

FCC Radio Test Report

FCC ID: KA2COVR1100A1

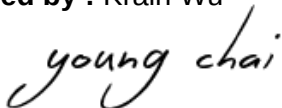
This report concerns: **Original Grant**

Project No. : 1907H003
Equipment : AC1200 Dual Band Mesh Wi-Fi Router
 AC1200 Dual Band Whole Home Mesh Wi-Fi Router
Brand Name : D-Link
Test Model : AC1200 Dual Band Mesh Wi-Fi Router: COVR-1100
Series Model : AC1200 Dual Band Whole Home Mesh Wi-Fi Router:
 COVR-1102, COVR-1103
Applicant : D-Link Corporation
Address : 17595Mt. Hermann,Fountain Valley , California, United States
 92708
Date of Receipt : Jul. 04, 2019
Date of Test : Jul. 12, 2019~Aug. 26, 2019
Issued Date : Spe. 24, 2019
Report Version : R00
Test Sample : Engineering Sample No.: SH19072983
Standard(s) : FCC Part15, Subpart C (15.247)
 ANSI C63.10-2013
 KDB 558074 D01 15.247 Meas Guidance V05r02

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



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Certificate # 5123.03

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Limitation

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

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

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	Spe. 24, 2019

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC Part15, Subpart C (15.247)				
Standard(s) Section	Test Item	Test Result	Judgment	Remark
15.207	AC Power Line Conducted Emissions	APPENDIX A	N/A	-----
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 & e.i.r.p.	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:

(1) "N/A" denotes test is not applicable in this test report.

1.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No. 29, Jintang Road, Tangzhen Industry Park, Pudong New Area, Shanghai 201210, China
 BTL's Test Firm Registration Number for FCC: 476765
 BTL's Designation Number for FCC: CN1241

1.2 MEASUREMENT UNCERTAINTY

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

A. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	U, (dB)
SH-C01	CISPR	150 kHz ~ 30 MHz	± 2.26

B. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)
SH-CB01	CISPR	9 KHz~30 MHz	V	3.79
		9 KHz~30 MHz	H	3.57
		30 MHz~200 MHz	V	4.04
		30 MHz~200 MHz	H	3.76
		200 MHz~1,000 MHz	V	4.24
		200 MHz~1,000 MHz	H	3.84
		1 GHz~18 GHz	V	4.46
		1 GHz~18 GHz	H	4.40
		18 GHz~40 GHz	V	3.95
		18 GHz~40 GHz	H	3.95

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	23°C	61%	AC 120V	Summer Xu
Radiated Emissions-9K-30MHz	24°C	60%	AC 120V	Summer Xu
Radiated Emissions-30 MHz to 1GHz	24°C	60%	AC 120V	Summer Xu
Radiated Emissions-Above 1000 MHz	24°C	60%	AC 120V	Summer Xu
Bandwidth	23°C	61%	AC 120V	Summer Xu
Maximum output power & e.i.r.p.	23°C	61%	AC 120V	Summer Xu
Conducted Spurious Emissions	23°C	61%	AC 120V	Summer Xu
Power Spectral Density	23°C	61%	AC 120V	Summer Xu

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	AC1200 Dual Band Mesh Wi-Fi Router AC1200 Dual Band Whole Home Mesh Wi-Fi Router
Brand Name	D-Link
Test Model	AC1200 Dual Band Mesh Wi-Fi Router: COVR-1100
Series Model	AC1200 Dual Band Whole Home Mesh Wi-Fi Router: COVR-1102, COVR-1103
Model Difference(s)	The product itself is the same, except that COVR-1100 is one pack, COVR-1102 is two packs, and COVR-1103 is three packs.
Software Version	N/A
Hardware Version	N/A
Power Source	DC Voltage supplied from AC/DC adapter: Model: AMS159A-1201000FV
Power Rating	I/P: 100-240V ~ 50/60Hz 0.5A O/P: 12V --- 1.0A
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 300 Mbps
Maximum Output Power Non-Beamforming	IEEE 802.11b: 28.15 dBm (0.6531 W) IEEE 802.11g: 28.38 dBm (0.6887 W) IEEE 802.11n (HT20): 29.90 dBm (0.9766 W) IEEE 802.11n (HT40): 29.74 dBm (0.9409 W)
Maximum Output Power Beamforming	IEEE 802.11n (HT20): 29.67 dBm (0.9269 W) IEEE 802.11n (HT40): 29.57 dBm (0.9061 W)

Note:

- For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- Channel List:

CH01 - CH11 for IEEE 802.11b, IEEE 802.11g, IEEE 802.11n (HT20) CH03 - CH09 for IEEE 802.11n (HT40)							
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)	Note
1	N/A	N/A	PCB	N/A	3	N/A
2	N/A	N/A	PCB	N/A	3	N/A

- (1) The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (2T2R), all transmit signals are completely uncorrelated, then, Direction gain = G_{ANT} , that is Directional gain=3.

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-20 MHz Mode Channel 01/06/11
Mode 4	TX N-40 MHz Mode Channel 03/06/09
Mode 5	TX N20 MODE CHANNEL 01

Following mode(s) as (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 5	TX N20 MODE CHANNEL 01

Radiated emissions test - Below 1GHz	
Final Test Mode:	Description
Mode 5	TX N20 MODE CHANNEL 01

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-20 MHz Mode Channel 01/06/11
Mode 4	TX N-40 MHz 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-20 MHz Mode Channel 01/06/11
Mode 4	TX N-40 MHz Mode Channel 03/06/09

NOTE:

- (1) The measurements are performed at the high, middle, low available channels.
- (2) 802.11b mode: CCK (1 Mbps)
802.11g mode: OFDM (6 Mbps)
802.11n HT20 mode : BPSK (6.5 Mbps)
802.11n HT40 mode : BPSK (13.5 Mbps)
For radiated emission tests, the highest output powers were set for final test.
- (3) For radiated emission below 1 GHz test, the IEEE 802.11n20 is found to be the worst case and recorded.
- (4) For radiated emission above 1 GHz test, 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.
- (5) The measurements for RF Output Power were tested during Non-Beamforming and Beamforming, the worst case were Non-Beamforming, only worst case were documented for other test items.

2.3 PARAMETERS OF TEST SOFTWARE

Non-Beamforming

Test Software	MP-v3.4		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	38	37	42
IEEE 802.11g	39	39	42
IEEE 802.11n (HT20)	35	35	37
Frequency (MHz)	2422	2437	2452
IEEE 802.11n (HT40)	36	41	42

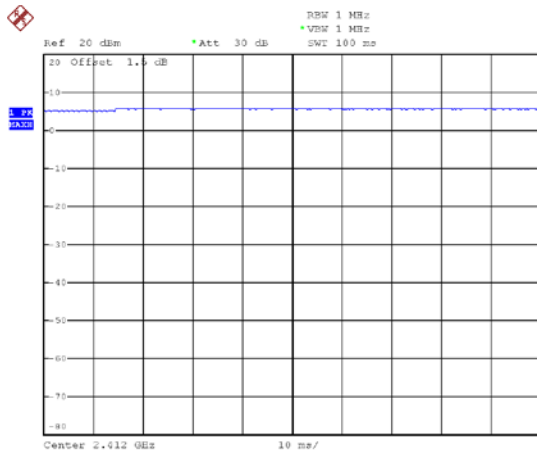
Beamforming

Test Software	MP-v3.4		
Frequency (MHz)	2412	2437	2462
IEEE 802.11n (HT20)	36	37	41
Frequency (MHz)	2422	2437	2452
IEEE 802.11n (HT40)	40	41	42

2.4 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.

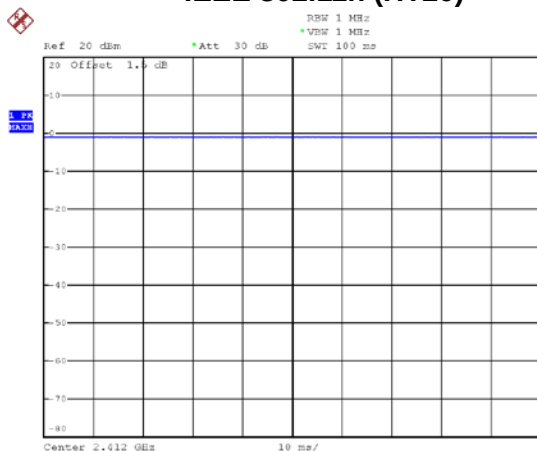
IEEE 802.11b



Date: 6.AUG.2019 16:22:41

Duty cycle = $100.000 \text{ ms} / 100.000 \text{ ms} = 100\%$
 Duty Factor = $10 \log(1/\text{Duty cycle}) = 0.00$

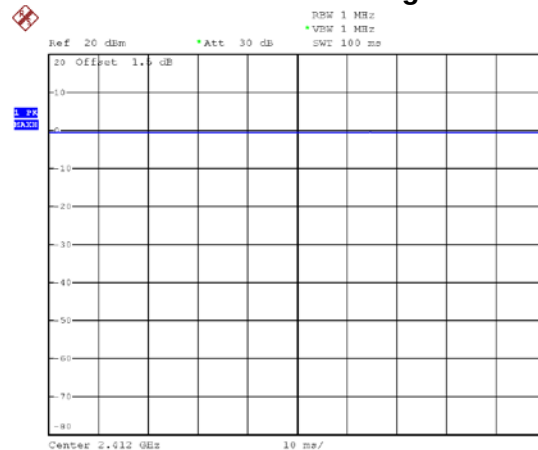
IEEE 802.11n (HT20)



Date: 6.AUG.2019 16:28:03

Duty cycle = $100.000 \text{ ms} / 100.000 \text{ ms} = 100\%$
 Duty Factor = $10 \log(1/\text{Duty cycle}) = 0.00$,

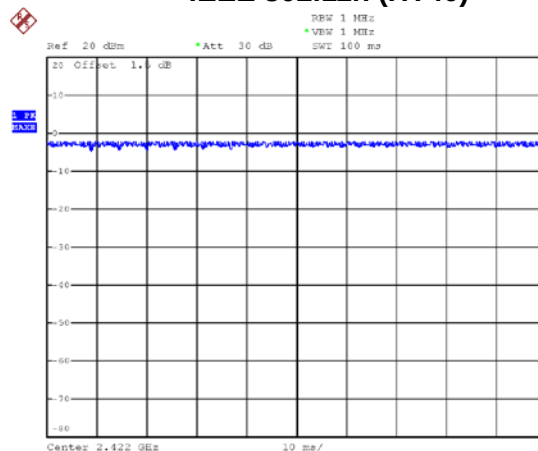
IEEE 802.11g



Date: 6.AUG.2019 16:26:35

Duty cycle = $100.000 \text{ ms} / 100.000 \text{ ms} = 100\%$
 Duty Factor = $10 \log(1/\text{Duty cycle}) = 0.00$

IEEE 802.11n (HT40)



Date: 6.AUG.2019 16:34:01

Duty cycle = $100.000 \text{ ms} / 100.000 \text{ ms} = 100\%$
 Duty Factor = $10 \log(1/\text{Duty cycle}) = 0.00$

NOTE:

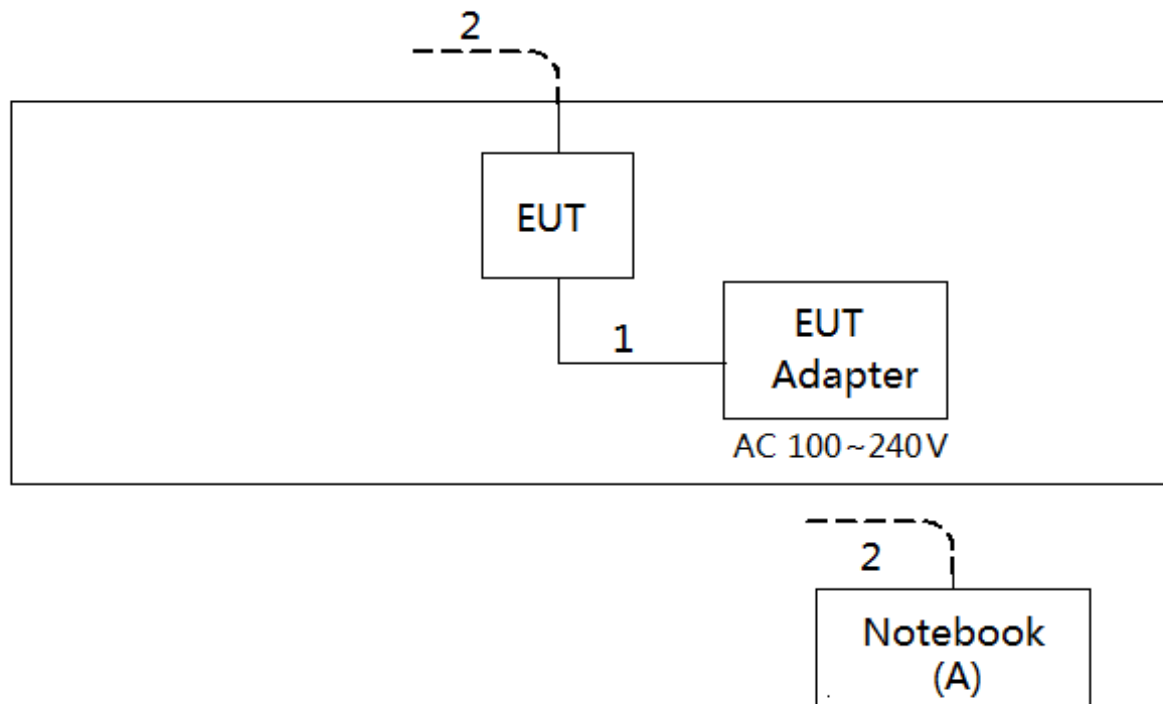
For IEEE 802.11g and IEEE 802.11n (HT20):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1 kHz (Duty cycle $< 98\%$).

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 2 kHz (Duty cycle $< 98\%$).

2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.6 SUPPORT UNITS

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.
A	Notebook	Lenovo	#P152014	N/A

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	DC Cable	N/A	N/A	1.5m
2	RJ45 Cable	N/A	N/A	10m

3. AC POWER LINE CONDUCTED EMISSIONS TEST

3.1 LIMIT

Frequency of Emission (MHz)	Limit (dB μ V)	
	Quasi-peak	Average
0.15 - 0.50	66 to 56*	56 - 46*
0.50 - 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.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

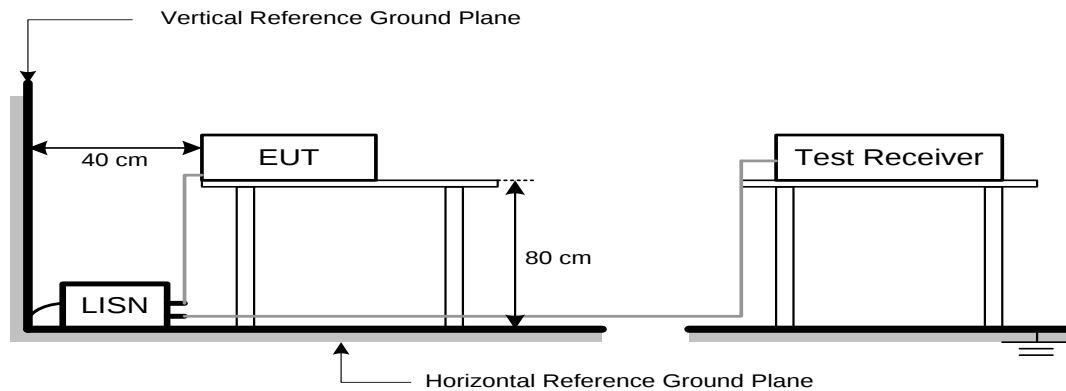
3.2 TEST PROCEDURE

- 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.

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 TEST

4.1 LIMIT

In case the emission fall within the restricted band specified on 15.205(a) and RSS-Gen 8.10, then the 15.209(a) & RSS-Gen 8.9 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 (9 kHz-30 MHz)

Frequency (MHz)	Magnetic field strength (H-Field) (μ A/m)	Measurement Distance (meters)
0.009-0.490	6.37/F(kHz)	300
0.490-1.705	6.37/F(kHz)	30
1.705-30.0	0.08	30

LIMITS OF RADIATED EMISSION MEASUREMENT (30 MHz-1000 MHz)

Frequency (MHz)	Field Strength (μ V/m at 3m)
30-88	100
88-216	150
216-960	200
Above 960	500

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000 MHz)

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

NOTE:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (μ V/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

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW (Emission in restricted band)	1 MHz / 3 MHz for Peak, 1 MHz / 1/T for Average

Receiver Parameter	Setting
Attenuation	Auto
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

4.2 TEST PROCEDURE

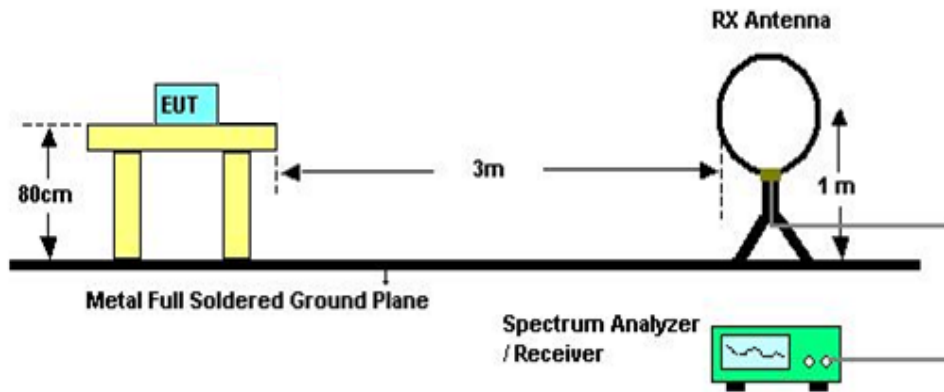
- The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1 GHz)
- The measuring distance 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)
- 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.
- 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).
- 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.
- 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.
- 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)
- 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)
- For the actual test configuration, please refer to the related Item -EUT Test Photos.

4.3 DEVIATION FROM TEST STANDARD

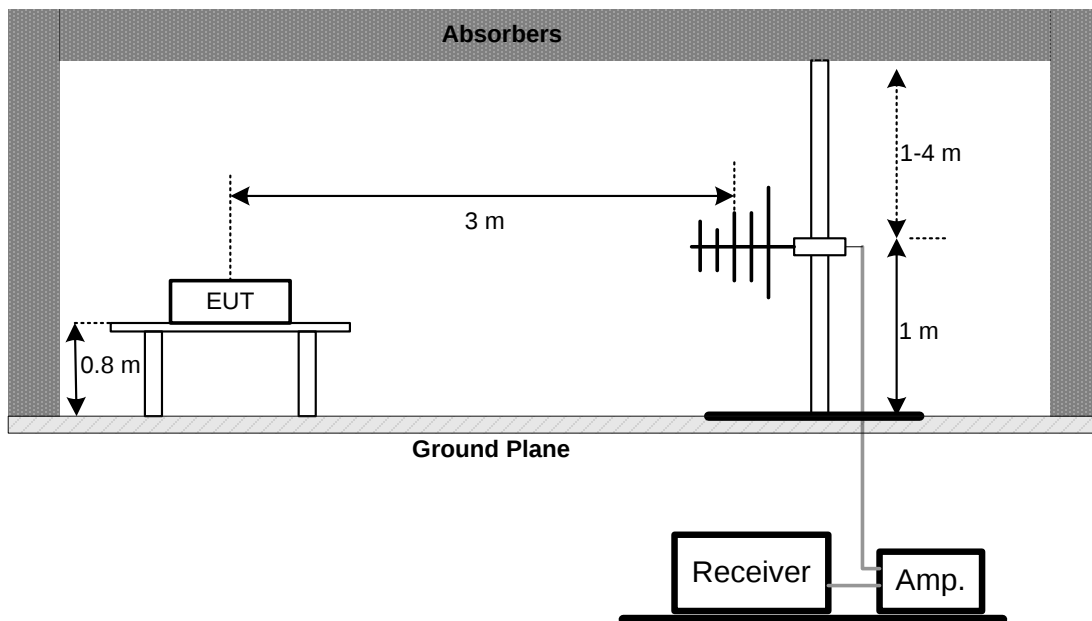
No deviation

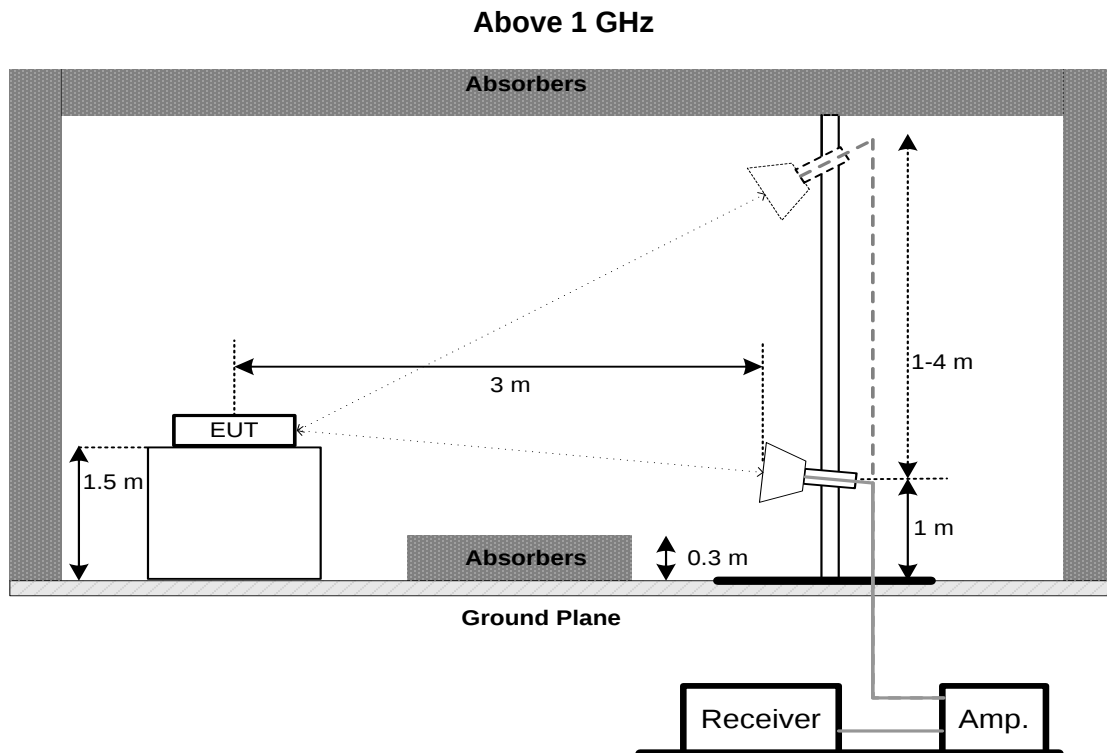
4.4 TEST SETUP

9 kHz-30 MHz



30 MHz to 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 TEST

5.1 LIMIT

FCC Part15, Subpart C (15.247)		
Section	Test Item	Limit
15.247(a)(2) RSS-Gen 6.7 RSS-247 5.2 (a)	6 dB Bandwidth	Minimum 500 kHz
	99% Emission Bandwidth	-

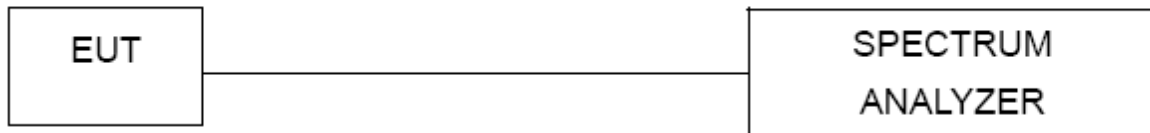
5.2 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- Spectrum Setting: RBW= 100 kHz, VBW=300 kHz, Sweep time = 2.5 ms.
- The bandwidth was performed in accordance with method 11.8.1 of ANSI C63.10-2013.

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 TEST & E.I.R.P. TEST

6.1 LIMIT

FCC Part15, Subpart C (15.247)		
Section	Test Item	Limit
15.247(b)(3) RSS-247 5.4 (d)	Maximum Output Power	1 Watt or 30dBm
RSS-247 5.4 (d)	Maximum e.i.r.p.	4 Watt or 36dBm

6.2 TEST PROCEDURE

- The EUT was directly connected to the power meter and antenna output port as show in the block diagram below.
- The maximum conducted output power was performed in accordance with method 11.9.1.3 (for peak power) or 11.9.2.3.1 (for AVG power) of ANSI C63.10-2013.

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. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

7.2 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- Spectrum Setting: RBW= 100 kHz, VBW=300 kHz, 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 TEST

8.1 LIMIT

FCC Part15, Subpart C (15.247)		
Section	Test Item	Limit
15.247(e) RSS-247 5.2 (b)	Power Spectral Density	8 dBm (in any 3 kHz)

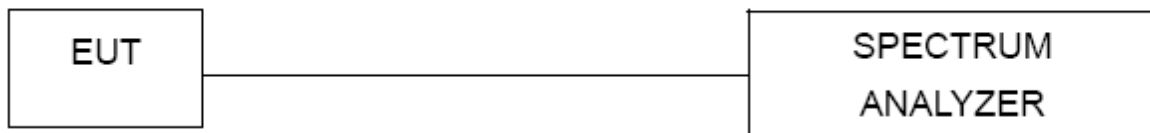
8.2 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- Spectrum Setting: RBW=3 kHz, VBW=10 kHz, Sweep time = Auto.
- The Power Spectral Density was performed in accordance with method 11.10.2 of ANSI C63.10-2013.

8.3 DEVIATION FROM STANDARD

No deviation.

8.4 TEST SETUP



8.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.6 TEST RESULTS

Please refer to the APPENDIX H.

9. MEASUREMENT INSTRUMENTS LIST

AC Power Line Conducted Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Line Impedance Stabilisation Network	Schwarzbeck	NNLK 8121	8121-822	Mar. 29, 2020
2	TWO-LINE V-NETWORK	R&S	ENV216	101340	Nov. 20, 2019
3	Test Cable	emci	EMCRG400-BM-NM-10000	170628	Apr. 17, 2020
4	EMI Test Receiver	R&S	ESCI	100082	Mar. 29, 2020
5	50Ω Terminator	SHX	TF2-1G-A	17051602	Mar. 29, 2020
6	50Ω coaxial switch	Anritsu	MP59B	6201750902	Mar. 29, 2020
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Radiated Emissions - 9 kHz to 30 MHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Loop Antenna	EMCI	EMCI LPA600	275	Mar. 29, 2020
2	EMI Test Receiver	R&S	ESCI	100082	Mar. 29, 2020
3	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

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	719	Mar. 29, 2020
2	Pre-Amplifier	emci	EMC9135	980400	Mar. 29, 2020
3	MXE EMI Receiver	Keysight	N9038A	MY57150106	Mar. 29, 2020
4	Test Cable	emci	EMC104-SM-SM-7000	170330	Apr. 17, 2020
5	Test Cable	emci	EMC104-SM-SM-1000	170331	Apr. 17, 2020
6	Test Cable	emci	EMC104-SM-NM-3500	170621	Apr. 17, 2020
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Radiated Emissions - Above 1 GHz

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Double-Ridged Waveguide Horn Antenna	ETS-Lindgren	9120D	00206960	Mar. 29, 2020
2	Pre-Amplifier	emci	EMC012645SE	980421	Mar. 29, 2020
3	EXA Spectrum Analyzer	Keysight	N9010A	MY56480545	Mar. 29, 2020
4	Test Cable	emci	EMC104-SM-SM-7000	170330	Apr. 17, 2020
5	Test Cable	emci	EMC104-SM-SM-1000	170331	Apr. 17, 2020
6	Test Cable	emci	EMC104-SM-NM-3500	170621	Apr. 17, 2020
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
8	MXE EMI Receiver	Keysight	N9038A	MY57150106	Mar. 29, 2020

Bandwidth

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100626	Mar. 29, 2020

Maximum Output Power

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	Keysight	8990B	MY51000507	Mar. 29, 2020
2	Pulse Power Sensor	Keysight	N1923A	MY58310003	Mar. 29, 2020

Antenna Conducted Spurious Emissions

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100626	Mar. 29, 2020

Power Spectral Density

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100626	Mar. 29, 2020

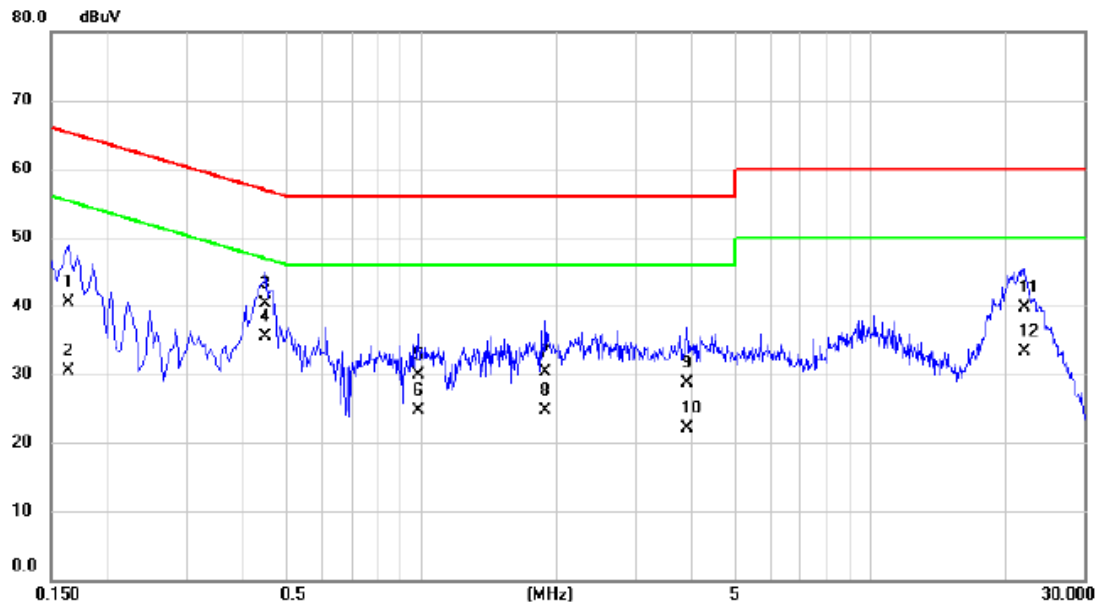
Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of equipment list is one year.

APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

Test Mode: TX Mode

Line



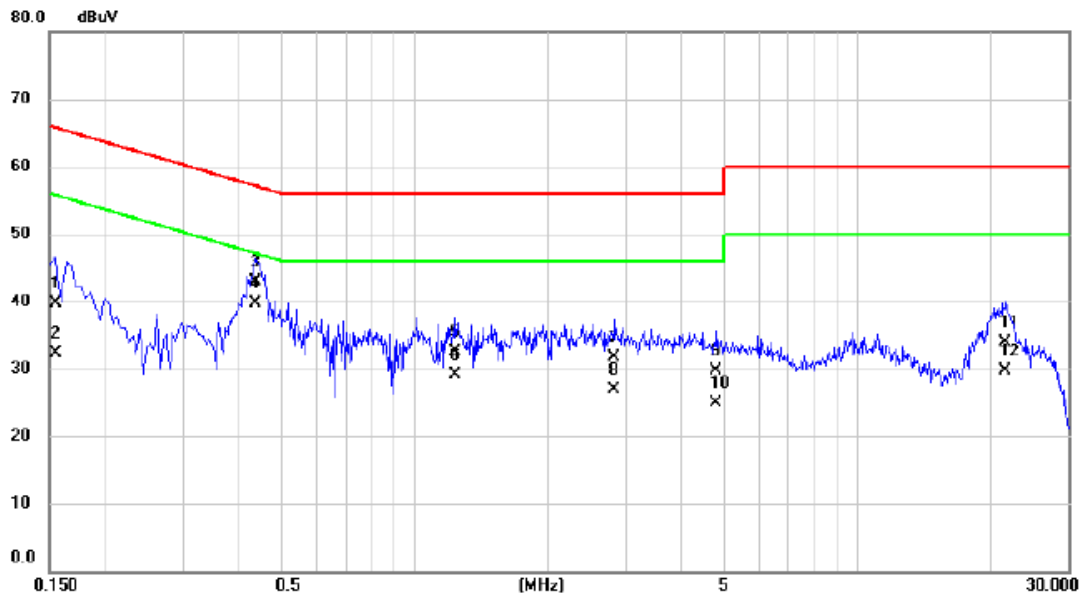
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1635	30.70	9.78	40.48	65.28	-24.80	QP	
2		0.1635	20.80	9.78	30.58	55.28	-24.70	AVG	
3		0.4515	30.30	9.95	40.25	56.85	-16.60	QP	
4	*	0.4515	25.60	9.95	35.55	46.85	-11.30	AVG	
5		0.9825	20.00	9.85	29.85	56.00	-26.15	QP	
6		0.9825	14.90	9.85	24.75	46.00	-21.25	AVG	
7		1.8915	20.40	9.97	30.37	56.00	-25.63	QP	
8		1.8915	14.80	9.97	24.77	46.00	-21.23	AVG	
9		3.9120	18.70	10.04	28.74	56.00	-27.26	QP	
10		3.9120	12.00	10.04	22.04	46.00	-23.96	AVG	
11		22.0425	29.30	10.38	39.68	60.00	-20.32	QP	
12		22.0425	22.90	10.38	33.28	50.00	-16.72	AVG	

REMARKS:

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

Test Mode: TX Mode

Neutral



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1545	30.00	9.62	39.62	65.75	-26.13	QP	
2		0.1545	22.60	9.62	32.22	55.75	-23.53	AVG	
3		0.4380	33.10	9.78	42.88	57.10	-14.22	QP	
4	*	0.4380	30.00	9.78	39.78	47.10	-7.32	AVG	
5		1.2345	22.80	9.75	32.55	56.00	-23.45	QP	
6		1.2345	19.30	9.75	29.05	46.00	-16.95	AVG	
7		2.8275	21.60	10.01	31.61	56.00	-24.39	QP	
8		2.8275	16.90	10.01	26.91	46.00	-19.09	AVG	
9		4.8120	19.60	10.03	29.63	56.00	-26.37	QP	
10		4.8120	14.90	10.03	24.93	46.00	-21.07	AVG	
11		21.6285	23.70	10.11	33.81	60.00	-26.19	QP	
12		21.6285	19.50	10.11	29.61	50.00	-20.39	AVG	

REMARKS:

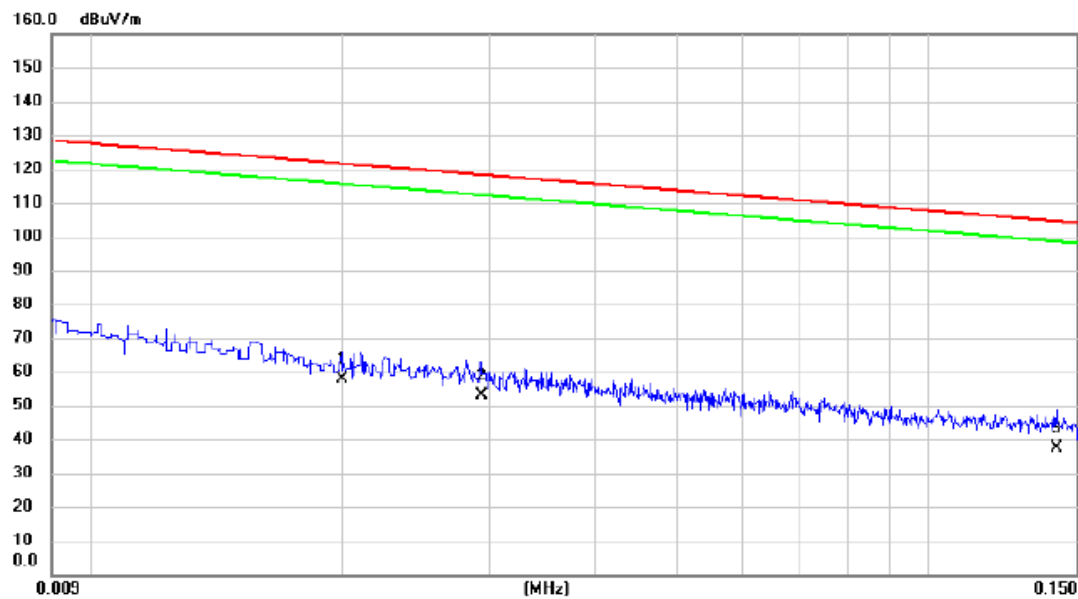
(1) Measurement Value = Reading Level + Correct Factor.

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

APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ

Test Mode: TX Mode

Ant 0°



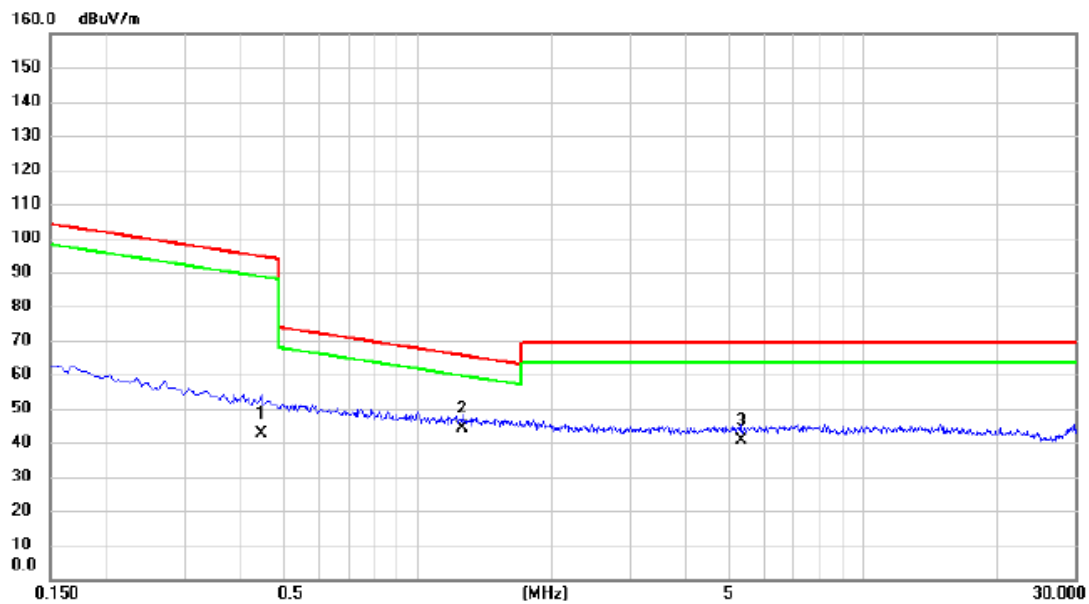
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0200	-14.67	72.30	57.63	121.58	-63.95	AVG	
2		0.0293	-16.92	69.88	52.96	118.27	-65.31	AVG	
3		0.1418	-18.06	55.53	37.47	104.57	-67.10	AVG	

REMARKS:

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

Test Mode: TX Mode

Ant 0°



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.4470	-3.21	45.84	42.63	94.60	-51.97	AVG	
2	*	1.2614	3.64	40.57	44.21	65.59	-21.38	QP	
3		5.3160	2.79	37.73	40.52	69.54	-29.02	QP	

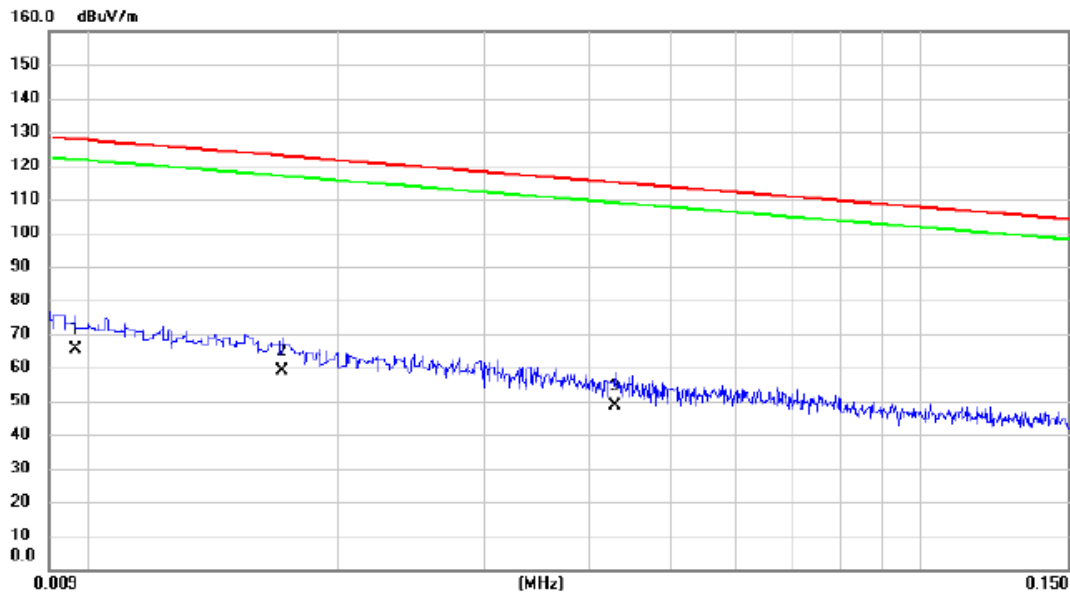
REMARKS:

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

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

Test Mode: TX Mode

Ant 90°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0097	-13.47	78.79	65.32	127.87	-62.55	QP	
2		0.0171	-15.21	74.07	58.86	122.94	-64.08	AVG	
3		0.0430	-17.25	65.95	48.70	114.94	-66.24	AVG	

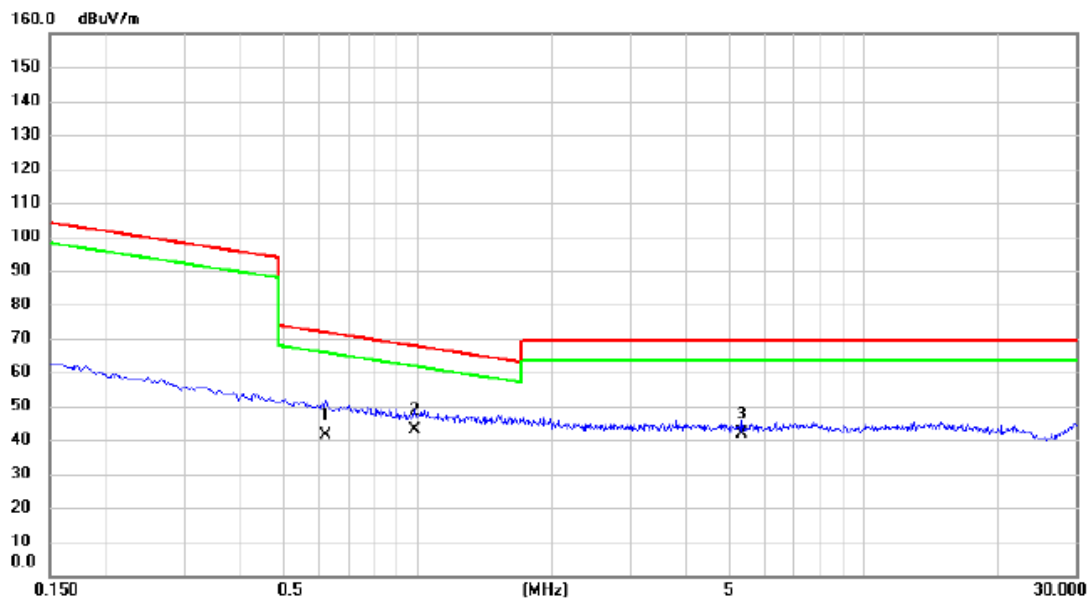
REMARKS:

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

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

Test Mode: TX Mode

Ant 90°



No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	0.6221	-2.24	43.60	41.36	71.73	-30.37	QP	
2 *	0.9824	1.75	41.25	43.00	67.76	-24.76	QP	
3	5.3160	3.90	37.73	41.63	69.54	-27.91	QP	

REMARKS:

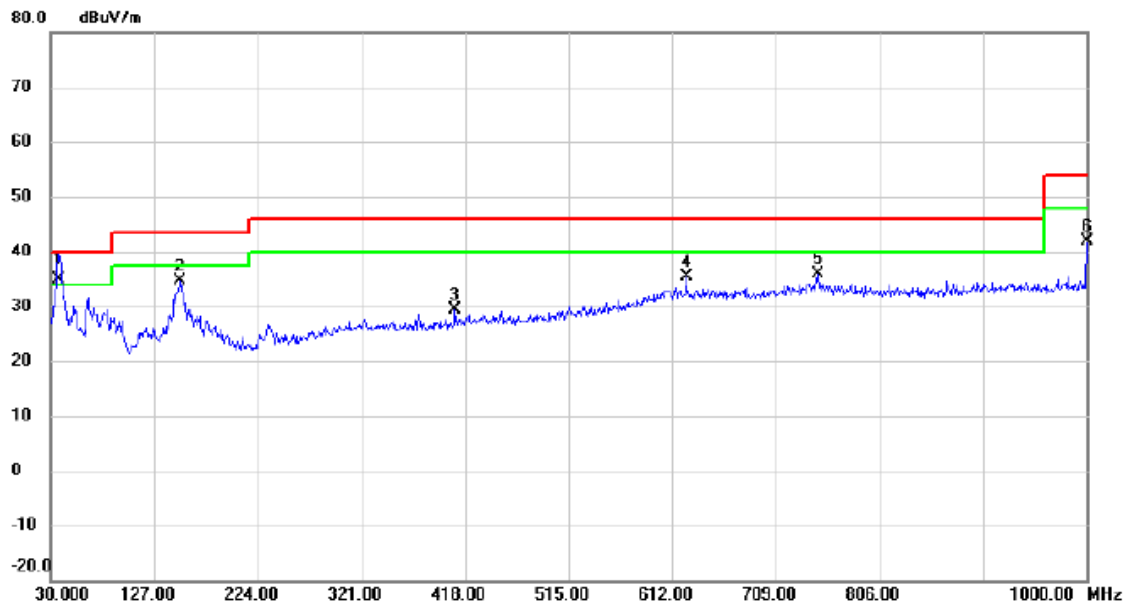
(1) Measurement Value = Reading Level + Correct Factor.

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

APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ

Test Mode: TX Mode

Vertical



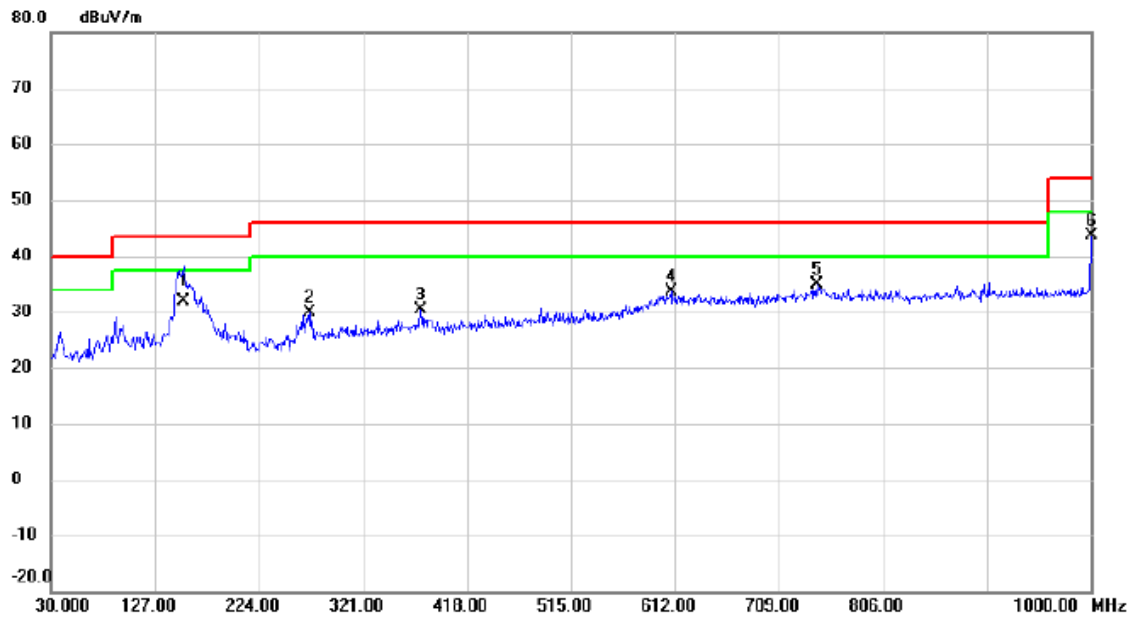
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	37.2750	51.82	-16.92	34.90	40.00	-5.10	QP	
2		151.2500	48.27	-13.62	34.65	43.50	-8.85	peak	
3		408.7850	41.68	-12.30	29.38	46.00	-16.62	peak	
4		625.0950	42.47	-7.13	35.34	46.00	-10.66	peak	
5		748.2850	41.91	-5.99	35.92	46.00	-10.08	peak	
6		1000.000	47.23	-5.46	41.77	54.00	-12.23	peak	

REMARKS:

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

Test Mode: TX Mode

Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		153.1900	45.54	-13.74	31.80	43.50	-11.70	QP	
2		271.5300	44.53	-14.73	29.80	46.00	-16.20	peak	
3		374.8350	43.04	-12.73	30.31	46.00	-15.69	peak	
4		608.1200	40.74	-7.21	33.53	46.00	-12.47	peak	
5		743.9200	40.85	-6.07	34.78	46.00	-11.22	peak	
6	*	1000.000	49.20	-5.46	43.74	54.00	-10.26	peak	

REMARKS:

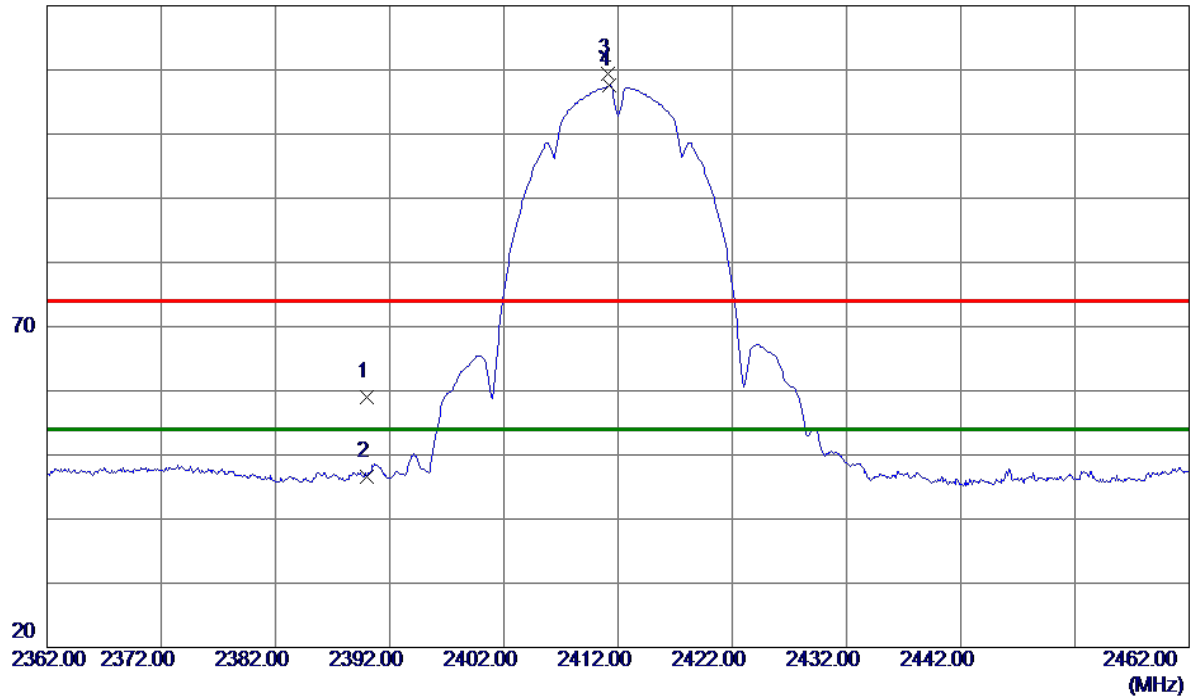
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ

Test Mode: TX B Mode 2412 MHz

Vertical

120 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	25.70	33.25	58.95	74.00	-15.05	Peak	
2	2390.0000	13.37	33.25	46.62	54.00	-7.38	AVG	
3	2411.1000	76.13	33.31	109.44	74.00	35.44	Peak	No limit
4 *	2411.2000	74.21	33.31	107.52	54.00	53.52	AVG	No limit

REMARKS:

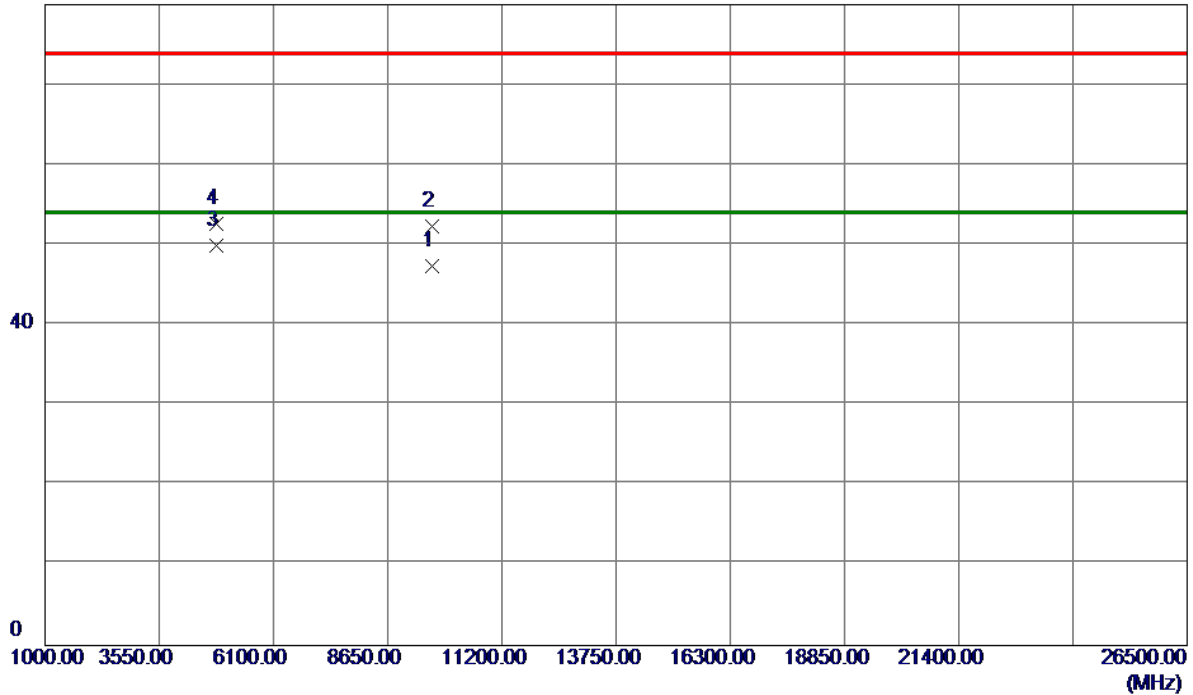
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode: TX B Mode 2412 MHz

Vertical

80 dBuV/m



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	9647.9900	45.73	1.56	47.29	54.00	-6.71	AVG	
2	9647.6900	50.74	1.56	52.30	74.00	-21.70	Peak	
3 *	4824.0650	58.90	-8.99	49.91	54.00	-4.09	AVG	
4	4823.8450	61.65	-8.99	52.66	74.00	-21.34	Peak	

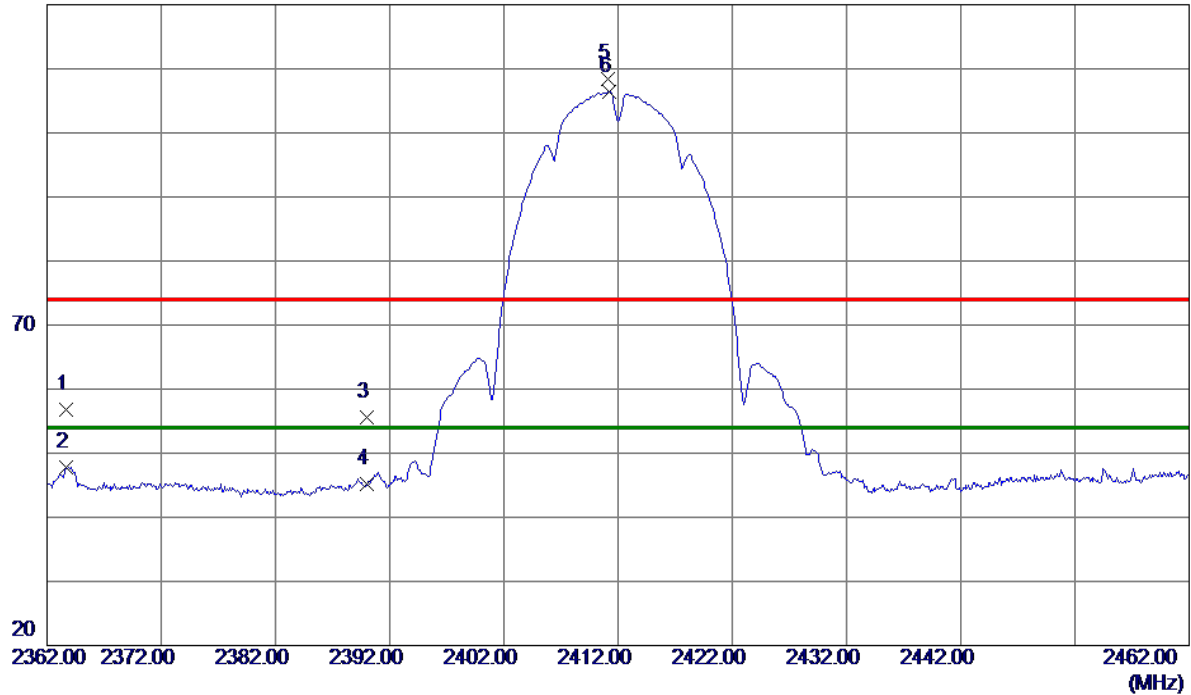
REMARKS:

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

Test Mode: TX B Mode 2412 MHz

Horizontal

120 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2363.7000	23.69	33.17	56.86	74.00	-17.14	Peak	
2	2363.7000	14.72	33.17	47.89	54.00	-6.11	AVG	
3	2390.0000	22.42	33.25	55.67	74.00	-18.33	Peak	
4	2390.0000	11.98	33.25	45.23	54.00	-8.77	AVG	
5	2411.1000	75.11	33.31	108.42	74.00	34.42	Peak	No limit
6 *	2411.2000	73.14	33.31	106.45	54.00	52.45	AVG	No limit

REMARKS:

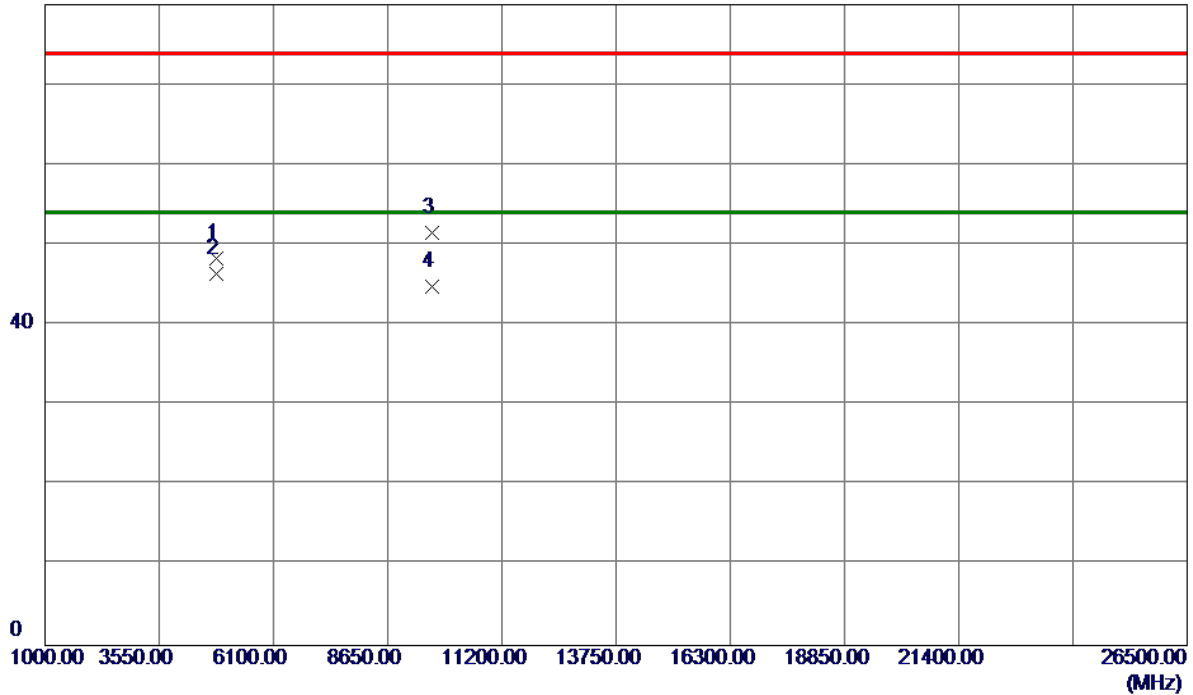
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode: TX B Mode 2412 MHz

Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4823.9200	57.32	-8.99	48.33	74.00	-25.67	Peak	
2 *	4824.0000	55.41	-8.99	46.42	54.00	-7.58	AVG	
3	9648.0000	49.98	1.56	51.54	74.00	-22.46	Peak	
4	9648.0599	43.19	1.56	44.75	54.00	-9.25	AVG	

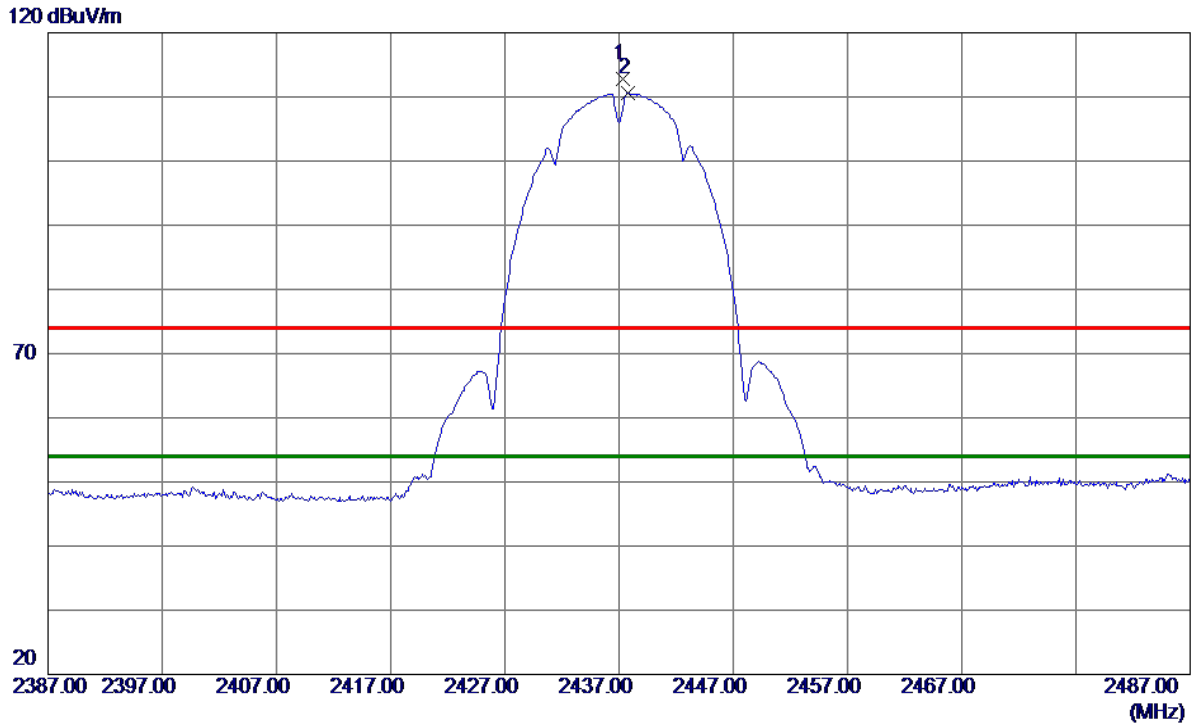
REMARKS:

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

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

Test Mode: TX B Mode 2437 MHz

Vertical



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2437.3000	79.33	33.38	112.71	74.00	38.71	Peak	No limit
2 *	2437.8000	77.25	33.38	110.63	54.00	56.63	AVG	No limit

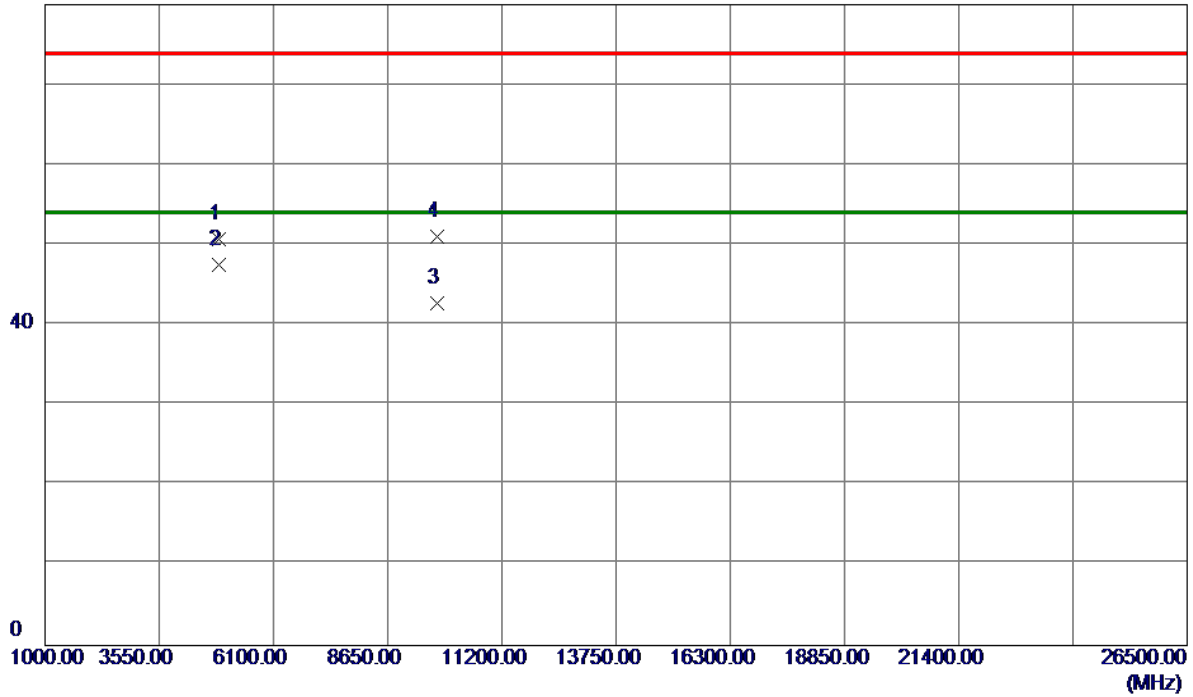
REMARKS:

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

Test Mode: TX B Mode 2437 MHz

Vertical

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4874.0099	59.49	-8.80	50.69	74.00	-23.31	Peak	
2 *	4874.0450	56.36	-8.80	47.56	54.00	-6.44	AVG	
3	9747.9950	40.89	1.89	42.78	54.00	-11.22	AVG	
4	9748.0900	49.11	1.89	51.00	74.00	-23.00	Peak	

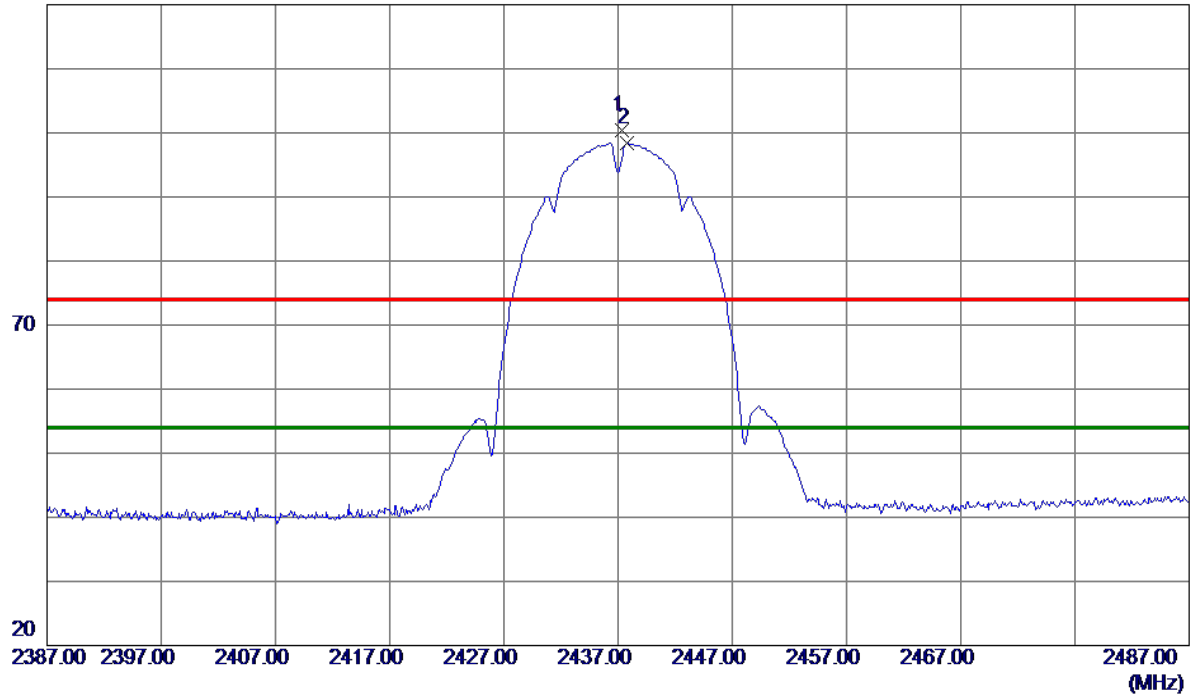
REMARKS:

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

Test Mode: TX B Mode 2437 MHz

Horizontal

120 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2437.3000	67.06	33.38	100.44	74.00	26.44	Peak	No limit
2 *	2437.8000	64.98	33.38	98.36	54.00	44.36	AVG	No limit

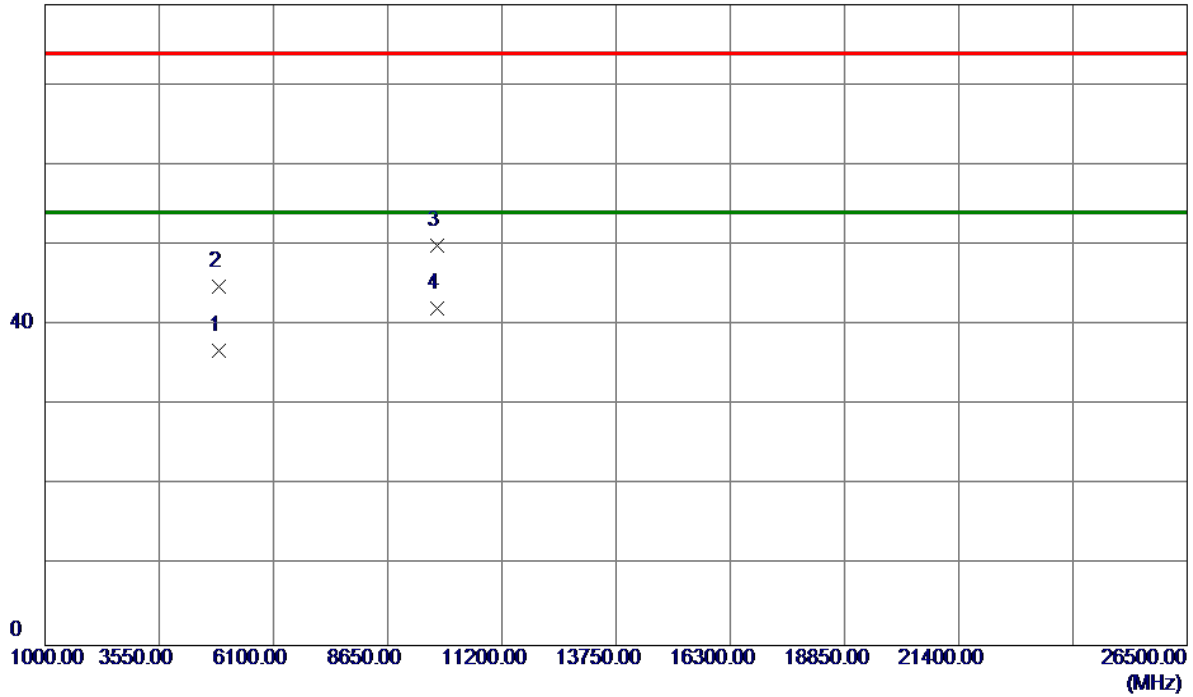
REMARKS:

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

Test Mode:	TX B Mode 2437 MHz
------------	--------------------

Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4874.0750	45.59	-8.80	36.79	54.00	-17.21	AVG	
2	4874.2100	53.59	-8.80	44.79	74.00	-29.21	Peak	
3	9747.8500	47.98	1.89	49.87	74.00	-24.13	Peak	
4 *	9747.9900	40.23	1.89	42.12	54.00	-11.88	AVG	

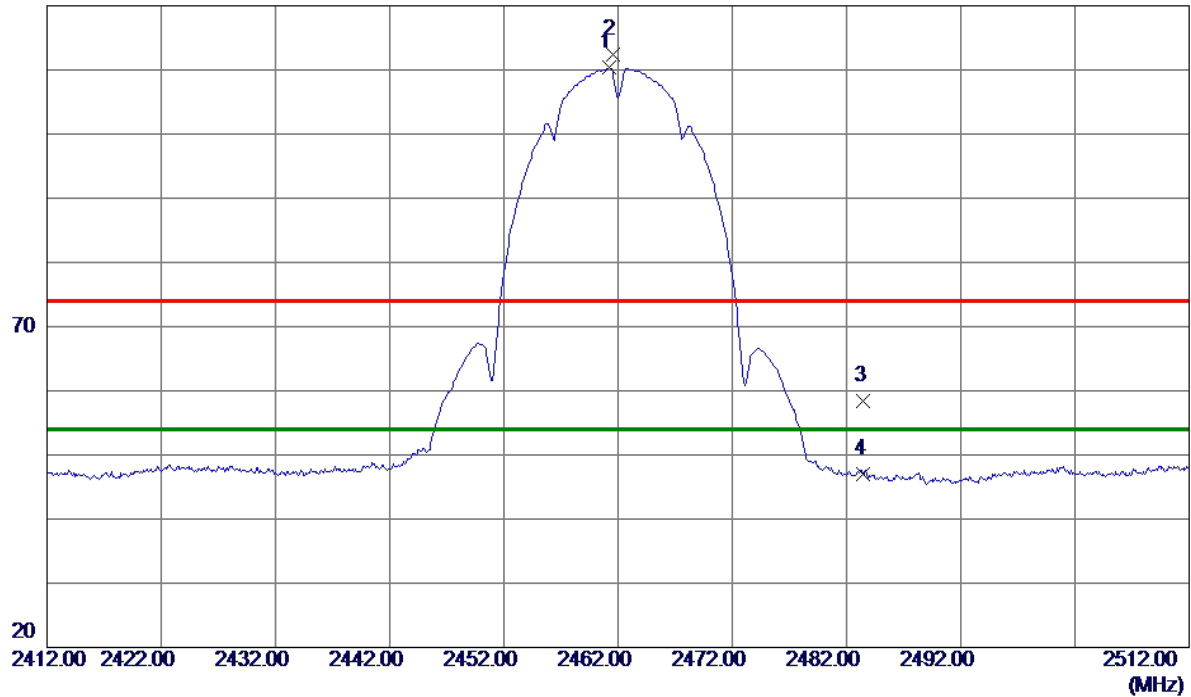
REMARKS:

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

Test Mode: TX B Mode 2462 MHz

Vertical

120 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	2461.2000	76.86	33.45	110.31	54.00	56.31	AVG	No limit
2	2461.6000	78.89	33.45	112.34	74.00	38.34	Peak	No limit
3	2483.5000	24.95	33.51	58.46	74.00	-15.54	Peak	
4	2483.5000	13.54	33.51	47.05	54.00	-6.95	AVG	

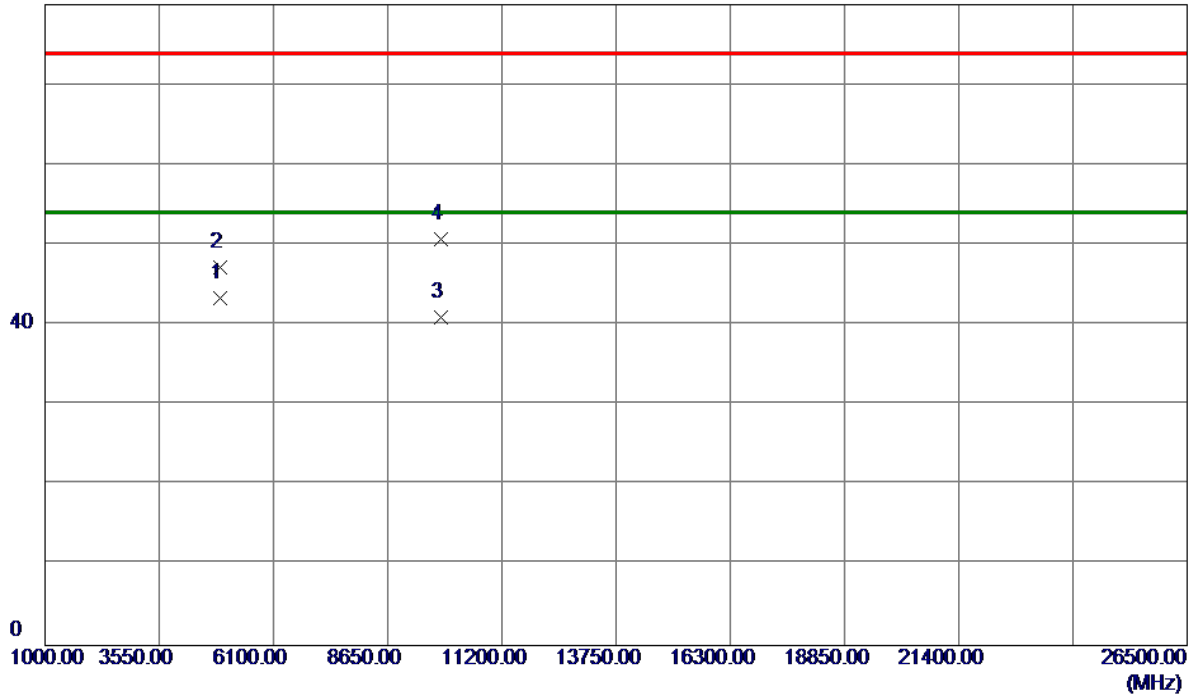
REMARKS:

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

Test Mode: TX B Mode 2462 MHz

Vertical

80 dBuV/m



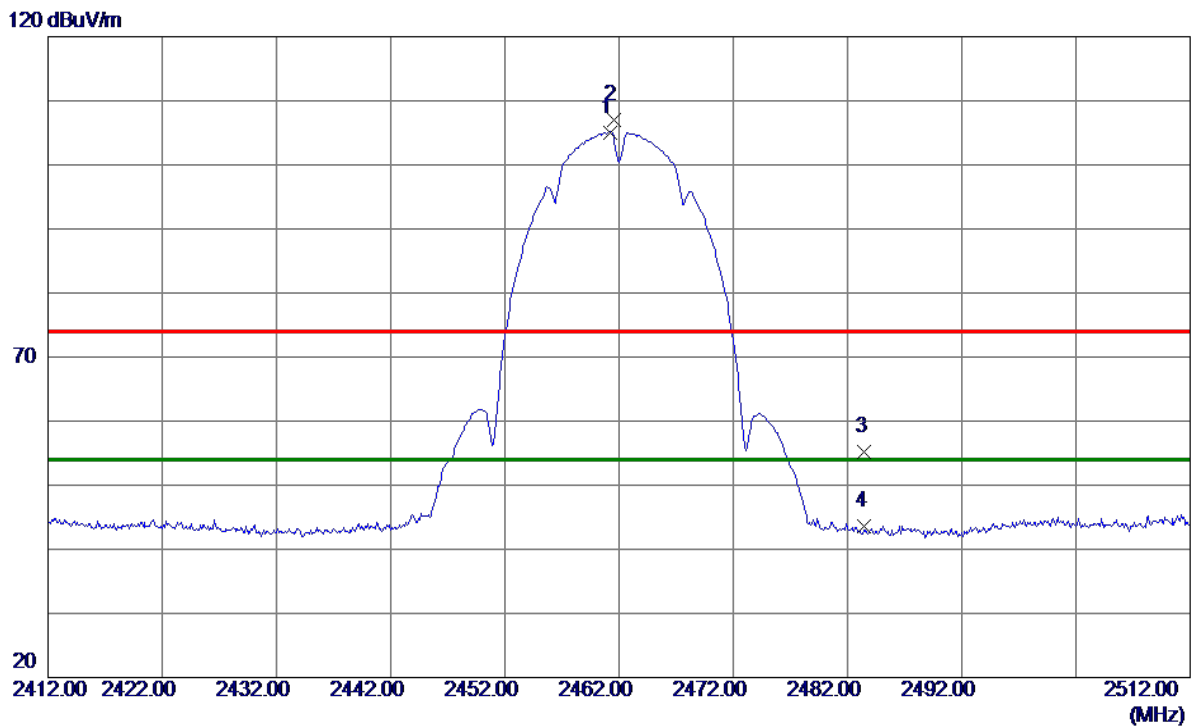
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	4923.9800	52.00	-8.60	43.40	54.00	-10.60	AVG	
2	4924.0450	55.80	-8.60	47.20	74.00	-26.80	Peak	
3	9848.0250	38.74	2.21	40.95	54.00	-13.05	AVG	
4	9848.0550	48.53	2.21	50.74	74.00	-23.26	Peak	

REMARKS:

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

Test Mode: TX B Mode 2462 MHz

Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	2461.2000	71.62	33.45	105.07	54.00	51.07	AVG	No limit
2	2461.6000	73.62	33.45	107.07	74.00	33.07	Peak	No limit
3	2483.5000	21.62	33.51	55.13	74.00	-18.87	Peak	
4	2483.5000	10.02	33.51	43.53	54.00	-10.47	AVG	

REMARKS:

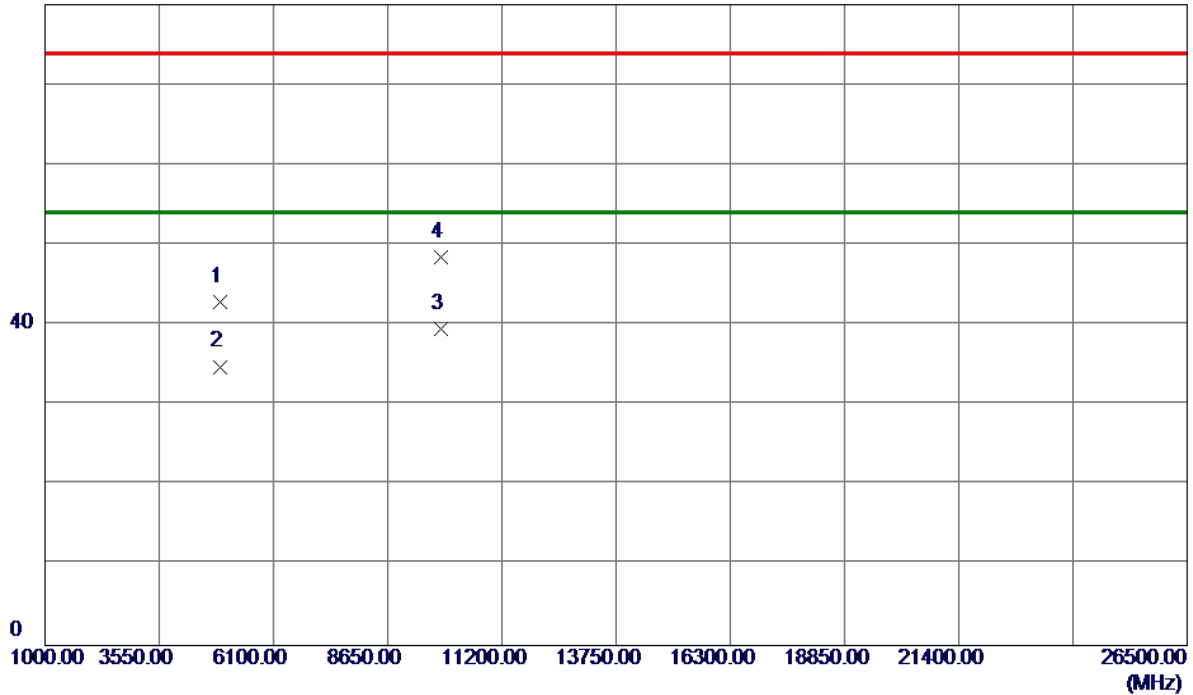
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX B Mode 2462 MHz
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Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4923.9300	51.52	-8.61	42.91	74.00	-31.09	Peak	
2	4924.0050	43.40	-8.60	34.80	54.00	-19.20	AVG	
3 *	9847.9600	37.34	2.21	39.55	54.00	-14.45	AVG	
4	9850.1400	46.24	2.22	48.46	74.00	-25.54	Peak	

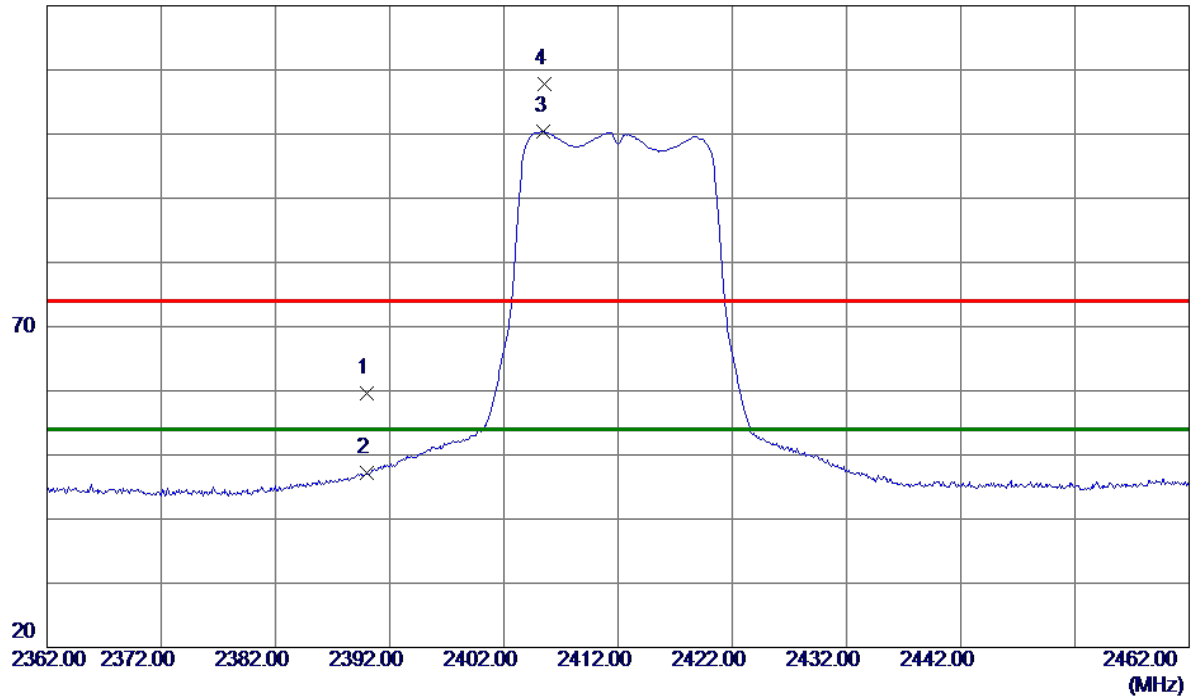
REMARKS:

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

Test Mode: TX G Mode 2412 MHz

Vertical

120 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	26.39	33.25	59.64	74.00	-14.36	Peak	
2	2390.0000	14.01	33.25	47.26	54.00	-6.74	AVG	
3 *	2405.5000	67.08	33.29	100.37	54.00	46.37	AVG	No limit
4	2405.6000	74.53	33.29	107.82	74.00	33.82	Peak	No limit

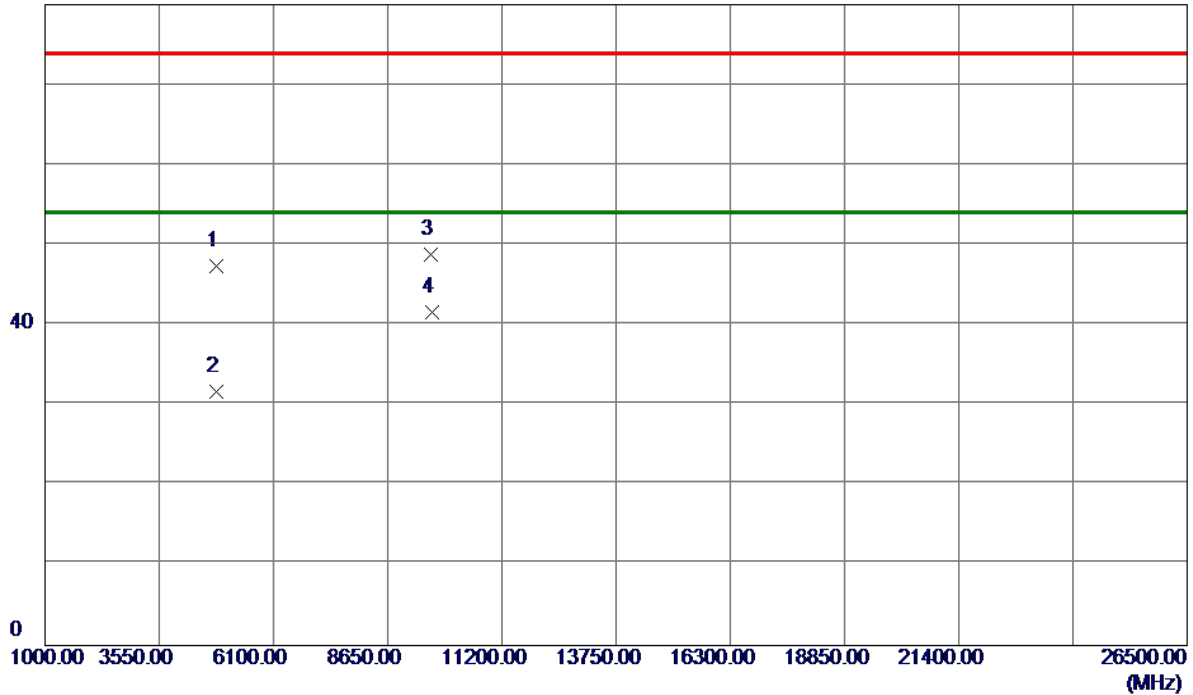
REMARKS:

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

Test Mode:	TX G Mode 2412 MHz
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Vertical

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4822.8800	56.39	-9.00	47.39	74.00	-26.61	Peak	
2	4824.1400	40.70	-8.99	31.71	54.00	-22.29	AVG	
3	9614.3000	47.30	1.45	48.75	74.00	-25.25	Peak	
4 *	9647.9000	40.03	1.56	41.59	54.00	-12.41	AVG	

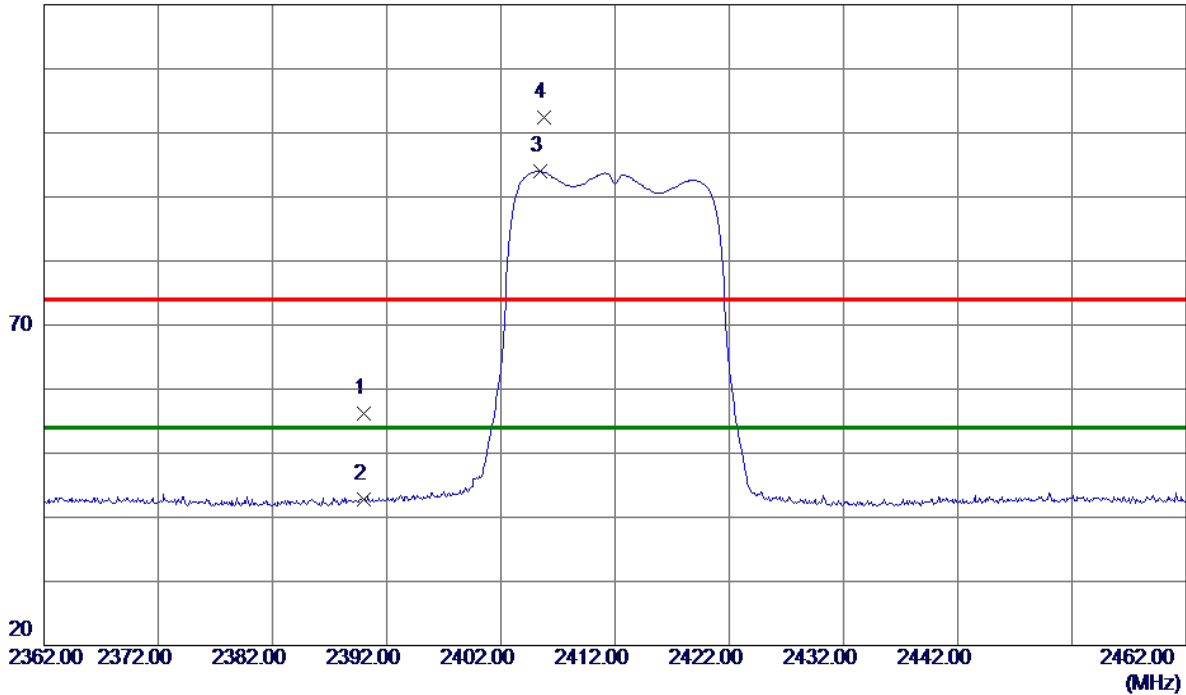
REMARKS:

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

Test Mode: TX G Mode 2412 MHz

Horizontal

120 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	22.99	33.25	56.24	74.00	-17.76	Peak	
2	2390.0000	9.62	33.25	42.87	54.00	-11.13	AVG	
3 *	2405.4000	60.63	33.29	93.92	54.00	39.92	AVG	No limit
4	2405.8000	69.09	33.29	102.38	74.00	28.38	Peak	No limit

REMARKS:

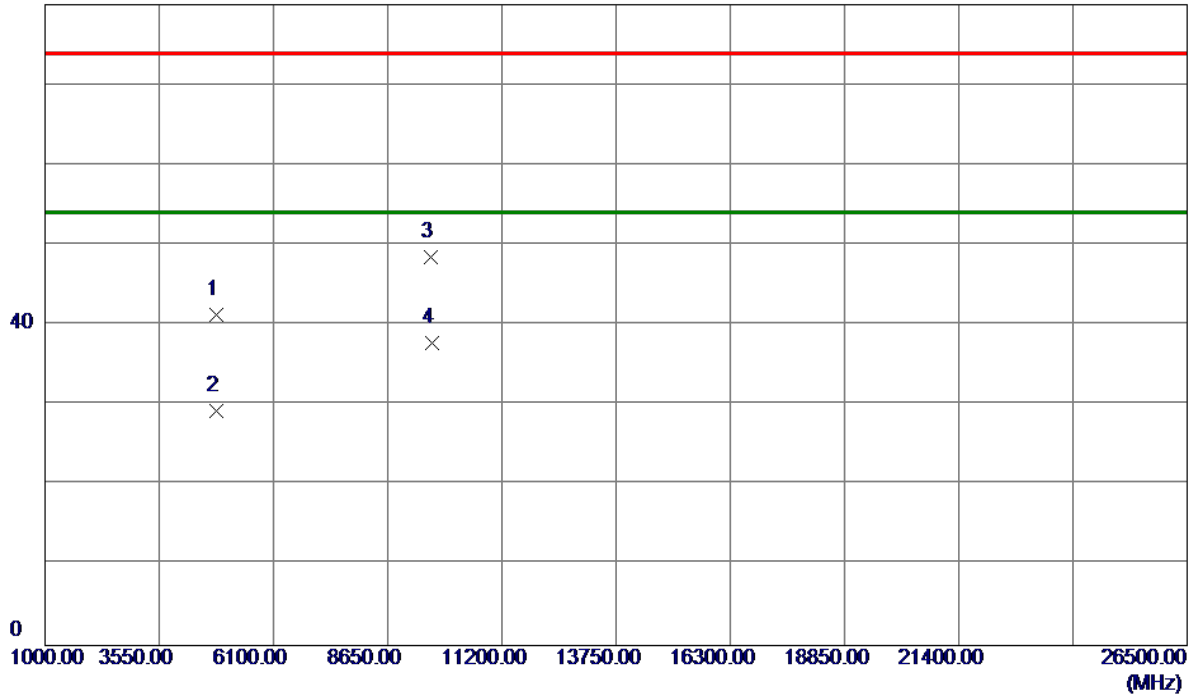
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode: TX G Mode 2412 MHz

Horizontal

80 dBuV/m



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4819.3000	50.25	-9.01	41.24	74.00	-32.76	Peak	
2	4828.6000	38.26	-8.98	29.28	54.00	-24.72	AVG	
3	9626.0500	46.93	1.49	48.42	74.00	-25.58	Peak	
4 *	9648.0000	36.14	1.56	37.70	54.00	-16.30	AVG	

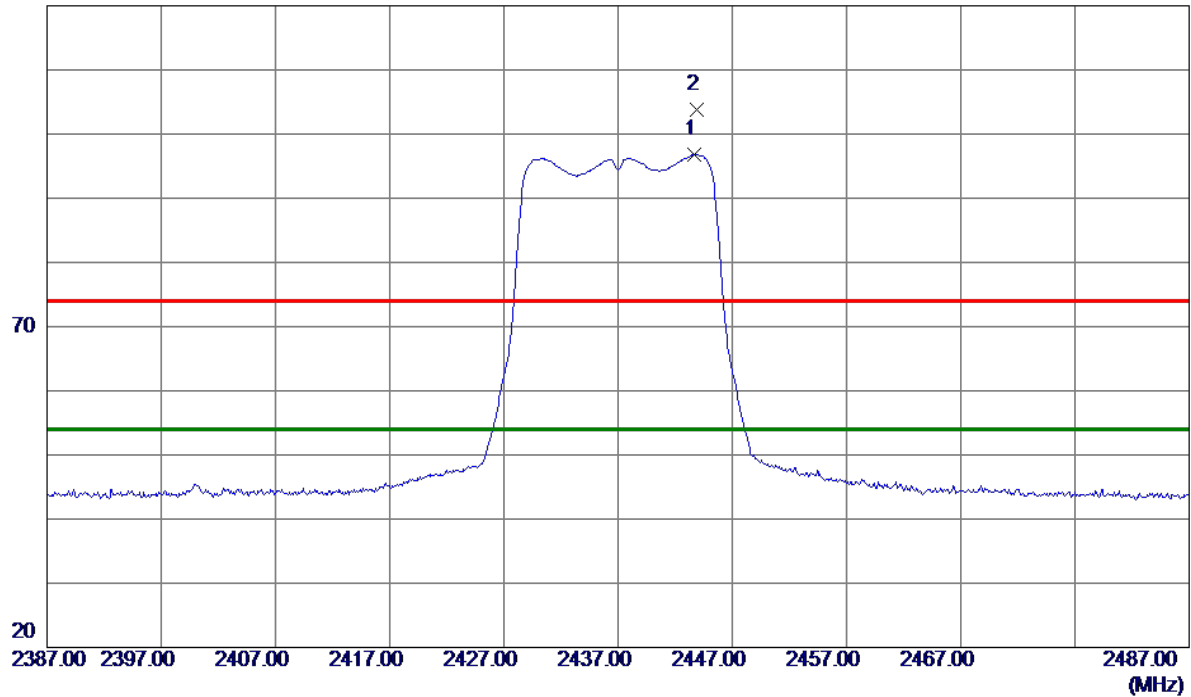
REMARKS:

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

Test Mode: TX G Mode 2437 MHz

Vertical

120 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	2443.7000	63.49	33.40	96.89	54.00	42.89	AVG	No limit
2	2443.9000	70.49	33.40	103.89	74.00	29.89	Peak	No limit

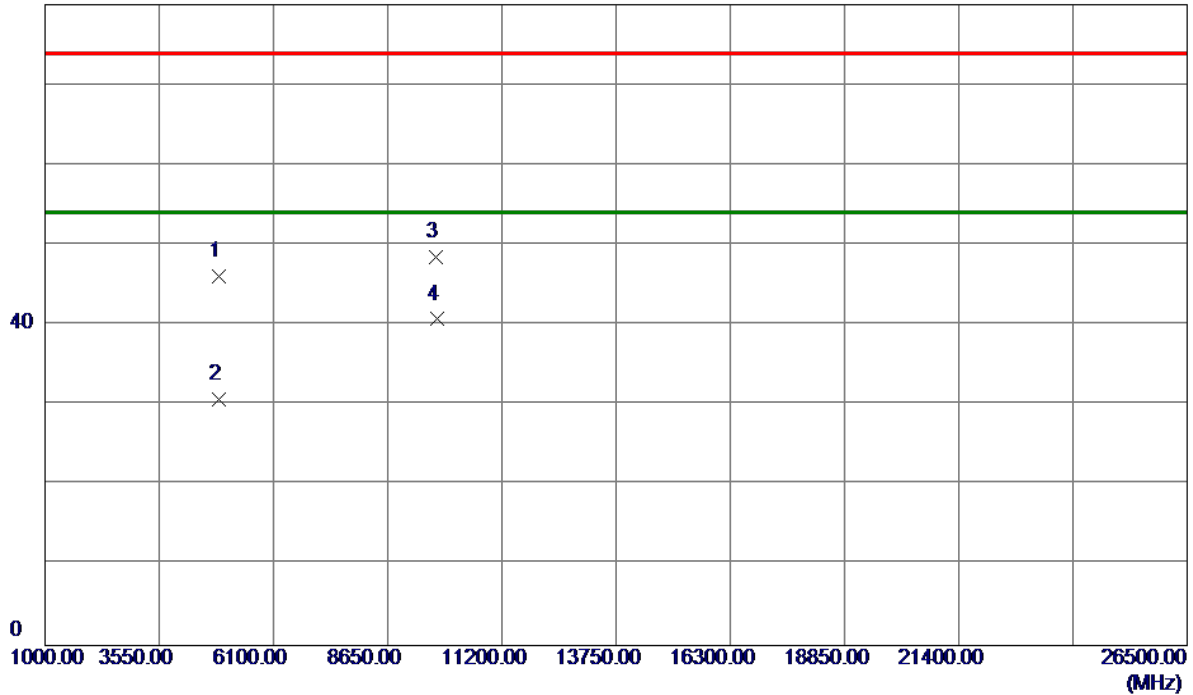
REMARKS:

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

Test Mode:	TX G Mode 2437 MHz
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Vertical

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4874.8800	54.91	-8.80	46.11	74.00	-27.89	Peak	
2	4874.8800	39.45	-8.80	30.65	54.00	-23.35	AVG	
3	9738.4400	46.60	1.85	48.45	74.00	-25.55	Peak	
4 *	9748.0000	38.83	1.89	40.72	54.00	-13.28	AVG	

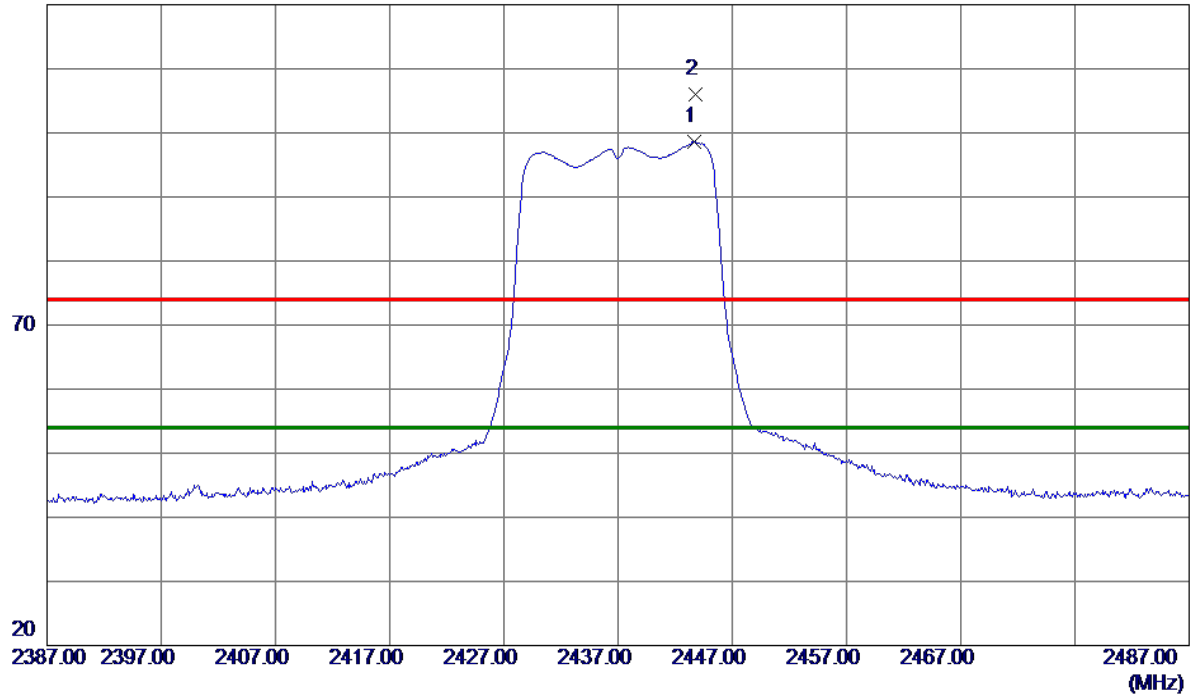
REMARKS:

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

Test Mode: TX G Mode 2437 MHz

Horizontal

120 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	2443.7000	65.19	33.40	98.59	54.00	44.59	AVG	No limit
2	2443.8000	72.52	33.40	105.92	74.00	31.92	Peak	No limit

REMARKS:

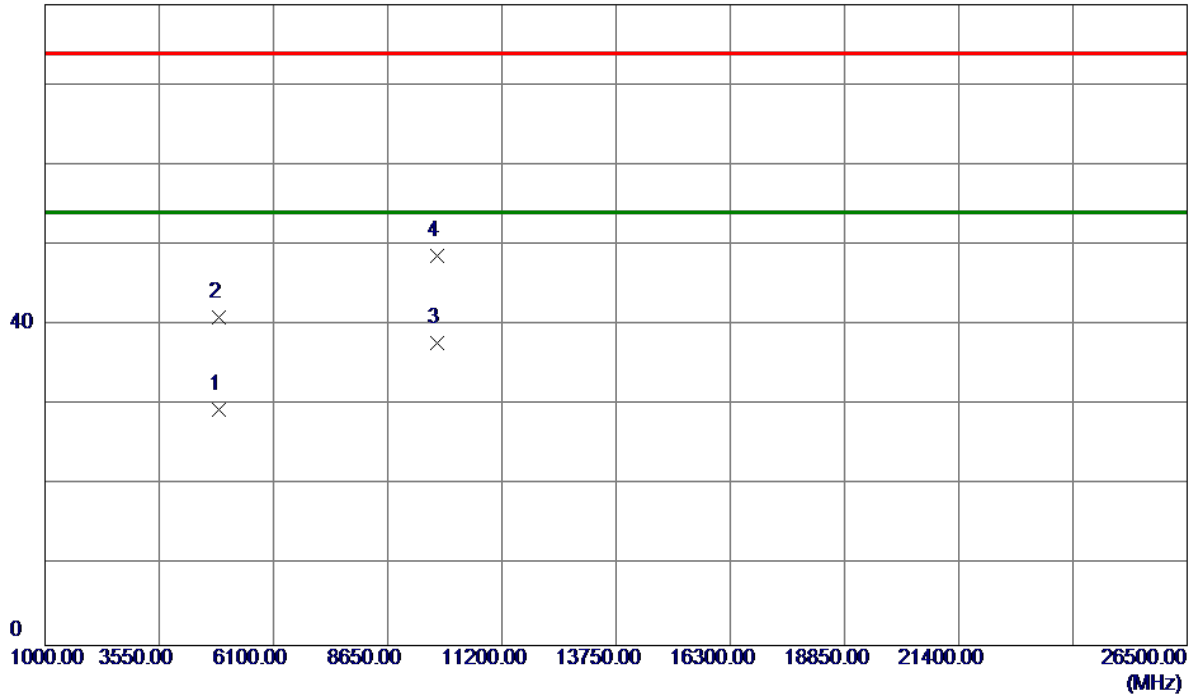
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX G Mode 2437 MHz
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Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4875.0200	38.29	-8.79	29.50	54.00	-24.50	AVG	
2	4876.6200	49.68	-8.79	40.89	74.00	-33.11	Peak	
3 *	9748.0000	35.89	1.89	37.78	54.00	-16.22	AVG	
4	9752.9500	46.79	1.90	48.69	74.00	-25.31	Peak	

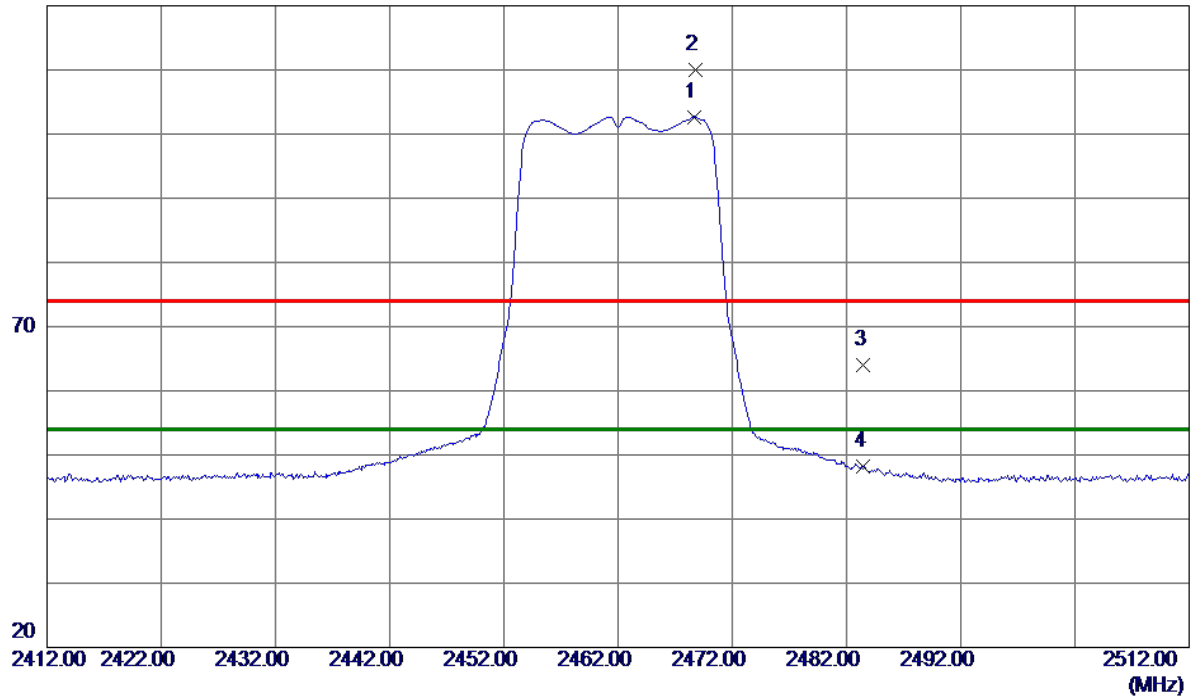
REMARKS:

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

Test Mode: TX G Mode 2462 MHz

Vertical

120 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	2468.7000	69.16	33.47	102.63	54.00	48.63	AVG	No limit
2	2468.8000	76.50	33.47	109.97	74.00	35.97	Peak	No limit
3	2483.5000	30.49	33.51	64.00	74.00	-10.00	Peak	
4	2483.5000	14.63	33.51	48.14	54.00	-5.86	AVG	

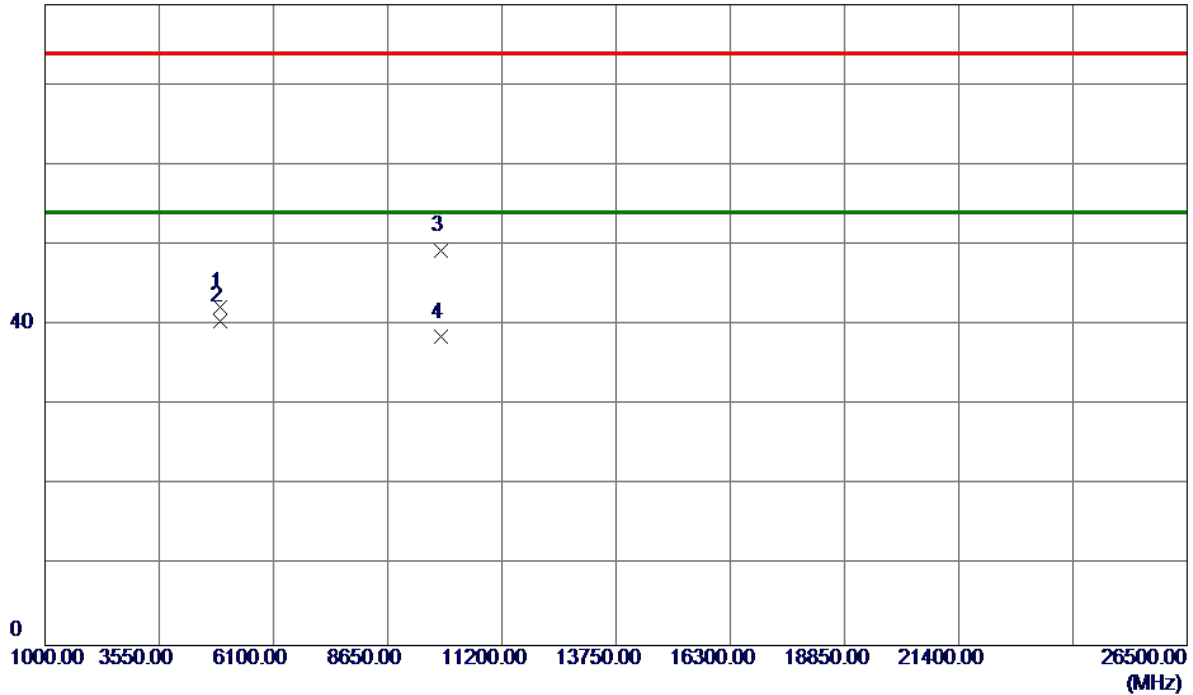
REMARKS:

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

Test Mode: TX G Mode 2462 MHz

Vertical

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4921.2000	50.80	-8.62	42.18	74.00	-31.82	Peak	
2 *	4921.9000	49.11	-8.61	40.50	54.00	-13.50	AVG	
3	9847.9850	47.14	2.21	49.35	74.00	-24.65	Peak	
4	9847.9900	36.27	2.21	38.48	54.00	-15.52	AVG	

REMARKS:

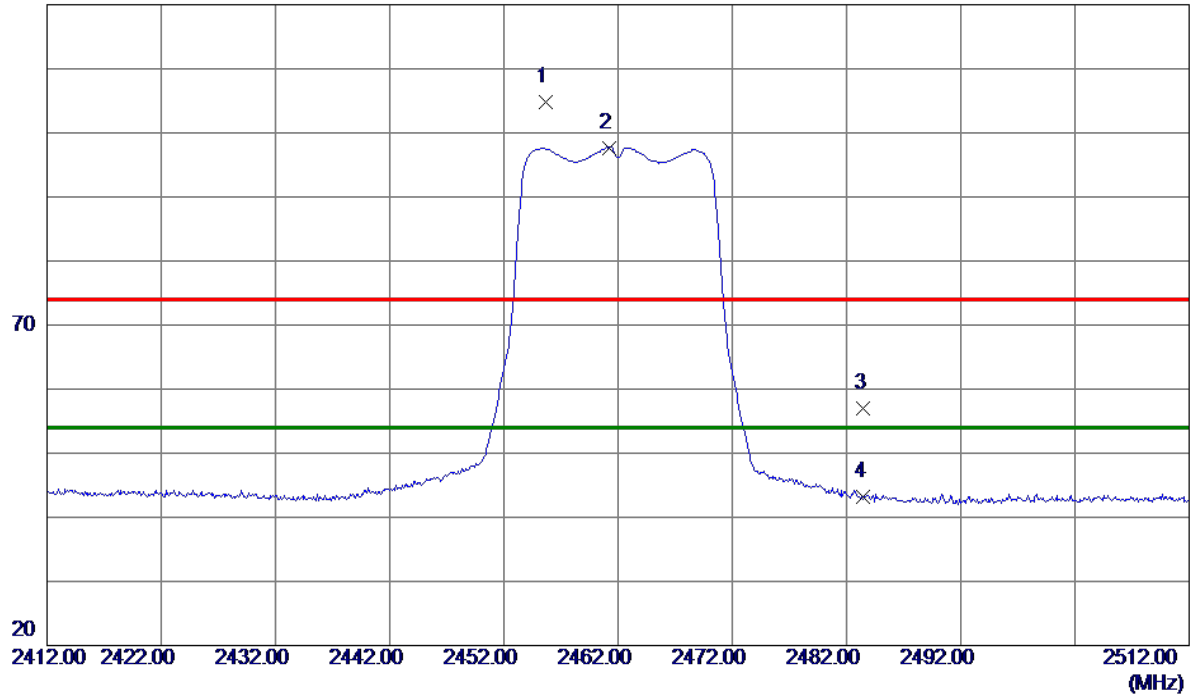
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode: TX G Mode 2462 MHz

Horizontal

120 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2455.7000	71.31	33.43	104.74	74.00	30.74	Peak	No limit
2 *	2461.2000	64.07	33.45	97.52	54.00	43.52	AVG	No limit
3	2483.5000	23.53	33.51	57.04	74.00	-16.96	Peak	
4	2483.5000	9.63	33.51	43.14	54.00	-10.86	AVG	

REMARKS:

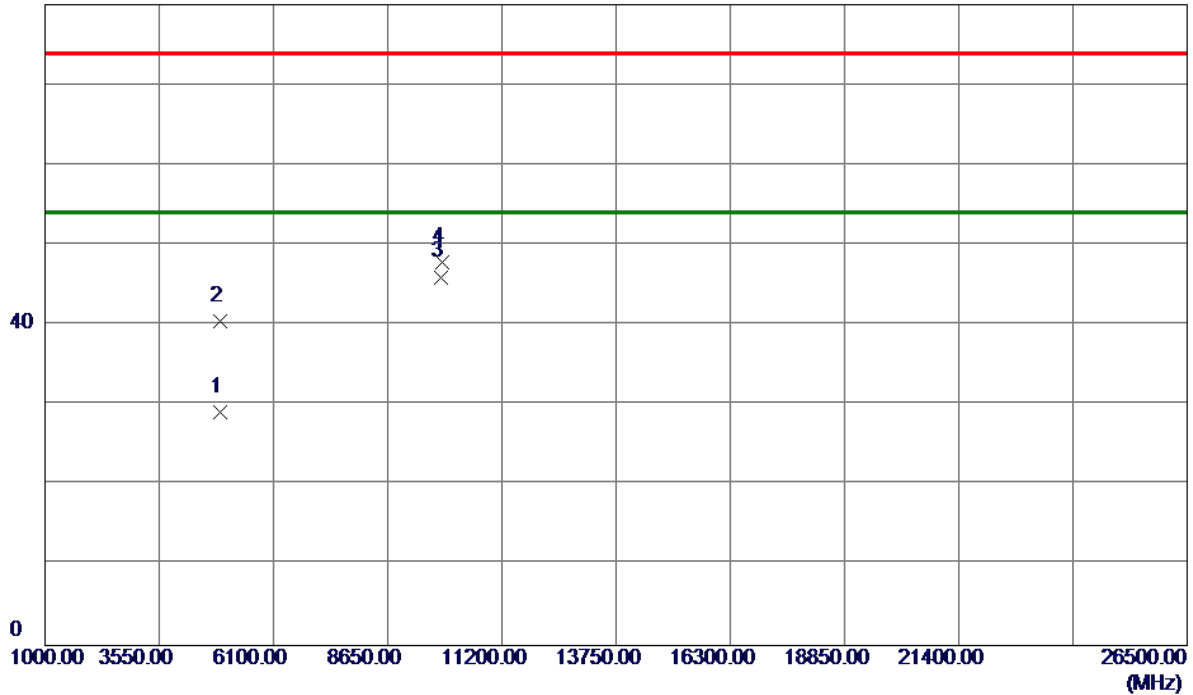
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX G Mode 2462 MHz
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Horizontal

80 dBuV/m



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4921.0400	37.75	-8.62	29.13	54.00	-24.87	AVG	
2	4921.4000	49.08	-8.61	40.47	74.00	-33.53	Peak	
3 *	9848.1000	43.79	2.21	46.00	54.00	-8.00	AVG	
4	9880.5000	45.48	2.32	47.80	74.00	-26.20	Peak	

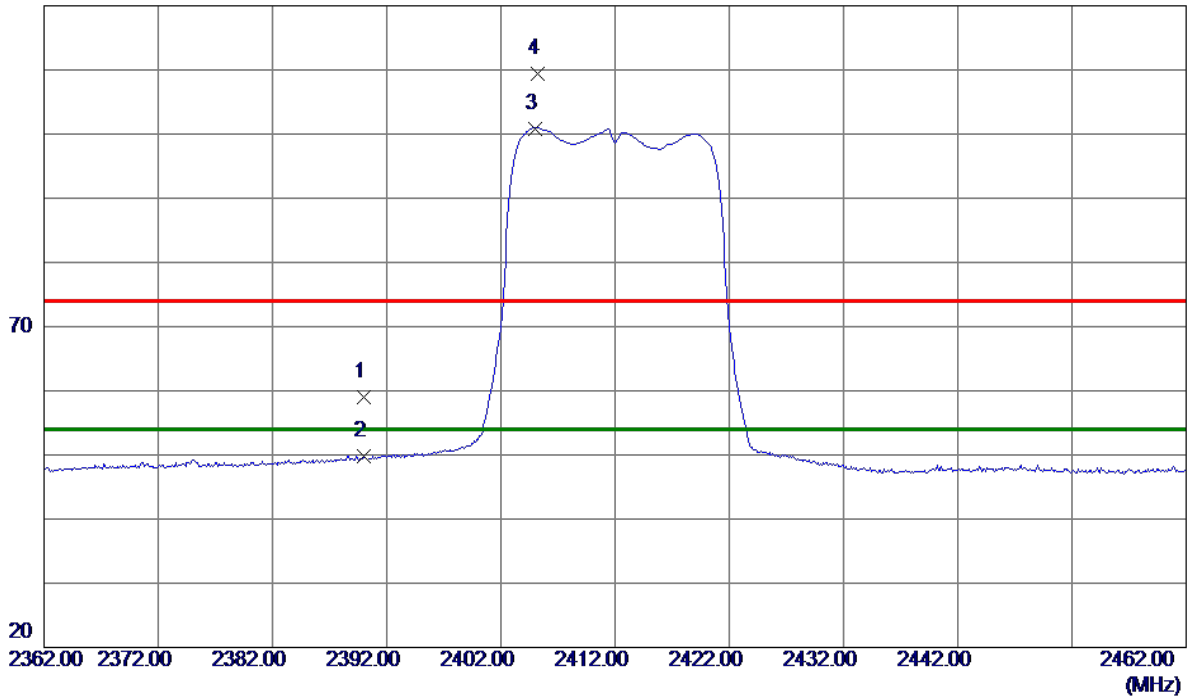
REMARKS:

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

Test Mode: TX N-20M Mode 2412 MHz

Vertical

120 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	25.69	33.25	58.94	74.00	-15.06	Peak	
2	2390.0000	16.48	33.25	49.73	54.00	-4.27	AVG	
3 *	2405.0000	67.50	33.29	100.79	54.00	46.79	AVG	No limit
4	2405.2000	76.16	33.29	109.45	74.00	35.45	Peak	No limit

REMARKS:

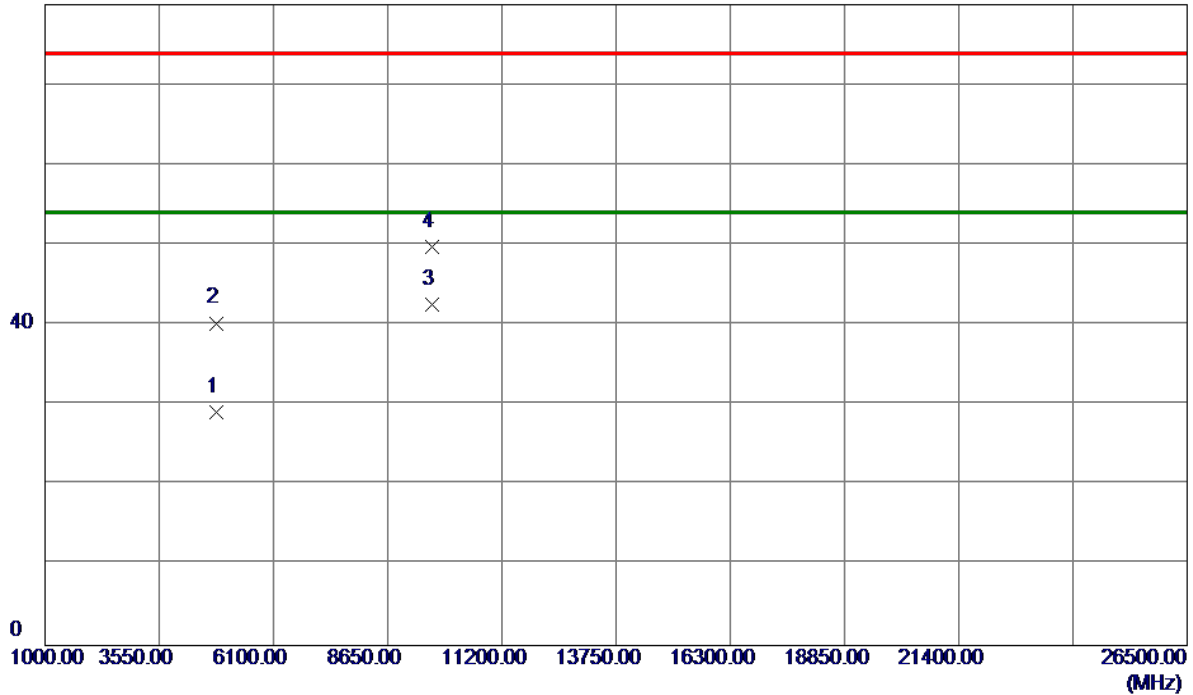
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX N-20M Mode 2412 MHz
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Vertical

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4817.1500	38.10	-9.02	29.08	54.00	-24.92	AVG	
2	4820.0000	49.25	-9.01	40.24	74.00	-33.76	Peak	
3 *	9648.0700	41.07	1.56	42.63	54.00	-11.37	AVG	
4	9648.3550	48.14	1.56	49.70	74.00	-24.30	Peak	

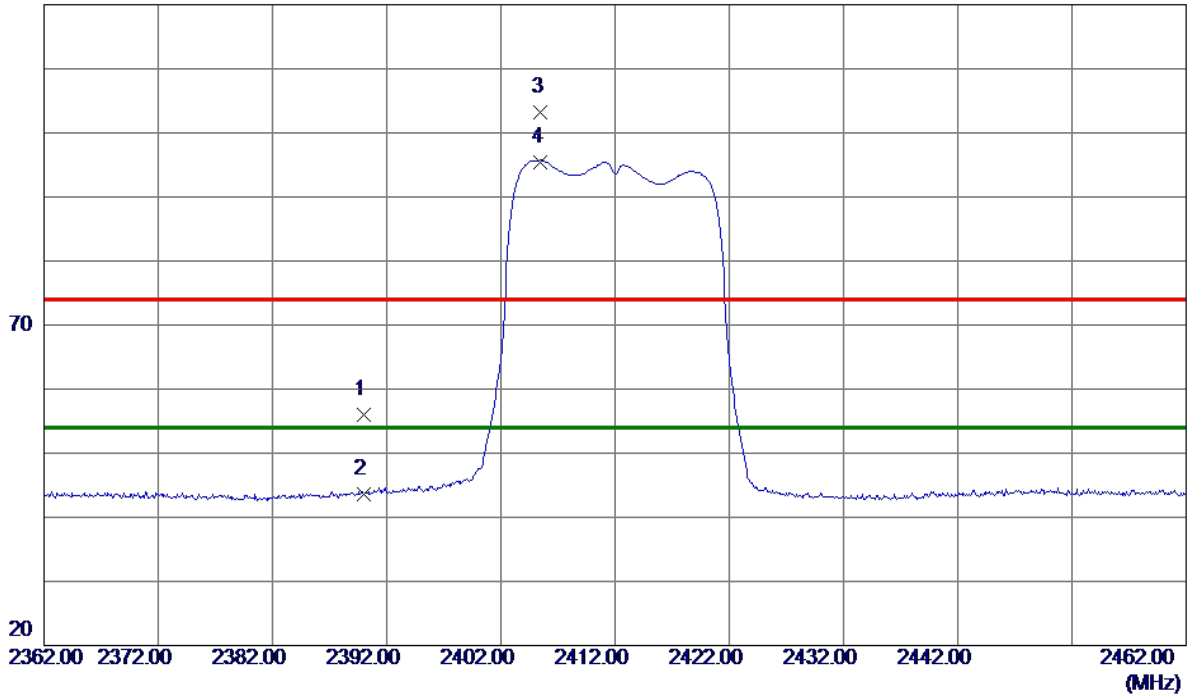
REMARKS:

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

Test Mode: TX N-20M Mode 2412 MHz

Horizontal

120 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	22.72	33.25	55.97	74.00	-18.03	Peak	
2	2390.0000	10.33	33.25	43.58	54.00	-10.42	AVG	
3	2405.5000	69.95	33.29	103.24	74.00	29.24	Peak	No limit
4 *	2405.5000	62.05	33.29	95.34	54.00	41.34	AVG	No limit

REMARKS:

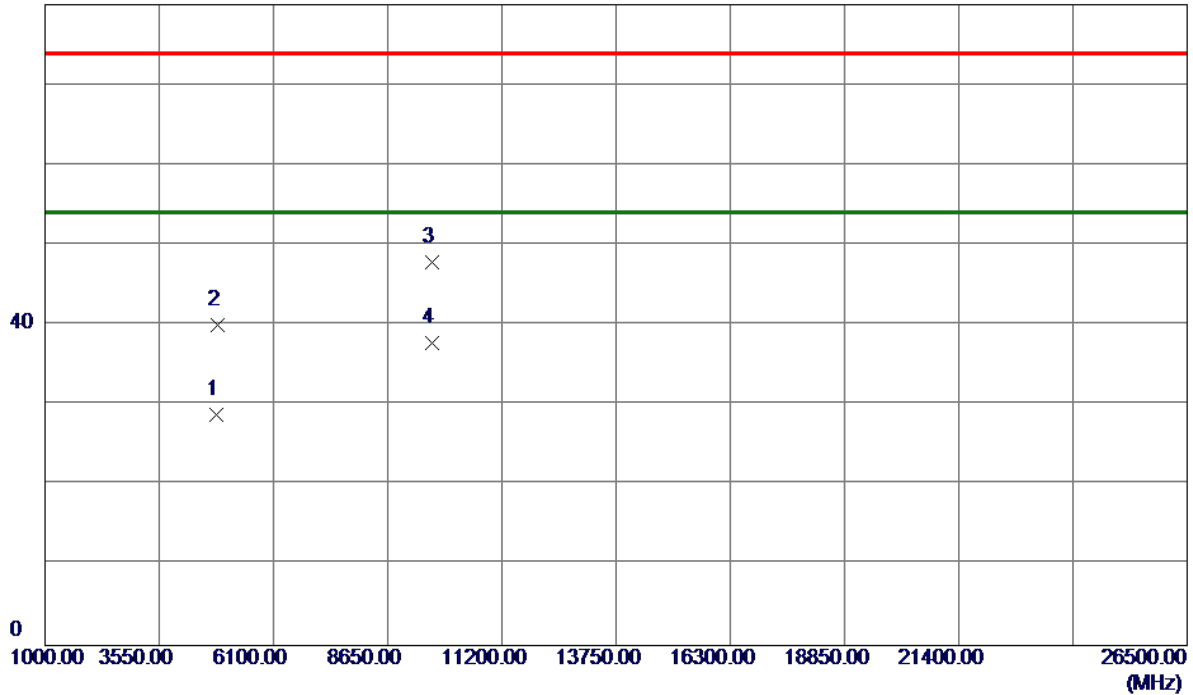
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX N-20M Mode 2412 MHz
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Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4830.9500	37.78	-8.97	28.81	54.00	-25.19	AVG	
2	4841.0500	48.92	-8.93	39.99	74.00	-34.01	Peak	
3	9639.4000	46.34	1.53	47.87	74.00	-26.13	Peak	
4 *	9648.1000	36.25	1.56	37.81	54.00	-16.19	AVG	

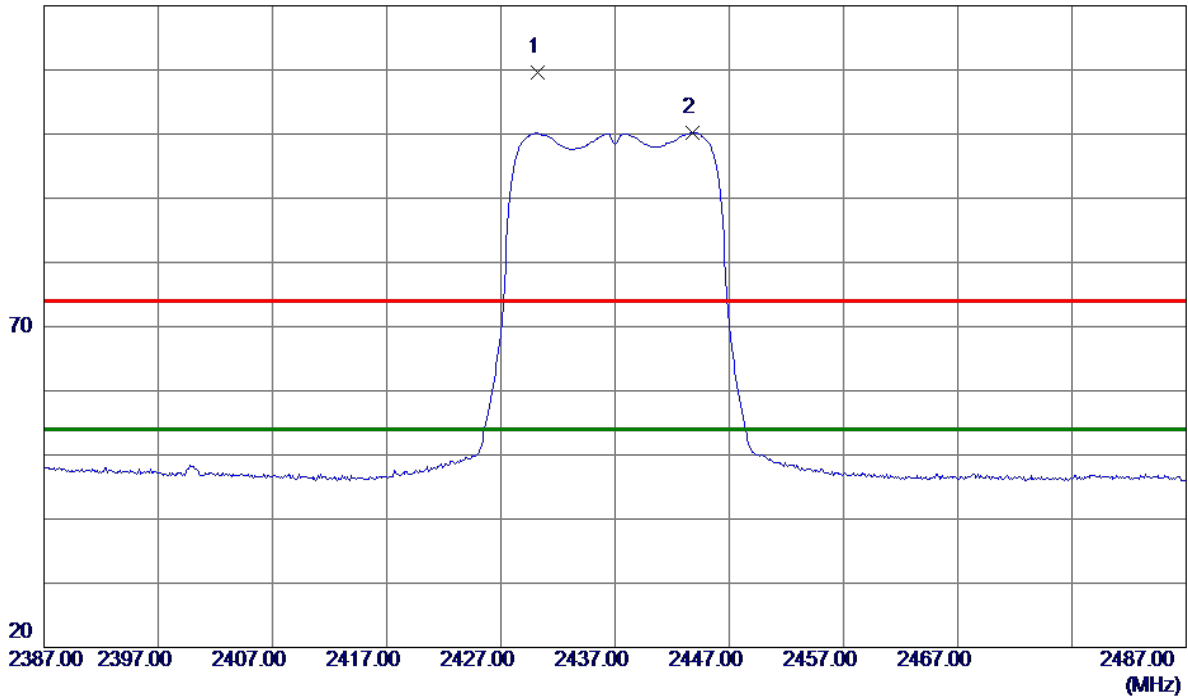
REMARKS:

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

Test Mode: TX N-20M Mode 2437 MHz

Vertical

120 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2430.2000	76.19	33.36	109.55	74.00	35.55	Peak	No limit
2 *	2443.8000	66.83	33.40	100.23	54.00	46.23	AVG	No limit

REMARKS:

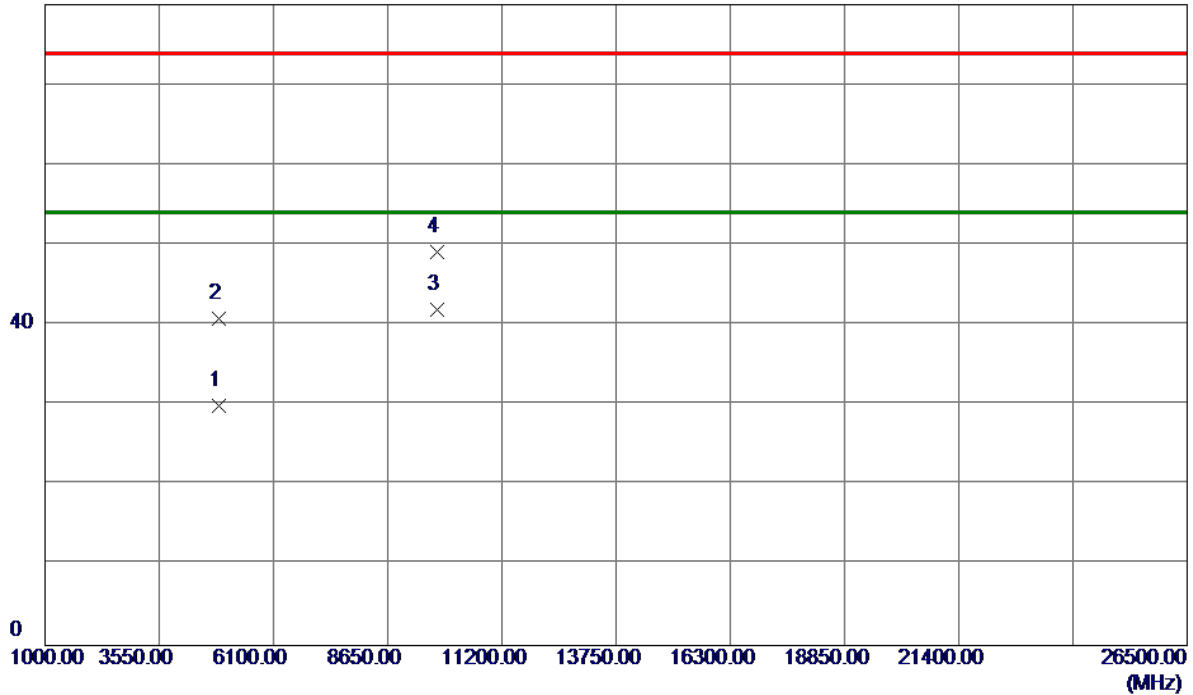
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX N-20M Mode 2437 MHz
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Vertical

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4874.9200	38.66	-8.80	29.86	54.00	-24.14	AVG	
2	4883.5000	49.59	-8.76	40.83	74.00	-33.17	Peak	
3 *	9747.9500	39.99	1.89	41.88	54.00	-12.12	AVG	
4	9748.3000	47.20	1.89	49.09	74.00	-24.91	Peak	

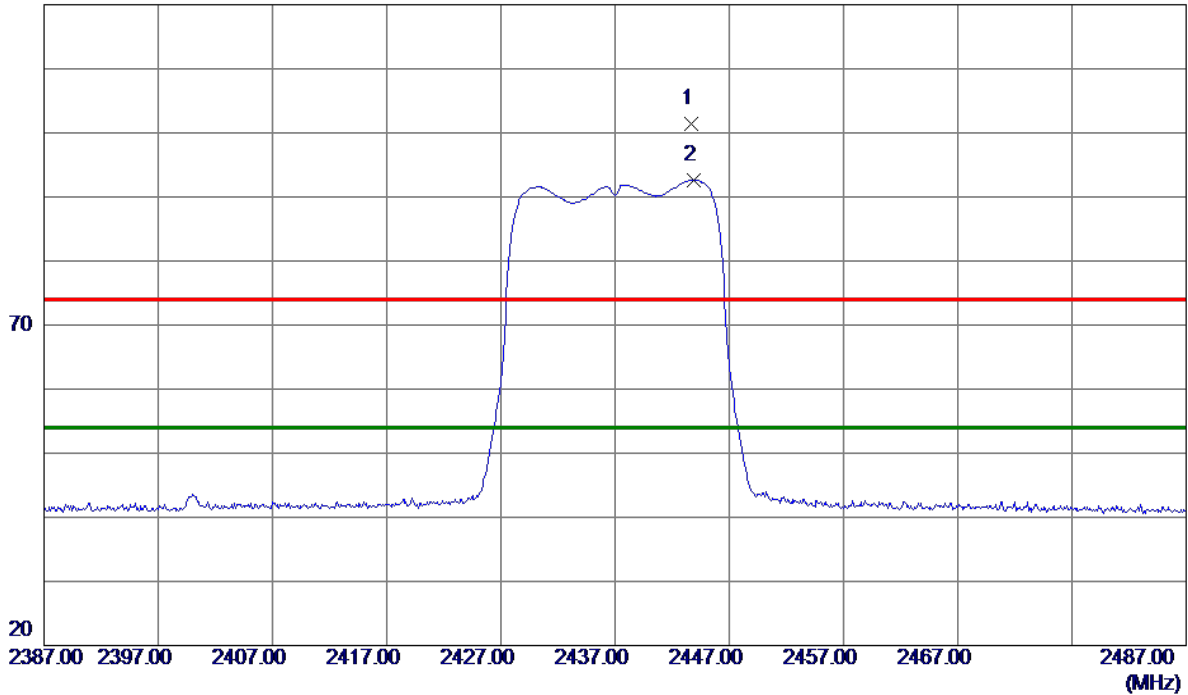
REMARKS:

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

Test Mode: TX N-20M Mode 2437 MHz

Horizontal

120 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2443.7000	68.09	33.40	101.49	74.00	27.49	Peak	No limit
2 *	2443.9000	59.25	33.40	92.65	54.00	38.65	AVG	No limit

REMARKS:

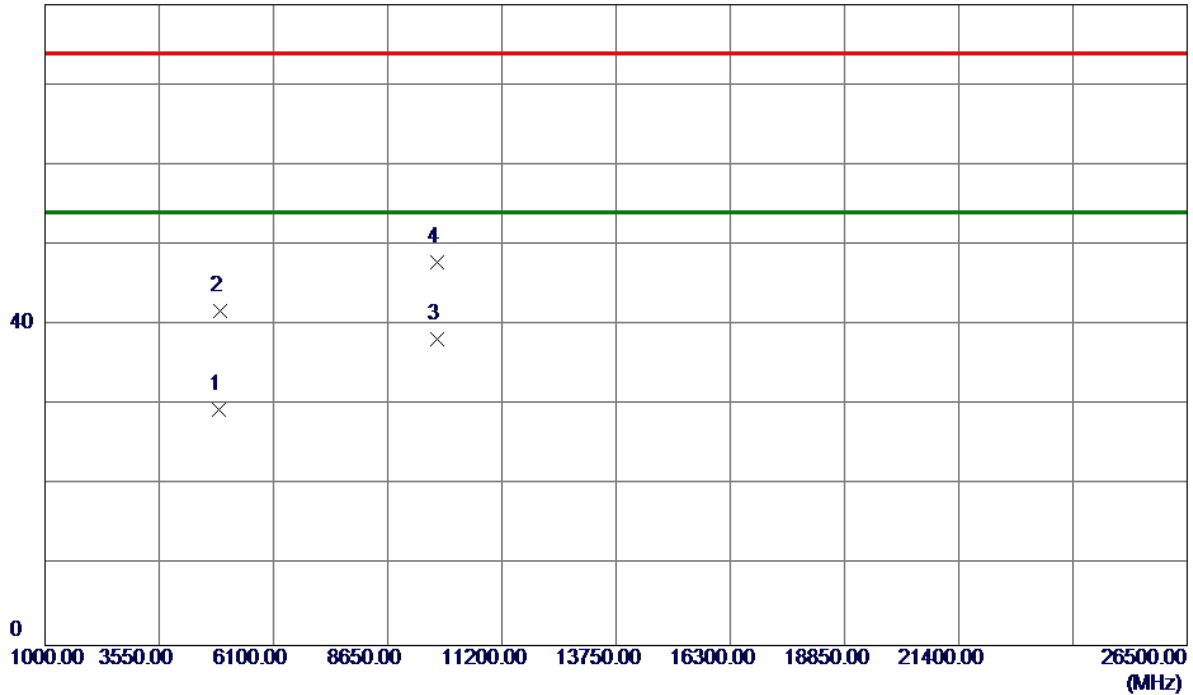
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX N-20M Mode 2437 MHz
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Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4874.8500	38.24	-8.80	29.44	54.00	-24.56	AVG	
2	4905.4000	50.39	-8.68	41.71	74.00	-32.29	Peak	
3 *	9748.0199	36.40	1.89	38.29	54.00	-15.71	AVG	
4	9750.3600	45.89	1.89	47.78	74.00	-26.22	Peak	

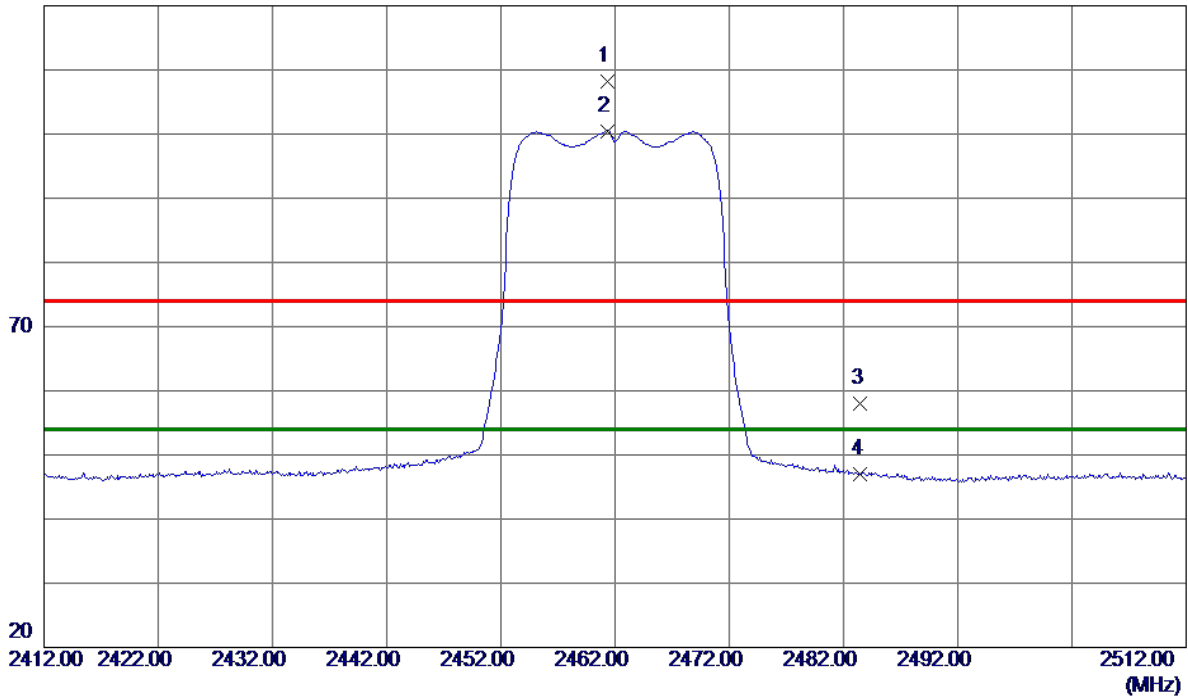
REMARKS:

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

Test Mode: TX N-20M Mode 2462 MHz

Vertical

120 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2461.3000	74.84	33.45	108.29	74.00	34.29	Peak	No limit
2 *	2461.3000	66.92	33.45	100.37	54.00	46.37	AVG	No limit
3	2483.5000	24.42	33.51	57.93	74.00	-16.07	Peak	
4	2483.5000	13.50	33.51	47.01	54.00	-6.99	AVG	

REMARKS:

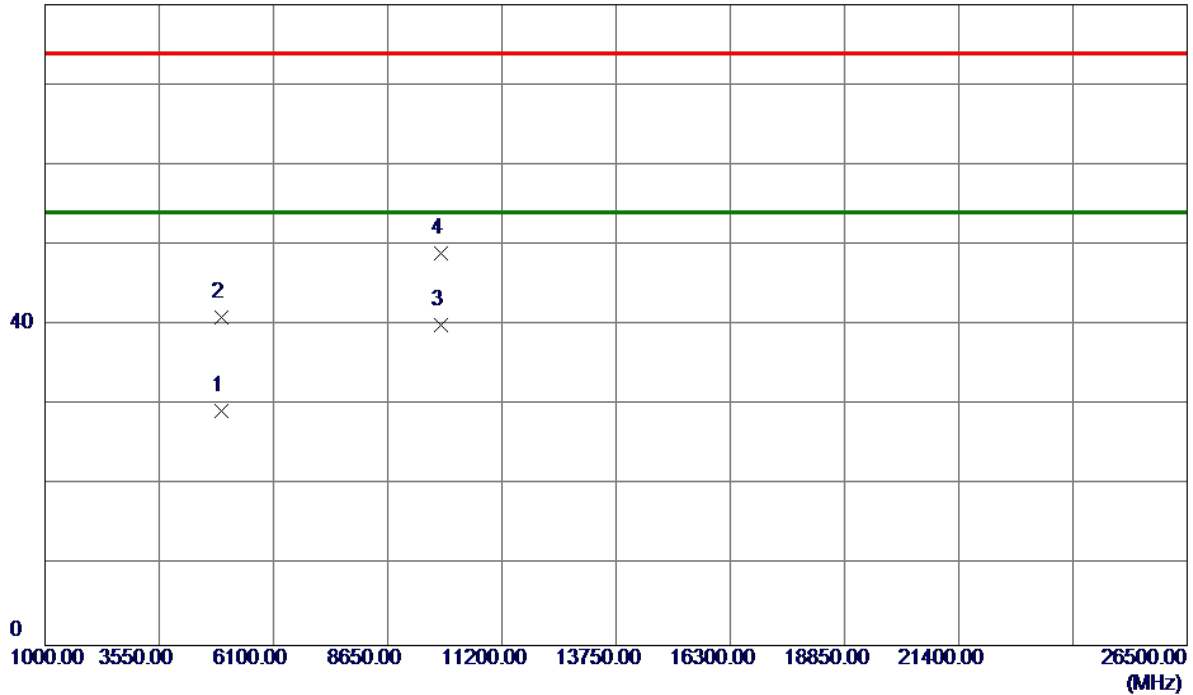
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX N-20M Mode 2462 MHz
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Vertical

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4924.3000	37.95	-8.60	29.35	54.00	-24.65	AVG	
2	4925.1200	49.58	-8.60	40.98	74.00	-33.02	Peak	
3 *	9848.1000	37.83	2.21	40.04	54.00	-13.96	AVG	
4	9850.7000	46.68	2.22	48.90	74.00	-25.10	Peak	

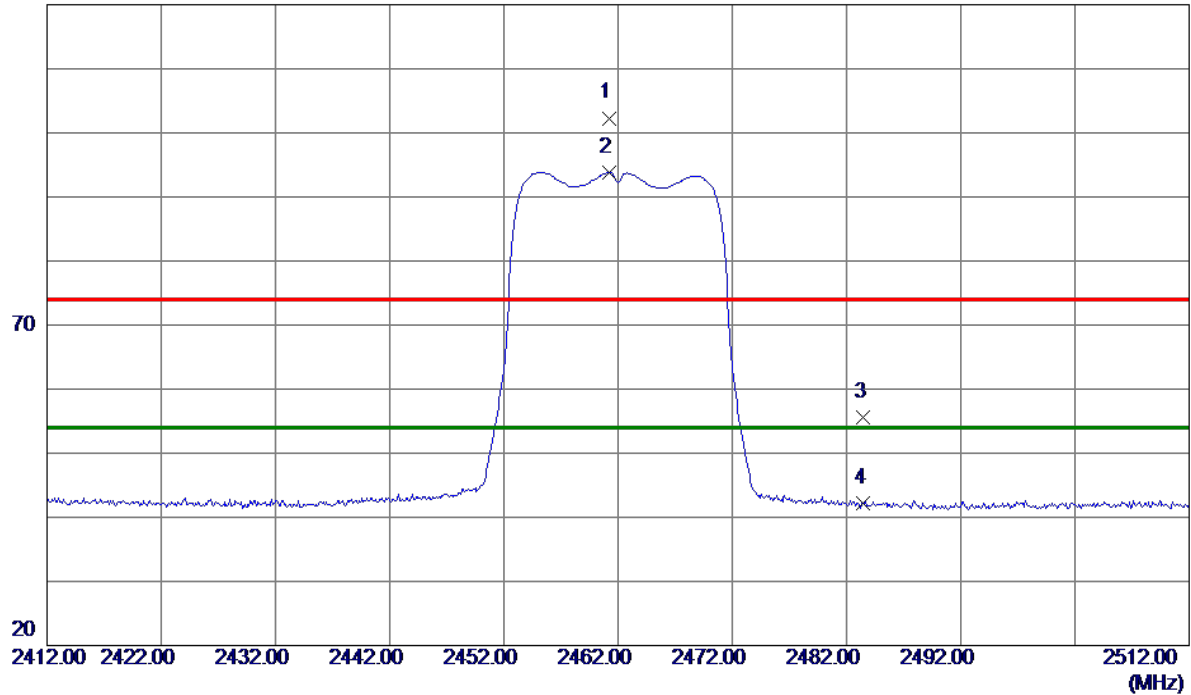
REMARKS:

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

Test Mode: TX N-20M Mode 2462 MHz

Horizontal

120 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2461.2000	68.85	33.45	102.30	74.00	28.30	Peak	No limit
2 *	2461.2000	60.27	33.45	93.72	54.00	39.72	AVG	No limit
3	2483.5000	22.16	33.51	55.67	74.00	-18.33	Peak	
4	2483.5000	8.67	33.51	42.18	54.00	-11.82	AVG	

REMARKS:

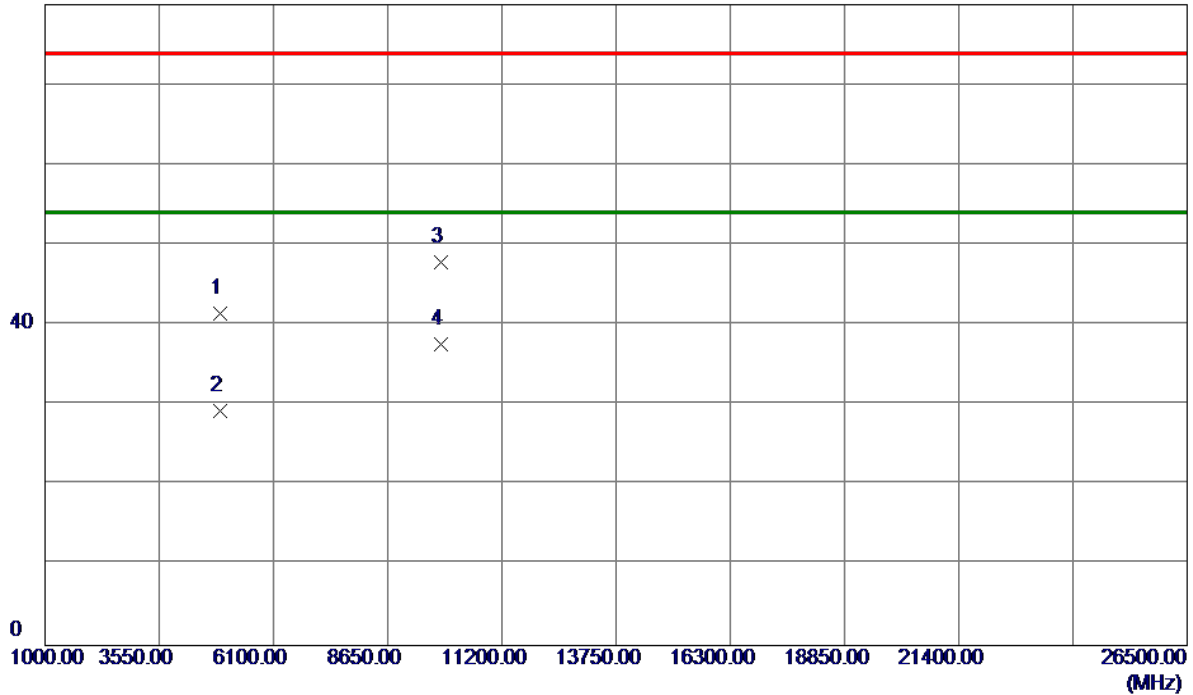
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX N-20M Mode 2462 MHz
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Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4921.9400	50.00	-8.61	41.39	74.00	-32.61	Peak	
2	4922.9400	37.82	-8.61	29.21	54.00	-24.79	AVG	
3	9846.7200	45.63	2.21	47.84	74.00	-26.16	Peak	
4 *	9848.1400	35.44	2.21	37.65	54.00	-16.35	AVG	

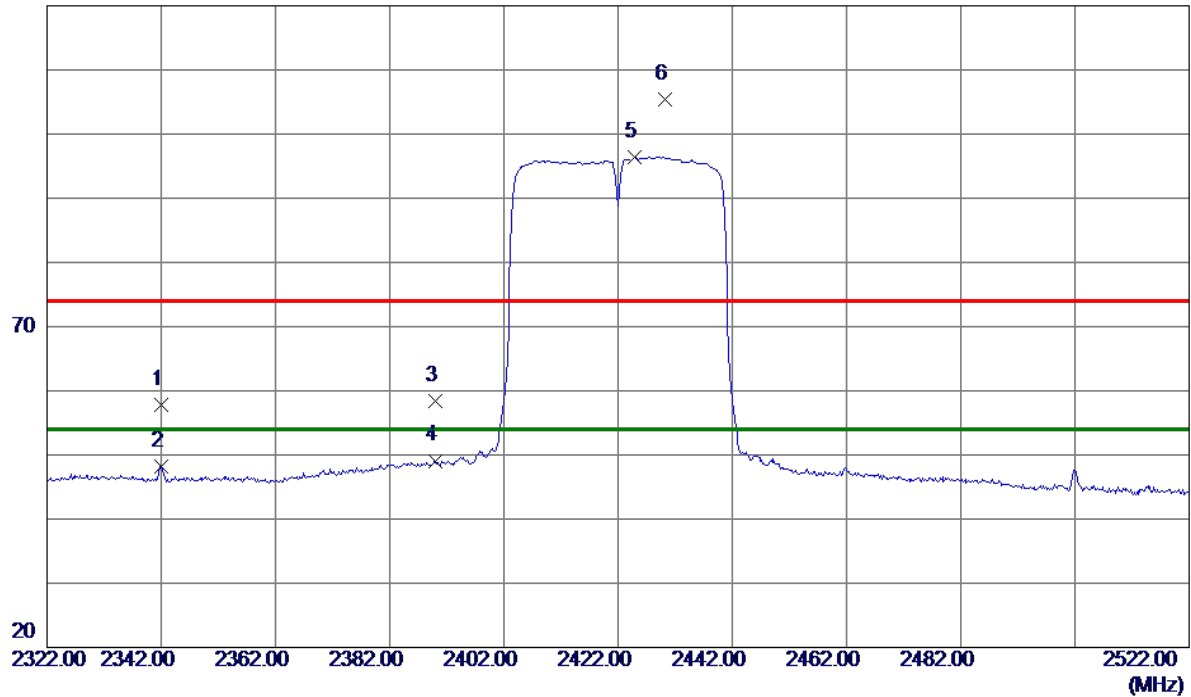
REMARKS:

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

Test Mode: TX N-40M Mode 2422MHz

Vertical

120 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2342.0000	24.70	33.11	57.81	74.00	-16.19	Peak	
2	2342.0000	15.06	33.11	48.17	54.00	-5.83	AVG	
3	2390.0000	25.09	33.25	58.34	74.00	-15.66	Peak	
4	2390.0000	15.85	33.25	49.10	54.00	-4.90	AVG	
5 *	2424.8000	63.05	33.35	96.40	54.00	42.40	AVG	No limit
6	2430.2000	72.06	33.36	105.42	74.00	31.42	Peak	No limit

REMARKS:

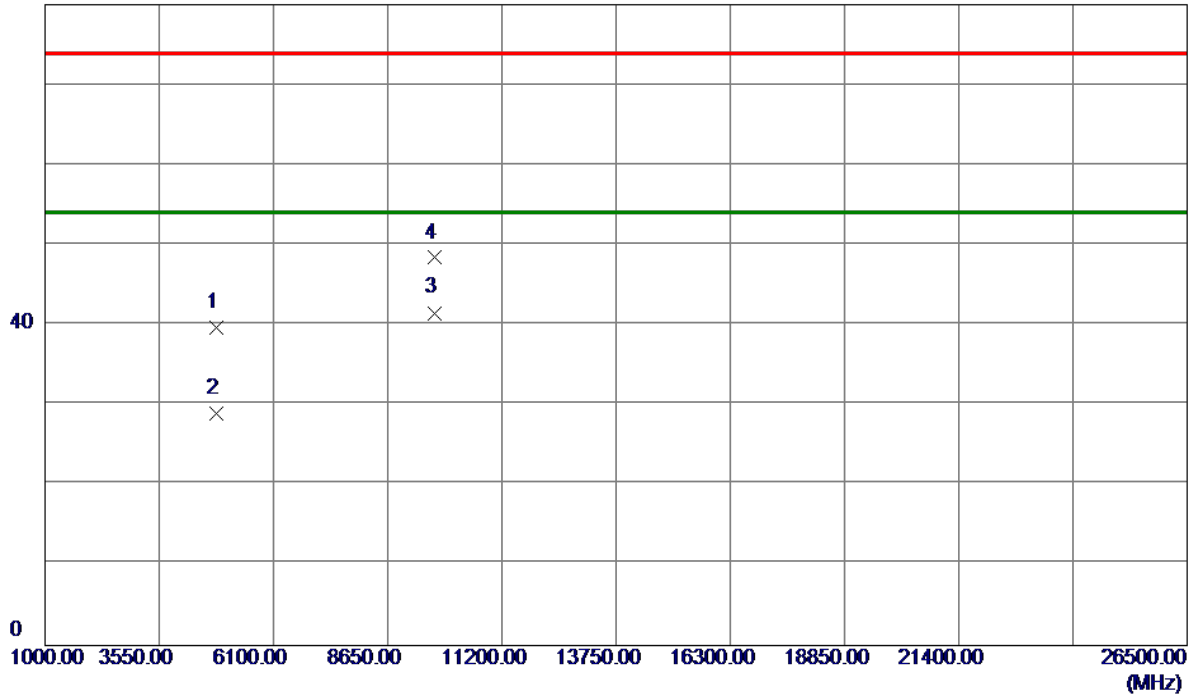
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX N-40M Mode 2422MHz
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Vertical

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4828.3500	48.74	-8.98	39.76	74.00	-34.24	Peak	
2	4836.6000	37.90	-8.94	28.96	54.00	-25.04	AVG	
3 *	9688.0900	39.83	1.69	41.52	54.00	-12.48	AVG	
4	9688.3200	46.71	1.69	48.40	74.00	-25.60	Peak	

REMARKS:

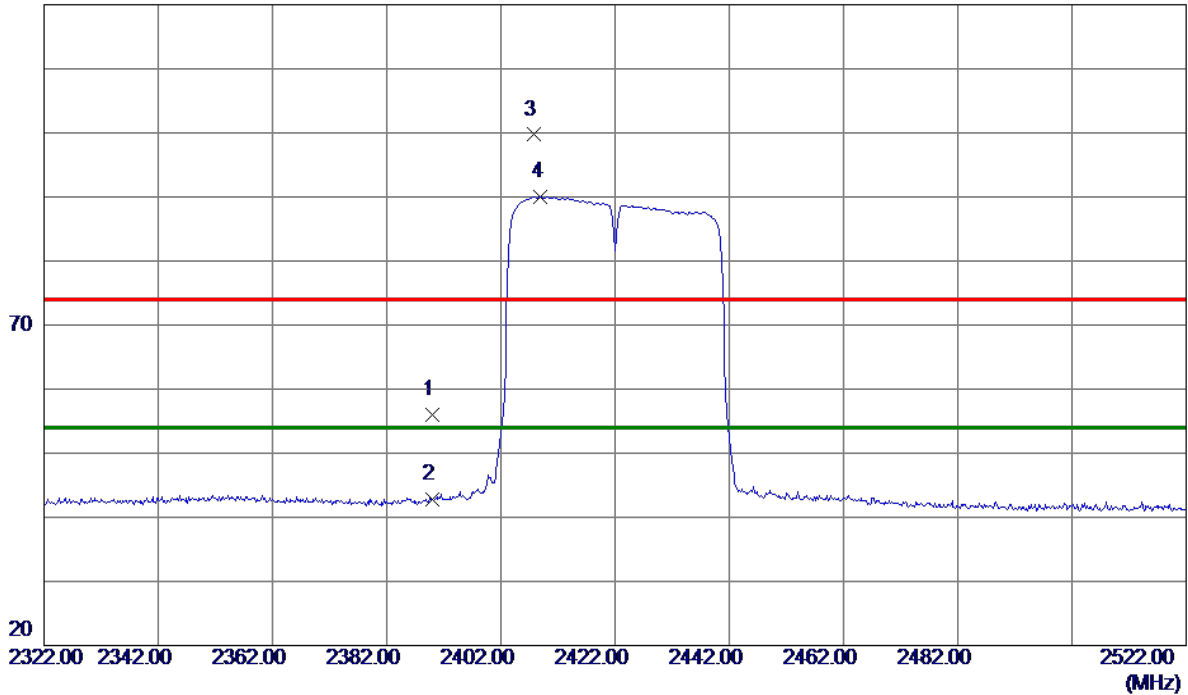
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode: TX N-40M Mode 2422MHz

Horizontal

120 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	22.79	33.25	56.04	74.00	-17.96	Peak	
2	2390.0000	9.50	33.25	42.75	54.00	-11.25	AVG	
3	2407.8000	66.40	33.30	99.70	74.00	25.70	Peak	No limit
4 *	2409.0000	56.70	33.30	90.00	54.00	36.00	AVG	No limit

REMARKS:

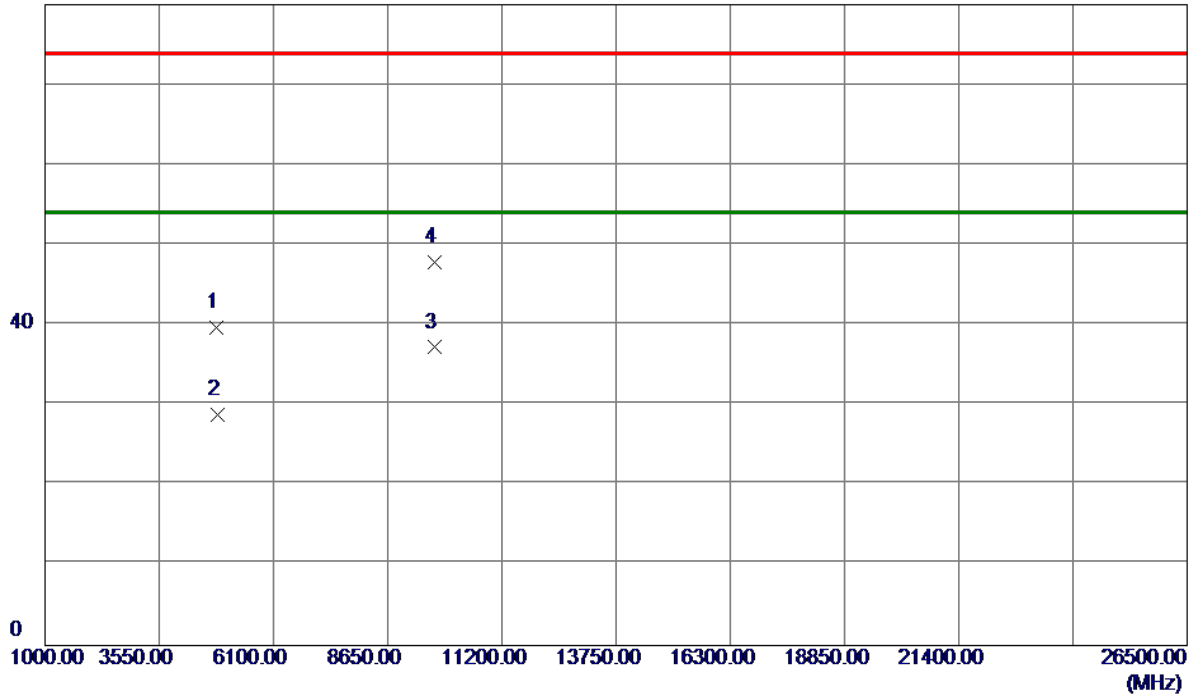
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX N-40M Mode 2422MHz
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Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4825.6500	48.72	-8.99	39.73	74.00	-34.27	Peak	
2	4844.8500	37.66	-8.91	28.75	54.00	-25.25	AVG	
3 *	9687.9100	35.51	1.69	37.20	54.00	-16.80	AVG	
4	9694.0100	46.21	1.71	47.92	74.00	-26.08	Peak	

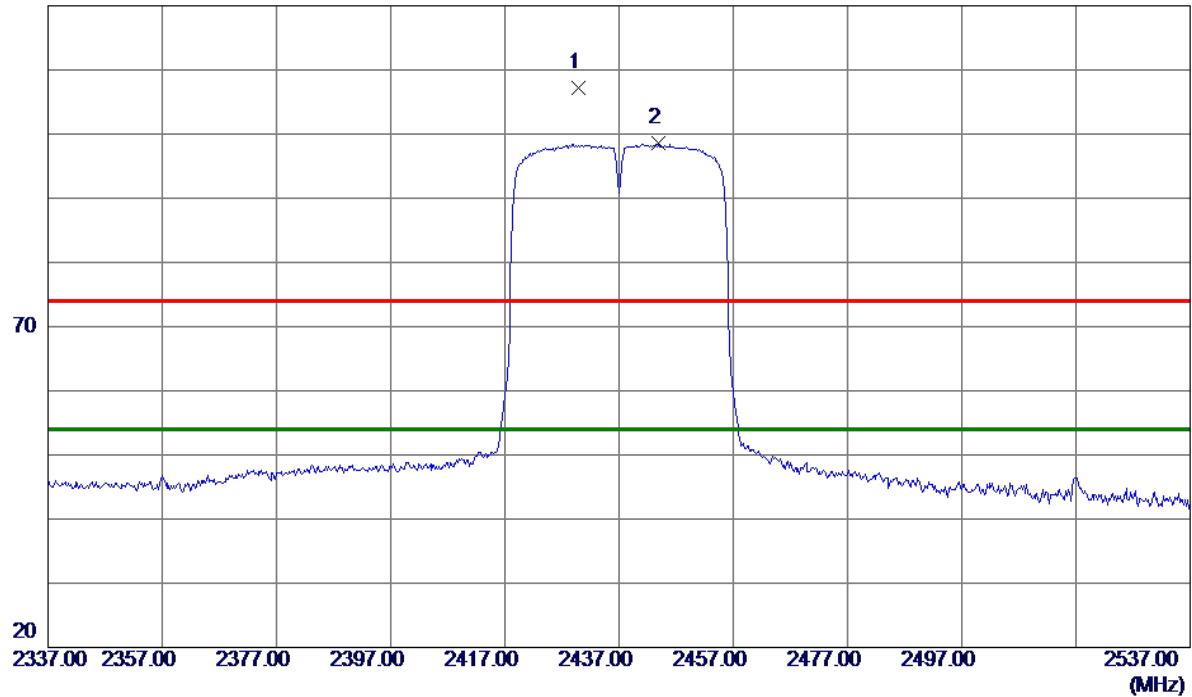
REMARKS:

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

Test Mode: TX N-40M Mode 2437 MHz

Vertical

120 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2429.8000	73.79	33.36	107.15	74.00	33.15	Peak	No limit
2 *	2443.8000	65.14	33.40	98.54	54.00	44.54	AVG	No limit

REMARKS:

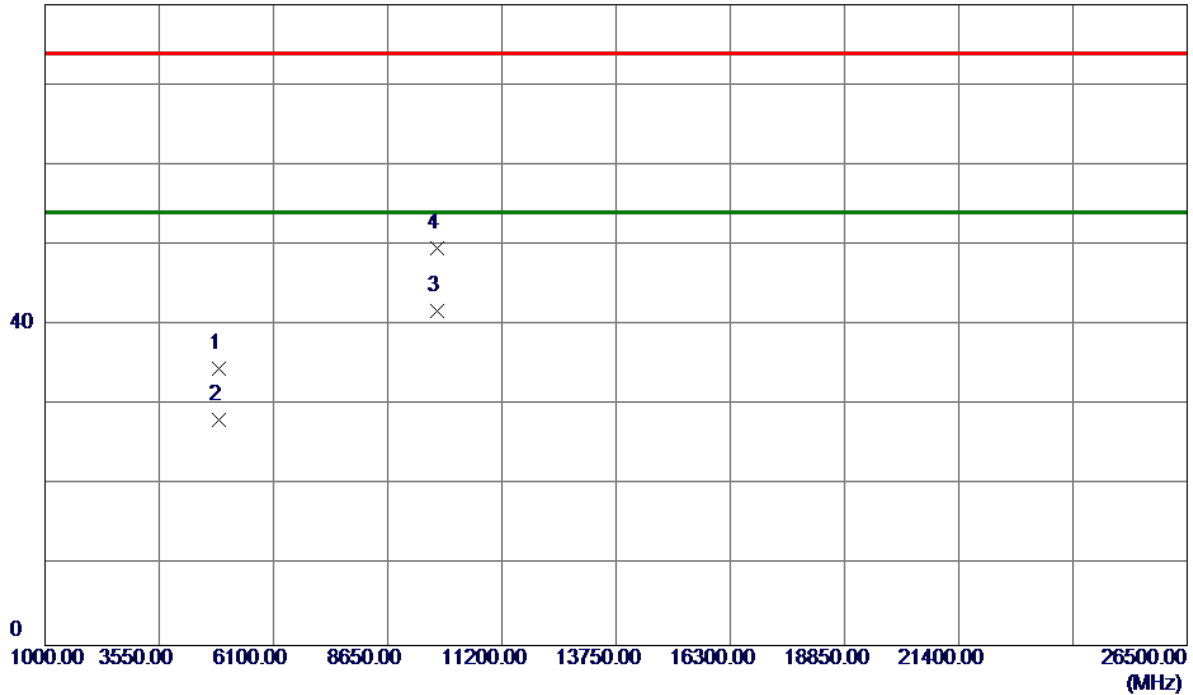
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX N-40M Mode 2437 MHz
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Vertical

80 dBuV/m



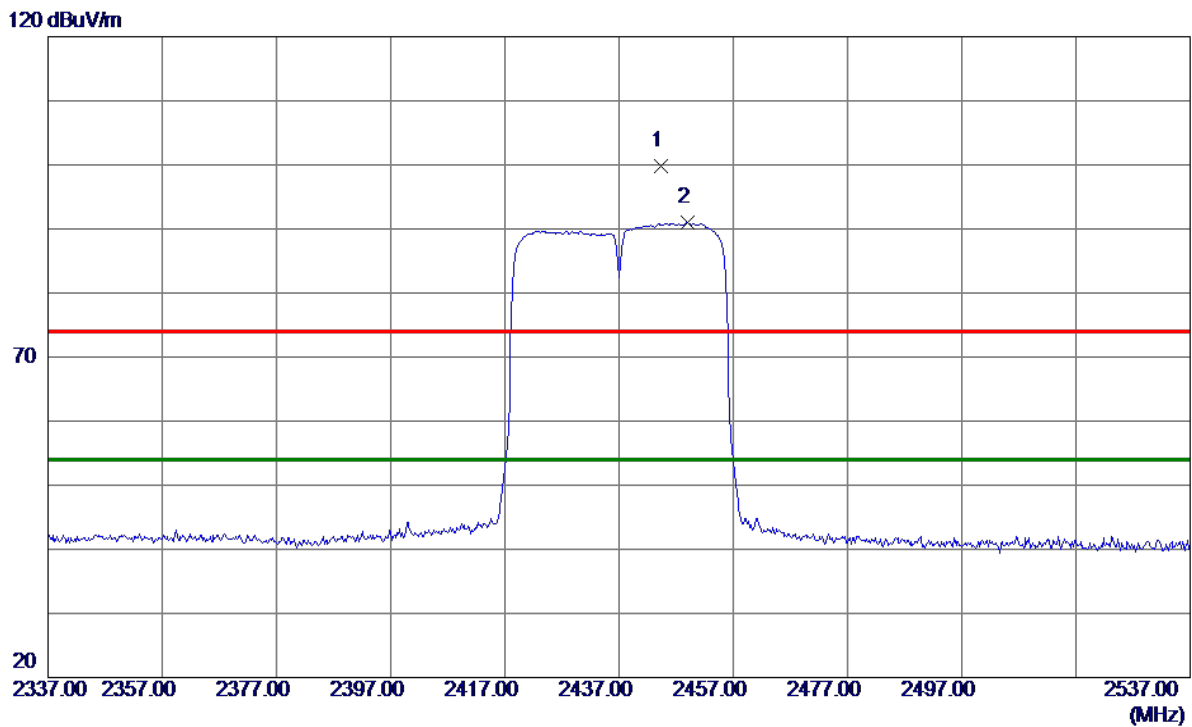
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4878.9600	43.37	-8.78	34.59	74.00	-39.41	Peak	
2	4884.1800	36.90	-8.76	28.14	54.00	-25.86	AVG	
3 *	9747.9400	39.91	1.89	41.80	54.00	-12.20	AVG	
4	9754.9600	47.66	1.91	49.57	74.00	-24.43	Peak	

REMARKS:

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

Test Mode: TX N-40M Mode 2437 MHz

Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2444.4000	66.44	33.40	99.84	74.00	25.84	Peak	No limit
2 *	2449.0000	57.60	33.42	91.02	54.00	37.02	AVG	No limit

REMARKS:

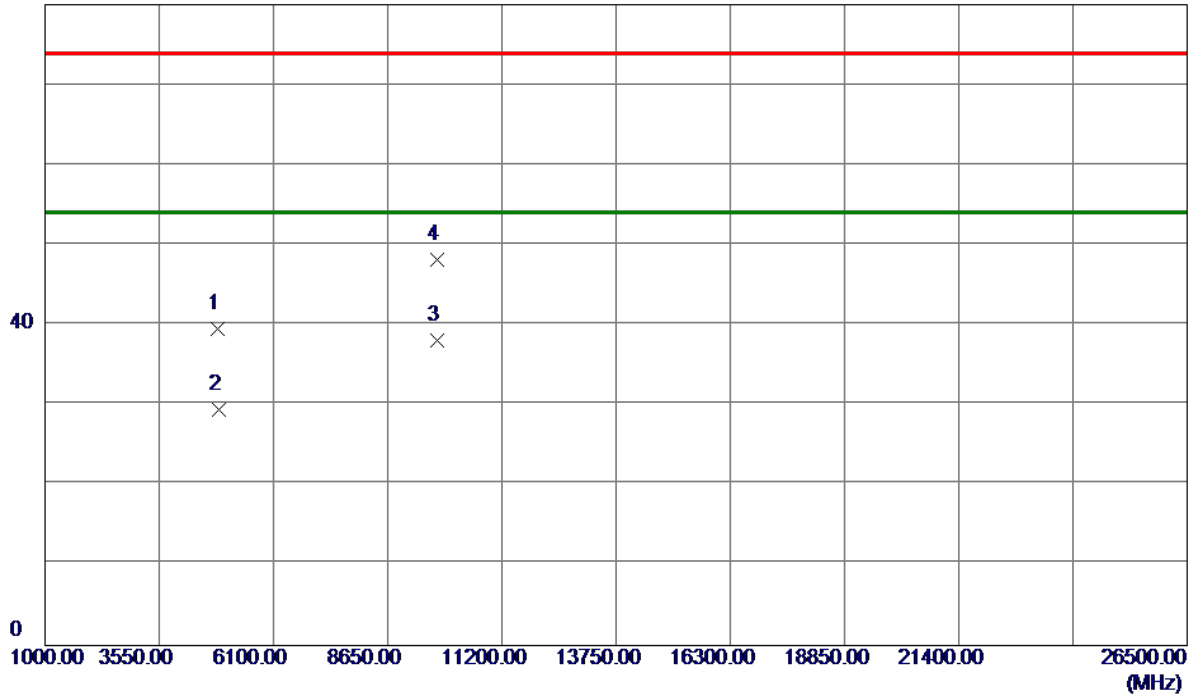
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX N-40M Mode 2437 MHz
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Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4867.1600	48.37	-8.83	39.54	74.00	-34.46	Peak	
2	4875.0000	38.24	-8.80	29.44	54.00	-24.56	AVG	
3 *	9747.9600	36.24	1.89	38.13	54.00	-15.87	AVG	
4	9748.8200	46.22	1.89	48.11	74.00	-25.89	Peak	

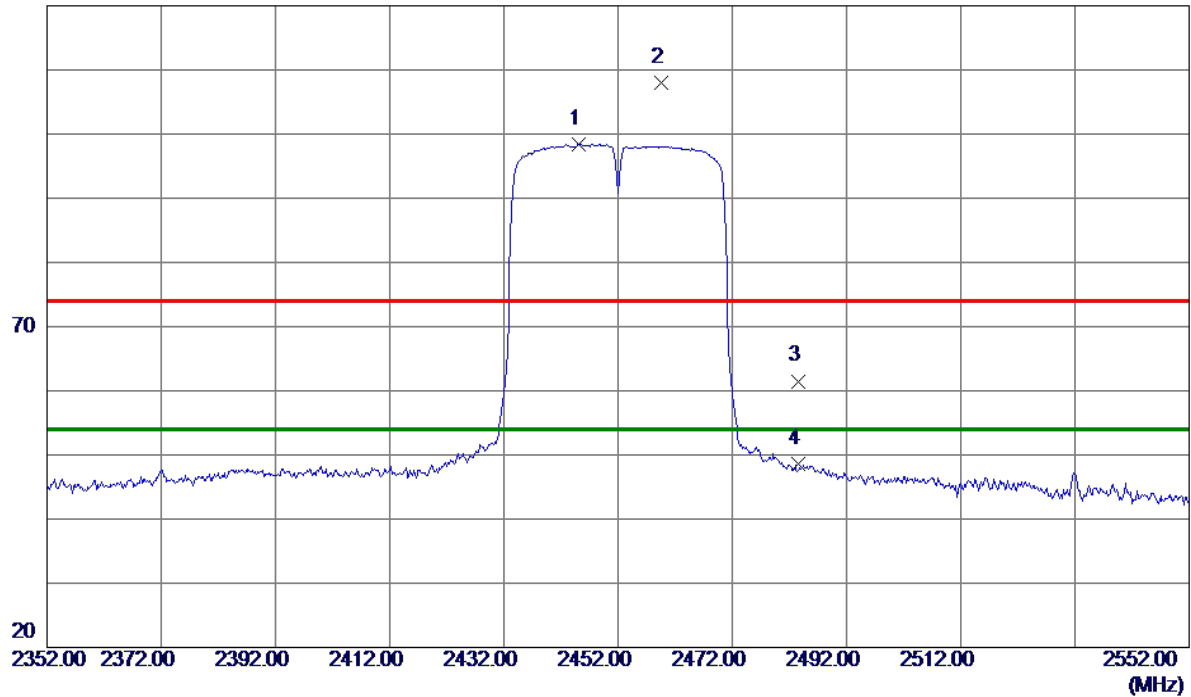
REMARKS:

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

Test Mode: TX N-40M Mode 2452 MHz

Vertical

120 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	2445.2000	65.07	33.40	98.47	54.00	44.47	AVG	No limit
2	2459.6000	74.50	33.45	107.95	74.00	33.95	Peak	No limit
3	2483.5000	27.99	33.51	61.50	74.00	-12.50	Peak	
4	2483.5000	15.18	33.51	48.69	54.00	-5.31	AVG	

REMARKS:

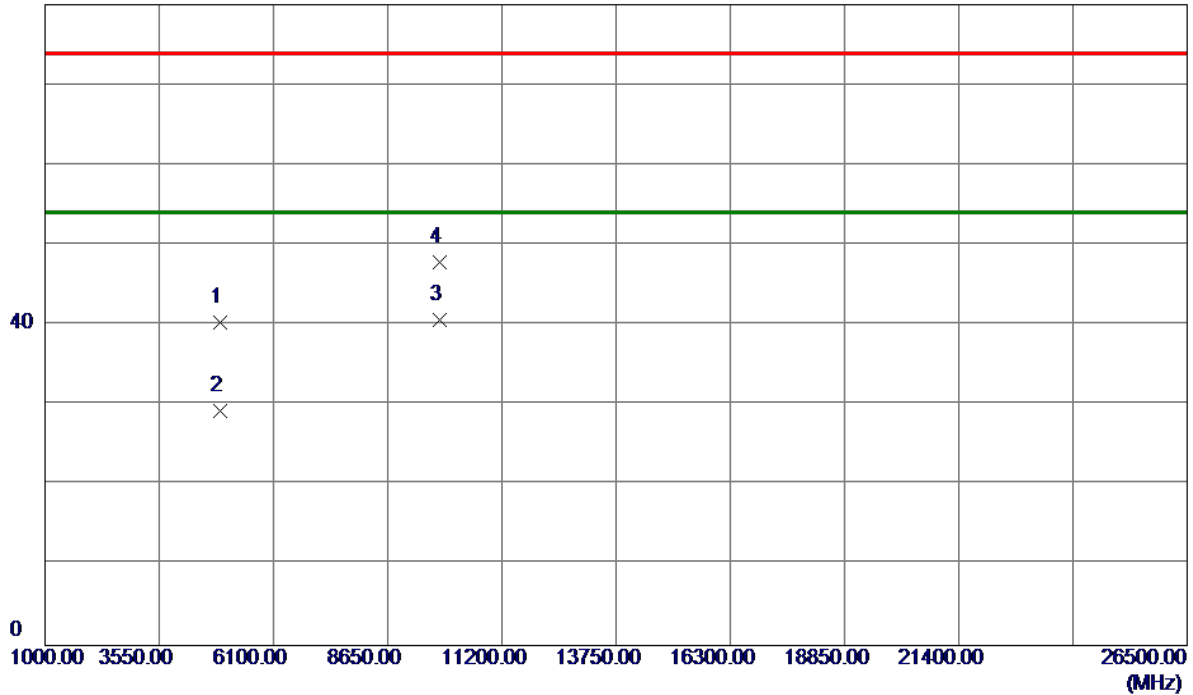
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX N-40M Mode 2452 MHz
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Vertical

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4905.7200	49.03	-8.68	40.35	74.00	-33.65	Peak	
2	4906.9200	37.92	-8.67	29.25	54.00	-24.75	AVG	
3 *	9808.1500	38.57	2.08	40.65	54.00	-13.35	AVG	
4	9808.3200	45.71	2.08	47.79	74.00	-26.21	Peak	

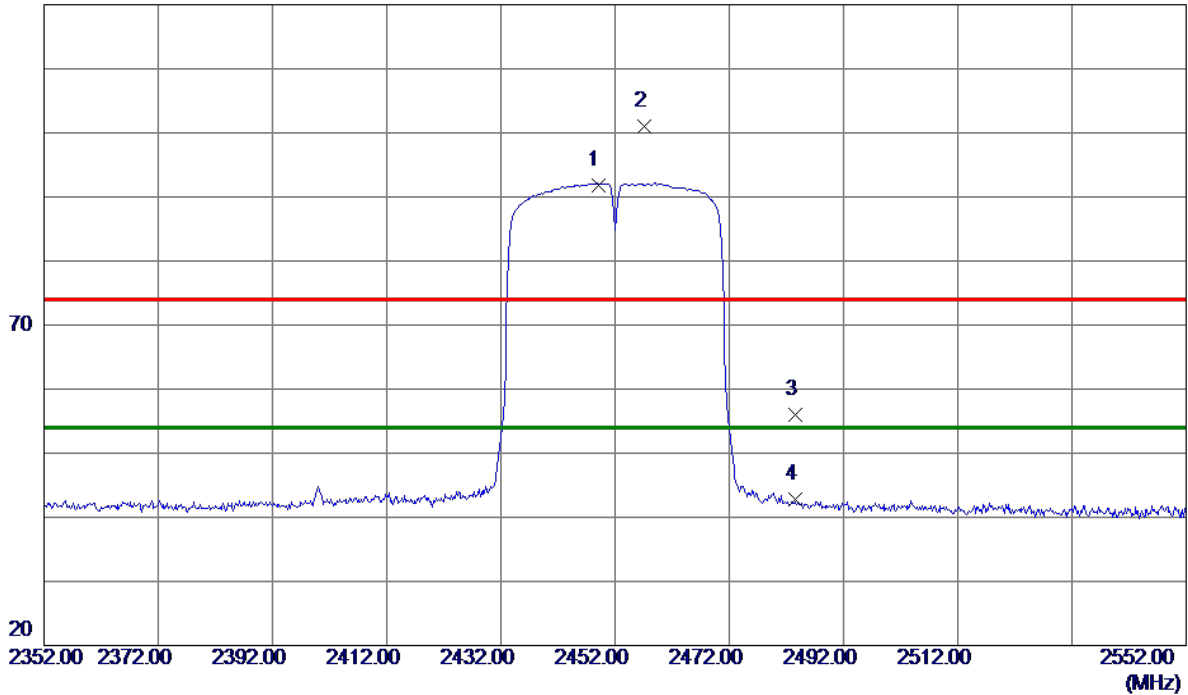
REMARKS:

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

Test Mode: TX N-40M Mode 2452 MHz

Horizontal

120 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	2449.0000	58.34	33.42	91.76	54.00	37.76	AVG	No limit
2	2457.2000	67.53	33.44	100.97	74.00	26.97	Peak	No limit
3	2483.5000	22.47	33.51	55.98	74.00	-18.02	Peak	
4	2483.5000	9.31	33.51	42.82	54.00	-11.18	AVG	

REMARKS:

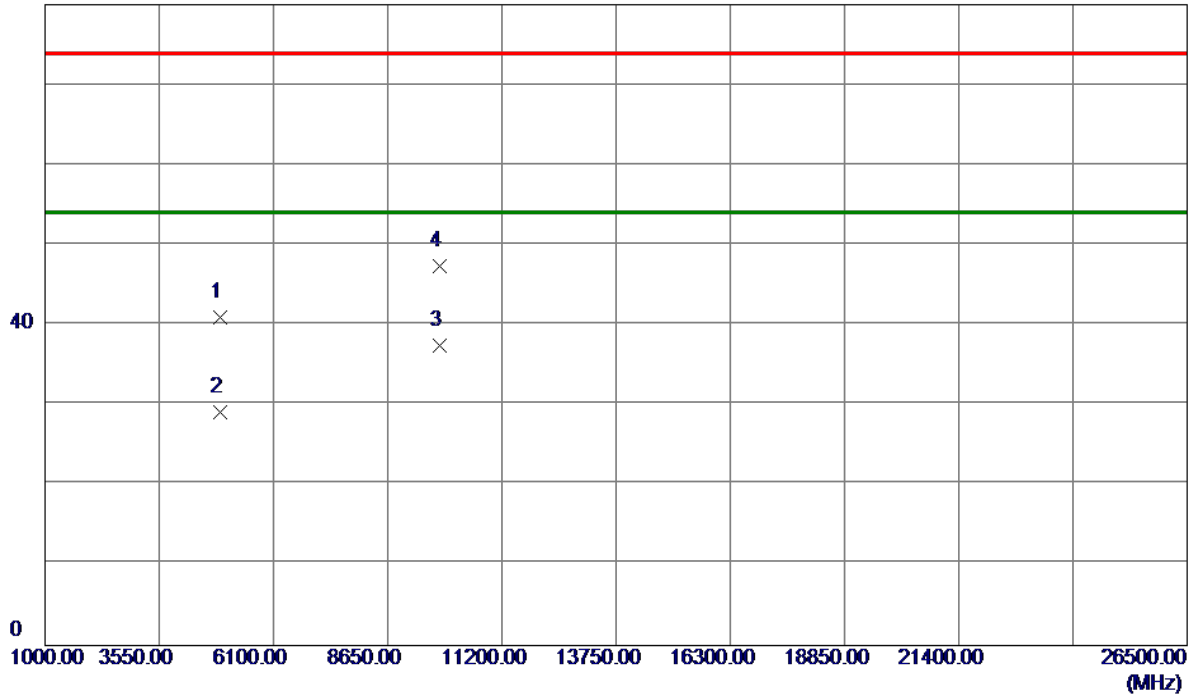
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX N-40M Mode 2452 MHz
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Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4904.0200	49.60	-8.68	40.92	74.00	-33.08	Peak	
2	4904.9400	37.79	-8.68	29.11	54.00	-24.89	AVG	
3 *	9808.1300	35.37	2.08	37.45	54.00	-16.55	AVG	
4	9818.1300	45.20	2.12	47.32	74.00	-26.68	Peak	

REMARKS:

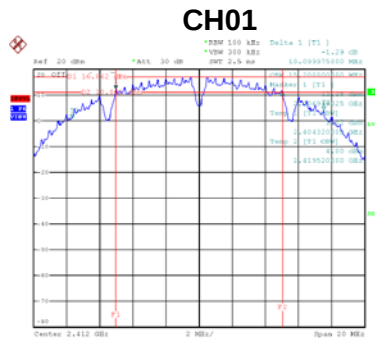
- (1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX E - BANDWIDTH

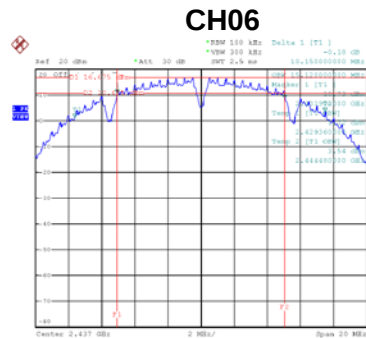
Non-Beamforming

Test Mode	TX B Mode
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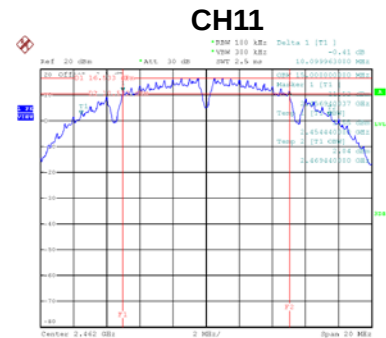
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	10.10	500	Complies
06	2437	10.15	500	Complies
11	2462	10.10	500	Complies



Date: 7.AUG.2019 14:06:15

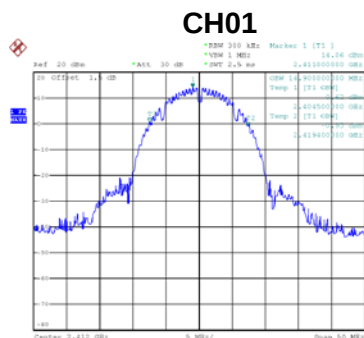


Date: 7.AUG.2019 14:08:02

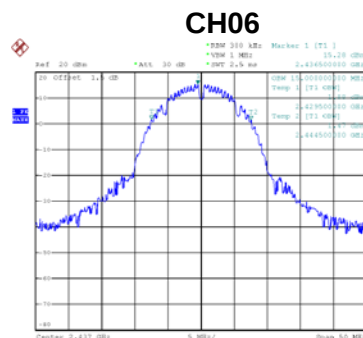


Date: 7.AUG.2019 14:10:38

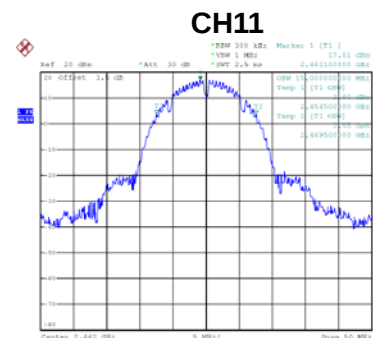
Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
01	2412	14.90	Complies
06	2437	15.00	Complies
11	2462	15.00	Complies



Date: 17.SEP.2019 10:24:06



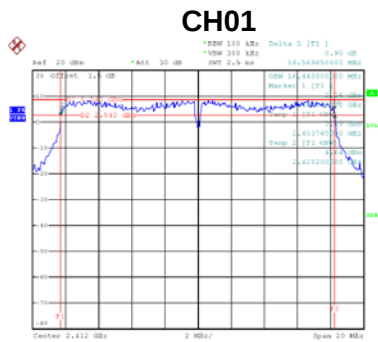
Date: 17.SEP.2019 10:38:07



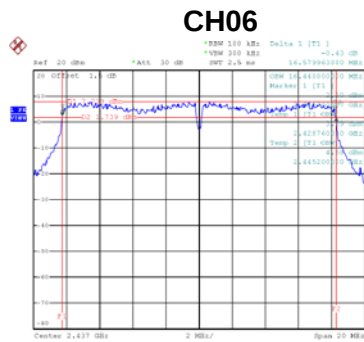
Date: 17.SEP.2019 10:39:47

Test Mode	TX G Mode
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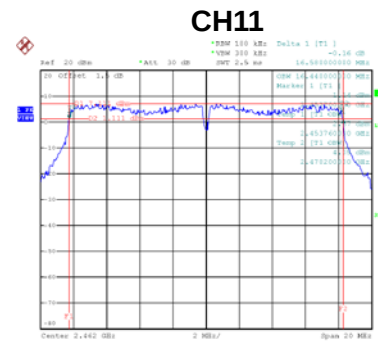
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	16.57	500	Complies
06	2437	16.58	500	Complies
11	2462	16.58	500	Complies



Date: 7.AUG.2019 14:13:02

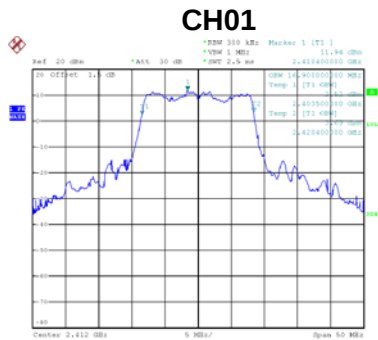


Date: 7.AUG.2019 14:16:48

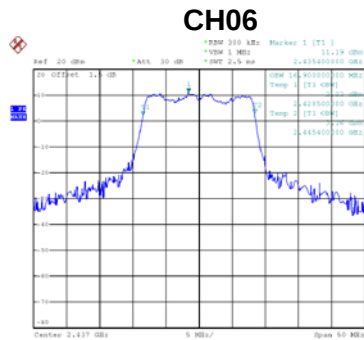


Date: 7.AUG.2019 14:20:37

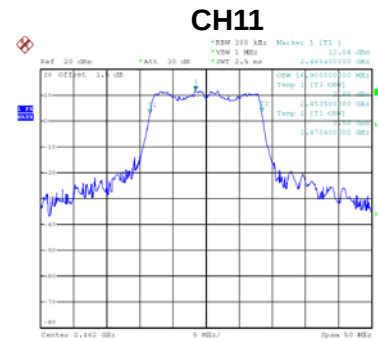
Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
01	2412	16.90	Complies
06	2437	16.90	Complies
11	2462	16.90	Complies



Date: 17.SEP.2019 10:44:39



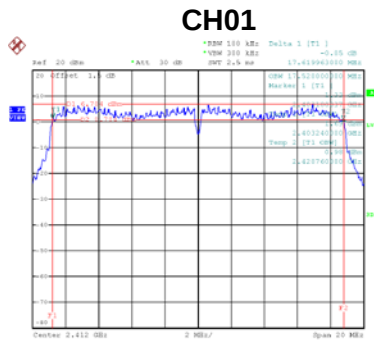
Date: 17.SEP.2019 10:43:46



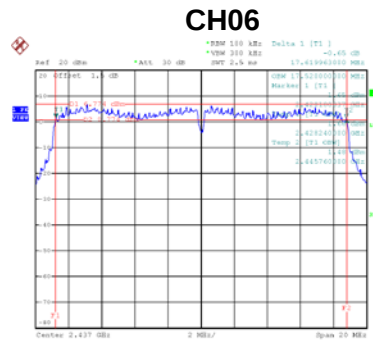
Date: 17.SEP.2019 10:41:57

Test Mode	TX N-20M Mode
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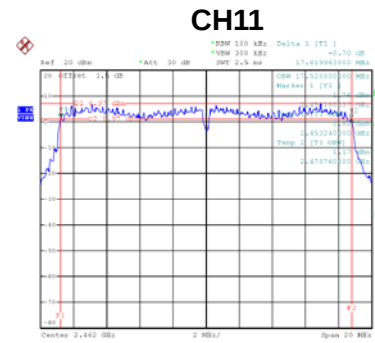
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	17.62	500	Complies
06	2437	17.62	500	Complies
11	2462	17.62	500	Complies



Date: 7.AUG.2019 14:22:50

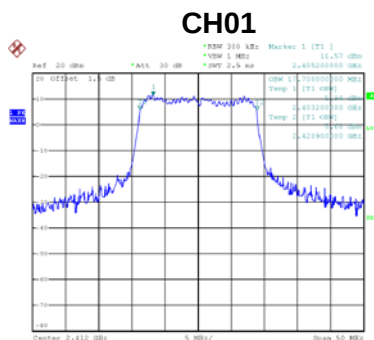


Date: 7.AUG.2019 14:24:35

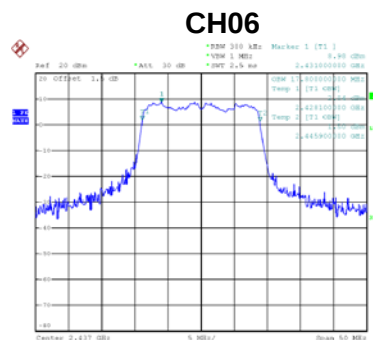


Date: 7.AUG.2019 14:27:10

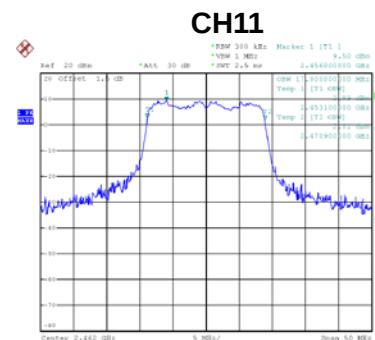
Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
01	2412	17.70	Complies
06	2437	17.80	Complies
11	2462	17.80	Complies



Date: 17.SEP.2019 10:51:31



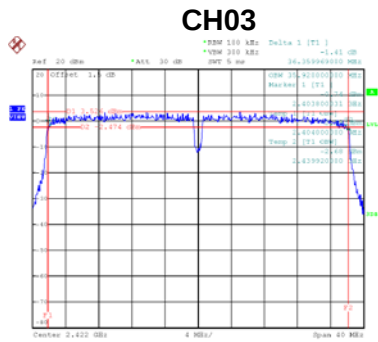
Date: 17.SEP.2019 10:54:52



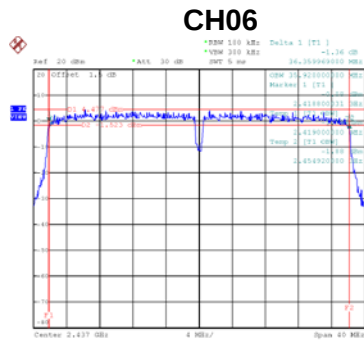
Date: 17.SEP.2019 10:56:56

Test Mode	TX N-40M Mode
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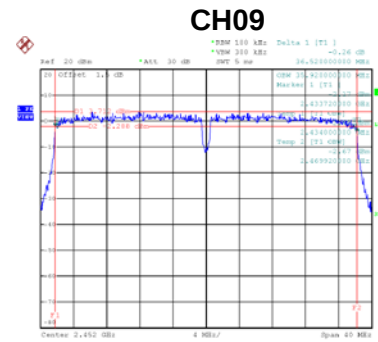
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
03	2422	36.36	500	Complies
06	2437	36.36	500	Complies
09	2452	36.52	500	Complies



Date: 7_AUG.2019 14:38:28

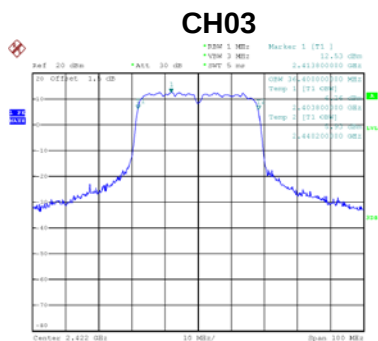


Date: 7_AUG.2019 14:40:04

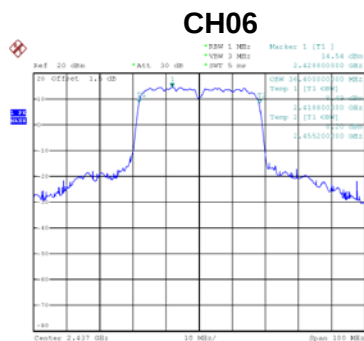


Date: 7_AUG.2019 14:41:36

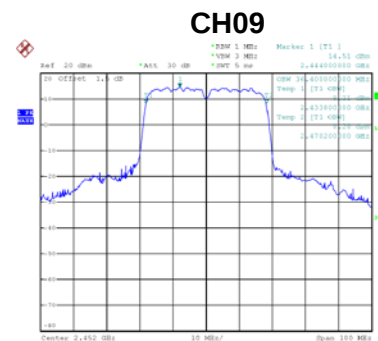
Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
03	2422	36.40	Complies
06	2437	36.40	Complies
09	2452	36.40	Complies



Date: 17_SEPT.2019 11:04:13



Date: 17_SEPT.2019 11:06:57



Date: 17_SEPT.2019 11:12:27

APPENDIX F - MAXIMUM OUTPUT POWER

Non-Beamforming

Test Mode	TX B Mode
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Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	28.15	0.6531	30.00	1.0000	Complies
06	2437	27.64	0.5808	30.00	1.0000	Complies
11	2462	27.23	0.5284	30.00	1.0000	Complies

Test Mode	TX G Mode
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Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	28.38	0.6887	30.00	1.0000	Complies
06	2437	28.32	0.6792	30.00	1.0000	Complies
11	2462	28.04	0.6368	30.00	1.0000	Complies

Test Mode	TX N-20M Mode_Ant. 1
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Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	26.33	0.4295	30.00	1.0000	Complies
06	2437	25.66	0.3681	30.00	1.0000	Complies
11	2462	25.73	0.3741	30.00	1.0000	Complies

Test Mode	TX N-20M Mode_Ant. 2
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Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	27.38	0.5470	30.00	1.0000	Complies
06	2437	26.37	0.4335	30.00	1.0000	Complies
11	2462	26.48	0.4446	30.00	1.0000	Complies

Test Mode	TX N-20M Mode_Total
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Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	29.90	0.9766	30.00	1.0000	Complies
06	2437	29.04	0.8016	30.00	1.0000	Complies
11	2462	29.13	0.8187	30.00	1.0000	Complies

Test Mode	TX N-40M Mode_Ant. 1
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Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	26.83	0.4819	30.00	1.0000	Complies
06	2437	26.47	0.4436	30.00	1.0000	Complies
09	2452	26.69	0.4667	30.00	1.0000	Complies

Test Mode	TX N-40M Mode_Ant. 2
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Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	26.48	0.4446	30.00	1.0000	Complies
06	2437	26.45	0.4416	30.00	1.0000	Complies
09	2452	26.76	0.4742	30.00	1.0000	Complies

Test Mode	TX N-40M Mode_Total
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Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	29.67	0.9266	30.00	1.0000	Complies
06	2437	29.47	0.8852	30.00	1.0000	Complies
09	2452	29.74	0.9409	30.00	1.0000	Complies

Beamforming

Test Mode	TX N-20M Mode_Ant. 1
-----------	----------------------

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	26.31	0.4276	30.00	1.0000	Complies
06	2437	26.08	0.4055	30.00	1.0000	Complies
11	2462	26.45	0.4416	30.00	1.0000	Complies

Test Mode	TX N-20M Mode_Ant. 2
-----------	----------------------

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	26.84	0.4831	30.00	1.0000	Complies
06	2437	26.39	0.4355	30.00	1.0000	Complies
11	2462	26.86	0.4853	30.00	1.0000	Complies

Test Mode	TX N-20M Mode_Total
-----------	---------------------

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	29.59	0.9106	30.00	1.0000	Complies
06	2437	29.25	0.8410	30.00	1.0000	Complies
11	2462	29.67	0.9269	30.00	1.0000	Complies

Test Mode	TX N-40M Mode_Ant. 1
-----------	----------------------

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	26.44	0.4406	30.00	1.0000	Complies
06	2437	26.42	0.4385	30.00	1.0000	Complies
09	2452	26.48	0.4446	30.00	1.0000	Complies

Test Mode	TX N-40M Mode_Ant. 2
-----------	----------------------

Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	26.68	0.4656	30.00	1.0000	Complies
06	2437	26.21	0.4178	30.00	1.0000	Complies
09	2452	26.57	0.4539	30.00	1.0000	Complies

Test Mode	TX N-40M Mode_Total
-----------	---------------------

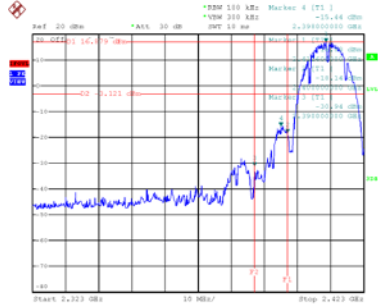
Channel	Frequency (MHz)	Output Power (dBm)	Output Power (W)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	29.57	0.9061	30.00	1.0000	Complies
06	2437	29.33	0.8564	30.00	1.0000	Complies
09	2452	29.54	0.8986	30.00	1.0000	Complies

APPENDIX G - CONDUCTED SPURIOUS EMISSIONS

Non-Beamforming

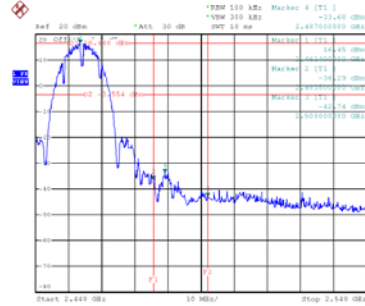
Test Mode TX B Mode

Bandedge-CH01



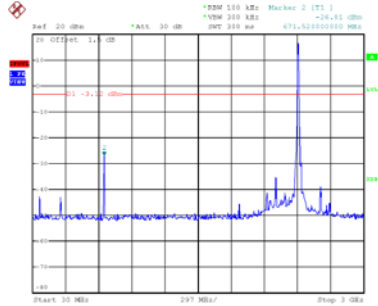
Date: 7.AUG.2019 14:06:23

Bandedge-CH11

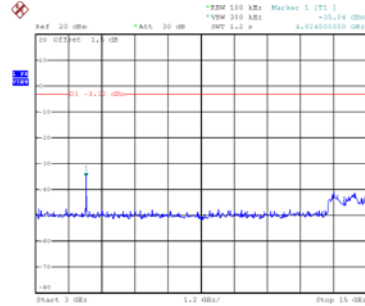


Date: 7.AUG.2019 14:11:02

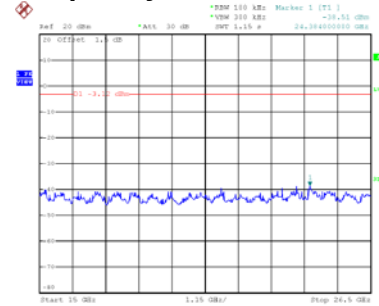
CH01 – 10th Harmonic of the fundamental frequency



Date: 7.AUG.2019 14:06:35

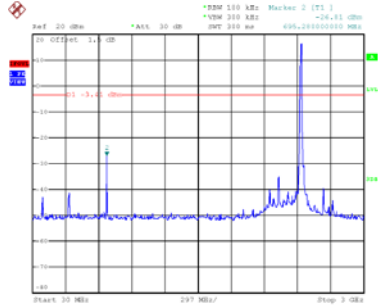


Date: 7.AUG.2019 14:06:42

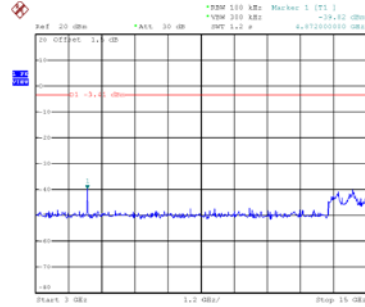


Date: 7.AUG.2019 14:06:49

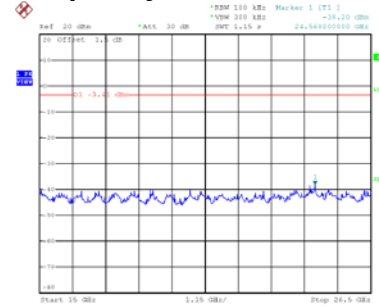
CH06 – 10th Harmonic of the fundamental frequency



Date: 7.AUG.2019 14:08:38

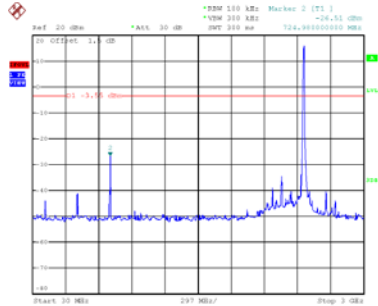


Date: 7.AUG.2019 14:08:45

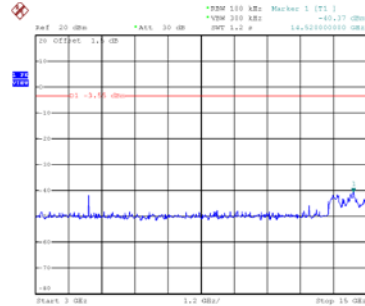


Date: 7.AUG.2019 14:08:52

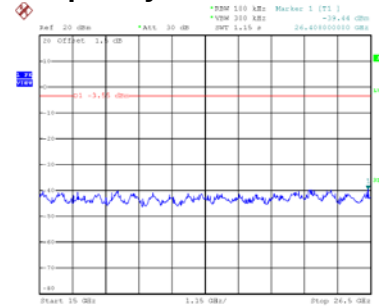
CH11 – 10th Harmonic of the fundamental frequency



Date: 7.AUG.2019 14:11:14



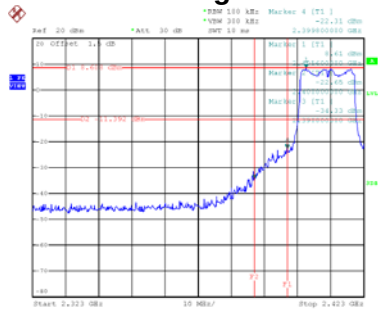
Date: 7.AUG.2019 14:11:21



Date: 7.AUG.2019 14:11:28

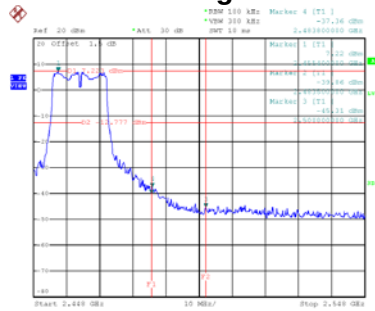
Test Mode TX G Mode

Bandedge-CH01



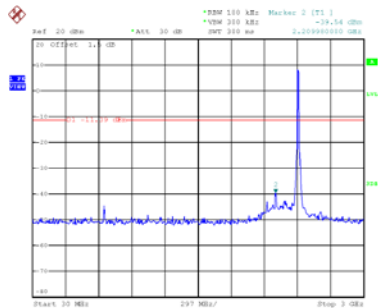
Date: 7.AUG.2019 14:13:09

Bandedge-CH11

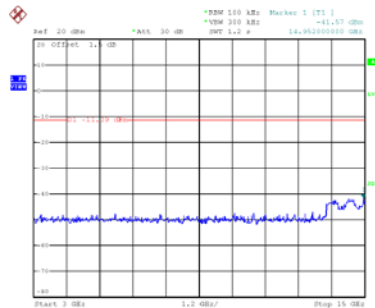


Date: 7.AUG.2019 14:21:01

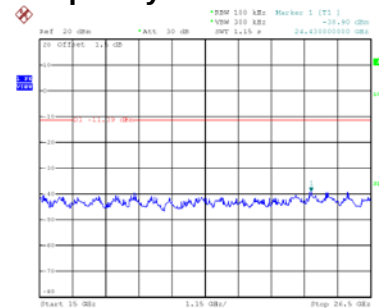
CH01 – 10th Harmonic of the fundamental frequency



Date: 7.AUG.2019 14:13:21

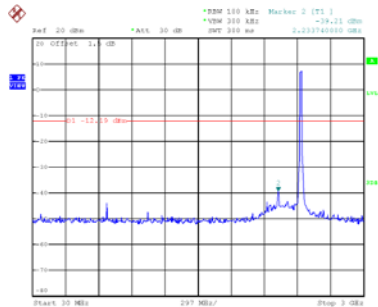


Date: 7.AUG.2019 14:13:28

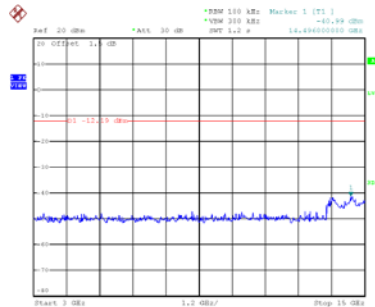


Date: 7.AUG.2019 14:13:35

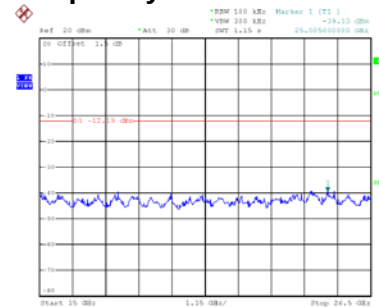
CH06 – 10th Harmonic of the fundamental frequency



Date: 7.AUG.2019 14:17:24

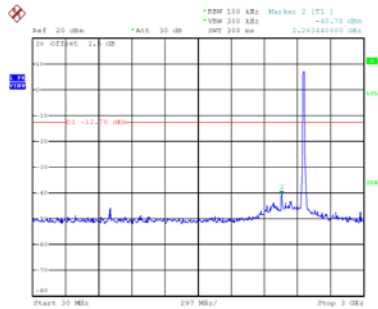


Date: 7.AUG.2019 14:17:31

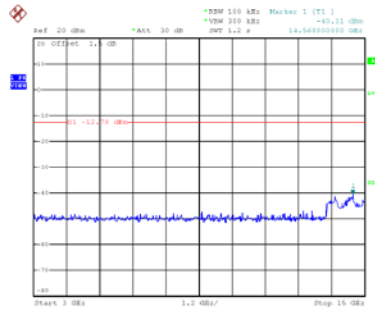


Date: 7.AUG.2019 14:17:38

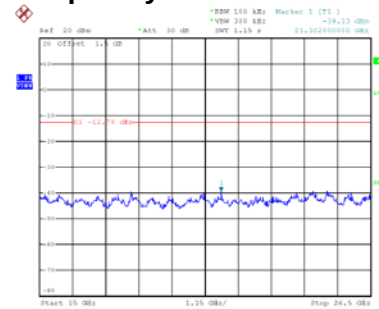
CH11 – 10th Harmonic of the fundamental frequency



Date: 7.AUG.2019 14:21:13



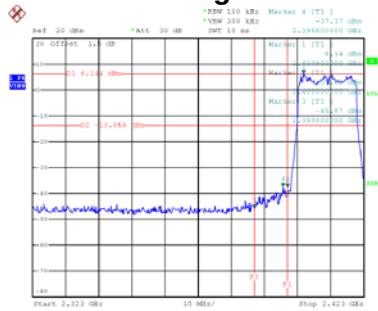
Date: 7.AUG.2019 14:21:20



Date: 7.AUG.2019 14:21:27

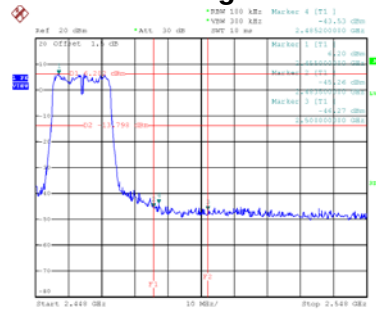
Test Mode TX N-20M Mode_Ant. 1

Bandedge-CH01



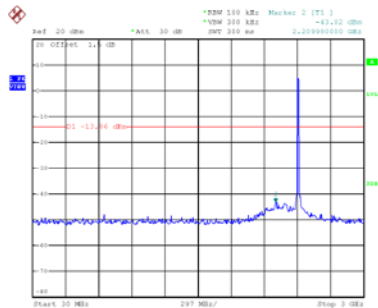
Date: 7.AUG.2019 14:23:14

Bandedge-CH11

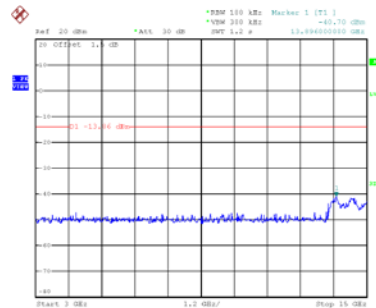


Date: 7.AUG.2019 14:27:34

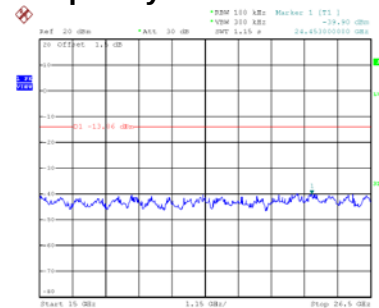
CH01 – 10th Harmonic of the fundamental frequency



Date: 7.AUG.2019 14:23:27

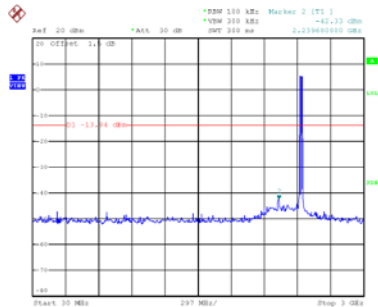


Date: 7.AUG.2019 14:23:33

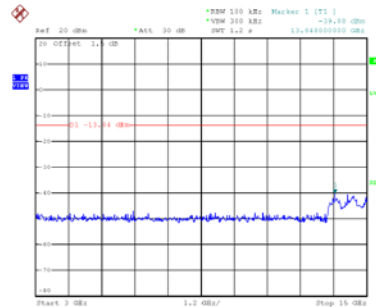


Date: 7.AUG.2019 14:23:40

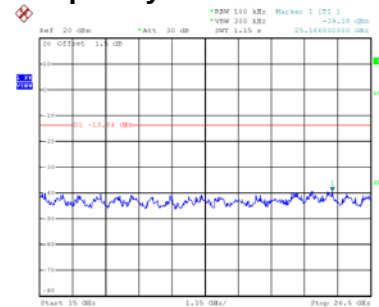
CH06 – 10th Harmonic of the fundamental frequency



Date: 7.AUG.2019 14:25:12

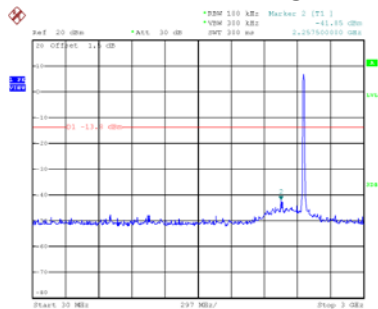


Date: 7.AUG.2019 14:25:18

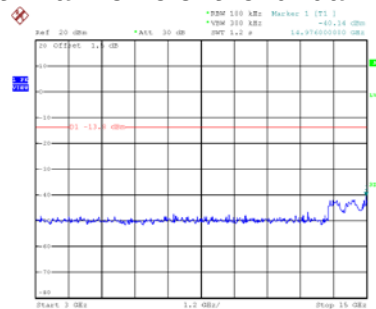


Date: 7.AUG.2019 14:25:25

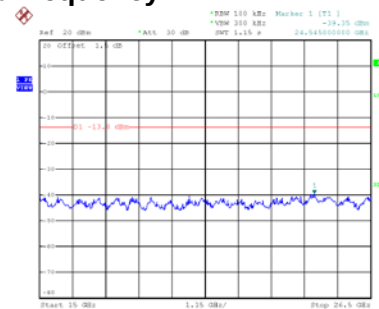
CH11 – 10th Harmonic of the fundamental frequency



Date: 7.AUG.2019 14:27:46



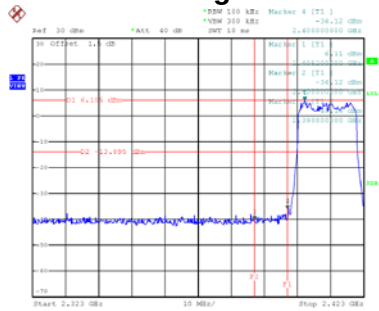
Date: 7.AUG.2019 14:27:53



Date: 7.AUG.2019 14:28:00

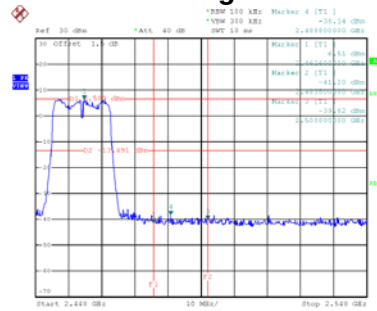
Test Mode TX N-20M Mode_Ant. 2

Bandedge-CH01



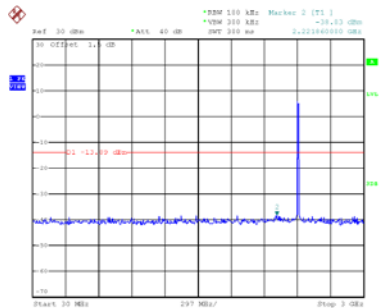
Date: 29.AUG.2019 10:34:34

Bandedge-CH11

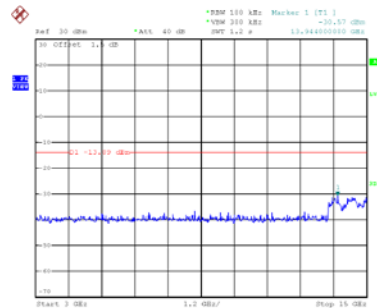


Date: 30.AUG.2019 09:53:19

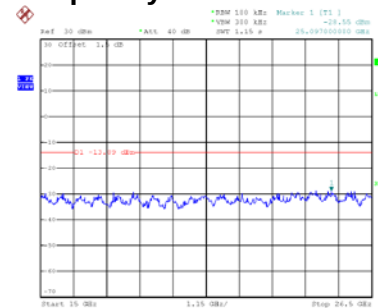
CH01 – 10th Harmonic of the fundamental frequency



Date: 29.AUG.2019 10:34:46

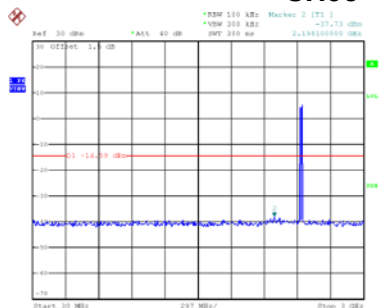


Date: 29.AUG.2019 10:34:53

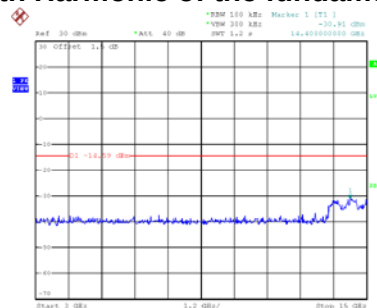


Date: 29.AUG.2019 10:34:59

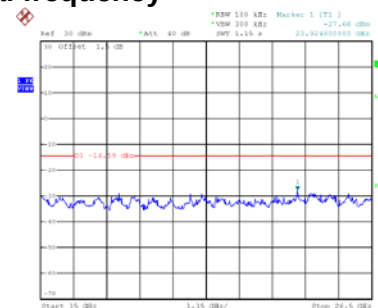
CH06 – 10th Harmonic of the fundamental frequency



Date: 29.AUG.2019 10:36:41

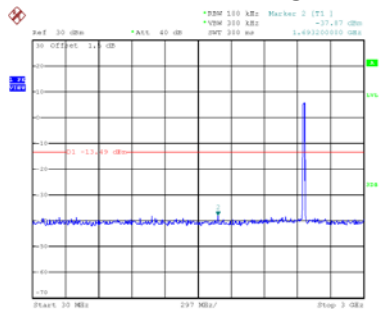


Date: 29.AUG.2019 10:36:48

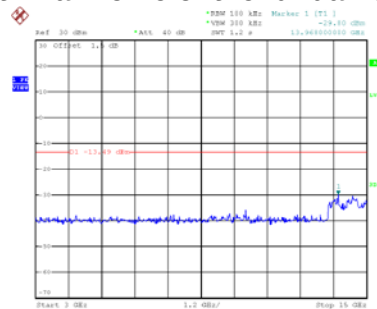


Date: 29.AUG.2019 10:36:55

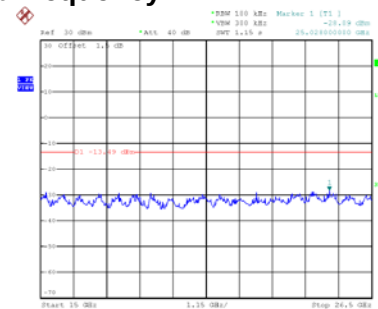
CH11 – 10th Harmonic of the fundamental frequency



Date: 30.AUG.2019 09:53:32



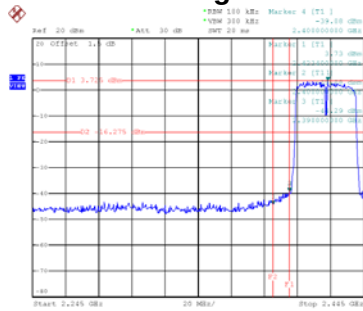
Date: 30.AUG.2019 09:53:40



Date: 30.AUG.2019 09:53:47

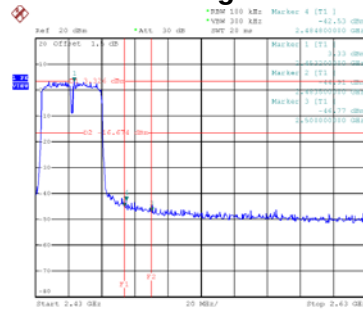
Test Mode TX N-40M Mode_Ant. 1

Bandedge-CH03



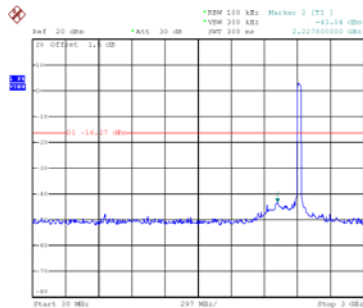
Date: 7.AUG.2019 14:39:35

Bandedge-CH09

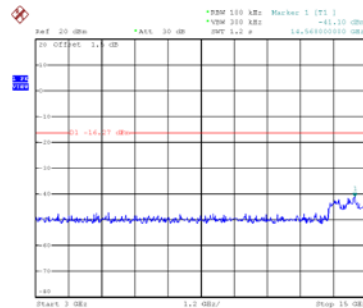


Date: 7.AUG.2019 14:42:00

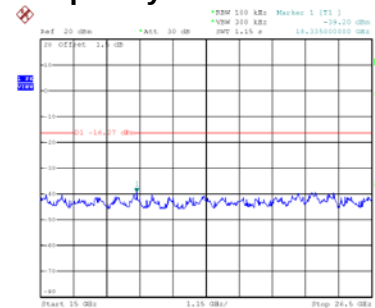
CH03 – 10th Harmonic of the fundamental frequency



Date: 7.AUG.2019 14:39:48

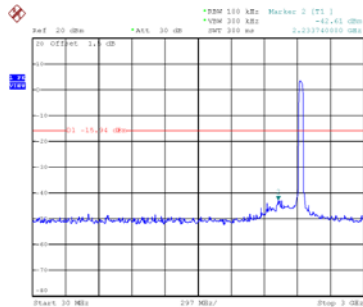


Date: 7.AUG.2019 14:39:54

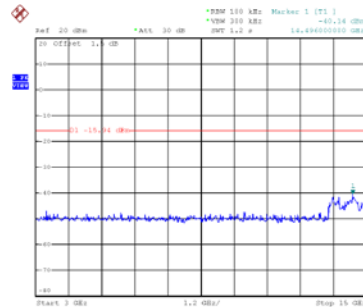


Date: 7.AUG.2019 14:39:01

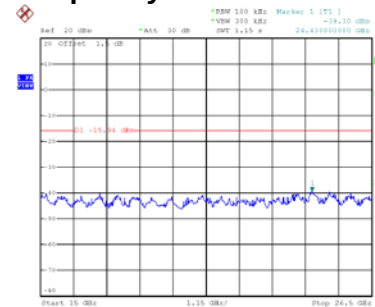
CH06 – 10th Harmonic of the fundamental frequency



Date: 7.AUG.2019 14:49:41

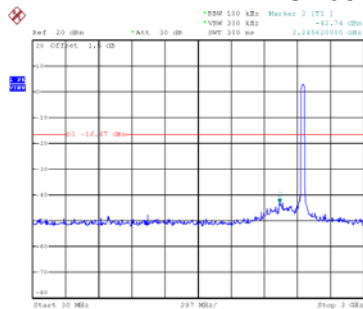


Date: 7.AUG.2019 14:49:47

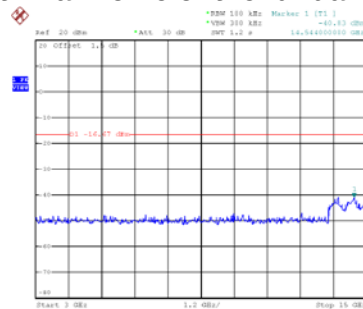


Date: 7.AUG.2019 14:49:54

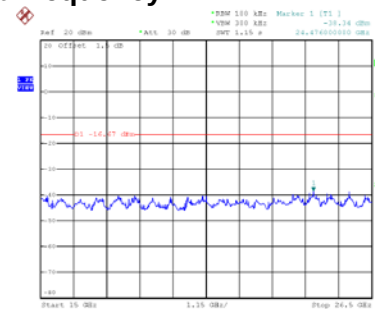
CH09 – 10th Harmonic of the fundamental frequency



Date: 7.AUG.2019 14:42:13



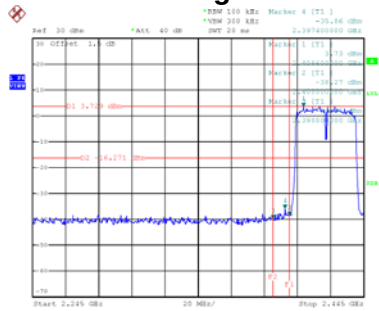
Date: 7.AUG.2019 14:42:20



Date: 7.AUG.2019 14:42:26

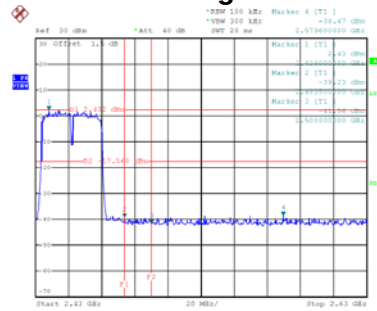
Test Mode TX N-40M Mode_Ant. 2

Bandedge-CH03



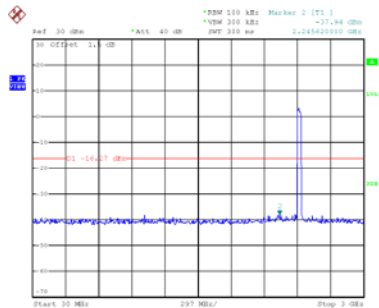
Date: 30.AUG.2019 09:56:42

Bandedge-CH09

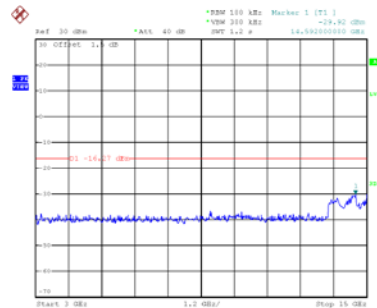


Date: 30.AUG.2019 10:04:36

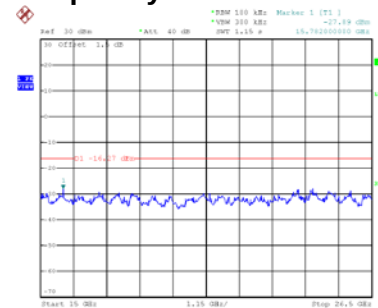
CH03 – 10th Harmonic of the fundamental frequency



Date: 30.AUG.2019 09:56:55

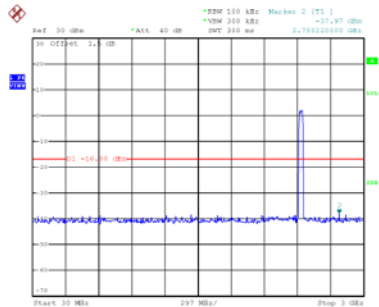


Date: 30.AUG.2019 09:57:03

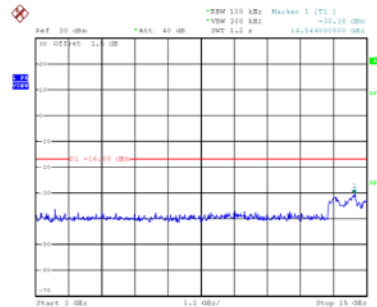


Date: 30.AUG.2019 09:57:10

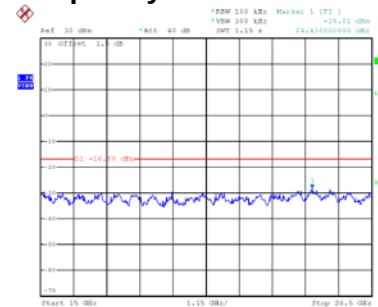
CH06 – 10th Harmonic of the fundamental frequency



Date: 30.AUG.2019 10:01:07

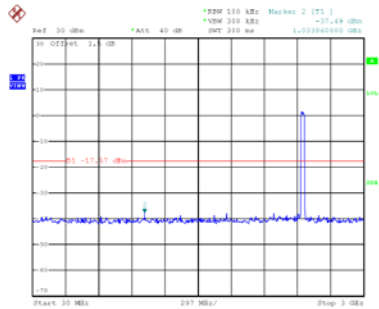


Date: 30.AUG.2019 10:01:15

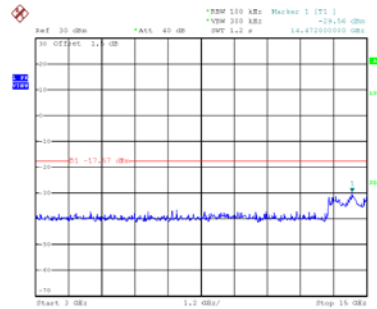


Date: 30.AUG.2019 10:01:22

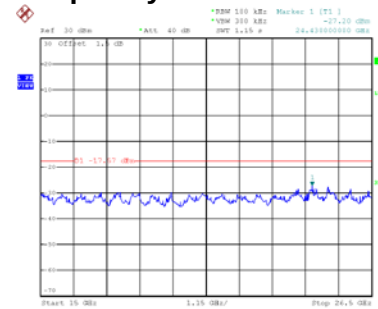
CH09 – 10th Harmonic of the fundamental frequency



Date: 30.AUG.2019 10:04:50



Date: 30.AUG.2019 10:04:57



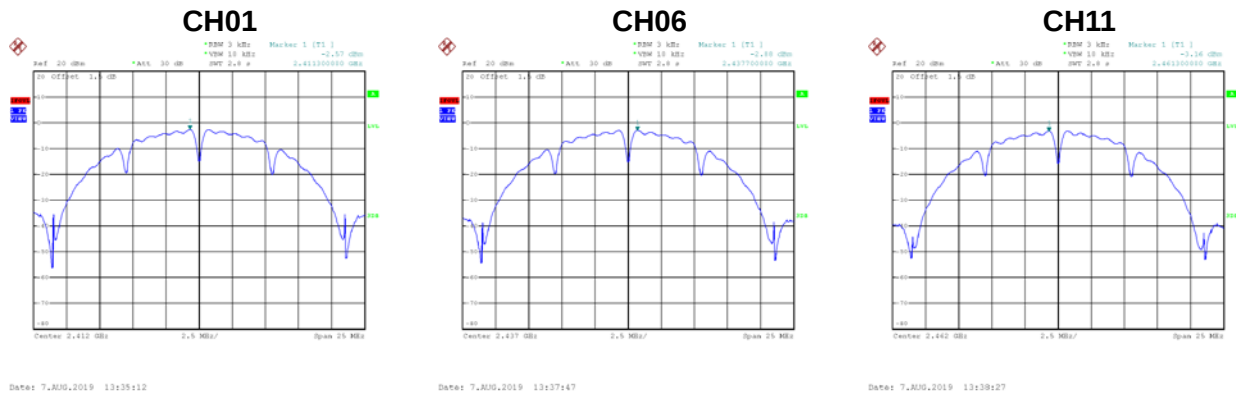
Date: 30.AUG.2019 10:05:05

APPENDIX H - POWER SPECTRAL DENSITY

Non-Beamforming

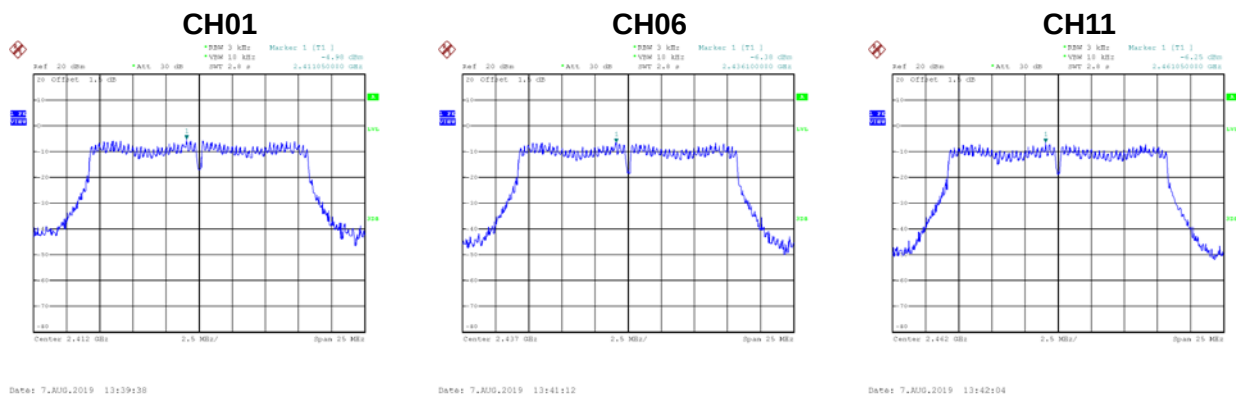
Test Mode	TX B Mode
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Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-2.57	8	Complies
06	2437	-2.88	8	Complies
11	2462	-3.16	8	Complies



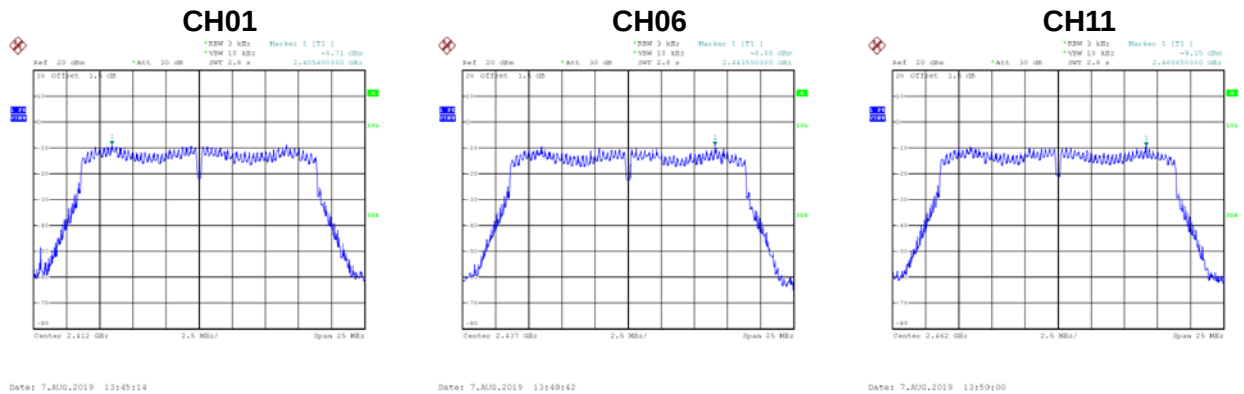
Test Mode	TX G Mode
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Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-4.98	8	Complies
06	2437	-6.38	8	Complies
11	2462	-6.25	8	Complies



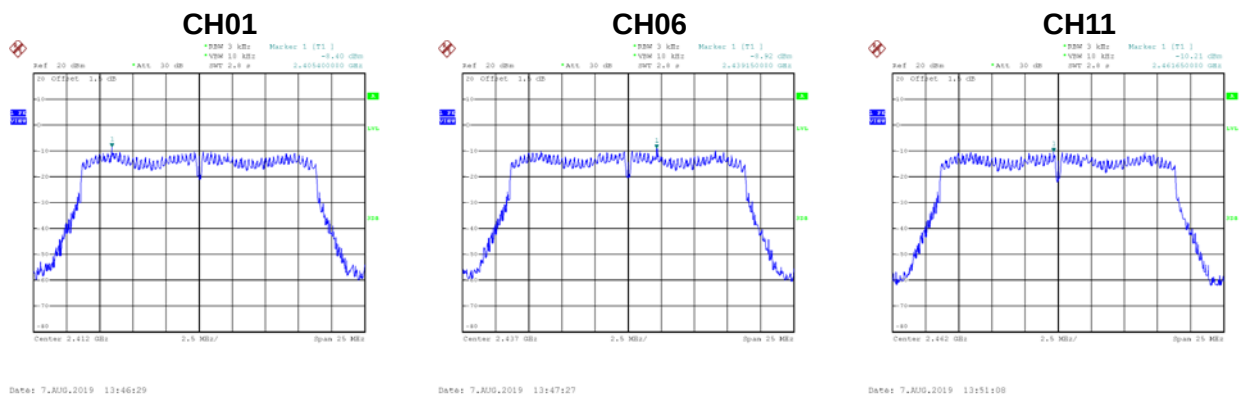
Test Mode	TX N-20M Mode_Ant. 1
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Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-8.71	8	Complies
06	2437	-8.88	8	Complies
11	2462	-9.15	8	Complies



Test Mode	TX N-20M Mode_Ant. 2
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Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-8.40	8	Complies
06	2437	-8.92	8	Complies
11	2462	-10.21	8	Complies

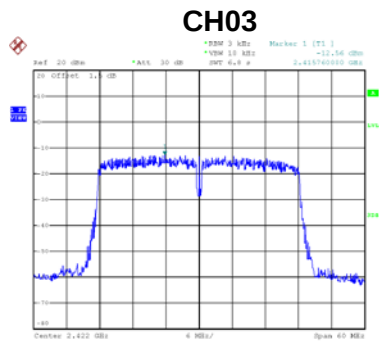


Test Mode	TX N-20M Mode_Total
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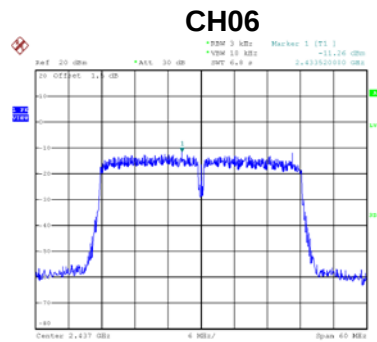
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-5.54	8	Complies
06	2437	-5.89	8	Complies
11	2462	-6.64	8	Complies

Test Mode	TX N-40M Mode_Ant. 1
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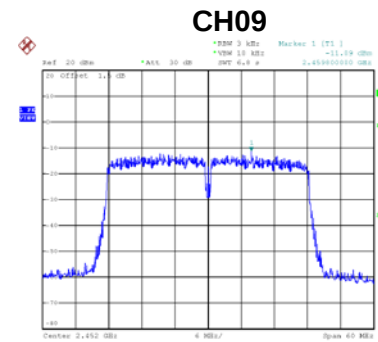
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
03	2422	-12.56	8	Complies
06	2437	-11.26	8	Complies
09	2452	-11.09	8	Complies



Date: 7_AUG_2019 13:59:20



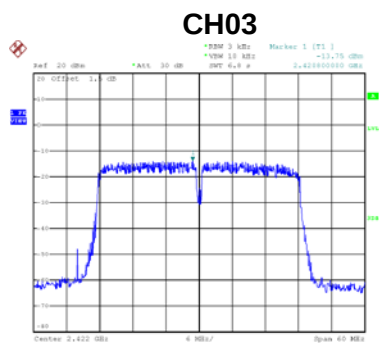
Date: 7_AUG_2019 14:01:31



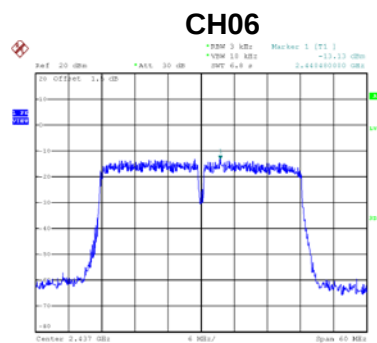
Date: 7_AUG_2019 14:03:41

Test Mode	TX N-40M Mode_Ant. 2
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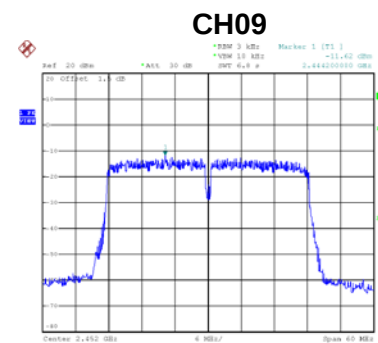
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
03	2422	-13.75	8	Complies
06	2437	-13.13	8	Complies
09	2452	-11.62	8	Complies



Date: 7_AUG_2019 13:59:44



Date: 7_AUG_2019 14:02:07



Date: 7_AUG_2019 14:03:08

Test Mode	TX N-40M Mode_Total
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Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
03	2422	-10.10	8	Complies
06	2437	-9.08	8	Complies
09	2452	-8.34	8	Complies

End of Test Report