



中认信通

CHINA CERTIFICATION ICT CO., LTD (DONGGUAN)



TEST REPORT

Applicant: Cedar Kingdom Corporation Limited

Address: Flat/Rm05, 14/F, Lucky Centre, 165-171 Wanchai Road, Wanchai, Hong Kong

FCC ID: 2AKQUVZCKVT1001

Product Name: FUNTAB X

Model Number: VT1001

**Standard(s): 47 CFR Part 15 Subpart B
ANSI C63.4-2014**

The above equipment has been tested and found compliance with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

Report Number: CR21090060-00E

Date Of Issue: 2021-11-19

Reviewed By: Sun Zhong

Sun Zhong

Title: Manager

Test Laboratory: China Certification ICT Co., Ltd (Dongguan)

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Guangdong, China

Tel: +86-769-82016888

Test Facility

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 442868, the FCC Designation No. : CN1314.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0123.

Declarations

China Certification ICT Co., Ltd (Dongguan) is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol “▲”. Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

EUT Name:	FUNTAB X
EUT Model:	VT1001
Highest Operation Frequency:	5825 MHz
Rated Input Voltage:	DC 3.8V from battery or DC 5V from adapter
Serial Number:	CR21090060-RF-S1/2
EUT Received Date:	2021.09.29
EUT Received Status:	Good

Accessory Information:

Accessory Description	Manufacturer	Model	Parameters
Adapter	VIRZO	VT1001	Input: AC 100-240V 50/60Hz 0.4A Max Output: DC 5V 2A
USB Cable	Unknown	Unknown	Shield, 0.8 m

1.2 Description of Test Configuration

1.2.1 EUT Operation Condition:

EUT Operation Mode:	The system was configured for testing in Typical Use Mode, which was provided by the manufacturer. Test Mode: Downloading
Equipment Modifications:	No
EUT Exercise Software:	Winthrax.exe

1.2.2 Support Equipment List and Details

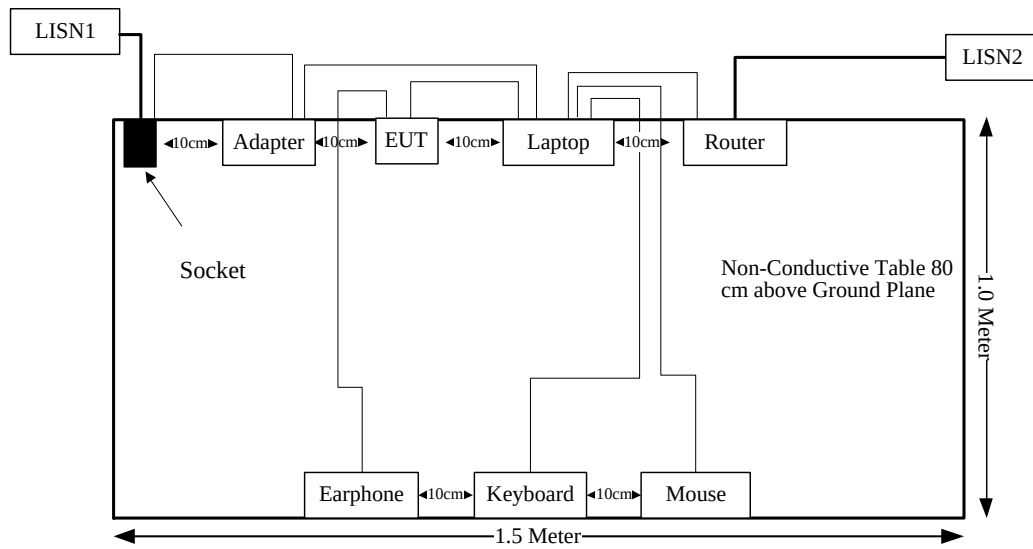
Manufacturer	Description	Model	Serial Number
Lenovo	Laptop	ThinkPad E450	PF-0MRADG
SanDisk	Micro SD Card	UHS-I-128G	9292DVDSV0XZ
Keenion	Earphone	KDM-911	6951812200215
PHILIPS	Mouse	SPK7214	M214bq210411115
PHILIPS	Keyboard	SPK6234	K234210510743
ZIONCOM	Router	MB-R210-00	MB-R210-00

1.2.3 Support Cable List and Details

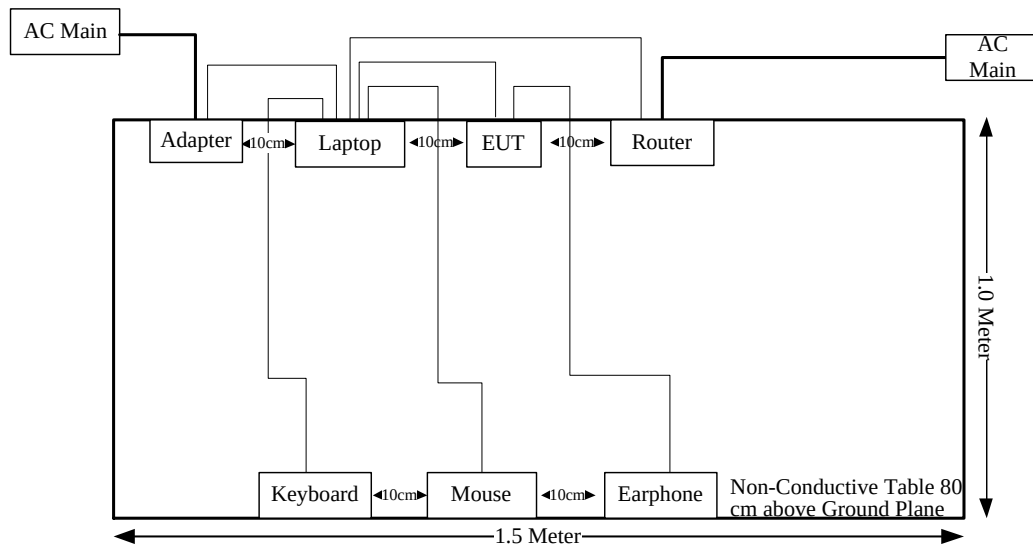
Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
Earphone Cable	Yes	No	1.5	EUT	Earphone
Mouse Cable	Yes	No	1.5	Laptop	Mouse
Keyboard Cable	Yes	No	1.5	Laptop	Keyboard
RJ45 Cable	Yes	No	1.0	Laptop	Router
USB Cable	Yes	No	0.8	EUT	Laptop

1.2.4 Block Diagram of Test Setup

Conducted emissions:



Radiated emissions:



1.3 Measurement Uncertainty

Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

Parameter	Measurement Uncertainty
Unwanted Emissions, radiated	30M~200MHz: 4.15 dB, 200M~1GHz: 5.61 dB, 1G~6GHz: 5.14 dB, 6G~18GHz: 5.93 dB, 18G~26.5G: 5.47 dB, 26.5G~40G: 5.63 dB
Temperature	$\pm 1^{\circ}\text{C}$
Humidity	$\pm 5\%$
AC Power Lines Conducted Emission	2.8 dB (150 kHz to 30 MHz)

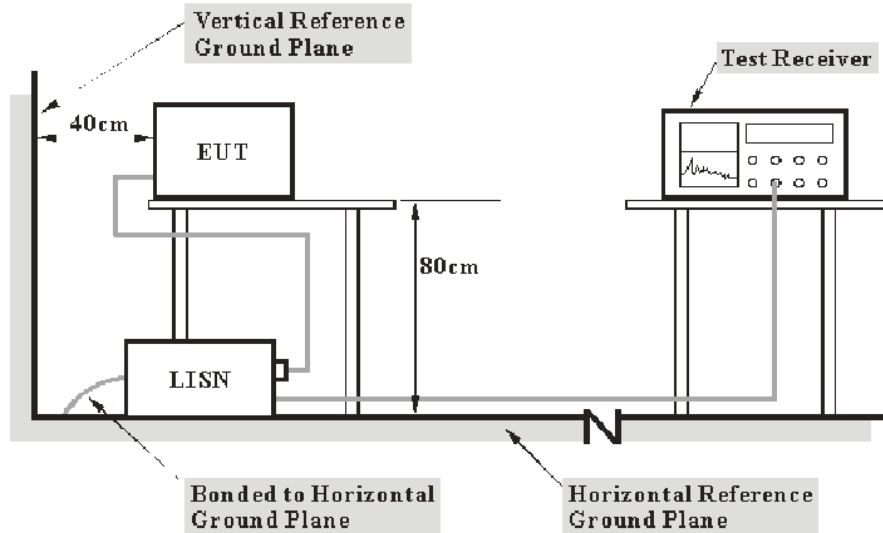
2. SUMMARY OF TEST RESULTS

Standard(s) Section	Description of Test	Result
§15.107	Conducted emissions	Compliance
§15.109	Radiated emissions	Compliance

3. REQUIREMENTS AND TEST PROCEDURES

3.1 AC Line Conducted Emissions

3.1.1 EUT Setup



Note: 1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.4-2014 measurement procedure. The specification used was with the FCC Part 15 B Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The adapter was connected to the main LISN with a 120 V/60 Hz AC power source.

3.1.2 EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

3.1.3 Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the first LISN and the other support equipments were connected to the outlet of the second LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT, the report shall list the six emissions with the smallest margin relative to the limit, unless the margin is greater than 20 dB.

All data was recorded in the Quasi-peak and average detection mode.

The report shall list the six emissions with the smallest margin relative to the limit, unless the margin is greater than 20 dB.

3.1.4 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor

Factor = attenuation caused by cable loss + voltage division factor of AMN

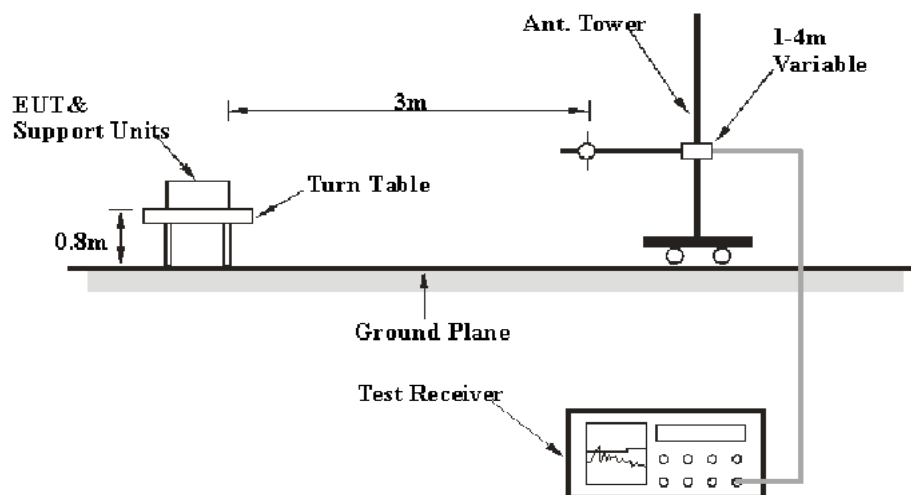
The “**Margin**” column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

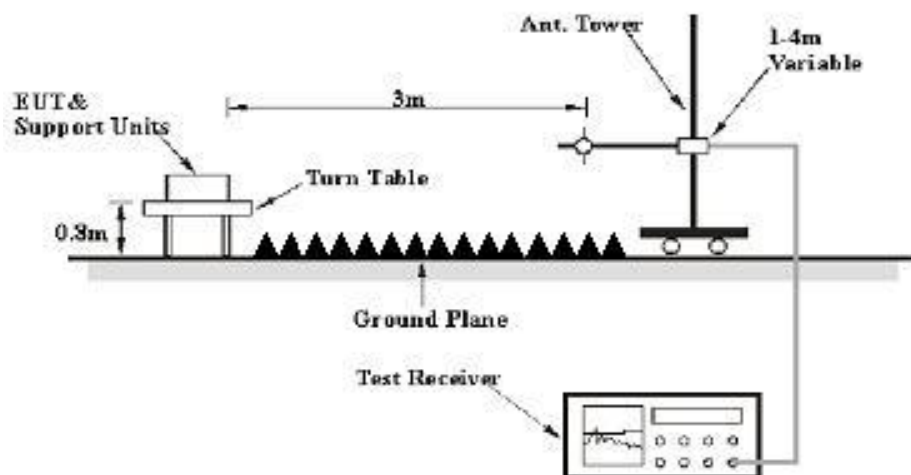
3.2 Radiation Spurious Emissions

3.2.1 EUT Setup

Below 1GHz:



Above 1GHz:



The radiated emission were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.4-2014. The specification used was with the FCC Part 15 B Class B limits.

3.2.2 EMI Test Receiver Setup

The system was investigated from 30 MHz to 30 GHz.

During the radiated emission test, the EMI test receiver was set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
30 MHz – 1000 MHz	120 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1 MHz	3 MHz	/	Peak
	1 MHz	Reduced video bandwidth	/	AVG

If the maximized peak measured value complies with under the limit more than 6dB, then it is unnecessary to perform an QP/Average measurement.

3.2.3 Test Procedure

During the radiated emissions, the adapter was connected to the first AC floor outlet and the other support equipments were connected to the second AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

The data was recorded in the Quasi-peak detection mode for below 1 GHz, peak and average detection mode above 1 GHz.

All emissions under the average limit and under the noise floor have not recorded in the report.

3.2.4 Corrected Amplitude & Margin Calculation

The basic equation is as follows:

Result = Reading + Factor

Factor = Antenna Factor + Cable Loss- Amplifier Gain

The “**Margin**” column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

4. TEST DATA AND RESULTS

4.1 AC Line Conducted Emissions

Serial Number:	CR21090060-RF-S1/2	Test Date:	2021-10-23
Test Site:	CE	Test Mode:	Downloading
Tester:	Carps Hu	Test Result:	Pass

Environmental Conditions:

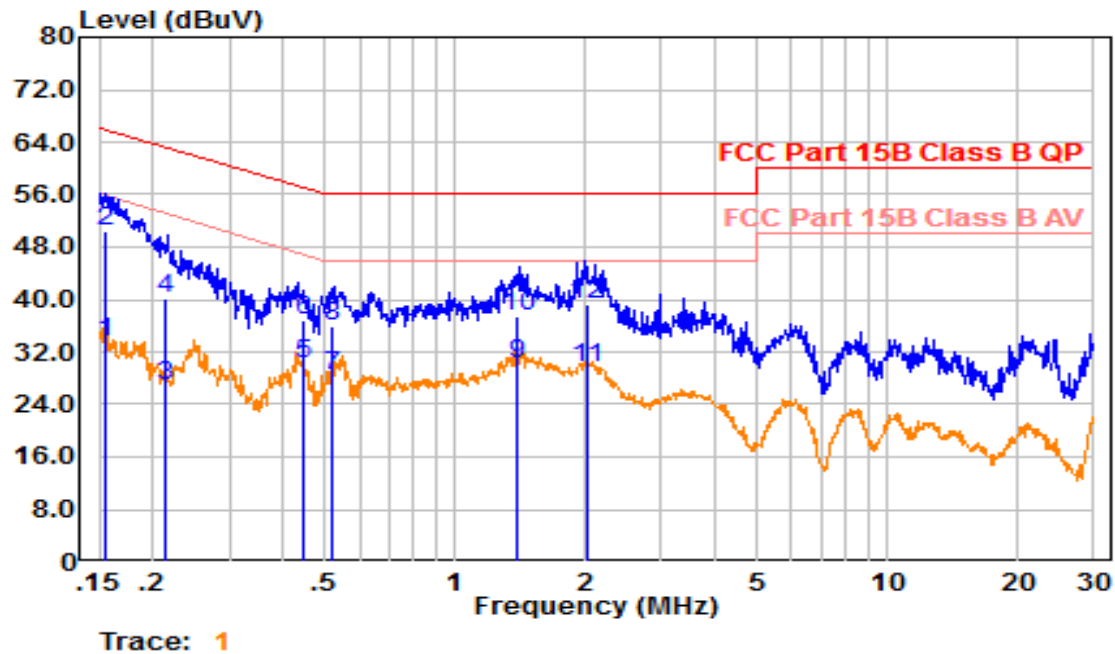
Temperature: (°C)	26.2	Relative Humidity: (%)	62	ATM Pressure: (kPa)	100.4
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	LISN	ENV216	101132	2021-04-25	2022-04-24
R&S	LISN	ENV216	101134	2021-04-25	2022-04-24
R&S	EMI Test Receiver	ESR3	102726	2021-07-22	2022-07-21
MICRO-COAX	Coaxial Cable	UTIFLEX	C-0200-01	2021-08-08	2022-08-07
Audix	Test Software	E3	190306 (V9)	N/A	N/A

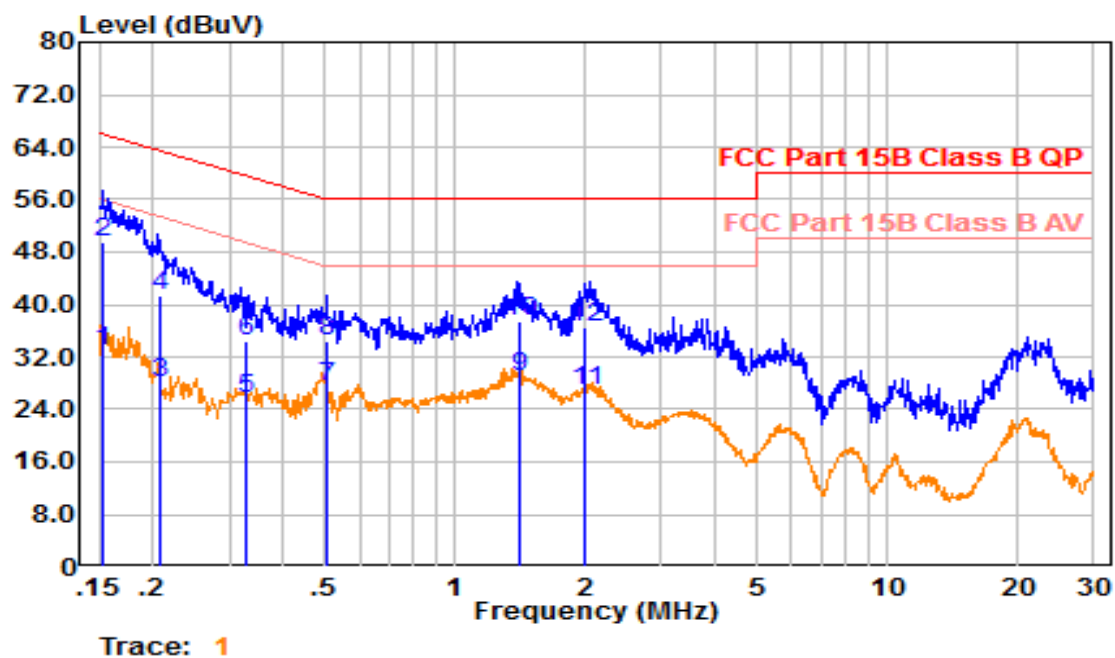
* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Line:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Detector
1	0.155	23.90	9.61	33.51	55.74	22.23	Average
2	0.155	40.67	9.61	50.28	65.74	15.46	QP
3	0.214	17.24	9.61	26.85	53.06	26.21	Average
4	0.214	30.56	9.61	40.17	63.06	22.89	QP
5	0.445	20.50	9.61	30.11	46.98	16.87	Average
6	0.445	27.24	9.61	36.85	56.98	20.12	QP
7	0.519	18.78	9.61	28.39	46.00	17.61	Average
8	0.519	26.43	9.61	36.04	56.00	19.96	QP
9	1.397	20.60	9.62	30.22	46.00	15.78	Average
10	1.397	27.70	9.62	37.32	56.00	18.68	QP
11	2.008	19.94	9.63	29.57	46.00	16.43	Average
12	2.008	29.53	9.63	39.16	56.00	16.84	QP

Neutral:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Detector
1	0.154	23.26	9.61	32.87	55.81	22.94	Average
2	0.154	39.99	9.61	49.60	65.81	16.20	QP
3	0.207	18.46	9.61	28.07	53.33	25.26	Average
4	0.207	31.74	9.61	41.35	63.33	21.98	QP
5	0.327	16.11	9.61	25.72	49.52	23.80	Average
6	0.327	24.86	9.61	34.47	59.52	25.05	QP
7	0.506	17.74	9.61	27.35	46.00	18.65	Average
8	0.506	24.66	9.61	34.27	56.00	21.73	QP
9	1.410	19.29	9.62	28.91	46.00	17.09	Average
10	1.410	27.70	9.62	37.33	56.00	18.67	QP
11	2.004	17.22	9.63	26.85	46.00	19.15	Average
12	2.004	26.89	9.63	36.52	56.00	19.48	QP

4.2 Radiation Spurious Emissions

Serial Number:	CR21090060-RF-S1/2	Test Date:	2021-10-28~2021-11-11
Test Site:	966-1, 966-2	Test Mode:	Downloading
Tester:	Elan Lv, Carps Hu	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.5~26.6	Relative Humidity: (%)	62~66	ATM Pressure: (kPa)	100.4~100.7
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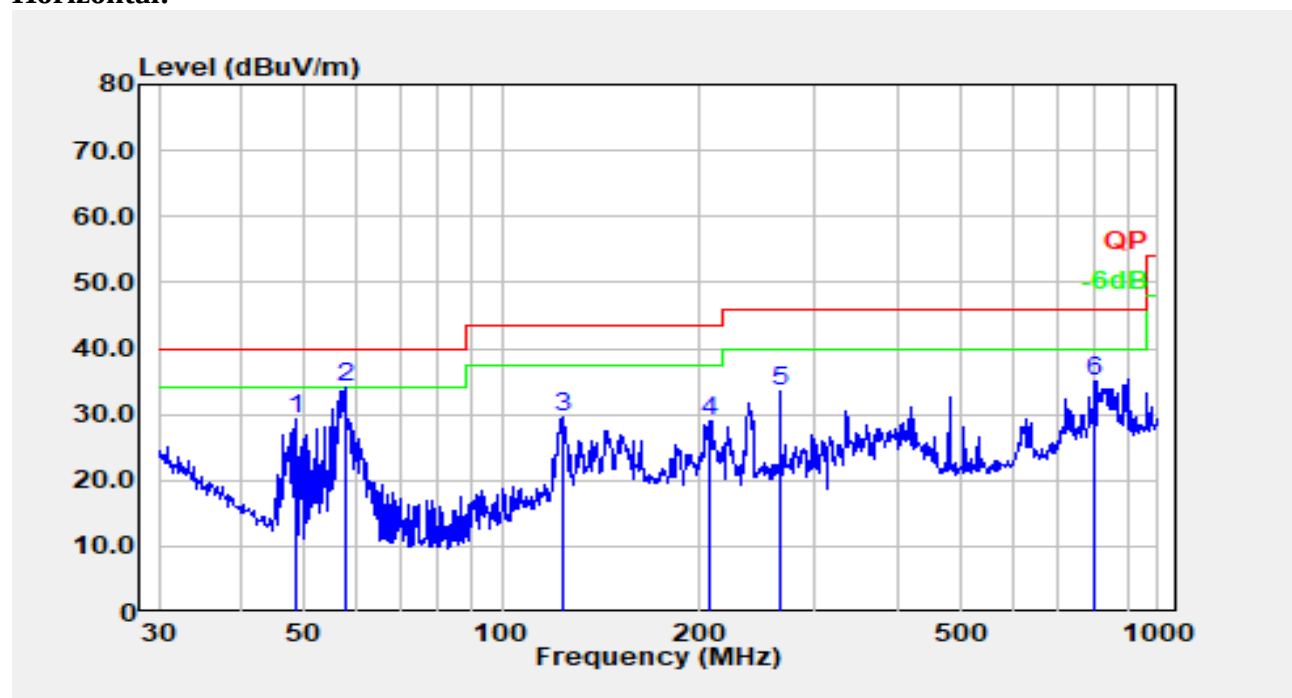
Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sunol Sciences	Antenna	JB6	A082520-5	2020-10-19	2023-10-18
R&S	EMI Test Receiver	ESR3	102724	2021-07-22	2022-07-21
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0470-02	2021-07-18	2022-07-17
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0780-01	2021-07-18	2022-07-17
Sonoma	Amplifier	310N	186165	2021-07-18	2022-07-17
Audix	Test Software	E3	201021 (V9)	N/A	N/A
ETS-Lindgren	Horn Antenna	3115	9912-5985	2020-10-13	2023-10-12
PASTERNAK	Horn Antenna	PE9852/2F-20	112002	2021-02-05	2023-02-04
PASTERNAK	Horn Antenna	PE9850/2F-20	072001	2021-02-05	2023-02-04
R&S	Spectrum Analyzer	FSV40	101591	2021-07-22	2022-07-21
MICRO-COAX	Coaxial Cable	UFA210A-1-1200-70U300	217423-008	2021-08-08	2022-08-07
MICRO-COAX	Coaxial Cable	UFA210A-1-2362-300300	235780-001	2021-08-08	2022-08-07
MICRO-COAX	Coaxial Cable	UFB142A-1-2362-200200	235772-001	2021-08-08	2022-08-07
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2021-08-08	2022-08-07
AH	Preamplifier	PAM-1840VH	190	2020-11-20	2021-11-19

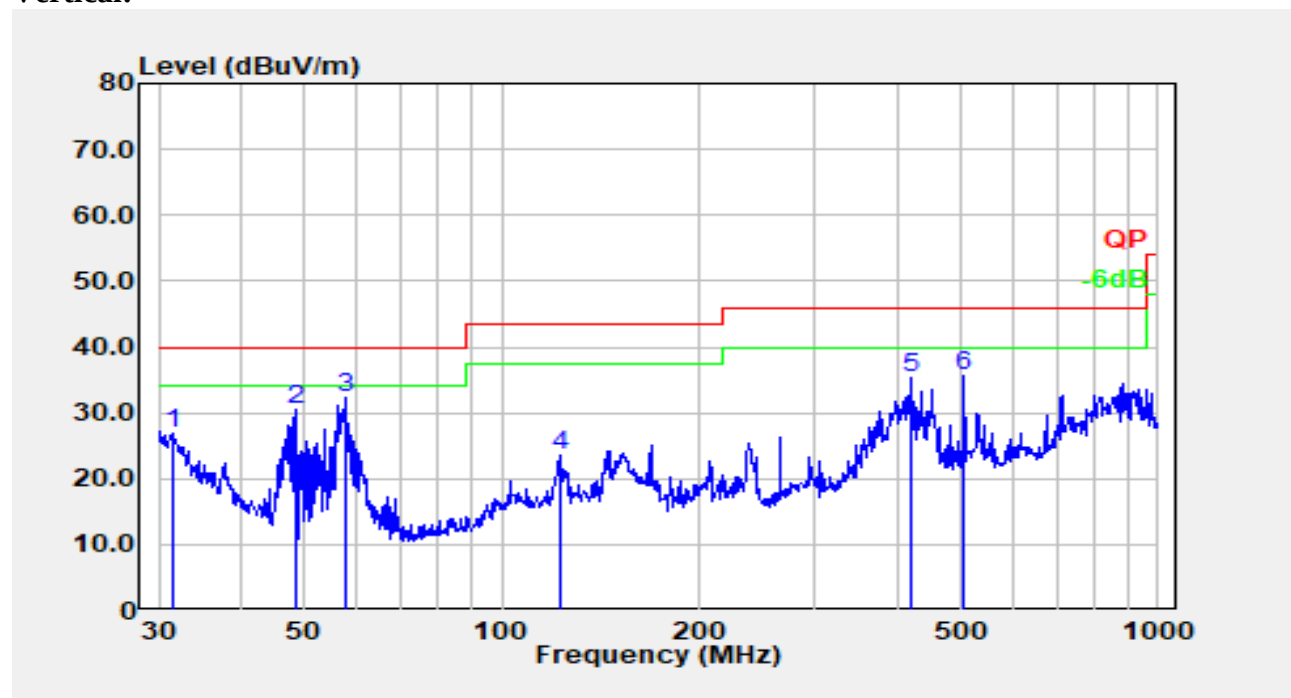
* Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

1) 30MHz-1GHz:

Horizontal:

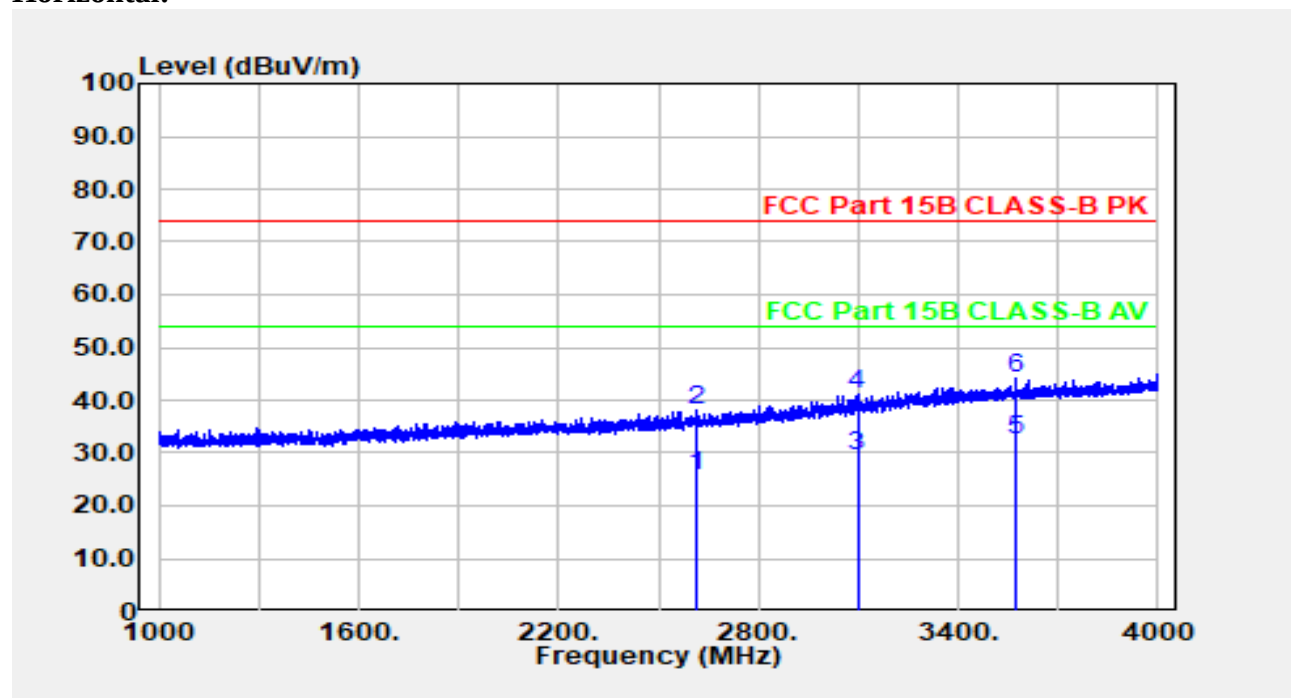


No.	Frequency (MHz)	Reading (dB μ V)	Factor (dB/m)	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector
1	48.672	45.95	-16.62	29.33	40.00	10.67	Peak
2	57.594	51.77	-17.55	34.22	40.00	5.78	QP
3	124.133	41.30	-11.62	29.68	43.50	13.82	Peak
4	207.850	41.69	-12.57	29.12	43.50	14.38	Peak
5	265.676	46.07	-12.44	33.63	46.00	12.37	Peak
6	798.980	37.40	-2.47	34.93	46.00	11.07	Peak

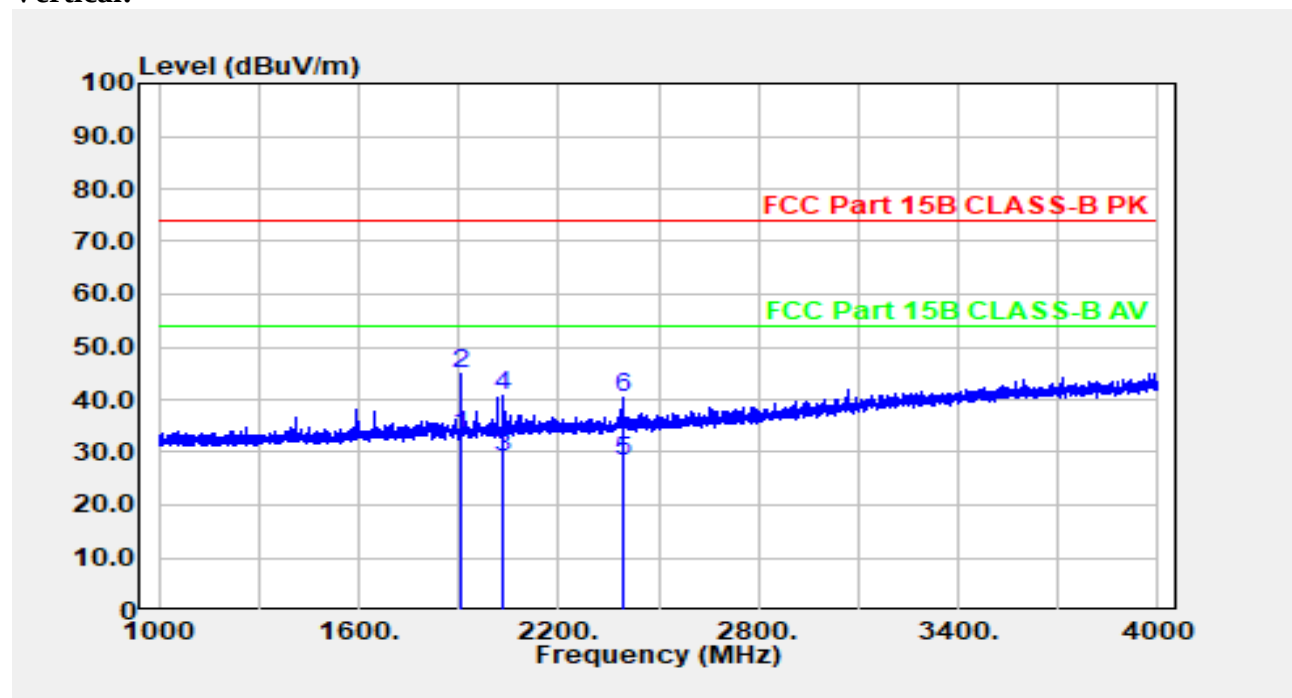
Vertical:

No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Result (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector
1	31.620	32.02	-5.03	26.99	40.00	13.01	Peak
2	48.672	47.05	-16.62	30.42	40.00	9.58	Peak
3	57.594	49.95	-17.55	32.40	40.00	7.60	Peak
4	122.404	35.36	-11.67	23.70	43.50	19.80	Peak
5	422.058	43.45	-8.05	35.39	46.00	10.61	Peak
6	506.479	41.74	-6.12	35.61	46.00	10.39	Peak

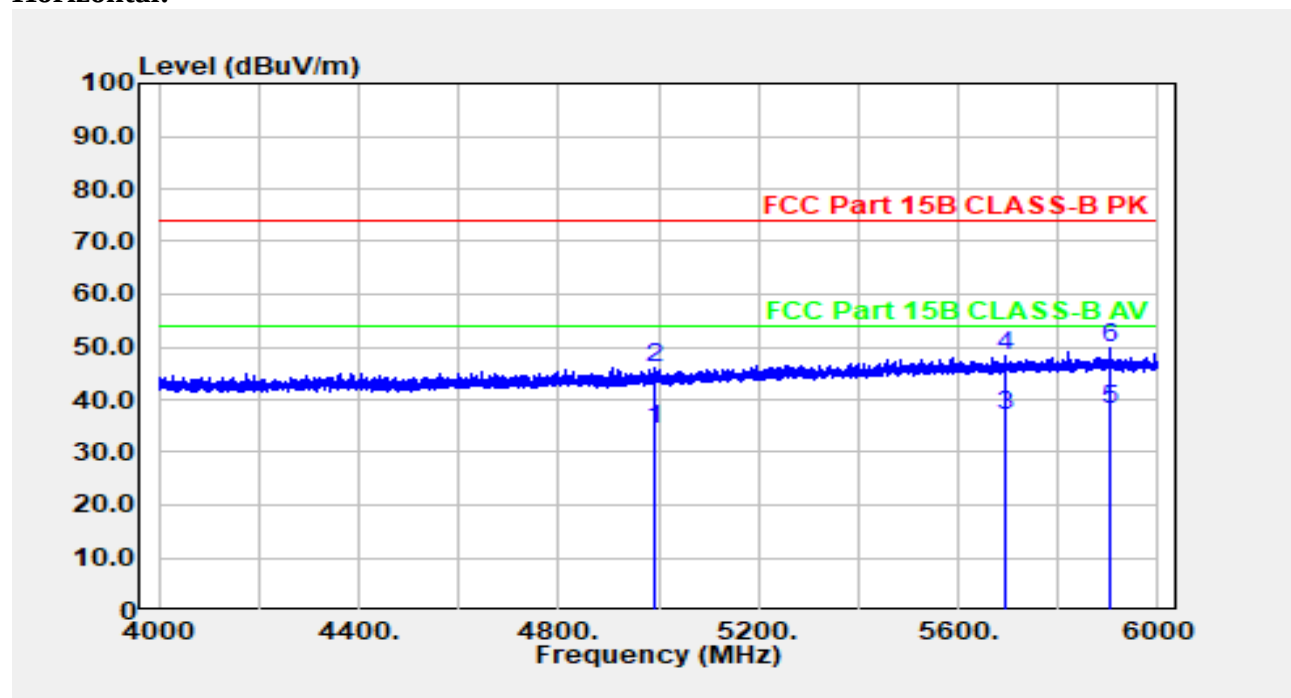
2) Above 1GHz

Horizontal:

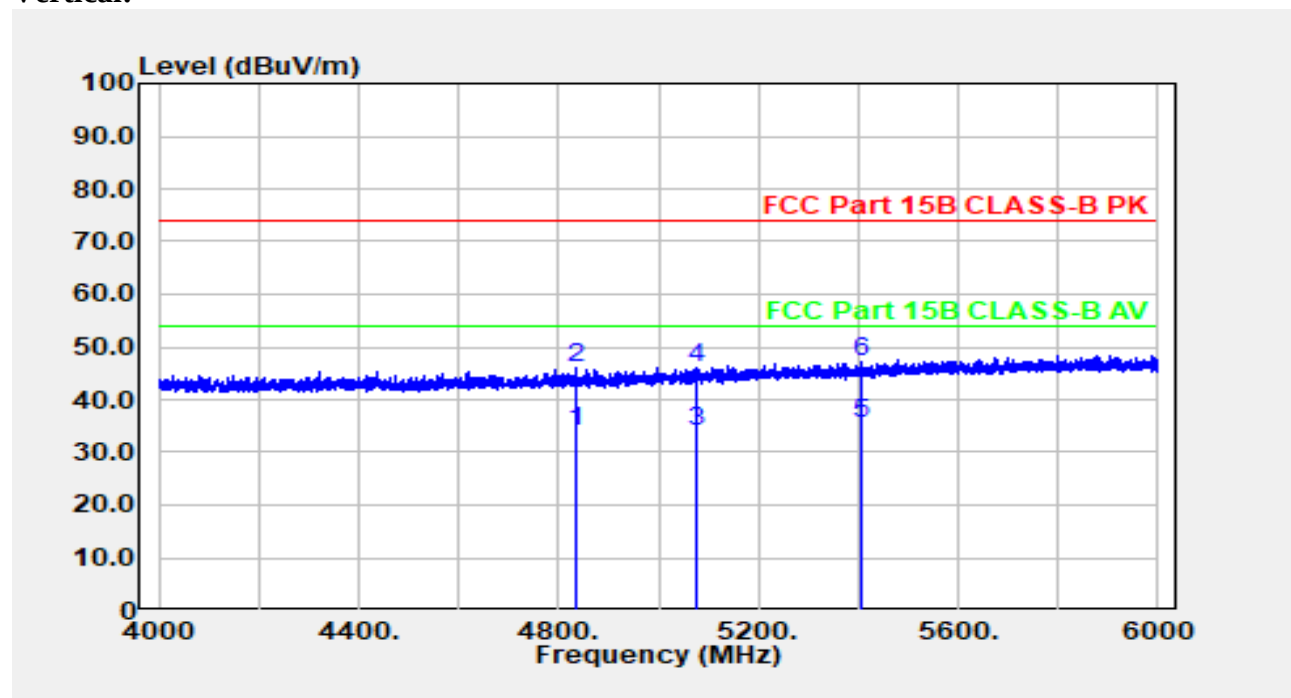
No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Result (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector
1	2616.123	21.36	4.39	25.75	54.00	28.25	Average
2	2616.123	33.54	4.39	37.93	74.00	36.07	Peak
3	3097.419	22.42	6.91	29.33	54.00	24.67	Average
4	3097.419	34.06	6.91	40.97	74.00	33.03	Peak
5	3573.315	23.41	8.98	32.39	54.00	21.61	Average
6	3573.315	35.04	8.98	44.02	74.00	29.98	Peak

Vertical:

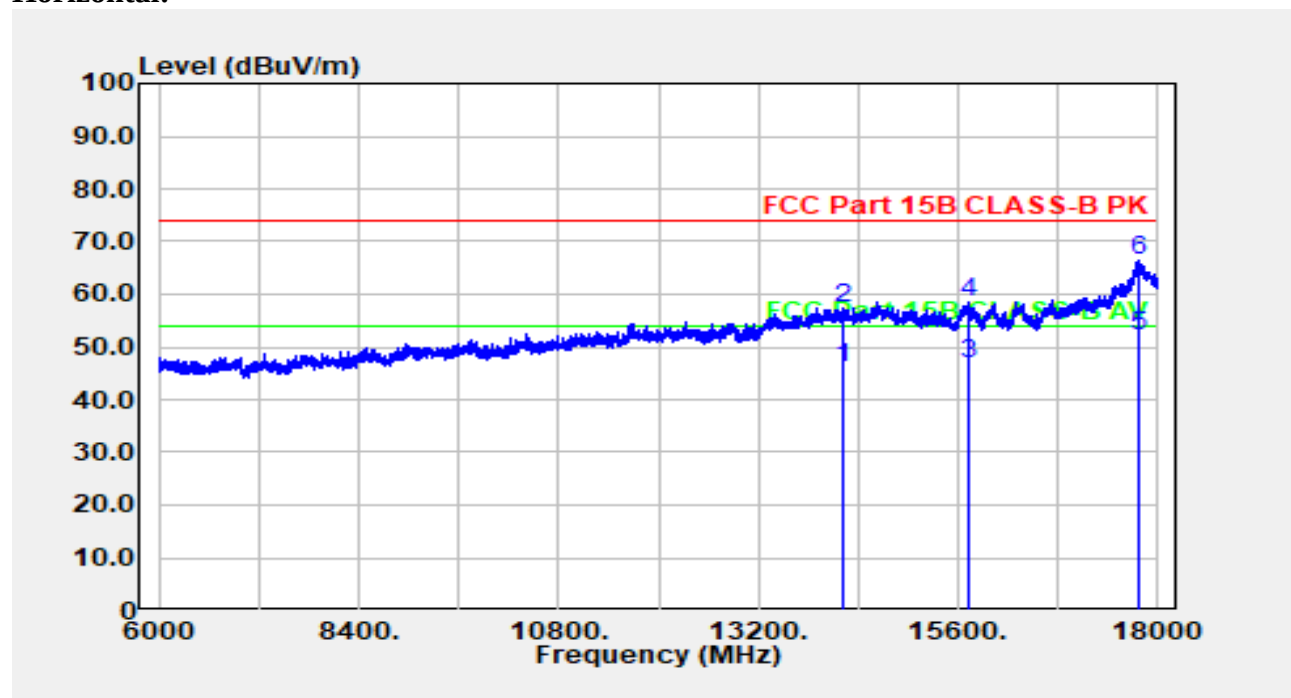
No.	Frequency (MHz)	Reading (dB μ V)	Factor (dB/m)	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector
1	1904.981	31.36	1.99	33.35	54.00	20.65	Average
2	1904.981	43.04	1.99	45.03	74.00	28.97	Peak
3	2035.807	26.68	2.50	29.18	54.00	24.82	Average
4	2035.807	38.18	2.50	40.68	74.00	33.32	Peak
5	2394.079	24.69	3.65	28.34	54.00	25.66	Average
6	2394.079	36.67	3.65	40.32	74.00	33.68	Peak

Horizontal:

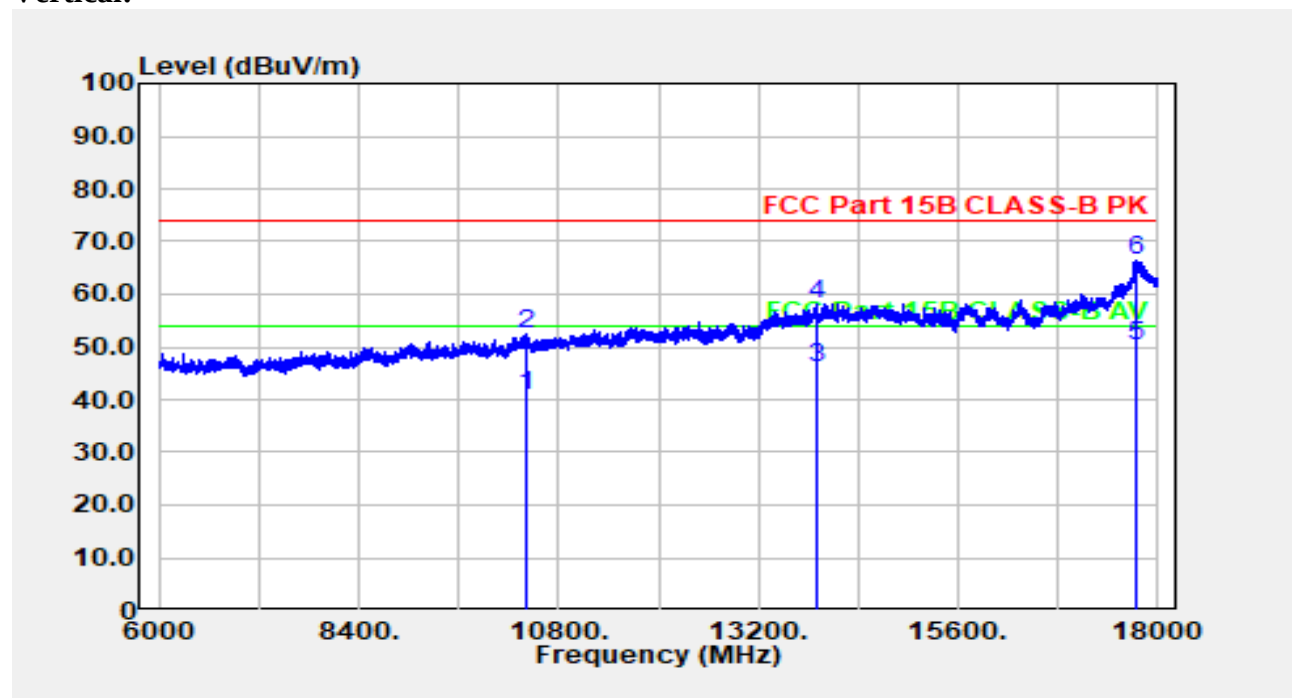
No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Result (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector
1	4994.599	23.25	11.06	34.31	54.00	19.69	Average
2	4994.599	35.12	11.06	46.18	74.00	27.82	Peak
3	5694.739	23.86	13.04	36.90	54.00	17.10	Average
4	5694.739	35.31	13.04	48.35	74.00	25.65	Peak
5	5901.980	24.67	13.27	37.94	54.00	16.06	Average
6	5901.980	36.61	13.27	49.88	74.00	24.12	Peak

Vertical:

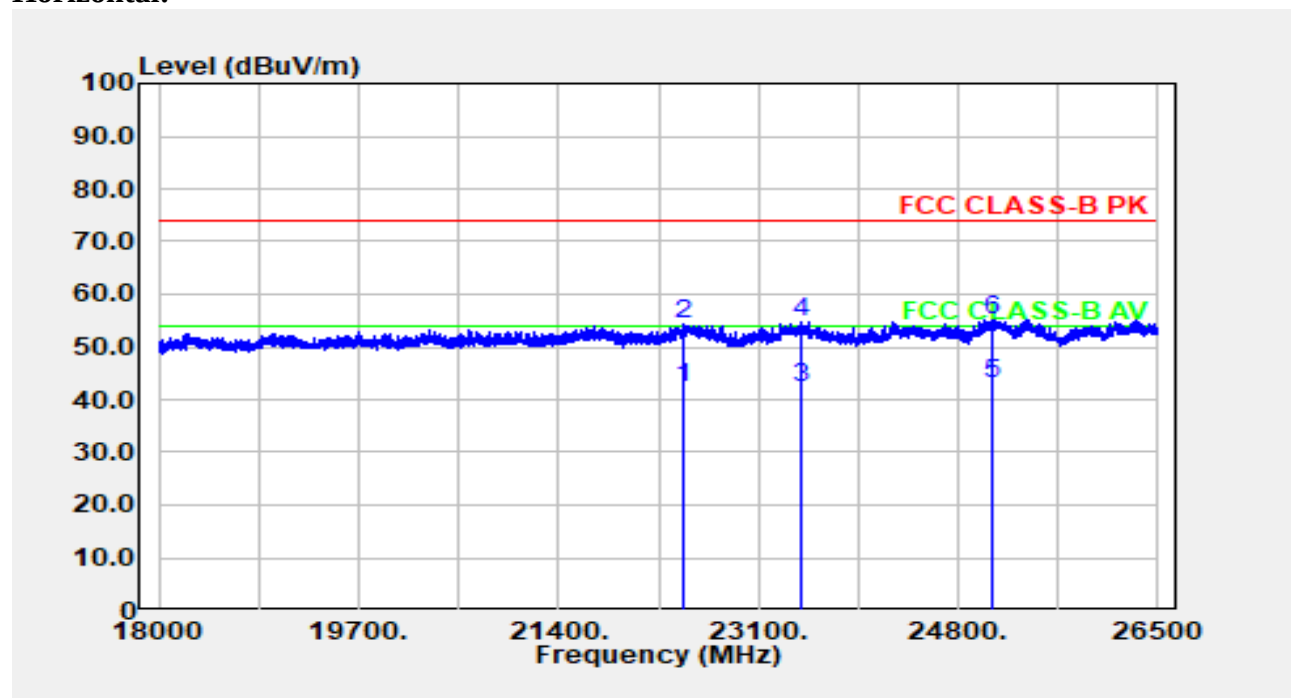
No.	Frequency (MHz)	Reading (dB μ V)	Factor (dB/m)	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector
1	4834.167	23.37	10.56	33.93	54.00	20.07	Average
2	4834.167	35.34	10.56	45.90	74.00	28.10	Peak
3	5075.415	22.78	11.22	34.00	54.00	20.00	Average
4	5075.415	34.87	11.22	46.09	74.00	27.91	Peak
5	5407.082	23.16	12.25	35.41	54.00	18.59	Average
6	5407.082	35.04	12.25	47.29	74.00	26.71	Peak

Horizontal:

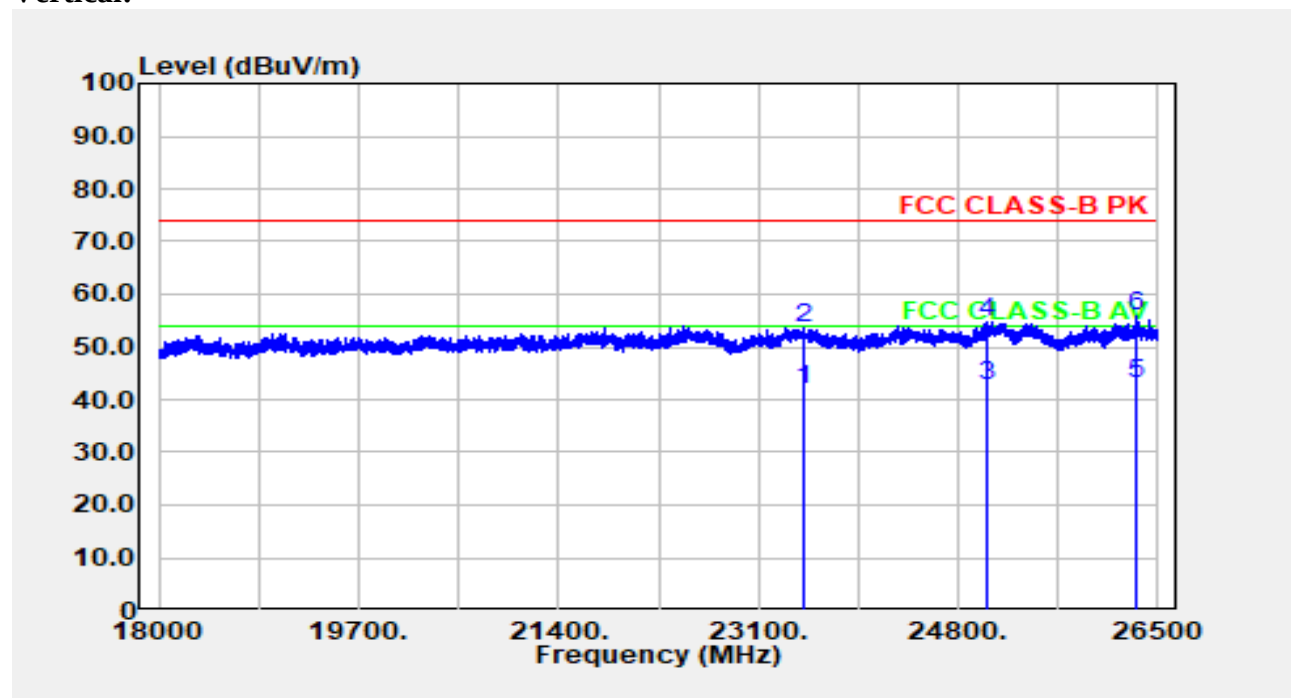
No.	Frequency (MHz)	Reading (dB μ V)	Factor (dB/m)	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector
1	14202.440	21.79	24.11	45.90	54.00	8.10	Average
2	14202.440	33.37	24.11	57.48	74.00	16.52	Peak
3	15719.540	25.68	21.24	46.92	54.00	7.08	Average
4	15719.540	37.19	21.24	58.43	74.00	15.57	Peak
5	17755.150	22.63	29.58	52.21	54.00	1.79	Average
6	17755.150	36.91	29.58	66.49	74.00	7.51	Peak

Vertical:

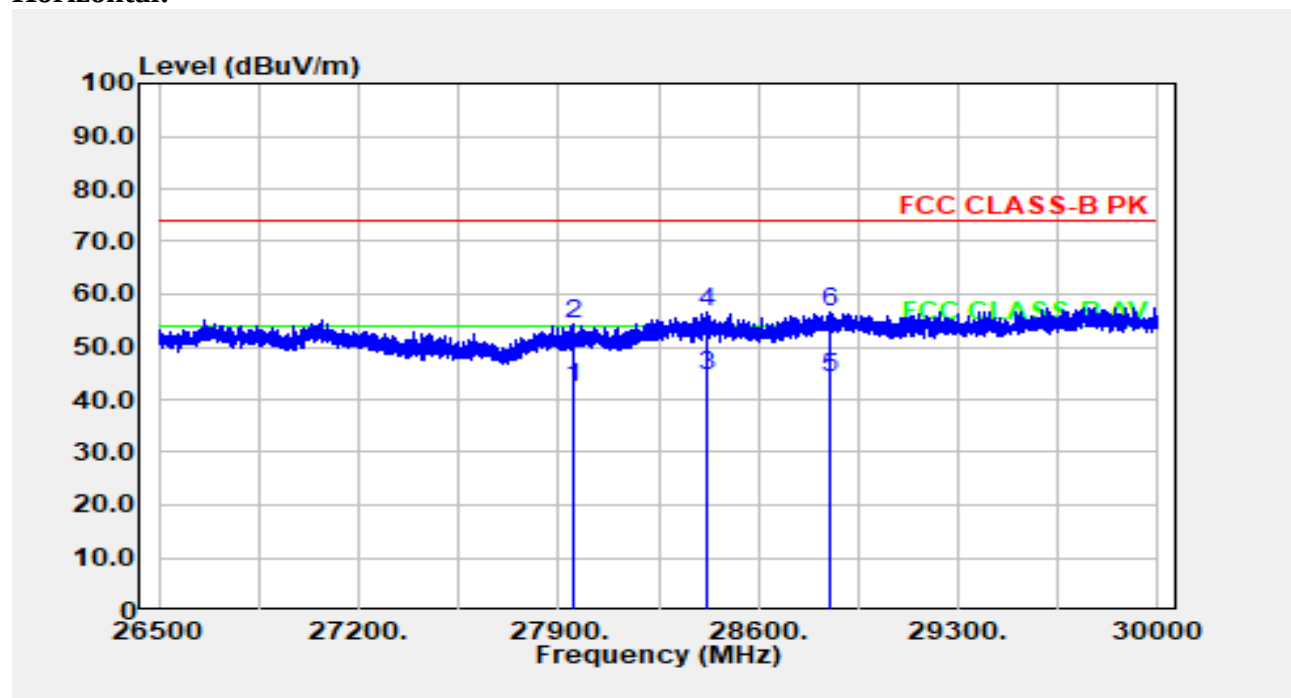
No.	Frequency (MHz)	Reading (dB μ V)	Factor (dB/m)	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector
1	10404.880	22.31	18.45	40.76	54.00	13.24	Average
2	10404.880	34.01	18.45	52.46	74.00	21.54	Peak
3	13897.580	22.14	23.86	46.00	54.00	8.00	Average
4	13897.580	34.37	23.86	58.23	74.00	15.77	Peak
5	17731.150	20.47	29.58	50.05	54.00	3.95	Average
6	17731.150	36.93	29.58	66.51	74.00	7.49	Peak

Horizontal:

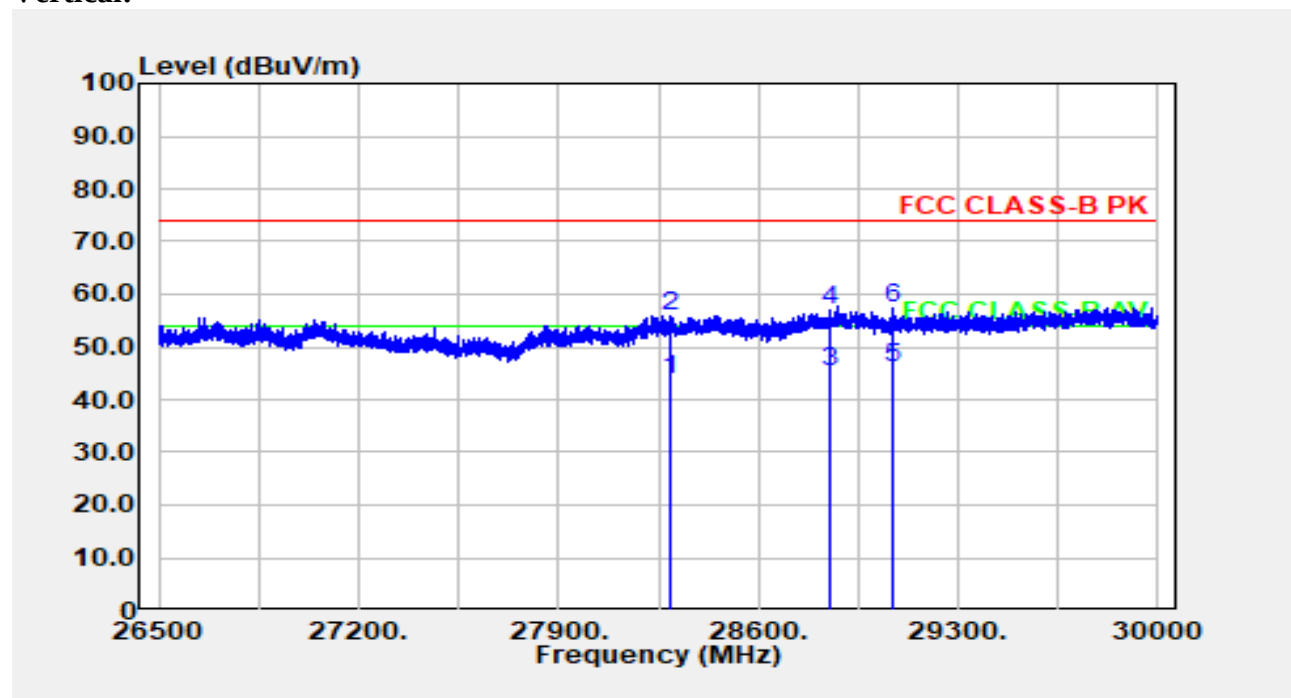
No.	Frequency (MHz)	Reading (dB μ V)	Factor (dB/m)	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector
1	22470.190	31.34	10.90	42.24	54.00	11.76	Average
2	22470.190	43.29	10.90	54.19	74.00	19.81	Peak
3	23468.290	31.09	11.30	42.39	54.00	11.61	Average
4	23468.290	43.51	11.30	54.81	74.00	19.19	Peak
5	25085.320	30.34	12.64	42.98	54.00	11.02	Average
6	25085.320	42.48	12.64	55.12	74.00	18.88	Peak

Vertical:

No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Result (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector
1	23490.400	30.35	11.36	41.71	54.00	12.29	Average
2	23490.400	42.23	11.36	53.59	74.00	20.41	Peak
3	25042.810	30.26	12.34	42.60	54.00	11.40	Average
4	25042.810	42.53	12.34	54.87	74.00	19.13	Peak
5	26307.860	30.25	12.84	43.09	54.00	10.91	Average
6	26307.860	42.87	12.84	55.71	74.00	18.29	Peak

Horizontal:

No.	Frequency (MHz)	Reading (dBUV)	Factor (dB/m)	Result (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector
1	27950.690	27.63	14.81	42.44	54.00	11.56	Average
2	27950.690	39.71	14.81	54.52	74.00	19.48	Peak
3	28421.180	30.63	13.95	44.58	54.00	9.42	Average
4	28421.180	42.56	13.95	56.51	74.00	17.49	Peak
5	28854.570	29.25	14.89	44.14	54.00	9.86	Average
6	28854.570	41.81	14.89	56.70	74.00	17.30	Peak

Vertical:

No.	Frequency (MHz)	Reading (dB μ V)	Factor (dB/m)	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector
1	28293.760	30.23	13.72	43.95	54.00	10.05	Average
2	28293.760	42.28	13.72	56.00	74.00	18.00	Peak
3	28854.570	30.23	14.89	45.12	54.00	8.88	Average
4	28854.570	42.01	14.89	56.90	74.00	17.10	Peak
5	29066.710	31.63	14.32	45.95	54.00	8.05	Average
6	29066.710	43.03	14.32	57.35	74.00	16.65	Peak

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