

MEASUREMENT REPORT

FCC PART 15C / WLAN 802.11b/g/n

FCC ID: HD5-CT40L1N

Applicant: Honeywell International Inc
Honeywell Safety and Productivity Solutions

Application Type: Class II Permissive Change

Product: DOLPHIN CT40

Model No.: CT40-L1N

Brand Name: Honeywell

FCC Classification: Digital Transmission System (DTS)

FCC Rule Part(s): Part 15 Subpart C (Section 15.247)

Test Procedure(s): ANSI C63.10-2013

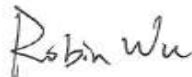
Test Date: December 19 ~ 29, 2020

Reviewed By:



Jame Yuan

Approved By:



Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2012RSU041-U1	Rev. 01	Initial Report	12-30-2020	Valid

Note: Model CT40-L1N has got FCC ID HD5-CT40L1N, now add new channel 12/13 (20M BW) and 10/11 (40M BW) by software upgrade, so we evaluated all RF testing for new channels in this report.

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1. GENERAL INFORMATION

1.1. Applicant

Honeywell International Inc
Honeywell Safety and Productivity Solutions
9680 Old Bailes Rd. Fort Mill, SC 29707 United States

1.2. Manufacturer

Honeywell International Inc
Honeywell Safety and Productivity Solutions
9680 Old Bailes Rd. Fort Mill, SC 29707 United States

1.3. Test Facility

☒	Test Site – MRT Suzhou Laboratory
	Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
	Laboratory Location (Suzhou - SIP) 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China
	Laboratory Accreditations
	A2LA: 3628.01 FCC: CN1166 VCCI: R-20025, G-20034, C-20020, T-20020
☐	Test Site – MRT Shenzhen Laboratory
	Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China
	Laboratory Accreditations
	A2LA: 3628.02 FCC: CN1284
☐	Test Site – MRT Taiwan Laboratory
	Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
	Laboratory Accreditations
	TAF: L3261-190725 FCC: 291082, TW3261

2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name	DOLPHIN CT40
Model No.	CT40-L1N
Serial No.	20328B1D81
Hardware Version	1.0
Software Version	OS.04.001-HON.03.002
Wi-Fi Specification	802.11a/b/g/n/ac
Bluetooth Version	v5.0 dual mode
NFC	13.56MHz
GSM Band (s)	GSM850 / PCS1900
WCDMA Band (s)	Band II / IV / V
CDMA2000 Band (s)	BC0 / BC1 / BC10
LTE Band (s)	FDD Band 2 / 4 / 5 / 7 / 12 / 13 / 17 / 25 / 26, TDD Band 38 / 41
Accessories	
USB Adapter	Model No.: ADS-12B-06 05010E Input Power: 100 - 240V ~ 50/60Hz, Max. 0.3A Output Power: 5VDC 2.0A
Snap-on Adapter	Model No.: CT40-SN
Battery	Model No.: CT50-BTSC Capacitance: 15.5Wh, 4090mAh Rated Voltage: 3.8V, Limit Charge Voltage: 4.36V

2.2. Product Specification Subjective to this Report

Frequency Range	802.11b/g/n-HT20: 2412 ~ 2472 MHz 802.11n-HT40: 2422 ~ 2462 MHz
Channel Number	802.11b/g/n-HT20: 13 802.11n-HT40: 9
Type of Modulation	802.11b: DSSS 802.11g/n: OFDM
Data Rate	802.11b: 1/2/5.5/11Mbps 802.11g: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 150Mbps
Antenna Type	FPC Antenna
Antenna Gain	1.90dBi

Note: For other features of this EUT, test report will be issued separately.

2.3. Working Frequencies for this report

802.11b/g/n-HT20

Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz
04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz
10	2457 MHz	11	2462 MHz	12	2467 MHz
13	2472 MHz	--	--	--	--

802.11n-HT40

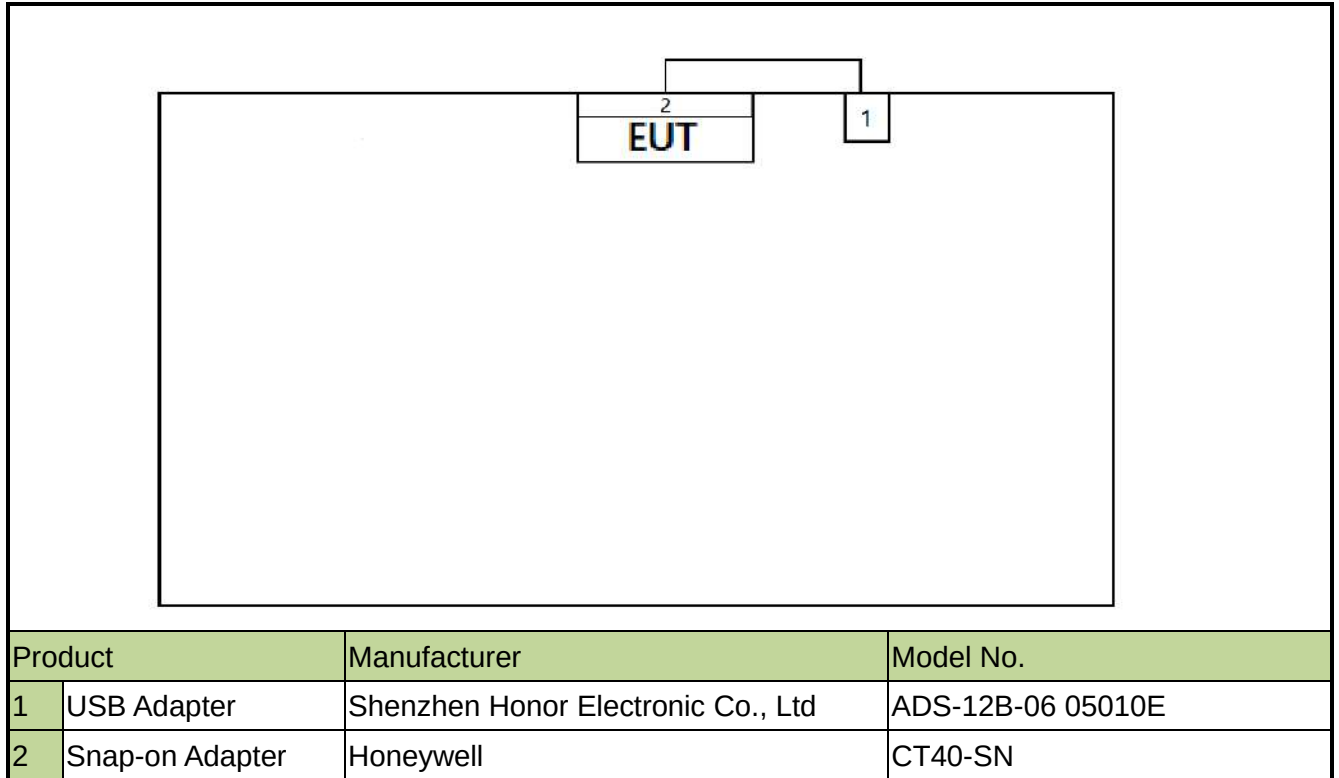
Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	04	2427 MHz	05	2432 MHz
06	2437 MHz	07	2442 MHz	08	2447 MHz
09	2452 MHz	10	2457 MHz	11	2462 MHz

2.4. Test Mode

Test Mode	Mode 1: Transmit by 802.11b (1Mbps)
	Mode 2: Transmit by 802.11g (6Mbps)
	Mode 3: Transmit by 802.11n-HT20 (MCS0)
	Mode 4: Transmit by 802.11n-HT40 (MCS0)

2.5. Description of Test Configuration

The device was tested per the guidance ANSI C63.10: 2013 that was used to reference the appropriate EUT setup for radiated emissions and AC line conducted emission testing.



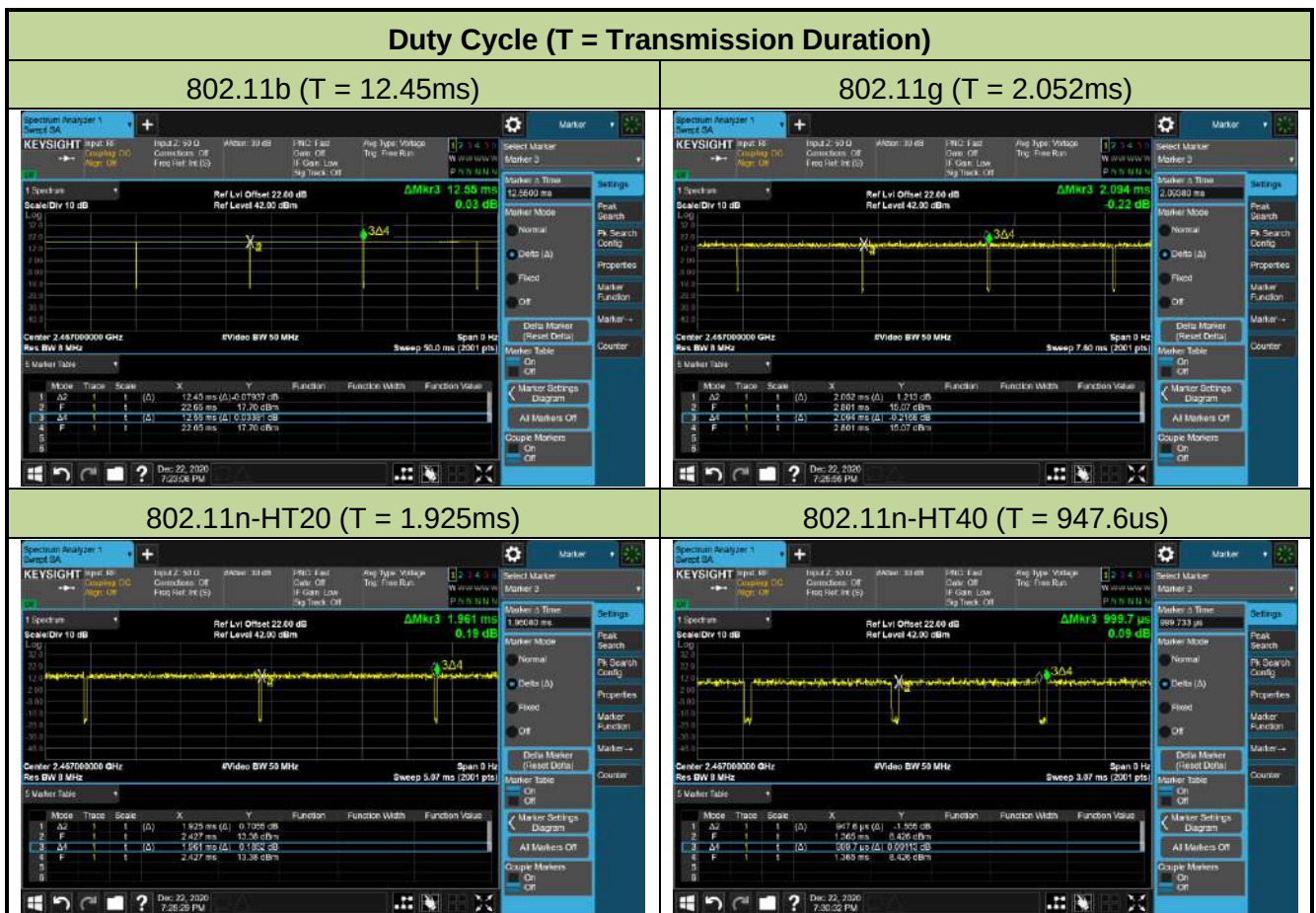
Note 1: The test utility software used during testing was “QRCT”, and the version was 3.0.268.0.

Note 2: Detail power setting refer to operation description.

2.6. Duty Cycle

2.4GHz WLAN (DTS) operation is possible in 20MHz channel bandwidths. The maximum achievable duty cycles for all modes were determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz. The RBW and VBW were both greater than 50/T, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

Test Mode	Duty Cycle
802.11b	99.20%
802.11g	97.99%
802.11n-HT20	98.16%
802.11n-HT40	94.79%



2.7. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

2.8. Test Environment Condition

Ambient Temperature	15°C ~ 35°C
Relative Humidity	20%RH ~ 75%RH

3. TEST EQUIPMENT CALIBRATION DATE

Conducted Emission (WZ-SR2)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06185	1 year	2021/01/18
Two-Line V-Network	R&S	ENV216	MRTSUE06002	1 year	2021/09/09
Thermal Hygrometer	testo	608-H1	MRTSUE06404	1 year	2021/07/26
Shielding Room	MIX-BEP	Chamber-SR2	MRTSUE06215	N/A	N/A

Conducted Emission (SIP-SR2)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06613	1 year	2021/07/02
Two-Line V-Network	R&S	ENV216	MRTSUE06003	1 year	2021/09/09
Thermal Hygrometer	testo	608-H1	MRTSUE06621	1 year	2021/12/03

Radiated Emission (WZ-AC1)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2021/01/18
PXA Signal Analyzer	Keysight	N9030B	MRTSUE06395	1 year	2021/08/30
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2021/11/08
Bilog Period Antenna	Schwarzbeck	VULB 9168	MRTSUE06172	1 year	2021/08/08
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06023	1 year	2021/09/27
Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06597	1 year	2021/12/14
Microwave System Amplifier	Agilent	83017A	MRTSUE06076	1 year	2021/11/14
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2021/06/11
Thermal Hygrometer	testo	608-H1	MRTSUE06403	1 year	2021/07/26
Anechoic Chamber	TDK	Chamber-AC1	MRTSUE06212	1 year	2021/04/30

Radiated Emission (WZ-AC2)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
MXE EMI Receiver	Keysight	N9038A	MRTSUE06125	1 year	2021/07/02
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2021/11/08
Bilog Period Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2021/05/26
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06171	1 year	2021/10/25
Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06597	1 year	2021/12/14
Broadband Coaxial Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2021/11/14
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2021/06/11
Thermal Hygrometer	Minggao	ETH529	MRTSUE06170	1 year	2021/12/08
Anechoic Chamber	RIKEN	Chamber-WZ-AC2	MRTSUE06213	1 year	2021/04/30

Radiated Emission (SIP-AC1)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06612	1 year	2021/07/02
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06559	1 year	2021/07/23
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2021/11/08
Bilog Period Antenna	Schwarzbeck	VULB9168	MRTSUE06645	1 year	2021/08/30
Double Ridged Horn Antenna	R&S	HF907	MRTSUE06610	1 year	2021/08/30
Preamplifier	EMCI	EMC051845SE	MRTSUE06600	1 year	2021/11/09
Thermal Hygrometer	testo	608-H1	MRTSUE06620	1 year	2021/12/03
Anechoic Chamber	RIKEN	SIP-AC1	MRTSUE06554	1 year	2021/12/24

Radiated Emission (SIP-AC2)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06613	1 year	2021/07/02
MXA Signal Analyzer	Keysight	N9020B	MRTSUE06604	1 year	2021/09/26
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2021/11/08
Bilog Period Antenna	Schwarzbeck	VULB9168	MRTSUE06646	1 year	2021/08/30
Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06648	1 year	2021/11/26
Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06599	1 year	2021/11/26
Preamplifier	EMCI	EMC051845SE	MRTSUE06644	1 year	2021/11/09
Preamplifier	EMCI	EMC184045SE	MRTSUE06602	1 year	2021/10/21
Thermal Hygrometer	testo	608-H1	MRTSUE06624	1 year	2021/12/03
Anechoic Chamber	RIKEN	SIP-AC2	MRTSUE06781	1 year	2021/12/24

Radiated Emission (SIP-AC3)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06612	1 year	2021/07/02
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06559	1 year	2021/07/23
Loop Antenna	Schwarzbeck	FMZB 1519	MRTSUE06025	1 year	2021/11/08
Bilog Period Antenna	Schwarzbeck	VULB9168	MRTSUE06647	1 year	2021/08/08
Double Ridged Horn Antenna	R&S	HF907	MRTSUE06611	1 year	2021/09/13
Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06598	1 year	2021/11/26
Preamplifier	EMCI	EMC012645SE	MRTSUE06642	1 year	2021/01/16
Preamplifier	EMCI	EMC184045SE	MRTSUE06641	1 year	2021/01/16
Thermal Hygrometer	testo	608-H1	MRTSUE06622	1 year	2021/12/03
Anechoic Chamber	RIKEN	SIP-AC3	MRTSUE06782	1 year	2021/12/24

Conducted Test Equipment (WZ-TR3)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2021/04/14
EXA Signal Analyzer	Keysight	N9010B	MRTSUE06607	1 year	2021/01/08
Signal Analyzer	R&S	FSV40	MRTSUE06218	1 year	2021/04/14
Power Meter	Agilent	U2021XA	MRTSUE06030	1 year	2021/10/22
USB wideband power sensor	Keysight	U2021XA	MRTSUE06446	1 year	2021/08/30
USB wideband power sensor	Keysight	U2021XA	MRTSUE06447	1 year	2021/08/08
Bluetooth Test Set	Anritsu	MT8852B-042	MRTSUE06389	1 year	2021/06/11
Audio Analyzer	Agilent	U8903B	MRTSUE06143	1 year	2021/06/11
Modulation Analyzer	HP	HP8901A	MRTSUE06098	1 year	2021/09/26
Attenuator	MVE	20dB	MRTSUE06547	1 year	2021/05/20
Attenuator	MVE	6dB	MRTSUE06532	1 year	2021/05/20
Attenuator	MVE	10dB	MRTSUE06540	1 year	2021/05/20
Wideband Radio Communication Tester	R&S	CMW 500	MRTSUE06243	1 year	2021/10/20
DC Power Supply	GWINSTEK	DPS-3303C	MRTSUE06064	N/A	N/A
Temperature & Humidity Chamber	BAOYT	BYH-150CL	MRTSUE06051	1 year	2021/10/21
Thermal Hygrometer	testo	608-H1	MRTSUE06401	1 year	2021/07/26

Conducted Test Equipment (SIP-SR5)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Signal Analyzer	R&S	FSV40	MRTSUE06218	1 year	2021/04/14
PXA Signal Analyzer	Keysight	N9030B	MRTSUE06395	1 year	2021/08/30
USB wideband power sensor	Agilent	U2021XA	MRTSUE06595	1 year	2021/09/26
USB wideband power sensor	Agilent	U2021XA	MRTSUE06596	1 year	2021/09/26
Attenuator	MVE	20dB	MRTSUE06547	1 year	2021/05/20
Attenuator	MVE	6dB	MRTSUE06532	1 year	2021/05/20
Attenuator	MVE	10dB	MRTSUE06540	1 year	2021/05/20
Wideband Radio Communication Tester	R&S	CMW 500	MRTSUE06243	1 year	2021/10/20
Bluetooth Test Set	Anritsu	MT8852B-042	MRTSUE06389	1 year	2021/06/11
Temperature Chamber	BAOYT	BYG-408CS	MRTSUE06847	1 year	2021/03/31
Thermal Hygrometer	testo	622	MRTSUE06629	1 year	2021/11/25

Software	Version	Function
EMI Software	V3	EMI Test Software

4. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

AC Conducted Emission Measurement
Measurement Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 9kHz~150kHz: 3.74dB 150kHz~30MHz: 3.44dB
Radiated Disturbance
Measurement Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): Horizontal: 30MHz~300MHz: 5.04dB 300MHz~1GHz: 4.95dB 1GHz~40GHz: 6.40dB Vertical: 30MHz~300MHz: 5.24dB 300MHz~1GHz: 6.03dB 1GHz~40GHz: 6.40dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 0.78dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 1.13dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 1.15dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 0.28%

5. TEST RESULT

5.1. Summary

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
15.247(a)(2)	6dB Bandwidth	$\geq 500\text{kHz}$	Conducted	Pass	Section 5.2
15.247(b)(3)	Output Power	$\leq 1\text{Watt}$		Pass	Section 5.3
15.247(e)	Power Spectral Density	$\leq 8\text{dBm} / 3\text{kHz}$		Pass	Section 5.4
15.247(d)	Band Edge / Out-of-Band Emissions	$\geq 20\text{dBc (Peak)}$		Pass	Section 5.5
15.205 15.209	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Emissions in restricted bands must meet the radiated limits detailed in 15.209	Radiated	Pass	Section 5.6 & 5.7
15.207	AC Conducted Emissions 150kHz - 30MHz	$< \text{FCC 15.207 limits}$	Line Conducted	Pass	Section 5.8

Notes:

- 1) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
- 2) All modes of operation and data rates were investigated. For radiated emission test, every axis (X, Y, Z) was also verified. The test results shown in the following sections represent the worst case emissions.

5.2. 6dB Bandwidth Measurement

5.2.1. Test Limit

The minimum 6dB bandwidth shall be at least 500 kHz.

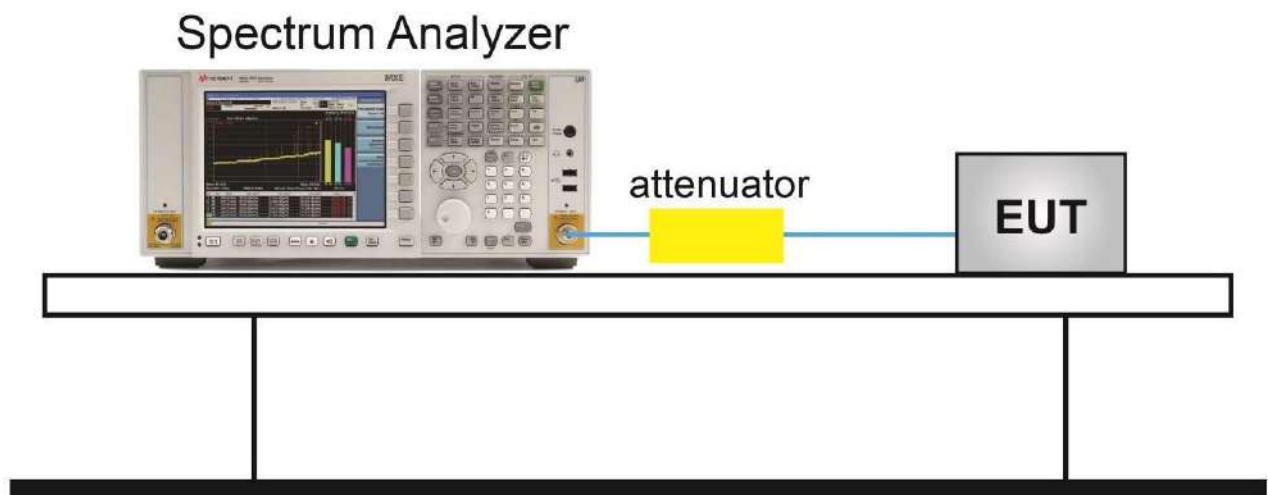
5.2.2. Test Procedure used

ANSI C63.10-2013 - Section 11.8

5.2.3. Test Setting

1. The Spectrum's automatic bandwidth measurement capability was used to perform the 6dB bandwidth measurement. The "X" dB bandwidth parameter was set to $X = 6$. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. Set RBW = 100 kHz
3. $VBW \geq 3 \times RBW$
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep = Auto couple
7. Allow the trace was allowed to stabilize

5.2.4. Test Setup



5.2.5.Test Result

Product	DOLPHIN CT40	Test Engineer	Amy Zhang
Test Site	WZ-TR3	Test Date	2020/12/22

Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11b	1Mbps	12	2467	8.11	≥ 0.5	Pass
802.11b	1Mbps	13	2472	8.11	≥ 0.5	Pass
802.11g	6Mbps	12	2467	16.37	≥ 0.5	Pass
802.11g	6Mbps	13	2472	16.37	≥ 0.5	Pass
802.11n-HT20	MCS0	12	2467	17.59	≥ 0.5	Pass
802.11n-HT20	MCS0	13	2472	17.60	≥ 0.5	Pass
802.11n-HT40	MCS0	10	2457	36.11	≥ 0.5	Pass
802.11n-HT40	MCS0	11	2462	36.09	≥ 0.5	Pass

802.11b

Channel 12 (2467MHz)



Channel 13 (2472MHz)

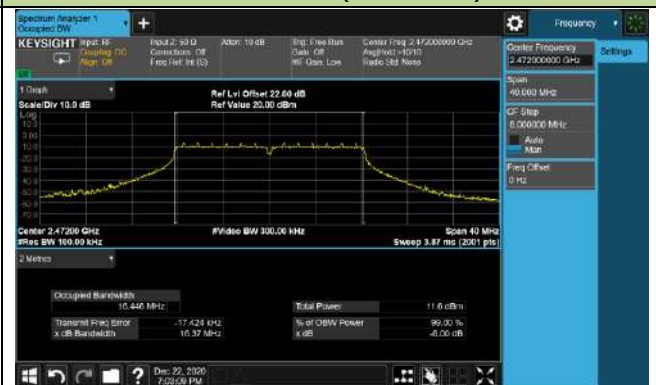


802.11g

Channel 12 (2467MHz)

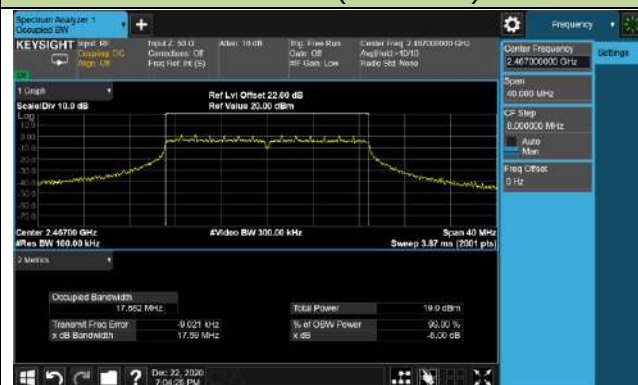


Channel 13 (2472MHz)



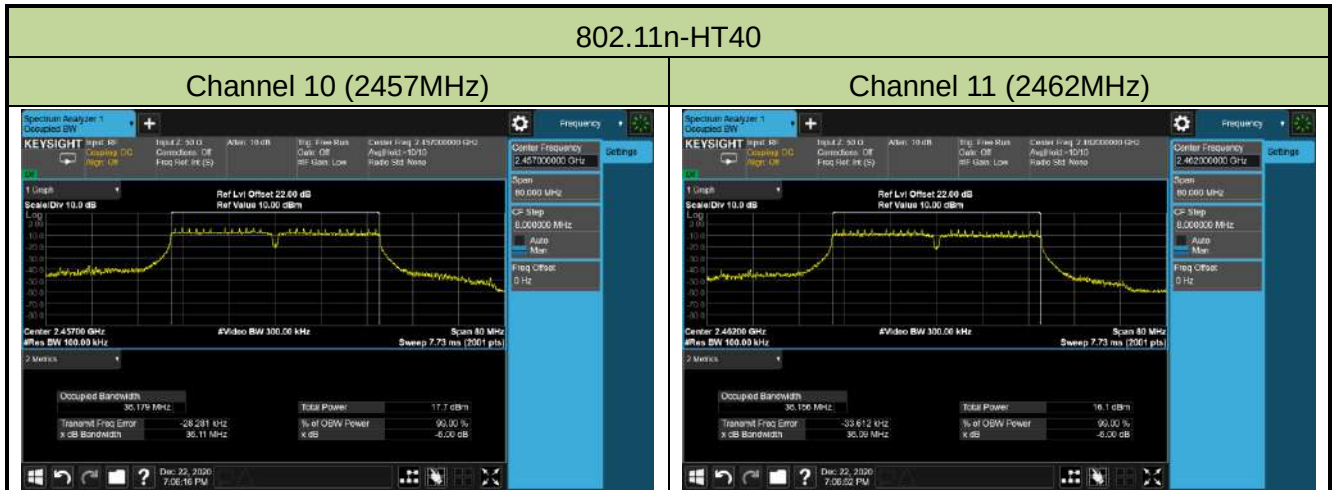
802.11n-HT20

Channel 12 (2467MHz)



Channel 13 (2472MHz)





5.3. Output Power Measurement

5.3.1. Test Limit

The maximum peak output power shall not exceed 1 Watt (30dBm).

5.3.2. Test Procedure Used

ANSI C63.10-2013 Section 11.9.1.3 & ANSI C63.10-2013 Section 11.9.2.3

5.3.3. Test Setting

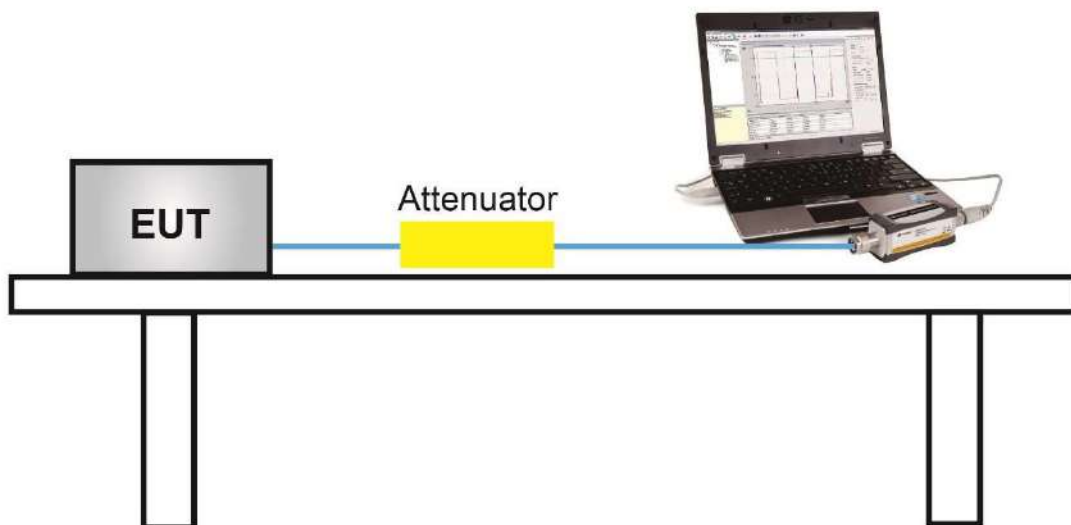
Method PKPM1 (Peak Power Measurement)

Peak power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The pulse sensor employs a VBW = 50MHz so this method was only used for signals whose DTS bandwidth was less than or equal to 50MHz.

Method AVGPM-G (Measurement using a gated RF average-reading power meter)

Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since this measurement is made only during the ON time of the transmitter, no duty cycle correction is required.

5.3.4. Test Setup



5.3.5.Test Result

Product	DOLPHIN CT40	Test Engineer	Yuri Li
Test Site	WZ-TR3	Test Date	2020/12/21~2020/12/29

Test Result of Peak Output Power

Test Mode	Data Rate / MCS	Channel No.	Freq. (MHz)	Peak Power (dBm)	Limit (dBm)	Result
11b	1Mbps	12	2467	13.60	≤ 30.00	Pass
11b	1Mbps	13	2472	13.55	≤ 30.00	Pass
11g	6Mbps	12	2467	21.53	≤ 30.00	Pass
11g	6Mbps	13	2472	14.56	≤ 30.00	Pass
11n-HT20	MCS0	12	2467	20.80	≤ 30.00	Pass
11n-HT20	MCS0	13	2472	12.22	≤ 30.00	Pass
11n-HT40	MCS0	10	2457	20.05	≤ 30.00	Pass
11n-HT40	MCS0	11	2462	18.16	≤ 30.00	Pass

Test Result of Average Output Power (Reporting Only)

Test Mode	Data Rate / MCS	Channel No.	Freq. (MHz)	Average Power (dBm)	Limit (dBm)	Result
11b	1Mbps	12	2467	11.22	≤ 30.00	Pass
11b	1Mbps	13	2472	11.18	≤ 30.00	Pass
11g	6Mbps	12	2467	12.42	≤ 30.00	Pass
11g	6Mbps	13	2472	4.46	≤ 30.00	Pass
11n-HT20	MCS0	12	2467	11.79	≤ 30.00	Pass
11n-HT20	MCS0	13	2472	2.18	≤ 30.00	Pass
11n-HT40	MCS0	10	2457	10.39	≤ 30.00	Pass
11n-HT40	MCS0	11	2462	8.86	≤ 30.00	Pass

5.4. Power Spectral Density Measurement

5.4.1. Test Limit

The maximum permissible power spectral density is 8dBm in any 3 kHz band.

The same method of determining the conducted output power shall be used to determine the power spectral density.

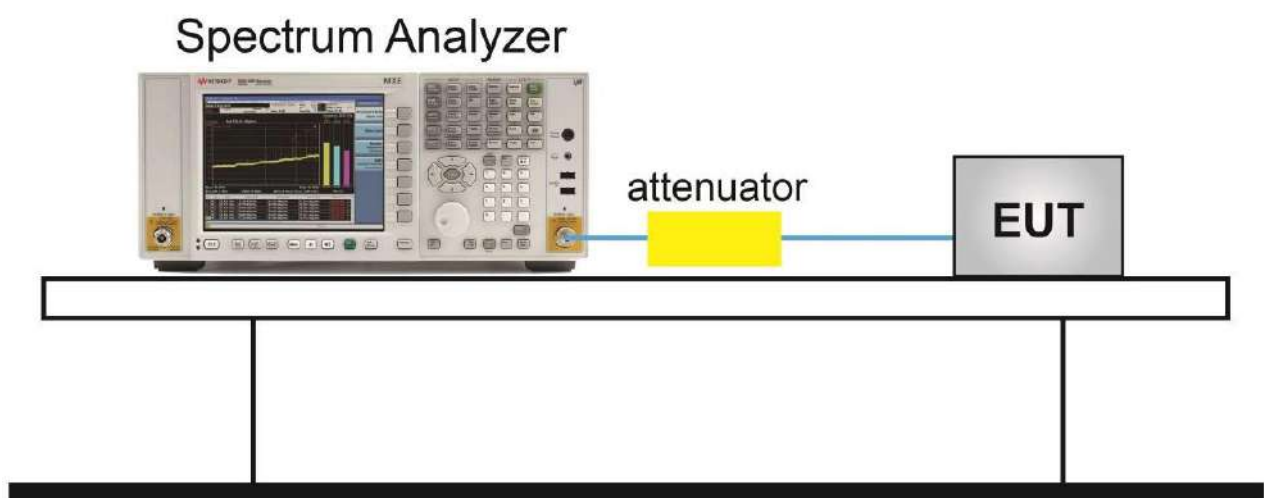
5.4.2. Test Procedure Used

ANSI C63.10-2013 - Section 11.10.2

5.4.3. Test Setting

1. Analyzer was set to the center frequency of the DTS channel under investigation
2. Span = 1.5 times the DTS channel bandwidth
3. RBW = 3kHz
4. VBW = 10kHz
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Trace was allowed to stabilize

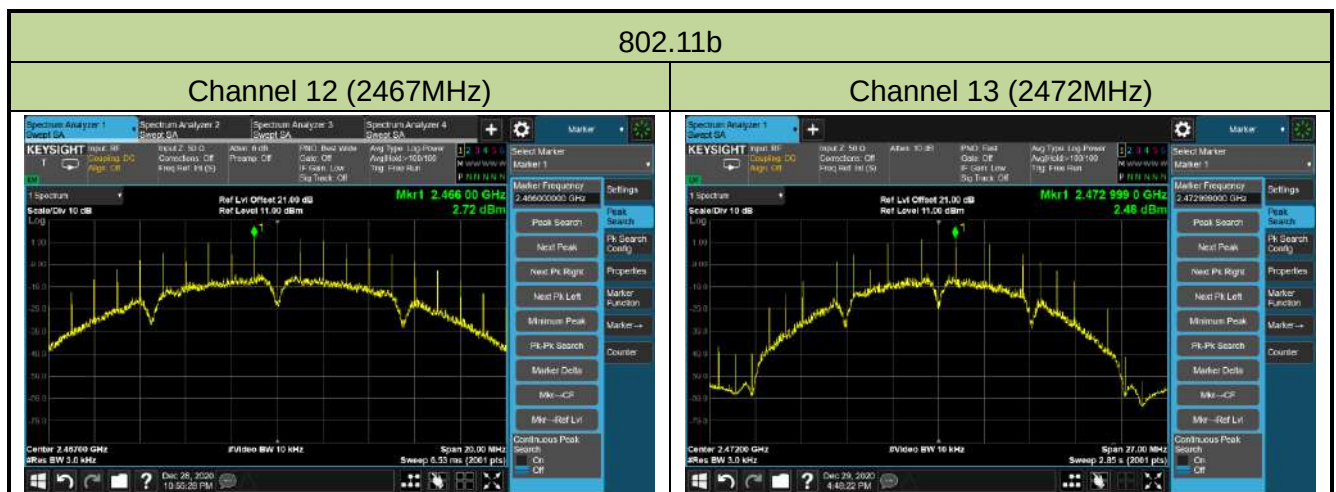
5.4.4. Test Setup



5.4.5. Test Result

Product	DOLPHIN CT40	Test Engineer	Yuri Li
Test Site	WZ-TR3	Test Date	2020/12/22 ~ 2020/12/28

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	PKPSD (dBm / 3kHz)	Limit (dBm / 3kHz)	Result
11b	1Mbps	12	2467	2.72	≤ 8.00	Pass
11b	1Mbps	13	2472	2.48	≤ 8.00	Pass
11g	6Mbps	12	2467	-14.00	≤ 8.00	Pass
11g	6Mbps	13	2472	-22.98	≤ 8.00	Pass
11n-HT20	MCS0	12	2467	-15.36	≤ 8.00	Pass
11n-HT20	MCS0	13	2472	-25.09	≤ 8.00	Pass
11n-HT40	MCS0	10	2457	-18.35	≤ 8.00	Pass
11n-HT40	MCS0	11	2462	-20.93	≤ 8.00	Pass



802.11g

Channel 12 (2467MHz)



Channel 13 (2472MHz)



802.11n-HT20

Channel 12 (2467MHz)



Channel 13 (2472MHz)



802.11n-HT40

Channel 10 (2457MHz)



Channel 11 (2462MHz)



5.5. Conducted Band Edge and Out-of-Band Emissions

5.5.1. Test Limit

The limit for out-of-band spurious emissions at the band edge is 20dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100 kHz bandwidth per the PSD procedure.

5.5.2. Test Procedure Used

ANSI C63.10-2013 - Section 11.11

5.5.3. Test Setting

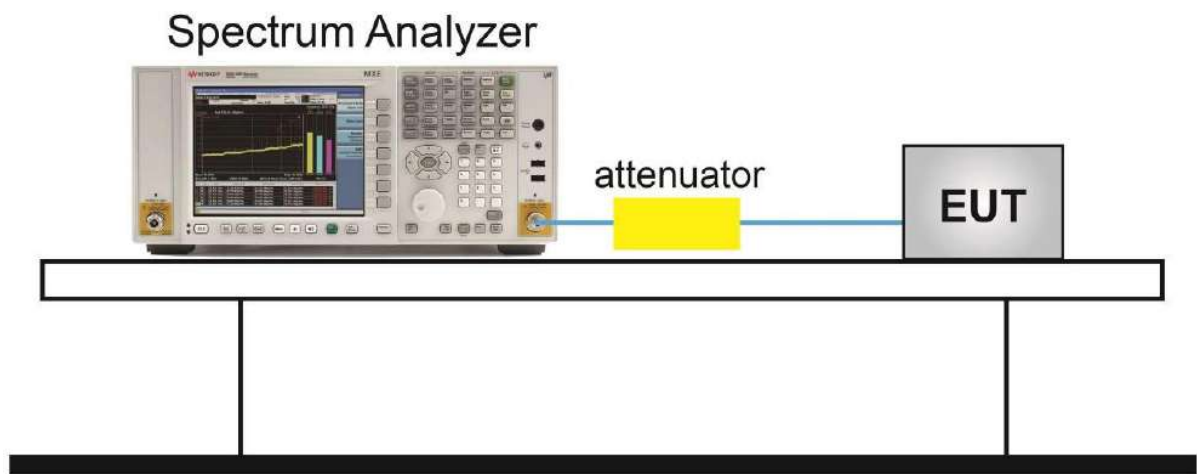
Reference level measurement

1. Set instrument center frequency to DTS channel center frequency
2. Set the span to ≥ 1.5 times the DTS bandwidth
3. Set the RBW = 100 kHz
4. Set the VBW $\geq 3 \times$ RBW
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Allow trace to fully stabilize

Emission level measurement

1. Set the center frequency and span to encompass frequency range to be measured
2. RBW = 100kHz
3. VBW = 300kHz
4. Detector = Peak
5. Trace mode = max hold
6. Sweep time = auto couple
7. The trace was allowed to stabilize

5.5.4. Test Setup



5.5.5.Test Result

Product	DOLPHIN CT40	Test Engineer	Amy Zhang
Test Site	WZ-TR3	Test Date	2020/12/22 ~ 2020/12/28

Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	Limit	Result
802.11b	1Mbps	12	2467	20dBc	Pass
802.11b	1Mbps	13	2472	20dBc	Pass
802.11g	6Mbps	12	2467	20dBc	Pass
802.11g	6Mbps	13	2472	20dBc	Pass
802.11n-HT20	MCS0	12	2467	20dBc	Pass
802.11n-HT20	MCS0	13	2472	20dBc	Pass
802.11n-HT40	MCS0	10	2457	20dBc	Pass
802.11n-HT40	MCS0	11	2462	20dBc	Pass

802.11b Channel 12 (2467MHz)

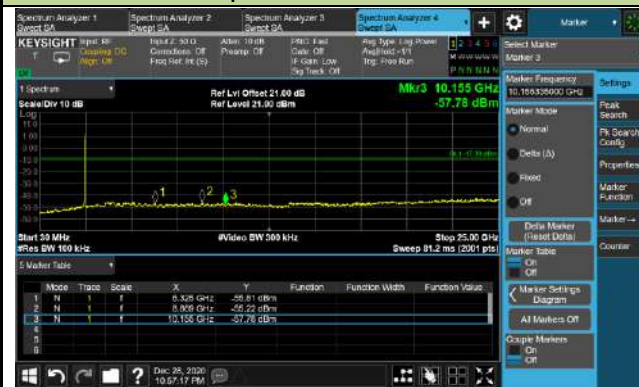
100kHz PSD Reference Level



High Band Edge



Spurious Emission



High Band Edge



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802.11g Channel 12 (2467MHz)

100kHz PSD Reference Level



High Band Edge



Spurious Emission



High Band Edge



Spectrum Analyzer 1
 Select GA

KEYSIGHT Input 1: 500 GHz Center Freq: 21.579 GHz Span: 10 GHz

Ref Lvl Offset: 22.60 dB
 Ref Level: 19.00 dBm

Mkr3 21.579 GHz
 -51.56 dBm

1 2 3
 21.570 GHz
 21.572 GHz
 21.574 GHz

Scale/Div 10 dB
 Lin
 10
 0
 -10
 -20
 -30
 -40
 -50
 -60
 -70
 -80
 -90

Start 20 MHz
 Offset BW 100 kHz

#Video BW 200 kHz

Stop 25.00 GHz
 Sweep 2.39 s (2001 pts)

5 Marker Table

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	F	7.914 GHz	-50.52 dBm			
2	N	F	14.857 GHz	-54.55 dBm			
3	N	F	21.579 GHz	-51.56 dBm			

Select Marker
 Marker 3

Marker Frequency
 21.57910000 GHz

Marker Name
 Normal
 Delta (Δ)
 Fixed
 Marker Function

Data Marker
 Offset Data

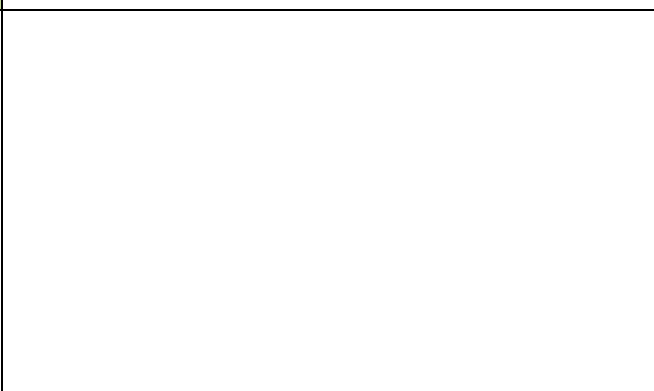
Marker Table
 On
 Off

Marker Settings
 Diagram

All Markers Off

Group Markers
 On
 Off

Dec 29, 2020
 8:22:27 PM



802.11n-HT20 Channel 12 (2467MHz)

100kHz PSD Reference Level



High Band Edge



Spurious Emission



802.11n-HT20 Channel 13 (2472MHz)

100kHz PSD Reference Level



High Band Edge



Spurious Emission



High Band Edge



The screenshot displays the Keysight Spectrum Analyzer software interface. The main window shows a spectrum plot with a yellow trace. A marker is placed at 21.617 GHz with a level of -53.12 dBm. The plot has a scale of 10 dB and a resolution of 5 MHz. The frequency range is from 20.995 GHz to 21.005 GHz. The power range is from -60 dBm to -40 dBm. The plot shows a flat baseline with a small peak at the marker frequency.

Key interface elements include:

- Top Bar:** Spectrum Analyzer 1, Select GA, +, Marker.
- Left Panel:** KEYSIGHT, Input 1: 50.0 GHz, Center Freq: OFF, Preset: Fast, Gate: Off, IF Gain: Low, Sig Track: Off, Avg Type: Log Power, Readout: -RHD, Trig: Auto Run.
- Plot Area:** 1 spectrum, Scale/Div 10 dB, LING, 10.0, 20.0, 30.0, 40.0, 50.0, 60.0, 70.0, 80.0, 90.0, 100.0, 110.0, 120.0, 130.0, 140.0, 150.0, 160.0, 170.0, 180.0, 190.0, 200.0, 210.0, 220.0, 230.0, 240.0, 250.0, 260.0, 270.0, 280.0, 290.0, 300.0, 310.0, 320.0, 330.0, 340.0, 350.0, 360.0, 370.0, 380.0, 390.0, 400.0, 410.0, 420.0, 430.0, 440.0, 450.0, 460.0, 470.0, 480.0, 490.0, 500.0, 510.0, 520.0, 530.0, 540.0, 550.0, 560.0, 570.0, 580.0, 590.0, 600.0, 610.0, 620.0, 630.0, 640.0, 650.0, 660.0, 670.0, 680.0, 690.0, 700.0, 710.0, 720.0, 730.0, 740.0, 750.0, 760.0, 770.0, 780.0, 790.0, 800.0, 810.0, 820.0, 830.0, 840.0, 850.0, 860.0, 870.0, 880.0, 890.0, 900.0, 910.0, 920.0, 930.0, 940.0, 950.0, 960.0, 970.0, 980.0, 990.0, 1000.0, 1010.0, 1020.0, 1030.0, 1040.0, 1050.0, 1060.0, 1070.0, 1080.0, 1090.0, 1100.0, 1110.0, 1120.0, 1130.0, 1140.0, 1150.0, 1160.0, 1170.0, 1180.0, 1190.0, 1200.0, 1210.0, 1220.0, 1230.0, 1240.0, 1250.0, 1260.0, 1270.0, 1280.0, 1290.0, 1300.0, 1310.0, 1320.0, 1330.0, 1340.0, 1350.0, 1360.0, 1370.0, 1380.0, 1390.0, 1400.0, 1410.0, 1420.0, 1430.0, 1440.0, 1450.0, 1460.0, 1470.0, 1480.0, 1490.0, 1500.0, 1510.0, 1520.0, 1530.0, 1540.0, 1550.0, 1560.0, 1570.0, 1580.0, 1590.0, 1600.0, 1610.0, 1620.0, 1630.0, 1640.0, 1650.0, 1660.0, 1670.0, 1680.0, 1690.0, 1700.0, 1710.0, 1720.0, 1730.0, 1740.0, 1750.0, 1760.0, 1770.0, 1780.0, 1790.0, 1800.0, 1810.0, 1820.0, 1830.0, 1840.0, 1850.0, 1860.0, 1870.0, 1880.0, 1890.0, 1900.0, 1910.0, 1920.0, 1930.0, 1940.0, 1950.0, 1960.0, 1970.0, 1980.0, 1990.0, 2000.0, 2010.0, 2020.0, 2030.0, 2040.0, 2050.0, 2060.0, 2070.0, 2080.0, 2090.0, 2100.0, 2110.0, 2120.0, 2130.0, 2140.0, 2150.0, 2160.0, 2170.0, 2180.0, 2190.0, 2200.0, 2210.0, 2220.0, 2230.0, 2240.0, 2250.0, 2260.0, 2270.0, 2280.0, 2290.0, 2300.0, 2310.0, 2320.0, 2330.0, 2340.0, 2350.0, 2360.0, 2370.0, 2380.0, 2390.0, 2400.0, 2410.0, 2420.0, 2430.0, 2440.0, 2450.0, 2460.0, 2470.0, 2480.0, 2490.0, 2500.0, 2510.0, 2520.0, 2530.0, 2540.0, 2550.0, 2560.0, 2570.0, 2580.0, 2590.0, 2600.0, 2610.0, 2620.0, 2630.0, 2640.0, 2650.0, 2660.0, 2670.0, 2680.0, 2690.0, 2700.0, 2710.0, 2720.0, 2730.0, 2740.0, 2750.0, 2760.0, 2770.0, 2780.0, 2790.0, 2800.0, 2810.0, 2820.0, 2830.0, 2840.0, 2850.0, 2860.0, 2870.0, 2880.0, 2890.0, 2900.0, 2910.0, 2920.0, 2930.0, 2940.0, 2950.0, 2960.0, 2970.0, 2980.0, 2990.0, 3000.0, 3010.0, 3020.0, 3030.0, 3040.0, 3050.0, 3060.0, 3070.0, 3080.0, 3090.0, 3100.0, 3110.0, 3120.0, 3130.0, 3140.0, 3150.0, 3160.0, 3170.0, 3180.0, 3190.0, 3200.0, 3210.0, 3220.0, 3230.0, 3240.0, 3250.0, 3260.0, 3270.0, 3280.0, 3290.0, 3300.0, 3310.0, 3320.0, 3330.0, 3340.0, 3350.0, 3360.0, 3370.0, 3380.0, 3390.0, 3400.0, 3410.0, 3420.0, 3430.0, 3440.0, 3450.0, 3460.0, 3470.0, 3480.0, 3490.0, 3500.0, 3510.0, 3520.0, 3530.0, 3540.0, 3550.0, 3560.0, 3570.0, 3580.0, 3590.0, 3600.0, 3610.0, 3620.0, 3630.0, 3640.0, 3650.0, 3660.0, 3670.0, 3680.0, 3690.0, 3700.0, 3710.0, 3720.0, 3730.0, 3740.0, 3750.0, 3760.0, 3770.0, 3780.0, 3790.0, 3800.0, 3810.0, 3820.0, 3830.0, 3840.0, 3850.0, 3860.0, 3870.0, 3880.0, 3890.0, 3900.0, 3910.0, 3920.0, 3930.0, 3940.0, 3950.0, 3960.0, 3970.0, 3980.0, 3990.0, 4000.0, 4010.0, 4020.0, 4030.0, 4040.0, 4050.0, 4060.0, 4070.0, 4080.0, 4090.0, 4100.0, 4110.0, 4120.0, 4130.0, 4140.0, 4150.0, 4160.0, 4170.0, 4180.0, 4190.0, 4200.0, 4210.0, 4220.0, 4230.0, 4240.0, 4250.0, 4260.0, 4270.0, 4280.0, 4290.0, 4300.0, 4310.0, 4320.0, 4330.0, 4340.0, 4350.0, 4360.0, 4370.0, 4380.0, 4390.0, 4400.0, 4410.0, 4420.0, 4430.0, 4440.0, 4450.0, 4460.0, 4470.0, 4480.0, 4490.0, 4500.0, 4510.0, 4520.0, 4530.0, 4540.0, 4550.0, 4560.0, 4570.0, 4580.0, 4590.0, 4600.0, 4610.0, 4620.0, 4630.0, 4640.0, 4650.0, 4660.0, 4670.0, 4680.0, 4690.0, 4700.0, 4710.0, 4720.0, 4730.0, 4740.0, 4750.0, 4760.0, 4770.0, 4780.0, 4790.0, 4800.0, 4810.0, 4820.0, 4830.0, 4840.0, 4850.0, 4860.0, 4870.0, 4880.0, 489

802.11n-HT40 Channel 11 (2462MHz)

100kHz PSD Reference Level



High Band Edge



Spurious Emission



5.6. Radiated Spurious Emission Measurement

5.6.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

5.6.2. Test Procedure Used

ANSI C63.10-2013 Section 6.3 & 6.4 & 6.5 & 6.6

5.6.3. Test Setting

Table 1 - RBW as a function of frequency

Frequency Range	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000MHz	1MHz

Quasi-Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Peak Measurements above 1GHz

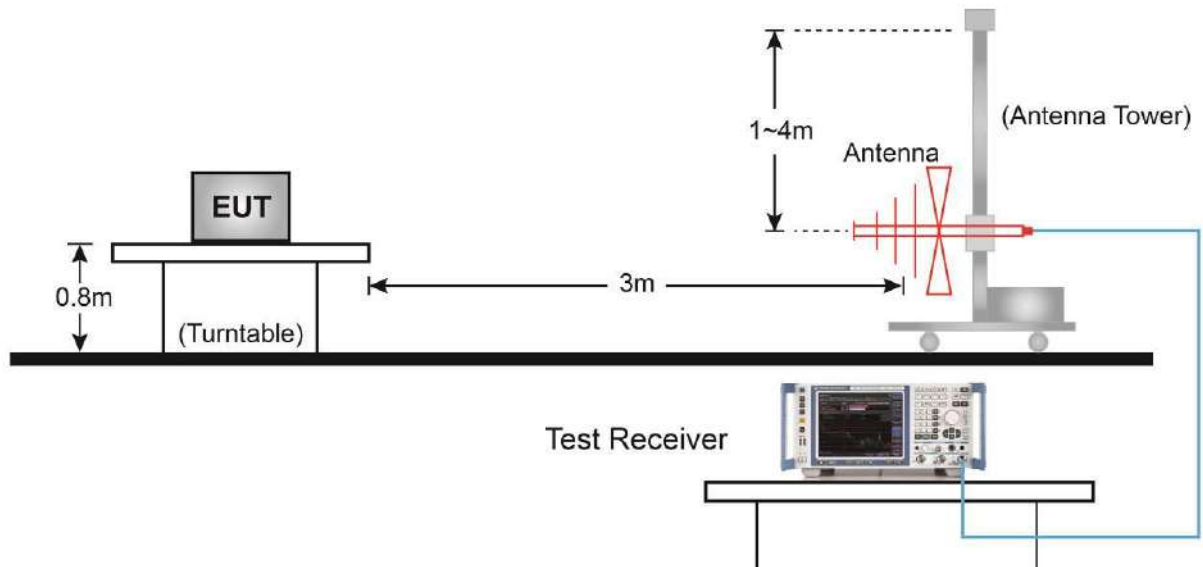
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Measurements above 1GHz (Method VB)

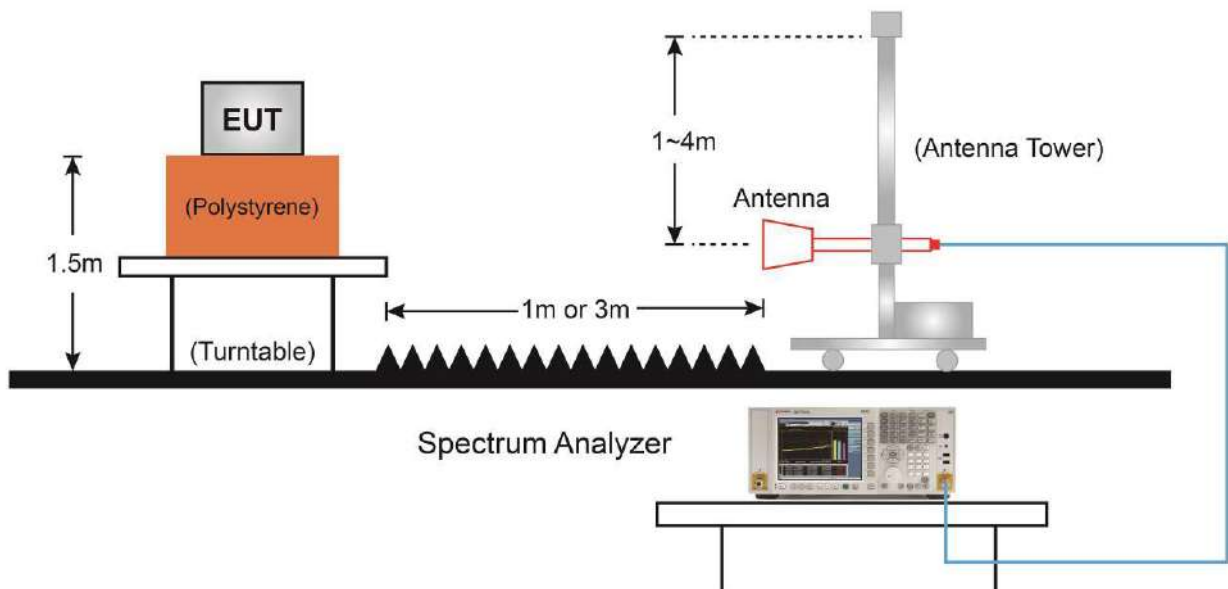
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle $\geq 98\%$, set VBW = 10 Hz.
If the EUT duty cycle is $< 98\%$, set VBW $\geq 1/T$. T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

5.6.4. Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



5.6.5. Test Result

Product	DOLPHIN CT40	Test Engineer	Hyde Yu
Test Site	WZ-AC2	Test Date	2020/12/20
Test Mode:	802.11b	Test Channel:	13
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4026.0	37.1	1.6	38.7	74.0	-35.3	Peak	Horizontal
	4944.0	37.6	4.0	41.6	74.0	-32.4	Peak	Horizontal
*	5921.5	35.3	6.5	41.8	74.0	-32.2	Peak	Horizontal
*	7111.5	33.7	11.8	45.5	74.0	-28.5	Peak	Horizontal
	4026.0	36.5	1.6	38.1	74.0	-35.9	Peak	Vertical
	4944.0	38.0	4.0	42.0	74.0	-32.0	Peak	Vertical
*	5913.0	35.0	6.3	41.3	74.0	-32.7	Peak	Vertical
*	7154.0	34.2	11.7	45.9	74.0	-28.1	Peak	Vertical

Note 1: "*" means test frequency didn't fall into restricted band.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	DOLPHIN CT40	Test Engineer	Hyde Yu
Test Site	WZ-AC2	Test Date	2020/12/20
Test Mode:	802.11g	Test Channel:	13
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3966.5	37.3	1.3	38.6	74.0	-35.4	Peak	Horizontal
	4850.5	36.5	4.0	40.5	74.0	-33.5	Peak	Horizontal
*	5896.0	35.2	5.9	41.1	74.0	-32.9	Peak	Horizontal
*	6992.5	33.6	10.7	44.3	74.0	-29.7	Peak	Horizontal
	3839.0	38.1	0.7	38.8	74.0	-35.2	Peak	Vertical
	4816.5	36.4	4.2	40.6	74.0	-33.4	Peak	Vertical
*	5955.5	35.1	6.4	41.5	74.0	-32.5	Peak	Vertical
*	6975.5	34.0	10.6	44.6	74.0	-29.4	Peak	Vertical

Note 1: "*" means test frequency didn't fall into restricted band.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	DOLPHIN CT40	Test Engineer	Hyde Yu
Test Site	WZ-AC2	Test Date	2020/12/20
Test Mode:	802.11n-HT20	Test Channel:	13
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4009.0	36.4	1.7	38.1	74.0	-35.9	Peak	Horizontal
	5046.0	36.2	4.7	40.9	74.0	-33.1	Peak	Horizontal
*	5853.5	35.8	6.1	41.9	74.0	-32.1	Peak	Horizontal
*	7179.5	34.6	11.9	46.5	74.0	-27.5	Peak	Horizontal
	3898.5	37.4	1.0	38.4	74.0	-35.6	Peak	Vertical
	4816.5	36.8	4.2	41.0	74.0	-33.0	Peak	Vertical
*	5760.0	37.7	5.7	43.4	74.0	-30.6	Peak	Vertical
*	7043.5	33.4	11.4	44.8	74.0	-29.2	Peak	Vertical

Note 1: "*" means test frequency didn't fall into restricted band.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	DOLPHIN CT40	Test Engineer	Hyde Yu
Test Site	WZ-AC2	Test Date	2020/12/20
Test Mode:	802.11n-HT40	Test Channel:	11
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4094.0	37.0	1.8	38.8	74.0	-35.2	Peak	Horizontal
	4969.5	36.1	4.1	40.2	74.0	-33.8	Peak	Horizontal
*	5938.5	35.5	6.5	42.0	74.0	-32.0	Peak	Horizontal
*	7043.5	33.5	11.4	44.9	74.0	-29.1	Peak	Horizontal
	3873.0	36.9	0.9	37.8	74.0	-36.2	Peak	Vertical
	4876.0	37.0	4.0	41.0	74.0	-33.0	Peak	Vertical
*	5760.0	37.5	5.7	43.2	74.0	-30.8	Peak	Vertical
*	7094.5	32.9	11.6	44.5	74.0	-29.5	Peak	Vertical

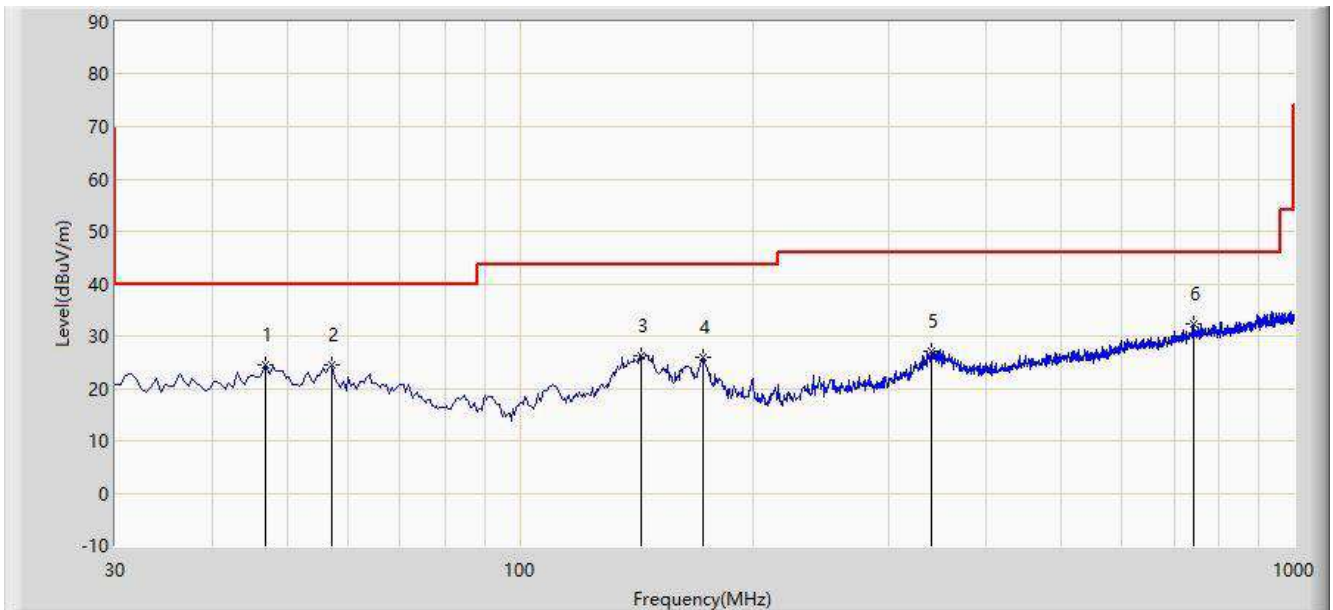
Note 1: "*" means test frequency didn't fall into restricted band.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

The Result of Radiated Emission below 1GHz:

Site: WZ-AC1	Time: 2020/12/24 - 21:48
Limit: FCC_Part15.209_RE(3m)	Engineer: Antony Yang
Probe: WZ-AC1_VULB 9168 _30-1000MHz	Polarity: Horizontal
EUT: DOLPHIN CT40	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 2462MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor	Type
1			46.975	24.588	6.613	-15.412	40.000	17.975	PK
2			57.160	24.583	6.732	-15.417	40.000	17.851	PK
3			143.490	26.266	8.374	-17.234	43.500	17.892	PK
4			172.105	25.980	8.532	-17.520	43.500	17.448	PK
5			339.915	27.180	7.450	-18.820	46.000	19.730	PK
6		*	742.465	32.392	4.076	-13.608	46.000	28.316	PK

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

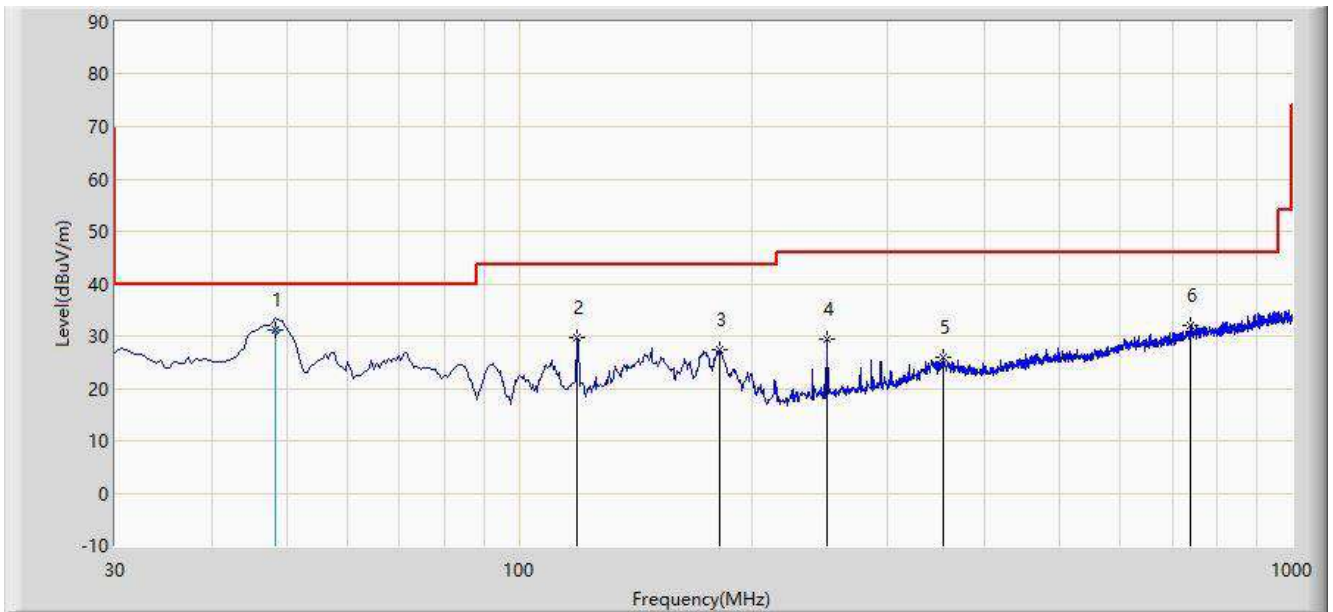
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: QP measurement was not performed when peak measure level was lower than the QP limit by more than 10dB.

Note 3: The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value.

Therefore, the data is not presented in the report.

Site: WZ-AC1	Time: 2020/12/24 - 21:49
Limit: FCC_Part15.209_RE(3m)	Engineer: Antony Yang
Probe: WZ-AC1_VULB 9168 _30-1000MHz	Polarity: Vertical
EUT: DOLPHIN CT40	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at channel 2462MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor	Type
1		*	48.430	31.300	13.260	-8.700	40.000	18.040	QP
2			118.755	29.629	13.806	-13.871	43.500	15.824	PK
3			181.805	27.512	11.045	-15.988	43.500	16.466	PK
4			250.675	29.382	12.502	-16.618	46.000	16.881	PK
5			353.980	26.018	6.121	-19.982	46.000	19.897	PK
6			738.100	32.011	3.836	-13.989	46.000	28.175	PK

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: QP measurement was not performed when peak measure level was lower than the QP limit by more than 10dB.

Note 3: The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value.

Therefore, the data is not presented in the report.

5.7. Radiated Restricted Band Edge Measurement

5.7.1. Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41	--	--	--

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

5.7.2.Test Procedure Used

ANSI C63.10-2013 Section 6.3 & 6.6 & 11.1.3

5.7.3.Test Setting

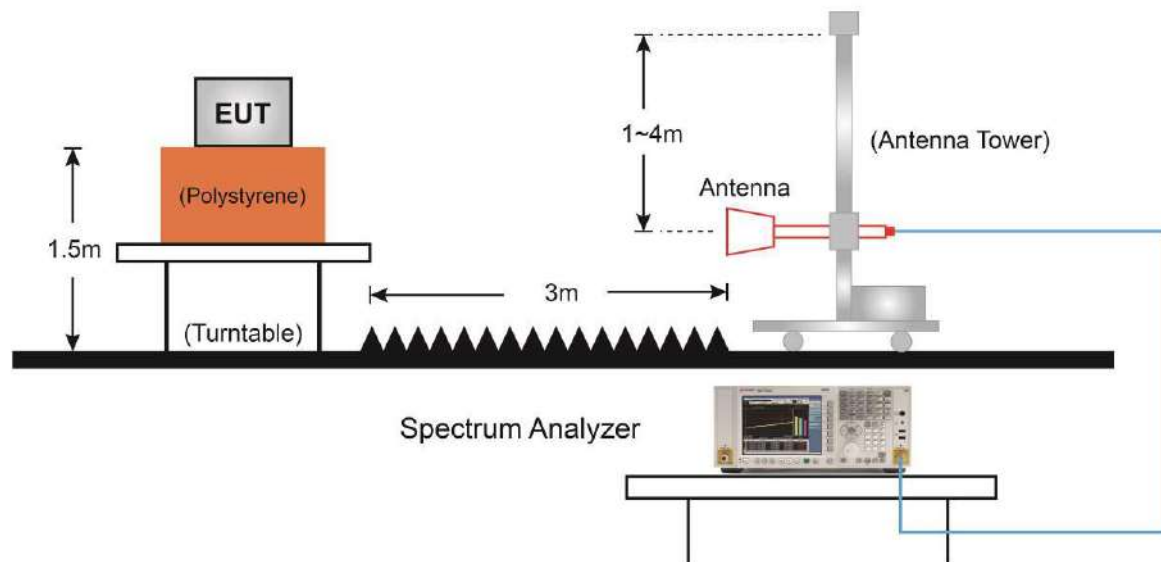
Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Field Strength Measurements

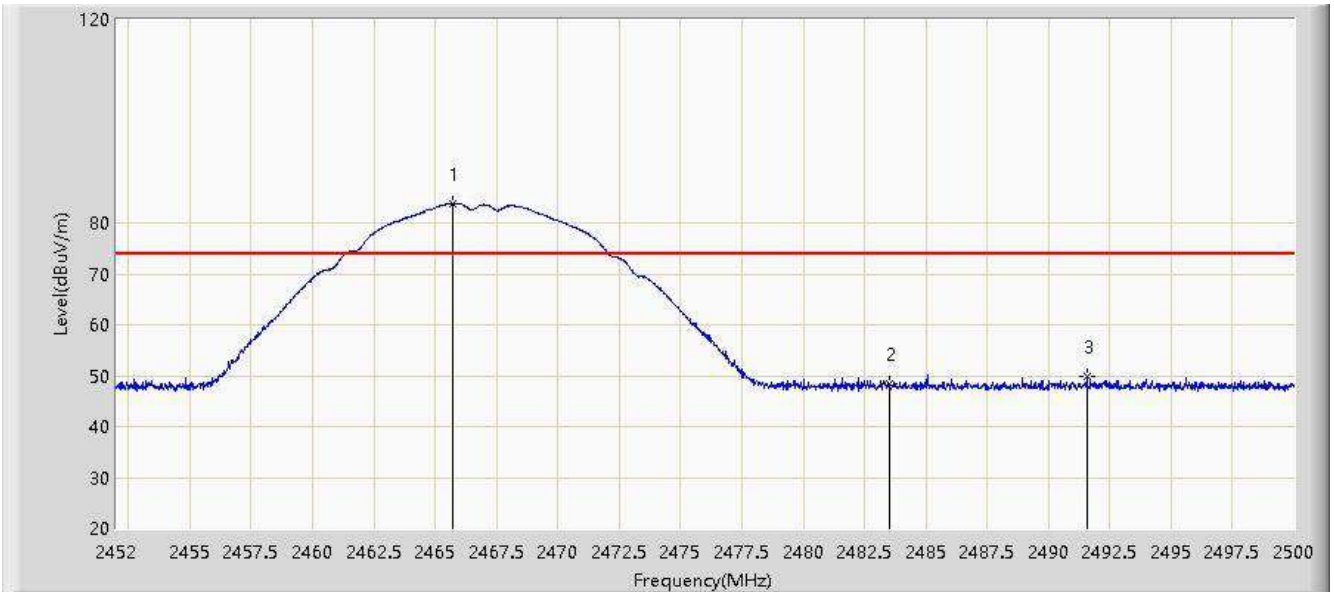
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW $\geq 1/T$
4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

5.7.4. Test Setup



5.7.5.Test Result

Site: WZ-AC2	Time: 2020/12/29 - 20:13
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: DOLPHIN CT40	Power: By USB
Test Mode: Transmit by 802.11b at Channel 2467MHz	

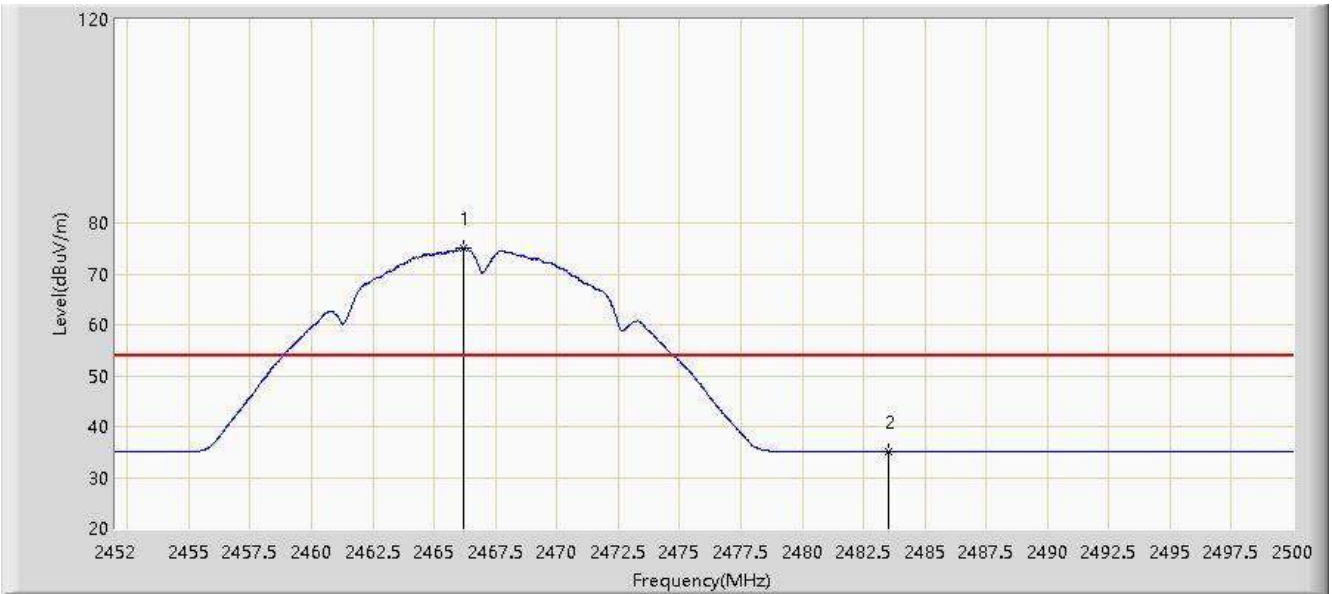


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2465.704	83.829	51.293	N/A	N/A	32.536	PK
2			2483.500	48.305	15.604	-25.695	74.000	32.701	PK
3			2491.576	49.724	16.999	-24.276	74.000	32.725	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/29 - 20:15
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: DOLPHIN CT40	Power: By USB
Test Mode: Transmit by 802.11b at Channel 2467MHz	

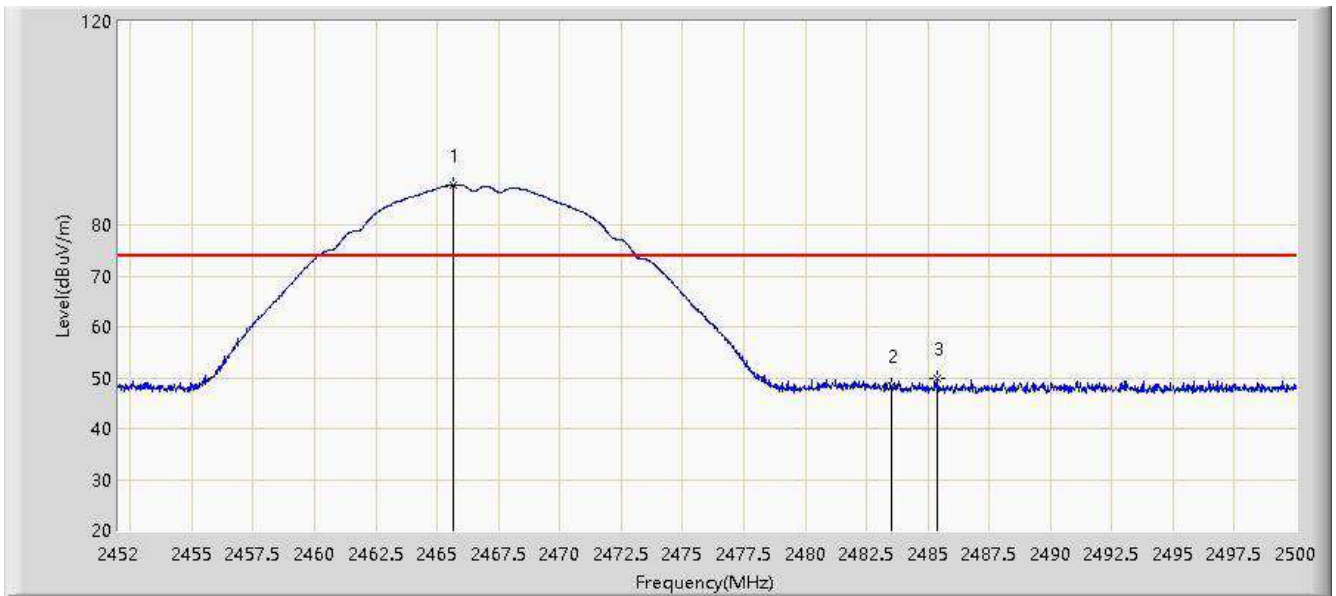


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2466.208	75.159	42.627	N/A	N/A	32.532	AV
2			2483.500	35.138	2.437	-18.862	54.000	32.701	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/29 - 20:16
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: DOLPHIN CT40	Power: By USB
Test Mode: Transmit by 802.11b at Channel 2467MHz	

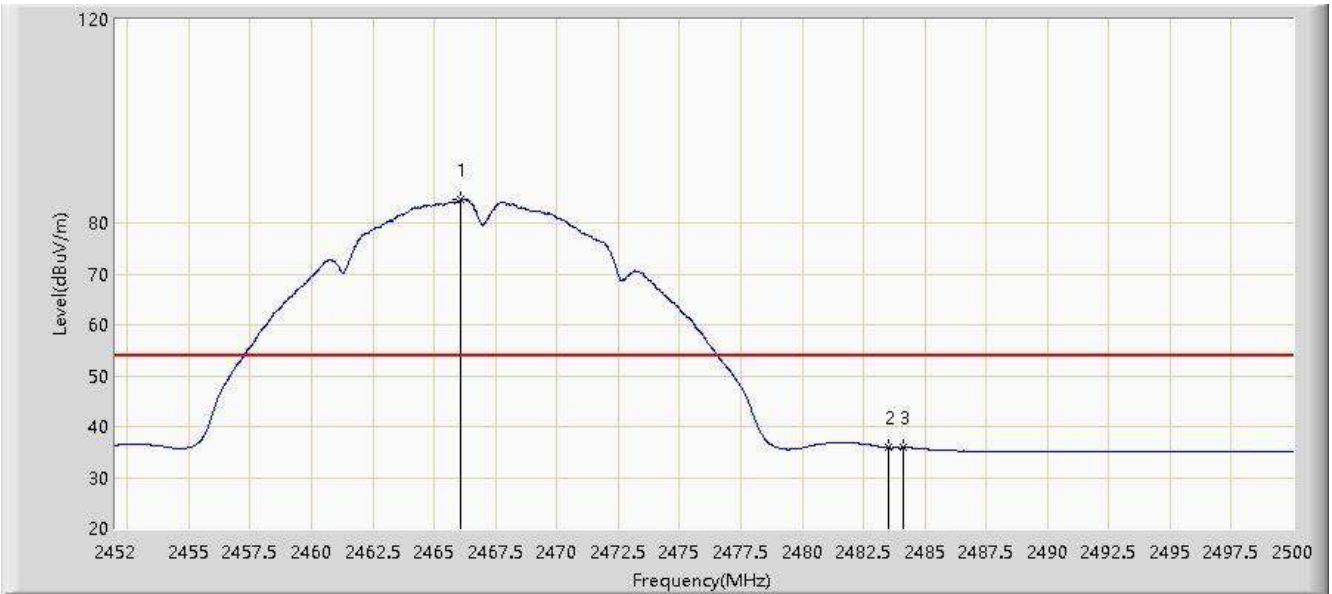


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2465.632	87.870	55.333	N/A	N/A	32.537	PK
2			2483.500	48.406	15.705	-25.594	74.000	32.701	PK
3			2485.360	49.916	17.190	-24.084	74.000	32.727	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/29 - 20:19
Limit: FCC_Part15.209_RE(3m)	Engineer: Buter Shi
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: DOLPHIN CT40	Power: By USB
Test Mode: Transmit by 802.11b at Channel 2467MHz	

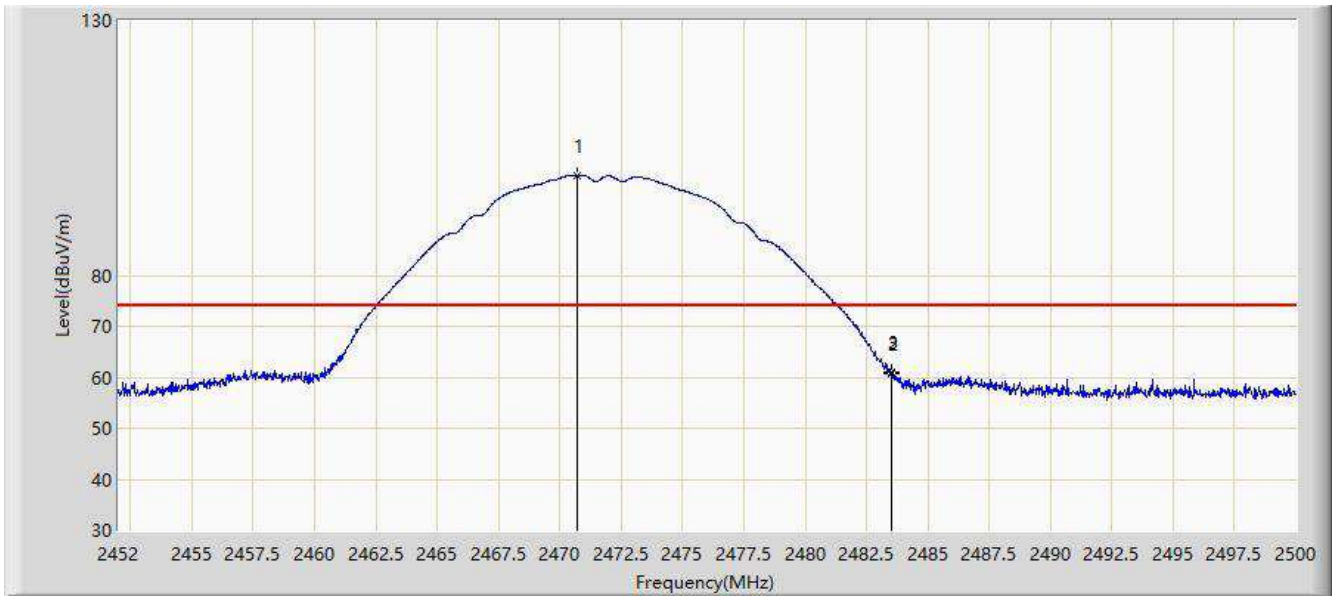


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2466.088	84.507	51.974	N/A	N/A	32.533	AV
2			2483.500	35.805	3.104	-18.195	54.000	32.701	AV
3			2484.112	35.843	3.134	-18.157	54.000	32.709	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 11:29
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11b at Channel 2472MHz	

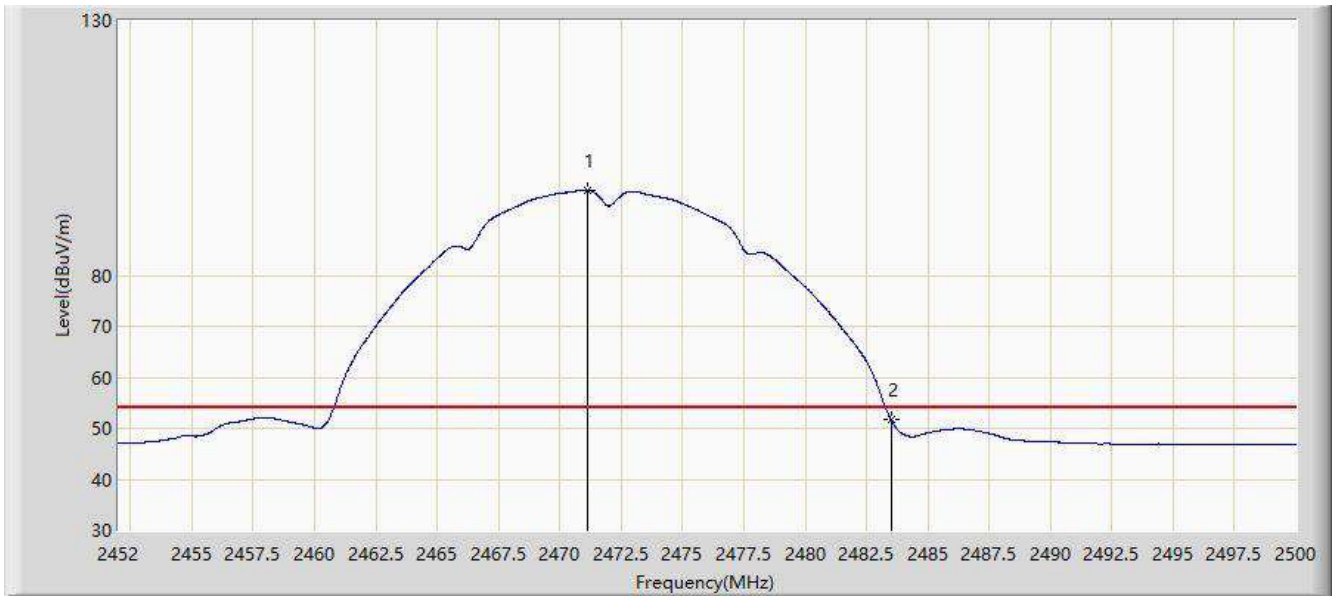


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2470.720	99.696	67.178	N/A	N/A	32.518	PK
2			2483.500	60.585	27.884	-13.415	74.000	32.701	PK
3			2483.536	60.958	28.257	-13.042	74.000	32.701	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 11:30
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11b at Channel 2472MHz	

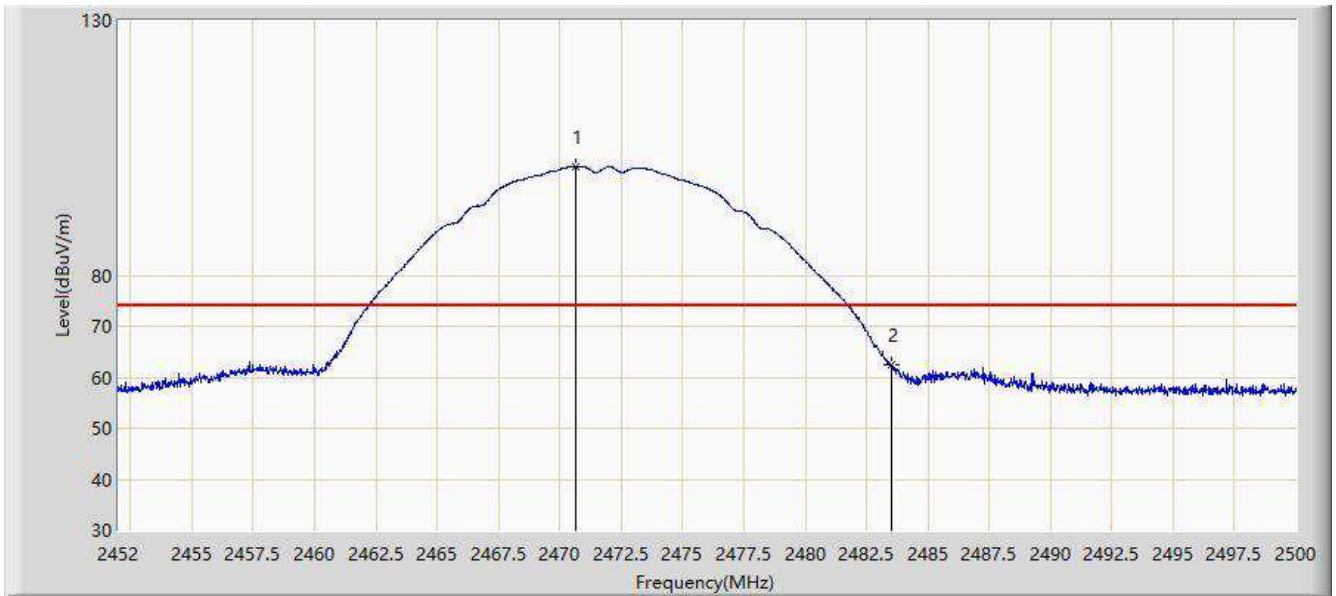


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2471.152	96.709	64.185	N/A	N/A	32.524	AV
2			2483.500	51.643	18.942	-2.357	54.000	32.701	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 11:28
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11b at Channel 2472MHz	

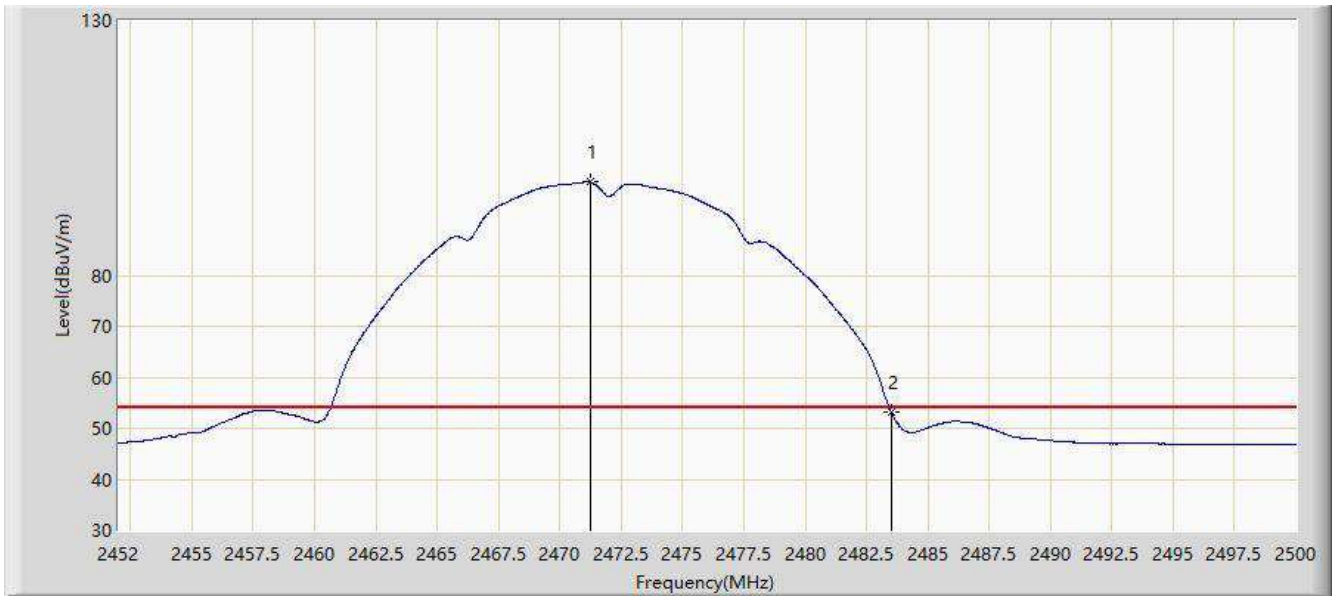


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2470.648	101.287	68.770	N/A	N/A	32.517	PK
2			2483.500	62.407	29.706	-11.593	74.000	32.701	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 11:28
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11b at Channel 2472MHz	

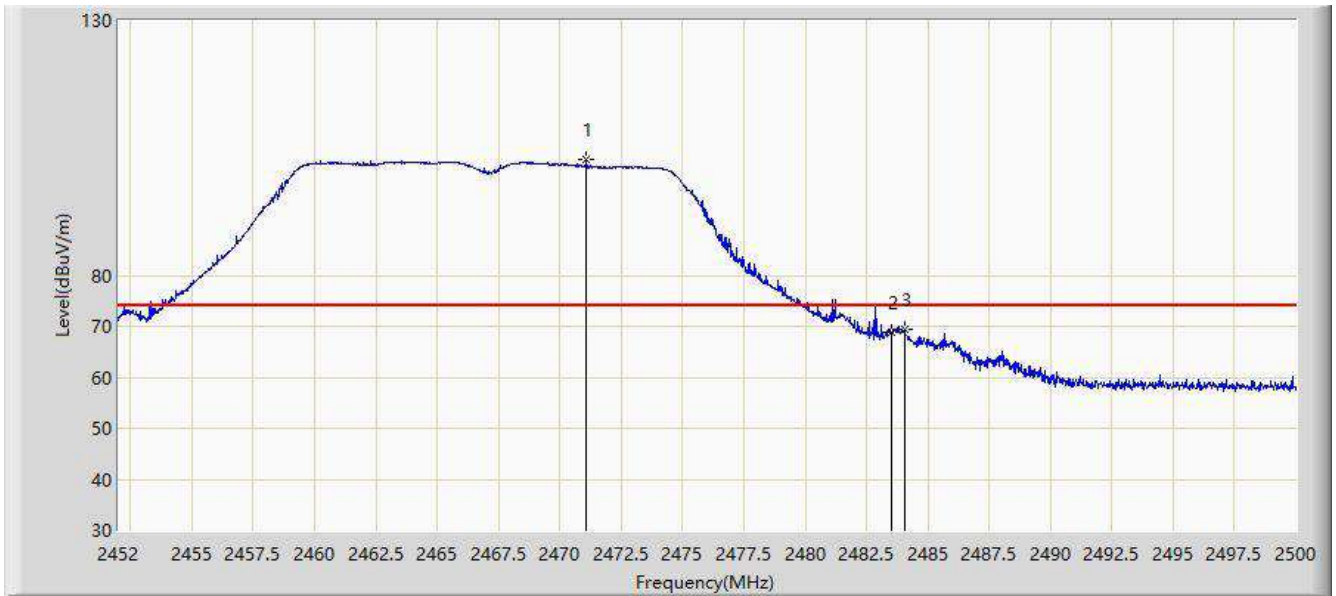


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2471.224	98.293	65.768	N/A	N/A	32.525	AV
2			2483.500	53.319	20.618	-0.681	54.000	32.701	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 11:47
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11g at Channel 2467MHz	

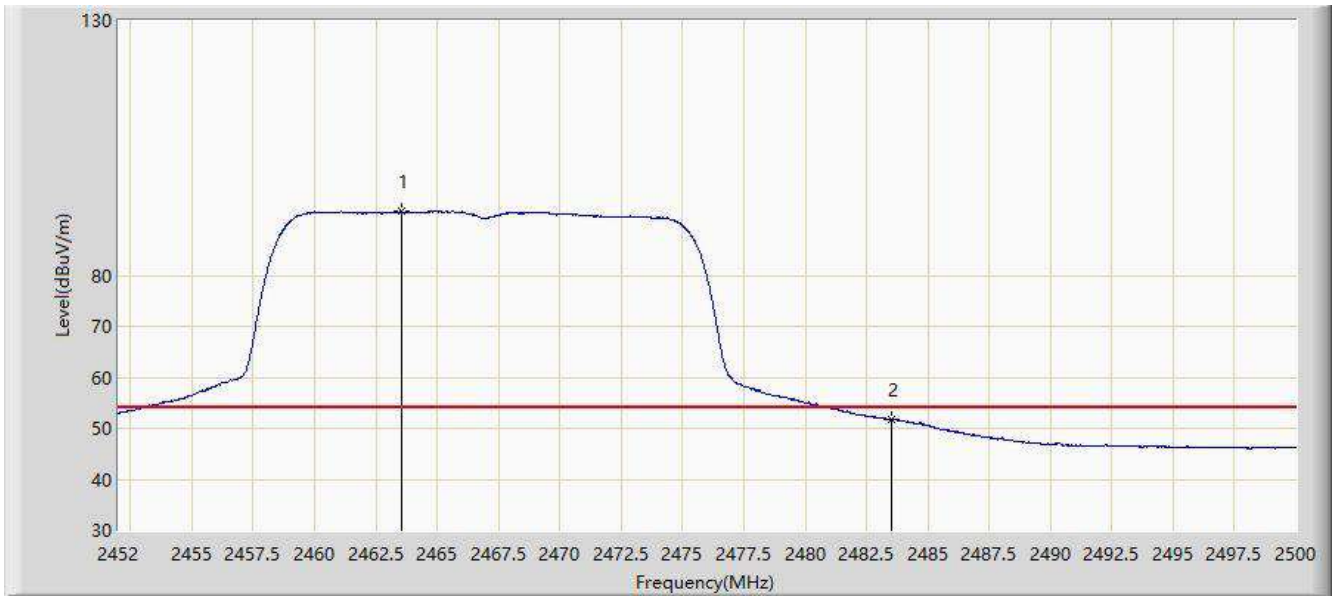


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2471.080	102.860	70.337	N/A	N/A	32.523	PK
2			2483.500	68.880	36.179	-5.120	74.000	32.701	PK
3			2484.064	69.550	36.842	-4.450	74.000	32.708	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 11:48
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11g at Channel 2467MHz	

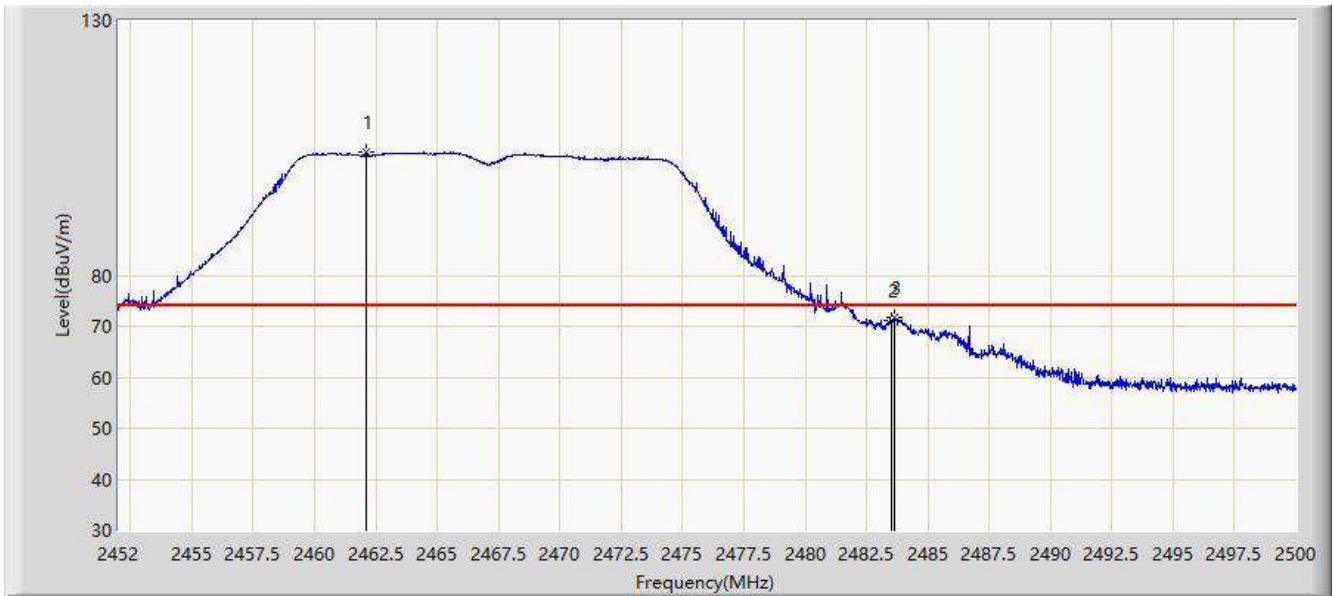


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.520	92.611	60.055	N/A	N/A	32.555	AV
2			2483.500	51.766	19.065	-2.234	54.000	32.701	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 11:46
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11g at Channel 2467MHz	

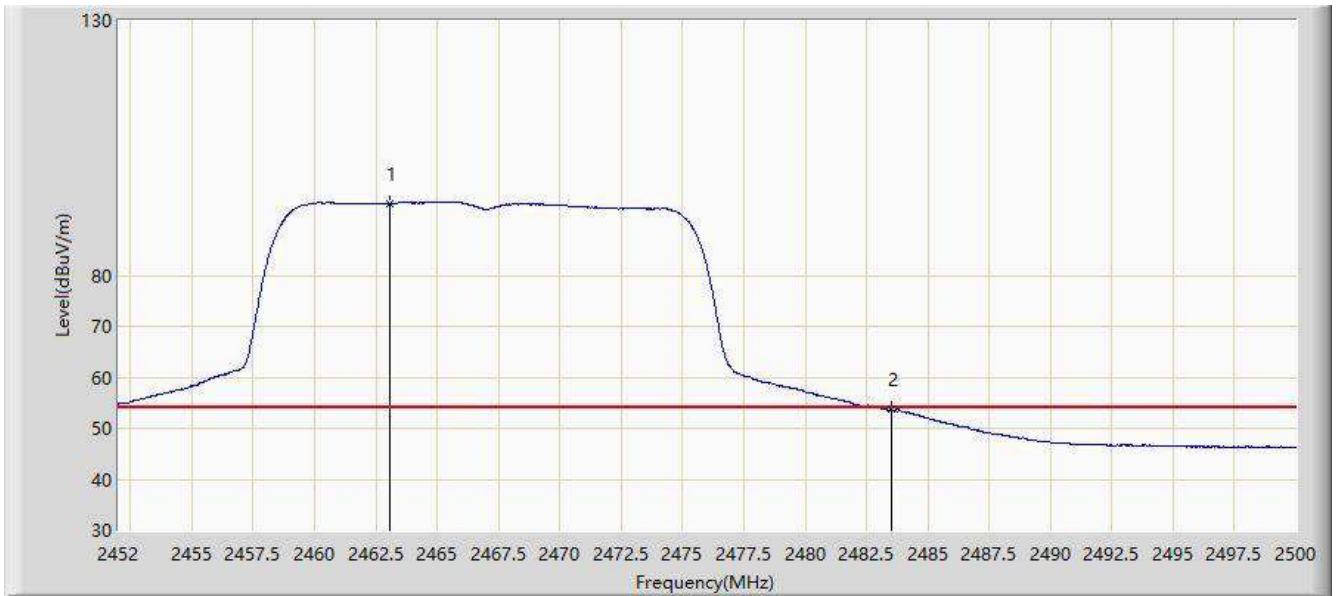


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2462.080	104.215	71.647	N/A	N/A	32.568	PK
2			2483.500	71.215	38.514	-2.785	74.000	32.701	PK
3			2483.656	71.850	39.147	-2.150	74.000	32.702	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 11:45
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11g at Channel 2467MHz	

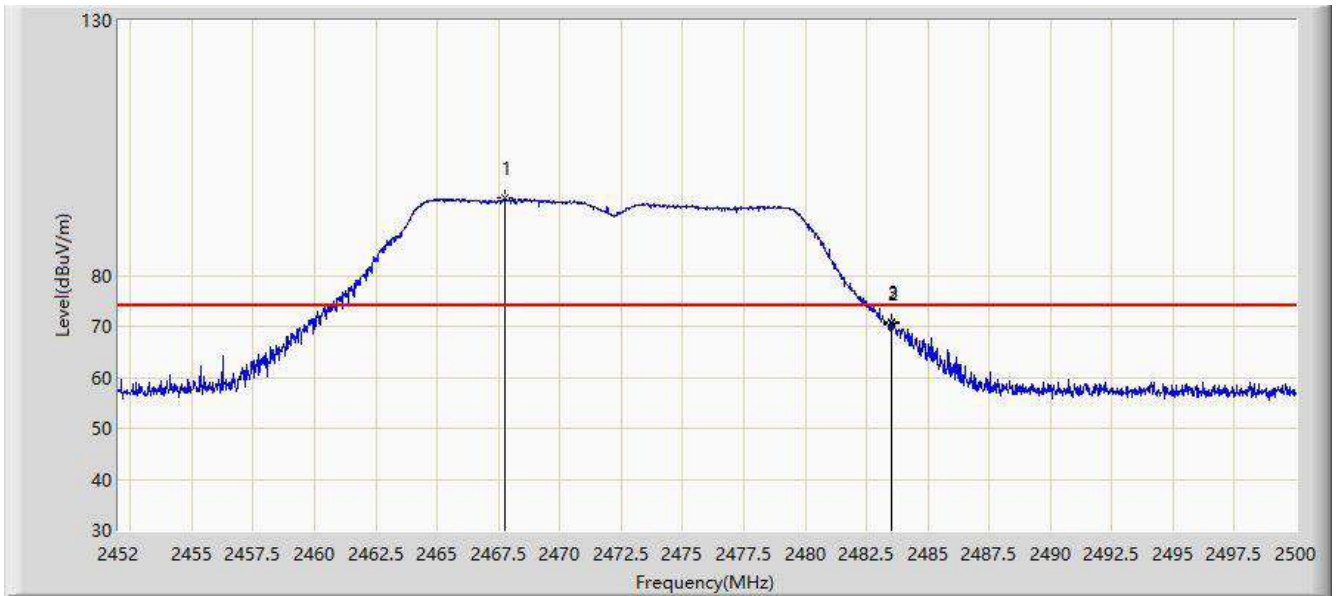


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.064	94.151	61.591	N/A	N/A	32.559	AV
2			2483.500	53.643	20.942	-0.357	54.000	32.701	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 11:58
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11g at Channel 2472MHz	

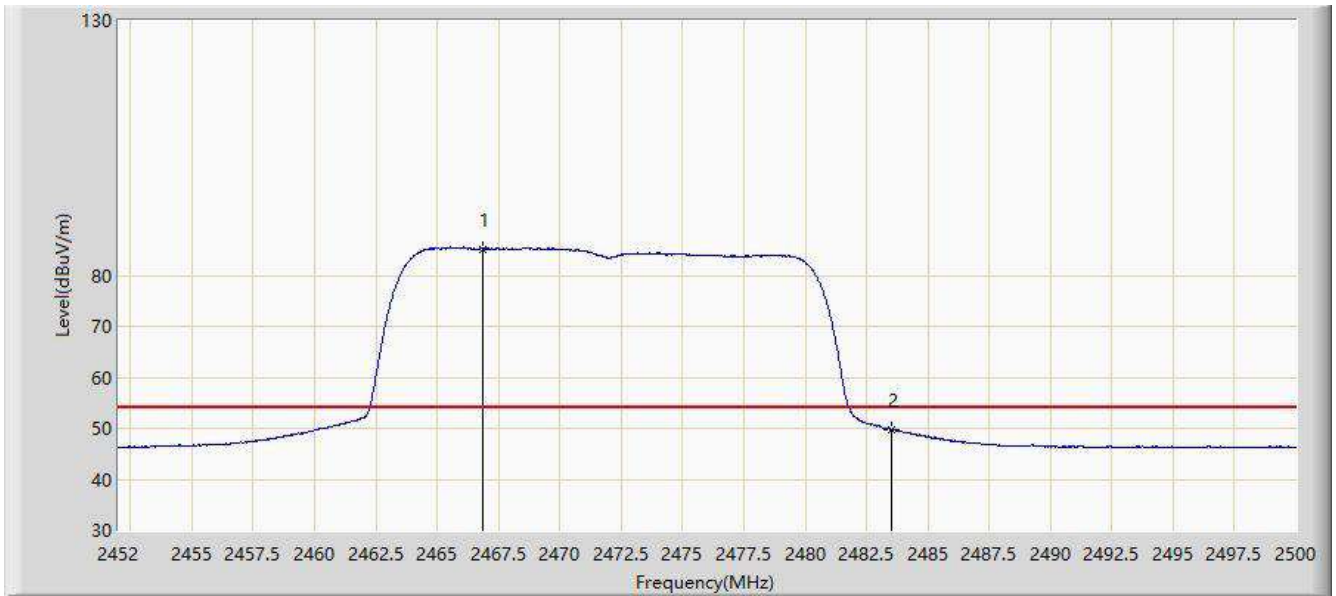


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2467.744	95.108	62.590	N/A	N/A	32.518	PK
2			2483.500	70.440	37.739	-3.560	74.000	32.701	PK
3			2483.536	70.982	38.281	-3.018	74.000	32.701	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 11:57
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11g at Channel 2472MHz	

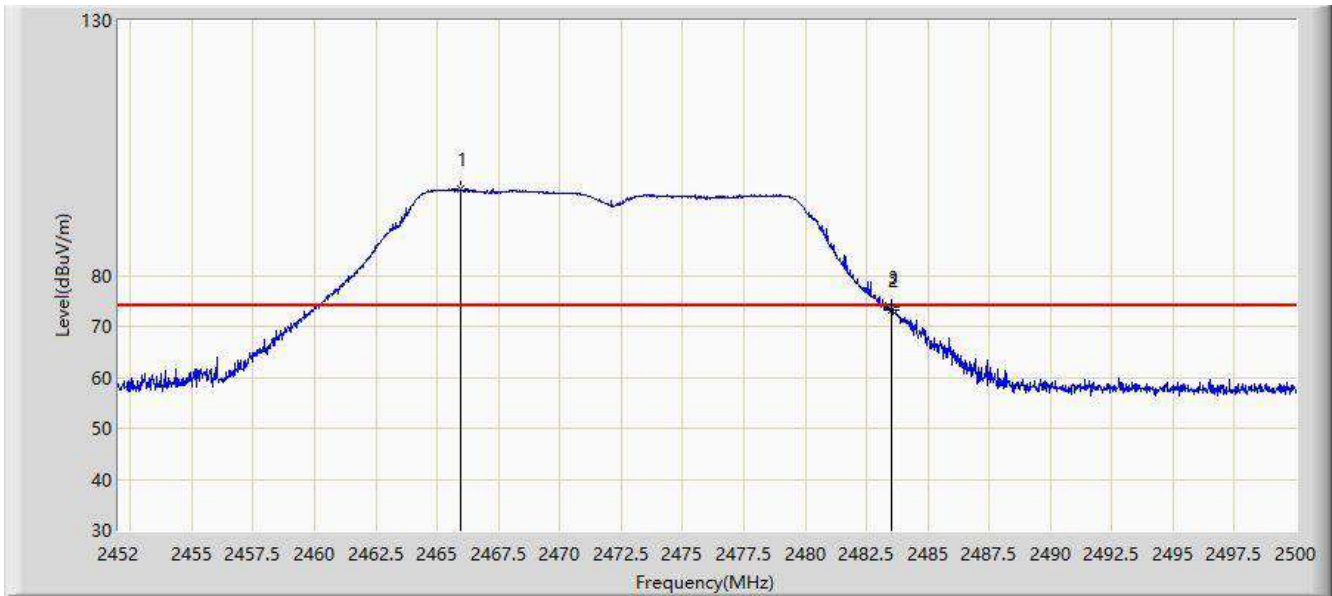


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2466.832	85.178	52.652	N/A	N/A	32.526	AV
2			2483.500	49.750	17.049	-4.250	54.000	32.701	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 11:56
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11g at Channel 2472MHz	

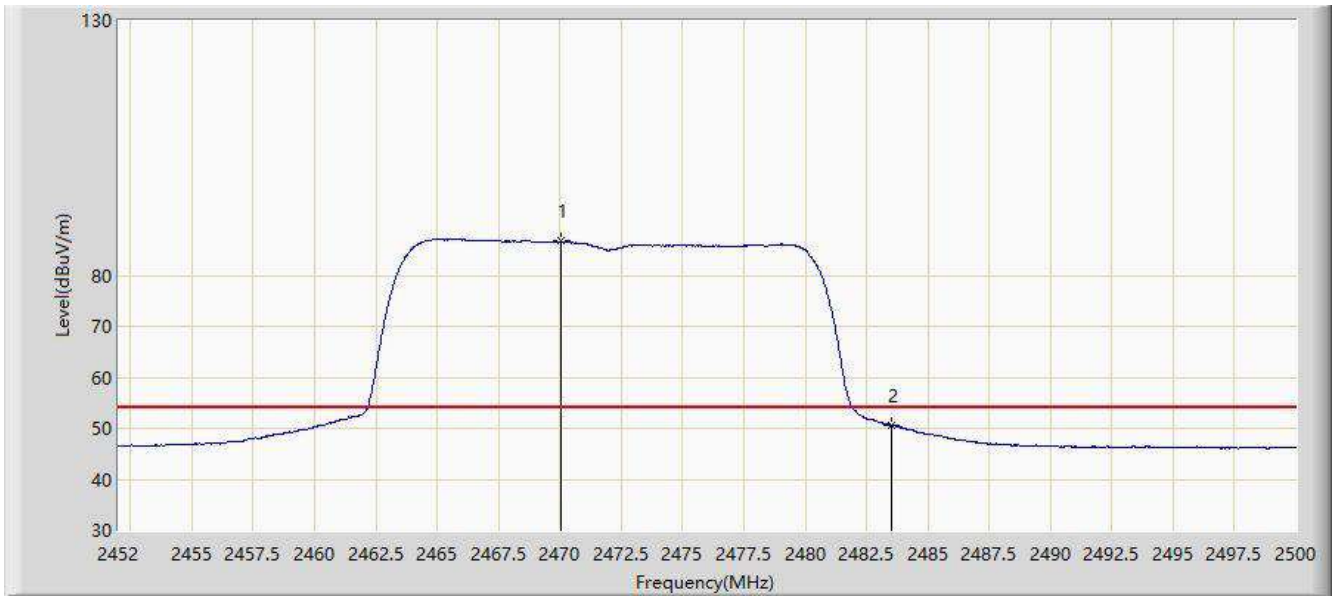


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2465.944	96.953	64.419	N/A	N/A	32.534	PK
2			2483.500	73.079	40.378	-0.921	74.000	32.701	PK
3			2483.536	73.755	41.054	-0.245	74.000	32.701	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 11:56
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11g at Channel 2472MHz	

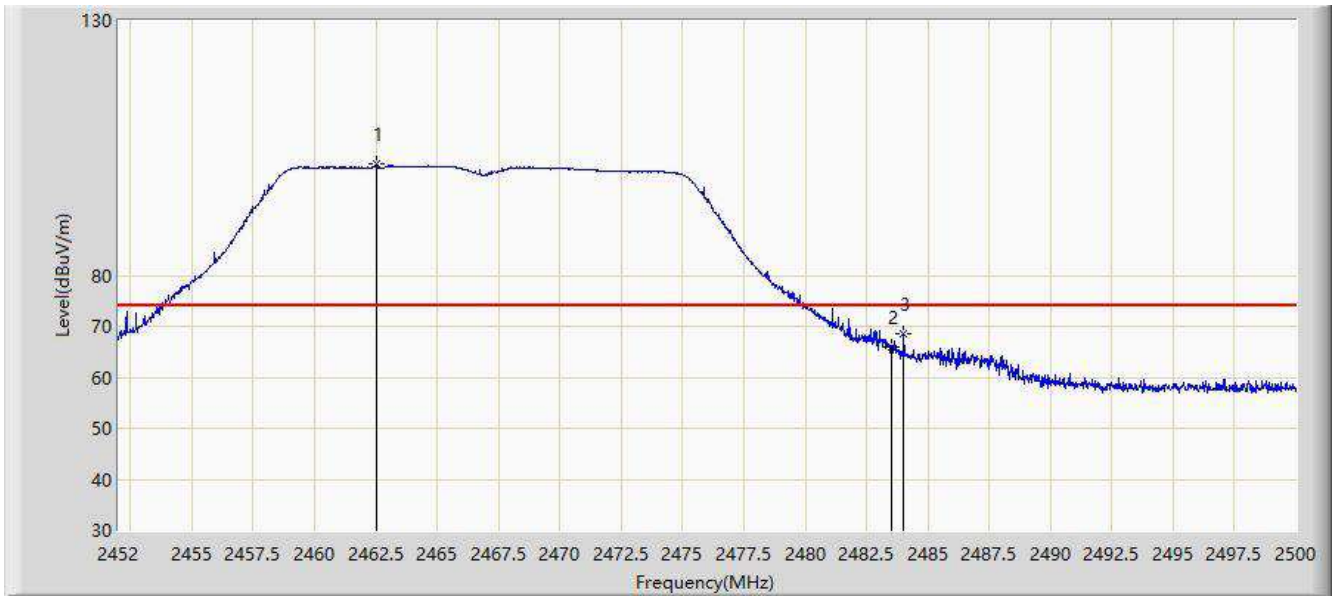


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2470.048	86.711	54.203	N/A	N/A	32.509	AV
2			2483.500	50.550	17.849	-3.450	54.000	32.701	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 12:33
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at Channel 2467MHz	

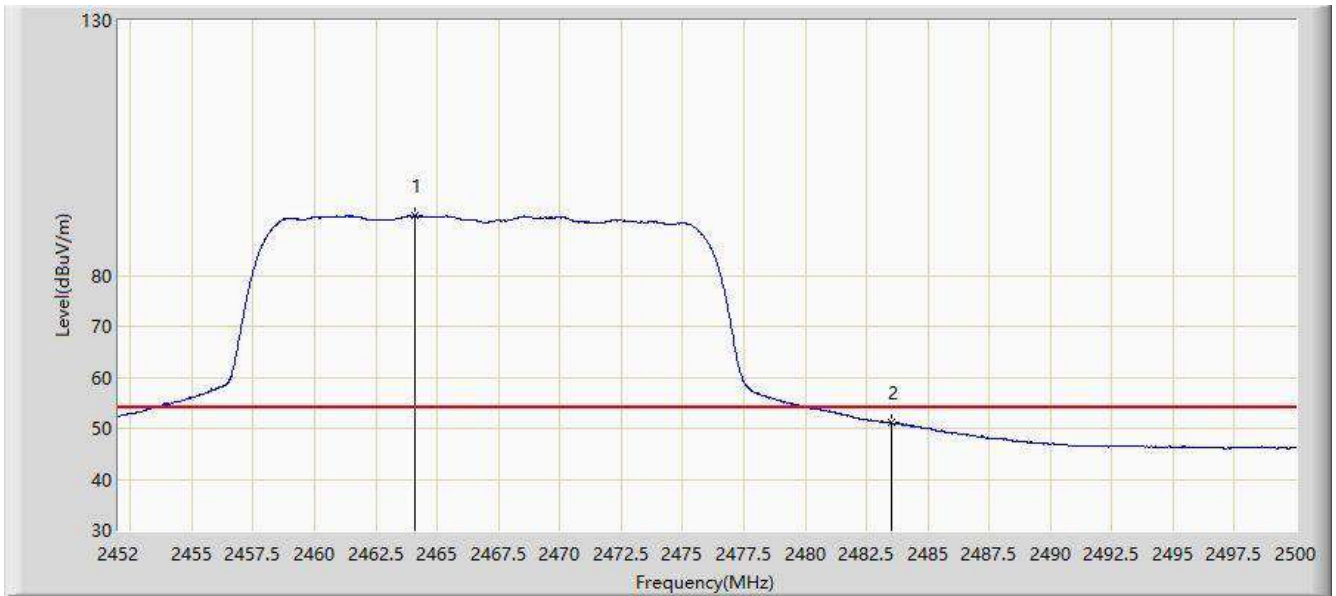


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2462.512	101.958	69.394	N/A	N/A	32.565	PK
2			2483.500	65.857	33.156	-8.143	74.000	32.701	PK
3			2484.016	68.553	35.845	-5.447	74.000	32.708	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 12:34
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at Channel 2467MHz	

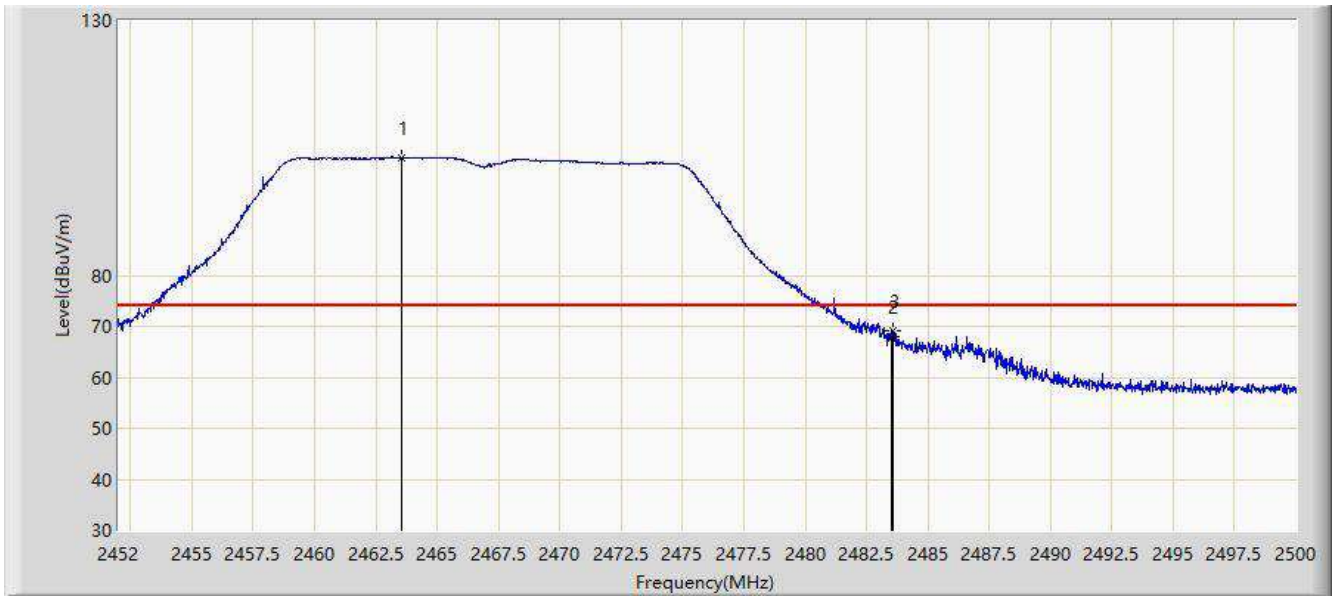


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2464.072	91.694	59.143	N/A	N/A	32.551	AV
2			2483.500	51.055	18.354	-2.945	54.000	32.701	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 12:32
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at Channel 2467MHz	

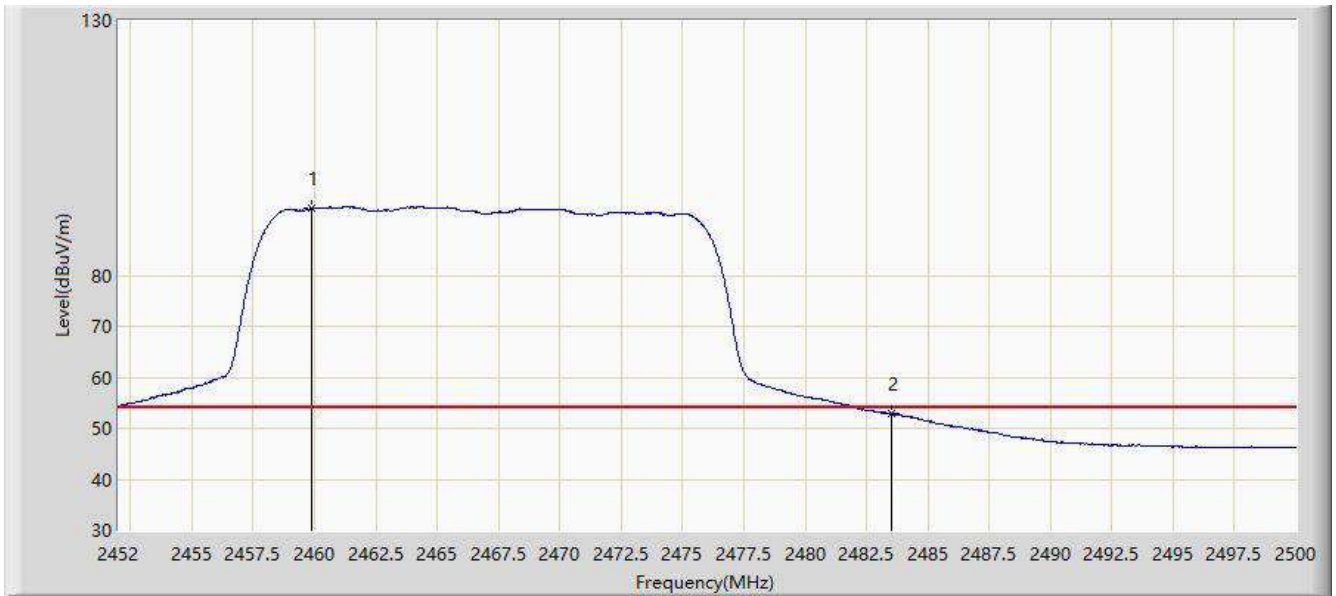


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.544	103.165	70.610	N/A	N/A	32.555	PK
2			2483.500	67.976	35.275	-6.024	74.000	32.701	PK
3			2483.608	69.146	36.444	-4.854	74.000	32.702	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 12:31
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at Channel 2467MHz	

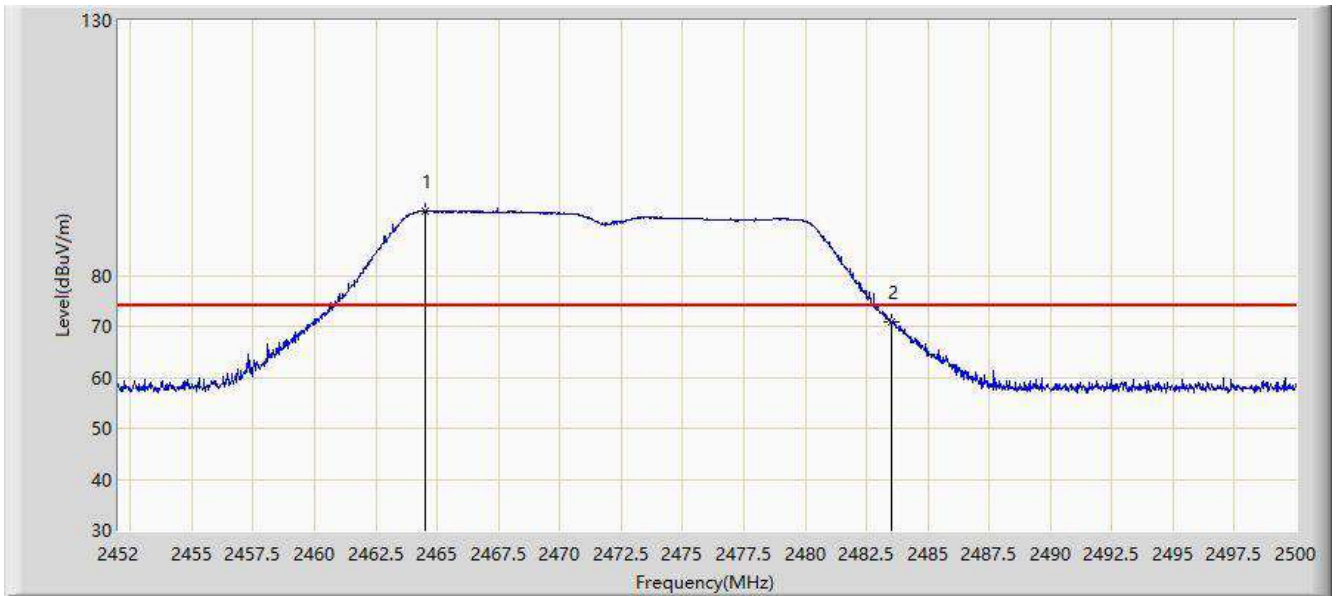


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2459.896	93.314	60.724	N/A	N/A	32.590	AV
2			2483.500	52.907	20.206	-1.093	54.000	32.701	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 12:41
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at Channel 2472MHz	

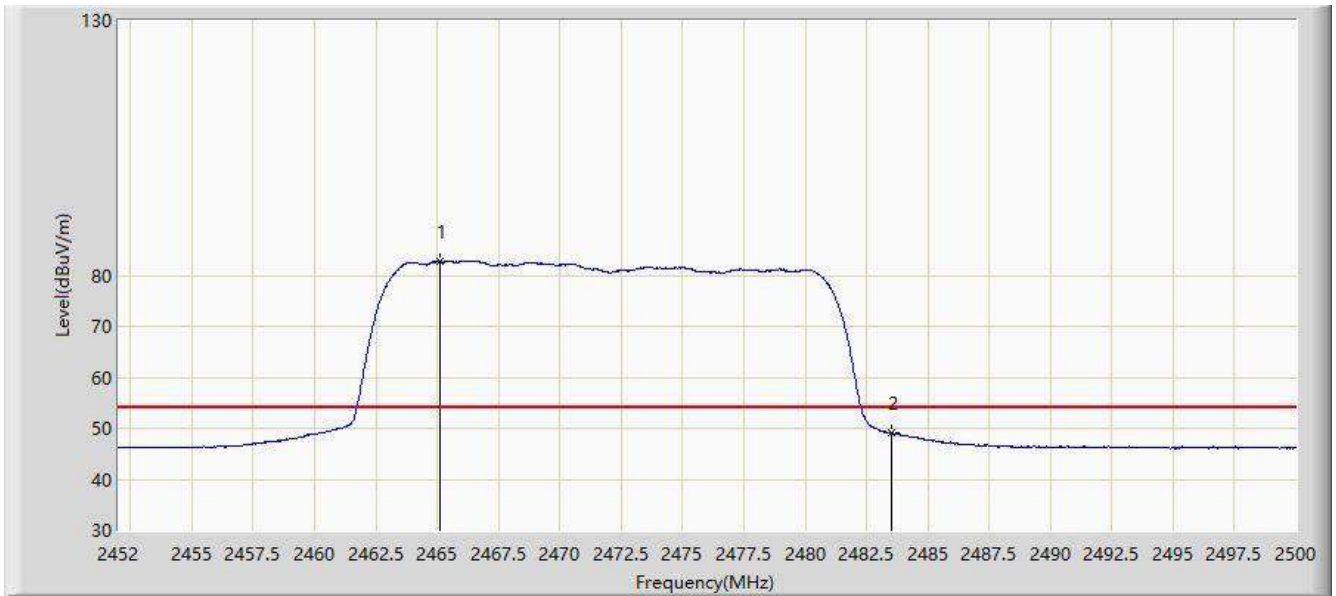


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2464.504	92.586	60.039	N/A	N/A	32.547	PK
2			2483.500	70.933	38.232	-3.067	74.000	32.701	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 12:39
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at Channel 2472MHz	

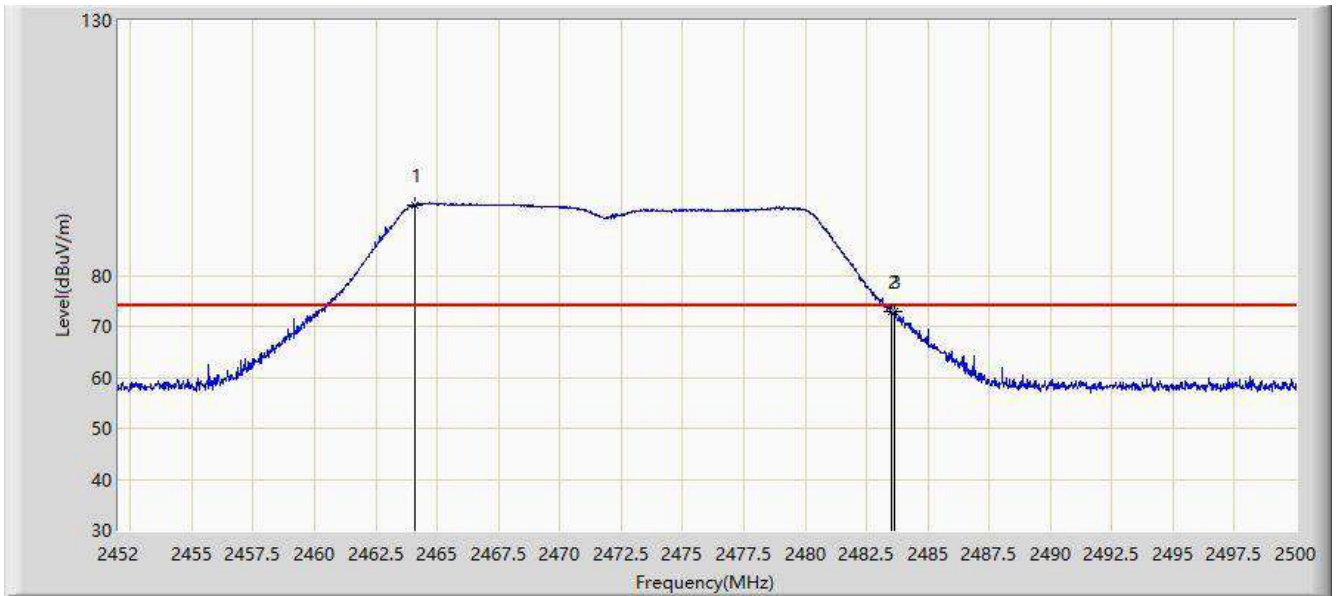


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2465.104	82.775	50.233	N/A	N/A	32.541	AV
2			2483.500	49.230	16.529	-4.770	54.000	32.701	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 12:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at Channel 2472MHz	

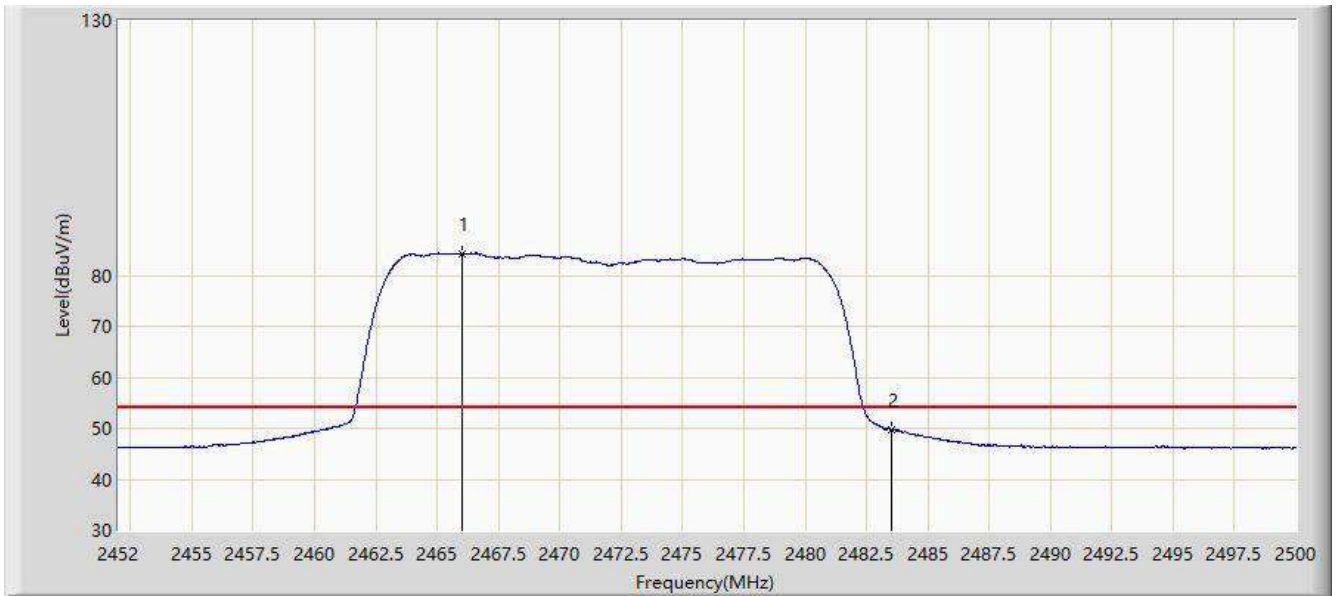


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2464.096	93.883	61.332	N/A	N/A	32.551	PK
2			2483.500	72.884	40.183	-1.116	74.000	32.701	PK
3			2483.632	72.992	40.290	-1.008	74.000	32.702	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 12:38
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11n-HT20 at Channel 2472MHz	

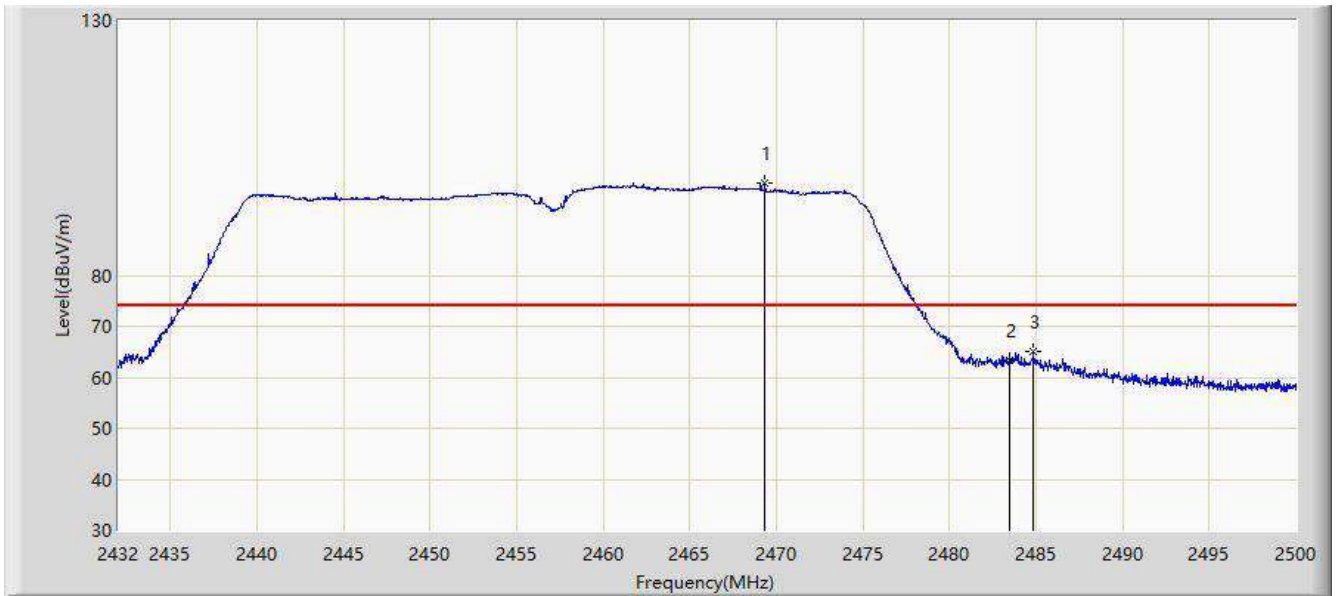


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2466.016	84.203	51.669	N/A	N/A	32.534	AV
2			2483.500	49.718	17.017	-4.282	54.000	32.701	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 12:51
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11n-HT40 at Channel 2457MHz	

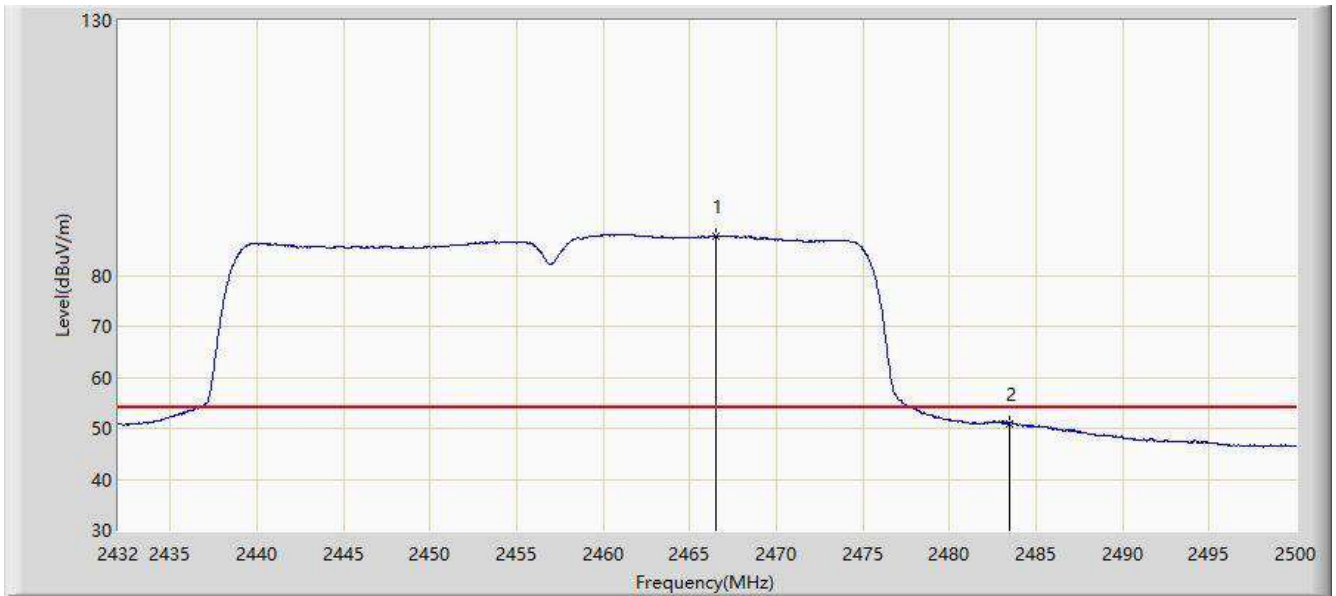


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2469.332	98.229	65.725	N/A	N/A	32.504	PK
2			2483.500	63.266	30.565	-10.734	74.000	32.701	PK
3			2484.870	65.053	32.333	-8.947	74.000	32.720	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 12:52
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11n-HT40 at Channel 2457MHz	

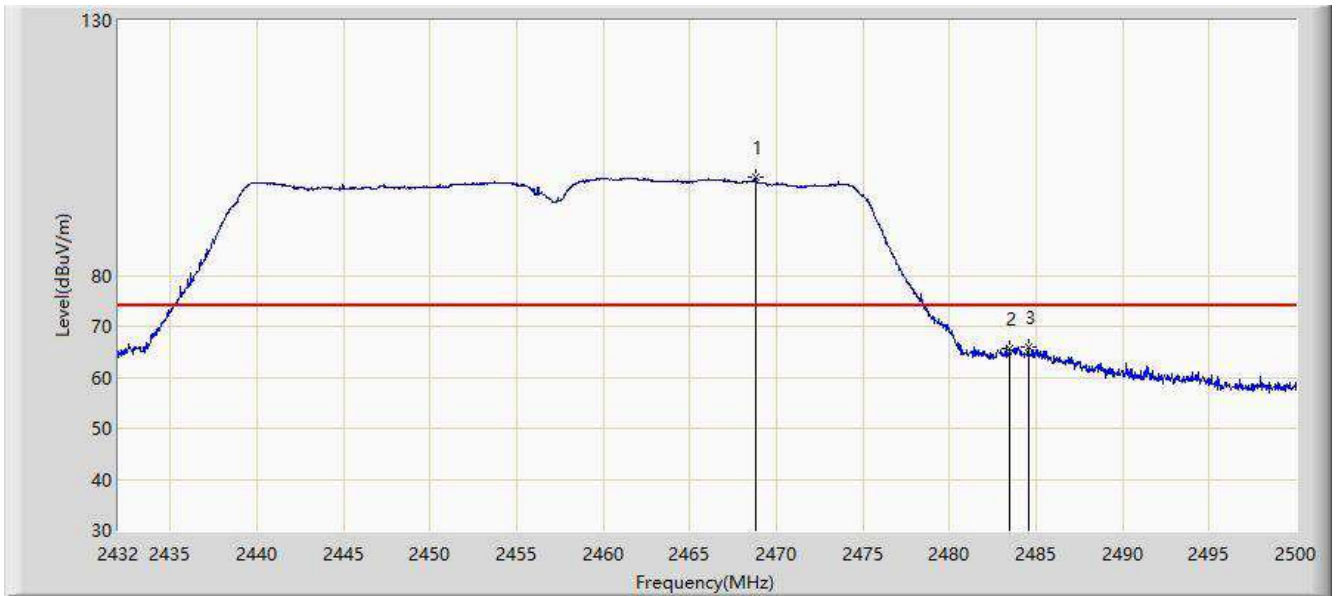


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2466.544	87.731	55.202	N/A	N/A	32.529	AV
2			2483.500	50.994	18.293	-3.006	54.000	32.701	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 12:50
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11n-HT40 at Channel 2457MHz	

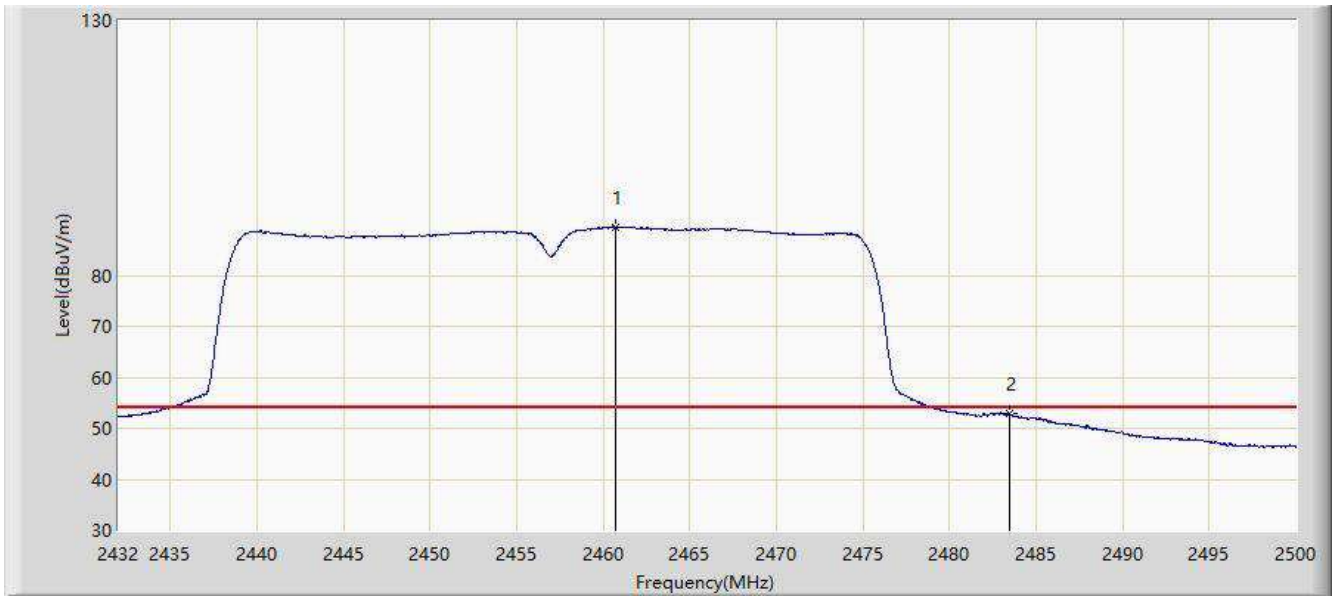


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2468.788	99.146	66.637	N/A	N/A	32.509	PK
2			2483.500	65.604	32.903	-8.396	74.000	32.701	PK
3			2484.564	65.923	33.208	-8.077	74.000	32.715	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 12:50
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11n-HT40 at Channel 2457MHz	

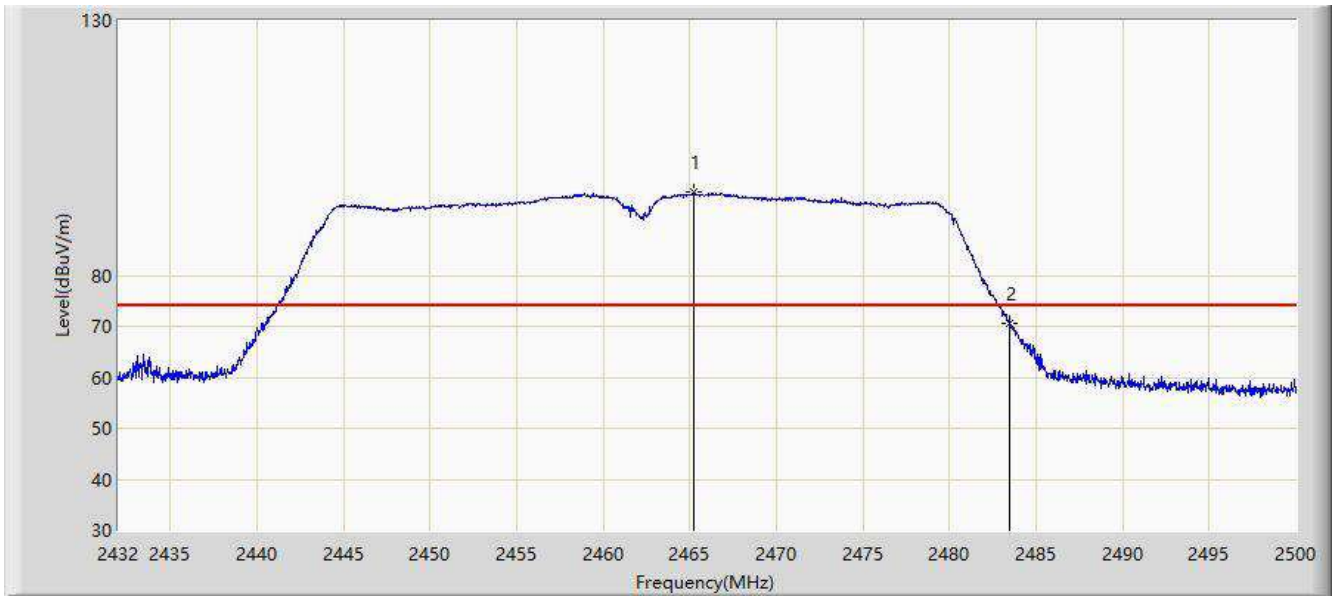


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2460.730	89.494	56.912	N/A	N/A	32.582	AV
2			2483.500	52.829	20.128	-1.171	54.000	32.701	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 13:03
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11n-HT40 at Channel 2462MHz	

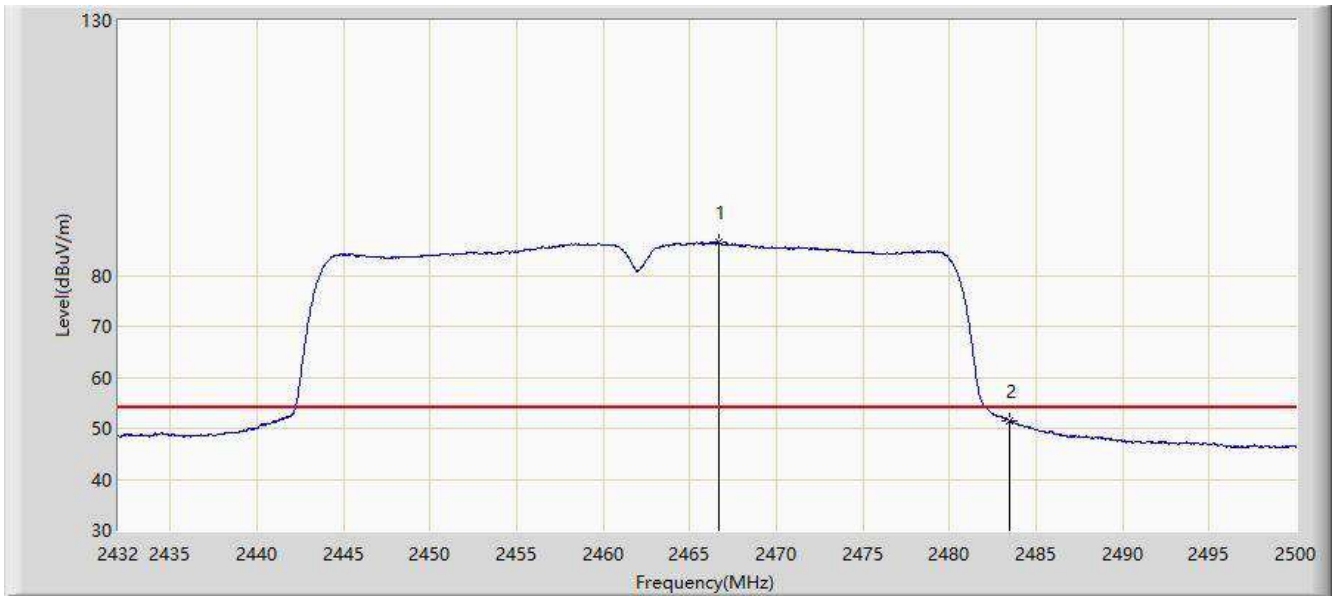


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2465.252	96.235	63.695	N/A	N/A	32.540	PK
2			2483.500	70.562	37.861	-3.438	74.000	32.701	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 13:03
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11n-HT40 at Channel 2462MHz	

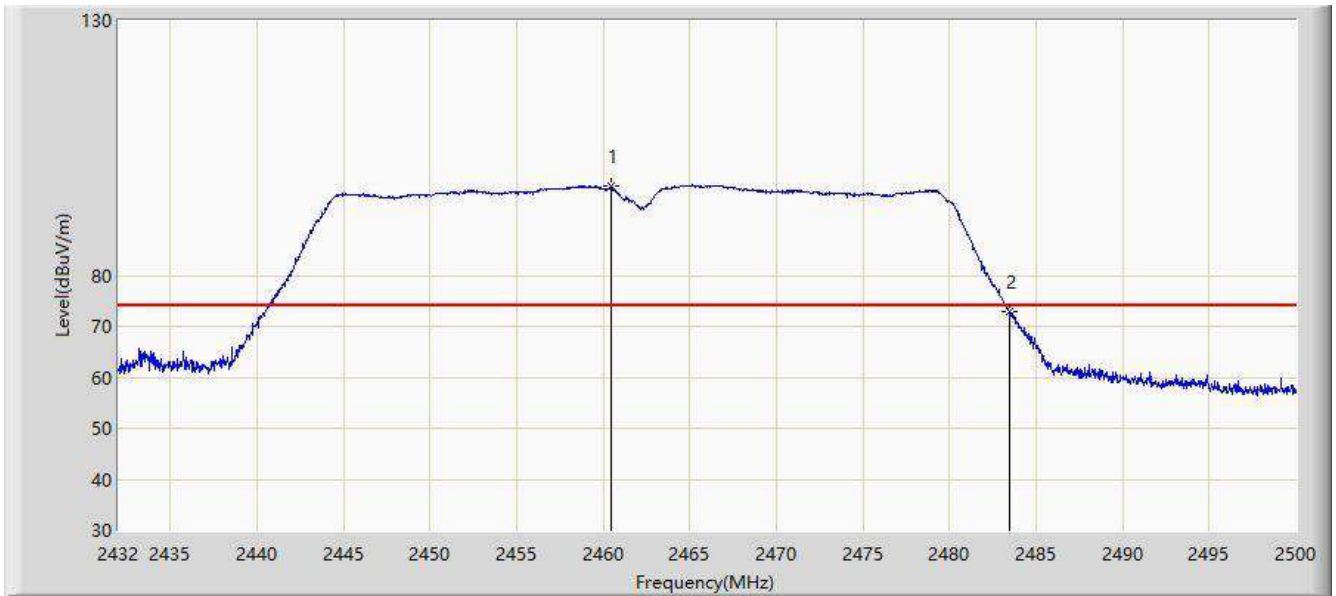


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2466.680	86.401	53.873	N/A	N/A	32.528	AV
2			2483.500	51.459	18.758	-2.541	54.000	32.701	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 13:01
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11n-HT40 at Channel 2462MHz	

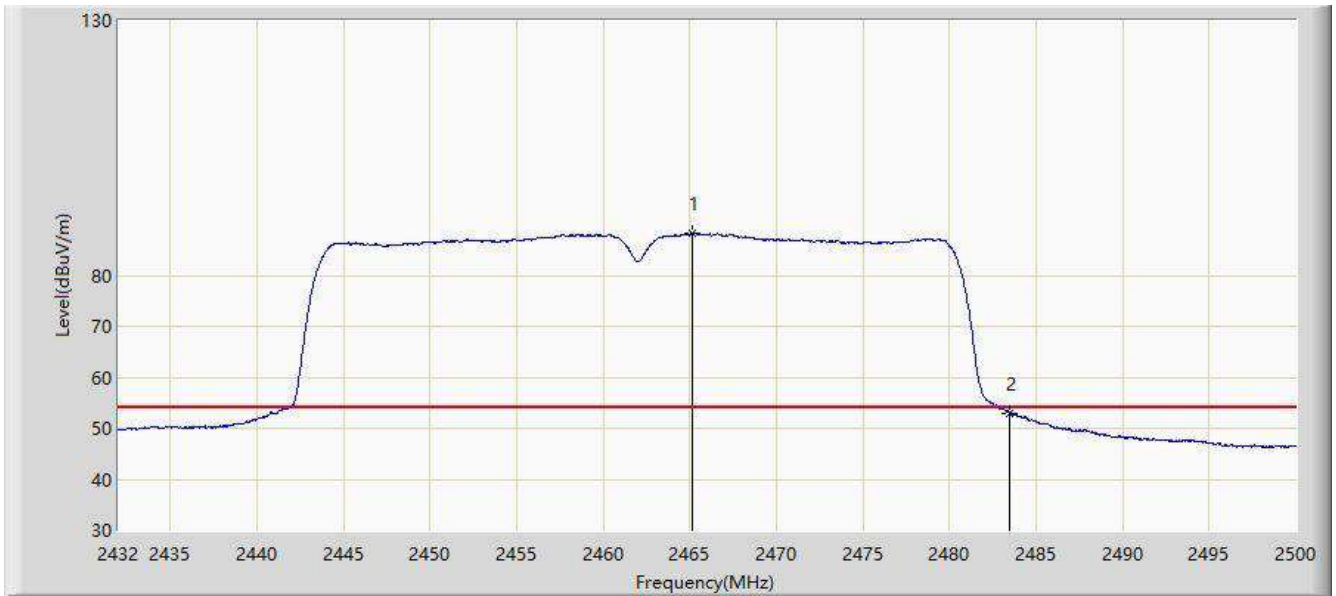


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2460.424	97.661	65.076	N/A	N/A	32.585	PK
2			2483.500	72.848	40.147	-1.152	74.000	32.701	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: WZ-AC2	Time: 2020/12/19 - 13:02
Limit: FCC_Part15.209_RE(3m)	Engineer: Jason Gao
Probe: WZ-AC2_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: DOLPHIN CT40	Power: By Battery
Test Mode: Transmit by 802.11n-HT40 at Channel 2462MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2465.184	88.244	55.703	N/A	N/A	32.541	AV
2			2483.500	53.039	20.338	-0.961	54.000	32.701	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

5.8. AC Conducted Emissions Measurement

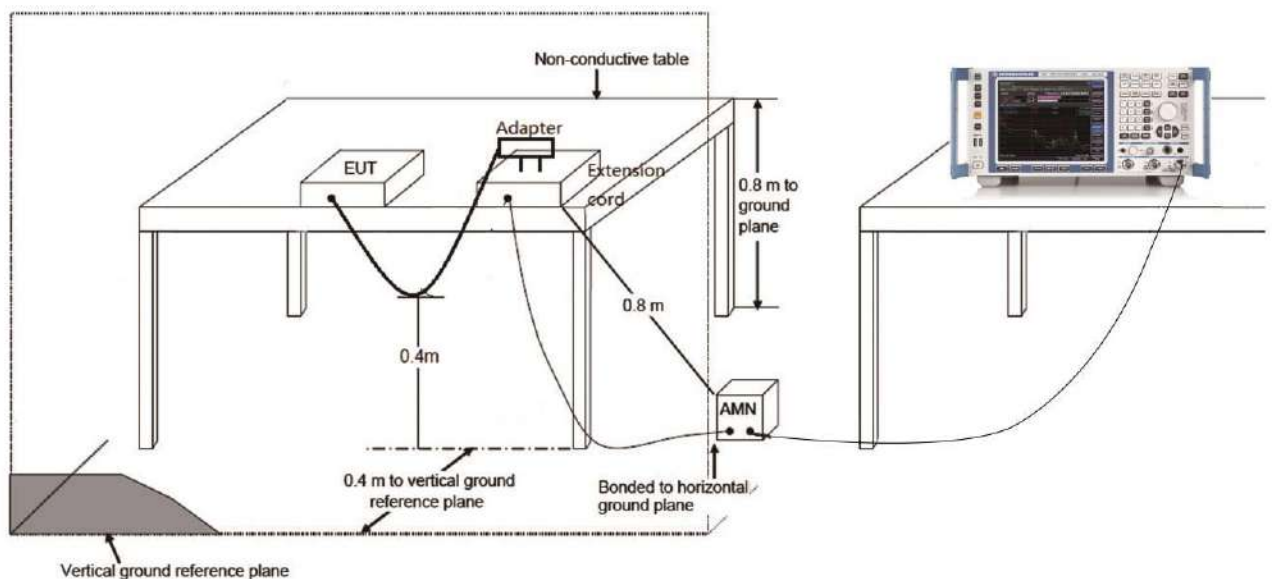
5.8.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

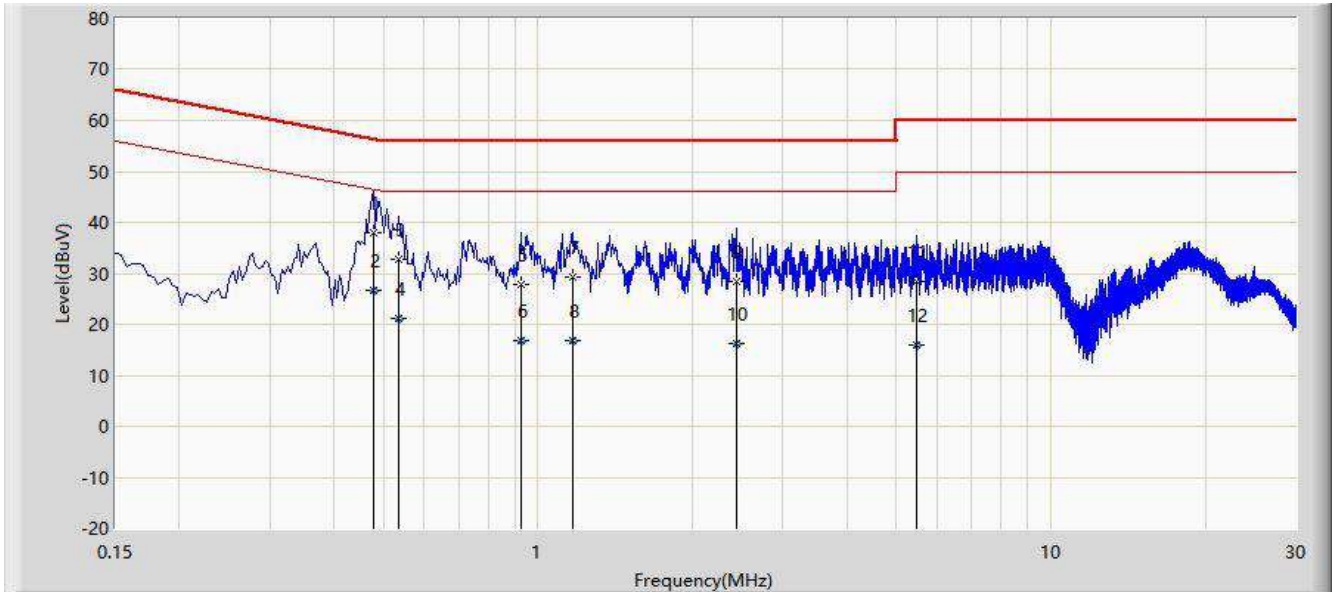
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

5.8.2. Test Setup



5.8.3.Test Result

Site: WZ-SR2	Time: 2020/12/25 - 09:31
Limit: FCC_Part15.207_CE_AC Power	Engineer: Buter Shi
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: DOLPHIN CT40	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2462MHz	

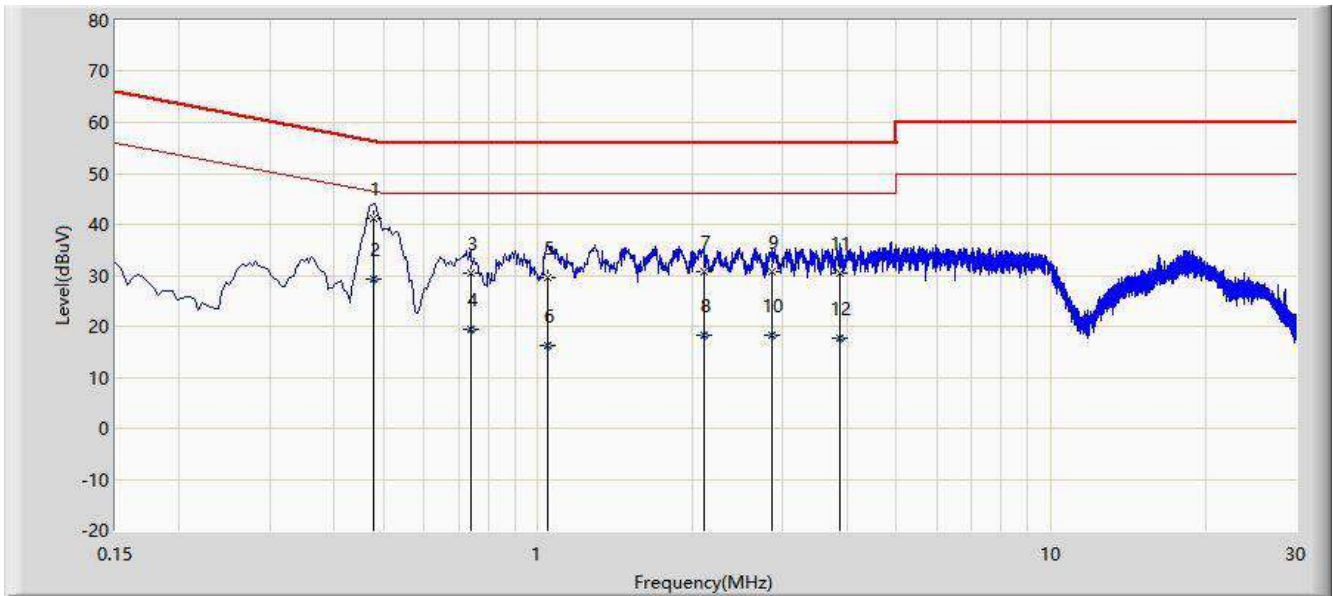


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.478	37.829	28.135	-18.545	56.374	9.694	QP
2			0.478	26.711	17.016	-19.663	46.374	9.694	AV
3			0.534	32.626	22.924	-23.374	56.000	9.702	QP
4			0.534	21.244	11.543	-24.756	46.000	9.702	AV
5			0.926	27.714	17.969	-28.286	56.000	9.746	QP
6			0.926	16.761	7.015	-29.239	46.000	9.746	AV
7			1.166	29.220	19.470	-26.780	56.000	9.750	QP
8			1.166	16.876	7.126	-29.124	46.000	9.750	AV
9			2.438	28.450	18.670	-27.550	56.000	9.780	QP
10			2.438	16.240	6.460	-29.760	46.000	9.780	AV
11			5.474	28.265	18.381	-31.735	60.000	9.884	QP
12			5.474	16.067	6.183	-33.933	50.000	9.884	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

Site: WZ-SR2	Time: 2020/12/25 - 09:38
Limit: FCC_Part15.207_CE_AC Power	Engineer: Buter Shi
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: DOLPHIN CT40	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2462MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.478	41.137	31.453	-15.237	56.374	9.684	QP
2			0.478	29.192	19.507	-17.182	46.374	9.684	AV
3			0.738	30.560	20.840	-25.440	56.000	9.720	QP
4			0.738	19.345	9.625	-26.655	46.000	9.720	AV
5			1.046	29.475	19.734	-26.525	56.000	9.741	QP
6			1.046	16.240	6.499	-29.760	46.000	9.741	AV
7			2.102	30.747	20.985	-25.253	56.000	9.762	QP
8			2.102	18.262	8.500	-27.738	46.000	9.762	AV
9			2.862	30.774	20.986	-25.226	56.000	9.787	QP
10			2.862	18.232	8.445	-27.768	46.000	9.787	AV
11			3.878	30.307	20.489	-25.693	56.000	9.818	QP
12			3.878	17.749	7.931	-28.251	46.000	9.818	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

6. CONCLUSION

The data collected relate only the item(s) tested and show that the device is in compliance with Part 15C of the FCC rules.

The End

Appendix - Test Setup Photograph

Refer to “2012RSU041-UT” file.