



TEST REPORT

Report No. : **CTC2025340803**
FCC ID : **XUJLAUNCHITPMS**
Applicant : **Launch Tech Co., Ltd.**
Address : No.4012, Launch Industrial Park, North Wuhe Rd, Bantian Street, Longgang District, Shenzhen, China
Manufacturer : Launch Tech Co., Ltd.
Address : No.4012, Launch Industrial Park, North Wuhe Rd, Bantian Street, Longgang District, Shenzhen, China
Product Name : **Modular activation programming tool**
Trade Mark : LAUNCH
Model/Type reference : LAUNCH i-TPMS
Listed Model(s) : /
Standard : **FCC CFR Title 47 Part 15 Subpart C**
Test Report Form No : CTC-TR-171_A1
Master TRF : Dated 2025-06-20
Date of receipt of test sample : May 27, 2025
Date of testing : May 27, 2025 ~ Jun. 20, 2025
Date of issue : Jun. 23, 2025
Result : **PASS**

Compiled by:

(Printed name + signature)

Jim Jiang

Jim Jiang

Supervised by:

(Printed name + signature)

Eric Zhang

Eric Zhang

Approved by:

(Printed name + signature)

Totti Zhao

Totti Zhao

This test report may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product endorsement by CTC. The test results in the report only apply to the tested sample. The test report shall be invalid without all the signatures of testing engineers, reviewer and approver. Any objections must be raised to CTC within 15 days since the date when the report is received. It will not be taken into consideration beyond this limit.

**Table of Contents****Page**

1. TEST SUMMARY	3
1.1. TEST STANDARDS	3
1.2. REPORT VERSION	3
1.3. TEST DESCRIPTION	3
1.4. TEST FACILITY	4
1.5. MEASUREMENT UNCERTAINTY	4
1.6. ENVIRONMENTAL CONDITIONS	5
1.7. EUT OPERATION STATE	5
2. GENERAL INFORMATION	6
2.1. CLIENT INFORMATION	6
2.2. GENERAL DESCRIPTION OF EUT	6
2.3. ACCESSORY EQUIPMENT INFORMATION	7
2.4. MEASUREMENT INSTRUMENTS LIST	8
3. TEST ITEM AND RESULTS	10
3.1. CONDUCTED EMISSION	10
3.2. RADIATED EMISSION	13
3.3. BANDWIDTH	22
3.4. ANTENNA REQUIREMENT	24



1. TEST SUMMARY

1.1. Test Standards

The tests were performed according to following standards:

[FCC Rules Part 15C](#): Radio Frequency Devices.

[RSS-210 Issue 11](#): Licence-Exempt Radio Apparatus: Category I Equipment.

[ANSI C63.10-2013](#): American National Standard for Testing Unlicensed Wireless Devices.

[RSS-Gen Issue 5](#): General Requirements for Compliance of Radio Apparatus.

1.2. Report Version

Revised No.	Report No.	Date of issue	Description
01	CTC2025340803	Jun. 23, 2025	Original

1.3. Test Description

FCC Part 15C & RSS-210 Issue 11				
Test Item	Standard Section		Result	Test Engineer
	FCC	ISED		
Conducted Emission	15.207	RSS-Gen 8.8	Pass	Jim Jiang
Radiated Emission	15.209	RSS-Gen 8.9	Pass	Jim Jiang
Occupied Bandwidth	/	RSS-Gen 6.7	Pass	Jim Jiang
Antenna Requirement	15.203	RSS-Gen 6.8	Pass	Jim Jiang

Note:

N/A: Not applicable.

The measurement uncertainty is not included in the test result.



1.4. Test Facility

Address of the report laboratory

CTC Laboratories, Inc.

Add: Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhu Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China

Laboratory accreditation

The test facility is recognized, certified, or accredited by the following organizations:

A2LA-Lab Cert. No.: 4340.01

CTC Laboratories, Inc. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

Industry Canada (Registration No.: 9783A, CAB Identifier: CN0029)

CTC Laboratories, Inc. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 9783A on Jan, 2016.

FCC (Registration No.: 951311, Designation Number CN1208)

CTC Laboratories, Inc. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 951311, Aug 26, 2017.

1.5. Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2" and is documented in the CTC Laboratories, Inc. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Below is the best measurement capability for CTC Laboratories, Inc.



Test Items	Measurement Uncertainty	Notes
Transmitter power conducted	0.42 dB	(1)
Transmitter power Radiated	2.14 dB	(1)
Conducted spurious emissions 9kHz~40GHz	1.60 dB	(1)
Radiated spurious emissions 9kHz~40GHz	2.20 dB	(1)
Conducted Emissions 9kHz~30MHz	3.20 dB	(1)
Radiated Emissions 30~1000MHz	4.70 dB	(1)
Radiated Emissions 1~18GHz	5.00 dB	(1)
Radiated Emissions 18~40GHz	5.54 dB	(1)
Occupied Bandwidth	-----	(1)

Note (1): This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

1.6. Environmental Conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	21°C~27°C
Relative Humidity:	40%~60%
Air Pressure:	101kPa

1.7. EUT Operation State

The EUT has been tested under typical operating condition. The applicant provides normal EUT, to maintain continuous transmission mode for testing. Or in the state of charging.



2. GENERAL INFORMATION

2.1. Client Information

Applicant:	Launch Tech Co., Ltd.
Address:	No.4012, Launch Industrial Park, North Wuhe Rd, Bantian Street, Longgang District, Shenzhen, China
Manufacturer:	Launch Tech Co., Ltd.
Address:	No.4012, Launch Industrial Park, North Wuhe Rd, Bantian Street, Longgang District, Shenzhen, China

2.2. General Description of EUT

Product Name:	Modular activation programming tool
Trade Mark:	LAUNCH
Model/Type reference:	LAUNCH i-TPMS
Listed Model(s):	/
Model Difference:	/
Sample ID:	CTC250516-007-S001
Power supply:	USB Input: DC5V 1A 3.7V 2000mAh from lithium battery
Hardware version:	V1.00.000
Software version:	V1.18
RF Parameter	
Operation frequency:	125kHz
Modulation:	ASK
Antenna type:	Coil Antenna



2.3. Accessory Equipment Information

Equipment Information			
Name	Model	S/N	Manufacturer
RF-Sensor	LTR-V	/	LAUNCH
Adapter	A2167	/	Apple
Cable Information			
Name	Shielded Type	Ferrite Core	Length
USB Cable	Unshielded	NO	100cm
Test Software Information			
Name	Version	/	/
/	/	/	/

CTC Laboratories, Inc.

Address: Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhu Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax.: (86)755-27521011 Http://www.sz-ctc.org.cn

TRF No: CTC-TR-171_A1

For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com



2.4. Measurement Instruments List

RF Test System - SRD						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
1	MXA Signal Analyzer	Keysight	N9020A	MY52091402	Dec. 13, 2024	Dec. 12, 2025
2	EXG Analog Signal Generator	Keysight	N5173B	MY59100842	Dec. 13, 2024	Dec. 12, 2025
3	MXG Vector Signal Generator	Keysight	N5182B	MY59100212	Dec. 13, 2024	Dec. 12, 2025
4	Wideband Radio Communication Tester	R&S	CMW500	102414	Dec. 13, 2024	Dec. 12, 2025
5	RF Control Unit	Tonscend	JS0806-2	/	Aug. 22, 2024	Aug. 21, 2025
6	High and low temperature test chamber	ESPEC	MT3035	/	Mar. 25, 2025	Mar. 24, 2026
7	RF Cable	HUBER+SUHNER	SUCOFLEX101PE	RF-09	Apr. 16, 2025	Apr. 15, 2026
Test Software						
Name		Manufacturer			Software Version	
JS1120-3		Tonscend			V3.3.38	

Radiated emission						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9163	01026	Dec. 25, 2024	Dec. 24, 2025
2	Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-647	Sep. 26, 2024	Sep. 25, 2025
3	Test Receiver	Keysight	N9038A	MY56400071	Dec. 13, 2024	Dec. 12, 2025
4	Broadband Amplifier	Schwarzbeck	BBV9743B	259	Dec. 13, 2024	Dec. 12, 2025
5	Mirowave Broadband Amplifier	Schwarzbeck	BBV9718C	111	Dec. 13, 2024	Dec. 12, 2025
6	RE33L-001	COMM	/	014 (9kHz-1GHz)	Feb. 09, 2025	Feb. 08, 2026
7	RE33L-002	COMM	/	015 (9kHz-1GHz)	Feb. 09, 2025	Feb. 08, 2026
8	RE33H-001	SUHB SUCOFLEX	/	016 (1GHz-18GHz)	Feb. 09, 2025	Feb. 08, 2026
9	RE33H-002	HUBENR	/	017 (1GHz-18GHz)	Feb. 09, 2025	Feb. 08, 2026
10	RE33H-003	HUBENR	/	018 (1GHz-18GHz)	Feb. 09, 2025	Feb. 08, 2026
11	RE33H-003	HUBENR	/	019 (18GHz-40GHz)	Feb. 09, 2025	Feb. 08, 2026
12	3m chamber 3	YIHENG	EE106	/	Aug. 29, 2023	Aug. 28, 2026
13	SHF-EHF Horn Antenna	Schwarzbeck	BBHA 9170	013551	Dec. 13, 2024	Dec. 12, 2025
14	Low noise Amplifier	Tonscend	TAP180040048	AP24C8060348	Dec. 13, 2024	Dec. 12, 2025
Test Software						
Name		Manufacturer			Software Version	
EZ-EMC		FARA			FA-03A2	

CTC Laboratories, Inc.

Address: Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhu Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax.: (86)755-27521011 Http://www.sz-ctc.org.cn

For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com

TRF No: CTC-TR-171_A1



Conducted emission						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
1	LISN	R&S	ENV216	101112	Dec. 13, 2024	Dec. 12, 2025
2	LISN	R&S	ENV216	101113	Dec. 13, 2024	Dec. 12, 2025
3	EMI Test Receiver	R&S	ESCI	100524	Dec. 13, 2024	Dec. 12, 2025
4	ISN CAT6	Schwarzbeck	NTFM 8158	CAT6-8158-0046	Dec. 13, 2024	Dec. 12, 2025
5	ISN CAT5	Schwarzbeck	NTFM 8158	CAT5-8158-0046	Dec. 13, 2024	Dec. 12, 2025
6	CE-001	COMM	/	001	Feb. 09, 2025	Feb. 08, 2026
Test Software						
Name		Manufacturer		Software Version		
EMC32		R&S		6.10.10		

- Note: 1. The Cal. Interval was one year.
2. The Cal. Interval was three years of the antenna.
3. The cable loss has been calculated in test result which connection between each test instruments.

3. TEST ITEM AND RESULTS

3.1. Conducted Emission

Limit

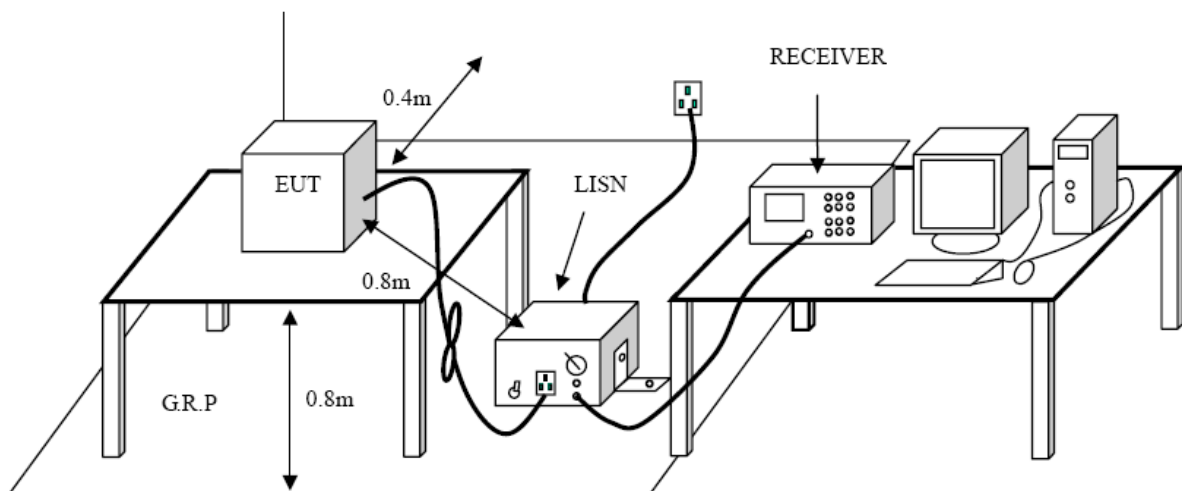
FCC CFR Title 47 Part 15 Subpart C Section 15.207, RSS-Gen 8.8

Frequency range (MHz)	Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

Notes:

- (1) *Decreasing linearly with logarithm of the frequency.
- (2) The lower limit shall apply at the transition frequencies.
- (3) The limit decrease in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

Test Configuration



Test Procedure

1. The EUT was setup according to ANSI C63.10:2013 requirements.
2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface.
3. The EUT and simulators are connected to the main power through a line impedances stabilization network (LISN). The LISN provides a 50ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
4. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
5. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
6. Conducted Emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
7. During the above scans, the emissions were maximized by cable manipulation.

CTC Laboratories, Inc.

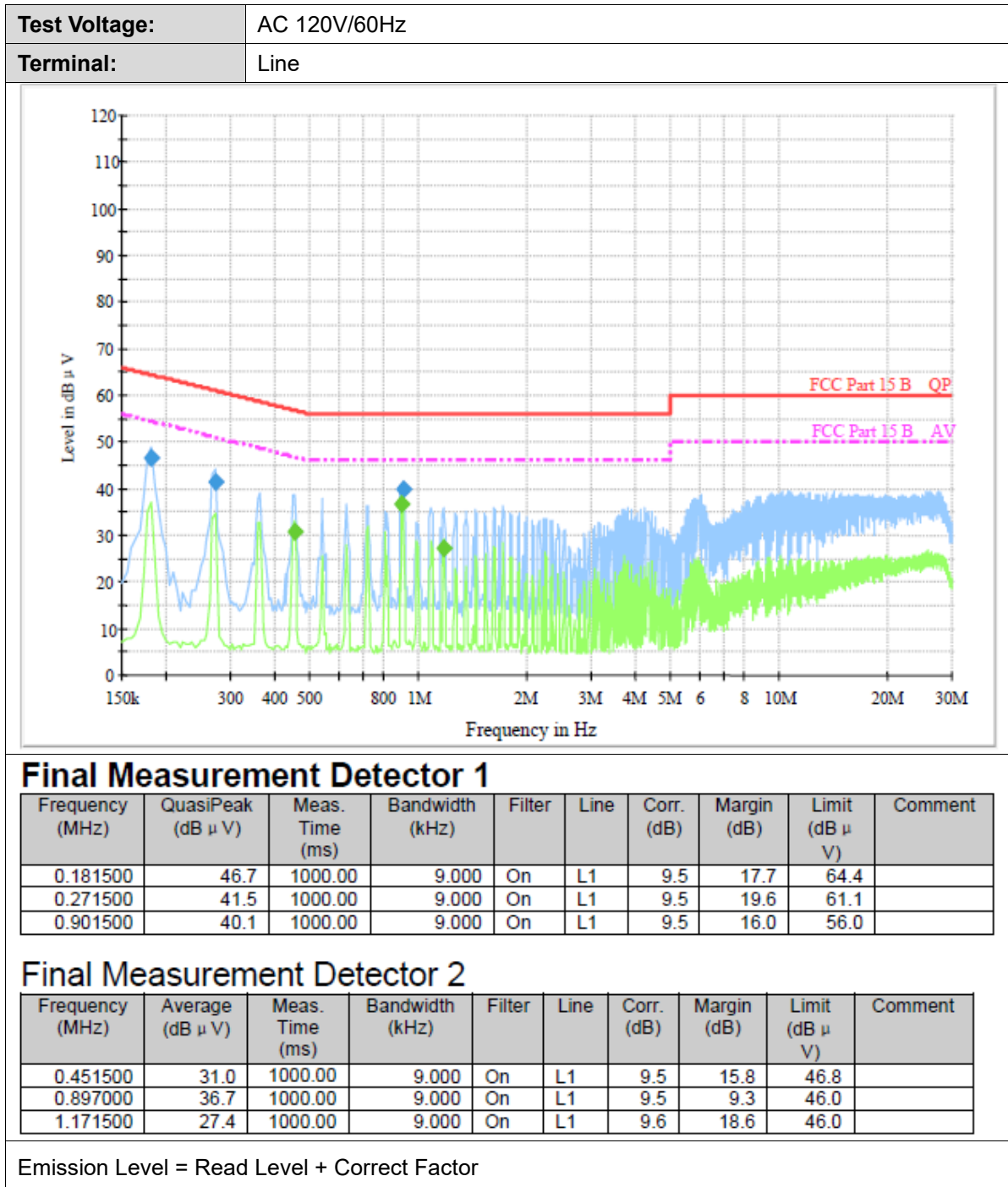
Address: Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhu Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax.: (86)755-27521011 Http://www.sz-ctc.org.cn

For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com

TRF No: CTC-TR-171_A1

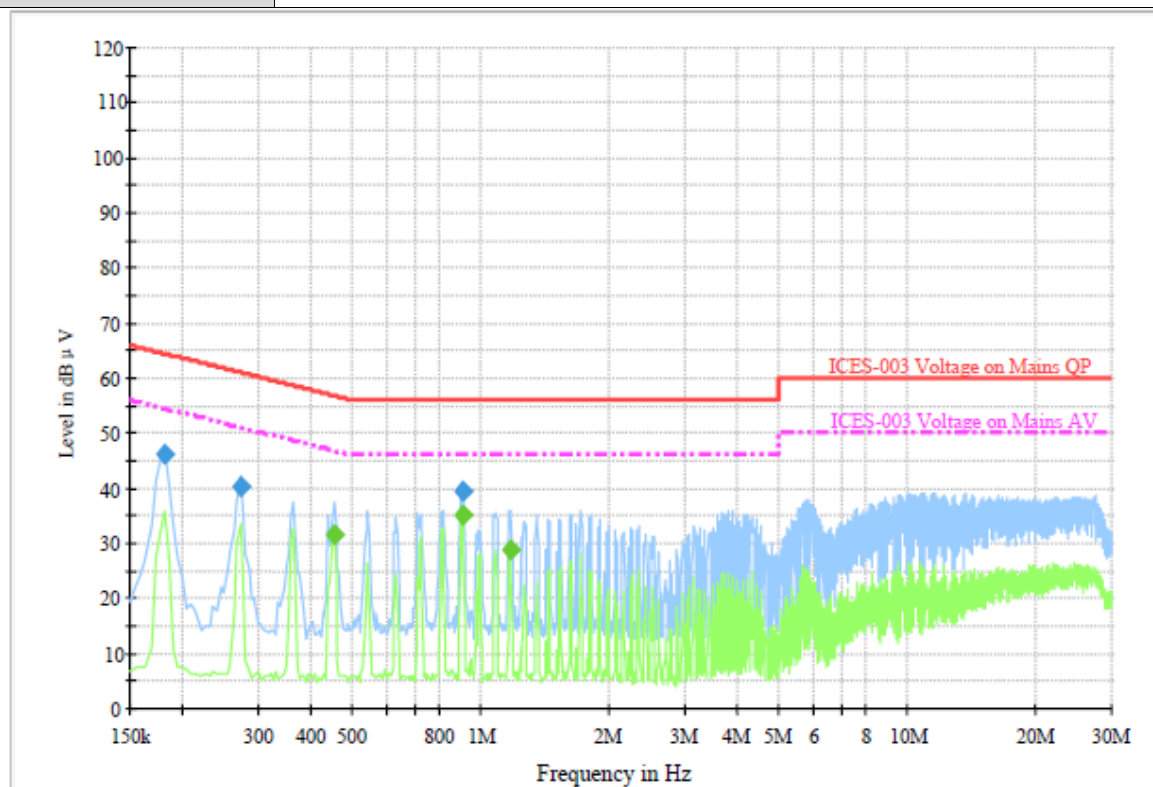
**Test Mode**

Please refer to the clause 1.7.

Test Results



Test Voltage:	AC 120V/60Hz
Terminal:	Neutral



Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dB μV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB μV)	Comment
0.181500	46.1	1000.00	9.000	On	N	9.5	18.3	64.4	
0.271500	40.2	1000.00	9.000	On	N	9.4	20.9	61.1	
0.901500	39.6	1000.00	9.000	On	N	9.4	16.4	56.0	

Final Measurement Detector 2

Frequency (MHz)	Average (dB μV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB μV)	Comment
0.451500	31.5	1000.00	9.000	On	N	9.4	15.3	46.8	
0.901500	35.1	1000.00	9.000	On	N	9.4	10.9	46.0	
1.171500	28.7	1000.00	9.000	On	N	9.5	17.3	46.0	

Emission Level = Read Level + Correct Factor



3.2. Radiated Emission

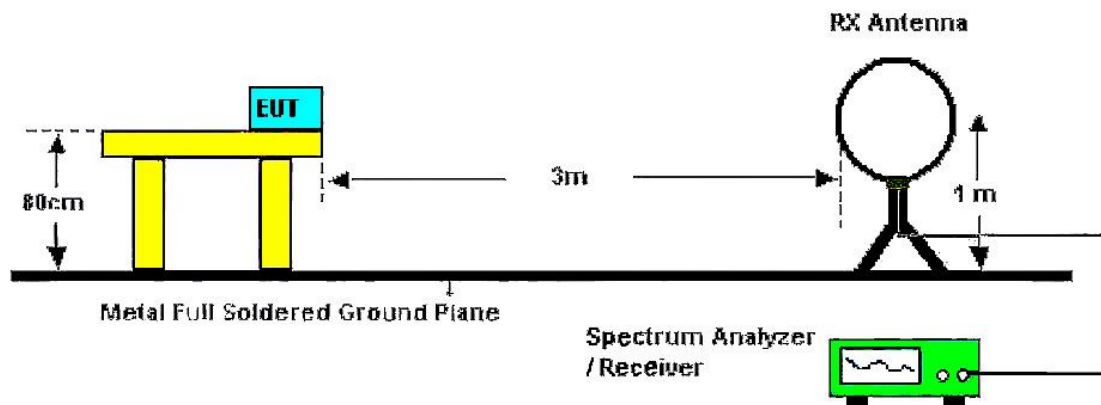
Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.209, RSS-Gen 8.9

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
960~1000	500	3

Frequency Range (MHz)	dB μ V/m (at 3 meters)	
	Peak	Average
Above 1000	74	54

Test Configuration



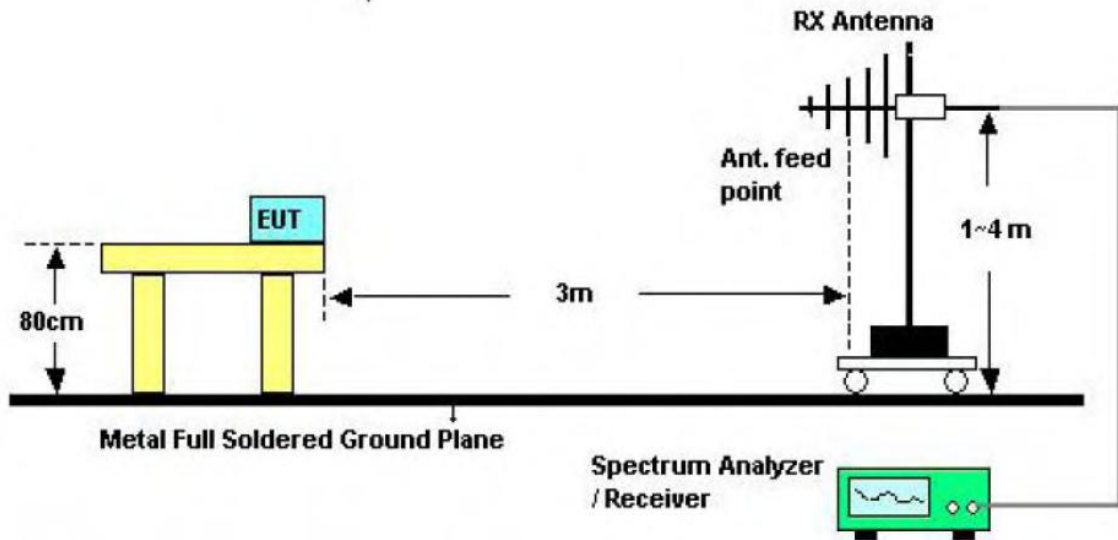
Below 30MHz Test Setup

CTC Laboratories, Inc.

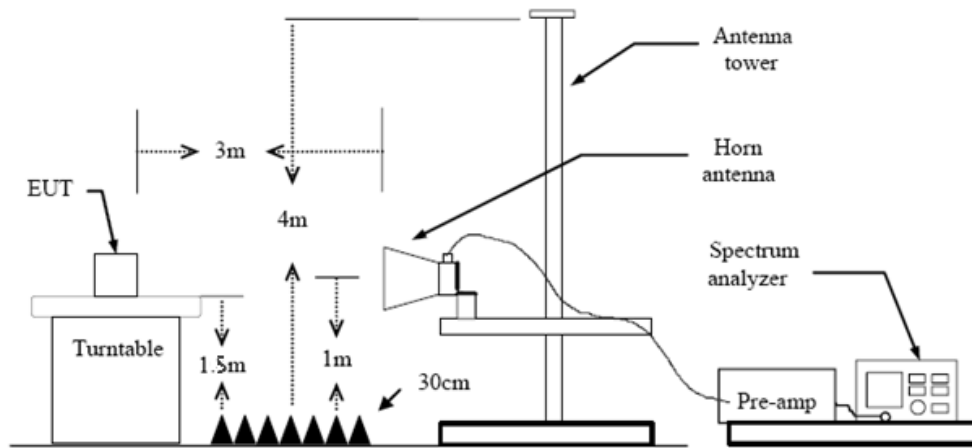
Address: Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhu Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax.: (86)755-27521011 Http://www.sz-ctc.org.cn

For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com

TRF No: CTC-TR-171_A1



Below 1000MHz Test Setup



Above 1GHz Test Setup

Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2013
2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower.
4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
5. Set to the maximum power setting and enable the EUT transmit continuously.



6. Use the following spectrum analyzer settings

(1) Span shall wide enough to fully capture the emission being measured;

(2) 9Hz - 150kHz:

RBW=300 Hz, VBW=1 kHz, Sweep=auto, Detector function=peak, Trace=max hold;

If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

(3) 150kHz - 30MHz:

RBW=10 kHz, VBW=30 kHz, Sweep=auto, Detector function=peak, Trace=max hold;

If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

(4) 30MHz - 1GHz:

RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;

If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

(5) From 1 GHz to 10th harmonic:

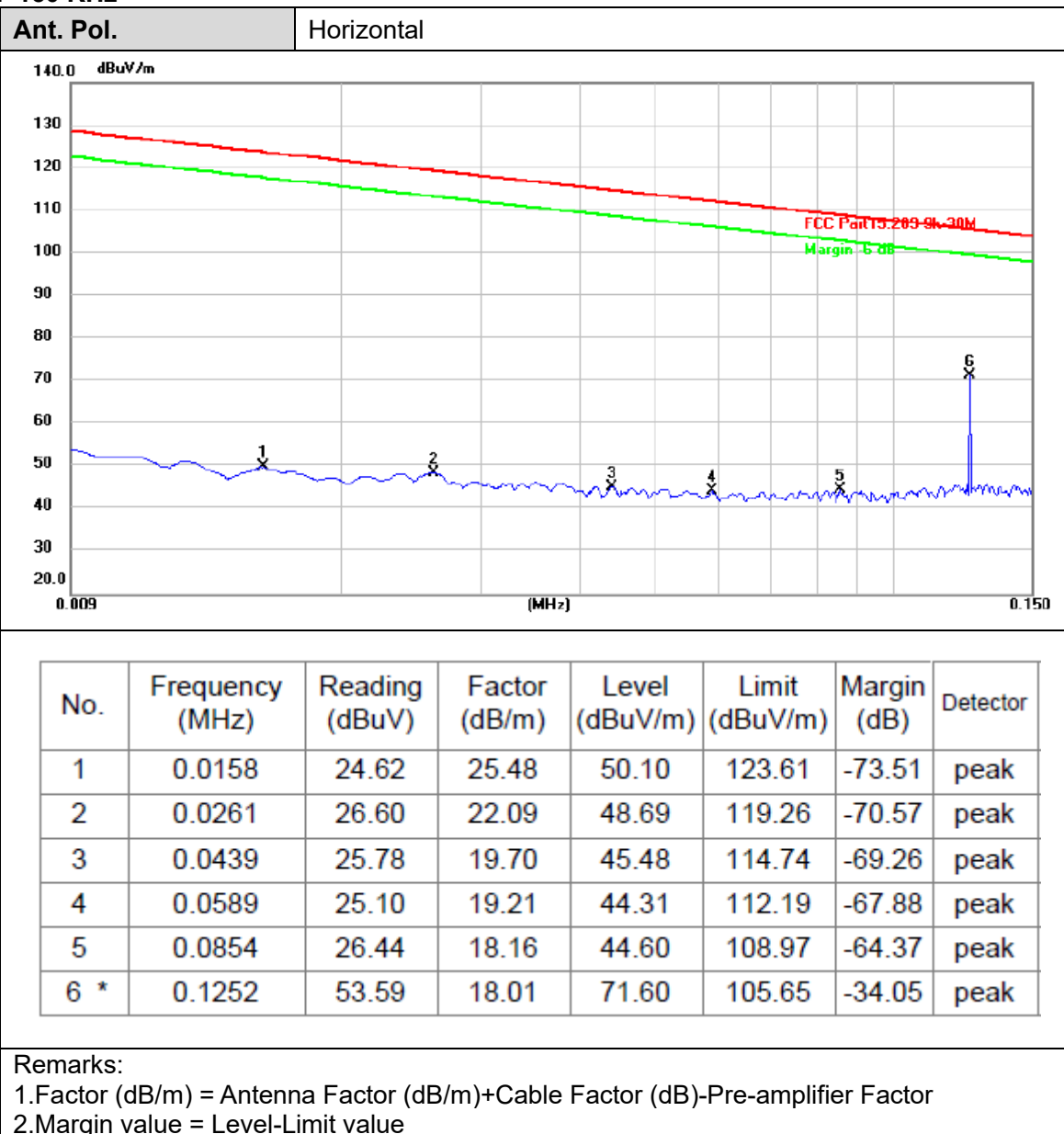
RBW=1MHz, VBW=3MHz Peak detector for Peak value.

RBW=1MHz, VBW=3MHz RMS detector for Average value.

Note 1: For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector for average measurements.

Test Mode

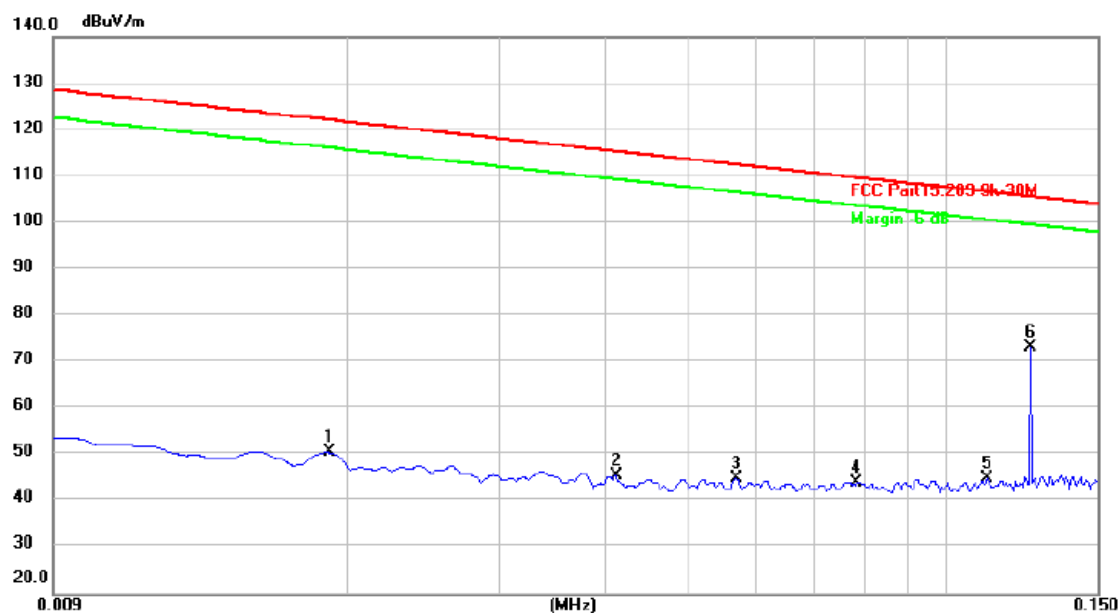
Please refer to the clause 1.7.

**Test Result****9 KHz~150 KHz**



Ant. Pol.

Vertical



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.0189	26.80	23.80	50.60	122.06	-71.46	peak
2	0.0410	25.59	19.93	45.52	115.34	-69.82	peak
3	0.0567	25.73	19.21	44.94	112.52	-67.58	peak
4	0.0786	26.06	18.14	44.20	109.69	-65.49	peak
5	0.1116	27.14	17.90	45.04	106.64	-61.60	peak
6 *	0.1252	55.22	18.01	73.23	105.65	-32.42	peak

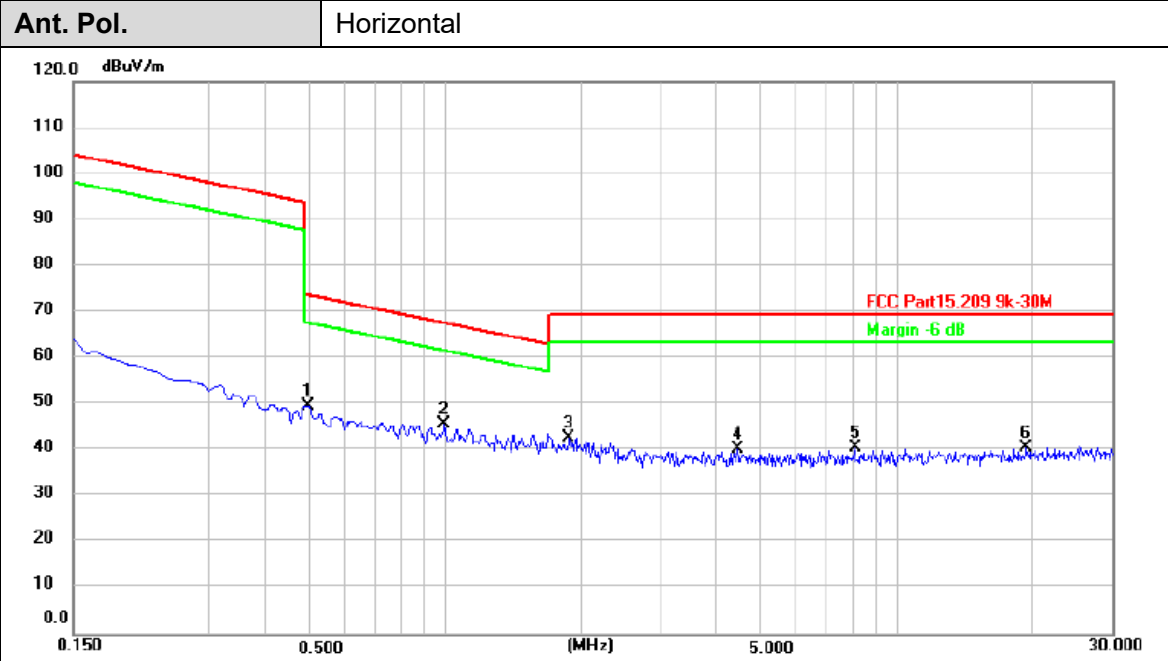
Remarks:

1. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Pre-amplifier Factor

2. Margin value = Level - Limit value



150 KHz~30 MHz

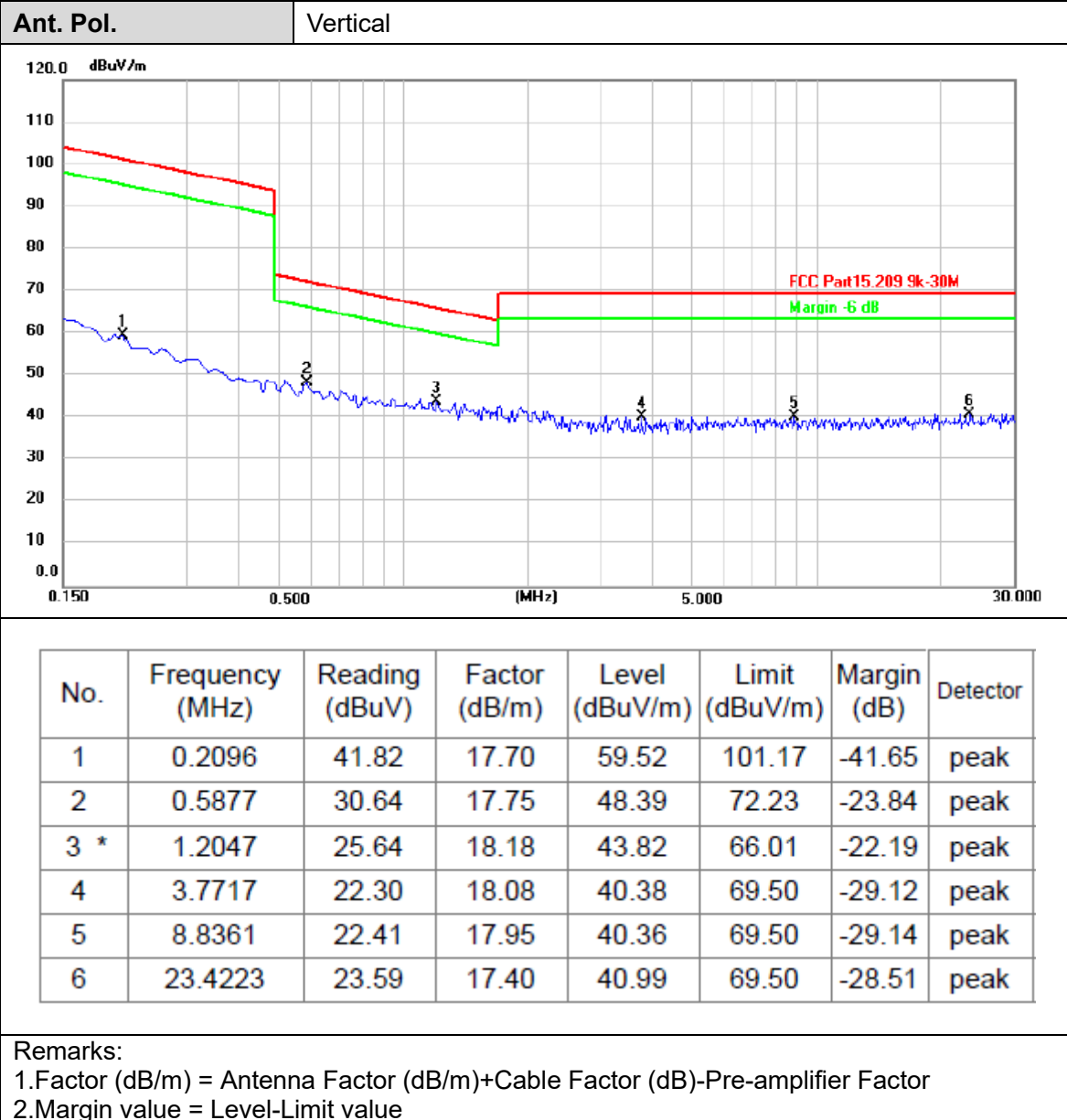


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	0.4979	31.80	18.00	49.80	73.66	-23.86	peak
2 *	0.9957	27.49	18.20	45.69	67.66	-21.97	peak
3	1.8810	24.80	18.06	42.86	69.50	-26.64	peak
4	4.4382	22.11	18.10	40.21	69.50	-29.29	peak
5	8.1000	22.53	18.08	40.61	69.50	-28.89	peak
6	19.3336	22.87	17.67	40.54	69.50	-28.96	peak

Remarks:

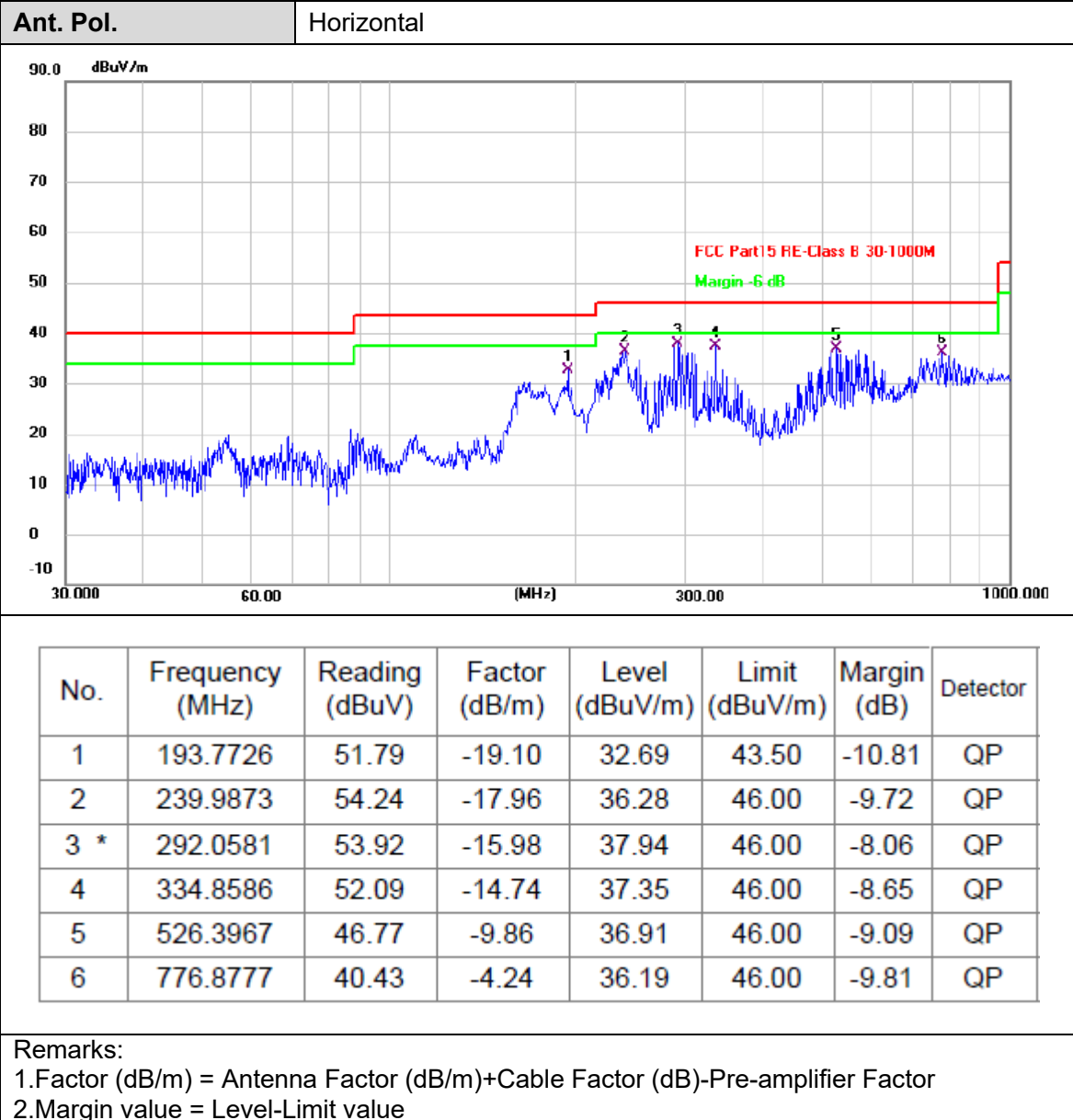
1. Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Pre-amplifier Factor

2. Margin value = Level - Limit value





30MHz-1GHz

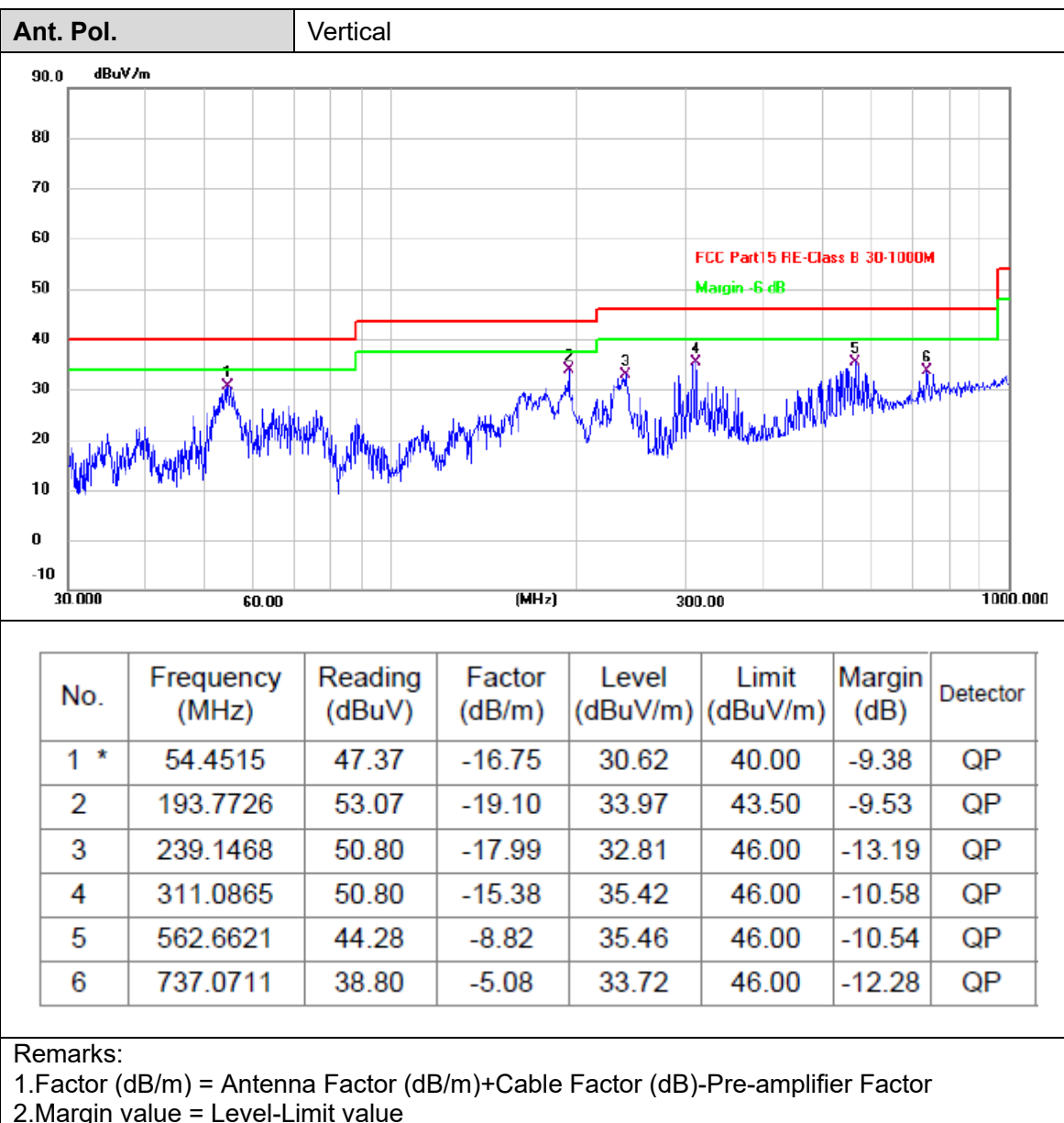


CTC Laboratories, Inc.

Address: Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhu Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax.: (86)755-27521011 Http://www.sz-ctc.org.cn

For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com

TRF No: CTC-TR-171_A1



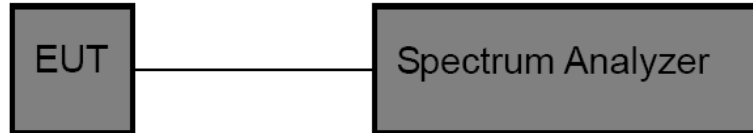


3.3. Bandwidth

Limit

None.

Test Configuration



Test Procedure

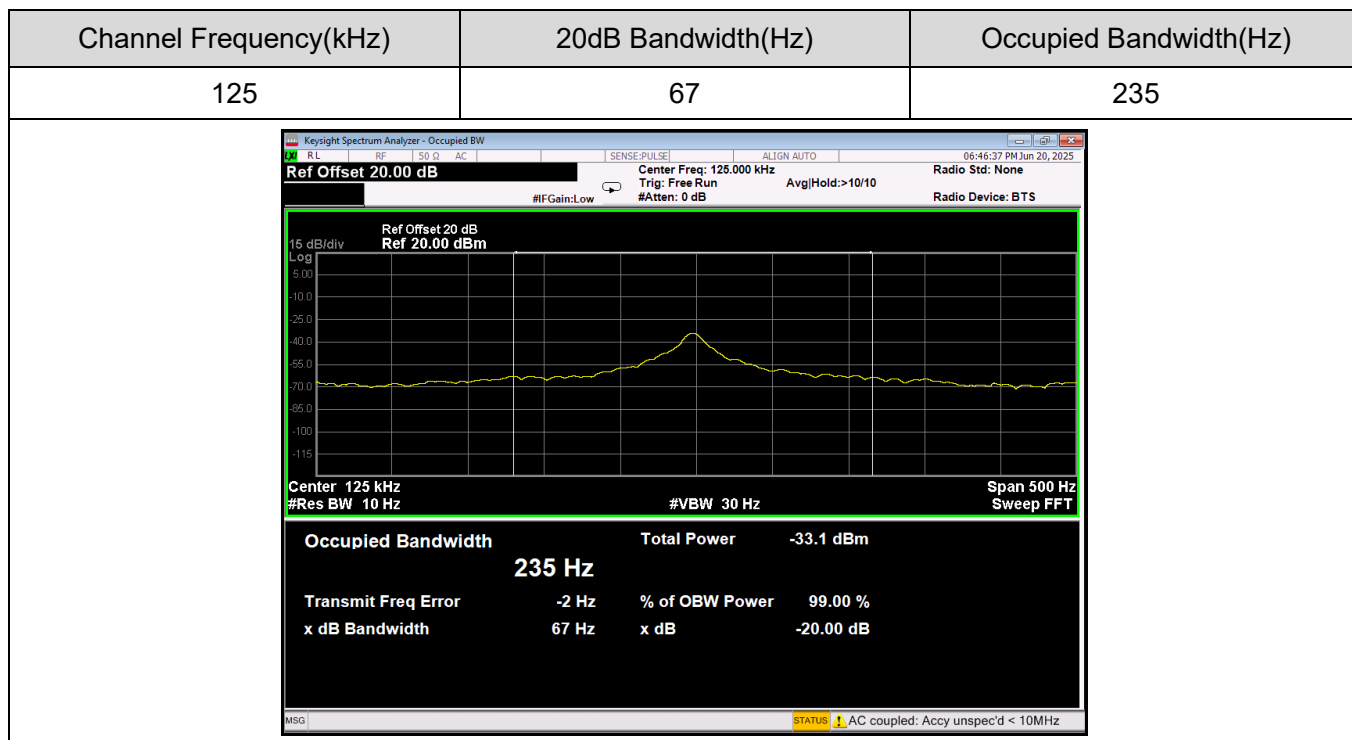
The occupied bandwidth per RSS-Gen Issue 5 Clause 6.7 was measured using the Spectrum Analyzer. The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts.

The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the occupied bandwidth (OBW) and video bandwidth (VBW) shall be approximately 3 x RBW.

Test Mode

Please refer to the clause 1.7.

Test Results



CTC Laboratories, Inc.

Address: Room 107, 108, 207, 208, 303 of Building A, Room 101 of Building B, No.7, Lanqing 1st Road, Luhu Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China Tel.: (86)755-27521059 Fax.: (86)755-27521011 Http://www.sz-ctc.org.cn

For anti-fake verification, please visit the official website of China Inspection And Testing Society : yz.cncaq.com

TRF No: CTC-TR-171_A1



3.4. Antenna Requirement

Requirement

FCC CFR Title 47 Part 15 Subpart C 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. The use of a permanently attached antenna or of antenna that uses a unique coupling to the intentional radiator, 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.

Result

The EUT's antenna is a Coil Antenna, there is no gain requirement.

*****THE END*****