TEST REPORT

Application No.:	GZEM2412007526HS
Applicant:	Guangdong Galanz Enterprises Co., Ltd.
Address of Applicant:	No. 25 South Ronggui Avenue, Ronggui Street, Shunde District, Foshan City, Guangdong Province, China
Manufacturer:	Guangdong Galanz Appliances Manufacturing Co., Ltd.
Address of Manufacturer:	No. 3, East Xingpu Avenue, Maxin Industrial Zone, Huangpu Town, Zhongshan City, Guangdong Province, China
Factory:	1. Guangdong Galanz Appliances Manufacturing Co., Ltd. 2. Guangdong Galanz Microwave Oven and Electrical Appliances Manufacturing Co., Ltd.
Address of Factory:	1. No. 3, East Xingpu Avenue, Maxin Industrial Zone, Huangpu Town, Zhongshan City, Guangdong Province, China 2. No.25, South Ronggui Avenue, Shunde District, Foshan City, Guangdong Province, China
Product Name:	Microwave oven
Model No.:	Please refer to page 2.
Trade Mark:	GALANZ, FRIGIDAIRE, VIDA, Royal Sovereign, RCA, MAINSTAYS, HAMILTON BEACH, Vissani, MAYTAG
Standard(s) :	47 CFR Part 18
Date of Receipt:	2024-12-06
Date of Test:	2024-12-10 to 2024-12-13
Date of Issue:	2024-12-23
Test Result:	**Pass***

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

Ricky Liu
Manager

Model No.: P100J30AP-F1, P100J30(X)-(Y), VSCMWE11S*W-10*, P100J30AYL-WE, OGCMF211BK-10, 043-7017-8, HH1001221, P100J30AL-WP, MS54100112162, MS54W100112162, P100J30AP-F3, EMW1120, P100J30AP-F2(L2), P100J30(X)(Y)(L2), P100J30(X)-(Y)(L2) (X may be L, P, SL, SP, TL, TP, AL, AP, ASL, ASP, ATL, ATP, AYL, EL, EP, ESL, ESP, ETL, ETP, ML, MP, MJ, MSL, MSP, MTL, MTP, MLY; Y may compose by one to five characters from A to Z and/or numbers from 0 to 9), 043-1536-8;HH1001221-V2, RMW30-1000B, RMW30-1000W, RMW30-1000SS, RMW1132-RED, EMW1132, RMW1132-BLACK, RMW1132-WHITE, RMW1134, RMW1178-B, EMW1120, MS8436127995-07, MS**36127995-**, HB8436127995-07, HB**36127995-** (Remark: * could be from 0 to 9 or from A to Z or blank), VSCMWE11S2W2102,

MTCMPT11SS10, P100J30AP-PT(L2) ♣

♣ Please refer to section 2 of this report which indicates which item was actually tested and which were electrically identical.

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Revision Record			
Version	**Report No.**	**Date**	**Remark**
01	GZEM200901528101	2020-10-28	Original
02	GZEM200901528103	2021-05-07	Copy report: Added models and update series number(X).
03	GZEM200901528104	2021-06-09	Copy report: Added one model.
04	GZEM200901528105	2021-12-13	Copy report: Added new model number:
05	GZEM200901528106	2022-12-16	Copy report: Added one model.
06	GZEM200901528107	2023-06-21	Copy report: Added new model.
07	GZEM200901528108	2023-09-25	Copy report: Deleted information of factory 3; Added one model and trade mark.
08	GZEM200901528109	2024-02-27	Amendment report: Added new models;
09	GZEM200901528110	2024-03-29	Amendment report: Updated manufacturer and factory names; added new models and trademark.
10	GZEM200901528111	2024-12-23	Amendment report: Updated the address of applicant and address of factory; Added new models and trademark.

Authorized for issue by:				
		Damon Guan **Damon Guan/Project Engineer**		
		Vico Cui **Vico Cui/Reviewer**		

2 Test Summary

Emission Part				
Item	**Standard**	**Method**	**Requirement**	**Result**
Conducted Emissions at Mains Terminals (150kHz-30MHz)	47 CFR Part 18	FCC/OST MP-5:1986	18.307	Pass
Radiated Emissions (Magnetic field Strength)(9kHz-30MHz)		FCC/OST MP-5:1986	18.305(b)	Pass
Radiated Emissions (30MHz-1GHz)		FCC/OST MP-5:1986	18.305(c)	Pass
Radiated Emissions (above 1GHz)		FCC/OST MP-5:1986	18.305(b)	Pass
Output Power Measurement		FCC OST/MP-5:1986	FCC OST/MP-5:1986 Clause 4.3	Pass
Operating Frequency Measurement		FCC OST/MP-5:1986	18.301	Pass
Radiation Hazard Test		FCC OST/MP-5:1986	1 mW/cm2	Pass

Note:

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.

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Remark for report GZEM200901528101:

¤ Declaration of EUT Family Grouping:

Model No.: P100J30AP-F1, P100J30(X)-(Y)

P: with microwave function only

110: denote the output power is 1000W

J30: denote different cavity in 30 liters.

Variable (X) may be

L,P, SL,SP, TL, TP,AL,AP, ASL,ASP,ATL,ATP,EL,EP, ESL,ESP, ETL,ETP, ML,MP, MSL,MSP,MTL,MTP,MYL.

Variable (Y) may compose by one to five characters from A to Z and/or numbers from 0 to 9. It represents the differences of the appearance.

According to the declaration from the applicant, the electrical circuit design, layout, components used and internal wiring were identical for all models, with only difference on the outer appearance.

Therefore, only one model P100J30AP-F1 was tested in this report.

Remark for copy report GZEM200901528103:

This report GZEM200901528103 was a supplement report based on the report GZEM200901528101 . Only added models and update series number(X):

1. Added model number: VSCMWE11S*W-10*, P100J30AYL-WE

2. Update series number(X)

Variable (X) may be

L, P, SL, SP, TL, TP, AL, AYL, AP, AYP, ASL, ASP, ATL, ATP, EL, EP, ESL, ESP, ETL, ETP, ML, MP, MSL, MSP, MTL, MTP, MYL.

Variable (Y) may compose by one to five characters from A to Z and/or numbers from 0 to 9. It represents the differences of the appearance.

The electrical circuit design, layout, components used and internal wiring are identical for models P100J30AP-F1 and P100J30AYL-WE, with only difference on the model name.

VSCMWE11S*W-10* is identical to P100J30AYL-WE except for the model name.

Remark: * could be from 0 to 9 or from A to Z or blank

Therefore, the original data was kept in this report GZEM200901528103.

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Remark for the report GZEM200901528104:

This report GZEM200901528104 was a supplement report based on original report GZEM200901528103, only added one model.

Added one model: OGCMF211BK-10

According to the declaration from the applicant, model OGCMF211BK-10 in this report is identical with model P100J30AP-F2 in original report in the electrical circuit design, PCB layout, components used and internal wiring, with only different in model name and brand name.

Therefore, test data in GZEM200901528103 was kept in this report GZEM200901528104.

Remark for the report GZEM200901528105:

This is a copy report base on GZEM200901528104 report. Only added new model number:

Model in report: GZEM200901528101	New models in copy report: GZEM200901528105
P100J30AP-F1	043-7017-8, HH1001221, P100J30AL-WP

According to the declaration from the applicant, models in this report GZEM200901528105 and model P100J30AP-F1 in report GZEM200901528101 were identical in mechanical and electrical construction, only difference being the model name and brand name.

Therefore, the original data was kept in this report GZEM200901528105.

Remark for copy report GZEM200901528106

This report GZEM200901528106 was a supplement report based on the report GZEM200901528105. Only added model MS54100112162.

According to the declaration from the applicant, model MS54100112162 in this report and model P100J30AP-F1 in previous report were identical in mechanical and electrical construction, only difference being the model name.

Therefore, the original data was kept in this report GZEM200901528106.

Remark for copy report GZEM200901528107

This report GZEM200901528107 was a supplement report based on the report GZEM200901528106. Only added model MS54W100112162, P100J30AP-F3.

According to the declaration from the applicant, model MS54W100112162, P100J30AP-F3 add in this report and model P100J30AP-F1 in previous report were identical in mechanical and electrical construction, only difference being the model name.

Therefore, the original data was kept in this report GZEM200901528107.

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¤Remark for copy report GZEM200901528108

This report GZEM200901528108 was a supplement report based on the report GZEM200901528107. With the follow changes:

1. Deleted information of factory 3.
2. Added trade mark: FRIGIDAIRE
3. Added one model: EMW1120

According to the declaration from the applicant, model EMW1120 add in this report and model P100J30AP-WP in previous report were identical in mechanical and electrical construction, only difference being the model name and trade mark.

Therefore, the original data was kept in this report GZEM200901528108.

Remark for report GZEM200901528109:

This report GZEM200901528109 is based on original report GZEM200901528108, with the following changes:

Added new models:

P100J30AP-F2(L2), P100J30(X)(Y)(L2)

X may be L, P, SL, SP, TL, TP, AL, AP, ASL, ASP, ATL, ATP, EL, EP, ESL, ESP, ETL, ETP, ML, MP, MJ, MSL, MSP, MTL, MTP, MLY

Y may compose by one to five characters from A to Z and/or numbers from 0 to 9. It represents the differences of the appearance.

According to the declaration from the applicant, models added in this report GZEM200901528109 and model P100J30AP-F1 in previous report were identical in mechanical and electrical construction, only with difference on appearance and model name.

All test results in report GZEM200901528108 were kept in this report GZEM200901528109.

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Remark for the report GZEM200901528110:

This report GZEM200901528110 is based on original report GZEM200901528109, with the following changes:

1. Updated manufacturer and factory names.

2. Added new models and trademark as below:

According to the declaration from the applicant, the models added in this report and models in original report are totally same, only being different in the appearance, model name and trademark.

Model	Trademark
P100J30(X)-(Y)(L2)	Galanz
043-1536-8; HH1001221-V2	VIDA
RMW30-1000B	Royal Sovereign
RMW30-1000W	Royal Sovereign
RMW30-1000SS	Royal Sovereign
RMW1132-RED	RCA
EMW1132	FRIGIDAIRE
RMW1132-BLACK	RCA
RMW1132-WHITE	RCA
RMW1134	RCA
RMW1178-B	RCA
EMW1120	FRIGIDAIRE
MS8436127995-07 MS**36127995-**	MAINSTAYS
HB8436127995-07 HB**36127995-**	HAMILTON BEACH
VSCMWE11S2W2102	Vissani

3. Added trademark: VIDA, Royal Sovereign, RCA, MAINSTAYS, HAMILTON BEACH, Vissani.

Therefore, test data in GZEM200901528109 was kept in this report GZEM200901528110.

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Remark for report GZEM200901528111:

This report GZEM200901528111 is based on original report GZEM200901528110, with the following changes:

1. Updated the address of applicant and address of factory.
2. Added trademark MAYTAG.
3. Added new models MTCMPT11SS10, P100J30AP-PT(L2).

According to the declaration from the applicant, models MTCMPT11SS10, P100J30AP-PT(L2) added in this report GZEM200901528111 and model P100J30AP-F1 in original report GZEM200901528110 were identical in mechanical and electrical construction, only with difference on the outer appearance, PCB and door open method.

Considering to the above difference, full tests were performed to model P100J30AP-PT(L2) and recorded the new test results in this report GZEM200901528111.

Other tests of original model please refer to original report GZEM200901528110 for details.

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4 General Information

4.1 Details of E.U.T.

Power supply: AC 120V 60Hz

Test Voltage: AC 120V 60Hz

Cable(s): About 1.0m x 3 wires unscreened AC mains cable.

Remark: The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

4.2 Description of Support Units

Load for microwave ovens for testing:

1000mL of water in the beaker for power output and frequency measurement.
One of 700 and the other of 300mL of water for second and third harmonic radiation measurement.
700mL of water for all other measurement

4.3 Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Emissions at Mains Terminals (150kHz-30MHz)	3.22dB (150kHz to 30MHz)
Radiated Emissions (Magnetic field Strength)(9kHz-30MHz)	3.12dB
Radiated Emissions (30MHz-1GHz)	5.14dB (30MHz-1GHz):3m; 4.90dB (30MHz-1GHz):10m
Radiated Emissions (above 1GHz)	4.88dB (1GHz-6GHz); 5.06dB (6GHz-18GHz)

Remark:

The U_{lab} (lab Uncertainty) is less than U_{cispr} (CISPR Uncertainty) or U_{ETSI}(ETSI Uncertainty).

Emission decision rule:

– Compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit, marked as Pass in the report.

– Non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit, marked as Fail in the report.

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,

No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou, Guangdong, China 510663

Tel: +86 20 82155555

No tests were sub-contracted.

4.5 Test Facility

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

- **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian/New Zealand Regulatory Compliance Mark (RCM).

- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

- **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818.

- **ISED (Registration No.: 4620B, CAB identifier: CN0052)**

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

- **VCCI (Registration No.: R-12460, C-12584, G-20107 and T-11179)**

The 10m Semi-anechoic chamber, 966 Anechoic Chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-20107 and T-11179 respectively.

- **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2017, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

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5 Equipment List

Conducted Emissions at Mains Terminals (150kHz-30MHz)					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
Coaxial Cable	HangTianXing	2m	EMC0107	2023-08-24	2025-08-23
Shielding Room	ChangZhou ZhongYu	8m x 3m x 3.8m	EMC0306	2022-10-16	2025-10-15
Two-Line V-Network-GZ	Rohde & Schwarz	ENV216	EMC2135	2024-09-02	2025-09-01
EMI Test Receiver (9kHz-3.6GHz)	Rohde & Schwarz	ESR3	EMC2221	2024-12-04	2025-12-03
Test Software E3r	Audix	Ver.6.191211	GZE100-77	N/A	N/A
Artificial Mains Network (LISN)	AFJ Instruments	LT32C	EMC2046	2024-10-14	2025-10-13

Radiated Emissions (Magnetic field Strength)(9kHz-30MHz)					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
Amplifier(9k-1000MHz)	SONOMA	310	EMC2237	2024-12-03	2025-12-02
Active Loop Antenna-RED	ETS-Lindgren	6502	EMC2190	2024-04-08	2026-04-07
EMI Test Receiver (1Hz-8GHz)	Rohde & Schwarz	ESW8	EMC2229	2024-12-03	2025-12-02
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A
966 Anechoic Chamber	Shenzhen C.R.T	CRTSGSSAC966	EMC2230	2022-04-12	2025-04-11
Coaxial Cable	Mirco-COAX UTIFLEX ve	LA2-C125-8000	EMC2239	2024-12-04	2026-12-03

Radiated Emissions (30MHz-1GHz)					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
966 Anechoic Chamber	Shenzhen C.R.T	CRTSGSSAC966	EMC2230	2022-04-12	2025-04-11
EMI Test Receiver(1Hz-8GHz)	Rohde & Schwarz	ESW8	EMC2229	2024-02-19	2025-02-18
Amplifier(9k-1000MHz)	SONOMA	310	EMC2237	2024-03-22	2025-03-21
Trilog Broadband Antenna (25MHz-2GHz)	Schwarzbeck Mess-Elektronik	VULB 9168	EMC2238	2022-04-20	2025-04-19
Coaxial Cable	Mirco-COAX UTIFLEX ve	LA2-C125-8000	EMC2239	2023-06-14	2025-06-13
Test Software E3	Audix	Ver.6.191211	GZE100-81	N/A	N/A

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Radiated Emissions (above 1GHz)					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
1GHz-26.5 GHz Pre-Amplifier	Agilent	8449B	EMC0521	2024-10-14	2025-10-13
EMI Test Receiver (10Hz-26.5GHz)	Rohde & Schwarz	ESIB26	EMC0522	2024-09-02	2025-09-01
Chamber cable (Above 1GHz)	Scoflex	KMKM-8.0m	EMC0545	2024-08-19	2026-08-18
Horn Antenna (1GHz-18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120D	EMC2026	2022-09-23	2025-09-22
2.4GHz Filter	Micro-Tronics	BRM 50702	EMC2069	2024-10-14	2025-10-13
EXA Signal Analyzer (10Hz-44GHz)	Keysight	N9010A	EMC2138	2024-08-19	2025-08-18
966 Anechoic Chamber	C.R.T	9m x 6m x 6m	EMC2142	2023-12-20	2026-12-19
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A

Output Power Measurement					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
Digital thermometer	FLUKE	51_2	EMC2200	2024-07-24	2025-07-23
Digital power analyzer for harmonics & flicker testing	EMTEST	DPA 500N	EMC2235	2024-04-19	2025-04-18
Programmable multifunctional ac/dc power source	EMTEST	NETWAVE 7-400	EMC2234	2024-04-19	2025-04-18
NET.Control	EMTEST	Ver 3.2.3	GZE100-80	N/A	N/A

Operating Frequency Measurement					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
EMI Test Receiver (10Hz-26.5GHz)	Rohde & Schwarz	ESIB26	EMC0522	2024-09-02	2025-09-01
Chamber cable (Above 1GHz)	Scoflex	KMKM-8.0m	EMC0545	2024-08-19	2026-08-18
Horn Antenna (1GHz-18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120D	EMC2026	2022-09-23	2025-09-22
966 Anechoic Chamber	C.R.T	9m x 6m x 6m	EMC2142	2023-12-20	2026-12-19
Test Software E3	Audix	Ver.6.120110a	GZE100-61	N/A	N/A

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Radiation Hazard Test					
Equipment	**Manufacturer**	**Model No.**	**Inventory No.**	**Cal Date**	**Cal Due Date**
Electric Field Probe(100KHz-3GHz)	WANDEL & GOLTERMANN	EMR-20	EMC0907	2024-05-13	2025-05-12

General used equipment					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
DMM	Fluke	73	EMC0006	2024-06-13	2025-06-12

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6 Emission Test Results

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

Test Requirement: 47 CFR Part 18
Test Method: FCC/OST MP-5:1986
Limit:
Frequency Range: 150kHz to 30MHz
0.15 to 0.5 MHz: 66dB(μV)-56dB(μV) quasi-peak, 56dB(μV)-46dB(μV) average
0.5 to 5 MHz: 56dB(μV) quasi-peak, 46dB(μV) average
5 to 30 MHz: 60dB(μV) quasi-peak, 50dB(μV) average
Detector: Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz

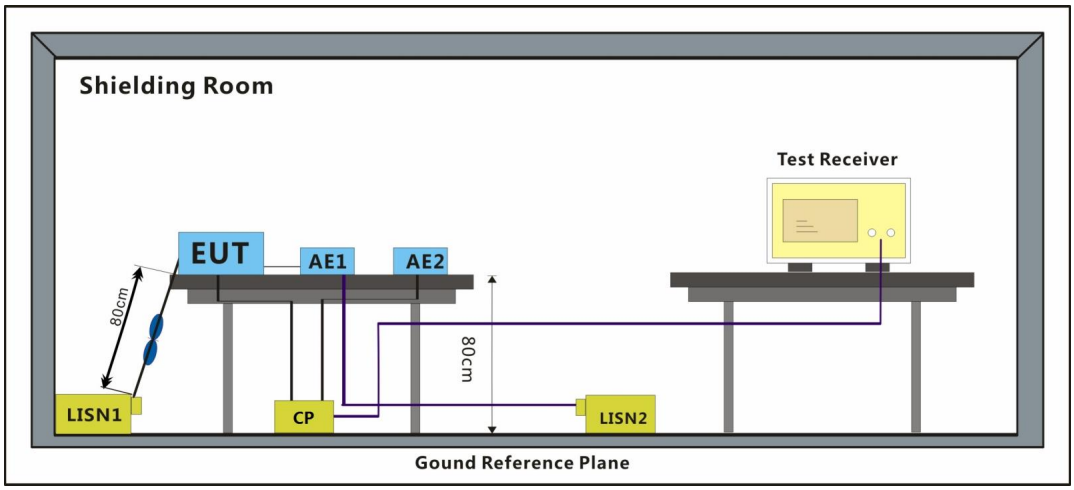
6.1.1 E.U.T. Operation

Operating Environment:
Temperature: 23.4 °C Humidity: 56.3 % RH Atmospheric Pressure: 1017 mbar

6.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Test the EUT in microwave mode with maximum power.
Pre-scan	01	Test the EUT in microwave mode with middle power.
Pre-scan	02	Test the EUT in microwave mode with lowest power.

6.1.3 Test Setup Diagram



6.1.4 Measurement Procedure and Data

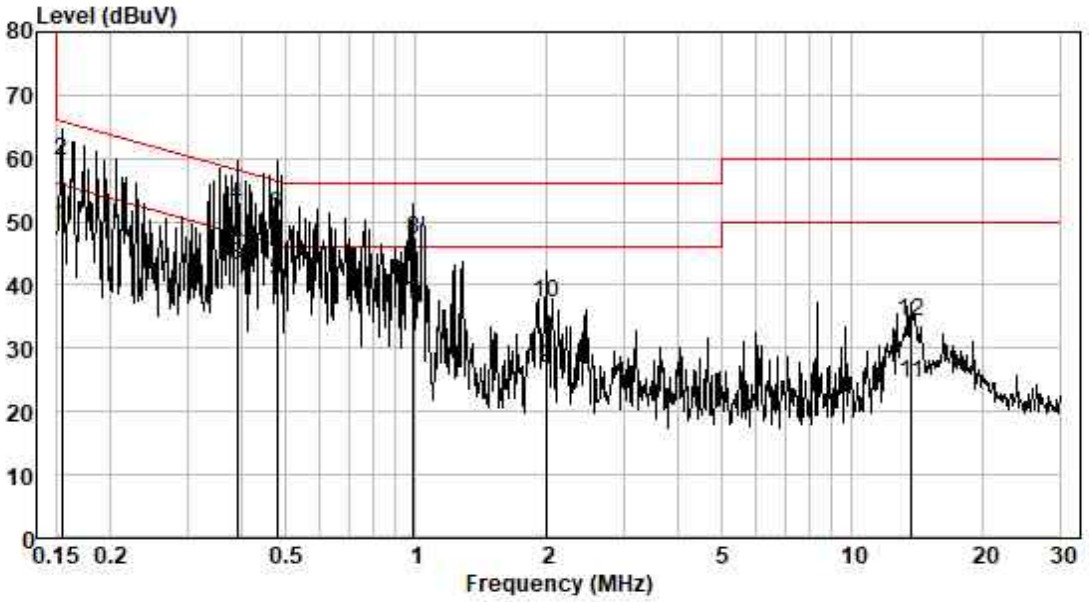
Frequency range: 150KHz-30MHz

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.

The red line show in graphic is the limit in standard used in this section.

Measured Level = Read level + Cable Loss + LISN Factor

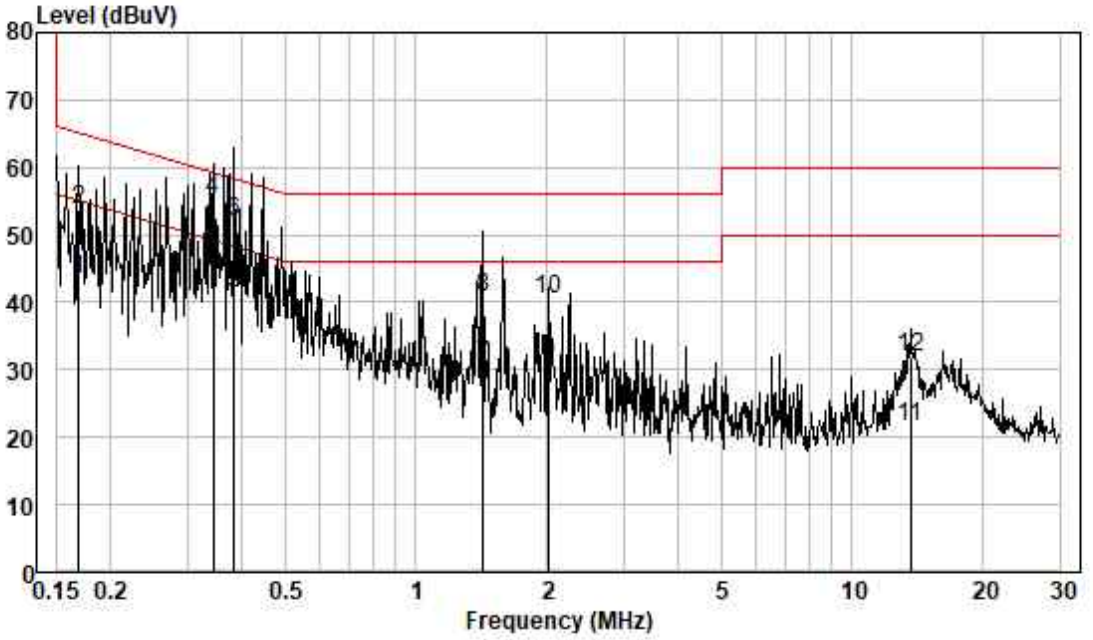
Test Mode: 00; Line: Live line



Pol :LINE
Mode :
Model :
Power :

	Frequenc MHz	Read Level dBuV	Cable Loss dB	LISN Factor dB	Measured Level dBuV	Limit Line dBuV	Over Limit dB	Remark
1	0.154	39.78	0.04	9.56	49.38	55.78	-6.40	Average
2	0.154	50.00	0.04	9.56	59.60	65.78	-6.18	QP
3	0.389	33.38	0.05	9.54	42.97	48.08	-5.11	Average
4	0.389	43.02	0.05	9.54	52.61	58.08	-5.47	QP
5	0.481	31.07	0.05	9.58	40.70	46.32	-5.62	Average
6	0.481	41.38	0.05	9.58	51.01	56.32	-5.31	QP
7	0.989	27.40	0.07	9.55	37.02	46.00	-8.98	Average
8	0.989	37.70	0.07	9.55	47.32	56.00	-8.68	QP
9	1.991	17.05	0.12	9.61	26.78	46.00	-19.22	Average
10	1.991	27.38	0.12	9.61	37.11	56.00	-18.89	QP
11	13.695	14.23	0.31	9.82	24.36	50.00	-25.64	Average
12	13.695	24.12	0.31	9.82	34.25	60.00	-25.75	QP

Test Mode: 00; Line: Neutral Line



Pol :NEUTRAL
Mode :
Model :
Power :

	Frequenc MHz	Read Level dBuV	Cable Loss dB	LISN Factor dB	Measured Level dBuV	Limit Line dBuV	Over Limit dB	Remark
1	0.169	33.80	0.04	9.54	43.38	55.03	-11.65	Average
2	0.169	44.03	0.04	9.54	53.61	65.03	-11.42	QP
3	0.343	35.57	0.05	9.51	45.13	49.13	-4.00	Average
4	0.343	45.53	0.05	9.51	55.09	59.13	-4.04	QP
5	0.383	31.86	0.05	9.53	41.44	48.21	-6.77	Average
6	0.383	42.31	0.05	9.53	51.89	58.21	-6.32	QP
7	1.426	21.06	0.10	9.54	30.70	46.00	-15.30	Average
8	1.426	31.08	0.10	9.54	40.72	56.00	-15.28	QP
9	2.023	21.29	0.13	9.52	30.94	46.00	-15.06	Average
10	2.023	30.94	0.13	9.52	40.59	56.00	-15.41	QP
11	13.623	11.22	0.31	9.88	21.41	50.00	-28.59	Average
12	13.623	21.81	0.31	9.88	32.00	60.00	-28.00	QP

6.2 Radiated Emissions (Magnetic field Strength)(9kHz-30MHz)

Test Requirement: 47 CFR Part 18

Test Method: FCC/OST MP-5:1986

Limit:

Measurement Distance: 3 m

Frequency Range: 9kHz to 30MHz

Detector: Peak for pre-scan, Average for the final result
(200Hz Resolution Bandwidth for 9kHz to 150kHz;
9kHz Resolution Bandwidth for 150kHz to 30MHz)

Equipment:	Operating frequency:	RF Power generated by equipment (watts):	Limit dB(uV/m) average:
Any type unless otherwise specified (miscellaneous)	Any ISM frequency	**962.2**	Limit=20lg(25*SQRT(**962.2**/500))+20lg(300/3)=**70.80 dBuV/m** @ 3m distance.

6.2.1 E.U.T. Operation

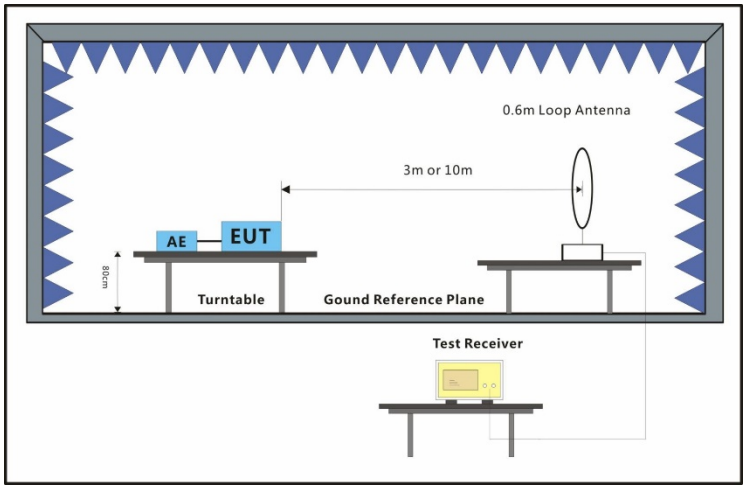
Operating Environment:

Temperature: 25.6 °C Humidity: 50.4 % RH Atmospheric Pressure: 1017 mbar

6.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Test the EUT in microwave mode with maximum power.
Pre-scan	01	Test the EUT in microwave mode with middle power.
Pre-scan	02	Test the EUT in microwave mode with lowest power.

6.2.3 Test Setup Diagram



6.2.4 Measurement Procedure and Data

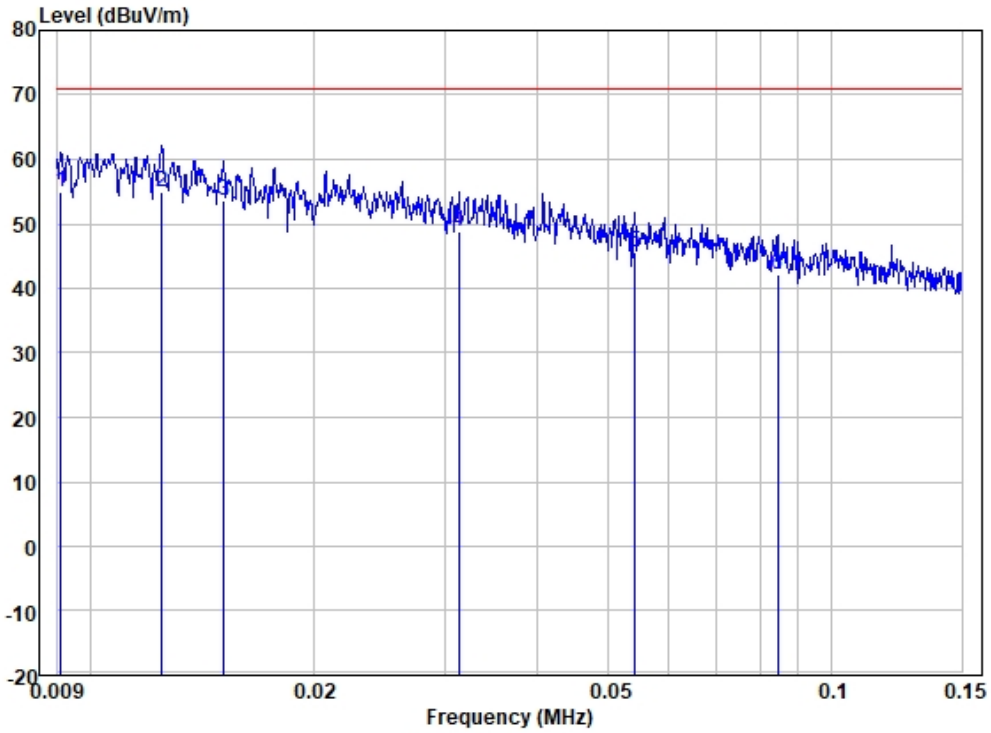
Frequency range: 9KHz-30MHz

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 loop antenna with 2 orthogonal polarities.

The red line show in graphic is the limit in standard used in this section.

Level=Read Level + Antenna Factor + Cable Loss - Preamp Factor

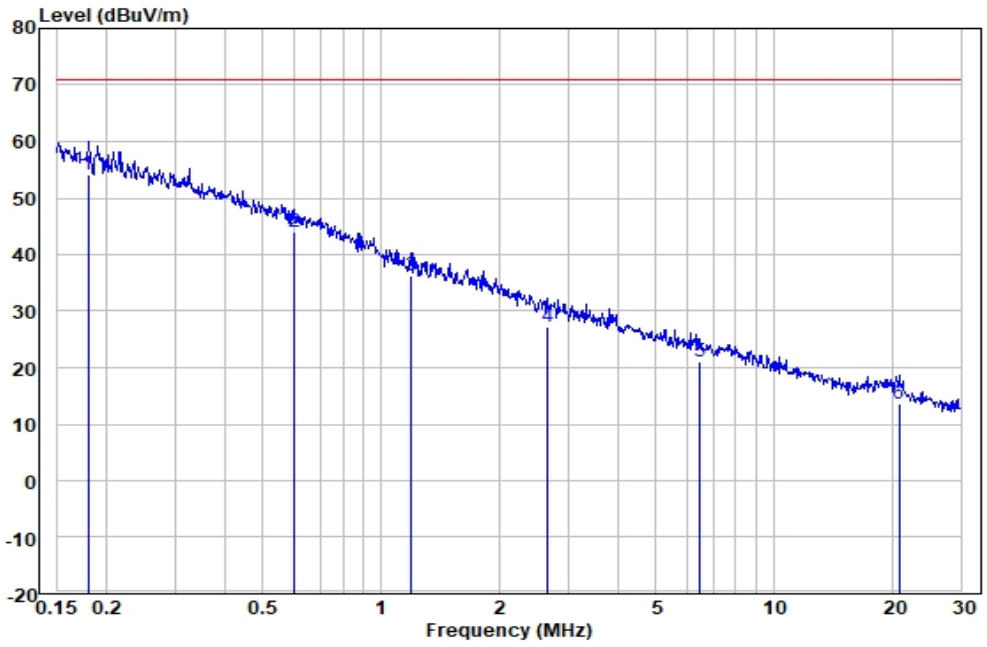
Test Mode: 00; Polarity: Horizontal



Site : 966 Chamber
Job :
Model :
Power :
Test Mode :

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Measured Level	Limit Line	Over Limit	Pol/ Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	0.009	65.94	21.84	0.01	32.84	54.95	70.80	-15.85	HORIZONTAL	Average
2	0.012	67.58	20.31	0.01	32.84	55.06	70.80	-15.74	HORIZONTAL	Average
3	0.015	68.30	18.18	0.01	32.84	53.65	70.80	-17.15	HORIZONTAL	Average
4	0.031	66.09	15.66	0.01	32.84	48.92	70.80	-21.88	HORIZONTAL	Average
5	0.054	63.65	14.89	0.01	32.84	45.71	70.80	-25.09	HORIZONTAL	Average
6	0.084	60.40	14.59	0.01	32.84	42.16	70.80	-28.64	HORIZONTAL	Average

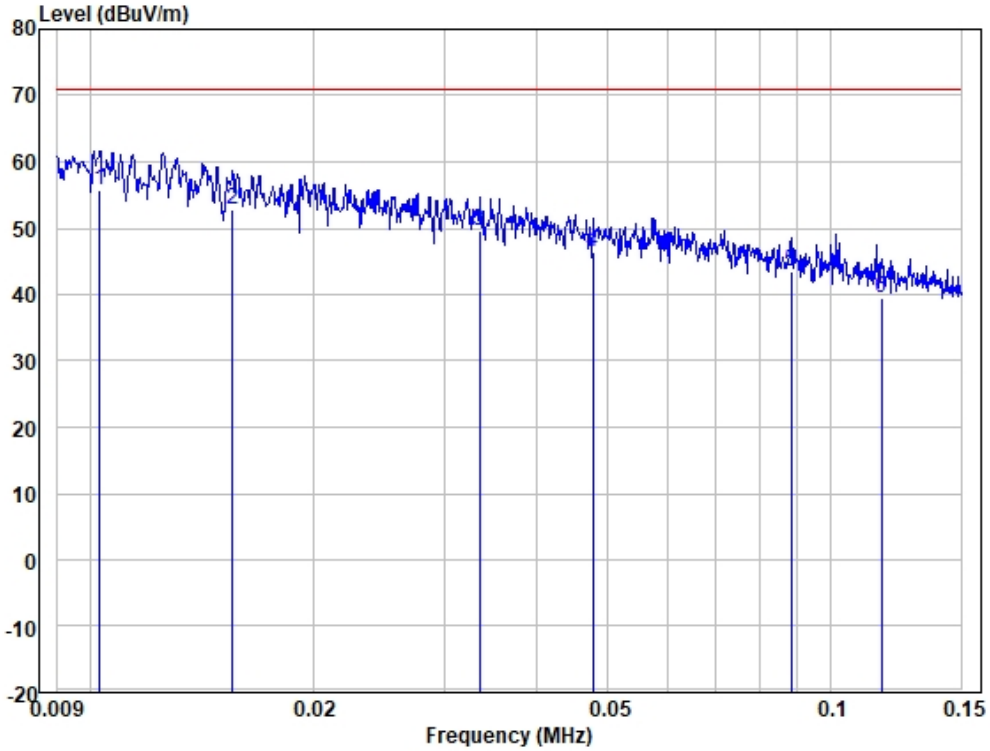
Test Mode: 00; Polarity: Horizontal



Site : 966 Chamber
Job :
Model :
Power :
Test Mode :

	Freq	Read Level	Anterna Factor	Cable Loss	Preamp Factor	Measured Level	Limit Line	Over Limit	Pol/ Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	0.180	72.27	14.68	0.01	32.84	54.12	70.80	-16.68	HORIZONTAL	Average
2	0.604	62.49	14.23	0.05	32.83	43.94	70.80	-26.86	HORIZONTAL	Average
3	1.197	55.76	13.42	0.05	32.83	36.40	70.80	-34.40	HORIZONTAL	Average
4	2.664	46.48	13.59	0.07	32.82	27.32	70.80	-43.48	HORIZONTAL	Average
5	6.488	41.30	12.59	0.11	32.82	21.18	70.80	-49.62	HORIZONTAL	Average
6	20.814	37.06	9.10	0.25	32.82	13.59	70.80	-57.21	HORIZONTAL	Average

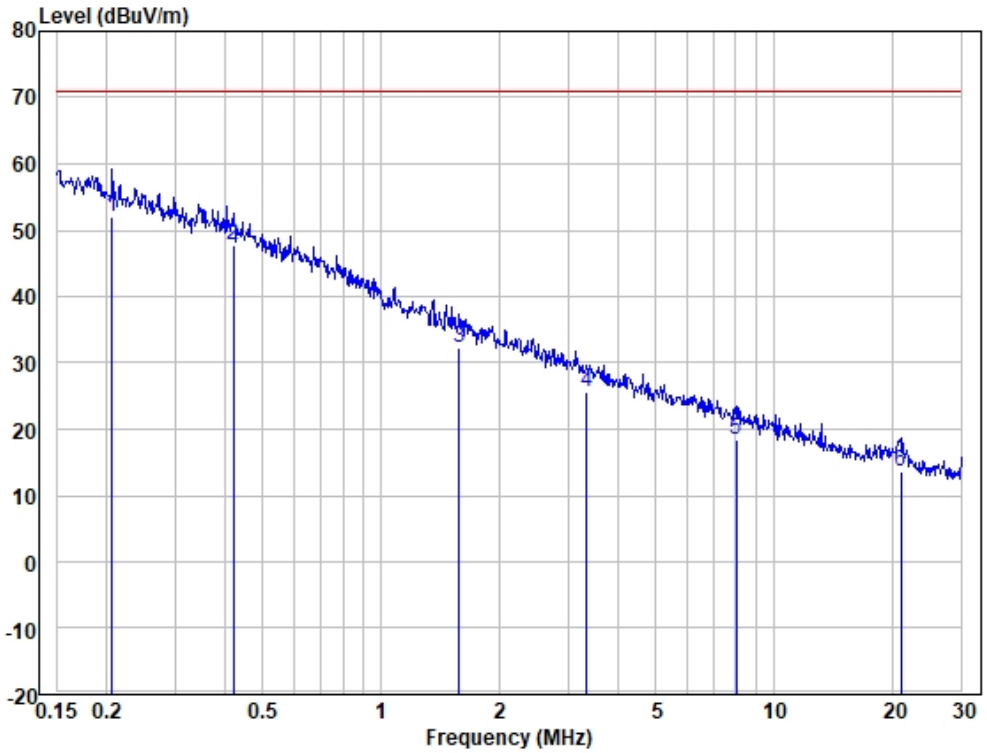
Test Mode: 00; Polarity: Vertical



Site : 966 Chamber
Job :
Model :
Power :
Test Mode :

	Freq	Read Level	Anterna Factor	Cable Loss	Preamp Factor	Measured Level	Limit Line	Over Limit	Pol/ Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	0.010	67.04	21.43	0.01	32.84	55.64	70.80	-15.16	VERTICAL	Average
2	0.016	67.57	18.03	0.01	32.84	52.77	70.80	-18.03	VERTICAL	Average
3	0.033	67.01	15.54	0.01	32.84	49.72	70.80	-21.08	VERTICAL	Average
4	0.048	64.33	14.98	0.01	32.84	46.48	70.80	-24.32	VERTICAL	Average
5	0.088	61.89	14.44	0.01	32.84	43.50	70.80	-27.30	VERTICAL	Average
6	0.117	57.47	14.74	0.01	32.84	39.38	70.80	-31.42	VERTICAL	Average

Test Mode: 00; Polarity: Vertical



Site : 966 Chamber
Job :
Model :
Power :
Test Mode :

	Freq	Read Level	Anterna Factor	Cable Loss	Preamp Factor	Measured Level	Limit Line	Over Limit	Pol/ Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	0.207	70.23	14.67	0.01	32.84	52.07	70.80	-18.73	VERTICAL	Average
2	0.421	65.93	14.53	0.01	32.84	47.63	70.80	-23.17	VERTICAL	Average
3	1.585	51.24	13.83	0.06	32.83	32.30	70.80	-38.50	VERTICAL	Average
4	3.346	45.12	13.36	0.07	32.82	25.73	70.80	-45.07	VERTICAL	Average
5	8.020	38.75	12.30	0.14	32.81	18.38	70.80	-52.42	VERTICAL	Average
6	21.035	37.22	9.03	0.25	32.82	13.68	70.80	-57.12	VERTICAL	Average

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6.3 Radiated Emissions (30MHz-1GHz)

Test Requirement: 47 CFR Part 18

Test Method: FCC/OST MP-5:1986

Limit:

Measurement Distance: 3 m

Frequency Range: 30 MHz to 1 GHz

Detector: Peak for pre-scan, average for the final result

(120 kHz Resolution Bandwidth for 30 MHz to 1 GHz)

Equipment:	Operating frequency:	RF Power generated by equipment (watts):	Limit dB(uV/m) average:
Any type unless otherwise specified (miscellaneous)	Any ISM frequency	**962.2**	Limit=20lg(25*SQRT(**962.2**/500))+20lg(300/3)=**70.80 dBuV/m** @ 3m distance.

6.3.1 E.U.T. Operation

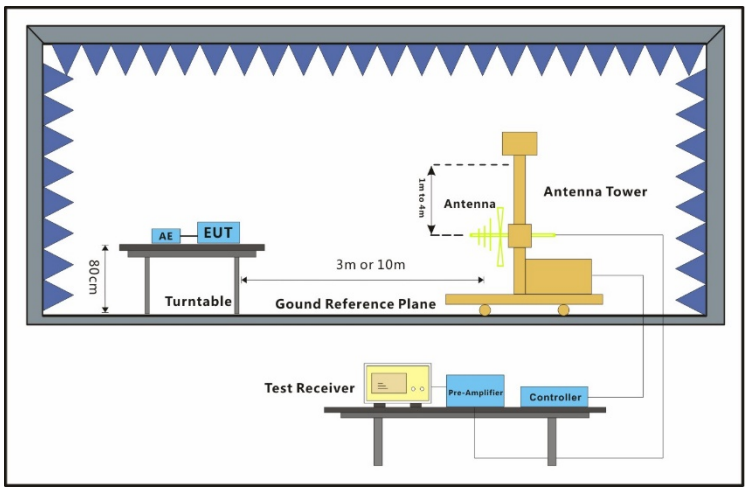
Operating Environment:

Temperature: 23.4 °C Humidity: 52.2 % RH Atmospheric Pressure: 1017 mbar

6.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Test the EUT in microwave mode with maximum power.
Pre-scan	01	Test the EUT in microwave mode with middle power.
Pre-scan	02	Test the EUT in microwave mode with lowest power.

6.3.3 Test Setup Diagram



6.3.4 Measurement Procedure and Data

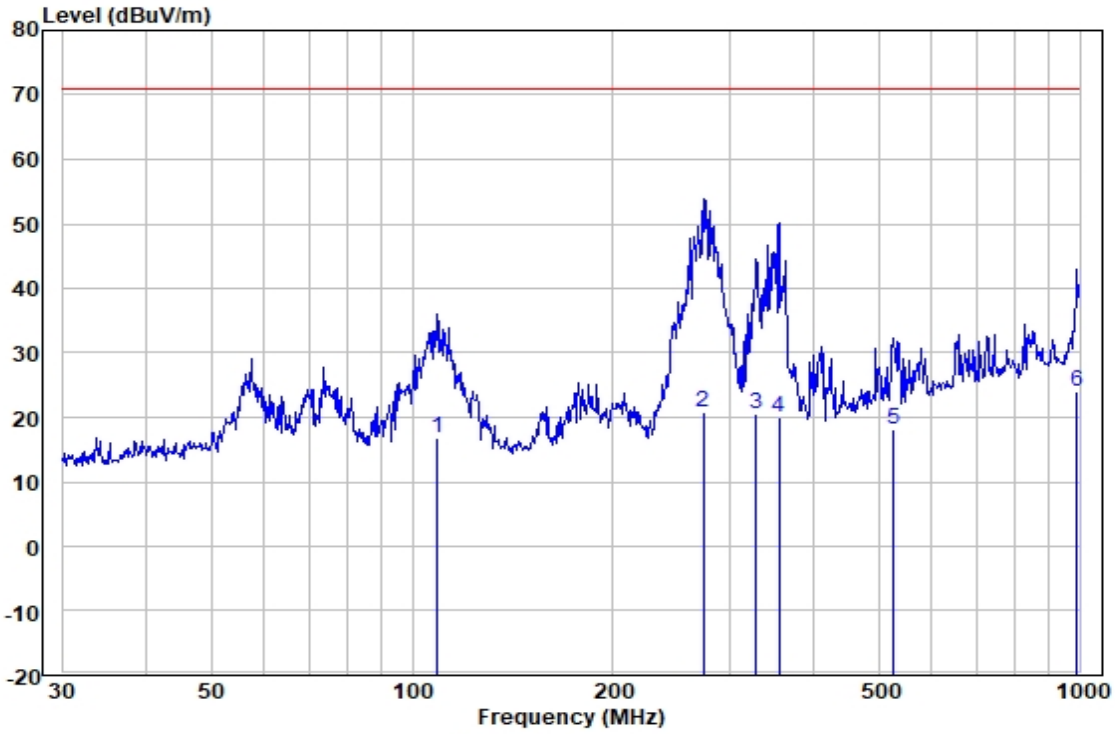
Frequency range: 30MHz-1GHz

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 BiConiLog antenna with 2 orthogonal polarities.

The red line show in graphic is the limit in standard used in this section.

Level=Read Level + Antenna Factor + Cable Loss - Preamp Factor

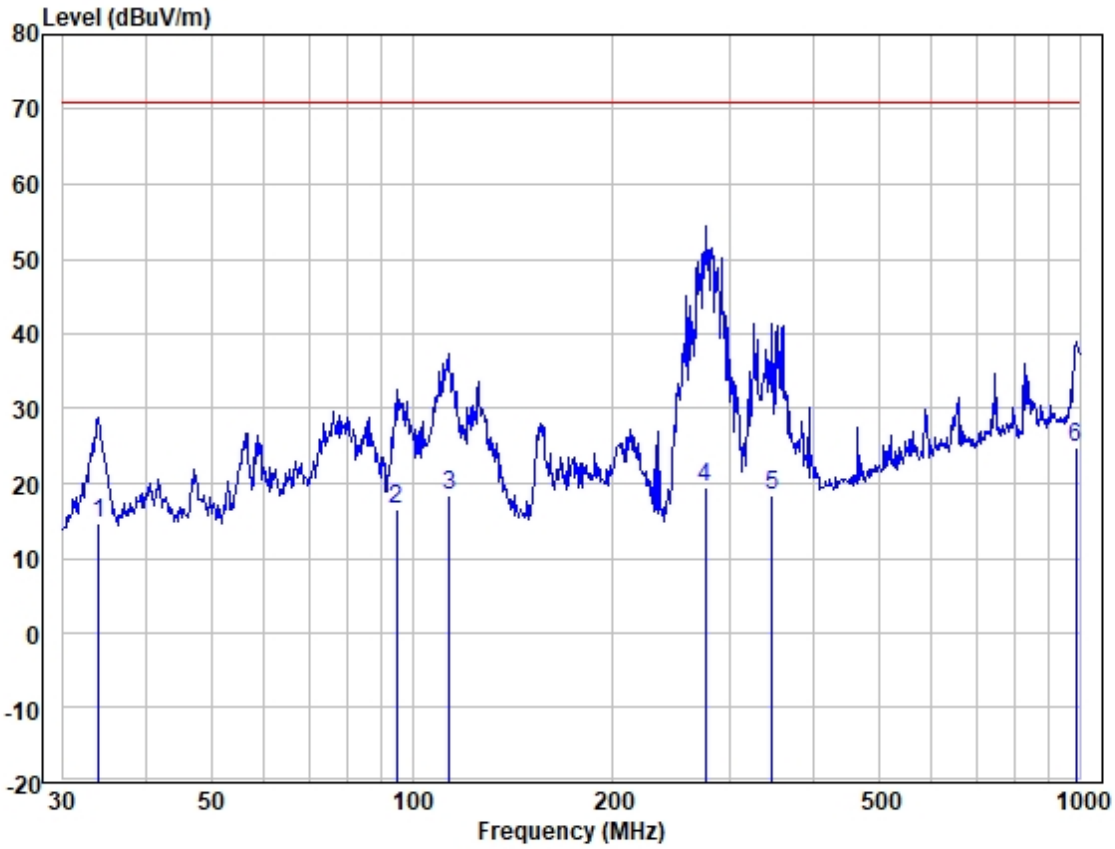
Test Mode: 00; Polarity: Horizontal



Site : 966 Chamber
Job :
Model :
Power :
Test Mode :

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Measured Level	Limit Line	Over Limit	Pol/ Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	109.029	33.20	15.92	0.57	32.80	16.89	70.80	-53.91	HORIZONTAL	Average
2	273.234	34.37	18.46	0.95	32.87	20.91	70.80	-49.89	HORIZONTAL	Average
3	327.887	32.39	20.11	1.01	32.89	20.62	70.80	-50.18	HORIZONTAL	Average
4	354.183	31.51	20.34	1.09	32.90	20.04	70.80	-50.76	HORIZONTAL	Average
5	526.397	25.71	24.20	1.31	32.97	18.25	70.80	-52.55	HORIZONTAL	Average
6	989.536	23.91	29.80	1.84	31.66	23.89	70.80	-46.91	HORIZONTAL	Average

Test Mode: 00; Polarity: Vertical



Site : 966 Chamber
Job :
Model :
Power :
Test Mode :

	Freq	Read Level	Anterna Factor	Cable Loss	Preamp Factor	Measured Level	Limit Line	Over Limit	Pol/ Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	33.917	29.31	17.99	0.32	32.85	14.77	70.80	-56.03	VERTICAL	Average
2	94.760	35.06	13.86	0.53	32.80	16.65	70.80	-54.15	VERTICAL	Average
3	113.714	34.11	16.50	0.58	32.80	18.39	70.80	-52.41	VERTICAL	Average
4	275.157	32.70	18.57	0.95	32.87	19.35	70.80	-51.45	VERTICAL	Average
5	345.595	29.90	20.26	1.05	32.89	18.32	70.80	-52.48	VERTICAL	Average
6	986.072	24.88	29.85	1.83	31.66	24.90	70.80	-45.90	VERTICAL	Average

6.4 Radiated Emissions (above 1GHz)

Test Requirement: 47 CFR Part 18

Test Method: FCC/OST MP-5:1986

Limit:

Measurement Distance: 3 m

Frequency Range: Above 1GHz

Detector: Peak for pre-scan, Average for the final result

(1MHz Resolution Bandwidth for 1000MHz Above)

Equipment:	Operating frequency:	RF Power generated by equipment (watts):	Limit dB(uV/m) average:
Any type unless otherwise specified (miscellaneous)	Any ISM frequency	**962.2**	Limit=20lg(25*SQRT(**962.2**/500))+20lg(300/3)=**70.80 dBuV/m** @ 3m distance.

6.4.1 E.U.T. Operation

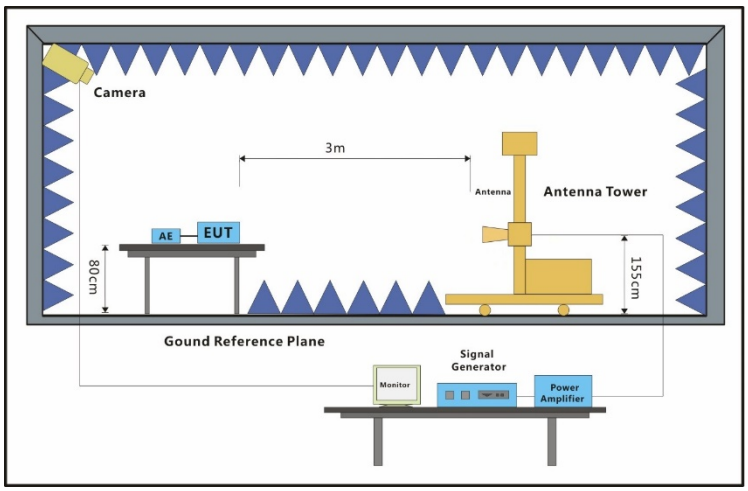
Operating Environment:

Temperature: 22.6 °C Humidity: 54.1 % RH Atmospheric Pressure: 1017 mbar

6.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Test the EUT in microwave mode with maximum power.
Pre-scan	01	Test the EUT in microwave mode with middle power.
Pre-scan	02	Test the EUT in microwave mode with lowest power.

6.4.3 Test Setup Diagram



6.4.4 Measurement Procedure and Data

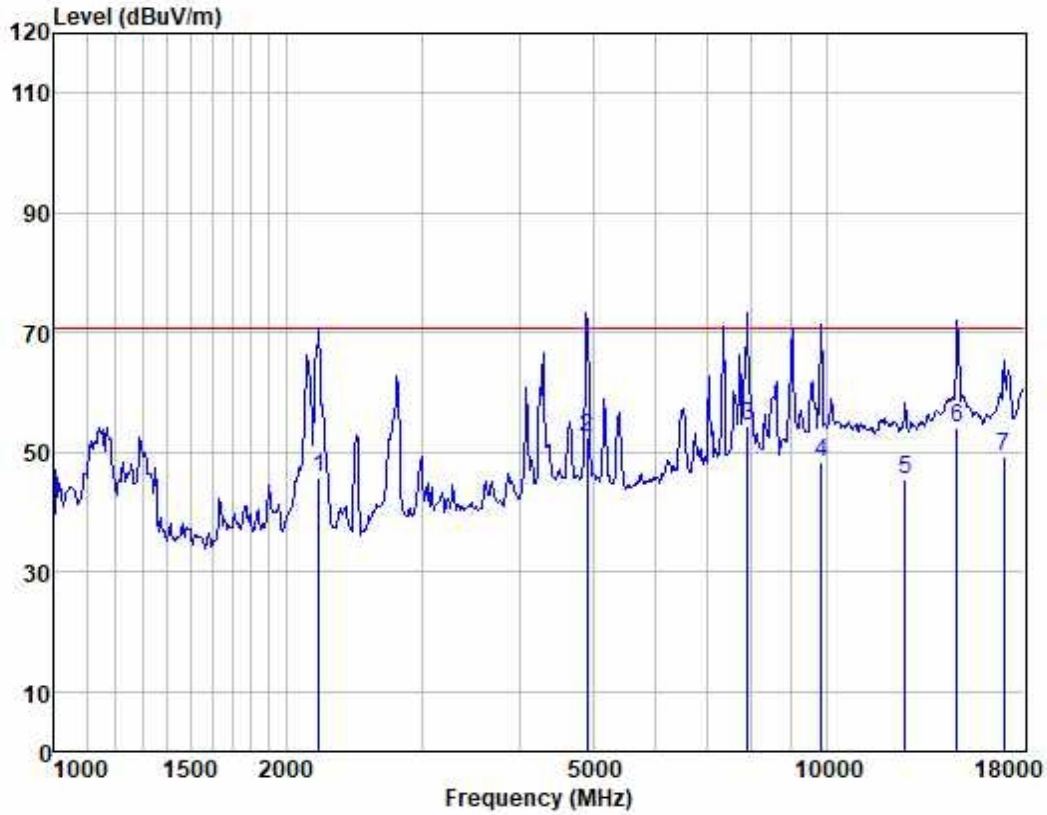
Frequency range: Above 1GHz

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.

The red line show in graphic is the limit in standard used in this section.

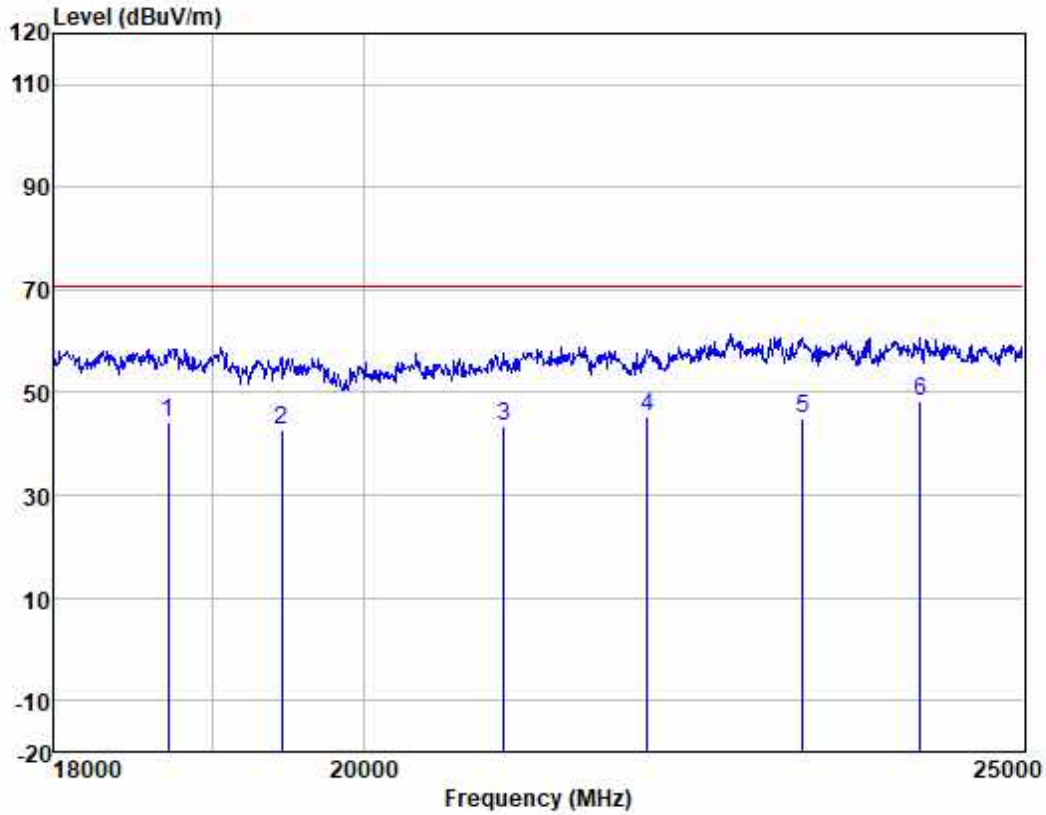
Level=Read Level + Antenna Factor + Cable Loss - Preamp Factor

Test Mode: 00; Polarity: Horizontal



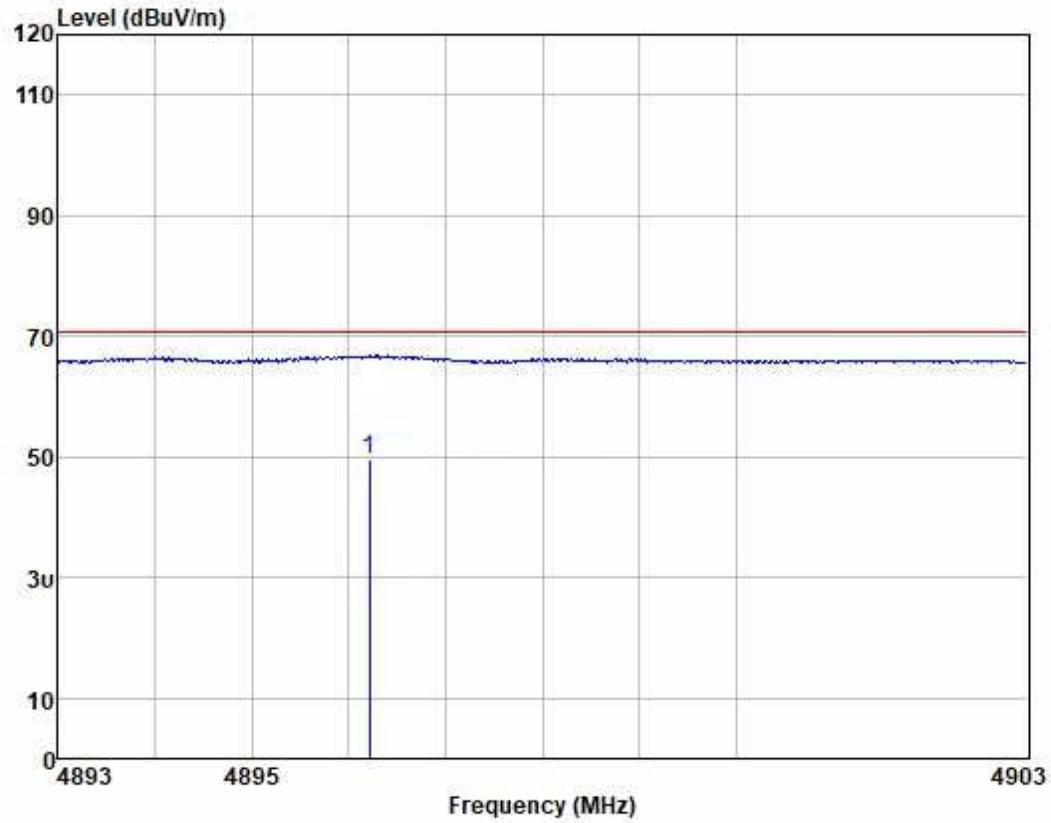
	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	2201.352	53.24	26.93	3.26	37.79	45.64	70.80	-25.16	HORIZONTAL	Average
2	4898.971	50.69	34.15	4.86	37.35	52.35	70.80	-18.45	HORIZONTAL	Average
3	7917.388	48.30	37.07	6.18	37.20	54.35	70.80	-16.45	HORIZONTAL	Average
4	9866.789	39.36	38.91	7.17	37.10	48.34	70.80	-22.46	HORIZONTAL	Average
5	12651.130	35.59	38.57	8.00	36.86	45.30	70.80	-25.50	HORIZONTAL	Average
6	14788.150	40.18	41.56	8.79	36.51	54.02	70.80	-16.78	HORIZONTAL	Average
7	16988.970	34.65	41.57	9.43	36.42	49.23	70.80	-21.57	HORIZONTAL	Average

Test Mode: 00; Polarity: Horizontal



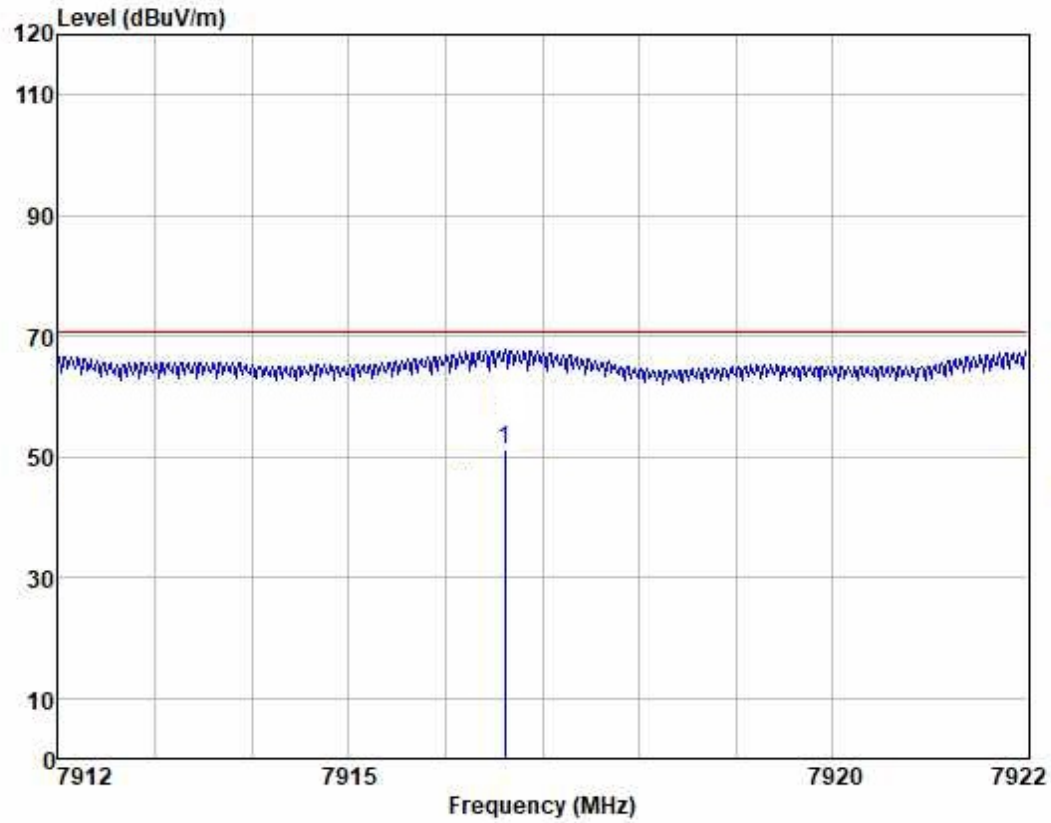
	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	18711.440	43.51	36.97	3.17	39.27	44.38	70.80	-26.42	HORIZONTAL	Average
2	19444.620	42.57	36.91	3.12	39.78	42.82	70.80	-27.98	HORIZONTAL	Average
3	20963.810	41.48	37.68	3.22	38.76	43.62	70.80	-27.18	HORIZONTAL	Average
4	22015.460	44.42	37.52	3.35	39.90	45.39	70.80	-25.41	HORIZONTAL	Average
5	23203.550	41.06	38.54	3.35	38.13	44.82	70.80	-25.98	HORIZONTAL	Average
6	24152.380	44.36	38.70	3.45	38.02	48.49	70.80	-22.31	HORIZONTAL	Average

Test Mode: 00; Polarity: Horizontal



	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	4896.208	48.11	34.15	4.86	37.35	49.77	70.80	-21.03	HORIZONTAL	Average

Test Mode: 00; Polarity: Horizontal



	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	7916.608	45.49	37.07	6.18	37.20	51.54	70.80	-19.26	HORIZONTAL	Average

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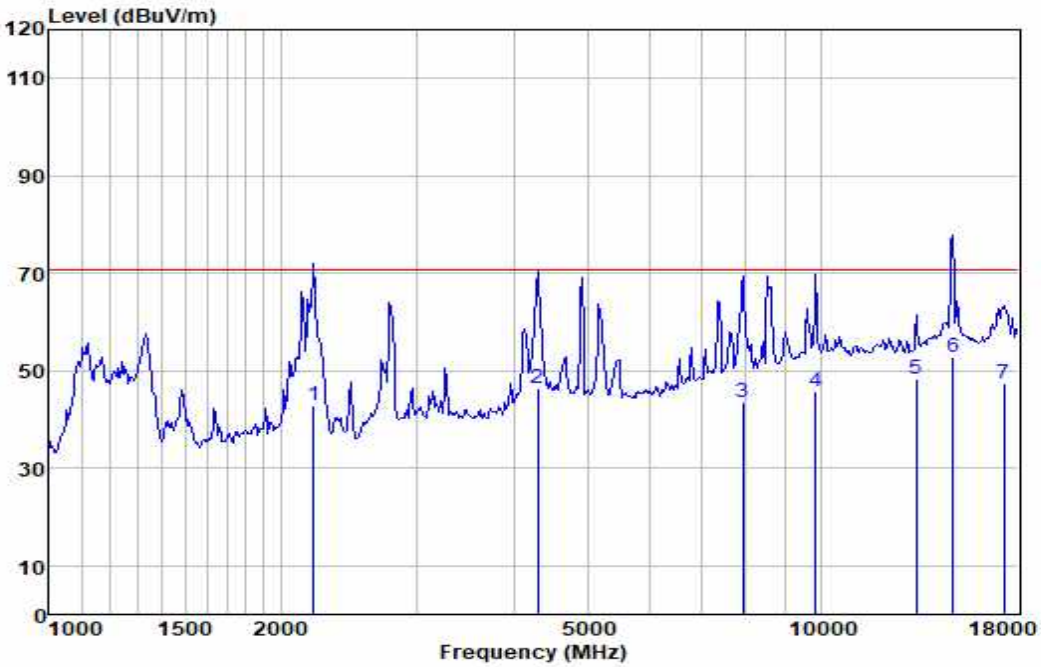
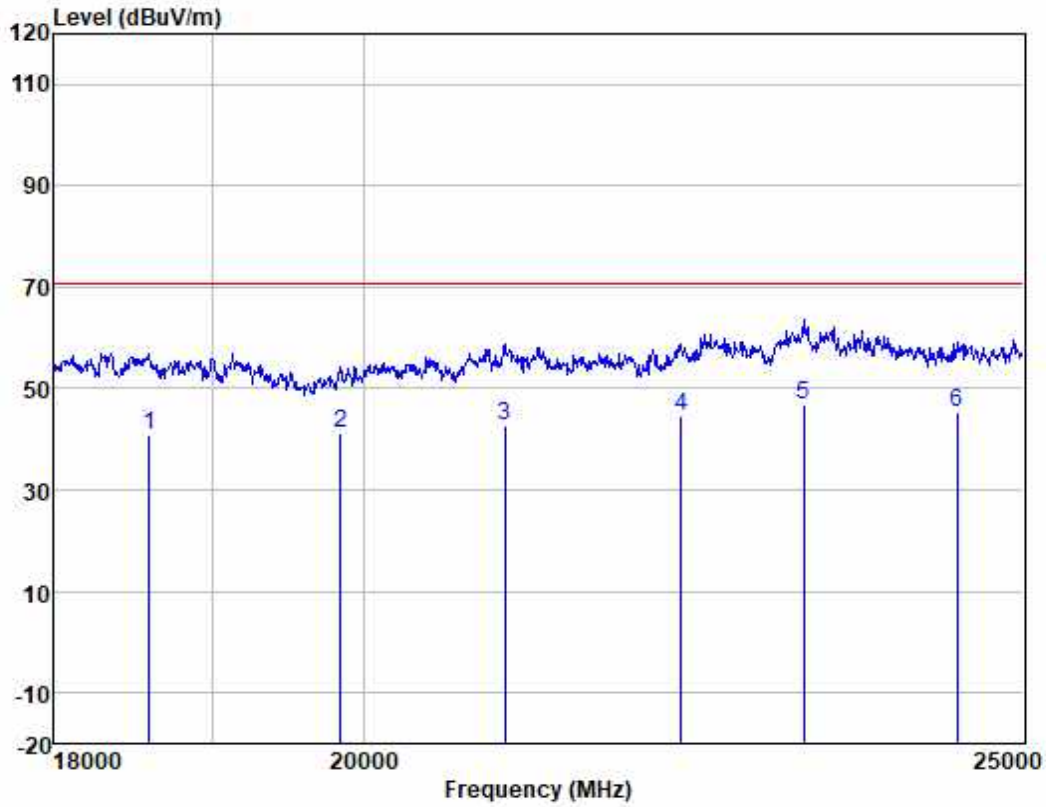
Test Mode: 00; Polarity: Vertical



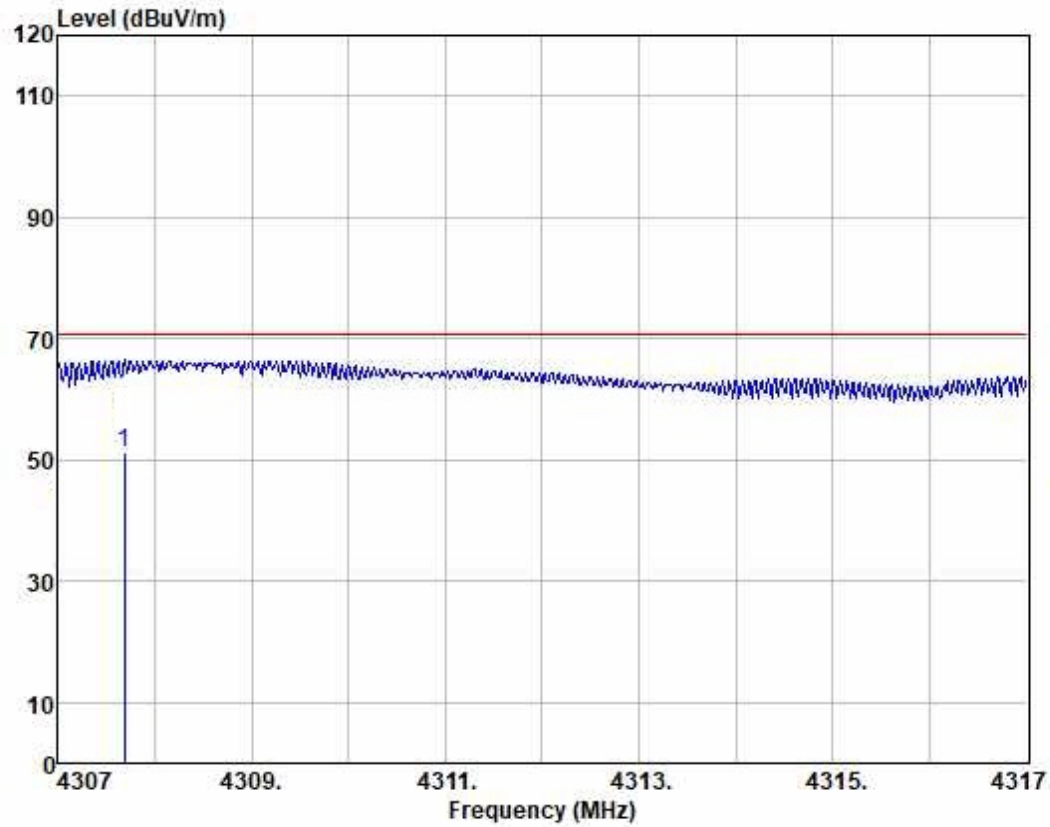
	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	2201.352	50.56	26.93	3.26	37.79	42.96	70.80	-27.84	VERTICAL	Average
2	4304.400	46.11	33.05	4.58	37.47	46.27	70.80	-24.53	VERTICAL	Average
3	7943.838	37.36	37.09	6.19	37.20	43.44	70.80	-27.36	VERTICAL	Average
4	9866.789	36.77	38.91	7.17	37.10	45.75	70.80	-25.05	VERTICAL	Average
5	13326.750	36.85	40.06	8.20	36.76	48.35	70.80	-22.45	VERTICAL	Average
6	14873.890	39.08	41.31	8.90	36.51	52.78	70.80	-18.02	VERTICAL	Average
7	17286.170	31.39	42.72	9.52	36.41	47.22	70.80	-23.58	VERTICAL	Average

Test Mode: 00; Polarity: Vertical



	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	18588.910	39.98	36.93	3.14	39.24	40.81	70.80	-29.99	VERTICAL	Average
2	19838.190	41.54	37.05	3.00	40.36	41.23	70.80	-29.57	VERTICAL	Average
3	20977.590	40.52	37.69	3.22	38.75	42.68	70.80	-28.12	VERTICAL	Average
4	22270.040	43.13	37.84	3.35	39.56	44.76	70.80	-26.04	VERTICAL	Average
5	23211.180	43.00	38.54	3.35	38.13	46.76	70.80	-24.04	VERTICAL	Average
6	24455.770	41.93	38.70	3.42	38.79	45.26	70.80	-25.54	VERTICAL	Average

Test Mode: 00; Polarity: Vertical



	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	4307.680	51.47	33.05	4.58	37.47	51.63	70.80	-19.17	VERTICAL	Average

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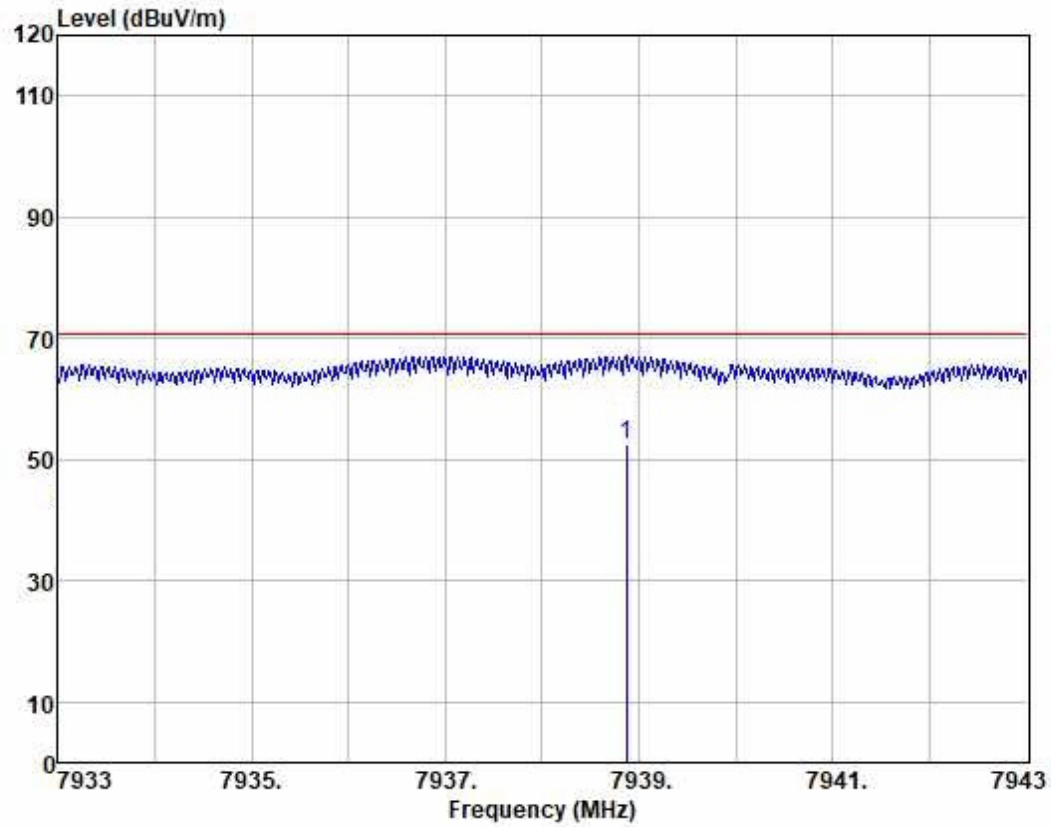
Test Mode: 00; Polarity: Vertical



	Freq	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	7938.870	46.13	37.09	6.19	37.20	52.21	70.80	-18.59	VERTICAL	Average

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6.5 Output Power Measurement

Test Requirement: 47 CFR Part 18

Test Method: FCC OST/MP-5:1986

Limit:

Power output Measurement:

Formula:

$$P = \frac{4{,}187 \cdot m_w (T_2 - T_1) + 0{,}55 \cdot m_c (T_2 - T_0)}{t}$$

NOTE :

P is the microwave power output, in watts

m_w is the mass of the water, in grams

m_c is the mass of the container, in grams

T_0 is the ambient temperature, in degrees Celsius

T_1 is the initial temperature of the water, in degrees Celsius

T_2 is the final temperature of the water, in degrees Celsius

t is the heating time, in seconds, excluding the magnetron filament heating-up time.

Input Power Measurement:

The EUT was set up according to the MP-5 for input power measurement, the input power and current was measured using a power analyzer. Water load in a beaker was located in the center of the oven and the microwave oven was set to maximum power.

Base on the measured input power it was found that the microwave oven can operating as the user manual's specifications.

6.5.1 E.U.T. Operation

Operating Environment:

Temperature: 22.4 °C Humidity: 52.2 % RH Atmospheric Pressure: 1017 mbar

6.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Test the EUT in microwave mode with maximum power.
Final test	01	Test the EUT in microwave mode with middle power.
Final test	02	Test the EUT in microwave mode with lowest power.

6.5.3 Measurement Procedure and Data

Output Power Data

Mass of water (g)	Mass of the container (g)	Ambient temperature (℃)	Initial temperature (℃)	Final temperature (℃)	Heating time (s)	Power output (W)
1003	415	20.2	10.1	20.4	45	962.2

Input Power Data

Input Voltage (V)	Input Current (A)	Power Factor	Measured input power (W)	Rated input power (W)
120.02	12.92	0.941	1459	1500

6.6 Operating Frequency Measurement

Test Requirement: 47 CFR Part 18

Test Method: FCC OST/MP-5:1986

Limit:

Frequency Range: 2400-2500 MHz

Detector: Average for the final result for outside ISM band(2450MHz±50MHz)

Outside band limit: (a) ISM equipment operation on a frequency specified in §18.301 is permitted unlimited radiated energy in the band specified for that frequency.

(b) The field strength levels of emissions which lie outside the bands specified in §18.301,unless otherwise indicated, shall not exceed the following:

RF Power generated by equipment(watts)	Field strength Limit(uV/m) @300m
Below 500	25
500 or more	25*SQRT(power/500)

Power =**962.2** W according to clause 6.1.2

Limit**=20lg(25*SQRT(power/500))+20lg(300/3)=70.80dBuV/m @ 3m distance.**

ISM band: ISM equipment may be operated on any frequency above 9 kHz.

And the frequency band 2400-2500MHz is allocated for use by ISM equipment.

(§18.301)

ISM frequency	Tolerance
6.78MHz	±15.0kHz
13.56MHz	±7.0kHz
27.12MHz	±163.0kHz
40.68MHz	±20.0kHz
915MHz	±13.0MHz
2450MHz	**±50.0MHz**
5800MHz	±75.0MHz
24125MHz	±125.0MHz
61.25GHz	±250.0MHz
122.5GHz	±500.0MHz
245.00GHz	±1.0GHz

6.6.1 E.U.T. Operation

Operating Environment:

Temperature: 22.6 °C Humidity: 54.1 % RH Atmospheric Pressure: 1017 mbar

6.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Test the EUT in microwave mode with maximum power.
Pre-scan	01	Test the EUT in microwave mode with middle power.
Pre-scan	02	Test the EUT in microwave mode with lowest power.

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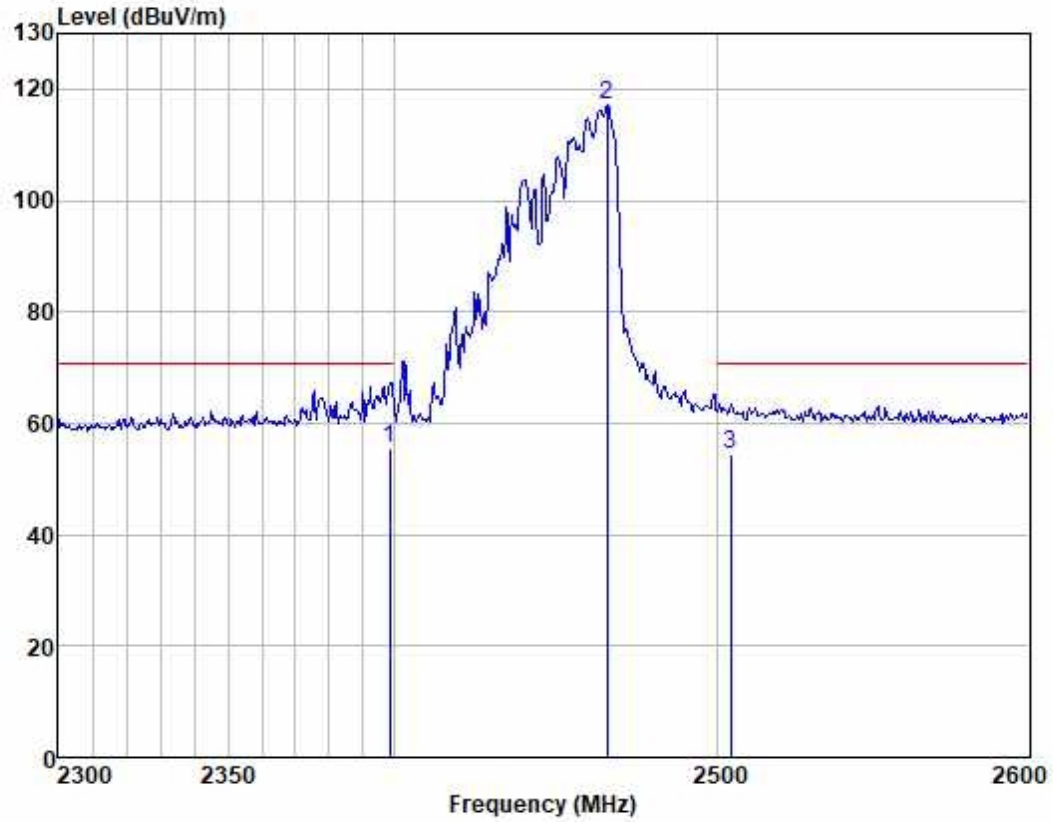
6.6.3 Measurement Procedure and Data

Test Mode: 00; The variation of frequency with line voltage



	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	2398.490	24.39	27.46	3.45	0.00	55.30	70.80	-15.50	HORIZONTAL	Average
2	2465.272	85.83	27.72	3.48	0.00	117.03	------	------	HORIZONTAL	peak
3	2504.265	23.16	27.87	3.49	0.00	54.52	70.80	-16.28	HORIZONTAL	Average

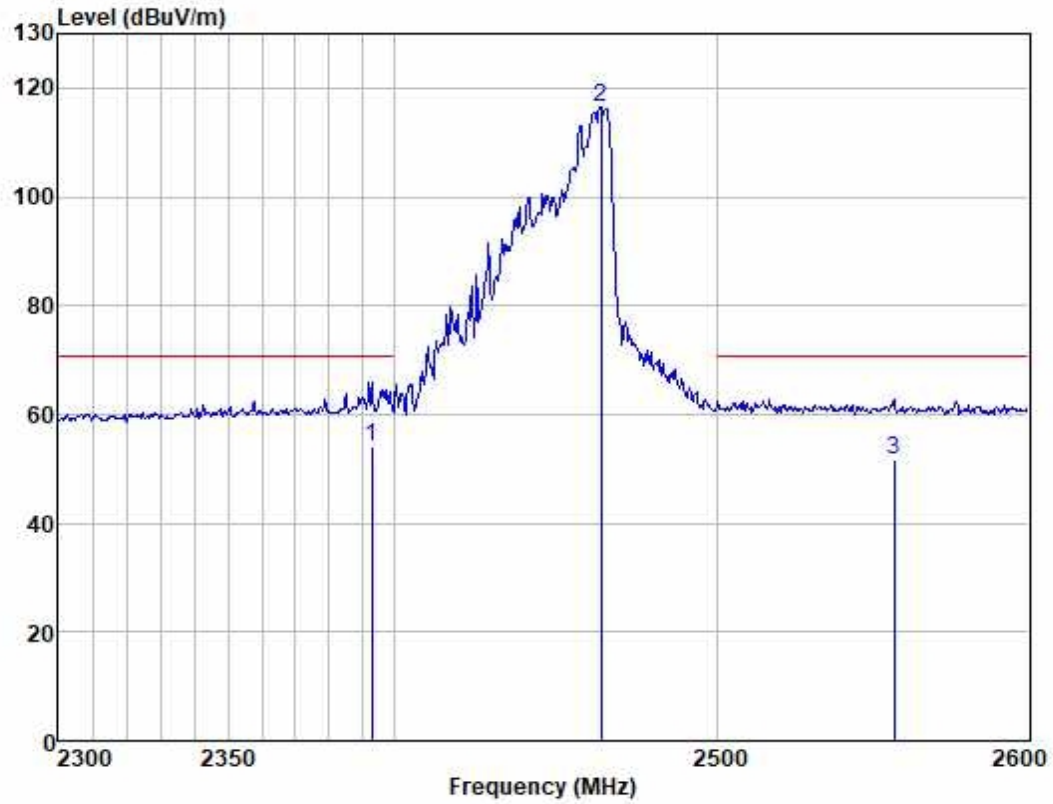
The variation of frequency with line voltage.

The operating frequency was measured using a spectrum analyzer, the supply voltage was setting at the rated AC voltage, measured was start with EUT at room temperature. The EUT was started to warm by at least 10 minutes, the operating frequency was monitored as the rated voltage was varied from 80% to 125%.

Test record was found the worst situation is when the line voltage is 125% of rated AC voltage.

ISM frequency(MHz)	Tolerance(MHz)	Measurement Data(MHz)
2450	±50	2465.272

Test Mode: 00; The variation of frequency with time



	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	2393.202	23.13	27.45	3.45	0.00	54.03	70.80	-16.77	VERTICAL	Average
2	2463.459	85.23	27.72	3.48	0.00	116.43	------	------	VERTICAL	peak
3	2556.694	20.24	28.05	3.51	0.00	51.80	70.80	-19.00	VERTICAL	Average

The variation of frequency with time

The operating frequency was measured using a spectrum analyzer, the supply voltage was setting at the rated AC voltage, measured was start with EUT at room temperature, the operating frequency was monitored until the water load was reduced to 20 percent of the original quantity.

Test record was found the worst situation is when the water load is reduced to 20 percent of the original quantity.

ISM frequency(MHz)	Tolerance(MHz)	Measurement Data(MHz)
2450	±50	2463.459

6.7 Radiation Hazard Test

Test Requirement: 47 CFR Part 18

Test Method: FCC OST/MP-5:1986

6.7.1 E.U.T. Operation

Operating Environment:

Temperature: 21.4 °C Humidity: 51.3 % RH Atmospheric Pressure: 1017 mbar

6.7.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	00	Test the EUT in microwave mode with maximum power.
Pre-scan	01	Test the EUT in microwave mode with middle power.
Pre-scan	02	Test the EUT in microwave mode with lowest power.

6.7.3 Measurement Procedure and Data

Maximum measure level (mW/cm²)	Limit (mW/cm²)	Test Result
0.065	1	pass

7 Test Setup Photo

Refer to Appendix - Test Setup Photo for GZEM200901528111

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8 EUT Constructional Details (EUT Photos)

Refer to Appendix - External and Internal Photos for GZEM2412007526HS

- End of the Report -

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