



**SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch**

No. 1 Workshop, M-10, Middle section, Science & Technology Park,
Shenzhen, Guangdong, China 518057

Telephone: +86 (0) 755 2601 2053
Fax: +86 (0) 755 2671 0594
Email: ee.shenzhen@sgs.com

Report No.: ZR/2018/9003205
Page: 1 of 64

TEST REPORT

Application No.: ZR/2018/90032
Applicant: TCL Communication Ltd.
Address of Applicant: 7/F, Block F4, TCL Communication Technology Building, TCL International E City, Zhong Shan Yuan Road, Nanshan District, Shenzhen, Guangdong, P.R. China 518052
Manufacturer: TCL Communication Ltd.
Address of Manufacturer: 7/F, Block F4, TCL Communication Technology Building, TCL International E City, Zhong Shan Yuan Road, Nanshan District, Shenzhen, Guangdong, P.R. China 518052
Equipment Under Test (EUT):
EUT Name: GSM/UMTS/LTE mobile phone
Model No.: 5008A
Trade mark: alcatel
FCC ID: 2ACCJH097
Standard(s) : 47 CFR Part 15, Subpart B
Date of Receipt: 2018-10-23
Date of Test: 2018-10-29 to 2018-10-31
Date of Issue: 2018-11-06

Test Result:	Pass*
---------------------	--------------

* In the configuration tested, the EUT complied with the standards specified above.



Keny Xu
EMC Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



<i>Revision Record</i>				
<i>Version</i>	<i>Chapter</i>	<i>Date</i>	<i>Modifier</i>	<i>Remark</i>
01		2018-11-06		Original

Authorized for issue by:				
				
		<hr/>		
		Leo Lai /Project Engineer		
				
		<hr/>		
		Eric Fu /Reviewer		

2 Test Summary

Emission Part				
Item	Standard	Method	Requirement	Result
Conducted Emissions at Mains Terminals (150kHz-30MHz)	47 CFR Part 15, Subpart B	ANSI C63.4:2014	Class B	Pass
Radiated Emissions (30MHz-1GHz)	47 CFR Part 15, Subpart B	ANSI C63.4:2014	Class B	Pass
Radiated Emissions (above 1GHz)	47 CFR Part 15, Subpart B	ANSI C63.4:2014	Class B	Pass

Internal Source	Upper Frequency
Below 1.705MHz	30MHz
1.705MHz to 108MHz	1GHz
108MHz to 500MHz	2GHz
500MHz to 1GHz	5GHz
Above 1GHz	5th harmonic of the highest frequency or 40GHz, whichever is lower



3 Contents

	Page
1 COVER PAGE	1
2 TEST SUMMARY	3
3 CONTENTS	4
4 GENERAL INFORMATION	5
4.1 DETAILS OF E.U.T.	5
4.2 DESCRIPTION OF SUPPORT UNITS	5
4.3 MEASUREMENT UNCERTAINTY	5
4.4 TEST LOCATION.....	6
4.5 TEST FACILITY.....	6
4.6 DEVIATION FROM STANDARDS.....	6
4.7 ABNORMALITIES FROM STANDARD CONDITIONS	6
5 EQUIPMENT LIST	7
6 EMISSION TEST RESULTS	9
6.1 CONDUCTED EMISSIONS AT MAINS TERMINALS (150kHz-30MHz)	9
6.1.1 <i>E.U.T. Operation</i>	10
6.1.2 <i>Test Setup Diagram</i>	10
6.1.3 <i>Measurement Data</i>	10
6.2 RADIATED EMISSIONS (30MHz-1GHz).....	23
6.2.1 <i>E.U.T. Operation</i>	23
6.2.2 <i>Test Setup Diagram</i>	24
6.2.3 <i>Measurement Data</i>	24
6.3 RADIATED EMISSIONS (ABOVE 1GHz).....	43
6.3.1 <i>E.U.T. Operation</i>	43
6.3.2 <i>Test Setup Diagram</i>	44
6.3.3 <i>Measurement Data</i>	44
7 PHOTOGRAPHS	53
7.1 CONDUCTED EMISSIONS AT MAINS TERMINALS (150kHz-30MHz) TEST SETUP	53
7.2 RADIATED EMISSIONS (30MHz-1GHz) TEST SETUP	54
7.3 EUT CONSTRUCTIONAL DETAILS (EUT PHOTOS).....	56-64

4 General Information

4.1 Details of E.U.T.

Power supply:	DC 3.85V from internal battery or AC/DC adapter Model No.: UC13US, UC11US
Cable:	USB cable: 80cm shielded. Earphone cable: 120cm unshielded.

Product	Serial no.	P/N
charger	1	CBA0058AGAC5 PUAN
	2	CBA0058AGAC7 CHENYANG
	3	CBA0059AGAC5 PUAN
	4	CBA0059AGAC7 CHENYANG
battery	1	CAC2900019C1 BYD
	2	CAC2900009C7 VEKEN
headset	1	CCB0046A10C1 JUWEI
	2	CCB0046A10C4 MEIHAO
	3	CCB0049A10C1 JUWEI
	4	CCB0049A10C4 MEIHAO
USB cable	1	CDA3122005C8 PUAN
	2	CDA3122005C2 SHENGHUA
	3	CDA0000024C8 PUAN
	4	CDA0000024C2 JUWEI

Remark: All accessories were conducted test and the worst data was show in the report.

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Laptop	Lenovo	T430u	REF. No.SEA1800
Mouse	Lenovo	M-U0025-O	REF. No.:SEA2400
Router	NETGEAR	DGN2200	REF. No.SEA2200

4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Conduction Emission	± 3.0dB (150kHz to 30MHz)
2	Radiated Emission	± 4.5dB (30MHz-1GHz)
		± 4.8dB (1GHz-6GHz)
3	Temperature test	± 1 °C
4	Humidity test	± 3%

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China.
518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.5 Test Facility

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

- **CNAS (No. CNAS L2929)**

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

- **FCC –Designation Number: CN1178**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None



5 Equipment List

Conducted Emissions at Mains Terminals (150kHz-30MHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	ChangZhou ZhongYu	GB-88	SEM001-06	2017-05-10	2020-05-09
Measurement Software	AUDIX	e3 V5.4.1221d	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM024-01	2018-07-12	2019-07-11
LISN	Rohde & Schwarz	ENV216	SEM007-01	2018-09-25	2019-09-24
LISN	ETS-LINDGREN	3816/2	SEM007-02	2018-04-02	2019-04-01
EMI Test Receiver	Rohde & Schwarz	ESCI	SEM004-02	2018-04-02	2019-04-01

Radiated Emissions (30MHz-1GHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
10m Semi-Anechoic Chamber	SAEMC	FSAC1018	SEM001-03	2018-03-31	2021-03-30
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM029-01	2018-07-12	2019-07-11
EMI Test Receiver (9kHz-7GHz)	Rohde & Schwarz	ESR	SEM004-03	2018-04-02	2019-04-01
Trilog-Broadband Antenna (30MHz-1GHz)	Schwarzbeck	VULB9168	SEM003-18	2016-06-29	2019-06-28
Pre-amplifier	Sonoma Instrument Co	310N	SEM005-04	2018-04-13	2019-04-12

Radiated Emissions (above 1GHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2018-03-13	2021-03-12
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2018-07-12	2019-07-11
EXA Spectrum Analyzer	AgilentTechnologies Inc	N9010A	SEM004-09	2018-04-13	2019-04-12
Horn Antenna(1-18GHz)	Rohde & Schwarz	HF907	SEM003-07	2018-04-13	2021-04-12
Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEM004-11	2018-09-27	2019-09-26



**SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch**

Report No.: ZR/2018/9003205

Page: 8 of 64

General used equipment					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-03	2018-09-27	2019-09-26
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-04	2018-09-27	2019-09-26
Humidity/ Temperature Indicator	Mingle	N/A	SEM002-08	2018-09-27	2019-09-26
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2018-04-08	2019-04-07



6 Emission Test Results

6.1 Conducted Emissions at Mains Terminals (150kHz-30MHz)

Test Requirement:	47 CFR Part 15, Subpart B
Test Method:	ANSI C63.4:2014
Frequency Range:	150kHz to 30MHz
Limit:	
0.15M-0.5MHz	66dB(μV)-56dB(μV) quasi-peak, 56dB(μV)-46dB(μV) average
0.5M-5MHz	56dB(μV) quasi-peak, 46dB(μV) average
5M-30MHz	60dB(μV) quasi-peak, 50dB(μV) average
Detector:	Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz

6.1.1 E.U.T. Operation

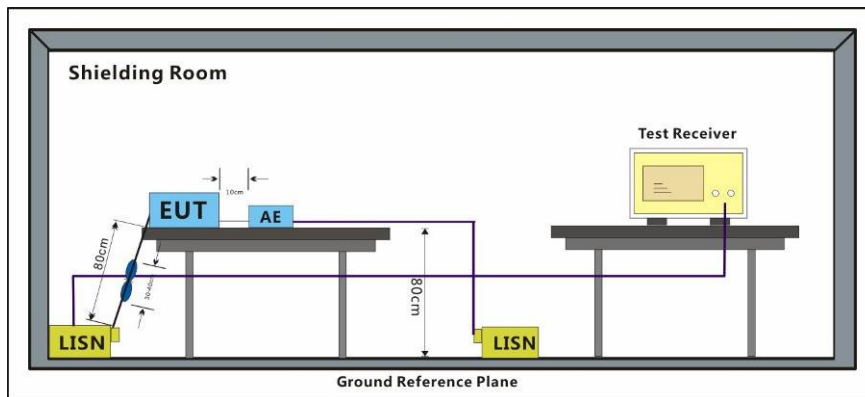
Operating Environment:

Temperature: 24.2 °C Humidity: 47.8 % RH Atmospheric Pressure: 1010 mbar

Pretest these modes to find the worst case:

- e: Telecom Idle + BT + WLAN + GPS Rx + playing MP4 (SD card) + earphone + battery + adapter1
 - f: Telecom Idle + BT + WLAN + GPS Rx + camera (Front) + earphone + battery + adapter2
 - g: Telecom Idle + BT + WLAN + GPS Rx + camera (Back) + earphone + battery + adapter3
 - h: Telecom Idle + BT + WLAN + GPS Rx + camera (Back) + earphone + battery + adapter4
 - i: Transfer data between the EUT and the PC + cable1
 - m: GSM 850 + BT + WLAN + GPS Rx + earphone + battery + adapter2
- The worst case for final test:
- e: Telecom Idle + BT + WLAN + GPS Rx + playing MP4 (SD card) + earphone + battery + adapter1
 - f: Telecom Idle + BT + WLAN + GPS Rx + camera (Front) + earphone + battery + adapter2
 - g: Telecom Idle + BT + WLAN + GPS Rx + camera (Back) + earphone + battery + adapter3
 - h: Telecom Idle + BT + WLAN + GPS Rx + camera (Back) + earphone + battery + adapter4
 - i: Transfer data between the EUT and the PC + cable1
 - m: GSM 850 + BT + WLAN + GPS Rx + earphone + battery + adapter2

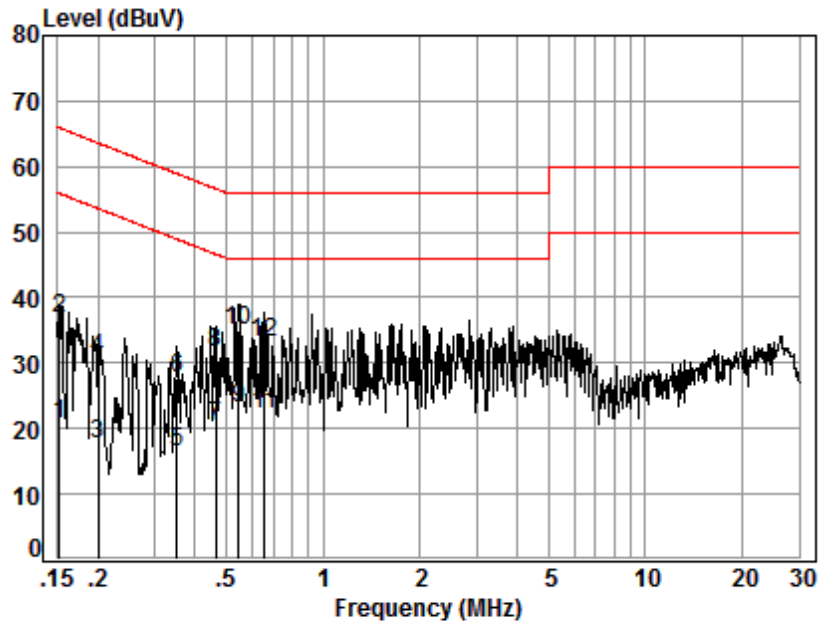
6.1.2 Test Setup Diagram



6.1.3 Measurement Data

An initial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected.

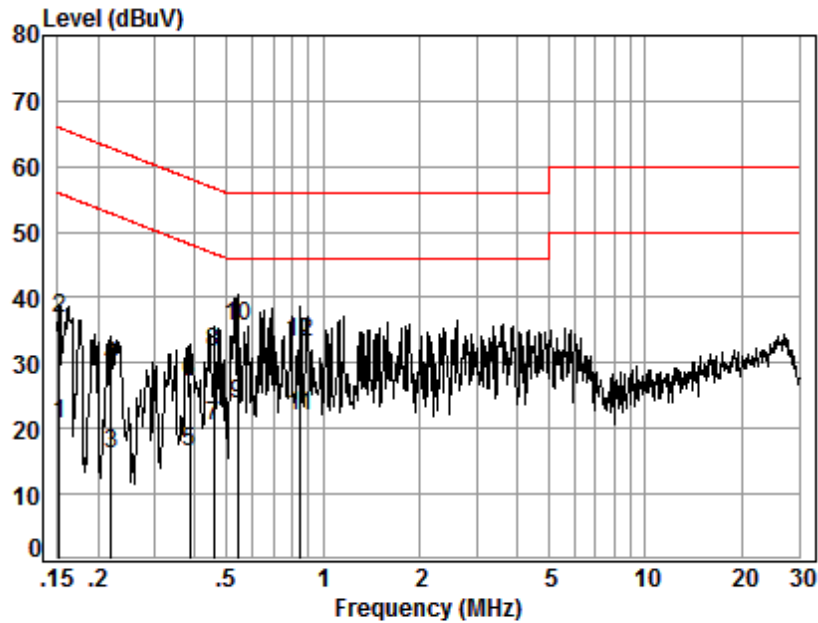
Mode:e; Line:Live Line



Site : Shielding Room
 Condition: Line
 Job No. : 90032
 Test mode: e

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.15	0.01	9.66	11.09	20.76	55.91	-35.15	Average
2	0.15	0.01	9.66	27.14	36.81	65.91	-29.10	QP
3	0.20	0.02	9.66	7.87	17.55	53.58	-36.03	Average
4	0.20	0.02	9.66	21.11	30.79	63.58	-32.79	QP
5	0.35	0.05	9.67	6.79	16.51	48.91	-32.40	Average
6	0.35	0.05	9.67	17.88	27.60	58.91	-31.31	QP
7	0.46	0.06	9.67	10.63	20.36	46.63	-26.27	Average
8	0.46	0.06	9.67	22.02	31.75	56.63	-24.88	QP
9	0.55	0.06	9.67	13.43	23.16	46.00	-22.84	Average
10	0.55	0.06	9.67	25.13	34.86	56.00	-21.14	QP
11	0.66	0.07	9.68	12.53	22.28	46.00	-23.72	Average
12	0.66	0.07	9.68	23.53	33.28	56.00	-22.72	QP

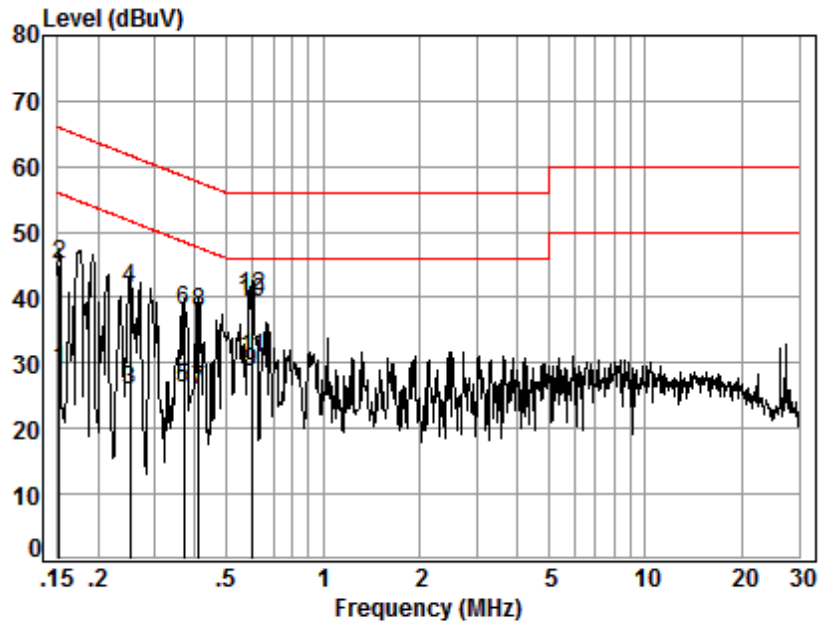
Mode:e; Line:Neutral Line



Site : Shielding Room
 Condition: Neutral
 Job No. : 90032
 Test mode: e

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.15	0.01	9.63	11.16	20.80	55.91	-35.11	Average
2	0.15	0.01	9.63	27.21	36.85	65.91	-29.06	QP
3	0.22	0.03	9.64	6.58	16.25	52.83	-36.58	Average
4	0.22	0.03	9.64	19.95	29.62	62.83	-33.21	QP
5	0.39	0.05	9.65	6.75	16.45	48.17	-31.72	Average
6	0.39	0.05	9.65	17.30	27.00	58.17	-31.17	QP
7	0.46	0.06	9.64	10.72	20.42	46.71	-26.29	Average
8	0.46	0.06	9.64	22.05	31.75	56.71	-24.96	QP
9	0.54	0.06	9.64	14.01	23.71	46.00	-22.29	Average
10	0.54	0.06	9.64	25.87	35.57	56.00	-20.43	QP
11	0.85	0.08	9.71	12.16	21.95	46.00	-24.05	Average
12	0.85	0.08	9.71	23.35	33.14	56.00	-22.86	QP

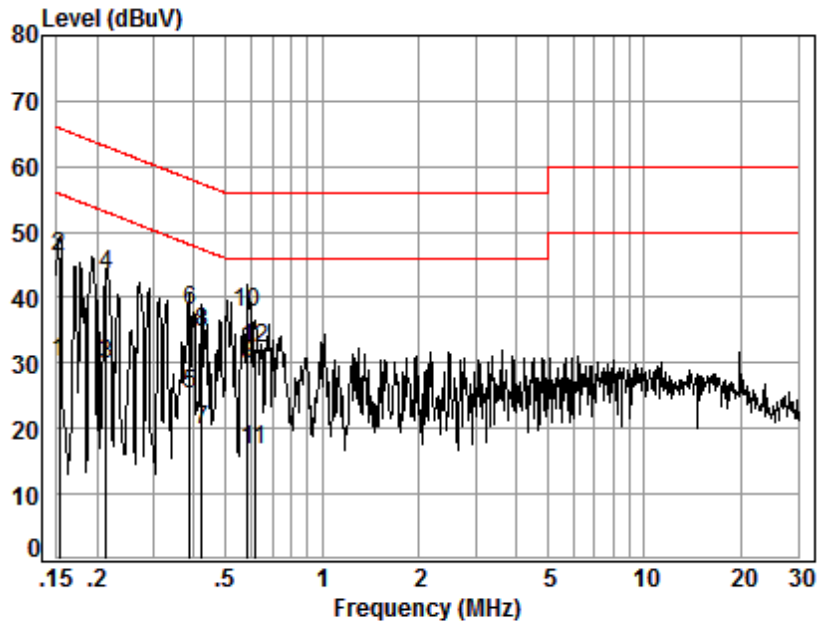
Mode:f; Line:Live Line



Site : Shielding Room
 Condition: Line
 Job No. : 90032
 Test mode: f

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.15	0.01	9.66	19.12	28.79	55.91	-27.12	Average
2	0.15	0.01	9.66	35.35	45.02	65.91	-20.89	QP
3	0.25	0.03	9.67	16.23	25.93	51.73	-25.80	Average
4	0.25	0.03	9.67	31.57	41.27	61.73	-20.46	QP
5	0.37	0.05	9.67	16.41	26.13	48.52	-22.39	Average
6	0.37	0.05	9.67	28.26	37.98	58.52	-20.54	QP
7	0.41	0.05	9.67	16.21	25.93	47.64	-21.71	Average
8	0.41	0.05	9.67	27.90	37.62	57.64	-20.02	QP
9	0.60	0.07	9.67	19.00	28.74	46.00	-17.26	Average
10	0.60	0.07	9.67	29.35	39.09	56.00	-16.91	QP
11	0.60	0.07	9.67	20.96	30.70	46.00	-15.30	Average
12	0.60	0.07	9.67	30.41	40.15	56.00	-15.85	QP

Mode:f; Line:Neutral Line

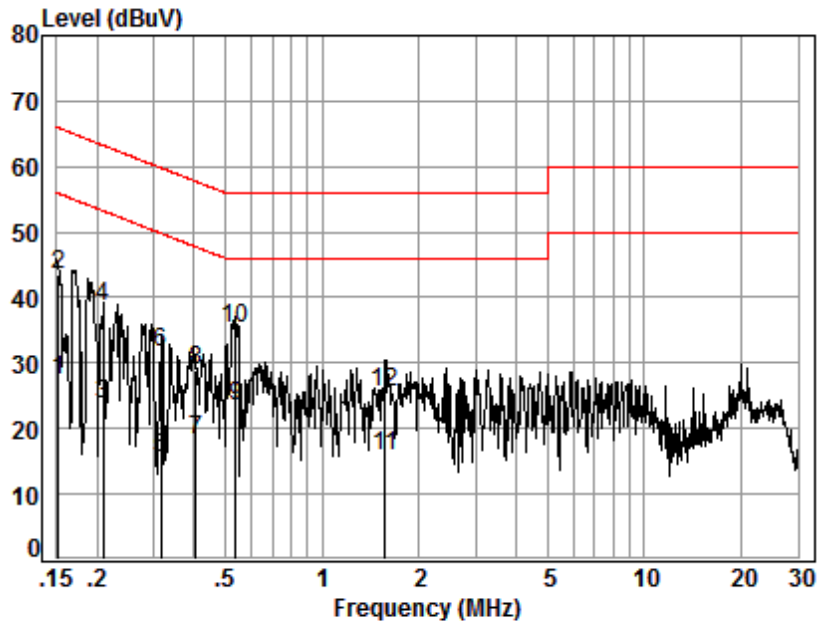


Site : Shielding Room
 Condition: Neutral
 Job No. : 90032
 Test mode: f

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.15	0.01	9.63	20.46	30.10	55.87	-25.77	Average
2	0.15	0.01	9.63	36.52	46.16	65.87	-19.71	QP
3	0.21	0.02	9.64	20.28	29.94	53.05	-23.11	Average
4	0.21	0.02	9.64	33.99	43.65	63.05	-19.40	QP
5	0.39	0.05	9.65	15.62	25.32	48.12	-22.80	Average
6	0.39	0.05	9.65	28.18	37.88	58.12	-20.24	QP
7	0.42	0.05	9.65	9.99	19.69	47.37	-27.68	Average
8	0.42	0.05	9.65	24.99	34.69	57.37	-22.68	QP
9	0.59	0.07	9.64	20.06	29.77	46.00	-16.23	Average
10	0.59	0.07	9.64	28.02	37.73	56.00	-18.27	QP
11	0.62	0.07	9.64	7.02	16.73	46.00	-29.27	Average
12	0.62	0.07	9.64	22.43	32.14	56.00	-23.86	QP



Mode:g; Line:Live Line

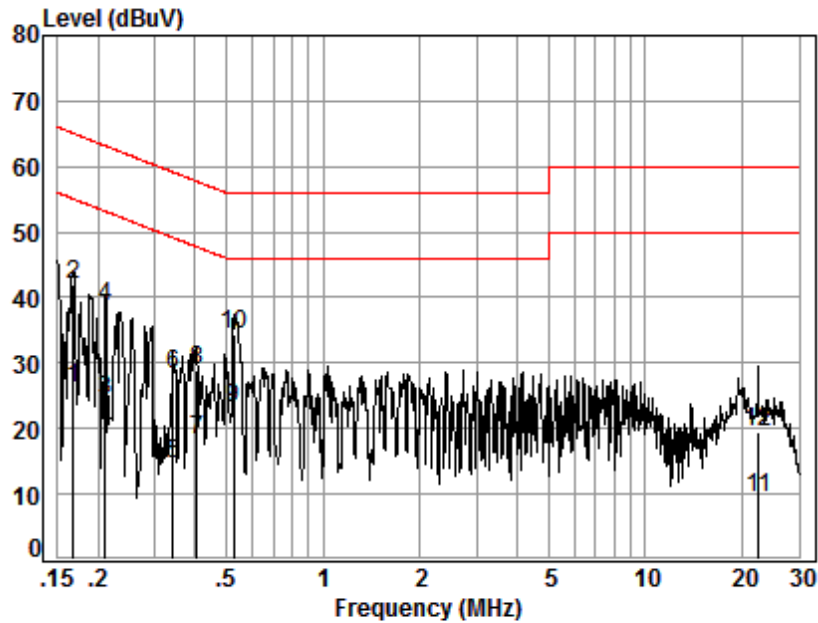


Site : Shielding Room
Condition: Line
Job No. : 90032
Test mode: g

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.15	0.01	9.66	17.70	27.37	55.91	-28.54	Average
2	0.15	0.01	9.66	33.85	43.52	65.91	-22.39	QP
3	0.21	0.02	9.66	14.02	23.70	53.23	-29.53	Average
4	0.21	0.02	9.66	29.09	38.77	63.23	-24.46	QP
5	0.31	0.04	9.67	5.66	15.37	49.84	-34.47	Average
6	0.31	0.04	9.67	21.88	31.59	59.84	-28.25	QP
7	0.41	0.05	9.67	8.66	18.38	47.73	-29.35	Average
8	0.41	0.05	9.67	19.22	28.94	57.73	-28.79	QP
9	0.54	0.06	9.67	13.58	23.31	46.00	-22.69	Average
10	0.54	0.06	9.67	25.47	35.20	56.00	-20.80	QP
11	1.57	0.13	9.73	5.86	15.72	46.00	-30.28	Average
12	1.57	0.13	9.73	15.83	25.69	56.00	-30.31	QP



Mode:g; Line:Neutral Line

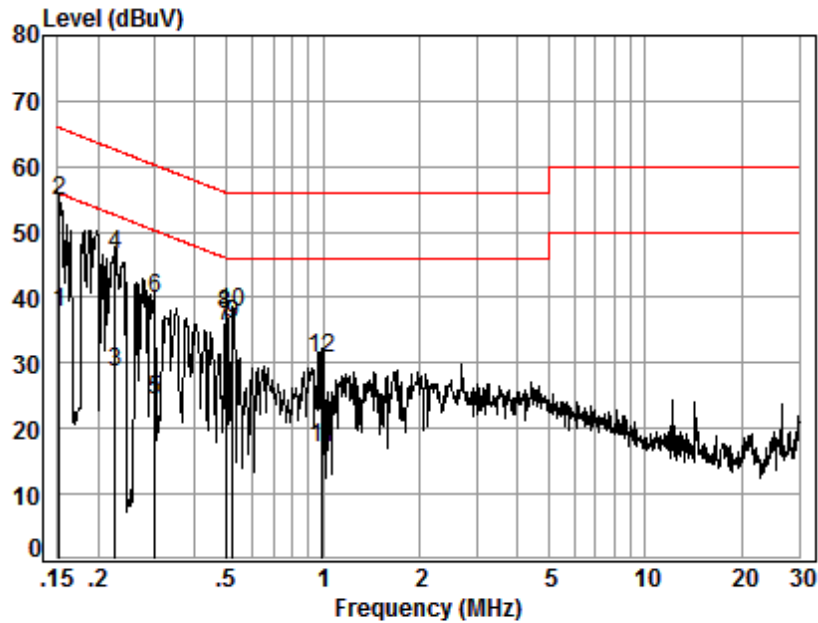


Site : Shielding Room
Condition: Neutral
Job No. : 90032
Test mode: g

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.17	0.01	9.64	16.62	26.27	55.08	-28.81	Average
2	0.17	0.01	9.64	32.34	41.99	65.08	-23.09	QP
3	0.21	0.02	9.64	14.59	24.25	53.18	-28.93	Average
4	0.21	0.02	9.64	28.88	38.54	63.18	-24.64	QP
5	0.34	0.04	9.64	4.96	14.64	49.13	-34.49	Average
6	0.34	0.04	9.64	18.53	28.21	59.13	-30.92	QP
7	0.41	0.05	9.65	8.59	18.29	47.73	-29.44	Average
8	0.41	0.05	9.65	19.26	28.96	57.73	-28.77	QP
9	0.53	0.06	9.64	13.38	23.08	46.00	-22.92	Average
10	0.53	0.06	9.64	24.57	34.27	56.00	-21.73	QP
11	22.42	0.25	10.20	-1.01	9.44	50.00	-40.56	Average
12	22.42	0.25	10.20	8.98	19.43	60.00	-40.57	QP



Mode:h; Line:Live Line

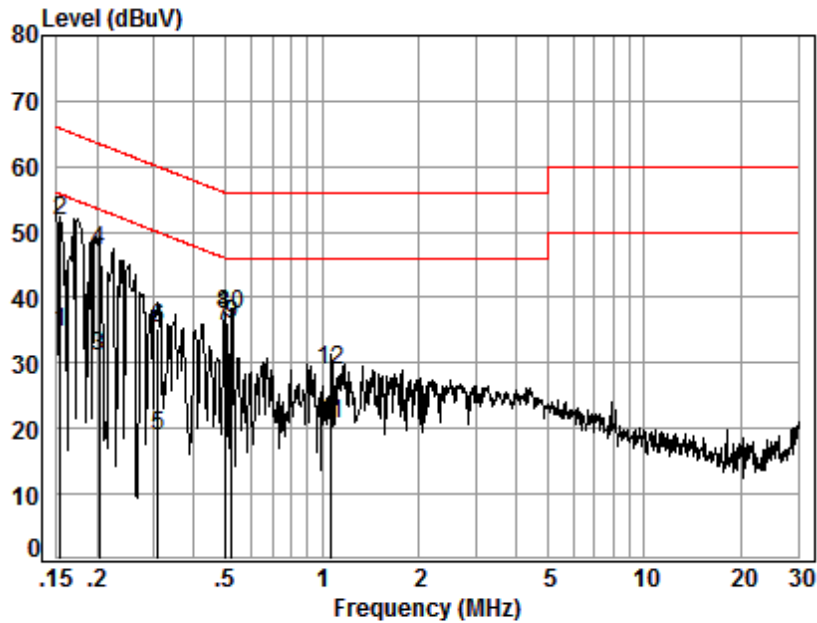


Site : Shielding Room
Condition: Line
Job No. : 90032
Test mode: h

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.15	0.01	9.66	27.91	37.58	55.91	-18.33	Average
2	0.15	0.01	9.66	44.94	54.61	65.91	-11.30	QP
3	0.23	0.03	9.67	18.78	28.48	52.57	-24.09	Average
4	0.23	0.03	9.67	36.79	46.49	62.57	-16.08	QP
5	0.30	0.04	9.67	14.63	24.34	50.24	-25.90	Average
6	0.30	0.04	9.67	30.01	39.72	60.24	-20.52	QP
7	0.50	0.06	9.67	25.89	35.62	46.01	-10.39	Average
8	0.50	0.06	9.67	27.57	37.30	56.01	-18.71	QP
9	0.52	0.06	9.67	26.05	35.78	46.00	-10.22	Average
10	0.52	0.06	9.67	27.88	37.61	56.00	-18.39	QP
11	0.99	0.09	9.74	7.22	17.05	46.00	-28.95	Average
12	0.99	0.09	9.74	20.90	30.73	56.00	-25.27	QP



Mode:h; Line:Neutral Line

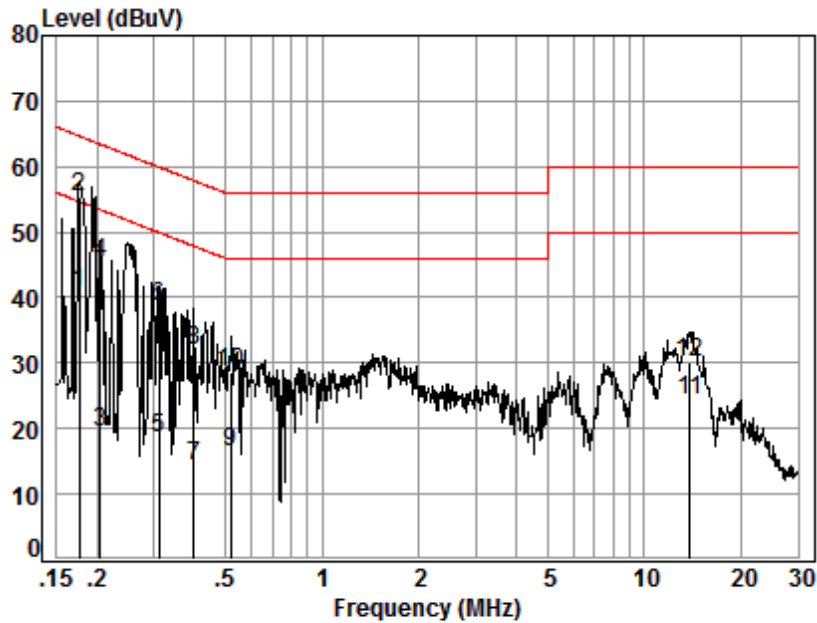


Site : Shielding Room
Condition: Neutral
Job No. : 90032
Test mode: h

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.15	0.01	9.63	24.91	34.55	55.78	-21.23	Average
2	0.15	0.01	9.63	42.05	51.69	65.78	-14.09	QP
3	0.20	0.02	9.64	21.49	31.15	53.49	-22.34	Average
4	0.20	0.02	9.64	37.51	47.17	63.49	-16.32	QP
5	0.31	0.04	9.64	9.07	18.75	49.97	-31.22	Average
6	0.31	0.04	9.64	25.51	35.19	59.97	-24.78	QP
7	0.50	0.06	9.64	26.00	35.70	46.01	-10.31	Average
8	0.50	0.06	9.64	27.67	37.37	56.01	-18.64	QP
9	0.52	0.06	9.64	26.22	35.92	46.00	-10.08	Average
10	0.52	0.06	9.64	27.86	37.56	56.00	-18.44	QP
11	1.07	0.10	9.71	11.00	20.81	46.00	-25.19	Average
12	1.07	0.10	9.71	19.16	28.97	56.00	-27.03	QP



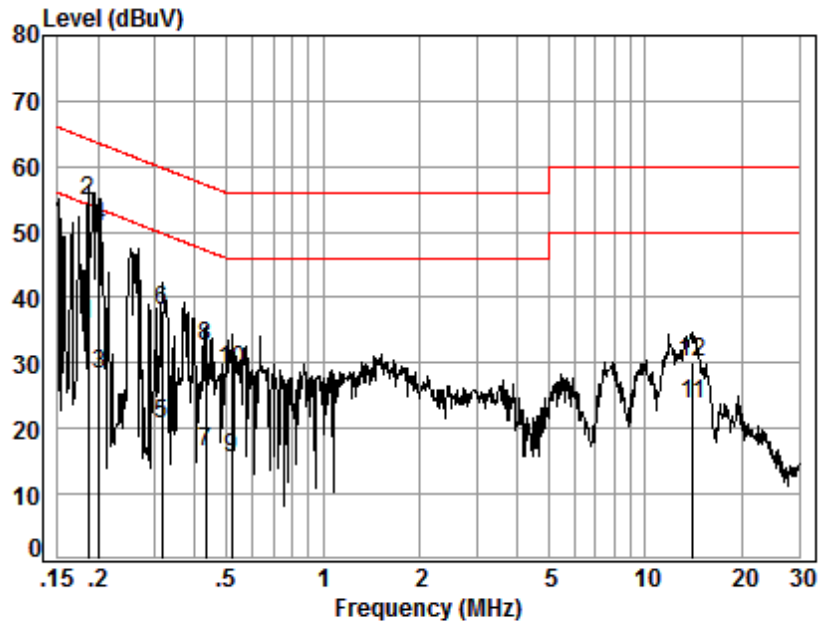
Mode:i; Line:Live Line



Site : Shielding Room
Condition: Line
Job No. : 90032
Test mode: i

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.18	0.02	9.66	31.11	40.79	54.68	-13.89	Average
2	0.18	0.02	9.66	45.68	55.36	64.68	-9.32	QP
3	0.21	0.02	9.66	9.79	19.47	53.40	-33.93	Average
4	0.21	0.02	9.66	35.68	45.36	63.40	-18.04	QP
5	0.31	0.04	9.67	8.85	18.56	49.93	-31.37	Average
6	0.31	0.04	9.67	29.03	38.74	59.93	-21.19	QP
7	0.40	0.05	9.67	4.58	14.30	47.86	-33.56	Average
8	0.40	0.05	9.67	22.21	31.93	57.86	-25.93	QP
9	0.52	0.06	9.67	6.71	16.44	46.00	-29.56	Average
10	0.52	0.06	9.67	19.01	28.74	56.00	-27.26	QP
11	13.84	0.20	10.25	13.89	24.34	50.00	-25.66	Average
12	13.84	0.20	10.25	19.52	29.97	60.00	-30.03	QP

Mode:i; Line:Neutral Line

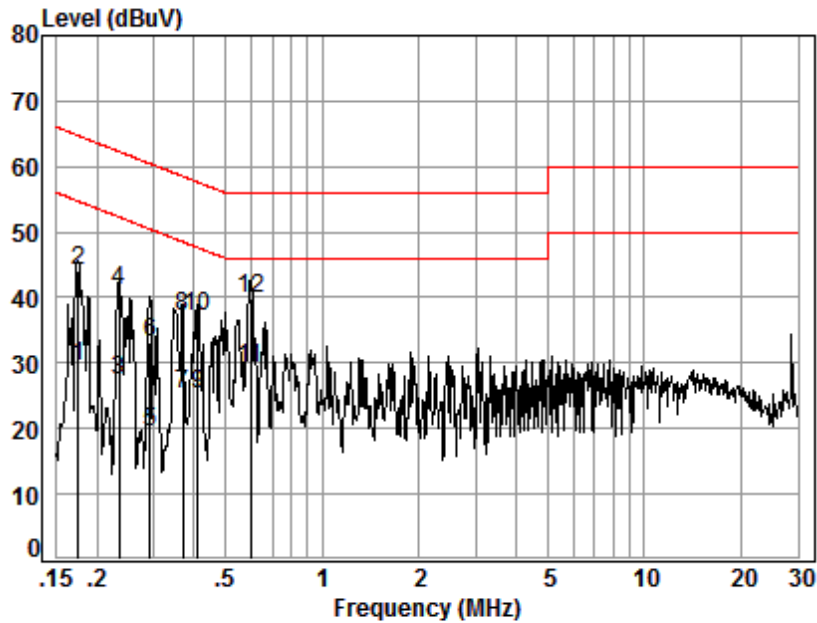


Site : Shielding Room
 Condition: Neutral
 Job No. : 90032
 Test mode: i

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.19	0.02	9.64	26.17	35.83	54.20	-18.37	Average
2	0.19	0.02	9.64	45.19	54.85	64.20	-9.35	QP
3	0.20	0.02	9.64	18.67	28.33	53.54	-25.21	Average
4	0.20	0.02	9.64	41.13	50.79	63.54	-12.75	QP
5	0.32	0.04	9.64	10.89	20.57	49.80	-29.23	Average
6	0.32	0.04	9.64	28.45	38.13	59.80	-21.67	QP
7	0.43	0.05	9.65	6.71	16.41	47.20	-30.79	Average
8	0.43	0.05	9.65	22.71	32.41	57.20	-24.79	QP
9	0.52	0.06	9.64	5.69	15.39	46.00	-30.61	Average
10	0.52	0.06	9.64	19.30	29.00	56.00	-27.00	QP
11	14.06	0.20	10.29	13.31	23.80	50.00	-26.20	Average
12	14.06	0.20	10.29	19.54	30.03	60.00	-29.97	QP



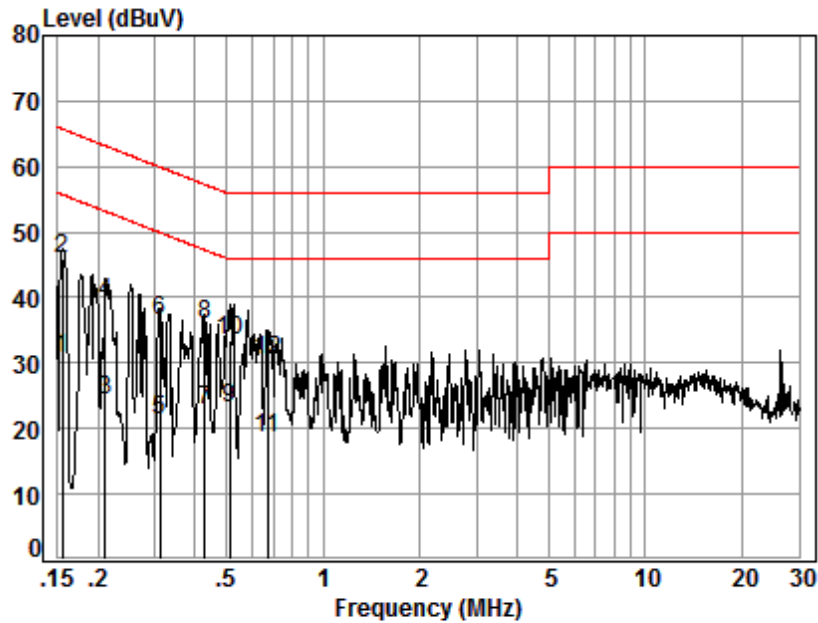
Mode:m; Line:Live Line



Site : Shielding Room
Condition: Line
Job No. : 90032
Test mode: m

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.17	0.02	9.66	19.83	29.51	54.72	-25.21	Average
2	0.17	0.02	9.66	34.33	44.01	64.72	-20.71	QP
3	0.23	0.03	9.67	17.61	27.31	52.30	-24.99	Average
4	0.23	0.03	9.67	31.37	41.07	62.30	-21.23	QP
5	0.29	0.04	9.67	9.85	19.56	50.46	-30.90	Average
6	0.29	0.04	9.67	23.59	33.30	60.46	-27.16	QP
7	0.37	0.05	9.67	15.66	25.38	48.52	-23.14	Average
8	0.37	0.05	9.67	27.38	37.10	58.52	-21.42	QP
9	0.41	0.05	9.67	15.46	25.18	47.64	-22.46	Average
10	0.41	0.05	9.67	27.46	37.18	57.64	-20.46	QP
11	0.60	0.07	9.67	19.58	29.32	46.00	-16.68	Average
12	0.60	0.07	9.67	30.09	39.83	56.00	-16.17	QP

Mode:m; Line:Neutral Line



Site : Shielding Room
 Condition: Neutral
 Job No. : 90032
 Test mode: m

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.15	0.01	9.63	20.96	30.60	55.74	-25.14	Average
2	0.15	0.01	9.63	36.25	45.89	65.74	-19.85	QP
3	0.21	0.02	9.64	14.72	24.38	53.18	-28.80	Average
4	0.21	0.02	9.64	29.66	39.32	63.18	-23.86	QP
5	0.31	0.04	9.64	11.70	21.38	49.93	-28.55	Average
6	0.31	0.04	9.64	26.69	36.37	59.93	-23.56	QP
7	0.43	0.05	9.65	13.01	22.71	47.29	-24.58	Average
8	0.43	0.05	9.65	26.25	35.95	57.29	-21.34	QP
9	0.51	0.06	9.64	13.57	23.27	46.00	-22.73	Average
10	0.51	0.06	9.64	23.75	33.45	56.00	-22.55	QP
11	0.67	0.07	9.65	8.74	18.46	46.00	-27.54	Average
12	0.67	0.07	9.65	20.68	30.40	56.00	-25.60	QP



6.2 Radiated Emissions (30MHz-1GHz)

Test Requirement:	47 CFR Part 15, Subpart B
Test Method:	ANSI C63.4:2014
Frequency Range:	30MHz to 1GHz
Measurement Distance:	10m
Limit:	
30MHz -88MHz	29.5(dBμV/m) quasi-peak
88MHz-216MHz	33.1(dBμV/m) quasi-peak
216MHz-960MHz	35.6(dBμV/m) quasi-peak
960MHz-1000MHz	43.5(dBμV/m) quasi-peak
Detector:	Peak for pre-scan (120kHz resolution bandwidth) 30M to1000MHz

6.2.1 E.U.T. Operation

Operating Environment:

Temperature: 25 °C Humidity: 51 % RH Atmospheric Pressure: 1010 mbar

Pretest these modes to find the worst case: e: Telecom Idle + BT + WLAN + GPS Rx + playing MP4 (SD card) + earphone + battery + adapter1

f: Telecom Idle + BT + WLAN + GPS Rx + camera (Front) + earphone + battery + adapter2

g: Telecom Idle + BT + WLAN + GPS Rx + camera (Back) + earphone + battery + adapter3

h: Telecom Idle + BT + WLAN + GPS Rx + camera (Back) + earphone + battery + adapter4

i: Transfer data between the EUT and the PC + cable1

j: Transfer data between the EUT and the PC + cable2

k: Transfer data between the EUT and the PC + cable3

l: Transfer data between the EUT and the PC + cable4

m: GSM 850 + BT + WLAN + GPS Rx + earphone + battery + adapter2

n: GSM 1900 + BT + WLAN + GPS Rx + earphone + battery + adapter2

o: WCDMA Band II + BT + WLAN + GPS Rx + earphone + battery2

p: WCDMA Band VI + BT + WLAN + GPS Rx + earphone + battery2

q: LTE band 2 + BT + WLAN + GPS Rx + earphone + battery + adapter2

r: LTE band 3 + BT + WLAN + GPS Rx + earphone + battery + adapter2

s: LTE band 5 + BT + WLAN + GPS Rx + earphone + battery + adapter2

t: LTE band 7 + BT + WLAN + GPS Rx + earphone + battery + adapter2

u: LTE band 12 + BT + WLAN + GPS Rx + earphone + battery + adapter2

v: LTE band 66 + BT + WLAN + GPS Rx + earphone + battery + adapter2

w: LTE band 40 + BT + WLAN + GPS Rx + earphone + battery + adapter2

The worst case for final test: e: Telecom Idle + BT + WLAN + GPS Rx + playing MP4 (SD card) + earphone + battery + adapter1

f: Telecom Idle + BT + WLAN + GPS Rx + camera (Front) + earphone + battery + adapter2

g: Telecom Idle + BT + WLAN + GPS Rx + camera (Back) + earphone + battery + adapter3

h: Telecom Idle + BT + WLAN + GPS Rx + camera (Back) + earphone + battery +

adapter4

i: Transfer data between the EUT and the PC + cable1

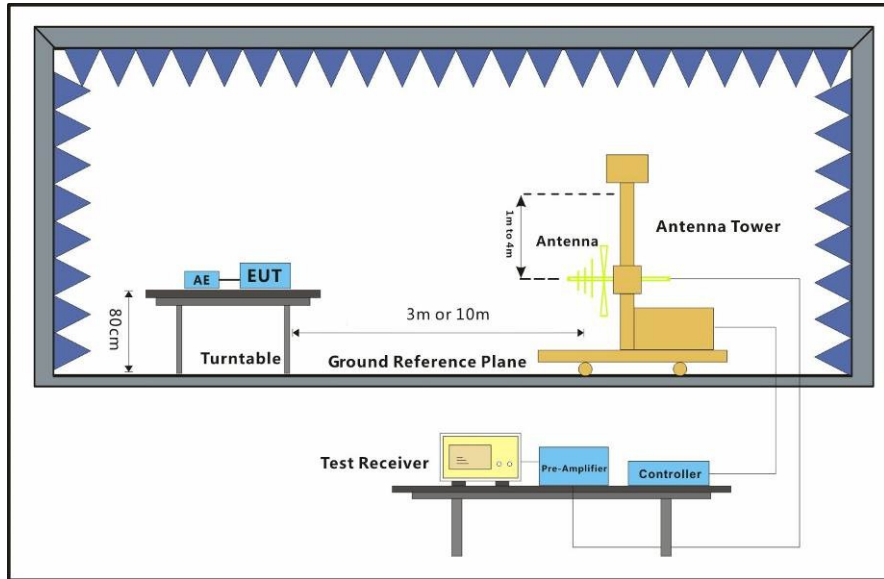
j: Transfer data between the EUT and the PC + cable2

k: Transfer data between the EUT and the PC + cable3

l: Transfer data between the EUT and the PC + cable4

m: GSM 850 + BT + WLAN + GPS Rx + earphone + battery + adapter2

6.2.2 Test Setup Diagram

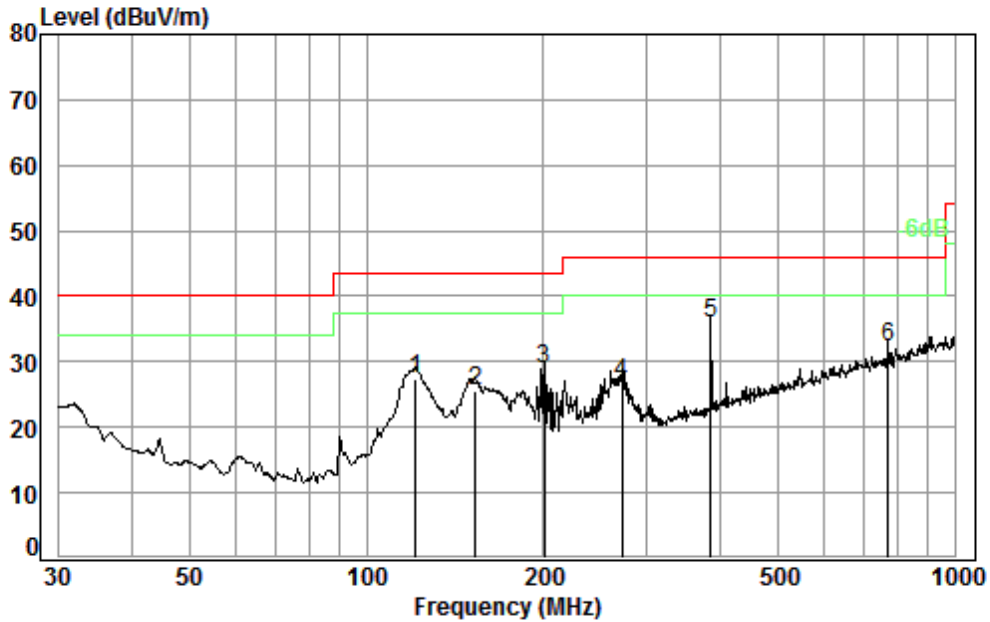


6.2.3 Measurement Data

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities.



Mode:e; Polarization:Horizontal



Condition: 3m HORIZONTAL

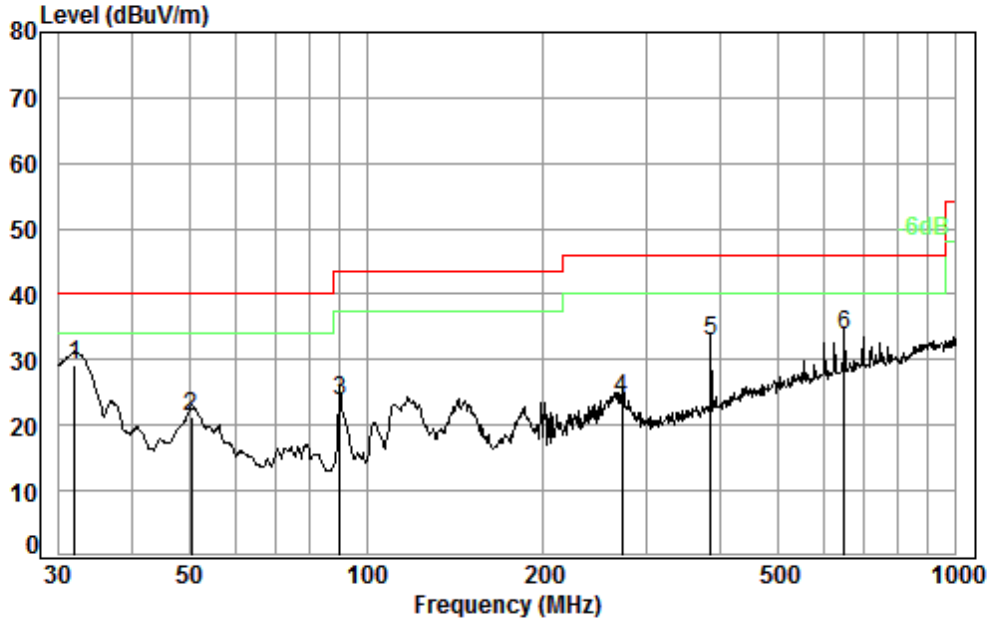
Job No. : 90032

Test mode: e

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	121.12	1.26	13.14	27.23	40.05	27.22	43.50	-16.28
2	153.20	1.32	14.91	27.07	36.42	25.58	43.50	-17.92
3	200.69	1.40	16.53	26.90	37.78	28.81	43.50	-14.69
4	271.32	1.77	18.93	26.70	32.76	26.76	46.00	-19.24
5 pp	383.93	2.16	22.00	27.11	38.99	36.04	46.00	-9.96
6	768.75	3.11	28.32	27.68	28.64	32.39	46.00	-13.61



Mode:e; Polarization:Vertical

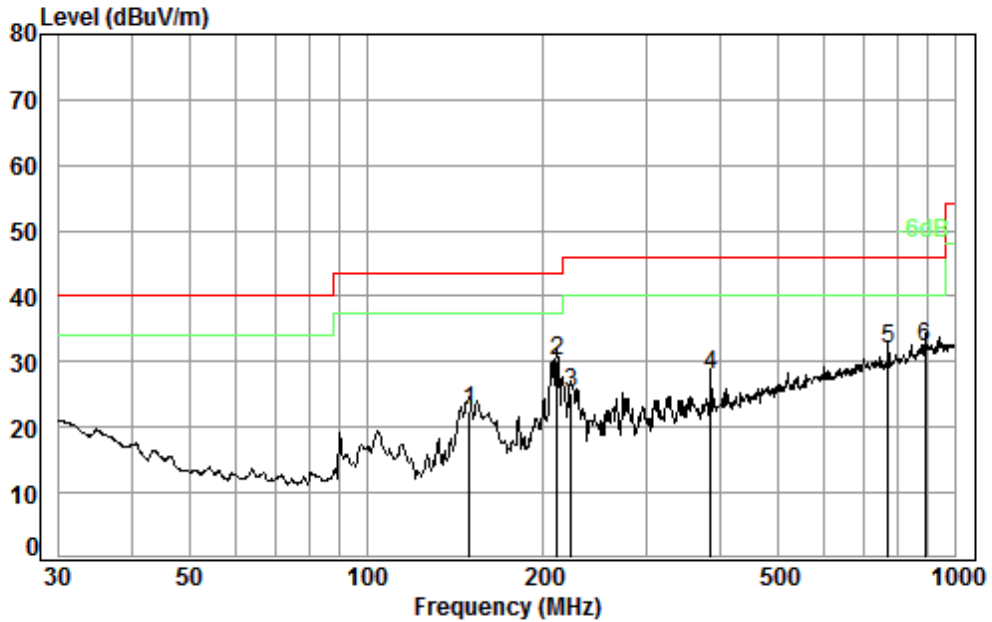


Condition: 3m VERTICAL
Job No. : 90032
Test mode: e

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 pp	31.95	0.60	21.40	27.45	34.69	29.24	40.00	-10.76
2	50.41	0.80	14.16	27.41	33.63	21.18	40.00	-18.82
3	90.22	1.10	13.12	27.36	36.96	23.82	43.50	-19.68
4	271.32	1.77	18.93	26.70	29.91	23.91	46.00	-22.09
5	383.93	2.16	22.00	27.11	35.87	32.92	46.00	-13.08
6	647.39	2.80	27.24	27.87	31.66	33.83	46.00	-12.17



Mode:f; Polarization:Horizontal



Condition: 3m HORIZONTAL

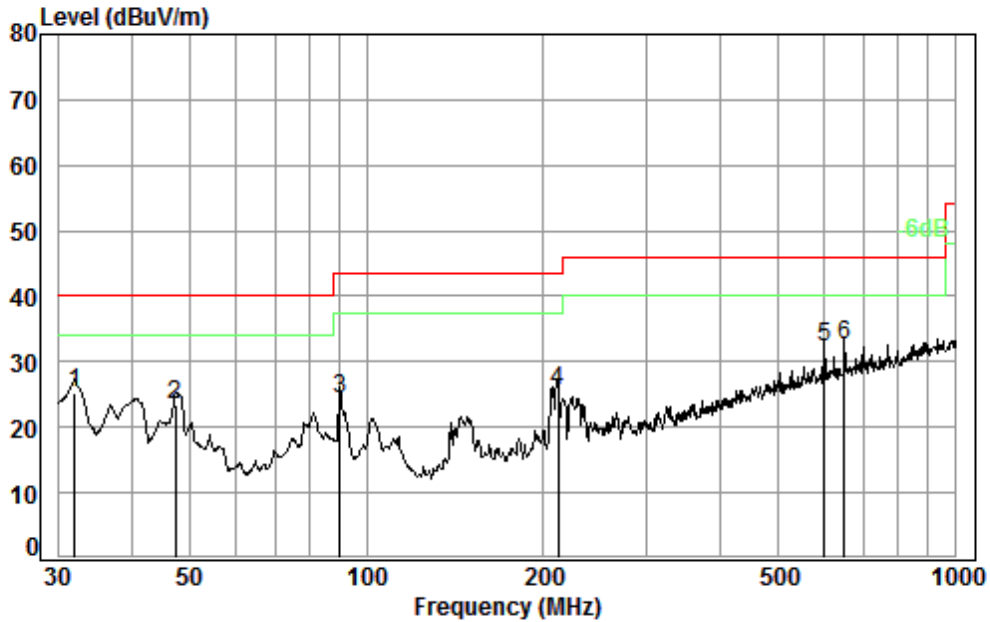
Job No. : 90032

Test mode: f

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	149.49	1.32	14.58	27.09	33.80	22.61	43.50	-20.89
2 pp	210.79	1.46	16.89	26.87	38.49	29.97	43.50	-13.53
3	222.95	1.53	17.44	26.83	32.99	25.13	46.00	-20.87
4	383.93	2.16	22.00	27.11	30.97	28.02	46.00	-17.98
5	768.75	3.11	28.32	27.68	28.27	32.02	46.00	-13.98
6	887.61	3.55	29.65	27.12	26.14	32.22	46.00	-13.78



Mode:f; Polarization:Vertical

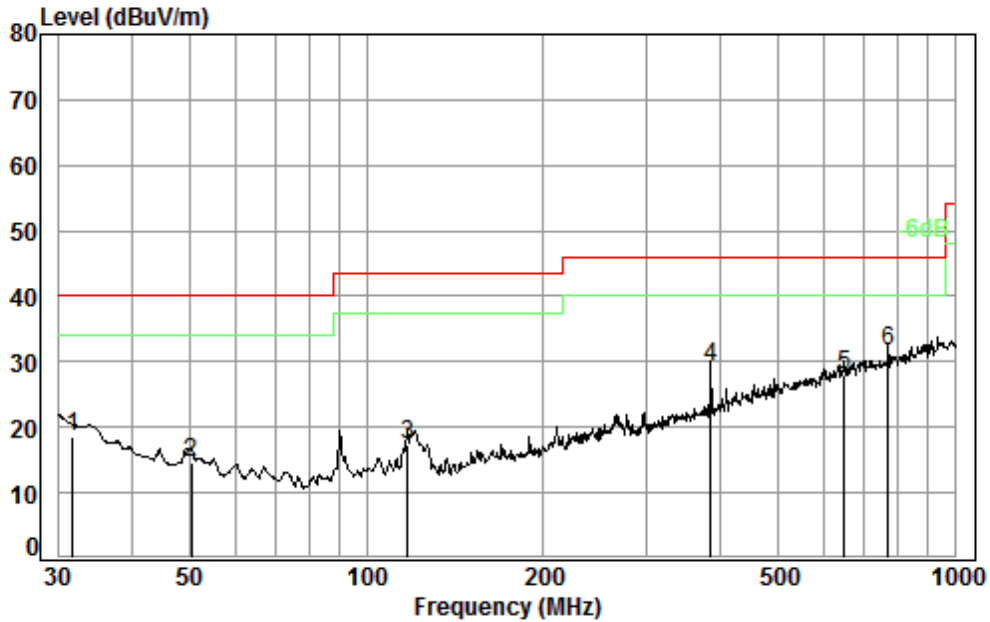


Condition: 3m VERTICAL
Job No. : 90032
Test mode: f

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	31.95	0.60	21.40	27.45	30.73	25.28	40.00	-14.72
2	47.49	0.75	14.96	27.41	34.99	23.29	40.00	-16.71
3	90.22	1.10	13.12	27.36	37.34	24.20	43.50	-19.30
4	211.53	1.47	16.91	26.87	33.99	25.50	43.50	-18.00
5	599.32	2.70	26.59	27.95	31.00	32.34	46.00	-13.66
6 pp	647.39	2.80	27.24	27.87	30.34	32.51	46.00	-13.49



Mode:g; Polarization:Horizontal



Condition: 3m HORIZONTAL

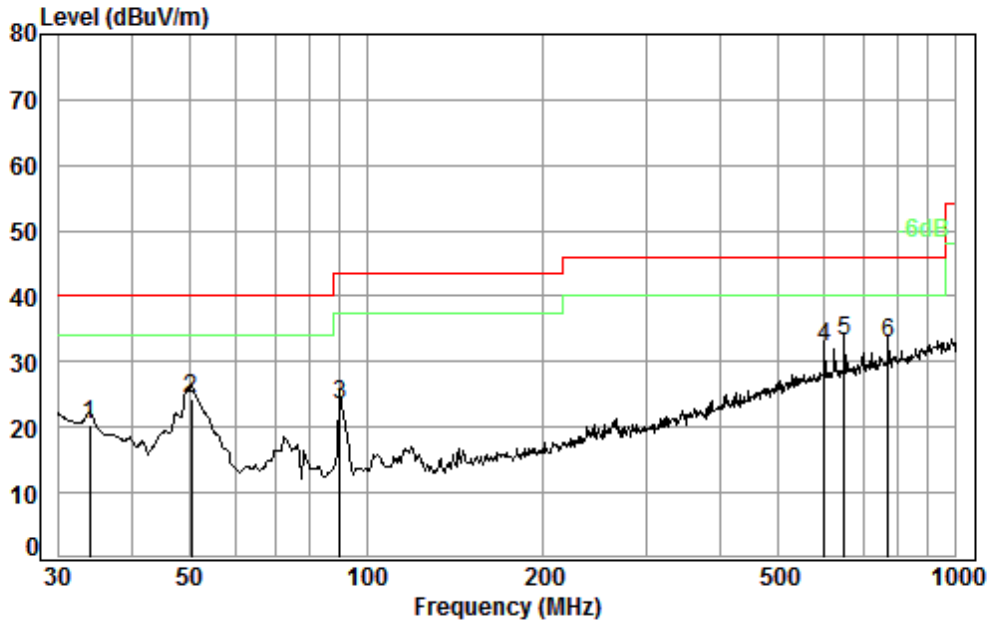
Job No. : 90032

Test mode: g

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	31.73	0.60	21.52	27.45	23.74	18.41	40.00	-21.59
2	50.41	0.80	14.16	27.41	27.10	14.65	40.00	-25.35
3	117.36	1.25	13.21	27.25	30.26	17.47	43.50	-26.03
4	383.93	2.16	22.00	27.11	32.02	29.07	46.00	-16.93
5	647.39	2.80	27.24	27.87	25.94	28.11	46.00	-17.89
6 pp	768.75	3.11	28.32	27.68	27.86	31.61	46.00	-14.39



Mode:g; Polarization:Vertical

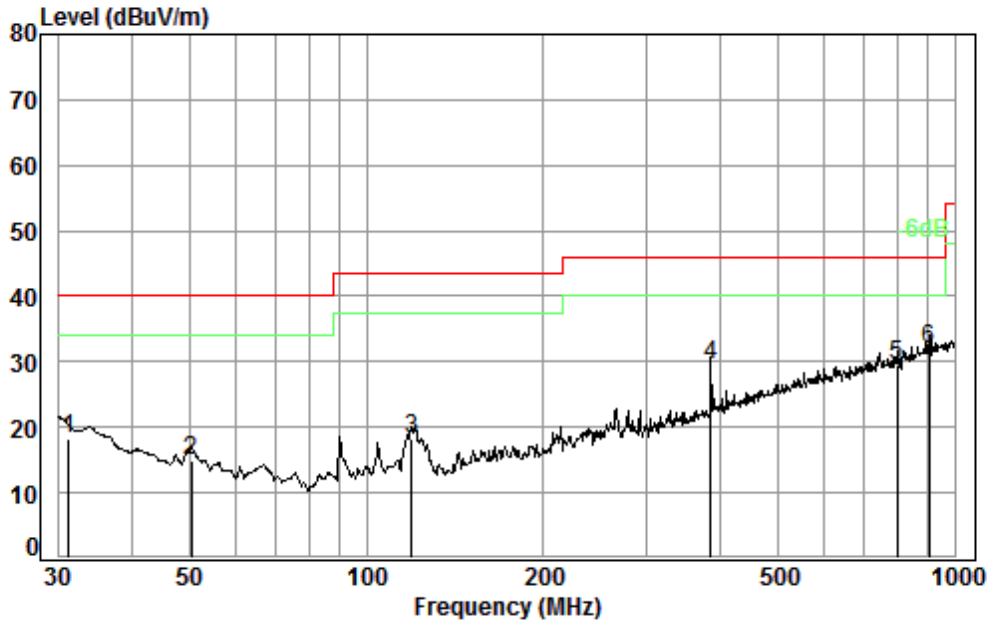


Condition: 3m VERTICAL
Job No. : 90032
Test mode: g

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	33.92	0.60	20.37	27.44	26.94	20.47	40.00	-19.53
2	50.41	0.80	14.16	27.41	36.79	24.34	40.00	-15.66
3	90.22	1.10	13.12	27.36	36.59	23.45	43.50	-20.05
4	599.32	2.70	26.59	27.95	30.94	32.28	46.00	-13.72
5 pp	647.39	2.80	27.24	27.87	30.95	33.12	46.00	-12.88
6	768.75	3.11	28.32	27.68	29.18	32.93	46.00	-13.07



Mode:h; Polarization:Horizontal

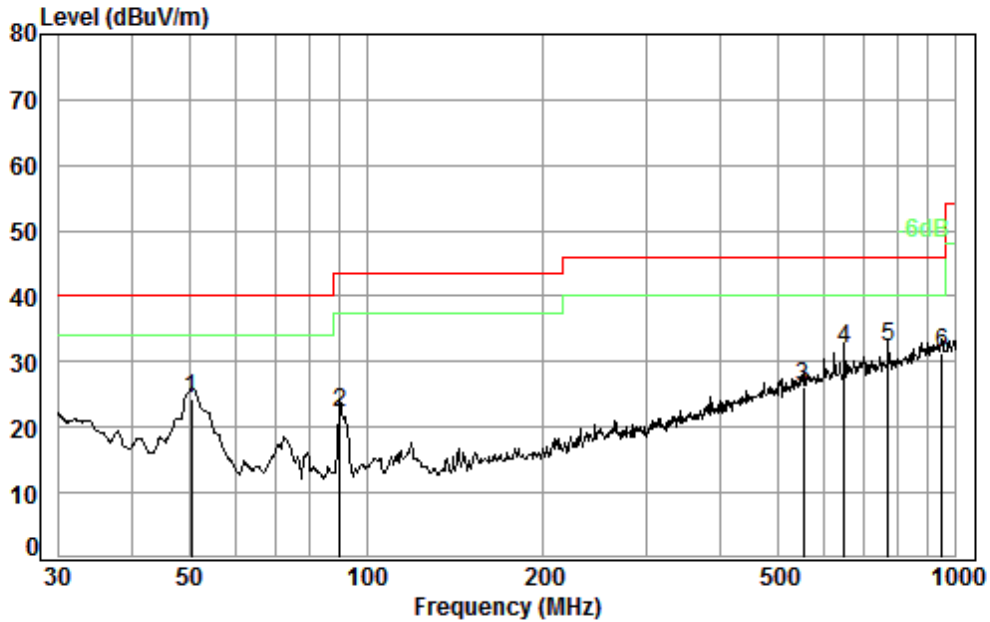


Condition: 3m HORIZONTAL
Job No. : 90032
Test mode: h

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	31.29	0.60	21.77	27.45	23.38	18.30	40.00	-21.70
2	50.41	0.80	14.16	27.41	27.40	14.95	40.00	-25.05
3	119.44	1.25	13.12	27.24	31.09	18.22	43.50	-25.28
4	383.93	2.16	22.00	27.11	32.59	29.64	46.00	-16.36
5	796.18	3.19	28.48	27.65	25.51	29.53	46.00	-16.47
6 pp	903.31	3.60	29.82	27.04	25.68	32.06	46.00	-13.94



Mode:h; Polarization:Vertical

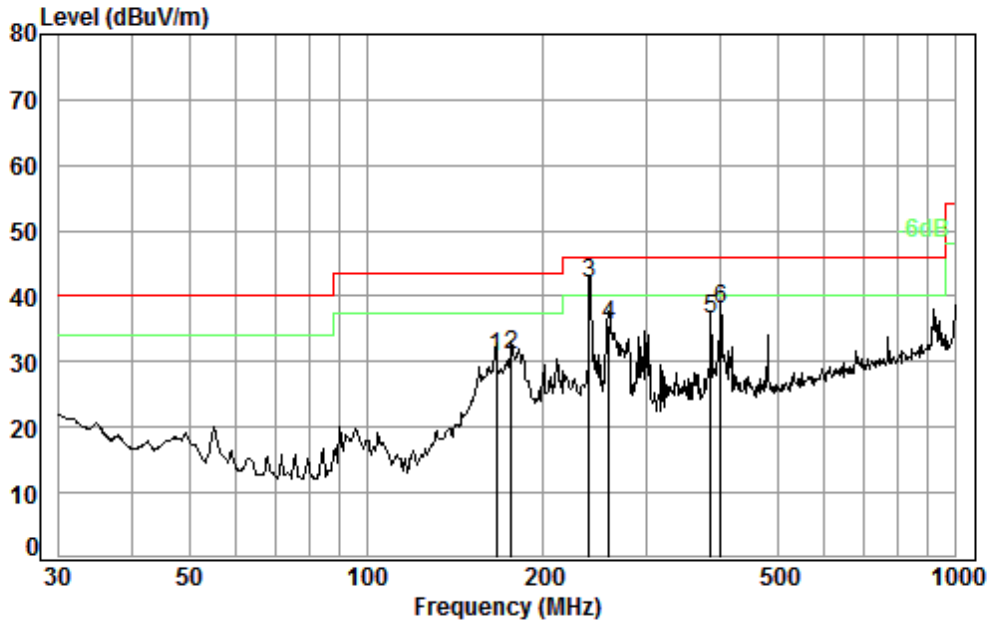


Condition: 3m VERTICAL
Job No. : 90032
Test mode: h

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	50.41	0.80	14.16	27.41	36.65	24.20	40.00	-15.80
2	90.22	1.10	13.12	27.36	35.49	22.35	43.50	-21.15
3	550.95	2.65	25.66	27.79	25.68	26.20	46.00	-19.80
4	647.39	2.80	27.24	27.87	29.63	31.80	46.00	-14.20
5 pp	768.75	3.11	28.32	27.68	28.56	32.31	46.00	-13.69
6	948.76	3.65	30.05	26.79	24.50	31.41	46.00	-14.59



Mode:i; Polarization:Horizontal



Condition: 3m HORIZONTAL

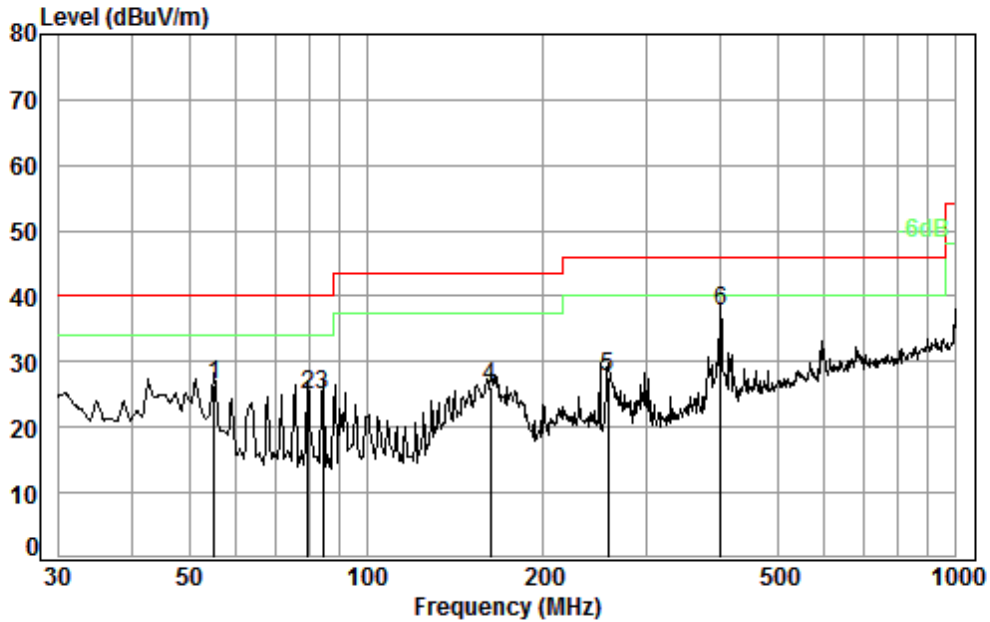
Job No. : 90032

Test mode: i

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	166.07	1.35	15.63	27.02	40.78	30.74	43.50	-12.76
2	176.27	1.36	15.83	26.98	40.90	31.11	43.50	-12.39
3 pp	239.15	1.62	18.73	26.79	48.45	42.01	46.00	-3.99
4	258.33	1.71	19.08	26.74	41.56	35.61	46.00	-10.39
5	383.93	2.16	22.00	27.11	39.59	36.64	46.00	-9.36
6	399.03	2.20	22.38	27.18	40.77	38.17	46.00	-7.83



Mode:i; Polarization:Vertical



Condition: 3m VERTICAL

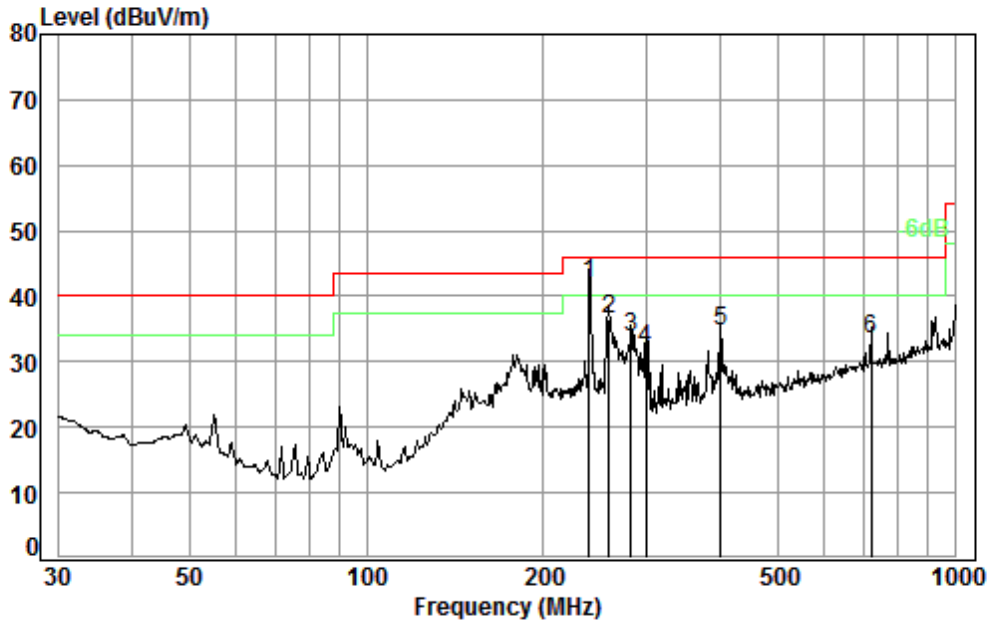
Job No. : 90032

Test mode: i

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	55.22	0.80	13.66	27.40	39.29	26.35	40.00	-13.65
2	79.52	1.08	12.04	27.37	39.26	25.01	40.00	-14.99
3	84.41	1.10	12.50	27.36	38.73	24.97	40.00	-15.03
4	162.61	1.34	15.55	27.04	36.44	26.29	43.50	-17.21
5	257.42	1.71	19.06	26.74	33.73	27.76	46.00	-18.24
6 pp	399.03	2.20	22.38	27.18	40.35	37.75	46.00	-8.25



Mode:j; Polarization:Horizontal



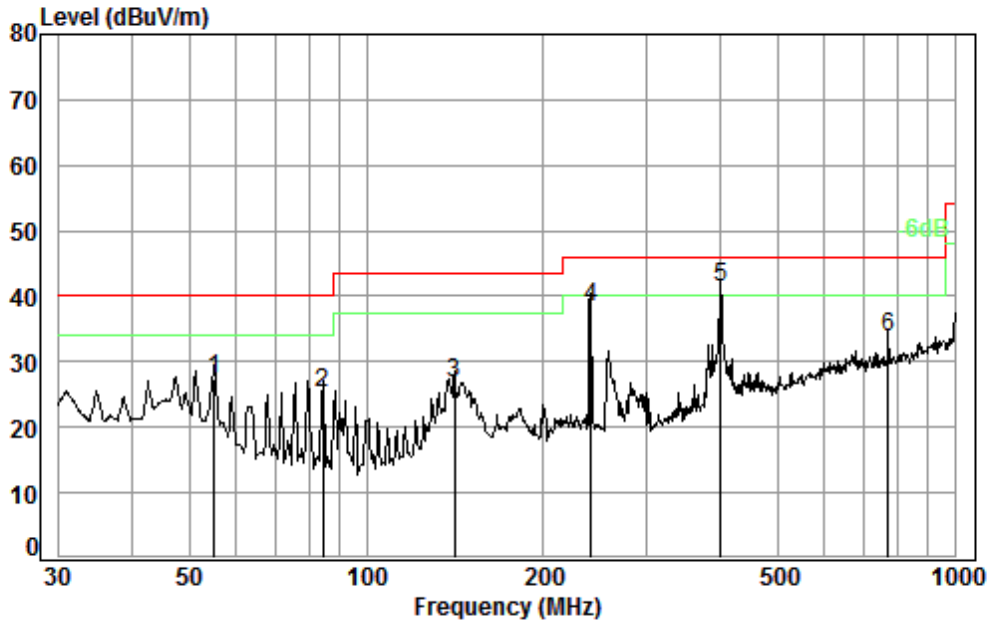
Condition: 3m HORIZONTAL

Job No. : 90032

Test mode: j

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 pp	239.15	1.62	18.73	26.79	48.52	42.08	46.00	-3.92
2	258.33	1.71	19.08	26.74	42.32	36.37	46.00	-9.63
3	281.01	1.82	18.84	26.68	39.68	33.66	46.00	-12.34
4	298.27	1.89	19.53	26.64	37.14	31.92	46.00	-14.08
5	399.03	2.20	22.38	27.18	37.24	34.64	46.00	-11.36
6	719.20	2.96	28.02	27.75	30.18	33.41	46.00	-12.59

Mode:j; Polarization:Vertical



Condition: 3m VERTICAL

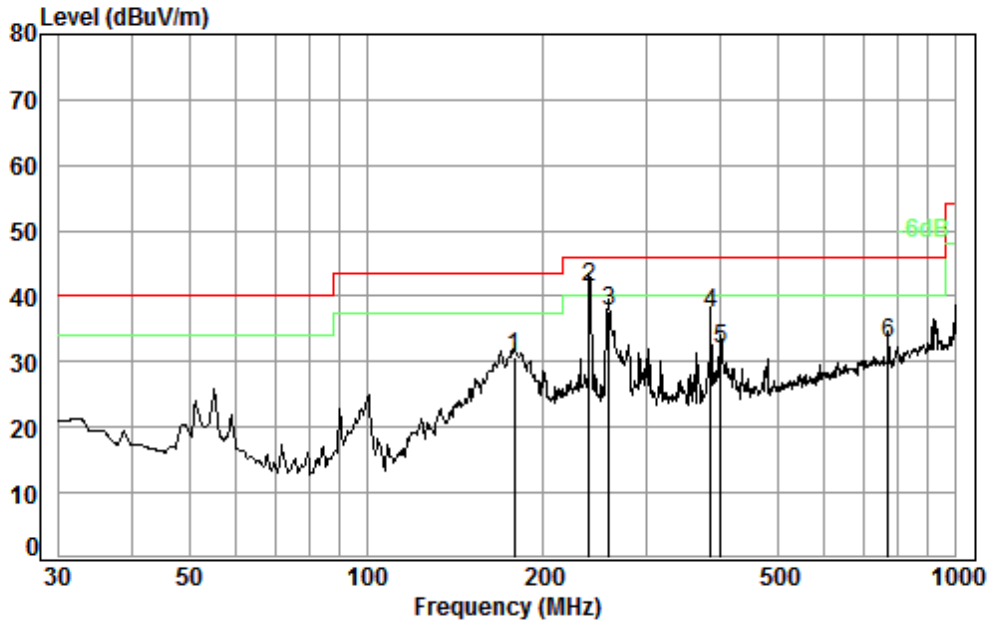
Job No. : 90032

Test mode: j

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	55.22	0.80	13.66	27.40	40.41	27.47	40.00	-12.53
2	84.41	1.10	12.50	27.36	38.95	25.19	40.00	-14.81
3	141.33	1.30	13.83	27.13	38.62	26.62	43.50	-16.88
4	240.83	1.63	18.81	26.78	44.72	38.38	46.00	-7.62
5 pp	399.03	2.20	22.38	27.18	44.02	41.42	46.00	-4.58
6	768.75	3.11	28.32	27.68	29.95	33.70	46.00	-12.30



Mode:k; Polarization:Horizontal



Condition: 3m HORIZONTAL

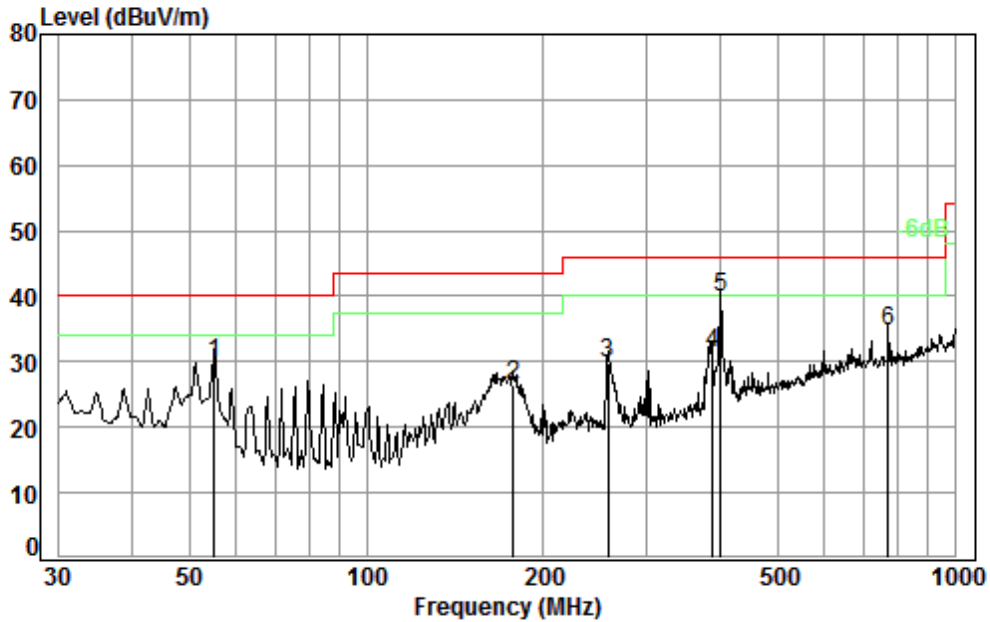
Job No. : 90032

Test mode: k

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	178.13	1.37	15.86	26.98	40.47	30.72	43.50	-12.78
2 pp	239.15	1.62	18.73	26.79	47.80	41.36	46.00	-4.64
3	258.33	1.71	19.08	26.74	43.55	37.60	46.00	-8.40
4	383.93	2.16	22.00	27.11	40.27	37.32	46.00	-8.68
5	399.03	2.20	22.38	27.18	34.54	31.94	46.00	-14.06
6	768.75	3.11	28.32	27.68	28.95	32.70	46.00	-13.30



Mode:k; Polarization:Vertical



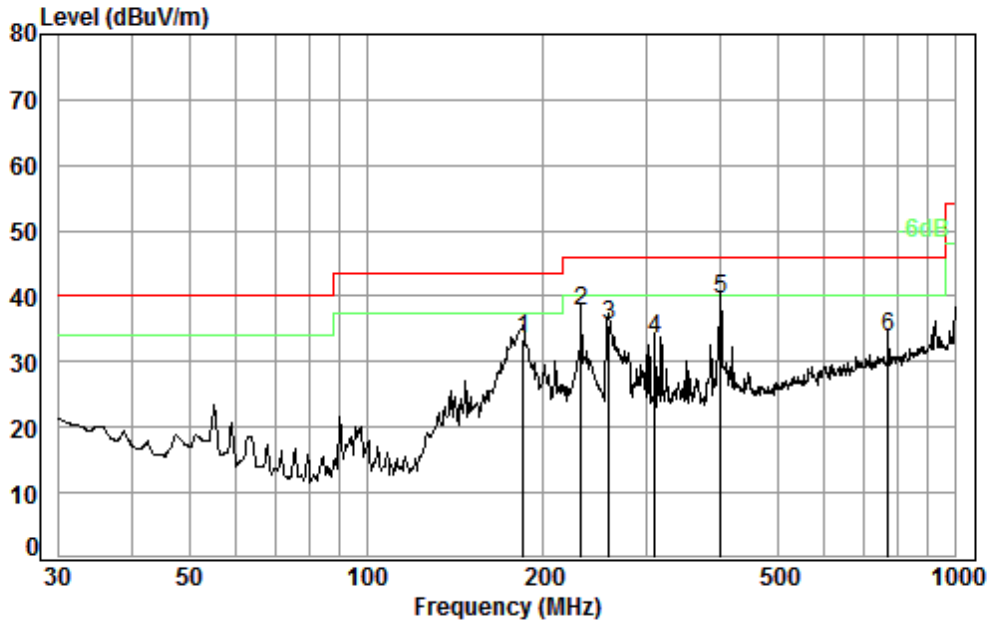
Condition: 3m VERTICAL

Job No. : 90032

Test mode: k

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	55.22	0.80	13.66	27.40	42.74	29.80	40.00	-10.20
2	177.51	1.37	15.85	26.98	36.35	26.59	43.50	-16.91
3	257.42	1.71	19.06	26.74	35.70	29.73	46.00	-16.27
4	386.63	2.16	22.07	27.12	34.07	31.18	46.00	-14.82
5 pp	399.03	2.20	22.38	27.18	42.50	39.90	46.00	-6.10
6	768.75	3.11	28.32	27.68	31.02	34.77	46.00	-11.23

Mode:I; Polarization:Horizontal

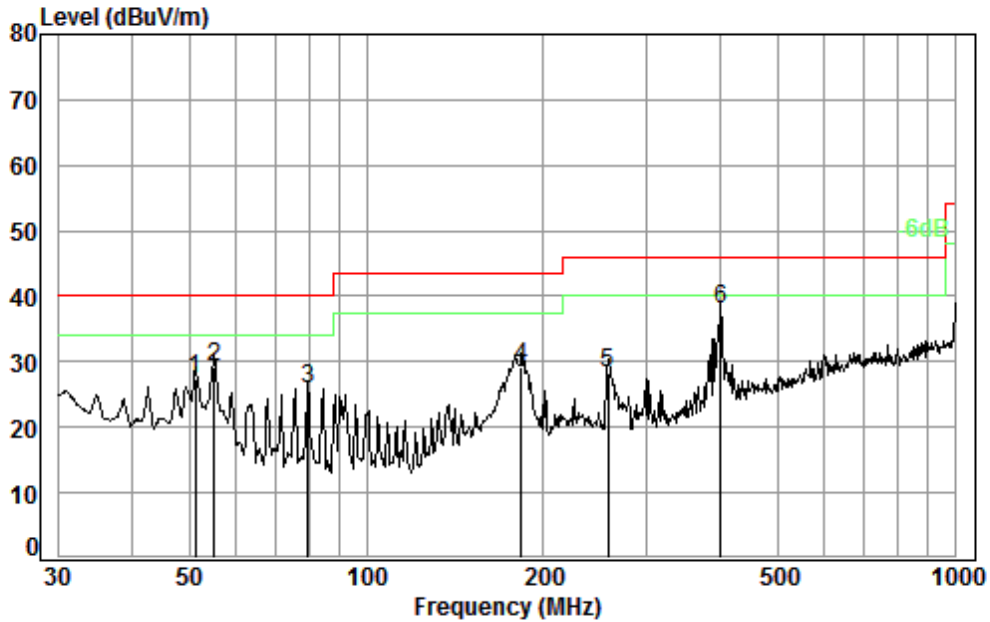


Condition: 3m HORIZONTAL
 Job No. : 90032
 Test mode: 1

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	184.49	1.38	16.04	26.95	42.97	33.44	43.50	-10.06
2	231.72	1.58	18.15	26.81	44.75	37.67	46.00	-8.33
3	258.33	1.71	19.08	26.74	41.39	35.44	46.00	-10.56
4	308.91	1.93	19.88	26.70	38.36	33.47	46.00	-12.53
5 pp	399.03	2.20	22.38	27.18	42.25	39.65	46.00	-6.35
6	768.75	3.11	28.32	27.68	29.94	33.69	46.00	-12.31



Mode:I; Polarization:Vertical

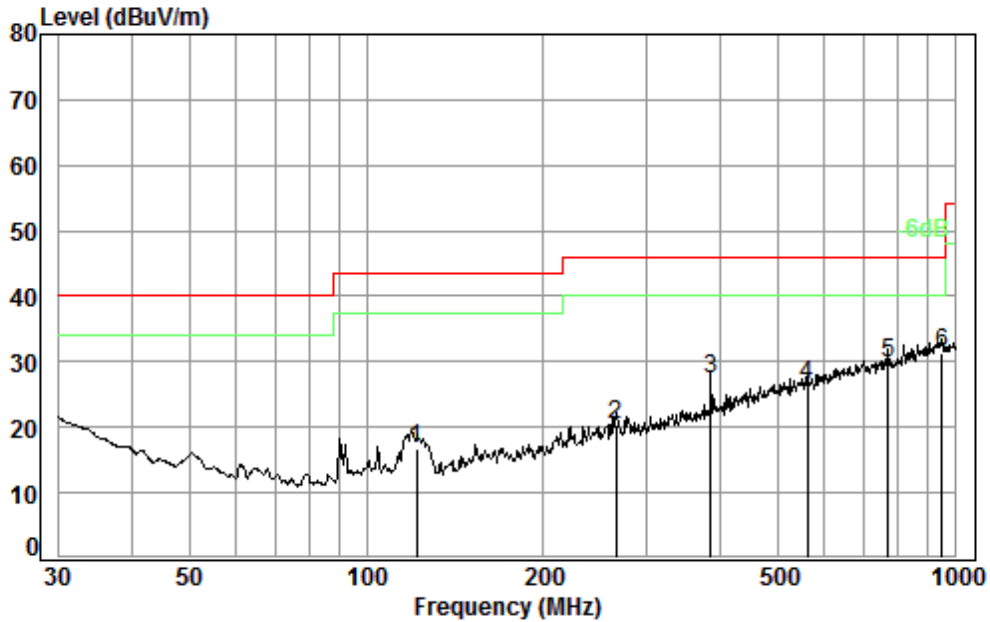


Condition: 3m VERTICAL
Job No. : 90032
Test mode: 1

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	51.30	0.80	14.06	27.41	39.86	27.31	40.00	-12.69
2	55.22	0.80	13.66	27.40	42.06	29.12	40.00	-10.88
3	79.52	1.08	12.04	27.37	39.97	25.72	40.00	-14.28
4	183.20	1.37	16.00	26.96	38.79	29.20	43.50	-14.30
5	257.42	1.71	19.06	26.74	34.41	28.44	46.00	-17.56
6 pp	399.03	2.20	22.38	27.18	40.77	38.17	46.00	-7.83



Mode:m; Polarization:Horizontal



Condition: 3m HORIZONTAL

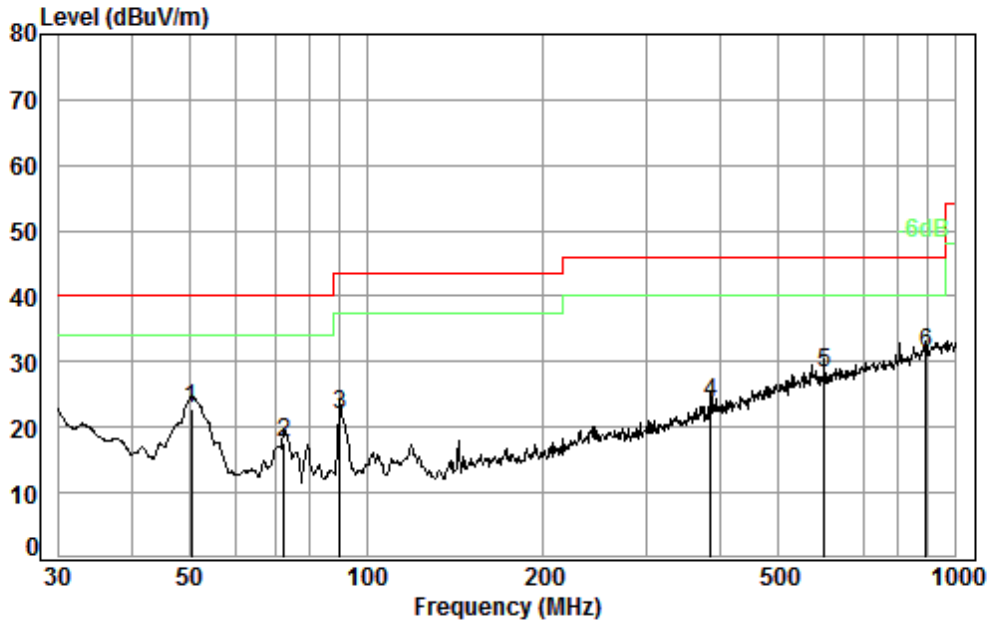
Job No. : 90032

Test mode: m

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB
1	121.98	1.26	13.16	27.22	29.58	43.50	-26.72
2	265.68	1.75	19.01	26.72	26.31	46.00	-25.65
3	383.93	2.16	22.00	27.11	30.38	46.00	-18.57
4	560.69	2.66	25.86	27.82	25.68	46.00	-19.62
5	768.75	3.11	28.32	27.68	26.05	46.00	-16.20
6 pp	948.76	3.65	30.05	26.79	24.51	46.00	-14.58



Mode:m; Polarization:Vertical



Condition: 3m VERTICAL
Job No. : 90032
Test mode: m

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	50.41	0.80	14.16	27.41	35.29	22.84	40.00	-17.16
2	72.59	0.88	12.58	27.38	31.63	17.71	40.00	-22.29
3	90.22	1.10	13.12	27.36	35.07	21.93	43.50	-21.57
4	383.93	2.16	22.00	27.11	26.61	23.66	46.00	-22.34
5	599.32	2.70	26.59	27.95	26.97	28.31	46.00	-17.69
6 pp	890.73	3.56	29.69	27.11	25.09	31.23	46.00	-14.77



6.3 Radiated Emissions (above 1GHz)

Test Requirement: 47 CFR Part 15, Subpart B
Test Method: ANSI C63.4:2014
Frequency Range: Above 1GHz
Measurement Distance: 3m
Limit:
Above 1GHz 74(dB μ V/m) peak, 54(dB μ V/m) average
Detector: Peak for pre-scan (1000kHz resolution bandwidth) 1000M to18000MHz

6.3.1 E.U.T. Operation

Operating Environment:

Temperature: 24.2 °C Humidity: 45.6 % RH Atmospheric Pressure: 1010 mbar

Pretest these modes to find the worst case: e: Telecom Idle + BT + WLAN + GPS Rx + playing MP4 (SD card) + earphone + battery + adapter1

f: Telecom Idle + BT + WLAN + GPS Rx + camera (Front) + earphone + battery + adapter2

g: Telecom Idle + BT + WLAN + GPS Rx + camera (Back) + earphone + battery + adapter3

h: Telecom Idle + BT + WLAN + GPS Rx + camera (Back) + earphone + battery + adapter4

i: Transfer data between the EUT and the PC + cable1

j: Transfer data between the EUT and the PC + cable2

k: Transfer data between the EUT and the PC + cable3

l: Transfer data between the EUT and the PC + cable4

m: GSM 850 + BT + WLAN + GPS Rx + earphone + battery + adapter2

n: GSM 1900 + BT + WLAN + GPS Rx + earphone + battery + adapter2

o: WCDMA Band II + BT + WLAN + GPS Rx + earphone + battery2

p: WCDMA Band VI + BT + WLAN + GPS Rx + earphone + battery2

q: LTE band 2 + BT + WLAN + GPS Rx + earphone + battery + adapter2

r: LTE band 3 + BT + WLAN + GPS Rx + earphone + battery + adapter2

s: LTE band 5 + BT + WLAN + GPS Rx + earphone + battery + adapter2

t: LTE band 7 + BT + WLAN + GPS Rx + earphone + battery + adapter2

u: LTE band 12 + BT + WLAN + GPS Rx + earphone + battery + adapter2

v: LTE band 66 + BT + WLAN + GPS Rx + earphone + battery + adapter2

w: LTE band 40 + BT + WLAN + GPS Rx + earphone + battery + adapter2

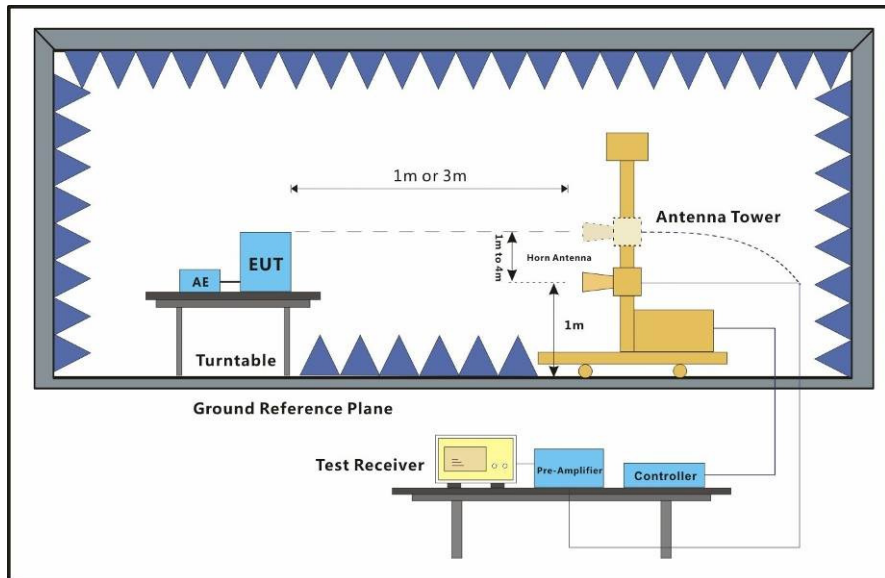
The worst case for final test: i: Transfer data between the EUT and the PC + cable1

j: Transfer data between the EUT and the PC + cable2

k: Transfer data between the EUT and the PC + cable3

l: Transfer data between the EUT and the PC + cable4

6.3.2 Test Setup Diagram

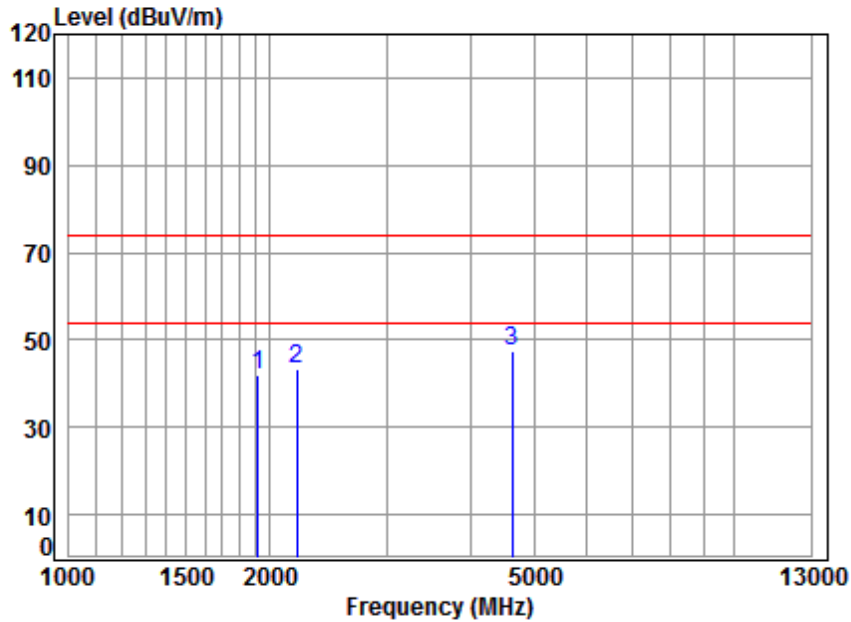


6.3.3 Measurement Data

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Average measurements were conducted based on the peak sweep graph. The EUT was measured by Horn antenna with 2 orthogonal polarities.



Mode:i; Polarization:Horizontal

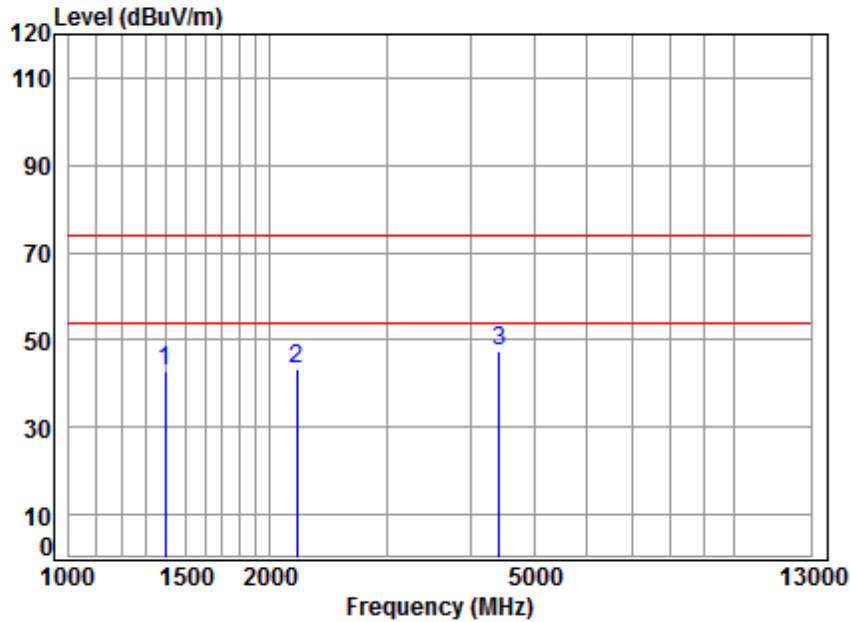


Site : chamber
Condition: 3m HORIZONTAL
Job No : 90032
Mode : i

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1919.760	4.98	27.52	41.65	51.15	42.00	74.00	-32.00	Peak
2	2195.879	5.20	28.18	41.79	51.72	43.31	74.00	-30.69	Peak
3	4627.211	7.70	33.76	42.44	48.43	47.45	74.00	-26.55	Peak



Mode:i; Polarization:Vertical

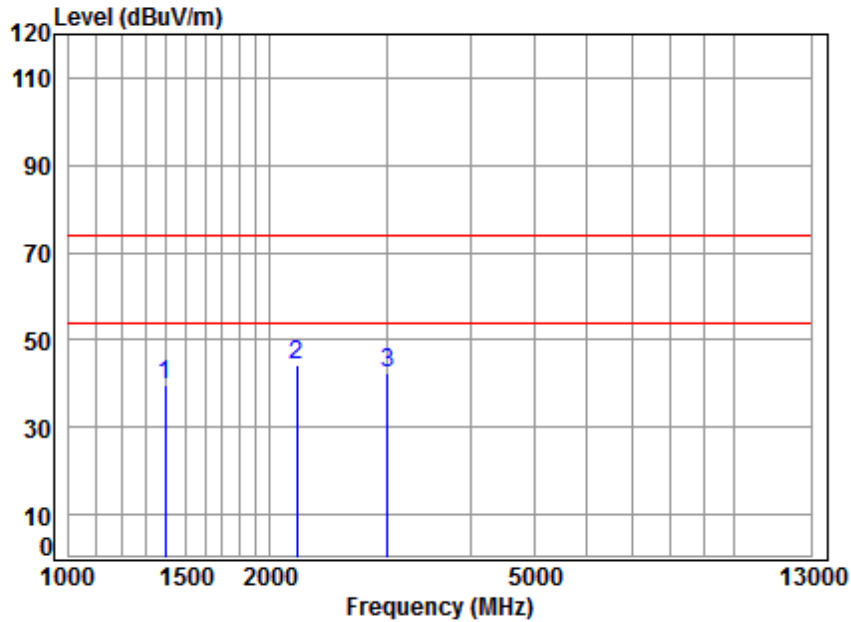


Site : chamber
Condition: 3m VERTICAL
Job No : 90032
Mode : i

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1395.520	5.14	25.41	41.33	53.83	43.05	74.00	-30.95	Peak
2	2195.879	5.20	28.18	41.79	51.66	43.25	74.00	-30.75	Peak
3	4424.514	7.48	33.47	42.40	48.74	47.29	74.00	-26.71	Peak



Mode:j; Polarization:Horizontal

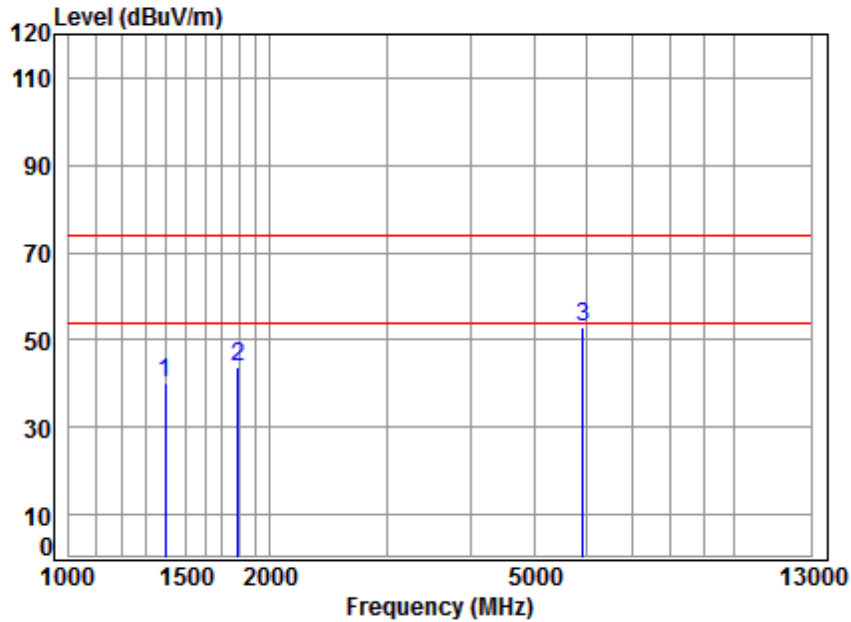


Site : chamber
Condition: 3m HORIZONTAL
Job No : 90032
Mode : j

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1395.520	5.14	25.41	41.33	50.39	39.61	74.00	-34.39	Peak
2	2195.879	5.20	28.18	41.79	52.76	44.35	74.00	-29.65	Peak
3	3004.588	5.98	30.91	42.10	47.70	42.49	74.00	-31.51	Peak



Mode:j; Polarization:Vertical

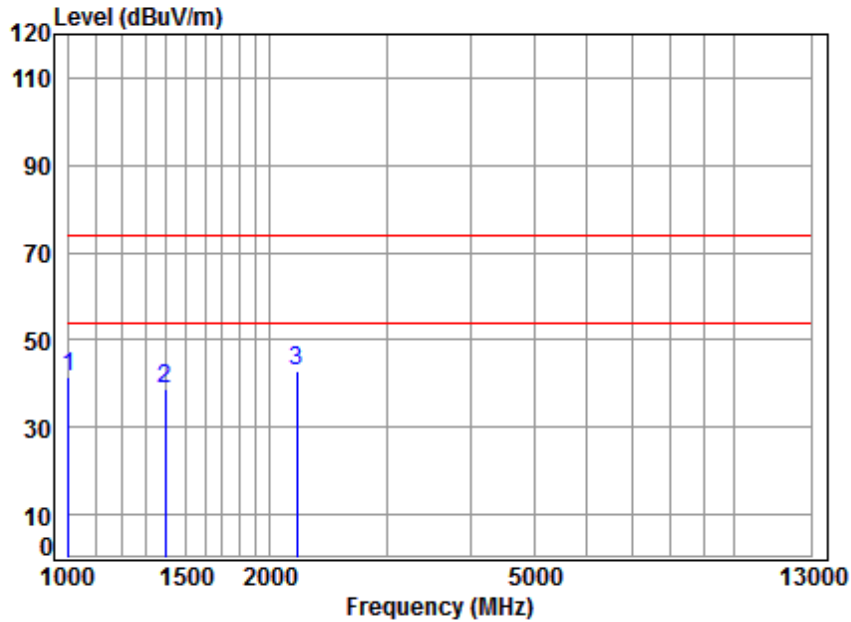


Site : chamber
Condition: 3m VERTICAL
Job No : 90032
Mode : j

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1395.520	5.14	25.41	41.33	51.13	40.35	74.00	-33.65	Peak
2	1796.617	5.12	27.05	41.59	53.13	43.71	74.00	-30.29	Peak
3	5914.609	10.29	35.02	41.68	49.34	52.97	74.00	-21.03	Peak



Mode:k; Polarization:Horizontal

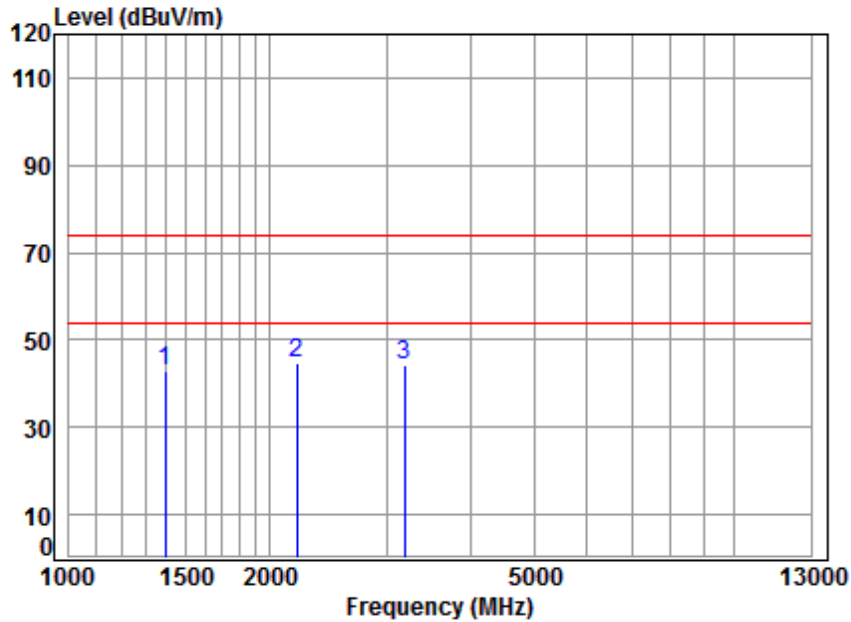


Site : chamber
Condition: 3m HORIZONTAL
Job No : 90032
Mode : k

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1000.000	3.55	23.60	41.00	55.42	41.57	74.00	-32.43	Peak
2	1395.520	5.14	25.41	41.33	49.55	38.77	74.00	-35.23	Peak
3	2195.879	5.20	28.18	41.79	51.17	42.76	74.00	-31.24	Peak



Mode:k; Polarization:Vertical

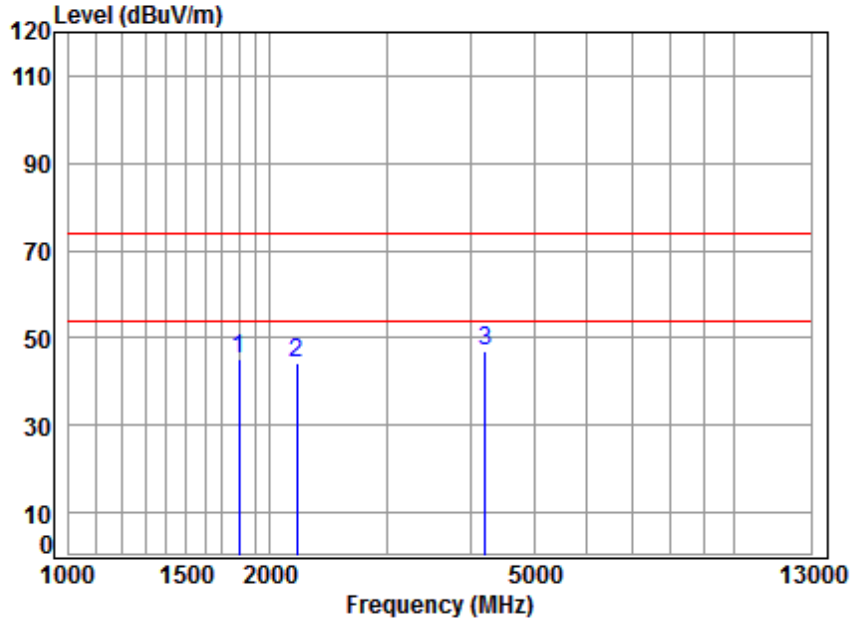


Site : chamber
Condition: 3m VERTICAL
Job No : 90032
Mode : k

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1395.520	5.14	25.41	41.33	53.86	43.08	74.00	-30.92	Peak
2	2195.879	5.20	28.18	41.79	52.91	44.50	74.00	-29.50	Peak
3	3187.600	6.17	31.21	42.15	48.81	44.04	74.00	-29.96	Peak



Mode:l; Polarization:Horizontal

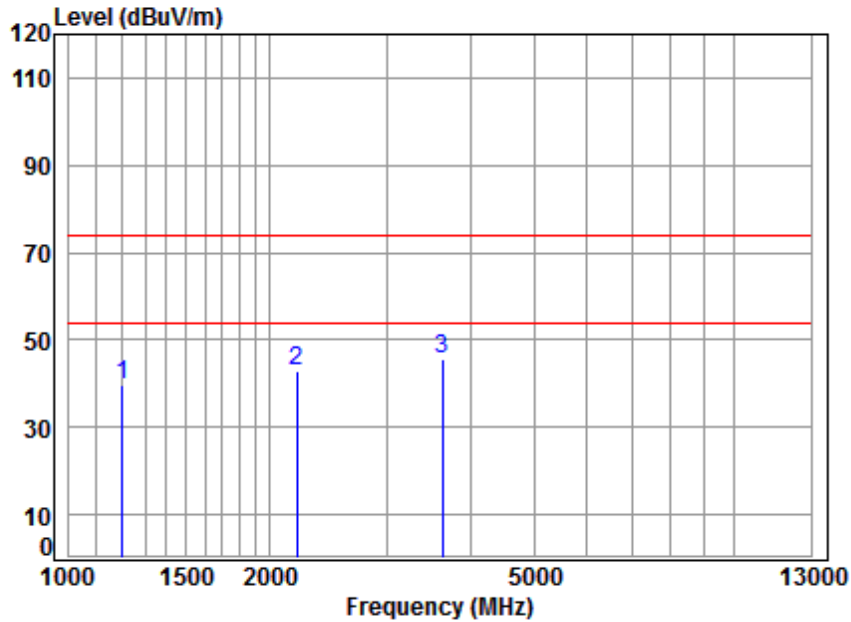


Site : chamber
Condition: 3m HORIZONTAL
Job No : 90032
Mode : l

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1799.839	5.11	27.07	41.59	54.48	45.07	74.00	-28.93	Peak
2	2195.879	5.20	28.18	41.79	52.64	44.23	74.00	-29.77	Peak
3	4223.122	7.25	33.11	42.37	48.85	46.84	74.00	-27.16	Peak



Mode:l; Polarization:Vertical

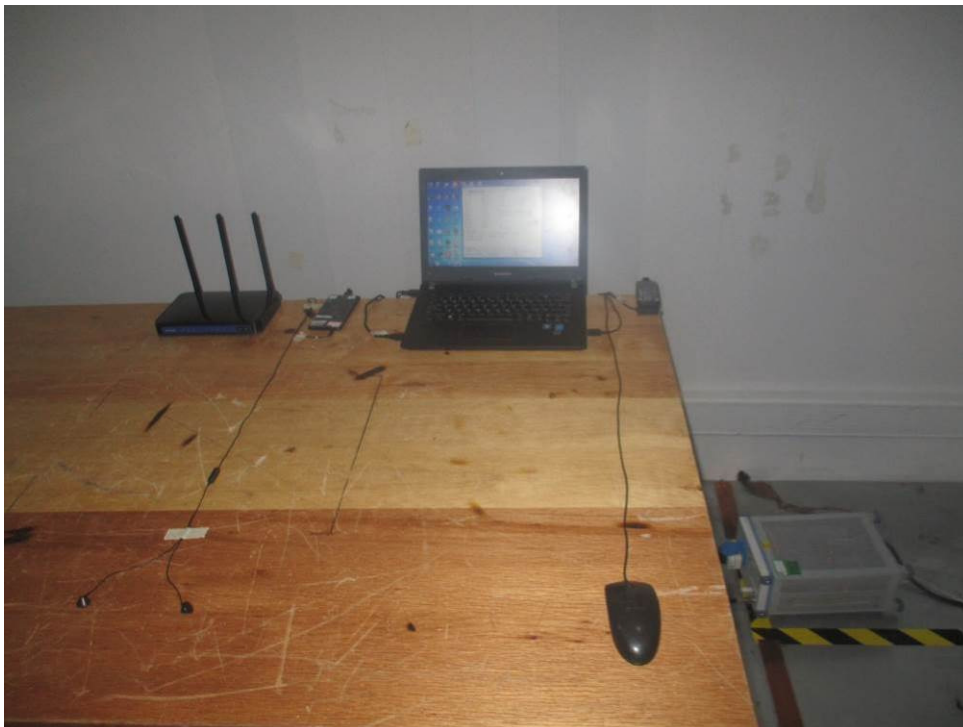


Site : chamber
Condition: 3m VERTICAL
Job No : 90032
Mode : l

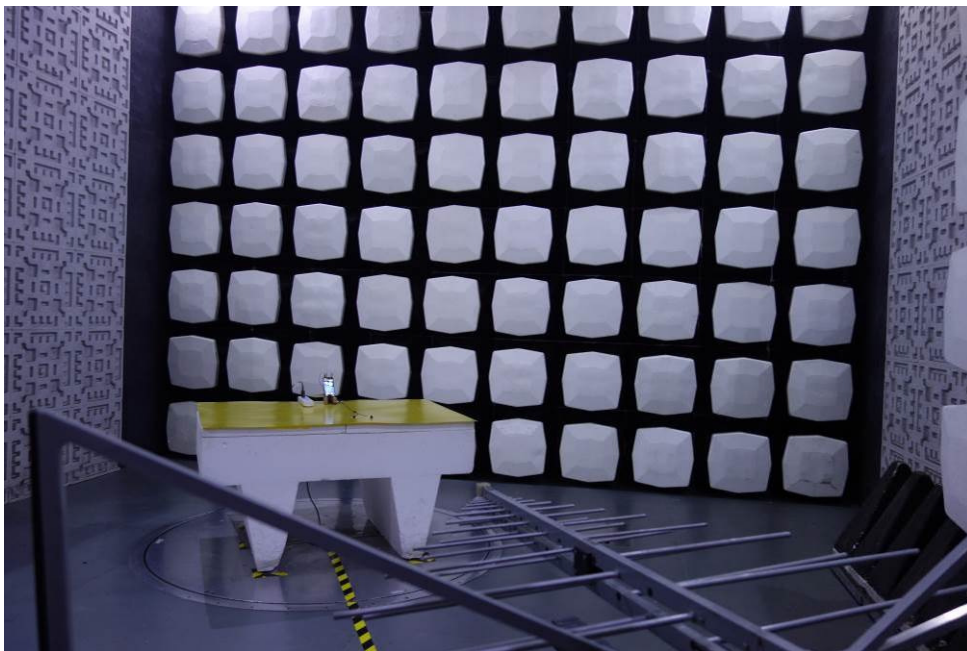
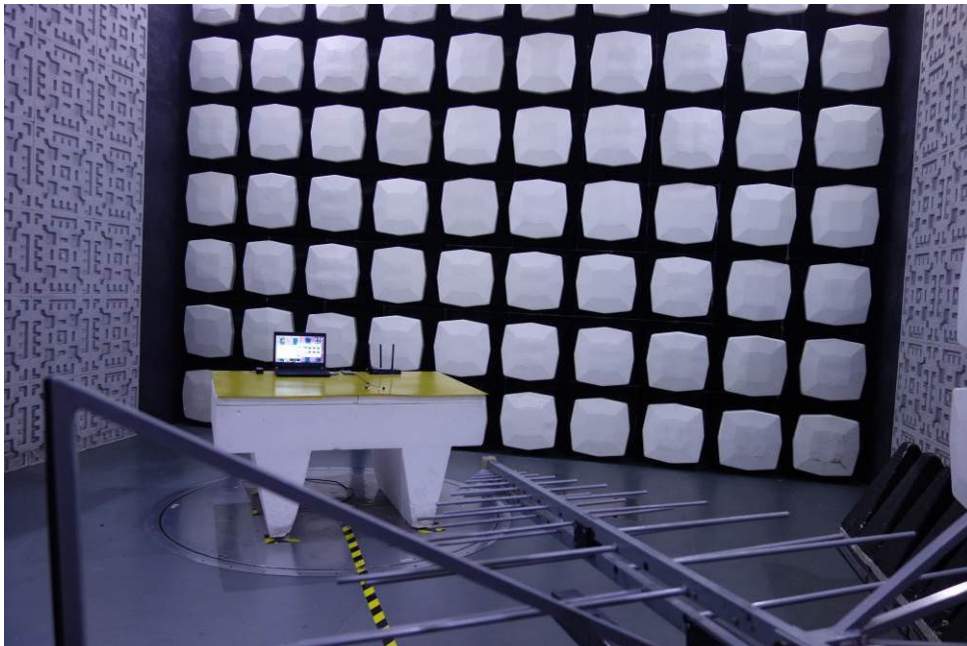
	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1202.679	4.43	24.60	41.18	52.03	39.88	74.00	-34.12	Peak
2	2195.879	5.20	28.18	41.79	51.42	43.01	74.00	-30.99	Peak
3	3639.545	6.61	31.99	42.25	49.40	45.75	74.00	-28.25	Peak

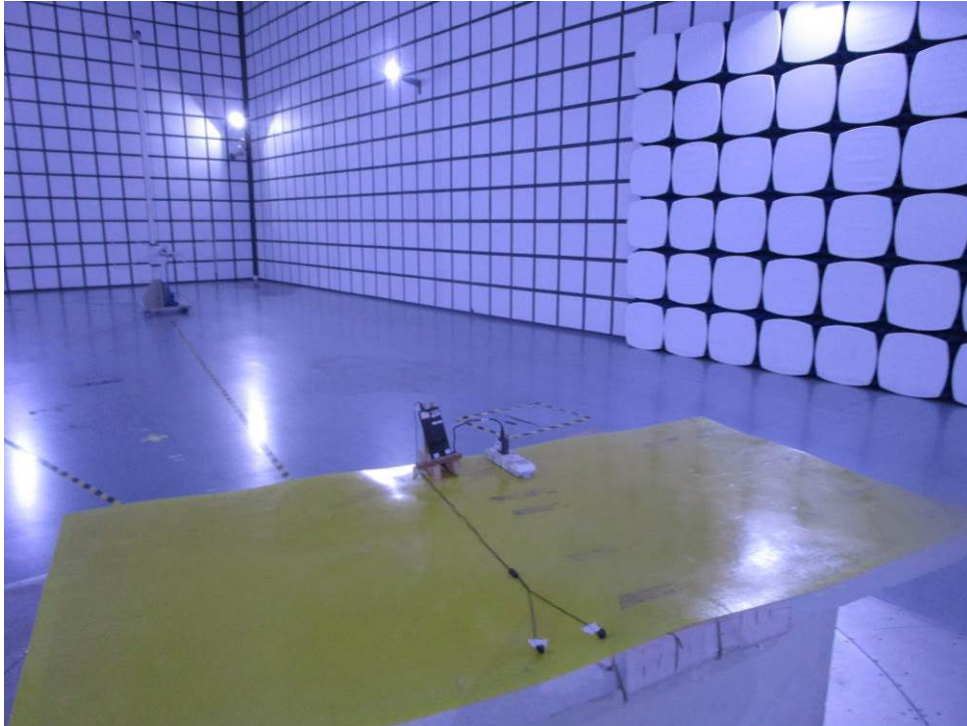
7 Photographs

7.1 Conducted Emissions at Mains Terminals (150kHz-30MHz) Test Setup



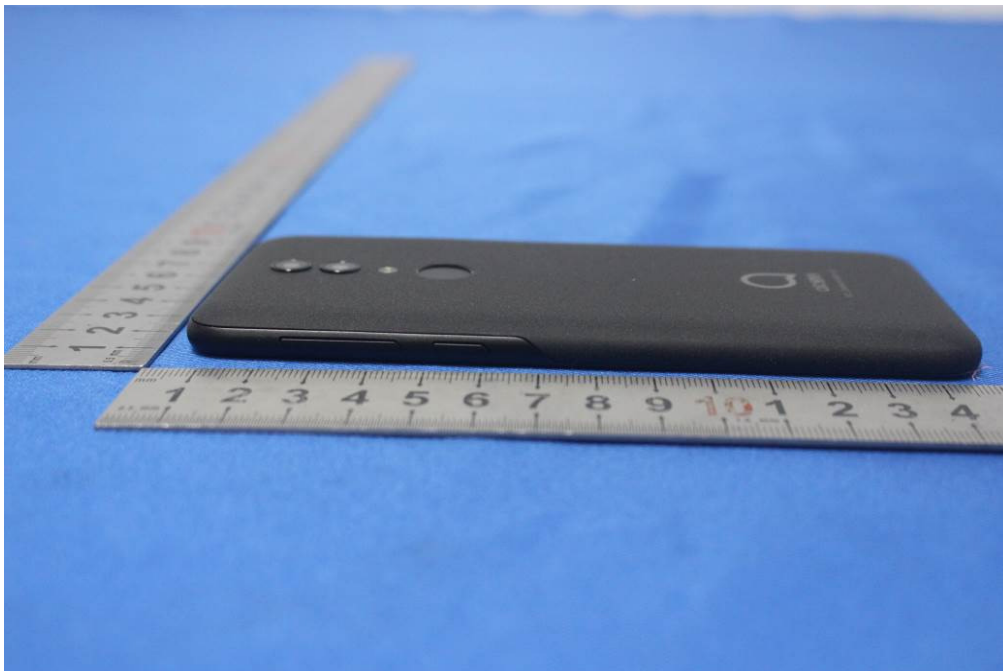
7.2 Radiated Emissions (30MHz-1GHz) Test Setup



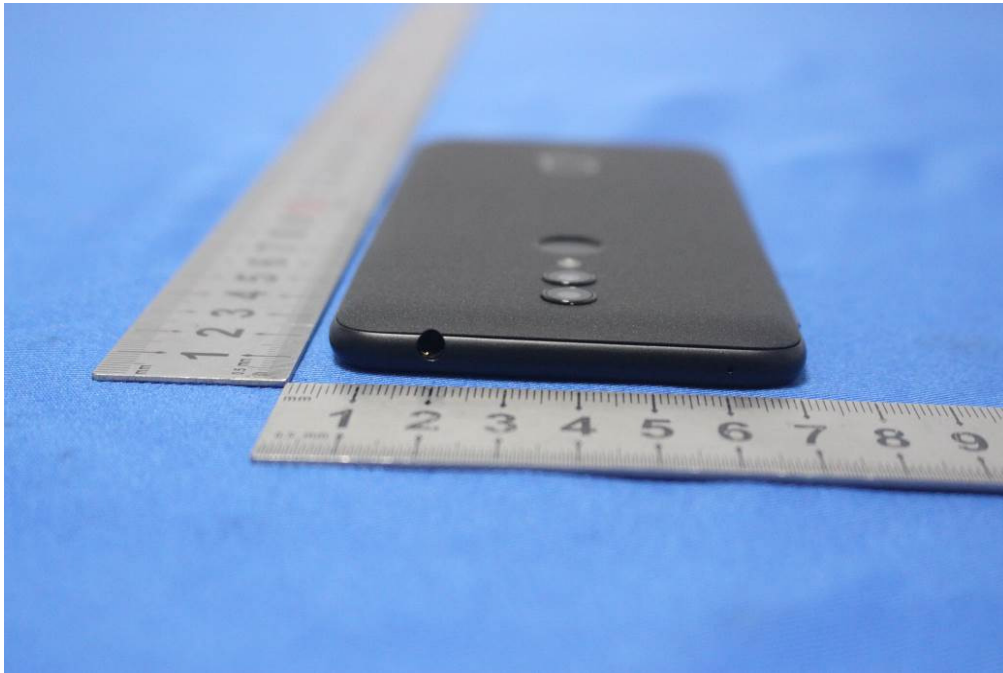


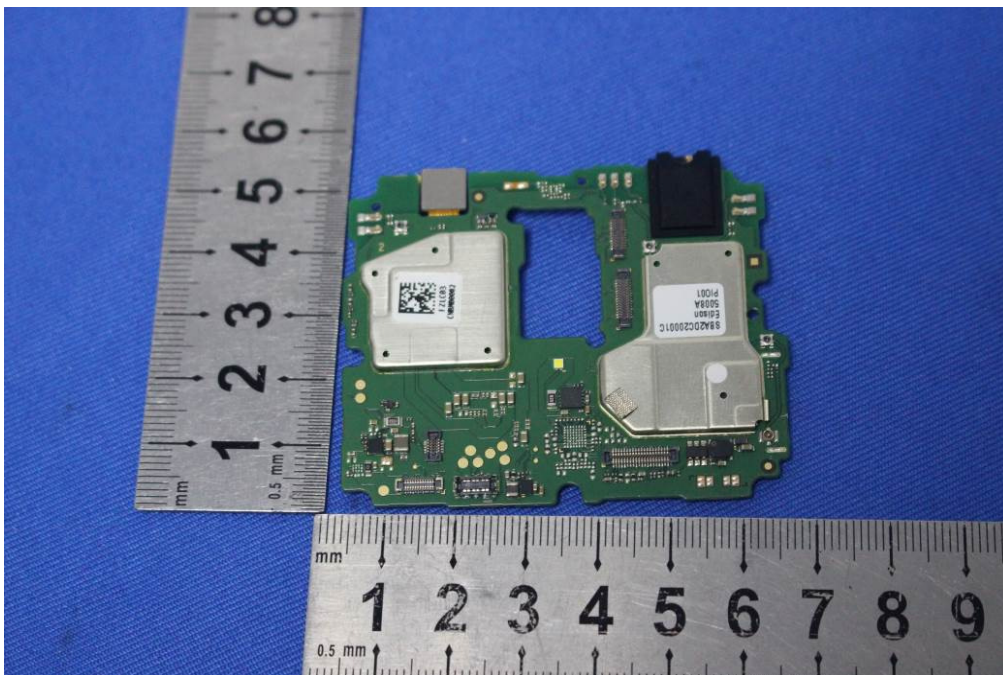
7.3 EUT Constructional Details (EUT Photos)

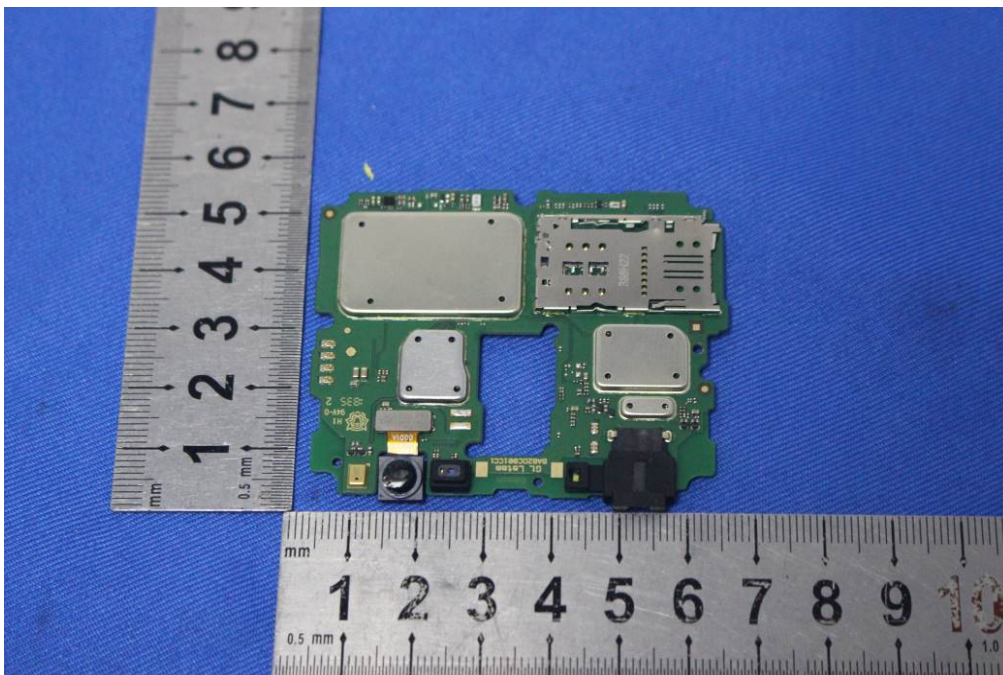
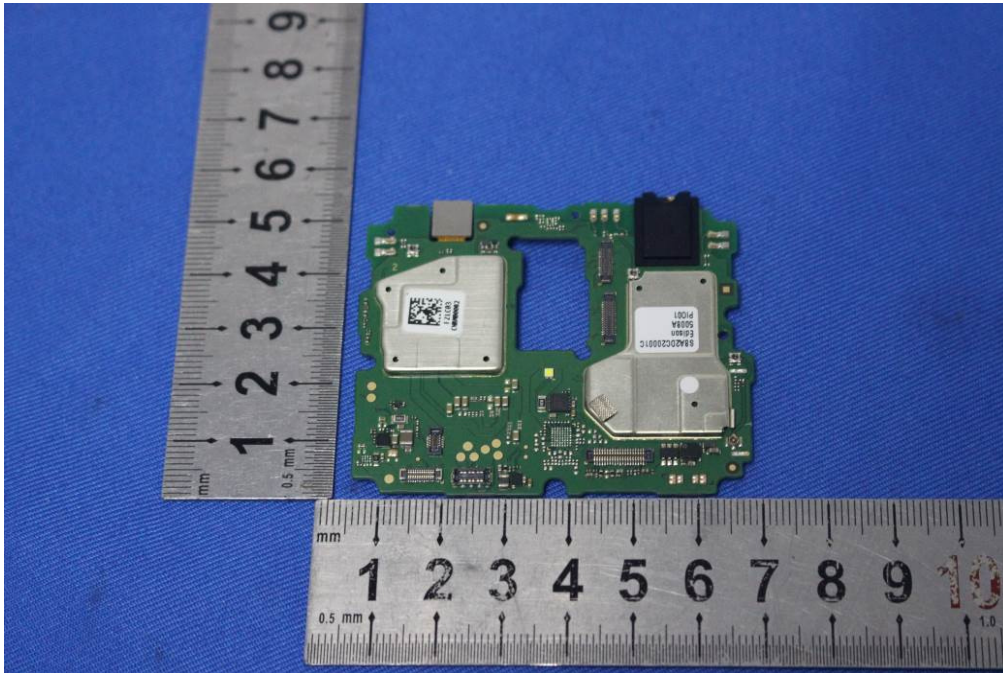


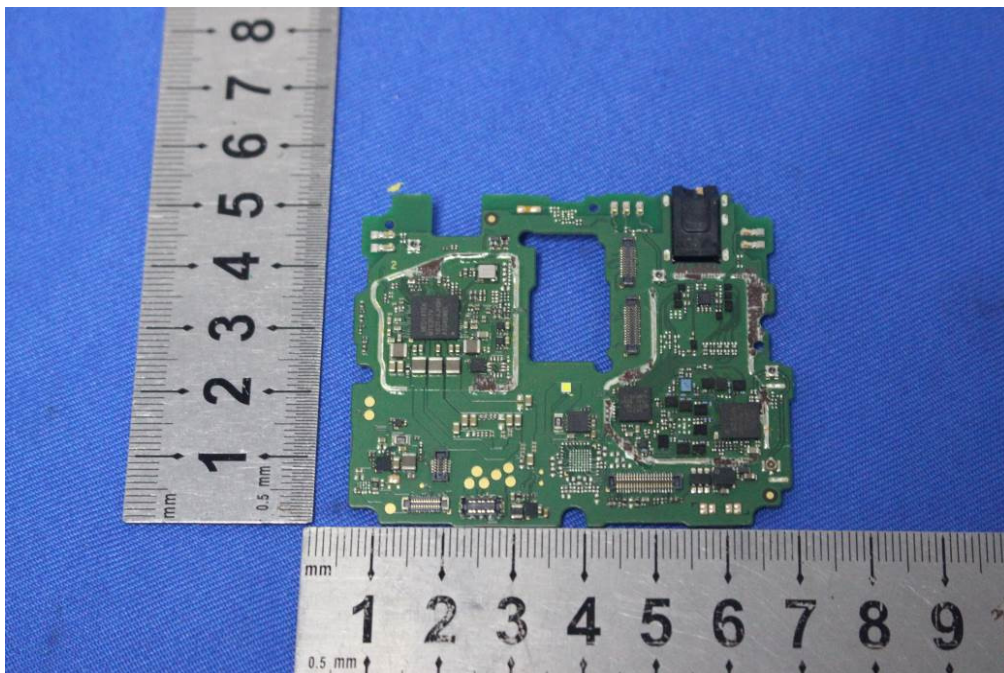
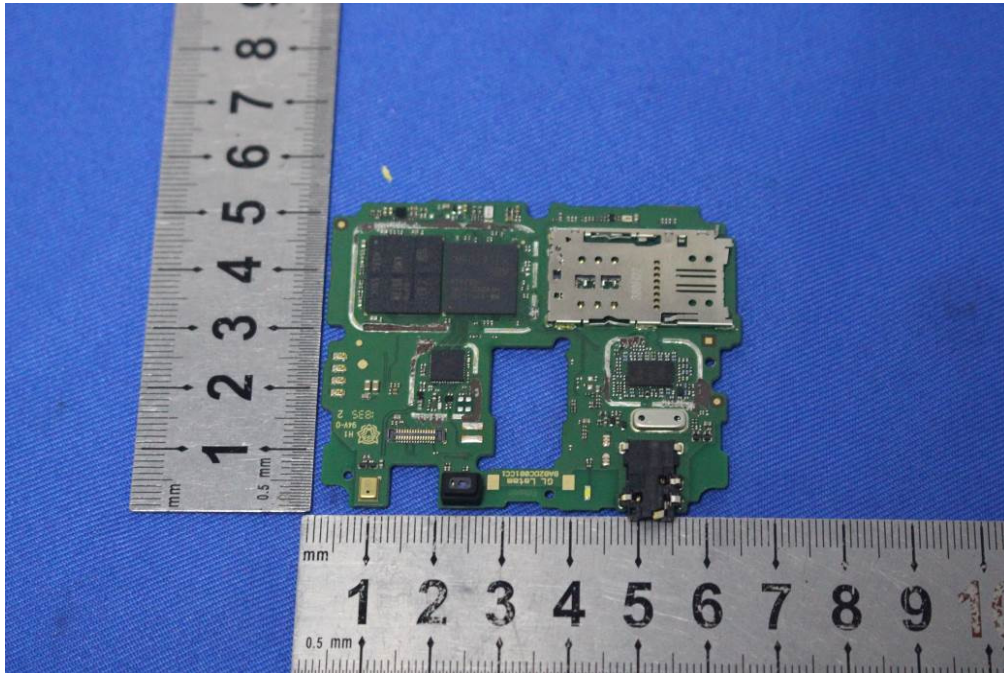


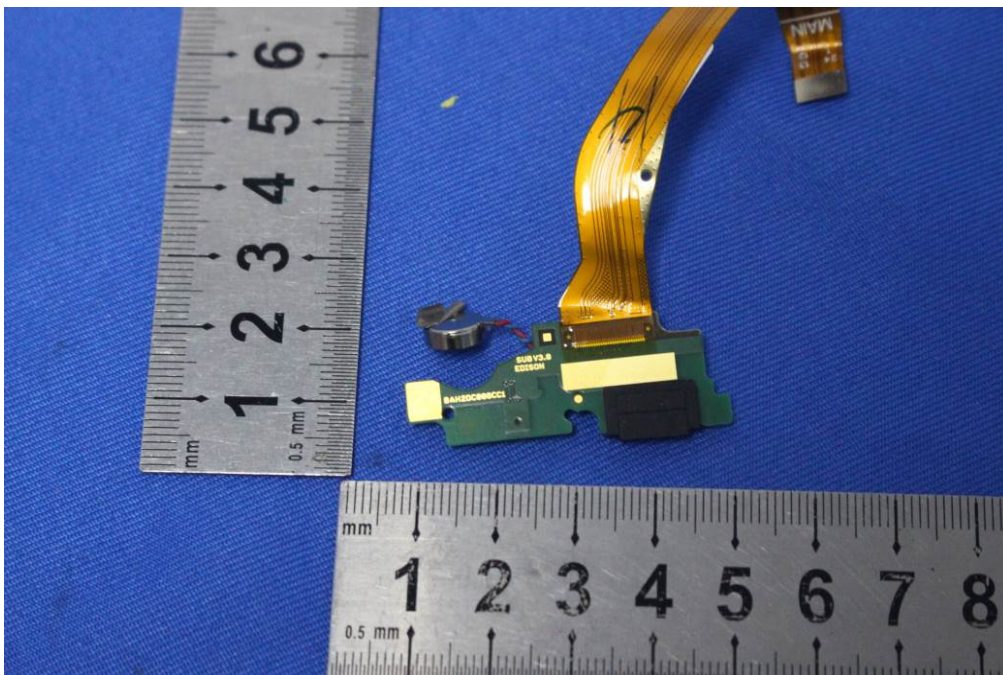
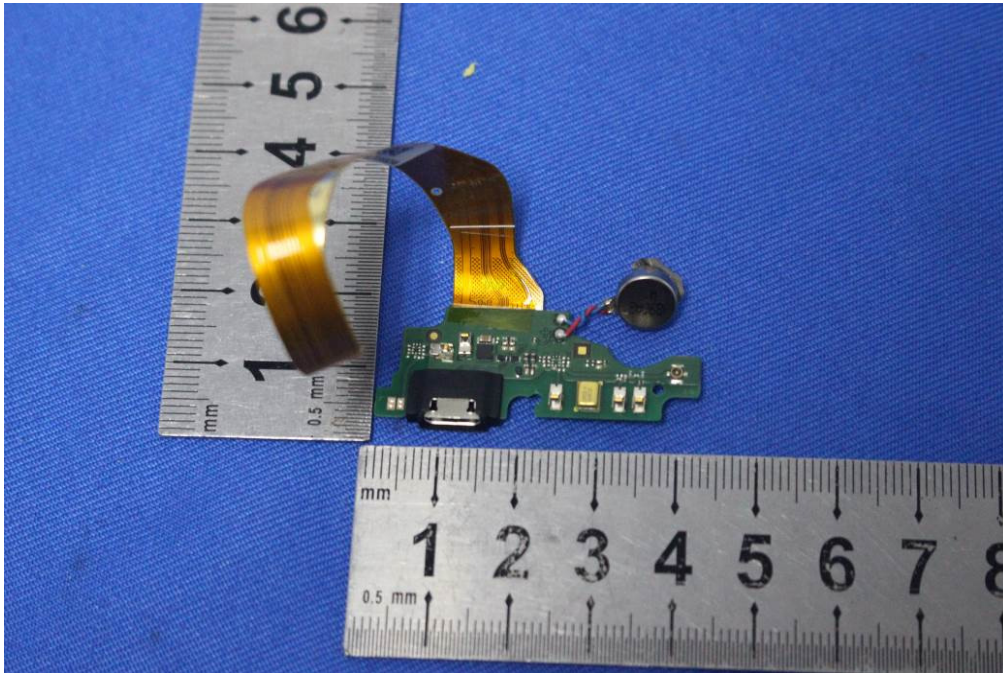


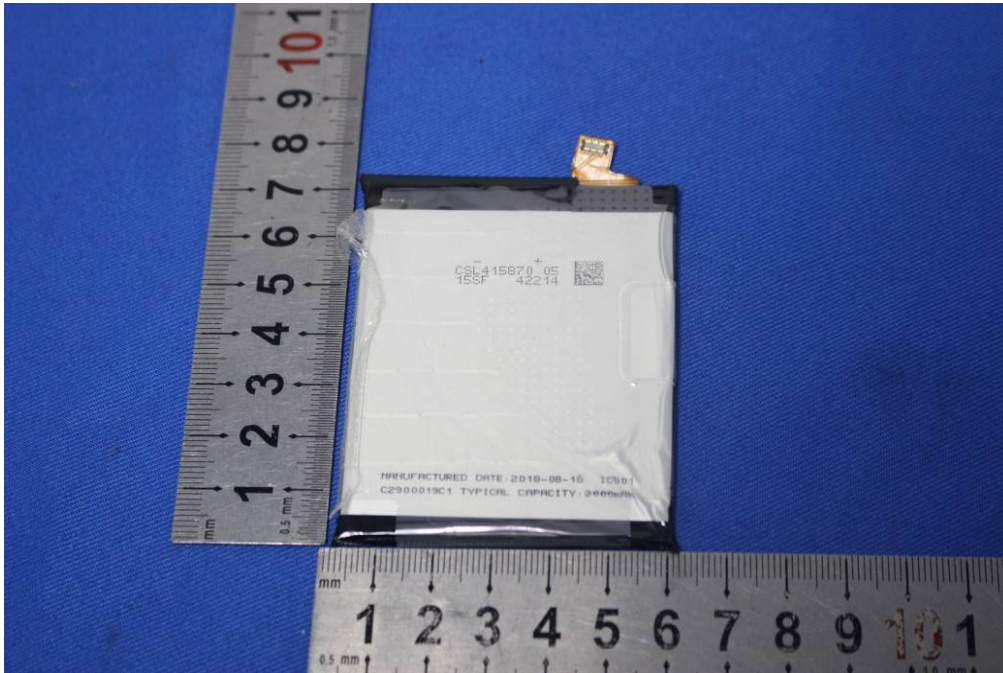












- End of the Report -