



Test report No.: 2360237R-RFUSV03S-A

TEST REPORT

Product Name	Peplink Pepwave Wireless Product
Trademark	peplink PEPWAVE
Model and /or type reference	B One 5G
	B-ONE-5GN-T-PRM
	B One
	B-ONE-T-PRM
	B One Plus
	B-ONE-PLUS-LTE-US-T-PRM
FCC ID	U8G-P1AX23
Applicant's name / address	PISMO LABS TECHNOLOGY LIMITED
	A8, 5/F, HK Spinners Industrial Building, Phase 6, 481 Castle
	Peak Road, Cheung Sha Wan, Hong Kong
Manufacturer's name	PISMO LABS TECHNOLOGY LIMITED
Test method requested, standard	FCC CFR Title 47 Part 15 Subpart E
	ANSI C63.4: 2014, ANSI C63.10: 2013
	KDB Publication 789033
Verdict Summary	IN COMPLIANCE
Documented By	Tda Tuna
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Tested By	Ida Tung Bill Liv
(Senior Engineer / Bill Lin)	
Approved By (Senior Engineer / Jack Hsu)	Jack Asu
Date of Receipt	2023/06/07
Date of Issue	2024/03/06
Report Version	V1.0



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Competences and Guarantees

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

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General conditions

- 1. The test results relate only to the samples tested.
- 2. 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.
- 3. This report must not be used to claim product endorsement by TAF or any agency of the government.
- 4. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.
- 5. 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.



Revision History

Report No.	Version	Description	Issued Date
2360237R-RFUSV03S-A	V1.0	Initial issue of report.	2024/03/06



1. General Information

1.1. EUT Description

Product Name	Peplink Pepwave Wireless Product
Trademark	peplink PEPWAVE
Model and /or type	B One 5G
reference	B-ONE-5GN-T-PRM
	B One
	B-ONE-T-PRM
	B One Plus
	B-ONE-PLUS-LTE-US-T-PRM
EUT Rated Voltage	DC 10~30V
EUT Test Voltage	AC 120V/60Hz to DC 12V (power by adapter)
Frequency Range	802.11a/n/ac/ax-20 MHz: 5180-5240 MHz, 5745-5825 MHz
	802.11n/ac/ax-40 MHz: 5190-5230 MHz, 5755-5795 MHz
	802.11ac/ax-80 MHz: 5210 MHz, 5775 MHz
Number of Channels	802.11a/n/ac/ax-20 MHz: 9CH, 802.11n/ac/ax-40 MHz: 4CH
	802.11ac/ax-80 MHz: 2CH
Data Rate	802.11a: 6-54 Mbps, 802.11n: up to 300 MHz
	802.11ac: up to 866.7 MHz, 802.11ax: up to 1201 MHz
Type of Modulation	OFDM, OFDMA, BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Channel Control	Auto
Adapter #1	MFR: Zhuzhou Dachuan Electronic Technology Co., Ltd.
	M/N: DCT36W120300ZZ-D2
	Input: AC 100-240V~50/60Hz, 1.0A max.
	Output: 12.0V=3.0A, 36.0W
	Cable Out: Non-shielded, 1.5m
Adapter #2	MFR: FLYPOWER
	M/N: PS36LA120K3000UD
	Input: AC 100-240V~50/60Hz, 1.0A Max.
	Output: 12.0V=3.0A, 36.0W
	Cable Out: Non-shielded, 1.5m

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	INPAQ	RFDPA191300SBLB813	Omni-directional	4.46 dBi for 5150~5250 MHz
				4.51 dBi for 5725~5850 MHz
2	INPAQ	RFDPA191300SBLB813	Omni-directional	4.46 dBi for 5150~5250 MHz
				4.51 dBi for 5725~5850 MHz

Note: 1. The antenna of EUT is conforming to FCC 15.203.

2. The antenna gain as by the manufacturer provided.



For CDD mode:

For Power Directional gain For PSD Directional gain

5150MHz-5250MHz: Directional gain = 4.46 dBi 5150MHz-5250MHz: Directional gain = 7.47 dBi

5725MHz-5850MHz: Directional gain = 4.51 dBi 5725MHz-5850MHz: Directional gain = 7.52 dBi

 $(Directional\ gain = G_{ANT\ MAX} + Array\ Gain,\ Array \quad Directional\ gain = 10\ log[(10^{G1/20} + 10^{G2/20})^2 / C_{AR}] + C_{AR}(G_{AR}) + C_{AR}(G_{AR})$

Gain = 0 dB for $N_{ANT} \le 4$) N_{ANT}] dBi

802.11a/n/ac/ax-20 MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
	(MHz)		(MHz)		(MHz)		(MHz)
36	5180	40	5200	44	5220	48	5240
149	5745	153	5765	157	5785	161	5805
165	5825						

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

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
	(MHz)		(MHz)		(MHz)		(MHz)
38	5190	46	5230	151	5755	159	5795

802.11ac/ax-80 MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
	(MHz)		(MHz)		(MHz)		(MHz)
42	5210	155	5775				



Note:

1. This device is a Peplink Pepwave Wireless Product with built-in WLAN and Bluetooth transceiver, this report for 5 GHz WLAN.

2. Difference of Models

Model	WWAN module	WWAN function	WIFI function	BT function
B One 5G	Quectel	X 7	3 7	T 7
B-ONE-5GN-T-PRM	RM520N-GL	V	V	V
B One	21/4	21/4	T 7	***
B-ONE-T-PRM	N/A	N/A	V	V
B One Plus	Quectel	T 7	T 7	T 7
B-ONE-PLUS-LTE-US-T-PRM	EC25-AFXD	V	V	V

The EUT is available in different model names for marketing purposes. The identification of test sample is B One 5G.

- 3. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
- 4. Lowest data rates are tested in each mode. Only worst case is shown in the report. (802.11a is 6Mbps, 802.11ax-20BW/40BW/80BW is MCS0)
- 5. The CDD 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.
- 6. The spectrum plot against conducted item only shows the worst case.
- 7. This device does not support partial RU function.
- 8. For radiated emission below 1 GHz and AC power line conducted emission have performed all modes of operation were investigated and the worst-case emissions are reported.
- These tests were conducted on a sample for the purpose of demonstrating compliance of 802.11a/n/ac/ax transmitter with Part 15 Subpart E for Unlicensed National Information Infrastructure devices.

		Transmit (802.11a-CDD)
		Transmit (802.11n-20BW-CDD)
		Transmit (802.11n-40BW-CDD)
		Transmit (802.11ac-20BW-CDD)
Test Mode	Mode 1	Transmit (802.11ac-40BW-CDD)
		Transmit (802.11ac-80BW-CDD)
		Transmit (802.11ax-20BW-CDD)
		Transmit (802.11ax-40BW-CDD)
		Transmit (802.11ax-80BW-CDD)



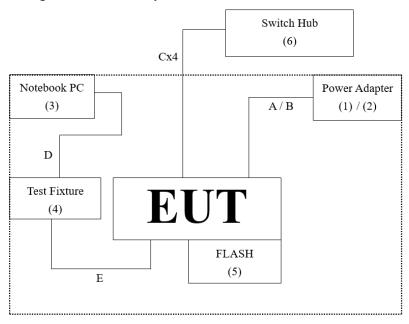
1.2. Tested System Datails

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Power Adapter	Zhuzhou Dachuan Electronic Technology Co., Ltd.	DCT36W120300ZZ-D2	N/A	N/A
2	Power Adapter	FLYPOWER	PS36LA120K3000UD	N/A	N/A
3	Notebook PC	DELL	Latitude 5501	8JHGL13	N/A
4	Test Fixture	Askey	BBS tool Rev03	N/A	N/A
5	FLASH	Transcend	JetFlash 790C/64GB	N/A	N/A
6	Switch Hub	ZYXEL	GS-108B v3	N/A	N/A

Cab	le Type	Cable Description		
A	Power Cable	Non-shielded, 1.5m		
В	Power Cable	Non-shielded, 1.5m		
C	LAN Cable	Non-shielded, 3m, four PCS.		
D	USB TO MicroB Cable	Shielded, 1m		
Е	Signal Cable	Non-shielded, 0.1m		

1.3. Configuration of tested System



1.4. EUT Exercise Software

1	Setup the EUT as shown in Section 1.3.
2	Execute software "Qualcomm Sequence Profiling Resource Version 5.0-00197" on the Notebook
	PC.
3	Configure the test mode, the test channel, and the data rate.
4	Verify that the EUT works properly.



1.5. Test Facility

Ambient conditions in the laboratory:

Performed Item	Items	Required	Actual
G 1 . 1F : :	Temperature (°C)	10~40 °C	27.3 °C
Conducted Emission	Humidity (%RH)	10~90 %	48.5 %
D - 1'-A - 1 E ' '	Temperature (°C)	10~40 °C	21.4 °C
Radiated Emission	Humidity (%RH)	10~90 %	62.6 %
	Temperature (°C)	10~40 °C	27.0 °C
Conductive	Humidity (%RH)	10~90 %	52.2 %

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.				
	Linkou Laboratory				
Address	No.5-22, Ruishukeng Linkou District, New Taipei City, 24451, Taiwan, R.O.C.				
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				



1.6. List of Test Equipment

For Conduction Measurements / HY-SR01

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
V	EMI Test Receiver	R&S	ESR7	101601	2023/06/20	2024/06/19
V	Two-Line V-Network	R&S	ENV216	101306	2023/03/16	2024/03/15
V	Two-Line V-Network	R&S	ENV216	102202	2022/08/08	2023/08/07
V	Coaxial Cable	SUHNER	RG400_BNC	RF001	2023/01/10	2024/01/09

Note:

- 1. All equipments are calibrated every one year.
- 2. The test instruments marked with "V" are used to measure the final test results.
- 3. Test Software Version: e3 230303 dekra V9.

For Conducted Measurements / HY-SR02

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
V	Spectrum Analyzer	R&S	FSV30	103466	2022/12/22	2023/12/21
V	Peak Power Analyzer	KEYSIGHT	8990B	MY51000539	2023/05/15	2024/05/14
V	Power Sensor	KEYSIGHT	N1923A	MY59240002	2023/05/18	2024/05/17
V	Power Sensor	KEYSIGHT	N1923A	MY59240003	2023/05/18	2024/05/17

Note:

- 1. All equipments are calibrated every one year.
- 2. The test instruments marked with "V" are used to measure the final test results.
- Test Software Version: RF Conducted Test Tools R3 V3.0.0.14. 3.

For Radiated Measurements /HY-CB01

	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
V	Loop Antenna	AMETEK	HLA6121	56736	2023/05/23	2024/05/24
V	Bi-Log Antenna	SCHWARZBECK	VULB9168	9168-0675	2021/08/11	2023/08/10
V	Horn Antenna	RF SPIN	DRH18-E	210802A18ES	2023/03/23	2024/03/22
V	Horn Antenna	Com-Power	AH-840	101101	2021/11/30	2023/11/29
V	Pre-Asmplifier	SGH	0301	20211007-7	2023/01/10	2024/01/09
V	Pre-Amplifier	EMCI	EMC051845SE	980632	2023/01/10	2024/01/09
V	Pre-Amplifier	EMCI	EMC05820SE	980362	2023/01/10	2024/01/09
	Pre-Amplifier	EMCI	EMC184045SE	980369	2023/01/10	2024/01/09
	Coaxial Cable	EMCI	EMC102-KM-KM-	1160314		
V			600			
	Coaxial Cable	EMCI	EMC102-KM-KM-	170242		
			7000			
	Filter	MICRO TRONICS	BRM50702	G251	2023/01/05	2024/01/04
V	Filter	MICRO TRONICS	BRM50716	067	2023/01/05	2024/01/04
V	EMI Test Receiver	R&S	ESR3	102792	2022/12/29	2023/12/28
V	Spectrum Analyzer	R&S	FSV3044	101115	2023/01/06	2024/01/05
	Coaxial Cable	SUHNER	SUCOFLEX 106	25450/6	2023/01/10	2024/01/09
V	Coaxial Cable	SGH	HA800	GD20110222-8		
ľ	Coaxial Cable	SGH	SGH18	2021003-8		
	Coaxial Cable	EMCI	EMC106	151113		

- Bi-Log Antenna and Horn Antenna (AH-840) is calibrated every two years, the other equipments are calibrated every one year.

 The test instruments marked with "V" are used to measure the final test results.
- 2.
- 3. Test Software Version: e3 230303 dekra 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 %.

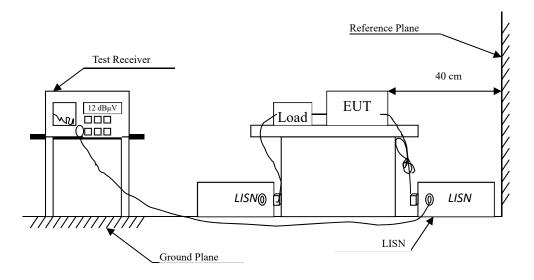
Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test item	Uncertainty		
Conducted Emission	±3.50 dB		
Mariana and the state of the st	Spectrum Analyzer: ±2.14 dB		
Maximum conducted output power	Power Meter: ±1.05 dB		
Maximun Power Spectral Density	±2.14 dB		
Radiated Emission	9 kHz~30 MHz: ±3.88 dB		
	30 MHz~1 GHz: ±4.42 dB		
	1 GHz~18 GHz: ±4.28 dB		
	18 GHz~40 GHz: ±3.90 dB		
	9 kHz~30 MHz: ±3.88 dB		
	30 MHz~1 GHz: ±4.42 dB		
Band Edge	1 GHz~18 GHz: ±4.28 dB		
	18 GHz~40 GHz: ±3.90 dB		
Occupied Bandwidth	±1580.61 Hz		
Duty Cycle	±0.53 %		



2. Conducted Emission

2.1. Test Setup



2.2. Limits

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

Remarks: In the above table, the tighter limit applies at the band edges.



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 /50 uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50 ohm /50 uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

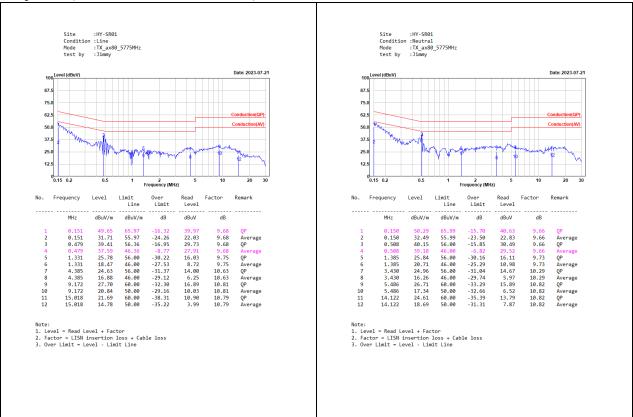
Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4:2014 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15 MHz to 30 MHz using a receiver bandwidth of 9 kHz.

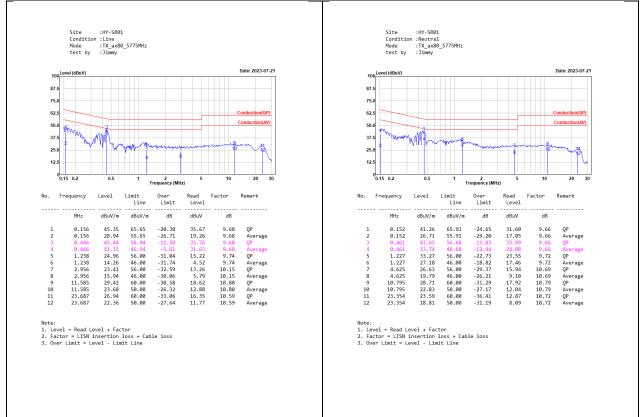


2.4. Test Result of Conducted Emission

Adapter #1 (M/N: DCT36W120300ZZ-D2)



Adapter #2 (M/N: PS36LA120K3000UD)

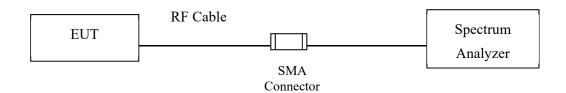




3. Maximun conducted output power

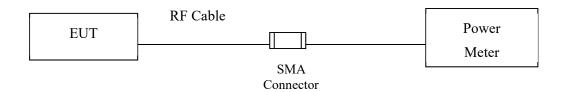
3.1. Test Setup

26 dB Occupied Bandwidth

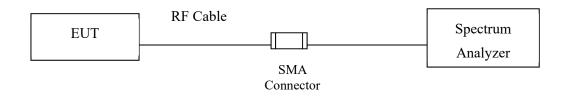


Conduction Power Measurement

Conduction Power Measurement (for 802.11an)



Conduction Power Measurement (for 802.11ac/ax)





3.2. Limits

For the band 5.15-5.25 GHz,

- (i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).
- (ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
- (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.
- (iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 99% emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.



For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point UNII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

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:

```
5150MHz-5250MHz: Directional gain = 4.46 dBi, Limit= 30dBm
5725MHz-5850MHz: Directional gain = 4.51 dBi, Limit= 30dBm
(Directional gain = Gant Max + Array Gain, Array Gain = 0 dB for Nant ≤ 2)
```

3.3. Test Procedure

As an alternative to FCC KDB-789033, the EUT maximum conducted output power was measured with an average power meter employing a video bandwidth greater the 6dB BW of the emission under test. Maximum conducted output power was read directly from the meter across all data rates, and across three channels within each sub-band. Special care was used to make sure that the EUT was transmitting in continuous mode. This method exceeds the limitations of FCC KDB-789033, and provides more accurate measurements.

802.11an (BW \leq 40 MHz) Maximum conducted output power using KDB 789033 section E)3)b) Method PM-G (Measurement using a gated RF average power meter)

Note: the power meter have a video bandwidth that is greater than or equal to the measurement bandwidth, (Anritsu/ MA2411B video bandwidth: 65MHz)

802.11ac (BW=80 MHz) Maximum conducted output power using KDB 789033 section E)2)b) Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep).

When transmitted signals consist of two or more non-contiguous spectrum segments (e.g., 80+80 MHz mode) or when a single spectrum segment of a transmission crosses the boundary between two adjacent U-NII bands, KDB 644545 D03 section D) procedure is used for measurements.



3.4. Test Result of Maximum conducted output power

Product : Peplink Pepwave Wireless Product
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11a-CDD) Master

Test Date : 2023/06/21

Maximum conducted output power Measurement:

Maximum conducted output power Measurement.									
	Eraguanav	26 dB	Chain A	Chain B	Output	Duty	Output Power Limit		
Channel No.	rrequency	Bandwidth	Power	Power	Power	factor	Outp		Result
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dB)	(dBm)	dBm+10log(BW)	
36	5180		19.02	19.22	22.13		30		Pass
44	5220		22.60	23.93	26.33		30		Pass
48	5240		22.44	23.49	26.01		30		Pass
149	5745		19.71	20.47	23.12		30		Pass
157	5785		19.45	20.54	23.04		30		Pass
165	5825		19.61	20.38	23.02		30		Pass

- 1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW))
- 2. 26 dB Bandwidth is the bandwidth of chain A or B whichever is less bandwidth, output power limitation is more stringent.



Product : Peplink Pepwave Wireless Product
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11n-20BW-CDD)_Master

Test Date : 2023/06/21

Maximum conducted output power Measurement:

		1 1		ı	1				
	Fraguency	26 dB	Chain A	Chain B	Output	Duty	Outn	ut Power Limit	
Channel No.	rrequency	Bandwidth	Power	Power	Power	factor	Outp	ut rower Limit	Result
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dB)	(dBm)	dBm+10log(BW)	
36	5180		18.74	18.88	21.82		30		Pass
44	5220		23.19	24.35	26.82		30		Pass
48	5240		22.56	23.58	26.11		30		Pass
149	5745		19.20	20.05	22.66		30		Pass
157	5785		18.11	19.07	21.63		30		Pass
165	5825		19.26	20.13	22.73		30		Pass

- 1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW))
- 2. 26 dB Bandwidth is the bandwidth of chain A or B whichever is less bandwidth, output power limitation is more stringent.



Product : Peplink Pepwave Wireless Product
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11n-40BW-CDD)_Master

Test Date : 2023/06/21

Maximum conducted output power Measurement:

	Emagnamay	26 dB	Chain A	Chain B	Output	Duty	Oute	yet Dayyan Limit	
Channel No.	rrequency	Bandwidth	Power	Power	Power	factor	Outp	ut Power Limit	Result
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dB)	(dBm)	dBm+10log(BW)	
38	5190		11.45	11.53	14.50		30		Pass
46	5230		21.38	21.47	24.44		30		Pass
151	5755		21.79	22.83	25.35		30		Pass
159	5795		20.18	21.11	23.68		30		Pass

- 1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW))
- 2. 26 dB Bandwidth is the bandwidth of chain A or B whichever is less bandwidth, output power limitation is more stringent.



Product : Peplink Pepwave Wireless Product
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ac-20BW-CDD)_Master

Test Date : 2023/06/26

Maximum conducted output power Measurement:

	1	1				1	1		1
	Fraguanay	26 dB	Chain A	Chain B	Output	Duty	Outn	ut Power Limit	
Channel No.	rrequency	Bandwidth	Power	Power	Power	factor	Outp	ut rower Lillit	Result
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dB)	(dBm)	dBm+10log(BW)	
36	5180		18.78	18.93	21.87		30		Pass
44	5220		23.26	24.41	26.88		30		Pass
48	5240		22.63	23.67	26.19		30		Pass
149	5745		19.25	20.11	22.71		30		Pass
157	5785		18.14	19.10	21.66		30		Pass
165	5825		19.35	20.16	22.78		30		Pass

- 1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW))
- 2. 26 dB Bandwidth is the bandwidth of chain A or B whichever is less bandwidth, output power limitation is more stringent.



Product : Peplink Pepwave Wireless Product
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ac-40BW-CDD)_Master

Test Date : 2023/06/26

Maximum conducted output power Measurement:

	Emagyamay	26 dB	Chain A	Chain B	Output	Duty	Oute	yet Dayyan Limit	
Channel No.	Frequency	Bandwidth	Power	Power	Power	factor	Outp	ut Power Limit	Result
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dB)	(dBm)	dBm+10log(BW)	
38	5190		11.48	11.57	14.54		30		Pass
46	5230		21.43	21.55	24.50		30		Pass
151	5755		21.83	22.87	25.39		30		Pass
159	5795		20.22	21.19	23.74		30		Pass

- 1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW))
- 2. 26 dB Bandwidth is the bandwidth of chain A or B whichever is less bandwidth, output power limitation is more stringent.



Product : Peplink Pepwave Wireless Product
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ac-80BW-CDD)_Master

Test Date : 2023/06/26

Maximum conducted output power Measurement:

	Emagyamay	26 dB	Chain A	Chain B	Output	Duty	Oute	ut Davvan Limit	
Channel No.	Frequency	Bandwidth	Power	Power	Power	factor	Outp	ut Power Limit	Result
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dB)	(dBm)	dBm+10log(BW)	
42	5210		11.41	11.55	14.49		30		Pass
155	5775		16.97	17.43	20.22		30		Pass

- 1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW))
- 2. 26 dB Bandwidth is the bandwidth of chain A or B whichever is less bandwidth, output power limitation is more stringent.



Product : Peplink Pepwave Wireless Product
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ax-20BW-CDD)_Master

Test Date : 2023/06/26

Maximum conducted output power Measurement:

	L	26 dB	Chain A	Chain B	Output	Duty			
Channel No.	Frequency	Bandwidth	Power	Power	Power	factor	Outp	ut Power Limit	Result
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dB)	(dBm)	dBm+10log(BW)	
36	5180		18.82	18.97	21.91		30		Pass
44	5220		23.34	24.49	26.96		30		Pass
48	5240		22.68	23.71	26.24		30		Pass
149	5745		19.29	20.19	22.77		30		Pass
157	5785		18.16	19.16	21.70		30		Pass
165	5825		19.39	20.20	22.82		30		Pass

- 1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW))
- 2. 26 dB Bandwidth is the bandwidth of chain A or B whichever is less bandwidth, output power limitation is more stringent.



Product : Peplink Pepwave Wireless Product
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ax-40BW-CDD)_Master

Test Date : 2023/06/26

Maximum conducted output power Measurement:

	E	26 dB	Chain A	Chain B	Output	Duty	Overton	net Danner I insit	
Channel No.	Frequency	Bandwidth	Power	Power	Power	factor	Ouip	ut Power Limit	Result
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dB)	(dBm)	dBm+10log(BW)	
38	5190		11.52	11.63	14.59		30		Pass
46	5230		21.49	21.59	24.55		30		Pass
151	5755		21.89	22.91	25.44		30		Pass
159	5795		20.28	21.26	23.81		30		Pass

- 1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW))
- 2. 26 dB Bandwidth is the bandwidth of chain A or B whichever is less bandwidth, output power limitation is more stringent.



Product : Peplink Pepwave Wireless Product
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ax-80BW-CDD)_Master

Test Date : 2023/06/26

Maximum conducted output power Measurement:

	Eraguanav	26 dB	Chain A	Chain B	Output	Duty	Outn	ut Power Limit	
Channel No.	riequency	Bandwidth	Power	Power	Power	factor	Outp	ut rower Lillit	Result
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dB)	(dBm)	dBm+10log(BW)	
42	5210		11.44	11.59	14.53		30		Pass
155	5775		17.09	17.49	20.30		30		Pass

- 1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW))
- 2. 26 dB Bandwidth is the bandwidth of chain A or B whichever is less bandwidth, output power limitation is more stringent.



Product : Peplink Pepwave Wireless Product
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11a-CDD)_Slave

Test Date : 2023/06/26

Maximum conducted output power Measurement:

	Eraguanav	26 dB	Chain A	Chain B	Output	Duty	Outn	ut Power Limit	
Channel No.	rrequency	Bandwidth	Power	Power	Power	factor	Outp	ut rower Lillit	Result
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dB)	(dBm)	dBm+10log(BW)	
36	5180		17.61	18.52	21.10		24		Pass
44	5220		17.65	17.97	20.82		24		Pass
48	5240		17.62	17.80	20.72		24		Pass

- 1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW))
- 2. 26 dB Bandwidth is the bandwidth of chain A or B whichever is less bandwidth, output power limitation is more stringent.



Product : Peplink Pepwave Wireless Product
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11n-20BW-CDD)_Slave

Test Date : 2023/06/26

Maximum conducted output power Measurement:

Channel No.	Frequency	26 dB Bandwidth	Chain A Power	Chain B Power	Output Power	Duty factor	Outp	Output Power Limit	
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dB)	(dBm)	dBm+10log(BW)	
36	5180		18.02	18.15	21.10		24		Pass
44	5220		17.63	18.04	20.85		24		Pass
48	5240		18.17	18.42	21.31		24		Pass

- 1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW))
- 2. 26 dB Bandwidth is the bandwidth of chain A or B whichever is less bandwidth, output power limitation is more stringent.



Product : Peplink Pepwave Wireless Product
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11n-40BW-CDD)_Slave

Test Date : 2023/06/26

Maximum conducted output power Measurement:

	Eraguanav	26 dB	Chain A	Chain B	Output	Duty	Outn	ut Power Limit	
Channel No.	rrequency	Bandwidth	Power	Power	Power	factor	Outp	ut rower Lillit	Result
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dB)	(dBm)	dBm+10log(BW)	
38	5190		11.45	11.53	14.5		24		Pass
46	5230		20.83	20.86	23.86		24		Pass

- 1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW))
- 2. 26 dB Bandwidth is the bandwidth of chain A or B whichever is less bandwidth, output power limitation is more stringent.



Product : Peplink Pepwave Wireless Product
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ac-20BW-CDD)_Slave

Test Date : 2023/06/26

Maximum conducted output power Measurement:

	Fraguenay	26 dB	Chain A	Chain B	Output	Duty	Outo	ut Power Limit	
Channel No.	rrequency	Bandwidth	Power	Power	Power	factor	Outp	ut rower Lillit	Result
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dB)	(dBm)	dBm+10log(BW)	
36	5180		18.07	18.19	21.14		24		Pass
44	5220		17.68	18.11	20.91		24		Pass
48	5240		18.23	18.49	21.37		24		Pass

- 1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW))
- 2. 26 dB Bandwidth is the bandwidth of chain A or B whichever is less bandwidth, output power limitation is more stringent.



Product : Peplink Pepwave Wireless Product
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ac-40BW-CDD)_Slave

Test Date : 2023/06/26

Maximum conducted output power Measurement:

-										
	Channel No.	Eraguanav	26 dB	Chain A	Chain B	Output	Duty	Outn	ut Power Limit	
		Frequency	Bandwidth	Power	Power	Power	factor	Outp	Result	
		(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dB)	(dBm)	dBm+10log(BW)	
Ī	38	5190		11.48	11.57	14.54		24		Pass
	46	5230		20.87	20.91	23.90		24		Pass

- 1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW))
- 2. 26 dB Bandwidth is the bandwidth of chain A or B whichever is less bandwidth, output power limitation is more stringent.



Product : Peplink Pepwave Wireless Product
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ac-80BW-CDD)_Slave

Test Date : 2023/06/26

Maximum conducted output power Measurement:

	Frequency	26 dB	Chain A	Chain B		,	Outp	ut Power Limit	
Channel No.	(MHz)	Bandwidth		Power (dBm)	Power (dBm)	factor (dB)	(dBm) dBm+10log(BW)		Result
	(MHZ)	(MHz)	(dBm)	(aBm)	(aBm)	(aB)	(aBm)	dBm+10log(BW)	
42	5210		11.41	11.55	14.49		24		Pass

- 1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW))
- 2. 26 dB Bandwidth is the bandwidth of chain A or B whichever is less bandwidth, output power limitation is more stringent.



Product : Peplink Pepwave Wireless Product
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ax-20BW-CDD)_Slave

Test Date : 2023/06/26

Maximum conducted output power Measurement:

		26 dB	Chain A	Chain B	Output	Duty	_		
Channel No.	Frequency	Bandwidth	Power	Power	Power	factor	Outp	out Power Limit	Result
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dB)	(dBm)	dBm+10log(BW)	
36	5180		18.14	18.27	21.22		24		Pass
44	5220		17.71	18.15	20.95		24		Pass
48	5240		18.28	18.52	21.41		24		Pass

- 1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW))
- 2. 26 dB Bandwidth is the bandwidth of chain A or B whichever is less bandwidth, output power limitation is more stringent.



Product : Peplink Pepwave Wireless Product
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ax-40BW-CDD)_Slave

Test Date : 2023/06/26

Maximum conducted output power Measurement:

	Emagyamay	26 dB	Chain A	Chain B	Output	Duty	Oute	ut Davvan Limit	
Channel No.	Frequency	Bandwidth	Power	Power	Power	factor	Outp	ut Power Limit	Result
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dB)	(dBm)	dBm+10log(BW)	
38	5190		11.52	11.63	14.59		24		Pass
46	5230		20.90	20.95	23.94		24		Pass

- 1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW))
- 2. 26 dB Bandwidth is the bandwidth of chain A or B whichever is less bandwidth, output power limitation is more stringent.



Product : Peplink Pepwave Wireless Product
Test Item : Maximum conducted output power
Test Mode : Transmit (802.11ax-80BW-CDD)_Slave

Test Date : 2023/06/26

Maximum conducted output power Measurement:

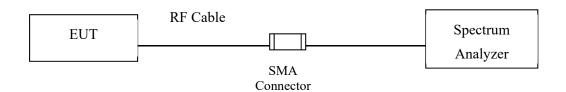
	Eraguanav	26 dB	Chain A	Chain B	Output	Duty	Outo	ut Dayyar Limit	
Channel No.	Frequency	Bandwidth	Power	Power	Power	factor	Output Power Limit (dBm) dBm+10log(BW) 24		Result
	(MHz)	(MHz)	(dBm)	(dBm)	(dBm)	(dB)	(dBm)	dBm+10log(BW)	
42	5210		11.44	11.59	14.53		24	-	Pass

- 1. Output Power Value (dBm) = 10*LOG (Chain A(mW)+ Chain B(mW))
- 2. 26 dB Bandwidth is the bandwidth of chain A or B whichever is less bandwidth, output power limitation is more stringent.



4. Maximun Power Spectral Density

4.1. Test Setup



4.2. Limits

For the band 5.15-5.25 GHz,

- (i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
- (ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
- (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.
- (iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.



For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point UNII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

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:

5150MHz-5250MHz: Directional gain = 7.47 dBi, Limit= 15.53 dBm 5725MHz-5850MHz: Directional gain = 7.52 dBi, Limit= 28.48 dBm Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}]$ dBi

4.3. Test Procedure

The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

The Peak Power Spectral Density using KDB 789033 section F) procedure, Create an average power spectrum for the EUT operating mode being tested by following the instructions in section E)2) for measuring maximum conducted output power using a spectrum analyzer.

SA-1 method is selected to run the test.



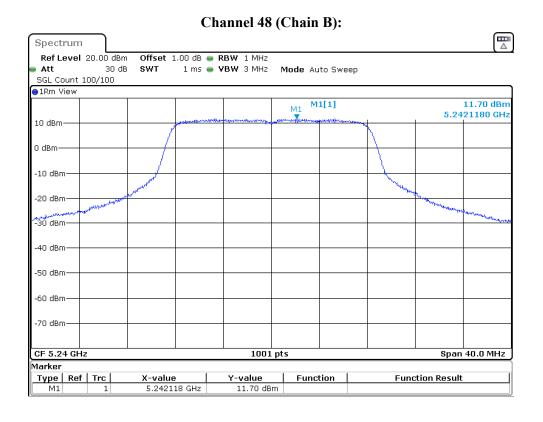
4.4. Test Result of Maximun Power Spectral Density

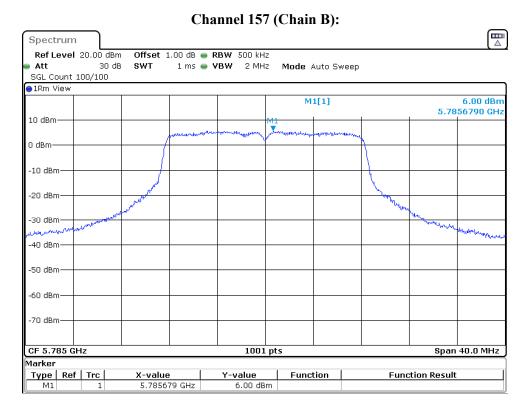
Product : Peplink Pepwave Wireless Product
Test Item : Maximun Power Spectral Density
Test Mode : Transmit (802.11a-CDD) _Master

Channel No.	Frequency	Data Rate	Chain	PPSD/MHz	Duty factor	Total PPSD/MHz	Limit	Result
	(MHz)	(Mbps)		(dBm)	(dB)	(dBm)	(dBm)	
36	5180	6	A	7.56	0.46	11.39	15.53	Pass
30	3160	O	В	8.26	0.40	11.39	13.33	rass
44	5220	6	A	11.60	0.46	15.11	15.53	Pass
44	3220	0	В	11.68	0.40	13.11	13.33	rass
10	5240	6	A	11.47	0.46	15.06	15.53	Dogg
48	5240	6	В	11.70	0.46	13.06	13.33	Pass

Channel No.	Frequency	Data Rate	Chain	PPSD/MHz	Duty factor	Total PPSD/MHz	Limit	Result
	(MHz)	(Mbps)		(dBm)	(dB)	(dBm)	(dBm)	
149	5745	6	A	5.64	0.46	9.27	28.48	Pass
149	3/43	U	В	5.96	0.40	9.21	20.40	1 488
157	5785	6	A	5.39	0.46	9.18	28.48	Pass
137	3763	U	В	6.00	0.40	9.16	20.40	1 488
165	5825	6	A	5.38	0.46	8.72	28.48	Pass
165	3623	O	В	5.11	0.40	0.72	20.40	rass









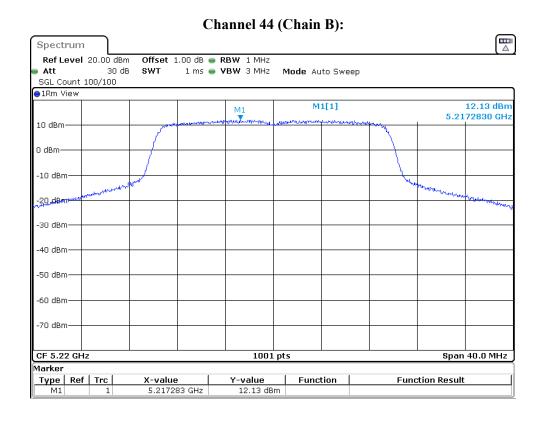
Product : Peplink Pepwave Wireless Product
Test Item : Maximun Power Spectral Density

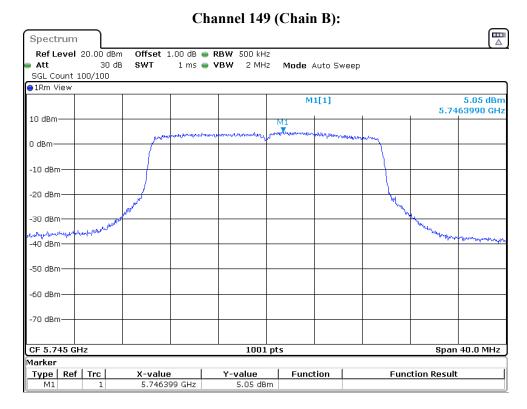
Test Mode : Transmit (802.11ax-20BW-CDD)_Master

Channel No.	Frequency	Data Rate	Chain	PPSD/MHz	Duty factor	Total PPSD/MHz	Limit	Result
	(MHz)			(dBm)	(dB)	(dBm)	(dBm)	
36	5180	MCS0	A	6.68	0.25	10.05	15.53	Pass
30	3180	MCSU	В	6.90	0.23	10.03	13.33	rass
44	5220	MCCO	A	11.81	0.25	15.23	15.53	Pass
44	3220	MCS0	В	12.13	0.23	13.23	13.33	1 488
18	5240	Maga	A	11.16	0.25	14.52	15.53	Pass
48	3240	MCS0	В	11.36	0.23	14.32	13.33	rass

Channel No.	Frequency	Data Rate	Chain	PPSD/MHz	Duty factor	Total PPSD/MHz	Limit	Result
	(MHz)			(dBm)	(dB)	(dBm)	(dBm)	
149	5745	MCS0	A	4.61	0.25	8.09	28.48	Pass
149	3/43	MCSU	В	5.05	0.23	8.09	20.40	1 488
157	5785	MCS0	A	3.77	0.25	7.08	28.48	Pass
137	3763	MCSU	В	3.88	0.23	7.08	20.40	rass
165	5825	MCS0	A	4.55	0.25	7.70	28.48	Pass
103	3623	MCSU	В	4.32	0.23	7.70	20.40	rass









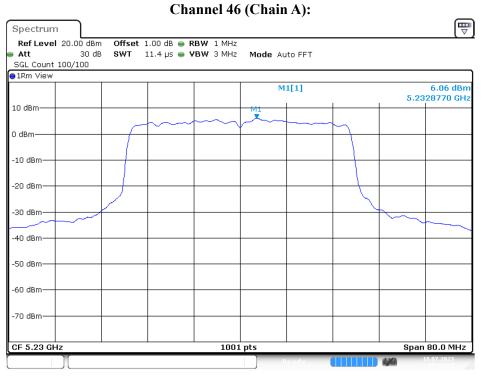
Product : Peplink Pepwave Wireless Product
Test Item : Maximun Power Spectral Density

Test Mode : Transmit (802.11ax-40BW-CDD)_Master

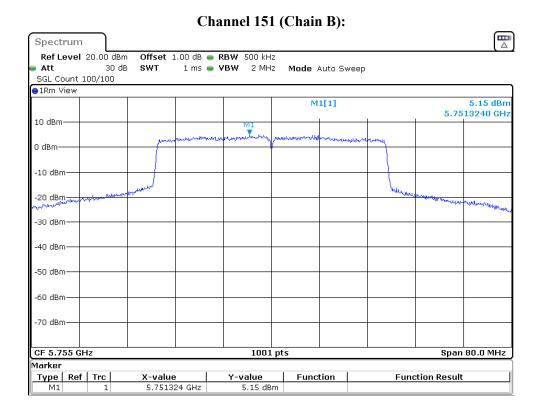
Channel No.	Frequency	Data Rate	Chain	PPSD/MHz	Duty factor	Total PPSD/MHz	Limit	Result
	(MHz)			(dBm)	(dB)	(dBm)	(dBm)	
38	5190	MCS0	A	-3.43	0.26	-0.15	15.53	Pass
36	3190	MCSU	В	-3.42	0.20	-0.13	13.33	rass
46	5230	MCS0	A	5.62	0.26	9.12	15.53	Pass
40	3230	MCSU	В	6.06	0.20	9.12	15.55	rass

Channel No.	Frequency	Data Rate	Chain	PPSD/MHz	Duty factor	Total PPSD/MHz	Limit	Result
	(MHz)			(dBm)	(dB)	(dBm)	(dBm)	
151	5755	MCS0	A	4.25	0.26	8.00	28.48	Pass
131	3733	MCSU	В	5.15	0.20	8.00	20.40	rass
159	5795	MCS0	A	2.63	0.26	5.98	28.48	Pass
139	3193	MCSU	В	2.77	0.20	3.96	20.40	rass





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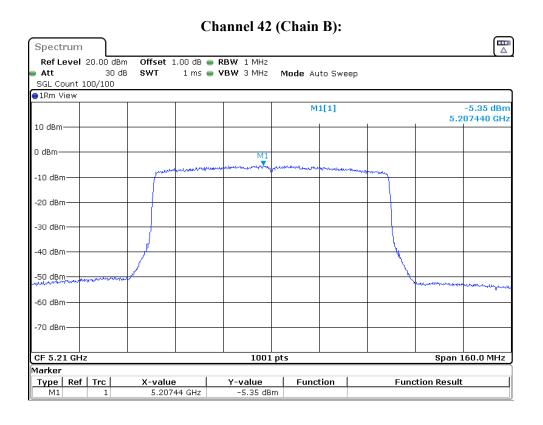
Product : Peplink Pepwave Wireless Product
Test Item : Maximun Power Spectral Density

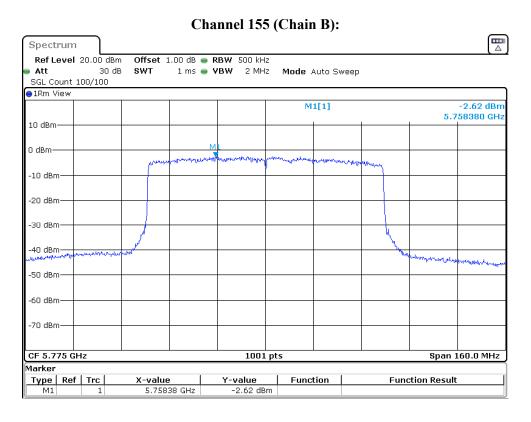
Test Mode : Transmit (802.11ax-80BW-CDD)_Master

Channel No.	Frequency	Data Rate	Chain	PPSD/MHz	Duty factor	Total PPSD/MHz	Limit	Result
	(MHz)			(dBm)	(dB)	(dBm)	(dBm)	
42	5210	MCS0	A	-5.60	0.34	2 12	15.53	Dogg
42	3210	MCSU	В	-5.35	0.34	-2.12	13.33	Pass

Channel No.	Frequency	Data Rate	Chain	PPSD/MHz	Duty factor	Total PPSD/MHz	Limit	Result
	(MHz)			(dBm)	(dB)	(dBm)	(dBm)	
155	5775	MCS0	A	-2.65	0.34	0.72	28.48	Pass
155	3113	MCSU	В	-2.62	0.34	0.72	20.40	rass



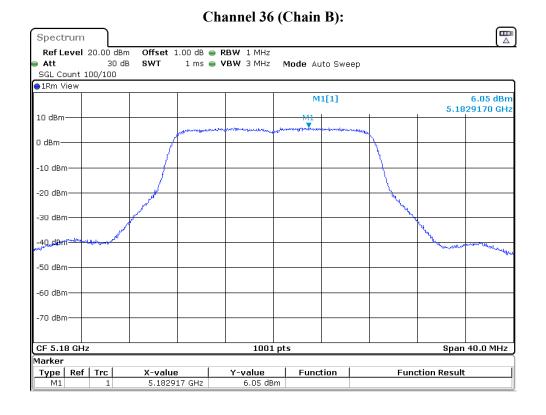






Product : Peplink Pepwave Wireless Product
Test Item : Maximun Power Spectral Density
Test Mode : Transmit (802.11a-CDD) _Slave

Channel No.	Frequency	Data Rate	Chain	PPSD/MHz	Duty factor	Total PPSD/MHz	Limit	Result
	(MHz)	(Mbps)		(dBm)	(dB)	(dBm)	(dBm)	
36	5180	6	A	5.89	0.46	9.44	9.53	Pass
30	3100	U	В	6.05	0.40	9. 44	9.55	1 ass
44	5220	6	A	5.96	0.46	9.44	9.53	Pass
44	3220	Ü	В	5.98	0.40	7. 44	7.33	1 488
48	5240	6	A	6.02	0.46	9.50	9.53	Pass
48	3240	O	В	6.04	0.40	9.30	9.33	1 488





Product : Peplink Pepwave Wireless Product
Test Item : Maximun Power Spectral Density
Test Mode : Transmit (802.11ax-20BW-CDD)_Slave

Channel No.	Frequency	Data Rate	Chain	PPSD/MHz	Duty factor	Total PPSD/MHz	Limit	Result
	(MHz)			(dBm)	(dB)	(dBm)	(dBm)	
36	5180	MCS0	A	6.01	0.25	9.33	9.53	Pass
30	3160	MCSU	В	6.13	0.23	9.33	9.33	1 488
44	5220	Maga	A	5.61	0.25	9.19	9.53	Pass
44	3220	MCS0	В	6.24	0.23	9.19	9.33	1 488
10	5240	Maga	A	6.20	0.25	9.49	9.53	Pass
48	3240	MCS0	В	6.27	0.23	9.49	9.33	rass

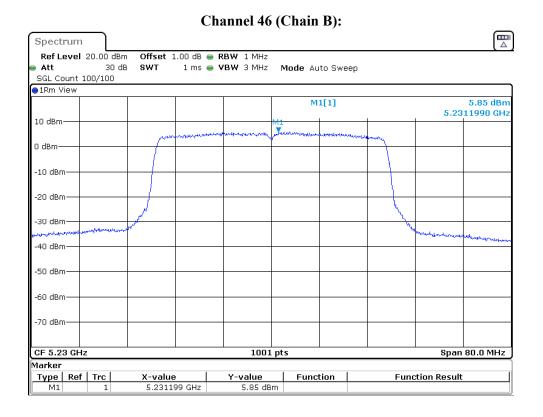
Note: Total PPSD = 10*log(Chain A (mW) + Chain B (mW) + Duty factor.

Channel 48 (Chain B): Spectrum Ref Level 20.00 dBm Offset 1.00 dB 🖷 RBW 1 MHz Att 30 dB SWT 1 ms 🁄 **VBW** 3 MHz Mode Auto Sweep SGL Count 100/100 ●1Rm View 6.27 dBm 5.2421980 GHz M1[1] 10 dBm-0 dBm -10 dBm -20 dBm -40 dBm -50 dBm--70 dBm-1001 pts Span 40.0 MHz CF 5.24 GHz Marker Type Ref Trc Function **Function Result** X-value Y-value



Product : Peplink Pepwave Wireless Product
Test Item : Maximun Power Spectral Density
Test Mode : Transmit (802.11ax-40BW-CDD)_Slave

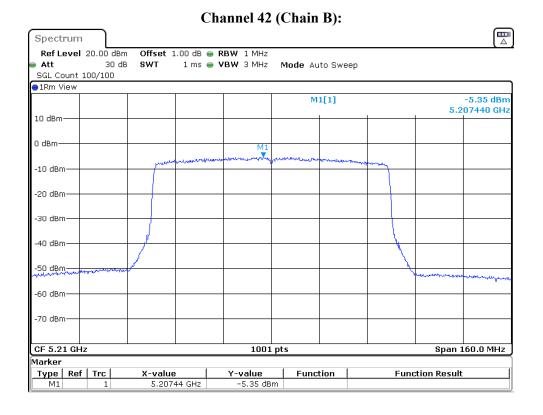
Channel No.	Frequency	Data Rate	Chain	PPSD/MHz	Duty factor	Total PPSD/MHz	Limit	Result
	(MHz)			(dBm)	(dB)	(dBm)	(dBm)	
38	5190	MCS0	A	-3.43	0.26	-0.15	9.53	Pass
36	3190	MCSU	В	-3.42	0.20	-0.13	9.33	rass
46	5230	MCS0	A	5.45	0.26	8.93	9.53	Pass
40	3230	MCSU	В	5.85	0.20	0.93	7.33	rass





Product : Peplink Pepwave Wireless Product
Test Item : Maximun Power Spectral Density
Test Mode : Transmit (802.11ax-80BW-CDD)_Slave

Channel No.	Frequency	Data Rate	Chain	PPSD/MHz	Duty factor	Total PPSD/MHz	Limit	Result
	(MHz)			(dBm)	(dB)	(dBm)	(dBm)	
42	5210	MCS0	A	-5.60	0.24	2 12	0.52	Dogg
42	5210	MCSU	В	-5.35	0.34	-2.12	9.53	Pass

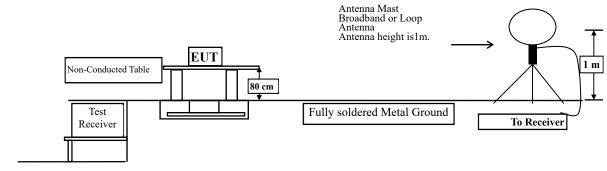


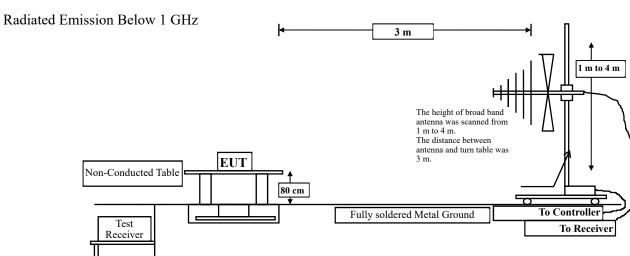


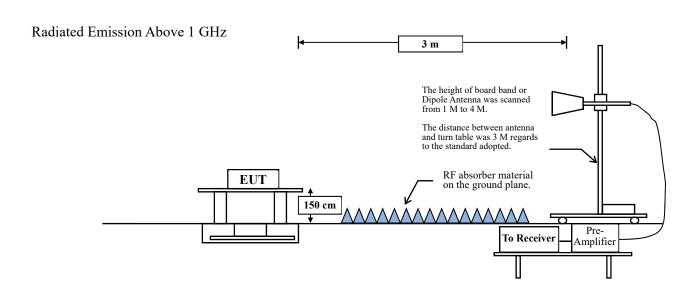
5. Radiated Emission

5.1. Test Setup

Radiated Emission Under 30 MHz









5.2. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20 dB 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(a) 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: E field strength $(dB\mu V/m) = 20 \log E$ field strength (uV/m)



5.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to FCC KDB-789033 test procedure for compliance to FCC 47CFR 15. 407 requirements.

Measuring the frequency range below 1 GHz, the EUT is placed on a turn table which is 0.8 meter above ground, when measuring the frequency range above 1 GHz, 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 30 MHz setting on the field strength meter is 9 kHz and 30 MHz~1 GHz is 120 kHz and above 1 GHz is 1 MHz.

Radiated emission measurements below 30 MHz are made using Loop Antenna and 30 MHz~1 GHz are made using broadband Bilog antenna and above 1 GHz 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 9 kHz - 10th Harmonic of fundamental was investigated.



RBW and **VBW** Parameter setting:

According to KDB 789033 section II.G.5 Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz.

RBW = 1 MHz.

 $VBW \ge 3 MHz$.

According to KDB 789033 section II.G.6 Procedures for Average Unwanted Emissions Measurements above 1000 MHz.

RBW = 1 MHz.

VBW = 10 Hz, when duty cycle \geq 98 %

VBW \geq 1/T, when duty cycle \leq 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.)

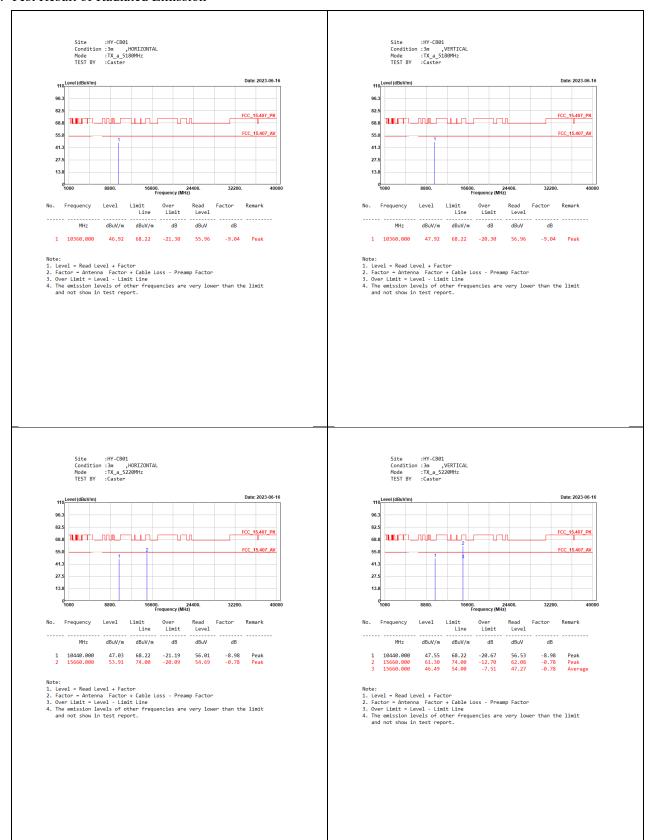
CDD Mode:

5 GHz band	Duty Cycle	Т	1/T	VBW
	(%)	(ms)	(Hz)	(Hz)
802.11a	89.94	3.2400	699	1000
802.11ax20	94.44	5.4400	184	200
802.11ax40	94.10	5.4200	185	200
802.11ax80	92.41	5.3600	187	200

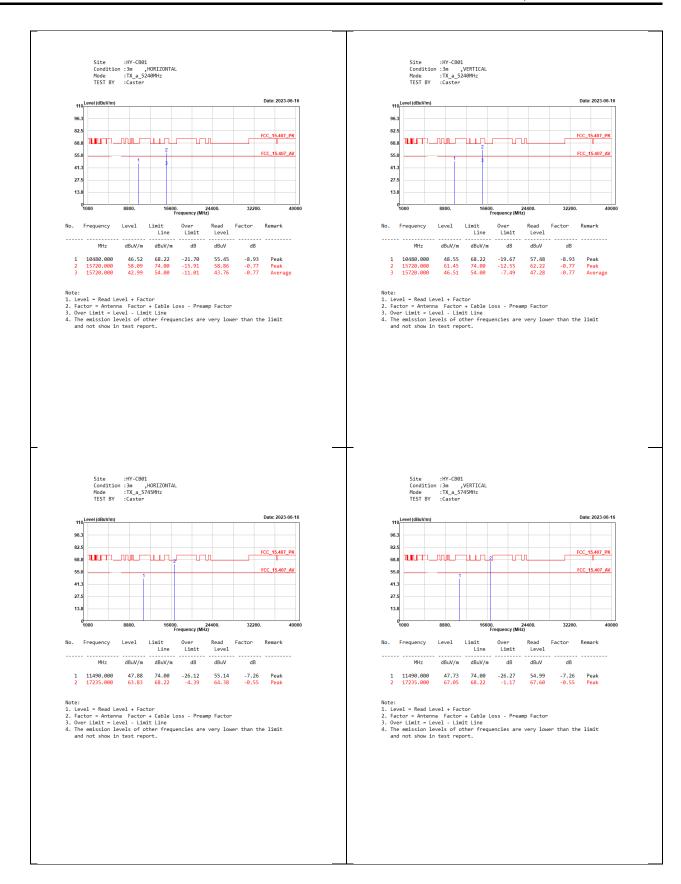
Note: Duty Cycle Refer to Section 8.



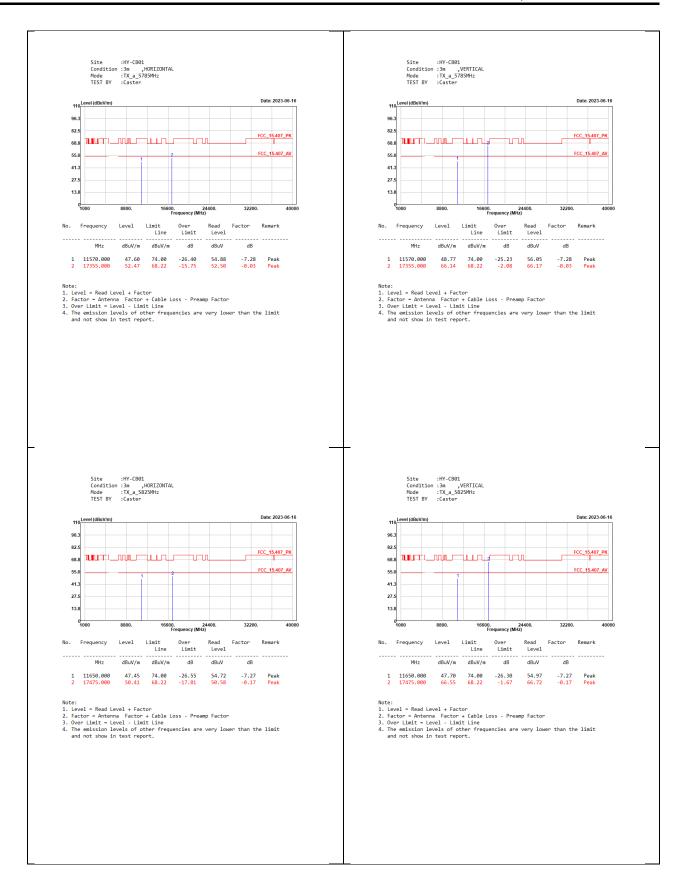
5.4. Test Result of Radiated Emission



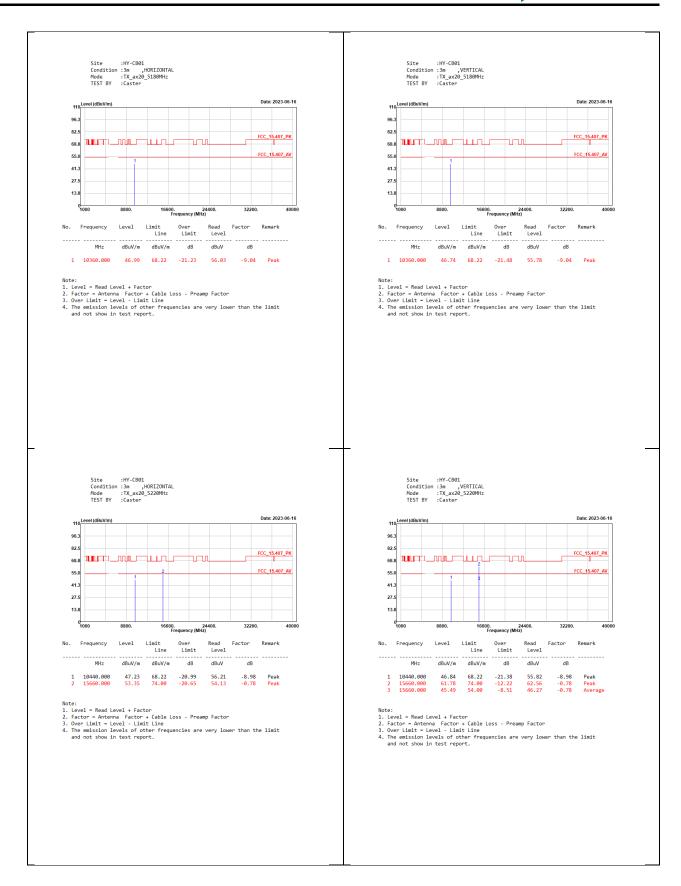




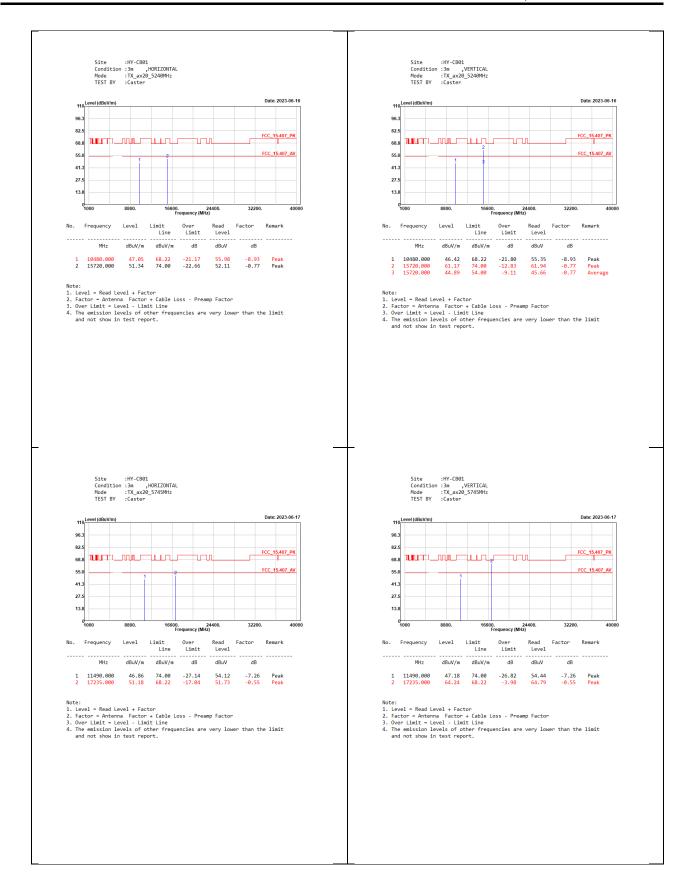




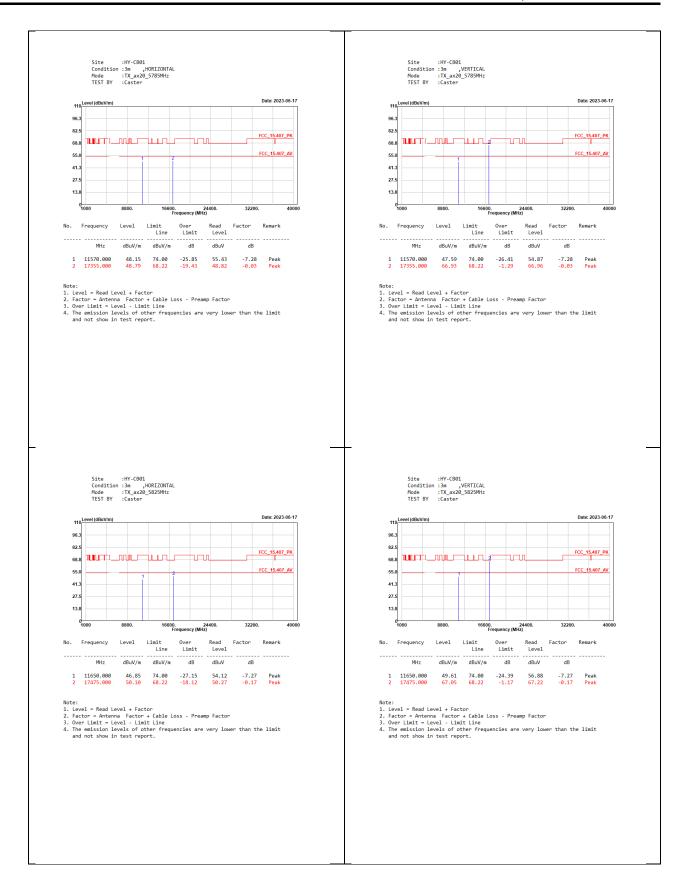




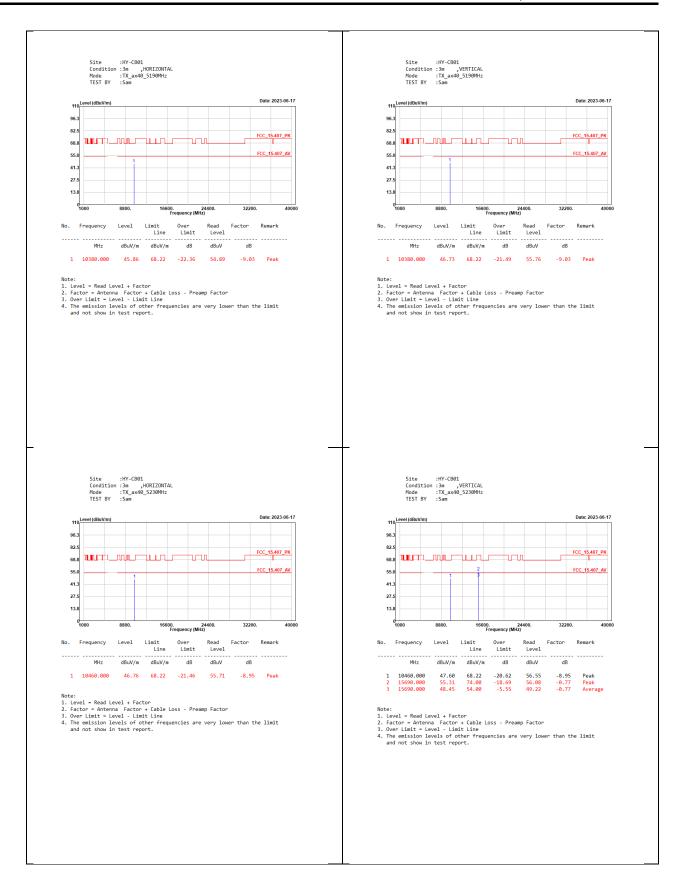




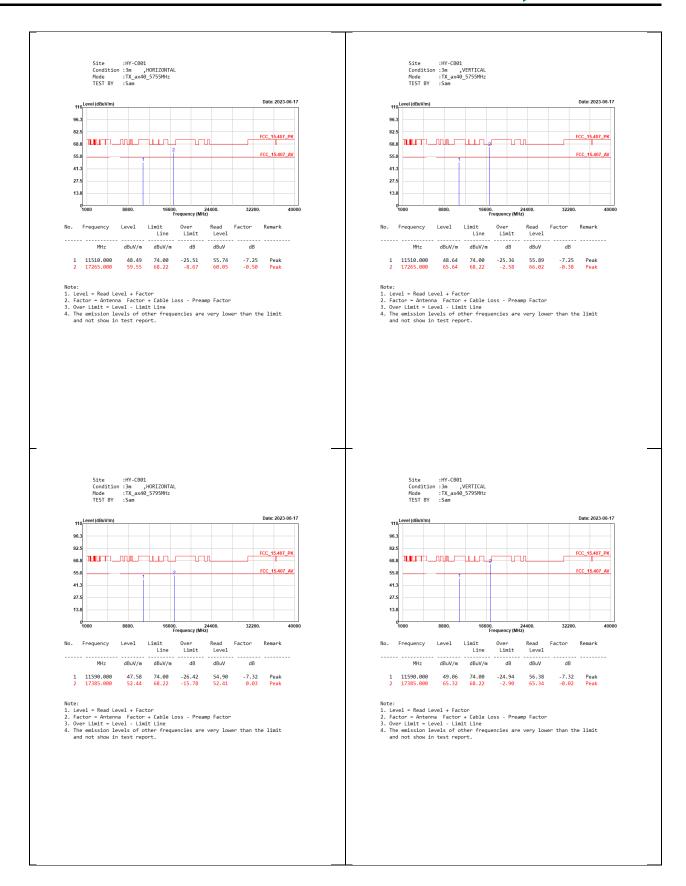




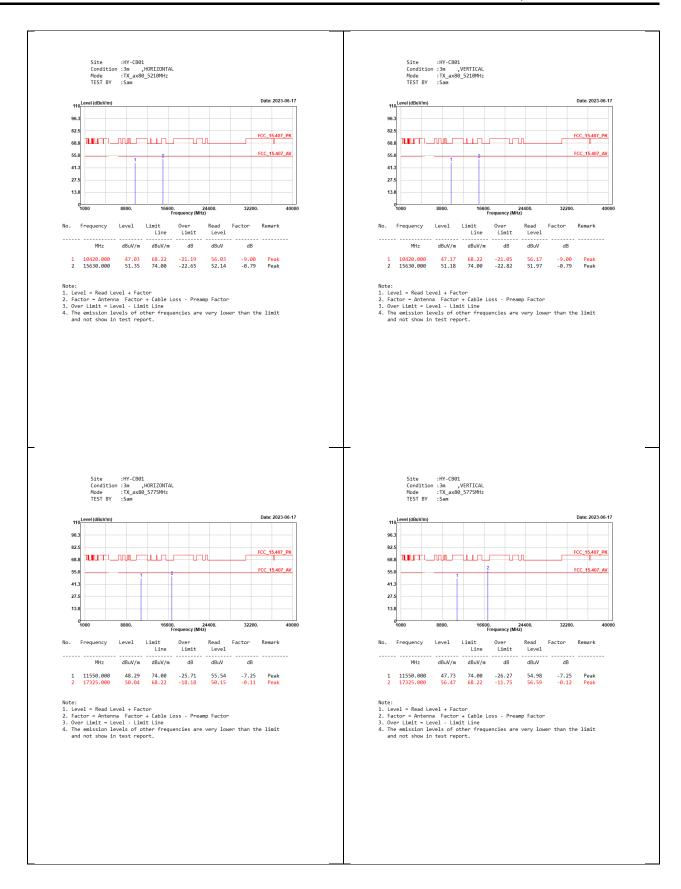






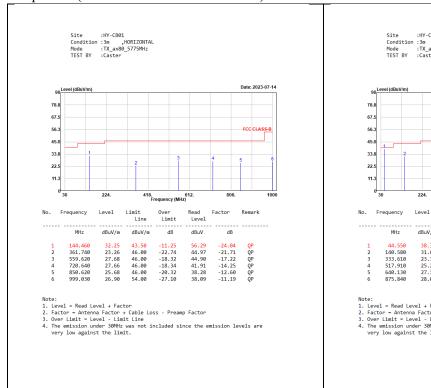


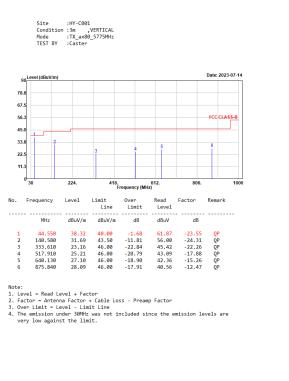




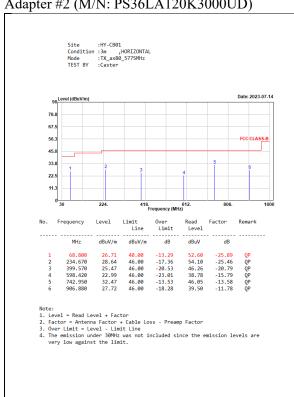


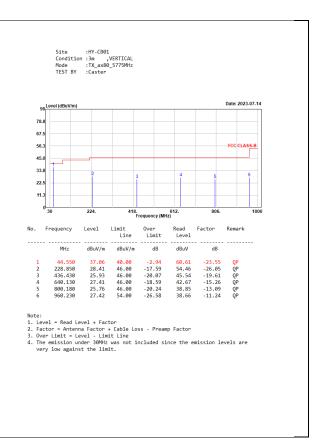
Adapter #1 (M/N: DCT36W120300ZZ-D2)





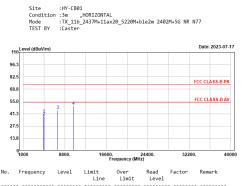
Adapter #2 (M/N: PS36LA120K3000UD)





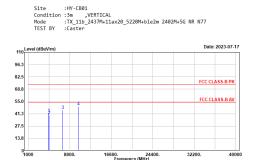


Test Result of Radiated Emission co-location



dB dBuV MHz dBuV/m dBuV/m dB 4804.000 4874.000 7500.000 10440.000 -32.73 -35.66 -28.65 -24.28 54.82 51.68 54.56 58.70

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



No.	Frequency	Level	Line	Limit	Kead Level	Factor	Kemark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4804.000	41.87	74.00	-32.13	55.42	-13.55	Peak
2	4874.000	39.44	74.00	-34.56	52.78	-13.34	Peak
3	7500.000	45.14	74.00	-28.86	54.35	-9.21	Peak
4	10440.000	49.27	74.00	-24.73	58.25	-8.98	Peak

- Note:

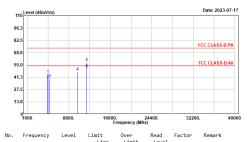
 1. Level = Read Level + Factor

 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-CB01
Condition :3m ,HORIZONTAL
Mode :TX_1ib_2437M+11ax20_5226M+ble2m 2402M+LTE 838
TEST BY :Caster



			Line	Limit	Level			
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB		
1	4804.000	44.22	74.00	-29.78	57.77	-13.55	Peak	
2	4874.000	38.76	74.00	-35.24	52.10	-13.34	Peak	
3	5200.000	39.69	74.00	-34.31	52.85	-13.16	Peak	
4	10440.000	47.18	74.00	-26.82	56.16	-8.98	Peak	
5	12185.000	57.60	74.00	-16.40	64.43	-6.83	Peak	
6	12185.000	50.53	54.00	-3.47	57.36	-6.83	Average	

- Note:

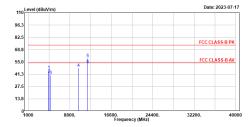
 1. Level = Read Level + Factor

 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-CB01
Condition :3m ,VERTICAL
Mode :TX_1ib_2437M+11ax20_5226M+ble2m 2402M+LTE 838
TEST BY :Caster



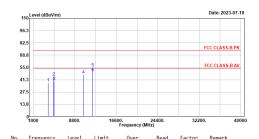
No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4804.000	45.54	74.00	-28.46	59.09	-13.55	Peak
2	4874.000	41.56	74.00	-32.44	54.90	-13.34	Peak
3	5200.000	39.94	74.00	-34.06	53.10	-13.16	Peak
4	10440.000	48.22	74.00	-25.78	57.20	-8.98	Peak
5	12185.000	58.95	74.00	-15.05	65.78	-6.83	Peak
6	12185.000	52.41	54.00	-1.59	59.24	-6.83	Average

- 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-CB01
Condition :3m ,HORIZONTAL
Mode :TX_11b_2437M+11ax20_5220M+ble2m 2402M+WCDMA
TEST BY :Sam



	rrequency	Level	Line	Limit	Level	T de coi	remark	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB		
1	3760.000	37.95	74.00	-36.05	53.99	-16.04	Peak	
2	4804.000	44.47	74.00	-29.53	58.02	-13.55	Peak	
3	4874.000	39.38	74.00	-34.62	52.72	-13.34	Peak	
4	10440.000	46.97	74.00	-27.03	55.95	-8.98	Peak	
5	12185.000	54.94	74.00	-19.06	61.77	-6.83	Peak	
6	12185 000	40.30	54 00	-4.70	56 13	-6.83	Avonago	

- Note:

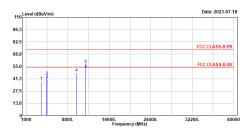
 1. Level Read Level + Factor

 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-CB01
Condition :3m ,VERTICAL
Mode :TK_11b_2437M+11ax20_5220M+ble2m 2402M+WCDMA
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	3760.000	38.31	74.00	-35.69	54.35	-16.04	Peak
2	4804.000	43.98	74.00	-30.02	57.53	-13.55	Peak
3	4874.000	40.70	74.00	-33.30	54.04	-13.34	Peak
4	10440.000	47.70	74.00	-26.30	56.68	-8.98	Peak
5	12185.000	57.32	74.00	-16.68	64.15	-6.83	Peak
6	12185.000	51.80	54.00	-2.20	58.63	-6.83	Average

- Note:

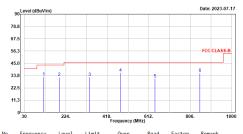
 1. Level = Read Level + Factor

 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-CB01
Condition :3m ,HORIZONTAL
Mode :TX_11b_2437M+11ax20_5220M+51e2m 2402M+5G NR N77
TEST BY :Sam



ο.	Frequency	revel	Line	Limit	Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	119.240	32.69	43.50	-10.81	58.67	-25.98	QP
2	192.960	32.37	43.50	-11.13	59.04	-26.67	QP
3	335.550	32.27	46.00	-13.73	54.51	-22.24	QP
4	480.080	36.47	46.00	-9.53	55.28	-18.81	QP .
5	640.130	30.96	46.00	-15.04	46.22	-15.26	QP
6	850.620	35.95	46.00	-10.05	48.55	-12.60	ŎР

- Note:

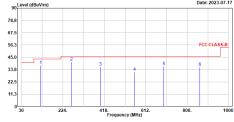
 1. Level Read Level + Factor

 2. Factor Antenna Factor + Cable Loss Preamp Factor

 3. Over Limit = Level Limit Line

 4. The emission under 30MMz was not included since the emission levels are very low against the limit.

Site :HY-CB01 Condition :3m ,VERTICAL Mode :TX_11b_2437M+11ax20_5220M+ble2m 2402M+5G NR N77 TEST BY :San

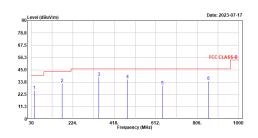


	Frequency (MHz)							
No.	Frequency	requency Level Limit Lin		Over Limit	Read Level	Factor	Remark	
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB		
1	120.210	37.60	43.50	-5.90	63.56	-25.96	QP	
2	263.770	40.66	46.00	-5.34	65.46	-24.80	QP	
3	399.570	36.41	46.00	-9.59	57.20	-20.79	QP	
4	559.620	31.71	46.00	-14.29	48.93	-17.22	QP	
5	696.390	36.81	46.00	-9.19	51.38	-14.57	QP	
6	865.170	35.86	46.00	-10.14	48.36	-12.50	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 30MMiz was not included since the emission levels are very low against the limit.



Site :HY-CB01 Condition :3m ,HORIZONTAL Mode :TX_11b_2437M+11ax20_5220M+ble2m 2402M+LTE 838 TEST BY :Sam



	rrequency	Level	Line	Limit	Level	100001	ricinar it
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	43.580	26.26	40.00	-13.74	49.88	-23.62	QP
2	173.560	32.59	43.50	-10.91	56.83	-24.24	QP
3	345.250	38.48	46.00	-7.52	60.63	-22.15	QP
4	480.080	36.39	46.00	-9.61	55.20	-18.81	QP
5	643.040	30.47	46.00	-15.53	45.66	-15.19	QP
6	857.410	34.74	46.00	-11.26	47.31	-12.57	QP

- Note:

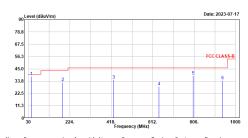
 1. Level = Read Level + Factor

 2. Factor = Antenna Factor + Cable Loss Preamp Factor

 3. Over Limit t = Level Limit Line

 4. The emission under 30MMz was not included since the emission levels are very low against the limit.

Site :HY-CB01
Condition :3m ,VERTICAL
Mode :TX_11b_2437M+11ax20_5220M+ble2m 2402M+LTE 838
TEST BY :Sam



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	43.580	38.14	40.00	-1.86	61.76	-23.62	QP
2	191.990	32.44	43.50	-11.06	59.02	-26.58	QP
3	428.670	34.96	46.00	-11.04	54.93	-19.97	QP
4	640.130	28.94	46.00	-17.06	44.20	-15.26	QP
5	800.180	38.63	46.00	-7.37	51.72	-13.09	QP
6	937.920	34.40	46.00	-11.60	45.99	-11.59	QP

- Note:

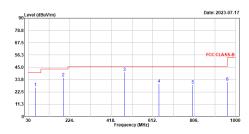
 1. Level = Read Level + Factor

 2. Factor = Antenna Factor + Cable loss Preamp Factor

 3. Over Limit = Level Limit Line

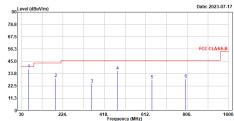
 4. The emission under 30MPU was not included since the emission levels are very low against the limit.

Site :HY-CB01
Condition :3m ,HORIZONTAL
Mode :TX_11b_2437M+11ax20_5220M+ble2m 2402M+WCDMA
TEST BY :Sam



0.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	62.980	26.37	40.00	-13.63	51.34	-24.97	QP
2	192.960	35.78	43.50	-7.72	62.45	-26.67	QP
3	480.080	40.40	46.00	-5.60	59.21	-18.81	QP
4	640.130	29.92	46.00	-16.08	45.18	-15.26	QP
5	799.210	28.72	46.00	-17.28	41.79	-13.07	QP
6	960.230	31.55	54.00	-22.45	42.79	-11.24	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.



Frequency (MHz)							
Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark	
MHz	dBuV/m	dBuV/m	dB	dBuV	dB		
63.950	38.01	40.00	-1.99	63.10	-25.09	QP	
191.020	29.49	43.50	-14.01	55.98	-26.49	QP	
359.800	24.32	46.00	-21.68	46.07	-21.75	QP	
480.080	36.24	46.00	-9.76	55.05	-18.81	QP	
640.130	28.11	46.00	-17.89	43.37	-15.26	QP	
799.210	28.98	46.00	-17.02	42.05	-13.07	QP	
	MHz 63.950 191.020 359.800 480.080 640.130	MHz dBuV/m 63.950 38.01 191.020 29.49 359.800 24.32 480.080 36.24 640.130 28.11	Frequency Level Limit Line MHz dBuV/m dBuV/m 63.950 38.01 40.00 191.020 29.49 43.50 359.800 24.32 46.00 480.080 36.24 46.06 640.130 28.11 46.00	Frequency Level Limit Lime Over Limit №1z dBuV/m dBuV/m dB 63.950 38.01 40.00 -1.99 191.020 29.49 43.50 -14.01 359.800 24.12 40.00 -21.68 480.080 36.24 46.00 -9.76 640.130 28.11 46.00 -17.89	Frequency Level Limit Line Over Limit Read Level №12 dBuV/m dBuV/m dB dBuV 63.950 38.01 40.00 -1.99 63.10 191.020 29.49 43.59 -14.01 55.98 395.800 24.32 46.00 -21.68 46.07 480.800 36.24 46.00 -9.76 55.95 640.130 28.11 46.00 -17.89 43.37	Frequency Level Limit Line Over Limit Read Level Factor MHz dBuV/m dBuV/m dB dBuV dB 63.950 38.01 40.00 -1.99 63.10 -25.09 191.020 29.49 43.50 -14.01 55.98 -26.49 359.800 24.32 40.00 -21.68 46.07 -21.58 480.080 36.24 46.00 -9.76 55.05 -18.81 640.130 28.11 46.00 -17.89 43.37 -15.81	

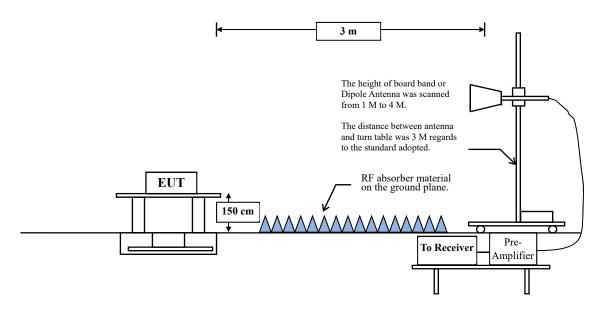
- Note:
 1. Level = Read Level + Factor
 2. Factor = Antenna Factor + Cable Loss Preamp Factor
 3. Over Limit = Level Limit Line
 4. The emission under 30MMiz was not included since the emission levels are very low against the limit.



6. Band Edge

6.1. Test Setup

RF Radiated Measurement:



6.2. Limits

The provisions of Section 15.205 of this part apply to intentional radiators operating under this section. Radiated emissions which fall in the restricted bands, as defined in Section 15.205, must also comply with the radiated emission limits specified in Section 15.209:

FCC Part 15 Subpart C Paragraph 15.209 Limits						
Frequency MHz	μV/m @3 m	dBμV/m@3 m				
30-88	100	40				
88-216	150	43.5				
216-960	200	46				
Above 960	500	54				

Remarks:

- 1. RF Voltage (dB μ V) = 20 log RF Voltage (μ V).
- 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.



6.3. Test Procedure

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table can rotate 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 can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10:2013 on radiated measurement.

The bandwidth below 1 GHz setting on the field strength meter is 120 kHz, above 1GHz are 1 MHz. The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

RBW and **VBW** Parameter setting:

According to KDB 789033 section II.G.5 Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz.

RBW = 1 MHz.

 $VBW \ge 3 MHz$.

According to KDB 789033 section II.G.6 Procedures for Average Unwanted Emissions Measurements above 1000 MHz.

RBW = 1 MHz.

VBW = 10 Hz, when duty cycle \geq 98 %

 $VBW \ge 1/T$, 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.)

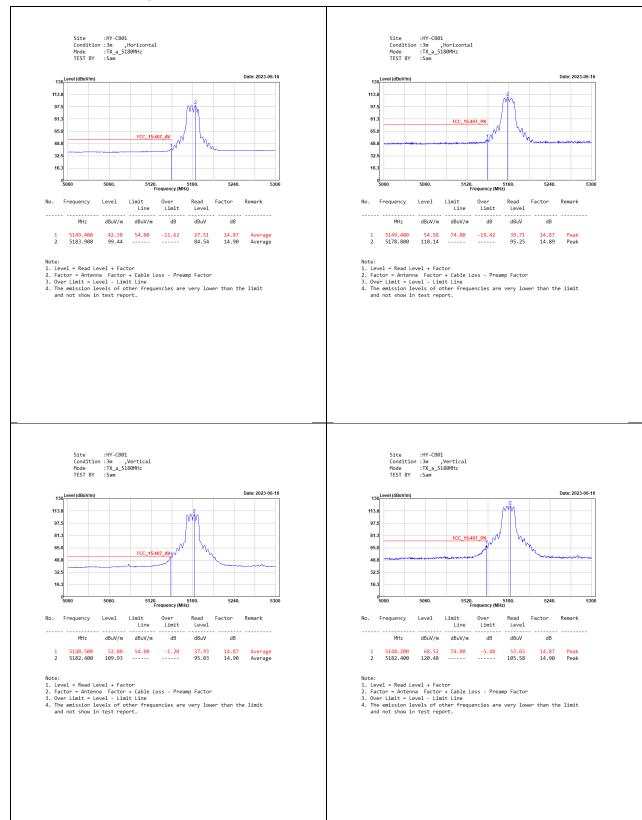
CDD Mode:

5 GHz band	Duty Cycle	Т	1/T	VBW
	(%)	(ms)	(Hz)	(Hz)
802.11a	89.94	3.2400	699	1000
802.11ax20	94.44	5.4400	184	200
802.11ax40	94.10	5.4200	185	200
802.11ax80	92.41	5.3600	187	200

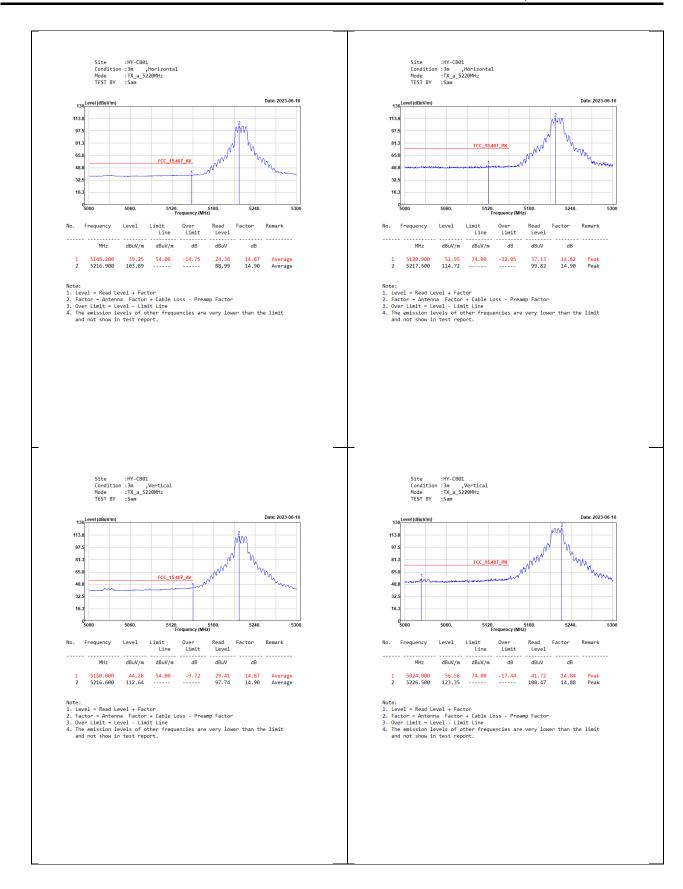
Note: Duty Cycle Refer to Section 8.



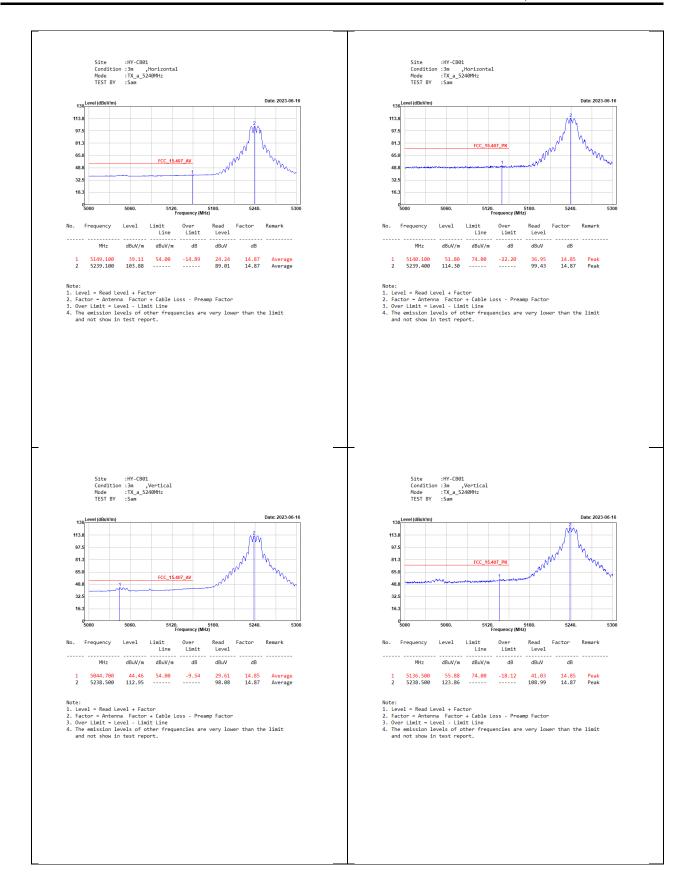
6.4. Test Result of Band Edge



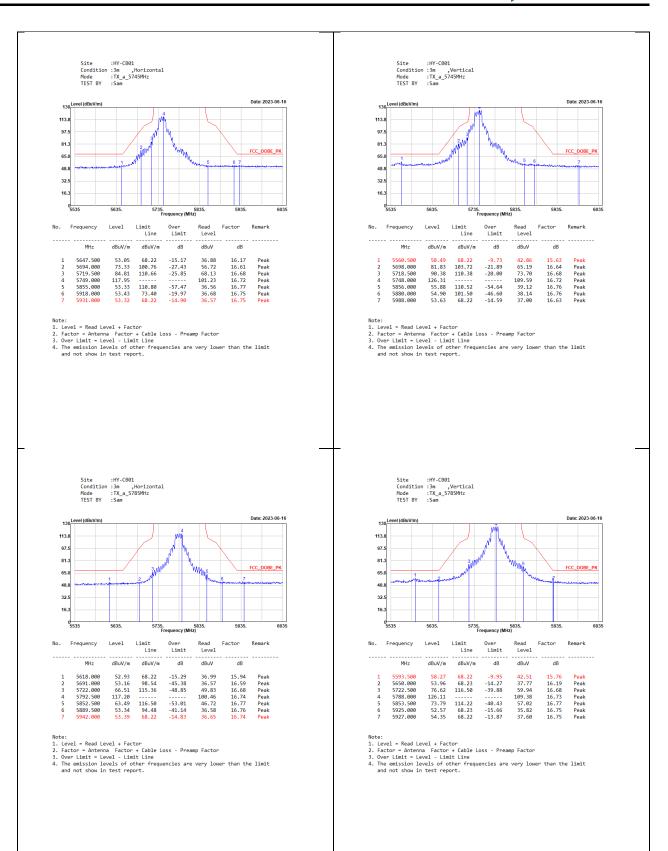




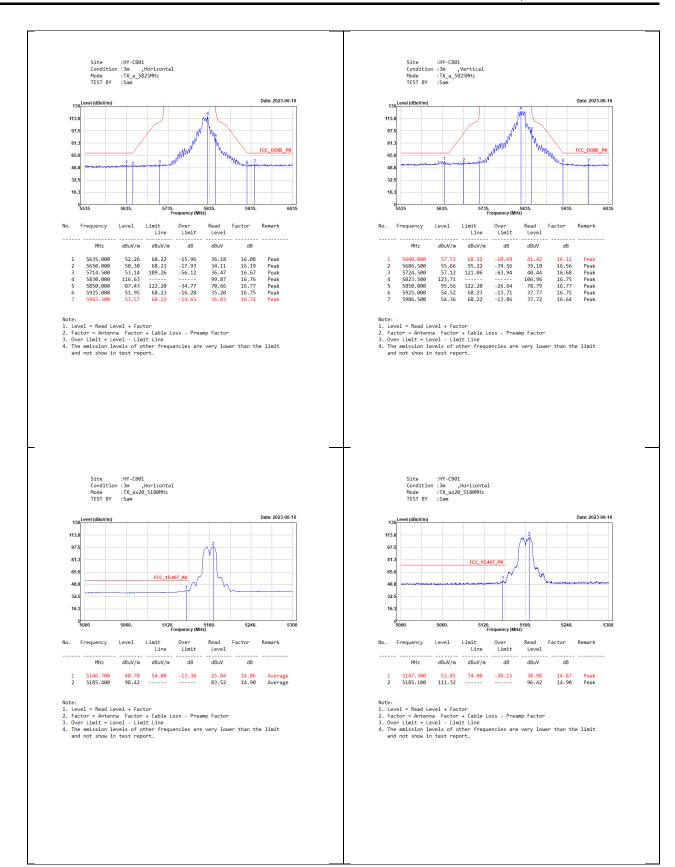




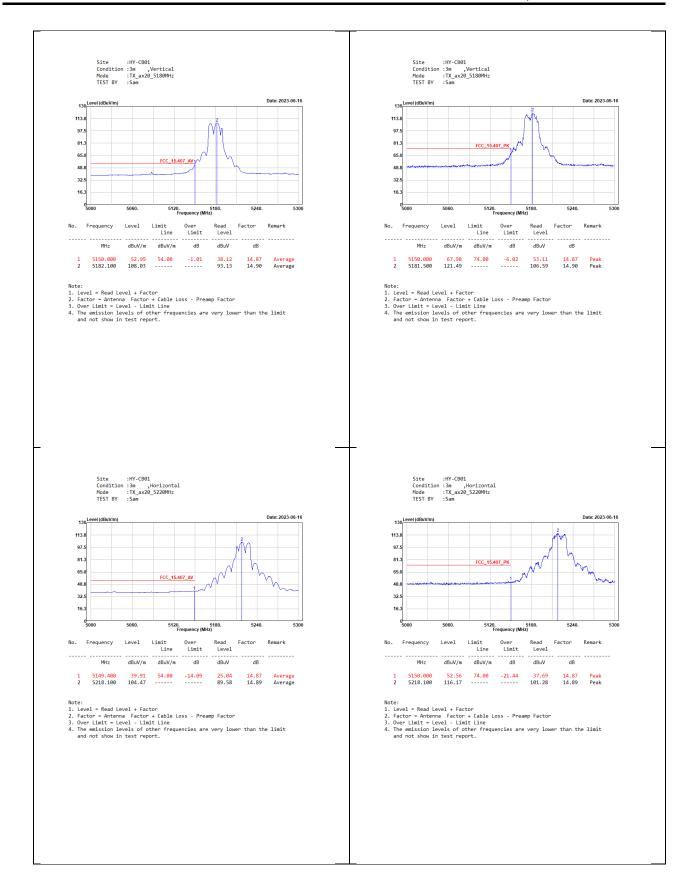




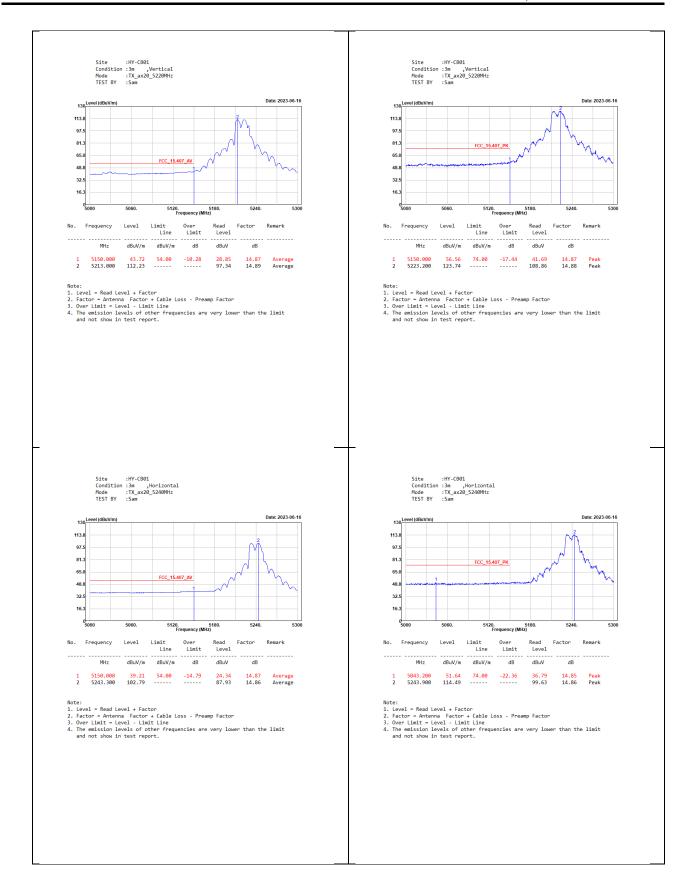




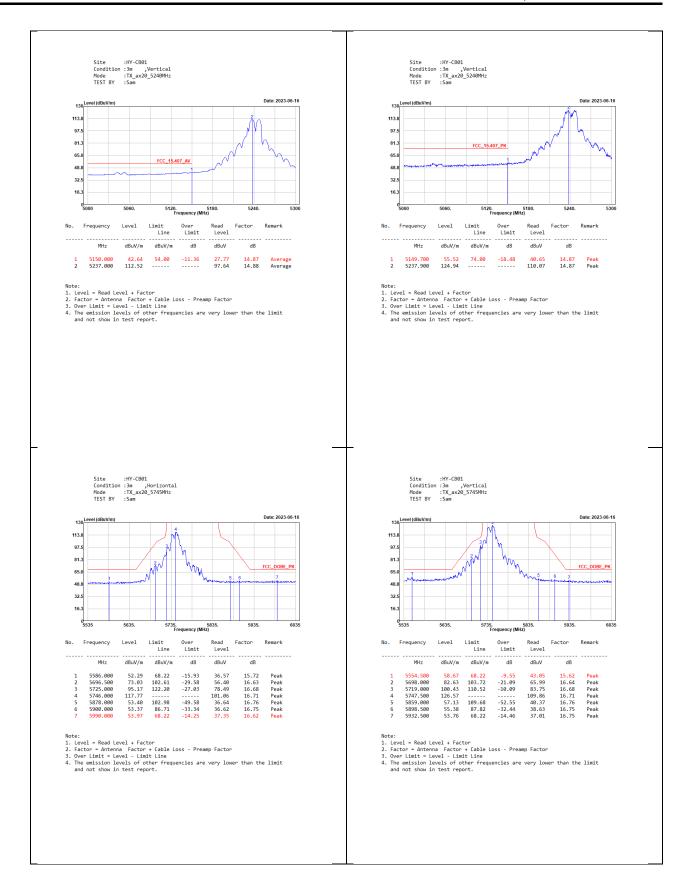




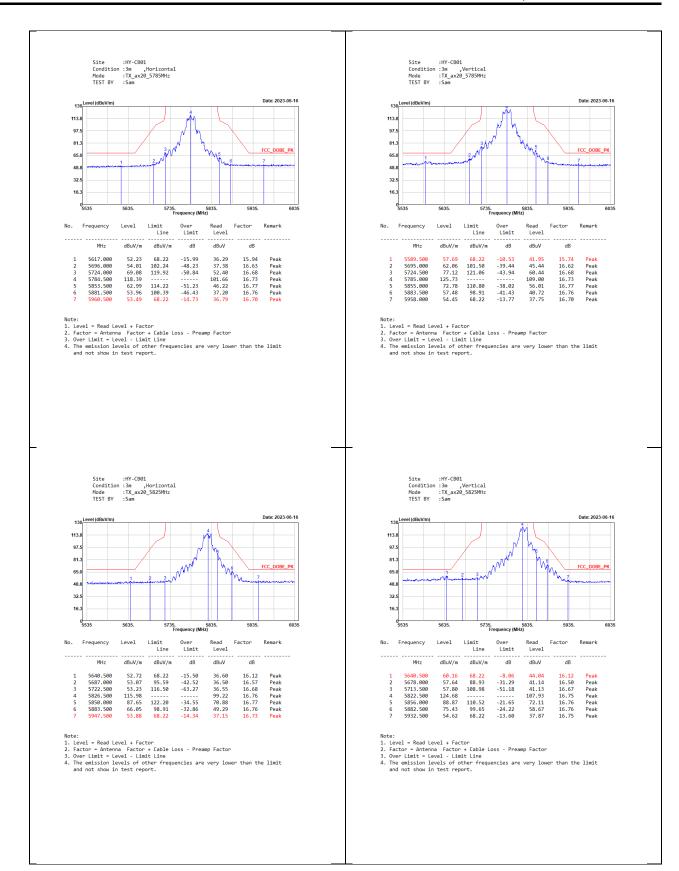




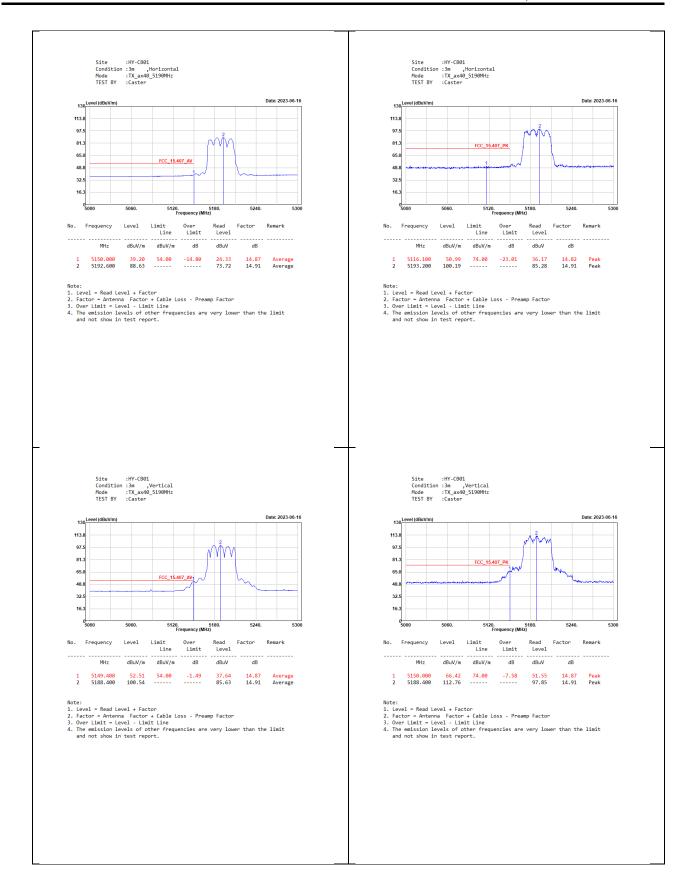




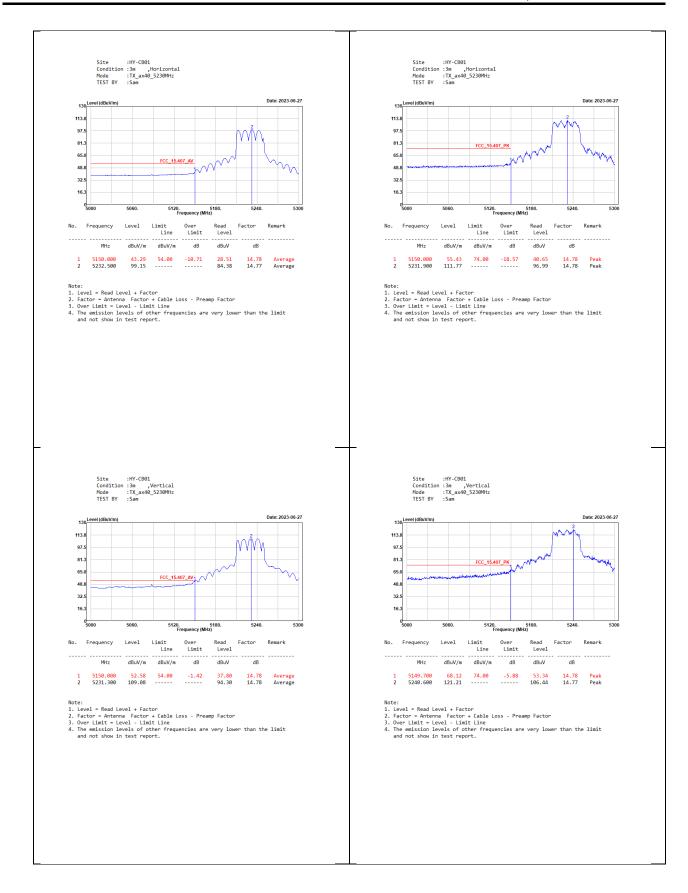




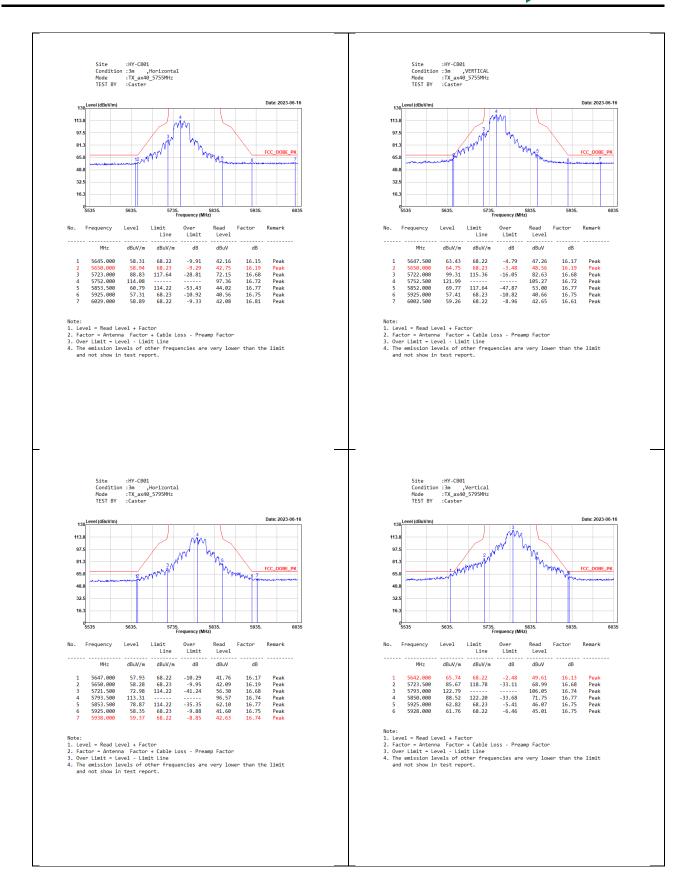




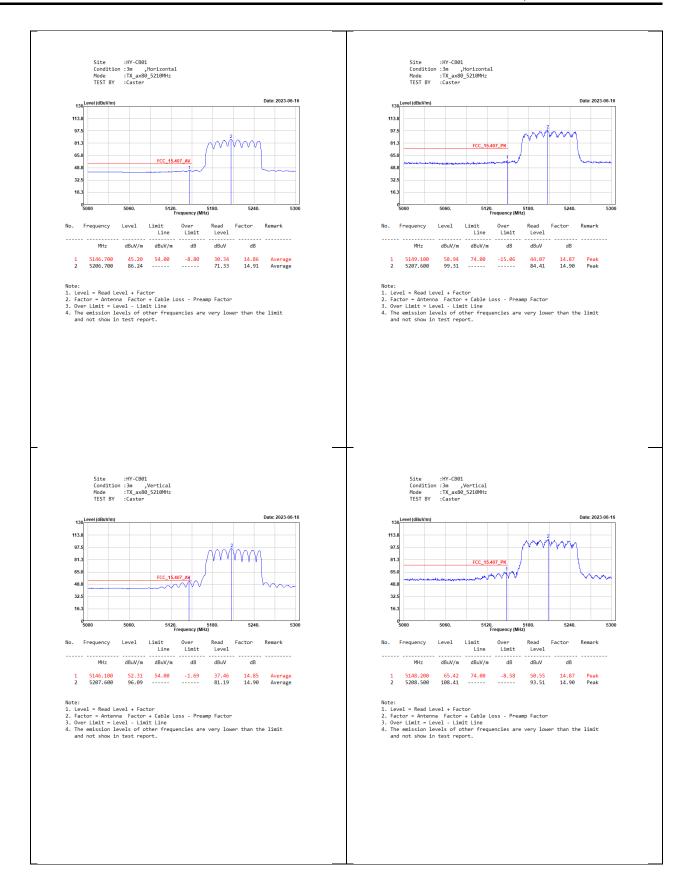




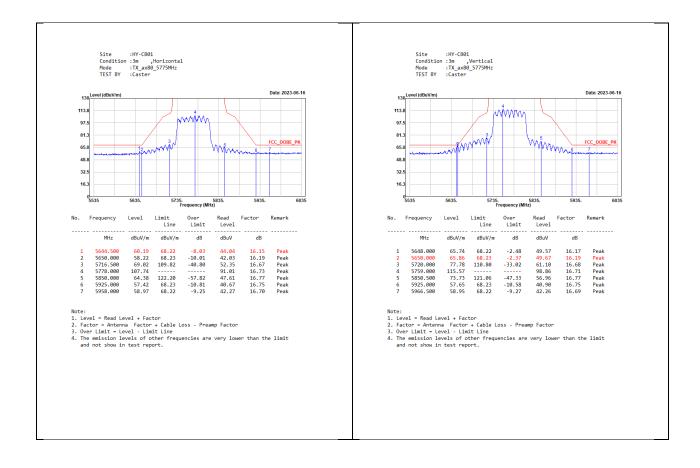








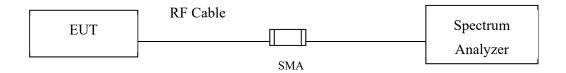






7. Occupied Bandwidth

7.1. Test Setup



7.2. Limits

For the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

7.3. Test Procedure

The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.



7.4. Test Result of Occupied Bandwidth

Product : Peplink Pepwave Wireless Product

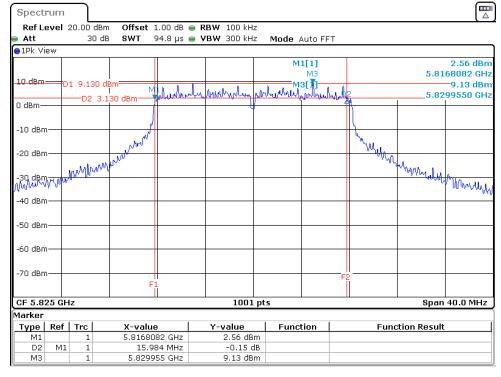
Test Item : Occupied Bandwidth Data

Test Mode : Transmit (802.11a-CDD)_Master

Test Date : 2023/06/21

Channel No.	Chain	Frequency	Measurement Level	Required Limit	Result	
		(MHz)	(kHz)	(kHz)	Result	
149	A	5745	15504	>500	Pass	
157	A	5785	15544	>500	Pass	
165	A	5825	15984	>500	Pass	
149	В	5745	15704	>500	Pass	
157	В	5785	15904	>500	Pass	
165	В	5825	15304	>500	Pass	

Channel 165 (Chain A):





Product : Peplink Pepwave Wireless Product

Test Item : Occupied Bandwidth Data

Test Mode : Transmit (802.11ax-20BW-CDD)_Master

Test Date : 2023/06/21

МЗ

5.746239 GHz

Channel No.	Chain	Frequency	Measurement Level	Required Limit	Result	
		(MHz)	(kHz)	(kHz)	Result	
149	A	5745	18141	>500	Pass	
157	A	5785	17502	>500	Pass	
165	A	5825	17702	>500	Pass	
149	В	5745	15624	>500	Pass	
157	В	5785	17542	>500	Pass	
165	В	5825	17542	>500	Pass	

Channel 149 (Chain A): Spectrum Ref Level 20.00 dBm Offset 1.00 dB • RBW 100 kHz 94.8 μs 🅌 **VBW** 300 kHz 30 dB SWT Mode Auto FFT Att ●1Pk View M1[1] 5.7359690 GHz 10 dBm -8.43 dBm 5.7462390 GHz 0 dBm -10 dBm -20 dBm--30 dBm Aprobania Maria -40 dBm--50 dBm--60 dBm -70 dBm-CF 5.745 GHz 1001 pts Span 40.0 MHz . Marker Type | Ref | Trc | Function **Function Result** X-value 5.735969 GHz Y-value 2.24 dBm M1 М1 18.1419 MHz -0.03 dB

8.43 dBm



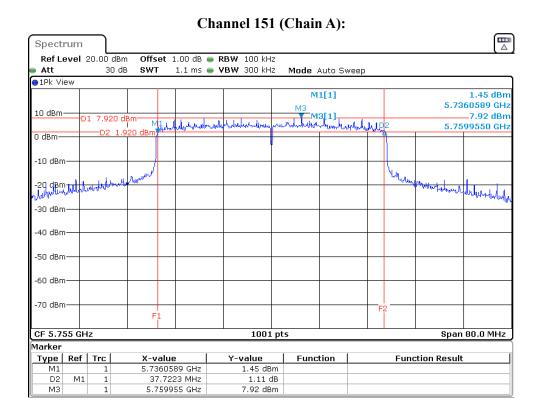
Product : Peplink Pepwave Wireless Product

Test Item : Occupied Bandwidth Data

Test Mode : Transmit (802.11ax-40BW-CDD)_Master

Test Date : 2023/06/21

Channel No.	Chain	Frequency	Measurement Level	Required Limit	Result	
		(MHz)	(kHz)	(kHz)	resurt	
151	A	5755	37722	>500	Pass	
159	A	5795	37642	>500	Pass	
151	В	5755	37242	>500	Pass	
159	В	5795	37562	>500	Pass	





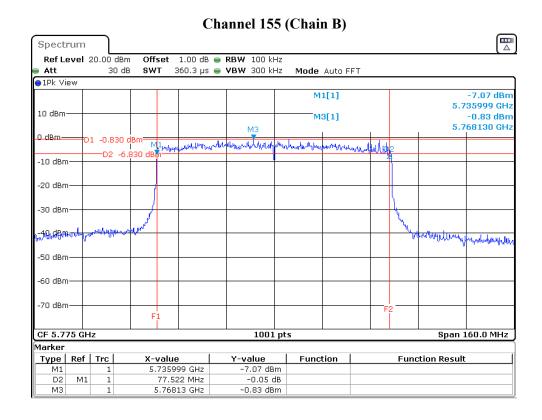
Product : Peplink Pepwave Wireless Product

Test Item : Occupied Bandwidth Data

Test Mode : Transmit (802.11ax-80BW-CDD)_Master

Test Date : 2023/06/21

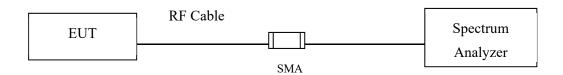
Channel No.	Chain	Frequency	Measurement Level Required Limit		Result	
	Chain	(MHz)	(kHz)	(kHz)	Kesuit	
155	A	5775	68092	>500	Pass	
155	В	5775	77522	>500	Pass	





8. Duty Cycle

8.1. Test Setup



8.2. Test Procedure

The EUT was setup according to ANSI C63.10 2013; tested according to U-NII test procedure of KDB789033 for compliance to FCC 47CFR 15.407 requirements.



8.3. Test Result of Duty Cycle

Product : Peplink Pepwave Wireless Product

Test Item : Duty Cycle

Test Mode : Transmit-CDD mode

Duty Cycle Formula:

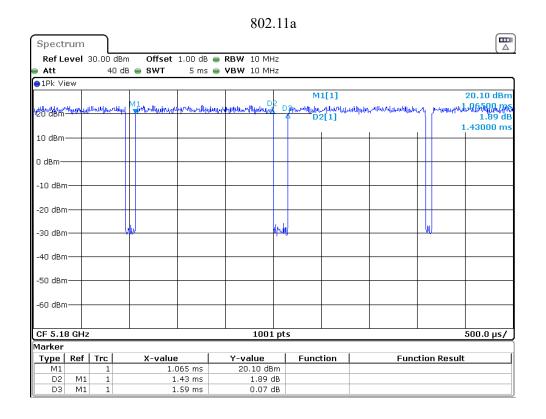
 $Duty \ Cycle = Ton \ / \ (Ton + Toff)$

Duty Factor = 10 Log (1/Duty Cycle)

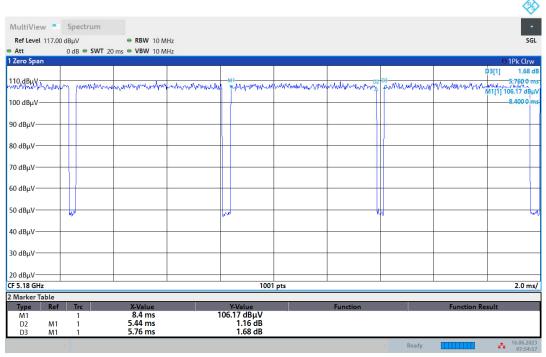
Results:

5 GHz band	Ton	Ton + Toff	Duty Cycle	Duty Factor
	(ms)	(ms)	(%)	(dB)
802.11a	1.4300	1.5900	89.94	0.46
802.11ax20	5.4400	5.7600	94.44	0.25
802.11ax40	5.4200	5.7600	94.10	0.26
802.11ax80	5.3600	5.8000	92.41	0.34





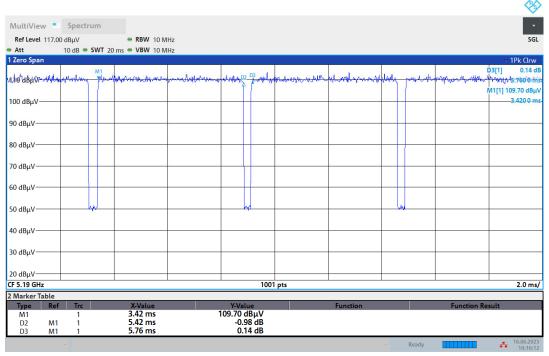
802.11ax20



07:54:58 16.06.2023

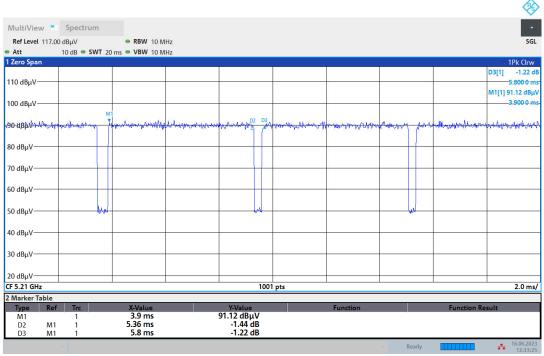


802.11ax40



10:10:13 16.06.2023

802.11ax80



12:33:26 16.06.2023