

FCC Radio Test Report

FCC ID: 2ADQY525831

This report concerns: Original Grant

Project No. : 1909H029
Equipment : Manageable Wireless AC1300 Dual-Band Gigabit PoE Indoor Access Point and Router
Brand Name : Intellinet
Test Model : 525831
Series Model : N/A
Applicant : Intracom Asia Co., Ltd
Address : 4F., No. 77, Sec. 1, Xintai 5th Rd., Xizhi Dist., New Taipei City 221, Taiwan
Date of Receipt : Sep. 09, 2019
Date of Test : Sep. 16, 2019~Jan.16,2020
Issued Date : Jan.19,2020
Report Version : R01
Test Sample : Engineering Sample No.: SH2019090922
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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The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

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

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

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	Dec. 27, 2019
R01	Add the AC 240V test data of conducted emission and the co-located radiated spurious emission data.	Jan.19,2020

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	PASS	-----
15.247(d) 15.205(a) 15.209(a)	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	PASS	-----
15.247(a)(2)	Bandwidth	APPENDIX E	PASS	-----
15.247(b)(3)	Maximum Output Power	APPENDIX F	PASS	-----
15.247(d)	Conducted Spurious Emissions	APPENDIX G	PASS	-----
15.247(e)	Power Spectral Density	APPENDIX H	PASS	-----
15.203	Antenna Requirement	-----	PASS	Note(2)

Note:

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

1.1 TEST FACILITY

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. 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	22°C	53%	AC 120V/60Hz	Forest Li
Radiated Emissions-9K-30MHz	22°C	45%	AC 120V/60Hz	Forest Li
Radiated Emissions-30 MHz to 1GHz	22°C	55%	AC 120V/60Hz	Forest Li
Radiated Emissions-Above 1000 MHz	22°C	55%	AC 120V/60Hz	Forest Li
Bandwidth	22°C	54%	AC 120V/60Hz	Forest Li
Maximum output power & e.i.r.p.	22°C	54%	AC 120V/60Hz	Forest Li
Conducted Spurious Emissions	22°C	54%	AC 120V/60Hz	Forest Li
Power Spectral Density	22°C	54%	AC 120V/60Hz	Forest Li

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Manageable Wireless AC1300 Dual-Band Gigabit PoE Indoor Access Point and Router
Brand Name	Intellinet
Test Model	525831
Series Model	N/A
Model Difference(s)	N/A
Software Version	V1.0
Hardware Version	V1.1
Power Source	Supplied from AC/DC adapter Brand /model: AMIGO/AMS200-1201500FU
Power Rating	I/P: 100-240V ~ 50/60Hz 0.8A Max O/P: 12V --- 1.5A
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 450 Mbps
Maximum Output Power Non-Beamforming	IEEE 802.11b: 29.52 dBm (0.8954 W) IEEE 802.11g: 29.88 dBm (0.9727 W) IEEE 802.11n (HT20): 29.69 dBm (0.9311 W) IEEE 802.11n (HT40): 29.94 dBm (0.9863 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)
1	N/A	N/A	FPC	IPEX	3
2	N/A	N/A	FPC	IPEX	3
3	N/A	N/A	FPC	IPEX	3

Note:

This EUT supports CDD, and all antennas have the same gain, so directional gain= $G_{ANT} + \text{Array Gain}$, For power spectral density measurements, Array Gain= $10\log(N_{ANT}/N_{SS})$ dB, Directional gain= $3 + 10\log(3/1) = 7.77$. So, the power density limit is $8 - 7.77 + 6 = 6.23$, for power measurements, direction gain= $G_{ANT} = 3$.

4. Table for Antenna Configuration:

Operating Mode	TX Mode	3TX
802.11b		V (Ant. 1 + Ant. 2 + Ant. 3)
802.11g		V (Ant. 1 + Ant. 2 + Ant. 3)
802.11n(20 MHz)		V (Ant. 1 + Ant. 2 + Ant. 3)
802.11n(40 MHz)		V (Ant. 1 + Ant. 2 + Ant. 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 N40 Mode Channel 03
Mode 6	TX-CO-LOCATION N40 2422MHz & A 5240MHz

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

AC power line conducted emissions test	
Final Test Mode:	Description
Mode 5	TX N40 Mode Channel 03

Radiated emissions test - Below 1GHz	
Final Test Mode:	Description
Mode 5	TX N40 Mode Channel 03

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
Mode 6	TX-CO-LOCATION N40 2422MHz & A 5240MHz

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 (3 Mbps)
802.11g mode: OFDM (18 Mbps)
802.11n HT20 mode : BPSK (19.5 Mbps)
802.11n HT40 mode : BPSK (40.5Mbps)
For radiated emission tests, the highest output powers were set for final test.
- (3) For radiated emission below 1 GHz test, the IEEE 802.11n40 Channel 03 is found to be the worst case and recorded.

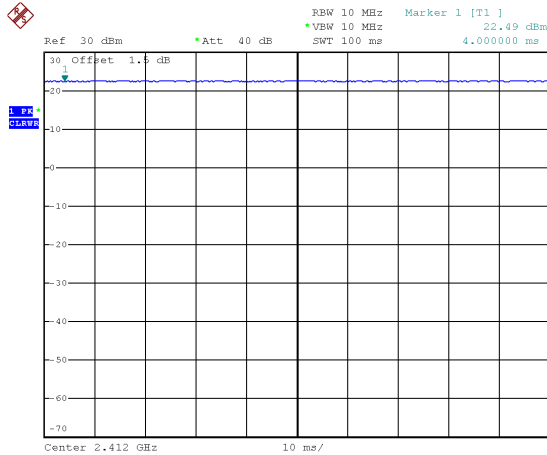
2.3 PARAMETERS OF TEST SOFTWARE

Test Software	artgui.exe		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	25	26	27
IEEE 802.11g	23	22	24
IEEE 802.11n (HT20)	22	22	24
Frequency (MHz)	2422	2437	2452
IEEE 802.11n (HT40)	24	24	24

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.

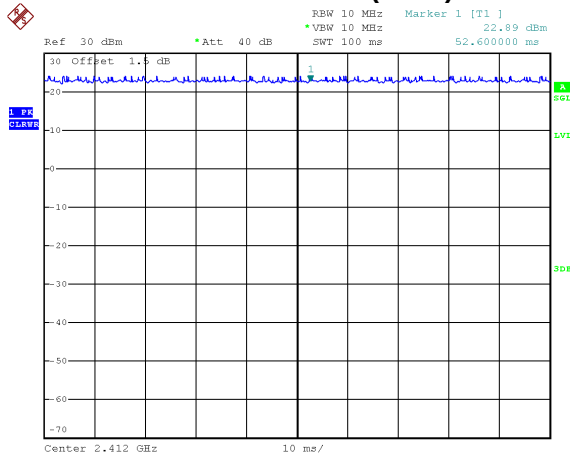
IEEE 802.11b



Date: 12.OCT.2019 09:47:10

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

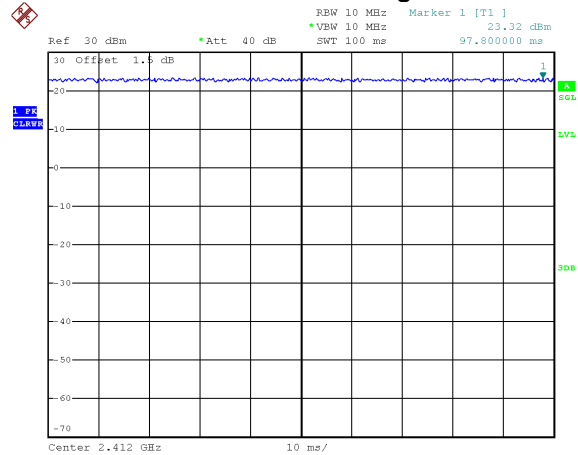
IEEE 802.11n (HT20)



Date: 12.OCT.2019 09:43:15

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

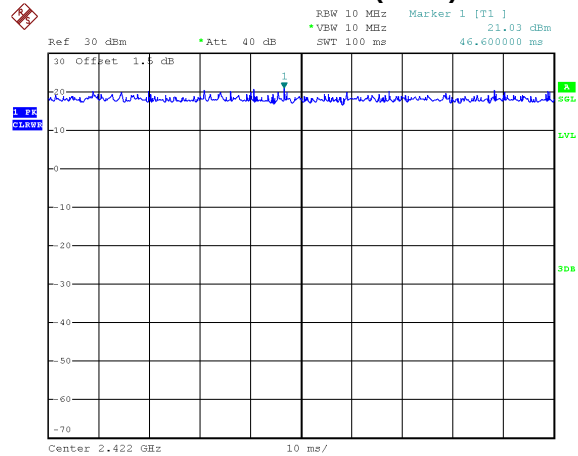
IEEE 802.11g



Date: 12.OCT.2019 09:44:24

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

IEEE 802.11n (HT40)



Date: 12.OCT.2019 09:36:23

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

NOTE:

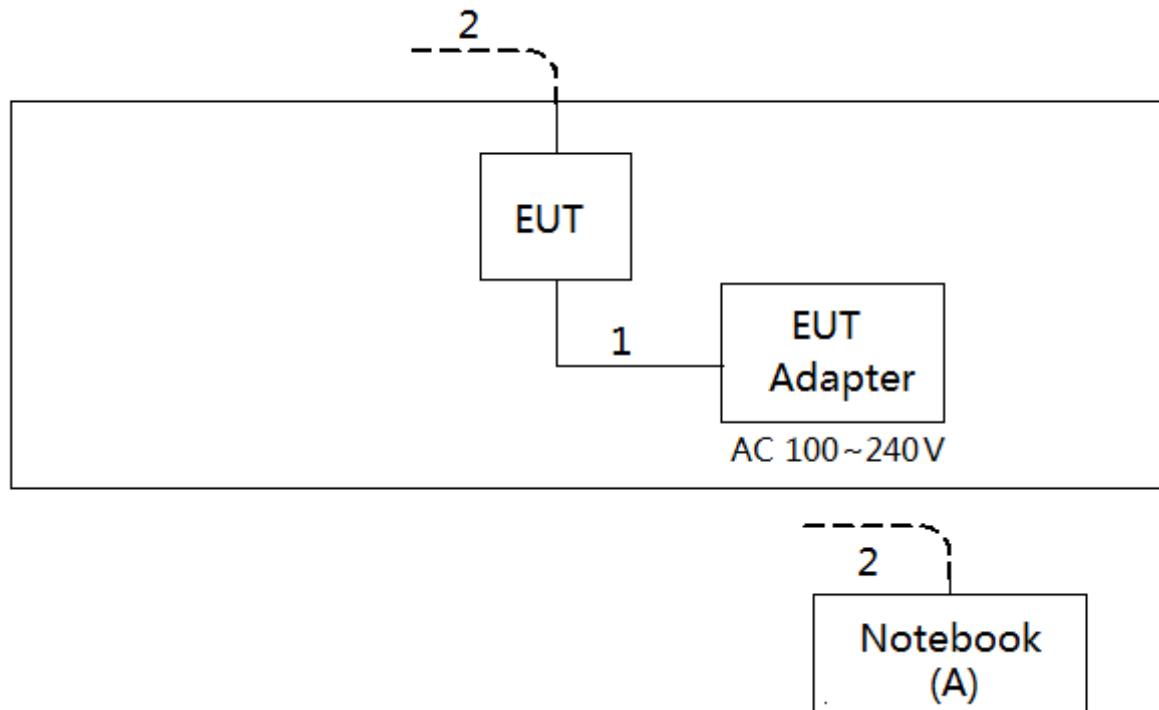
For IEEE 802.11b, IEEE 802.11g and IEEE 802.11n (HT20):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 0.01 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 0.01 kHz (Duty cycle $< 98\%$).

2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.6 SUPPORT UNITS

Item	Equipment	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	1m
2	RJ 45 cable	N/A	N/A	10m

3. AC POWER LINE CONDUCTED EMISSIONS TEST

3.1 LIMIT

Frequency of Emission (MHz)	Limit (dBμV)	
	Quasi-peak	Average
0.15 - 0.50	66 to 56*	56 to 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

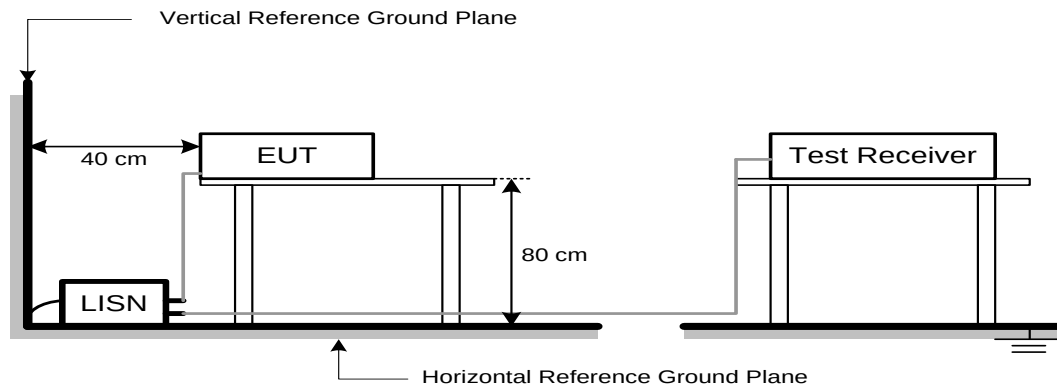
3.2 TEST PROCEDURE

- 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), then the 15.209(a) limit in the table below has to be followed.

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

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

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000 MHz)

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

NOTE:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).
- (4) The test result calculated as following:
 Measurement Value = Reading Level + Correct Factor
 Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)
 Margin Level = Measurement Value - Limit Value

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

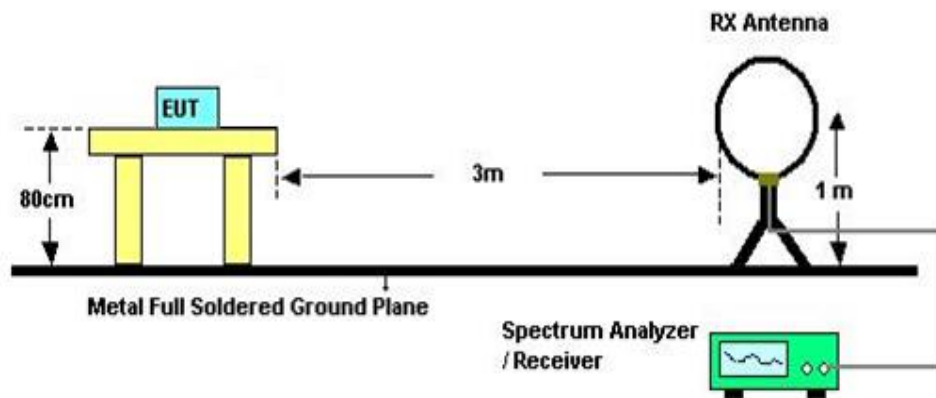
- The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1 GHz)
- The measuring distance 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

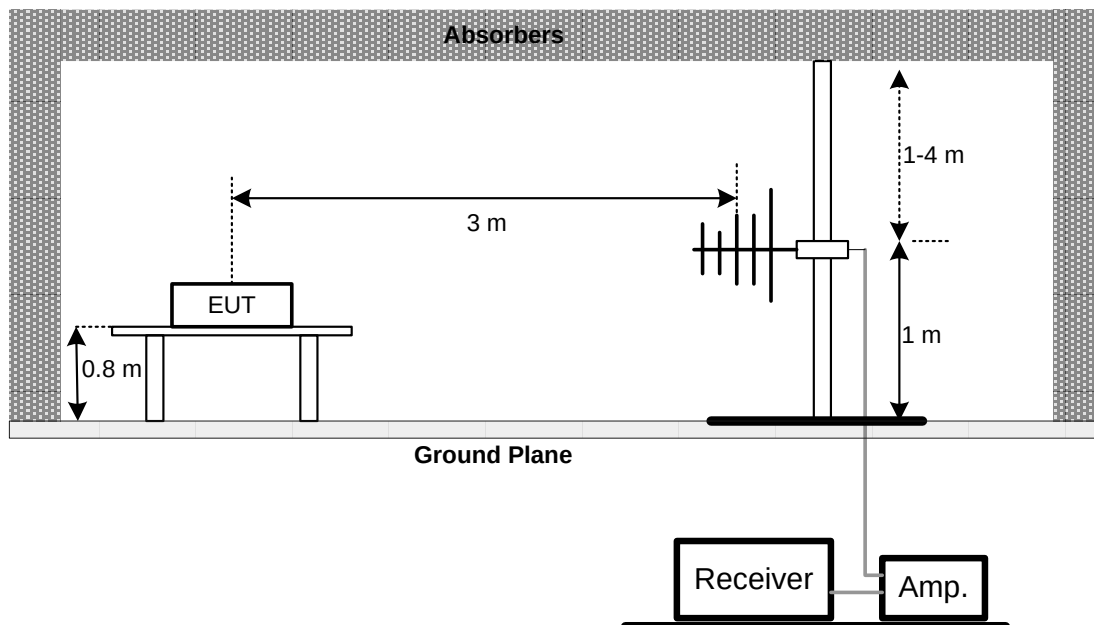
No deviation

4.4 TEST SETUP

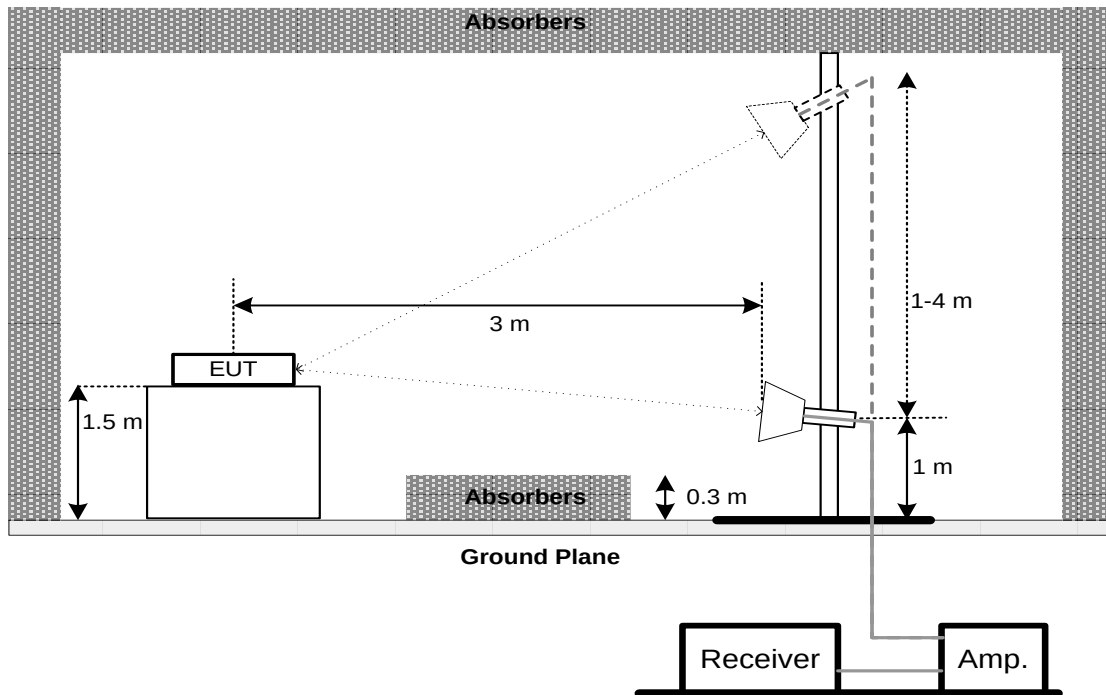
9 kHz-30 MHz



30 MHz to 1 GHz



Above 1 GHz



4.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.6 TEST RESULTS - 9 KHZ TO 30 MHZ

Please refer to the APPENDIX B

Remark:

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

4.7 TEST RESULTS - 30 MHZ TO 1000 MHZ

Please refer to the APPENDIX C.

4.8 TEST RESULTS - ABOVE 1000 MHZ

Please refer to the APPENDIX D.

Remark:

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

5. BANDWIDTH TEST

5.1 LIMIT

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

5.2 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- Spectrum Setting:
For 6 dB Bandwidth : RBW= 100 kHz, VBW=300 kHz, auto couple = 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.

Note: Only the worst case be reported.

6. MAXIMUM OUTPUT POWER TEST

6.1 LIMIT

FCC Part15, Subpart C (15.247)		
Section	Test Item	Limit
15.247(b)(3)	Maximum Output Power	1 Watt or 30dBm

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 and FCC KDB 662911 D01 v02r01 Multiple Transmitter Output.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.6 TEST RESULTS

Please refer to the APPENDIX F.

7. CONDUCTED SPURIOUS EMISSIONS

7.1 LIMIT

For FCC

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

7.2 TEST PROCEDURE

- 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)	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	Sep. 01, 2020
3	Test Cable	emci	EMCRG400-BM-N M-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-7 000	170330	Apr. 17, 2020
5	Test Cable	emci	EMC104-SM-SM-1 000	170331	Apr. 17, 2020
6	Test Cable	emci	EMC104-SM-NM-3 500	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
9	Double-Ridged Waveguide Horn Antenna	ETS-Lindgren	3116C	00203919	Mar. 29, 2020
10	Pre-Amplifier	emci	EMC184045SE	980409	Mar. 29, 2020
11	EXA Spectrum Analyzer	Keysight	N9010A	MY56480579	Mar. 29, 2020
12	Test Cable	emci	EMC102-KM-KM-800	170654	Apr. 17, 2020
13	Test Cable	emci	Super Reliable-40G-SS11-7000	W0030860001	Apr. 17, 2020
14	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

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	Peak Power Analyze	Keysight	8990B	MY51000507	Mar. 29, 2020
2	Wideband Power Sensor	Keysight	N9123A	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

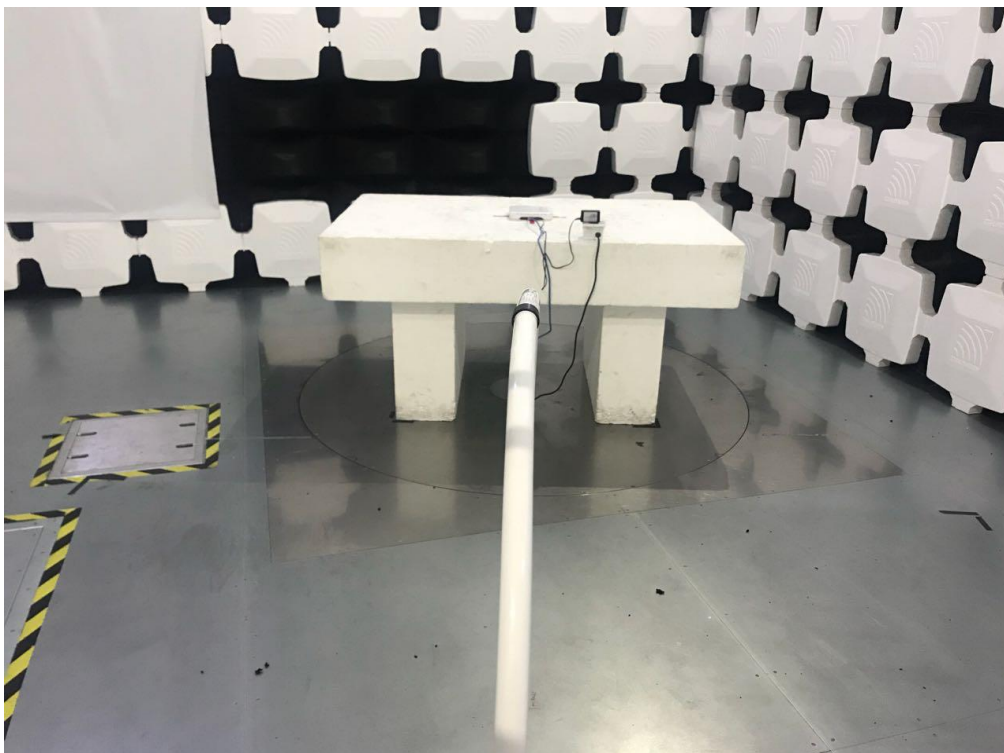
Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of equipment list is one year.

10. EUT TEST PHOTO

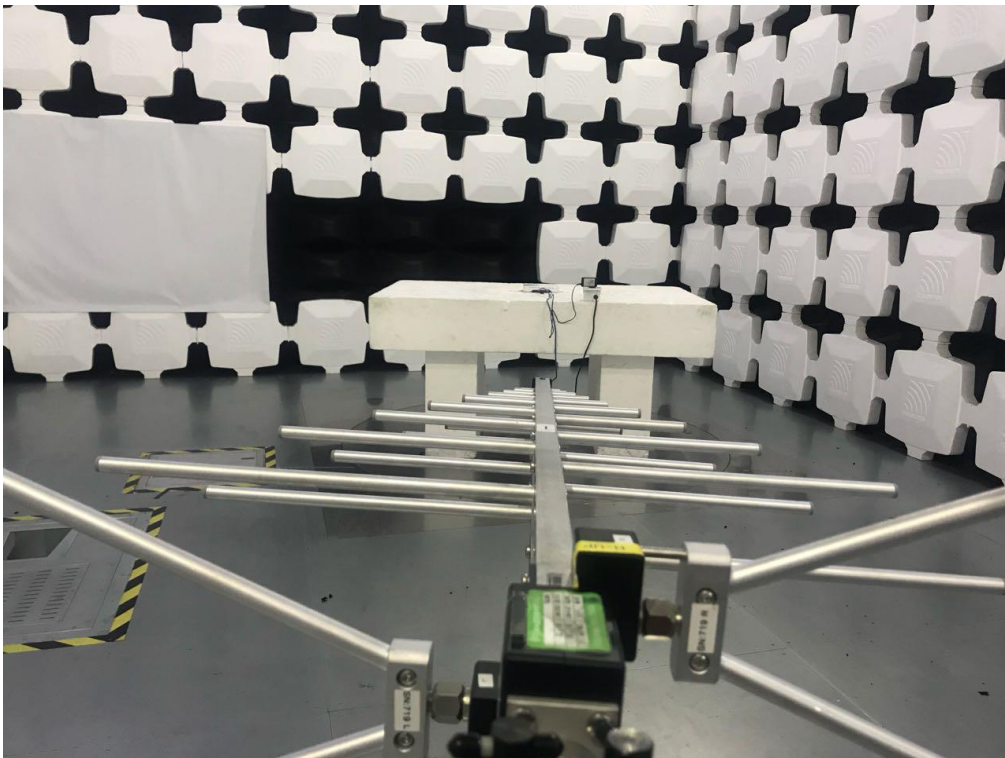
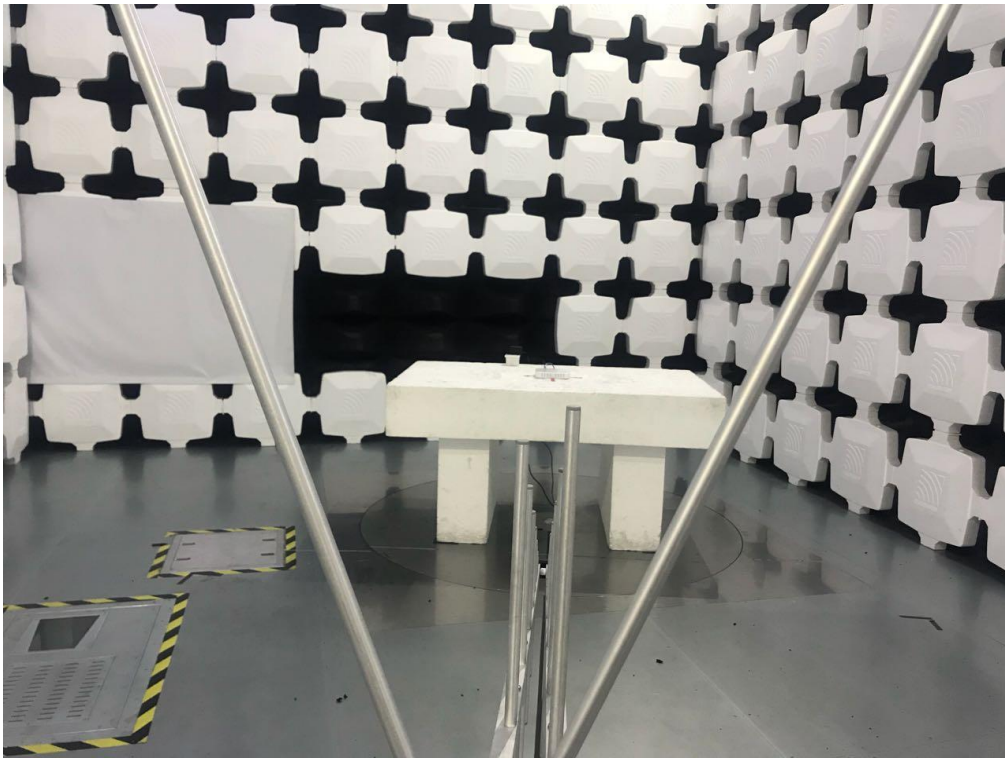
Radiated Emissions Test Photos

9 kHz to 30 MHz



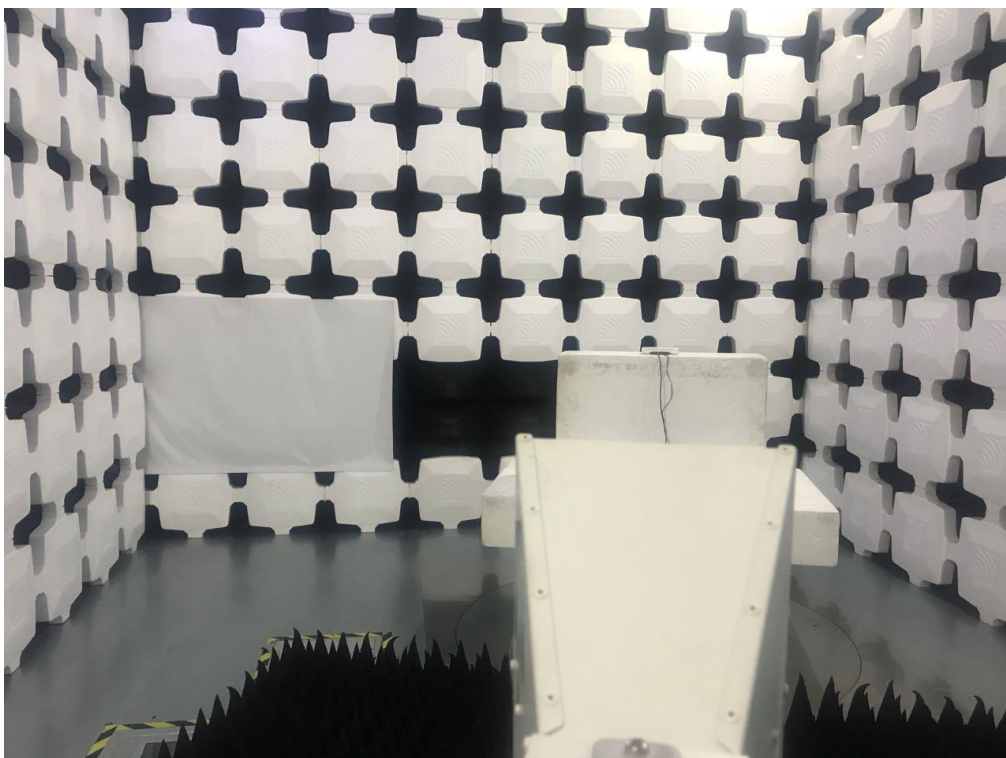
Radiated Emissions Test Photos

30 MHz to 1 GHz



Radiated Emissions Test Photos

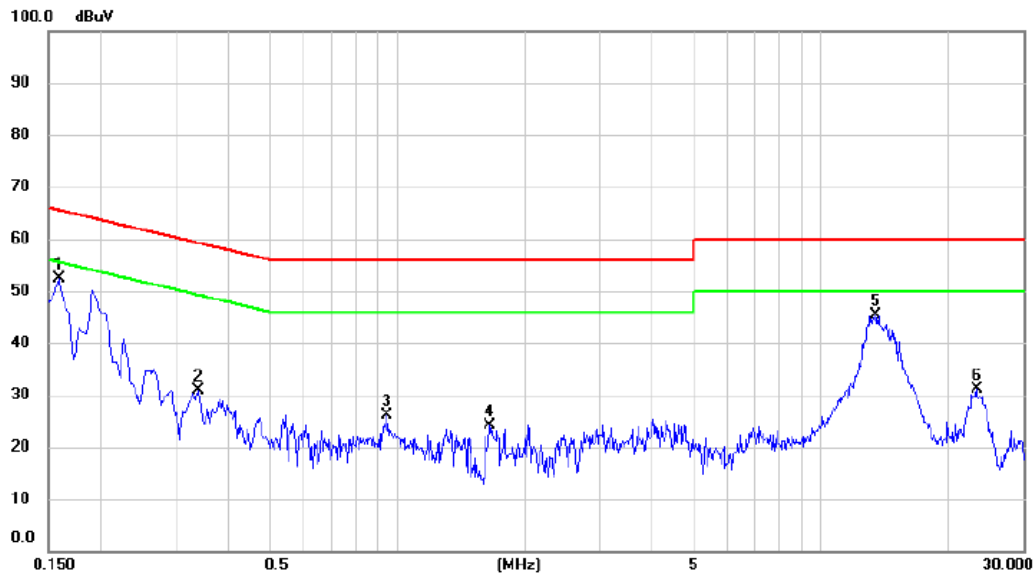
Above 1 GHz



APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

Test Mode:	TX N40 Mode Channel 03	Test Voltage:	AC 120V/60Hz
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Line



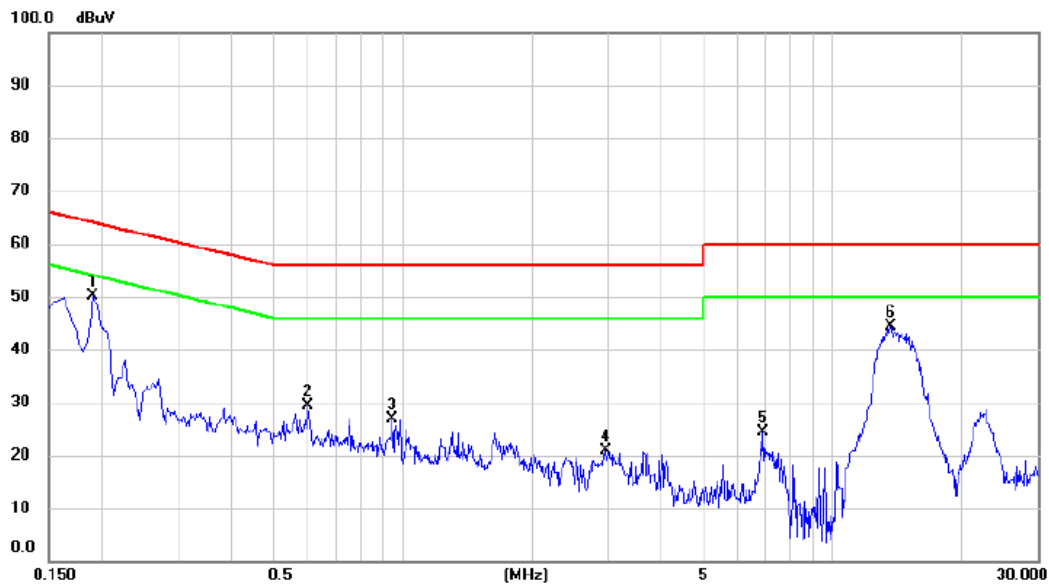
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.1590	42.63	9.77	52.40	65.52	-13.12	peak	
2		0.3390	21.07	9.84	30.91	59.23	-28.32	peak	
3		0.9464	16.36	9.84	26.20	56.00	-29.80	peak	
4		1.6530	14.20	9.96	24.16	56.00	-31.84	peak	
5		13.4610	35.31	10.10	45.41	60.00	-14.59	peak	
6		23.2800	20.76	10.39	31.15	60.00	-28.85	peak	

REMARKS:

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

Test Mode:	TX N40 Mode Channel 03	Test Voltage:	AC 120V/60Hz
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Neutral



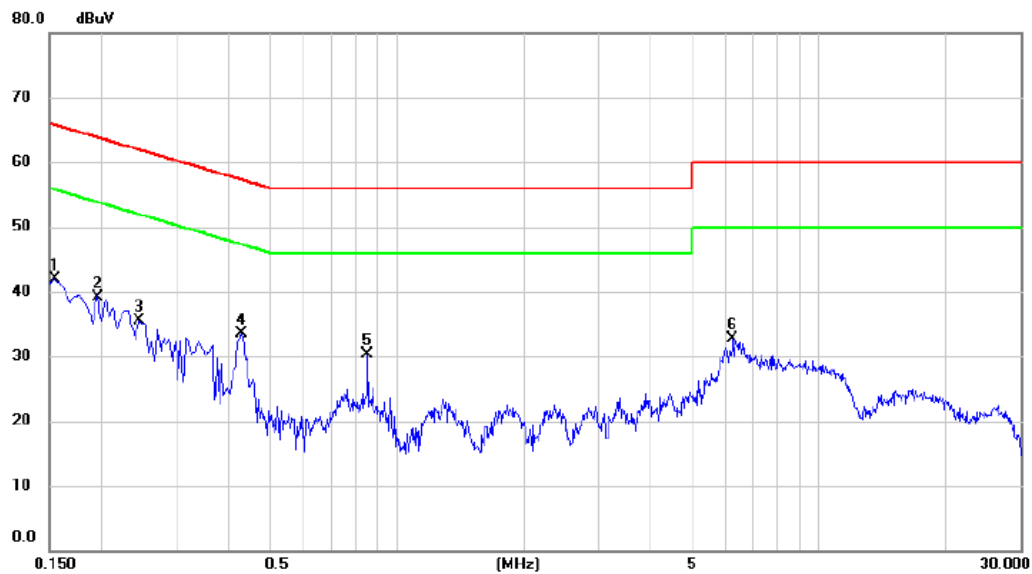
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.1905	40.61	9.63	50.24	64.01	-13.77	peak	
2		0.6000	19.52	9.85	29.37	56.00	-26.63	peak	
3		0.9464	17.08	9.72	26.80	56.00	-29.20	peak	
4		2.9624	10.78	10.03	20.81	56.00	-35.19	peak	
5		6.9000	14.13	10.14	24.27	60.00	-35.73	peak	
6		13.6500	34.31	10.12	44.43	60.00	-15.57	peak	

REMARKS:

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

Test Mode:	TX N40 Mode Channel 03	Test Voltage:	AC 240V/50Hz
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Line



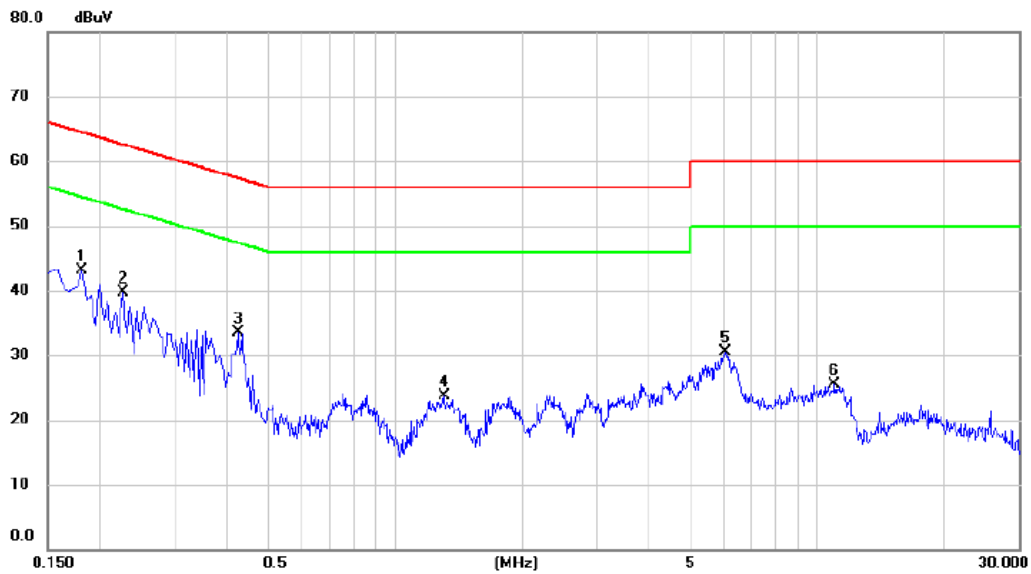
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1545	32.09	9.77	41.86	65.75	-23.89	peak	
2		0.1955	29.26	9.82	39.08	63.80	-24.72	peak	
3		0.2445	25.58	9.86	35.44	61.94	-26.50	peak	
4	*	0.4290	23.61	9.91	33.52	57.27	-23.75	peak	
5		0.8520	20.52	9.82	30.34	56.00	-25.66	peak	
6		6.2430	22.58	10.11	32.69	60.00	-27.31	peak	

REMARKS:

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

Test Mode:	TX N40 Mode Channel 03	Test Voltage:	AC 240V/50Hz
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Neutral



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.1815	33.46	9.61	43.07	64.42	-21.35	peak	
2		0.2265	29.99	9.69	39.68	62.58	-22.90	peak	
3		0.4245	23.76	9.77	33.53	57.36	-23.83	peak	
4		1.3065	13.88	9.80	23.68	56.00	-32.32	peak	
5		6.0405	20.37	10.09	30.46	60.00	-29.54	peak	
6		10.9905	15.28	10.14	25.42	60.00	-34.58	peak	

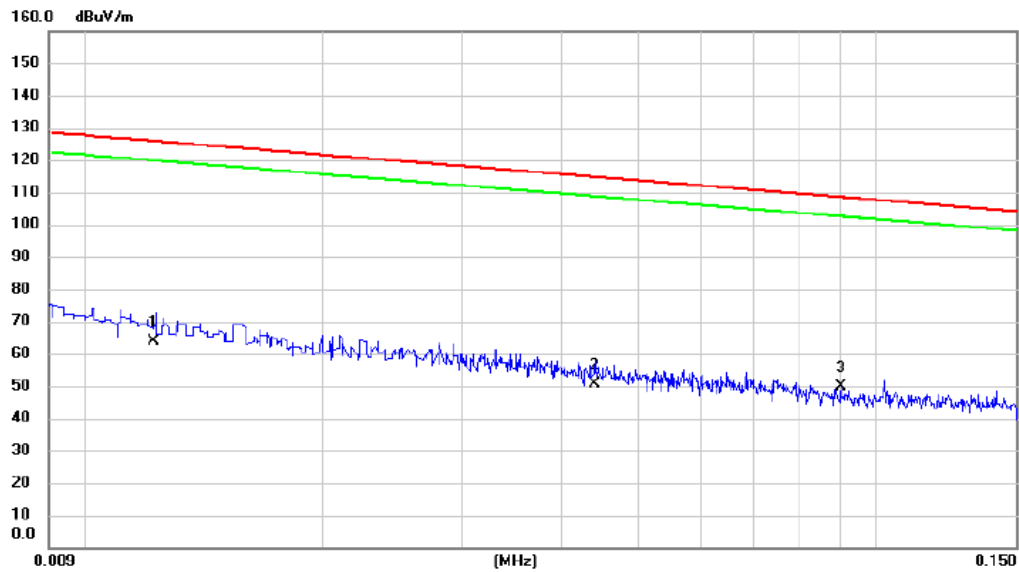
REMARKS:

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

APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ

Test Mode: TX N40 Mode Channel 03

Ant 0°



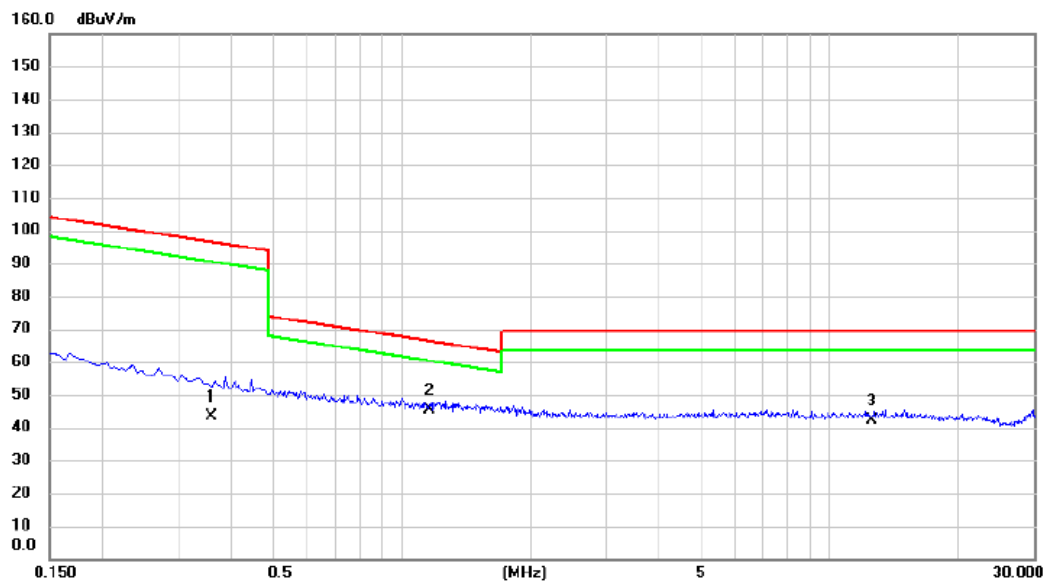
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	0.0122	-13.38	77.06	63.68	125.88	-62.20	AVG	
2	0.0440	-14.95	65.70	50.75	114.74	-63.99	AVG	
3 *	0.0902	-9.56	59.18	49.62	108.50	-58.88	QP	

REMARKS:

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

Test Mode: TX N40 Mode Channel 03

Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.3585	-3.86	47.41	43.55	96.51	-52.96	AVG	
2	*	1.1630	4.42	40.81	45.23	66.29	-21.06	QP	
3		12.5464	4.27	38.08	42.35	69.54	-27.19	QP	

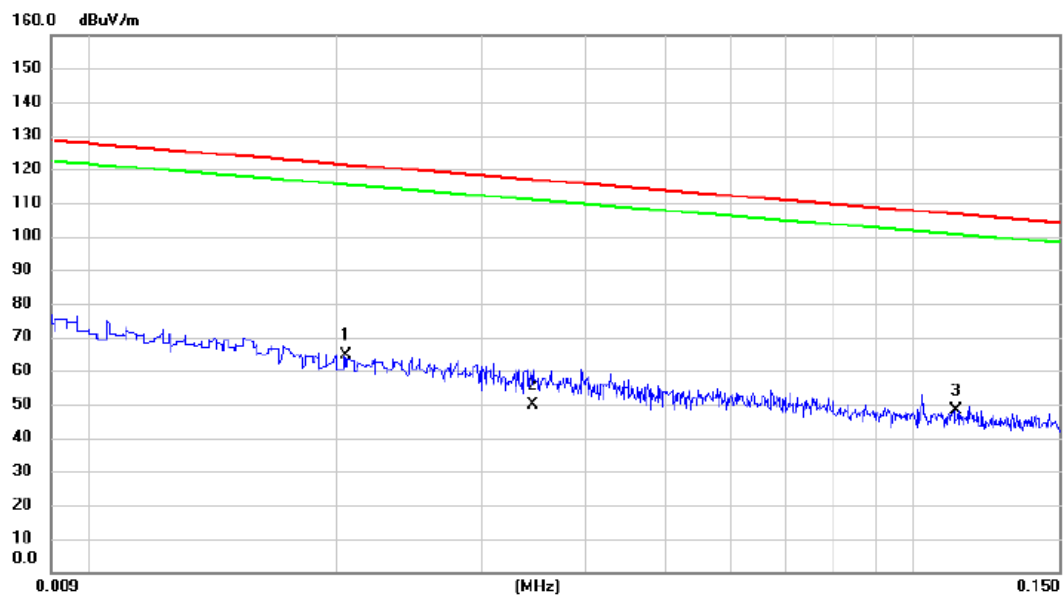
REMARKS:

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

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

Test Mode: TX N40 Mode Channel 03

Ant 90°



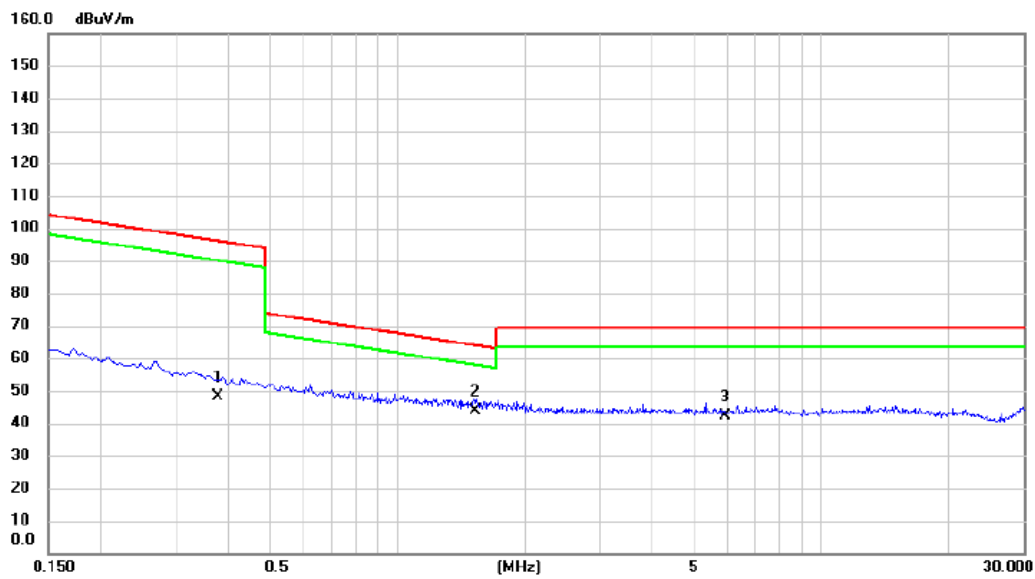
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0205	-7.53	72.17	64.64	121.37	-56.73	AVG	
2		0.0346	-18.52	68.32	49.80	116.82	-67.02	AVG	
3		0.1126	-9.05	57.26	48.21	106.58	-58.37	AVG	

REMARKS:

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

Test Mode: TX N40 Mode Channel 03

Ant 90°



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.3770	1.21	47.01	48.22	96.08	-47.86	AVG	
2	*	1.5294	3.91	39.93	43.84	63.91	-20.07	QP	
3		5.9260	4.34	37.79	42.13	69.54	-27.41	QP	

REMARKS:

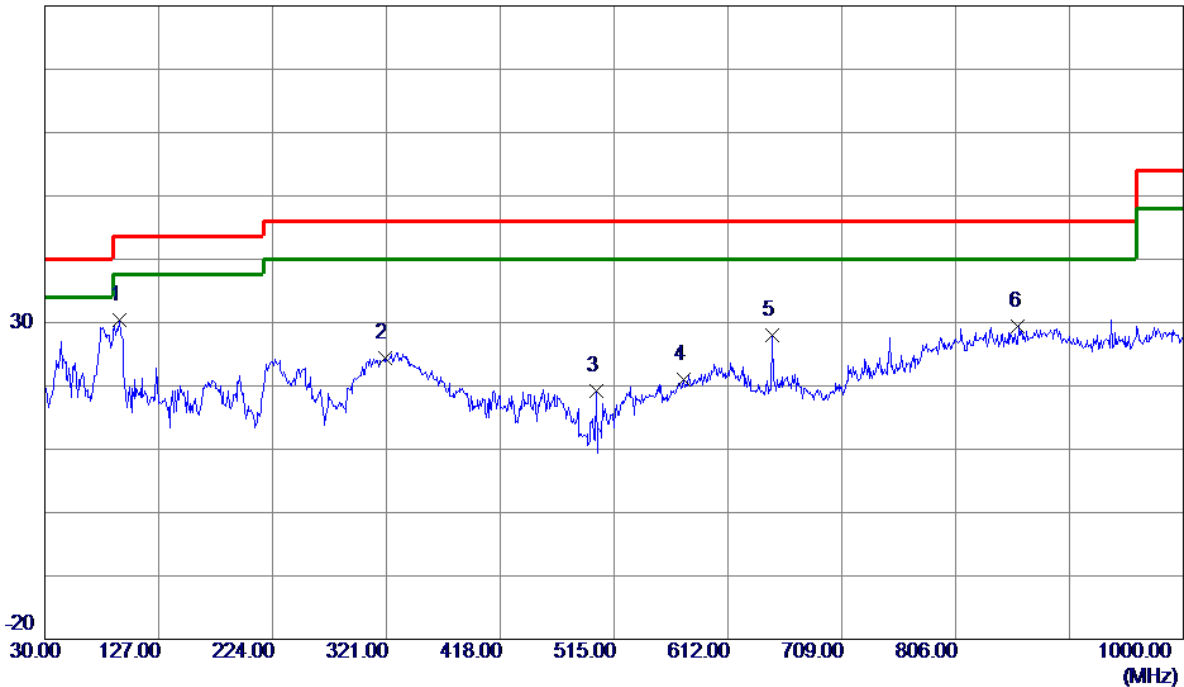
- (1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.

APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ

Test Mode: TX N40 Mode Channel 03

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 *	93.5350	50.69	-20.36	30.33	43.50	-13.17	Peak	
2	320.0300	38.36	-14.00	24.36	46.00	-21.64	Peak	
3	499.9650	31.92	-12.63	19.29	46.00	-26.71	Peak	
4	574.6550	31.00	-9.96	21.04	46.00	-24.96	Peak	
5	649.8300	36.42	-8.51	27.91	46.00	-18.09	Peak	
6	859.3500	35.23	-5.92	29.31	46.00	-16.69	Peak	

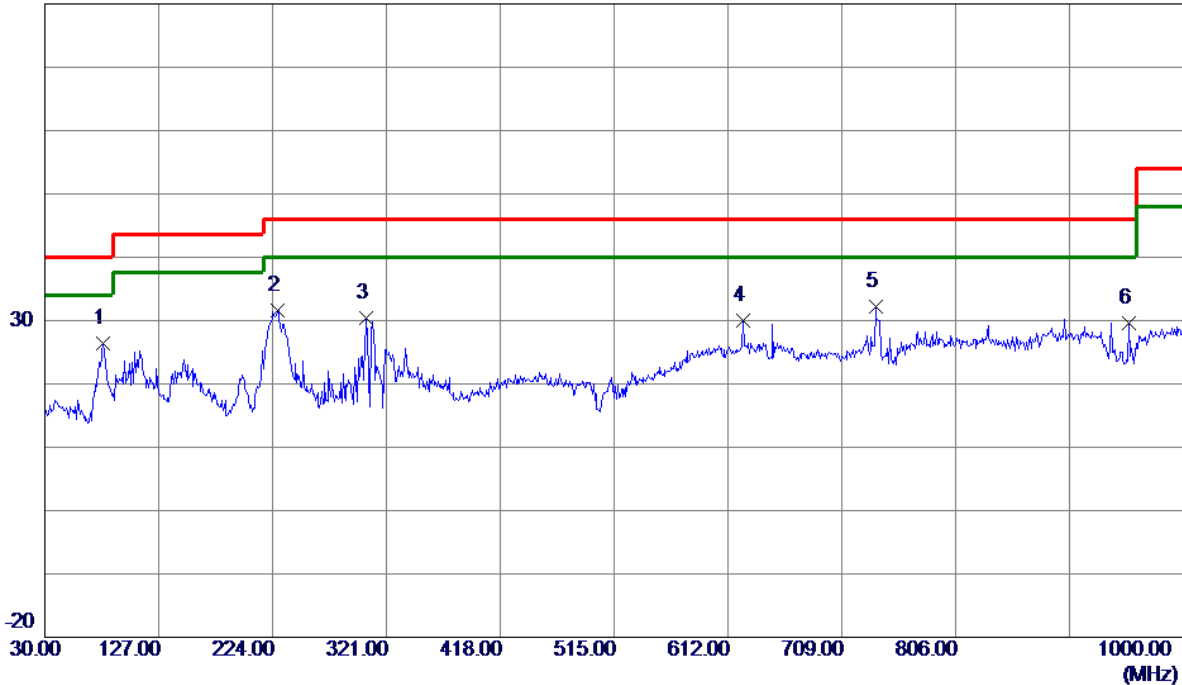
REMARKS:

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

Test Mode: TX N40 Mode Channel 03

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 *	79.4700	46.78	-20.29	26.49	40.00	-13.51	Peak	
2	228.3650	49.11	-17.45	31.66	46.00	-14.34	Peak	
3	303.5400	44.60	-14.26	30.34	46.00	-15.66	Peak	
4	625.0949	38.57	-8.58	29.99	46.00	-16.01	Peak	
5	737.6150	39.25	-7.14	32.11	46.00	-13.89	Peak	
6	953.4400	34.79	-5.13	29.66	46.00	-16.34	Peak	

REMARKS:

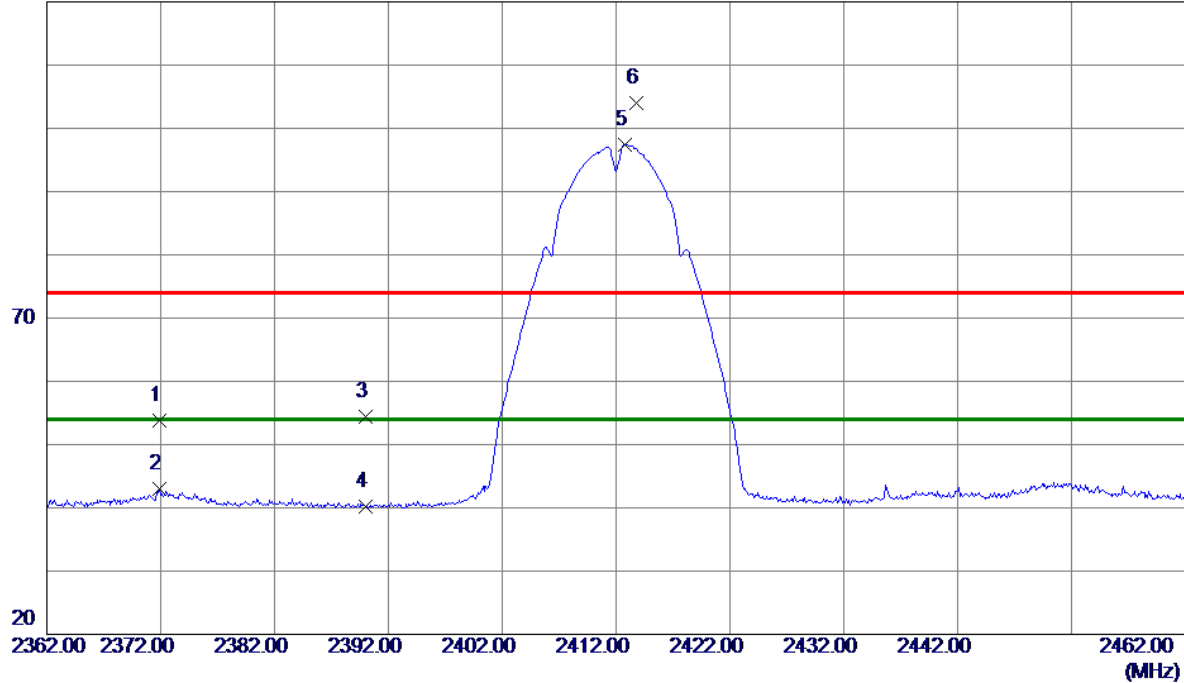
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

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	2371.9000	21.51	32.34	53.85	74.00	-20.15	Peak	
2	2371.9000	10.57	32.34	42.91	54.00	-11.09	AVG	
3	2390.0000	22.09	32.39	54.48	74.00	-19.52	Peak	
4	2390.0000	7.75	32.39	40.14	54.00	-13.86	AVG	
5 *	2412.8000	65.01	32.46	97.47	54.00	43.47	AVG	No limit
6	2413.8000	71.58	32.46	104.04	74.00	30.04	Peak	No limit

REMARKS:

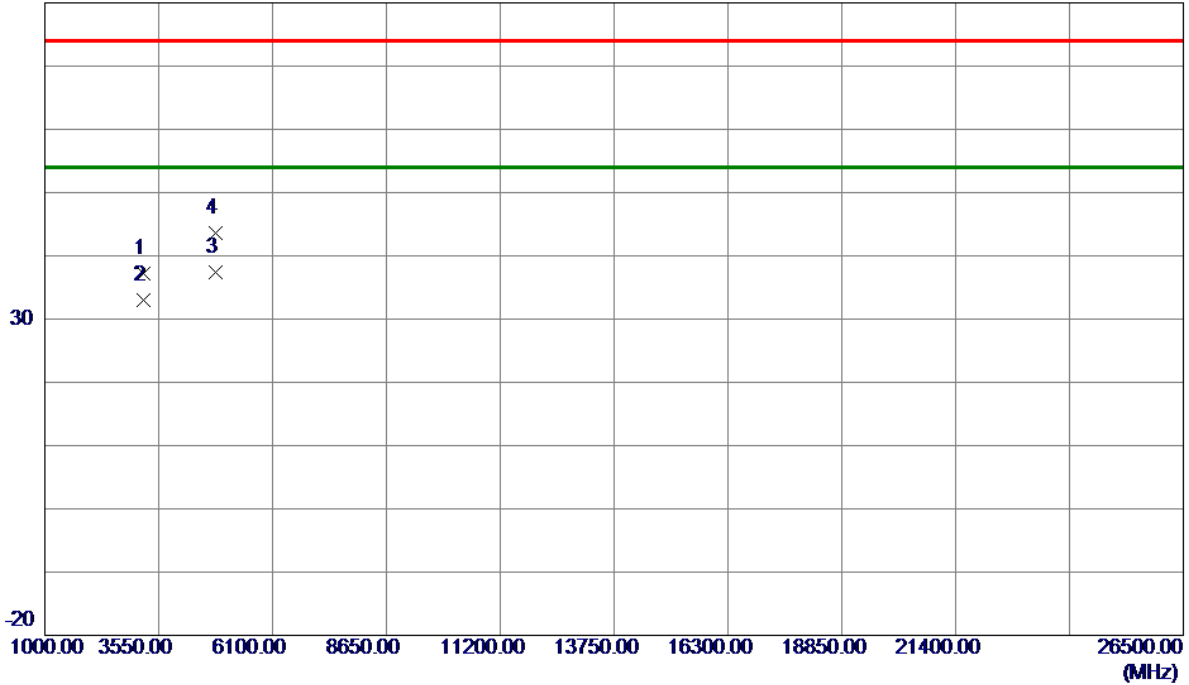
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX B 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	3216.0000	51.38	-14.26	37.12	74.00	-36.88	Peak	
2	3216.0000	47.17	-14.26	32.91	54.00	-21.09	AVG	
3 *	4824.0299	47.01	-9.69	37.32	54.00	-16.68	AVG	
4	4824.2799	53.35	-9.69	43.66	74.00	-30.34	Peak	

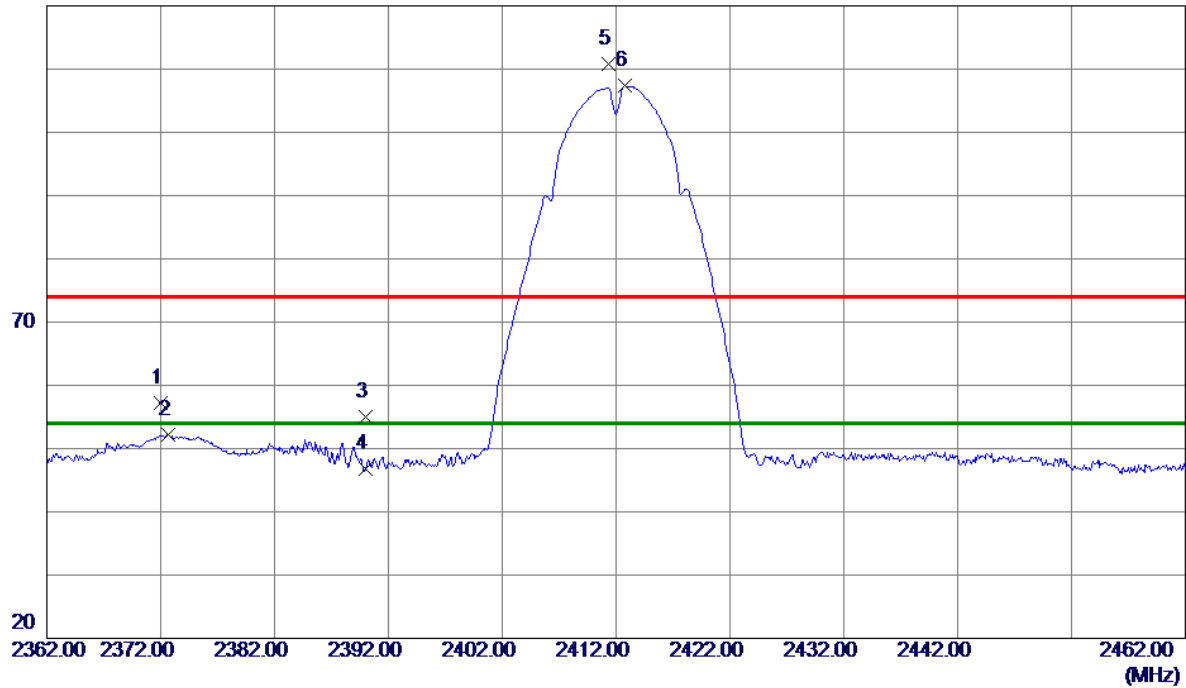
REMARKS:

- (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	2372.0000	24.90	32.34	57.24	74.00	-16.76	Peak	
2	2372.7000	19.84	32.34	52.18	54.00	-1.82	AVG	
3	2390.0000	22.69	32.39	55.08	74.00	-18.92	Peak	
4	2390.0000	14.39	32.39	46.78	54.00	-7.22	AVG	
5	2411.3000	78.41	32.45	110.86	74.00	36.86	Peak	No limit
6 *	2412.8000	74.86	32.46	107.32	54.00	53.32	AVG	No limit

REMARKS:

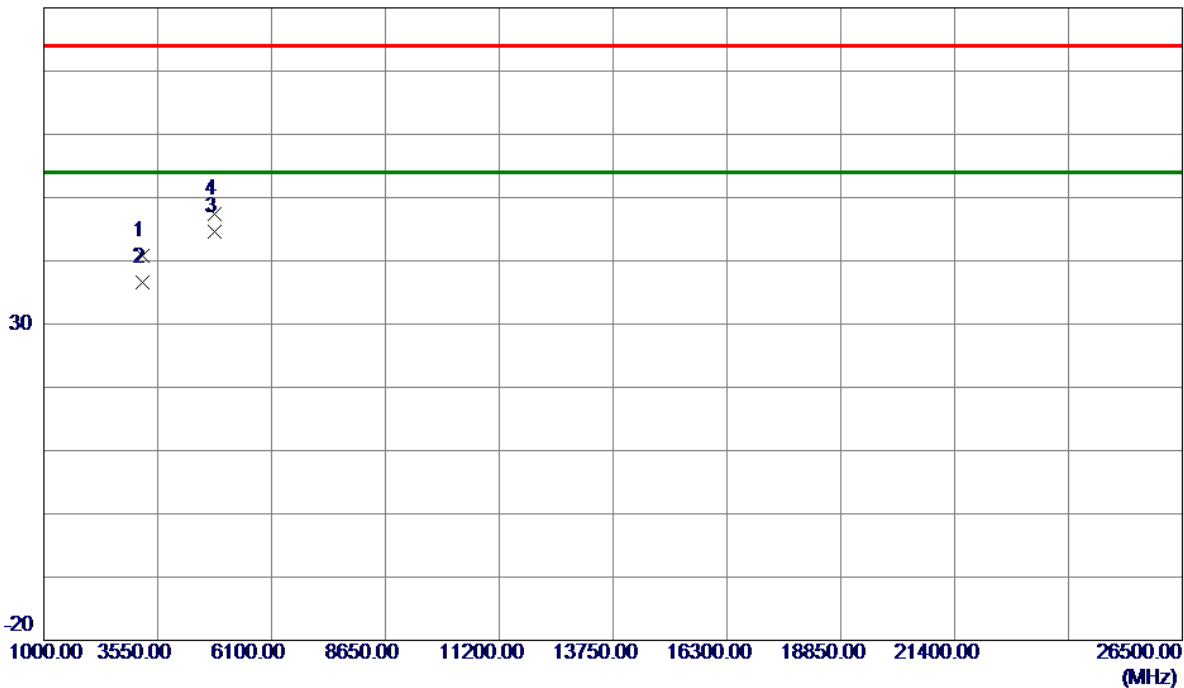
(1) Measurement Value = Reading Level + Correct Factor.

(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	3215.9750	55.04	-14.26	40.78	74.00	-33.22	Peak	
2	3216.0000	50.93	-14.26	36.67	54.00	-17.33	AVG	
3 *	4824.0000	54.35	-9.69	44.66	54.00	-9.34	AVG	
4	4824.1800	57.16	-9.69	47.47	74.00	-26.53	Peak	

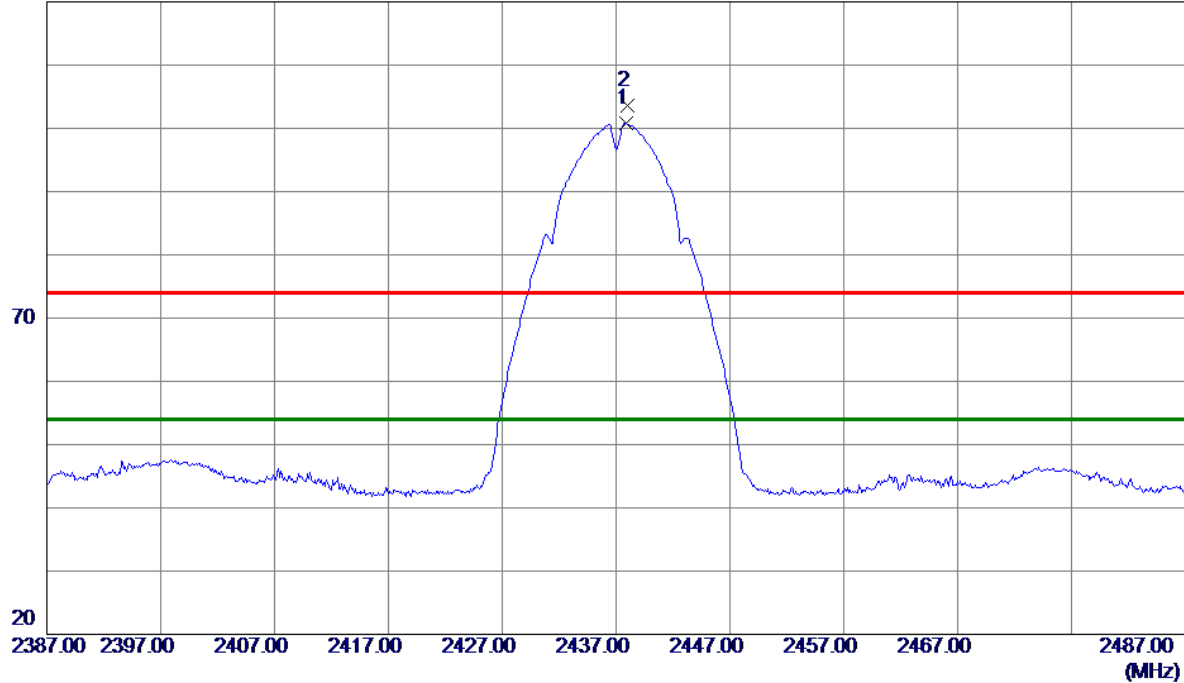
REMARKS:

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

Test Mode: TX B 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 *	2437.9000	68.31	32.53	100.84	54.00	46.84	AVG	No limit
2	2438.0000	71.08	32.53	103.61	74.00	29.61	Peak	No limit

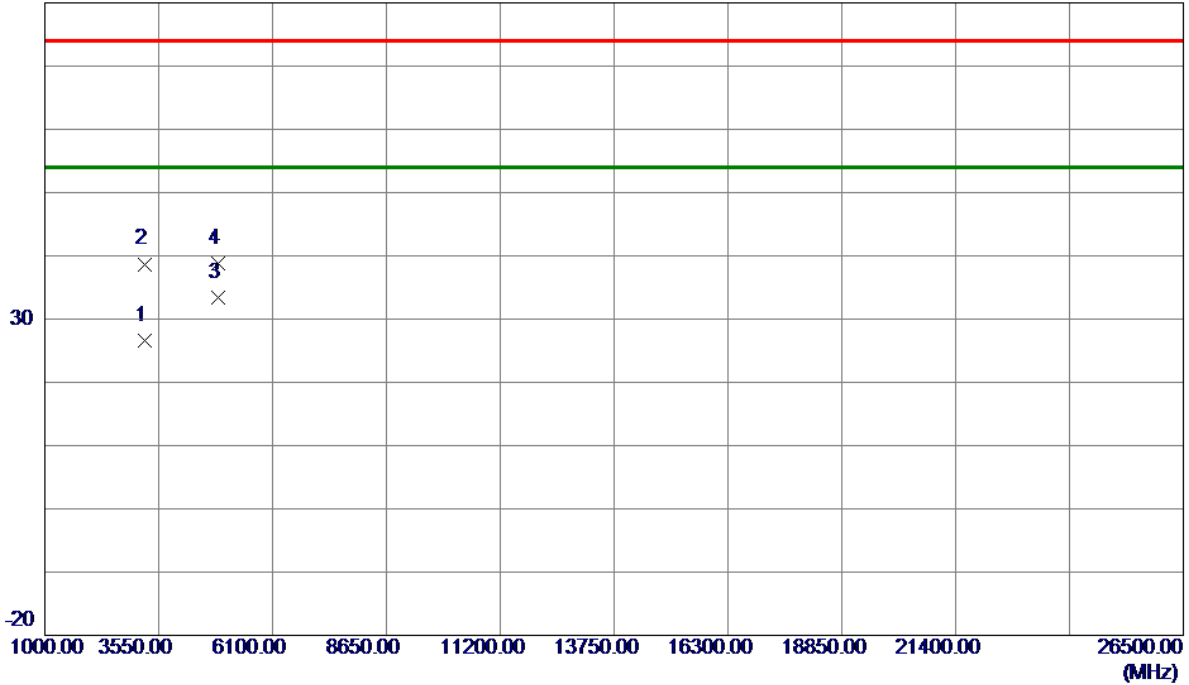
REMARKS:

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

Test Mode:	TX B Mode 2437 MHz
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Vertical

80 dBuV/m



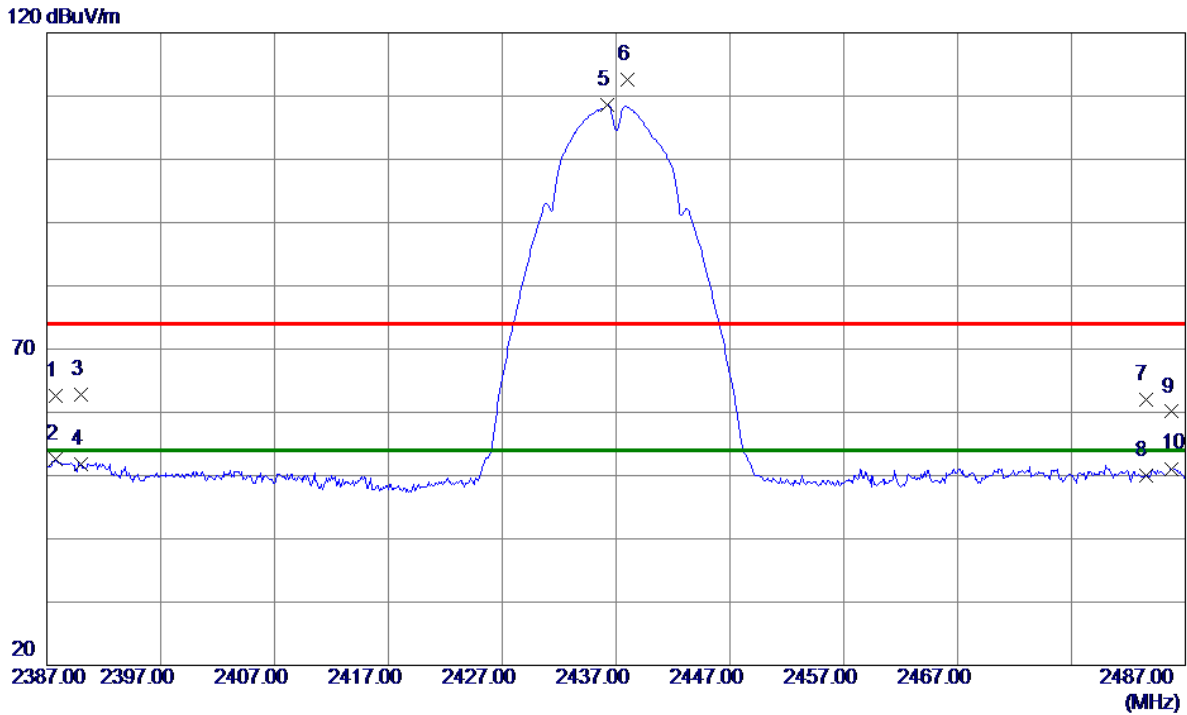
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	3249.3330	40.77	-14.22	26.55	54.00	-27.45	AVG	
2	3249.8330	52.92	-14.22	38.70	74.00	-35.30	Peak	
3 *	4874.0000	42.96	-9.50	33.46	54.00	-20.54	AVG	
4	4877.4000	48.25	-9.49	38.76	74.00	-35.24	Peak	

REMARKS:

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

Test Mode: TX B 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	2387.8000	30.13	32.39	62.52	74.00	-11.48	Peak	
2	2387.8000	20.13	32.39	52.52	54.00	-1.48	AVG	
3	2390.0000	30.35	32.39	62.74	74.00	-11.26	Peak	
4	2390.0000	19.35	32.39	51.74	54.00	-2.26	AVG	
5 *	2436.2000	76.03	32.53	108.56	54.00	54.56	AVG	No limit
6	2438.0000	80.11	32.53	112.64	74.00	38.64	Peak	No limit
7	2483.5000	29.43	32.66	62.09	74.00	-11.91	Peak	
8	2483.5000	17.43	32.66	50.09	54.00	-3.91	AVG	
9	2485.8000	27.43	32.67	60.10	74.00	-13.90	Peak	
10	2485.8000	18.43	32.67	51.10	54.00	-2.90	AVG	

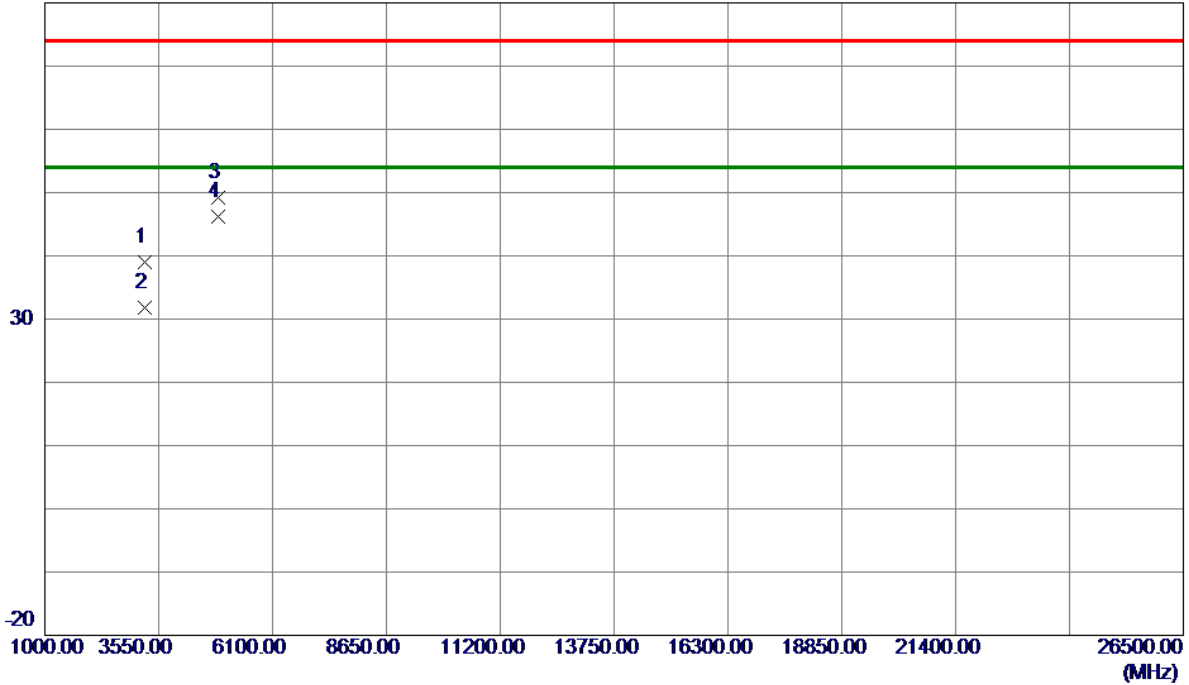
REMARKS:

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

Test Mode:	TX B 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	3249.5550	53.24	-14.22	39.02	74.00	-34.98	Peak	
2	3250.0650	45.95	-14.22	31.73	54.00	-22.27	AVG	
3	4873.9200	58.70	-9.50	49.20	74.00	-24.80	Peak	
4 *	4874.0000	55.64	-9.50	46.14	54.00	-7.86	AVG	

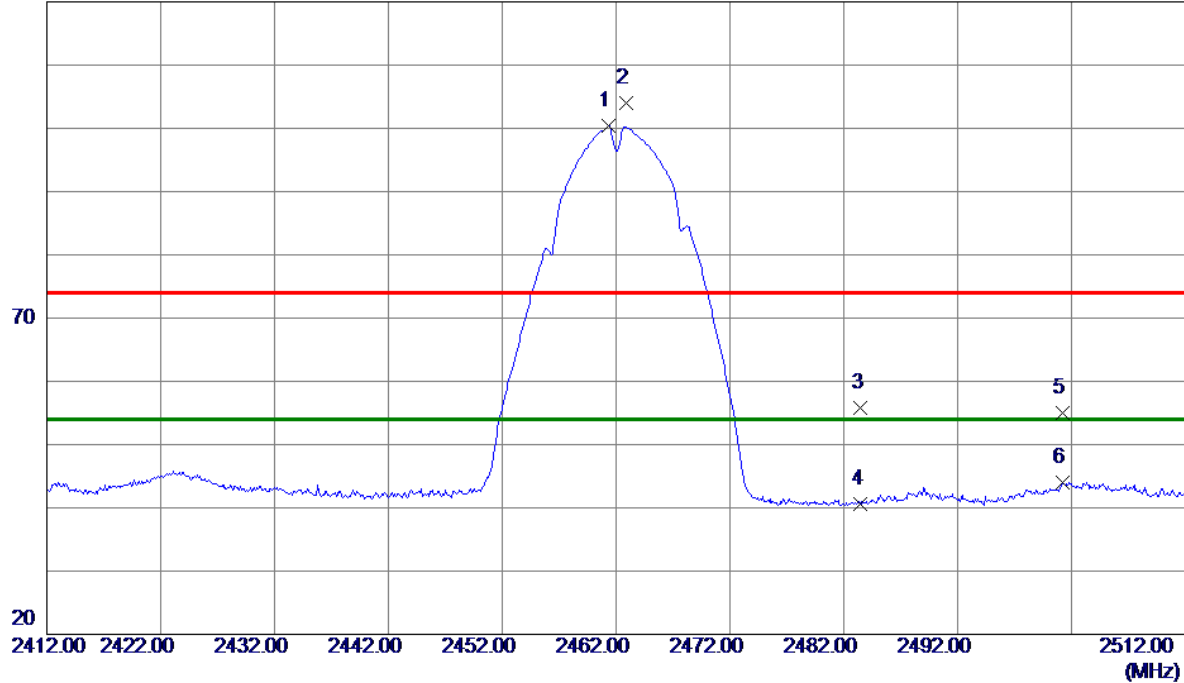
REMARKS:

- (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 *	2461.3000	67.75	32.60	100.35	54.00	46.35	AVG	No limit
2	2462.9000	71.49	32.60	104.09	74.00	30.09	Peak	No limit
3	2483.5000	23.23	32.66	55.89	74.00	-18.11	Peak	
4	2483.5000	7.92	32.66	40.58	54.00	-13.42	AVG	
5	2501.2000	22.36	32.71	55.07	74.00	-18.93	Peak	
6	2501.2000	11.31	32.71	44.02	54.00	-9.98	AVG	

REMARKS:

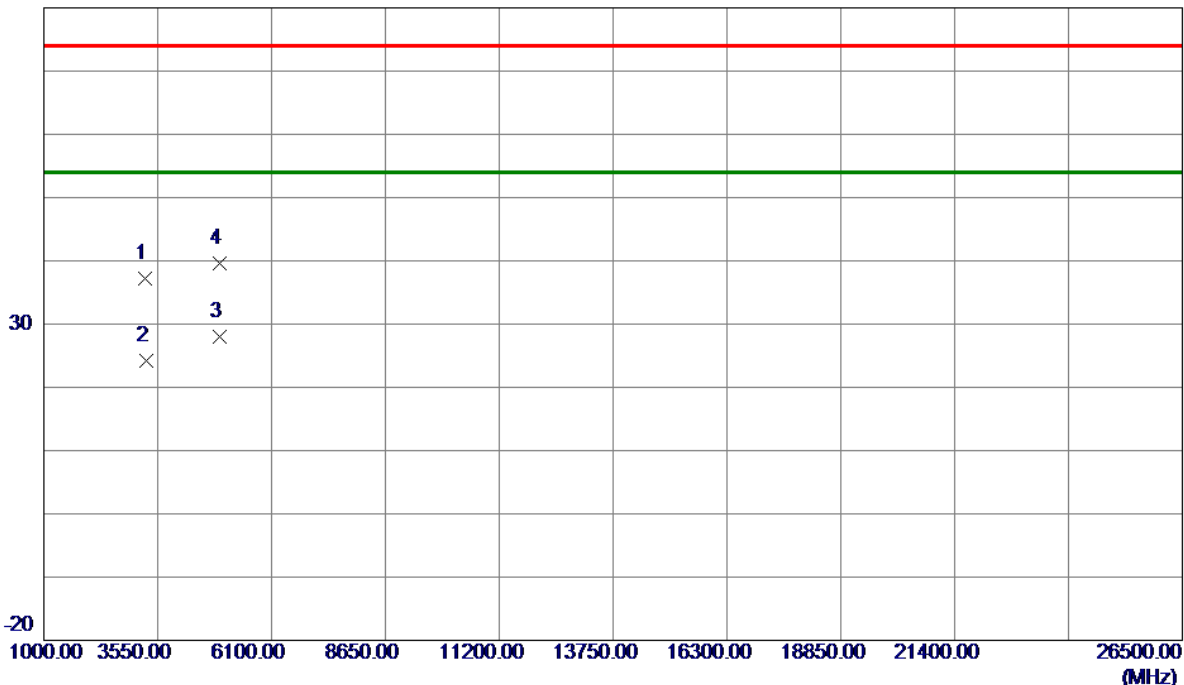
(1) Measurement Value = Reading Level + Correct Factor.

(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	3279.7000	51.43	-14.19	37.24	74.00	-36.76	Peak	
2	3282.0000	38.31	-14.19	24.12	54.00	-29.88	AVG	
3 *	4926.5200	37.37	-9.30	28.07	54.00	-25.93	AVG	
4	4926.9700	48.90	-9.30	39.60	74.00	-34.40	Peak	

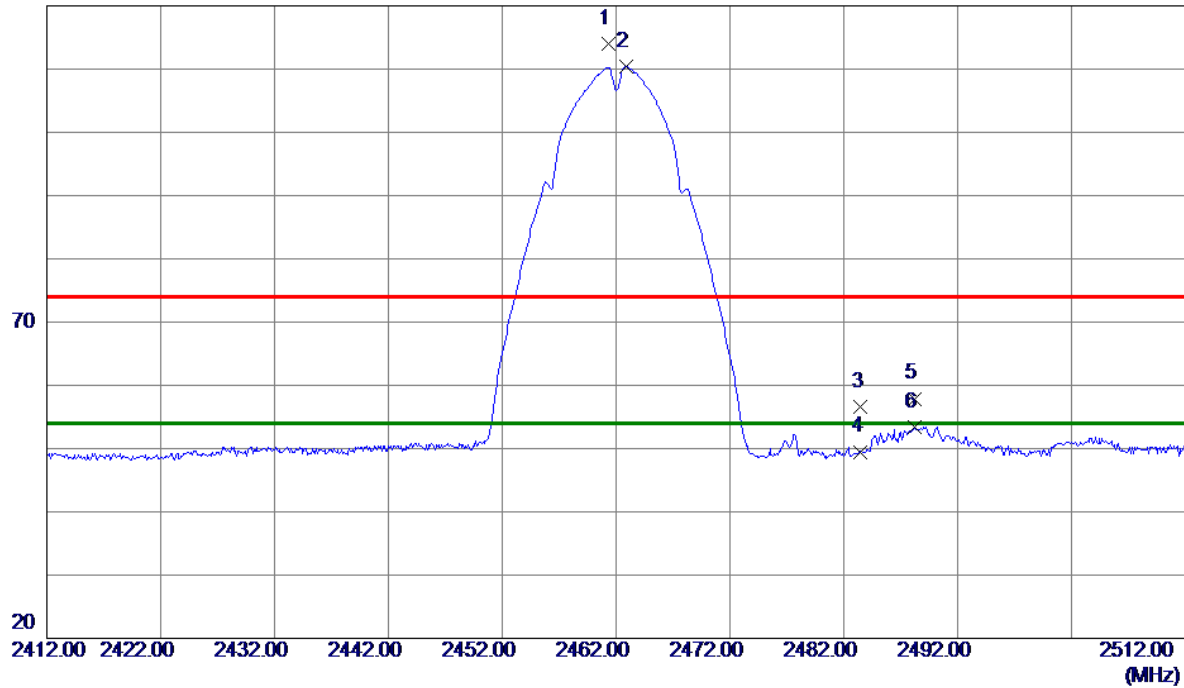
REMARKS:

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

Test Mode: TX B 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	2461.3000	81.45	32.60	114.05	74.00	40.05	Peak	No limit
2 *	2462.9000	77.82	32.60	110.42	54.00	56.42	AVG	No limit
3	2483.5000	23.88	32.66	56.54	74.00	-17.46	Peak	
4	2483.5000	16.84	32.66	49.50	54.00	-4.50	AVG	
5	2488.2000	25.22	32.68	57.90	74.00	-16.10	Peak	
6	2488.2000	20.80	32.68	53.48	54.00	-0.52	AVG	

REMARKS:

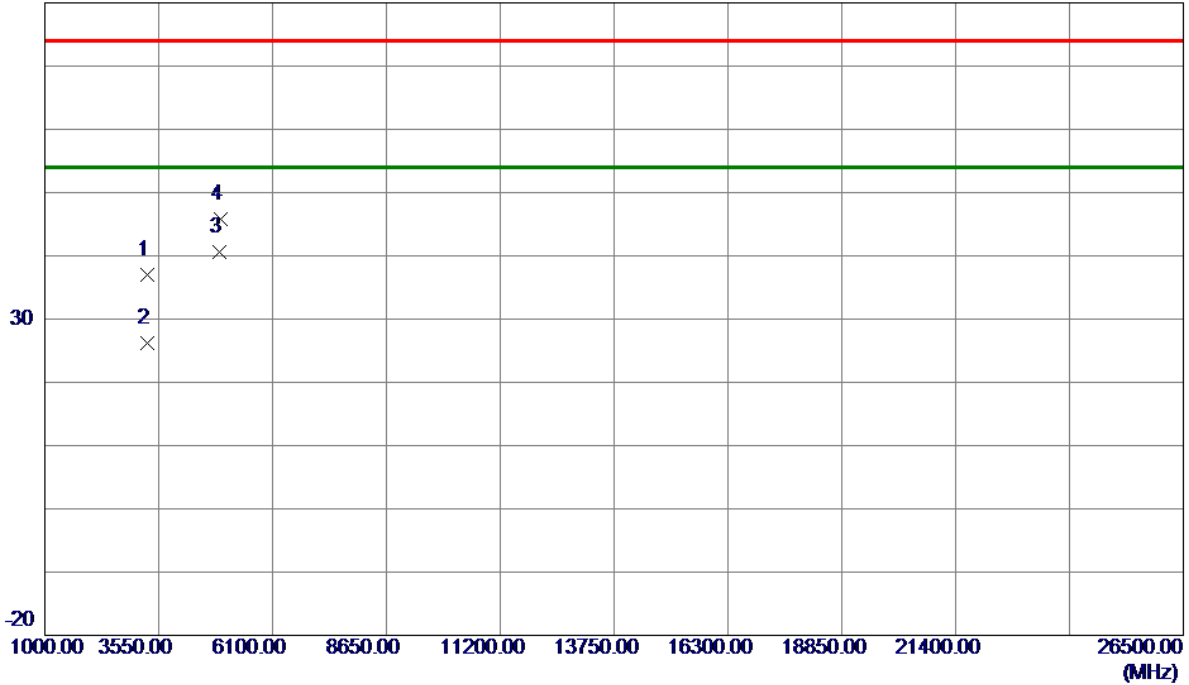
(1) Measurement Value = Reading Level + Correct Factor.

(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	3282.0149	51.16	-14.19	36.97	74.00	-37.03	Peak	
2	3282.8050	40.36	-14.19	26.17	54.00	-27.83	AVG	
3 *	4924.0000	49.90	-9.31	40.59	54.00	-13.41	AVG	
4	4926.5200	55.02	-9.30	45.72	74.00	-28.28	Peak	

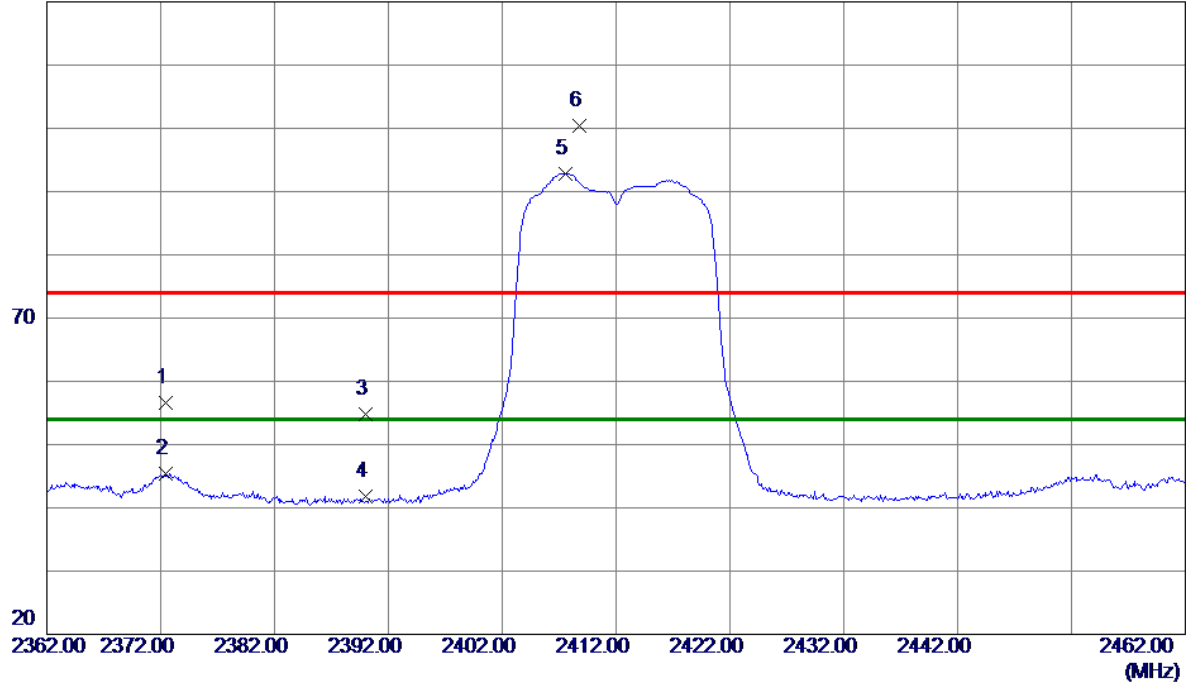
REMARKS:

- (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	2372.4000	24.18	32.34	56.52	74.00	-17.48	Peak	
2	2372.4000	13.11	32.34	45.45	54.00	-8.55	AVG	
3	2390.0000	22.49	32.39	54.88	74.00	-19.12	Peak	
4	2390.0000	9.38	32.39	41.77	54.00	-12.23	AVG	
5 *	2407.6000	60.43	32.44	92.87	54.00	38.87	AVG	No limit
6	2408.8000	67.95	32.45	100.40	74.00	26.40	Peak	No limit

REMARKS:

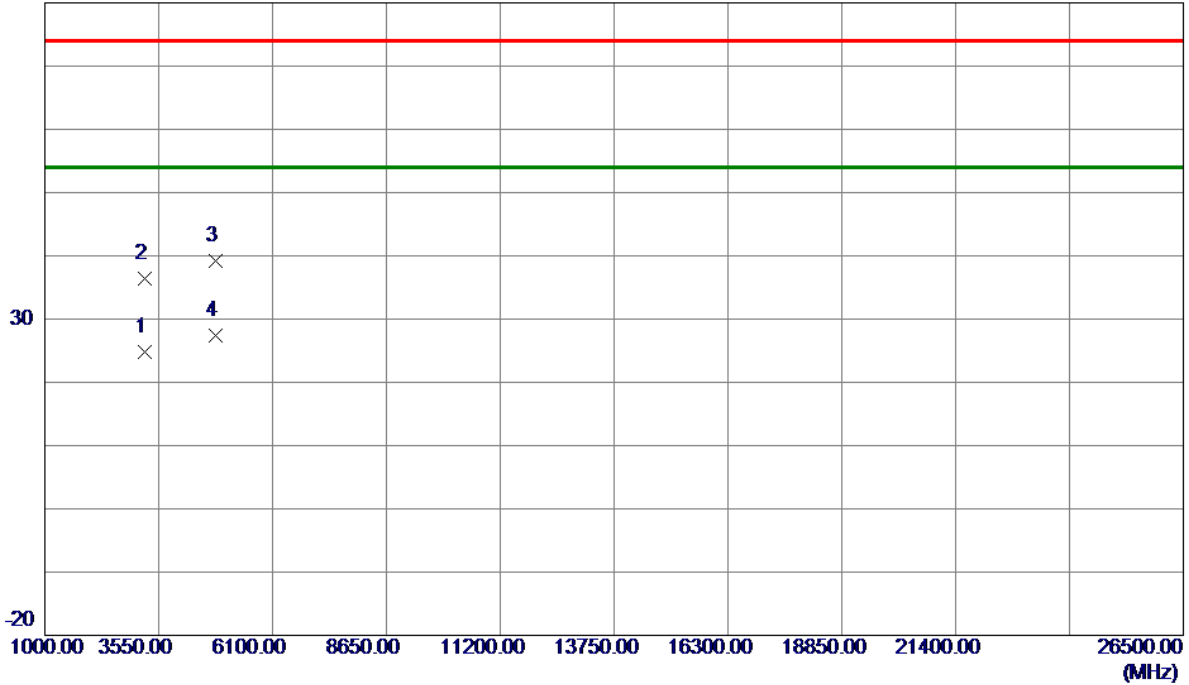
(1) Measurement Value = Reading Level + Correct Factor.

(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	3224.6500	39.02	-14.25	24.77	54.00	-29.23	AVG	
2	3232.5500	50.72	-14.24	36.48	74.00	-37.52	Peak	
3	4821.4000	48.88	-9.70	39.18	74.00	-34.82	Peak	
4 *	4824.0000	37.17	-9.69	27.48	54.00	-26.52	AVG	

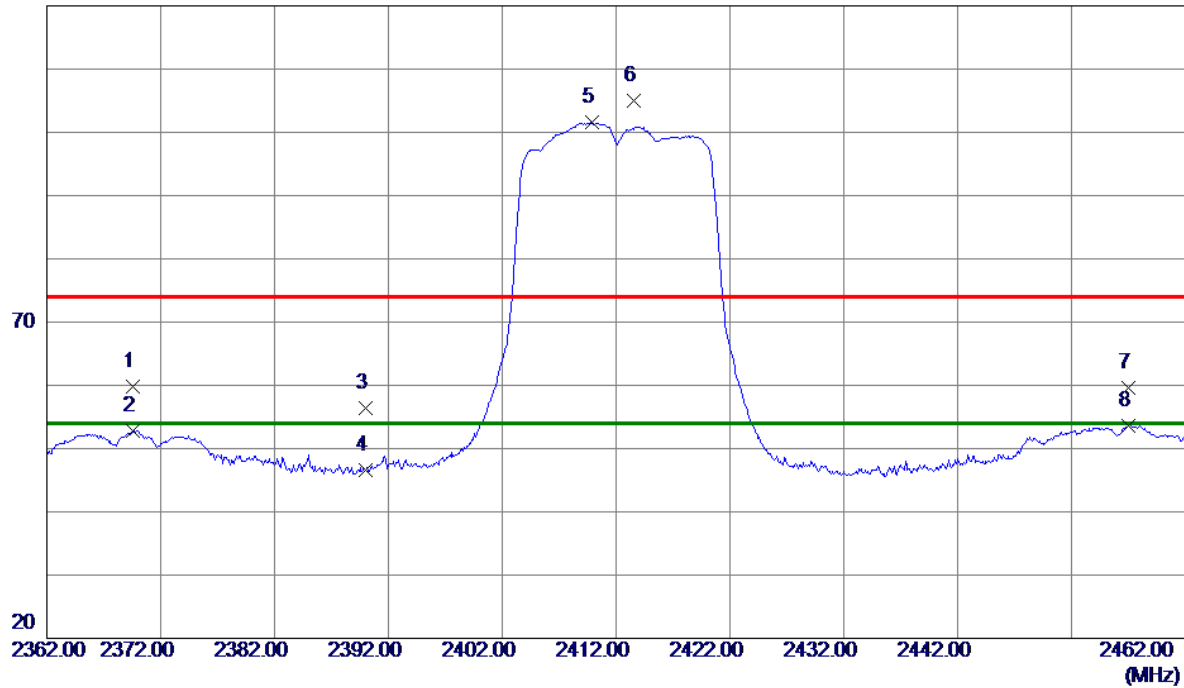
REMARKS:

- (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	2369.6000	27.52	32.33	59.85	74.00	-14.15	Peak	
2	2369.6000	20.47	32.33	52.80	54.00	-1.20	AVG	
3	2390.0000	24.00	32.39	56.39	74.00	-17.61	Peak	
4	2390.0000	14.24	32.39	46.63	54.00	-7.37	AVG	
5 *	2409.9000	69.10	32.45	101.55	54.00	47.55	AVG	No limit
6	2413.6000	72.57	32.46	105.03	74.00	31.03	Peak	No limit
7	2457.0000	26.96	32.59	59.55	74.00	-14.45	Peak	
8	2457.0000	21.07	32.59	53.66	54.00	-0.34	AVG	

REMARKS:

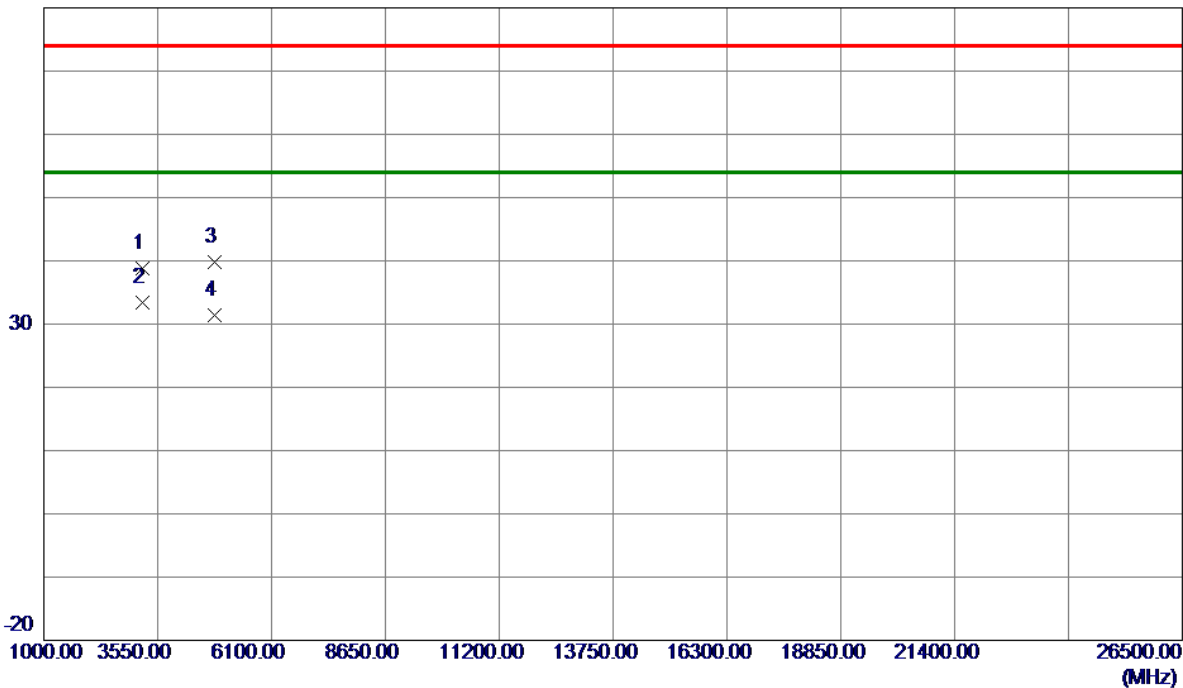
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode: TX G Mode 2412 MHz

Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	3215.9700	52.98	-14.26	38.72	74.00	-35.28	Peak	
2 *	3216.0000	47.75	-14.26	33.49	54.00	-20.51	AVG	
3	4827.0000	49.45	-9.68	39.77	74.00	-34.23	Peak	
4	4828.1000	40.99	-9.67	31.32	54.00	-22.68	AVG	

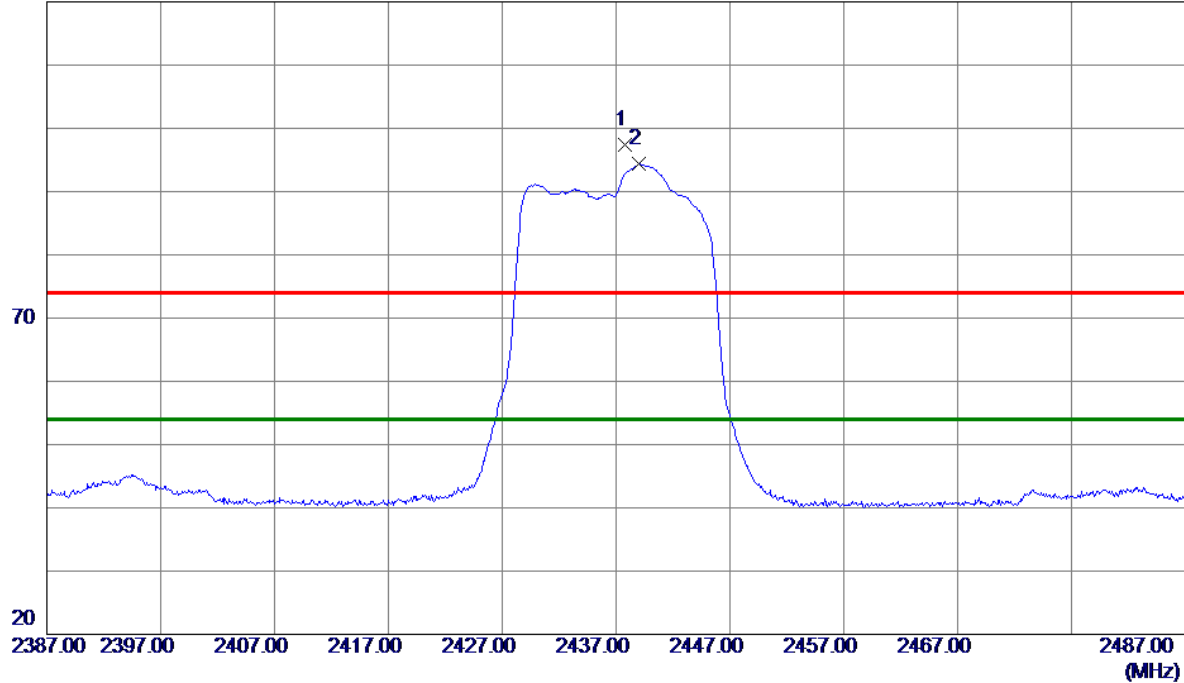
REMARKS:

- (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	2437.8000	64.96	32.53	97.49	74.00	23.49	Peak	No limit
2 *	2439.0000	61.92	32.53	94.45	54.00	40.45	AVG	No limit

REMARKS:

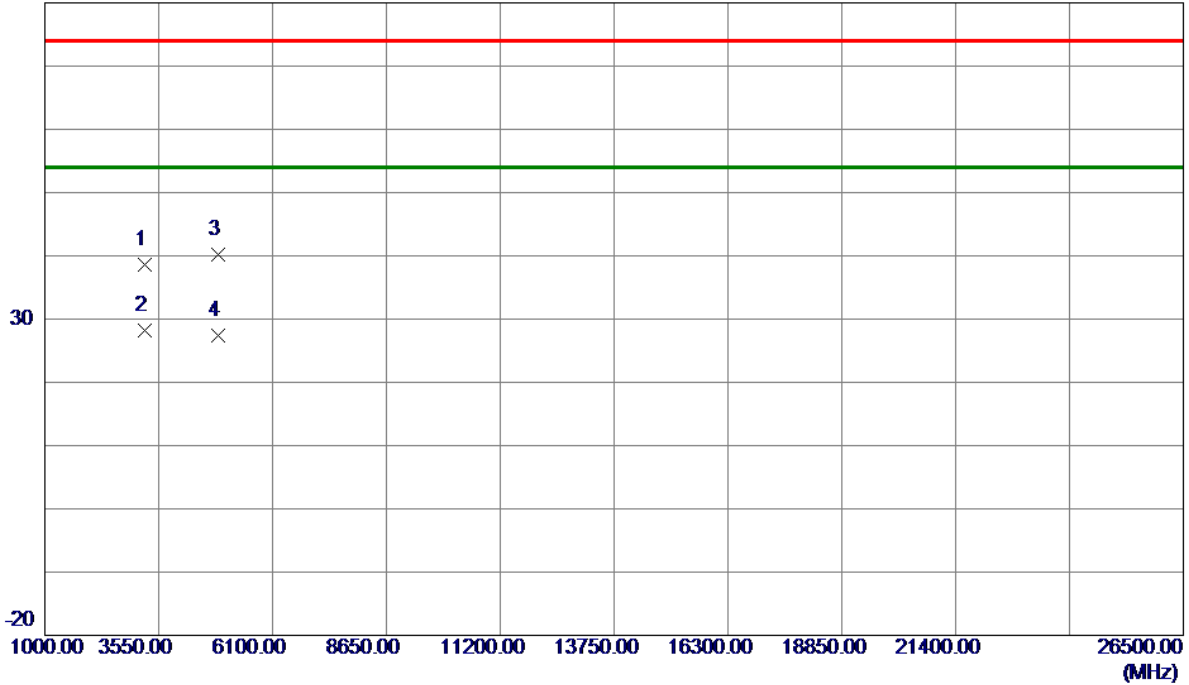
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX G Mode 2437 MHz
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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	3250.0100	52.83	-14.22	38.61	74.00	-35.39	Peak	
2 *	3250.0850	42.43	-14.22	28.21	54.00	-25.79	AVG	
3	4871.7900	49.63	-9.51	40.12	74.00	-33.88	Peak	
4	4874.0000	36.87	-9.50	27.37	54.00	-26.63	AVG	

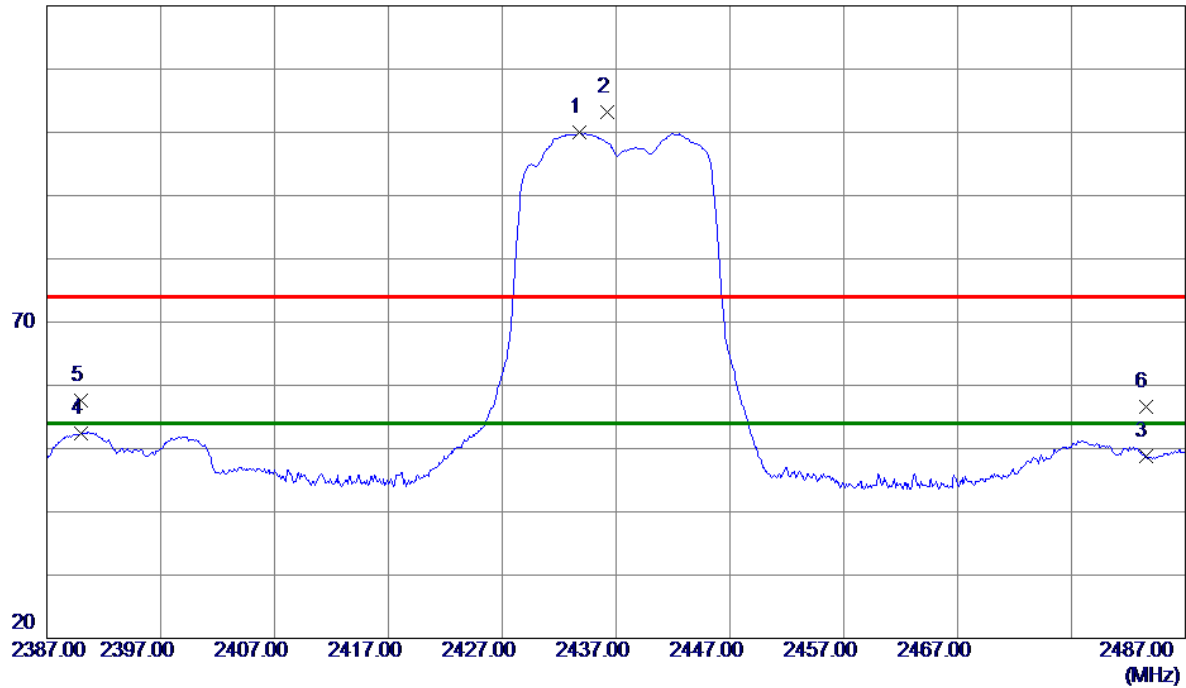
REMARKS:

- (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 *	2433.8000	67.42	32.52	99.94	54.00	45.94	AVG	No limit
2	2436.2000	70.60	32.53	103.13	74.00	29.13	Peak	No limit
3	2483.5000	16.06	32.66	48.72	54.00	-5.28	AVG	
4	2390.0000	19.94	32.39	52.33	54.00	-1.67	AVG	
5	2390.0000	25.29	32.39	57.68	74.00	-16.32	Peak	
6	2483.5000	24.02	32.66	56.68	74.00	-17.32	Peak	

REMARKS:

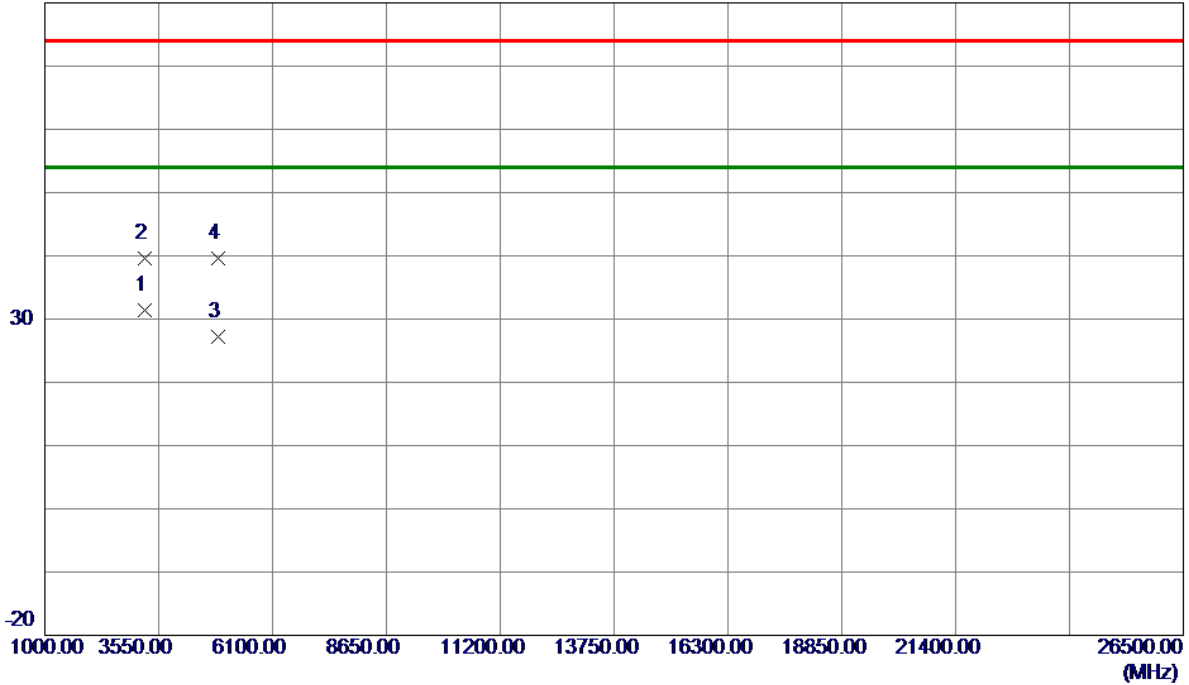
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode: TX G 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 *	3249.3300	45.61	-14.22	31.39	54.00	-22.61	AVG	
2	3249.4350	53.76	-14.22	39.54	74.00	-34.46	Peak	
3	4874.0000	36.66	-9.50	27.16	54.00	-26.84	AVG	
4	4878.2000	49.08	-9.48	39.60	74.00	-34.40	Peak	

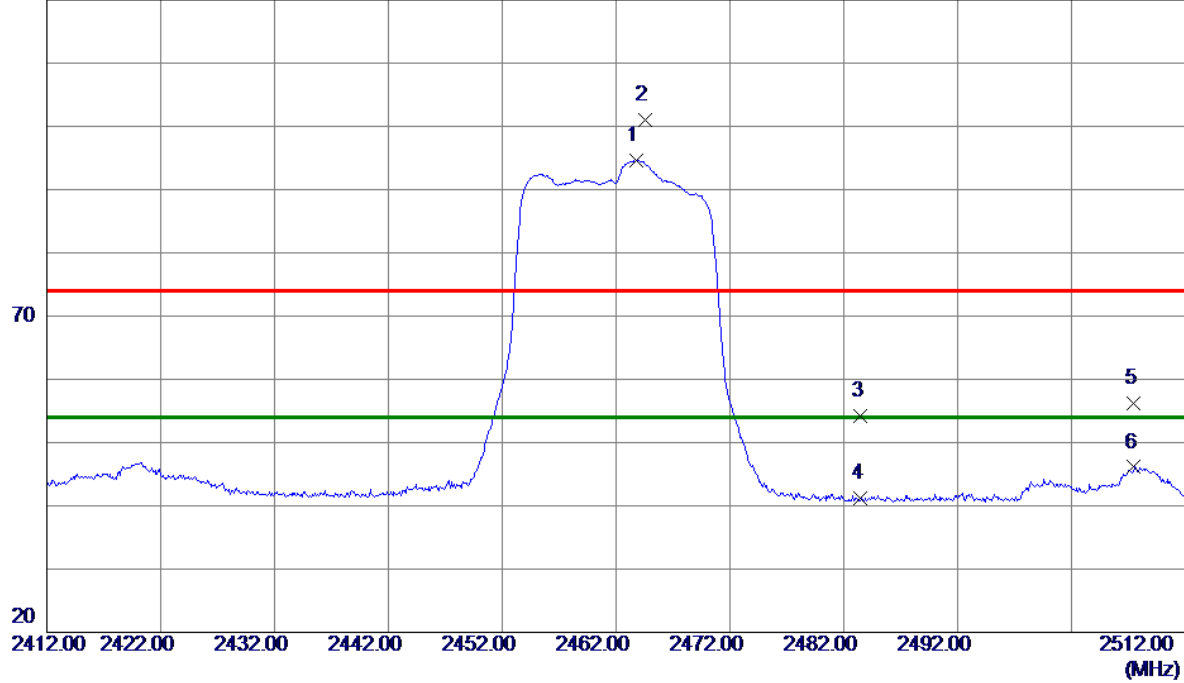
REMARKS:

- (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 *	2463.8000	61.97	32.61	94.58	54.00	40.58	AVG	No limit
2	2464.6000	68.49	32.61	101.10	74.00	27.10	Peak	No limit
3	2483.5000	21.46	32.66	54.12	74.00	-19.88	Peak	
4	2483.5000	8.56	32.66	41.22	54.00	-12.78	AVG	
5	2507.5000	23.38	32.73	56.11	74.00	-17.89	Peak	
6	2507.5000	13.37	32.73	46.10	54.00	-7.90	AVG	

REMARKS:

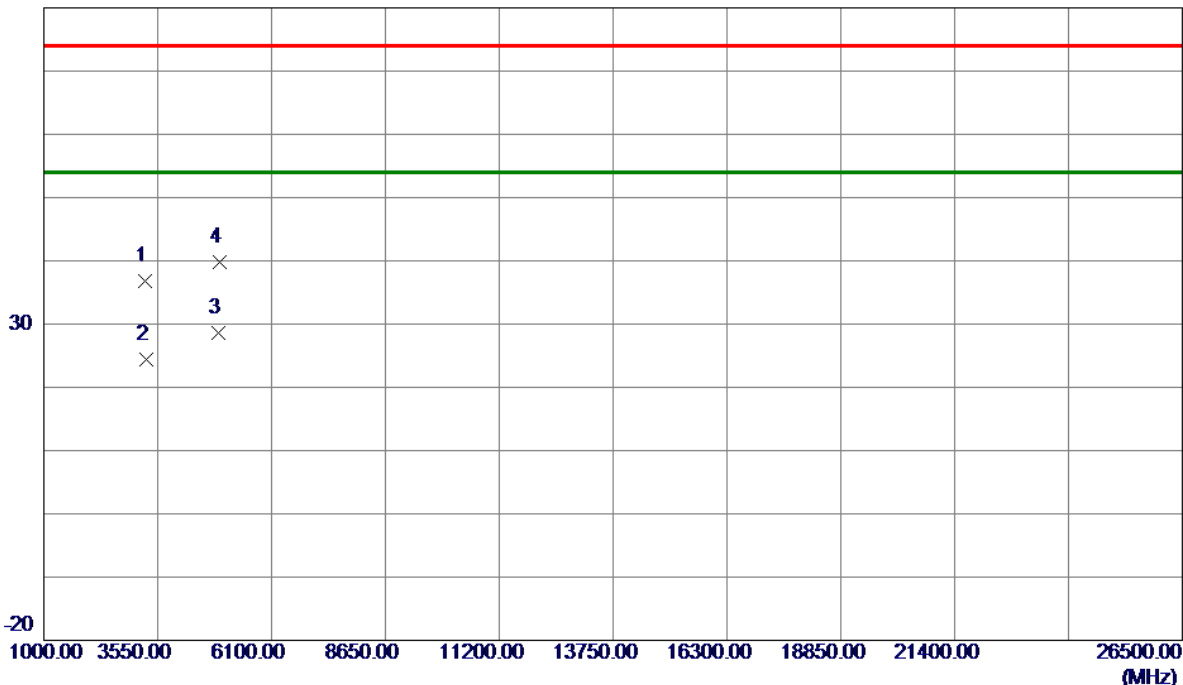
(1) Measurement Value = Reading Level + Correct Factor.

(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	3280.1750	50.99	-14.19	36.80	74.00	-37.20	Peak	
2	3282.6950	38.56	-14.19	24.37	54.00	-29.63	AVG	
3 *	4924.0500	37.97	-9.31	28.66	54.00	-25.34	AVG	
4	4948.7500	48.92	-9.21	39.71	74.00	-34.29	Peak	

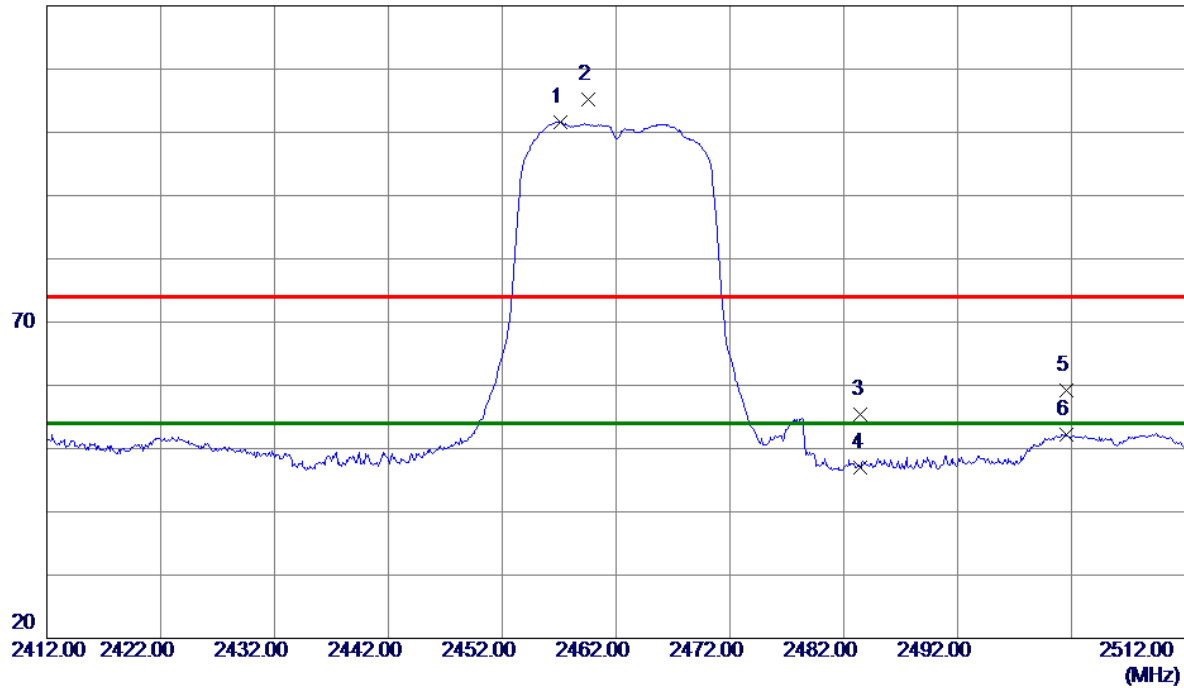
REMARKS:

- (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 *	2457.1000	68.98	32.59	101.57	54.00	47.57	AVG	No limit
2	2459.6100	72.59	32.59	105.18	74.00	31.18	Peak	No limit
3	2483.5000	22.77	32.66	55.43	74.00	-18.57	Peak	
4	2483.5000	14.37	32.66	47.03	54.00	-6.97	AVG	
5	2501.6000	26.54	32.71	59.25	74.00	-14.75	Peak	
6	2501.6000	19.54	32.71	52.25	54.00	-1.75	AVG	

REMARKS:

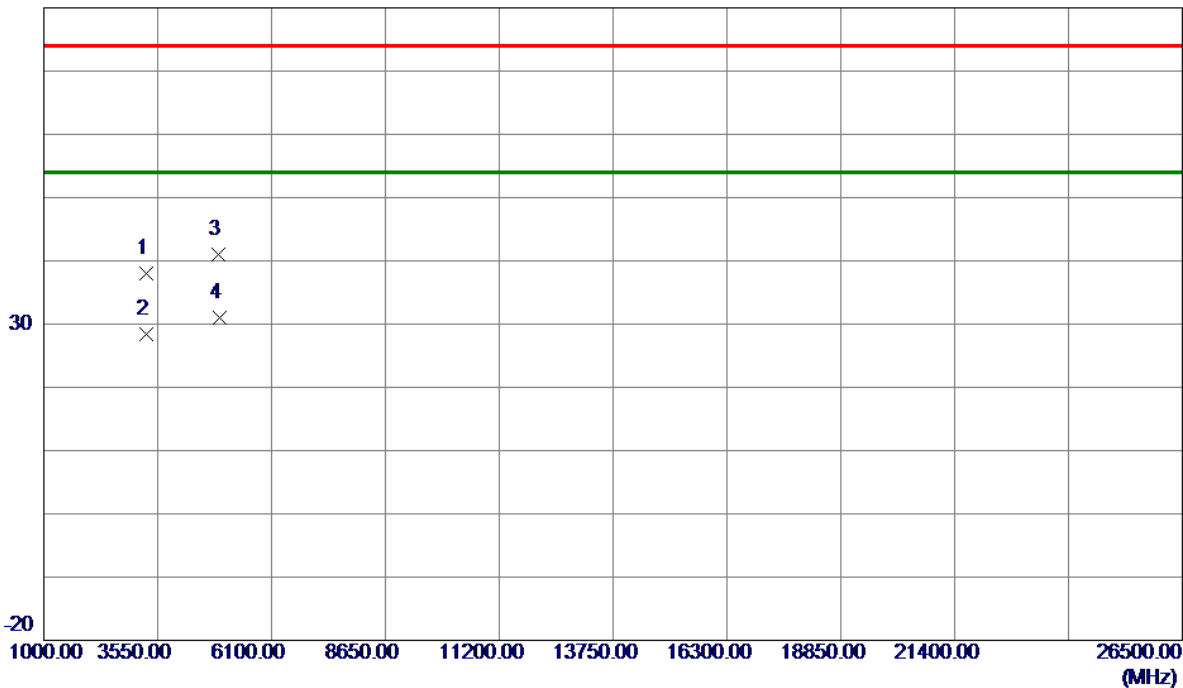
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode: TX G Mode 2462 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	3282.6950	52.12	-14.19	37.93	74.00	-36.07	Peak	
2	3282.7450	42.60	-14.19	28.41	54.00	-25.59	AVG	
3	4919.7200	50.41	-9.33	41.08	74.00	-32.92	Peak	
4 *	4924.2200	40.29	-9.31	30.98	54.00	-23.02	AVG	

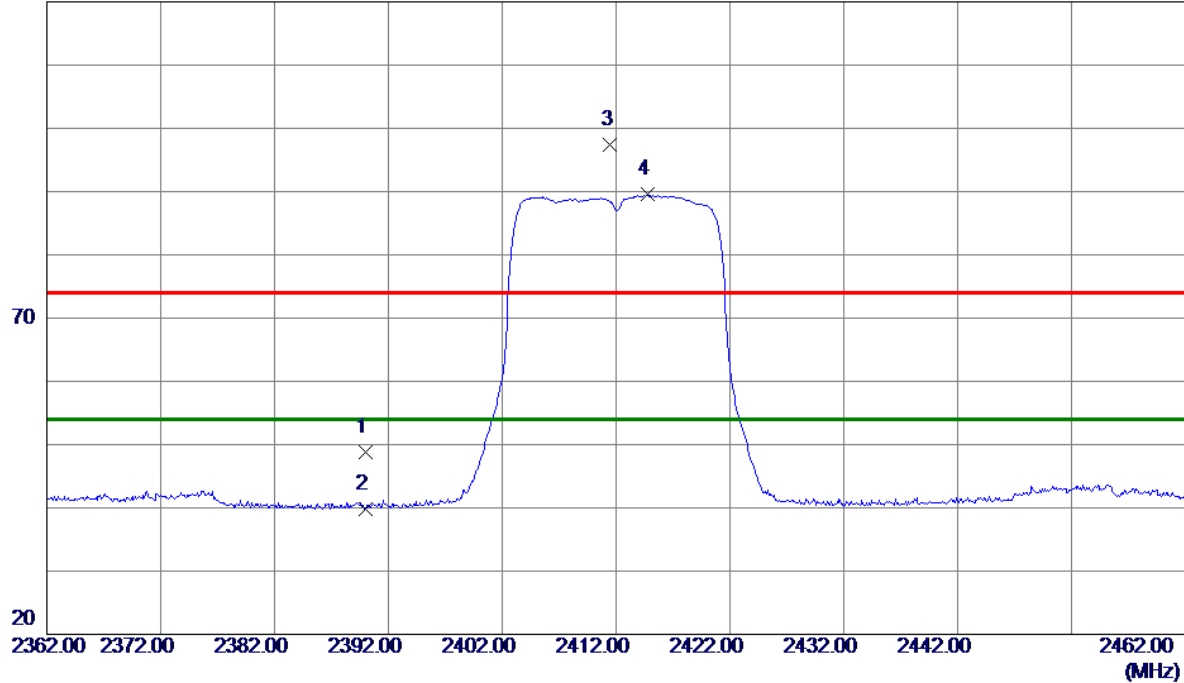
REMARKS:

- (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	16.46	32.39	48.85	74.00	-25.15	Peak	
2	2390.0000	7.46	32.39	39.85	54.00	-14.15	AVG	
3	2411.5000	65.03	32.46	97.49	74.00	23.49	Peak	No limit
4 *	2414.8000	57.07	32.46	89.53	54.00	35.53	AVG	No limit

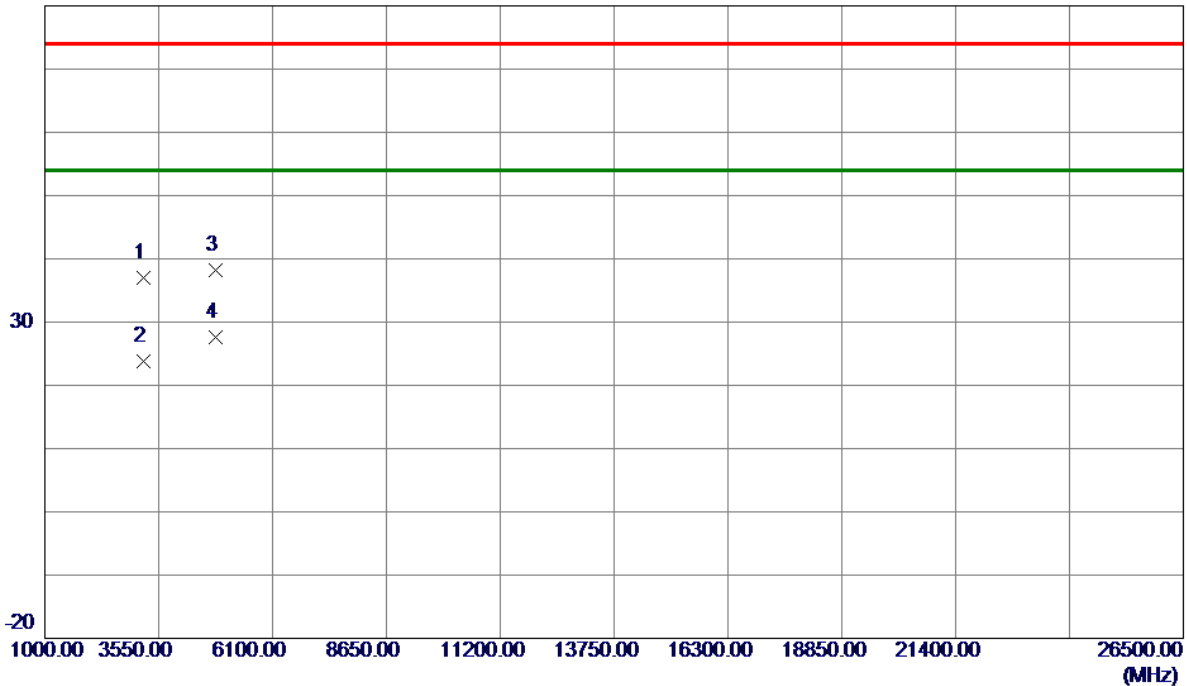
REMARKS:

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

Test Mode: TX N-20M Mode 2412 MHz

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	3214.8350	51.18	-14.26	36.92	74.00	-37.08	Peak	
2	3216.0149	38.01	-14.26	23.75	54.00	-30.25	AVG	
3	4817.2000	47.93	-9.71	38.22	74.00	-35.78	Peak	
4 *	4817.4000	37.22	-9.71	27.51	54.00	-26.49	AVG	

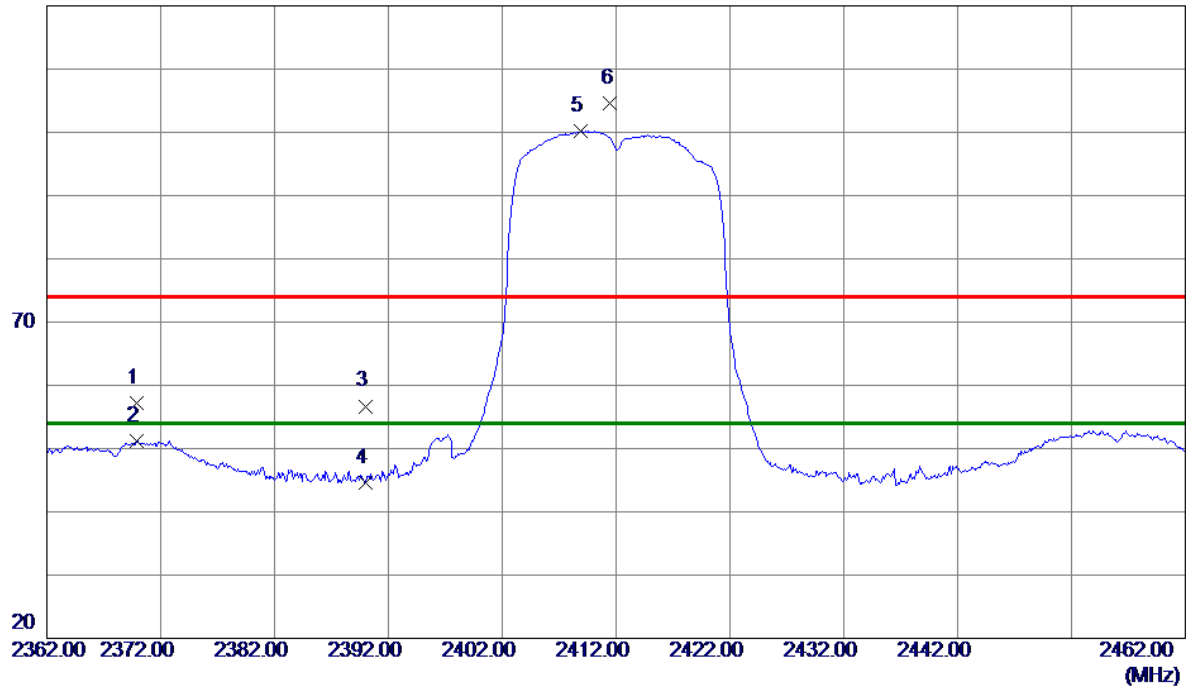
REMARKS:

- (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	2369.9000	24.82	32.34	57.16	74.00	-16.84	Peak	
2	2369.9000	18.92	32.34	51.26	54.00	-2.74	AVG	
3	2390.0000	24.31	32.39	56.70	74.00	-17.30	Peak	
4	2390.0000	12.23	32.39	44.62	54.00	-9.38	AVG	
5 *	2408.9000	67.79	32.45	100.24	54.00	46.24	AVG	No limit
6	2411.5000	72.08	32.46	104.54	74.00	30.54	Peak	No limit

REMARKS:

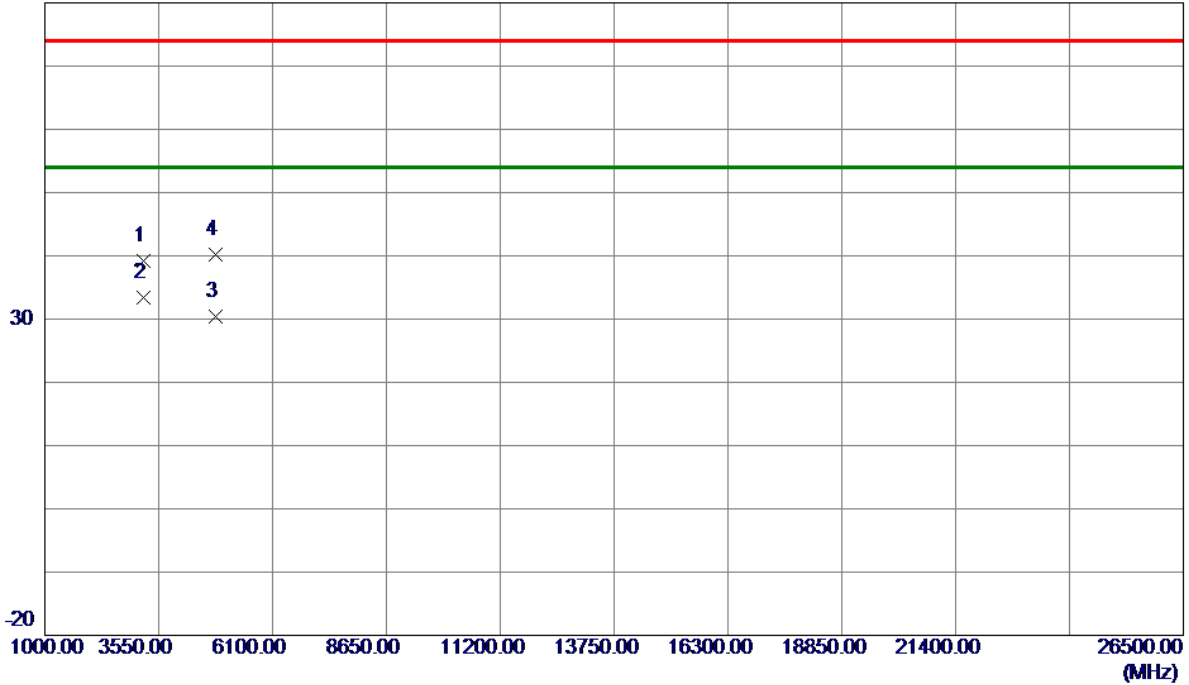
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode: TX N-20M Mode 2412 MHz

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	3216.0149	53.55	-14.26	39.29	74.00	-34.71	Peak	
2 *	3216.1150	47.74	-14.26	33.48	54.00	-20.52	AVG	
3	4824.0000	40.07	-9.69	30.38	54.00	-23.62	AVG	
4	4826.2000	49.91	-9.68	40.23	74.00	-33.77	Peak	

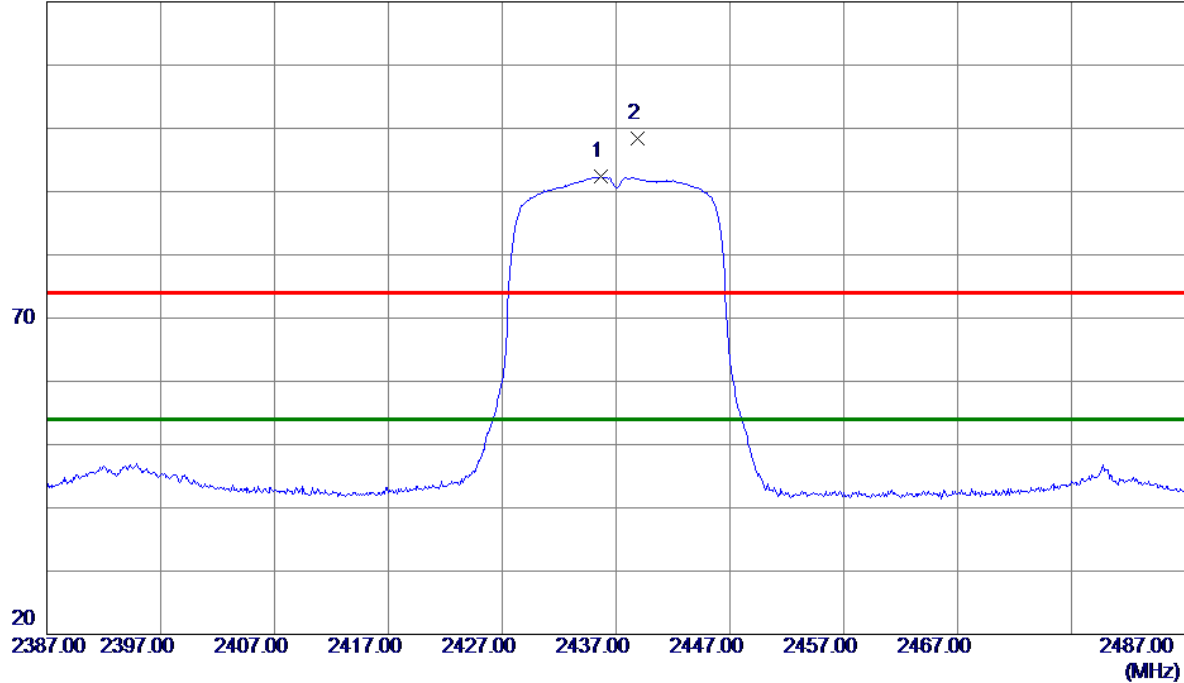
REMARKS:

- (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 *	2435.7000	59.82	32.52	92.34	54.00	38.34	AVG	No limit
2	2438.9000	65.84	32.53	98.37	74.00	24.37	Peak	No limit

REMARKS:

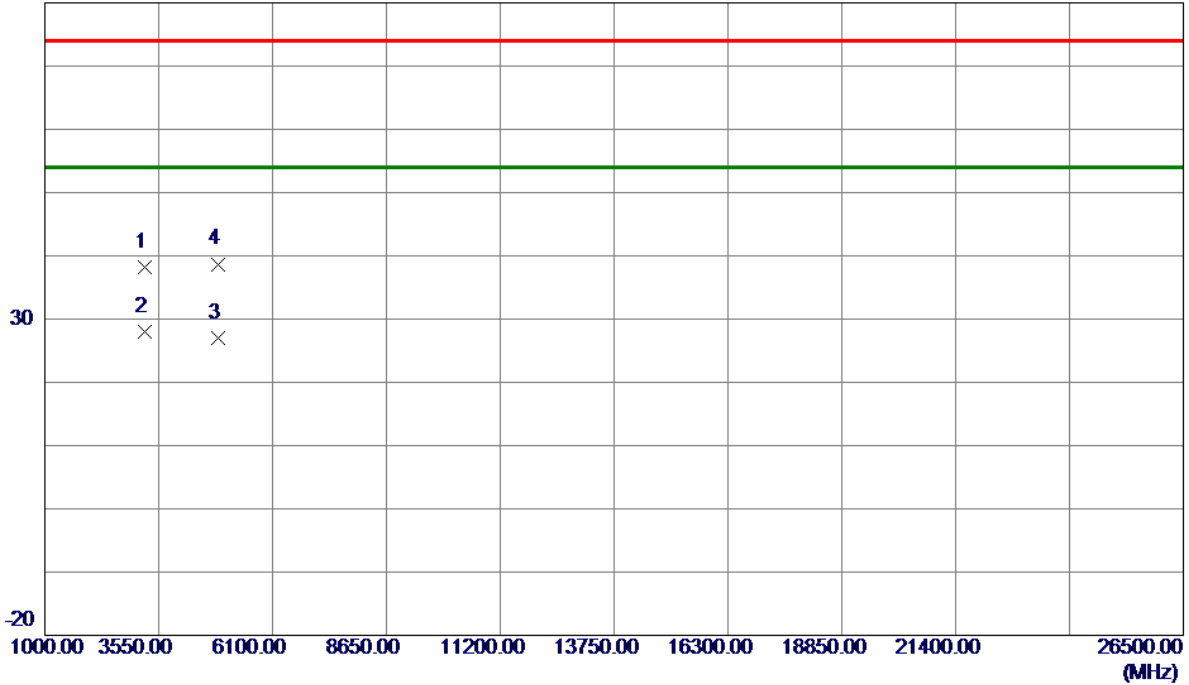
(1) Measurement Value = Reading Level + Correct Factor.

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

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

80 dBuV/m



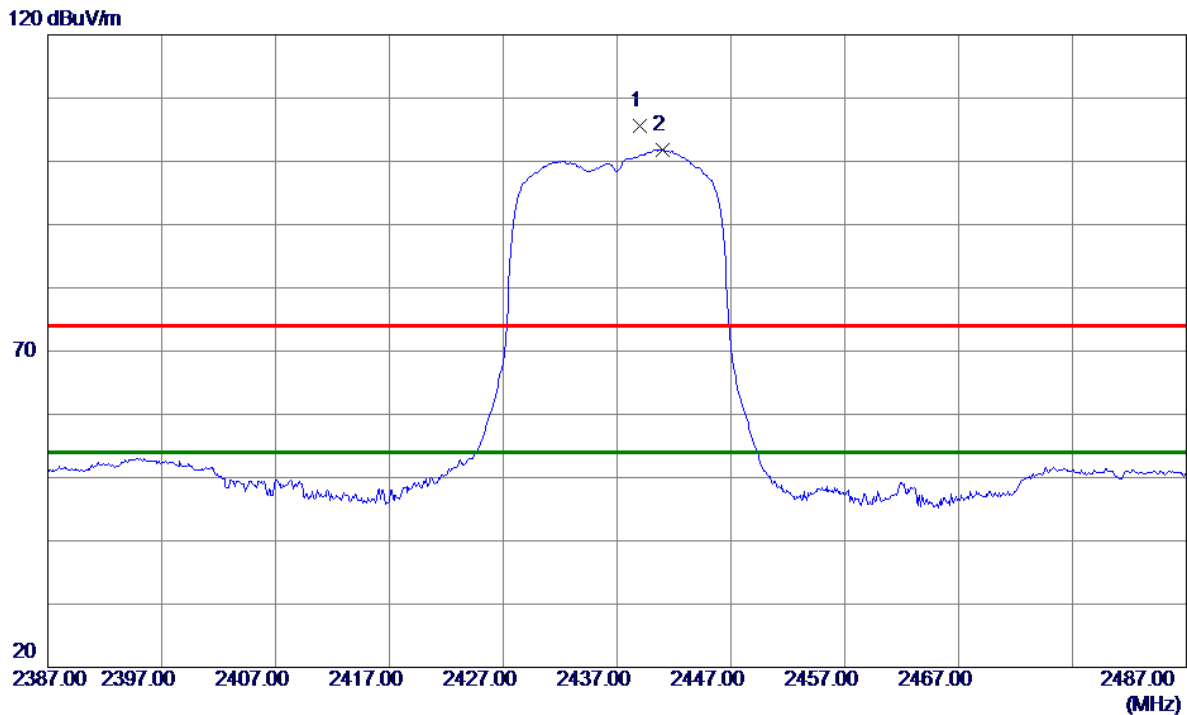
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	3250.0180	52.45	-14.22	38.23	74.00	-35.77	Peak	
2 *	3250.1130	42.23	-14.22	28.01	54.00	-25.99	AVG	
3	4876.8500	36.44	-9.49	26.95	54.00	-27.05	AVG	
4	4877.9200	48.18	-9.48	38.70	74.00	-35.30	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



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2439.0000	73.02	32.53	105.55	74.00	31.55	Peak	No limit
2 *	2441.0000	69.30	32.54	101.84	54.00	47.84	AVG	No limit

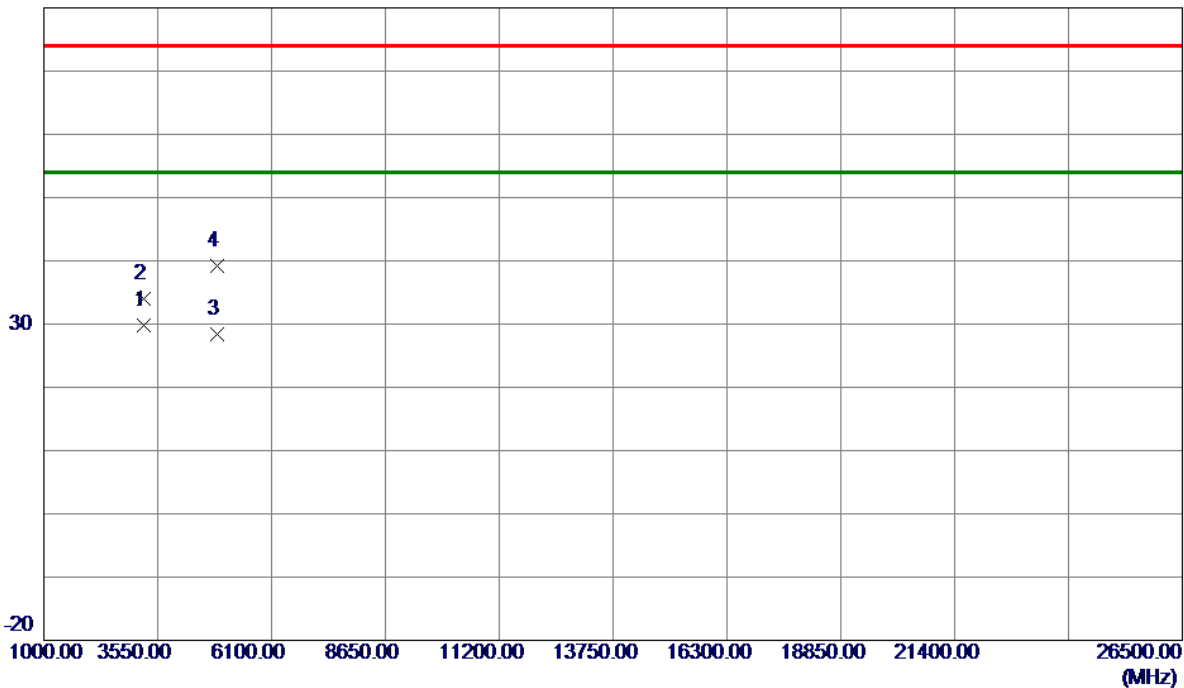
REMARKS:

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

Test Mode: TX N-20M Mode 2437 MHz

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 *	3249.3330	44.02	-14.22	29.80	54.00	-24.20	AVG	
2	3249.4080	48.13	-14.22	33.91	74.00	-40.09	Peak	
3	4881.2500	37.92	-9.47	28.45	54.00	-25.55	AVG	
4	4882.1000	48.74	-9.47	39.27	74.00	-34.73	Peak	

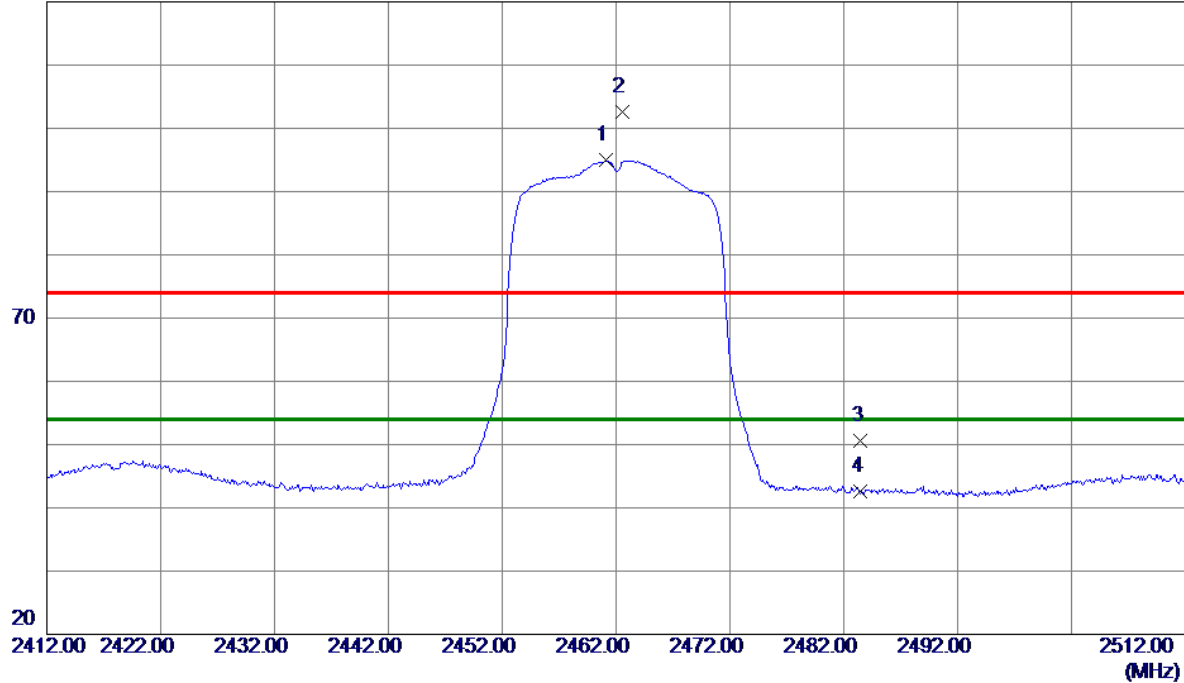
REMARKS:

- (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 *	2461.1000	62.30	32.60	94.90	54.00	40.90	AVG	No limit
2	2462.6000	70.01	32.60	102.61	74.00	28.61	Peak	No limit
3	2483.5000	17.87	32.66	50.53	74.00	-23.47	Peak	
4	2483.5000	9.87	32.66	42.53	54.00	-11.47	AVG	

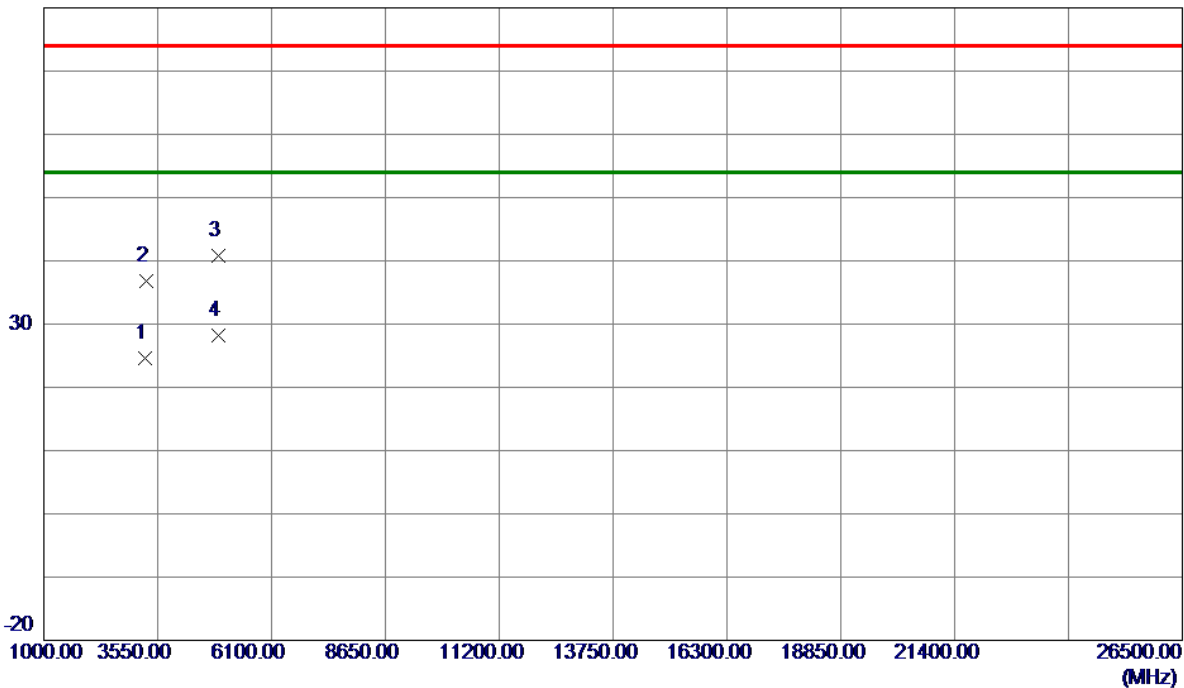
REMARKS:

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

Test Mode: TX N-20M Mode 2462 MHz

Vertical

80 dBuV/m



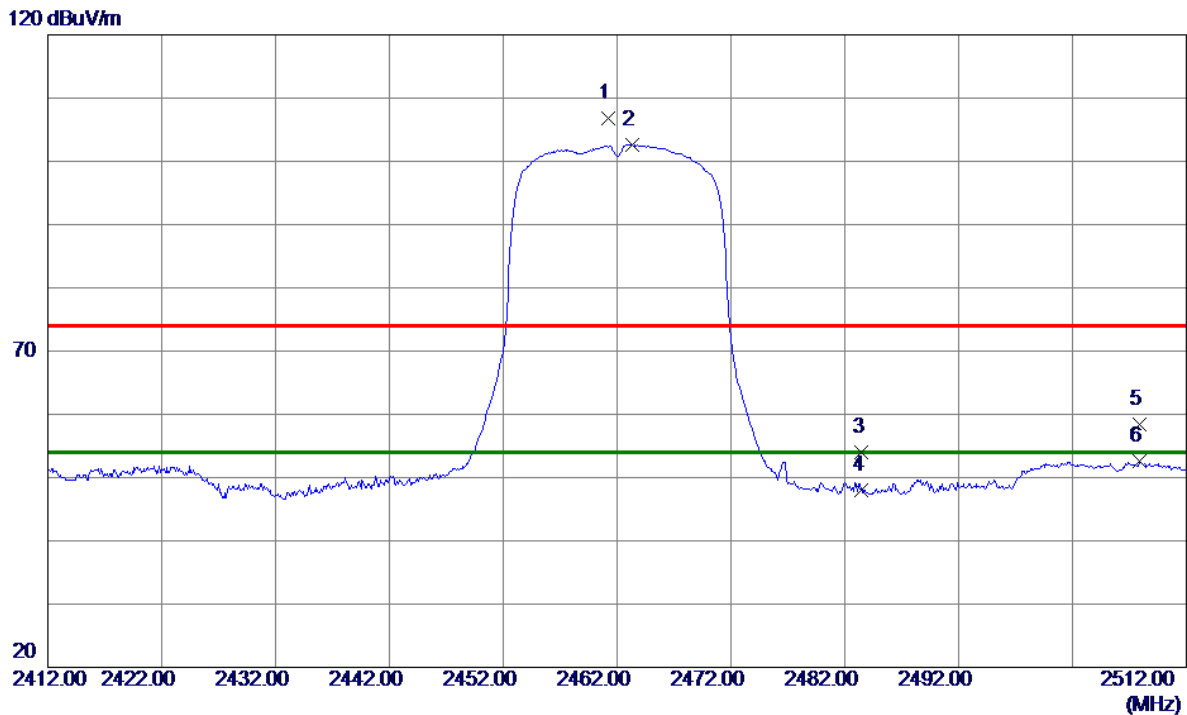
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	3279.7450	38.79	-14.19	24.60	54.00	-29.40	AVG	
2	3284.0900	51.07	-14.18	36.89	74.00	-37.11	Peak	
3	4922.6750	50.08	-9.31	40.77	74.00	-33.23	Peak	
4 *	4924.0000	37.52	-9.31	28.21	54.00	-25.79	AVG	

REMARKS:

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

Test Mode: TX N-20M 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	74.23	32.60	106.83	74.00	32.83	Peak	No limit
2 *	2463.3000	70.00	32.60	102.60	54.00	48.60	AVG	No limit
3	2483.5000	21.30	32.66	53.96	74.00	-20.04	Peak	
4	2483.5000	15.30	32.66	47.96	54.00	-6.04	AVG	
5	2507.9000	25.64	32.73	58.37	74.00	-15.63	Peak	
6	2507.9000	19.84	32.73	52.57	54.00	-1.43	AVG	

REMARKS:

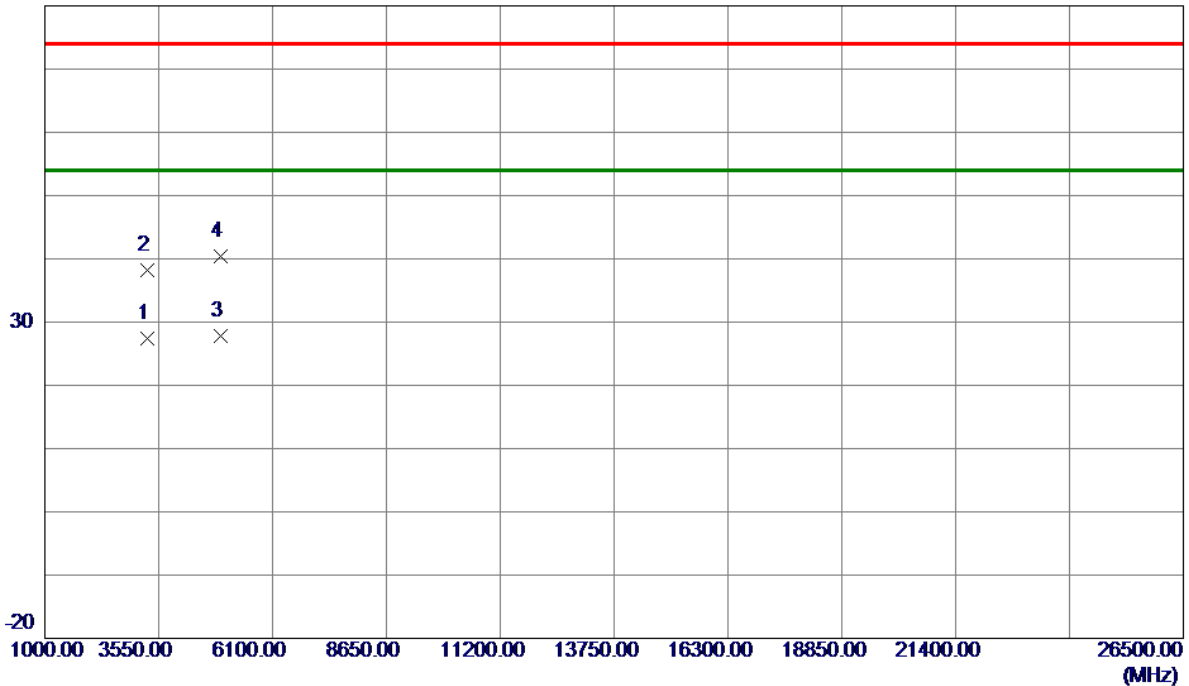
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode: TX N-20M Mode 2462 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	3282.7900	41.68	-14.19	27.49	54.00	-26.51	AVG	
2	3283.2549	52.36	-14.19	38.17	74.00	-35.83	Peak	
3 *	4924.3200	37.17	-9.31	27.86	54.00	-26.14	AVG	
4	4926.5400	49.67	-9.30	40.37	74.00	-33.63	Peak	

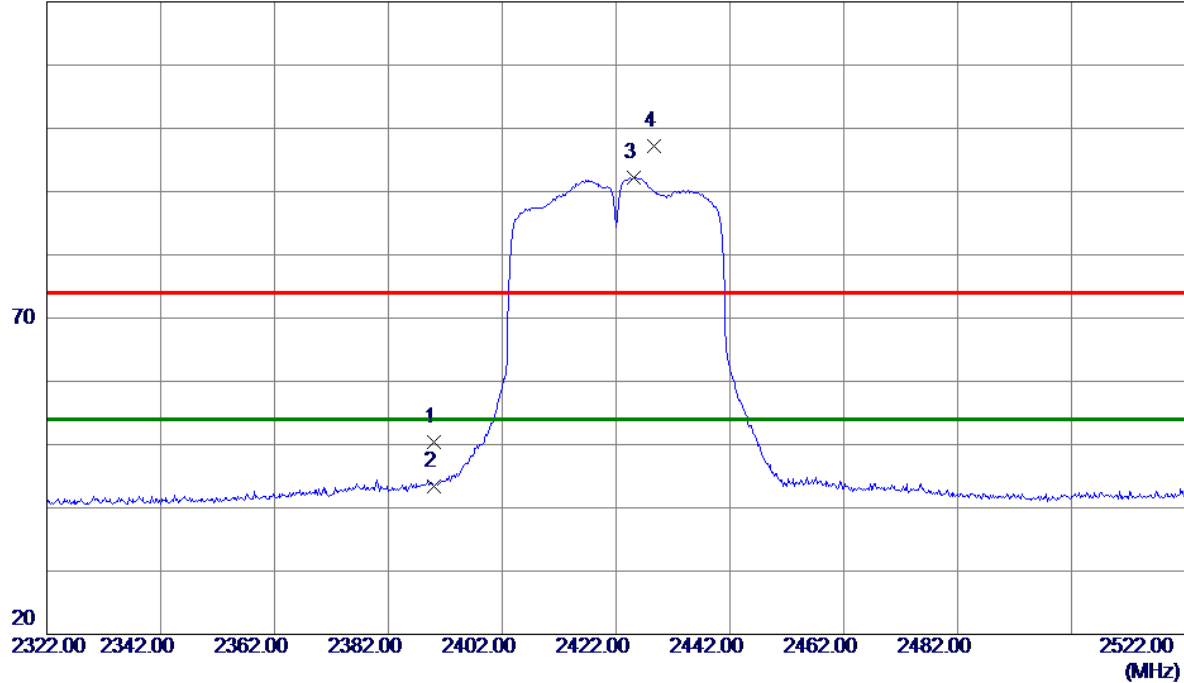
REMARKS:

- (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	2390.0000	17.98	32.39	50.37	74.00	-23.63	Peak	
2	2390.0000	10.98	32.39	43.37	54.00	-10.63	AVG	
3 *	2425.2000	59.78	32.49	92.27	54.00	38.27	AVG	No limit
4	2428.6000	64.78	32.50	97.28	74.00	23.28	Peak	No limit

REMARKS:

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