

**ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT
INTENTIONAL RADIATOR CERTIFICATION TO
FCC PART 15 SUBPART C REQUIREMENT**

For

AUTO Smart Diagnostic Tool

MODEL No.: X-431 PRO TP

FCC ID: XUJPROTP

Trademark: LAUNCH

REPORT NO: ES190805028W04

ISSUE DATE: September 9, 2019

Prepared for

LAUNCH TECH CO.,LTD.

Launch Industrial Park, North of Wuhe Road, Banxuegang Industrial Zone,
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Prepared by

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VERIFICATION OF COMPLIANCE

Applicant:	LAUNCH TECH CO.,LTD. Launch Industrial Park, North of Wuhe Road, Banxuegang Industrial Zone, Longgang District, Shenzhen City, Guangdong Province 518129, P.R. China
Manufacturer:	LAUNCH TECH CO.,LTD. Launch Industrial Park, North of Wuhe Road, Banxuegang Industrial Zone, Longgang District, Shenzhen City, Guangdong Province 518129, P.R. China
Product Name:	AUTO Smart Diagnostic Tool
Model Number:	X-431 PRO TP
Trademark:	LAUNCH


Measurement Procedure Used:


APPLICABLE STANDARDS	
STANDARD	TEST RESULT
FCC 47 CFR Part 2, Subpart J FCC 47 CFR Part 15, Subpart C	PASS

The above equipment was tested by EMTEK(SHENZHEN) CO., LTD.. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15.207&15.209.

The test results of this report relate only to the tested sample identified in this report.

Date of Test : August 6, 2019 to September 6, 2019

Prepared by : 
Stephen liang/Editor

Reviewer : 
Sewen Guo/Supervisor


Approve & Authorized Signer : 
Lisa Wang/Manager



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1. GENERAL INFORMATION

1.1 Product Description

Characteristics	Description
EUT Description	AUTO Smart Diagnostic Tool
Model Number	X-431 PRO TP
Device style	RFID
Modulation	ASK
Operating Frequency Range	125kHz
Number of Channels	1
Antenna Type	PFC Antenna
Antenna Gain	2 dBi
Power supply	<input checked="" type="checkbox"/> Battery 3.7V, 6100mAh <input checked="" type="checkbox"/> Adapter: Model: FY0502500 Input: 100~240V, 50/60Hz, 0.6A Max Output: 5V/2.5A
Test Voltage	AC 120V/60Hz
Temperature Range:	0°C ~ 50°C

1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: XUJPROTP filing to comply with Section 15.207&15.209 of the FCC Part 15 Subpart C Rules.

1.3 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10 (2013) and Radiated testing was performed at an antenna to EUT distance 3 meters.

1.4 Special Accessories

Item	Equipment	Mfr/Brand	Model/Type No.	Note
/	/	/	/	/

1.5 Equipment Modifications

Not available for this EUT intended for grant.

1.6 Test Facility

Site Description
EMC Lab.

: Accredited by CNAS, 2018.11.30
The certificate is valid until 2022.10.28
The Laboratory has been assessed and proved to be in compliance
with CNAS-CL01:2006 (identical to ISO/IEC 17025:2017)
The Certificate Registration Number is L2291

Accredited by TUV Rheinland Shenzhen 2018.3.30
The Laboratory has been assessed according to the requirements
ISO/IEC 17025

Accredited by FCC, August 09, 2018
Designation Number: CN1204
Test Firm Registration Number: 882943
Accredited by A2LA, August 08, 2018
The Certificate Registration Number is 4321.01

Accredited by Industry Canada, November 09, 2018
The Certificate Registration Number is CN0008

Name of Firm : EMTEK (SHENZHEN) CO., LTD.

Site Location : Bldg 69, Majialong Industry Zone,
Nanshan District, Shenzhen, Guangdong, China

2. System Test Configuration

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

2.3 Test Procedure

2.3.1 Radiated Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 13.1.4.1 of ANSI C63.10 (2013).

2.4 Limitation

(1) Radiated Emission

FCC Part 15, Subpart C Section 15.209 limit of radiated emission for frequency below 1000GHz.

The emissions from an intentional radiator shall not exceed the field strength level specified in the following table:

FCC Part 15.209				
Frequency (MHz)	Field Strength Limitation		Field Strength Limitation Frequency tion at 3m Measurement Dist	
	(uV/m)	Dist	(uV/m)	(dBuV/m)
0.009 – 0.490	2400 / F(KHz)	300m	10000 * 2400/F(KHz)	20log 2400/F(KHz) + 80
0.490 – 1.705	24000 / F(KHz)	30m	100 * 24000/F(KHz)	20log 24000/F(KHz) + 40
1.705 – 30.00	30	30m	100* 30	20log 30 + 40
30.0 – 88.0	100	3m	100	20log 100
88.0 – 216.0	150	3m	150	20log 150
216.0 – 960.0	200	3m	200	20log 200
Above 960.0	500	3m	500	20log 500

15.205 Restricted bands of operation

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)

Remark: 1. Emission level in dBuV/m=20 log (uV/m)
 2. Measurement was performed at an antenna to the closed point of EUT distance of meters.
 3. Only spurious frequency is permitted to locate within the Restricted Bands specified in provision of § 15.205, and the emissions located in restricted bands also comply with 15.209 limit.

3. Summary of Test Results

FCC Rule	Description Of Test	Result
15.207	AC Power Conducted Emission	Pass
15.209	Radiated Emission	Pass
2.1049	20dB Bandwidth	Pass

4. CONDUCTED EMISSION TEST

4.1 Applicable Standard

According to FCC Part 15.207(a)

4.2 Conformance Limit

Frequency(MHz)	Conducted Emission Limit	
	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50

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

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.3 Test Configuration

Test according to clause 7.3 conducted emission test setup

4.4 Test Procedure

The EUT was placed on a table which is 0.8m above ground plane.

Maximum procedure was performed on the highest emissions to ensure EUT compliance.

Repeat above procedures until all frequency measured were complete.

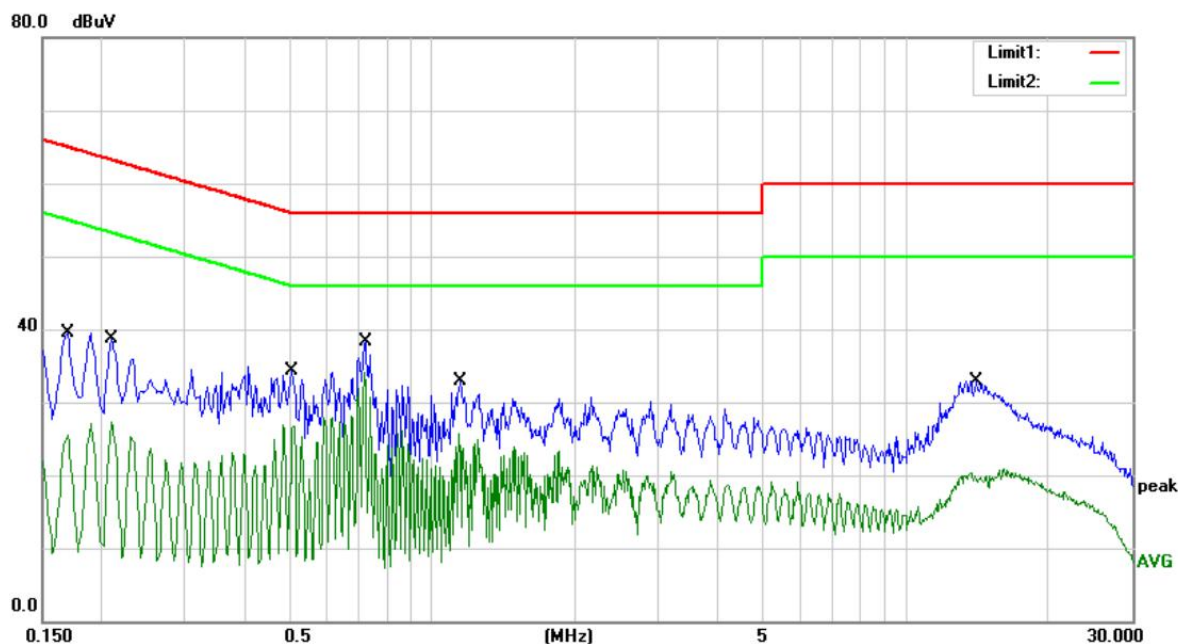
4.5 Measurement Equipment Used:

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	DUE CAL.
Test Receiver	Rohde & Schwarz	ESCS30	828985/018	May 19, 2019	May 18, 2020
L.I.S.N.	Schwarzbeck	NNLK8129	8129203	May 19, 2019	May 18, 2020
50Ω Coaxial Switch	Anritsu	MP59B	M20531	May 19, 2019	May 18, 2020
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100006	May 19, 2019	May 18, 2020
Voltage Probe	Rohde & Schwarz	TK9416	N/A	May 19, 2019	May 18, 2020
I.S.N	Rohde & Schwarz	ENY22	1109.9508.02	May 19, 2019	May 18, 2020

4.6 Test Result

Pass

AC 120V & 240V voltage have been tested, and the worst result recorded was report as below.



Site Conduction #1

Phase: **L1**

Temperature: 24.9

Limit: FCC PART 15C

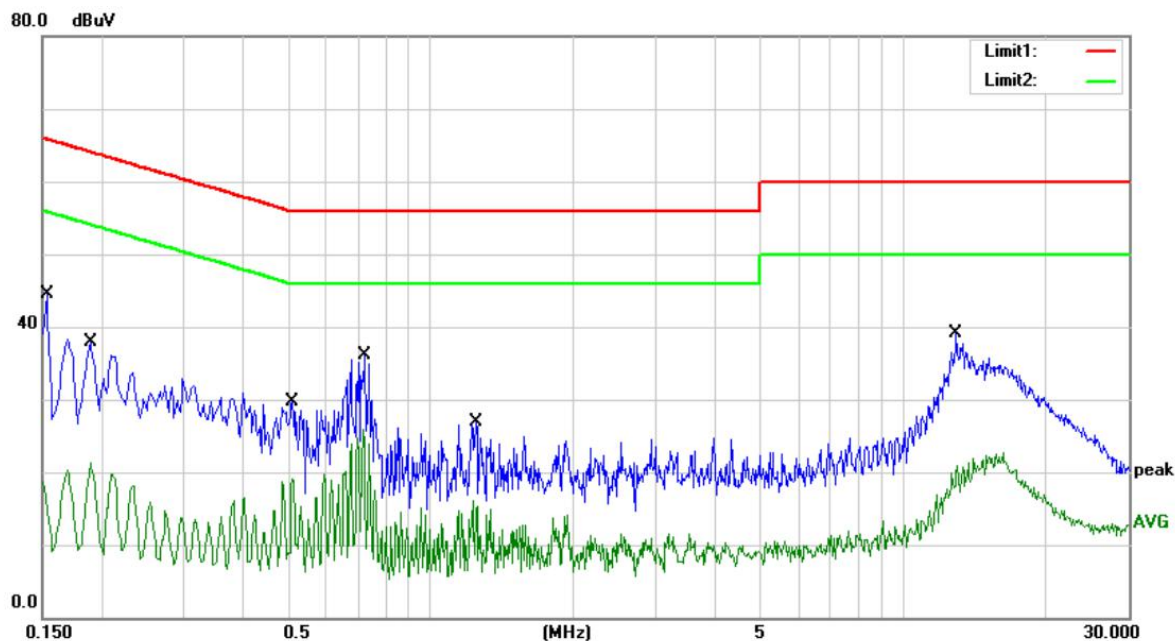
Power: AC 120V/60Hz

Humidity: 54 %

Mode: 125KHz Operation Mode

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1700	29.94	9.55	39.49	64.96	-25.47	QP	
2		0.1700	15.88	9.55	25.43	54.96	-29.53	AVG	
3		0.2100	29.05	9.55	38.60	63.21	-24.61	QP	
4		0.2100	17.75	9.55	27.30	53.21	-25.91	AVG	
5		0.5060	24.72	9.57	34.29	56.00	-21.71	QP	
6		0.5060	17.18	9.57	26.75	46.00	-19.25	AVG	
7		0.7180	28.59	9.57	38.16	56.00	-17.84	QP	
8	*	0.7180	24.45	9.57	34.02	46.00	-11.98	AVG	
9		1.1420	23.34	9.59	32.93	56.00	-23.07	QP	
10		1.1420	16.05	9.59	25.64	46.00	-20.36	AVG	
11		14.1180	23.04	9.88	32.92	60.00	-27.08	QP	
12		14.1180	10.50	9.88	20.38	50.00	-29.62	AVG	



Site Conduction #1

Phase: **N**

Temperature: 24.9

Limit: FCC PART 15C

Power: AC 120V/60Hz

Humidity: 54 %

Mode: 125KHz Operation Mode

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1540	34.89	9.65	44.54	65.78	-21.24	QP	
2		0.1540	10.02	9.65	19.67	55.78	-36.11	AVG	
3		0.1900	28.36	9.55	37.91	64.04	-26.13	QP	
4		0.1900	11.72	9.55	21.27	54.04	-32.77	AVG	
5		0.5100	20.07	9.57	29.64	56.00	-26.36	QP	
6		0.5100	9.46	9.57	19.03	46.00	-26.97	AVG	
7	*	0.7260	26.52	9.57	36.09	56.00	-19.91	QP	
8		0.7260	16.33	9.57	25.90	46.00	-20.10	AVG	
9		1.2460	17.39	9.59	26.98	56.00	-29.02	QP	
10		1.2460	6.59	9.59	16.18	46.00	-29.82	AVG	
11		12.9660	29.16	9.86	39.02	60.00	-20.98	QP	
12		12.9660	12.04	9.86	21.90	50.00	-28.10	AVG	

5. Radiated Emission Test

5.1 Measurement Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measured was complete.

When spectrum scanned from 9KHz to 150KHz setting resolution bandwidth 200Hz and video bandwidth 1kHz.

EMI Test Receiver	Setting
Attenuation	Auto
RB	200Hz
VB	1kHz
Detector	QP
Trace	Max hold

When spectrum scanned from 150KHz to 30MHz setting resolution bandwidth 9 kHz and video bandwidth 30kHz.

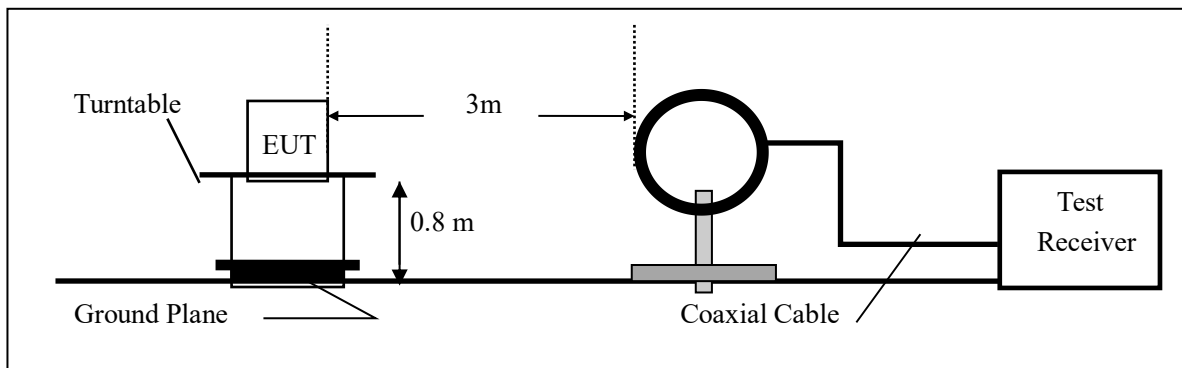
EMI Test Receiver	Setting
Attenuation	Auto
RB	9kHz
VB	30kHz
Detector	QP
Trace	Max hold

When spectrum scanned from 30 MHz to 1GHz setting resolution bandwidth 120 kHz and video bandwidth 300kHz.

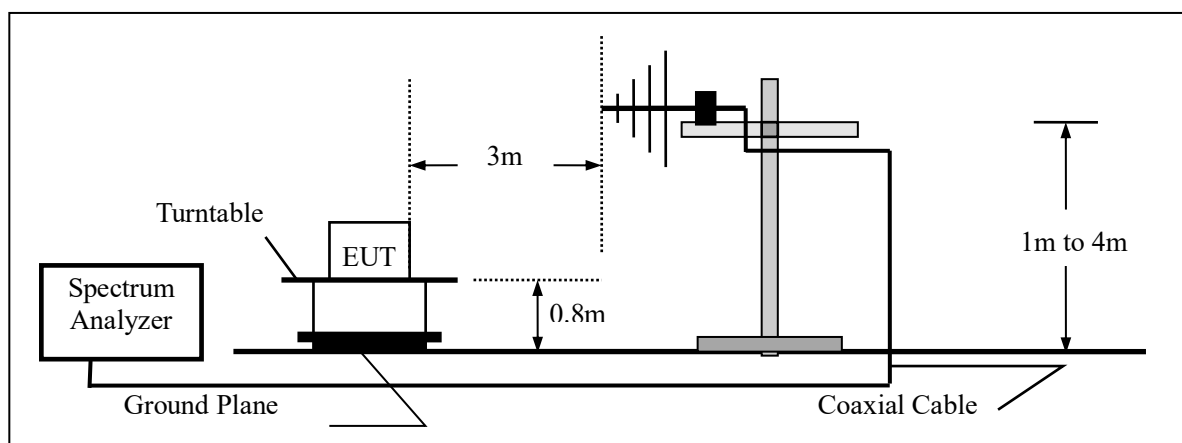
EMI Test Receiver	Setting
Attenuation	Auto
RB	120kHz
VB	300kHz
Detector	QP
Trace	Max hold

5.2 Test SET-UP (Block Diagram of Configuration)

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



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



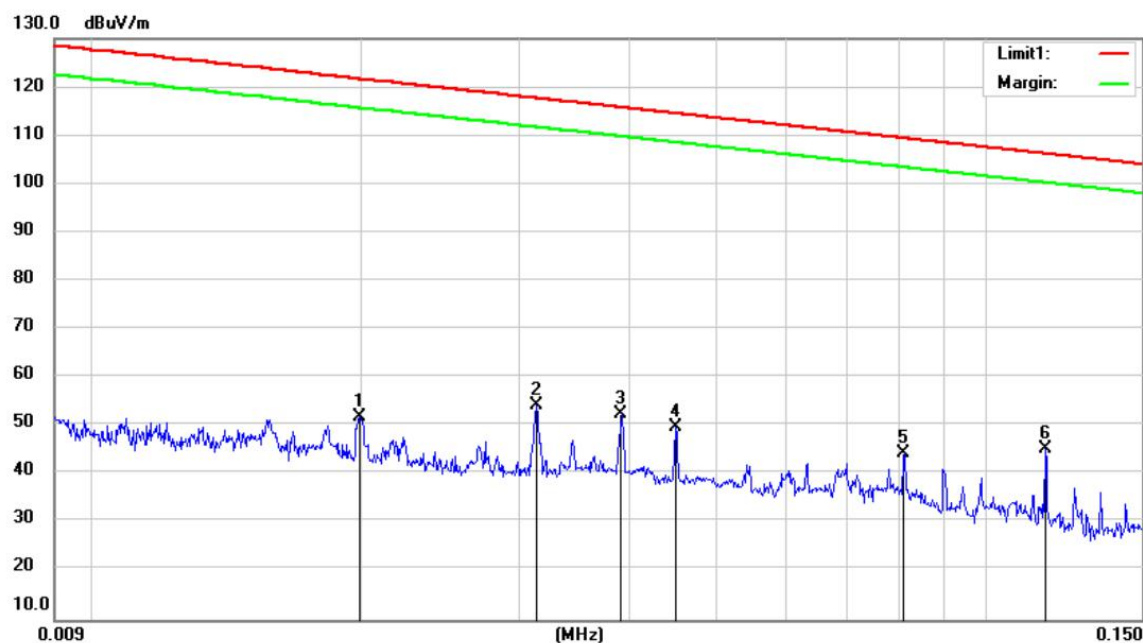
5.3 Measurement Equipment Used:

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	DUE CAL.
EMI Test Receiver	Rohde & Schwarz	ESU	1302.6005.26	May 19, 2019	May 18, 2020
Pre-Amplifier	HP	8447D	2944A07999	May 19, 2019	May 18, 2020
Bilog Antenna	Schwarzbeck	VULB9163	142	May 19, 2019	May 18, 2020
Loop Antenna	ARA	PLA-1030/B	1029	May 19, 2019	May 18, 2020
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170399	May 19, 2019	May 18, 2020
Horn Antenna	Schwarzbeck	BBHA 9120	D143	May 19, 2019	May 18, 2020
Cable	Schwarzbeck	AK9513	ACRX1	May 19, 2019	May 18, 2020
Cable	Rosenberger	N/A	FP2RX2	May 19, 2019	May 18, 2020
Cable	Schwarzbeck	AK9513	CRPX1	May 19, 2019	May 18, 2020
Cable	Schwarzbeck	AK9513	CRRX2	May 19, 2019	May 18, 2020

5.4 Measurement Result

Pass, see the following page.

9 kHz – 0.15MHz:



Site 3m Chamber #1

Polarization: X

Temperature: 27 C

Limit: (RE)FCC PART 15.209(9K-30M)

Power: AC 120V/60Hz

Humidity: 43 %

Mode: 125K

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		0.0198	61.54	-9.55	51.99	121.66	-69.67	QP		
2		0.0313	63.51	-9.36	54.15	117.68	-63.53	QP		
3		0.0390	61.63	-9.23	52.40	115.77	-63.37	QP		
4		0.0450	58.74	-9.13	49.61	114.53	-64.92	QP		
5		0.0810	54.07	-9.73	44.34	109.43	-65.09	QP		
6	*	0.1170	54.55	-9.35	45.20	106.23	-61.03	QP		



Site 3m Chamber #1

Polarization: Y

Temperature: 27 C

Limit: (RE)FCC PART 15.209(9K-30M)

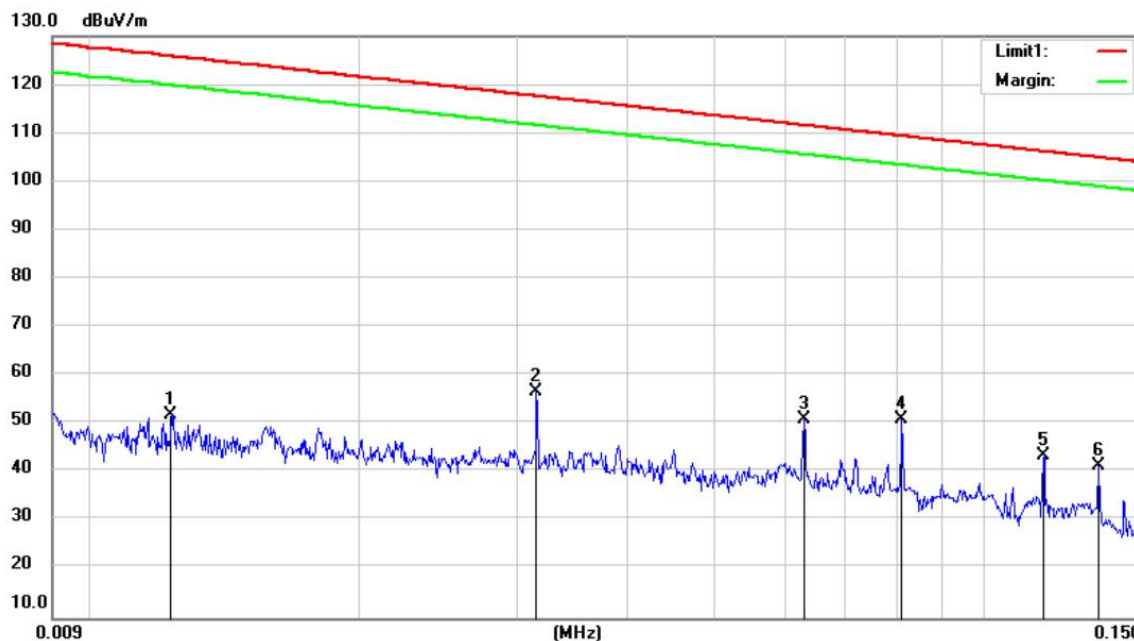
Power: AC 120V/60Hz

Humidity: 43 %

Mode: 125K

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		0.0270	60.90	-9.43	51.47	118.96	-67.49	QP		
2		0.0495	58.73	-9.06	49.67	113.70	-64.03	QP		
3	*	0.0630	59.99	-9.47	50.52	111.61	-61.09	QP		
4		0.0810	55.54	-9.73	45.81	109.43	-63.62	QP		
5		0.0985	53.52	-9.38	44.14	107.73	-63.59	QP		
6		0.1350	49.41	-9.35	40.06	104.99	-64.93	QP		



Site 3m Chamber #1

Polarization: **Z**

Temperature: 27 C

Limit: (RE)FCC PART 15.209(9K-30M)

Power: AC 120V/60Hz

Humidity: 43 %

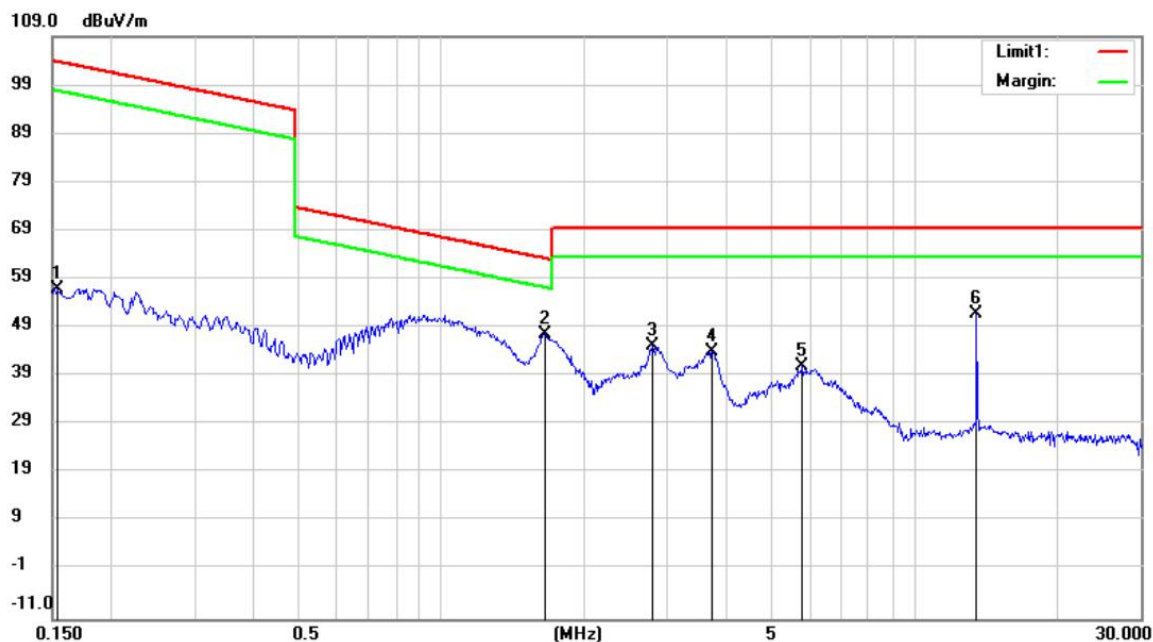
Mode: 125K

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		0.0122	61.12	-9.39	51.73	125.86	-74.13	QP		
2		0.0314	65.92	-9.36	56.56	117.65	-61.09	QP		
3		0.0630	60.49	-9.47	51.02	111.61	-60.59	QP		
4	*	0.0810	60.76	-9.73	51.03	109.43	-58.40	QP		
5		0.1170	52.92	-9.35	43.57	106.23	-62.66	QP		
6		0.1350	50.84	-9.35	41.49	104.99	-63.50	QP		

Note: the Fundamental Emission is less than the spurious emission Limit, the bandage test is not need.

0.15MHz – 30MHz:



Site 3m Chamber #1

Polarization: **Z**

Temperature: 27 C

Limit: (RE)FCC PART 15.209(9K-30M)

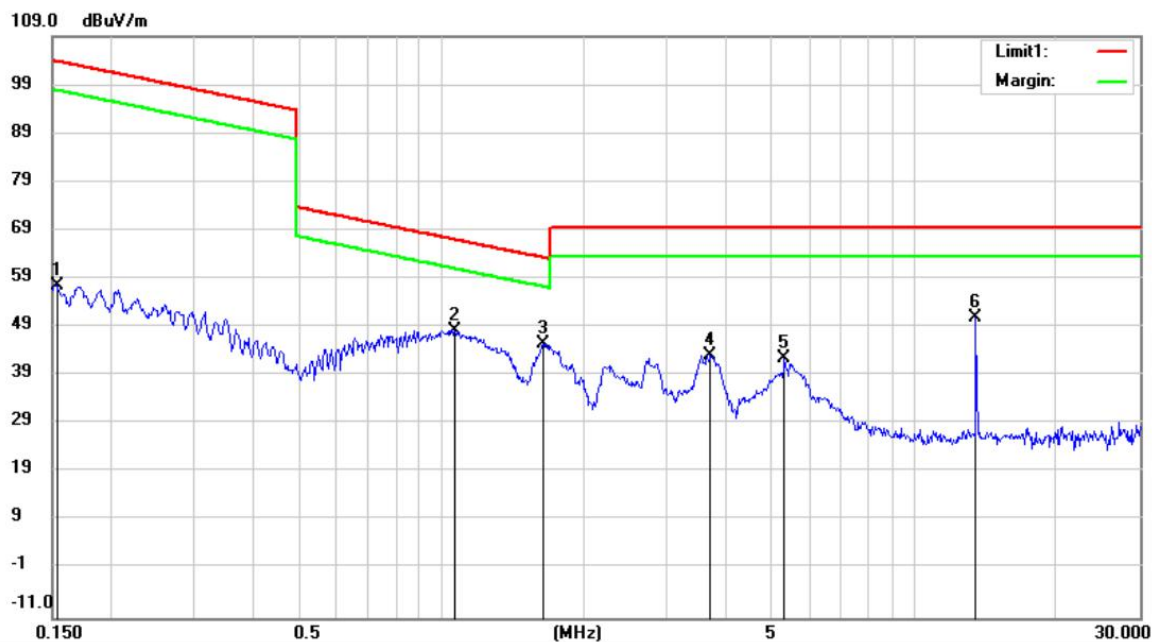
Power: AC 120V/60Hz

Humidity: 43 %

Mode: 125K

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		0.1532	66.32	-9.33	56.99	103.89	-46.90	QP		
2	*	1.6532	57.11	-9.34	47.77	63.27	-15.50	QP		
3		2.7905	54.88	-9.68	45.20	69.50	-24.30	QP		
4		3.7296	53.86	-9.74	44.12	69.50	-25.38	QP		
5		5.7781	50.71	-9.66	41.05	69.50	-28.45	QP		
6		13.5418	62.04	-10.12	51.92	69.50	-17.58	QP		



Site 3m Chamber #1

Polarization: Y

Temperature: 27 C

Limit: (RE)FCC PART 15.209(9K-30M)

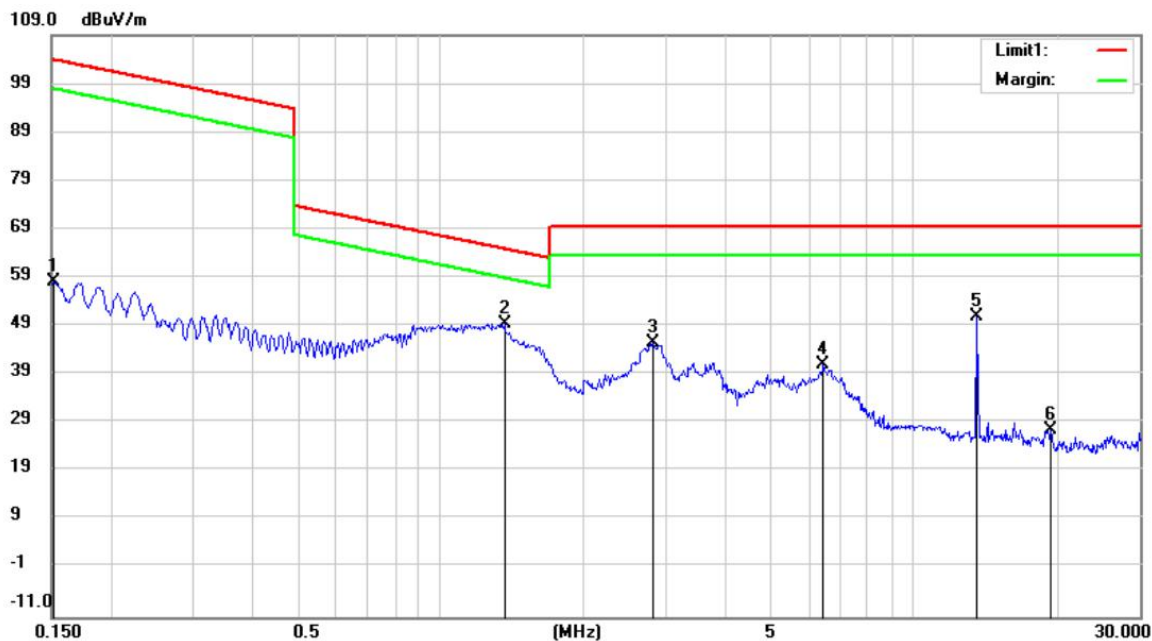
Power: AC 120V/60Hz

Humidity: 43 %

Mode: 125K

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		0.1534	67.01	-9.33	57.68	103.88	-46.20	QP		
2		1.0665	57.40	-9.16	48.24	67.06	-18.82	QP		
3	*	1.6362	54.99	-9.33	45.66	63.36	-17.70	QP		
4		3.7147	53.01	-9.74	43.27	69.50	-26.23	QP		
5		5.3155	52.08	-9.66	42.42	69.50	-27.08	QP		
6		13.5418	61.14	-10.12	51.02	69.50	-18.48	QP		



Site 3m Chamber #1

Polarization: X

Temperature: 27 C

Limit: (RE)FCC PART 15.209(9K-30M)

Power: AC 120V/60Hz

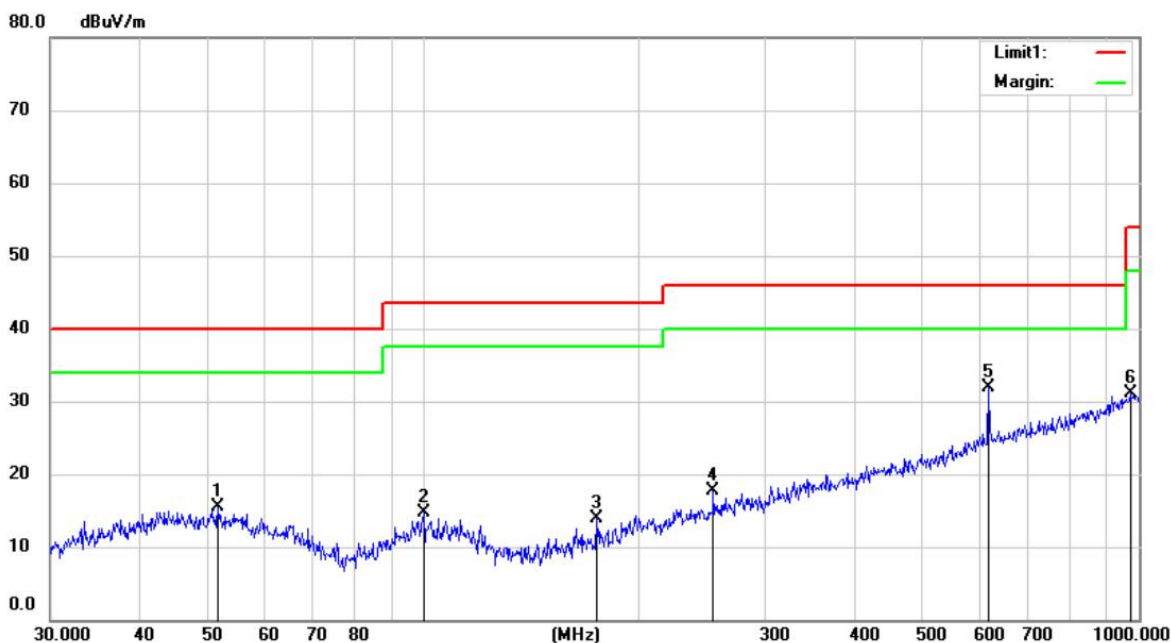
Humidity: 43 %

Mode: 125K

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		0.1522	67.35	-9.34	58.01	103.95	-45.94	QP		
2	*	1.3630	58.74	-9.25	49.49	64.94	-15.45	QP		
3		2.8071	55.17	-9.68	45.49	69.50	-24.01	QP		
4		6.4367	50.65	-9.67	40.98	69.50	-28.52	QP		
5		13.5685	60.93	-10.12	50.81	69.50	-18.69	QP		
6		19.4670	37.79	-10.23	27.56	69.50	-41.94	QP		

30MHz - 1GHz:



Site 3m Chamber #1

Polarization: **Vertical**

Temperature: 29.5 C

Limit: FCC PART 15C

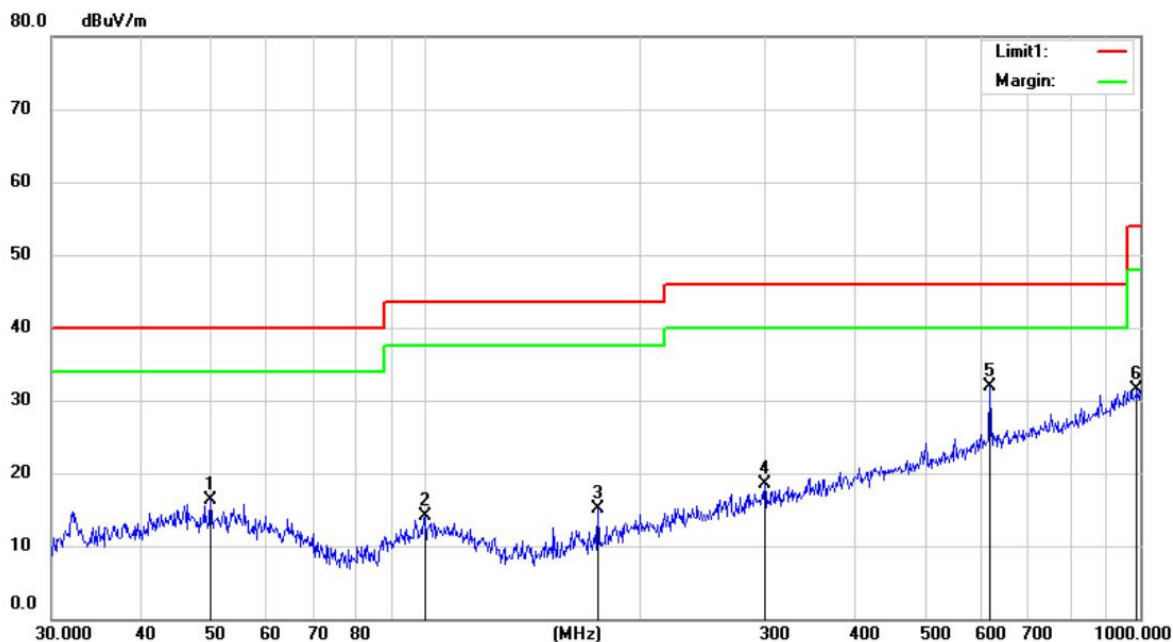
Power: AC 120V/60Hz

Humidity: 48 %

Mode: 125K

Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1		51.6390	26.70	-11.16	15.54	40.00	-24.46	QP		
2		99.9652	27.31	-12.65	14.66	43.50	-28.84	QP		
3		174.8832	27.86	-14.00	13.86	43.50	-29.64	QP		
4		254.6167	27.36	-9.67	17.69	46.00	-28.31	QP		
5	*	617.9950	33.90	-1.93	31.97	46.00	-14.03	QP		
6		972.3373	27.75	3.32	31.07	54.00	-22.93	QP		



Site 3m Chamber #1

Polarization: **Horizontal**

Temperature: 29.5 C

Limit: FCC PART 15C

Power: AC 120V/60Hz

Humidity: 48 %

Mode: 125K

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		50.1005	27.64	-11.26	16.38	40.00	-23.62	QP		
2		99.9653	26.85	-12.65	14.20	43.50	-29.30	QP		
3		174.9600	29.05	-13.99	15.06	43.50	-28.44	QP		
4		298.5297	26.90	-8.31	18.59	46.00	-27.41	QP		
5	*	617.9950	33.75	-1.93	31.82	46.00	-14.18	QP		
6		991.2720	27.74	3.79	31.53	54.00	-22.47	QP		

6. 20DB BANDWIDTH

6.1 Applicable Standard

According to FCC Part 2.1049

6.2 Conformance Limit

No limit requirement.

6.3 Test Configuration

Test according to clause 6.1 radio frequency test setup 1

6.4 Test Procedure

The EUT was operating in transmit mode and controlled its channel. Printed out the test result from the spectrum by hard copy function.

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.

Set to the maximum power setting and enable the EUT transmit continuously

Set RBW = 1% occupied bandwidth (3 kHz).

Set the video bandwidth (VBW) =3 times RBW (10 kHz).

Set Span= approximately 2 to 4 times the occupied bandwidth

Set Detector = Peak.

Set Trace mode = max hold.

Set Sweep = auto couple.

The EUT should be transmitting at its maximum data rate. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. Use the marker-delta function to measure 20dB down one side of the emission. Reset the markerdelta function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level. The marker-delta reading at this point is the 20dB bandwidth of the emission.

If this value varies with different modes of operation (e.g., data rate, modulation format, etc.), repeat this test for each variation.

Measure and record the results in the test report.

6.5 Test Results

Temperature :	25°C	Test By:	LMQ
Humidity :	60 %		

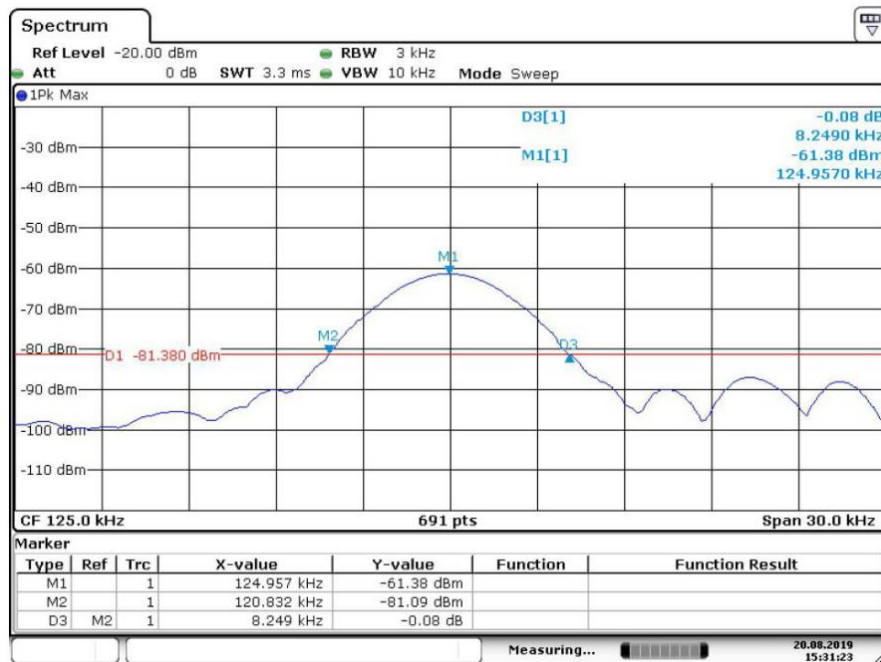
Modulation Mode	Channel Number	Channel Frequency (kHz)	20dB Bandwidth (kHz)	Limit (kHz)	Verdict
ASK	0	125	8.25	N/A	PASS
Note: N/A (Not Applicable)					

Test Model

125kHz

20dB Bandwidth

ASK Modulation



7. Antenna Application

Antenna Requirement

Standard	Requirement
FCC CRF Part 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. 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. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

For intentional device, according to FCC 47 CFR 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. if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

Result

PASS.

- Note:
- ☒ Antenna use a permanently attached antenna which is not replaceable.
 - ☐ Not using a standard antenna jack or electrical connector for antenna replacement
 - ☐ The antenna has to be professionally installed (please provide method of installation)

Which in accordance to section 15.203, please refer to the internal photos

----- End of Report -----