NVLAP LAB CODE 600341-0

TEST REPORT

Applicant:	**INGENICO**
Address:	**9 Avenue de la gare - Rovaltain TGV,BP25156,Valence Cedex 9, 26958 ,France**
Product Name:	**Smart POS Terminal**
FCC ID:	**XKB-DX4LOBCLWB**
Standard(s):	**FCC PART 15B ANSI C63.4-2014**
Report Number:	**2402Y99420E-RF-00DA1**
Report Date:	**2024/12/14**

The above device has been tested and found compliant with the requirement of the relative standards by Bay Area Compliance Laboratories Corp. (Dongguan).

Reviewed By: Pedro Yun	**Approved By:** Gavin Xu
Title: Project Engineer	Title: RF Supervisor

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	2402Y99420E-RF-00DA1	Original Report	2024/12/14

1. GENERAL INFORMATION

1.1 General Description Of Equipment under Test

EUT Name:	Smart POS Terminal
EUT Model:	AXIUM DX4000
Highest Operation Frequency:	2690MHz
Rated Input Voltage:	5Vdc from adapter or 7.2/7.4Vdc from battery
Serial Number:	2TOQ-1 (Configuration 1#: Screen 2#) 2TOQ-2 (Configuration 2#: Screen 1#)
EUT Received Date:	2024/10/16
EUT Received Status:	Good

1.2 Accessory Information

Adapter Information:

Accessory Description	Manufacturer	Model	Parameters
Adapter 1#	Xiamen Keli Electronics Co., Ltd	SW-0983	Input: 100-240Vac 50/60Hz0.5A Output: 5.0Vdc 2.0A
Adapter 2#	Jiangxi Jian Aohai Technology Co., Ltd	A319-050200U-US2	Input: 100-240Vac 50/60Hz0.5A Output: 5.0Vdc 2.0A
Adapter 3#	Xiamen Keli Electronics Co., Ltd	KL-WD050200U	Input: 100-240Vac 50/60Hz0.5A Output: 5.0Vdc 2.0A
Adapter 4# (New)	SHENZHEN KEYU POWER SUPPLY TECHNOLOGY CO.,LTD	KA1602-0502000DEU	Input: 100-240Vac 50/60Hz0.35A Output: 5.0Vdc 2.0A

Battery Information:

No.	Manufacturer	Model	Rated Voltage/Capacity
Battery 1#	XinyuGanfeng Electronics Co.,Ltd.	LD1865N	DC 7.4V Typical Capacity:2200mAh/16.28Wh
Battery 2# (Updated)	Xinyu Ganfeng Electronics Co.,Ltd.	LD18650P	7.2Vdc, Typical Capacity:3350mAh, 24.12Wh
Battery 3# (Updated)	SCUD (Fujian) Electronics CO.,LTD.	LD18650K-1	7.2Vdc, Typical Capacity:3350mAh, 24.12Wh
Battery 4# (New)	Dongguan Veken Battery Co.,Ltd. (Battery cell suplier: BAK)	LD18650N	7.2Vdc, Typical Capacity:2200mAh, 15.84Wh
Battery 5# (New)	Dongguan Veken Battery Co.,Ltd. (Battery cell suplier: EVE)	LD18650N	7.2Vdc, Typical Capacity:2200mAh, 15.84Wh

Screen Information:

No.	Manufacturer	Model
Screen 1#	GuangDonghongbosheng Optoelectronic Technology Co.,Ltd	MDT0500M
Screen 2#(New)	Shenzhen Great Prospect Optoelectronics Co.,Ltd.	MDT0500N

1.3 Equipment Modifications

No modifications are made to the EUT during all test items.

2. SUMMARY OF TEST RESULTS

Standard Clause	Description of Test	Test Result
FCC§15.107	Conducted emissions	Compliant
FCC§15.109	Radiated emissions	Compliant

Note 1:This is Class II permissive change application based on the original device, model: AXIUM DX4000, FCC ID: XKB-DX4LOBCLWB, please refer to report No.: CR221263969-00D▲, issued by China Certification ICT Co., Ltd (Dongguan) on 2023/4/21, which was provided by the manufacturer▲. Differences between the previous device and the current one are stated and guaranteed by the manufacturer, as following:

1. Add new Veken-2200mAh battery pack (2 different cells).

2. PCB upgrading with new Charge IC.

3. Add a new configuration with front camera.

4. Add a new Display.

5. WWAN Main Antenna changed.

6. Remove the Flypower adapter and add KEYU Multi-plug adapter.

7. Updated the label of current battery packs (LD18650P& LD18650k-1& LD18650N).

8. Changed battery protection circuit of LD18650k-1 and LD18650P.

9. Add the appearance color of the EUT.

10.Capacitors of NFC circuit adjusted.

The Bay Area Compliance Laboratories Corp. (Dongguan) is responsible for all the information provided in this report, except when information is provided by the customer as identified in this report.

3. DESCRIPTION OF TEST CONFIGURATION

3.1 Description of Test Configuration

The system was configured for testing in a typical fashion (as normally used by a typical user). The following summary table is showing all test modes to demonstrate in compliance with the standard:

Test Items	Test Modes
Radiated Emission Below 1G:	M1: Charging &Front Camera Working (Configuration 1#+ Adapter 4# + Battery 2#) M2: Charging &Front Camera Working (Configuration 1#+ Adapter 4# + Battery 3#) M3: Charging &Front Camera Working (Configuration 1# + Adapter 4# + Battery 4#) M4: Charging &Front Camera Working (Configuration 1# + Adapter 4# + Battery 5#) M5: Charging &Front Camera Working (Configuration 2#+ Adapter 4# + Worst Battery Above)
Radiated Emission Above 1G:	Configuration 1#: M2:Charging &Front Camera Working (Adapter 4# + Worst Battery Above(M1-M4)) Configuration 2#: M5: Charging &Front Camera Working (Configuration 2#+ Adapter 4# + Worst Battery Above)
AC Line Conducted Emission:	M1: Charging &Front Camera Working (Configuration 1#+ Adapter 4# + Battery 2#) M2: Charging &Front Camera Working (Configuration 1#+ Adapter 4# + Battery 3#) M3: Charging &Front Camera Working (Configuration 1# + Adapter 4# + Battery 4#) M4: Charging &Front Camera Working (Configuration 1# + Adapter 4# + Battery 5#) M5: Charging &Front Camera Working (Configuration 2#+ Adapter 4# + Worst Battery Above)

3.2 EUT Exercise Software

No software was used in test.

3.3 Support Equipment List and Details

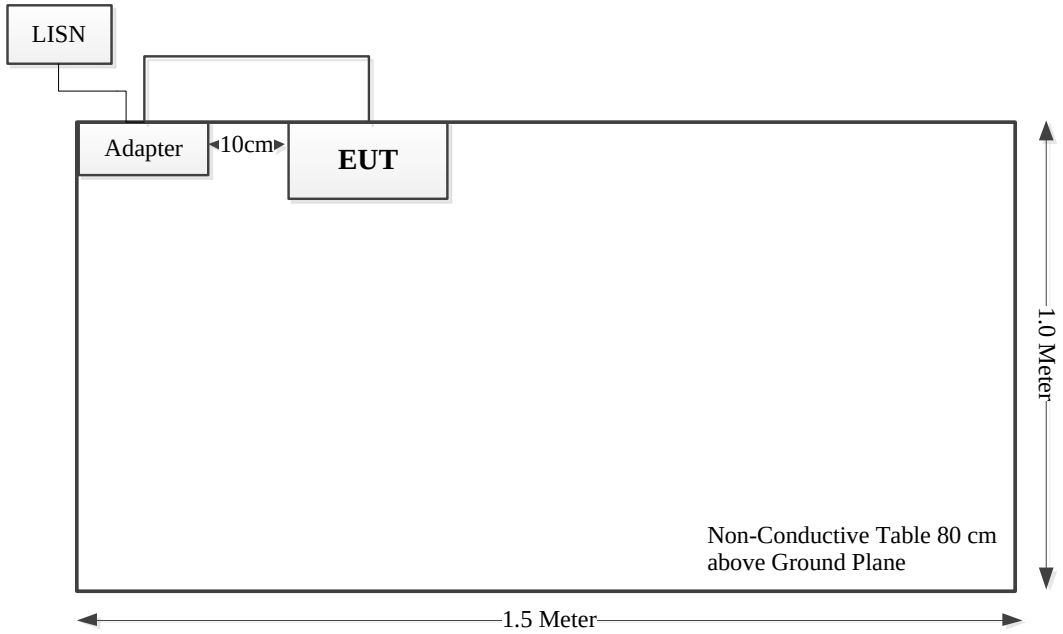
Manufacturer	Description	Model	Serial Number
/	/	/	/

3.4 Support Cable List and Details

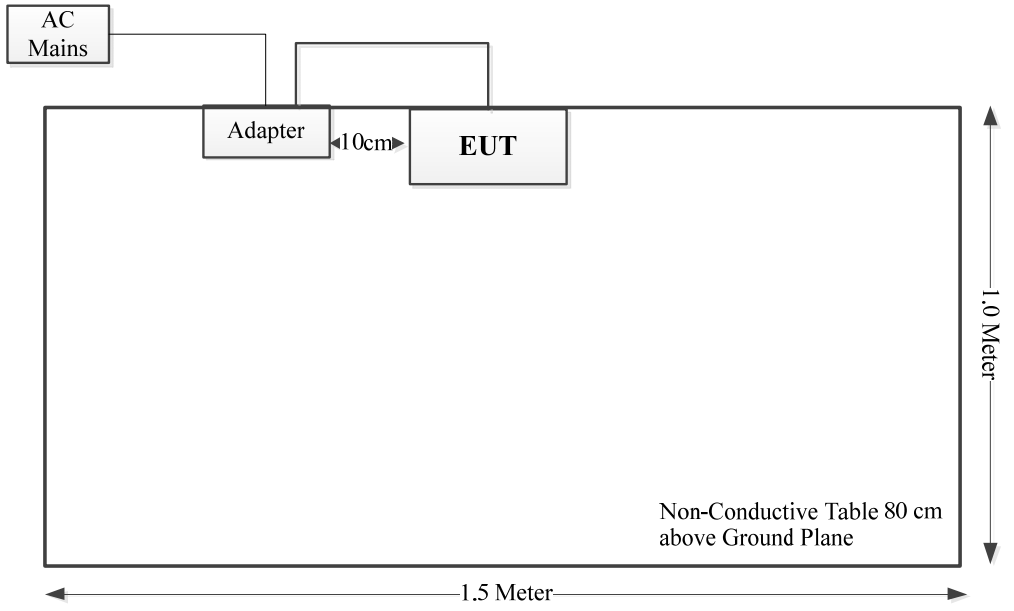
Cable Description	Shielding Cable	Ferrite Core	Length (m)	From Port	To
USB Cable	No	No	1	Adapter	EUT

3.5 Block Diagram of Test Setup

AC Line Conducted Emission:



Radiated Emission:



3.6 Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.12, Pulong East 1st Road, Tangxia 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. : 829273, the FCC Designation No. : CN5044.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0022.

3.7 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	9kHz~30MHz: 3.3dB, 30MHz~200MHz: 4.55 dB, 200MHz~1GHz: 5.92 dB, 1GHz~6GHz: 4.98 dB, 6GHz~18GHz: 5.89 dB, 18GHz~26.5GHz:5.47 dB, 26.5GHz~40GHz:5.63 dB
Temperature	±1℃
Humidity	±5%
AC Power Lines Conducted Emission	3.11 dB (150 kHz to 30 MHz)

4. REQUIREMENTS AND TEST PROCEDURES

4.1 AC Line Conducted Emissions

4.1.1 Applicable Standard

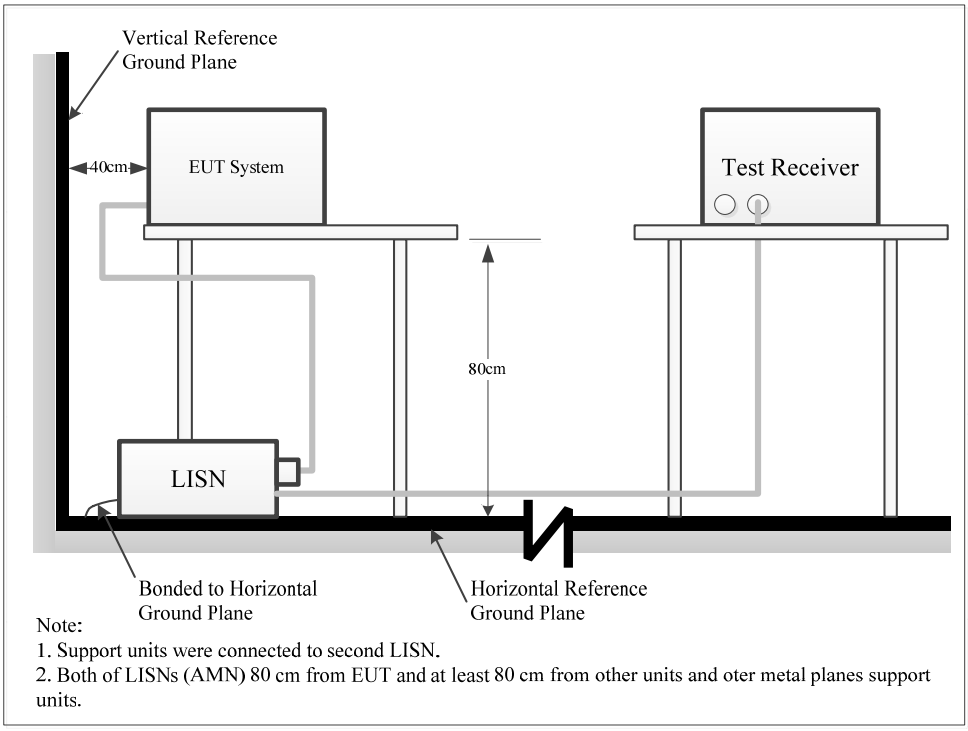
FCC§15.107

(a) Except for Class A digital devices, for equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the band edges

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15–0.5	66 to 56*	56 to 46*
0.5–5	56	46
5–30	60	50

*Decreases with the logarithm of the frequency.

4.1.2 EUT Setup



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

4.1.3 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

4.1.4 Test Procedure

The frequency and amplitude of the six highest ac power-line conducted emissions relative to the limit, measured over all the current-carrying conductors of the EUT power cords, and the operating frequency or frequency to which the EUT is tuned (if appropriate), should be reported, unless such emissions are more than 20 dB below the limit. AC power-line conducted emissions measurements are to be separately carried out only on each of the phase ("hot") line(s) and (if used) on the neutral line(s), but not on the ground [protective earth] line(s). If less than six emission frequencies are within 20 dB of the limit, then the noise level of the measuring instrument at representative frequencies should be reported. The specific conductor of the power-line cord for each of the reported emissions should be identified. Measure the six highest emissions with respect to the limit on each current-carrying conductor of each power cord associated with the EUT (but not the power cords of associated or peripheral equipment that are part of the test configuration). Then, report the six highest emissions with respect to the limit from among all the measurements identifying the frequency and specific current-carrying conductor identified with the emission. The six highest emissions should be reported for each of the current-carrying conductors, or the six highest emissions may be reported over all the current-carrying conductors.

4.1.5 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

4.1.6 Test Data and Result

Serial Number:	2TOQ-1,2TOQ-2	Test Date:	2024/10/22
Test Site:	CE	Test Mode:	M1-M5
Tester:	Yolo Fan	Test Result:	Pass

Environmental Conditions:

Temperature: (℃)	27.1	Relative Humidity: (%)	55	ATM Pressure: (kPa)	101.6

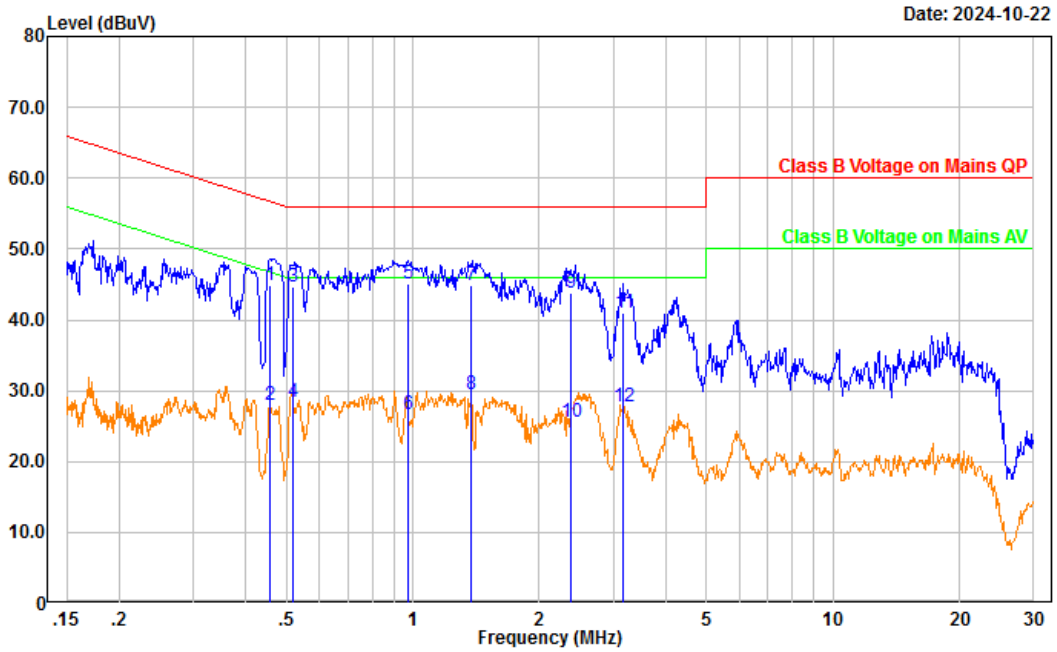
Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	LISN	ENV216	101614	2024/9/5	2025/9/4
MICRO-COAX	Coaxial Cable	C-NJNJ-50	C-0200-01	2024/9/5	2025/9/4
R&S	EMI Test Receiver	ESCI	100035	2024/8/26	2025/8/25
Audix	Test Software	E3	191218 V9	N/A	N/A

** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

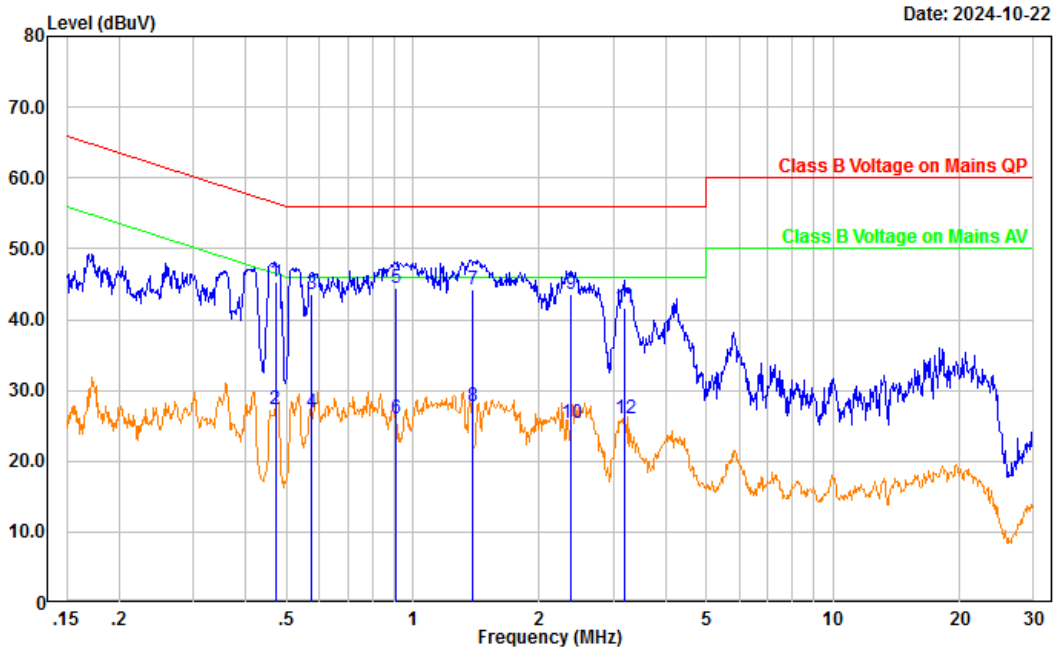
M1: Charging &Front Camera Working (Configuration 1#+ Adapter 4# + Battery 2#)

Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-1
Port: Line Tester: Yolo Fan
Test Mode: M1
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.458	34.06	10.84	44.90	56.73	11.83	QP
2	0.458	17.20	10.84	28.04	46.73	18.69	Average
3	0.519	33.86	10.84	44.70	56.00	11.30	QP
4	0.519	17.56	10.84	28.40	46.00	17.60	Average
5	0.974	34.18	10.85	45.03	56.00	10.97	QP
6	0.974	15.90	10.85	26.75	46.00	19.25	Average
7	1.370	33.97	10.84	44.81	56.00	11.19	QP
8	1.370	18.58	10.84	29.42	46.00	16.58	Average
9	2.376	33.04	10.81	43.85	56.00	12.15	QP
10	2.376	14.67	10.81	25.48	46.00	20.52	Average
11	3.172	30.16	10.78	40.94	56.00	15.06	QP
12	3.172	17.01	10.78	27.79	46.00	18.21	Average

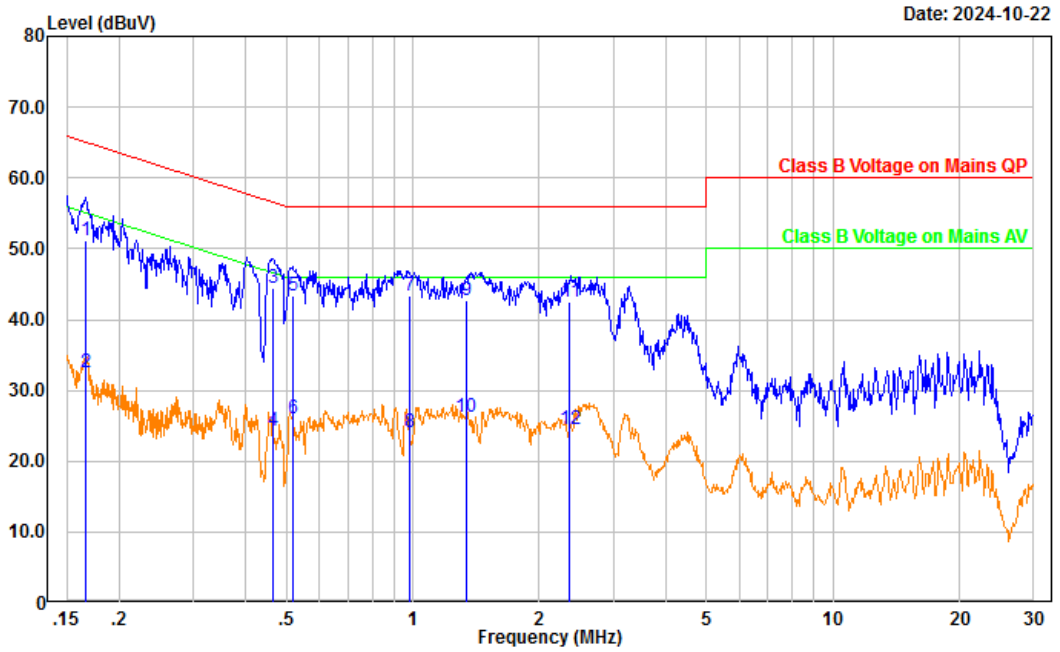
Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-1
Port: neutral Tester: Yolo Fan
Test Mode: M1
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.471	34.62	10.75	45.37	56.50	11.13	QP
2	0.471	16.48	10.75	27.23	46.50	19.27	Average
3	0.572	32.76	10.73	43.49	56.00	12.51	QP
4	0.572	16.16	10.73	26.89	46.00	19.11	Average
5	0.914	33.56	10.83	44.39	56.00	11.61	QP
6	0.914	15.21	10.83	26.04	46.00	19.96	Average
7	1.383	33.27	10.88	44.15	56.00	11.85	QP
8	1.383	16.76	10.88	27.64	46.00	18.36	Average
9	2.382	32.67	10.91	43.58	56.00	12.42	QP
10	2.382	14.54	10.91	25.45	46.00	20.55	Average
11	3.182	30.66	10.88	41.54	56.00	14.46	QP
12	3.182	15.22	10.88	26.10	46.00	19.90	Average

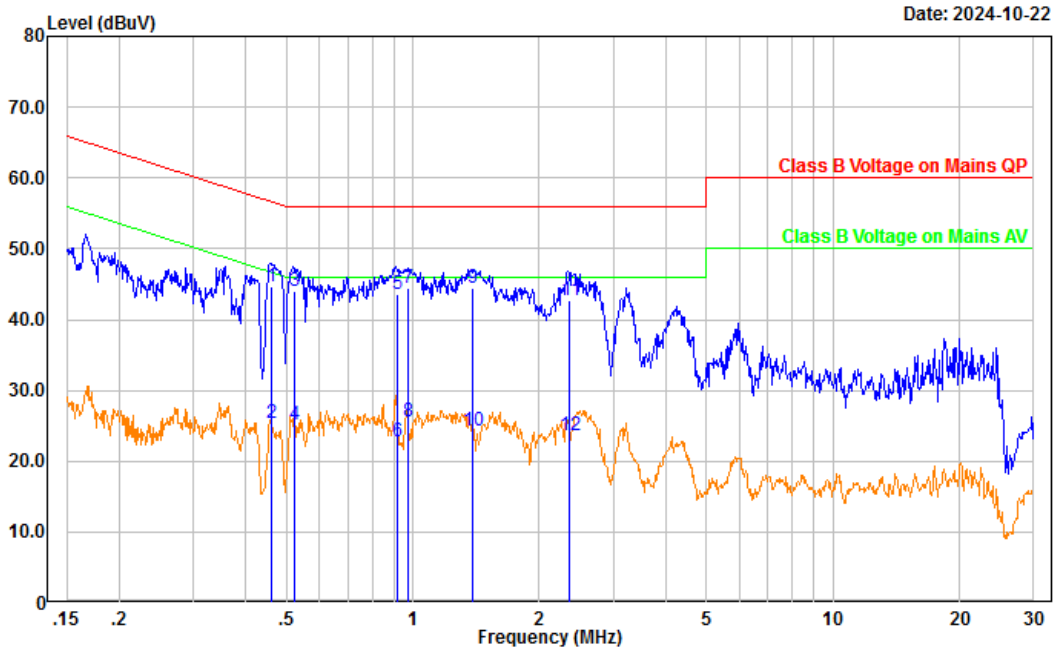
M2: Charging &Front Camera Working (Configuration 1#+ Adapter 4# + Battery 3#)

Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-1
Port: Line Tester: Yolo Fan
Test Mode: M2
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.166	40.37	10.78	51.15	65.16	14.01	QP
2	0.166	21.69	10.78	32.47	55.16	22.69	Average
3	0.464	33.71	10.84	44.55	56.63	12.08	QP
4	0.464	13.41	10.84	24.25	46.63	22.38	Average
5	0.518	32.49	10.84	43.33	56.00	12.67	QP
6	0.518	15.19	10.84	26.03	46.00	19.97	Average
7	0.981	32.48	10.85	43.33	56.00	12.67	QP
8	0.981	13.22	10.85	24.07	46.00	21.93	Average
9	1.336	31.79	10.84	42.63	56.00	13.37	QP
10	1.336	15.35	10.84	26.19	46.00	19.81	Average
11	2.366	31.61	10.81	42.42	56.00	13.58	QP
12	2.366	13.68	10.81	24.49	46.00	21.51	Average

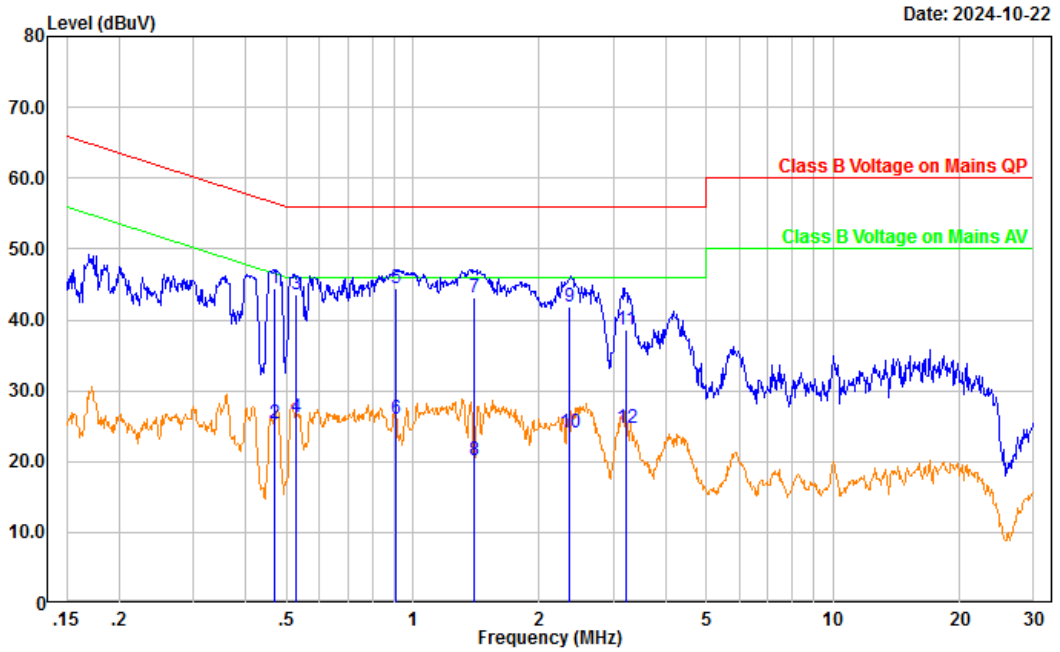
Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-1
Port: neutral Tester: Yolo Fan
Test Mode: M2
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.461	34.02	10.75	44.77	56.68	11.91	QP
2	0.461	14.72	10.75	25.47	46.68	21.21	Average
3	0.522	33.31	10.74	44.05	56.00	11.95	QP
4	0.522	14.41	10.74	25.15	46.00	20.85	Average
5	0.921	32.80	10.83	43.63	56.00	12.37	QP
6	0.921	11.94	10.83	22.77	46.00	23.23	Average
7	0.974	33.56	10.84	44.40	56.00	11.60	QP
8	0.974	14.85	10.84	25.69	46.00	20.31	Average
9	1.391	33.57	10.88	44.45	56.00	11.55	QP
10	1.391	13.38	10.88	24.26	46.00	21.74	Average
11	2.364	31.81	10.91	42.72	56.00	13.28	QP
12	2.364	12.72	10.91	23.63	46.00	22.37	Average

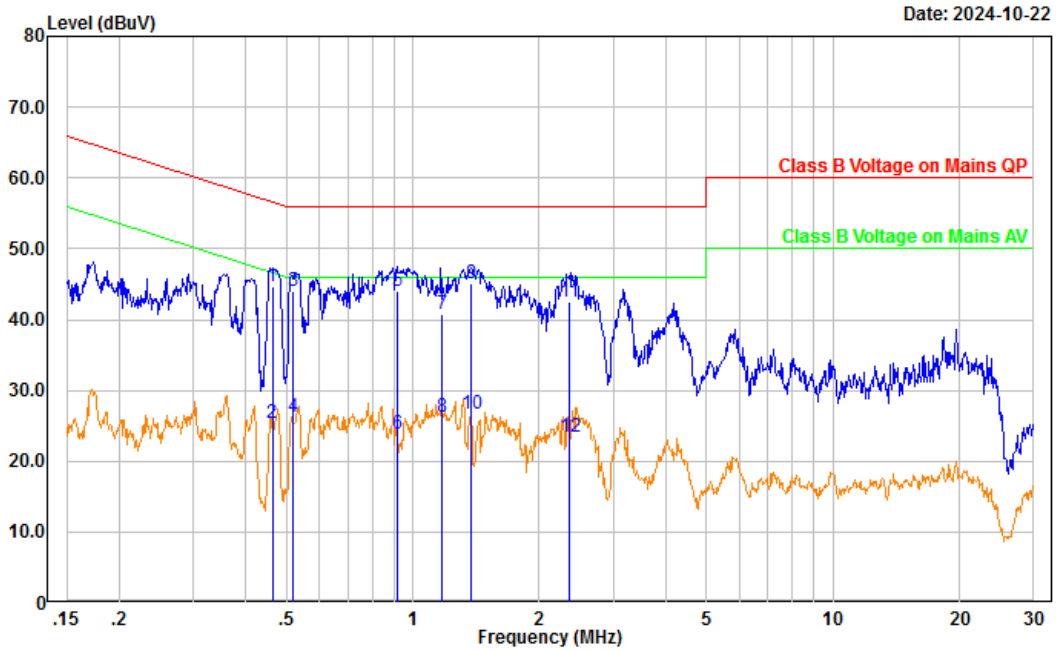
M3: Charging &Front Camera Working (Configuration 1#+ Adapter 4# + Battery 4#)

Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-1
Port: Line Tester: Yolo Fan
Test Mode: M3
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.469	33.53	10.84	44.37	56.53	12.16	QP
2	0.469	14.43	10.84	25.27	46.53	21.26	Average
3	0.527	32.65	10.83	43.48	56.00	12.52	QP
4	0.527	15.34	10.83	26.17	46.00	19.83	Average
5	0.913	33.55	10.86	44.41	56.00	11.59	QP
6	0.913	15.18	10.86	26.04	46.00	19.96	Average
7	1.404	32.32	10.84	43.16	56.00	12.84	QP
8	1.404	9.40	10.84	20.24	46.00	25.76	Average
9	2.354	31.14	10.81	41.95	56.00	14.05	QP
10	2.354	13.27	10.81	24.08	46.00	21.92	Average
11	3.207	27.79	10.78	38.57	56.00	17.43	QP
12	3.207	13.98	10.78	24.76	46.00	21.24	Average

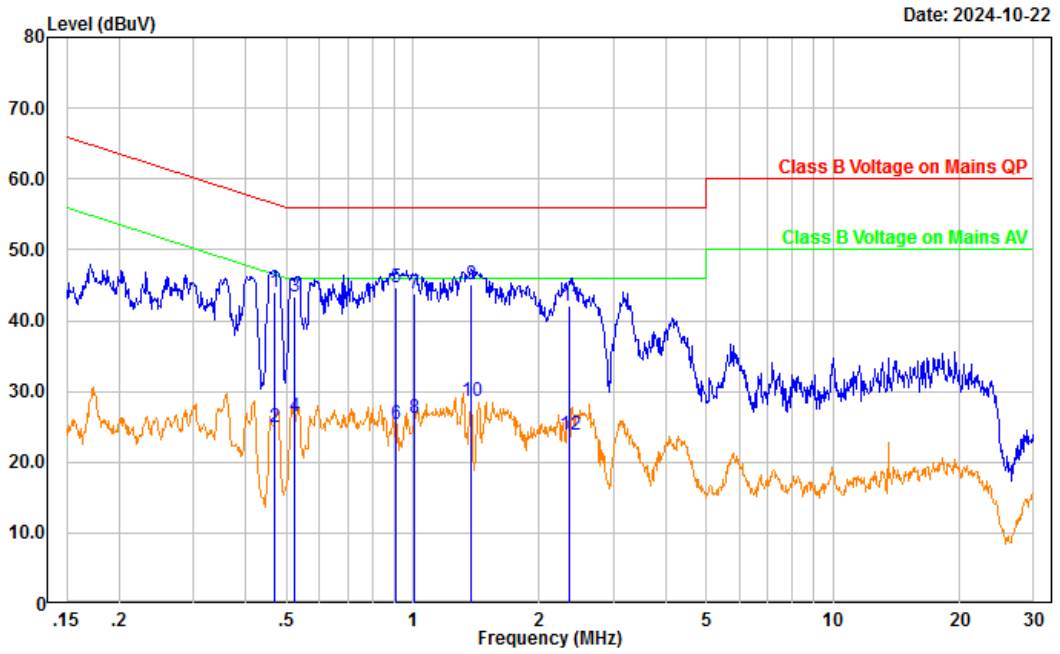
Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-1
Port: neutral Tester: Yolo Fan
Test Mode: M3
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.463	33.93	10.75	44.68	56.64	11.96	QP
2	0.463	14.51	10.75	25.26	46.64	21.38	Average
3	0.518	33.18	10.74	43.92	56.00	12.08	QP
4	0.518	15.59	10.74	26.33	46.00	19.67	Average
5	0.919	33.28	10.83	44.11	56.00	11.89	QP
6	0.919	12.93	10.83	23.76	46.00	22.24	Average
7	1.170	29.86	10.86	40.72	56.00	15.28	QP
8	1.170	15.45	10.86	26.31	46.00	19.69	Average
9	1.374	34.30	10.88	45.18	56.00	10.82	QP
10	1.374	15.82	10.88	26.70	46.00	19.30	Average
11	2.354	31.68	10.91	42.59	56.00	13.41	QP
12	2.354	12.49	10.91	23.40	46.00	22.60	Average

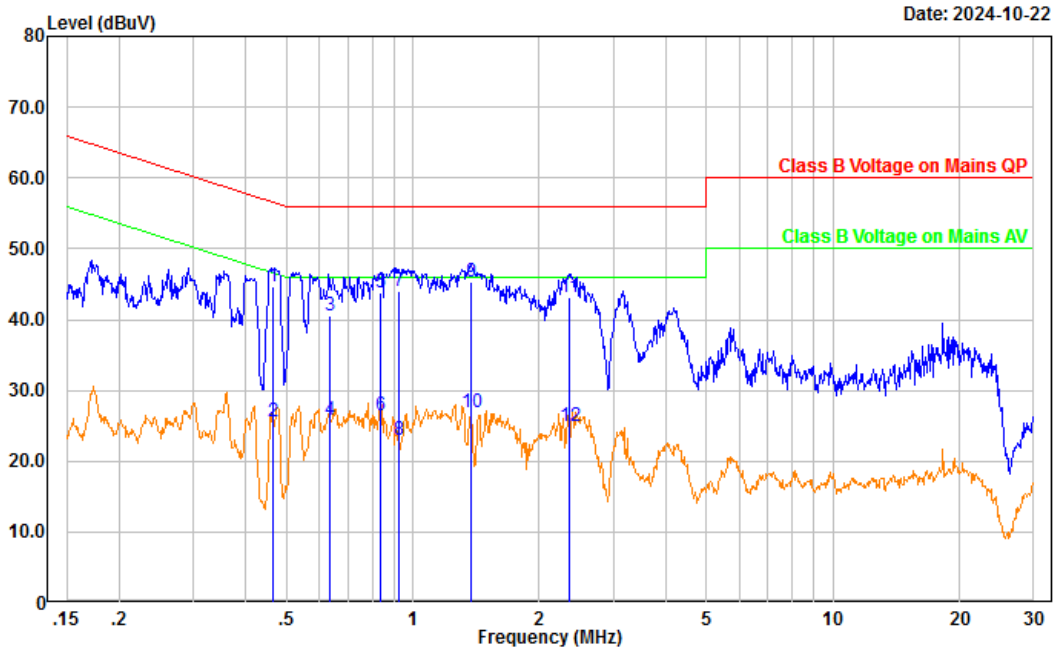
M4: Charging &Front Camera Working (Configuration 1#+ Adapter 4# + Battery 5#)

Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-1
Port: Line Tester: Yolo Fan
Test Mode: M4
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.467	33.18	10.84	44.02	56.57	12.55	QP
2	0.467	14.13	10.84	24.97	46.57	21.60	Average
3	0.521	32.46	10.84	43.30	56.00	12.70	QP
4	0.521	15.65	10.84	26.49	46.00	19.51	Average
5	0.912	33.86	10.86	44.72	56.00	11.28	QP
6	0.912	14.56	10.86	25.42	46.00	20.58	Average
7	1.011	33.03	10.85	43.88	56.00	12.12	QP
8	1.011	15.32	10.85	26.17	46.00	19.83	Average
9	1.379	34.35	10.84	45.19	56.00	10.81	QP
10	1.379	17.71	10.84	28.55	46.00	17.45	Average
11	2.362	31.14	10.81	41.95	56.00	14.05	QP
12	2.362	13.09	10.81	23.90	46.00	22.10	Average

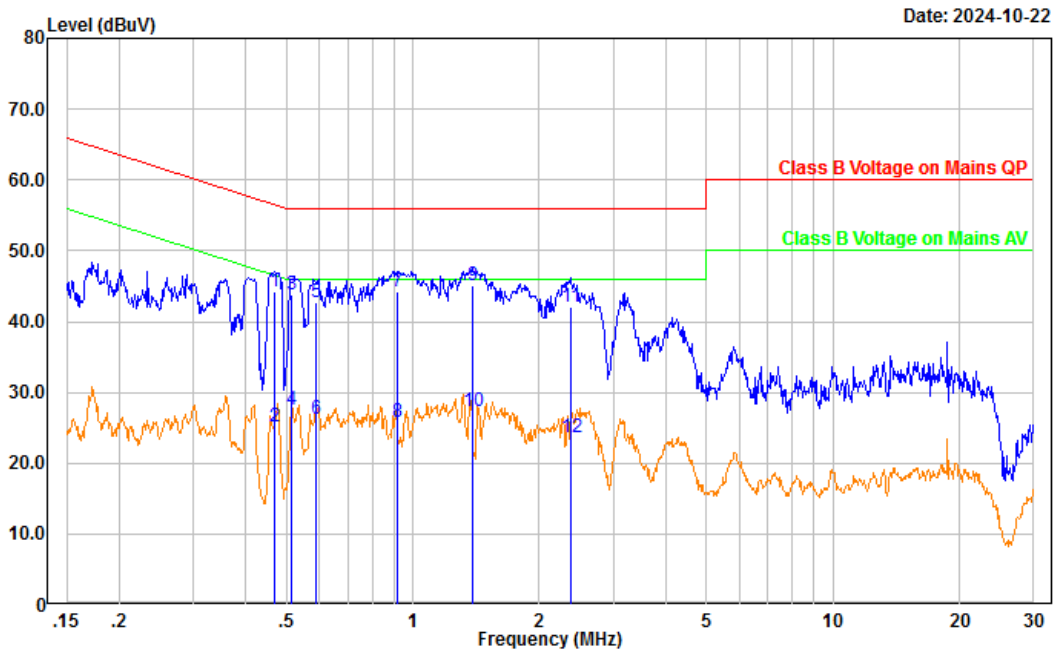
Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-1
Port: neutral Tester: Yolo Fan
Test Mode: M4
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.464	34.00	10.75	44.75	56.62	11.87	QP
2	0.464	14.80	10.75	25.55	46.62	21.07	Average
3	0.632	29.88	10.73	40.61	56.00	15.39	QP
4	0.632	15.04	10.73	25.77	46.00	20.23	Average
5	0.836	33.04	10.80	43.84	56.00	12.16	QP
6	0.836	15.74	10.80	26.54	46.00	19.46	Average
7	0.928	33.23	10.84	44.07	56.00	11.93	QP
8	0.928	12.22	10.84	23.06	46.00	22.94	Average
9	1.375	34.41	10.88	45.29	56.00	10.71	QP
10	1.375	16.10	10.88	26.98	46.00	19.02	Average
11	2.351	32.16	10.91	43.07	56.00	12.93	QP
12	2.351	13.95	10.91	24.86	46.00	21.14	Average

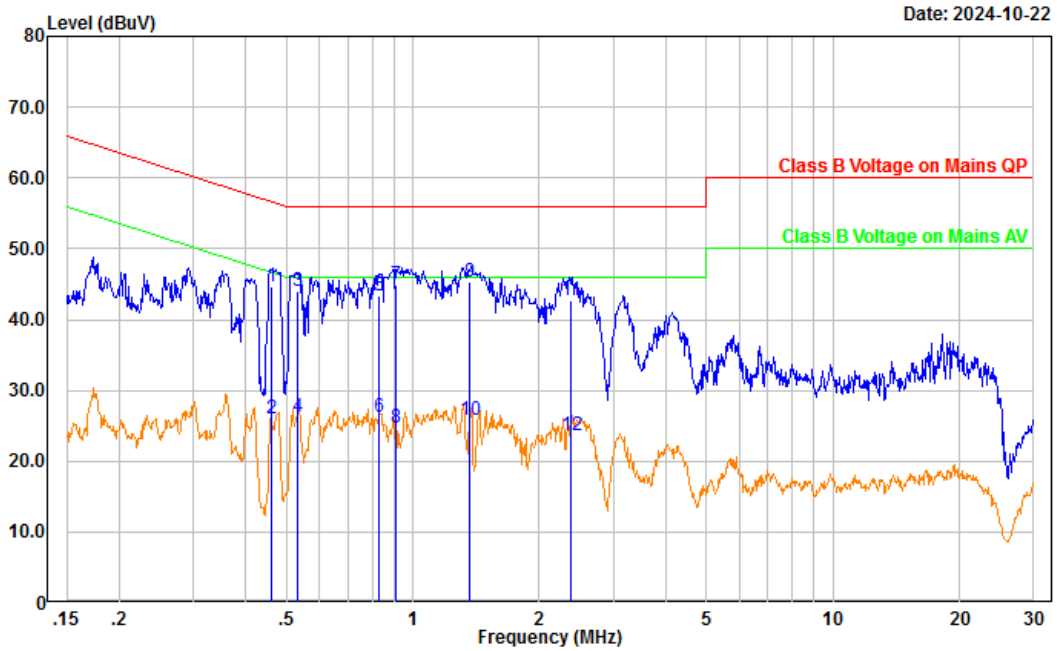
M5: Charging &Front Camera Working (Configuration 2#+ Adapter 4# + Battery 5#)

Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-2
Port: Line Tester: Yolo Fan
Test Mode: M5
Note: Worst Battery:Battery 5#



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.469	33.47	10.84	44.31	56.53	12.22	QP
2	0.469	14.31	10.84	25.15	46.53	21.38	Average
3	0.515	32.88	10.84	43.72	56.00	12.28	QP
4	0.515	16.73	10.84	27.57	46.00	18.43	Average
5	0.586	31.84	10.82	42.66	56.00	13.34	QP
6	0.586	15.48	10.82	26.30	46.00	19.70	Average
7	0.916	33.29	10.86	44.15	56.00	11.85	QP
8	0.916	14.94	10.86	25.80	46.00	20.20	Average
9	1.383	34.27	10.84	45.11	56.00	10.89	QP
10	1.383	16.37	10.84	27.21	46.00	18.79	Average
11	2.372	31.30	10.81	42.11	56.00	13.89	QP
12	2.372	12.91	10.81	23.72	46.00	22.28	Average

Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-2
Port: neutral Tester: Yolo Fan
Test Mode: M5
Note: Worst Battery:Battery 5#



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.460	33.97	10.75	44.72	56.69	11.97	QP
2	0.460	15.31	10.75	26.06	46.69	20.63	Average
3	0.531	33.29	10.73	44.02	56.00	11.98	QP
4	0.531	15.53	10.73	26.26	46.00	19.74	Average
5	0.831	32.65	10.79	43.44	56.00	12.56	QP
6	0.831	15.37	10.79	26.16	46.00	19.84	Average
7	0.914	34.10	10.83	44.93	56.00	11.07	QP
8	0.914	13.86	10.83	24.69	46.00	21.31	Average
9	1.370	34.40	10.88	45.28	56.00	10.72	QP
10	1.370	14.95	10.88	25.83	46.00	20.17	Average
11	2.379	31.70	10.91	42.61	56.00	13.39	QP
12	2.379	12.70	10.91	23.61	46.00	22.39	Average

4.2 Radiation Emissions

4.2.1 Applicable Standard

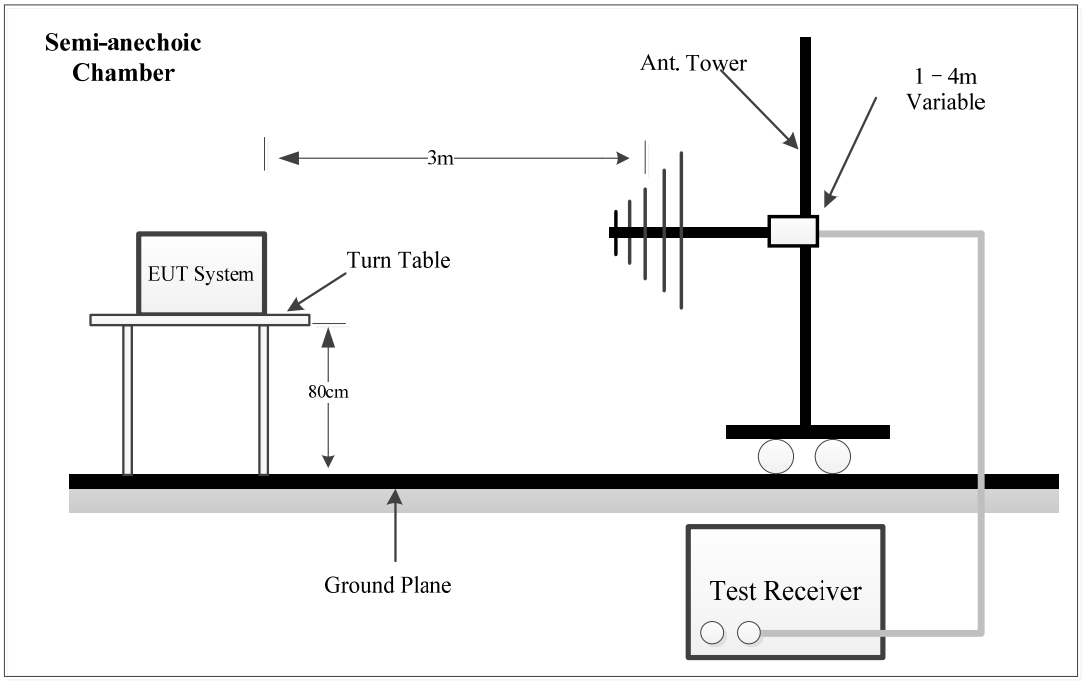
FCC§15.109

(a) Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

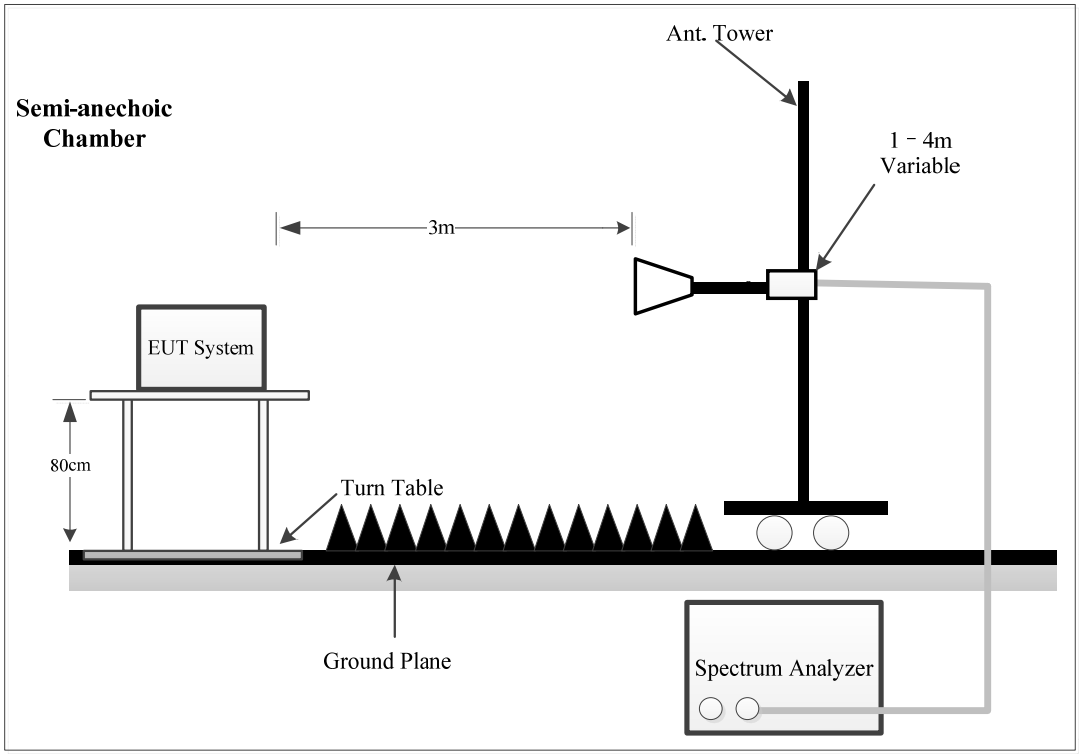
Frequency of emission (MHz)	Field strength (microvolts/meter)
30–88	100
88–216	150
216–960	200
Above 960	500

4.2.2 Test System Setup

Below 1GHz:



Above 1GHz:



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

4.2.3 EMI Test Receiver Setup

The system was investigated from 30 MHz to 13.45 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
30MHz – 1000 MHz	100 kHz	300 kHz	/	Peak
	/	/	120kHz	QP
Above 1 GHz	1 MHz	3 MHz	/	Peak
	1 MHz	10Hz	/	AVG

4.2.4 Test Procedure

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.

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

4.2.5 Corrected Result & 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

4.2.6 Test Data and Result

Serial Number:	2TOQ-1 , 2TOQ-2	Test Date:	2024/10/24~2024/12/06
Test Site:	Chamber A, Chamber 10m	Test Mode:	M1-M5
Tester:	Leesin Xiang, Alan Xie	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	23~26.4	Relative Humidity: (%)	39~55	ATM Pressure: (kPa)	101.2~101.8

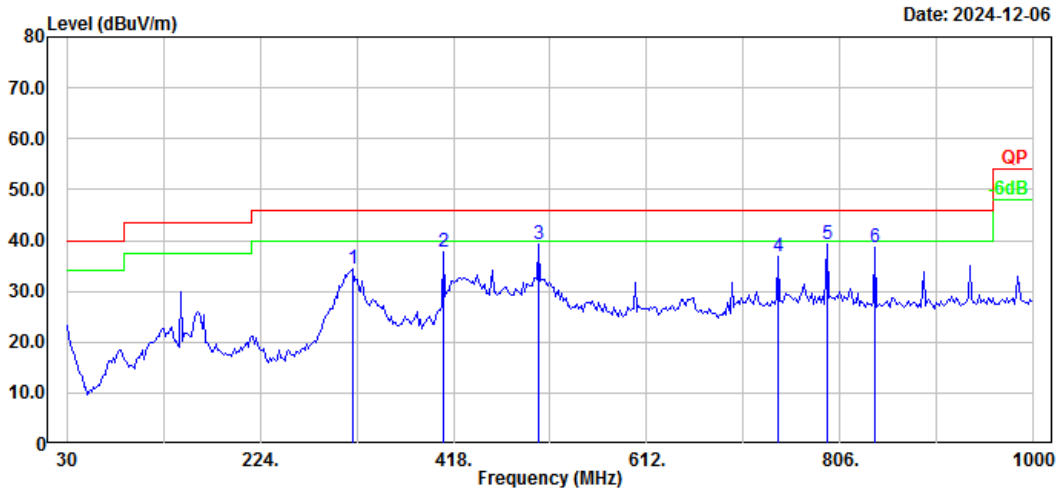
Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sunol Sciences	Hybrid Antenna	JB3	A060611-1	2023/9/6	2026/9/5
Narda	Coaxial Attenuator	779-6dB	04269	2023/9/6	2026/9/5
Unknown	Coaxial Cable	C-NJNJ-50	C-1000-01	2024/7/1	2025/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-0400-04	2024/7/1	2025/6/30
Unknown	Coaxial Cable	C-NJNJ-50	C-0530-01	2024/7/1	2025/6/30
Sonoma	Amplifier	310N	185914	2024/8/26	2025/8/25
R&S	EMI Test Receiver	ESCI	100224	2024/8/26	2025/8/25
Audix	Test Software	E3	191218 V9	N/A	N/A
AH	Horn Antenna	SAS-571	1177	2023/2/22	2026/2/21
HUBER+SUHNER	Coaxial Cable	SUCOFLEX 126EA	MY369/26/26EA	2024/7/1	2025/6/30
Mini-Circuits	Preamplifier	ZVZ-183-S+	5696001267	2024/3/1	2025/2/28
R&S	Spectrum Analyzer	FSV40	101589	2024/9/5	2025/9/4
E-Microwave	Band Rejection Filter	OBSF-2400-2483.5-S	OE01601525	2024/2/21	2025/2/20

** Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

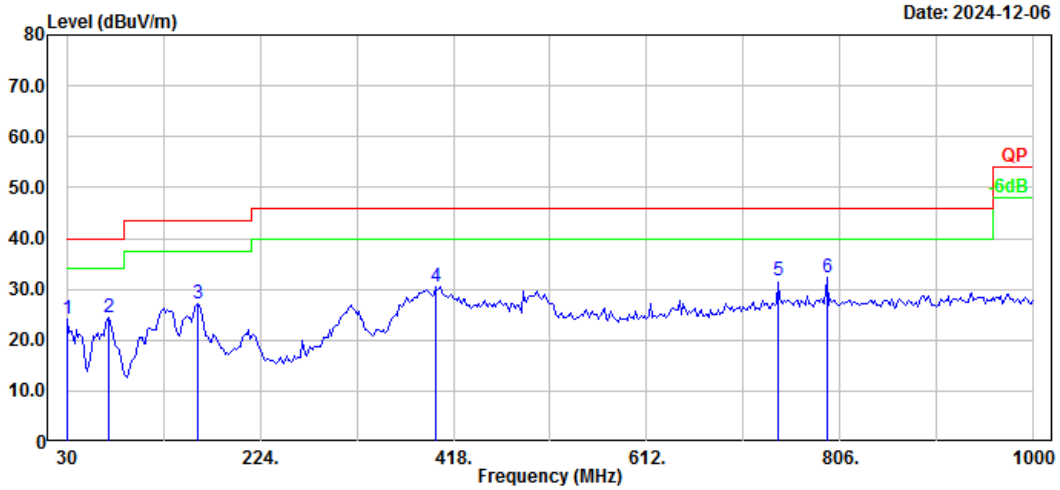
1) 30MHz-1GHz:
M1: Charging &Front Camera Working (Configuration 1#+ Adapter 4# + Battery 2#)

Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-1
Polarization: Horizontal Tester: Leesin Xiang
Test Mode: M1
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	317.12	43.53	-9.14	34.39	46.00	11.61	Peak
2	408.30	44.55	-6.76	37.79	46.00	8.21	Peak
3	503.36	43.40	-4.22	39.18	46.00	6.82	Peak
4	743.92	37.14	-0.43	36.71	46.00	9.29	Peak
5	792.42	38.86	0.34	39.20	46.00	6.80	Peak
6	840.92	37.85	0.81	38.66	46.00	7.34	Peak

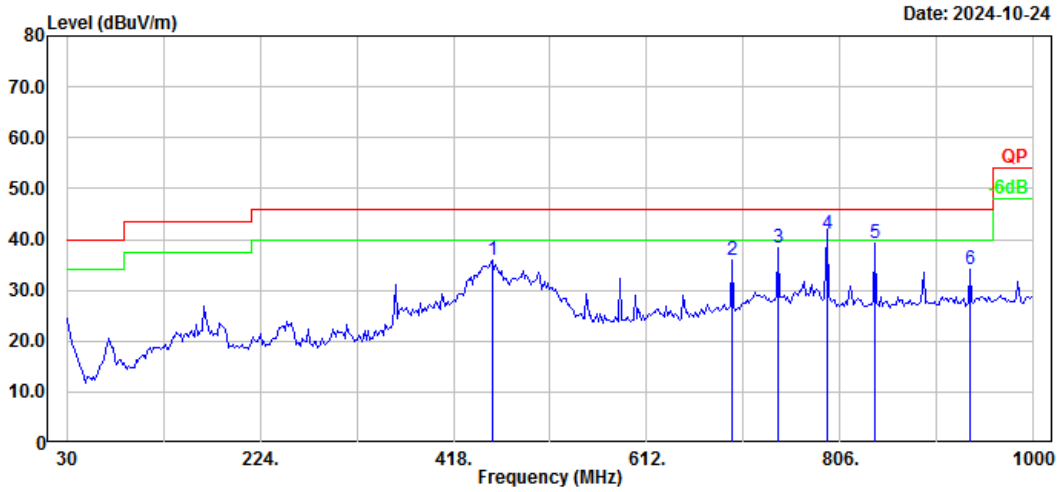
Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-1
Polarization: Vertical Tester: Leesin Xiang
Test Mode: M1
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	30.00	27.95	-3.80	24.15	40.00	15.85	Peak
2	72.68	40.62	-16.20	24.42	40.00	15.58	Peak
3	161.92	38.49	-11.27	27.22	43.50	16.28	Peak
4	400.54	37.56	-6.96	30.60	46.00	15.40	Peak
5	743.92	31.98	-0.43	31.55	46.00	14.45	Peak
6	792.42	31.98	0.34	32.32	46.00	13.68	Peak

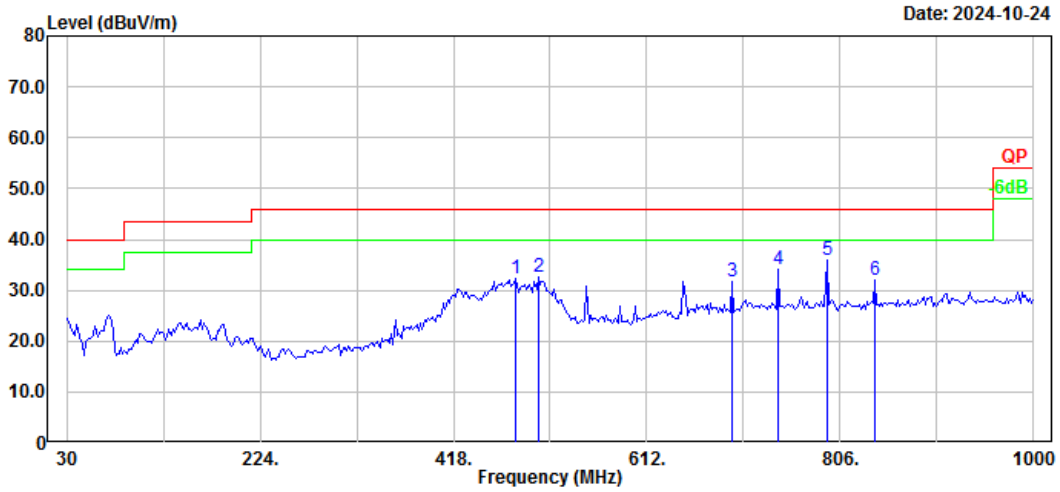
M2: Charging &Front Camera Working (Configuration 1#+ Adapter 4# + Battery 3#)

Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-1
Polarization: Horizontal Tester: Leesin Xiang
Test Mode: M2
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	456.80	41.18	-5.25	35.93	46.00	10.07	Peak
2	697.36	37.17	-1.32	35.85	46.00	10.15	Peak
3	743.92	38.80	-0.43	38.37	46.00	7.63	Peak
4	792.42	40.80	0.34	41.14	46.00	4.86	QP
5	840.92	38.29	0.81	39.10	46.00	6.90	Peak
6	935.98	32.20	1.86	34.06	46.00	11.94	Peak

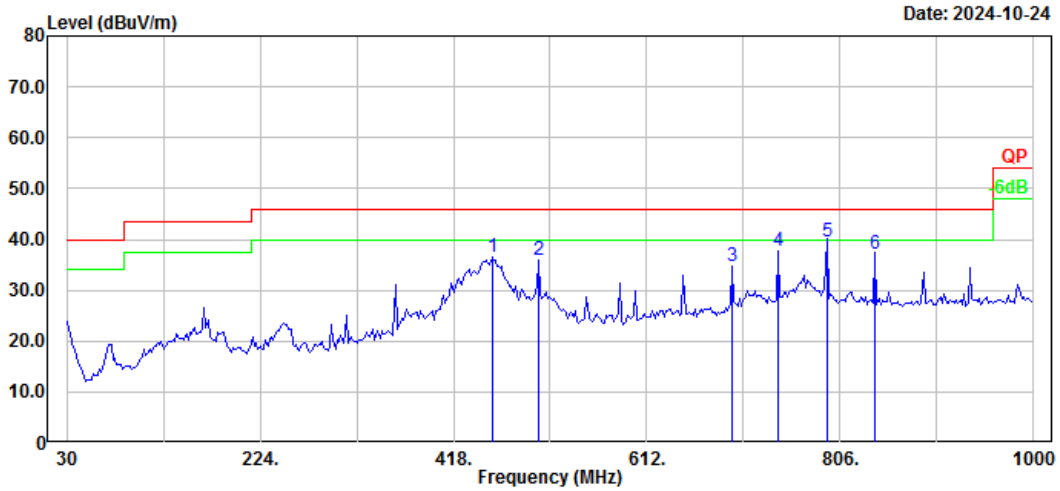
Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-1
Polarization: Vertical Tester: Leesin Xiang
Test Mode: M2
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	480.08	37.01	-4.71	32.30	46.00	13.70	Peak
2	503.36	36.68	-4.22	32.46	46.00	13.54	Peak
3	697.36	33.16	-1.32	31.84	46.00	14.16	Peak
4	743.92	34.45	-0.43	34.02	46.00	11.98	Peak
5	792.42	35.61	0.34	35.95	46.00	10.05	Peak
6	840.92	31.10	0.81	31.91	46.00	14.09	Peak

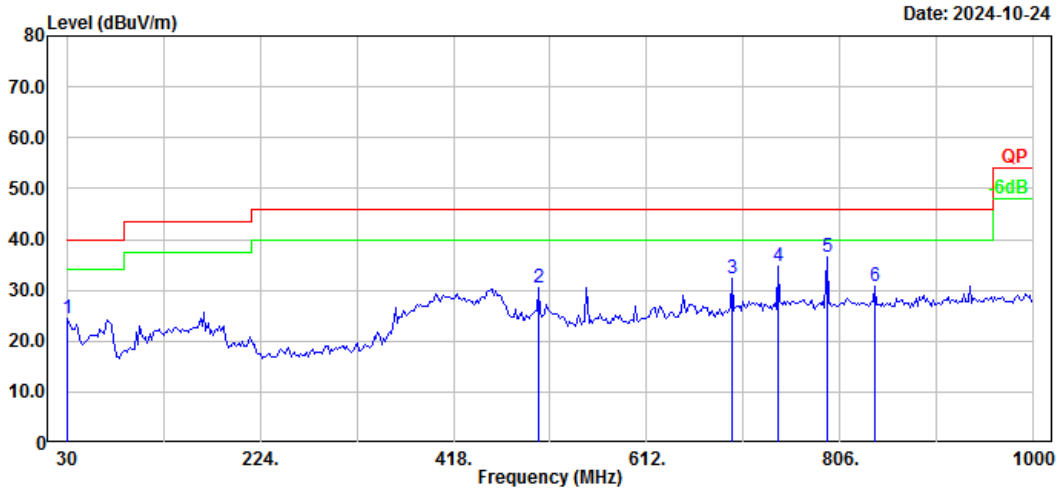
M3: Charging &Front Camera Working (Configuration 1#+ Adapter 4# + Battery 4#)

Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-1
Polarization: Horizontal Tester: Leesin Xiang
Test Mode: M3
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	456.80	41.81	-5.25	36.56	46.00	9.44	Peak
2	503.36	40.09	-4.22	35.87	46.00	10.13	Peak
3	697.36	36.06	-1.32	34.74	46.00	11.26	Peak
4	743.92	38.30	-0.43	37.87	46.00	8.13	Peak
5	792.42	39.10	0.34	39.44	46.00	6.56	QP
6	840.92	36.47	0.81	37.28	46.00	8.72	Peak

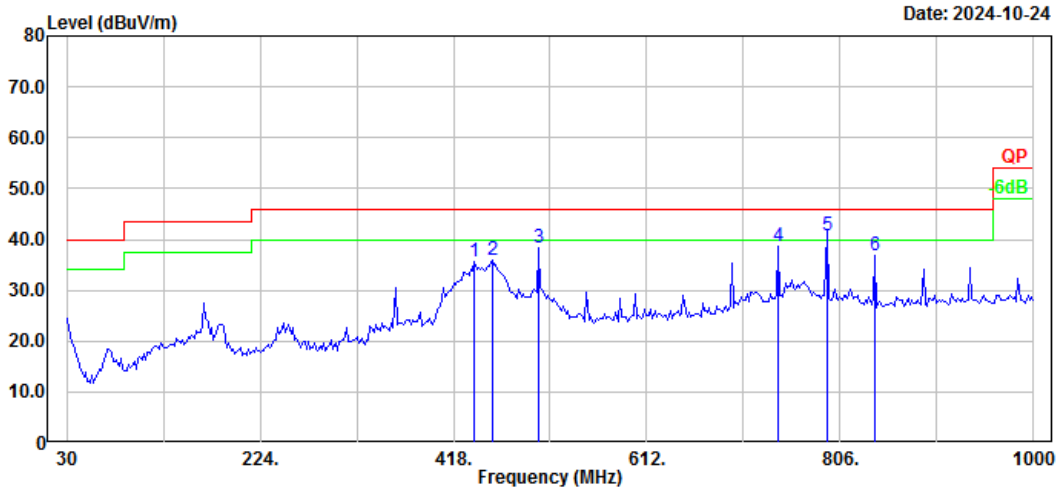
Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-1
Polarization: Vertical Tester: Leesin Xiang
Test Mode: M3
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	30.00	28.16	-3.80	24.36	40.00	15.64	Peak
2	503.36	34.58	-4.22	30.36	46.00	15.64	Peak
3	697.36	33.60	-1.32	32.28	46.00	13.72	Peak
4	743.92	35.29	-0.43	34.86	46.00	11.14	Peak
5	792.42	36.12	0.34	36.46	46.00	9.54	Peak
6	840.92	30.08	0.81	30.89	46.00	15.11	Peak

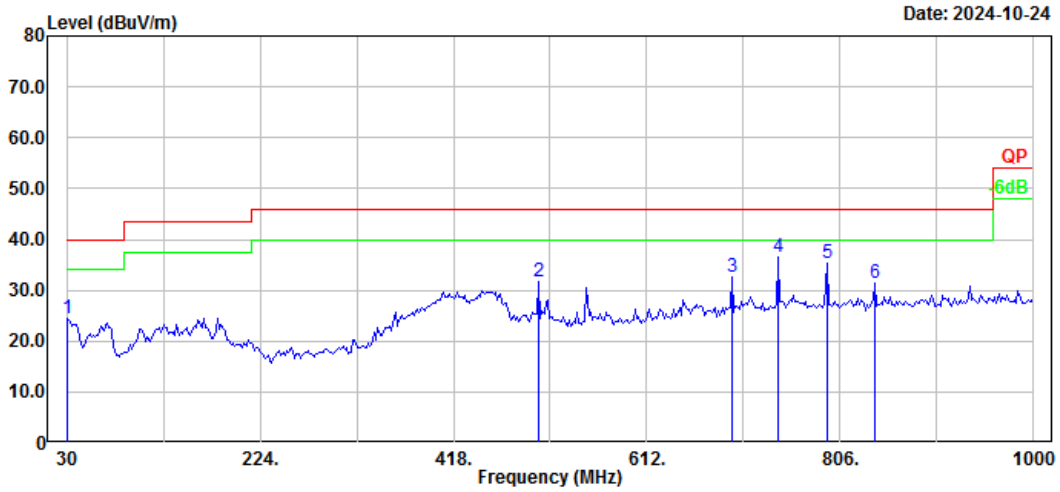
M4: Charging &Front Camera Working (Configuration 1#+ Adapter 4# + Battery 5#)

Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-1
Polarization: Horizontal Tester: Leesin Xiang
Test Mode: M4
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	439.34	41.39	-5.84	35.55	46.00	10.45	Peak
2	456.80	41.26	-5.25	36.01	46.00	9.99	Peak
3	503.36	42.55	-4.22	38.33	46.00	7.67	Peak
4	743.92	39.21	-0.43	38.78	46.00	7.22	Peak
5	792.42	40.50	0.34	40.84	46.00	5.16	QP
6	840.92	36.04	0.81	36.85	46.00	9.15	Peak

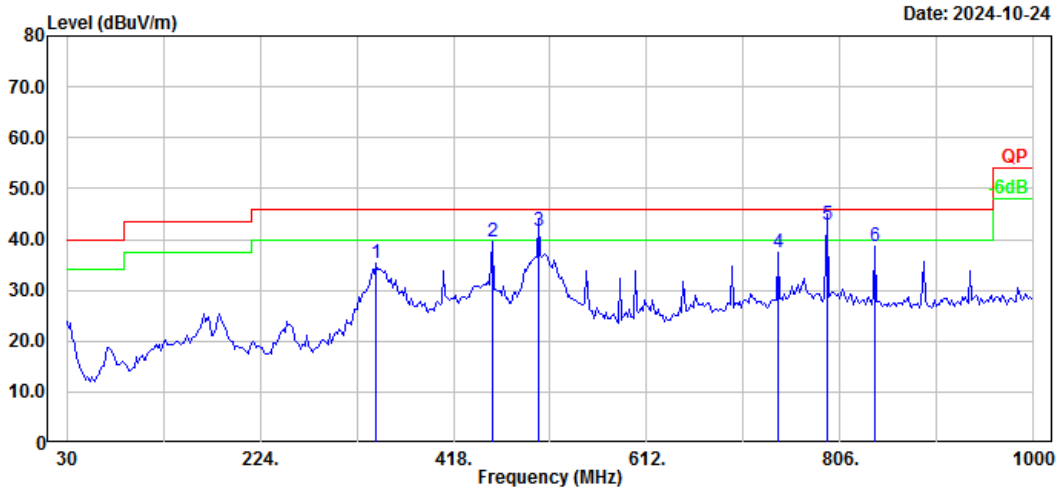
Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-1
Polarization: Vertical Tester: Leesin Xiang
Test Mode: M4
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	30.00	28.30	-3.80	24.50	40.00	15.50	Peak
2	503.36	35.80	-4.22	31.58	46.00	14.42	Peak
3	697.36	33.92	-1.32	32.60	46.00	13.40	Peak
4	743.92	37.07	-0.43	36.64	46.00	9.36	Peak
5	792.42	35.07	0.34	35.41	46.00	10.59	Peak
6	840.92	30.54	0.81	31.35	46.00	14.65	Peak

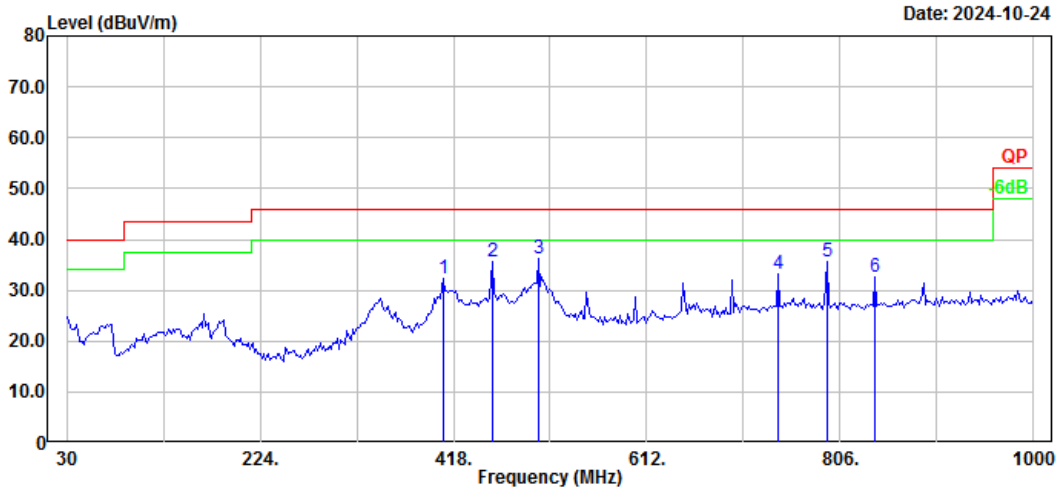
M5: Charging &Front Camera Working (Configuration 2#+ Adapter 4# + Battery 3#)

Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-2
Polarization: Horizontal Tester: Leesin Xiang
Test Mode: M5
Note: Worst Battery 3#



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	340.40	43.98	-8.72	35.26	46.00	10.74	Peak
2	456.80	44.93	-5.25	39.68	46.00	6.32	Peak
3	503.36	45.80	-4.22	41.58	46.00	4.42	QP
4	743.92	37.74	-0.43	37.31	46.00	8.69	Peak
5	792.42	42.40	0.34	42.74	46.00	3.26	QP
6	840.92	37.95	0.81	38.76	46.00	7.24	Peak

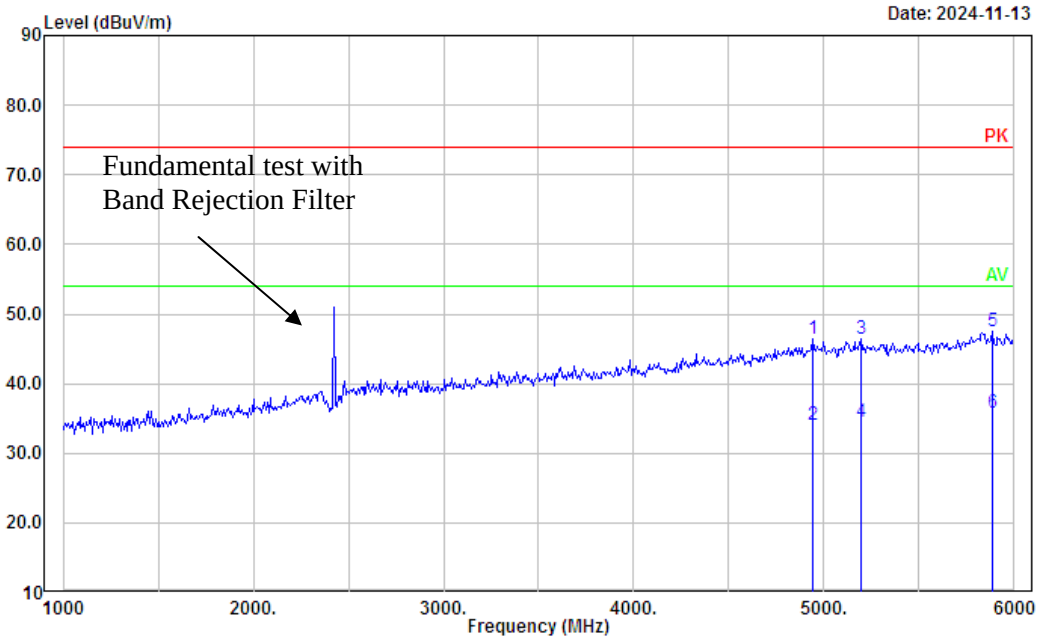
Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-2
Polarization: Vertical Tester: Leesin Xiang
Test Mode: M5
Note: Worst Battery 3#



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	408.30	39.16	-6.76	32.40	46.00	13.60	Peak
2	456.80	40.99	-5.25	35.74	46.00	10.26	Peak
3	503.36	40.35	-4.22	36.13	46.00	9.87	Peak
4	743.92	33.72	-0.43	33.29	46.00	12.71	Peak
5	792.42	35.31	0.34	35.65	46.00	10.35	Peak
6	840.92	31.79	0.81	32.60	46.00	13.40	Peak

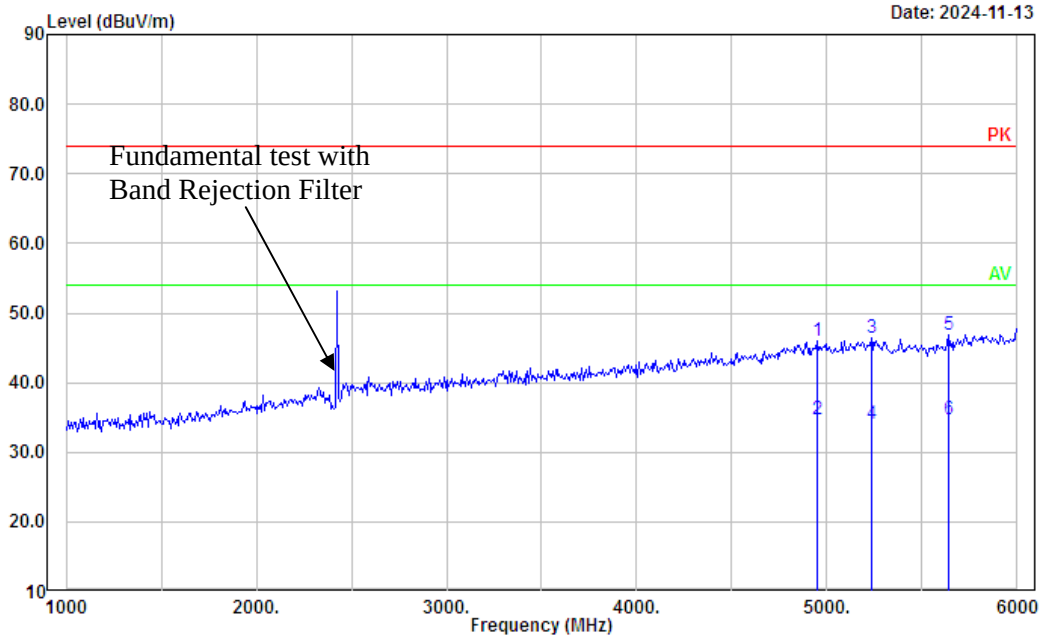
2) 1GHz-13.45GHz:
M2:

Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-1
Polarization: Horizontal Tester: Alan Xie
Test Mode: M2
Note:



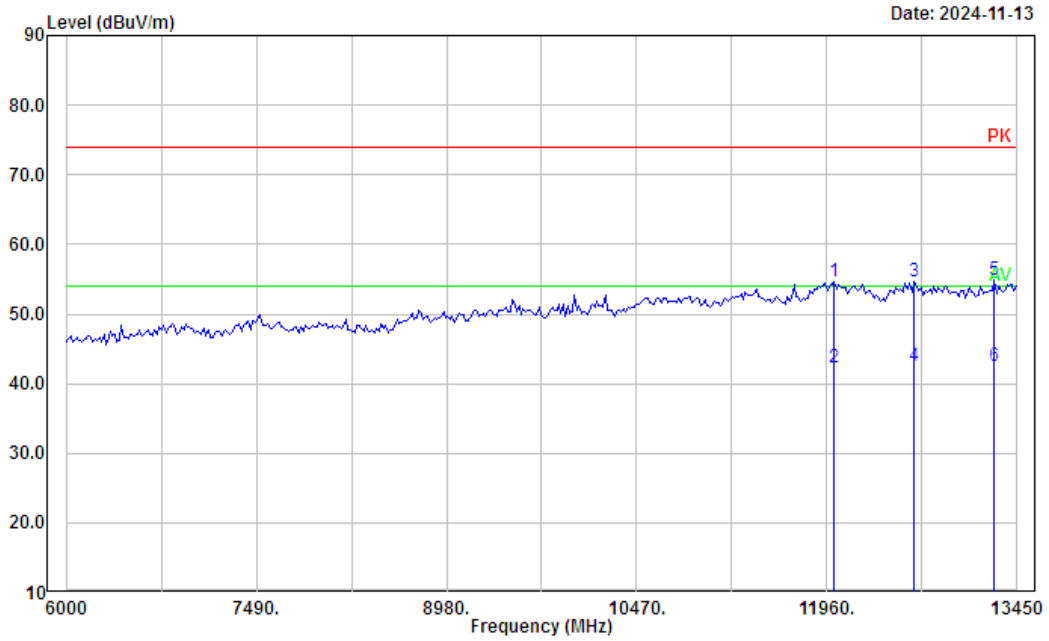
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	4942.03	35.51	10.90	46.41	74.00	27.59	Peak
2	4942.03	23.27	10.90	34.17	54.00	19.83	Average
3	5195.65	35.40	11.10	46.50	74.00	27.50	Peak
4	5195.65	23.35	11.10	34.45	54.00	19.55	Average
5	5884.06	36.22	11.34	47.56	74.00	26.44	Peak
6	5884.06	24.52	11.34	35.86	54.00	18.14	Average

Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-1
Polarization: Vertical Tester: Alan Xie
Test Mode: M2
Note:



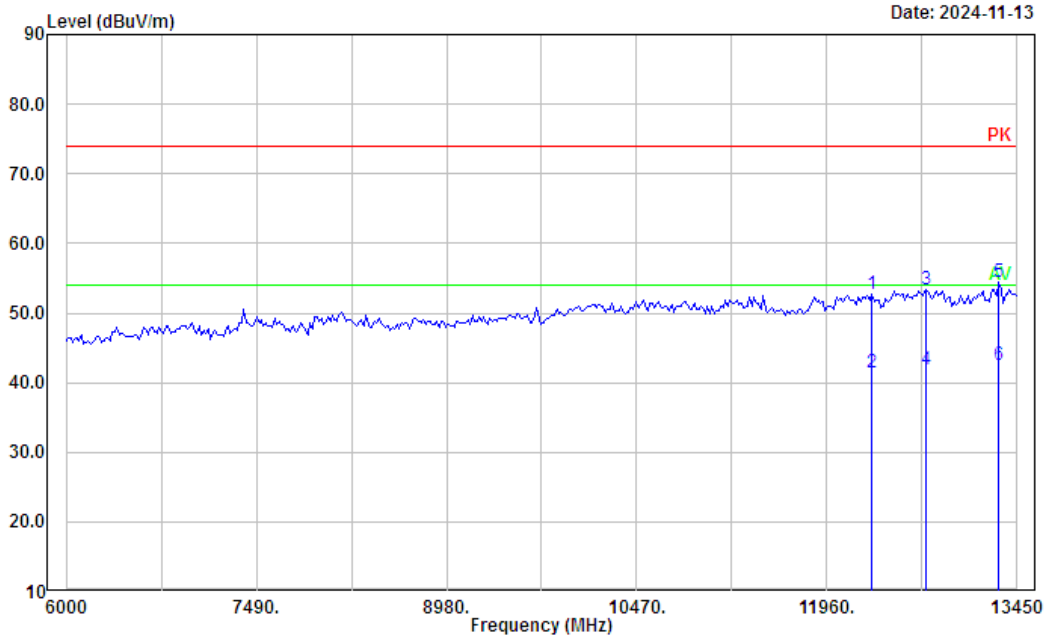
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	4949.28	35.03	10.95	45.98	74.00	28.02	Peak
2	4949.28	23.80	10.95	34.75	54.00	19.25	Average
3	5231.88	35.46	10.98	46.44	74.00	27.56	Peak
4	5231.88	23.19	10.98	34.17	54.00	19.83	Average
5	5637.68	35.83	11.06	46.89	74.00	27.11	Peak
6	5637.68	23.62	11.06	34.68	54.00	19.32	Average

Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-1
Polarization: Horizontal Tester: Alan Xie
Test Mode: M2
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	12017.39	32.97	21.67	54.64	74.00	19.36	Peak
2	12017.39	20.58	21.67	42.25	54.00	11.75	Average
3	12643.48	33.57	21.15	54.72	74.00	19.28	Peak
4	12643.48	21.38	21.15	42.53	54.00	11.47	Average
5	13269.57	32.88	22.02	54.90	74.00	19.10	Peak
6	13269.57	20.43	22.02	42.45	54.00	11.55	Average

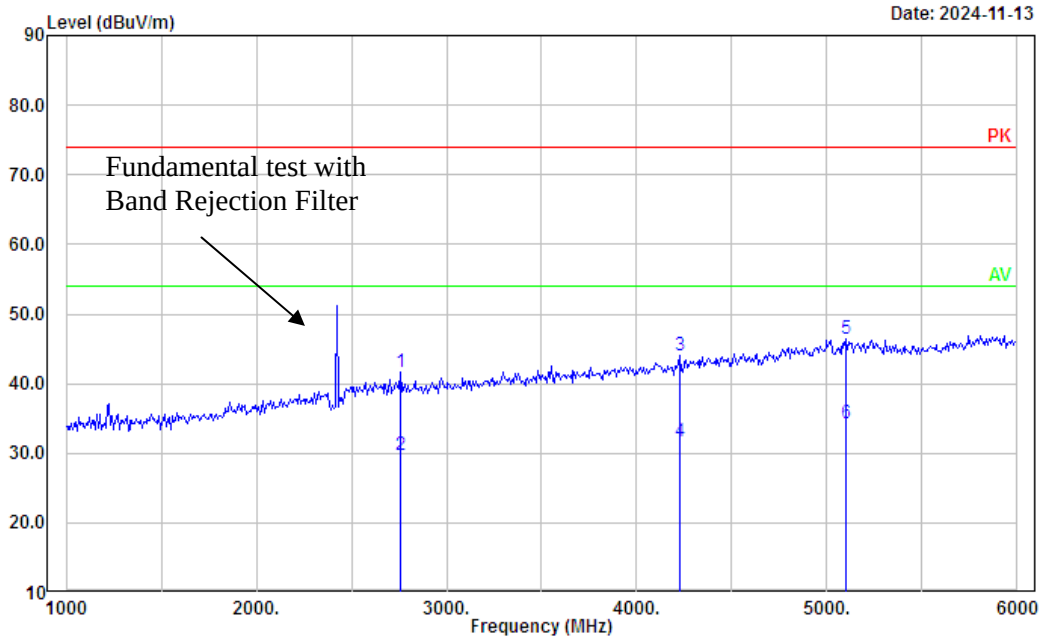
Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-1
Polarization: Vertical Tester: Alan Xie
Test Mode: M2
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	12313.04	31.31	21.32	52.63	74.00	21.37	Peak
2	12313.04	20.03	21.32	41.35	54.00	12.65	Average
3	12730.43	32.10	21.29	53.39	74.00	20.61	Peak
4	12730.43	20.62	21.29	41.91	54.00	12.09	Average
5	13304.35	32.38	22.16	54.54	74.00	19.46	Peak
6	13304.35	20.34	22.16	42.50	54.00	11.50	Average

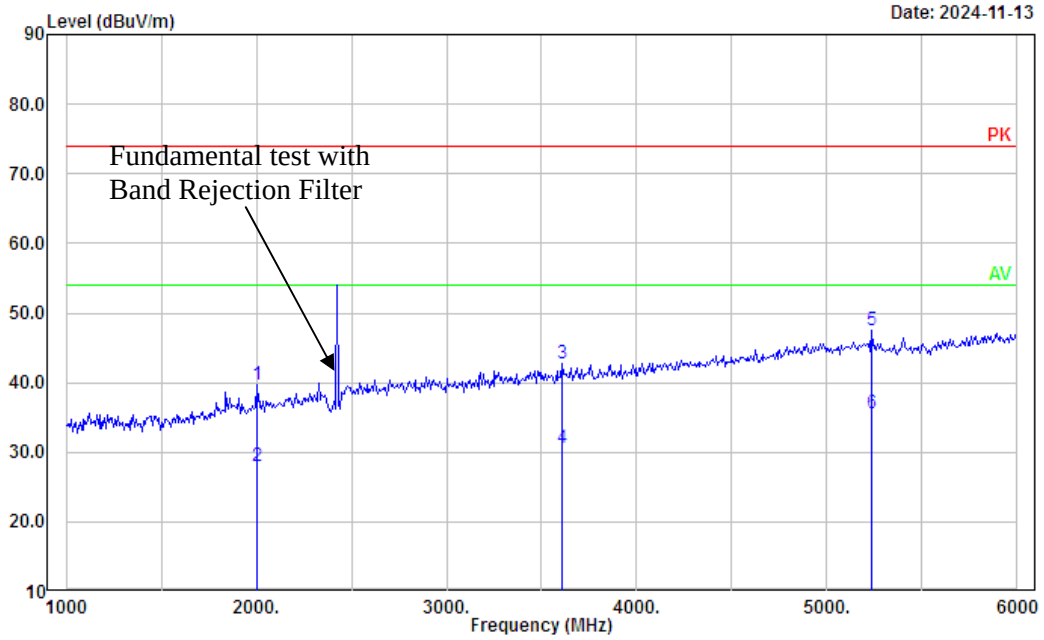
M5: Charging &Front Camera Working (Configuration 2#+ Adapter 4# + Battery 3#)

Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-2
Polarization: Horizontal Tester: Alan Xie
Test Mode: M5
Note: Battery 3#



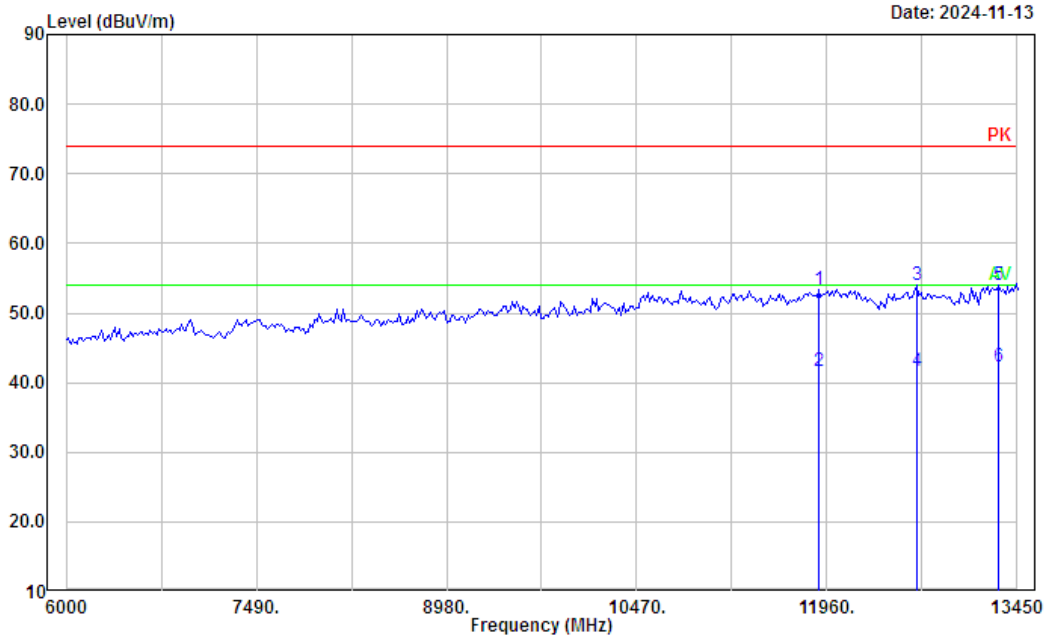
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	2760.87	37.04	4.57	41.61	74.00	32.39	Peak
2	2760.87	25.26	4.57	29.83	54.00	24.17	Average
3	4224.64	35.96	8.03	43.99	74.00	30.01	Peak
4	4224.64	23.73	8.03	31.76	54.00	22.24	Average
5	5101.45	35.65	10.80	46.45	74.00	27.55	Peak
6	5101.45	23.55	10.80	34.35	54.00	19.65	Average

Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-2
Polarization: Vertical Tester: Alan Xie
Test Mode: M5
Note: Battery 3#



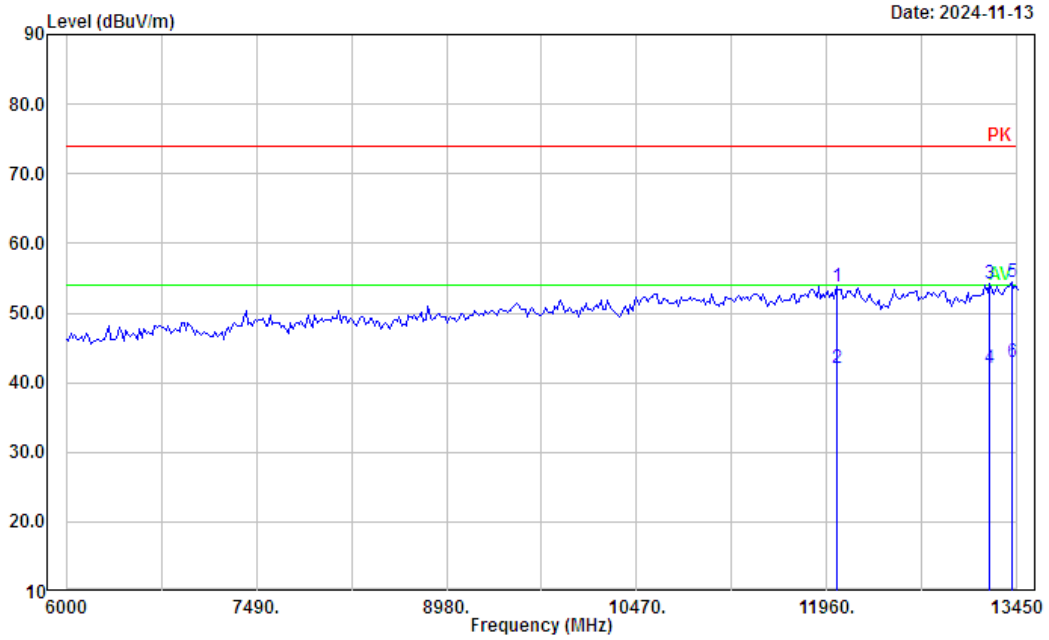
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	2000.00	38.50	1.29	39.79	74.00	34.21	Peak
2	2000.00	26.63	1.29	27.92	54.00	26.08	Average
3	3608.70	36.24	6.40	42.64	74.00	31.36	Peak
4	3608.70	24.28	6.40	30.68	54.00	23.32	Average
5	5231.88	36.45	10.98	47.43	74.00	26.57	Peak
6	5231.88	24.58	10.98	35.56	54.00	18.44	Average

Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-2
Polarization: Horizontal Tester: Alan Xie
Test Mode: M5
Note: Battery 3#



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	11895.65	31.96	21.48	53.44	74.00	20.56	Peak
2	11895.65	20.14	21.48	41.62	54.00	12.38	Average
3	12660.87	32.79	21.13	53.92	74.00	20.08	Peak
4	12660.87	20.60	21.13	41.73	54.00	12.27	Average
5	13304.35	31.85	22.16	54.01	74.00	19.99	Peak
6	13304.35	20.25	22.16	42.41	54.00	11.59	Average

Project No.: 2402Y99420E-RF-A1 Serial No.: 2TOQ-2
Polarization: Vertical Tester: Alan Xie
Test Mode: M5
Note: Battery 3#



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	12034.78	32.15	21.62	53.77	74.00	20.23	Peak
2	12034.78	20.48	21.62	42.10	54.00	11.90	Average
3	13234.78	32.44	21.84	54.28	74.00	19.72	Peak
4	13234.78	20.33	21.84	42.17	54.00	11.83	Average
5	13408.70	32.16	22.31	54.47	74.00	19.53	Peak
6	13408.70	20.58	22.31	42.89	54.00	11.11	Average

EXHIBIT A - EUT PHOTOGRAPHS

Please refer to the attachment 2402Y99420E-RF-A1-EXP EUT external photographs and 2402Y99420E-RF-A1-INP EUT internal photographs.

EXHIBIT B - TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2402Y99420E-RF-00DA1-TSP test setup photographs.

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