

Product Name: Wi-Fi&Bluetooth Module	Report No: FCC022022-06260RF1
Product Model: FC64E	Security Classification: Open
Version: V1.0	Total Page: 137

TIRT Testing Report



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FCC Radio Test Report

FCC ID: XMR202208FC64E

This report concerns: Original Grant

Project No. : 2022-06260
Equipment : Wi-Fi&Bluetooth Module
Brand Name : Quectel
Test Model : FC64E
Series Model : N/A
Applicant : Quectel Wireless Solutions Co., Ltd
Address : Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233
Manufacturer : Quectel Wireless Solutions Co., Ltd
Address : Building 5, Shanghai Business Park Phase III (Area B), No.1016 Tianlin Road, Minhang District, Shanghai, China 200233
Date of Receipt : Sep. 14, 2022
Date of Test : Sep. 14, 2022~Nov. 14, 2022
Issued Date : Dec. 07, 2022
Report Version : V1.0
Test Sample : Engineering Sample No.: 20221207021267
Standard(s) : FCC CFR Title 47, Part 15, Subpart C
FCC KDB 558074 D01 15.247 Meas Guidance v05r02
FCC KDB 662911 D01 Multiple Transmitter Output v02r01
ANSI C63.10-2013

- The test result referred exclusively to the presented test model /sample.
- Without written approval of TIRT Inc. the test report shall not reproduced except in full.

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REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
FCC022022-06260RF1	V1.0	Original Report.	2022.12.07	Valid

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 Emissions	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 in this test report.
- (2) The device what use a permanently attached antenna were considered sufficient to comply with the provisions of 15.203.

1.1 TEST FACILITY

Company:	Beijing TIRT Technology Service Co.,Ltd Shenzhen
Address:	101, 3 # Factory Building, Gongjin Electronics Shatin Community, Kengzi Street, Pingshan District, Shenzhen, China
CNAS Registration Number:	CNAS L14158
A2LA Registration Number:	6049.01
FCC Accredited Lab. Designation Number:	CN1309
FCC Test Firm Registration Number:	825524
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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 TIRT measurement uncertainty as below table:

Uncertainty	
Parameter	Uncertainty
Occupied Channel Bandwidth	±142.12 KHz
RF power conducted	±0.74 dB
RF power radiated	±3.25dB
Spurious emissions, conducted	±1.78dB
Spurious emissions, radiated (30MHz~1GHz)	±4.6dB
Spurious emissions, radiated (1GHz~18GHz)	±4.9dB
Conduction Emissions(150kHz~30MHz)	±3.1 dB
Humidity	±4.6%
Temprature	±0.7°C
Time	±1.2%

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	22°C	41%	AC 120V/60Hz	Stone Tang
Radiated Emissions-9kHz to 30 MHz	23°C	48%	AC 120V/60Hz	Stone Tang
Radiated Emissions-30MHz to 1000MHz	24°C	58%	AC 120V/60Hz	Stone Tang
Radiated Emissions-Above 1000MHz	24°C	58%	AC 120V/60Hz	Stone Tang
Bandwidth	25°C	65%	AC 120V/60Hz	Stone Tang
Maximum Output Power	23°C	60%	AC 120V/60Hz	Stone Tang
Conducted Spurious Emissions	24.5°C	58%	AC 120V/60Hz	Stone Tang
Power Spectral Density	26°C	52%	AC 120V/60Hz	Stone Tang

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Wi-Fi&Bluetooth Module
Brand Name	Quectel
Test Model	FC64E
Series Model	N/A
Model Difference(s)	N/A
Software Version	N/A
Hardware Version	R1.0
Power Source	DC voltage supplied from AC/DC adapter.
Power Rating	1.8V
Operation Frequency	2412 MHz ~ 2462 MHz
Modulation Type	IEEE 802.11b: DSSS IEEE 802.11g: OFDM IEEE 802.11n: OFDM IEEE 802.11ax: OFDMA
Bit Rate of Transmitter	IEEE 802.11b: 11/5.5/2/1 Mbps IEEE 802.11g: 54/48/36/24/18/12/9/6 Mbps IEEE 802.11n: up to 300 Mbps IEEE 802.11ax: up to 573.6 Mbps
Maximum Output Power	IEEE 802.11ax20: 26.88 dBm (0.4875 W)

Note:

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

2. Channel List:

CH01 - CH11 for IEEE 802.11b, IEEE 802.11g, IEEE 802.11n(HT20), IEEE 802.11ax(HE20)							
CH03 - CH09 for IEEE 802.11n(HT40), IEEE 802.11ax(HE40)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

3. Antenna Specification:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	Dipole	N/A	0.73
2	N/A	N/A	Dipole	N/A	0.73

Note:

1. The antenna gain is provided by the manufacturer.
2. The antenna is for testing purposes only.
3. This EUT supports CDD, and all antenna gains are not equal, Directional gain = G_{ANT} +Array Gain.
For power measurements, Array Gain=0dB ($N_{ANT} \leq 4$), so the Directional gain=0.73dBi.
For power spectral density measurements, $N_{ANT}=2$, $N_{SS} = 1$.
So the Directional gain= G_{ANT} +Array Gain= $G_{ANT}+10\log(N_{ANT}/ N_{SS})$ dBi=0.73+10log(2/1)dBi=3.74dBi.

4. Table for Antenna Configuration:

Operating Mode / TX Mode	1TX	1TX	2TX
IEEE 802.11b	V (Ant. 1)	V(Ant. 2)	V(Ant. 1 + Ant. 2)
IEEE 802.11g	V (Ant. 1)	V(Ant. 2)	V(Ant. 1 + Ant. 2)
IEEE 802.11n(HT20)	V (Ant. 1)	V(Ant. 2)	V(Ant. 1 + Ant. 2)
IEEE 802.11n(HT40)	V (Ant. 1)	V(Ant. 2)	V(Ant. 1 + Ant. 2)
IEEE 802.11ax(HE20)	V (Ant. 1)	V(Ant. 2)	V(Ant. 1 + Ant. 2)
IEEE 802.11ax(HE40)	V (Ant. 1)	V(Ant. 2)	V(Ant. 1 + Ant. 2)

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 B Mode Channel 01/06/11
Mode 2	TX G Mode Channel 01/06/11
Mode 3	TX N(HT20) Mode Channel 01/06/11
Mode 4	TX N(HT40) Mode Channel 03/06/09
Mode 5	TX AX(HE20) Mode Channel 01/06/11
Mode 6	TX AX(HE40) Mode Channel 03/06/09
Mode 7	TX AX(HE20) Mode Channel 06

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

AC power line conducted emissions test	
Final Test Mode	Description
Mode 7	TX AX(HE20) Mode Channel 06

Radiated emissions test - Below 1GHz	
Final Test Mode	Description
Mode 7	TX AX(HE20) Mode Channel 06

Radiated emissions test- Above 1GHz	
Final Test Mode	Description
Mode 1	TX B Mode Channel 01/06/11
Mode 2	TX G Mode Channel 01/06/11
Mode 3	TX N(HT20) Mode Channel 01/06/11
Mode 4	TX N(HT40) Mode Channel 03/06/09
Mode 5	TX AX(HE20) Mode Channel 01/06/11
Mode 6	TX AX(HE40) Mode Channel 03/06/09

Conducted test	
Final Test Mode	Description
Mode 1	TX B Mode Channel 01/06/11

Mode 2	TX G Mode Channel 01/06/11
Mode 3	TX N(HT20) Mode Channel 01/06/11
Mode 4	TX N(HT40) Mode Channel 03/06/09
Mode 5	TX AX(HE20) Mode Channel 01/06/11
Mode 6	TX AX(HE40) Mode Channel 03/06/09

NOTE:

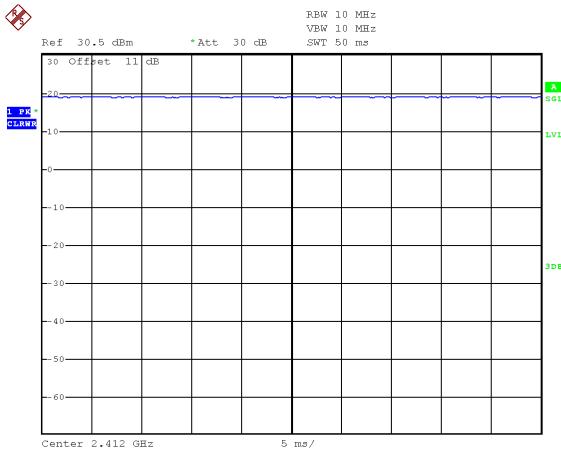
- (1) All the bit rate of transmitter have been tested and found the lowest rate is found to be the worst case and recorded.
- (2) For AC power line conducted emissions and radiated emission below 1 GHz test, the TX AX(HE20) Mode Channel 06 is found to be the worst case and recorded.
- (3) For radiated 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.

2.3 PARAMETERS OF TEST SOFTWARE

Test Software Version	QRCT		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	17.00	17.00	17.00
IEEE 802.11g	15.50	15.50	12.00
IEEE 802.11n(HT20)	14.50	15.50	12.00
IEEE 802.11ax(HE20)	11.00	15.50	11.00
Frequency (MHz)	2422	2437	2452
IEEE 802.11n(HT40)	12.50	15.50	11.00
IEEE 802.11ax(HE40)	10.50	16.00	10.00

2.4 DUTY CYCLE

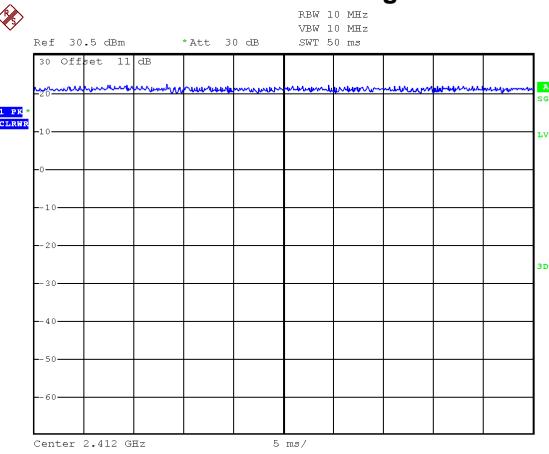
IEEE 802.11b



Date: 1.SEP.2022 19:22:48

Duty cycle = 0.000 ms / 0.000 ms = 100%
Duty Factor = $10 \log(1/\text{Duty cycle}) = 0.00$

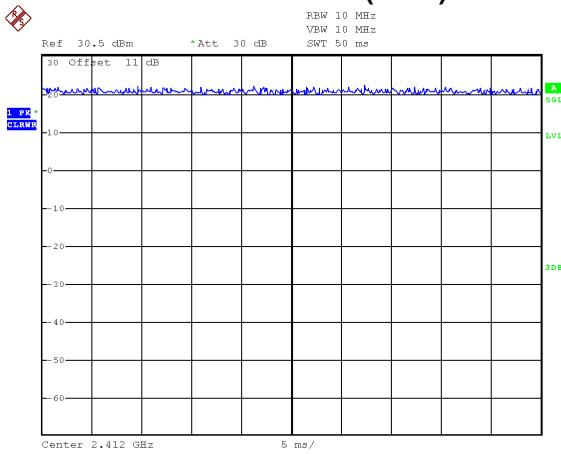
IEEE 802.11g



Date: 1.SEP.2022 19:25:08

Duty cycle = 0.000 ms / 0.000 ms = 100%
Duty Factor = $10 \log(1/\text{Duty cycle}) = 0.00$

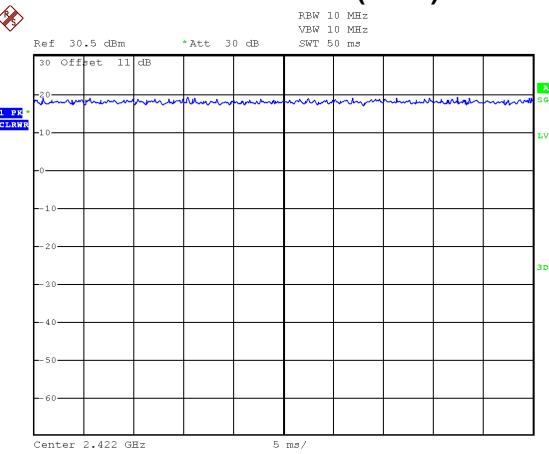
IEEE 802.11n(HT20)



Date: 1.SEP.2022 19:27:23

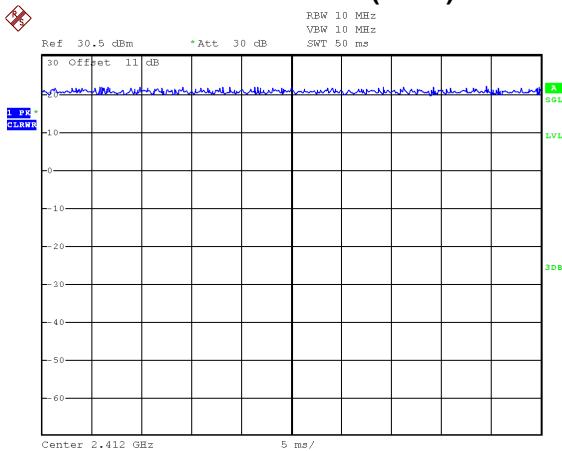
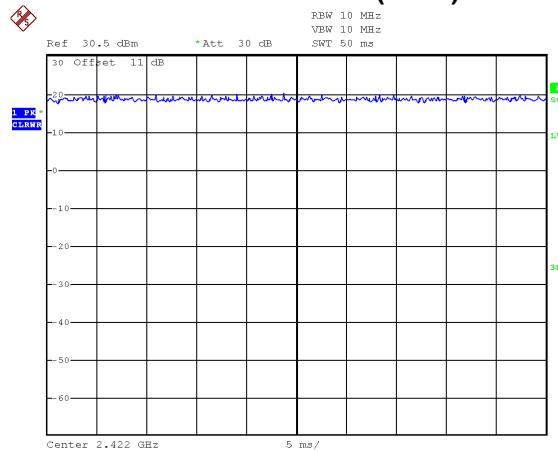
Duty cycle = 0.000 ms / 0.000 ms = 100%
Duty Factor = $10 \log(1/\text{Duty cycle}) = 0.00$

IEEE 802.11n(HT40)



Date: 1.SEP.2022 19:30:37

Duty cycle = 0.000 ms / 0.000 ms = 100%
Duty Factor = $10 \log(1/\text{Duty cycle}) = 0.00$

IEEE 802.11ax(HE20)**IEEE 802.11ax(HE40)**

Date: 1.SEP.2022 19:29:29

Duty cycle = 0.000 ms / 0.000 ms = 100%
Duty Factor = $10 \log(1/\text{Duty cycle}) = 0.00$

Date: 1.SEP.2022 19:31:22

Duty cycle = 0.000 ms / 0.000 ms = 100%
Duty Factor = $10 \log(1/\text{Duty cycle}) = 0.00$

NOTE:

For IEEE 802.11b:

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10Hz.

For IEEE 802.11g:

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10Hz.

For IEEE 802.11n(HT20):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10Hz.

For IEEE 802.11n(HT40):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10Hz.

For IEEE 802.11ax(HE20):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10Hz.

For IEEE 802.11ax(HE40):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10Hz.

2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED**2.6 SUPPORT UNITS**

3. AC POWER LINE CONDUCTED EMISSIONS

3.1 LIMIT

Frequency of Emission (MHz)	Limit (dB μ 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.

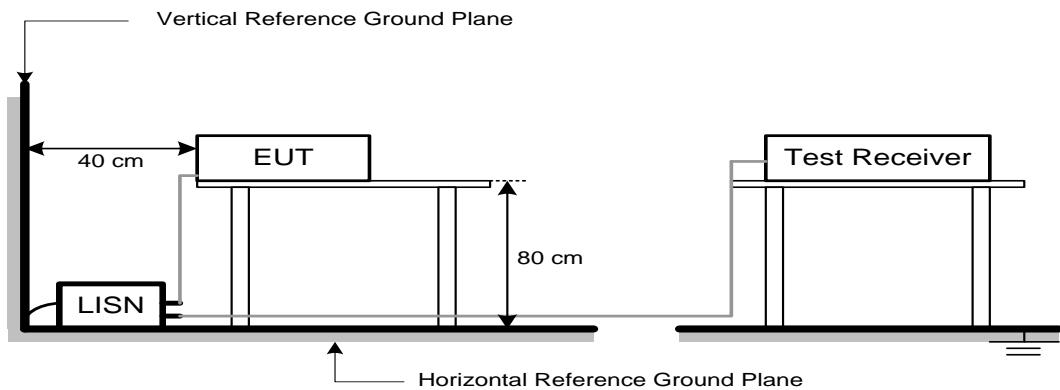
The following table is the setting of the receiver:

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 OPERATION CONDITIONS

EUT was programmed to be in continuously transmitting mode.

3.6 TEST RESULTS

Please refer to the APPENDIX A.

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)	(dB _{UV} /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 (dB_{UV}/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 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 1 GHz)
- 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

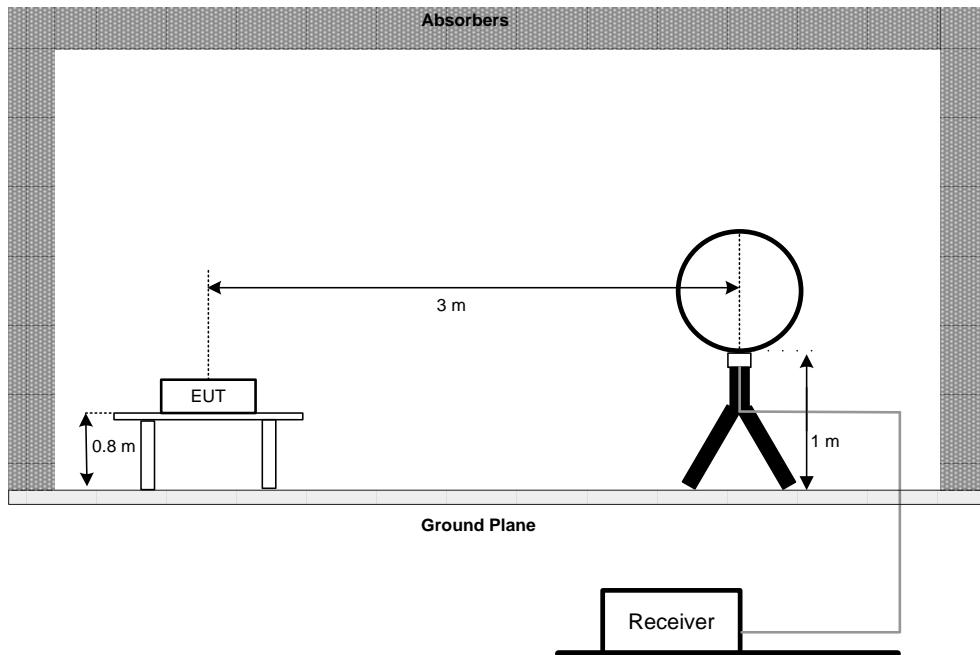
Receiver Parameters	Setting
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector
Start ~ Stop Frequency	30 MHz~1000 MHz for QP detector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

4.3 DEVIATION FROM TEST STANDARD

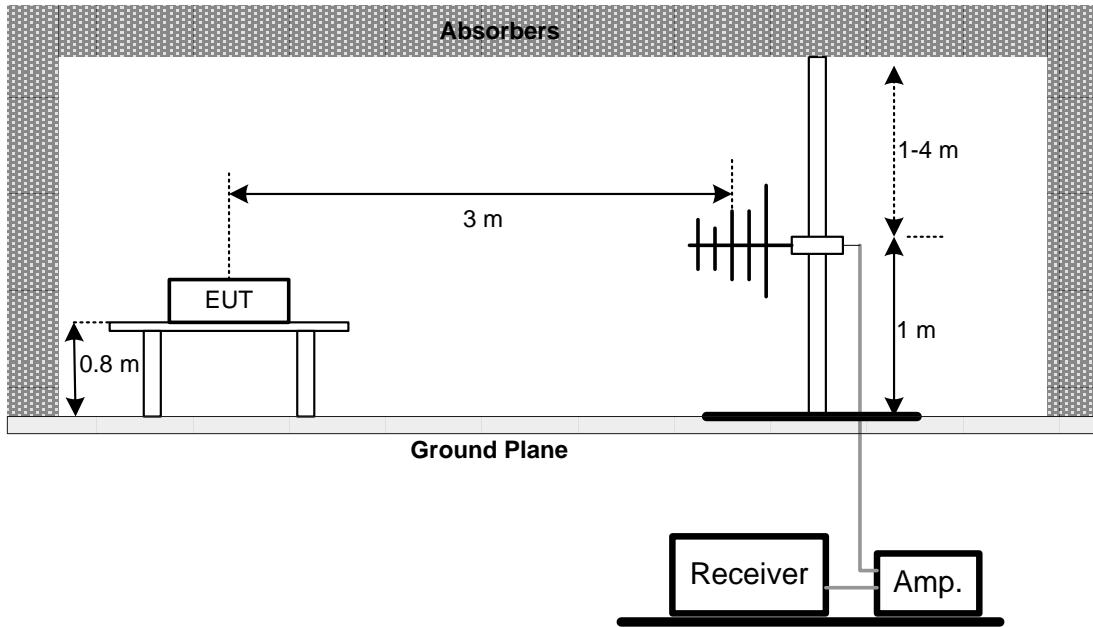
No deviation.

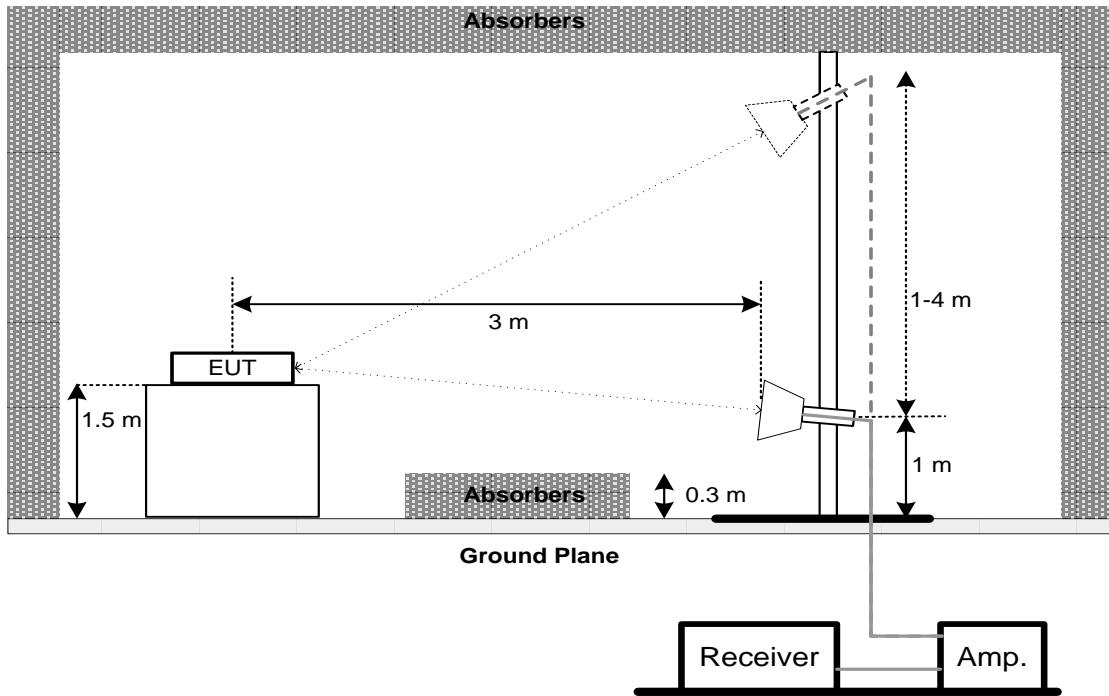
4.4 TEST SETUP

9 kHz to 30 MHz



30 MHz to 1 GHz



Above 1 GHz

4.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.6 TEST RESULTS - 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 RESULTS - 30 MHZ TO 1000 MHZ

Please refer to the APPENDIX C.

4.8 TEST RESULTS - 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	Minimum 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	300 kHz For 20MHz 1 MHz For 40MHz
VBW	1 MHz For 20MHz 3 MHz For 40MHz
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

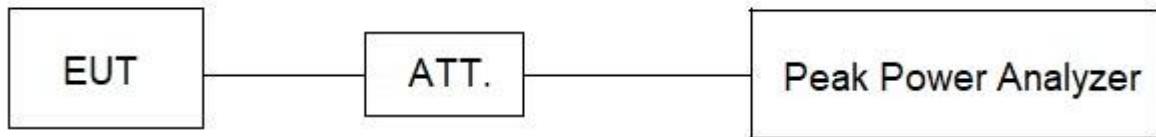
6.2 TEST PROCEDURE

- a. The EUT was directly connected to the peak power analyzer and antenna output port as show in the block diagram below.
- b. The maximum conducted output power was performed in accordance with method 11.9.1.3 (for peak power) of ANSI C63.10-2013 and FCC KDB 662911 D01 v02r01 Multiple Transmitter Output.

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 EMISSIONS

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	300 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

- 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:

Spectrum Parameters	Setting
Span Frequency	25 MHz (20 MHz) / 60 MHz (40 MHz)
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

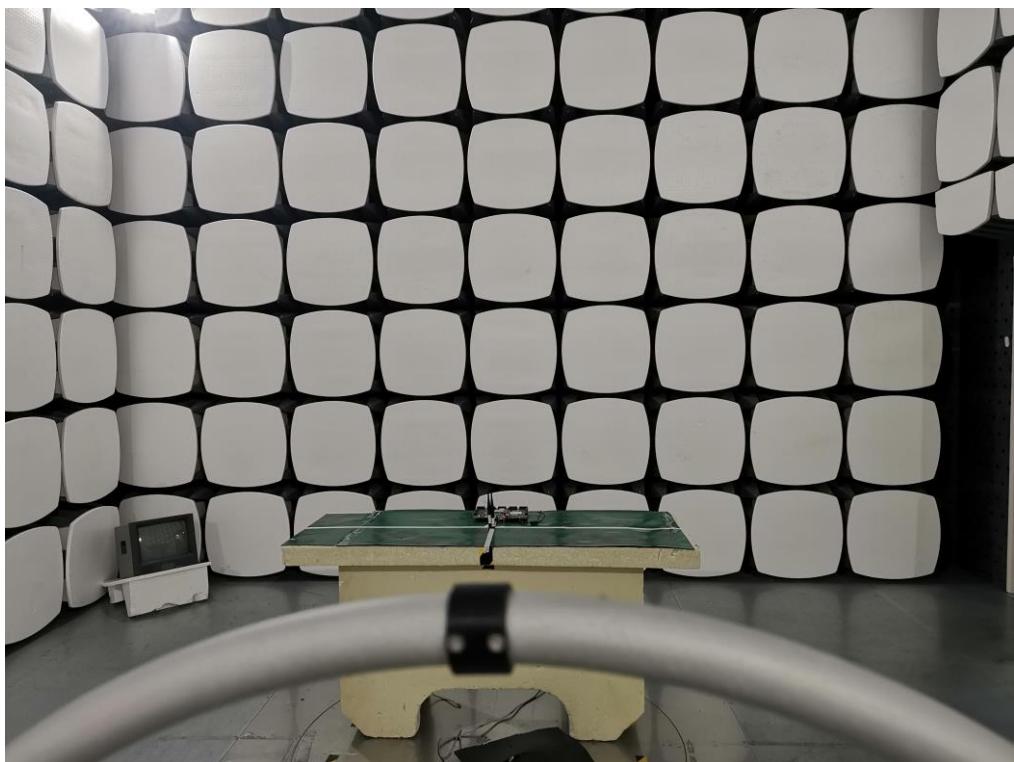
No.	Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EMI Receiver	Rohde&Schwarz	ESCI	1166.5950.03	2023/10/14
2	AMN	Rohde&Schwarz	ENV216	3560.6550.05	2023/10/14
3	AMN	Schwarzbeck	NSLK8127	#829	2023/10/14
4	ECSI RF IN RF Cable	Rohde&Schwarz	RP-X1	\	2023/10/14
5	ECSI RF IN RF Cable	Rohde&Schwarz	Sapre sm	\	2023/10/14
6	EMI Receiver	Rohde&Schwarz	ESR7	102013	2023/10/14
7	Spectrum analyzer	Rohde&Schwarz	FSV30	103741	2023/10/17
8	EMI receiver	Rohde&Schwarz	ESU	100184	2023/07/20
9	Spectrum analyzer	KEYSIGHT	N9010A-44	MY51440158	2023/10/17
10	Loop Antenna*	Schwarzbeck	FMZB1519B	00029	2025/07/03
11	Integral Antenna	Schwarzbeck	VULB 9163	VULB 9163-361	2023/10/20
12	Integral Antenna	Schwarzbeck	BBHA 9120D	BBHA 9120D 1201	2023/10/15
13	Integral Antenna	Schwarzbeck	BBHA 9170	9170#685	2023/10/15
14	Preamplifier	CD Systems Inc	PAP-03036-30	85060000	2023/10/15
15	Preamplifier	Schwarzbeck	BBV9721	9721-019	2023/10/15
16	Preamplifier	emci	EMC012645 SE	980417	2023/10/16
17	ECSI RF IN RF Cable	Rohde&Schwarz	AP-X1	\	2023/10/16
18	Spectrum Analyzer	Agilent	N9010A	MY52221119	2023/10/17
19	Power Collection Unit	Tonscend	JS0806-2	188060134	2023/10/16
20	Tonscend Test System	Tonscend	2.6.77.0518	N/A	N/A
21	10dB Attenuator	Tonscend	10dB	N/A	N/A
22	Temp&Humidity Recorder	Anymetre	JR900	N/A	2023/10/16
23	Temp&Humidity Chamber	ETOMA	NTH1100-30 A	16080628	2023/10/16
24	Filter	STI	STI15-9845	N/A	N/A
25	Filter	STI	5.1G	N/A	N/A
26	Filter	STI	STI15-9845	N/A	N/A
27	Testing Software	EZ-EMC	TW-03A2	N/A	N/A

Remark: "N/A" denotes no model name, serial no. or calibration specified.

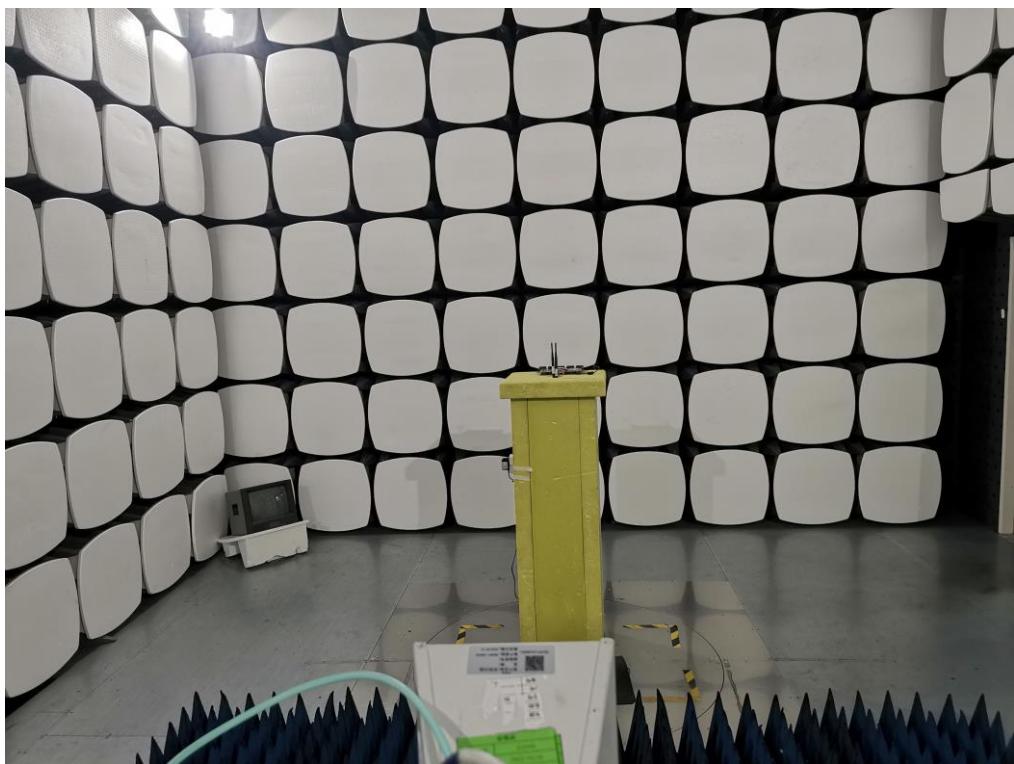
"**" calibration period of equipment list is three year.

Except * item, 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**

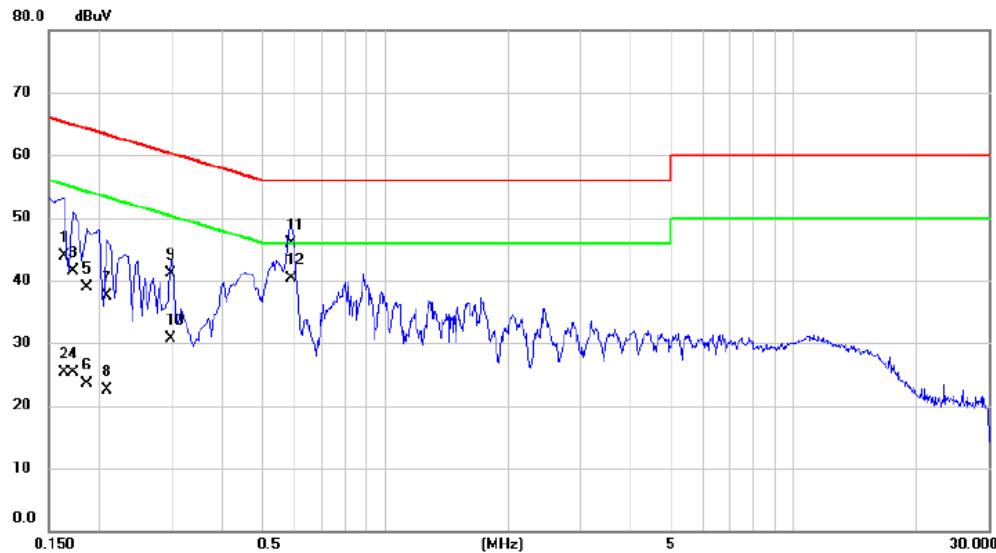
Radiated Emissions Test Photos**30 MHz to 1 GHz**

Radiated Emissions Test Photos**Above 1 GHz**

Conducted Test Photos

APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

Test Mode	TX AX(HE20) Mode Channel 06	Phase	Line
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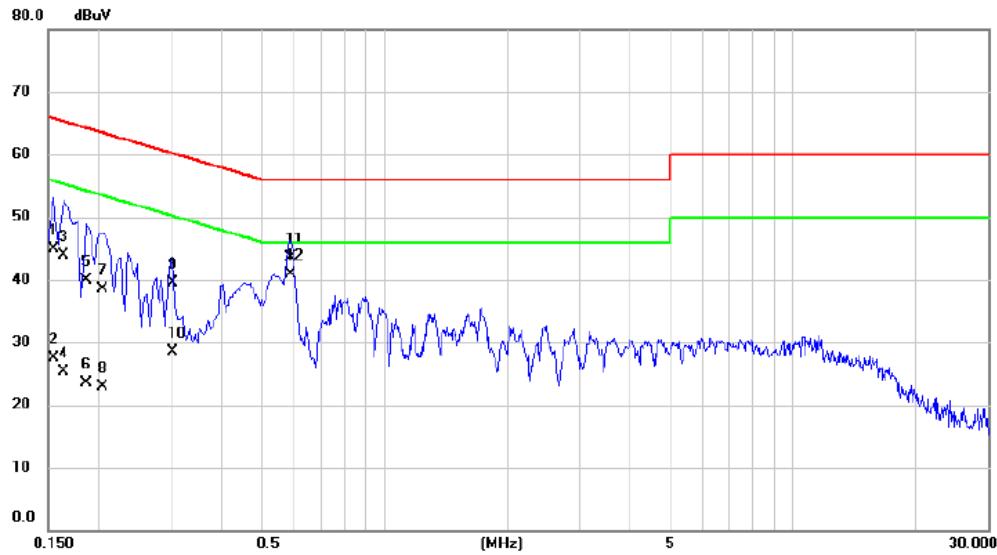


No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0.1635	34.20	9.78	43.98	65.28	-21.30	QP	
2	0.1635	15.50	9.78	25.28	55.28	-30.00	AVG	
3	0.1725	31.70	9.78	41.48	64.84	-23.36	QP	
4	0.1725	15.50	9.78	25.28	54.84	-29.56	AVG	
5	0.1860	29.20	9.78	38.98	64.21	-25.23	QP	
6	0.1860	13.80	9.78	23.58	54.21	-30.63	AVG	
7	0.2085	27.70	9.78	37.48	63.26	-25.78	QP	
8	0.2085	12.80	9.78	22.58	53.26	-30.68	AVG	
9	0.2985	31.40	9.79	41.19	60.28	-19.09	QP	
10	0.2985	20.90	9.79	30.69	50.28	-19.59	AVG	
11	0.5865	36.20	9.80	46.00	56.00	-10.00	QP	
12 *	0.5865	30.50	9.80	40.30	46.00	-5.70	AVG	

REMARKS:

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

Test Mode	TX AX(HE20) Mode Channel 06	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	35.20	9.78	44.98	65.75	-20.77	QP	
2	0.1545	17.80	9.78	27.58	55.75	-28.17	AVG	
3	0.1635	34.10	9.77	43.87	65.28	-21.41	QP	
4	0.1635	15.50	9.77	25.27	55.28	-30.01	AVG	
5	0.1860	30.10	9.78	39.88	64.21	-24.33	QP	
6	0.1860	13.70	9.78	23.48	54.21	-30.73	AVG	
7	0.2040	28.70	9.77	38.47	63.45	-24.98	QP	
8	0.2040	13.20	9.77	22.97	53.45	-30.48	AVG	
9	0.3030	29.80	9.78	39.58	60.16	-20.58	QP	
10	0.3030	18.80	9.78	28.58	50.16	-21.58	AVG	
11	0.5865	33.80	9.80	43.60	56.00	-12.40	QP	
12 *	0.5865	31.20	9.80	41.00	46.00	-5.00	AVG	

REMARKS:

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

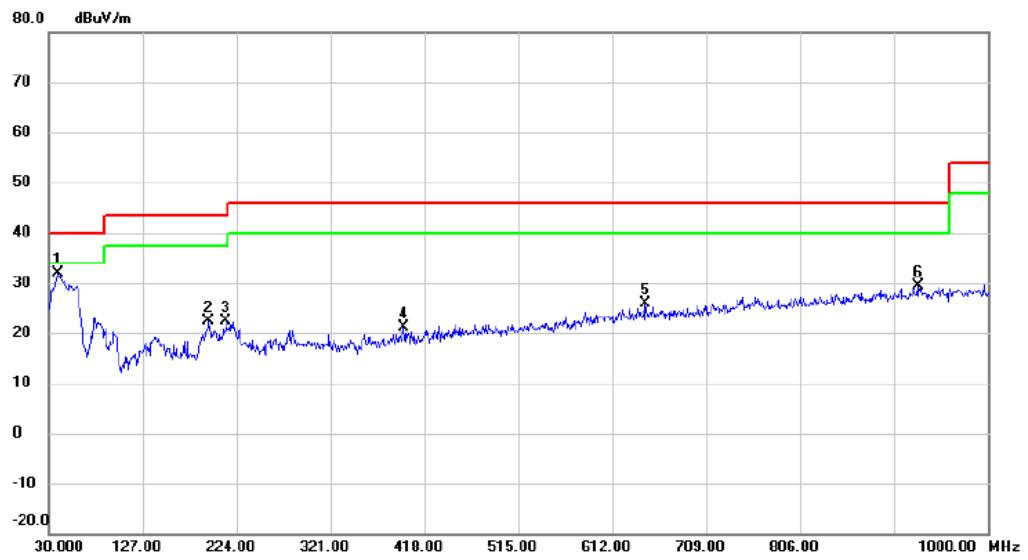
APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ

Test Mode	TX AX(HE20) Mode Channel 06	Polarization	Vertical
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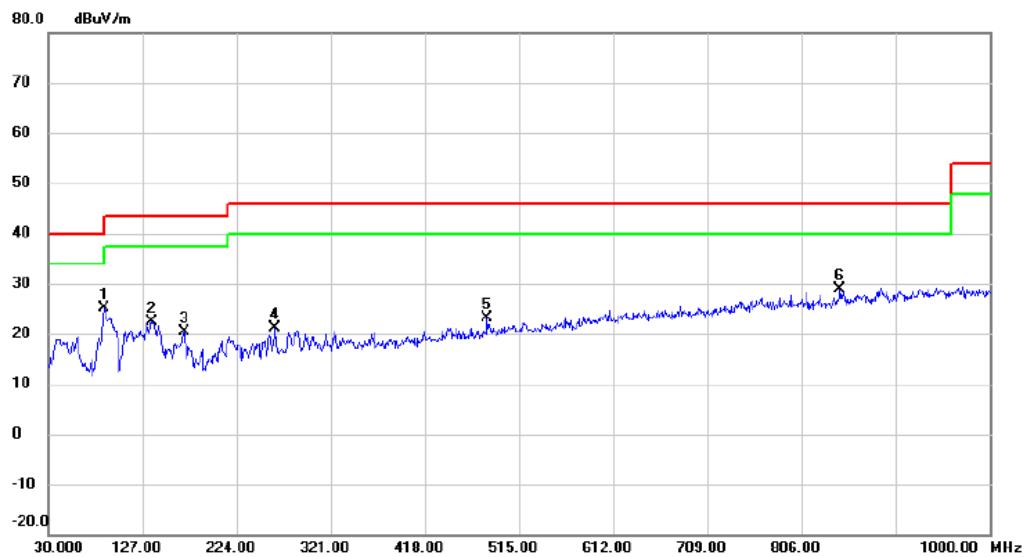


No. Mk.	Freq. MHz	Reading Level	Correct Factor	Measure- ment	Limit	Margin	Detector	Comment
		dBuV	dB	dBuV/m	dBuV/m	dB		
1 *	39.7000	49.67	-17.85	31.82	40.00	-8.18	QP	
2	195.3850	40.90	-18.45	22.45	43.50	-21.05	QP	
3	213.3300	41.02	-18.56	22.46	43.50	-21.04	QP	
4	397.1450	33.84	-12.73	21.11	46.00	-24.89	QP	
5	646.9200	33.44	-7.68	25.76	46.00	-20.24	QP	
6	927.7350	33.68	-4.42	29.26	46.00	-16.74	QP	

REMARKS:

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

Test Mode	TX AX(HE20) Mode Channel 06	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
		dBuV	dB	dBuV/m	dB			
1 *	87.2300	46.60	-21.59	25.01	40.00	-14.99	QP	
2	136.2150	39.20	-16.72	22.48	43.50	-21.02	QP	
3	169.6800	36.87	-16.24	20.43	43.50	-23.07	QP	
4	263.7700	37.28	-16.18	21.10	46.00	-24.90	QP	
5	482.5050	34.04	-10.97	23.07	46.00	-22.93	QP	
6	845.7700	34.14	-5.35	28.79	46.00	-17.21	QP	

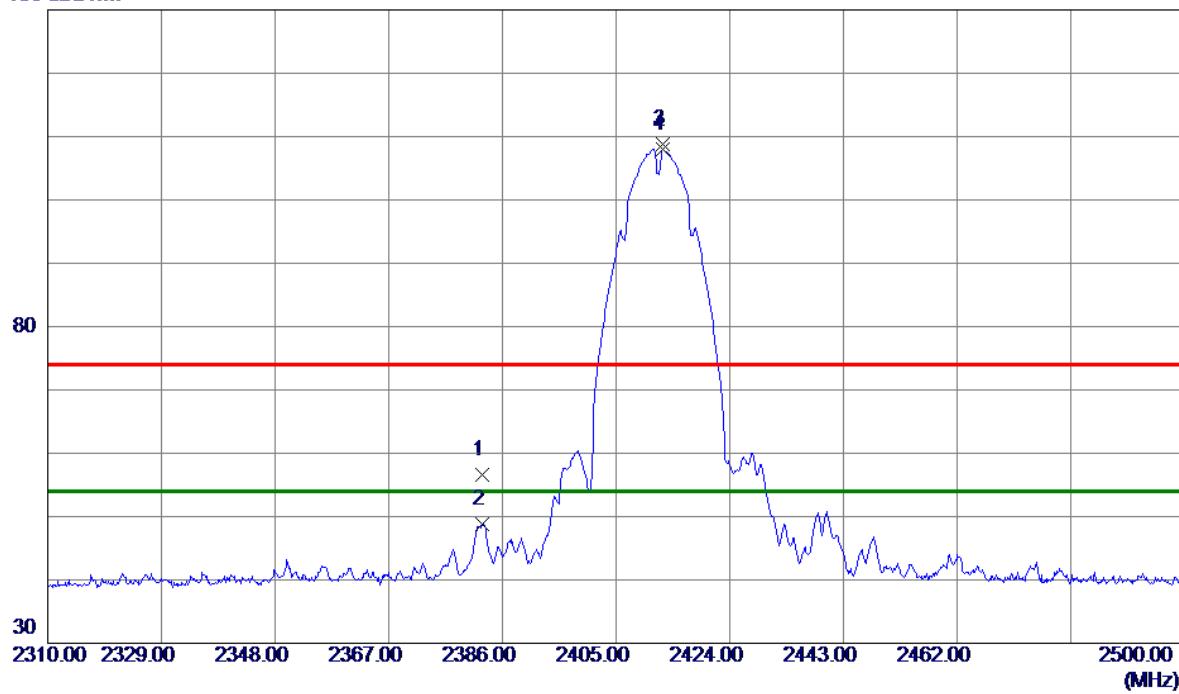
REMARKS:

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

APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ

Test Mode	TX B Mode 2412 MHz	Polarization	Vertical
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130 dBuV/m

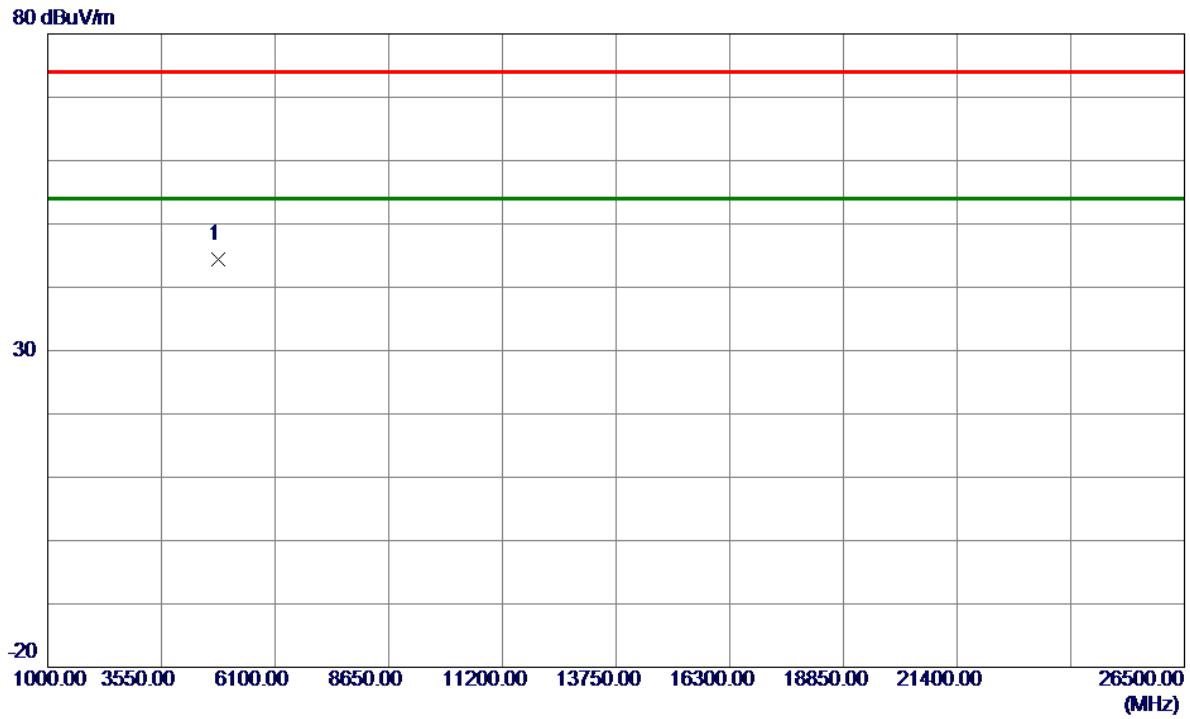


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dB	Margin Detector	Comment	
							Detector	Comment
1	2382.6750	26.01	30.51	56.52	74.00	-17.48	Peak	
2	2382.6750	18.35	30.51	48.86	54.00	-5.14	AVG	
3	2412.8850	78.22	30.64	108.86	74.00	34.86	Peak	No limit
4 *	2412.8850	77.33	30.64	107.97	54.00	53.97	AVG	No limit

REMARKS:

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

Test Mode	TX B Mode 2412 MHz	Polarization	Vertical
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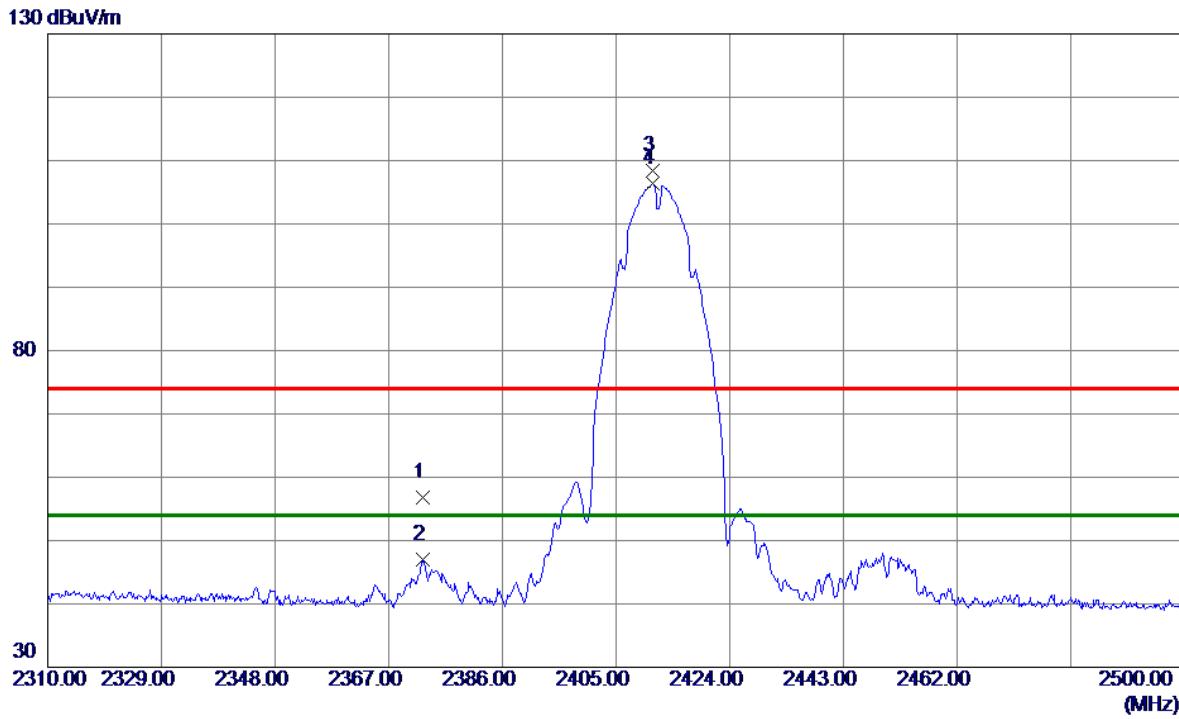


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dB _{UV} /m	dB	dB _{UV} /m	dB _{UV} /m	dB	Detector
1 *	4823.7250	61.52	-17.19	44.33	74.00	-29.67	Peak

REMARKS:

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

Test Mode	TX B Mode 2412 MHz	Polarization	Horizontal
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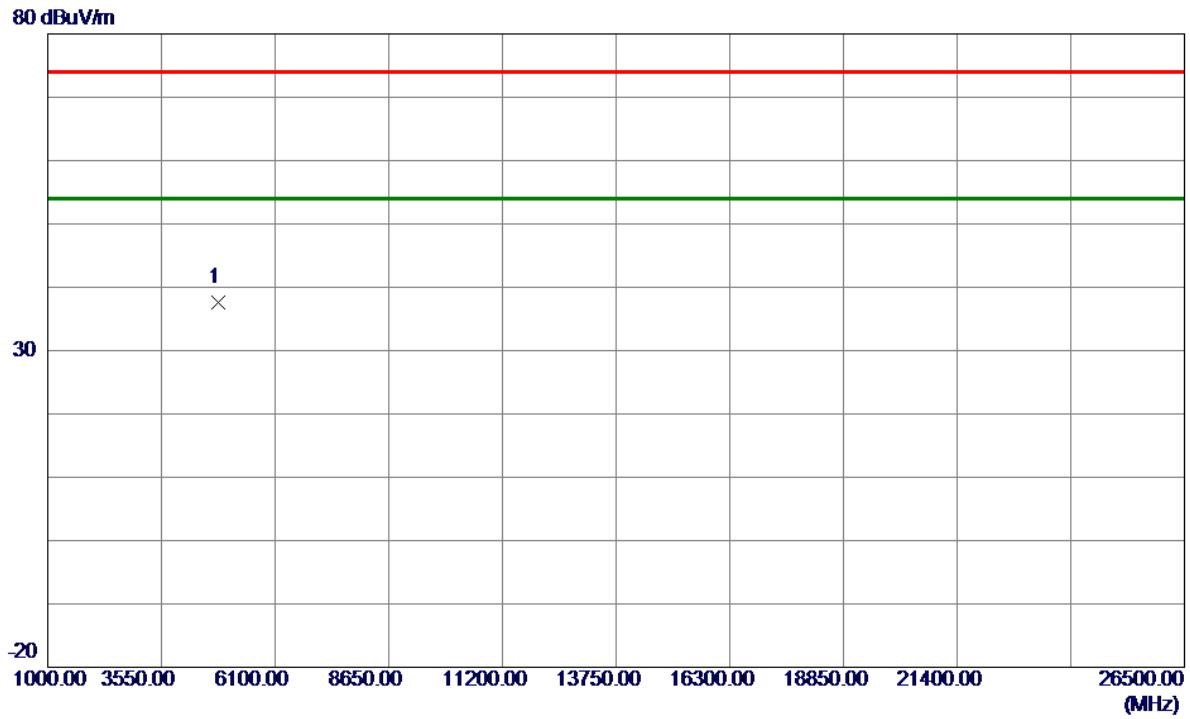


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	2372.7000	26.37	30.47	56.84	74.00	-17.16	Peak	
2	2372.7000	16.50	30.47	46.97	54.00	-7.03	AVG	
3	2411.1750	77.73	30.64	108.37	74.00	34.37	Peak	No limit
4 *	2411.1750	75.77	30.64	106.41	54.00	52.41	AVG	No limit

REMARKS:

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

Test Mode	TX B Mode 2412 MHz	Polarization	Horizontal
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No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dB μ V/m	dB	dB μ V/m	dB μ V/m	dB		
1 *	4823.7250	54.79	-17.19	37.60	74.00	-36.40	Peak	

REMARKS:

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

Test Mode	TX B Mode 2437 MHz	Polarization	Vertical
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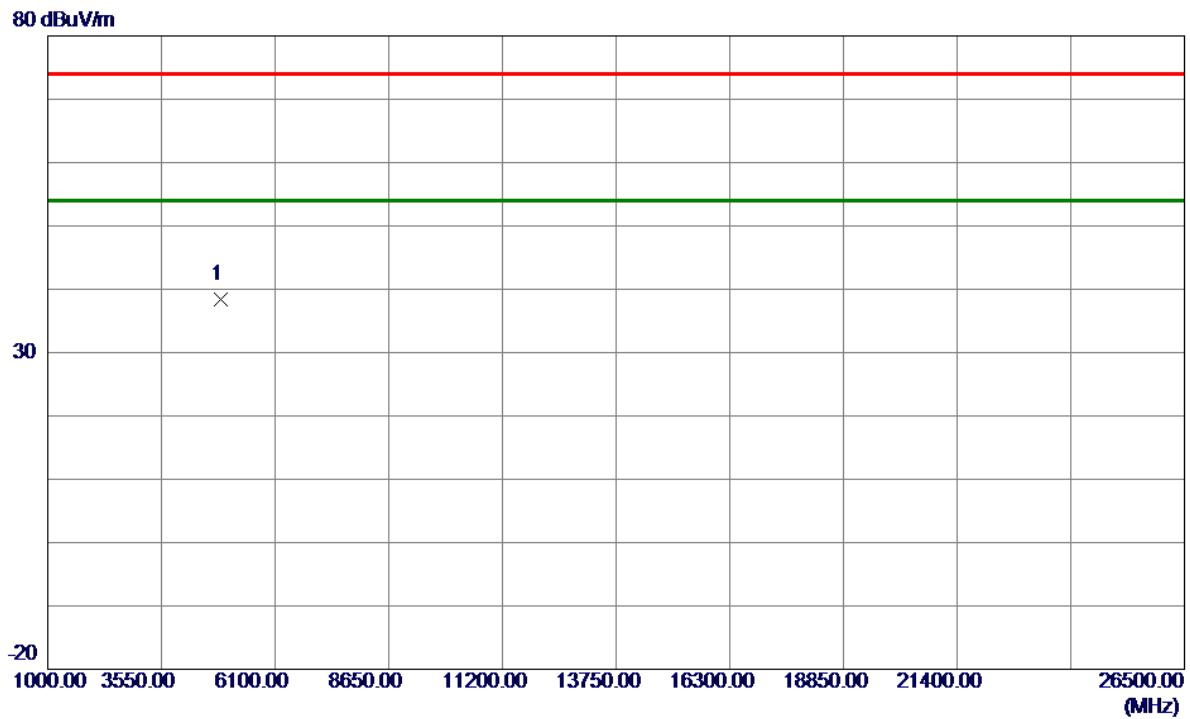


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dB μ V/m	dB	dB μ V/m	dB μ V/m	dB	Detector
1 *	4874.7250	62.28	-17.00	45.28	74.00	-28.72	Peak

REMARKS:

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

Test Mode	TX B Mode 2437 MHz	Polarization	Horizontal
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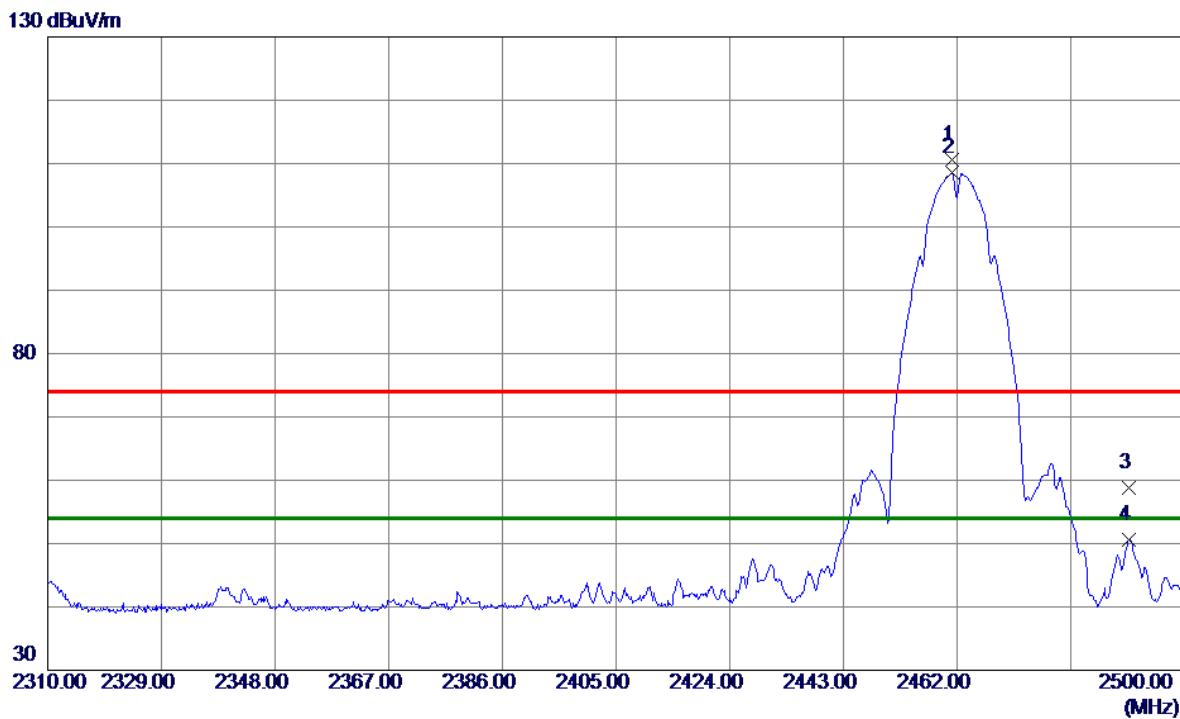


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dB μ V/m	dB	dB μ V/m	dB μ V/m	dB		
1 *	4874.7250	55.31	-17.00	38.31	74.00	-35.69	Peak	

REMARKS:

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

Test Mode	TX B Mode 2462 MHz	Polarization	Vertical
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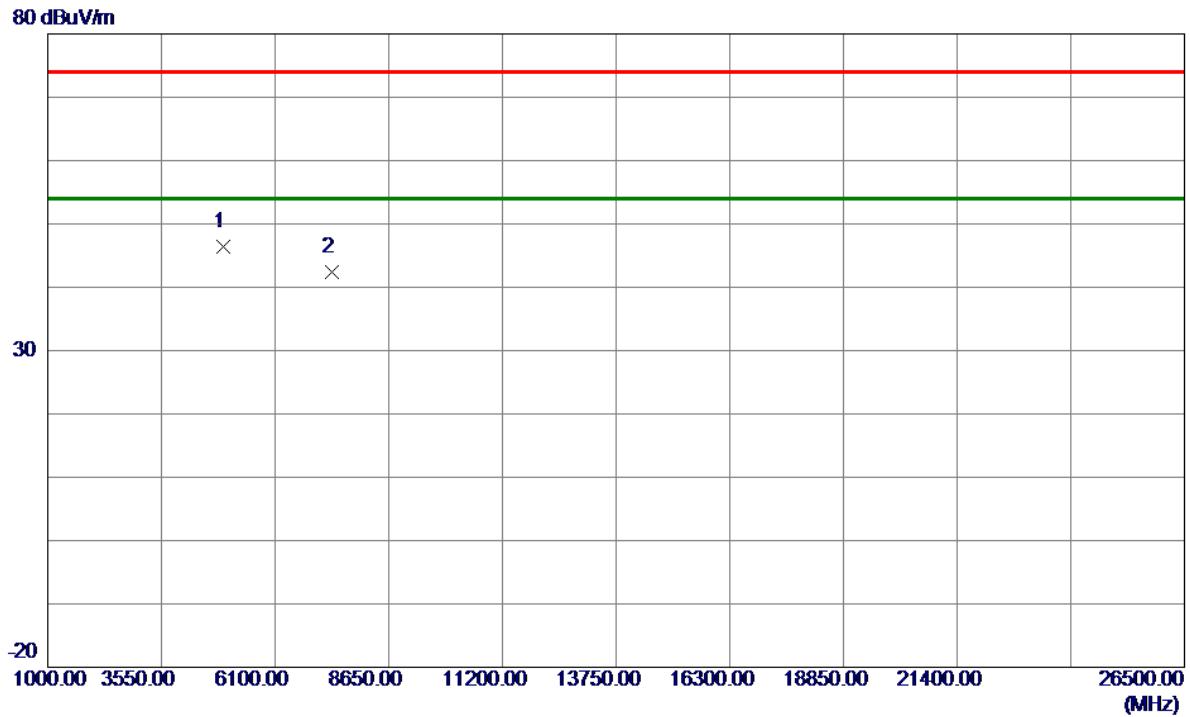


No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	ment	dBuV/m	dB		
1	2461.1450	79.81	30.85	110.66	74.00	36.66	Peak	No limit
2 *	2461.1450	77.72	30.85	108.57	54.00	54.57	AVG	No limit
3	2490.7850	27.78	30.97	58.75	74.00	-15.25	Peak	
4	2490.7850	19.60	30.97	50.57	54.00	-3.43	AVG	

REMARKS:

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

Test Mode	TX B Mode 2462 MHz	Polarization	Vertical
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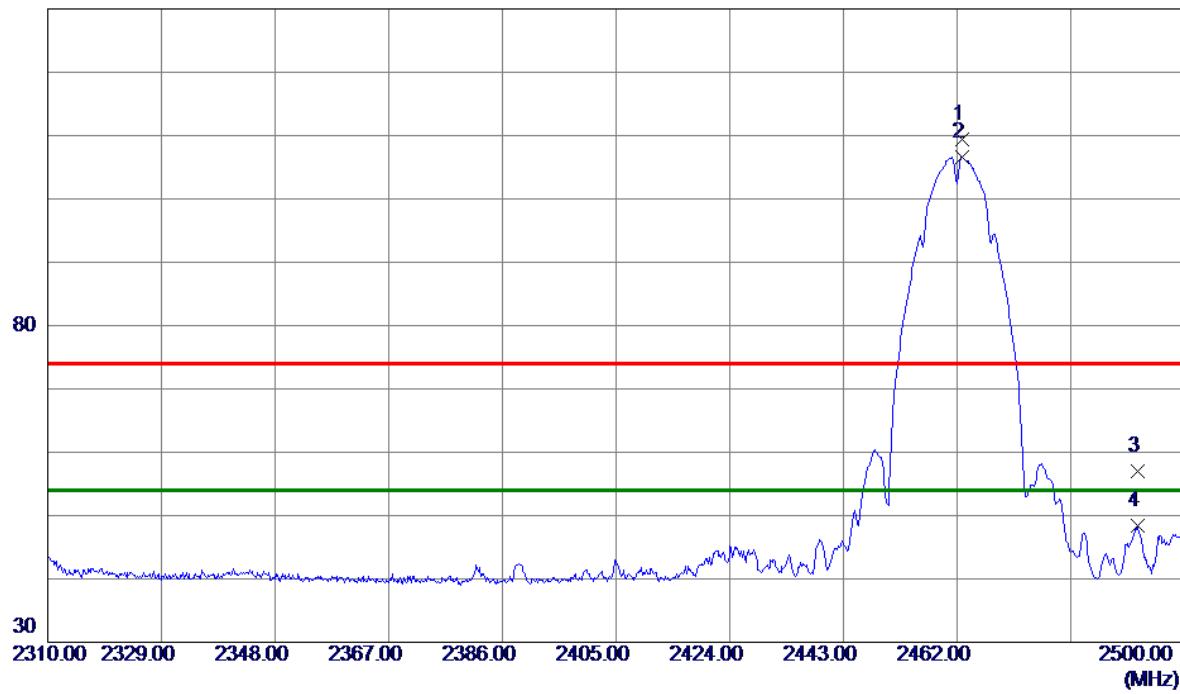
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dB _{uV/m}	dB	dB _{uV/m}	dB	Detector	Comment
1 *	4924.4500	63.28	-16.81	46.47	74.00	-27.53	Peak
2	7387.7500	55.44	-13.03	42.41	74.00	-31.59	Peak

REMARKS:

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

Test Mode	TX B Mode 2462 MHz	Polarization	Horizontal
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130 dBuV/m

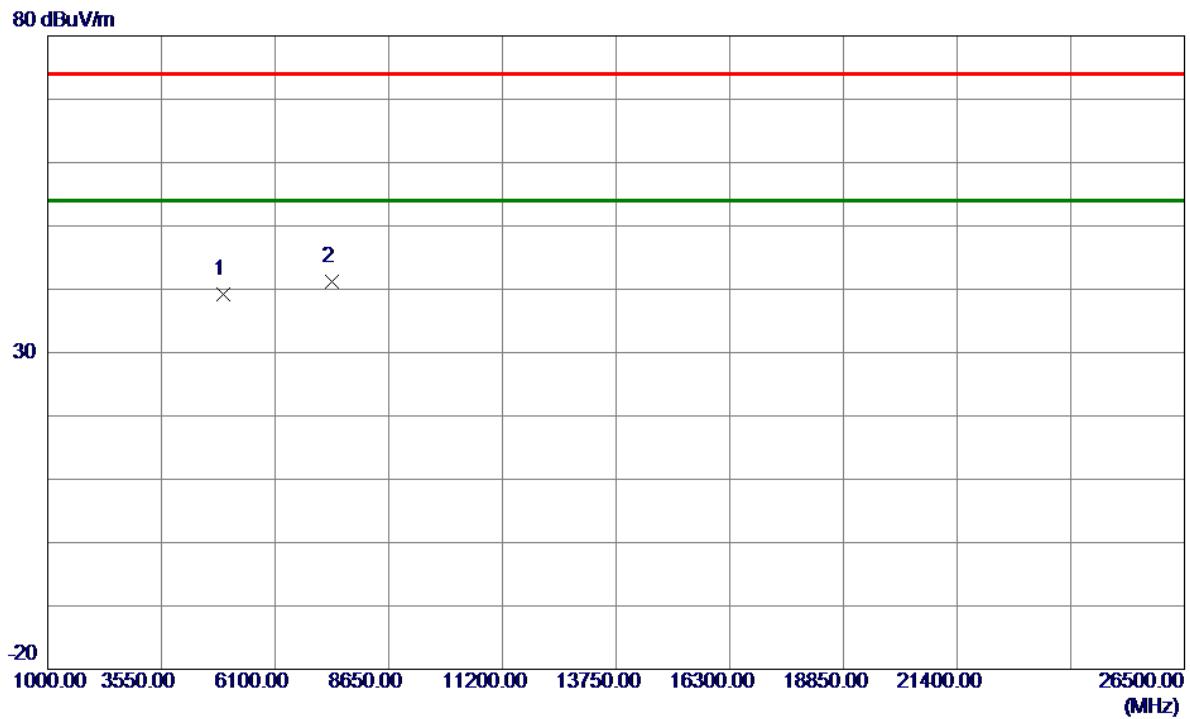


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector
1	2462.8550	78.47	30.85	109.32	74.00	35.32	Peak
2 *	2462.8550	75.84	30.85	106.69	54.00	52.69	AVG
3	2492.2100	25.94	30.98	56.92	74.00	-17.08	Peak
4	2492.2100	17.36	30.98	48.34	54.00	-5.66	AVG

REMARKS:

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

Test Mode	TX B Mode 2462 MHz	Polarization	Horizontal
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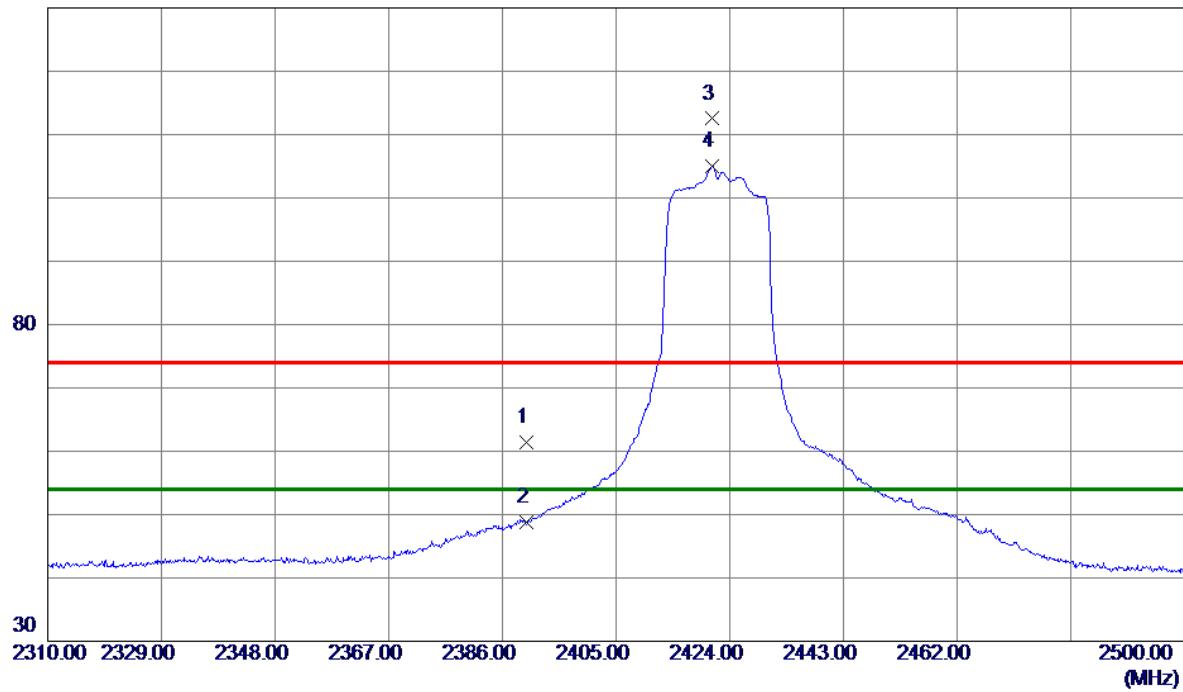
No.	Freq. MHz	Reading Level dB _{uV/m}	Correct Factor dB	Measure ment dB _{uV/m}	Limit dB _{uV/m}	Margin dB	Detector	
							Comment	
1	4924.4500	56.00	-16.81	39.19	74.00	-34.81	Peak	
2 *	7387.7500	54.29	-13.03	41.26	74.00	-32.74	Peak	

REMARKS:

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

Test Mode	TX G Mode 2412 MHz	Polarization	Vertical
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130 dBuV/m

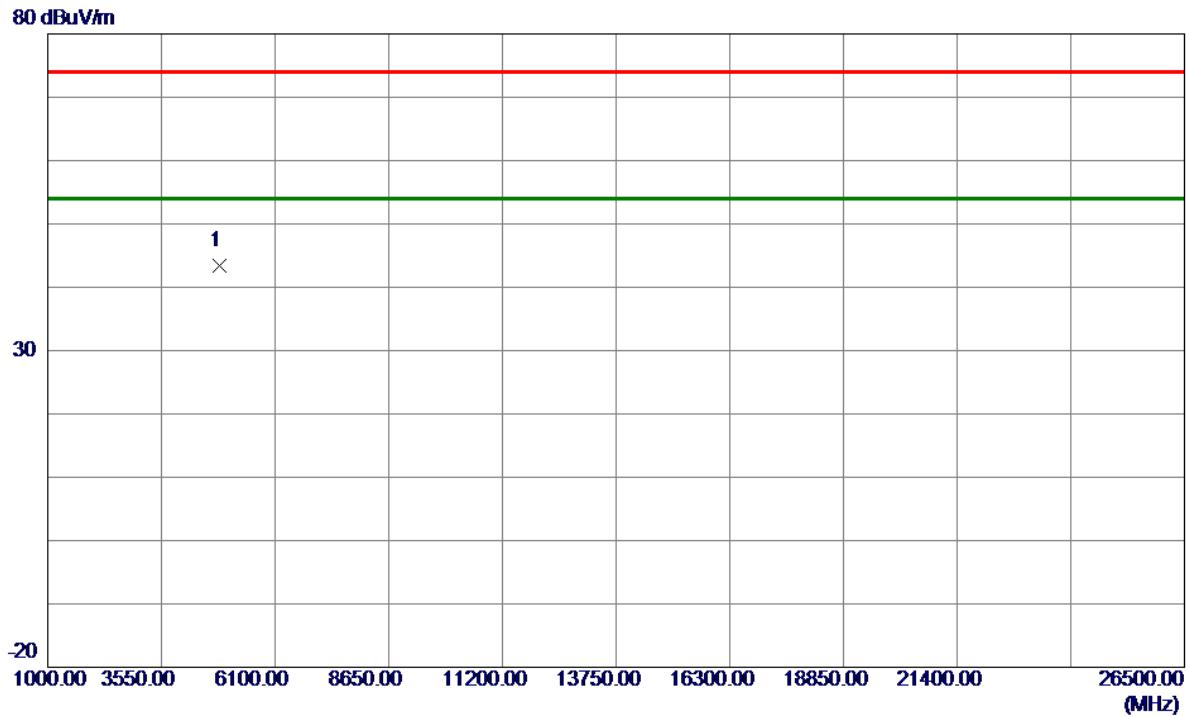


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dB	Margin dB	Detector		Comment
							Detector	Comment	
1	2390.0000	30.91	30.55	61.46	74.00	-12.54	Peak		
2	2390.0000	18.19	30.55	48.74	54.00	-5.26	AVG		
3	2421.0550	81.82	30.68	112.50	74.00	38.50	Peak	No limit	
4 *	2421.0550	74.26	30.68	104.94	54.00	50.94	AVG	No limit	

REMARKS:

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

Test Mode	TX G Mode 2412 MHz	Polarization	Vertical
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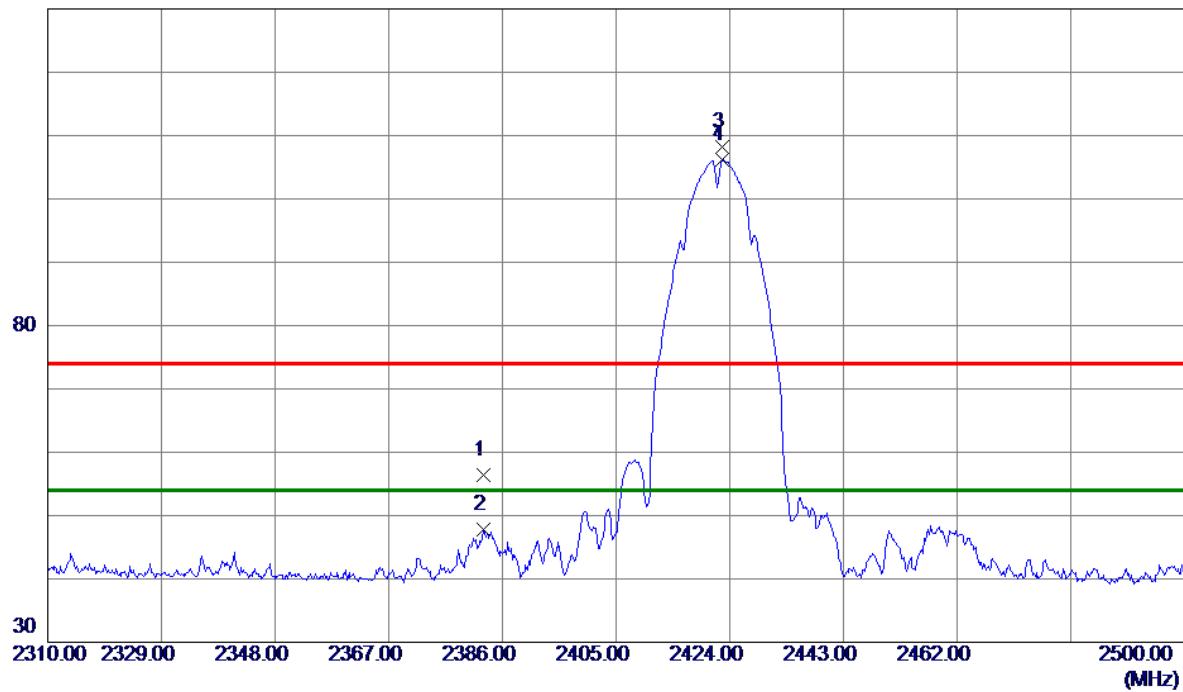
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dB μ V/m	dB	dB μ V/m	dB μ V/m	dB	Detector
1 *	4841.5750	60.58	-17.13	43.45	74.00	-30.55	Peak

REMARKS:

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

Test Mode	TX G Mode 2412 MHz	Polarization	Horizontal
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130 dBuV/m

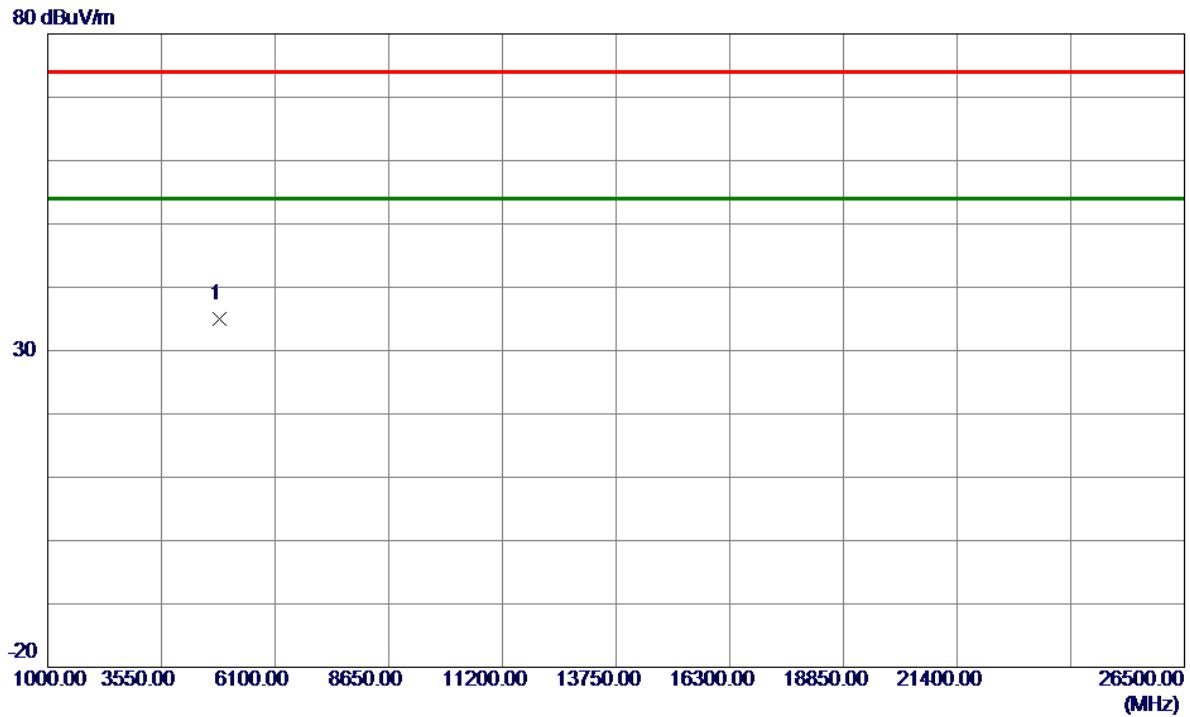


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2382.8650	25.91	30.51	56.42	74.00	-17.58	Peak	
2	2382.8650	17.35	30.51	47.86	54.00	-6.14	AVG	
3	2422.7649	77.49	30.69	108.18	74.00	34.18	Peak	No limit
4 *	2422.7649	75.46	30.69	106.15	54.00	52.15	AVG	No limit

REMARKS:

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

Test Mode	TX G Mode 2412 MHz	Polarization	Horizontal
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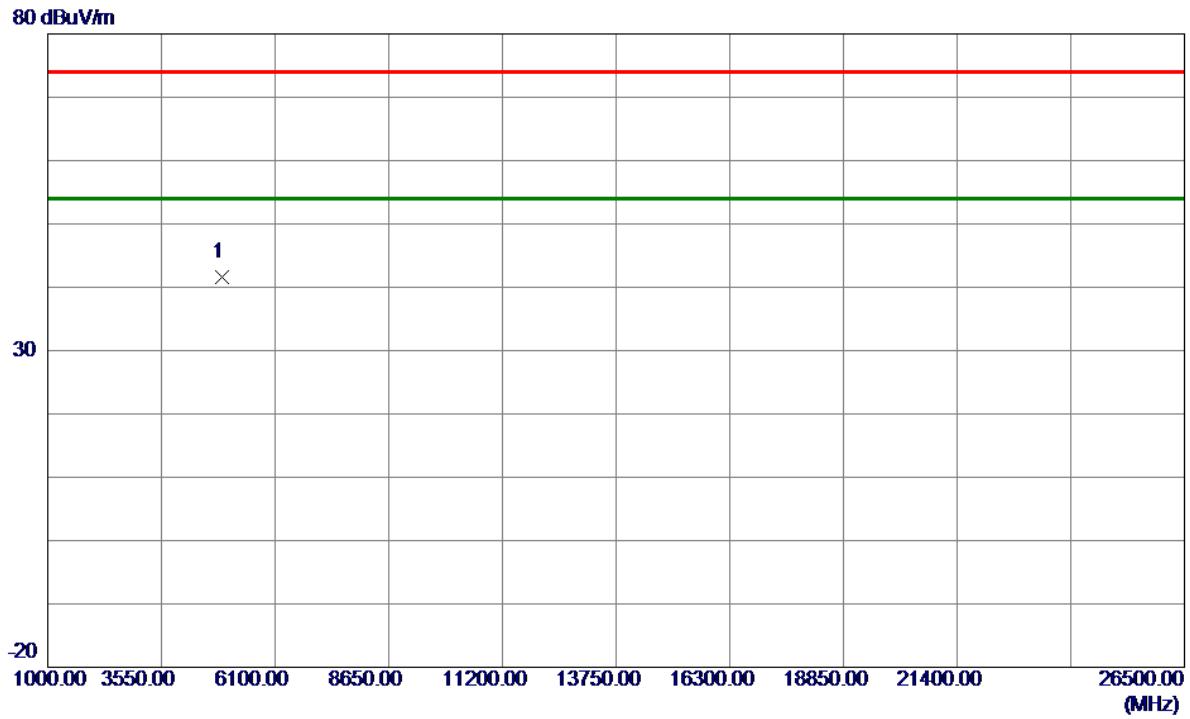


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dB μ V/m	dB	dB μ V/m	dB μ V/m	dB	Detector
1 *	4841.5750	52.10	-17.13	34.97	74.00	-39.03	Peak

REMARKS:

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

Test Mode	TX G Mode 2437 MHz	Polarization	Vertical
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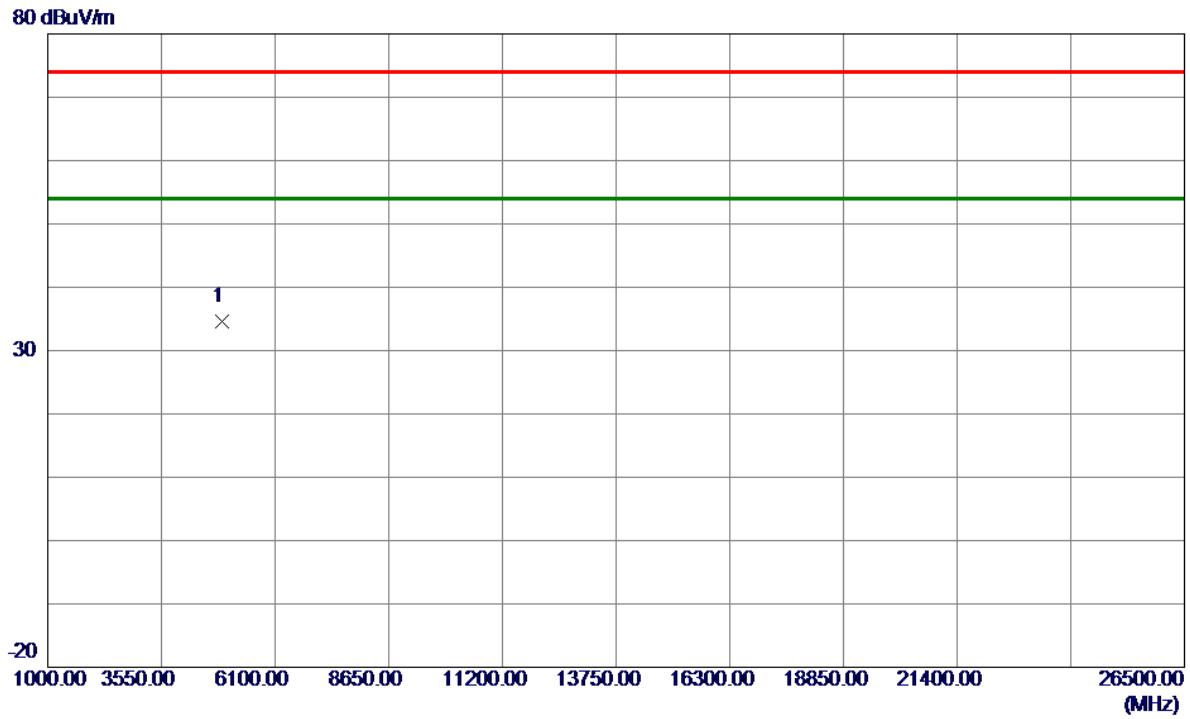


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dB μ V/m	dB	dB μ V/m	dB μ V/m	dB	Detector
1 *	4896.4000	58.49	-16.92	41.57	74.00	-32.43	Peak

REMARKS:

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

Test Mode	TX G Mode 2437 MHz	Polarization	Horizontal
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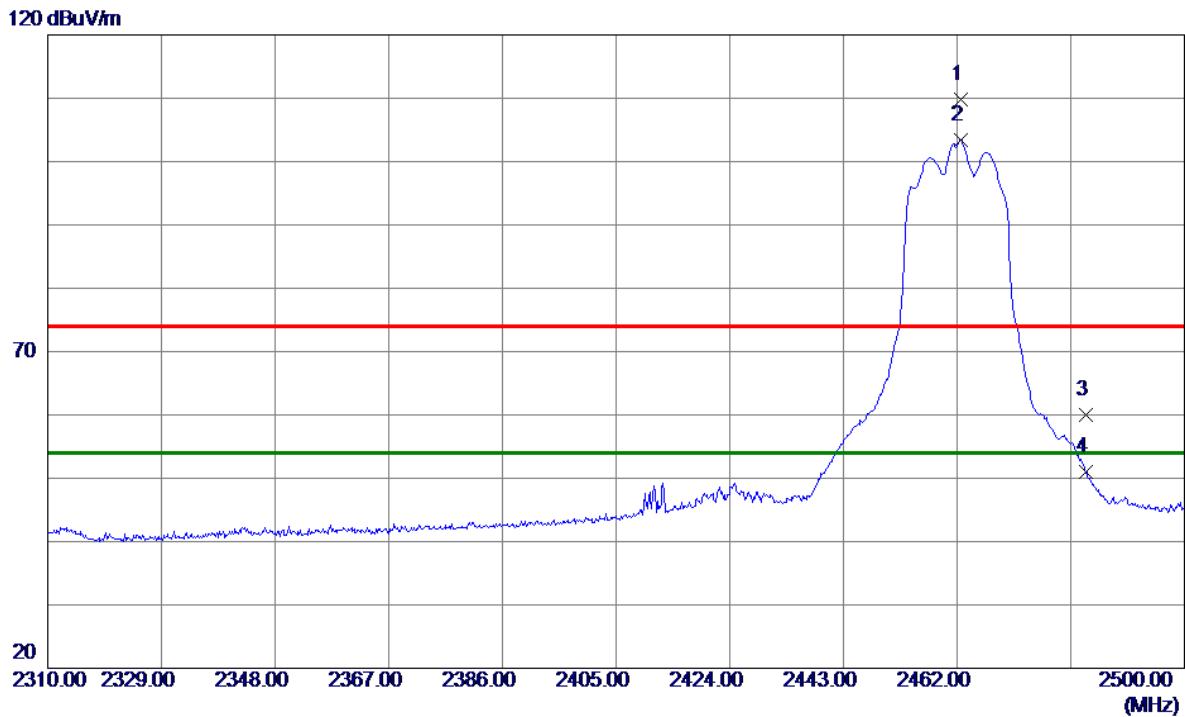


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dB μ V/m	dB	dB μ V/m	dB μ V/m	dB		
1 *	4896.0000	51.51	-16.92	34.59	74.00	-39.41	Peak	

REMARKS:

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

Test Mode	TX G Mode 2462 MHz	Polarization	Vertical
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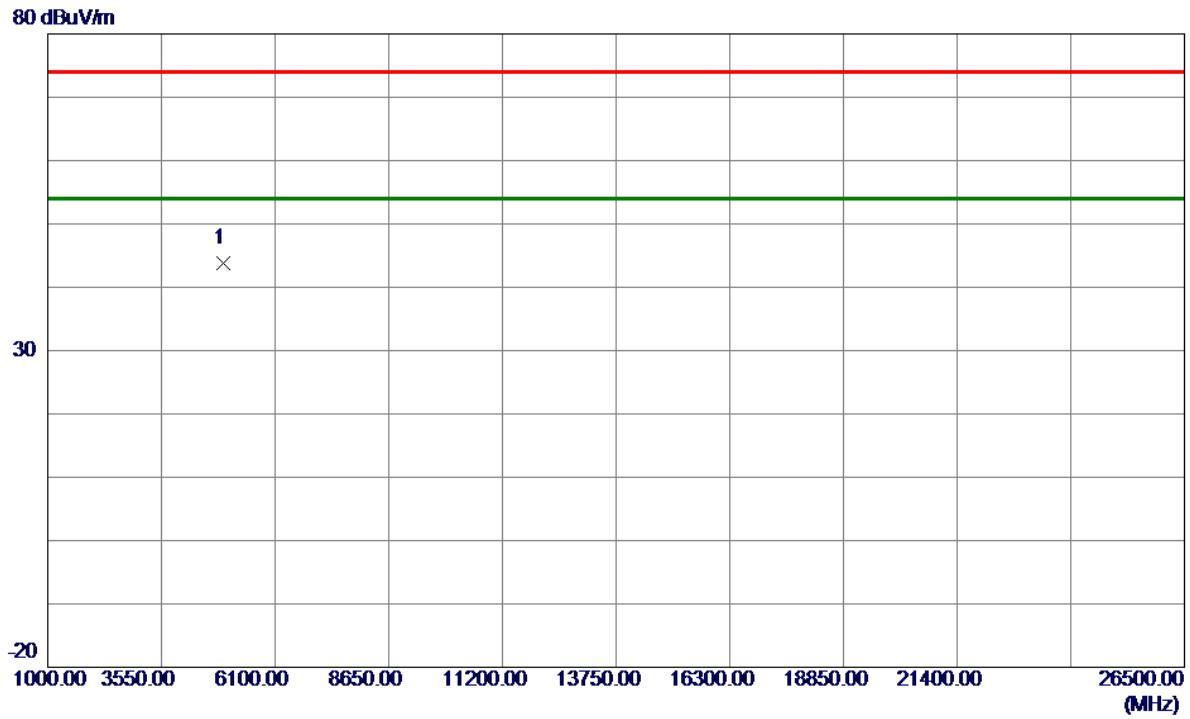


No.	Freq. MHz	Reading Level	Correct Factor	Measure ment	Limit	Margin	Detector	Comment
		dBuV/m	dB	dBuV/m	dB			
1	2462.6650	79.02	30.85	109.87	74.00	35.87	Peak	No limit
2 *	2462.6650	72.59	30.85	103.44	54.00	49.44	AVG	No limit
3	2483.5000	28.97	30.94	59.91	74.00	-14.09	Peak	
4	2483.5000	20.02	30.94	50.96	54.00	-3.04	AVG	

REMARKS:

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

Test Mode	TX G Mode 2462 MHz	Polarization	Vertical
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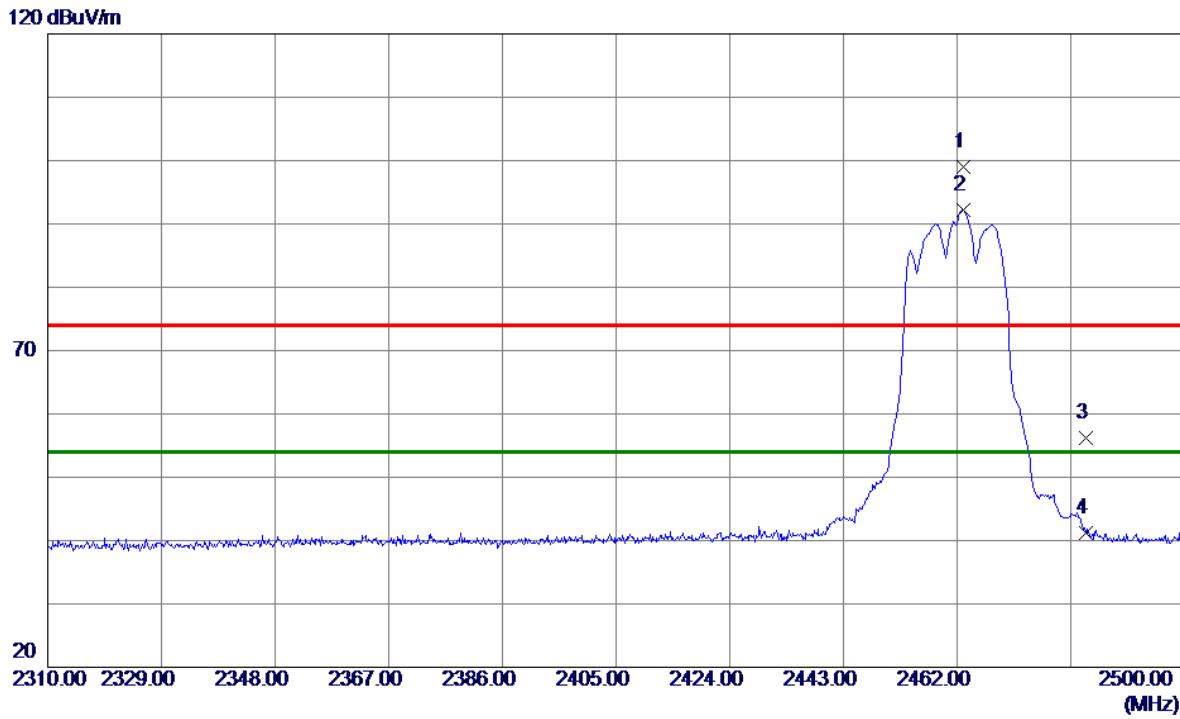


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dB μ V/m	dB	dB μ V/m	dB μ V/m	dB	Detector
1 *	4942.3000	60.47	-16.75	43.72	74.00	-30.28	Peak

REMARKS:

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

Test Mode	TX G Mode 2462 MHz	Polarization	Horizontal
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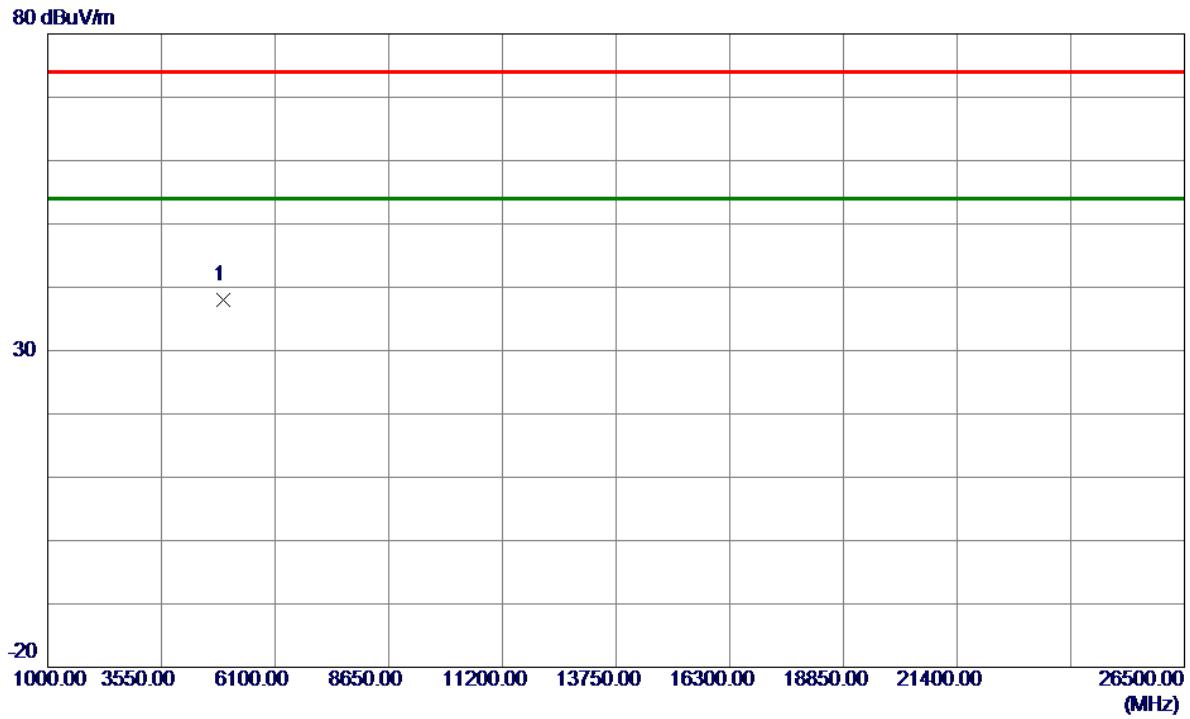


No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	ment	dBuV/m	dB		
1	2463.0450	68.13	30.85	98.98	74.00	24.98	Peak	No limit
2 *	2463.0450	61.42	30.85	92.27	54.00	38.27	AVG	No limit
3	2483.5000	25.27	30.94	56.21	74.00	-17.79	Peak	
4	2483.5000	10.20	30.94	41.14	54.00	-12.86	AVG	

REMARKS:

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

Test Mode	TX G Mode 2462 MHz	Polarization	Horizontal
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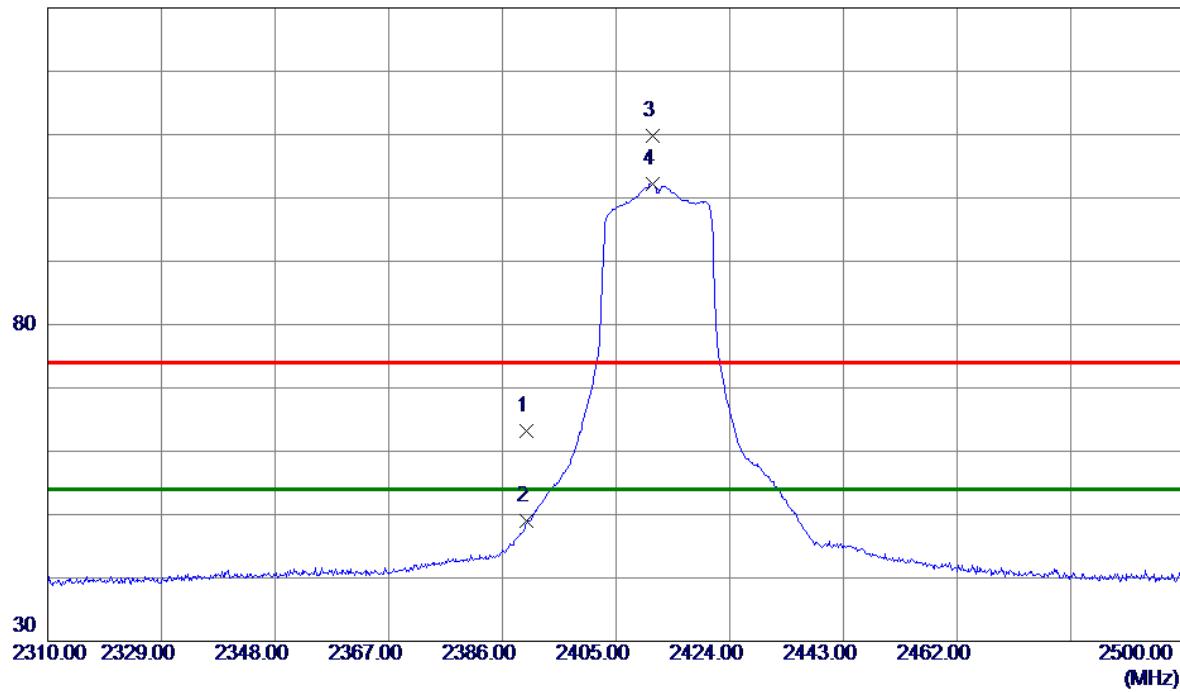
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	d μ V/m	dB	d μ V/m	dB	Detector	Comment
1 *	4947.4000	54.74	-16.73	38.01	74.00	-35.99	Peak

REMARKS:

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

Test Mode	TX N(HT20) Mode 2412 MHz	Polarization	Vertical
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130 dBuV/m

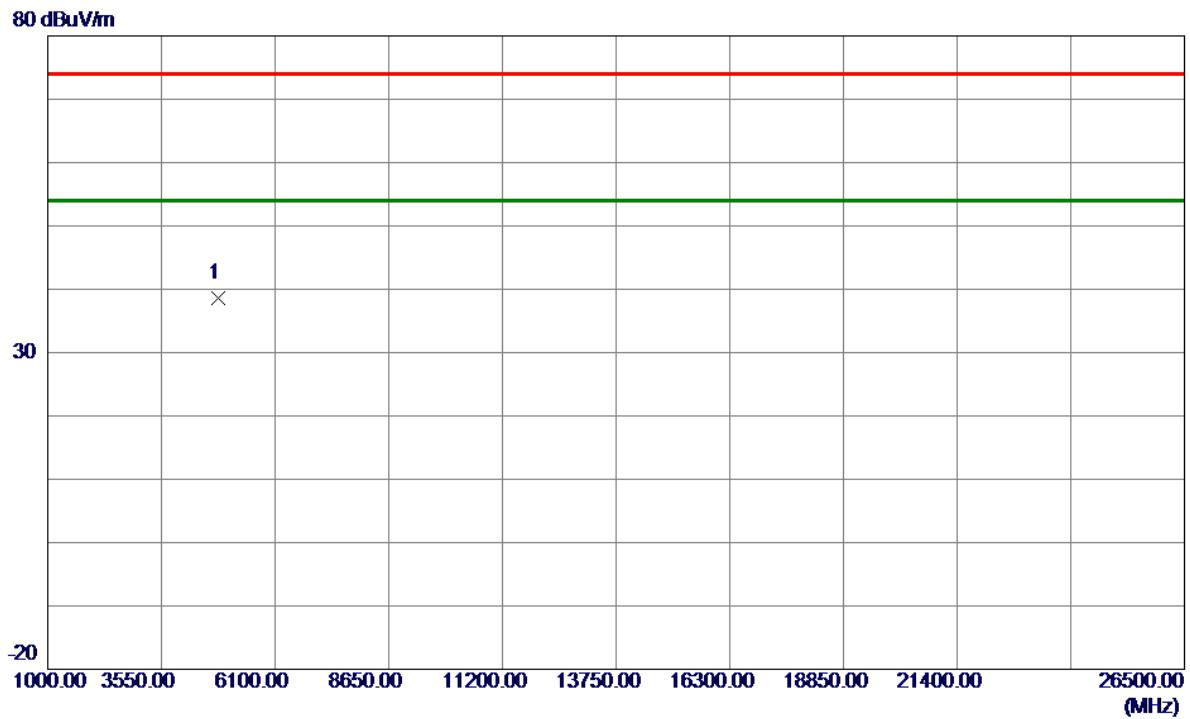


No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	ment	dBuV/m	dB		
1	2390.0000	32.61	30.55	63.16	74.00	-10.84	Peak	
2	2390.0000	18.36	30.55	48.91	54.00	-5.09	AVG	
3	2411.1750	79.12	30.64	109.76	74.00	35.76	Peak	No limit
4 *	2411.1750	71.53	30.64	102.17	54.00	48.17	AVG	No limit

REMARKS:

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

Test Mode	TX N(HT20) Mode 2412 MHz	Polarization	Vertical
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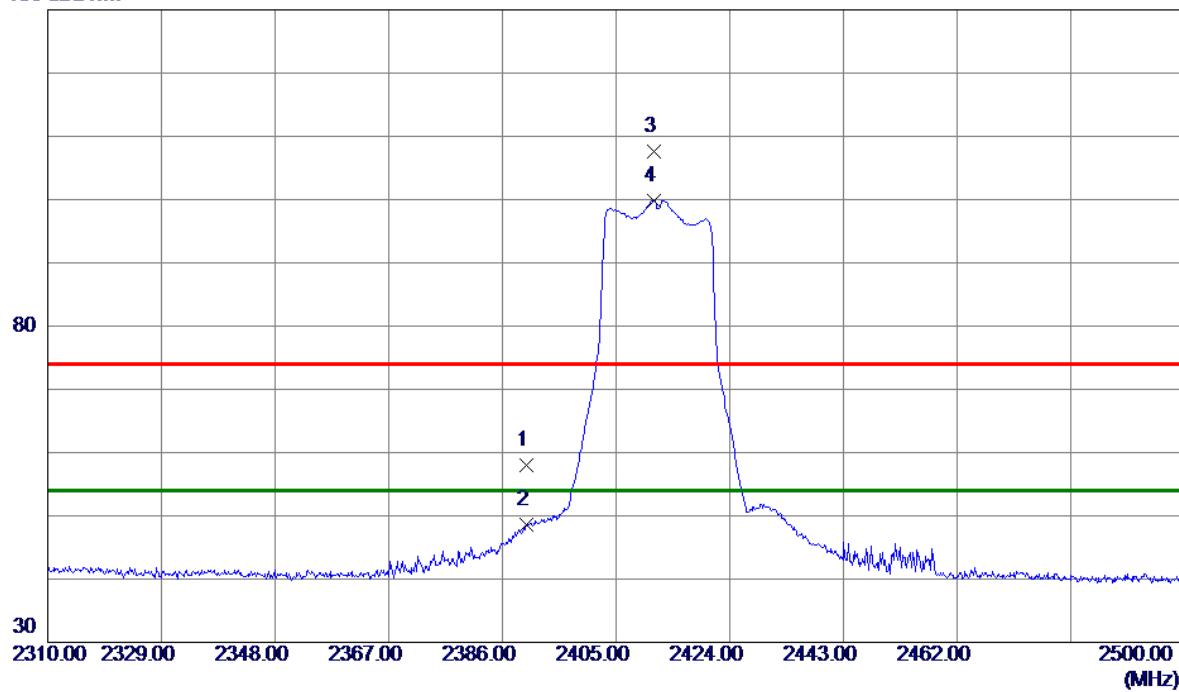
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	d μ V/m	dB	d μ V/m	d μ V/m	dB	Detector
1 *	4825.0000	55.76	-17.19	38.57	74.00	-35.43	Peak

REMARKS:

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

Test Mode	TX N(HT20) Mode 2412 MHz	Polarization	Horizontal
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130 dBuV/m

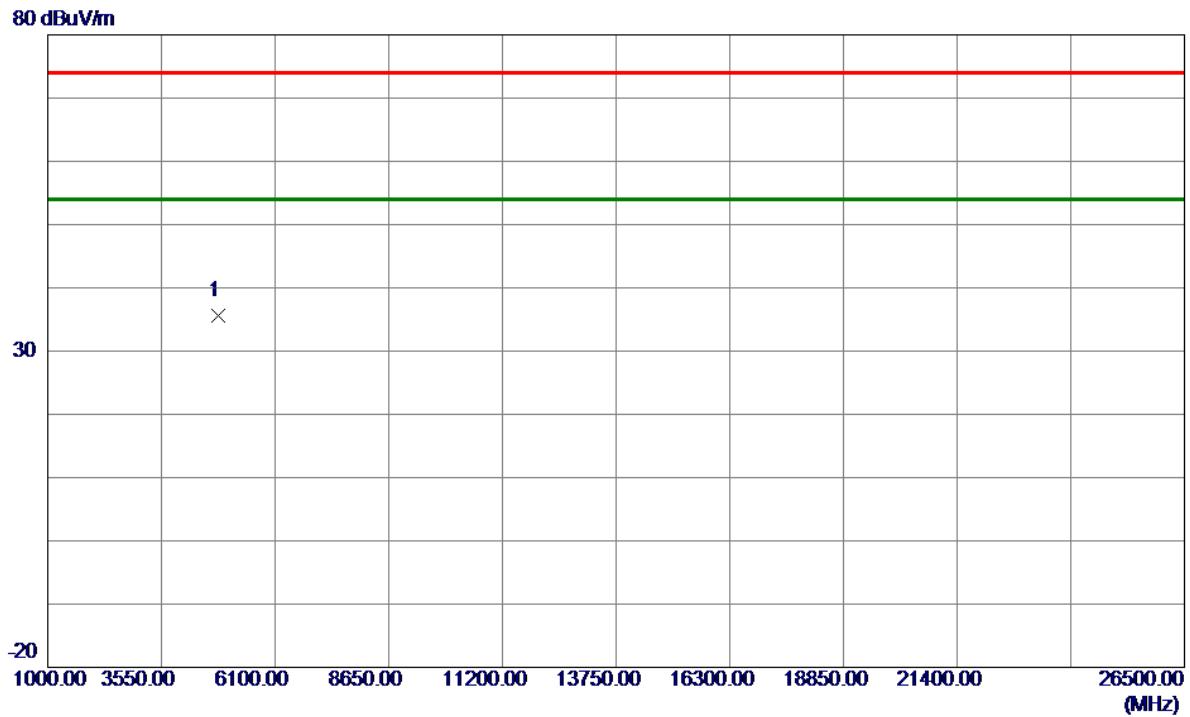


No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	ment	dBuV/m	dB		
1	2390.0000	27.44	30.55	57.99	74.00	-16.01	Peak	
2	2390.0000	18.11	30.55	48.66	54.00	-5.34	AVG	
3	2411.3650	77.05	30.64	107.69	74.00	33.69	Peak	No limit
4 *	2411.3650	69.17	30.64	99.81	54.00	45.81	AVG	No limit

REMARKS:

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

Test Mode	TX N(HT20) Mode 2412 MHz	Polarization	Horizontal
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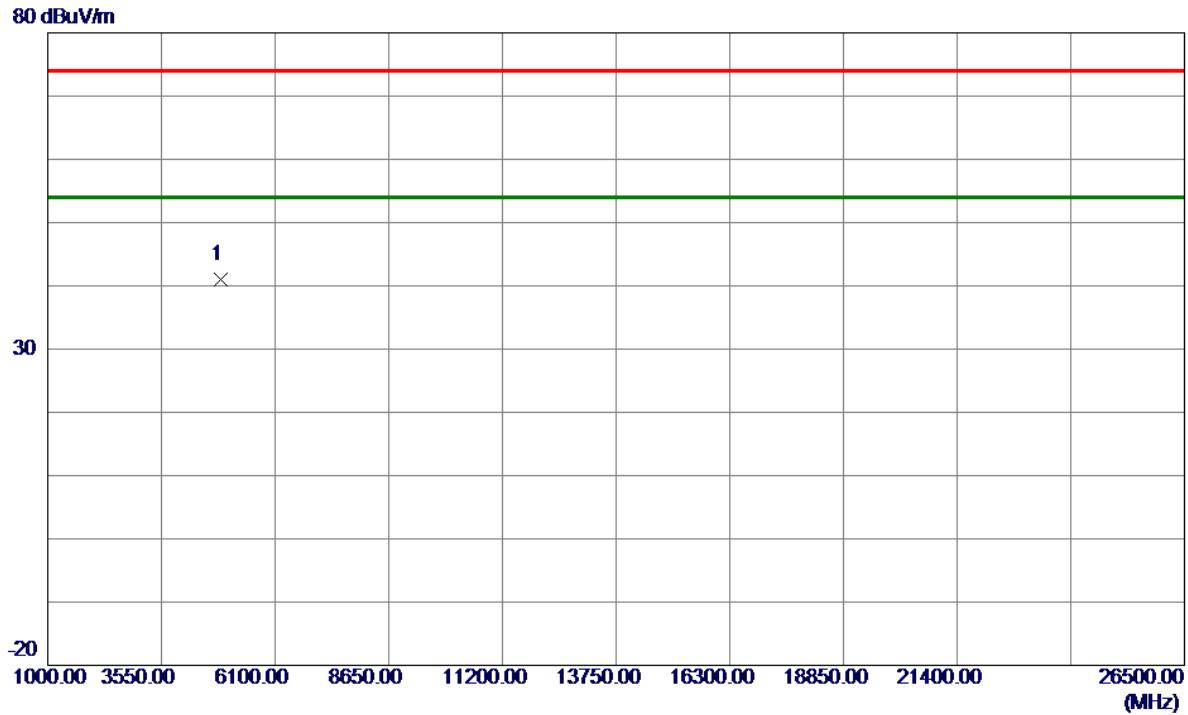


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dBuV/m	dB	dBuV/m	dB	Detector	Comment
1 *	4825.0000	52.71	-17.19	35.52	74.00	-38.48	Peak

REMARKS:

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

Test Mode	TX N(HT20) Mode 2437 MHz	Polarization	Vertical
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No.	Freq. MHz	Reading Level dB μ V/m	Correct Factor dB	Measure ment dB μ V/m	Limit dB	Margin Detector	Comment
							Detector
1 *	4878.5500	57.97	-16.99	40.98	74.00	-33.02	Peak

REMARKS:

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

Test Mode	TX N(HT20) Mode 2437 MHz	Polarization	Horizontal
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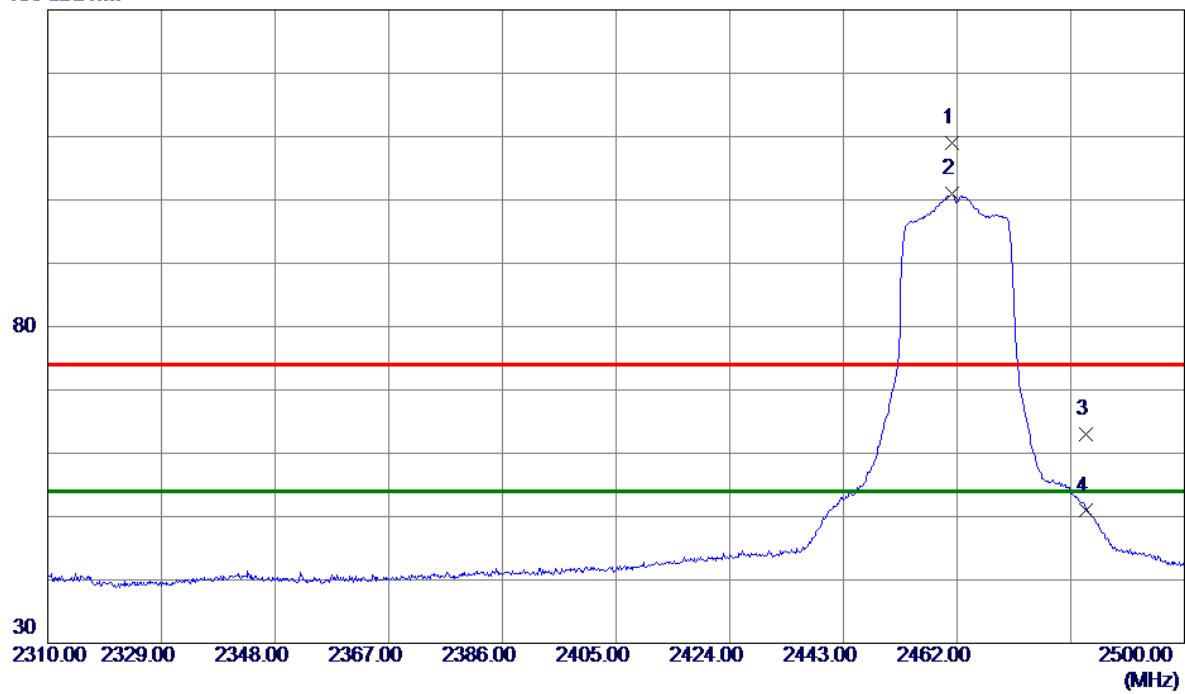
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector
1 *	4878.5500	52.79	-16.99	35.80	74.00	-38.20	Peak

REMARKS:

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

Test Mode	TX N(HT20) Mode 2462 MHz	Polarization	Vertical
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130 dBuV/m

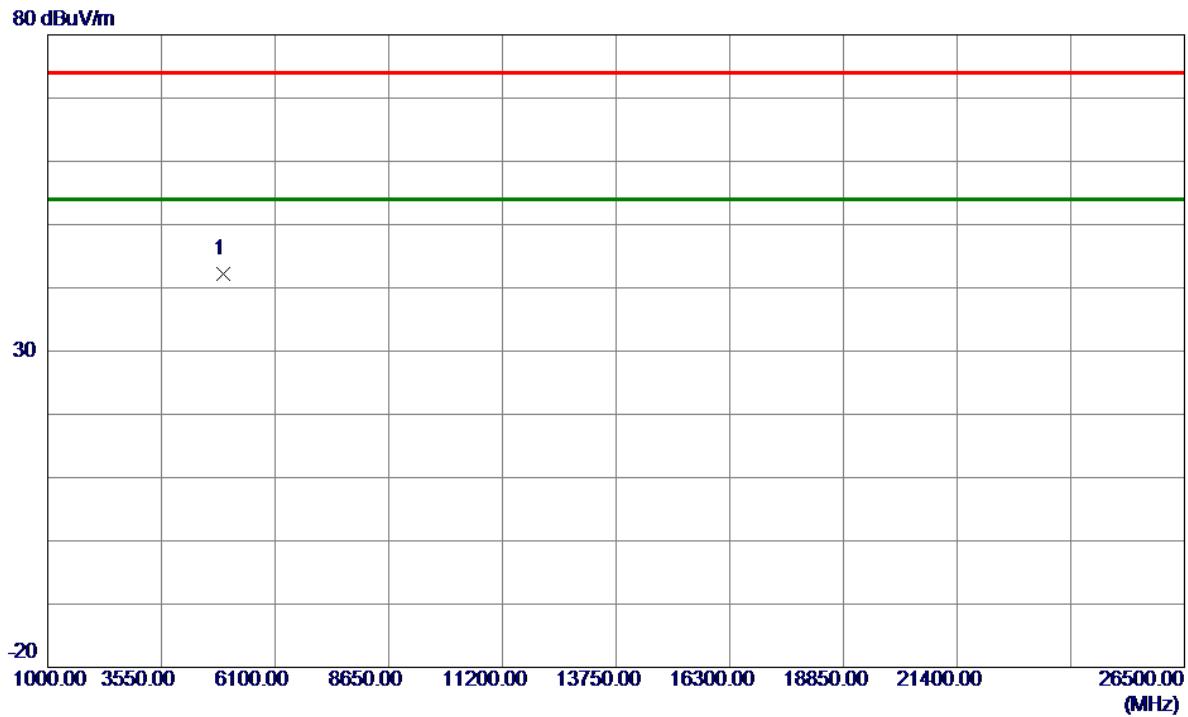


No.	Freq. MHz	Reading Level	Correct Factor	Measure ment	Limit	Margin	Detector	Comment
		dBuV/m	dB	dBuV/m	dB	Detector		
1	2461.1450	78.09	30.85	108.94	74.00	34.94	Peak	No limit
2 *	2461.1450	70.13	30.85	100.98	54.00	46.98	AVG	No limit
3	2483.5000	32.10	30.94	63.04	74.00	-10.96	Peak	
4	2483.5000	19.96	30.94	50.90	54.00	-3.10	AVG	

REMARKS:

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

Test Mode	TX N(HT20) Mode 2462 MHz	Polarization	Vertical
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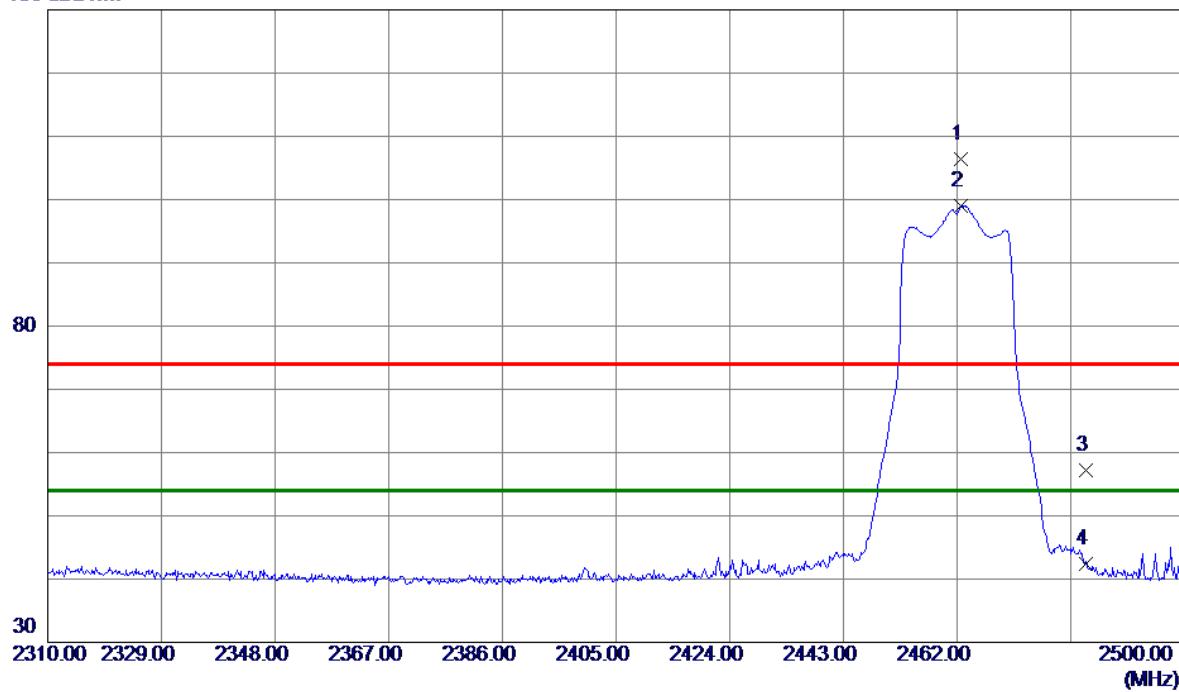
No.	Freq. MHz	Reading Level	Correct Factor	Measure ment	Limit	Margin	Detector	Comment
		dB μ V/m	dB	dB μ V/m	dB			
1 *	4928.2750	59.02	-16.80	42.22	74.00	-31.78	Peak	

REMARKS:

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

Test Mode	TX N(HT20) Mode 2462 MHz	Polarization	Horizontal
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130 dBuV/m

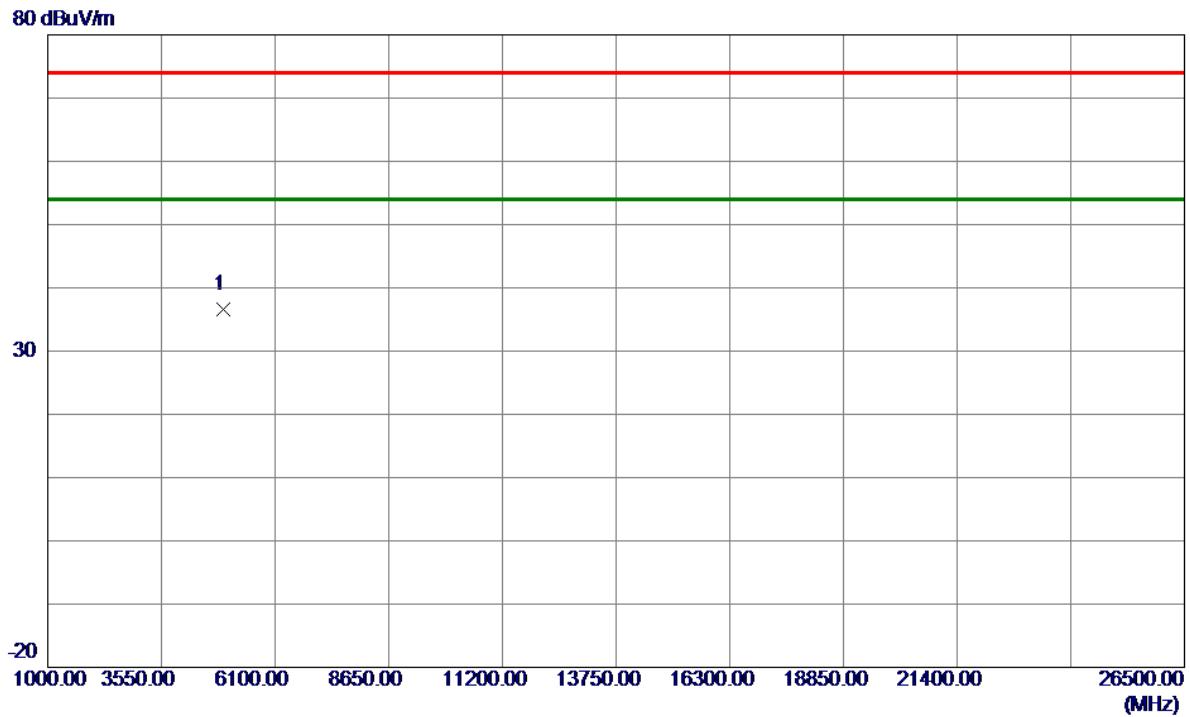


No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	ment	dBuV/m	dB		
1	2462.6650	75.60	30.85	106.45	74.00	32.45	Peak	No limit
2 *	2462.6650	68.24	30.85	99.09	54.00	45.09	AVG	No limit
3	2483.5000	26.34	30.94	57.28	74.00	-16.72	Peak	
4	2483.5000	11.40	30.94	42.34	54.00	-11.66	AVG	

REMARKS:

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

Test Mode	TX N(HT20) Mode 2462 MHz	Polarization	Horizontal
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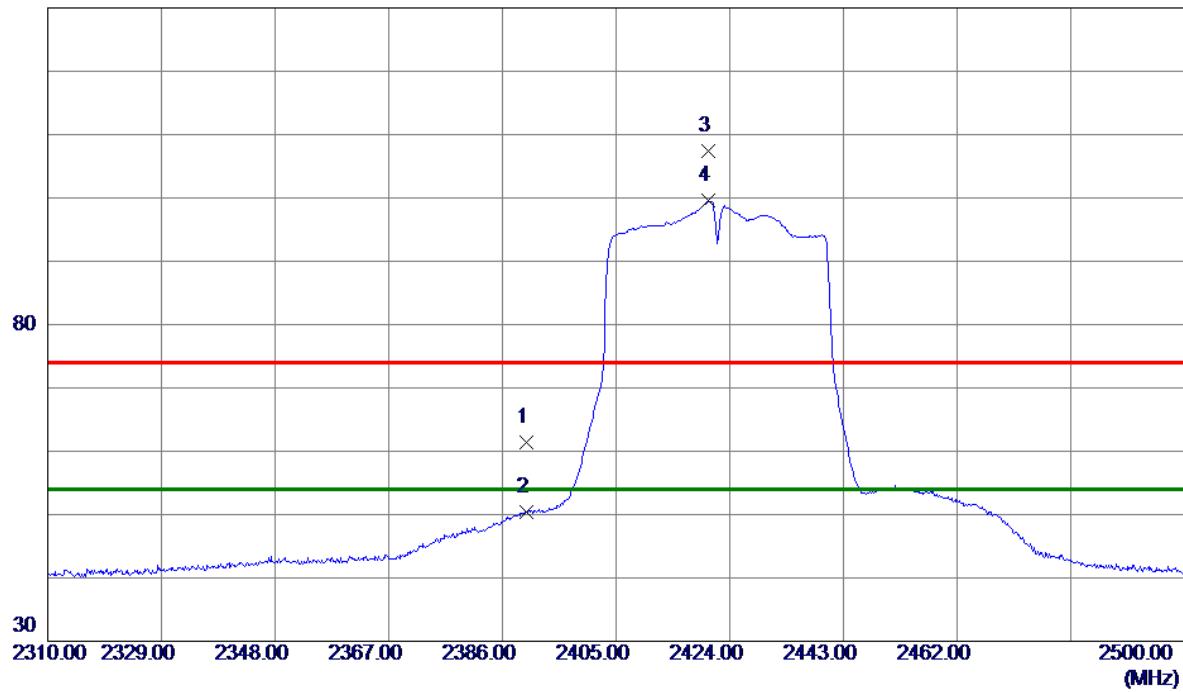
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector
1 *	4928.2750	53.38	-16.80	36.58	74.00	-37.42	Peak

REMARKS:

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

Test Mode	TX N(HT40) Mode 2422 MHz	Polarization	Vertical
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130 dBuV/m

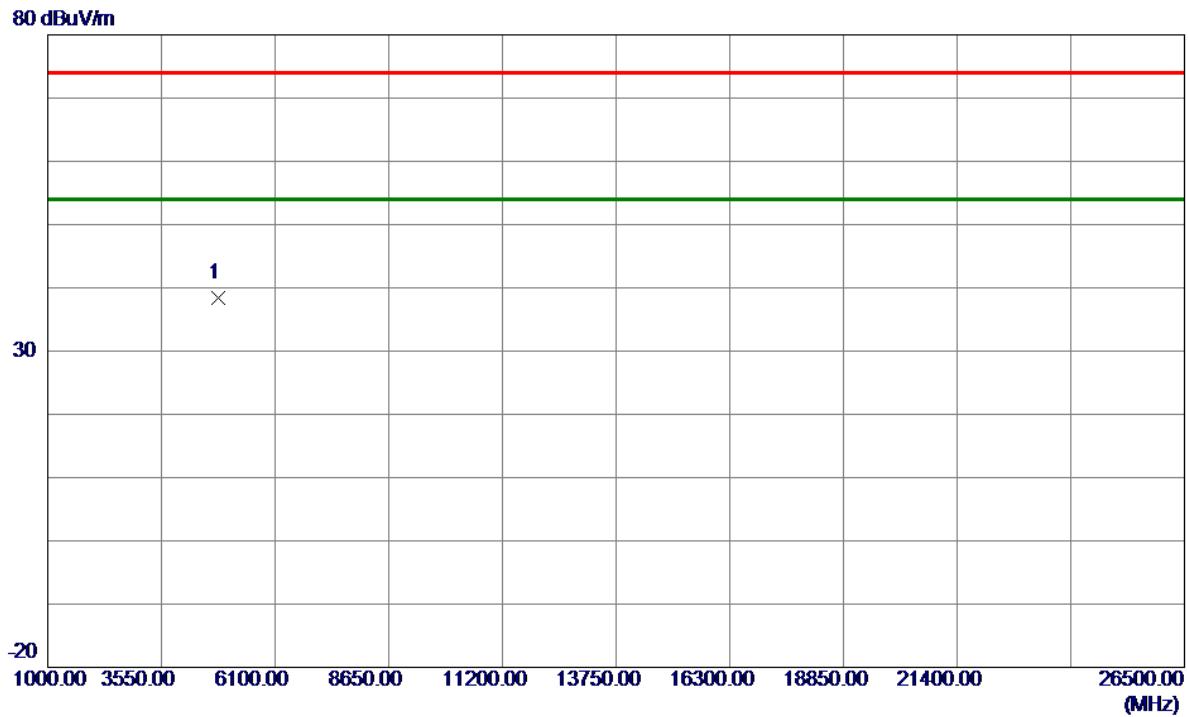


No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	ment	dBuV/m	dB		
1	2390.0000	30.92	30.55	61.47	74.00	-12.53	Peak	
2	2390.0000	19.83	30.55	50.38	54.00	-3.62	AVG	
3	2420.4850	76.71	30.68	107.39	74.00	33.39	Peak	No limit
4 *	2420.4850	68.85	30.68	99.53	54.00	45.53	AVG	No limit

REMARKS:

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

Test Mode	TX N(HT40) Mode 2422 MHz	Polarization	Vertical
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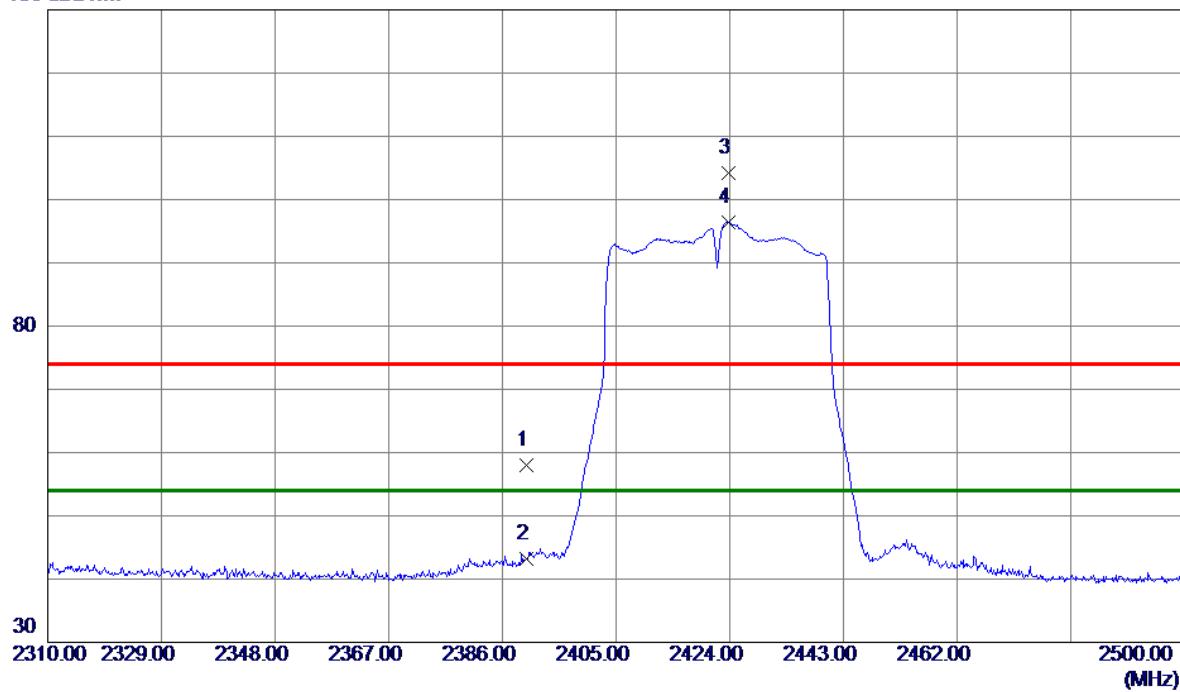
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1 *	4839.0250	55.57	-17.14	38.43	74.00	-35.57	Peak	

REMARKS:

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

Test Mode	TX N(HT40) Mode 2422 MHz	Polarization	Horizontal
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130 dBuV/m

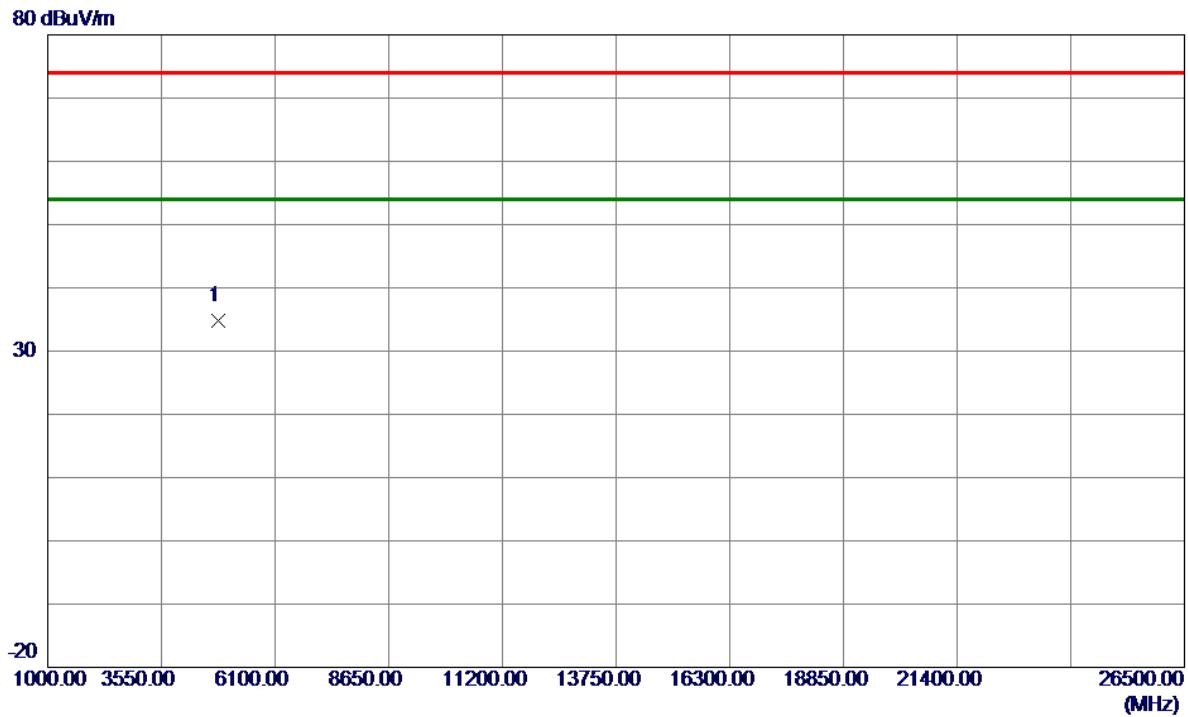


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Margin	
							Detector	Comment
1	2390.000	27.47	30.55	58.02	74.00	-15.98	Peak	
2	2390.000	12.63	30.55	43.18	54.00	-10.82	AVG	
3	2423.8100	73.49	30.69	104.18	74.00	30.18	Peak	No limit
4 *	2423.8100	65.67	30.69	96.36	54.00	42.36	AVG	No limit

REMARKS:

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

Test Mode	TX N(HT40) Mode 2422 MHz	Polarization	Horizontal
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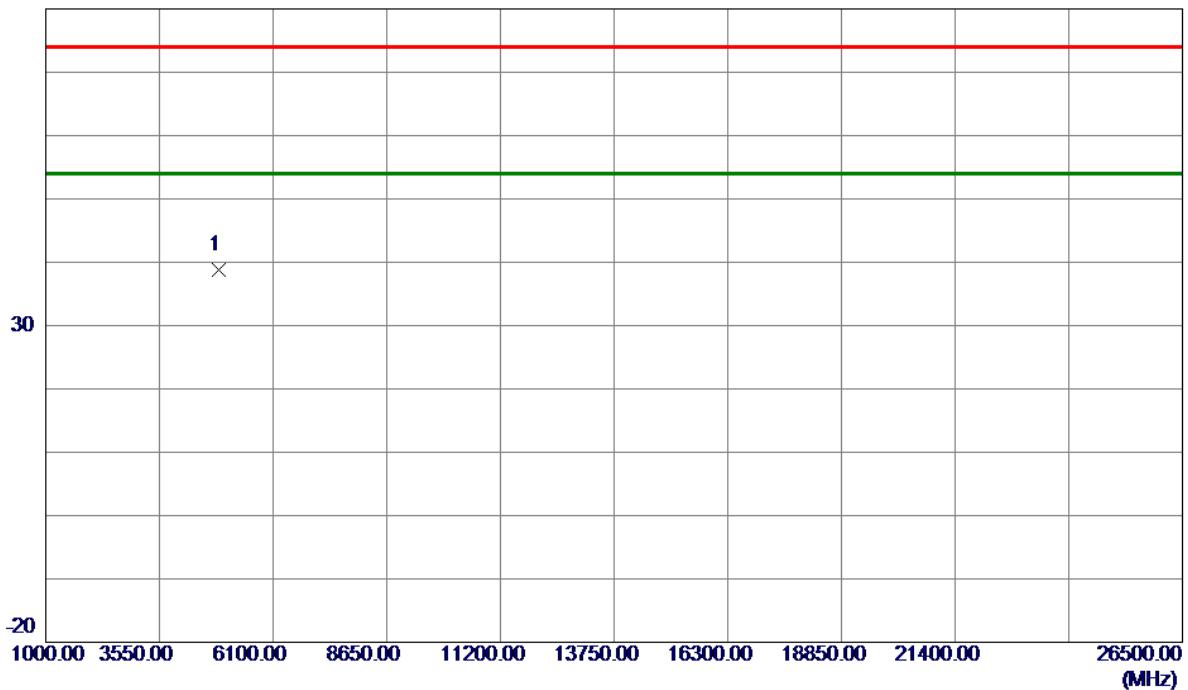


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dBuV/m	dB	dBuV/m	dB	Detector	Comment
1 *	4839.0250	51.89	-17.14	34.75	74.00	-39.25	Peak

REMARKS:

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

Test Mode	TX N(HT40) Mode 2437 MHz	Polarization	Vertical
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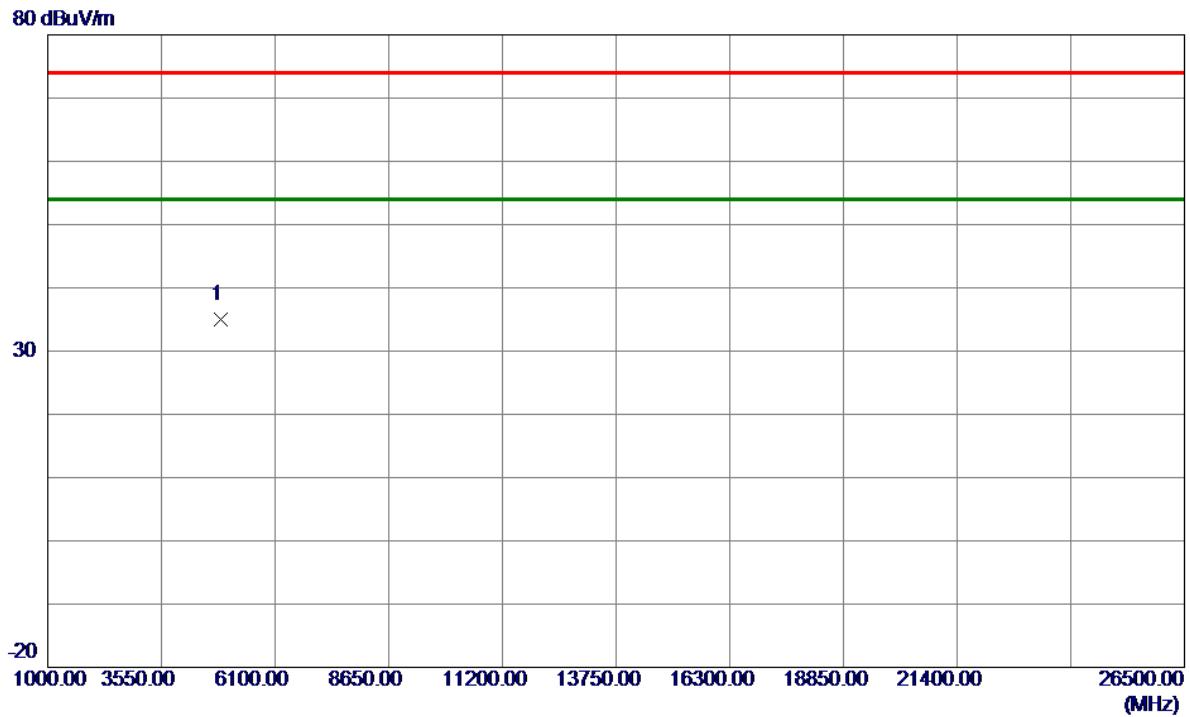
80 dBuV/m

No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1 *	4877.2750	55.87	-16.99	38.88	74.00	-35.12	Peak	

REMARKS:

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

Test Mode	TX N(HT40) Mode 2437 MHz	Polarization	Horizontal
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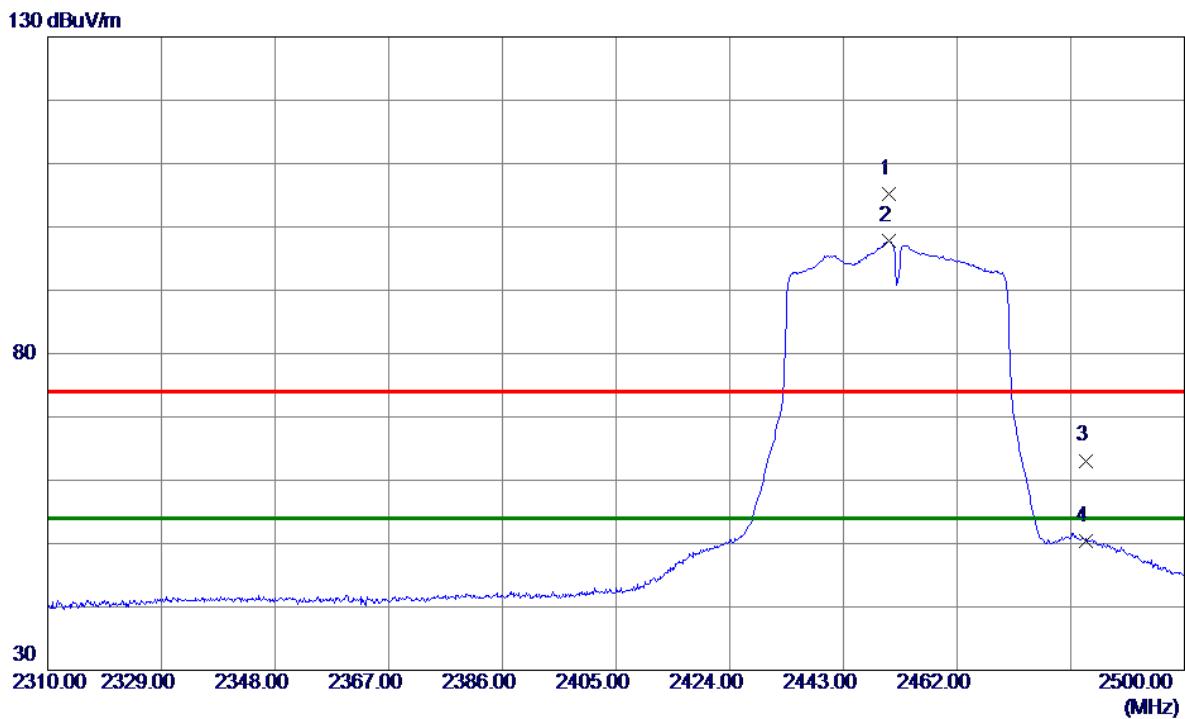


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dBuV/m	dB	dBuV/m	dB	Detector	Comment
1 *	4877.2750	52.04	-16.99	35.05	74.00	-38.95	Peak

REMARKS:

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

Test Mode	TX N(HT40) Mode 2452 MHz	Polarization	Vertical
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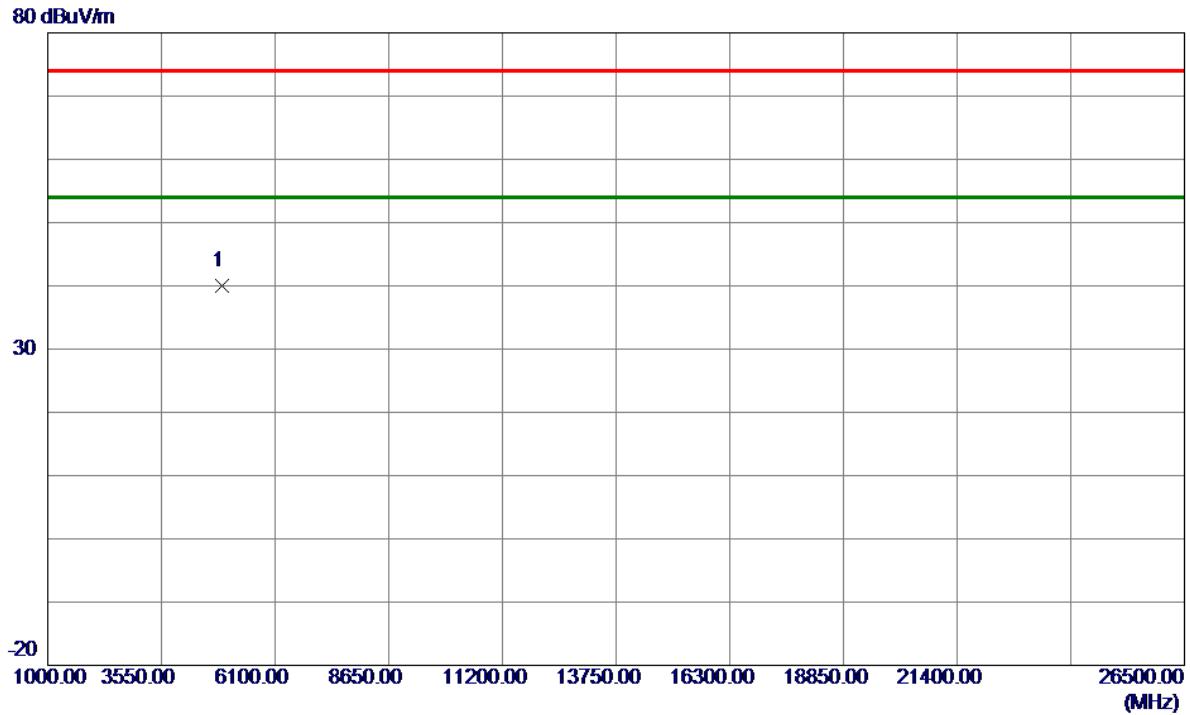


No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	ment	dBuV/m	dB		
1	2450.5049	74.39	30.80	105.19	74.00	31.19	Peak	No limit
2 *	2450.5049	67.05	30.80	97.85	54.00	43.85	AVG	No limit
3	2483.5000	32.16	30.94	63.10	74.00	-10.90	Peak	
4	2483.5000	19.47	30.94	50.41	54.00	-3.59	AVG	

REMARKS:

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

Test Mode	TX N(HT40) Mode 2452 MHz	Polarization	Vertical
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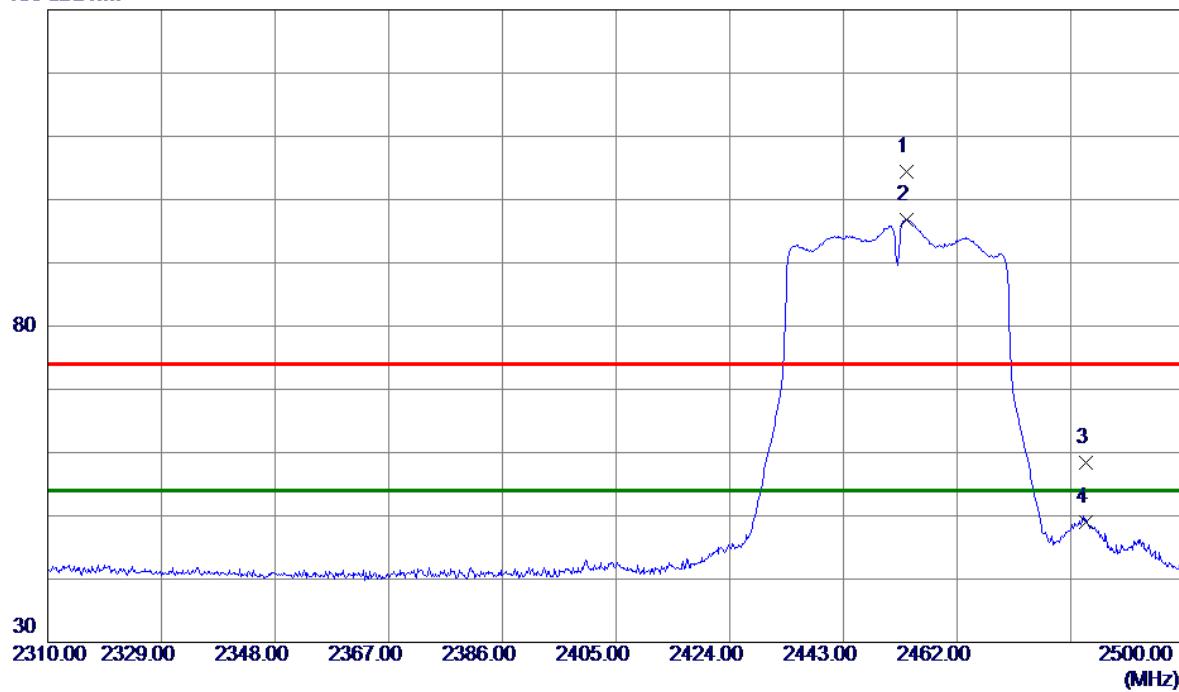
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dB μ V/m	dB	dB μ V/m	dB	Detector	Comment
1 *	4914.2500	56.88	-16.85	40.03	74.00	-33.97	Peak

REMARKS:

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

Test Mode	TX N(HT40) Mode 2452 MHz	Polarization	Horizontal
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130 dBuV/m

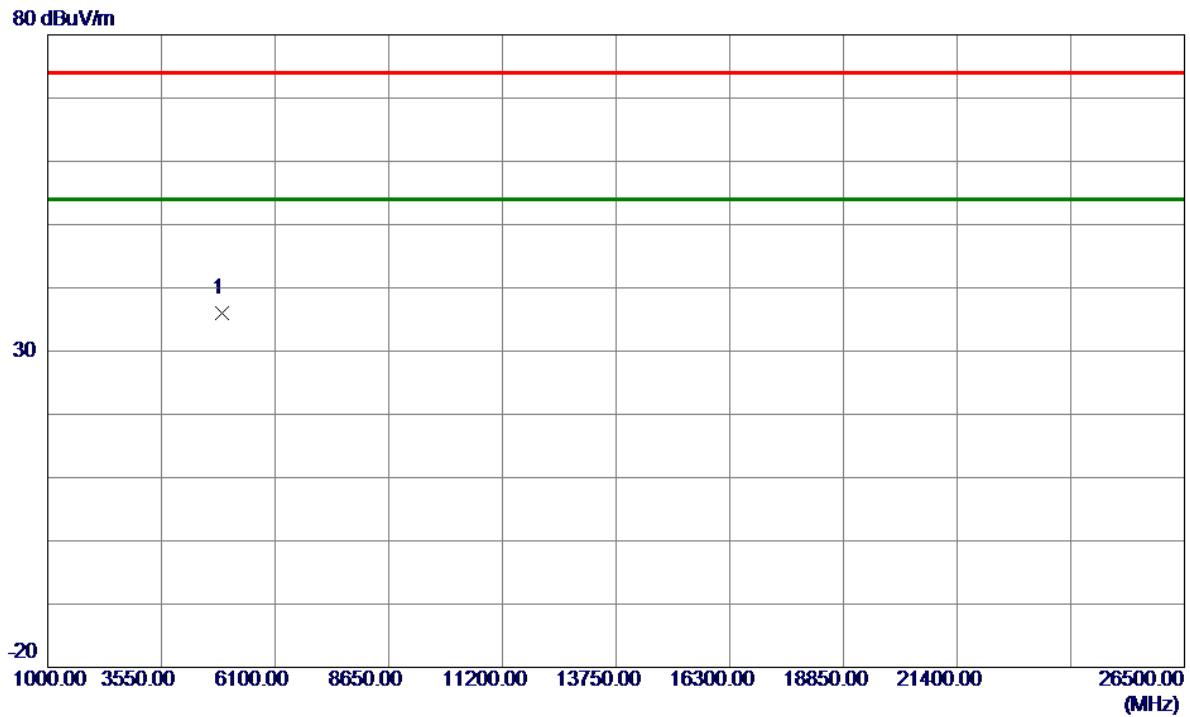


No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dB	Margin dB	Comment	
							Detector	
1	2453.5450	73.63	30.81	104.44	74.00	30.44	Peak	No limit
2 *	2453.5450	66.00	30.81	96.81	54.00	42.81	AVG	No limit
3	2483.5000	27.40	30.94	58.34	74.00	-15.66	Peak	
4	2483.5000	18.03	30.94	48.97	54.00	-5.03	AVG	

REMARKS:

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

Test Mode	TX N(HT40) Mode 2452 MHz	Polarization	Horizontal
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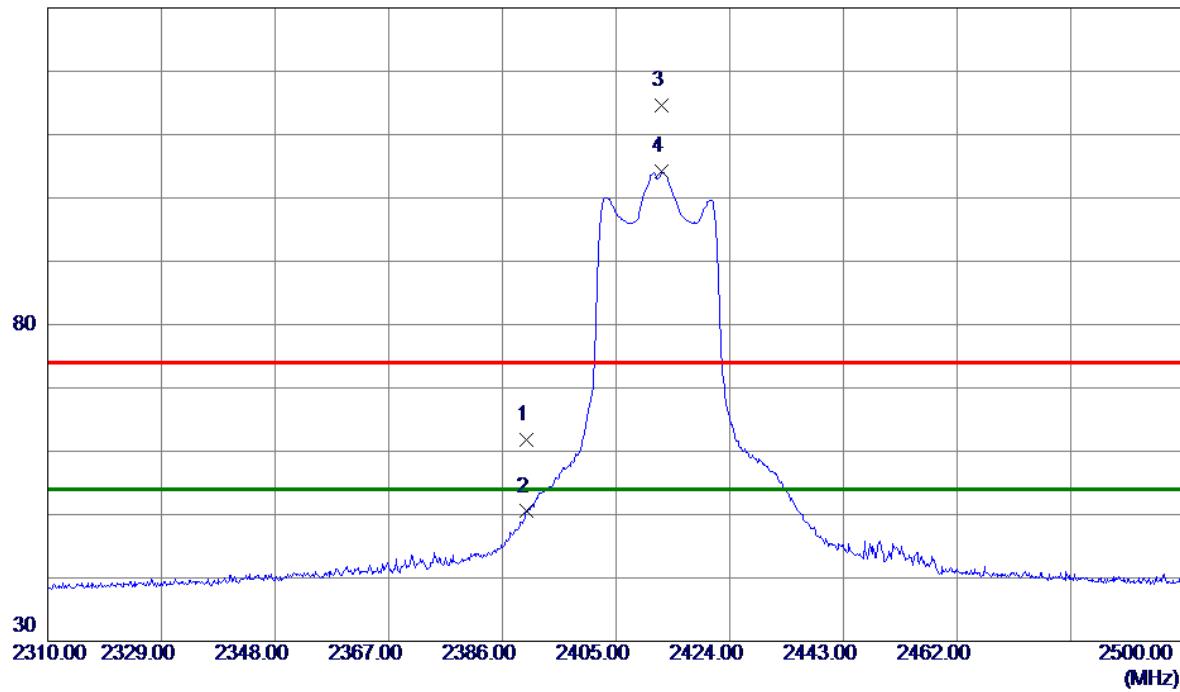
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dB μ V/m	dB	dB μ V/m	dB	Detector	Comment
1 *	4914.2500	52.88	-16.85	36.03	74.00	-37.97	Peak

REMARKS:

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

Test Mode	TX AX(HE20) Mode 2412 MHz	Polarization	Vertical
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130 dBuV/m

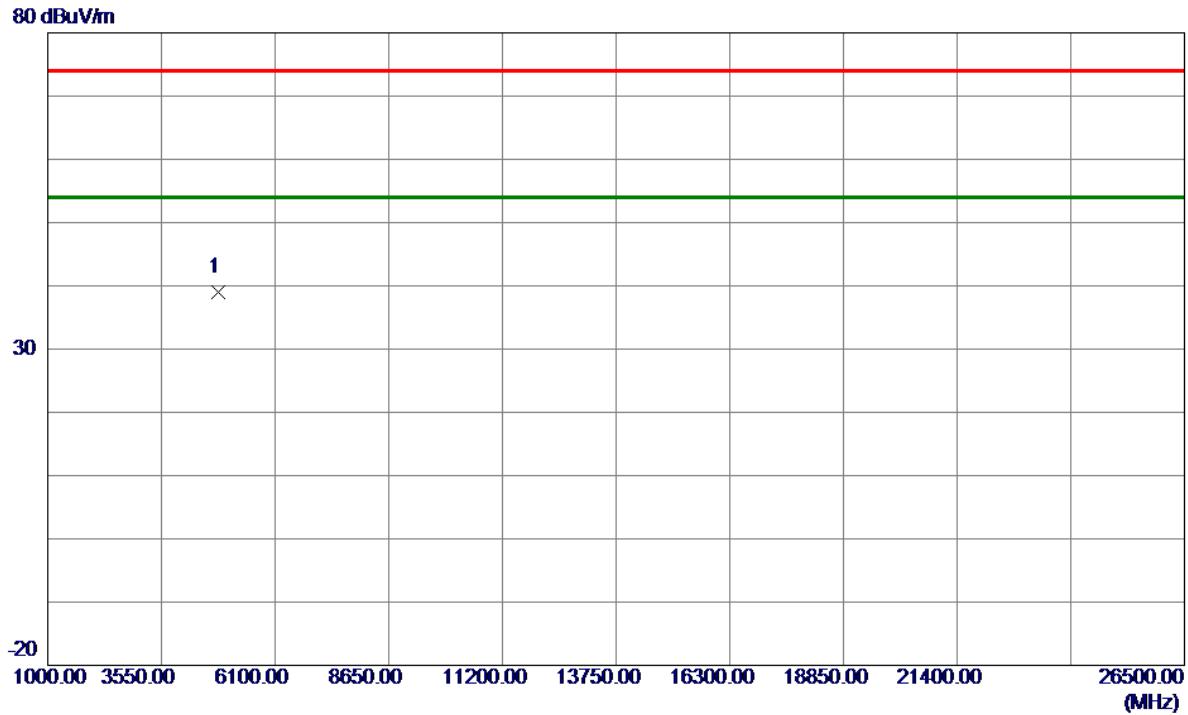


No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	ment	dBuV/m	dB		
1	2390.0000	31.17	30.55	61.72	74.00	-12.28	Peak	
2	2390.0000	19.95	30.55	50.50	54.00	-3.50	AVG	
3	2412.6950	83.89	30.64	114.53	74.00	40.53	Peak	No limit
4 *	2412.6950	73.54	30.64	104.18	54.00	50.18	AVG	No limit

REMARKS:

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

Test Mode	TX AX(HE20) Mode 2412 MHz	Polarization	Vertical
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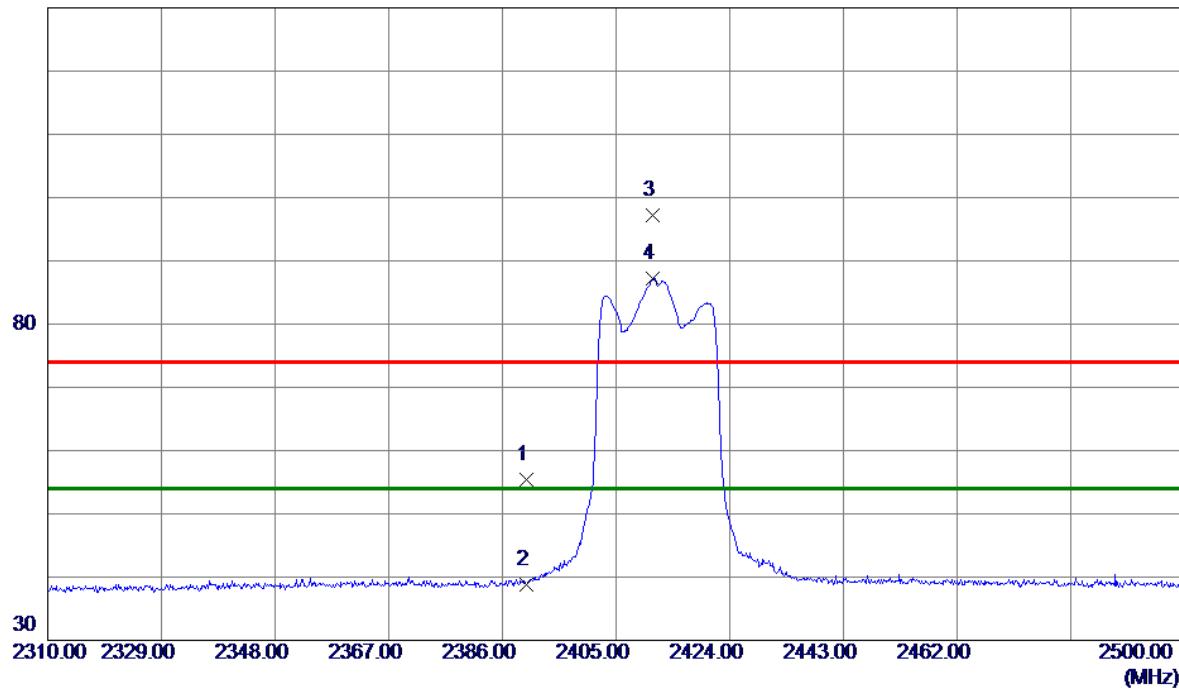
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dB μ V/m	dB	dB μ V/m	dB μ V/m	dB	Detector
1 *	4823.7250	56.27	-17.19	39.08	74.00	-34.92	Peak

REMARKS:

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

Test Mode	TX AX(HE20) Mode 2412 MHz	Polarization	Horizontal
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130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	24.82	30.55	55.37	74.00	-18.63	Peak	
2	2390.0000	8.21	30.55	38.76	54.00	-15.24	AVG	
3	2411.1750	66.61	30.64	97.25	74.00	23.25	Peak	No limit
4 *	2411.1750	56.56	30.64	87.20	54.00	33.20	AVG	No limit

REMARKS:

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

Test Mode	TX AX(HE20) Mode 2412 MHz	Polarization	Horizontal
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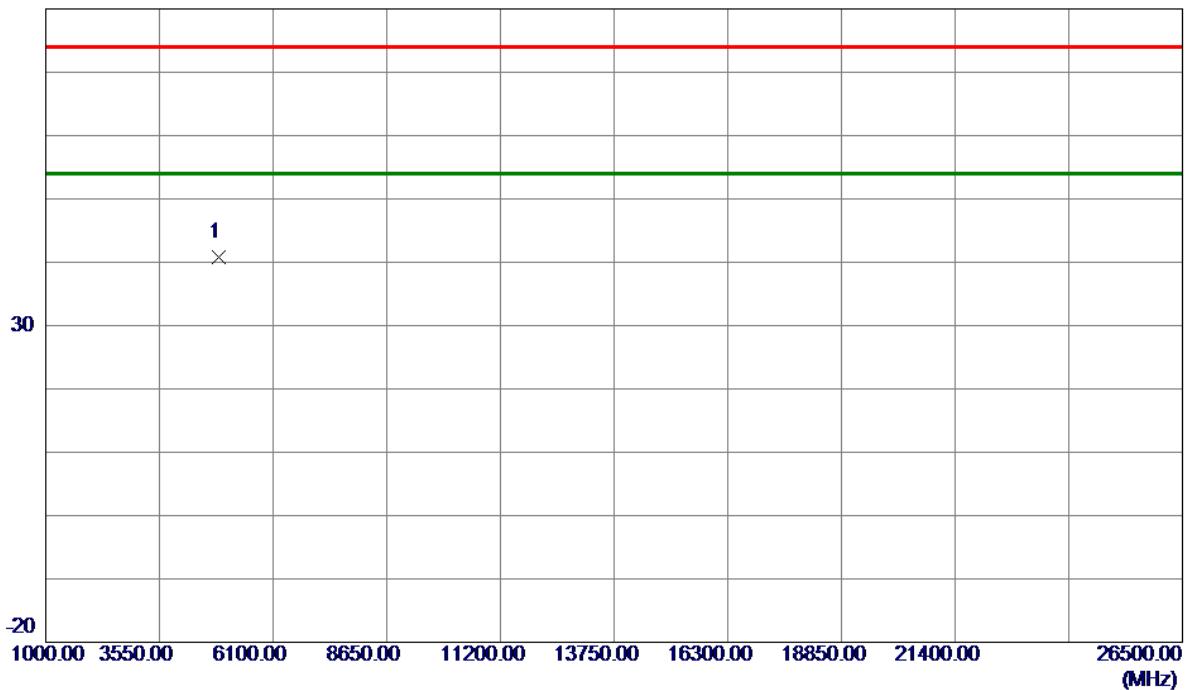


No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	d μ V/m	dB	d μ V/m	dB	Detector	Comment
1 *	4823.7250	52.82	-17.19	35.63	74.00	-38.37	Peak

REMARKS:

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

Test Mode	TX AX(HE20) Mode 2437 MHz	Polarization	Vertical
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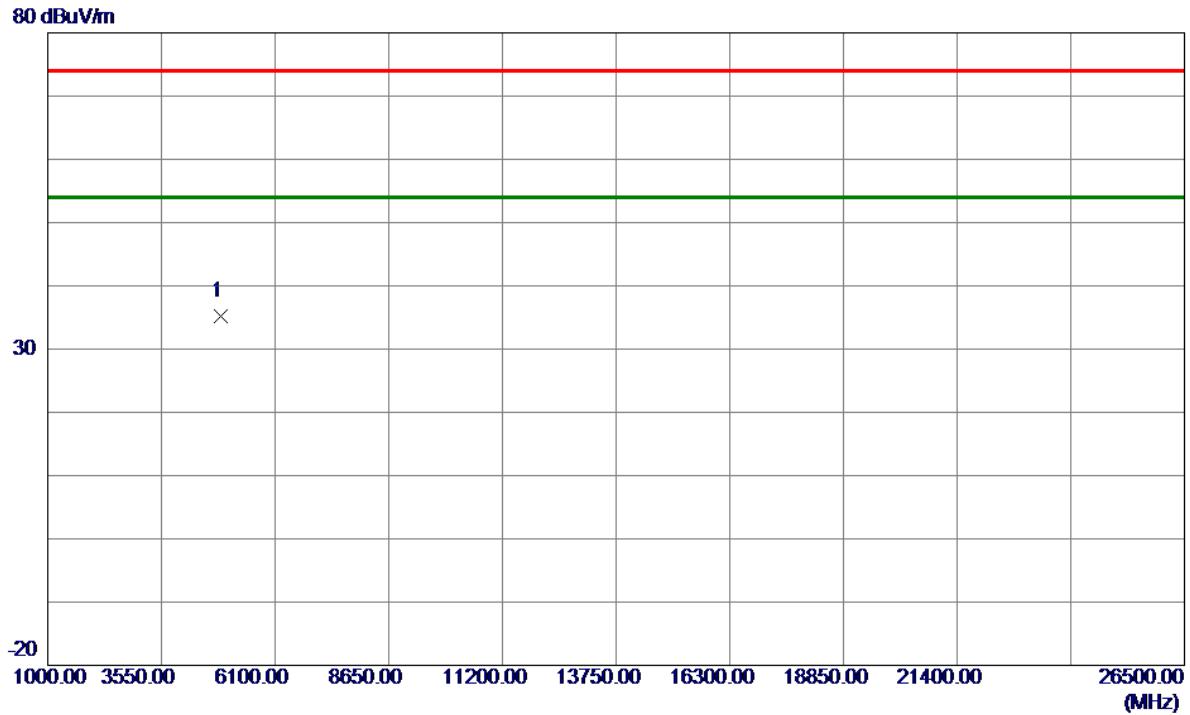
80 dBuV/m

No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1 *	4868.3500	57.74	-17.03	40.71	74.00	-33.29	Peak	

REMARKS:

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

Test Mode	TX AX(HE20) Mode 2437 MHz	Polarization	Horizontal
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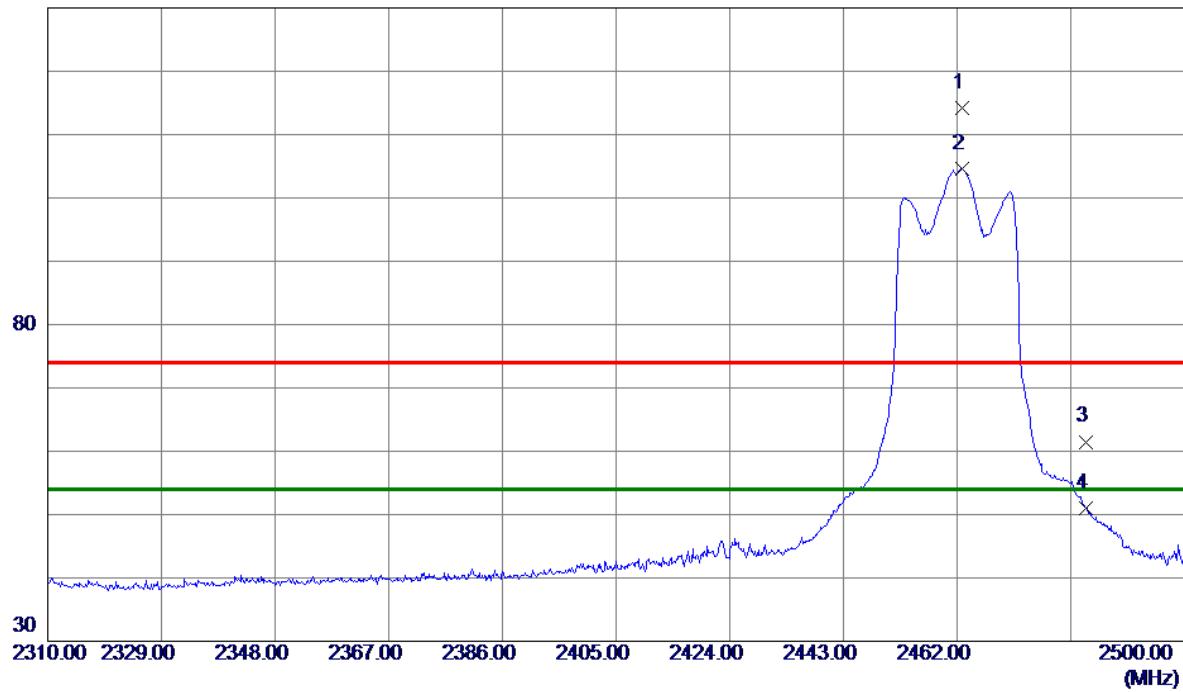
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dB			
1 *	4868.3500	52.29	-17.03	35.26	74.00	-38.74	Peak	

REMARKS:

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

Test Mode	TX AX(HE20) Mode 2462 MHz	Polarization	Vertical
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130 dBuV/m

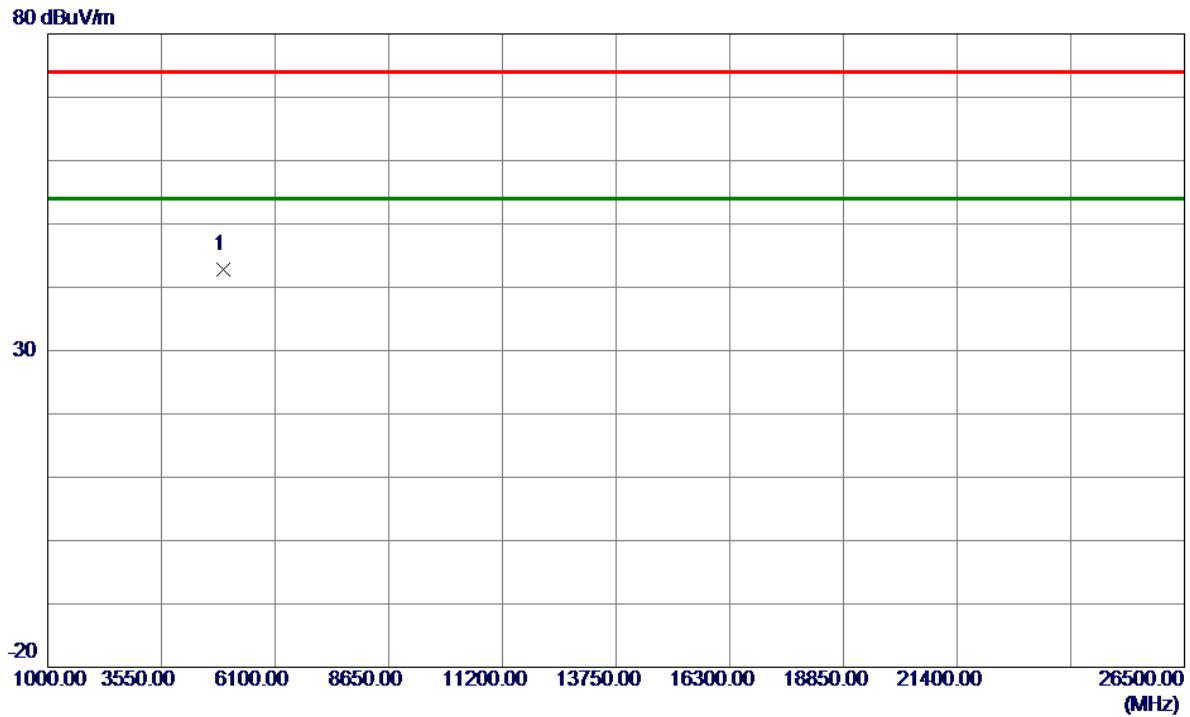


No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	ment	dBuV/m	dB		
1	2462.8550	83.37	30.85	114.22	74.00	40.22	Peak	No limit
2 *	2462.8550	73.80	30.85	104.65	54.00	50.65	AVG	No limit
3	2483.5000	30.56	30.94	61.50	74.00	-12.50	Peak	
4	2483.5000	19.97	30.94	50.91	54.00	-3.09	AVG	

REMARKS:

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

Test Mode	TX AX(HE20) Mode 2462 MHz	Polarization	Vertical
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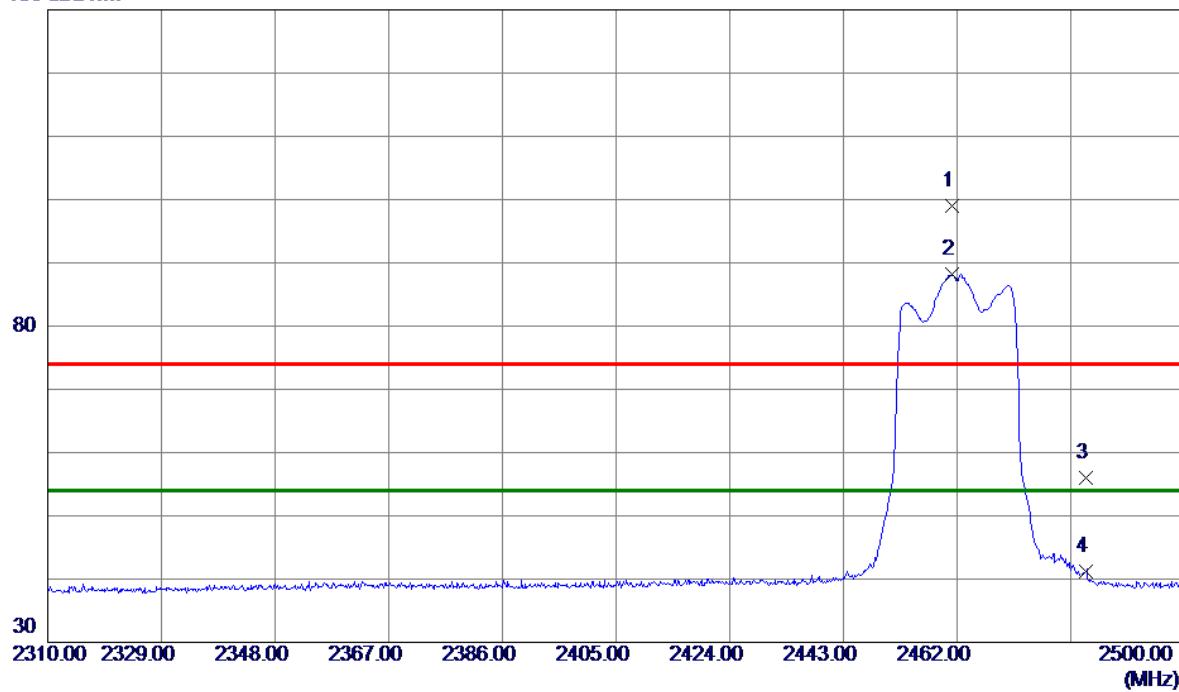
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dB μ V/m	dB	dB μ V/m	dB μ V/m	dB	Detector
1 *	4929.5500	59.66	-16.80	42.86	74.00	-31.14	Peak

REMARKS:

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

Test Mode	TX AX(HE20) Mode 2462 MHz	Polarization	Horizontal
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130 dBuV/m

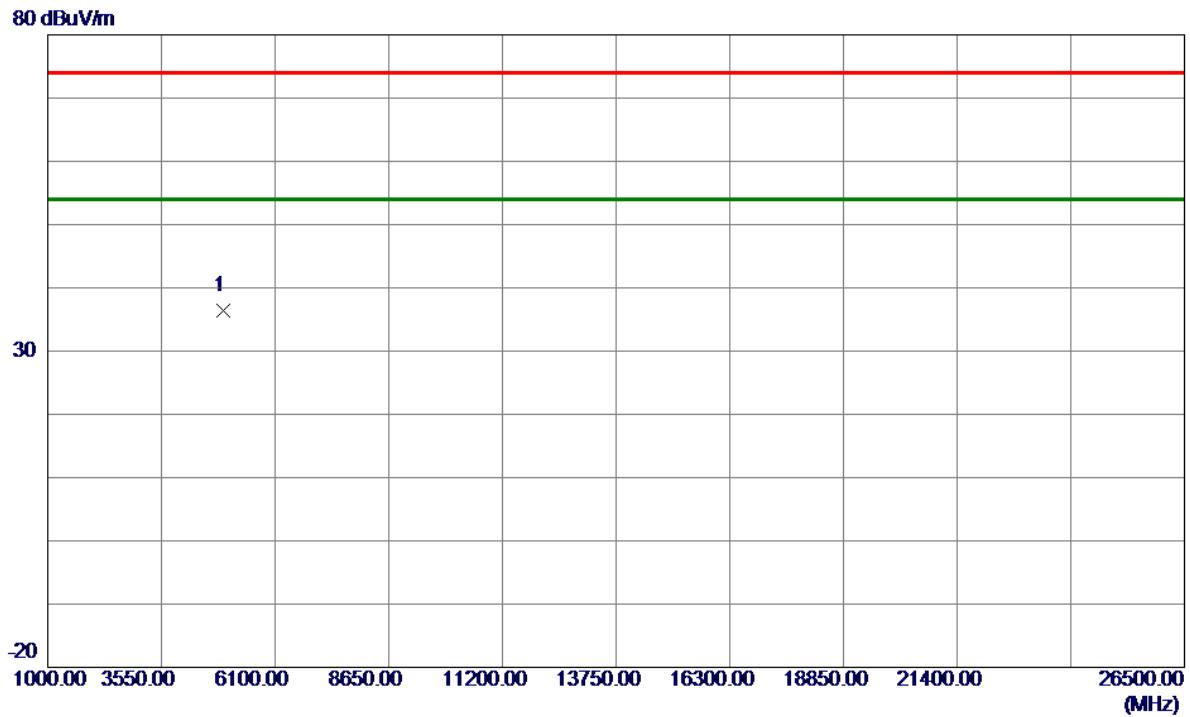


No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	ment	dBuV/m	dB		
1	2461.2400	68.11	30.85	98.96	74.00	24.96	Peak	No limit
2 *	2461.2400	57.27	30.85	88.12	54.00	34.12	AVG	No limit
3	2483.5000	25.07	30.94	56.01	74.00	-17.99	Peak	
4	2483.5000	10.32	30.94	41.26	54.00	-12.74	AVG	

REMARKS:

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

Test Mode	TX AX(HE20) Mode 2462 MHz	Polarization	Horizontal
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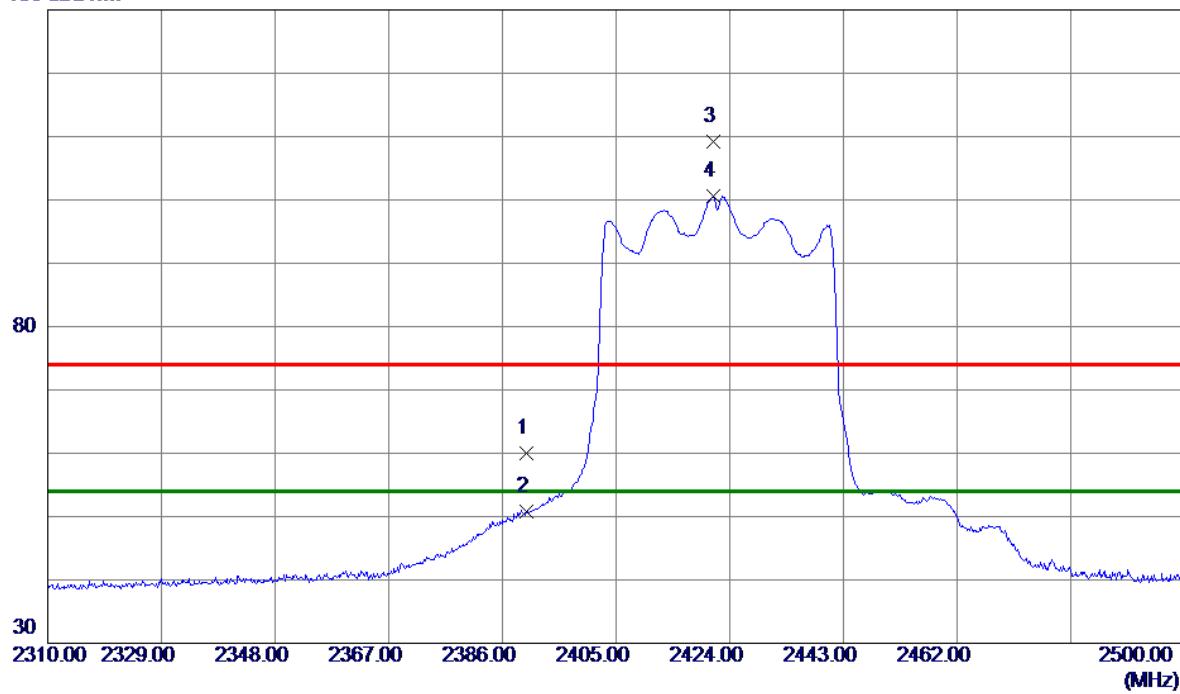
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dB μ V/m	dB	dB μ V/m	dB	Detector	Comment
1 *	4929.5500	53.20	-16.80	36.40	74.00	-37.60	Peak

REMARKS:

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

Test Mode	TX AX(HE40) Mode 2422 MHz	Polarization	Vertical
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130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dB	Margin dB	Detector		Comment
							Detector	Comment	
1	2390.000	29.45	30.55	60.00	74.00	-14.00	Peak		
2	2390.000	20.23	30.55	50.78	54.00	-3.22	AVG		
3	2421.2450	78.55	30.68	109.23	74.00	35.23	Peak	No limit	
4 *	2421.2450	69.89	30.68	100.57	54.00	46.57	AVG	No limit	

REMARKS:

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

Test Mode	TX AX(HE40) Mode 2422 MHz	Polarization	Vertical
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No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	
	MHz	dB μ V/m	dB	dB μ V/m	dB	Detector	Comment
1 *	4840.3000	56.23	-17.13	39.10	74.00	-34.90	Peak

REMARKS:

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