TEST REPORT

Application No.:	KSCR2410002068HS
FCC ID:	OU5MULW01
IC:	4048B-MULW01
Applicant:	GE Medical Systems Information Technologies, Inc.
Address of Applicant:	8200 West Tower Avenue, Milwaukee, Wisconsin, 53223, United States
Manufacturer:	GE Medical Systems Information Technologies, Inc.
Address of Manufacturer:	8200 West Tower Avenue, Milwaukee, Wisconsin, 53223, United States
Equipment Under Test (EUT):	
EUT Name:	WLAN Module
Model No.:	WLANCSMOD
Trade Mark:	GE HealthCare
Standard(s) :	47 CFR Part 15, Subpart E 15.407 RSS-247 Issue 3, August 2023 RSS-Gen Issue 5 Amendment 2 (February 2021)
Date of Receipt:	2024-06-06
Date of Test:	2024-06-07 to 2024-07-10
Date of Issue:	2024-07-12
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Revision Record			
Version	**Description**	**Date**	**Remark**
00	Original	2024-07-12	/

Authorized for issue by:				
Tested By		Damon zhou **Damon_Zhou/Project Engineer**		
Approved By		Terry Hou **Terry Hou /Reviewer**		

2 Test Summary

Radio Spectrum Technical Requirement				
Item	**FCC Requirement**	**IC Requirement**	**Method**	**Result**
Antenna Requirement	47 CFR Part 15, Subpart C 15.203	RSS-Gen Clause 6.8	N/A	Pass
Transmission in the Absence of Data	47 CFR Part 15, Subpart C 15.407 (c)	RSS-247 Section 6.4(a)	N/A	Pass

N/A: Not applicable

Radio Spectrum Matter Part				
Item	**FCC Requirement**	**IC Requirement**	**Method**	**Result**
99% Bandwidth	N/A	RSS-Gen Section 6.7	KDB 789033 II D	Pass
26dB Emission bandwidth	47 CFR Part 15, Subpart C 15.407 (a)	RSS-247 Section 6.2.1(1)	KDB 789033 D02 II C 1	Pass
Minimum 6 dB bandwidth (5.725-5.85 GHz band)	47 CFR Part 15, Subpart C 15.407 (e)	RSS-247 Section 6.2.4	KDB 789033 D02 II C 2	Pass
Maximum Conducted output power	47 CFR Part 15, Subpart C 15.407 (a)	RSS-247 Section 6.2.1&6.2.2&6.2.3&6.2.4	KDB 789033 D02 II E	Pass
Peak Power spectrum density	47 CFR Part 15, Subpart C 15.407 (a)	RSS-247 Section 6.2.1&6.2.2&6.2.3& 6.2.4	KDB 789033 D02 II F	Pass
Radiated Emissions	47 CFR Part 15, Subpart C 15.209 & 15.407(b)	RSS-247 Section 3.3 & RSS-Gen Section 8.9	KDB 789033 D02 II G	Pass
Radiated Emissions which fall in the restricted bands	47 CFR Part 15, Subpart C 15.209 & 15.407(b)	RSS-247 Section 3.3 & RSS-Gen Section 8.9	KDB 789033 D02 II G	Pass

3 Contents

4 General Information

4.1 Details of E.U.T.

Power supply:	DC 3.3V
Test voltage:	DC 3.3V

Operation Frequency:	Band	Mode	Frequency Range(MHz)	Number of channels
	UNII Band I	802.11a/n(HT20)	5180-5240	4
		802.11n(HT40)	5190-5230	2
	UNII Band II-A	802.11a/n(HT20)	5260-5320	4
		802.11n(HT40)	5270-5310	2
	UNII Band II-C	802.11a/n(HT20)	5500-5700	11
		802.11n(HT40)	5510-5670	5
	UNII Band III	802.11a/n(HT20)	5745-5825	5
		802.11n(HT40)	5755-5795	2
Modulation Type:	802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM)			
Date Rate:	802.11a:6/9/12/18/24/36/48/54Mbps 802.11n:MCS0-MCS7			
Channel Spacing:	802.11a/n(HT20): 20MHz 802.11n(HT40): 40MHz			
Antenna Gain:	Antenna 1: 5.71dBi Antenna 2: 2.97dBi (Provided by manufacturer)			
Antenna Type:	Antenna 1: FPC Antenna Antenna 2: FPC Antenna			
TPC Function:	Not support			
DFS Function:	Slaver without radar detection			
Date Rate:	802.11a:6/9/12/18/24/36/48/54Mbps 802.11n:MCS0-MCS7 802.11ac:VHT MCS0-MCS7			
S/N:	9180169-003			
Firmware Version:	(FRev) Rev 8.9.0.0.90			

Note 1: 802.11a mode only support antenna port 1.
Note 2: 5600MHz to 5650MHz band can not be operated in Canada.

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
PC	GE	-	-
Laptop	LENOVO	L460	-
Router	NETGEAR	RAX50	-

4.3 Power level setting using in test

Test Mode	802.11a		802.11n(HT20)	
Channel	Ant 1	Ant 2	Ant 1	Ant 2
36	15000	/	15000	15000
40	15000	/	15000	15000
48	15000	/	15000	15000
52	15000	/	15000	15000
60	15000	/	15000	15000
64	15000	/	15000	15000
100	15000	/	15000	15000
116	15000	/	15000	15000
120	15000	/	15000	15000
140	15000	/	15000	15000
149	15000	/	15000	15000
157	15000	/	15000	15000
165	15000	/	15000	15000

Test Mode	802.11n(HT40)	
Channel	Ant 1	Ant 2
38	15000	15000
46	15000	15000
54	15000	15000
62	15000	15000
102	15000	15000
110	15000	15000
118	15000	15000
134	15000	15000
151	15000	15000
159	15000	15000

4.4 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	8.4×10^{-8}
2	Timeout	2s
3	Duty Cycle	0.37%
4	Occupied Bandwidth	3%
5	RF Conducted Power	0.6dB
6	RF Power Density	2.9dB
7	Conducted Spurious Emissions	0.75dB
8	RF Radiated Power	5.2dB (Below 1GHz)
		5.9dB (Above 1GHz)
9	Radiated Spurious Emission Test	4.2dB (Below 30MHz)
		4.5dB (30MHz-1GHz)
		5.1dB (1GHz-18GHz)
		5.4dB (Above 18GHz)
10	Temperature Test	1°C
11	Humidity Test	3%
12	Supply Voltages	1.5%
13	Time	3%
Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.		

4.5 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888 Fax: +86 512 5737 0818

No tests were sub-contracted.

Note:

1. SGS is not responsible for wrong test results due to incorrect information (e.g. max. clock frequency, highest internal frequency, antenna gain, cable loss, etc) is provided by the applicant. (if applicable).
2. SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (if applicable).
3. Sample source: sent by customer.

4.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• A2LA

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

• FCC

Compliance Certification Services (Kunshan) Inc. has been recognized as an accredited testing laboratory. Designation Number: CN1172.

• ISED

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory. Company Number: 2324E

• VCCI

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-20134, R-11600, C-11707, T-11499, G-10216 respectively.

4.7 Deviation from Standards

None

4.8 Abnormalities from Standard Conditions

None

5 Equipment List

Item	Equipment	Manufacturer	Model	Inventory No	Cal Date	Cal. Due Date
RF Conducted Test						
1	Spectrum Analyzer	Keysight	N9020A	KUS1911E004-2	08/01/2024	07/31/2025
2	Spectrum Analyzer	Keysight	N9020A	KUS2001M001-2	08/01/2024	07/31/2025
3	Spectrum Analyzer	Keysight	N9030B	KSEM021-1	01/15/2024	01/14/2025
4	Signal Generator	R&S	SMBV100B	KSEM032	03/19/2024	03/18/2025
5	Signal Generator	R&S	SMW200A	KSEM020-1	08/02/2024	08/01/2025
6	Signal Generator	Agilent	N5182A	KUS2001M001-1	08/01/2024	07/31/2025
7	Signal Generator	Agilent	E8257C	KS301066	08/06/2024	08/05/2025
8	Radio Communication Test Station	Anritsu	MT8000A	KSEM001-1	08/01/2024	07/31/2025
9	Radio Communication Analyzer	Anritsu	MT8821C	KSEM002-1	03/19/2024	03/18/2025
10	Universal Radio Communication Tester	R&S	CMW500	KUS1911E004-1	08/12/2024	08/11/2025
11	Switcher	TST	FY562	KUS2001M001-4	01/15/2024	01/14/2025
12	Conducted Test Cable	Thermax	RF01-RF04	CZ301111-CZ301120	01/15/2024	01/14/2025
13	Temp. / Humidity Chamber	TERCHY	MHK-120AK	KS301190	08/26/2024	08/25/2025
14	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-5	03/19/2024	03/18/2025
15	Test software	Tonscend	JS Tonscend BT/WIFI System	Version: 2.6	NCR	NCR
RF Radiated Test						
1	Spectrum Analyzer	R&S	FSV40	KUS1806E003	08/06/2024	08/05/2025
2	Universal Radio Communication Tester	R&S	CMW500	KSEM009-1	03/19/2024	03/18/2025
4	Loop Antenna	COM-POWER	AL-130R	KUS1806E001	03/18/2023	03/17/2025
5	Bilog Antenna	TESEQ	CBL 6112D	KUS1806E005	06/29/2023	06/28/2025
6	Bilog Antenna	TESEQ	CBL 6112D	KUS1806E006	03/19/2024	03/18/2025
7	Horn-antenna(1-18GHz)	Schwarzbeck	BBHA9120D	KS301079	03/23/2024	08/22/2026
8	Horn-antenna(1-18GHz)	ETS-LINDGREN	3117	KS301186	04/07/2023	04/06/2025
9	Horn Antenna(18-40GHz)	Schwarzbeck	BBHA9170	CZ301058	01/07/2024	01/06/2026
10	Amplifier(30MHz~18GHz)	PANSHAN TECHNOLOGY	LNA:1~18G	KSEM010-1	01/15/2024	01/14/2025
11	Amplifier(18~40GHz)	PANSHAN TECHNOLOGY	LNA180400G40	KSEM038	08/12/2024	08/11/2025
12	RE Test Cable	REBES MICROWAVE	/	CZ301097	08/12/2024	08/11/2025
13	Temperature & Humidity Recorder	Renke Control	RS-WS-N01-6J	KSEM024-4	03/21/2024	03/20/2025
14	Software	Faratronic	EZ_EMC-v 3A1	/	NCR	NCR
15	Software	ESE	E3_V 6.111221a	/	NCR	NCR

6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203

6.1.2 Conclusion

Standard Requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit permanently attached antenna or of an so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:

The antenna 1 and Antenna 2 is FPC antenna and no consideration of replacement. The best case gain of the antenna 1 is 5.71 dBi and antenna 2 is 2.93 dBi.

Antenna location: Refer to internal photo.

6.2 Transmission in the Absence of Data

6.2.1 Test Requirement:

47 CFR Part 15, Subpart E 15.407 (c)

6.2.2 Conclusion

6.2.2 Conclusion

Standard Requirement:

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signalling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals.

Applicants shall include in their application for equipment authorization a description of how this requirement is met.

EUT Details:

WIFI chip support automatically discontinue transmission in case of either absence of information to transmit or operational failure, if the chip detect absence of information to transmit or operational failure, it will be automatically shut off.

7 Radio Spectrum Matter Test Results

7.1 26dB Emission bandwidth

Test Requirement 47 CFR Part 15, Subpart E 15.407 (a)

Test Method: KDB 789033 D02 II C 1

7.1.1 E.U.T. Operation

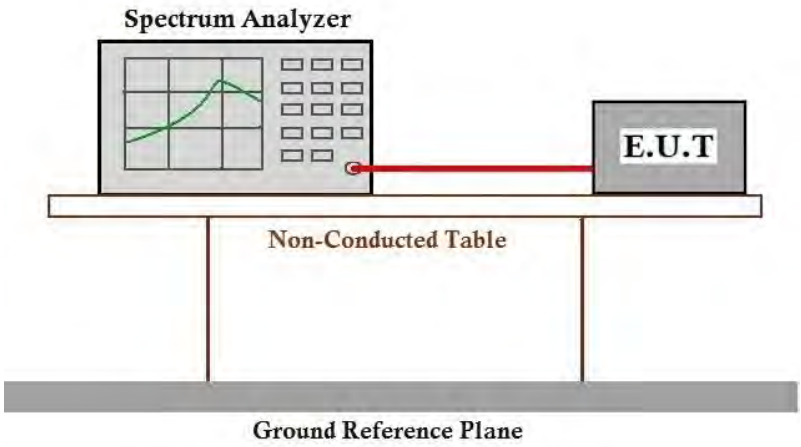
Operating Environment:

Temperature: 26.0 °C Humidity: 70.1 % RH Atmospheric Pressure: 1010 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	05	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	07	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.

7.1.3 Test Setup Diagram



7.1.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.2 99% Bandwidth

Test Requirement N/A

Test Method: KDB 789033 II D

7.2.1 E.U.T. Operation

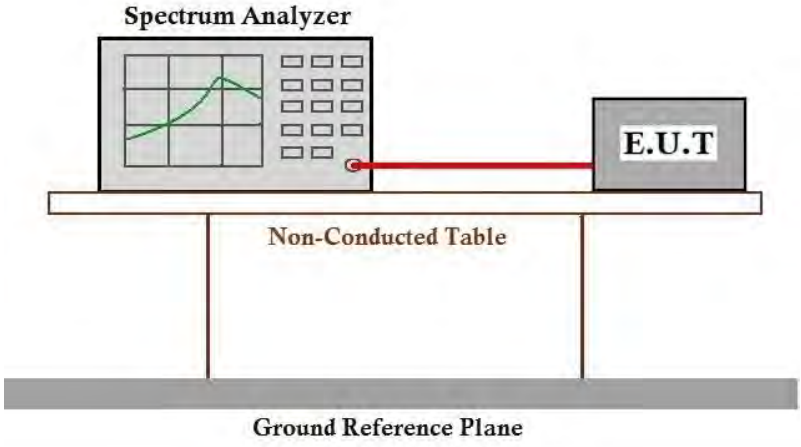
Operating Environment:

Temperature: 26.0 °C Humidity: 69.9 % RH Atmospheric Pressure: 1010 mbar

7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	05	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	07	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.

7.2.3 Test Setup Diagram



7.2.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.3 Minimum 6 dB bandwidth (5.725-5.85 GHz band)

Test Requirement 47 CFR Part 15, Subpart E 15.407 (e)

Test Method: KDB 789033 D02 II C 2

Limit:

Frequency band(MHz)	Limit
5725-5850	⩾500 kHz

7.3.1 E.U.T. Operation

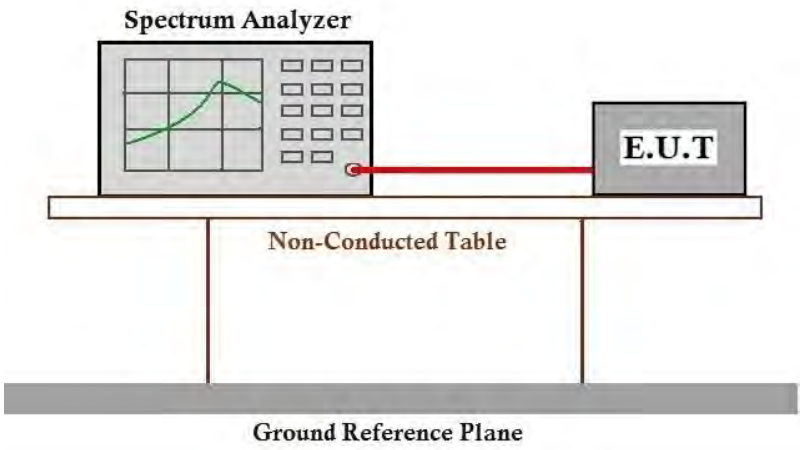
Operating Environment:

Temperature: 26.0 °C Humidity: 69.6 % RH Atmospheric Pressure: 1010 mbar

7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	07	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.

7.3.3 Test Setup Diagram



7.3.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.4 Duty Cycle

Test Requirement KDB 789033 D02 II B 1

Test Method: KDB 789033 II B 1

7.4.1 E.U.T. Operation

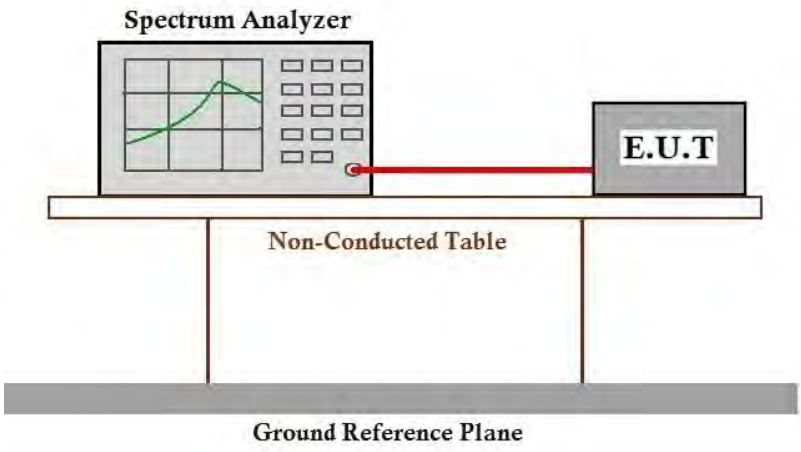
Operating Environment:

Temperature: 26.1 °C Humidity: 69.5 % RH Atmospheric Pressure: 1010 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	05	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	07	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.

7.4.3 Test Setup Diagram



7.4.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.5 Maximum Conducted output power

Test Requirement 47 CFR Part 15, Subpart E 15.407 (a)

Test Method: KDB 789033 D02 II E

Limit:

Frequency band(MHz)	Limit
5150-5250	≤1W(30dBm) for master device
	≤250mW(24dBm) for client device
5250-5350	≤250mW(24dBm) for client device or 11dBm+10logB*
5470-5725	≤250mW(24dBm) for client device or 11dBm+10logB*
5725-5850	≤1W(30dBm)
Remark:	* Where B is the 26dB emission bandwidth in MHz. The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. For IC 5150MHz to 5250MHz limit is EIRP⩽200mW(23dBm)

7.5.1 E.U.T. Operation

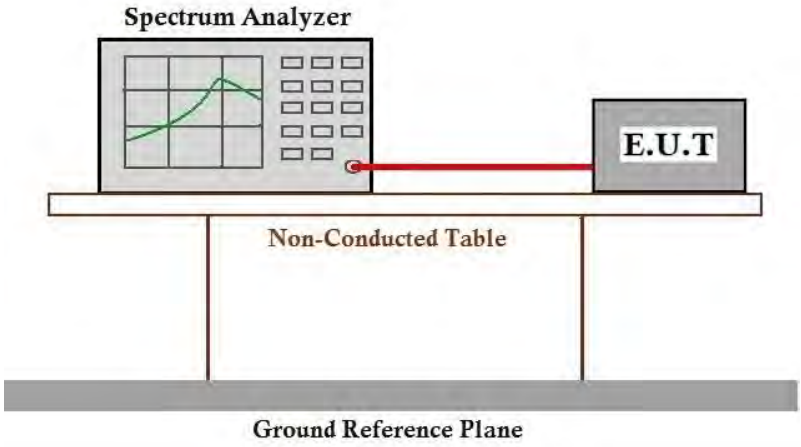
Operating Environment:

Temperature: 26.1 °C Humidity: 69.5 % RH Atmospheric Pressure: 1010 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	05	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	07	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.

7.5.3 Test Setup Diagram



7.5.4 Measurement Procedure and Data

Note: Since the verify power the same operating range bandwidth and smaller power can be covered by the higher power.

Please Refer to Appendix for Details

7.6 Peak Power spectrum density

Test Requirement 47 CFR Part 15, Subpart E 15.407 (a)
Test Method: KDB 789033 D02 II F

Limit:

Frequency band(MHz)	Limit
5150-5250	≤17dBm in 1MHz for master device
	≤11dBm in 1MHz for client device
5250-5350	≤11dBm in 1MHz for client device
5470-5725	≤11dBm in 1MHz for client device
5725-5850	≤30dBm in 500 kHz
Remark:	The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test.

For IC 5150MHz to 5250MHz limit is EIRP≤10dBm/MHz

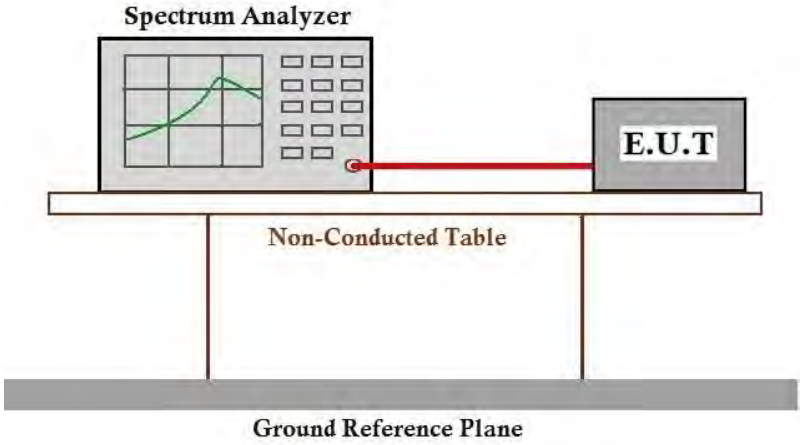
7.6.1 E.U.T. Operation

Operating Environment:
Temperature: 26.1 °C Humidity: 69.5 % RH Atmospheric Pressure: 1010 mbar

7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	05	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	07	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.

7.6.3 Test Setup Diagram



7.6.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.7 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)
Test Method: KDB 789033 D02 II G

Limit:

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

*(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

7.7.1 E.U.T. Operation

Operating Environment:

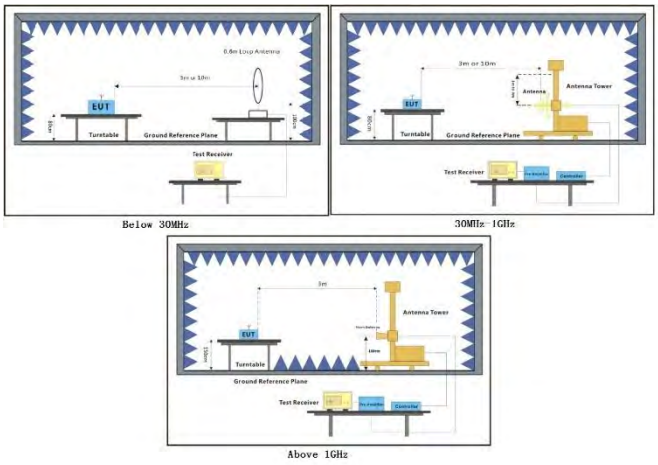
Temperature: 26.1 °C Humidity: 69.5 % RH Atmospheric Pressure: 1010 mbar

7.7.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	05	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all

		modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	07	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.

7.7.3 Test Setup Diagram



7.7.4 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

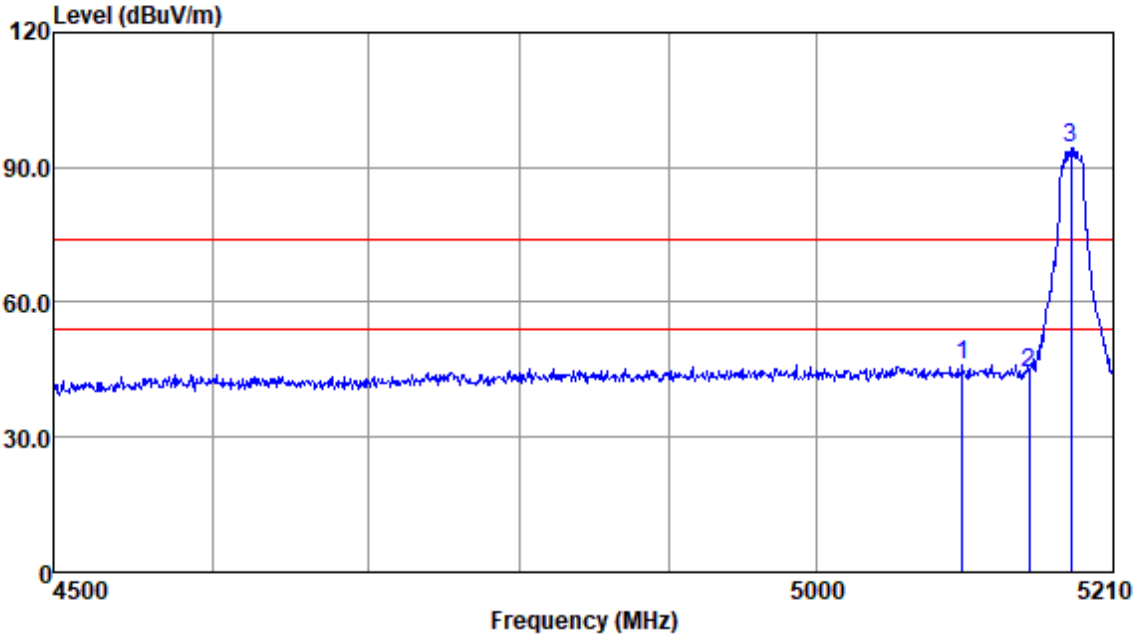
h. Test the EUT in the lowest channel, the middle channel, the Highest channel.

i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

j. Repeat above procedures until all frequencies measured was complete.

Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

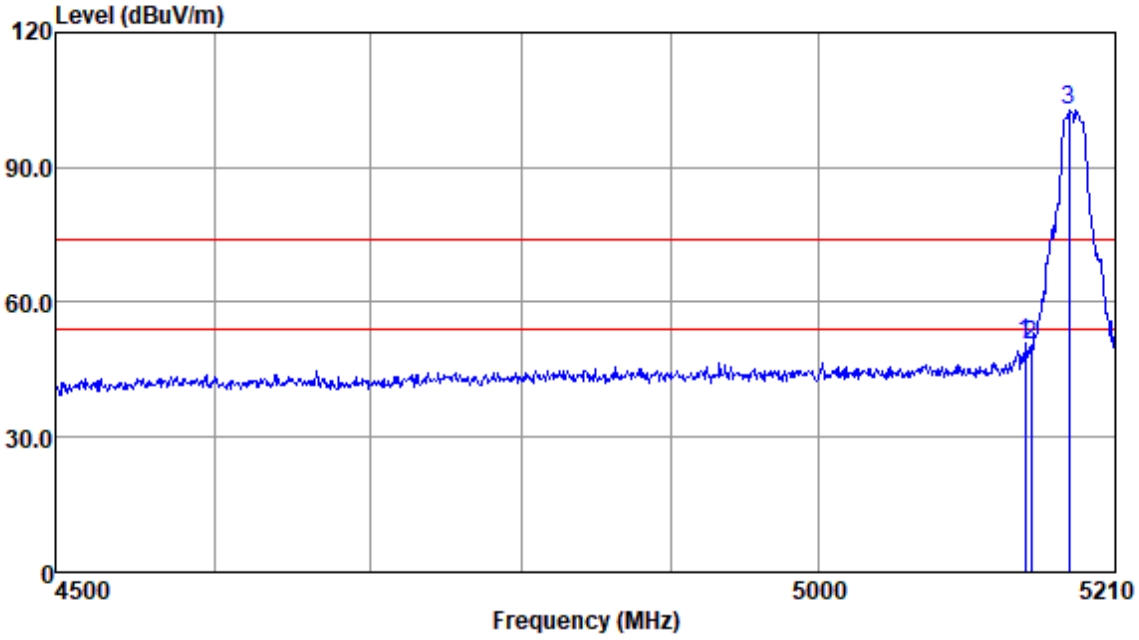


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5102.73	43.90	33.67	5.53	36.87	46.23	74.00	-27.77	Peak
5150.00	42.06	33.78	5.54	36.88	44.50	74.00	-29.50	Peak
5179.56	91.56	33.87	5.65	36.89	94.19	74.00	20.19	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

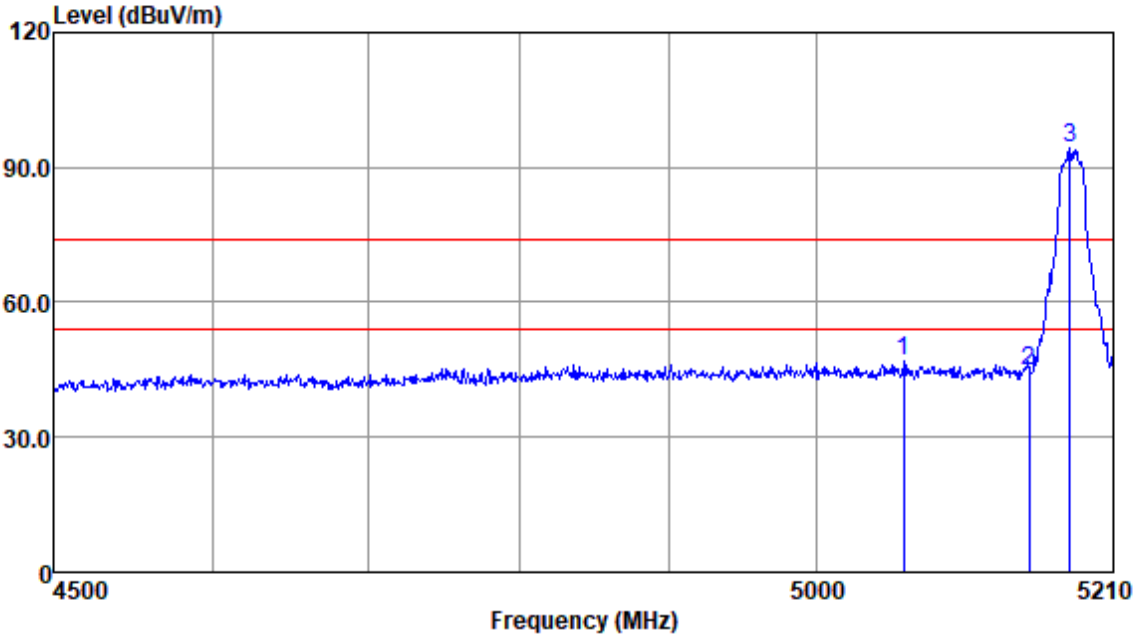


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5145.52	48.57	33.78	5.54	36.88	51.01	74.00	-22.99	Peak
5150.00	48.08	33.78	5.54	36.88	50.52	74.00	-23.48	Peak
5176.52	100.24	33.87	5.65	36.89	102.87	74.00	28.87	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

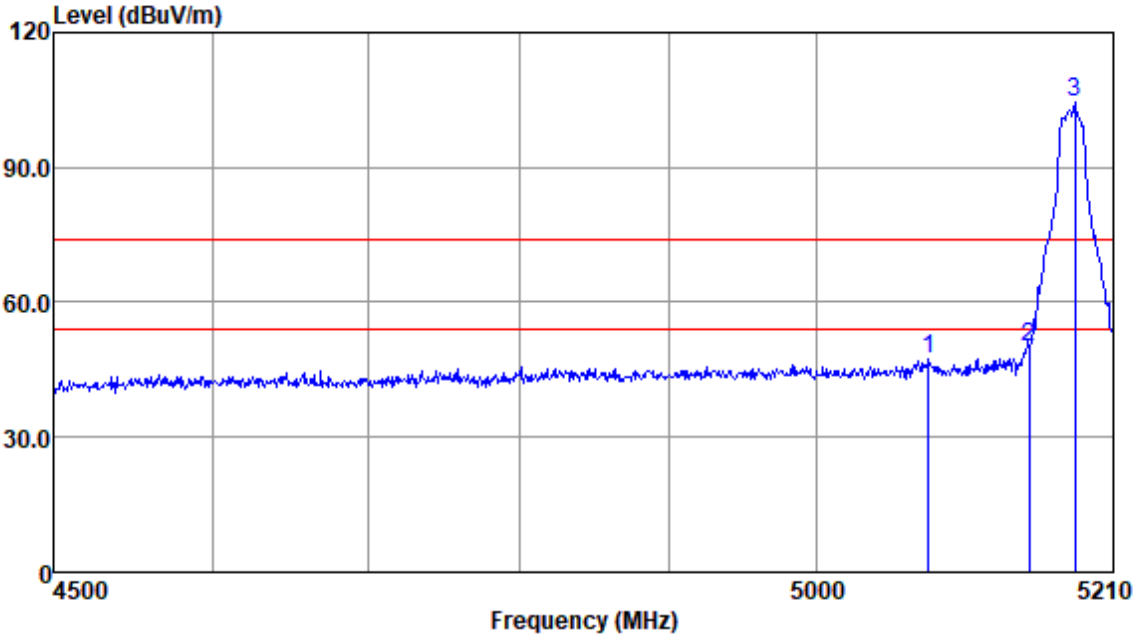


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5061.04	44.41	33.68	5.72	36.86	46.95	74.00	-27.05	Peak
5150.00	42.07	33.78	5.54	36.88	44.51	74.00	-29.49	Peak
5178.80	91.53	33.87	5.65	36.89	94.16	74.00	20.16	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

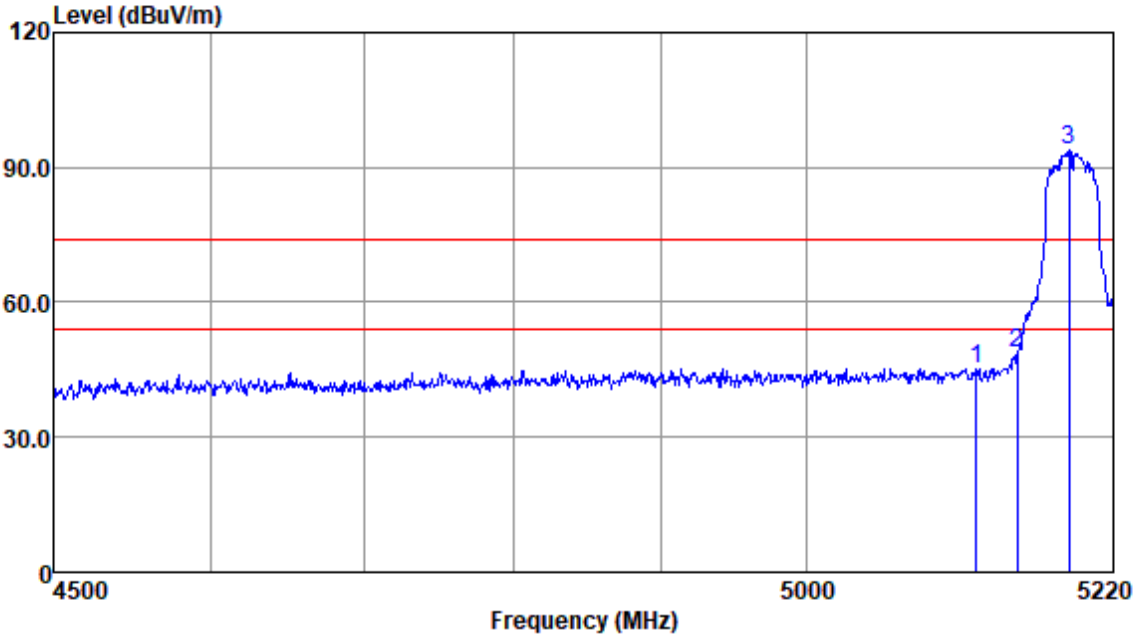


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5078.87	45.09	33.68	5.64	36.86	47.55	74.00	-26.45	Peak
5150.00	47.63	33.78	5.54	36.88	50.07	74.00	-23.93	Peak
5182.59	101.86	33.87	5.65	36.89	104.49	74.00	30.49	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

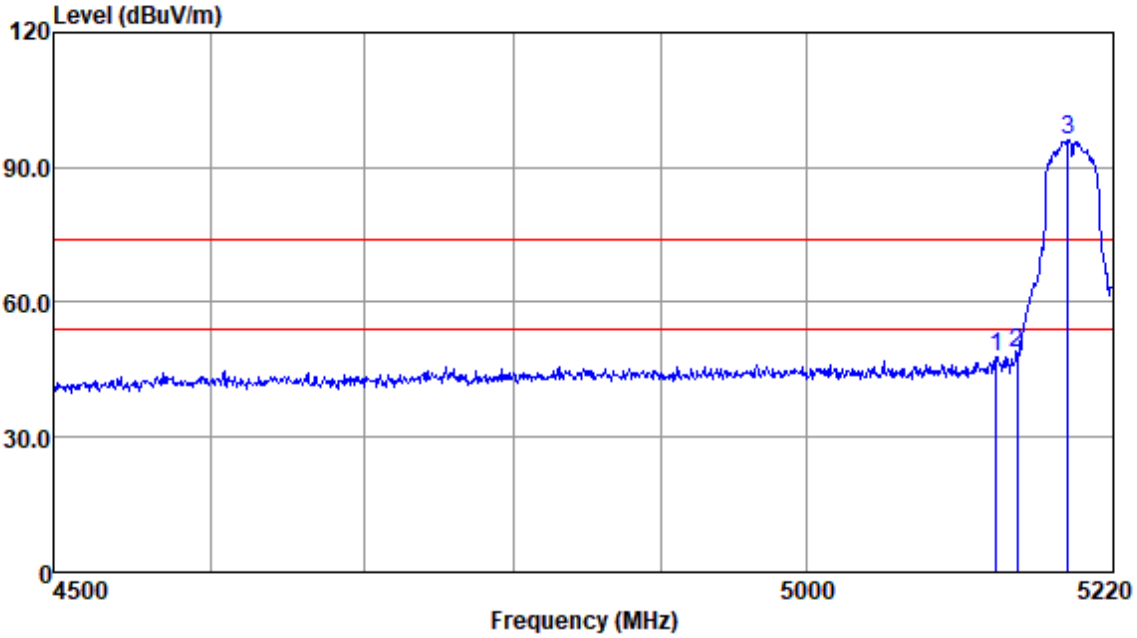


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5121.01	42.89	33.71	5.55	36.87	45.28	74.00	-28.72	Peak
5150.00	46.31	33.78	5.54	36.88	48.75	74.00	-25.25	Peak
5187.56	91.15	33.91	5.65	36.89	93.82	74.00	19.82	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

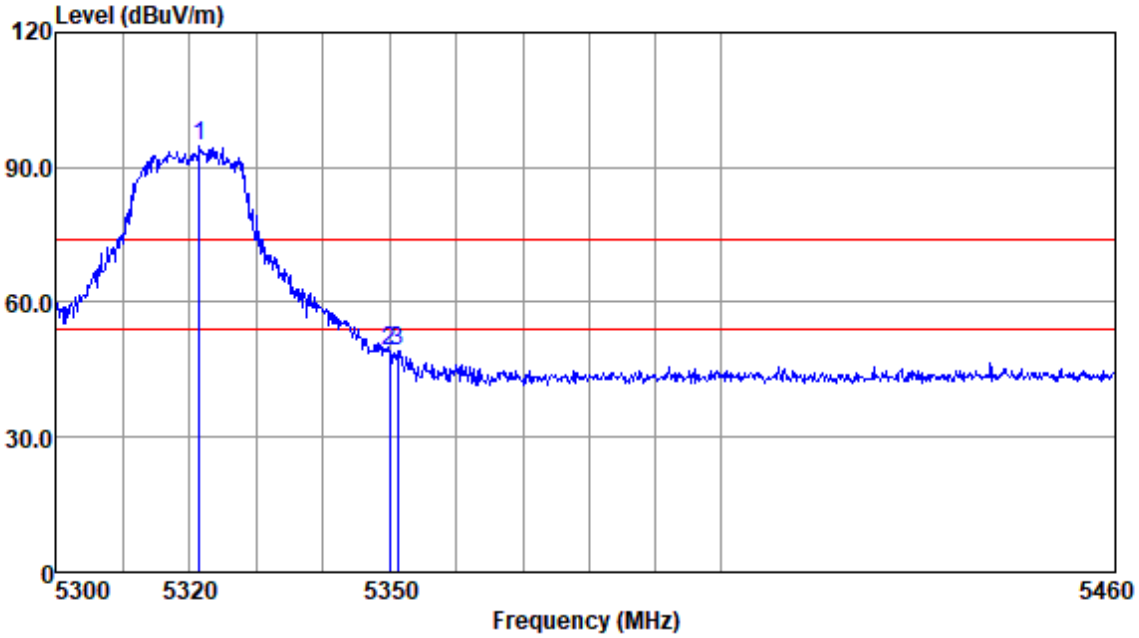


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5135.47	45.57	33.74	5.59	36.88	48.02	74.00	-25.98	Peak
5150.00	46.42	33.78	5.54	36.88	48.86	74.00	-25.14	Peak
5186.79	93.50	33.91	5.65	36.89	96.17	74.00	22.17	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High

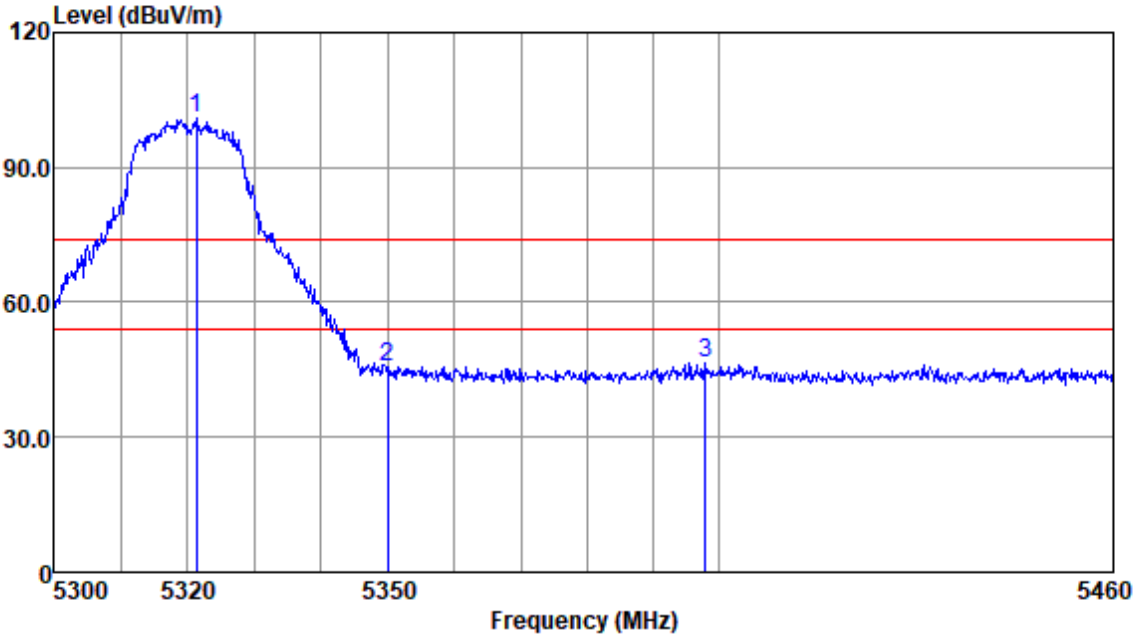


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5321.48	92.31	34.16	5.44	36.93	94.98	74.00	20.98	Peak
5350.00	46.46	34.19	5.60	36.94	49.31	74.00	-24.69	Peak
5351.16	46.49	34.19	5.60	36.94	49.34	74.00	-24.66	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High

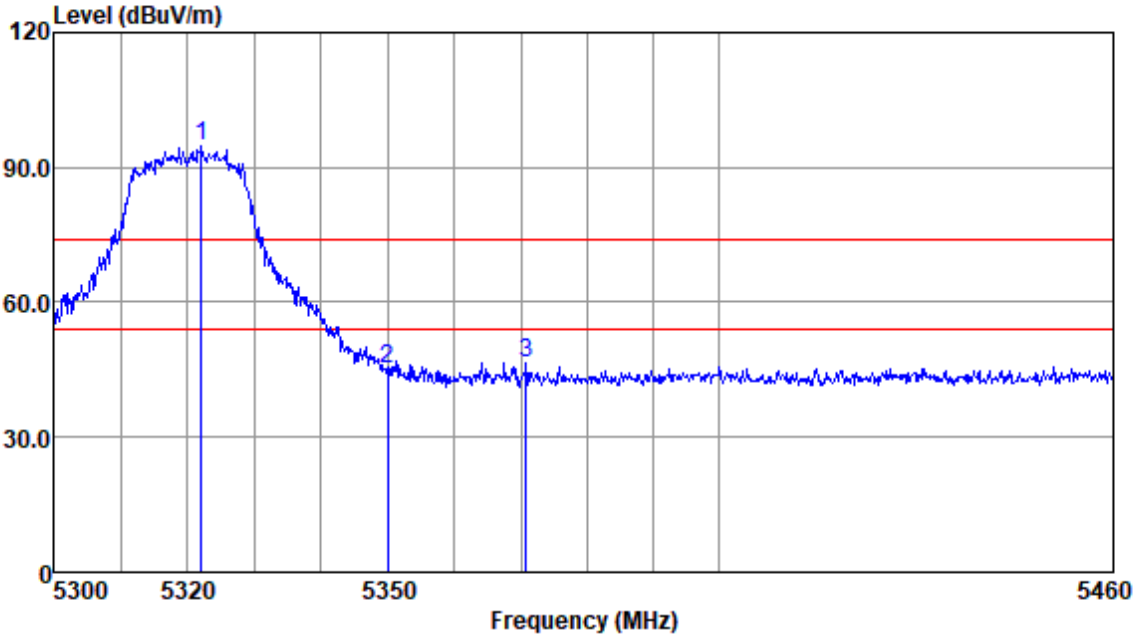


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5321.32	98.12	34.16	5.44	36.93	100.79	74.00	26.79	Peak
5350.00	42.77	34.19	5.60	36.94	45.62	74.00	-28.38	Peak
5397.84	43.62	34.34	5.70	36.95	46.71	74.00	-27.29	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High

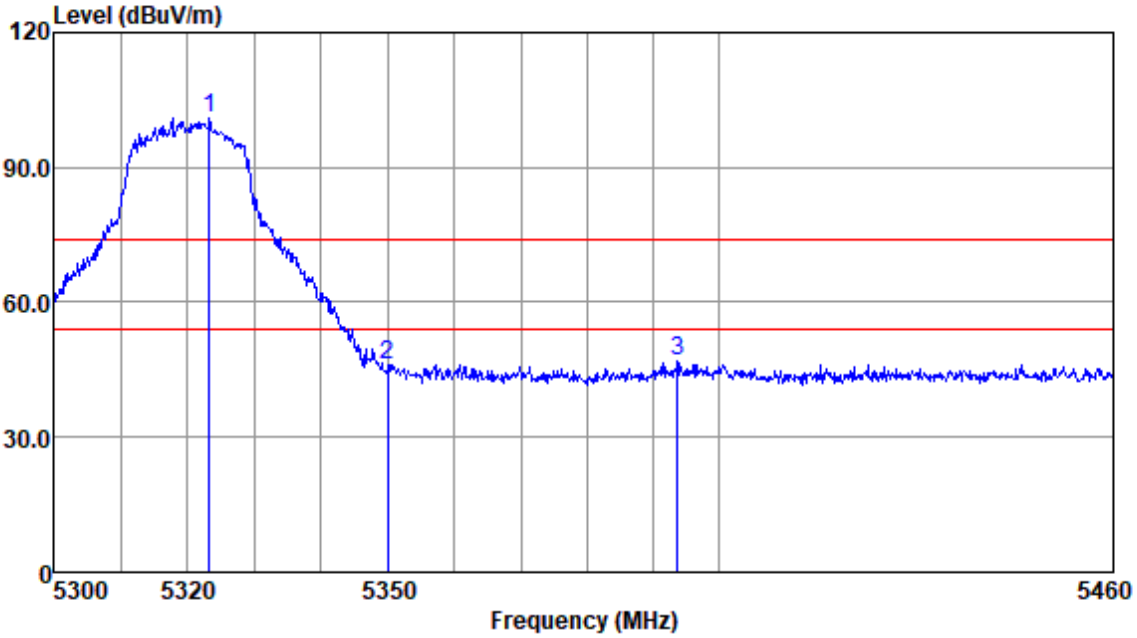


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5322.12	92.09	34.16	5.44	36.93	94.76	74.00	20.76	Peak
5350.00	42.21	34.19	5.60	36.94	45.06	74.00	-28.94	Peak
5370.77	43.65	34.29	5.63	36.95	46.62	74.00	-27.38	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High

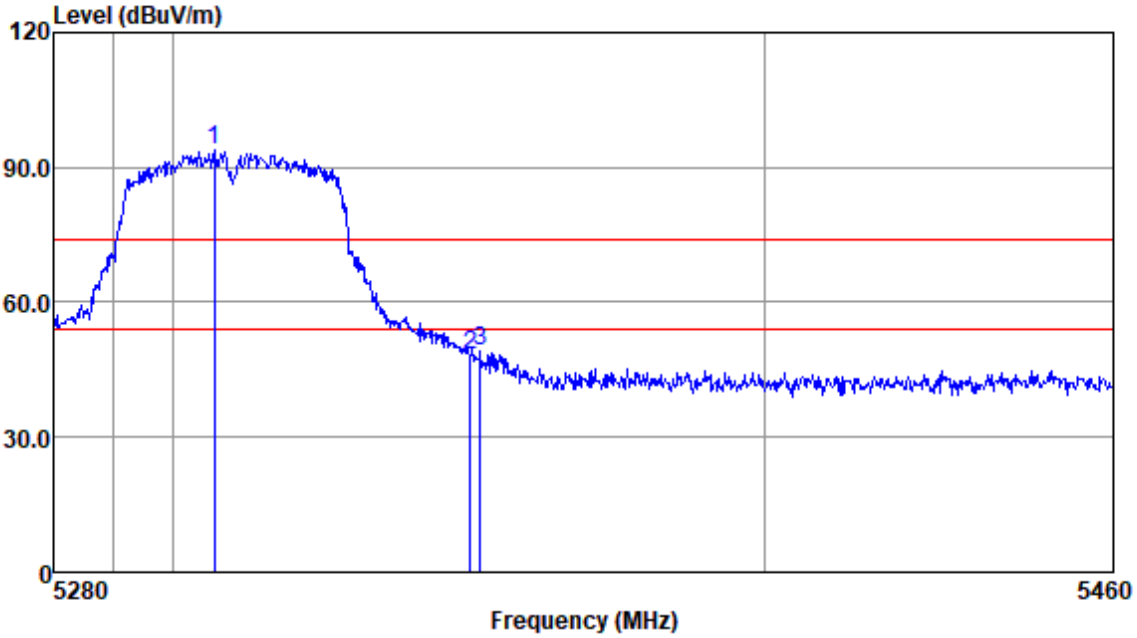


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5323.22	98.17	34.16	5.44	36.93	100.84	74.00	26.84	Peak
5350.00	43.07	34.19	5.60	36.94	45.92	74.00	-28.08	Peak
5393.66	43.80	34.34	5.70	36.95	46.89	74.00	-27.11	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High

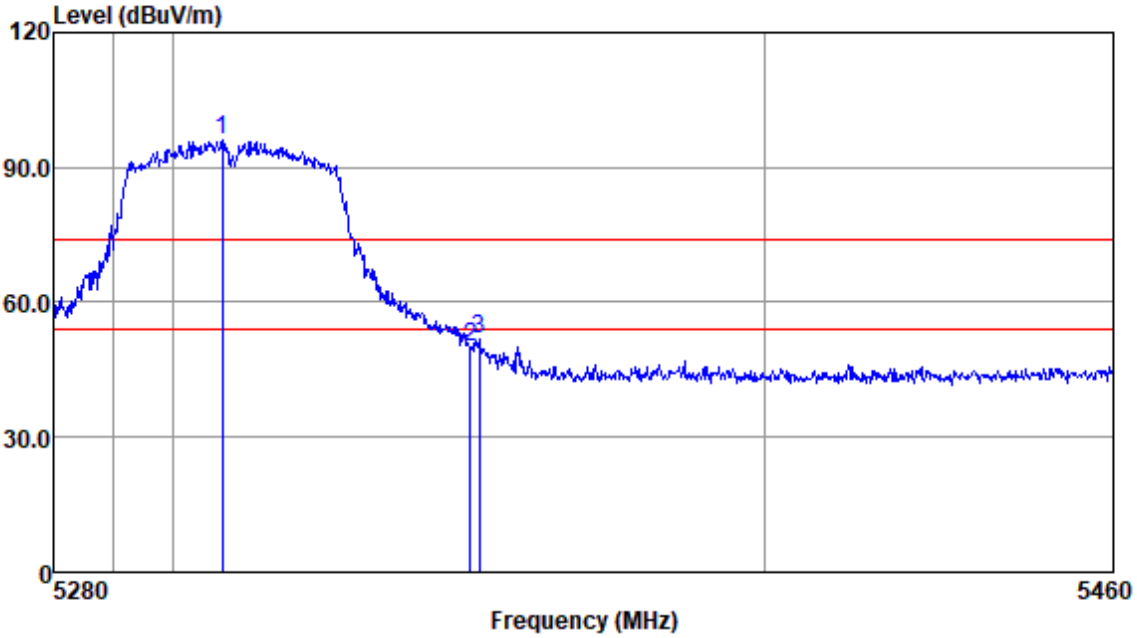


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5306.97	90.83	34.14	5.63	36.92	93.68	74.00	19.68	Peak
5350.00	45.41	34.19	5.60	36.94	48.26	74.00	-25.74	Peak
5351.82	46.35	34.19	5.60	36.94	49.20	74.00	-24.80	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High

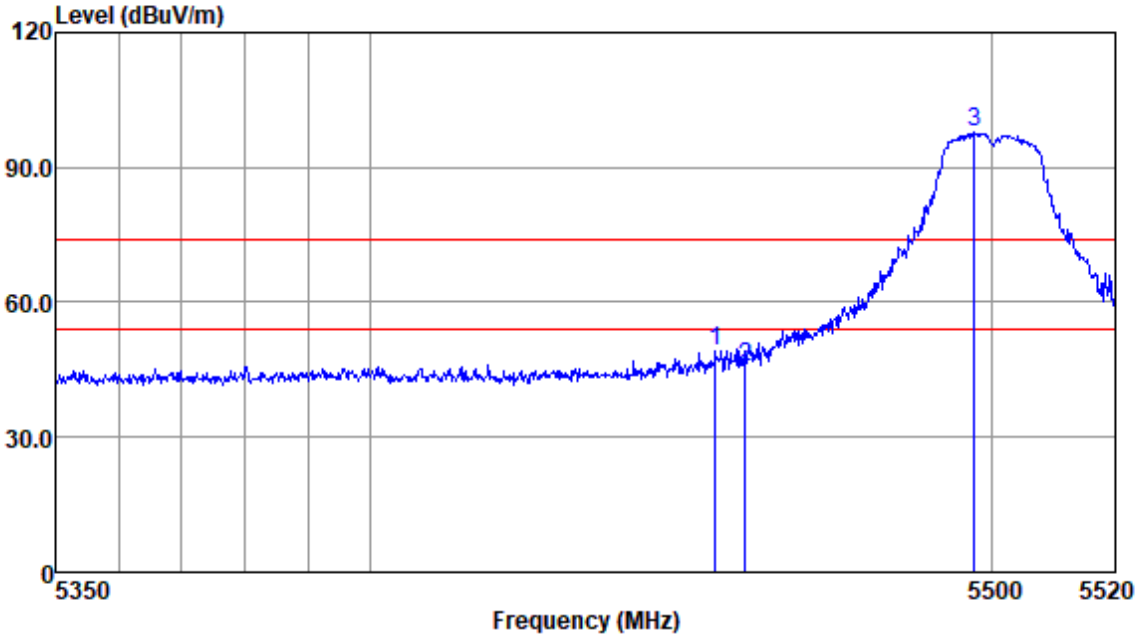


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5308.22	93.24	34.16	5.44	36.93	95.91	74.00	21.91	Peak
5350.00	47.08	34.19	5.60	36.94	49.93	74.00	-24.07	Peak
5351.64	48.79	34.19	5.60	36.94	51.64	74.00	-22.36	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

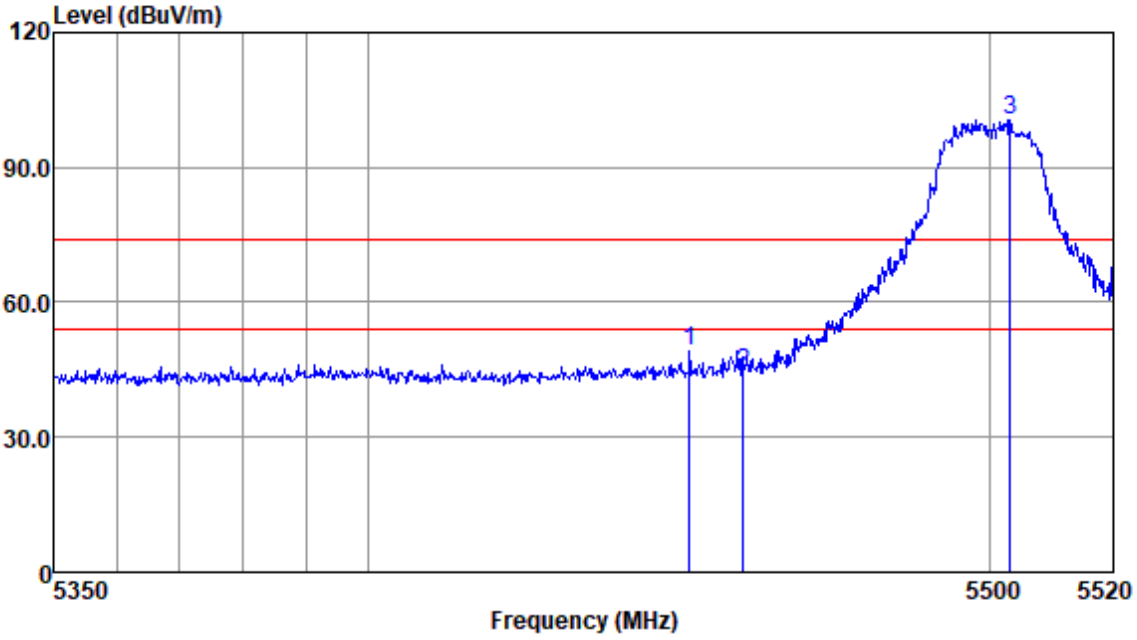


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5455.29	45.82	34.44	5.75	36.97	49.04	74.00	-24.96	Peak
5460.00	42.51	34.44	5.75	36.97	45.73	74.00	-28.27	Peak
5497.08	94.53	34.52	5.73	36.98	97.80	74.00	23.80	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

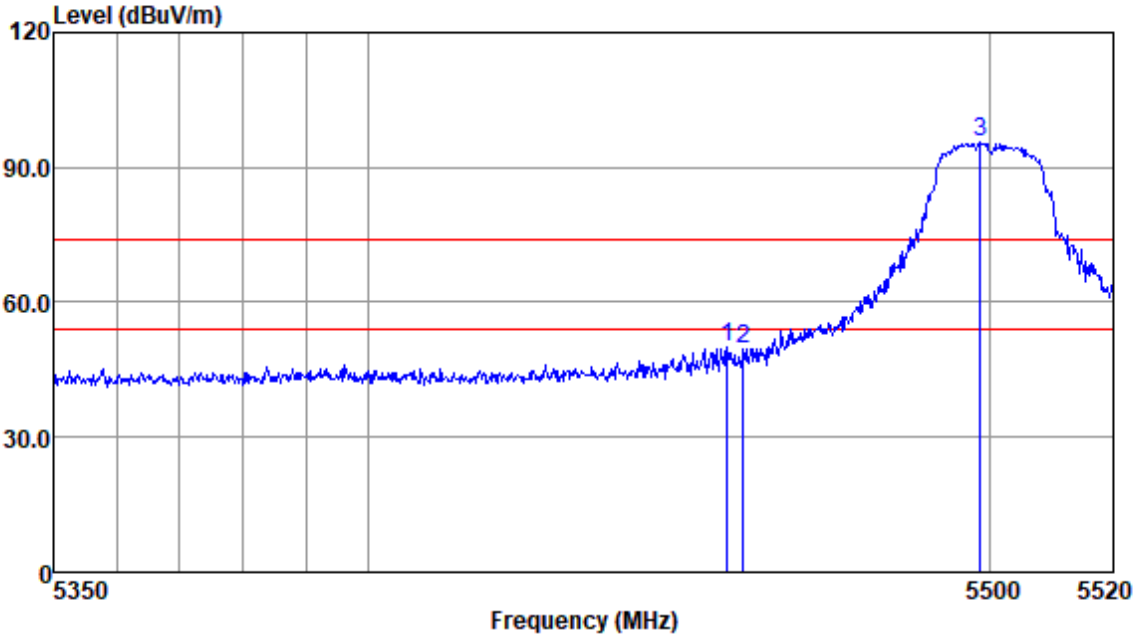


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5451.36	45.80	34.44	5.75	36.97	49.02	74.00	-24.98	Peak
5460.00	41.06	34.44	5.75	36.97	44.28	74.00	-29.72	Peak
5503.28	97.42	34.52	5.73	36.98	100.69	74.00	26.69	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

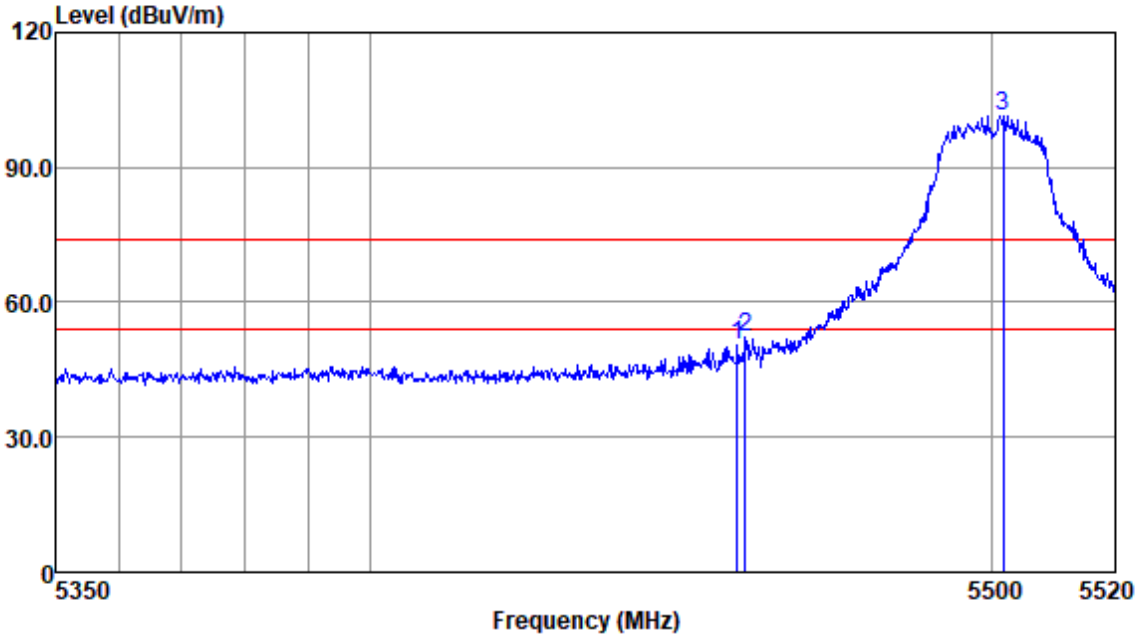


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5457.50	46.92	34.44	5.75	36.97	50.14	74.00	-23.86	Peak
5460.00	46.15	34.44	5.75	36.97	49.37	74.00	-24.63	Peak
5498.46	92.40	34.52	5.73	36.98	95.67	74.00	21.67	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

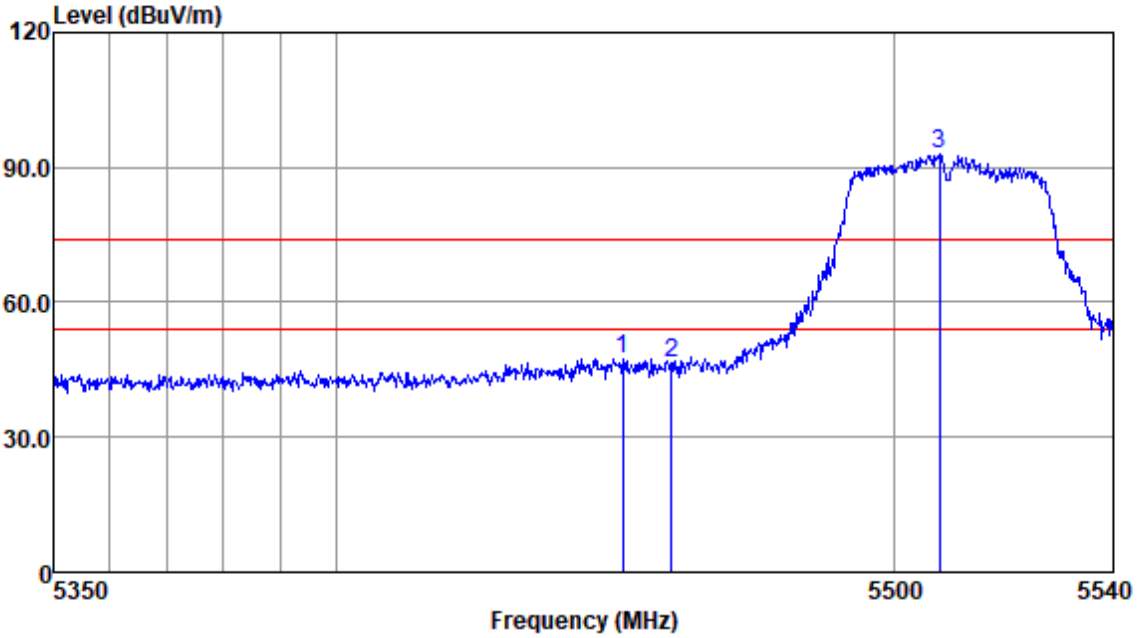


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5458.70	47.44	34.44	5.75	36.97	50.66	74.00	-23.34	Peak
5460.00	48.89	34.44	5.75	36.97	52.11	74.00	-21.89	Peak
5501.73	98.17	34.52	5.73	36.98	101.44	74.00	27.44	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

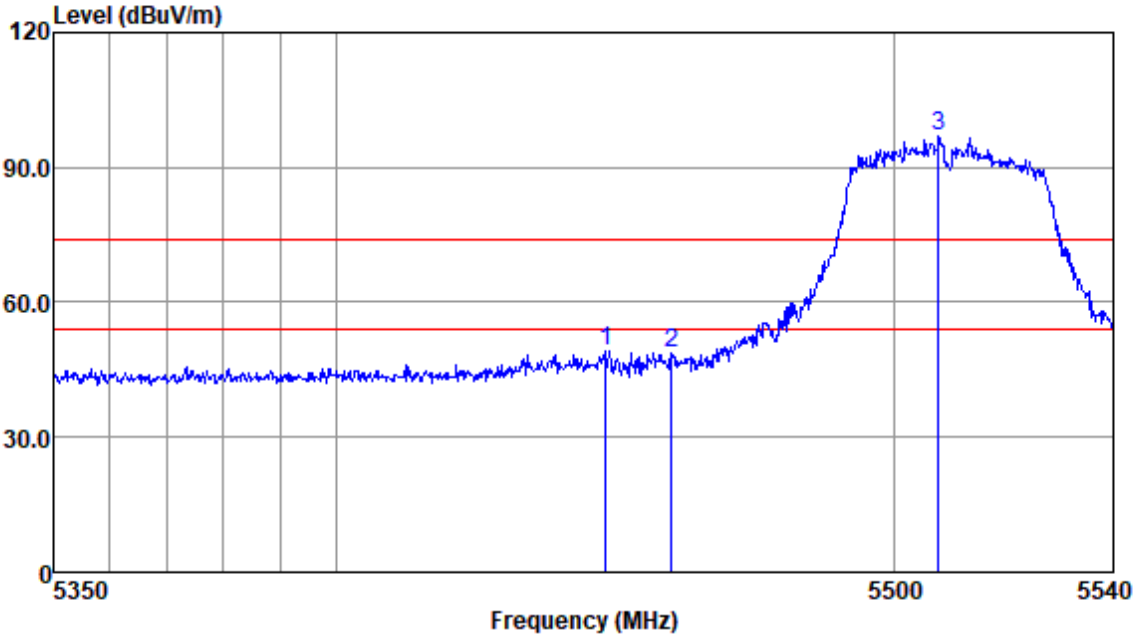


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5451.21	44.29	34.44	5.75	36.97	47.51	74.00	-26.49	Peak
5460.00	43.12	34.44	5.75	36.97	46.34	74.00	-27.66	Peak
5508.38	89.50	34.52	5.73	36.98	92.77	74.00	18.77	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

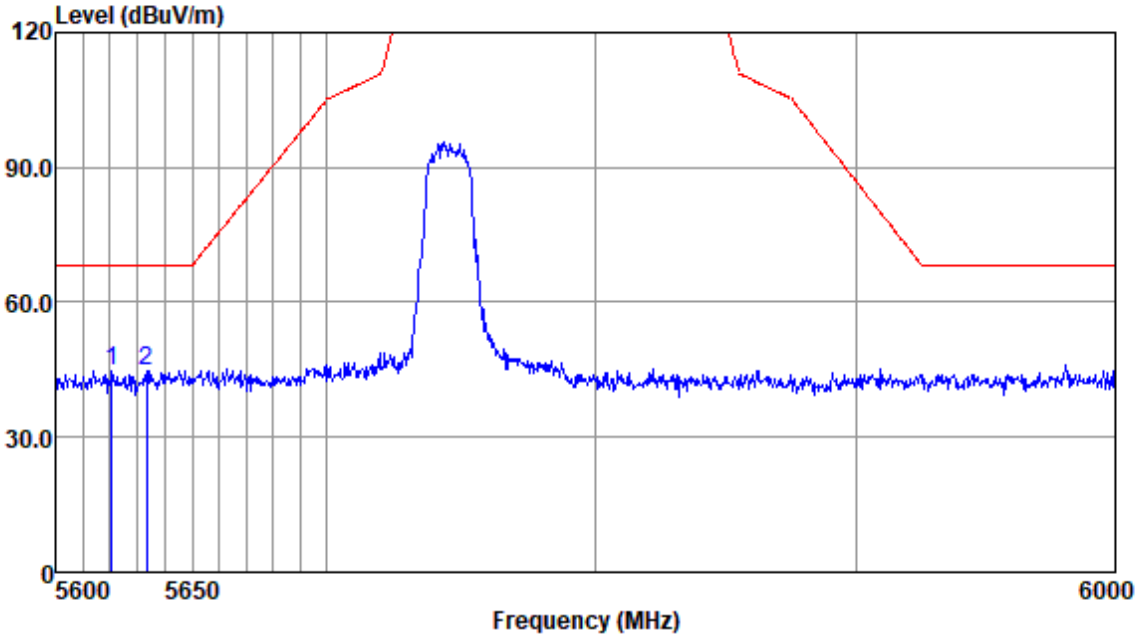


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5448.16	46.05	34.44	5.75	36.97	49.27	74.00	-24.73	Peak
5460.00	45.43	34.44	5.75	36.97	48.65	74.00	-25.35	Peak
5508.19	93.56	34.52	5.73	36.98	96.83	74.00	22.83	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

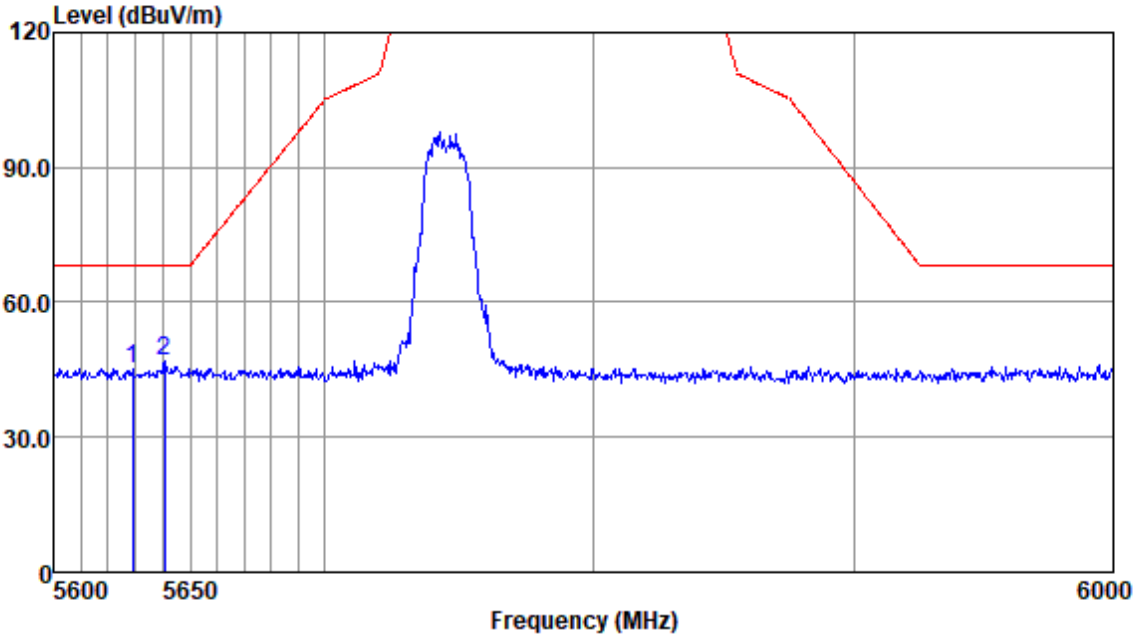


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5620.52	41.48	34.52	5.79	37.00	44.79	68.20	-23.41	Peak
5633.33	41.50	34.53	5.83	37.00	44.86	68.20	-23.34	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

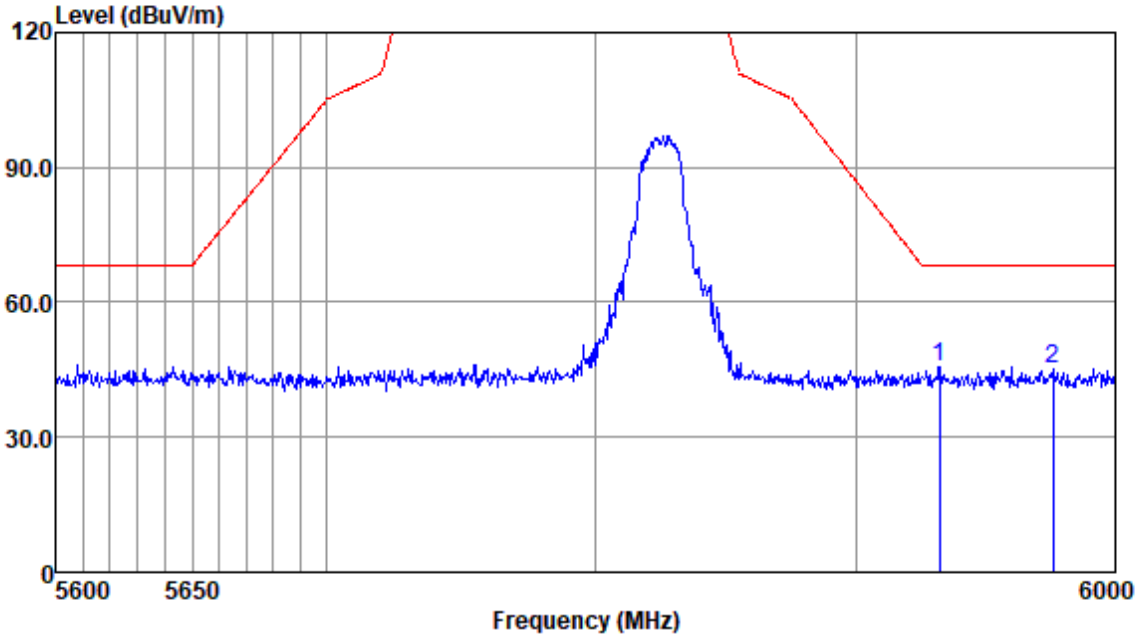


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5629.05	41.75	34.53	5.83	37.00	45.11	68.20	-23.09	Peak
5640.72	43.46	34.53	5.87	37.00	46.86	68.20	-21.34	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High

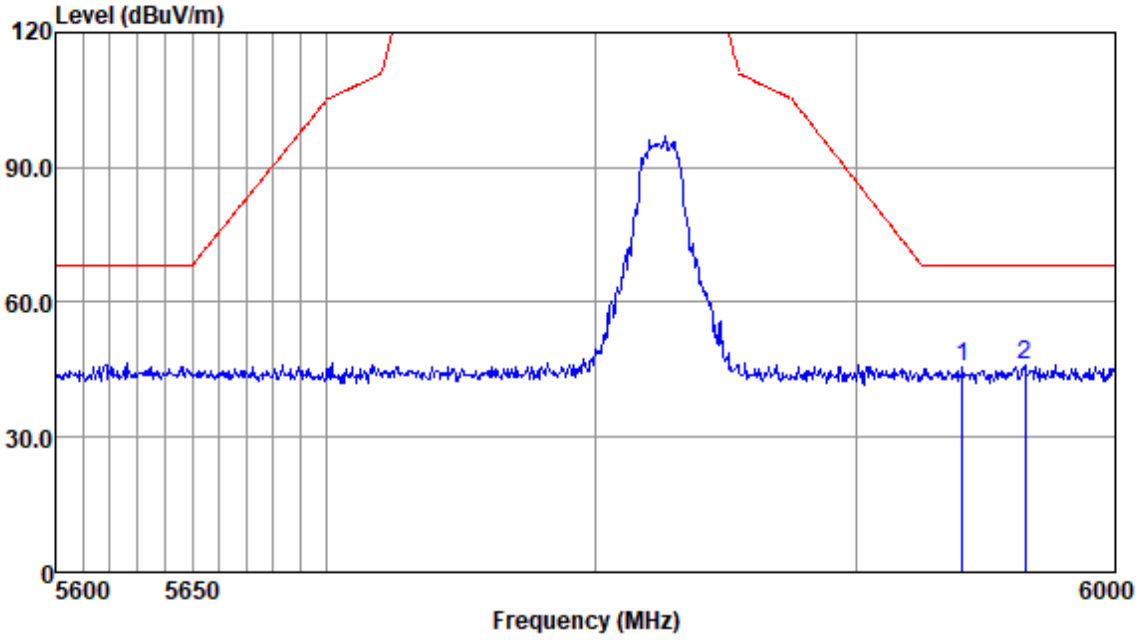


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5931.68	42.12	34.81	5.91	37.05	45.79	68.20	-22.41	Peak
5975.63	41.22	34.90	5.97	37.05	45.04	68.20	-23.16	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High

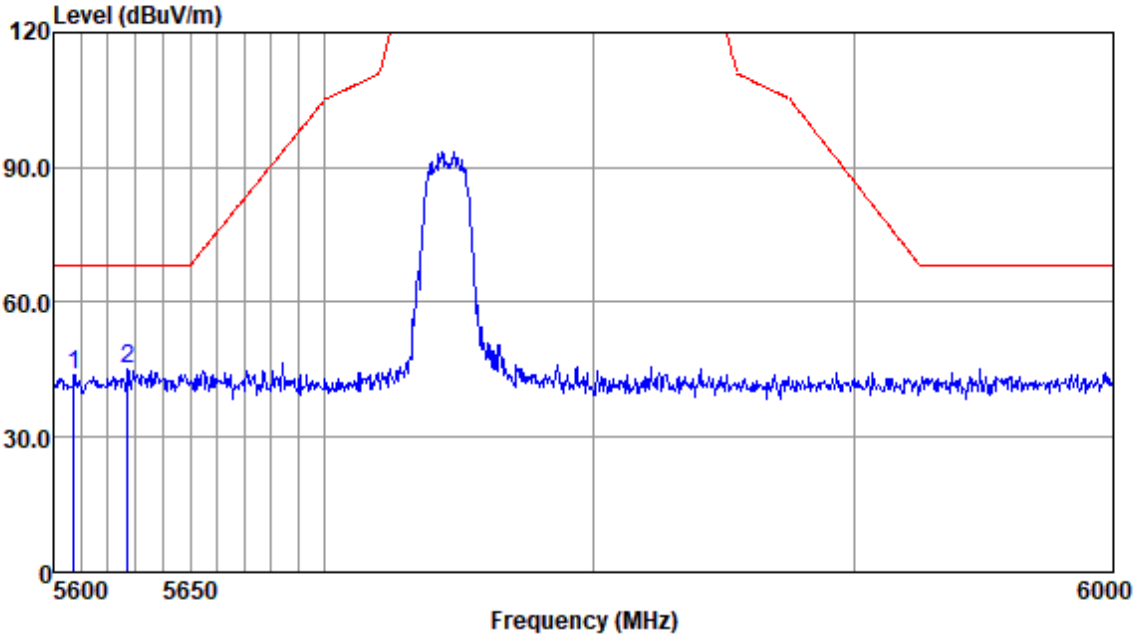


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5940.69	42.09	34.81	5.91	37.05	45.76	68.20	-22.44	Peak
5964.92	42.06	34.90	5.97	37.05	45.88	68.20	-22.32	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

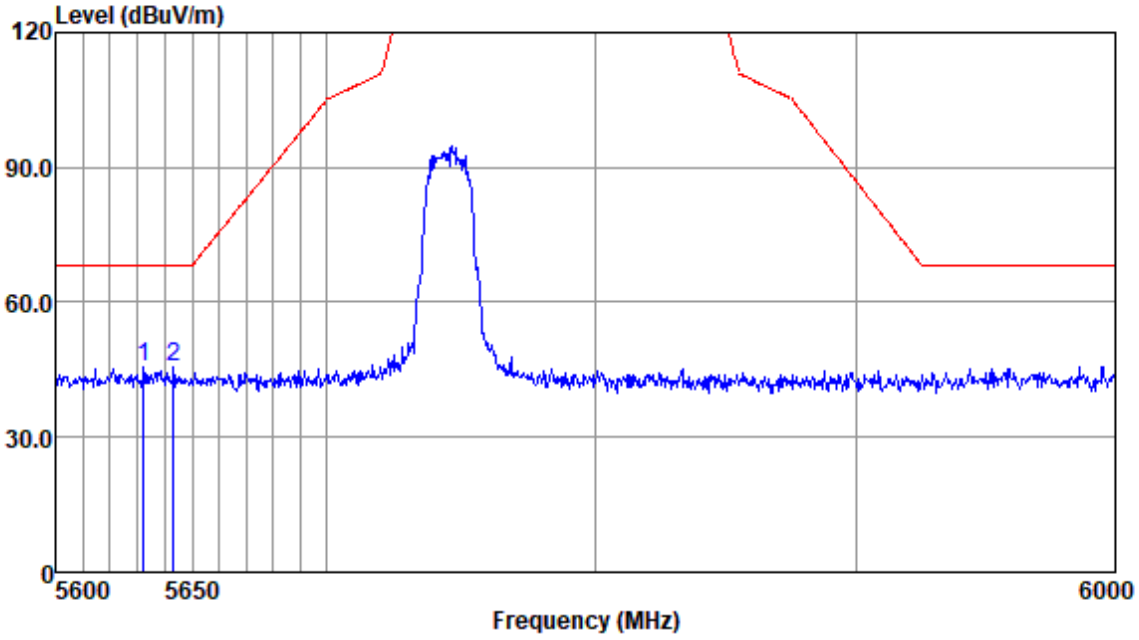


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5607.35	40.70	34.52	5.74	37.00	43.96	68.20	-24.24	Peak
5627.11	41.74	34.53	5.83	37.00	45.10	68.20	-23.10	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

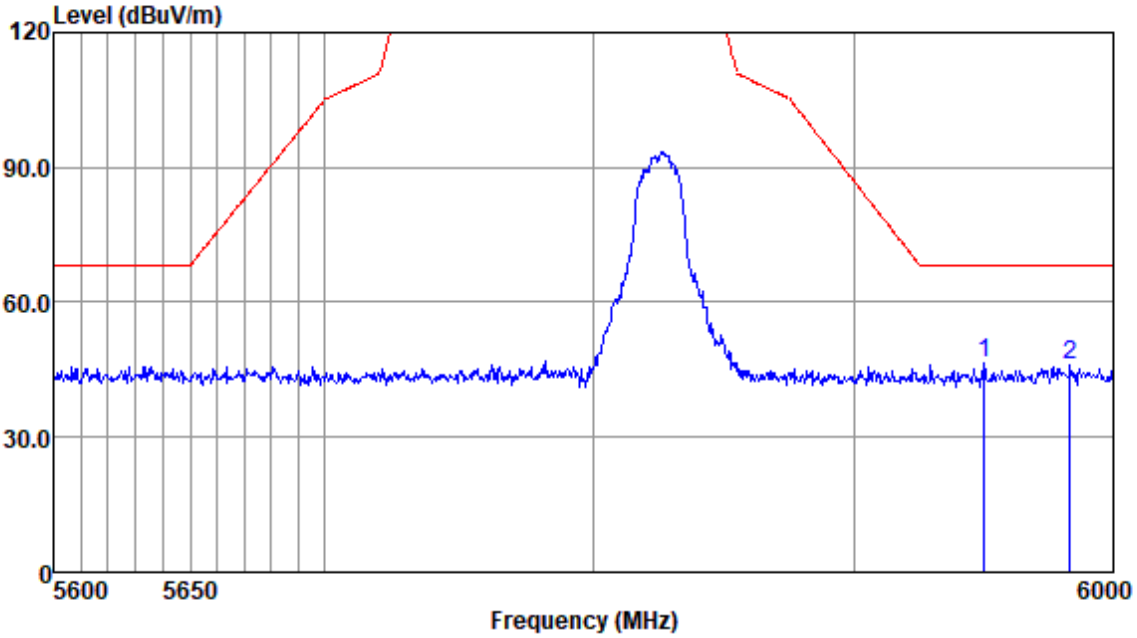


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5632.16	42.04	34.53	5.83	37.00	45.40	68.20	-22.80	Peak
5643.05	42.32	34.53	5.87	37.00	45.72	68.20	-22.48	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High

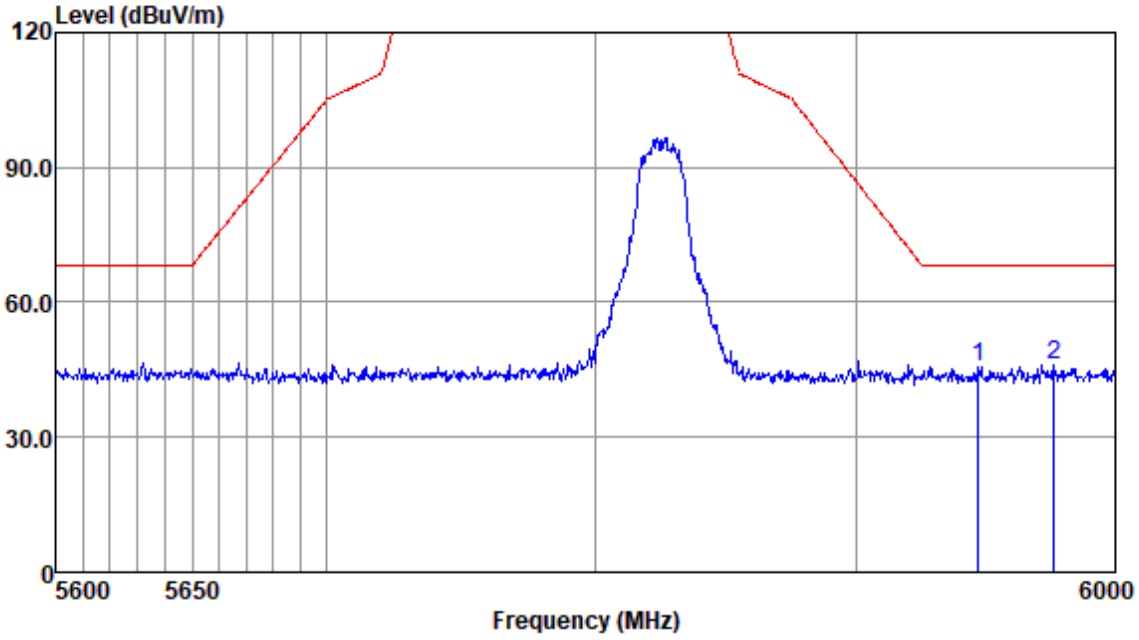


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5949.71	42.79	34.85	5.71	37.05	46.30	68.20	-21.90	Peak
5983.05	42.16	34.94	5.88	37.06	45.92	68.20	-22.28	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High

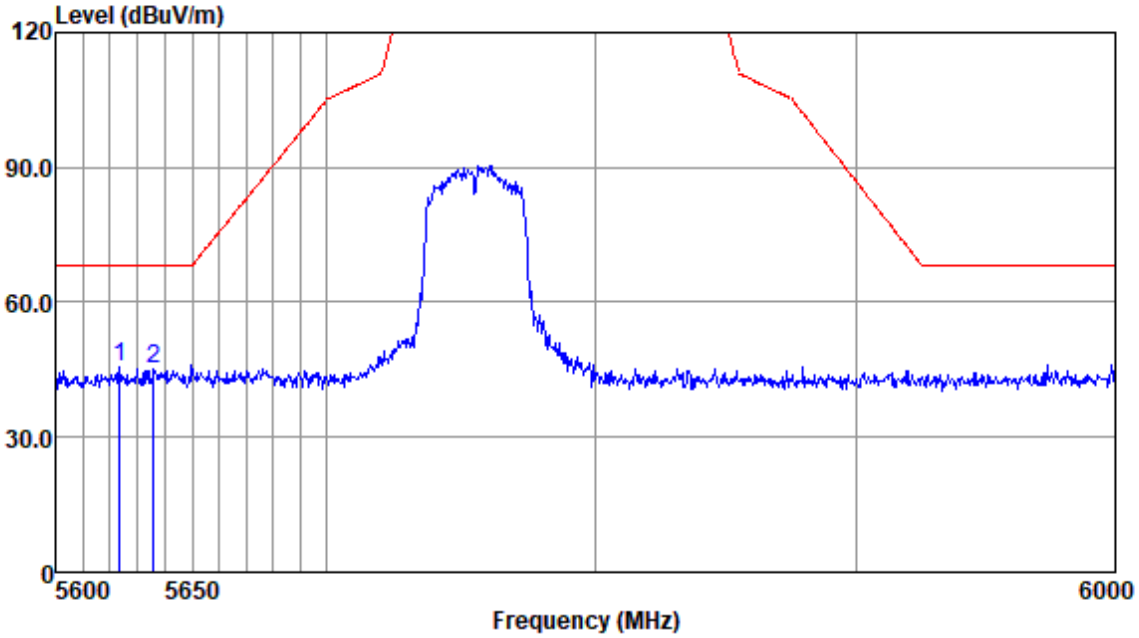


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5946.84	42.07	34.85	5.71	37.05	45.58	68.20	-22.62	Peak
5976.04	42.38	34.94	5.88	37.06	46.14	68.20	-22.06	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

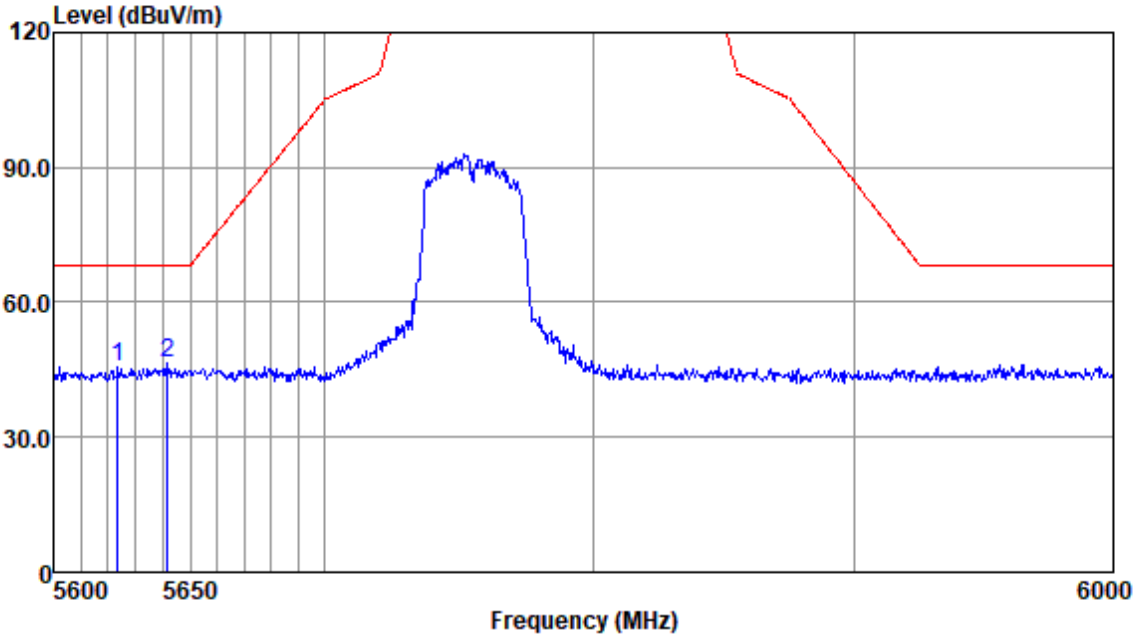


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5623.62	42.42	34.52	5.79	37.00	45.73	68.20	-22.47	Peak
5636.05	41.77	34.53	5.83	37.00	45.13	68.20	-23.07	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

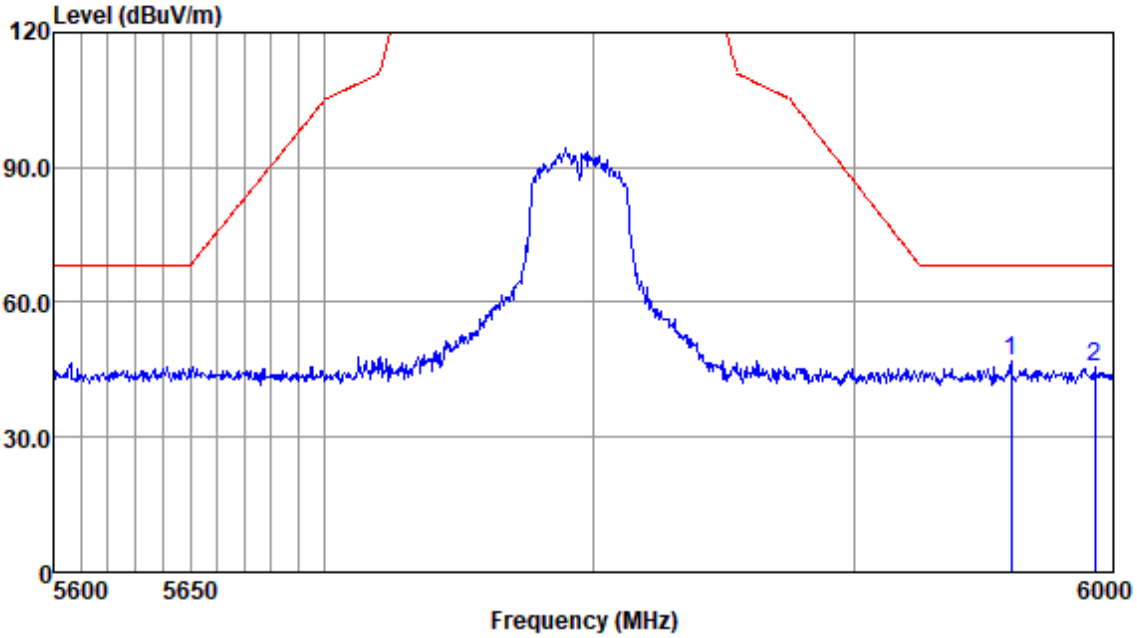


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5623.62	42.36	34.52	5.79	37.00	45.67	68.20	-22.53	Peak
5641.88	42.95	34.53	5.87	37.00	46.35	68.20	-21.85	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High

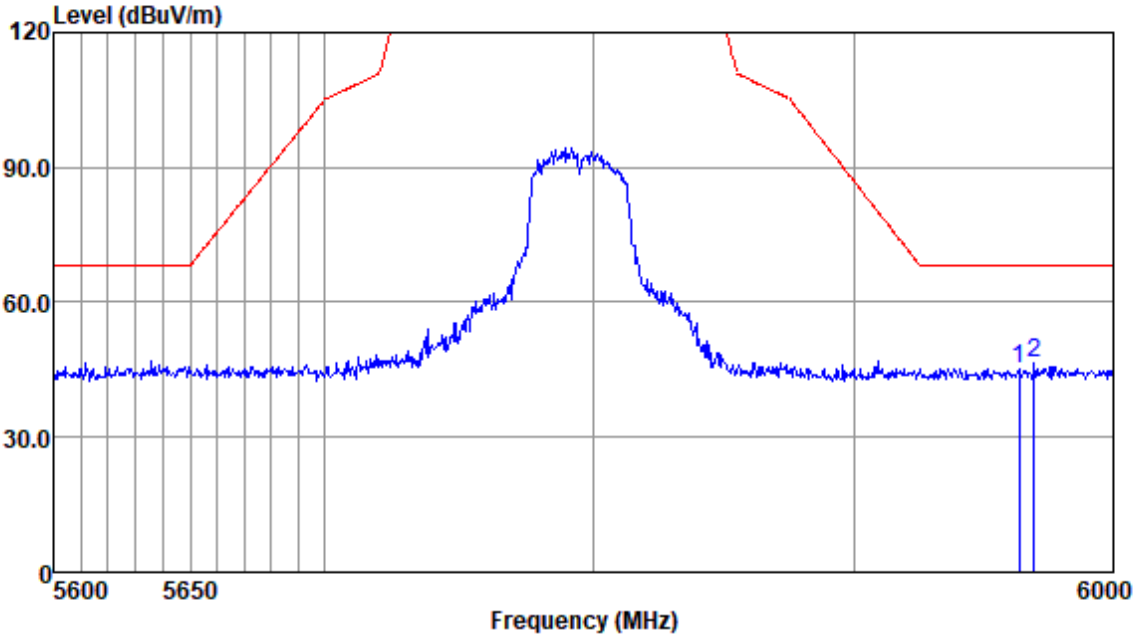


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5960.39	43.24	34.90	5.97	37.05	47.06	68.20	-21.14	Peak
5992.97	41.63	34.99	5.85	37.06	45.41	68.20	-22.79	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High



Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
5963.27	41.38	34.90	5.97	37.05	45.20	68.20	-23.00	Peak
5969.03	42.80	34.90	5.97	37.05	46.62	68.20	-21.58	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

7.8 Radiated Emissions (Below 1GHz)

Test Requirement 47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)
Test Method: KDB 789033 D02 II G

Limit:

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
960-1000	500	3

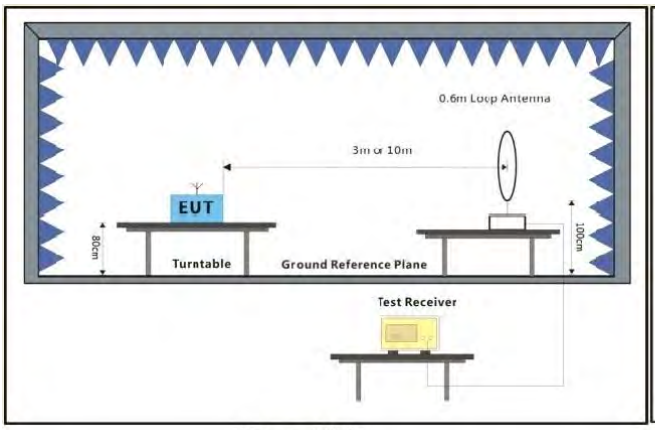
7.8.1 E.U.T. Operation

Operating Environment:
Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1010 mbar

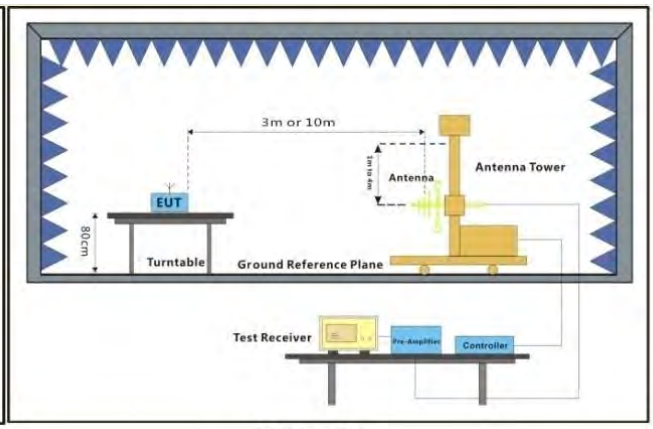
7.8.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	05	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	07	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.

7.8.3 Test Setup Diagram



Below 30MHz



30MHz-1GHz

7.8.4 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using quasi-peak method as specified and then reported in a data sheet.

g. Test the EUT in the lowest channel, the middle channel, the Highest channel.

h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

i. Repeat above procedures until all frequencies measured was complete.

Remark:

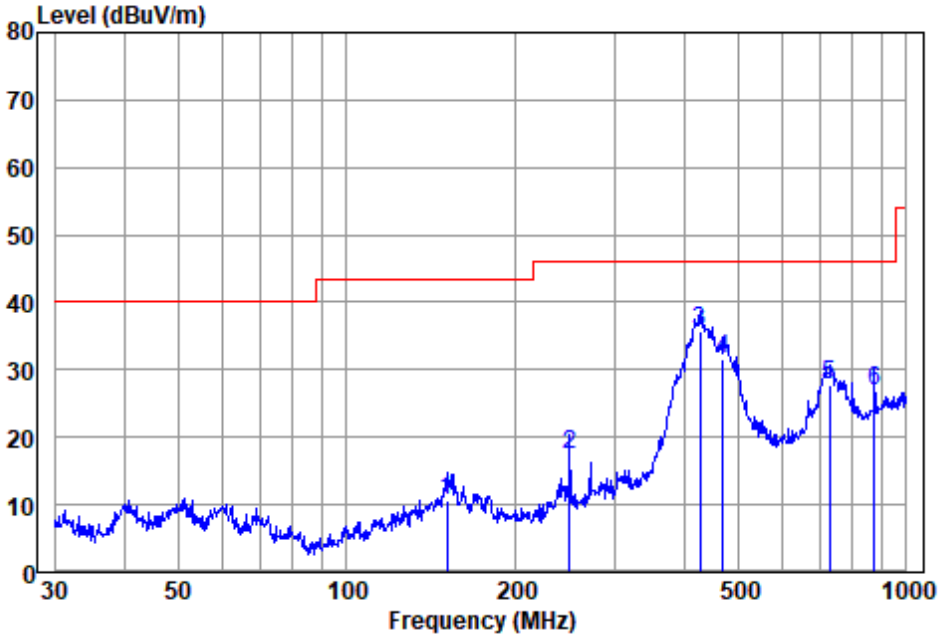
1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

2. For emission below 1GHz, through the pre-scan found the worst case is the lowest channel of 802.11a. Only the worst case is recorded in the report.

3. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

4. The disturbance below 1GHz was very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

Test Mode: 04; Polarity: Horizontal

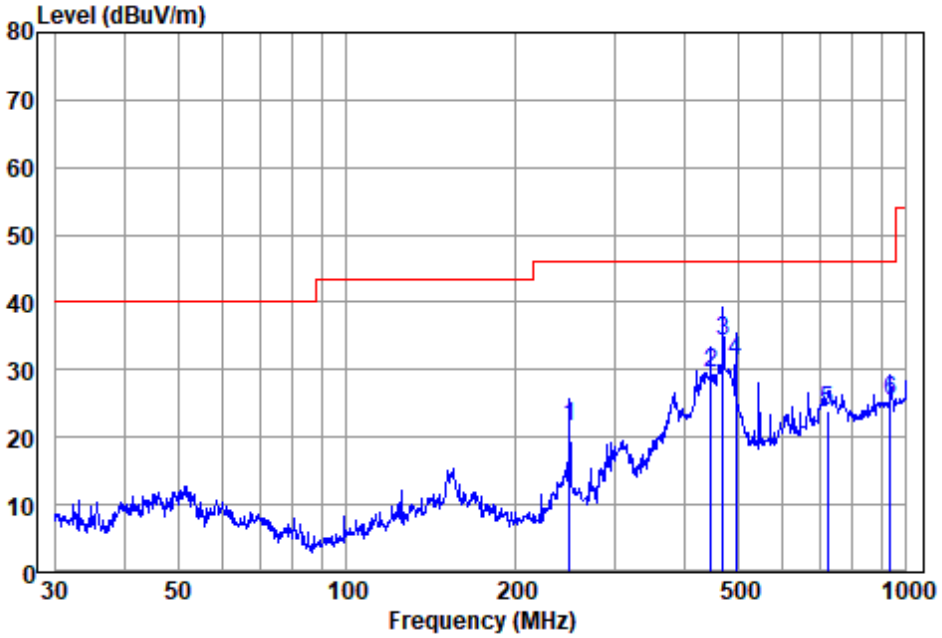


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME
Test mode :04

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	151.067	27.32	13.80	2.62	33.00	10.74	43.50	-32.76	QP
2	250.301	35.16	11.70	3.35	32.80	17.41	46.00	-28.59	QP
3	428.019	47.26	16.62	4.51	32.74	35.65	46.00	-10.35	QP
4	470.523	42.14	17.50	4.79	32.70	31.73	46.00	-14.27	QP
5	729.358	32.53	21.80	6.07	32.57	27.83	46.00	-18.17	QP
6	875.247	28.67	23.40	6.77	31.84	27.00	46.00	-19.00	QP

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Vertical



Antenna Polarity :VERTICAL
EUT/Project :1076ME
Test mode :04

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	250.301	39.35	11.70	3.35	32.80	21.60	46.00	-24.40	QP
2	446.414	40.32	17.13	4.70	32.71	29.44	46.00	-16.56	QP
3	470.523	44.55	17.50	4.79	32.70	34.14	46.00	-11.86	QP
4	495.934	41.27	17.92	4.90	32.70	31.39	46.00	-14.61	QP
5	721.726	28.92	21.50	6.04	32.53	23.93	46.00	-22.07	QP
6	935.546	26.10	23.70	7.08	31.57	25.31	46.00	-20.69	QP

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

7.9 Radiated Emissions (Above 1GHz)

Test Requirement 47 CFR Part 15, Subpart C 15.209 & Subpart E 15.407(b)

Test Method: KDB 789033 D02 II G

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
Above 1GHz	500	3
*(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz. (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz. (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz. (4) For transmitters operating in the 5.725-5.85 GHz band: (i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge. Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.		

7.9.1 E.U.T. Operation

Operating Environment:

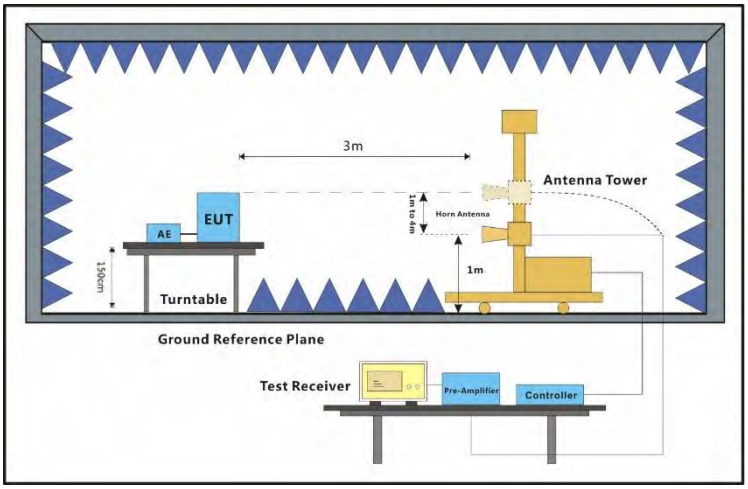
Temperature: 26.1 °C Humidity: 69.5 % RH Atmospheric Pressure: 1010 mbar

7.9.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	05	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0

		is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	07	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.

7.9.3 Test Setup Diagram



7.9.4 Measurement Procedure and Data

a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak or average method as specified and then reported in a data sheet.

g. Test the EUT in the lowest channel, the middle channel, the Highest channel.

h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

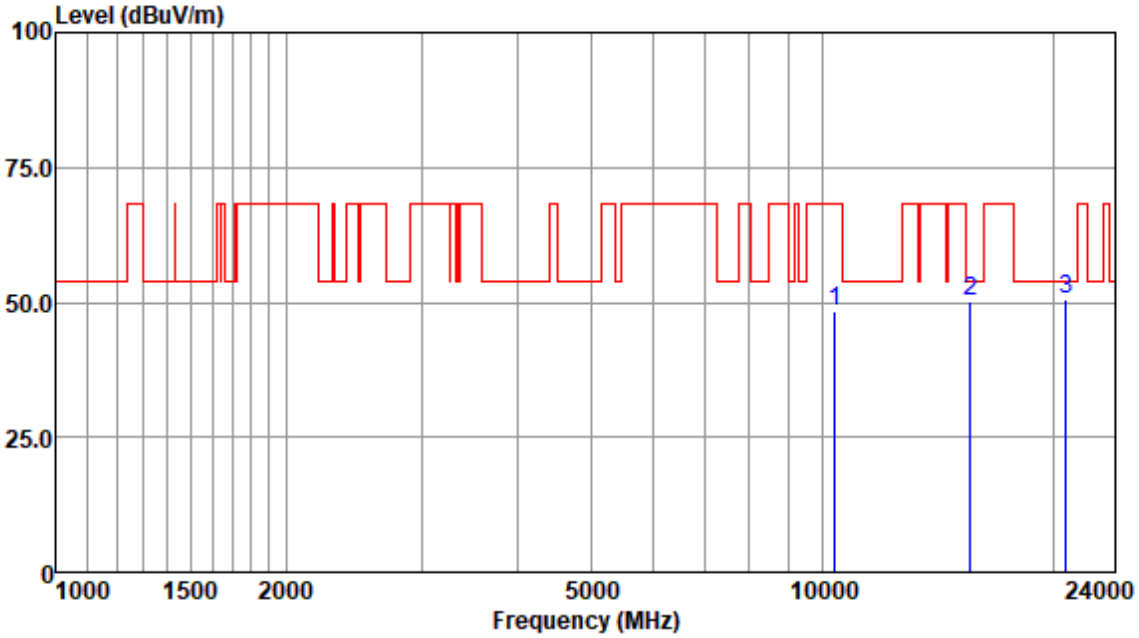
2. Scan from 18GHz to 40GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

3. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

4. The disturbance above 18GHz were very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

5. For devices with multiple operating modes, measurements on the middle channel is used to determine the worst-case mode(s). Only the worst case mode with the highest output power and the mode with the highest output power spectral density for each modulation family (e.g., OFDM and direct sequence spread spectrum) is recorded in the test report.

Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

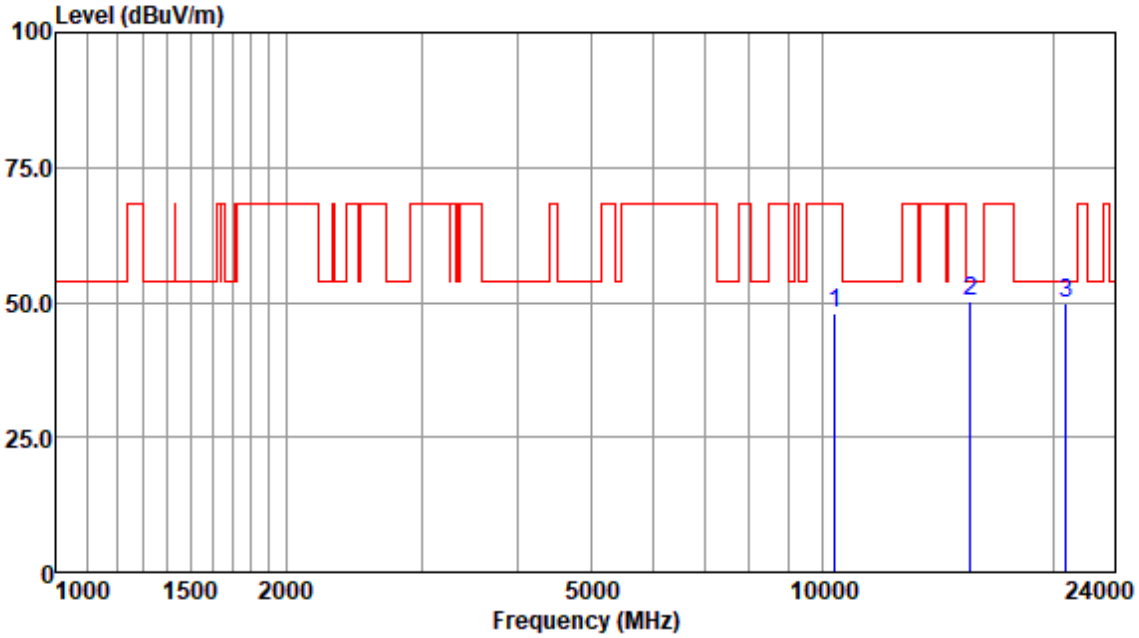


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10360.35	35.09	37.85	9.02	33.56	48.40	68.20	-19.80	Peak
15540.24	31.03	43.36	12.59	36.82	50.16	54.00	-3.84	Peak
20720.83	30.82	43.94	14.46	38.82	50.40	54.00	-3.60	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

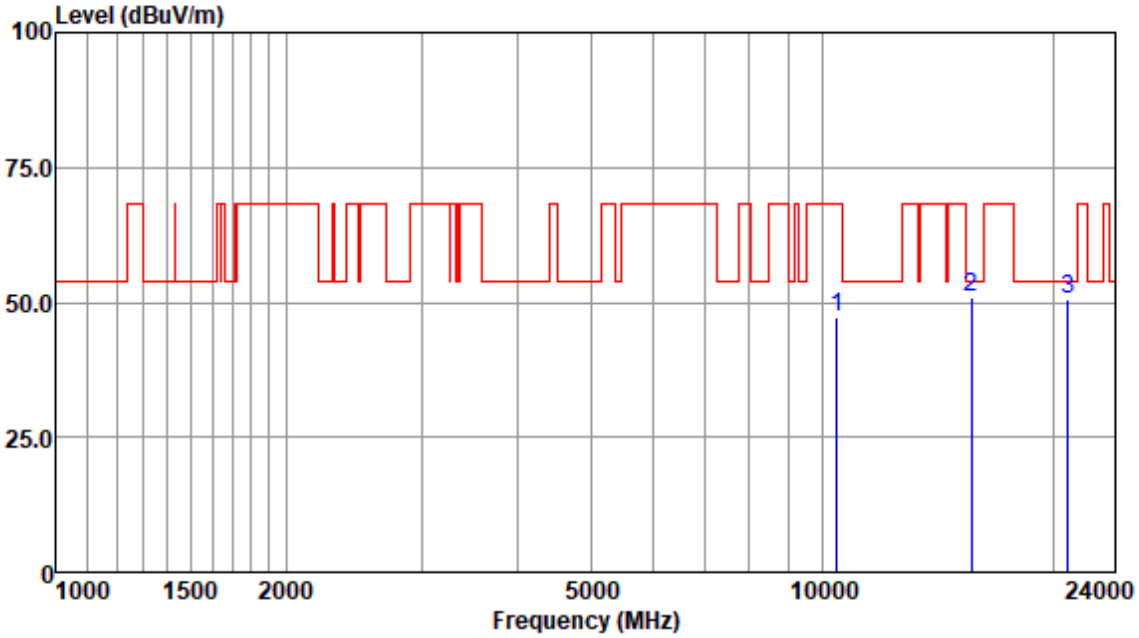


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10360.35	34.56	37.85	9.02	33.56	47.87	68.20	-20.33	Peak
15540.24	31.15	43.36	12.59	36.82	50.28	54.00	-3.72	Peak
20720.83	30.40	43.94	14.46	38.82	49.98	54.00	-4.02	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:middle

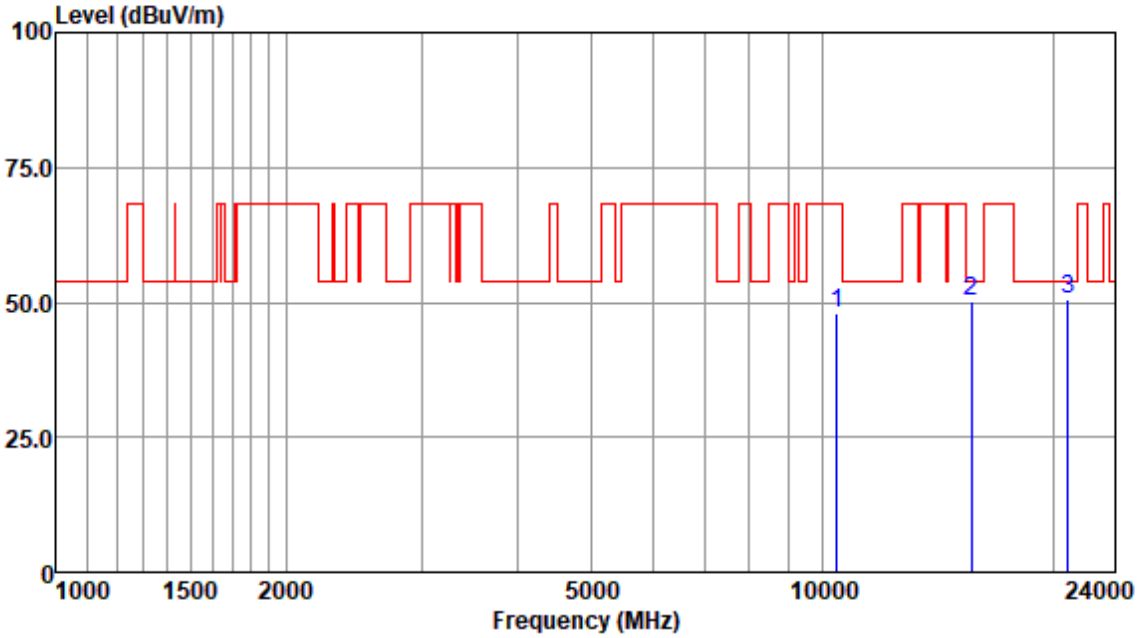


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10400.37	34.00	37.87	9.03	33.58	47.32	68.20	-20.88	Peak
15600.67	31.75	43.25	12.64	36.81	50.83	54.00	-3.17	Peak
20800.84	31.03	43.96	14.48	38.92	50.55	54.00	-3.45	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:middle

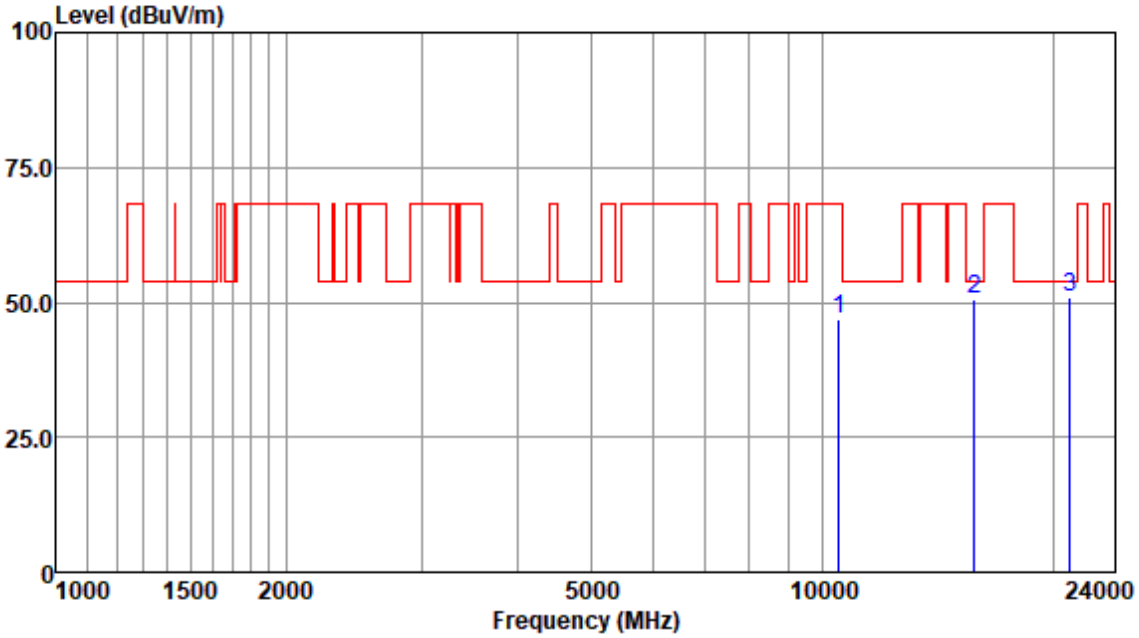


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10400.37	34.70	37.87	9.03	33.58	48.02	68.20	-20.18	Peak
15600.67	30.99	43.25	12.64	36.81	50.07	54.00	-3.93	Peak
20800.84	30.85	43.96	14.48	38.92	50.37	54.00	-3.63	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High

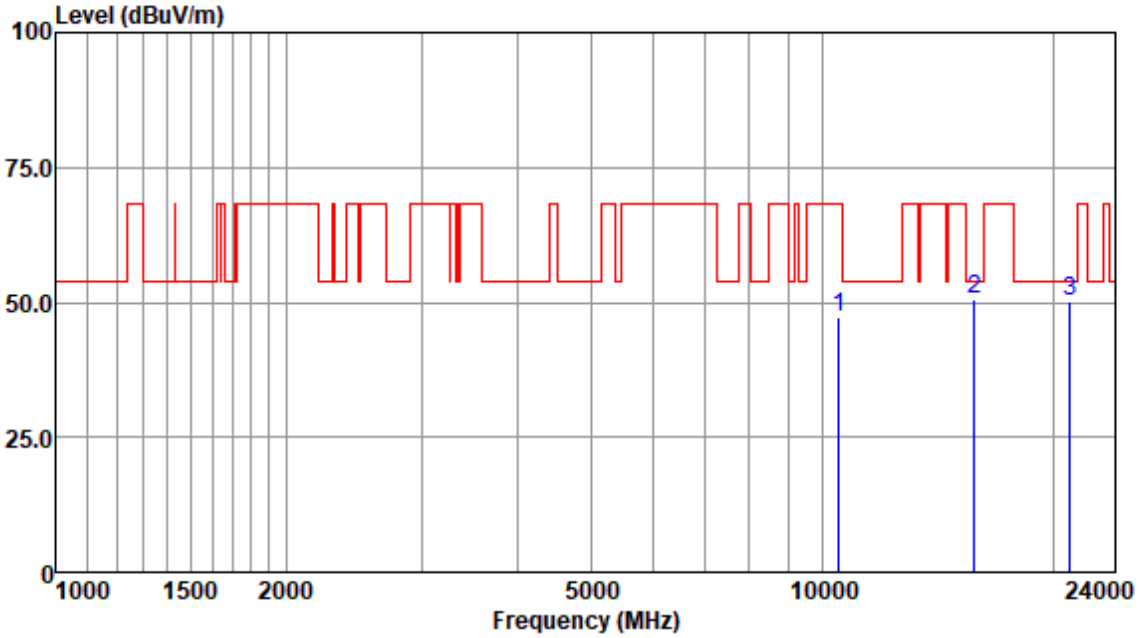


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10480.71	33.57	37.90	9.04	33.62	46.89	68.20	-21.31	Peak
15720.90	31.93	42.93	12.54	36.81	50.59	54.00	-3.41	Peak
20960.48	31.36	44.00	14.53	39.12	50.77	54.00	-3.23	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High

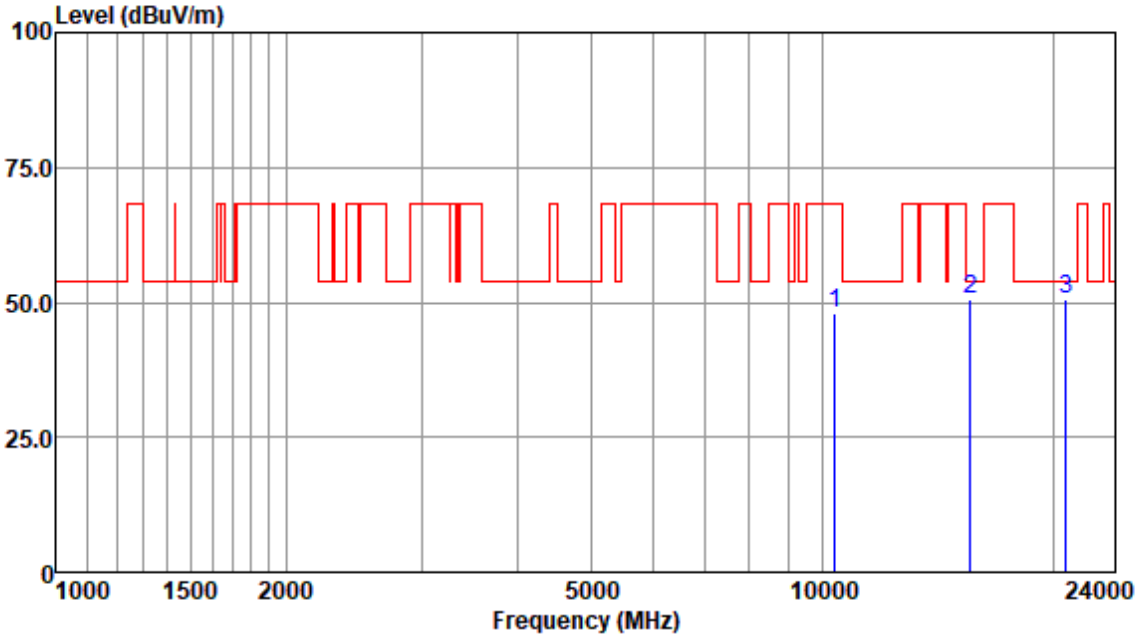


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10480.71	34.03	37.90	9.04	33.62	47.35	68.20	-20.85	Peak
15720.90	31.90	42.93	12.54	36.81	50.56	54.00	-3.44	Peak
20960.48	30.68	44.00	14.53	39.12	50.09	54.00	-3.91	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

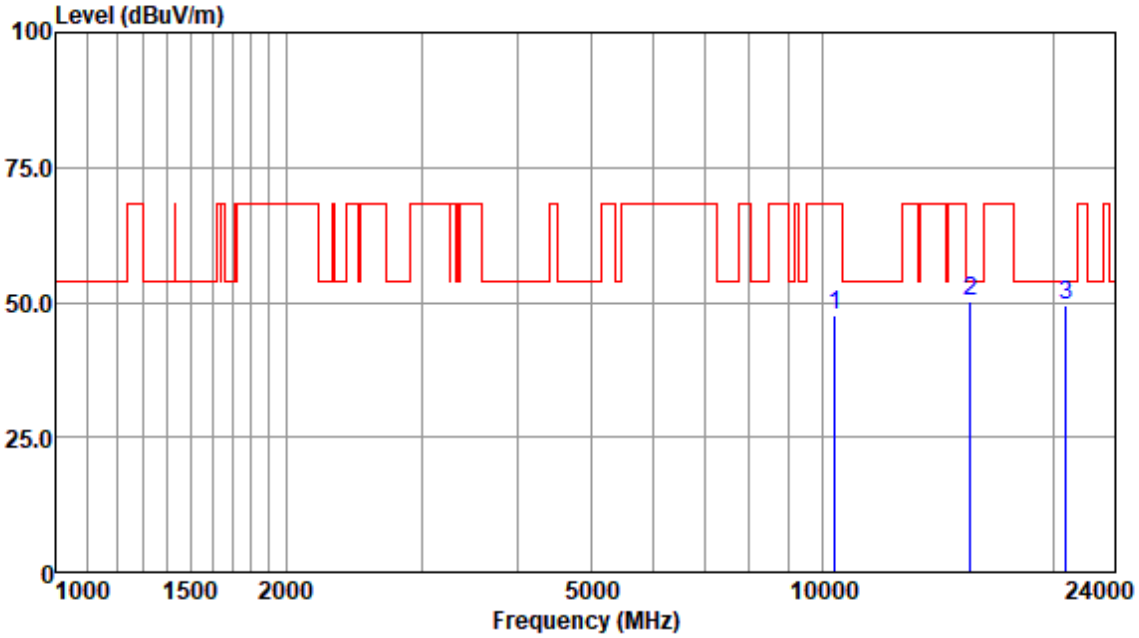


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10360.35	34.63	37.85	9.02	33.56	47.94	68.20	-20.26	Peak
15540.24	31.54	43.36	12.59	36.82	50.67	54.00	-3.33	Peak
20720.83	30.88	43.94	14.46	38.82	50.46	54.00	-3.54	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

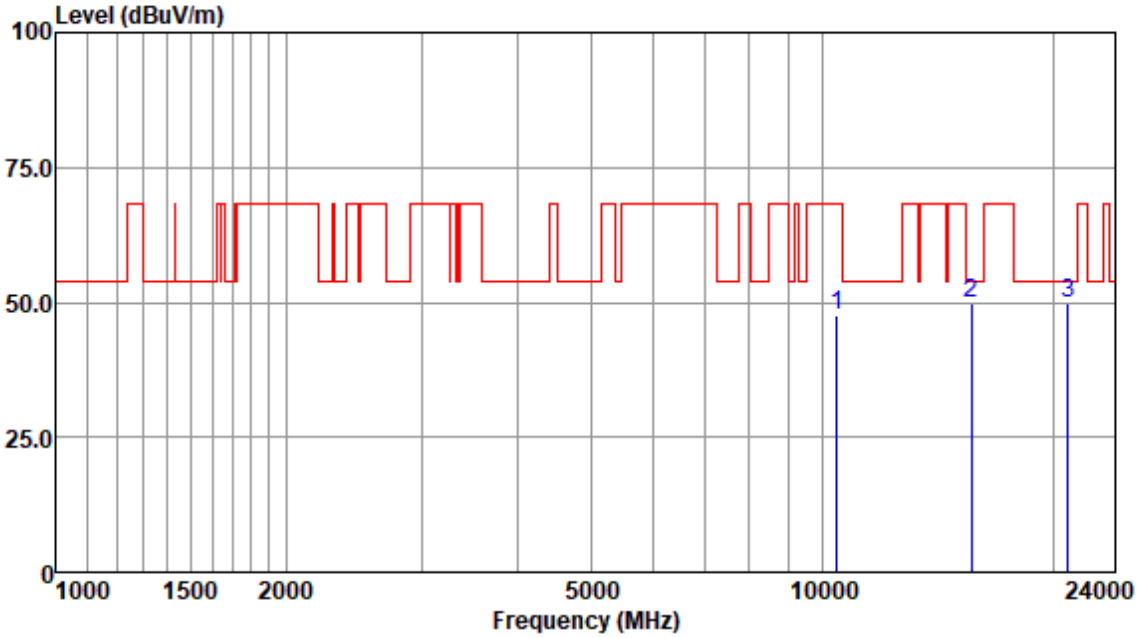


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10360.35	34.29	37.85	9.02	33.56	47.60	68.20	-20.60	Peak
15540.24	31.19	43.36	12.59	36.82	50.32	54.00	-3.68	Peak
20720.83	29.81	43.94	14.46	38.82	49.39	54.00	-4.61	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:middle

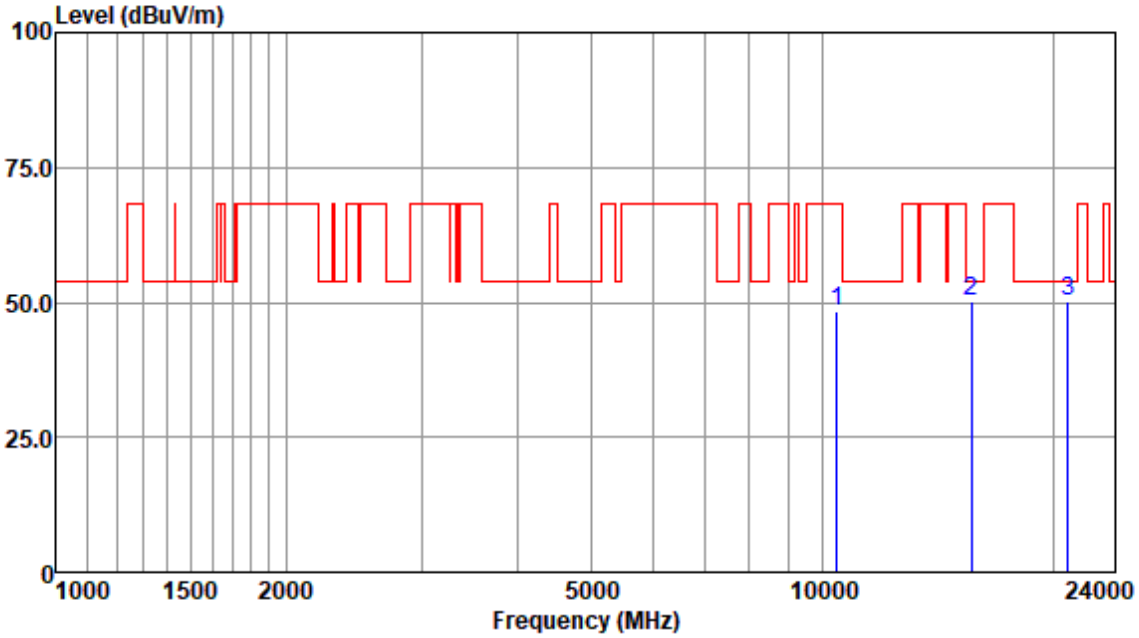


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10400.37	34.43	37.87	9.03	33.58	47.75	68.20	-20.45	Peak
15600.67	30.62	43.25	12.64	36.81	49.70	54.00	-4.30	Peak
20800.84	30.29	43.96	14.48	38.92	49.81	54.00	-4.19	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:middle

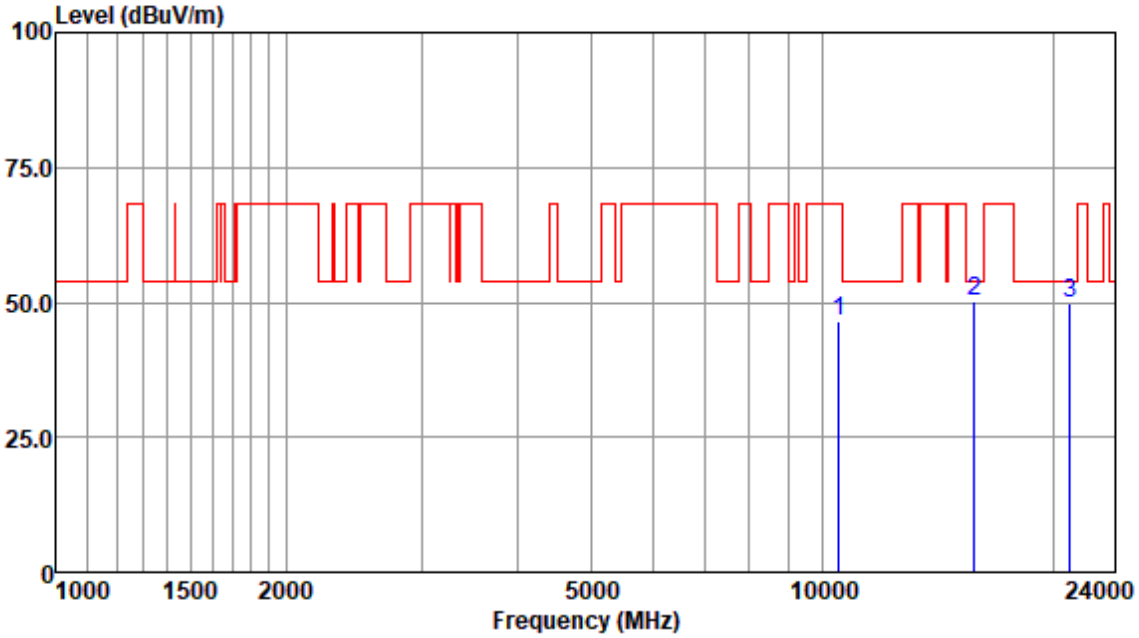


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10400.37	34.93	37.87	9.03	33.58	48.25	68.20	-19.95	Peak
15600.67	31.02	43.25	12.64	36.81	50.10	54.00	-3.90	Peak
20800.84	30.56	43.96	14.48	38.92	50.08	54.00	-3.92	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High

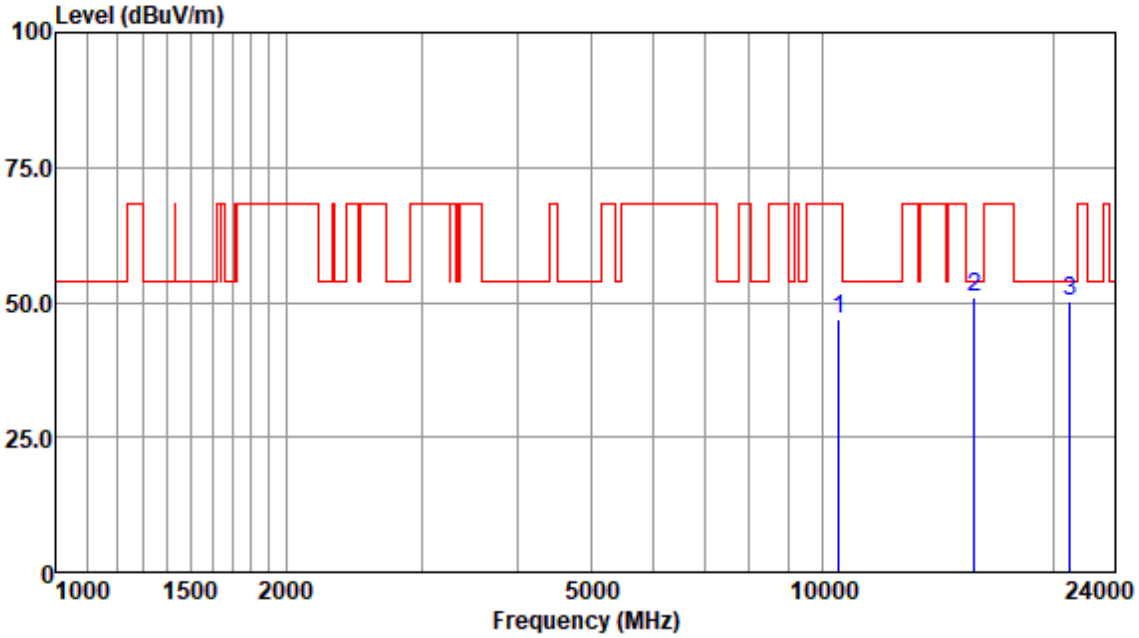


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10480.71	33.02	37.90	9.04	33.62	46.34	68.20	-21.86	Peak
15720.90	31.48	42.93	12.54	36.81	50.14	54.00	-3.86	Peak
20960.48	30.22	44.00	14.53	39.12	49.63	54.00	-4.37	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High

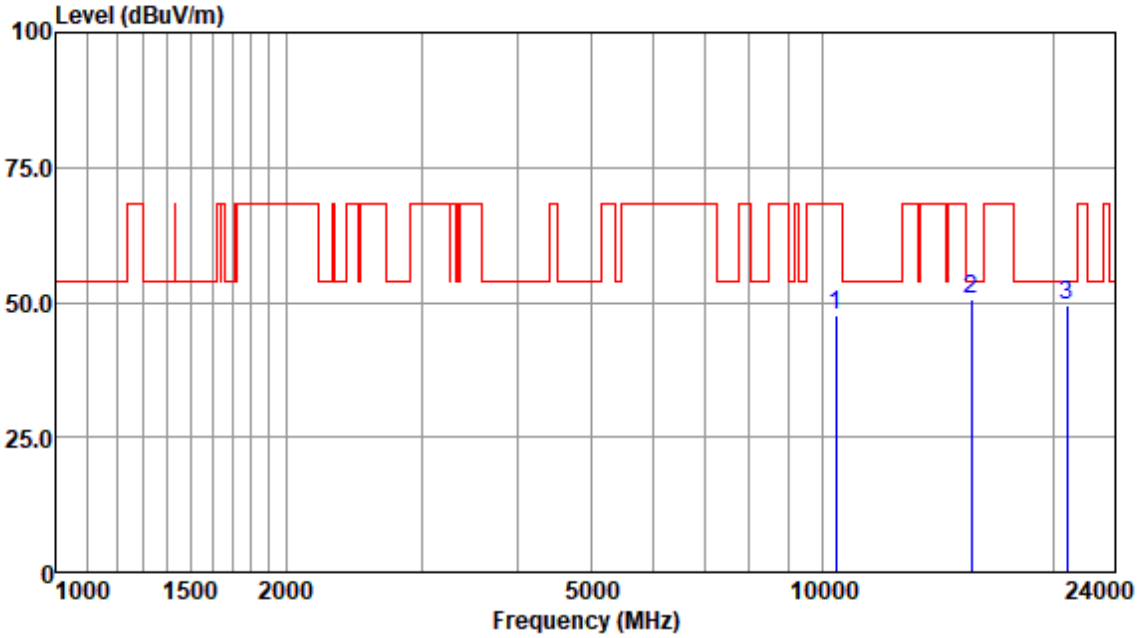


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10480.71	33.43	37.90	9.04	33.62	46.75	68.20	-21.45	Peak
15720.90	32.23	42.93	12.54	36.81	50.89	54.00	-3.11	Peak
20960.48	30.68	44.00	14.53	39.12	50.09	54.00	-3.91	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

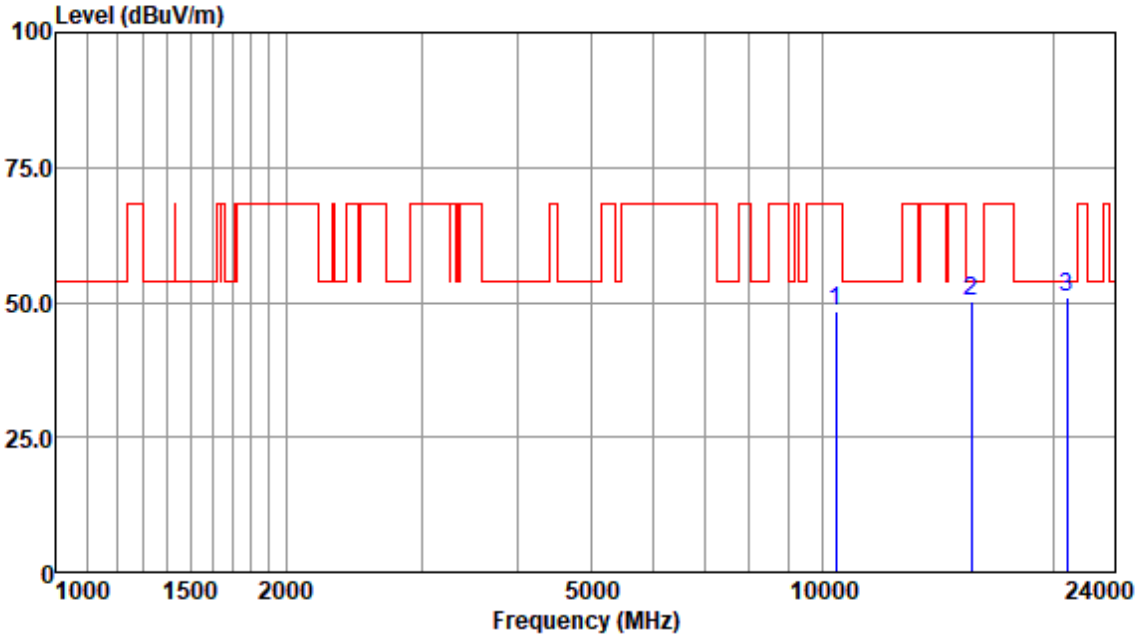


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10380.35	34.13	37.85	9.02	33.56	47.44	68.20	-20.76	Peak
15570.67	31.48	43.25	12.64	36.81	50.56	54.00	-3.44	Peak
20760.83	30.02	43.94	14.46	38.82	49.60	54.00	-4.40	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

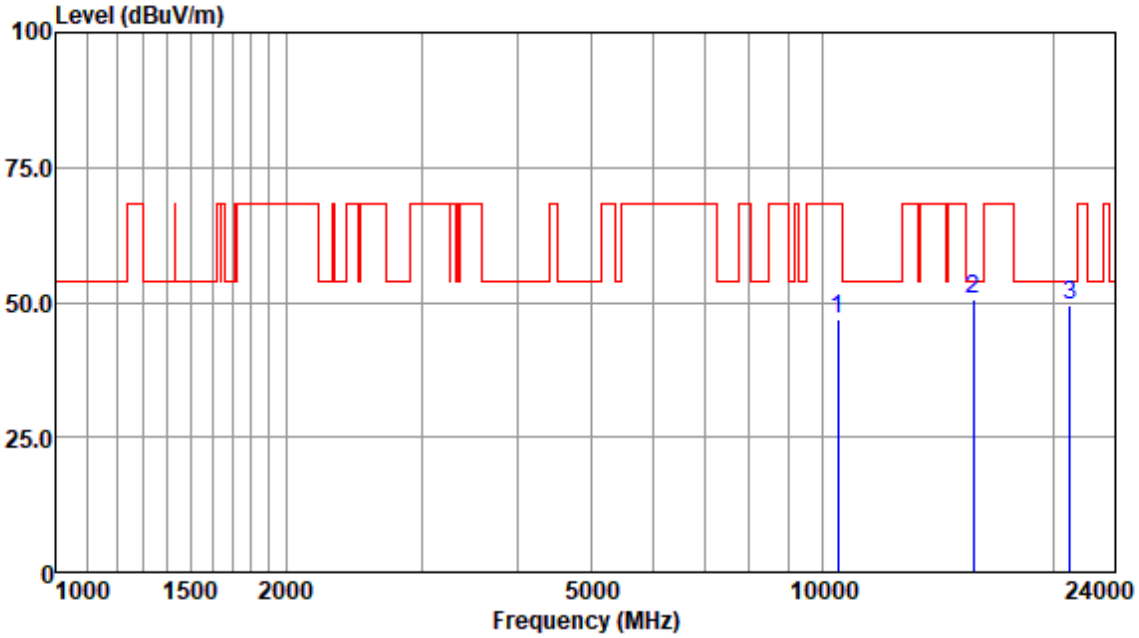


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10380.35	35.10	37.85	9.02	33.56	48.41	68.20	-19.79	Peak
15570.67	31.24	43.25	12.64	36.81	50.32	54.00	-3.68	Peak
20760.83	31.32	43.94	14.46	38.82	50.90	54.00	-3.10	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High

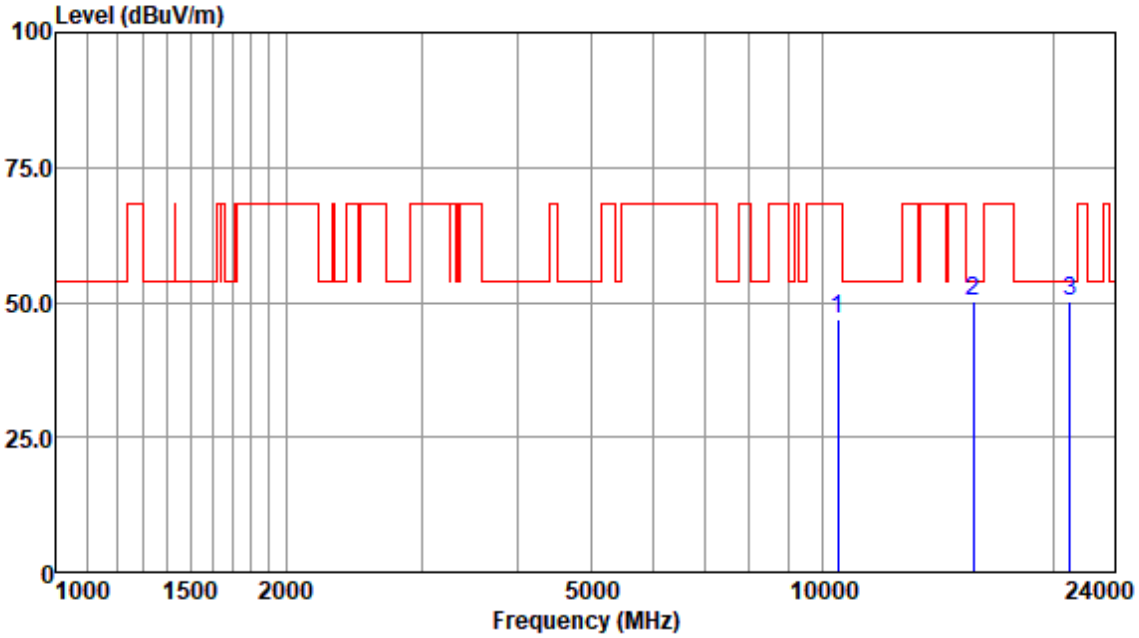


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10460.71	33.39	37.90	9.04	33.62	46.71	68.20	-21.49	Peak
15690.00	31.76	43.04	12.63	36.81	50.62	54.00	-3.38	Peak
20920.48	29.96	44.00	14.53	39.12	49.37	54.00	-4.63	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 04; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High

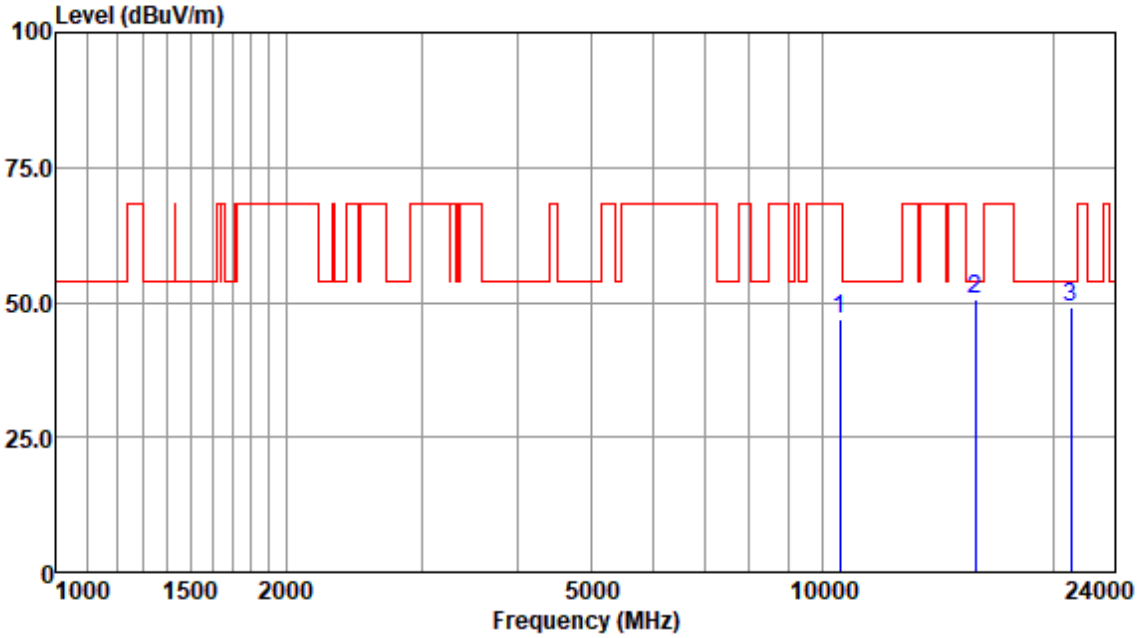


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10460.71	33.53	37.90	9.04	33.62	46.85	68.20	-21.35	Peak
15690.00	31.48	43.04	12.63	36.81	50.34	54.00	-3.66	Peak
20920.48	30.60	44.00	14.53	39.12	50.01	54.00	-3.99	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

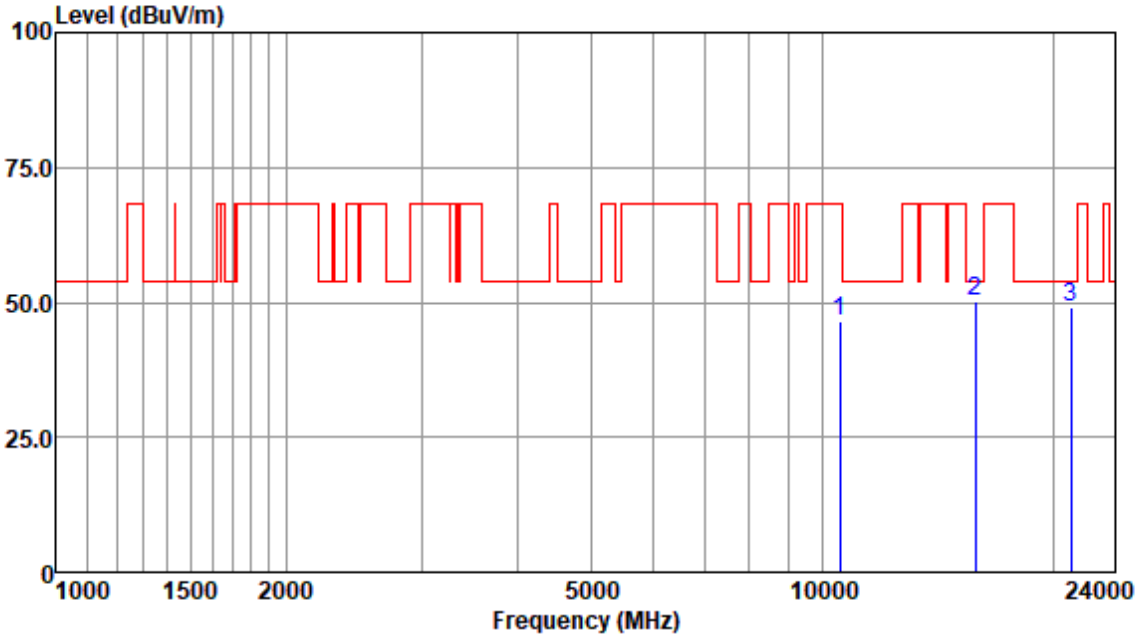


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10520.04	33.60	37.91	9.05	33.63	46.93	68.20	-21.27	Peak
15780.96	32.19	42.79	12.50	36.80	50.68	54.00	-3.32	Peak
21040.96	29.69	44.05	14.57	39.31	49.00	54.00	-5.00	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

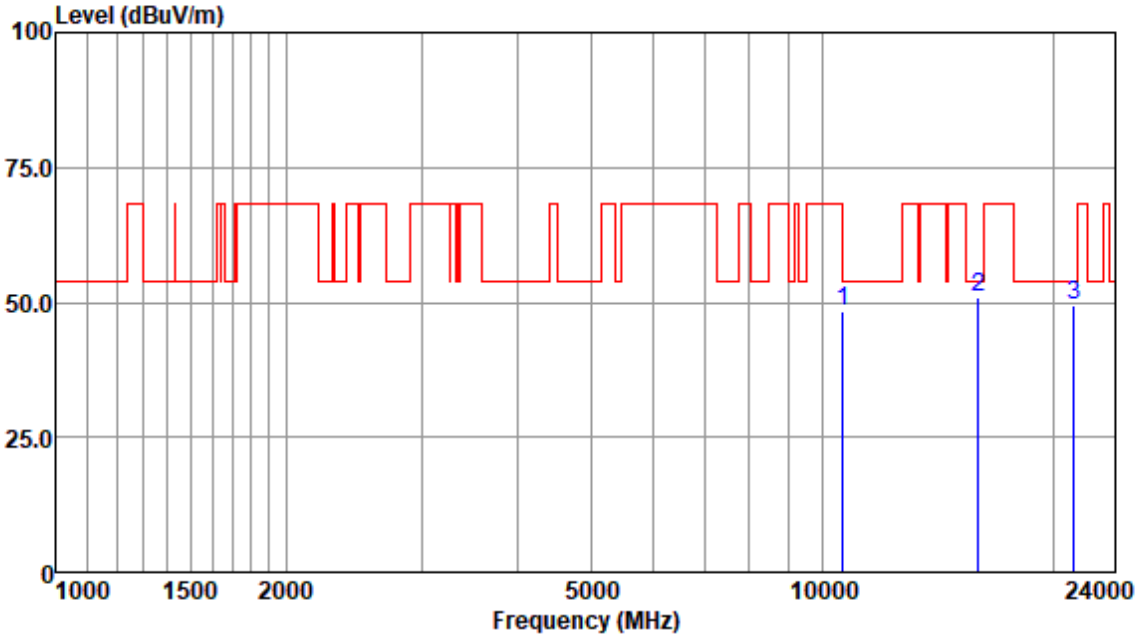


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10520.04	33.26	37.91	9.05	33.63	46.59	68.20	-21.61	Peak
15780.96	31.52	42.79	12.50	36.80	50.01	54.00	-3.99	Peak
21040.96	29.88	44.05	14.57	39.31	49.19	54.00	-4.81	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:middle

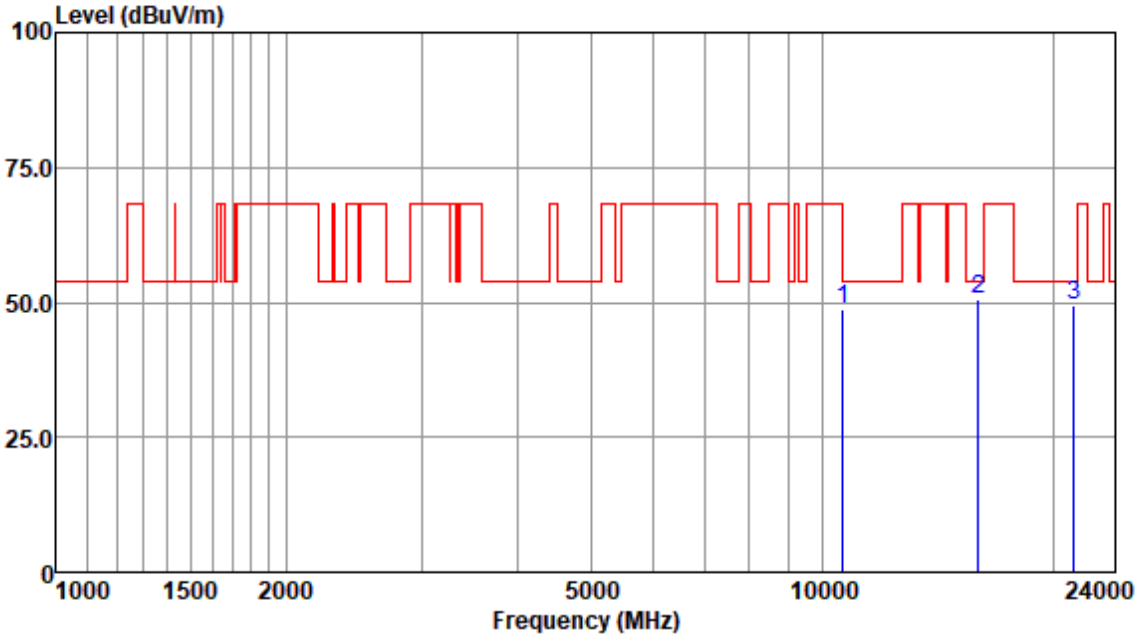


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10600.67	34.81	37.99	9.08	33.69	48.19	54.00	-5.81	Peak
15900.56	32.56	42.51	12.47	36.72	50.82	54.00	-3.18	Peak
21200.30	30.35	44.09	14.61	39.51	49.54	54.00	-4.46	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:middle

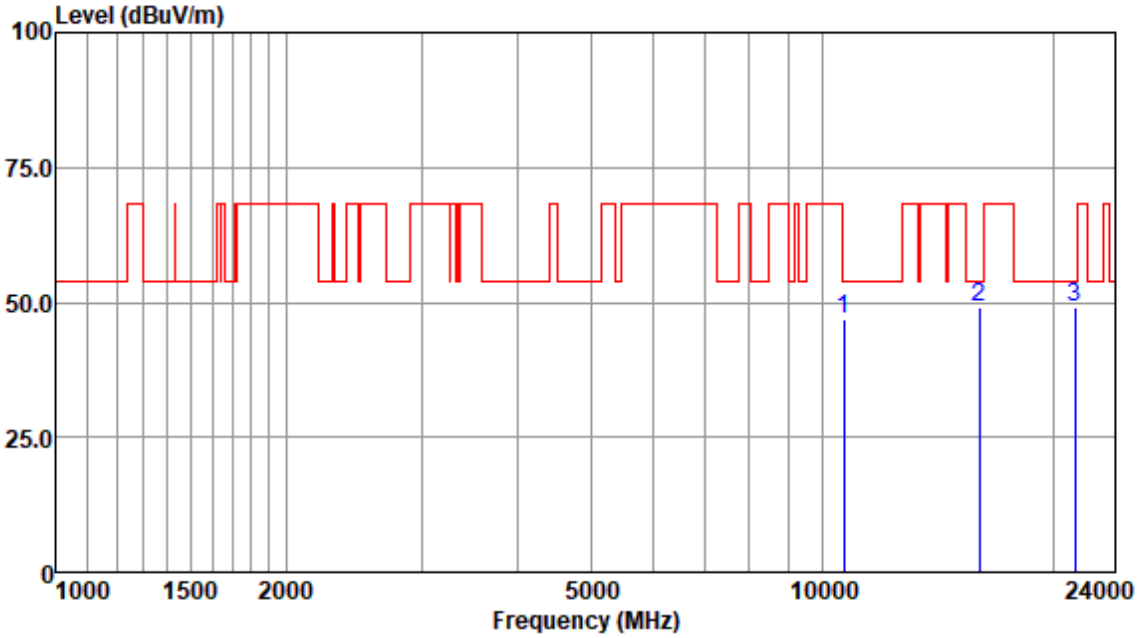


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10600.67	35.38	37.99	9.08	33.69	48.76	54.00	-5.24	Peak
15900.56	32.14	42.51	12.47	36.72	50.40	54.00	-3.60	Peak
21200.30	30.25	44.09	14.61	39.51	49.44	54.00	-4.56	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High

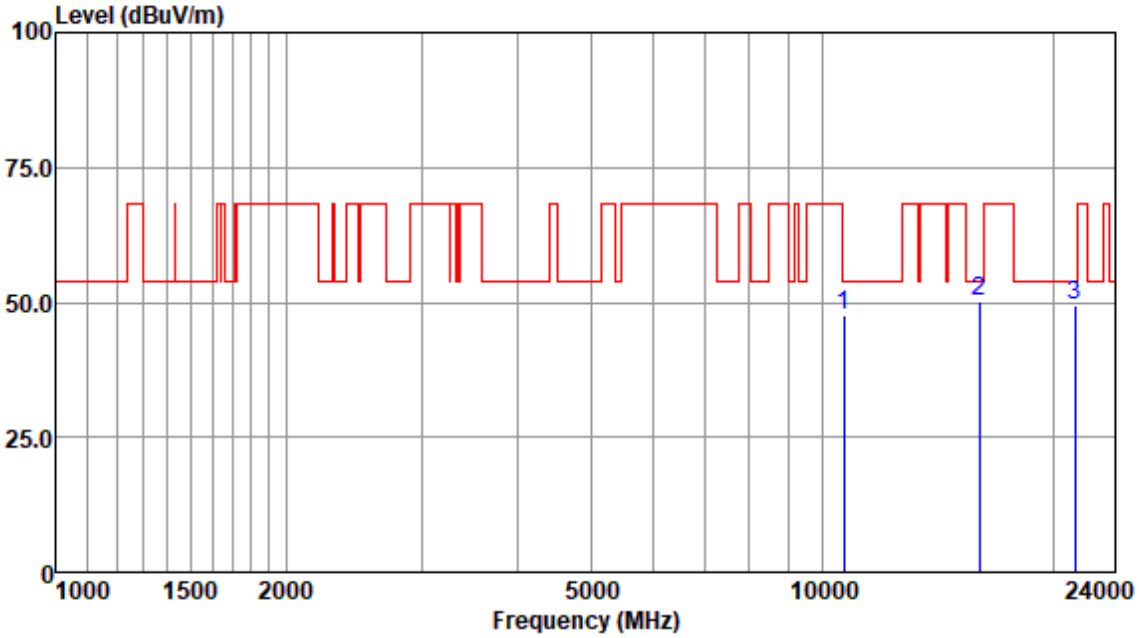


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10640.42	33.53	38.02	9.09	33.71	46.93	54.00	-7.07	Peak
15960.80	30.81	42.32	12.44	36.63	48.94	54.00	-5.06	Peak
21280.79	29.93	44.11	14.64	39.61	49.07	54.00	-4.93	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High

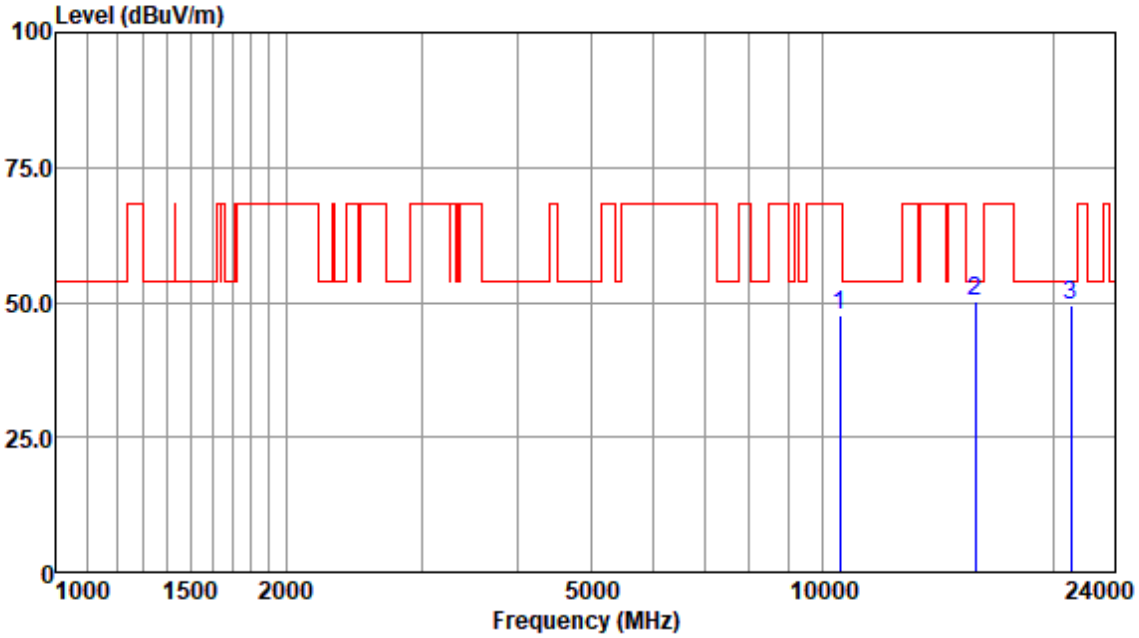


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10640.42	34.29	38.02	9.09	33.71	47.69	54.00	-6.31	Peak
15960.80	32.04	42.32	12.44	36.63	50.17	54.00	-3.83	Peak
21280.79	30.17	44.11	14.64	39.61	49.31	54.00	-4.69	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

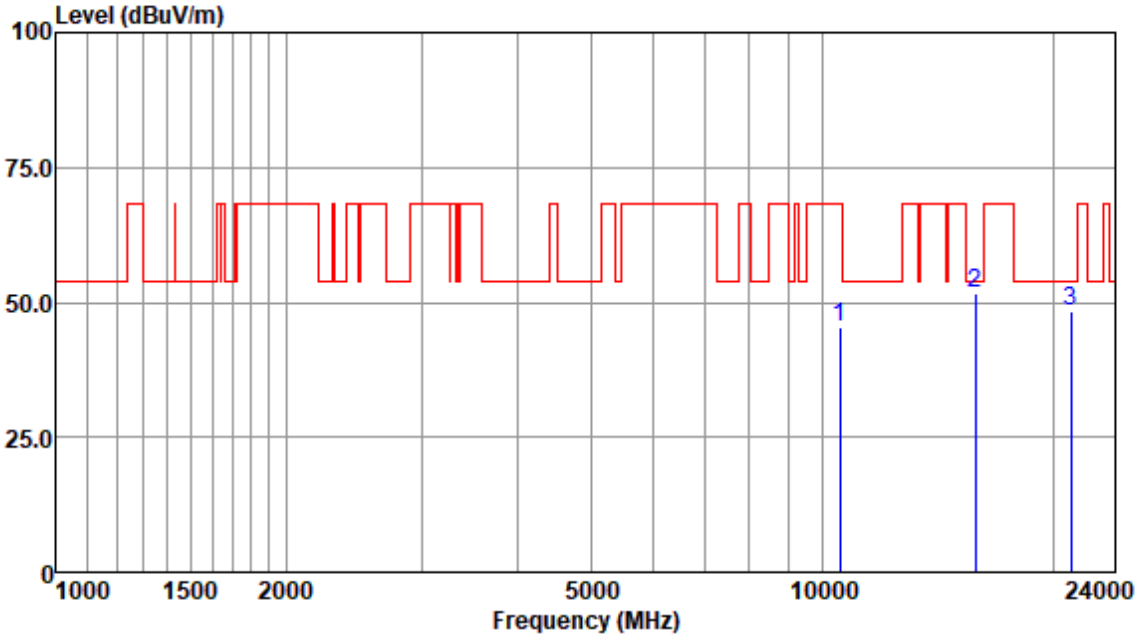


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10520.04	34.09	37.91	9.05	33.63	47.42	68.20	-20.78	Peak
15780.96	31.84	42.79	12.50	36.80	50.33	54.00	-3.67	Peak
21040.96	30.12	44.05	14.57	39.31	49.43	54.00	-4.57	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

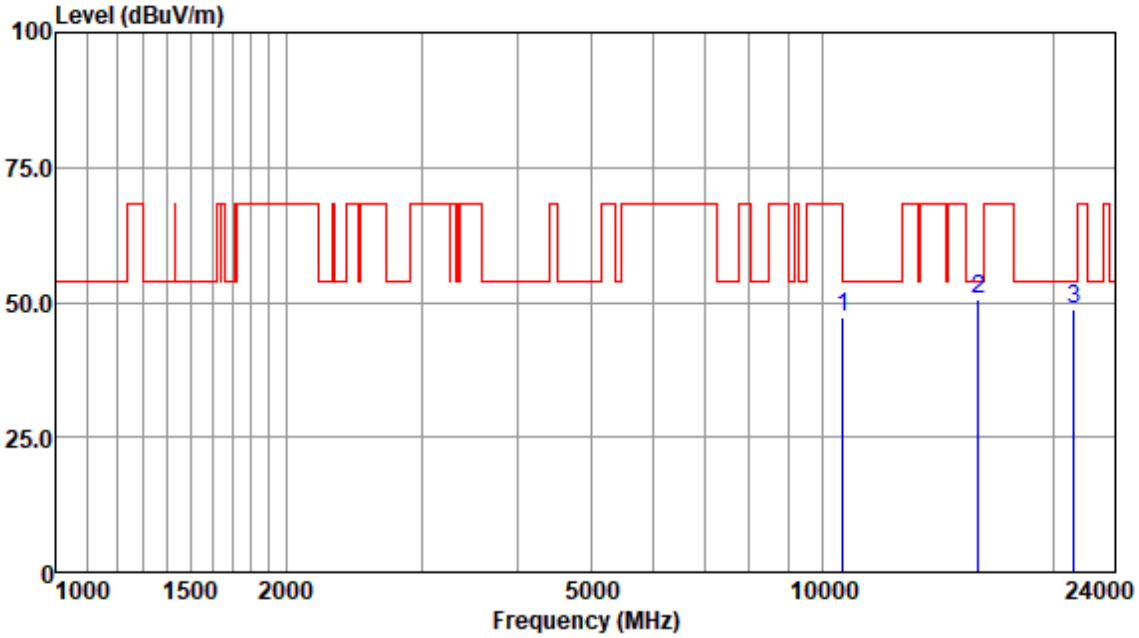


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10520.04	31.88	37.91	9.05	33.63	45.21	68.20	-22.99	Peak
15780.96	33.25	42.79	12.50	36.80	51.74	54.00	-2.26	Peak
21040.96	28.91	44.05	14.57	39.31	48.22	54.00	-5.78	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:middle

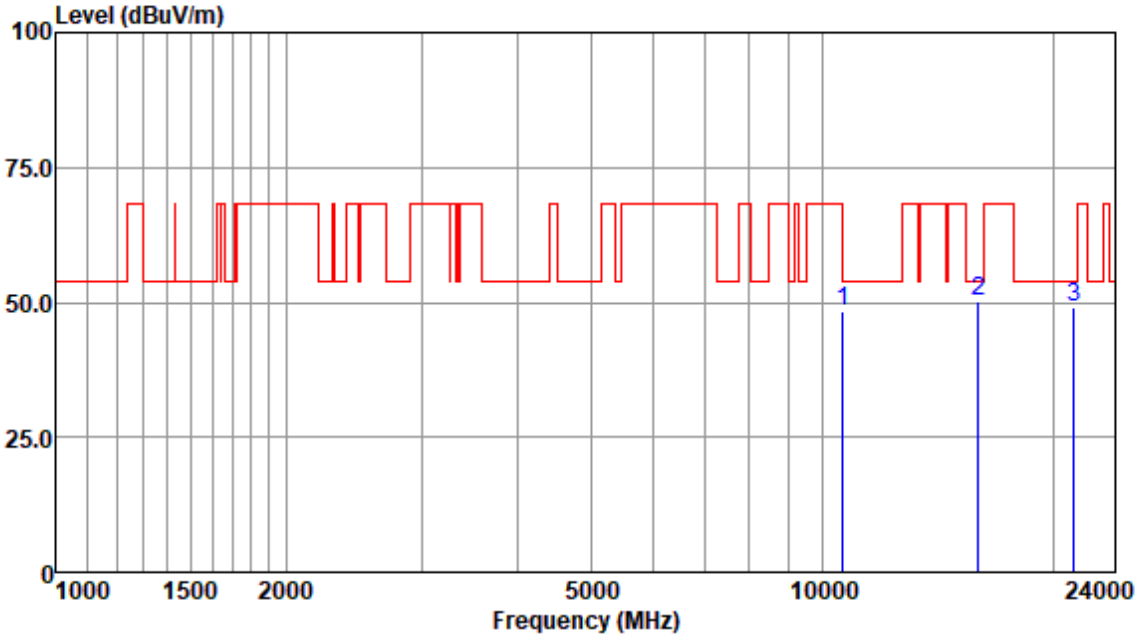


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10600.67	33.73	37.99	9.08	33.69	47.11	54.00	-6.89	Peak
15900.56	32.12	42.51	12.47	36.72	50.38	54.00	-3.62	Peak
21200.30	29.46	44.09	14.61	39.51	48.65	54.00	-5.35	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:middle

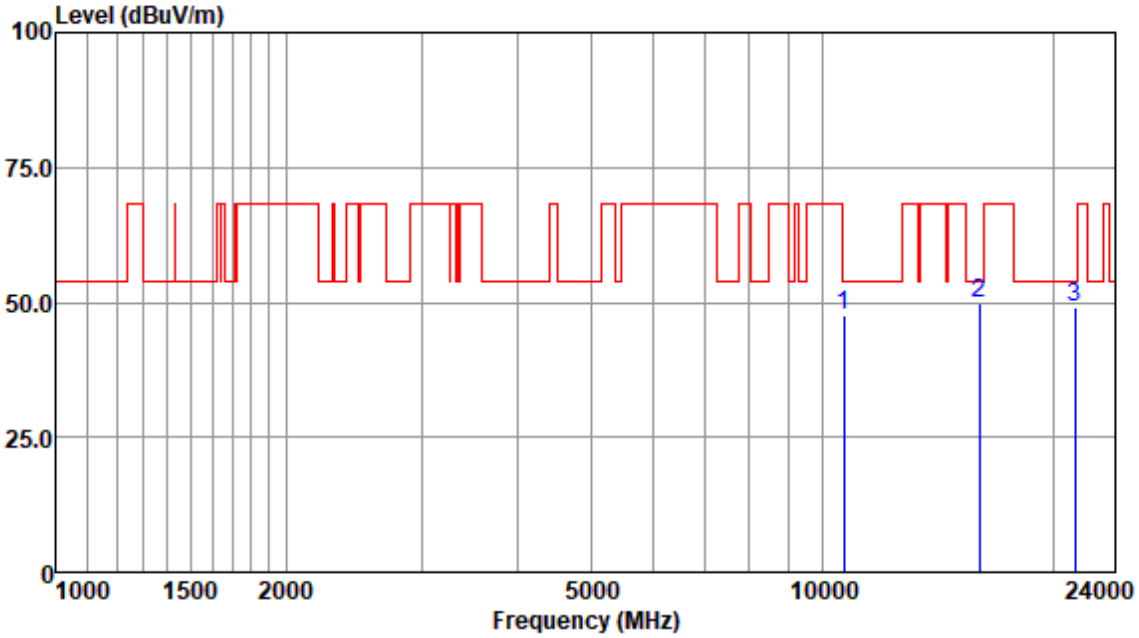


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10600.67	34.98	37.99	9.08	33.69	48.36	54.00	-5.64	Peak
15900.56	31.81	42.51	12.47	36.72	50.07	54.00	-3.93	Peak
21200.30	29.97	44.09	14.61	39.51	49.16	54.00	-4.84	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High

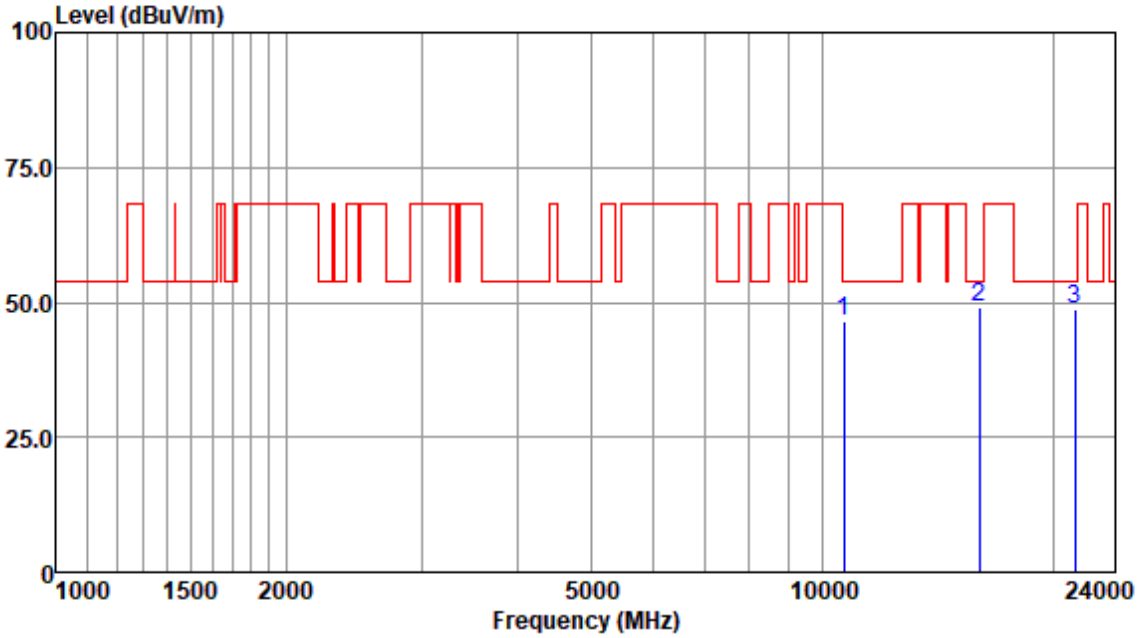


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10640.42	34.33	38.02	9.09	33.71	47.73	54.00	-6.27	Peak
15960.80	31.73	42.32	12.44	36.63	49.86	54.00	-4.14	Peak
21280.79	30.09	44.11	14.64	39.61	49.23	54.00	-4.77	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High

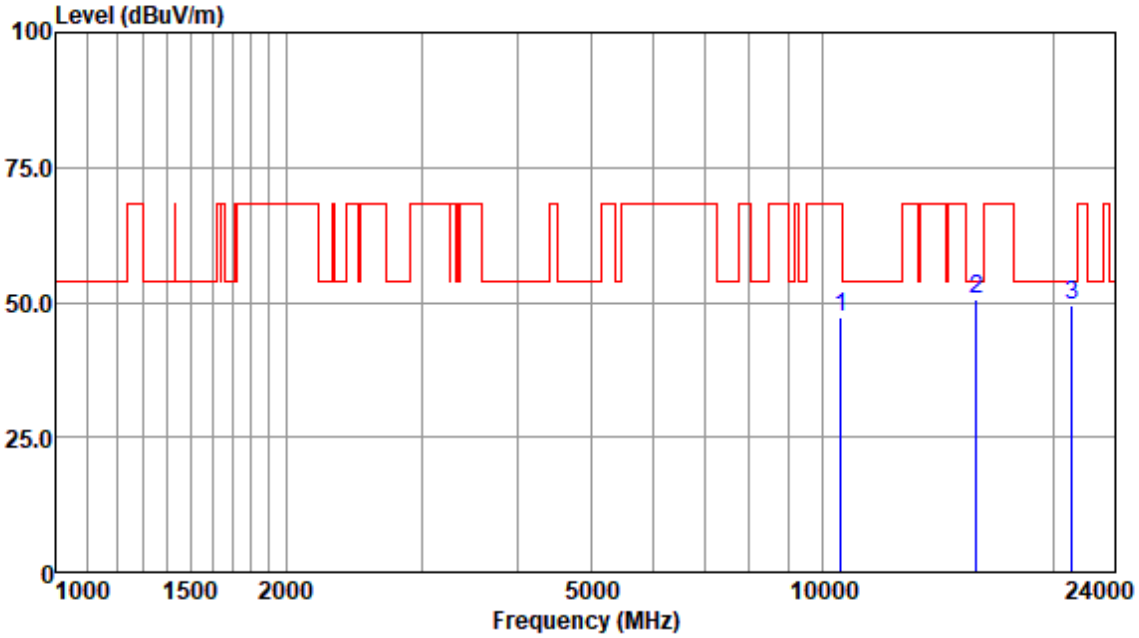


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10640.42	33.20	38.02	9.09	33.71	46.60	54.00	-7.40	Peak
15960.80	30.82	42.32	12.44	36.63	48.95	54.00	-5.05	Peak
21280.79	29.45	44.11	14.64	39.61	48.59	54.00	-5.41	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

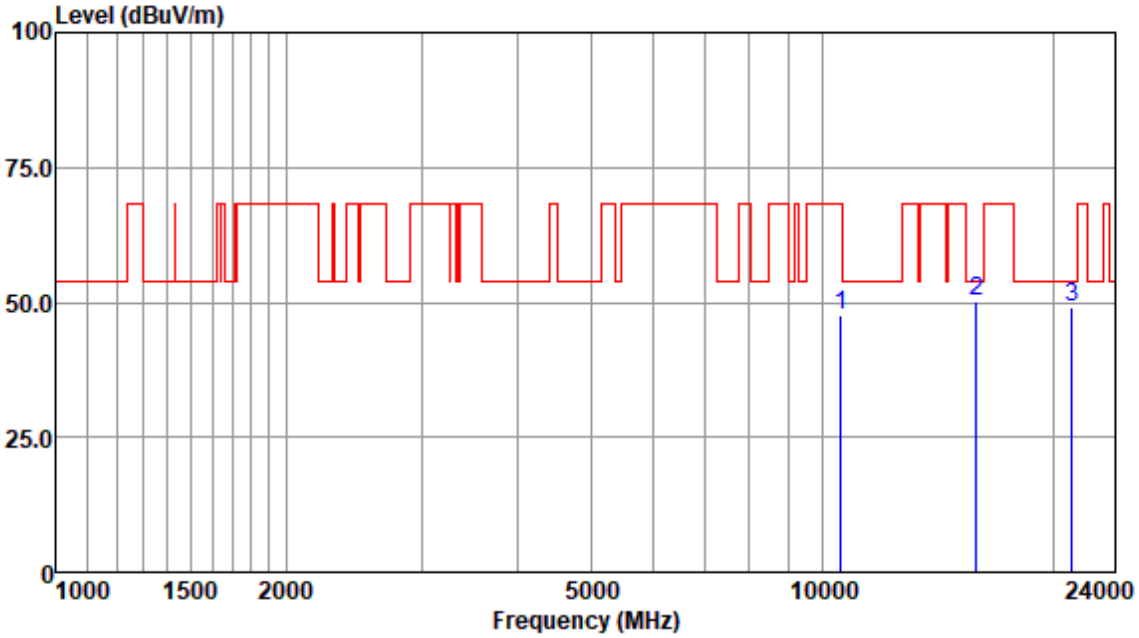


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10540.47	33.82	37.94	9.05	33.65	47.16	68.20	-21.04	Peak
15810.18	32.31	42.65	12.48	36.76	50.68	54.00	-3.32	Peak
21080.96	30.09	44.05	14.57	39.31	49.40	54.00	-4.60	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

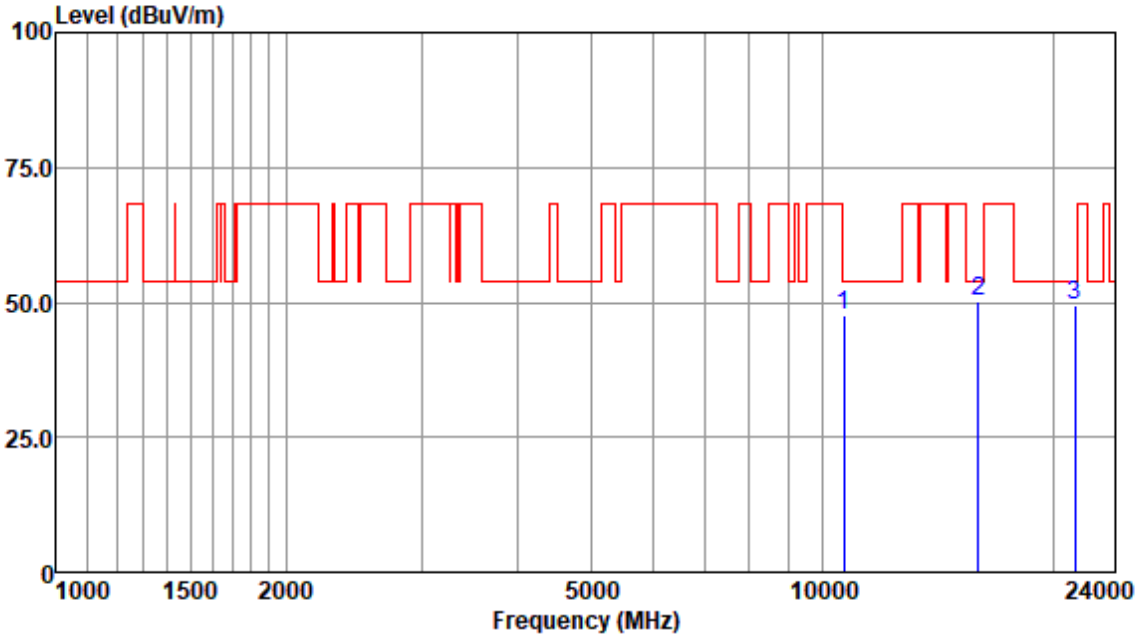


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10540.47	34.20	37.94	9.05	33.65	47.54	68.20	-20.66	Peak
15810.18	31.96	42.65	12.48	36.76	50.33	54.00	-3.67	Peak
21080.96	29.64	44.05	14.57	39.31	48.95	54.00	-5.05	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High

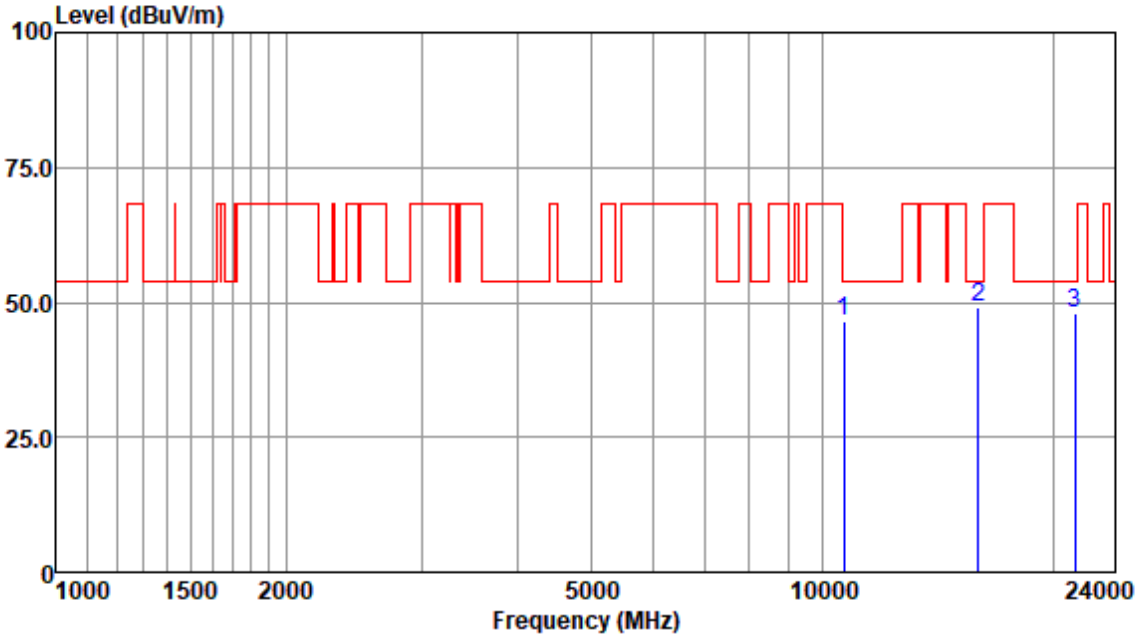


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10620.67	34.04	37.99	9.08	33.69	47.42	54.00	-6.58	Peak
15930.10	32.04	42.37	12.46	36.67	50.20	54.00	-3.80	Peak
21240.79	30.48	44.11	14.64	39.61	49.62	54.00	-4.38	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 05; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High

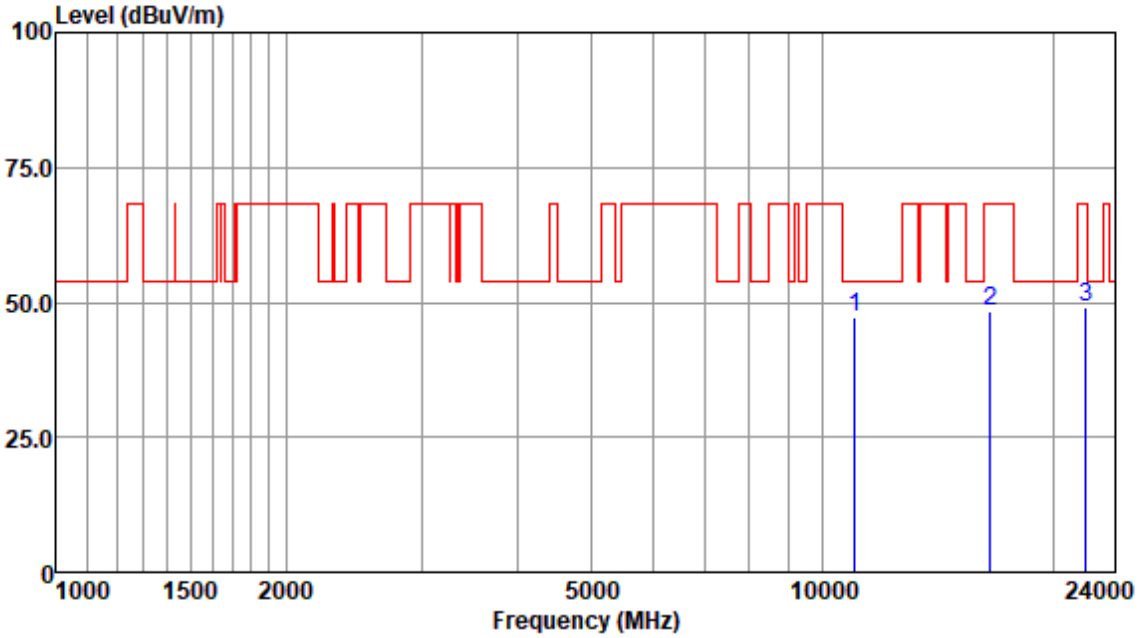


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
10620.67	33.16	37.99	9.08	33.69	46.54	54.00	-7.46	Peak
15930.10	30.94	42.37	12.46	36.67	49.10	54.00	-4.90	Peak
21240.79	28.84	44.11	14.64	39.61	47.98	54.00	-6.02	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

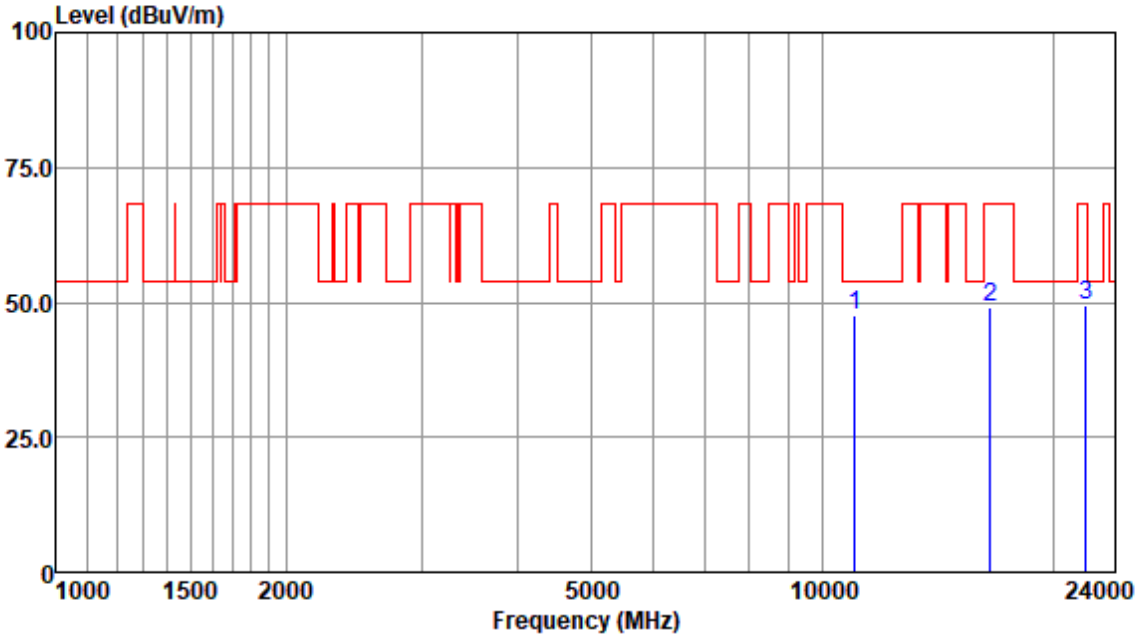


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11000.90	33.81	38.28	9.37	34.15	47.31	54.00	-6.69	Peak
16500.77	29.94	41.74	12.79	36.20	48.27	68.20	-19.93	Peak
22000.50	30.36	44.36	14.88	40.70	48.90	68.20	-19.30	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

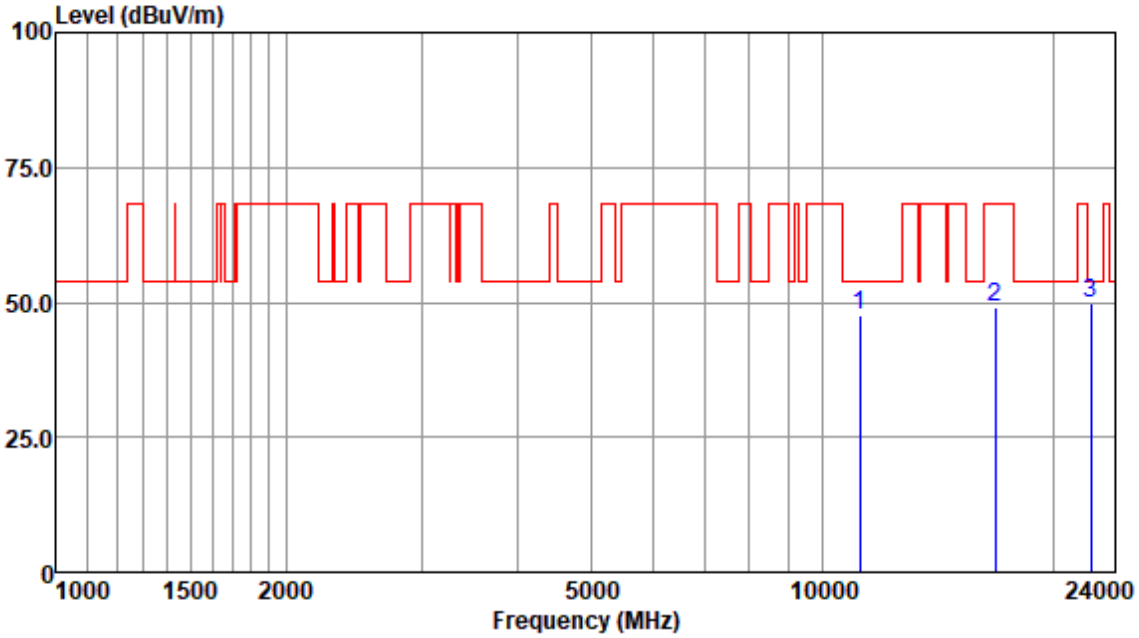


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11000.90	33.92	38.28	9.37	34.15	47.42	54.00	-6.58	Peak
16500.77	30.70	41.74	12.79	36.20	49.03	68.20	-19.17	Peak
22000.50	31.09	44.36	14.88	40.70	49.63	68.20	-18.57	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:middle

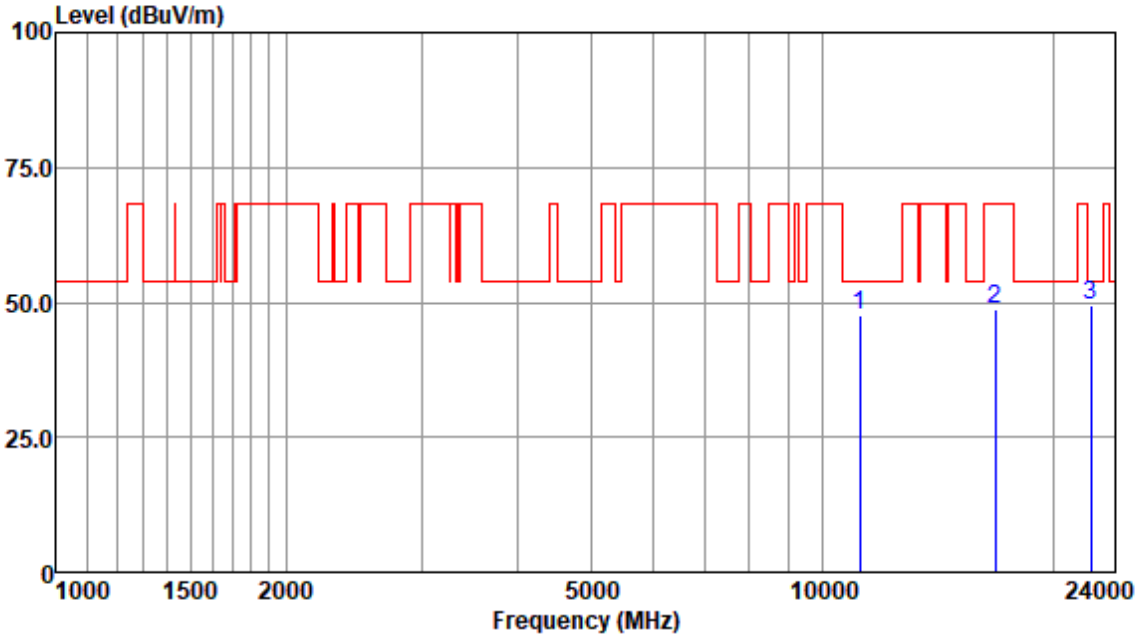


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11160.85	34.24	38.28	9.58	34.54	47.56	54.00	-6.44	Peak
16740.97	30.47	41.69	12.78	35.97	48.97	68.20	-19.23	Peak
22320.29	31.54	44.44	14.97	41.09	49.86	54.00	-4.14	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:middle

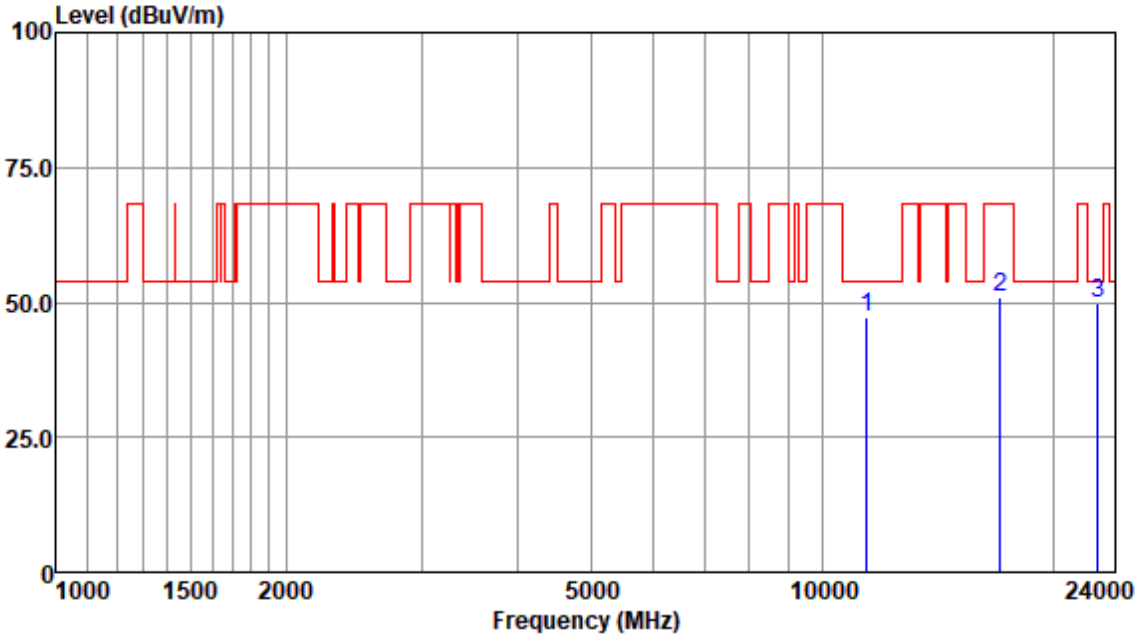


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11160.85	34.21	38.28	9.58	34.54	47.53	54.00	-6.47	Peak
16740.97	30.21	41.69	12.78	35.97	48.71	68.20	-19.49	Peak
22320.29	31.12	44.44	14.97	41.09	49.44	54.00	-4.56	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High

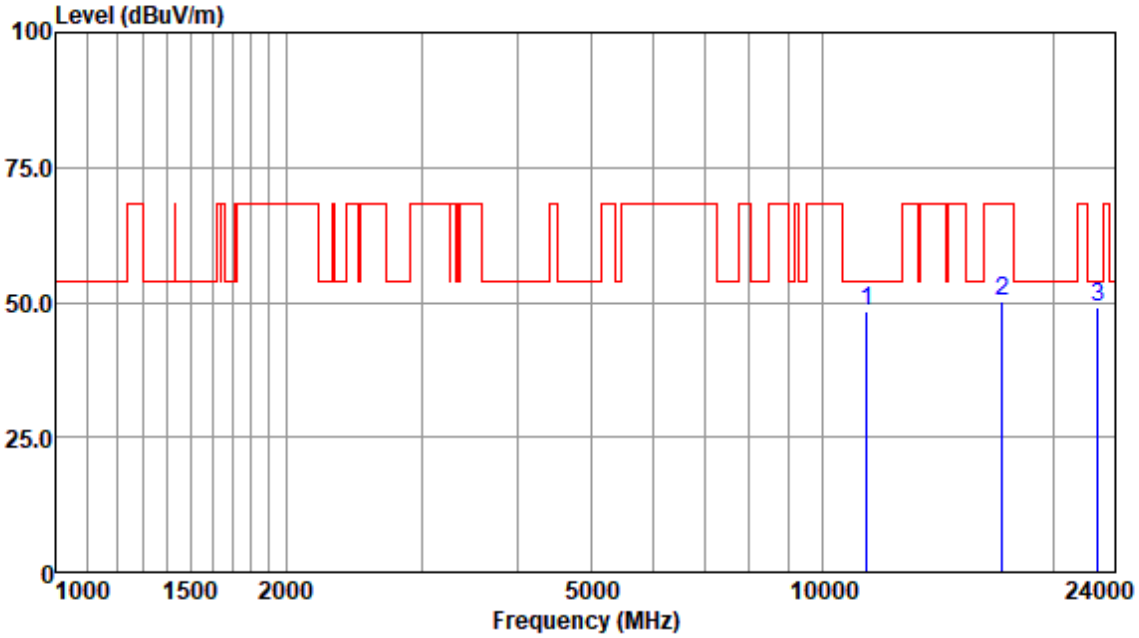


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11400.85	34.63	38.28	9.85	35.43	47.33	54.00	-6.67	Peak
17000.60	31.62	41.72	13.08	35.64	50.78	68.20	-17.42	Peak
22800.13	31.74	44.60	15.12	41.79	49.67	54.00	-4.33	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High

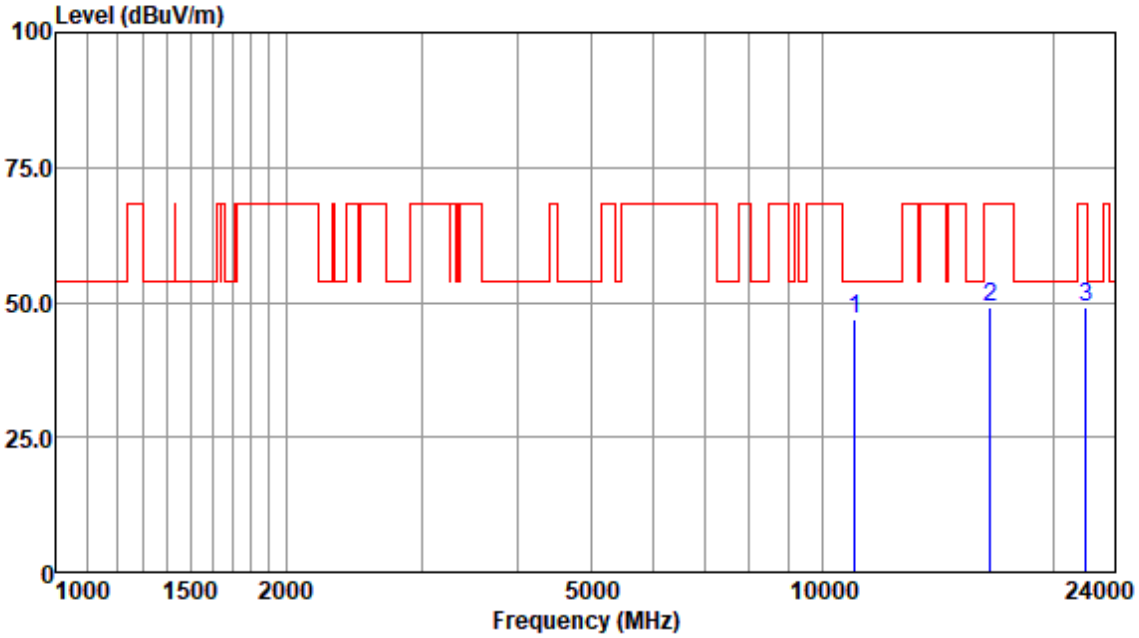


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11400.85	35.60	38.28	9.85	35.43	48.30	54.00	-5.70	Peak
17100.60	30.85	41.79	13.09	35.58	50.15	68.20	-18.05	Peak
22800.00	31.28	44.60	15.12	41.79	49.21	54.00	-4.79	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

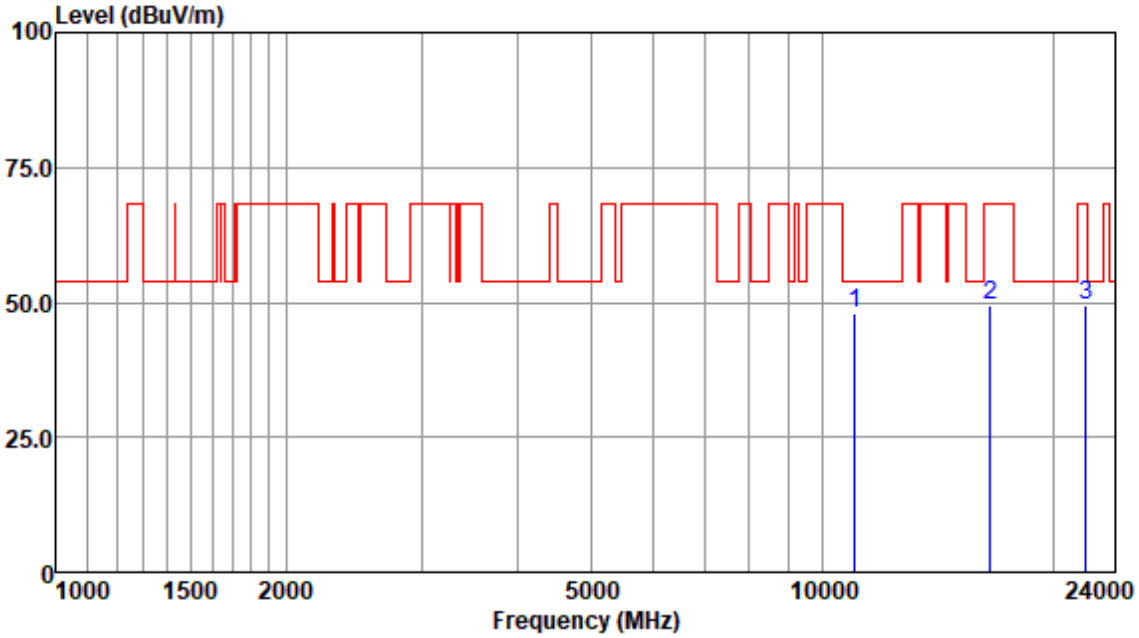


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11000.90	33.51	38.28	9.37	34.15	47.01	54.00	-6.99	Peak
16500.77	30.81	41.74	12.79	36.20	49.14	68.20	-19.06	Peak
22000.50	30.41	44.36	14.88	40.70	48.95	68.20	-19.25	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

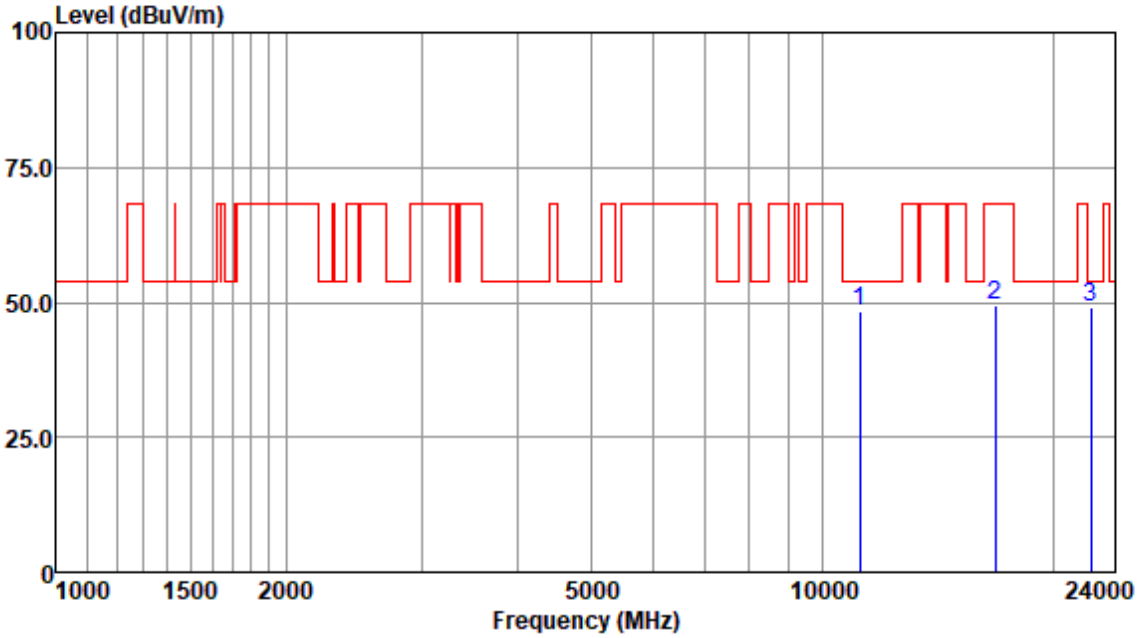


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11000.90	34.59	38.28	9.37	34.15	48.09	54.00	-5.91	Peak
16500.77	31.26	41.74	12.79	36.20	49.59	68.20	-18.61	Peak
22000.50	31.07	44.36	14.88	40.70	49.61	68.20	-18.59	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:middle

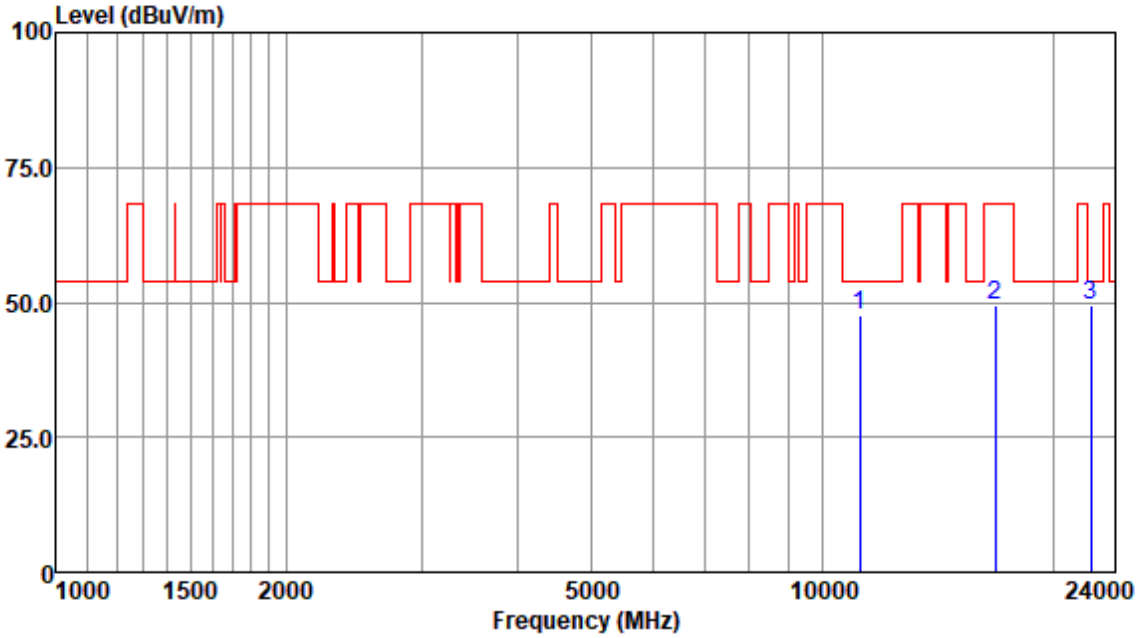


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11160.85	35.13	38.28	9.58	34.54	48.45	54.00	-5.55	Peak
16740.97	30.82	41.69	12.78	35.97	49.32	68.20	-18.88	Peak
22320.29	30.80	44.44	14.97	41.09	49.12	54.00	-4.88	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:middle

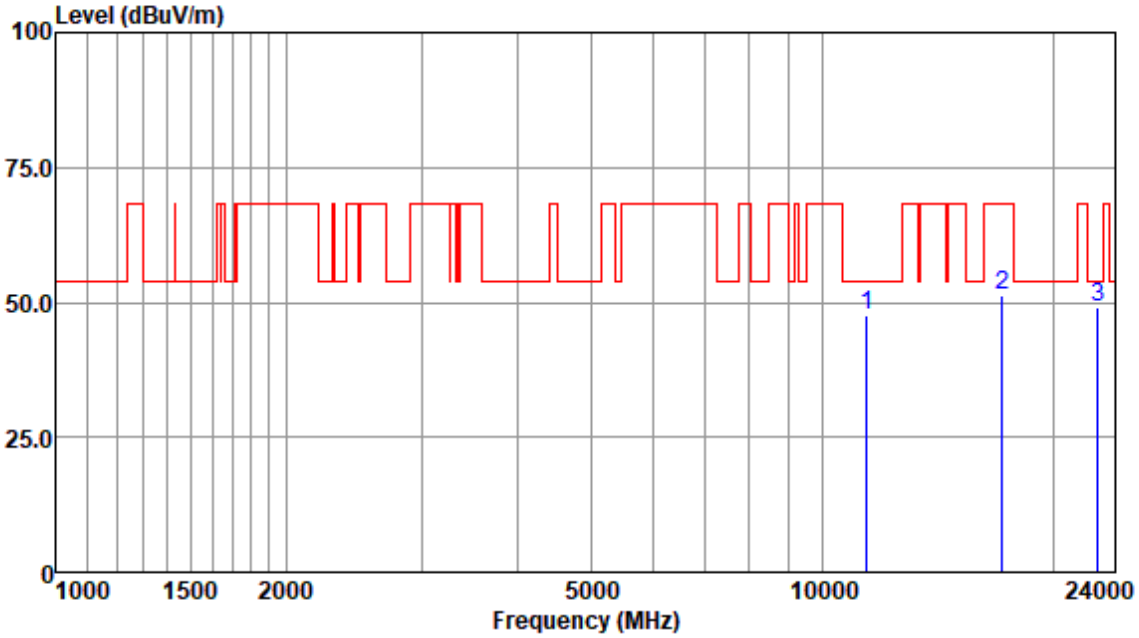


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11160.85	34.25	38.28	9.58	34.54	47.57	54.00	-6.43	Peak
16740.97	30.82	41.69	12.78	35.97	49.32	68.20	-18.88	Peak
22320.29	31.09	44.44	14.97	41.09	49.41	54.00	-4.59	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High

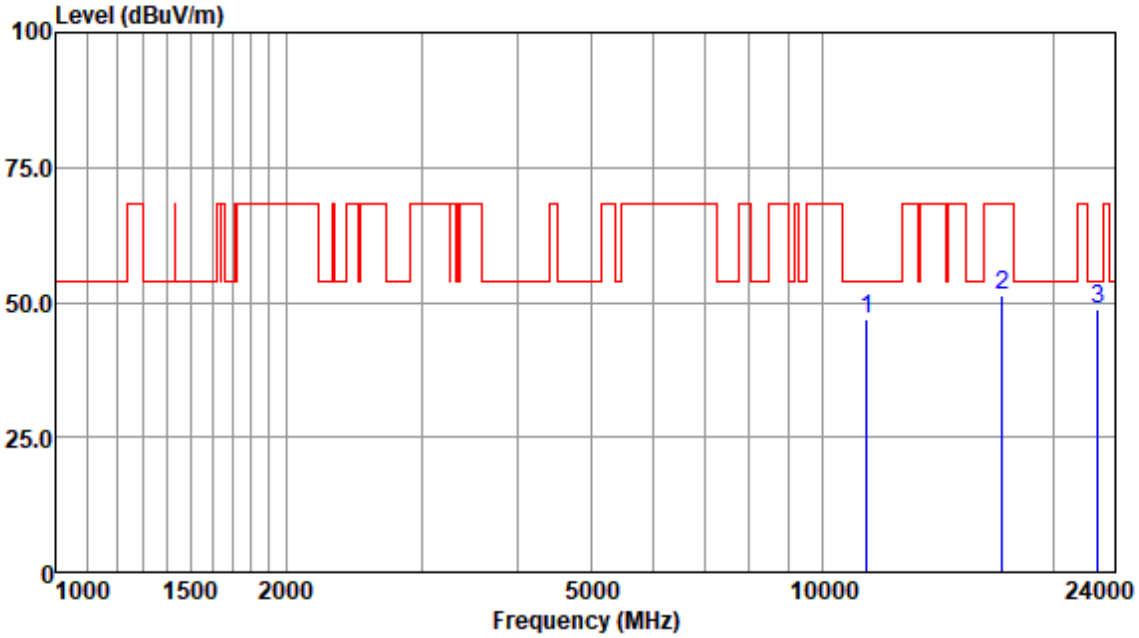


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11400.85	34.88	38.28	9.85	35.43	47.58	54.00	-6.42	Peak
17100.60	32.11	41.79	13.09	35.58	51.41	68.20	-16.79	Peak
22800.13	30.97	44.60	15.12	41.79	48.90	54.00	-5.10	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High

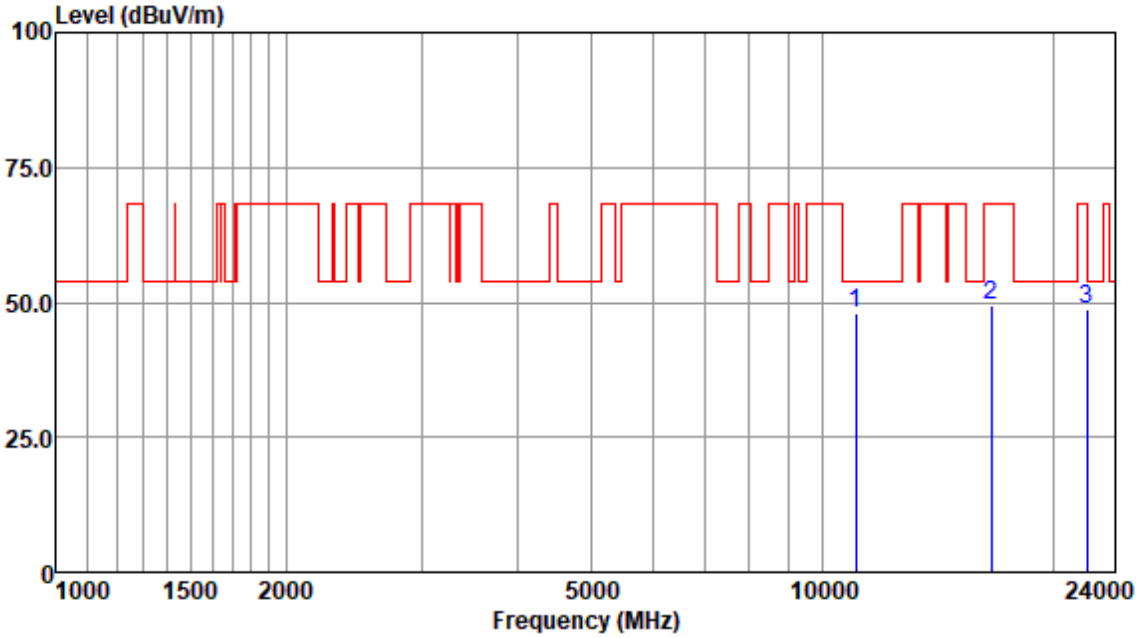


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11400.85	34.05	38.28	9.85	35.43	46.75	54.00	-7.25	Peak
17100.60	31.97	41.79	13.09	35.58	51.27	68.20	-16.93	Peak
22800.13	30.74	44.60	15.12	41.79	48.67	54.00	-5.33	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

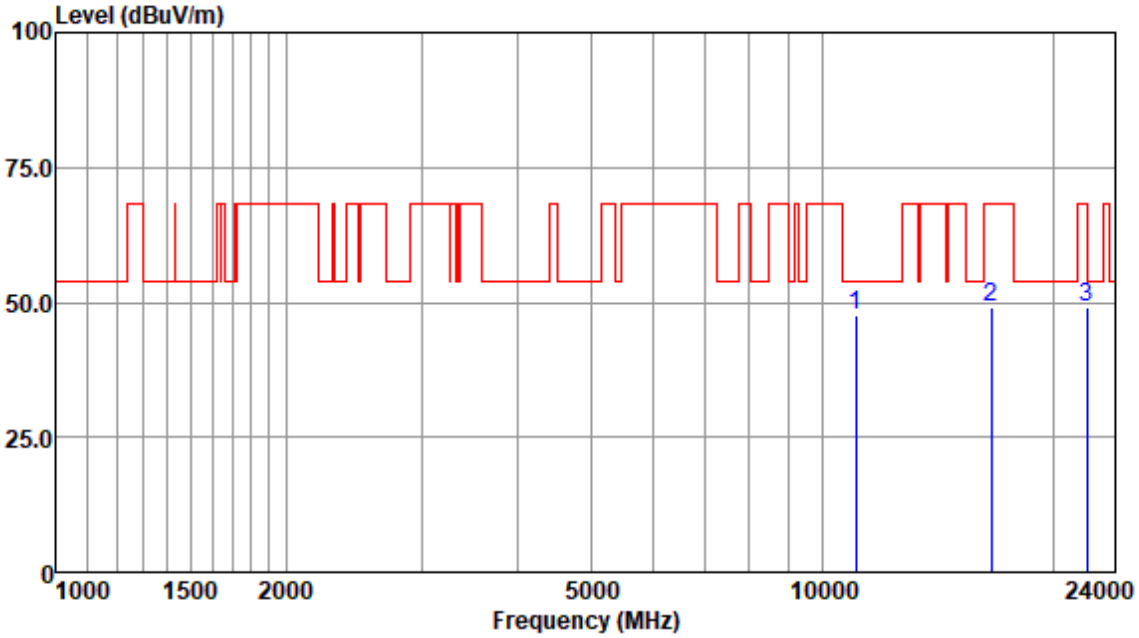


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11020.90	34.37	38.28	9.37	34.15	47.87	54.00	-6.13	Peak
16530.28	31.28	41.67	12.79	36.16	49.58	68.20	-18.62	Peak
22040.50	30.27	44.36	14.88	40.70	48.81	54.00	-5.19	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

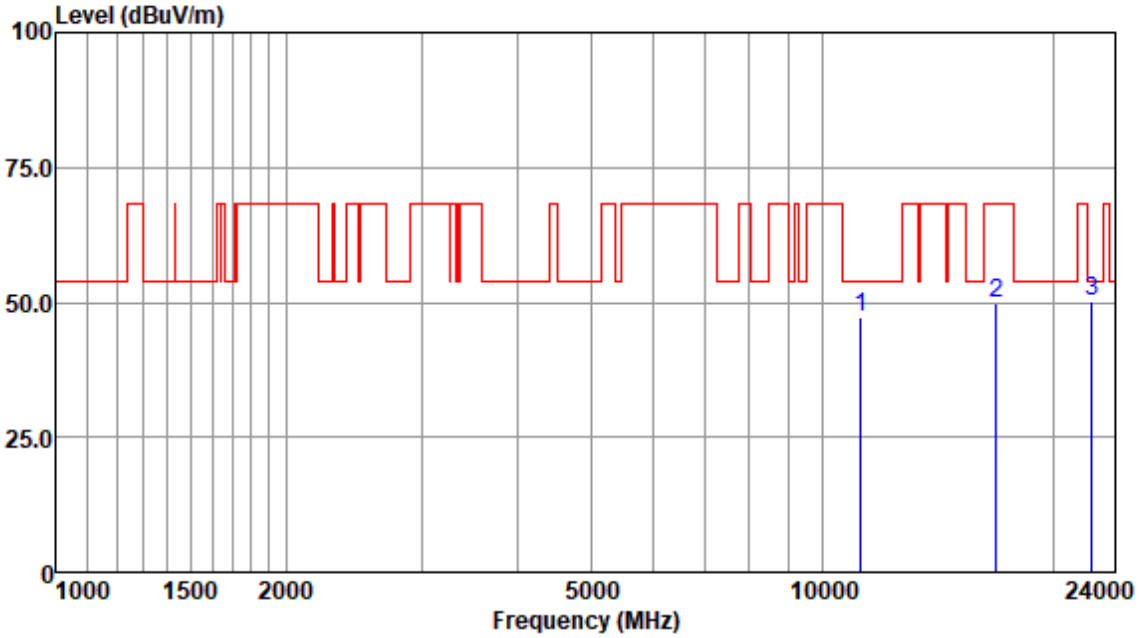


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11020.90	34.13	38.28	9.37	34.15	47.63	54.00	-6.37	Peak
16530.28	30.81	41.67	12.79	36.16	49.11	68.20	-19.09	Peak
22040.50	30.62	44.36	14.88	40.70	49.16	54.00	-4.84	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:middle

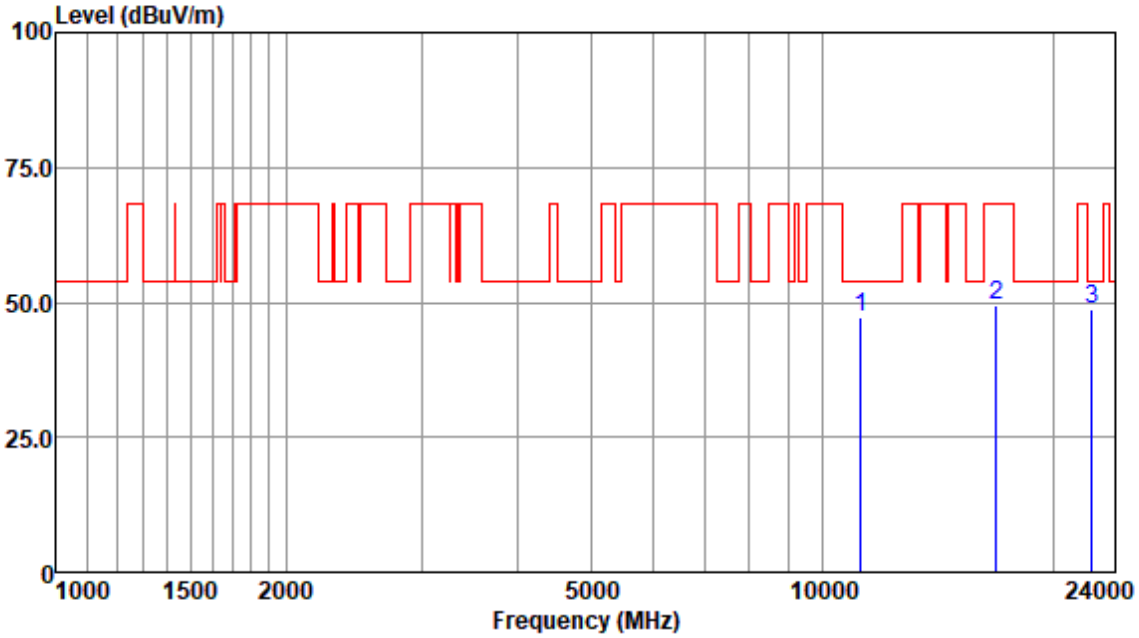


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11190.36	33.93	38.28	9.63	34.67	47.17	54.00	-6.83	Peak
16770.97	31.20	41.69	12.78	35.97	49.70	68.20	-18.50	Peak
22360.30	31.93	44.47	14.99	41.19	50.20	54.00	-3.80	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:middle

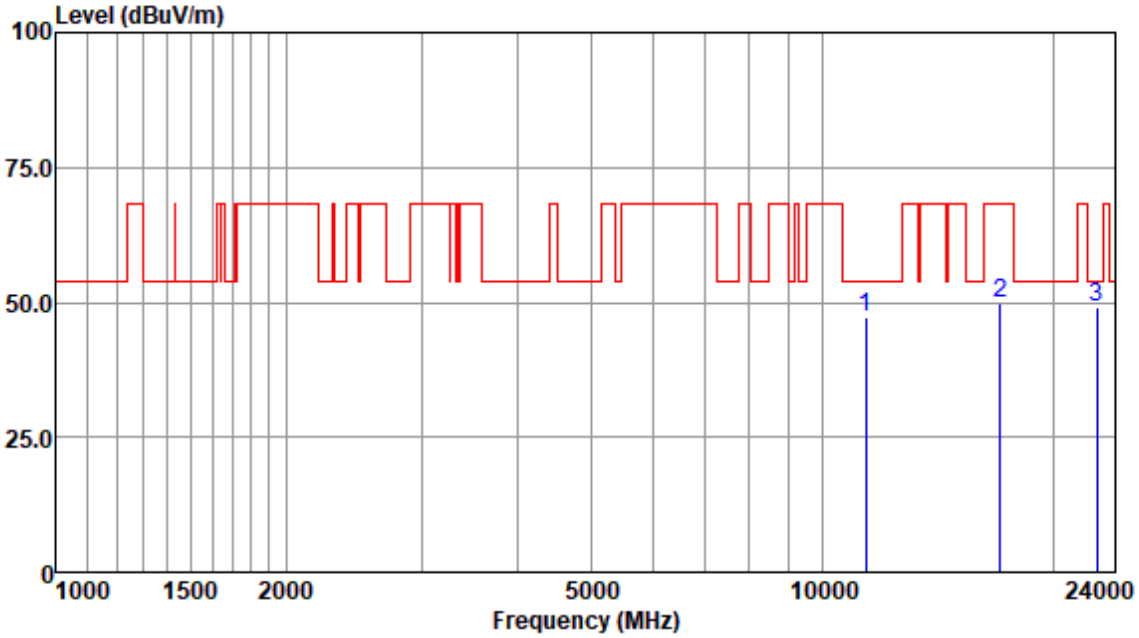


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11180.36	33.83	38.28	9.63	34.67	47.07	54.00	-6.93	Peak
16770.97	30.99	41.69	12.78	35.97	49.49	68.20	-18.71	Peak
22360.30	30.49	44.47	14.99	41.19	48.76	54.00	-5.24	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High

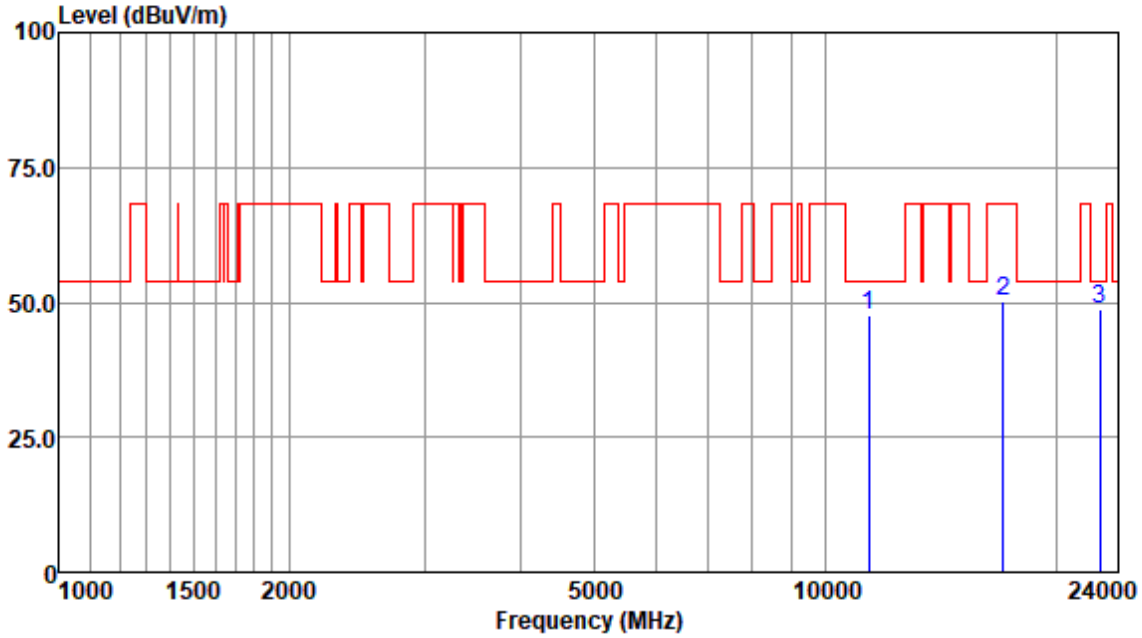


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11340.56	34.14	38.28	9.81	35.17	47.06	54.00	-6.94	Peak
17010.40	30.60	41.72	13.08	35.64	49.76	68.20	-18.44	Peak
22680.61	30.89	44.55	15.08	41.59	48.93	54.00	-5.07	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 06; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High

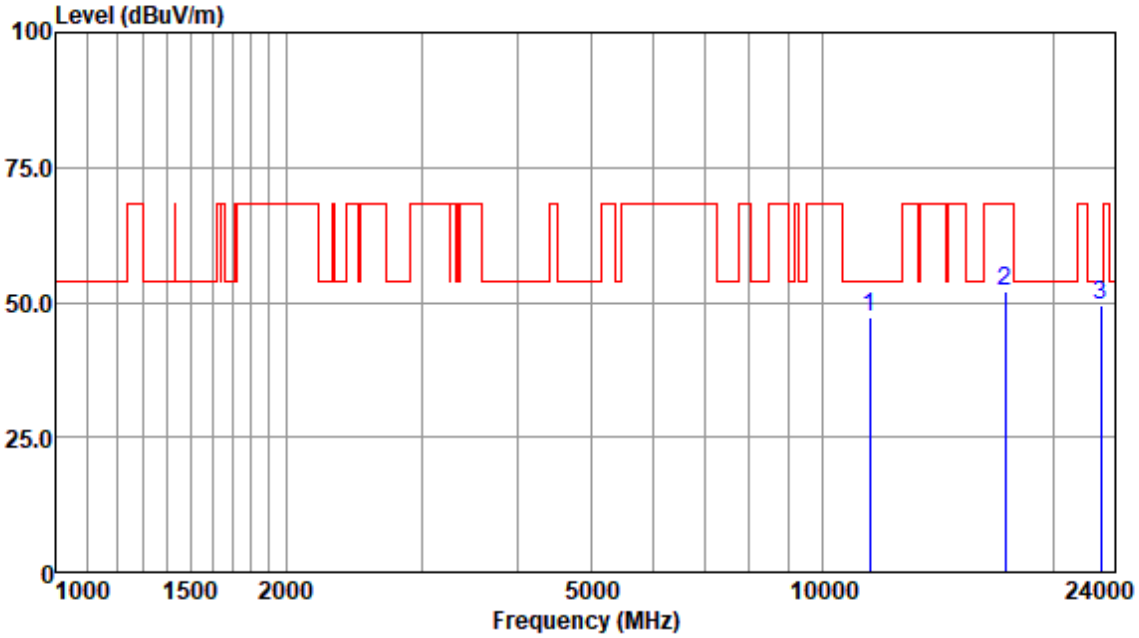


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11340.56	34.66	38.28	9.81	35.17	47.58	54.00	-6.42	Peak
17010.40	31.14	41.72	13.08	35.64	50.30	68.20	-17.90	Peak
22680.61	30.74	44.55	15.08	41.59	48.78	54.00	-5.22	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

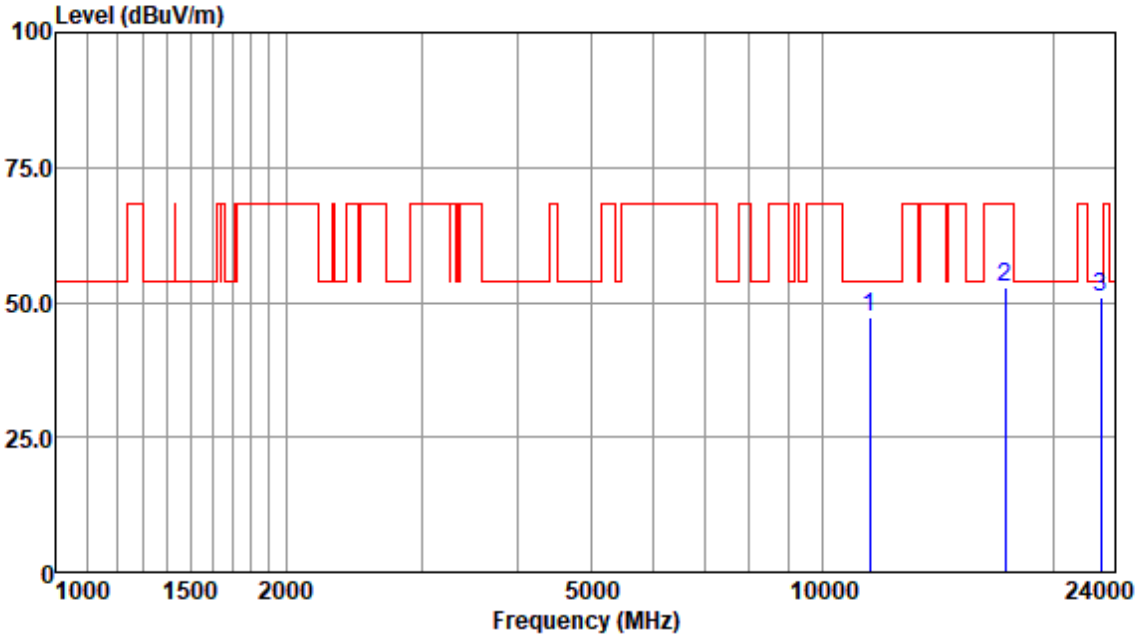


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11490.60	34.71	38.28	9.88	35.68	47.19	54.00	-6.81	Peak
17235.24	32.31	42.00	13.15	35.39	52.07	68.20	-16.13	Peak
22980.58	31.52	44.64	15.17	41.99	49.34	54.00	-4.66	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:Low

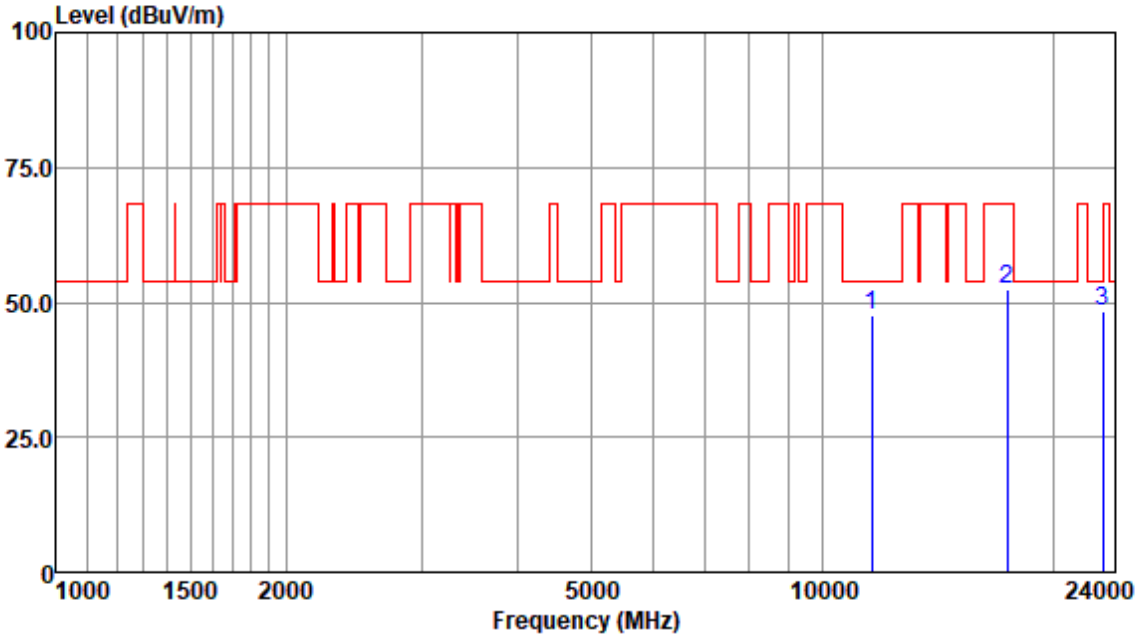


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11490.60	34.66	38.28	9.88	35.68	47.14	54.00	-6.86	Peak
17235.24	33.07	42.00	13.15	35.39	52.83	68.20	-15.37	Peak
22980.58	32.94	44.64	15.17	41.99	50.76	54.00	-3.24	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:middle

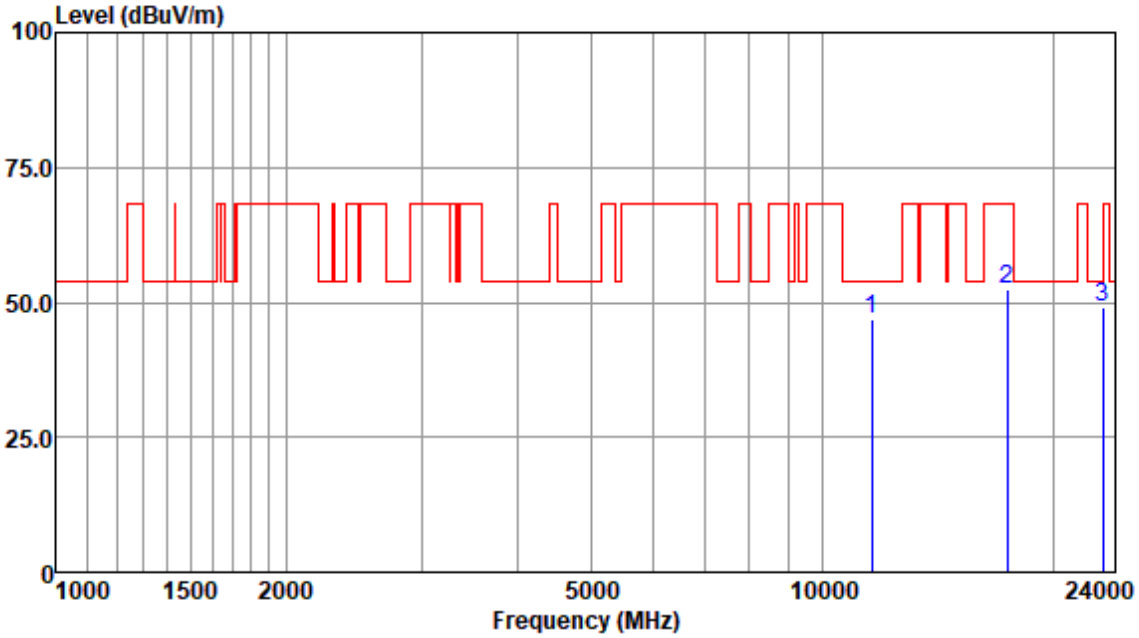


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11570.81	35.30	38.29	9.90	35.96	47.53	54.00	-6.47	Peak
17355.20	32.14	42.22	13.19	35.24	52.31	68.20	-15.89	Peak
23140.49	30.70	44.71	15.24	42.28	48.37	68.20	-19.83	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:middle

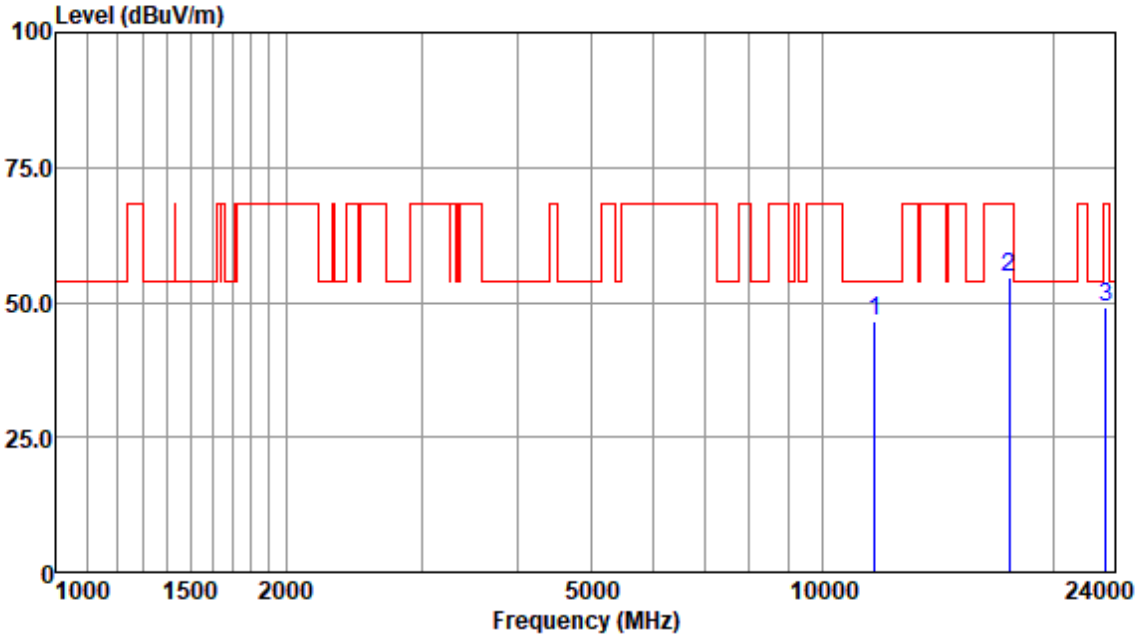


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11570.81	34.58	38.29	9.90	35.96	46.81	54.00	-7.19	Peak
17355.20	32.05	42.22	13.19	35.24	52.22	68.20	-15.98	Peak
23140.49	31.53	44.71	15.24	42.28	49.20	68.20	-19.00	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Horizontal; Modulation:802.11a; Bandwidth:20MHz; Channel:High

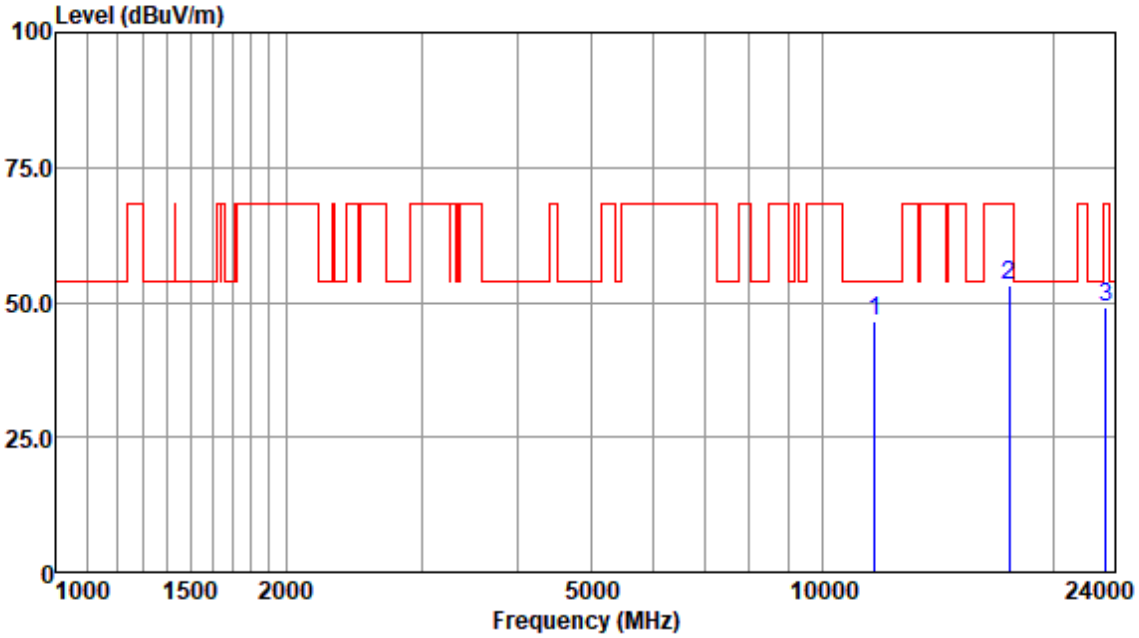


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11650.50	34.79	38.30	9.91	36.41	46.59	54.00	-7.41	Peak
17475.87	34.12	42.26	13.23	35.08	54.53	68.20	-13.67	Peak
23300.27	31.64	44.75	15.28	42.48	49.19	68.20	-19.01	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Vertical; Modulation:802.11a; Bandwidth:20MHz; Channel:High

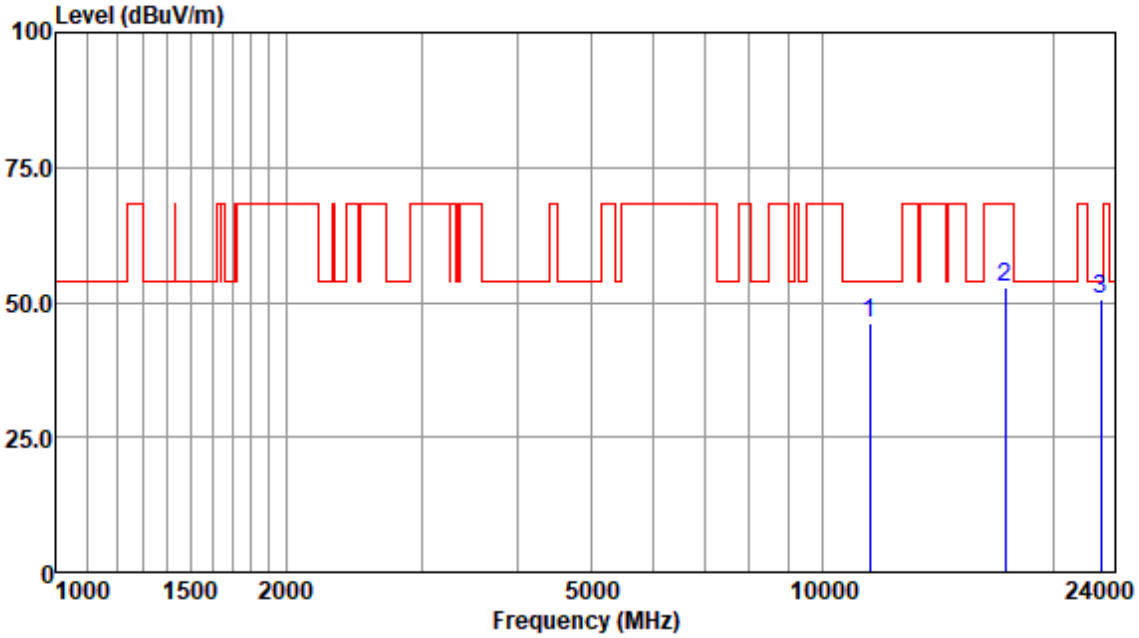


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11650.50	34.82	38.30	9.91	36.41	46.62	54.00	-7.38	Peak
17475.87	32.56	42.26	13.23	35.08	52.97	68.20	-15.23	Peak
23300.27	31.38	44.75	15.28	42.48	48.93	68.20	-19.27	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

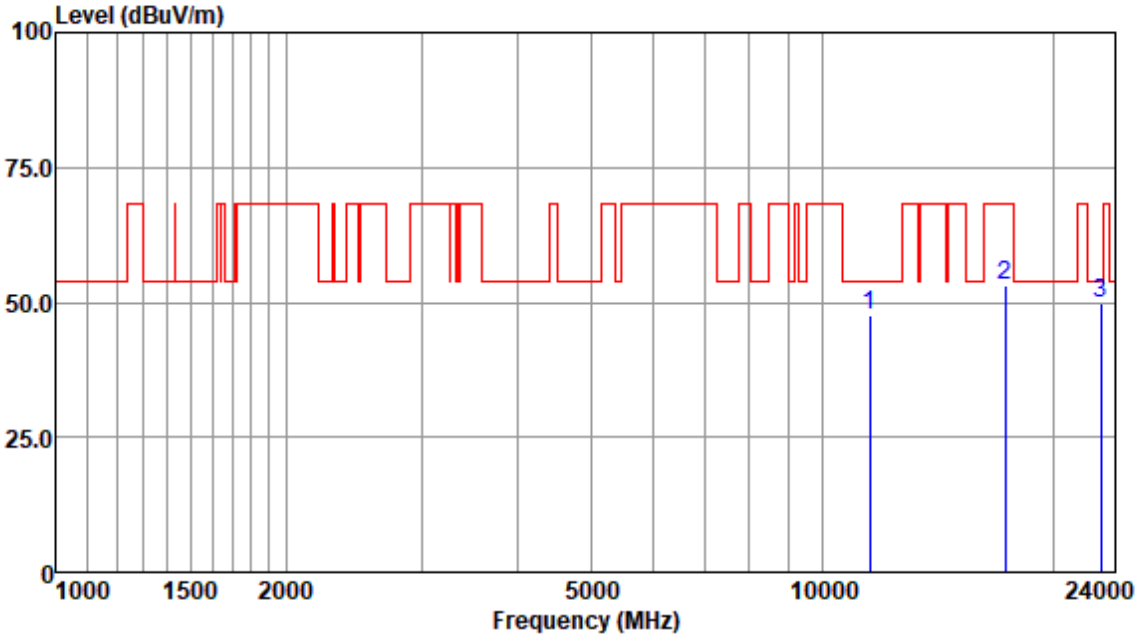


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11490.60	33.80	38.28	9.88	35.68	46.28	54.00	-7.72	Peak
17235.24	33.06	42.00	13.15	35.39	52.82	68.20	-15.38	Peak
22980.58	32.66	44.64	15.17	41.99	50.48	54.00	-3.52	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:Low

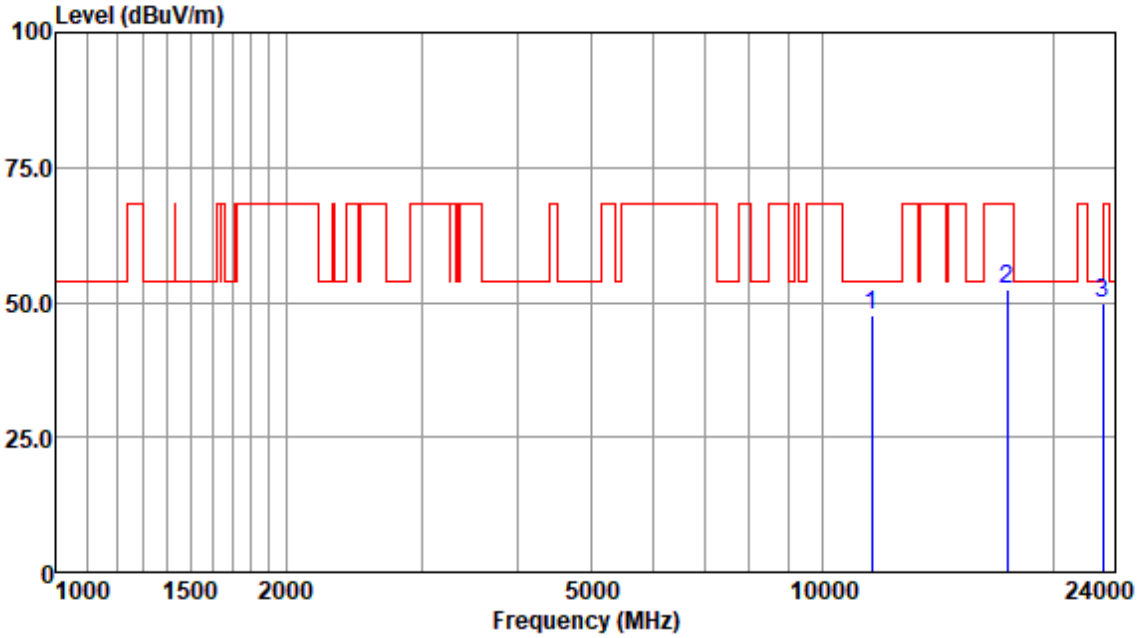


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11490.60	35.02	38.28	9.88	35.68	47.50	54.00	-6.50	Peak
17235.24	33.50	42.00	13.15	35.39	53.26	68.20	-14.94	Peak
22980.58	32.05	44.64	15.17	41.99	49.87	54.00	-4.13	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:middle

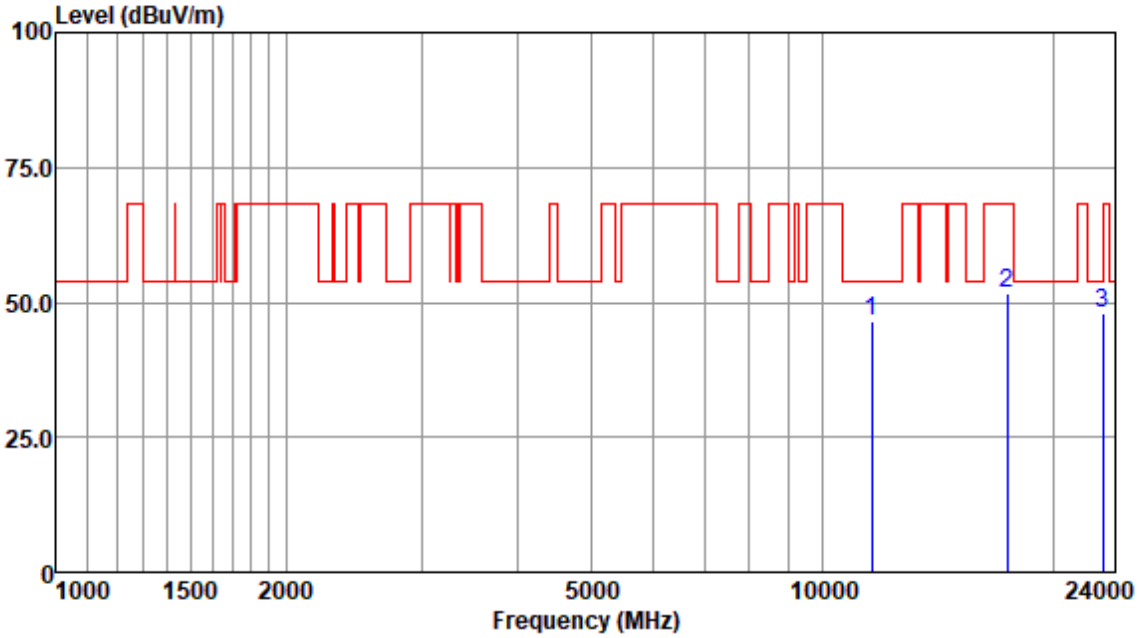


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11570.81	35.48	38.29	9.90	35.96	47.71	54.00	-6.29	Peak
17355.20	32.11	42.22	13.19	35.24	52.28	68.20	-15.92	Peak
23140.49	32.21	44.71	15.24	42.28	49.88	68.20	-18.32	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:middle

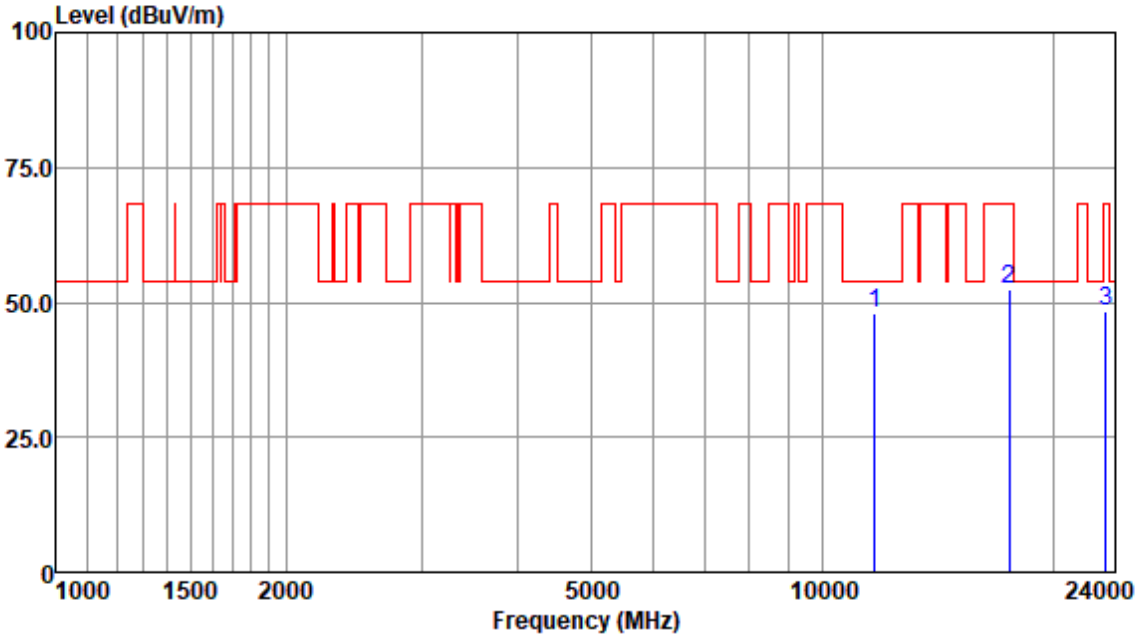


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11570.81	34.28	38.29	9.90	35.96	46.51	54.00	-7.49	Peak
17355.20	31.54	42.22	13.19	35.24	51.71	68.20	-16.49	Peak
23140.49	30.42	44.71	15.24	42.28	48.09	68.20	-20.11	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Horizontal; Modulation:802.11n; Bandwidth:20MHz; Channel:High

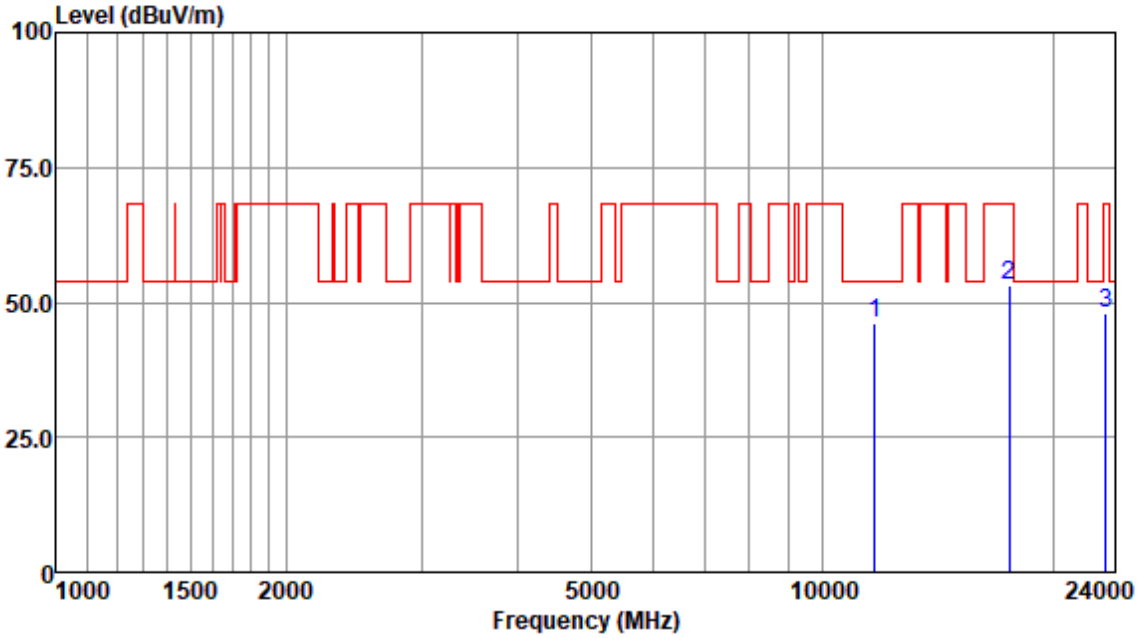


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11650.50	35.99	38.30	9.91	36.41	47.79	54.00	-6.21	Peak
17475.87	32.15	42.26	13.23	35.08	52.56	68.20	-15.64	Peak
23300.27	30.76	44.75	15.28	42.48	48.31	68.20	-19.89	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Vertical; Modulation:802.11n; Bandwidth:20MHz; Channel:High

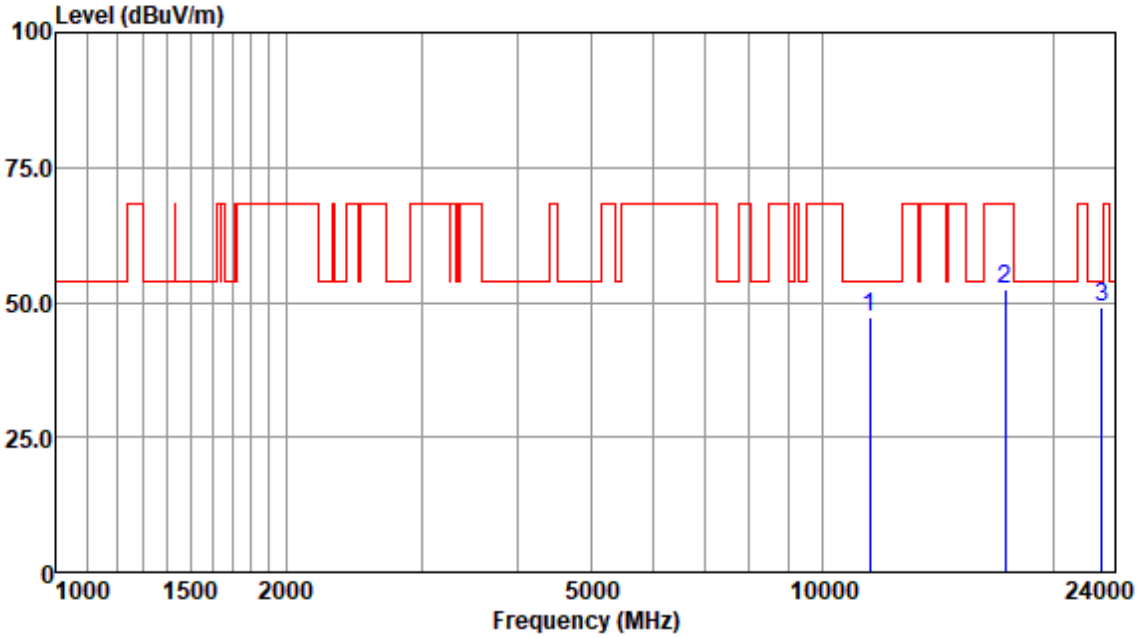


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11650.50	34.32	38.30	9.91	36.41	46.12	54.00	-7.88	Peak
17475.87	32.91	42.26	13.23	35.08	53.32	68.20	-14.88	Peak
23300.27	30.46	44.75	15.28	42.48	48.01	68.20	-20.19	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

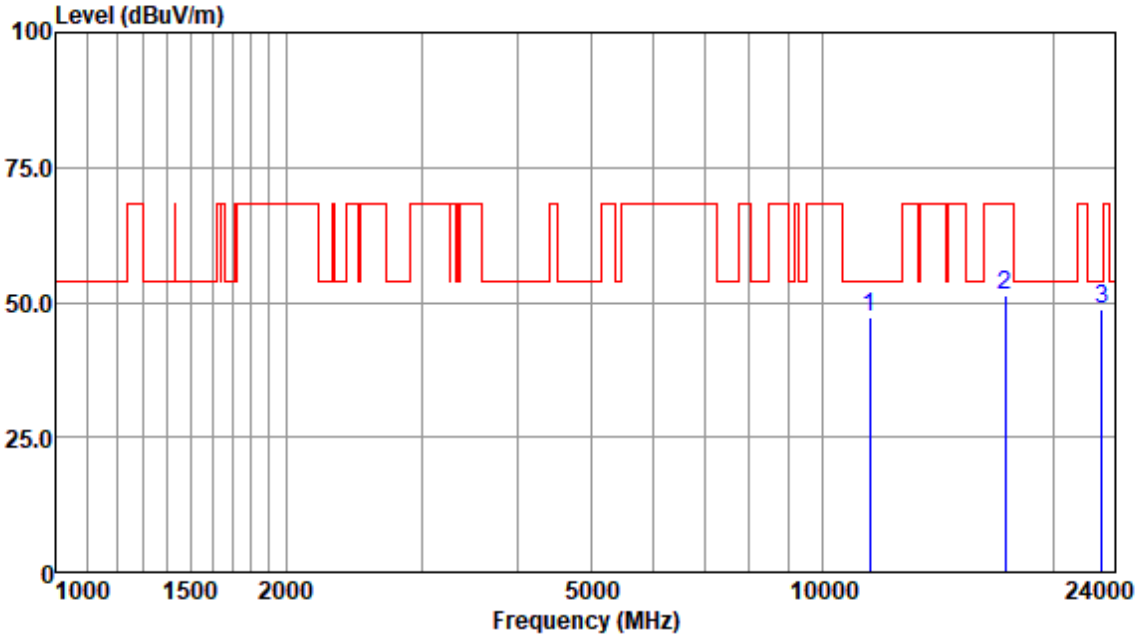


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11510.14	34.91	38.29	9.89	35.80	47.29	54.00	-6.71	Peak
17265.24	32.82	42.00	13.15	35.39	52.58	68.20	-15.62	Peak
23020.65	31.13	44.66	15.19	42.08	48.90	54.00	-5.10	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:Low

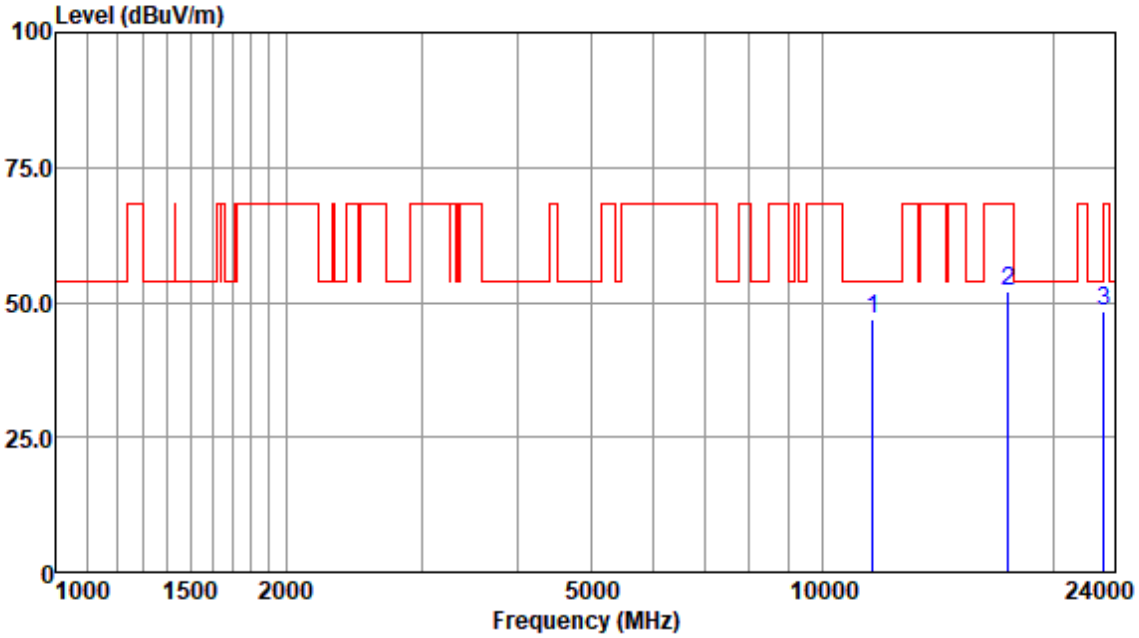


Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11510.14	34.83	38.29	9.89	35.80	47.21	54.00	-6.79	Peak
17265.24	31.72	42.00	13.15	35.39	51.48	68.20	-16.72	Peak
23020.65	30.82	44.66	15.19	42.08	48.59	54.00	-5.41	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Horizontal; Modulation:802.11n; Bandwidth:40MHz; Channel:High

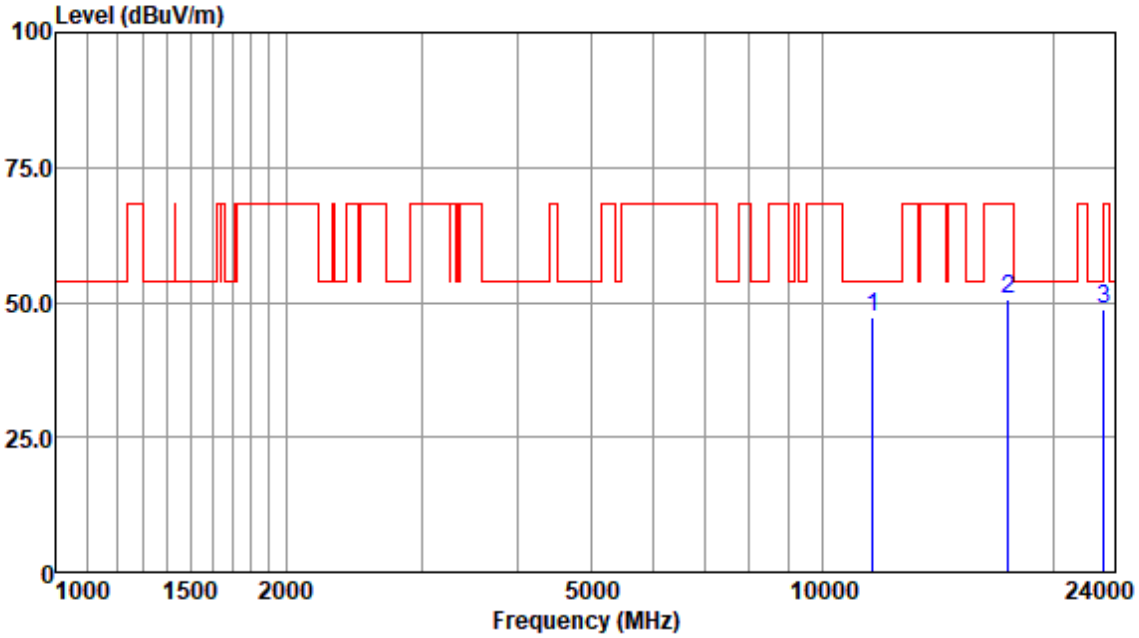


Antenna Polarity :HORIZONTAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11590.59	34.87	38.29	9.92	36.11	46.97	54.00	-7.03	Peak
17385.45	31.63	42.24	13.21	35.16	51.92	68.20	-16.28	Peak
23180.49	30.58	44.71	15.24	42.28	48.25	68.20	-19.95	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Test Mode: 07; Polarity: Vertical; Modulation:802.11n; Bandwidth:40MHz; Channel:High



Antenna Polarity :VERTICAL
EUT/Project :1076ME

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Emission Level	Limit Line	Over Limit	Remark
MHz	dBuv	dB/m	dB	dB	dBuv/m	dBuv/m	dB	
11590.59	35.11	38.29	9.92	36.11	47.21	54.00	-6.79	Peak
17385.45	30.16	42.24	13.21	35.16	50.45	68.20	-17.75	Peak
23180.49	30.90	44.71	15.24	42.28	48.57	68.20	-19.63	Peak

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

7.10 Frequency Stability

Test Requirement 47 CFR Part 15, Subpart E 15.407 (g)
Test Method: ANSI C63.10 (2013) Section 6.8

7.10.1 E.U.T. Operation

Operating Environment:
Temperature: 26.1 °C Humidity: 69.5 % RH Atmospheric Pressure: 1010 mbar

7.10.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	05	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	07	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.

7.10.3 Test Setup Diagram

7.10.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.11 99% Bandwidth

Test Requirement RSS-Gen Section 6.7

Test Method: ANSI C63.10 (2013) Section 6.9.3

7.11.1 E.U.T. Operation

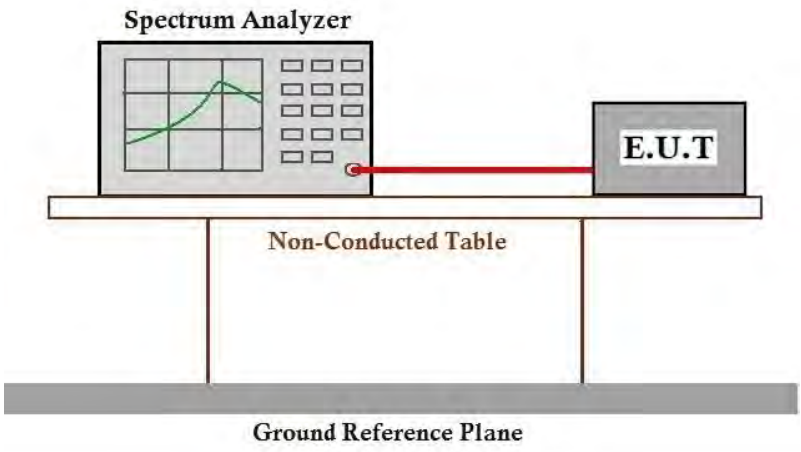
Operating Environment:

Temperature: 26.1 °C Humidity: 69.4 % RH Atmospheric Pressure: 1010 mbar

7.11.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode (U-NII-1)_Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	05	TX mode (U-NII-2A) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	06	TX mode (U-NII-2C) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.
Final test	07	TX mode (U-NII-3) _Keep the EUT in continuously transmitting mode with all modulation types. All data rates for each modulation type have been tested and found the data rate @ 6Mbps is the worst case of IEEE 802.11a; data rate @ MCS0 is the worst case of IEEE 802.11n20/40, Only the data of worst case is recorded in the report.

7.11.3 Test Setup Diagram



7.11.4 Measurement Procedure and Data

Please Refer to Appendix for Details

8 Test Setup Photo

Refer to Appendix - Test Setup Photo for KSCR2410002068HS

9 EUT Constructional Details (EUT Photos)

Refer to Appendix - Photographs of EUT Constructional Details for KSCR2410002068HS

10 Appendix

10.1 Appendix A1: Emission Bandwidth

10.1.1 Test Result

Test Mode	Antenna	Channel	26dB EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	24.400	5167.560	5191.960	---	---
		5220	26.320	5207.240	5233.560	---	---
		5240	25.800	5226.520	5252.320	---	---
		5260	22.120	5248.920	5271.040	---	---
		5300	23.240	5288.080	5311.320	---	---
		5320	22.680	5308.520	5331.200	---	---
		5500	23.200	5488.440	5511.640	---	---
		5580	26.520	5566.560	5593.080	---	---
		5700	22.040	5688.840	5710.880	---	---
		5745	19.640	5735.240	5754.880	---	---
		5785	23.120	5773.160	5796.280	---	---
		5825	23.200	5813.760	5836.960	---	---
11N20SISO	Ant1	5180	24.040	5167.760	5191.800	---	---
	Ant2	5180	23.480	5168.400	5191.880	---	---
	Ant1	5220	28.360	5205.360	5233.720	---	---
	Ant2	5220	28.280	5206.680	5234.960	---	---
	Ant1	5240	25.480	5227.400	5252.880	---	---
	Ant2	5240	28.480	5226.480	5254.960	---	---
	Ant1	5260	24.440	5247.920	5272.360	---	---
	Ant2	5260	23.480	5248.280	5271.760	---	---
	Ant1	5300	24.200	5288.160	5312.360	---	---
	Ant2	5300	23.280	5288.320	5311.600	---	---
	Ant1	5320	24.040	5307.920	5331.960	---	---
	Ant2	5320	23.120	5308.600	5331.720	---	---
	Ant1	5500	24.680	5487.560	5512.240	---	---
	Ant2	5500	24.760	5487.880	5512.640	---	---
	Ant1	5580	26.160	5566.680	5592.840	---	---
	Ant2	5580	26.280	5567.160	5593.440	---	---
	Ant1	5700	23.880	5688.560	5712.440	---	---
	Ant2	5700	25.080	5687.040	5712.120	---	---
	Ant1	5745	20.520	5734.680	5755.200	---	---
	Ant2	5745	20.600	5734.720	5755.320	---	---
	Ant1	5785	24.320	5772.720	5797.040	---	---
	Ant2	5785	25.120	5772.280	5797.400	---	---
	Ant1	5825	23.520	5813.720	5837.240	---	---

	Ant2	5825	23.840	5812.760	5836.600	---	---
11N40SISO	Ant1	5190	42.800	5168.400	5211.200	---	---
	Ant2	5190	43.920	5168.320	5212.240	---	---
	Ant1	5230	44.720	5207.200	5251.920	---	---
	Ant2	5230	43.760	5208.560	5252.320	---	---
	Ant1	5270	43.520	5247.840	5291.360	---	---
	Ant2	5270	46.480	5246.320	5292.800	---	---
	Ant1	5310	43.280	5288.320	5331.600	---	---
	Ant2	5310	43.200	5288.480	5331.680	---	---
	Ant1	5510	42.720	5488.960	5531.680	---	---
	Ant2	5510	43.200	5488.160	5531.360	---	---
	Ant1	5550	45.040	5528.880	5573.920	---	---
	Ant2	5550	45.840	5525.520	5571.360	---	---
	Ant1	5670	42.720	5648.080	5690.800	---	---
	Ant2	5670	42.960	5648.560	5691.520	---	---
	Ant1	5755	40.240	5734.920	5775.160	---	---
	Ant2	5755	39.760	5735.320	5775.080	---	---
	Ant1	5795	43.040	5773.240	5816.280	---	---
	Ant2	5795	44.000	5773.240	5817.240	---	---

10.1.2 Test Graphs

11A_Ant1_5180

11A_Ant1_5220

11A_Ant1_5240

11A_Ant1_5260

11A_Ant1_5300

11A_Ant1_5320

11A_Ant1_5500

11A_Ant1_5580

11A_Ant1_5700

11A_Ant1_5745

11A_Ant1_5785

11A_Ant1_5825

11N20SISO_Ant1_5180

11N20SISO_Ant2_5180

11N20SISO_Ant1_5220

11N20SISO_Ant2_5220

11N20SISO_Ant1_5240

11N20SISO_Ant2_5240

11N20SISO_Ant1_5260

11N20SISO_Ant2_5260

11N20SISO_Ant1_5300

11N20SISO_Ant2_5300

11N20SISO_Ant1_5320

11N20SISO_Ant2_5320

11N20SISO_Ant1_5500

11N20SISO_Ant2_5500

11N20SISO_Ant1_5580

11N20SISO_Ant2_5580

11N20SISO_Ant1_5700

11N20SISO_Ant2_5700

11N20SISO_Ant1_5745

11N20SISO_Ant2_5745

11N20SISO_Ant1_5785

11N20SISO_Ant2_5785

11N20SISO_Ant1_5825

11N20SISO_Ant2_5825

11N40SISO_Ant1_5190

11N40SISO_Ant2_5190

11N40SISO_Ant1_5230

11N40SISO_Ant2_5230

11N40SISO_Ant1_5270

11N40SISO_Ant2_5270

11N40SISO_Ant1_5310

11N40SISO_Ant2_5310

11N40SISO_Ant1_5510

11N40SISO_Ant2_5510

11N40SISO_Ant1_5550

11N40SISO_Ant2_5550

11N40SISO_Ant1_5670

11N40SISO_Ant2_5670

11N40SISO_Ant1_5755

11N40SISO_Ant2_5755

11N40SISO_Ant1_5795

11N40SISO_Ant2_5795