



TESTING LABORATORY  
CERTIFICATE#4323.01



## FCC PART 15B


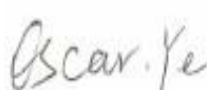
## TEST REPORT

For

### Xiamen New Sound Technology Co., Ltd

No.13 of Xiang yue Road, Torch Hi-Tech Industrial Development Zone, Xiang An District,  
Xiamen, China

**FCC ID: 2AI4QPOCO**

<b>Report Type:</b> Original Report	<b>Product Type:</b> Hearing aid& Hearing Amplifier
<b>Test Engineer:</b> Jett Zhao	
<b>Report Number:</b> RXM200519050-00B	
<b>Report Date:</b> 2020-06-02	
<b>Reviewed By:</b> Oscar Ye EMC Manager	
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## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

Applicant	Xiamen New Sound Technology Co., Ltd
Test Model	Poco SA801
Series Model	Poco SA1601, Poco Y1601, Poco Y601, Poco Y801, Poco Z1601, Poco Z601, Poco Z801, HE-01, HE-02, HE-03, HE-04, HE-05, HE-06, HE-07, HE-08, HE-09, HE-10, ReCharge ITE, Poco RA801
Model Difference	Model name
Product Type	Hearing aid& Hearing Amplifier
Highest Operation Frequency	2480 MHz
Rate Voltage	DC 5V from Adapter

*Adapter Information:*

*Model: P12DUSB050100 US*

*Input: AC100-240V 50/60Hz 0.3A*

*Output: 5V, 1.0A*

*\*All measurement and test data in this report was gathered from production sample serial number: 2020059050. (Assigned by the BACL. The EUT supplied by the applicant was received on 2020-05-19)*

### Objective

This report is prepared on behalf of *Xiamen New Sound Technology 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 15.247 DTS Submittal with FCC ID: 2AI4QPOCO.

### 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 fashion (as normally used by a typical user).

*Test mode 1: Charge*

*Test mode 2: BT Link*

### EUT Exercise Software

No 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

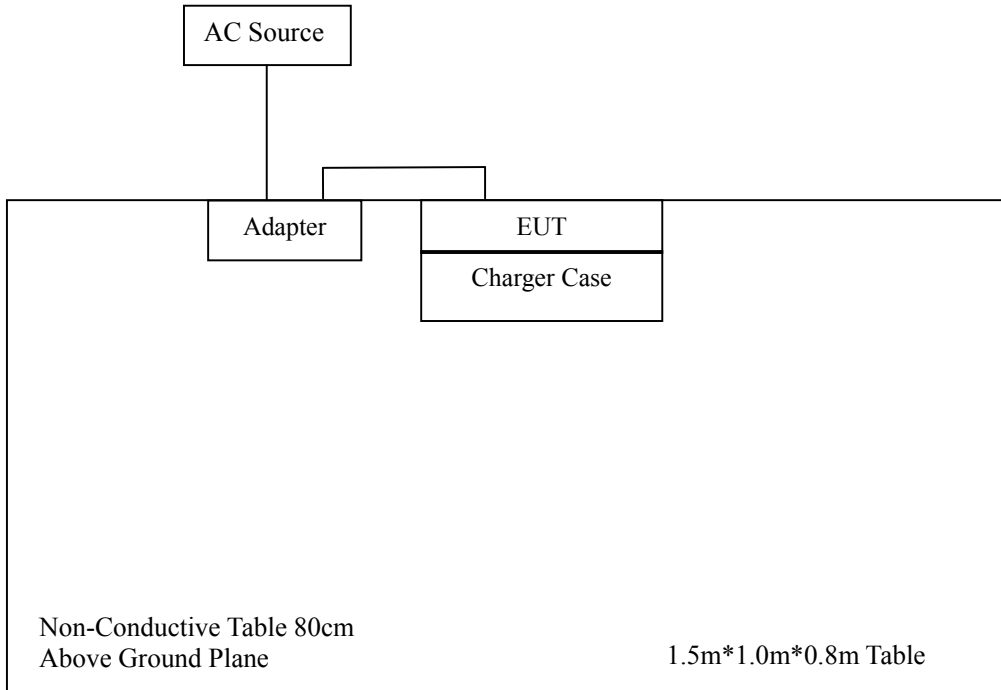
Manufacturer	Description	Model	Serial Number
Samsung	Phone	SM-G9750	/

### External I/O Cable

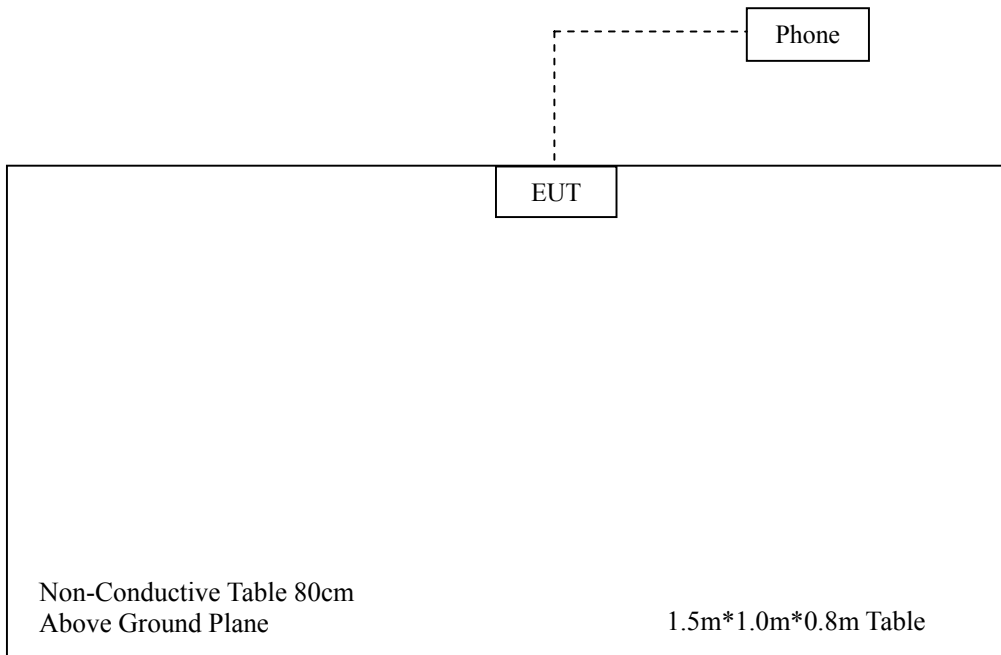
Cable Description	Length (m)	From/Port	To
Power Cable1	0.1	EUT	Adapter
Power Cable2	1.0	Adapter	AC Source

### Block Diagram of Test Setup

Test mode 1:



Test mode 2:



**SUMMARY OF TEST RESULTS**

<b>FCC Rules</b>	<b>Description of Test</b>	<b>Results</b>
§15.107	Conducted Emissions	Compliant
§15.109	Radiated Emissions	Compliant

**FCC §15.107 – CONDUCTED EMISSIONS**

**Applicable Standard**

According to FCC§15.107

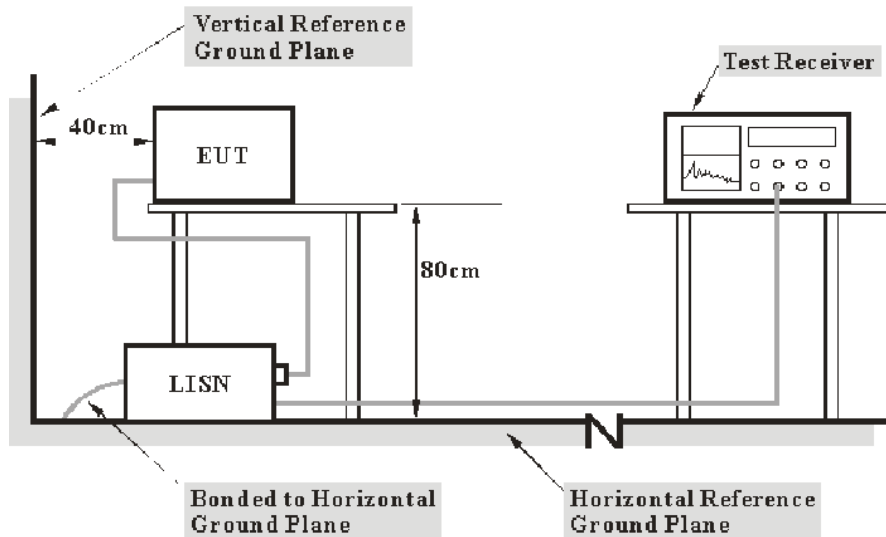
**Measurement Uncertainty**

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		Measurement Uncertainty	$U_{cispr}$
AMN	150kHz~30MHz	3.19 dB	3.4 dB

Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

**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**

During the conducted emission test, the Adapter was connected to the outlet of the LISN.

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

All final data was recorded in the Quasi-peak and average detection mode.

**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	2019-08-05	2020-08-04
Rohde & Schwarz	LISN	ENV216	101115	2019-12-14	2020-12-13
Rohde & Schwarz	Pluse limiter	ESH3-Z2	100552	2019-08-10	2020-08-09
Audix	Test Software	e3	V9	--	--
MICRO-COAX	Coaxial Cable	Cable-6	006	2019-08-15	2020-08-14

\* **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**

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

$$\text{Factor (dB)} = \text{LISN VDF (dB)} + \text{Cable Loss (dB)} + \text{Transient Limiter Attenuation (dB)}$$

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**

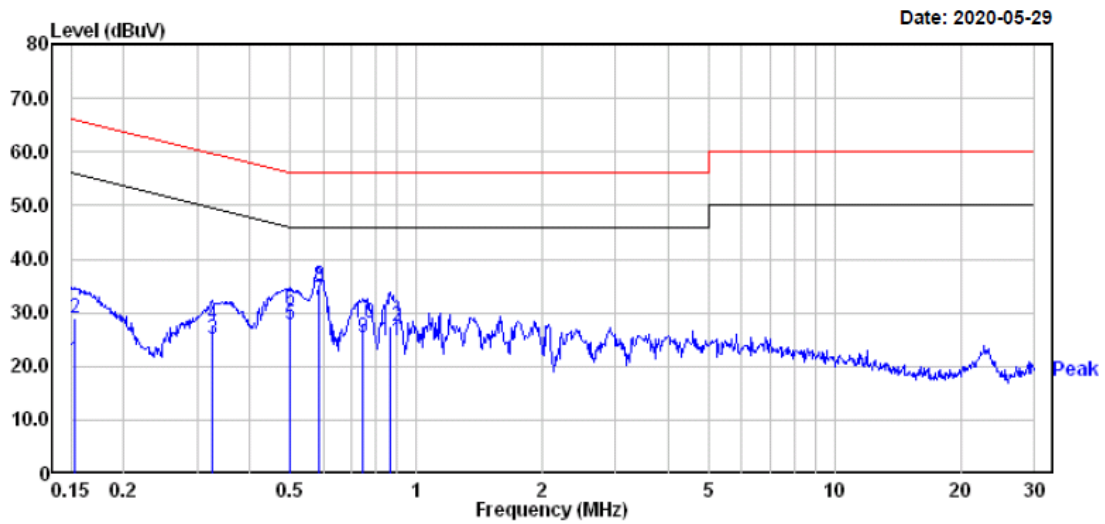
**Environmental Conditions**

Temperature:	25.9 °C
Relative Humidity:	51 %
ATM Pressure:	101.3 kPa

The testing was performed by Jett Zhao on 2020-05-29.

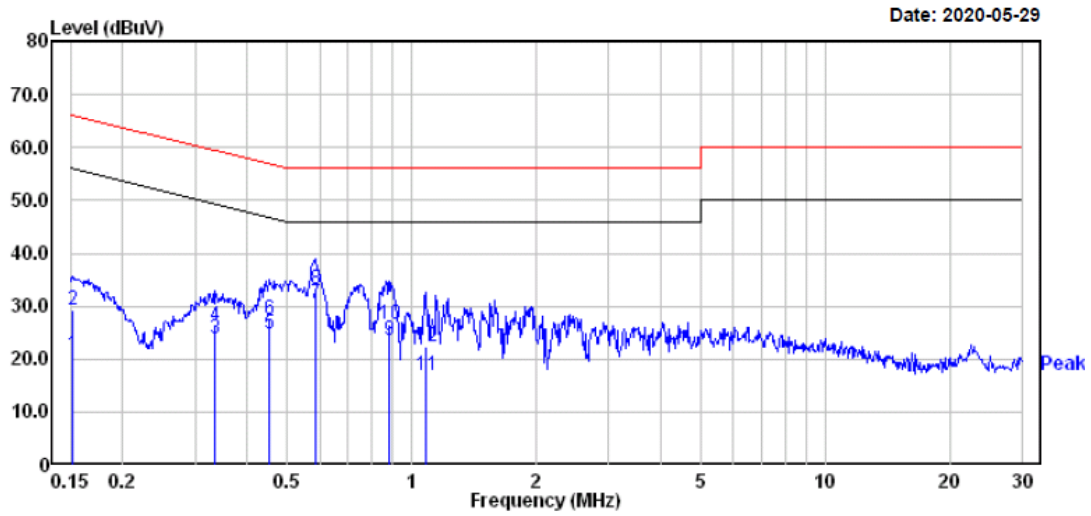
Test mode 1:

Line:



	Read Freq	Level	Factor	Level	Limit	Over	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.153	1.40	19.82	21.22	55.82	-34.60	Average
2	0.153	9.20	19.82	29.02	65.82	-36.80	QP
3	0.325	5.20	19.82	25.02	49.57	-24.55	Average
4	0.325	7.90	19.82	27.72	59.57	-31.85	QP
5	0.499	8.00	19.76	27.76	46.01	-18.25	Average
6	0.499	10.70	19.76	30.46	56.01	-25.55	QP
7	0.585	12.50	19.75	32.25	46.00	-13.75	Average
8	0.585	15.30	19.75	35.05	56.00	-20.95	QP
9	0.747	5.70	19.73	25.43	46.00	-20.57	Average
10	0.747	8.40	19.73	28.13	56.00	-27.87	QP
11	0.866	5.10	19.72	24.82	46.00	-21.18	Average
12	0.866	7.80	19.72	27.52	56.00	-28.48	QP

**Neutral:**



	Read	Limit	Over				
Freq	Level	Factor	Level	Line			
MHz	dBuV	dB	dBuV	dBuV			
1	0.152	0.90	19.82	20.72	55.91	-35.19	Average
2	0.152	9.60	19.82	29.42	65.91	-36.49	QP
3	0.336	4.09	19.82	23.91	49.31	-25.40	Average
4	0.336	6.49	19.82	26.31	59.31	-33.00	QP
5	0.454	5.10	19.75	24.85	46.80	-21.95	Average
6	0.454	7.60	19.75	27.35	56.80	-29.45	QP
7	0.585	10.80	19.75	30.55	46.00	-15.45	Average
8	0.585	13.50	19.75	33.25	56.00	-22.75	QP
9	0.880	3.89	19.73	23.62	46.00	-22.38	Average
10	0.880	6.89	19.73	26.62	56.00	-29.38	QP
11	1.082	-3.00	19.82	16.82	46.00	-29.18	Average
12	1.082	2.60	19.82	22.42	56.00	-33.58	QP

**Note:**

1) Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)

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

## FCC §15.109 - RADIATED EMISSIONS

### Applicable Standard

FCC §15.109

### Measurement Uncertainty

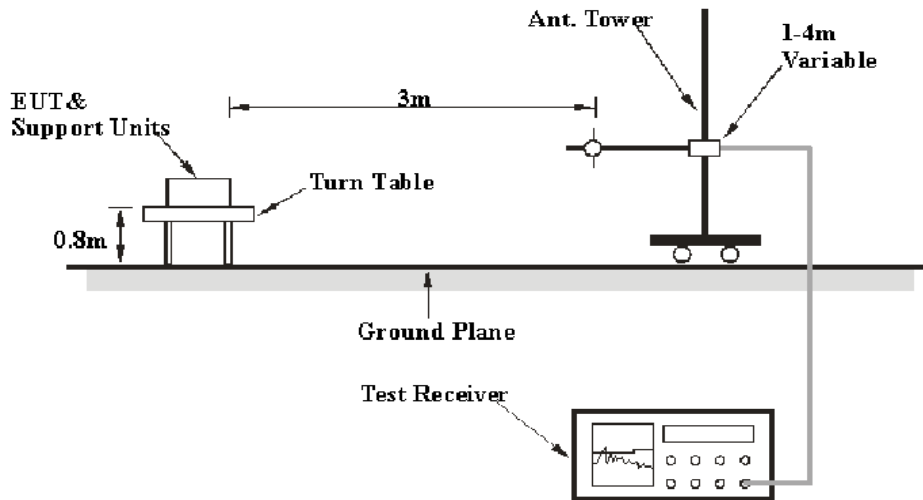
All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency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

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

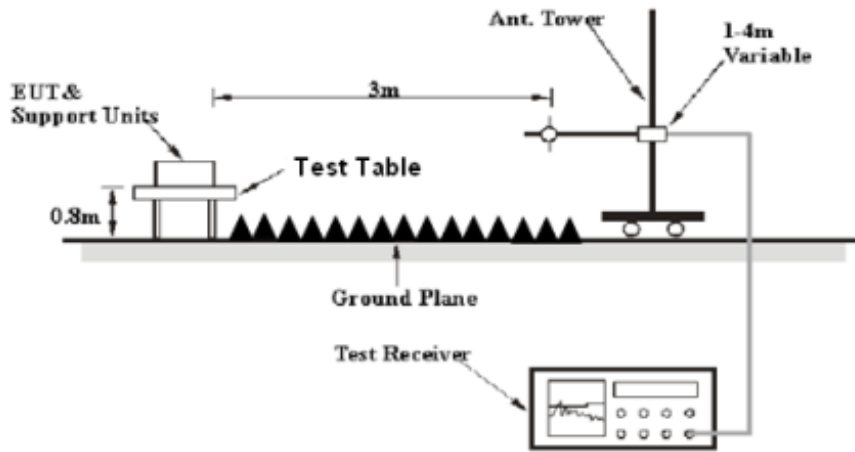
Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

### 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 13 GHz.

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

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

**Test Procedure**

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

All data was recorded in the Quasi-peak detector mode from 30 MHz to 1 GHz.

### Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sonoma Instrument	Pre-amplifier	310N	185700	2019-08-14	2020-08-13
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2019-12-14	2020-12-13
Sunol Sciences	Broadband Antenna	JB3	A090413-1	2017-08-04	2020-08-03
Champrotek	Chamber 1#	3m-SAC 966	NA	2017-09-03	2020-09-02
Albatross	Chamber 2#	3m-SAC 966	NA	2020-05-09	2023-05-08
R&S	Auto test Software	EMC32	100361	-	-
ETS	Horn Antenna	3115	9207-3900	2017-07-15	2020-07-14
Rohde & Schwarz	EMI Receiver	ESU40	100207	2020-04-01	2021-03-31
A.H.Systems,inc	Amplifier	PAM-0118P	512	2020-02-20	2021-02-19
MICRO-COAX	Coaxial Cable	Cable-8	008	2019-08-15	2020-08-14
MICRO-COAX	Coaxial Cable	Cable-9	009	2019-08-15	2020-08-14
MICRO-COAX	Coaxial Cable	Cable-10	010	2019-08-15	2020-08-14
MICRO-COAX	Coaxial Cable	Cable-4	004	2019-12-12	2020-12-11
MICRO-COAX	Coaxial Cable	Cable-5	005	2019-12-12	2020-12-11

\* **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).

### Corrected Amplitude & Margin Calculation

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:

$$\text{Corrected Amplitude} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

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

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

**Test Data**

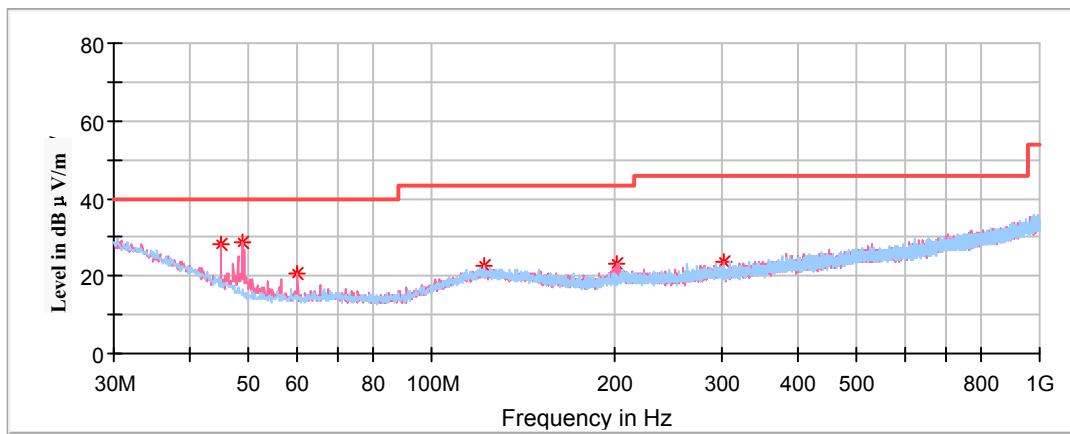
**Environmental Conditions**

<b>Temperature:</b>	25.2 °C
<b>Relative Humidity:</b>	51 %
<b>ATM Pressure:</b>	101.1 kPa

The testing was performed by Cody Lu on 2020-05-30

Test mode 1:

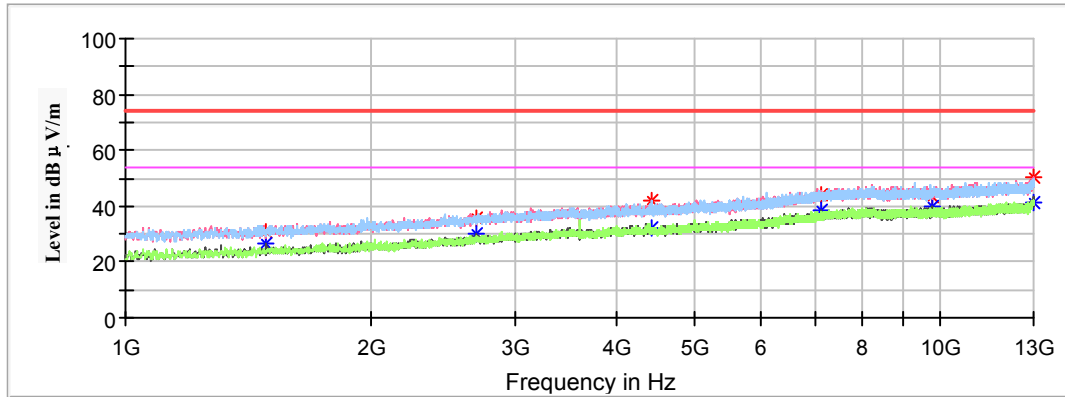
**1) 30MHz ~ 1GHz:**



Frequency (MHz)	Quasi-Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
45.035000	28.27	40.00	11.73	100.0	V	105.0	-14.1
48.793750	28.63	40.00	11.37	100.0	V	158.0	-16.7
60.191250	20.56	40.00	19.44	100.0	V	163.0	-17.9
122.150000	22.62	43.50	20.88	100.0	H	211.0	-11.3
202.175000	23.19	43.50	20.31	100.0	V	96.0	-12.3
303.418750	23.83	46.00	22.17	200.0	V	242.0	-10.4

**Above 1 GHz:**

Full Spectrum

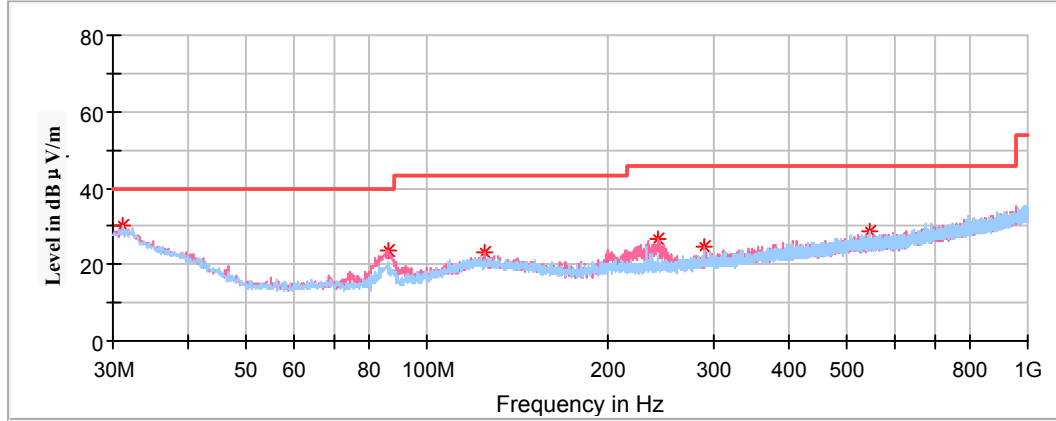


Frequency (MHz)	Max Peak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1489.600000	---	26.29	54.00	27.71	200.0	V	72.0	-16.4
1489.600000	31.06	---	74.00	42.94	200.0	V	72.0	-16.4
2686.000000	---	29.77	54.00	24.23	100.0	V	167.0	-11.6
2686.000000	35.80	---	74.00	38.20	100.0	V	167.0	-11.6
4420.000000	---	32.01	54.00	21.99	200.0	H	247.0	-6.3
4420.000000	41.81	---	74.00	32.19	200.0	H	247.0	-6.3
7118.800000	---	38.76	54.00	15.24	200.0	V	245.0	0.2
7118.800000	44.26	---	74.00	29.74	200.0	V	245.0	0.2
9769.600000	---	39.67	54.00	14.33	100.0	V	216.0	2.0
9769.600000	43.33	---	74.00	30.67	100.0	V	216.0	2.0
12984.400000	---	41.10	54.00	12.90	100.0	V	31.0	5.1
12984.400000	50.44	---	74.00	23.56	100.0	V	31.0	5.1



Test mode 2:

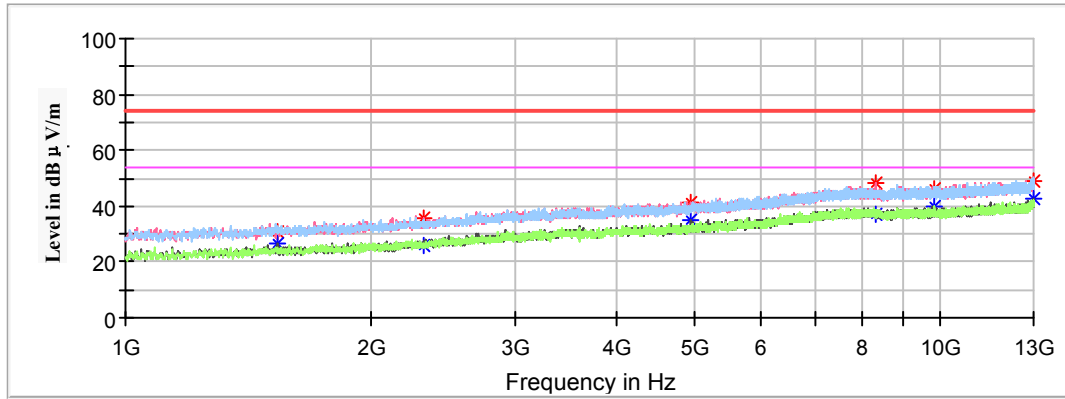
1) 30MHz ~ 1GHz:



Frequency (MHz)	Quasi-Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
31.212500	29.95	40.00	10.05	100.0	H	79.0	-4.8
86.260000	23.71	40.00	16.29	100.0	V	75.0	-17.6
124.938750	22.92	43.50	20.58	200.0	V	136.0	-11.4
241.945000	26.51	46.00	19.49	100.0	V	195.0	-12.1
289.596250	24.76	46.00	21.24	100.0	V	238.0	-10.8
545.555000	28.72	46.00	17.28	100.0	H	117.0	-5.7

**Above 1 GHz:**

Full Spectrum



Frequency (MHz)	Max Peak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1534.000000	---	26.41	54.00	27.59	200.0	V	191.0	-16.2
1534.000000	30.78	---	74.00	43.22	200.0	V	191.0	-16.2
2320.000000	---	25.94	54.00	28.06	100.0	V	321.0	-13.2
2320.000000	35.88	---	74.00	38.12	100.0	V	321.0	-13.2
4931.200000	---	35.15	54.00	18.85	200.0	V	8.0	-5.3
4931.200000	41.03	---	74.00	32.97	200.0	V	8.0	-5.3
8320.000000	---	37.17	54.00	16.83	200.0	V	191.0	1.5
8320.000000	47.99	---	74.00	26.01	200.0	V	191.0	1.5
9834.400000	---	39.74	54.00	14.26	200.0	H	141.0	2.0
9834.400000	46.16	---	74.00	27.84	200.0	H	141.0	2.0
12977.200000	---	42.44	54.00	11.56	100.0	V	62.0	5.1
12977.200000	49.11	---	74.00	24.89	100.0	V	62.0	5.1

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