



中认信通

CHINA CERTIFICATION ICT CO., LTD (DONGGUAN)



TEST REPORT

Applicant: Fujian Newland Payment Technology Co.,Ltd.

Address: No. B602, Building #1, Haixia Jingmao Plaza, Fuzhou Bonded Area 350015,
Fuzhou, Fujian, China

FCC ID: 2AM6U-N700-1

Product Name: POS Terminal

Model Number: N700

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: CR22010044-00DA1

Date Of Issue: 2022-04-13

Reviewed By: Sun Zhong *Sun Zhong*

Title: Manager

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

No. 113, Pingkang Road, Dalang Town, Dongguan,
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.

This report cannot be reproduced except in full, without prior written approval of the Company.

This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

This report may contain data that are not covered by the accreditation scope and shall be marked with an asterisk “★”.

CONTENTS

TEST FACILITY	2
DECLARATIONS	2
1. GENERAL INFORMATION	4
1.1 PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	4
1.2 DESCRIPTION OF TEST CONFIGURATION	5
1.2.4 Block Diagram of Test Setup	5
1.3 MEASUREMENT UNCERTAINTY	7
2. SUMMARY OF TEST RESULTS	8
3. REQUIREMENTS AND TEST PROCEDURES	9
3.1 AC LINE CONDUCTED EMISSIONS	9
3.1.1 EUT Setup	9
3.1.2 EMI Test Receiver Setup	9
3.1.3 Test Procedure	10
3.1.4 Corrected Amplitude & Margin Calculation	10
3.2 RADIATION SPURIOUS EMISSIONS	11
3.2.1 EUT Setup	11
3.2.2 EMI Test Receiver Setup	12
3.2.3 Test Procedure	12
3.2.4 Corrected Amplitude & Margin Calculation	12
4. TEST DATA AND RESULTS	13
4.1 AC LINE CONDUCTED EMISSIONS	13
4.2 RADIATION SPURIOUS EMISSIONS	16

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

EUT Name:	POS Terminal
EUT Model:	N700
Highest Operation Frequency:	5825 MHz
Rated Input Voltage:	DC 3.7V from battery or DC 5V from adapter
Serial Number:	CR22010044-RF-A1-S1
EUT Received Date:	2022.2.8
EUT Received Status:	Good

Accessory Information:

Accessory Description	Manufacturer	Model	Parameters
Adapter	SHENZHEN HONOR ELECTRONIC CO.,LTD	ADS-6AE-06 05050E	Input: 100-240V~50/60Hz 0.3A Output: 5V 1A

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: Operating Connected the wifi network, and transmitting data to the network
Equipment Modifications:	No
EUT Exercise Software:	Lantest.exe

1.2.2 Support Equipment List and Details

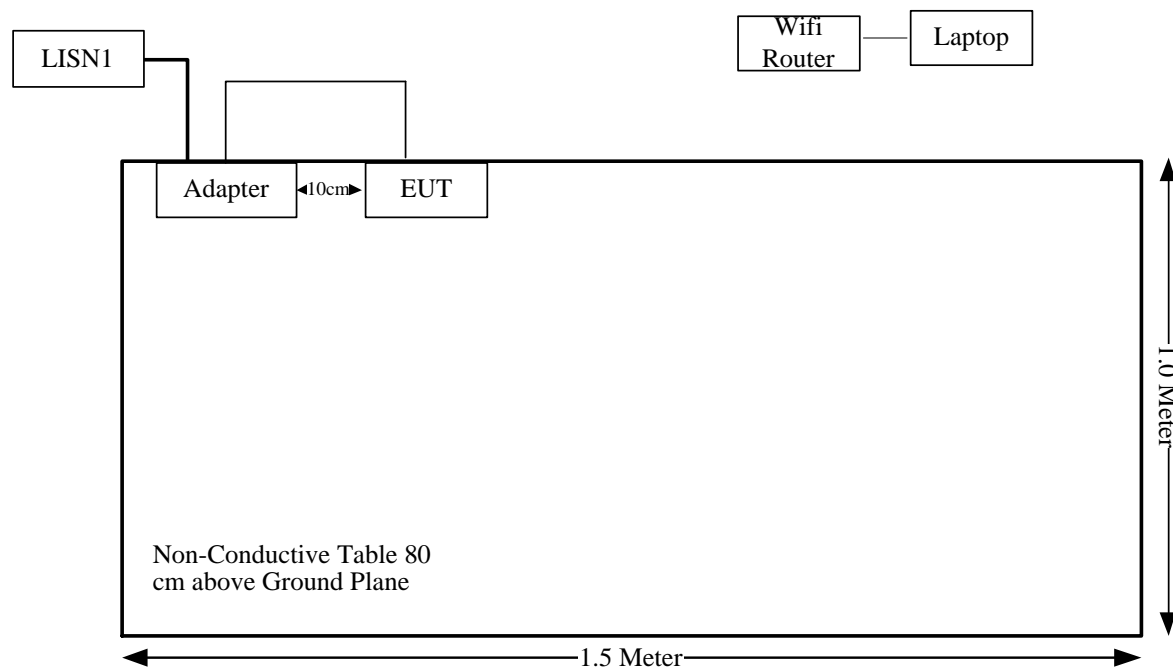
Manufacturer	Description	Model	Serial Number
Lenovo	Laptop	E480	PF-1QQYYYP 19/06
ZIONCOM	Router	MB-R210-00	MB-R210-00

1.2.3 Support Cable List and Details

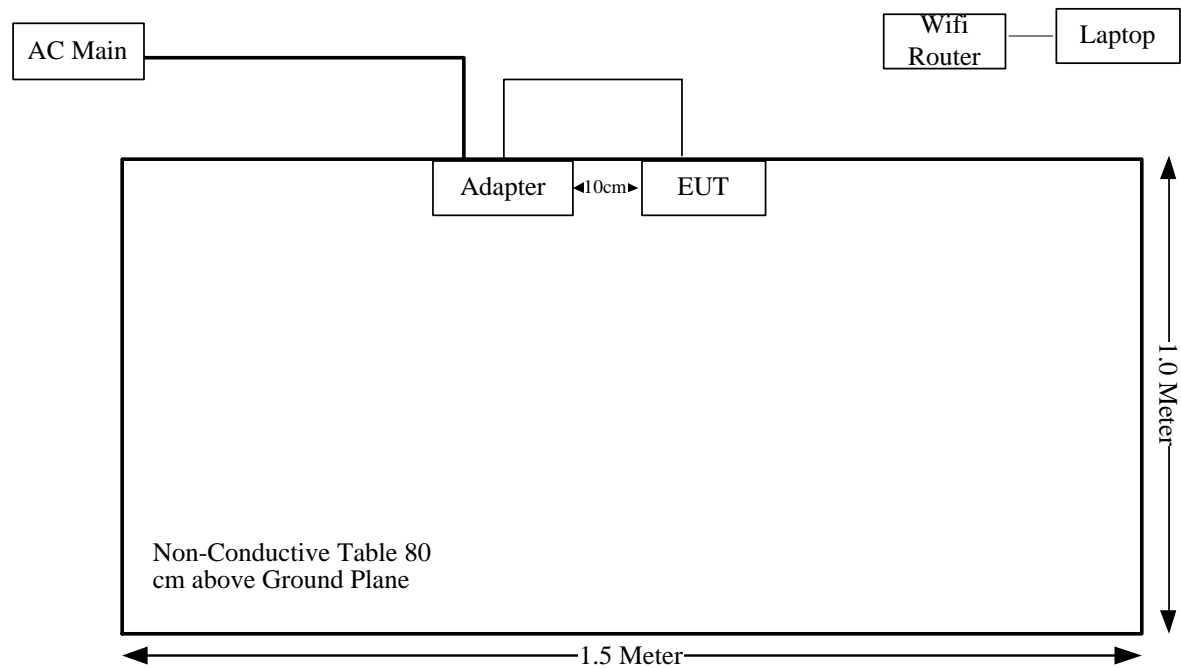
Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
Adapter Cable	Yes	No	1.0	Adapter	EUT

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)

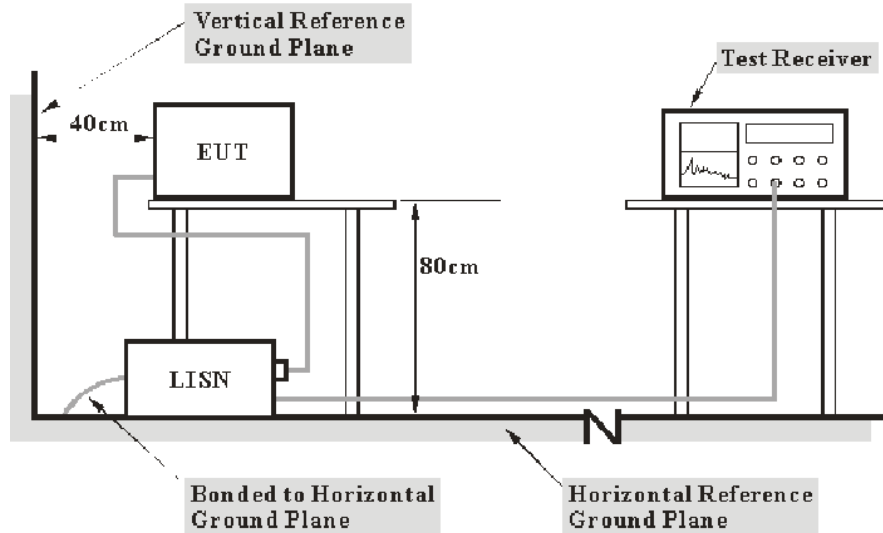
2. SUMMARY OF TEST RESULTS

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

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

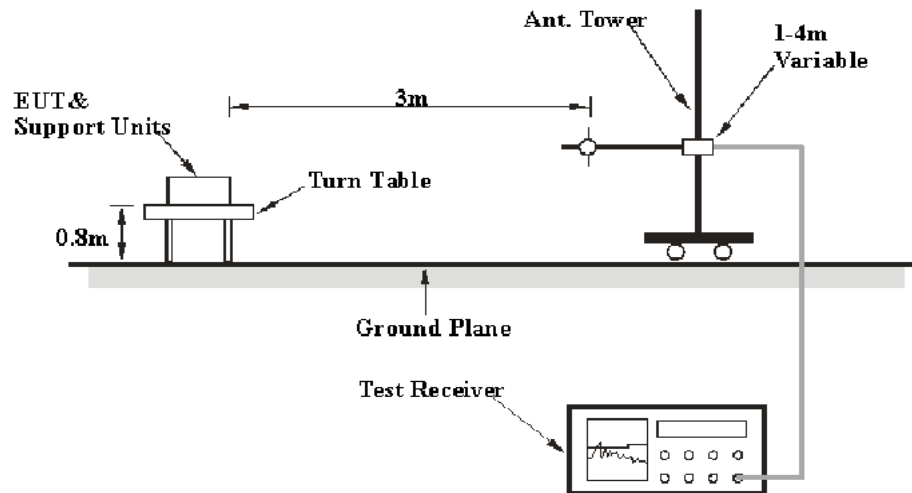
The “**Margin**” column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

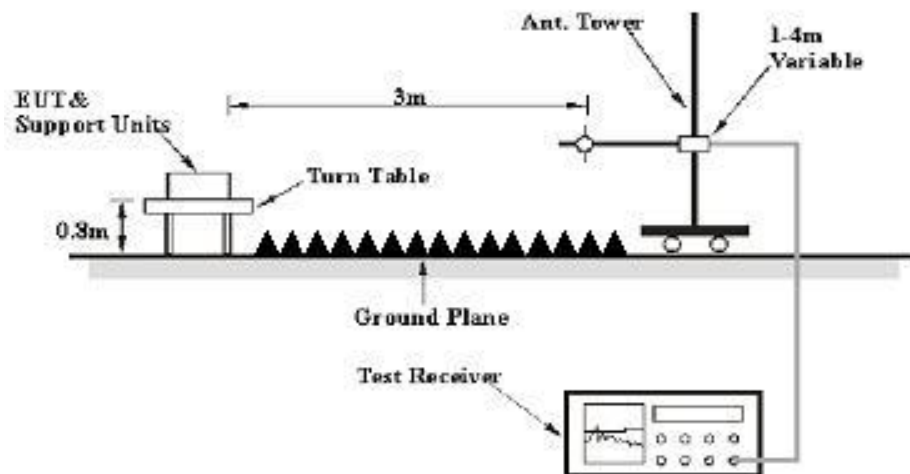
3.2 Radiation Spurious Emissions

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:	CR22010044-RF-A1-S1	Test Date:	2022-02-14
Test Site:	CE	Test Mode:	Operating
Tester:	Nick Tang	Test Result:	Pass

Environmental Conditions:

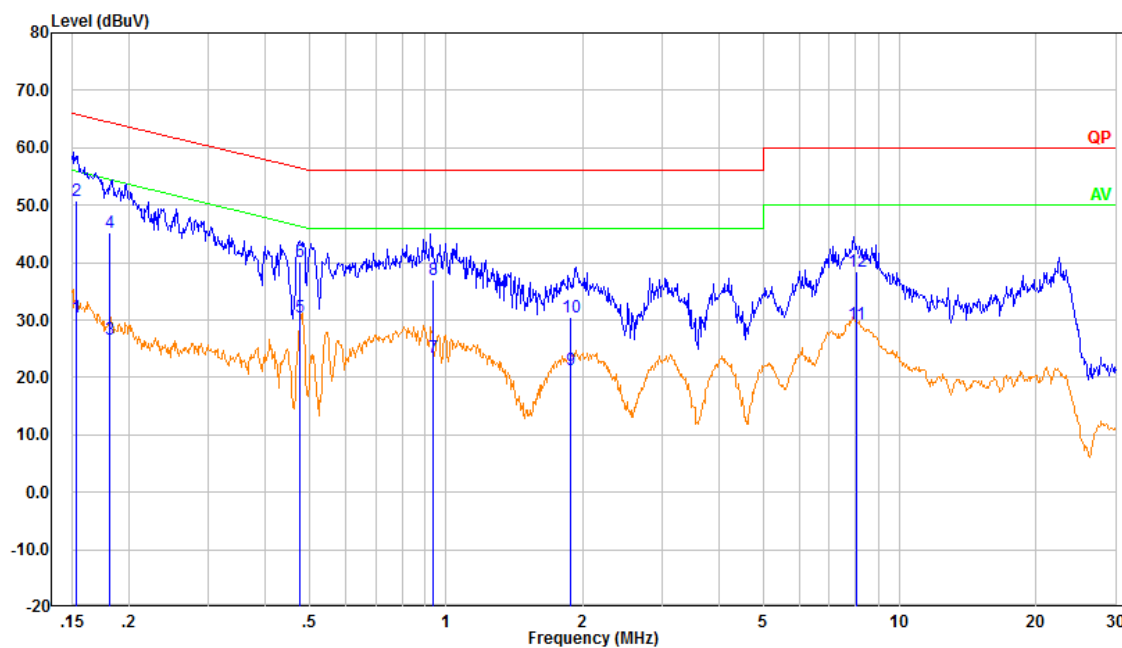
Temperature: (°C)	18.3	Relative Humidity: (%)	65	ATM Pressure: (kPa)	101.3
----------------------	------	------------------------------	----	------------------------	-------

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
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

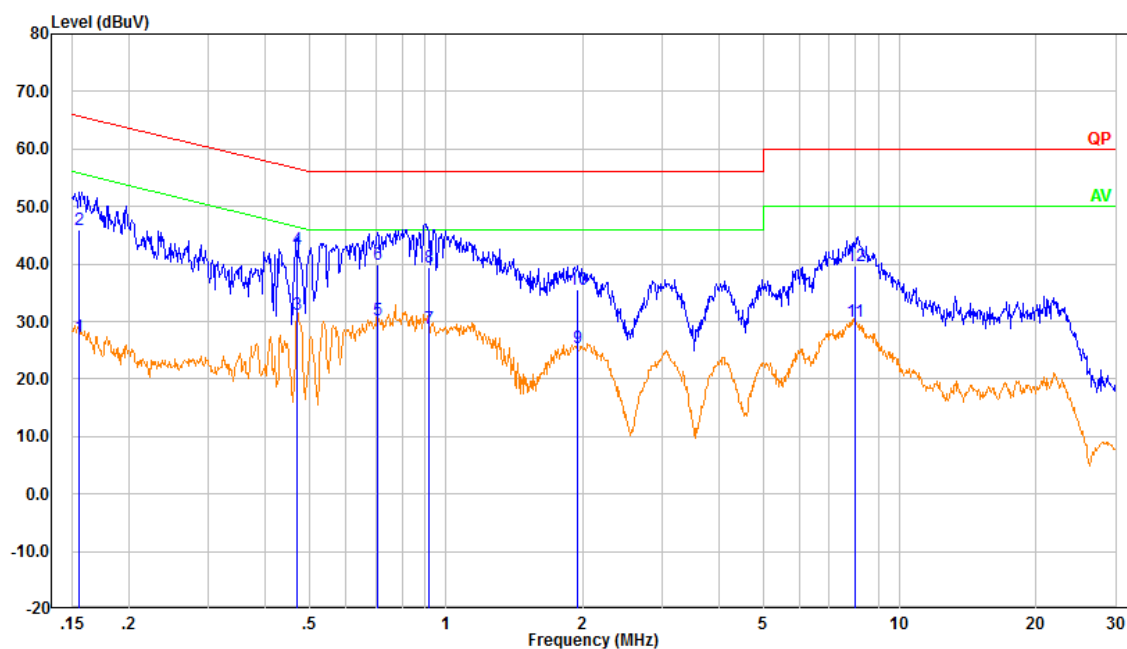
** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Line:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Detector
1	0.153	20.94	9.61	30.55	55.81	25.26	Average
2	0.153	41.09	9.61	50.70	65.81	15.11	QP
3	0.181	16.99	9.61	26.60	54.44	27.84	Average
4	0.181	35.63	9.61	45.24	64.44	19.20	QP
5	0.478	20.80	9.61	30.41	46.38	15.97	Average
6	0.478	30.54	9.61	40.15	56.38	16.23	QP
7	0.939	13.91	9.62	23.53	46.00	22.47	Average
8	0.939	27.28	9.62	36.90	56.00	19.10	QP
9	1.880	11.58	9.63	21.21	46.00	24.79	Average
10	1.880	20.81	9.63	30.44	56.00	25.56	QP
11	8.030	19.57	9.67	29.24	50.00	20.76	Average
12	8.030	28.71	9.67	38.38	60.00	21.62	QP

Neutral:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Detector
1	0.156	17.69	9.61	27.30	55.69	28.39	Average
2	0.156	36.38	9.61	45.99	65.69	19.70	QP
3	0.471	21.50	9.61	31.11	46.49	15.38	Average
4	0.471	32.85	9.61	42.46	56.49	14.03	QP
5	0.709	20.59	9.62	30.21	46.00	15.79	Average
6	0.709	30.30	9.62	39.92	56.00	16.08	QP
7	0.916	19.15	9.62	28.77	46.00	17.23	Average
8	0.916	29.69	9.62	39.31	56.00	16.69	QP
9	1.948	15.68	9.63	25.31	46.00	20.69	Average
10	1.948	26.00	9.63	35.63	56.00	20.37	QP
11	7.970	20.30	9.67	29.97	50.00	20.03	Average
12	7.970	29.90	9.67	39.57	60.00	20.43	QP

4.2 Radiation Spurious Emissions

Serial Number:	CR22010044-RF-A1-S1	Test Date:	2022-02-14~2022-02-17
Test Site:	966-1/966-2	Test Mode:	Operating
Tester:	Carl Liang, Great Qiao	Test Result:	Pass

Environmental Conditions:

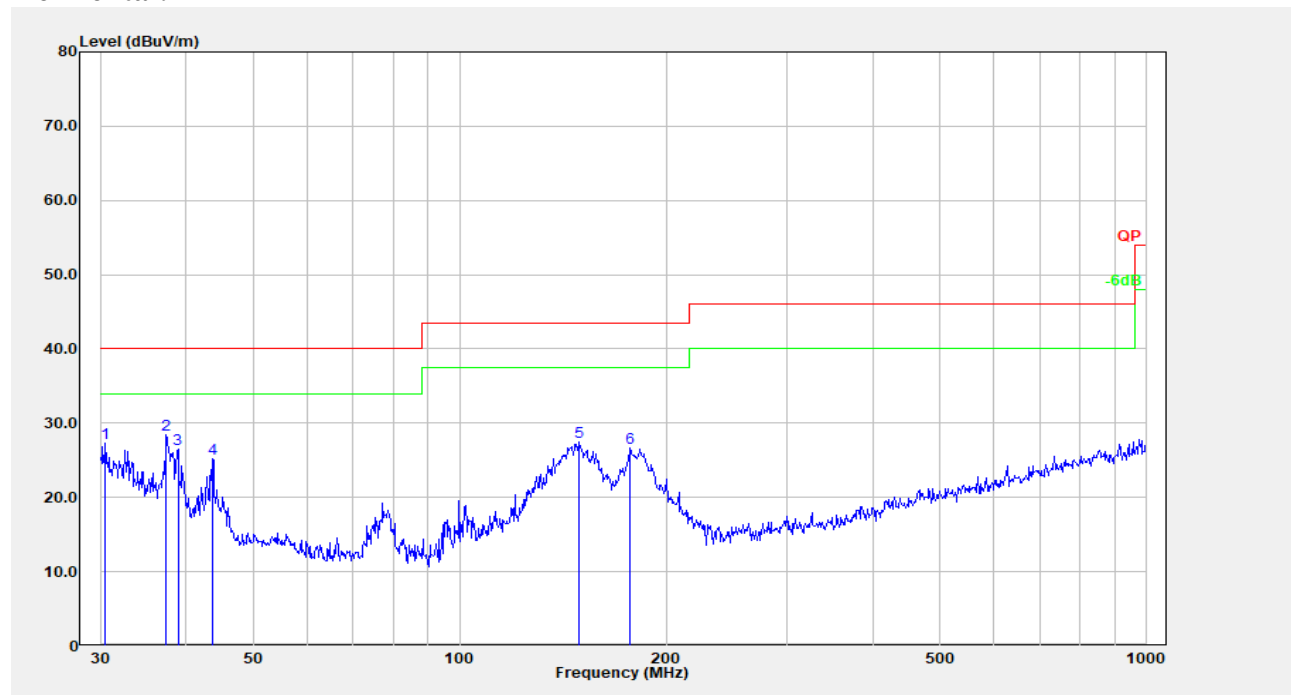
Temperature: (°C)	17.7~18.9	Relative Humidity: (%)	57~62	ATM Pressure: (kPa)	100.9~101.3
----------------------	-----------	------------------------------	-------	------------------------	-------------

Test Equipment List and Details:

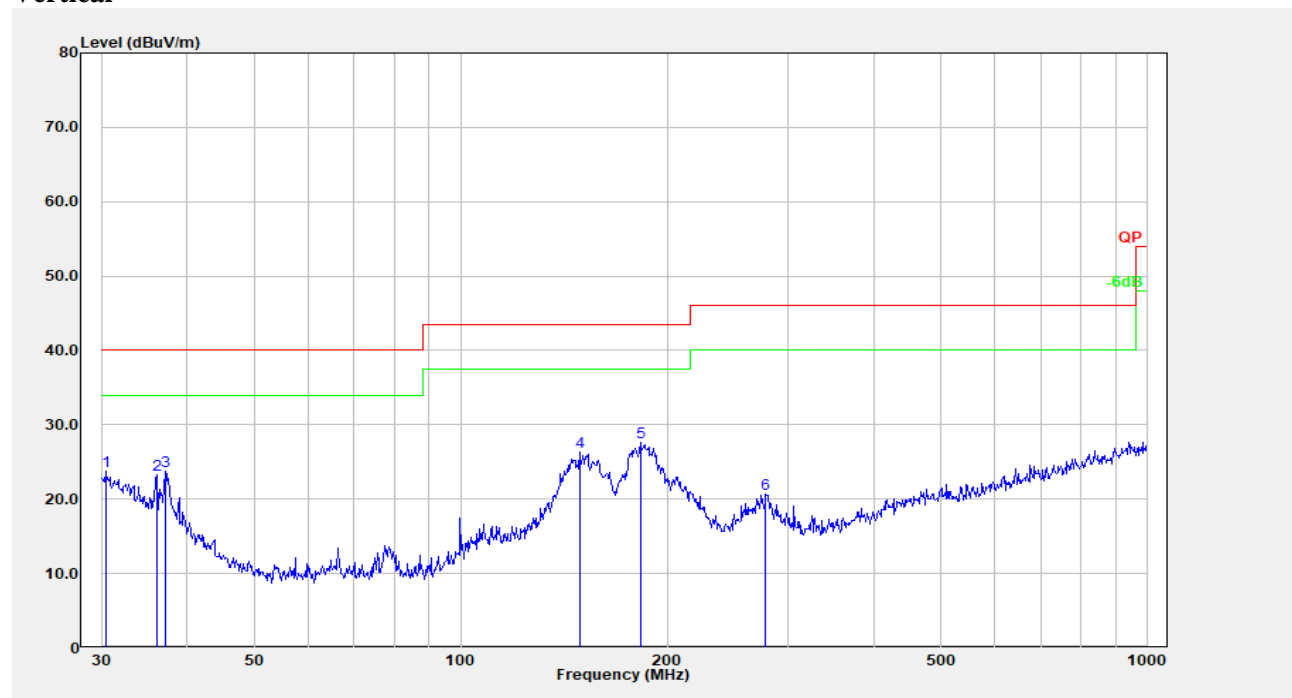
Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sunol Sciences	Antenna	JB6	A082520-5	2020-10-19	2023-10-18
R&S	EMI Test Receiver	ESR3	102724	2021-07-22	2022-07-21
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0470-02	2021-07-18	2022-07-17
TIMES MICROWAVE	Coaxial 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	2024-02-04
PASTERNAK	Horn Antenna	PE9850/2F-20	072001	2021-02-05	2024-02-04
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	2021-11-10	2022-11-09
AH	Preamplifier	PAM-1840VH	190	2021-11-19	2022-11-18

* 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:

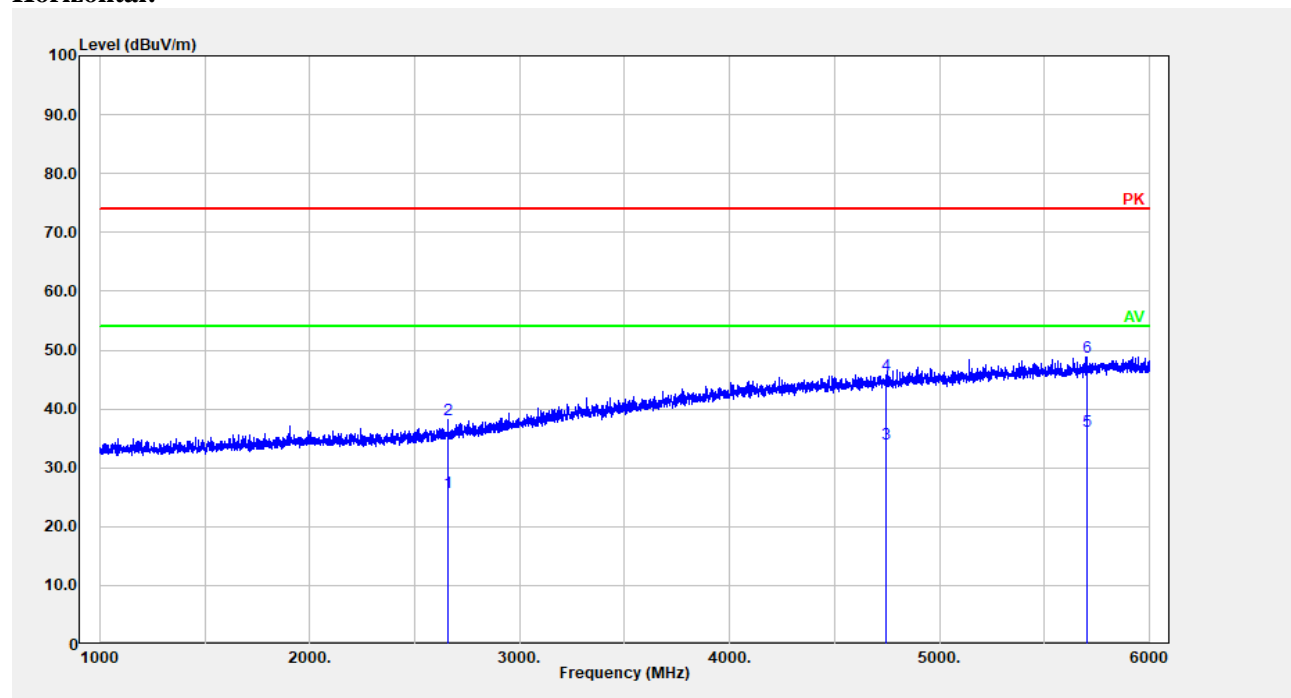
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	30.531	31.58	-4.20	27.38	40.00	12.62	Peak
2	37.416	37.93	-9.49	28.44	40.00	11.56	Peak
3	38.888	37.09	-10.63	26.46	40.00	13.54	Peak
4	43.659	38.96	-13.70	25.26	40.00	14.74	Peak
5	149.486	39.65	-12.26	27.39	43.50	16.11	Peak
6	176.888	40.30	-13.62	26.69	43.50	16.81	Peak

Vertical

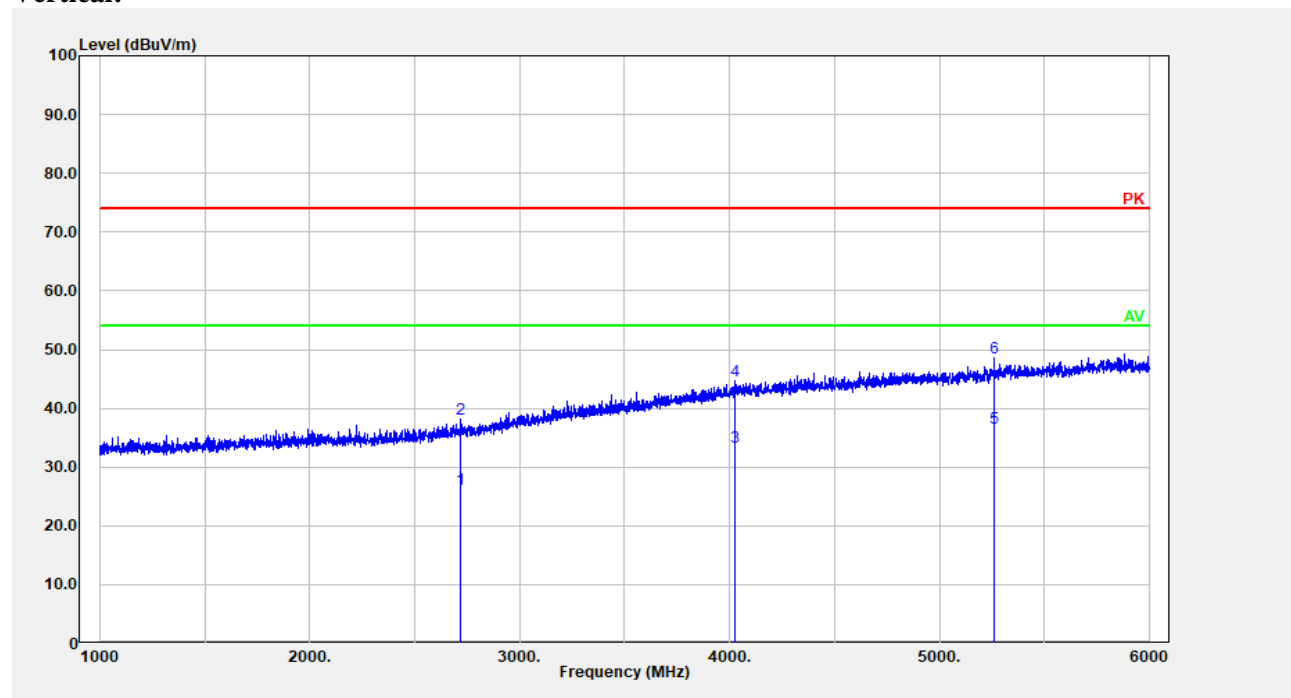
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	30.424	27.82	-4.12	23.70	40.00	16.30	Peak
2	36.127	31.79	-8.52	23.27	40.00	16.73	Peak
3	37.155	33.03	-9.30	23.73	40.00	16.27	Peak
4	148.963	38.62	-12.26	26.36	43.50	17.14	Peak
5	182.559	41.33	-13.75	27.57	43.50	15.93	Peak
6	278.067	32.58	-11.94	20.64	46.00	25.36	Peak

2) Above 1GHz

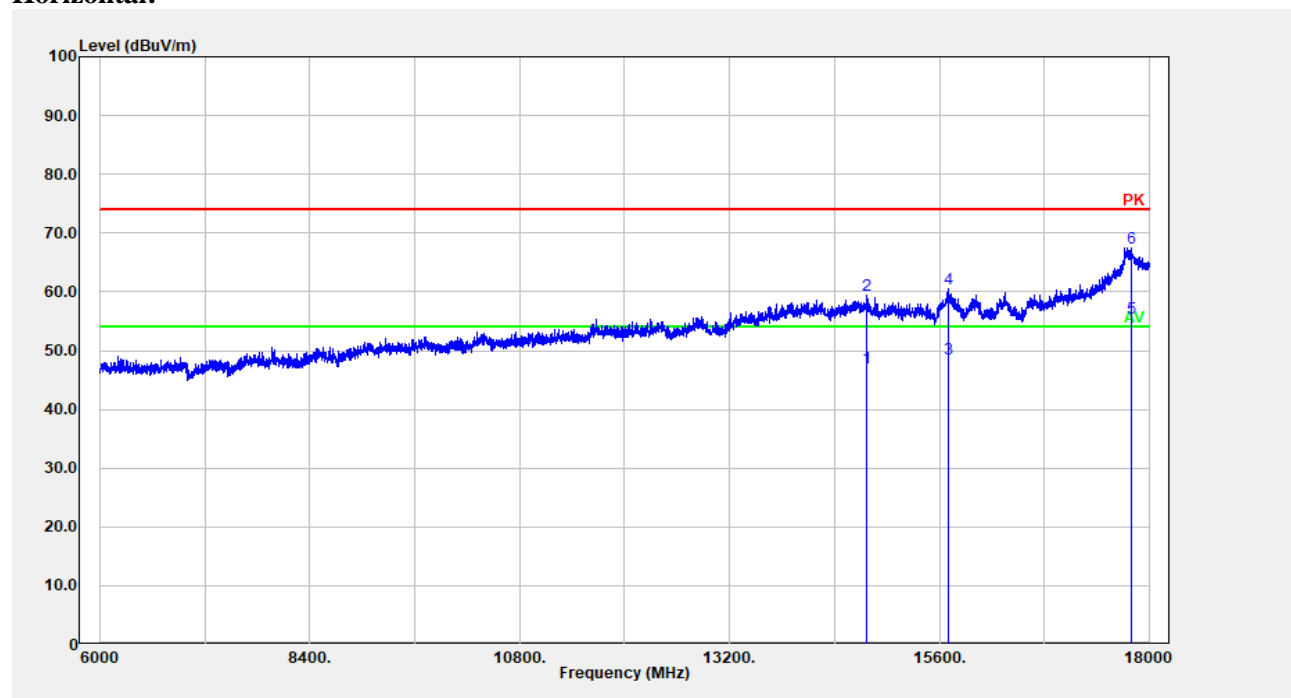
Horizontal:



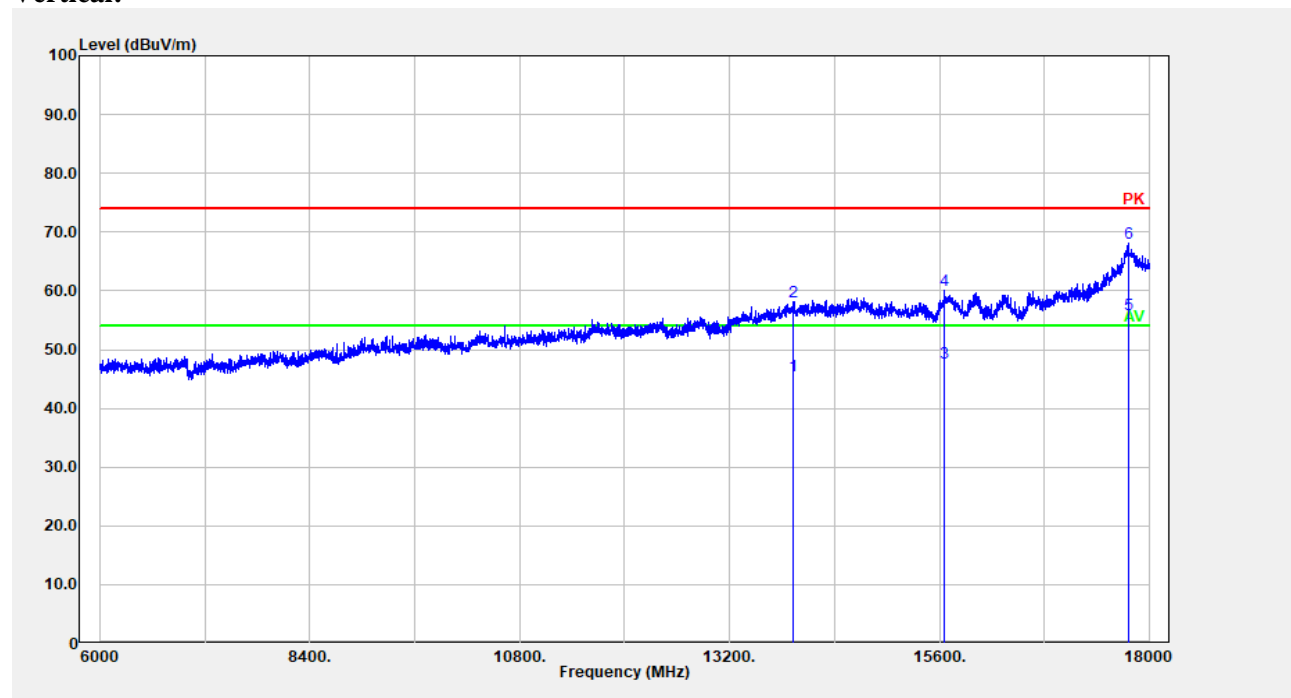
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2657.332	21.34	4.48	25.82	54.00	28.18	Average
2	2657.332	33.63	4.48	38.11	74.00	35.89	Peak
3	4742.749	23.44	10.69	34.13	54.00	19.87	Average
4	4742.749	35.05	10.69	45.74	74.00	28.26	Peak
5	5703.941	23.15	13.01	36.16	54.00	17.84	Average
6	5703.941	35.83	13.01	48.84	74.00	25.16	Peak

Vertical:

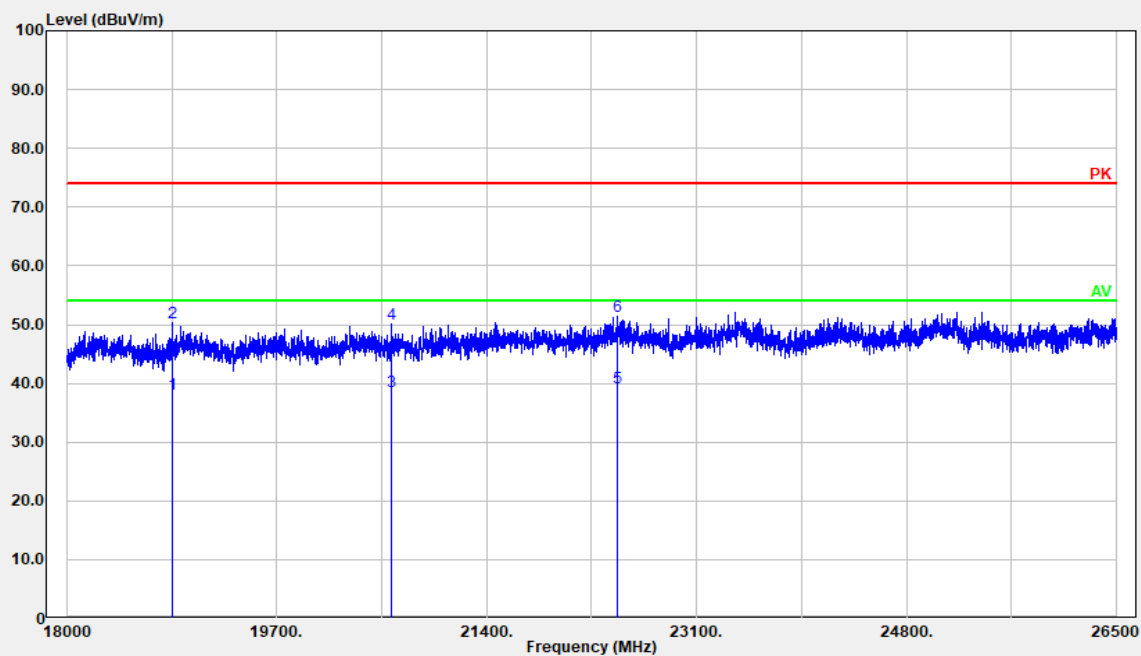
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	2718.344	21.37	4.80	26.17	54.00	27.83	Average
2	2718.344	33.30	4.80	38.10	74.00	35.90	Peak
3	4022.604	23.99	9.37	33.36	54.00	20.64	Average
4	4022.604	35.31	9.37	44.68	74.00	29.32	Peak
5	5258.852	24.67	11.96	36.63	54.00	17.37	Average
6	5258.852	36.63	11.96	48.59	74.00	25.41	Peak

Horizontal:

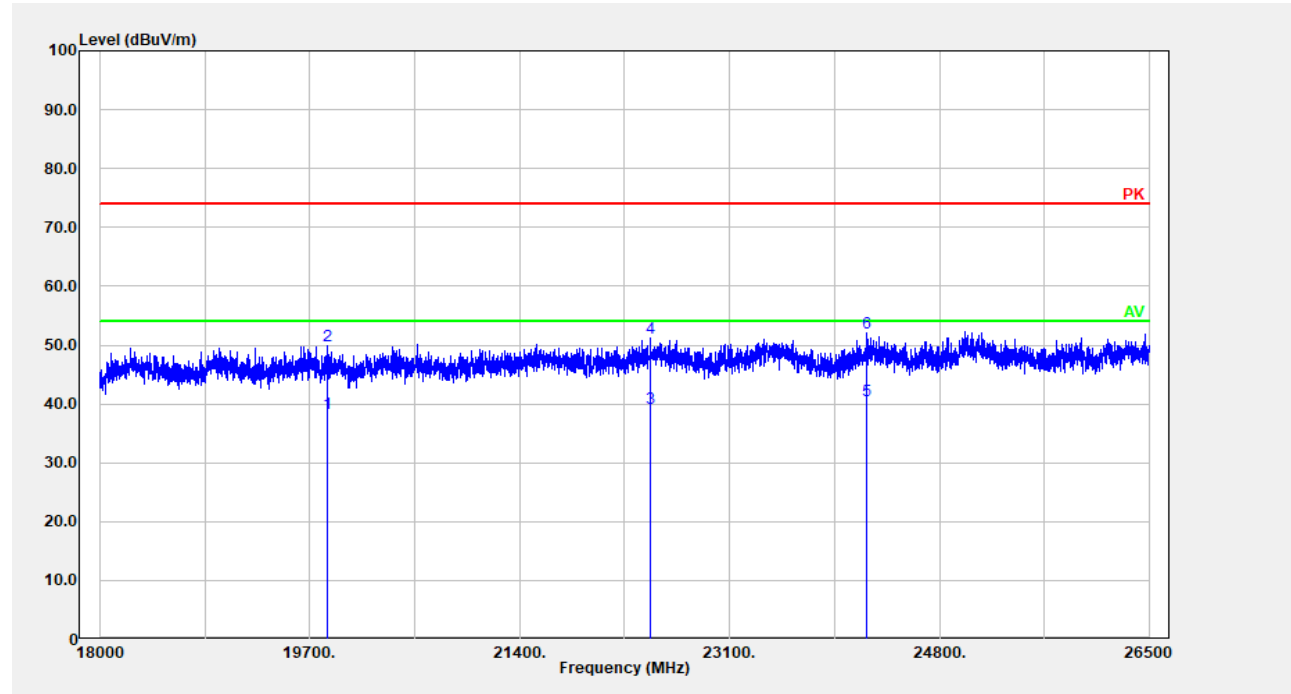
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	14764.150	22.37	24.68	47.05	54.00	6.95	Average
2	14764.150	34.69	24.68	59.37	74.00	14.63	Peak
3	15695.540	26.34	22.29	48.63	54.00	5.37	Average
4	15695.540	38.22	22.29	60.51	74.00	13.49	Peak
5	17788.760	24.67	30.78	55.45	54.00	-1.45	Average
6	17788.760	36.78	30.78	67.56	74.00	6.44	Peak

Vertical:

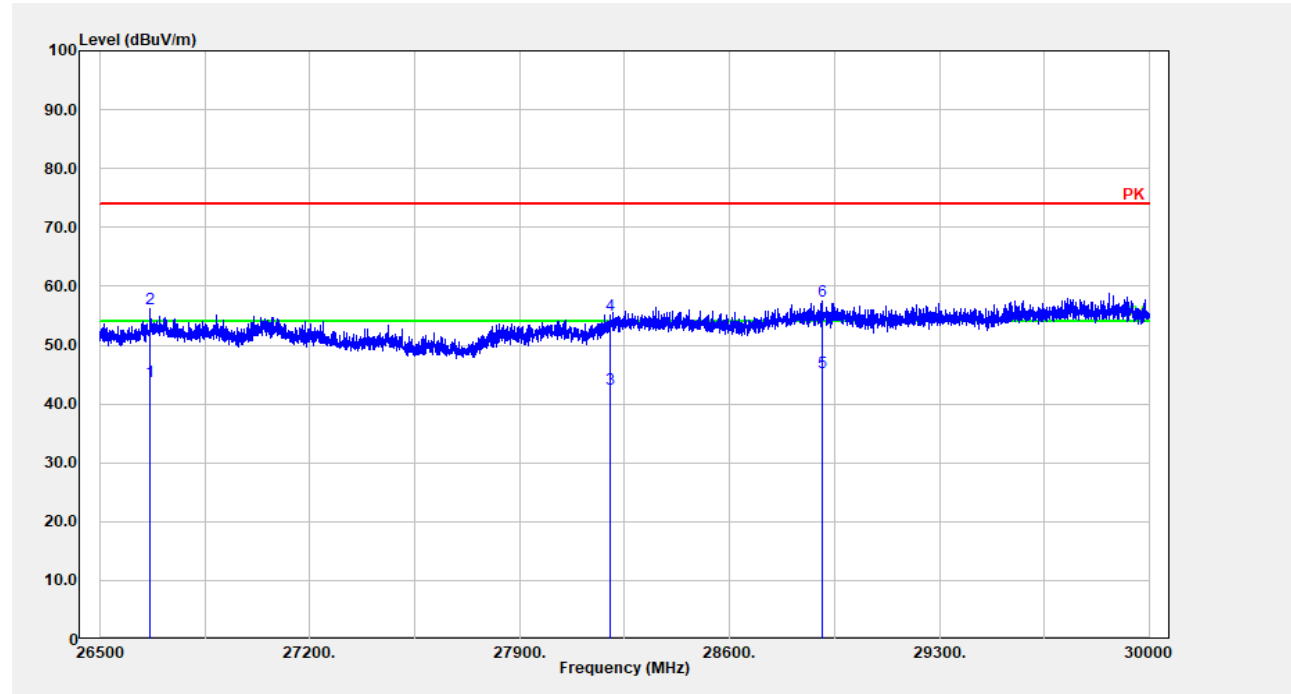
No.	Frequency (MHz)	Reading (dB μ V)	Factor (dB/m)	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector
1	13921.580	21.33	24.21	45.54	54.00	8.46	Average
2	13921.580	33.98	24.21	58.19	74.00	15.81	Peak
3	15661.930	25.49	22.33	47.82	54.00	6.18	Average
4	15661.930	37.68	22.33	60.01	74.00	13.99	Peak
5	17767.150	25.38	30.68	56.06	54.00	-2.06	Average
6	17767.150	37.53	30.68	68.21	74.00	5.79	Peak

Horizontal:

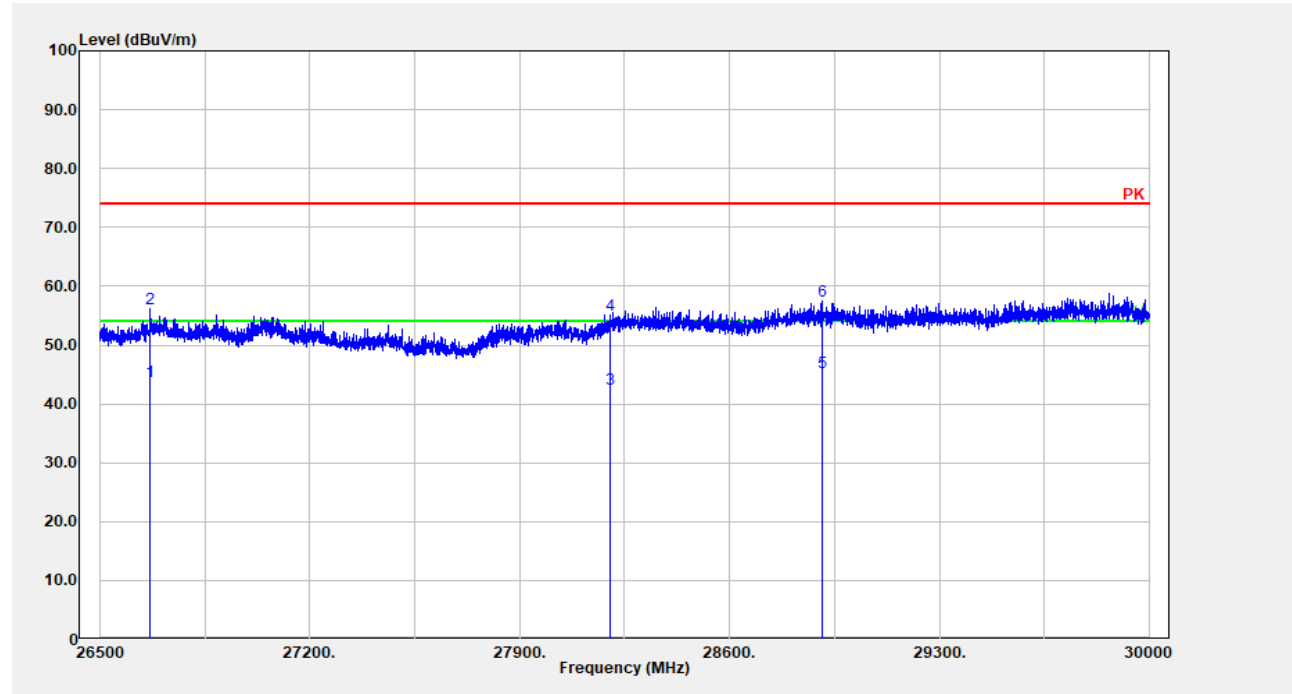
No.	Frequency (MHz)	Reading (dB μ V)	Factor (dB/m)	Result (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector
1	18855.270	32.64	5.49	38.13	54.00	15.87	Average
2	18855.270	44.85	5.49	50.34	74.00	23.66	Peak
3	20627.030	31.59	6.97	38.56	54.00	15.44	Average
4	20627.030	43.09	6.97	50.06	74.00	23.94	Peak
5	22463.390	28.54	10.82	39.36	54.00	14.64	Average
6	22463.390	40.60	10.82	51.42	74.00	22.58	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	19836.370	32.48	5.82	38.30	54.00	15.70	Average
2	19836.370	44.12	5.82	49.94	74.00	24.06	Peak
3	22459.990	28.46	10.78	39.24	54.00	14.76	Average
4	22459.990	40.39	10.78	51.17	74.00	22.83	Peak
5	24206.240	29.55	11.09	40.64	54.00	13.36	Average
6	24206.240	41.07	11.09	52.16	74.00	21.84	Peak

Horizontal:

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	26665.930	30.58	13.21	43.79	54.00	10.21	Average
2	26665.930	42.95	13.21	56.16	74.00	17.84	Peak
3	28202.040	28.55	13.92	42.47	54.00	11.53	Average
4	28202.040	41.15	13.92	55.07	74.00	18.93	Peak
5	28907.780	30.59	14.78	45.37	54.00	8.63	Average
6	28907.780	42.64	14.78	57.42	74.00	16.58	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	26665.930	30.58	13.21	43.79	54.00	10.21	Average
2	26665.930	42.95	13.21	56.16	74.00	17.84	Peak
3	28202.040	28.55	13.92	42.47	54.00	11.53	Average
4	28202.040	41.15	13.92	55.07	74.00	18.93	Peak
5	28907.780	30.59	14.78	45.37	54.00	8.63	Average
6	28907.780	42.64	14.78	57.42	74.00	16.58	Peak

===== END OF REPORT =====