FCC TEST REPORT

For

DONGGUAN CITY BLUEMAN ELECTRONIC TECHNOLOGY CO., LTD.

Bluetooth Speaker

Model No.: BT-Z1, BT-Z2, BT-Z3, BT-Z4, BT-Z5, BT-Z6, BT-Z7, BT-Z8, BT-Z9

Prepared For	:	DONGGUAN CITY BLUEMAN ELECTRONIC TECHNOLOGY CO., LTD.
Address	:	No. 5, ShunXing 5th Road, Dajingtou 2nd Industrial Zone, Dalang Town Dongguan Guangdong China
Prepared By	:	Shenzhen Anbotek Compliance Laboratory Limited
Address	:	1/F., Building 1, SEC Industrial Park, No.0409 Qianhai Road, Nanshan District, Shenzhen, Guangdong, China Tel: (86) 755-26066544 Fax: (86) 755-26014772
Report Number	:	R0217110068W3
Date of Test	:	Oct. 11~Nov. 13, 2017
Date of Report	:	Dec. 11, 2017

Contents

1. General Information....4
1.1. Client Information....4
1.2. Description of Device (EUT)....4
1.3. Auxiliary Equipment Used During Test....4
1.4. Description of Test Modes....5
1.5. List of channels....5
1.6. Description Of Test Setup....6
1.7. Test Equipment List....7
1.8. Measurement Uncertainty....8
1.9. Description of Test Facility....8
2. Summary of Test Results....9
3. Conducted Emission Test....10
3.1. Test Standard and Limit....10
3.2. Test Setup....10
3.3. Test Procedure....10
3.4. Test Data....10
4. Radiation Spurious Emission and Band Edge....23
4.1. Test Standard and Limit....23
4.2. Test Setup....23
4.3. Test Procedure....24
4.4. Test Data....24
APPENDIX I -- TEST SETUP PHOTOGRAPH....32
APPENDIX II -- EXTERNAL PHOTOGRAPH....34
APPENDIX III -- INTERNAL PHOTOGRAPH....35

TEST REPORT

Applicant	:	DONGGUAN CITY BLUEMAN ELECTRONIC TECHNOLOGY CO., LTD.
Manufacturer	:	DONGGUAN CITY BLUEMAN ELECTRONIC TECHNOLOGY CO., LTD.
Product Name	:	Bluetooth Speaker
Model No.	:	BT-Z1, BT-Z2, BT-Z3, BT-Z4, BT-Z5, BT-Z6, BT-Z7, BT-Z8, BT-Z9
Trade Mark	:	BLUEMAN
Rating(s)	:	Input:DC 16V, 3A (with DC 11.1V, 2200 mAh Battery inside) BX-1603000 (via adapter input:AC 100~240V, 50/60Hz, 1.5A; output:16V 3A) BI65-160300-E2 (via adapter input:AC 100~240V, 50/60Hz, 2A; output:16V 3A) BSG-60W1603000 (via adapter input:AC 100~240V, 50/60Hz, 1.5A; output:16V 3A)

Test Standard(s)	**:**	**FCC Part15 Subpart C 2017, Paragraph 15.209**
Test Method(s)	**:**	**ANSI C63.10: 2013**

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the FCC Part 15 Subpart C requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited.

Date of Test : : Oct. 11~Nov. 13, 2017

Prepared by : : Winkey Wang

(Tested Engineer / Winkey Wang)

Reviewer : : Tangcy. T.

(Project Manager / Tangcy. T)

Approved & Authorized Signer : : Tom Chen

(Manager / Tom Chen)

1. General Information

1.1. Client Information

Applicant	:	DONGGUAN CITY BLUEMAN ELECTRONIC TECHNOLOGY CO., LTD.
Address	:	No. 5, ShunXing 5th Road, Dajingtou 2nd Industrial Zone, Dalang Town Dongguan Guangdong China
Manufacturer	:	DONGGUAN CITY BLUEMAN ELECTRONIC TECHNOLOGY CO., LTD.
Address	:	No. 5, ShunXing 5th Road, Dajingtou 2nd Industrial Zone, Dalang Town Dongguan Guangdong China

1.2. Description of Device (EUT)

Product Name	:	Bluetooth Speaker	
Model No.	:	BT-Z1, BT-Z2, BT-Z3, BT-Z4, BT-Z5, BT-Z6, BT-Z7, BT-Z8, BT-Z9 (Note: All samples are the same except the model number and colour, so we prepare "BT-Z1" for test only.)	
Trade Mark	:	BLUEMAN	
Test Power Supply	:	AC 120V, 60Hz for adapter/AC 240V, 60Hz for adapter DC 11.1V Battery inside	
Product Description	:	Operation Frequency:	110-205KHz
		Number of Channel:	20 Channels
		Modulation Type:	MSK
		Antenna Type:	Loop Antenna
		Antenna Gain(Peak):	0 dBi
Remark: 1) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.			

1.3. Auxiliary Equipment Used During Test

Adapter	:	BX-1603000: input:AC 100~240V, 50/60Hz, 1.5A; output:16V 3A) BI65-160300-E2: input:AC 100~240V, 50/60Hz, 2A; output:16V 3A) BSG-60W1603000: input:AC 100~240V, 50/60Hz, 1.5A; output:16V 3A)
Mobile Phone	:	Model No.: NOKIA Lumia 920 Manufacturer: Windows Phone

1.4. Description of Test Modes

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	CH01
Mode 2	CH10
Mode 3	CH20
Mode 4	Keeping TX mode

For Conducted Emission	
Final Test Mode	Description
Mode 4	Keeping TX mode

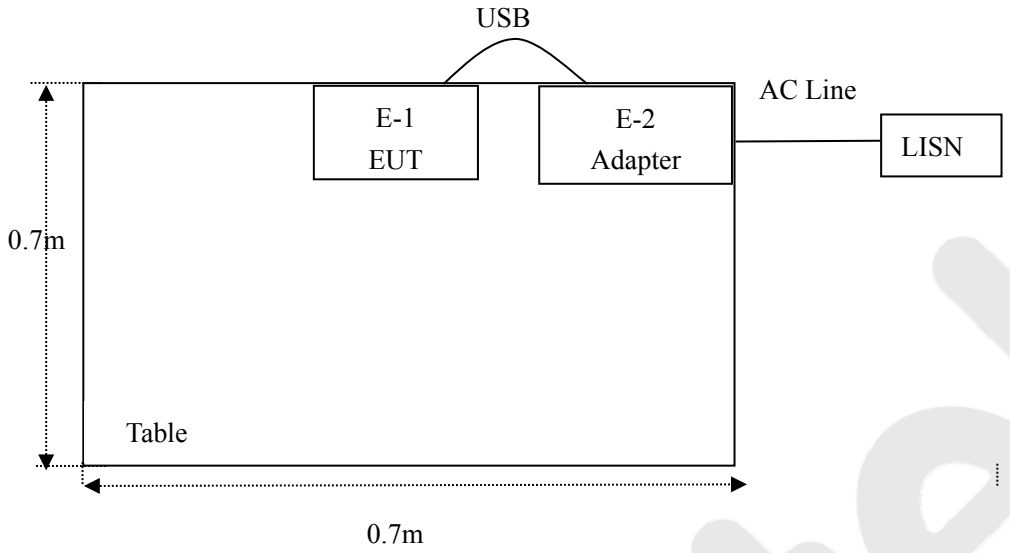
For Radiated Emission	
Final Test Mode	Description
Mode 1	CH01
Mode 2	CH10
Mode 3	CH20

1.5. List of channels

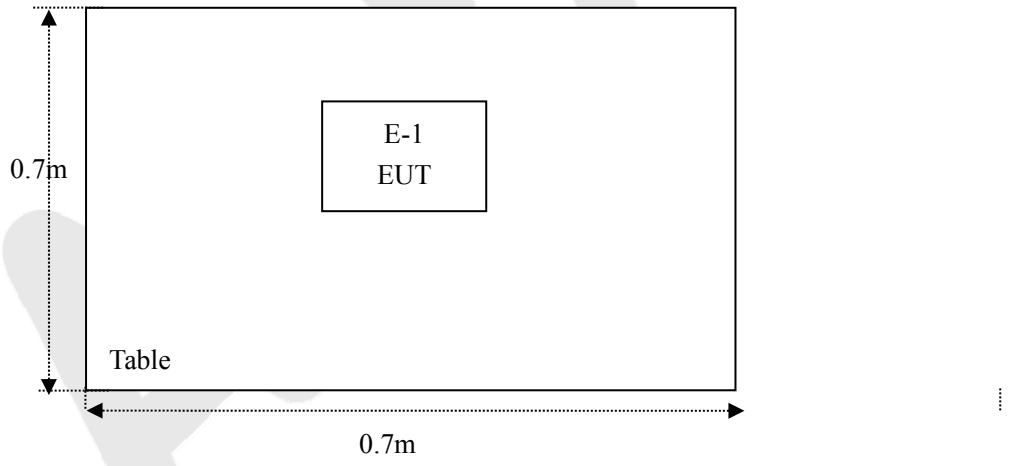
Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
1	0.110	6	0.135	11	0.160	16	0.185
2	0.115	7	0.140	12	0.165	17	0.190
3	0.120	8	0.145	13	0.170	18	0.195
4	0.125	9	0.150	14	0.175	19	0.200
5	0.130	10	0.155	15	0.180	20	0.205

1.6. Description Of Test Setup

CE



RE



1.7. Test Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	L.I.S.N. Artificial Mains Network	Rohde & Schwarz	ENV216	100055	May 27, 2017	1 Year
2.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	May 27, 2017	1 Year
3.	RF Switching Unit	Compliance Direction	RSU-M2	38303	May 27, 2017	1 Year
4.	Spectrum Analysis	Agilent	E4407B	US39390582	May 27, 2017	1 Year
5.	Spectrum Analysis	Agilent	N9038A	MY53227295	May 27, 2017	1 Year
6.	Preamplifier	SKET Electronic	BK1G18G30 D	KD17503	May 27, 2017	1 Year
7.	EMI Test Receiver	Rohde & Schwarz	ESPI	101604	May 27, 2017	1 Year
8.	Double Ridged Horn Antenna	Instruments corporation	GTH-0118	351600	May 31, 2017	1 Year
9.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	May 31, 2017	1 Year
10.	Loop Antenna	Schwarzbeck	HFH2-Z2	100047	Apr. 03, 2017	1 Year
11.	Horn Antenna	Schewarzbeck	BBHA9170	9170-375	May 27, 2017	1 Year
12.	Pre-amplifier	SONOMA	310N	186860	May 27, 2017	1 Year
13.	Pre-amplifier	SKET Electronic	BK1G40G50 A	KD25352	May 27, 2017	1 Year
14.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A
15.	Power Sensor	DAER	RPR3006W	15I00041SN045	May 27, 2017	1 Year
16.	Power Sensor	DAER	RPR3006W	15I00041SN046	May 27, 2017	1 Year
17.	MXA Spectrum Analysis	Agilent	N9020A	MY51170037	May 27, 2017	1 Year
18.	MXG RF Vector Signal Generator	Agilent	N5182A	MY48180656	May 27, 2017	1 Year
19.	Signal Generator	Agilent	E4421B	MY41000743	May 27, 2017	1 Year
20.	DC Power supply	IVYTECH	IV6003	1601D6030007	May 26, 2017	1 Year
21.	TEMP&HUMI PROGRAMMABLE CHAMBER	Sertep	ZJ-HWHS80 B	ZJ-17042804	Mar. 03, 2017	1 Year

1.8. Measurement Uncertainty

Radiation Uncertainty	:	Ur = 4.1 dB (Horizontal)
		Ur = 4.3 dB (Vertical)
Conduction Uncertainty	:	Uc = 3.4dB

1.9. Description of Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.: 184111

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registed and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No. 184111, July 31, 2017.

ISED-Registration No.: 8058A-1

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (ISED) Innovation, Science and Economic Development Canada. The acceptance letter from the ISED is maintained in our files. Registration 8058A-1, June 13, 2016.

Test Location

All Emissions tests were performed at

Shenzhen Anbotek Compliance Laboratory Limited. at 1/F., Building 1, SEC Industrial Park, No.0409 Qianhai Road, Nanshan District, Shenzhen, Guangdong, China

2. Summary of Test Results

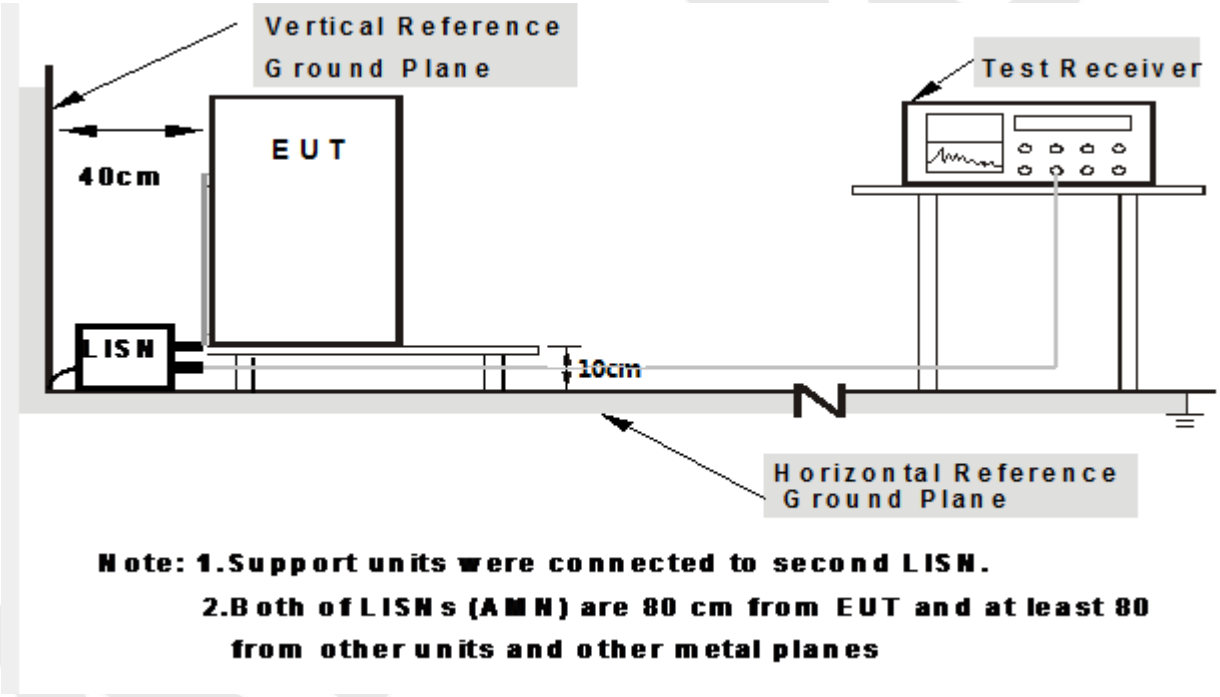
Standard Section	Test Item	Result
FCC Part 15, Paragraph 15.207	Conducted Emission Test	PASS
FCC Part 15, Paragraph 15.209(a)(f)	Spurious Emission	PASS

3. Conducted Emission Test

3.1. Test Standard and Limit

Test Standard	FCC Part15 Section 15.207		
Test Limit	Frequency	Maximum RF Line Voltage (dBuV)	
		Quasi-peak Level	Average Level
	150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
	500kHz~5MHz	56	46
	5MHz~30MHz	60	50
Remark: (1) *Decreasing linearly with logarithm of the frequency. (2) The lower limit shall apply at the transition frequency.			

3.2. Test Setup



3.3. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC ANSI C63.10-2013 on Conducted Emission Measurement.

The bandwidth of test receiver (ESCI) set at 9kHz.

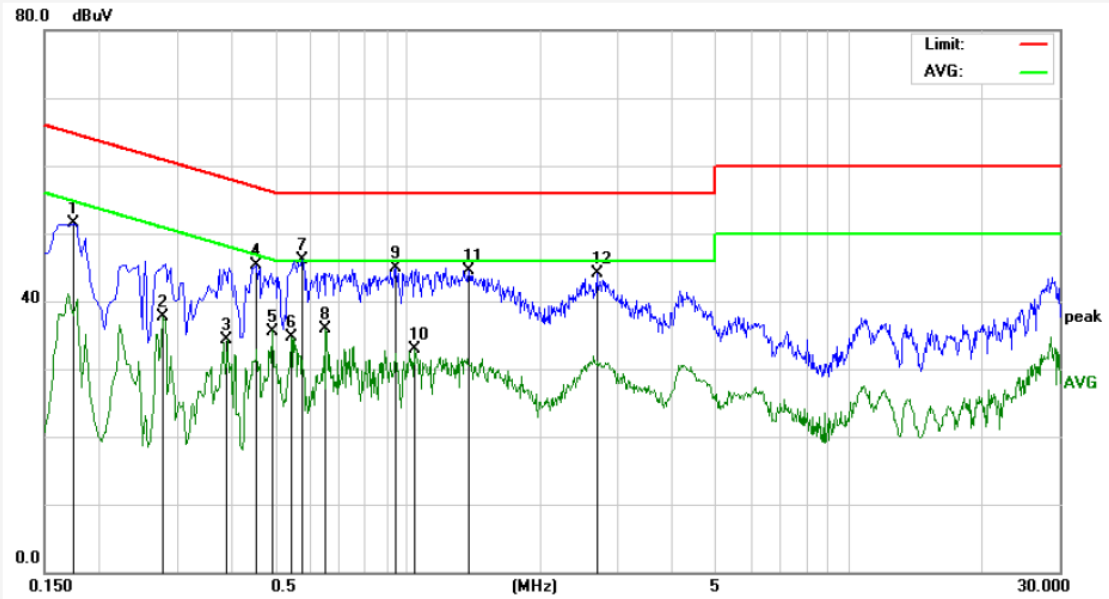
The frequency range from 150kHz to 30MHz is checked.

3.4. Test Data

Please to see the following pages

Conducted Emission Test Data

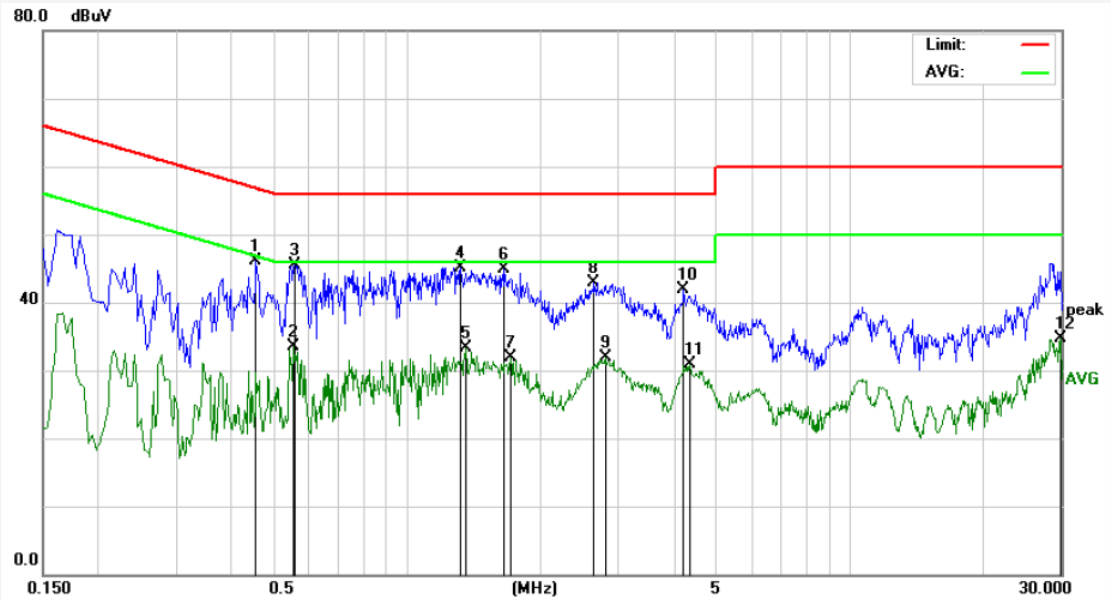
Test Site:	1# Shielded Room
Operating Condition:	Keeping TX mode
Test Specification:	AC 120V, 60Hz for adapter
Comment:	Live Line
	Tem.:25℃ Hum.:50%
Remark	Its for Model BX-1603000



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Over Limit (dB)	Detector	Remark
1	0.1740	51.44	0.00	51.44	64.76	-13.32	QP	
2	0.2779	37.68	0.00	37.68	50.88	-13.20	AVG	
3	0.3899	34.36	0.00	34.36	48.06	-13.70	AVG	
4	0.4540	45.29	0.00	45.29	56.80	-11.51	QP	
5	0.4940	35.60	0.00	35.60	46.10	-10.50	AVG	
6	0.5460	34.80	0.00	34.80	46.00	-11.20	AVG	
7	0.5780	46.15	0.00	46.15	56.00	-9.85	QP	
8	0.6540	35.89	0.00	35.89	46.00	-10.11	AVG	
9	0.9420	44.91	0.00	44.91	56.00	-11.09	QP	
10	1.0339	32.86	0.00	32.86	46.00	-13.14	AVG	
11	1.3740	44.55	0.00	44.55	56.00	-11.45	QP	
12	2.6820	44.07	0.00	44.07	56.00	-11.93	QP	

Conducted Emission Test Data

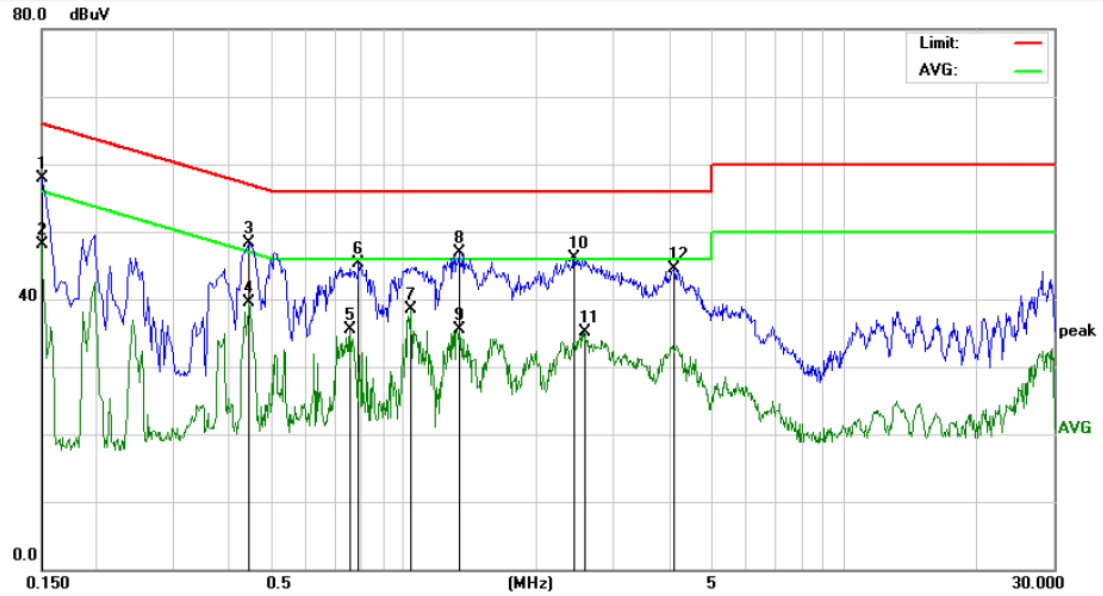
Test Site:	1# Shielded Room
Operating Condition:	Keeping TX mode
Test Specification:	AC 120V, 60Hz for adapter
Comment:	Neutral Line
	Tem.:25℃ Hum.:50%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Over Limit (dB)	Detector	Remark
1	0.4540	46.02	0.00	46.02	56.80	-10.78	QP	
2	0.5540	33.53	0.00	33.53	46.00	-12.47	AVG	
3	0.5580	45.54	0.00	45.54	56.00	-10.46	QP	
4	1.3220	45.16	0.00	45.16	56.00	-10.84	QP	
5	1.3580	33.28	0.00	33.28	46.00	-12.72	AVG	
6	1.6540	44.89	0.00	44.89	56.00	-11.11	QP	
7	1.7140	31.84	0.00	31.84	46.00	-14.16	AVG	
8	2.6380	42.92	0.00	42.92	56.00	-13.08	QP	
9	2.8060	31.94	0.00	31.94	46.00	-14.06	AVG	
10	4.2020	41.95	0.00	41.95	56.00	-14.05	QP	
11	4.3380	30.84	0.00	30.84	46.00	-15.16	AVG	
12	29.9900	34.63	0.00	34.63	50.00	-15.37	AVG	

Conducted Emission Test Data

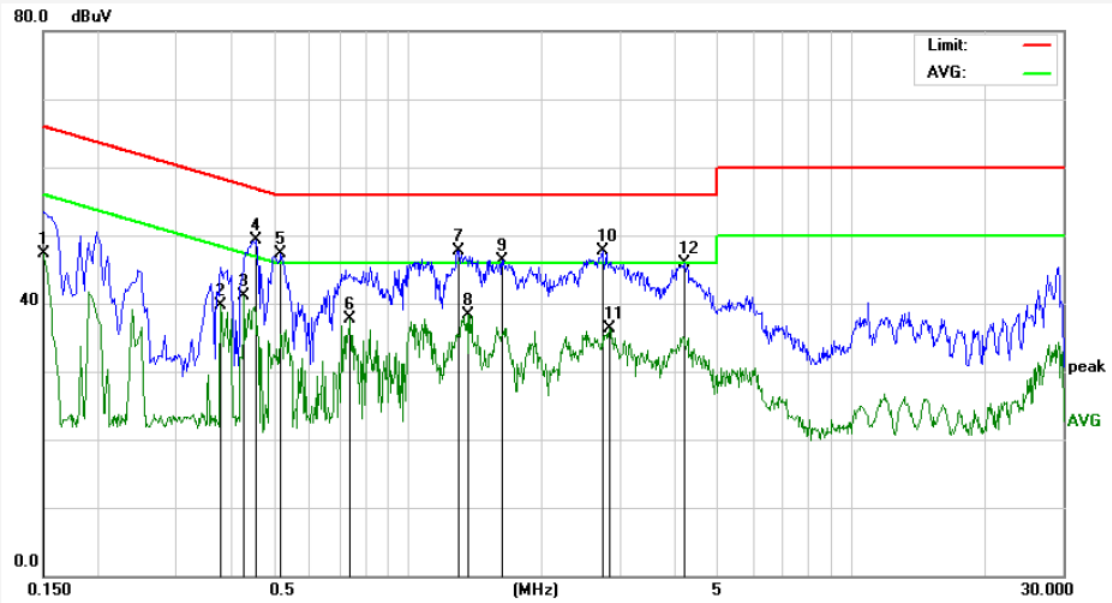
Test Site: 1# Shielded Room
Operating Condition: Keeping TX mode
Test Specification: AC 240V, 60Hz for adapter
Comment: Live Line
Tem.:25℃ Hum.:50%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Over Limit (dB)	Detector	Remark
1	0.1499	57.84	0.00	57.84	66.00	-8.16	QP	
2	0.1499	48.11	0.00	48.11	56.00	-7.89	AVG	
3	0.4460	48.31	0.00	48.31	56.95	-8.64	QP	
4	0.4460	39.55	0.00	39.55	46.95	-7.40	AVG	
5	0.7580	35.56	0.00	35.56	46.00	-10.44	AVG	
6	0.7900	45.25	0.00	45.25	56.00	-10.75	QP	
7	1.0339	38.41	0.00	38.41	46.00	-7.59	AVG	
8	1.3340	46.98	0.00	46.98	56.00	-9.02	QP	
9	1.3420	35.48	0.00	35.48	46.00	-10.52	AVG	
10	2.4460	46.06	0.00	46.06	56.00	-9.94	QP	
11	2.5660	35.01	0.00	35.01	46.00	-10.99	AVG	
12	4.0939	44.55	0.00	44.55	56.00	-11.45	QP	

Conducted Emission Test Data

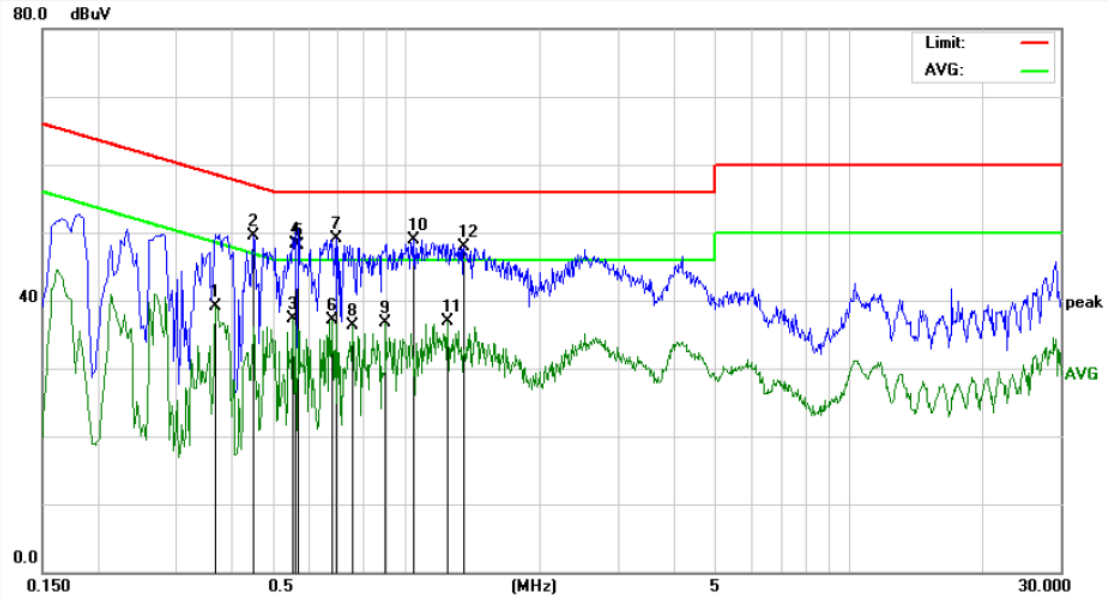
Test Site:	1# Shielded Room
Operating Condition:	Keeping TX mode
Test Specification:	AC 240V, 60Hz for adapter
Comment:	Neutral Line
	Tem.:25℃ Hum.:50%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Over Limit (dB)	Detector	Remark
1	0.1499	47.38	0.00	47.38	56.00	-8.62	AVG	
2	0.3780	39.72	0.00	39.72	48.32	-8.60	AVG	
3	0.4259	41.13	0.00	41.13	47.33	-6.20	AVG	
4	0.4540	49.22	0.00	49.22	56.80	-7.58	QP	
5	0.5180	47.24	0.00	47.24	56.00	-8.76	QP	
6	0.7419	37.63	0.00	37.63	46.00	-8.37	AVG	
7	1.3020	47.77	0.00	47.77	56.00	-8.23	QP	
8	1.3660	38.32	0.00	38.32	46.00	-7.68	AVG	
9	1.6339	46.40	0.00	46.40	56.00	-9.60	QP	
10	2.7500	47.63	0.00	47.63	56.00	-8.37	QP	
11	2.8460	36.27	0.00	36.27	46.00	-9.73	AVG	
12	4.1939	45.83	0.00	45.83	56.00	-10.17	QP	

Conducted Emission Test Data

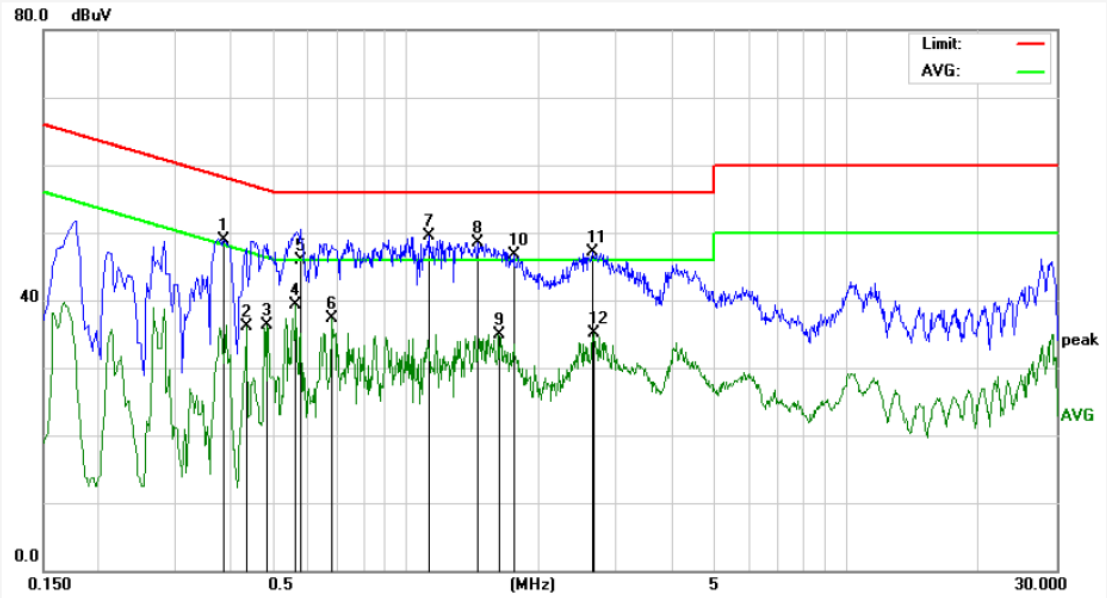
Test Site:	1# Shielded Room
Operating Condition:	Keeping TX mode
Test Specification:	AC 120V, 60Hz for adapter
Comment:	Live Line
	Tem.:25℃ Hum.:50%
Remark	Its for Model BI65-160300-E2



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Over Limit (dB)	Detector	Remark
1	0.3700	39.05	0.00	39.05	48.50	-9.45	AVG	
2	0.4500	49.42	0.00	49.42	56.87	-7.45	QP	
3	0.5540	37.38	0.00	37.38	46.00	-8.62	AVG	
4	0.5620	48.35	0.00	48.35	56.00	-7.65	QP	
5	0.5700	48.18	0.00	48.18	56.00	-7.82	QP	
6	0.6820	37.19	0.00	37.19	46.00	-8.81	AVG	
7	0.6900	49.09	0.00	49.09	56.00	-6.91	QP	
8	0.7580	36.38	0.00	36.38	46.00	-9.62	AVG	
9	0.8980	36.64	0.00	36.64	46.00	-9.36	AVG	
10	1.0380	48.90	0.00	48.90	56.00	-7.10	QP	
11	1.2420	36.83	0.00	36.83	46.00	-9.17	AVG	
12	1.3460	47.91	0.00	47.91	56.00	-8.09	QP	

Conducted Emission Test Data

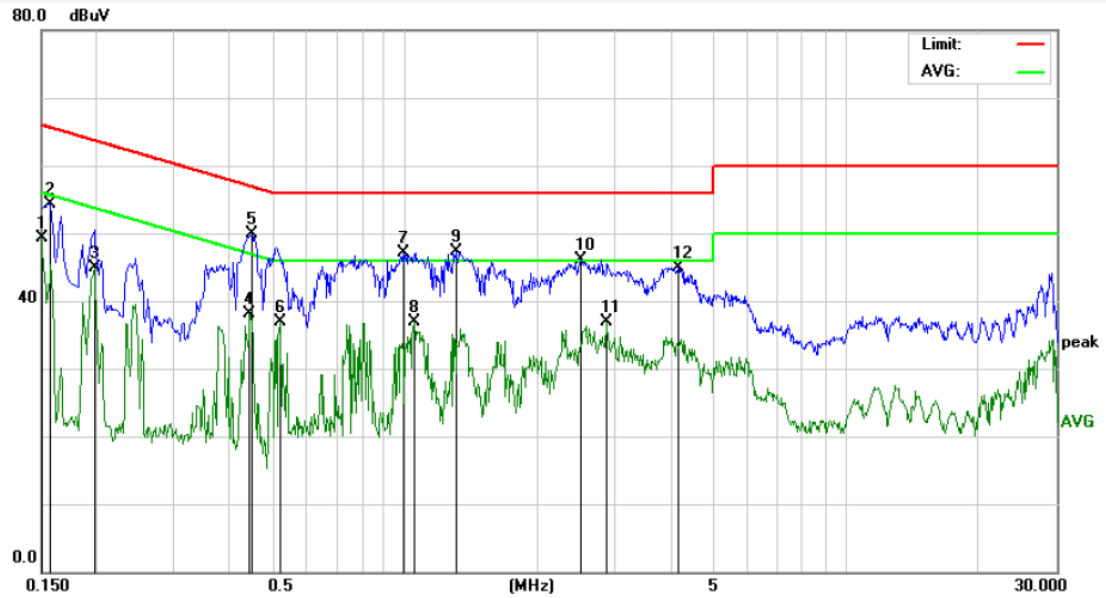
Test Site: 1# Shielded Room
Operating Condition: Keeping TX mode
Test Specification: AC 120V, 60Hz for adapter
Comment: Neutral Line
Tem.:25℃ Hum.:50%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Over Limit (dB)	Detector	Remark
1	0.3860	48.99	0.00	48.99	58.15	-9.16	QP	
2	0.4340	36.09	0.00	36.09	47.18	-11.09	AVG	
3	0.4860	36.32	0.00	36.32	46.24	-9.92	AVG	
4	0.5620	39.38	0.00	39.38	46.00	-6.62	AVG	
5	0.5780	45.96	0.00	45.96	56.00	-10.04	QP	
6	0.6820	37.40	0.00	37.40	46.00	-8.60	AVG	
7	1.1260	49.52	0.00	49.52	56.00	-6.48	QP	
8	1.4580	48.50	0.00	48.50	56.00	-7.50	QP	
9	1.6260	34.88	0.00	34.88	46.00	-11.12	AVG	
10	1.7620	46.66	0.00	46.66	56.00	-9.34	QP	
11	2.6500	47.09	0.00	47.09	56.00	-8.91	QP	
12	2.6780	35.09	0.00	35.09	46.00	-10.91	AVG	

Conducted Emission Test Data

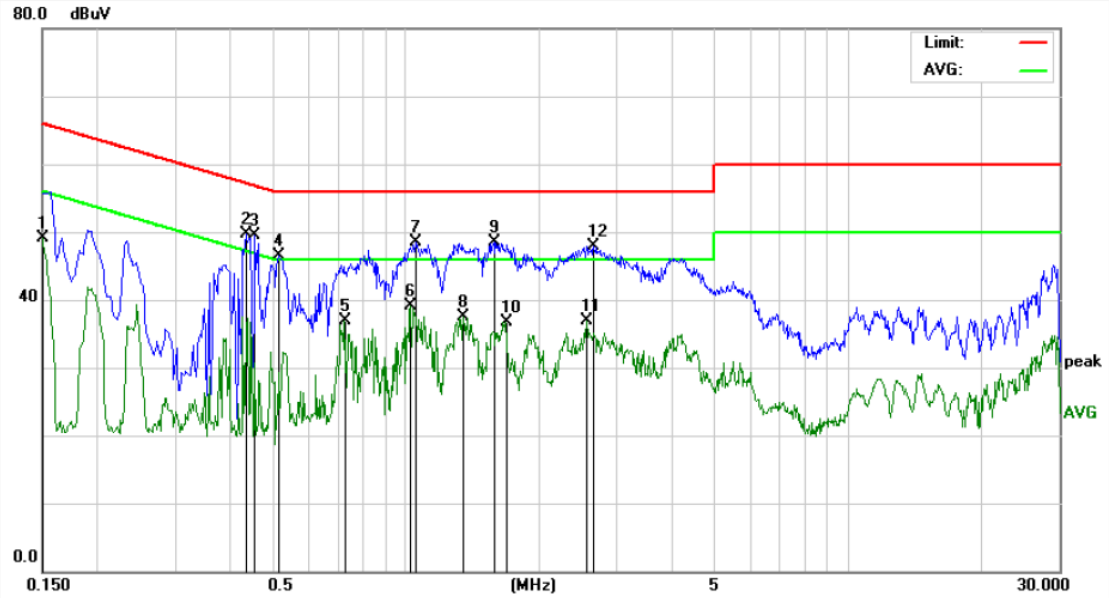
Test Site:	1# Shielded Room
Operating Condition:	Keeping TX mode
Test Specification:	AC 240V, 60Hz for adapter
Comment:	Live Line
	Tem.:25℃ Hum.:50%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Over Limit (dB)	Detector	Remark
1	0.1499	49.36	0.00	49.36	56.00	-6.64	AVG	
2	0.1580	54.30	0.00	54.30	65.56	-11.26	QP	
3	0.1980	44.89	0.00	44.89	53.69	-8.80	AVG	
4	0.4460	38.14	0.00	38.14	46.95	-8.81	AVG	
5	0.4500	50.00	0.00	50.00	56.87	-6.87	QP	
6	0.5220	36.93	0.00	36.93	46.00	-9.07	AVG	
7	0.9940	47.15	0.00	47.15	56.00	-8.85	QP	
8	1.0500	36.94	0.00	36.94	46.00	-9.06	AVG	
9	1.3099	47.31	0.00	47.31	56.00	-8.69	QP	
10	2.5020	46.16	0.00	46.16	56.00	-9.84	QP	
11	2.8620	37.00	0.00	37.00	46.00	-9.00	AVG	
12	4.1779	44.97	0.00	44.97	56.00	-11.03	QP	

Conducted Emission Test Data

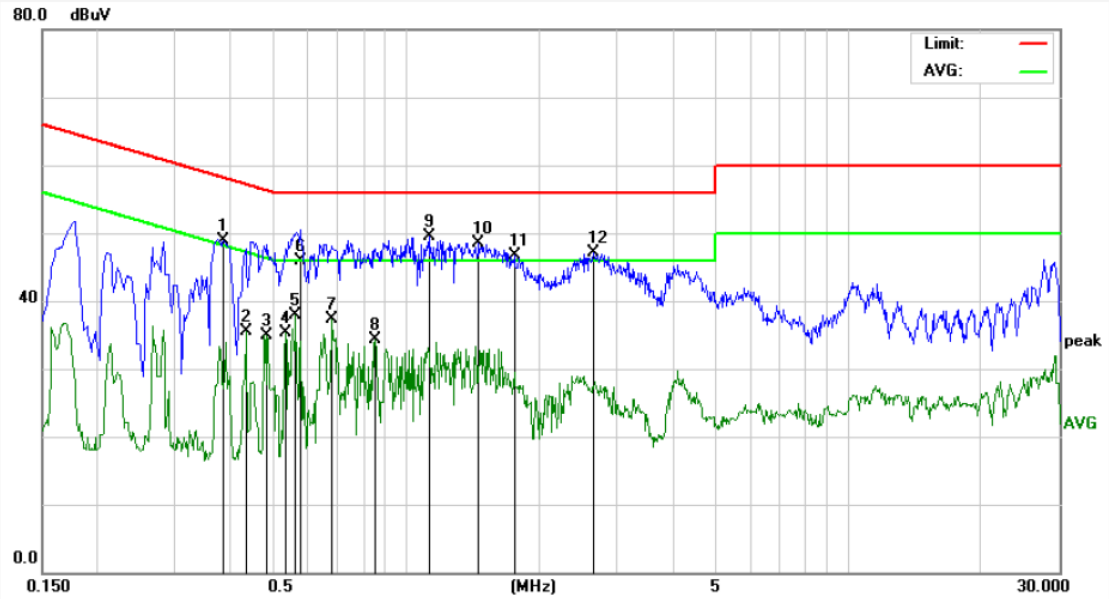
Test Site: 1# Shielded Room
Operating Condition: Keeping TX mode
Test Specification: AC 240V, 60Hz for adapter
Comment: Neutral Line
Tem.:25℃ Hum.:50%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Over Limit (dB)	Detector	Remark
1	0.1499	49.07	0.00	49.07	56.00	-6.93	AVG	
2	0.4339	49.73	0.00	49.73	57.18	-7.45	QP	
3	0.4540	49.43	0.00	49.43	56.80	-7.37	QP	
4	0.5140	46.47	0.00	46.47	56.00	-9.53	QP	
5	0.7259	36.96	0.00	36.96	46.00	-9.04	AVG	
6	1.0260	39.05	0.00	39.05	46.00	-6.95	AVG	
7	1.0500	48.53	0.00	48.53	56.00	-7.47	QP	
8	1.3460	37.51	0.00	37.51	46.00	-8.49	AVG	
9	1.5820	48.41	0.00	48.41	56.00	-7.59	QP	
10	1.6739	36.73	0.00	36.73	46.00	-9.27	AVG	
11	2.5619	36.92	0.00	36.92	46.00	-9.08	AVG	
12	2.6579	47.97	0.00	47.97	56.00	-8.03	QP	

Conducted Emission Test Data

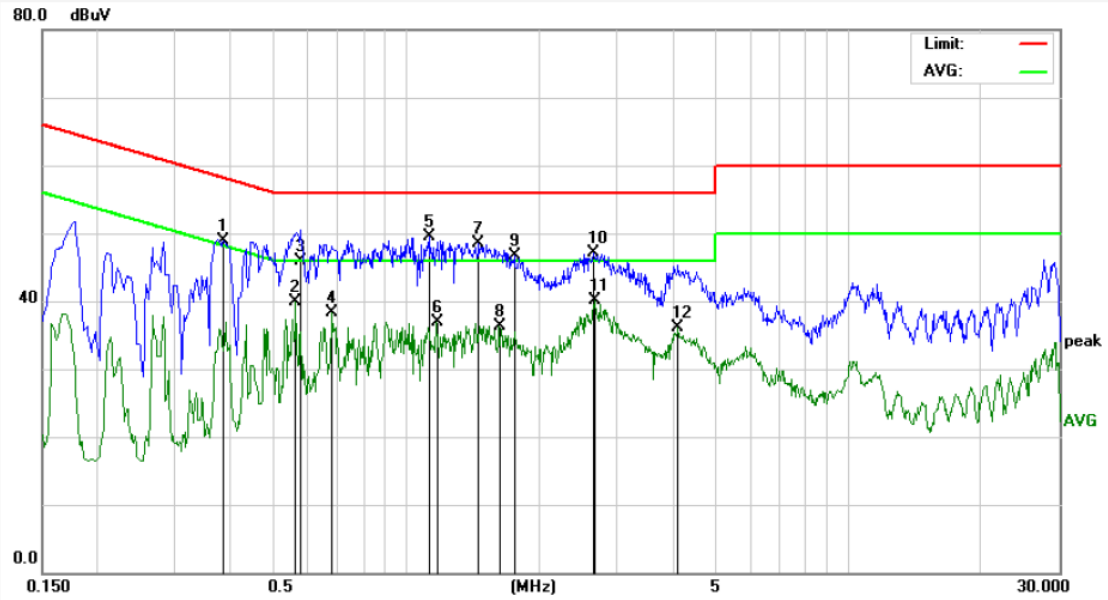
Test Site:	1# Shielded Room
Operating Condition:	Keeping TX mode
Test Specification:	AC 120V, 60Hz for adapter
Comment:	Live Line
	Tem.:25℃ Hum.:50%
Remark	Its for Model BSG-60W1603000



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Over Limit (dB)	Detector	Remark
1	0.3860	48.99	0.00	48.99	58.15	-9.16	QP	
2	0.4339	35.59	0.00	35.59	47.18	-11.59	AVG	
3	0.4858	34.82	0.00	34.82	46.24	-11.42	AVG	
4	0.5340	35.37	0.00	35.37	46.00	-10.63	AVG	
5	0.5620	37.88	0.00	37.88	46.00	-8.12	AVG	
6	0.5780	45.96	0.00	45.96	56.00	-10.04	QP	
7	0.6820	37.40	0.00	37.40	46.00	-8.60	AVG	
8	0.8498	34.30	0.00	34.30	46.00	-11.70	AVG	
9	1.1260	49.52	0.00	49.52	56.00	-6.48	QP	
10	1.4580	48.50	0.00	48.50	56.00	-7.50	QP	
11	1.7620	46.66	0.00	46.66	56.00	-9.34	QP	
12	2.6500	47.09	0.00	47.09	56.00	-8.91	QP	

Conducted Emission Test Data

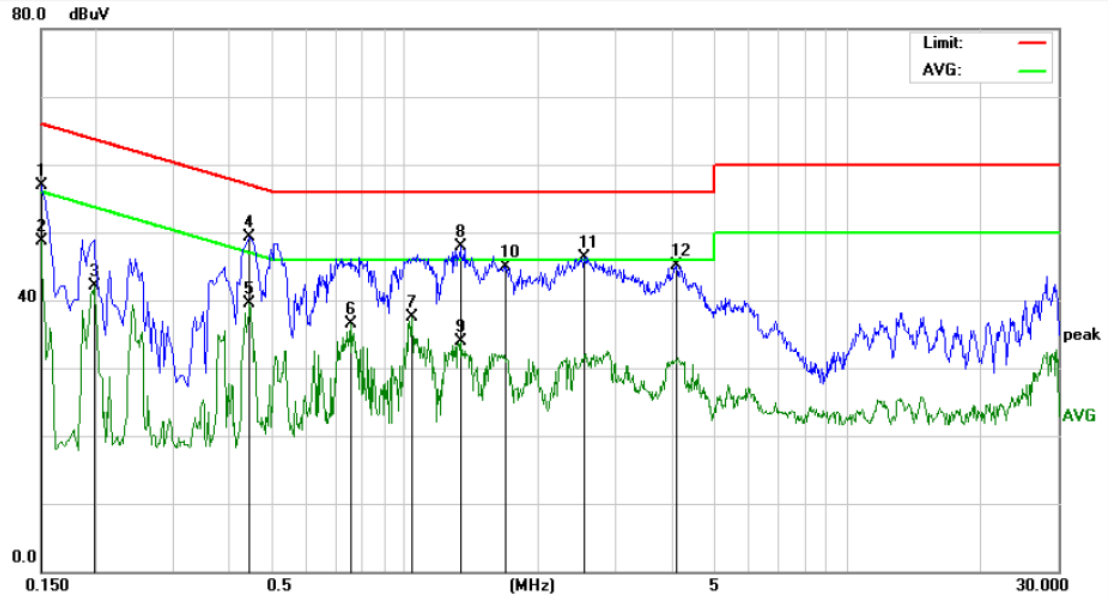
Test Site: 1# Shielded Room
Operating Condition: Keeping TX mode
Test Specification: AC 120V, 60Hz for adapter
Comment: Neutral Line
Tem.:25℃ Hum.:50%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Over Limit (dB)	Detector	Remark
1	0.3860	48.99	0.00	48.99	58.15	-9.16	QP	
2	0.5620	39.88	0.00	39.88	46.00	-6.12	AVG	
3	0.5780	45.96	0.00	45.96	56.00	-10.04	QP	
4	0.6820	38.40	0.00	38.40	46.00	-7.60	AVG	
5	1.1260	49.52	0.00	49.52	56.00	-6.48	QP	
6	1.1698	36.85	0.00	36.85	46.00	-9.15	AVG	
7	1.4580	48.50	0.00	48.50	56.00	-7.50	QP	
8	1.6258	36.38	0.00	36.38	46.00	-9.62	AVG	
9	1.7620	46.66	0.00	46.66	56.00	-9.34	QP	
10	2.6500	47.09	0.00	47.09	56.00	-8.91	QP	
11	2.6779	40.09	0.00	40.09	46.00	-5.91	AVG	
12	4.1337	36.15	0.00	36.15	46.00	-9.85	AVG	

Conducted Emission Test Data

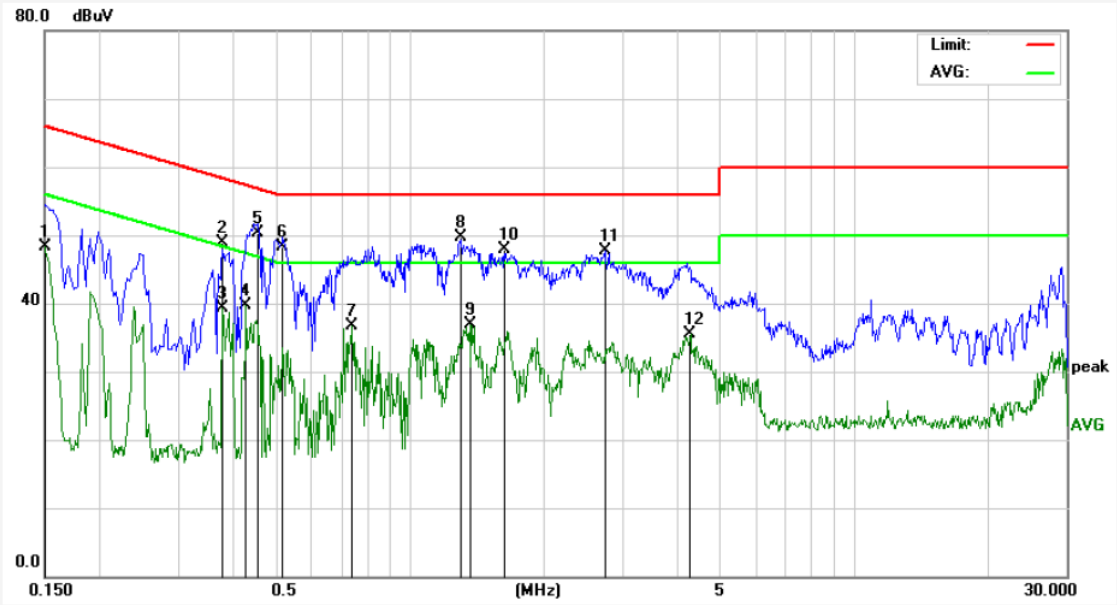
Test Site: 1# Shielded Room
Operating Condition: Keeping TX mode
Test Specification: AC 240V, 60Hz for adapter
Comment: Live Line
Tem.:25℃ Hum.:50%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Over Limit (dB)	Detector	Remark
1	0.1499	56.84	0.00	56.84	66.00	-9.16	QP	
2	0.1499	48.61	0.00	48.61	56.00	-7.39	AVG	
3	0.1980	42.02	0.00	42.02	53.69	-11.67	AVG	
4	0.4460	49.31	0.00	49.31	56.95	-7.64	QP	
5	0.4460	39.55	0.00	39.55	46.95	-7.40	AVG	
6	0.7580	36.56	0.00	36.56	46.00	-9.44	AVG	
7	1.0339	37.41	0.00	37.41	46.00	-8.59	AVG	
8	1.3340	47.98	0.00	47.98	56.00	-8.02	QP	
9	1.3420	33.98	0.00	33.98	46.00	-12.02	AVG	
10	1.6818	44.98	0.00	44.98	56.00	-11.02	QP	
11	2.5419	46.30	0.00	46.30	56.00	-9.70	QP	
12	4.0937	45.05	0.00	45.05	56.00	-10.95	QP	

Conducted Emission Test Data

Test Site: 1# Shielded Room
Operating Condition: Keeping TX mode
Test Specification: AC 240V, 60Hz for adapter
Comment: Neutral Line
Tem.:25℃ Hum.:50%



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit dBuV	Over Limit (dB)	Detector	Remark
1	0.1499	48.38	0.00	48.38	56.00	-7.62	AVG	
2	0.3780	48.88	0.00	48.88	58.32	-9.44	QP	
3	0.3780	39.22	0.00	39.22	48.32	-9.10	AVG	
4	0.4259	39.63	0.00	39.63	47.33	-7.70	AVG	
5	0.4540	50.23	0.00	50.23	56.80	-6.57	QP	
6	0.5180	48.24	0.00	48.24	56.00	-7.76	QP	
7	0.7419	36.63	0.00	36.63	46.00	-9.37	AVG	
8	1.3020	49.77	0.00	49.77	56.00	-6.23	QP	
9	1.3660	36.82	0.00	36.82	46.00	-9.18	AVG	
10	1.6340	47.90	0.00	47.90	56.00	-8.10	QP	
11	2.7500	47.63	0.00	47.63	56.00	-8.37	QP	
12	4.2738	35.41	0.00	35.41	46.00	-10.59	AVG	

4. Radiation Spurious Emission and Band Edge

4.1. Test Standard and Limit

Test Standard	FCC Part15 C Section 15.209 and 15.205				
Test Limit	Frequency (MHz)	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)
	0.009MHz~0.490MHz	2400/F(kHz)	-	-	300
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
	1.705MHz-30MHz	30	-	-	30
	30MHz~88MHz	100	40.0	Quasi-peak	3
	88MHz~216MHz	150	43.5	Quasi-peak	3
	216MHz~960MHz	200	46.0	Quasi-peak	3
	960MHz~1000MHz	500	54.0	Quasi-peak	3
	Above 1000MHz	500	54.0	Average	3
		-	74.0	Peak	3

Remark:

(1)The lower limit shall apply at the transition frequency.

(2) 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

4.2. Test Setup

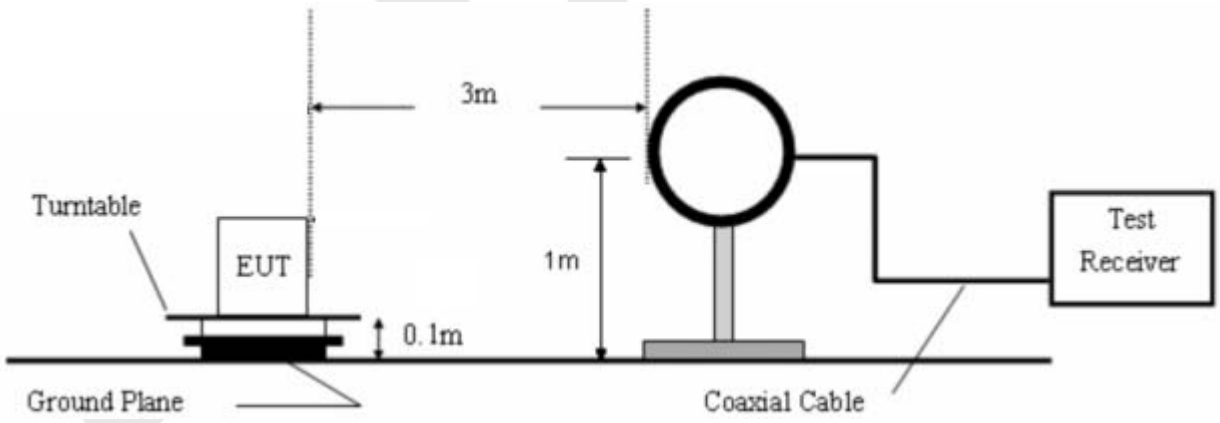


Figure 1. Below 30MHz

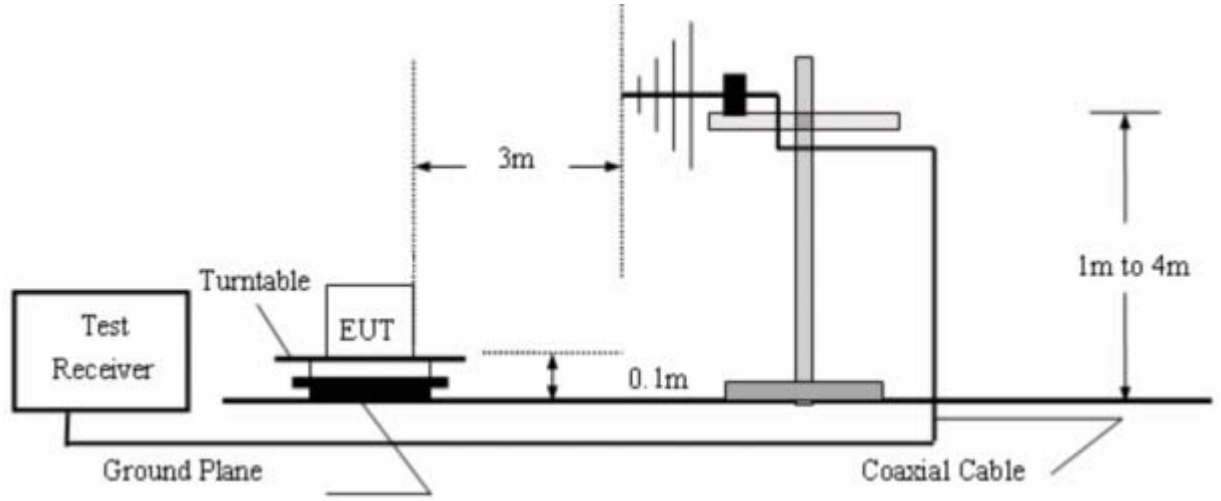


Figure 2. 30MHz to 1GHz

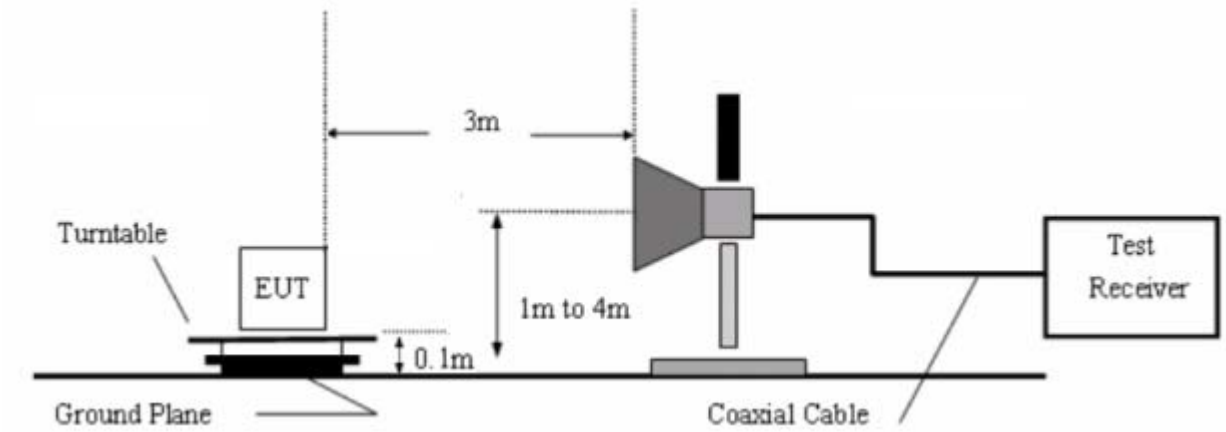


Figure 3. Above 1 GHz

4.3. Test Procedure

For below 1GHz: The EUT is placed on a turntable, which is 0.1m above the ground plane.
For above 1GHz: The EUT is placed on a turntable, which is 0.1m above the ground plane.
The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Rotated the EUT through three orthogonal axes to determine the maximum emissions, both horizontal and vertical polarization of the antenna are set on test. The EUT is tested in 9*6*6 Chamber. The device is evaluated in xyz orientation.

For 9kHz to 150kHz, Set the spectrum analyzer as:
RBW = 200Hz, VBW =1kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 150kHz to 30MHz, Set the spectrum analyzer as:
RBW = 9KHz, VBW =30kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 30MHz to 1000MHz, Set the spectrum analyzer as:
RBW = 100kHz, VBW =300kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

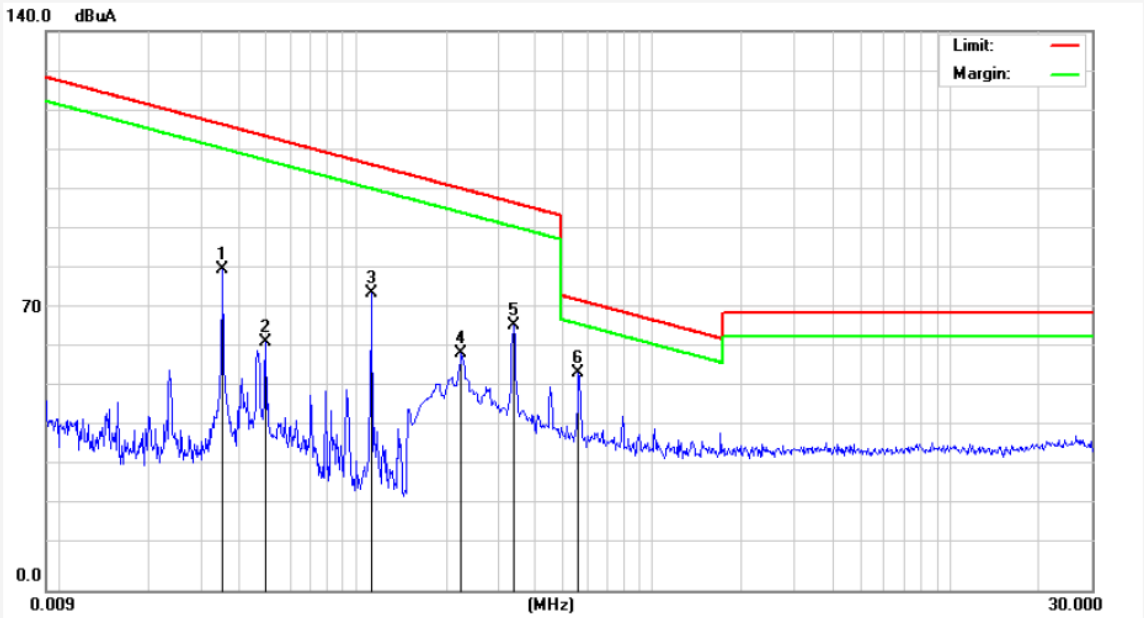
4.4. Test Data

PASS

Test Results

(Between 9KHz – 30MHz)

Job No.:	**0217110068W3**		
Standard:	**FCC PART15 C _3m**	**Power Source:**	**AC 120V, 60Hz for adapter**
Test item:	**Radiation Test**	**Temp.(C)/Hum.(%RH):**	**24.4(C)/50%RH**
Test Mode:	**TX Mode**	**Distance:**	**3m**

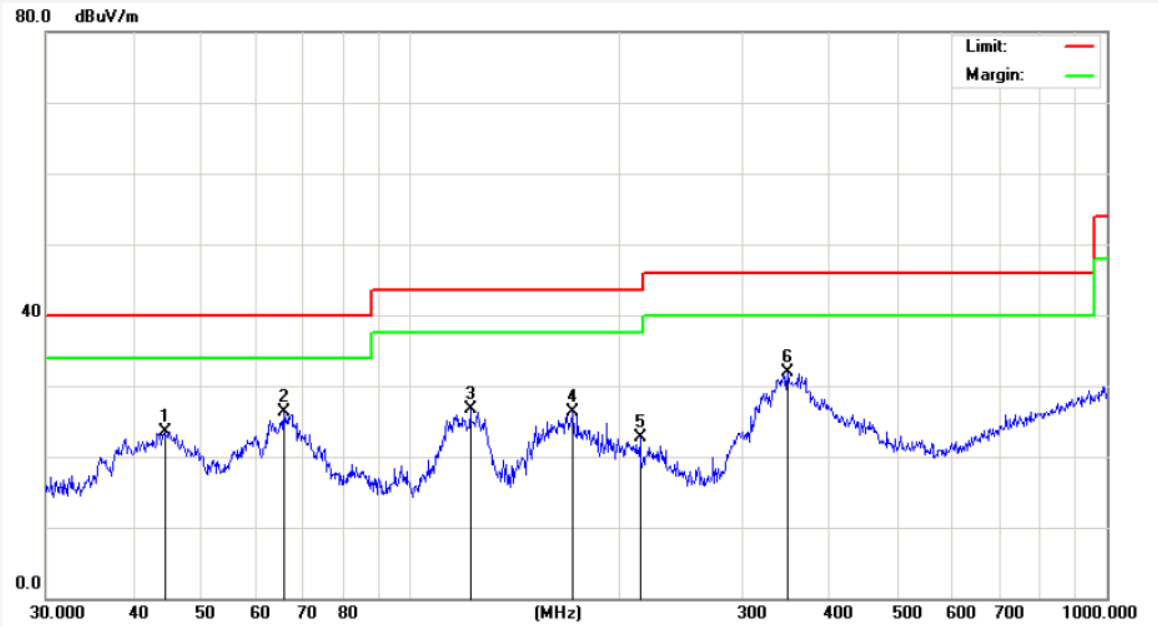


Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	degree (dge)
0.0355	58.64	19.30	2.53	0	80.47	136.54	-56.07	Peak	120
0.0355	57.11	19.30	2.53	0	78.94	116.54	-37.60	AV	120
0.0495	40.34	19.30	2.53	0	62.17	133.66	-71.49	Peak	240
0.0495	37.52	19.30	2.53	0	59.35	113.66	-54.31	AV	240
0.1127	84.70	19.29	2.54	0	106.53	126.53	-20.00	Peak	124
0.1127	80.89	19.29	2.54	0	102.72	106.53	-3.81	AV	124
0.2260	37.52	19.36	2.55	0	59.43	120.50	-61.07	Peak	300
0.2260	34.87	19.36	2.55	0	56.78	100.50	-43.72	AV	300
0.3379	43.97	19.63	2.59	0	66.19	117.02	-50.83	Peak	115
0.3379	41.02	19.63	2.59	0	63.24	97.02	-33.78	AV	115
0.5620	31.63	20.32	2.60	0	54.55	72.61	-18.06	QP	0

Remark: According to FCC PART 15.209 (d), the emission limits for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz, Radiated emission limits in these three bands are based on measurements employing an average detector.

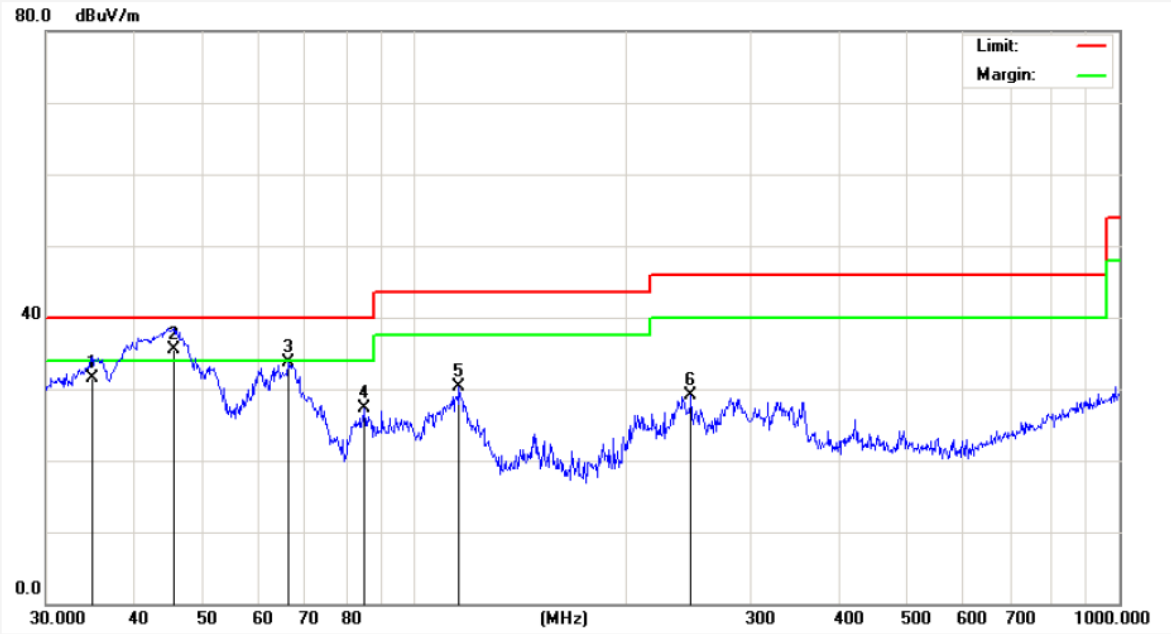
(Between 30MHz –1000 MHz)

Job No.:	**0217110068W3**	**Polarization:**	**Horizontal**
Standard:	**FCC PART15 C _3m**	**Power Source:**	**AC 120V, 60Hz for adapter**
Test item:	**Radiation Test**	**Temp.(C)/Hum.(%RH):**	**24.4(C)/50%RH**
Test Mode:	**TX Mode**	**Distance:**	**3m**
Remark	**Its for Model BX-1603000**		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	44.4308	37.79	-14.34	23.45	40.00	-16.55	QP	300	16	
2	65.8031	44.03	-17.81	26.22	40.00	-13.78	QP	300	77	
3	121.9755	48.29	-21.62	26.67	43.50	-16.83	QP	300	144	
4	171.3926	48.78	-22.46	26.32	43.50	-17.18	QP	300	157	
5	213.7634	43.00	-20.35	22.65	43.50	-20.85	QP	300	213	
6	348.0274	45.97	-14.05	31.92	46.00	-14.08	QP	300	266	

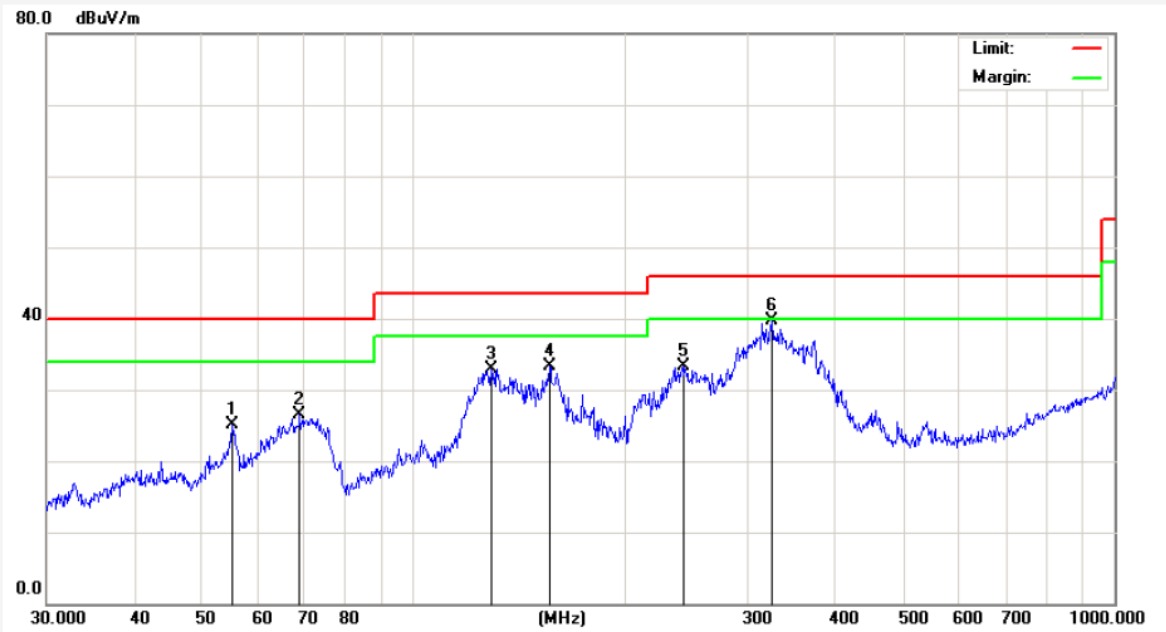
Job No.:	**0217110068W3**	**Plarization:**	**Vertical**
Standard:	**FCC PART15 C _3m**	**Power Source:**	**AC 120V, 60Hz for adapter**
Test item:	**Radiation Test**	**Temp.(C)/Hum.(%RH):**	**24.4(C)/50%RH**
Test Mode:	**TX Mode**	**Distance:**	**3m**



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	34.8823	47.76	-16.30	31.46	40.00	-8.54	QP	300	16	
2	45.5348	49.86	-14.35	35.51	40.00	-4.49	QP	300	44	
3	66.2662	51.72	-18.01	33.71	40.00	-6.29	QP	300	141	
4	84.9995	45.69	-18.35	27.34	40.00	-12.66	QP	300	157	
5	115.7256	46.27	-16.03	30.24	43.50	-13.26	QP	300	215	
6	246.8149	43.08	-14.06	29.02	46.00	-16.98	QP	300	266	

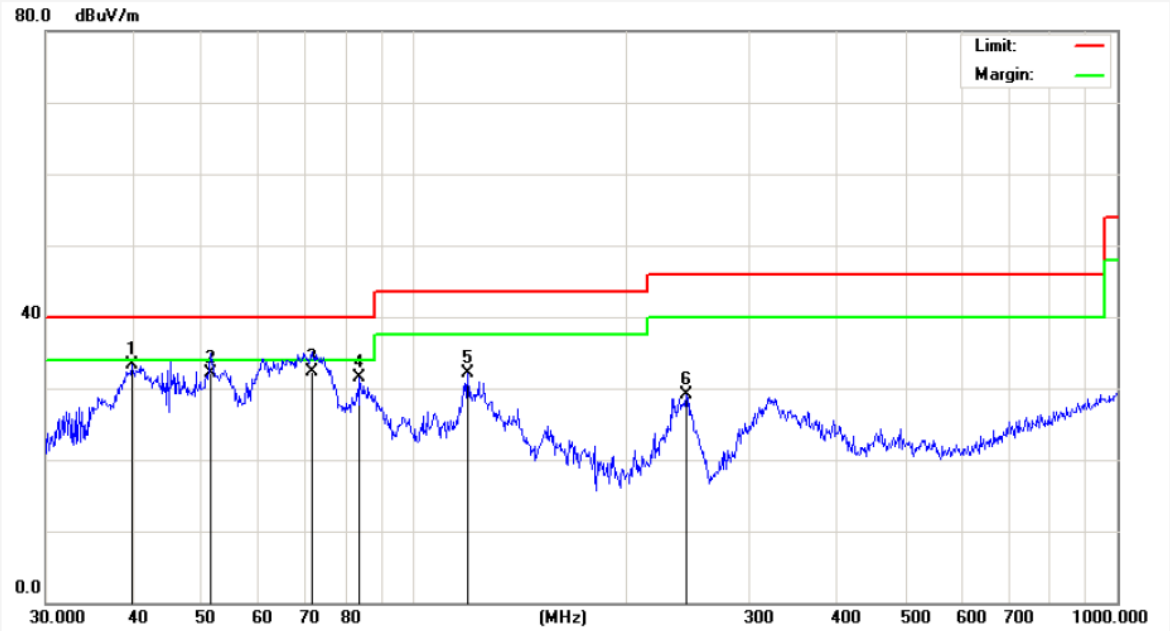
(Between 30MHz –1000 MHz)

Job No.:	**0217110068W3**	**Polarization:**	**Horizontal**
Standard:	**FCC PART15 C _3m**	**Power Source:**	**AC 120V, 60Hz for adapter**
Test item:	**Radiation Test**	**Temp.(C)/Hum.(%RH):**	**24.4(C)/50%RH**
Test Mode:	**TX Mode**	**Distance:**	**3m**
Remark	**Its for Model BI65-160300-E2**		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	55.2207	39.98	-14.94	25.04	40.00	-14.96	QP	300	16	
2	68.8721	45.60	-19.14	26.46	40.00	-13.54	QP	300	77	
3	129.4677	55.71	-22.73	32.98	43.50	-10.52	QP	300	142	
4	156.4578	56.41	-23.04	33.37	43.50	-10.13	QP	300	176	
5	242.5253	51.59	-18.21	33.38	46.00	-12.62	QP	300	241	
6	324.4561	54.83	-15.04	39.79	46.00	-6.21	QP	300	296	

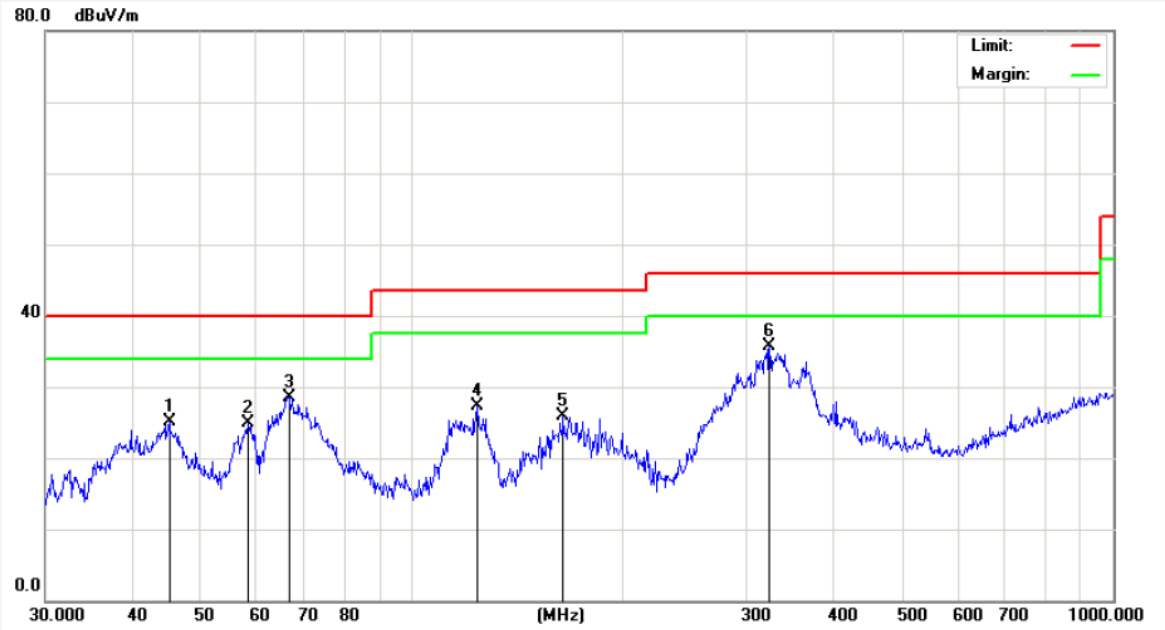
Job No.:	**0217110068W3**	**Plarization:**	**Vertical**
Standard:	**FCC PART15 C _3m**	**Power Source:**	**AC 120V, 60Hz for adapter**
Test item:	**Radiation Test**	**Temp.(C)/Hum.(%RH):**	**24.4(C)/50%RH**
Test Mode:	**TX Mode**	**Distance:**	**3m**



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	39.7146	47.74	-14.47	33.27	40.00	-6.73	QP	300	15	
2	51.4807	46.80	-14.68	32.12	40.00	-7.88	QP	300	77	
3	71.5806	52.29	-19.93	32.36	40.00	-7.64	QP	300	114	
4	83.8156	50.16	-18.73	31.43	40.00	-8.57	QP	300	152	
5	119.4361	48.42	-16.29	32.13	43.50	-11.37	QP	300	215	
6	244.2321	43.10	-14.07	29.03	46.00	-16.97	QP	300	266	

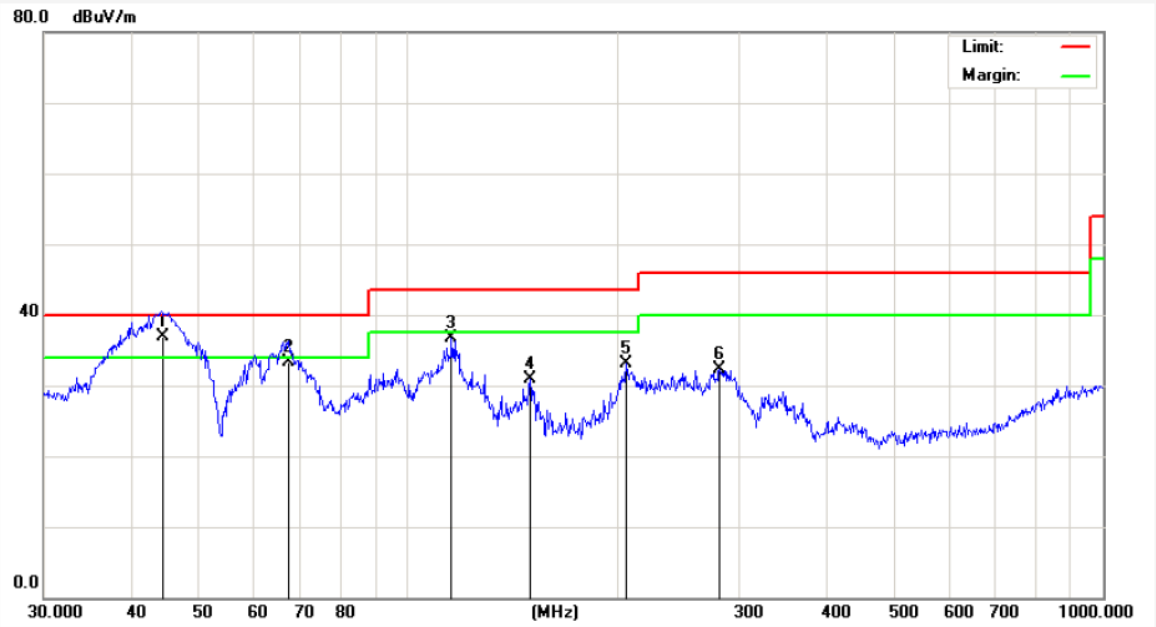
(Between 30MHz –1000 MHz)

Job No.:	**0217110068W3**	**Polarization:**	**Horizontal**
Standard:	**FCC PART15 C _3m**	**Power Source:**	**AC 120V, 60Hz for adapter**
Test item:	**Radiation Test**	**Temp.(C)/Hum.(%RH):**	**24.4(C)/50%RH**
Test Mode:	**TX Mode**	**Distance:**	**3m**
Remark	**Its for Model BSG-60W1603000**		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	45.0583	39.34	-14.33	25.01	40.00	-14.99	QP	300	16	
2	58.4074	40.21	-15.26	24.95	40.00	-15.05	QP	300	66	
3	66.7325	46.71	-18.21	28.50	40.00	-11.50	QP	300	147	
4	124.1330	49.22	-21.95	27.27	43.50	-16.23	QP	300	214	
5	164.3301	48.70	-22.73	25.97	43.50	-17.53	QP	300	255	
6	323.3204	50.71	-15.10	35.61	46.00	-10.39	QP	300	263	

Job No.:	**0217110068W3**	**Plarization:**	**Vertical**
Standard:	**FCC PART15 C _3m**	**Power Source:**	**AC 120V, 60Hz for adapter**
Test item:	**Radiation Test**	**Temp.(C)/Hum.(%RH):**	**24.4(C)/50%RH**
Test Mode:	**TX Mode**	**Distance:**	**3m**

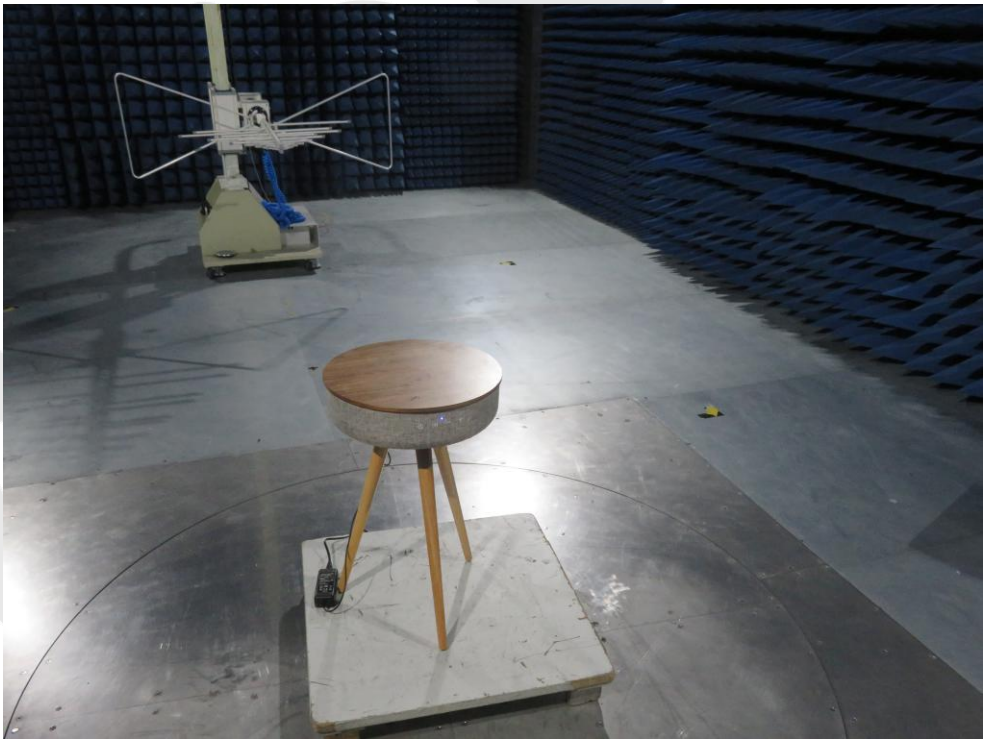


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	44.5552	51.33	-14.34	36.99	40.00	-3.01	QP	300	33	
2	67.4382	51.73	-18.51	33.22	40.00	-6.78	QP	300	142	
3	115.7256	52.69	-16.03	36.66	43.50	-6.84	QP	300	177	
4	150.0108	49.28	-18.34	30.94	43.50	-12.56	QP	300	214	
5	206.3976	48.78	-15.63	33.15	43.50	-10.35	QP	300	256	
6	281.0075	47.51	-15.20	32.31	46.00	-13.69	QP	300	299	

APPENDIX I -- TEST SETUP PHOTOGRAPH

Photo of Conducted Emission Measurement

Photo of Radiation Emission Test



APPENDIX II -- EXTERNAL PHOTOGRAPH

Please see the test report of R0217110068W1

APPENDIX III -- INTERNAL PHOTOGRAPH

Please see the test report of R0217110068W1

End of Report