TEST REPORT

Applicant:	LETARON ELECTRONIC CO LTD
Address of Applicant:	No. 253, Junma Road, Hengli Town, Dongguan City, Guangdong Province, China
Manufacturer:	LETARON ELECTRONIC CO LTD
Address of Manufacturer:	No. 253, Junma Road, Hengli Town, Dongguan City, Guangdong Province, China
Product name:	Wireless Touch Sensor Switch
Model:	LSK-JJ-004-S
Rating(s):	DC 3V battery
Trademark:	LETARON
Standards:	47 CFR PART 15 Subpart C: section 15.249
FCC ID:	2BL73-LSKJJ004S
Data of Receipt:	2026-06-04
Date of Test:	2026-06-04~2026-08-14
Date of Issue:	2026-08-14
Test Result	**Pass***

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

Authorized for issue by:

Test by:

Aug.14, 2026 Jaffer Zhou Jaffer Zhou

Project Engineer

Date *Name/Position* *Signature*

Reviewed by:

Aug.14, 2026 Victor Meng Victor Meng

Project Engineer

Date *Name/Position* *Signature*

GUANGZHOU ITL CO., LTD. ITL

Possible test case verdicts:

test case does not apply to the test object ..:	N/A
test object does meet the requirement .....:	P (Pass)
test object does not meet the requirement ..:	F (Fail)

Testing Laboratory information:

Testing Laboratory Name ..... :	Guangzhou ITL Co., Ltd.
Address.....:	No. 3 Keyan Lu, Science City Guangzhou, Guangdong 510663, China
Testing location :	Same as above
Tel :	0086-20-32209330
Fax :	0086-20-62824387
E-mail :	itl@i-testlab.com

General remarks:

The test results presented in this report relate only to the object tested.

The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.

This report would be invalid test report without all the signatures of testing technician and approver.

This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

General product information:

/

1 Test Summary

Test	Test Requirement	Test method	Result
Antenna Requirement	FCC PART 15 C Section 15.203	FCC PART 15 C Section 15.203	PASS
Occupied Bandwidth	FCC PART 15 C section 15.215 (c)	ANSI C63.10-2020 + Cor1-2023	PASS
Radiated Emission	FCC PART 15 C section 15.249 (a), (d)	ANSI C63.10-2020 + Cor1-2023	PASS
Band Edges Measurement	FCC PART 15 C section 15.249 (d)	ANSI C63.10-2020 + Cor1-2023	PASS
Conducted Emissions at Mains Terminals	FCC PART 15 C section 15.207	ANSI C63.10-2020 + Cor1-2023	PASS

2 Contents

Page

TEST REPORT 1

1 TEST SUMMARY 3

2 CONTENTS 4

3 GENERAL INFORMATION 5

3.1 CLIENT INFORMATION 5
3.2 GENERAL DESCRIPTION OF E.U.T. 5
3.3 DETAILS OF E.U.T. 5
3.4 DESCRIPTION OF SUPPORT UNITS 5
3.5 TEST LOCATION 5
3.6 DEVIATION FROM STANDARDS 5
3.7 ABNORMALITIES FROM STANDARD CONDITIONS 5
3.8 OTHER INFORMATION REQUESTED BY THE CUSTOMER 5
3.9 TEST FACILITY 6
3.10 MEASUREMENT UNCERTAINTY 6

4 INSTRUMENTS USED DURING TEST 7

5 TEST RESULTS 8

5.1 E.U.T. TEST CONDITIONS 8
5.2 ANTENNA REQUIREMENT 10
5.3 OCCUPIED BANDWIDTH 11
5.4 RADIATED SPURIOUS EMISSIONS 14
5.4.1 Harmonic and other spurious emissions 19
5.5 BAND EDGES REQUIREMENT 23
5.6 CONDUCTED EMISSIONS AT MAINS TERMINALS 150 KHZ TO 30MHZ 26

3 General Information

3.1 Client Information

Applicant:	LETARON ELECTRONIC CO LTD
Address of Applicant:	No. 253, Junma Road, Hengli Town, Dongguan City, Guangdong Province, China

3.2 General Description of E.U.T.

Name:	Wireless Touch Sensor Switch
Model No.:	LSK-JJ-004-S
Trade Mark:	LETARON
Operating Frequency:	2468 MHz
Channel Separation:	/
Type of Modulation	GFSK
Antenna Type:	PCB antenna
Antenna gain:	2 dBi
Remark:	All information regarding the antenna is provided by the applicant, and the applicant shall be responsible for all issues arising from the antenna information.

3.3 Details of E.U.T.

EUT Power Supply:	DC 3V battery
Test mode:	The program used to control the EUT for staying in continuous transmitting and receiving mode is programmed.
Power cord:	/

3.4 Description of Support Units

The EUT has been tested as an independent unit for fixed frequency by testing lab.

3.5 Test Location

All tests were performed at:

Guangzhou ITL Co., Ltd.
No. 3 Keyan Lu, Science City Guangzhou, Guangdong 510663, China
0086-20-32209330
itl@i-testlab.com

No tests were sub-contracted.

3.6 Deviation from Standards

None.

3.7 Abnormalities from Standard Conditions

None.

3.8 Other Information Requested by the Customer

None.

3.9 Test Facility

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

- **CNAS Lab code: L4957**
- **FCC Designation No.: CN5060**
- **CAB identifier: CN0204**
- **NVLAP LAB CODE: 600411-0**

3.10 Measurement Uncertainty

The below measurement uncertainties given below are based on a 95% confidence level (base on a coverage factor (k=2).)

Parameter	Uncertainty
Radio frequency	2.25%
total RF power, conducted	±1.34 dB
RF power density , conducted	±1.49 dB
All emissions, radiated	±2.72 dB
Temperature	±5.02 dB
Humidity	±0.8°C
DC and low frequency voltages	±1.5 %

4 Instruments Used during Test

RF Test For EU						
No.	**Test Equipment**	**Manufacturer**	**Model**	**Serial No.**	**Last Cal.**	**Cal. Due**
ITL-100	Semi-Anechoic chamber	ETS•Lindgren	FACT3 2.0	CT09015	2026/01/12	2029/01/11
ITL-101	Shielded Room	ETS•Lindgren	8*4*3	CT09010	2024/01/05	2027/01/04
ITL-103	Two-line v-network	R&S	ENV216	100120	2026/05/27	2027/05/26
ITL-110	Horn Antenna	A-INFOMW	JXTXLB-10180-N	J20310906 12133	2026/01/17	2027/01/16
ITL-114	Spectrum Analyzer	R&S	FSV40-N	101763	2026/01/14	2027/01/13
ITL-116	Pre Amplifier	HP	8447F	3113A0590 5	2026/01/14	2027/01/13
ITL-117	Wideband Amplifier Super Ultra	Mini-circuits	ZVA-183X-S+	SN9864014 26	2025/10/09	2026/10/08
ITL-143	LISN	R&S	100120	ENV216	2026/01/14	2027/01/13
ITL-163	Active Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-062	2026/01/17	2027/01/16
ITL-172	WIDEBAND RADIO COMMUNICATI ON TSETER	R&S	CMW500	158388	2026/01/14	2027/01/13
ITL-180	Trilog-Broadband Antenna	Schwarzbeck	VULB 9164	005	2026/01/17	2027/01/16
ITL-182	2.4g/5g RF performance test software	MWRFtest	MTS 8310	2.0	/	/
ITL-184	50Ω Coaxial Cable	HongChuang Electrics	RG-401	/	2026/02/02	2027/02/01
ITL-194	Power Meter	MWRFtest	MW100-PSB	MW202006 002	2026/01/14	2027/01/13
ITL-195	Radio frequency switch	MWRFtest	MW100-PFCB	MW210608	2026/01/14	2027/01/13
ITL-196	Vector Signal Generator (100KHz-6GHz)	R&S	SMBA100 A	259268	2026/01/14	2027/01/13

5 Test Results

5.1 E.U.T. test conditions

Test Voltage: DC 3V

Temperature: 23.2 -25.0 °C

Humidity: 38-50 % RH

Atmospheric Pressure: 1000 -1010 mbar

Requirements:

15.31(e): For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. For battery operated equipment, the equipment tests shall be performed using a new battery.

15.32: Power supplies and CPU boards used with personal computers and for which separate authorizations are required to be obtained shall be tested as follows: Testing shall be in accordance with the procedures specified in Section 15.31 of this part.

Test frequencies and frequency range:

According to the 15.31(m) Measurements on intentional radiators or receivers, other than TV broadcast receivers, shall be performed and, if required, reported for each band in which the device can be operated with the device operating at the number of frequencies in each band specified in the following table:

According to the 15.33 (a) For an intentional radiator, the spectrum shall be investigated from the lowest radio frequency signal generated in the device, without going below 9 kHz, up to at least the frequency shown in the following table:

Number of fundamental frequencies to be tested in EUT transmit band

Frequency range in which	Number of	Location in frequency range
1 MHz or less	1	Middle
1 MHz	2	1 near top and 1 near bottom
More than 10 MHz	3	1 near top, 1 near middle and 1 near bottom

Frequency range of radiated emission measurements

Lowest frequency generated	Upper frequency range of measurement
9 kHz to below 10 GHz	10th harmonic of highest fundamental frequency or to 40 GHz,
At or above 10 GHz to below	5th harmonic of highest fundamental frequency or to 100 GHz,
At or above 30 GHz	5th harmonic of highest fundamental frequency or to 200 GHz,

EUT channels and frequencies list:

channel	Frequency
1	2468

Test frequencies are channel: 2468MHz

Test the EUT in continuous transmission mode

5.2 Antenna requirement

Standard requirement

15.203 requirement:

For intentional device. According to 15.203. An intentional radiator shall be designed to Ensure that no antenna other than that furnished by the responsible party shall be used with the device.

EUT Antenna

The antenna is a PCB antenna and no consideration of replacement. The best case gain of the antenna is 2 dBi.

Test result: The unit does meet the FCC requirements.

5.3 Occupied Bandwidth

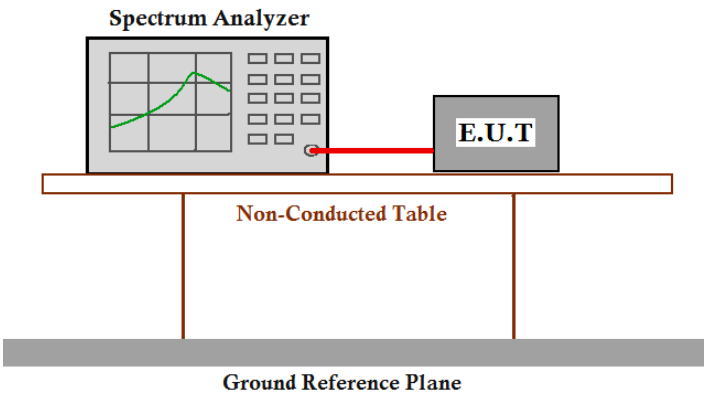
Test Requirement: FCC PART 15 C section 15.215(c)

(c) Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rulesection under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated

Test Method: ANSI C63.10-2020 + Cor1-2023

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, channels and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.

Test Configuration:



Test Procedure:

1. Remove the antenna from the EUT and then connect a low attention attenuation RF cable from the antenna port to the spectrum.

a) The instrument center frequency was set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer was between 1.5 times and 5.0 times the OBW(20 dB Bandwidth).

b) The nominal IF filter bandwidth (3 dB RBW) was in the range of 1% to 5% of the OBW, and VBW was approximately three times the RBW.

c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral

envelope was more than [10 log (OBW/RBW)] below the reference level.

d) Step a) through step c) might require iteration to adjust within the specified range.

e) The dynamic range of the instrument at the selected RBW was more than 10 dB below the target "−20 dB down" requirement; that is, if the requirement calls for measuring the −20 dB OBW, the instrument noise floor at the selected RBW was at least 30 dB below the reference value.

f) Peak detection and max hold mode (until the trace stabilizes) was used.

g) Used the 20dB bandwidth function of the instrument and reported the measured bandwidth.

h) The occupied bandwidth was reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division was clearly labeled. Tabular data was reported in addition to the plot(s).

20 dB bandwidth:

Channel No.	Frequency (MHz)	Measured 20dB bandwidth (MHz)	Limit	Result
1	2468	1.0781	2400-2483.5 MHz	Pass

20dB bandwidth:

Result plot as follows:

Channel 1:2.468GHz:

5.4 Radiated Spurious Emissions

Test Requirement: FCC PART 15 C section 15.249 (a), (d)

(a) Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental Frequency (MHz)	Field Strength of Fundamental (dBμV/m @ 3m)	Field Strength of Harmonics (dBμV/m @ 3m)
902 to 928	94.0	54.0
2400 to 2483.5	94.0	54.0
5725 to 5875	94.0	54.0

Note: The limits shown in the above table are based on measurements using an average detector, except for the fundamental emission in the frequency band 902-928 MHz, which is based on measurements using a CISPR quasi-peak detector.

(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in§ 15.209, whichever is the lesser attenuation.

Test Method: ANSI C63.10-2020 + Cor1-2023

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, channels and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.

Detector: For PK value:

RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f < 1 GHz
VBW ≥ RBW
Sweep = auto

Detector function = peak

Trace = max hold

15.209 Limit: 40.0 dBμV/m between 30MHz & 88MHz

43.5 dBμV/m between 88MHz & 216MHz

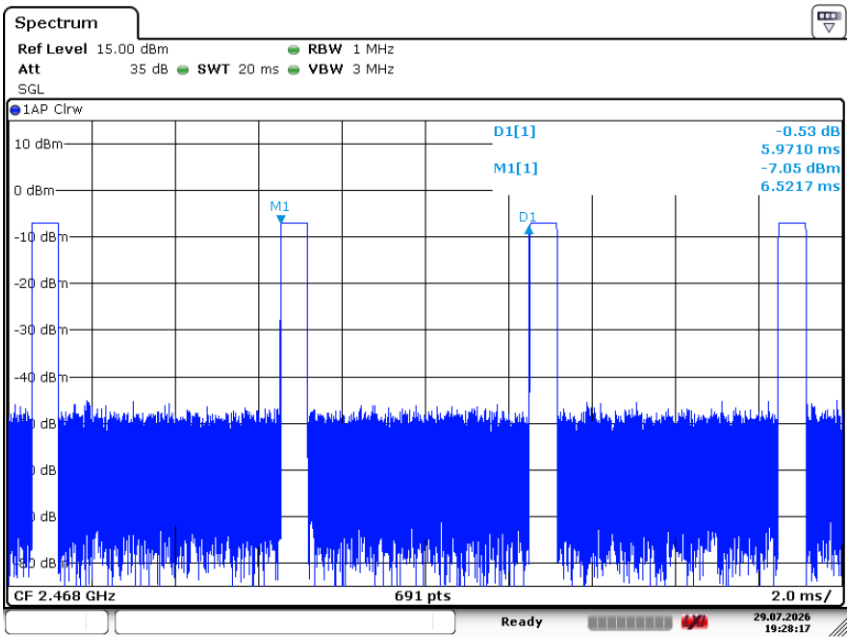
46.0 dBμV/m between 216MHz & 960MHz

54.0 dBμV/m above 960MHz

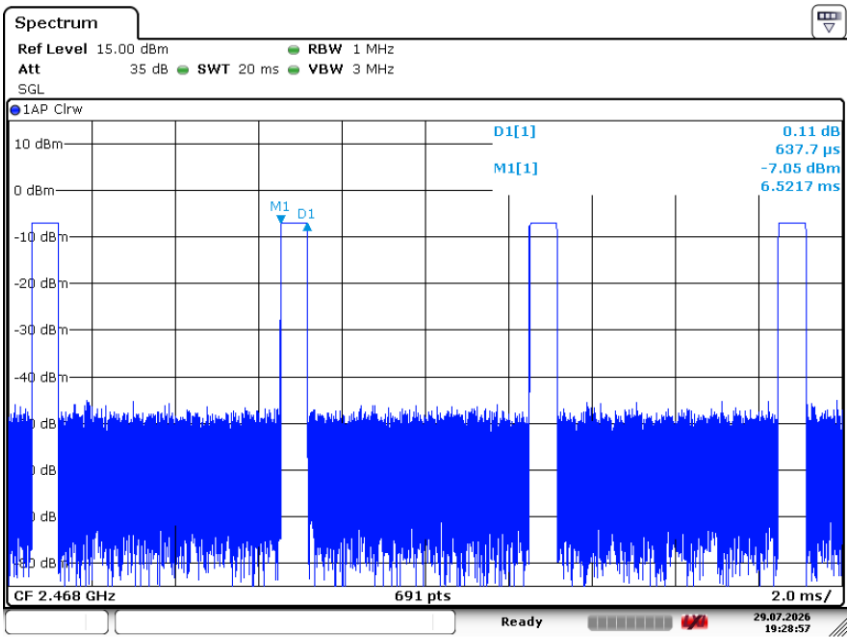
The average correction factor was computed by analyzing the on time in 100ms over one

complete pulse train. Analysis of the Wireless Touch Sensor Switch transmitter on time in one complete pulse train,
therefore the average value of fundamental frequency was: Average = Peak value + 20log (Duty cycle), where the duty factor is calculated from following formula:

The duration of one cycle =0.638ms
Effective period of the cycle =5.971ms
DC =0.638/5.971=0.1068 or 10.68%
Therefore, the averaging factor is found by 20lg0.1068=-19.43
Please refer to below plots for more details.
Retest on all keys ,v found that the worst case result was the “on” Key



Date: 29.JUL.2026 19:28:17



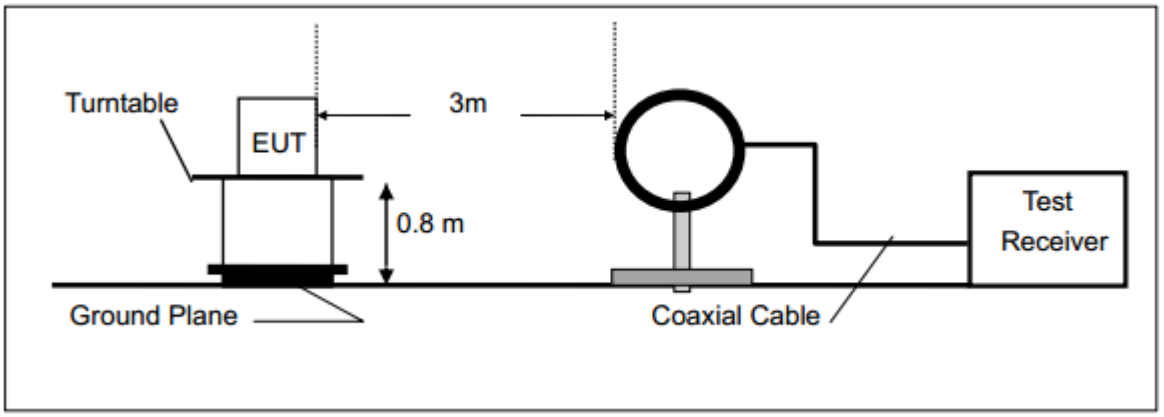
Date: 29.JUL.2026 19:28:57

Section 15.205 Restricted bands of operation.

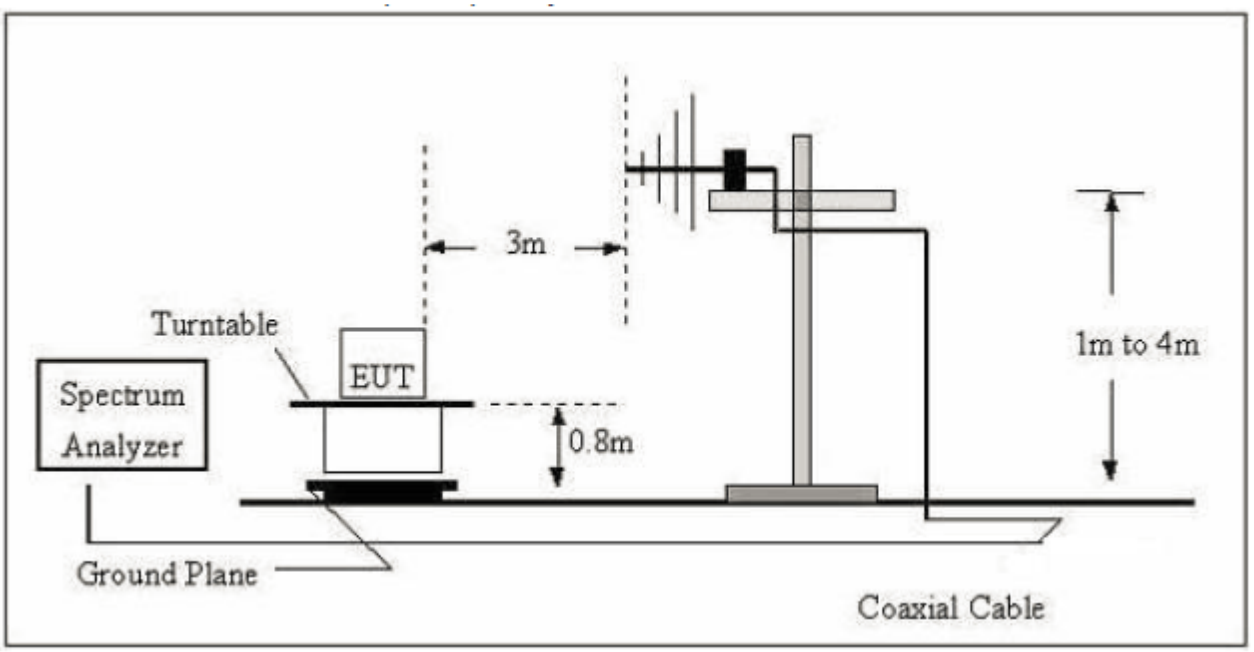
MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
10.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 -	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.52525	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	156.7 - 156.9	3260 - 3267	23.6 - 24.0
12.29 - 12.293	162.0125 - 167.17	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	167.72 - 173.2	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	240 - 285	3600 - 4400	
13.36 - 13.41	322 - 335.4		

Test Configuration:

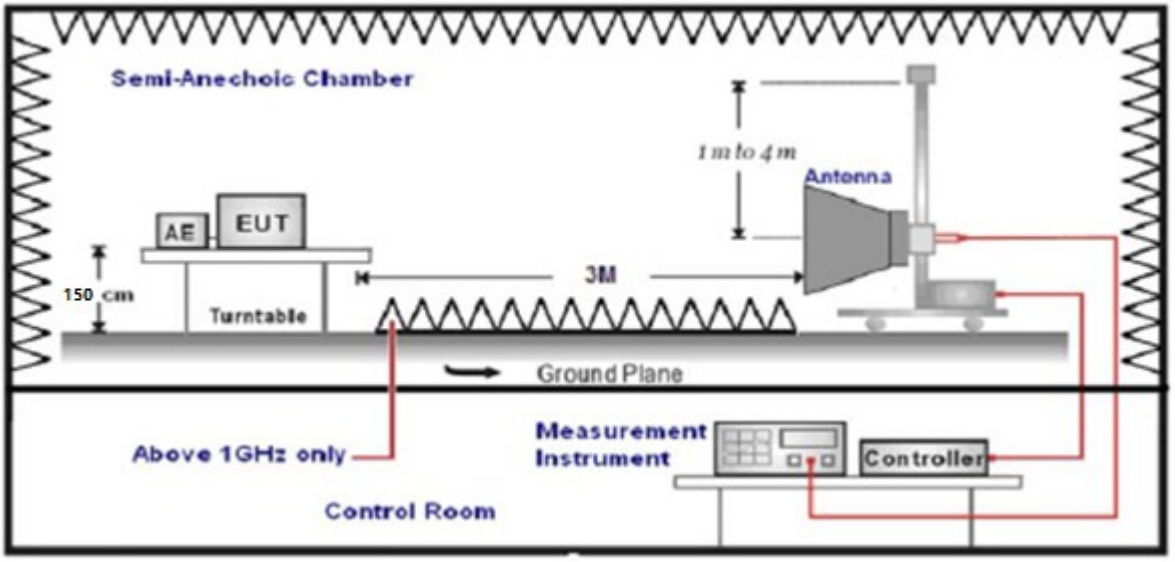
1) 9kHz to 30MHz emissions:



2) 30 MHz to 1 GHz emissions:



3) 1 GHz to 40 GHz emissions:



Test Procedure:
1) 9 kHz to 30 MHz emissions:
For testing performed with the loop antenna. The centre of the loop was positioned 1 m above the ground and positioned with its plane vertical at the special distance from the EUT. During testing the loop was rotated about its vertical axis for maximum response at each azimuth and also investigated with the loop positioned in the horizontal plane.
2) 30 MHz to 1 GHz emissions:
For testing performed with the bi-log type antenna. The measurement is performed with the EUT rotated 360o, the antenna height scanned between 1m and 4m, and the antenna rotated to repeat the measurement for both the horizontal and vertical antenna polarizations.
3) 1 GHz to 25 GHz emissions:
Test site with RF absorbing material covering the ground plane that met the site validation criterion called out in CISPR 16-1-4:2010 was used to perform radiated emission test above 1 GHz.
For testing performed with the horn antenna. The measurement is performed with the EUT rotated 360°, the antenna height scanned between 1m and 4m, and the antenna rotated to repeat the measurement for both the horizontal and vertical antenna polarizations.
4) The receiver was scanned from 9 kHz to 25 GHz. When an emission was found, the table was rotated to produce the maximum signal strength. An initial pre-scan was performed for in peak detection mode using the receiver. The EUT was measured for both the Horizontal and Vertical polarities and performed a pre-test three orthogonal planes. For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage.
The worst case emissions were reported.
The measurements with active loop antenna were greater than 20dB below the limit, so the test data were not recorded in the test report.

5.4.1 Harmonic and other spurious emissions

Test at Channel 1 (2.468 GHz) in transmitting status

9kHz~30MHz Test result

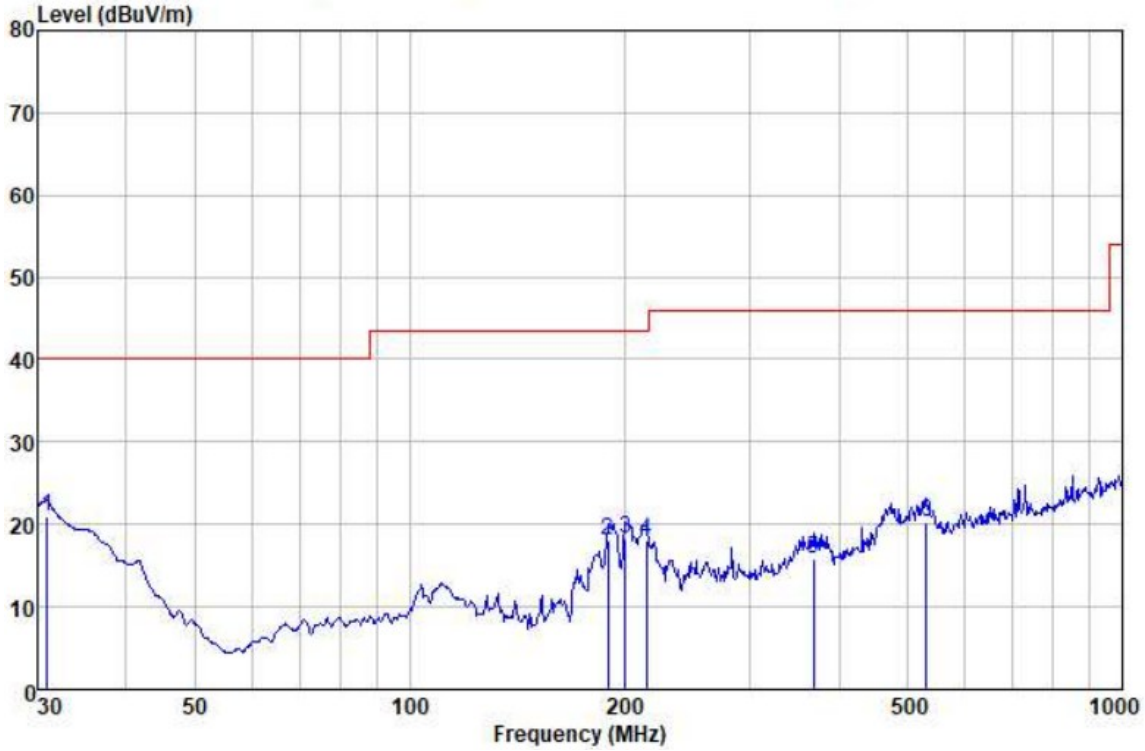
The Low frequency, which started from 9kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not report

30 MHz~1 GHz Spurious Emissions .Quasi-Peak Measurement

Horizontal:

Peak scan

Level (dBμV/m)



Quasi-peak measurement

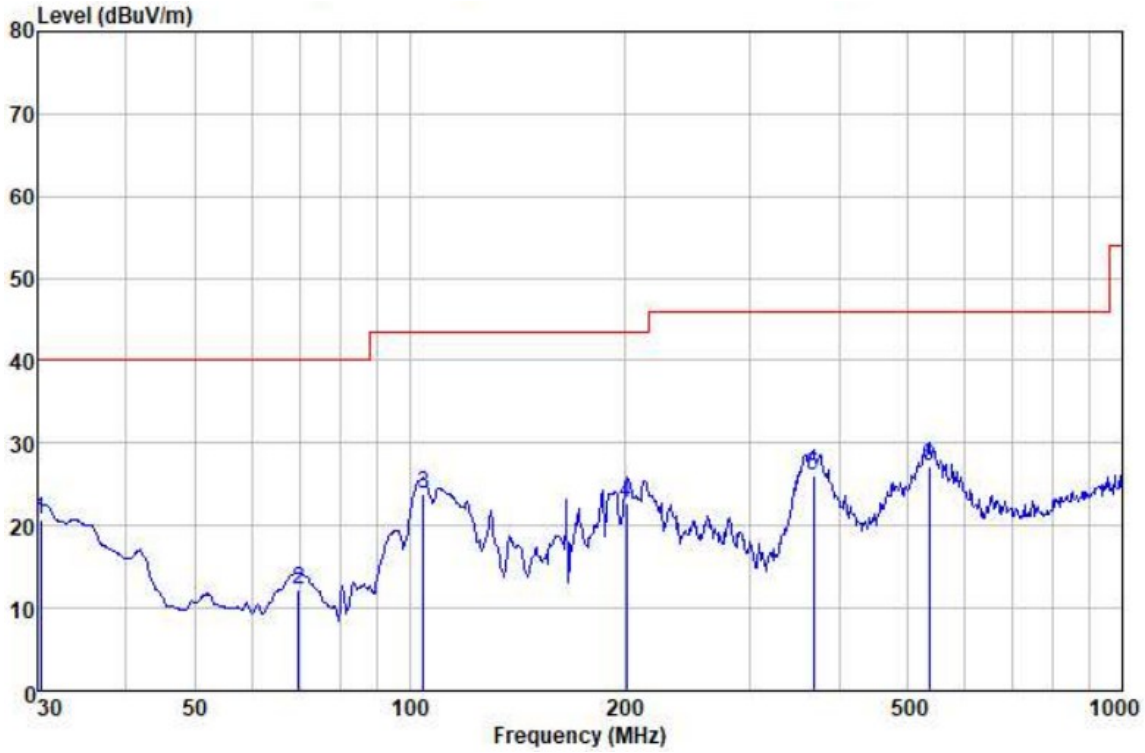
No.	Freq MHz	Read Level dBuV	Antenna Factor dB	Cable Loss dB	Preamp Factor dB	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Pol/Phase	Remark
1	30.962	23.87	22.83	0.37	26.07	21.00	40.00	-19.00	HORIZONTAL	QP
2	189.739	31.98	10.72	1.08	25.67	18.11	43.50	-25.39	HORIZONTAL	QP
3	200.688	32.67	10.23	1.12	25.65	18.37	43.50	-25.13	HORIZONTAL	QP
4	214.514	31.32	11.16	1.16	25.62	18.02	43.50	-25.48	HORIZONTAL	QP
5	368.112	25.30	15.24	1.49	26.18	15.85	46.00	-30.15	HORIZONTAL	QP
6	530.101	28.17	17.50	1.74	27.19	20.22	46.00	-25.78	HORIZONTAL	QP

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

Vertical:

Peak scan

Level (dBμV/m)



Quasi-peak measurement

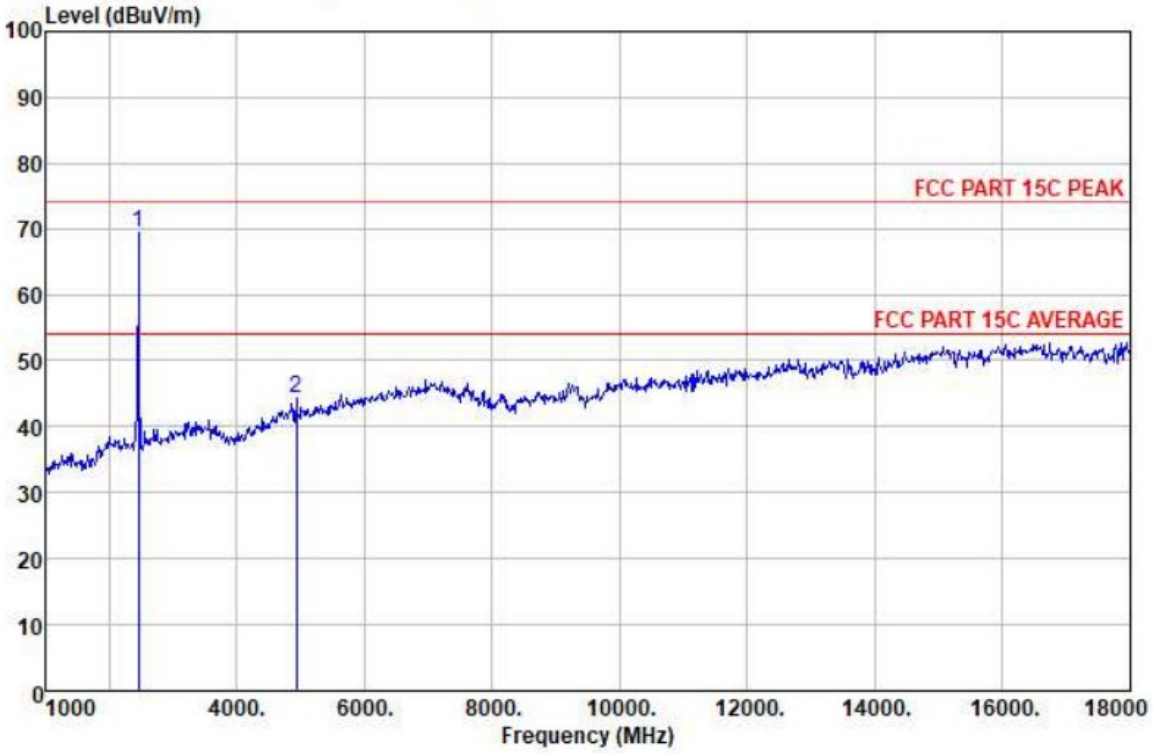
No.	Freq MHz	Read Level dBuV	Antenna Factor dB	Cable Loss dB	Preamp Factor dB	Level dBuV/m	Limit Line dBuV/m	Over Limit dB	Pol/Phase	Remark
1	30.317	23.01	23.35	0.36	26.07	20.65	40.00	-19.35	VERTICAL	QP
2	69.845	30.03	7.75	0.57	26.03	12.32	40.00	-27.68	VERTICAL	QP
3	104.536	39.91	9.15	0.72	25.88	23.90	43.50	-19.60	VERTICAL	QP
4	201.393	37.08	10.26	1.12	25.65	22.81	43.50	-20.69	VERTICAL	QP
5	368.112	35.53	15.24	1.49	26.18	26.08	46.00	-19.92	VERTICAL	QP
6	535.707	34.98	17.63	1.75	27.19	27.17	46.00	-18.83	VERTICAL	QP

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

Above 1G

Horizontal:

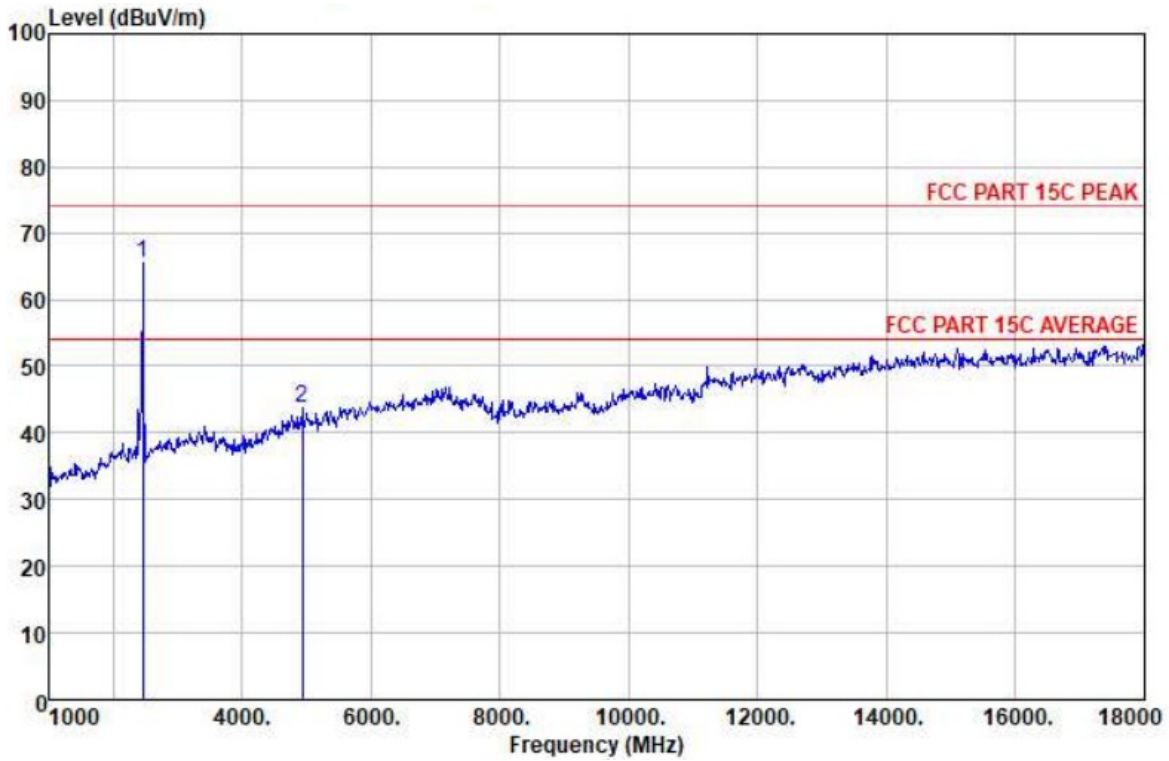
Peak scan



No.	Frequency (MHz)	Reading Level (dBuV)	Correct (dB/m)	Duty cycle Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna polarization	Remark
1	2468	62.51	6.76	N/A	69.27	114.00	-44.73	H	Peak
				-19.43	49.84	94.00	-44.16	H	AV
2	4936	29.00	15.19	N/A	44.19	74.00	-29.81	H	Peak
				-19.43	24.76	54.00	-29.24	H	AV

Vertical:

Peak scan



No.	Frequency (MHz)	Reading Level (dBuV)	Correct (dB/m)	Duty cycle Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna polarization	Remark
1	2468	58.57	6.76	N/A	65.33	114.00	-48.67	V	Peak
				-19.43	45.90	94.00	-48.10	V	AV
2	4936	28.42	15.19	N/A	43.61	74.00	-30.39	V	Peak
				-19.43	24.18	54.00	-29.82	V	AV

Remark:

1) .For this intentional radiator operates below 25 GHz. The spectrum shall be investigated to the tenth harmonics of the highest fundamental frequency. And above the third harmonic of this intentional radiator, the disturbance is very low. So the test result only displays to 3rd harmonic.

2). As shown in Section, for frequencies above 1000 MHz. the above field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

3). The test only perform the EUT in transmitting status since the test frequencies were over 1GHz only required transmitting status.

Test result: The unit does meet the FCC requirements.

5.5 Band Edges Requirement

Test Requirement: FCC Part 15 C section 15.249

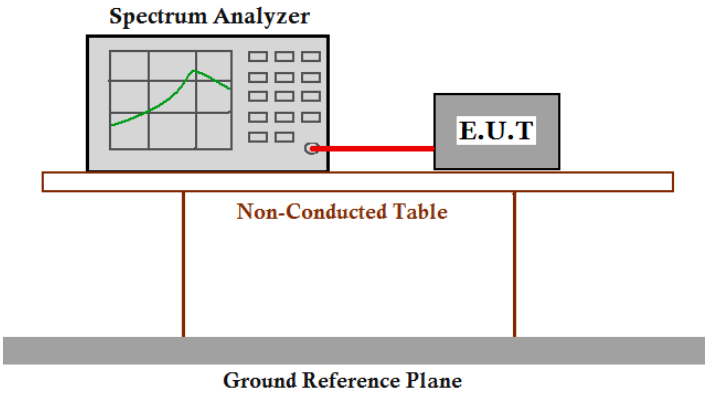
(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in§ 15.209, whichever is the lesser attenuation.

Frequency Band: 2400 MHz to 2483.5 MHz

Test Method: ANSI C63.10-2020 + Cor1-2023

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, channels and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.

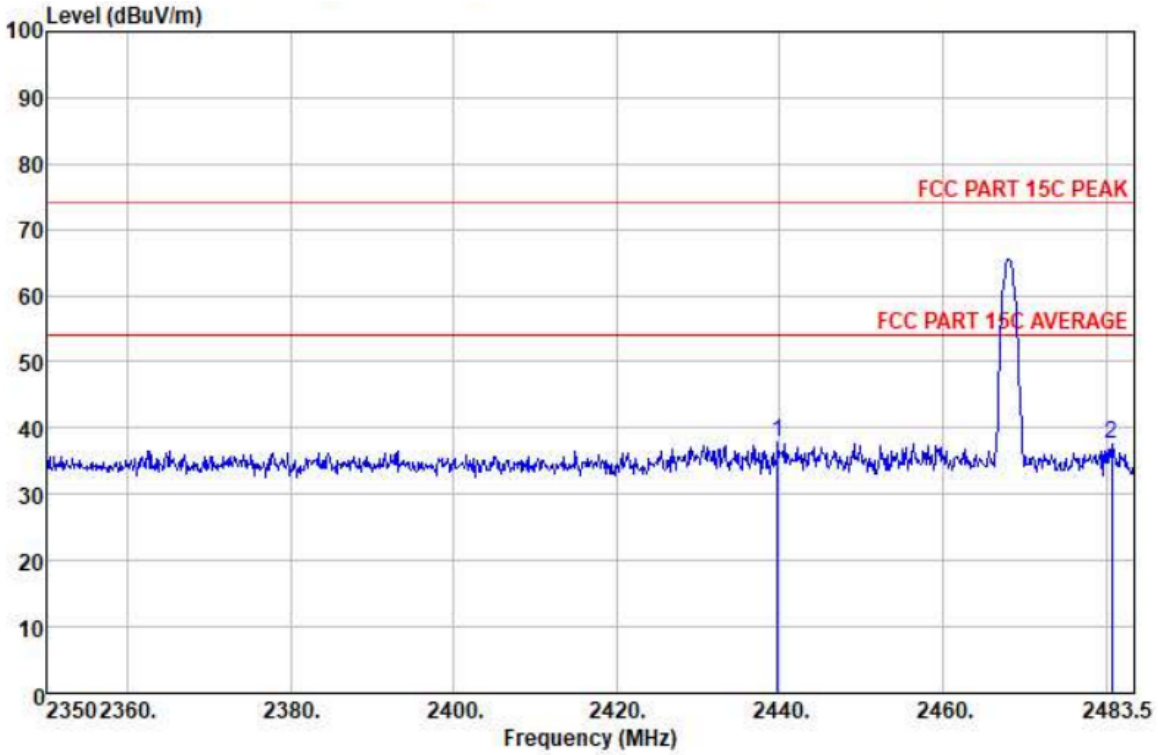
Test Configuration:



Result plot as follows:

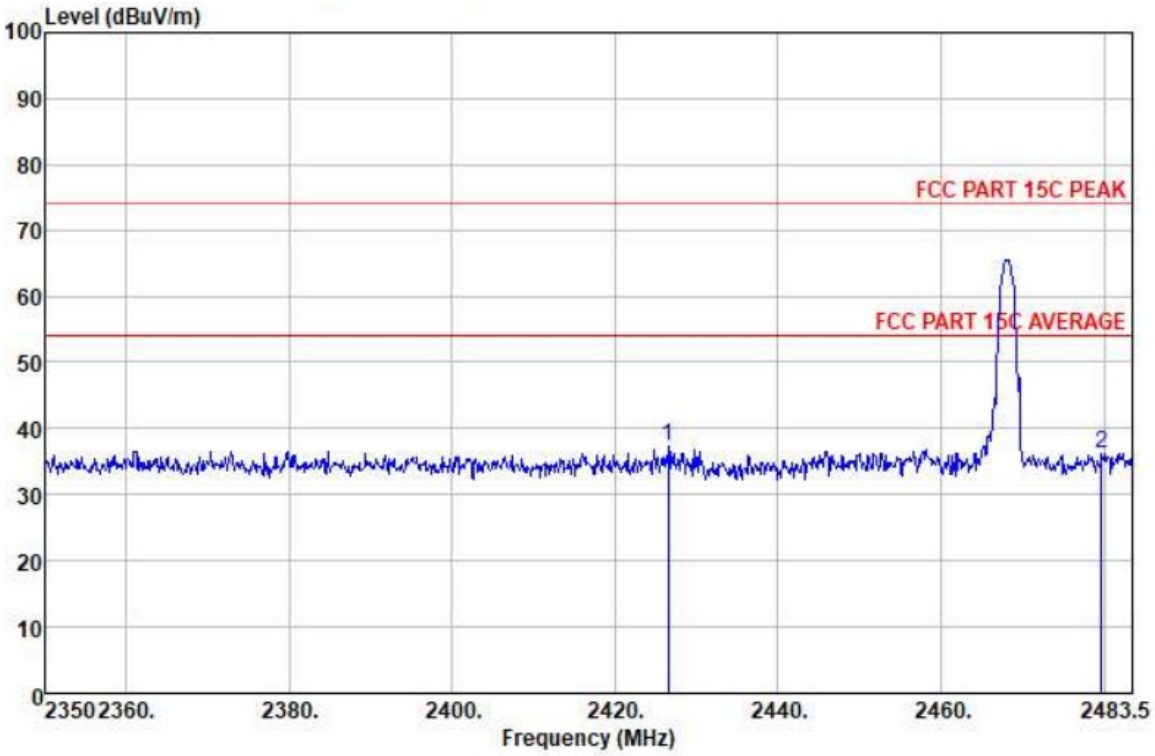
Channel 1: 2.468 GHz

Horizontal:



Frequency (MHz)	Meas. Time (ms)	Bandwidth (kHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna polarization	Remark
2439.712	1000	1000	37.86	74	-36.14	H	Peak
2480.697	1000	1000	37.73	74	-36.27	H	Peak

Vertical:



Frequency (MHz)	Meas. Time (ms)	Bandwidth (kHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Antenna polarization	Remark
2426.496	1000	1000	37.47	74	-36.53	V	Peak
2479.762	1000	1000	36.17	74	-37.83	V	Peak

5.6 Conducted Emissions at Mains Terminals 150 kHz to 30MHz

Test Requirement: FCC Part 15 C section 15.207

Test Voltage: 120V~ 60Hz

Test Method: ANSI C63.10-2020 + Cor1-2023

Frequency Range: 150 kHz to 30 MHz

Detector: Peak for pre-scan (9 kHz Resolution Bandwidth)

Test Limit

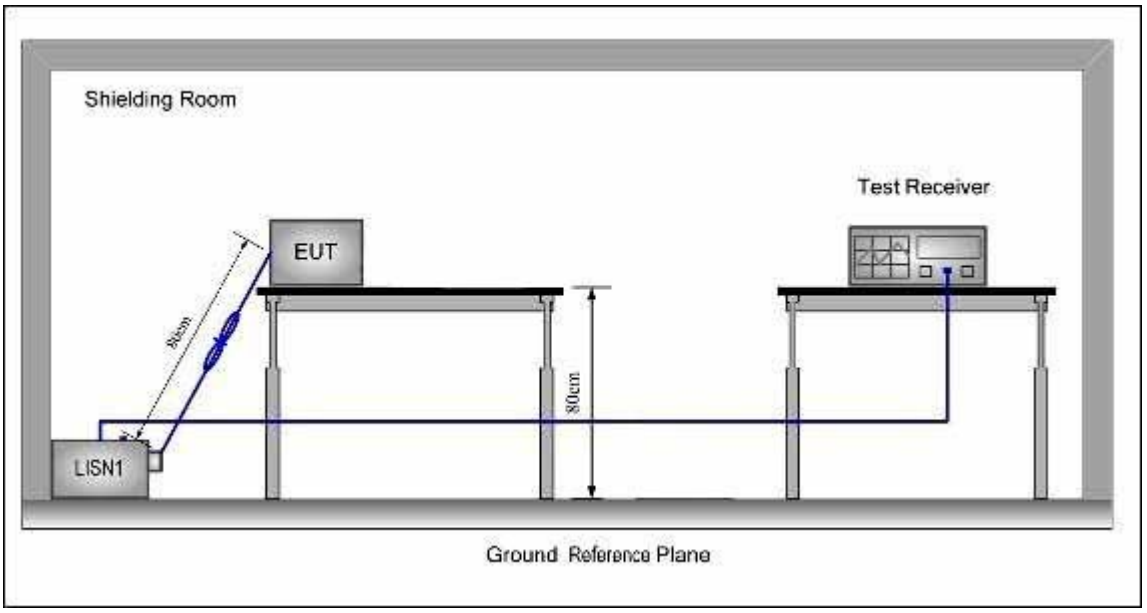
Limits for conducted disturbance at the mains ports of class B

Frequency Range	Class B Limit dB(μV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50
NOTE 1 The limit decreases linearly with the logarithm of the frequency in the range 0,15 MHz to 0,50 MHz.		

EUT Operation: Test in normal operating mode. For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage.

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, channels and antenna ports (if EUT with antenna diversity architecture).

Test Configuration:



Test procedure:

1. The mains terminal disturbance voltage test was conducted in a shielded room.

2. The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.

3. The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation.

4. The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0,4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0,8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0,8 m from the LISN 2.

Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

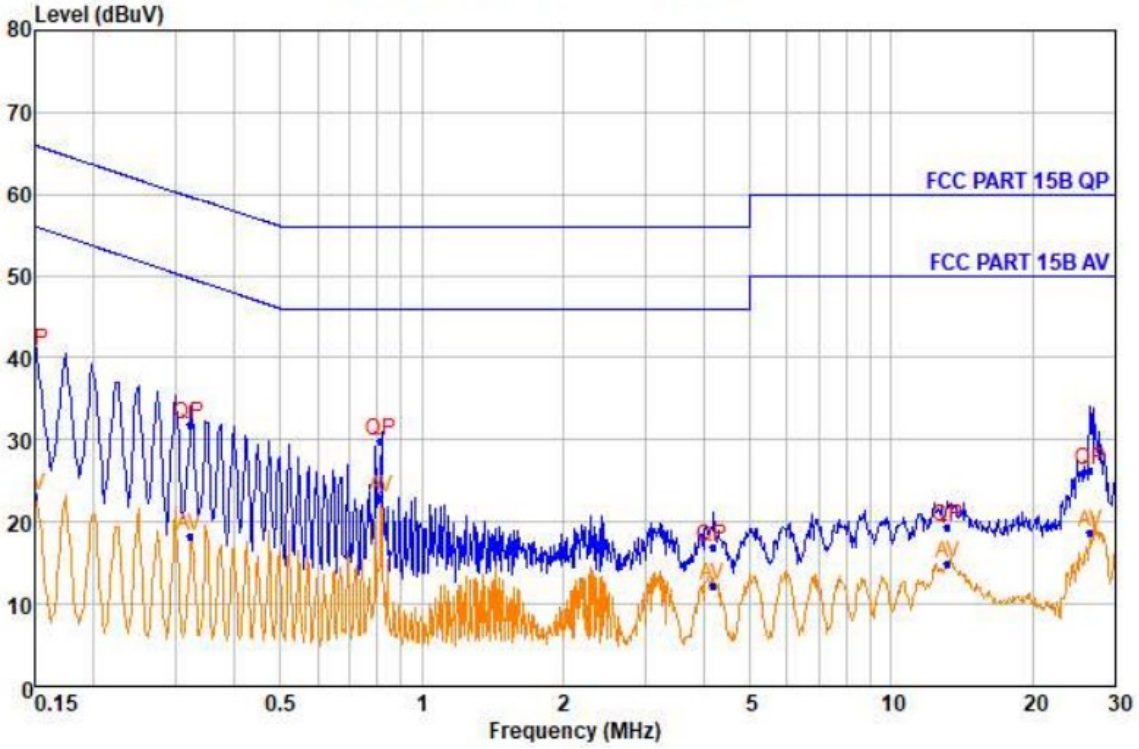
Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected. For EUT the communicating was worst case mode.

The following Quasi-Peak and Average measurements were performed on the EUT

Live line

Peak Scan:

Level (dBµV)



Quasi-peak and Average measurement

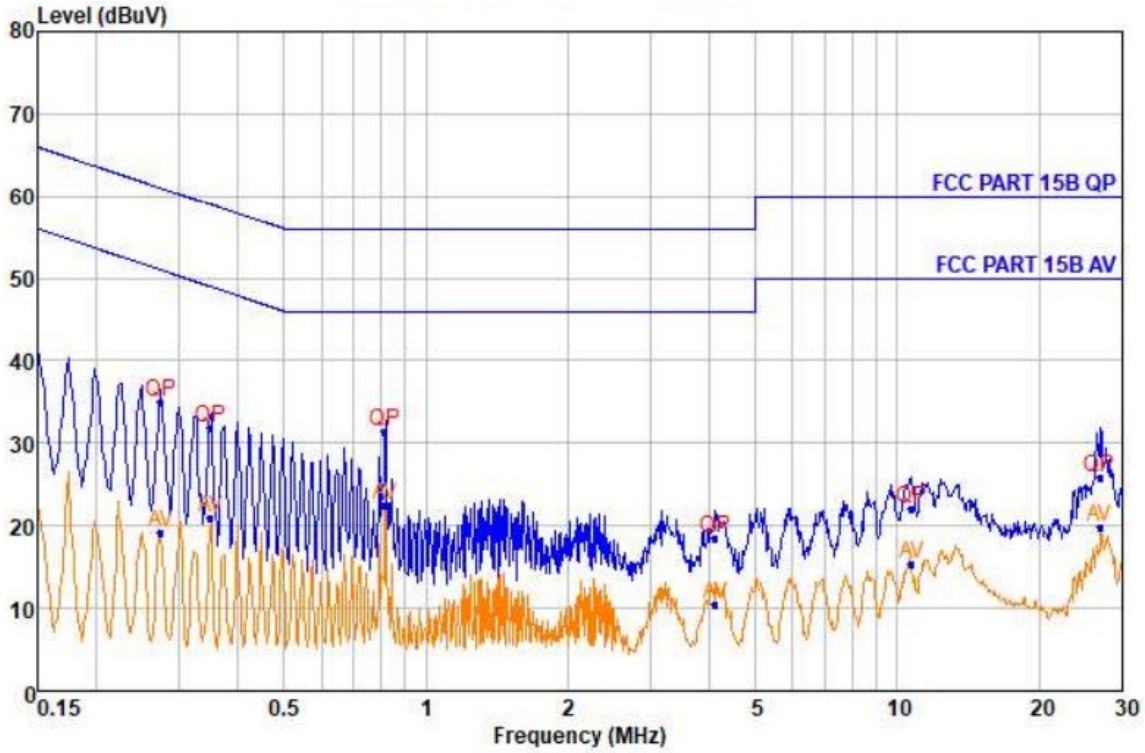
NO.	Freq MHz	Level dBuV	Remark	LISN Factor dB	Cable Loss dB	Limit Line dBuV	Margin dB
1	0.150	40.80	QP	9.70	0.20	66.00	-25.20
2	0.150	23.20	Average	9.70	0.20	56.00	-32.80
3	0.321	31.76	QP	9.66	0.24	59.68	-27.92
4	0.321	18.22	Average	9.66	0.24	49.68	-31.46
5	0.820	29.77	QP	9.69	0.30	56.00	-26.23
6	0.820	22.92	Average	9.69	0.30	46.00	-23.08
7	4.170	16.87	QP	9.61	0.39	56.00	-39.13
8	4.170	12.26	Average	9.61	0.39	46.00	-33.74
9	13.162	19.29	QP	9.69	0.45	60.00	-40.71
10	13.162	14.94	Average	9.69	0.45	50.00	-35.06
11	26.499	26.34	QP	9.66	0.49	60.00	-33.66
12	26.499	18.62	Average	9.66	0.49	50.00	-31.38

Level=Read Level + LISN Factor + Cable Loss

Neutral Line

Peak Scan:

Level (dBμV)



Quasi-peak and Average measurement

NO.	Freq MHz	Level dBuV	Remark	LISN Factor dB	Cable Loss dB	Limit Line dBuV	Margin dB
1	0.274	35.02	QP	9.64	0.23	61.00	-25.98
2	0.274	19.07	Average	9.64	0.23	50.98	-31.91
3	0.349	31.92	QP	9.65	0.25	58.98	-27.06
4	0.349	21.01	Average	9.65	0.25	48.98	-27.97
5	0.820	31.45	QP	9.62	0.30	56.00	-24.55
6	0.820	22.59	Average	9.62	0.30	46.00	-23.41
7	4.106	18.50	QP	9.62	0.39	56.00	-37.50
8	4.106	10.54	Average	9.62	0.39	46.00	-35.46
9	10.706	22.12	QP	9.62	0.44	60.00	-37.88
10	10.706	15.44	Average	9.62	0.44	50.00	-34.56
11	26.925	25.79	QP	9.63	0.49	60.00	-34.21
12	26.925	19.73	Average	9.63	0.49	50.00	-30.27

Level=Read Level + LISN Factor + Cable Loss

-- End of test report --