



中认信通

CHINA CERTIFICATION ICT CO., LTD (DONGGUAN)



TEST REPORT

Applicant: Xiamen VBeT Electronic Co., Ltd.

Address: N403, Weiye Building, Xiamen Pioneering Park for Overseas Chinese Scholars, PRC ,Xiamen, China

FCC ID: 2AC67-B320BT

Product Name: Bluetooth Headset

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: CR230743745-00A

Date Of Issue: 2023/8/25

Reviewed By: Calvin Chen

Title: RF Engineer

Approved By: Sun Zhong

Title: Manager

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

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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	CR230743745-00A	Original Report	2023/8/25

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

Product Name:	Bluetooth Headset
Trade Name:	VT
Test Model:	VT B320 BT
Multiple Models:	B320 BT
Highest Operation Frequency:	2480 MHz
Rated Input Voltage:	DC 5V form Adapter/Charging Base (for Charging) or DC 3.8V from Internal Battery
Serial Number:	290H-1
EUT Received Date:	2023/8/ 2
EUT Received Status:	Good
Note: The multiple models are electrically identical with the test model except the model number for marketing purpose. Please refer to the declaration letter for more detail, which was provided by manufacturer.	

Accessory Information:

Accessory Description	Manufacturer	Model
USB-C Cable	/	/

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: M1: Charging from Adapter M2: Charging from Charging Base Note: The EUT could be turned on but in standby mode while charging.
Equipment Modifications:	No
EUT Exercise Software:	No

1.2.2 Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Jian Aohai	Adapter	A8-050200U-US3	AD220930002
XTOUCH	Phone	S40	4069092900015
VbeT	Charging Base	VT X300 BS	/

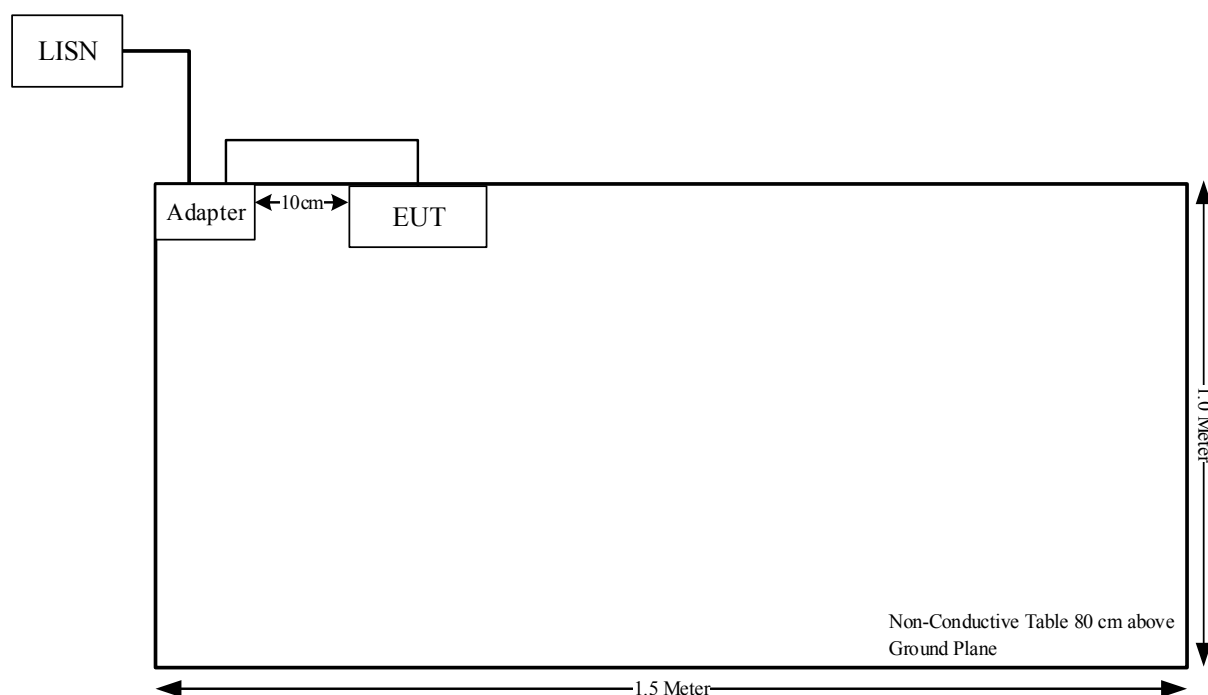
1.2.3 Support Cable List and Details

Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
/	/	/	/	/	/

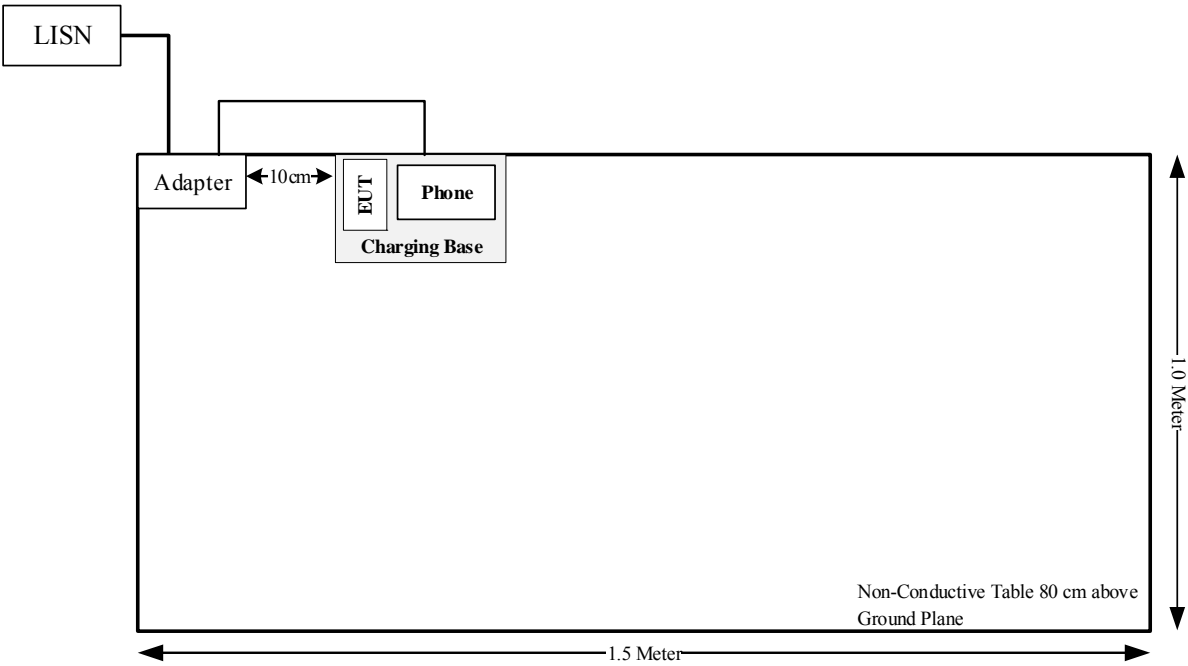
1.2.4 Block Diagram of Test Setup

AC line conducted emissions:

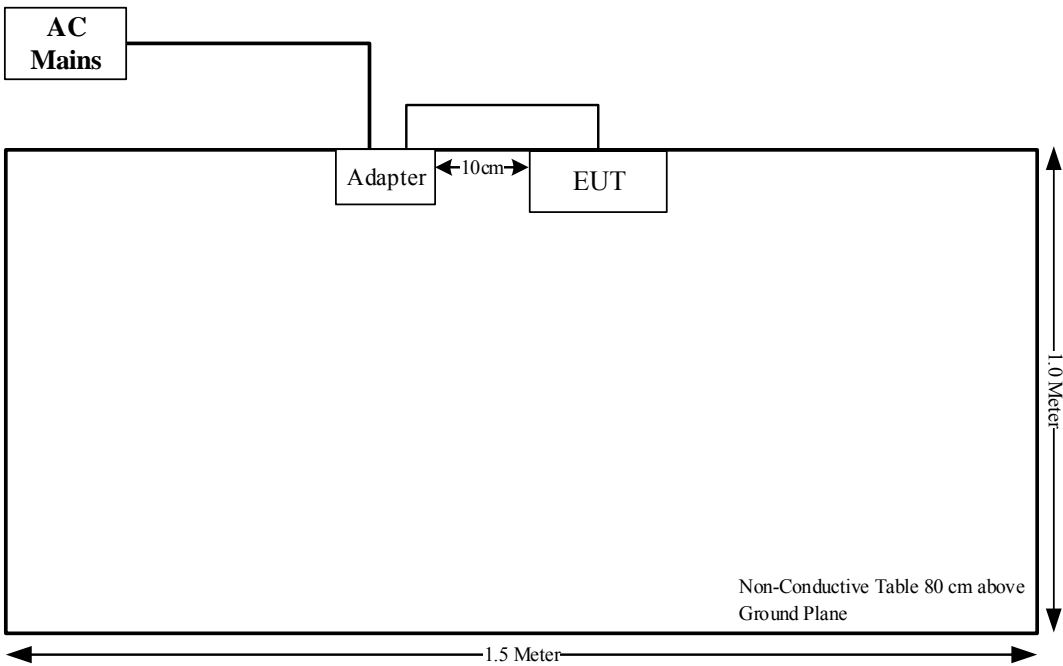
M1:



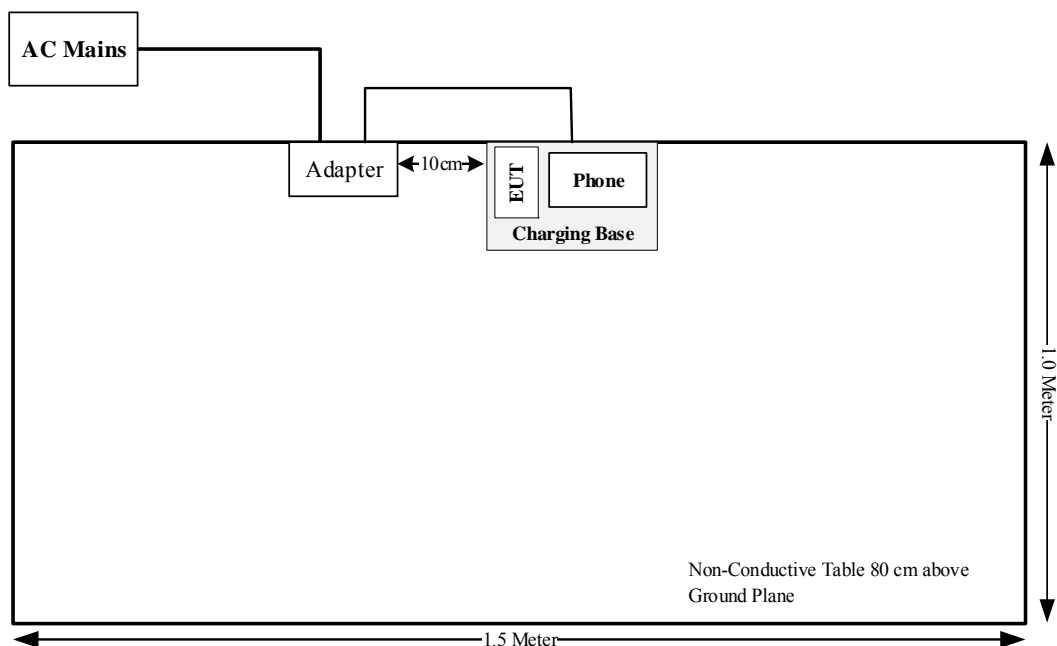
M2:



Radiated Emissions:
M1:



M2:



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)

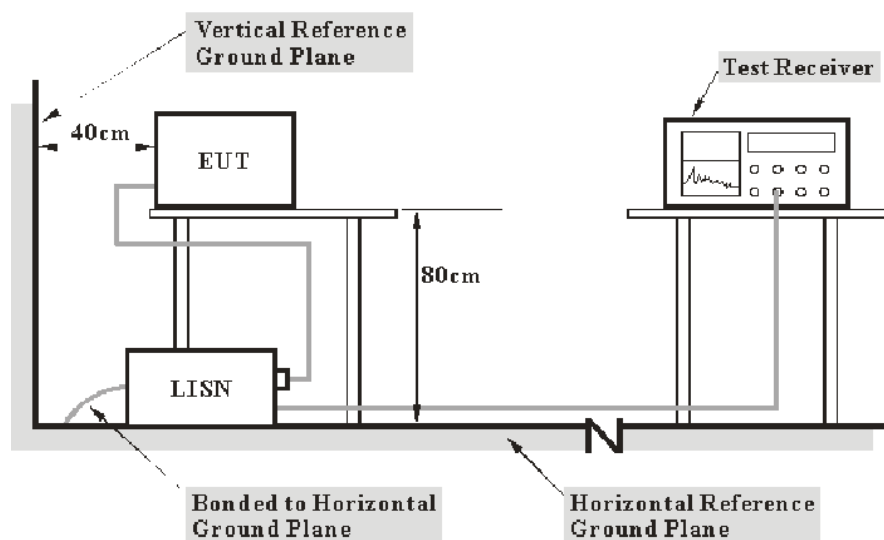
2. SUMMARY OF TEST RESULTS

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

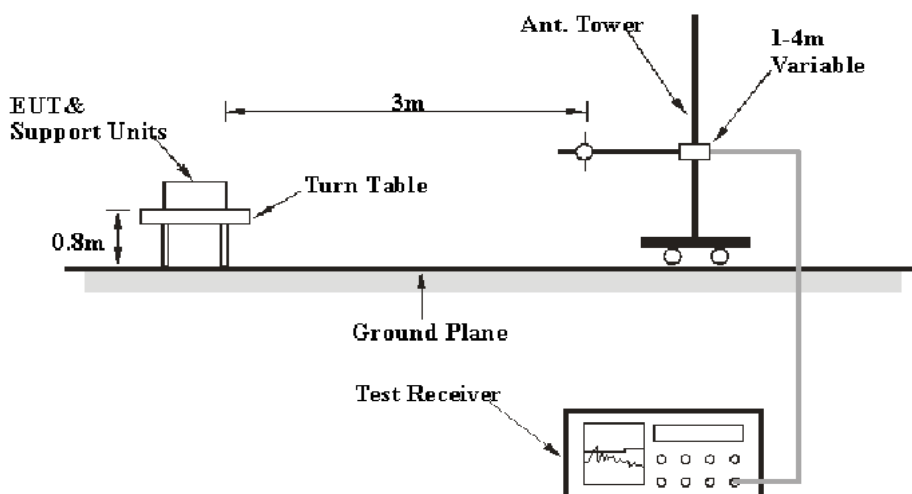
The “**Margin**” column of the following data tables indicates the degree of compliance within the applicable limit. The equation for margin calculation is as follows:

Margin = Limit – Result

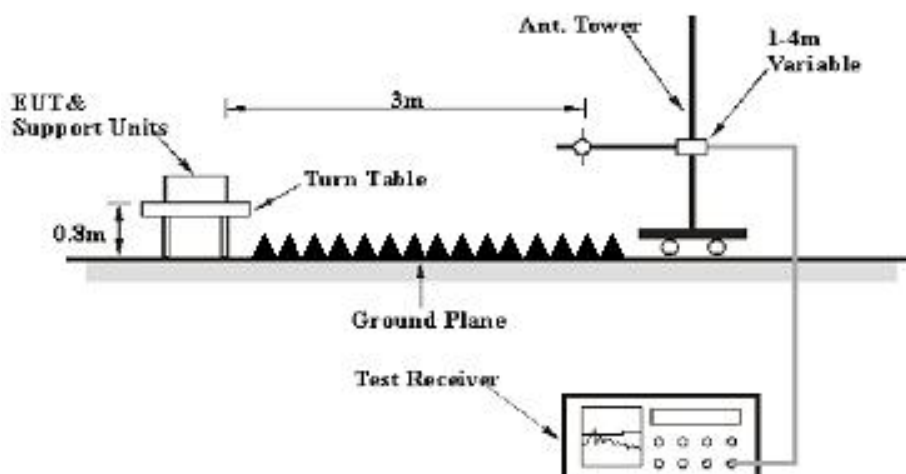
3.2 Radiation Spurious Emissions

3.2.1 EUT Setup

Below 1GHz:



Above 1GHz:



The radiated 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 Equipment Setup

The system was investigated from 30 MHz to 13 GHz.

During the radiated emission test, the test equipment 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	10Hz	/	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:	290H-1	Test Date:	2023/8/4
Test Site:	CE	Test Mode:	M1, M2
Tester:	David Huang	Test Result:	Pass

Environmental Conditions:					
Temperature: (°C)	26	Relative Humidity: (%)	57	ATM Pressure: (kPa)	100.5

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	2022/08/07	2023/08/06
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 Data:

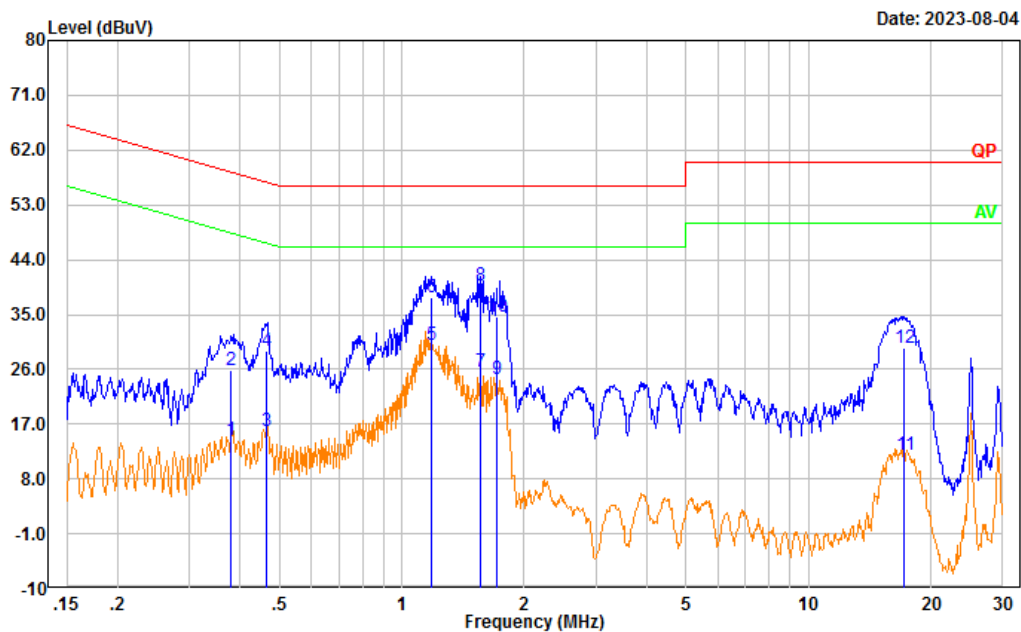
M1: Charging from Adapter

Project No.: CR230743745-RF

Tester: David Huang

Port: Line

Note:



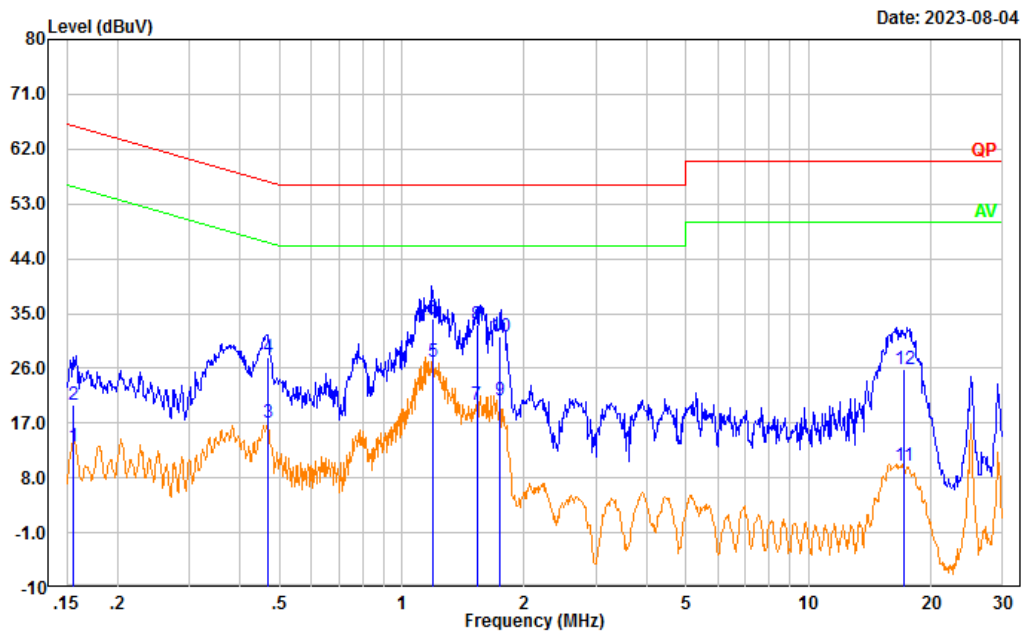
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.381	4.71	9.61	14.32	48.25	33.93	Average
2	0.381	16.27	9.61	25.88	58.25	32.37	QP
3	0.466	6.34	9.61	15.95	46.59	30.64	Average
4	0.466	19.41	9.61	29.02	56.59	27.57	QP
5	1.181	20.41	9.62	30.03	46.00	15.97	Average
6	1.181	28.30	9.62	37.92	56.00	18.08	QP
7	1.565	16.10	9.63	25.73	46.00	20.27	Average
8	1.565	30.21	9.63	39.84	56.00	16.16	QP
9	1.710	14.87	9.63	24.50	46.00	21.50	Average
10	1.710	24.96	9.63	34.59	56.00	21.41	QP
11	17.219	2.27	9.73	12.00	50.00	38.00	Average
12	17.219	19.68	9.73	29.41	60.00	30.59	QP

Project No.: CR230743745-RF

Tester: David Huang

Port: neutral

Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Detector
1	0.156	3.61	9.61	13.22	55.70	42.48	Average
2	0.156	10.36	9.61	19.97	65.70	45.73	QP
3	0.467	7.55	9.61	17.16	46.57	29.41	Average
4	0.467	18.09	9.61	27.70	56.57	28.87	QP
5	1.191	17.44	9.62	27.06	46.00	18.94	Average
6	1.191	24.59	9.62	34.21	56.00	21.79	QP
7	1.528	10.40	9.63	20.03	46.00	25.97	Average
8	1.528	23.53	9.63	33.16	56.00	22.84	QP
9	1.745	11.06	9.63	20.69	46.00	25.31	Average
10	1.745	21.61	9.63	31.24	56.00	24.76	QP
11	17.150	0.19	9.69	9.88	50.00	40.12	Average
12	17.150	16.12	9.69	25.81	60.00	34.19	QP

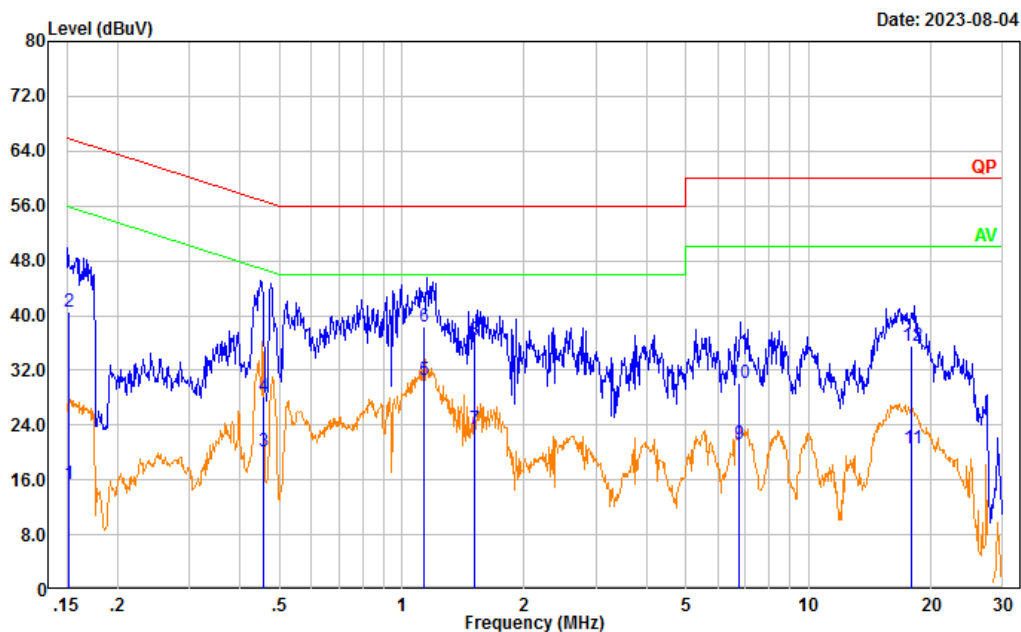
M2: Charging from Charging Base

Project No.: CR230743745-RF

Tester: David Huang

Port: Line

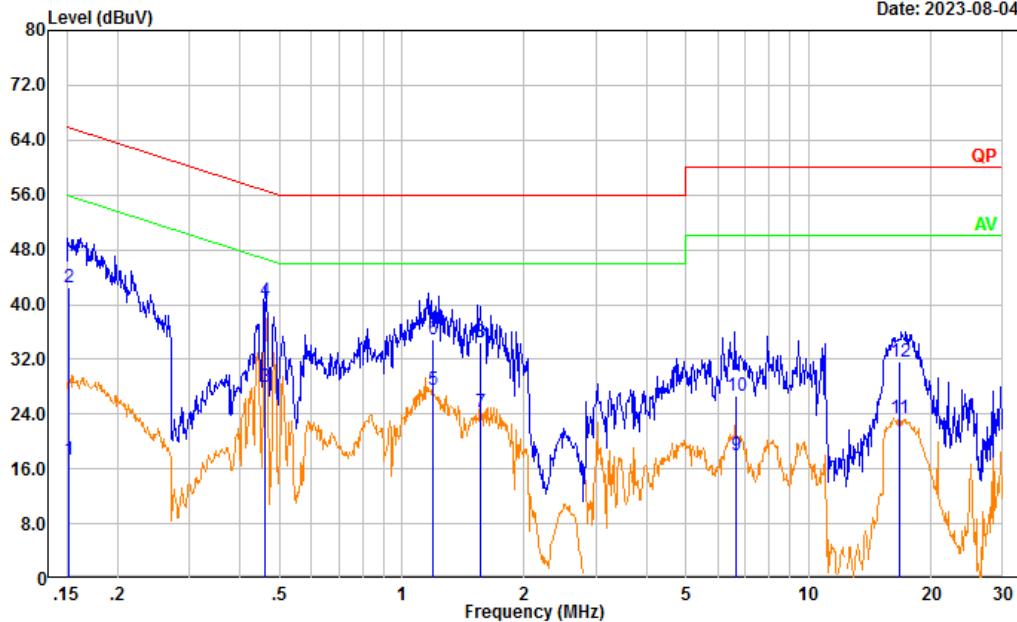
Note:



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Detector
1	0.152	5.70	9.61	15.31	55.89	40.58	Average
2	0.152	30.92	9.61	40.53	65.89	25.36	QP
3	0.457	10.54	9.61	20.15	46.75	26.60	Average
4	0.457	18.57	9.61	28.18	56.75	28.57	QP
5	1.132	21.03	9.62	30.65	46.00	15.35	Average
6	1.132	28.65	9.62	38.27	56.00	17.73	QP
7	1.515	13.84	9.63	23.47	46.00	22.53	Average
8	1.515	26.87	9.63	36.50	56.00	19.50	QP
9	6.749	11.66	9.66	21.32	50.00	28.68	Average
10	6.749	20.48	9.66	30.14	60.00	29.86	QP
11	17.964	10.75	9.75	20.50	50.00	29.50	Average
12	17.964	25.81	9.75	35.56	60.00	24.44	QP

Project No.:
 Tester: David Huang
 Port: neutral
 Note:

Date: 2023-08-04



No.	Frequency (MHz)	Reading (dBμV)	Factor (dB)	Result (dBμV)	Limit (dBμV)	Margin (dB)	Detector
<hr/>							
1	0.152	7.81	9.61	17.42	55.87	38.45	Average
2	0.152	32.94	9.61	42.55	65.87	23.32	QP
3	0.460	18.33	9.61	27.94	46.69	18.75	Average
4	0.460	31.03	9.61	40.64	56.69	16.05	QP
5	1.189	17.93	9.62	27.55	46.00	18.45	Average
6	1.189	25.22	9.62	34.84	56.00	21.16	QP
7	1.562	14.76	9.63	24.39	46.00	21.61	Average
8	1.562	24.74	9.63	34.37	56.00	21.63	QP
9	6.618	8.39	9.66	18.05	50.00	31.95	Average
10	6.618	16.94	9.66	26.60	60.00	33.40	QP
11	16.694	13.62	9.69	23.31	50.00	26.69	Average
12	16.694	22.00	9.69	31.69	60.00	28.31	QP

4.2 Radiation Spurious Emissions

Serial Number:	290H-1	Test Date:	2023/8/7~2023/8/15
Test Site:	966-1, 966-2	Test Mode:	M1, M2
Tester:	Vic Du, coco Tian	Test Result:	Pass

Environmental Conditions:					
Temperature: (°C)	26.4~27.1	Relative Humidity: (%)	64~65	ATM Pressure: (kPa)	99.6~100.1

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

* 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).

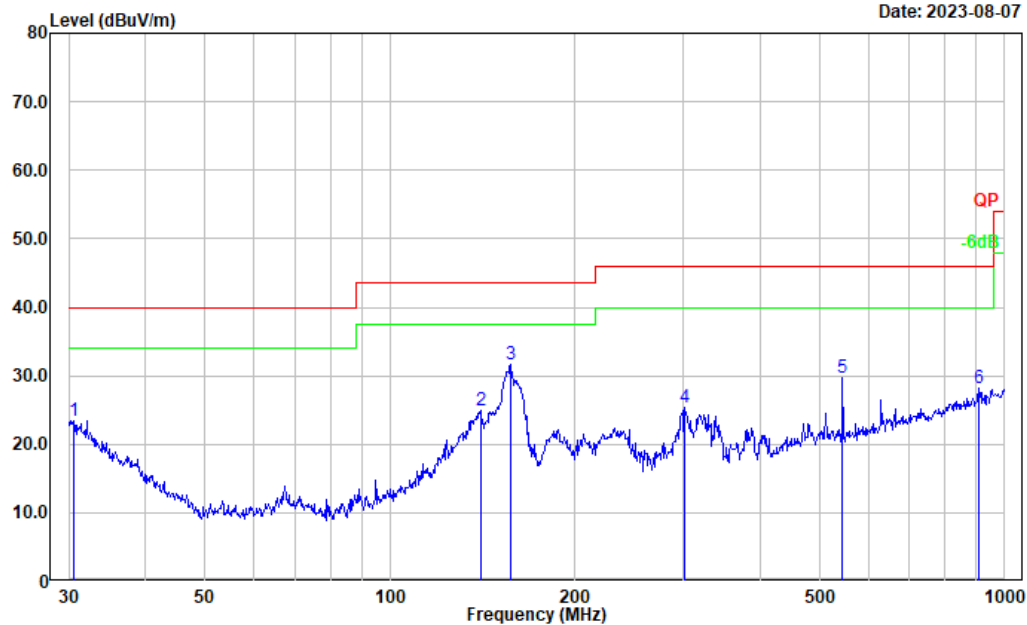
Test Data:

1) 30MHz-1GHz:

M1: Charging from Adapter

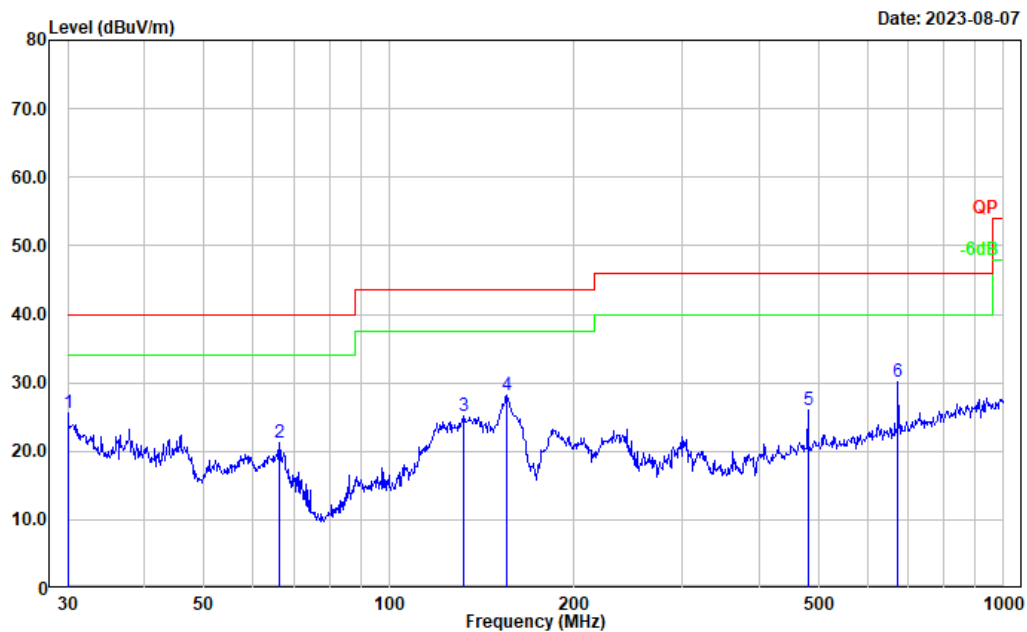
Project No.: CR230743745-RF
Tester: Vic Du
Test Mode: Adapter Charging
Polarization: horizontal
Note:

Date: 2023-08-07



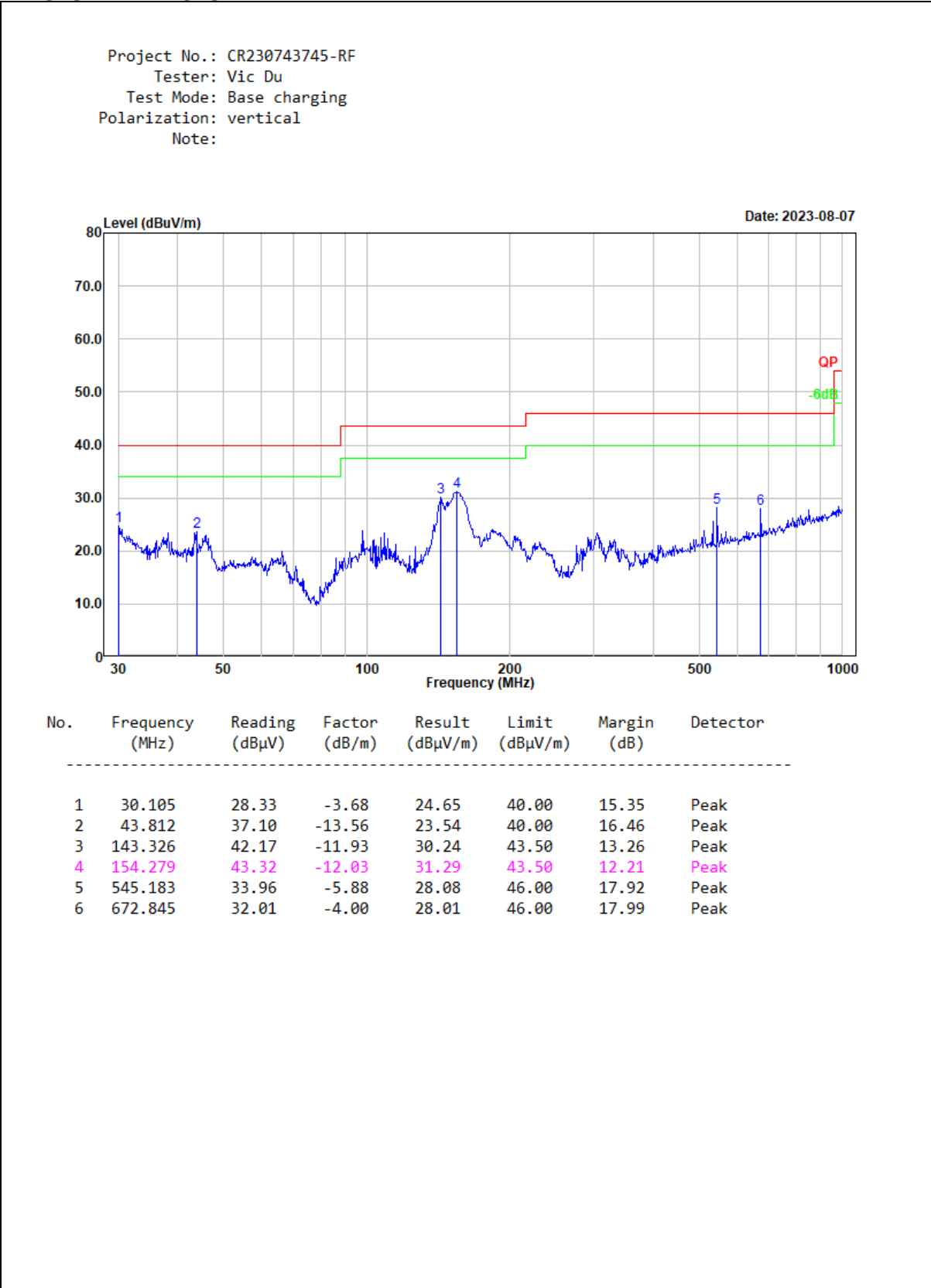
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	30.638	27.54	-4.09	23.45	40.00	16.55	Peak
2	140.342	36.79	-11.89	24.90	43.50	18.60	Peak
3	157.007	43.74	-12.04	31.70	43.50	11.80	Peak
4	301.422	36.01	-10.61	25.40	46.00	20.60	Peak
5	545.183	35.49	-5.88	29.61	46.00	16.39	Peak
6	906.482	28.95	-0.80	28.15	46.00	17.85	Peak

Project No.: CR230743745-RF
Tester: Vic Du
Test Mode: Adapter Charging
Polarization: vertical
Note:

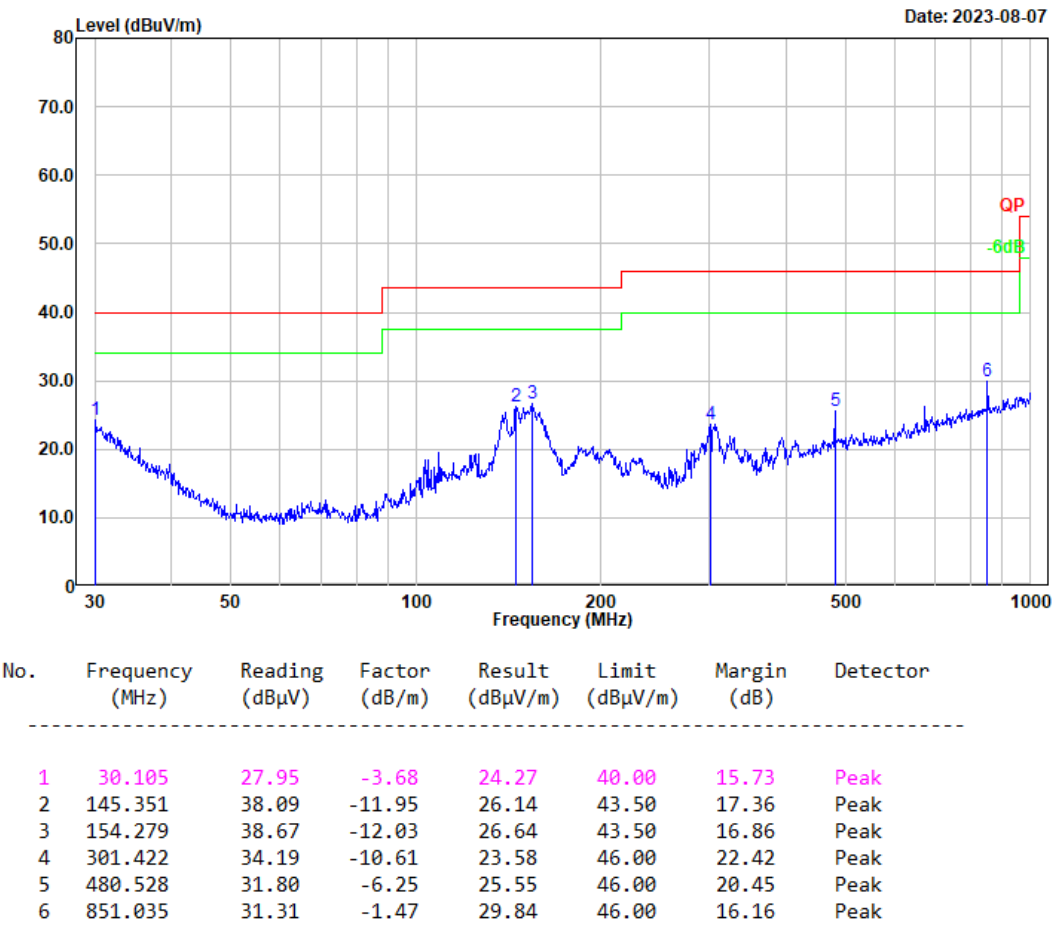


No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	30.000	29.16	-3.60	25.56	40.00	14.44	Peak
2	66.266	38.12	-16.84	21.28	40.00	18.72	Peak
3	132.221	36.52	-11.42	25.10	43.50	18.40	Peak
4	155.364	40.14	-12.06	28.08	43.50	15.42	Peak
5	480.528	32.26	-6.25	26.01	46.00	19.99	Peak
6	672.845	34.06	-4.00	30.06	46.00	15.94	Peak

M2: Charging from Charging Base

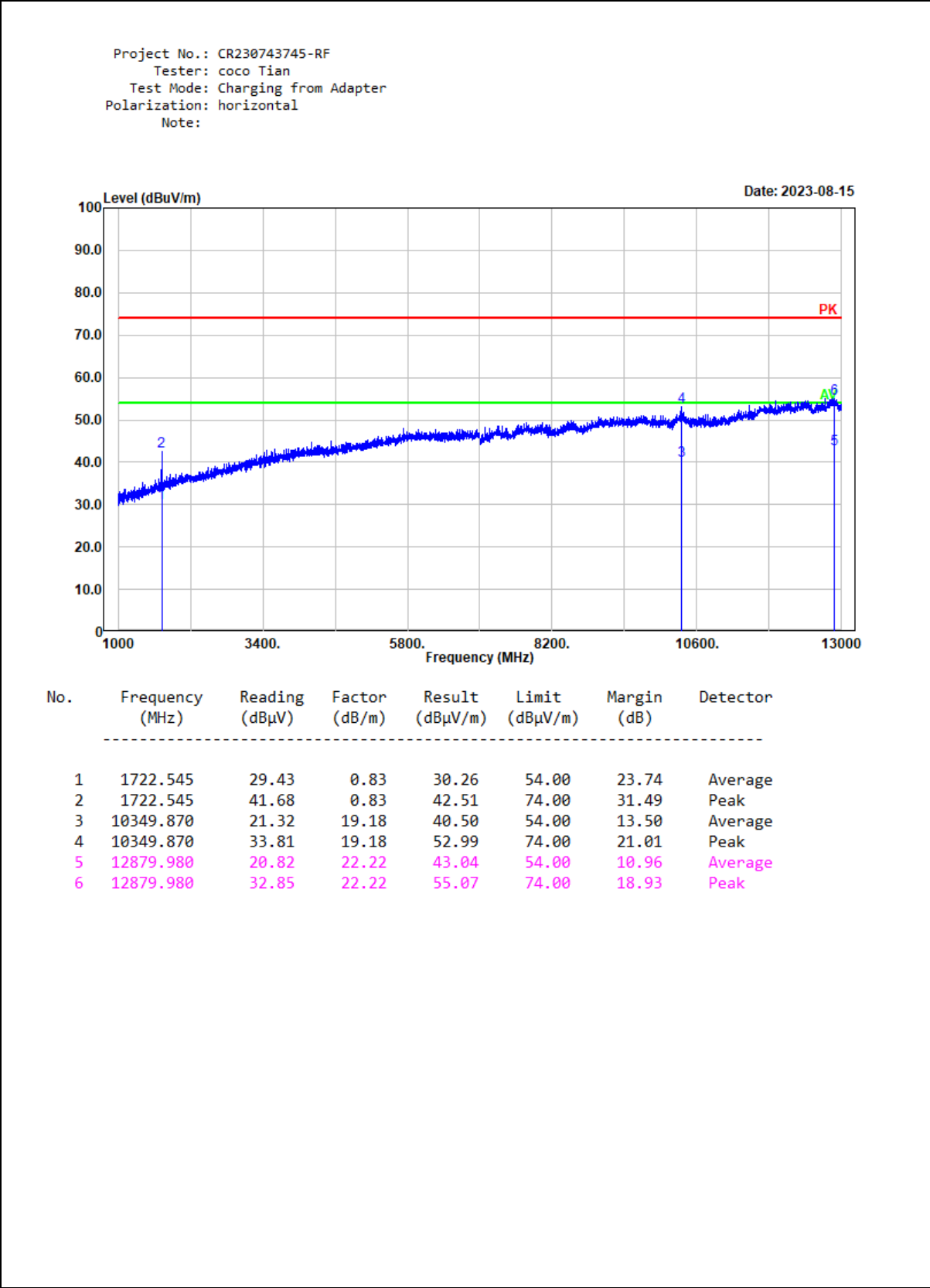


Project No.: CR230743745-RF
Tester: Vic Du
Test Mode: Base charging
Polarization: horizontal
Note:

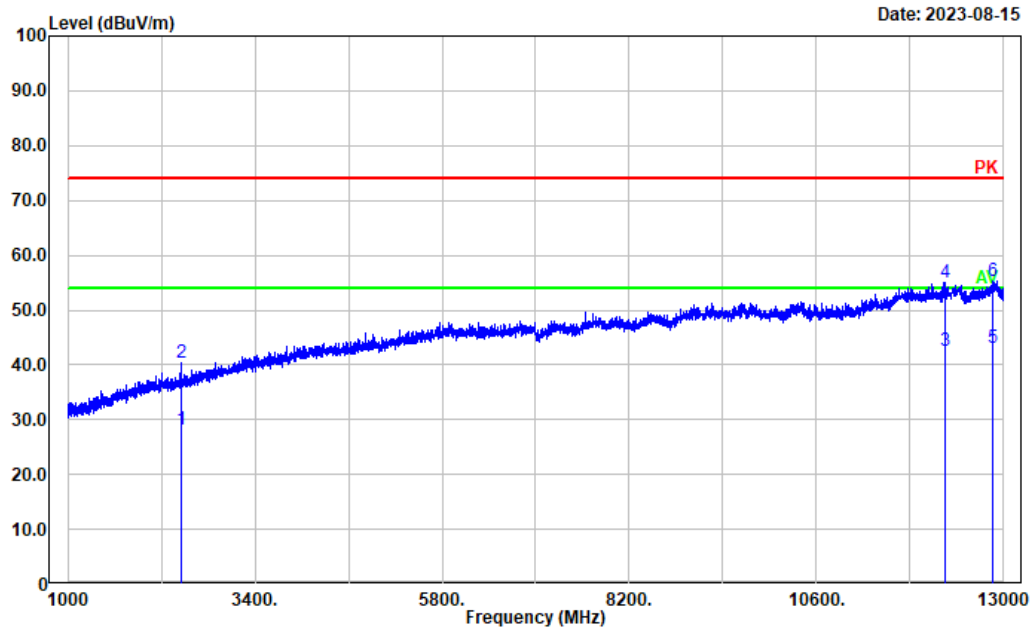


2) Above 1GHz:

M1: Charging from Adapter



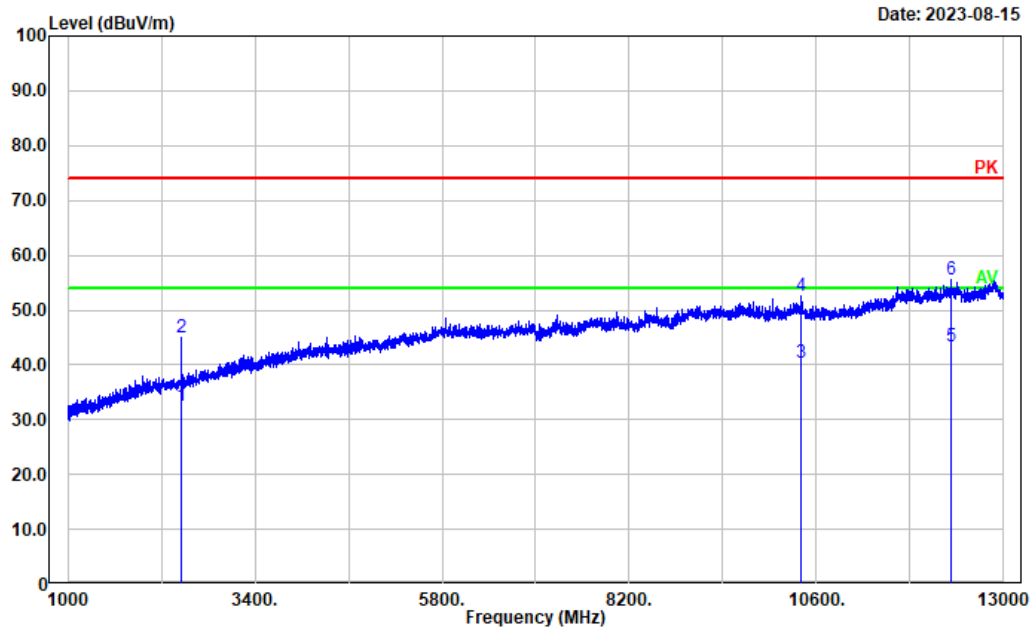
Project No.: CR230743745-RF
Tester: coco Tian
Test Mode: Charging from Adapter
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
<hr/>							
1	2454.691	24.53	3.63	28.16	54.00	25.84	Average
2	2454.691	36.69	3.63	40.32	74.00	33.68	Peak
3	12258.250	21.04	21.42	42.46	54.00	11.54	Average
4	12258.250	33.50	21.42	54.92	74.00	19.08	Peak
5	12867.970	21.02	22.16	43.18	54.00	10.82	Average
6	12867.970	33.19	22.16	55.35	74.00	18.65	Peak

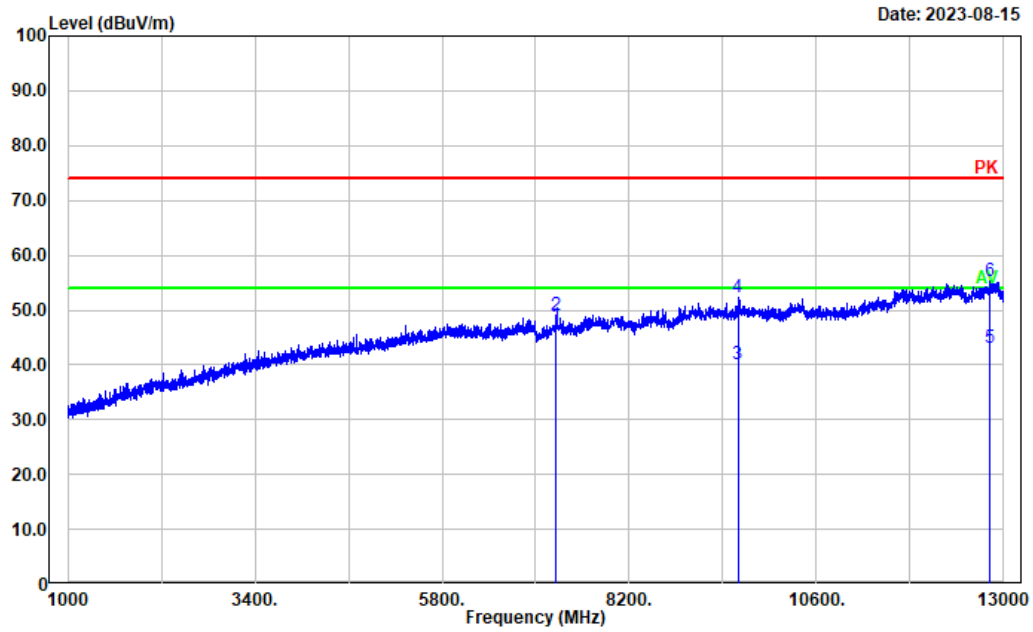
M2: Charging from Charging Base

Project No.: CR230743745-RF
Tester: coco Tian
Test Mode: Charging from Charging Base
Polarization: horizontal
Note:



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
<hr/>							
1	2459.492	28.85	3.62	32.47	54.00	21.53	Average
2	2459.492	41.31	3.62	44.93	74.00	29.07	Peak
3	10409.880	21.12	19.13	40.25	54.00	13.75	Average
4	10409.880	33.34	19.13	52.47	74.00	21.53	Peak
5	12320.660	21.77	21.49	43.26	54.00	10.74	Average
6	12320.660	34.02	21.49	55.51	74.00	18.49	Peak

Project No.: CR230743745-RF
Tester: coco Tian
Test Mode: Charging from Charging Base
Polarization: vertical
Note:



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

1	7250.850	32.54	14.55	47.09	54.00	6.91	Average
2	7250.850	34.62	14.55	49.17	74.00	24.83	Peak
3	9591.318	21.52	18.61	40.13	54.00	13.87	Average
4	9591.318	33.64	18.61	52.25	74.00	21.75	Peak
5	12815.160	21.17	21.95	43.12	54.00	10.88	Average
6	12815.160	33.29	21.95	55.24	74.00	18.76	Peak

5. EUT PHOTOGRAPHS

Please refer to the attachment CR230743745-EXP EUT EXTERNAL PHOTOGRAPHS and CR230743745-
INP EUT INTERNAL PHOTOGRAPHS

6. TEST SETUP PHOTOGRAPHS

Please refer to the attachment CR230743745-00A-TSP TEST SETUP PHOTOGRAPHS.

******* END OF REPORT *******