APPLICATION CERTIFICATION FCC Part 15C
On Behalf of

Shenzhen Mingzong Technology Co., Ltd

Digital Wireless Rear View System
Model No.: MS-708RSM, MS-715RSM

FCC ID: 2AOPG-MS-708RSM

Prepared for	:	Shenzhen Mingzong Technology Co., Ltd
Address	:	3rd Yangwu Road, Liantangmian, Huinan Avenue, Huiyang Economic Development Zone, Huizhou, Guangdong Province, China
Prepared by	:	Shenzhen Accurate Technology Co., Ltd.
Address	:	1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China
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Report Number	:	ATE20172354
Date of Test	:	Dec. 27, 2017
Date of Report	:	Dec. 28, 2017

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Test Report Certification

Applicant	:	Shenzhen Mingzong Technology Co., Ltd
Address	:	3rd Yangwu Road, Liantangmian, Huinan Avenue, Huiyang Economic Development Zone, Huizhou, Guangdong Province, China
Manufacturer	:	Huizou Miangshang Technology Co., Ltd
Address	:	3rd Yangwu Road, Liantangmian, Huinan Avenue, Huiyang Economic Development Zone, Huizhou, Guangdong Province, China
Product	:	Digital Wireless Rear View System
Model No.	:	MS-708RSM, MS-715RSM
		(Please refer to the detailed description about coverage models on page 4)
Trade name	:	MINGSHANG

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.249
ANSI C63.10: 2013

The EUT was tested according to FCC 47CFR 15.249 for compliance to FCC 47CFR 15.249 requirements

The device described above is tested by Shenzhen Accurate Technology Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C Section 15.249 limits. The measurement results are contained in this test report and Shenzhen Accurate Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

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

Date of Test :	Dec. 27, 2017
Date of Report :	Dec. 28, 2017

Prepared by : _____
(Steven Yang, Engineer)

Approved & Authorized Signer : _____
(Sean Liu, Manager)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Product	:	Digital Wireless Rear View System
Main test model Number	:	MS-708RSM, MS-715RSM (Note: We hereby state that these models are identical in interior structure, electrical circuits and components, Just model name is different. Therefore, only model MS-708RSM is for tests.)
Frequency Range	:	2407MHz-2473.5MHz
Channel frequency	:	2407MHz, 2412MHz, 2417MHz, 2422MHz, 2427MHz, 2432MHz, 2437MHz, 2442MHz, 2447MHz, 2452MHz, 2457MHz, 2462MHz, 2467MHz, 2473.5MHz
Number of Channels	:	14
Modulation Type	:	GFSK
Type of Antenna	:	Integral Antenna
Max antenna gain	:	5dBi
Power Supply	:	DC 12-24V

1.2. Special Accessory and Auxiliary Equipment

N/A

1.3.Description of Test Facility

EMC Lab	:	Recognition of accreditation by Federal Communications Commission (FCC) The Designation Number is CN1189 The Registration Number is 708358 Listed by Innovation, Science and Economic Development Canada (ISEDC) The Registration Number is 5077A-2 Accredited by China National Accreditation Service for Conformity Assessment (CNAS) The Registration Number is CNAS L3193 Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 4297.01
Name of Firm	:	Shenzhen Accurate Technology Co., Ltd.
Site Location	:	1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China

1.4.Measurement Uncertainty

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

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated dates	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 07, 2017	Jan. 06, 2018
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 07, 2017	Jan. 06, 2018
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 07, 2017	Jan. 06, 2018
Pre-Amplifier	Rohde&Schwarz	CBLU1183540-01	3791	Jan. 07, 2017	Jan. 06, 2018
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 13, 2017	Jan. 12, 2018
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 13, 2017	Jan. 12, 2018
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 13, 2017	Jan. 12, 2018
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 13, 2017	Jan. 12, 2018
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 07, 2017	Jan. 06, 2018
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 07, 2017	Jan. 06, 2018
Highpass Filter	Wainwright Instruments	WHKX3.6/18G-10SS	N/A	Jan. 07, 2017	Jan. 06, 2018
Band Reject Filter	Wainwright Instruments	WRCG2400/2485-2375/2510-60/11SS	N/A	Jan. 07, 2017	Jan. 06, 2018

3. OPERATION OF EUT DURING TESTING

3.1.Operating Mode

The mode is used: **Transmitting mode**

Low Channel: 2407MHz
Middle Channel: 2442MHz
High Channel: 2473.5MHz

3.2.Configuration and peripherals

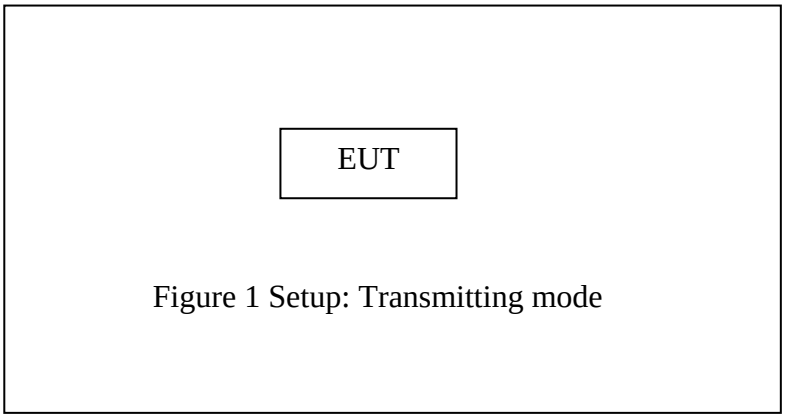


Figure 1 Setup: Transmitting mode

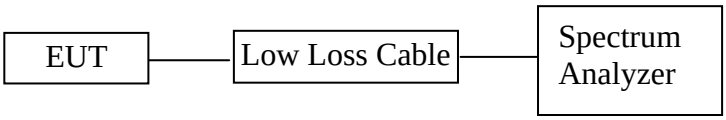
4. TEST PROCEDURES AND RESULTS

FCC Rules	Description of Test	Result
Section 15.215(c)	20dB Bandwidth	Compliant
Section 15.249(d)	Band Edge Compliance Test	Compliant
Section 15.205(a), Section 15.209(a), Section 15.249, Section 15.35	Radiated Spurious Emission Test	Compliant
Section 15.207	AC Power Line Conducted Emission Test	N/A
Section 15.203	Antenna Requirement	Compliant

Note: The EUT is powered by the DC 12-24V, so the conducted emission test is not applicable and skipped.

5. 20DB BANDWIDTH MEASUREMENT

5.1.Block Diagram of Test Setup



5.2.The Requirement For Section 15.215(c)

The bandwidth of a frequency hopping channel is the 20 dB emission bandwidth, measured with the hopping stopped. The system RF bandwidth is equal to the channel bandwidth multiplied by the number of channels in the hopset. The hopset shall be such that the near-term distribution of frequencies appears random, with sequential hops randomly distributed in both direction and magnitude of change in the hopset while the long-term distribution appears evenly distributed.

5.3.Operating Condition of EUT

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

5.3.2.Turn on the power of all equipment.

5.3.3.Let the EUT work in TX modes measure it. The transmit frequency are 2407-2473.5 MHz. We select 2407MHz, 2442MHz, and 2473.5MHz TX frequency to transmit.

5.4.Test Procedure

5.4.1.Place the EUT on the table and set it in transmitting mode.

5.4.2.Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

5.4.3.Set RBW of spectrum analyzer to 100 kHz and VBW to300 kHz, Detector function=peak, Trace=max hold, Sweep=auto.

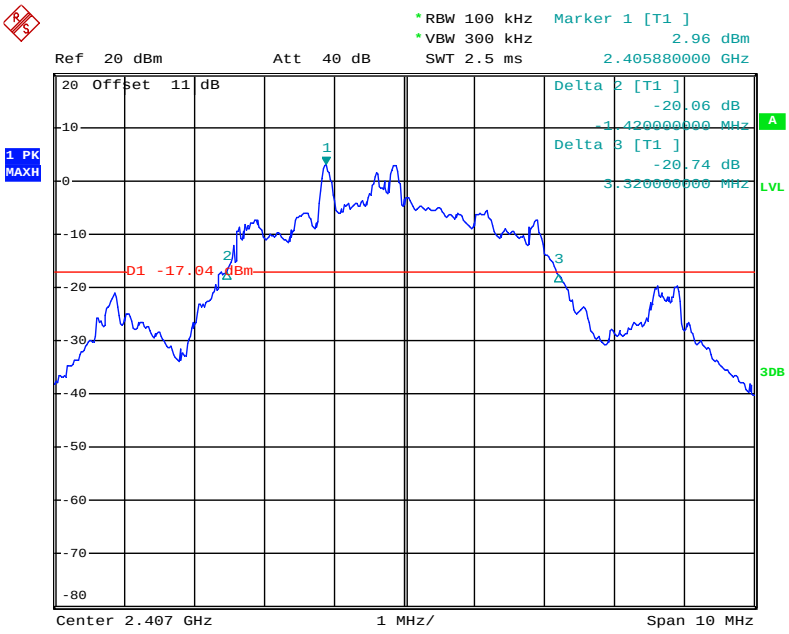
5.4.4.Set the measured low, middle and high frequency and test 20dB bandwidth with spectrum analyzer.

5.5.Test Result

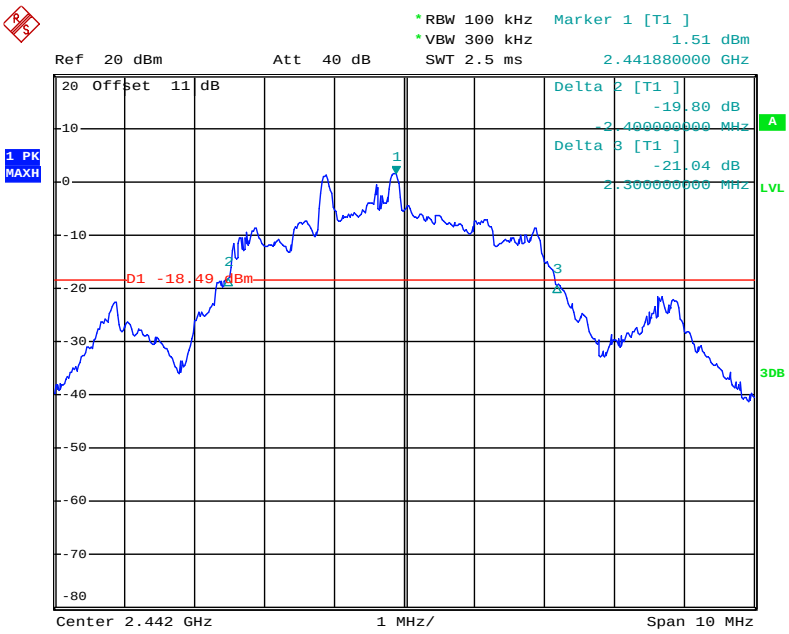
Channel	Frequency (MHz)	20 dB Bandwidth (MHz)
Low	2407	4.74
Middle	2442	4.70
High	2473.5	4.78

The spectrum analyzer plots are attached as below.

Low channel



Middle channel



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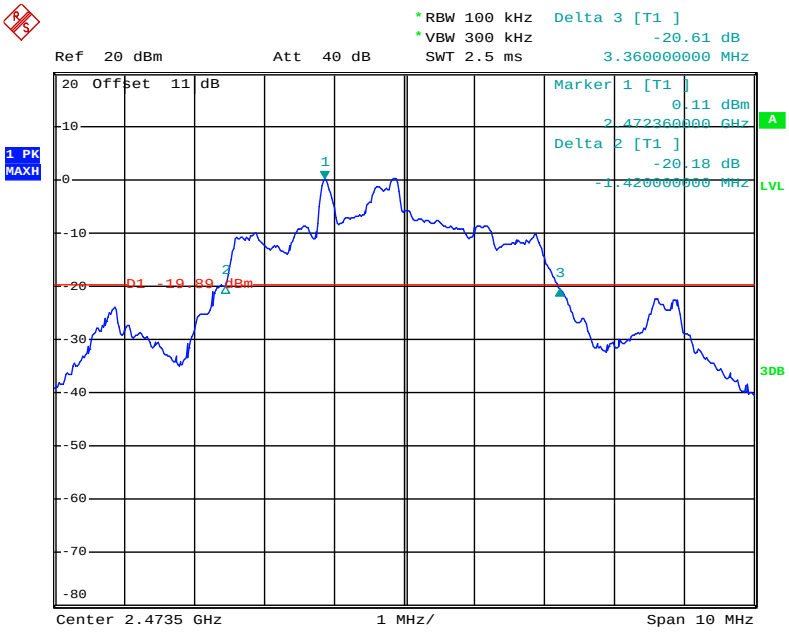
High channel



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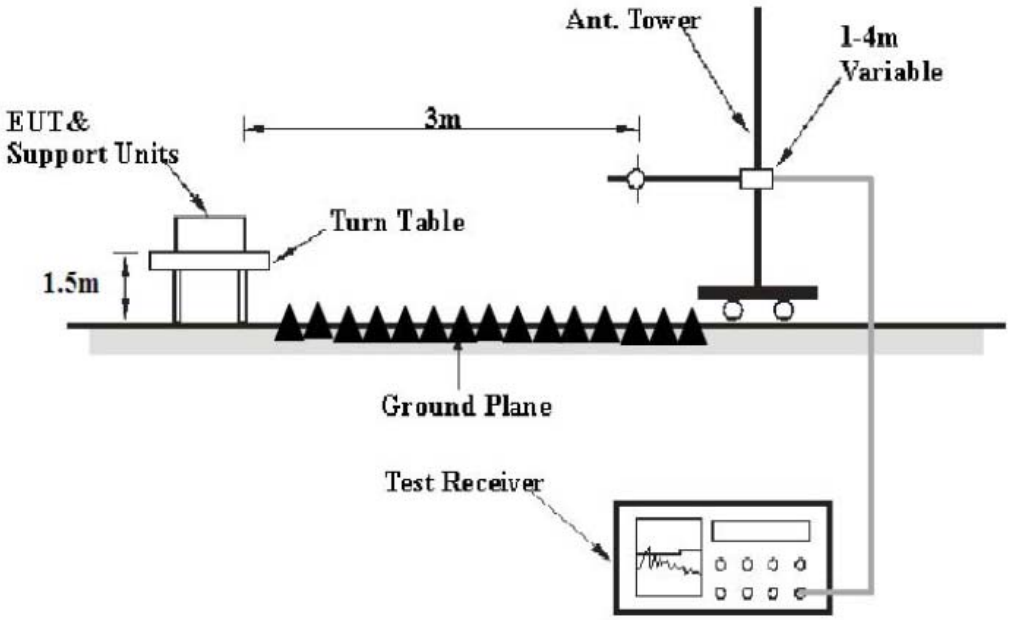
6. BAND EDGE COMPLIANCE TEST

6.1.Block Diagram of Test Setup



6.2.The Requirement For Section 15.249

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph A8.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

6.3.EUT Configuration on Measurement

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

6.4.Operating Condition of EUT

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

6.4.2.Turn on the power of all equipment.

6.4.3.Let the EUT work in TX modes measure it. The transmit frequency are 2407-2473.5 MHz. We select 2407MHz, 2473.5MHz TX frequency to transmit.

6.5.Test Procedure

Radiate Band Edge:

6.5.1. The EUT is placed on a turntable, which is 1.5m above the ground plane and worked at highest radiated power.

6.5.2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.

6.5.3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.

6.5.4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:

RBW=1MHz, VBW=1MHz

6.5.5.The band edges was measured and recorded.

6.6.Test Result

Pass

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

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

Result = Reading + Corrected Factor

3. Display the measurement of peak values.

4. The average measurement was not performed when peak measured data under the limit of average detection.

The spectral diagrams are attached as below.

ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China
Site: 1# Chamber
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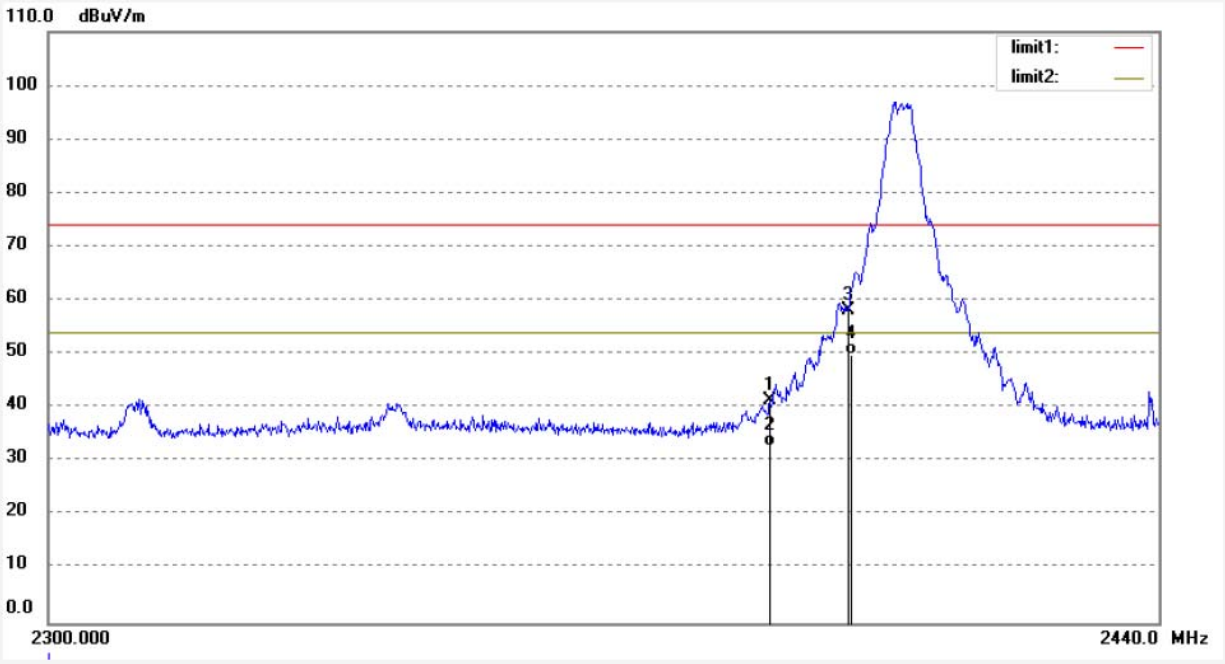
Job No.: STAR2017 #1412
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Digital Wireless Rear View System
Mode: TX 2407MHz
Model: MS-708RSM
Manufacturer: Mingshang

Polarization: Vertical
Power Source: DC 24V
Date: 2017/12/27
Time: 17:43:17
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20172354



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	45.70	-4.32	41.38	74.00	-32.62	peak	150	305	
2	2390.000	37.30	-4.32	32.98	54.00	-21.02	AVG	150	278	
3	2400.000	62.57	-4.27	58.30	74.00	-15.70	peak	150	222	
4	2400.000	54.29	-4.27	50.02	54.00	-3.98	AVG	150	174	

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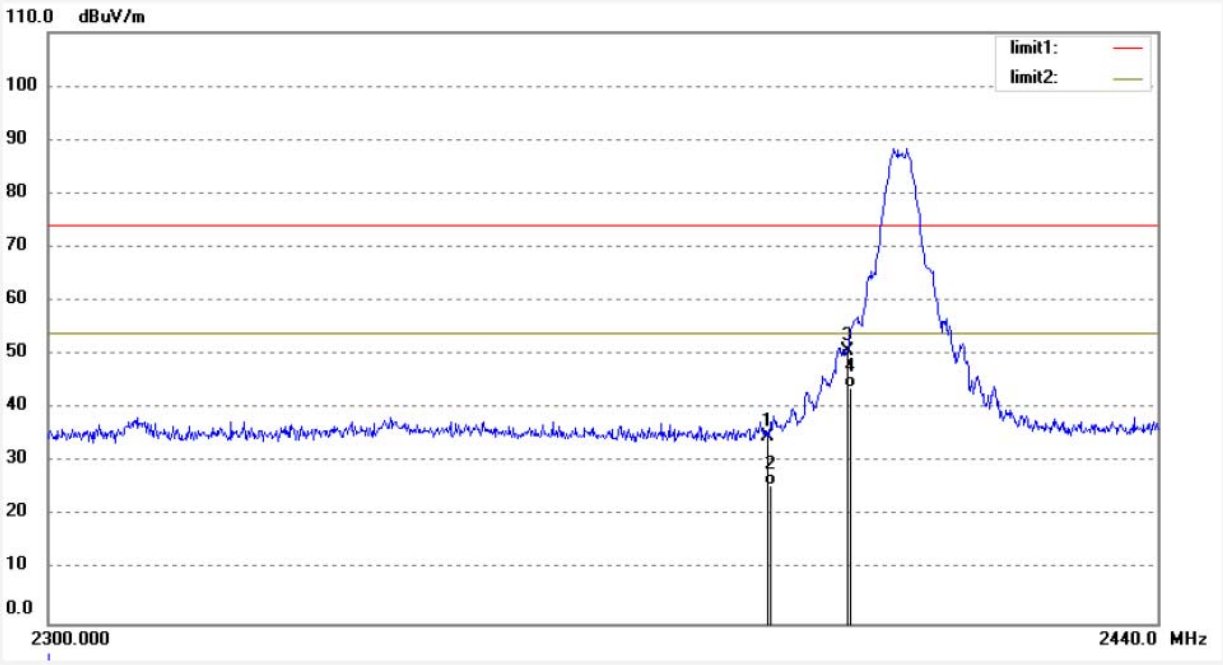
Job No.: STAR2017 #1413	Polarization: Horizontal
Standard: FCC PK	Power Source: DC 24V
Test item: Radiation Test	Date: 2017/12/27
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 17:44:20
EUT: Digital Wireless Rear View System	Engineer Signature: star
Mode: TX 2407MHz	Distance: 3m
Model: MS-708RSM	
Manufacturer: Mingshang	

Note: Report No.:ATE20172354



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2390.000	38.99	-4.32	34.67	74.00	-39.33	peak	200	119	
2	2390.000	30.00	-4.32	25.68	54.00	-28.32	AVG	200	82	
3	2400.000	55.01	-4.27	50.74	74.00	-23.26	peak	200	47	
4	2400.000	48.10	-4.27	43.83	54.00	-10.17	AVG	200	155	

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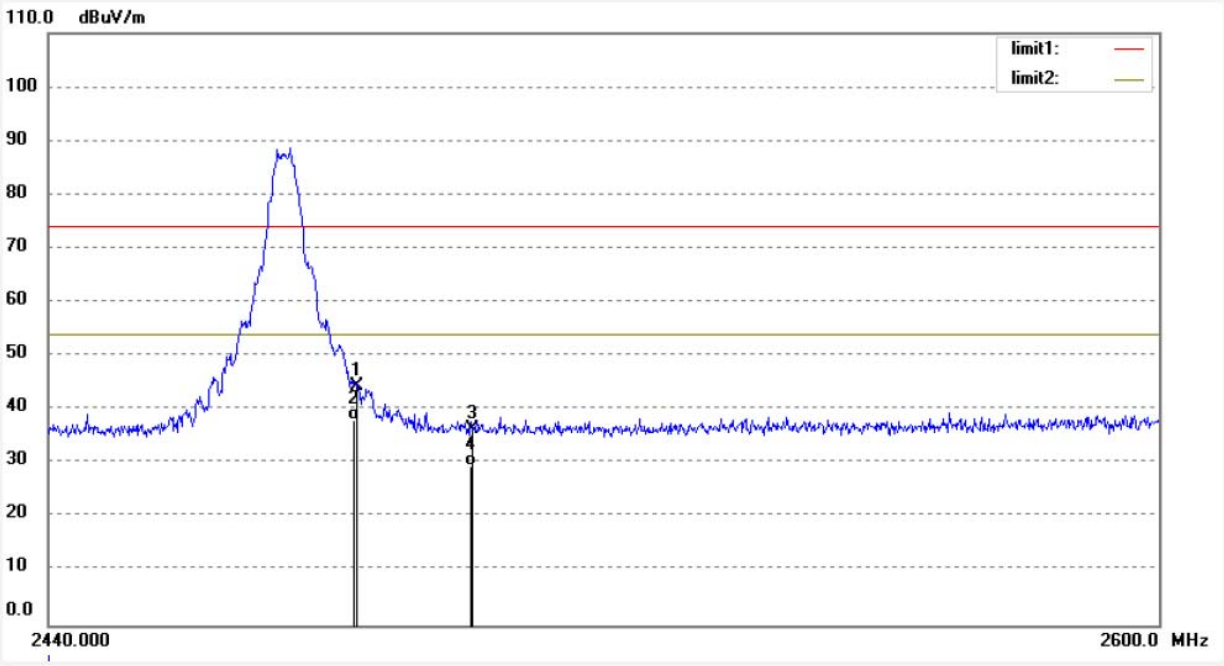
Job No.: STAR2017 #1414	Polarization: Horizontal
Standard: FCC PK	Power Source: DC 24V
Test item: Radiation Test	Date: 2017/12/27
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 17:45:38
EUT: Digital Wireless Rear View System	Engineer Signature: star
Mode: TX 2473.5MHz	Distance: 3m
Model: MS-708RSM	
Manufacturer: Mingshang	

Note: Report No.:ATE20172354



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	48.27	-3.89	44.38	74.00	-29.62	peak	200	177	
2	2483.500	42.07	-3.89	38.18	54.00	-15.82	AVG	200	215	
3	2500.000	40.12	-3.81	36.31	74.00	-37.69	peak	200	239	
4	2500.000	33.44	-3.81	29.63	54.00	-24.37	AVG	200	220	

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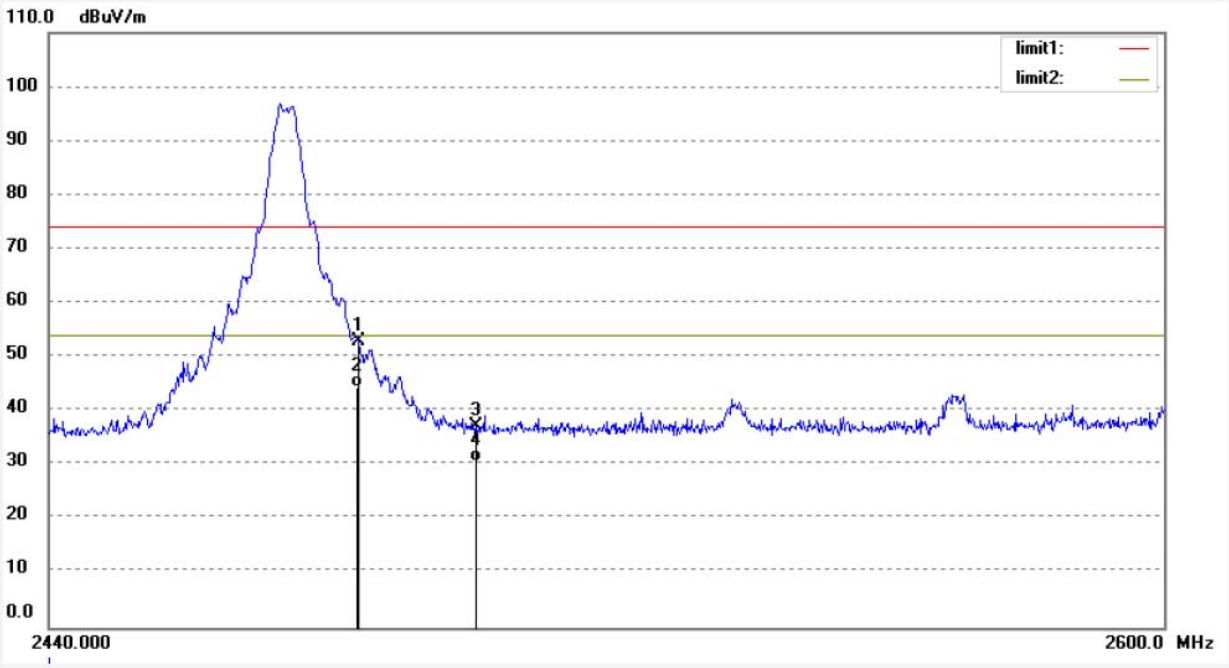
Job No.: STAR2017 #1415	Polarization: Vertical
Standard: FCC PK	Power Source: DC 24V
Test item: Radiation Test	Date: 2017/12/27
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 17:46:44
EUT: Digital Wireless Rear View System	Engineer Signature: star
Mode: TX 2473.5MHz	Distance: 3m
Model: MS-708RSM	
Manufacturer: Mingshang	

Note: Report No.:ATE20172354



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	56.85	-3.89	52.96	74.00	-21.04	peak	150	266	
2	2483.500	48.26	-3.89	44.37	54.00	-9.63	AVG	150	198	
3	2500.000	41.02	-3.81	37.21	74.00	-36.79	peak	150	241	
4	2500.000	34.47	-3.81	30.66	54.00	-23.34	AVG	150	203	

7. RADIATED SPURIOUS EMISSION TEST

7.1.Block Diagram of Test Setup

7.1.1.Block diagram of connection between the EUT and peripherals

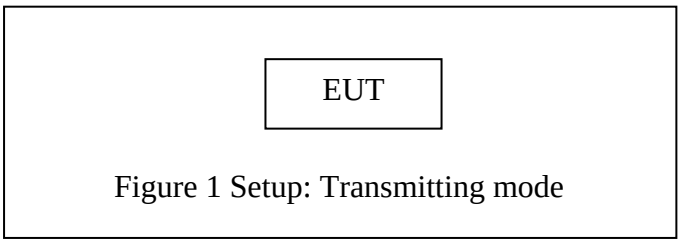
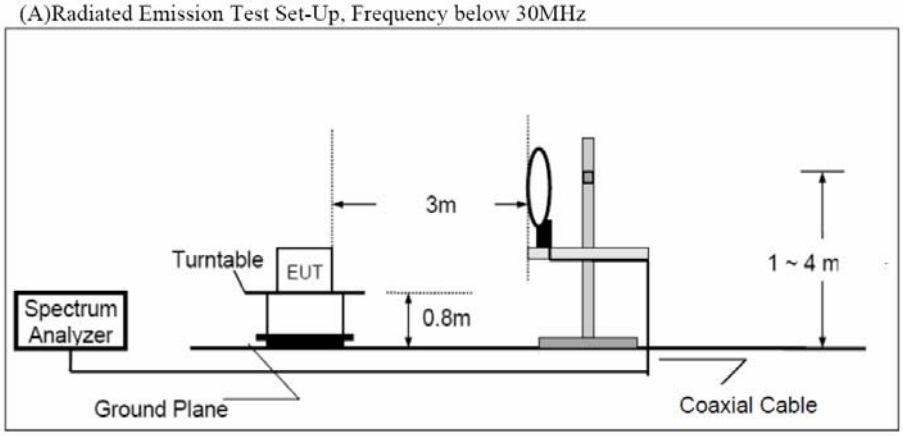


Figure 1 Setup: Transmitting mode

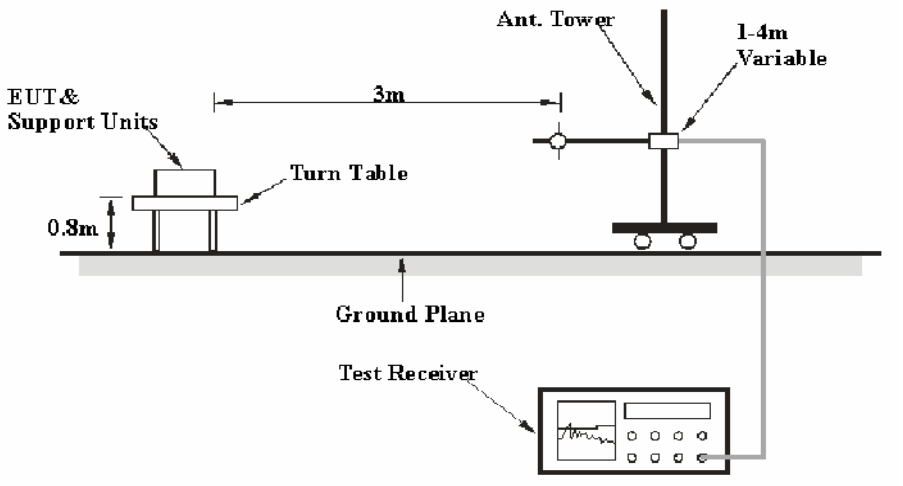
(EUT: Digital Wireless Rear View System)

7.1.2.Semi-Anechoic Chamber Test Setup Diagram

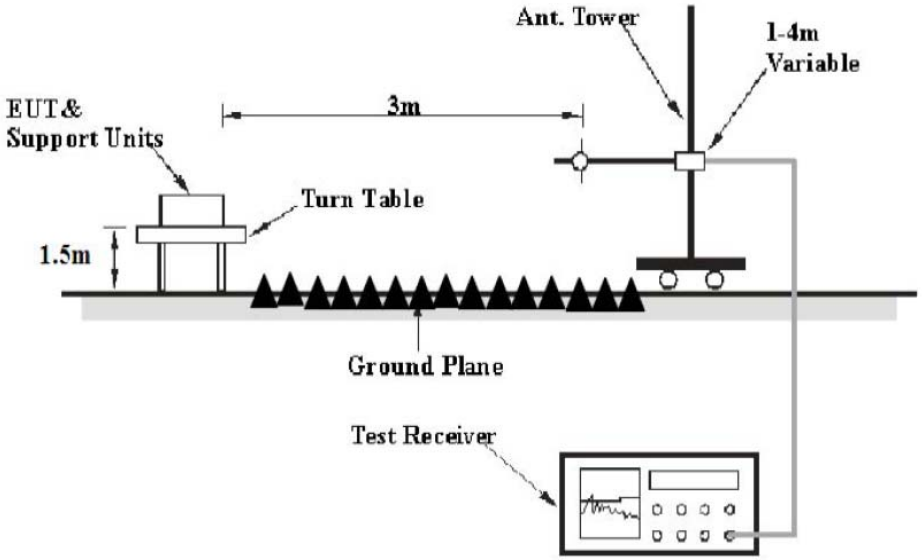
(A)Radiated Emission Test Set-Up, Frequency below 30MHz



(B)Radiated Emission Test Set-Up, Frequency 30-1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1GHz



7.2.The Limit For Section 15.249

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph A8.4(4), the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

7.3.Restricted bands of operation

7.3.1.FCC Part 15.205 Restricted bands of operation

(a) Except as shown in paragraph (d) of this section, Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

[1]Until February 1, 1999, this restricted band shall be 0.490-0.510
[2]Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emission appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000MHz, Compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000MHz, compliance with the emission limits in Section15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

7.4.Configuration of EUT on Measurement

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

7.5.Operating Condition of EUT

7.5.1.Setup the EUT and simulator as shown as Section 7.1.

7.5.2.Turn on the power of all equipment.

7.5.3.Let the EUT work in TX modes measure it. The transmit frequency are 2407-2473.5 MHz. We select 2407MHz, 2442MHz, and 2473.5MHz TX frequency to transmit.

7.6.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground(Below 1GHz). The EUT and its simulators are placed on a turntable, which is 1.5 meter high above ground(Above 1GHz). The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bi-log antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the EUT location must be manipulated according to ANSI C63.10:2013 on radiated emission measurement. This EUT was tested in 3 orthogonal positions and the worst case position data was reported.

The bandwidth of test receiver is set at 9 kHz in below 30MHz. and set at 120 kHz in 30-1000MHz, and 1MHz in above 1000MHz.

The final measurement in band 9-90 kHz, 110-490 kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.

RBW (120 kHz), VBW (300 kHz) for QP detector below 1GHz
Peak detector above 1GHz
RBW (1 MHz), VBW (3MHz) for Peak measurement
RBW (1 MHz), VBW (10Hz) for AV measurement

7.7.Data Sample

Frequency(MHz)	Reading (dBμv)	Factor (dB/m)	Result (dBμv/m)	Limit (dBμv/m)	Margin (dB)	Remark
X.XX	30.21	-17.87	12.34	40.00	-27.66	QP

Frequency(MHz) = Emission frequency in MHz
Reading(dBμv) = Uncorrected Analyzer/Receiver reading
Factor (dB/m) = Antenna factor + Cable Loss – Amplifier gain
Result(dBμv/m) = Reading(dBμv) + Factor(dB/m)
Limit (dBμv/m) = Limit stated in standard
Margin (dB) = Result(dBμv/m) - Limit (dBμv/m)
QP = Quasi-peak Reading

Calculation Formula:
Margin(dB) = Result (dBμV/m)–Limit(dBμV/m)
Result(dBμV/m)= Reading(dBμV)+ Factor(dB/m)

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the limit.

7.8.The Field Strength of Radiation Emission Measurement Results

PASS.

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

2. *: Denotes restricted band of operation.

3. The EUT is tested radiation emission at Low, Middle, High channel in three axes. The worst emissions are reported in all channels.

4. The test frequency is from 9KHz to 26.5GHz, The 9KHz-30MHz and 18-26.5GHz emissions are not reported, because the levels are too low against the limit.

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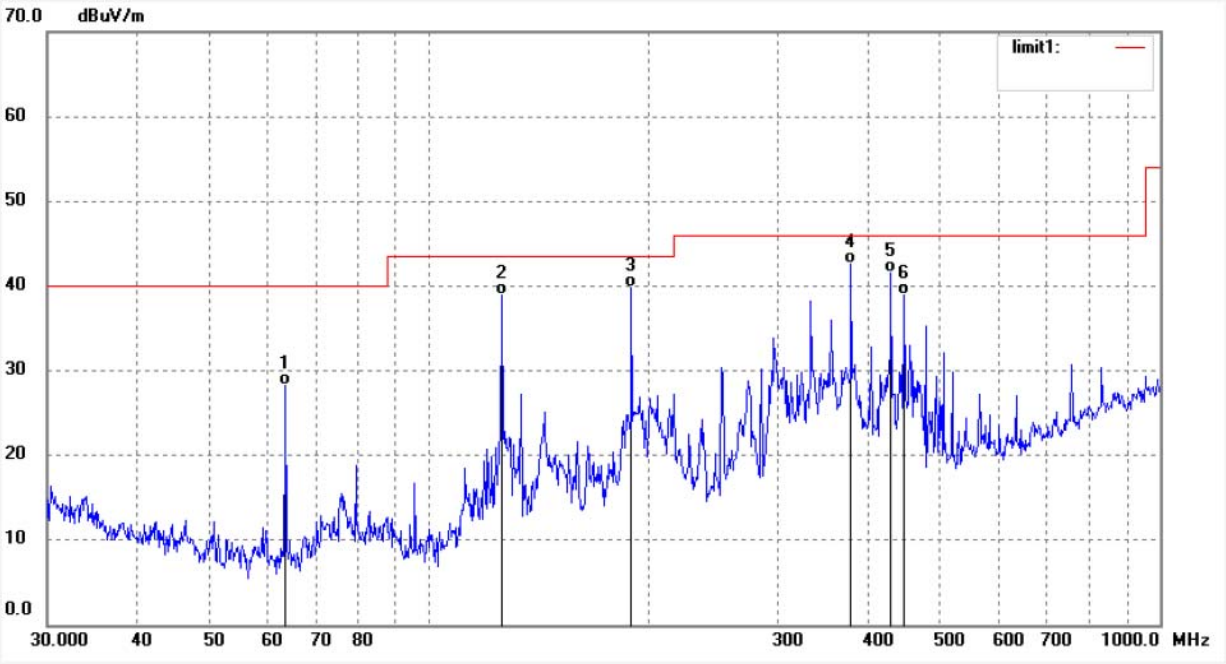
Job No.: star2017 #1174	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 24V
Test item: Radiation Test	Date: 2017/12/27
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 17:37:55
EUT: Digital Wireless Rear View System	Engineer Signature: star
Mode: TX 2407MHz	Distance: 3m
Model: MS-708RSM	
Manufacturer: Mingshang	

Note: Report No.:ATE20172354



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	63.6312	55.46	-27.27	28.19	40.00	-11.81	QP	150	144	
2	125.8059	66.48	-27.60	38.88	43.50	-4.62	QP	150	192	
3	189.1076	65.02	-25.19	39.83	43.50	-3.67	QP	150	299	
4	377.8481	61.29	-18.66	42.63	46.00	-3.37	QP	150	243	
5	428.7960	59.45	-17.83	41.62	46.00	-4.38	QP	150	178	
6	447.2619	56.19	-17.32	38.87	46.00	-7.13	QP	150	94	

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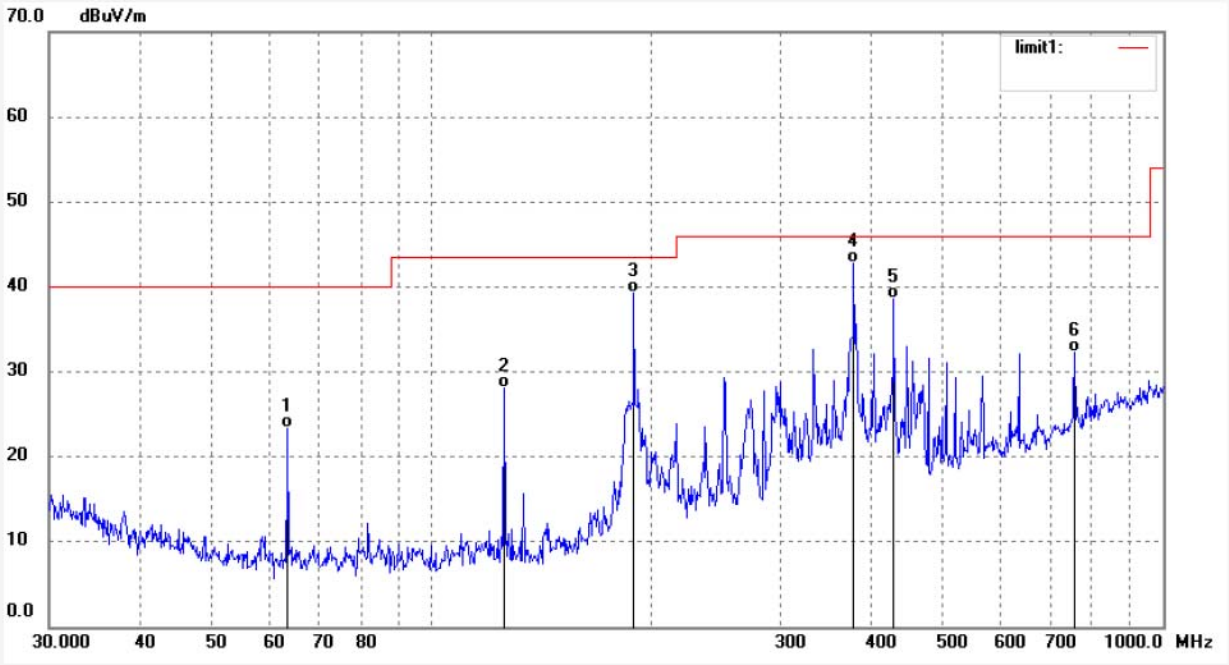
Job No.: star2017 #1175	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 24V
Test item: Radiation Test	Date: 2017/12/27
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 17:38:38
EUT: Digital Wireless Rear View System	Engineer Signature: star
Mode: TX 2407MHz	Distance: 3m
Model: MS-708RSM	
Manufacturer: Mingshang	

Note: Report No.:ATE20172354



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	63.6312	50.55	-27.27	23.28	40.00	-16.72	QP	200	175	
2	125.8059	55.69	-27.60	28.09	43.50	-15.41	QP	200	132	
3	189.1076	64.45	-25.19	39.26	43.50	-4.24	QP	200	103	
4	377.8481	61.42	-18.66	42.76	46.00	-3.24	QP	200	241	
5	428.7960	56.39	-17.83	38.56	46.00	-7.44	QP	200	210	
6	757.6201	42.35	-10.12	32.23	46.00	-13.77	QP	200	193	

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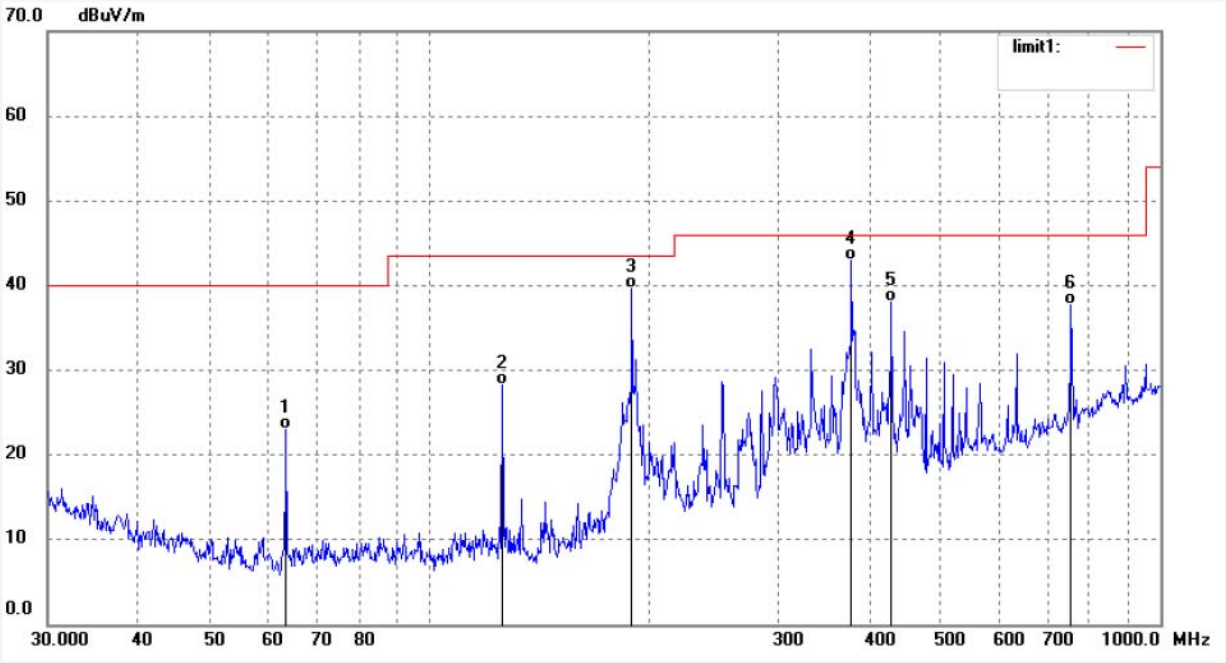
Job No.: star2017 #1176
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Digital Wireless Rear View System
Mode: TX 2442MHz
Model: MS-708RSM
Manufacturer: Mingshang

Polarization: Horizontal
Power Source: DC 24V
Date: 2017/12/27
Time: 17:39:27
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20172354



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	63.6311	50.29	-27.27	23.02	40.00	-16.98	QP	200	177	
2	125.8058	55.87	-27.60	28.27	43.50	-15.23	QP	200	75	
3	189.1075	64.83	-25.19	39.64	43.50	-3.86	QP	200	180	
4	377.8480	61.54	-18.66	42.88	46.00	-3.12	QP	200	88	
5	428.7959	55.91	-17.83	38.08	46.00	-7.92	QP	200	102	
6	754.9628	47.95	-10.19	37.76	46.00	-8.24	QP	200	199	

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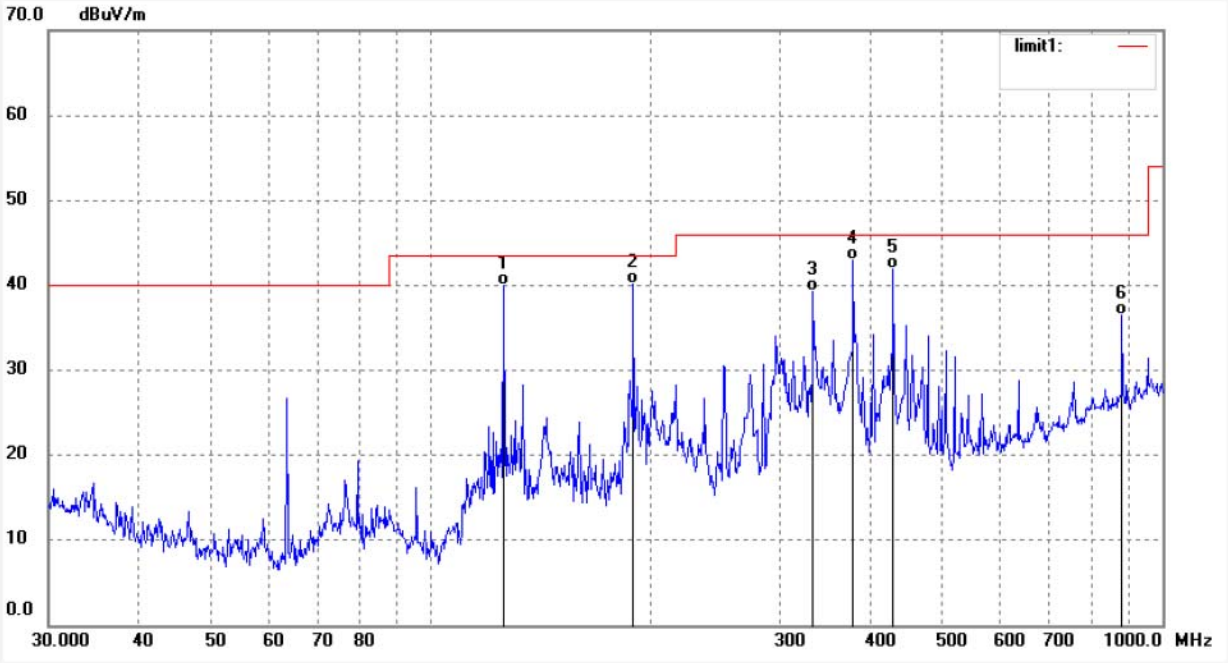
Job No.: star2017 #1177	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 24V
Test item: Radiation Test	Date: 2017/12/27
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 17:40:31
EUT: Digital Wireless Rear View System	Engineer Signature: star
Mode: TX 2442MHz	Distance: 3m
Model: MS-708RSM	
Manufacturer: Mingshang	

Note: Report No.:ATE20172354



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	125.8058	67.52	-27.60	39.92	43.50	-3.58	QP	150	93	
2	189.1075	65.37	-25.19	40.18	43.50	-3.32	QP	150	172	
3	332.9534	59.24	-19.99	39.25	46.00	-6.75	QP	150	243	
4	377.8480	61.63	-18.66	42.97	46.00	-3.03	QP	150	282	
5	428.7959	59.75	-17.83	41.92	46.00	-4.08	QP	150	199	
6	881.1838	43.91	-7.50	36.41	46.00	-9.59	QP	150	19	

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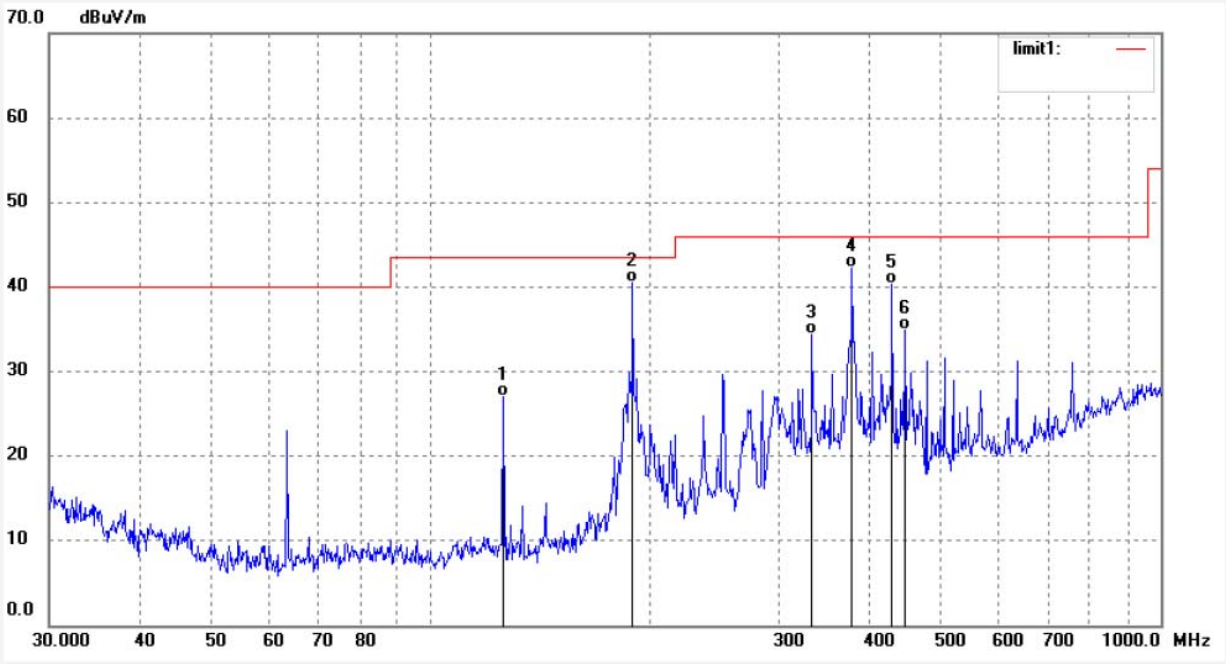
Job No.: star2017 #1179
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Digital Wireless Rear View System
Mode: TX 2473.5MHz
Model: MS-708RSM
Manufacturer: Mingshang

Polarization: Horizontal
Power Source: DC 24V
Date: 2017/12/27
Time: 17:41:58
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20172354



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	125.8059	54.68	-27.60	27.08	43.50	-16.42	QP	200	74	
2	189.1076	65.72	-25.19	40.53	43.50	-2.97	QP	200	107	
3	332.9536	54.37	-19.99	34.38	46.00	-11.62	QP	200	128	
4	377.8481	61.00	-18.66	42.34	46.00	-3.66	QP	200	190	
5	428.7960	58.14	-17.83	40.31	46.00	-5.69	QP	200	62	
6	447.2619	52.26	-17.32	34.94	46.00	-11.06	QP	200	99	

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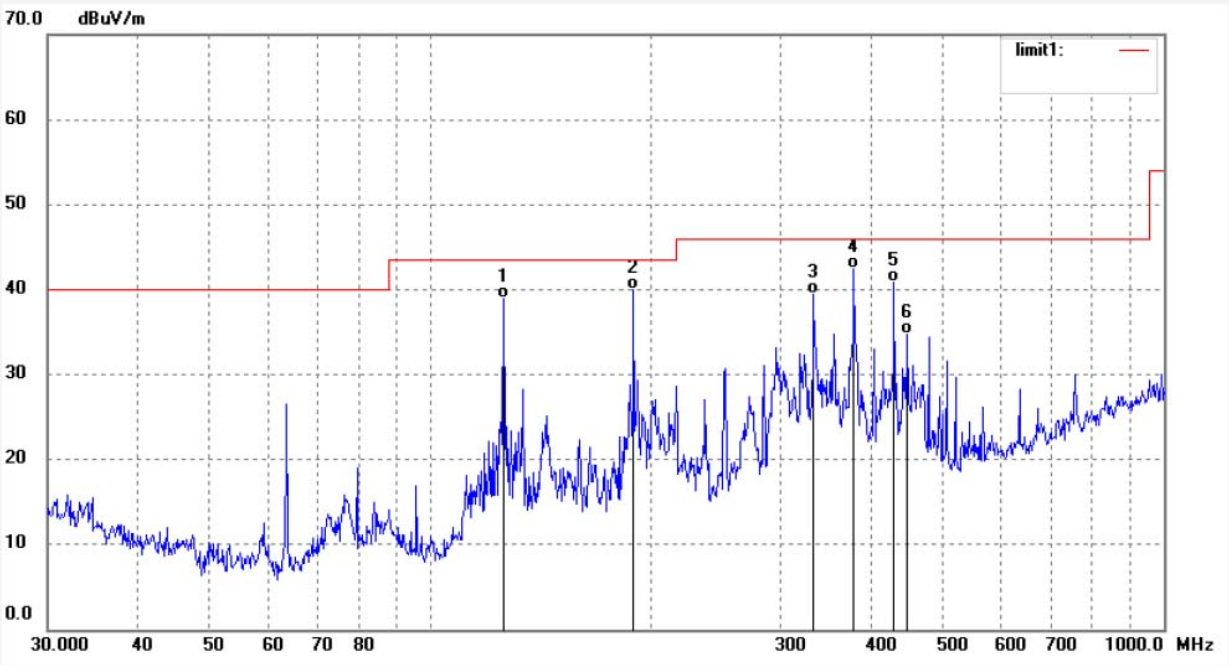
Job No.: star2017 #1178	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 24V
Test item: Radiation Test	Date: 2017/12/27
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 17:41:15
EUT: Digital Wireless Rear View System	Engineer Signature: star
Mode: TX 2473.5MHz	Distance: 3m
Model: MS-708RSM	
Manufacturer: Mingshang	

Note: Report No.:ATE20172354



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	125.8058	66.62	-27.60	39.02	43.50	-4.48	QP	150	177	
2	189.1075	65.14	-25.19	39.95	43.50	-3.55	QP	150	186	
3	332.9534	59.52	-19.99	39.53	46.00	-6.47	QP	150	301	
4	377.8480	61.13	-18.66	42.47	46.00	-3.53	QP	150	78	
5	428.7959	58.61	-17.83	40.78	46.00	-5.22	QP	150	133	
6	447.2619	51.99	-17.32	34.67	46.00	-11.33	QP	150	224	

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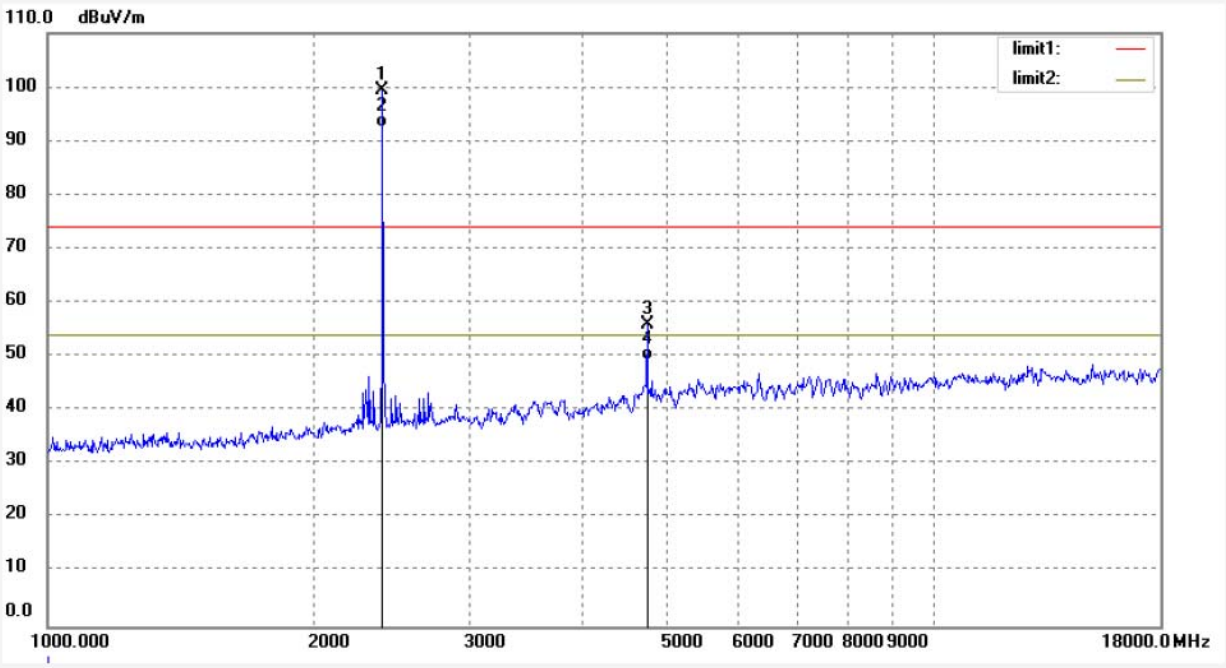
Job No.: STAR2017 #1403
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Digital Wireless Rear View System
Mode: TX 2407MHz
Model: MS-708RSM
Manufacturer: Mingshang

Polarization: Vertical
Power Source: DC 24V
Date: 2017/12/27
Time: 17:17:23
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20172354



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2407.059	103.65	-4.33	99.32	114.00	-14.68	peak	150	144	
2	2407.059	95.77	-4.33	91.44	94.00	-2.56	AVG	150	134	
3	4814.051	53.29	2.76	56.05	74.00	-17.95	peak	150	102	
4	4814.051	46.67	2.76	49.43	54.00	-4.57	AVG	150	87	

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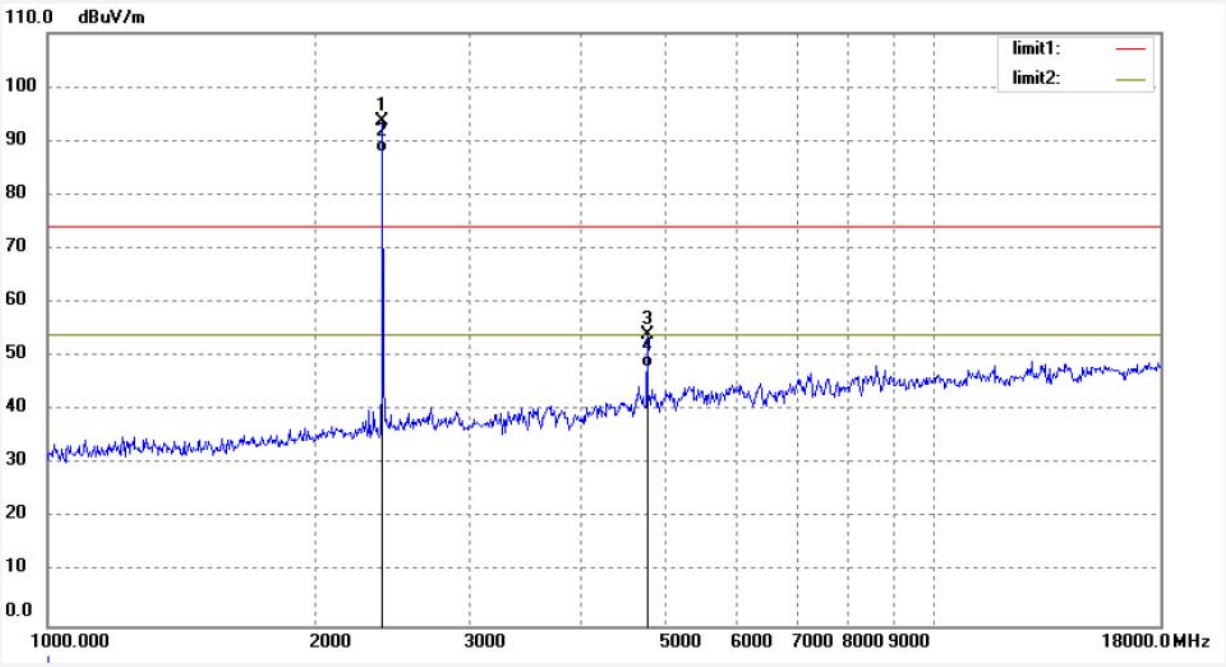
Job No.: STAR2017 #1402	Polarization: Horizontal
Standard: FCC PK	Power Source: DC 24V
Test item: Radiation Test	Date: 2017/12/27
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 17:14:33
EUT: Digital Wireless Rear View System	Engineer Signature: star
Mode: TX 2407MHz	Distance: 3m
Model: MS-708RSM	
Manufacturer: Mingshang	

Note: Report No.:ATE20172354



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2407.059	97.93	-4.33	93.60	114.00	-20.4	peak	200	142	
2	2407.059	92.22	-4.33	87.89	94.00	-6.11	AVG	200	106	
3	4814.051	51.25	2.76	54.01	74.00	-19.99	peak	200	33	
4	4814.051	45.36	2.76	48.12	54.00	-5.88	AVG	200	28	

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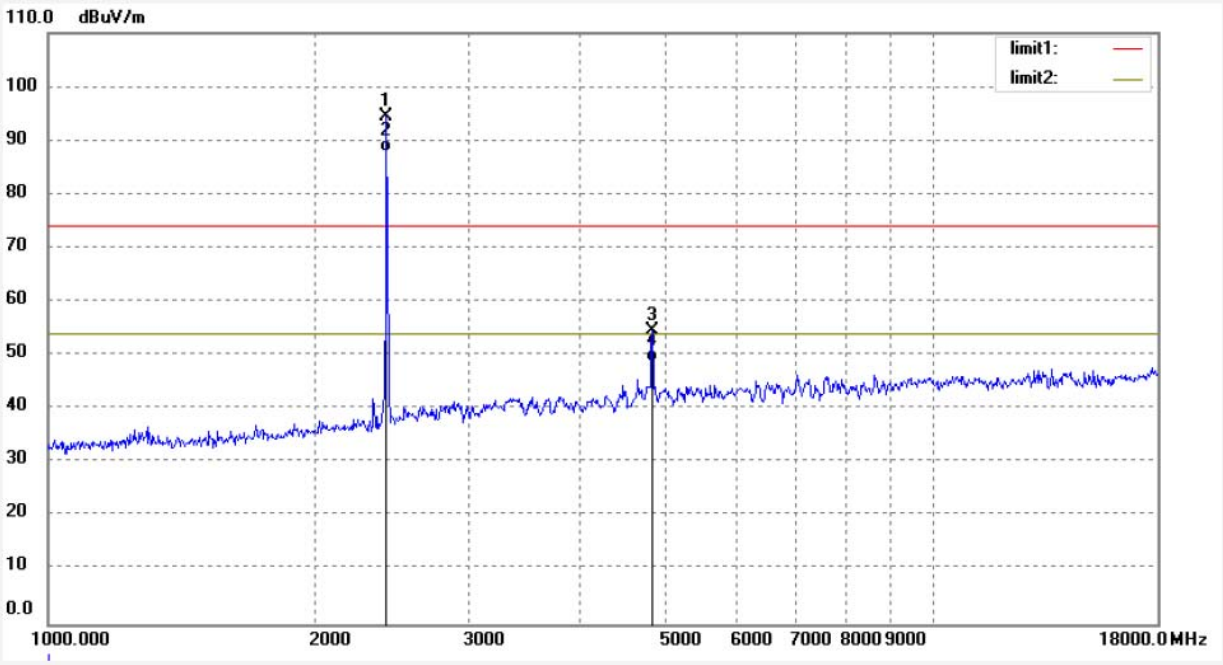
Job No.: STAR2017 #1396	Polarization: Horizontal
Standard: FCC PK	Power Source: DC 24V
Test item: Radiation Test	Date: 2017/12/27
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 17:07:56
EUT: Digital Wireless Rear View System	Engineer Signature: star
Mode: TX 2442MHz	Distance: 3m
Model: MS-708RSM	
Manufacturer: Mingshang	

Note: Report No.:ATE20172354



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2442.021	98.71	-4.20	94.51	114.00	-19.49	peak	200	105	
2	2442.021	92.14	-4.20	87.94	94.00	-6.06	AVG	200	241	
3	4884.361	51.50	3.13	54.63	74.00	-19.37	peak	200	114	
4	4884.361	45.69	3.13	48.82	54.00	-5.18	AVG	200	256	

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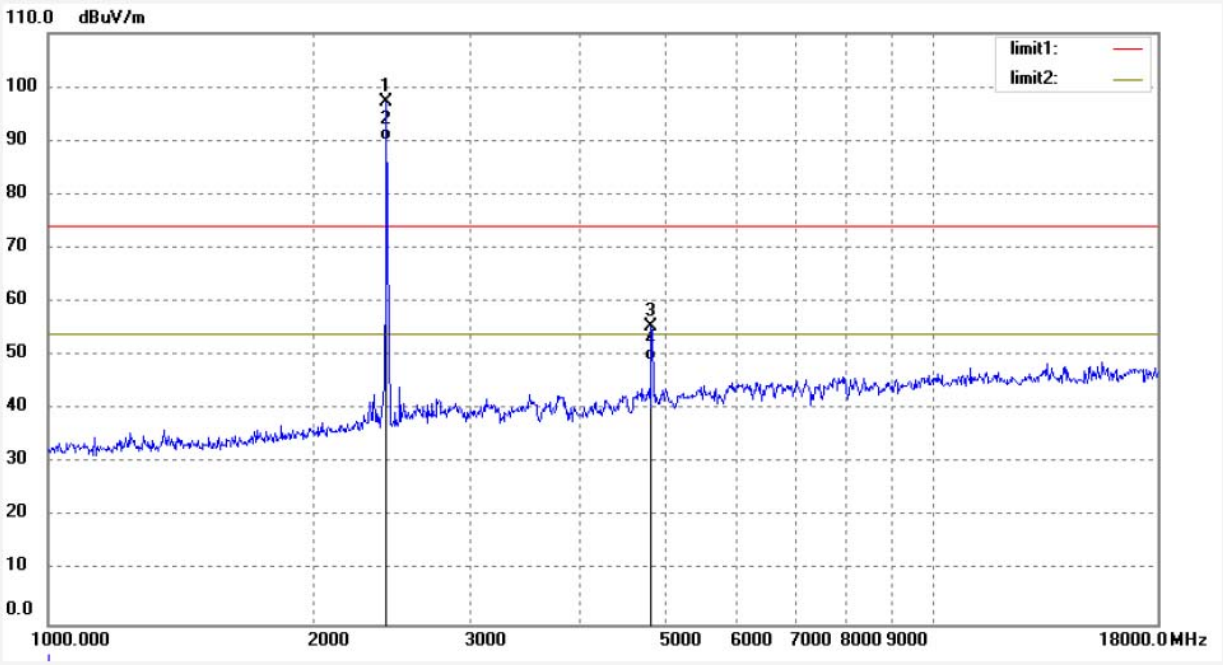
Job No.: STAR2017 #1397	Polarization: Vertical
Standard: FCC PK	Power Source: DC 24V
Test item: Radiation Test	Date: 2017/12/27
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 17:09:33
EUT: Digital Wireless Rear View System	Engineer Signature: star
Mode: TX 2442MHz	Distance: 3m
Model: MS-708RSM	
Manufacturer: Mingshang	

Note: Report No.:ATE20172354



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2442.021	101.35	-4.20	97.15	114.00	-16.85	peak	150	174	
2	2442.021	94.25	-4.20	90.05	94.00	-3.95	AVG	150	152	
3	4884.324	52.38	3.07	55.45	74.00	-18.55	peak	150	111	
4	4884.324	46.11	3.07	49.18	54.00	-4.82	AVG	150	45	

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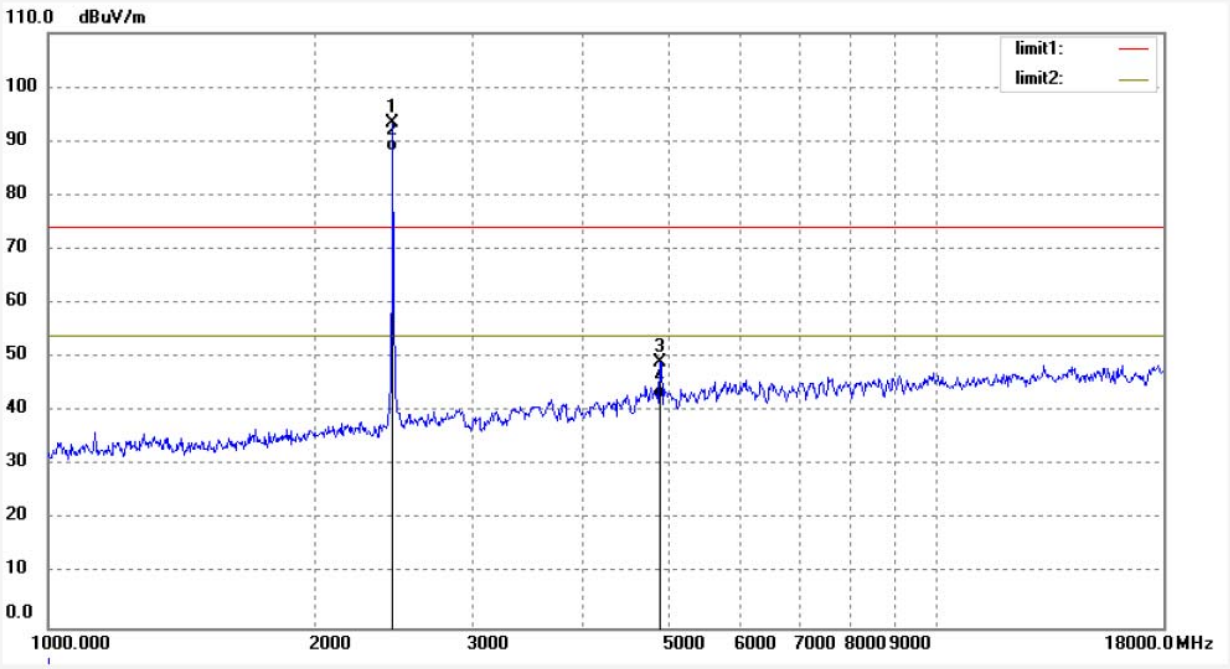
Job No.: STAR2017 #1401	Polarization: Horizontal
Standard: FCC PK	Power Source: DC 24V
Test item: Radiation Test	Date: 2017/12/27
Temp.(C)/Hum.(%) 25 C / 55 %	Time: 17:13:25
EUT: Digital Wireless Rear View System	Engineer Signature: star
Mode: TX 2473.5MHz	Distance: 3m
Model: MS-708RSM	
Manufacturer: Mingshang	

Note: Report No.:ATE20172354



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2473.510	97.51	-4.07	93.44	114.00	-20.56	peak	200	114	
2	2473.510	92.16	-4.07	88.09	94.00	-5.91	AVG	200	244	
3	4947.017	45.74	3.36	49.10	74.00	-24.90	peak	200	26	
4	4947.018	39.26	3.36	42.62	54.00	-11.38	AVG	200	31	

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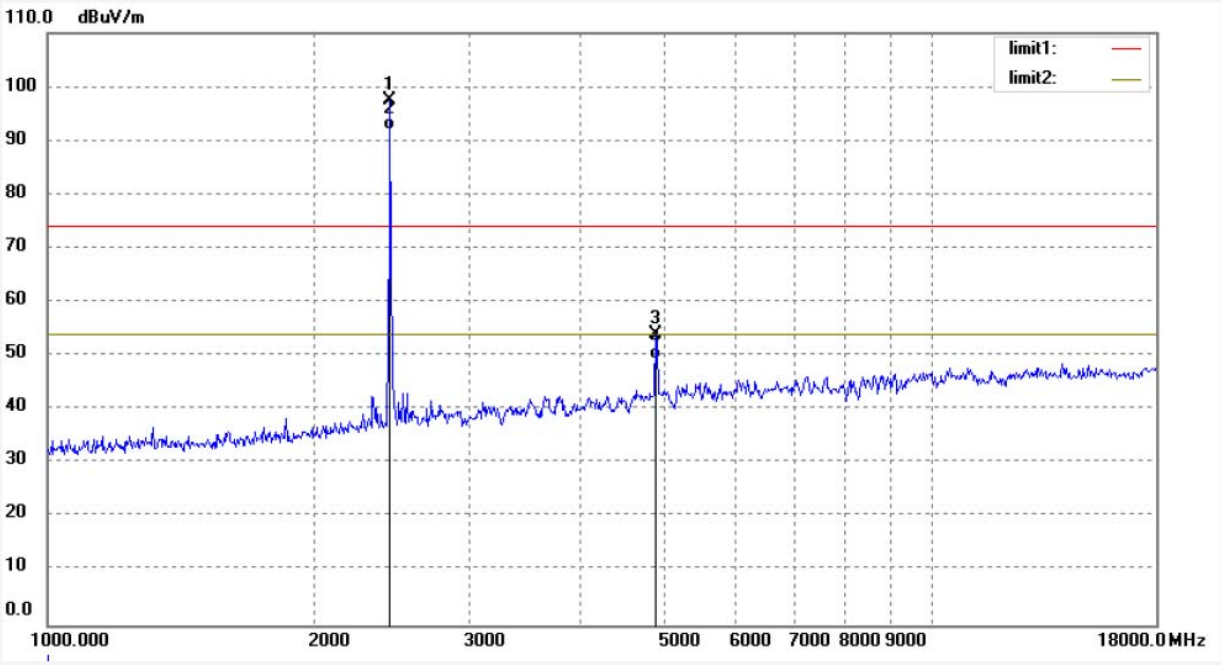
Job No.: STAR2017 #1398
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Digital Wireless Rear View System
Mode: TX 2473.5MHz
Model: MS-708RSM
Manufacturer: Mingshang

Polarization: Vertical
Power Source: DC 24V
Date: 2017/12/27
Time: 17:11:19
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20172354



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2473.510	101.59	-4.07	97.52	114.00	-16.48	peak	150	119	
2	2473.510	96.00	-4.07	91.93	94.00	-2.07	AVG	150	240	
3	4947.017	50.60	3.36	53.96	74.00	-20.04	peak	150	235	
4	4947.017	46.10	3.36	49.46	54.00	-4.54	AVG	150	229	

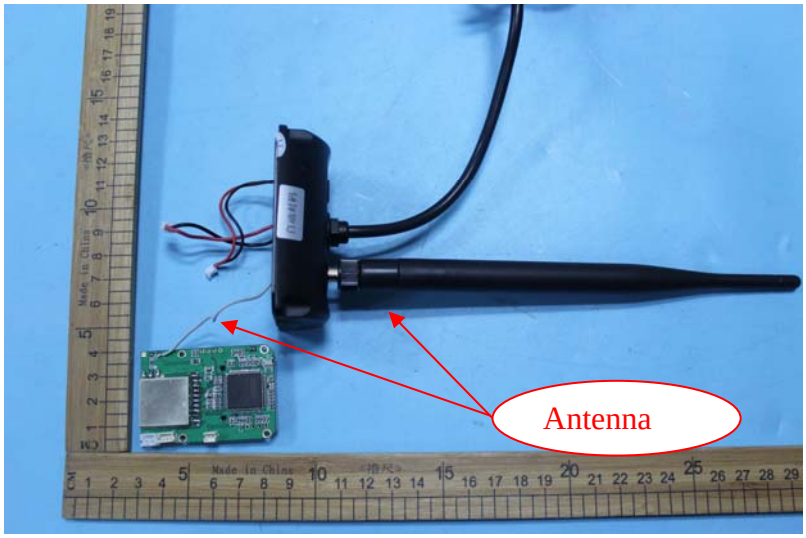
8. ANTENNA REQUIREMENT

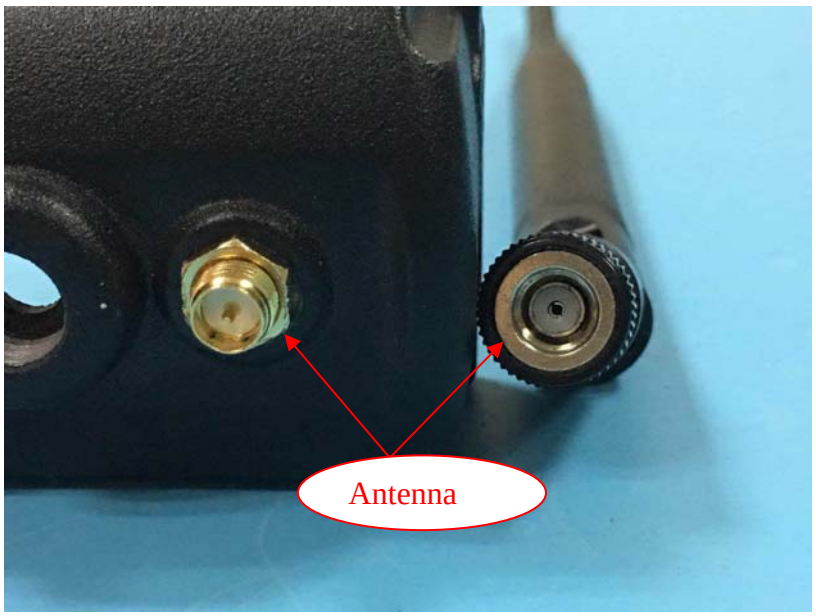
8.1.The Requirement

According to Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

8.2.Antenna Construction

Device is equipped with unique antenna, which isn't displaced by other antenna. Therefore, the equipment complies with the antenna requirement of Section 15.203.





******* End of Test Report *******