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

ACCREDITED
TESTING LABORATORY
CERTIFICATE # 6356.01

TEST REPORT

Applicant: **INGENICO**

Address: 9 Avenue de la gare - Rovaltain TGV, BP25156,Valence Cedex 9,26958 ,France

FCC ID: **XKB-EX4CLWBT**

Product Name: **Smart POS Terminal**

Standard(s): **47 CFR Part 15, Subpart C(15.247)**
ANSI C63.10-2013
KDB 558074 D01 15.247 Meas Guidance v05r02

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: **CR230526341-00B**

Date Of Issue: **2023/6/14**

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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.

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	CR230526341-00B	Original Report	2023/6/14

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

EUT Name:	Smart POS Terminal
EUT Model:	AXIUM EX4000
Operation Frequency:	2402-2480 MHz
Maximum Peak Output Power (Conducted):	-1.05 dBm
Modulation Type:	GFSK
Rated Input Voltage:	DC 3.85V from battery or DC 5V from adapter or charger Base
Serial Number:	25TQ-7(Configuration 1#) 25TU-1(Configuration 2#)
EUT Received Date:	2023/5/16
EUT Received Status:	Good
Note: this model has two configurations. Configuration 1# Configuration 2# are electrically identical, please refer to the declaration letter for more detail, which was provided by manufacturer. Both Configurations were tested for AC line conducted emission and Radiated Spurious Emissions, other test item only performed with Configuration 2#.	

Operation Frequency Detail:
For BLE:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	20	2442
1	2404	…	…
…	…	…	…
…	…	…	…
..	…	38	2478
19	2440	39	2480

Per section 15.31(m), the below frequencies were performed the test as below:

Test Channel	Frequency (MHz)
Lowest	2402
Middle	2440
Highest	2480

Antenna Information Detail▲:

Antenna Manufacturer	Antenna Type	input impedance (Ohm)	Frequency Range	Antenna Gain
Fuzhou ZHONGTIANXUN communication technology Co., Ltd	IFA	50	2.4~2.5GHz	-6.6 dBi

The Method of §15.203 Compliance:
☒Antenna must be permanently attached to the unit.
☐Antenna must use a unique type of connector to attach to the EUT.
☐Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

Accessory Information:

Accessory Description	Manufacturer	Model
Adapter 1#	XIAMEN KELI ELECTRONICS CO LTD	SW-0983
Adapter 2#	Jiangxi Jian Aohai Technology Co.,Ltd.	A319-050200U-US2
Adapter 3#	XIAMEN KELI ELECTRONICS CO LTD	KL-WD050200U
Adapter 4#	SHENZHEN KEYU POWER SUPPLY TECHNOLOGY CO.,LTD.	KA1602-0502000DEU
Adapter 5#	SHENZHEN KEYU POWER SUPPLY TECHNOLOGY CO.,LTD.	KA12C-0502000US

1.2 Description of Test Configuration

1.2.1 EUT Operation Condition:

For BLE:

EUT Operation Mode:	The system was configured for testing in Engineering Mode, which was provided by the manufacturer. All adapters were tested with EUT Configuration 1#. The worst adapter above test with the EUT Configuration 1#+Charger Base. The worst adapter above test with the EUT Configuration 2#
Equipment Modifications:	No
EUT Exercise Software:	Engineering Mode

The software was provided by manufacturer. The maximum power was configured as below, that was provided by the manufacturer▲:

Test Modes	Power Level Setting		
	Lowest Channel	Middle Channel	Highest Channel
BLE	default	default	default

1.2.2 Support Equipment List and Details

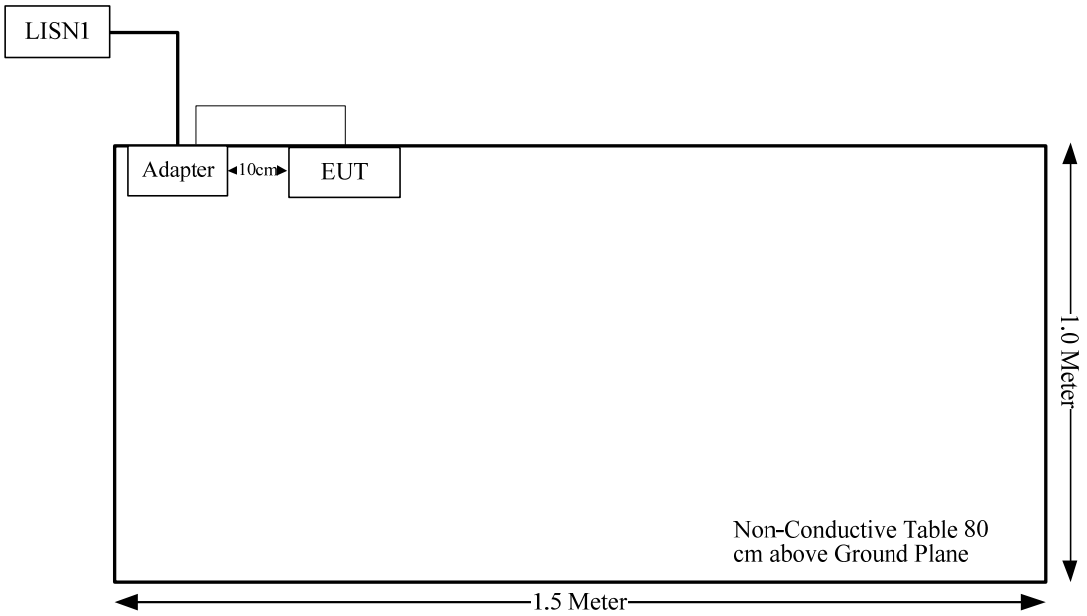
Manufacturer	Description	Model	Serial Number
Ingenico	Charger Base	AXIUM EX-SBASE-C	224BCU006579

1.2.3 Support Cable List and Details

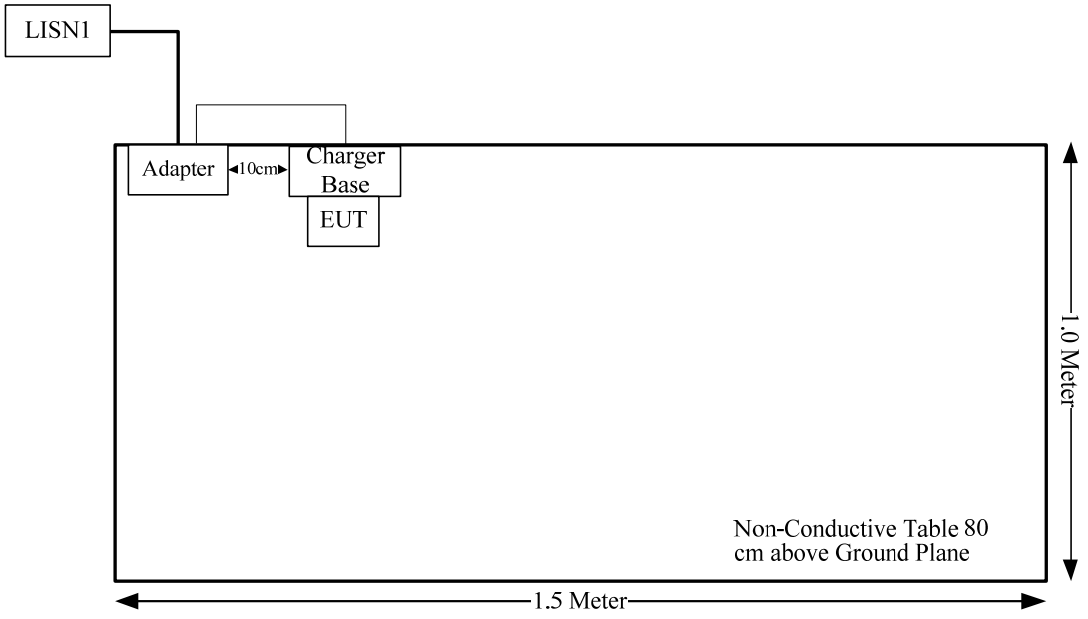
Cable Description	Shielding Type	Ferrite Core	Length (m)	From Port	To
USB Cable	No	No	1.2	Adapter	EUT

1.2.4 Block Diagram of Test Setup

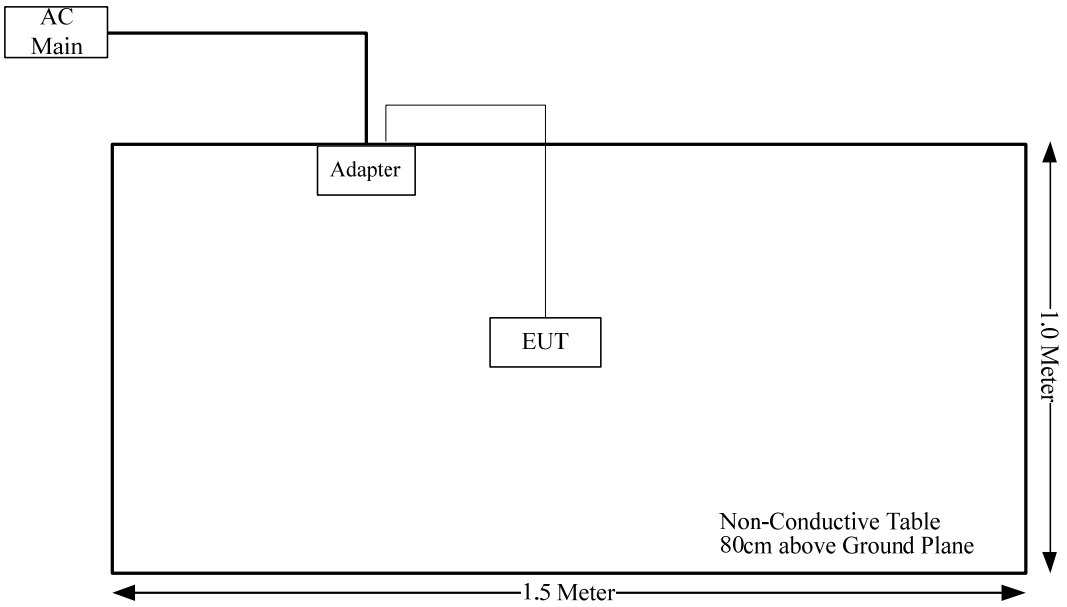
AC line conducted emissions:
Adapter Power:



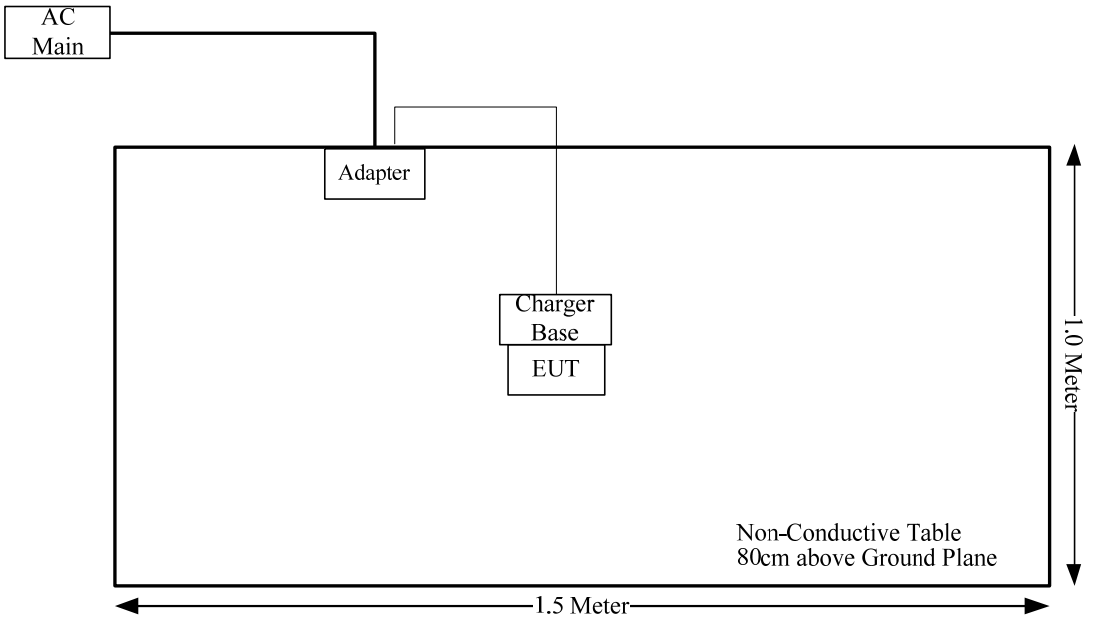
Charger Base Power:



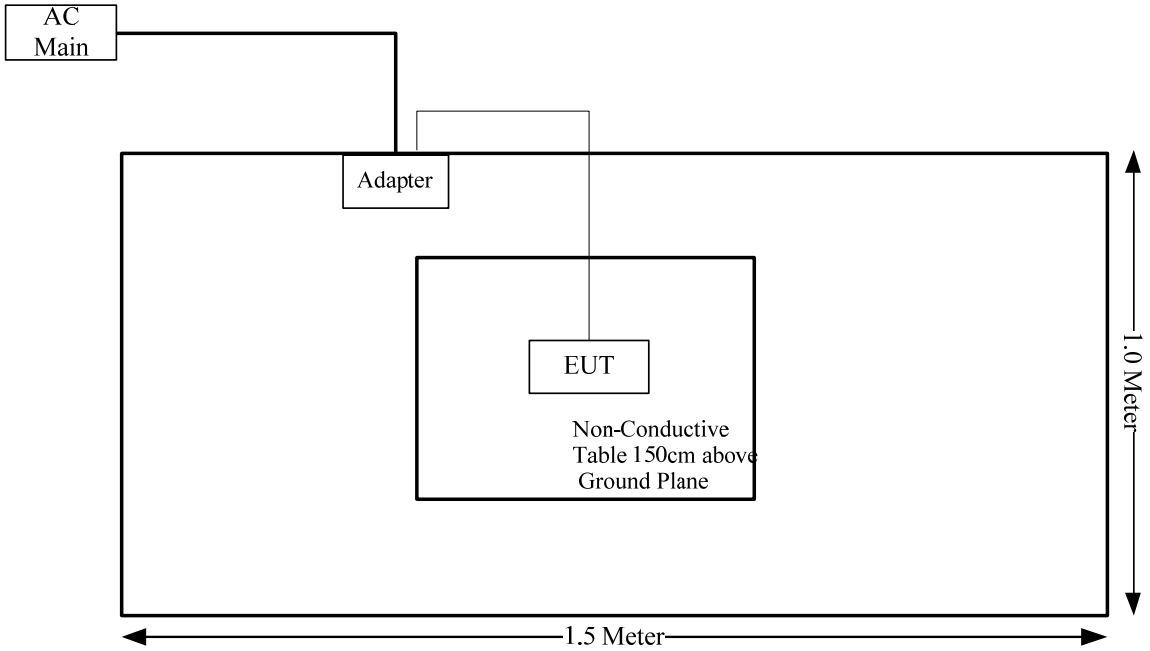
Spurious Emissions:
Below 1G:
Adapter Power:



Charger Base Power:



Above 1G:


AC
Main
Adapter
EUT
Non-Conductive
Table 150cm above
Ground Plane
1.0 Meter
1.5 Meter

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
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±0.61dB
Power Spectral Density, conducted	±0.61 dB
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
Unwanted Emissions, conducted	±1.26 dB
Temperature	±1℃
Humidity	±5%
DC and low frequency voltages	±0.4%
Duty Cycle	1%
AC Power Lines Conducted Emission	2.8 dB (150 kHz to 30 MHz)

2. SUMMARY OF TEST RESULTS

Standard(s) Section	Test Items	Result
§15.207(a)	AC line conducted emissions	Compliant
§15.205, §15.209, §15.247(d)	Radiated Spurious Emissions	Compliant
§15.247 (a)(2)	6 dB Emission Bandwidth	Compliant
§15.247(b)(3)	Maximum Conducted Output Power	Compliant
§15.247(e)	Power Spectral Density	Compliant
§15.247(d)	100 kHz Bandwidth of Frequency Band Edge	Compliant
§15.203	Antenna Requirement	Compliant
FCC§15.247 (i) & §1.1307 & §2.1093	RF Exposure Evaluation	Compliant

3. REQUIREMENTS AND TEST PROCEDURES

3.1 AC Line Conducted Emissions

3.1.1 Applicable Standard

FCC§15.207(a).

(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator 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 boundary between the frequency ranges.

	Conducted limit (dBμV)	
Frequency of emission (MHz)	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.

(b) The limit shown in paragraph (a) of this section shall not apply to carrier current systems operating as intentional radiators on frequencies below 30 MHz. In lieu thereof, these carrier current systems shall be subject to the following standards:

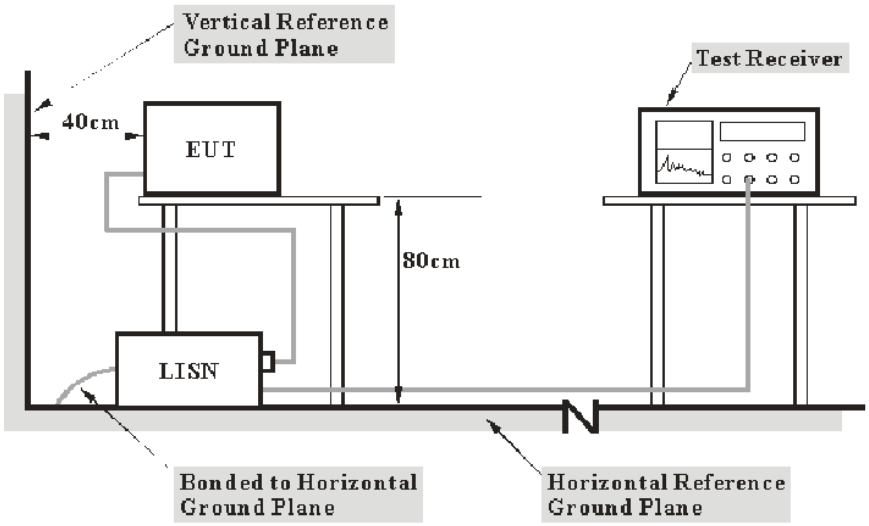
(1) For carrier current system containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions.

(2) For all other carrier current systems: 1000 μV within the frequency band 535-1705 kHz, as measured using a 50 μH/50 ohms LISN.

(3) Carrier current systems operating below 30 MHz are also subject to the radiated emission limits in §15.205, §15.209, §15.221, §15.223, or §15.227, as appropriate.

(c) Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines. Devices that include, or make provisions for, the use of battery chargers which permit operating while charging, AC adapters or battery eliminators or that connect to the AC power lines indirectly, obtainig their power through another device which is connected to the AC power lines, shall be tested to demonstrate compliance with the conducted limits.

3.1.2 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 C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

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

3.1.3 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

3.1.4 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.

3.1.5 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

3.2 Radiation Spurious Emissions

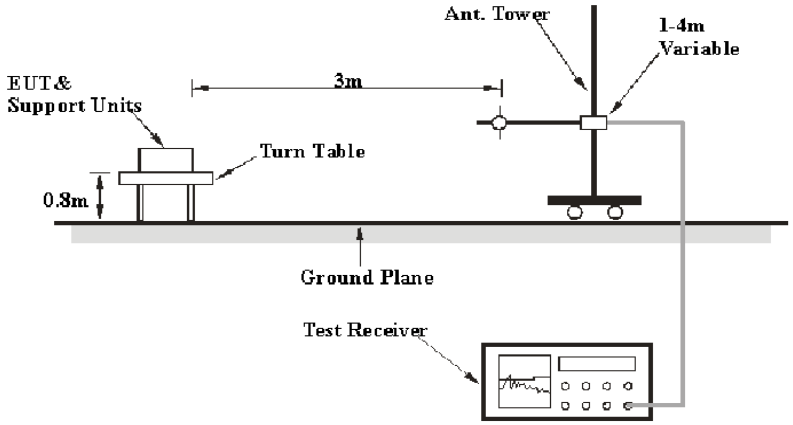
3.2.1 Applicable Standard

FCC §15.247 (d);

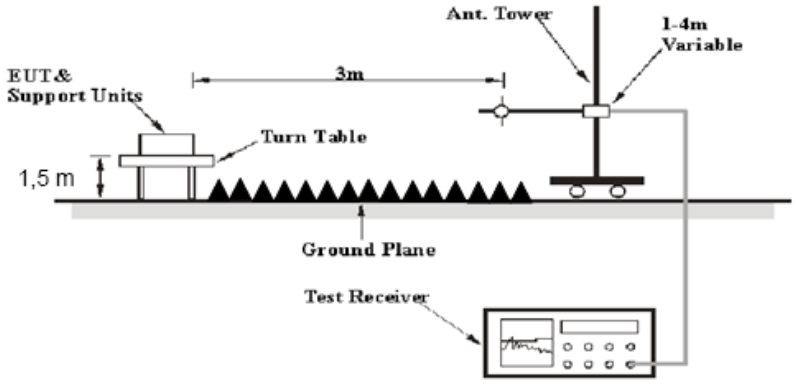
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

3.2.2 EUT Setup

Below 1GHz:



Above 1GHz:



The radiated emissions were performed in the 3 meters distance, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209, and FCC 15.247 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 spacing between the peripherals was 10 cm.

3.2.3 EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 25 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

30-1000MHz:

Measurement	RBW	Video B/W	IF B/W
QP	120 kHz	300 kHz	120kHz

1GHz- 25GHz:

Measurement	Duty cycle	RBW	Video B/W
PK	Any	1MHz	3 MHz
Ave.	>98%	1MHz	10 Hz
	<98%	1MHz	≥1/T

Note: T is minimum transmission duration

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

3.2.4 Test Procedure

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

Data was recorded in Quasi-peak detection mode for frequency range of 30 MHz-1 GHz, peak and Average detection modes for frequencies above 1 GHz.

3.2.5 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

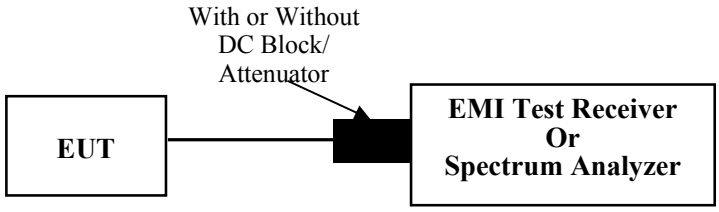
3.3 6 dB Emission Bandwidth:

3.3.1 Applicable Standard

FCC §15.247 (a)(2)

Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

3.3.2 EUT Setup



3.3.3 Test Procedure

According to ANSI C63.10-2013 Section 11.8

a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) ≥ 3×RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

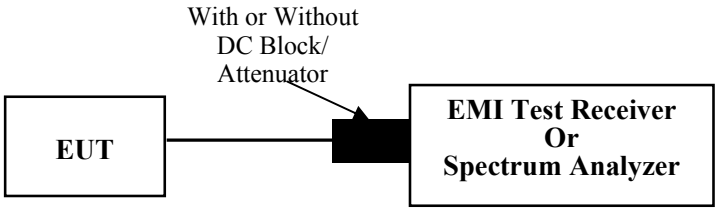
3.4 Maximum Conducted Output Power:

3.4.1 Applicable Standard

FCC §15.247 (b)(3)

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

3.4.2 EUT Setup



3.4.3 Test Procedure

According to ANSI C63.10-2013 Section 11.9.1.1

The following procedure shall be used when an instrument with a resolution bandwidth that is greater than the DTS bandwidth is available to perform the measurement:
a) Set the RBW ≥ DTS bandwidth.
b) Set VBW ≥ [3 × RBW].
c) Set span ≥ [3 × RBW].
d) Sweep time = auto couple.
e) Detector = peak.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use peak marker function to determine the peak amplitude level.

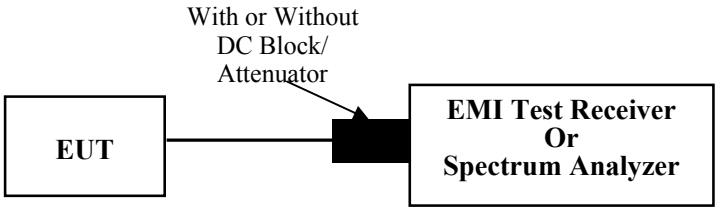
3.5 Maximum power spectral density:

3.5.1 Applicable Standard

FCC §15.247 (e)

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

3.5.2 EUT Setup



3.5.3 Test Procedure

According to ANSI C63.10-2013 Section 11.10.2

a) Set analyzer center frequency to DTS channel center frequency.
b) Set the span to 1.5 times the DTS bandwidth.
c) Set the RBW to 3 kHz ≤ RBW ≤ 100 kHz.
d) Set the VBW ≥ [3 × RBW].
e) Detector = peak.
f) Sweep time = auto couple.
g) Trace mode = max hold.
h) Allow trace to fully stabilize.
i) Use the peak marker function to determine the maximum amplitude level within the RBW.
j) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.

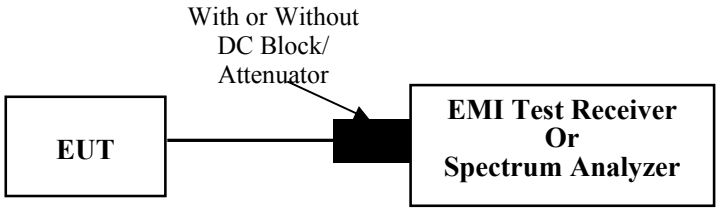
3.6 100 kHz Bandwidth of Frequency Band Edge:

3.6.1 Applicable Standard

FCC §15.247 (d);

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

3.6.2 EUT Setup



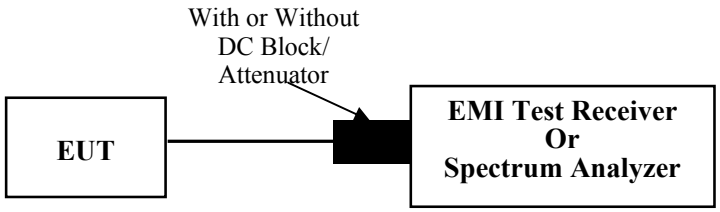
3.6.3 Test Procedure

According to ANSI C63.10-2013 Section 11.11

a) Set the center frequency and span to encompass frequency range to be measured.
b) Set the RBW = 100 kHz.
c) Set the VBW ≥ [3 × RBW].
d) Detector = peak.
e) Sweep time = auto couple.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use the peak marker function to determine the maximum amplitude level.
Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.

3.7 Duty Cycle:

3.7.1 EUT Setup



3.7.2 Test Procedure

According to ANSI C63.10-2013 Section 11.6

The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the ON and OFF times of the transmitted signal:
1) Set the center frequency of the instrument to the center frequency of the transmission.
2) Set RBW ≥ OBW if possible; otherwise, set RBW to the largest available value.
3) Set VBW ≥ RBW. Set detector = peak or average.
4) The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring the duty cycle shall not be used if T ≤ 16.7 μs.)

3.8 Antenna Requirement

3.8.1 Applicable Standard

FCC §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§15.211, 15.213, 15.217, 15.219, 15.221, or §15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

3.8.2 Judgment

Compliant. Please refer to the Antenna Information detail in Section 1.

4. Test DATA AND RESULTS

4.1 AC Line Conducted Emissions

Serial Number:	25TU-1 25TQ-7	Test Date:	2023/06/02~2023/06/05
Test Site:	CE	Test Mode:	Transmitting (Low channel was the worst)
Tester:	David Huang	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	25~25.1	Relative Humidity: (%)	56	ATM Pressure: (kPa)	99.9~100.9

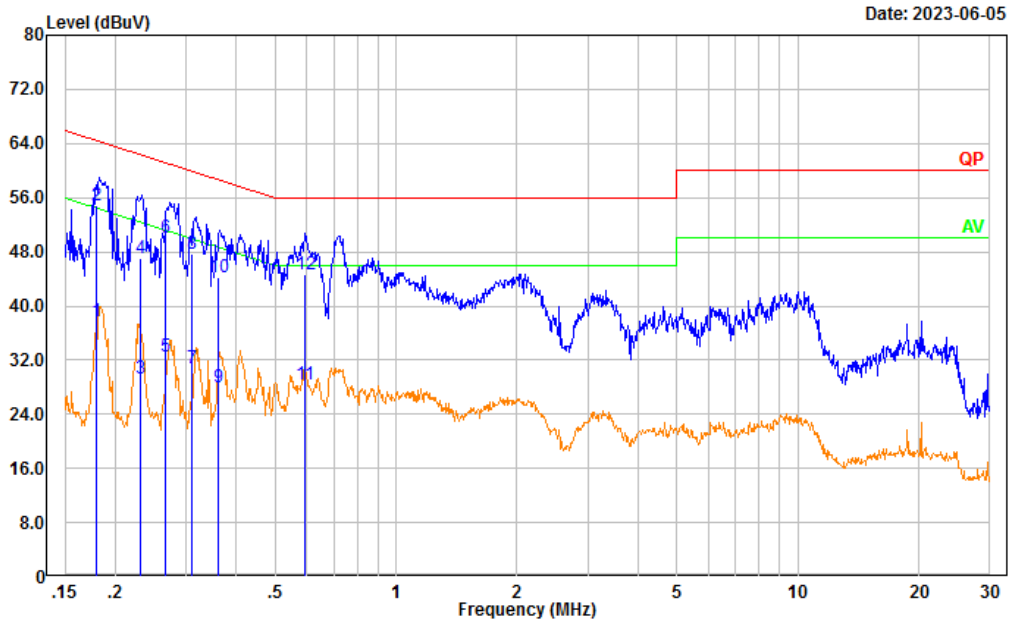
Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	LISN	ENV216	101134	2023/04/01	2024/03/31
R&S	EMI Test Receiver	ESR3	102726	2022/07/15	2023/07/14
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).*

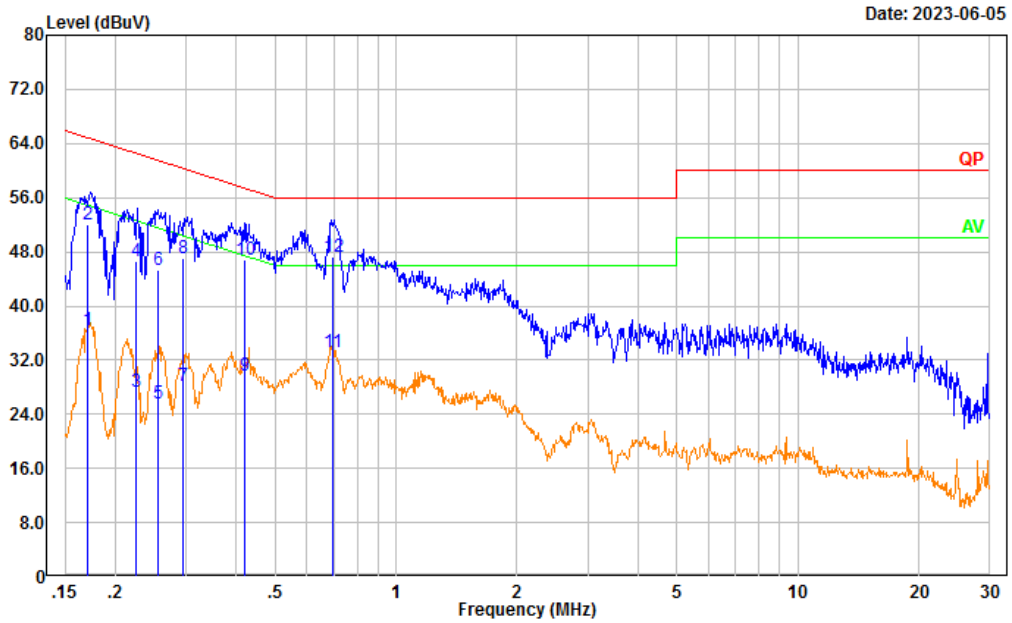
Adapter 1#+Configuration 1#:

Project No.: CR230526341-RF
Tester: David Huang
Port: Line
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.179	28.19	9.61	37.80	54.51	16.71	Average
2	0.179	45.18	9.61	54.79	64.51	9.72	QP
3	0.232	19.75	9.61	29.36	52.39	23.03	Average
4	0.232	37.46	9.61	47.07	62.39	15.32	QP
5	0.267	22.90	9.61	32.51	51.21	18.70	Average
6	0.267	40.56	9.61	50.17	61.21	11.04	QP
7	0.311	21.23	9.61	30.84	49.93	19.09	Average
8	0.311	38.12	9.61	47.73	59.93	12.20	QP
9	0.362	18.33	9.61	27.94	48.68	20.74	Average
10	0.362	34.69	9.61	44.30	58.68	14.38	QP
11	0.591	18.81	9.62	28.43	46.00	17.57	Average
12	0.591	35.04	9.62	44.66	56.00	11.34	QP

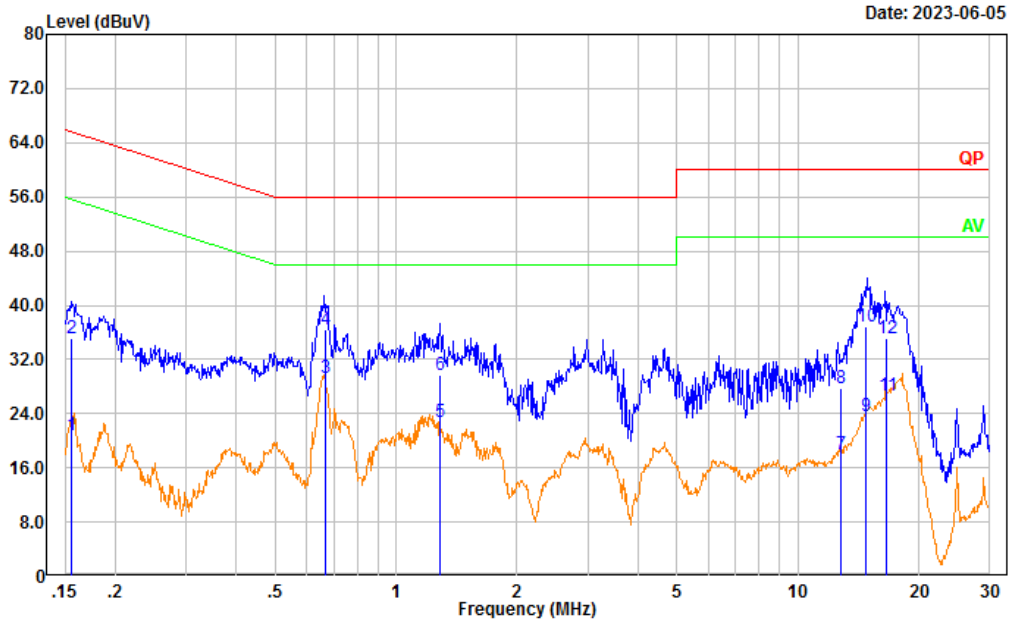
Project No.: CR230526341-RF
Tester: David Huang
Port: neutral
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.171	26.75	9.61	36.36	54.89	18.53	Average
2	0.171	42.37	9.61	51.98	64.89	12.91	QP
3	0.226	17.62	9.61	27.23	52.59	25.36	Average
4	0.226	37.03	9.61	46.64	62.59	15.95	QP
5	0.256	15.94	9.61	25.55	51.56	26.01	Average
6	0.256	35.64	9.61	45.25	61.56	16.31	QP
7	0.295	18.65	9.61	28.26	50.38	22.12	Average
8	0.295	37.41	9.61	47.02	60.38	13.36	QP
9	0.419	20.02	9.61	29.63	47.46	17.83	Average
10	0.419	37.23	9.61	46.84	57.46	10.62	QP
11	0.694	23.63	9.62	33.25	46.00	12.75	Average
12	0.694	37.65	9.62	47.27	56.00	8.73	QP

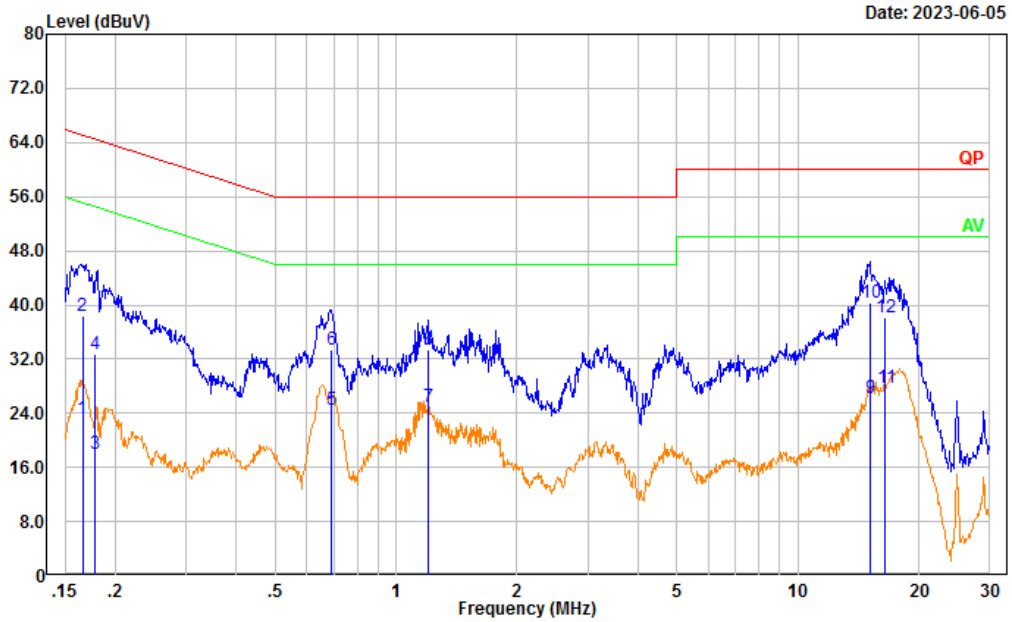
Adapter 2#+Configuration 1#

Project No.: CR230526341-RF
Tester: David Huang
Port: Line
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.156	11.15	9.61	20.76	55.70	34.94	Average
2	0.156	25.54	9.61	35.15	65.70	30.55	QP
3	0.668	19.63	9.62	29.25	46.00	16.75	Average
4	0.668	26.75	9.62	36.37	56.00	19.63	QP
5	1.288	13.16	9.62	22.78	46.00	23.22	Average
6	1.288	20.07	9.62	29.69	56.00	26.31	QP
7	12.742	8.39	9.68	18.07	50.00	31.93	Average
8	12.742	17.98	9.68	27.66	60.00	32.34	QP
9	14.780	14.03	9.69	23.72	50.00	26.28	Average
10	14.780	27.09	9.69	36.78	60.00	23.22	QP
11	16.630	17.03	9.72	26.75	50.00	23.25	Average
12	16.630	25.50	9.72	35.22	60.00	24.78	QP

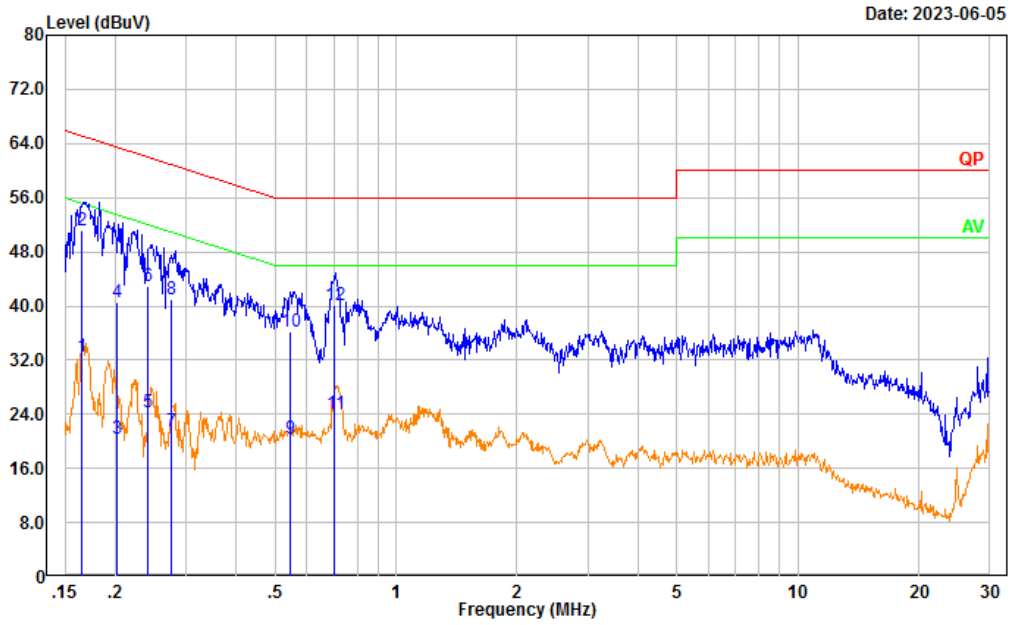
Project No.: CR230526341-RF
Tester: David Huang
Port: neutral
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.166	13.67	9.61	23.28	55.17	31.89	Average
2	0.166	28.67	9.61	38.28	65.17	26.89	QP
3	0.178	8.46	9.61	18.07	54.59	36.52	Average
4	0.178	23.19	9.61	32.80	64.59	31.79	QP
5	0.688	14.83	9.62	24.45	46.00	21.55	Average
6	0.688	23.72	9.62	33.34	56.00	22.66	QP
7	1.204	15.23	9.62	24.85	46.00	21.15	Average
8	1.204	23.80	9.62	33.42	56.00	22.58	QP
9	15.084	16.60	9.69	26.29	50.00	23.71	Average
10	15.084	30.67	9.69	40.36	60.00	19.64	QP
11	16.480	18.12	9.69	27.81	50.00	22.19	Average
12	16.480	28.44	9.69	38.13	60.00	21.87	QP

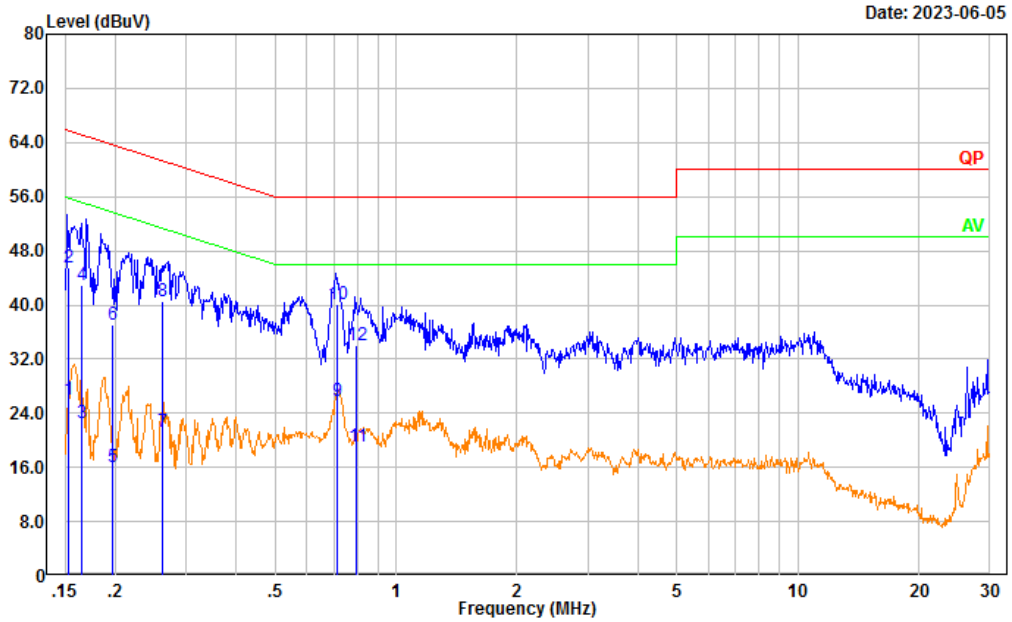
Adapter 3#+Configuration 1#

Project No.: CR230526341-RF
Tester: David Huang
Port: Line
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.165	22.98	9.61	32.59	55.22	22.63	Average
2	0.165	41.50	9.61	51.11	65.22	14.11	QP
3	0.202	10.85	9.61	20.46	53.52	33.06	Average
4	0.202	30.93	9.61	40.54	63.52	22.98	QP
5	0.241	14.68	9.61	24.29	52.07	27.78	Average
6	0.241	33.41	9.61	43.02	62.07	19.05	QP
7	0.276	11.80	9.61	21.41	50.94	29.53	Average
8	0.276	31.37	9.61	40.98	60.94	19.96	QP
9	0.544	10.78	9.61	20.39	46.00	25.61	Average
10	0.544	26.49	9.61	36.10	56.00	19.90	QP
11	0.703	14.41	9.62	24.03	46.00	21.97	Average
12	0.703	30.41	9.62	40.03	56.00	15.97	QP

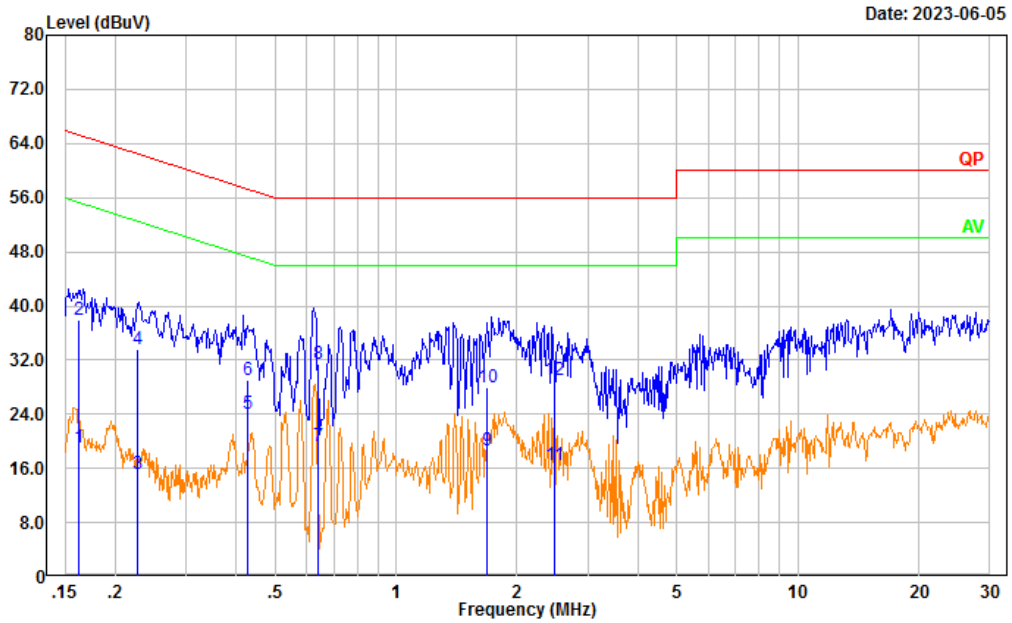
Project No.: CR230526341-RF
Tester: David Huang
Port: neutral
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.153	16.49	9.61	26.10	55.83	29.73	Average
2	0.153	35.82	9.61	45.43	65.83	20.40	QP
3	0.165	12.95	9.61	22.56	55.20	32.64	Average
4	0.165	33.24	9.61	42.85	65.20	22.35	QP
5	0.198	6.48	9.61	16.09	53.70	37.61	Average
6	0.198	27.39	9.61	37.00	63.70	26.70	QP
7	0.262	11.70	9.61	21.31	51.36	30.05	Average
8	0.262	30.92	9.61	40.53	61.36	20.83	QP
9	0.714	16.19	9.62	25.81	46.00	20.19	Average
10	0.714	30.50	9.62	40.12	56.00	15.88	QP
11	0.797	9.50	9.62	19.12	46.00	26.88	Average
12	0.797	24.41	9.62	34.03	56.00	21.97	QP

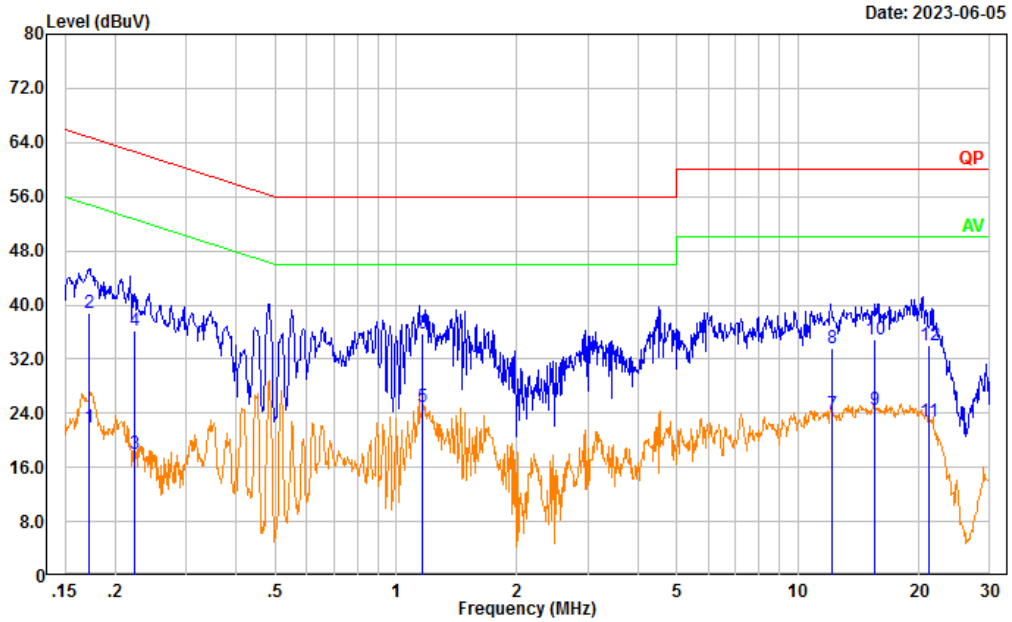
Adapter 4#+Configuration 1#

Project No.: CR230526341-RF
Tester: David Huang
Port: Line
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.162	9.47	9.61	19.08	55.35	36.27	Average
2	0.162	28.29	9.61	37.90	65.35	27.45	QP
3	0.227	5.51	9.61	15.12	52.57	37.45	Average
4	0.227	23.91	9.61	33.52	62.57	29.05	QP
5	0.428	14.37	9.61	23.98	47.30	23.32	Average
6	0.428	19.50	9.61	29.11	57.30	28.19	QP
7	0.640	9.66	9.62	19.28	46.00	26.72	Average
8	0.640	21.73	9.62	31.35	56.00	24.65	QP
9	1.681	9.02	9.63	18.65	46.00	27.35	Average
10	1.681	18.27	9.63	27.90	56.00	28.10	QP
11	2.469	6.92	9.64	16.56	46.00	29.44	Average
12	2.469	19.39	9.64	29.03	56.00	26.97	QP

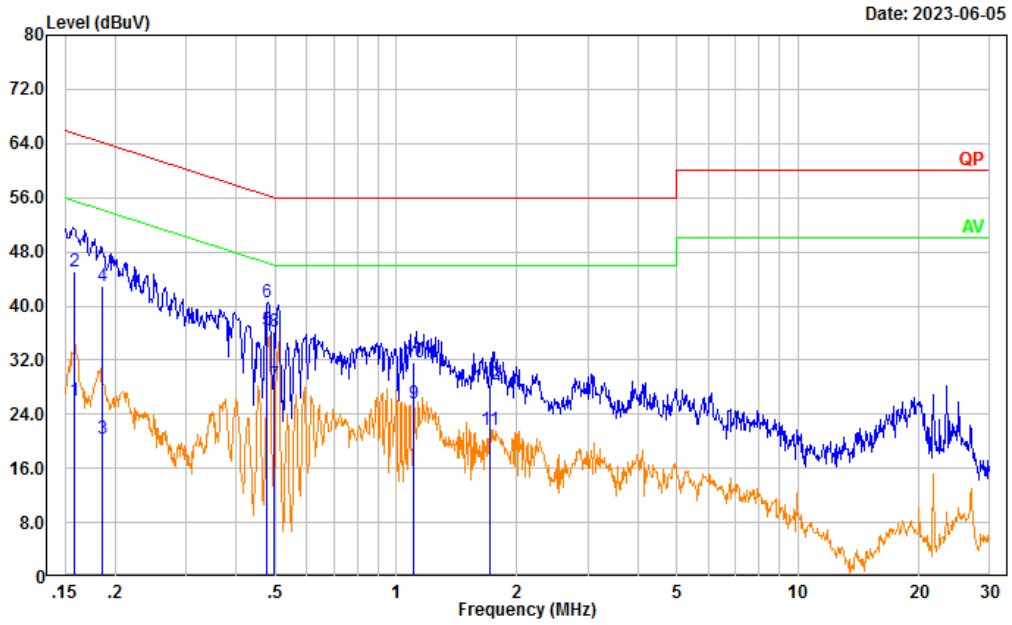
Project No.: CR230526341-RF
Tester: David Huang
Port: neutral
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.172	12.36	9.61	21.97	54.88	32.91	Average
2	0.172	29.13	9.61	38.74	64.88	26.14	QP
3	0.223	8.42	9.61	18.03	52.72	34.69	Average
4	0.223	26.62	9.61	36.23	62.72	26.49	QP
5	1.164	15.21	9.62	24.83	46.00	21.17	Average
6	1.164	26.15	9.62	35.77	56.00	20.23	QP
7	12.197	14.09	9.67	23.76	50.00	26.24	Average
8	12.197	24.03	9.67	33.70	60.00	26.30	QP
9	15.471	14.71	9.69	24.40	50.00	25.60	Average
10	15.471	25.25	9.69	34.94	60.00	25.06	QP
11	21.123	13.15	9.71	22.86	50.00	27.14	Average
12	21.123	24.37	9.71	34.08	60.00	25.92	QP

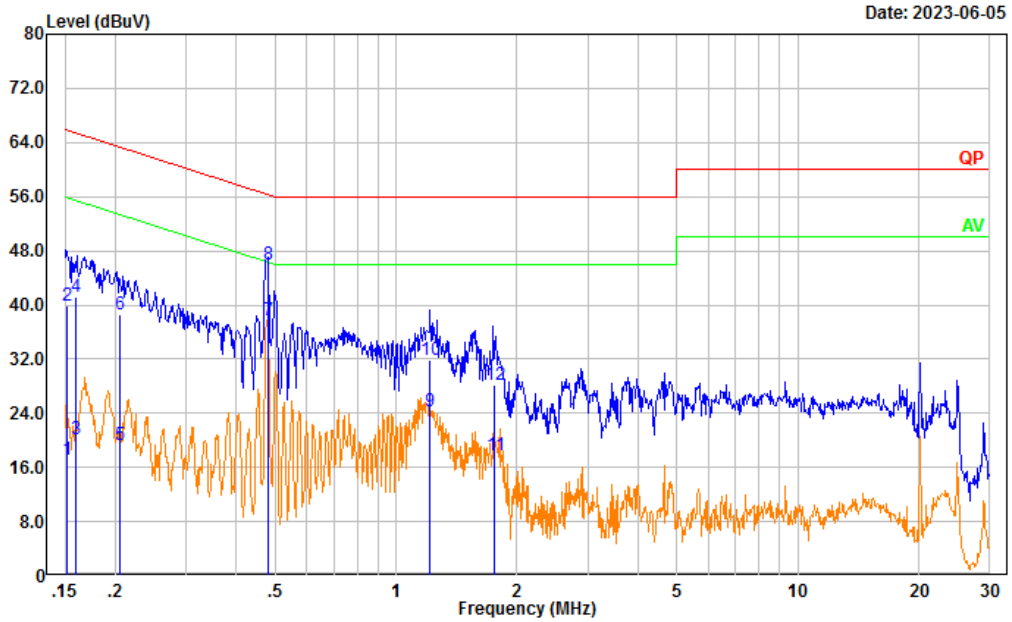
Adapter 5#+Configuration 1#

Project No.: CR230526341-RF
Tester: David Huang
Port: Line
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.158	16.40	9.61	26.01	55.58	29.57	Average
2	0.158	35.39	9.61	45.00	65.58	20.58	QP
3	0.186	10.76	9.61	20.37	54.20	33.83	Average
4	0.186	33.23	9.61	42.84	64.20	21.36	QP
5	0.476	26.80	9.61	36.41	46.41	10.00	Average
6	0.476	30.96	9.61	40.57	56.41	15.84	QP
7	0.497	18.74	9.61	28.35	46.05	17.70	Average
8	0.497	26.56	9.61	36.17	56.05	19.88	QP
9	1.106	15.91	9.62	25.53	46.00	20.47	Average
10	1.106	22.01	9.62	31.63	56.00	24.37	QP
11	1.706	11.95	9.63	21.58	46.00	24.42	Average
12	1.706	18.76	9.63	28.39	56.00	27.61	QP

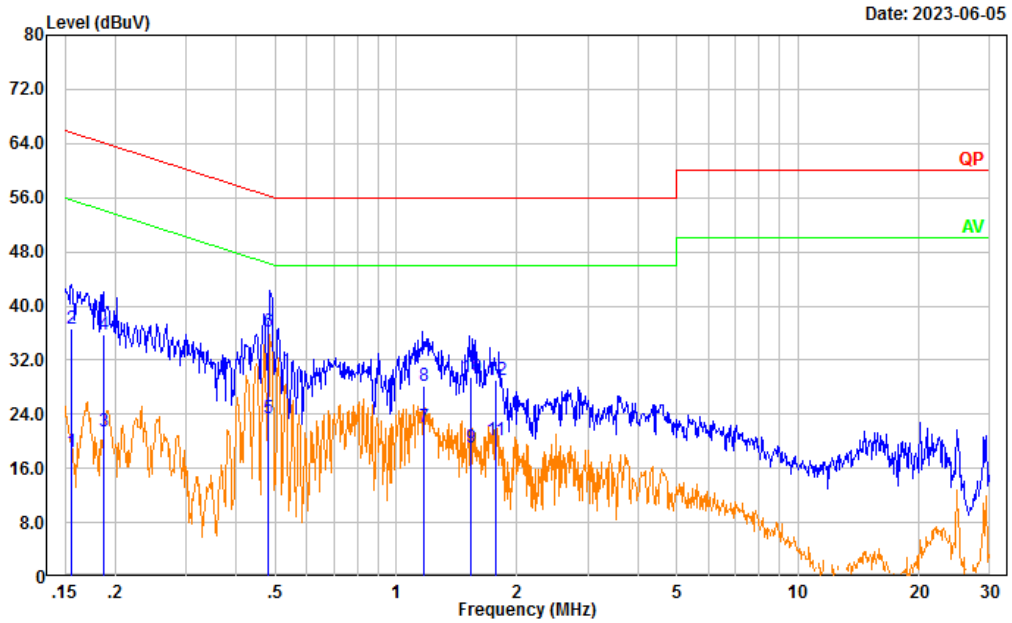
Project No.: CR230526341-RF
Tester: David Huang
Port: neutral
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.151	7.53	9.61	17.14	55.93	38.79	Average
2	0.151	30.25	9.61	39.86	65.93	26.07	QP
3	0.159	10.60	9.61	20.21	55.50	35.29	Average
4	0.159	31.53	9.61	41.14	65.50	24.36	QP
5	0.206	9.76	9.61	19.37	53.38	34.01	Average
6	0.206	28.96	9.61	38.57	63.38	24.81	QP
7	0.480	28.17	9.61	37.78	46.33	8.55	Average
8	0.480	36.29	9.61	45.90	56.33	10.43	QP
9	1.216	14.67	9.62	24.29	46.00	21.71	Average
10	1.216	22.26	9.62	31.88	56.00	24.12	QP
11	1.758	8.16	9.63	17.79	46.00	28.21	Average
12	1.758	18.49	9.63	28.12	56.00	27.88	QP

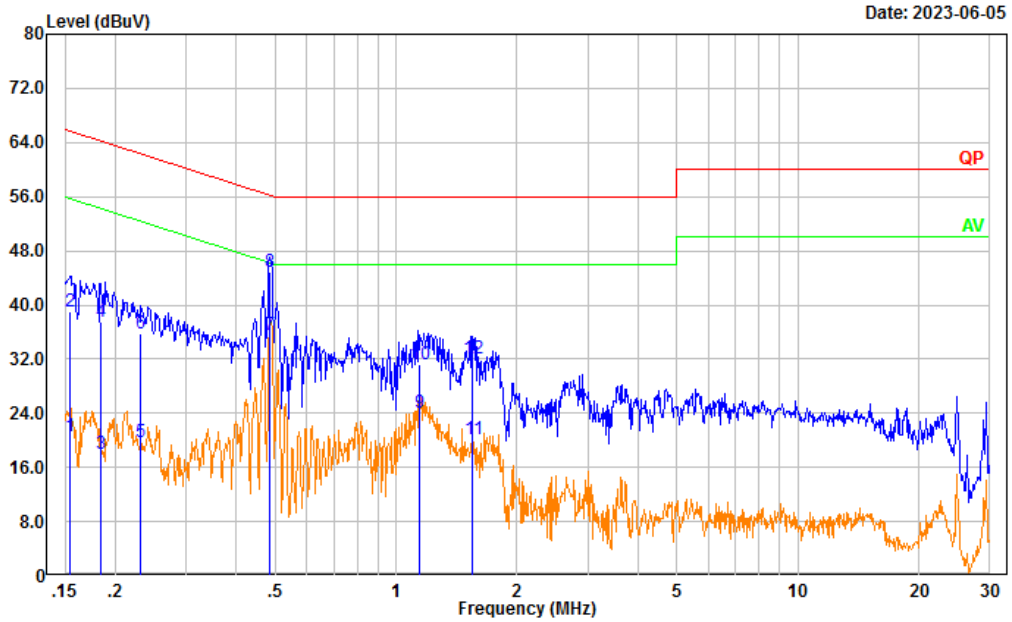
Worst Adapter(Adapter 5#)+Configuration 1#+Charger base

Project No.: CR230526341-RF
Tester: David Huang
Port: Line
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.156	8.82	9.61	18.43	55.70	37.27	Average
2	0.156	26.95	9.61	36.56	65.70	29.14	QP
3	0.187	11.80	9.61	21.41	54.17	32.76	Average
4	0.187	26.20	9.61	35.81	64.17	28.36	QP
5	0.482	13.73	9.61	23.34	46.30	22.96	Average
6	0.482	26.61	9.61	36.22	56.30	20.08	QP
7	1.172	12.42	9.62	22.04	46.00	23.96	Average
8	1.172	18.59	9.62	28.21	56.00	27.79	QP
9	1.540	9.41	9.63	19.04	46.00	26.96	Average
10	1.540	19.76	9.63	29.39	56.00	26.61	QP
11	1.770	10.50	9.63	20.13	46.00	25.87	Average
12	1.770	19.40	9.63	29.03	56.00	26.97	QP

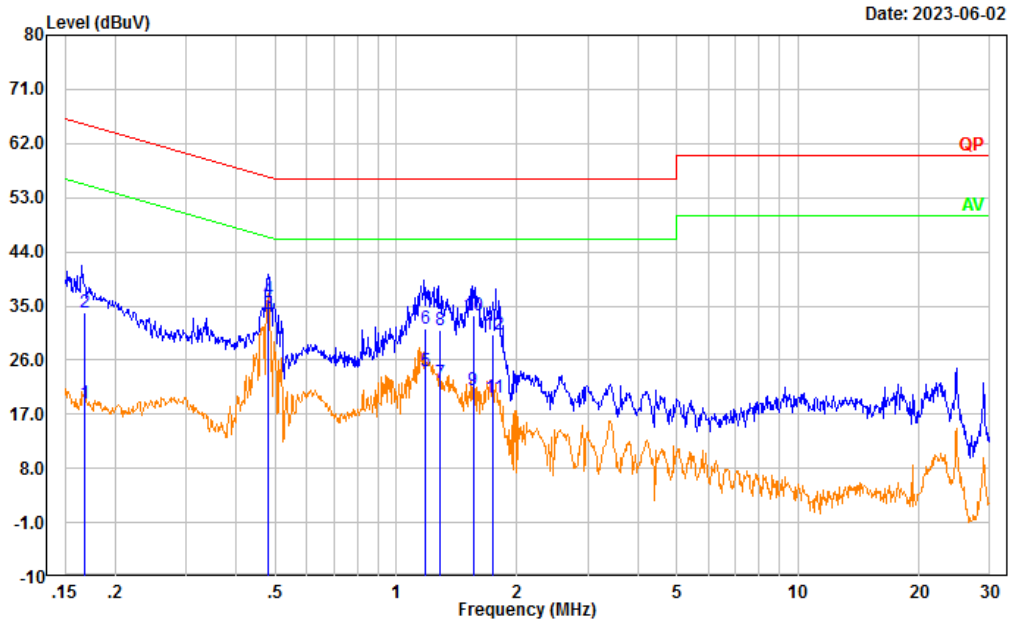
Project No.: CR230526341-RF
Tester: David Huang
Port: neutral
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.154	11.05	9.61	20.66	55.77	35.11	Average
2	0.154	29.50	9.61	39.11	65.77	26.66	QP
3	0.185	8.44	9.61	18.05	54.27	36.22	Average
4	0.185	27.89	9.61	37.50	64.27	26.77	QP
5	0.232	10.08	9.61	19.69	52.39	32.70	Average
6	0.232	26.24	9.61	35.85	62.39	26.54	QP
7	0.486	25.88	9.61	35.49	46.24	10.75	Average
8	0.486	35.17	9.61	44.78	56.24	11.46	QP
9	1.140	14.42	9.62	24.04	46.00	21.96	Average
10	1.140	21.56	9.62	31.18	56.00	24.82	QP
11	1.553	10.46	9.63	20.09	46.00	25.91	Average
12	1.553	22.40	9.63	32.03	56.00	23.97	QP

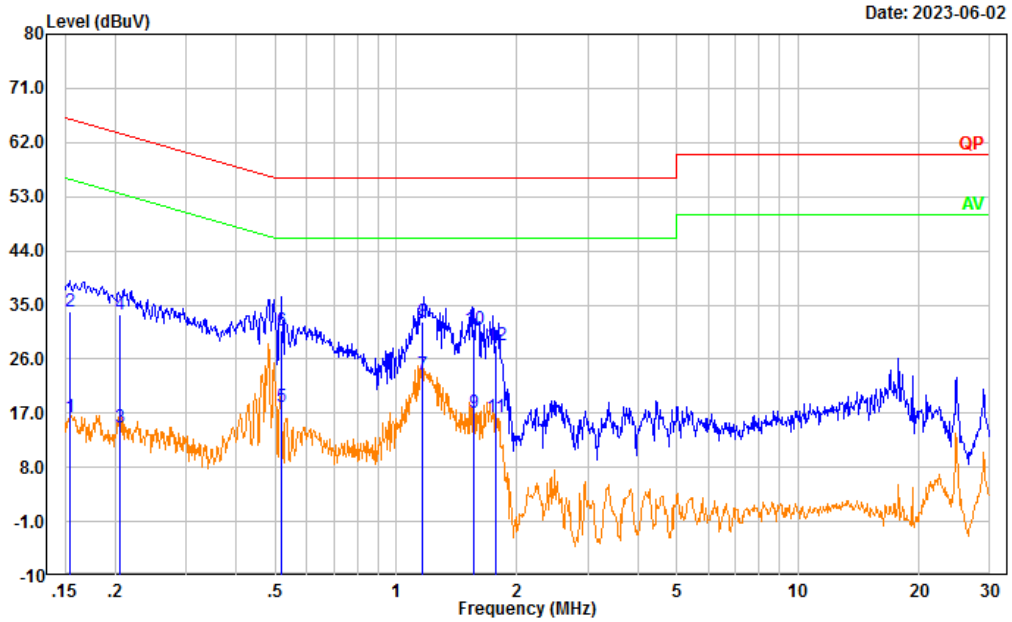
Worst Adapter(Adapter 5#)+Configuration 2#

Project No.: CR230526341-RF
Tester: David Huang
Port: Line
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.168	9.13	9.61	18.74	55.04	36.30	Average
2	0.168	24.27	9.61	33.88	65.04	31.16	QP
3	0.481	24.12	9.61	33.73	46.32	12.59	Average
4	0.481	26.58	9.61	36.19	56.32	20.13	QP
5	1.186	14.63	9.62	24.25	46.00	21.75	Average
6	1.186	21.52	9.62	31.14	56.00	24.86	QP
7	1.289	12.60	9.62	22.22	46.00	23.78	Average
8	1.289	21.29	9.62	30.91	56.00	25.09	QP
9	1.554	11.30	9.63	20.93	46.00	25.07	Average
10	1.554	23.89	9.63	33.52	56.00	22.48	QP
11	1.746	10.17	9.63	19.80	46.00	26.20	Average
12	1.746	20.72	9.63	30.35	56.00	25.65	QP

Project No.: CR230526341-RF
Tester: David Huang
Port: neutral
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB)	Result (dBµV)	Limit (dBµV)	Margin (dB)	Detector
1	0.154	6.71	9.61	16.32	55.77	39.45	Average
2	0.154	24.26	9.61	33.87	65.77	31.90	QP
3	0.205	5.14	9.61	14.75	53.41	38.66	Average
4	0.205	23.86	9.61	33.47	63.41	29.94	QP
5	0.519	8.43	9.61	18.04	46.00	27.96	Average
6	0.519	21.21	9.61	30.82	56.00	25.18	QP
7	1.164	13.79	9.62	23.41	46.00	22.59	Average
8	1.164	22.54	9.62	32.16	56.00	23.84	QP
9	1.560	7.45	9.63	17.08	46.00	28.92	Average
10	1.560	21.26	9.63	30.89	56.00	25.11	QP
11	1.770	6.61	9.63	16.24	46.00	29.76	Average
12	1.770	18.60	9.63	28.23	56.00	27.77	QP

4.2 Radiation Spurious Emissions

Serial Number:	25TU-1, 25TQ-7	Test Date:	2023/05/29~2023/06/04
Test Site:	966-1, 966-2	Test Mode:	Transmitting
Tester:	Vic Du, Mack Huang	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	26.3~27.5	Relative Humidity: (%)	57~63	ATM Pressure: (kPa)	100.2~100.3

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	2022/07/15	2023/07/14
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0470-02	2022/07/17	2023/07/16
TIMES MICROWAVE	Coaxial Cable	LMR-600-UltraFlex	C-0780-01	2022/07/17	2023/07/16
Sonoma	Amplifier	310N	186165	2022/07/17	2023/07/16
ETS-Lindgren	Horn Antenna	3115	9912-5985	2020/10/13	2023/10/12
R&S	Spectrum Analyzer	FSV40	101591	2022/07/15	2023/07/14
MICRO-COAX	Coaxial Cable	UFA210A-1-1200-70U300	217423-008	2022/08/07	2023/08/06
MICRO-COAX	Coaxial Cable	UFA210A-1-2362-300300	235780-001	2022/08/07	2023/08/06
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2022/11/09	2023/11/08
Audix	Test Software	E3	201021 (V9)	N/A	N/A
PASTERNACK	Horn Antenna	PE9852/2F-20	112002	2021/02/05	2024/02/04
Quinstar	Preamplifier	QLW-18405536-JO	15964001005	2022/09/16	2023/09/15
MICRO-COAX	Coaxial Cable	UFB142A-1-2362-200200	235772-001	2022/08/07	2023/08/06
E-Microwave	Band Rejection Filter	2400-2483.5MHz	OE01902424	2022/08/07	2023/08/06
Mini Circuits	High Pass Filter	VHF-6010+	31119	2022/08/07	2023/08/06

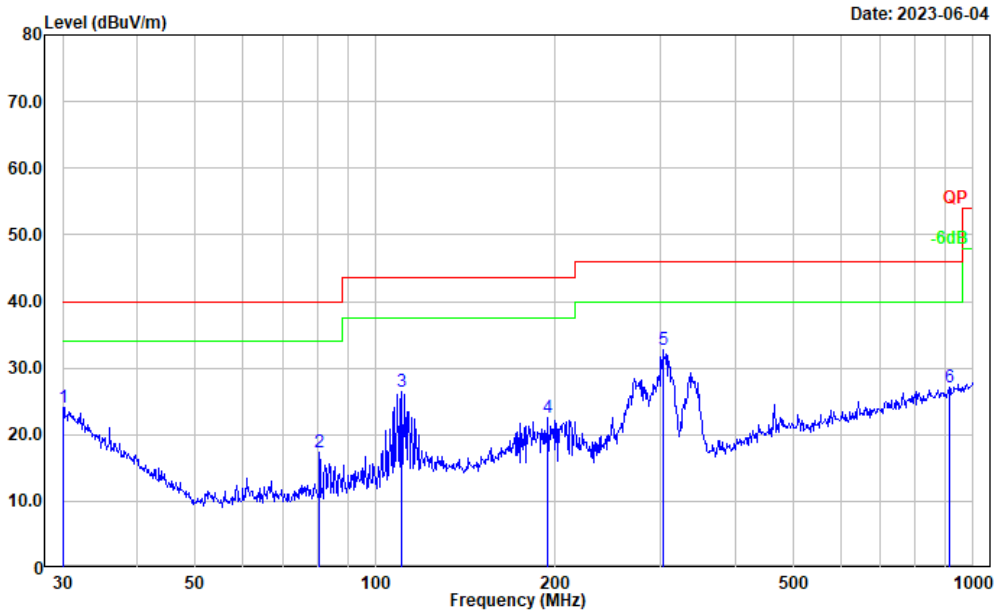
** Statement of Traceability: China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Test Data:

Please refer to the below table and plots.
After pre-scan in the X, Y and Z axes of orientation, the worst case is below:

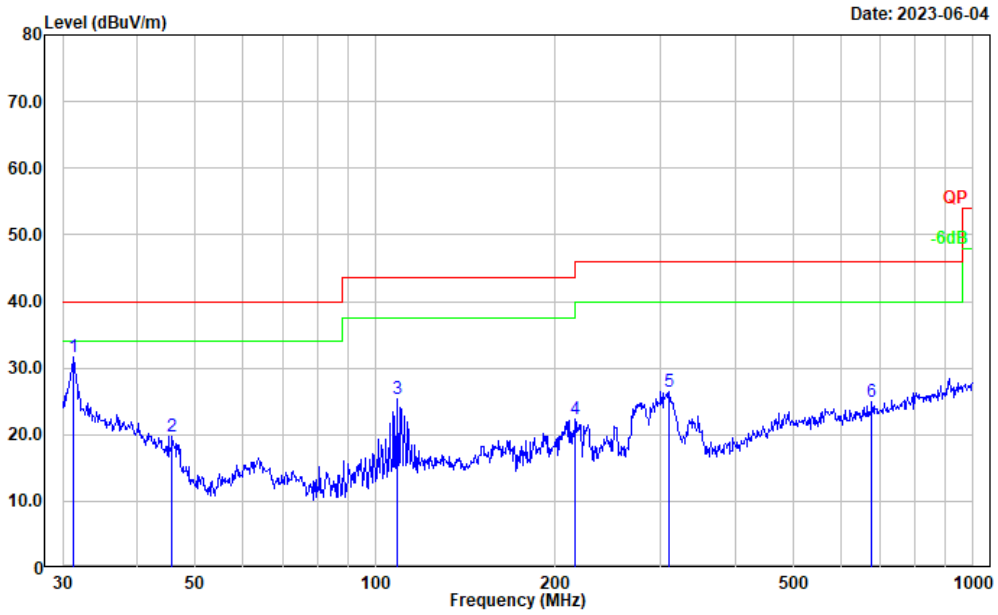
1) 30MHz-1GHz(Low channel was the worst):
Adapter 1#+Configuration 1#

Project No.: CR230526341-RF
Tester: Vic Du
Polarization: horizontal
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	30.105	27.84	-3.68	24.16	40.00	15.84	Peak
2	80.644	34.78	-17.41	17.37	40.00	22.63	Peak
3	110.569	38.63	-12.28	26.35	43.50	17.15	Peak
4	194.453	35.45	-12.87	22.58	43.50	20.92	Peak
5	302.481	43.33	-10.61	32.72	46.00	13.28	Peak
6	912.862	27.75	-0.67	27.08	46.00	18.92	Peak

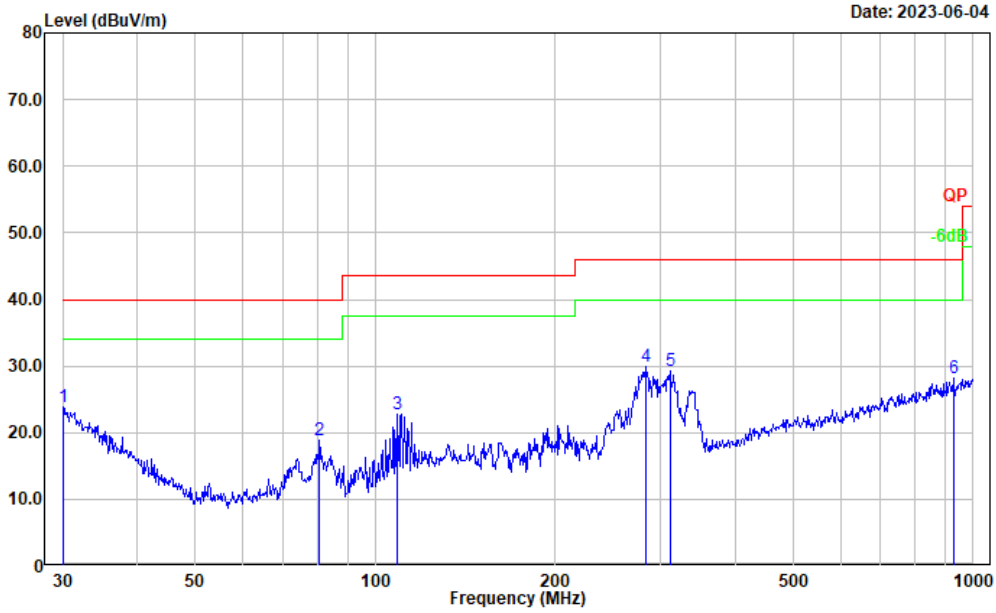
Project No.: CR230526341-RF
Tester: Vic Du
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	31.289	36.16	-4.59	31.57	40.00	8.43	Peak
2	45.695	34.42	-14.64	19.78	40.00	20.22	Peak
3	109.029	37.91	-12.45	25.46	43.50	18.04	Peak
4	216.024	34.88	-12.65	22.23	46.00	23.77	Peak
5	309.998	37.03	-10.60	26.43	46.00	19.57	Peak
6	677.580	28.73	-3.85	24.88	46.00	21.12	Peak

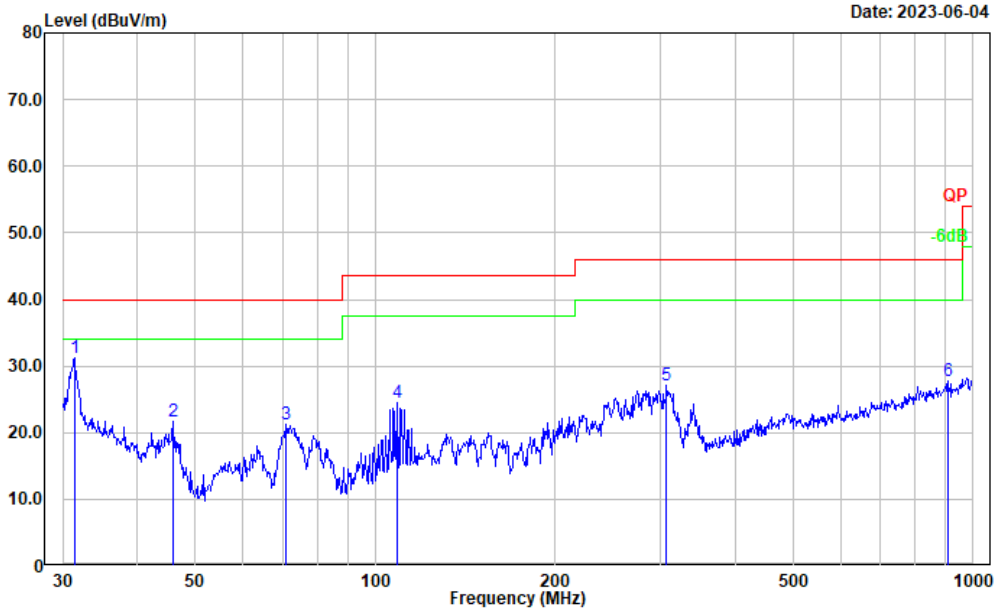
Adapter 2#+Configuration 1#

Project No.: CR230526341-RF
Tester: Vic Du
Polarization: horizontal
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	30.000	27.40	-3.60	23.80	40.00	16.20	Peak
2	80.644	36.29	-17.41	18.88	40.00	21.12	Peak
3	109.029	35.32	-12.45	22.87	43.50	20.63	Peak
4	282.985	41.39	-11.47	29.92	46.00	16.08	Peak
5	311.087	39.96	-10.60	29.36	46.00	16.64	Peak
6	925.756	28.72	-0.62	28.10	46.00	17.90	Peak

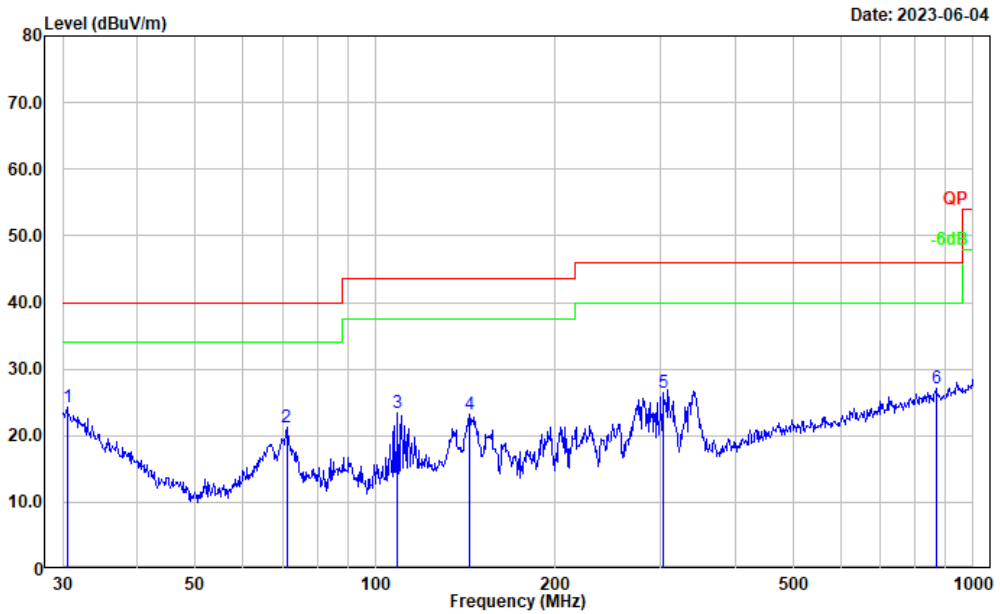
Project No.: CR230526341-RF
Tester: Vic Du
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	31.399	35.85	-4.67	31.18	40.00	8.82	Peak
2	45.855	36.43	-14.74	21.69	40.00	18.31	Peak
3	70.832	37.71	-16.55	21.16	40.00	18.84	Peak
4	108.647	36.99	-12.54	24.45	43.50	19.05	Peak
5	306.754	37.79	-10.58	27.21	46.00	18.79	Peak
6	906.482	28.47	-0.80	27.67	46.00	18.33	Peak

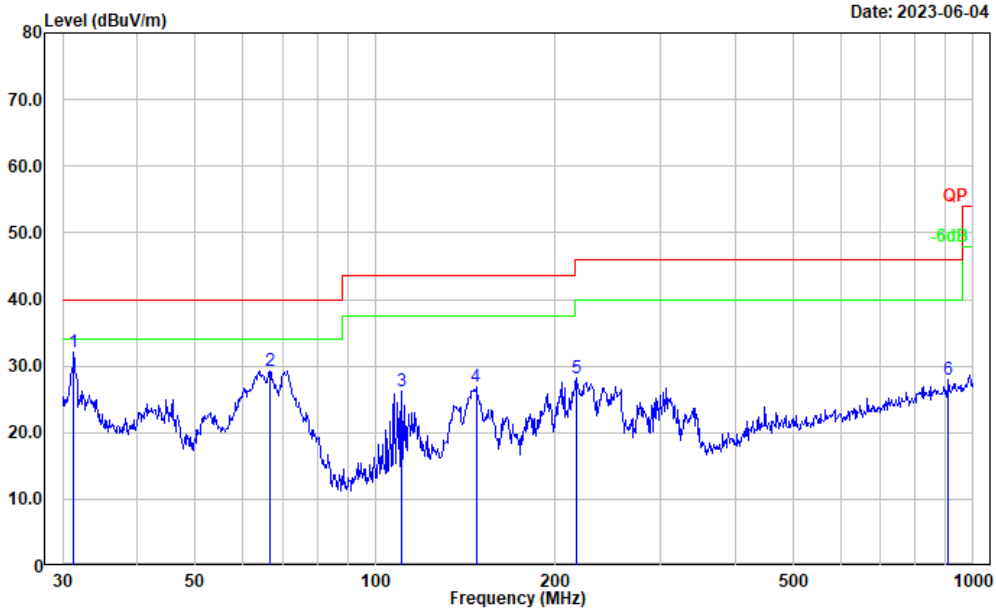
Adapter 3#+Configuration 1#

Project No.: CR230526341-RF
Tester: Vic Du
Polarization: horizontal
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	30.531	28.37	-4.00	24.37	40.00	15.63	Peak
2	71.080	37.79	-16.59	21.20	40.00	18.80	Peak
3	109.029	35.93	-12.45	23.48	43.50	20.02	Peak
4	143.830	35.12	-11.96	23.16	43.50	20.34	Peak
5	303.544	36.93	-10.59	26.34	46.00	19.66	Peak
6	866.088	28.26	-1.19	27.07	46.00	18.93	Peak

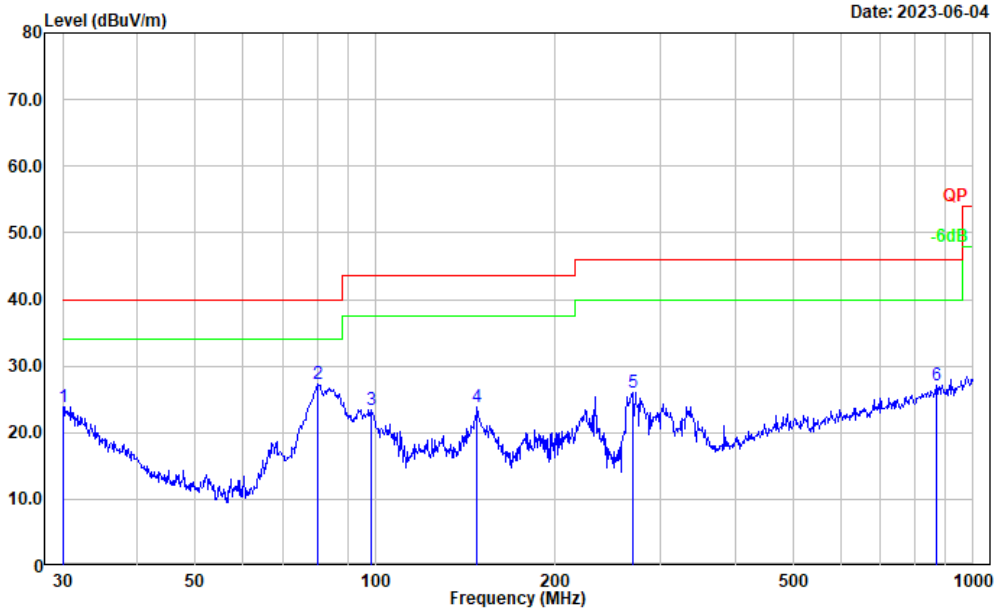
Project No.: CR230526341-RF
Tester: Vic Du
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	31.289	36.62	-4.59	32.03	40.00	7.97	Peak
2	66.499	46.14	-16.82	29.32	40.00	10.68	Peak
3	110.569	38.56	-12.28	26.28	43.50	17.22	Peak
4	147.404	38.91	-11.99	26.92	43.50	16.58	Peak
5	216.783	40.90	-12.68	28.22	46.00	17.78	Peak
6	909.667	28.66	-0.68	27.98	46.00	18.02	Peak

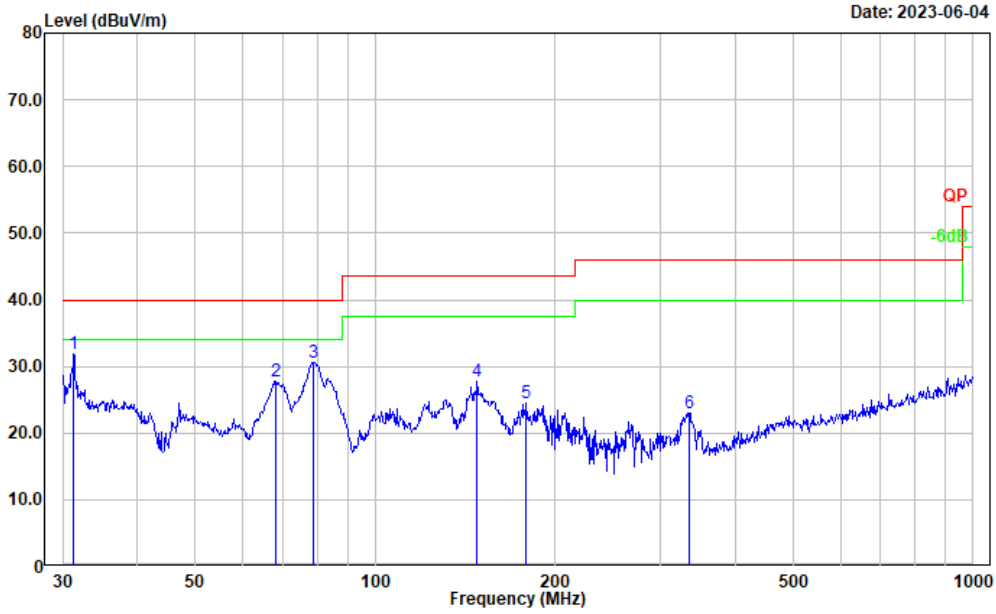
Adapter 4#+Configuration 1#

Project No.: CR230526341-RF
Tester: Vic Du
Polarization: horizontal
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	30.105	27.63	-3.68	23.95	40.00	16.05	Peak
2	80.081	44.67	-17.46	27.21	40.00	12.79	Peak
3	98.487	38.09	-14.66	23.43	43.50	20.07	Peak
4	147.921	35.74	-11.99	23.75	43.50	19.75	Peak
5	269.428	38.16	-12.12	26.04	46.00	19.96	Peak
6	869.130	28.24	-1.21	27.03	46.00	18.97	Peak

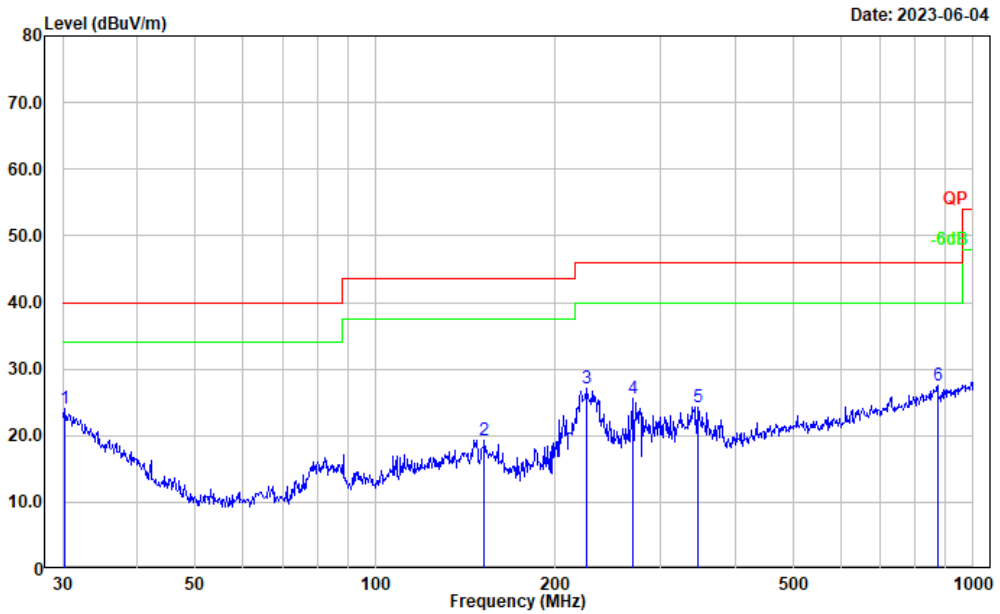
Project No.: CR230526341-RF
Tester: Vic Du
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	31.289	36.43	-4.59	31.84	40.00	8.16	Peak
2	68.151	44.44	-16.67	27.77	40.00	12.23	Peak
3	78.965	47.89	-17.35	30.54	40.00	9.46	Peak
4	147.921	39.76	-11.99	27.77	43.50	15.73	Peak
5	178.758	38.05	-13.55	24.50	43.50	19.00	Peak
6	334.859	33.15	-10.15	23.00	46.00	23.00	Peak

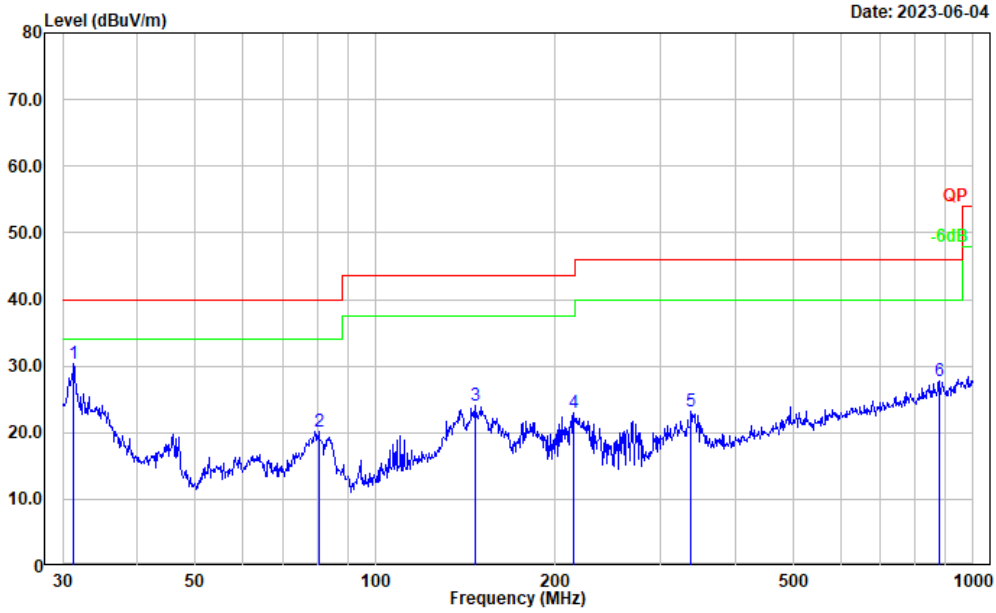
Adapter 5#+Configuration 1#

Project No.: CR230526341-RF
Tester: Vic Du
Polarization: horizontal
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	30.317	27.83	-3.85	23.98	40.00	16.02	Peak
2	152.130	31.34	-12.02	19.32	43.50	24.18	Peak
3	226.099	40.09	-12.89	27.20	46.00	18.80	Peak
4	270.375	37.63	-12.07	25.56	46.00	20.44	Peak
5	345.595	34.41	-10.02	24.39	46.00	21.61	Peak
6	872.183	28.75	-1.21	27.54	46.00	18.46	Peak

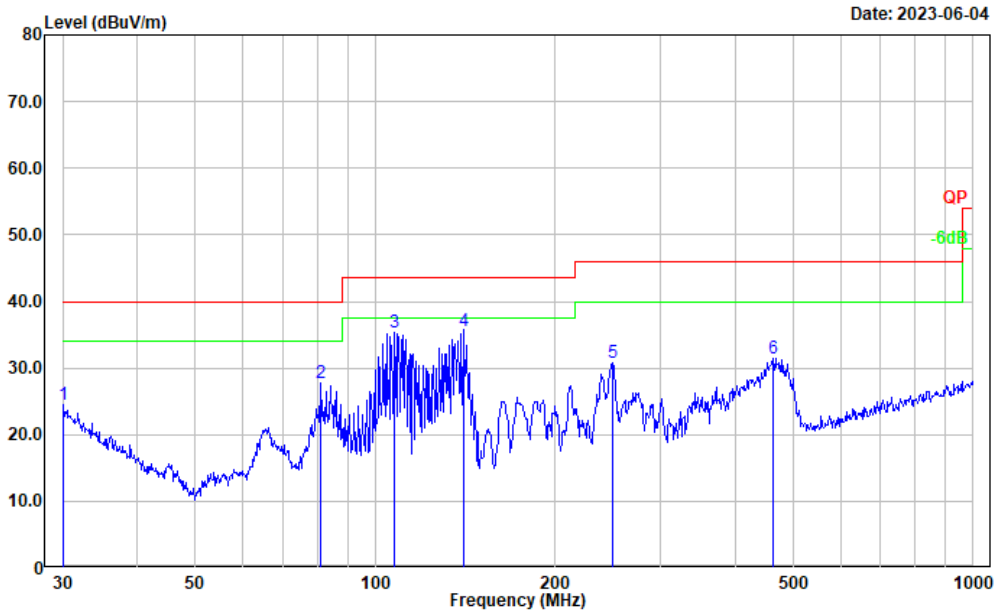
Project No.: CR230526341-RF
Tester: Vic Du
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	31.289	35.00	-4.59	30.41	40.00	9.59	Peak
2	80.362	37.57	-17.43	20.14	40.00	19.86	Peak
3	146.888	35.97	-11.98	23.99	43.50	19.51	Peak
4	214.514	35.68	-12.60	23.08	43.50	20.42	Peak
5	337.216	33.38	-10.10	23.28	46.00	22.72	Peak
6	878.322	29.01	-1.18	27.83	46.00	18.17	Peak

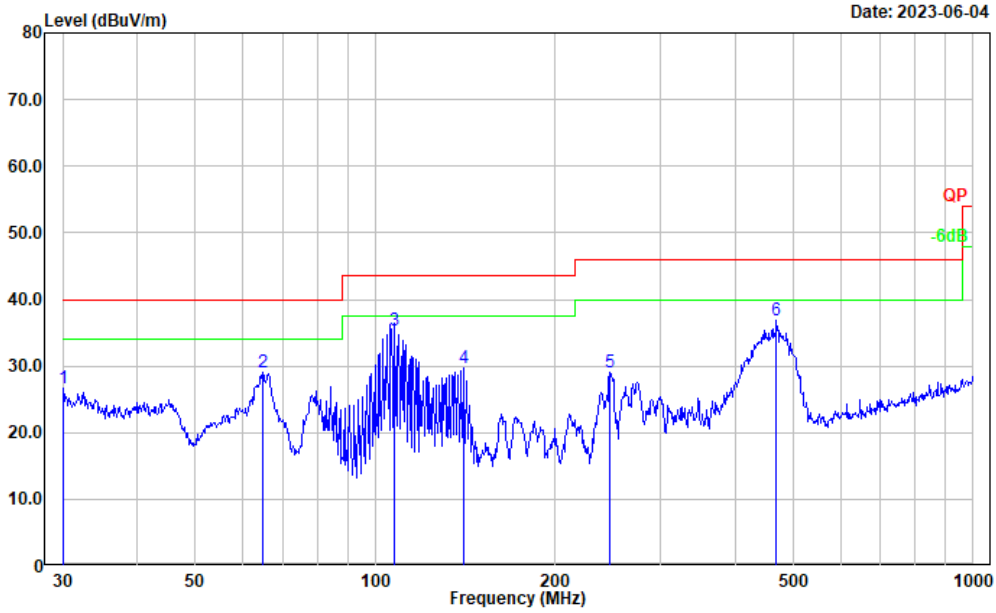
Worst Adapter(#3)+Configuration 1#+Charger base

Project No.: CR230526341-RF
Tester: Vic Du
Polarization: horizontal
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	30.000	28.14	-3.60	24.54	40.00	15.46	Peak
2	81.212	45.17	-17.38	27.79	40.00	12.21	Peak
3	107.888	48.01	-12.72	35.29	43.50	8.21	Peak
4	140.342	47.35	-11.89	35.46	43.50	8.04	Peak
5	249.425	43.81	-13.07	30.74	46.00	15.26	Peak
6	463.970	37.97	-6.51	31.46	46.00	14.54	Peak

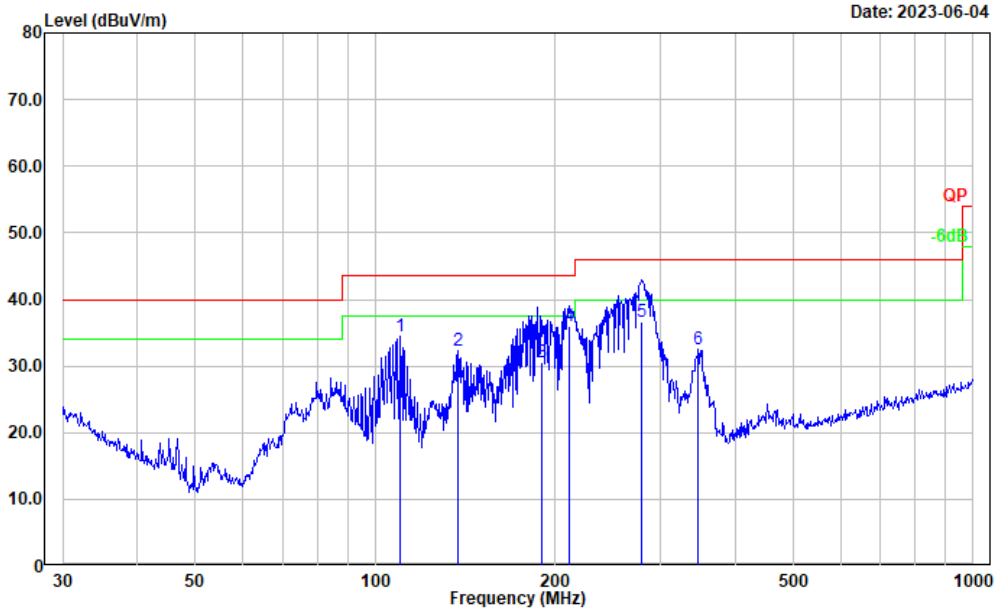
Project No.: CR230526341-RF
Tester: Vic Du
Polarization: vertical
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	30.105	30.28	-3.68	26.60	40.00	13.40	Peak
2	64.887	46.09	-16.94	29.15	40.00	10.85	Peak
3	107.510	48.21	-12.80	35.41	43.50	8.09	Peak
4	140.342	41.52	-11.89	29.63	43.50	13.87	Peak
5	246.815	42.03	-13.02	29.01	46.00	16.99	Peak
6	468.876	43.25	-6.38	36.87	46.00	9.13	Peak

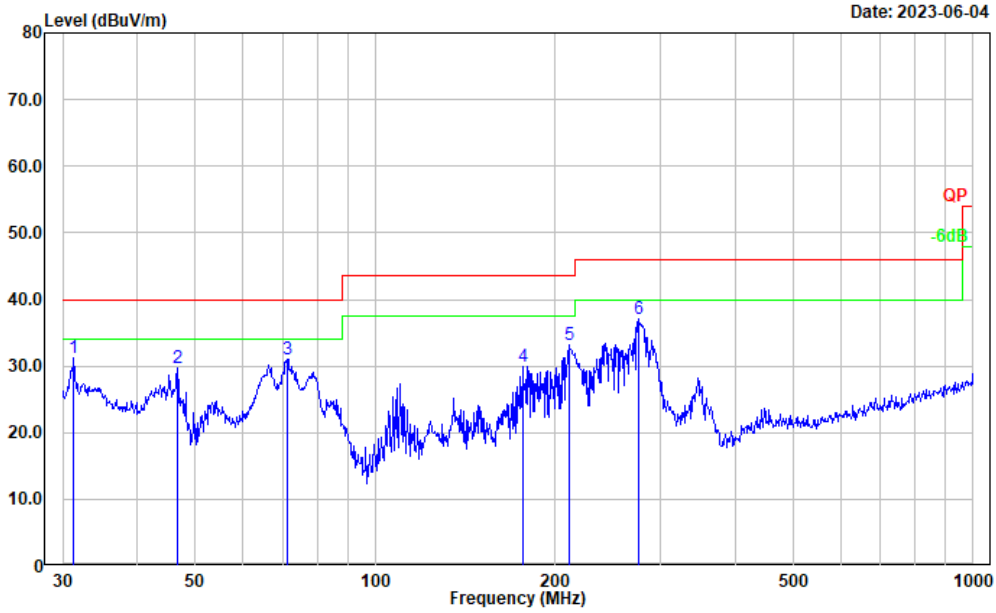
Worst Adapter(#3)+Configuration 2#

Project No.: CR230526341-RF
Tester: Vic Du
Polarization: horizontal
Note:



No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	110.182	46.87	-12.32	34.55	43.50	8.95	Peak
2	137.420	44.01	-11.75	32.26	43.50	11.24	Peak
3	190.079	44.09	-13.46	30.63	43.50	12.87	QP
4	211.157	48.54	-12.50	36.04	43.50	7.46	QP
5	279.055	48.36	-11.71	36.65	46.00	9.35	QP
6	346.809	42.56	-10.03	32.53	46.00	13.47	Peak

Project No.: CR230526341-RF
Tester: Vic Du
Polarization: vertical
Note:

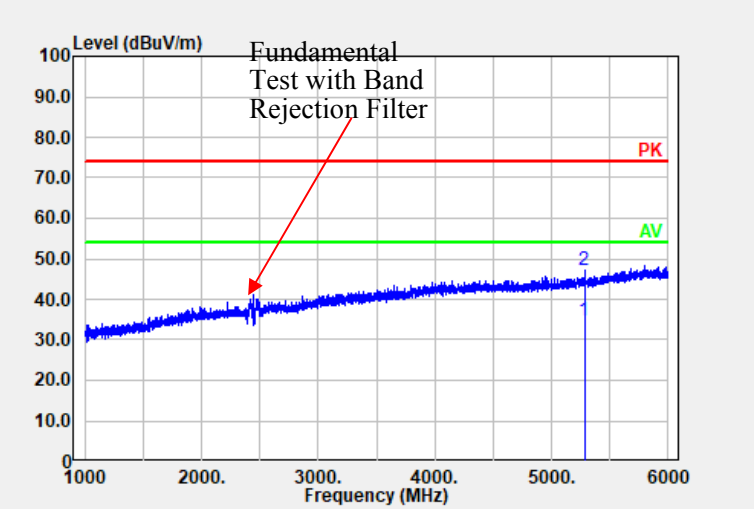
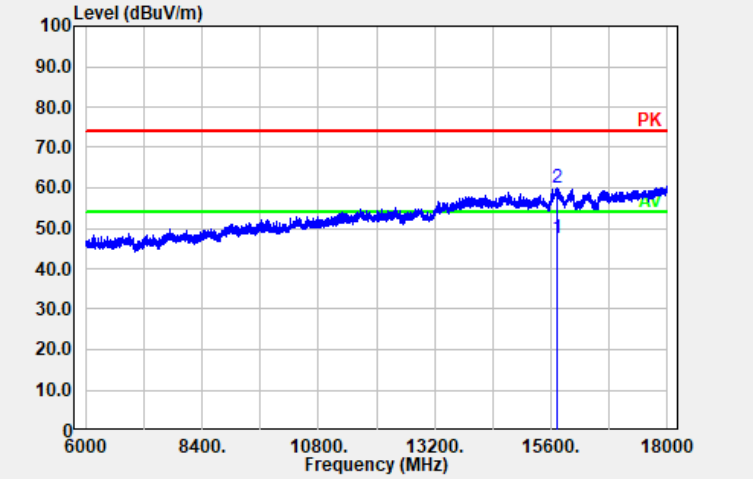
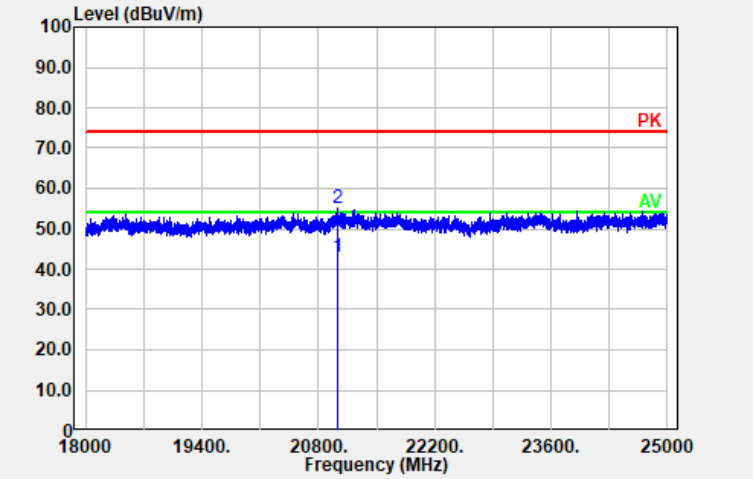


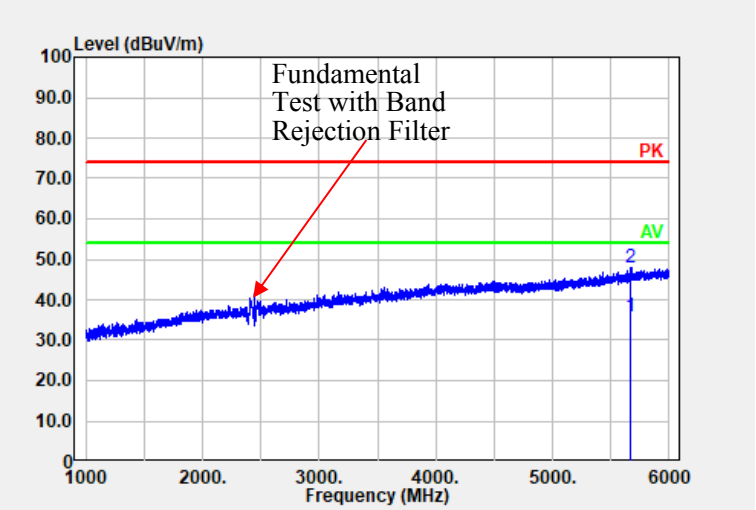
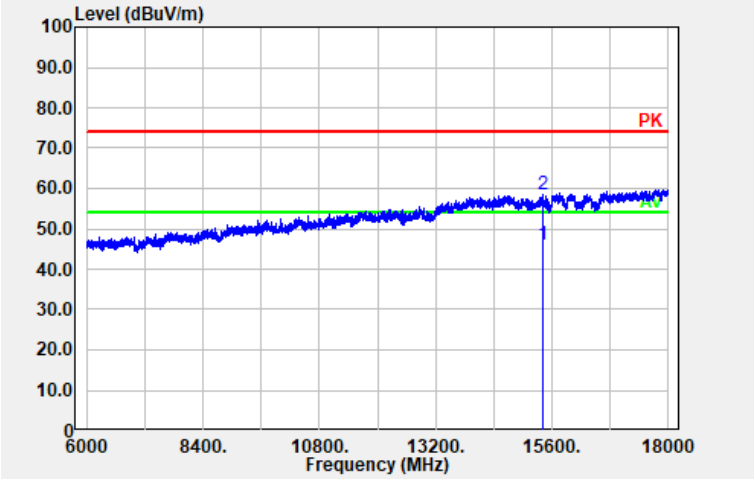
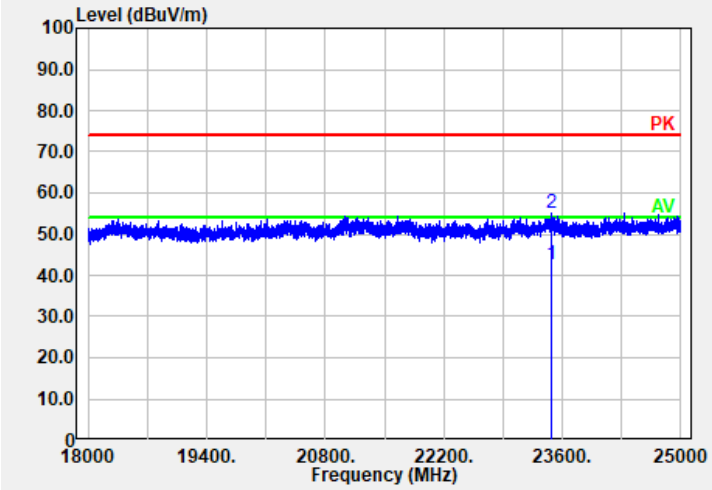
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	31.289	35.90	-4.59	31.31	40.00	8.69	Peak
2	46.666	44.99	-15.23	29.76	40.00	10.24	Peak
3	71.330	47.66	-16.61	31.05	40.00	8.95	Peak
4	176.269	43.29	-13.31	29.98	43.50	13.52	Peak
5	210.786	45.72	-12.49	33.23	43.50	10.27	Peak
6	276.124	48.81	-11.84	36.97	46.00	9.03	Peak

2) 1-25GHz:

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	Detector					
Low Channel: 2402 MHz							
2402.000	57.41	PK	H	31.51	88.92	N/A	N/A
2402.000	54.32	AV	H	31.51	85.83	N/A	N/A
2402.000	58.28	PK	V	31.51	89.79	N/A	N/A
2402.000	54.45	AV	V	31.51	85.96	N/A	N/A
2390.000	26.50	PK	V	31.46	57.96	74.00	16.04
2390.000	13.75	AV	V	31.46	45.21	54.00	8.79
4804.000	34.54	PK	V	10.91	45.45	74.00	28.55
4804.000	22.27	AV	V	10.91	33.18	54.00	20.82
7206.000	34.16	PK	V	14.22	48.38	74.00	25.62
7206.000	22.08	AV	V	14.22	36.30	54.00	17.70
Middle Channel: 2440 MHz							
2440.000	58.02	PK	H	31.60	89.62	N/A	N/A
2440.000	55.37	AV	H	31.60	86.97	N/A	N/A
2440.000	58.34	PK	V	31.60	89.94	N/A	N/A
2440.000	54.28	AV	V	31.60	85.88	N/A	N/A
4880.000	35.02	PK	V	11.07	46.09	74.00	27.91
4880.000	23.01	AV	V	11.07	34.08	54.00	19.92
7320.000	34.55	PK	V	14.80	49.35	74.00	24.65
7320.000	22.28	AV	V	14.80	37.08	54.00	**16.92**
High Channel: 2480 MHz							
2480.000	53.70	PK	H	31.64	85.34	N/A	N/A
2480.000	49.80	AV	H	31.64	81.44	N/A	N/A
2480.000	53.86	PK	V	31.64	85.50	N/A	N/A
2480.000	49.35	AV	V	31.64	80.99	N/A	N/A
2483.500	27.59	PK	V	31.64	59.23	74.00	14.77
2483.500	14.13	AV	V	31.64	45.77	54.00	8.23
4960.000	34.78	PK	V	11.23	46.01	74.00	27.99
4960.000	22.39	AV	V	11.23	33.62	54.00	20.38
7440.000	33.46	PK	V	15.26	48.72	74.00	25.28
7440.000	21.23	AV	V	15.26	36.49	54.00	17.51

Worst Test plots(Middle channel)

Horizontal	
1-6GHz	
6-18GHz	
18-25GHz	

Vertical	
1-6GHz	
6-18GHz	
18-25GHz	

4.3 6 dB Emission Bandwidth:

Serial Number:	25TU-1	Test Date:	2023/05/19-2023/05/20
Test Site:	RF	Test Mode:	Transmitting
Tester:	Jim Wei	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	24.9-25.2	Relative Humidity: (%)	65-69	ATM Pressure: (kPa)	100.2-100.3

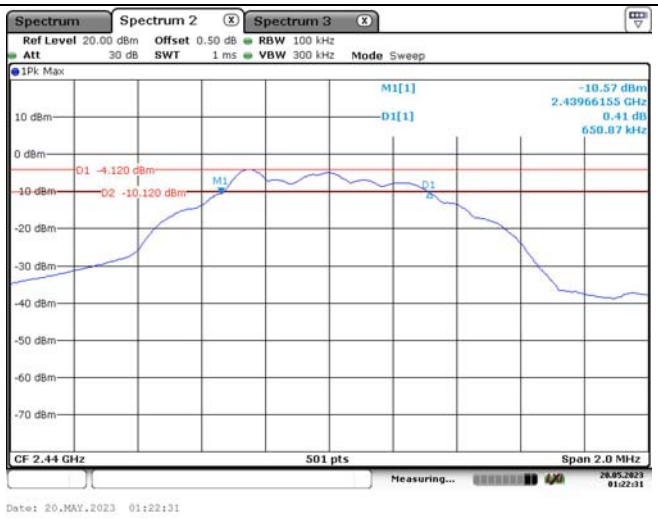
Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101943	2022/7/25	2023/7/24
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	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:

Test Channel	Test Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)
Lowest	2402	0.512	≥0.5
Middle	2440	0.651	≥0.5
Highest	2480	0.512	≥0.5

6dB Emission Bandwidth	
BLE 1Mbps Lowest Channel	
BLE 1Mbps Middle Channel	
BLE 1Mbps Highest Channel	

4.4 Maximum Conducted Output Power:

Serial Number:	25TU-1	Test Date:	2023/05/19
Test Site:	RF	Test Mode:	Transmitting
Tester:	Jim Wei	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	24.9	Relative Humidity: (%)	65	ATM Pressure: (kPa)	100.2

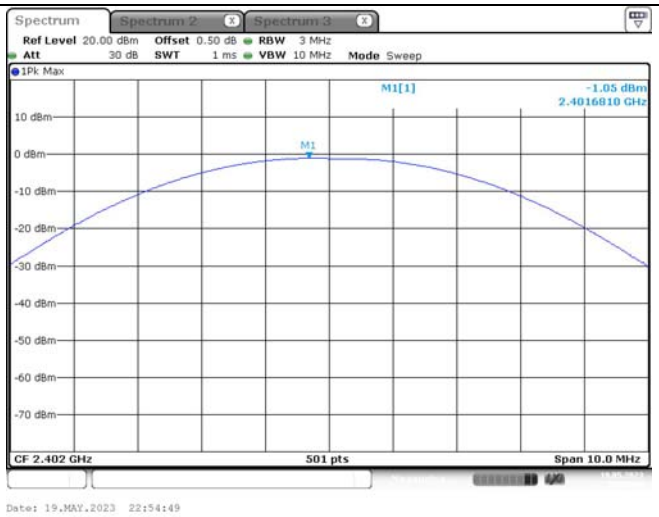
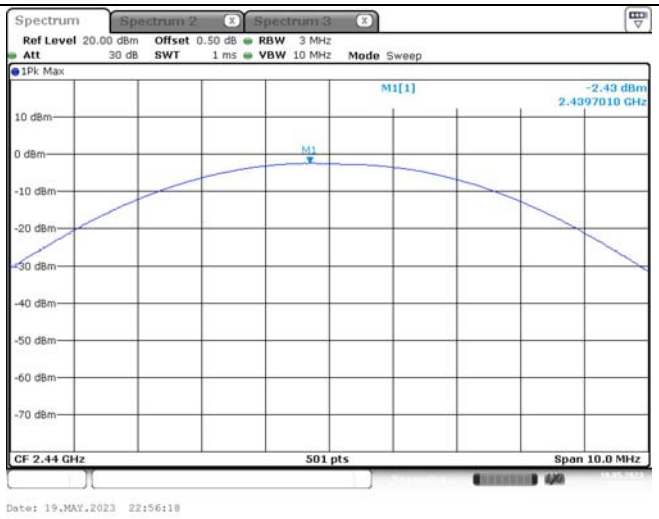
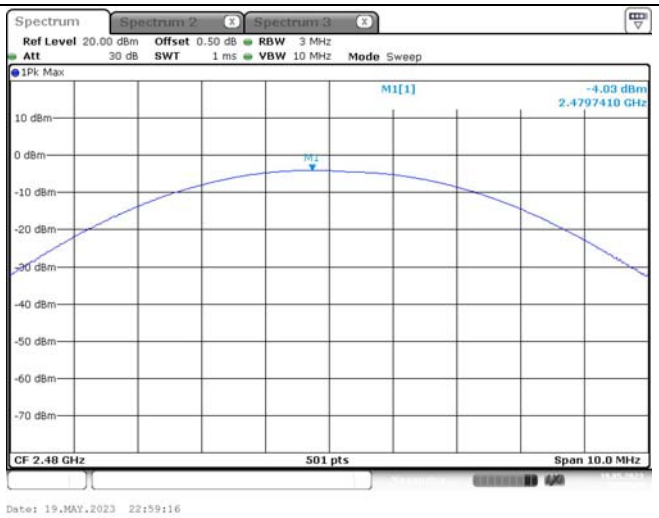
Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101943	2022/7/25	2023/7/24
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	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:

Test Channel	Test Frequency (MHz)	Maximum Conducted Peak Output Power (dBm)	Limit (dBm)
Lowest	2402	**-1.05**	≤30
Middle	2440	-2.43	≤30
Highest	2480	-4.03	≤30

Maximum Conducted Peak Output Power	
BLE 1Mbps Lowest Channel	
BLE 1Mbps Middle Channel	
BLE 1Mbps Highest Channel	

4.6 Maximum power spectral density:

Serial Number:	25TU-1	Test Date:	2023/05/20
Test Site:	RF	Test Mode:	Transmitting
Tester:	Jim Wei	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	25.2	Relative Humidity: (%)	69	ATM Pressure: (kPa)	100.3

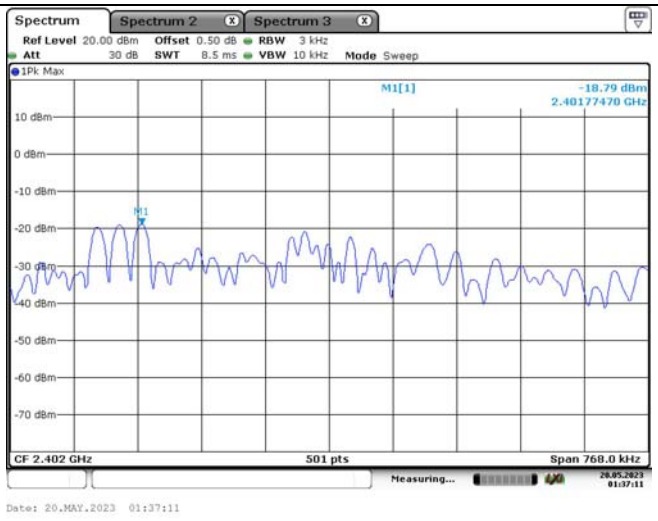
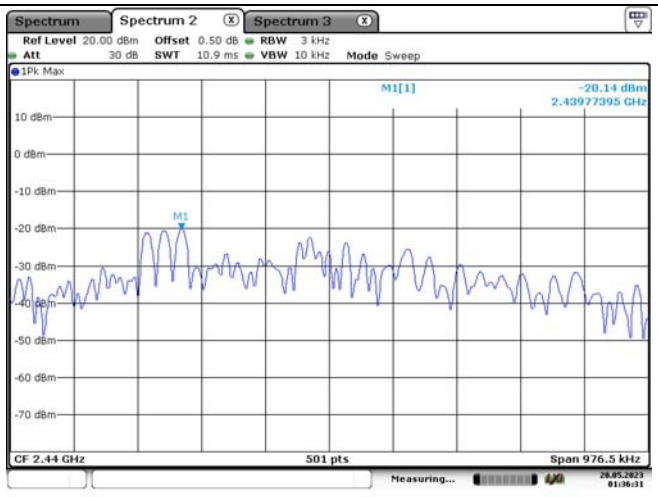
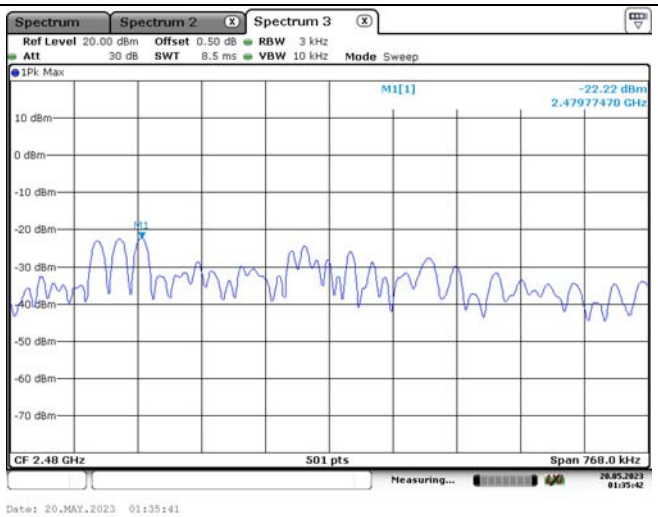
Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101943	2022/07/25	2023/07/24
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	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:

Test Channel	Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)
Lowest	2402	-18.79	≤8.00
Middle	2440	-20.14	≤8.00
Highest	2480	-22.22	≤8.00

Maximum power spectral density	
BLE 1Mbps Lowest Channel	
BLE 1Mbps Middle Channel	
BLE 1Mbps Highest Channel	

4.7 100 kHz Bandwidth of Frequency Band Edge:

Serial Number:	25TU-1	Test Date:	2023/05/19
Test Site:	RF	Test Mode:	Transmitting
Tester:	Jim Wei	Test Result:	Pass

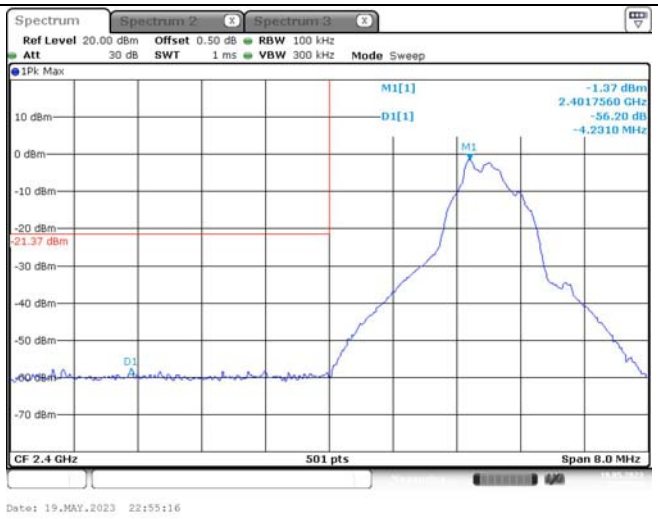
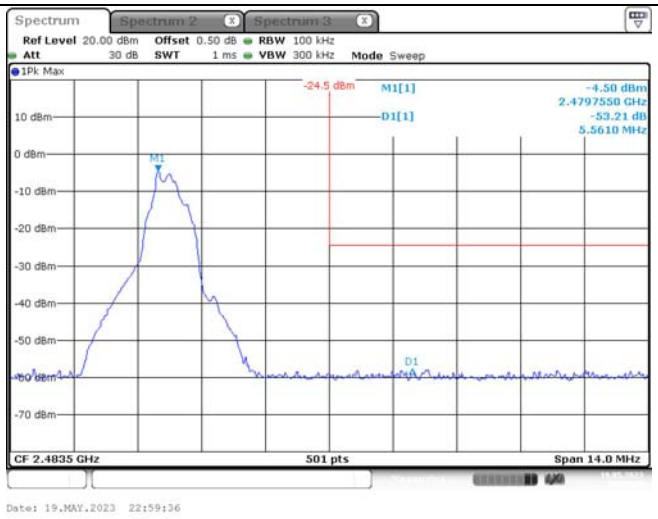
Environmental Conditions:					
Temperature: (℃)	24.9	Relative Humidity: (%)	65	ATM Pressure: (kPa)	100.2

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101943	2022/07/25	2023/07/24
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	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:

100 kHz Bandwidth of Frequency Band Edge	
BLE 1Mbps Lowest Band edge	
BLE 1Mbps Highest Band edge	

4.8 Duty Cycle:

Serial Number:	25TU-1	Test Date:	2023/05/20
Test Site:	RF	Test Mode:	Transmitting
Tester:	Jim Wei	Test Result:	N/A

Environmental Conditions:					
Temperature: (℃)	25.2	Relative Humidity: (%)	69	ATM Pressure: (kPa)	100.3

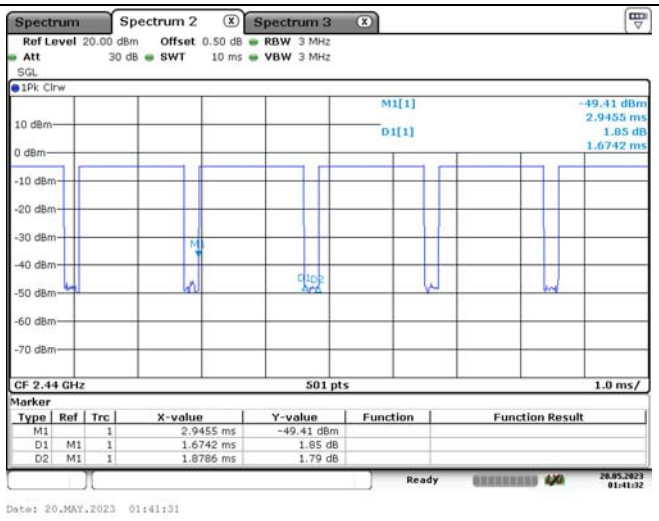
Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum Analyzer	FSV40	101943	2022/07/25	2023/07/24
zhuoxiang	Coaxial Cable	SMA-178	211001	Each time	N/A
Mini-Circuits	DC Block	BLK-18-S+	1554403	Each time	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:

Mode	Ton (ms)	Ton+off (ms)	Duty cycle (%)	1/T (Hz)	VBW Setting (kHz)
BLE	1.6742	1.8786	89.12	597	1

Duty Cycle	
BLE 1Mbps	

5. RF EXPOSURE EVALUATION

5.1 Applicable Standard

According to§15.247(i) and §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to KDB447498 D01 General RF Exposure Guidance v06:

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

5.2 Measurement Result

For BLE:

The max conducted power including tune-up tolerance is -1.0dBm (0.79 mW).
[(max. power of channel, mW)/(min. test separation distance, mm)][√f(GHz)]
=0.79/5*(√2.480) = 0.3< 3.0

Result: Compliant. The stand-alone SAR evaluation is not necessary.

6. EUT PHOTOGRAPHS

Please refer to the attachment CR230526341-EXP EUT EXTERNAL PHOTOGRAPHS and CR230526341-INP EUT INTERNAL PHOTOGRAPHS

7. TEST SETUP PHOTOGRAPHS

Please refer to the attachment CR230526341-00B-TSP TEST SETUP PHOTOGRAPHS.

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