

# FCC Radio Test Report

## FCC ID: 2AQPW-SB450

This report concerns: Original Grant

**Project No.** : 2103T148  
**Equipment** : Ultra Bright LCD Display with LED Backlight  
**Brand Name** : Seura  
**Test Model** : UB4-50  
**Series Model** : N/A  
**Applicant** : Innolux Corporation  
**Address** : No. 160, Kesuyue Rd. Jhunan Science Park, Miaoli County, Taiwan 350  
**Manufacturer** : Innolux Corporation  
**Address** : No. 160, Kesuyue Rd. Jhunan Science Park, Miaoli County, Taiwan 350  
**Factory** : Keewin Display (Suzhou) Co., LTD  
**Address** : No. 17 Chengpu Rd, Suzhou Industrial Park, Jiangsu  
**Date of Receipt** : Mar. 29, 2021  
**Date of Test** : Mar. 29, 2021 ~ May 11, 2021  
**Issued Date** : Jun. 21, 2021  
**Report Version** : R01  
**Test Sample** : Engineering Sample No.: DG20210325161  
**Standard(s)** : FCC CFR Title 47, Part 15, Subpart C  
FCC KDB 558074 D01 15.247 Meas Guidance v05r02  
ANSI C63.10-2013

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

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**Limitation**

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

<b>Table of Contents</b>	<b>Page</b>
<b>REPORT ISSUED HISTORY</b>	<b>6</b>
<b>1 . SUMMARY OF TEST RESULTS</b>	<b>7</b>
1.1 TEST FACILITY	8
1.2 MEASUREMENT UNCERTAINTY	8
1.3 TEST ENVIRONMENT CONDITIONS	9
<b>2 . GENERAL INFORMATION</b>	<b>10</b>
2.1 GENERAL DESCRIPTION OF EUT	10
2.2 DESCRIPTION OF TEST MODES	11
2.3 PARAMETERS OF TEST SOFTWARE	12
2.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	13
2.5 SUPPORT UNITS	13
<b>3 . AC POWER LINE CONDUCTED EMISSIONS</b>	<b>14</b>
3.1 LIMIT	14
3.2 TEST PROCEDURE	14
3.3 DEVIATION FROM TEST STANDARD	14
3.4 TEST SETUP	15
3.5 EUT OPERATING CONDITIONS	15
3.6 TEST RESULTS	15
<b>4 . RADIATED EMISSIONS</b>	<b>16</b>
4.1 LIMIT	16
4.2 TEST PROCEDURE	17
4.3 DEVIATION FROM TEST STANDARD	18
4.4 TEST SETUP	18
4.5 EUT OPERATING CONDITIONS	19
4.6 TEST RESULT - 9 KHZ TO 30 MHZ	19
4.7 TEST RESULT - 30 MHZ TO 1000 MHZ	19
4.8 TEST RESULT - ABOVE 1000 MHZ	19
<b>5 . BANDWIDTH</b>	<b>20</b>
5.1 LIMIT	20
5.2 TEST PROCEDURE	20
5.3 DEVIATION FROM STANDARD	20
5.4 TEST SETUP	20

<b>Table of Contents</b>	<b>Page</b>
5.5 EUT OPERATION CONDITIONS	20
5.6 TEST RESULTS	20
<b>6 . MAXIMUM OUTPUT POWER</b>	<b>21</b>
6.1 LIMIT	21
6.2 TEST PROCEDURE	21
6.3 DEVIATION FROM STANDARD	21
6.4 TEST SETUP	21
6.5 EUT OPERATION CONDITIONS	21
6.6 TEST RESULTS	21
<b>7 . CONDUCTED SPURIOUS EMISSION</b>	<b>22</b>
7.1 LIMIT	22
7.2 TEST PROCEDURE	22
7.3 DEVIATION FROM STANDARD	22
7.4 TEST SETUP	22
7.5 EUT OPERATION CONDITIONS	22
7.6 TEST RESULTS	22
<b>8 . POWER SPECTRAL DENSITY</b>	<b>23</b>
8.1 LIMIT	23
8.2 TEST PROCEDURE	23
8.3 DEVIATION FROM STANDARD	23
8.4 TEST SETUP	23
8.5 EUT OPERATION CONDITIONS	23
8.6 TEST RESULTS	23
<b>9 . MEASUREMENT INSTRUMENTS LIST</b>	<b>24</b>
<b>10 . EUT TEST PHOTO</b>	<b>26</b>
<b>APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS</b>	<b>31</b>
<b>APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ</b>	<b>34</b>
<b>APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ</b>	<b>39</b>
<b>APPENDIX D - RADIATED EMISSION - ABOVE 1000 MHZ</b>	<b>42</b>
<b>APPENDIX E - BANDWIDTH</b>	<b>67</b>
<b>APPENDIX F - MAXIMUM OUTPUT POWER</b>	<b>70</b>

**Table of Contents****Page****APPENDIX G - CONDUCTED SPURIOUS EMISSION****72****APPENDIX H - POWER SPECTRAL DENSITY****75**

**REPORT ISSUED HISTORY**

Report Version	Description	Issued Date
R00	Original Issue.	Jun. 18, 2021
R01	Changed the product name.	Jun. 21, 2021

### 1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC CFR Title 47, Part 15, Subpart C				
Standard(s) Section	Test Item	Test Result	Judgment	Remark
15.207	AC Power Line Conducted Emissions	APPENDIX A	PASS	-----
15.247(d) 15.205(a) 15.209(a)	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	PASS	-----
15.247(a)(2)	Bandwidth	APPENDIX E	PASS	-----
15.247(b)(3)	Maximum Output Power	APPENDIX F	PASS	-----
15.247(d)	Conducted Spurious Emission	APPENDIX G	PASS	-----
15.247(e)	Power Spectral Density	APPENDIX H	PASS	-----
15.203	Antenna Requirement	-----	PASS	Note(2)

Note:

- (1) "N/A" denotes test is not applicable to this device.
- (2) The device what use a permanently attached antenna were considered sufficient to comply with the provisions of 15.203.

## 1.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China  
 BTL's Test Firm Registration Number for FCC: 357015  
 BTL's Designation Number for FCC: CN1240

## 1.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))  
 The BTL measurement uncertainty as below table:

### A. AC power line conducted emissions Measurement:

Test Site	Method	Measurement Frequency Range	U, (dB)
DG-C02	CISPR	150kHz ~ 30MHz	2.68

### B. Radiated emissions Measurement:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)
DG-CB03	CISPR	9kHz ~ 30MHz	-	3.02
		30MHz ~ 200MHz	V	4.26
		30MHz ~ 200MHz	H	3.38
		200MHz ~ 1,000MHz	V	3.98
		200MHz ~ 1,000MHz	H	3.94
		1GHz ~ 6GHz	-	3.96
		6GHz ~ 18GHz	-	5.24
		18GHz ~ 26.5GHz	-	3.62
		26.5GHz ~ 40GHz	-	4.00

### C. Other Measurement:

Test Item	Uncertainty
Bandwidth	±3.8 %
Maximum Output Power	±0.95 dB
Conducted Spurious Emission	±2.71 dB
Power Spectral Density	±0.86 dB
Temperature	±0.08 °C
Humidity	±1.5%

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.



**1.3 TEST ENVIRONMENT CONDITIONS**

Test Item	Temperature	Humidity	Test Voltage	Tested By
AC Power Line Conducted Emissions	25°C	53%	AC 120V/60Hz	Hand Huang
Radiated Emissions-9 kHz to 30 MHz	25°C	60%	AC 120V/60Hz	Grani Zhou
Radiated Emissions-30 MHz to 1000 MHz	26°C	52%	AC 120V/60Hz	Grani Zhou
Radiated Emissions-Above 1000 MHz	26°C	52%	AC 120V/60Hz	Grani Zhou
Bandwidth	25°C	62%	AC 120V/60Hz	Hayden Chen
Maximum Output Power	25°C	62%	AC 120V/60Hz	Hand Huang
Conducted Spurious Emission	25°C	62%	AC 120V/60Hz	Hayden Chen
Power Spectral Density	25°C	62%	AC 120V/60Hz	Hayden Chen

## 2. GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

Equipment	Ultra Bright LCD Display with LED Backlight
Brand Name	Seura
Test Model	UB4-50
Series Model	N/A
Model Difference(s)	N/A
Power Source	AC Mains.
Power Rating	AC 110V, 5.5A
Operation Frequency	2402 MHz ~ 2480 MHz
Modulation Type	GFSK
Bit Rate of Transmitter	1Mbps, 2Mbps
Max. Output Power	1Mbps: 1.81 dBm (0.0015 W)

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

#### 2. Channel List:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	20	2442
01	2404	21	2444
02	2406	22	2446
03	2408	23	2448
04	2410	24	2450
05	2412	25	2452
06	2414	26	2454
07	2416	27	2456
08	2418	28	2458
09	2420	29	2460
10	2422	30	2462
11	2424	31	2464
12	2426	32	2466
13	2428	33	2468
14	2430	34	2470
15	2432	35	2472
16	2434	36	2474
17	2436	37	2476
18	2438	38	2478
19	2440	39	2480

#### 3. Table for Filed Antenna:

Ant.	Manufacturer	Model Name	Antenna Type	Connector	Gain (dBi)
1	SHENZHEN ZHONGTIAN XUN Communication Technology Shares Co., Ltd.	61005-00244	Internal	N/A	2.99

Note:

The antenna gain is provided by the manufacturer.

## 2.2 DESCRIPTION OF TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation mode.

Pretest Mode	Description
Mode 1	TX Mode_1Mbps Channel 00/19/39
Mode 2	TX Mode_2Mbps Channel 00/19/39
Mode 3	TX Mode_1Mbps Channel 19

Following mode(s) was (were) found to be the worst case(s) and selected for the final test.

<b>AC power line conducted emissions test</b>	
Final Test Mode	Description
Mode 3	TX Mode_1Mbps Channel 19

<b>Radiated emissions test - Below 1GHz</b>	
Final Test Mode	Description
Mode 3	TX Mode_1Mbps Channel 19

<b>Radiated emissions test - Above 1GHz</b>	
Final Test Mode	Description
Mode 1	TX Mode_1Mbps Channel 00/19/39
Mode 2	TX Mode_2Mbps Channel 00/19/39

<b>Conducted test</b>	
Final Test Mode	Description
Mode 1	TX Mode_1Mbps Channel 00/19/39
Mode 2	TX Mode_2Mbps Channel 00/19/39

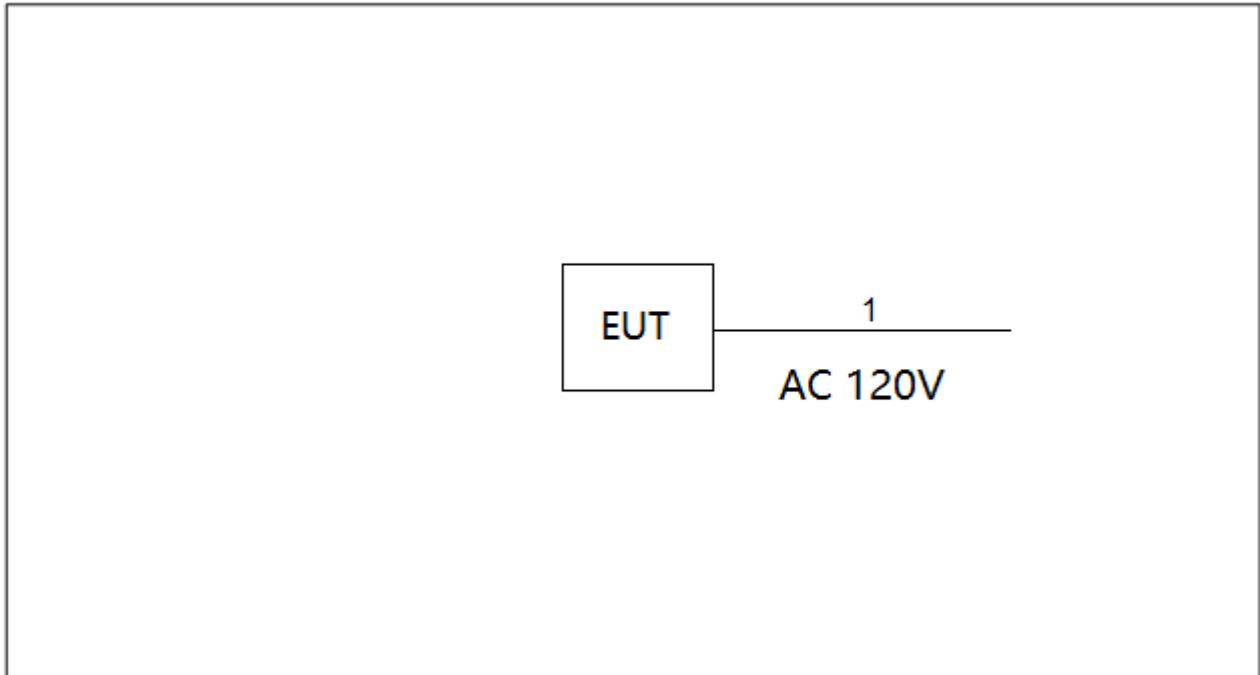
Note:

- (1) For radiated emission above 1 GHz test, the spurious points of 1GHz~26.5GHz have been pre-tested and in this report only recorded the worst case. The remaining spurious points are all below the limit value of 20dB.
- (2) For AC power line conducted emissions and radiated emissions below 1 GHz test, the 1Mbps Channel 19 is found to be the worst case and recorded.

### 2.3 PARAMETERS OF TEST SOFTWARE

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

Test Software Version	IPOP V4.0		
Frequency (MHz)	2402	2440	2480
1Mbps	0	0	0
2Mbps	0	0	0

**2.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED****2.5 SUPPORT UNITS**

Item	Equipment	Brand	Model No.	Series No.
-	-	-	-	-

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	AC Cable	NO	NO	1.2m

### 3. AC POWER LINE CONDUCTED EMISSIONS

#### 3.1 LIMIT

Frequency of Emission (MHz)	Limit (dB $\mu$ V)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56*	56 to 46*
0.5 - 5.0	56	46
5.0 - 30.0	60	50

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

#### 3.2 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

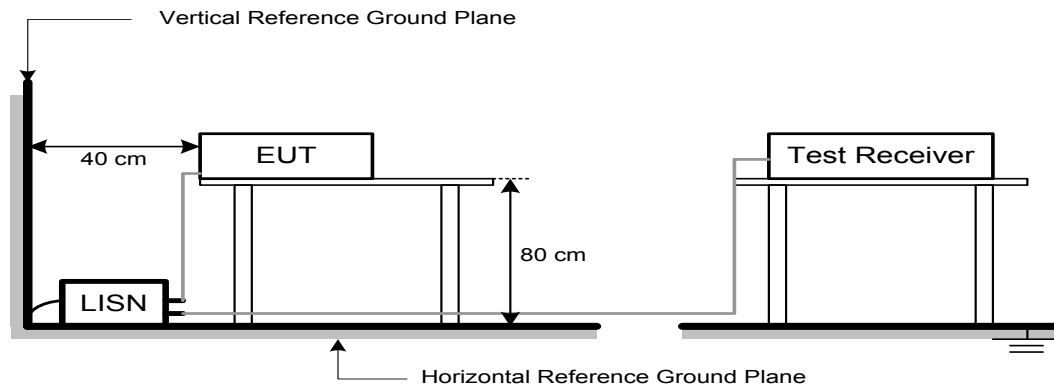
The following table is the setting of the receiver:

Receiver Parameters	Setting
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

#### 3.3 DEVIATION FROM TEST STANDARD

No deviation.

### 3.4 TEST SETUP



### 3.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

### 3.6 TEST RESULTS

Please refer to the APPENDIX A.

Remark:

- (1) All readings are QP Mode value unless otherwise stated AVG in column of 『Note』 . If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform. In this case, a “ \* ” marked in AVG Mode column of Interference Voltage Measured.
- (2) Measuring frequency range from 150 kHz to 30 MHz.

#### 4. RADIATED EMISSIONS

##### 4.1 LIMIT

In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

##### LIMITS OF RADIATED EMISSION MEASUREMENT (9 kHz-1000 MHz)

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

##### LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000 MHz)

Frequency (MHz)	(dBuV/m at 3 m)	
	Peak	Average
Above 1000	74	54

**Note:**

- (1) The limit for radiated test was performed according to FCC CFR Title 47, Part 15, Subpart C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).



#### 4.2 TEST PROCEDURE

- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1 GHz)
- b. The measuring distance of 3 m or 1.5m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8m or 1.5m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
- e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.
- f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.  
(below 1 GHz)
- h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (above 1 GHz)
- i. For the actual test configuration, please refer to the related Item –EUT Test Photos.

The following table is the setting of the receiver:

Spectrum Parameters	Setting
Start ~ Stop Frequency	9 kHz~150 kHz for RBW 200 Hz
Start ~ Stop Frequency	0.15 MHz~30 MHz for RBW 9 kHz
Start ~ Stop Frequency	30 MHz~1000 MHz for RBW 100 kHz

Spectrum Parameters	Setting
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW (Emission in restricted band)	1 MHz / 3 MHz for PK value 1 MHz / 1/T Hz for AVG value

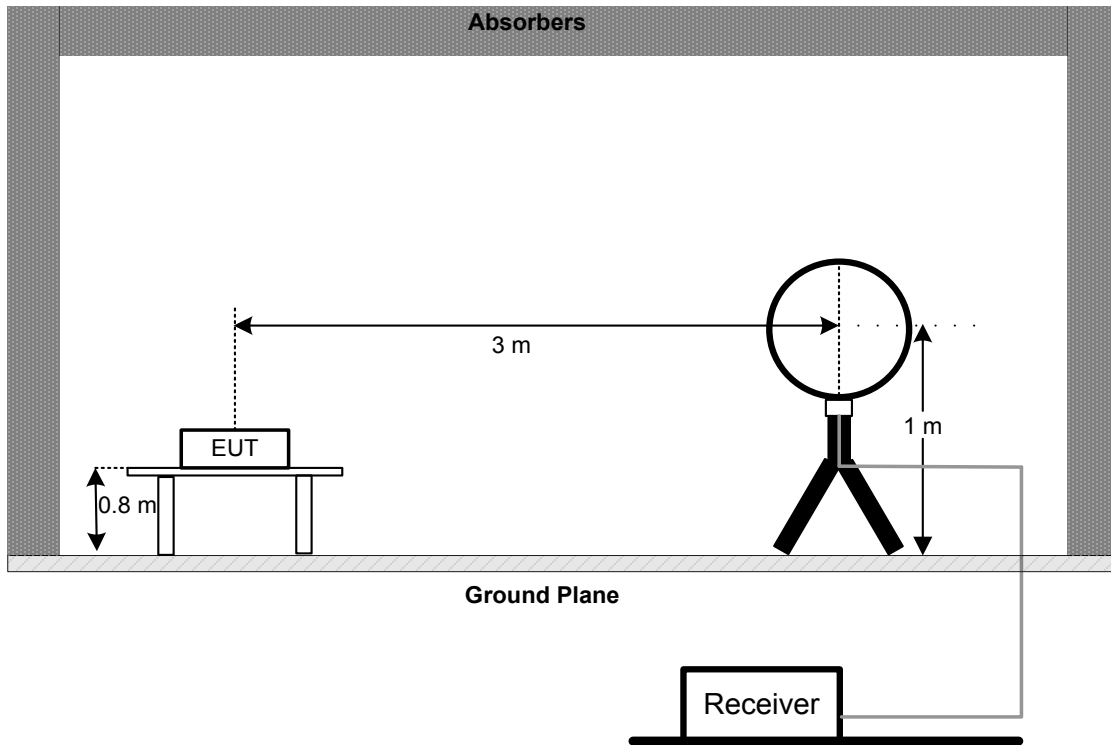
Spectrum Parameters	Setting
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector
Start ~ Stop Frequency	30 MHz~1000 MHz for QP detector
Start ~ Stop Frequency	1 GHz~26.5 GHz for PK/AVG detector

#### 4.3 DEVIATION FROM TEST STANDARD

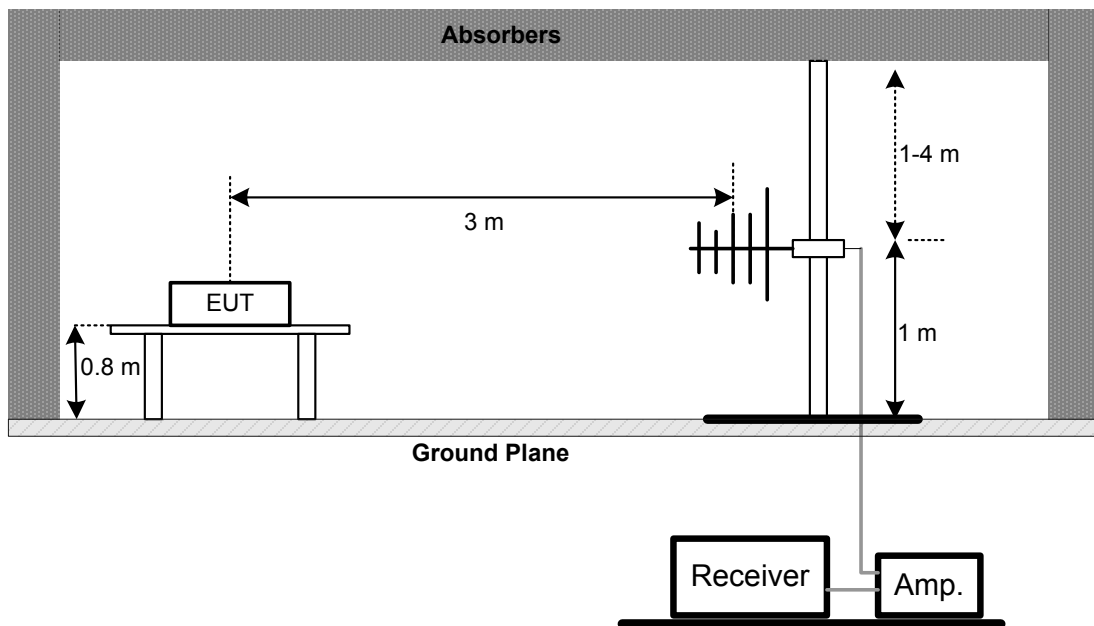
No deviation.

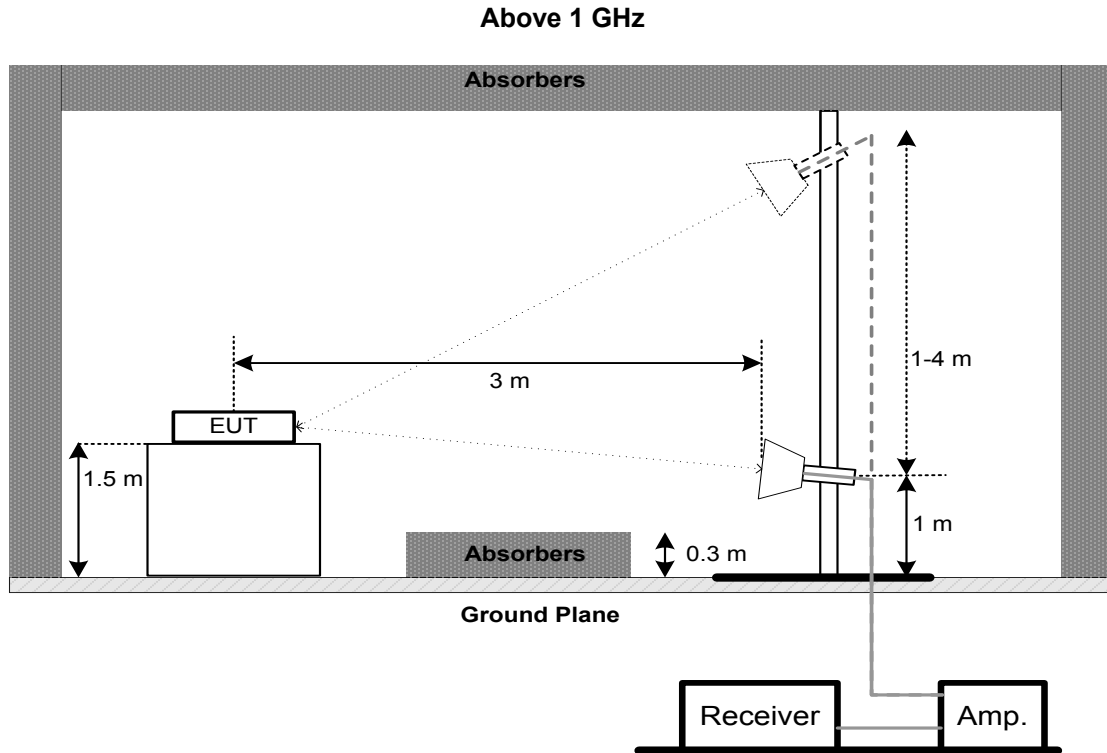
#### 4.4 TEST SETUP

9 kHz to 30 MHz



30 MHz to 1 GHz





**4.5 EUT OPERATING CONDITIONS**

The EUT was programmed to be in continuously transmitting mode.

**4.6 TEST RESULT - 9 kHz TO 30 MHz**

Please refer to the APPENDIX B.

Remark:

- (1) Distance extrapolation factor =  $40 \log(\text{specific distance} / \text{test distance})$  (dB).
- (2) Limit line = specific limits (dBuV) + distance extrapolation factor.

**4.7 TEST RESULT - 30 MHz TO 1000 MHz**

Please refer to the APPENDIX C.

**4.8 TEST RESULT - ABOVE 1000 MHz**

Please refer to the APPENDIX D.

Remark:

- (1) No limit: This is fundamental signal, the judgment is not applicable.  
For fundamental signal judgment was referred to Peak output test.

## 5. BANDWIDTH

### 5.1 LIMIT

Section	Test Item	Limit
FCC 15.247(a)(2)	6 dB Bandwidth	$\geq 500$ kHz
	99% Emission Bandwidth	-

### 5.2 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- The following table is the setting of the spectrum analyzer:

For 6 dB Bandwidth:

Spectrum Parameters	Setting
Span Frequency	$>$ Measurement Bandwidth
RBW	100 kHz
VBW	300 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

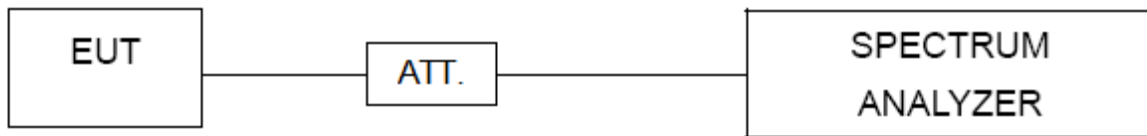
For 99% Emission Bandwidth:

Spectrum Parameters	Setting
Span Frequency	Between 1.5 times and 5.0 times the OBW
RBW	30 kHz
VBW	100 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

### 5.3 DEVIATION FROM STANDARD

No deviation.

### 5.4 TEST SETUP



### 5.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### 5.6 TEST RESULTS

Please refer to the APPENDIX E.

**6. MAXIMUM OUTPUT POWER**

**6.1 LIMIT**

Section	Test Item	Limit
FCC 15.247(b)(3)	Maximum Output Power	1.0000 watt or 30.00 dBm

**6.2 TEST PROCEDURE**

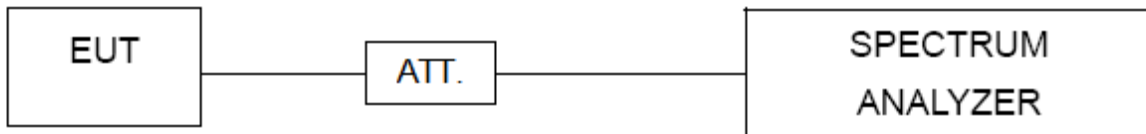
- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. The following table is the setting of the spectrum analyzer:

Spectrum Parameters	Setting
Span Frequency	$\geq 3 \times \text{RBW}$
RBW	3 MHz
VBW	3 MHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

**6.3 DEVIATION FROM STANDARD**

No deviation.

**6.4 TEST SETUP**



**6.5 EUT OPERATION CONDITIONS**

The EUT was programmed to be in continuously transmitting mode.

**6.6 TEST RESULTS**

Please refer to the APPENDIX F.

## 7. CONDUCTED SPURIOUS EMISSION

### 7.1 LIMIT

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak Output Power limits. If the transmitter complies with the Output Power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required.

### 7.2 TEST PROCEDURE

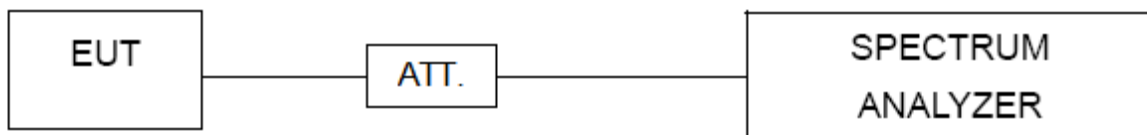
- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. The following table is the setting of the spectrum analyzer:

Spectrum Parameters	Setting
Start Frequency	30 MHz
Stop Frequency	26.5 GHz
RBW	100 kHz
VBW	100 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

### 7.3 DEVIATION FROM STANDARD

No deviation.

### 7.4 TEST SETUP



### 7.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### 7.6 TEST RESULTS

Please refer to the APPENDIX G.

**8. POWER SPECTRAL DENSITY**

**8.1 LIMIT**

Section	Test Item	Limit
FCC 15.247(e)	Power Spectral Density	8 dBm (in any 3 kHz)

**8.2 TEST PROCEDURE**

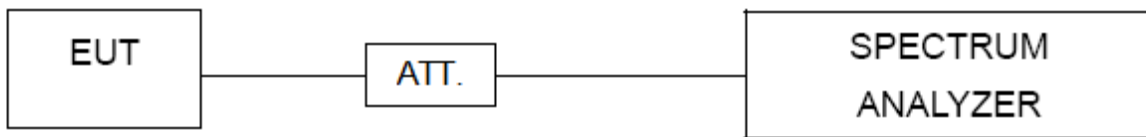
- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. The following table is the setting of the spectrum analyzer:

Spectrum Parameters	Setting
Span Frequency	2 MHz (1 Mbps) / 4 MHz (2 Mbps)
RBW	3 kHz
VBW	10 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

**8.3 DEVIATION FROM STANDARD**

No deviation.

**8.4 TEST SETUP**



**8.5 EUT OPERATION CONDITIONS**

The EUT was programmed to be in continuously transmitting mode.

**8.6 TEST RESULTS**

Please refer to the APPENDIX H.

**9. MEASUREMENT INSTRUMENTS LIST**

AC Power Line Conducted Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EMI Test Receiver	R&S	ESCI	100382	Feb. 28, 2022
2	LISN	EMCO	3816/2	52765	Feb. 27, 2022
3	TWO-LINE V-NETWORK	R&S	ENV216	101447	Feb. 27, 2022
4	50Ω Terminator	SHX	TF5-3	15041305	Feb. 27, 2022
5	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
6	Cable	N/A	RG223	12m	Mar. 09, 2022
7	643 Shield Room	ETS	6*4*3m	N/A	N/A

Radiated Emissions - 9 kHz to 30 MHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Loop Antenna	EM	EM-6876-1	230	Apr. 28, 2022
2	Cable	N/A	RG 213/U	N/A	May 29, 2021
3	EMI Test Receiver	R&S	ESCI	100895	Feb. 27, 2022
4	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
5	966 Chambe Room	RM	9*6*6m	N/A	Jul. 25, 2021

Radiated Emissions - 30 MHz to 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarzbeck	VULB9160	9160-3232	Mar. 15, 2022
2	Amplifier	HP	8447D	2944A08742	Feb. 28, 2022
3	Receiver	Agilent	N9038A	MY52130039	Jul. 25, 2021
4	Cable	emci	LMR-400(30MHz-1 GHz)(8m+5m)	N/A	May 22, 2021
5	Controller	CT	SC100	N/A	N/A
6	Controller	MF	MF-7802	MF780208416	N/A
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
8	966 Chambe Room	RM	9*6*6m	N/A	Jul. 25, 2021

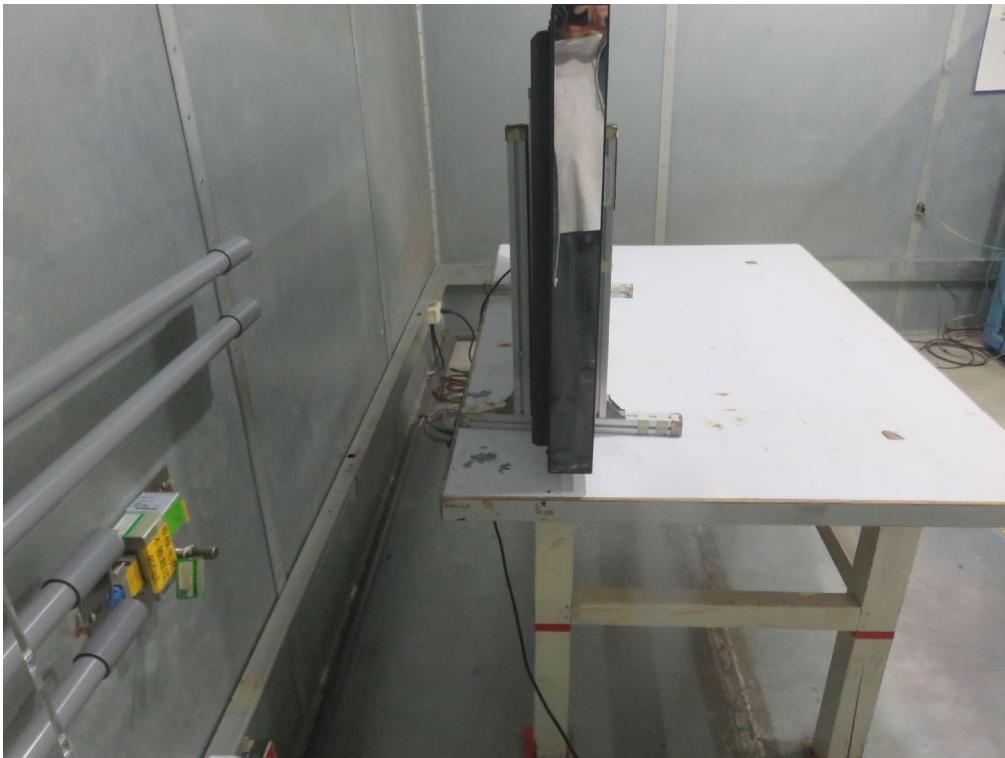
Radiated Emissions - Above 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Double Ridged Guide Antenna	ETS	3115	75789	May 12, 2021
2	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jul. 07, 2021
3	Amplifier	Agilent	8449B	3008A02584	Jul. 25, 2021
4	Microwave Preampifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Feb. 28, 2022
5	Receiver	Agilent	N9038A	MY52130039	Jul. 25, 2021
6	Controller	CT	SC100	N/A	N/A
7	Controller	MF	MF-7802	MF780208416	N/A
8	Cable	N/A	EMC104-SM-SM-6 000	N/A	Oct. 16, 2021
9	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
10	Filter	STI	STI15-9912	N/A	Jul. 25, 2021
11	966 Chambe Room	RM	9*6*6m	N/A	Jul. 25, 2021



**Bandwidth &  
Maximum Output Power &  
Power Spectral Density &  
Conducted Spurious Emission**

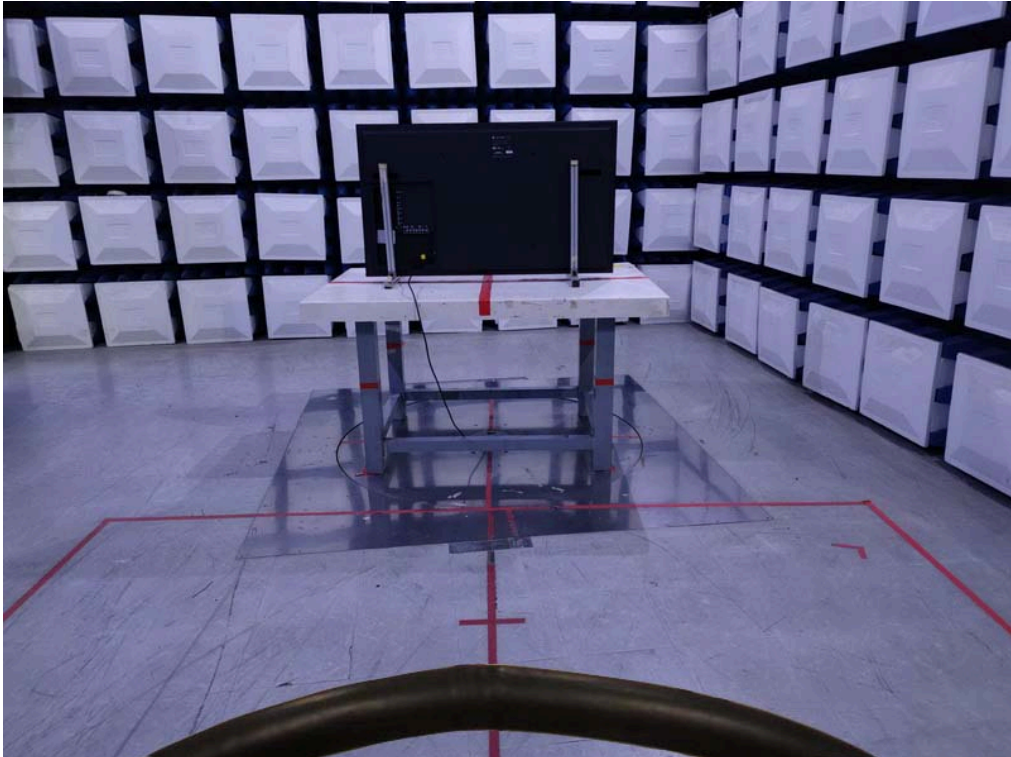
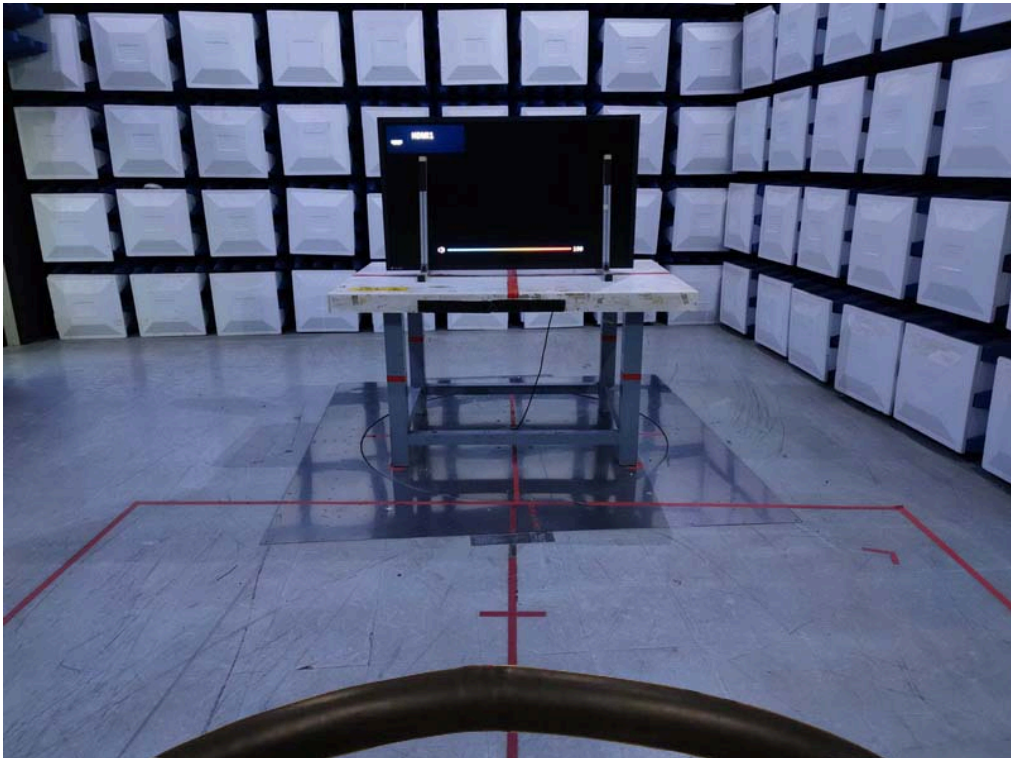
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Jul. 25, 2021
2	Attenuator	WOKEN	6SM3502	VAS1214NL	Feb. 07, 2022
3	RF Cable	Tongkaichuan	N/A	N/A	N/A
4	DC Block	Mini	N/A	N/A	N/A

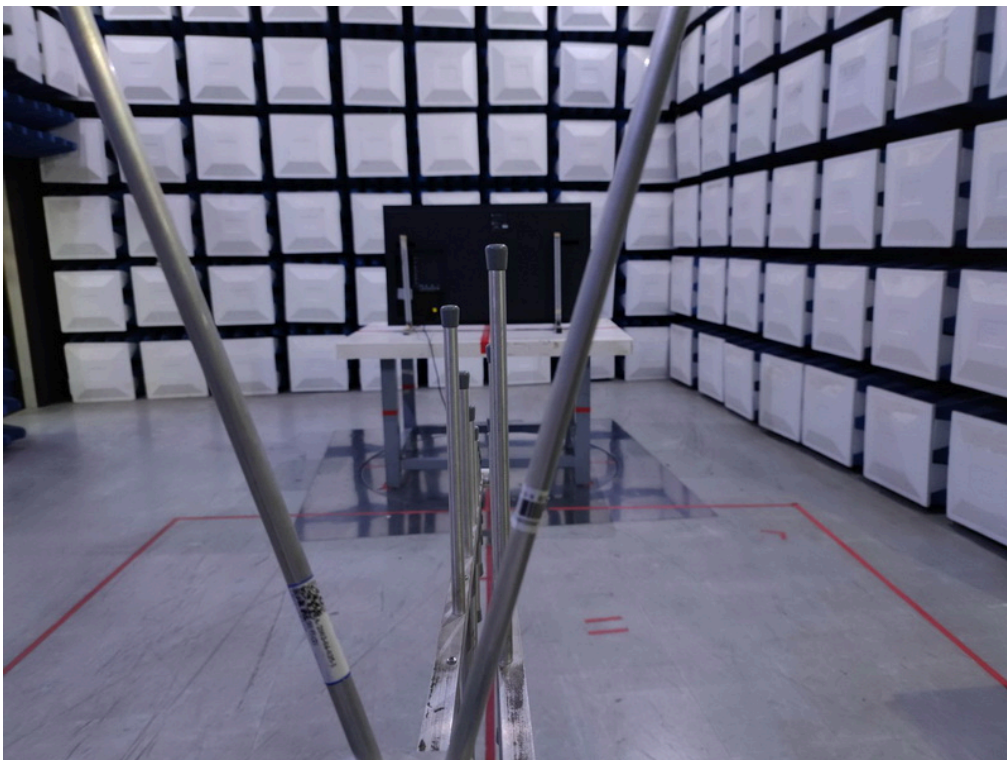
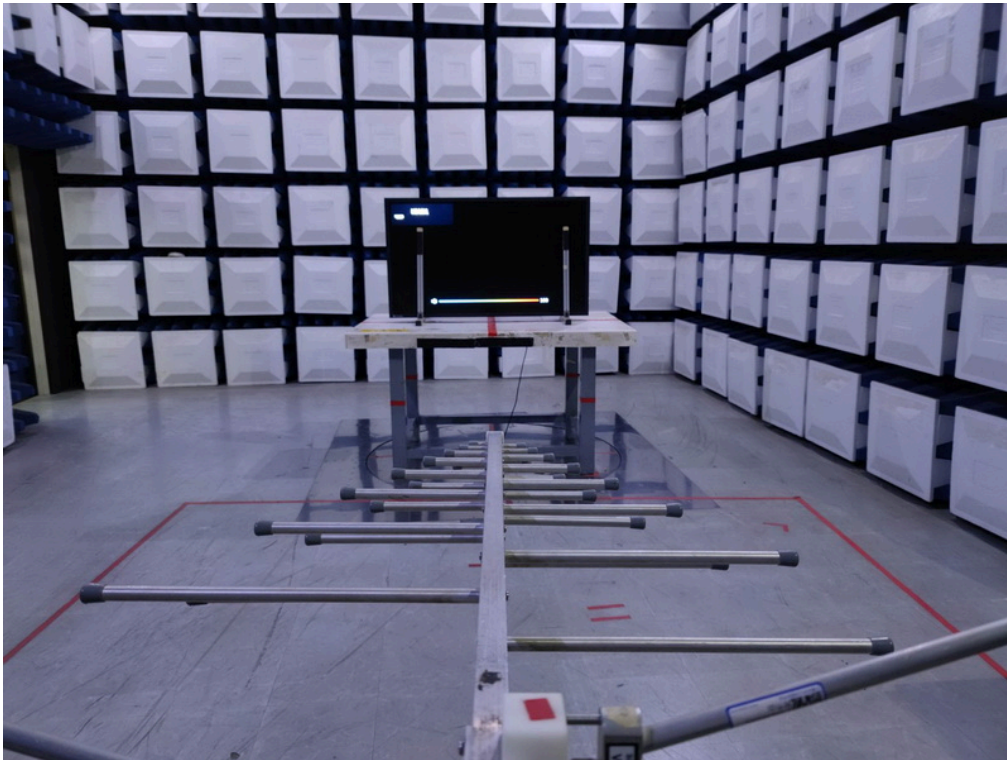
Remark: "N/A" denotes no model name, serial no. or calibration specified.  
All calibration period of equipment list is one year.

**10. EUT TEST PHOTO****AC Power Line Conducted Emissions Test Photos**

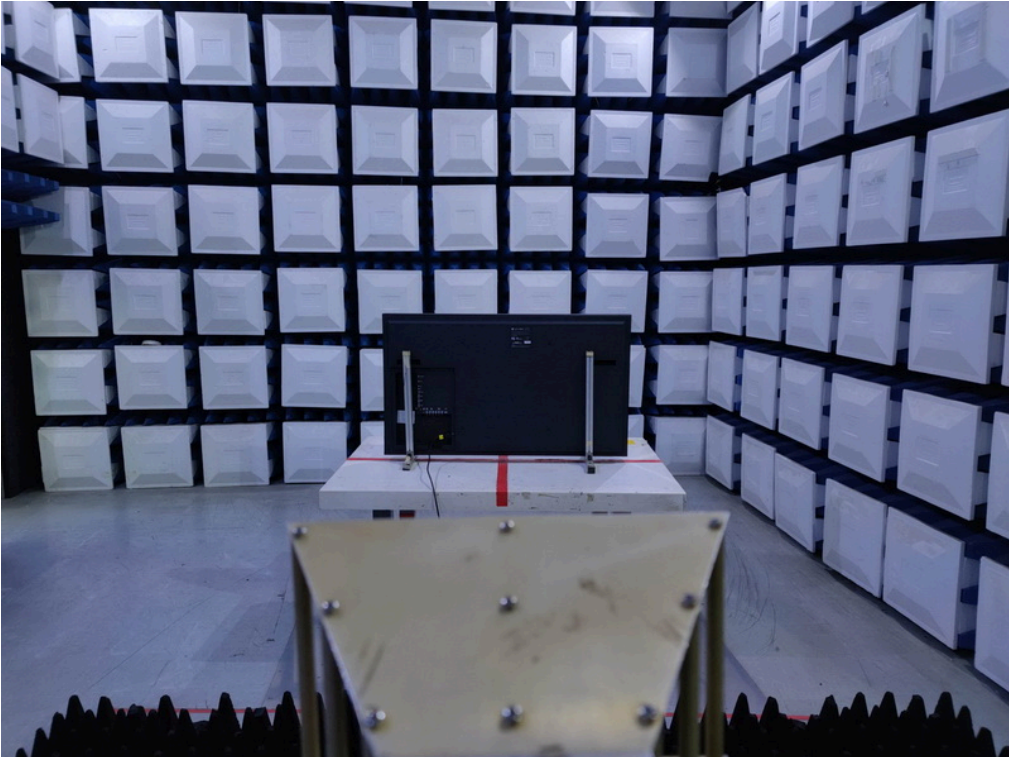
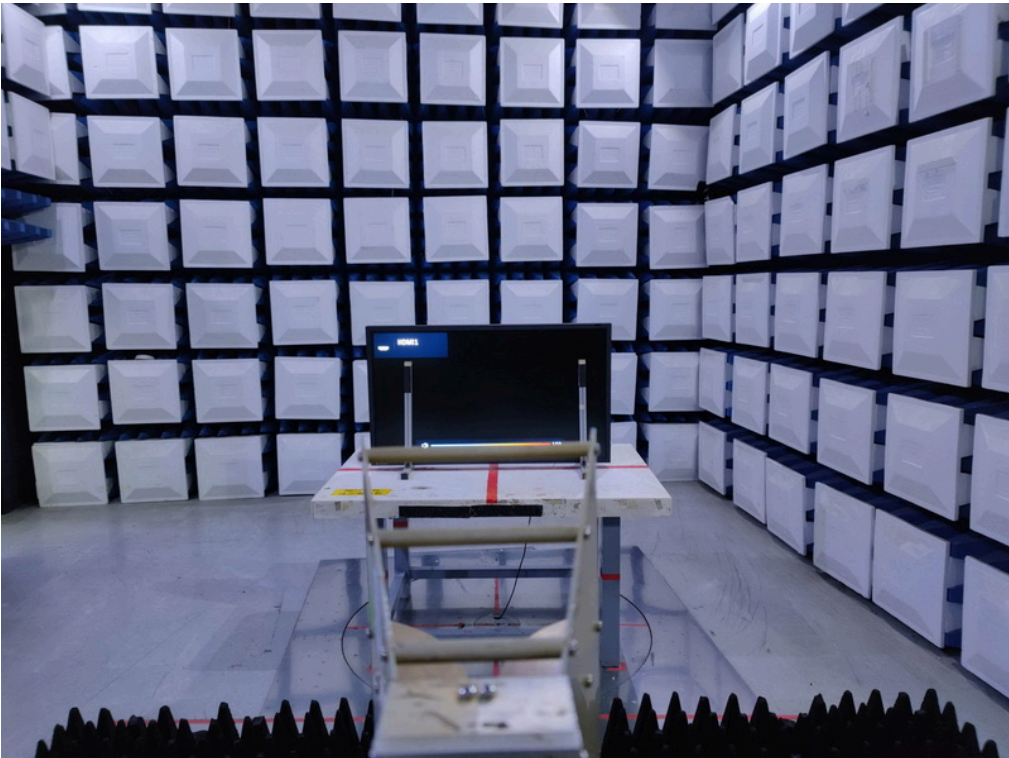
**Radiated Emissions Test Photos**

**9 kHz to 30 MHz**

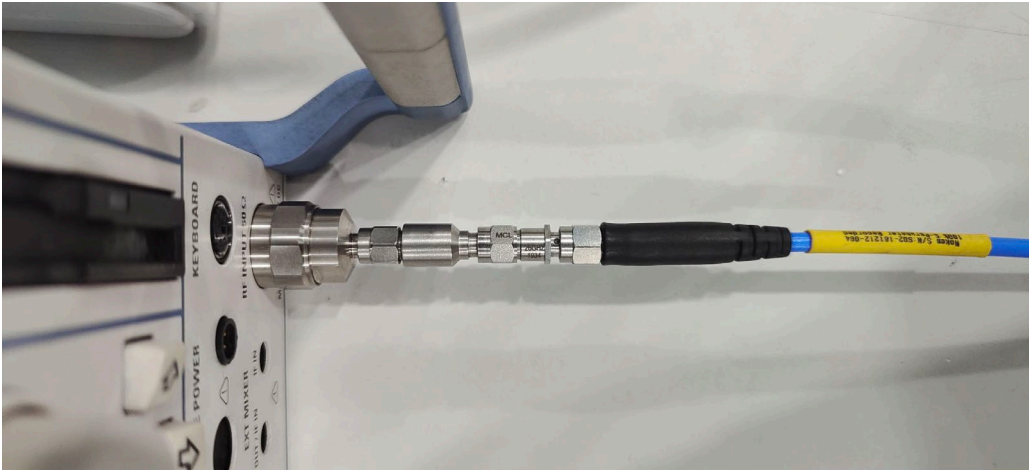
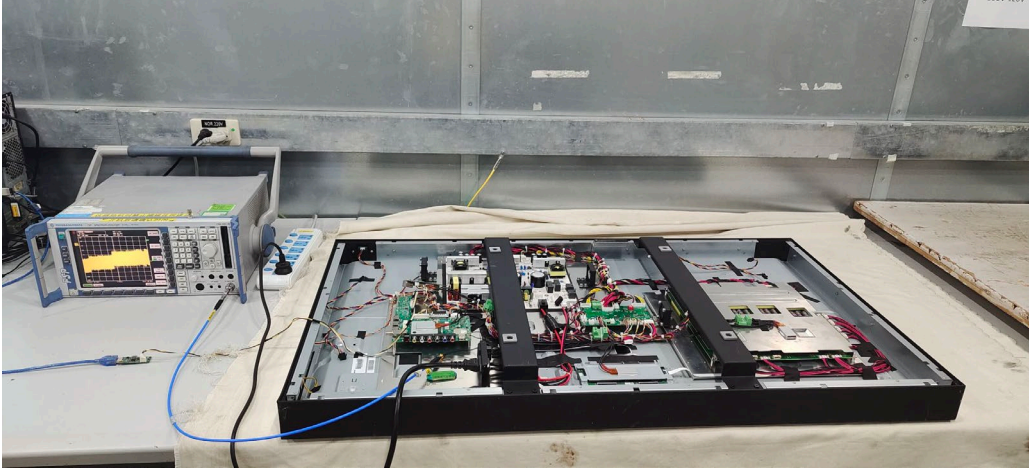


**Radiated Emissions Test Photos****30 MHz to 1000 MHz**

**Radiated Emissions Test Photos**  
**Above 1 GHz**

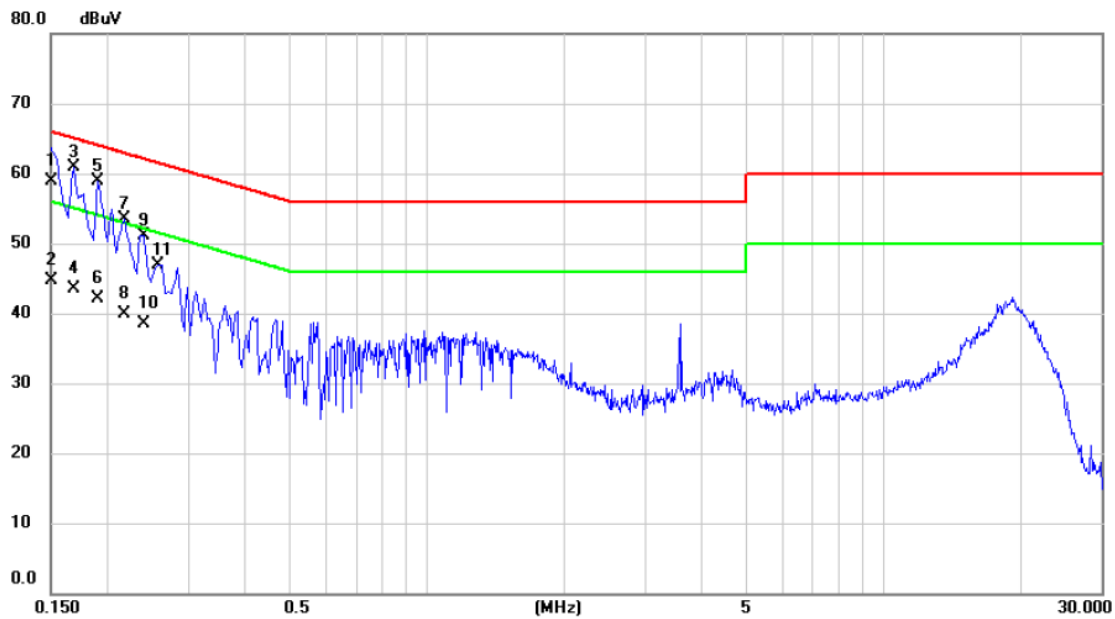


**Conducted Test Photos**



## **APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS**

Test Mode	TX Mode_1Mbps Channel 19	Phase	Line
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No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0.1500	49.30	9.67	58.97	66.00	-7.03	QP	
2	0.1500	35.10	9.67	44.77	56.00	-11.23	AVG	
3 *	0.1680	51.14	9.81	60.95	65.06	-4.11	peak	
4	0.1680	33.60	9.81	43.41	55.06	-11.65	AVG	
5	0.1905	48.95	9.88	58.83	64.01	-5.18	peak	
6	0.1905	32.20	9.88	42.08	54.01	-11.93	AVG	
7	0.2175	43.52	9.90	53.42	62.91	-9.49	peak	
8	0.2175	30.10	9.90	40.00	52.91	-12.91	AVG	
9	0.2400	41.28	9.88	51.16	62.10	-10.94	peak	
10	0.2400	28.70	9.88	38.58	52.10	-13.52	AVG	
11	0.2580	37.05	9.87	46.92	61.50	-14.58	peak	

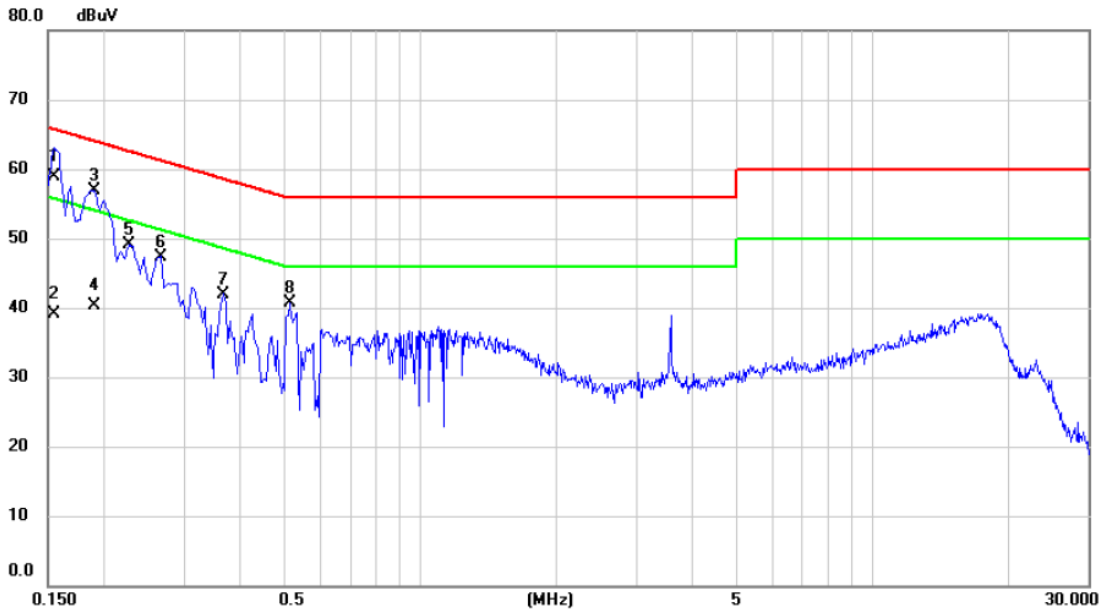
**REMARKS:**

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.



Test Mode	TX Mode_1Mbps Channel 19	Phase	Neutral
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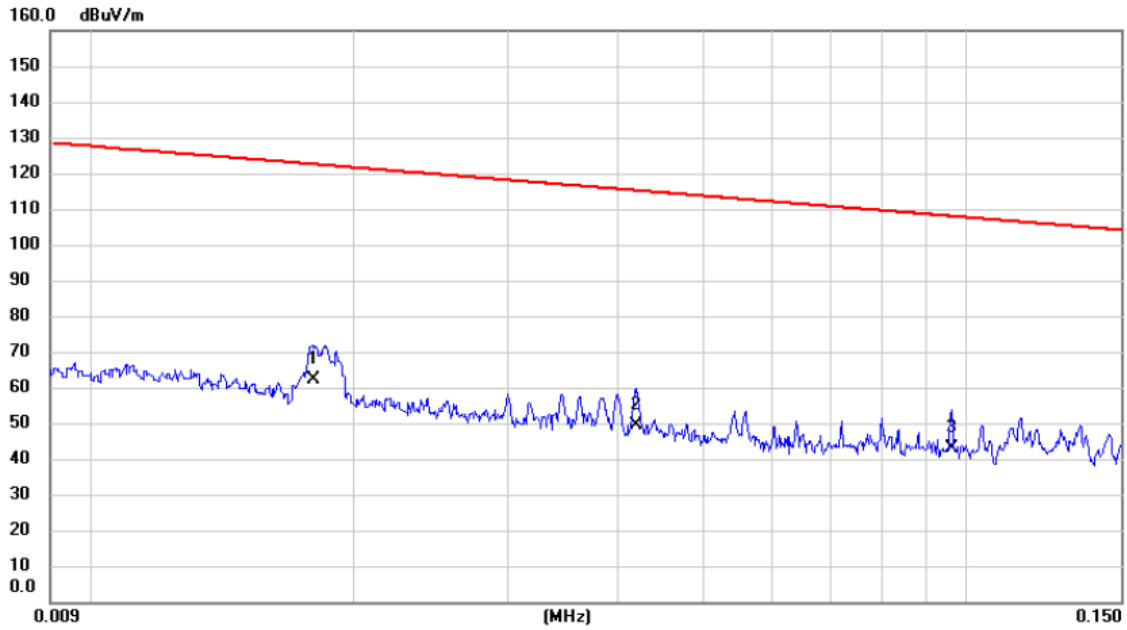
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.1545	49.10	9.77	58.87	65.75	-6.88	QP	
2		0.1545	29.40	9.77	39.17	55.75	-16.58	AVG	
3		0.1905	46.93	9.98	56.91	64.01	-7.10	peak	
4		0.1905	30.30	9.98	40.28	54.01	-13.73	AVG	
5		0.2265	39.13	9.99	49.12	62.58	-13.46	peak	
6		0.2670	37.42	9.98	47.40	61.21	-13.81	peak	
7		0.3660	31.95	10.05	42.00	58.59	-16.59	peak	
8		0.5144	30.55	10.13	40.68	56.00	-15.32	peak	

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

**APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ**

Test Mode	TX Mode_1Mbps Channel 19	Polarization	Ant 0°
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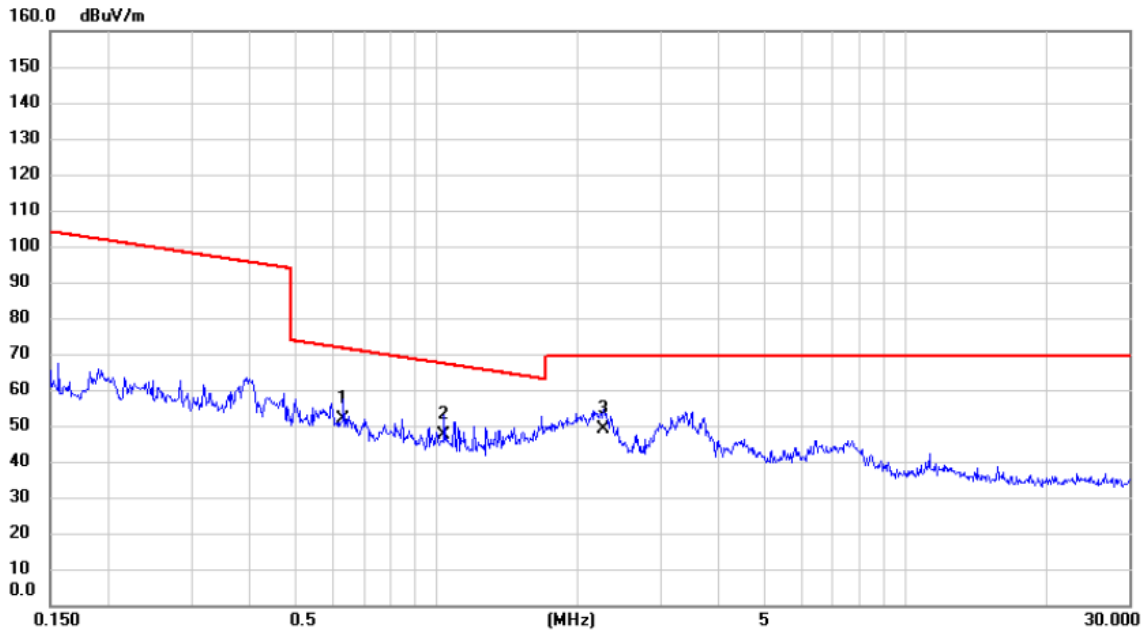


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	0.0180	48.47	13.84	62.31	122.50	-60.19	AVG	
2		0.0420	36.77	12.63	49.40	115.14	-65.74	AVG	
3		0.0962	30.19	12.70	42.89	107.94	-65.05	AVG	

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX Mode_1Mbps Channel 19	Polarization	Ant 0°
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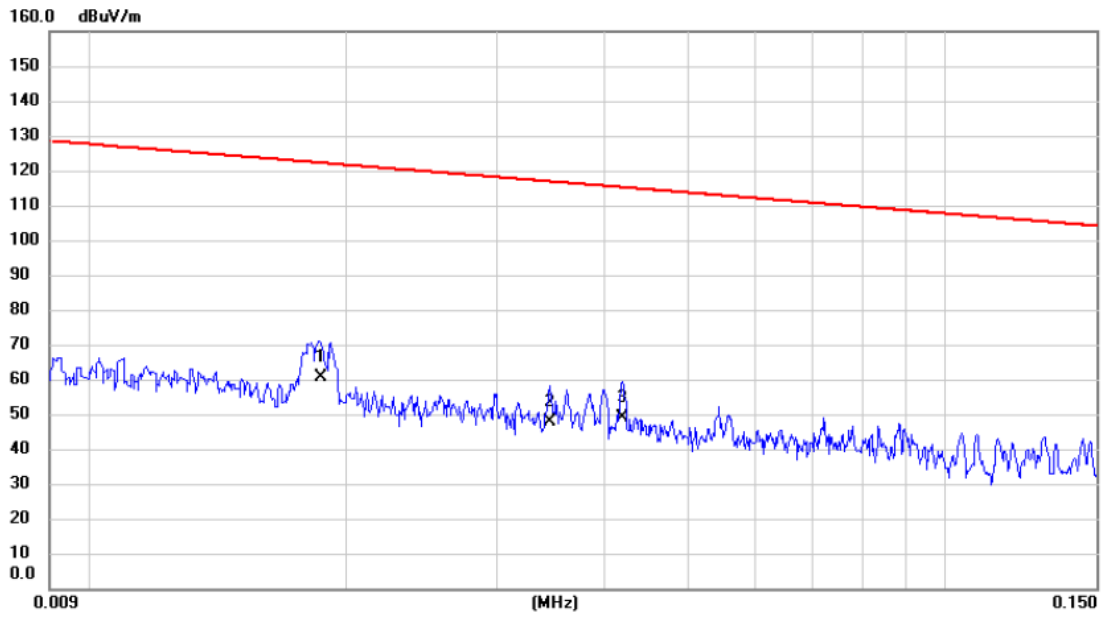


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	0.6338	39.93	11.96	51.89	71.56	-19.67	QP	
2		1.0374	35.65	11.78	47.43	67.29	-19.86	QP	
3		2.2726	37.89	11.17	49.06	69.54	-20.48	QP	

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX Mode_1Mbps Channel 19	Polarization	Ant 90°
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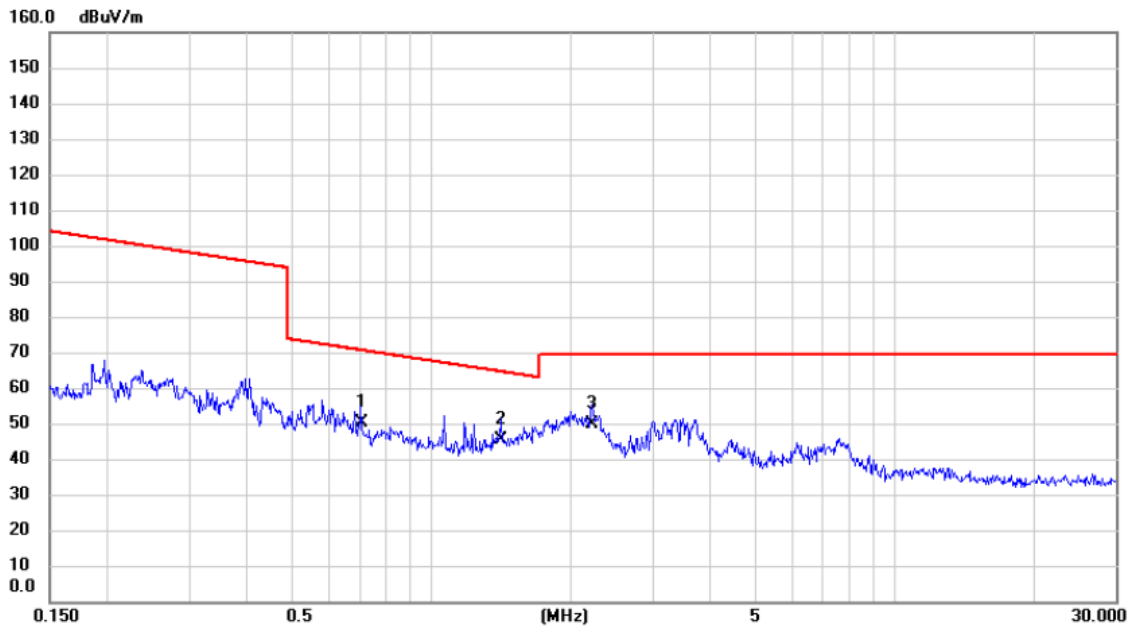


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	0.0187	46.85	13.62	60.47	122.17	-61.70	AVG	
2		0.0345	35.14	12.83	47.97	116.85	-68.88	AVG	
3		0.0420	36.38	12.63	49.01	115.14	-66.13	AVG	

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX Mode_1Mbps Channel 19	Polarization	Ant 90°
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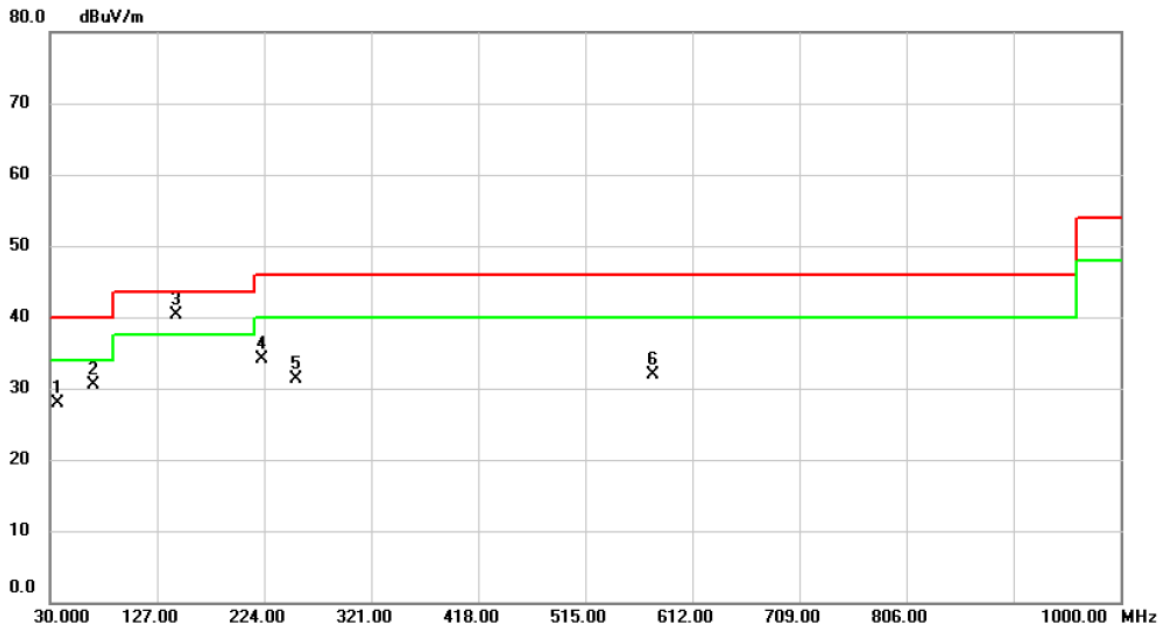
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		0.7047	38.12	11.93	50.05	70.64	-20.59	QP	
2	*	1.4107	33.73	11.59	45.32	64.62	-19.30	QP	
3		2.2250	38.57	11.20	49.77	69.54	-19.77	QP	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

**APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ**

Test Mode	TX Mode_1Mbps Channel 19	Polarization	Vertical
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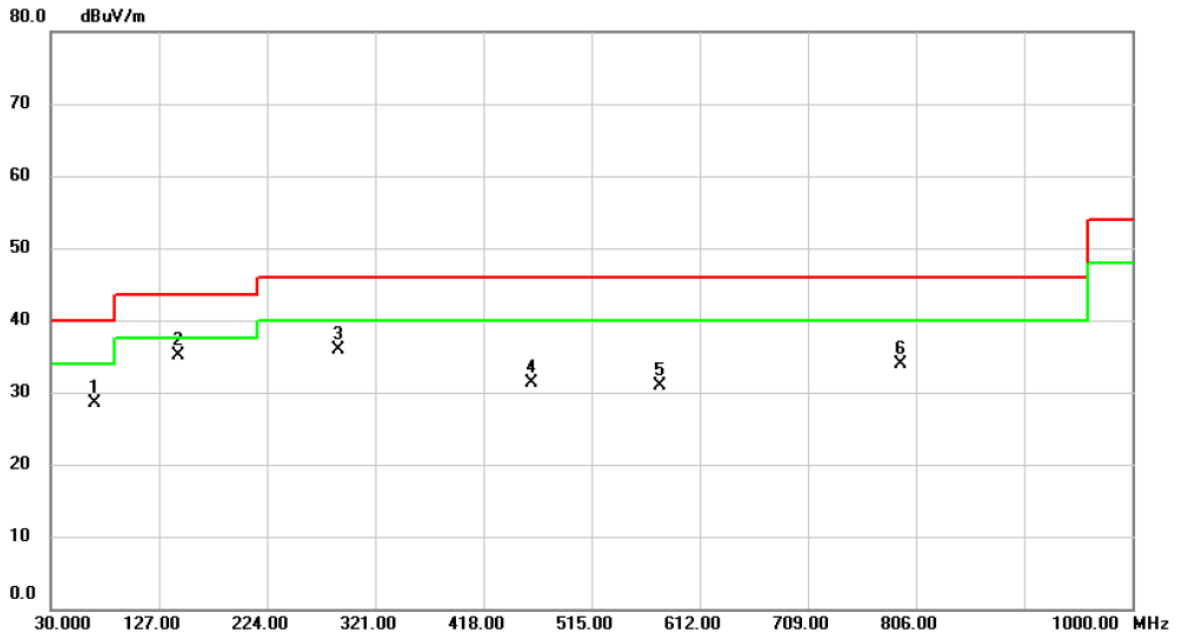
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		36.790	42.69	-14.81	27.88	40.00	-12.12	peak	
2		69.770	46.76	-16.16	30.60	40.00	-9.40	peak	
3	*	144.460	53.06	-12.76	40.30	43.50	-3.20	peak	
4		222.060	48.68	-14.64	34.04	46.00	-11.96	peak	
5		253.100	44.19	-12.81	31.38	46.00	-14.62	peak	
6		576.110	37.09	-5.19	31.90	46.00	-14.10	peak	

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.



Test Mode	TX Mode_1Mbps Channel 19	Polarization	Horizontal
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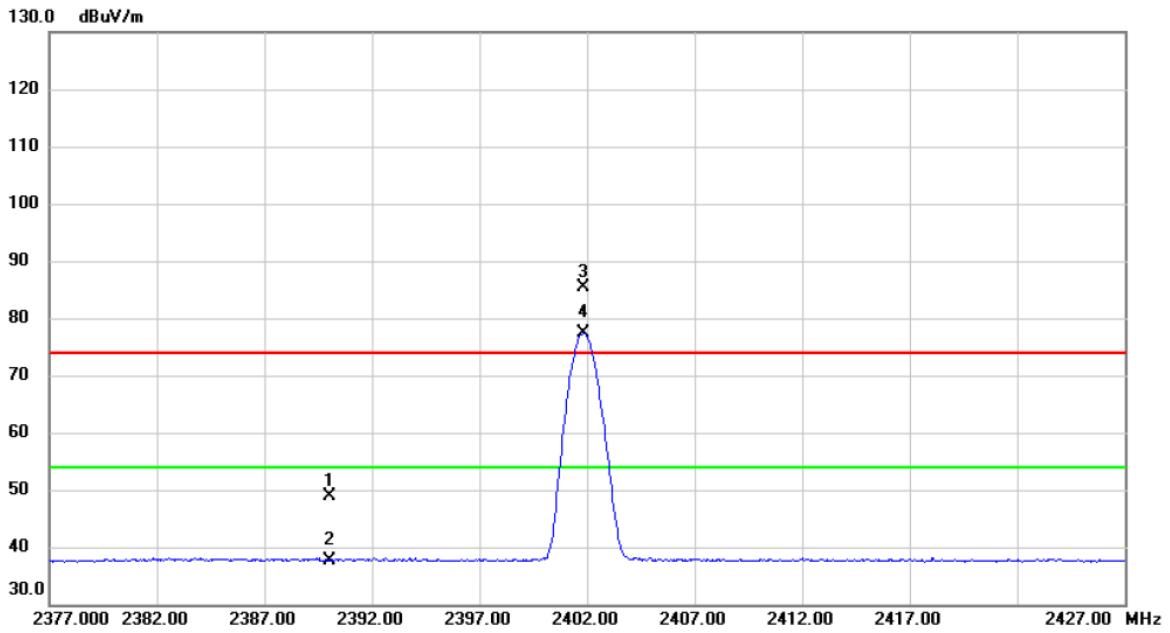
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	69.770	44.61	-16.16	28.45	40.00	-11.55	peak	
2 *	144.460	47.93	-12.76	35.17	43.50	-8.33	peak	
3	288.020	47.24	-11.29	35.95	46.00	-10.05	peak	
4	461.650	38.51	-7.20	31.31	46.00	-14.69	peak	
5	576.110	36.17	-5.19	30.98	46.00	-15.02	peak	
6	792.420	34.82	-0.88	33.94	46.00	-12.06	peak	

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

## **APPENDIX D - RADIATED EMISSION - ABOVE 1000 MHZ**

Test Mode	TX 2402 MHz _CH00_1Mbps	Polarization	Vertical
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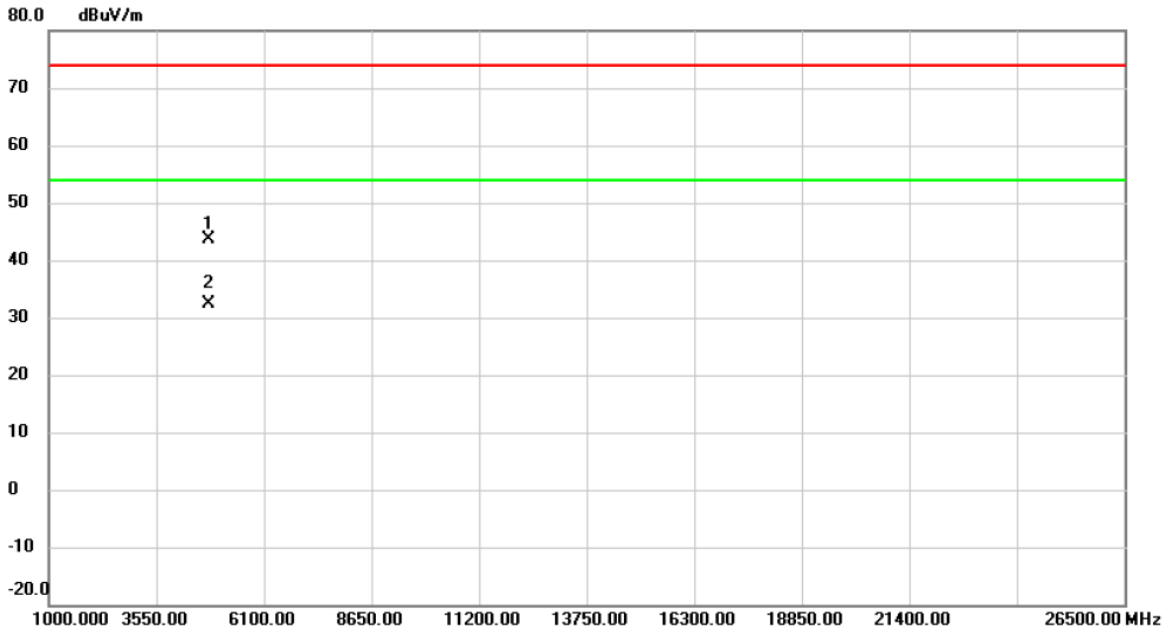
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		2390.000	41.73	7.26	48.99	74.00	-25.01	peak	
2		2390.000	30.44	7.26	37.70	54.00	-16.30	AVG	
3	X	2401.850	78.20	7.26	85.46	74.00	11.46	peak	No Limit
4	*	2401.850	70.05	7.26	77.31	54.00	23.31	AVG	No Limit

**REMARKS:**

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2402 MHz _CH00_1Mbps	Polarization	Vertical
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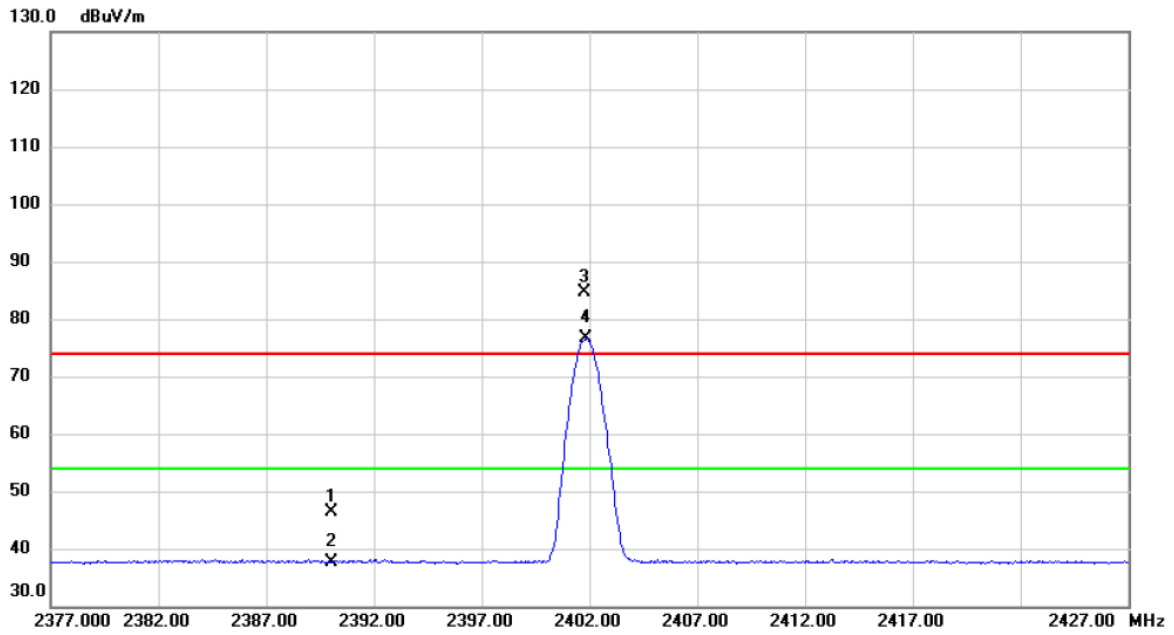


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		4806.010	39.21	4.40	43.61	74.00	-30.39	peak	
2	*	4806.177	27.93	4.40	32.33	54.00	-21.67	AVG	

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2402 MHz _CH00_1Mbps	Polarization	Horizontal
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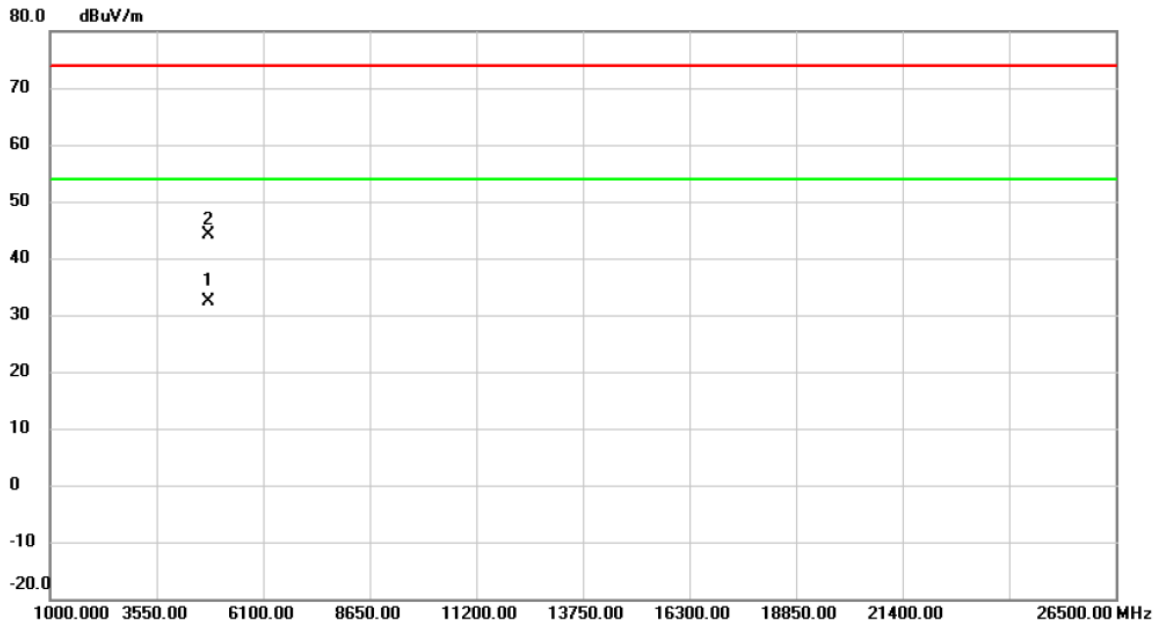


No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.000	39.14	7.26	46.40	74.00	-27.60	peak	
2	2390.000	30.47	7.26	37.73	54.00	-16.27	AVG	
3 X	2401.750	77.45	7.26	84.71	74.00	10.71	peak	No Limit
4 *	2401.850	69.27	7.26	76.53	54.00	22.53	AVG	No Limit

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2402 MHz _CH00_1Mbps	Polarization	Horizontal
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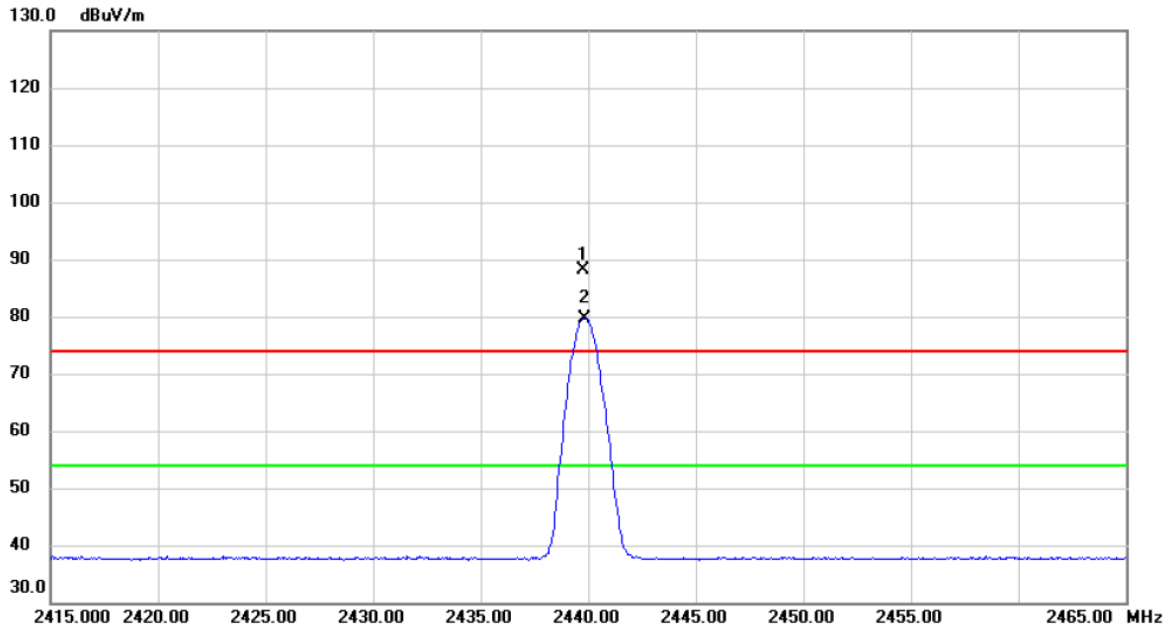


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	4805.818	27.92	4.40	32.32	54.00	-21.68	AVG	
2		4805.835	39.82	4.40	44.22	74.00	-29.78	peak	

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2440 MHz _CH19_1Mbps	Polarization	Vertical
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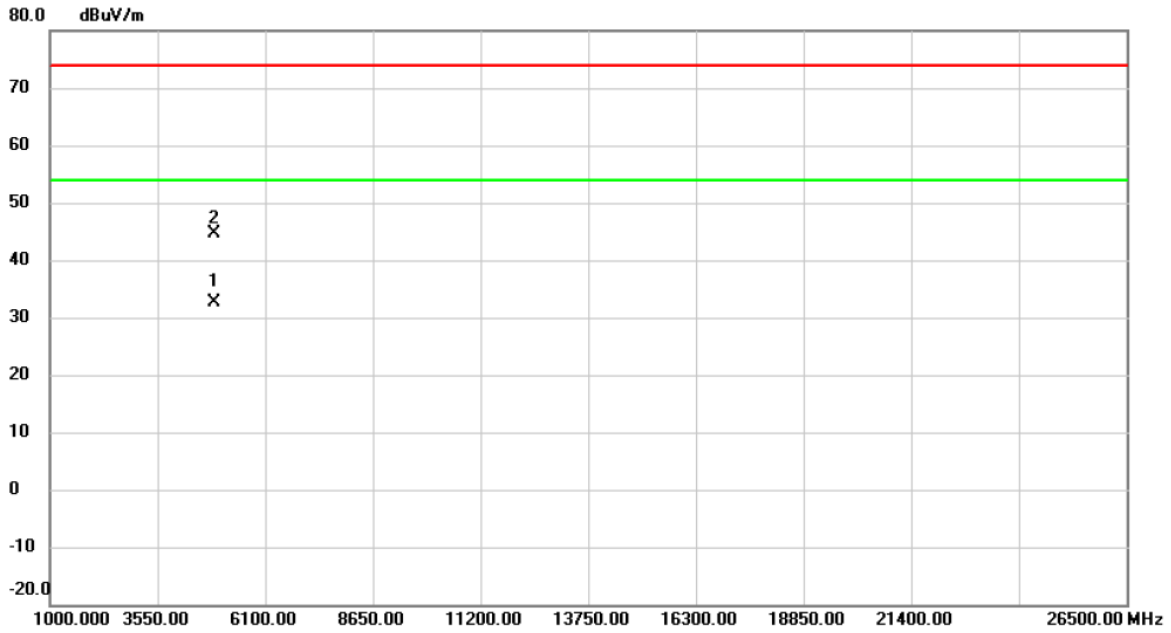


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	X	2439.750	80.77	7.25	88.02	74.00	14.02	peak	No Limit
2	*	2439.850	72.46	7.25	79.71	54.00	25.71	AVG	No Limit

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2440 MHz _CH19_1Mbps	Polarization	Vertical
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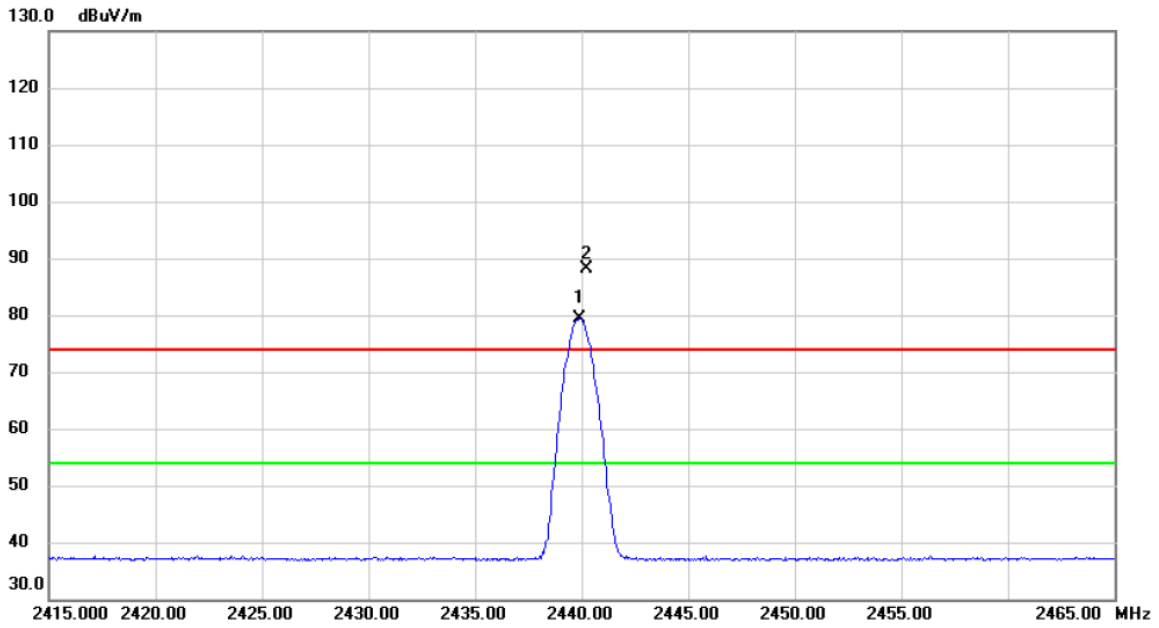
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	4880.320	27.90	4.61	32.51	54.00	-21.49	AVG	
2		4880.882	40.02	4.61	44.63	74.00	-29.37	peak	

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.



Test Mode	TX 2440 MHz _CH19_1Mbps	Polarization	Horizontal
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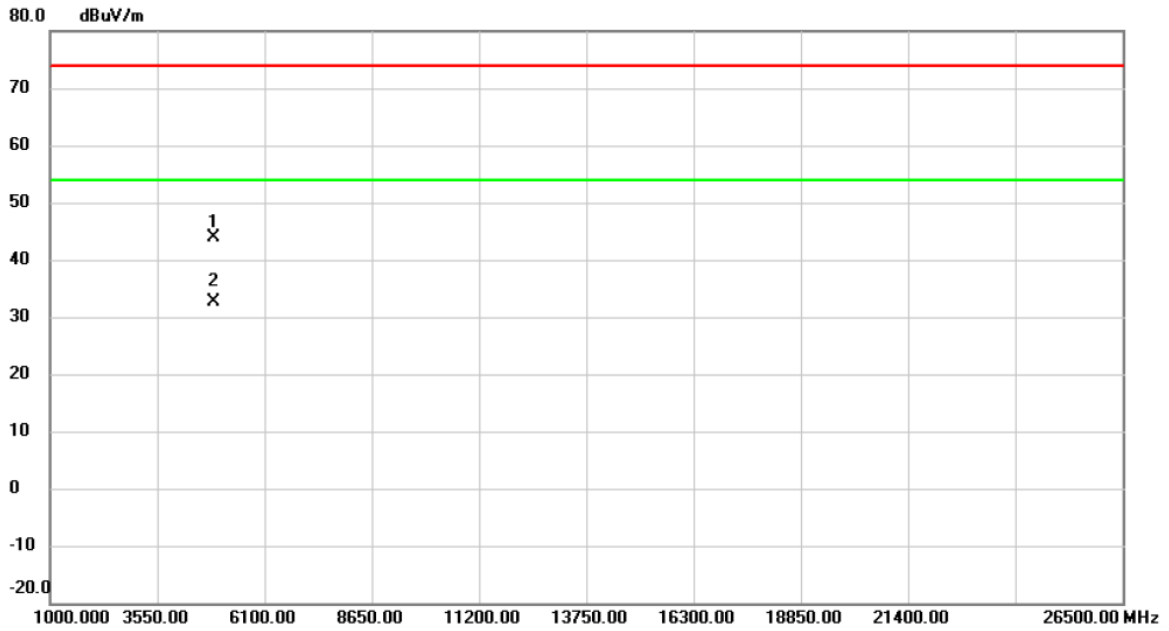


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2439.900	72.16	7.25	79.41	54.00	25.41	AVG	No Limit
2	X	2440.250	80.82	7.25	88.07	74.00	14.07	peak	No Limit

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2440 MHz _CH19_1Mbps	Polarization	Horizontal
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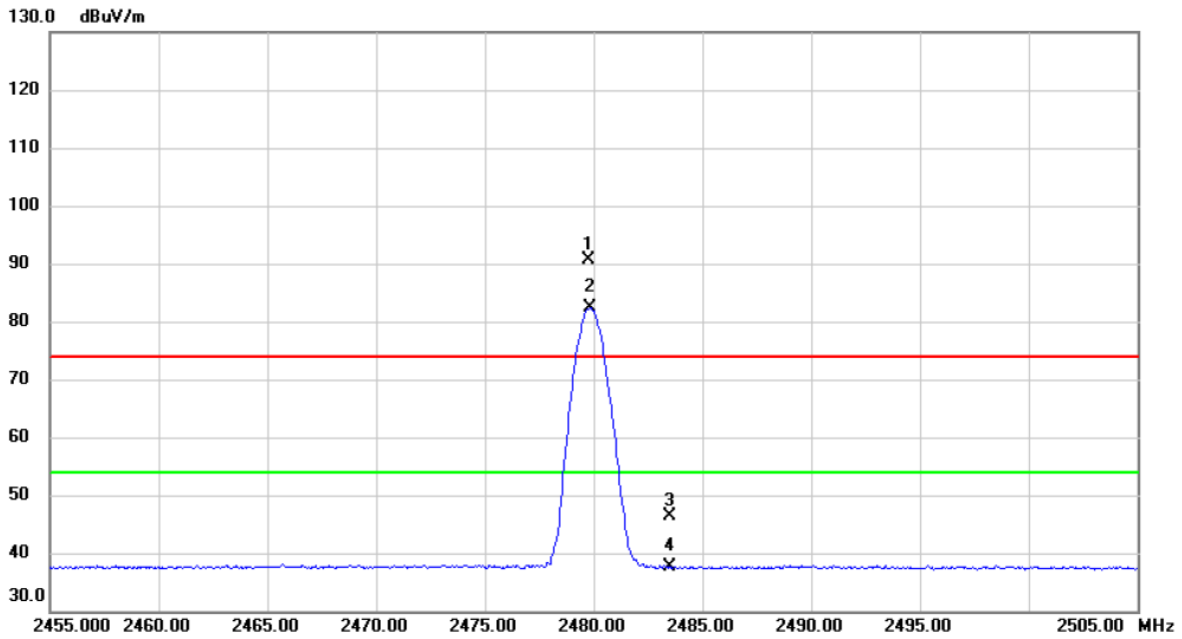


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		4879.015	39.17	4.60	43.77	74.00	-30.23	peak	
2	*	4882.427	28.07	4.61	32.68	54.00	-21.32	AVG	

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2480 MHz _CH39_1Mbps	Polarization	Vertical
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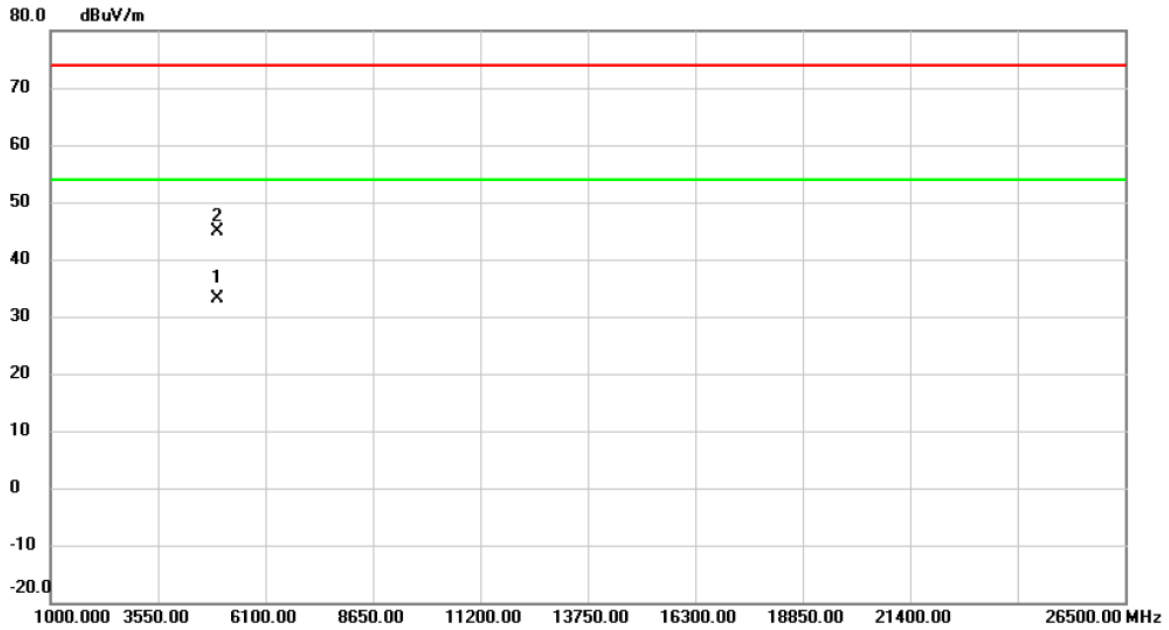


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2479.750	83.30	7.25	90.55	74.00	16.55	peak	No Limit
2	*	2479.850	75.07	7.25	82.32	54.00	28.32	AVG	No Limit
3		2483.500	39.10	7.25	46.35	74.00	-27.65	peak	
4		2483.500	30.29	7.25	37.54	54.00	-16.46	AVG	

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2480 MHz _CH39_1Mbps	Polarization	Vertical
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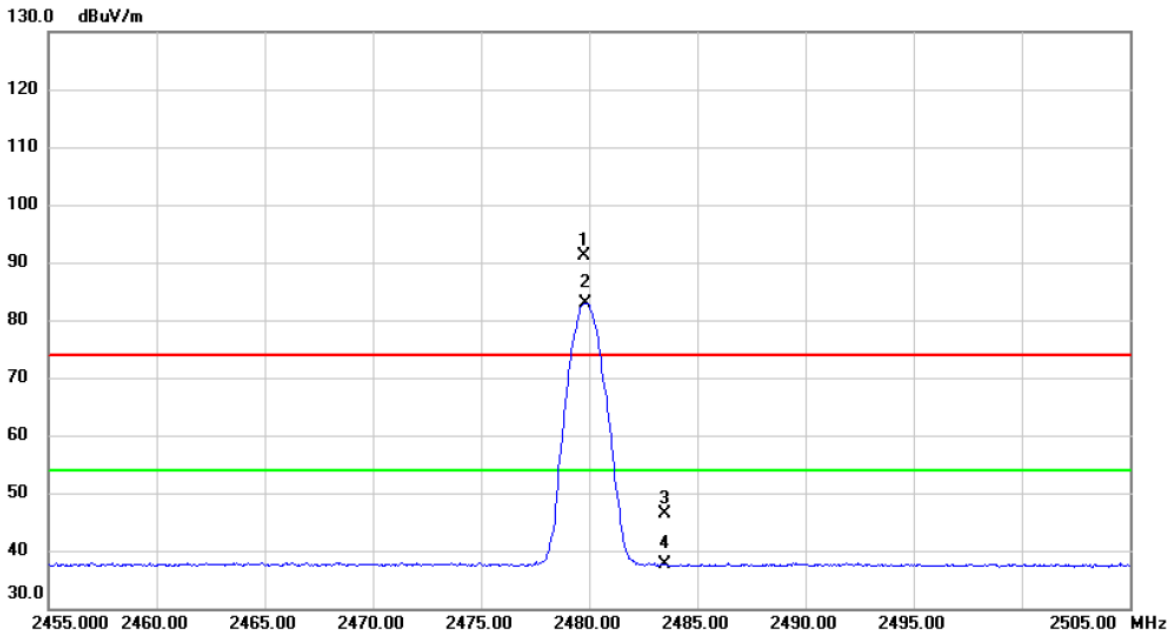


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	4959.243	28.31	4.81	33.12	54.00	-20.88	AVG	
2		4959.510	40.18	4.81	44.99	74.00	-29.01	peak	

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2480 MHz _CH39_1Mbps	Polarization	Horizontal
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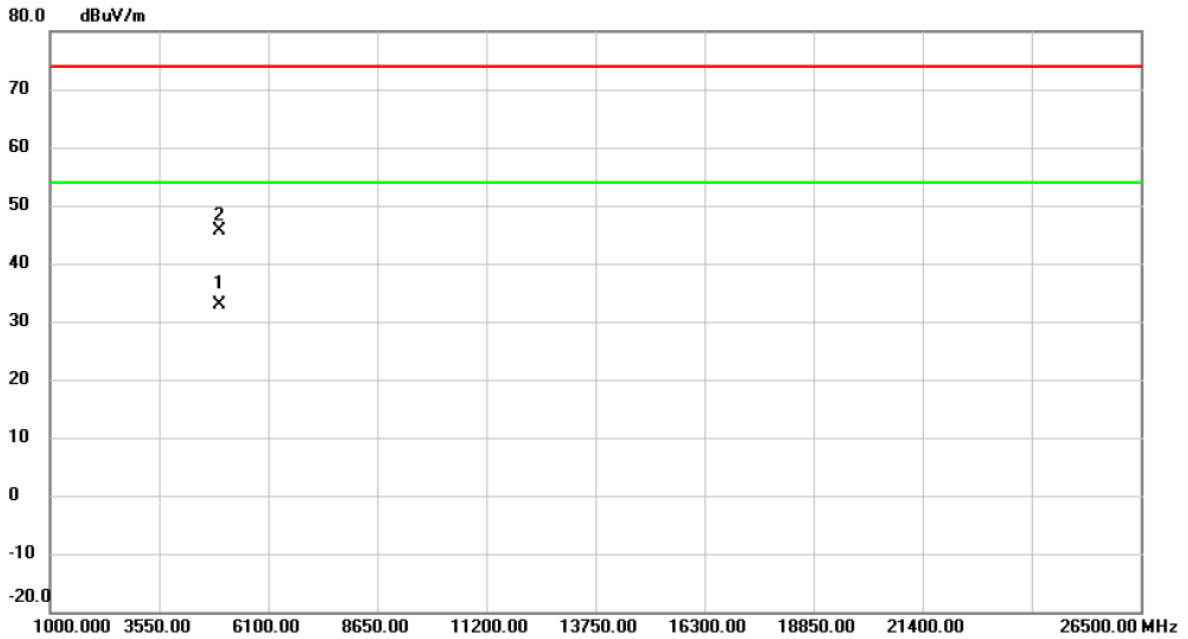


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2479.750	83.99	7.25	91.24	74.00	17.24	peak	No Limit
2	*	2479.850	75.73	7.25	82.98	54.00	28.98	AVG	No Limit
3		2483.500	39.08	7.25	46.33	74.00	-27.67	peak	
4		2483.500	30.28	7.25	37.53	54.00	-16.47	AVG	

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2480 MHz _CH39_1Mbps	Polarization	Horizontal
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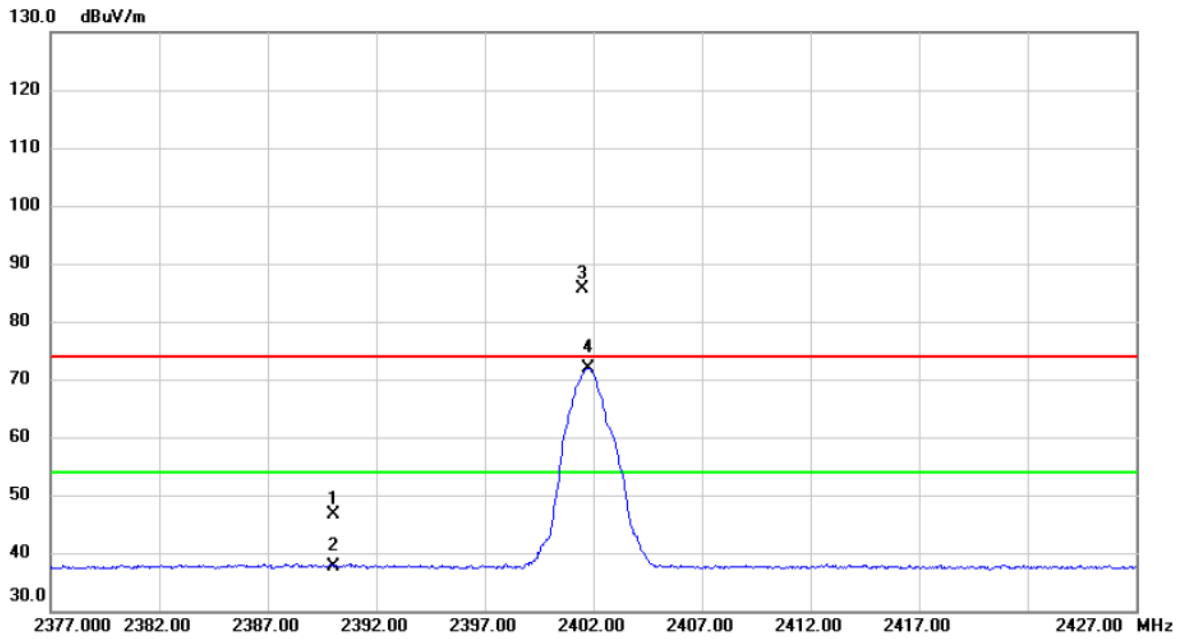


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	4957.698	28.00	4.81	32.81	54.00	-21.19	AVG	
2		4958.095	40.92	4.81	45.73	74.00	-28.27	peak	

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2402 MHz _CH00_2Mbps	Polarization	Vertical
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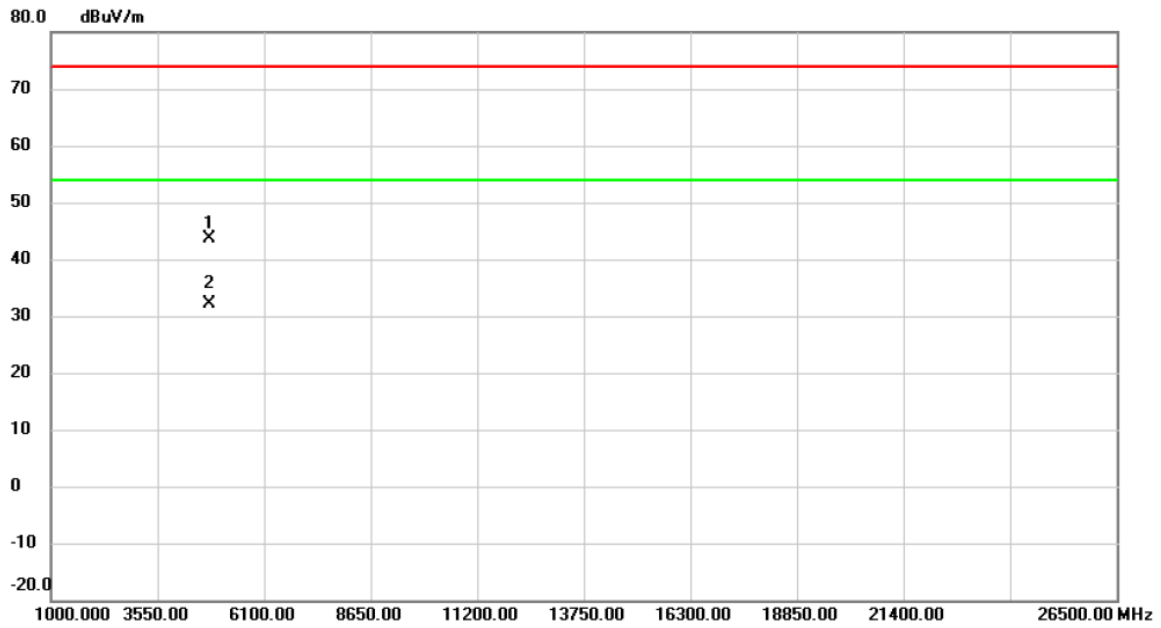


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		2390.000	39.47	7.26	46.73	74.00	-27.27	peak	
2		2390.000	30.41	7.26	37.67	54.00	-16.33	AVG	
3	X	2401.500	78.30	7.26	85.56	74.00	11.56	peak	No Limit
4	*	2401.750	64.67	7.26	71.93	54.00	17.93	AVG	No Limit

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2402 MHz _CH00_2Mbps	Polarization	Vertical
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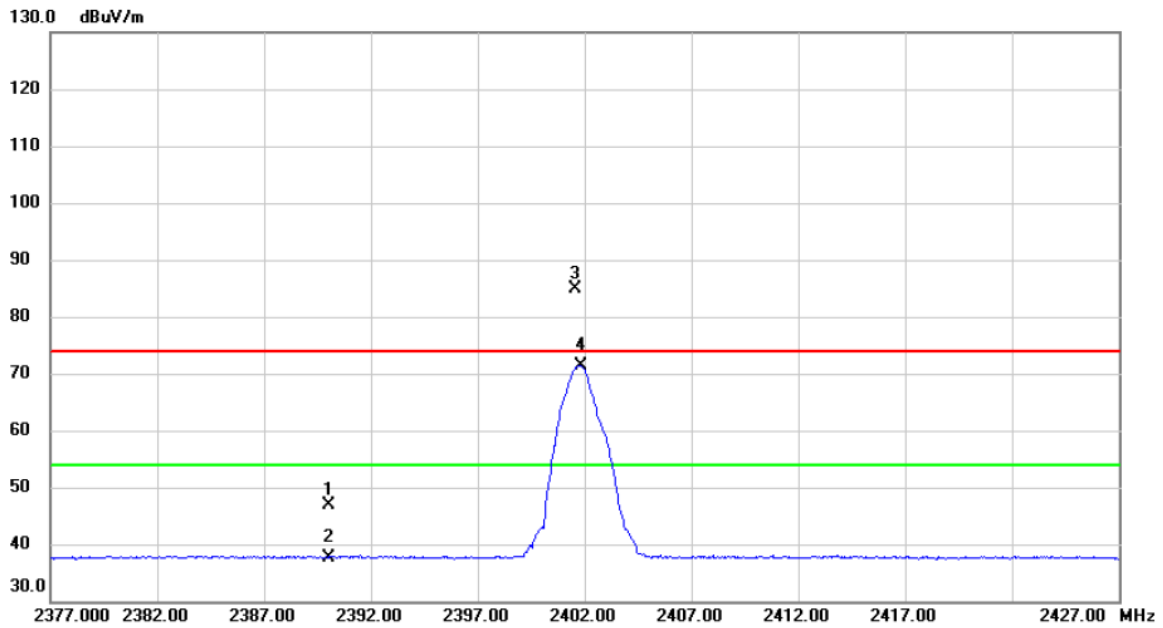
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		4803.583	39.30	4.40	43.70	74.00	-30.30	peak	
2	*	4806.278	27.85	4.40	32.25	54.00	-21.75	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.



Test Mode	TX 2402 MHz _CH00_2Mbps	Polarization	Horizontal
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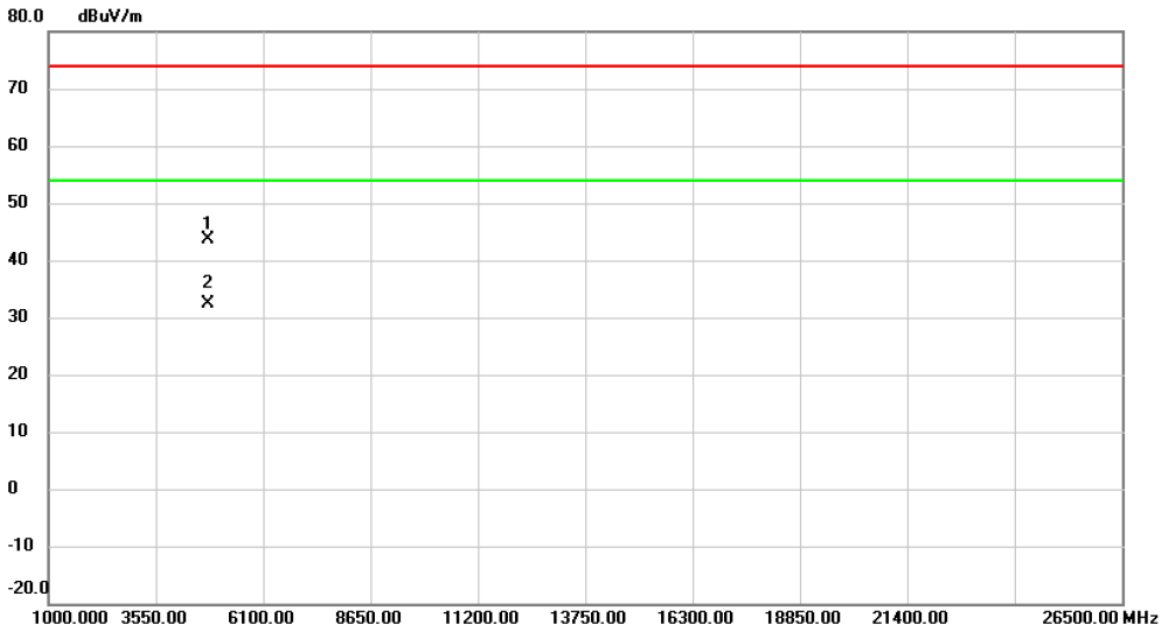
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		2390.000	39.64	7.26	46.90	74.00	-27.10	peak	
2		2390.000	30.47	7.26	37.73	54.00	-16.27	AVG	
3	X	2401.550	77.72	7.26	84.98	74.00	10.98	peak	No Limit
4	*	2401.800	64.10	7.26	71.36	54.00	17.36	AVG	No Limit

**REMARKS:**

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2402 MHz _CH00_2Mbps	Polarization	Horizontal
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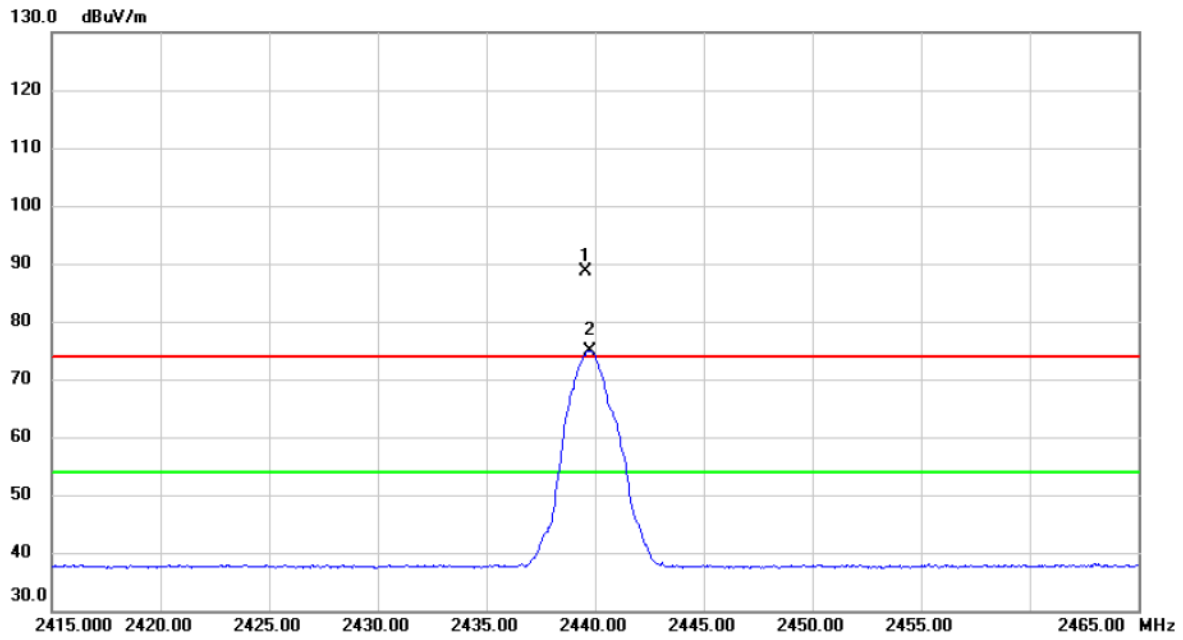


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		4803.855	39.11	4.40	43.51	74.00	-30.49	peak	
2	*	4805.177	27.90	4.40	32.30	54.00	-21.70	AVG	

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2440 MHz _CH19_2Mbps	Polarization	Vertical
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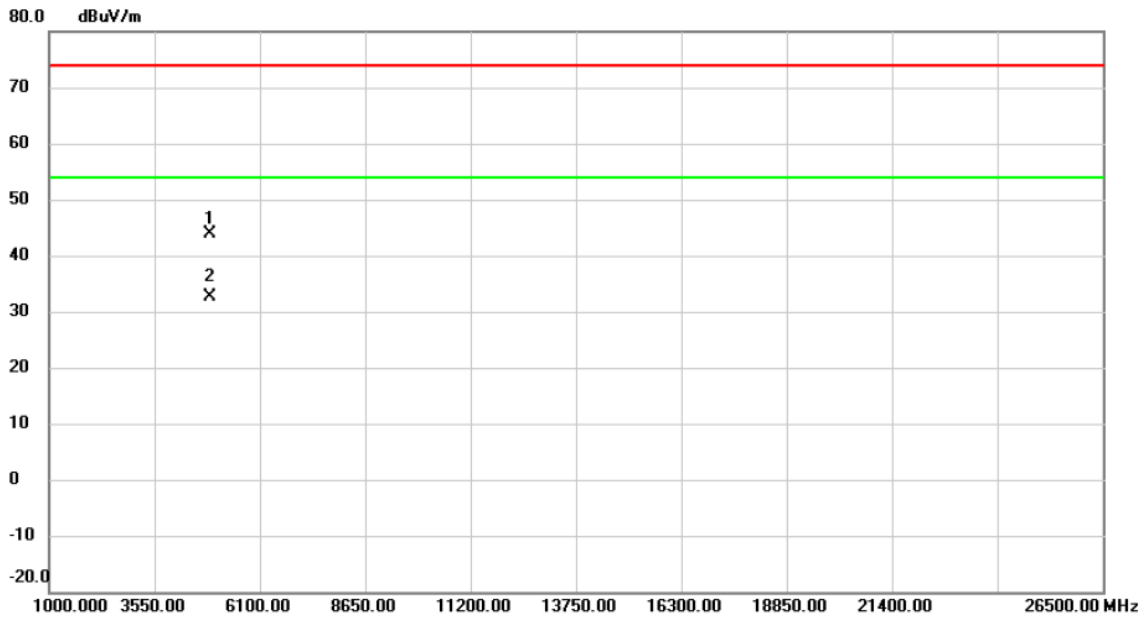


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2439.550	81.32	7.25	88.57	74.00	14.57	peak	No Limit
2	*	2439.750	67.65	7.25	74.90	54.00	20.90	AVG	No Limit

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2440 MHz _CH19_2Mbps	Polarization	Vertical
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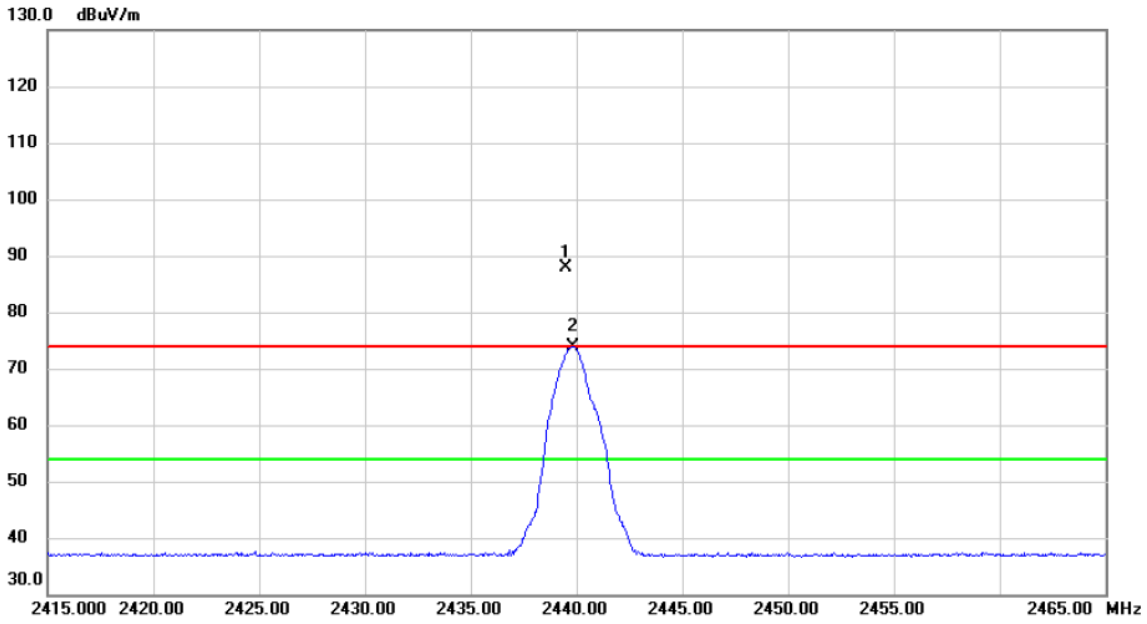


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		4879.075	39.23	4.60	43.83	74.00	-30.17	peak	
2	*	4880.063	28.02	4.61	32.63	54.00	-21.37	AVG	

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2440 MHz _CH19_2Mbps	Polarization	Horizontal
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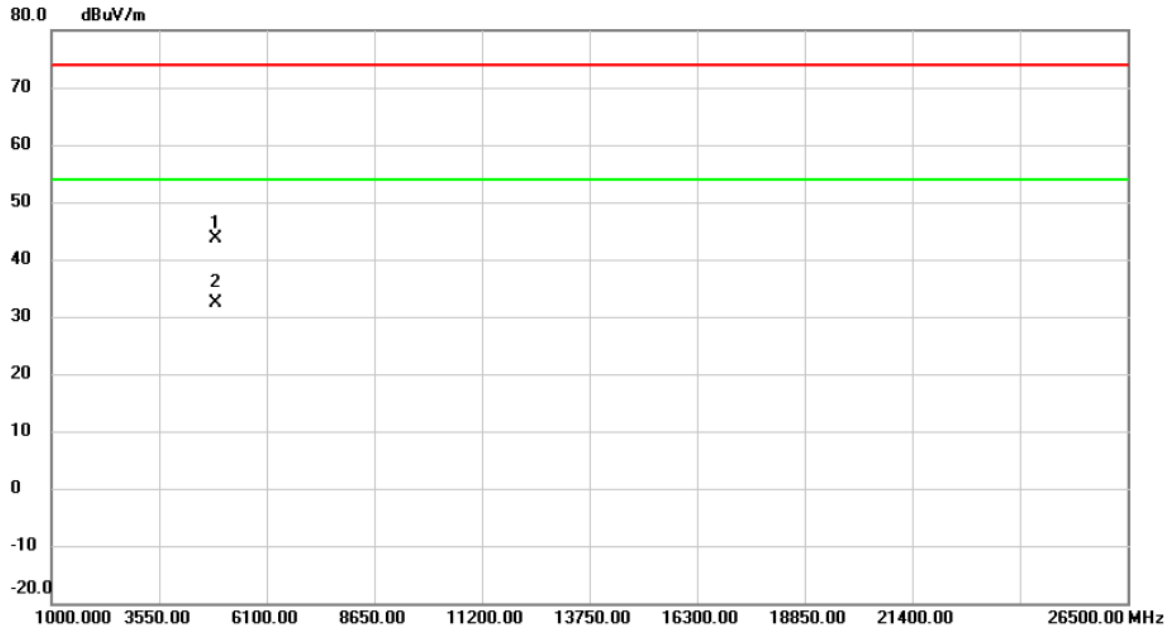


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	X	2439.500	80.73	7.25	87.98	74.00	13.98	peak	No Limit
2	*	2439.800	66.65	7.25	73.90	54.00	19.90	AVG	No Limit

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2440 MHz _CH19_2Mbps	Polarization	Horizontal
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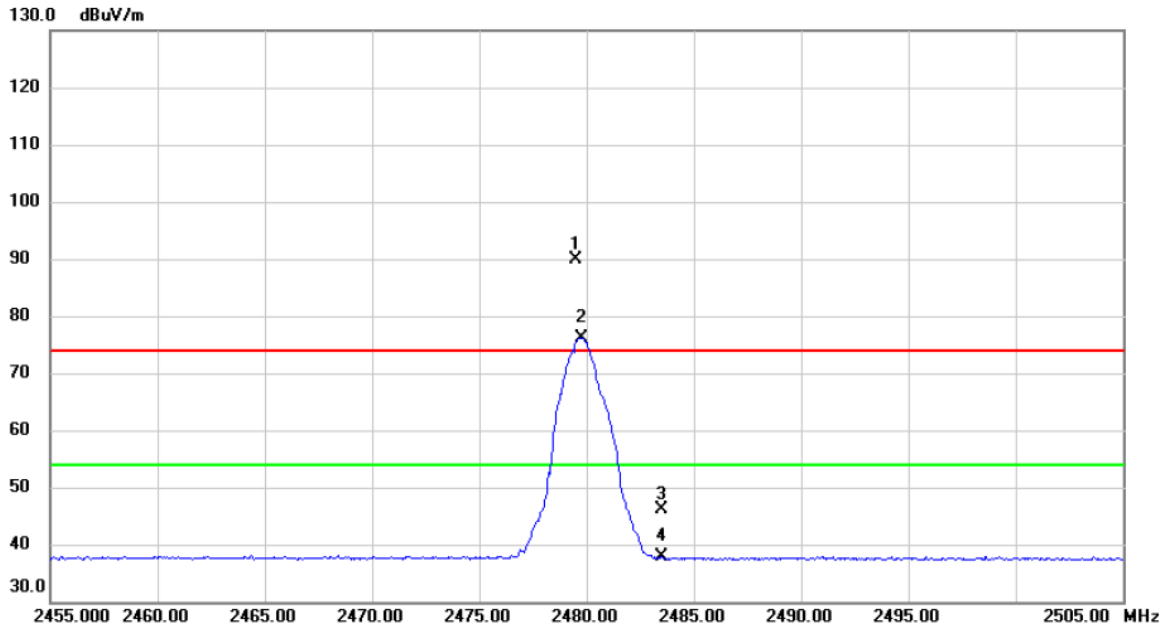


No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4880.547	39.07	4.61	43.68	74.00	-30.32	peak	
2 *	4882.033	27.84	4.61	32.45	54.00	-21.55	AVG	

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2480 MHz _CH39_2Mbps	Polarization	Vertical
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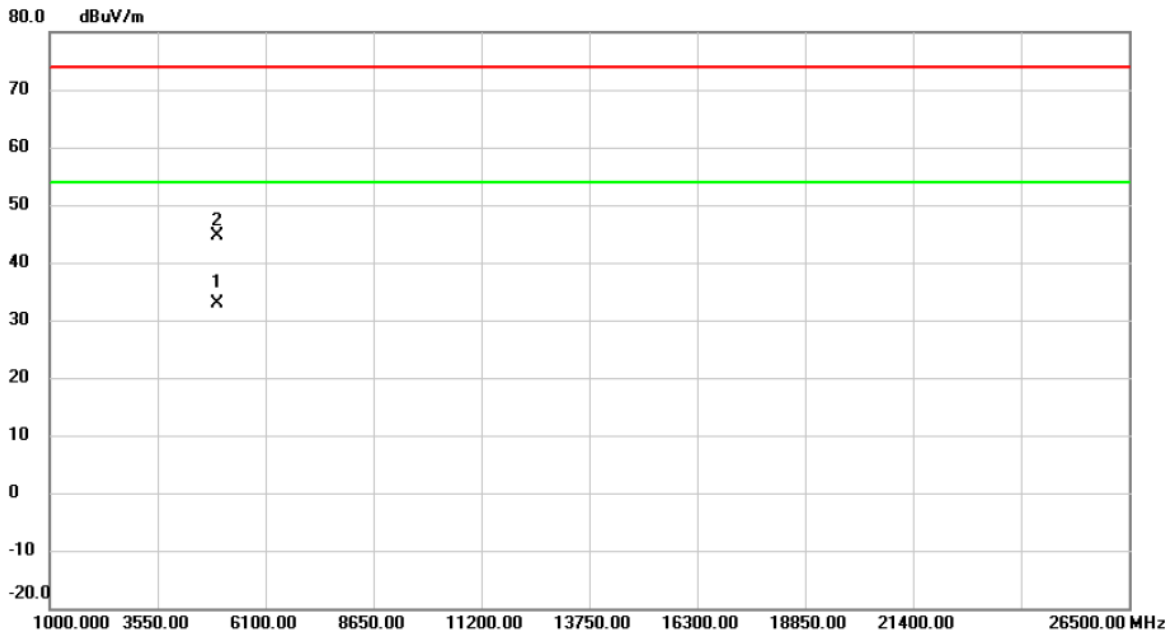


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2479.500	82.58	7.25	89.83	74.00	15.83	peak	No Limit
2	*	2479.750	68.89	7.25	76.14	54.00	22.14	AVG	No Limit
3		2483.500	38.92	7.25	46.17	74.00	-27.83	peak	
4		2483.500	30.52	7.25	37.77	54.00	-16.23	AVG	

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2480 MHz _CH39_2Mbps	Polarization	Vertical
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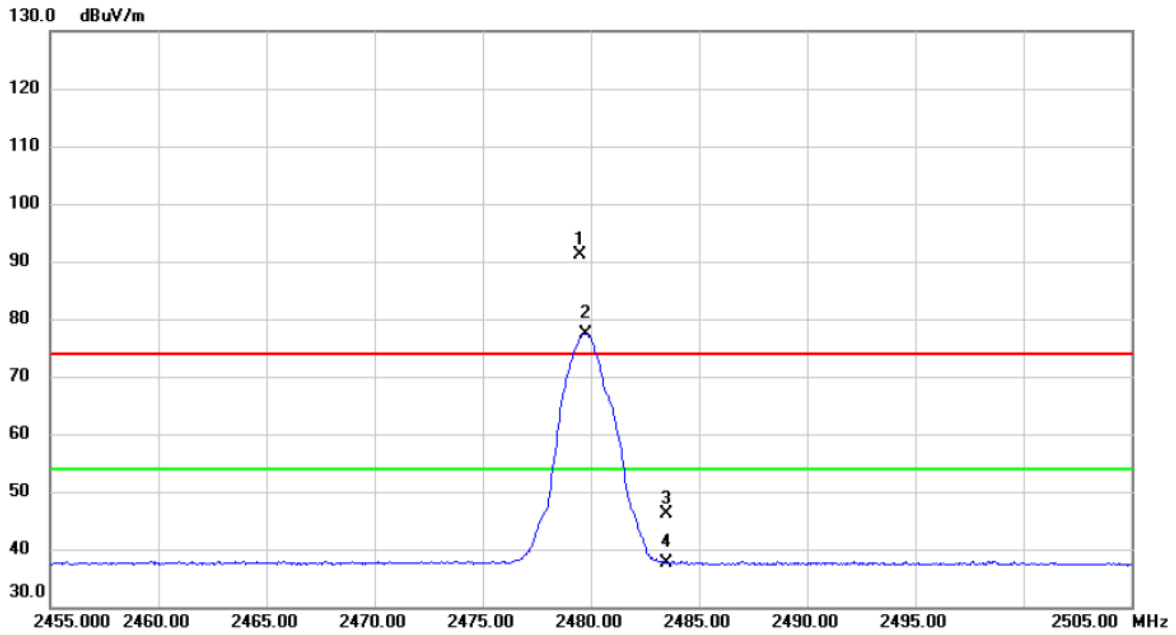
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	4958.547	28.15	4.81	32.96	54.00	-21.04	AVG	
2		4961.328	39.79	4.81	44.60	74.00	-29.40	peak	

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.



Test Mode	TX 2480 MHz _CH39_2Mbps	Polarization	Horizontal
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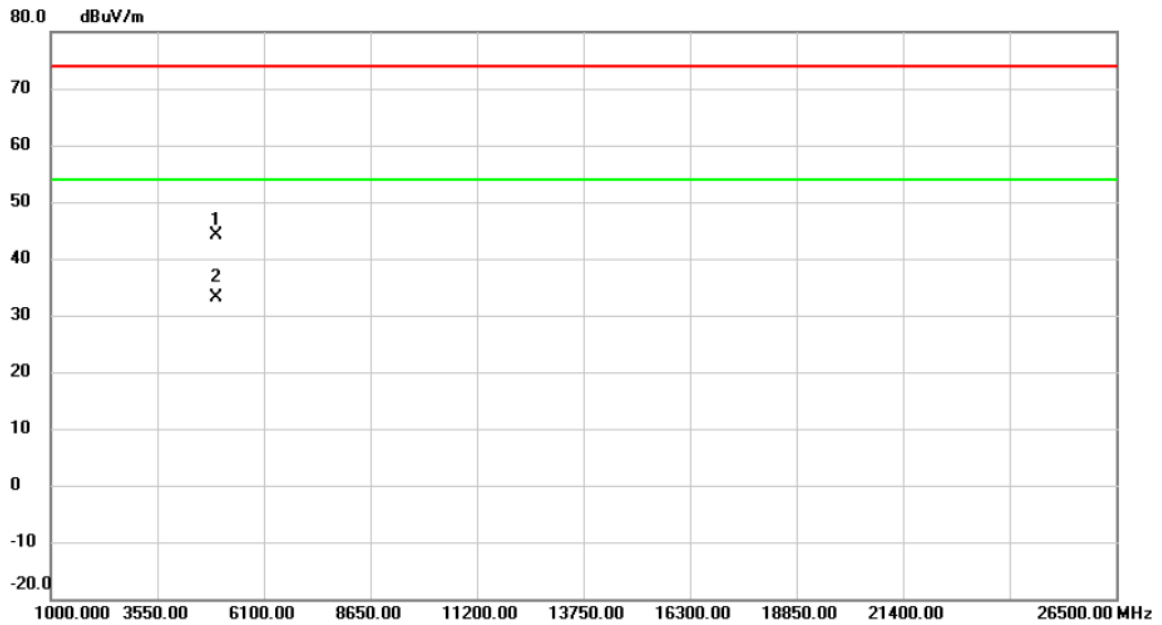


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	X	2479.500	83.92	7.25	91.17	74.00	17.17	peak	No Limit
2	*	2479.750	70.19	7.25	77.44	54.00	23.44	AVG	No Limit
3		2483.500	38.88	7.25	46.13	74.00	-27.87	peak	
4		2483.500	30.37	7.25	37.62	54.00	-16.38	AVG	

**REMARKS:**

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX 2480 MHz _CH39_2Mbps	Polarization	Horizontal
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No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		4959.375	39.40	4.81	44.21	74.00	-29.79	peak	
2	*	4960.890	28.30	4.81	33.11	54.00	-20.89	AVG	

**REMARKS:**

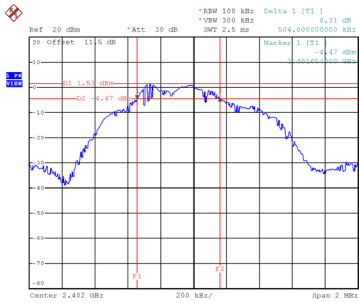
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

**APPENDIX E - BANDWIDTH**

Test Mode	TX Mode_1Mbps
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Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Test Result
00	2402	0.50	1.03	0.5	Pass
19	2440	0.50	1.03	0.5	Pass
39	2480	0.50	1.03	0.5	Pass

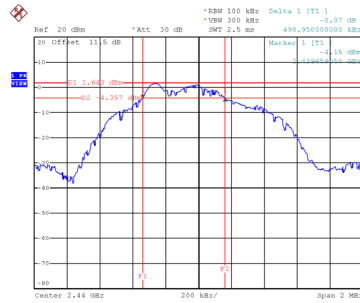
**CH00**



Date: 30.APR.2021 11:08:43

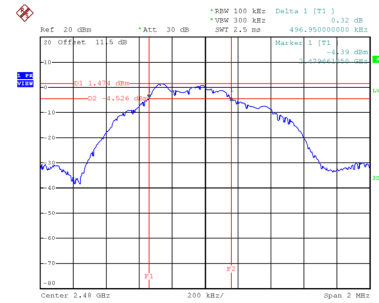
**CH19**

**6 dB Bandwidth**



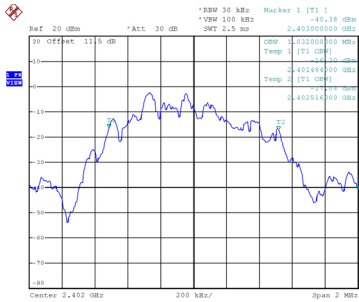
Date: 30.APR.2021 11:10:11

**CH39**

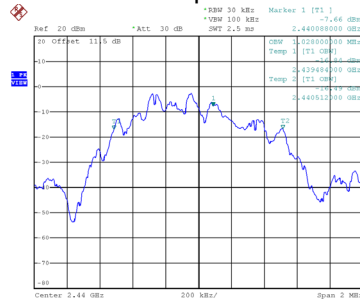


Date: 30.APR.2021 11:11:51

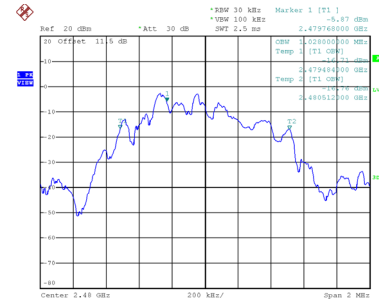
**99 % Occupied Bandwidth**



Date: 30.APR.2021 11:08:17



Date: 30.APR.2021 11:10:17

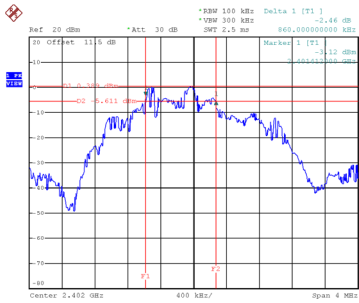


Date: 30.APR.2021 11:11:57

Test Mode TX Mode \_2Mbps

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Test Result
00	2402	0.86	2.06	0.5	Pass
19	2440	0.88	2.06	0.5	Pass
39	2480	0.89	2.06	0.5	Pass

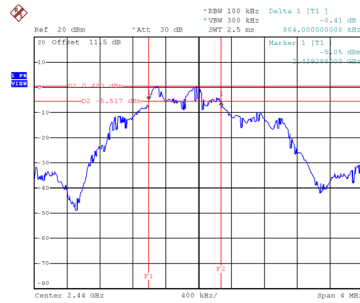
**CH00**



Date: 30.APR.2021 11:13:23

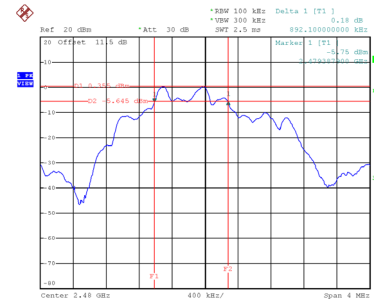
**CH19**

**6 dB Bandwidth**



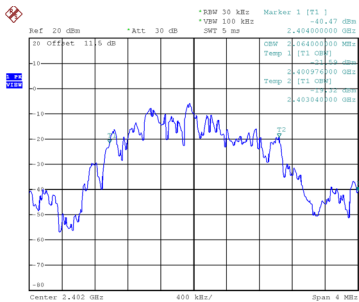
Date: 30.APR.2021 11:14:56

**CH39**

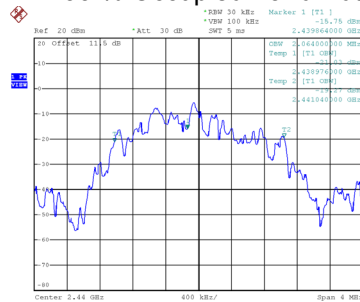


Date: 30.APR.2021 11:19:36

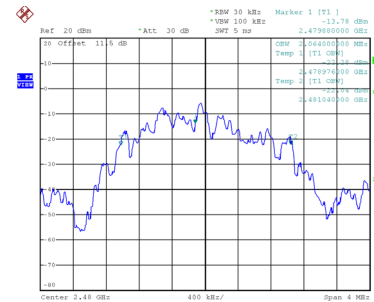
**99 % Occupied Bandwidth**



Date: 30.APR.2021 11:12:56



Date: 30.APR.2021 11:15:02

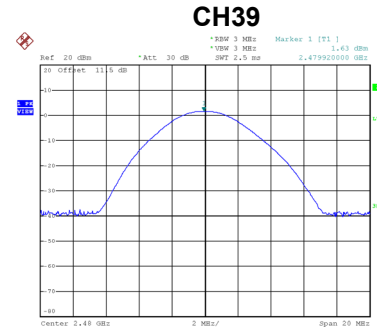
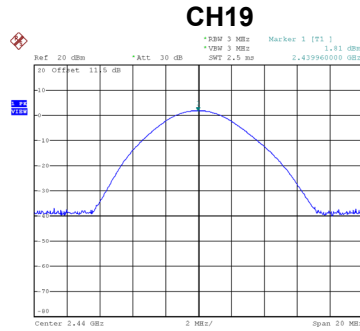
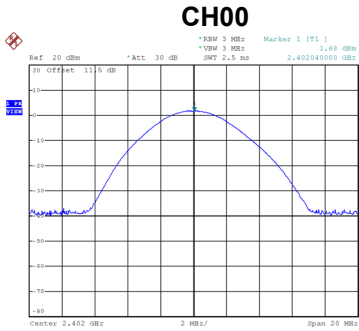


Date: 30.APR.2021 11:16:37

## APPENDIX F - MAXIMUM OUTPUT POWER

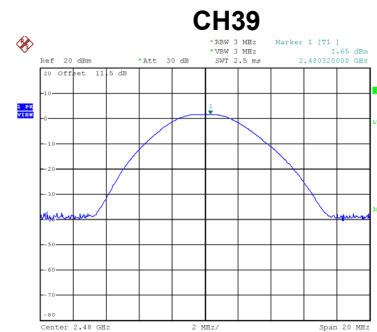
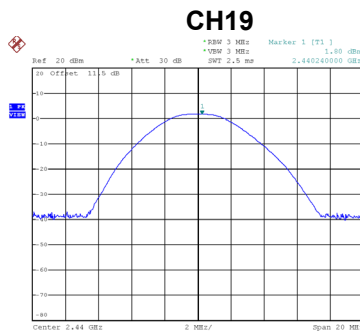
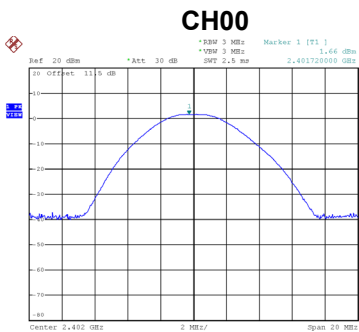
Test Mode	TX Mode _1Mbps
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Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Test Result
2402	1.68	0.0015	30.00	1.0000	Pass
2440	1.81	0.0015	30.00	1.0000	Pass
2480	1.63	0.0015	30.00	1.0000	Pass



Test Mode	TX Mode _2Mbps
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Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Test Result
2402	1.66	0.0015	30.00	1.0000	Pass
2440	1.80	0.0015	30.00	1.0000	Pass
2480	1.65	0.0015	30.00	1.0000	Pass

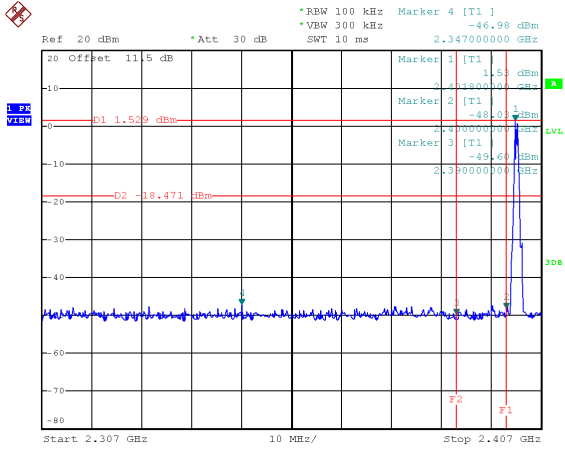


## **APPENDIX G - CONDUCTED SPURIOUS EMISSION**

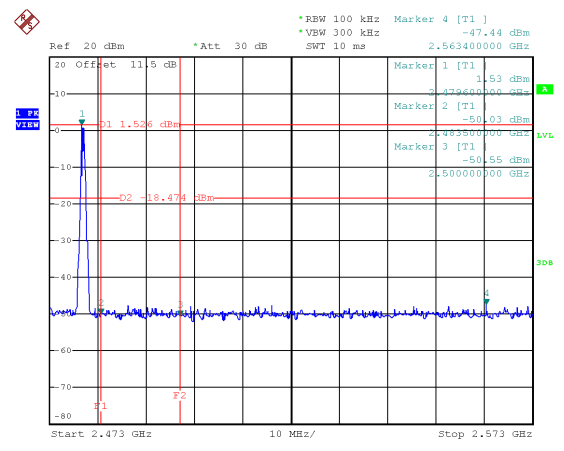


Test Mode TX Mode\_1Mbps

### Bandedge CH00 (Lower)



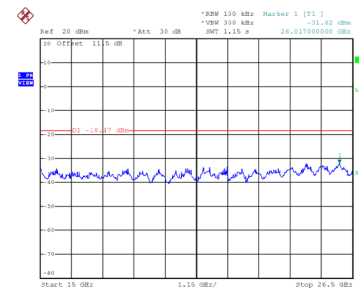
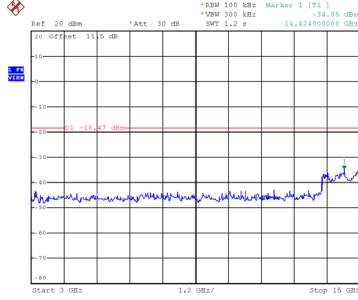
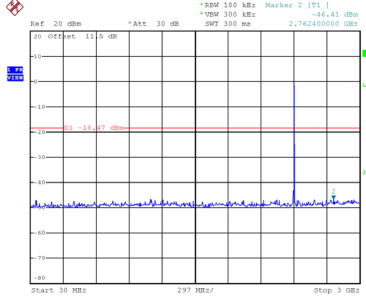
### Bandedge CH39 (Upper)



Date: 30.APR.2021 11:08:50

Date: 30.APR.2021 11:12:04

### CH00 – 10th Harmonic of the fundamental frequency

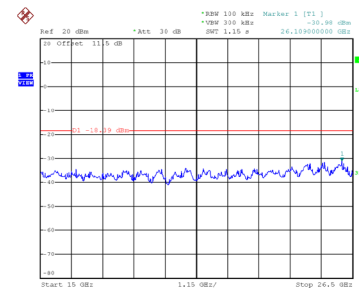
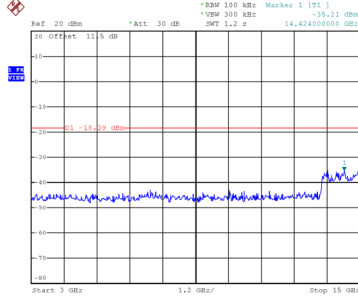
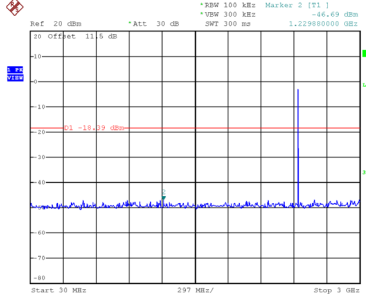


Date: 30.APR.2021 11:09:13

Date: 30.APR.2021 11:09:20

Date: 30.APR.2021 11:09:26

### CH19 – 10th Harmonic of the fundamental frequency

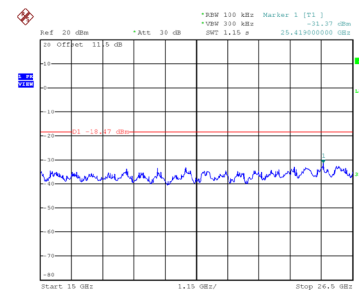
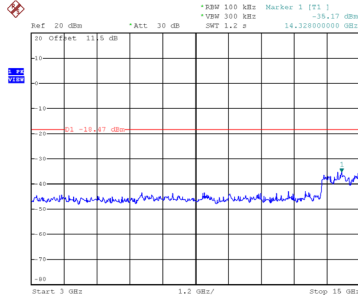
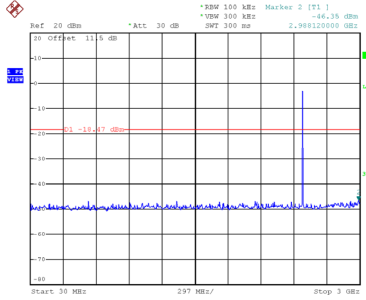


Date: 30.APR.2021 11:10:36

Date: 30.APR.2021 11:10:43

Date: 30.APR.2021 11:10:50

### CH39 – 10th Harmonic of the fundamental frequency



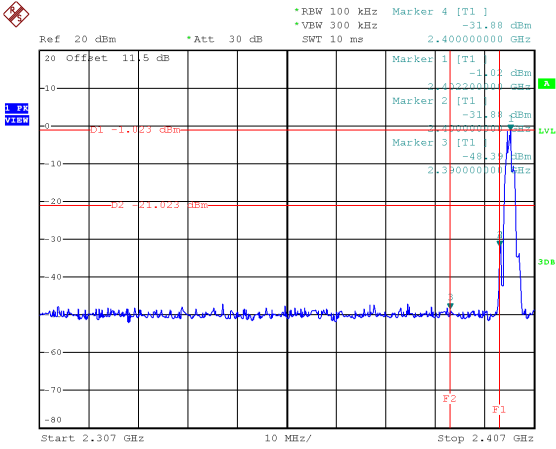
Date: 30.APR.2021 11:12:16

Date: 30.APR.2021 11:12:23

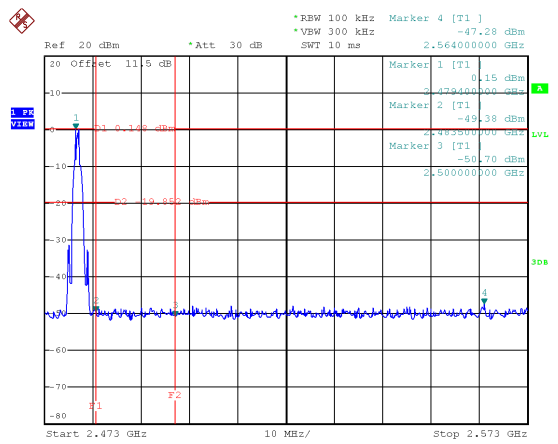
Date: 30.APR.2021 11:12:30

Test Mode TX Mode\_2Mbps

### Bandedge CH00 (Lower)



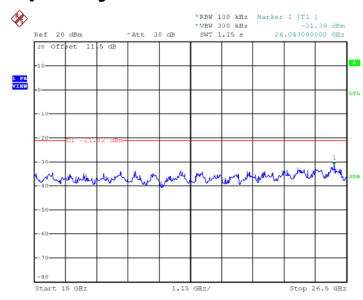
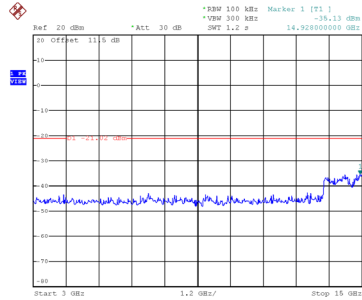
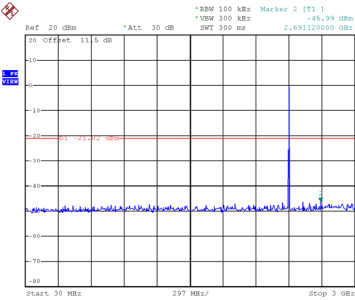
### Bandedge CH39 (Upper)



Date: 30.APR.2021 11:13:30

Date: 30.APR.2021 11:16:44

### CH00 – 10th Harmonic of the fundamental frequency

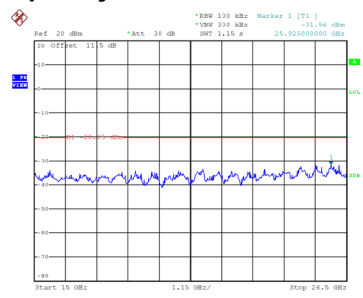
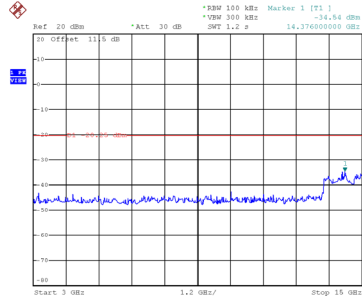
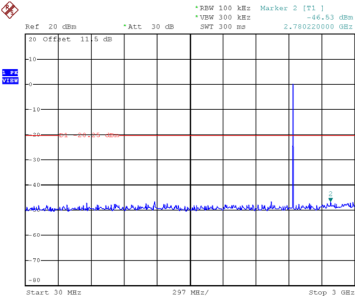


Date: 30.APR.2021 11:13:43

Date: 30.APR.2021 11:13:50

Date: 30.APR.2021 11:13:56

### CH19 – 10th Harmonic of the fundamental frequency

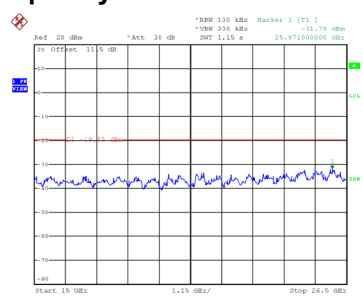
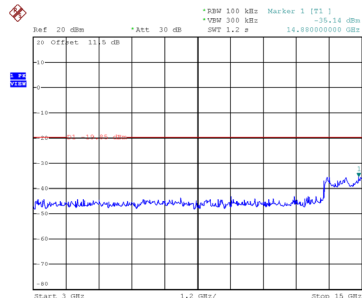
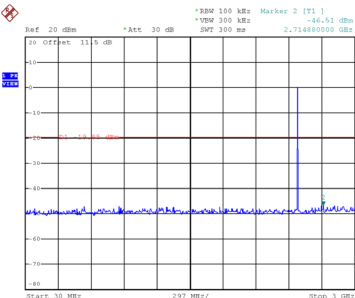


Date: 30.APR.2021 11:15:21

Date: 30.APR.2021 11:15:28

Date: 30.APR.2021 11:15:35

### CH39 – 10th Harmonic of the fundamental frequency



Date: 30.APR.2021 11:16:56

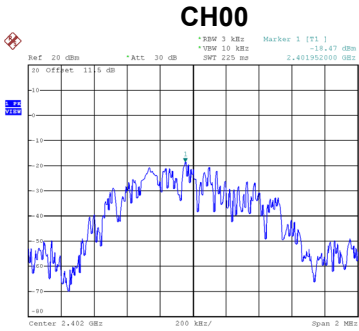
Date: 30.APR.2021 11:17:03

Date: 30.APR.2021 11:17:09

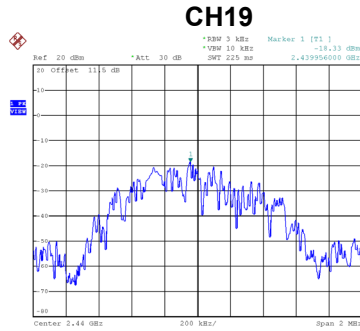
## APPENDIX H - POWER SPECTRAL DENSITY

Test Mode	TX Mode _1Mbps
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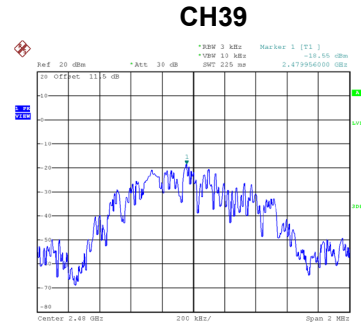
Channel	Frequency (MHz)	Power Spectral Density (dBm/3 kHz)	Max. Limit (dBm/3 kHz)	Test Result
00	2402	-18.47	8.00	Pass
19	2440	-18.33	8.00	Pass
39	2480	-18.55	8.00	Pass



Date: 30.APR.2021 11:09:32



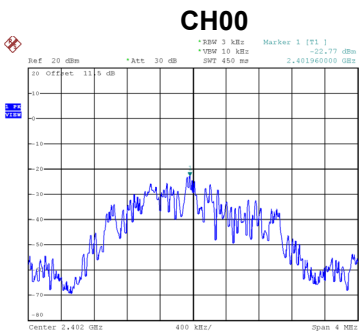
Date: 30.APR.2021 11:10:55



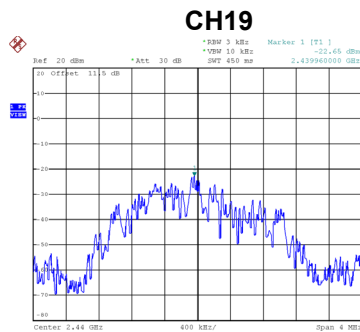
Date: 30.APR.2021 11:12:03

Test Mode	TX Mode _2Mbps
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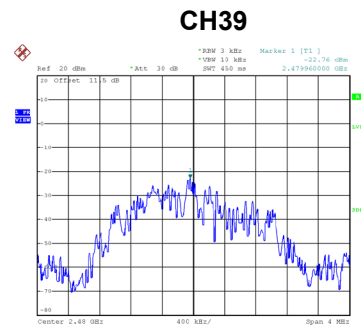
Channel	Frequency (MHz)	Power Spectral Density (dBm/3 kHz)	Max. Limit (dBm/3 kHz)	Test Result
00	2402	-22.77	8.00	Pass
19	2440	-22.65	8.00	Pass
39	2480	-22.76	8.00	Pass



Date: 30.APR.2021 11:14:02



Date: 30.APR.2021 11:15:40



Date: 30.APR.2021 11:17:10

End of Test Report