Test Report

Product Name	Secured Network Extension Device
Model No	FEV-211F, FEV-212F, FEV-211F-AM, FEV-212F-AM (Main model) (for detail model no. refer to section 1.1 EUT Description)
FCC ID	TVE-3317E142
Contains FCC ID	N7NEM75, N7NEM75S

Applicant	Fortinet, Inc.
Address	899 Kifer Road Sunnyvale California United States 94086

Date of Receipt	Jun. 14, 2022
Issue Date	Jun. 20, 2023
Report No.	2260415R-RFUSWL2V01-A
Report Version	V1.0

Testing Laboratory
3023

The test results relate only to the samples tested.
The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.
This report must not be used to claim product endorsement by TAF or any agency of the government.
The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.
Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test Report

Product Name	Secured Network Extension Device
Applicant	Fortinet, Inc.
Address	899 Kifer Road Sunnyvale California United States 94086
Manufacturer	Fortinet, Inc.
Model No.	FEV-211F, FEV-212F, FEV-211F-AM, FEV-212F-AM (Main model) (for detail model no. refer to section 1.1 EUT Description)
FCC ID	TVE-3317E142
Contains FCC ID	N7NEM75, N7NEM75S
EUT Rated Voltage	DC 7-36Vdc (from Car Charger) AC 100-240Vdc (from Power Adapter)
EUT Test Voltage	DC 36V (from Car Charger), AC 120V / 60Hz (from Power Adapter)
Trade Name	Fortinet
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C ANSI C63.4: 2014, ANSI C63.10: 2013
Test Result	Complied

Documented By : Genie Chang

(Senior Project Specialist / Genie Chang)

Tested By : Ivan Chuang

(Senior Engineer / Ivan Chuang)

Approved By : Jack Hsu

(Senior Engineer / Jack Hsu)

TABLE OF CONTENTS

1. General Information 6

1.1. EUT Description 6
1.2. Tested System Details 11
1.3. Configuration of Tested System 11
1.4. EUT Exercise Software 12
1.5. Test Facility 13
1.6. List of Test Item and Equipment 14
1.7. Uncertainty 16

2. Conducted Emission 17

2.1. Test Setup 17
2.2. Limits 17
2.3. Test Procedure 17
2.4. Test Result of Conducted Emission 18

3. Maximum Power Output 19

3.1. Test Setup 19
3.2. Limits 19
3.3. Test Procedure 19
3.4. Test Result of Maximum Power Output 20

4. Radiated Emission 26

4.1. Test Setup 26
4.2. Limits 27
4.3. Test Procedure 28
4.4. Test Result of Radiated Emission 30

5. RF Antenna Conducted Test 45

5.1. Test Setup 45
5.2. Limits 45
5.3. Test Procedure 45
5.4. Test Result of RF antenna conducted test 46

6. Band Edge 50

6.1. Test Setup 50
6.2. Limits 51
6.3. Test Procedure 51
6.4. Test Result of Band Edge 53

7. 6dB Bandwidth 65

7.1. Test Setup 65
7.2. Limits.....65
7.3. Test Procedure 65
7.4. Test Result of 6dB Bandwidth.....66

8. Power Density.....70

8.1. Test Setup 70
8.2. Limits.....70
8.3. Test Procedure 70
8.4. Test Result of Power Density 71

9. Duty Cycle 75

9.1. Test Setup 75
9.2. Test Procedure 75
9.3. Test Result of Duty Cycle.....76

Appendix 1: EUT Test Photographs
Appendix 2: Product Photos-Please refer to the file: 2260415R-Product Photos

Revision History

Report No.	Version	Description	Issued Date
2260415R-RFUSWL2V01-A	V1.0	Initial issue of report.	Jun. 20, 2023

1. General Information

1.1. EUT Description

Product Name	Secured Network Extension Device
Trade Name	Fortinet
Model No. (Main model)	FEV-211F, FEV-212F FEV-211F-AM, FEV-212F-AM
Model No. (Series model)	FortiExtenderVehicle 211Fxxxxxxxxxx FORTIEXTENDERVEHICLE-211Fxxxxxxxxxx FEV-211Fxxxxxxxxxx FortiExtenderVehicle 212Fxxxxxxxxxx FORTIEXTENDERVEHICLE-212Fxxxxxxxxxx FEV-212Fxxxxxxxxxx FortiExtenderVehicle 211F-AMxxxxxxxxxx FORTIEXTENDERVEHICLE-211F-AMxxxxxxxxxx FEV-211F-AMxxxxxxxxxx FortiExtenderVehicle 212F-AMxxxxxxxxxx FORTIEXTENDERVEHICLE-212F-AMxxxxxxxxxx FEV-212F-AMxxxxxxxxxx (where “x” can be used “A-Z”, or “0-9”, or “-“, or blank for software purposes or marketing purposes only)
FCC ID	TVE-3317E142
Contains FCC ID	N7NEM75, N7NEM75S
Frequency Range	802.11b/g/n/ac-20: 2412-2462 MHz, 802.11n/ac-40: 2422-2452 MHz
Number of Channels	802.11b/g/n/ac-20MHz: 11CH, n/ac-40MHz: 7CH
Data Rate	802.11b: 1-11 Mbps, 802.11g: 6-54 Mbps, 802.11n: MCS0-MCS15, 802.11ac: MCS0-MCS9
Type of Modulation	DSSS (DBPSK, DQPSK, CCK) OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)
Channel Control	Auto
Car Charger	MFR: HUAI YANG CO., LTD M/N: FEVCBL-2M3-C Internal M/N: HWR-SH-20230116-01
Power Adapter	MFR: APD, M/N: WA-36W12R Input: 100-240V~50-60Hz, 0.9A Output: 12.0V⎓3.0A, 36.0W Cable Out: Non-shielded, 1.5m

Note: The different models name are for the market segment.

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	ADVANCED WIRELESS & ANTENNA INC.	A8EEE-000003	Dipole	2.0 dBi for 2.4 GHz (BLE)
2	ADVANCED WIRELESS & ANTENNA INC.	A8EEE-000002 (Main)	Dipole	3.5 dBi for 2.4 GHz (WLAN) 5.5 dBi for 5GHz (WLAN)
		A8EEE-000002 (Aux)		3.5 dBi for 2.4 GHz (WLAN) 5.5 dBi for 5GHz (WLAN)
3	Master Wave Technology Co., Ltd.	98619PRSX018 (Main)	Dipole	3.19 dBi for 2.4 GHz (WLAN) 5.85 dBi for UNII-1, 2A (WLAN) 5.73 dBi foe UNII-2C (WLAN) 5.03 dBi for UNII-3 (WLAN)
		98619PRSX018 (Aux)		3.19 dBi for 2.4 GHz (WLAN) 5.85 dBi for UNII-1, 2A (WLAN) 5.73 dBi foe UNII-2C (WLAN) 5.03 dBi for UNII-3 (WLAN)
4	SENAO	MA1505.AK.008 (5 in 1, cable 5M)	PIFA	1.99 dBi for WCDMA Band 2 2.64 dBi for WCDMA Band 4 0.86 dBi for WCDMA Band 5 1.99 dBi for LTE Band 2 2.64 dBi for LTE Band 4 0.86 dBi for LTE Band 5 1.23 dBi for LTE Band 7 -2.09 dBi for LTE Band 12 -1.98 dBi for LTE Band 13 -0.04 dBi for LTE Band 14 0.86 dBi for LTE Band 26 -0.91 dBi for LTE Band 30 1.23 dBi for LTE Band 41 -0.31 dBi for LTE Band 48 2.64 dBi for LTE Band 66
5	SENAO	MA1505.AK.008 (5 in 1, cable 0.3M)	PIFA	3.98 dBi for WCDMA Band 2 5.22 dBi for WCDMA Band 4 1.83 dBi for WCDMA Band 5 3.98 dBi for LTE Band 2 5.22 dBi for LTE Band 4 1.83 dBi for LTE Band 5 4.85 dBi for LTE Band 7 1.50 dBi for LTE Band 12 3.03 dBi for LTE Band 13 3.03 dBi for LTE Band 14 1.83 dBi for LTE Band 26 0.84 dBi for LTE Band 30 4.85 dBi for LTE Band 41 -0.07 dBi for LTE Band 48 5.22 dBi for LTE Band 66

Note: The above EUT information is declared by the manufacturer.

Directional gain for CDD Power	Directional gain for Beamforming Power
3.5 dBi for 2.4 GHz	6.51 dBi for 2.4 GHz

For CDD mode:

2400 MHz: Directional gain = 3.5 dBi

(Directional gain = $G_{ANT\ MAX}$ + Array Gain, Array Gain = 0 dB for $N_{ANT} \leq 4$)

For Beamforming mode:

2400 MHz: Directional gain = 6.51 dBi

(Directional gain = $G_{ANT\ MAX}$ + Array Gain, Array Gain = 10*log(2) = 3.01dB)

Directional gain for PSD
6.51 dBi for 2.4 GHz

2400 MHz: Directional gain = 6.51 dBi

Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}]$ dBi

802.11b/g/n/ac- 20MHz Center Frequency of Each Channel:

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

802.11n/ac- 40MHz Center Frequency of Each Channel:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
03	2422	04	2427	05	2432	06	2437
07	2442	08	2447	09	2452	--	--

Note:

1. The EUT is a Secured Network Extension Device with built-in Bluetooth V5.2, Wi-Fi and WWAN transceiver, this report is for 2.4GHz Wi-Fi.
2. The different of each model is shown as below:

Model No.	Description
FEV-211F Series	Bluetooth + Wi-Fi + LTE module x1 (EM7565) Contains LTE module's FCC ID (N7NEM75)
FEV-212F Series	Bluetooth + Wi-Fi + LTE module x2 (EM7565) Contains LTE module's FCC ID (N7NEM75)
FEV-211F-AM Series	Bluetooth + Wi-Fi + LTE module x1 (EM7511) Contains LTE module's FCC ID (N7NEM75S)
FEV-212F-AM Series	Bluetooth + Wi-Fi + LTE module x2 (EM7511) Contains LTE module's FCC ID (N7NEM75S)

3. The identification of test sample is FEV-212F-AM with A8EEE-000003, A8EEE-000002 and MA1505.AK.008 (5 in 1, cable 0.3M) antennas for Bluetooth and co-location (EM7511) testing.
4. The identification of test sample is FEV-212F with A8EEE-000003, A8EEE-000002 and MA1505.AK.008 (5 in 1, cable 0.3M) antennas for co-location (EM7565) testing.
5. The radiation measurements are performed in X, Y and Z axis positioning, and only the worst case is shown in the report.
6. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
7. Lowest data rates are tested in each mode. Only worst case is shown in the report. (802.11b is 1Mbps、802.11g is 6Mbps、802.11ac-20BW/40BW is MCS0)
8. The CDD mode and Beamforming mode are presented in the power output test item. For other test items, CDD mode is the worst case for the final test and shown in this report.
9. After evaluation and investigation, the worst case for Power Adapter and Car Charger is Power Adapter, so it was used to perform all testing and record in the test report.
10. The spectrum plot against conducted item only shows the worst case.
11. These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11b/g/n/ac transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.
12. 2.4GHz Wi-Fi is worst case compare to 5GHz Wi-Fi, therefore 2.4GHz Wi-Fi was selected for the co-location testing.

Test Mode	Transmit (802.11b)-CDD
	Transmit (802.11g)-CDD
	Transmit (802.11ac-20 MHz)-CDD
	Transmit (802.11ac-40 MHz)-CDD
	Transmit (802.11ac-20 MHz)-Beamforming
	Transmit (802.11ac-40 MHz)-Beamforming
	Transmit - Co-location (EM7511, WCDMA_B5 + LTE_B5 + BLE + Wi-Fi)
	Transmit - Co-location (EM7511, WCDMA_B2 + LTE_B2 + BLE + Wi-Fi)
	Transmit - Co-location (EM7511, WCDMA_B4 + LTE_B30 + BLE + Wi-Fi)
	Transmit - Co-location (EM7511, LTE_B26 + LTE_B48 + BLE + Wi-Fi)
	Transmit - Co-location (EM7565, WCDMA_B5 + LTE_B26 + BLE + Wi-Fi)
	Transmit - Co-location (EM7565, WCDMA_B2 + LTE_B2 + BLE + Wi-Fi)
	Transmit - Co-location (EM7565, WCDMA_B4 + LTE_B7 + BLE + Wi-Fi)
	Transmit - Co-location (EM7565, LTE_B26 + LTE_B48 + BLE + Wi-Fi)

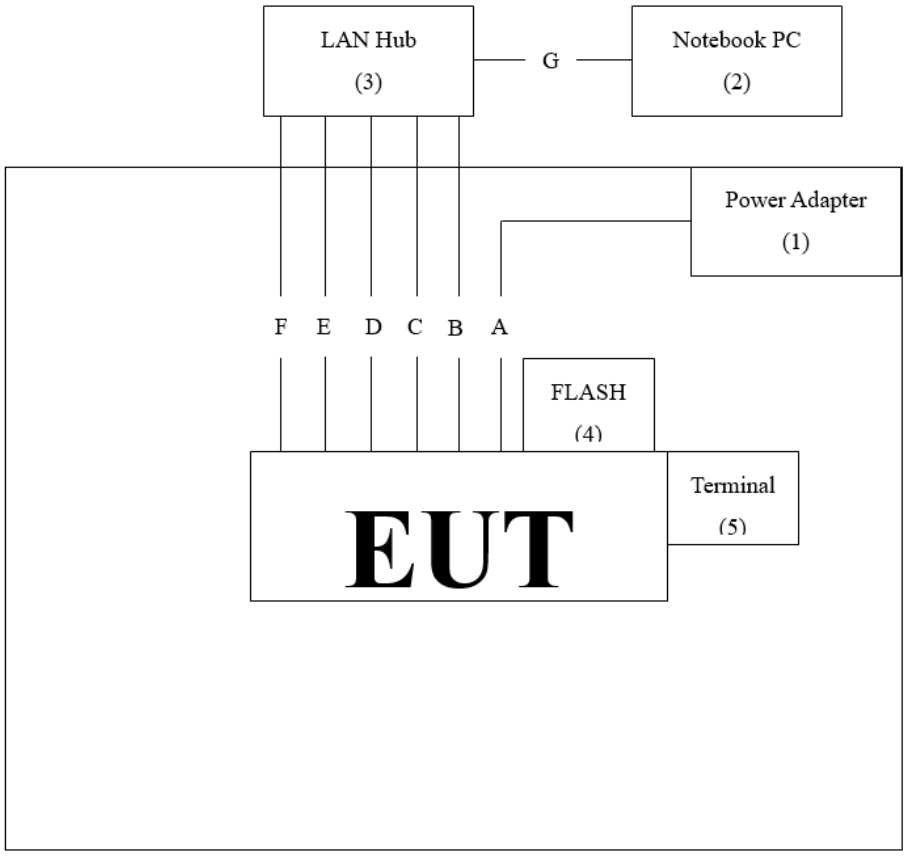
1.2. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Power Adapter	APD	WA-36W12R	N/A	N/A
2	Notebook PC	DELL	Latitude 5501	4H94P13	N/A
3	LAN Hub	TP-LINK	TL-SG108	2161597000480	Non-Shielded, 1.5m
4	FLASH	Kingston	DT100G3/8GB	N/A	N/A
5	Terminal	N/A	N/A	N/A	N/A

Signal Cable Type		Signal cable Description
A	Power Cable	Non-Shielded, 1.5m
B	LAN Cable	Non-Shielded, 3m
C	LAN Cable	Non-Shielded, 2m
D	LAN Cable	Non-Shielded, 2m
E	LAN Cable	Non-Shielded, 2m
F	LAN Cable	Non-Shielded, 2m
G	LAN Cable	Non-Shielded, 2m

1.3. Configuration of Tested System



1.4. EUT Exercise Software

1. Setup the EUT as shown in Section 1.3.
2. Execute software “QSPR V5.0-00186” on the Notebook PC.
3. Configure the test mode, the test channel, and the data rate.
4. Press “OK” to start the continuous transmit.
5. Verify that the EUT works properly.

1.5. Test Facility

Ambient conditions in the laboratory:

Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	10~40 °C	24.4 °C
	Humidity (%RH)	10~90 %	47.2 %
Radiated Emission	Temperature (°C)	10~40 °C	24.7 °C
	Humidity (%RH)	10~90 %	58.2 %
Conductive	Temperature (°C)	10~40 °C	25.0 °C
	Humidity (%RH)	10~90 %	55.8 %

USA : FCC Registration Number: TW0033

Canada : CAB Identifier Number: TW3023 / Company Number: 26930

Site Description : Accredited by TAF
Accredited Number: 3023

Test Laboratory : DEKRA Testing and Certification Co., Ltd
Address : No. 5-22, Ruishukeng Linkou District, New Taipei City, 24451, Taiwan
Performed Location : No. 26, Huaya 1st Rd., Guishan Dist.,Taoyuan City 333411, Taiwan, R.O.C.
Phone number : +886-3-275-7255
Fax number : +886-3-327-8031
Email address : info.tw@dekra.com
Website : http://www.dekra.com.tw

1.6. List of Test Item and Equipment

For Conduction Measurements / HY-SR01

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
V	EMI Test Receiver	R&S	ESR7	101601	2022.06.23	2023.06.22
V	Two-Line V-Network	R&S	ENV216	101306	2022.05.23	2023.05.22
V	Coaxial Cable	SUHNER	RG400_BNC	RF001	2021.09.08	2022.09.07

Note:

1. All equipment are calibrated every one year.
2. The test instruments marked with “V” are used to measure the final test results.
3. Test Software version: AUDIX e3 V9.

For Conducted Measurements / HY-SR02

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
V	Spectrum Analyzer	R&S	FSV30	103466	2021.12.27	2022.12.26
V	Power Meter	Anritsu	ML2496A	1739004& 1726078& 1726079	2022.05.06	2023.05.05

Note:

1. All equipment are calibrated every one year.
2. The test instruments marked with “V” are used to measure the final test results.
3. Test Software version: RF Conducted Test Tools R3 V3.0.1.19.

For Radiated measurements / HY-CB03

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
V	Loop Antenna	AMETEK	HLA6121	49611	2022.03.18 2023.02.21	2023.03.17 2024.02.20
V	Bi-Log Antenna	SCHWARZBECK	VULB9168	9168-675	2021.08.11	2023.08.10
V	Horn Antenna	RF SPIN	DRH18-E	210508A18ES	2022.06.08	2023.06.07
V	Horn Antenna	RF SPIN	DRH18-E	210507A18ES	2023.05.11	2024.05.10
V	Horn Antenna	ETS-Lindgren	3117	00227700	2021.10.12	2022.10.11
V	Horn Antenna	Com-Power	AH-840	101100	2021.10.04	2023.10.03
V	Pre-Amplifier	SGH	0301	20211007-10	2022.02.22 2023.01.10	2023.02.21 2024.01.09
V	Pre-Amplifier	SGH	PRAMP118	20200701	2023.01.10	2024.01.09
V	Pre-Amplifier	EMCI	EMC051835SE	980313	2021.11.24	2022.11.23
V	Pre-Amplifier	EMCI	EMC05820SE	980309	2021.09.27	2022.09.26
V	Pre-Amplifier	EMCI	EMC05820SE	980310	2023.01.10	2024.01.09
V	Pre-Amplifier	EMCI	EMC184045SE	980369	2023.01.10	2024.01.09
	Coaxial Cable	EMCI	EMC102-KM-KM-600	1160314		
	Coaxial Cable	EMCI	EMC102-KM-KM-7000	170242		
V	Pre-Amplifier	SGH	PRAMP184	20200705	2021.08.11	2022.08.10
	Coaxial Cable	EMCI	EMC102-KM-KM-600	160312	2022.02.16	2023.02.15
	Coaxial Cable	HUBER+SUHNER	SUCOFLEX 102	MY3382/2	2022.02.16	2023.02.15
V	EMI Test Receiver	R&S	ESR3	102793	2021.12.15 2022.12.05	2022.12.14 2023.12.04
V	Spectrum Analyzer	R&S	FSV3044	101113	2023.02.04	2024.02.03
V	Spectrum Analyzer	R&S	FSV3044	101114	2022.02.11	2023.02.10
V	Coaxial Cable	SGH	SGH18	2021005-1	2023.01.10	2024.01.09
	Coaxial Cable	SGH	SGH18	202108-4		
	Coaxial Cable	SGH	HA800	GD20110223-1		
	Coaxial Cable	SGH	HA800	GD20110222-3		
V	Coaxial Cable	SGH	SGH18	2021005-3	2022.03.18	2023.03.17
	Coaxial Cable	SGH	SGH18	202108-4		
	Coaxial Cable	SGH	SGH18	20110223-1		
	Coaxial Cable	SGH	HA800	GD20110222-3		
V	Universal Radiocommunication tester	R&S	CMU200	113574	2022.06.06	2023.06.05
V	Radio communication analyzer	Anritsu	MT8820C	6201465467	2022.08.10	2023.08.09
V	Wideband Radio Communication Tester	R&S	CMW500	157304	2023.03.06	2024.03.05
V	Wideband Radio Communication Tester tester	Anritsu	MT8821C	6261849043	2023.01.11	2024.01.10

Note:

1. The test instruments marked with “V” are used to measure the final test results.
2. Test Software version: AUDIX e3 V9.

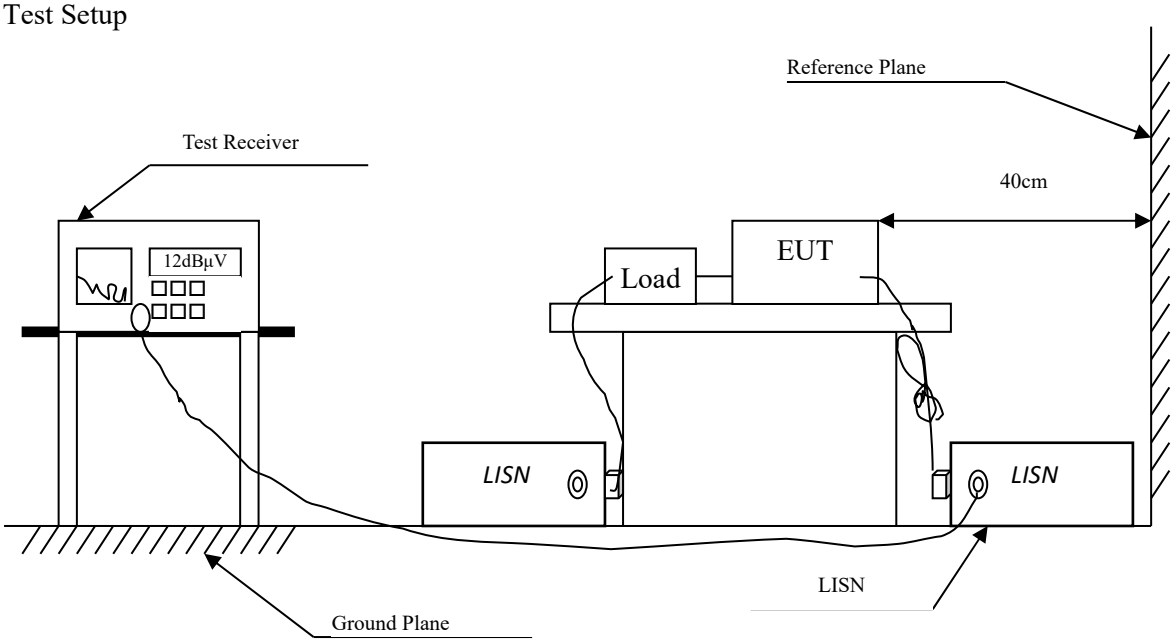
1.7. Uncertainty

Uncertainties have been calculated according to the DEKRA internal document.
The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.
Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test item	**Uncertainty**	
Conducted Emission	±3.42 dB	
Peak Power Output	±0.89 dB	
Radiated Emission	Under 1GHz ±4.42 dB	Above 1GHz ±4.28 dB
RF Antenna Conducted Test	±2.06 dB	
Band Edge	Under 1GHz ±4.42 dB	Above 1GHz ±4.28 dB
6dB Bandwidth	±1544.74 Hz	
Power Density	±2.06 dB	
Duty Cycle	±2.31 ms	

2. Conducted Emission

2.1. Test Setup



2.2. Limits

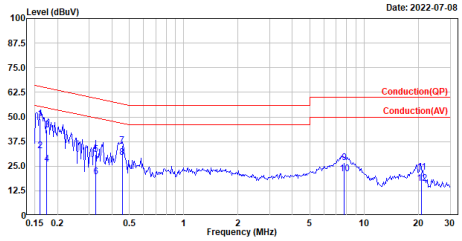
FCC Part 15 Subpart C Paragraph 15.207 (dBµV) Limit		
Frequency MHz	Limits	
	QP	AVG
0.15 - 0.50	66-56	56-46
0.50-5.0	56	46
5.0 - 30	60	50

2.3. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)
Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement.
Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.4. Test Result of Conducted Emission

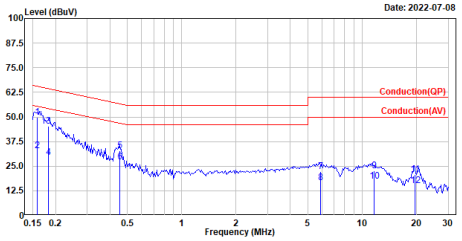
Site :HY-SR01
Condition :Line
Mode :ac40_2437MHz_TX
test by :Lucas



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	0.160	49.02	65.44	-16.42	39.34	9.68	QP
2	0.160	32.74	55.44	-22.70	23.06	9.68	Average
3	0.174	43.41	64.79	-21.38	33.73	9.68	QP
4	0.174	26.22	54.79	-28.57	16.54	9.68	Average
5	0.325	30.91	59.59	-28.68	21.24	9.67	QP
6	0.325	19.68	49.59	-29.91	10.01	9.67	Average
7	0.456	35.49	56.76	-21.27	25.81	9.68	QP
8	0.456	29.56	46.76	-17.20	19.88	9.68	Average
9	7.717	26.64	60.00	-33.36	15.82	10.82	QP
10	7.717	21.06	50.00	-28.94	10.24	10.82	Average
11	20.742	21.78	60.00	-38.22	11.12	10.66	QP
12	20.742	16.28	50.00	-33.72	5.62	10.66	Average

Note:
1. Level = Read Level + Factor
2. Factor = LISN insertion loss + Cable loss
3. Over Limit = Level - Limit Line

Site :HY-SR01
Condition :Neutral
Mode :ac40_2437MHz_TX
test by :Lucas



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	0.158	49.73	65.55	-15.82	40.07	9.66	QP
2	0.158	32.65	55.55	-22.90	22.99	9.66	Average
3	0.183	45.17	64.35	-19.18	35.51	9.66	QP
4	0.183	29.26	54.35	-25.09	19.60	9.66	Average
5	0.455	32.66	56.79	-24.13	23.00	9.66	QP
6	0.455	27.21	46.79	-19.58	17.55	9.66	Average
7	5.864	22.20	60.00	-37.80	11.38	10.82	QP
8	5.864	16.74	50.00	-33.26	5.92	10.82	Average
9	11.641	22.67	60.00	-37.33	11.86	10.81	QP
10	11.641	17.31	50.00	-32.69	6.50	10.81	Average
11	19.607	20.77	60.00	-39.23	9.99	10.78	QP
12	19.607	15.20	50.00	-34.80	4.42	10.78	Average

Note:
1. Level = Read Level + Factor
2. Factor = LISN insertion loss + Cable loss
3. Over Limit = Level - Limit Line

3. Maximum Power Output

3.1. Test Setup

3.2. Limits

The maximum peak power shall be less 1 Watt.

3.3. Test Procedure

The EUT was tested according to C63.10:2013 for compliance to FCC 47CFR 15.247 requirements. The maximum peak conducted output power using C63.10:2013 Section 11.9.1.3 PKPM1 Peak power meter method. The maximum average conducted output power using C63.10:2013 Section 11.9.2.3 Measurement using a power meter (PM). (Measurement using a gated RF average-reading power meter).
The maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For CDD mode:
2400 MHz: Directional Gain = 3.50 dBi, Limit= 30 dBm
(Directional Gain = $G_{ANT\ MAX}$ + Array Gain, Array Gain = 0 dB for $N_{ANT} \leq 4$)

For Beamforming mode:
2400 MHz: Directional Gain = 6.51 dBi, Limit= 29.49 dBm
(Directional Gain = $G_{ANT\ MAX}$ + Array Gain, Array Gain = 10*log(2) = 3.01 dB)

3.4. Test Result of Maximum Power Output

Product	:	Secured Network Extension Device
Test Item	:	Maximum Power Output Data
Test Mode	:	Transmit (802.11b)-CDD
Test Date	:	2022/06/29

Chain A+B

Channel No.	Frequency (MHz)	Data Rate (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
01	2412	1	22.34	22.49	25.43	<30dBm	Pass
06	2437	1	24.36	24.73	27.56	<30dBm	Pass
11	2462	1	20.84	20.79	23.83	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW) + Chain B (mW))

Product : Secured Network Extension Device
Test Item : Maximum Power Output Data
Test Mode : Transmit (802.11g)-CDD
Test Date : 2022/06/29

Chain A+B

Channel No.	Frequency (MHz)	Data Rate (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
01	2412	6	16.55	16.75	19.66	<30dBm	Pass
06	2437	6	21.15	21.34	24.26	<30dBm	Pass
11	2462	6	15.92	15.84	18.89	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW) + Chain B (mW))

Product	:	Secured Network Extension Device
Test Item	:	Maximum Power Output Data
Test Mode	:	Transmit (802.11ac-20 MHz)-CDD
Test Date	:	2022/06/29

Chain A+B

Channel No.	Frequency (MHz)	Data Rate (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
01	2412	MCS0	16.65	16.76	19.72	<30dBm	Pass
06	2437	MCS0	22.39	22.87	25.65	<30dBm	Pass
11	2462	MCS0	14.96	14.72	17.85	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW) + Chain B (mW))

Product	:	Secured Network Extension Device
Test Item	:	Maximum Power Output Data
Test Mode	:	Transmit (802.11ac-40 MHz)-CDD
Test Date	:	2022/06/29

Chain A+B

Channel No.	Frequency (MHz)	Data Rate (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
03	2422	MCS0	13.94	13.96	16.96	<30dBm	Pass
06	2437	MCS0	15.55	15.91	18.74	<30dBm	Pass
09	2452	MCS0	14.06	14.21	17.15	<30dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW) + Chain B (mW))

Product	:	Secured Network Extension Device
Test Item	:	Maximum Power Output Data
Test Mode	:	Transmit (802.11ac-20 MHz)-Beamforming
Test Date	:	2022/06/29

Chain A+B

Channel No.	Frequency (MHz)	Data Rate (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
01	2412	MCS0	13.64	13.75	16.71	<29.49dBm	Pass
06	2437	MCS0	19.38	19.86	22.64	<29.49dBm	Pass
11	2462	MCS0	11.95	11.71	14.84	<29.49dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW) + Chain B (mW)

Product : Secured Network Extension Device
Test Item : Maximum Power Output Data
Test Mode : Transmit (802.11ac-40 MHz)-Beamforming
Test Date : 2022/06/29

Chain A+B

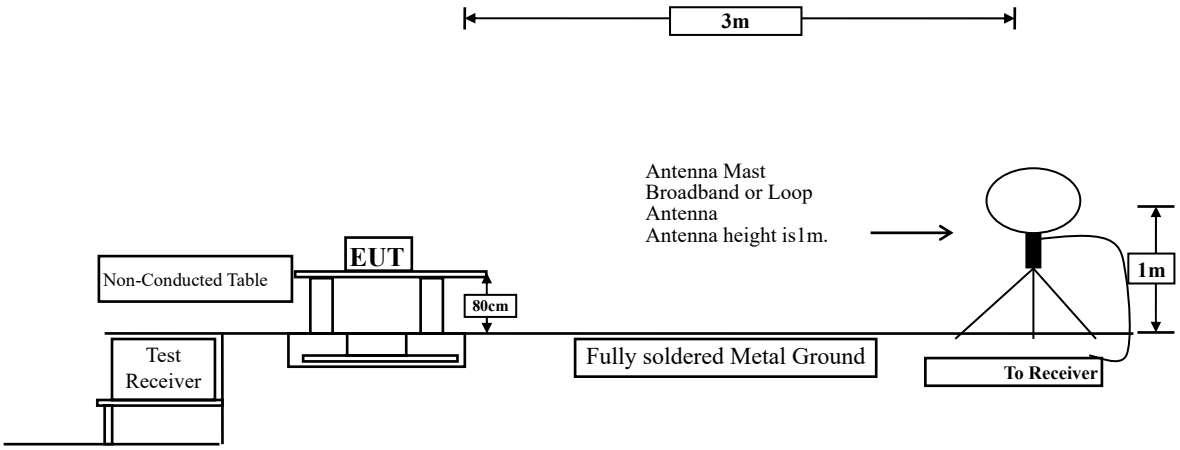
Channel No.	Frequency (MHz)	Data Rate (Mbps)	Chain A Power (dBm)	Chain B Power (dBm)	Chain A+B Power (dBm)	Limit (dBm)	Result
03	2422	MCS0	10.93	10.95	13.95	<29.49dBm	Pass
06	2437	MCS0	12.54	12.90	15.73	<29.49dBm	Pass
09	2452	MCS0	11.05	11.20	14.14	<29.49dBm	Pass

Note: Peak Power Output Value (dBm) = 10*LOG (Chain A (mW) + Chain B (mW)

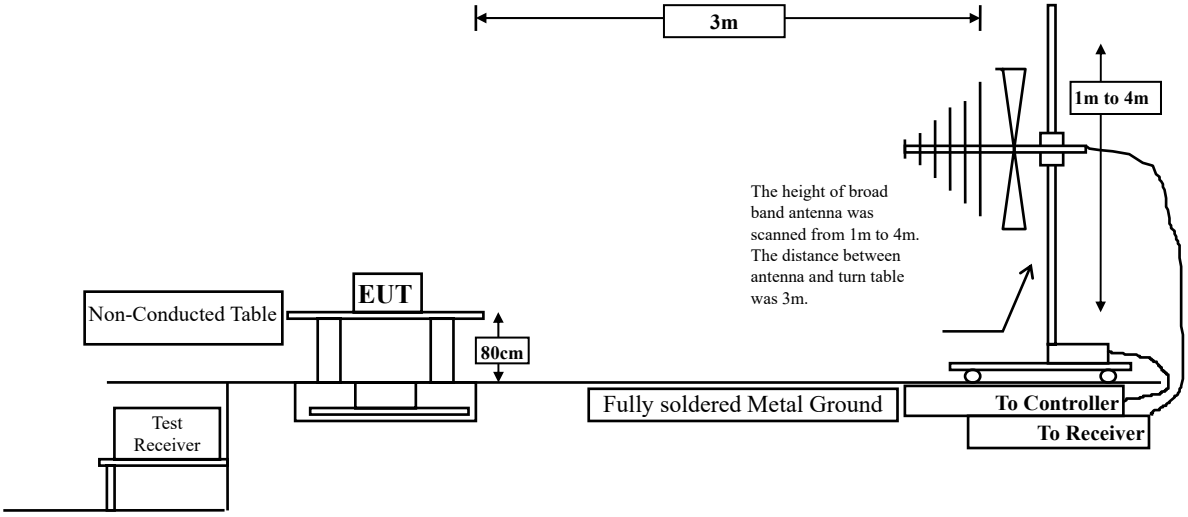
4. Radiated Emission

4.1. Test Setup

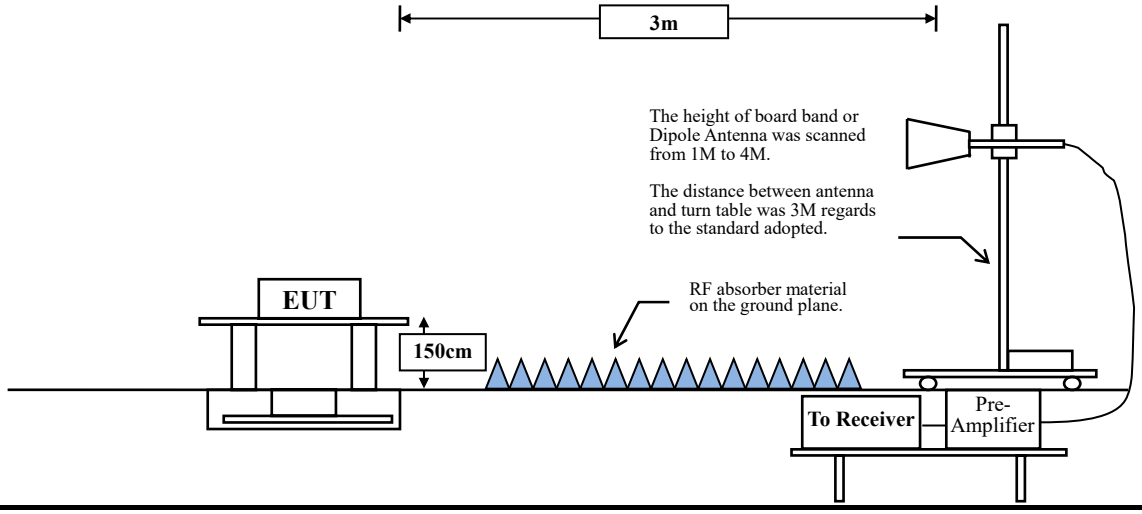
Radiated Emission Under 30MHz



Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



4.2. Limits

➢ General Radiated Emission Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits		
Frequency MHz	Field strength (microvolts/meter)	Measurement distance (meter)
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

Remarks: 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
2. In the Above Table, the tighter limit applies at the band edges.
3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

4.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to C63.10:2013 Section 11.12.1 for compliance to FCC 47CFR 15.247 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground,when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The measurement frequency range form 9kHz - 10th Harmonic of fundamental was investigated.

RBW and VBW Parameter setting:

According to C63.10 Section 11.12.2.4 Peak measurement procedure.

RBW = as specified in Table 1.

VBW ≥ 3 x RBW.

Table 1 - RBW as a function of frequency

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

According to C63.10 Section 11.12.2.5 Average measurement procedure.

RBW = 1MHz.

VBW = 10Hz, when duty cycle ≥ 98 %

VBW ≥ 1/T, when duty cycle < 98 %

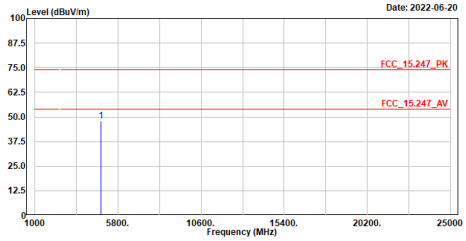
(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

2.4GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11b	99.19	12.2000	82	10
802.11g	94.81	2.0100	498	500
802.11ac20	97.24	4.9400	202	300
802.11ac40	93.65	2.3600	424	500

Note: Duty Cycle Refer to Section 9.

4.4. Test Result of Radiated Emission

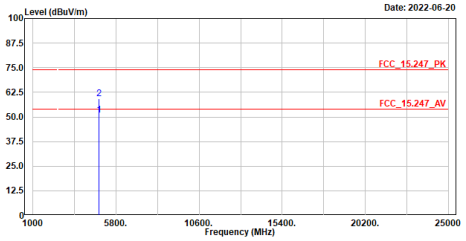
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_b_2412MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4824.000	48.10	74.00	-25.90	47.22	0.88	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

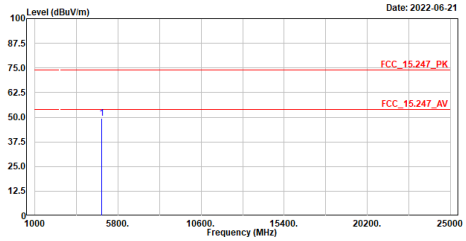
Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_b_2412MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4824.000	51.12	54.00	-2.88	50.24	0.88	Average
2	4824.000	59.31	74.00	-14.69	58.43	0.88	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

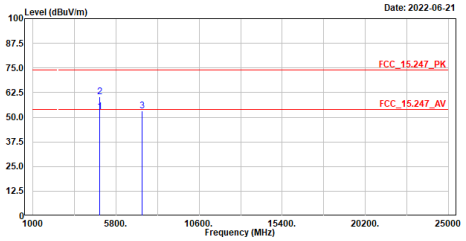
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_b_2437MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4874.000	49.60	74.00	-24.40	48.72	0.88	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

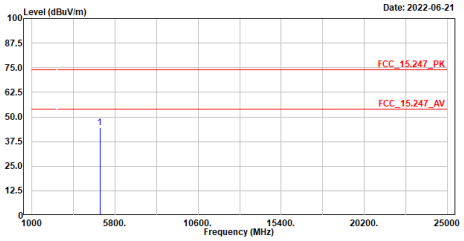
Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_b_2437MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4874.000	52.96	54.00	-1.04	52.08	0.88	Average
2	4874.000	60.50	74.00	-13.50	59.62	0.88	Peak
3	7311.000	53.38	74.00	-20.62	49.39	3.99	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

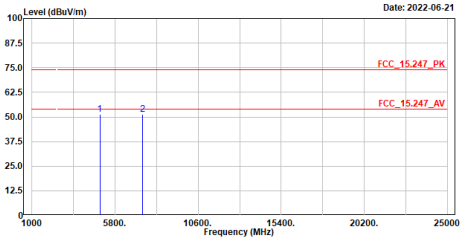
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_b_2462MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4924.000	44.57	74.00	-29.43	43.58	0.99	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

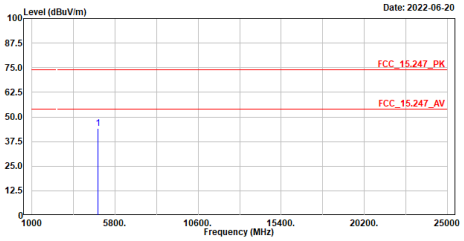
Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_b_2462MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4924.000	51.45	74.00	-22.55	50.46	0.99	Peak
2	7386.000	51.35	74.00	-22.65	47.33	4.02	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

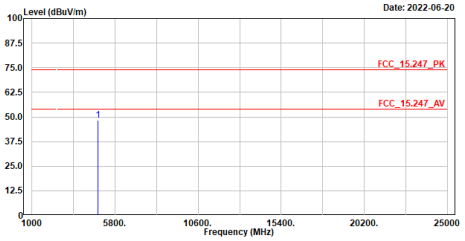
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_g_2412MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4824.000	44.04	74.00	-29.96	43.16	0.88	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

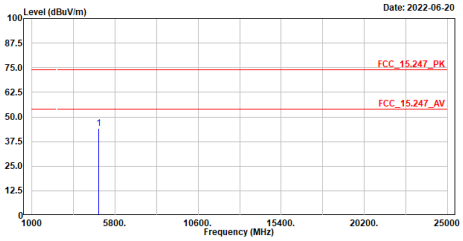
Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_g_2412MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4824.000	48.20	74.00	-25.80	47.32	0.88	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

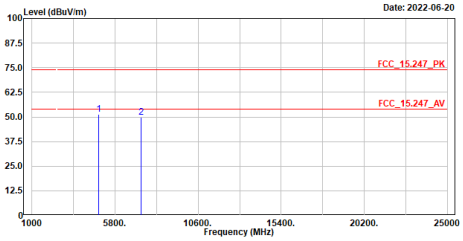
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_g_2437MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4874.000	44.15	74.00	-29.85	43.27	0.88	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

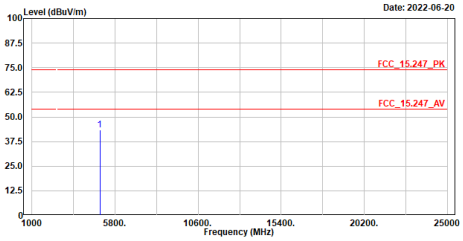
Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_g_2437MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4874.000	51.48	74.00	-22.52	50.61	0.87	Peak
2	7311.000	49.92	74.00	-24.08	45.94	3.98	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

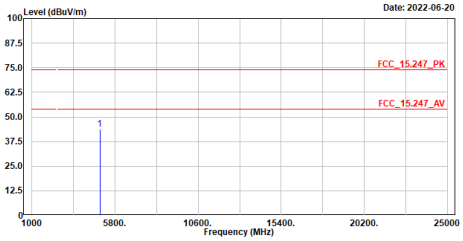
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_g_2462MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4924.000	43.24	74.00	-30.76	42.22	1.02	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

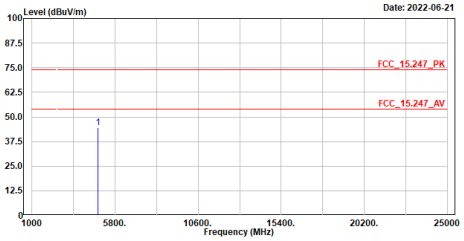
Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_g_2462MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4924.000	43.82	74.00	-30.18	42.81	1.01	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

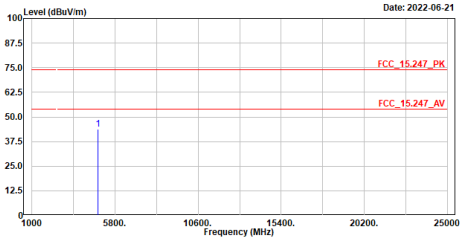
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ac20_2412MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4824.000	44.56	74.00	-29.44	43.68	0.88	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

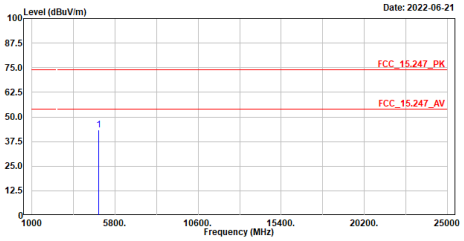
Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ac20_2412MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4824.000	43.90	74.00	-30.10	43.02	0.88	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

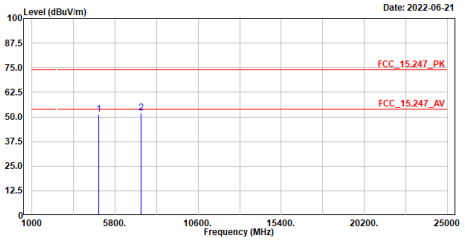
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ac20_2437MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4874.000	43.46	74.00	-30.54	42.58	0.88	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

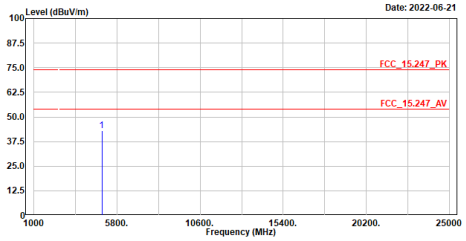
Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ac20_2437MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4874.000	51.22	74.00	-22.78	50.34	0.88	Peak
2	7311.000	51.95	74.00	-22.05	47.99	3.96	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

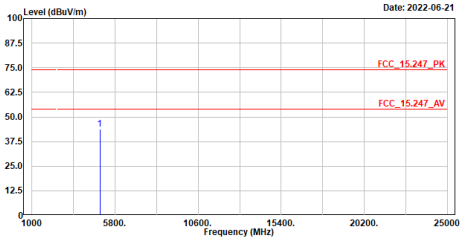
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ac20_2462MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4924.000	43.15	74.00	-30.85	42.16	0.99	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

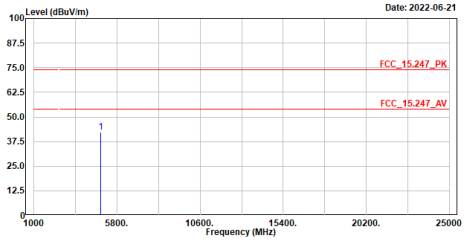
Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ac20_2462MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4924.000	43.62	74.00	-30.38	42.63	0.99	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

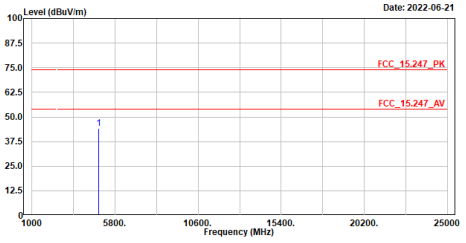
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ac40_2422MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4844.000	42.43	74.00	-31.57	41.59	0.84	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

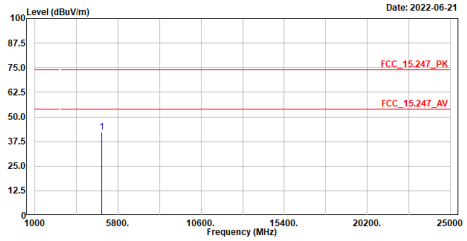
Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ac40_2422MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4844.000	44.29	74.00	-29.71	43.45	0.84	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

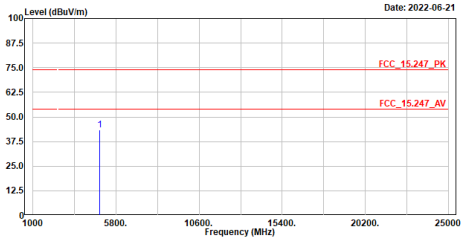
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ac40_2437MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4874.000	42.33	74.00	-31.67	41.45	0.88	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

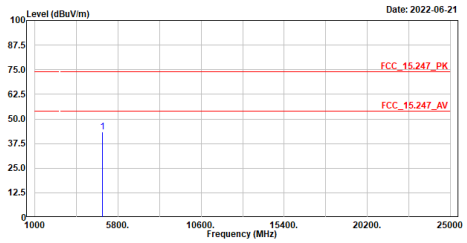
Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ac40_2437MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4874.000	43.49	74.00	-30.51	42.61	0.88	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

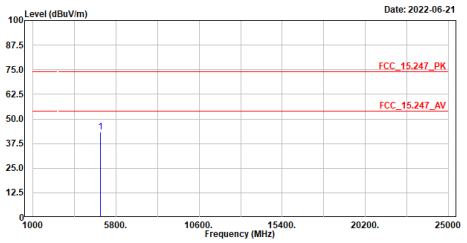
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ac40_2452MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4904.000	43.23	74.00	-30.77	42.28	0.95	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

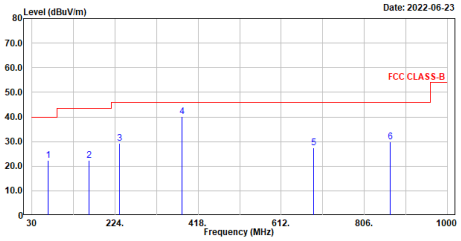
Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ac40_2452MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4904.000	43.46	74.00	-30.54	42.51	0.95	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

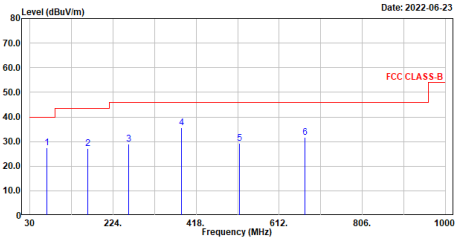
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :TX_ac40_2437MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	67.830	22.33	40.00	-17.67	48.44	-26.11	QP
2	163.860	22.22	43.50	-21.28	46.42	-24.20	QP
3	234.670	29.22	46.00	-16.78	55.26	-26.04	QP
4	381.140	40.00	46.00	-6.00	61.69	-21.69	QP
5	687.660	27.37	46.00	-18.63	42.60	-15.23	QP
6	866.140	29.90	46.00	-16.10	42.90	-13.00	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :TX_ac40_2437MHz
Test BY :Jing Chang

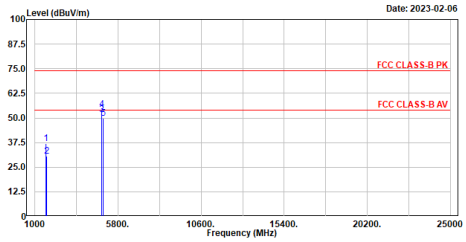


No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	69.770	27.57	40.00	-12.43	54.21	-26.64	QP
2	164.830	27.03	43.50	-16.47	51.30	-24.27	QP
3	260.860	29.10	46.00	-16.90	54.51	-25.41	QP
4	384.050	35.49	46.00	-10.51	57.11	-21.62	QP
5	518.880	29.31	46.00	-16.69	47.71	-18.40	QP
6	672.140	31.59	46.00	-14.41	47.12	-15.53	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Co-location for EM7511

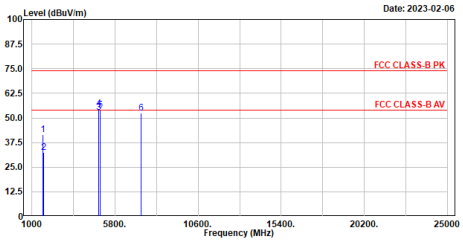
Site :HY-CB03
Condition :3m ,Horizontal
Mode :WCDMAB5_CH4132_LTEB5_1.4M_CH20525_b1e1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	1652.800	37.01	74.00	-36.99	62.01	-25.00	Peak
2	1673.000	30.72	74.00	-43.28	55.78	-25.06	Peak
3	4874.000	51.85	54.00	-2.15	65.86	-14.01	Average
4	4874.000	54.35	74.00	-19.65	68.36	-14.01	Peak
5	4960.000	49.80	74.00	-24.20	63.56	-13.76	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

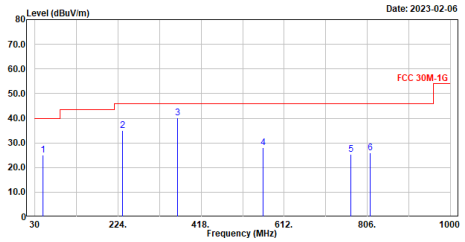
Site :HY-CB03
Condition :3m ,Vertical
Mode :WCDMAB5_CH4132_LTEB5_1.4M_CH20525_b1e1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	1652.800	41.64	74.00	-32.36	66.64	-25.00	Peak
2	1673.000	32.35	74.00	-41.65	57.41	-25.06	Peak
3	4874.000	52.72	54.00	-1.28	66.73	-14.01	Average
4	4874.000	54.88	74.00	-19.12	68.89	-14.01	Peak
5	4960.000	53.86	74.00	-20.14	67.62	-13.76	Peak
6	7311.000	52.51	74.00	-21.49	59.31	-6.80	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

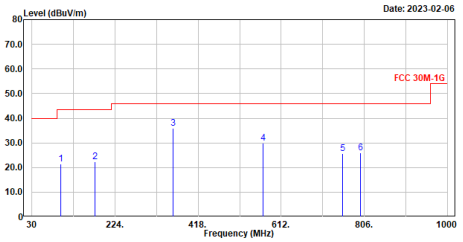
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :WCDMAB5_CH4132_LTEB5_1.4M_CH20525_b1e1M_2480MHz_b_2437MHz
Test BY :Lance



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	48.430	24.96	40.00	-15.04	49.08	-24.12	QP
2	234.670	35.15	46.00	-10.85	61.01	-25.86	QP
3	362.710	40.16	46.00	-5.84	62.23	-22.07	QP
4	563.500	28.04	46.00	-17.96	45.53	-17.49	QP
5	767.200	25.23	46.00	-20.77	38.99	-13.76	QP
6	812.790	25.97	46.00	-20.03	39.25	-13.28	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

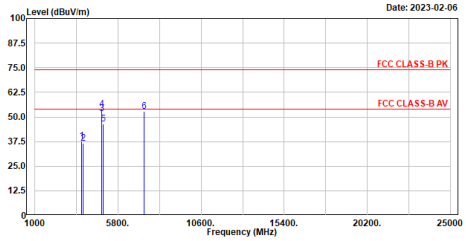
Site :HY-CB03
Condition :3m ,VERTICAL
Mode :WCDMAB5_CH4132_LTEB5_1.4M_CH20525_b1e1M_2480MHz_b_2437MHz
Test BY :Lance



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	97.900	21.53	43.50	-21.97	50.74	-29.21	QP
2	177.440	22.30	43.50	-21.20	47.51	-25.21	QP
3	358.830	35.86	46.00	-10.14	58.04	-22.18	QP
4	570.290	29.83	46.00	-16.17	47.05	-17.22	QP
5	755.560	25.63	46.00	-20.37	39.43	-13.80	QP
6	797.270	25.97	46.00	-20.03	39.33	-13.36	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

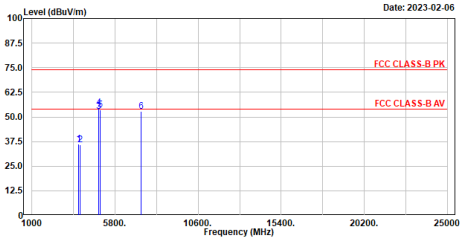
Site :HY-CB03
Condition :3m ,Horizontal
Mode :WCDMAB2_CH9262_LTEB2_20M_CH19100_ble1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	3704.800	37.88	74.00	-36.12	56.61	-18.73	Peak
2	3800.000	36.72	74.00	-37.28	54.92	-18.20	Peak
3	4874.000	51.69	54.00	-2.31	65.70	-14.01	Average
4	4874.000	54.06	74.00	-19.94	68.07	-14.01	Peak
5	4960.000	46.26	74.00	-27.74	60.02	-13.76	Peak
6	7311.000	52.82	74.00	-21.18	59.62	-6.80	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

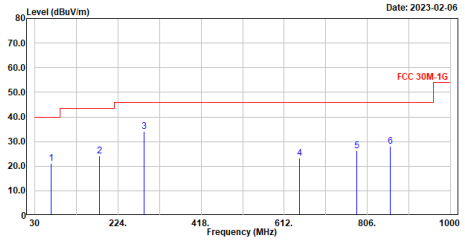
Site :HY-CB03
Condition :3m ,Vertical
Mode :WCDMAB2_CH9262_LTEB2_20M_CH19100_ble1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	3704.800	36.09	74.00	-37.91	54.82	-18.73	Peak
2	3800.000	35.94	74.00	-38.06	54.14	-18.20	Peak
3	4874.000	52.74	54.00	-1.26	66.75	-14.01	Average
4	4874.000	54.76	74.00	-19.24	68.77	-14.01	Peak
5	4960.000	53.42	74.00	-20.58	67.18	-13.76	Peak
6	7311.000	52.66	74.00	-21.34	59.46	-6.80	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

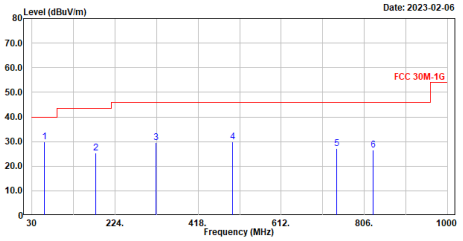
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :WCDMAB2_CH9262_LTEB2_20M_CH19100_ble1M_2480MHz_b_2437MHz
Test BY :Lance



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	67.830	21.15	40.00	-18.85	47.20	-26.05	QP
2	180.350	24.23	43.50	-19.27	49.79	-25.56	QP
3	285.110	34.18	46.00	-11.82	58.24	-24.06	QP
4	647.890	23.13	46.00	-22.87	38.60	-15.47	QP
5	781.750	26.22	46.00	-19.78	39.67	-13.45	QP
6	859.350	28.11	46.00	-17.89	41.02	-12.91	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

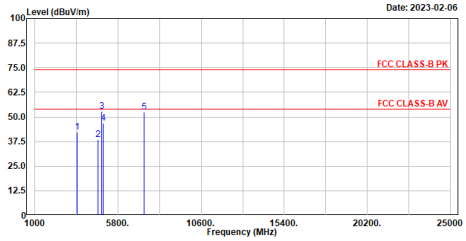
Site :HY-CB03
Condition :3m ,VERTICAL
Mode :WCDMAB2_CH9262_LTEB2_20M_CH19100_ble1M_2480MHz_b_2437MHz
Test BY :Lance



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	59.100	29.80	40.00	-10.20	54.85	-25.05	QP
2	178.410	25.32	43.50	-18.18	50.68	-25.36	QP
3	320.030	29.49	46.00	-16.51	52.43	-22.94	QP
4	498.510	29.87	46.00	-16.13	48.35	-18.48	QP
5	741.010	27.23	46.00	-18.77	41.24	-14.01	QP
6	827.340	26.49	46.00	-19.51	39.64	-13.15	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

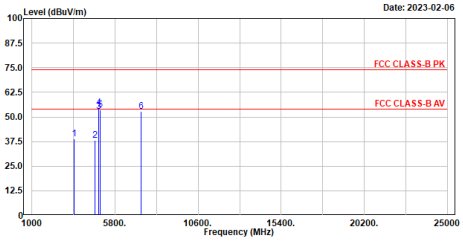
Site :HY-CB03
Condition :3m ,Horizontal
Mode :WCDMAB4_CH1312_LTEB30_5M_CH27735_ble1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	3424.800	42.16	74.00	-31.84	62.85	-20.69	Peak
2	4625.000	38.41	74.00	-35.59	53.71	-15.30	Peak
3	4874.000	53.02	74.00	-20.98	67.03	-14.01	Peak
4	4960.000	46.81	74.00	-27.19	60.57	-13.76	Peak
5	7311.000	52.55	74.00	-21.45	59.35	-6.80	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

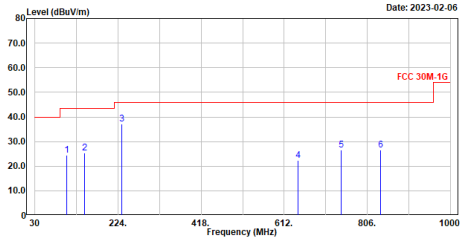
Site :HY-CB03
Condition :3m ,Vertical
Mode :WCDMAB4_CH1312_LTEB30_5M_CH27735_ble1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	3424.800	38.69	74.00	-35.31	59.38	-20.69	Peak
2	4625.000	38.17	74.00	-35.83	53.47	-15.30	Peak
3	4874.000	52.81	54.00	-1.19	66.82	-14.01	Average
4	4874.000	54.84	74.00	-19.16	68.85	-14.01	Peak
5	4960.000	53.57	74.00	-20.43	67.33	-13.76	Peak
6	7311.000	52.81	74.00	-21.19	59.61	-6.80	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

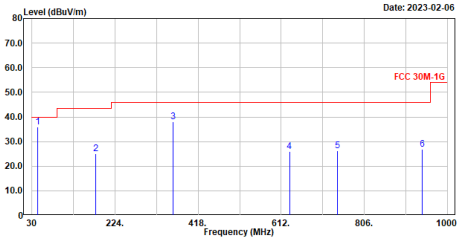
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :WCDMAB4_CH1312_LTEB30_5M_CH27735_ble1M_2480MHz_b_2437MHz
Test BY :Lance



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	104.690	24.35	43.50	-19.15	52.38	-28.03	QP
2	145.430	25.28	43.50	-18.22	49.73	-24.45	QP
3	233.700	37.24	46.00	-8.76	63.19	-25.95	QP
4	644.010	22.42	46.00	-23.58	37.94	-15.52	QP
5	744.890	26.61	46.00	-19.39	40.46	-13.85	QP
6	837.040	26.50	46.00	-19.50	39.48	-12.98	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

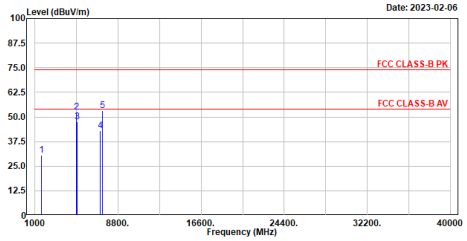
Site :HY-CB03
Condition :3m ,VERTICAL
Mode :WCDMAB4_CH1312_LTEB30_5M_CH27735_ble1M_2480MHz_b_2437MHz
Test BY :Lance



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	43.580	35.79	40.00	-4.21	59.81	-24.02	QP
2	179.380	25.03	43.50	-18.47	50.48	-25.45	QP
3	358.830	37.91	46.00	-8.09	60.09	-22.18	QP
4	631.400	25.91	46.00	-20.09	41.71	-15.80	QP
5	743.920	26.38	46.00	-19.62	40.27	-13.89	QP
6	941.800	26.79	46.00	-19.21	38.53	-11.74	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

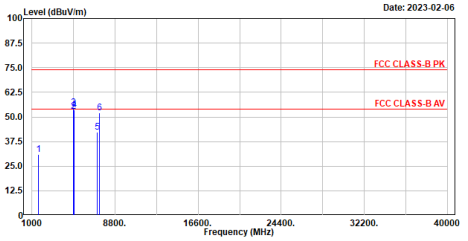
Site :HY-CB03
Condition :3m ,Horizontal
Mode :LTEB26_10M_CH26740_LTEB48_20M_CH55340_b1e1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	1638.000	30.67	74.00	-43.33	55.69	-25.02	Peak
2	4874.000	52.56	74.00	-21.44	66.57	-14.01	Peak
3	4960.000	47.62	74.00	-26.38	61.38	-13.76	Peak
4	7120.000	42.84	74.00	-31.16	50.34	-7.50	Peak
5	7311.000	53.22	74.00	-20.78	60.02	-6.80	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

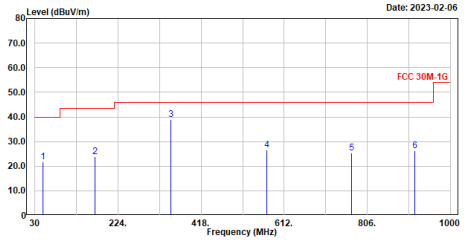
Site :HY-CB03
Condition :3m ,Vertical
Mode :LTEB26_10M_CH26740_LTEB48_20M_CH55340_b1e1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	1638.000	30.85	74.00	-43.15	55.87	-25.02	Peak
2	4874.000	52.75	54.00	-1.25	66.76	-14.01	Average
3	4874.000	54.89	74.00	-19.11	68.90	-14.01	Peak
4	4960.000	53.64	74.00	-20.36	67.40	-13.76	Peak
5	7120.000	42.32	74.00	-31.68	49.82	-7.50	Peak
6	7311.000	51.96	74.00	-22.04	58.76	-6.80	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

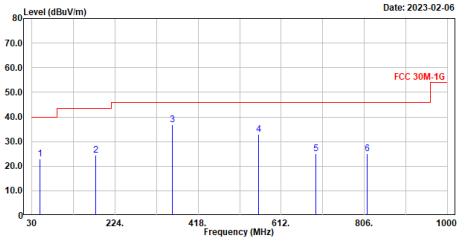
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :LTEB26_10M_CH26740_LTEB48_20M_CH55340_b1e1M_2480MHz_b_2437MHz
Test BY :Lance



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	48.430	21.62	40.00	-18.38	45.74	-24.12	QP
2	170.650	23.81	43.50	-19.69	48.24	-24.43	QP
3	347.190	38.97	46.00	-7.03	61.55	-22.58	QP
4	571.260	26.58	46.00	-19.42	43.76	-17.18	QP
5	770.110	25.22	46.00	-20.78	38.90	-13.68	QP
6	916.580	26.21	46.00	-19.79	38.18	-11.97	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :LTEB26_10M_CH26740_LTEB48_20M_CH55340_b1e1M_2480MHz_b_2437MHz
Test BY :Lance

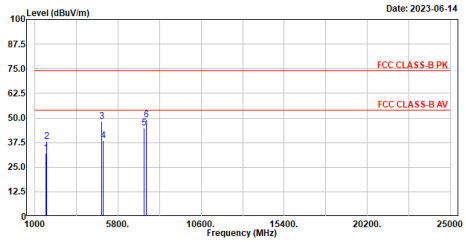


No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	48.430	22.98	40.00	-17.02	47.10	-24.12	QP
2	178.410	24.46	43.50	-19.04	49.82	-25.36	QP
3	357.860	36.90	46.00	-9.10	59.13	-22.23	QP
4	559.620	32.84	46.00	-13.16	50.43	-17.59	QP
5	693.480	25.03	46.00	-20.97	40.02	-14.99	QP
6	812.790	24.91	46.00	-21.09	38.19	-13.28	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Co-location for EM7565

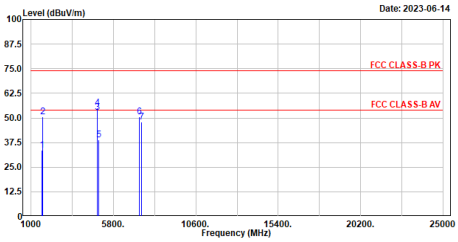
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :WCDMAB5_CH4132_LTEB26_1.4M_CH26915_ble1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	1652.800	32.26	74.00	-41.74	57.25	-24.99	Peak
2	1673.000	37.93	74.00	-36.07	62.81	-24.88	Peak
3	4874.000	48.48	74.00	-25.52	62.34	-13.86	Peak
4	4960.000	38.59	74.00	-35.41	52.25	-13.66	Peak
5	7311.000	44.88	74.00	-29.12	51.62	-6.74	Peak
6	7440.000	49.20	74.00	-24.80	55.77	-6.57	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

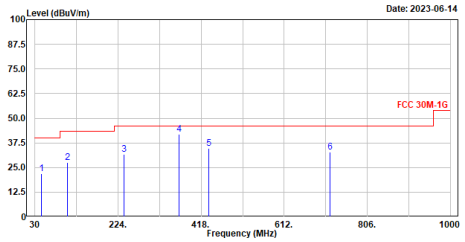
Site :HY-CB03
Condition :3m ,VERTICAL
Mode :WCDMAB5_CH4132_LTEB26_1.4M_CH26915_ble1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	1652.800	33.77	74.00	-40.23	58.76	-24.99	Peak
2	1673.000	50.41	74.00	-23.59	75.29	-24.88	Peak
3	4874.000	52.83	54.00	-1.17	66.69	-13.86	Average
4	4874.000	55.26	74.00	-18.74	69.12	-13.86	Peak
5	4960.000	38.78	74.00	-35.22	52.44	-13.66	Peak
6	7311.000	50.45	74.00	-23.55	57.19	-6.74	Peak
7	7440.000	47.85	74.00	-26.15	54.42	-6.57	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

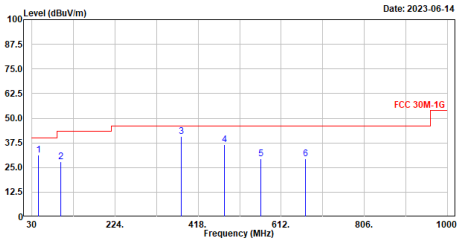
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :WCDMAB5_CH4132_LTEB26_1.4M_CH26915_ble1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	44.550	21.93	40.00	-18.07	45.87	-23.94	QP
2	106.630	27.56	43.50	-15.94	55.33	-27.77	QP
3	237.580	31.58	46.00	-14.42	57.33	-25.75	QP
4	366.590	41.75	46.00	-4.25	63.72	-21.97	QP
5	436.430	34.86	46.00	-11.14	54.86	-20.00	QP
6	719.670	32.97	46.00	-13.03	47.59	-14.62	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

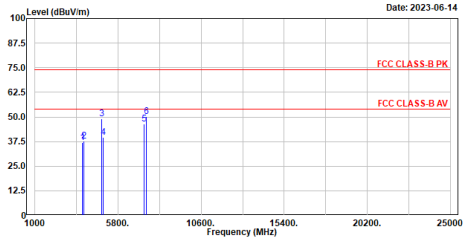
Site :HY-CB03
Condition :3m ,VERTICAL
Mode :WCDMAB5_CH4132_LTEB26_1.4M_CH26915_ble1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	44.550	31.26	40.00	-8.74	55.20	-23.94	QP
2	97.900	28.11	43.50	-15.39	57.32	-29.21	QP
3	379.200	40.62	46.00	-5.38	62.29	-21.67	QP
4	480.080	36.49	46.00	-9.51	55.66	-19.17	QP
5	564.470	29.42	46.00	-16.58	46.88	-17.46	QP
6	669.230	29.56	46.00	-16.44	44.93	-15.37	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

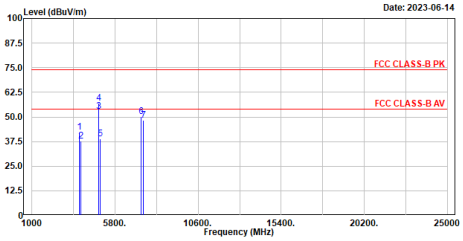
Site :HY-CB03
Condition :3m ,Horizontal
Mode :WCDMAB2_CH9538_LTEB2_20M_CH18900_ble1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	3760.000	36.95	74.00	-37.05	55.22	-18.27	Peak
2	3815.200	37.87	74.00	-36.13	55.81	-17.94	Peak
3	4874.000	49.14	74.00	-24.86	63.00	-13.86	Peak
4	4960.000	39.71	74.00	-34.29	53.37	-13.66	Peak
5	7311.000	46.33	74.00	-27.67	53.07	-6.74	Peak
6	7440.000	50.03	74.00	-23.97	56.60	-6.57	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

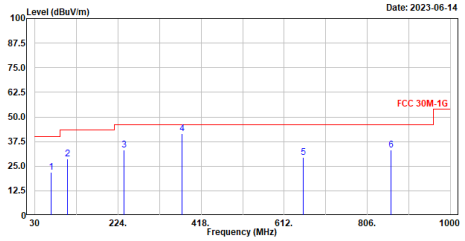
Site :HY-CB03
Condition :3m ,Vertical
Mode :WCDMAB2_CH9538_LTEB2_20M_CH18900_ble1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	3760.000	42.23	74.00	-31.77	60.50	-18.27	Peak
2	3815.200	37.84	74.00	-36.16	55.78	-17.94	Peak
3	4874.000	52.88	54.00	-1.12	66.74	-13.86	Average
4	4874.000	57.04	74.00	-16.96	70.90	-13.86	Peak
5	4960.000	39.04	74.00	-34.96	52.70	-13.66	Peak
6	7311.000	50.14	74.00	-23.86	56.88	-6.74	Peak
7	7440.000	48.43	74.00	-25.57	55.00	-6.57	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

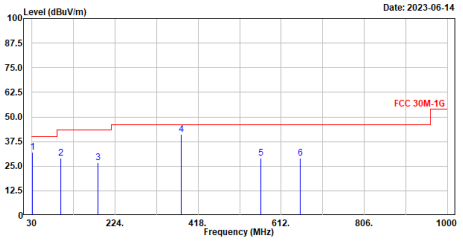
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :WCDMAB2_CH9538_LTEB2_20M_CH18900_ble1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	67.830	21.91	40.00	-18.09	47.96	-26.05	QP
2	106.630	28.53	43.50	-14.97	56.30	-27.77	QP
3	237.580	33.31	46.00	-12.69	59.06	-25.75	QP
4	374.350	41.56	46.00	-4.44	63.34	-21.78	QP
5	656.620	29.31	46.00	-16.69	44.67	-15.36	QP
6	861.290	33.19	46.00	-12.81	46.07	-12.88	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

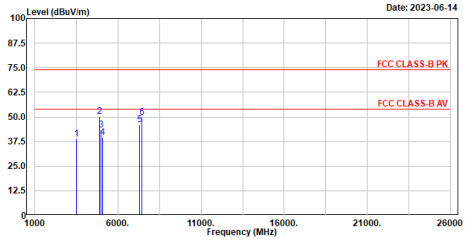
Site :HY-CB03
Condition :3m ,VERTICAL
Mode :WCDMAB2_CH9538_LTEB2_20M_CH18900_ble1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	30.970	32.14	40.00	-7.86	57.68	-25.54	QP
2	97.900	28.91	43.50	-14.59	58.12	-29.21	QP
3	184.230	26.78	43.50	-16.72	52.78	-26.00	QP
4	378.230	41.04	46.00	-4.96	62.74	-21.70	QP
5	564.470	28.90	46.00	-17.10	46.36	-17.46	QP
6	656.620	29.20	46.00	-16.80	44.56	-15.36	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

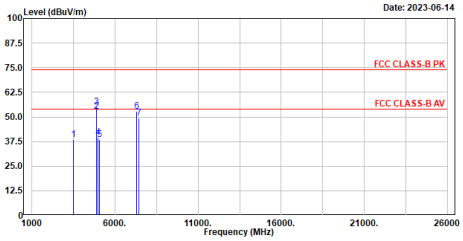
Site :HY-CB03
Condition :3m ,Horizontal
Mode :WCDMAB4_CH1513_LTEB7_10M_CH21100_ble1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	3505.200	38.96	74.00	-35.04	59.38	-20.42	Peak
2	4874.000	50.06	74.00	-23.94	63.92	-13.86	Peak
3	4960.000	43.45	74.00	-30.55	57.11	-13.66	Peak
4	5070.000	39.66	74.00	-34.34	53.29	-13.63	Peak
5	7311.000	45.98	74.00	-28.02	52.72	-6.74	Peak
6	7440.000	49.74	74.00	-24.26	56.31	-6.57	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

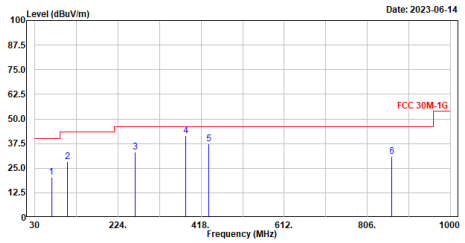
Site :HY-CB03
Condition :3m ,Vertical
Mode :WCDMAB4_CH1513_LTEB7_10M_CH21100_ble1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	3505.200	38.54	74.00	-35.46	58.96	-20.42	Peak
2	4874.000	52.90	54.00	-1.10	66.76	-13.86	Average
3	4874.000	55.04	74.00	-18.96	68.90	-13.86	Peak
4	4960.000	39.79	74.00	-34.21	53.45	-13.66	Peak
5	5070.000	38.67	74.00	-35.33	52.30	-13.63	Peak
6	7311.000	53.01	74.00	-20.99	59.75	-6.74	Peak
7	7440.000	49.32	74.00	-24.68	55.89	-6.57	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

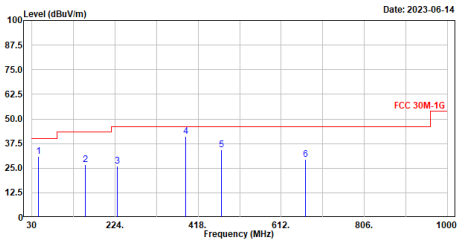
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :WCDMAB4_CH1513_LTEB7_10M_CH21100_ble1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	68.800	20.48	40.00	-19.52	46.81	-26.33	QP
2	106.630	28.48	43.50	-15.02	56.25	-27.77	QP
3	263.770	33.29	46.00	-12.71	58.42	-25.13	QP
4	382.110	41.55	46.00	-4.45	63.15	-21.60	QP
5	435.460	37.31	46.00	-8.69	57.35	-20.04	QP
6	863.230	30.96	46.00	-15.04	43.79	-12.83	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

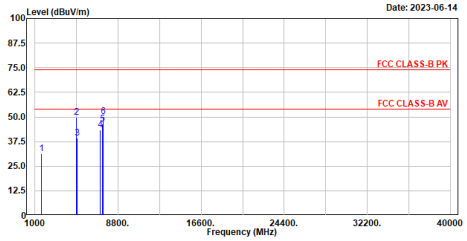
Site :HY-CB03
Condition :3m ,VERTICAL
Mode :WCDMAB4_CH1513_LTEB7_10M_CH21100_ble1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	45.520	31.06	40.00	-8.94	54.96	-23.90	QP
2	155.130	26.65	43.50	-16.85	50.79	-24.14	QP
3	229.820	26.13	46.00	-19.87	52.46	-26.33	QP
4	389.870	40.96	46.00	-5.04	62.36	-21.40	QP
5	472.320	34.30	46.00	-11.70	53.50	-19.20	QP
6	669.230	29.55	46.00	-16.45	44.92	-15.37	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

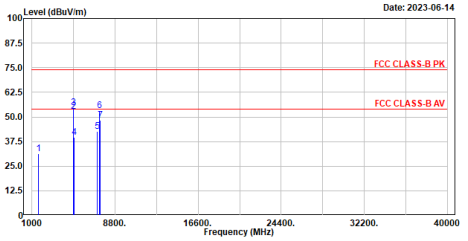
Site :HY-CB03
Condition :3m ,Horizontal
Mode :LTEB26_10M_CH26740_LTEB48_5M_CH55990_ble1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	1638.000	31.24	74.00	-42.76	56.21	-24.97	Peak
2	4874.000	49.87	74.00	-24.13	63.73	-13.86	Peak
3	4960.000	39.29	74.00	-34.71	52.95	-13.66	Peak
4	7120.000	43.35	74.00	-30.65	50.69	-7.34	Peak
5	7311.000	46.30	74.00	-27.70	53.04	-6.74	Peak
6	7440.000	50.25	74.00	-23.75	56.82	-6.57	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

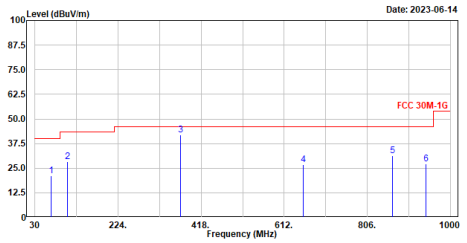
Site :HY-CB03
Condition :3m ,Vertical
Mode :LTEB26_10M_CH26740_LTEB48_5M_CH55990_ble1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	1638.000	31.22	74.00	-42.78	56.19	-24.97	Peak
2	4874.000	52.83	54.00	-1.17	66.69	-13.86	Average
3	4874.000	54.84	74.00	-19.16	68.70	-13.86	Peak
4	4960.000	39.70	74.00	-34.30	53.36	-13.66	Peak
5	7120.000	42.54	74.00	-31.46	49.88	-7.34	Peak
6	7311.000	53.13	74.00	-20.87	59.87	-6.74	Peak
7	7440.000	48.35	74.00	-25.65	54.92	-6.57	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

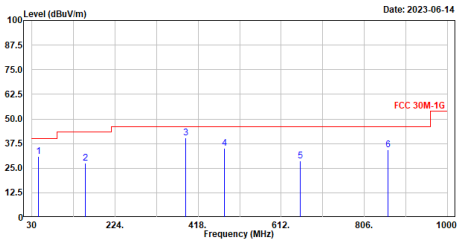
Site :HY-CB03
Condition :3m ,HORIZONTAL
Mode :LTEB26_10M_CH26740_LTEB48_5M_CH55990_ble1M_2480MHz_b_2437MHz
Test BY :Ashton



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	67.830	20.97	40.00	-19.03	47.02	-26.05	QP
2	106.630	28.38	43.50	-15.12	56.15	-27.77	QP
3	370.470	41.76	46.00	-4.24	63.62	-21.86	QP
4	656.620	26.98	46.00	-19.02	42.34	-15.36	QP
5	864.200	31.24	46.00	-14.76	44.05	-12.81	QP
6	943.740	27.34	46.00	-18.66	39.05	-11.71	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

Site :HY-CB03
Condition :3m ,VERTICAL
Mode :LTEB26_10M_CH26740_LTEB48_5M_CH55990_ble1M_2480MHz_b_2437MHz
Test BY :Ashton



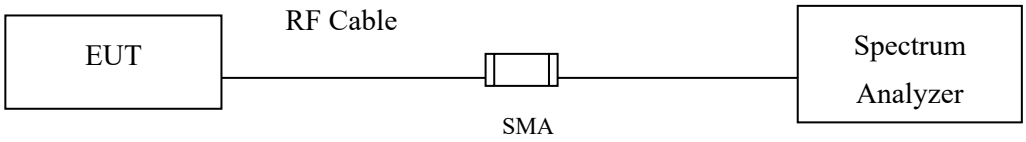
No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	44.550	31.07	40.00	-8.93	55.01	-23.94	QP
2	155.130	27.46	43.50	-16.04	51.60	-24.14	QP
3	389.870	40.43	46.00	-5.57	61.83	-21.40	QP
4	479.110	35.17	46.00	-10.83	54.34	-19.17	QP
5	656.620	28.50	46.00	-17.50	43.86	-15.36	QP
6	861.290	34.16	46.00	-11.84	47.04	-12.88	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.

5. RF Antenna Conducted Test

5.1. Test Setup

RF antenna Conducted Measurement:



5.2. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

5.3. Test Procedure

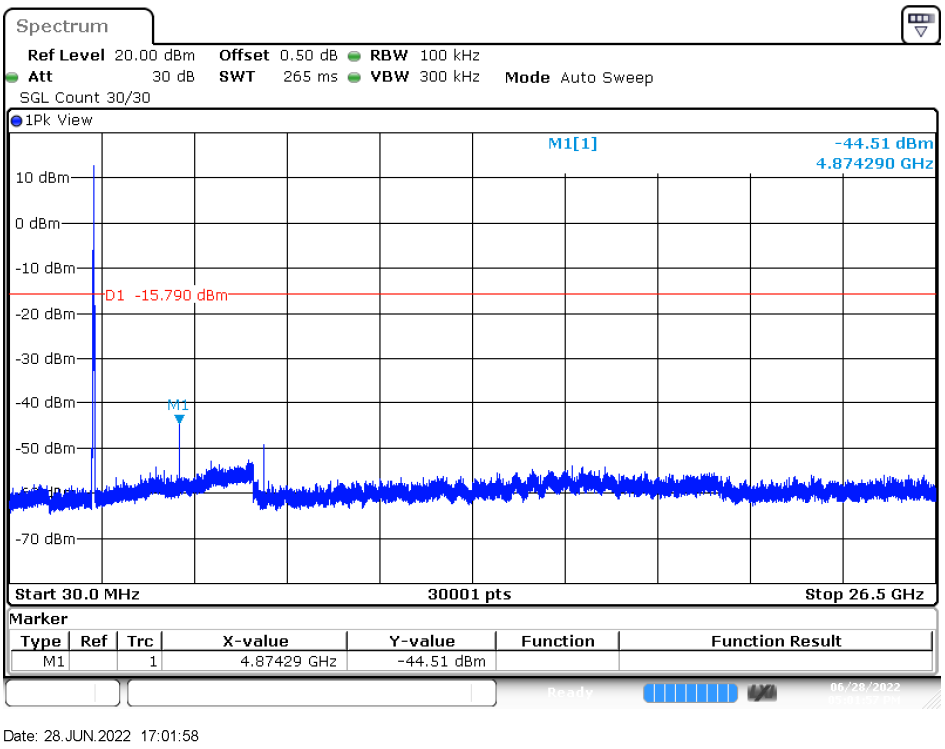
The EUT was tested according to C63.10:2013 Section 11.11 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.

5.4. Test Result of RF antenna conducted test

Product	:	Secured Network Extension Device
Test Item	:	RF antenna conducted test
Test Mode	:	Transmit (802.11b)-CDD
Test Date	:	2022/06/28

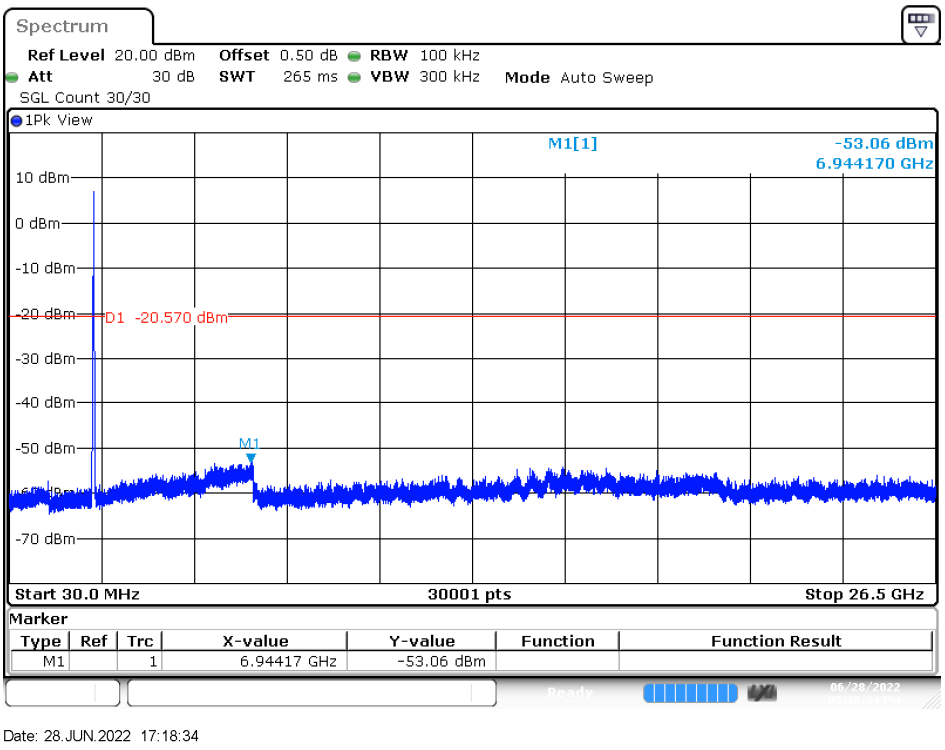
Channel 06 (2437MHz) (Chain B)



Date: 28.JUN.2022 17:01:58

Product	:	Secured Network Extension Device
Test Item	:	RF Antenna Conducted Spurious
Test Mode	:	Transmit (802.11g)-CDD
Test Date	:	2022/06/28

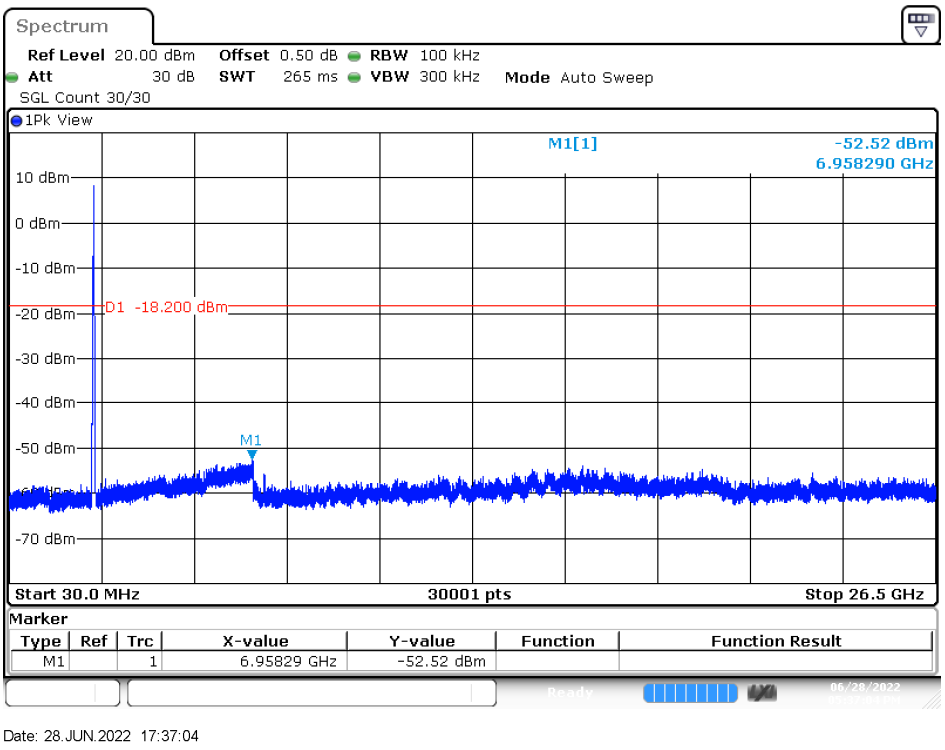
Channel 06 (2437MHz) (Chain A)



Date: 28.JUN.2022 17:18:34

Product	:	Secured Network Extension Device
Test Item	:	RF Antenna Conducted Spurious
Test Mode	:	Transmit (802.11ac-20 MHz)-CDD
Test Date	:	2022/06/28

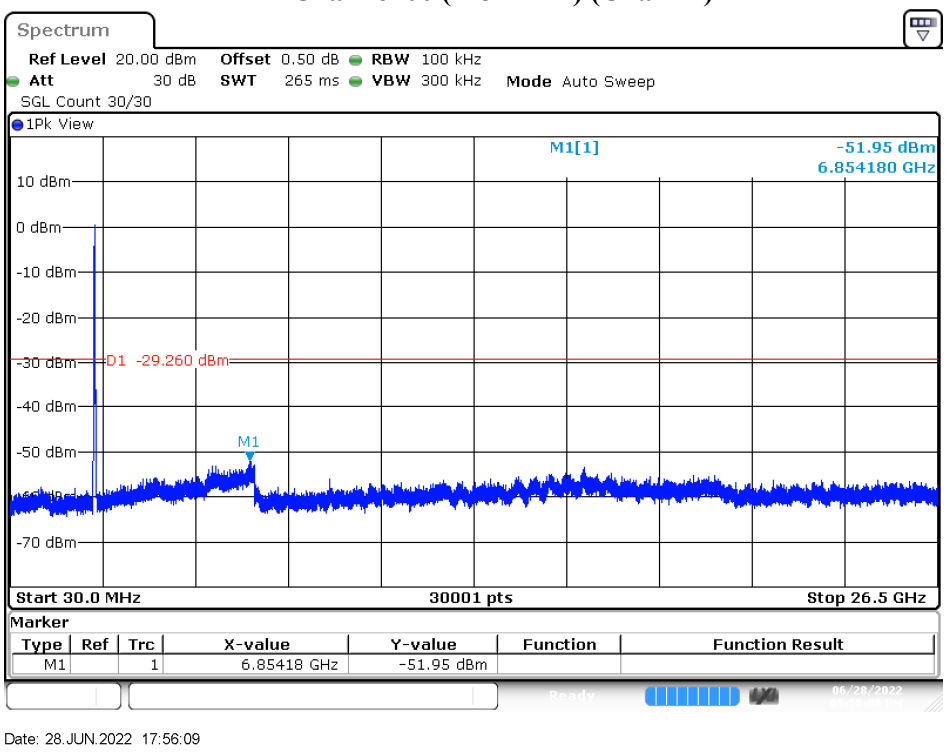
Channel 06 (2437MHz) (Chain B)



Date: 28.JUN.2022 17:37:04

Product	:	Secured Network Extension Device
Test Item	:	RF Antenna Conducted Spurious
Test Mode	:	Transmit (802.11ac-40 MHz)-CDD
Test Date	:	2022/06/28

Channel 06 (2437MHz) (Chain B)

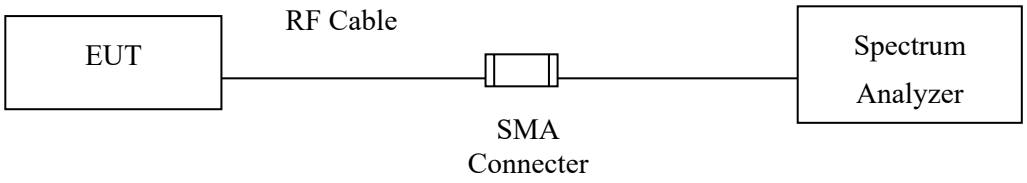


Date: 28.JUN.2022 17:56:09

6. Band Edge

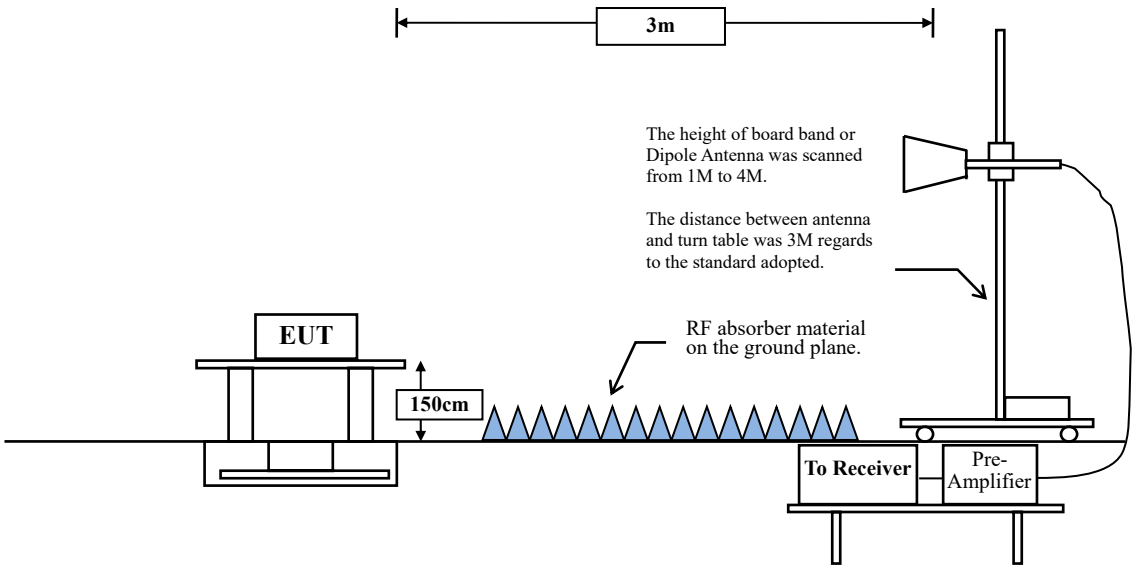
6.1. Test Setup

RF Conducted Measurement



RF Radiated Measurement:

Above 1GHz



6.2. Limits

According to FCC Section 15.247(d). In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

6.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to C63.10:2013 Section 11.12.1 for compliance to FCC 47CFR 15.247 requirements.
The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.

RBW and VBW Parameter setting:

According to C63.10 Section 11.12.2.4 Peak measurement procedure.

RBW = as specified in Table 1.

VBW ≥ 3 x RBW.

Table 1 - RBW as a function of frequency

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

According to C63.10 Section 11.12.2.5 Average measurement procedure.

RBW = 1MHz.

VBW = 10Hz, when duty cycle ≥ 98 %

VBW ≥ 1/T, when duty cycle < 98 %

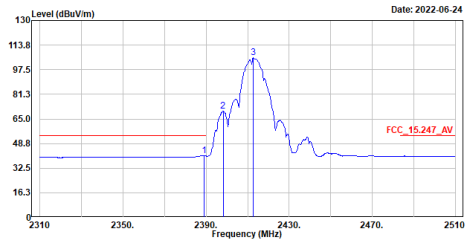
(T refers to the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.)

2.4GHz band	Duty Cycle (%)	T (ms)	1/T (Hz)	VBW (Hz)
802.11b	99.19	12.2000	82	10
802.11g	94.81	2.0100	498	500
802.11ax20	97.24	4.9400	202	300
802.11ax40	93.65	2.3600	424	500

Note: Duty Cycle Refer to Section 9.

6.4. Test Result of Band Edge

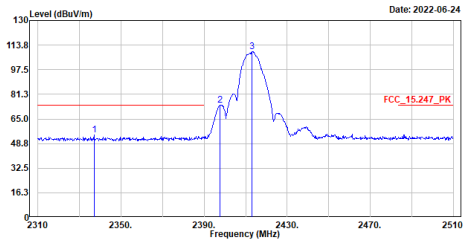
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_b_2412MHz
Test BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2389.000	40.82	54.00	-13.18	29.05	11.77	Average
2	2398.200	70.07	------	------	58.25	11.82	Average
3	2412.800	105.31	------	------	93.46	11.85	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

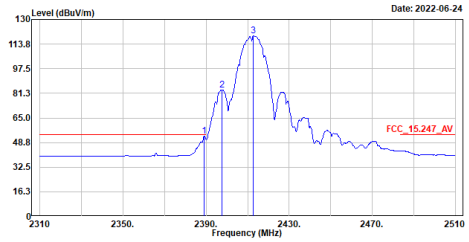
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_b_2412MHz
Test BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2337.000	54.64	74.00	-19.36	43.14	11.50	Peak
2	2397.800	73.90	------	------	62.08	11.82	Peak
3	2413.200	109.33	------	------	97.48	11.85	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

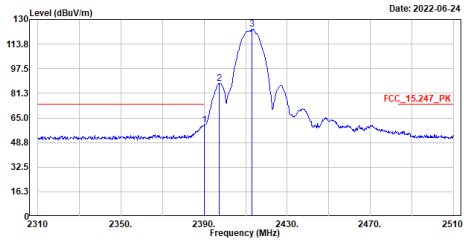
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_b_2412MHz
Test BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2389.200	52.95	54.00	-1.05	41.18	11.77	Average
2	2397.600	83.57	------	------	71.75	11.82	Average
3	2412.600	119.45	------	------	107.60	11.85	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

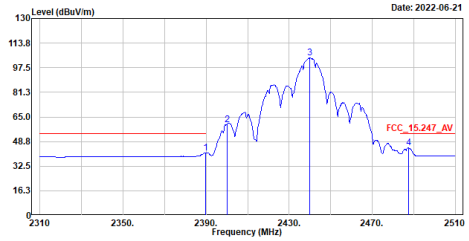
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_b_2412MHz
Test BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2390.000	60.19	74.00	-13.81	48.42	11.77	Peak
2	2397.400	87.75	------	------	75.93	11.82	Peak
3	2413.200	123.55	------	------	111.70	11.85	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

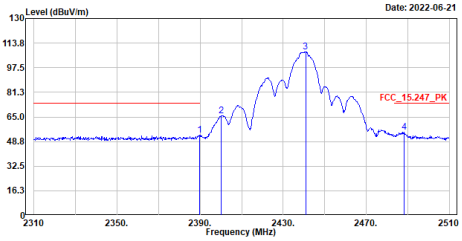
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_b_2437MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2389.800	41.26	54.00	-12.74	29.49	11.77	Average
2	2400.000	60.07	------	------	48.24	11.83	Average
3	2439.800	104.12	------	------	92.22	11.90	Average
4	2487.400	44.67	54.00	-9.33	32.69	11.98	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

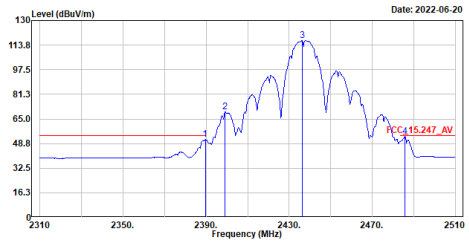
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_b_2437MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2389.800	52.91	74.00	-21.09	41.14	11.77	Peak
2	2400.000	65.58	------	------	53.75	11.83	Peak
3	2440.800	108.14	------	------	96.24	11.90	Peak
4	2488.200	55.17	74.00	-18.83	43.19	11.98	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

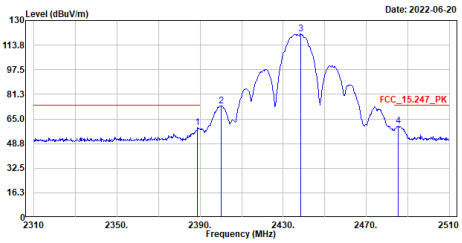
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_b_2437MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2389.600	51.36	54.00	-2.64	39.59	11.77	Average
2	2399.200	69.63	------	------	57.80	11.83	Average
3	2436.200	116.97	------	------	105.08	11.89	Average
4	2485.800	53.42	54.00	-0.58	41.44	11.98	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

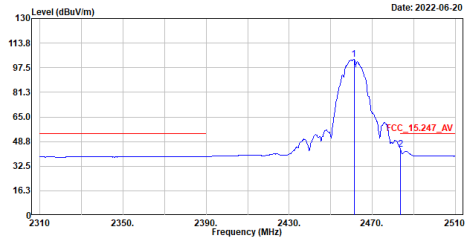
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_b_2437MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2388.800	59.30	74.00	-14.70	47.53	11.77	Peak
2	2400.000	73.74	------	------	61.91	11.83	Peak
3	2438.400	121.05	------	------	109.16	11.89	Peak
4	2485.200	60.34	74.00	-13.66	48.36	11.98	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

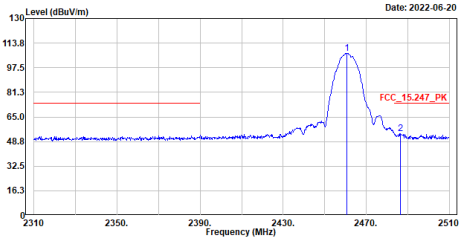
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_b_2462MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2461.200	102.94	------	------	91.00	11.94	Average
2	2483.600	43.55	54.00	-10.45	31.57	11.98	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

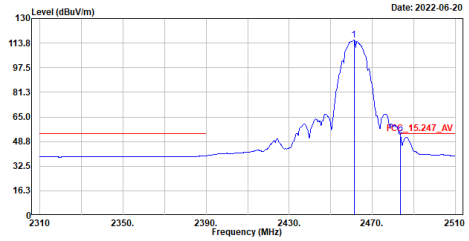
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_b_2462MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2460.600	107.12	------	------	95.19	11.93	Peak
2	2486.600	53.85	74.00	-20.15	41.87	11.98	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

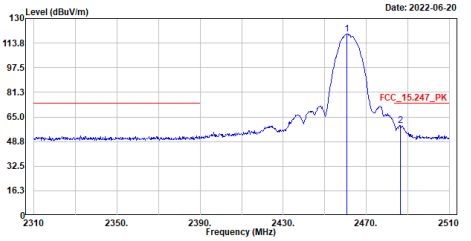
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_b_2462MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2461.200	115.88	------	------	103.94	11.94	Average
2	2483.500	52.51	54.00	-1.49	40.53	11.98	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

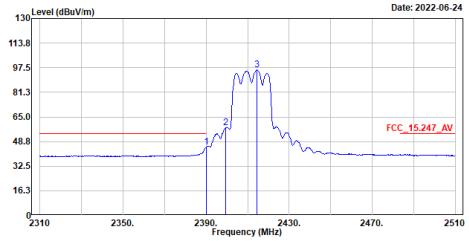
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_b_2462MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2460.600	119.88	------	------	107.95	11.93	Peak
2	2486.400	59.56	74.00	-14.44	47.58	11.98	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

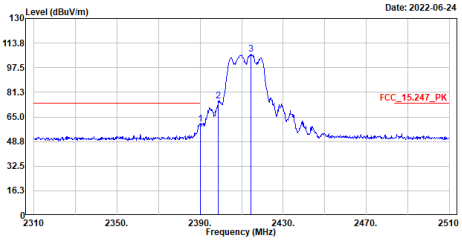
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_g_2412MHz
Test BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2390.000	45.06	54.00	-8.94	33.29	11.77	Average
2	2399.600	58.02	------	------	46.19	11.83	Average
3	2414.400	96.01	------	------	84.16	11.85	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

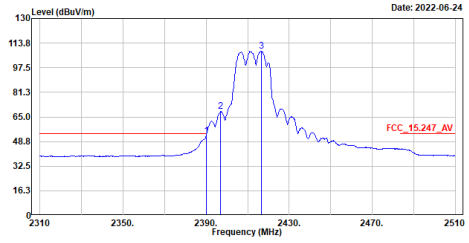
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_g_2412MHz
Test BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2390.000	60.45	74.00	-13.55	48.68	11.77	Peak
2	2398.800	75.47	------	------	63.64	11.83	Peak
3	2414.600	106.42	------	------	94.57	11.85	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

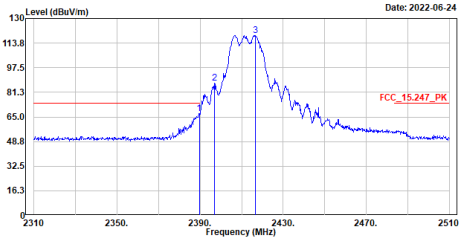
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_g_2412MHz
Test BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2390.000	52.59	54.00	-1.41	40.82	11.77	Average
2	2397.000	68.47	------	------	56.65	11.82	Average
3	2416.600	108.57	------	------	96.71	11.86	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

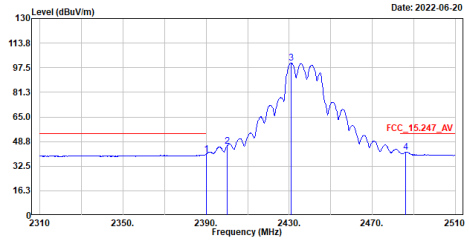
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_g_2412MHz
Test BY :Ashton Chiu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2389.600	67.38	74.00	-6.62	55.61	11.77	Peak
2	2396.800	87.44	------	------	75.62	11.82	Peak
3	2416.600	118.87	------	------	107.01	11.86	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

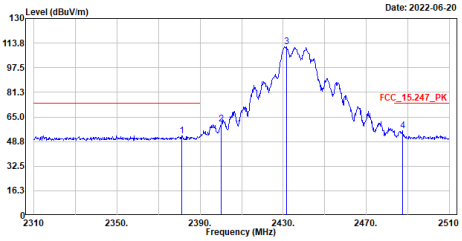
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_g_2437MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2390.000	40.36	54.00	-13.64	28.59	11.77	Average
2	2400.000	45.67	------	------	33.84	11.83	Average
3	2431.000	100.66	------	------	88.78	11.88	Average
4	2486.200	41.94	54.00	-12.06	29.96	11.98	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

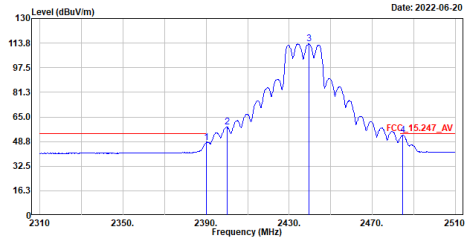
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_g_2437MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2381.200	52.51	74.00	-21.49	40.79	11.72	Peak
2	2400.000	60.37	------	------	48.54	11.83	Peak
3	2431.600	111.55	------	------	99.67	11.88	Peak
4	2487.400	55.72	74.00	-18.28	43.74	11.98	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

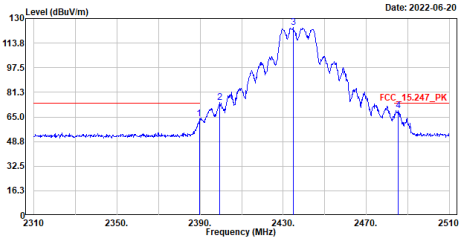
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_g_2437MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2390.000	48.02	54.00	-5.98	36.25	11.77	Average
2	2400.000	58.32	------	------	46.49	11.83	Average
3	2439.400	113.19	------	------	101.29	11.90	Average
4	2484.600	52.98	54.00	-1.02	41.00	11.98	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

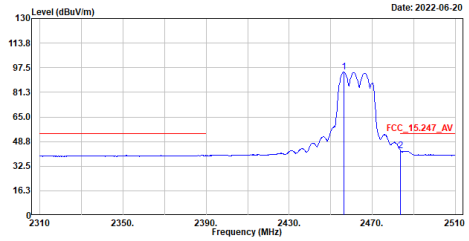
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_g_2437MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2389.600	63.77	74.00	-10.23	52.00	11.77	Peak
2	2399.600	74.34	------	------	62.51	11.83	Peak
3	2434.800	123.95	------	------	112.06	11.89	Peak
4	2485.400	69.11	74.00	-4.89	57.13	11.98	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

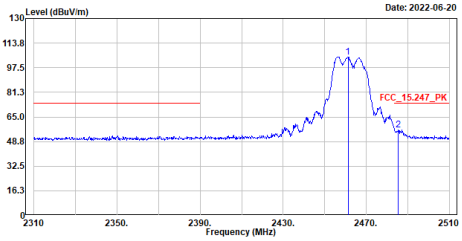
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_g_2462MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2456.200	94.68	------	------	82.76	11.92	Average
2	2483.600	42.66	54.00	-11.34	30.68	11.98	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

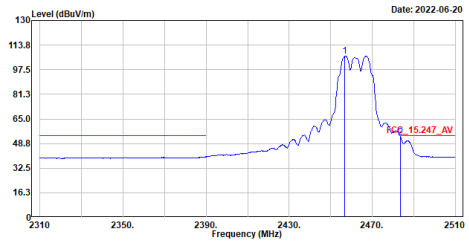
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_g_2462MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2461.200	104.71	------	------	92.77	11.94	Peak
2	2485.400	56.64	74.00	-17.36	44.66	11.98	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

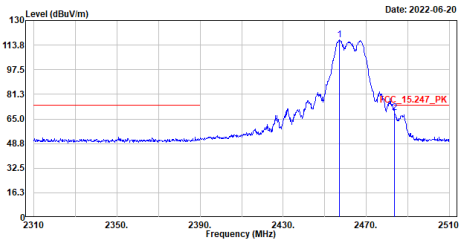
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_g_2462MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2456.800	106.69	------	------	94.77	11.92	Average
2	2483.600	53.05	54.00	-0.95	41.07	11.98	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

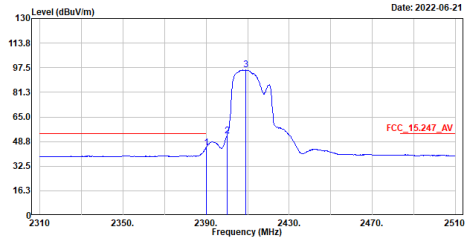
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_g_2462MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2457.000	117.15	------	------	105.23	11.92	Peak
2	2483.600	69.22	74.00	-4.78	57.24	11.98	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

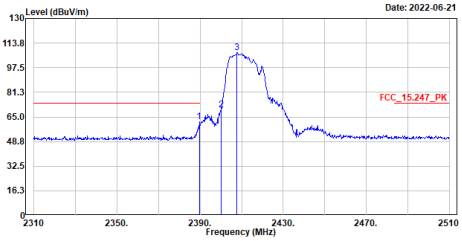
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_ac20_2412MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2390.000	44.79	54.00	-9.21	33.02	11.77	Average
2	2400.000	52.31	------	------	40.48	11.83	Average
3	2409.200	95.95	------	------	84.10	11.85	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

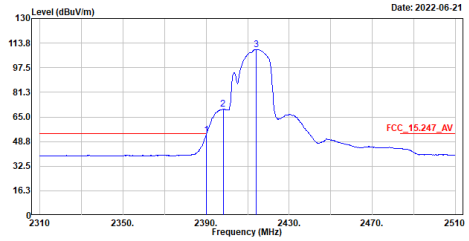
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_ac20_2412MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2389.600	61.64	74.00	-12.36	49.87	11.77	Peak
2	2400.000	69.46	------	------	57.63	11.83	Peak
3	2407.800	107.56	------	------	95.72	11.84	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

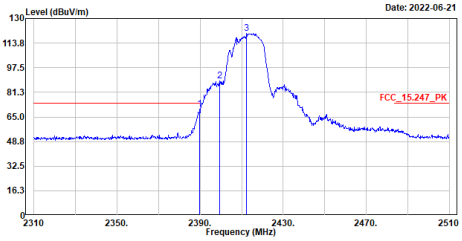
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_ac20_2412MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2390.000	53.08	54.00	-0.92	41.31	11.77	Average
2	2398.200	70.33	------	------	58.51	11.82	Average
3	2414.000	109.55	------	------	97.70	11.85	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

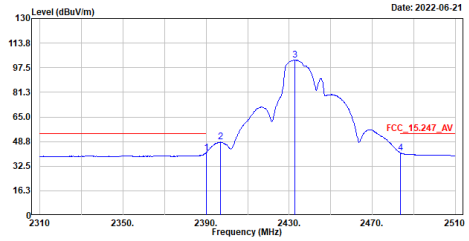
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_ac20_2412MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2389.800	70.29	74.00	-3.71	58.52	11.77	Peak
2	2399.400	88.57	------	------	76.74	11.83	Peak
3	2412.400	120.15	------	------	108.30	11.85	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

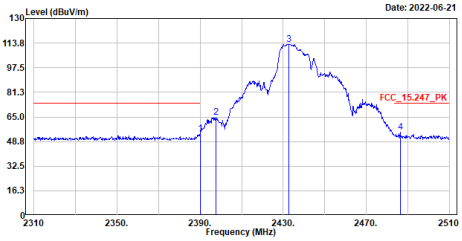
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_ac20_2437MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2390.000	41.29	54.00	-12.71	29.52	11.77	Average
2	2396.800	48.39	------	------	36.57	11.82	Average
3	2432.600	102.50	------	------	90.62	11.88	Average
4	2483.600	41.26	54.00	-12.74	29.28	11.98	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

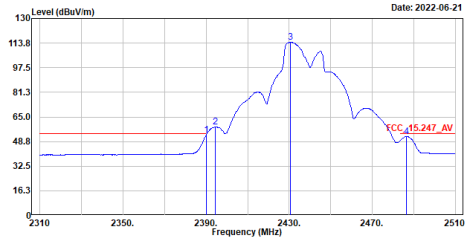
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_ac20_2437MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2390.000	54.21	74.00	-19.79	42.44	11.77	Peak
2	2397.800	64.73	------	------	52.91	11.82	Peak
3	2432.600	113.06	------	------	101.18	11.88	Peak
4	2486.400	55.13	74.00	-18.87	43.15	11.98	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

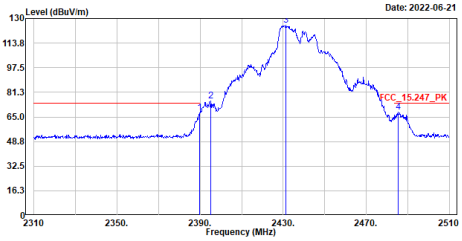
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_ac20_2437MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2390.000	53.09	54.00	-0.91	41.32	11.77	Average
2	2394.600	58.39	------	------	46.59	11.80	Average
3	2430.600	114.25	------	------	102.37	11.88	Average
4	2486.600	52.22	54.00	-1.78	40.24	11.98	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

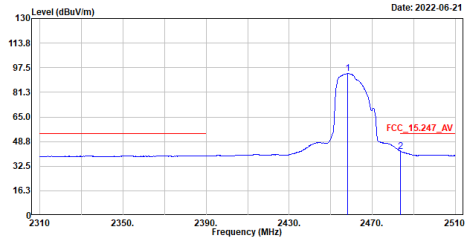
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_ac20_2437MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2389.800	67.76	74.00	-6.24	55.99	11.77	Peak
2	2395.200	75.34	------	------	63.54	11.80	Peak
3	2431.400	125.49	------	------	113.61	11.88	Peak
4	2485.200	68.00	74.00	-6.00	56.02	11.98	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

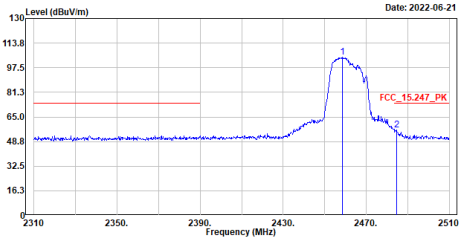
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_ac20_2462MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2458.200	93.68	------	------	81.75	11.93	Average
2	2483.600	42.27	54.00	-11.73	30.29	11.98	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

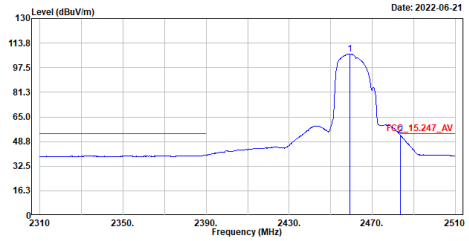
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_ac20_2462MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2458.400	104.52	------	------	92.59	11.93	Peak
2	2484.600	56.59	74.00	-17.41	44.61	11.98	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

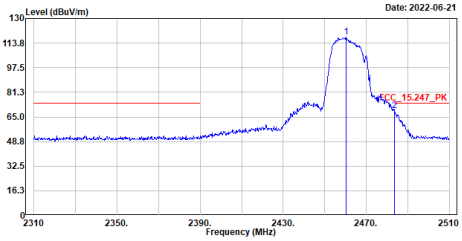
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_ac20_2462MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2459.400	106.69	------	------	94.76	11.93	Average
2	2483.600	53.12	54.00	-0.88	41.14	11.98	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

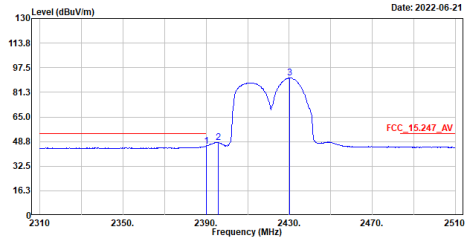
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_ac20_2462MHz
Test BY :Jing Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2460.400	117.57	------	------	105.64	11.93	Peak
2	2483.600	69.00	74.00	-5.00	57.02	11.98	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

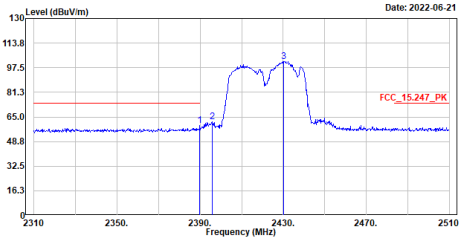
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_ac40_2422MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2390.000	45.86	54.00	-8.14	34.09	11.77	Average
2	2396.000	48.18	------	------	36.38	11.80	Average
3	2430.200	90.82	------	------	78.94	11.88	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

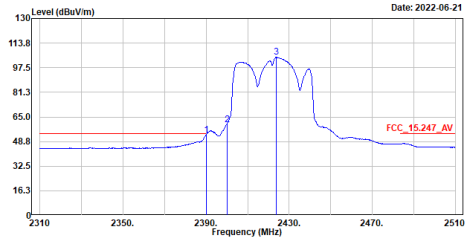
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_ac40_2422MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2389.800	59.12	74.00	-14.88	47.35	11.77	Peak
2	2395.800	61.77	------	------	49.97	11.80	Peak
3	2430.200	101.54	------	------	89.66	11.88	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

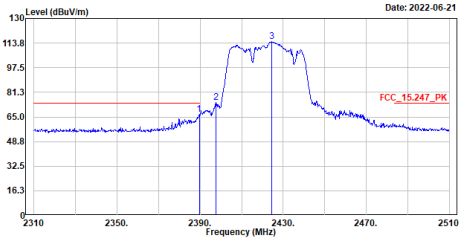
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_ac40_2422MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2390.000	53.19	54.00	-0.81	41.42	11.77	Average
2	2400.000	60.05	------	------	48.22	11.83	Average
3	2423.800	104.35	------	------	92.48	11.87	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

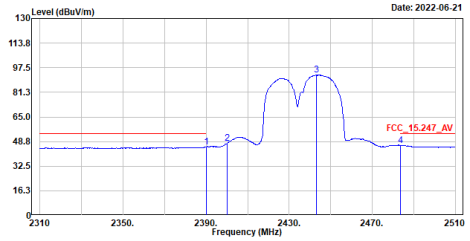
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_ac40_2422MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2389.600	66.49	74.00	-7.51	54.72	11.77	Peak
2	2397.600	74.35	------	------	62.53	11.82	Peak
3	2424.600	114.61	------	------	102.74	11.87	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

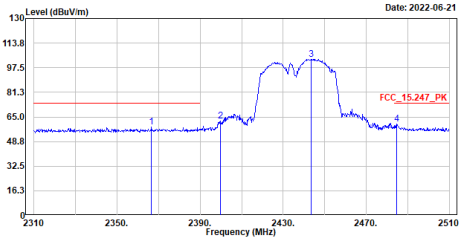
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_ac40_2437MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2390.000	45.16	54.00	-8.84	33.39	11.77	Average
2	2400.000	47.37	------	------	35.54	11.83	Average
3	2443.000	92.74	------	------	80.84	11.90	Average
4	2483.600	46.35	54.00	-7.65	34.37	11.98	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

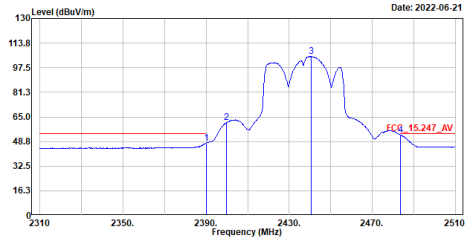
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_ac40_2437MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2366.600	58.41	74.00	-15.59	46.76	11.65	Peak
2	2399.800	62.13	------	------	50.30	11.83	Peak
3	2443.400	103.23	------	------	91.33	11.90	Peak
4	2484.600	60.17	74.00	-13.83	48.19	11.98	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

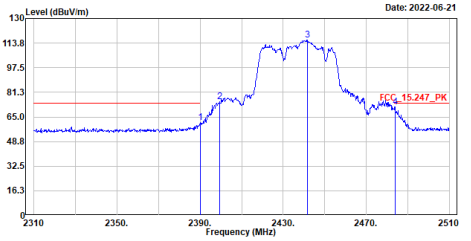
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_ac40_2437MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2390.000	47.72	54.00	-6.28	35.95	11.77	Average
2	2399.800	61.53	------	------	49.70	11.83	Average
3	2440.600	104.93	------	------	93.03	11.90	Average
4	2483.500	53.22	54.00	-0.78	41.24	11.98	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

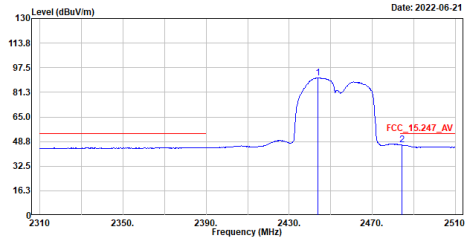
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_ac40_2437MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2390.000	61.27	74.00	-12.73	49.50	11.77	Peak
2	2399.600	74.93	------	------	63.10	11.83	Peak
3	2441.600	115.67	------	------	103.77	11.90	Peak
4	2483.800	71.40	74.00	-2.60	59.42	11.98	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

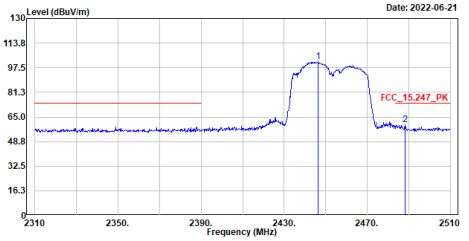
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_ac40_2452MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2444.000	90.77	------	------	78.87	11.90	Average
2	2484.200	46.58	54.00	-7.42	34.60	11.98	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

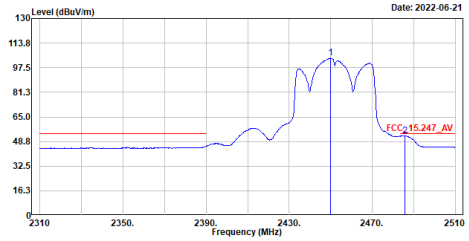
Site :HY-CB03
Condition :3m ,Horizontal
Mode :TX_ac40_2452MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2446.200	101.54	------	------	89.63	11.91	Peak
2	2488.200	59.67	74.00	-14.33	47.69	11.98	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

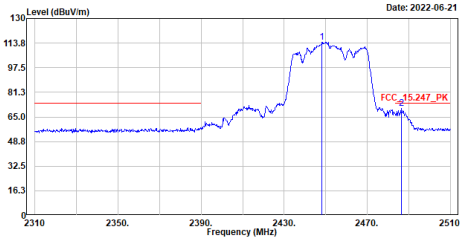
Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_ac40_2452MHz
Test BY :Yeh Lin



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2449.800	103.91	------	------	92.00	11.91	Average
2	2485.800	52.63	54.00	-1.37	40.65	11.98	Average

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

Site :HY-CB03
Condition :3m ,Vertical
Mode :TX_ac40_2452MHz
Test BY :Yeh Lin

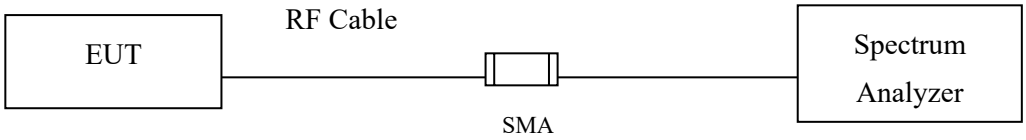


No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2448.200	114.49	------	------	102.58	11.91	Peak
2	2486.400	70.56	74.00	-3.44	58.58	11.98	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line

7. 6dB Bandwidth

7.1. Test Setup



7.2. Limits

The minimum bandwidth shall be at least 500 kHz.

7.3. Test Procedure

The EUT was setup according to ANSI C63.4, 2014; tested according to ANSI C63.10 Section 11.8 for compliance to FCC 47CFR 15.247 requirements.

7.4. Test Result of 6dB Bandwidth

Product : Secured Network Extension Device
Test Item : 6dB Bandwidth Data
Test Mode : Transmit (802.11b)-CDD

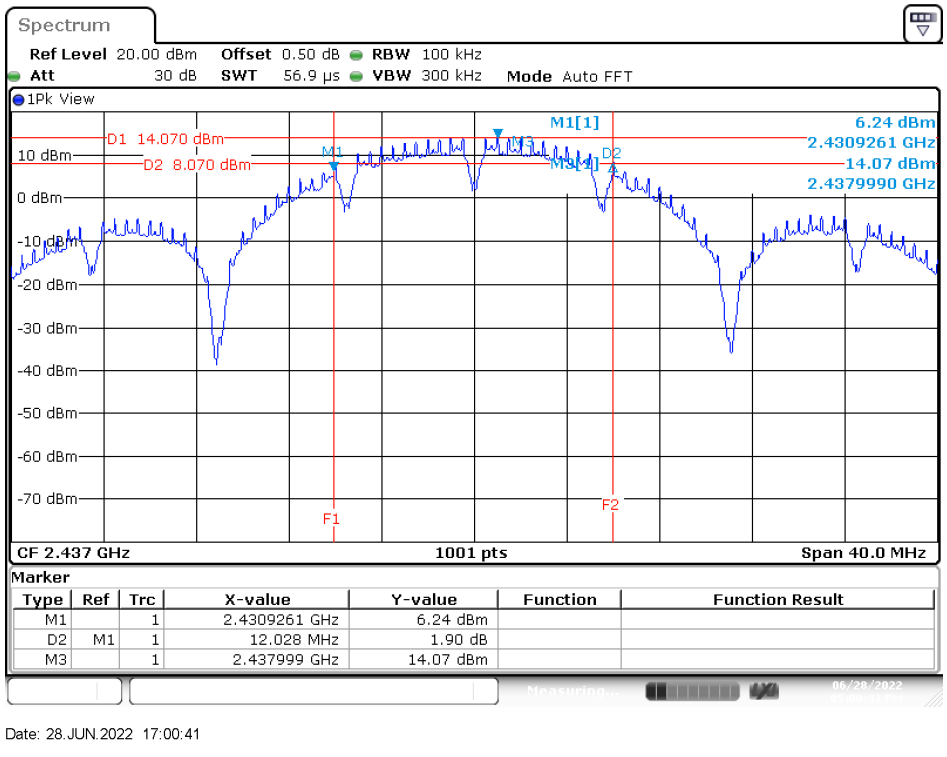
Chain A

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	9070	>500	Pass
06	2437	11029	>500	Pass
11	2462	9031	>500	Pass

Chain B

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	9550	>500	Pass
06	2437	12028	>500	Pass
11	2462	8991	>500	Pass

Figure Channel 06 (Chain A):



Product : Secured Network Extension Device
Test Item : 6dB Bandwidth Data
Test Mode : Transmit (802.11g)-CDD

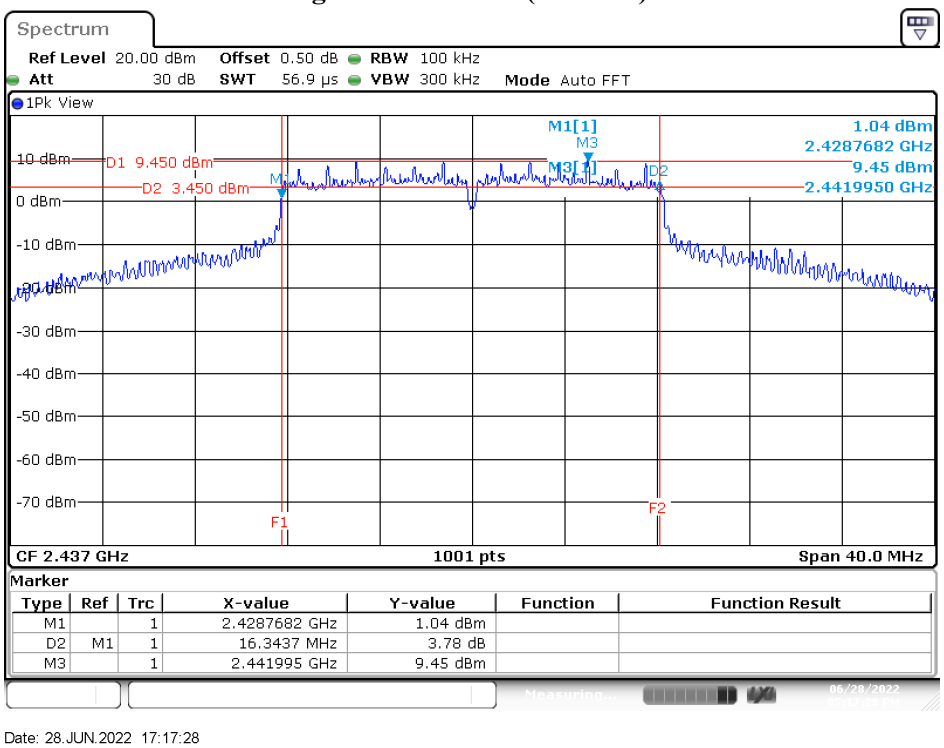
Chain A

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	16343	>500	Pass
06	2437	16343	>500	Pass
11	2462	16343	>500	Pass

Chain B

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	16303	>500	Pass
06	2437	16343	>500	Pass
11	2462	16343	>500	Pass

Figure Channel 06 (Chain B):



Date: 28.JUN.2022 17:17:28

Product : Secured Network Extension Device
Test Item : 6dB Bandwidth Data
Test Mode : Transmit (802.11ac-20 MHz)-CDD

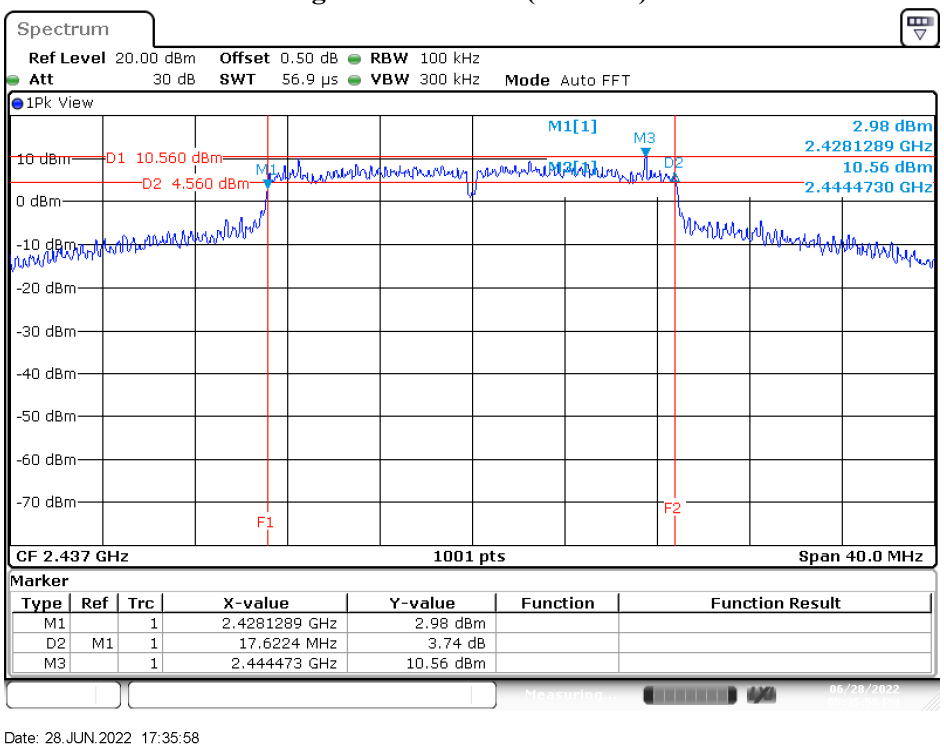
Chain A

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	17542	>500	Pass
06	2437	17542	>500	Pass
11	2462	17542	>500	Pass

Chain B

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
01	2412	17542	>500	Pass
06	2437	17622	>500	Pass
11	2462	17542	>500	Pass

Figure Channel 06 (Chain B):



Product : Secured Network Extension Device
Test Item : 6dB Bandwidth Data
Test Mode : Transmit (802.11ac-40 MHz)-CDD

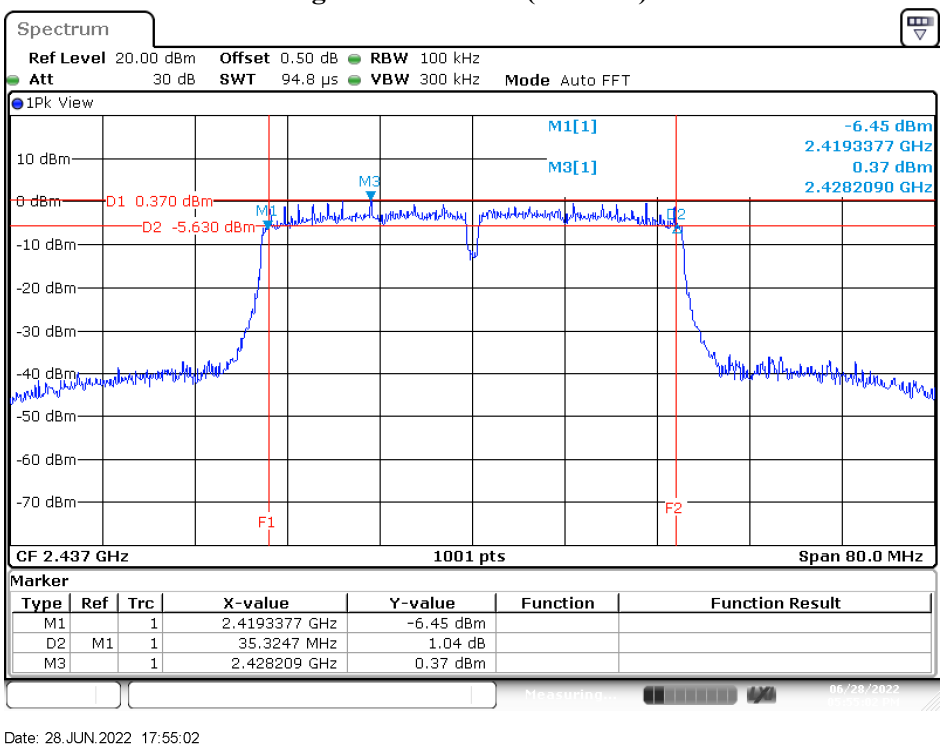
Chain A

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
03	2422	35005	>500	Pass
06	2437	34685	>500	Pass
09	2452	32127	>500	Pass

Chain B

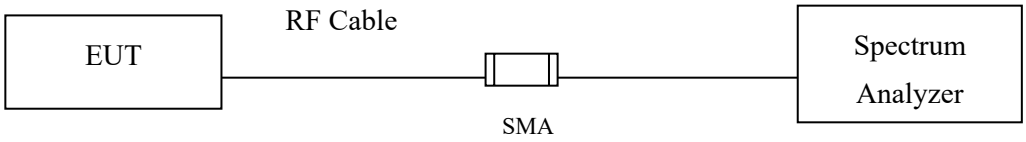
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
03	2422	35084	>500	Pass
06	2437	35324	>500	Pass
09	2452	35084	>500	Pass

Figure Channel 09 (Chain B):



8. Power Density

8.1. Test Setup



8.2. Limits

The transmitted power density averaged over any 1 second interval shall not be greater +8dBm in any 3kHz bandwidth.

8.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013; tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements.
The maximum power spectral density using C63.10 Section 11.10.2 Method PKPSD (peak PSD)

The maximum power density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

2400 MHz: Directional Gain = 6.51 dBi, Limit= 7.49 dBm
(Directional Gain = $G_{ANT\ MAX}$ + Array Gain, Array Gain = 10*log(2) = 3.01 dB)

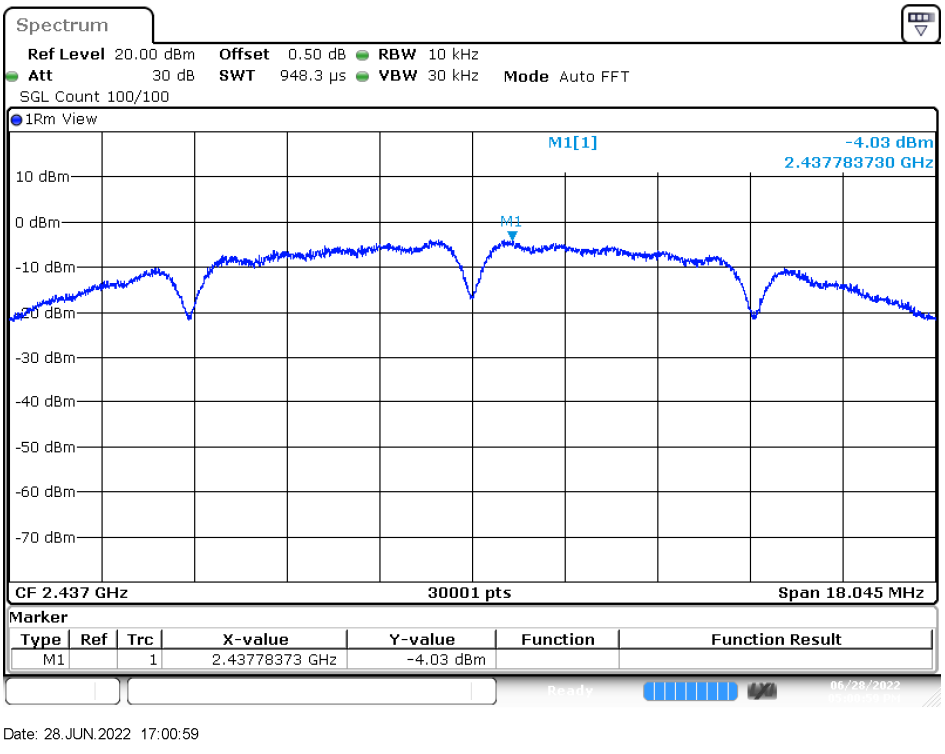
8.4. Test Result of Power Density

Product : Secured Network Extension Device
Test Item : Power Density Data
Test Mode : Transmit (802.11b)-CDD

Channel No.	Frequency (MHz)	Data Rate (Mbps)	Chain	PPSD/MHz (dBm)	Duty factor (dBm)	Total PPSD/MHz (dBm)	Limit (dBm)	Result
01	2412	1	A	-5.140	0.00	-2.034	7.49	Pass
			B	-4.950				
06	2437	1	A	-4.280	0.00	-1.143	7.49	Pass
			B	-4.030				
11	2462	1	A	-6.590	0.00	-3.489	7.49	Pass
			B	-6.410				

Note: Total PPSD/MHz = 10*log(Chain A (mW) + Chain B (mW)) + Duty factor

Figure Channel 06 (Chain B):

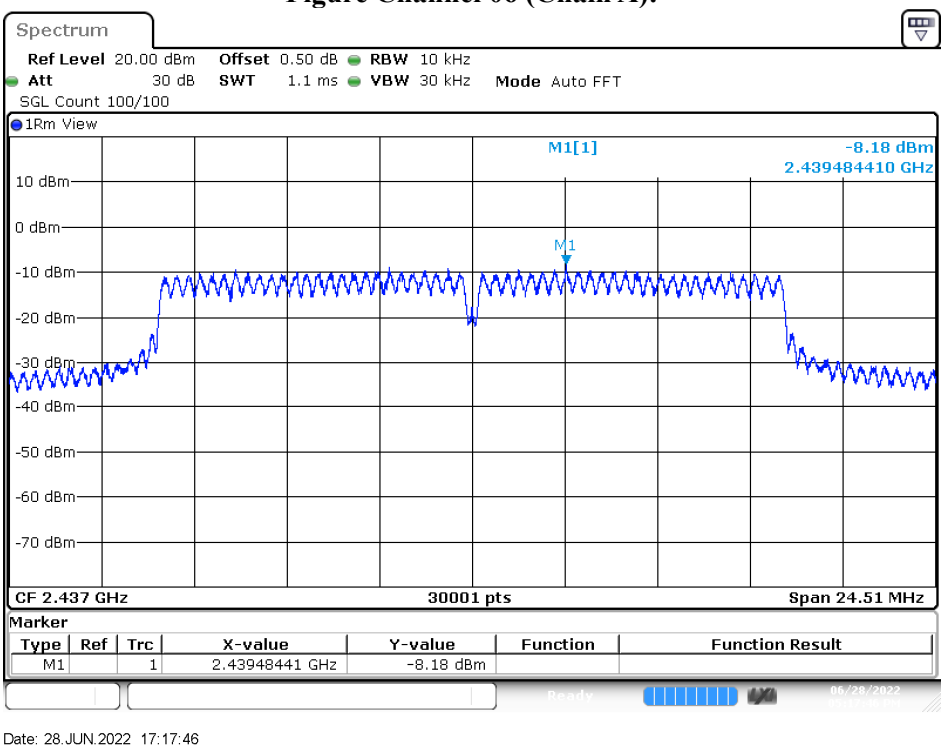


Product : Secured Network Extension Device
Test Item : Power Density Data
Test Mode : Transmit (802.11g)-CDD

Channel No.	Frequency (MHz)	Data Rate (Mbps)	Chain	PPSD/MHz (dBm)	Duty factor (dBm)	Total PPSD/MHz (dBm)	Limit (dBm)	Result
01	2412	6	A	-13.690	0.231	-10.362	7.49	Pass
			B	-13.520				
06	2437	6	A	-8.180	0.231	-5.334	7.49	Pass
			B	-9.010				
11	2462	6	A	-14.760	0.231	-11.468	7.49	Pass
			B	-14.660				

Note: Total PPSD/MHz = 10*log(Chain A (mW) + Chain B (mW)) + Duty factor

Figure Channel 06 (Chain A):

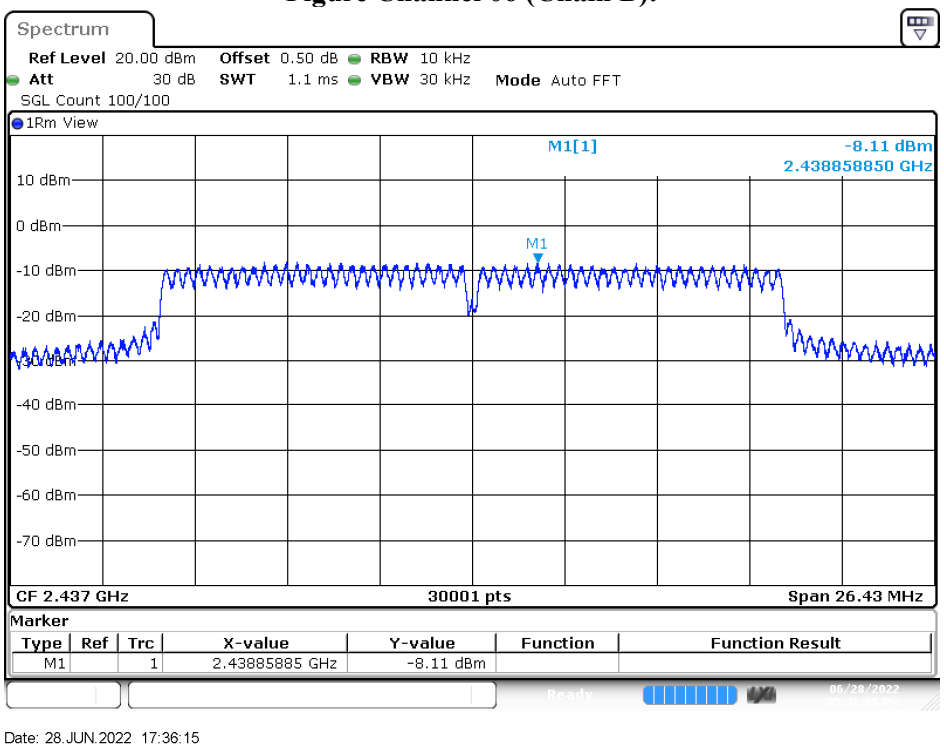


Product : Secured Network Extension Device
Test Item : Power Density Data
Test Mode : Transmit (802.11ac-20 MHz)-CDD

Channel No.	Frequency (MHz)	Data Rate (Mbps)	Chain	PPSD/MHz (dBm)	Duty factor (dBm)	Total PPSD/MHz (dBm)	Limit (dBm)	Result
01	2412	MCS0	A	-14.290	0.121	-11.001	7.49	Pass
			B	-13.980				
06	2437	MCS0	A	-8.750	0.121	-5.287	7.49	Pass
			B	-8.110				
11	2462	MCS0	A	-16.070	0.121	-12.938	7.49	Pass
			B	-16.070				

Note: Total PPSD/MHz = 10*log(Chain A (mW) + Chain B (mW)) + Duty factor

Figure Channel 06 (Chain B):

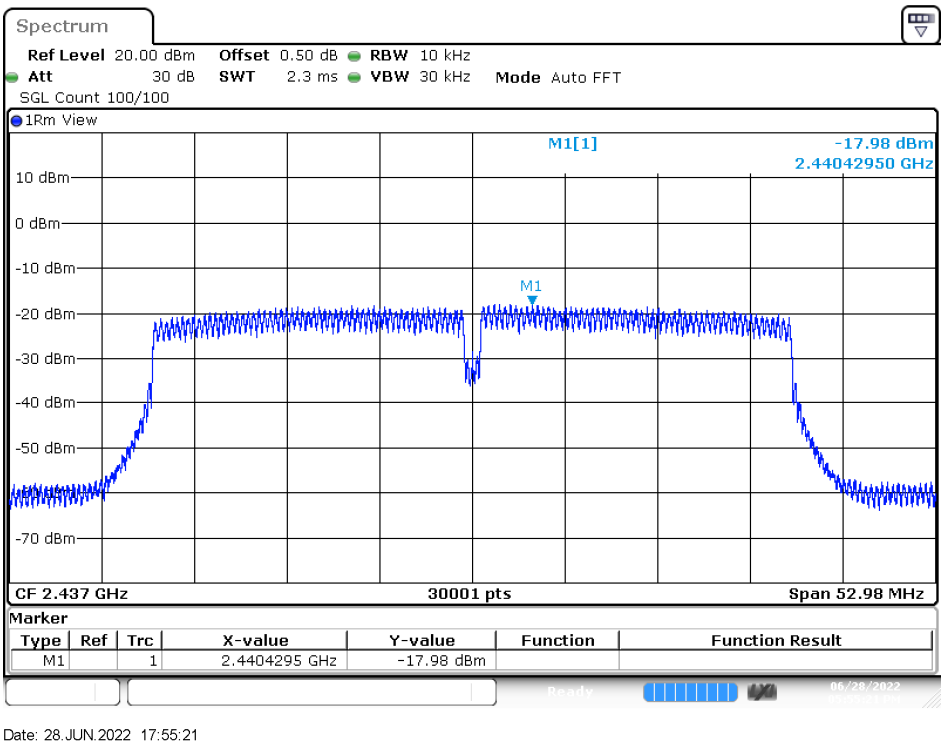


Product : Secured Network Extension Device
Test Item : Power Density Data
Test Mode : Transmit (802.11ac-40 MHz)-CDD

Channel No.	Frequency (MHz)	Data Rate (Mbps)	Chain	PPSD/MHz (dBm)	Duty factor (dBm)	Total PPSD/MHz (dBm)	Limit (dBm)	Result
03	2422	MCS0	A	-19.670	0.285	-16.365	7.49	Pass
			B	-19.650				
06	2437	MCS0	A	-18.330	0.285	-14.856	7.49	Pass
			B	-17.980				
09	2452	MCS0	A	-19.750	0.285	-16.276	7.49	Pass
			B	-19.400				

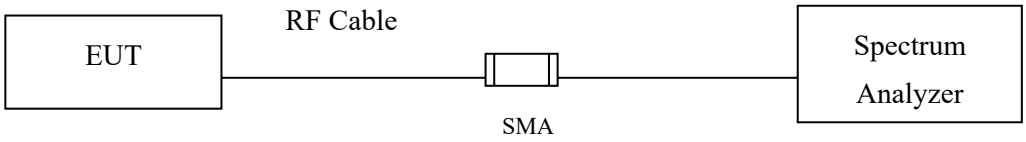
Note: Total PPSD/MHz = 10*log(Chain A (mW) + Chain B (mW)) + Duty factor

Figure Channel 09 (Chain B):



9. Duty Cycle

9.1. Test Setup



9.2. Test Procedure

The EUT was setup according to ANSI C63.10 2013; tested according to ANSI C63.10 2013 for compliance to FCC 47CFR 15.247 requirements.

9.3. Test Result of Duty Cycle

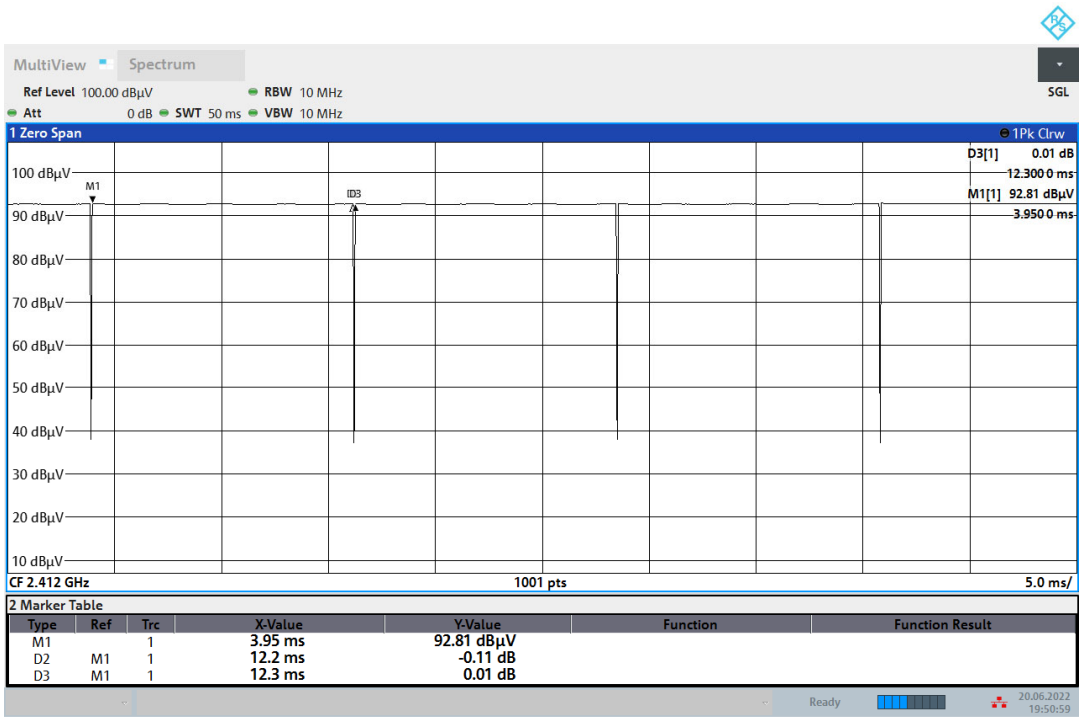
Product : Secured Network Extension Device
Test Item : Duty Cycle
Test Mode : Transmit-CDD mode

Duty Cycle Formula:
Duty Cycle = Ton / (Ton + Toff)
Duty Factor = 10 Log (1/Duty Cycle)

Results:

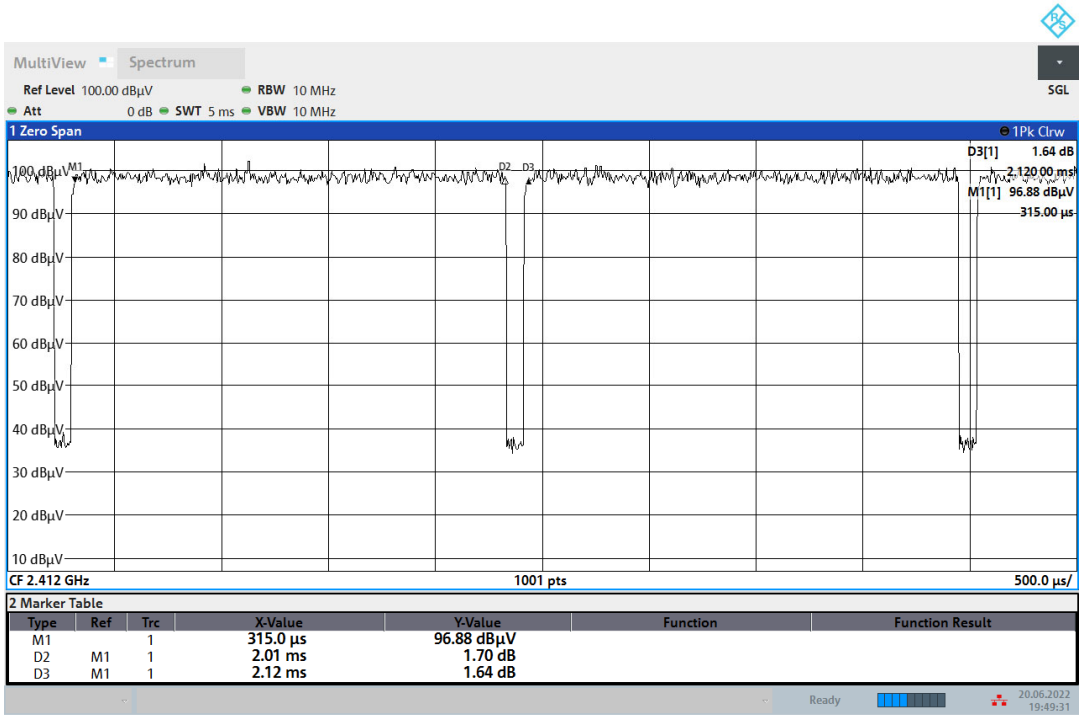
2.4GHz band	Ton (ms)	Ton + Toff (ms)	Duty Cycle (%)	Duty Factor (dB)
802.11b	12.2000	12.3000	99.19	0.04
802.11g	2.0100	2.1200	94.81	0.23
802.11ac20	4.9400	5.0800	97.24	0.12
802.11ac40	2.3600	2.5200	93.65	0.28

802.11b



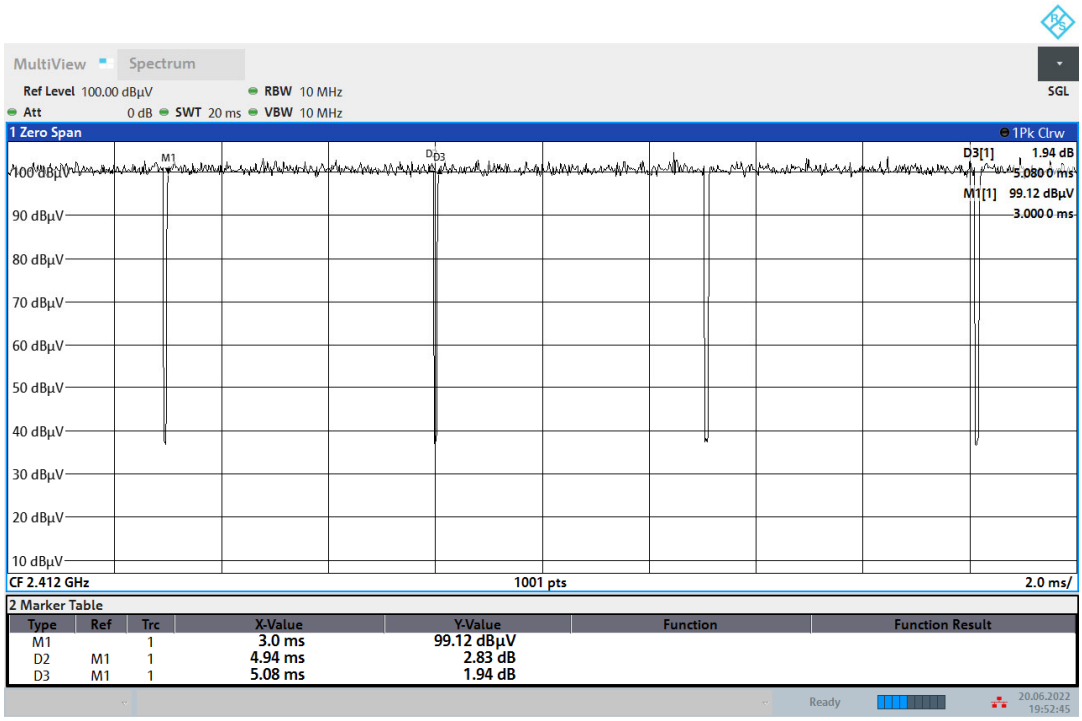
19:50:59 20.06.2022

802.11g



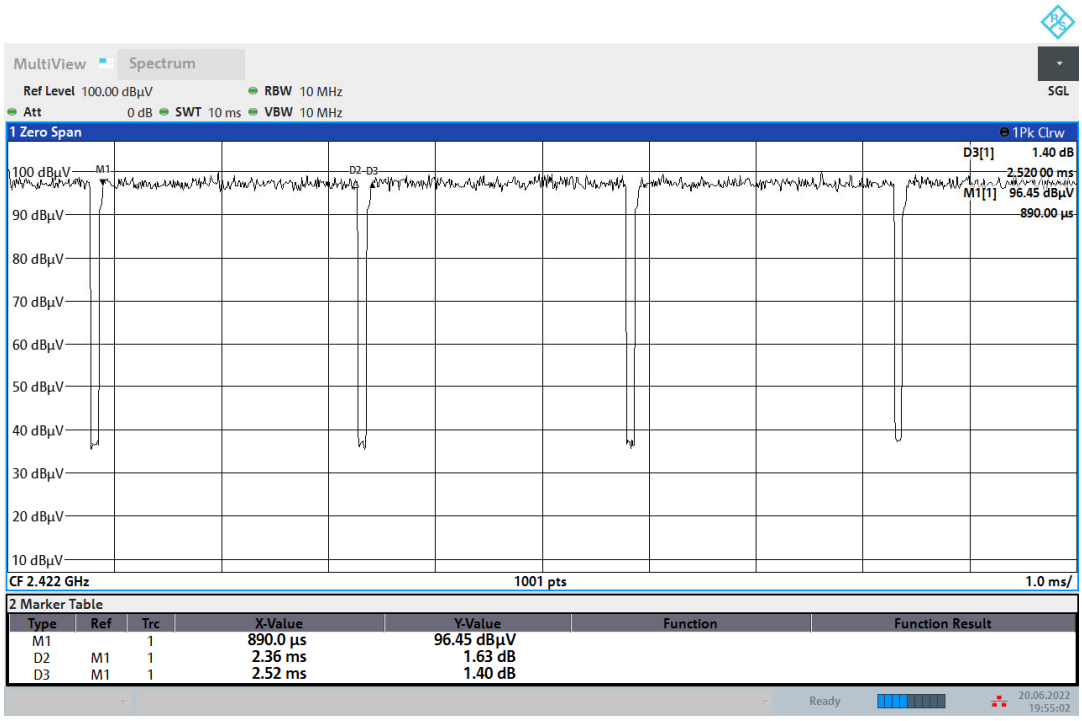
19:49:31 20.06.2022

802.11ac20



19:52:46 20.06.2022

802.11ac40



19:55:02 20.06.2022