



FCC Radio Test Report

FCC ID: 2BH7FDL100

This report concerns: Original Grant

Project No. : 2501G003
Equipment : Smart Wi-Fi Door Lock
Brand Name : tp-link, tapo
Test Model : Tapo DL100
Series Model : DLW10
Applicant : TP-Link Systems Inc.
Address : 10 Mauchly, Irvine, CA 92618
Manufacturer : TP-Link Systems Inc.
Address : 10 Mauchly, Irvine, CA 92618
Date of Receipt : Jan. 06, 2025
Date of Test : Jan. 07, 2025 ~ Feb. 13, 2025
Issued Date : Mar. 14, 2025
Report Version : R00
Test Sample : Engineering Sample No.: DG20250106174 and DG20250106176 for radiated and AC power line conducted, DG20250106175 for others.
Standard(s) : FCC CFR Title 47, Part 15, Subpart C

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

Prepared by

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Declaration

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BTL's reports apply only to the specific samples tested under conditions. It is manufacturer's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** assumes no responsibility for the data provided by the customer, any statements, inferences or generalizations drawn by the customer or others from the reports issued by **BTL**.

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BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

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 used in determining the Pass/Fail results.

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REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-2-2501G003	R00	Original Report.	Mar. 14, 2025	Valid

1. APPLICABLE STANDARDS

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

ANSI C63.10-2013

The following reference test guidance is not within the scope of accreditation of A2LA:

KDB 558074 D01 15.247 Meas Guidance v05r02

2. 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.

2.1 TEST FACILITY

The test facilities used to collect the test data in this report:

For Radiated Emissions-30MHz to 1GHz item: Room 102 & Room 702, Building 3, No.9, Jinshagang 1st Road, Dalang Town, Dongguan City, Guangdong People's Republic of China.

For other items: 1-2/F, 4/F, Building A, 1-2/F, Building B, 3/F, Building C, No.3, Jinshagang 1st Road, Dalang Town, Dongguan City, Guangdong People's Republic of China.

BTL's Registration Number for FCC: 747969

BTL's Designation Number for FCC: CN1377

2.2 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 95.45% confidence level (based on a coverage factor (k=2))

The BTL measurement uncertainty as below table:

A. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	$U_{\text{(dB)}}$
DG-C02	CISPR	150kHz ~ 30MHz	2.88

B. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	$U_{\text{(dB)}}$
DG-CB01	CISPR	9kHz ~ 30MHz	2.36

Test Site	Method	Measurement Frequency Range	Ant. H / V	$U_{\text{(dB)}}$
DG-CB17 (3m)	CISPR	30MHz ~ 200MHz	V	4.22
		30MHz ~ 200MHz	H	3.46
		200MHz ~ 1,000MHz	V	5.02
		200MHz ~ 1,000MHz	H	4.22

Test Site	Method	Measurement Frequency Range	$U_{\text{(dB)}}$
DG-CB03 (3m)	CISPR	1GHz ~ 6GHz	4.08
		6GHz ~ 18GHz	4.62

Test Site	Method	Measurement Frequency Range	$U_{\text{(dB)}}$
DG-CB03 (1m)	CISPR	18 ~ 26.5 GHz	3.36

C. Other Measurement:

Test Item	Uncertainty
Bandwidth	0.90 %
Maximum Output Power	1.3 dB
Conducted Spurious Emission	1.9 dB
Power Spectral Density	1.4 dB
Temperature	0.8 °C
Humidity	2.2 %

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

2.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By	Test Date
AC Power Line Conducted Emissions	22°C	50%	AC 120V/60Hz	Hayden Chen	Feb. 13, 2025
Radiated Emissions-9kHz to 30 MHz	26°C	47%	AC 120V/60Hz	Hayden Chen	Jan. 16, 2025
Radiated Emissions-30MHz to 1000MHz	23°C	41%	AC 120V/60Hz	Calvin Wen	Feb. 11, 2025
Radiated Emissions-Above 1000MHz	23°C	42%	AC 120V/60Hz	Jensen Zhou	Jan. 16, 2025
	23-24°C	42-48%	AC 120V/60Hz	Jensen Zhou Drew Tan	Jan. 19, 2025- Jan. 23, 2025
Bandwidth	23°C	51%	AC 120V/60Hz	Steve Zhou	Jan. 20, 2025
Maximum Output Power	23-25°C	48-50%	AC 120V/60Hz	Meers Zhang	Jan. 13, 2025- Feb. 11, 2025
Conducted Spurious Emissions	23°C	51%	AC 120V/60Hz	Steve Zhou	Jan. 20, 2025
Power Spectral Density	23°C	51%	AC 120V/60Hz	Steve Zhou	Jan. 20, 2025

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	Smart Wi-Fi Door Lock
Brand Name	tp-link, tapo
Test Model	Tapo DL100
Series Model	DLW10
Model Difference(s)	Only differ in model name.
Software Version	1.X
Hardware Version	1.0
Power Source	1# Battery supplied. 2# DC Voltage supplied from AC adapter (support unit).
Power Rating	1# 4 x 1.5V SIZE AA/LR6 2# DC 5V—1A
Operation Frequency	2412 MHz ~ 2462 MHz
Modulation Type	IEEE 802.11b: DSSS IEEE 802.11g: OFDM IEEE 802.11n: OFDM
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 72.2 Mbps
Maximum Output Power	IEEE 802.11b: 20.02 dBm (0.1005 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)							
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.	Manufacturer	P/N	Antenna Type	Connector	Gain (dBi)
1	TP-Link Systems Inc.	6035500223	PIFA	N/A	0.5

3.2 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 B Mode Channel 01/02/06/10/11
Mode 5	TX G Mode Channel 01/02/06/10/11
Mode 6	TX N(HT20) Mode Channel 01/02/06/10/11
Mode 7	TX B 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 B Mode Channel 06

Radiated emissions test - Below 1GHz	
Final Test Mode	Description
Mode 7	TX B Mode Channel 06

Radiated emissions test- Above 1GHz	
Final Test Mode	Description
Mode 4	TX B Mode Channel 01/02/06/10/11
Mode 5	TX G Mode Channel 01/02/06/10/11
Mode 6	TX N(HT20) Mode Channel 01/02/06/10/11

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

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 B 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.
- (4) For radiated emission Harmonic 18-26.5GHz test, only tested the worst case and recorded.
- (5) For radiated emission: The test data of vertical and horizontal have been re-evaluated, the worst case is recorded in the test report.

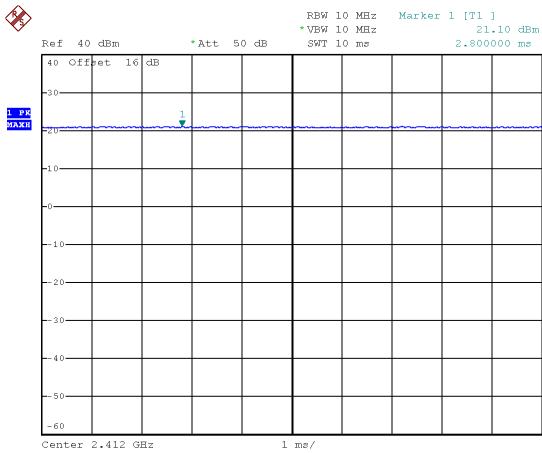
3.3 PARAMETERS OF TEST SOFTWARE

Test Software Version	Ameba_1-N_MP_ImageTool_v2.5.26		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	103	103	103
IEEE 802.11g	81	98	89
IEEE 802.11n(HT20)	78	96	84

3.4 DUTY CYCLE

If duty cycle is $\geq 98\%$, duty factor is not required.
If duty cycle is $< 98\%$, duty factor shall be considered.
The output power = measured power + duty factor.

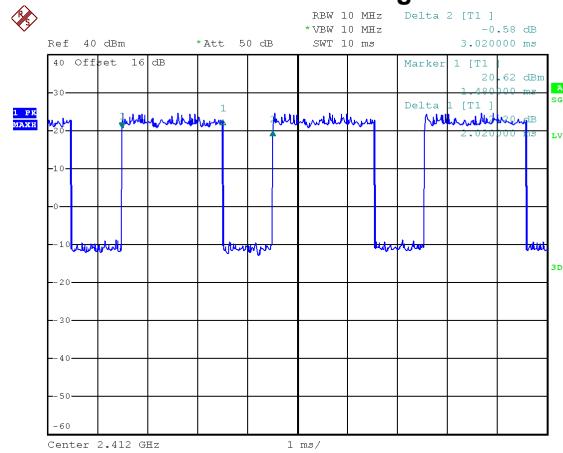
IEEE 802.11b



Date: 20.JAN.2025 19:16:55

Duty cycle = $1000.000 \text{ ms} / 1000.000 \text{ ms} = 100\%$
Duty Factor = $10 \log(1/\text{Duty cycle}) = 0.00$

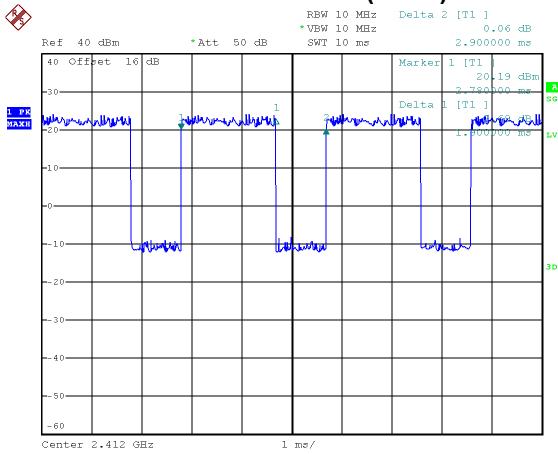
IEEE 802.11g



Date: 20.JAN.2025 19:17:39

Duty cycle = $2.020 \text{ ms} / 3.020 \text{ ms} = 66.89\%$
Duty Factor = $10 \log(1/\text{Duty cycle}) = 1.75$

IEEE 802.11n(HT20)



Date: 20.JAN.2025 19:18:14

Duty cycle = $1.900 \text{ ms} / 2.900 \text{ ms} = 65.52\%$
Duty Factor = $10 \log(1/\text{Duty cycle}) = 1.84$

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 1 kHz.

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 495 Hz.

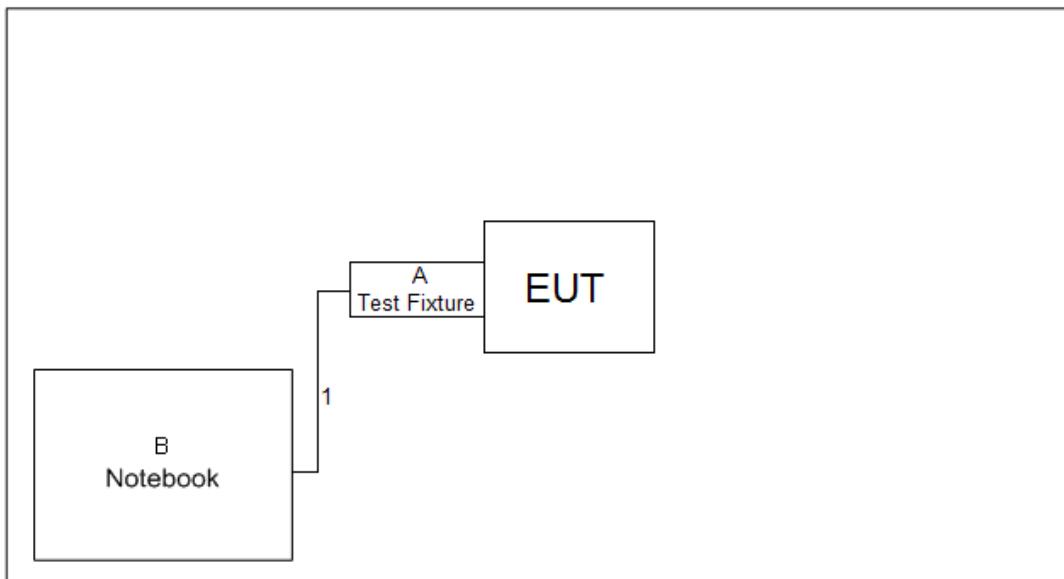
For IEEE 802.11n(HT20):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 526 Hz.

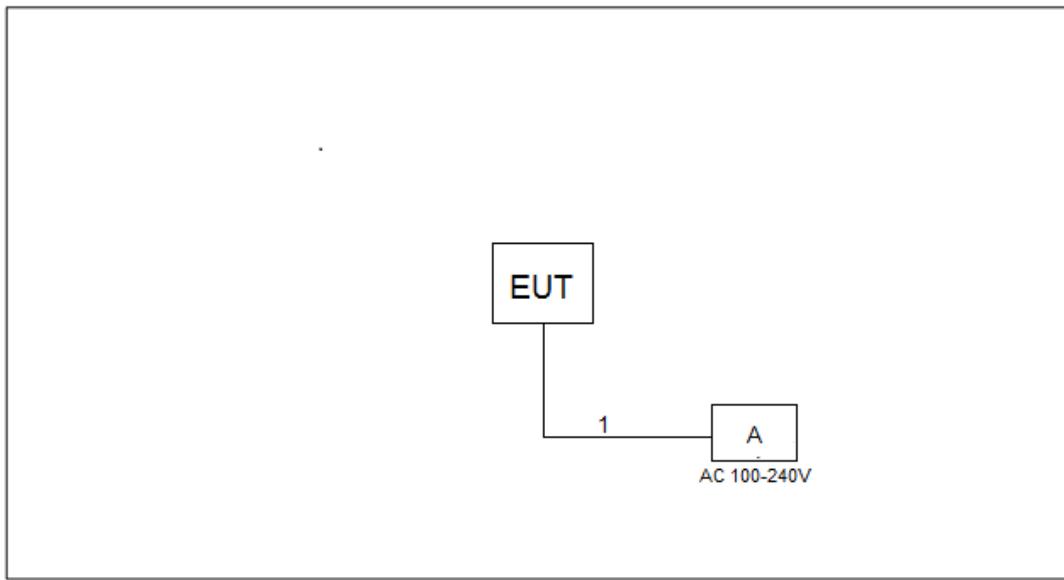
Remarks: The video bandwidth of the spectrum analyzer was set to 1 kHz during the test.

3.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

For Radiated Emissions-1GHz to 18GHz item:



For other items:



3.6 SUPPORT UNITS

For Radiated Emissions-1GHz to 18GHz item:

Item	Equipment	Brand	Model No.	Series No.
A	Test Fixture	N/A	N/A	N/A
B	Notebook	Huawei	NbDE-WFH9	N/A

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	Data Cable	NO	NO	1m

For other items:

Item	Equipment	Brand	Model No.	Series No.
A	Adapter	HUAWEI	HW-200325CP3	N/A

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

3.7 CUSTOMER INFORMATION DESCRIPTION

- 1) The antenna gain is provided by the manufacturer.
- 2) Except for AC power line conducted emissions and radiated emissions, the results of all test items include cable losses. Part of the cable losses (0.5dB) are provided by the manufacturer, while the other parts of the cable losses are provided by the testing laboratory.

4. AC POWER LINE CONDUCTED EMISSIONS

4.1 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) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor (if use)
Margin Level = Measurement Value – Limit Value

4.2 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.

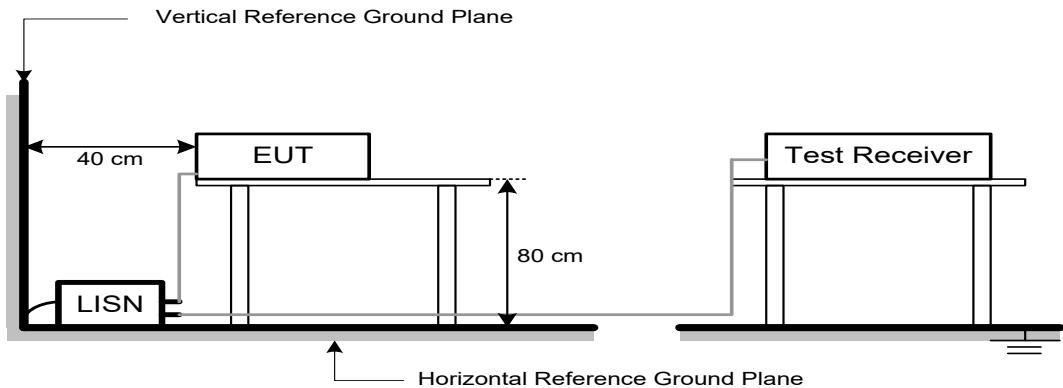
The following table is the setting of the receiver:

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

4.3 DEVIATION FROM TEST STANDARD

No deviation.

4.4 TEST SETUP



4.5 EUT OPERATION CONDITIONS

EUT was programmed to be in continuously transmitting mode.

4.6 TEST RESULTS

Please refer to the APPENDIX A.

5. RADIATED EMISSIONS

5.1 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)	Band edge/ Harmonic at 3m (dB μ V/m)		Harmonic at 1m (dB μ V/m)	
	Peak	Average	Peak	Average
Above 1000	74	54	83.5 (Note 5)	63.5 (Note 5)

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 μ V/m)=20log Emission level (uV/m).
- (4) The test result calculated as following:

Measurement Value = Reading Level + Correct Factor

Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)

Margin Level = Measurement Value - Limit Value

(5)

$$FS_{\text{limit}} = FS_{\text{max}} - 20 \log \left(\frac{d_{\text{limit}}}{d_{\text{measure}}} \right)$$

20log (d_{limit}/d_{measure})=20log (3/1)=9.5 dB.

FS_{limit}: Harmonic at 3m Peak and Average limit.

FS_{max}: Harmonic at 1m Peak and Average Maximum value.

d_{limit}: Harmonic at 3m test distance.

d_{measure}: Harmonic Actual test distance.

5.2 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 1m 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

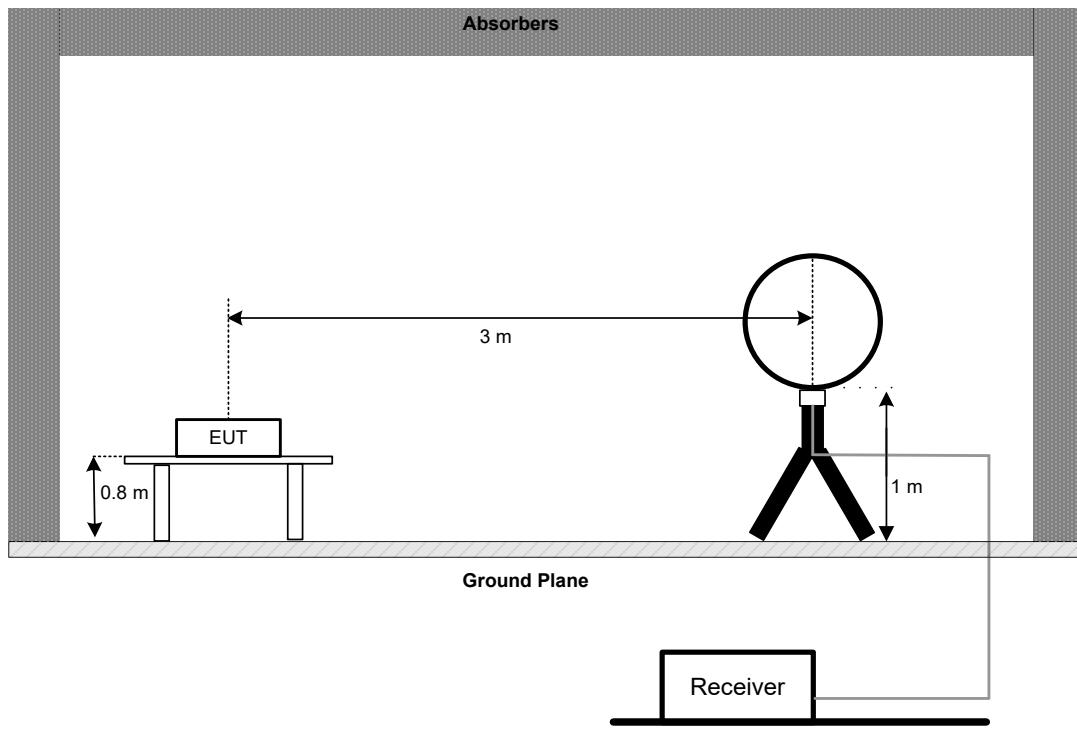
Receiver Parameters	Setting
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector
Start ~ Stop Frequency	30 MHz~1000 MHz for QP detector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

5.3 DEVIATION FROM TEST STANDARD

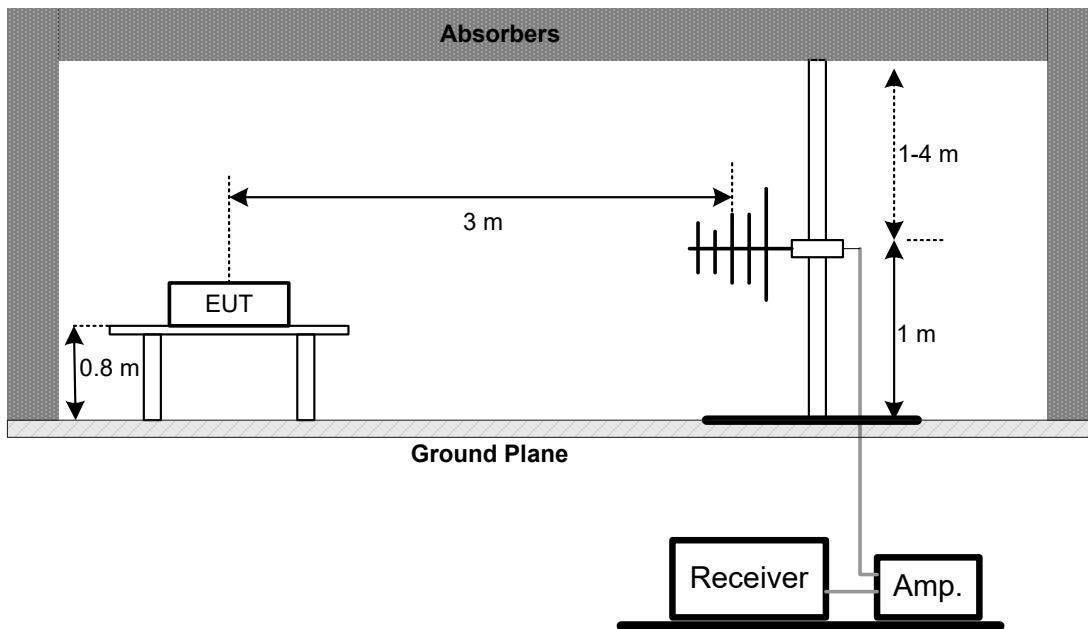
No deviation.

5.4 TEST SETUP

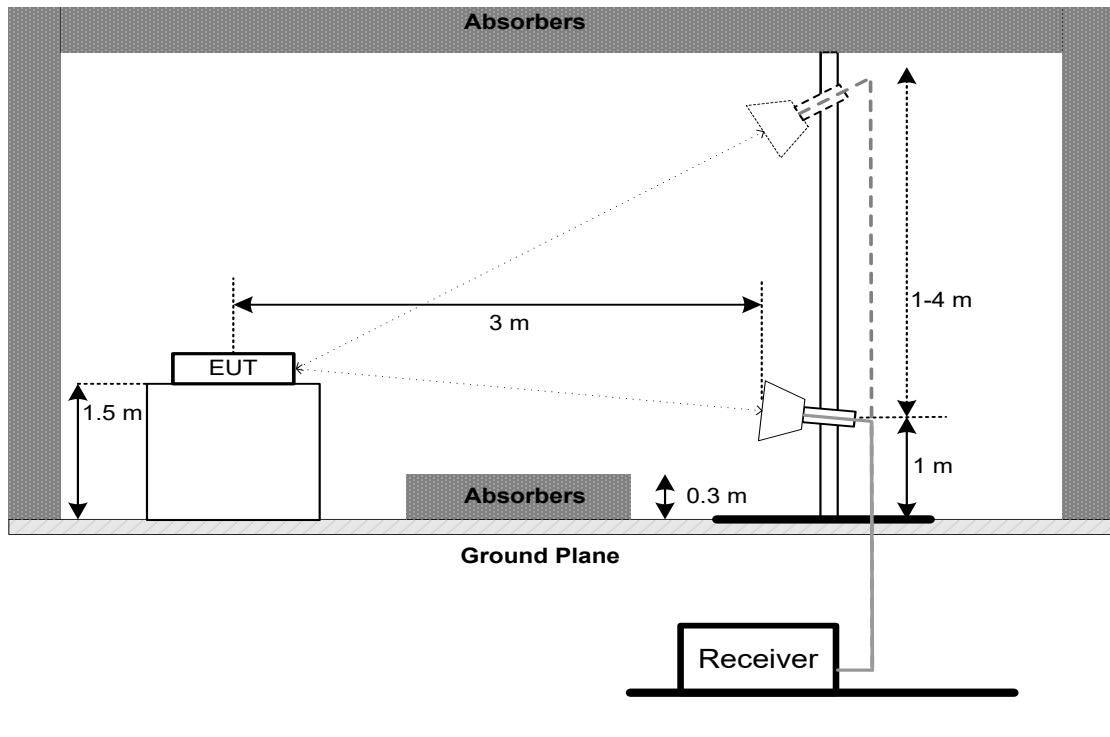
9 kHz to 30 MHz



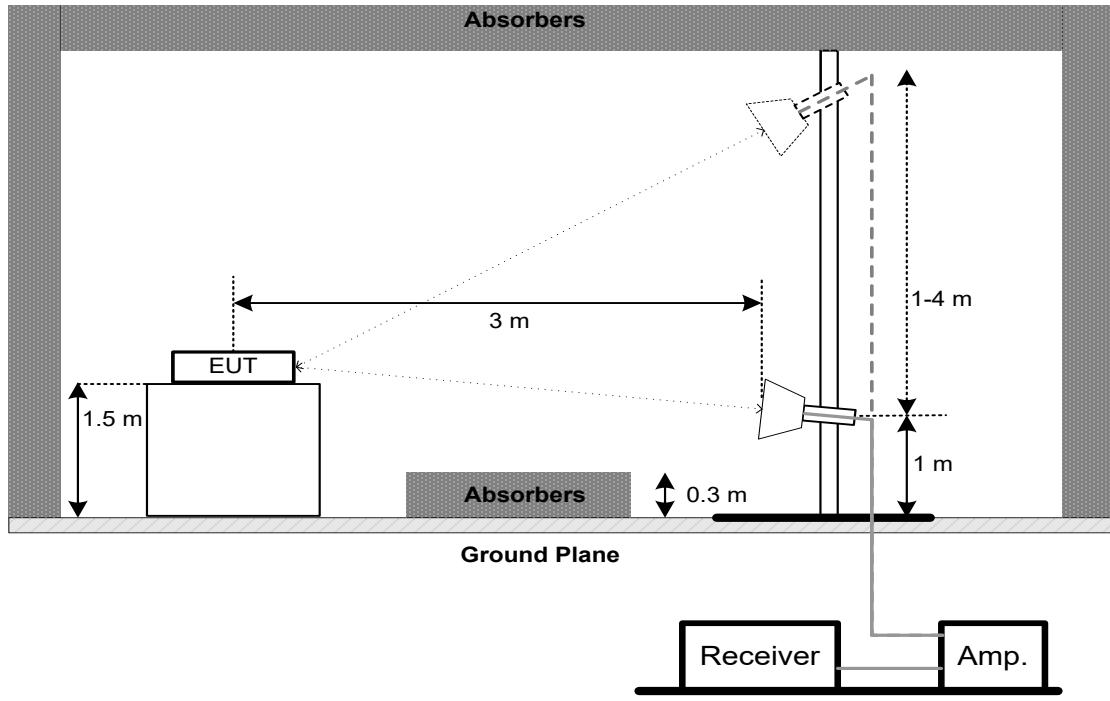
30 MHz to 1 GHz

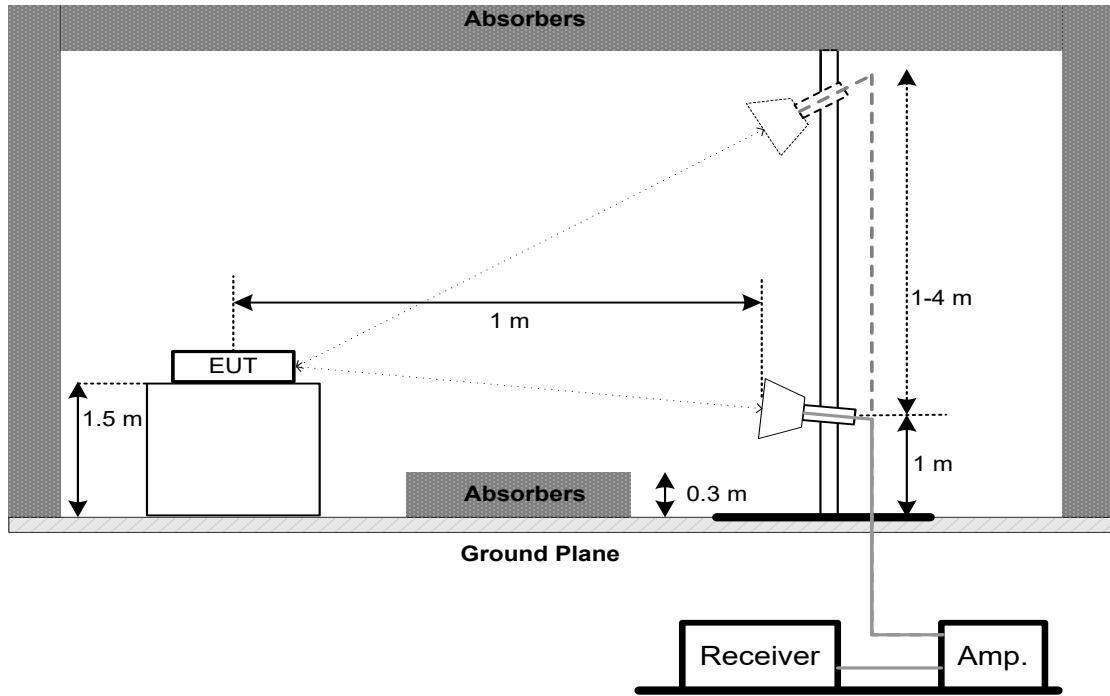


**Above 1 GHz
Band edge**



Harmonic(1 GHz to 18 GHz)



Harmonic(18 GHz to 26.5 GHz)**5.5 EUT OPERATION CONDITIONS**

The EUT was programmed to be in continuously transmitting mode.

5.6 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.

5.7 TEST RESULTS - 30 MHZ TO 1000 MHZ

Please refer to the APPENDIX C.

5.8 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.

6. BANDWIDTH

6.1 LIMIT

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

6.2 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

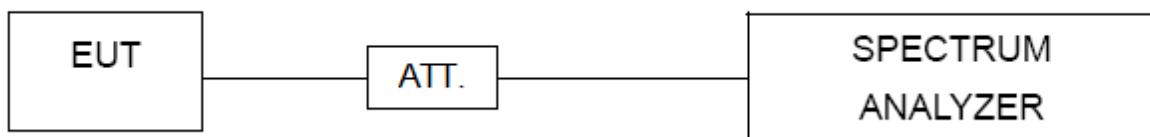
For 99% Emission Bandwidth:

Spectrum Parameters	Setting
Span Frequency	Between 1.5 times and 5.0 times the OBW
RBW	300 kHz
VBW	1 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 E.

7. MAXIMUM OUTPUT POWER

7.1 LIMIT

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

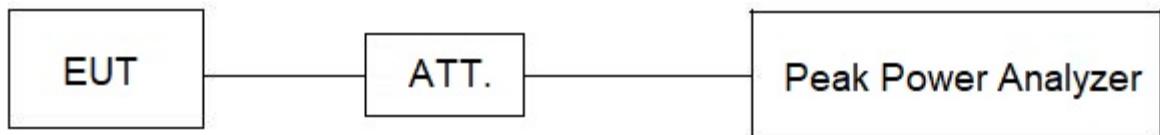
7.2 TEST PROCEDURE

- 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 11.9.2.3.1 of ANSI C63.10-2013.

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 F.

8. CONDUCTED SPURIOUS EMISSIONS

8.1 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.

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:

For Reference Level:

Spectrum Parameters	Setting
Span Frequency	≥ 1.5 times the bandwidth.
RBW	100 kHz
VBW	300 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

For Emission Level:

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

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 G.

9. POWER SPECTRAL DENSITY

9.1 LIMIT

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

9.2 TEST PROCEDURE

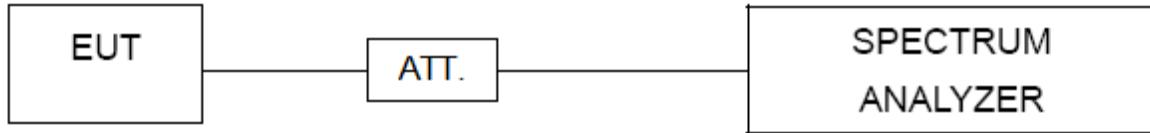
- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- The following table is the setting of the spectrum analyzer:

Spectrum Parameters	Setting
Span Frequency	1.5 times the DTS bandwidth
RBW	3 kHz
VBW	10 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

9.3 DEVIATION FROM STANDARD

No deviation.

9.4 TEST SETUP



9.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

9.6 TEST RESULTS

Please refer to the APPENDIX H.

10. 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	Dec. 06, 2025
2	TWO-LINE V-NETWORK	R&S	ENV216	101447	Dec. 06, 2025
3	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
4	Cable	N/A	SFT205-NMNM-9M -001	9M	Nov. 11, 2025
5	643 Shield Room	ETS	6*4*3	N/A	N/A

Radiated Emissions - 9 kHz to 30 MHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Active Loop Antenna	Schwarzbeck	FMZB 1513-60B	1513-60 B-034	Mar. 30, 2025
2	MXE EMI Receiver	Keysight	N9038A	MY56400091	Dec. 06, 2025
3	Cable	N/A	RW4950-3.8A-NMS M-1.5	N/A	Nov. 12, 2025
4	Cable	N/A	LMR400-NMNM-8 M	N/A	Nov. 12, 2025
5	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
6	966 Chamber room	ETS	9*6*6	N/A	May 16, 2025

Radiated Emissions - 30 MHz to 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	1587	Apr. 25, 2025
2	Attenuator	EMC INSTRUMENT	EMCI-N-6-06	AT-06010	Apr. 25, 2025
3	Preamplifier	EMC INSTRUMENT	EMC001330	980865	Oct. 29, 2025
4	Cable	RegalWay	LMR400-NMNM-2. 5m	N/A	Jan. 07, 2026
5	Cable	RegalWay	LMR400-NMNM-7 m	N/A	Jan. 07, 2026
6	Cable	RegalWay	LMR400-NMNM-3 m	N/A	Jan. 07, 2026
7	Receiver	Agilent	N9038A	MY52130039	Jan. 10, 2026
8	Multi-Device Controller	ETS-Lindgren	N/A	N/A	N/A
9	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
10	966 Chamber room	ETS	9*6*6	N/A	Jan. 02, 2026

Radiated Emissions - 1 GHz-18GHz

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Receiver	Agilent	N9038A	MY52130039	Jan. 10, 2026
2	Preamplifier	EMC INSTRUMENT	EMC118A45SE	980878	Nov. 25, 2025
3	Double Ridged Guide Antenna	ETS	3115	75789	Jun. 15, 2025
4	Cable	RegalWay	RWLP50-4.0A-SMS M-12.5M	N/A	Jul. 03, 2025
5	Cable	RegalWay	RWLP50-4.0A-NM RASM-2.5M	N/A	Jul. 03, 2025
6	Cable	RegalWay	RWLP50-4.0A-NM RASMRA-0.8M	N/A	Jul. 03, 2025
7	966 Chamber room	CM	9*6*6	N/A	Dec. 28, 2025
8	Attenuator	Talent Microwave	TA10A2-S-18	N/A	N/A
9	Filter	STI	STI15-9912	N/A	May 31, 2025
10	Positioning Controller	MF	MF-7802	N/A	N/A
11	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Radiated Emissions - Above 18 GHz

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	MXA Signal Analyzer	KEYSIGHT	N9020B	MY63430227	Oct. 29, 2025
2	Preamplifier	EMC INSTRUMENT	EMC184045SE	980905	Oct. 29, 2025
3	Cable	RegalWay	RWLP50-2.6A-2.92 M2.92M-1.1M	N/A	Jul. 25, 2025
4	Cable	Tonscend	HF160-KMKM-3M	N/A	Jul. 25, 2025
5	Broad-Band Horn Antenna	Schwarzbeck	BBHA9170(3m)	9170-319	Jun. 16, 2025
6	966 Chamber room	CM	9*6*6	N/A	Dec. 28, 2025
7	Positioning Controller	MF	MF-7802	N/A	N/A
8	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Bandwidth & Conducted Spurious Emissions & Power Spectral Density

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP38	100852	May 31, 2025
2	Measurement Software	BTL	BTL Conducted Test	N/A	N/A
3	Isolation attenuator	Z-Link	ASMA-16-18-2W	N/A	N/A

Maximum Output Power

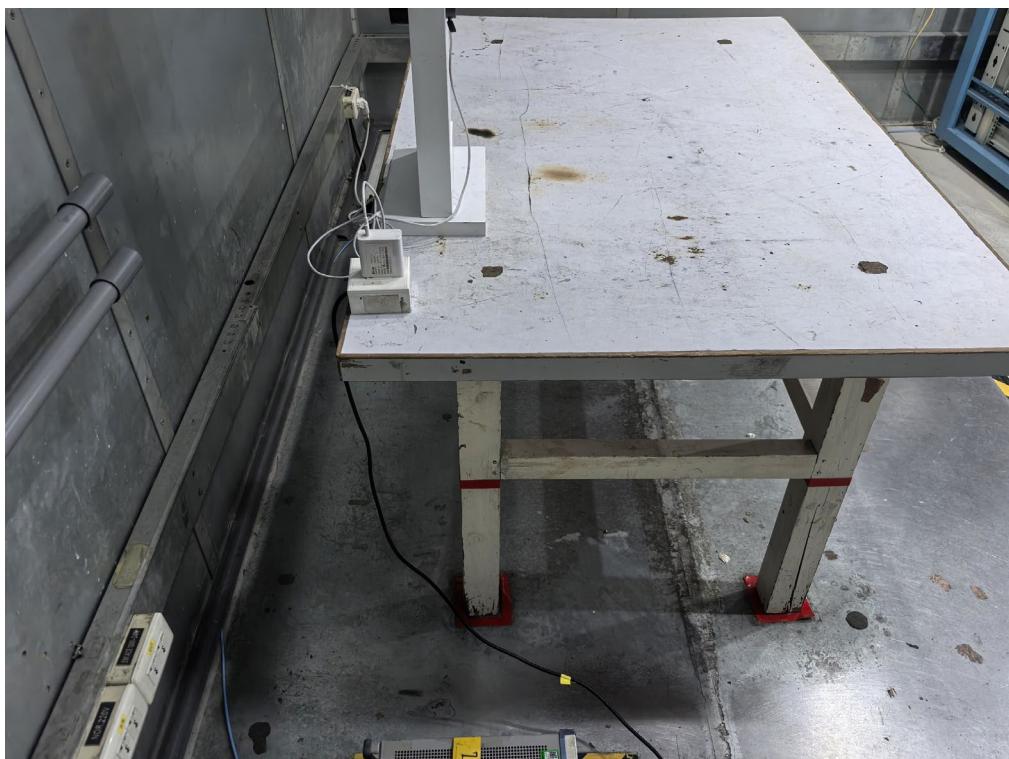
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Peak Power Analyzer	Keysight	8990B	MY51000506	May 31, 2025
2	Wideband power sensor	Keysight	N1923A	MY58310004	May 31, 2025
3	Isolation attenuator	Z-Link	ASMA-10-18-2W	N/A	N/A

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

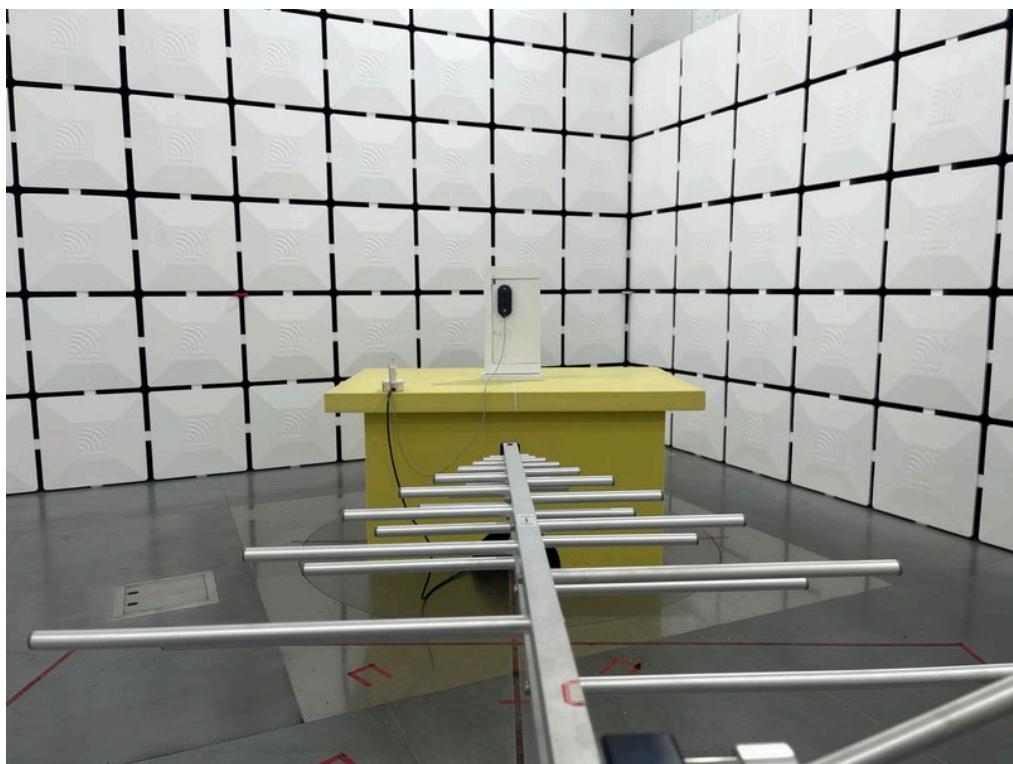
All calibration period of equipment list is one year.

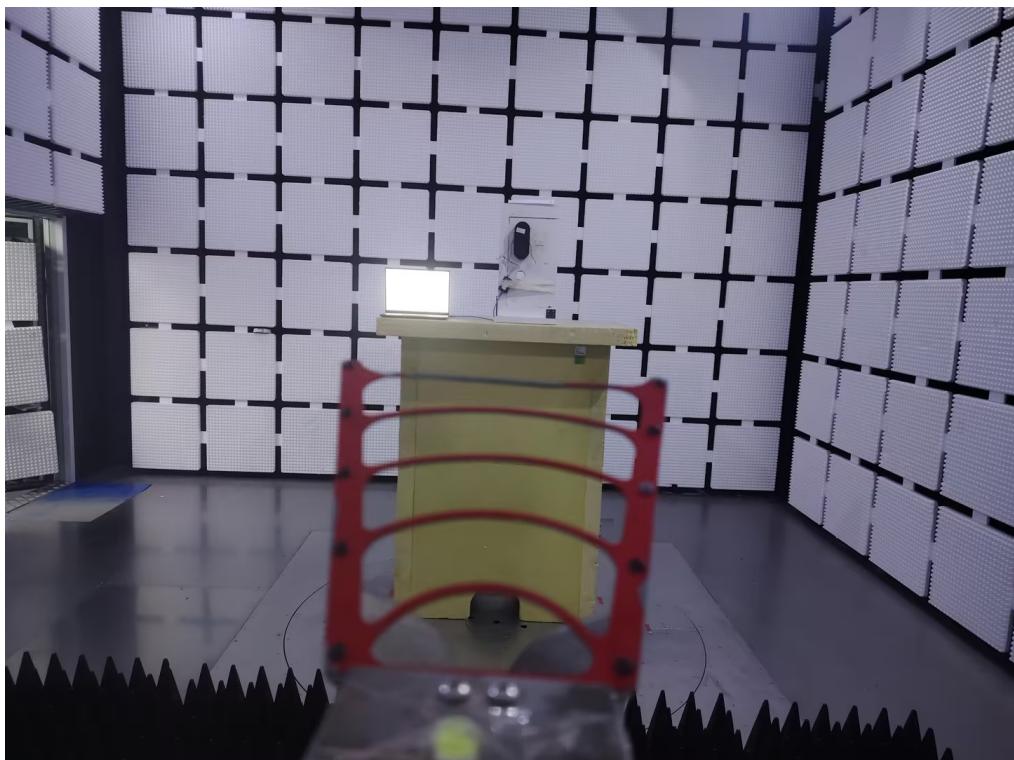
11. EUT TEST PHOTO

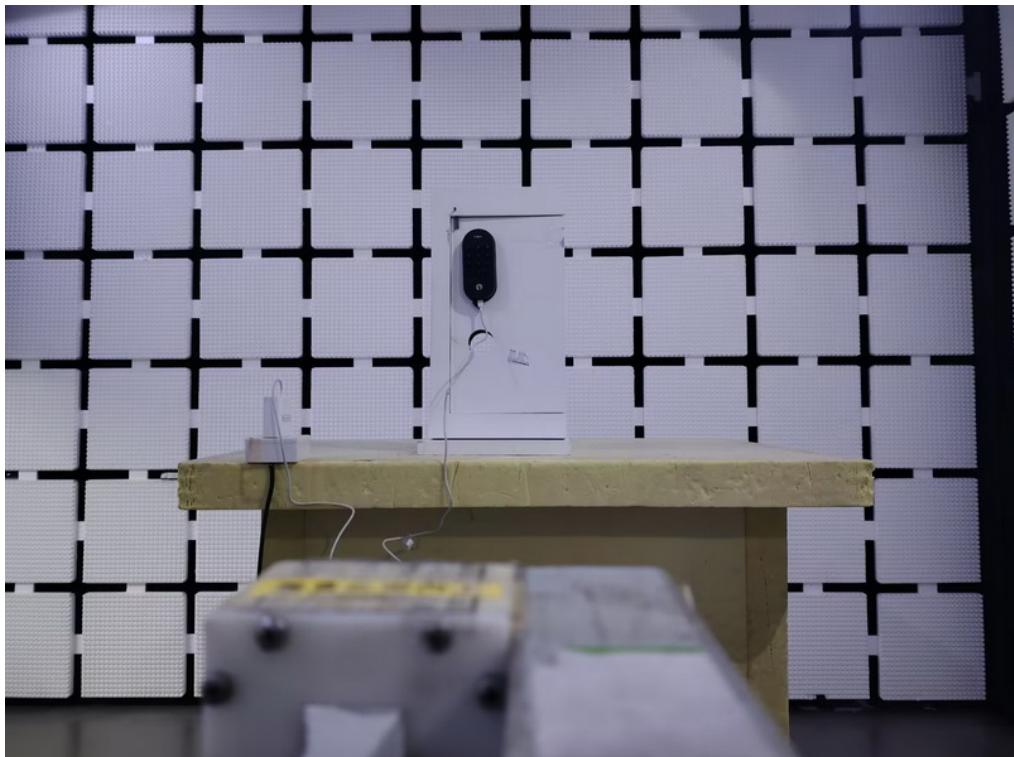
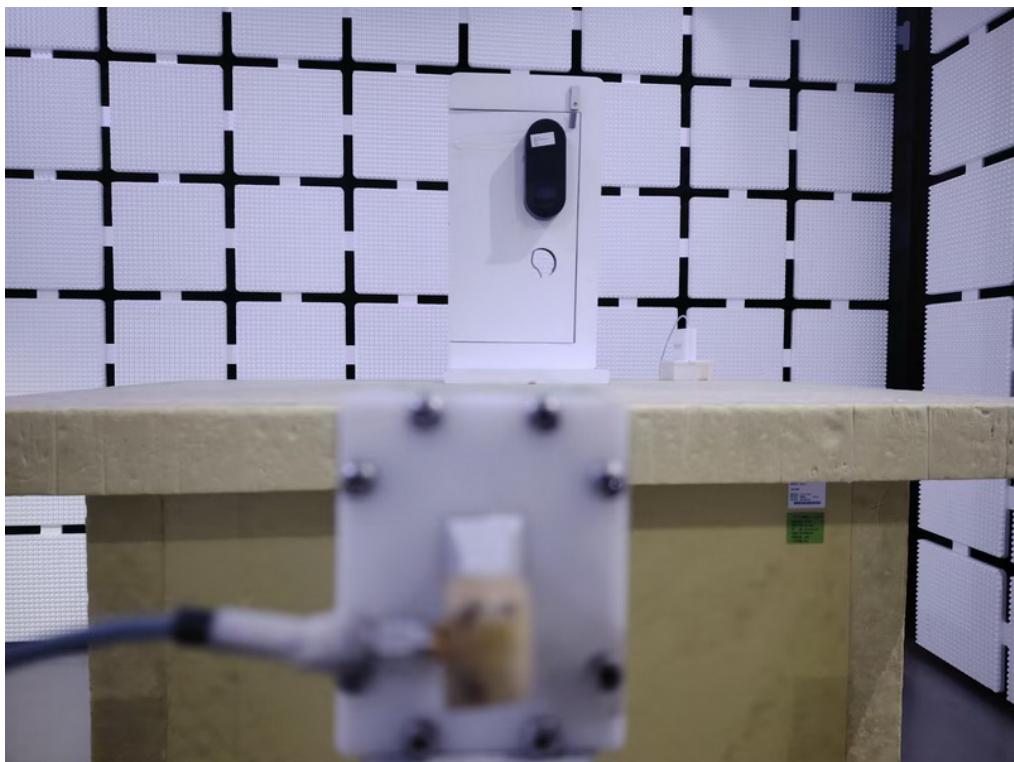
AC Power Line Conducted Emissions Test Photos

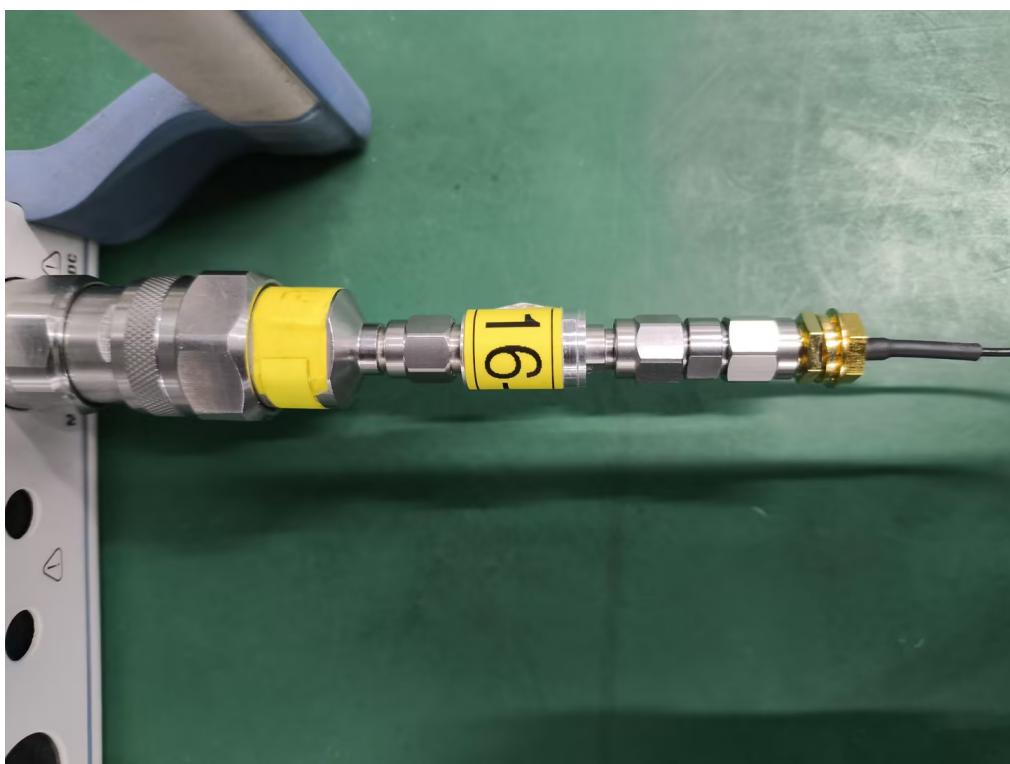


Radiated Emissions Test Photos**9 kHz to 30 MHz**

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

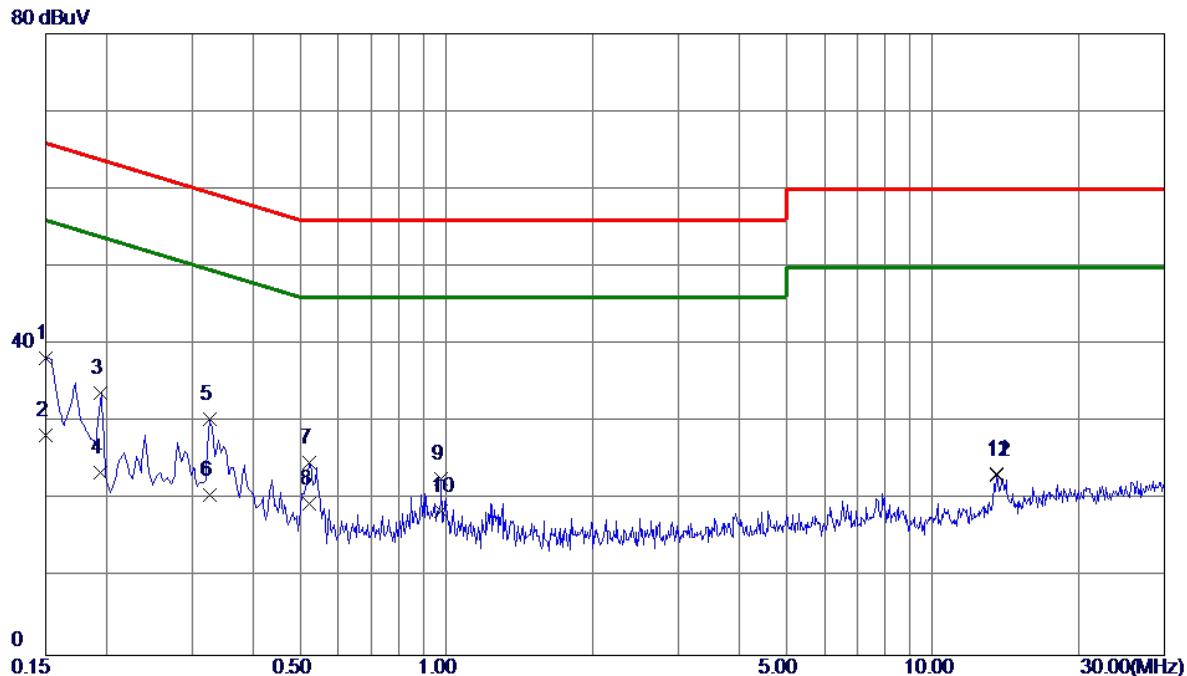
Radiated Emissions Test Photos**Harmonic(1 GHz to 18 GHz) & Band edge**

Radiated Emissions Test Photos**Harmonic(Above 18 GHz)**

Conducted Test Photos

APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

Test Mode	TX B Mode Channel 06	Phase	Line
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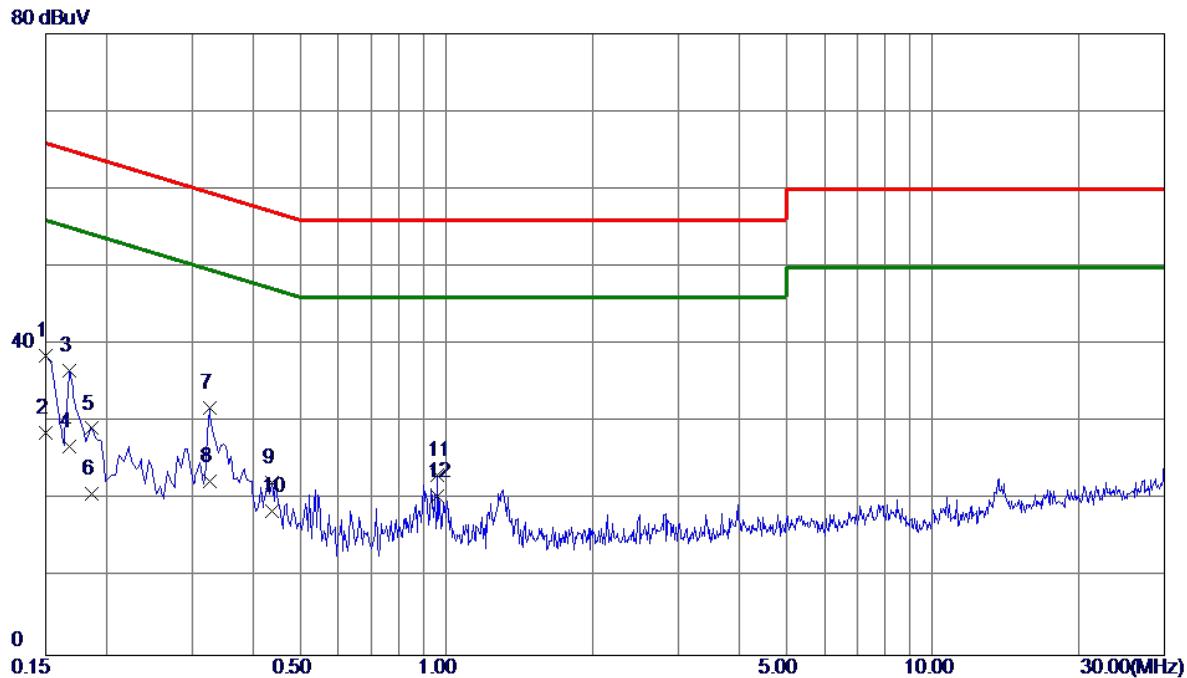


No.	Freq. MHz	Reading Level dBuV	Correct Factor	Measure ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0. 1500	28. 36	9. 90	38. 26	66. 00	-27. 74	QP	
2	0. 1500	18. 49	9. 90	28. 39	56. 00	-27. 61	AVG	
3	0. 1949	23. 88	9. 90	33. 78	63. 83	-30. 05	QP	
4	0. 1949	13. 61	9. 90	23. 51	53. 83	-30. 32	AVG	
5	0. 3255	20. 48	9. 93	30. 41	59. 57	-29. 16	QP	
6	0. 3255	10. 70	9. 93	20. 63	49. 57	-28. 94	AVG	
7	0. 5235	14. 84	9. 96	24. 80	56. 00	-31. 20	QP	
8 *	0. 5235	9. 50	9. 96	19. 46	46. 00	-26. 54	AVG	
9	0. 9780	12. 71	10. 05	22. 76	56. 00	-33. 24	QP	
10	0. 9780	8. 50	10. 05	18. 55	46. 00	-27. 45	AVG	
11	13. 5690	10. 14	13. 20	23. 34	60. 00	-36. 66	QP	
12	13. 5690	9. 99	13. 20	23. 19	50. 00	-26. 81	AVG	

REMARKS:

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

Test Mode	TX B Mode Channel 06	Phase	Neutral
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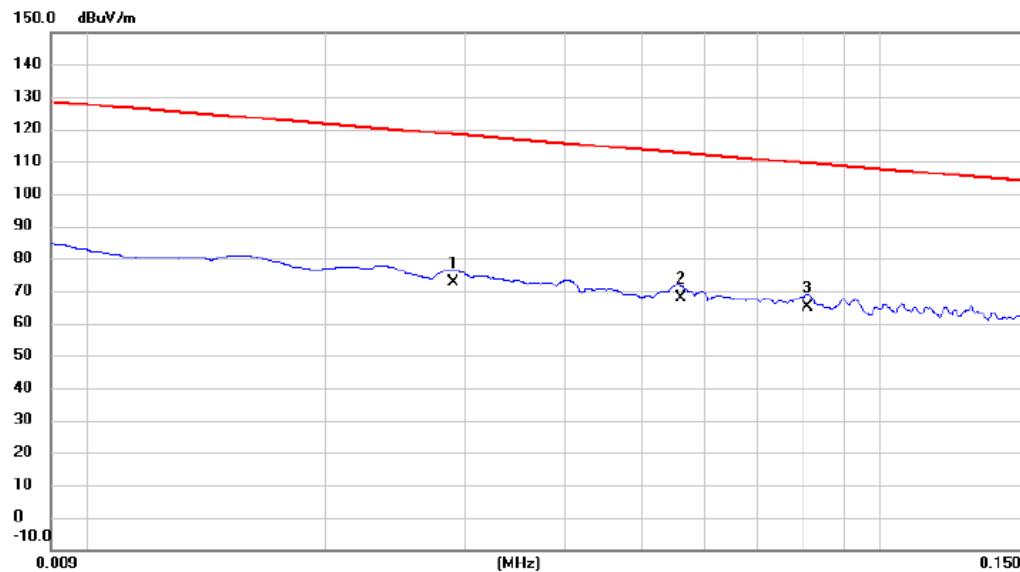
No.	Freq. MHz	Reading Level dBuV	Correct Factor	Measure ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0. 1500	28. 59	9. 97	38. 56	66. 00	-27. 44	QP	
2	0. 1500	18. 60	9. 97	28. 57	56. 00	-27. 43	AVG	
3	0. 1680	26. 71	9. 97	36. 68	65. 06	-28. 38	QP	
4	0. 1680	16. 90	9. 97	26. 87	55. 06	-28. 19	AVG	
5	0. 1864	19. 23	9. 97	29. 20	64. 20	-35. 00	QP	
6	0. 1864	10. 90	9. 97	20. 87	54. 20	-33. 33	AVG	
7	0. 3255	21. 90	9. 98	31. 88	59. 57	-27. 69	QP	
8	0. 3255	12. 40	9. 98	22. 38	49. 57	-27. 19	AVG	
9	0. 4380	12. 25	10. 02	22. 27	57. 10	-34. 83	QP	
10	0. 4380	8. 49	10. 02	18. 51	47. 10	-28. 59	AVG	
11	0. 9600	13. 17	10. 08	23. 25	56. 00	-32. 75	QP	
12 *	0. 9600	10. 40	10. 08	20. 48	46. 00	-25. 52	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

Test Mode	TX B Mode Channel 06	Polarization	Ant 0°
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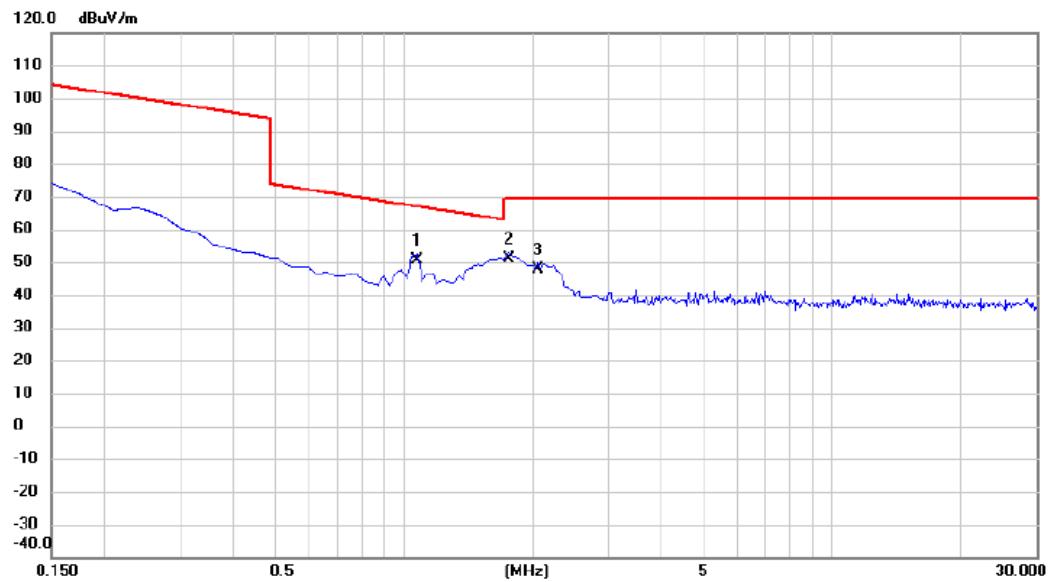


No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	Detector	Comment
			Level	Factor	ment				
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		0.0290	51.36	21.11	72.47	118.36	-45.89	AVG	
2		0.0561	46.45	21.26	67.71	112.63	-44.92	AVG	
3	*	0.0810	43.62	21.34	64.96	109.44	-44.48	AVG	

REMARKS:

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

Test Mode	TX B Mode Channel 06	Polarization	Ant 0°
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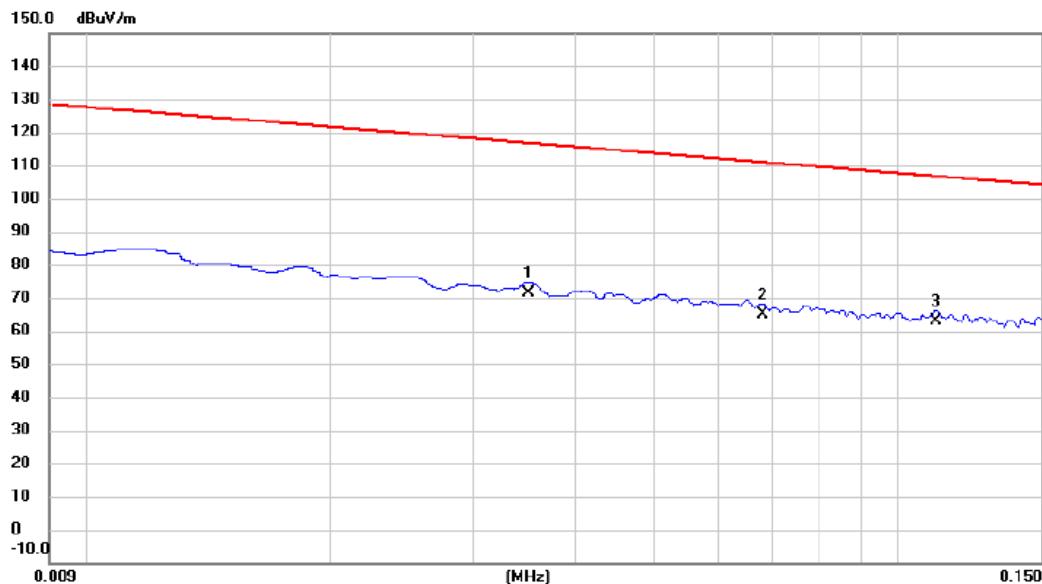


No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	Detector	Comment
			Level	Factor	ment				
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	1.0754	29.47	21.19	50.66	66.97	-16.31	QP	
2		1.7620	29.98	21.13	51.11	69.54	-18.43	QP	
3		2.0604	26.57	21.11	47.68	69.54	-21.86	QP	

REMARKS:

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

Test Mode	TX B Mode Channel 06	Polarization	Ant 90°
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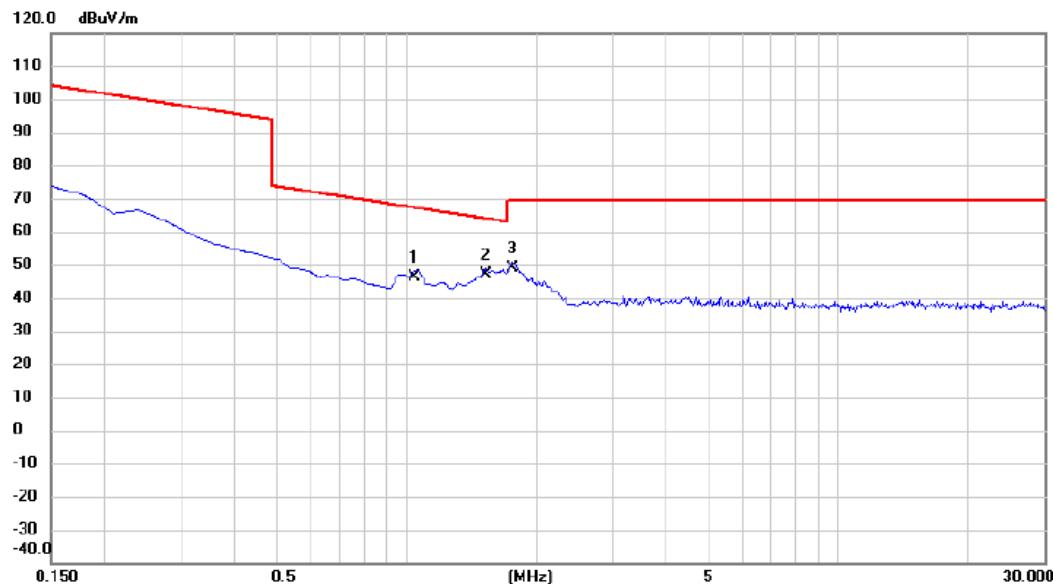


No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	Detector	Comment
			Level	Factor	ment				
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1		0.0351	50.39	21.17	71.56	116.70	-45.14	AVG	
2		0.0680	43.58	21.30	64.88	110.95	-46.07	AVG	
3	*	0.1115	41.75	21.32	63.07	106.66	-43.59	AVG	

REMARKS:

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

Test Mode	TX B Mode Channel 06	Polarization	Ant 90°
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No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin	
		MHz	dBuV	dB	dBuV/m	dB	Detector	Comment
1		1.0455	25.02	21.20	46.22	67.22	-21.00	QP
2	*	1.5231	25.68	21.16	46.84	63.95	-17.11	QP
3		1.7623	27.80	21.13	48.93	69.54	-20.61	QP

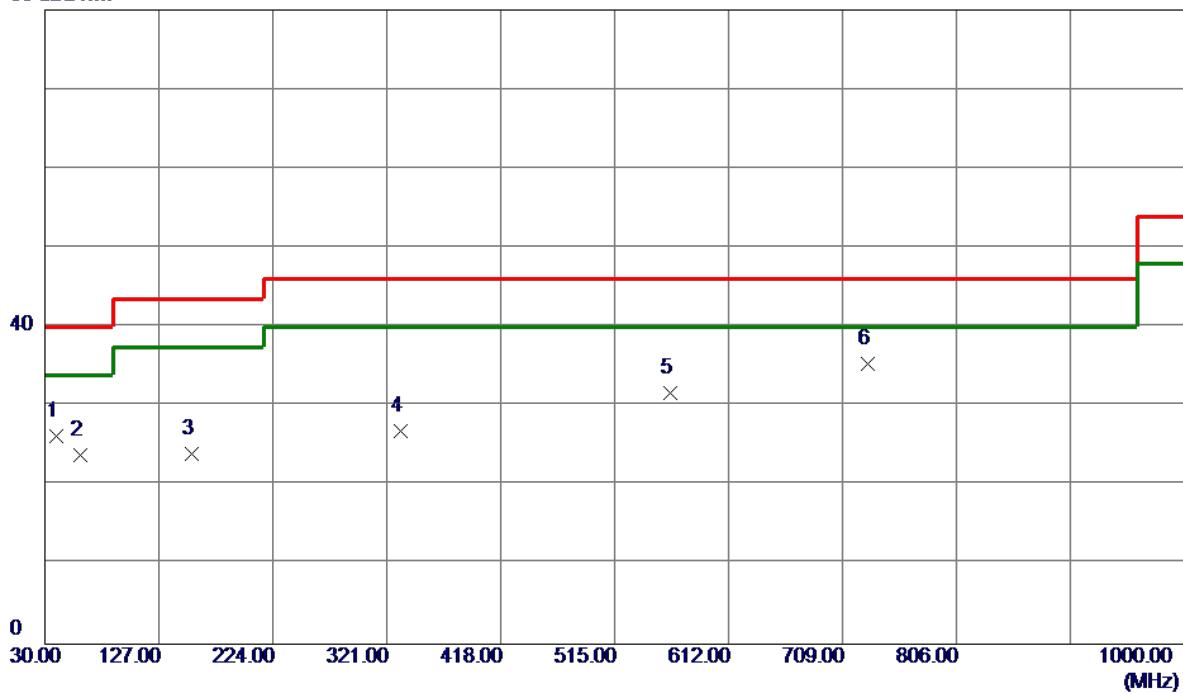
REMARKS:

- (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 B Mode Channel 06	Polarization	Vertical
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80 dBuV/m



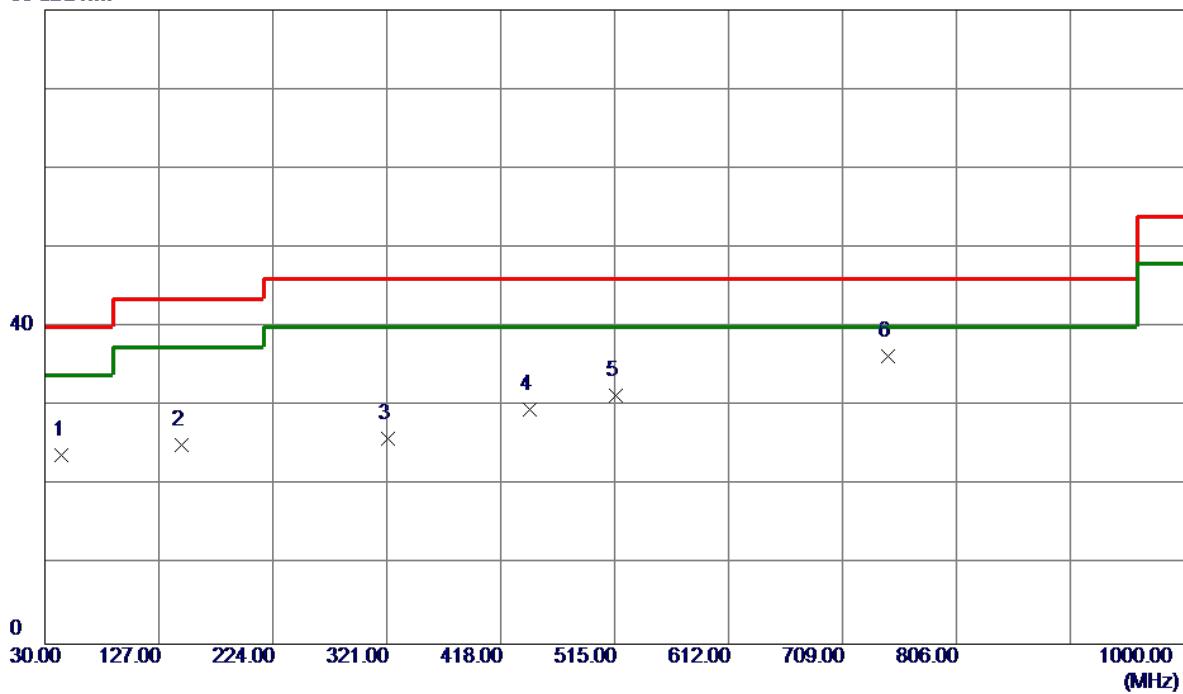
No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	ment				
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	39.7000	38.12	-11.94	26.18	40.00	-13.82	Peak	
2	60.0700	35.82	-12.00	23.82	40.00	-16.18	Peak	
3	155.1300	35.20	-11.25	23.95	43.52	-19.57	Peak	
4	332.6400	36.90	-10.00	26.90	46.02	-19.12	Peak	
5	562.5300	36.87	-5.21	31.66	46.02	-14.36	Peak	
6 *	730.3400	37.36	-2.05	35.31	46.02	-10.71	Peak	

REMARKS:

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

Test Mode	TX B Mode Channel 06	Polarization	Horizontal
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80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector		Comment
							Detector	Comment	
1	44.5500	35.53	-11.66	23.87	40.00	-16.13	Peak		
2	146.4000	36.59	-11.54	25.05	43.52	-18.47	Peak		
3	321.9700	36.09	-10.18	25.91	46.02	-20.11	Peak		
4	443.2200	36.85	-7.32	29.53	46.02	-16.49	Peak		
5	515.9699	37.39	-6.06	31.33	46.02	-14.69	Peak		
6 *	747.8000	38.19	-1.82	36.37	46.02	-9.65	Peak		

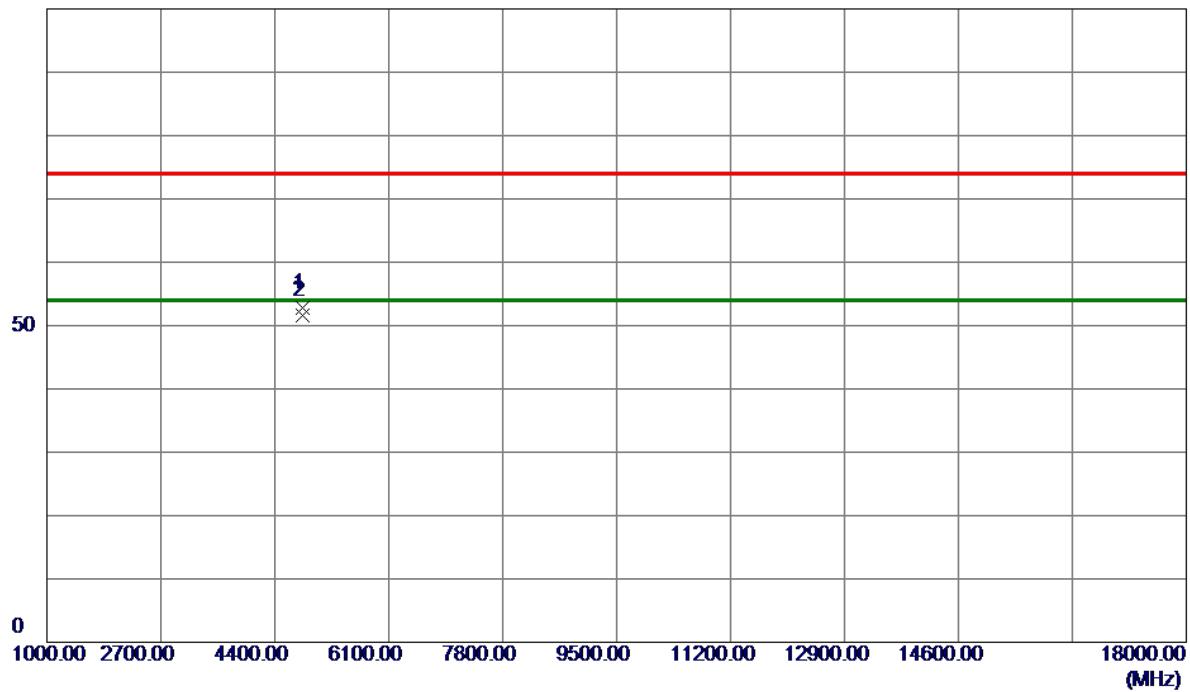
REMARKS:

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

APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ

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



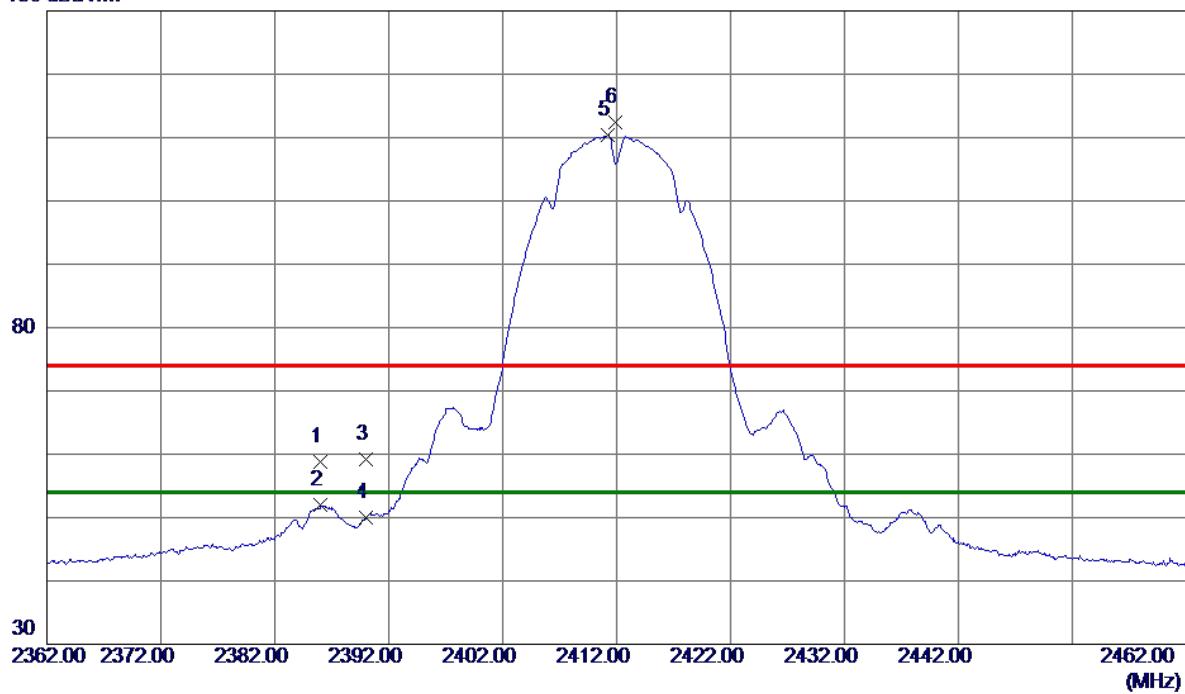
No.	Freq. MHz	Reading Level	Correct Factor	Measure ment	Limit	Margin	Detector	Comment
		dBuV/m	dB	dBuV/m	dB			
1	4823.9200	48.28	4.55	52.83	74.00	-21.17	Peak	
2 *	4823.9600	47.12	4.55	51.67	54.00	-2.33	AVG	

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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130 dBuV/m



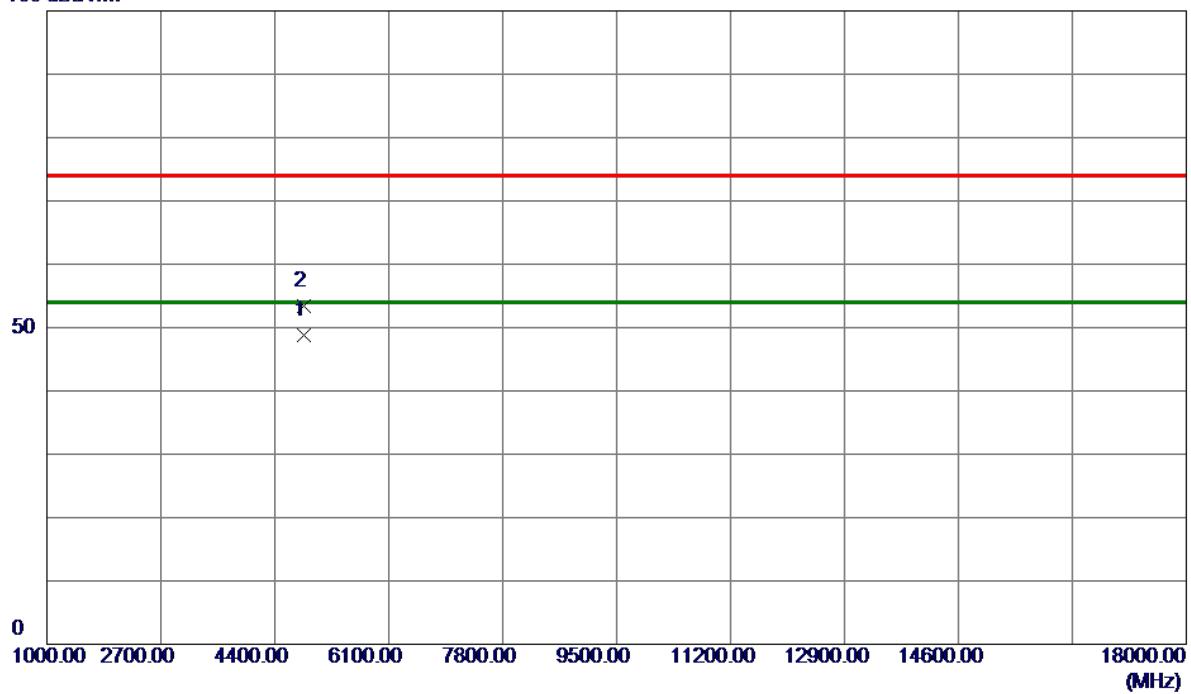
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	2386.0500	50.05	8.68	58.73	74.00	-15.27	Peak	
2	2386.0500	43.33	8.68	52.01	54.00	-1.99	AVG	
3	2390.0000	50.51	8.68	59.19	74.00	-14.81	Peak	
4	2390.0000	41.28	8.68	49.96	54.00	-4.04	AVG	
5 *	2411.2000	101.63	8.72	110.35	54.00	56.35	AVG	No Limit
6	2411.9000	103.77	8.72	112.49	74.00	38.49	Peak	No Limit

REMARKS:

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

Test Mode	TX B Mode 2417 MHz	Polarization	Vertical
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100 dBuV/m



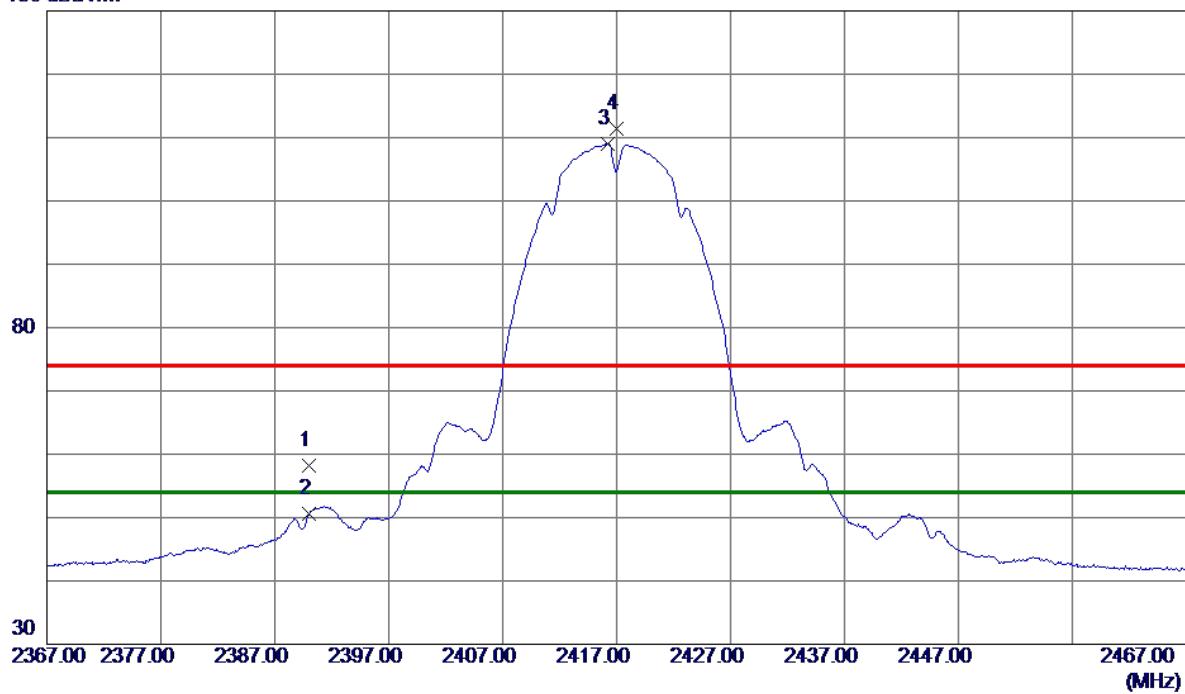
No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	dBuV/m	dBuV/m	dB		
1 *	4834.1500	44.18	4.57	48.75	54.00	-5.25	AVG	
2	4834.7200	48.83	4.57	53.40	74.00	-20.60	Peak	

REMARKS:

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

Test Mode	TX B Mode 2417 MHz	Polarization	Horizontal
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130 dBuV/m



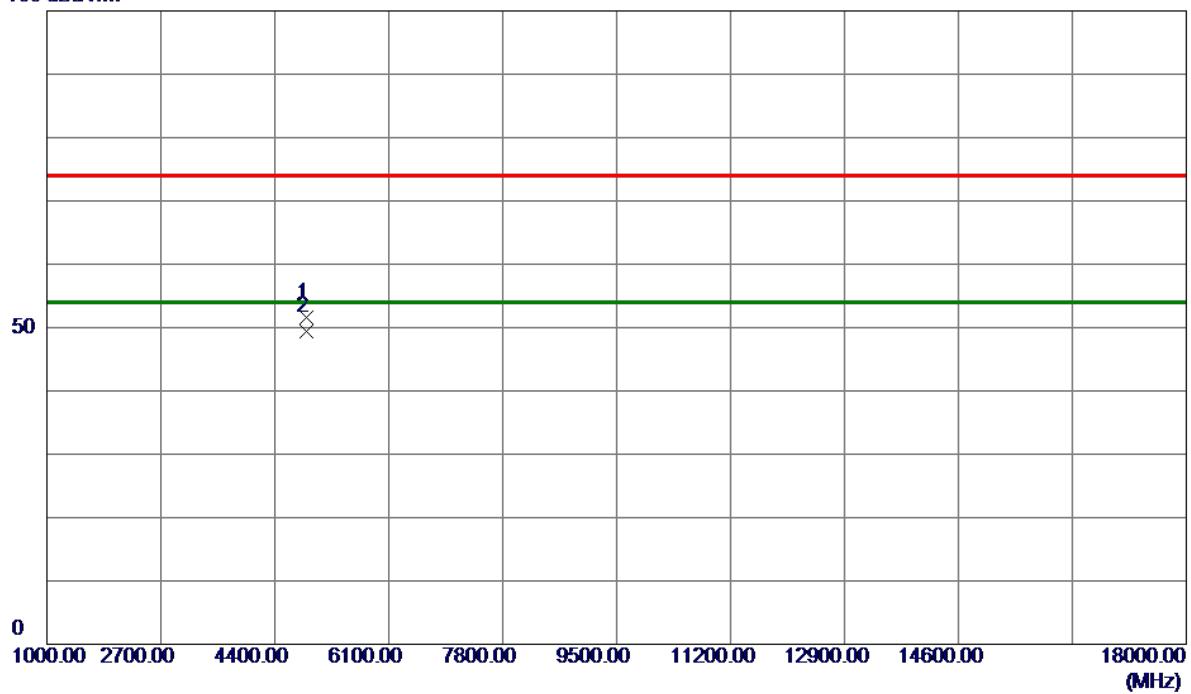
No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	ment				
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1	2390.0000	49.59	8.68	58.27	74.00	-15.73	Peak	
2	2390.0000	41.99	8.68	50.67	54.00	-3.33	AVG	
3 *	2416.2500	100.35	8.73	109.08	54.00	55.08	AVG	No Limit
4	2417.0000	102.64	8.73	111.37	74.00	37.37	Peak	No Limit

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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100 dBuV/m



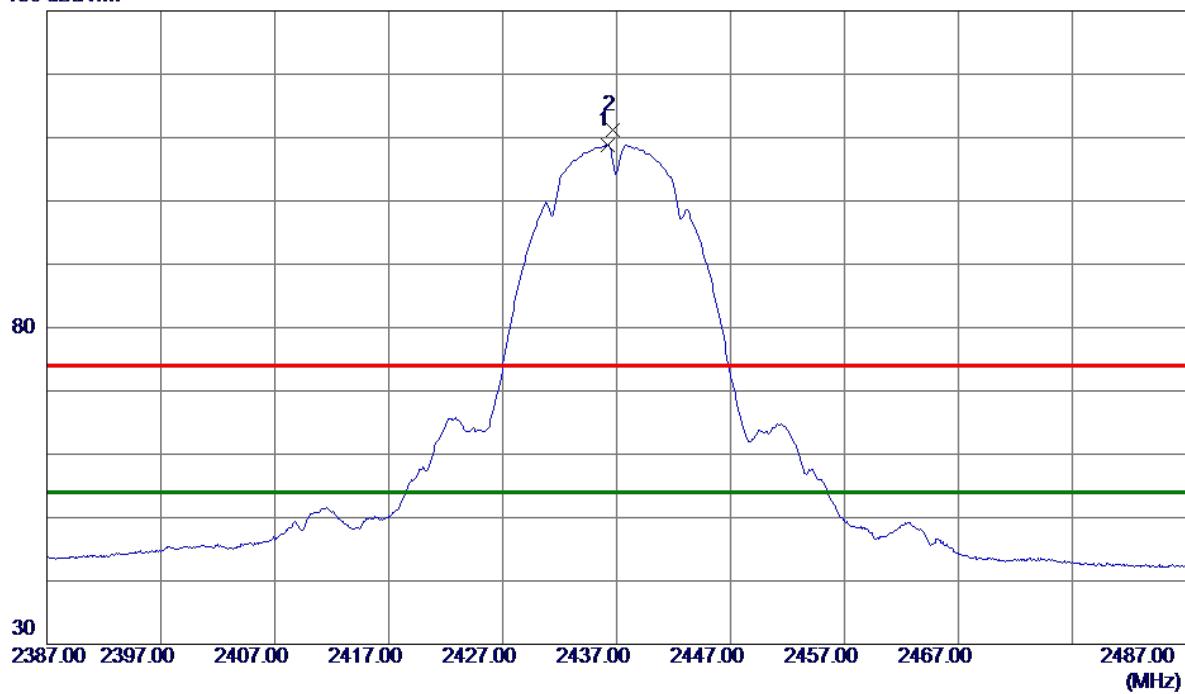
No.	Freq. MHz	Reading Level	Correct Factor	Measure ment	Limit	Margin	Detector	Comment
		dBuV/m	dB	dBuV/m	dB			
1	4873.9600	46.84	4.67	51.51	74.00	-22.49	Peak	
2 *	4873.9700	44.74	4.67	49.41	54.00	-4.59	AVG	

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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130 dBuV/m

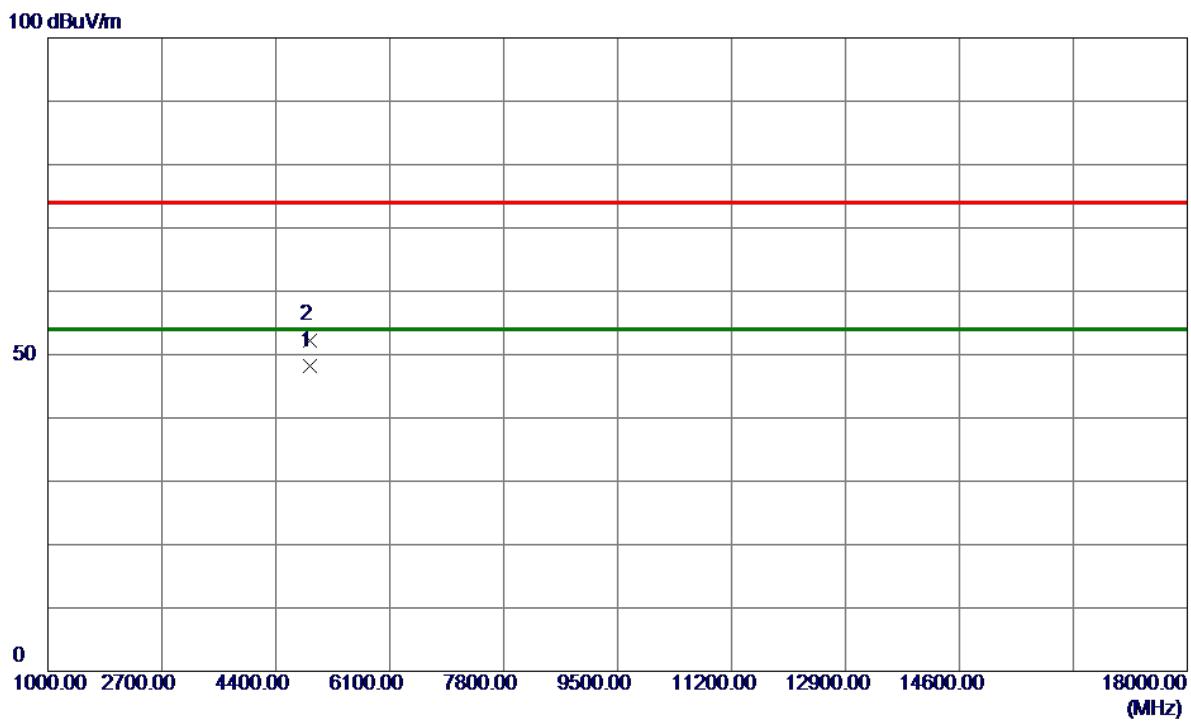


No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	ment				
1 *	2436.2000	100.11	8.76	108.87	54.00	54.87	AVG	No Limit
2	2436.7000	102.40	8.76	111.16	74.00	37.16	Peak	No Limit

REMARKS:

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

Test Mode	TX B Mode 2457 MHz	Polarization	Vertical
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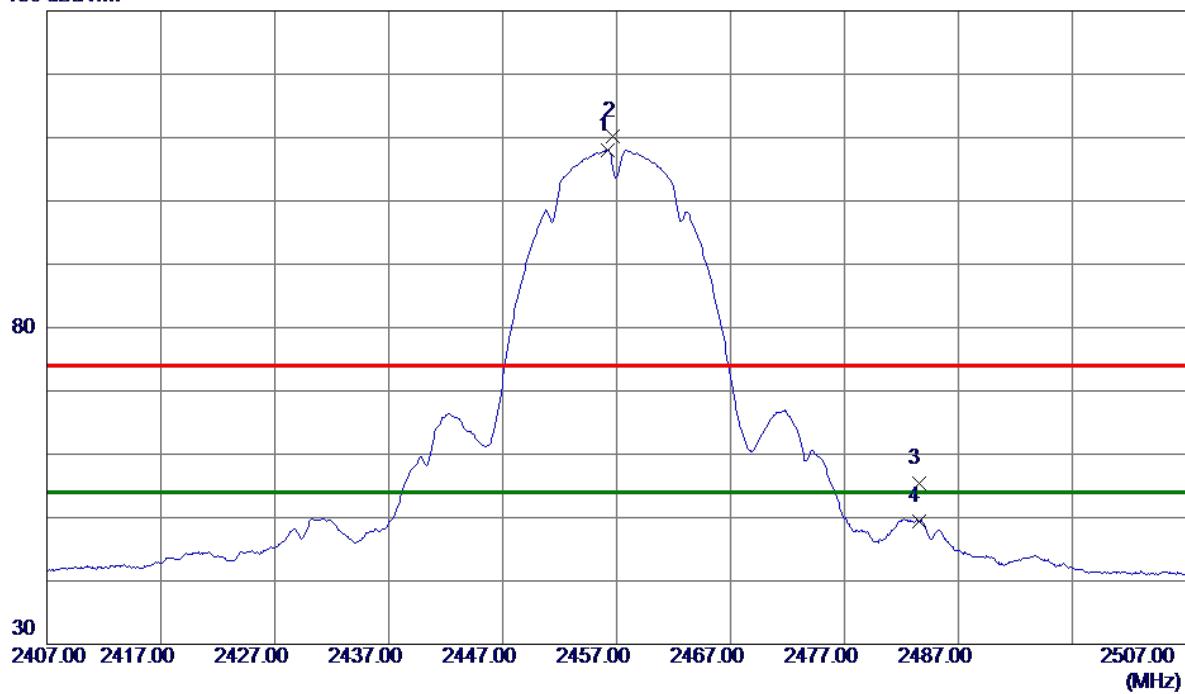
No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	ment				
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB		
1 *	4914.0800	43.41	4.78	48.19	54.00	-5.81	AVG	
2	4914.5299	47.52	4.78	52.30	74.00	-21.70	Peak	

REMARKS:

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

Test Mode	TX B Mode 2457 MHz	Polarization	Horizontal
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130 dBuV/m



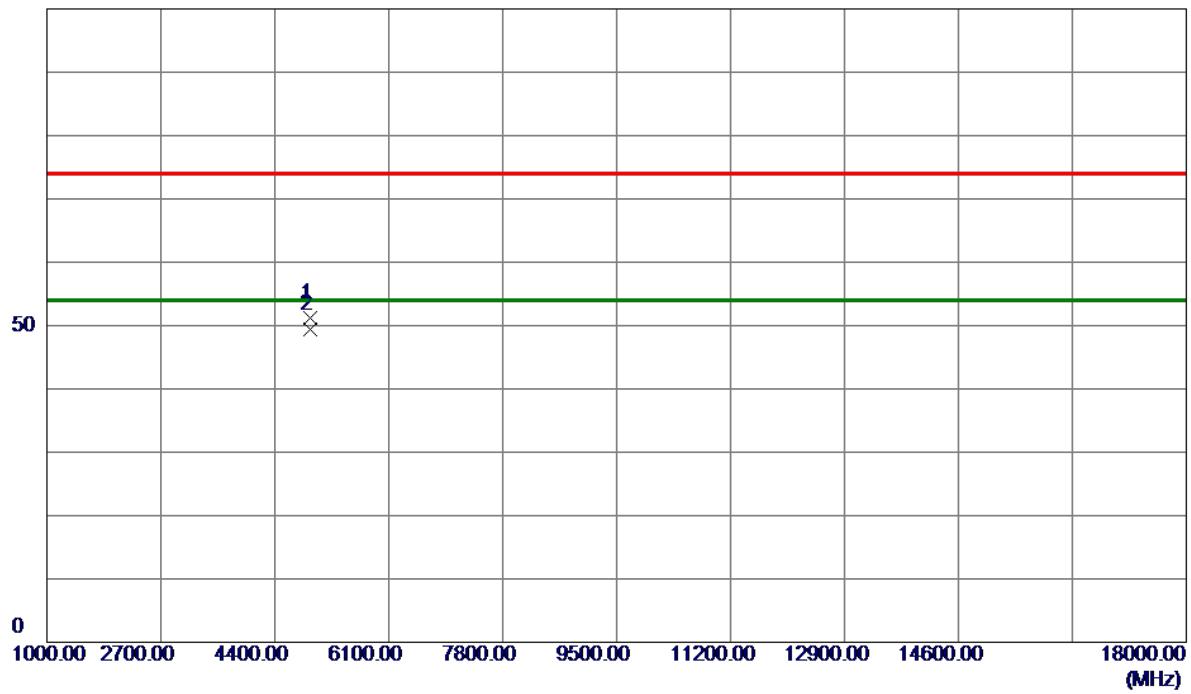
No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	ment	dBuV/m	dB		
1 *	2456.2000	99.21	8.79	108.00	54.00	54.00	AVG	No Limit
2	2456.7000	101.48	8.79	110.27	74.00	36.27	Peak	No Limit
3	2483.5000	46.55	8.83	55.38	74.00	-18.62	Peak	
4	2483.5000	40.54	8.83	49.37	54.00	-4.63	AVG	

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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100 dBuV/m



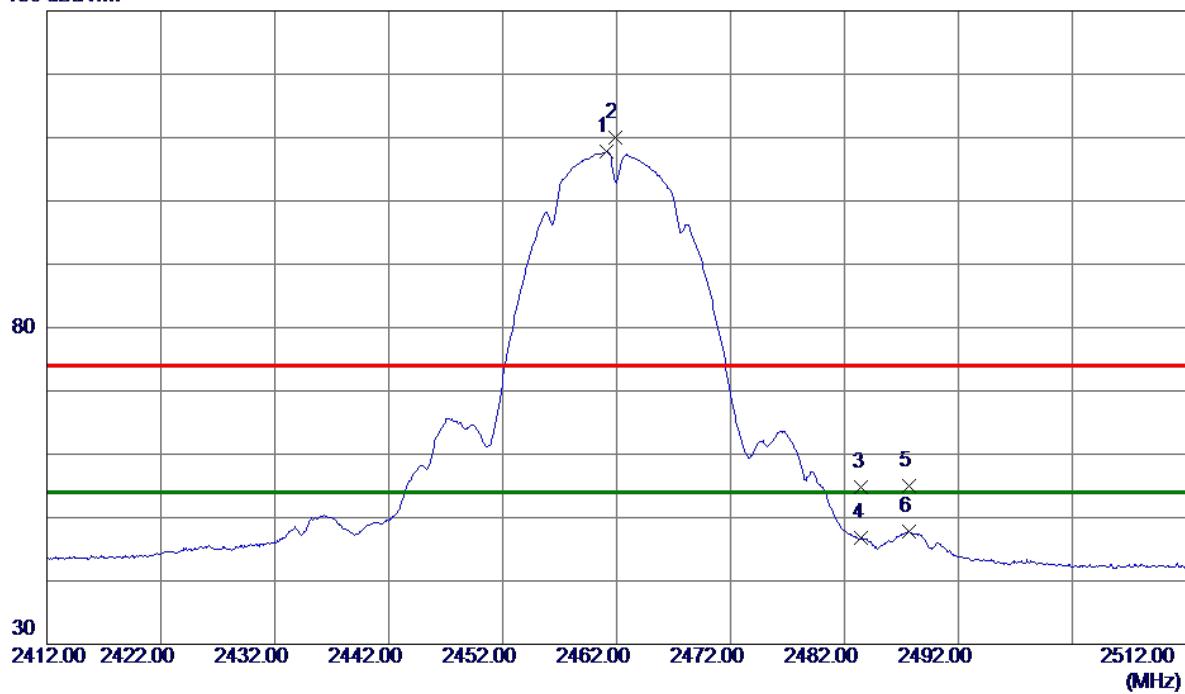
No.	Freq. MHz	Reading Level	Correct Factor	Measure ment	Limit	Margin	Detector	Comment
		dBuV/m	dB	dBuV/m	dB			
1	4923.9200	46.32	4.80	51.12	74.00	-22.88	Peak	
2 *	4923.9600	44.52	4.80	49.32	54.00	-4.68	AVG	

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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130 dBuV/m



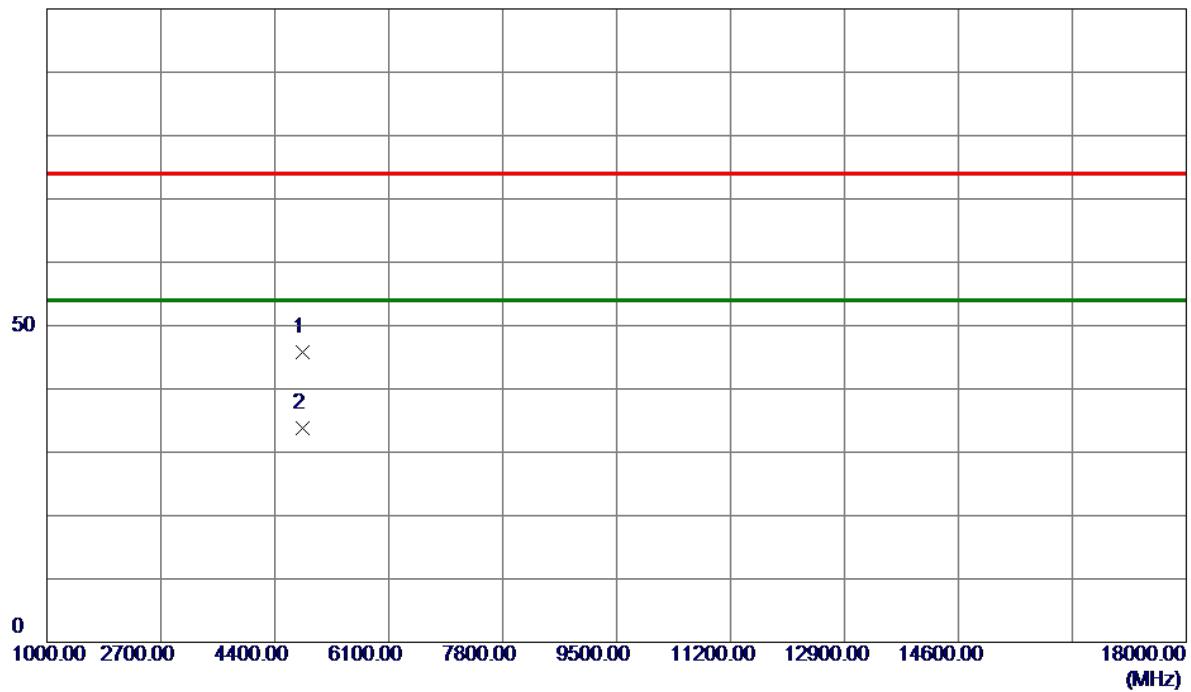
No.	Freq. MHz	Reading Level	Correct Factor	Measure ment	Limit	Margin	Detector	Comment
		dBuV/m	dB	dBuV/m	dB			
1 *	2461.1500	98.92	8.80	107.72	54.00	53.72	AVG	No Limit
2	2461.8500	101.16	8.80	109.96	74.00	35.96	Peak	No Limit
3	2483.5000	46.00	8.83	54.83	74.00	-19.17	Peak	
4	2483.5000	37.90	8.83	46.73	54.00	-7.27	AVG	
5	2487.7000	46.18	8.84	55.02	74.00	-18.98	Peak	
6	2487.7000	38.98	8.84	47.82	54.00	-6.18	AVG	

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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100 dBuV/m



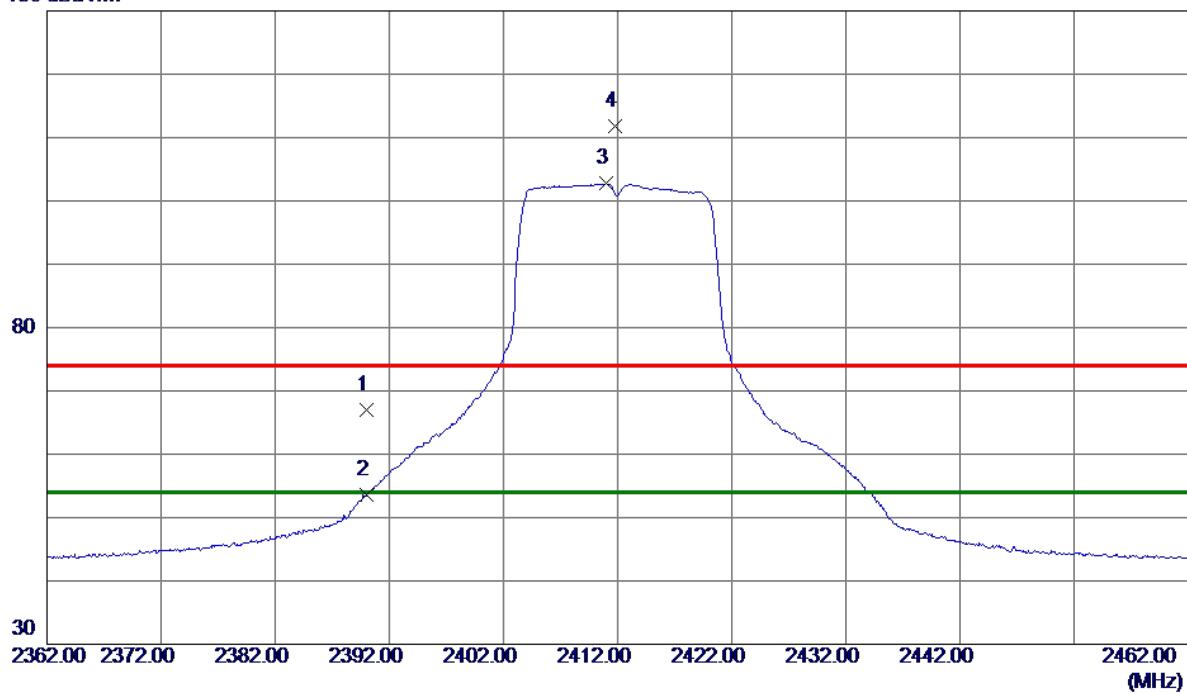
No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	ment				
1	4823.3000	41.31	4.54	45.85	74.00	-28.15	Peak	
2 *	4824.2000	29.24	4.55	33.79	54.00	-20.21	AVG	

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



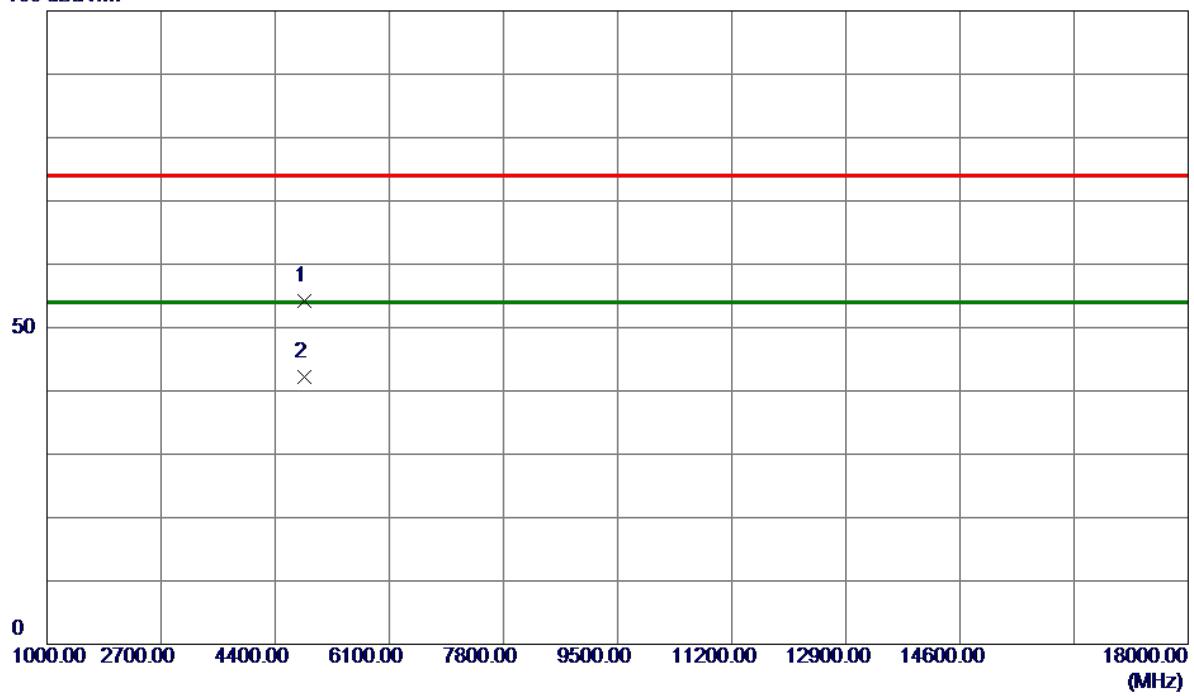
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector		Comment
							Detector	Comment	
1	2390.0000	58.24	8.68	66.92	74.00	-7.08	Peak		
2	2390.0000	44.90	8.68	53.58	54.00	-0.42	AVG		
3 *	2410.9500	94.03	8.72	102.75	54.00	48.75	AVG	No Limit	
4	2411.8000	103.06	8.72	111.78	74.00	37.78	Peak	No Limit	

REMARKS:

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

Test Mode	TX G Mode 2417 MHz	Polarization	Vertical
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100 dBuV/m



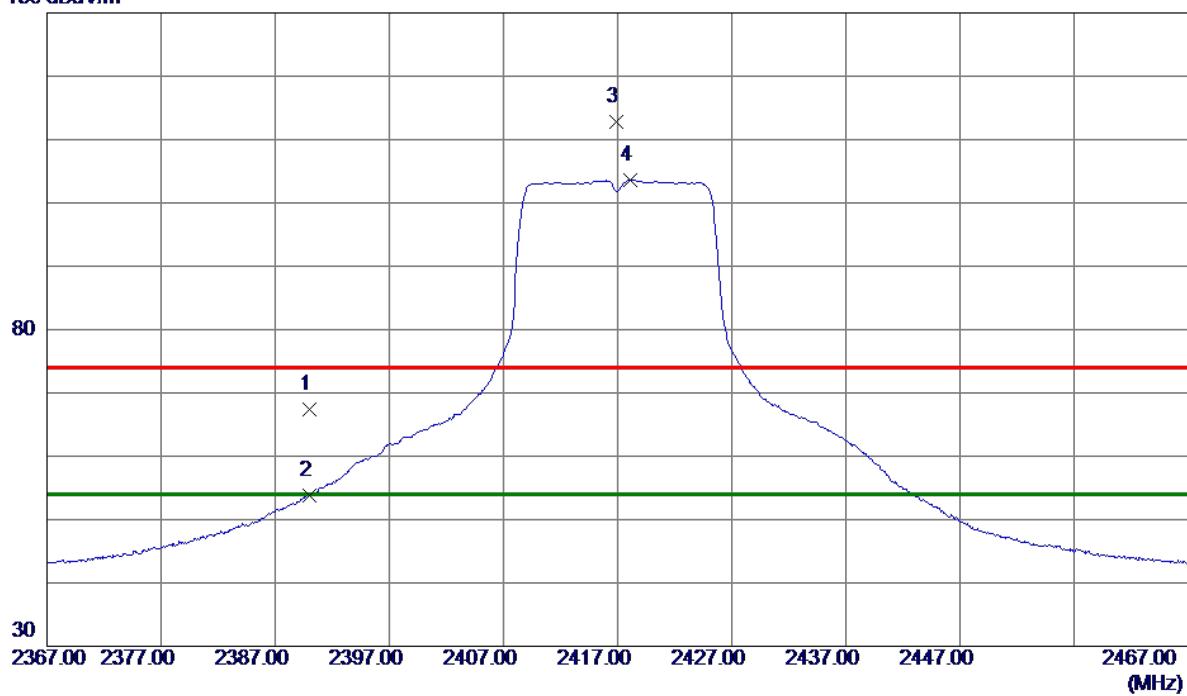
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	
							Comment	
1	4834.0750	49.55	4.57	54.12	74.00	-19.88	Peak	
2 *	4834.8000	37.65	4.57	42.22	54.00	-11.78	AVG	

REMARKS:

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

Test Mode	TX G Mode 2417 MHz	Polarization	Horizontal
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130 dBuV/m



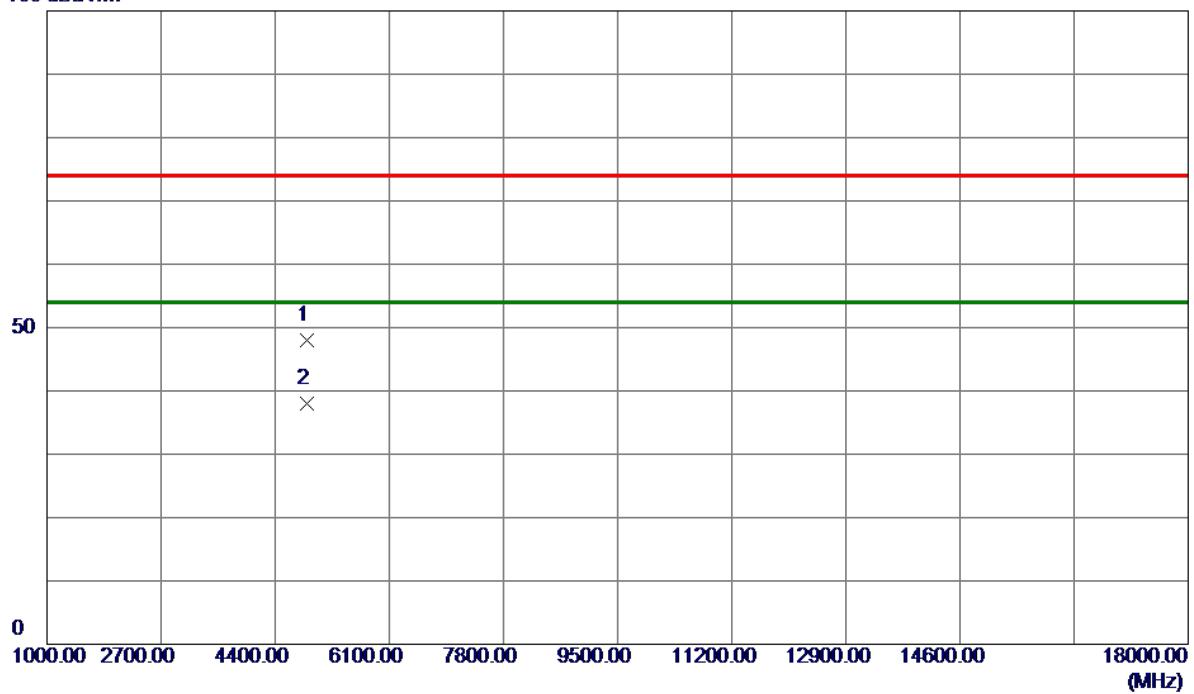
No.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Comment						
							MHz	dBuV/m	dB	dBuV/m	dB	Detector	Comment
1	2390.0000	58.71	8.68	67.39	74.00	-6.61	Peak						
2	2390.0000	45.17	8.68	53.85	54.00	-0.15	AVG						
3	2416.9000	104.15	8.73	112.88	74.00	38.88	Peak					No Limit	
4 *	2418.1000	94.96	8.73	103.69	54.00	49.69	AVG					No Limit	

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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100 dBuV/m



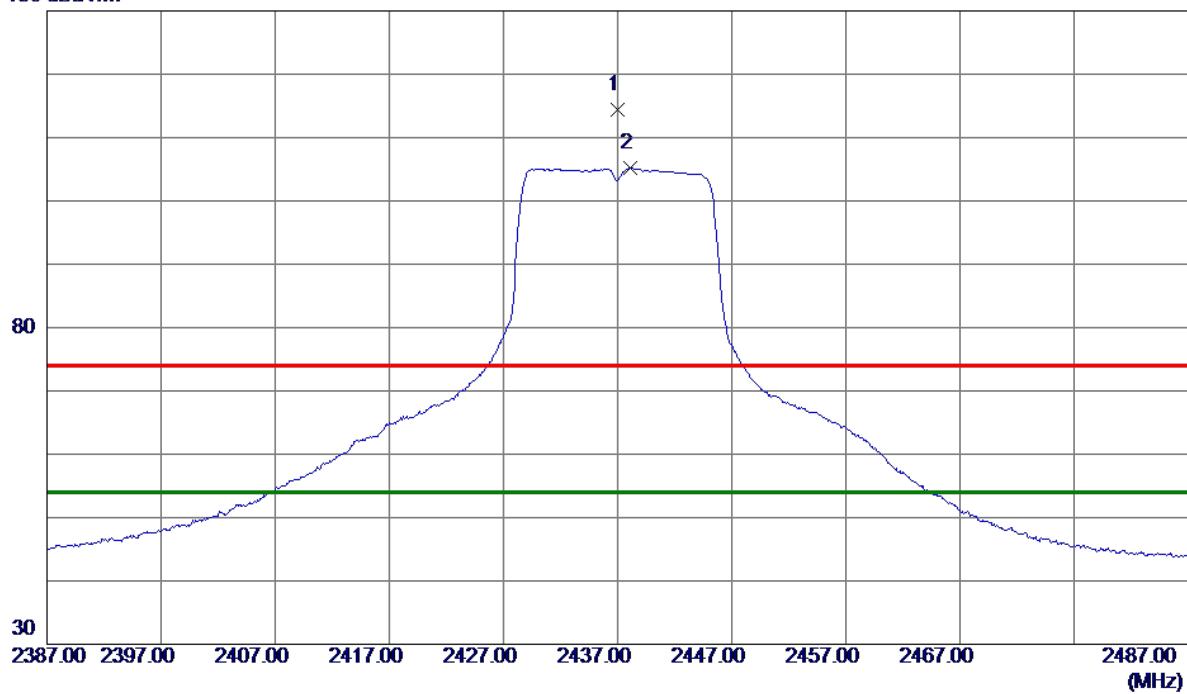
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	
							Detector	Comment
1	4869.9250	43.28	4.66	47.94	74.00	-26.06	Peak	
2 *	4872.4250	33.25	4.67	37.92	54.00	-16.08	AVG	

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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130 dBuV/m



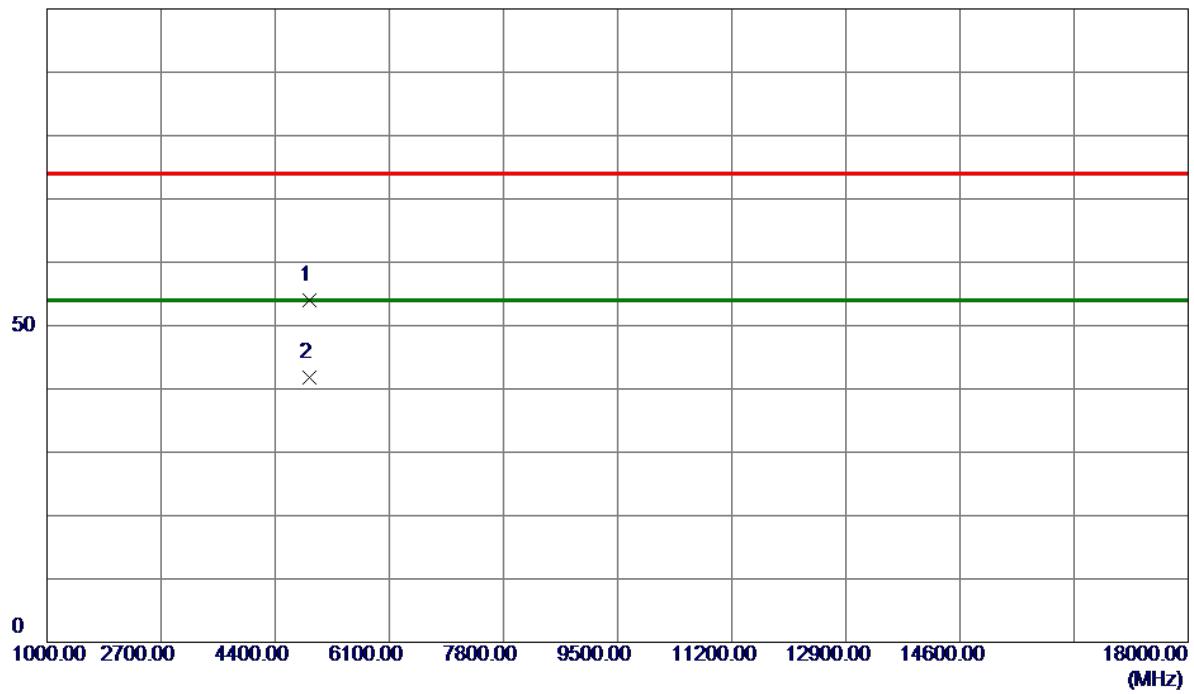
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	
							Peak	AVG
1	2436.9500	105.68	8.76	114.44	74.00	40.44	Peak	No Limit
2 *	2438.1500	96.39	8.76	105.15	54.00	51.15	AVG	No Limit

REMARKS:

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

Test Mode	TX G Mode 2457 MHz	Polarization	Vertical
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100 dBuV/m



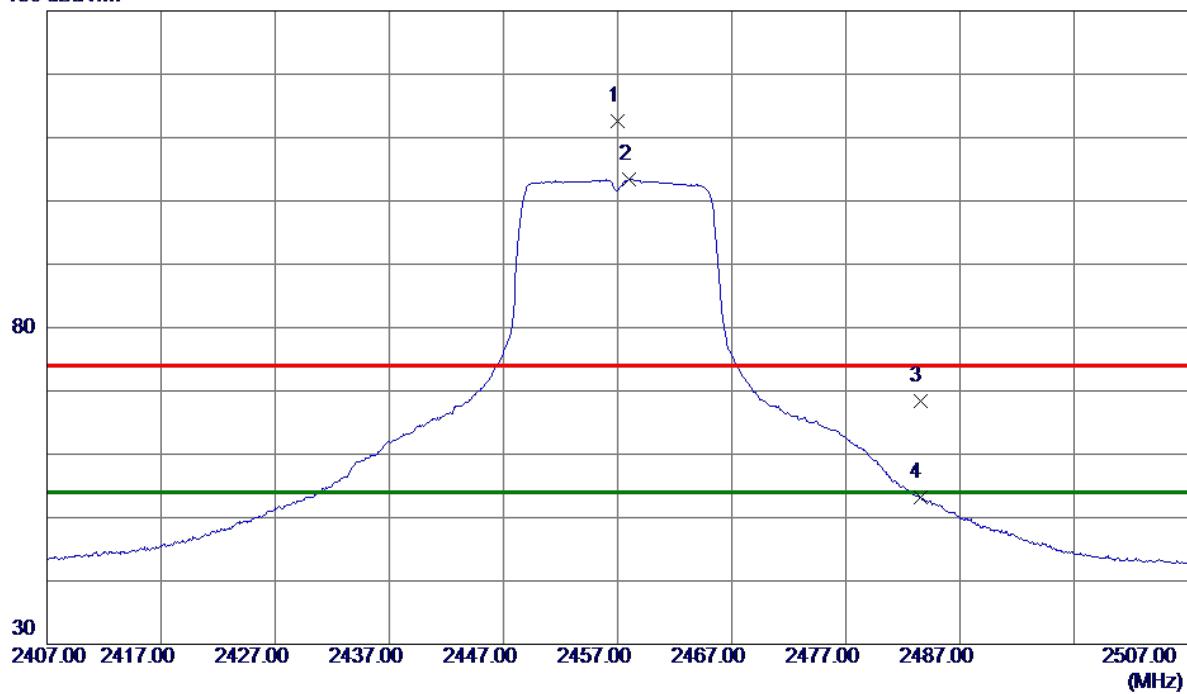
No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	ment				
1	4914.3000	49.16	4.78	53.94	74.00	-20.06	Peak	
2 *	4914.7250	37.04	4.78	41.82	54.00	-12.18	AVG	

REMARKS:

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

Test Mode	TX G Mode 2457 MHz	Polarization	Horizontal
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130 dBuV/m



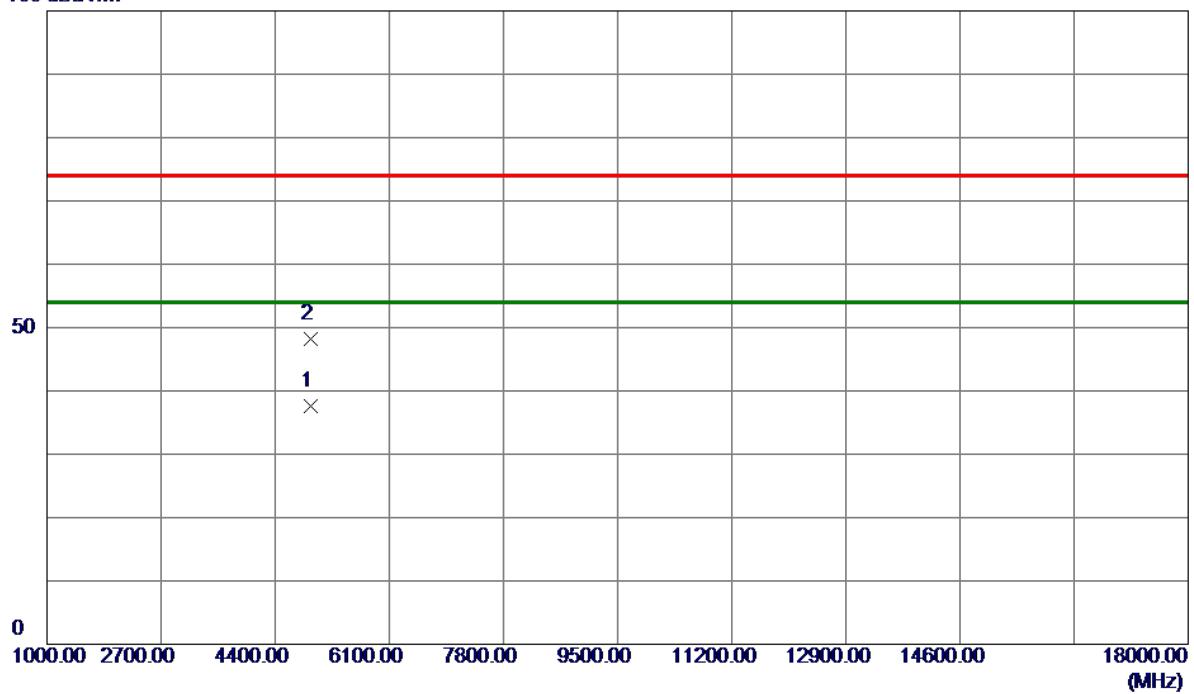
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector		Comment
							Peak	AVG	
1	2457.0500	103.87	8.79	112.66	74.00	38.66	Peak	AVG	No Limit
2 *	2458.0500	94.64	8.79	103.43	54.00	49.43	Peak	AVG	No Limit
3	2483.5000	59.53	8.83	68.36	74.00	-5.64	Peak	AVG	
4	2483.5000	44.28	8.83	53.11	54.00	-0.89	Peak	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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100 dBuV/m



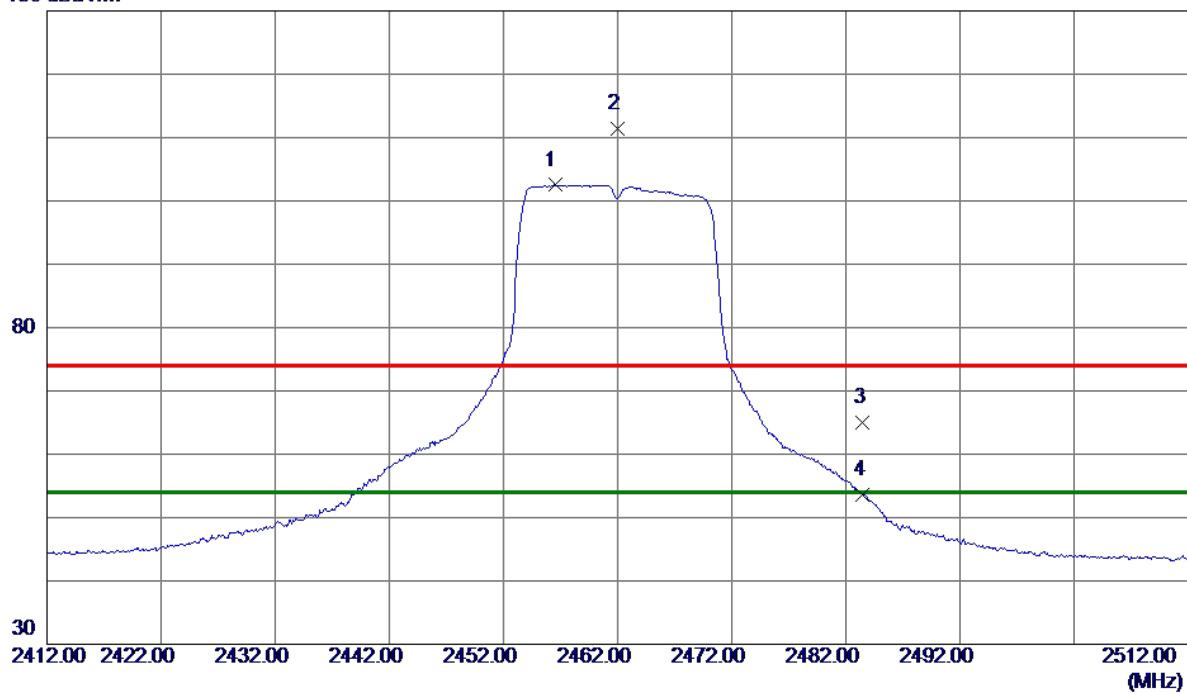
No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	ment				
1 *	4923.8750	32.74	4.80	37.54	54.00	-16.46	AVG	
2	4931.9000	43.39	4.82	48.21	74.00	-25.79	Peak	

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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130 dBuV/m



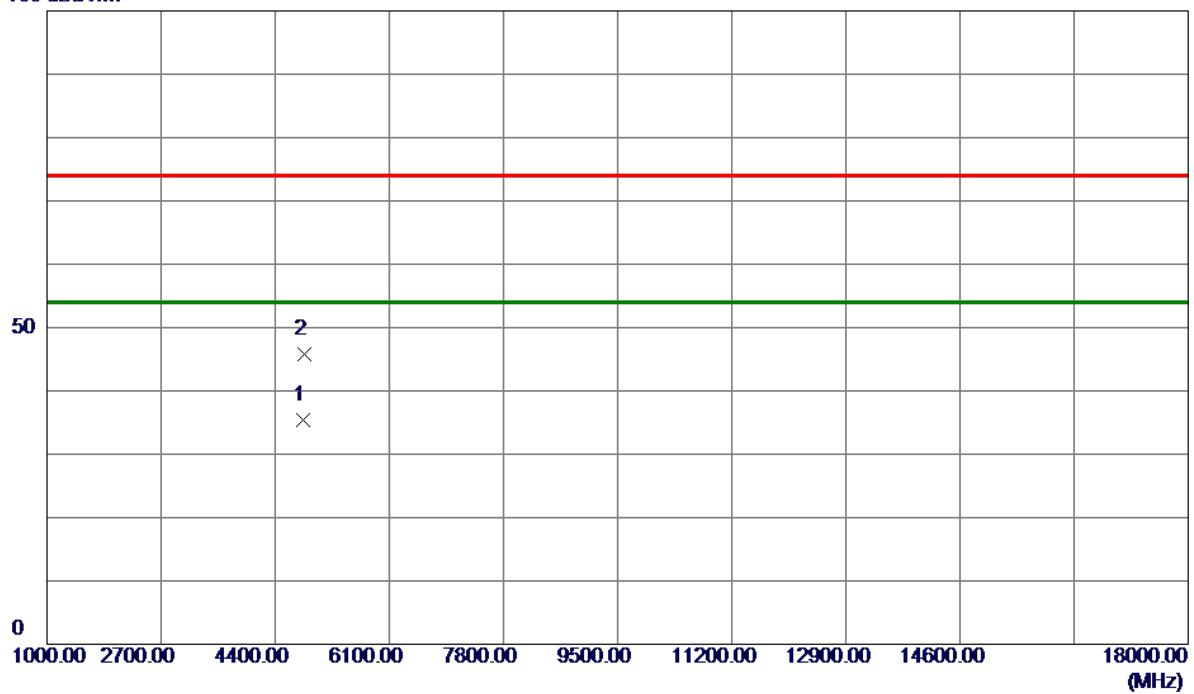
No.	Freq. MHz	Reading Level	Correct Factor	Measure ment	Limit	Margin	Detector	Comment
		dBuV/m	dB	dBuV/m	dB			
1 *	2456.5000	93.71	8.79	102.50	54.00	48.50	AVG	No Limit
2	2462.0500	102.69	8.80	111.49	74.00	37.49	Peak	No Limit
3	2483.5000	56.17	8.83	65.00	74.00	-9.00	Peak	
4	2483.5000	44.75	8.83	53.58	54.00	-0.42	AVG	

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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100 dBuV/m



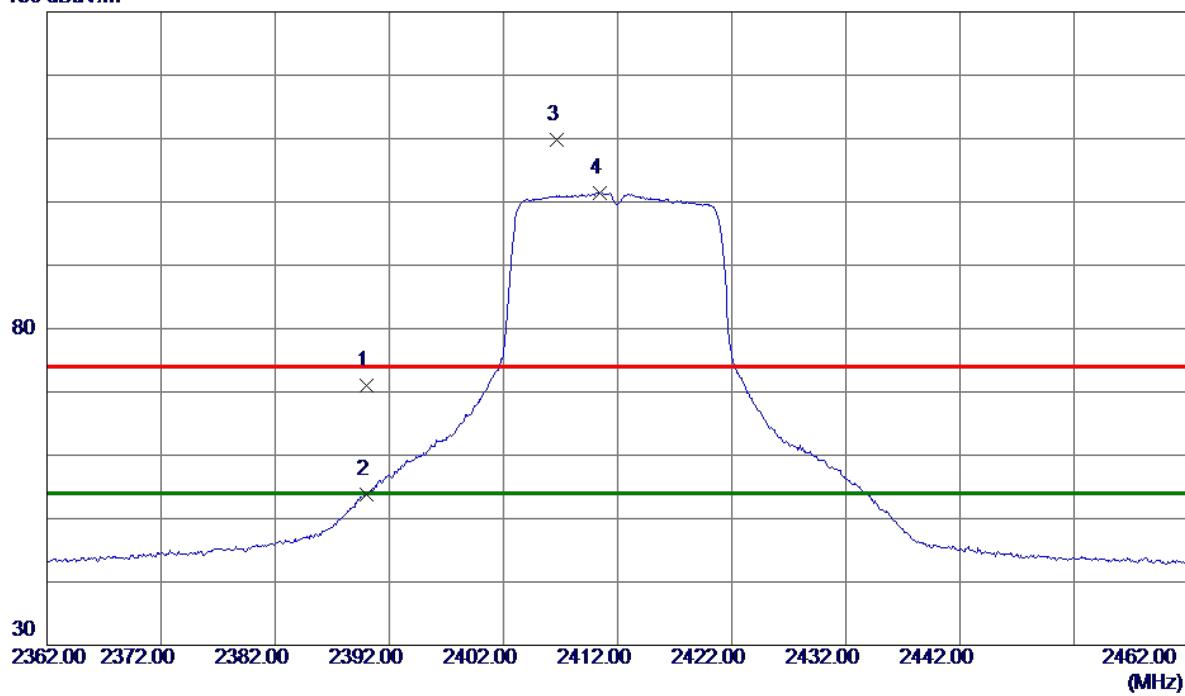
No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	dBuV/m	dBuV/m	dB		
1 *	4823.2000	30.88	4.54	35.42	54.00	-18.58	AVG	
2	4829.3750	41.26	4.56	45.82	74.00	-28.18	Peak	

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



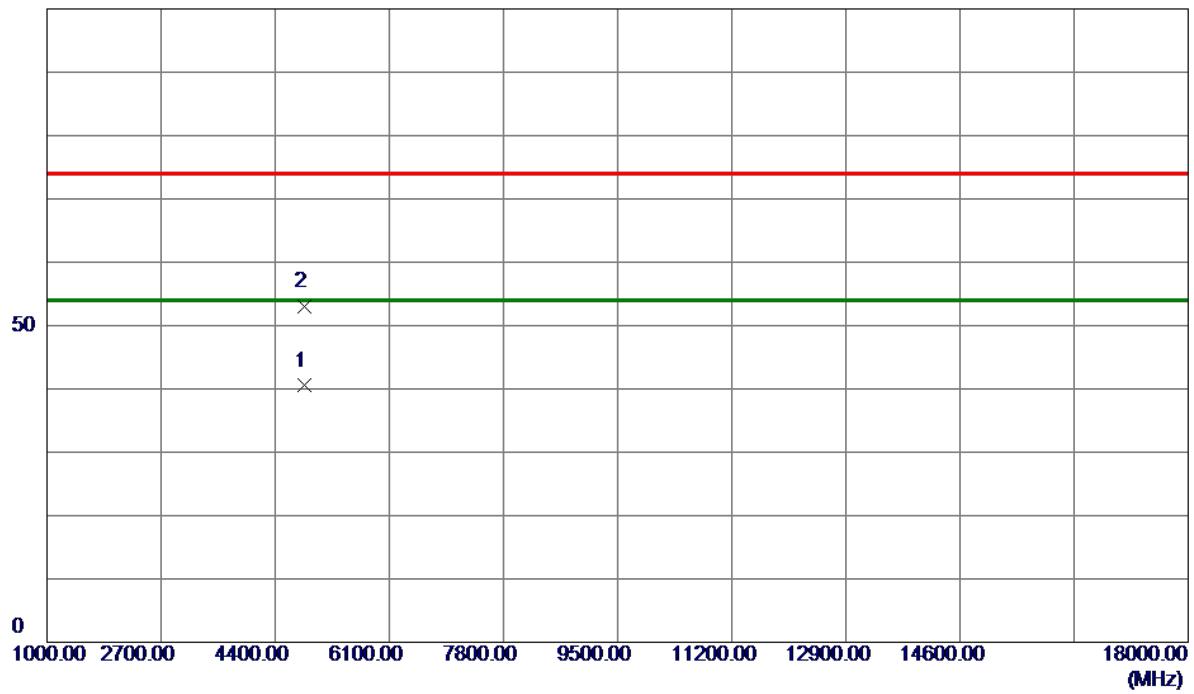
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	62.32	8.68	71.00	74.00	-3.00	Peak	
2	2390.0000	45.21	8.68	53.89	54.00	-0.11	AVG	
3	2406.6500	101.12	8.71	109.83	74.00	35.83	Peak	No Limit
4 *	2410.4500	92.70	8.72	101.42	54.00	47.42	AVG	No Limit

REMARKS:

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

Test Mode	TX N(HT20) Mode 2417 MHz	Polarization	Vertical
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100 dBuV/m



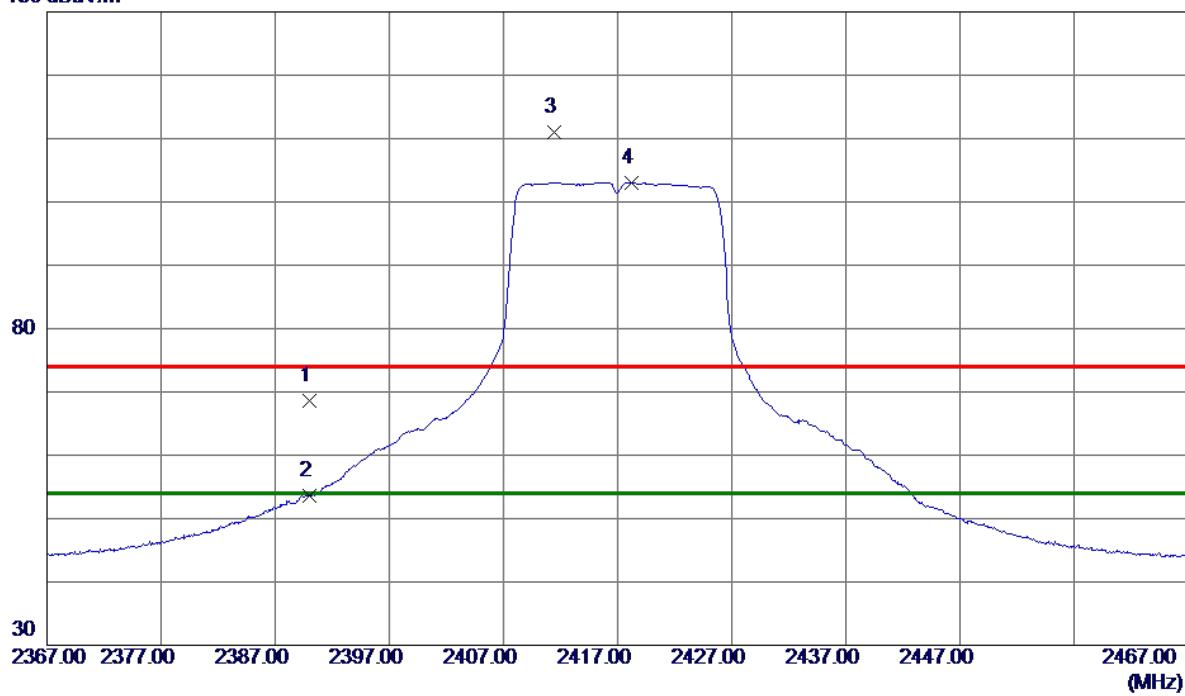
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Margin	
							Detector	Comment
1 *	4834.1250	35.93	4.57	40.50	54.00	-13.50	AVG	
2	4834.6750	48.38	4.57	52.95	74.00	-21.05	Peak	

REMARKS:

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

Test Mode	TX N(HT20) Mode 2417 MHz	Polarization	Horizontal
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130 dBuV/m



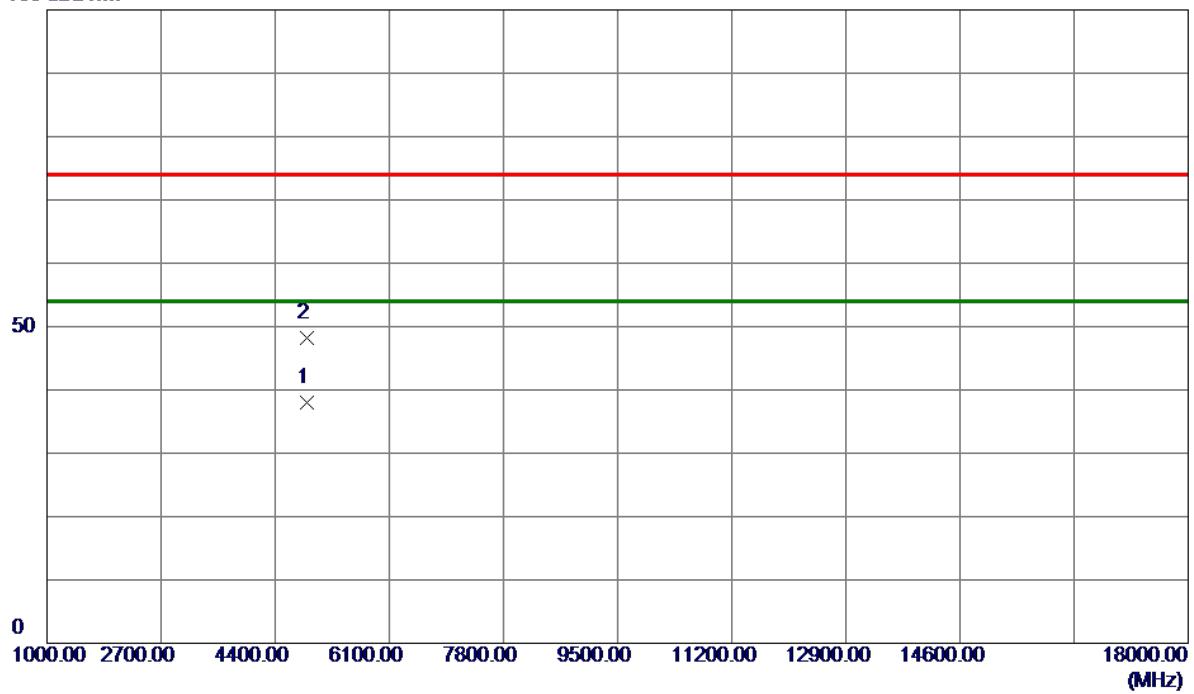
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector		Comment
							Detector	Comment	
1	2390.0000	59.95	8.68	68.63	74.00	-5.37	Peak		
2	2390.0000	44.93	8.68	53.61	54.00	-0.39	AVG		
3	2411.4000	102.23	8.72	110.95	74.00	36.95	Peak	No Limit	
4 *	2418.2500	94.36	8.73	103.09	54.00	49.09	AVG	No Limit	

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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100 dBuV/m



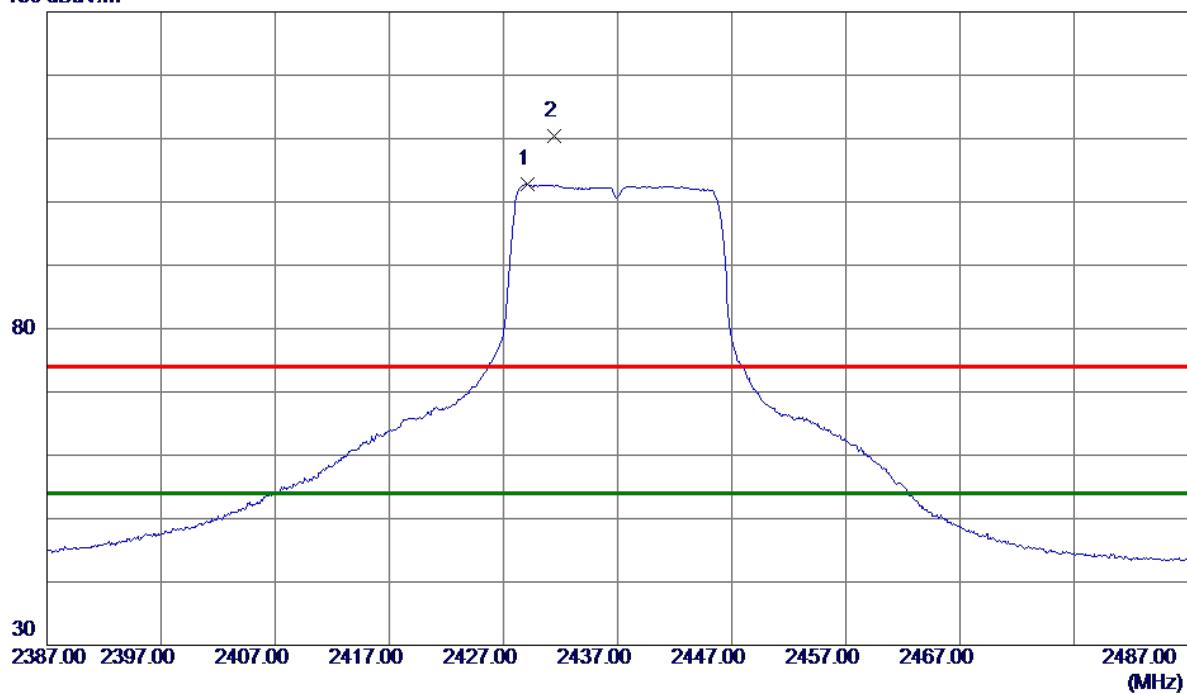
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	
							Detector	Comment
1 *	4873.9750	33.35	4.67	38.02	54.00	-15.98	AVG	
2	4876.5000	43.58	4.68	48.26	74.00	-25.74	Peak	

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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130 dBuV/m



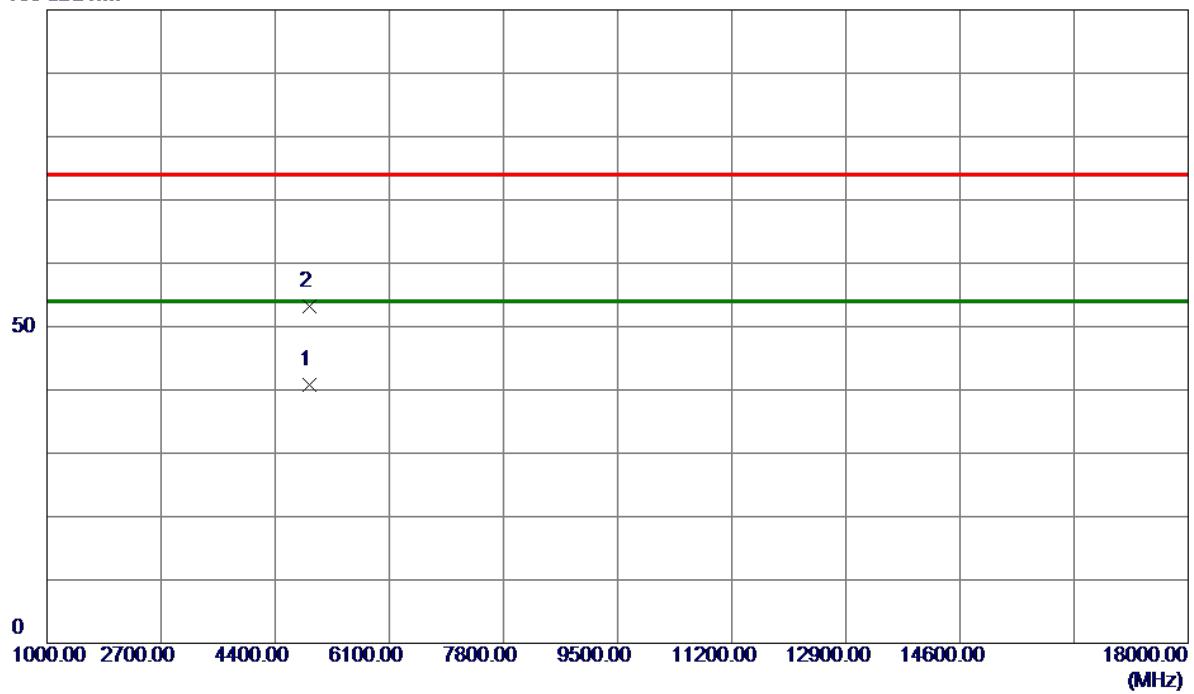
No.	Freq.	Reading	Correct	Measure	Limit	Margin	Detector	Comment
		Level	Factor	ment	dBuV/m	dB		
1 *	2429.1000	94.07	8.75	102.82	54.00	48.82	AVG	No Limit
2	2431.4500	101.68	8.75	110.43	74.00	36.43	Peak	No Limit

REMARKS:

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

Test Mode	TX N(HT20) Mode 2457 MHz	Polarization	Vertical
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100 dBuV/m



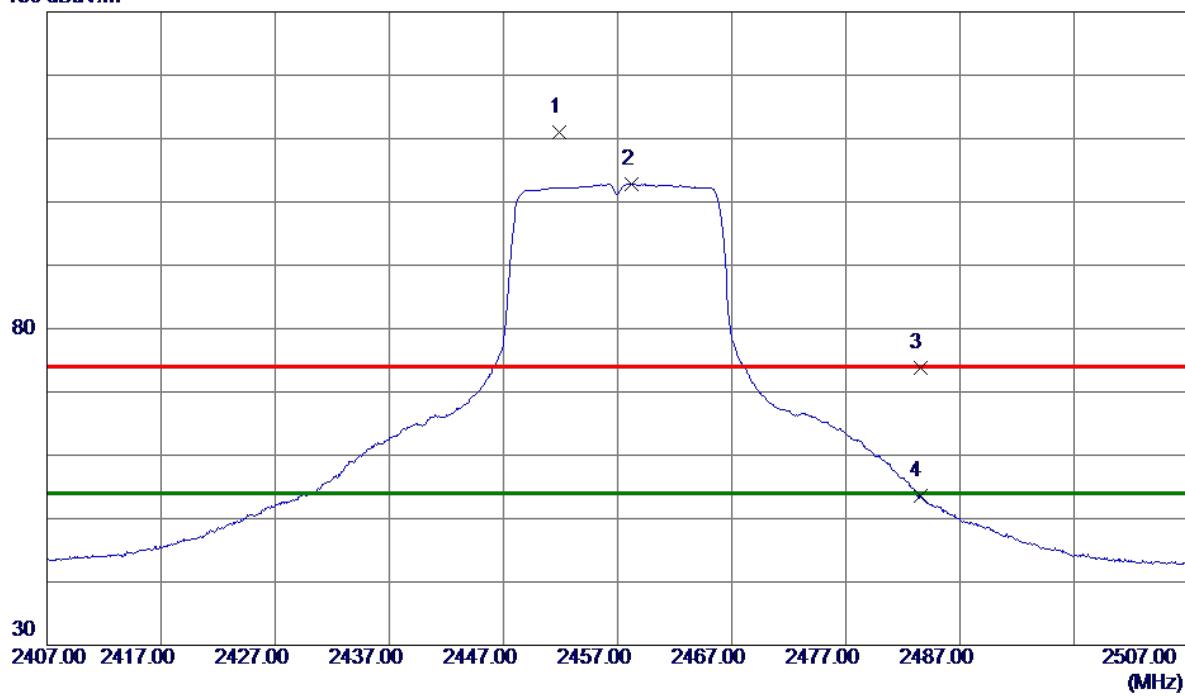
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	
							Detector	Comment
1 *	4914.5750	36.11	4.78	40.89	54.00	-13.11	AVG	
2	4914.6250	48.34	4.78	53.12	74.00	-20.88	Peak	

REMARKS:

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

Test Mode	TX N(HT20) Mode 2457 MHz	Polarization	Horizontal
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130 dBuV/m



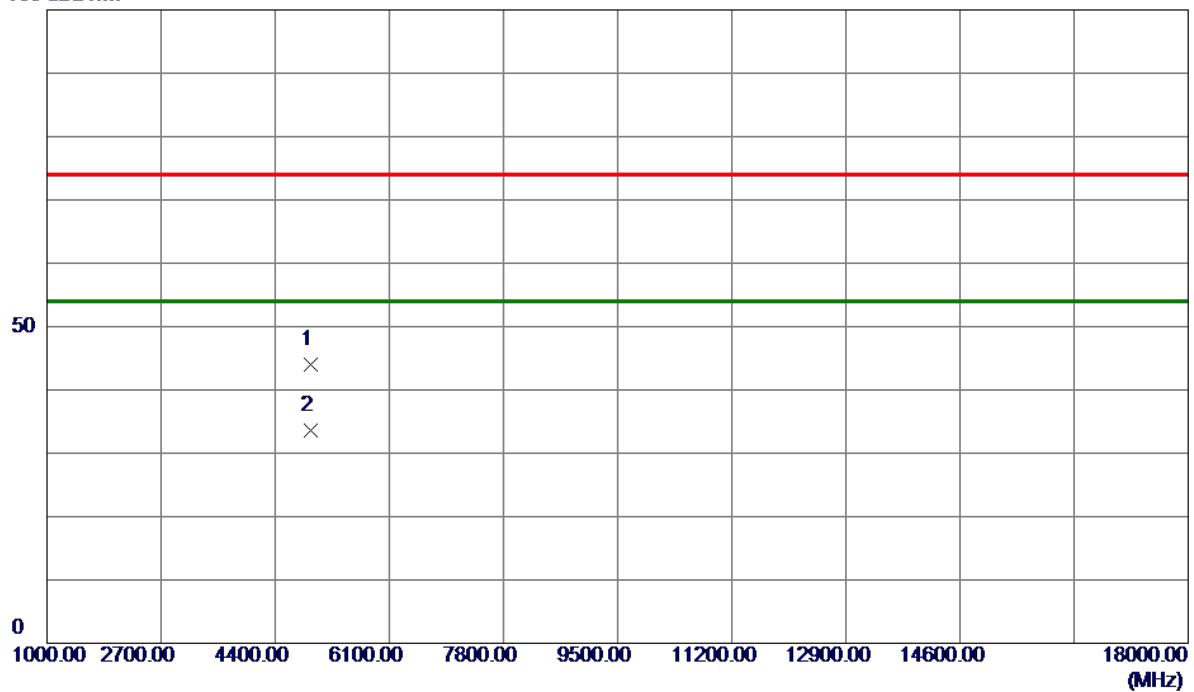
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2451.9000	102.15	8.78	110.93	74.00	36.93	Peak	No Limit
2 *	2458.2500	94.06	8.79	102.85	54.00	48.85	AVG	No Limit
3	2483.5000	64.92	8.83	73.75	74.00	-0.25	Peak	
4	2483.5000	44.70	8.83	53.53	54.00	-0.47	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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100 dBuV/m



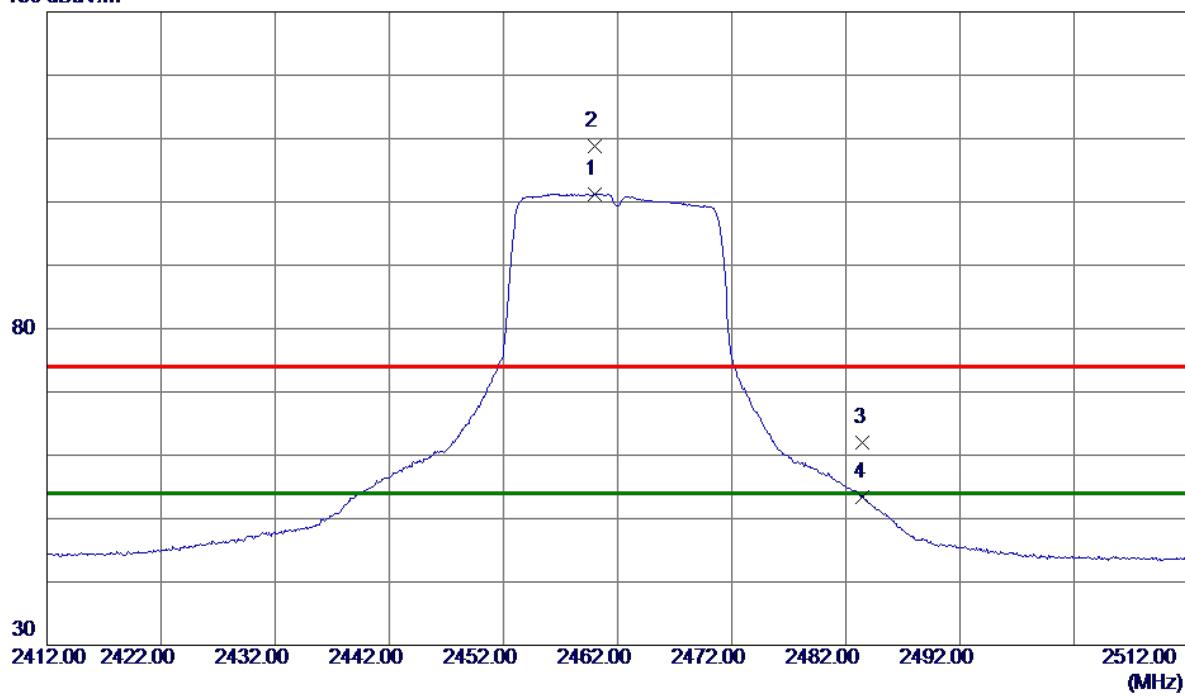
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	
							Comment	
1	4922.3750	39.19	4.80	43.99	74.00	-30.01	Peak	
2 *	4923.5250	28.87	4.80	33.67	54.00	-20.33	AVG	

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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130 dBuV/m

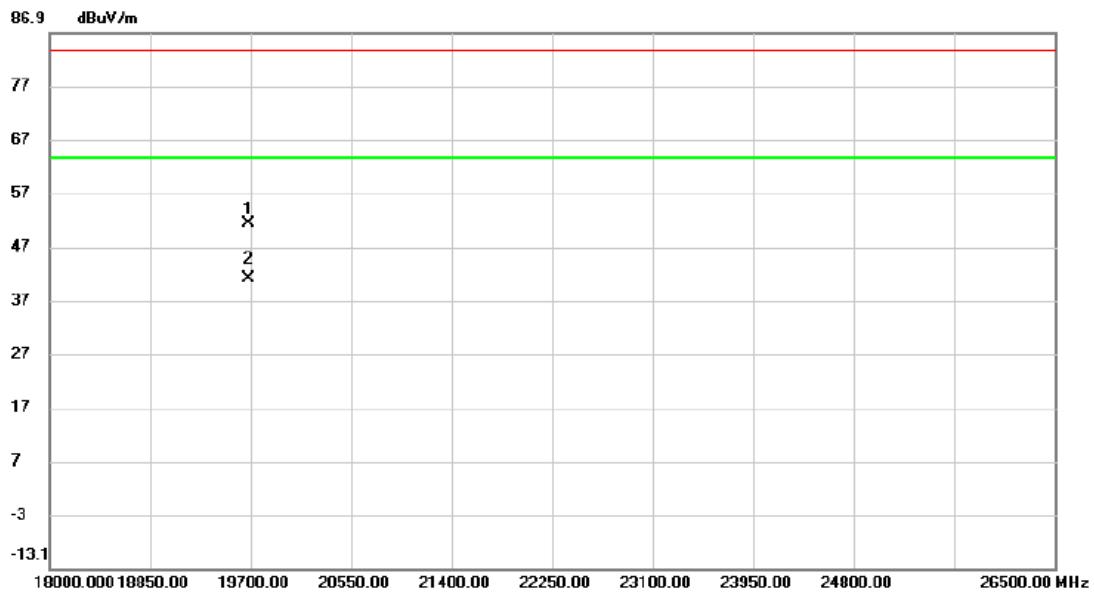


No.	Freq. MHz	Reading Level	Correct Factor	Measure ment	Limit	Margin	Detector	Comment
		dBuV/m	dB	dBuV/m	dB			
1 *	2459.9500	92.47	8.80	101.27	54.00	47.27	AVG	No Limit
2	2460.0500	100.05	8.80	108.85	74.00	34.85	Peak	No Limit
3	2483.5000	53.19	8.83	62.02	74.00	-11.98	Peak	
4	2483.5000	44.58	8.83	53.41	54.00	-0.59	AVG	

REMARKS:

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

Test Mode	TX B Mode Channel 06	Polarization	Vertical
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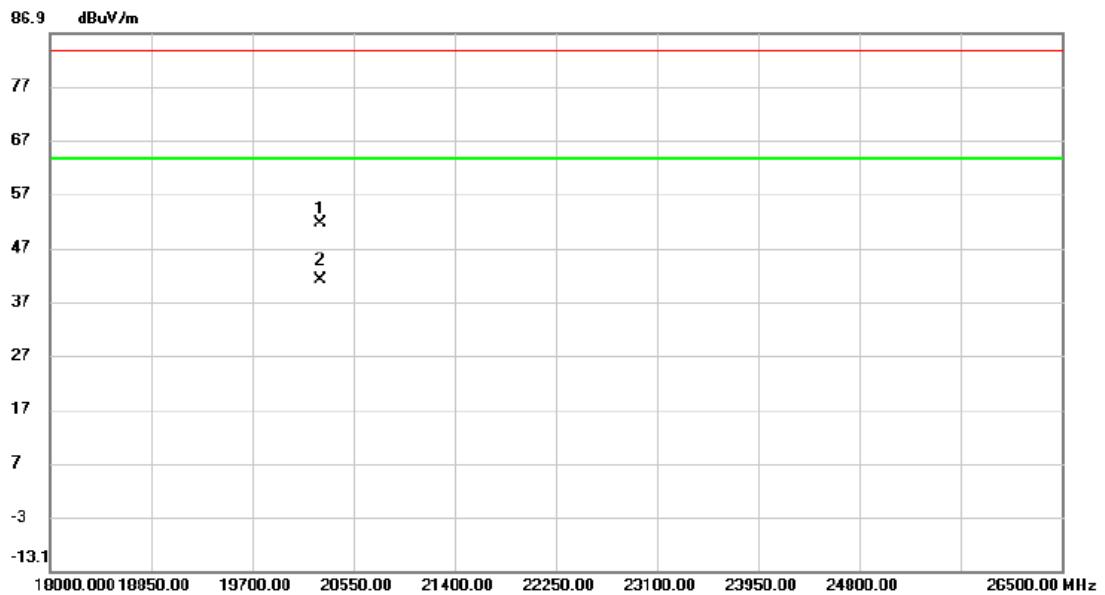


No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Margin	
			Level	Factor	ment			
		MHz	dBuV	dB	dBuV/m	dB	Detector	Comment
1		19687.250	52.38	-1.05	51.33	83.50	-32.17	peak
2	*	19687.250	42.18	-1.05	41.13	63.50	-22.37	AVG

REMARKS:

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

Test Mode	TX B Mode Channel 06	Polarization	Horizontal
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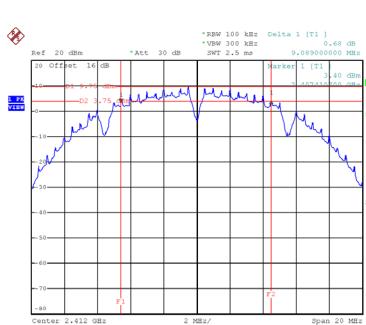
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		20273.750	52.24	-0.65	51.59	83.50	-31.91	peak	
2	*	20273.750	41.57	-0.65	40.92	63.50	-22.58	AVG	

REMARKS:

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

APPENDIX E - BANDWIDTH

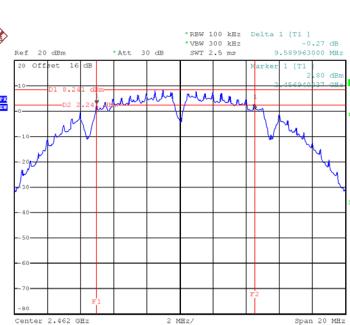
Test Mode		TX B Mode			
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
01	2412	9.089	13.920	0.5	Complies
06	2437	10.060	14.000	0.5	Complies
11	2462	9.590	13.920	0.5	Complies



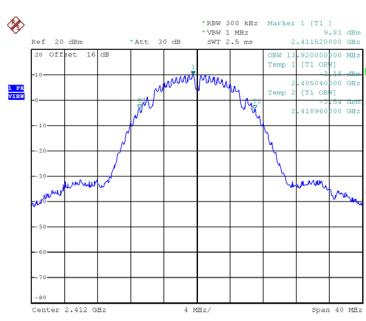
Date: 20.JAN.2025 18:20:29



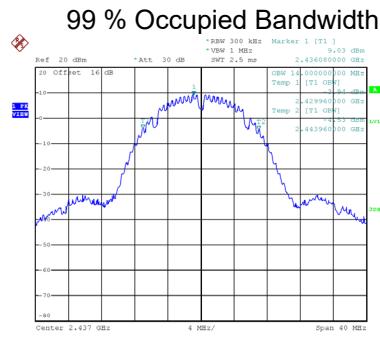
Date: 20.JAN.2025 18:21:14



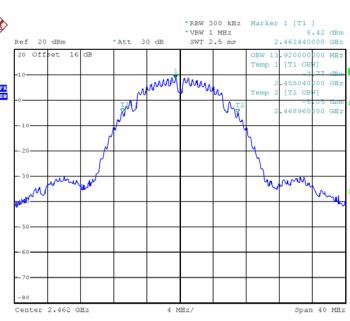
Date: 20.JAN.2025 18:22:00



Date: 20.JAN.2025 18:20:36



Date: 20.JAN.2025 18:21:21

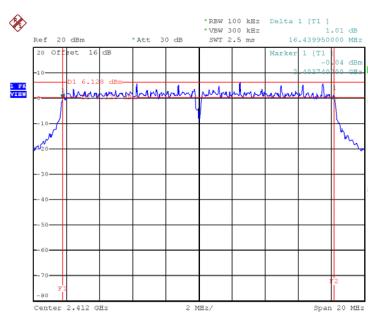


Date: 20.JAN.2025 18:22:06

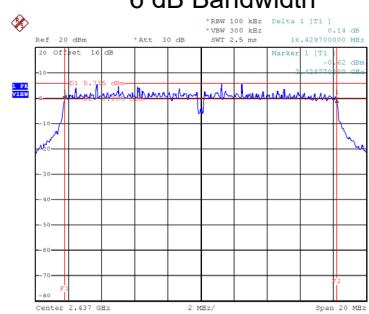
Test Mode TX G Mode

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
01	2412	16.440	17.200	0.5	Complies
06	2437	16.430	17.120	0.5	Complies
11	2462	16.410	17.120	0.5	Complies

CH01

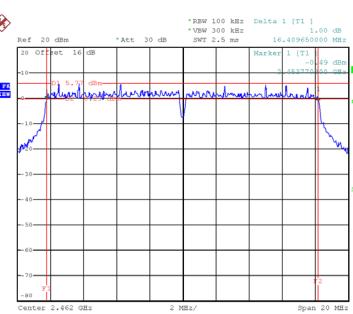


Date: 20.JAN.2025 18:23:40

CH06
6 dB Bandwidth

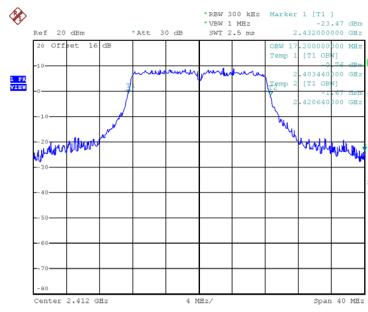
Date: 20.JAN.2025 18:24:03

CH11

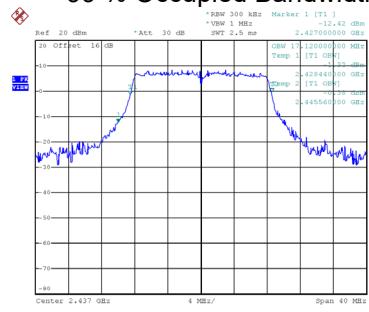


Date: 20.JAN.2025 18:24:20

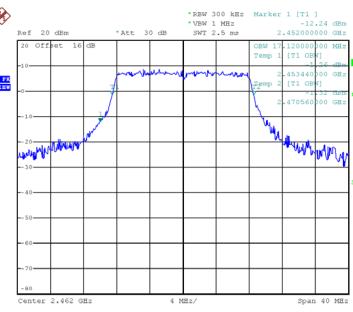
99 % Occupied Bandwidth



Date: 20.JAN.2025 18:23:24



Date: 20.JAN.2025 18:23:48

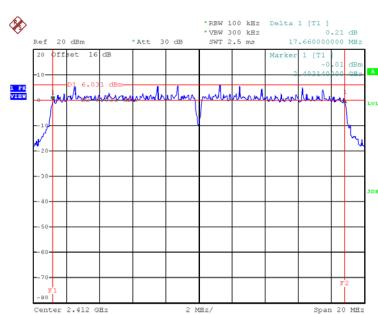


Date: 20.JAN.2025 18:24:12

Test Mode TX N(HT20) Mode

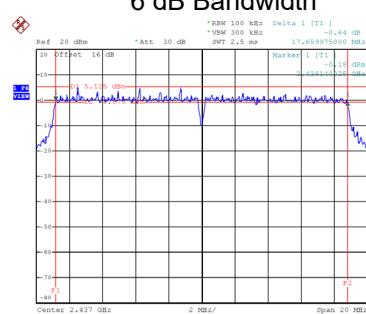
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
01	2412	17.660	18.480	0.5	Complies
06	2437	17.660	18.320	0.5	Complies
11	2462	17.720	18.400	0.5	Complies

CH01



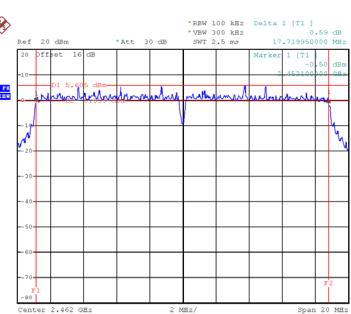
Date: 20.JAN.2025 18:25:09

CH06
6 dB Bandwidth



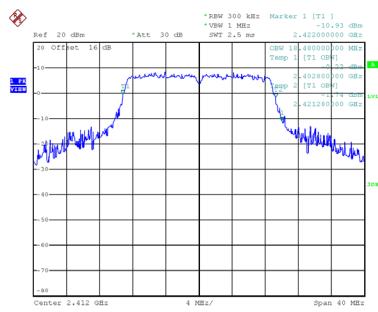
Date: 20.JAN.2025 18:25:31

CH11

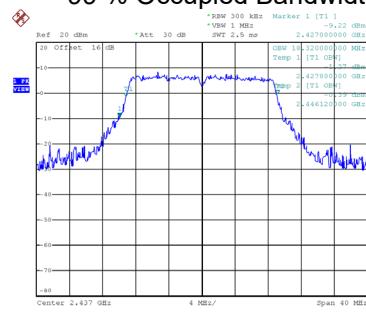


Date: 20.JAN.2025 18:25:56

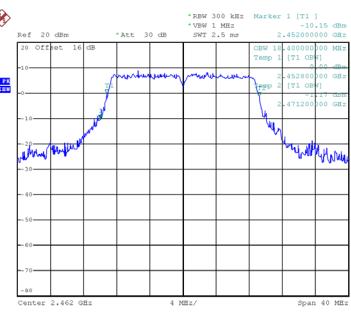
99 % Occupied Bandwidth



Date: 20.JAN.2025 18:24:57



Date: 20.JAN.2025 18:25:17



Date: 20.JAN.2025 18:25:44

APPENDIX F - MAXIMUM OUTPUT POWER

Test Mode TX B Mode

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	19.98	0.00	19.98	30.00	1.0000	Complies
06	2437	20.02	0.00	20.02	30.00	1.0000	Complies
11	2462	19.93	0.00	19.93	30.00	1.0000	Complies

Test Mode TX G Mode

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	14.35	1.75	16.10	30.00	1.0000	Complies
06	2437	18.03	1.75	19.78	30.00	1.0000	Complies
11	2462	15.46	1.75	17.21	30.00	1.0000	Complies

Test Mode TX N(HT20) Mode

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	13.96	1.84	15.80	30.00	1.0000	Complies
06	2437	18.11	1.84	19.95	30.00	1.0000	Complies
11	2462	14.45	1.84	16.29	30.00	1.0000	Complies

APPENDIX G - CONDUCTED SPURIOUS EMISSIONS

Test Mode

TX B Mode

Reference Level-CH01



Date: 20.JAN.2025 18:33:31

Reference Level -CH06



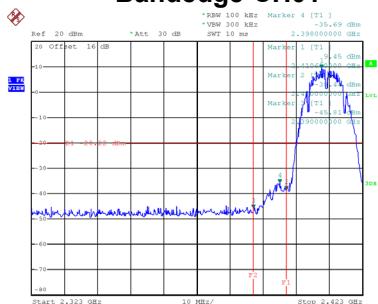
Date: 20.JAN.2025 18:34:25

Reference Level-CH11



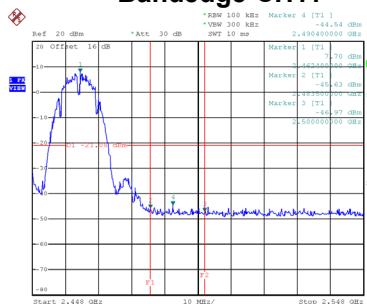
Date: 24.JAN.2025 09:44:32

Bandedge-CH01



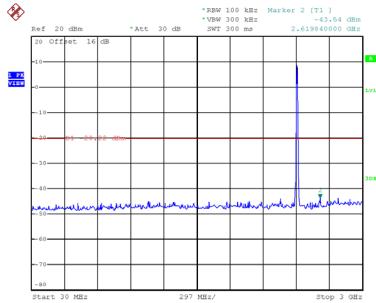
Date: 20.JAN.2025 18:46:26

Bandedge-CH11

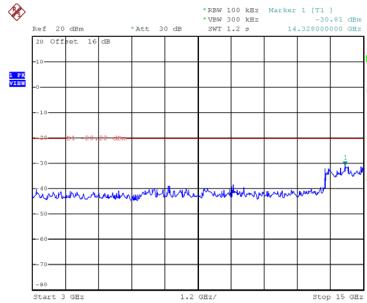


Date: 20.JAN.2025 18:49:56

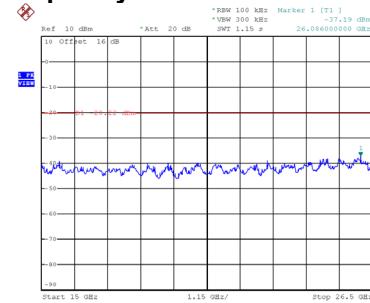
CH01 – 10th Harmonic of the fundamental frequency



Date: 20.JAN.2025 19:05:37

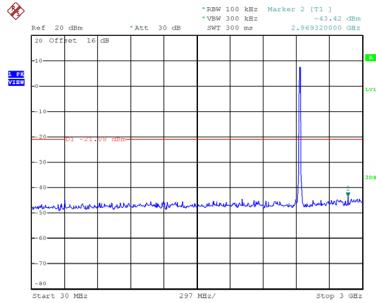


Date: 20.JAN.2025 19:05:45

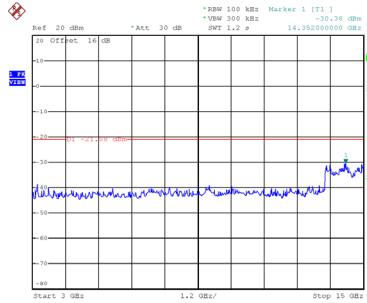


Date: 20.JAN.2025 19:12:02

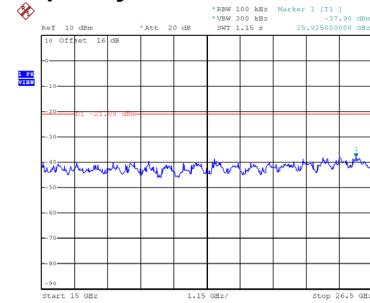
CH06 – 10th Harmonic of the fundamental frequency



Date: 20.JAN.2025 19:06:26



Date: 20.JAN.2025 19:06:34



Date: 20.JAN.2025 19:13:46