



Test Report No.:
FCC2021-0042-2

RF Test Report

Product Name : iPulseOx Pulse Oximeter
FCC ID : 2AHYZ-SMPO1000-US
Model Number : SMPO1000-US
Technology Tested : LTE cat M1
Client : Smart Meter Corporation
Classification Of Test : Commission Test

CVC Testing Technology Co., Ltd.



CVC Certification & Testing Co., Ltd.

Test Report No. FCC2021-0042-2

Page 2 of 63

Client	Name : Smart Meter Corporation Address : 201 E. Kennedy Blvd., Suite 880, Tampa, FL 33602		
Manufacturer	Name : Shanghai Berry Electronic Tech Co., Ltd. Address : Unit 104, 1st Floor, 7th Building, NO.1188 Lianhang Road, Minhang District, 201112 Shanghai, China.		
Equipment under Test	Product Name : Pulse Oximeter Model/Type : SMPO1000-US Trademark :  Serial no. : — Sampling : —		
Date of Receipt.	2021.12.01	Date of Testing	2021.12.29
Test Specification		Test Result	
FCC Part 27, Subpart C(2020) ANSI C63.26(2015) FCC KDB 971168 v03r01		PASS	
Evaluation of Test Result	The equipment under test was found to comply with the requirements of the standards applied.  Issue Date: 2021.12.29		
Tested by: <u>Lu Wei Ji</u> <u>Lu Wei Ji</u> ☐ Name Signature	Reviewed by: <u>Xu Zhenfei</u> <u>Xu Zhenfei</u> ☐ Name Signature	Approved by (title): <u>Chen Huawen</u> <u>Chen Huawen</u> ☐ Name Signature	
Other Aspects: NONE.			
Abbreviations: OK, Pass= passed Fail = failed N/A= not applicable EUT= equipment, sample(s) under tested			
This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of CVC.			

CVC Certification & Testing Co., Ltd.

Test Report No. FCC2021-0042-2

Page 3 of 63

TANBLE OF CONTENTS

1. GENERAL PRODUCT INFORMATION	4
1.1 GENERAL INFORMATION	4
2. TEST SITES.....	5
2.1 TEST FACILITIES	5
2.2 DESCRIPTION OF NON-STANDARD METHOD AND DEVIATIONS	5
2.3 LIST OF TEST AND MEASUREMENT INSTRUMENTS.....	5
3. TEST CONFIGURATION	6
3.1 TEST MODE	6
4. SUMMARY OF MEASUREMENT RESULTS.....	7
5. MEASUREMENT RESULTS	8
5.1 RADIATES SPURIOUS EMISSION.....	8
6. 6 KEY COMPONENTS LIST	58
7. GLOSSARY.....	59
8. APPENDIX I.	60
EQUIPMENT LIST.....	60
TEST SOFTWARE	60

CVC Certification & Testing Co., Ltd.

Test Report No. FCC2021-0042-2

Page 4 of 63

1. General Product Information

1.1 General information

EUT Description			
Product Type	Pulse Oximeter		
Model Number	SMPO1000-US		
IMEI	351358819125151		
Power Supply	DC 3V(2*AA*1.5V) From battery		
Antenna Type	Internal Antenna		
Antenna Connector	A permanently attached antenna		
Antenna Gain	Antenna 1: 0.7 dBi		
additional beamforming gain	0 dB		
Operating Frequency Range	Band	Tx (MHz)	Rx (MHz)
	☐ WCDMA Band IV	1710~1755	2110~2155
	☐ LTE Band 4	1710~1755	2110~2155
	☐ LTE Band 7	2500~2570	2620~2690
	☒ LTE Band 12	699~716	729~746
	☐ LTE Band 13	777~787	746~756
	☐ LTE Band 38	2570~2620	2570~2620
	☐ LTE Band 41	2496~2690	2496~2690
	☐ LTE Band 66	1710~1780	2110~2200
	☐ LTE Band 71	663~698	617~652
Modulation Type	☐ (GSM) GMSK ☐ 8PSK ☐ (WCDMA) QPSK ☒ (LTE) QPSK 16QAM		
Rated Power Supply Voltage	3.0V		
Extreme Voltage	Minimum: 2.2V Maximum: 3.4V		
Extreme Temperature	Lowest: +5 ℃ Highest: +40 ℃		
EUT Accessory			
Battery	DC 3V(2*AA*1.5V) From battery		
Adapter	-		
Note:			
1. The information of the EUT is declared by the manufacturer.			

CVC Certification & Testing Co., Ltd.

Test Report No. FCC2021-0042-2

Page 5 of 63

2. Test Sites

2.1 Test Facilities

The tests and measurements refer to this report were performed by EMC testing Lab. of CVC Certification & Testing Co., Ltd.

Add.: No.3, Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou, 510663, P. R. China

Telephone : +86-20-32293888

Fax : +86-20-32293889

FCC(Test firm designation number: CN1282)

IC(Test firm CAB identifier number: CN0103)

2.2 Description of Non-standard Method and Deviations

The testing and measurement methods used in this report are applied by all standard methods. Not any non-standard method or deviation from the used standards was used.

2.3 List of Test and Measurement Instruments

Refer to **Appendix I**.

CVC Certification & Testing Co., Ltd.

Test Report No. FCC2021-0042-2

Page 6 of 63

3. Test Configuration

3.1 Test Mode

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in lie-down position (X axis) and the worst case was recorded.

In order to find the worst case condition, Pre-tests are needed at the presence of different data rate. Preliminary tests have been done on all the configuration for confirming worst case. Data rate below means worst-case rate of each test item.

Worst-case data rates are shown as following table.

The following testing in LTE is set based on the maximum RF Output Power.

Test modes are chosen to be reported as the worst case configuration below:

Test modes are chosen to be reported as the worst case configuration below for LTE Band 2

Test items	Bandwidth (MHz)						Modulation		RB			Test Channel		
	1.4	3	5	10	15	20	QPSK	16QAM	1	50%	100%	L	M	H
RF power output	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Effective Isotropic Radiated power	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Band Edge Compliance	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Occupied Bandwidth	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peak-to-Average Power Ratio	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Frequency Stability	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conducted Spurious Emissions	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Radiates Spurious Emission	O	O	O	O	O	O	O	-	O	-	-	O	O	O
Note	1. The mark "O" means that this configuration is chosen for testing. 2. The mark "-" means that this configuration is not testing.													

CVC Certification & Testing Co., Ltd.

Test Report No. FCC2021-0042-2

Page 7 of 63

4. Summary of measurement results

Number	Summary of measurements of results	Clause in FCC rules	Verdict
1	Radiates Spurious Emission	2.1053 /27.53(g)	PASS

NOTE: The device SMPO1000-US is built with LTE Module (Model No.Nrf9160).And the 4G module has been certified.Only radiated spurious emission was test in the report, other test items and test data will refer to the LTE module's report(FCC ID: 2ANPO00NRF9160)

CVC Certification & Testing Co., Ltd.

Test Report No. FCC2021-0042-2

Page 8 of 63

5. Measurement results

5.1 Radiates Spurious Emission

Ambient condition:

Temperature	Relative humidity	Pressure
24.5 ℃	50.1%	101.0kPa

Method of Measurement:

1. The testing follows FCC KDB 971168 v03r01 Section 5.8 and ANSI C63.26 (2015).
2. Above 30MHz: The EUT is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0 °to 360 °; and the receive antenna has two polarizations Vertical (V) and Horizontal (H). Above 1GHz: (Note: the FCC's permission to use 1.5m as an alternative per TCBC Conf call of Dec. 2, 2014.) The EUT is placed on a turntable 1.5 meters above the ground in the chamber, 3 meter away from the antenna. The maximal emission value is acquired by adjusting the antenna height, polarisation and turntable azimuth. Normally, the height range of antenna is 1 m to 4 m, the azimuth range of turntable is 0 °to 360 °; and the receive antenna has two polarizations Vertical (V) and Horizontal (H).
3. A log-periodic antenna or horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
4. The EUT is then put into continuously transmitting mode at its maximum power level during the test. Set Test Receiver or Spectrum RBW=1MHz, VBW=3MHz for above 1GHz and RBW=100kHz, VBW=300kHz for 30MHz to 1GHz,, And the maximum value of the receiver should be recorded as (Pr).
5. The EUT shall be replaced by a substitution antenna. In the chamber, an substitution antenna for the frequency band of interest is placed at the reference point of the chamber. An RF Signal source for the frequency band of interest is connected to the substitution antenna with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A power (PMea) is applied to the input of the substitution antenna, and adjust the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (PMea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
6. A amplifier should be connected to the Signal Source output port. And the cable should be connect between the Amplifier and the Substitution Antenna. The cable loss (Pcl) ,the Substitution Antenna Gain (Ga) and the Amplifier Gain (PAg) should be recorded after test.

7. The measurement results are obtained as described below:

$$\text{Power(EIRP)} = \text{PMea} - \text{PAg} - \text{Pcl} + \text{Ga}$$

The measurement results are amend as described below:

$$\text{Power(EIRP)} = \text{PMea} - \text{Pcl} + \text{Ga}$$

CVC Certification & Testing Co., Ltd.

Test Report No. FCC2021-0042-2

Page 9 of 63

8. This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15 dBi) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, $ERP = EIRP - 2.15\text{dBi}$.

The modulation mode and RB allocation refer to section 5.1, using the maximum output power configuration.

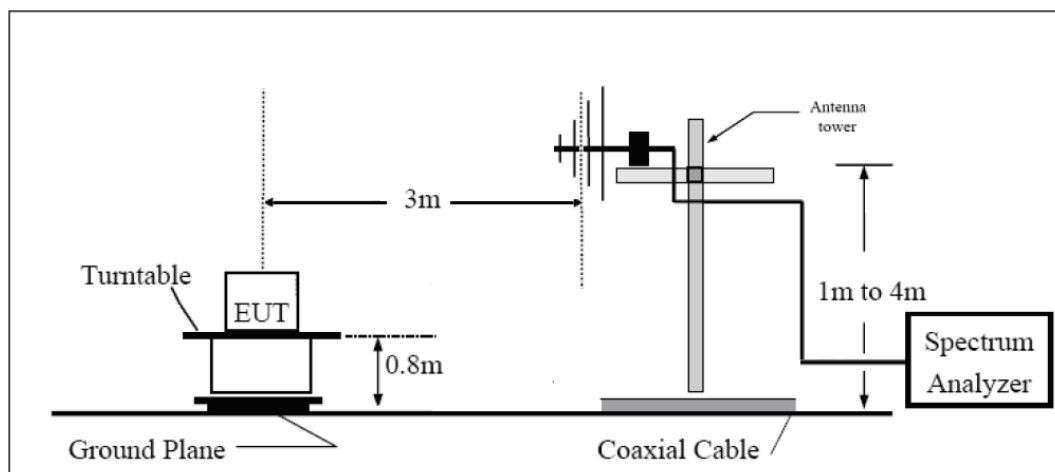
Limits:

Rule Part 27.53 (g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

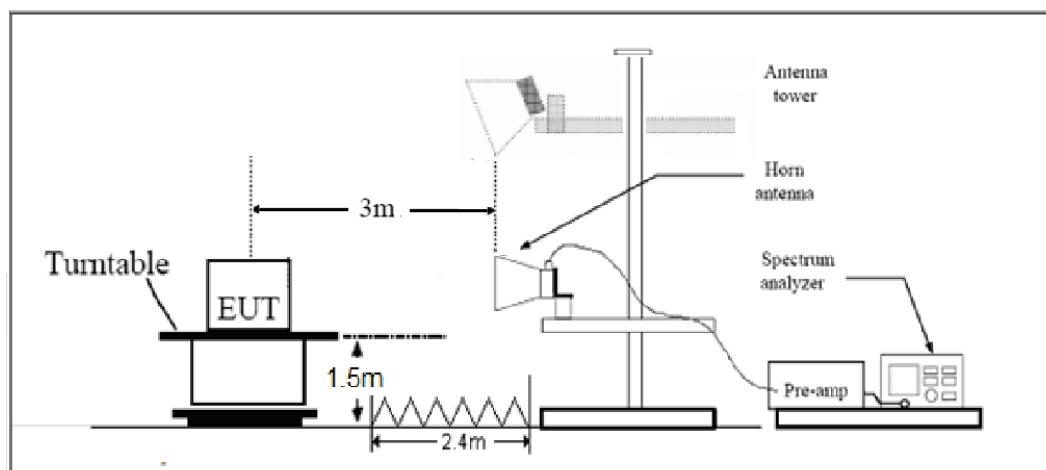
Limit	-13 dBm
-------	---------

Test Setup:

30MHz ~ 1GHz:



Above 1GHz:



CVC Certification & Testing Co., Ltd.

Test Report No. FCC2021-0042-2

Page 10 of 63

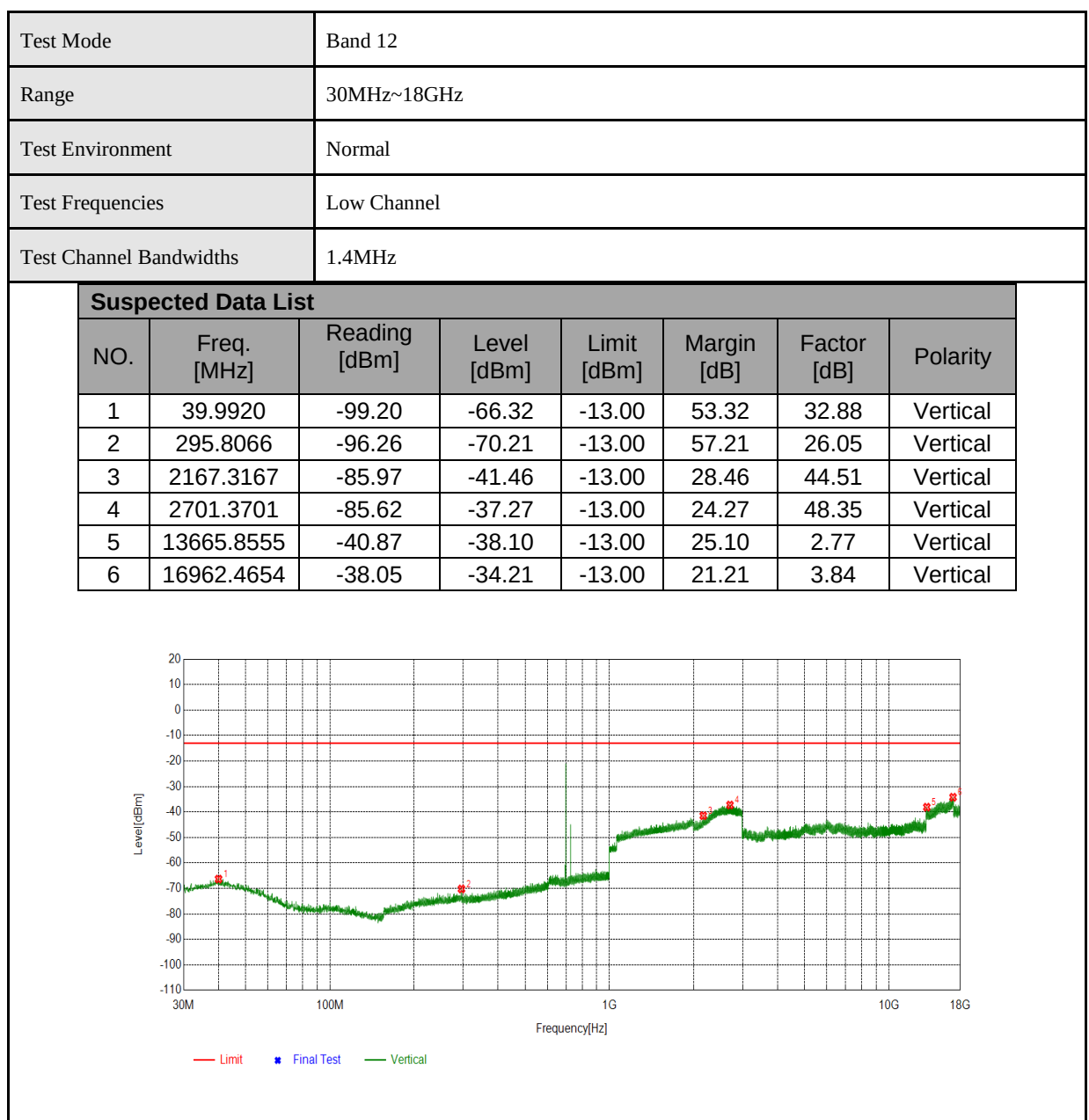
Measurement Uncertainty:

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor $k = 2$, $U = 3.55$ dB.

Test Results:

Sweep the whole frequency band through the range from 30MHz to the 10th harmonic of the carrier, the emissions below the noise floor will not be recorded in the report.

Results:



CVC Certification & Testing Co., Ltd.

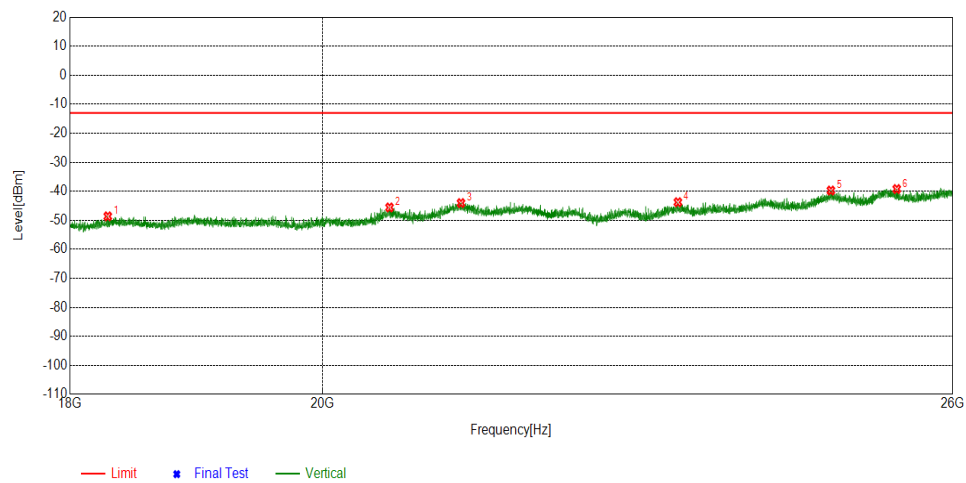
Test Report No. FCC2021-0042-2

Page 11 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Low Channel
Test Channel Bandwidths	1.4MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	18287.0359	-12.06	-48.62	-13.00	35.62	-36.56	Vertical
2	20564.3205	-9.34	-45.56	-13.00	32.56	-36.22	Vertical
3	21185.3982	-7.92	-44.04	-13.00	31.04	-36.12	Vertical
4	23188.6486	-8.47	-43.76	-13.00	30.76	-35.29	Vertical
5	24714.8394	-5.06	-39.72	-13.00	26.72	-34.66	Vertical
6	25401.9252	-4.68	-39.20	-13.00	26.20	-34.52	Vertical



CVC Certification & Testing Co., Ltd.

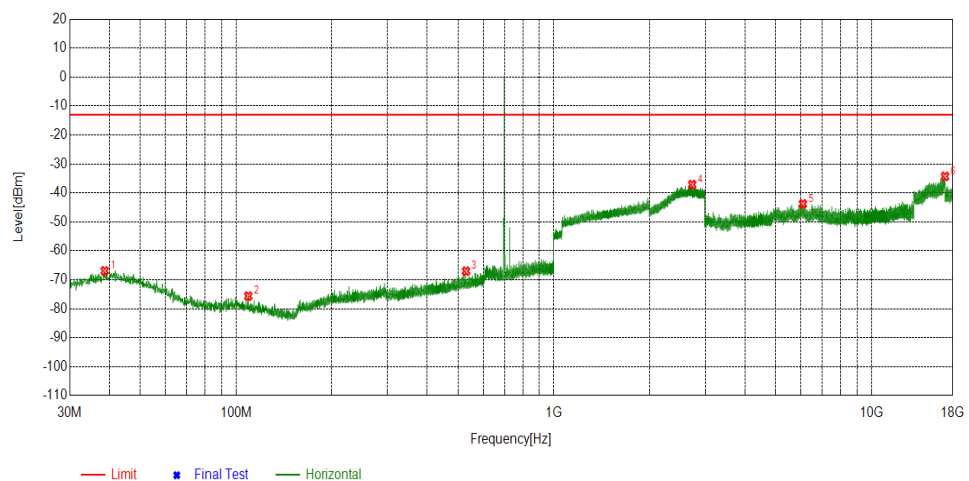
Test Report No. FCC2021-0042-2

Page 12 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Low Channel
Test Channel Bandwidths	1.4MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	38.6339	-99.34	-66.93	-13.00	53.93	32.41	Horizontal
2	109.3539	-98.62	-75.64	-13.00	62.64	22.98	Horizontal
3	529.6000	-97.24	-67.03	-13.00	54.03	30.21	Horizontal
4	2726.7727	-85.44	-37.13	-13.00	24.13	48.31	Horizontal
5	6082.1027	-45.68	-43.79	-13.00	30.79	1.89	Horizontal
6	17036.9679	-38.12	-34.28	-13.00	21.28	3.84	Horizontal



CVC Certification & Testing Co., Ltd.

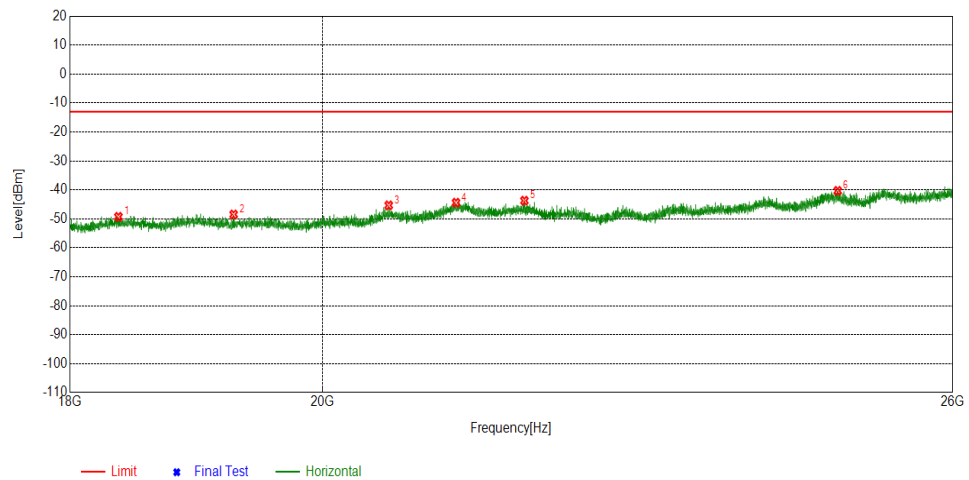
Test Report No. FCC2021-0042-2

Page 13 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Low Channel
Test Channel Bandwidths	1.4MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	18368.0460	-12.75	-49.29	-13.00	36.29	-36.54	Horizontal
2	19271.1589	-12.07	-48.48	-13.00	35.48	-36.41	Horizontal
3	20557.3197	-9.11	-45.33	-13.00	32.33	-36.22	Horizontal
4	21141.3927	-8.28	-44.41	-13.00	31.41	-36.13	Horizontal
5	21752.4691	-7.67	-43.71	-13.00	30.71	-36.04	Horizontal
6	24784.8481	-5.68	-40.32	-13.00	27.32	-34.64	Horizontal



CVC Certification & Testing Co., Ltd.

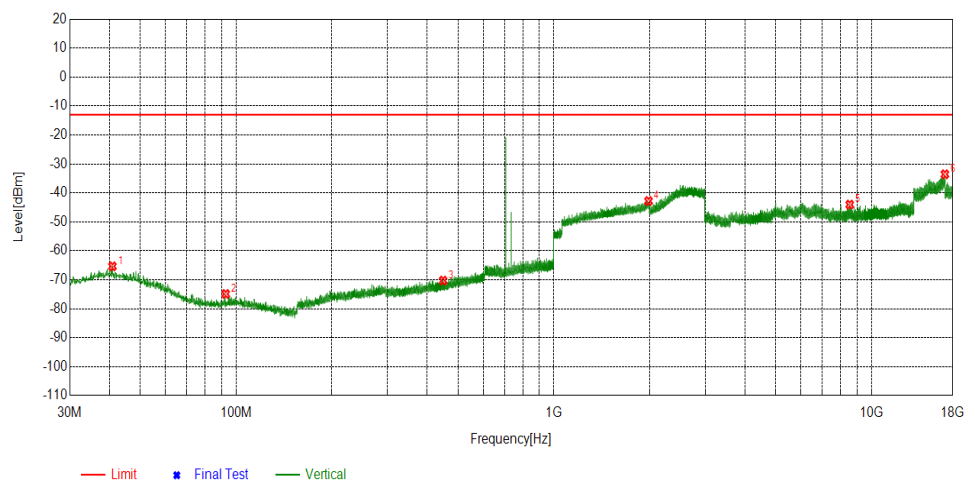
Test Report No. FCC2021-0042-2

Page 14 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Mid Channel
Test Channel Bandwidths	1.4MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	40.8651	-98.05	-65.35	-13.00	52.35	32.70	Vertical
2	92.8623	-98.09	-74.90	-13.00	61.90	23.19	Vertical
3	448.5969	-98.90	-70.27	-13.00	57.27	28.63	Vertical
4	1987.4988	-85.20	-42.80	-13.00	29.80	42.40	Vertical
5	8540.6847	-46.26	-44.03	-13.00	31.03	2.23	Vertical
6	17022.4674	-37.45	-33.56	-13.00	20.56	3.89	Vertical



CVC Certification & Testing Co., Ltd.

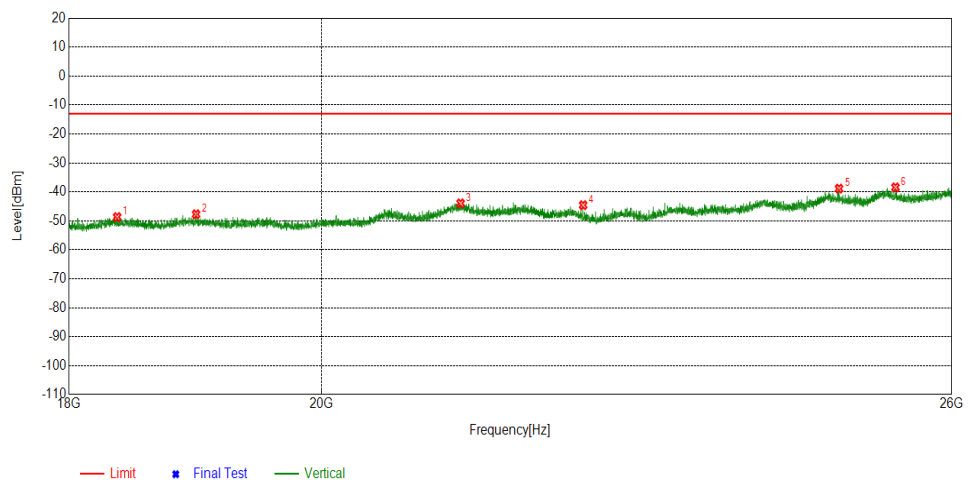
Test Report No. FCC2021-0042-2

Page 15 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Mid Channel
Test Channel Bandwidths	1.4MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	18366.0458	-12.11	-48.66	-13.00	35.66	-36.55	Vertical
2	18980.1225	-11.25	-47.70	-13.00	34.70	-36.45	Vertical
3	21190.3988	-7.81	-43.93	-13.00	30.93	-36.12	Vertical
4	22300.5376	-8.74	-44.56	-13.00	31.56	-35.82	Vertical
5	24808.8511	-4.21	-38.85	-13.00	25.85	-34.64	Vertical
6	25398.9249	-3.90	-38.42	-13.00	25.42	-34.52	Vertical



CVC Certification & Testing Co., Ltd.

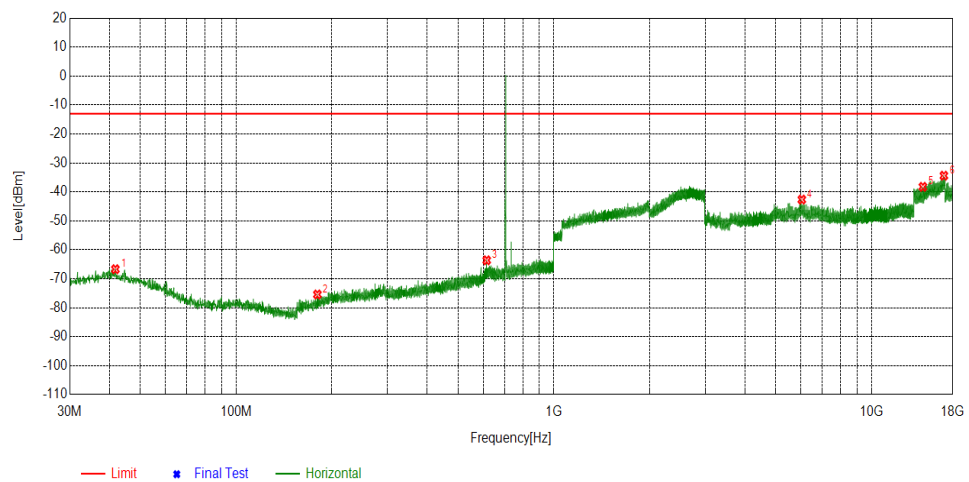
Test Report No. FCC2021-0042-2

Page 16 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Mid Channel
Test Channel Bandwidths	1.4MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	41.7382	-99.20	-66.69	-13.00	53.69	32.51	Horizontal
2	180.3650	-97.21	-75.42	-13.00	62.42	21.79	Horizontal
3	615.2595	-95.31	-63.61	-13.00	50.61	31.70	Horizontal
4	6036.1012	-44.51	-42.65	-13.00	29.65	1.86	Horizontal
5	14506.3835	-41.18	-38.24	-13.00	25.24	2.94	Horizontal
6	16896.9632	-38.00	-34.39	-13.00	21.39	3.61	Horizontal



CVC Certification & Testing Co., Ltd.

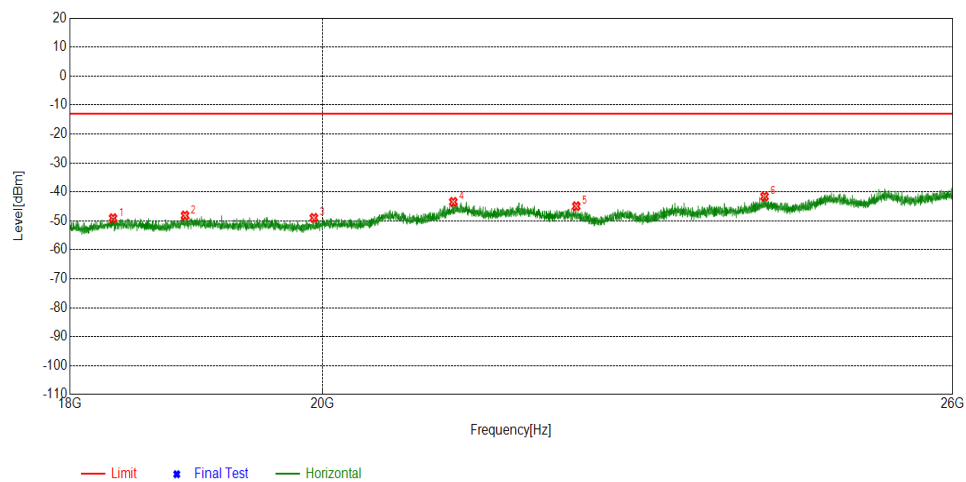
Test Report No. FCC2021-0042-2

Page 17 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Mid Channel
Test Channel Bandwidths	1.4MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	18327.0409	-12.52	-49.07	-13.00	36.07	-36.55	Horizontal
2	18885.1106	-11.68	-48.15	-13.00	35.15	-36.47	Horizontal
3	19926.2408	-12.66	-48.97	-13.00	35.97	-36.31	Horizontal
4	21117.3897	-7.32	-43.45	-13.00	30.45	-36.13	Horizontal
5	22227.5284	-9.07	-44.93	-13.00	31.93	-35.86	Horizontal
6	24040.7551	-6.81	-41.60	-13.00	28.60	-34.79	Horizontal



CVC Certification & Testing Co., Ltd.

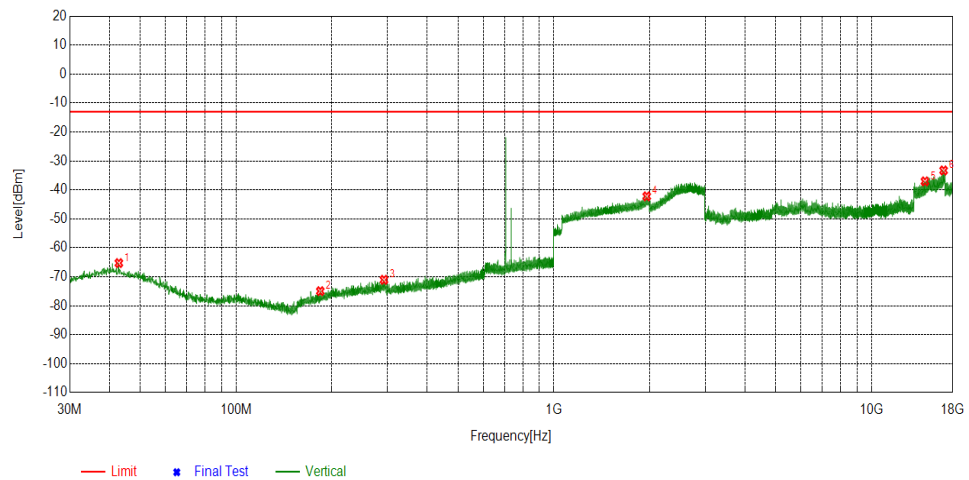
Test Report No. FCC2021-0042-2

Page 18 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Hig Channel
Test Channel Bandwidths	1.4MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	42.8053	-97.55	-65.26	-13.00	52.26	32.29	Vertical
2	184.2454	-97.03	-74.96	-13.00	61.96	22.07	Vertical
3	292.3142	-96.98	-71.04	-13.00	58.04	25.94	Vertical
4	1962.0962	-84.55	-42.22	-13.00	29.22	42.33	Vertical
5	14731.3910	-40.14	-37.05	-13.00	24.05	3.09	Vertical
6	16860.4620	-36.75	-33.27	-13.00	20.27	3.48	Vertical



CVC Certification & Testing Co., Ltd.

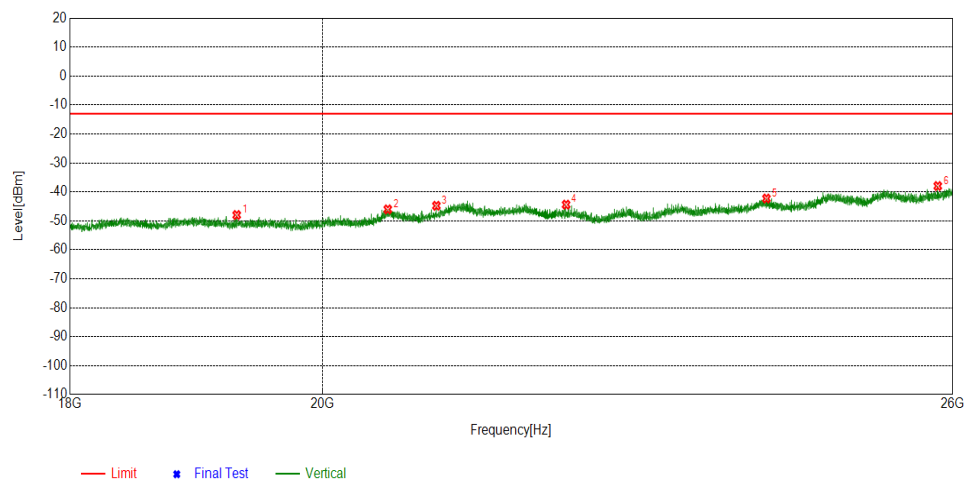
Test Report No. FCC2021-0042-2

Page 19 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Hig Channel
Test Channel Bandwidths	1.4MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	19296.1620	-11.56	-47.97	-13.00	34.97	-36.41	Vertical
2	20549.3187	-9.80	-46.02	-13.00	33.02	-36.22	Vertical
3	20969.3712	-8.63	-44.78	-13.00	31.78	-36.15	Vertical
4	22133.5167	-8.47	-44.39	-13.00	31.39	-35.92	Vertical
5	24059.7575	-7.48	-42.27	-13.00	29.27	-34.79	Vertical
6	25839.9800	-3.53	-37.96	-13.00	24.96	-34.43	Vertical



CVC Certification & Testing Co., Ltd.

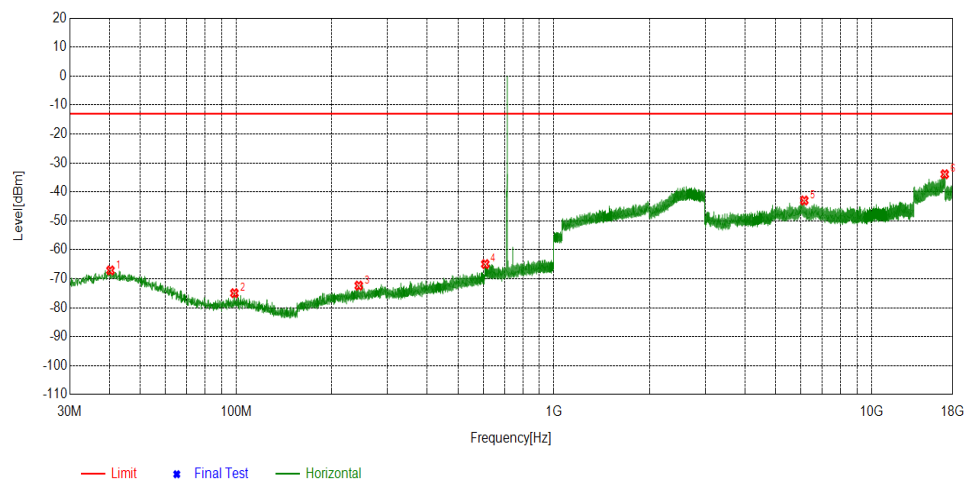
Test Report No. FCC2021-0042-2

Page 20 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Hig Channel
Test Channel Bandwidths	1.4MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	40.2830	-99.92	-67.10	-13.00	54.10	32.82	Horizontal
2	98.8769	-98.64	-74.96	-13.00	61.96	23.68	Horizontal
3	243.5184	-96.87	-72.36	-13.00	59.36	24.51	Horizontal
4	608.9539	-96.62	-64.92	-13.00	51.92	31.70	Horizontal
5	6145.1048	-44.88	-42.95	-13.00	29.95	1.93	Horizontal
6	17000.9667	-37.87	-33.89	-13.00	20.89	3.98	Horizontal



CVC Certification & Testing Co., Ltd.

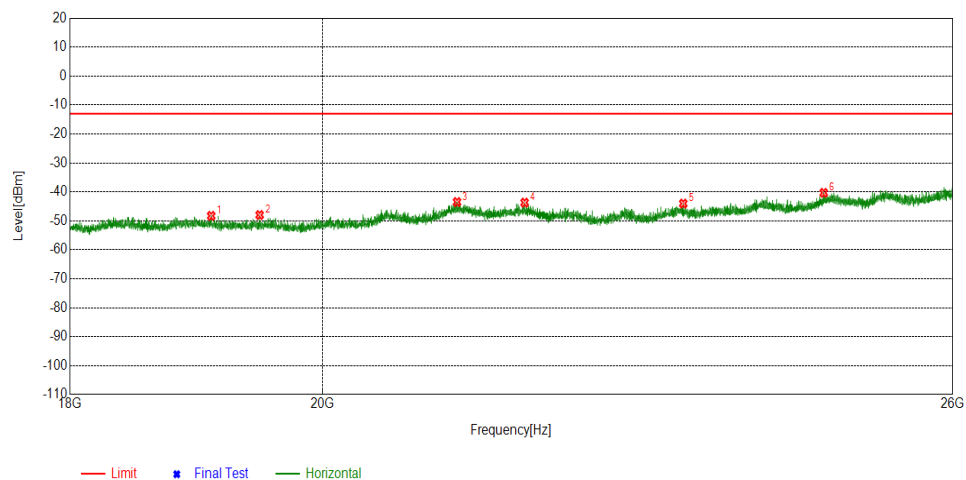
Test Report No. FCC2021-0042-2

Page 21 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Hig Channel
Test Channel Bandwidths	1.4MHz

Suspected Data List

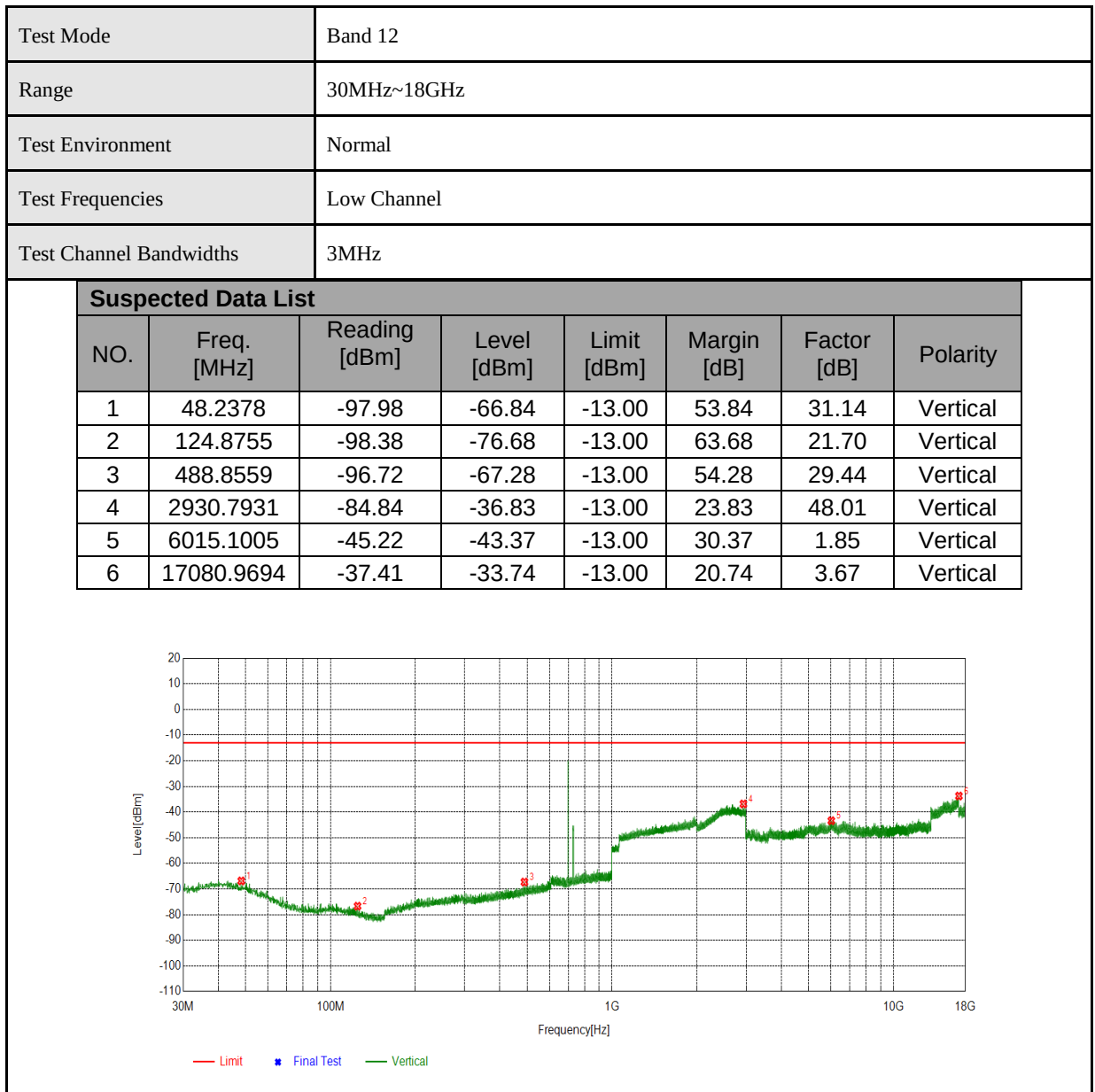
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	19092.1365	-11.82	-48.26	-13.00	35.26	-36.44	Horizontal
2	19481.1851	-11.58	-47.96	-13.00	34.96	-36.38	Horizontal
3	21150.3938	-7.35	-43.48	-13.00	30.48	-36.13	Horizontal
4	21754.4693	-7.66	-43.70	-13.00	30.70	-36.04	Horizontal
5	23240.6551	-8.75	-44.01	-13.00	31.01	-35.26	Horizontal
6	24640.8301	-5.64	-40.31	-13.00	27.31	-34.67	Horizontal



CVC Certification & Testing Co., Ltd.

Test Report No. FCC2021-0042-2

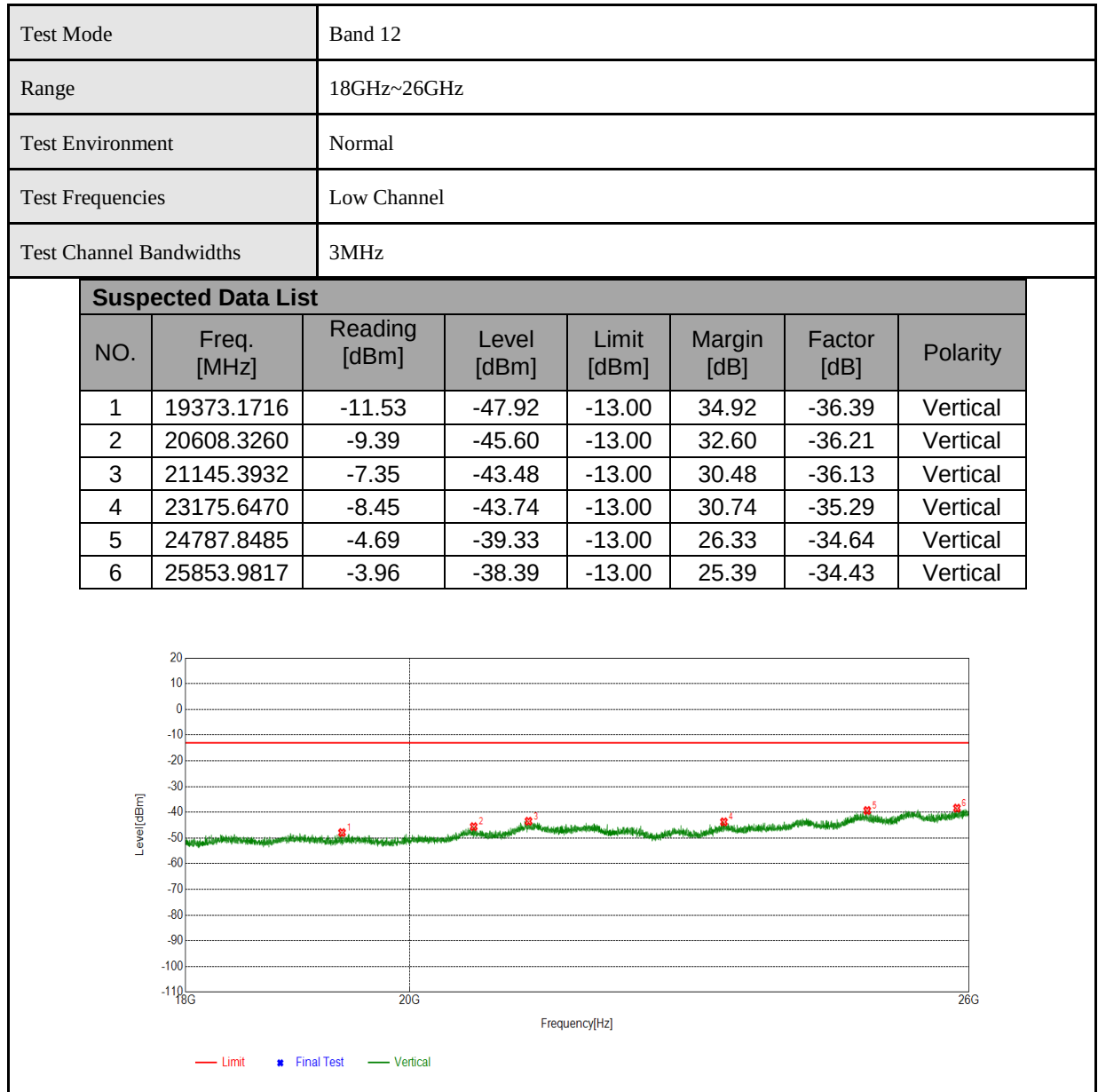
Page 22 of 63



CVC Certification & Testing Co., Ltd.

Test Report No. FCC2021-0042-2

Page 23 of 63



CVC Certification & Testing Co., Ltd.

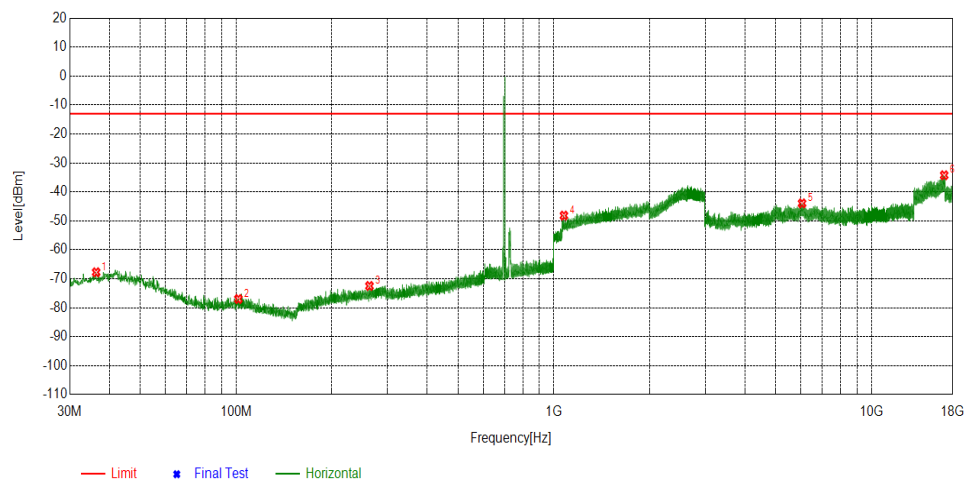
Test Report No. FCC2021-0042-2

Page 24 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Low Channel
Test Channel Bandwidths	3MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	36.3056	-99.37	-67.75	-13.00	54.75	31.62	Horizontal
2	101.7872	-100.60	-76.98	-13.00	63.98	23.62	Horizontal
3	263.1143	-97.57	-72.48	-13.00	59.48	25.09	Horizontal
4	1076.6077	-84.35	-48.17	-13.00	35.17	36.18	Horizontal
5	6046.1015	-45.82	-43.95	-13.00	30.95	1.87	Horizontal
6	16931.9644	-37.98	-34.24	-13.00	21.24	3.74	Horizontal



CVC Certification & Testing Co., Ltd.

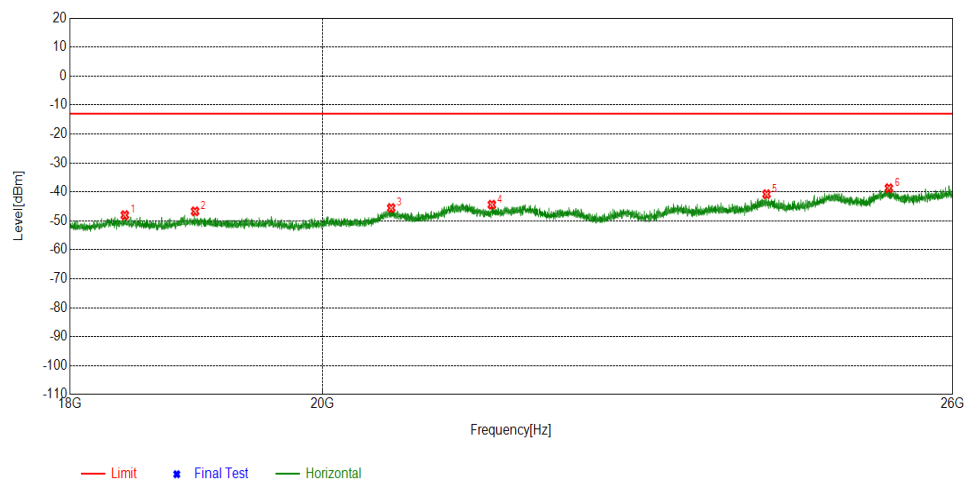
Test Report No. FCC2021-0042-2

Page 25 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Low Channel
Test Channel Bandwidths	3MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	18417.0521	-11.48	-48.02	-13.00	35.02	-36.54	Horizontal
2	18964.1205	-10.24	-46.70	-13.00	33.70	-36.46	Horizontal
3	20578.3223	-9.35	-45.56	-13.00	32.56	-36.21	Horizontal
4	21459.4324	-8.33	-44.41	-13.00	31.41	-36.08	Horizontal
5	24060.7576	-6.00	-40.79	-13.00	27.79	-34.79	Horizontal
6	25318.9149	-4.17	-38.71	-13.00	25.71	-34.54	Horizontal



CVC Certification & Testing Co., Ltd.

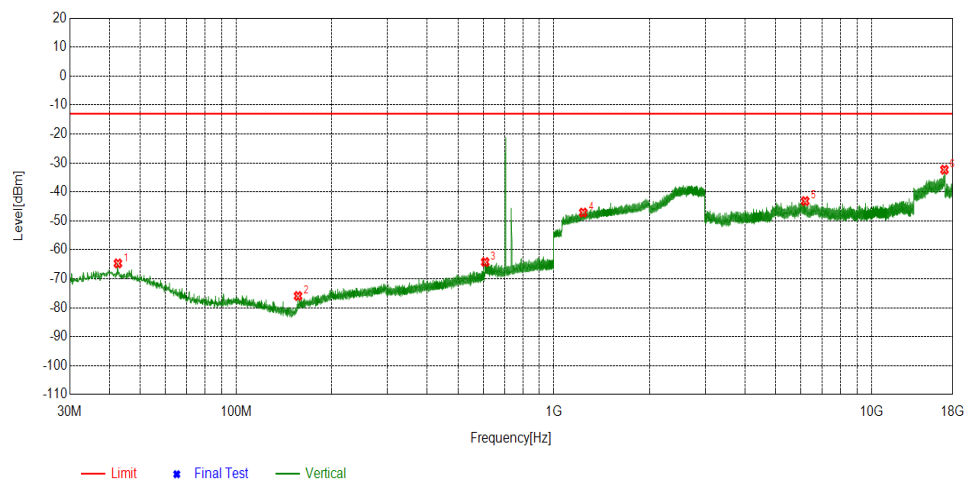
Test Report No. FCC2021-0042-2

Page 26 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Mid Channel
Test Channel Bandwidths	3MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	42.5143	-97.03	-64.68	-13.00	51.68	32.35	Vertical
2	156.7917	-96.02	-75.94	-13.00	62.94	20.08	Vertical
3	608.5659	-95.93	-64.23	-13.00	51.23	31.70	Vertical
4	1237.8238	-84.93	-47.13	-13.00	34.13	37.80	Vertical
5	6186.6062	-45.11	-43.16	-13.00	30.16	1.95	Vertical
6	16963.9655	-36.18	-32.33	-13.00	19.33	3.85	Vertical



CVC Certification & Testing Co., Ltd.

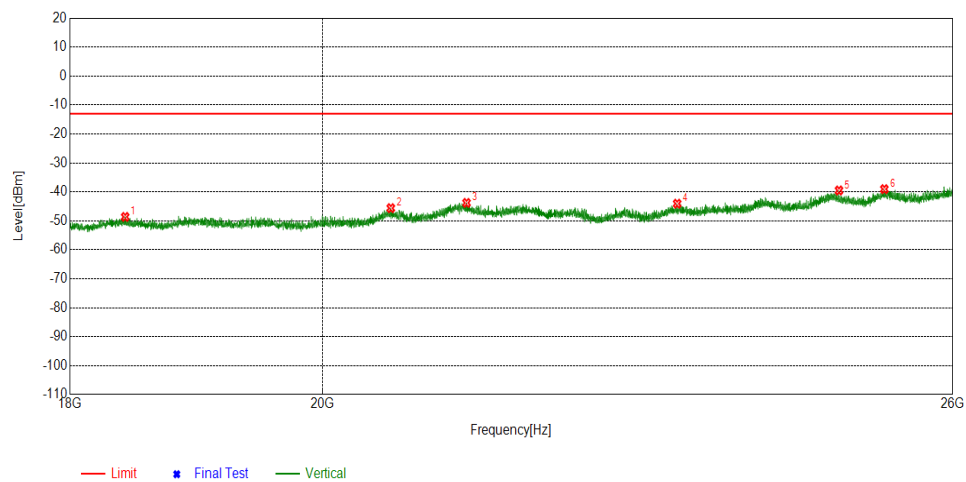
Test Report No. FCC2021-0042-2

Page 27 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Mid Channel
Test Channel Bandwidths	3MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	18420.0525	-12.08	-48.62	-13.00	35.62	-36.54	Vertical
2	20575.3219	-9.39	-45.60	-13.00	32.60	-36.21	Vertical
3	21234.4043	-7.67	-43.78	-13.00	30.78	-36.11	Vertical
4	23181.6477	-8.76	-44.05	-13.00	31.05	-35.29	Vertical
5	24797.8497	-4.85	-39.49	-13.00	26.49	-34.64	Vertical
6	25270.9089	-4.49	-39.04	-13.00	26.04	-34.55	Vertical



CVC Certification & Testing Co., Ltd.

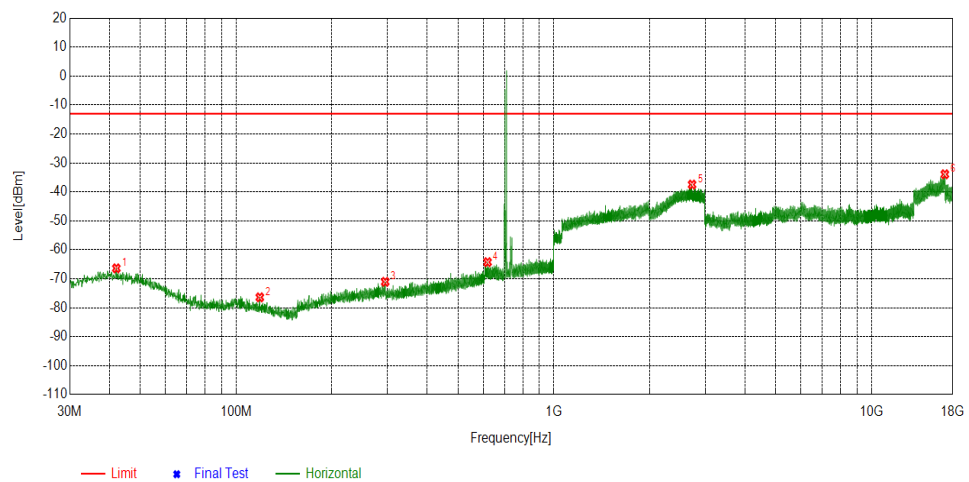
Test Report No. FCC2021-0042-2

Page 28 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Mid Channel
Test Channel Bandwidths	3MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	42.0292	-98.83	-66.38	-13.00	53.38	32.45	Horizontal
2	118.8609	-98.60	-76.40	-13.00	63.40	22.20	Horizontal
3	294.9335	-97.07	-71.05	-13.00	58.05	26.02	Horizontal
4	619.0429	-95.93	-64.24	-13.00	51.24	31.69	Horizontal
5	2724.3724	-85.77	-37.46	-13.00	24.46	48.31	Horizontal
6	17015.4672	-37.82	-33.90	-13.00	20.90	3.92	Horizontal



CVC Certification & Testing Co., Ltd.

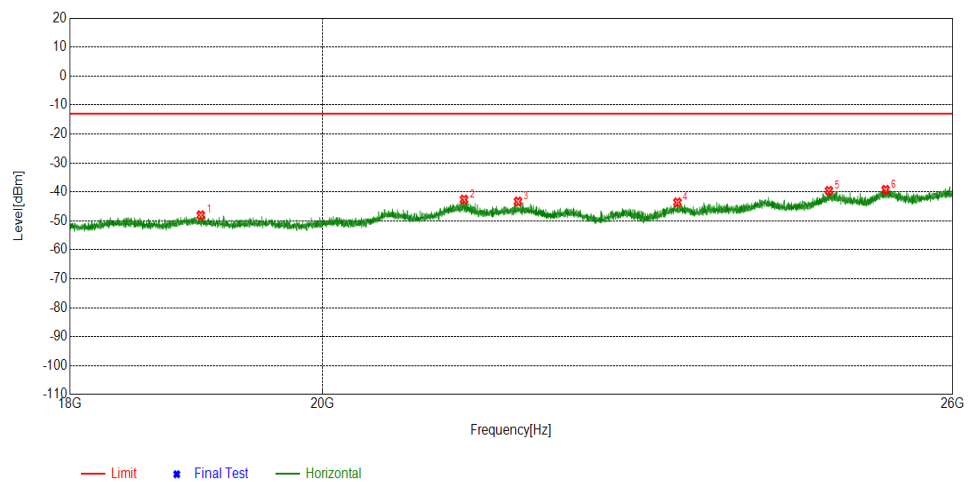
Test Report No. FCC2021-0042-2

Page 29 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Mid Channel
Test Channel Bandwidths	3MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	19009.1261	-11.60	-48.05	-13.00	35.05	-36.45	Horizontal
2	21212.4016	-6.51	-42.63	-13.00	29.63	-36.12	Horizontal
3	21694.4618	-7.25	-43.30	-13.00	30.30	-36.05	Horizontal
4	23184.6481	-8.31	-43.60	-13.00	30.60	-35.29	Horizontal
5	24694.8369	-4.96	-39.62	-13.00	26.62	-34.66	Horizontal
6	25283.9105	-4.72	-39.26	-13.00	26.26	-34.54	Horizontal



CVC Certification & Testing Co., Ltd.

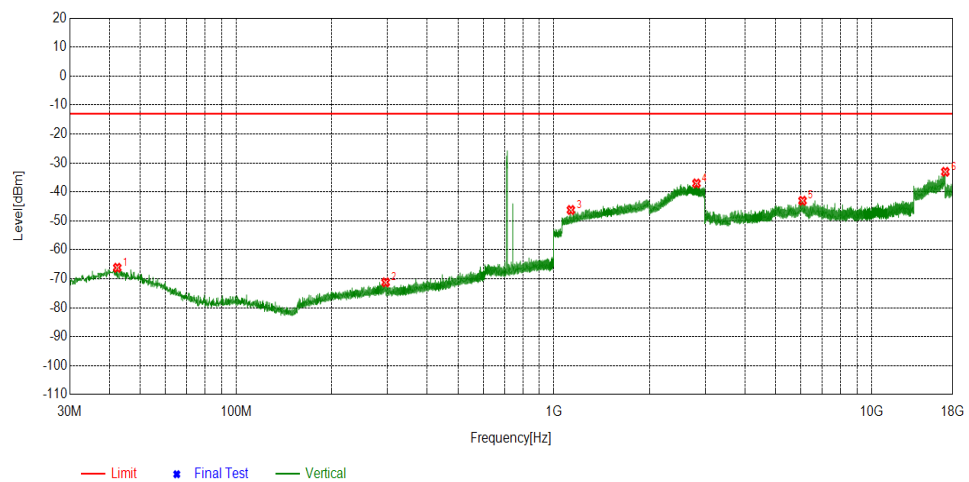
Test Report No. FCC2021-0042-2

Page 30 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Hig Channel
Test Channel Bandwidths	3MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	42.3202	-98.57	-66.18	-13.00	53.18	32.39	Vertical
2	295.8066	-97.29	-71.24	-13.00	58.24	26.05	Vertical
3	1132.4132	-83.00	-46.24	-13.00	33.24	36.76	Vertical
4	2812.9813	-85.24	-37.07	-13.00	24.07	48.17	Vertical
5	6067.1022	-44.93	-43.05	-13.00	30.05	1.88	Vertical
6	17074.9692	-36.74	-33.05	-13.00	20.05	3.69	Vertical



CVC Certification & Testing Co., Ltd.

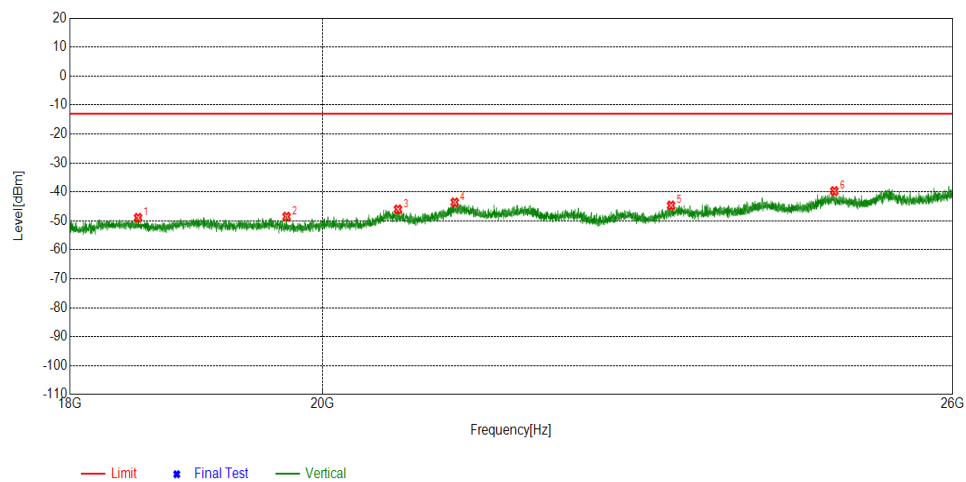
Test Report No. FCC2021-0042-2

Page 31 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Hig Channel
Test Channel Bandwidths	3MHz

Suspected Data List

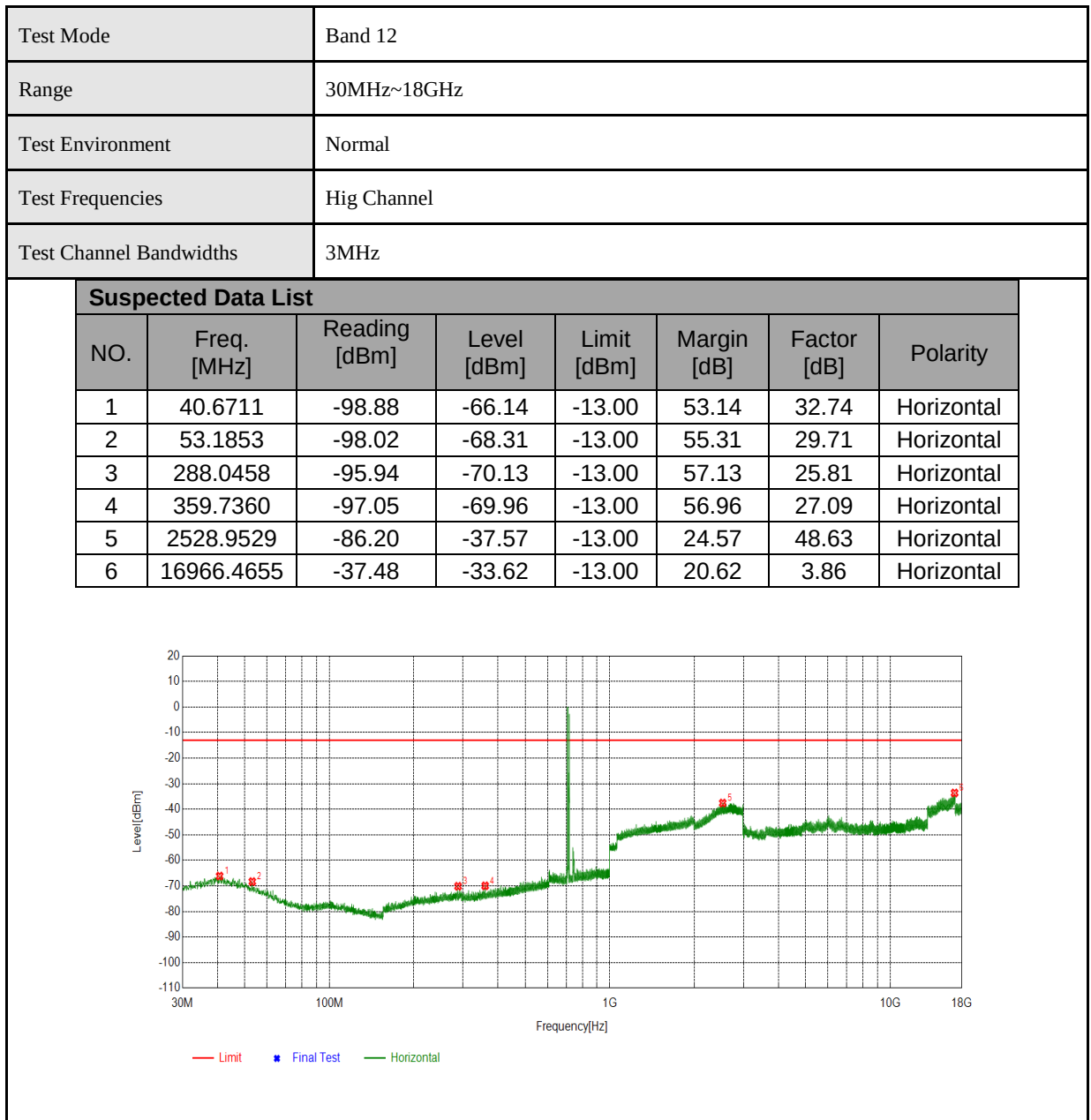
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	18519.0649	-12.41	-48.93	-13.00	35.93	-36.52	Vertical
2	19701.2127	-12.20	-48.54	-13.00	35.54	-36.34	Vertical
3	20636.3295	-9.84	-46.04	-13.00	33.04	-36.20	Vertical
4	21130.3913	-7.47	-43.60	-13.00	30.60	-36.13	Vertical
5	23122.6403	-9.35	-44.68	-13.00	31.68	-35.33	Vertical
6	24749.8437	-5.06	-39.71	-13.00	26.71	-34.65	Vertical



CVC Certification & Testing Co., Ltd.

Test Report No. FCC2021-0042-2

Page 32 of 63



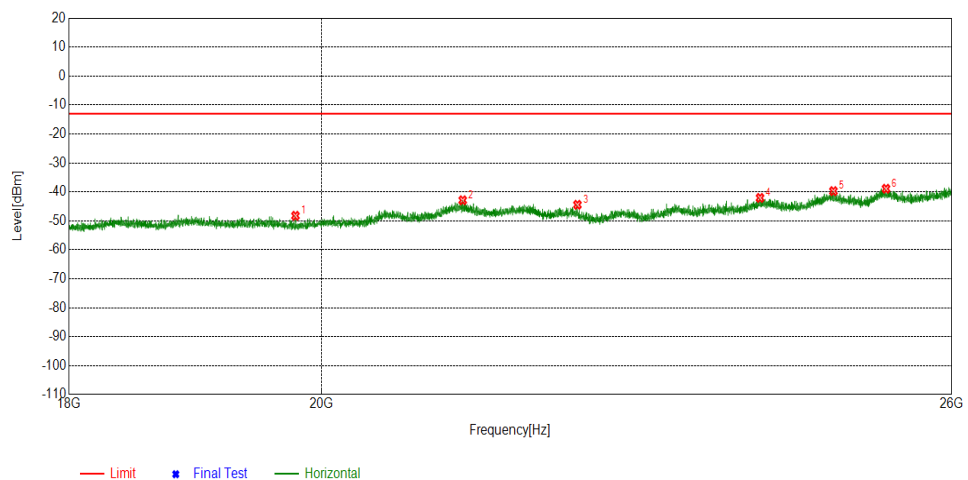
CVC Certification & Testing Co., Ltd.

Test Report No. FCC2021-0042-2

Page 33 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Hig Channel
Test Channel Bandwidths	3MHz

Suspected Data List							
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	19782.2228	-11.91	-48.24	-13.00	35.24	-36.33	Horizontal
2	21209.4012	-6.76	-42.88	-13.00	29.88	-36.12	Horizontal
3	22247.5309	-8.59	-44.44	-13.00	31.44	-35.85	Horizontal
4	24005.7507	-7.27	-42.07	-13.00	29.07	-34.80	Horizontal
5	24750.8439	-5.08	-39.73	-13.00	26.73	-34.65	Horizontal
6	25298.9124	-4.36	-38.90	-13.00	25.90	-34.54	Horizontal



CVC Certification & Testing Co., Ltd.

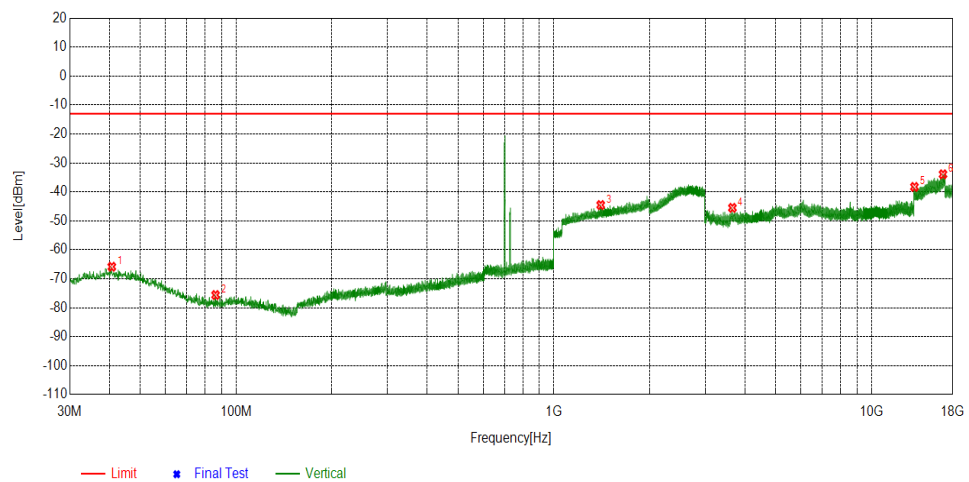
Test Report No. FCC2021-0042-2

Page 34 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Low Channel
Test Channel Bandwidths	5MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	40.6711	-98.58	-65.84	-13.00	52.84	32.74	Vertical
2	86.2656	-98.61	-75.60	-13.00	62.60	23.01	Vertical
3	1405.4405	-83.86	-44.52	-13.00	31.52	39.34	Vertical
4	3649.5217	-47.03	-45.50	-13.00	32.50	1.53	Vertical
5	13648.3549	-41.02	-38.26	-13.00	25.26	2.76	Vertical
6	16787.9596	-37.17	-33.91	-13.00	20.91	3.26	Vertical



CVC Certification & Testing Co., Ltd.

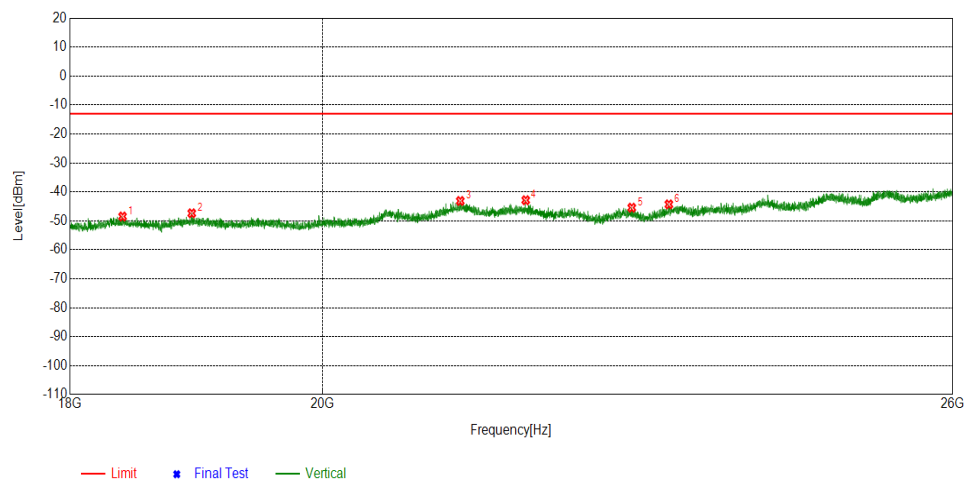
Test Report No. FCC2021-0042-2

Page 35 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Low Channel
Test Channel Bandwidths	5MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	18400.0500	-11.94	-48.48	-13.00	35.48	-36.54	Vertical
2	18938.1173	-10.91	-47.37	-13.00	34.37	-36.46	Vertical
3	21179.3974	-7.00	-43.12	-13.00	30.12	-36.12	Vertical
4	21764.4706	-6.82	-42.86	-13.00	29.86	-36.04	Vertical
5	22747.5934	-9.89	-45.44	-13.00	32.44	-35.55	Vertical
6	23101.6377	-8.95	-44.29	-13.00	31.29	-35.34	Vertical



CVC Certification & Testing Co., Ltd.

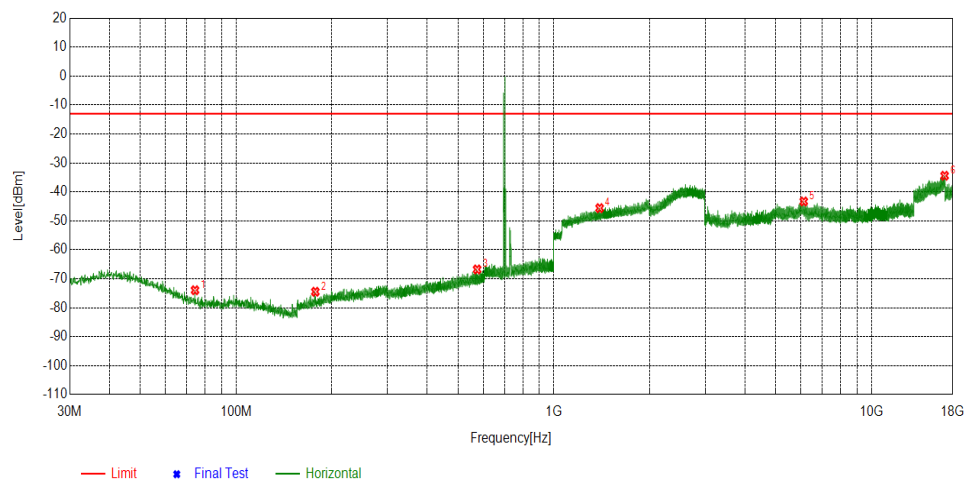
Test Report No. FCC2021-0042-2

Page 36 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Low Channel
Test Channel Bandwidths	5MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	74.3334	-97.48	-73.94	-13.00	60.94	23.54	Horizontal
2	177.7458	-96.07	-74.47	-13.00	61.47	21.60	Horizontal
3	574.0304	-97.88	-66.76	-13.00	53.76	31.12	Horizontal
4	1394.4394	-84.84	-45.60	-13.00	32.60	39.24	Horizontal
5	6120.1040	-45.20	-43.29	-13.00	30.29	1.91	Horizontal
6	16981.9661	-38.33	-34.41	-13.00	21.41	3.92	Horizontal



CVC Certification & Testing Co., Ltd.

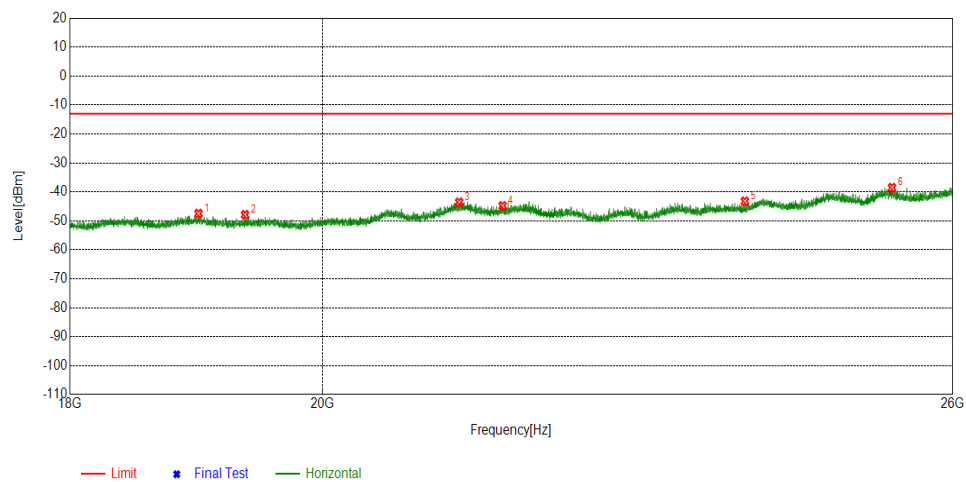
Test Report No. FCC2021-0042-2

Page 37 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Low Channel
Test Channel Bandwidths	5MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	18991.1239	-11.02	-47.47	-13.00	34.47	-36.45	Horizontal
2	19363.1704	-11.49	-47.89	-13.00	34.89	-36.40	Horizontal
3	21169.3962	-7.46	-43.58	-13.00	30.58	-36.12	Horizontal
4	21555.4444	-8.75	-44.82	-13.00	31.82	-36.07	Horizontal
5	23844.7306	-8.33	-43.22	-13.00	30.22	-34.89	Horizontal
6	25351.9190	-4.01	-38.54	-13.00	25.54	-34.53	Horizontal



CVC Certification & Testing Co., Ltd.

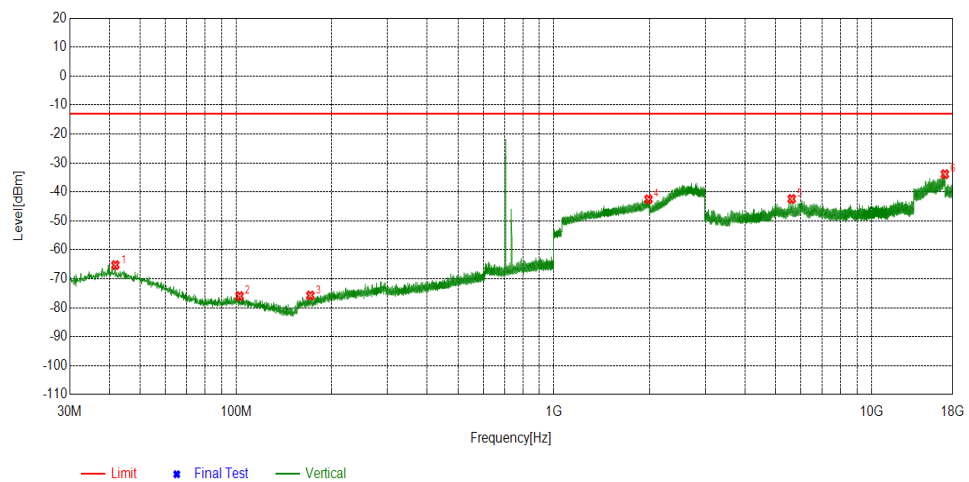
Test Report No. FCC2021-0042-2

Page 38 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Mid Channel
Test Channel Bandwidths	5MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	41.7382	-97.77	-65.26	-13.00	52.26	32.51	Vertical
2	102.6603	-99.53	-75.98	-13.00	62.98	23.55	Vertical
3	171.4401	-96.90	-75.76	-13.00	62.76	21.14	Vertical
4	1987.6988	-84.94	-42.54	-13.00	29.54	42.40	Vertical
5	5609.0870	-44.16	-42.42	-13.00	29.42	1.74	Vertical
6	17012.9671	-37.81	-33.88	-13.00	20.88	3.93	Vertical



CVC Certification & Testing Co., Ltd.

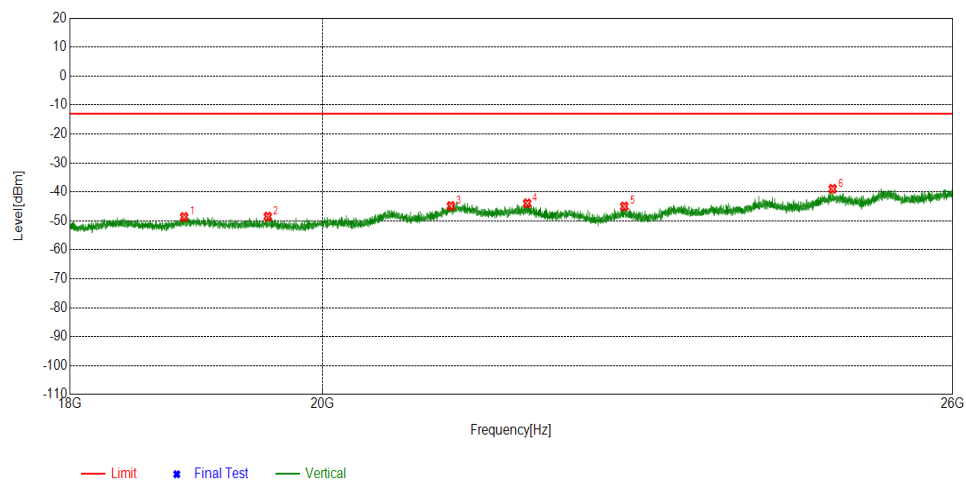
Test Report No. FCC2021-0042-2

Page 39 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Mid Channel
Test Channel Bandwidths	5MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	18878.1098	-12.17	-48.64	-13.00	35.64	-36.47	Vertical
2	19547.1934	-12.14	-48.51	-13.00	35.51	-36.37	Vertical
3	21096.3870	-8.71	-44.85	-13.00	31.85	-36.14	Vertical
4	21777.4722	-7.92	-43.95	-13.00	30.95	-36.03	Vertical
5	22676.5846	-9.42	-45.01	-13.00	32.01	-35.59	Vertical
6	24732.8416	-4.29	-38.94	-13.00	25.94	-34.65	Vertical



CVC Certification & Testing Co., Ltd.

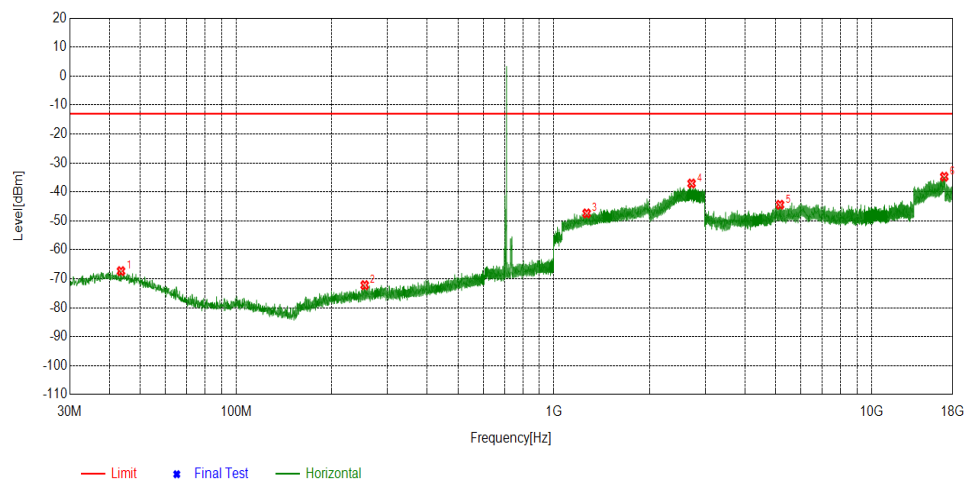
Test Report No. FCC2021-0042-2

Page 40 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Mid Channel
Test Channel Bandwidths	5MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	43.4843	-99.49	-67.35	-13.00	54.35	32.14	Horizontal
2	254.1894	-97.02	-72.19	-13.00	59.19	24.83	Horizontal
3	1269.2269	-85.51	-47.42	-13.00	34.42	38.09	Horizontal
4	2715.1715	-85.42	-37.09	-13.00	24.09	48.33	Horizontal
5	5154.5718	-46.24	-44.43	-13.00	31.43	1.81	Horizontal
6	16940.9647	-38.52	-34.75	-13.00	21.75	3.77	Horizontal



CVC Certification & Testing Co., Ltd.

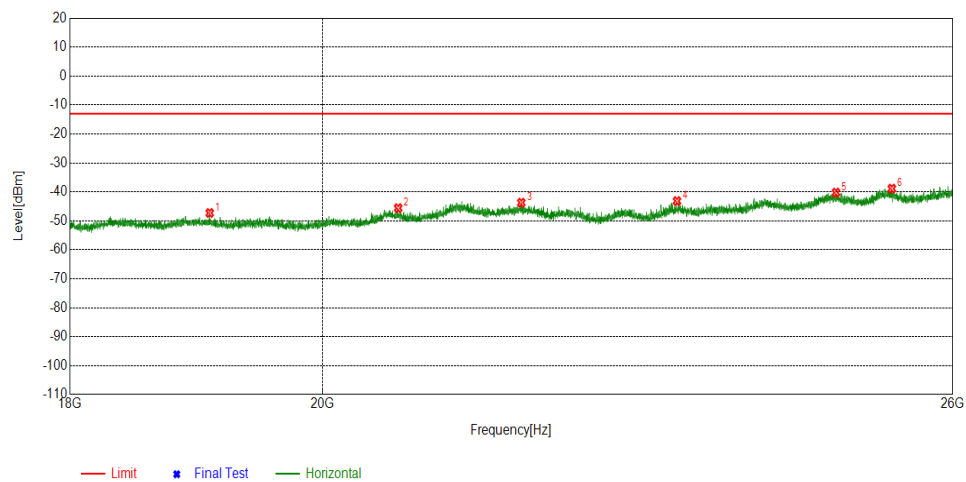
Test Report No. FCC2021-0042-2

Page 41 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Mid Channel
Test Channel Bandwidths	5MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	19080.1350	-10.82	-47.26	-13.00	34.26	-36.44	Horizontal
2	20638.3298	-9.40	-45.60	-13.00	32.60	-36.20	Horizontal
3	21724.4656	-7.68	-43.72	-13.00	30.72	-36.04	Horizontal
4	23179.6475	-7.87	-43.16	-13.00	30.16	-35.29	Horizontal
5	24766.8459	-5.58	-40.23	-13.00	27.23	-34.65	Horizontal
6	25349.9187	-4.33	-38.86	-13.00	25.86	-34.53	Horizontal



CVC Certification & Testing Co., Ltd.

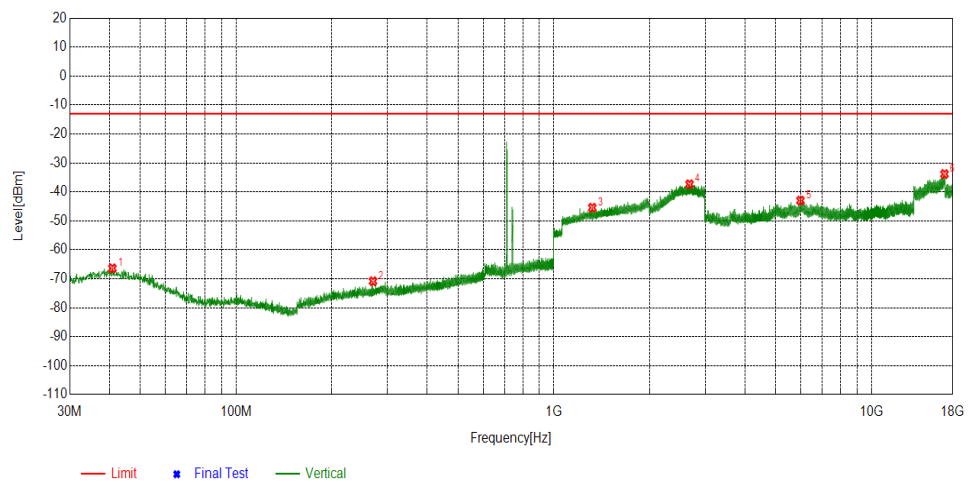
Test Report No. FCC2021-0042-2

Page 42 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Hig Channel
Test Channel Bandwidths	5MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	40.8651	-99.09	-66.39	-13.00	53.39	32.70	Vertical
2	269.9050	-96.12	-70.84	-13.00	57.84	25.28	Vertical
3	1322.2322	-84.03	-45.45	-13.00	32.45	38.58	Vertical
4	2675.1675	-85.73	-37.34	-13.00	24.34	48.39	Vertical
5	5976.0992	-44.81	-42.98	-13.00	29.98	1.83	Vertical
6	16972.4657	-37.70	-33.82	-13.00	20.82	3.88	Vertical



CVC Certification & Testing Co., Ltd.

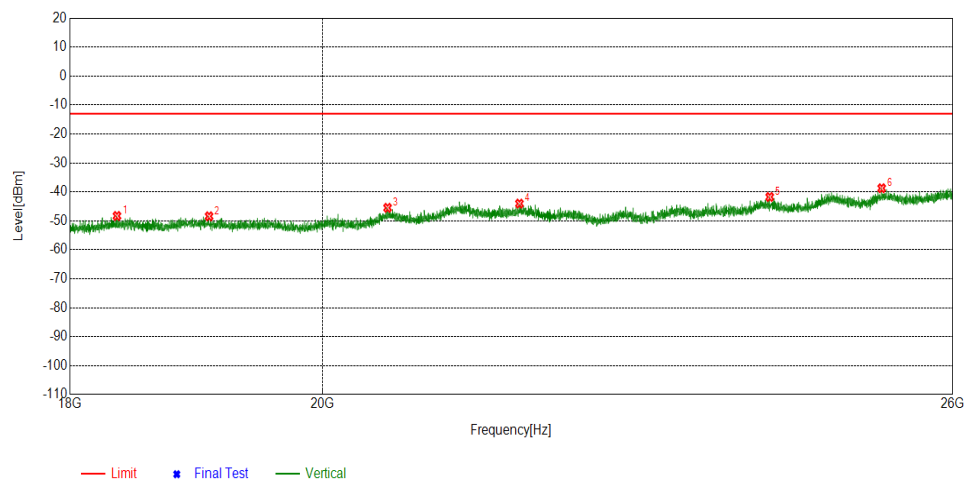
Test Report No. FCC2021-0042-2

Page 43 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Hig Channel
Test Channel Bandwidths	5MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	18357.0446	-11.74	-48.29	-13.00	35.29	-36.55	Vertical
2	19075.1344	-11.97	-48.41	-13.00	35.41	-36.44	Vertical
3	20547.3184	-9.26	-45.48	-13.00	32.48	-36.22	Vertical
4	21707.4634	-7.99	-44.03	-13.00	31.03	-36.04	Vertical
5	24092.7616	-6.96	-41.74	-13.00	28.74	-34.78	Vertical
6	25242.9054	-4.17	-38.72	-13.00	25.72	-34.55	Vertical



CVC Certification & Testing Co., Ltd.

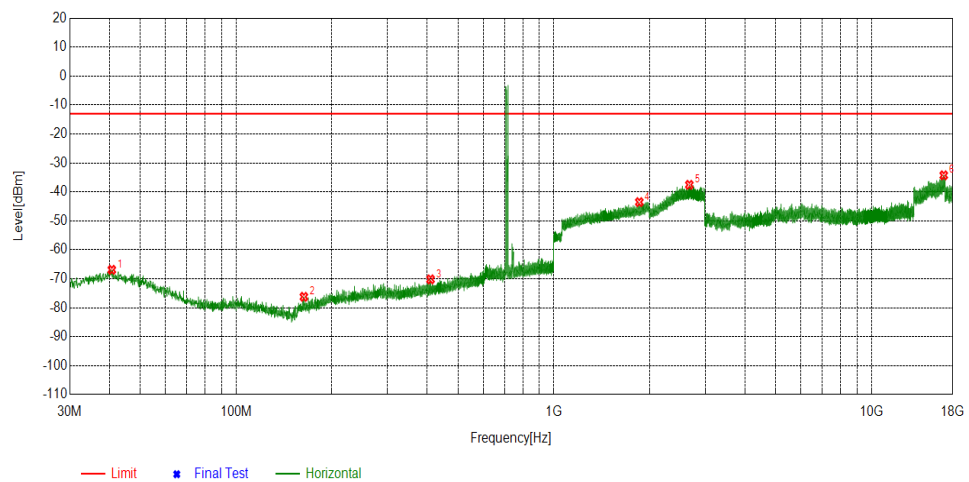
Test Report No. FCC2021-0042-2

Page 44 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Hig Channel
Test Channel Bandwidths	5MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	40.6711	-99.64	-66.90	-13.00	53.90	32.74	Horizontal
2	163.5824	-96.79	-76.22	-13.00	63.22	20.57	Horizontal
3	409.5990	-98.09	-70.20	-13.00	57.20	27.89	Horizontal
4	1859.0859	-85.56	-43.52	-13.00	30.52	42.04	Horizontal
5	2671.5672	-85.95	-37.55	-13.00	24.55	48.40	Horizontal
6	16878.4626	-37.81	-34.27	-13.00	21.27	3.54	Horizontal



CVC Certification & Testing Co., Ltd.

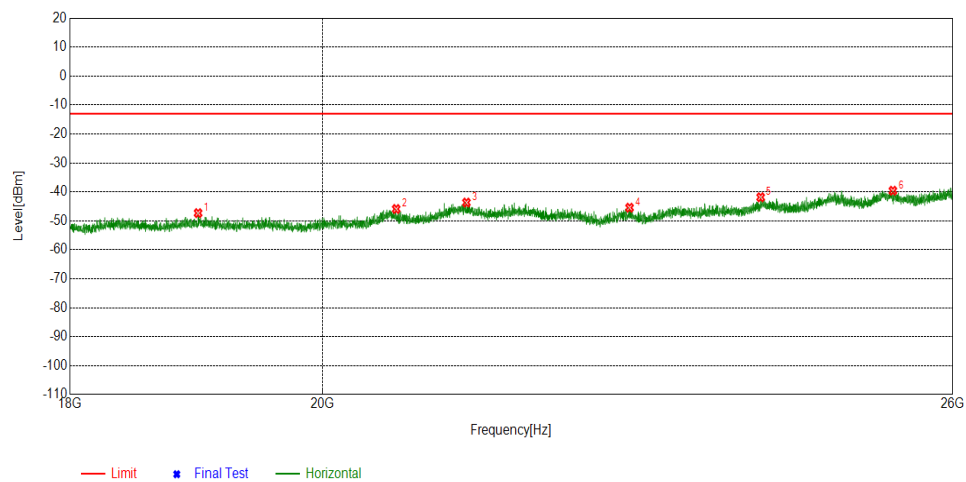
Test Report No. FCC2021-0042-2

Page 45 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Hig Channel
Test Channel Bandwidths	5MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	18988.1235	-10.86	-47.31	-13.00	34.31	-36.45	Horizontal
2	20621.3277	-9.68	-45.89	-13.00	32.89	-36.21	Horizontal
3	21233.4042	-7.56	-43.67	-13.00	30.67	-36.11	Horizontal
4	22726.5908	-9.88	-45.44	-13.00	32.44	-35.56	Horizontal
5	24001.7502	-7.04	-41.84	-13.00	28.84	-34.80	Horizontal
6	25360.9201	-5.06	-39.59	-13.00	26.59	-34.53	Horizontal



CVC Certification & Testing Co., Ltd.

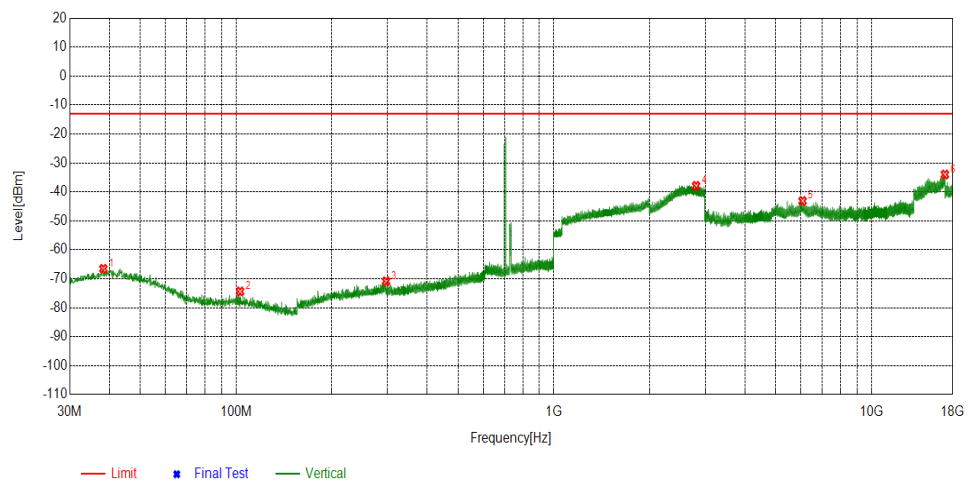
Test Report No. FCC2021-0042-2

Page 46 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Low Channel
Test Channel Bandwidths	10MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	38.2458	-98.83	-66.55	-13.00	53.55	32.28	Vertical
2	103.0483	-97.87	-74.36	-13.00	61.36	23.51	Vertical
3	296.7767	-96.94	-70.86	-13.00	57.86	26.08	Vertical
4	2805.5806	-86.07	-37.89	-13.00	24.89	48.18	Vertical
5	6068.6023	-44.98	-43.10	-13.00	30.10	1.88	Vertical
6	17018.9673	-37.89	-33.98	-13.00	20.98	3.91	Vertical



CVC Certification & Testing Co., Ltd.

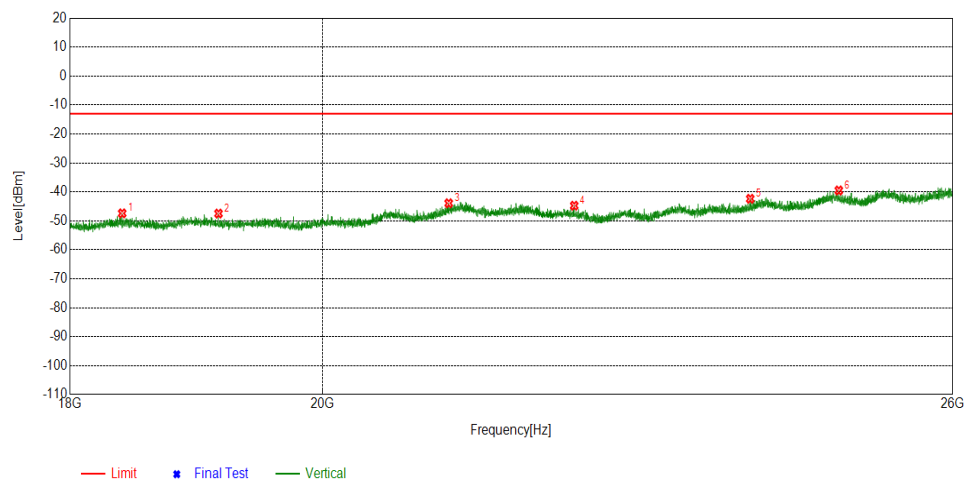
Test Report No. FCC2021-0042-2

Page 47 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Low Channel
Test Channel Bandwidths	10MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	18397.0496	-10.86	-47.40	-13.00	34.40	-36.54	Vertical
2	19150.1438	-11.04	-47.47	-13.00	34.47	-36.43	Vertical
3	21077.3847	-7.77	-43.91	-13.00	30.91	-36.14	Vertical
4	22208.5261	-8.88	-44.75	-13.00	31.75	-35.87	Vertical
5	23897.7372	-7.51	-42.37	-13.00	29.37	-34.86	Vertical
6	24795.8495	-4.85	-39.49	-13.00	26.49	-34.64	Vertical



CVC Certification & Testing Co., Ltd.

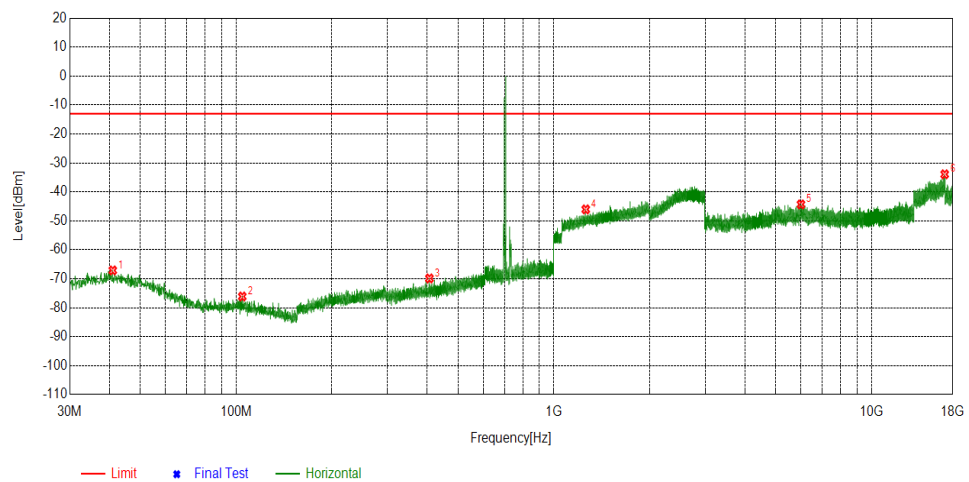
Test Report No. FCC2021-0042-2

Page 48 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Low Channel
Test Channel Bandwidths	10MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	40.9621	-99.78	-67.10	-13.00	54.10	32.68	Horizontal
2	104.6975	-99.49	-76.11	-13.00	63.11	23.38	Horizontal
3	406.3006	-97.69	-69.87	-13.00	56.87	27.82	Horizontal
4	1261.0261	-84.05	-46.03	-13.00	33.03	38.02	Horizontal
5	5997.5999	-46.15	-44.31	-13.00	31.31	1.84	Horizontal
6	16993.4664	-37.87	-33.91	-13.00	20.91	3.96	Horizontal



CVC Certification & Testing Co., Ltd.

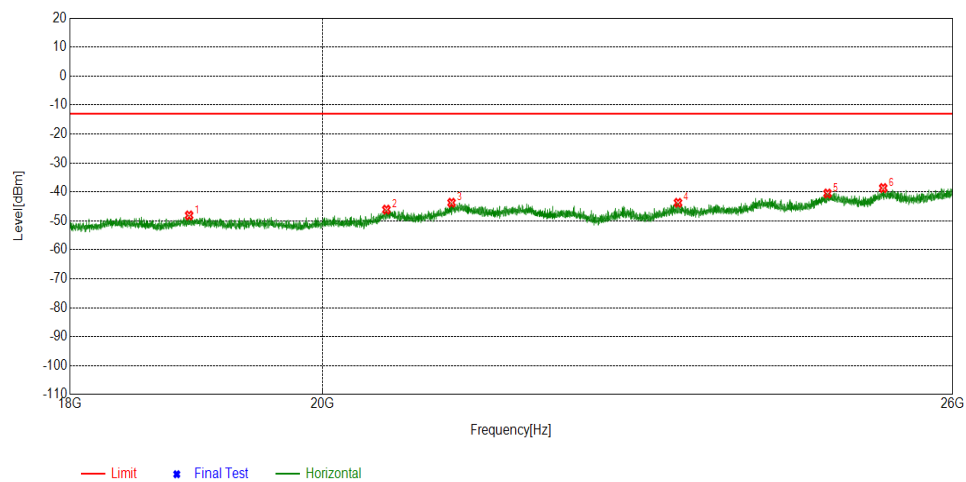
Test Report No. FCC2021-0042-2

Page 49 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Low Channel
Test Channel Bandwidths	10MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	18917.1146	-11.65	-48.11	-13.00	35.11	-36.46	Horizontal
2	20537.3172	-9.89	-46.11	-13.00	33.11	-36.22	Horizontal
3	21102.3878	-7.60	-43.73	-13.00	30.73	-36.13	Horizontal
4	23189.6487	-8.46	-43.75	-13.00	30.75	-35.29	Horizontal
5	24679.8350	-5.88	-40.54	-13.00	27.54	-34.66	Horizontal
6	25258.9074	-4.10	-38.65	-13.00	25.65	-34.55	Horizontal



CVC Certification & Testing Co., Ltd.

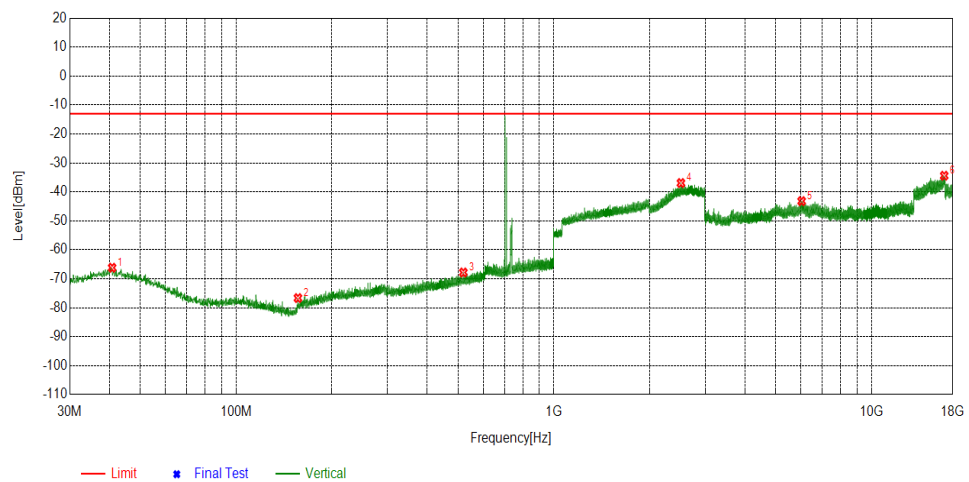
Test Report No. FCC2021-0042-2

Page 50 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Mid Channel
Test Channel Bandwidths	10MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	40.7681	-98.90	-66.18	-13.00	53.18	32.72	Vertical
2	156.6947	-96.72	-76.65	-13.00	63.65	20.07	Vertical
3	519.5110	-97.86	-67.82	-13.00	54.82	30.04	Vertical
4	2513.9514	-85.58	-36.93	-13.00	23.93	48.65	Vertical
5	6027.1009	-45.04	-43.18	-13.00	30.18	1.86	Vertical
6	16934.9645	-38.15	-34.40	-13.00	21.40	3.75	Vertical



CVC Certification & Testing Co., Ltd.

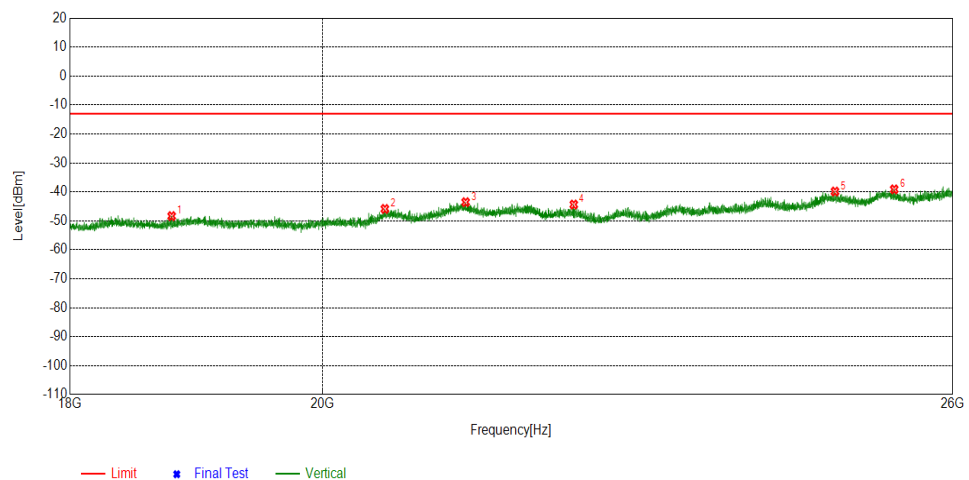
Test Report No. FCC2021-0042-2

Page 51 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Mid Channel
Test Channel Bandwidths	10MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	18780.0975	-11.87	-48.35	-13.00	35.35	-36.48	Vertical
2	20524.3155	-9.65	-45.87	-13.00	32.87	-36.22	Vertical
3	21226.4033	-7.42	-43.54	-13.00	30.54	-36.12	Vertical
4	22204.5256	-8.47	-44.35	-13.00	31.35	-35.88	Vertical
5	24756.8446	-5.22	-39.87	-13.00	26.87	-34.65	Vertical
6	25374.9219	-4.59	-39.12	-13.00	26.12	-34.53	Vertical



CVC Certification & Testing Co., Ltd.

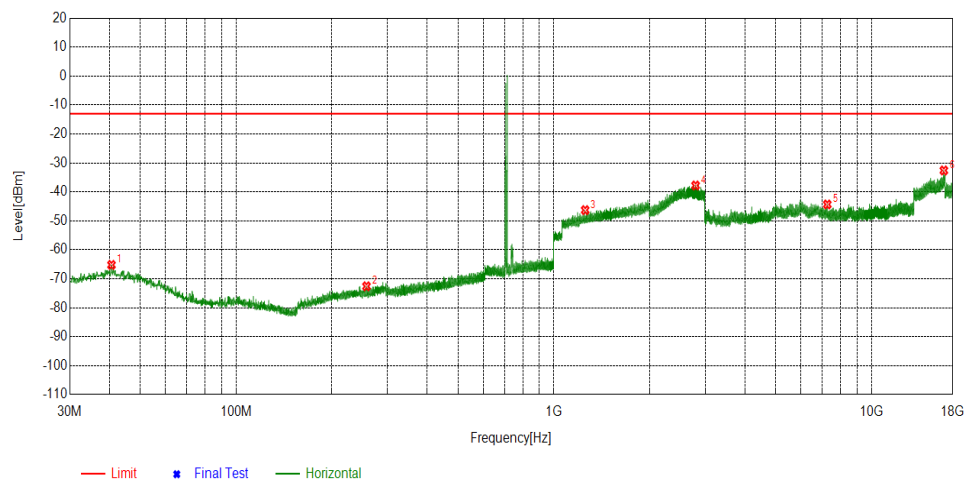
Test Report No. FCC2021-0042-2

Page 52 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Mid Channel
Test Channel Bandwidths	10MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	40.5741	-97.96	-65.20	-13.00	52.20	32.76	Horizontal
2	257.4877	-97.52	-72.59	-13.00	59.59	24.93	Horizontal
3	1255.8256	-84.25	-46.28	-13.00	33.28	37.97	Horizontal
4	2795.3795	-85.97	-37.77	-13.00	24.77	48.20	Horizontal
5	7259.1420	-46.38	-44.32	-13.00	31.32	2.06	Horizontal
6	16892.4631	-36.18	-32.59	-13.00	19.59	3.59	Horizontal



CVC Certification & Testing Co., Ltd.

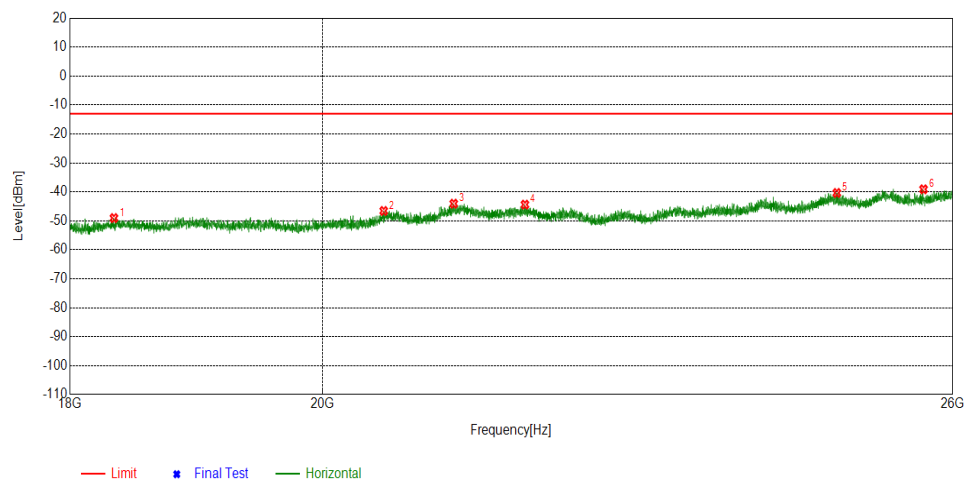
Test Report No. FCC2021-0042-2

Page 53 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Mid Channel
Test Channel Bandwidths	10MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	18334.0418	-12.48	-49.03	-13.00	36.03	-36.55	Horizontal
2	20514.3143	-10.34	-46.56	-13.00	33.56	-36.22	Horizontal
3	21121.3902	-7.92	-44.05	-13.00	31.05	-36.13	Horizontal
4	21757.4697	-8.34	-44.38	-13.00	31.38	-36.04	Horizontal
5	24775.8470	-5.70	-40.34	-13.00	27.34	-34.64	Horizontal
6	25686.9609	-4.64	-39.10	-13.00	26.10	-34.46	Horizontal



CVC Certification & Testing Co., Ltd.

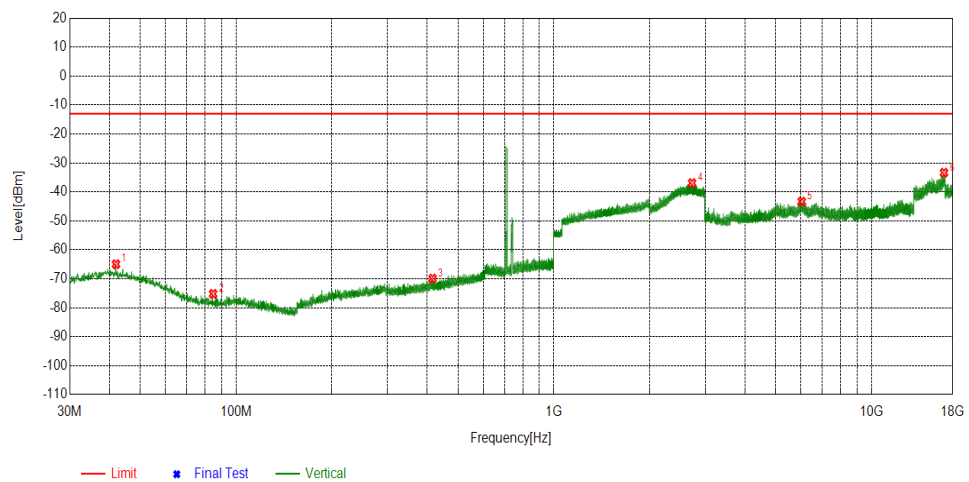
Test Report No. FCC2021-0042-2

Page 54 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Hig Channel
Test Channel Bandwidths	10MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	41.9322	-97.42	-64.95	-13.00	51.95	32.47	Vertical
2	84.7135	-98.23	-75.20	-13.00	62.20	23.03	Vertical
3	415.6136	-97.92	-69.92	-13.00	56.92	28.00	Vertical
4	2725.5726	-85.25	-36.94	-13.00	23.94	48.31	Vertical
5	6033.6011	-45.20	-43.34	-13.00	30.34	1.86	Vertical
6	16910.4637	-37.02	-33.36	-13.00	20.36	3.66	Vertical



CVC Certification & Testing Co., Ltd.

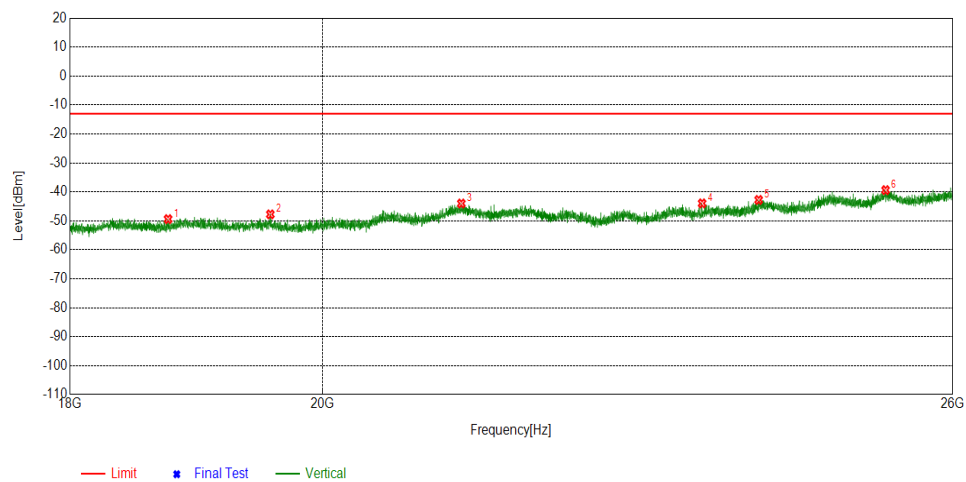
Test Report No. FCC2021-0042-2

Page 55 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Hig Channel
Test Channel Bandwidths	10MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	18752.0940	-12.90	-49.39	-13.00	36.39	-36.49	Vertical
2	19568.1960	-11.39	-47.75	-13.00	34.75	-36.36	Vertical
3	21188.3986	-7.88	-44.00	-13.00	31.00	-36.12	Vertical
4	23423.6780	-8.80	-43.95	-13.00	30.95	-35.15	Vertical
5	23981.7477	-7.95	-42.76	-13.00	29.76	-34.81	Vertical
6	25283.9105	-4.83	-39.37	-13.00	26.37	-34.54	Vertical



CVC Certification & Testing Co., Ltd.

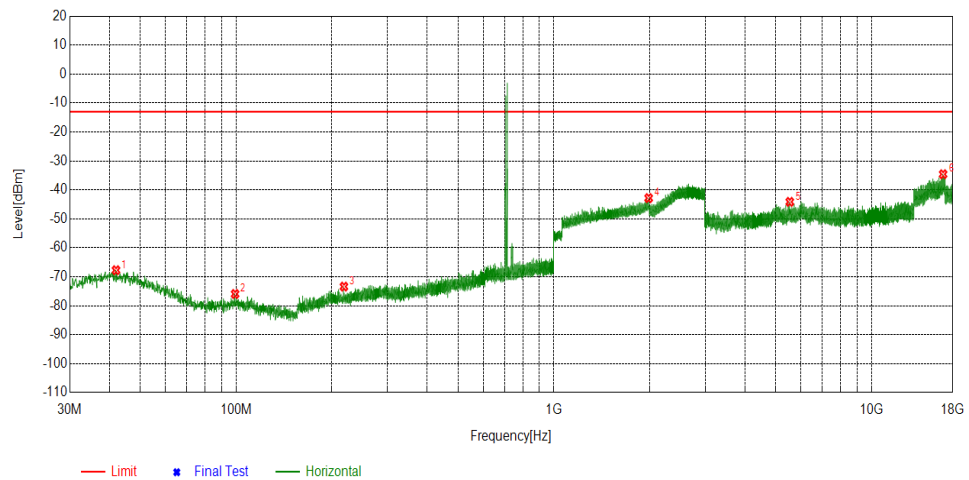
Test Report No. FCC2021-0042-2

Page 56 of 63

Test Mode	Band 12
Range	30MHz~18GHz
Test Environment	Normal
Test Frequencies	Hig Channel
Test Channel Bandwidths	10MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	41.9322	-100.19	-67.72	-13.00	54.72	32.47	Horizontal
2	99.3619	-99.64	-75.92	-13.00	62.92	23.72	Horizontal
3	218.6839	-97.18	-73.39	-13.00	60.39	23.79	Horizontal
4	1989.4990	-85.22	-42.82	-13.00	29.82	42.40	Horizontal
5	5532.0844	-45.86	-44.12	-13.00	31.12	1.74	Horizontal
6	16799.9600	-37.83	-34.57	-13.00	21.57	3.26	Horizontal



CVC Certification & Testing Co., Ltd.

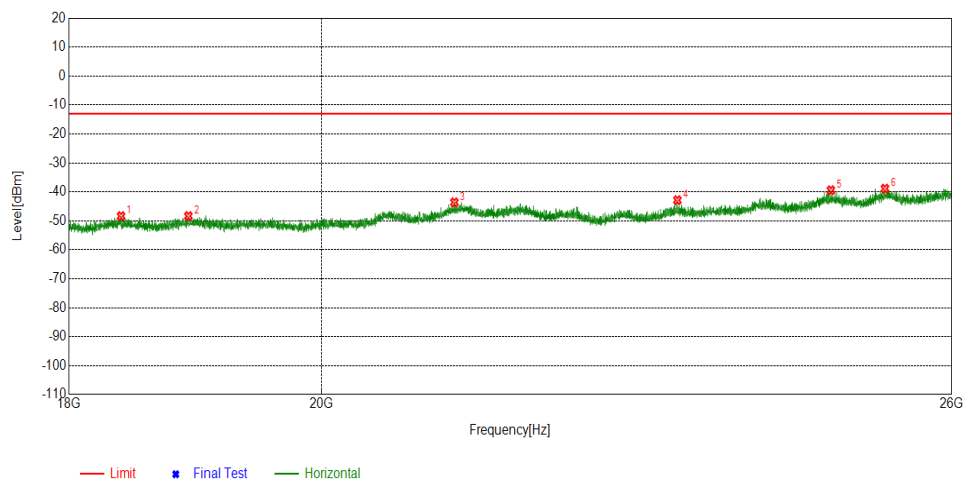
Test Report No. FCC2021-0042-2

Page 57 of 63

Test Mode	Band 12
Range	18GHz~26GHz
Test Environment	Normal
Test Frequencies	Hig Channel
Test Channel Bandwidths	10MHz

Suspected Data List

NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Polarity
1	18396.0495	-11.82	-48.36	-13.00	35.36	-36.54	Horizontal
2	18919.1149	-11.88	-48.34	-13.00	35.34	-36.46	Horizontal
3	21136.3920	-7.46	-43.59	-13.00	30.59	-36.13	Horizontal
4	23193.6492	-7.57	-42.85	-13.00	29.85	-35.28	Horizontal
5	24724.8406	-4.75	-39.41	-13.00	26.41	-34.66	Horizontal
6	25287.9110	-4.33	-38.87	-13.00	25.87	-34.54	Horizontal



CVC Certification & Testing Co., Ltd.

Test Report No. FCC2021-0042-2

Page 58 of 63

6. 6 Key components list

Key components relative with EMC performance				
Component	Manufacture	Type	Parameter	Certification
PCB	Shanghai Berry Electronic Tech Co., Ltd.	BM1000B_V 5.4	/	/
4G module	/	nRF9160	/	/
4G ANT	Shenzhen OnePlusOne Wireless Communication Technology Co.,Ltd.	FPC	690~850MHz 1710~2200MHz	/

7. Glossary

AVG - Average

DUT - Device under test

EMC - Electromagnetic Compatibility

EN - European Standard

EUT - Equipment under test

ETSI - European Telecommunications Standard Institute

FCC - Federal Communication Commission

FCC ID - Company Identifier at FCC

HW - Hardware

IC - Industry Canada

Inv. No. - Inventory number

N/A - Not applicable

PP - Positive peak

QP - Quasi peak

S/N - Serial number

SW – Software

CVC Certification & Testing Co., Ltd.

Test Report No. FCC2021-0042-2

Page 60 of 63

8. Appendix I.

Equipment list

Equipment list/Test Equipment	Type/Mode	Equipment No.	Manufacturer	Cal. Due
Radiates Spurious Emission(30MHz~26GHz)				
3m Semi-Anechoic Chamber	FACT-4	WKNA-0024	ETS	2024.12.12
Spectrum Analyzer	N9010B	DZ-000174	KEYSIGHT	2022.03.04
EMI Test Receiver	N9038A-508	EM-000397	Agilent	2022.03.05
Broadband Antenna	VULB 9163	EM-000342	SCHWARZBECK	2022.06.26
Waveguide Horn Antenna	HF906	WKNA-0024-8	R&S	2022.03.05
Waveguide Horn Antenna	BBHA9170	DZ-000209-2	SCHWARZBECK	2022.08.27
Preamplifier	BBV 9721	DZ-000209-1	SCHWARZBECK	2022.06.30
5G Bandstop Filters	WRCJV12-4900-5100-5900-6100-50EE	DZ-000186	WI	2022.12.20
Comprehensive tester	CMW500	DZ-000240-2	R&S	2022.12.20

test software

Software name	Software version	Software Developer
JS36-RSE Radiation spurious measurement system	2.5.1.2	Shenzhen JS tonscond co.,ltd

CVC Certification & Testing Co., Ltd.

Test Report No. FCC2021-0042-2

Page 61 of 63

Important

1. The test report is invalid without the official stamp of CVC;
2. Any part photocopies of the test report are forbidden without the written permission from CVC;
3. The test report is invalid without the signatures of Approval and Reviewer;
4. The test report is invalid if altered;
5. Objections to the test report must be submitted to CVC within 15 days;
6. Generally, commission test is responsible for the tested samples only;
7. As for the test result, “—” or “N” means “not applicable”, “ / ” means “not test” “P” means “pass” and “F” means “fail”.

The test data and test results given in this test report should only be used for purposes of scientific research, teaching and internal quality control when the CMA symbol is not presented.

Lab address: No.3, Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou, Guangdong, P.R. China

Post Code: 510663 Tel: 020 32293888

Fax: 020 32293889 E-mail: office@cvc.org.cn

<http://www.cvc.org.cn>