

FCC PART 15B TEST REPORT

For

Shanghai Sunmi Technology Co.,Ltd.

Room 505, KIC Plaza, No.388 Song Hu Road, Yang Pu District, Shanghai, China

FCC ID: 2AH25TF701

Report Type: Original Report	Product Type: WIRELESS DATA TERMINAL
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Report Number:	RKSA200706001-00A
Report Date:	2020-03-08
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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	Shanghai Sunmi Technology Co.,Ltd.
Test Model:	TF701
Product:	WIRELESS DATA TERMINAL
Rate Voltage:	DC 5.0V/9.0V/12.0V/3.6~6.0V/6.0~9.0V/9.0~12.0V from adapter
*Highest Operation Frequency:	5825 MHz

Adapter-1 Information:

Model: CK18W02U

Input: AC100-240V 50/60Hz 0.5A

Output: 5.0V, 3.0A/9.0V, 2.0A/12.0V, 1.5A

Adapter-2 Information:

Model: TPA-10120150UU

Input: AC100-240V 50/60Hz 0.6A

Output: 3.6~6.0V, 3.0A, /6.0~9.0V, 2.0A/9.0~12.0V, 1.5A

Adapter-3 Information:

Model: TPA-23A050200UU01

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

Output: 5.0V, 2.0A

Adapter-4 Information:

Model: UC13US

Input: AC100-240V 50/60Hz 0.35A

Output: 5.0V, 2.0A

Note: The highest operation frequency is provided by the applicant.

*All measurement and test data in this report was gathered from production sample serial number: RKSA200706001-1 (Assigned by the BACL. The EUT supplied by the applicant was received on 2020-07-06)

Objective

This report is prepared on behalf of *Shanghai Sunmi 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 submissions with FCC ID: 2AH25TF701

FCC Part 15.247 DSS submissions with FCC ID: 2AH25TF701

FCC Part 22H/24E/27/90 PCB submissions with FCC ID: 2AH25TF701

FCC Part 15.407 NII submissions with FCC ID: 2AH25TF701

FCC Part 15.225 DXX submissions with FCC ID: 2AH25TF701

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: Display + Camera on +Charging by Adapter 1

Test mode 2: Display + Camera on +Charging by Adapter 2

Test mode 3: Display + Camera on +Charging by Adapter 3

Test mode 4: Display + Camera on +Charging by Adapter 4

Test mode 5: Data transmission by USB port

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

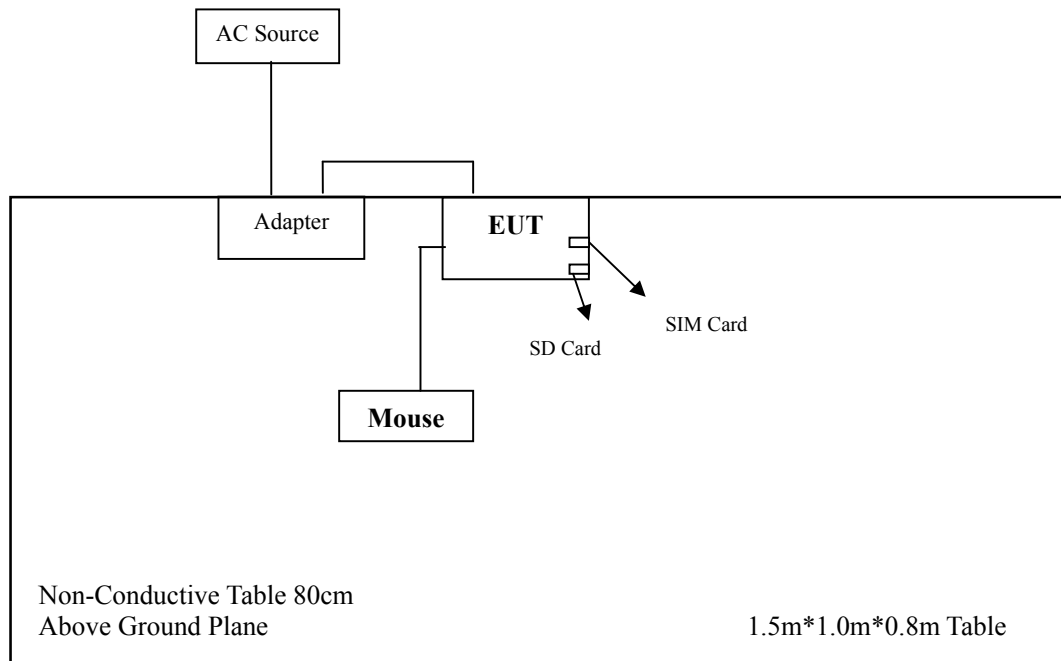
Manufacturer	Description	Model	Serial Number
Logitech	Mouse	M-U0026	HS529HB
DELL	Notebook	GX620	D65874152
DELL	Adapter	LA65NS0-00	DF263
BOLD	Earphone	/	/
TP-LINK	Router	TL-WDR5620	1188431022424
R&S	SIM Card	/	/
Sandisk	SD Card	/	/

External I/O Cable

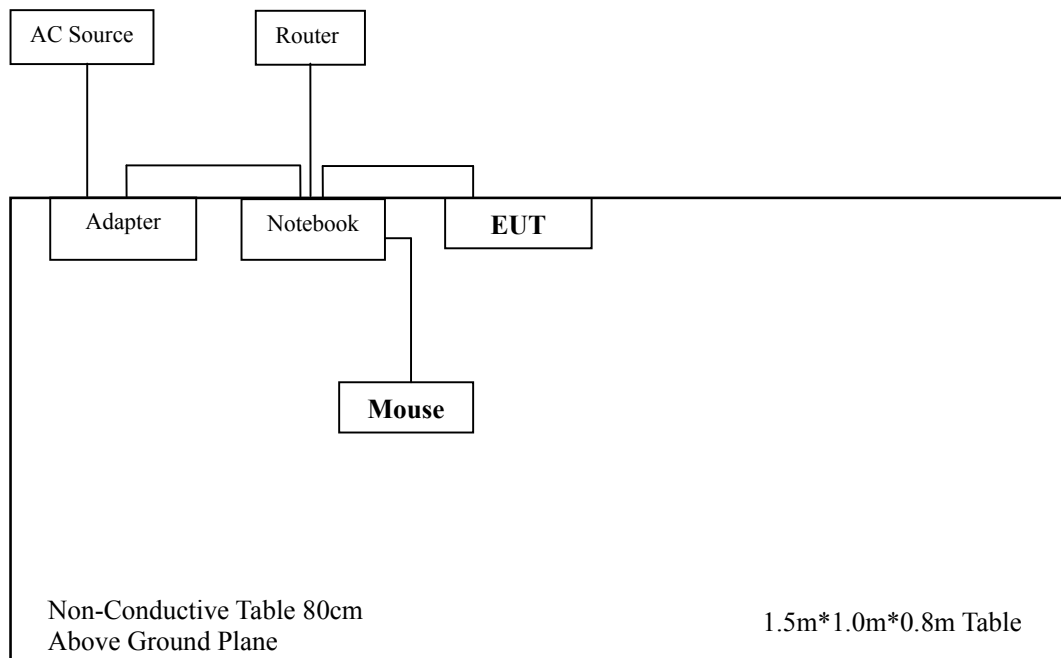
Cable Description	Length (m)	From/Port	To
USB Cable1	1	Notebook	Mouse
USB Cable 2	1	EUT	Notebook
Power cable1	1.2	Notebook	Adapter
Power cable2	1.2	EUT	Adapter
Power cable3	1.0	Adapter	AC Source

Block Diagram of Radiated Test Setup

Test mode 1 to Test mode 4:



Test mode 5:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Results
§15.107	Conducted Emissions	Compliant
§15.109	Radiated Emissions	Compliant

FCC §15.107 –CONDUCTED EMISSIONS

Applicable Standard

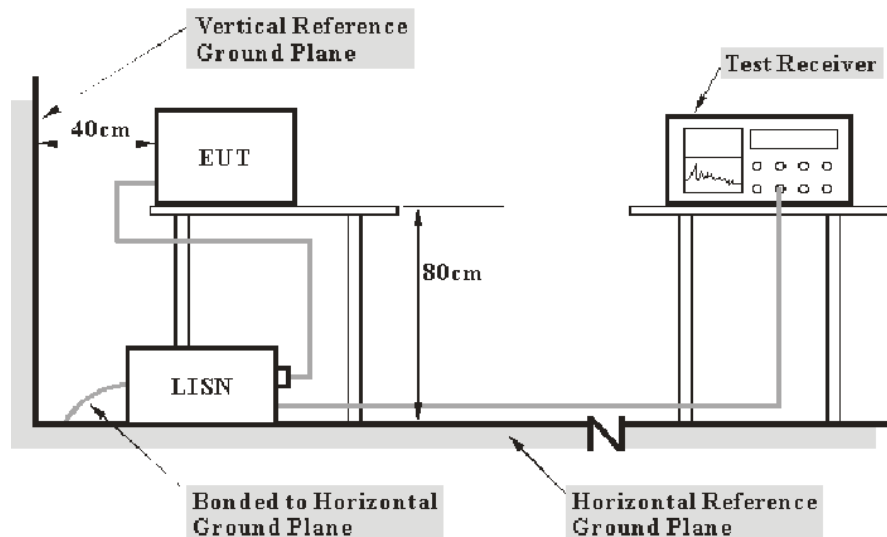
According to FCC§15.107

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	$U_{\text{cisp}}r$
Conducted Emissions	150kHz~30MHz	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

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	EMI Test Receiver	ESR	1316.3003K03-101746-zn	2020-07-28	2021-07-27
Rohde & Schwarz	LISN	ENV216	3560655016	2019-11-30	2020-11-29
Rohde & Schwarz	LISN	ENV216	101115	2020-11-27	2021-11-26
Audix	Test Software	e3	V9	--	--
MICRO-COAX	Coaxial Cable	Cable-6	006	2019-12-12	2020-12-11
Rohde & Schwarz	Pluse limiter	ESH3-Z2	100552	2019-12-12	2020-12-11
Rohde & Schwarz	Pulse 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).

Corrected 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:

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

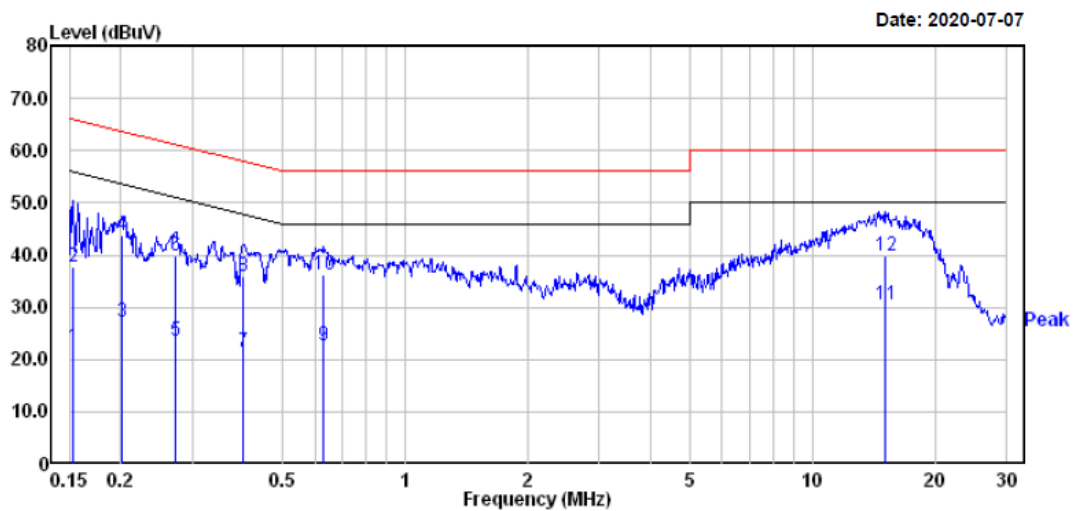
Test Data**Environmental Conditions**

Temperature:	23.4~24.6°C
Relative Humidity:	49~52%
ATM Pressure:	100.7~101.3kPa

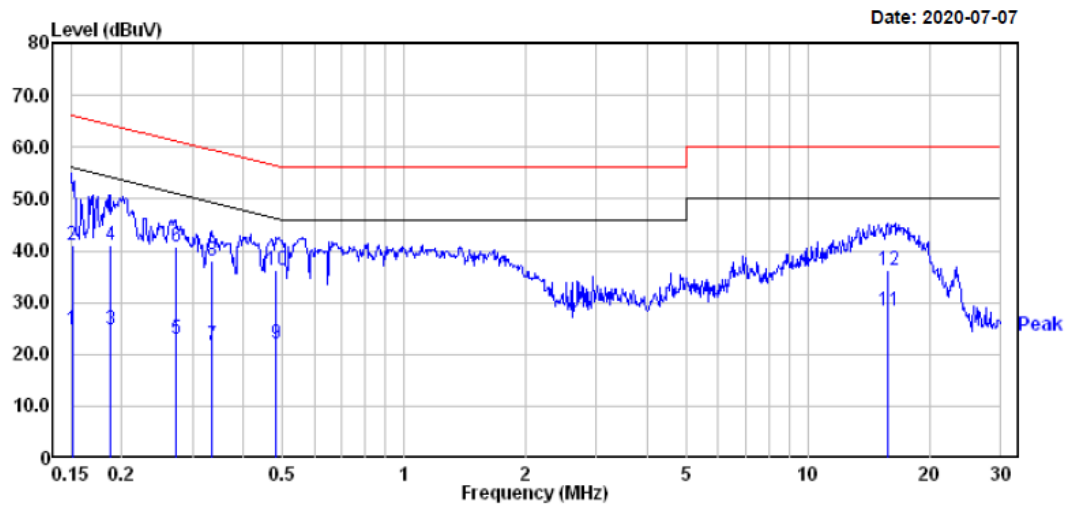
The testing was performed by Jett Zhao from 2020-07-07 to 2021-03-05.

Test model:

Line:



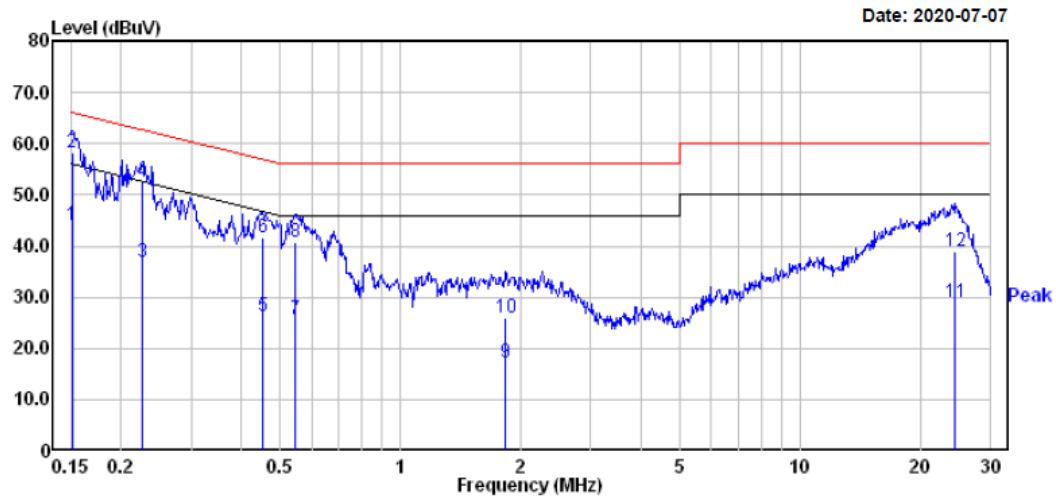
	Read Freq	Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.152	2.60	19.82	22.42	55.87	-33.45	Average
2	0.152	17.80	19.82	37.62	65.87	-28.25	QP
3	0.201	7.30	19.82	27.12	53.58	-26.46	Average
4	0.201	23.90	19.82	43.72	63.58	-19.86	QP
5	0.273	3.80	19.82	23.62	51.03	-27.41	Average
6	0.273	20.10	19.82	39.92	61.03	-21.11	QP
7	0.400	1.70	19.74	21.44	47.86	-26.42	Average
8	0.400	16.10	19.74	35.84	57.86	-22.02	QP
9	0.627	2.90	19.75	22.65	46.00	-23.35	Average
10	0.627	16.50	19.75	36.25	56.00	-19.75	QP
11	15.146	10.80	19.64	30.44	50.00	-19.56	Average
12	15.146	20.20	19.64	39.84	60.00	-20.16	QP

Neutral:

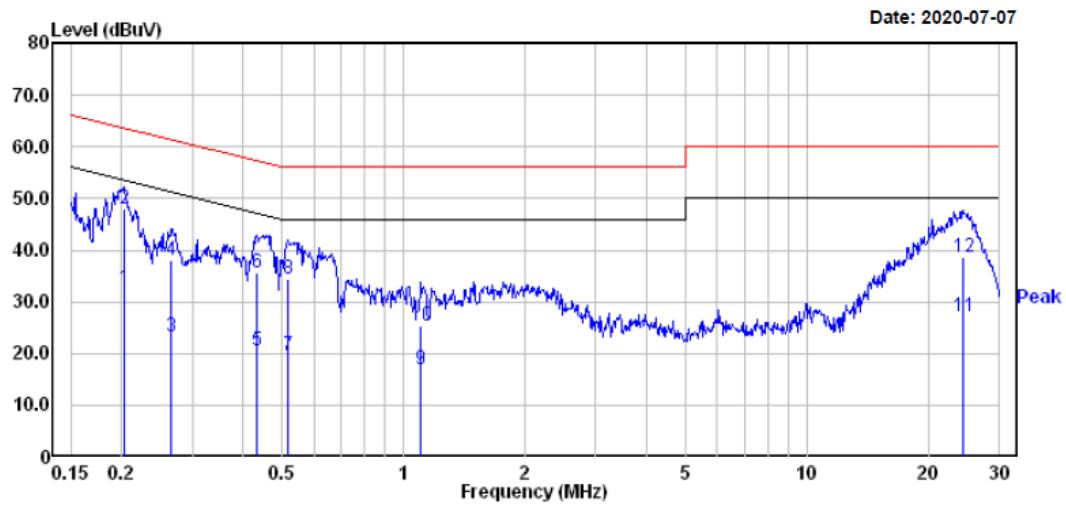
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.151	4.80	19.82	24.62	55.96	-31.34	Average
2	0.151	21.30	19.82	41.12	65.96	-24.84	QP
3	0.187	4.91	19.82	24.73	54.15	-29.42	Average
4	0.187	21.21	19.82	41.03	64.15	-23.12	QP
5	0.272	3.10	19.82	22.92	51.07	-28.15	Average
6	0.272	20.90	19.82	40.72	61.07	-20.35	QP
7	0.334	1.79	19.82	21.61	49.35	-27.74	Average
8	0.334	18.09	19.82	37.91	59.35	-21.44	QP
9	0.484	2.30	19.76	22.06	46.27	-24.21	Average
10	0.484	16.50	19.76	36.26	56.27	-20.01	QP
11	15.801	8.60	19.69	28.29	50.00	-21.71	Average
12	15.801	16.40	19.69	36.09	60.00	-23.91	QP

Test mode 2:

Line:



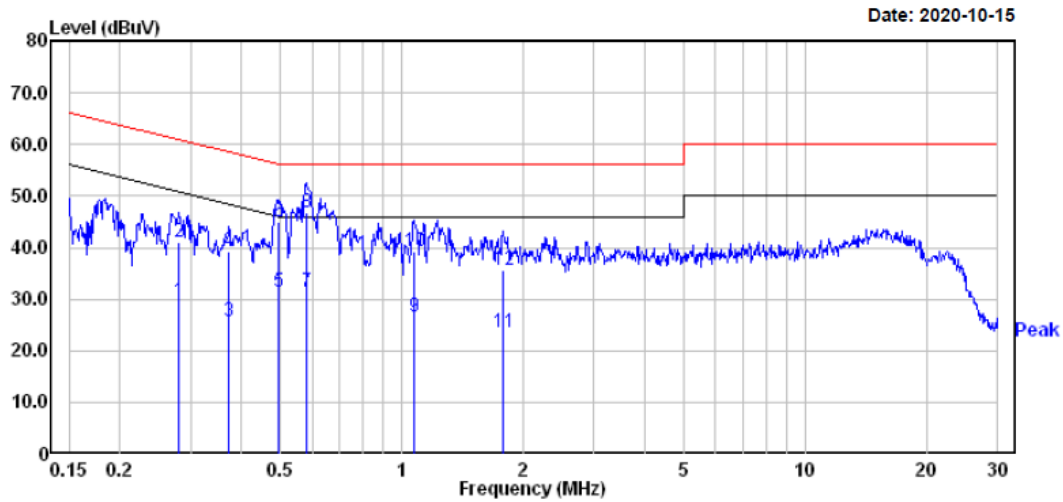
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.151	24.20	19.82	44.02	55.96	-11.94	Average
2	0.151	38.50	19.82	58.32	65.96	-7.64	QP
3	0.227	16.90	19.82	36.72	52.57	-15.85	Average
4	0.227	32.80	19.82	52.62	62.57	-9.95	QP
5	0.454	6.50	19.75	26.25	46.80	-20.55	Average
6	0.454	21.80	19.75	41.55	56.80	-15.25	QP
7	0.546	5.80	19.75	25.55	46.00	-20.45	Average
8	0.546	21.00	19.75	40.75	56.00	-15.25	QP
9	1.839	-2.51	19.84	17.33	46.00	-28.67	Average
10	1.839	6.19	19.84	26.03	56.00	-29.97	QP
11	24.529	9.40	19.72	29.12	50.00	-20.88	Average
12	24.529	19.10	19.72	38.82	60.00	-21.18	QP

Neutral:

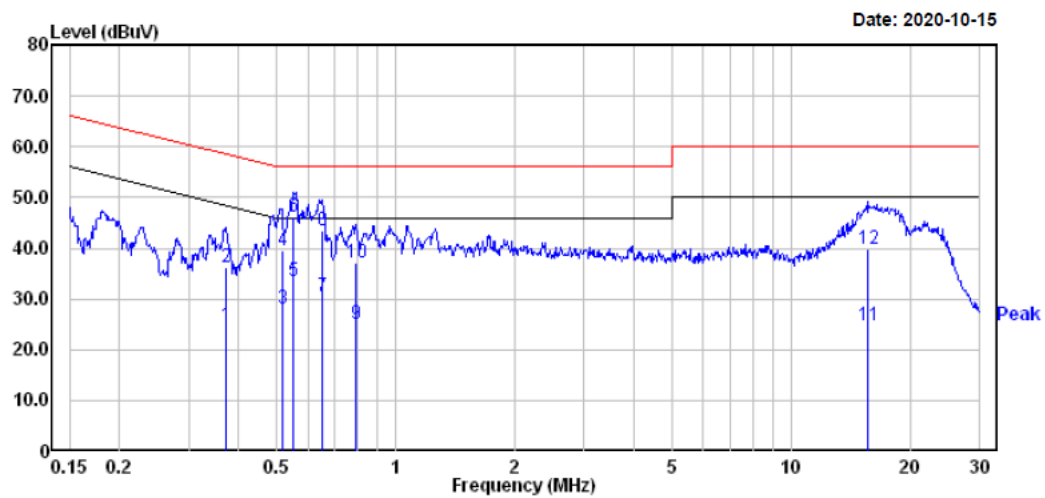
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.203	12.80	19.82	32.62	53.49	-20.87	Average
2	0.203	28.30	19.82	48.12	63.49	-15.37	QP
3	0.266	3.50	19.82	23.32	51.25	-27.93	Average
4	0.266	18.30	19.82	38.12	61.25	-23.13	QP
5	0.433	0.70	19.75	20.45	47.20	-26.75	Average
6	0.433	15.80	19.75	35.55	57.20	-21.65	QP
7	0.518	-0.20	19.76	19.56	46.00	-26.44	Average
8	0.518	14.70	19.76	34.46	56.00	-21.54	QP
9	1.106	-2.99	19.81	16.82	46.00	-29.18	Average
10	1.106	5.61	19.81	25.42	56.00	-30.58	QP
11	24.529	7.30	19.72	27.02	50.00	-22.98	Average
12	24.529	18.90	19.72	38.62	60.00	-21.38	QP

Test mode 3:

Line:



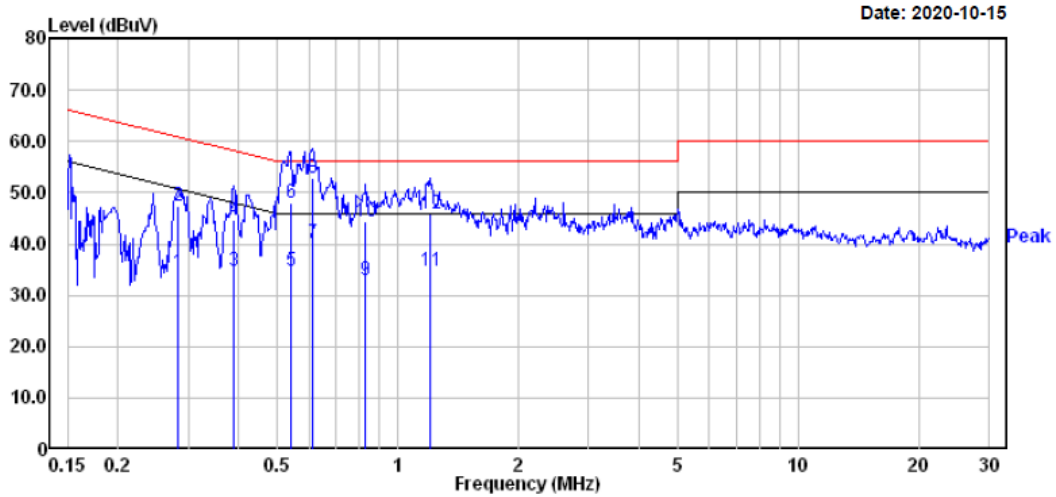
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.280	9.70	19.82	29.52	50.81	-21.29	Average
2	0.280	21.20	19.82	41.02	60.81	-19.79	QP
3	0.373	5.99	19.78	25.77	48.43	-22.66	Average
4	0.373	19.39	19.78	39.17	58.43	-19.26	QP
5	0.497	11.70	19.76	31.46	46.05	-14.59	Average
6	0.497	25.10	19.76	44.86	56.05	-11.19	QP
7	0.579	11.50	19.75	31.25	46.00	-14.75	Average
8	0.579	27.10	19.75	46.85	56.00	-9.15	QP
9	1.071	6.60	19.82	26.42	46.00	-19.58	Average
10	1.071	19.40	19.82	39.22	56.00	-16.78	QP
11	1.790	3.70	19.84	23.54	46.00	-22.46	Average
12	1.790	15.80	19.84	35.64	56.00	-20.36	QP

Neutral:

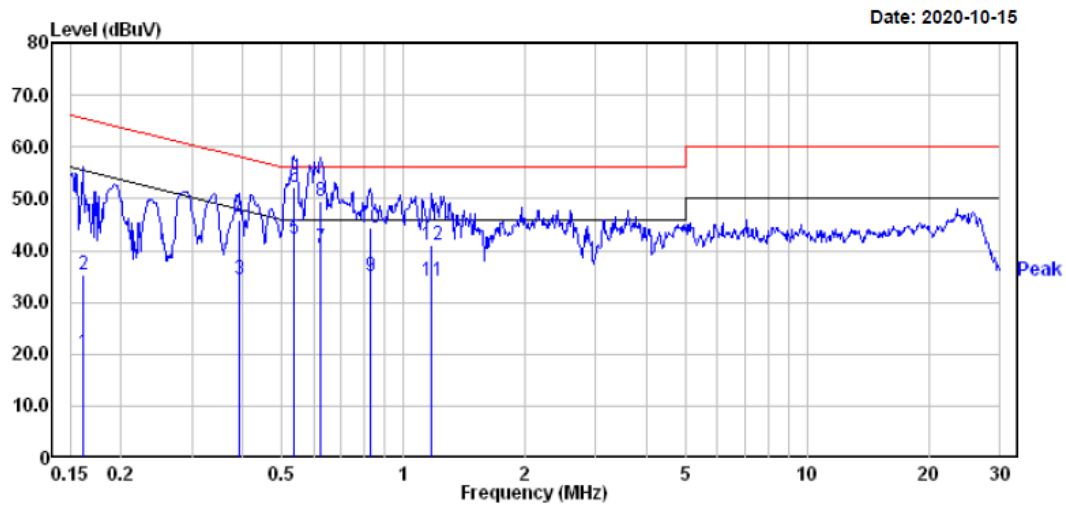
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.371	4.90	19.78	24.68	48.47	-23.79	Average
2	0.371	16.50	19.78	36.28	58.47	-22.19	QP
3	0.516	8.20	19.76	27.96	46.00	-18.04	Average
4	0.516	19.80	19.76	39.56	56.00	-16.44	QP
5	0.552	13.70	19.75	33.45	46.00	-12.55	Average
6	0.552	26.30	19.75	46.05	56.00	-9.95	QP
7	0.651	10.80	19.75	30.55	46.00	-15.45	Average
8	0.651	23.70	19.75	43.45	56.00	-12.55	QP
9	0.796	5.40	19.70	25.10	46.00	-20.90	Average
10	0.796	17.50	19.70	37.20	56.00	-18.80	QP
11	15.718	5.19	19.69	24.88	50.00	-25.12	Average
12	15.718	20.09	19.69	39.78	60.00	-20.22	QP

Test mode 4:

Line:



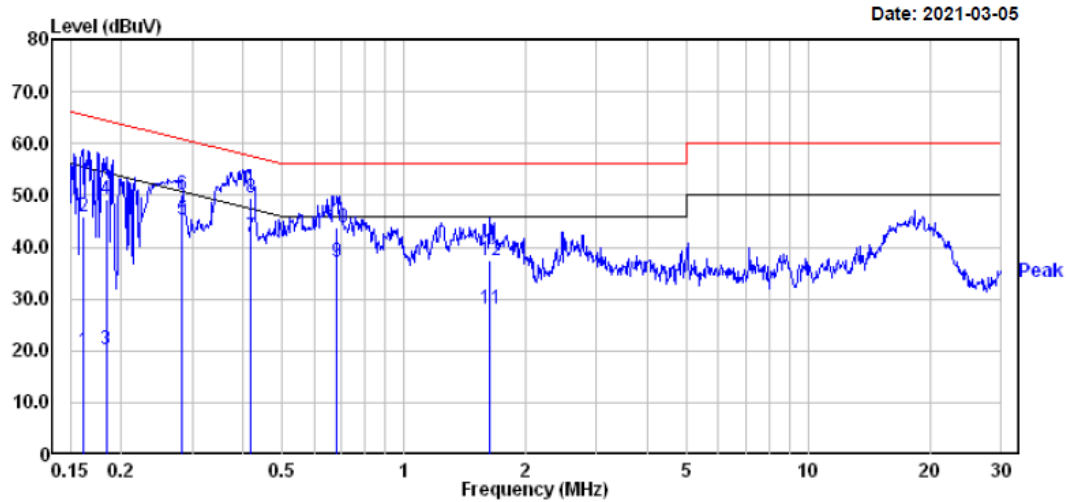
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.283	14.50	19.82	34.32	50.72	-16.40	Average
2	0.283	27.60	19.82	47.42	60.72	-13.30	QP
3	0.389	14.90	19.75	34.65	48.08	-13.43	Average
4	0.389	24.90	19.75	44.65	58.08	-13.43	QP
5	0.541	15.01	19.75	34.76	46.00	-11.24	Average
6	0.541	28.31	19.75	48.06	56.00	-7.94	QP
7	0.611	20.50	19.75	40.25	46.00	-5.75	Average
8	0.611	33.00	19.75	52.75	56.00	-3.25	QP
9	0.830	13.30	19.71	33.01	46.00	-12.99	Average
10	0.830	24.60	19.71	44.31	56.00	-11.69	QP
11	1.203	14.90	19.81	34.71	46.00	-11.29	Average
12	1.203	26.00	19.81	45.81	56.00	-10.19	QP

Neutral:

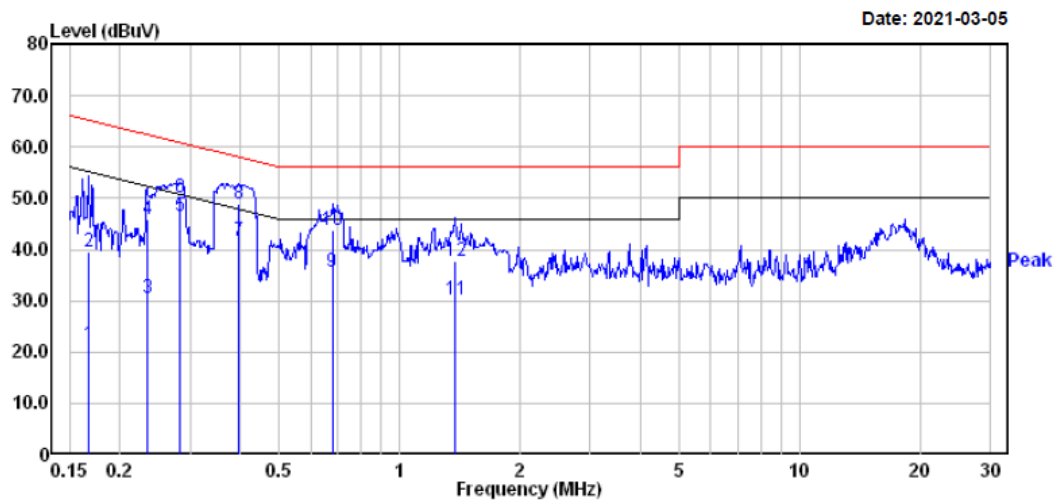
		Read		Limit	Over	
	Freq	Level	Factor	Level	Line	Limit Remark
	MHz	dBuV	dB	dBuV	dBuV	dB
1	0.161	0.50	19.83	20.33	55.43	-35.10 Average
2	0.161	15.60	19.83	35.43	65.43	-30.00 QP
3	0.391	14.70	19.75	34.45	48.03	-13.58 Average
4	0.391	26.20	19.75	45.95	58.03	-12.08 QP
5	0.535	22.41	19.75	42.16	46.00	-3.84 Average
6	0.535	32.41	19.75	52.16	56.00	-3.84 QP
7	0.624	20.60	19.75	40.35	46.00	-5.65 Average
8	0.624	29.80	19.75	49.55	56.00	-6.45 QP
9	0.826	15.20	19.71	34.91	46.00	-11.09 Average
10	0.826	24.70	19.71	44.41	56.00	-11.59 QP
11	1.178	14.20	19.81	34.01	46.00	-11.99 Average
12	1.178	21.30	19.81	41.11	56.00	-14.89 QP

Test mode 5:

Line:



		Read			Limit	Over	
	Freq	Level	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.161	0.10	19.83	19.93	55.43	-35.50	Average
2	0.161	26.20	19.83	46.03	65.43	-19.40	QP
3	0.183	0.50	19.83	20.33	54.33	-34.00	Average
4	0.183	29.30	19.83	49.13	64.33	-15.20	QP
5	0.283	25.60	19.82	45.42	50.72	-5.30	Average
6	0.283	30.40	19.82	50.22	60.72	-10.50	QP
7	0.417	22.30	19.74	42.04	47.51	-5.47	Average
8	0.417	29.70	19.74	49.44	57.51	-8.07	QP
9	0.683	17.30	19.75	37.05	46.00	-8.95	Average
10	0.683	23.90	19.75	43.65	56.00	-12.35	QP
11	1.636	8.30	19.84	28.14	46.00	-17.86	Average
12	1.636	17.70	19.84	37.54	56.00	-18.46	QP

Neutral:

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.167	1.50	19.83	21.33	55.12	-33.79	Average
2	0.167	19.60	19.83	39.43	65.12	-25.69	QP
3	0.234	10.70	19.82	30.52	52.30	-21.78	Average
4	0.234	26.00	19.82	45.82	62.30	-16.48	QP
5	0.283	26.80	19.82	46.62	50.72	-4.10	Average
6	0.283	30.40	19.82	50.22	60.72	-10.50	QP
7	0.398	21.90	19.74	41.64	47.90	-6.26	Average
8	0.398	29.20	19.74	48.94	57.90	-8.96	QP
9	0.679	16.00	19.75	35.75	46.00	-10.25	Average
10	0.679	24.10	19.75	43.85	56.00	-12.15	QP
11	1.381	10.30	19.83	30.13	46.00	-15.87	Average
12	1.381	17.80	19.83	37.63	56.00	-18.37	QP

Note:

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

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

FCC §15.109 - RADIATED EMISSIONS

Applicable Standard

FCC §15.109

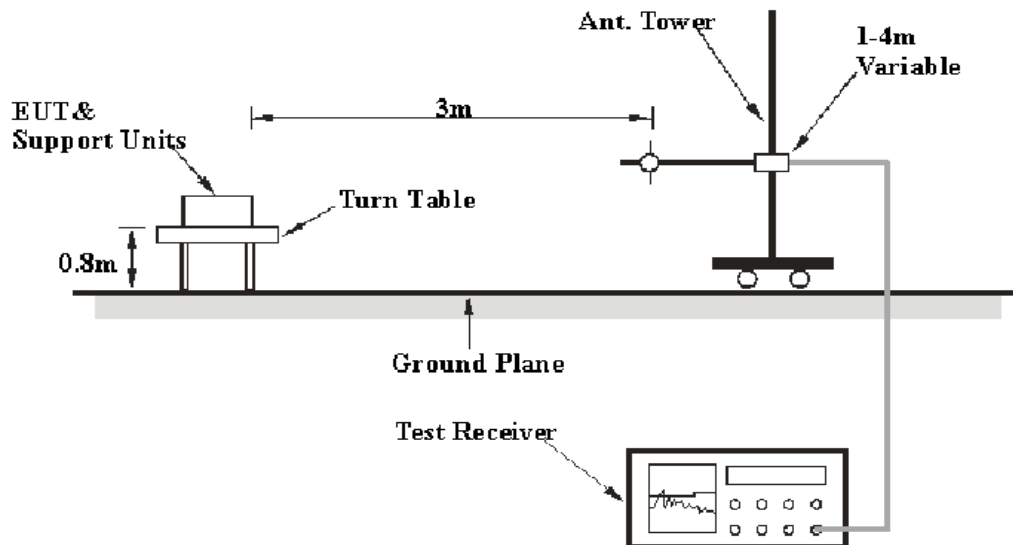
Measurement Uncertainty

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.

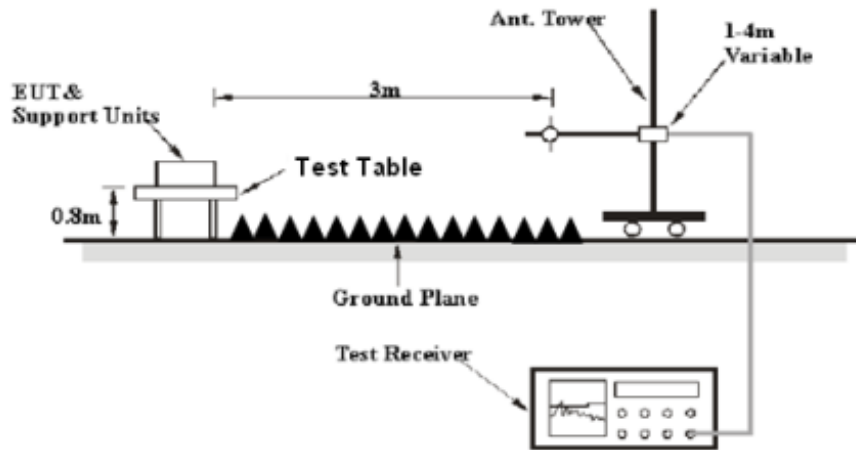
Item		Measurement Uncertainty	U_{cispr}
Radiated Emissions	30MHz~1GHz	6.11dB	6.3 dB
	1GHz~6GHz	4.45dB	5.2 dB
	6 GHz ~18 GHz	5.23dB	5.5 dB

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 30 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.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sonoma Instrument	Amplifier	310N	185700	2019-08-14	2020-08-13
Sonoma Instrument	Amplifier	310N	185700	2020-08-14	2021-08-13
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2019-11-27	2020-11-26
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2020-11-27	2021-11-26
Sunol Sciences	Broadband Antenna	JB3	A090314-1	2017-08-05	2020-08-04
Sunol Sciences	Broadband Antenna	JB3	A090314-1	2020-08-05	2023-08-04
Champrotek	Chamber 1#	3m-SAC 966	NA	2019-05-08	2022-05-07
Albatross	Chamber 2#	3m-SAC 966	NA	2019-05-08	2022-05-07
Rohde & Schwarz	Auto test Software	EMC32	100361	-	-
ETS	Horn Antenna	3115	6229	2020-01-10	2023-01-09
ETS	Horn Antenna	3116	2516	2020-01-07	2023-01-06
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
SELECTOR	Amplifier	EM18G40G	060726	2020-03-22	2021-03-21
MICRO-COAX	Coaxial Cable	Cable-8	008	2019-08-15	2020-08-14
MICRO-COAX	Coaxial Cable	Cable-8	008	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-9	009	2019-08-15	2020-08-14
MICRO-COAX	Coaxial Cable	Cable-9	009	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-10	010	2019-08-15	2020-08-14
MICRO-COAX	Coaxial Cable	Cable-10	010	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-4	004	2019-08-15	2020-08-14
MICRO-COAX	Coaxial Cable	Cable-4	004	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-5	005	2019-08-15	2020-08-14
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).

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:

Corrected Amplitude (dB μ V/m) = Meter Reading (dB μ V) + Antenna Factor (dB/m) + Cable Loss (dB) - 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:

Margin (dB) = Limit (dB μ V/m) – Corrected Amplitude (dB μ V/m)

Test Data

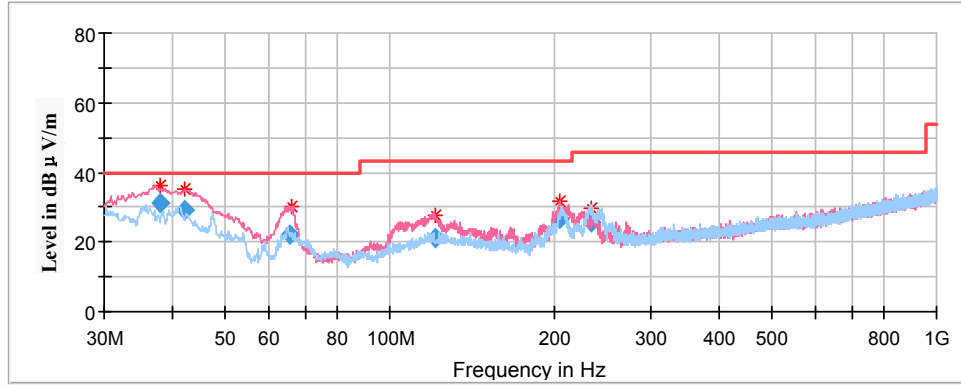
Environmental Conditions

Temperature:	23.3~24.1℃
Relative Humidity:	50~52%
ATM Pressure:	100.7~101.3kPa

The testing was performed by Jett Zhao from 2020-07-17 to 2021-03-03.

Test mode 1:

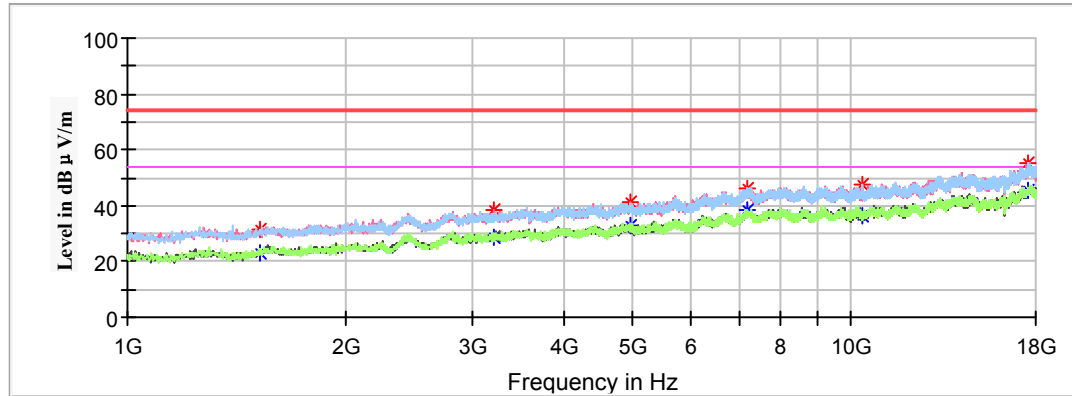
30MHz ~ 1GHz:



Frequency (MHz)	Corrected Amplitude	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
	QuasiPeak (dBμV/m)						
37.881600	31.12	40.00	8.88	100.0	V	120.0	-9.7
42.160600	29.34	40.00	10.66	100.0	V	68.0	-12.6
65.605900	22.03	40.00	17.97	100.0	V	62.0	-18.0
121.184200	21.37	43.50	22.13	100.0	V	226.0	-11.7
203.961300	26.86	43.50	16.64	100.0	V	263.0	-12.8
234.128050	25.82	46.00	20.18	100.0	H	97.0	-12.6

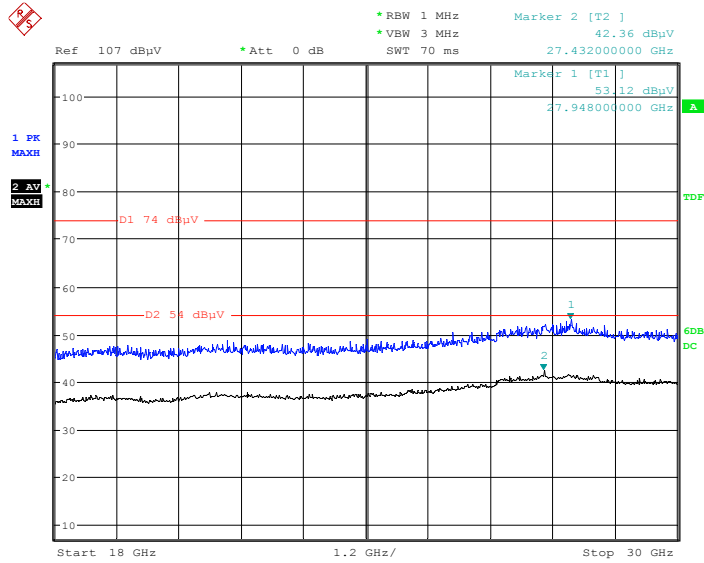
Above 1 GHz:

Full Spectrum



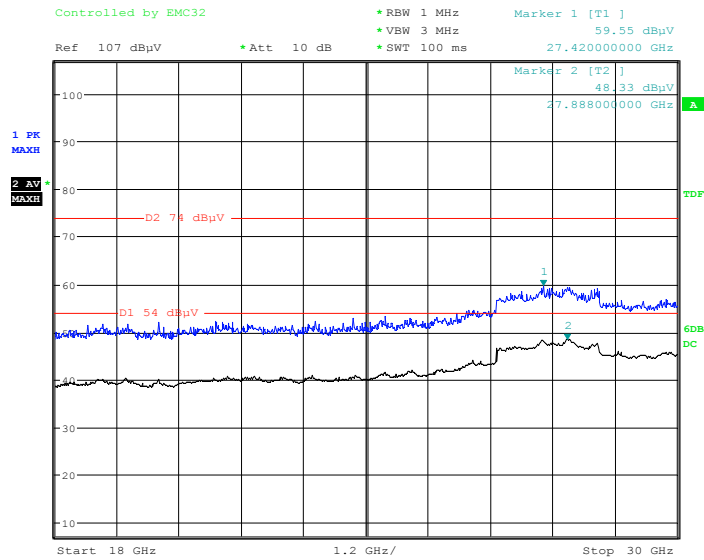
Frequency (MHz)	Corrected Amplitude		Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
	MaxPeak (dBμV/m)	Average (dBμV/m)						
1520.200000	---	23.06	54.00	30.94	100.0	H	340.0	-16.3
1520.200000	31.74	---	74.00	42.26	100.0	H	340.0	-16.3
3210.000000	---	28.74	54.00	25.26	100.0	V	192.0	-9.6
3210.000000	38.44	---	74.00	35.56	100.0	V	192.0	-9.6
4964.400000	41.05	---	74.00	32.95	200.0	V	108.0	-5.3
4964.400000	---	32.78	54.00	21.22	200.0	V	108.0	-5.3
7194.800000	45.87	---	74.00	28.13	100.0	V	251.0	0.4
7194.800000	---	38.63	54.00	15.37	100.0	V	251.0	0.4
10390.800000	47.62	---	74.00	26.38	200.0	H	230.0	2.2
10390.800000	---	36.12	54.00	17.88	200.0	H	230.0	2.2
17607.300000	54.99	---	74.00	19.01	200.0	H	171.0	8.9
17607.300000	---	45.22	54.00	8.78	200.0	H	171.0	8.9

**18GHz ~ 30GHz:
Horizontal:**



Date: 17.JUL.2020 07:41:04

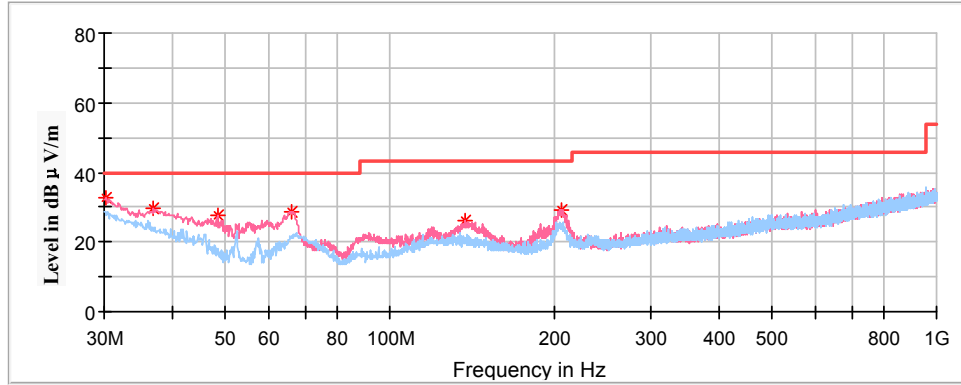
Vertical:



Date: 22.OCT.2020 21:59:46

Test mode 2:

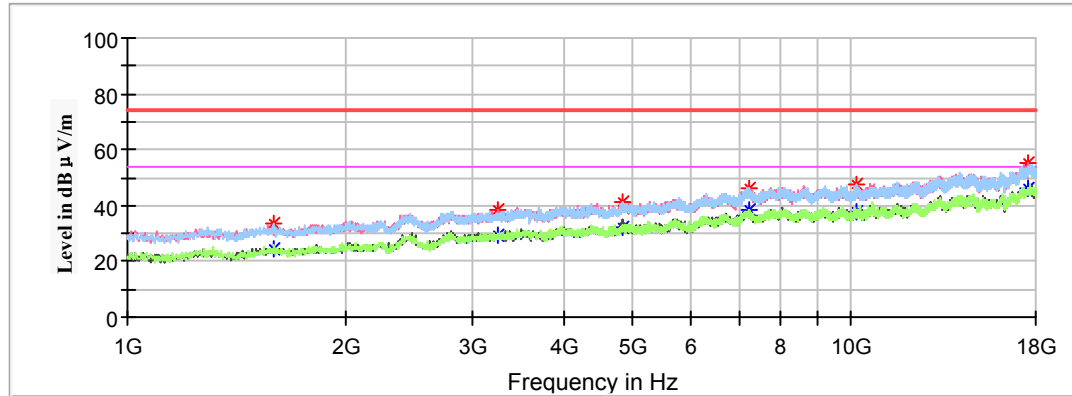
30MHz ~ 1GHz:



Frequency (MHz)	Corrected Amplitude	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
	MaxPeak (dBμV/m)						
30.242500	32.56	40.00	7.44	100.0	V	335.0	-4.5
36.911250	29.76	40.00	10.24	100.0	V	14.0	-9.1
48.308750	27.49	40.00	12.51	100.0	V	0.0	-16.8
66.253750	28.90	40.00	11.10	100.0	V	77.0	-18.0
137.306250	25.92	43.50	17.58	100.0	V	291.0	-12.3
205.570000	29.42	43.50	14.08	100.0	V	238.0	-12.7

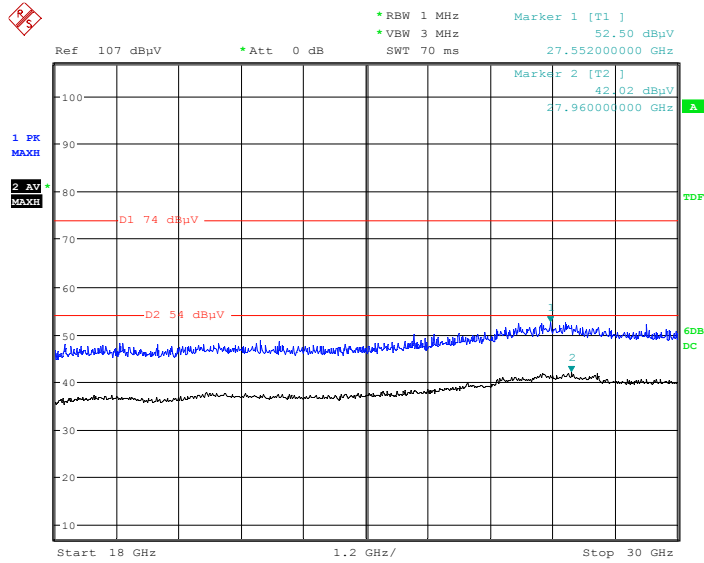
Above 1 GHz:

Full Spectrum



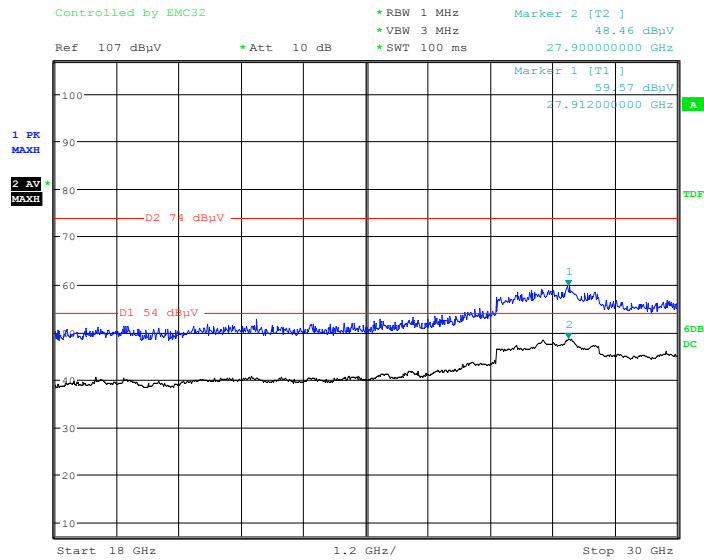
Frequency (MHz)	Corrected Amplitude		Limit (dB μ V/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
	MaxPeak (dB μ V/m)	Average (dB μ V/m)						
1588.200000	---	24.24	54.00	29.76	200.0	H	260.0	-16.0
1588.200000	33.49	---	74.00	40.51	200.0	H	260.0	-16.0
3244.000000	---	29.33	54.00	24.67	100.0	V	81.0	-9.5
3244.000000	38.40	---	74.00	35.60	100.0	V	81.0	-9.5
4821.600000	---	32.47	54.00	21.53	200.0	H	127.0	-5.5
4821.600000	41.49	---	74.00	32.51	200.0	H	127.0	-5.5
7235.600000	---	38.34	54.00	15.66	100.0	V	122.0	0.5
7235.600000	46.05	---	74.00	27.95	100.0	V	122.0	0.5
10188.500000	---	37.75	54.00	16.25	200.0	H	187.0	2.1
10188.500000	47.47	---	74.00	26.53	200.0	H	187.0	2.1
17602.200000	---	46.16	54.00	7.84	200.0	V	340.0	8.9
17602.200000	55.40	---	74.00	18.60	200.0	V	340.0	8.9

**18GHz ~ 30GHz:
Horizontal:**



Date: 17.JUL.2020 07:55:49

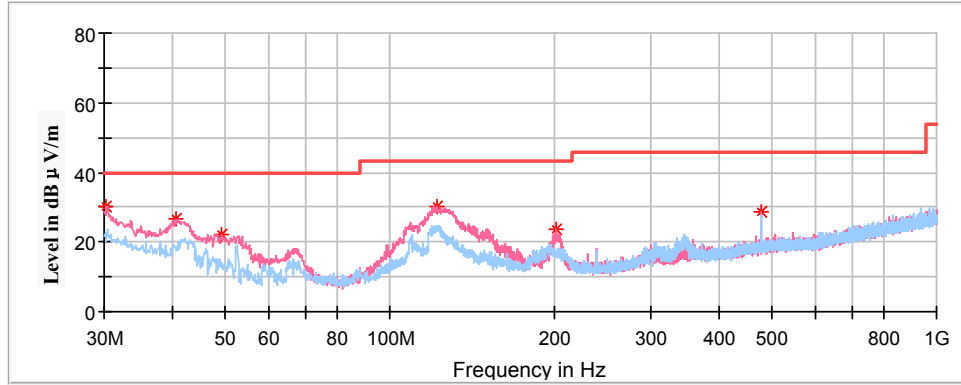
Vertical:



Date: 22.OCT.2020 22:01:44

Test mode 3:

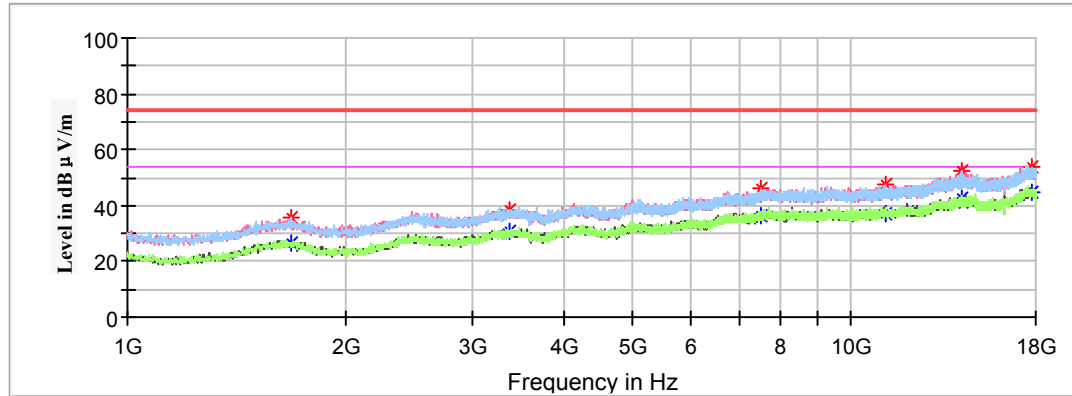
30MHz ~ 1GHz:



Frequency (MHz)	Corrected Amplitude	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
	MaxPeak (dBμV/m)						
30.242500	30.06	40.00	9.94	100.0	V	165.0	-10.7
40.548750	26.61	40.00	13.39	100.0	V	0.0	-17.6
49.278750	22.23	40.00	17.77	100.0	V	133.0	-23.5
121.786250	30.07	43.50	13.43	100.0	V	146.0	-17.7
202.053750	23.69	43.50	19.81	100.0	V	266.0	-17.7
477.776250	28.61	46.00	17.39	100.0	V	171.0	-12.6

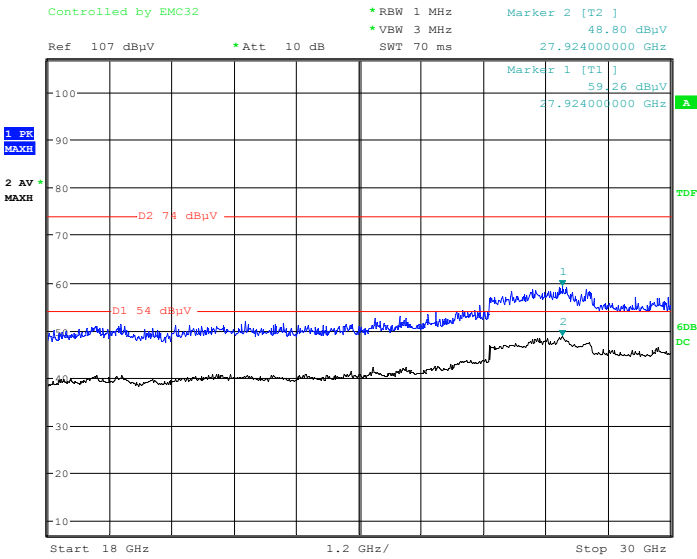
Above 1 GHz:

Full Spectrum



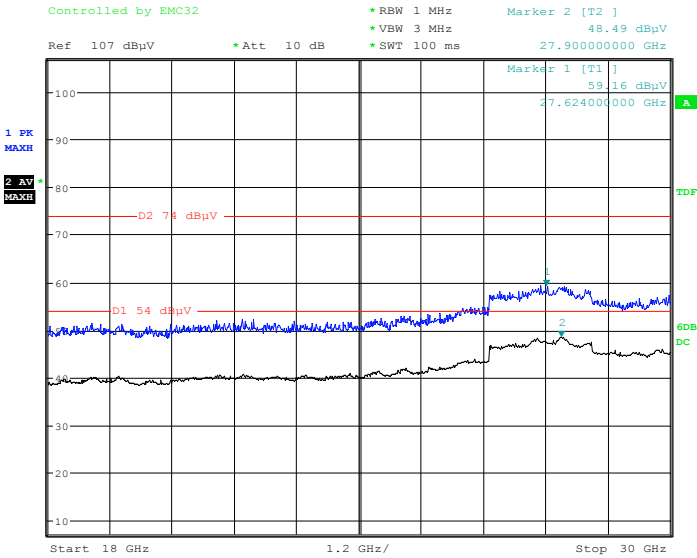
Frequency (MHz)	Corrected Amplitude		Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
	MaxPeak (dBμV/m)	Average (dBμV/m)						
1686.800000	---	26.36	54.00	27.64	200.0	H	46.0	-15.7
1686.800000	35.78	---	74.00	38.22	200.0	H	46.0	-15.7
3371.500000	---	30.96	54.00	23.04	200.0	V	103.0	-9.1
3371.500000	38.63	---	74.00	35.37	200.0	V	103.0	-9.1
7497.400000	---	36.70	54.00	17.30	100.0	V	232.0	1.0
7497.400000	46.05	---	74.00	27.95	100.0	V	232.0	1.0
11184.700000	---	37.02	54.00	16.98	200.0	V	156.0	2.9
11184.700000	47.26	---	74.00	26.74	200.0	V	156.0	2.9
14176.700000	---	42.47	54.00	11.53	100.0	H	283.0	6.3
14176.700000	52.12	---	74.00	21.88	100.0	H	283.0	6.3
17755.200000	---	45.03	54.00	8.97	100.0	V	0.0	8.8
17753.500000	53.75	---	74.00	20.25	100.0	V	0.0	8.8

18GHz ~ 30GHz:
Horizontal:



Date: 28.SEP.2020 11:35:26

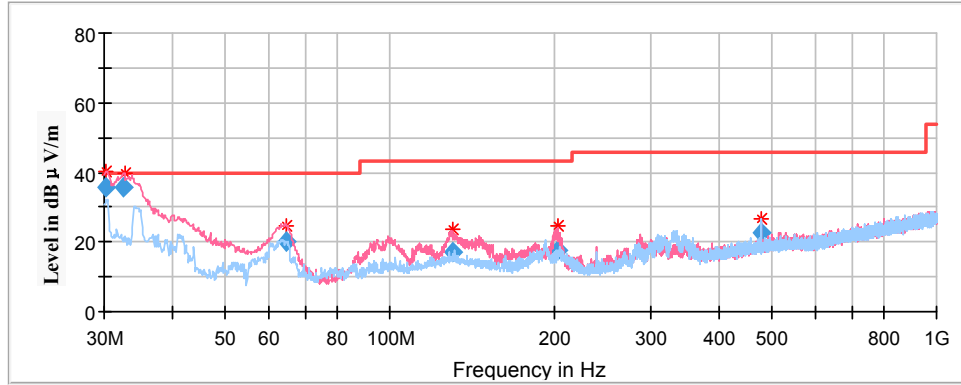
Vertical:



Date: 22.OCT.2020 21:57:35

Test mode 4:

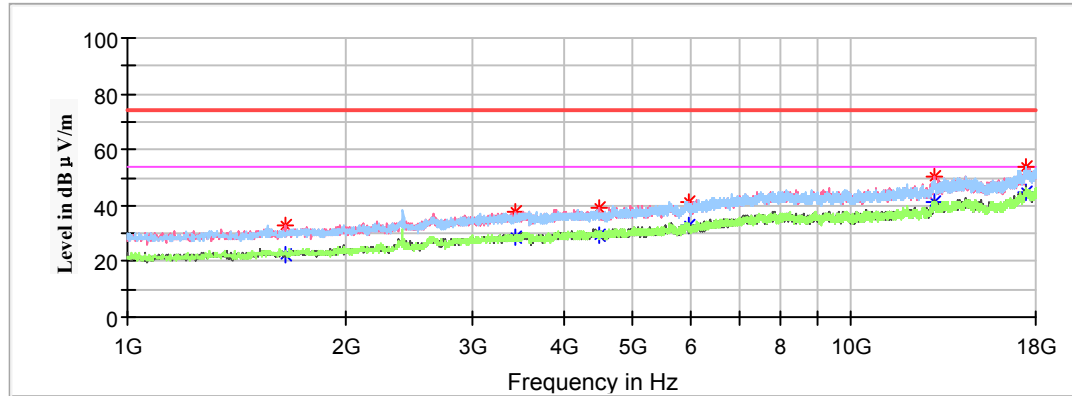
30MHz ~ 1GHz:



Frequency (MHz)	Corrected Amplitude QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
30.279484	35.90	40.00	4.10	100.0	V	123.0	-10.8
32.642500	35.60	40.00	4.40	100.0	V	184.0	-12.0
64.488450	20.03	40.00	19.97	100.0	V	210.0	-23.5
130.071100	17.30	43.50	26.20	100.0	V	155.0	-17.4
202.557250	17.69	43.50	25.81	100.0	V	0.0	-17.7
477.782550	22.64	46.00	23.36	100.0	H	232.0	-12.6

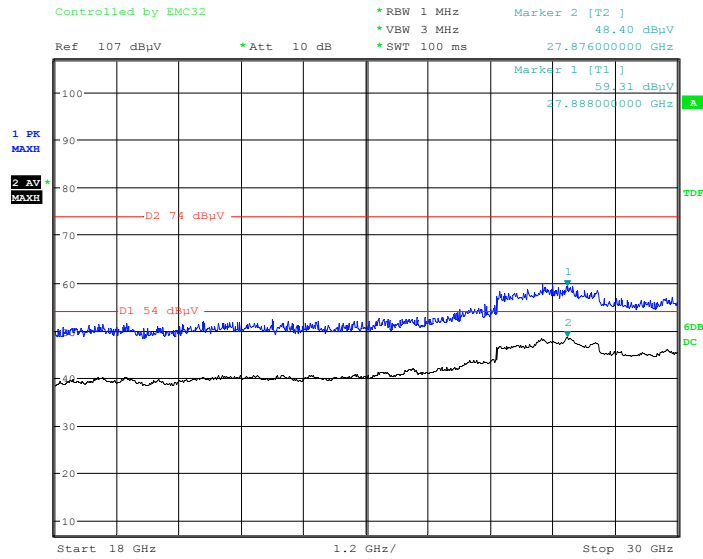
Above 1 GHz:

Full Spectrum



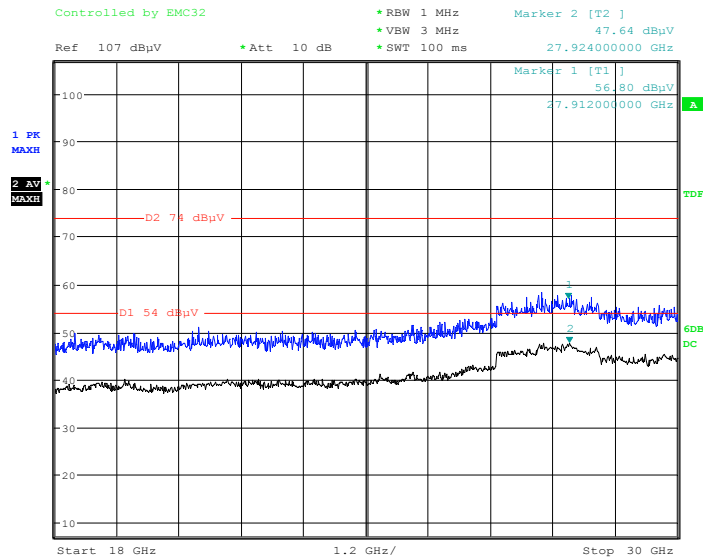
Frequency (MHz)	Corrected Amplitude		Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
	MaxPeak (dBμV/m)	Average (dBμV/m)						
1649.400000	---	22.18	54.00	31.82	150.0	V	324.0	-15.8
1649.400000	33.02	---	74.00	40.98	150.0	V	324.0	-15.8
3446.300000	---	28.90	54.00	25.10	200.0	H	136.0	-9.0
3446.300000	37.88	---	74.00	36.12	200.0	H	136.0	-9.0
4481.600000	---	29.62	54.00	24.38	200.0	H	226.0	-6.2
4481.600000	38.98	---	74.00	35.02	200.0	H	226.0	-6.2
5952.100000	---	33.09	54.00	20.91	150.0	V	0.0	-3.1
5952.100000	41.37	---	74.00	32.63	150.0	V	0.0	-3.1
13024.100000	---	41.03	54.00	12.97	150.0	H	194.0	5.2
13024.100000	50.10	---	74.00	23.90	150.0	H	194.0	5.2
17416.900000	---	44.94	54.00	9.06	200.0	V	0.0	8.6
17416.900000	54.03	---	74.00	19.97	200.0	V	0.0	8.6

**18GHz ~ 30GHz:
Horizontal:**



Date: 22.OCT.2020 21:50:48

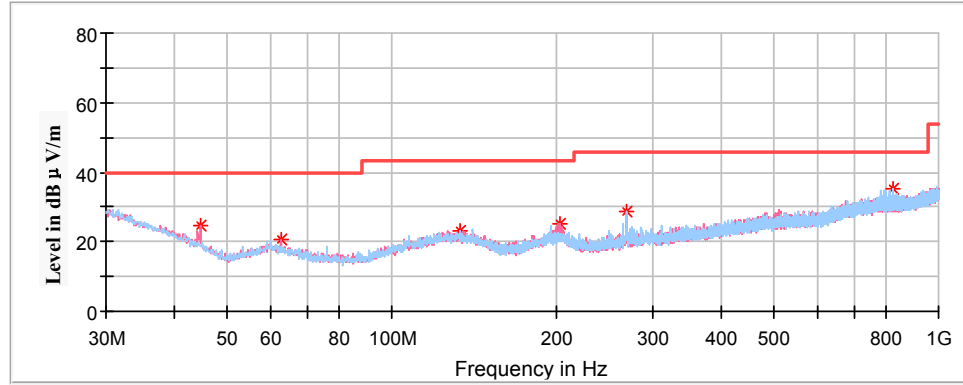
Vertical:



Date: 22.OCT.2020 21:47:39

Test mode 5:

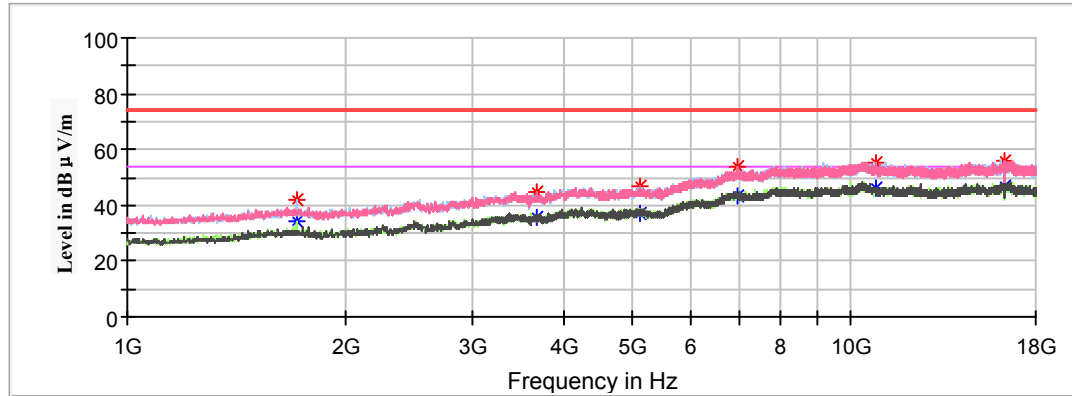
30MHz ~ 1GHz:



Frequency (MHz)	Corrected Amplitude	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
	MaxPeak (dBμV/m)						
44.671250	24.58	40.00	15.42	100.0	V	352.0	-13.7
62.616250	20.49	40.00	19.51	100.0	V	314.0	-14.6
133.547500	23.10	43.50	20.40	100.0	H	119.0	-10.8
203.266250	25.18	43.50	18.32	100.0	V	248.0	-11.1
268.377500	28.43	46.00	17.57	100.0	H	119.0	-11.9
826.127500	35.07	46.00	10.93	100.0	H	289.0	-0.6

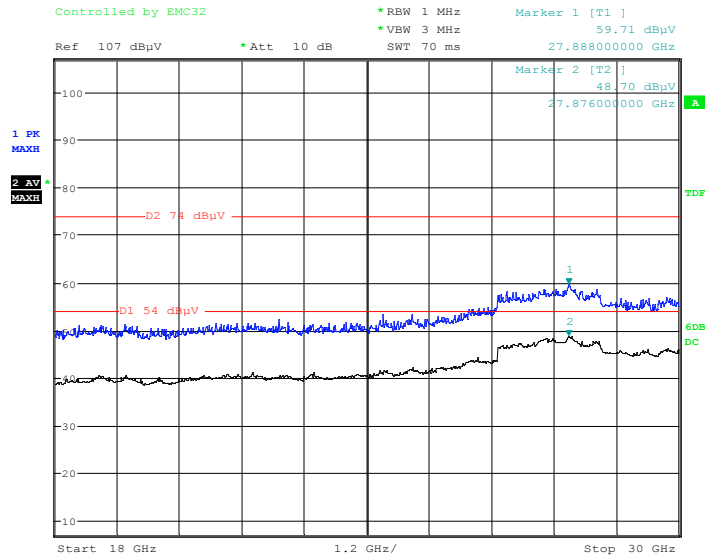
Above 1 GHz:

Full Spectrum



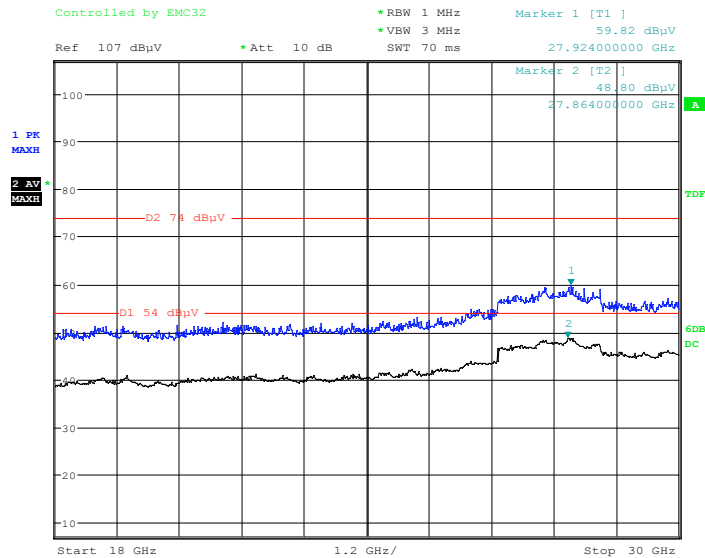
Frequency (MHz)	Corrected Amplitude		Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
	MaxPeak (dBµV/m)	Average (dBµV/m)						
1710.600000	41.69	---	74.00	32.31	100.0	H	309.0	-8.7
1710.600000	---	34.37	54.00	19.63	100.0	H	309.0	-8.7
3682.600000	---	35.60	54.00	18.40	200.0	V	357.0	-1.0
3682.600000	44.46	---	74.00	29.54	200.0	V	357.0	-1.0
5100.400000	---	37.27	54.00	16.73	100.0	V	168.0	1.3
5100.400000	46.96	---	74.00	27.04	100.0	V	168.0	1.3
6978.900000	---	43.37	54.00	10.63	200.0	V	96.0	8.8
6978.900000	53.72	---	74.00	20.28	200.0	V	96.0	8.8
10807.300000	---	46.45	54.00	7.55	100.0	V	244.0	12.1
10807.300000	55.23	---	74.00	18.77	100.0	V	244.0	12.1
16291.500000	---	47.00	54.00	7.00	100.0	V	148.0	12.1
16291.500000	55.83	---	74.00	18.17	100.0	V	148.0	12.1

**18GHz ~ 30GHz:
Horizontal:**



Date: 3.MAR.2021 16:04:23

Vertical:



Date: 3.MAR.2021 16:03:22

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*******