ 15.207(a)	Conducted Emissions	Not applicable (See Note)	Section 7.5

Notes:

1. The EUT is powered by DC 3V (Button Cell), this item only for the EUT is designed to be connected to the public utility (AC) power line.

7.2. Radiated Emissions

7.2.1. Limit

FCC §15.205, §15.209, §15.231 (e)

According to FCC §15.231(e), the field strength of emissions from intentional radiators operated under this section shall not exceed the following:

Fundamental frequency (MHz)	Field strength of fundamental (microvolts/meter)	Field strength of spurious emission (microvolts/meter)
40.66-40.70	1,000	100
70-130	500	50
130-174	500 to 1,500 [1]	50 to 150 [1]
174-260	1,500	150
260-470	1,500 to 5,000 [1]	150 to 500 [1]
Above 470	5,000	500

[1] *Linear interpolations.*

(1) The above field strength limits are specified at a distance of 3 meters. The tighter limits apply at the band edges.

(2) Intentional radiators operating under the provisions of this section shall demonstrate compliance with the limits on the field strength of emissions, as shown in the above table, based on the average value of the measured emissions. As an alternative, compliance with the limits in the above table may be based on the use of measurement instrumentation with a CISPR quasi-peak detector. The specific method of measurement employed shall be specified in the application for equipment authorization. If average emission measurements are employed, the provisions in §15.35 for averaging pulsed emissions and for limiting peak

emissions apply. Further, compliance with the provisions of §15.205 shall be demonstrated using the measurement instrumentation specified in that section.

(3) The limits on the field strength of the spurious emissions in the above table are based on the fundamental frequency of the intentional radiator. Spurious emissions shall be attenuated to the average (or, alternatively, CISPR quasi-peak) limits shown in this table or to the general limits shown in §15.209, whichever limit permits a higher field strength.

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100 **	3
88-216	150 **	3
216-960	200 **	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.

7.2.2. Test Procedure

1) The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

2) The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

3) Height of receiving antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the

antenna are set to make the measurement.

4) The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

5) If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

7.2.3. Test Setting

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = as specified in Table 1
3. VBW = 3RBW
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

7.2.4. Test Setup

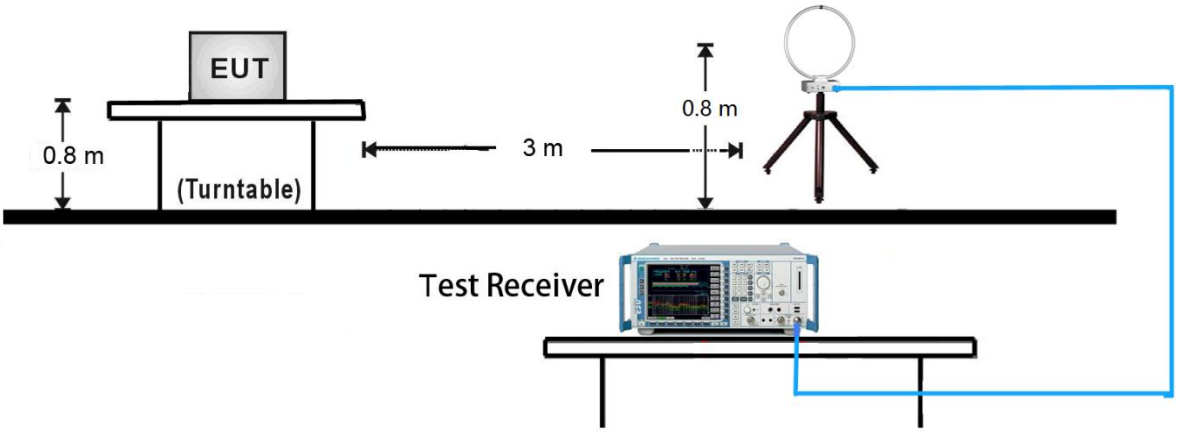


Figure 1. 9KHz to 30MHz radiated emissions test configuration

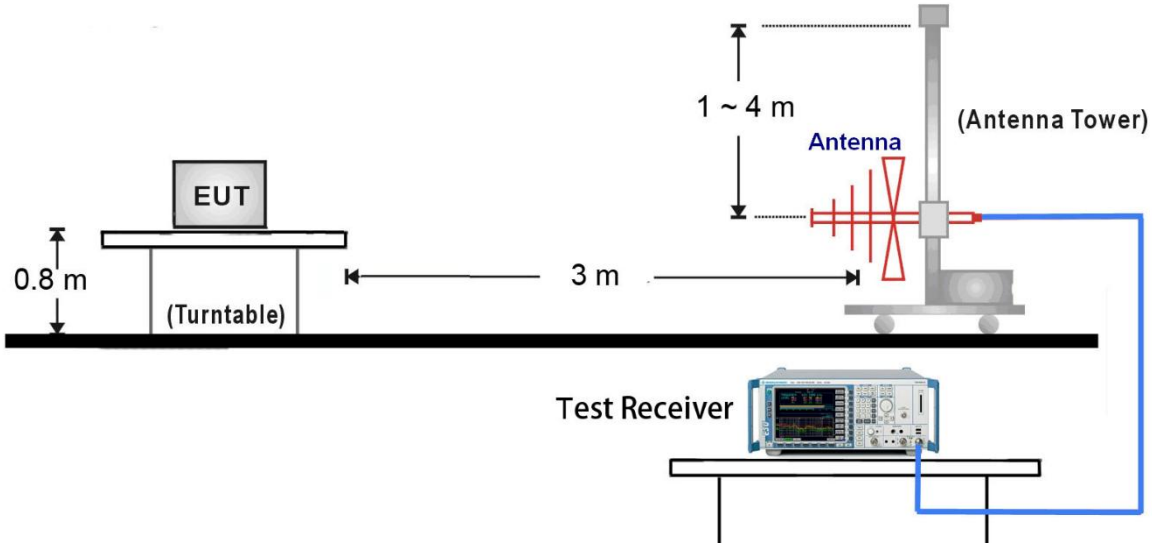


Figure 2. 30MHz to 1GHz radiated emissions test configuration

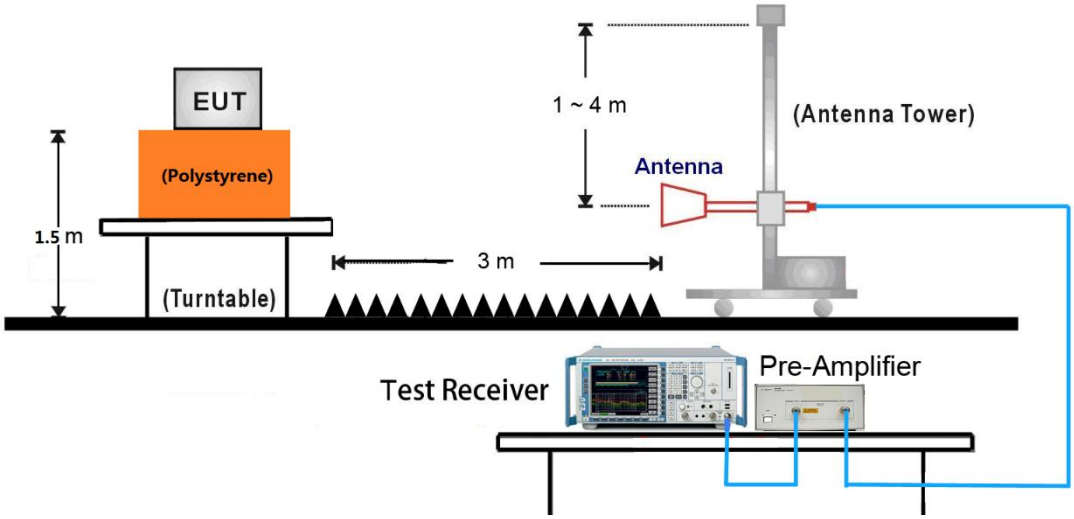


Figure 3. Above 1GHz radiated emissions test configuration

7.2.5. Test Result

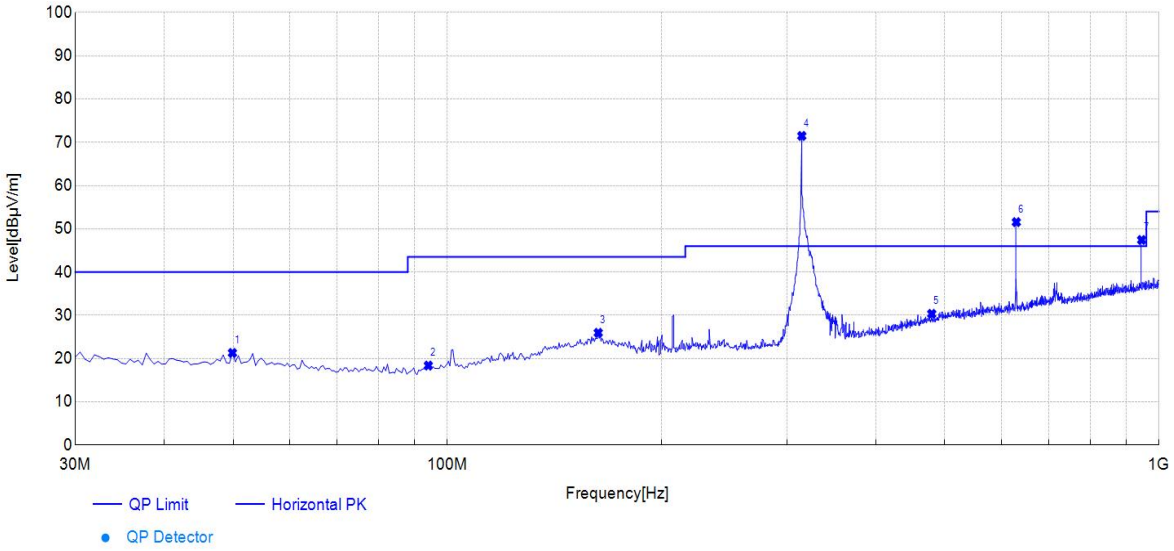
Radiated Spurious Emission:

9 kHz to 30MHz

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

30MHz – 1GHz

EUT:	TPMS SENSOR	Polarity:	Horizontal
Model:	TY-0910466	Test Date:	2025.07.04
Environment:	Temp: 22.5℃; Humi: 57%	Engineer:	Chuang Li
Test Mode	Transmit at 315MHz, ASK		

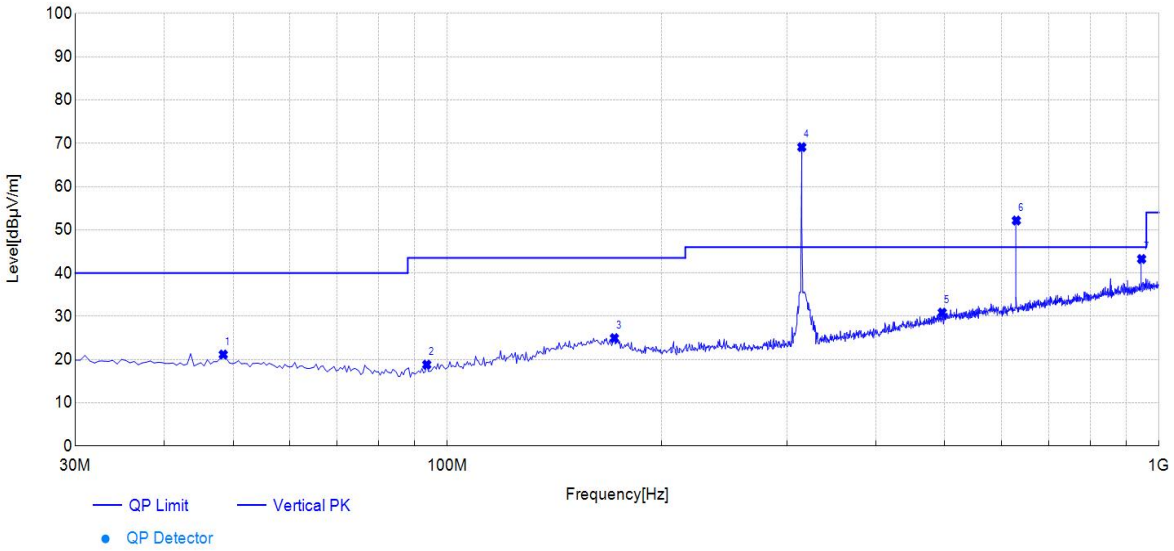


Suspected Data List									
NO.	Frequency [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
1	49.89	21.30	13.36	40.00	18.70	150	10	Peak	Horizontal
2	94.05	18.38	11.55	43.50	25.12	150	312	Peak	Horizontal
3	162.96	25.95	17.78	43.50	17.55	100	55	Peak	Horizontal
4	314.84	71.48	17.02	87.66	16.18	100	1	Peak	Horizontal
5	479.33	30.34	21.55	46.00	15.66	100	357	Peak	Horizontal
6	630.25	51.55	23.93	67.66	16.11	150	312	Peak	Horizontal
7	945.17	47.42	28.77	67.66	20.24	100	318	Peak	Horizontal

Note:

1) If the spurious emissions maximized peak measured value complies with the QP/Average limit, it is unnecessary to perform QP/Average measurement.
2) The Mark 4 is fundamental frequency.
3) The Mark 6 and Mark 7 are spurious emissions.

EUT:	TPMS SENSOR	Polarity:	Vertical
Model:	TY-0910466	Test Date:	2025.07.04
Environment:	Temp: 22.5℃; Humi: 57%	Engineer:	Chuang Li
Test Mode	Transmit at 315MHz, ASK		

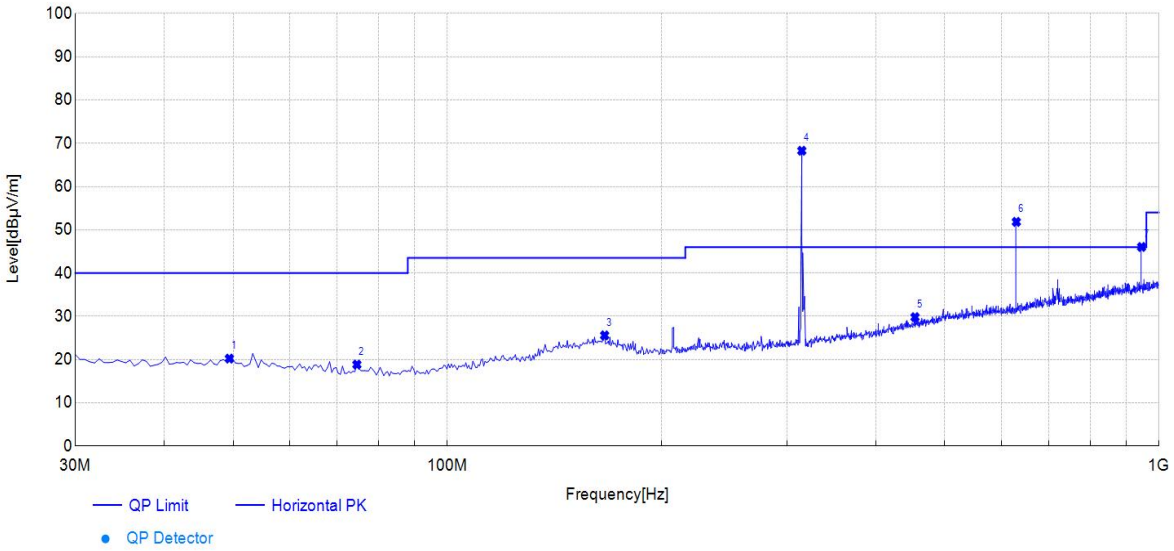


Suspected Data List									
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
1	48.44	21.16	13.30	40.00	18.84	100	184	Peak	Vertical
2	93.57	18.82	11.49	43.50	24.68	150	114	Peak	Vertical
3	171.69	24.95	17.37	43.50	18.55	100	324	Peak	Vertical
4	314.84	69.13	17.02	87.66	18.53	100	307	Peak	Vertical
5	495.83	30.86	22.05	46.00	15.14	150	202	Peak	Vertical
6	630.25	52.14	23.93	67.66	15.52	100	263	Peak	Vertical
7	945.17	43.25	28.77	67.66	24.41	150	163	Peak	Vertical

Note:

1) If the spurious emissions maximized peak measured value complies with the QP/Average limit, it is unnecessary to perform QP/Average measurement.
2) The Mark 4 is fundamental frequency.
3) The Mark 6 and Mark 7 are spurious emissions.

EUT:	TPMS SENSOR	Polarity:	Horizontal
Model:	TY-0910466	Test Date:	2025.07.04
Environment:	Temp: 22.5℃; Humi: 57%	Engineer:	Chuang Li
Test Mode	Transmit at 315MHz, FSK		

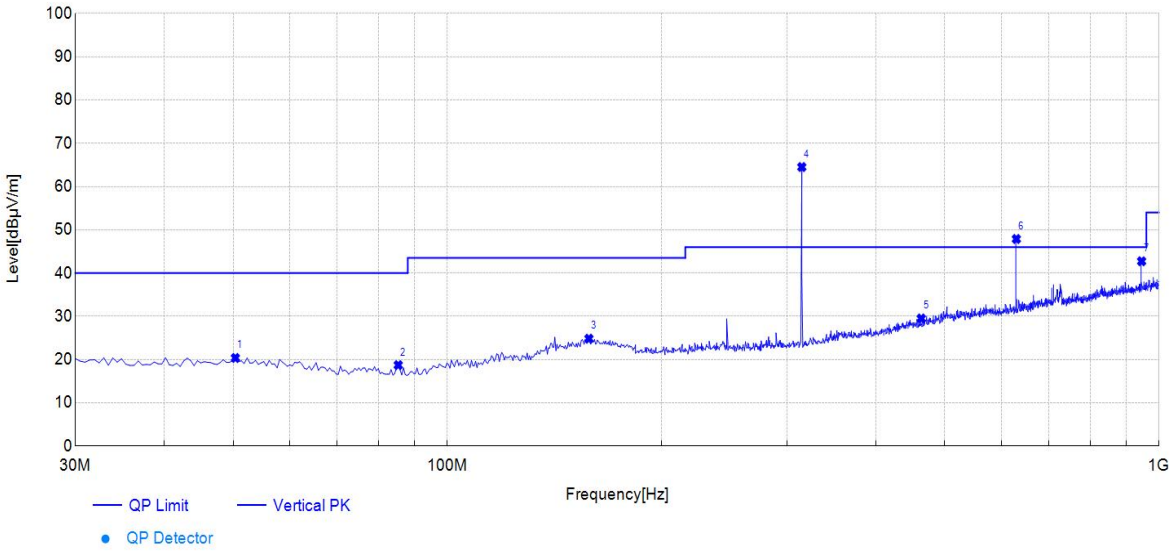


Suspected Data List									
NO.	Frequency [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
1	49.41	20.22	13.33	40.00	19.78	150	10	Peak	Horizontal
2	74.64	18.84	11.32	40.00	21.16	100	312	Peak	Horizontal
3	166.35	25.59	17.69	43.50	17.91	100	55	Peak	Horizontal
4	314.84	68.29	17.02	87.66	19.37	100	1	Peak	Horizontal
5	454.10	29.80	20.83	46.00	16.20	100	357	Peak	Horizontal
6	630.25	51.84	23.93	67.66	15.82	150	312	Peak	Horizontal
7	945.17	46.04	28.77	67.66	21.62	100	318	Peak	Horizontal

Note:

1) If the spurious emissions maximized peak measured value complies with the QP/Average limit, it is unnecessary to perform QP/Average measurement.
2) The Mark 4 is fundamental frequency.
3) The Mark 6 and Mark 7 are spurious emissions.

EUT:	TPMS SENSOR	Polarity:	Vertical
Model:	TY-0910466	Test Date:	2025.07.04
Environment:	Temp: 22.5℃; Humi: 57%	Engineer:	Chuang Li
Test Mode	Transmit at 315MHz, FSK		

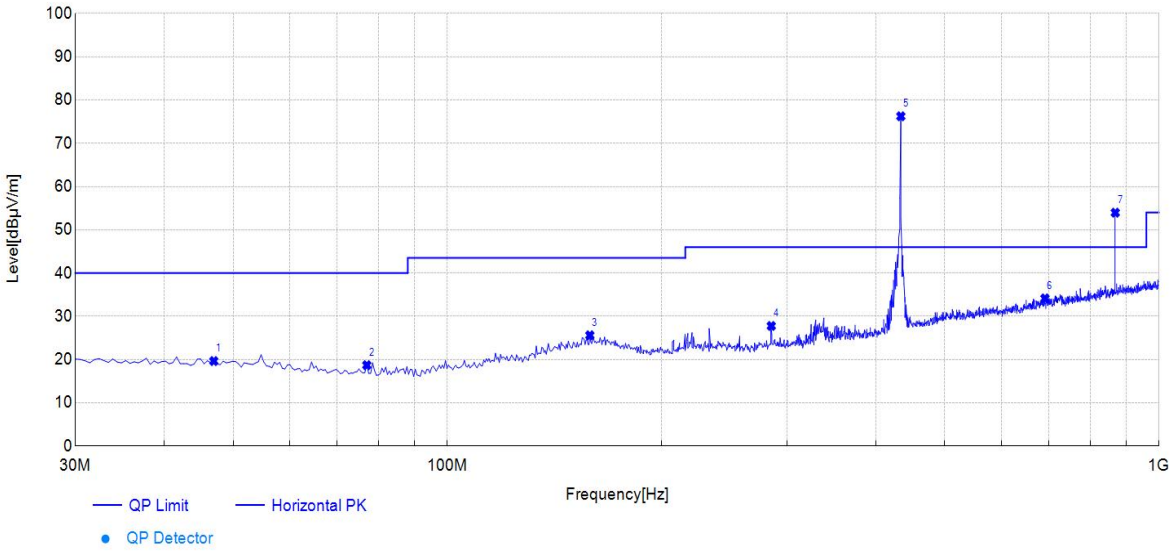


Suspected Data List									
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
1	50.38	20.37	13.34	40.00	19.63	150	358	Peak	Vertical
2	85.32	18.71	11.10	40.00	21.29	150	358	Peak	Vertical
3	158.10	24.83	17.73	43.50	18.67	150	69	Peak	Vertical
4	314.84	64.52	17.02	87.66	23.14	100	137	Peak	Vertical
5	463.32	29.50	20.97	46.00	16.50	150	336	Peak	Vertical
6	630.25	47.88	23.93	67.66	19.78	100	181	Peak	Vertical
7	945.17	42.73	28.77	67.66	24.93	150	114	Peak	Vertical

Note:

1) If the spurious emissions maximized peak measured value complies with the QP/Average limit, it is unnecessary to perform QP/Average measurement.
2) The Mark 4 is fundamental frequency.
3) The Mark 6 and Mark 7 are spurious emissions.

EUT:	TPMS SENSOR	Polarity:	Horizontal
Model:	TY-0910466	Test Date:	2025.07.04
Environment:	Temp: 22.5℃; Humi: 57%	Engineer:	Chuang Li
Test Mode	Transmit at 433.92MHz, ASK		

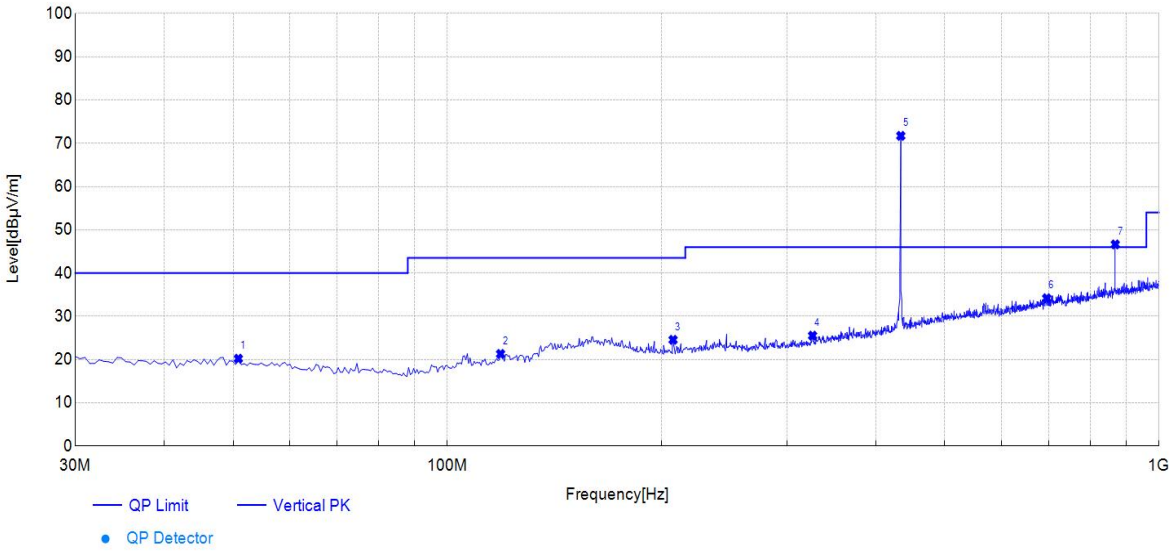


Suspected Data List									
NO.	Frequency [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
1	46.98	19.65	13.25	40.00	20.35	150	360	Peak	Horizontal
2	77.07	18.70	11.27	40.00	21.30	100	345	Peak	Horizontal
3	158.59	25.61	17.77	43.50	17.89	150	278	Peak	Horizontal
4	285.24	27.77	16.47	46.00	18.23	150	10	Peak	Horizontal
5	433.72	76.26	20.30	92.87	16.61	100	226	Peak	Horizontal
6	691.39	34.14	24.82	46.00	11.86	150	21	Peak	Horizontal
7	868.01	53.96	27.72	72.87	18.91	100	140	Peak	Horizontal

Note:

1) If the spurious emissions maximized peak measured value complies with the QP/Average limit, it is unnecessary to perform QP/Average measurement.
2) The Mark 5 is fundamental frequency.
3) The Mark 7 is spurious emission.

EUT:	TPMS SENSOR	Polarity:	Vertical
Model:	TY-0910466	Test Date:	2025.07.04
Environment:	Temp: 22.5℃; Humi: 57%	Engineer:	Chuang Li
Test Mode	Transmit at 433.92MHz, ASK		

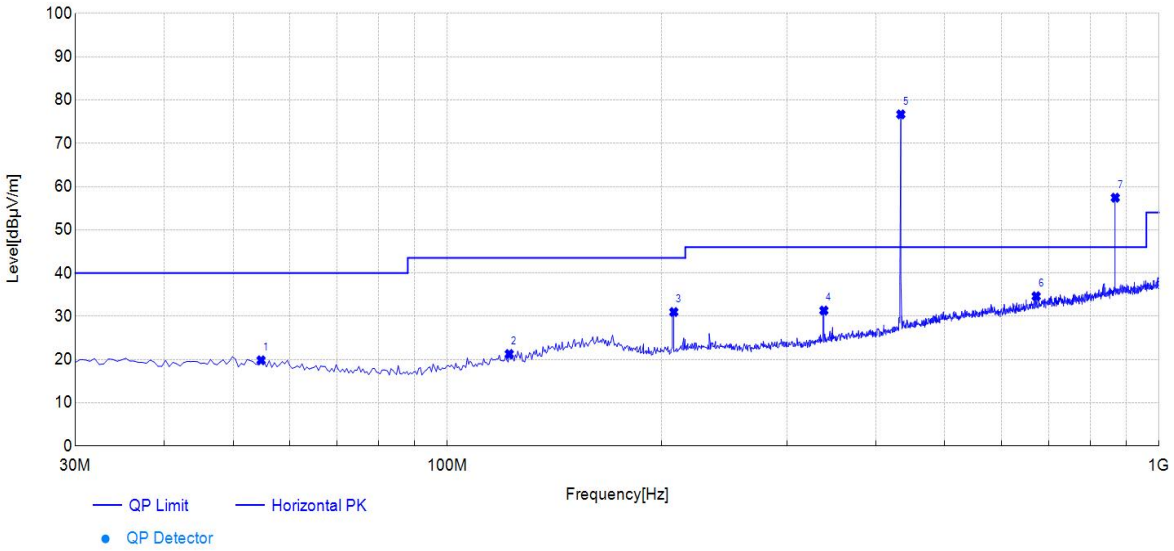


Suspected Data List									
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
1	50.87	20.20	13.31	40.00	19.80	150	2	Peak	Vertical
2	118.80	21.30	14.24	43.50	22.20	100	0	Peak	Vertical
3	207.60	24.56	15.31	43.50	18.94	100	255	Peak	Vertical
4	326.00	25.52	17.28	46.00	20.48	150	332	Peak	Vertical
5	433.72	71.73	20.30	92.87	21.14	100	154	Peak	Vertical
6	695.27	34.17	24.88	46.00	11.83	150	92	Peak	Vertical
7	868.01	46.63	27.72	72.87	26.24	150	288	Peak	Vertical

Note:

1) If the spurious emissions maximized peak measured value complies with the QP/Average limit, it is unnecessary to perform QP/Average measurement.
2) The Mark 5 is fundamental frequency.
3) The Mark 7 is spurious emission.

EUT:	TPMS SENSOR	Polarity:	Horizontal
Model:	TY-0910466	Test Date:	2025.07.04
Environment:	Temp: 22.5℃; Humi: 57%	Engineer:	Chuang Li
Test Mode	Transmit at 433.92MHz, FSK		

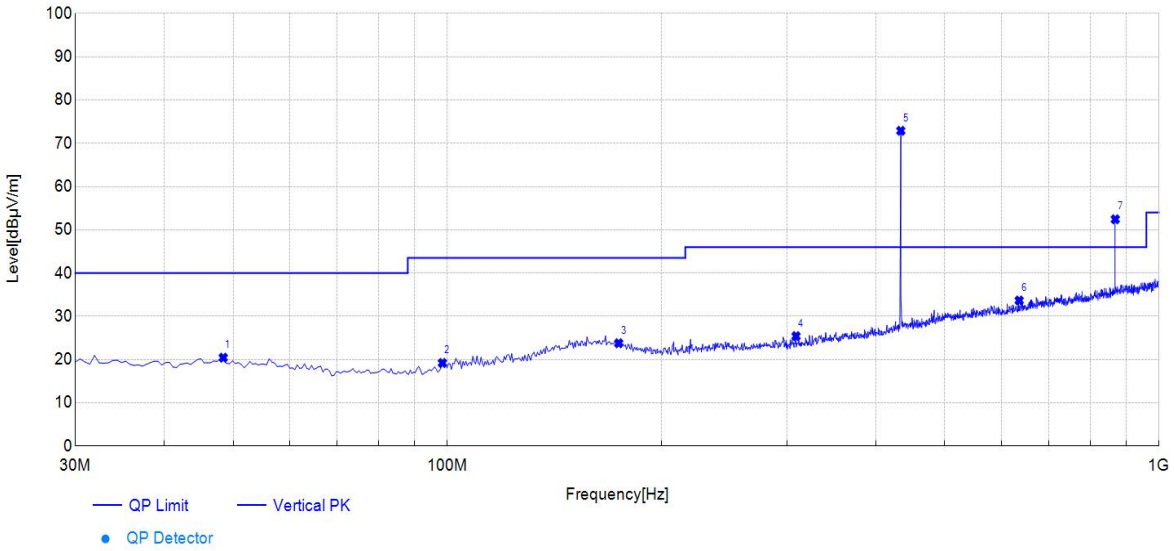


Suspected Data List									
NO.	Frequency [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
1	54.75	19.83	13.07	40.00	20.17	100	35	Peak	Horizontal
2	122.20	21.29	14.41	43.50	22.21	100	61	Peak	Horizontal
3	208.08	30.99	15.30	43.50	12.51	100	127	Peak	Horizontal
4	338.13	31.34	17.58	46.00	14.66	100	84	Peak	Horizontal
5	433.72	76.70	20.30	92.87	16.17	100	27	Peak	Horizontal
6	671.98	34.63	24.46	46.00	11.37	100	137	Peak	Horizontal
7	868.01	57.42	27.72	72.87	15.45	100	129	Peak	Horizontal

Note:

1) If the spurious emissions maximized peak measured value complies with the QP/Average limit, it is unnecessary to perform QP/Average measurement.
2) The Mark 5 is fundamental frequency.
3) The Mark 7 is spurious emission.

EUT:	TPMS SENSOR	Polarity:	Vertical
Model:	TY-0910466	Test Date:	2025.07.04
Environment:	Temp: 22.5℃; Humi: 57%	Engineer:	Chuang Li
Test Mode	Transmit at 433.92MHz, FSK		



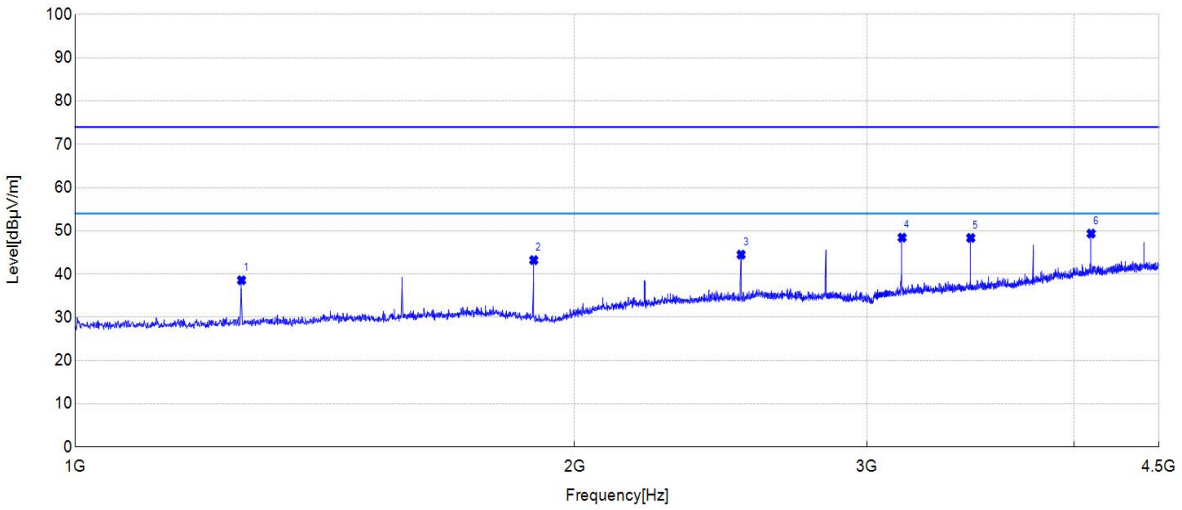
Suspected Data List									
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
1	48.44	20.43	13.30	40.00	19.57	150	232	Peak	Vertical
2	98.42	19.21	12.12	43.50	24.29	100	200	Peak	Vertical
3	174.12	23.78	17.09	43.50	19.72	150	230	Peak	Vertical
4	309.01	25.42	17.00	46.00	20.58	150	145	Peak	Vertical
5	433.72	72.90	20.30	92.87	19.97	100	54	Peak	Vertical
6	636.07	33.65	24.05	46.00	12.35	100	64	Peak	Vertical
7	868.01	52.44	27.72	72.87	20.43	100	154	Peak	Vertical

Note:

1) If the spurious emissions maximized peak measured value complies with the QP/Average limit, it is unnecessary to perform QP/Average measurement.
2) The Mark 5 is fundamental frequency.
3) The Mark 7 is spurious emission.

Emission above 1GHz

EUT:	TPMS SENSOR	Polarity:	Horizontal
Model:	TY-0910466	Test Date:	2025.07.04
Environment:	Temp: 22.5℃; Humi: 57%	Engineer:	Chuang Li
Test Mode	Transmit at 315MHz, ASK		

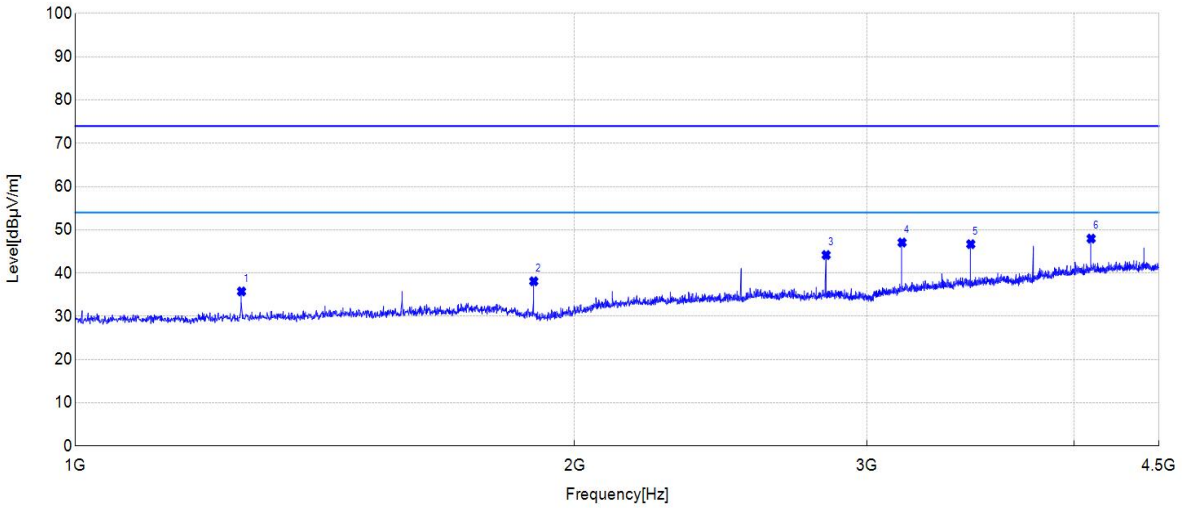


Suspected Data List									
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
1	1259.70	38.56	-23.12	54.00	15.44	150	237	Peak	Horizontal
2	1889.70	43.21	-19.08	54.00	10.79	150	119	Peak	Horizontal
3	2519.70	44.49	-15.75	54.00	9.51	150	0	Peak	Horizontal
4	3150.40	48.42	-13.84	54.00	5.58	150	220	Peak	Horizontal
5	3465.40	48.35	-12.51	54.00	5.65	150	205	Peak	Horizontal
6	4095.40	49.36	-8.11	54.00	4.64	150	308	Peak	Horizontal

Note:

1) If the spurious emissions maximized peak measured value complies with the QP/Average limit, it is unnecessary to perform QP/Average measurement.

EUT:	TPMS SENSOR	Polarity:	Vertical
Model:	TY-0910466	Test Date:	2025.07.04
Environment:	Temp: 22.5℃; Humi: 57%	Engineer:	Chuang Li
Test Mode	Transmit at 315MHz, ASK		

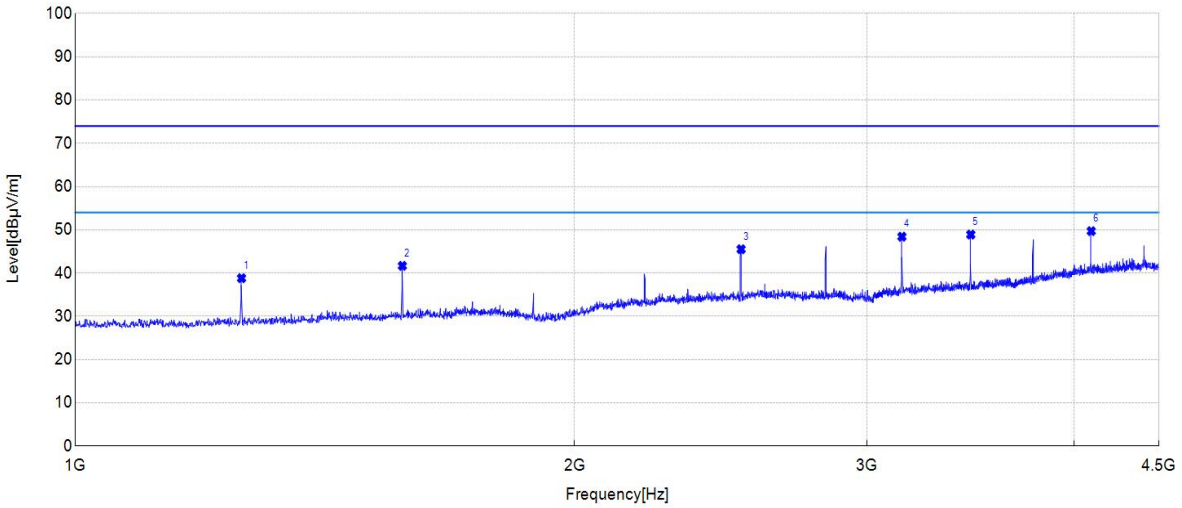


Suspected Data List									
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
1	1259.70	35.75	-22.17	54.00	18.25	150	327	Peak	Vertical
2	1889.70	38.10	-18.59	54.00	15.90	150	6	Peak	Vertical
3	2835.40	44.17	-14.98	54.00	9.83	150	223	Peak	Vertical
4	3150.40	47.06	-13.46	54.00	6.94	150	19	Peak	Vertical
5	3465.40	46.68	-11.75	54.00	7.32	150	325	Peak	Vertical
6	4095.40	47.97	-7.93	54.00	6.03	150	280	Peak	Vertical

Note:

1) If the spurious emissions maximized peak measured value complies with the QP/Average limit, it is unnecessary to perform QP/Average measurement.

EUT:	TPMS SENSOR	Polarity:	Horizontal
Model:	TY-0910466	Test Date:	2025.07.04
Environment:	Temp: 22.5℃; Humi: 57%	Engineer:	Chuang Li
Test Mode	Transmit at 315MHz, FSK		

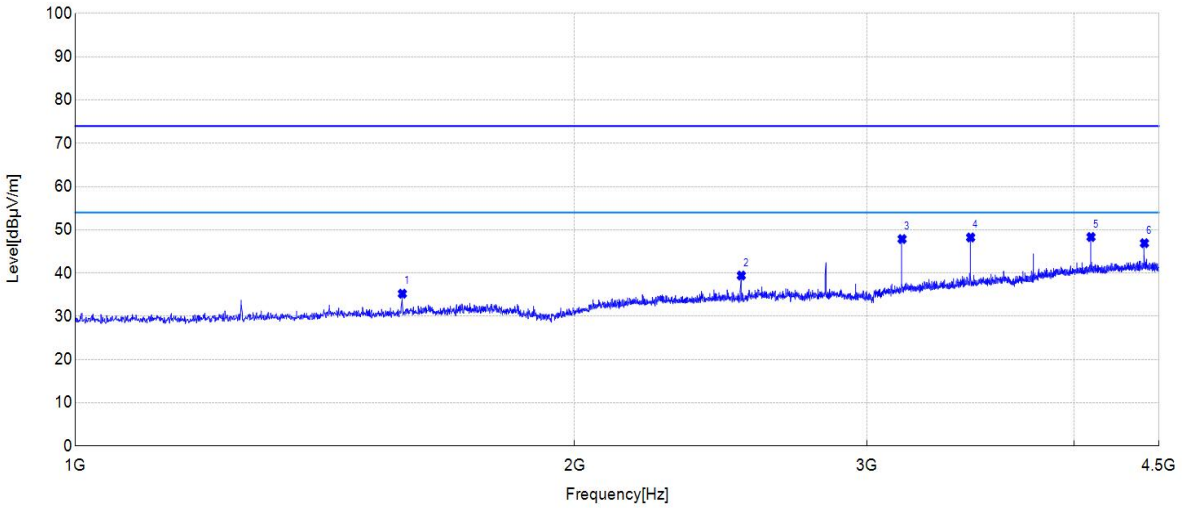


Suspected Data List									
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
1	1259.70	38.81	-23.12	54.00	15.19	150	81	Peak	Horizontal
2	1574.70	41.67	-21.26	54.00	12.33	150	81	Peak	Horizontal
3	2519.70	45.51	-15.75	54.00	8.49	150	211	Peak	Horizontal
4	3149.70	48.41	-13.85	54.00	5.59	150	328	Peak	Horizontal
5	3465.40	48.90	-12.51	54.00	5.10	150	341	Peak	Horizontal
6	4096.10	49.70	-8.11	54.00	4.30	150	25	Peak	Horizontal

Note:

2) If the spurious emissions maximized peak measured value complies with the QP/Average limit, it is unnecessary to perform QP/Average measurement.

EUT:	TPMS SENSOR	Polarity:	Vertical
Model:	TY-0910466	Test Date:	2025.07.04
Environment:	Temp: 22.5℃; Humi: 57%	Engineer:	Chuang Li
Test Mode	Transmit at 315MHz, FSK		

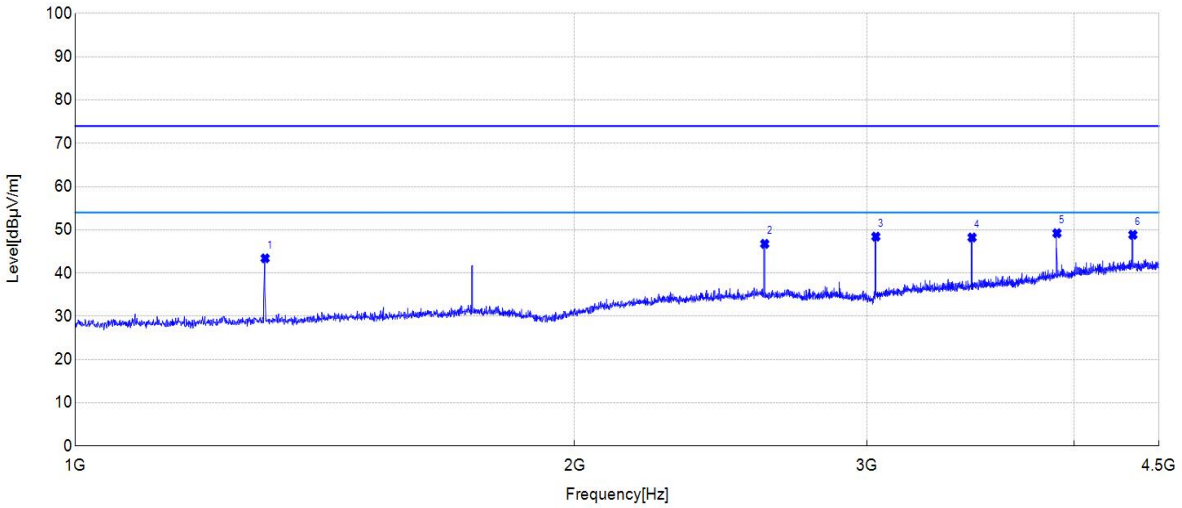


Suspected Data List									
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
1	1574.70	35.23	-20.52	54.00	18.77	150	218	Peak	Vertical
2	2520.40	39.43	-16.03	54.00	14.57	150	86	Peak	Vertical
3	3150.40	47.87	-13.46	54.00	6.13	150	290	Peak	Vertical
4	3464.70	48.23	-11.76	54.00	5.77	150	290	Peak	Vertical
5	4094.70	48.34	-7.93	54.00	5.66	150	273	Peak	Vertical
6	4409.70	46.91	-7.67	54.00	7.09	150	173	Peak	Vertical

Note:

2) If the spurious emissions maximized peak measured value complies with the QP/Average limit, it is unnecessary to perform QP/Average measurement.

EUT:	TPMS SENSOR	Polarity:	Horizontal
Model:	TY-0910466	Test Date:	2025.07.04
Environment:	Temp: 22.5℃; Humi: 57%	Engineer:	Chuang Li
Test Mode	Transmit at 433.92MHz, ASK		

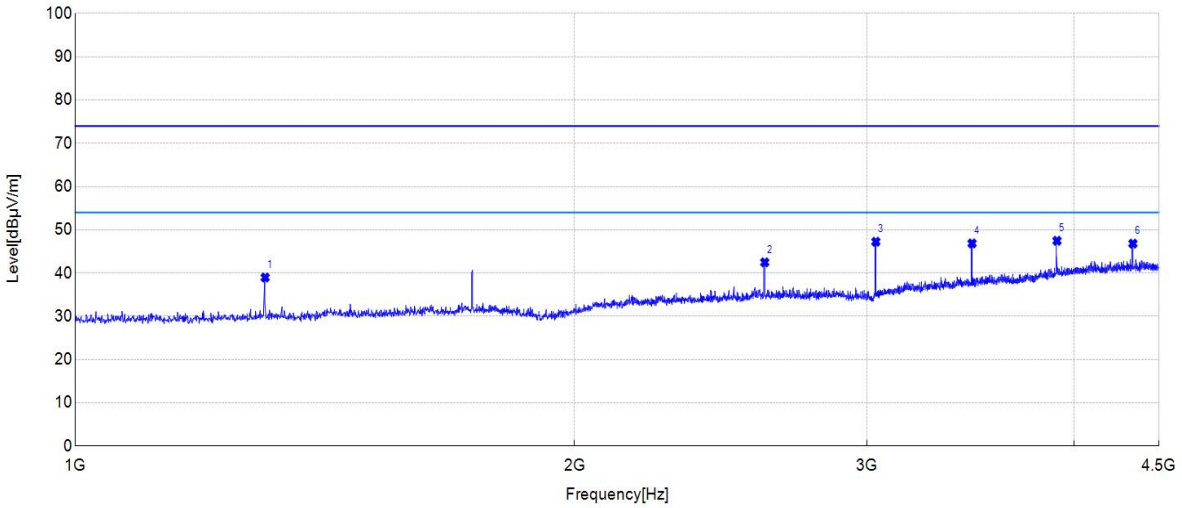


Suspected Data List									
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
1	1301.70	43.41	-22.88	54.00	10.59	150	25	Peak	Horizontal
2	2603.70	46.75	-15.52	54.00	7.25	150	55	Peak	Horizontal
3	3037.70	48.42	-14.38	54.00	5.58	150	334	Peak	Horizontal
4	3471.70	48.23	-12.49	54.00	5.77	150	100	Peak	Horizontal
5	3905.70	49.21	-9.22	54.00	4.79	150	202	Peak	Horizontal
6	4339.70	48.85	-7.57	54.00	5.15	150	113	Peak	Horizontal

Note:

3) If the spurious emissions maximized peak measured value complies with the QP/Average limit, it is unnecessary to perform QP/Average measurement.

EUT:	TPMS SENSOR	Polarity:	Vertical
Model:	TY-0910466	Test Date:	2025.07.04
Environment:	Temp: 22.5℃; Humi: 57%	Engineer:	Chuang Li
Test Mode	Transmit at 433.92MHz, ASK		

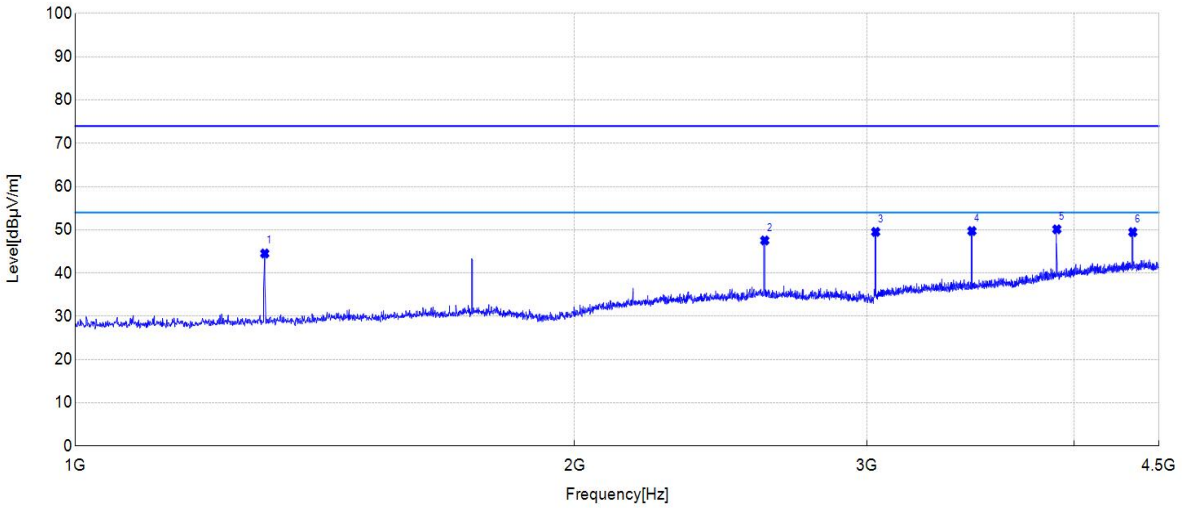


Suspected Data List									
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
1	1301.70	38.97	-21.96	54.00	15.03	150	348	Peak	Vertical
2	2603.70	42.48	-15.71	54.00	11.52	150	84	Peak	Vertical
3	3037.70	47.24	-14.13	54.00	6.76	150	112	Peak	Vertical
4	3471.70	46.85	-11.72	54.00	7.15	150	229	Peak	Vertical
5	3905.70	47.46	-8.83	54.00	6.54	150	171	Peak	Vertical
6	4339.70	46.81	-7.68	54.00	7.19	150	141	Peak	Vertical

Note:

3) If the spurious emissions maximized peak measured value complies with the QP/Average limit, it is unnecessary to perform QP/Average measurement.

EUT:	TPMS SENSOR	Polarity:	Horizontal
Model:	TY-0910466	Test Date:	2025.07.04
Environment:	Temp: 22.5℃; Humi: 57%	Engineer:	Chuang Li
Test Mode	Transmit at 433.92MHz, FSK		

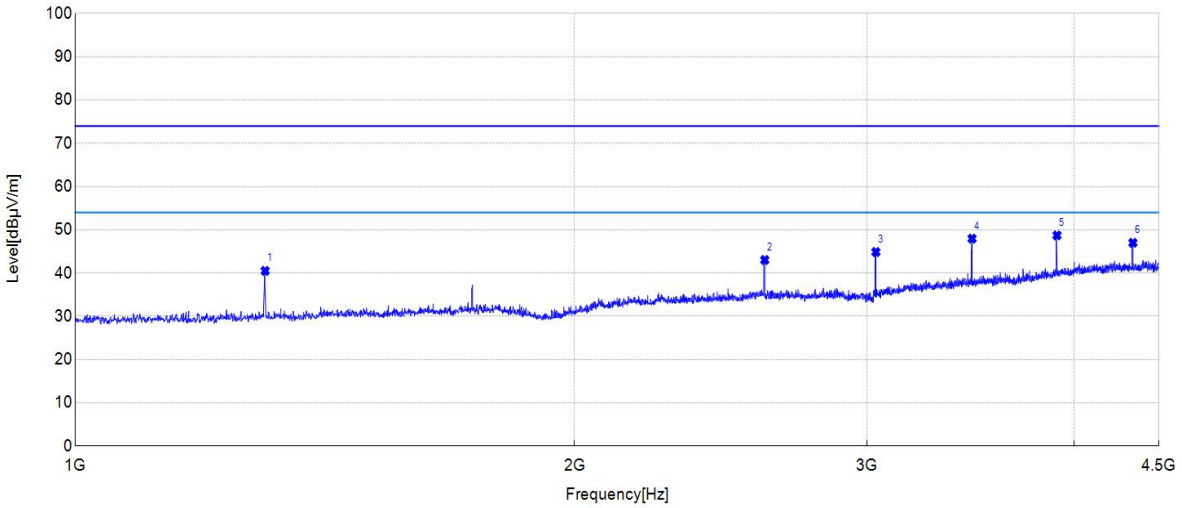


Suspected Data List									
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
1	1301.00	44.53	-22.89	54.00	9.47	150	121	Peak	Horizontal
2	2603.70	47.54	-15.52	54.00	6.46	150	255	Peak	Horizontal
3	3037.00	49.52	-14.38	54.00	4.48	150	299	Peak	Horizontal
4	3471.00	49.72	-12.49	54.00	4.28	150	285	Peak	Horizontal
5	3905.00	50.12	-9.22	54.00	3.88	150	123	Peak	Horizontal
6	4339.00	49.47	-7.57	54.00	4.53	150	51	Peak	Horizontal

Note:

4) If the spurious emissions maximized peak measured value complies with the QP/Average limit, it is unnecessary to perform QP/Average measurement.

EUT:	TPMS SENSOR	Polarity:	Vertical
Model:	TY-0910466	Test Date:	2025.07.04
Environment:	Temp: 22.5℃; Humi: 57%	Engineer:	Chuang Li
Test Mode	Transmit at 433.92MHz, FSK		



Suspected Data List									
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity
1	1301.70	40.51	-21.96	54.00	13.49	150	149	Peak	Vertical
2	2603.70	43.03	-15.71	54.00	10.97	150	149	Peak	Vertical
3	3037.70	44.87	-14.13	54.00	9.13	150	207	Peak	Vertical
4	3471.70	47.96	-11.72	54.00	6.04	150	207	Peak	Vertical
5	3905.70	48.72	-8.83	54.00	5.28	150	177	Peak	Vertical
6	4339.70	47.00	-7.68	54.00	7.00	150	192	Peak	Vertical

Note:

4) If the spurious emissions maximized peak measured value complies with the QP/Average limit, it is unnecessary to perform QP/Average measurement.

7.3. Transmission Time

7.3.1. Limit

Per FCC §15.231(e) (1), In addition, devices operated under the provisions of this paragraph shall be provided with a means for automatically limiting operation so that the duration of each transmission shall not be greater than one second and the silent period between transmissions shall be at least 30 times the duration of the transmission but in no case less than 10 seconds.

7.3.2. Test Procedure

1. With the EUT's antenna attached, the waveform was received by the test antenna which was connected to the spectrum analyzer.

2. Set center frequency of spectrum analyzer=operating frequency.

3. Set the spectrum analyzer as RBW=100k VBW=300k Span=0Hz.

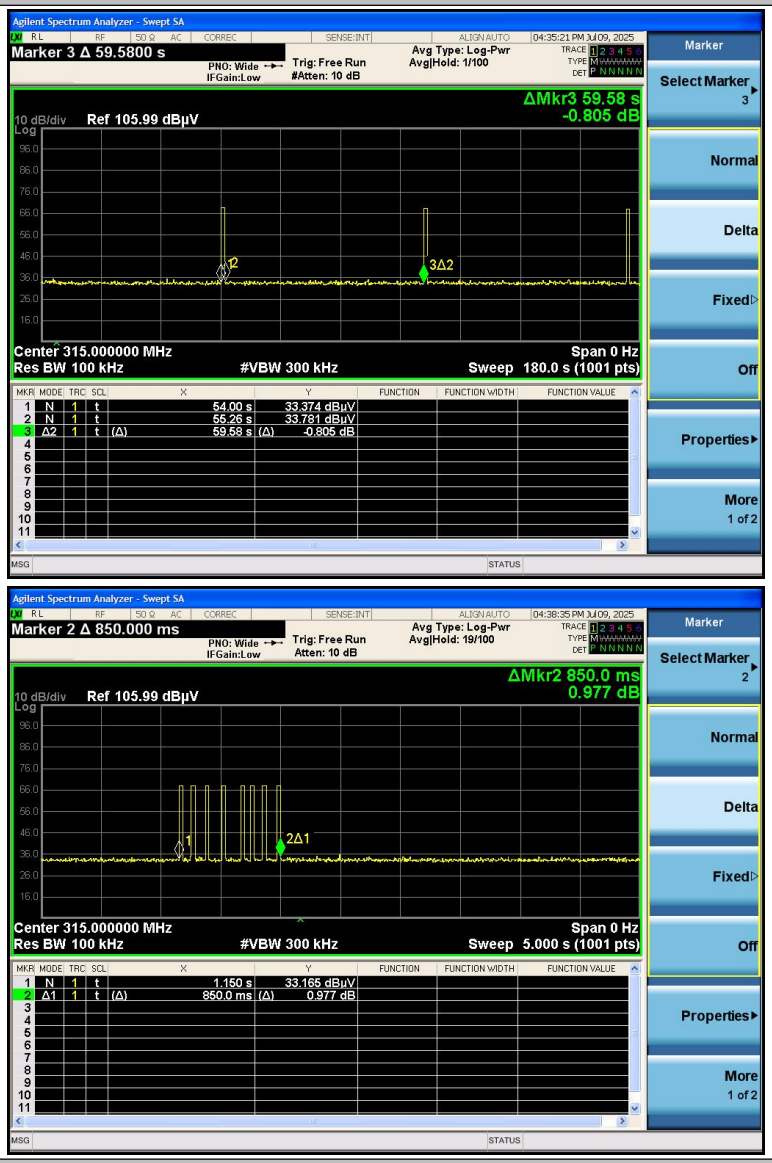
4. Repeat above procedures until all frequency measured was complete.

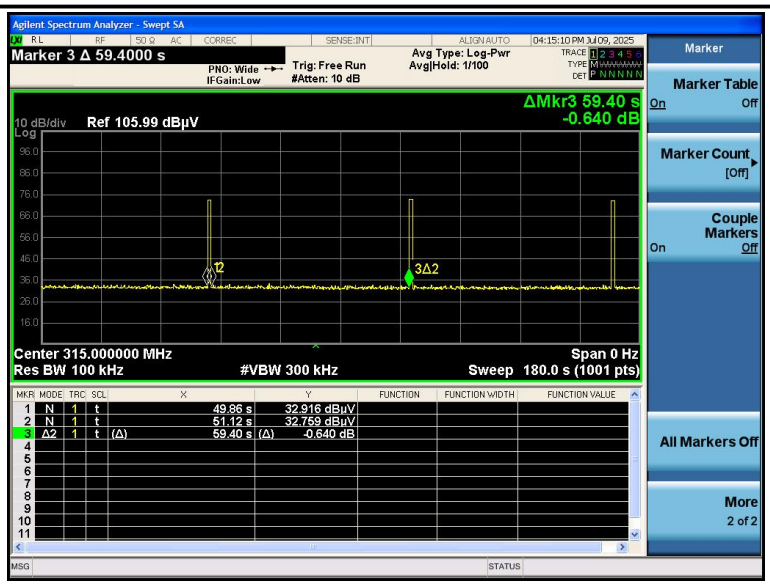
7.3.3. Test Result

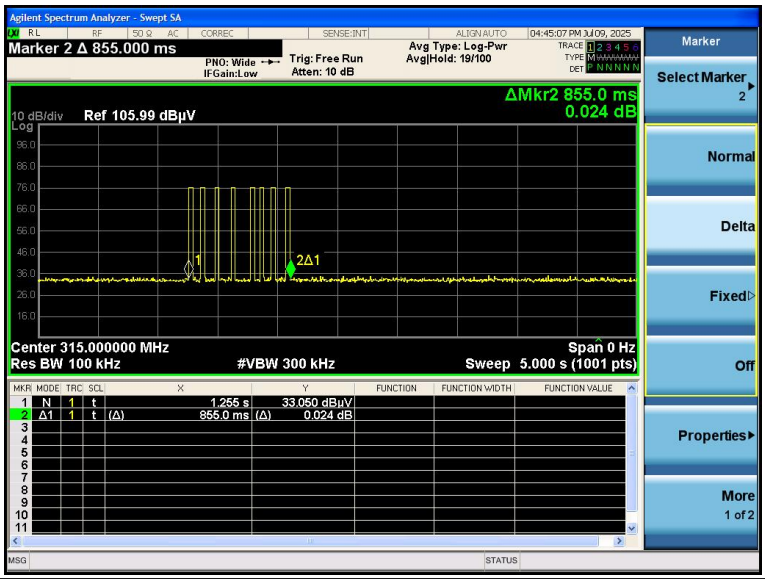
Frequency (MHz)	Modulation Type	Transmission Time (s)	Limit (s)	Silent Period Time (s)	Limit (s)	Result
315	ASK	0.850	≤1	59.58	≥30 times TX & ≥10	Pass
315	FSK	0.855	≤1	59.40	≥30 times TX & ≥10	Pass
433.92	ASK	0.850	≤1	59.58	≥30 times TX & ≥10	Pass
433.92	FSK	0.855	≤1	59.40	≥30 times TX & ≥10	Pass

Note: "≥30 times TX" means that the silent period between transmissions shall be at least 30 times the duration of the transmission.

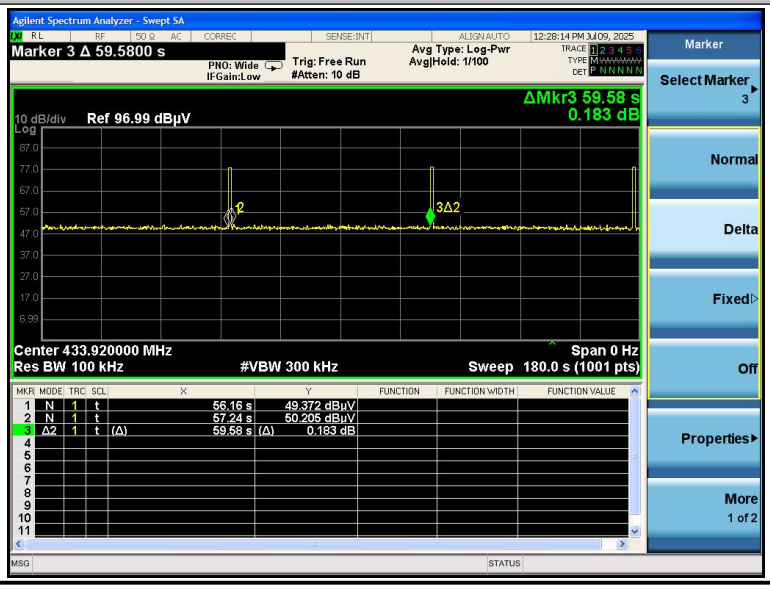
Test Photo:

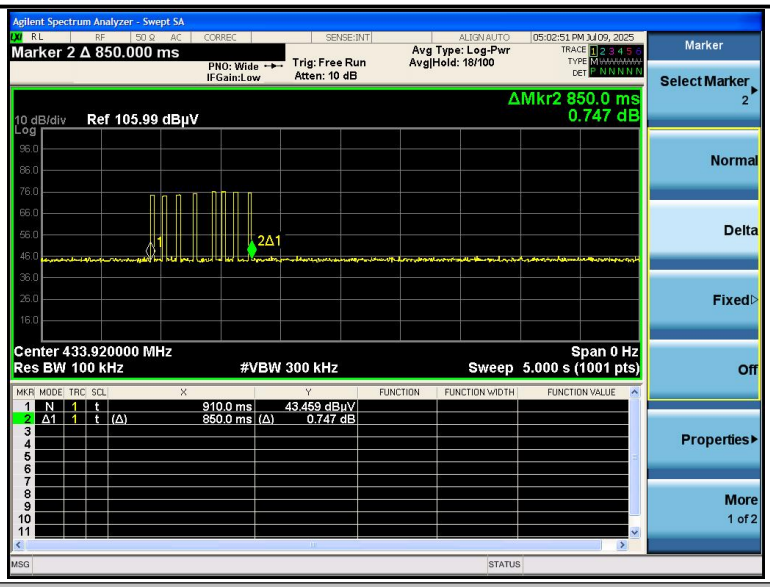
Transmit at 315MHz, ASK

Transmit at 315MHz, FSK



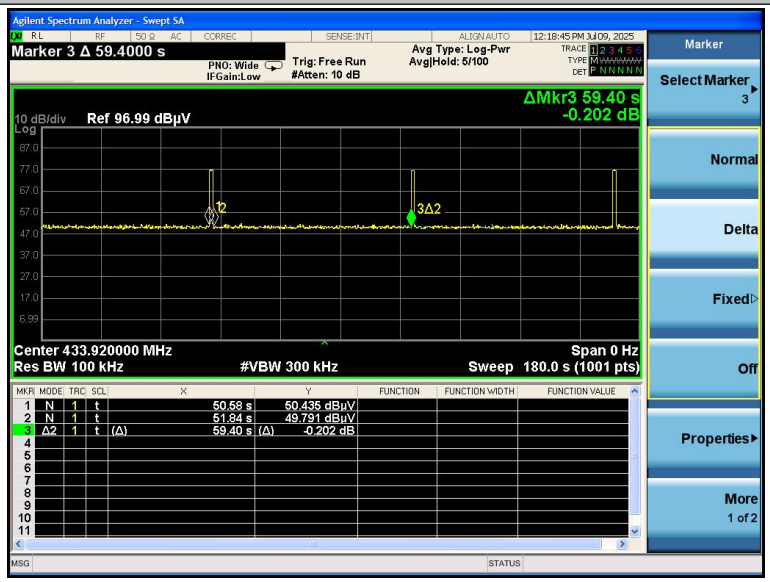


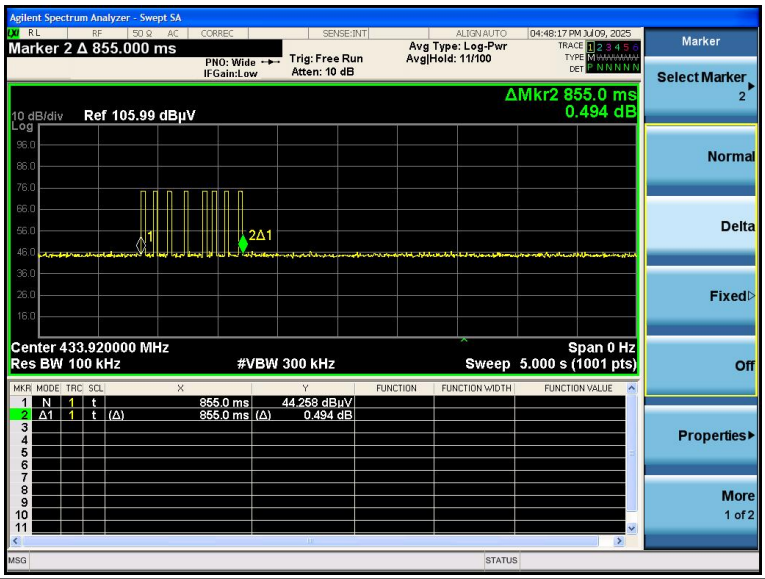
Transmit at 433.92MHz, ASK





Transmit at 433.92MHz, FSK





7.4. 20dB Emission Bandwidth

7.4.1. Limit

Per 15.231(c), 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. Bandwidth is determined at the points 20 dB down from the modulated carrier.

7.4.2. Test Procedure

1. With the EUT's antenna attached, the waveform was received by the test antenna which was connected to the spectrum analyzer, plot the 20dB bandwidth.

2. Set center frequency of spectrum analyzer=operating frequency.

3. Set the RBW to 1% to 5% of the OBW.

4. Set the VBW $\geqslant$ [3 $\times$ RBW].

5. Detector = peak.

6. Sweep time = auto couple.

7. Trace mode = max hold.

7.4.3. Test Result

Frequency (MHz)	Modulation Type	20dB Bandwidth (kHz)	Limit (kHz)	Result
315	ASK	43.5	787.50	Pass
315	FSK	110.4	787.50	Pass
433.92	ASK	50.6	1084.8	Pass
433.92	FSK	111.0	1084.8	Pass

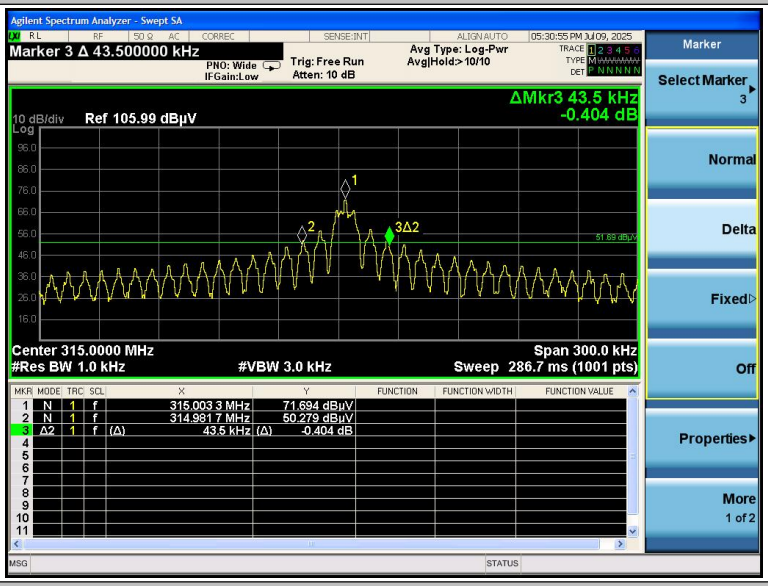
Note:

1. 315 MHz Limit = 0.25% * Center Frequency = 0.25% * 315 MHz = 787.50 kHz

2. 433.92 MHz Limit = 0.25% * Center Frequency = 0.25% * 433.92 MHz = 1084.8 kHz

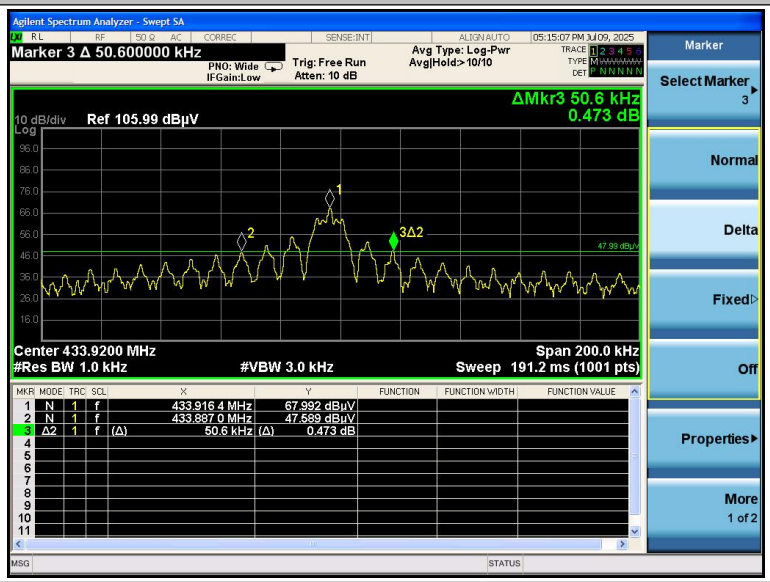
Test Photo:

Transmit at 315MHz, ASK

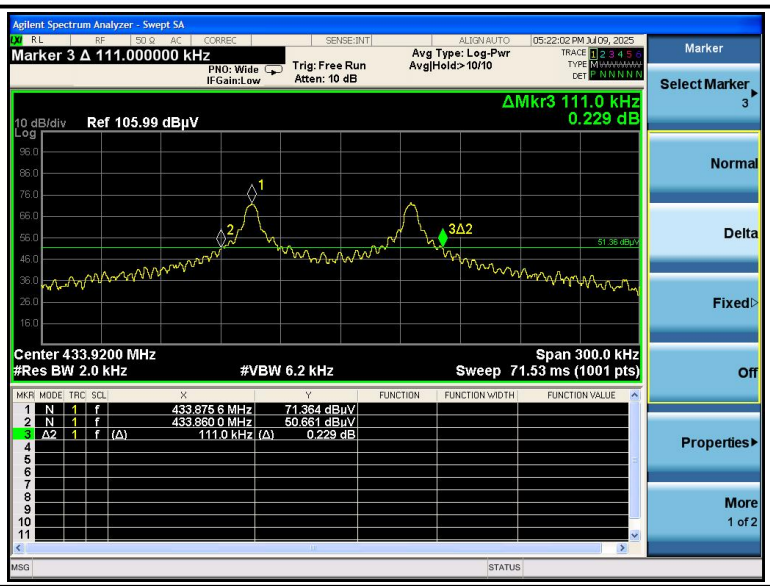


Transmit at 315MHz, FSK

Transmit at 433.92MHz, ASK



Transmit at 433.92MHz, FSK


Agilent Spectrum Analyzer - Swept SA
Marker 3 Δ 111.000000 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold:>10/10
05:22:02 PM Jul 09, 2025
ΔMkr3 111.0 kHz
0.229 dB
10 dB/div
Log
Ref 105.99 dBµV
51.36 dBµV
Center 433.9200 MHz
#Res BW 2.0 kHz
#VBW 6.2 kHz
Span 300.0 kHz
Sweep 71.53 ms (1001 pts)
1 N 1 f 433.875 6 MHz 71.364 dBµV
2 N 1 f 433.860 0 MHz 50.661 dBµV
3 Δ2 1 f (Δ) 111.0 kHz (Δ) 0.229 dB
Marker
Select Marker 3
Normal
Delta
Fixed
Off
Properties
More 1 of 2

7.5. AC Conducted Emissions Measurement

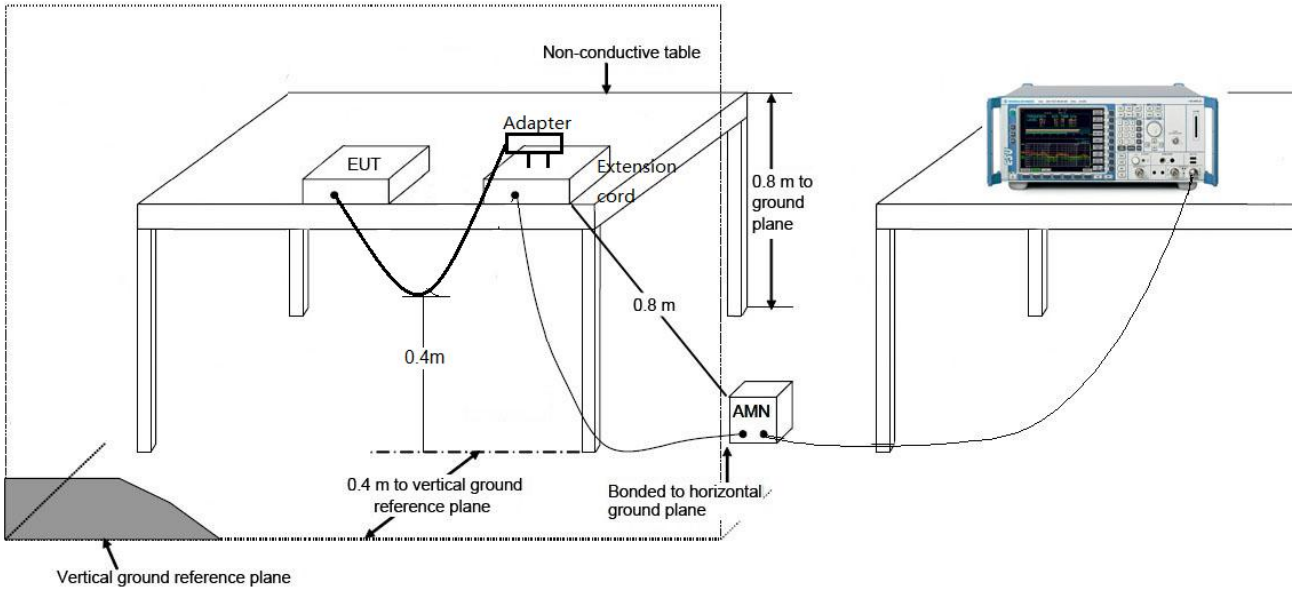
7.5.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 – 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

7.5.2. Test Setup



7.5.3. Test Result

The EUT is DC supply, this item only for the EUT is designed to be connected to the public utility (AC) power line. Not applicable.

8. CONCLUSION

The data collected relate only the item(s) tested and show that the **TPMS SENSOR (Model: TY-0910466)** is in compliance with Part 15C of the FCC Rules.

Statement

1. This report is invalid for the following states: without the special inspection and testing stamp or the official stamp of our institution; without the signature of the report authorized officer; if the report is altered.

2. It is forbidden to copy partial contents of the report except in full without the approval of our institution.

3. The client shall provide the test sample(s) and commission information and be responsible for their authenticity.

4. The report content is only applicable to the tested sample(s) this time.

5. If there are any objections to the report content, please submit them to our company in writing within 15 days from the date of receiving the report.

6. If the reports include both Chinese and English versions, when there are any inconsistencies caused by language, the Chinese version shall prevail.

7. This report is issued by the following laboratory premises:

   3/F., Comprehensive Laboratory Building, No.8, Ningyun Road, Xinwu District, Wuxi, Jiangsu, China (Ningyun Road Laboratory)

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