TEST REPORT

APPLICANT	:	Hot Pepper, Inc.
PRODUCT NAME	:	4G Smart Phone
MODEL NAME	:	HPP-L55
BRAND NAME	:	Hot Pepper
FCC ID	:	2APD4-A95C
STANDARD(S)	:	47 CFR Part 15 Subpart B
RECEIPT DATE	:	2019-11-27
TEST DATE	:	2019-12-26
ISSUE DATE	:	2019-12-30

Edited by : Qingzhou Zhuo

Qingzhou Zhuo (Test engineer)

Review by: Bowers Zeng

Bowers Zeng (Auditor)

Approved by:

Anne Liu (Supervisor)

DIRECTORY

Change History		
Version	**Date**	**Reason for change**
1.0	2019-12-30	First edition

1.Technical Information

Note: Provide by applicant.

1.1. Applicant and Manufacturer Information

Applicant:	Hot Pepper, Inc.
ApplicantAddress:	5151 California Ave., Suite 100, Irvine 92617, USA
Manufacturer:	Hot Pepper, Inc.
ManufacturerAddress:	5151 California Ave., Suite 100, Irvine 92617, USA

1.2. Equipment Under Test (EUT) Description

EUT Type:	4G Smart Phone	
Serial No:	(N/A, marked #1 by test site)	
Hardware Version:	A95C_MAINBOARD_P3	
Software Version:	HPP-L55-C1.0.0	
Accessory Information:	Battery	
	Manufacturer:	Shenzhen HUATIANTONG TECHNOLOGY CO.LTD
	Brand Name:	Hot Pepper
	Model No.:	H2019A95C
	Serial No.:	(N/A, marked #1 by test site)
	Capacity:	2200mAh
	Rated Voltage:	3.80V
	Charge Limit:	4.35V
	AC Adapter	
	Manufacturer:	Shenzhen Tianyin Electronics Co.,Ltd.
	Brand Name:	Hot Pepper
	Model No.:	TPA-46B050100UU
	Serial No.:	(N/A, marked #1 by test site)
	Rated Input:	100-240V~50/60Hz 0.2A
	Rated Output:	5V⎓1.0A

Note:

1. For a more detailed description, please refer to specification or user's manual supplied by the applicant and/or manufacturer

2. Test Results

2.1. Applied Reference Documents

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart B:

No.	Identity	Document Title
1	47 CFR Part 15	Radio Frequency Devices

Test detailed items/section required by FCC rules andresults are as below:

No.	Section	Description	Test Date	Test Engineer	Result
1	15.107	Conducted Emission	2019.12.26	Hao Wang	PASS
2	15.109	Radiated Emission	2019.12.26	Yaming Luo	PASS

NOTE: The tests were performed according to the method of measurements prescribed in ANSI C63.4-2014.

2.2. EUT Setup and Operating Conditions

Frequency range was investigated: Conducted emission test: from 150 KHz to 30 MHz; Radiated emission test: from 30MHz to 6000MHz.

Test Item	
Mode 1 :	**EUT + PC USB Link** **Note: EUT connects with the PC network port through the USB cable, opens the data link of data packet transmission test software "WINTHRAX".**
Mode 2 :	EUT + Adapter
Mode 3 :	EUT + Adapter + MP4
Remark: The above test modes in boldface were the worst cases of tests; only the test data of these modes was reported.	

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

Temperature (°C):	15 - 35
Relative Humidity (%):	30 - 60
Atmospheric Pressure (kPa):	86 - 106

3. 47 CFR Part 15B Requirements

3.1. Conducted Emission

3.1.1. Requirement

According to FCC section 15.107, the radio frequency voltage that is conducted back onto the ACpower line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in thefollowing table, as measured using a 50μH/50Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

NOTE:

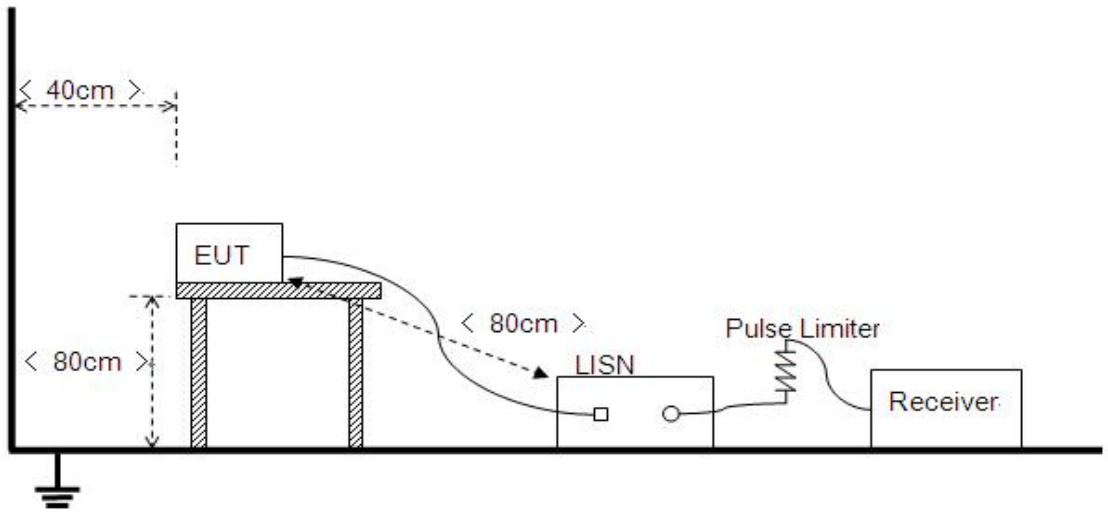
a) The limit subjects to the Class B digital device.

b) The lower limit shall apply at the band edges.

c) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

3.1.2. Test Setup

Please refer to Annex A for the photographs of the Test Configuration.



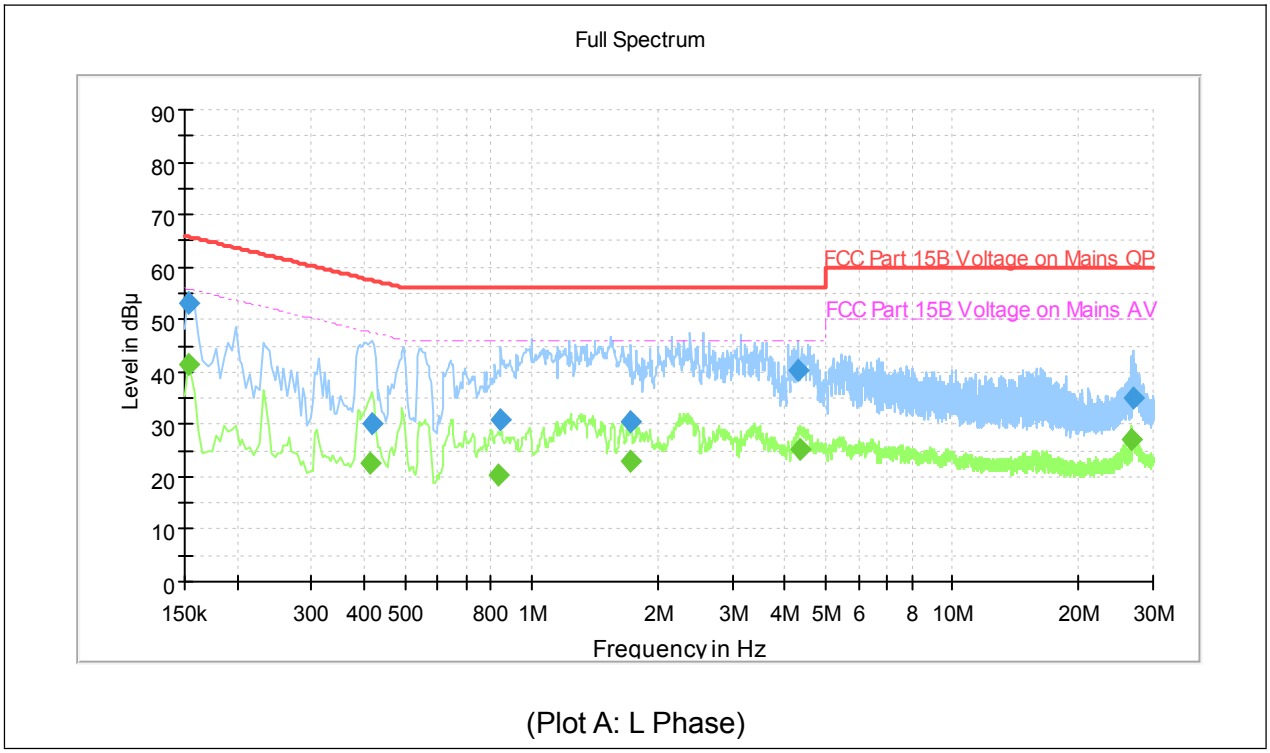
The EUT is placed on a 0.8m high insulating table, which stands on the grounded conducting floor, and keeps 0.4m away from the grounded conducting wall. The EUT is connected to the power mains through a LISN which provides 50Ω/50μH of coupling impedance for the measuring instrument. A Pulse Limiter is used to protect the measuring instrument. The factors of the whole test system are calibrated to correct the reading.

The power strip or extension cord has been investigated to make sure that the LISN integrity inma intained with respect to the impedance characteristics as prescribed in ANSI C63.4-2014 at Clause 4.3.

3.1.3. Test Result

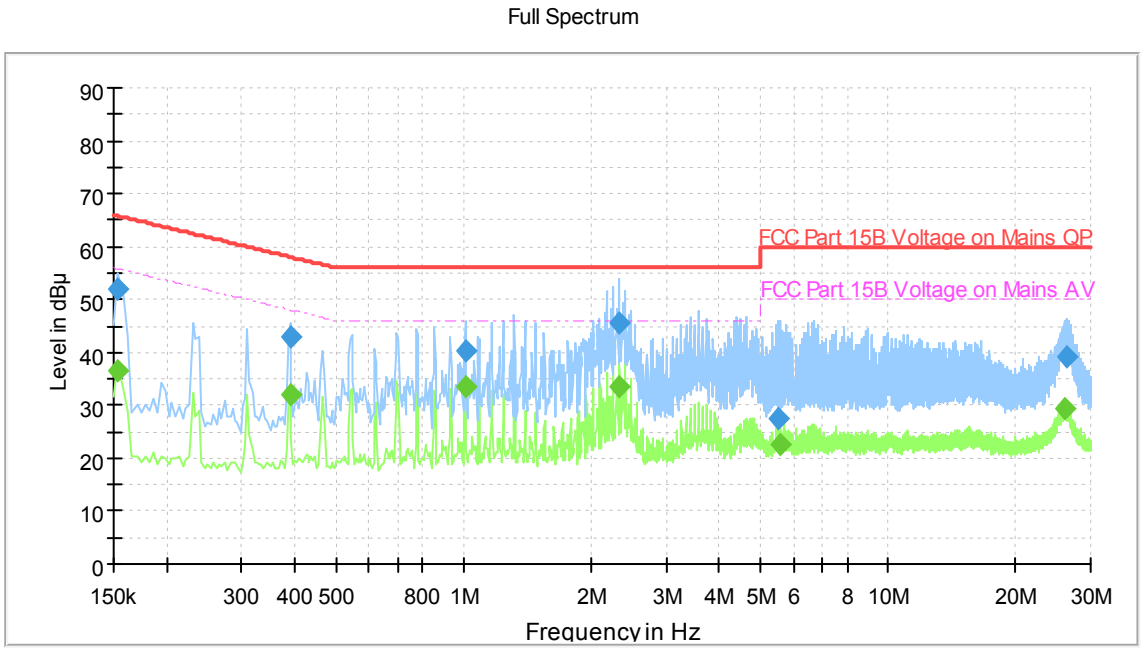
The maximum conducted interference is searched using Peak (PK), Quasi-peak (QP) and Average (AV) detectors; the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors.Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. All test modes are considered, refer to recorded points and plots below.

A. Test Plot and Suspicious Points:



(Plot A: L Phase)

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	Verdict
0.154000	52.96	---	65.78	12.82	L1	10.2	PASS
0.154000	---	41.29	55.78	14.49	L1	10.2	PASS
0.414000	---	22.44	47.57	25.12	L1	10.2	PASS
0.418000	30.30	---	57.49	27.19	L1	10.2	PASS
0.838000	---	20.51	46.00	25.49	L1	10.3	PASS
0.846000	30.83	---	56.00	25.17	L1	10.3	PASS
1.726000	---	22.89	46.00	23.11	L1	10.3	PASS
1.726000	30.39	---	56.00	25.61	L1	10.3	PASS
4.294000	40.30	---	56.00	15.70	L1	10.4	PASS
4.330000	---	25.05	46.00	20.95	L1	10.4	PASS
26.762000	---	27.20	50.00	22.80	L1	10.6	PASS
26.914000	34.92	---	60.00	25.08	L1	10.6	PASS



(Plot B: N Phase)

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	Verdict
0.154000	---	36.60	55.78	19.18	N	10.2	PASS
0.154000	51.96	---	65.78	13.82	N	10.2	PASS
0.390000	---	31.90	48.06	16.16	N	10.2	PASS
0.390000	42.94	---	58.06	15.12	N	10.2	PASS
1.010000	---	33.44	46.00	12.56	N	10.3	PASS
1.010000	40.29	---	56.00	15.71	N	10.3	PASS
2.326000	45.51	---	56.00	10.49	N	10.3	PASS
2.330000	---	33.68	46.00	12.32	N	10.3	PASS
5.490000	27.39	---	60.00	32.61	N	10.4	PASS
5.586000	---	22.60	50.00	27.40	N	10.5	PASS
26.082000	---	29.19	50.00	20.81	N	10.5	PASS
26.290000	39.03	---	60.00	20.97	N	10.5	PASS

3.2. Radiated Disturbance

3.2.1. Requirement

According to FCC section 15.109 (a), the field strength of radiated emissions from unintentionalradiators at a distance of 3 meters shall not exceed the following values:

Frequency range (MHz)	Field Strength Limitation at 3m Measurement Distance	
	(μV/m)	(dBμV/m)
30.0 - 88.0	100	20log 100
88.0 - 216.0	150	20log 150
216.0 - 960.0	200	20log 200
Above 960.0	500	20log 500

As shown in FCC section 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector. When average radiated emission measurements are specified in this part, including emission measurements below 1000MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit for the frequency being investigated unless a different peak emission limit is otherwise specified in the rules.

Note:

1) The tighter limit shall apply at the boundary between two frequency range.
2) Limitation expressed in dBμV/m is calculated by 20log Emission Level(μV/m).

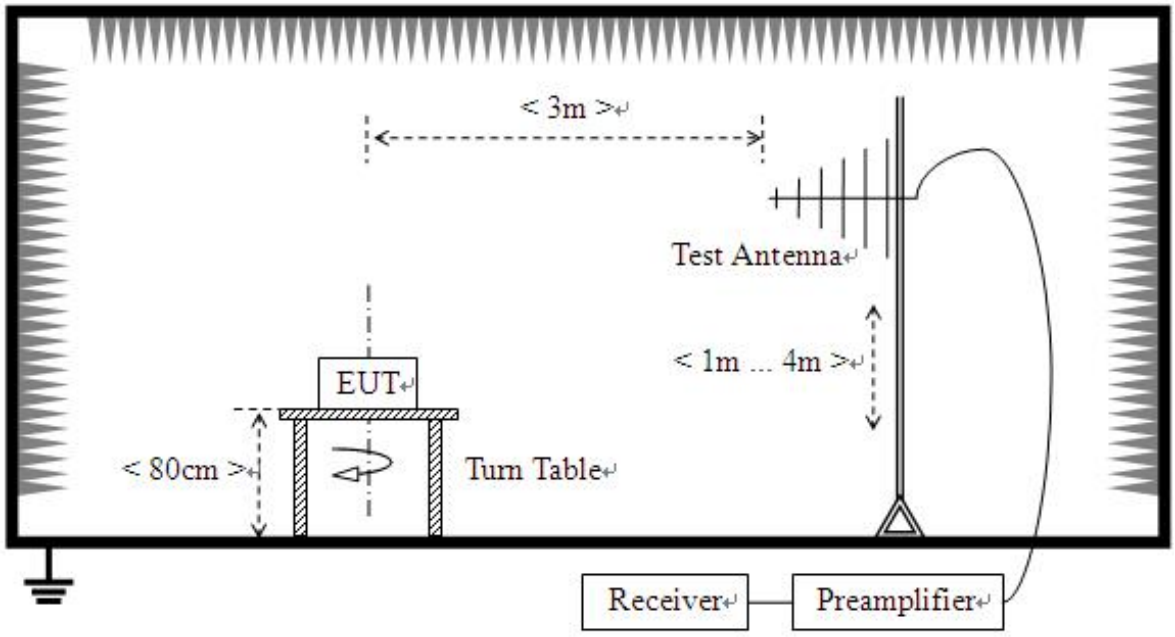
3.2.2. Frequency range of measurement

According to 15.33(b)(1), the frequency range of radiated measurement for the EUT is listed in the following table:

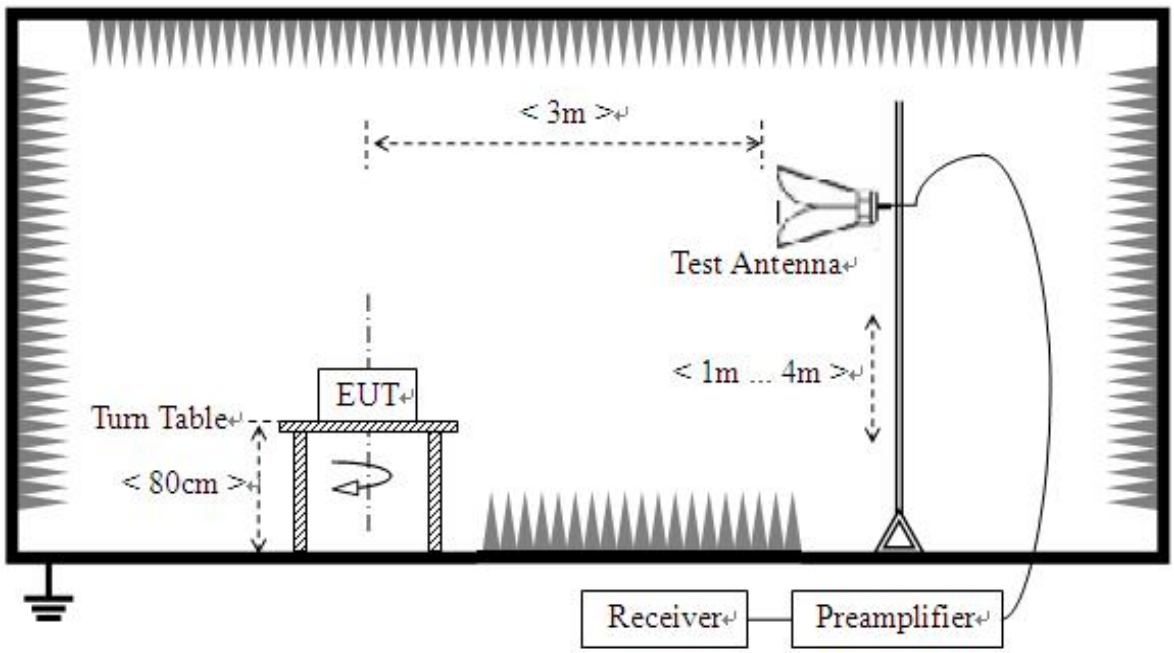
Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30.
1.705–108	1000.
108–500	2000.
500–1000	5000.
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower.

3.2.3. Test Setup

1) For radiated emissions from 30MHz to1GHz



2) For radiated emissions above 1GHz



The test is performed in a 3m Semi-Anechoic Chamber; the antenna factor, cable loss and so on of the site (factors) is calculated to correct the reading. The EUT is placed on a 0.8m high insulating Turn Table, and keeps 3m away from theTest Antenna, which is mounted onavariable-height antenna master tower.

For the test Antenna:

In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn TestAntenna (above 1GHz)are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. The emission levels at both horizontal and vertical polarizations should be tested.

For Radiated emission below 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

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

c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

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

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

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

c. The height of 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.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

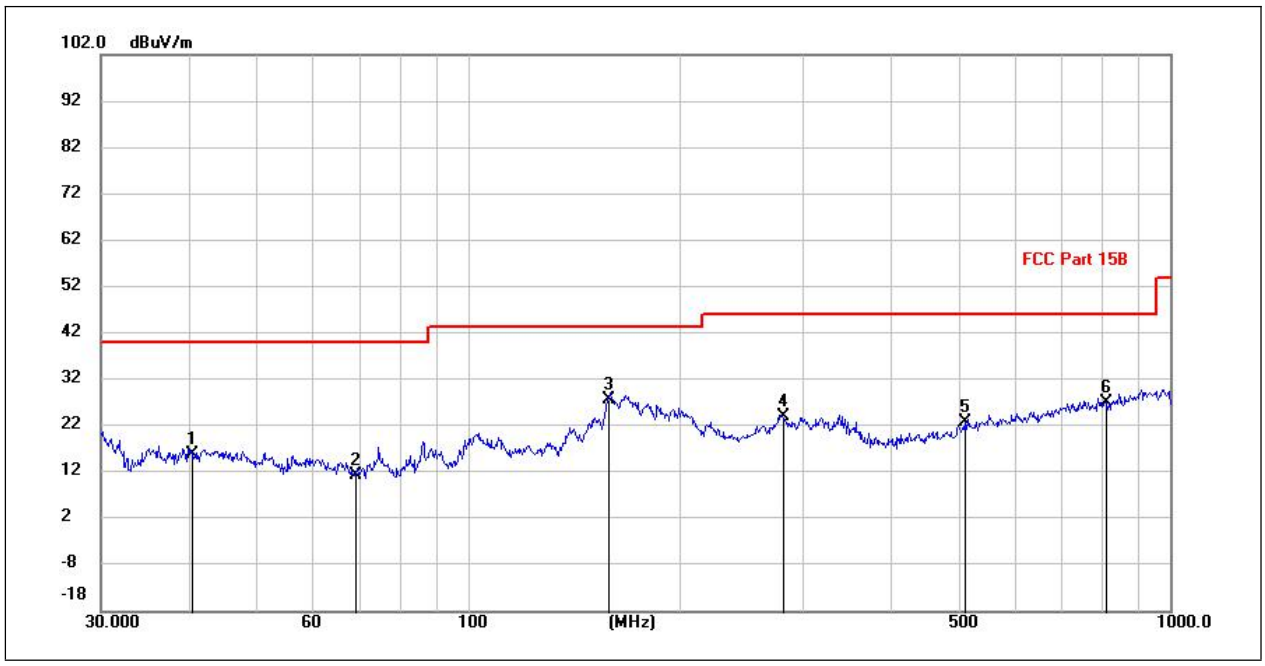
Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasipeak detection (QP) at frequency below 1GHz.

2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.

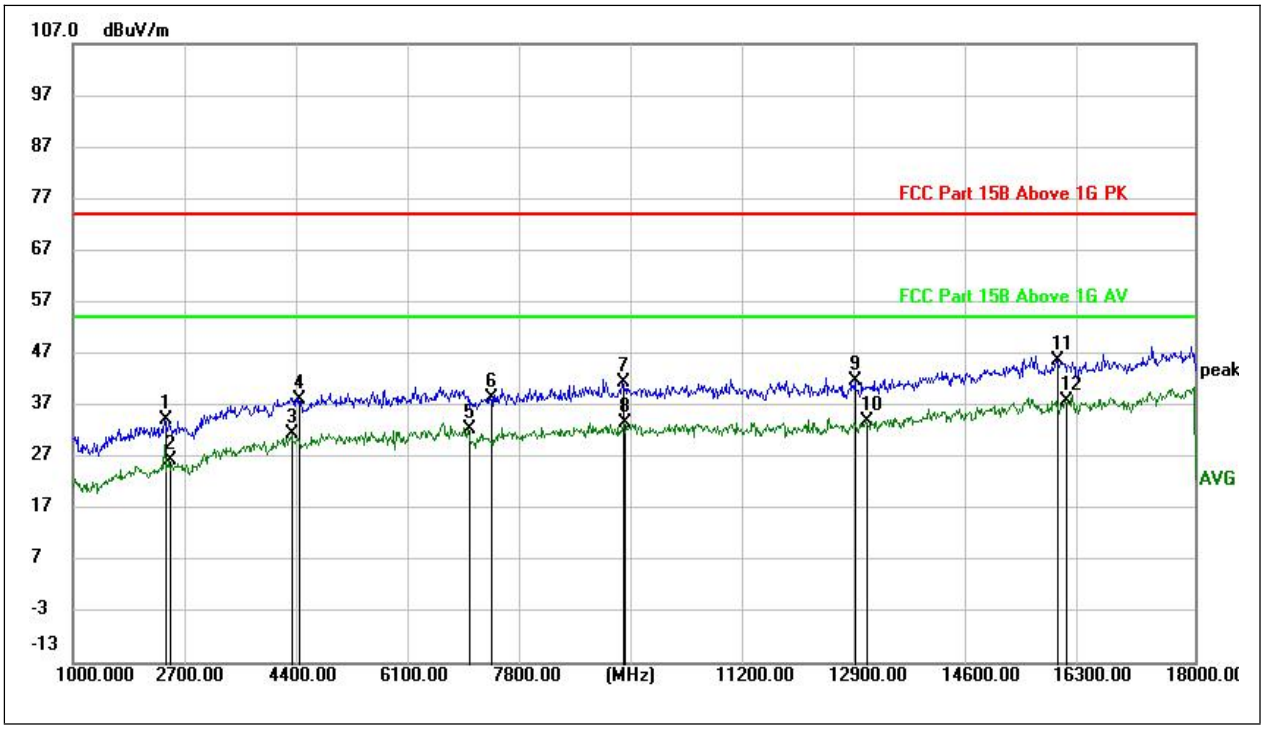
3. All modes of operation were investigated and the worst-case emissions are reported.

3.2.4. Test Result



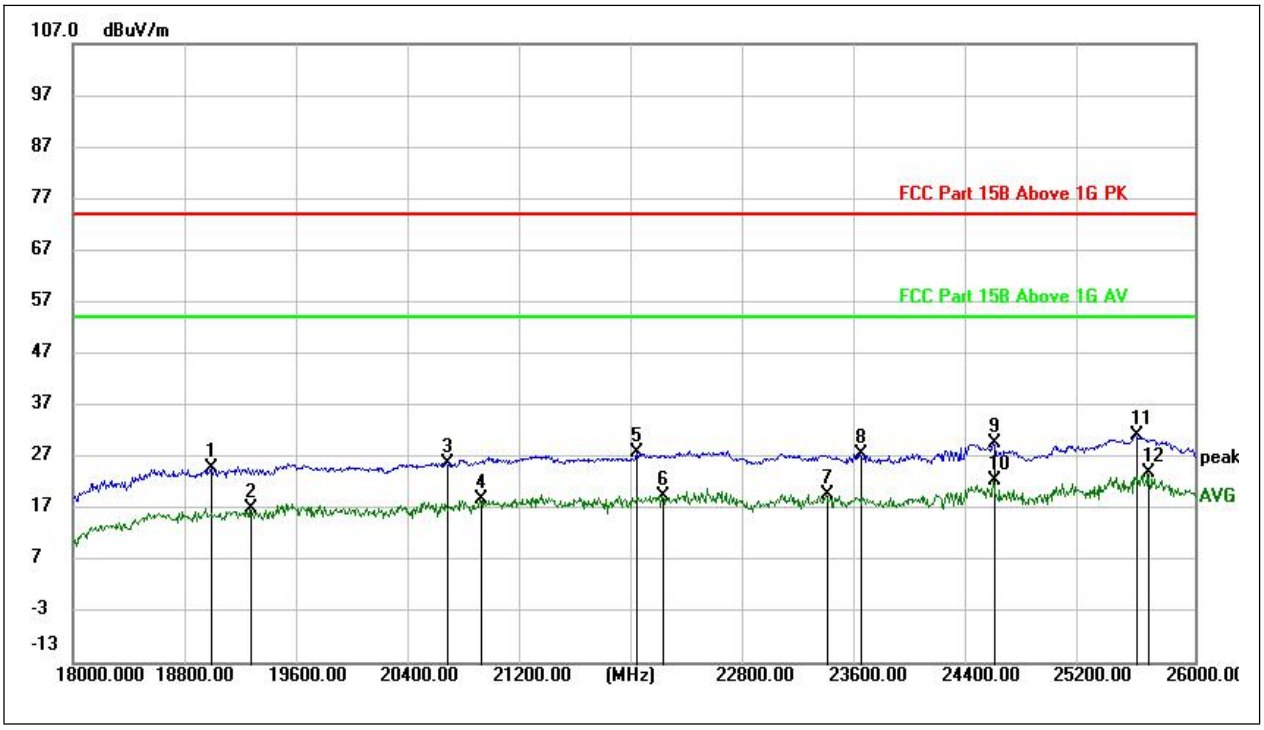
(Plot A: ANT- Horizontal, 30MHz - 1GHz)

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)	Verdict
40.4952	15.86	40.00	24.14	H	15.22	PASS
69.2111	11.37	40.00	28.63	H	12.22	PASS
158.6399	27.55	43.50	15.95	H	11.77	PASS
281.7475	23.91	46.00	22.09	H	16.47	PASS
511.0282	22.76	46.00	23.24	H	22.00	PASS
812.3991	26.99	46.00	19.01	H	26.23	PASS



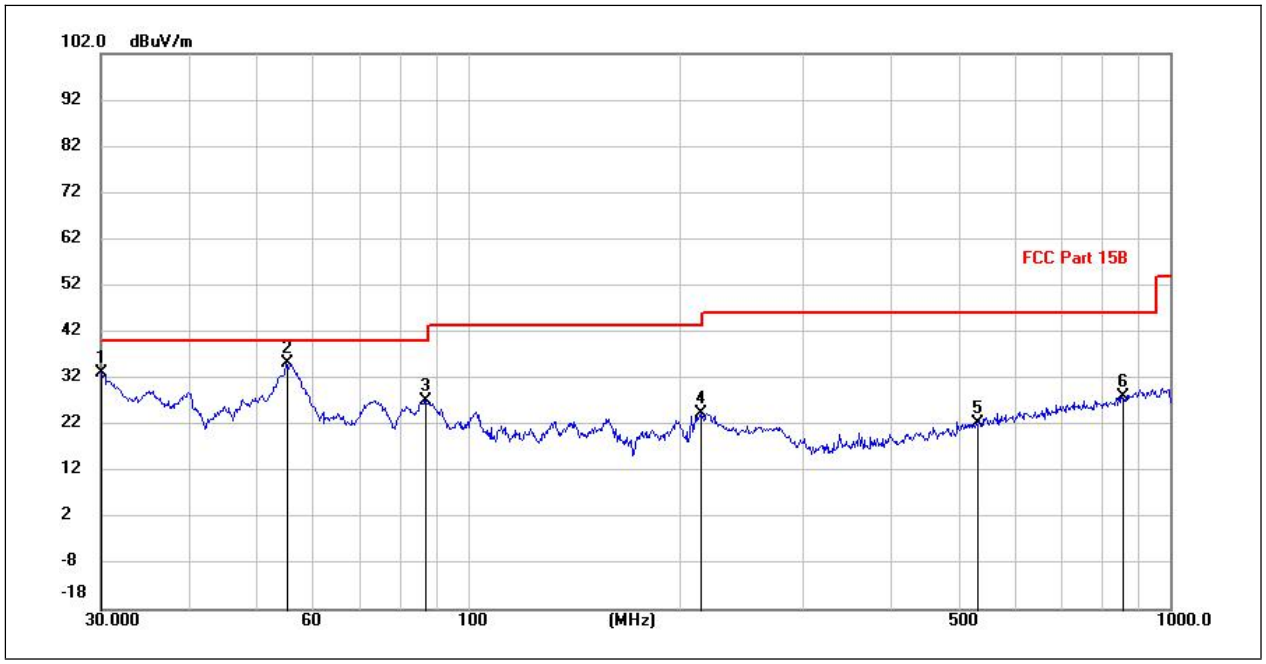
(Plot B: ANT- Horizontal, 1GHz - 18GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)	Verdict
2405.050	34.29	---	74.00	-39.71	H	-12.18	PASS
2477.300	---	26.43	54.00	-27.57	H	-11.24	PASS
4330.300	---	31.38	54.00	-22.62	H	-4.22	PASS
4431.450	38.19	---	74.00	-35.81	H	-4.99	PASS
6995.050	---	32.41	54.00	-21.59	H	-1.92	PASS
7337.600	38.54	---	74.00	-35.46	H	-1.40	PASS
9341.900	41.39	---	74.00	-32.61	H	0.84	PASS
9360.600	---	33.61	54.00	-20.39	H	0.80	PASS
12863.450	41.65	---	74.00	-32.35	H	4.29	PASS
13023.250	---	33.83	54.00	-20.17	H	5.21	PASS
15915.800	45.75	---	74.00	-28.25	H	10.38	PASS
16048.400	---	37.91	54.00	-16.09	H	10.91	PASS



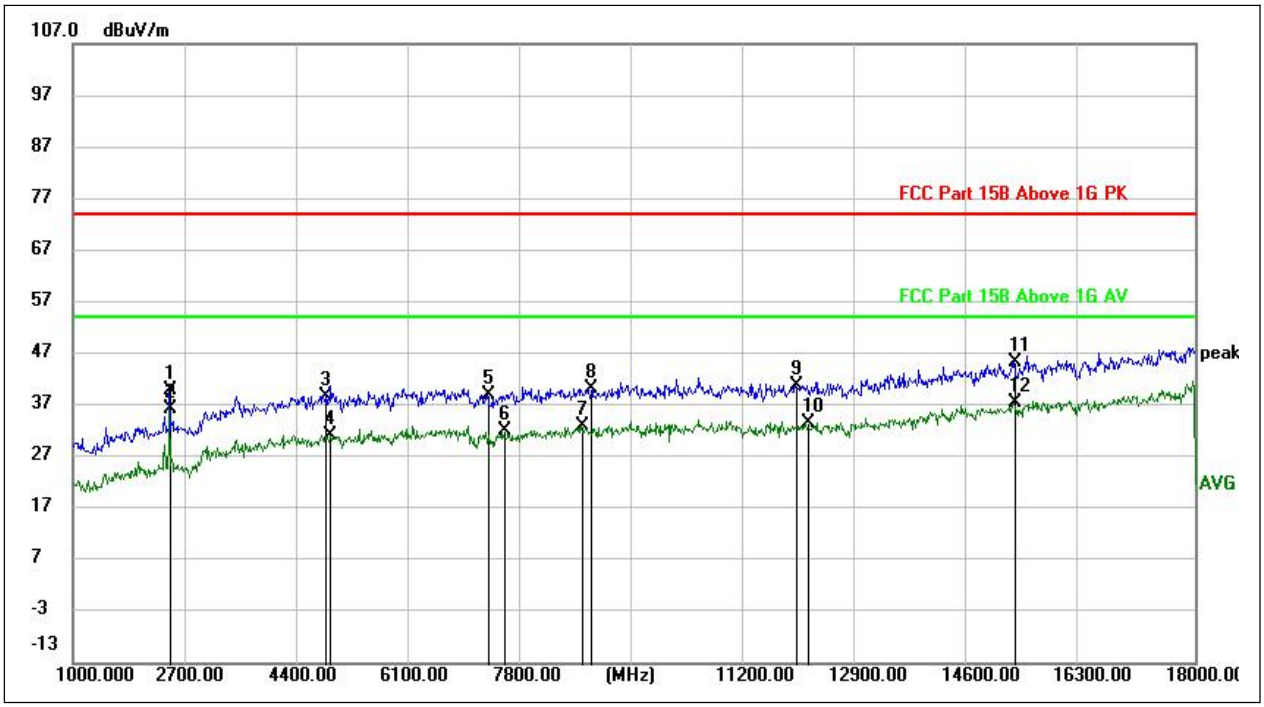
(Plot C: ANT- Horizontal, 18GHz - 26GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)	Verdict
18991.600	24.97	---	74.00	-49.03	H	37.28	PASS
19266.800	---	17.01	54.00	-36.99	H	37.22	PASS
20666.400	25.68	---	74.00	-48.32	H	37.31	PASS
20910.400	---	18.80	54.00	-35.20	H	37.38	PASS
22022.800	27.84	---	74.00	-46.16	H	37.28	PASS
22207.600	---	19.54	54.00	-34.46	H	37.32	PASS
23369.600	---	19.80	54.00	-34.20	H	37.32	PASS
23615.600	27.55	---	74.00	-46.45	H	37.46	PASS
24562.000	29.66	---	74.00	-44.34	H	37.47	PASS
24562.000	---	22.52	54.00	-31.48	H	37.47	PASS
25586.000	31.22	---	74.00	-42.78	H	37.61	PASS
25668.000	---	23.89	54.00	-30.11	H	37.66	PASS



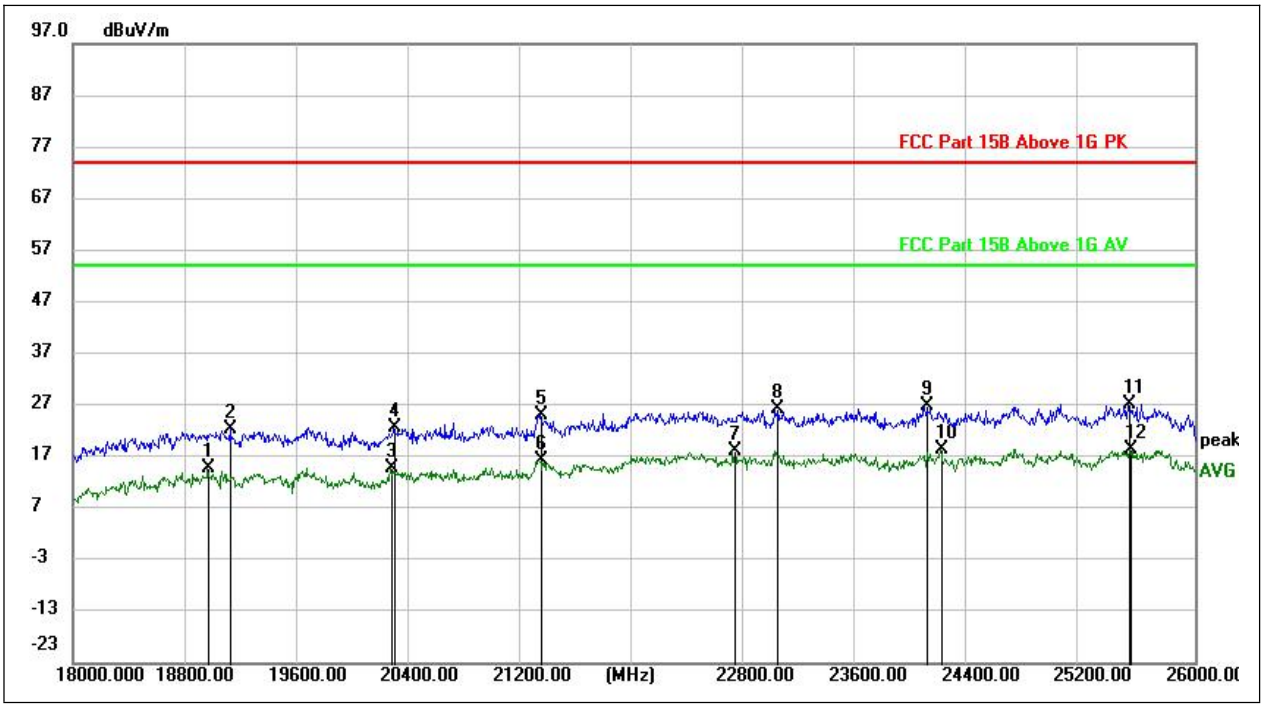
(Plot D: ANT- Vertical, 30MHz - 1GHz)

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)	Verdict
30.0000	33.20	40.00	6.80	V	13.90	PASS
55.1046	35.14	40.00	4.86	V	15.09	PASS
86.8981	27.14	40.00	12.86	V	11.21	PASS
214.5519	24.50	43.50	19.00	V	13.51	PASS
530.9385	22.17	46.00	23.83	V	18.21	PASS
857.0246	28.03	46.00	17.97	V	21.50	PASS



(Plot F: ANT- Vertical, 1GHz - 18GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)	Verdict
2477.300	39.86	---	74.00	-34.14	V	-11.24	PASS
2477.300	---	36.39	54.00	-17.61	V	-11.24	PASS
4813.100	38.84	---	74.00	-35.16	V	-3.91	PASS
4910.000	---	31.19	54.00	-22.81	V	-3.79	PASS
7286.600	39.06	---	74.00	-34.94	V	-1.31	PASS
7533.100	---	32.15	54.00	-21.85	V	-0.97	PASS
8701.850	---	33.03	54.00	-20.97	V	0.11	PASS
8845.500	40.28	---	74.00	-33.72	V	0.07	PASS
11959.050	40.83	---	74.00	-33.17	V	3.36	PASS
12131.600	---	33.46	54.00	-20.54	V	3.18	PASS
15272.350	45.31	---	74.00	-28.69	V	9.40	PASS
15272.350	---	37.61	54.00	-16.39	V	9.40	PASS



(Plot G: ANT- Vertical, 18GHz - 26GHz)

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Corr. (dB/m)	Verdict
18966.800	---	14.82	54.00	-39.18	V	37.29	PASS
19126.000	22.39	---	74.00	-51.61	V	37.27	PASS
20267.600	---	14.89	54.00	-39.11	V	37.51	PASS
20295.600	22.77	---	74.00	-51.23	V	37.49	PASS
21330.800	25.18	---	74.00	-48.82	V	37.55	PASS
21330.800	---	16.21	54.00	-37.79	V	37.55	PASS
22712.400	---	18.08	54.00	-35.92	V	37.47	PASS
23020.400	26.31	---	74.00	-47.69	V	37.35	PASS
24083.200	26.79	---	74.00	-47.21	V	37.44	PASS
24187.600	---	18.34	54.00	-35.66	V	37.46	PASS
25531.600	27.08	---	74.00	-46.92	V	37.52	PASS
25542.400	---	18.53	54.00	-35.47	V	37.54	PASS

Annex A Test Uncertainty

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO.

Uncertainty of Conducted Emission Measurement

Measuring Uncertainty for a Level of Confidence of 95%(U=2Uc(y))	150kHz-30MHz	2.61dB

Uncertainty of Radiated Emission Measurement

Measuring Uncertainty for a Level of Confidence of 95%(U=2Uc(y))	30MHz-200MHz	±3.66dB
	200MHz-1000MHz	±3.87dB
	1GHz-6GHz	±4.50dB

Annex B Testing Laboratory Information

1. Identification of the Responsible Testing Laboratory

Laboratory Name:	Kehu-Morlab Test Laboratory
Laboratory Address:	Unit 101, No.1732 Gangzhong Road, Xiamen Area, Pilot Free Trade Zone (Fujian) P.R. China
Telephone:	+86-0592-5612050
Facsimile:	+86-0592-5612095

2. Identification of the Responsible Testing Location

Name:	Kehu-Morlab Test Laboratory
Address:	Unit 101, No.1732 Gangzhong Road, Xiamen Area, Pilot Free Trade Zone (Fujian) P.R. China

3. Accreditation Certificate

AccreditedTesting Laboratory:	The FCC designation number is CN1249. (Kehu-Morlab Test Laboratory)

4. Test Software Utilized

No.	Model	Version Number	Producer	Test Item
1	EZ_EMC	V1.1.4.2	FARAD	RE
2	EMC32	V10.20.01	Rode&Schwarz	CE

5. Conducted Emission Test Equipments

No.	Equipment Name	Serial No.	Model No.	Manufacturer	Cal.Date	Cal.Due Date
1	EMI Receiver	102174	ESR3	ESR3	2019.01.08	2020.01.07
2	LISN	101338	ENV432	ENV432	2019.01.14	2020.01.13
3	Pulse Limiter (10dB)	317	VTSD 9561 F	VTSD 9561 F	2019.01.14	2020.01.13
4	Coaxial cable(BNC) (30MHz-3GHz)	EMC01	N/A	Morlab	2019.01.14	2020.01.13

6. Radiated Test Equipments

No.	Equipment Name	Serial No.	Model No.	Manufacturer	Cal. Date	Cal.Due Date
1	Anechoic Chamber	N/A	9m*6m*6m	ETS-Lindgren	2017.07.21	2020.07.20
2	Signal Analyzer	101294	FSV40	R&S	2019.01.04	2020.01.03
3	Active Ring Antenna	FMZB 1513 #269	FMZB 1513	Schwarzbeck	2019.01.02	2020.01.01
4	Linear Log Periodic Broad Band Antenna	949	VULB 9163	Schwarzbeck	2018.09.25	2020.09.24
5	Ultra-Wideband Horn Antenna	102615	HF907	R&S	2019.01.19	2020.01.18
6	Coaxial cable (N male) (9kHz -3GHz)	EMC02	N/A	Morlab	2019.01.04	2020.01.03
7	Coaxial cable (N male) (9kHz -3GHz)	EMC03	N/A	Morlab	2019.01.04	2020.01.03
8	Coaxial cable (N male) (1GHz-26.5GHz)	EMC04	N/A	Morlab	2019.01.04	2020.01.03
9	Coaxial cable (N male) (1GHz-26.5GHz)	EMC05	N/A	Morlab	2019.01.04	2020.01.03
10	Pre-amplifier (1GHz-18GHz)	8810011	PAP-1G18	CDSI	2019.01.04	2020.01.03

END OF REPORT