

FCC Radio Test Report

FCC ID: ARS-10BDL4551T

This report concerns: Original Grant

Project No. : 2006C009
Equipment : Colour Monitor
Brand Name : PHILIPS
Test Model : 10BDL4551T
Series Model : 10BDL4551T*** (The "*" can be any alphanumeric including "/" or blank for marking differences)
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Date of Receipt : Jun. 02, 2020
Date of Test : Jun. 03, 2020 ~ Jul. 06, 2020
Issued Date : Jul. 23, 2020
Report Version : R01
Test Sample : Engineering Sample No.: DG2020060273
Standard(s) : FCC Part15, Subpart C (15.247)
ANSI C63.10-2013
FCC 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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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

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

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

Limitation

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

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

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	Jul. 17, 2020
R01	Modified the comments of cetecom.	Jul. 23, 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.3,Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.

BTL's Test Firm Registration Number for FCC: 357015

BTL's Designation Number for FCC: CN1240

1.2 MEASUREMENT UNCERTAINTY

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

The BTL measurement uncertainty as below table:

A. AC power line conducted emissions Measurement:

Test Site	Method	Measurement Frequency Range	U, (dB)
DG-C02	CISPR	150kHz ~ 30MHz	2.60

B. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)
DG-CB03	CISPR	9kHz ~ 30MHz	V	3.79
		9kHz ~ 30MHz	H	3.57
		30MHz ~ 200MHz	V	4.88
		30MHz ~ 200MHz	H	4.14
		200MHz ~ 1,000MHz	V	4.62
		200MHz ~ 1,000MHz	H	4.80
		1GHz ~ 6GHz	-	4.58
		6GHz ~ 18GHz	-	5.18
		18GHz ~ 26.5GHz	-	3.62
		26.5GHz ~ 40GHz	-	4.00

C. Other Measurement:

Parameter	Uncertainty
Bandwidth	±3.8 %
Maximum Output Power.	±0.95 dB
Conducted Spurious Emission	±2.71 dB
Power Spectral Density	±0.86 dB
Temperature	±0.08 °C
Time	±0.58 %
Supply voltages	±0.3 %

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

1.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By
AC Power Line Conducted Emissions	25°C	55%	AC 120V/60Hz AC 240V/50Hz	Kwok Guo
Radiated Emissions-9K-30MHz	25°C	60%	AC 120V/60Hz	Kwok Guo
Radiated Emissions-30 MHz to 1GHz	22°C	54%	AC 120V/60Hz	Kwok Guo
Radiated Emissions-Above 1000 MHz	22°C	54%	AC 120V/60Hz	Kwok Guo
Bandwidth	25°C	60%	AC 120V/60Hz	Hayden Chen
Maximum output power	25°C	60%	AC 120V/60Hz	Laughing Zhang
Conducted Spurious Emissions	25°C	60%	AC 120V/60Hz	Hayden Chen
Power Spectral Density	25°C	60%	AC 120V/60Hz	Hayden Chen

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Colour Monitor
Brand Name	PHILIPS
Test Model	10BDL4551T
Series Model	10BDL4551T***
Model Difference(s)	The "*" can be any alphanumeric including "/" or blank for marking differences
Power Source	DC Voltage supplied from AC adapter. Model: ADS-26SGP-12 12024E
Power Rating	I/P: 100-240V~, Max 50/60Hz 0.7A O/P: 12V --- 2.0A
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 72.2 Mbps
Maximum Output Power	IEEE 802.11b: 21.19 dBm (0.1315 W) IEEE 802.11g: 23.75 dBm (0.2371 W) IEEE 802.11n (HT20): 23.82 dBm (0.2410 W)

Note:

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

2. Channel List:

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

3. Antenna Specification:

Ant.	Manufacturer	P/N	Antenna Type	Connector	Gain (dBi)
1	CHANGSHU HONGAO TELECOMMUNICATION TECHNOLOGY CO., LTD.	368GAAWA031HBO	PIFA	N/A	2.32

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-20 MHz Mode Channel 06

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

AC power line conducted emissions test	
Final Test Mode	Description
Mode 4	TX N-20 MHz Mode Channel 06

Radiated emissions test - Below 1GHz	
Final Test Mode	Description
Mode 4	TX N20 MHz Mode Channel 06

Radiated emissions test- Above 1GHz	
Final Test Mode:	Description
Mode 1	TX B Mode Channel 01/06/11
Mode 2	TX G Mode Channel 01/06/11
Mode 3	TX N-20 MHz Mode Channel 01/06/11

Conducted test	
Final Test Mode:	Description
Mode 1	TX B Mode Channel 01/06/11
Mode 2	TX G Mode Channel 01/06/11
Mode 3	TX N-20 MHz Mode Channel 01/06/11

NOTE:

- (1) The measurements are performed at the high, middle, low available channels.
- (2) For radiated emission below 1 GHz test, the IEEE 802.11n(HT20) Channel 06 is found to be the worst case and recorded.
- (3) 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.

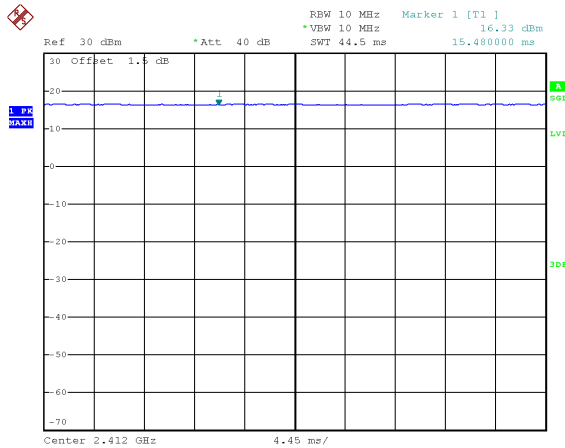
2.3 PARAMETERS OF TEST SOFTWARE

Test Software	rftesttool		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	64	64	64
IEEE 802.11g	53	61	55
IEEE 802.11n (HT20)	54	58	56

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.

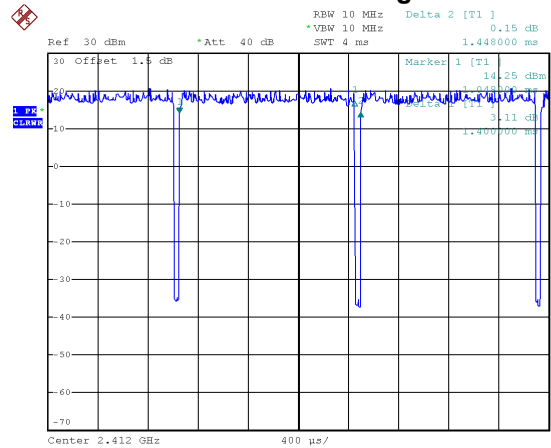
IEEE 802.11b



Date: 7.JUN.2020 20:15:43

Duty cycle = 0.000 ms / 15.480 ms = 100%
 Duty Factor = $10 \log(1/\text{Duty cycle}) = 0.00$

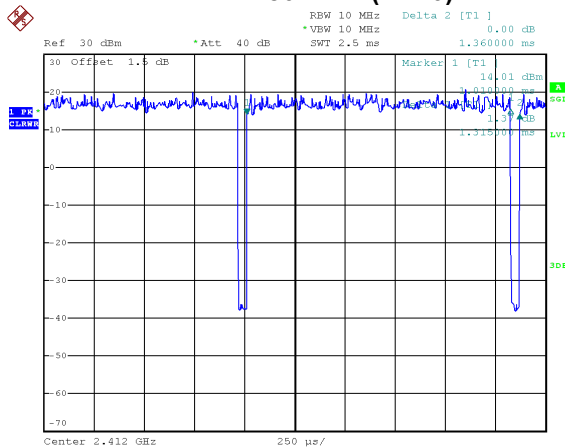
IEEE 802.11g



Date: 7.JUN.2020 20:16:20

Duty cycle = 1.400 ms / 1.448 ms = 96.69%
 Duty Factor = $10 \log(1/\text{Duty cycle}) = 0.15$

IEEE 802.11n (HT20)



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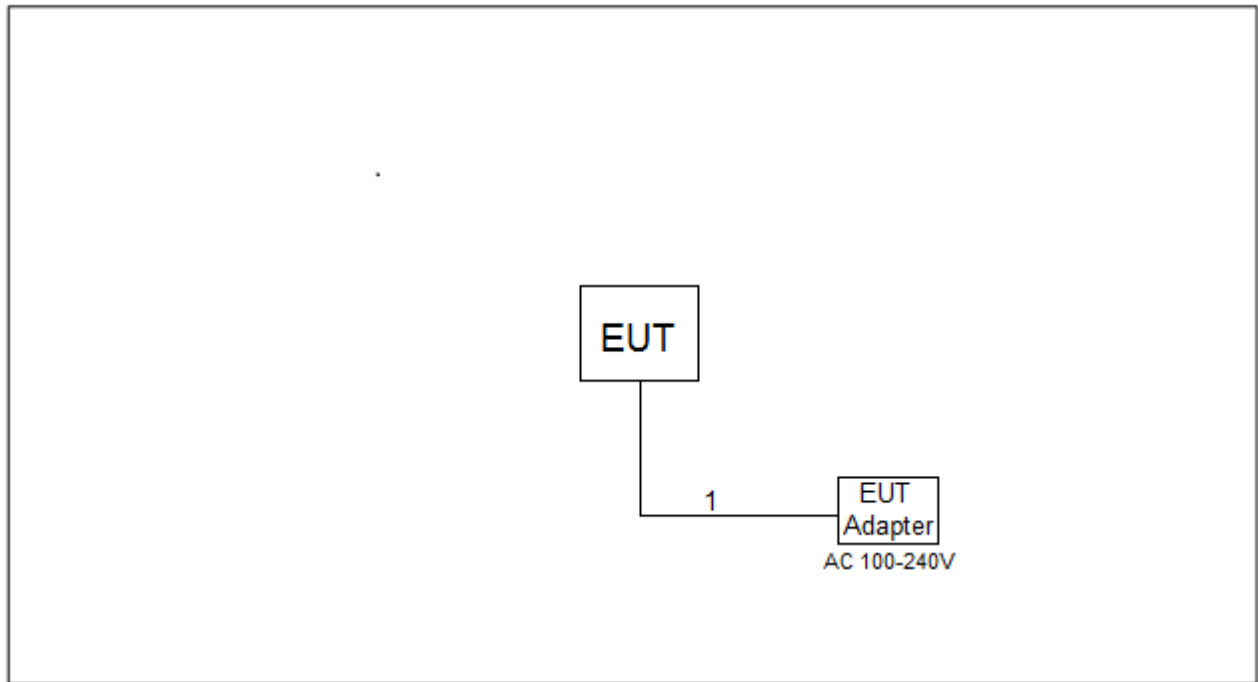
Duty cycle = 1.315 ms / 1.360 ms = 96.69%
 Duty Factor = $10 \log(1/\text{Duty cycle}) = 0.15$

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 $< 98\%$).

2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.6 SUPPORT UNITS

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

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

3. AC POWER LINE CONDUCTED EMISSIONS TEST

3.1 LIMIT

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

NOTE:

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

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

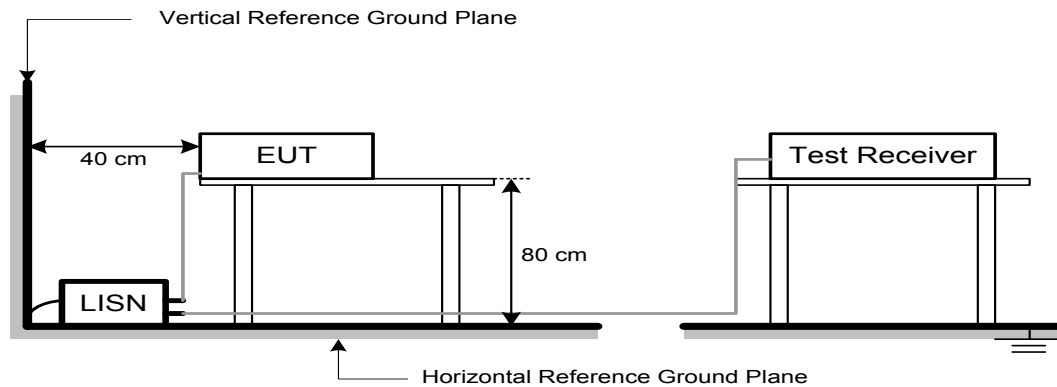
3.2 TEST PROCEDURE

- 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).

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

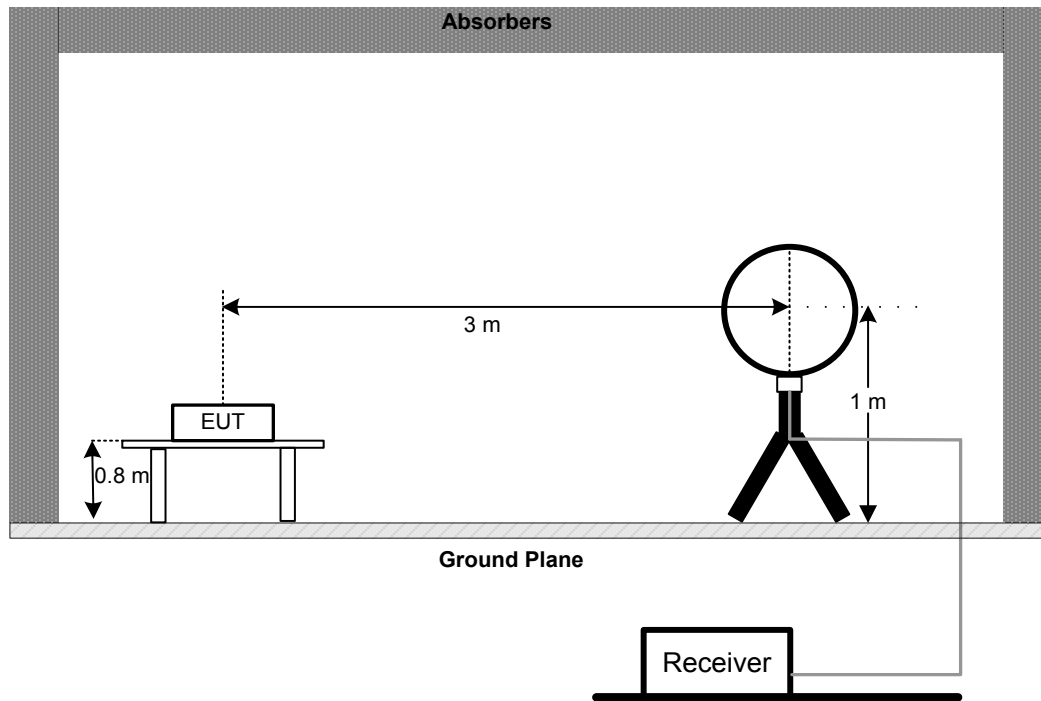
- The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1 GHz)
- The measuring distance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

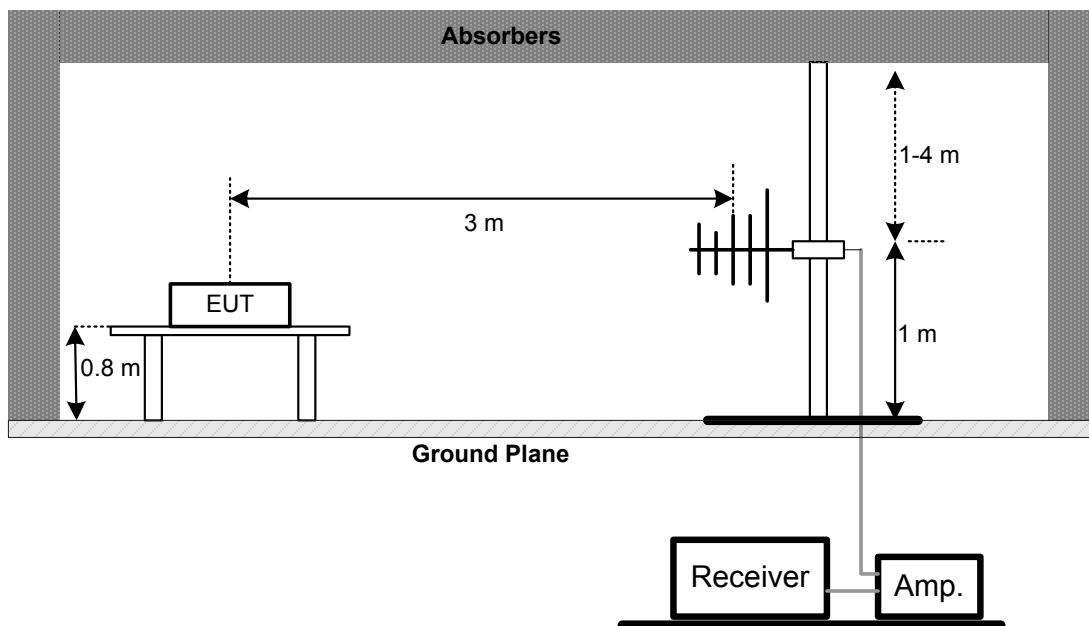
No deviation

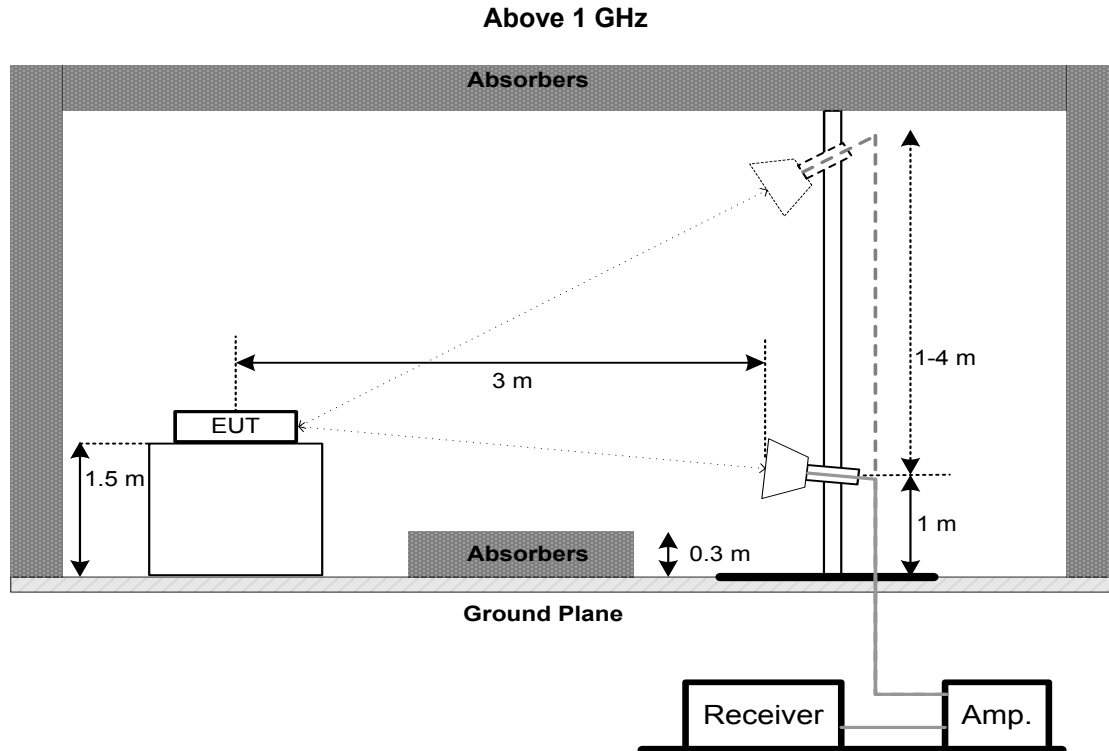
4.4 TEST SETUP

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)	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, Sweep time = auto.
 - For 99% Emission Bandwidth B/G/N-20 Mode: RBW= 300 KHz, VBW=1 MHz, Sweep time = 2.5 ms.
 - For 99% Emission Bandwidth N-40 Mode: RBW= 1 MHz, VBW=3 MHz, 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

6.1 LIMIT

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

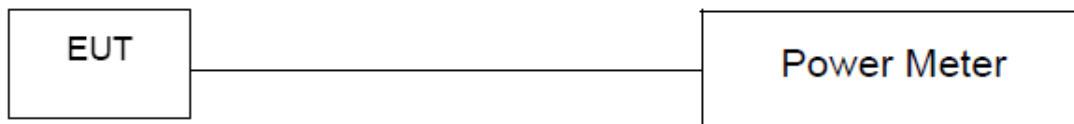
6.2 TEST PROCEDURE

- 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 11.9.2.3.1 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.

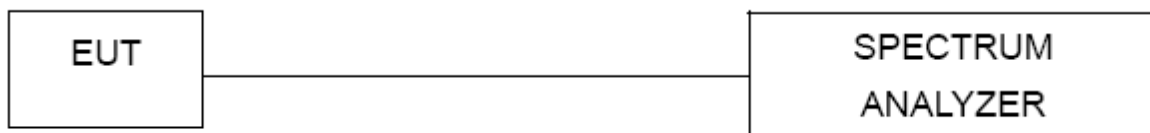
7.2 TEST PROCEDURE

- 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	EMI Test Receiver	R&S	ESCI	100382	Feb. 28, 2021
2	LISN	EMCO	3816/2	52765	Mar. 01, 2021
3	TWO-LINE V-NETWORK	R&S	ENV216	101447	Feb. 28, 2021
4	50Ω Terminator	SHX	TF5-3	15041305	Mar. 01, 2021
5	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
6	Cable	N/A	RG223	12m	Mar. 10, 2021

Radiated Emissions - 9 kHz to 30 MHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	EM	EM-6876-1	230	Apr. 16, 2021
2	Cable	N/A	RG 213/U	N/A	May 29, 2021
3	EMI Test Receiver	R&S	ESCI	100895	Feb. 28, 2021
4	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	Antenna	Schwarzbeck	VULB9160	9160-3232	Mar. 09, 2021
2*	Amplifier	HP	8447D	2944A09673	Aug. 11, 2021
3	Receiver	Agilent	N9038A	MY52130039	Aug. 03, 2020
4	Cable	emci	LMR-400(30MHz-1 GHz)(8m+5m)	N/A	May 22, 2021
5	Controller	CT	SC100	N/A	N/A
6	Controller	MF	MF-7802	MF780208416	N/A
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Radiated Emissions - Above 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Double Ridged Guide Antenna	ETS	3115	75789	May 12, 2021
2	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jun. 23, 2021
3	Amplifier	Agilent	8449B	3008A02333	Mar. 01, 2021
4	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 07, 2021
5	Receiver	Agilent	N9038A	MY52130039	Aug. 03, 2020
6	Controller	CT	SC100	N/A	N/A
7	Controller	MF	MF-7802	MF780208416	N/A
8	Cable	N/A	EMC104-SM-SM-6 000	N/A	May 09, 2021
9	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Bandwidth & Antenna Conducted Spurious Emissions & Power Spectral Density					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 03, 2020

Maximum Output Power					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Peak Power Analyzer	Keysight	8990B	MY51000506	Aug. 03, 2020
2	Wideband power sensor	Keysight	N1923A	MY58310004	Aug. 03, 2020

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

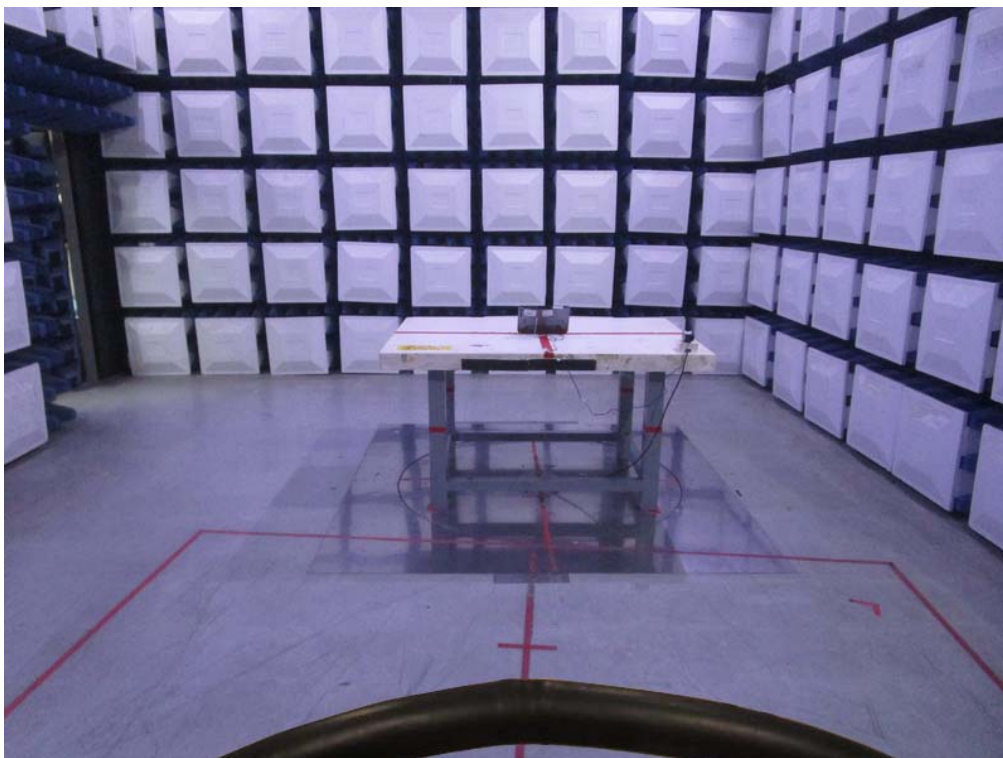
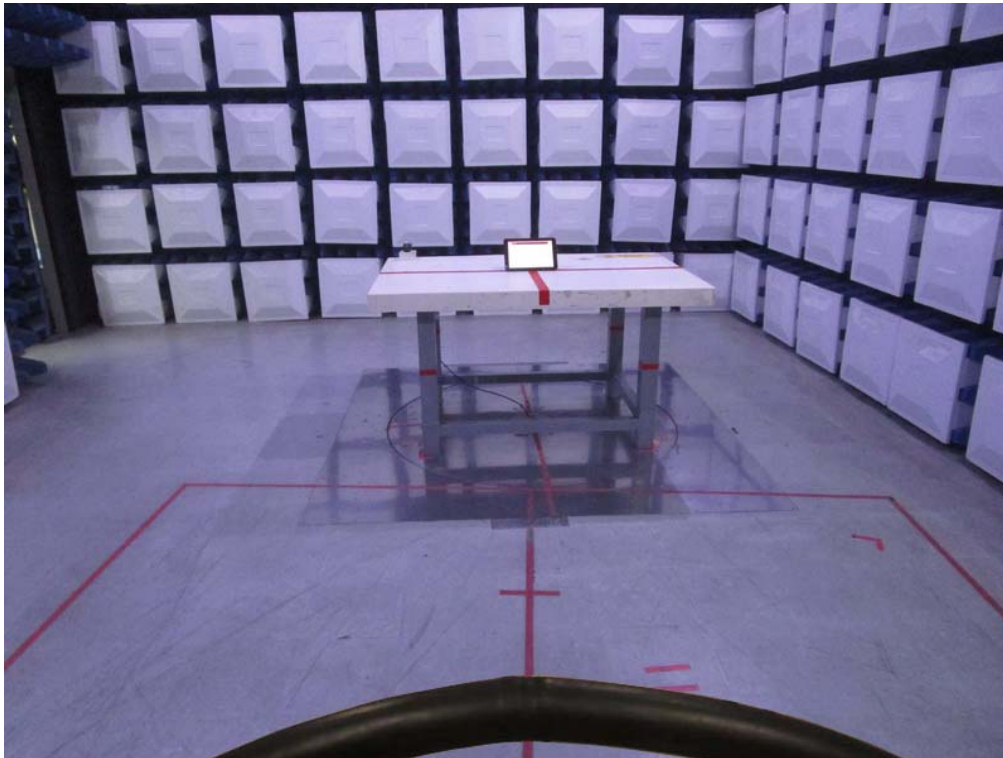
"*" calibration period of equipment list is three year.

Except * item, all calibration period of equipment list is one year.

10. EUT TEST PHOTO

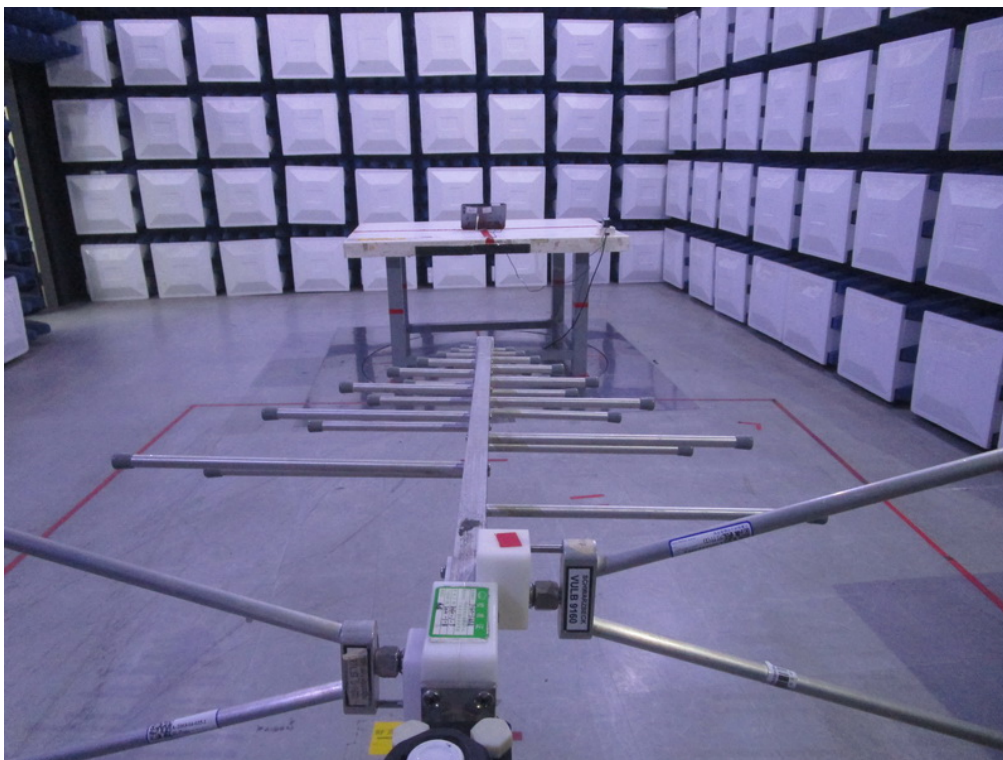
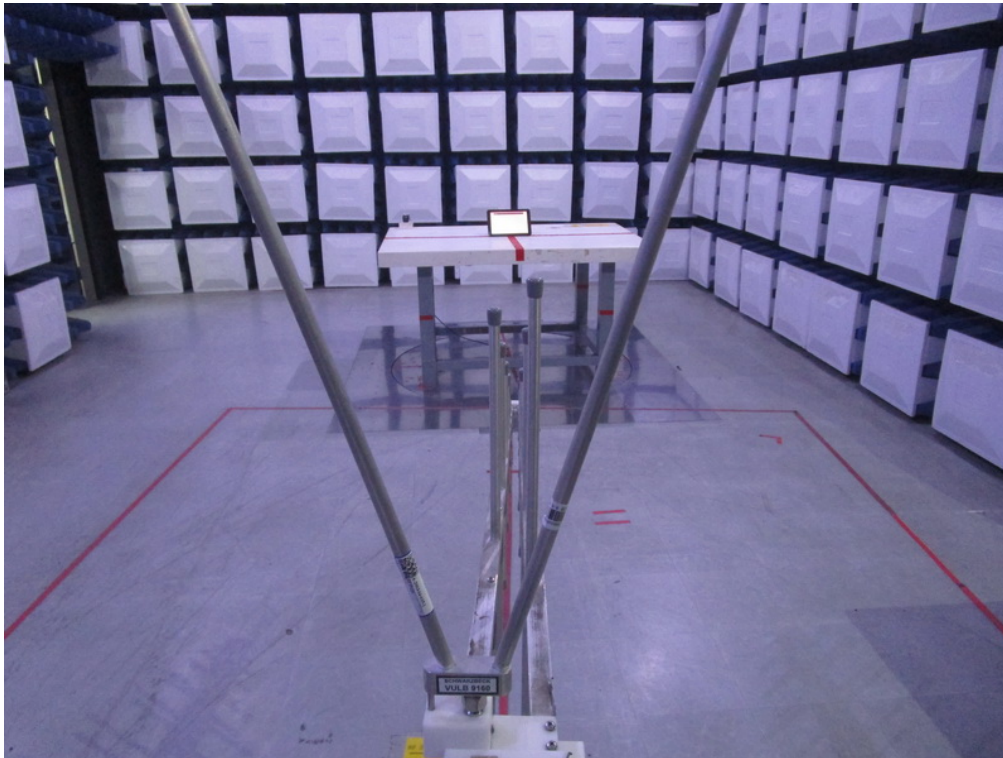
AC Power Line Conducted Emissions Test Photos



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

Radiated Emissions Test Photos

30 MHz to 1 GHz



Radiated Emissions Test Photos

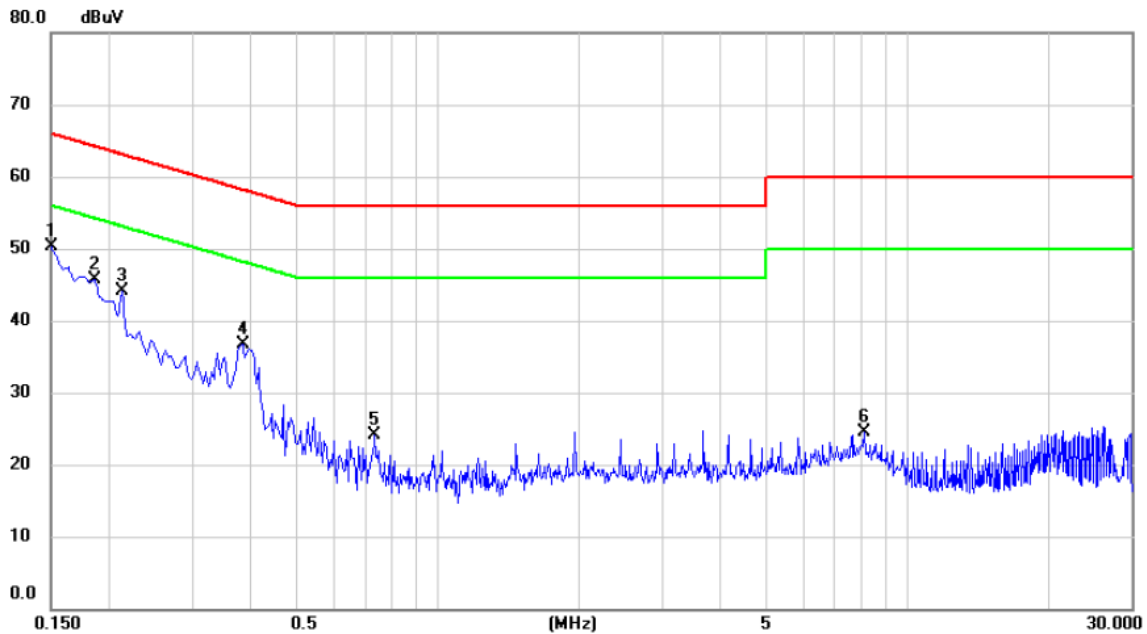
Above 1 GHz



APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

Test Mode:	TX N20 Mode Channel 06
Test Voltage	AC 120V/60Hz

Line



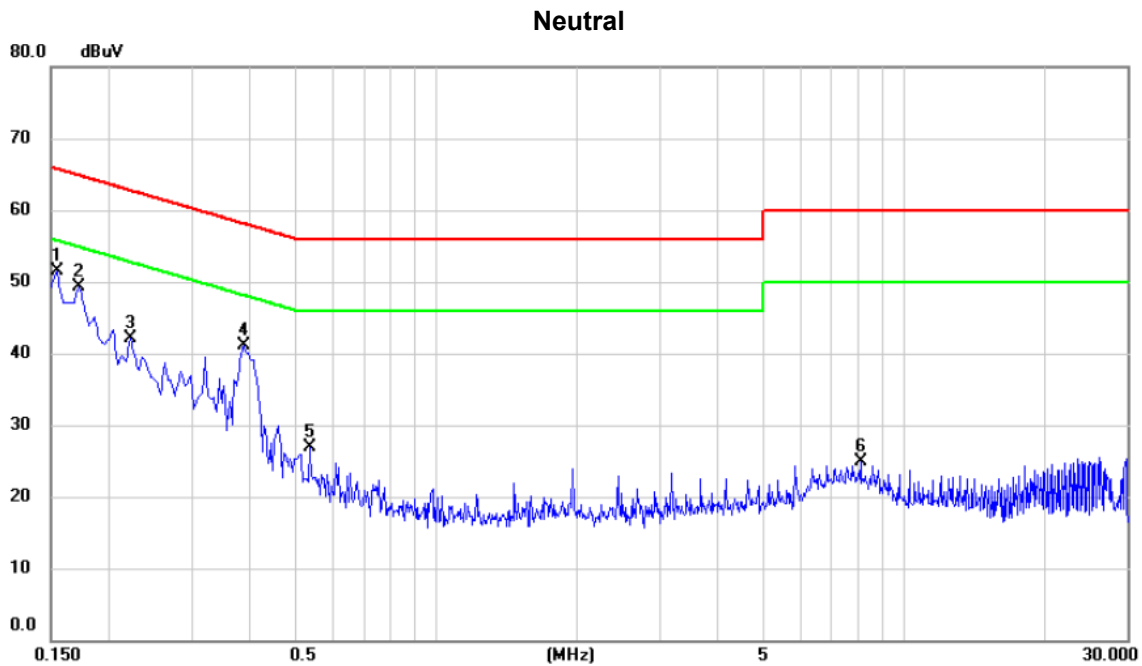
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.150	40.63	9.67	50.30	66.00	-15.70	peak	
2		0.186	35.91	9.86	45.77	64.21	-18.44	peak	
3		0.213	34.17	9.90	44.07	63.09	-19.02	peak	
4		0.384	26.69	9.92	36.61	58.19	-21.58	peak	
5		0.735	14.22	9.91	24.13	56.00	-31.87	peak	
6		8.066	13.99	10.56	24.55	60.00	-35.45	peak	

REMARKS:

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

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

Test Mode:	TX N20 Mode Channel 06
Test Voltage	AC 120V/60Hz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	*	0.154	41.78	9.77	51.55	65.75	-14.20	peak	
2		0.172	39.42	9.91	49.33	64.84	-15.51	peak	
3		0.222	32.13	9.99	42.12	62.74	-20.62	peak	
4		0.389	31.01	10.08	41.09	58.10	-17.01	peak	
5		0.537	16.66	10.15	26.81	56.00	-29.19	peak	
6		8.066	13.92	10.91	24.83	60.00	-35.17	peak	

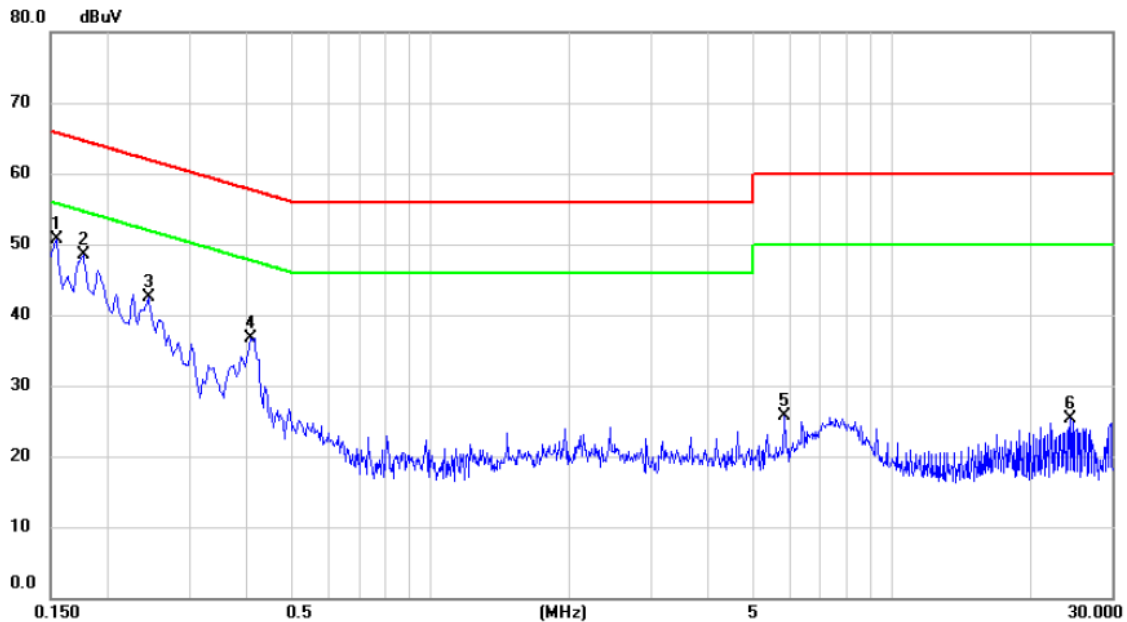
REMARKS:

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

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

Test Mode:	TX N20 Mode Channel 06
Test Voltage	AC 240V/50Hz

Line

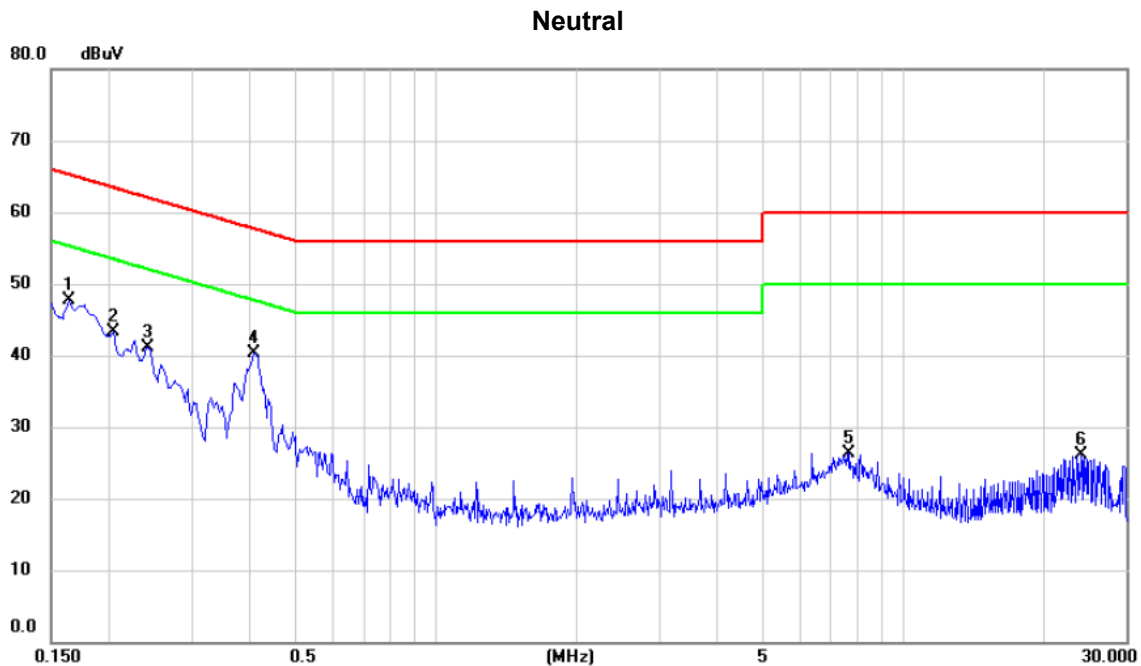


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.154	41.01	9.70	50.71	65.75	-15.04	peak	
2		0.177	38.70	9.84	48.54	64.63	-16.09	peak	
3		0.244	32.56	9.87	42.43	61.94	-19.51	peak	
4		0.406	26.75	9.92	36.67	57.72	-21.05	peak	
5		5.865	15.29	10.39	25.68	60.00	-34.32	peak	
6		24.441	14.35	11.03	25.38	60.00	-34.62	peak	

REMARKS:

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

Test Mode:	TX N20 Mode Channel 06
Test Voltage	AC 240V/50Hz



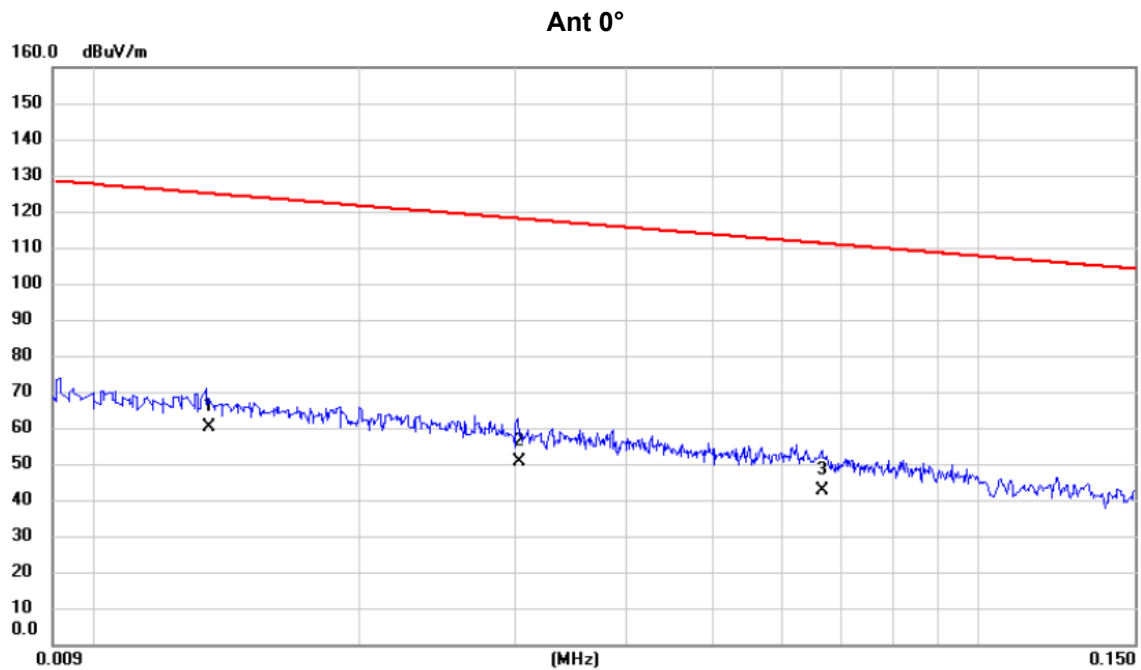
No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0.164	37.84	9.85	47.69	65.28	-17.59	peak	
2	0.204	33.28	10.01	43.29	63.45	-20.16	peak	
3	0.242	31.05	9.98	41.03	62.04	-21.01	peak	
4 *	0.406	30.27	10.09	40.36	57.72	-17.36	peak	
5	7.656	15.40	10.88	26.28	60.00	-33.72	peak	
6	23.955	14.68	11.34	26.02	60.00	-33.98	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 N20 Mode Channel 06



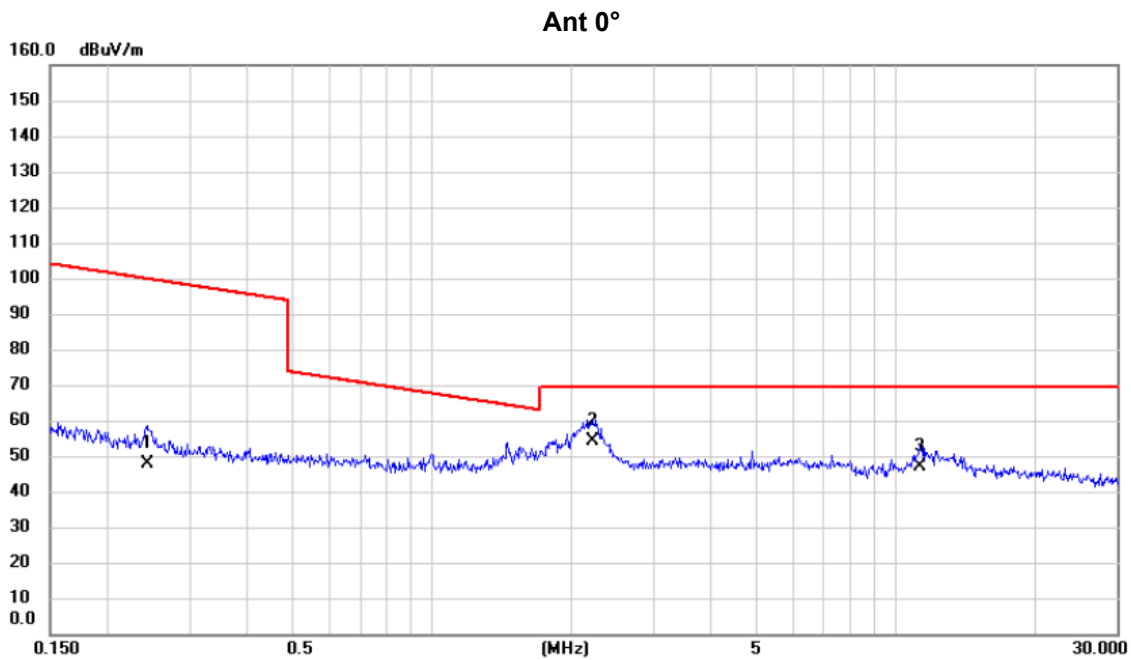
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0135	38.61	21.45	60.06	125.00	-64.94	AVG	
2		0.0303	29.52	21.05	50.57	117.98	-67.41	AVG	
3		0.0665	21.56	21.00	42.56	111.15	-68.59	AVG	

REMARKS:

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

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

Test Mode: TX N20 Mode Channel 06



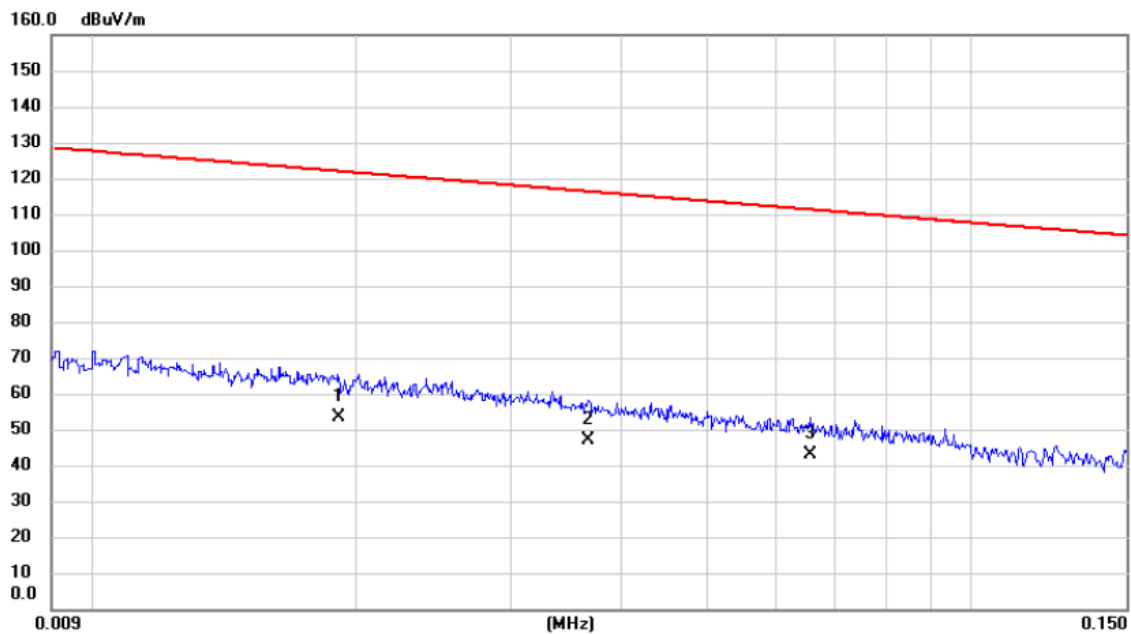
No.	Mk.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.2430	26.91	20.86	47.77	99.89	-52.12	AVG	
2	*	2.2250	32.17	21.84	54.01	69.54	-15.53	QP	
3		11.2572	24.68	22.49	47.17	69.54	-22.37	QP	

REMARKS:

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

Test Mode: TX N20 Mode Channel 06

Ant 90°



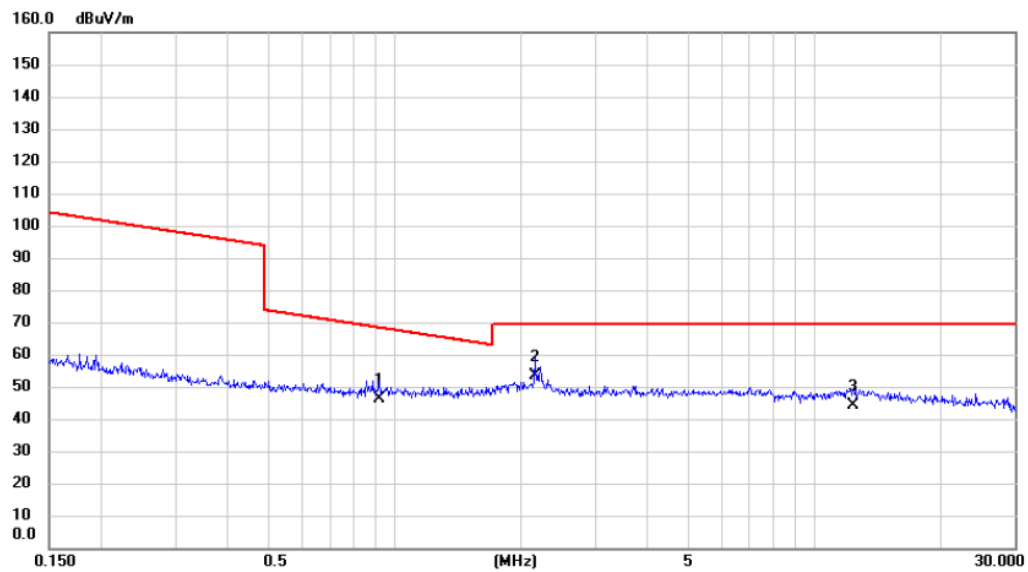
No.	Mk.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.0191	32.28	21.17	53.45	121.98	-68.53	AVG	
2		0.0367	25.83	21.02	46.85	116.31	-69.46	AVG	
3	*	0.0656	21.94	20.99	42.93	111.27	-68.34	AVG	

REMARKS:

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

Test Mode: TX N20 Mode Channel 06

Ant 90°



No.	Mk.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		0.9184	24.86	21.52	46.38	68.34	-21.96	QP	
2	*	2.1552	31.61	21.84	53.45	69.54	-16.09	QP	
3		12.3837	21.52	22.64	44.16	69.54	-25.38	QP	

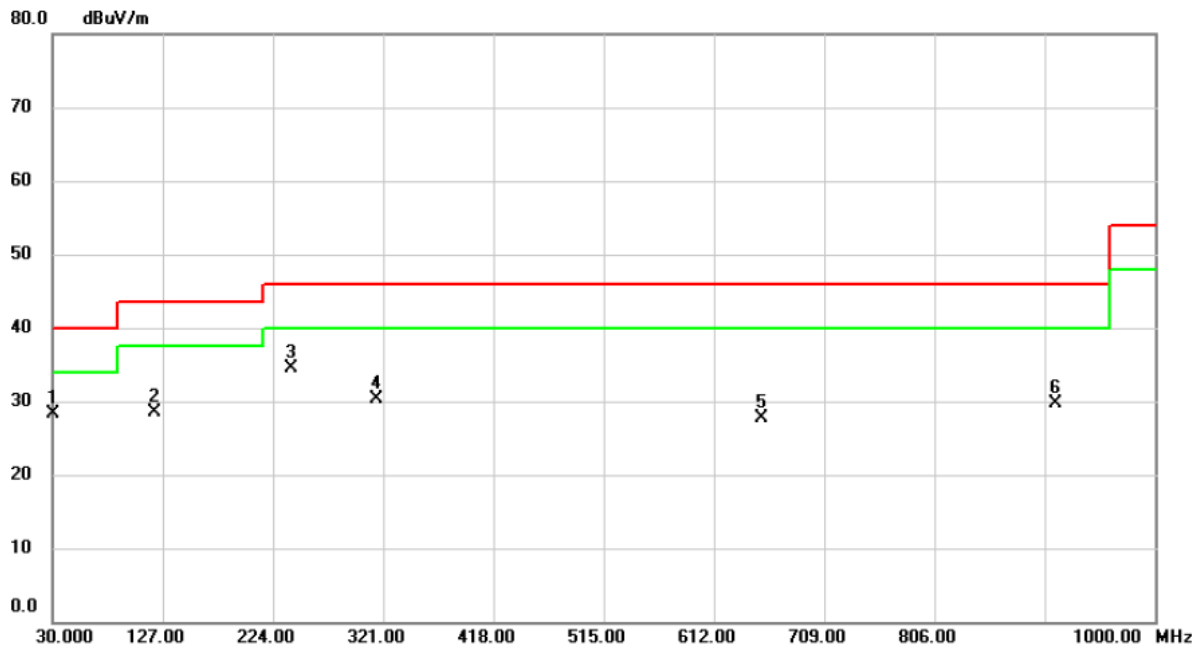
REMARKS:

- (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 N20 Mode Channel 06

Vertical



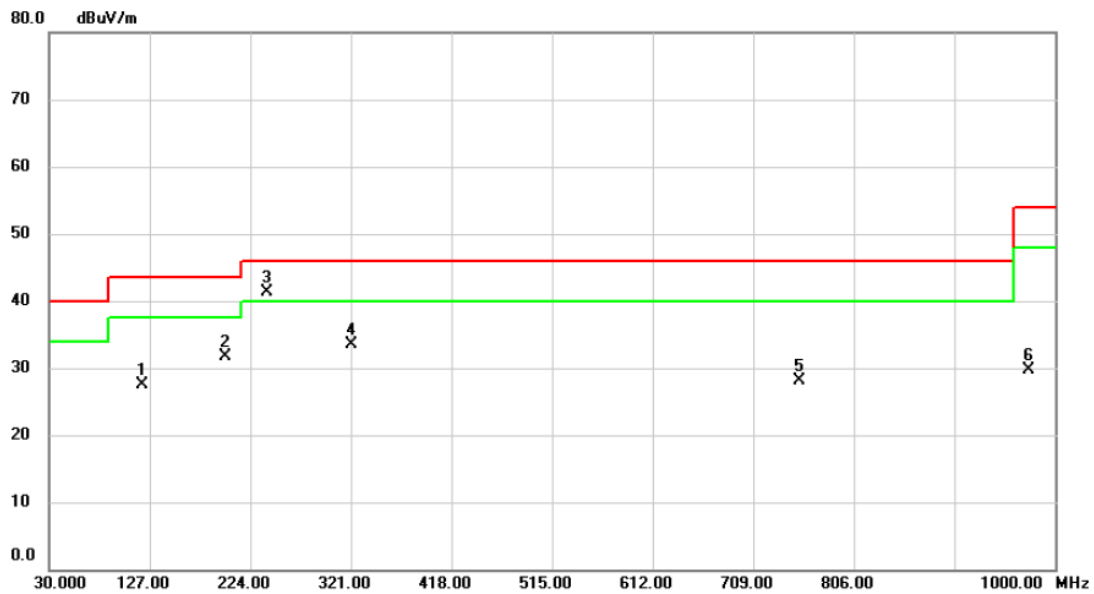
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		30.000	43.08	-14.75	28.33	40.00	-11.67	peak	
2		119.240	41.77	-13.24	28.53	43.50	-14.97	peak	
3	*	240.490	48.69	-14.13	34.56	46.00	-11.44	peak	
4		315.180	41.76	-11.40	30.36	46.00	-15.64	peak	
5		653.710	32.73	-5.06	27.67	46.00	-18.33	peak	
6		912.700	31.56	-1.83	29.73	46.00	-16.27	peak	

REMARKS:

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

Test Mode: TX N20 Mode Channel 06

Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		120.210	40.72	-13.12	27.60	43.50	-15.90	peak	
2		199.750	47.03	-15.31	31.72	43.50	-11.78	peak	
3	*	240.490	55.51	-14.13	41.38	46.00	-4.62	peak	
4		321.970	44.71	-11.30	33.41	46.00	-12.59	peak	
5		753.620	32.08	-4.05	28.03	46.00	-17.97	peak	
6		974.780	30.09	-0.42	29.67	54.00	-24.33	peak	

REMARKS:

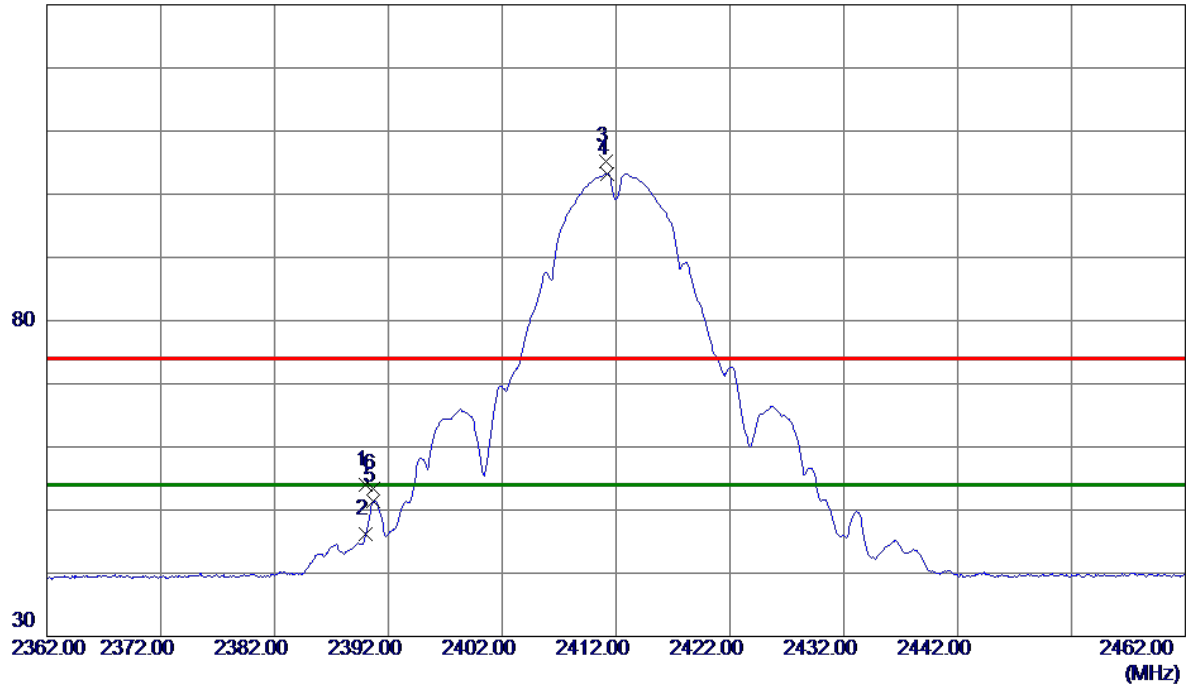
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ

Test Mode: TX B Mode 2412 MHz

Vertical

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	45.65	8.29	53.94	74.00	-20.06	Peak	
2	2390.0000	37.87	8.29	46.16	54.00	-7.84	AVG	
3	2411.1000	96.80	8.31	105.11	74.00	31.11	Peak	No Limit
4 *	2411.2000	94.90	8.31	103.21	54.00	49.21	AVG	No Limit
5	2390.7000	43.09	8.29	51.38	54.00	-2.62	AVG	
6	2390.7000	45.13	8.29	53.42	74.00	-20.58	Peak	

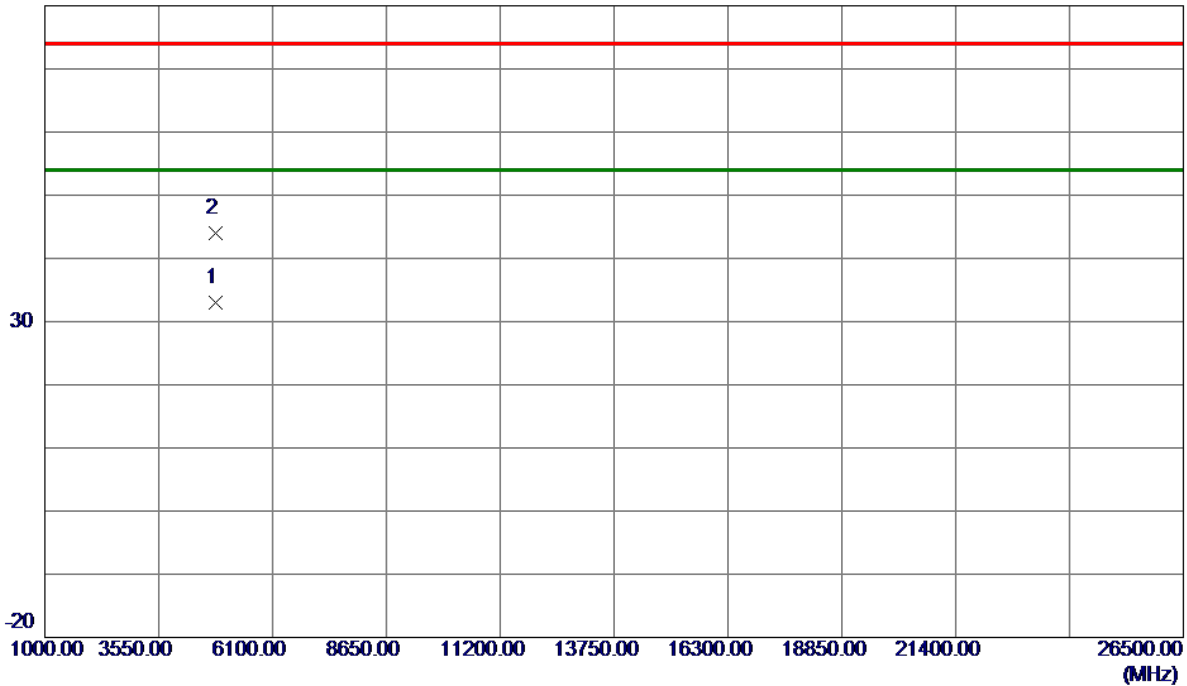
REMARKS:

- (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 *	4819.2599	27.74	5.31	33.05	54.00	-20.95	AVG	
2	4823.7500	38.67	5.32	43.99	74.00	-30.01	Peak	

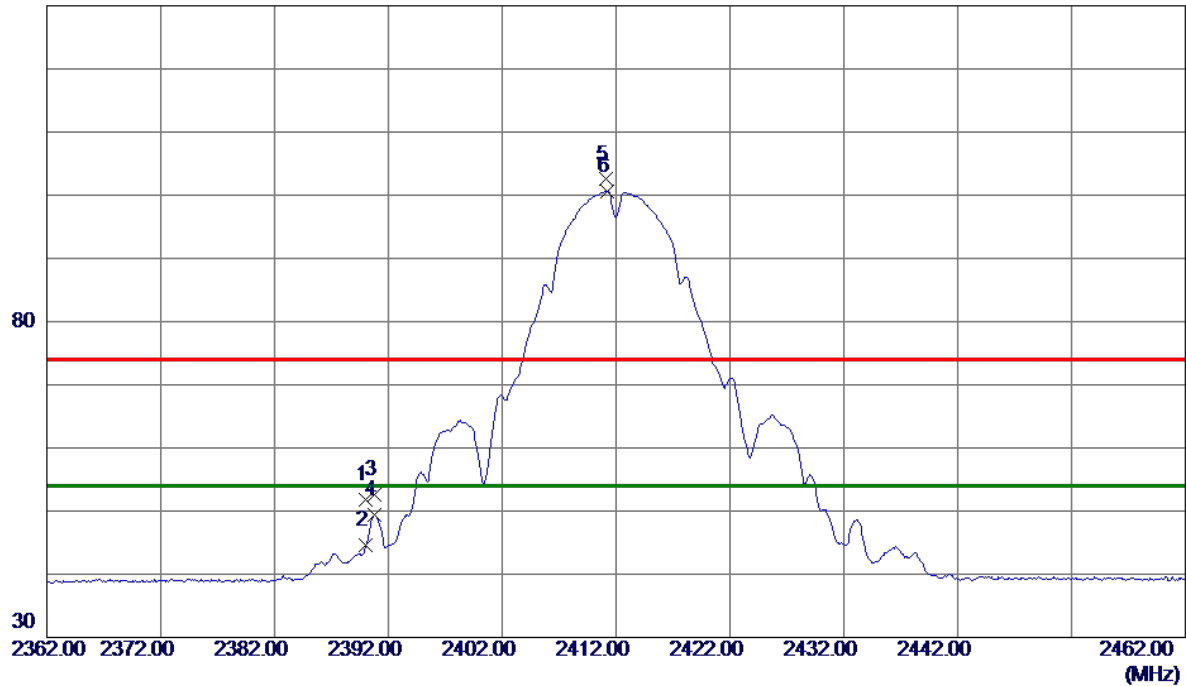
REMARKS:

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

Test Mode: TX B Mode 2412 MHz

Horizontal

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	43.48	8.29	51.77	74.00	-22.23	Peak	
2	2390.0000	36.26	8.29	44.55	54.00	-9.45	AVG	
3	2390.8000	44.23	8.29	52.52	74.00	-21.48	Peak	
4	2390.8000	41.05	8.29	49.34	54.00	-4.66	AVG	
5	2411.1000	94.19	8.31	102.50	74.00	28.50	Peak	No Limit
6 *	2411.2000	92.27	8.31	100.58	54.00	46.58	AVG	No Limit

REMARKS:

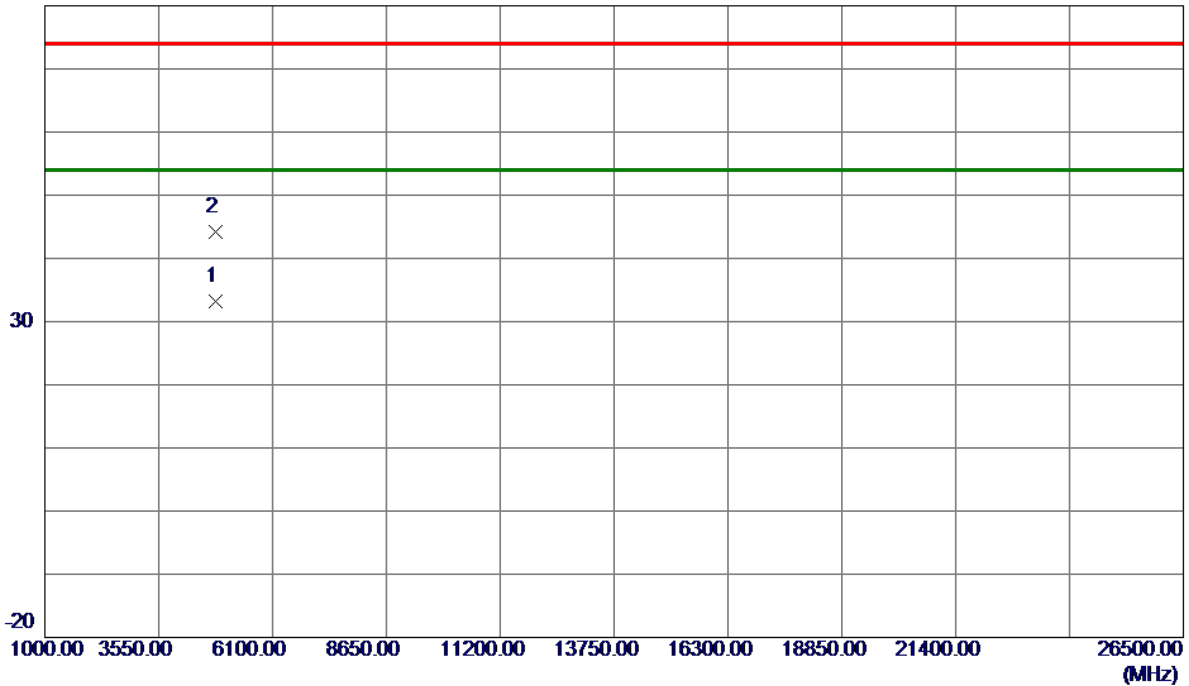
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX B Mode 2412 MHz
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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 *	4819.3400	27.88	5.31	33.19	54.00	-20.81	AVG	
2	4819.5600	38.88	5.31	44.19	74.00	-29.81	Peak	

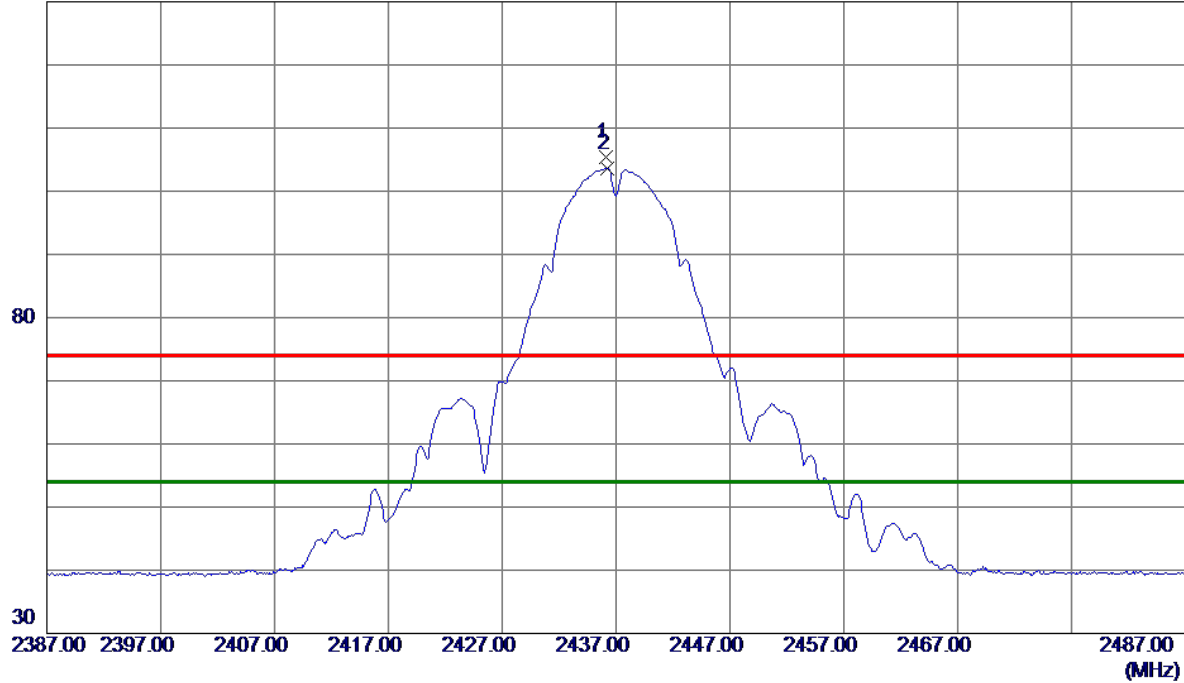
REMARKS:

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

Test Mode: TX B Mode 2437 MHz

Vertical

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2436.1000	97.12	8.34	105.46	74.00	31.46	Peak	No Limit
2 *	2436.2000	95.21	8.34	103.55	54.00	49.55	AVG	No Limit

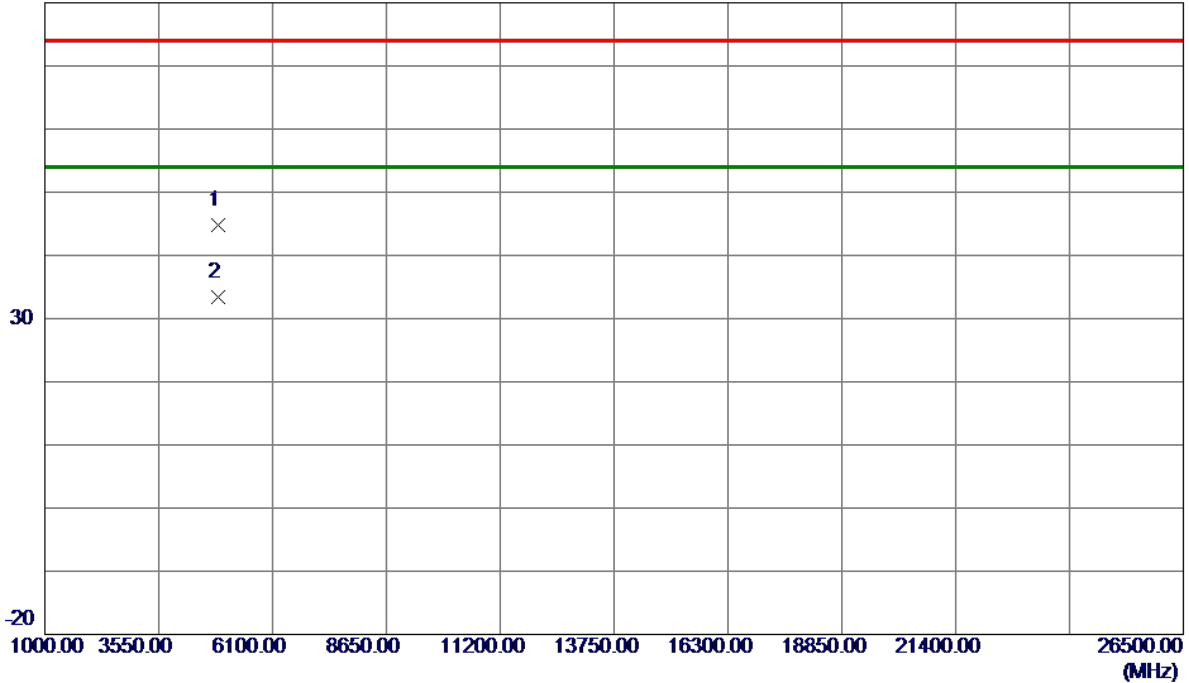
REMARKS:

- (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	4870.0700	39.29	5.45	44.74	74.00	-29.26	Peak	
2 *	4870.1100	27.89	5.45	33.34	54.00	-20.66	AVG	

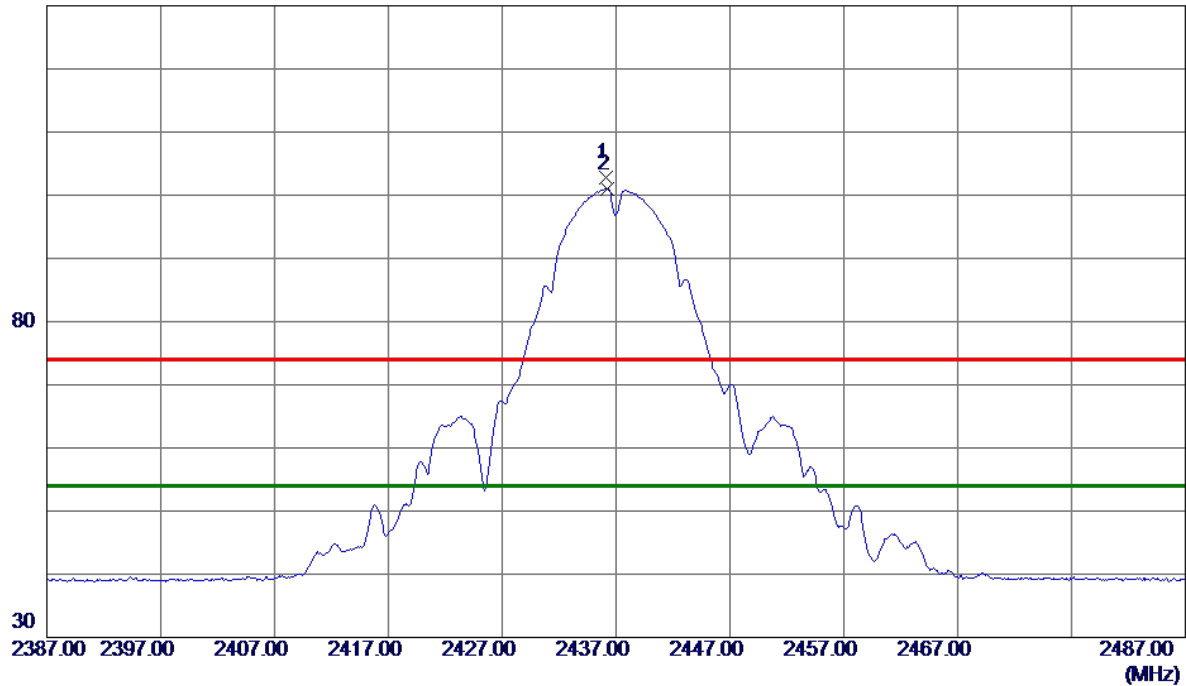
REMARKS:

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

Test Mode: TX B Mode 2437 MHz

Horizontal

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2436.1000	94.51	8.34	102.85	74.00	28.85	Peak	No Limit
2 *	2436.2000	92.65	8.34	100.99	54.00	46.99	AVG	No Limit

REMARKS:

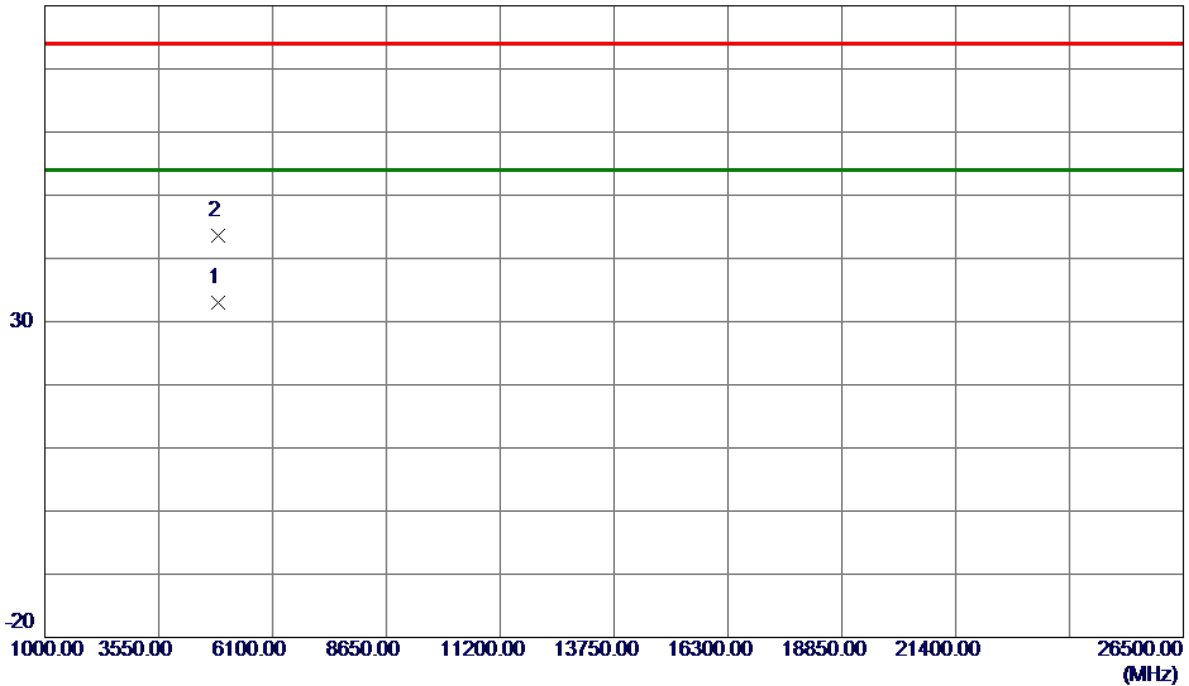
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX B Mode 2437 MHz
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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 *	4870.2000	27.54	5.45	32.99	54.00	-21.01	AVG	
2	4871.0600	38.06	5.45	43.51	74.00	-30.49	Peak	

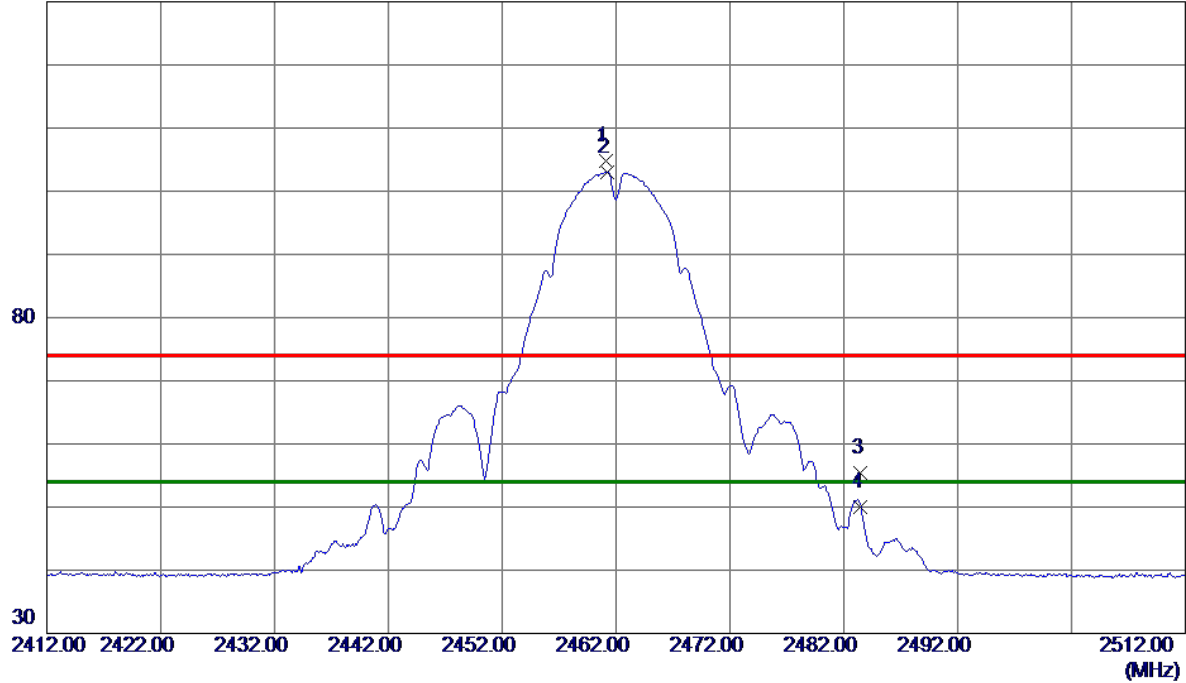
REMARKS:

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

Test Mode: TX B Mode 2462 MHz

Vertical

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2461.1000	96.50	8.36	104.86	74.00	30.86	Peak	No Limit
2 *	2461.2000	94.62	8.36	102.98	54.00	48.98	AVG	No Limit
3	2483.5000	46.97	8.39	55.36	74.00	-18.64	Peak	
4	2483.5000	41.70	8.39	50.09	54.00	-3.91	AVG	

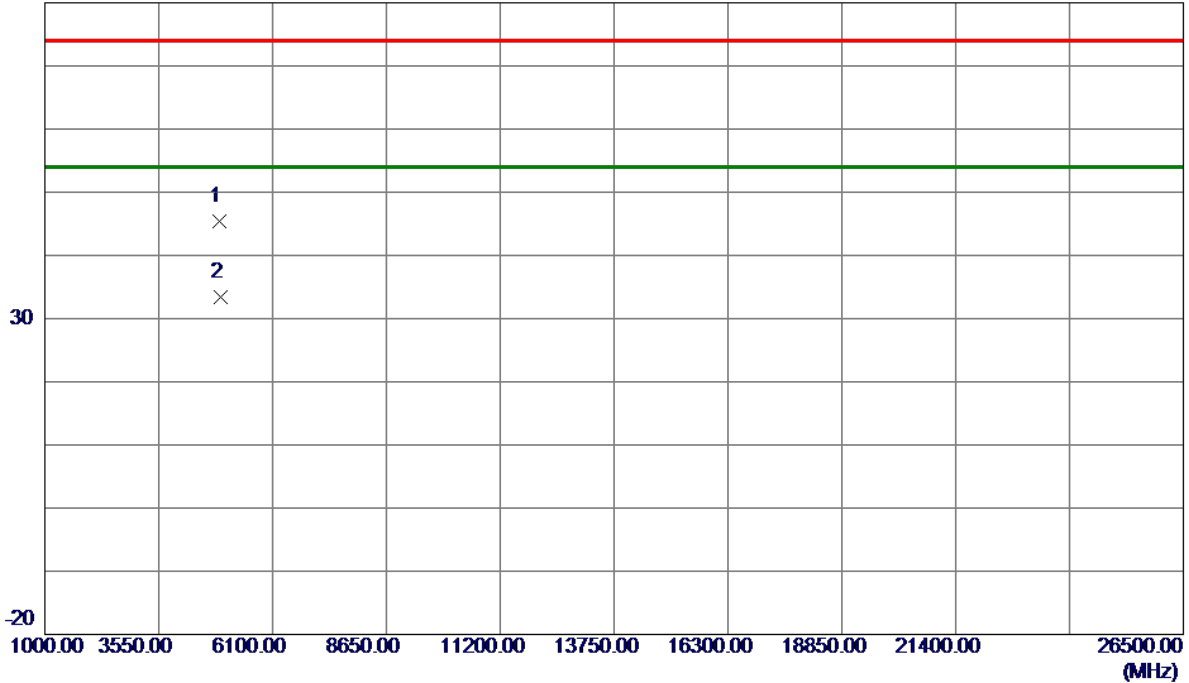
REMARKS:

- (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	4920.5700	39.76	5.58	45.34	74.00	-28.66	Peak	
2 *	4926.3600	27.87	5.60	33.47	54.00	-20.53	AVG	

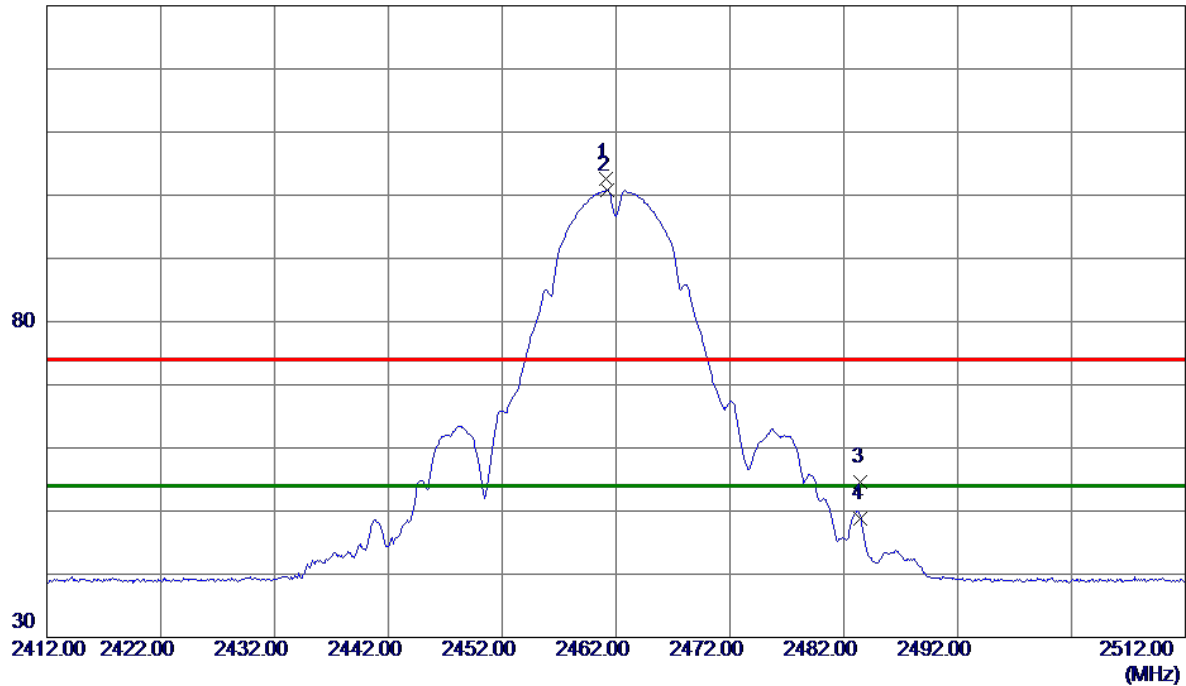
REMARKS:

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

Test Mode: TX B Mode 2462 MHz

Horizontal

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2461.1000	94.34	8.36	102.70	74.00	28.70	Peak	No Limit
2 *	2461.2000	92.43	8.36	100.79	54.00	46.79	AVG	No Limit
3	2483.5000	46.17	8.39	54.56	74.00	-19.44	Peak	
4	2483.5000	40.40	8.39	48.79	54.00	-5.21	AVG	

REMARKS:

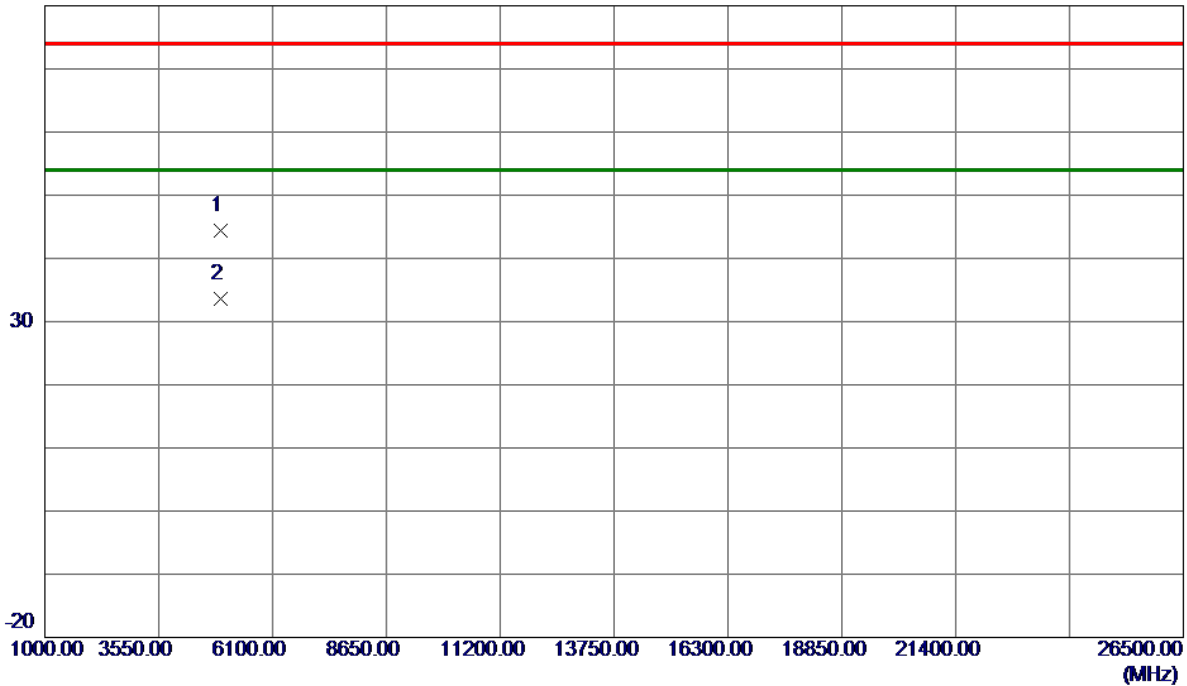
(1) Measurement Value = Reading Level + Correct Factor.

(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	4925.7700	38.71	5.60	44.31	74.00	-29.69	Peak	
2 *	4928.9100	27.99	5.61	33.60	54.00	-20.40	AVG	

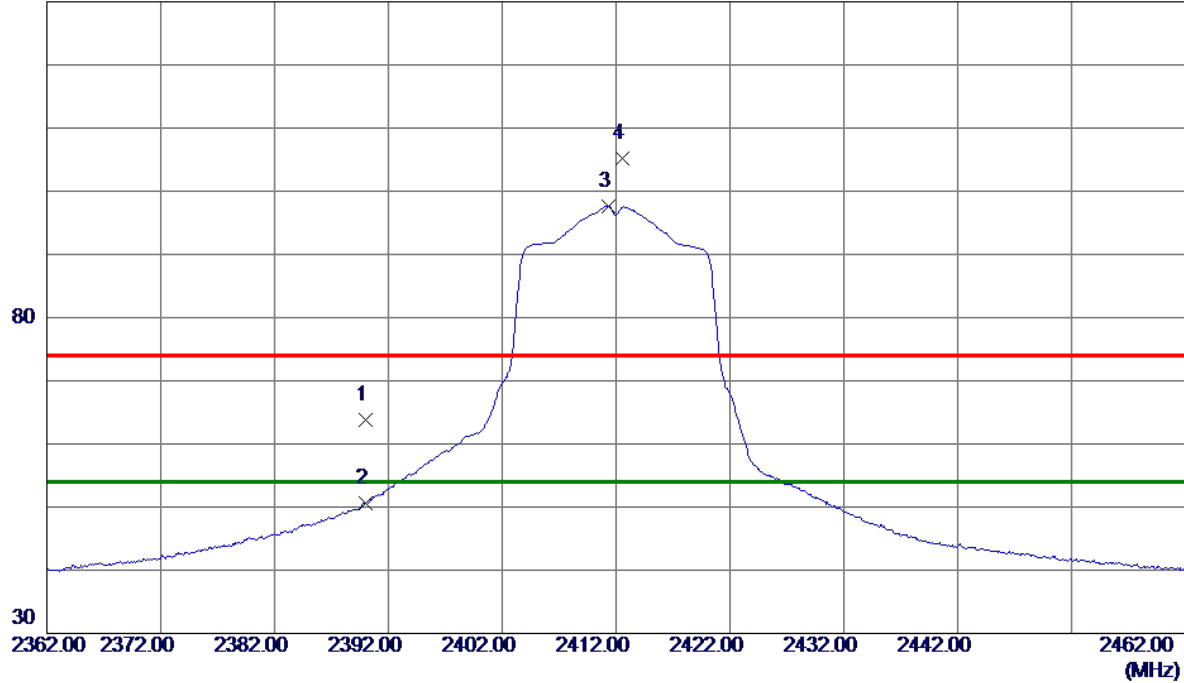
REMARKS:

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

Test Mode: TX G Mode 2412 MHz

Vertical

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	55.50	8.29	63.79	74.00	-10.21	Peak	
2	2390.0000	42.33	8.29	50.62	54.00	-3.38	AVG	
3 *	2411.3000	89.32	8.31	97.63	54.00	43.63	AVG	No Limit
4	2412.6000	96.98	8.31	105.29	74.00	31.29	Peak	No Limit

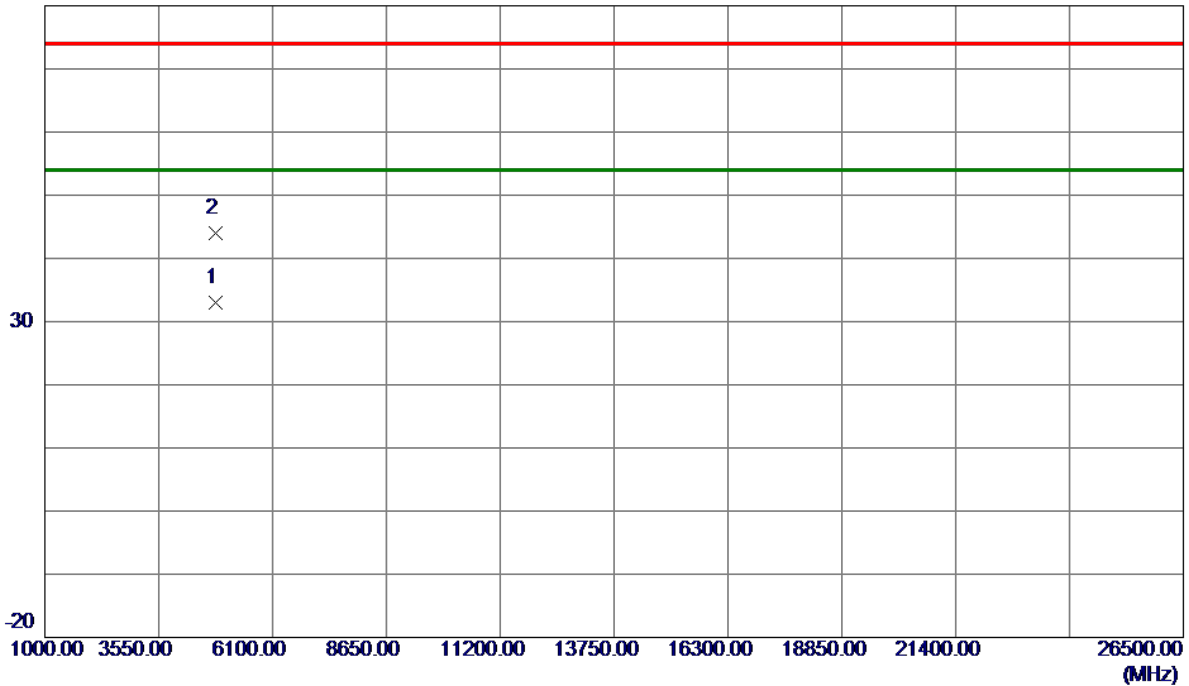
REMARKS:

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

Test Mode: TX G Mode 2412 MHz

Vertical

80 dBuV/m



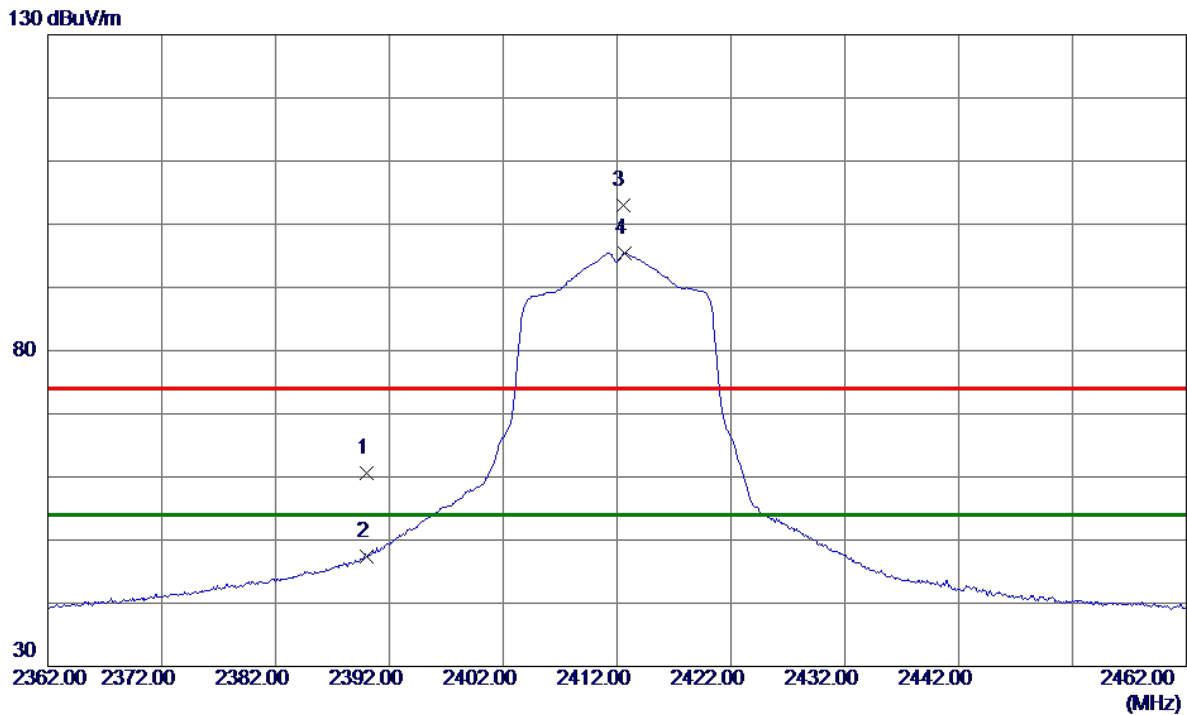
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	4819.8400	27.75	5.31	33.06	54.00	-20.94	AVG	
2	4824.4000	38.68	5.32	44.00	74.00	-30.00	Peak	

REMARKS:

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

Test Mode: TX G Mode 2412 MHz

Horizontal



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	52.37	8.29	60.66	74.00	-13.34	Peak	
2	2390.0000	39.06	8.29	47.35	54.00	-6.65	AVG	
3	2412.5000	94.68	8.31	102.99	74.00	28.99	Peak	No Limit
4 *	2412.7000	87.11	8.31	95.42	54.00	41.42	AVG	No Limit

REMARKS:

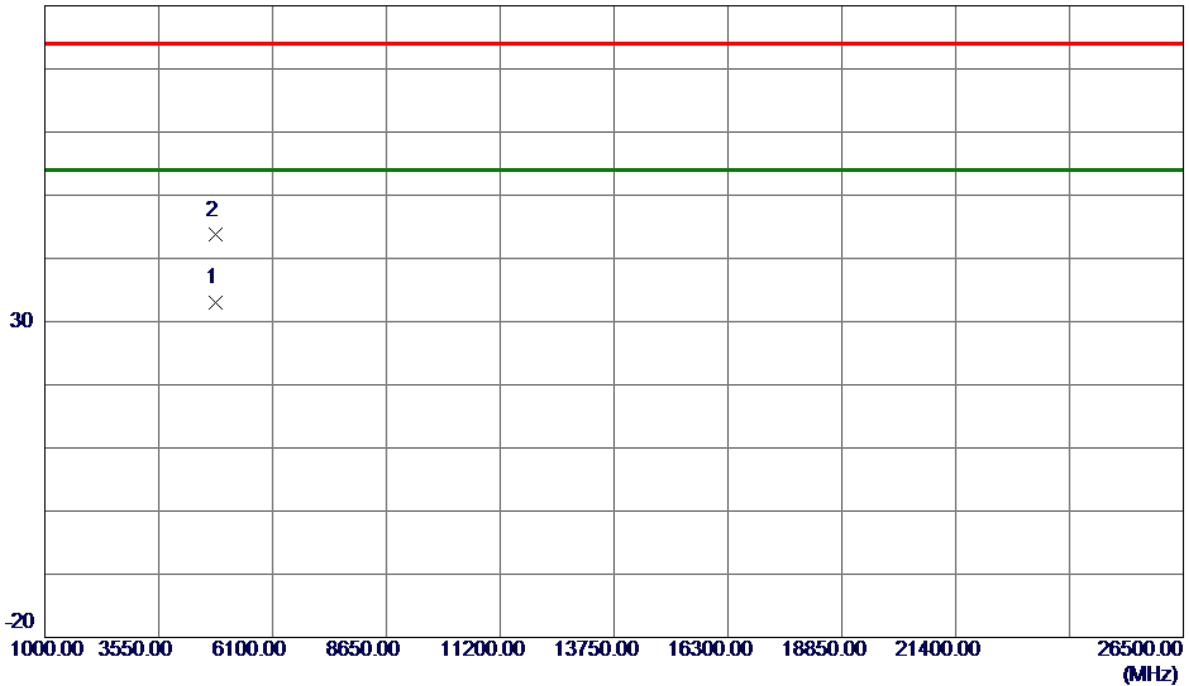
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX G Mode 2412 MHz
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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 *	4819.4400	27.62	5.31	32.93	54.00	-21.07	AVG	
2	4822.8400	38.38	5.32	43.70	74.00	-30.30	Peak	

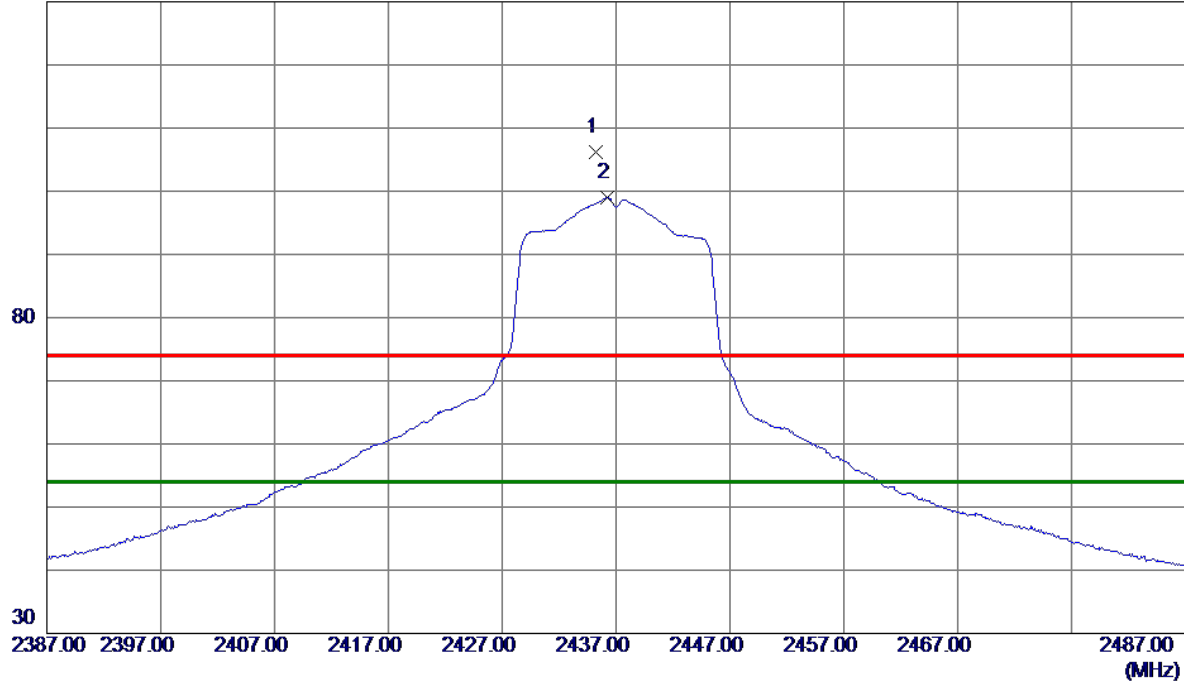
REMARKS:

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

Test Mode: TX G Mode 2437 MHz

Vertical

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2435.2000	97.95	8.34	106.29	74.00	32.29	Peak	No Limit
2 *	2436.2000	90.62	8.34	98.96	54.00	44.96	AVG	No Limit

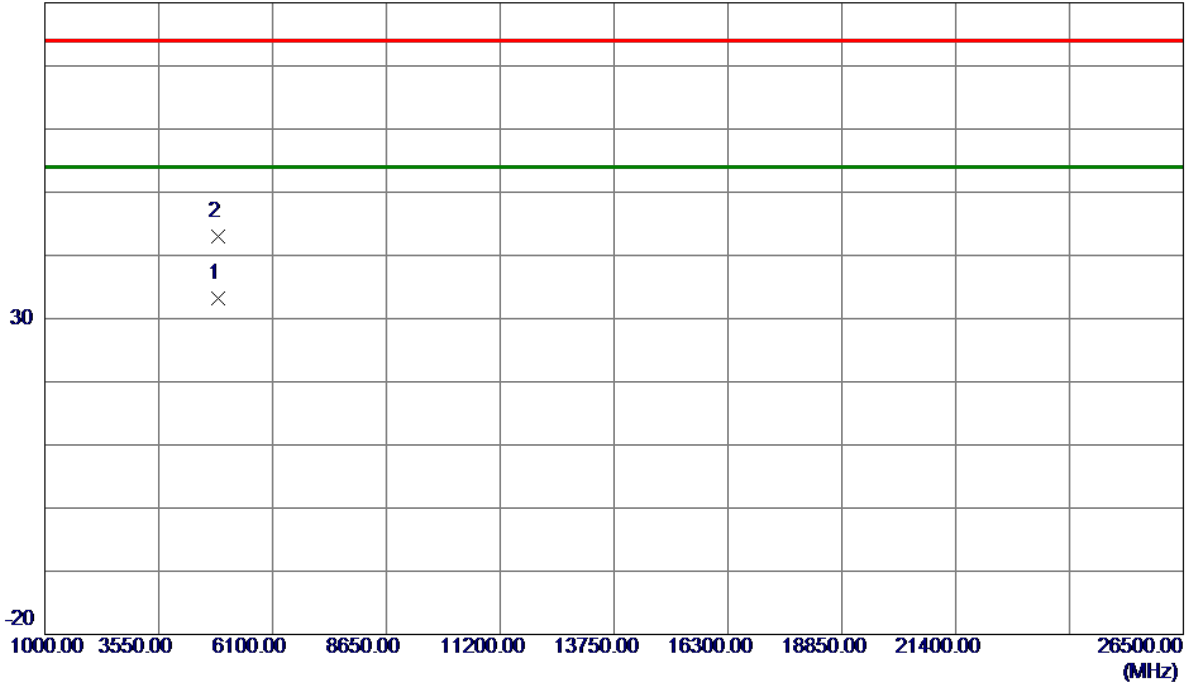
REMARKS:

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

Test Mode: TX G Mode 2437 MHz

Vertical

80 dBuV/m



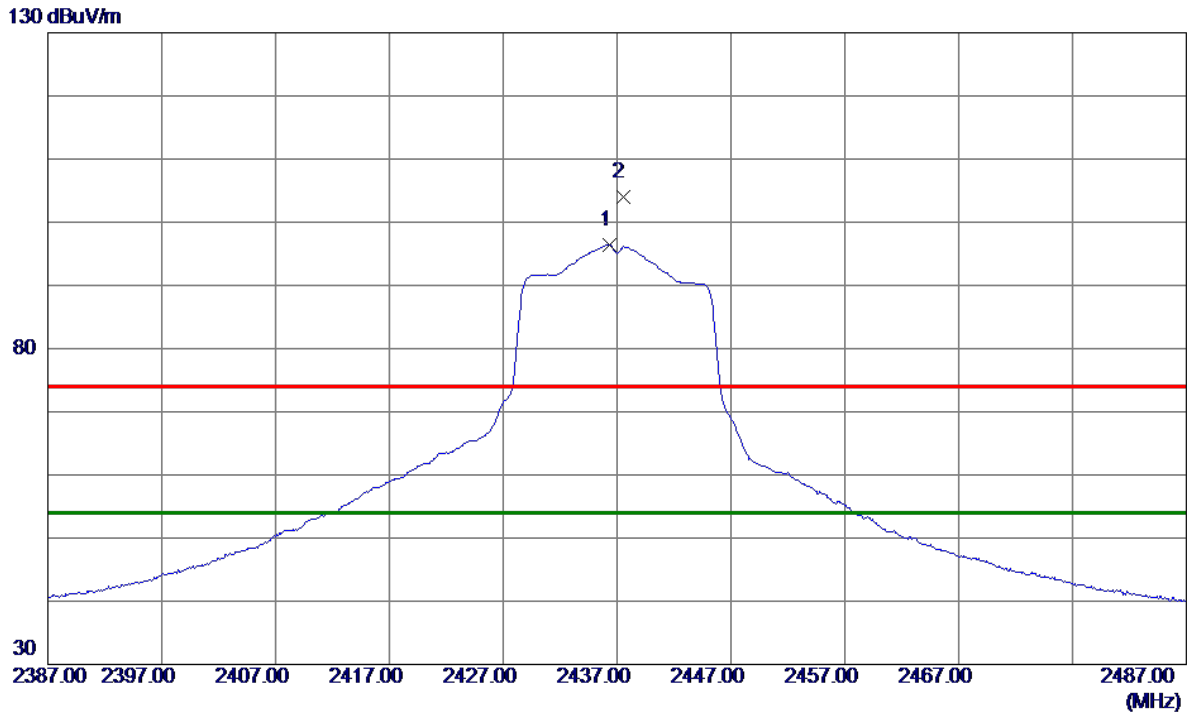
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	4873.7900	27.79	5.46	33.25	54.00	-20.75	AVG	
2	4873.9000	37.48	5.46	42.94	74.00	-31.06	Peak	

REMARKS:

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

Test Mode: TX G 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 *	2436.3000	88.12	8.34	96.46	54.00	42.46	AVG	No Limit
2	2437.5000	95.60	8.34	103.94	74.00	29.94	Peak	No Limit

REMARKS:

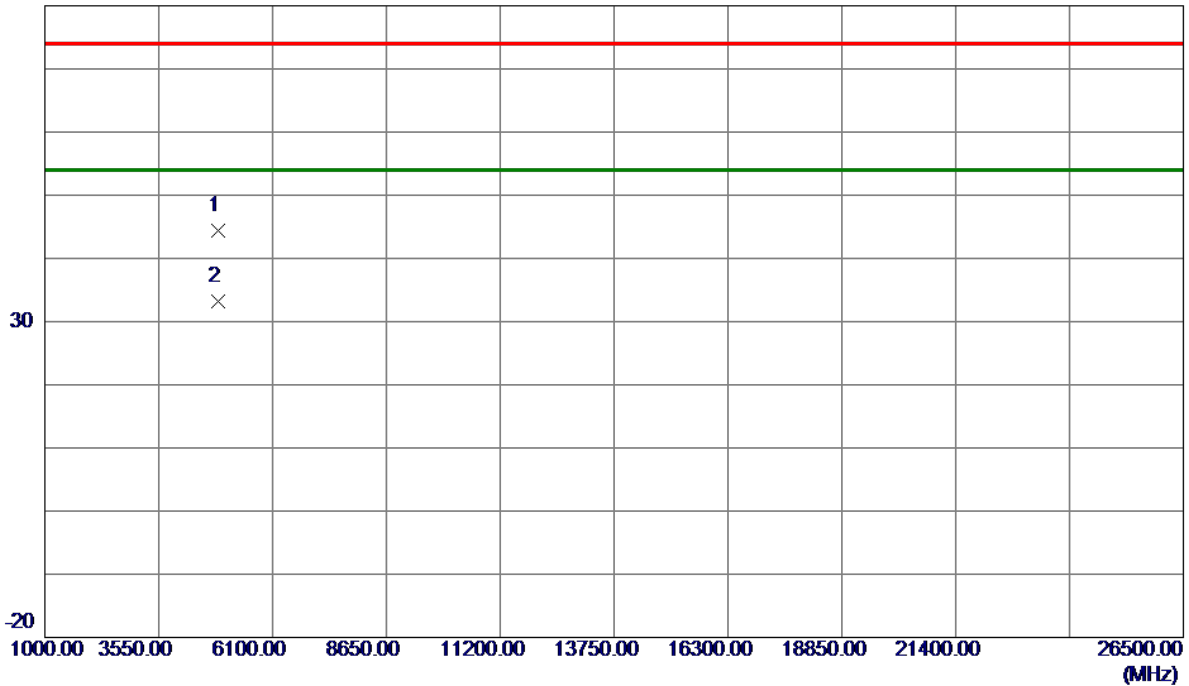
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode: TX G Mode 2437 MHz

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	4869.9800	38.88	5.45	44.33	74.00	-29.67	Peak	
2 *	4871.8200	27.75	5.45	33.20	54.00	-20.80	AVG	

REMARKS:

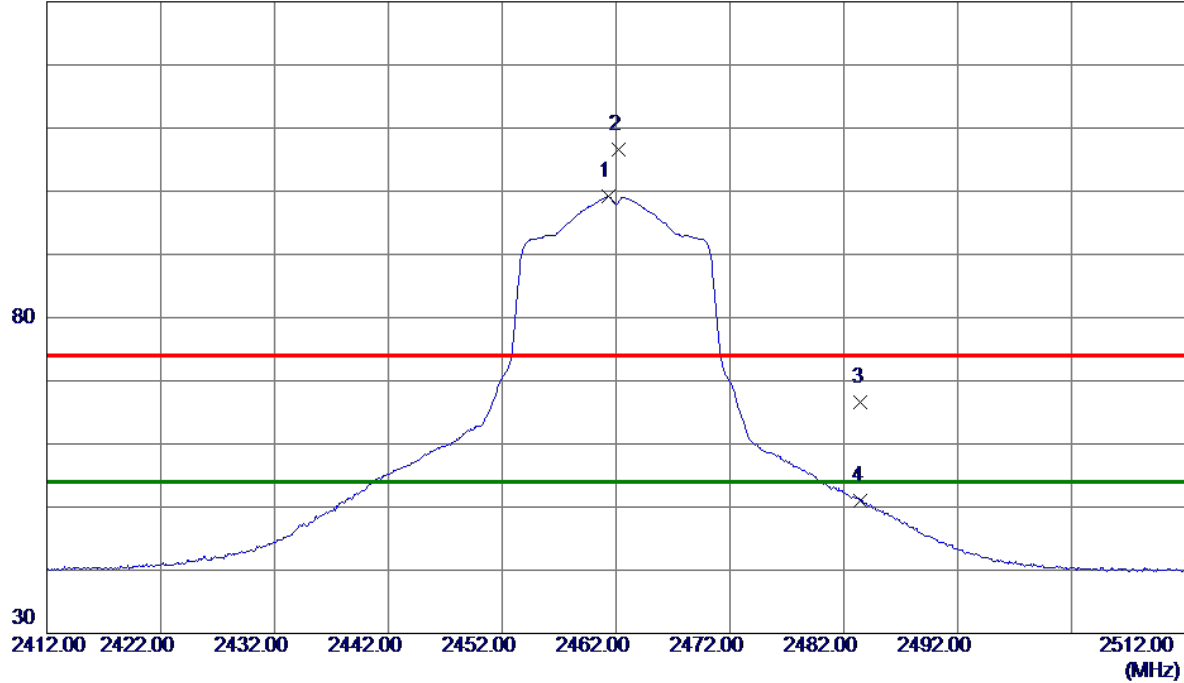
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode: TX G Mode 2462 MHz

Vertical

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	2461.3000	90.79	8.36	99.15	54.00	45.15	AVG	No Limit
2	2462.2000	98.22	8.36	106.58	74.00	32.58	Peak	No Limit
3	2483.5000	58.29	8.39	66.68	74.00	-7.32	Peak	
4	2483.5000	42.52	8.39	50.91	54.00	-3.09	AVG	

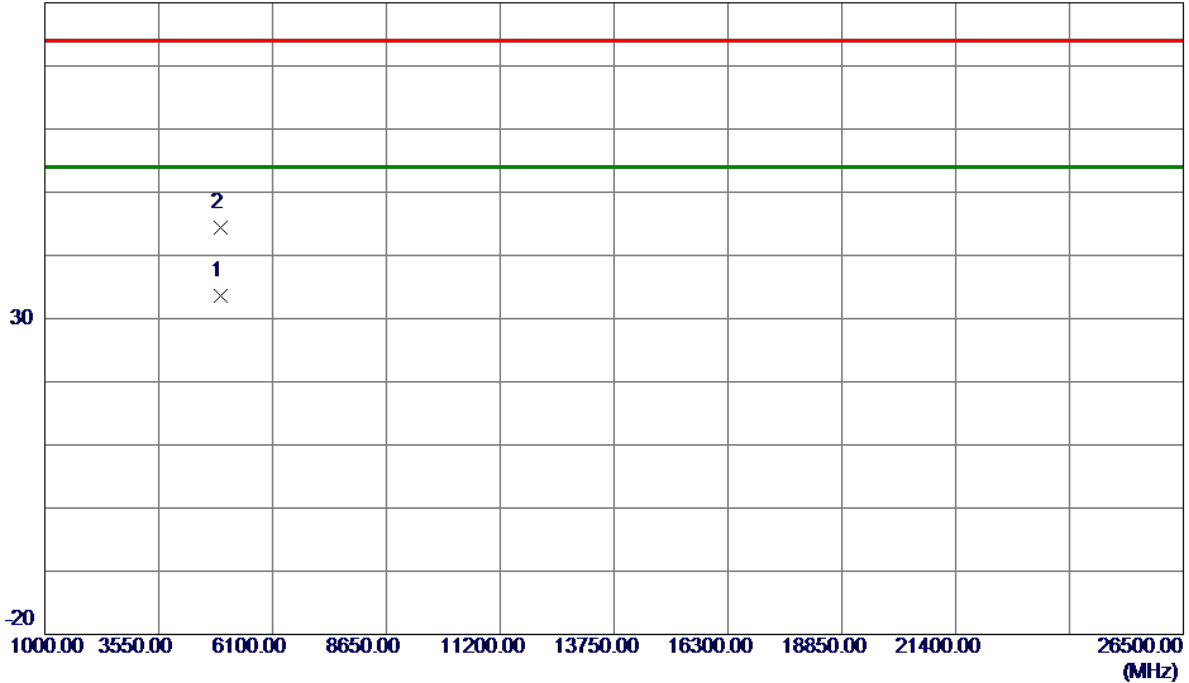
REMARKS:

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

Test Mode:	TX G Mode 2462 MHz
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Vertical

80 dBuV/m



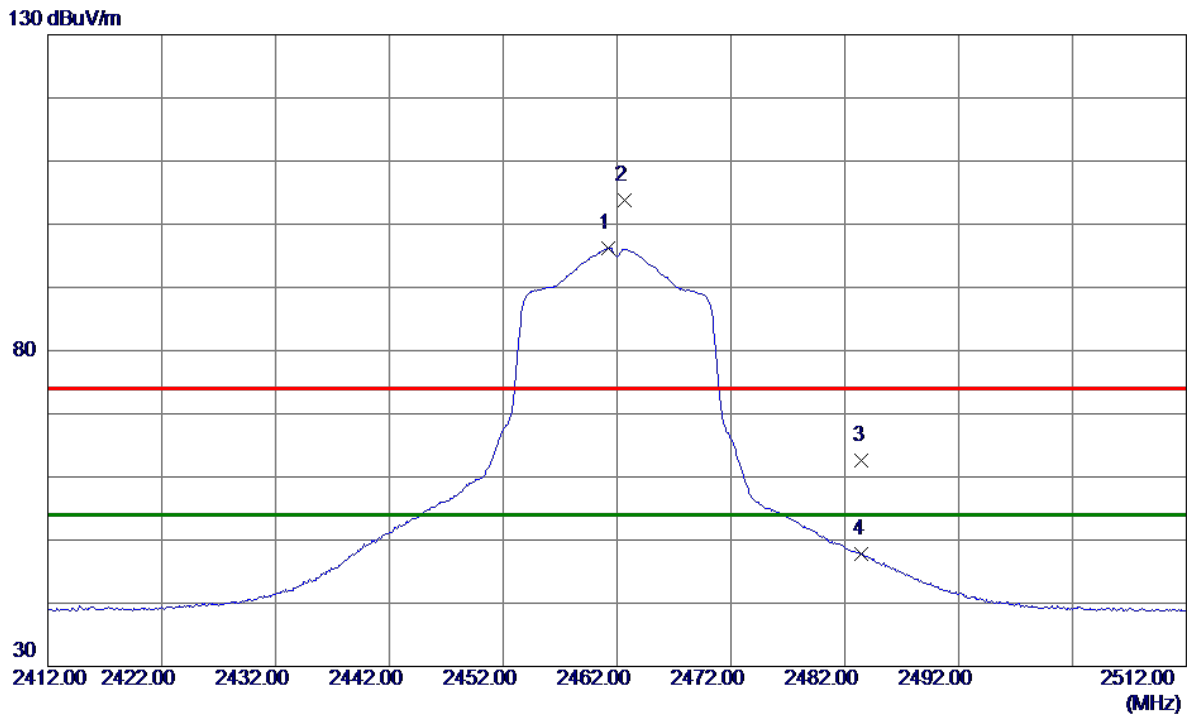
No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	4925.2300	27.96	5.60	33.56	54.00	-20.44	AVG	
2	4926.6700	38.78	5.60	44.38	74.00	-29.62	Peak	

REMARKS:

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

Test Mode: TX G 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	87.88	8.36	96.24	54.00	42.24	AVG	No Limit
2	2462.7000	95.41	8.37	103.78	74.00	29.78	Peak	No Limit
3	2483.5000	54.13	8.39	62.52	74.00	-11.48	Peak	
4	2483.5000	39.48	8.39	47.87	54.00	-6.13	AVG	

REMARKS:

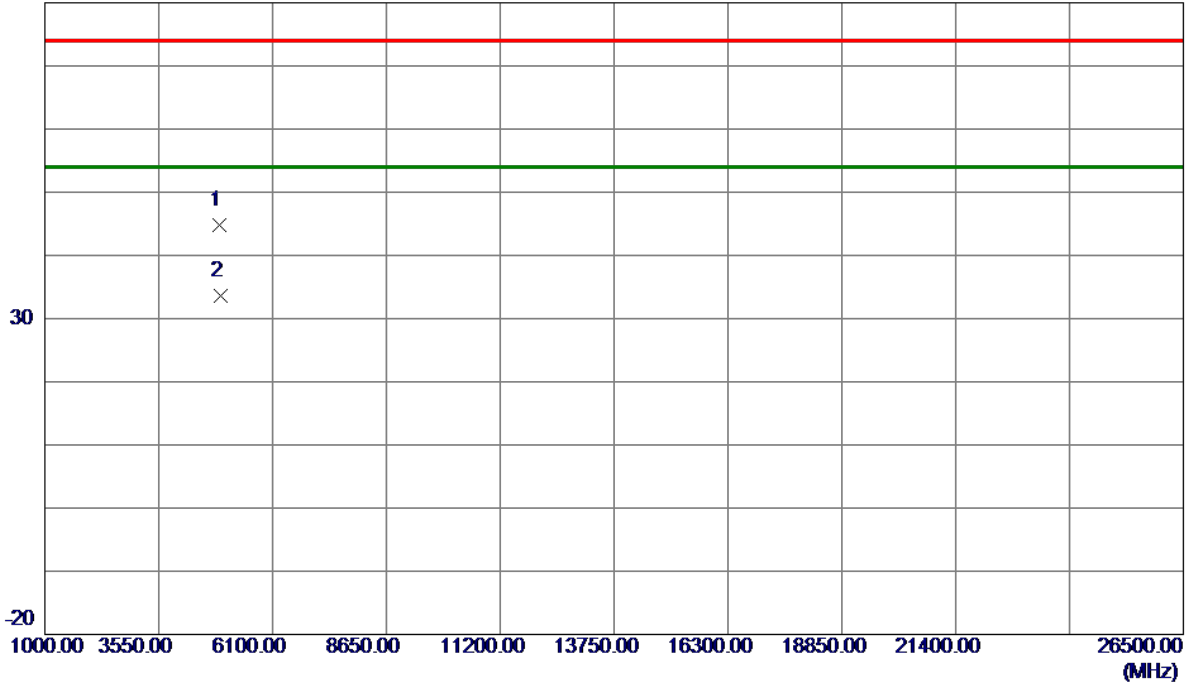
(1) Measurement Value = Reading Level + Correct Factor.

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

Test Mode:	TX G Mode 2462 MHz
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Horizontal

80 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	4921.4900	39.22	5.59	44.81	74.00	-29.19	Peak	
2 *	4927.1900	27.99	5.60	33.59	54.00	-20.41	AVG	

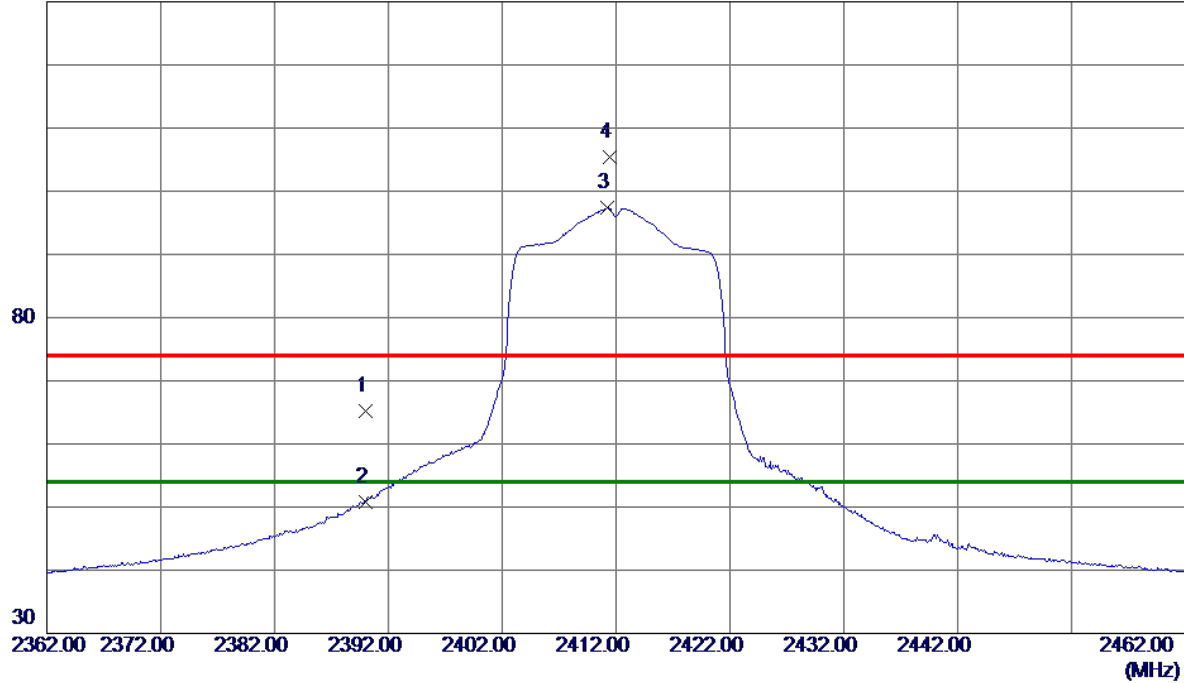
REMARKS:

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

Test Mode: TX N-20M Mode 2412 MHz

Vertical

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	56.90	8.29	65.19	74.00	-8.81	Peak	
2	2390.0000	42.57	8.29	50.86	54.00	-3.14	AVG	
3 *	2411.2000	89.09	8.31	97.40	54.00	43.40	AVG	No Limit
4	2411.4000	97.14	8.31	105.45	74.00	31.45	Peak	No Limit

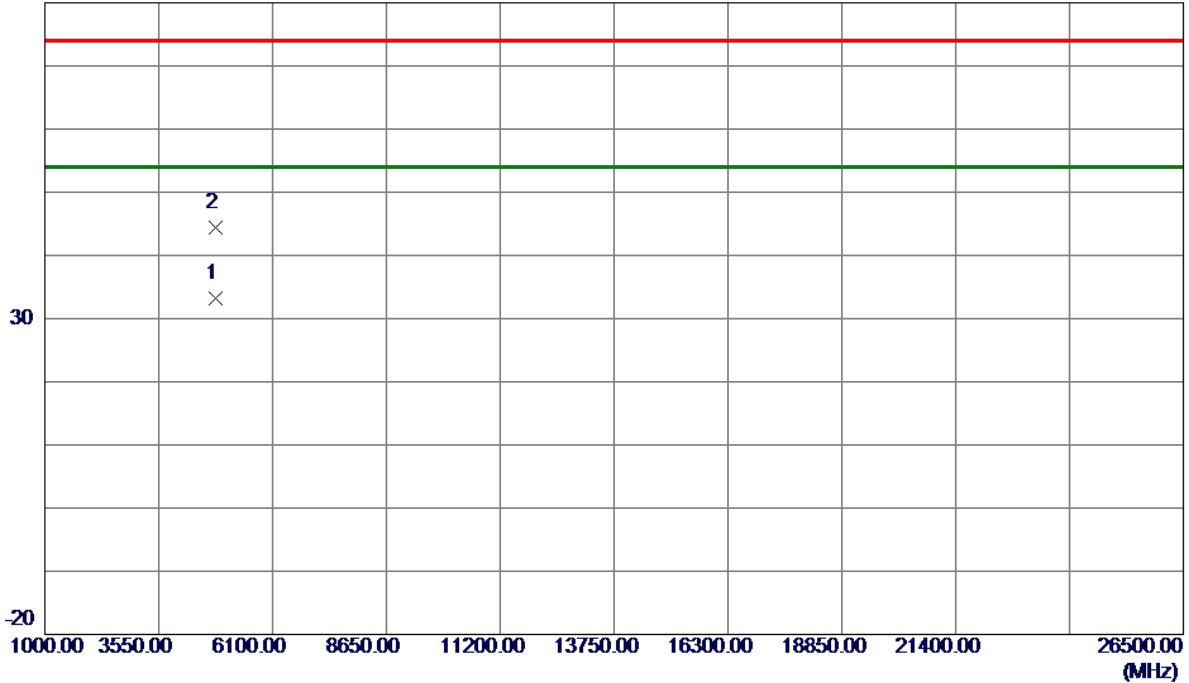
REMARKS:

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

Test Mode: TX N-20M Mode 2412 MHz

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 *	4820.1400	27.86	5.31	33.17	54.00	-20.83	AVG	
2	4820.6700	39.08	5.31	44.39	74.00	-29.61	Peak	

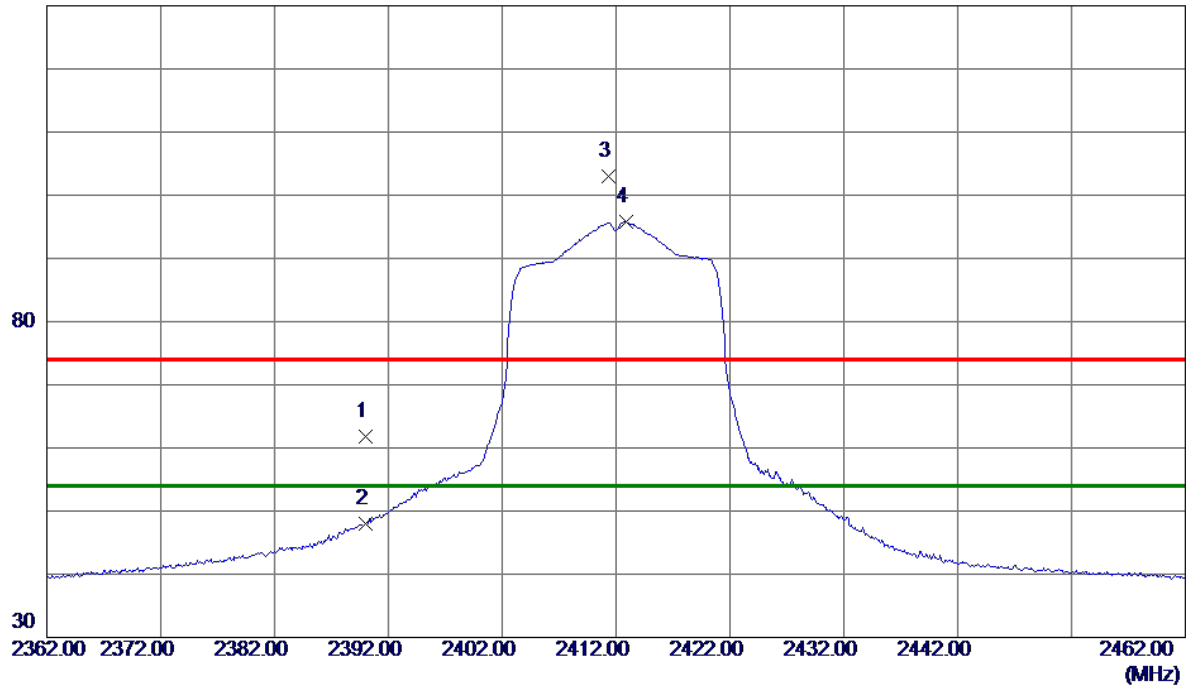
REMARKS:

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

Test Mode: TX N-20M Mode 2412 MHz

Horizontal

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2390.0000	53.55	8.29	61.84	74.00	-12.16	Peak	
2	2390.0000	39.78	8.29	48.07	54.00	-5.93	AVG	
3	2411.3000	94.69	8.31	103.00	74.00	29.00	Peak	No Limit
4 *	2412.9000	87.47	8.31	95.78	54.00	41.78	AVG	No Limit

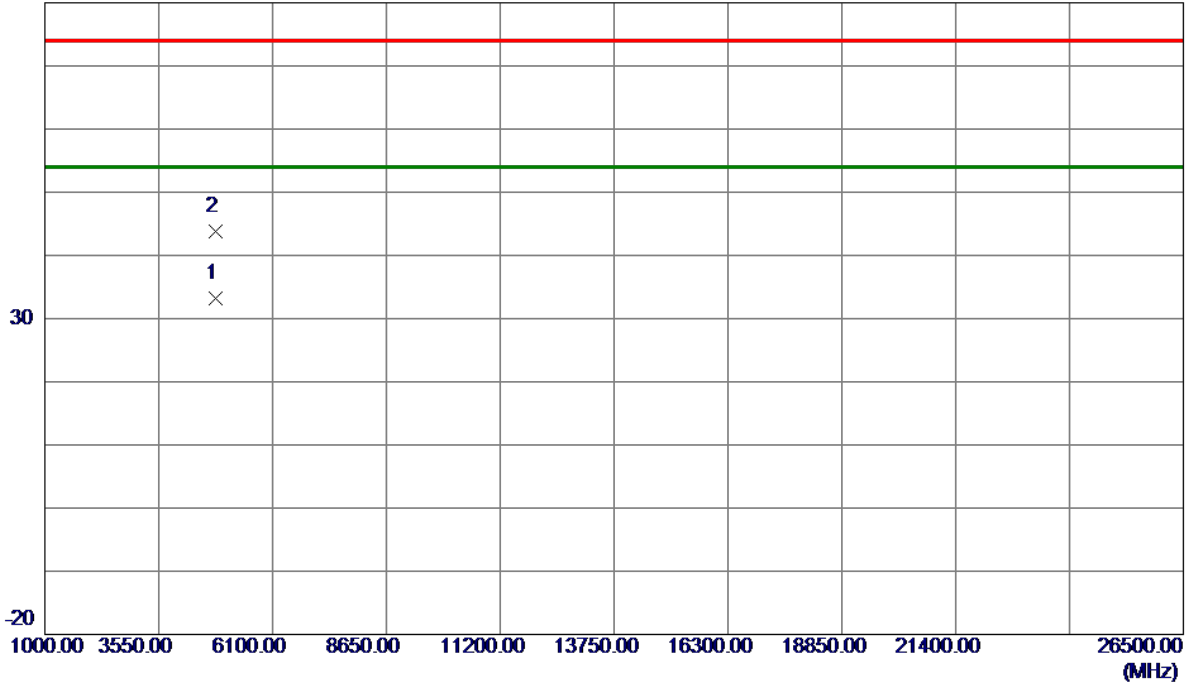
REMARKS:

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

Test Mode: TX N-20M Mode 2412 MHz

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 *	4825.6100	27.91	5.33	33.24	54.00	-20.76	AVG	
2	4828.1100	38.47	5.33	43.80	74.00	-30.20	Peak	

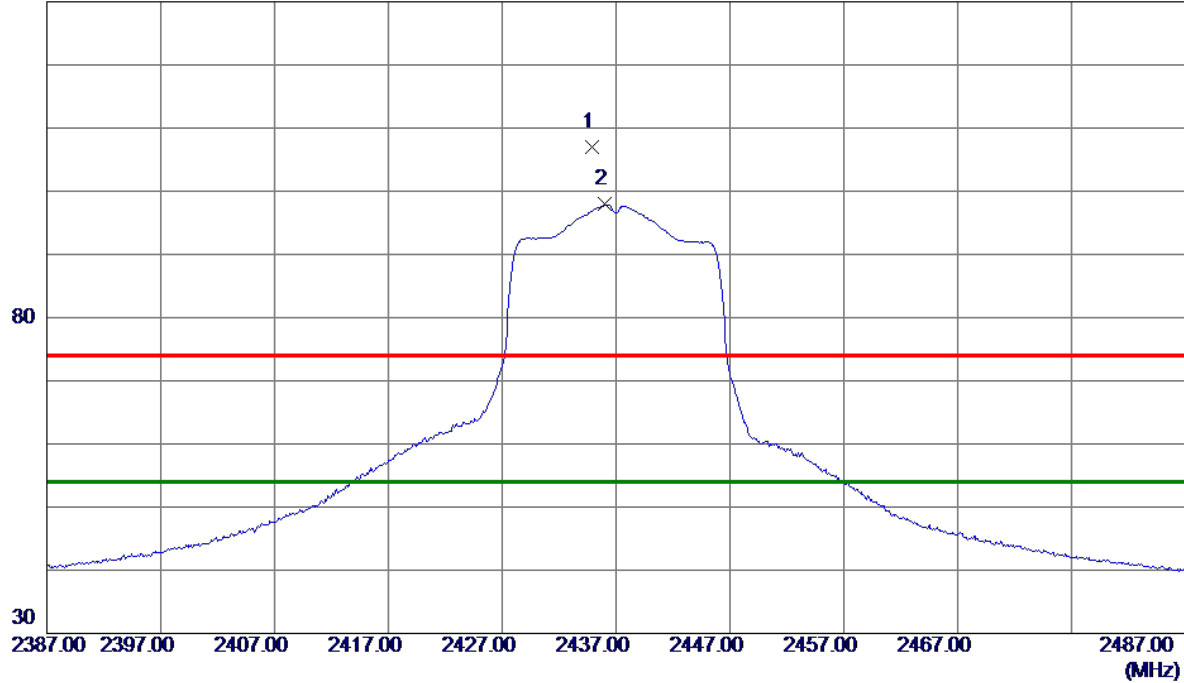
REMARKS:

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

Test Mode: TX N-20M Mode 2437 MHz

Vertical

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2434.9000	98.71	8.34	107.05	74.00	33.05	Peak	No Limit
2 *	2436.0000	89.57	8.34	97.91	54.00	43.91	AVG	No Limit

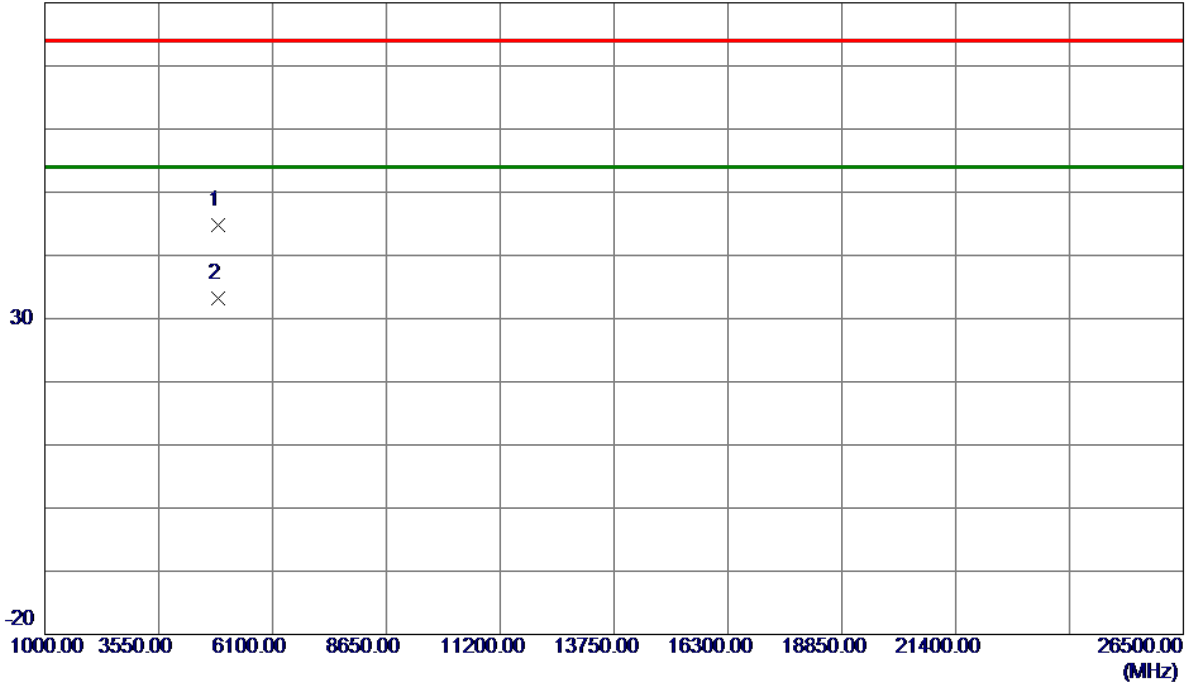
REMARKS:

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

Test Mode: TX N-20M Mode 2437 MHz

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	4873.7100	39.26	5.46	44.72	74.00	-29.28	Peak	
2 *	4878.9900	27.68	5.47	33.15	54.00	-20.85	AVG	

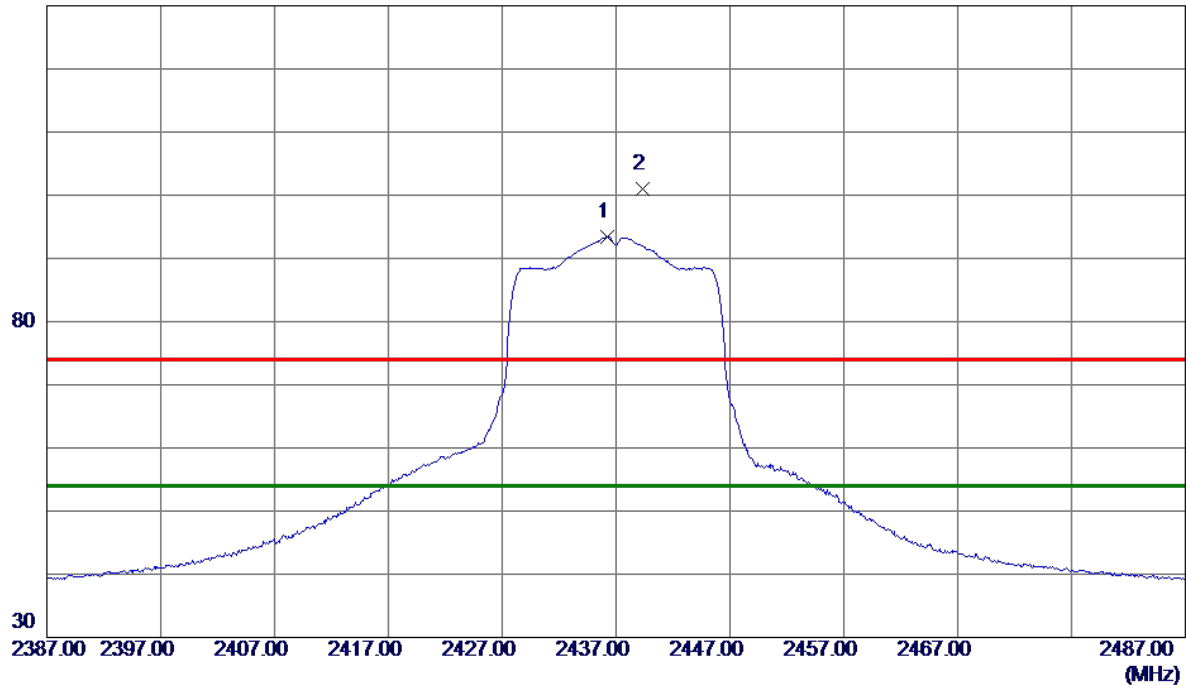
REMARKS:

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

Test Mode: TX N-20M Mode 2437 MHz

Horizontal

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	2436.2000	85.13	8.34	93.47	54.00	39.47	AVG	No Limit
2	2439.3000	92.58	8.34	100.92	74.00	26.92	Peak	No Limit

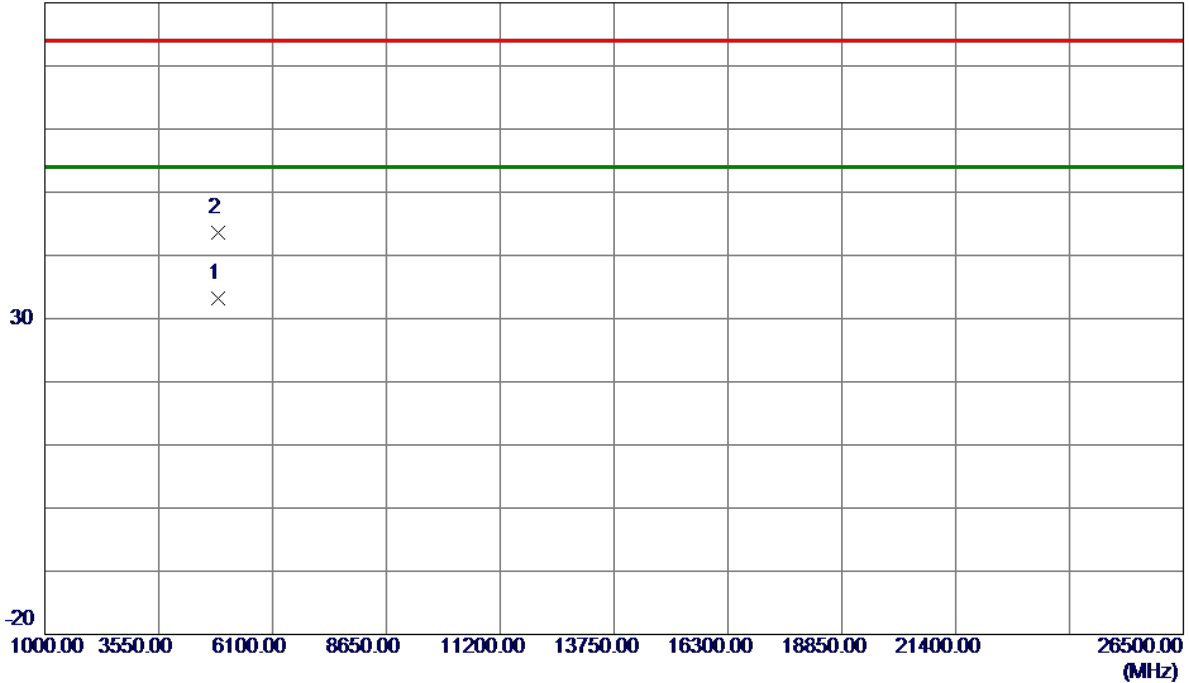
REMARKS:

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

Test Mode: TX N-20M Mode 2437 MHz

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 *	4875.7200	27.67	5.46	33.13	54.00	-20.87	AVG	
2	4877.8000	38.22	5.47	43.69	74.00	-30.31	Peak	

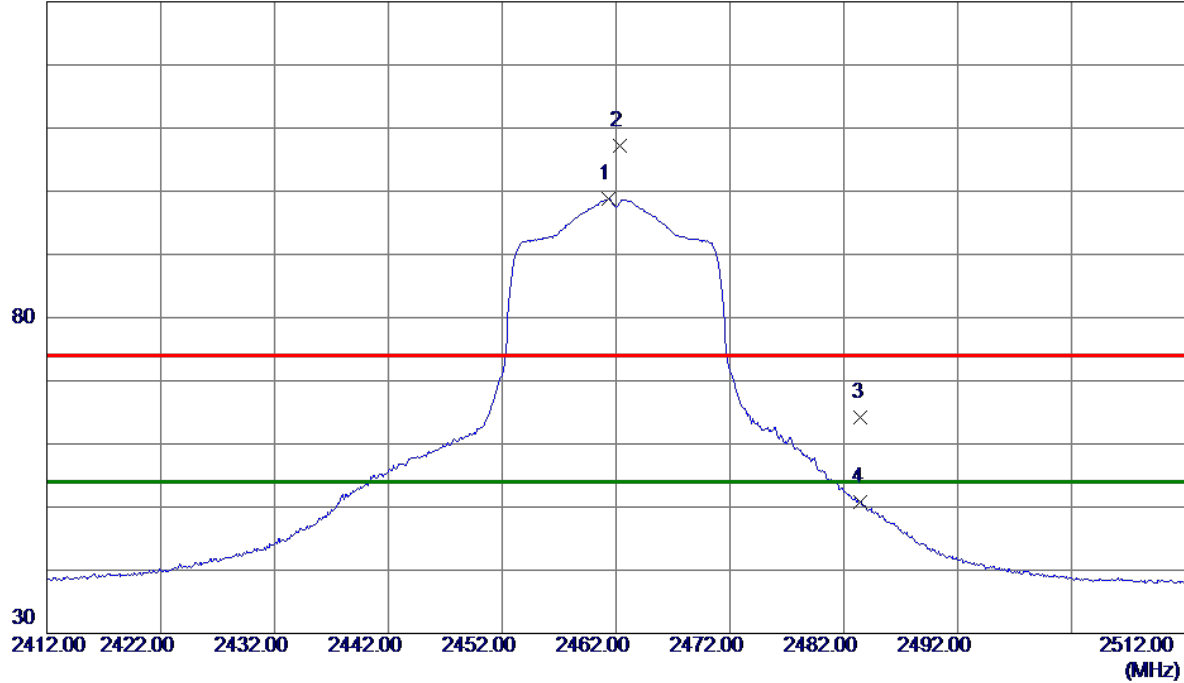
REMARKS:

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

Test Mode: TX N-20M Mode 2462 MHz

Vertical

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	2461.3000	90.39	8.36	98.75	54.00	44.75	AVG	No Limit
2	2462.3000	98.76	8.36	107.12	74.00	33.12	Peak	No Limit
3	2483.5000	55.74	8.39	64.13	74.00	-9.87	Peak	
4	2483.5000	42.37	8.39	50.76	54.00	-3.24	AVG	

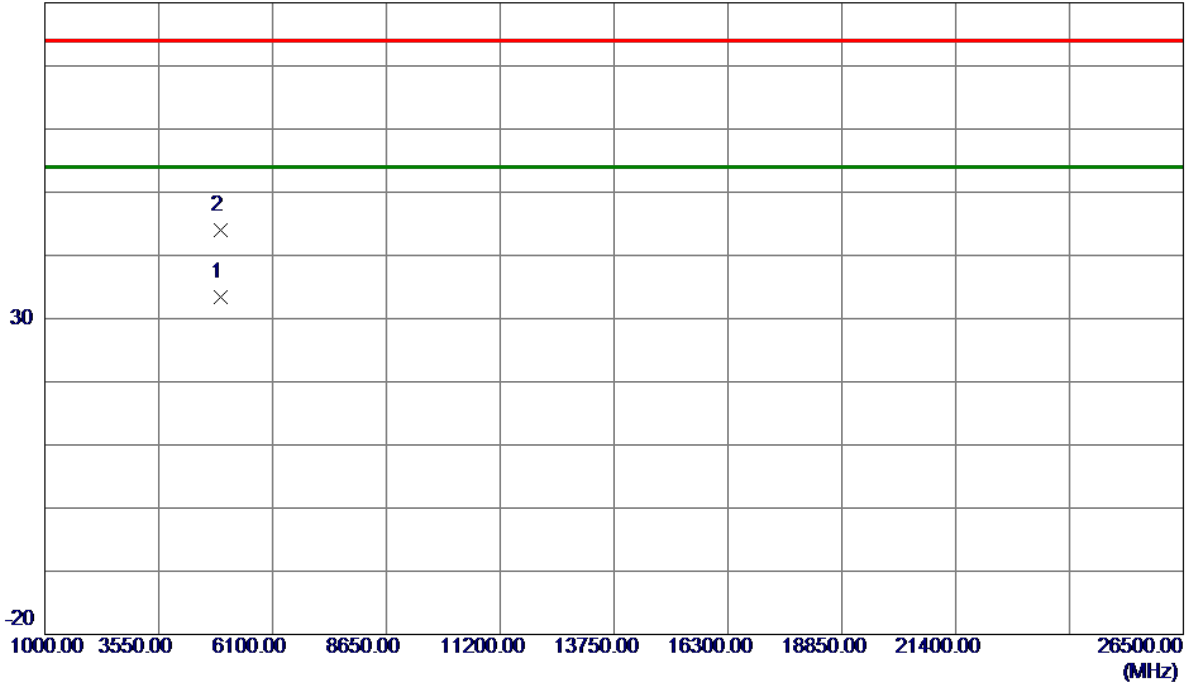
REMARKS:

- (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 *	4927.3500	27.77	5.60	33.37	54.00	-20.63	AVG	
2	4927.4500	38.47	5.60	44.07	74.00	-29.93	Peak	

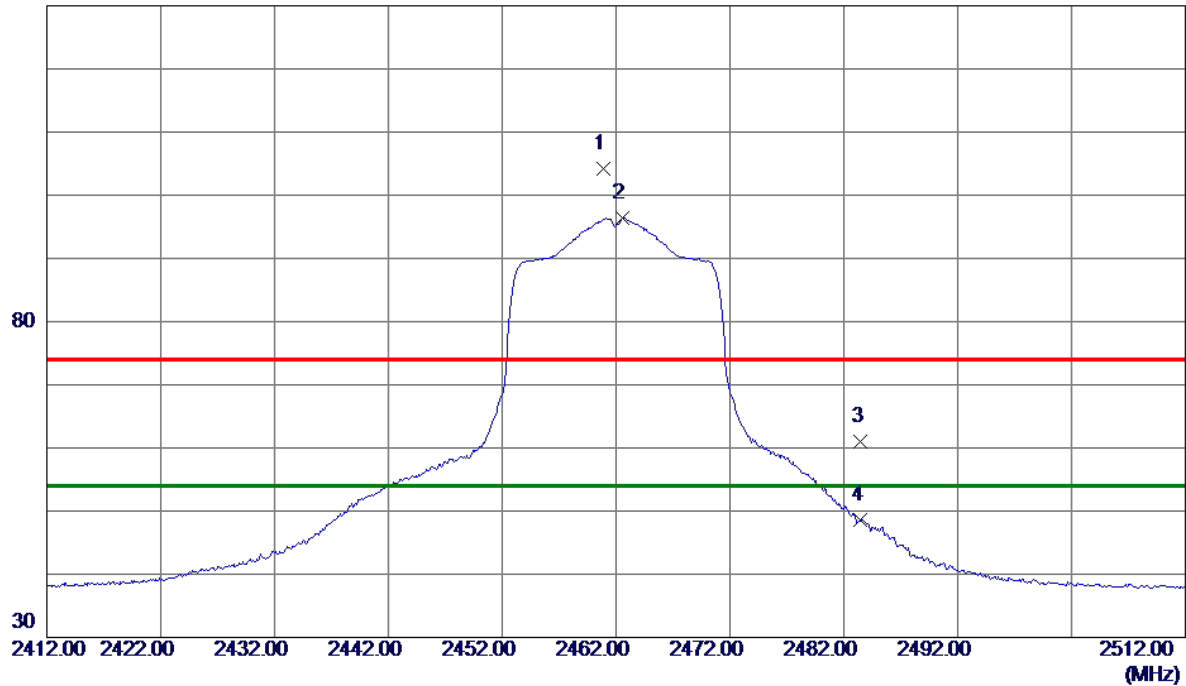
REMARKS:

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

Test Mode: TX N-20M Mode 2462 MHz

Horizontal

130 dBuV/m



No.	Freq. MHz	Reading Level dBuV/m	Correct Factor dB	Measure ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	2460.9000	95.77	8.36	104.13	74.00	30.13	Peak	No Limit
2 *	2462.6000	88.13	8.36	96.49	54.00	42.49	AVG	No Limit
3	2483.5000	52.62	8.39	61.01	74.00	-12.99	Peak	
4	2483.5000	40.27	8.39	48.66	54.00	-5.34	AVG	

REMARKS:

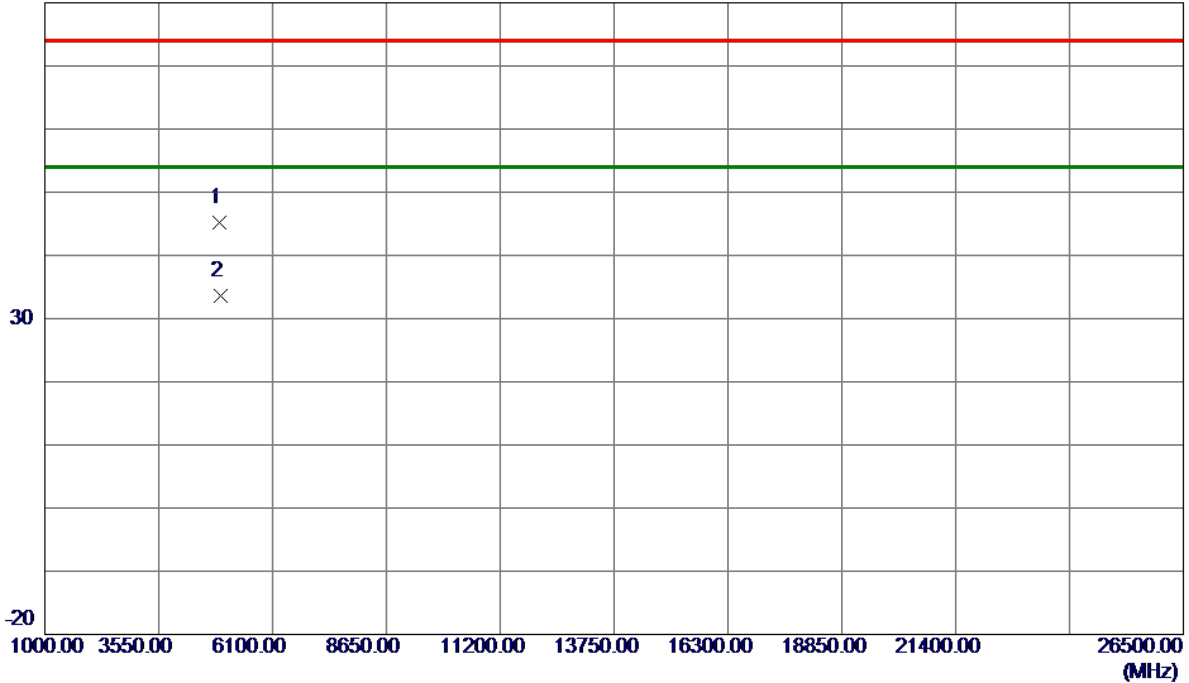
(1) Measurement Value = Reading Level + Correct Factor.

(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	4921.0700	39.64	5.59	45.23	74.00	-28.77	Peak	
2 *	4924.3800	28.02	5.60	33.62	54.00	-20.38	AVG	

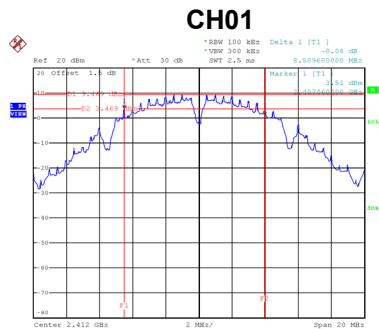
REMARKS:

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

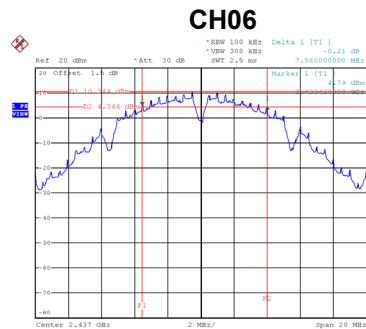
APPENDIX E - BANDWIDTH

Test Mode	TX B Mode
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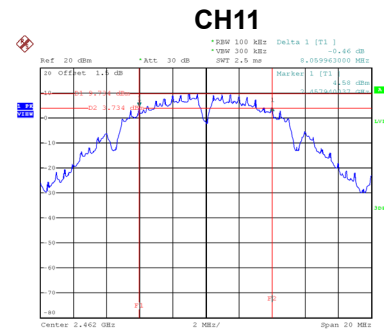
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	8.51	500	Complies
06	2437	7.58	500	Complies
11	2462	8.06	500	Complies



Date: 18.JUN.2020 16:05:26

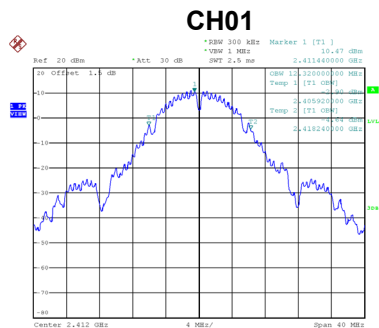


Date: 18.JUN.2020 16:06:51

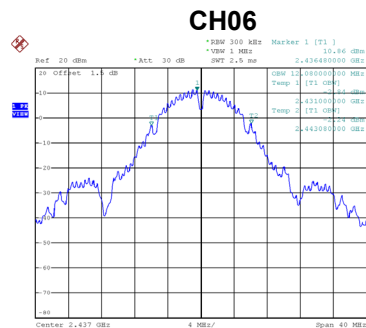


Date: 18.JUN.2020 16:08:36

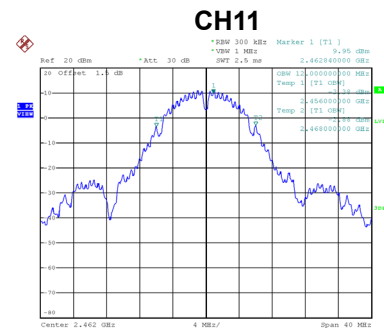
Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
01	2412	12.32	Complies
06	2437	12.08	Complies
11	2462	12.00	Complies



Date: 18.JUN.2020 16:05:32



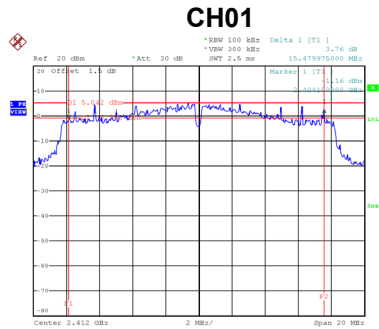
Date: 18.JUN.2020 16:06:57



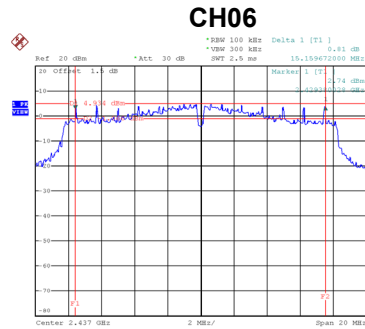
Date: 18.JUN.2020 16:08:42

Test Mode	TX G Mode
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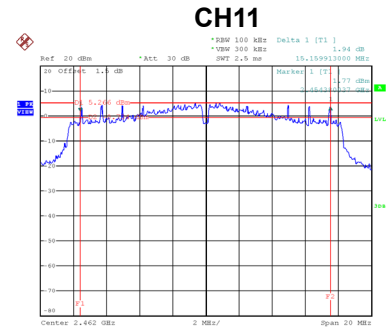
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	15.48	500	Complies
06	2437	15.16	500	Complies
11	2462	15.16	500	Complies



Date: 18.JUN.2020 16:09:55

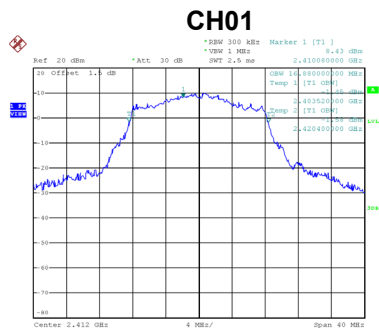


Date: 18.JUN.2020 16:11:18

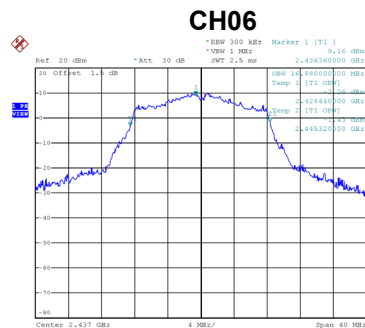


Date: 18.JUN.2020 16:12:57

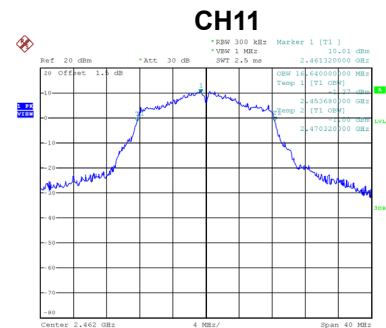
Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
01	2412	16.88	Complies
06	2437	16.88	Complies
11	2462	16.64	Complies



Date: 18.JUN.2020 16:10:03



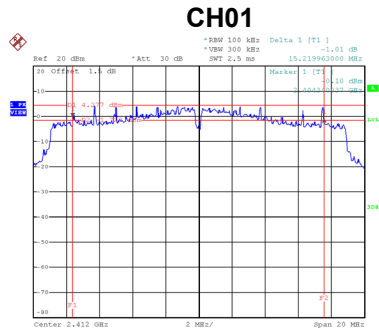
Date: 18.JUN.2020 16:11:24



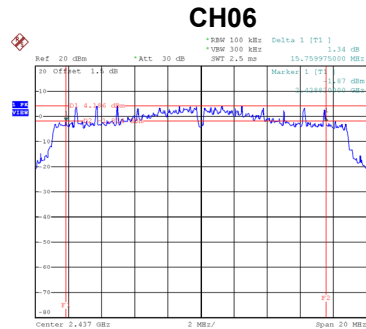
Date: 18.JUN.2020 16:13:04

Test Mode	TX N-20M Mode
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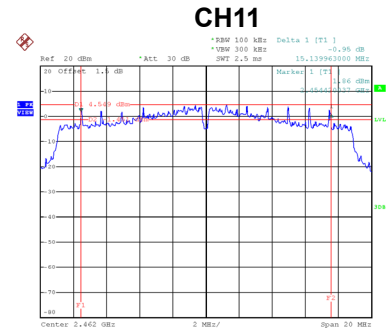
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	15.22	500	Complies
06	2437	15.76	500	Complies
11	2462	15.14	500	Complies



Date: 18.JUN.2020 16:14:27

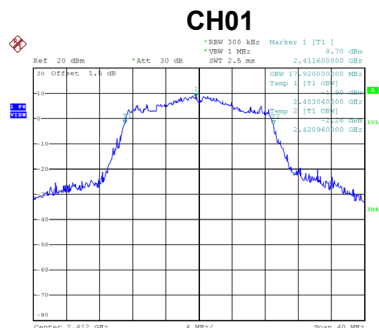


Date: 18.JUN.2020 16:16:06

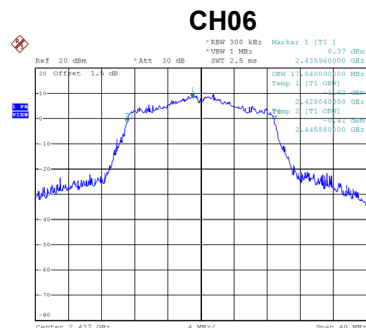


Date: 18.JUN.2020 16:19:08

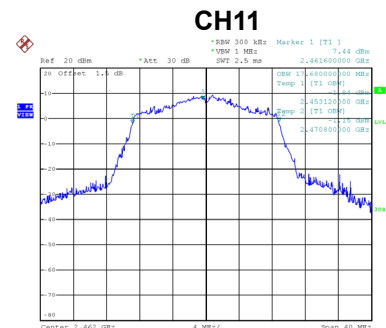
Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
01	2412	17.92	Complies
06	2437	17.84	Complies
11	2462	17.68	Complies



Date: 18.JUN.2020 16:14:34



Date: 18.JUN.2020 16:16:12



Date: 18.JUN.2020 16:19:14

APPENDIX F - MAXIMUM OUTPUT POWER

Test Mode	TX B Mode
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Channel	Frequency (MHz)	Peak Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	20.83	30.00	1.0000	Complies
06	2437	20.74	30.00	1.0000	Complies
11	2462	21.19	30.00	1.0000	Complies

Channel	Frequency (MHz)	Avg Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	17.22	0.00	17.22	30.00	1.0000	Complies
06	2437	17.24	0.00	17.24	30.00	1.0000	Complies
11	2462	17.17	0.00	17.17	30.00	1.0000	Complies

Test Mode	TX G Mode
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Channel	Frequency (MHz)	Peak Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	22.76	30.00	1.0000	Complies
06	2437	23.71	30.00	1.0000	Complies
11	2462	23.75	30.00	1.0000	Complies

Channel	Frequency (MHz)	Avg Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	15.06	0.15	15.21	30.00	1.0000	Complies
06	2437	16.12	0.15	16.27	30.00	1.0000	Complies
11	2462	15.19	0.15	15.34	30.00	1.0000	Complies

Test Mode	TX N-20M Mode
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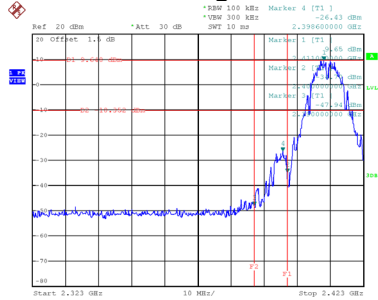
Channel	Frequency (MHz)	Peak Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	22.83	30.00	1.0000	Complies
06	2437	23.82	30.00	1.0000	Complies
11	2462	23.68	30.00	1.0000	Complies

Channel	Frequency (MHz)	Avg Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	14.57	0.15	14.72	30.00	1.0000	Complies
06	2437	14.47	0.15	14.62	30.00	1.0000	Complies
11	2462	14.88	0.15	15.03	30.00	1.0000	Complies

APPENDIX G - CONDUCTED SPURIOUS EMISSIONS

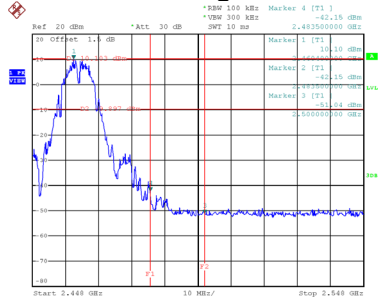
Test Mode TX B Mode

Bandedge-CH01



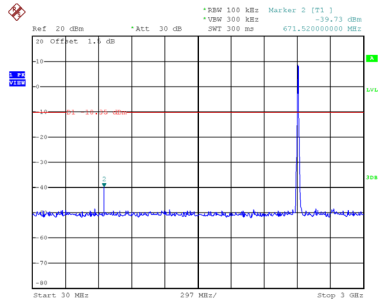
Date: 18.JUN.2020 16:05:40

Bandedge-CH11

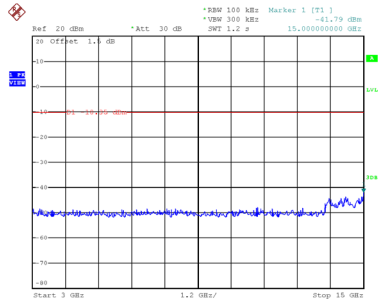


Date: 18.JUN.2020 16:08:49

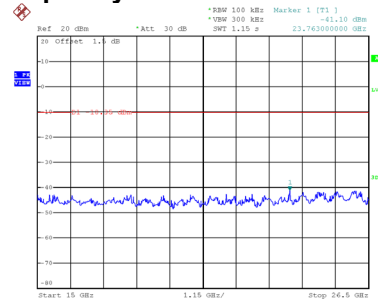
CH01 – 10th Harmonic of the fundamental frequency



Date: 18.JUN.2020 16:05:52

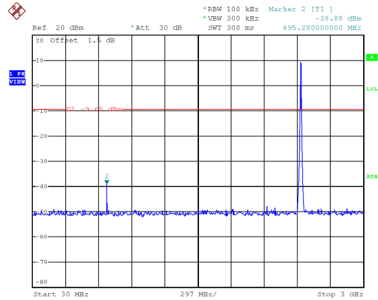


Date: 18.JUN.2020 16:05:59

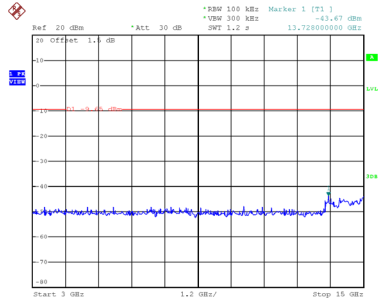


Date: 18.JUN.2020 16:06:06

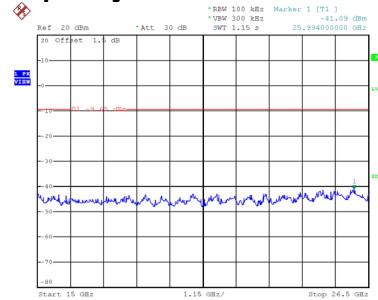
CH06 – 10th Harmonic of the fundamental frequency



Date: 18.JUN.2020 16:07:17

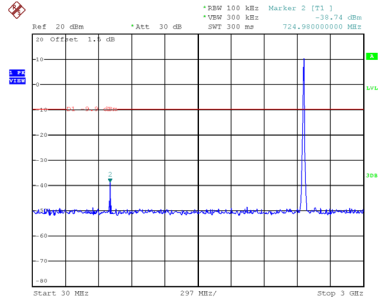


Date: 18.JUN.2020 16:07:24

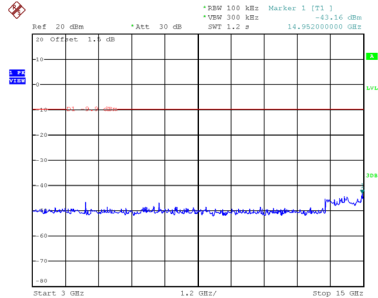


Date: 18.JUN.2020 16:07:30

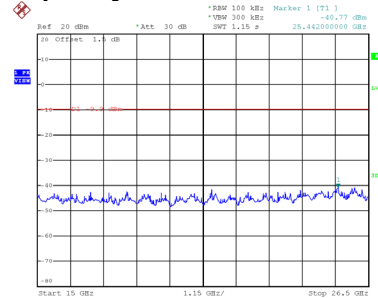
CH11 – 10th Harmonic of the fundamental frequency



Date: 18.JUN.2020 16:09:02



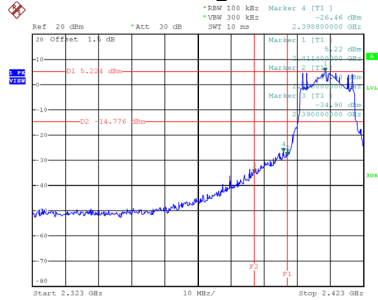
Date: 18.JUN.2020 16:09:09



Date: 18.JUN.2020 16:09:16

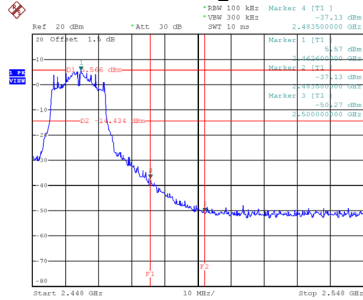
Test Mode TX G Mode

Bandedge-CH01



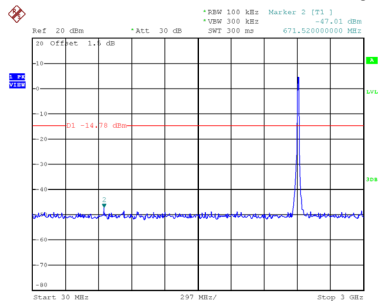
Date: 18.JUN.2020 16:10:10

Bandedge-CH11

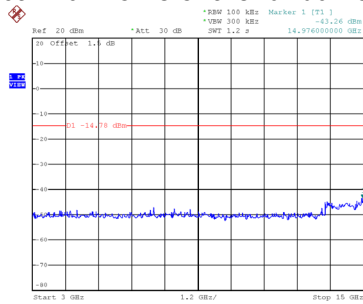


Date: 18.JUN.2020 16:13:11

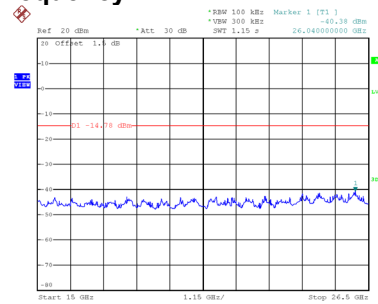
CH01 – 10th Harmonic of the fundamental frequency



Date: 18.JUN.2020 16:10:22

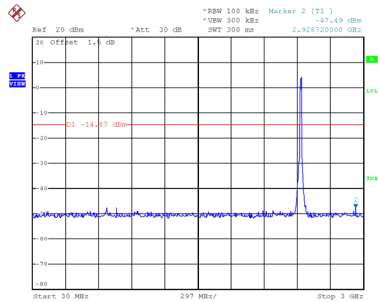


Date: 18.JUN.2020 16:10:29

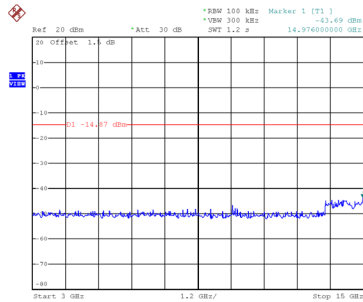


Date: 18.JUN.2020 16:10:36

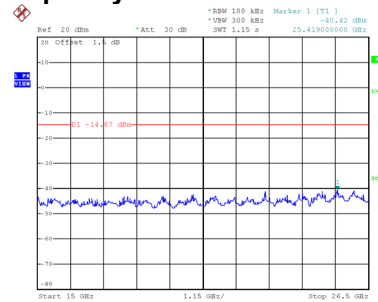
CH06 – 10th Harmonic of the fundamental frequency



Date: 18.JUN.2020 16:11:44

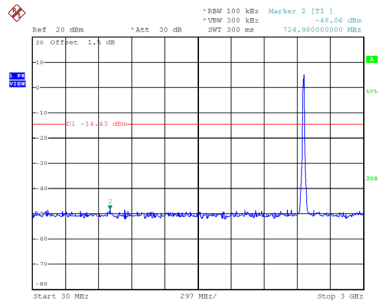


Date: 18.JUN.2020 16:11:51

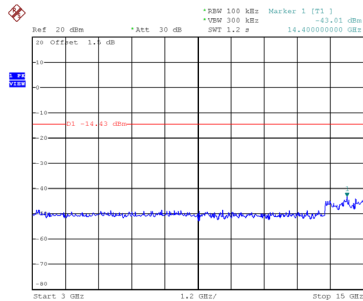


Date: 18.JUN.2020 16:11:57

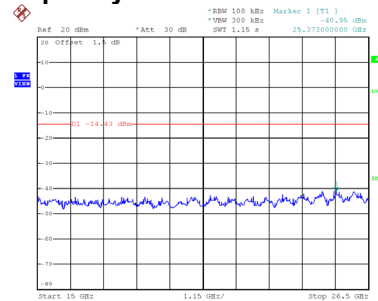
CH11 – 10th Harmonic of the fundamental frequency



Date: 18.JUN.2020 16:13:24



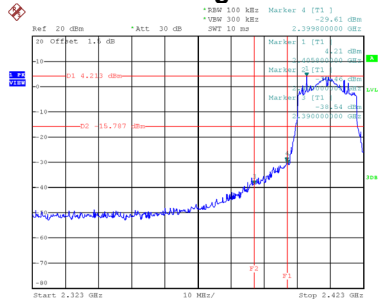
Date: 18.JUN.2020 16:13:31



Date: 18.JUN.2020 16:13:37

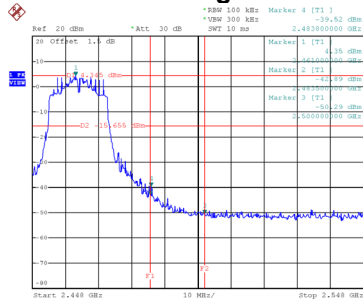
Test Mode TX N-20M Mode

Bandedge-CH01



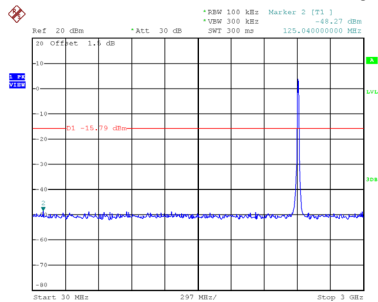
Date: 18.JUN.2020 16:14:40

Bandedge-CH11

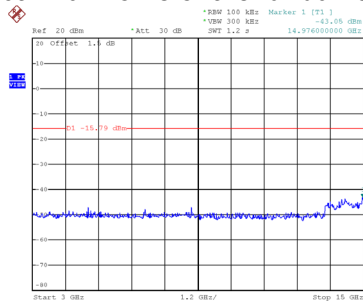


Date: 18.JUN.2020 16:19:21

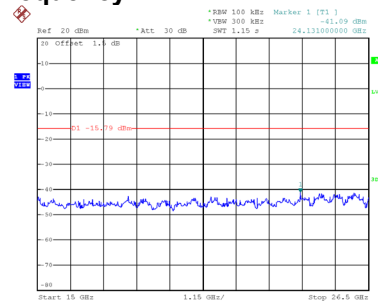
CH01 – 10th Harmonic of the fundamental frequency



Date: 18.JUN.2020 16:14:53

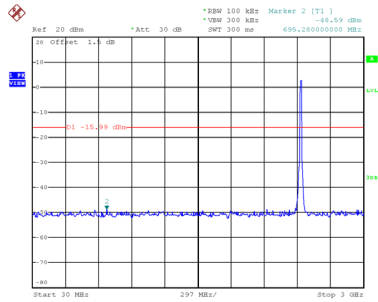


Date: 18.JUN.2020 16:15:00

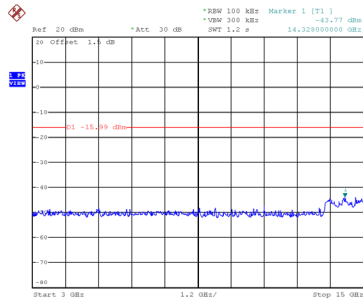


Date: 18.JUN.2020 16:15:07

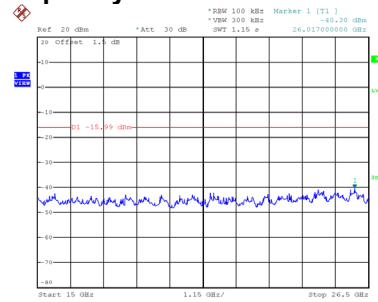
CH06 – 10th Harmonic of the fundamental frequency



Date: 18.JUN.2020 16:16:32

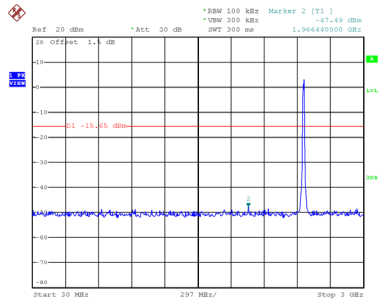


Date: 18.JUN.2020 16:16:39

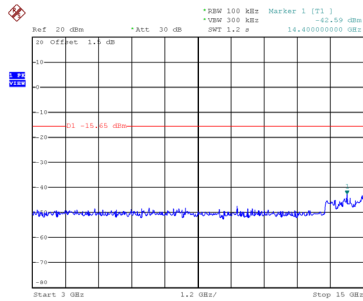


Date: 18.JUN.2020 16:16:45

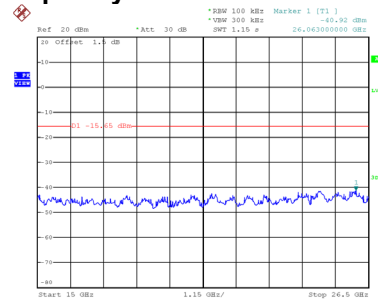
CH11 – 10th Harmonic of the fundamental frequency



Date: 18.JUN.2020 16:19:34



Date: 18.JUN.2020 16:19:41

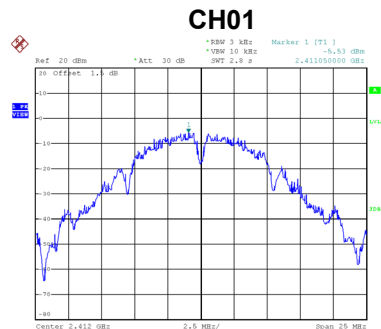


Date: 18.JUN.2020 16:19:48

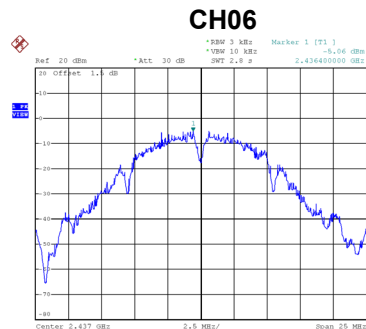
APPENDIX H - POWER SPECTRAL DENSITY

Test Mode	TX B Mode
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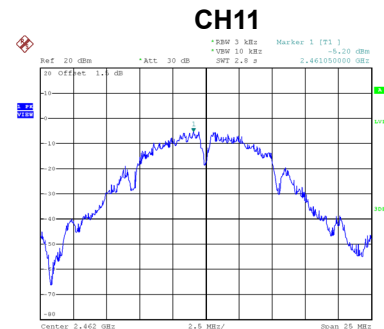
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-5.53	8	Complies
06	2437	-5.06	8	Complies
11	2462	-5.20	8	Complies



Date: 18.JUN.2020 16:06:14



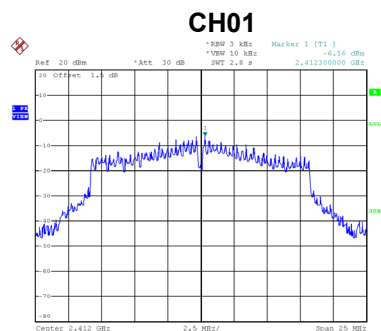
Date: 18.JUN.2020 16:07:39



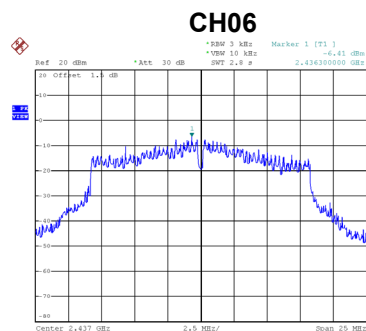
Date: 18.JUN.2020 16:09:24

Test Mode	TX G Mode
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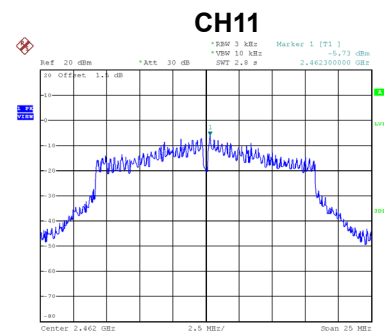
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-6.16	8	Complies
06	2437	-6.41	8	Complies
11	2462	-5.73	8	Complies



Date: 18.JUN.2020 16:10:44



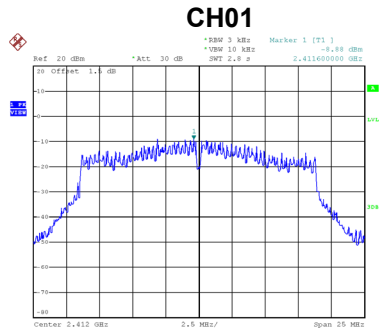
Date: 18.JUN.2020 16:12:06



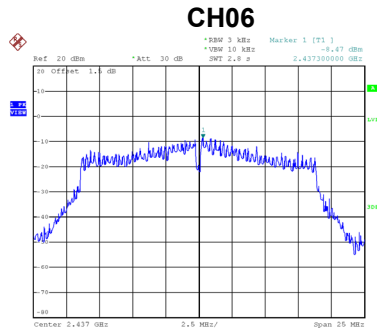
Date: 18.JUN.2020 16:13:46

Test Mode	TX N-20M Mode
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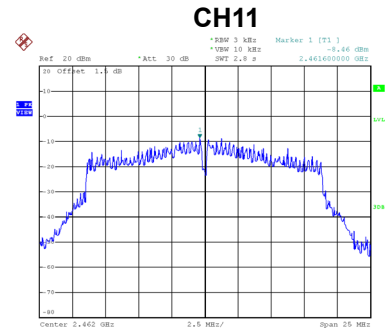
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-8.88	8	Complies
06	2437	-8.47	8	Complies
11	2462	-8.46	8	Complies



Date: 18.JUN.2020 16:15:15



Date: 18.JUN.2020 16:16:54



Date: 18.JUN.2020 16:19:56

End of Test Report