

FCC PART 15B TEST REPORT

For

Quanzhou Wouxun Electronics Co., Ltd.

Jiangnan High Technology Industry Park, No.928 Nanhuan Road, Quanzhou, Fujian, China

FCC ID: WVTWOXUN26

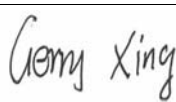
Report Type: Original Report	Product Type: TWO WAY RADIO(GMRS RADIO)
Test Engineer:	Gerry Xing 
Report Number:	RXM210421051-00A
Report Date:	2021-06-10
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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	Quanzhou Wouxun Electronics Co., Ltd.
Test Model:	KG-935G
Series Model:	KG-935G Plus, KG-935G+, KG-935GX, KG-935GV
Model Difference:	See Declaration letter
Product:	TWO WAY RADIO(GMRS RADIO)
Rate Voltage:	DC 7.4V from Battery and DC 12V from Adapter and DC 8.4V from Li-ion Battery Charger
*Highest Operation Frequency:	480 MHz

Adapter information:

Model: DSX-120100-US

Input: AC 100-240V, 50/60Hz, 0.3A

Output: DC 12V, 1.0A

Li-ion Battery Charger information:

Model: 1A32KG-8

Input: DC 12V, 800mA

Output: DC 8.4V, 800mA

**Note: The highest operation frequency was declared by the applicant.*

**All measurement and test data in this report was gathered from production sample serial number: RXM210421051-1. (Assigned by the BACL. The EUT supplied by the applicant was received on 2021-04-26)*

Objective

This report is prepared on behalf of *Quanzhou Wouxun Electronics Co., Ltd.* in accordance with Part 2-Subpart J, and Part 15-Subparts A and B of the Federal Communication Commission's rules.

The objective of the manufacturer is to determine the compliance of EUT with FCC Part 15, Class B device.

Related Submittal(s)/Grant(s)

FCC Part 95 TNF Submittal with FCC ID: WVTWOUXUN26.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Kunshan). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Test Facility

The test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the No.248 Chenghu Road, Kunshan, Jiangsu province, China.

Bay Area Compliance Laboratories Corp. (Kunshan) Lab is accredited to ISO/IEC 17025 by A2LA (Lab code: 4323.01) and the FCC designation No. CN1185 under the FCC KDB 974614 D01 and CAB identifier CN0004 under the ISED requirement. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

SYSTEM TEST CONFIGURATION

Justification

The system was configured for testing in a typical mode (as normally used by a typical user).

Test Mode1: Charging

Test Mode2: Scanning Receiver Mode

Test Mode3: Receive at 136MHz

Test Mode4: Receive at 155MHz

Test Mode5: Receive at 174MHz

Test Mode6: Receive at 400MHz

Test Mode7: Receive at 440MHz

Test Mode8: Receive at 480MHz

EUT Exercise Software

No exercise software was used to test.

Special Accessories

No special accessory was used.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

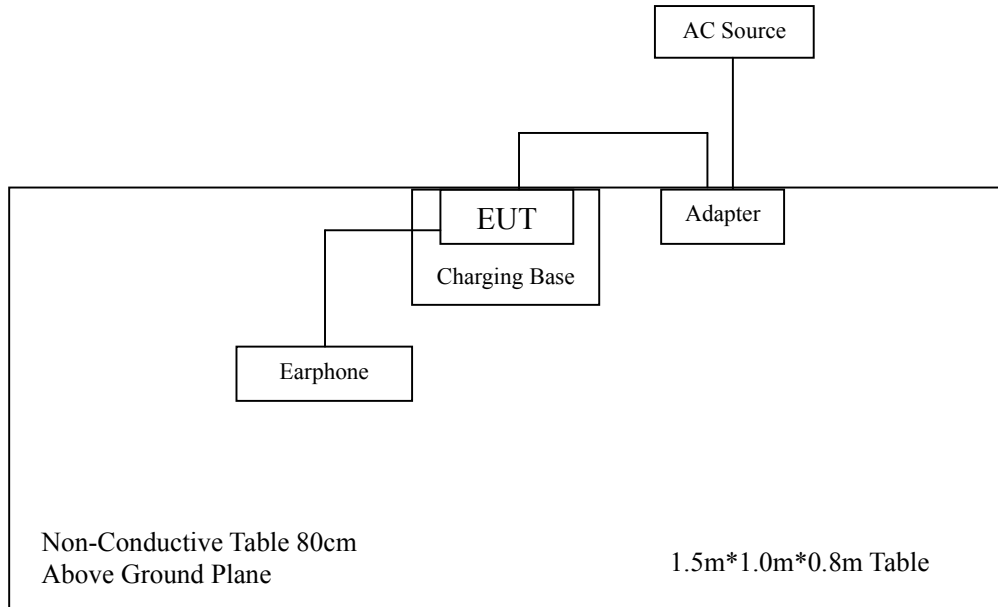
Manufacturer	Description	Model	Serial Number
BOLD	Earphone	/	/
Li-ion	Charging Base	1A32KG-8	/
	Adapter	DSX-1201GO-US	

External I/O Cable

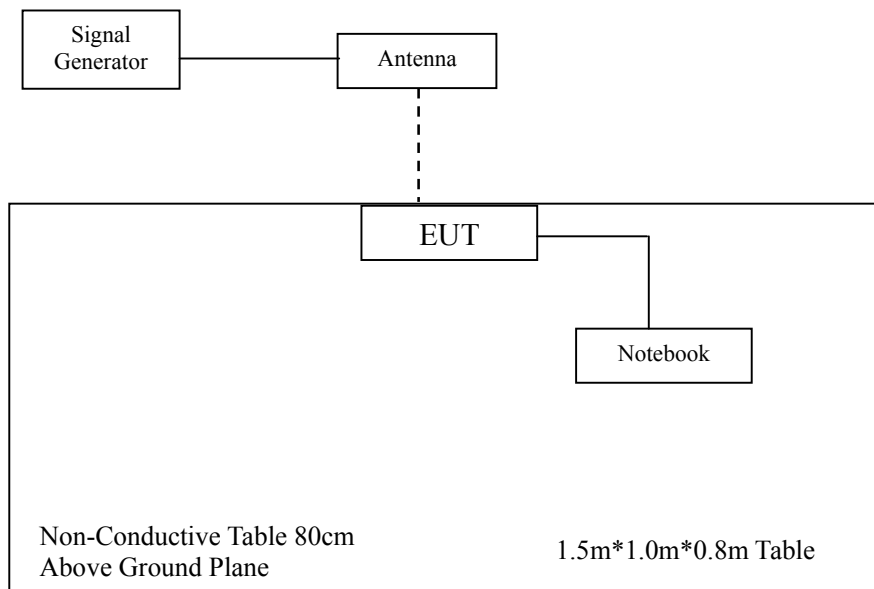
Cable Description	Length (m)	From Port	To Port
Power Cable	1.0	Charging Base	AC Source
Power Cable	1.0	Adapter	AC Source
Audio Cable	1.2	EUT	Earphone

Block Diagram of Radiated Test Setup

Test mode1:



Test mode2-8:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Results
§15.107	Conducted Emissions	Compliant
§15.109	Radiated Emissions	Compliant
§15.111	Antenna Conducted Power for receivers	Compliant
§15.121(b)	Scanning receivers and frequency converters used with scanning receivers	Compliant

FCC §15.107 - CONDUCTED EMISSIONS

Applicable Standard

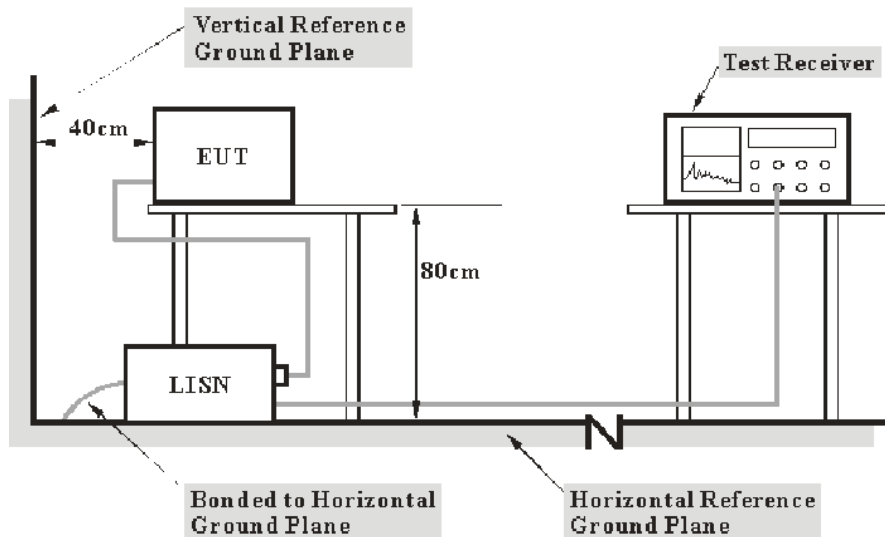
According to FCC§15.107

Measurement Uncertainty

Input quantities to be considered for conducted disturbance measurements maybe receiver reading, attenuation of the connection between LISN and receiver, LISN voltage division factor, LISN VDF frequency interpolation and receiver related input quantities, etc.

Item		Terminal	Measurement Uncertainty	U_{cispr}
Conducted Emission	150kHz~30MHz	AC Mains	3.19 dB	3.4 dB

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 measurement procedure of EUT setup is according with ANSI C63.4-2014. The related limit was specified in FCC Part 15.107 Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

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

Test Procedure

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESR	1316.3003K03 -101746-zn	2020-08-05	2021-08-04
Rohde & Schwarz	LISN	ENV216	101115	2020-12-14	2021-12-13
Audix	Test Software	e3	V9	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-15	015	2020-08-15	2021-08-14
Rohde & Schwarz	Pluse limiter	ESH3-Z2	100552	2020-08-10	2021-08-09

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

Factor & Over Limit Calculation

The Factor is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Attenuator. The basic equation is as follows:

$$\text{Factor (dB)} = \text{LISN VDF (dB)} + \text{Cable Loss (dB)} + \text{Attenuator (dB)}$$

The “**Over Limit**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit of 7 dB means the emission is 7 dB above the limit. The equation for Over Limit calculation is as follows:

$$\text{Over Limit (dB)} = \text{Read level (dB}\mu\text{V)} + \text{Factor (dB)} - \text{Limit (dB}\mu\text{V)}$$

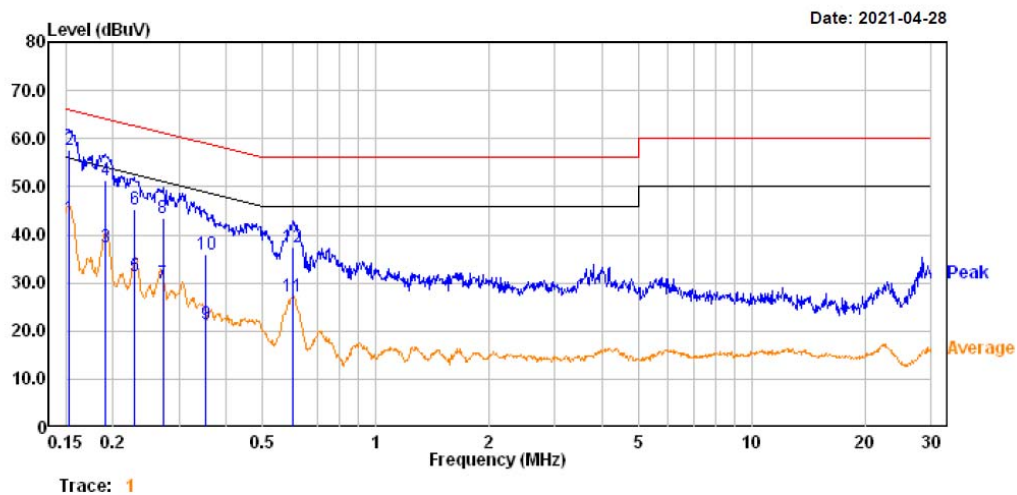
Test Data**Environmental Conditions**

Temperature:	24.3°C
Relative Humidity:	53 %
ATM Pressure:	101.5 kPa

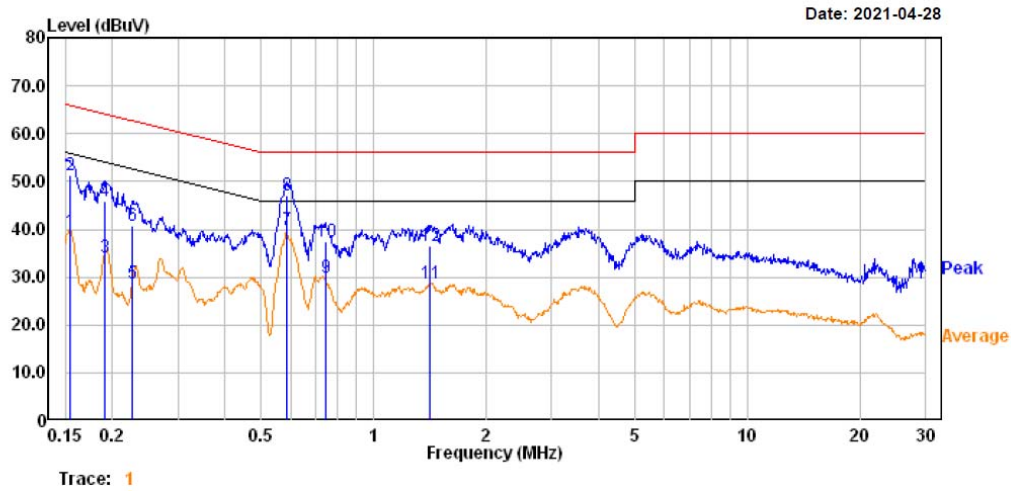
The testing was performed by Gerry Xing on 2021-04-28.

Test mode 1:

Line:



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.152	23.70	19.82	43.52	55.88	-12.36	Average
2	0.152	37.70	19.82	57.52	65.88	-8.36	QP
3	0.191	17.60	19.82	37.42	54.01	-16.59	Average
4	0.191	31.50	19.82	51.32	64.01	-12.69	QP
5	0.228	11.50	19.82	31.32	52.52	-21.20	Average
6	0.228	25.60	19.82	45.42	62.52	-17.10	QP
7	0.271	10.20	19.82	30.02	51.07	-21.05	Average
8	0.271	23.50	19.82	43.32	61.07	-17.75	QP
9	0.352	1.69	19.81	21.50	48.92	-27.42	Average
10	0.352	15.99	19.81	35.80	58.92	-23.12	QP
11	0.600	7.30	19.75	27.05	46.00	-18.95	Average
12	0.600	17.60	19.75	37.35	56.00	-18.65	QP

Neutral:

	Freq	Read		Limit	Over	
	MHz	Level	Factor	Line	Limit	Remark
	MHz	dBuV	dB	dBuV	dB	
1	0.155	19.60	19.82	39.42	55.75	-16.33 Average
2	0.155	31.40	19.82	51.22	65.75	-14.53 QP
3	0.191	14.40	19.82	34.22	54.01	-19.79 Average
4	0.191	26.20	19.82	46.02	64.01	-17.99 QP
5	0.227	8.80	19.82	28.62	52.56	-23.94 Average
6	0.227	20.80	19.82	40.62	62.56	-21.94 QP
7	0.585	20.00	19.75	39.75	46.00	-6.25 Average
8	0.585	27.20	19.75	46.95	56.00	-9.05 QP
9	0.743	10.20	19.73	29.93	46.00	-16.07 Average
10	0.743	17.80	19.73	37.53	56.00	-18.47 QP
11	1.420	8.81	19.83	28.64	46.00	-17.36 Average
12	1.420	16.81	19.83	36.64	56.00	-19.36 QP

Note:

1) Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Attenuator (dB)

2) Over Limit (dB) = Read level (dBμV) + Factor (dB) - Limit (dBμV)

FCC §15.109 - RADIATED EMISSIONS

Applicable Standard

FCC §15.109

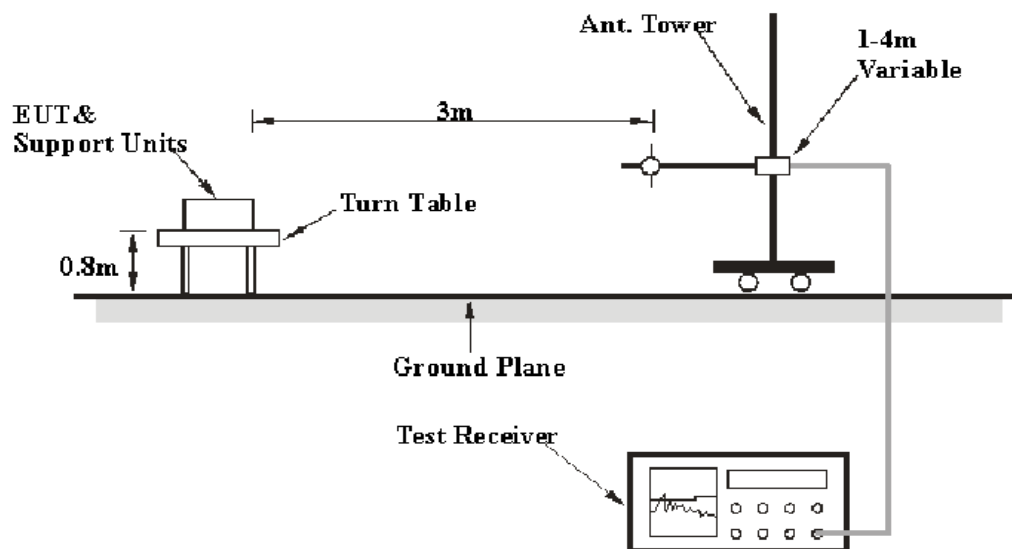
Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average) and system repeatability.

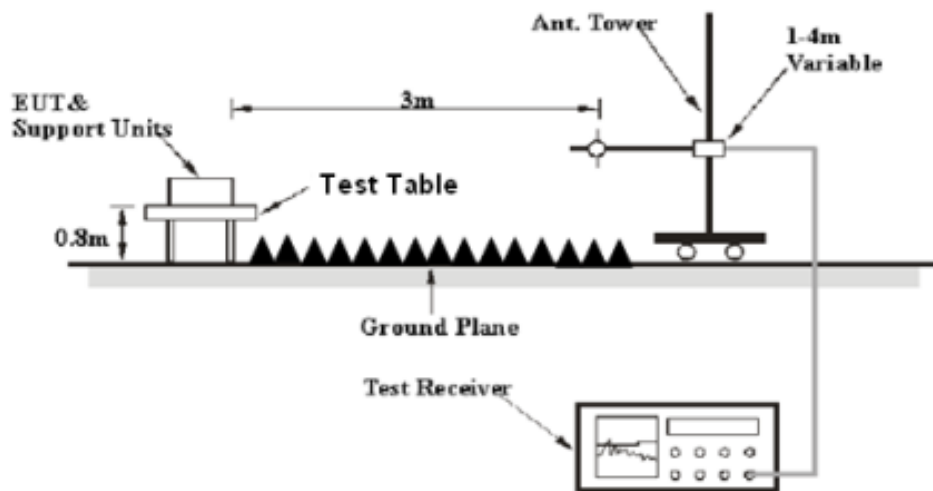
Item		Measurement Uncertainty	U_{cispr}
Radiated Emission	30MHz~1GHz	6.11dB	6.3 dB
	1GHz~6GHz	4.45dB	5.2dB
	6GHz~18GHz	5.23dB	5.5dB

EUT Setup

Below 1GHz:



Above 1GHz:



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.4-2014. The specification used was the FCC Part 15.109 Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The system was investigated from 30 MHz to 2 GHz.

During the radiated emission test, the EMI test receiver was set with the following configurations:

Frequency Range	RBW	Video B/W	Detector
30MHz – 1000 MHz	120 kHz	300 kHz	Peak
Above 1GHz	1MHz	3MHz	Peak
	1MHz	3MHz	Average

Test Procedure

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

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sonoma Instrument	Amplifier	310N	185700	2020-08-14	2021-08-13
Rohde & Schwarz	EMI Test Receiver	ESR	102454	2020-11-27	2021-11-26
Sunol Sciences	Hybrid Antenna	JB3	A090314-1	2020-08-05	2023-08-04
Albatross	Chamber 3#	3m-SAC 966	N/A	2019-07-02	2022-07-01
Audix	Test Software	e3	V9	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-11	011	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-12	012	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-13	013	2020-08-15	2021-08-14
A.H. Systems, inc.	Amplifier	PAM-0118P	512	2020-08-14	2021-08-13
Albatross	Chamber 2#	3m-SAC 966	N/A	2019-05-08	2022-05-07
ETS	Horn Antenna	3115	9311-4159	2020-07-15	2023-07-14
Rohde & Schwarz	EMI Test Receiver	ESU40	100207/040	2021-04-01	2022-03-31
Rohde & Schwarz	Auto test Software	EMC32	100361	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-4	004	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-5	005	2020-08-15	2021-08-14

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

Factor & Over Limit Calculation – for Below 1GHz

The Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Factor} = \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Over Limit**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit of 7 dB means the emission is 7 dB above the limit. The equation for Over Limit calculation is as follows:

$$\text{Over Limit (dB)} = \text{Read level (dB}\mu\text{V)} + \text{Factor (dB)} - \text{Limit (dB}\mu\text{V)}$$

Corrected Amplitude & Margin Calculation – for Above 1GHz

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Corrected Amplitude (dB}\mu\text{V/m)} = \text{Meter Reading (dB}\mu\text{V)} + \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} - \text{Amplifier Gain (dB)}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin (dB)} = \text{Limit (dB}\mu\text{V/m)} - \text{Corrected Amplitude (dB}\mu\text{V/m)}$$

Test Data**Environmental Conditions**

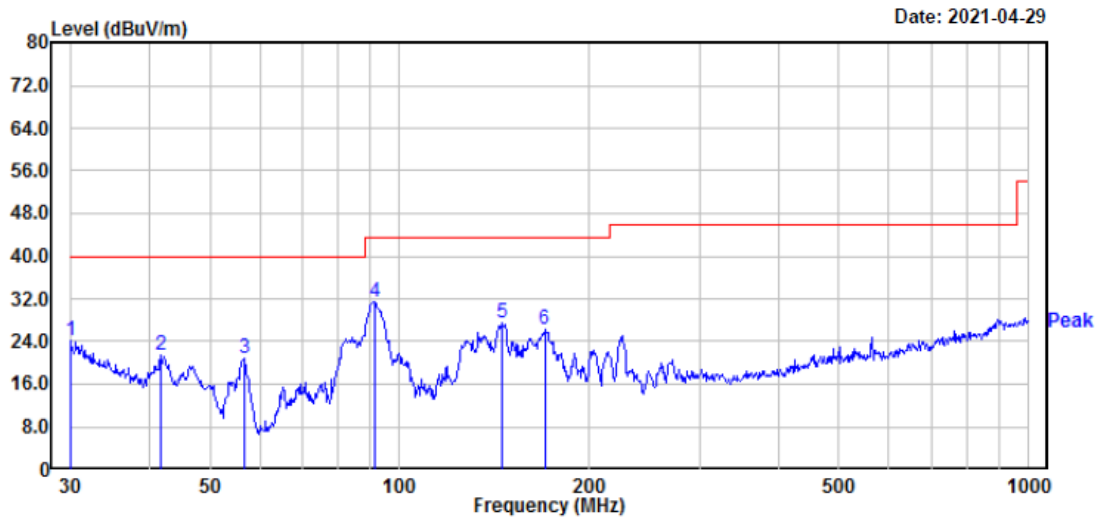
Temperature:	24.3°C
Relative Humidity:	53 %
ATM Pressure:	101.5 kPa

The testing was performed by Gerry Xing on 2021-04-29.

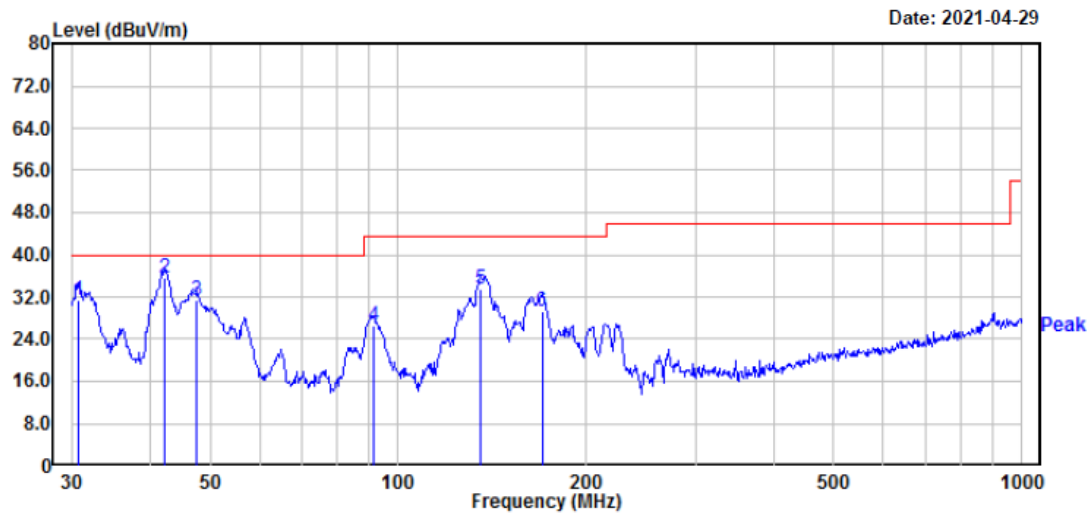
Test mode 1:

Below 1 GHz:

Horizontal:



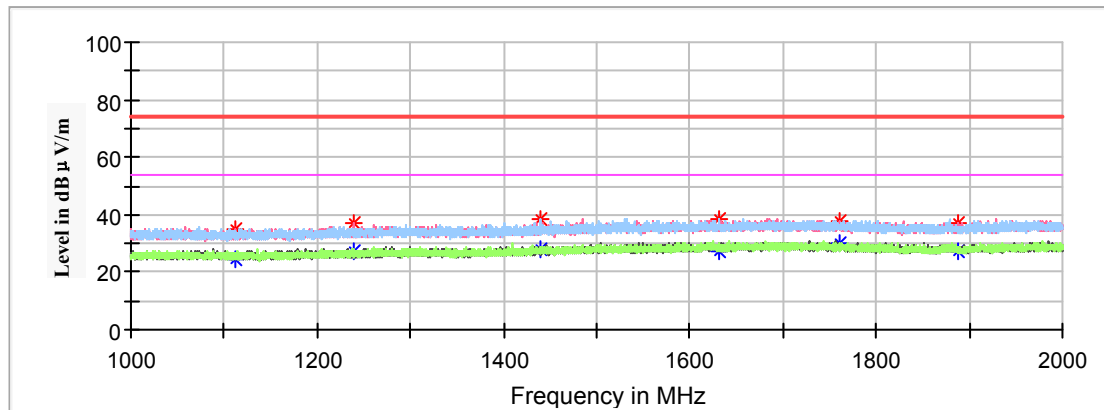
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	deg	
1	30.11	28.45	-4.32	24.13	40.00	-15.87	100	246	Peak
2	41.71	33.98	-12.65	21.33	40.00	-18.67	200	263	Peak
3	56.59	39.67	-18.84	20.83	40.00	-19.17	200	299	Peak
4	91.49	48.23	-16.82	31.41	43.50	-12.09	200	318	Peak
5	145.86	39.07	-11.74	27.33	43.50	-16.17	200	324	Peak
6	170.19	38.55	-12.16	26.39	43.50	-17.11	100	304	Peak

Vertical:

		Read			Limit	Over	APos	TPos	
	Freq	Level	Factor	Level	Line	Limit			Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	deg	
1	30.75	36.10	-4.76	31.34	40.00	-8.66	100	62	QP
2	42.30	48.59	-13.07	35.52	40.00	-4.48	100	12	QP
3	47.49	47.60	-16.29	31.31	40.00	-8.69	100	346	QP
4	91.17	43.50	-16.90	26.60	43.50	-16.90	200	359	QP
5	135.98	44.71	-11.30	33.41	43.50	-10.09	100	263	QP
6	170.19	41.50	-12.16	29.34	43.50	-14.16	100	276	QP

Above 1 GHz:

Full Spectrum



Frequency (MHz)	Corrected Amplitude		Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
	Max Peak (dBμV/m)	Average (dBμV/m)						
1111.500000	---	24.57	54.00	29.43	200.0	V	13.0	-11.8
1111.500000	34.78	---	74.00	39.22	200.0	V	13.0	-11.8
1239.400000	---	27.26	54.00	26.74	100.0	V	84.0	-11.0
1239.400000	37.05	---	74.00	36.95	100.0	V	84.0	-11.0
1439.900000	---	28.26	54.00	25.74	100.0	H	356.0	-9.8
1439.900000	38.24	---	74.00	35.76	100.0	H	356.0	-9.8
1631.400000	---	27.61	54.00	26.39	100.0	H	322.0	-8.9
1631.400000	38.38	---	74.00	35.62	100.0	H	322.0	-8.9
1761.700000	---	29.99	54.00	24.01	200.0	V	238.0	-8.5
1761.700000	37.91	---	74.00	36.09	200.0	V	238.0	-8.5
1887.200000	---	27.31	54.00	26.69	200.0	V	116.0	-8.1
1887.200000	37.38	---	74.00	36.62	200.0	V	116.0	-8.1

Note:

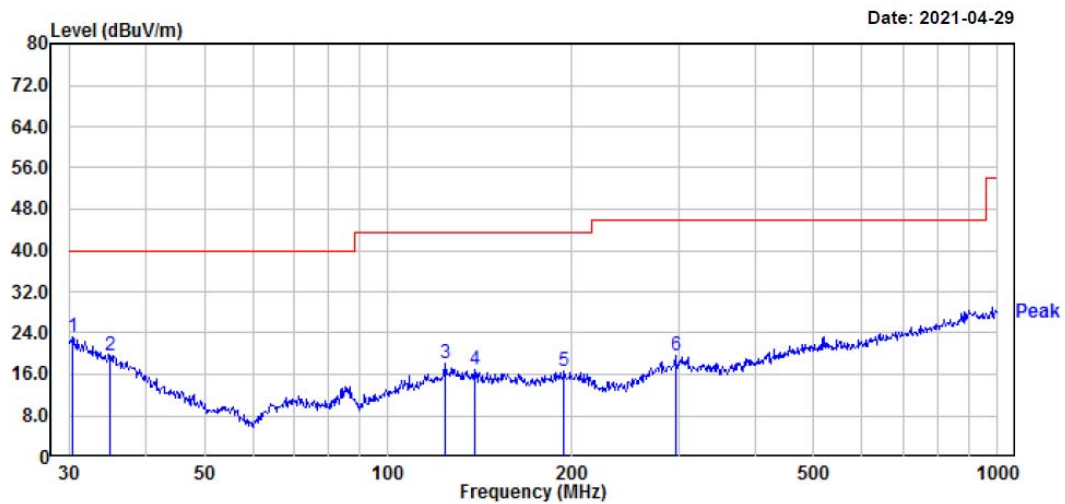
1) Corrected Amplitude = Meter Reading + Antenna Factor + Cable Loss - Amplifier Gain

2) Margin = Limit - Corrected Amplitude

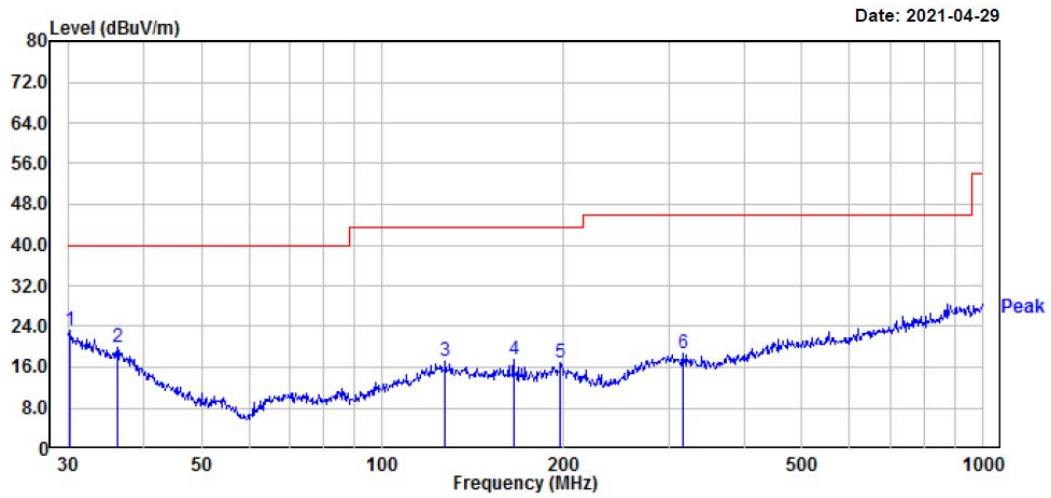
Test mode 2:

Below 1 GHz:

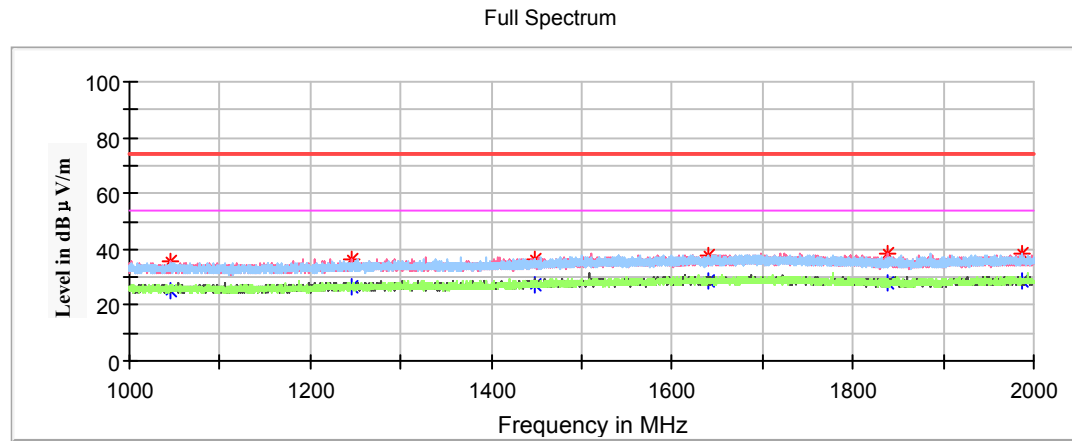
Horizontal:



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	deg	
1	30.32	27.83	-4.47	23.36	40.00	-16.64	100	146	Peak
2	35.00	27.43	-7.74	19.69	40.00	-20.31	100	317	Peak
3	124.13	28.95	-10.91	18.04	43.50	-25.46	200	90	Peak
4	138.87	28.45	-11.42	17.03	43.50	-26.47	100	220	Peak
5	194.45	27.89	-11.33	16.56	43.50	-26.94	200	342	Peak
6	296.18	28.33	-8.80	19.53	46.00	-26.47	100	354	Peak

Vertical:

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	deg	
1	30.21	27.72	-4.39	23.33	40.00	-16.67	100	272	Peak
2	36.25	28.71	-8.66	20.05	40.00	-19.95	200	45	Peak
3	127.22	27.99	-10.89	17.10	43.50	-26.40	200	348	Peak
4	165.49	29.36	-11.87	17.49	43.50	-26.01	200	359	Peak
5	197.89	28.16	-11.13	17.03	43.50	-26.47	100	6	Peak
6	317.70	27.55	-8.92	18.63	46.00	-27.37	200	193	Peak

Above 1 GHz:

Frequency (MHz)	Corrected Amplitude		Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
	Max Peak (dBμV/m)	Average (dBμV/m)						
1045.700000	35.39	---	74.00	38.61	200.0	V	254.0	-12.2
1045.700000	---	24.92	54.00	29.08	200.0	V	254.0	-12.2
1245.300000	36.17	---	74.00	37.83	100.0	V	223.0	-11.0
1245.300000	---	26.78	54.00	27.22	100.0	V	223.0	-11.0
1448.500000	36.71	---	74.00	37.29	100.0	V	201.0	-9.7
1448.500000	---	27.33	54.00	26.67	100.0	V	201.0	-9.7
1640.800000	37.56	---	74.00	36.44	100.0	H	7.0	-8.9
1640.800000	---	28.92	54.00	25.08	100.0	H	7.0	-8.9
1837.900000	---	27.70	54.00	26.30	200.0	V	244.0	-8.2
1837.900000	38.53	---	74.00	35.47	200.0	V	244.0	-8.2
1986.300000	---	28.44	54.00	25.56	200.0	H	229.0	-7.7
1986.300000	38.78	---	74.00	35.22	200.0	H	229.0	-7.7

Note:

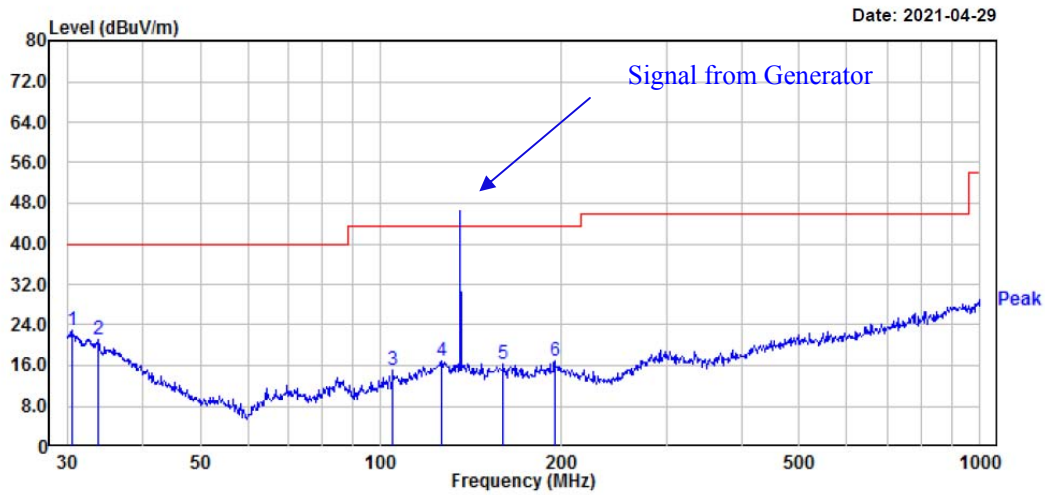
1) Corrected Amplitude = Meter Reading + Antenna Factor + Cable Loss - Amplifier Gain

2) Margin = Limit - Corrected Amplitude

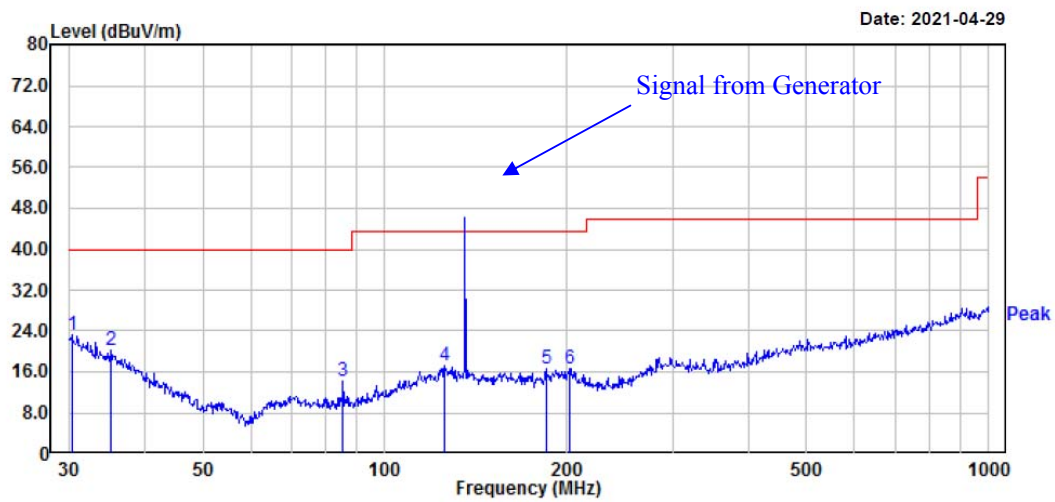
Test mode 3:

Below 1 GHz:

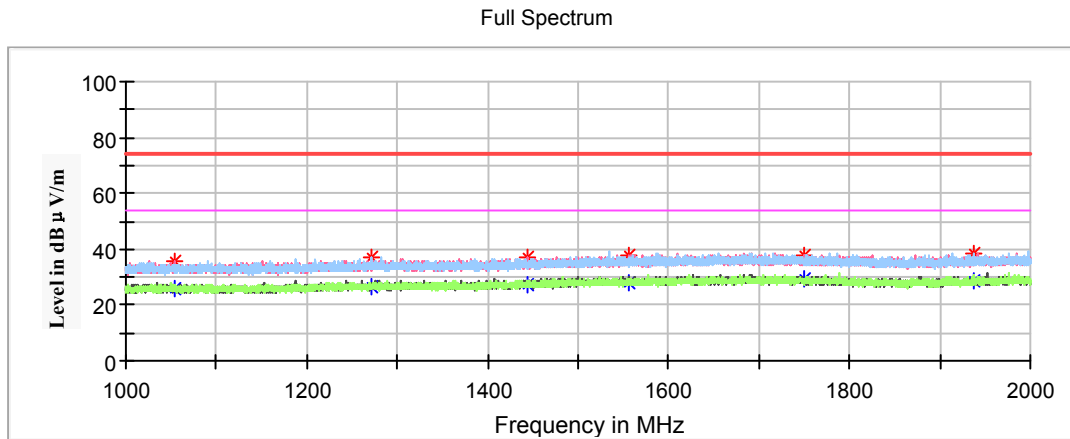
Horizontal:



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	deg	
1	30.64	27.54	-4.68	22.86	40.00	-17.14	100	316	Peak
2	33.68	28.06	-6.82	21.24	40.00	-18.76	200	328	Peak
3	104.90	28.90	-13.79	15.11	43.50	-28.39	200	171	Peak
4	126.33	27.78	-10.85	16.93	43.50	-26.57	100	12	Peak
5	160.35	27.77	-11.55	16.22	43.50	-27.28	200	146	Peak
6	195.14	28.23	-11.30	16.93	43.50	-26.57	200	254	Peak

Vertical:

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	deg	
1	30.32	27.74	-4.47	23.27	40.00	-16.73	100	197	Peak
2	35.25	28.20	-7.93	20.27	40.00	-19.73	200	360	Peak
3	85.30	32.19	-17.92	14.27	40.00	-25.73	200	11	Peak
4	125.89	28.09	-10.83	17.26	43.50	-26.24	100	300	Peak
5	185.14	28.51	-11.88	16.63	43.50	-26.87	200	281	Peak
6	202.81	27.97	-11.29	16.68	43.50	-26.82	200	256	Peak

Above 1 GHz:

Frequency (MHz)	Corrected Amplitude		Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
	Max Peak (dBµV/m)	Average (dBµV/m)						
1054.400000	---	26.18	54.00	27.82	200.0	V	73.0	-12.2
1054.400000	35.68	---	74.00	38.32	200.0	V	73.0	-12.2
1272.200000	---	26.54	54.00	27.46	200.0	V	277.0	-10.8
1272.200000	37.07	---	74.00	36.93	200.0	V	277.0	-10.8
1443.600000	---	27.09	54.00	26.91	200.0	H	321.0	-9.7
1443.600000	37.05	---	74.00	36.95	200.0	H	321.0	-9.7
1556.000000	---	28.22	54.00	25.78	100.0	V	49.0	-9.2
1556.000000	37.93	---	74.00	36.07	100.0	V	49.0	-9.2
1750.400000	---	29.39	54.00	24.61	200.0	V	0.0	-8.5
1750.400000	37.62	---	74.00	36.38	200.0	V	0.0	-8.5
1937.600000	---	28.80	54.00	25.20	200.0	H	196.0	-7.9
1937.600000	38.26	---	74.00	35.74	200.0	H	196.0	-7.9

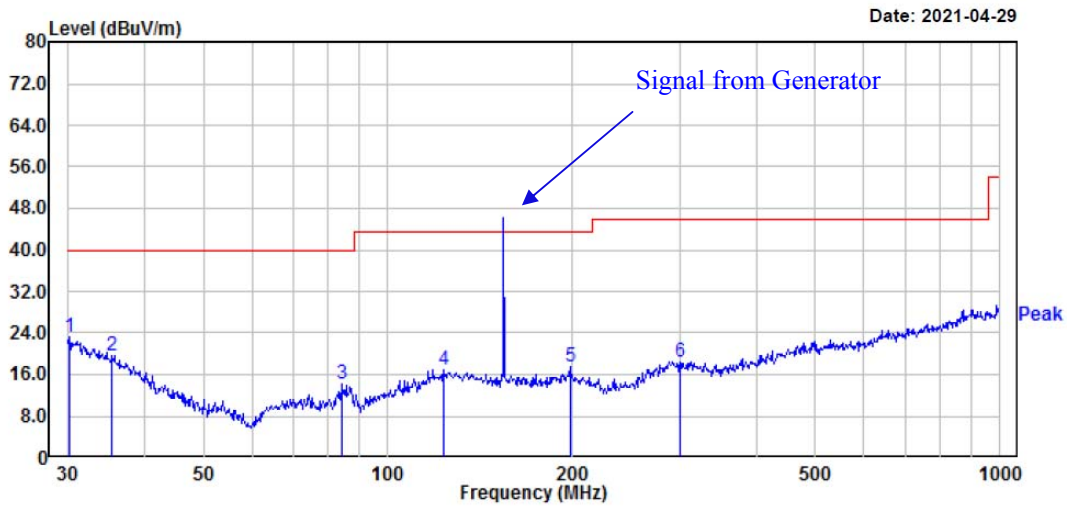
Note:

- 1) Corrected Amplitude = Meter Reading + Antenna Factor + Cable Loss - Amplifier Gain
- 2) Margin = Limit - Corrected Amplitude

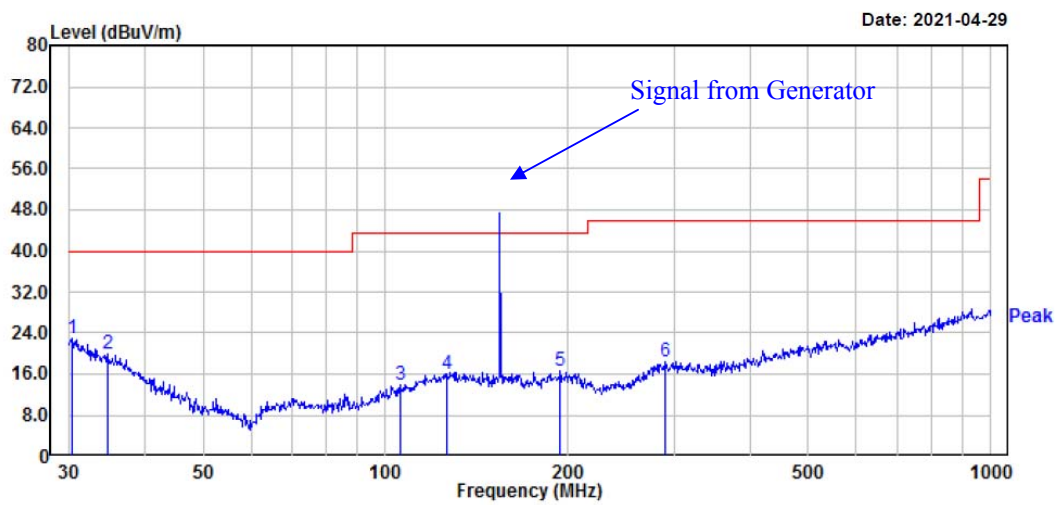
Test mode 4:

Below 1 GHz:

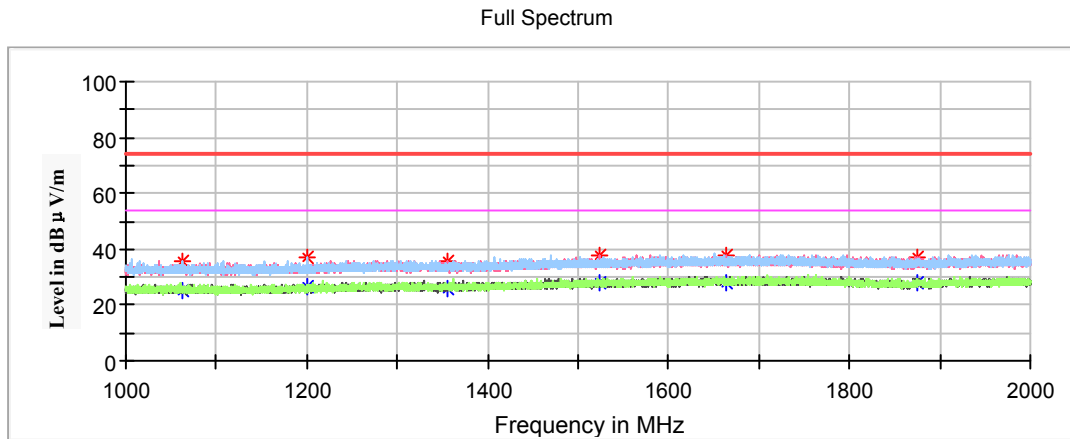
Horizontal:



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	deg	
1	30.21	27.53	-4.39	23.14	40.00	-16.86	100	143	Peak
2	35.50	27.87	-8.11	19.76	40.00	-20.24	100	317	Peak
3	84.41	32.13	-17.92	14.21	40.00	-25.79	200	298	Peak
4	123.27	27.93	-11.04	16.89	43.50	-26.61	200	328	Peak
5	198.59	28.69	-11.09	17.60	43.50	-25.90	100	249	Peak
6	300.37	27.07	-8.59	18.48	46.00	-27.52	200	63	Peak

Vertical:

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	deg	
1	30.32	27.30	-4.47	22.83	40.00	-17.17	100	325	Peak
2	34.88	27.54	-7.66	19.88	40.00	-20.12	100	328	Peak
3	105.64	27.62	-13.69	13.93	43.50	-29.57	200	83	Peak
4	126.33	26.90	-10.85	16.05	43.50	-27.45	100	352	Peak
5	194.45	27.80	-11.33	16.47	43.50	-27.03	200	174	Peak
6	290.02	27.46	-9.14	18.32	46.00	-27.68	100	356	Peak

Above 1 GHz:

Frequency (MHz)	Corrected Amplitude		Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
	Max Peak (dBµV/m)	Average (dBµV/m)						
1062.900000	---	25.11	54.00	28.89	200.0	H	228.0	-12.1
1062.900000	35.37	---	74.00	38.63	200.0	H	228.0	-12.1
1200.900000	---	26.47	54.00	27.53	100.0	H	0.0	-11.3
1200.900000	37.28	---	74.00	36.72	100.0	H	0.0	-11.3
1356.400000	---	26.20	54.00	27.80	100.0	V	147.0	-10.3
1356.400000	35.69	---	74.00	38.31	100.0	V	147.0	-10.3
1524.100000	---	28.13	54.00	25.87	200.0	V	39.0	-9.3
1524.100000	37.42	---	74.00	36.58	200.0	V	39.0	-9.3
1663.800000	---	27.98	54.00	26.02	200.0	V	311.0	-8.8
1663.800000	37.84	---	74.00	36.16	200.0	V	311.0	-8.8
1875.900000	---	27.88	54.00	26.12	100.0	V	310.0	-8.1
1875.900000	37.20	---	74.00	36.80	100.0	V	310.0	-8.1

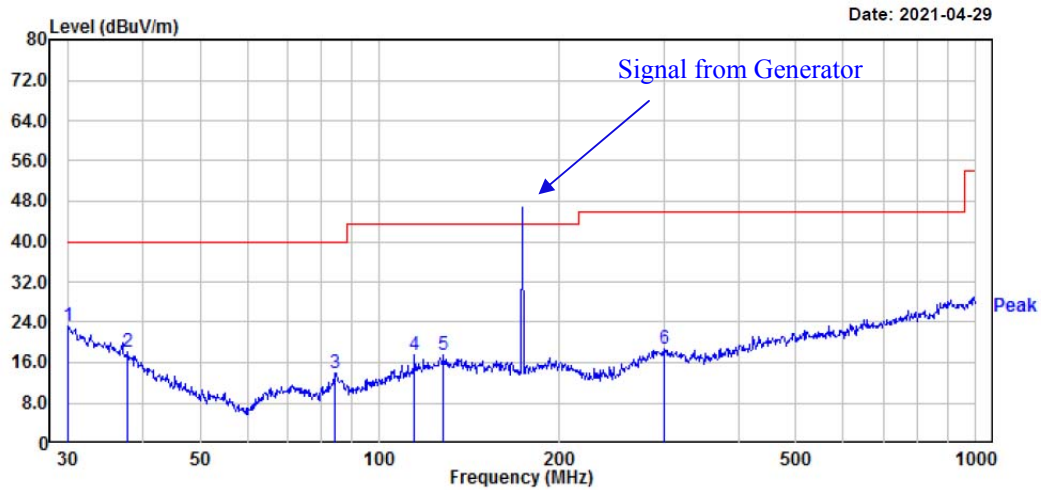
Note:

- 1) Corrected Amplitude = Meter Reading + Antenna Factor + Cable Loss - Amplifier Gain
- 2) Margin = Limit - Corrected Amplitude

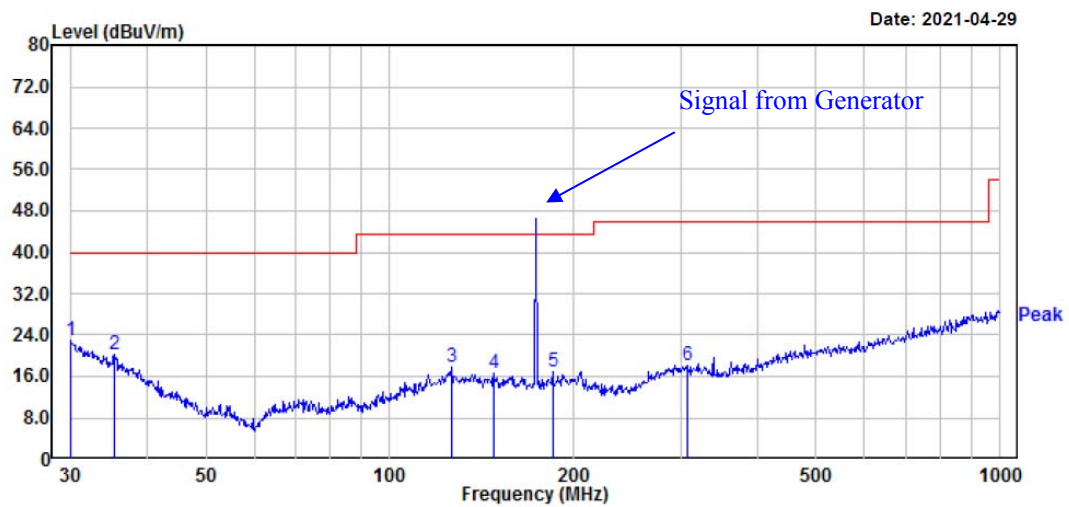
Test mode 5:

Below 1 GHz:

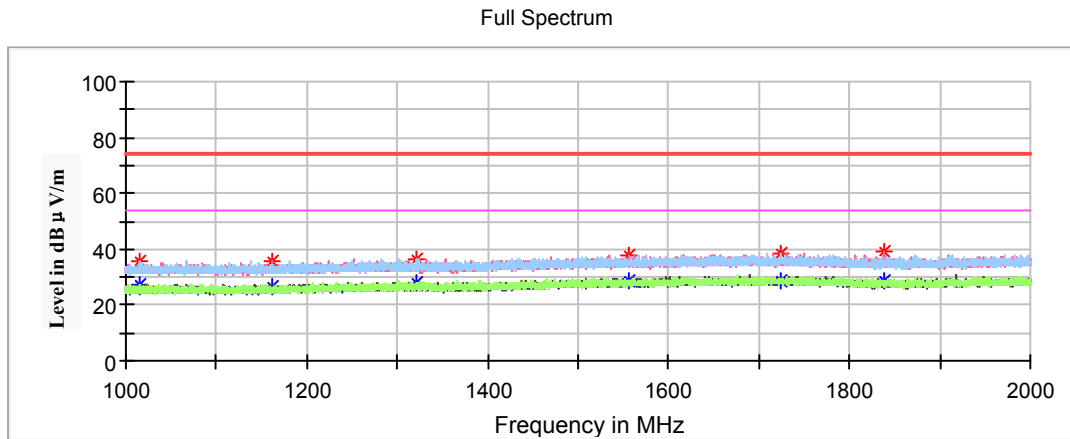
Horizontal:



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	deg	
1	30.11	27.43	-4.32	23.11	40.00	-16.89	100	191	Peak
2	37.81	27.83	-9.79	18.04	40.00	-21.96	100	328	Peak
3	84.11	31.87	-17.92	13.95	40.00	-26.05	200	291	Peak
4	114.51	29.87	-12.35	17.52	43.50	-25.98	100	253	Peak
5	128.11	28.37	-10.93	17.44	43.50	-26.06	100	290	Peak
6	300.37	27.33	-8.59	18.74	46.00	-27.26	200	217	Peak

Vertical:

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	deg	
1	30.11	27.24	-4.32	22.92	40.00	-17.08	200	14	Peak
2	35.38	28.22	-8.02	20.20	40.00	-19.80	200	84	Peak
3	126.33	28.64	-10.85	17.79	43.50	-25.71	100	114	Peak
4	147.92	28.42	-11.84	16.58	43.50	-26.92	100	6	Peak
5	185.14	28.76	-11.88	16.88	43.50	-26.62	200	156	Peak
6	307.83	26.99	-8.73	18.26	46.00	-27.74	100	359	Peak

Above 1 GHz:

Frequency (MHz)	Corrected Amplitude		Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
	Max Peak (dBµV/m)	Average (dBµV/m)						
1015.900000	---	26.95	54.00	27.05	100.0	H	356.0	-12.4
1015.900000	35.89	---	74.00	38.11	100.0	H	356.0	-12.4
1161.600000	---	26.26	54.00	27.74	100.0	V	84.0	-11.5
1161.600000	35.48	---	74.00	38.52	100.0	V	84.0	-11.5
1321.200000	---	27.72	54.00	26.28	100.0	H	201.0	-10.5
1321.200000	36.26	---	74.00	37.74	100.0	H	201.0	-10.5
1556.500000	---	28.40	54.00	25.60	200.0	V	217.0	-9.2
1556.500000	37.67	---	74.00	36.33	200.0	V	217.0	-9.2
1724.500000	---	28.58	54.00	25.42	100.0	H	116.0	-8.6
1724.500000	38.38	---	74.00	35.62	100.0	H	116.0	-8.6
1837.300000	---	28.89	54.00	25.11	100.0	V	0.0	-8.2
1837.300000	38.82	---	74.00	35.18	100.0	V	0.0	-8.2

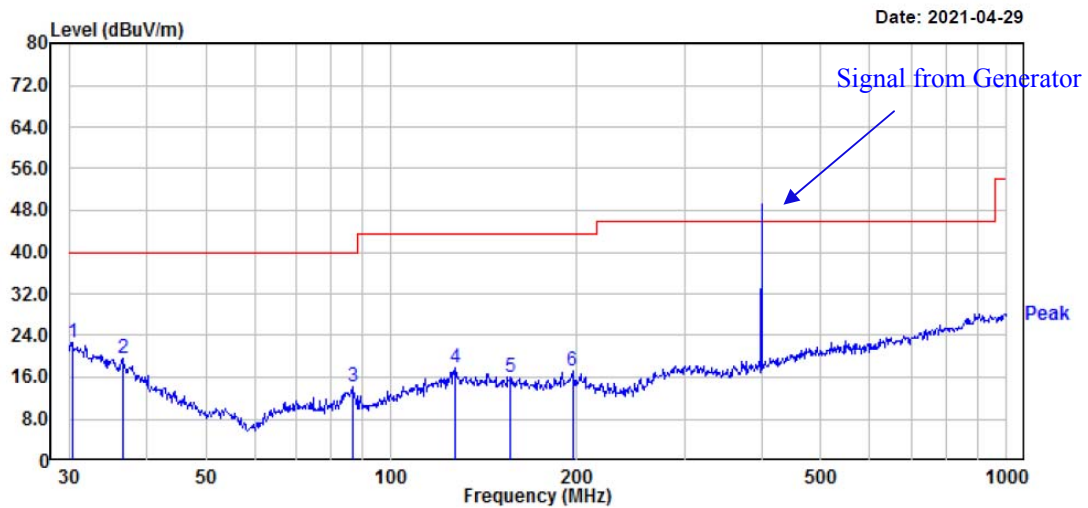
Note:

- 1) Corrected Amplitude = Meter Reading + Antenna Factor + Cable Loss - Amplifier Gain
- 2) Margin = Limit - Corrected Amplitude

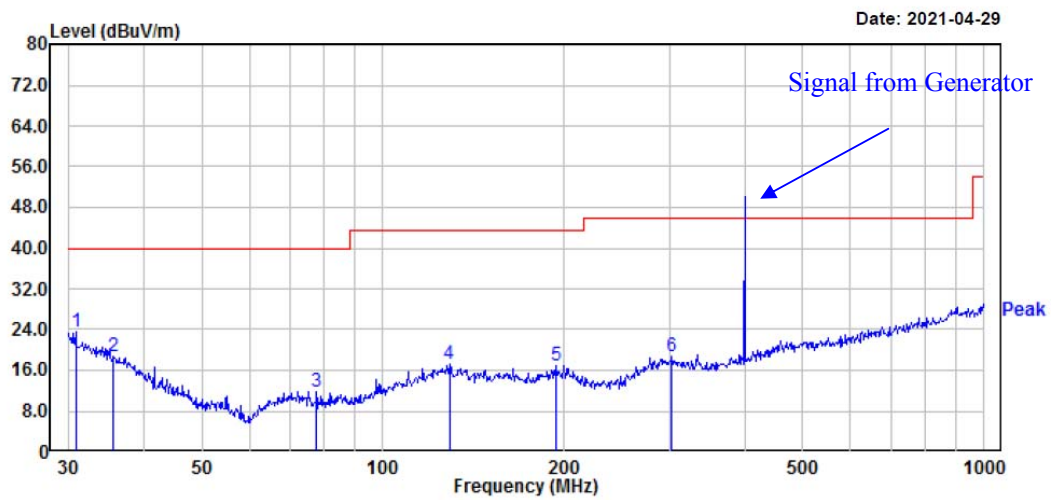
Test mode 6:

Below 1 GHz:

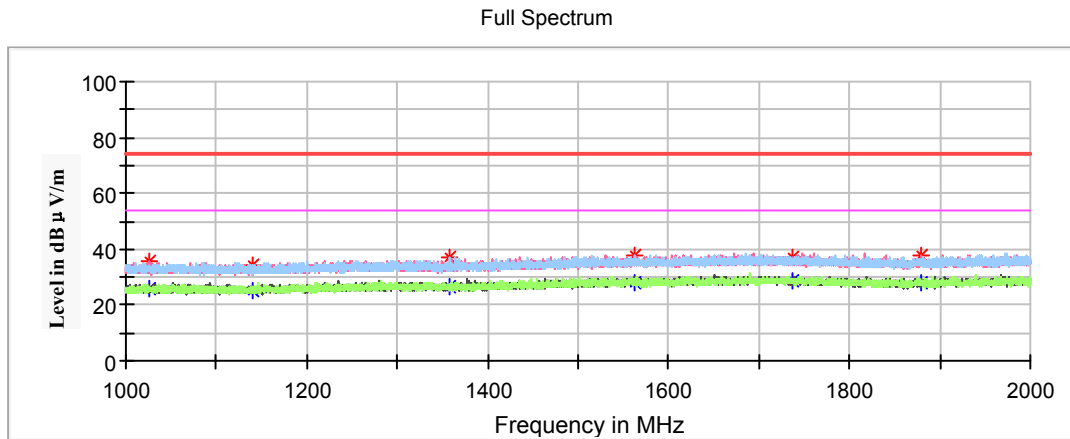
Horizontal:



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	deg	
1	30.32	27.05	-4.47	22.58	40.00	-17.42	200	8	Peak
2	36.77	28.70	-9.03	19.67	40.00	-20.33	200	85	Peak
3	86.50	31.81	-17.74	14.07	40.00	-25.93	200	55	Peak
4	127.22	28.56	-10.89	17.67	43.50	-25.83	200	198	Peak
5	156.46	27.76	-11.67	16.09	43.50	-27.41	100	294	Peak
6	197.20	28.43	-11.17	17.26	43.50	-26.24	100	159	Peak

Vertical:

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	deg	
1	30.85	28.43	-4.83	23.60	40.00	-16.40	100	254	Peak
2	35.62	27.03	-8.19	18.84	40.00	-21.16	100	112	Peak
3	77.59	29.17	-17.26	11.91	40.00	-28.09	100	217	Peak
4	129.01	28.27	-10.97	17.30	43.50	-26.20	100	70	Peak
5	193.77	28.33	-11.37	16.96	43.50	-26.54	100	352	Peak
6	302.48	27.45	-8.64	18.81	46.00	-27.19	200	170	Peak

Above 1 GHz:

Frequency (MHz)	Corrected Amplitude		Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
	Max Peak (dBµV/m)	Average (dBµV/m)						
1026.100000	---	25.67	54.00	28.33	200.0	V	281.0	-12.3
1026.100000	35.93	---	74.00	38.07	200.0	V	281.0	-12.3
1140.700000	---	24.90	54.00	29.10	100.0	H	239.0	-11.6
1140.700000	34.06	---	74.00	39.94	100.0	H	239.0	-11.6
1358.600000	---	26.43	54.00	27.57	100.0	H	160.0	-10.3
1358.600000	36.87	---	74.00	37.13	100.0	H	160.0	-10.3
1561.900000	---	28.11	54.00	25.89	100.0	H	160.0	-9.2
1561.900000	37.75	---	74.00	36.25	100.0	H	160.0	-9.2
1736.400000	---	28.50	54.00	25.50	200.0	V	359.0	-8.6
1736.400000	37.35	---	74.00	36.65	200.0	V	359.0	-8.6
1880.100000	---	27.64	54.00	26.36	200.0	V	324.0	-8.1
1880.100000	37.83	---	74.00	36.17	200.0	V	324.0	-8.1

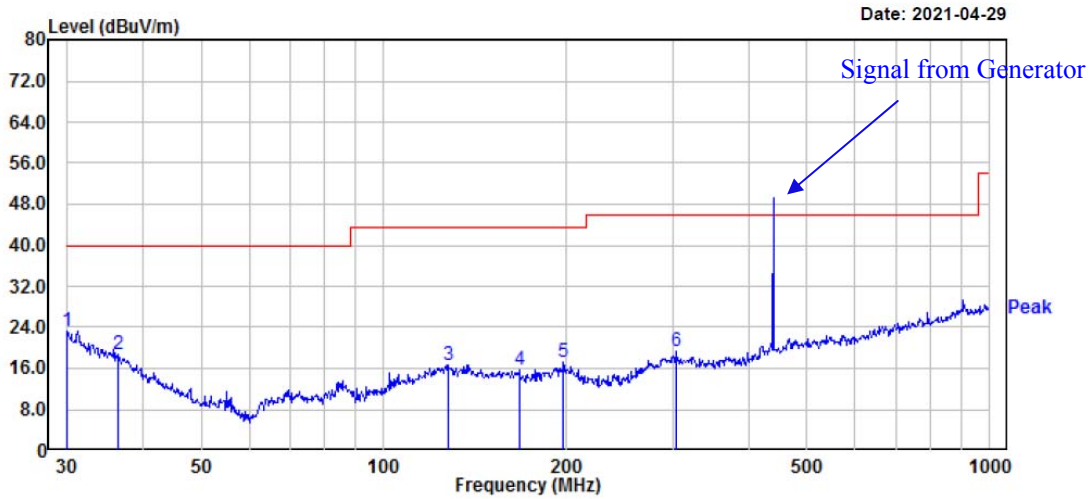
Note:

- 1) Corrected Amplitude = Meter Reading + Antenna Factor + Cable Loss - Amplifier Gain
- 2) Margin = Limit - Corrected Amplitude

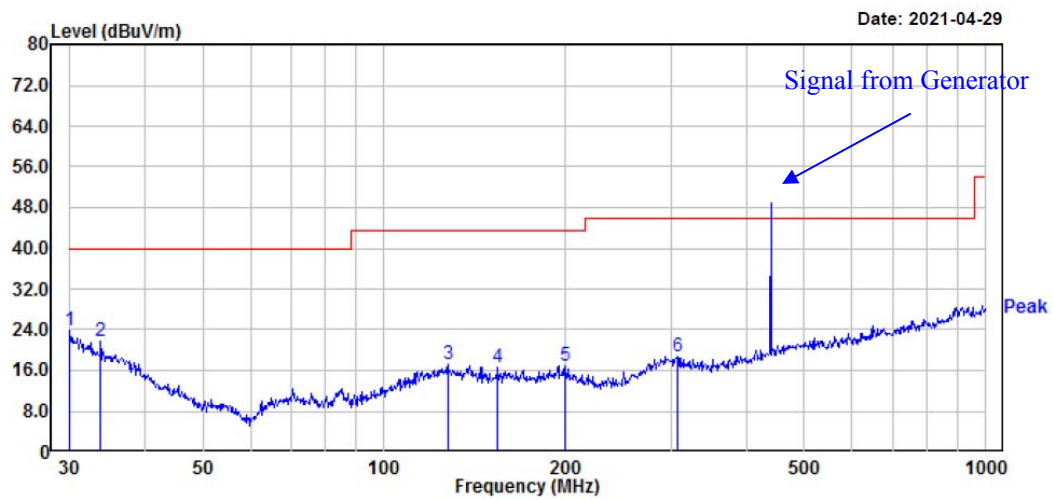
Test mode 7:

Below 1 GHz:

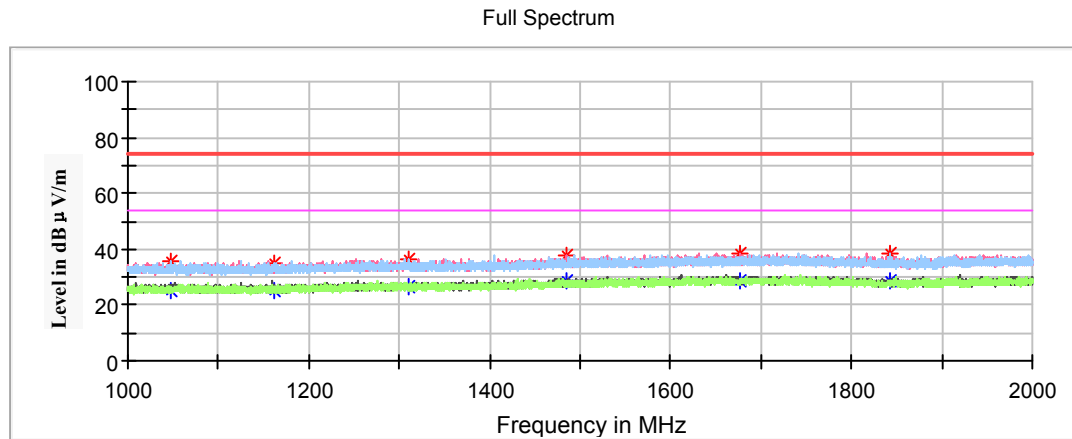
Horizontal:



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	deg	
1	30.11	27.65	-4.32	23.33	40.00	-16.67	200	341	Peak
2	36.51	27.69	-8.84	18.85	40.00	-21.15	200	107	Peak
3	128.11	27.48	-10.93	16.55	43.50	-26.95	200	267	Peak
4	167.24	27.75	-11.99	15.76	43.50	-27.74	200	144	Peak
5	197.89	28.28	-11.13	17.15	43.50	-26.35	200	248	Peak
6	303.54	27.93	-8.65	19.28	46.00	-26.72	100	299	Peak

Vertical:

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	deg	
1	30.00	28.15	-4.24	23.91	40.00	-16.09	100	135	Peak
2	33.80	28.50	-6.90	21.60	40.00	-18.40	100	190	Peak
3	127.66	28.17	-10.91	17.26	43.50	-26.24	200	281	Peak
4	154.82	28.26	-11.74	16.52	43.50	-26.98	200	122	Peak
5	200.69	27.90	-11.08	16.82	43.50	-26.68	100	350	Peak
6	307.83	27.55	-8.73	18.82	46.00	-27.18	100	306	Peak

Above 1 GHz:

Frequency (MHz)	Corrected Amplitude		Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
	Max Peak (dBµV/m)	Average (dBµV/m)						
1046.900000	---	25.22	54.00	28.78	200.0	V	212.0	-12.2
1046.900000	35.74	---	74.00	38.26	200.0	V	212.0	-12.2
1162.600000	---	25.43	54.00	28.57	100.0	V	122.0	-11.5
1162.600000	35.05	---	74.00	38.95	100.0	V	122.0	-11.5
1311.100000	---	26.46	54.00	27.54	200.0	V	191.0	-10.6
1311.100000	36.24	---	74.00	37.76	200.0	V	191.0	-10.6
1484.400000	---	28.44	54.00	25.56	200.0	V	29.0	-9.5
1484.400000	37.44	---	74.00	36.56	200.0	V	29.0	-9.5
1677.800000	---	29.01	54.00	24.99	100.0	V	47.0	-8.8
1677.800000	38.21	---	74.00	35.79	100.0	V	47.0	-8.8
1842.500000	---	28.50	54.00	25.50	100.0	H	72.0	-8.2
1842.500000	38.72	---	74.00	35.28	100.0	H	72.0	-8.2

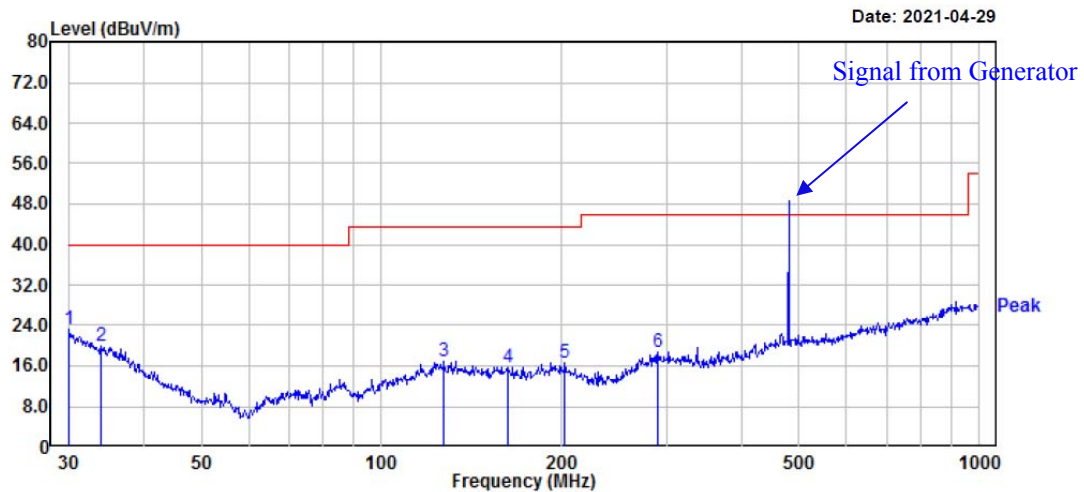
Note:

- 1) Corrected Amplitude = Meter Reading + Antenna Factor + Cable Loss - Amplifier Gain
- 2) Margin = Limit - Corrected Amplitude

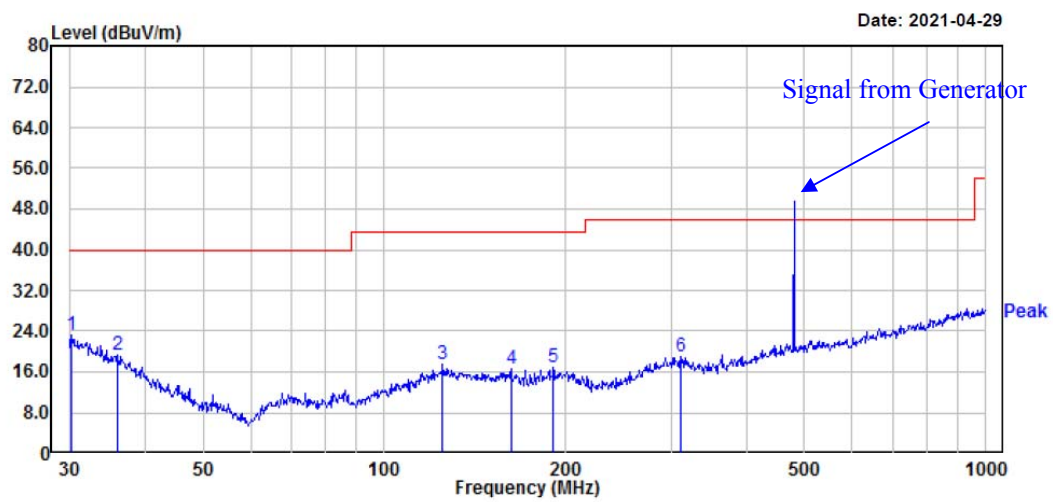
Test mode 8:

Below 1 GHz:

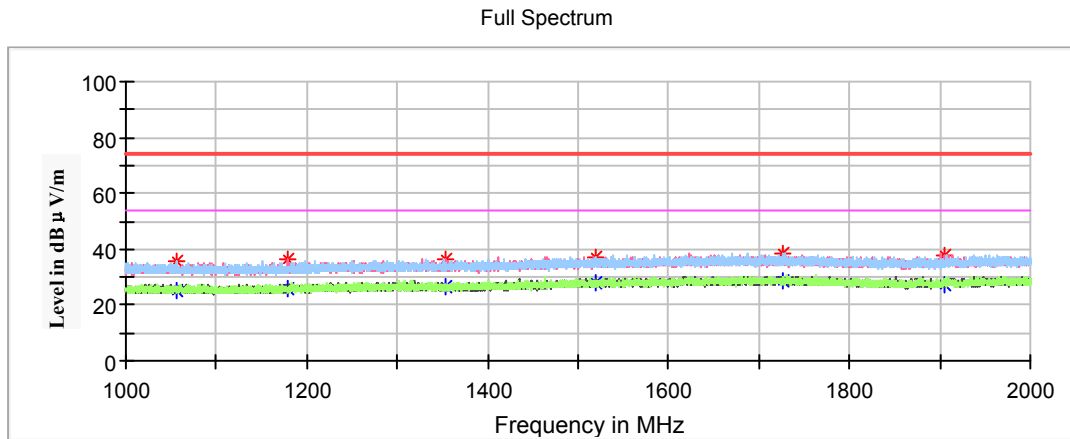
Horizontal:



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	deg	
1	30.11	27.54	-4.32	23.22	40.00	-16.78	100	81	Peak
2	34.04	26.96	-7.07	19.89	40.00	-20.11	100	233	Peak
3	127.22	27.68	-10.89	16.79	43.50	-26.71	200	37	Peak
4	162.61	27.53	-11.69	15.84	43.50	-27.66	100	129	Peak
5	202.81	27.94	-11.29	16.65	43.50	-26.85	100	43	Peak
6	290.02	27.72	-9.14	18.58	46.00	-27.42	200	31	Peak

Vertical:

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	deg	
1	30.21	27.53	-4.39	23.14	40.00	-16.86	200	201	Peak
2	36.13	27.93	-8.56	19.37	40.00	-20.63	100	355	Peak
3	125.01	28.20	-10.78	17.42	43.50	-26.08	100	245	Peak
4	162.61	28.26	-11.69	16.57	43.50	-26.93	100	246	Peak
5	191.07	28.41	-11.53	16.88	43.50	-26.62	100	329	Peak
6	311.09	27.95	-8.80	19.15	46.00	-26.85	100	269	Peak

Above 1 GHz:

Frequency (MHz)	Corrected Amplitude		Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
	Max Peak (dBµV/m)	Average (dBµV/m)						
1056.200000	35.40	---	74.00	38.60	100.0	H	349.0	-12.2
1056.200000	---	25.39	54.00	28.61	100.0	H	349.0	-12.2
1179.800000	36.06	---	74.00	37.94	100.0	V	153.0	-11.4
1179.800000	---	26.22	54.00	27.78	100.0	V	153.0	-11.4
1352.900000	---	26.67	54.00	27.33	200.0	V	138.0	-10.3
1352.900000	36.40	---	74.00	37.60	200.0	V	138.0	-10.3
1520.000000	---	28.19	54.00	25.81	200.0	H	111.0	-9.3
1520.000000	37.21	---	74.00	36.79	200.0	H	111.0	-9.3
1726.200000	---	28.98	54.00	25.02	200.0	H	111.0	-8.6
1726.200000	38.66	---	74.00	35.34	200.0	H	111.0	-8.6
1905.700000	---	27.15	54.00	26.85	200.0	V	106.0	-8.0
1905.700000	37.50	---	74.00	36.50	200.0	V	106.0	-8.0

Note:

- 1) Corrected Amplitude = Meter Reading + Antenna Factor + Cable Loss - Amplifier Gain
- 2) Margin = Limit - Corrected Amplitude

FCC §15.111 - ANTENNA CONDUCTED POWER FOR RECEIVERS

Applicable Standard

FCC §15.111

Limit

The antenna conducted power of the receiver as defined in §15.111 shall not exceed the values given in the following tables

Frequency Range	Limit
9 kHz to 2 GHz	2.0 nW (-57 dBm)

EUT Setup



Test Procedure

1. The receiver antenna terminal connected to a spectrum analyzer.
2. The test data of the worst case condition (mode 2) was reported on the following Data page.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESIB26	100146/026	2020-12-14	2021-12-13
WouXun	RF Cable	WouXun C01	C01	Each Time	/

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

Test Data

Environmental Conditions

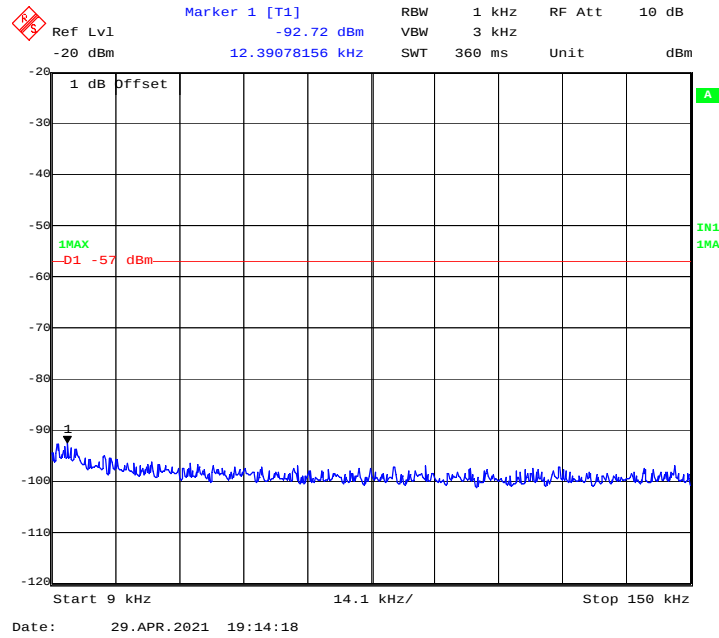
Temperature:	25.2 °C
Relative Humidity:	51 %
SDATM Pressure:	101.5 kPa

The testing was performed by Gerry Xing on 2021-04-29.

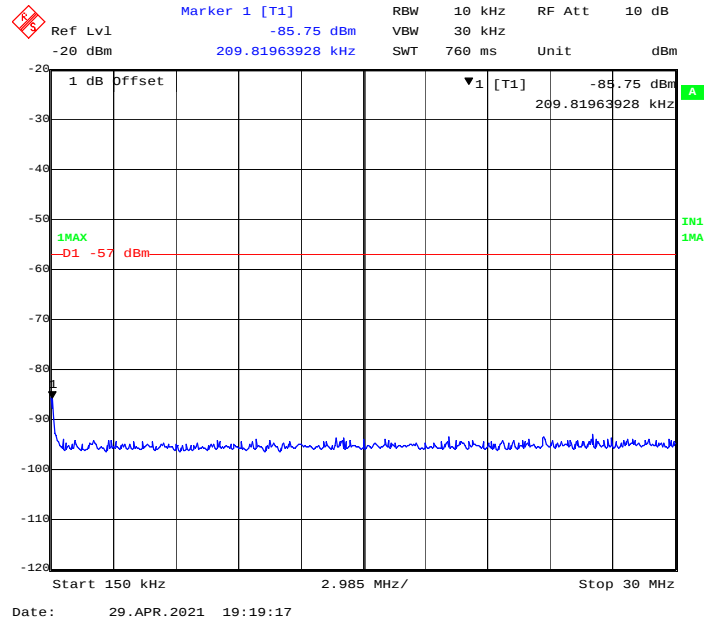
Test Mode2:

Antenna conducted power for receivers :

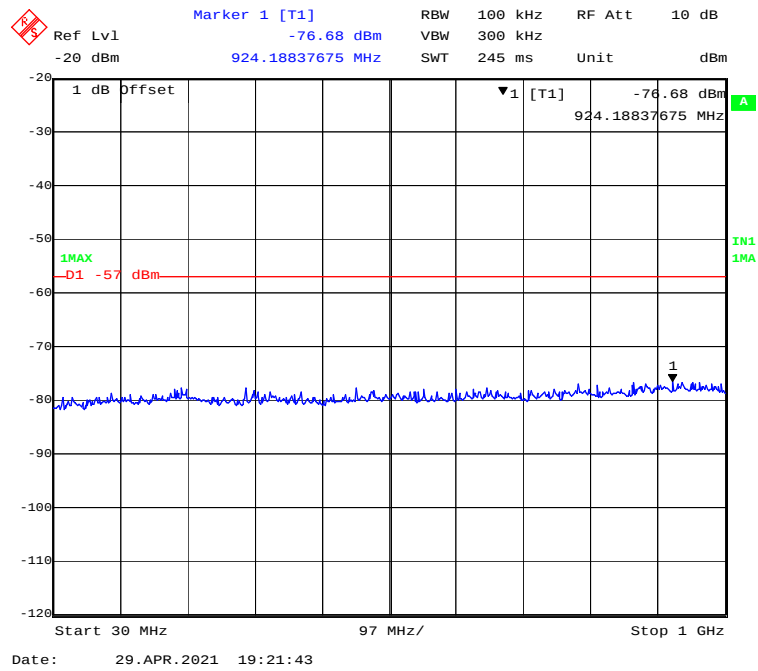
Conducted Measurement (9 kHz to 150 kHz)



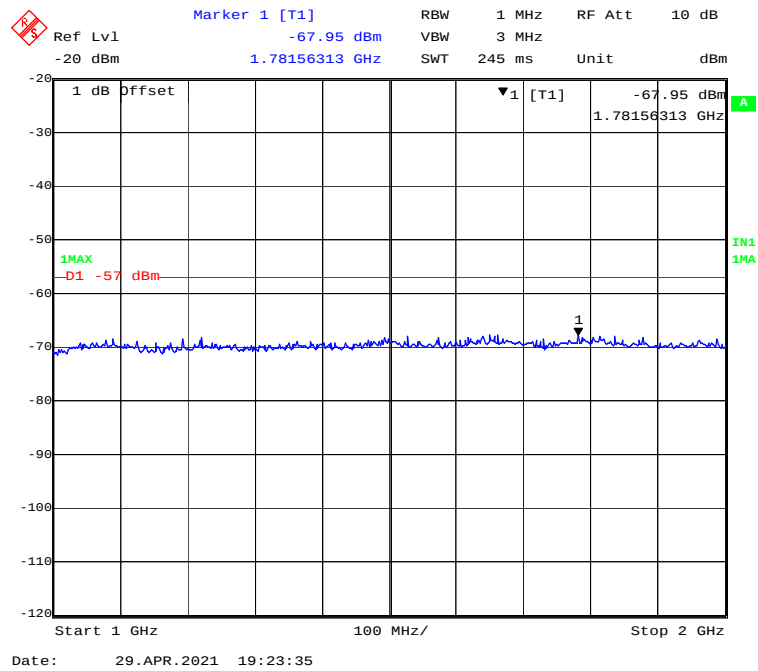
Conducted Measurement (150 kHz to 30MHz)



Conducted Measurement (30MHz to 1GHz)



Conducted Measurement (1GHz to 2GHz)



FCC §15.121(b) - SCANNING RECEIVERS AND FREQUENCY CONVERTERS USED WITH SCANNING RECEIVERS

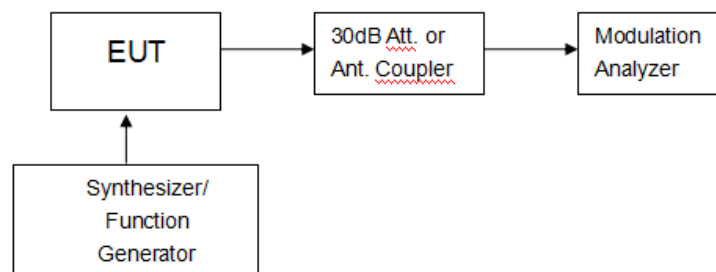
Applicable Standard

FCC §15.121(b)

Limit

Except as provided in paragraph (c) of this section, scanning receivers shall reject any signals from the Cellular Radiotelephone Service frequency bands that are 38 dB or lower based upon a 12 dB SINAD measurement, which is considered the threshold where a signal can be clearly discerned from any interference that may be present.

EUT Setup



Test Procedure

Test Procedure

- 1) Connected the EUT as shown in the above block diagram.
- 2) Apply a RF signal to the receiver input port at lowest, middle and highest channel frequencies of receiver operation band.
- 3) Adjust the audio output level of the receiver to it's rated value with the distortion less than 10%.
- 4) Adjust the RF Signal Generator Output Power to produce 12 dB SINAD without the audio output power dropping by more than 3 dB. This output level of the RF SG at each channel frequency is the sensitivity of the receiver.
- 5) Select the lowest or worse-case sensitivity level for all of the bands as the reference sensitivity.
- 6) Adjust the RF Signal Generator output to a level of +60 dB above the reference sensitivity obtained in step 5) and its frequency to the frequency points in the cellular band.
- 7) Set the Receiver squelch to threshold, the signal required to open the squelch must be lower than the reference sensitivity level.
- 8) Set the receiver in a scanning mode and allow it to scan through it's complete receiving range.
- 9) If the receiver unsquelched or stopped on any frequency, receiving at this frequency, then adjust the signal generator output level until 12 dB SINAD is produced, this level is the spurious value and the difference between the reference sensitivity and the spurious value is the rejection ratio and must be at least 38dB.
- 10) Repeat above procedure at the frequencies 824, 836.0, and 849 MHz for the mobile band, and 869, 881.5, and 894 MHz for the cellular base band.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Narda	Attenuator	30dB	030	2020-08-15	2021-08-14
Rohde & Schwarz	SMBV100A Vector Signal Generator	SMBV100A	261558	2020-07-28	2021-07-27
HP	RF communication test SET.	8920B	079	2021-03-13	2022-04-12
WouXun	RF Cable	WouXun C01	C01	Each Time	/

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

Test Data**Environmental Conditions**

Temperature:	25.2 °C
Relative Humidity:	51 %
ATM Pressure:	101.5 kPa

The testing was performed by Gerry Xing on 2021-04-29.

Test mode: Receive

EUT's Scanning Frequency Range (MHz)	Test Frequencies of Cellular Band (MHz)	Measurement Result (dB)	Limit (dB)
136-174	824,836,849,869,881.5,894	51	>38
400-480	824,836,849,869,881.5,894	54	>38

Note: The test report only shows the worst test results

Declarations

- 1: BACL 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 an asterisk '*'. Customer model name, addresses, names, trademarks etc. are not considered data.
- 2: Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
- 3: Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
- 4: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.
- 5: This report cannot be reproduced except in full, without prior written approval of the Company.
- 6: This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

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