



中认信通
CHINA CERTIFICATION ICT CO., LTD (DONGGUAN)



TEST REPORT

Applicant: HONG KONG IPRO TECHNOLOGY CO.,LIMITED

Address: 12/F., San Toi Building 137-139 Connaught Road Central HK

FCC ID: PQ4IPROF188S

Product Name: Mobile Phone

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

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

Report Number: CR230744239-00A

Date Of Issue: 2023/8/23

Reviewed By: Sun Zhong
Title: Manager

Sun Zhong

Test Laboratory: China Certification ICT Co., Ltd (Dongguan)
No. 113, Pingkang Road, Dalang Town, Dongguan,
Guangdong, China
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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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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	CR230744239-00A	Original Report	2023/8/23

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

EUT Name:	Mobile Phone
EUT Model:	F188S
Multiple Model:	F182S,F183S,F185S,F186S,F187S,F189S,K1,K2 Pro
Highest Operation Frequency:	2690MHz
Rated Input Voltage:	DC 3.7V from battery or DC 5V from Adapter
Serial Number:	294Q-2(for AC line conducted emission test) 294Q-4(for Radiated emission test)
EUT Received Date:	2023/8/1
EUT Received Status:	Good
Note: The Multiple models are electrically identical with test model, please refer to the declaration letter for more detail, which was provided by manufacturer.	

Accessory Information:

Accessory Description	Manufacturer	Model
Adapter	HONG KONG IPRO TECHNOLOGY CO.,LIMITED	NTR-02

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

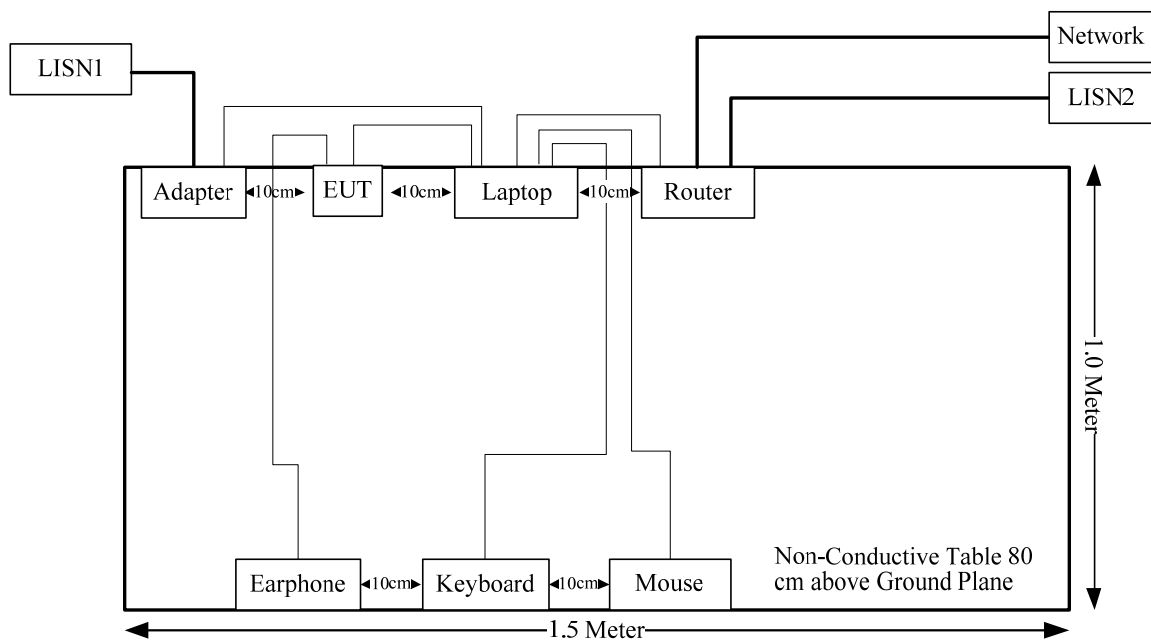
Manufacturer	Description	Model	Serial Number
CLC	Earphone	Whiteview5.0	EP21106054
PHILIPS	Keyboard	SPT6234	K234210510746
PHILIPS	Mouse	SPT6234	C234210506222
Lenovo	Laptop	T460S	60PDTEK8
Lenovo	Adapter	ADLX45DLC3A	00HM613
TOTO LINK	Router	X5000R	X5000RK9T0560

1.2.3 Support Cable List and Details

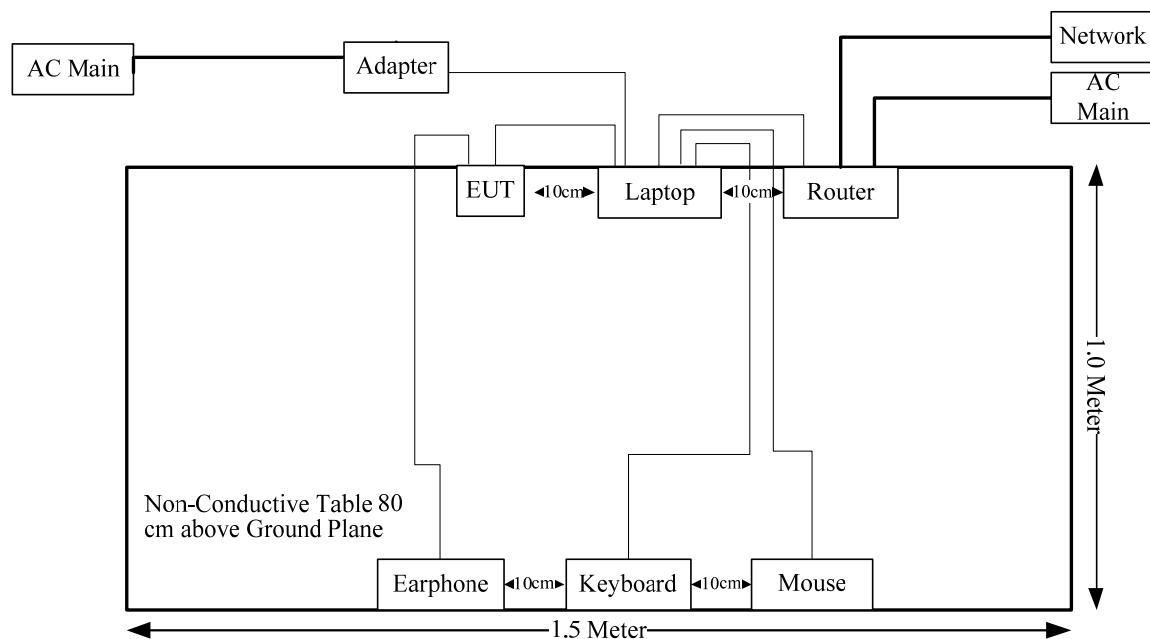
Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
RJ45 Cable	Yes	No	1.2	Router	Laptop
RJ45 Cable	Yes	No	10	Laptop	Router
USB Cable	No	No	0.8	EUT	Laptop
Adapter Cable	Yes	No	1.5	Laptop	Adapter
Keyboard Cable	No	No	1.2	Keyboard	Laptop
Mouse Cable	No	No	1.2	Mouse	Laptop
Earphone Cable	No	No	1.2	Earphone	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)

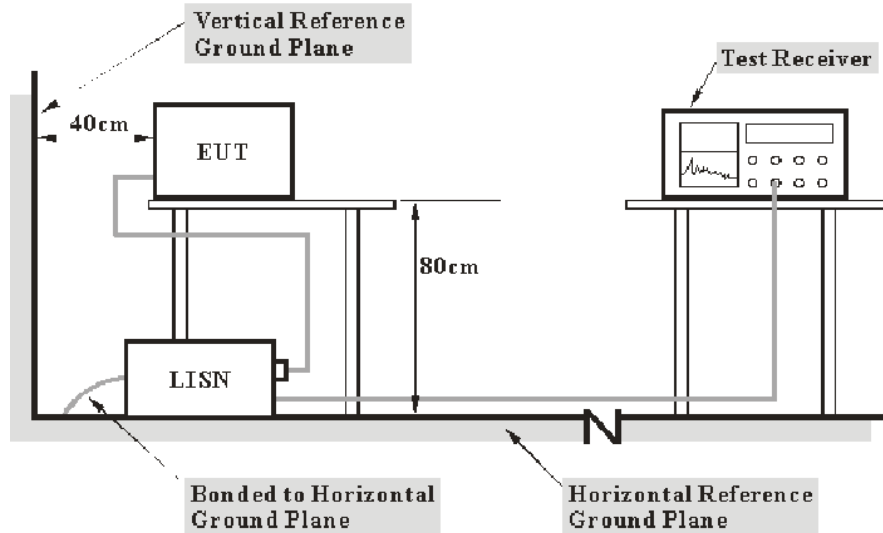
2. SUMMARY OF TEST RESULTS

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 or EUT 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

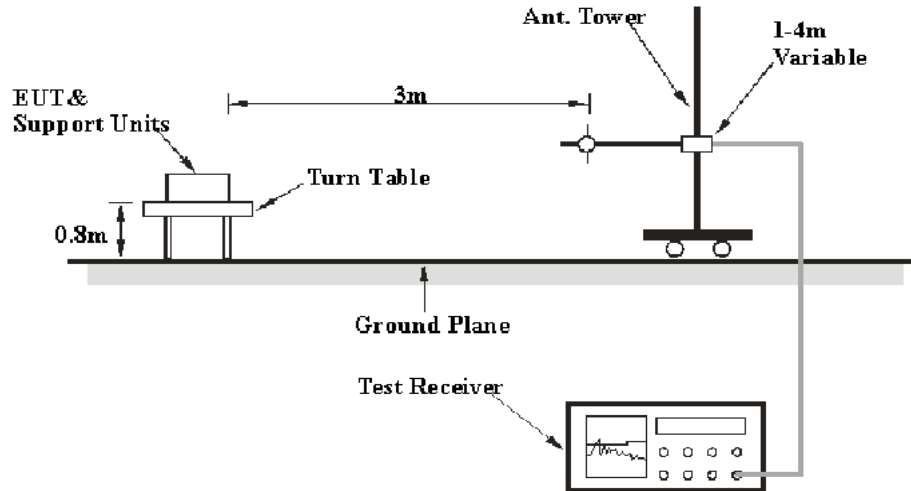
The “**Margin**” column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

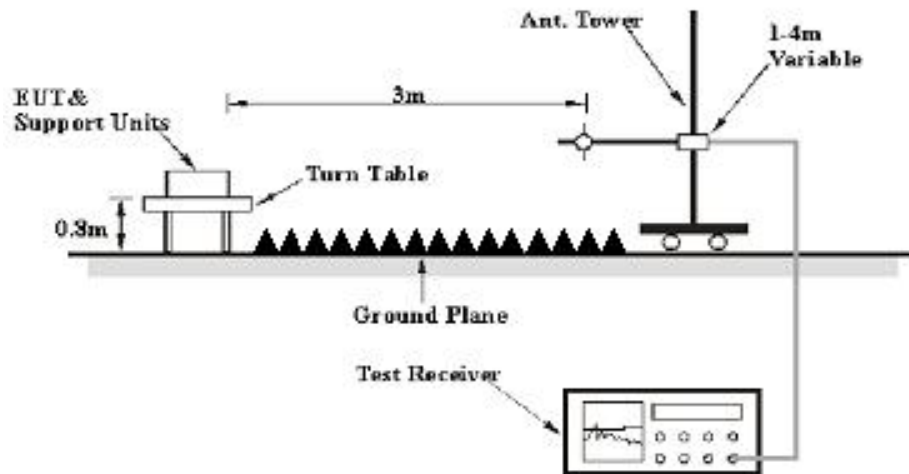
3.2 Radiation Spurious Emissions

3.2.1 EUT Setup

Below 1GHz:



Above 1GHz:



The radiated emissions 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 13.5 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	Detector
30 MHz – 1000 MHz	120 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1 MHz	3 MHz	/	Peak
	1 MHz	3 MHz	/	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.

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:	294Q-2	Test Date:	2023/08/14
Test Site:	CE	Test Mode:	Downloading
Tester:	David Huang	Test Result:	Pass

Environmental Conditions:

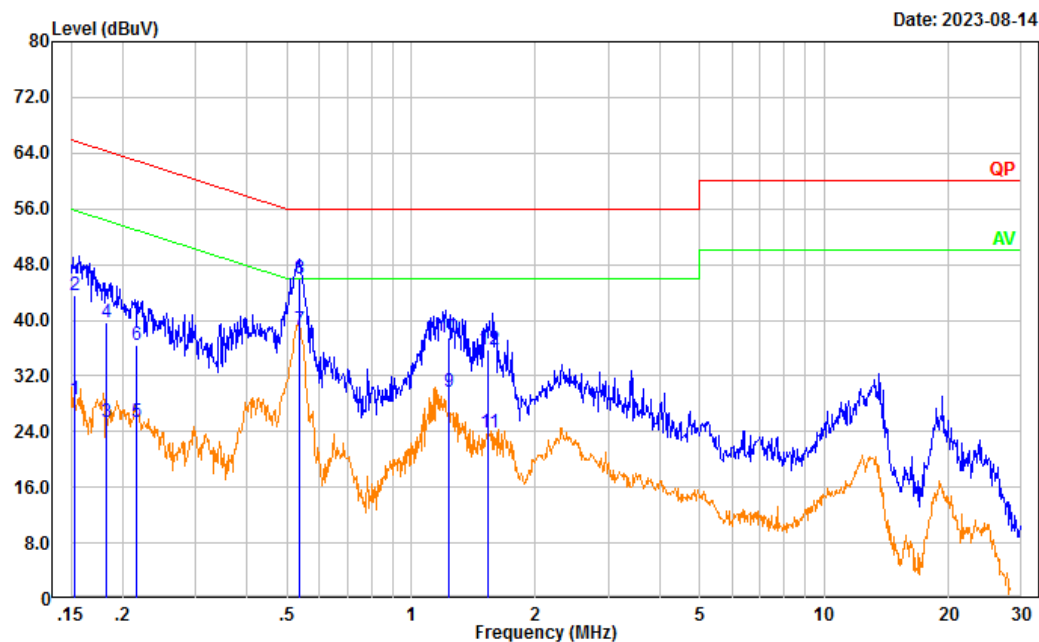
Temperature: (°C)	26	Relative Humidity: (%)	72	ATM Pressure: (kPa)	100.5
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Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	LISN	ENV216	101134	2023/03/31	2024/03/30
R&S	EMI Test Receiver	ESR3	102726	2023/03/31	2024/03/30
MICRO-COAX	Coaxial Cable	UTIFLEX	C-0200-01	2023/08/06	2024/08/05
Audix	Test Software	E3	190306 (V9)	N/A	N/A

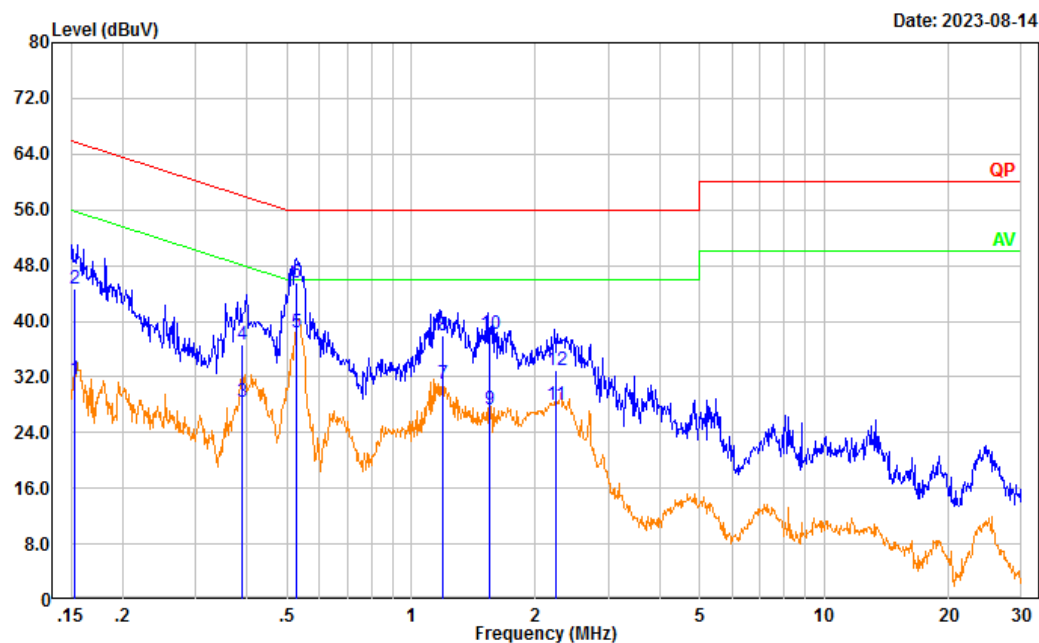
** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Mode: Downloading
Port: Line
Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Detector
1	0.153	18.98	9.61	28.59	55.84	27.25	Average
2	0.153	34.02	9.61	43.63	65.84	22.21	QP
3	0.182	15.72	9.61	25.33	54.38	29.05	Average
4	0.182	30.01	9.61	39.62	64.38	24.76	QP
5	0.216	15.82	9.61	25.43	52.98	27.55	Average
6	0.216	26.90	9.61	36.51	62.98	26.47	QP
7	0.535	28.93	9.61	38.54	46.00	7.46	Average
8	0.535	36.40	9.61	46.01	56.00	9.99	QP
9	1.228	19.99	9.62	29.61	46.00	16.39	Average
10	1.228	27.89	9.62	37.51	56.00	18.49	QP
11	1.540	14.30	9.63	23.93	46.00	22.07	Average
12	1.540	26.10	9.63	35.73	56.00	20.27	QP

Test Mode: Downloading
Port: neutral
Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Detector
1	0.153	22.14	9.61	31.75	55.84	24.09	Average
2	0.153	35.08	9.61	44.69	65.84	21.15	QP
3	0.389	18.80	9.61	28.41	48.08	19.67	Average
4	0.389	26.99	9.61	36.60	58.08	21.48	QP
5	0.526	28.87	9.61	38.48	46.00	7.52	Average
6	0.526	36.01	9.61	45.62	56.00	10.38	QP
7	1.190	21.41	9.62	31.03	46.00	14.97	Average
8	1.190	28.30	9.62	37.92	56.00	18.08	QP
9	1.553	17.63	9.63	27.26	46.00	18.74	Average
10	1.553	28.55	9.63	38.18	56.00	17.82	QP
11	2.239	18.42	9.63	28.05	46.00	17.95	Average
12	2.239	23.31	9.63	32.94	56.00	23.06	QP

4.2 Radiation Spurious Emissions

Serial Number:	294Q-4	Test Date:	2023/8/12~2023/8/17
Test Site:	966-2, 966-1	Test Mode:	Downloading
Tester:	Vic Du, Mack Huang	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	26.6~27.6	Relative Humidity: (%)	60~62	ATM Pressure: (kPa)	99.7~100
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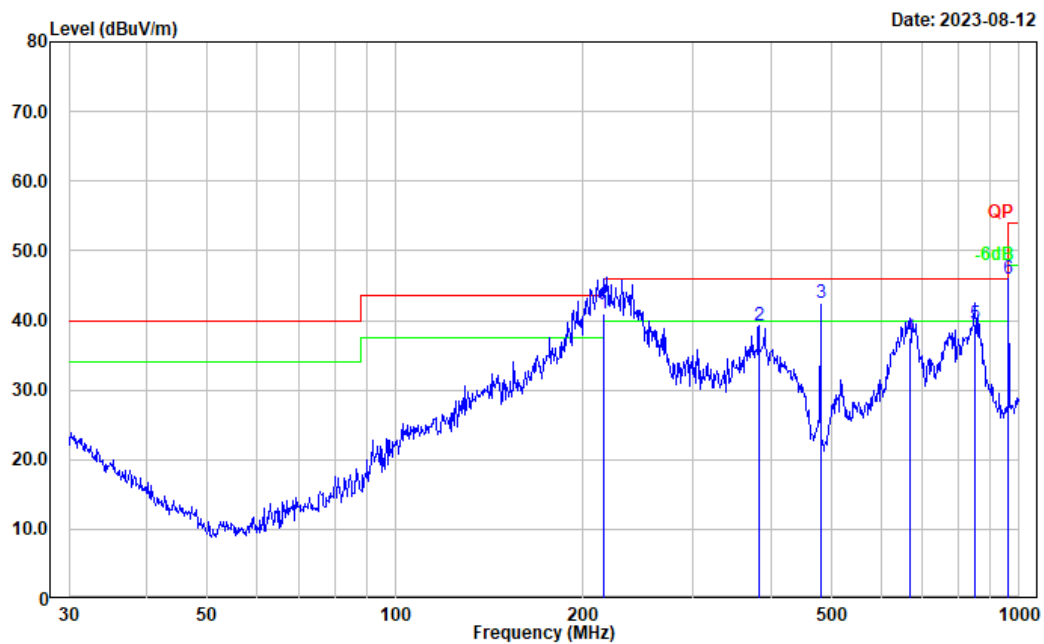
Test Equipment List and Details:

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	2023/3/31	2024/3/30
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0470-02	2023/7/16	2024/7/15
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0780-01	2023/7/16	2024/7/15
Sonoma	Amplifier	310N	186165	2023/7/16	2024/7/15
Audix	Test Software	E3	201021 (V9)	N/A	N/A
ETS-Lindgren	Horn Antenna	3115	9912-5985	2020/10/13	2023/10/12
R&S	Spectrum Analyzer	FSV40	101591	2023/3/31	2024/3/30
MICRO-COAX	Coaxial Cable	UFA210A-1-1200-70U300	217423-008	2023/8/6	2024/8/5
MICRO-COAX	Coaxial Cable	UFA210A-1-2362-300300	235780-001	2023/8/6	2024/8/5
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2022/11/9	2023/11/8
E-Microwave	Band Rejection Filter	2400-2483.5MHz	OE01902424	2023/8/6	2024/8/5
Mini Circuits	High Pass Filter	VHF-6010+	31119	2023/8/6	2024/8/5

* 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).

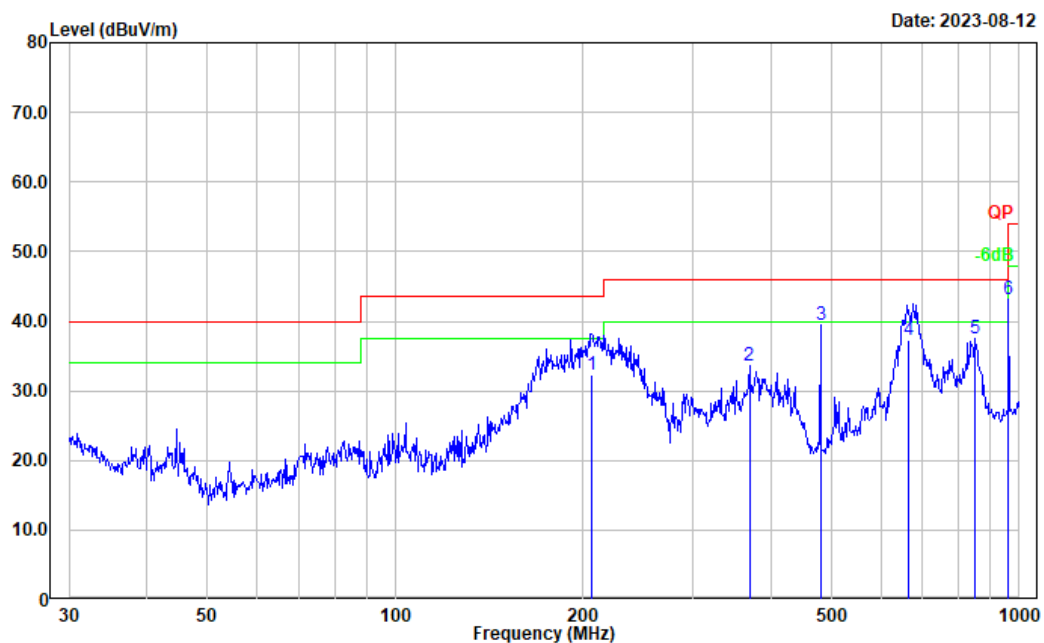
1) 30MHz-1GHz:

Project No.: CR230744239-RF
Tester: Carl Xue
Polarization: horizontal
Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	215.268	53.48	-12.61	40.87	43.50	2.63	QP
2	382.588	48.20	-9.05	39.15	46.00	6.85	Peak
3	480.009	48.81	-6.24	42.57	46.00	3.43	QP
4	668.142	41.54	-4.12	37.42	46.00	8.58	QP
5	851.035	41.03	-1.47	39.56	46.00	6.44	QP
6	962.162	45.91	0.14	46.05	54.00	7.95	Peak

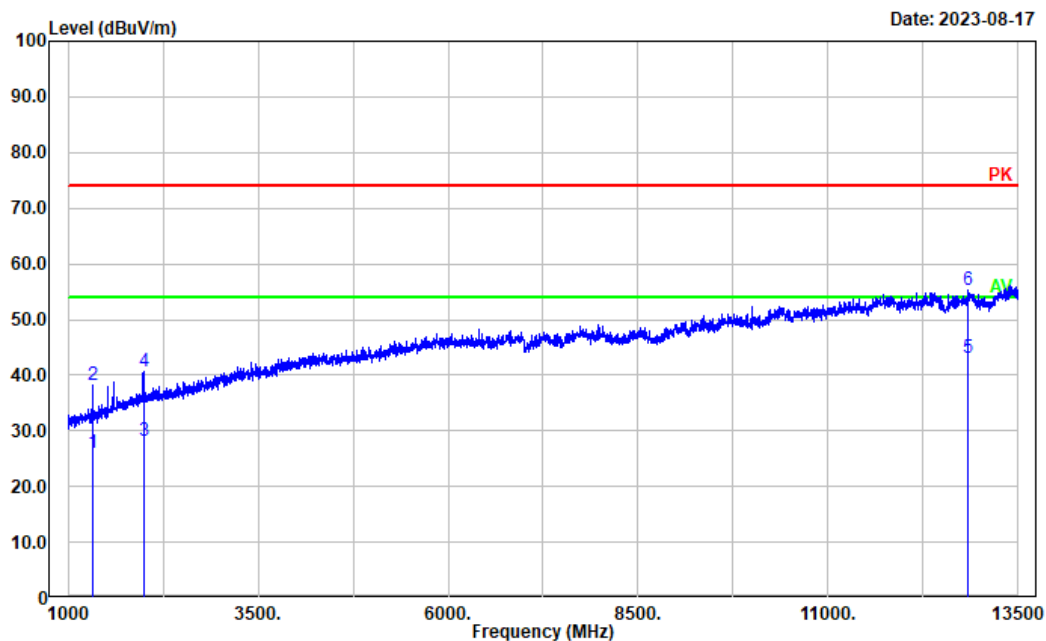
Test Mode: Downloading
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	206.402	44.67	-12.39	32.28	43.50	11.22	QP
2	369.405	43.23	-9.53	33.70	46.00	12.30	Peak
3	480.528	45.72	-6.25	39.47	46.00	6.53	Peak
4	664.854	41.54	-4.16	37.38	46.00	8.62	QP
5	848.056	39.03	-1.53	37.50	46.00	8.50	Peak
6	962.162	42.95	0.14	43.09	54.00	10.91	Peak

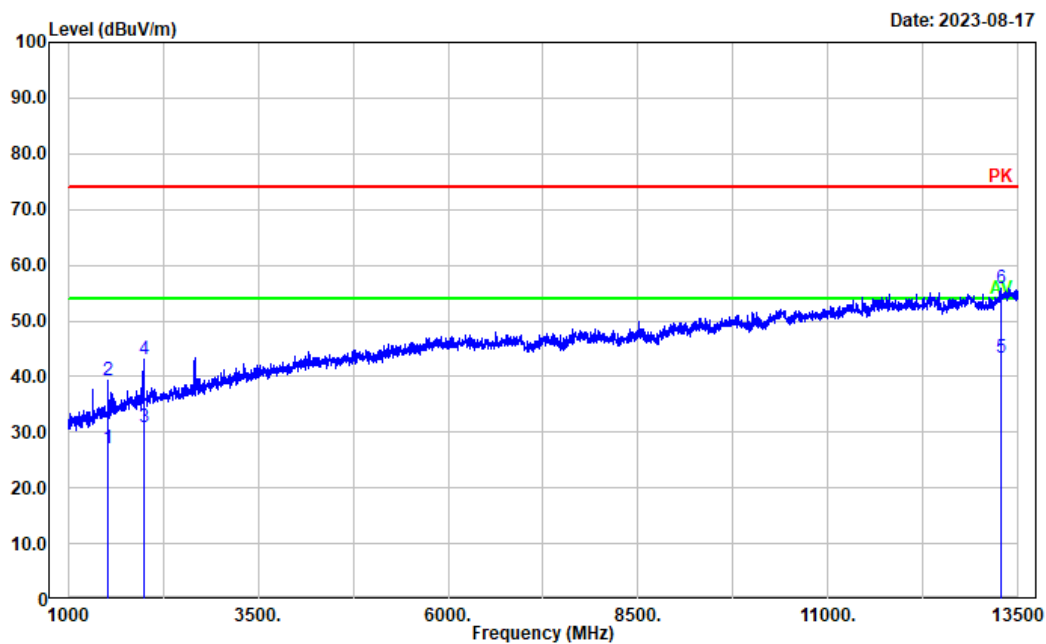
2) Above 1GHz:

Project No.: CR230744239-RF
Tester: Mack Huang
Test Mode: Downloading
Polarization: horizontal
Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	1329.866	27.53	-1.43	26.10	54.00	27.90	Average
2	1329.866	39.62	-1.43	38.19	74.00	35.81	Peak
3	1992.999	25.99	2.28	28.27	54.00	25.73	Average
4	1992.999	38.25	2.28	40.53	74.00	33.47	Peak
5	12830.970	21.19	22.02	43.21	54.00	10.79	Average
6	12830.970	33.40	22.02	55.42	74.00	18.58	Peak

Project No.: CR230744239-RF
Tester: Mack Huang
Test Mode: Downloading
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector

1	1527.105	27.44	-0.29	27.15	54.00	26.85	Average
2	1527.105	39.58	-0.29	39.29	74.00	34.71	Peak
3	1992.999	28.74	2.28	31.02	54.00	22.98	Average
4	1992.999	40.76	2.28	43.04	74.00	30.96	Peak
5	13283.260	20.91	22.54	43.45	54.00	10.55	Average
6	13283.260	33.35	22.54	55.89	74.00	18.11	Peak

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