

# **FCC Test Report**

Report No.: RFBDUI-WTW-P20110877-1

FCC ID: KA2M15A1

Test Model: M15

Received Date: Feb. 25, 2021

**Test Date:** Mar. 09 ~ May 20, 2021

**Issued Date:** Jun. 29, 2021

**Applicant:** D-Link Corporation

Address: 14420 Myford Road Suite 100 Irvine California United States 92606

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

Lin Kou Laboratories

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

Test Location (1): No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City

33383, Taiwan

FCC Registration /

**Designation Number (1):** 788550 / TW0003

Test Location (2): B2F., No.215, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 231,

Taiwan

FCC Registration /

Designation Number (2): 427177 / TW0011





This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification.



# **Table of Contents**

R	eleas	e Control Record	4
1	(	Certificate of Conformity	5
2	;	Summary of Test Results	6
	2.1	Measurement Uncertainty	6
	2.2	Modification Record	6
3	(	General Information	7
	3.1	General Description of EUT	7
	3.2	Description of Test Modes	
	3.2.1	Test Mode Applicability and Tested Channel Detail	
	3.3	Duty Cycle of Test Signal	
	3.4	Description of Support Units	
	3.4.1	Configuration of System under Test	
	3.5	General Description of Applied Standards and References	
4	-	Fest Types and Results	15
	4.1	Radiated Emission and Bandedge Measurement	15
	4.1.1	Limits of Radiated Emission and Bandedge Measurement	15
	4.1.2	Test Instruments	16
		Test Procedures	
		Deviation from Test Standard	
		Test Setup	
		EUT Operating Conditions	
		Test Results	
	4.2	Conducted Emission Measurement	
		Limits of Conducted Emission Measurement	
		Test Procedures	
		Deviation from Test Standard	
		Test Setup	
		EUT Operating Conditions	
		Test Results	
	4.3	Transmit Power Measurement	
	4.3.1	Limits of Transmit Power Measurement	80
		Test Setup	
	4.3.3	Test Instruments	80
		Test Procedure	
		Deviation from Test Standard	
		EUT Operating Conditions	
		Test Result	
	4.4	Occupied Bandwidth Measurement	
		Test Setup Test Instruments	
		Test Procedure	
		Test Result	
	4.5	Peak Power Spectral Density Measurement	
		Limits of Peak Power Spectral Density Measurement	
		Test Setup	
		Test Instruments	
	4.5.4	Test Procedures	89
		Deviation from Test Standard	
		EUT Operating Conditions	
		Test Results	
	4.6	Frequency Stability	
	4.6.1	Limits of Frequency Stability Measurement	96



4.6.2	Test Setup	96
4.6.3	Test Instruments	96
4.6.4	Test Procedure	96
4.6.5	Deviation from Test Standard	97
4.6.6	EUT Operating Condition	97
4.6.7	Test Results	97
4.7	6dB Bandwidth Measurement	98
4.7.1	Limits of 6dB Bandwidth Measurement	98
4.7.2	Test Setup	98
4.7.3	Test Instruments	98
4.7.4	Test Procedure	98
4.7.5	Deviation from Test Standard	98
4.7.6	EUT Operating Condition	98
4.7.7	Test Results	99
5 P	ictures of Test Arrangements	101
Annex A	- Band Edge Measurement	102
Append	ix – Information of the Testing Laboratories	111



# **Release Control Record**

Issue No.	Description	Date Issued
RFBDUI-WTW-P20110877-1	Original release.	Jun. 29, 2021



## 1 Certificate of Conformity

Product: AX1500 Wi-Fi 6 Al Mesh Router, AX1500 Wi-Fi 6 Al Mesh System,

AX1500 Mesh Router, AX1500 Mesh System

Brand: D-Link

Test Model: M15

Sample Status: Engineering sample

**Applicant:** D-Link Corporation

Test Date: Mar. 09 ~ May 20, 2021

**Standards:** 47 CFR FCC Part 15, Subpart E (Section 15.407)

ANSI C63.10:2013

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by: \_\_\_\_\_\_, Date: \_\_\_\_\_\_, Jun. 29, 2021

Pettie Chen / Senior Specialist

Approved by: , Date: Jun. 29, 2021

Bruce Chen / Senior Project Engineer



## 2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)							
FCC Test Item		Result	Remarks				
15.407(b)(8)	15.407(b)(8) AC Power Conducted Emissions		Meet the requirement of limit. Minimum passing margin is -16.82dB at 0.42761MHz.				
15.407(b) (1/2/3/4(i/ii)/8)	` '		Meet the requirement of limit. Minimum passing margin is -1.01dB at 5150.00MHz, 11490.00MHz.				
15.407(a)(1/2/3) Max Average Transmit Power		Pass	Meet the requirement of limit.				
	Occupied Bandwidth Measurement	Pass	Meet the requirement of limit.				
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.				
15.407(e)	15.407(e) 6dB bandwidth		Meet the requirement of limit. (U-NII-3 Band only)				
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.				
15.203			For Antenna 2G1, 5G1: Antenna connector is CCT MHF not a standard connector. For Antenna 2G2, 5G2: Antenna connector is KS-MHF not a standard connector.				

#### Note:

- 1. For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOBE test plots were recorded in item
- 2. For U-NII-1 band compliance with rule 15.407(b) of the band-edge items, the test plots were recorded in Annex A. Test Procedures refer to report 4.1.3.
- 3. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

### 2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.79 dB
	9kHz ~ 30MHz	2.44 dB
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	2.0153 dB
	200MHz ~1000MHz	2.0224 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	1.0121 dB
Radiated Emissions above 1 GHZ	18GHz ~ 40GHz	1.1508 dB

#### 2.2 Modification Record

There were no modifications required for compliance.



# 3 General Information

# 3.1 General Description of EUT

	AX1500 Wi-Fi 6 Al Mesh Router, AX1500 Wi-Fi 6 Al Mesh System,
Product	AX1500 Mesh Router, AX1500 Mesh System
Brand	D-Link
Test Model	M15
Sample Status	Engineering sample
Power Supply Rating	12Vdc from Adapter
Madulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Type	1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDMA
Modulation Technology	OFDM, OFDMA
	802.11a: 54/48/36/24/18/12/9/6Mbps
Transfer Rate	802.11n (HT20/40): up to 300Mbps
Transier Rate	802.11ac (VHT20/40/80): up to 866.7Mbps
	802.11ax: up to 1201.0Mbps
Operating Frequency	5180~5240MHz, 5745~5825MHz
	5180 ~ 5240MHz:
	802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 4
	802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 2
Novel or of Observed	802.11ac (VHT80), 802.11ax (HE80): 1
Number of Channel	5745 ~ 5825MHz:
	802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 5
	802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 2
	802.11ac (VHT80), 802.11ax (HE80): 1
	CDD Mode:
	5180~5240MHz: 280.255mW
0.4.4.0	5745~5825MHz: 245.779mW
Output Power	Beamforming Mode:
	5180~5240MHz: 132.791mW
	5745~5825MHz: 122.898mW
Antenna Type	Refer to note
Antenna Connector	Refer to note
Accessory Device	Adapter
Cable Cumplied	1.0m CAT5E 24AWG CCA WHITE CABLE
Cable Supplied	(Brand: Nienyi, Model: NY4710 REV.0)



#### Note:

1. The following product names and model are provided to this EUT.

Product	Model	Description
AX1500 Wi-Fi 6 Al Mesh Router		
AX1500 Wi-Fi 6 Al Mesh System	M15	For marketing purpose
AX1500 Mesh Router	W15	For marketing purpose.
AX1500 Mesh System		

2. The EUT incorporates a MIMO function. Physically, the EUT provides 2 completed transmitters and 2 receivers.

Modulation Mode	CDD Mode	Beamforming Mode	TX Function
802.11a	Support	Not Support	2TX
802.11n (HT20)	Support	Support	2TX
802.11n (HT40)	Support	Support	2TX
802.11ac (VHT20)	Support	Support	2TX
802.11ac (VHT40)	Support	Support	2TX
802.11ac (VHT80)	Support	Support	2TX
802.11ax (HE20)	Support	Support	2TX
802.11ax (HE40)	Support	Support	2TX
802.11ax (HE80)	Support	Support	2TX

<sup>\*</sup> The bandwidth and modulation are similar for HT20/HT40 on 802.11n mode and VHT20/VHT40/VHT80 on 802.11ac mode and HE20/HE40/HE80 on 802.11ax mode. Therefore the investigated worst case is the representative mode in test report. (Final test mode refer section 3.2.1)

3. The EUT consumes power from the following adapters.

Product	Brand	Model	Description
Adapter 1	Amigo	AMS159A-1201000F (US+UK)	I/P: 100-240 Vac, 50/60 Hz, 0.5 A O/P: 12 Vdc, 1 A
Adapter 2	Amigo	AMS159A-1201000F (EU+UK)	I/P: 100-240 Vac, 50/60 Hz, 0.5 A O/P: 12 Vdc, 1 A
Adapter 3	Amigo	AMS159A-1201000FU (US)	I/P: 100-240 Vac, 50/60 Hz, 0.5 A O/P: 12 Vdc, 1 A
Adapter 4	Amigo	AMS159A-1201000FS (AU)	I/P: 100-240 Vac, 50/60 Hz, 0.5 A O/P: 12 Vdc, 1 A
Adapter 5	er 5 Amigo AMS159A-1201000FV (EU)		I/P: 100-240 Vac, 50/60 Hz, 0.5 A O/P: 12 Vdc, 1 A
Adapter 6	Amigo	AMS195-1201000FY (IN)	I/P: 100-240 Vac, 50/60 Hz, 0.5 A O/P: 12 Vdc, 1 A
Adapter 7	Amigo	AMS195-1201000FK (KR)	I/P: 100-240 Vac, 50/60 Hz, 0.5 A O/P: 12 Vdc, 1 A
Adapter 8	Amigo	AMS159A-1201000FX (BR)	I/P: 100-240 Vac, 50/60 Hz, 0.5 A O/P: 12 Vdc, 1 A
Adapter 9	Amigo	AMS159A-1201000FB (UK)	I/P: 100-240 Vac, 50/60 Hz, 0.5 A O/P: 12 Vdc, 1 A

<sup>\*</sup>All adapters only different in plug. Therefore, use US type (adapter 3) as a representative for test.

<sup>\*</sup> For 802.11n and 802.11ac, CDD mode and Beamforming mode are presented in power output test item. For other test items, CDD mode is the worst case for final tests after pretesting.

<sup>\*</sup> Scanning Radio is RX only.



4. The following antennas were provided to the EUT.

	stoppe Type					PIFA				
AI	ntenna Type					FIFA				
Anter	nna Connector			2G1, 5	G1: CCT	MHF, 2G	2, 5G2: k	(S-MHF		
Brand			WHA YU							
Antenna	∆ntenna					Gain (dBi	i)			
	P/N	2400	2450	2500	5150	5250	5350	5725	5750	5825
No.		MHz	MHz	MHz	MHz	MHz	MHz	MHz	MHz	MHz
2G1	C1958-510011-A	2.29	2.31	2.27	ı				ı	ı
2G2	C1958-510012-A	2.51	2.56	2.43	ı				ı	ı
5G1	C1958-510013-A	ı	-	ı	2.19	2.37	2.44	2.24	2.36	2.23
5G2	C1958-510014-A	ı	ı	ı	2.51	2.33	2.64	2.77	2.56	2.62

<sup>\*</sup> The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

- 5. WLAN 2.4GHz & WLAN 5GHz technology can transmit at same time.
- 6. Spurious emission of the simultaneous operation (WLAN 2.4GHz and WLAN 5GHz) has been evaluated and no non-compliance was found.



## 3.2 Description of Test Modes

#### For 5180 ~ 5240MHz:

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

Channel	Frequency	Channel	Frequency
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):

Channel	Frequency	Channel	Frequency	
38	5190 MHz	46	5230 MHz	

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency		
42	5210MHz		

#### For 5745 ~ 5825MHz:

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

Channel	Frequency	Channel	Frequency	
149	5745MHz	161	5805MHz	
153	5765MHz	165	5825MHz	
157	5785MHz			

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):

Channel	Frequency	Channel	Frequency	
151	5755MHz	159	5795MHz	

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency		
155	5775MHz		



### 3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure		Applic	able to		D		
Mode	RE≥1G	RE<1G	PLC	APCM	Description		
-	√	√	√	√	-		

Where RE≥1G: Radiated Emission above 1GHz & Bandedge

RE<1G: Radiated Emission below 1GHz

Measurement

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

#### Note:

- 1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on X-plane.
- 2. Radiated emission test (below 1GHz) and power line conducted emission test items chosen the worst radiated emission (above 1GHz) channel for final testing.

#### Radiated Emission Test (Above 1GHz):

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
	802.11a		36 to 48	36, 40, 48	OFDM	6.0
[ 8	802.11ax (HE20)	5180-5240	36 to 48	36, 40, 48	OFDMA	MCS0
-	802.11ax (HE40)		38 to 46	38, 46	OFDMA	MCS0
	802.11ax (HE80)		42	42	OFDMA	MCS0
	802.11a		149 to 165	149, 157, 165	OFDM	6.0
-	802.11ax (HE20)	5745-5825	149 to 165	149, 157, 165	OFDMA	MCS0
	802.11ax (HE40)		151 to 159	151, 159	OFDMA	MCS0
	802.11ax (HE80)		155	155	OFDMA	MCS0

### Radiated Emission Test (Below 1GHz):

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
	000 44 -	5180-5240	36 to 48	40	OFDMA	6.0
-	802.11a	5745-5825	149 to 165	40	OFDMA	6.0

### Power Line Conducted Emission Test:

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
	000.44	5180-5240	36 to 48	40	OFDMA	6.0
-	802.11a	5745-5825	149 to 165	40	OFDMA	6.0



## Antenna Port Conducted Measurement:

- This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
	802.11a		36 to 48	36, 40, 48	OFDM	6.0
	802.11ax (HE20)	5180-5240	36 to 48	36, 40, 48	OFDMA	MCS0
-	802.11ax (HE40)		38 to 46	38, 46	OFDMA	MCS0
	802.11ax (HE80)		42	42	OFDMA	MCS0
	802.11a		149 to 165	149, 157, 165	OFDM	6.0
	802.11ax (HE20)	5745 5005	149 to 165	149, 157, 165	OFDMA	MCS0
-	802.11ax (HE40)	5745-5825	151 to 159	151, 159	OFDMA	MCS0
	802.11ax (HE80)		155	155	OFDMA	MCS0

# **Test Condition:**

Applicable to	Environmental Conditions	Input Power	Tested by
RE≥1G	23 deg. C, 67% RH	120Vac, 60Hz	Karl Lee, Charies Hsiao
RE<1G	23 deg. C, 67% RH	120Vac, 60Hz	Karl Lee
PLC	23 deg. C, 66% RH	120Vac, 60Hz	Cookie Ku
APCM	25 deg. C, 60% RH	120Vac, 60Hz	Vicent Huang



# 3.3 Duty Cycle of Test Signal

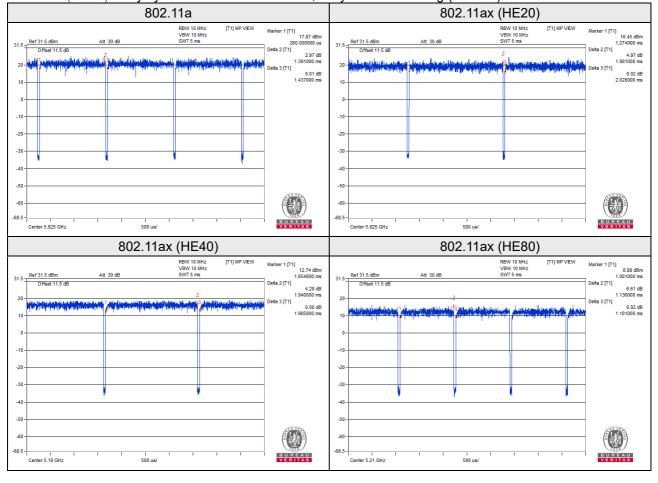
Duty cycle of test signal is < 98%, duty factor shall be considered.

802.11a: Duty cycle = 1.391/1.437 = 0.968, Duty factor = 10 \* log (1/0.968) = 0.14

802.11ax (HE20): Duty cycle = 1.981/2.028 = 0.977, Duty factor = 10 \* log (1/0.977) = 0.10

802.11ax (HE40): Duty cycle = 1.94/1.985 = 0.977, Duty factor = 10 \* log (1/0.977) = 0.10

802.11ax (HE80): Duty cycle = 1.136/1.181 = 0.962, Duty factor = 10 \* log (1/0.962) = 0.17





### 3.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

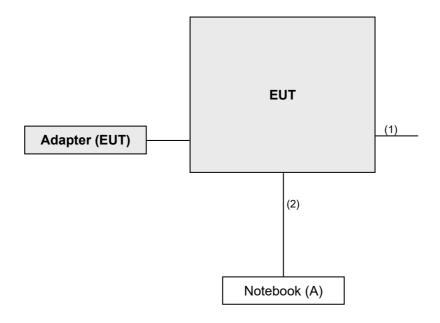
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	LATITUDE	F9MQBW1	FCC DoC Approved	-

#### Note:

- 1. All power cords of the above support units are non-shielded (1.8m).
- 2. Item A acted as a communication partner to transfer data.

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	LAN	1	1.5	N	0	RJ45, Cat5e (provided by lab)
2.	LAN	1	1.0	N	0	RJ45, Cat5e (Accessory)

## 3.4.1 Configuration of System under Test



## 3.5 General Description of Applied Standards and References

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards and references:

#### Test standard:

**FCC Part 15, Subpart E (15.407)** 

ANSI C63.10:2013

All test items have been performed and recorded as per the above standards.

#### **References Test Guidance:**

KDB 789033 D02 General UNII Test Procedure New Rules v02r01

KDB 662911 D01 Multiple Transmitter Output v02r01

All test items have been performed as a reference to the above KDB test guidance.



### 4 Test Types and Results

# 4.1 Radiated Emission and Bandedge Measurement

### 4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

#### NOTE:

- 1. The lower limit shall apply at the transition frequencies.
- 2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
- 3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

Limits of unwanted emission out of the restricted bands

Applio	cable	То	Lir	nit	
789033 D02 Genera	al UNI	II Test Procedure	Field Strei	ngth at 3m	
New Rules v02r01		)2r01	PK: 74 (dBµV/m)	AV: 54 (dBμV/m)	
Frequency Band		Applicable To	EIRP Limit	Equivalent Field Strength at 3m	
,	15.407(b)(1)				
5250~5350 MHz		15.407(b)(2)	PK: -27 (dBm/MHz)	PK: 68.2(dBµV/m)	
5470~5725 MHz	15.407(b)(3)				
5725~5850 MHz	5725~5850 MHz	15.407(b)(4)(i)		PK: -27 (dBm/MHz) *1 PK: 10 (dBm/MHz) *2 PK: 15.6 (dBm/MHz) *3 PK: 27 (dBm/MHz) *4	PK: 68.2 (dBμV/m) <sup>*1</sup> PK: 105.2 (dBμV/m) <sup>*2</sup> PK: 110.8 (dBμV/m) <sup>*3</sup> PK: 122.2 (dBμV/m) <sup>*4</sup>
		15.407(b)(4)(ii)	Emission limits in	section 15.247(d)	

<sup>\*1</sup> beyond 75 MHz or more above of the band edge.

Note: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

E = 
$$\frac{1000000 \sqrt{30 P}}{3}$$
 µV/m, where P is the eirp (Watts).

<sup>\*2</sup> below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.

<sup>\*3</sup> below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.

<sup>&</sup>lt;sup>\*4</sup> from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.



#### 4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver	N9038A	MY52260177	Aug. 24, 2020	Aug. 23, 2021
Agilent Technologies Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Apr. 16, 2020 Apr. 12, 2021	Apr. 17, 2021 Apr. 11, 2022
HORN Antenna ETS-Lindgren	3117	00143293	Nov. 22, 2020	Nov. 21, 2021
BILOG Antenna SCHWARZBECK	VULB 9168	9168-616	Nov. 09, 2020	Nov. 08, 2021
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Nov. 22, 2020	Nov. 21, 2021
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 14, 2020 Apr. 13, 2021	Apr. 13, 2021 Apr. 12, 2022
Loop Antenna	EM-6879	269	Sep. 17, 2020	Sep. 16, 2021
MXG Vector signal generator Agilent	N5182B	MY53050430	Nov. 25, 2020	Nov. 24, 2021
Preamplifier Agilent	310N	187226	Jun. 17, 2020	Jun. 16, 2021
Preamplifier Agilent	83017A	MY39501357	Jun. 17, 2020	Jun. 16, 2021
Preamplifier EMCI	EMC 184045	980116	Oct. 07, 2020	Oct. 06, 2021
Power Meter Anritsu	ML2495A	1012010	Sep. 01, 2020	Aug. 31, 2021
Power Sensor Anritsu	MA2411B	1315050	Sep. 01, 2020	Aug. 31, 2021
RF signal cable ETS-LINDGREN	5D-FB	Cable-CH1-01(RFC-S MS-100-SMS-120+RF C-SMS-100-SMS-400)	Jun. 17, 2020	Jun. 16, 2021
RF signal cable ETS-LINDGREN	8D-FB	Cable-CH1-02(RFC-S MS-100-SMS-24)	Jun. 17, 2020	Jun. 17, 2021
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Software BV ADT	E3 8.130425b	NA	NA	NA
Antenna Tower MF	NA	NA	NA	NA
Turn Table MF	NA	NA	NA	NA
Antenna Tower &Turn Table Controller MF	MF-7802	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in Xindian Chamber 1.



#### 4.1.3 Test Procedures

#### For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

#### Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

#### For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

#### Note:

- 1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
- 2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
- 3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz. (RBW = 1MHz, VBW = 1kHz)
- 4. All modes of operation were investigated and the worst-case emissions are reported.

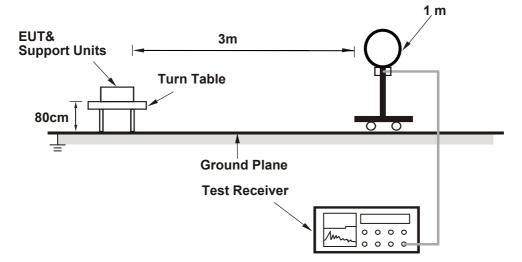
#### 4.1.4 Deviation from Test Standard

No deviation.

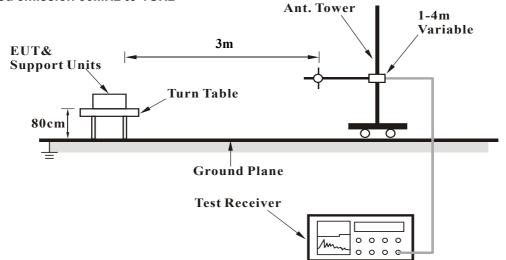


# 4.1.5 Test Setup

## For Radiated emission below 30MHz

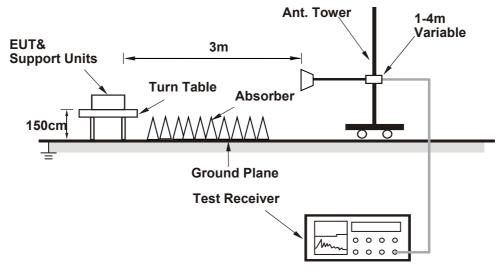


## For Radiated emission 30MHz to 1GHz





#### For Radiated emission above 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

## 4.1.6 EUT Operating Conditions

- a. Connected EUT with a notebook system via a RJ45 cable and placed on a testing table.
- b. The notebook ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.



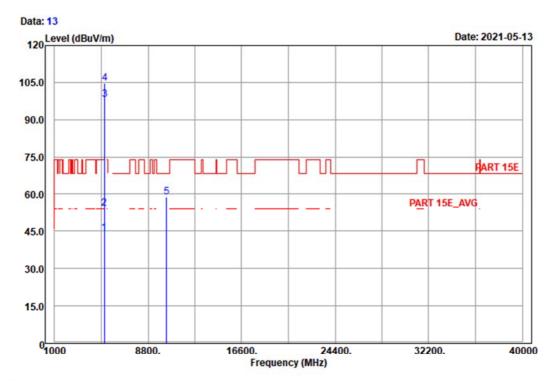
#### 4.1.7 Test Results

Above 1GHz data:

802.11a



Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 chamber 1

Condition: PART 15E 3m Horizontal

Remark : 11A\_TX\_CH36 Tested by: Karl Lee Rate : 6M Power : 20/20

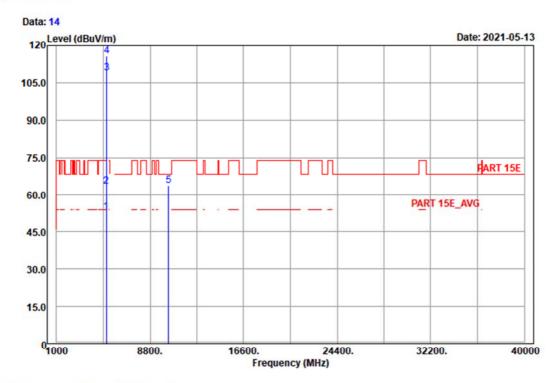
RB/VB : 1 MHz / 1 KHz

		Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark
	-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1	av	5150.00	44.08	34.03	10.05	54.00	-9.92	137	104	Average
2		5150.00	54.20	44.15	10.05	74.00	-19.80	137	104	Peak
3		5180.00	98.22	88.10	10.12			108	116	Average
4		5180.00	104.60	94.48	10.12			108	116	Peak
5	pp	10360.00	58.99	42.97	16.02	68.20	-9.21	200	6	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: PART 15E 3m Vertical

Remark : 11A\_TX\_CH36 Tested by: Karl Lee Rate : 6M

Power : 20/20

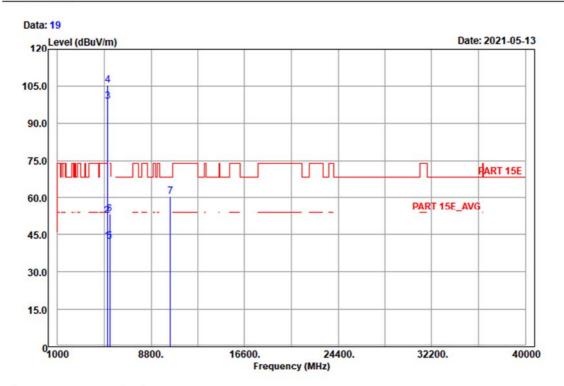
RB/VB : 1 MHz / 1 KHz

		Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark
	-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1	pp	5150.00	52.83	42.78	10.05	54.00	-1.17	197	353	Average
2		5150.00	63.32	53.27	10.05	74.00	-10.68	197	353	Peak
3		5180.00	109.00	98.88	10.12			181	1	Average
4		5180.00	115.80	105.68	10.12			181	1	Peak
5	pk	10360.00	63.61	47.59	16.02	68.20	-4.59	201	285	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: PART 15E 3m Horizontal

Remark : 11A\_TX\_CH40
Tested by: Charles Hsiao

Rate : 6M Power : 25/25

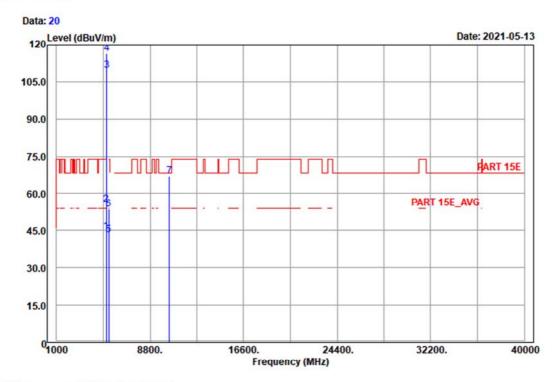
RB/VB : 1 MHz / 1 KHz

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1 av	5150.00	42.22	32.17	10.05	54.00	-11.78	108	116	Average
2	5150.00	52.68	42.63	10.05	74.00	-21.32	108	116	Peak
3	5200.00	98.59	88.43	10.16			108	116	Average
4	5200.00	105.30	95.14	10.16			108	116	Peak
5	5350.00	42.11	31.88	10.23	54.00	-11.89	108	116	Average
6	5350.00	53.33	43.10	10.23	74.00	-20.67	108	116	Peak
7 pp	10400.00	60.33	44.15	16.18	68.20	-7.87	200	6	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: PART 15E 3m Vertical

Remark : 11A\_TX\_CH40 Tested by: Charles Hsiao

Rate : 6M Power : 25/25

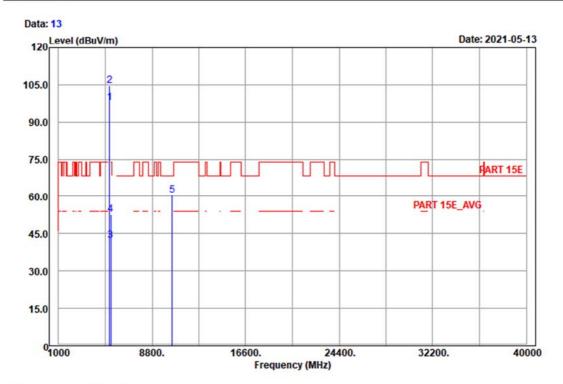
RB/VB : 1 MHz / 1 KHz

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1 av	5150.00	44.45	34.40	10.05	54.00	-9.55	181	0	Average
2	5150.00	55.53	45.48	10.05	74.00	-18.47	181	0	Peak
3	5200.00	109.58	99.42	10.16			181	0	Average
4	5200.00	116.33	106.17	10.16			181	0	Peak
5	5350.00	43.07	32.84	10.23	54.00	-10.93	181	0	Average
6	5350.00	53.64	43.41	10.23	74.00	-20.36	181	0	Peak
7 pp	10400.00	67.02	50.84	16.18	68.20	-1.18	201	285	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: PART 15E 3m Horizontal

Remark : 11A\_TX\_CH48
Tested by: Charles Hsiao

Rate : 6M Power : 25/25

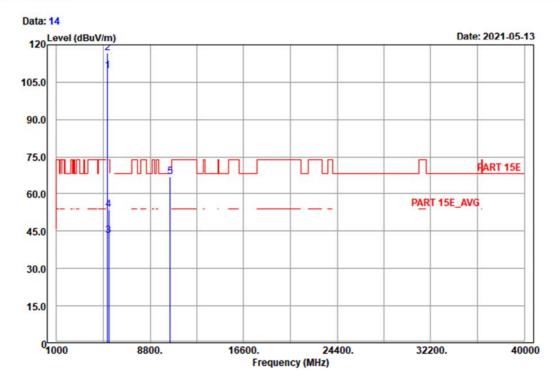
RB/VB : 1 MHz / 1 KHz

		Freq	Level	Read Level	Factor	Limit Line		APos	TPos	Remark
	•	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1		5240.00	97.65	87.51	10.14			108	116	Average
2		5240.00	104.47	94.33	10.14			108	116	Peak
3	av	5350.00	42.14	31.91	10.23	54.00	-11.86	108	116	Average
4		5350.00	52.56	42.33	10.23	74.00	-21.44	108	116	Peak
5	pp	10480.00	60.46	44.56	15.90	68.20	-7.74	200	6	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: PART 15E 3m Vertical

Remark : 11A\_TX\_CH48
Tested by: Charles Hsiao

Rate : 6M Power : 25/25

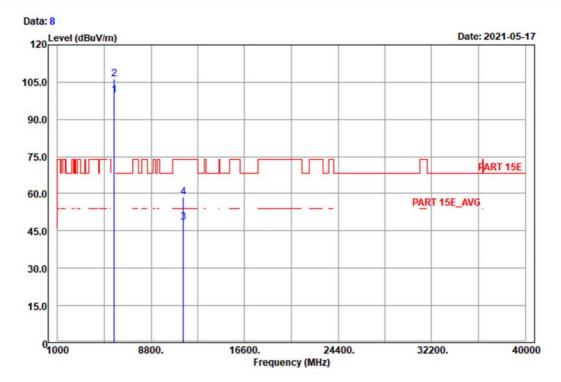
RB/VB : 1 MHz / 1 KHz

		Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark
	•	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1		5240.00	109.57	99.43	10.14			181	0	Average
2		5240.00	116.64	106.50	10.14			181	0	Peak
3	av	5350.00	43.16	32.93	10.23	54.00	-10.84	181	0	Average
4		5350.00	53.47	43.24	10.23	74.00	-20.53	181	0	Peak
5	pp	10480.00	67.09	51.19	15.90	68.20	-1.11	201	285	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: PART 15E 3m Horizontal

Remark : 11A\_TX\_CH149 Tested by: Karl Lee

Rate : 6M

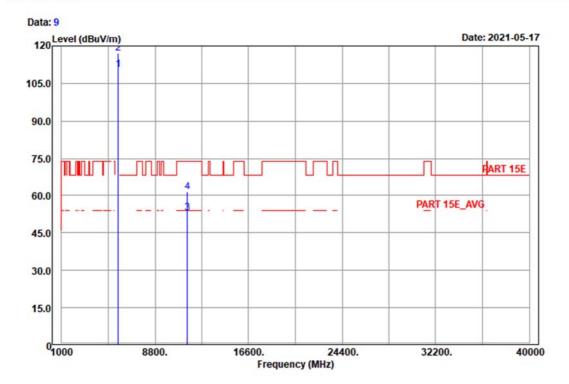
Power : 21.5/21.5 RB/VB : 1 MHz / 1 KHz

	Freq	Level	Read Level		Limit Line		APos	TPos	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1	5745.00	99.88	89.00	10.88			100	108	Average
2	5745.00	106.30	95.42	10.88			100	108	Peak
3 рр	11490.00	48.35	31.88	16.47	54.00	-5.65	196	223	Average
4 pk	11490.00	58.60	42.13	16.47	74.00	-15.40	196	223	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: PART 15E 3m Vertical

Remark : 11A\_TX\_CH149 Tested by: Karl Lee

Rate : 6M

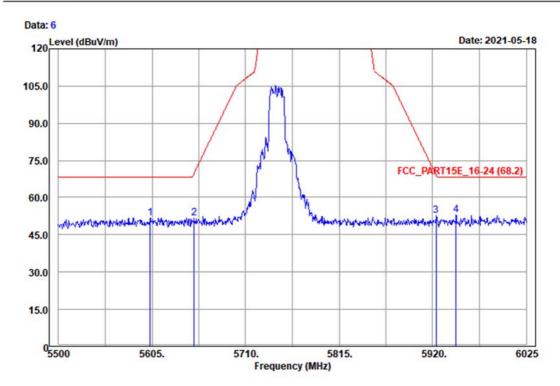
Power : 21.5/21.5 RB/VB : 1 MHz / 1 KHz

		Freq	Level	Read Level			Over Limit	APos	TPos	Remark
	-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1		5745.00	110.54	99.66	10.88			197	0	Average
2		5745.00	117.05	106.17	10.88			197	0	Peak
3	pp	11490.00	52.99	36.52	16.47	54.00	-1.01	216	299	Average
4	pk	11490.00	61.58	45.11	16.47	74.00	-12.42	216	299	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: FCC\_PART15E\_16-24 (68.2) 3m Horizontal

Remark : 11A\_TX\_CH149 Tested by: Karl Lee

Rate : 6M

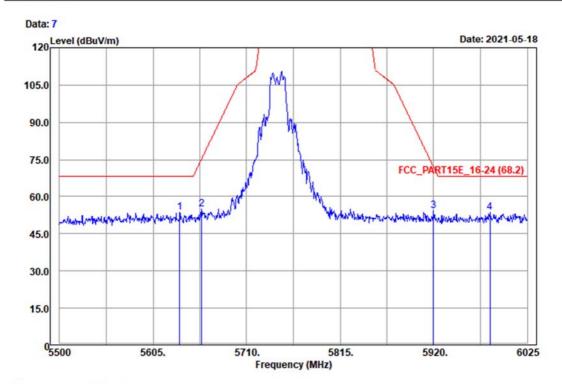
Power : 21.5/21.5 RB/VB : 1 MHz / 1 KHz

			Read		Limit	0ver	APos	<b>TPos</b>	
	Freq	Level	Level	Factor	Line	Limit			Remark
-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	-
1	5602.90	51.82	41.07	10.75	68.20	-16.38	100	108	Peak
2	5652.25	51.72	40.85	10.87	69.86	-18.14	100	108	Peak
3	5923.68	52.80	41.69	11.11	69.18	-16.38	100	108	Peak
4 pp	5946.25	52.94	41.76	11.18	68.20	-15.26	100	108	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







: 966 chamber 1

Condition: FCC\_PART15E\_16-24 (68.2) 3m Vertical

Remark : 11A\_TX\_CH149 Tested by: Karl Lee Rate : 6M

Power : 21.5/21.5

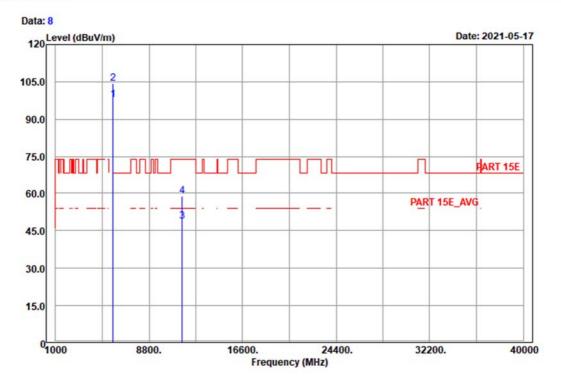
RB/VB : 1 MHz / 1 KHz

		Read		Limit	0ver	APos	<b>TPos</b>	
Freq	Level	Level	Factor	Line	Limit			Remark
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
5634.93	53.53	42.70	10.83	68.20	-14.67	197	0	Peak
5659.60	54.84	43.97	10.87	75.30	-20.46	197	0	Peak
5920.00	54.16	43.07	11.09	71.90	-17.74	197	0	Peak
5983.00	53.66	42.40	11.26	68.20	-14.54	197	0	Peak
	MHz 5634.93 5659.60 5920.00	MHz dBuV/m  5634.93 53.53 5659.60 54.84 5920.00 54.16	Freq Level Level  MHz dBuV/m dBuV  5634.93 53.53 42.70 5659.60 54.84 43.97 5920.00 54.16 43.07	Freq Level Level Factor  MHz dBuV/m dBuV dB/m  5634.93 53.53 42.70 10.83 5659.60 54.84 43.97 10.87 5920.00 54.16 43.07 11.09	Freq Level Level Factor Line  MHz dBuV/m dBuV dB/m dBuV/m  5634.93 53.53 42.70 10.83 68.20 5659.60 54.84 43.97 10.87 75.30 5920.00 54.16 43.07 11.09 71.90	Freq Level Level Factor Line Limit  MHz dBuV/m dBuV dB/m dBuV/m dB  5634.93 53.53 42.70 10.83 68.20 -14.67 5659.60 54.84 43.97 10.87 75.30 -20.46 5920.00 54.16 43.07 11.09 71.90 -17.74	Freq Level Level Factor Line Limit  MHz dBuV/m dBuV dB/m dBuV/m dB cm  5634.93 53.53 42.70 10.83 68.20 -14.67 197 5659.60 54.84 43.97 10.87 75.30 -20.46 197 5920.00 54.16 43.07 11.09 71.90 -17.74 197	Freq Level Level Factor Line Limit  MHz dBuV/m dBuV dB/m dBuV/m dB cm deg  5634.93 53.53 42.70 10.83 68.20 -14.67 197 0 5659.60 54.84 43.97 10.87 75.30 -20.46 197 0 5920.00 54.16 43.07 11.09 71.90 -17.74 197 0

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: PART 15E 3m Horizontal

Remark : 11A\_TX\_CH157 Tested by: Karl Lee

Rate : 6M Power : 20/20

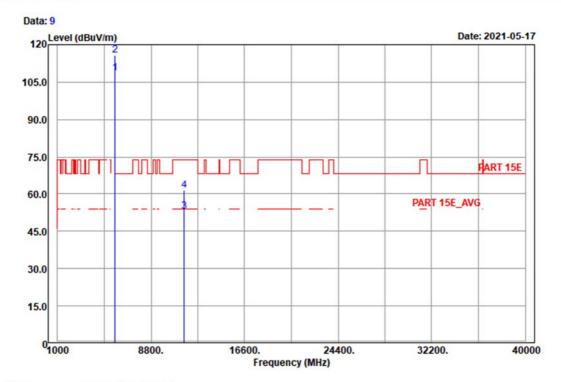
RB/VB : 1 MHz / 1 KHz

				Read		Limit	Over	APos	<b>TPos</b>	
		Freq	Level	Level	Factor	Line	Limit			Remark
	-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	-
1		5785.00	97.68	86.87	10.81			100	108	Average
2		5785.00	104.36	93.55	10.81			100	108	Peak
3	pp	11570.00	48.64	32.15	16.49	54.00	-5.36	207	231	Average
4	pk	11570.00	58.89	42.40	16.49	74.00	-15.11	207	231	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: PART 15E 3m Vertical

Remark : 11A\_TX\_CH157 Tested by: Karl Lee

Rate : 6M Power : 20/20

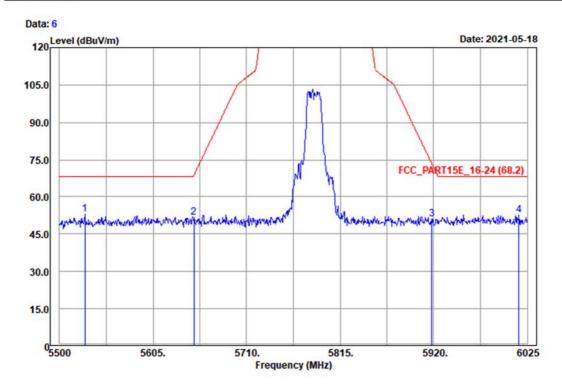
RB/VB : 1 MHz / 1 KHz

	Freq	Level	Read Level		Limit Line		APos	TPos	Remark
•	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB -	cm	deg	
1	5785.00	108.58	97.77	10.81			197	0	Average
2	5785.00	115.59	104.78	10.81			197	0	Peak
3 рр	11570.00	52.91	36.42	16.49	54.00	-1.09	108	249	Average
4 pk	11570.00	61.54	45.05	16.49	74.00	-12.46	108	249	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: FCC\_PART15E\_16-24 (68.2) 3m Horizontal

Remark : 11A\_TX\_CH157 Tested by: Karl Lee

Rate : 6M Power : 20/20

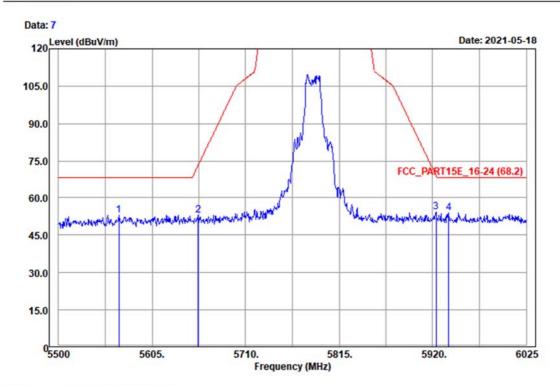
RB/VB : 1 MHz / 1 KHz

		and the state of	Read		Limit	Over	APos	<b>TPos</b>	
	Freq	Level	Level	Factor	Line	Limit			Remark
-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1 pp	5528.35	52.87	42.24	10.63	68.20	-15.33	100	108	Peak
2	5650.68	51.57	40.70	10.87	68.70	-17.13	100	108	Peak
3	5917.90	51.15	40.06	11.09	73.45	-22.30	100	108	Peak
4	6015.55	52.58	41.23	11.35	68.20	-15.62	100	108	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: FCC\_PART15E\_16-24 (68.2) 3m Vertical

Remark : 11A\_TX\_CH157 Tested by: Karl Lee

Rate : 6M Power : 20/20

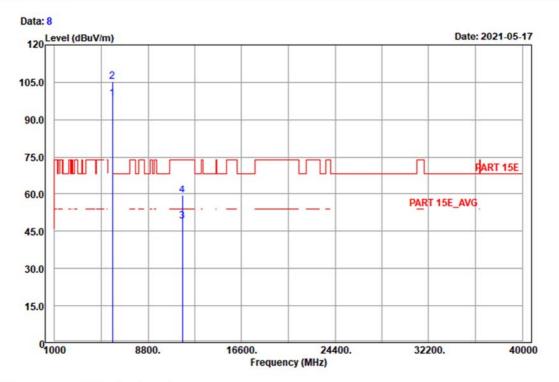
RB/VB : 1 MHz / 1 KHz

	Freq	Level	Read Level		Limit Line	Over Limit	APos	TPos	Remark
-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	1) 
1	5567.73	53.09	42.39	10.70	68.20	-15.11	197	0	Peak
2	5656.98	52.84	41.97	10.87	73.36	-20.52	197	0	Peak
3	5923.68	54.24	43.13	11.11	69.18	-14.94	197	0	Peak
4 pp	5937.85	53.91	42.75	11.16	68.20	-14.29	197	0	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: PART 15E 3m Horizontal

Remark : 11A\_TX\_CH165 Tested by: Karl Lee

Rate : 6M Power : 21/21

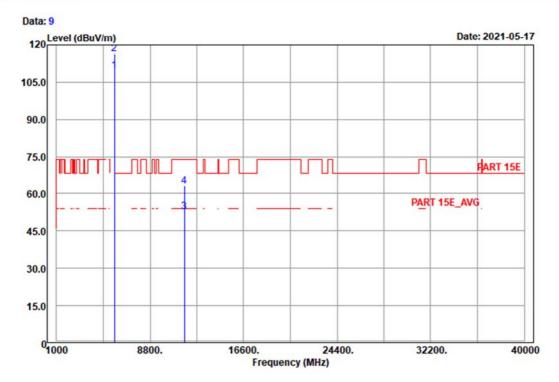
RB/VB : 1 MHz / 1 KHz

			Read		Limit	Over	APos	TPos	
	Freq	Level	Level	Factor	Line	Limit			Remark
-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
	5825.00	98.54	87.66	10.88			100	108	Average
	5825.00	105.43	94.55	10.88			100	108	Peak
pp	11650.00	49.08	32.30	16.78	54.00	-4.92	183	227	Average
pk	11650.00	59.36	42.58	16.78	74.00	-14.64	183	227	Peak
		MHz 5825.00 5825.00 pp 11650.00	MHz dBuV/m  5825.00 98.54 5825.00 105.43 pp 11650.00 49.08	Freq Level Level  MHz dBuV/m dBuV  5825.00 98.54 87.66 5825.00 105.43 94.55 pp 11650.00 49.08 32.30	Freq Level Level Factor  MHz dBuV/m dBuV dB/m  5825.00 98.54 87.66 10.88 5825.00 105.43 94.55 10.88 pp 11650.00 49.08 32.30 16.78	Freq Level Level Factor Line  MHz dBuV/m dBuV dB/m dBuV/m  5825.00 98.54 87.66 10.88 5825.00 105.43 94.55 10.88 pp 11650.00 49.08 32.30 16.78 54.00	Freq Level Level Factor Line Limit	Freq Level Level Factor Line Limit  MHz dBuV/m dBuV dB/m dBuV/m dB cm  5825.00 98.54 87.66 10.88 100 5825.00 105.43 94.55 10.88 100 pp 11650.00 49.08 32.30 16.78 54.00 -4.92 183	Freq Level Level Factor Line Limit  MHz dBuV/m dBuV dB/m dBuV/m dB cm deg  5825.00 98.54 87.66 10.88 100 108  5825.00 105.43 94.55 10.88 100 108  pp 11650.00 49.08 32.30 16.78 54.00 -4.92 183 227

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: PART 15E 3m Vertical

Remark : 11A\_TX\_CH165 Tested by: Karl Lee

Rate : 6M Power : 21/21

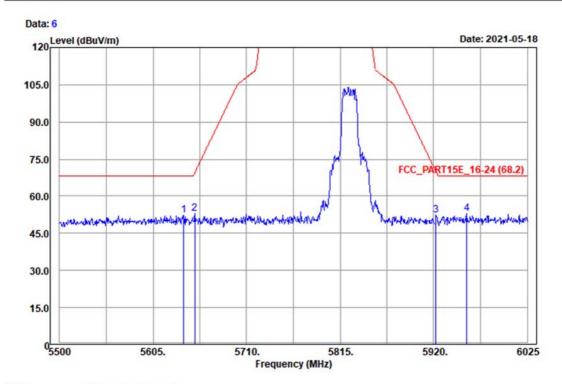
RB/VB : 1 MHz / 1 KHz

		Freq	Level	Read Level		Limit Line		APos	TPos	Remark
	-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	-
1		5825.00	109.68	98.80	10.88			197	0	Average
2		5825.00	116.50	105.62	10.88			197	0	Peak
3 1	pp	11650.00	52.80	36.02	16.78	54.00	-1.20	106	259	Average
4	pk	11650.00	63.26	46.48	16.78	74.00	-10.74	106	259	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: FCC\_PART15E\_16-24 (68.2) 3m Horizontal

Remark : 11A\_TX\_CH165 Tested by: Karl Lee

Rate : 6M Power : 21/21

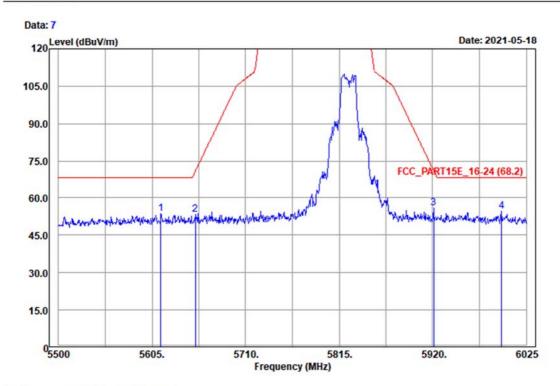
RB/VB : 1 MHz / 1 KHz

	Freq	Level	Read Level		Limit Line		APos	TPos	Remark
-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB -	cm	deg	
1	5639.65	52.19	41.36	10.83	68.20	-16.01	100	108	Peak
2	5651.73	53.04	42.17	10.87	69.48	-16.44	100	108	Peak
3	5922.63	52.21	41.10	11.11	69.96	-17.75	100	108	Peak
4 pp	5957.28	53.02	41.81	11.21	68.20	-15.18	100	108	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: FCC\_PART15E\_16-24 (68.2) 3m Vertical

Remark : 11A\_TX\_CH165 Tested by: Karl Lee

Rate : 6M Power : 21/21

RB/VB : 1 MHz / 1 KHz

	Freq	Level	Read Level		Limit Line		APos	TPos	Remark
-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1	5614.98	53.56	42.79	10.77	68.20	-14.64	197	0	Peak
2	5653.83	53.39	42.52	10.87	71.03	-17.64	197	0	Peak
3	5921.05	55.98	44.89	11.09	71.12	-15.14	197	0	Peak
4 pp	5997.18	54.58	43.25	11.33	68.20	-13.62	197	0	Peak

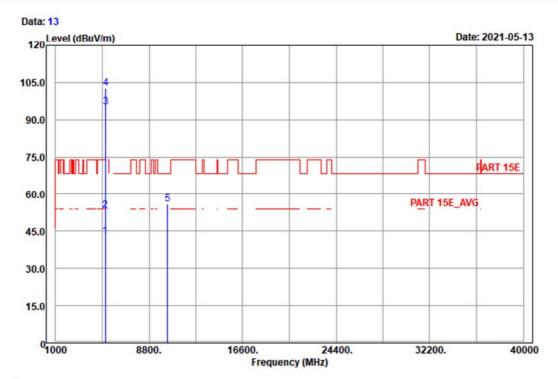
- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.



### 802.11ax (HE20)



# Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 chamber 1

Condition: PART 15E 3m Horizontal Remark : 11AX\_HE20\_TX\_CH36 Tested by: Charles Hsiao

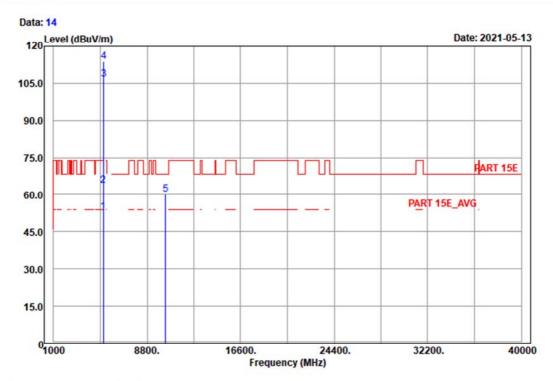
Rate : MCS0
Power : 18.5/18.5
RB/VB : 1 MHz / 1 KHz

		Freq	Level	Read Level	Factor	Limit		APos	TPos	Remark
		MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1	pp	5150.00	42.74	32.69	10.05	54.00	-11.26	108	116	Average
2		5150.00	53.24	43.19	10.05	74.00	-20.76	108	116	Peak
3		5180.00	95.25	85.13	10.12			108	116	Average
4		5180.00	102.68	92.56	10.12			108	116	Peak
5	pk	10360.00	56.02	40.00	16.02	68.20	-12.18	200	6	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1 Condition: PART 15E 3m Vertical Remark : 11AX\_HE20\_TX\_CH36 Tested by: Charles Hsiao

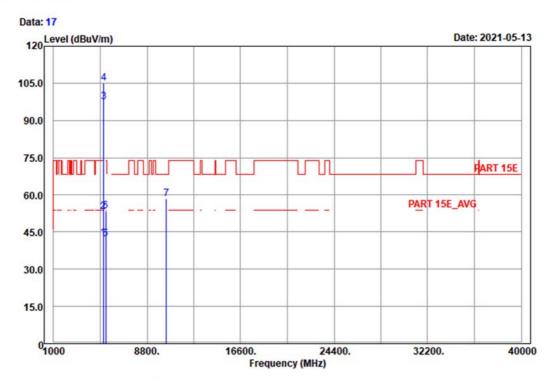
Rate : MCS0
Power : 18.5/18.5
RB/VB : 1 MHz / 1 KHz

		Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark
		MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1	pp	5150.00	52.92	42.87	10.05	54.00	-1.08	181	18	Average
2		5150.00	63.90	53.85	10.05	74.00	-10.10	181	18	Peak
3		5180.00	106.65	96.53	10.12			181	0	Average
4		5180.00	113.71	103.59	10.12			181	0	Peak
5	pk	10360.00	60.26	44.24	16.02	68.20	-7.94	201	285	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: PART 15E 3m Horizontal Remark : 11AX\_HE20\_TX\_CH40 Tested by: Charles Hsiao

Rate : MCS0

Power : 25/25

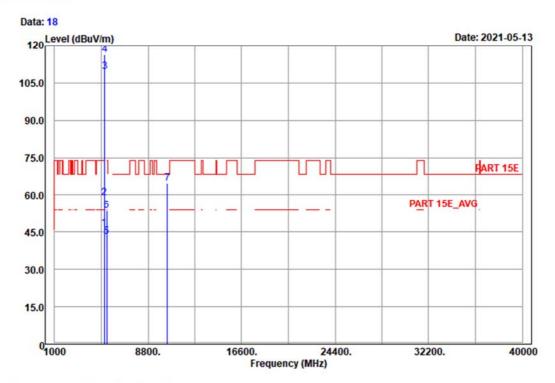
RB/VB : 1 MHz / 1 KHz

0/	VD	. 1 1	1112 / 1	Read		Limit	Over	APos	TPos	
		Freq	Level		Factor	Line	Limit			Remark
	-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1	av	5150.00	42.38	32.33	10.05	54.00	-11.62	108	116	Average
2		5150.00	53.22	43.17	10.05	74.00	-20.78	108	116	Peak
3		5200.00	97.49	87.33	10.16			108	116	Average
4		5200.00	104.97	94.81	10.16			108	116	Peak
5		5350.00	42.12	31.89	10.23	54.00	-11.88	108	116	Average
6		5350.00	53.55	43.32	10.23	74.00	-20.45	108	116	Peak
7	pp	10400.00	58.42	42.24	16.18	68.20	-9.78	200	6	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1 Condition: PART 15E 3m Vertical Remark : 11AX\_HE20\_TX\_CH40 Tested by: Charles Hsiao

Rate : MCS0 Power : 25/25

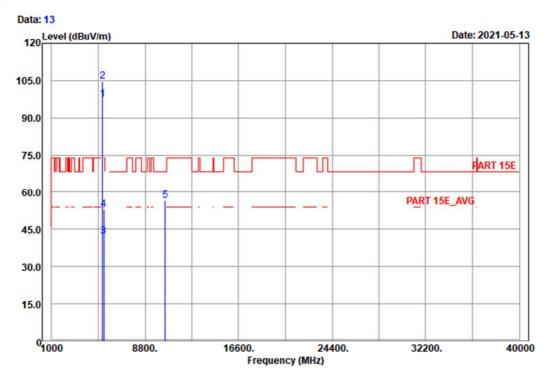
RB/VB : 1 MHz / 1 KHz

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1 av	5150.00	46.48	36.43	10.05	54.00	-7.52	181	0	Average
2	5150.00	58.86	48.81	10.05	74.00	-15.14	181	0	Peak
3	5200.00	109.50	99.34	10.16			181	0	Average
4	5200.00	116.55	106.39	10.16			181	0	Peak
5	5350.00	43.18	32.95	10.23	54.00	-10.82	181	0	Average
6	5350.00	53.55	43.32	10.23	74.00	-20.45	181	0	Peak
7 pp	10400.00	64.69	48.51	16.18	68.20	-3.51	201	285	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: PART 15E 3m Horizontal Remark : 11AX\_HE20\_TX\_CH48 Tested by: Charles Hsiao

Rate : MCS0 Power : 25/25

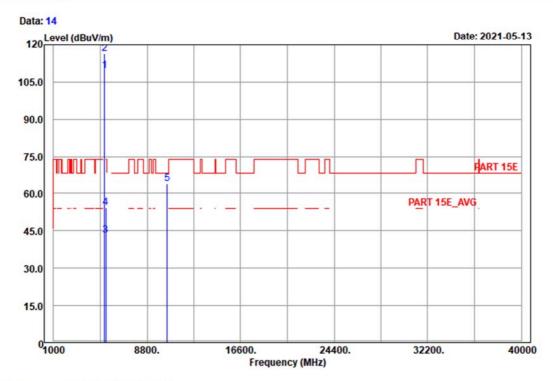
RB/VB : 1 MHz / 1 KHz

		Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark
	-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1		5240.00	97.57	87.43	10.14			108	116	Average
2		5240.00	104.66	94.52	10.14			108	116	Peak
3	av	5350.00	42.19	31.96	10.23	54.00	-11.81	108	116	Average
4		5350.00	53.12	42.89	10.23	74.00	-20.88	108	116	Peak
5	pp	10480.00	56.69	40.79	15.90	68.20	-11.51	200	50	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1 Condition: PART 15E 3m Vertical Remark : 11AX\_HE20\_TX\_CH48 Tested by: Charles Hsiao

Rate : MCS0 Power : 25/25

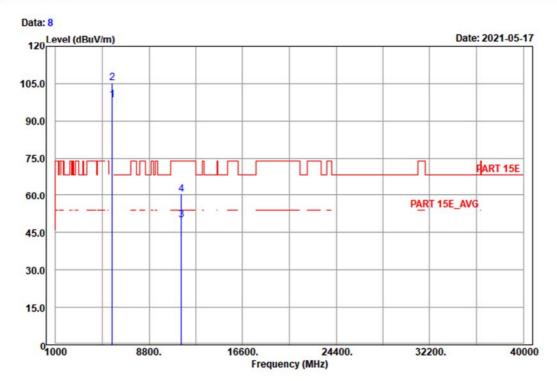
RB/VB : 1 MHz / 1 KHz

		Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark
		MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1		5240.00	109.54	99.40	10.14			181	0	Average
2		5240.00	116.34	106.20	10.14			181	0	Peak
3	av	5350.00	43.24	33.01	10.23	54.00	-10.76	181	0	Average
4		5350.00	54.35	44.12	10.23	74.00	-19.65	181	0	Peak
5	pp	10480.00	64.14	48.24	15.90	68.20	-4.06	201	285	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: PART 15E 3m Horizontal Remark : 11AX\_HE20\_TX\_CH149

Tested by: Karl Lee Rate : MCS0 Power : 22/22

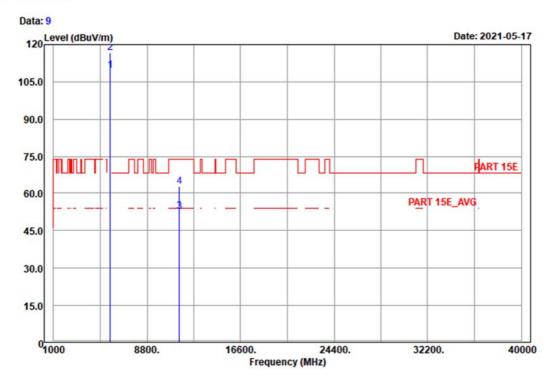
RB/VB : 1 MHz / 1 KHz

	Freq	Level	Read Level		Limit Line		APos	TPos	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1	5745.00	98.54	87.66	10.88			100	108	Average
2	5745.00	105.43	94.55	10.88			100	108	Peak
3 pp	11490.00	50.12	33.65	16.47	54.00	-3.88	185	209	Average
4 pl	11490.00	60.39	43.92	16.47	74.00	-13.61	185	209	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1 Condition: PART 15E 3m Vertical

Remark : 11AX\_HE20\_TX\_CH149

Tested by: Karl Lee Rate : MCS0 Power : 22/22

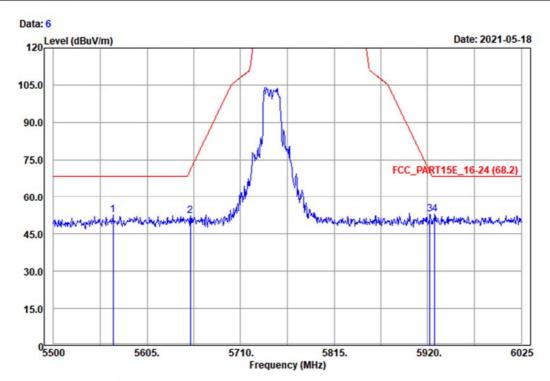
RB/VB : 1 MHz / 1 KHz

	Freq	Level	Read Level		Limit Line		APos	TPos	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	7
1	5745.00	109.54	98.66	10.88			197	0	Average
2	5745.00	116.69	105.81	10.88			197	0	Peak
3 pp	11490.00	52.49	36.02	16.47	54.00	-1.51	234	251	Average
4 pk	11490.00	62.65	46.18	16.47	74.00	-11.35	234	251	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: FCC\_PART15E\_16-24 (68.2) 3m Horizontal

Remark : 11AX\_HE20\_TX\_CH149

Tested by: Karl Lee Rate : MCS0 Power : 22/22

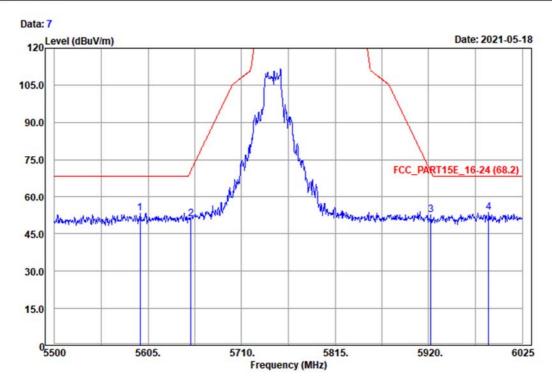
RB/VB : 1 MHz / 1 KHz

.0, .0		Level	Read	Factor	Limit Line	Over Limit	APos	TPos	Remark
-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1	5566.68	52.72	42.02	10.70	68.20	-15.48	100	108	Peak
2	5653.83	52.27	41.40	10.87	71.03	-18.76	100	108	Peak
3	5922.63	52.88	41.77	11.11	69.96	-17.08	100	108	Peak
4 pp	5927.88	53.01	41.90	11.11	68.20	-15.19	100	108	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: FCC\_PART15E\_16-24 (68.2) 3m Vertical

Remark : 11AX\_HE20\_TX\_CH149

Tested by: Karl Lee Rate : MCS0 Power : 22/22

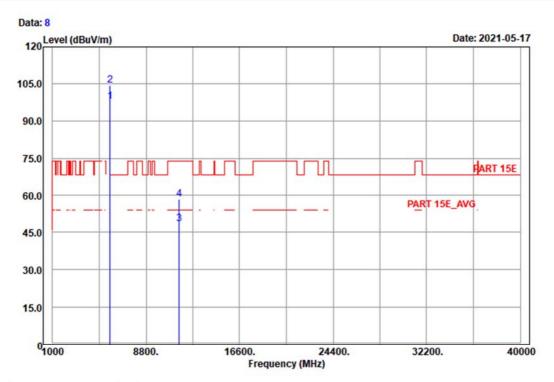
RB/VB : 1 MHz / 1 KHz

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1	5596.08	53.39	42.64	10.75	68.20	-14.81	197	0	Peak
2	5653.30	51.06	40.19	10.87	70.64	-19.58	197	0	Peak
3	5922.63	52.78	41.67	11.11	69.96	-17.18	197	0	Peak
4 pp	5987.20	53.49	42.18	11.31	68.20	-14.71	197	0	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: PART 15E 3m Horizontal Remark : 11AX\_HE20\_TX\_CH157

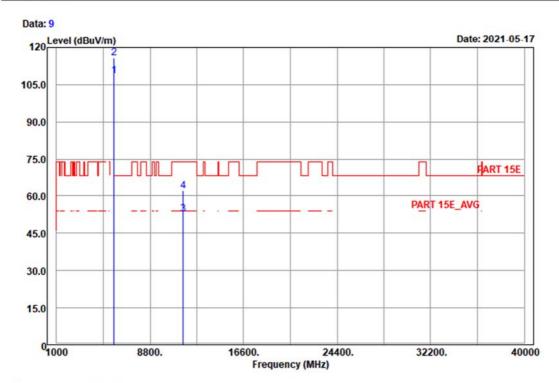
Tested by: Karl Lee
Rate : MCS0
Power : 21.5/21.5
RB/VB : 1 MHz / 1 KHz

		Freq	Level	Read Level		Limit Line		APos	TPos	Remark
	-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1		5785.00	97.67	86.86	10.81			100	108	Average
2		5785.00	104.45	93.64	10.81			100	108	Peak
3	pp	11570.00	48.33	31.84	16.49	54.00	-5.67	194	207	Average
4	pk	11570.00	58.49	42.00	16.49	74.00	-15.51	194	207	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1 Condition: PART 15E 3m Vertical Remark : 11AX\_HE20\_TX\_CH157

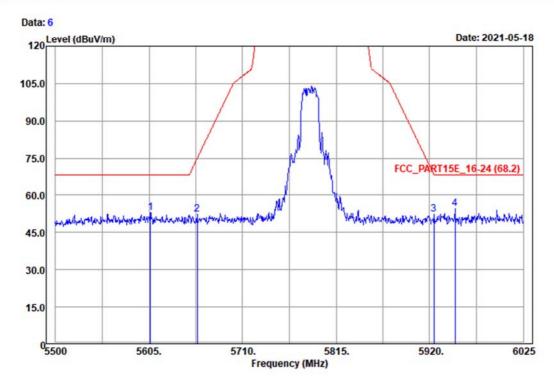
Tested by: Karl Lee
Rate : MCS0
Power : 21.5/21.5
RB/VB : 1 MHz / 1 KHz

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1	5785.00	108.41	97.60	10.81			197	0	Average
2	5785.00	115.82	105.01	10.81			197	0	Peak
3 p	11570.00	52.77	36.28	16.49	54.00	-1.23	108	250	Average
4 pl	11570.00	62.25	45.76	16.49	74.00	-11.75	108	250	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: FCC\_PART15E\_16-24 (68.2) 3m Horizontal

Remark : 11AX\_HE20\_TX\_CH157

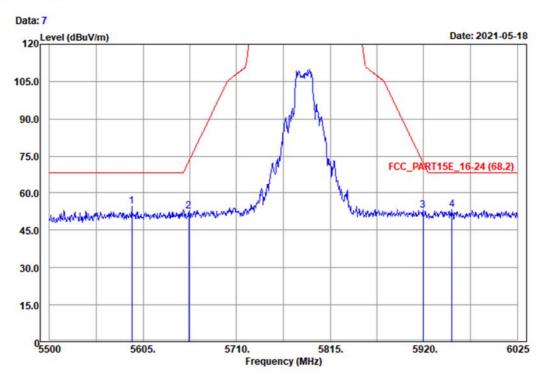
Tested by: Karl Lee
Rate : MCS0
Power : 21.5/21.5
RB/VB : 1 MHz / 1 KHz

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark
-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1	5606.58	53.07	42.32	10.75	68.20	-15.13	100	108	Peak
2	5659.08	52.19	41.32	10.87	74.92	-22.73	100	108	Peak
3	5924.73	52.30	41.19	11.11	68.40	-16.10	100	108	Peak
4 pp	5948.35	54.50	43.32	11.18	68.20	-13.70	100	108	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: FCC\_PART15E\_16-24 (68.2) 3m Vertical

Remark : 11AX\_HE20\_TX\_CH157

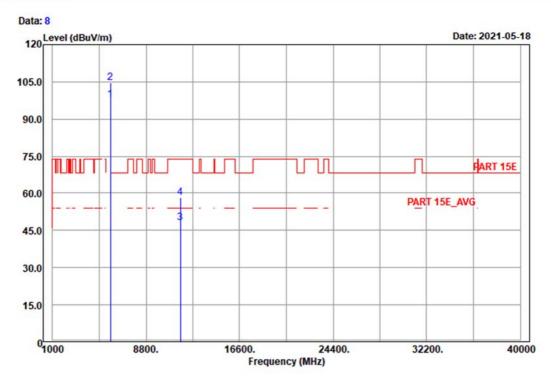
Tested by: Karl Lee
Rate : MCS0
Power : 21.5/21.5
RB/VB : 1 MHz / 1 KHz

	Freq	Level	Read Level			Over Limit	APos	TPos	Remark
-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	-
1 pp	5592.40	54.53	43.78	10.75	68.20	-13.67	197	0	Peak
2	5656.45	52.53	41.66	10.87	72.97	-20.44	197	0	Peak
3	5919.48	53.09	42.00	11.09	72.29	-19.20	197	0	Peak
4	5951.50	53.25	42.06	11.19	68.20	-14.95	197	0	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: PART 15E 3m Horizontal Remark : 11AX\_HE20\_TX\_CH165

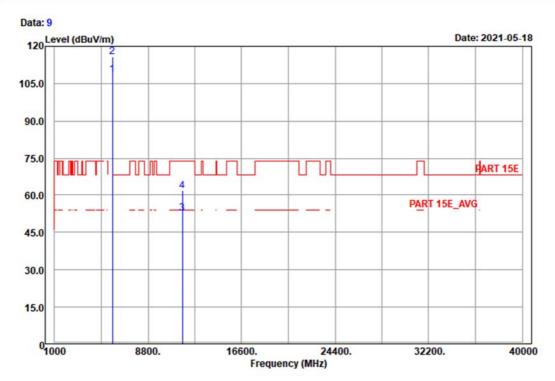
Tested by: Karl Lee
Rate : MCS0
Power : 21.5/21.5
RB/VB : 1 MHz / 1 KHz

<b>5</b>	1 1					APos	TPos	Damarla
Freq	revel	revel	Factor	Line	Limit			Remark
MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
5825.00	97.74	86.86	10.88			100	108	Average
5825.00	104.53	93.65	10.88			100	108	Peak
11650.00	47.97	31.19	16.78	54.00	-6.03	215	196	Average
11650.00	58.22	41.44	16.78	74.00	-15.78	215	196	Peak
	MHz 5825.00 5825.00 11650.00	MHz dBuV/m 5825.00 97.74 5825.00 104.53 11650.00 47.97	Freq Level Level  MHz dBuV/m dBuV  5825.00 97.74 86.86 5825.00 104.53 93.65 11650.00 47.97 31.19	MHz dBuV/m dBuV dB/m 5825.00 97.74 86.86 10.88 5825.00 104.53 93.65 10.88 11650.00 47.97 31.19 16.78	Freq Level Level Factor Line  MHz dBuV/m dBuV dB/m dBuV/m  5825.00 97.74 86.86 10.88 5825.00 104.53 93.65 10.88 11650.00 47.97 31.19 16.78 54.00	Freq Level Level Factor Line Limit	Freq Level Level Factor Line Limit  MHz dBuV/m dBuV dB/m dBuV/m dB cm  5825.00 97.74 86.86 10.88 100 5825.00 104.53 93.65 10.88 100 11650.00 47.97 31.19 16.78 54.00 -6.03 215	Freq Level Level Factor Line Limit  MHz dBuV/m dBuV dB/m dBuV/m dB cm deg  5825.00 97.74 86.86 10.88 100 108 5825.00 104.53 93.65 10.88 100 108 11650.00 47.97 31.19 16.78 54.00 -6.03 215 196

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1 Condition: PART 15E 3m Vertical Remark : 11AX\_HE20\_TX\_CH165

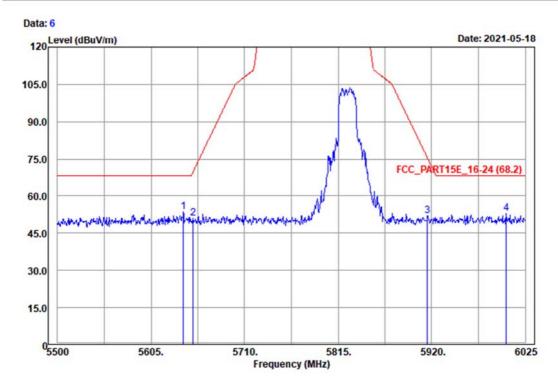
Tested by: Karl Lee
Rate : MCS0
Power : 21.5/21.5
RB/VB : 1 MHz / 1 KHz

	Fre	eq Level	Read Level		Limit Line	0.00	APos	TPos	Remark
	M	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1	5825.6	00 108.55	97.67	10.88			197	0	Average
2	5825.6	00 115.74	104.86	10.88			197	0	Peak
3 p	p 11650.6	90 52.78	36.00	16.78	54.00	-1.22	106	257	Average
4 p	k 11650.6	00 61.73	44.95	16.78	74.00	-12.27	106	257	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: FCC\_PART15E\_16-24 (68.2) 3m Horizontal

Remark : 11AX\_HE20\_TX\_CH165

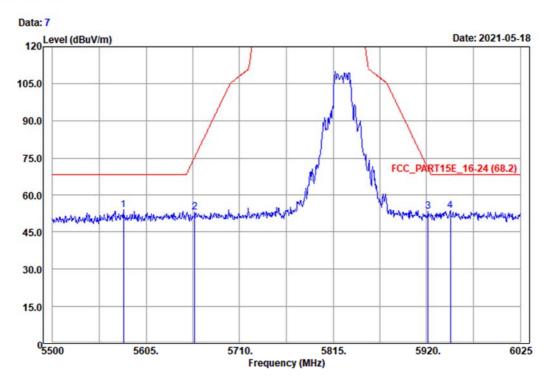
Tested by: Karl Lee
Rate : MCS0
Power : 21.5/21.5
RB/VB : 1 MHz / 1 KHz

,		, _	Read		Limit	Over	APos	TPos	
	Freq	Level	Level	Factor	Line	Limit			Remark
-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1 pp	5641.23	53.74	42.91	10.83	68.20	-14.46	100	108	Peak
2	5652.25	50.85	39.98	10.87	69.86	-19.01	100	108	Peak
3	5915.28	51.96	40.87	11.09	75.40	-23.44	100	108	Peak
4	6004.00	53.01	41.68	11.33	68.20	-15.19	100	108	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: FCC\_PART15E\_16-24 (68.2) 3m Vertical

Remark : 11AX\_HE20\_TX\_CH165

Tested by: Karl Lee
Rate : MCS0
Power : 21.5/21.5
RB/VB : 1 MHz / 1 KHz

0,.0		Level	Read		Limit Line	Over Limit	APos	TPos	Remark
-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	- cm	deg	
1 pp	5579.80	53.92	43.21	10.71	68.20	-14.28	197	0	Peak
2	5659.60	52.97	42.10	10.87	75.30	-22.33	197	0	Peak
3	5921.58	53.32	42.21	11.11	70.73	-17.41	197	0	Peak
4	5946.78	53.74	42.56	11.18	68.20	-14.46	197	0	Peak

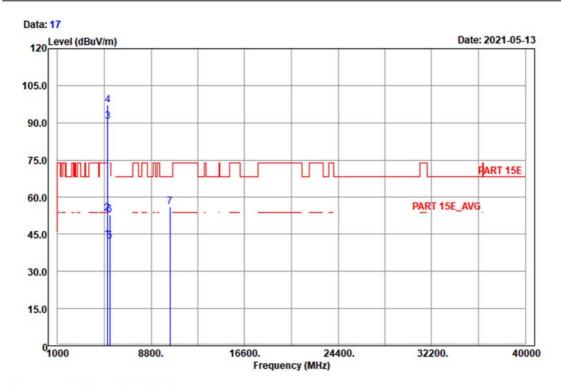
- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.



### 802.11ax (HE40)



## Bureau Veritas Consumer Products Services Ltd., Taoyuan Branch



Site : 966 chamber 1

Condition: PART 15E 3m Horizontal Remark : 11AX\_HE40\_TX\_CH38 Tested by: Charles Hsiao

Rate : MCS0 Power : 15/15

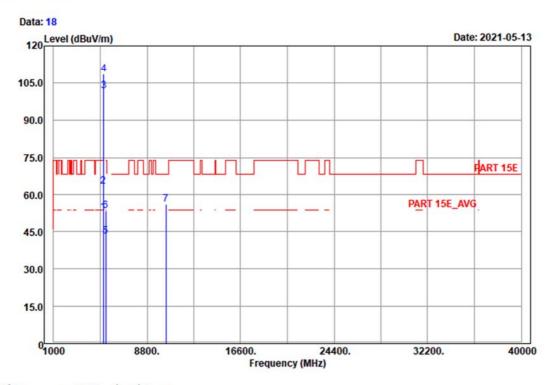
RB/VB : 1 MHz / 1 KHz

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1 pp	5150.00	42.80	32.75	10.05	54.00	-11.20	108	116	Average
2	5150.00	53.70	43.65	10.05	74.00	-20.30	108	116	Peak
3	5190.00	90.67	80.55	10.12			108	116	Average
4	5190.00	97.15	87.03	10.12			108	116	Peak
5	5350.00	42.32	32.09	10.23	54.00	-11.68	108	116	Average
6	5350.00	52.98	42.75	10.23	74.00	-21.02	108	116	Peak
7 pk	10380.00	56.37	40.27	16.10	68.20	-11.83	200	6	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1 Condition: PART 15E 3m Vertical Remark : 11AX\_HE40\_TX\_CH38

Tested by: Charles Hsiao

Rate : MCS0 Power : 15/15

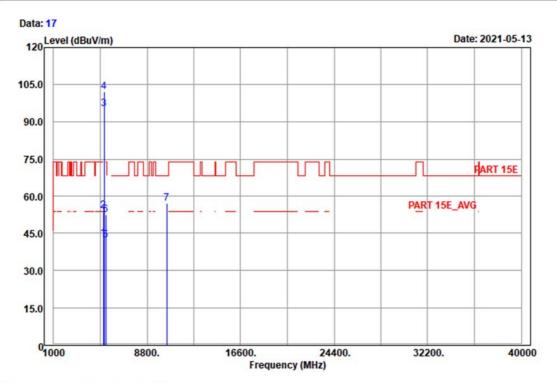
RB/VB : 1 MHz / 1 KHz

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1 pp	5150.00	52.99	42.94	10.05	54.00	-1.01	182	20	Average
2 pk	5150.00	63.60	53.55	10.05	74.00	-10.40	182	20	Peak
3	5190.00	101.64	91.52	10.12			181	0	Average
4	5190.00	108.44	98.32	10.12			181	0	Peak
5	5350.00	43.21	32.98	10.23	54.00	-10.79	181	0	Average
6	5350.00	53.78	43.55	10.23	74.00	-20.22	181	0	Peak
7	10380.00	56.27	40.17	16.10	68.20	-11.93	201	285	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: PART 15E 3m Horizontal Remark : 11AX\_HE40\_TX\_CH46 Tested by: Charles Hsiao

Rate : MCS0 Power : 25/25

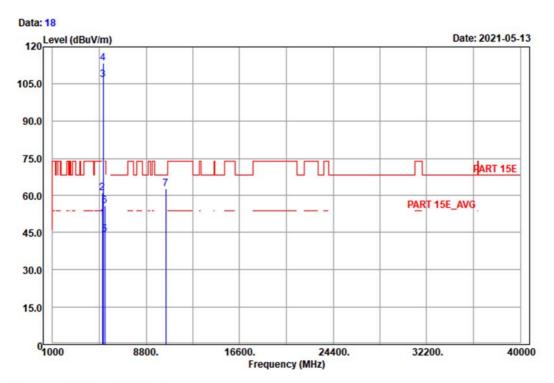
RB/VB : 1 MHz / 1 KHz

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1 av	5150.00	42.93	32.88	10.05	54.00	-11.07	108	116	Average
2	5150.00	54.34	44.29	10.05	74.00	-19.66	108	116	Peak
3	5230.00	95.29	85.15	10.14			108	116	Average
4	5230.00	102.07	91.93	10.14			108	116	Peak
5	5350.00	42.20	31.97	10.23	54.00	-11.80	108	116	Average
6	5350.00	52.80	42.57	10.23	74.00	-21.20	108	116	Peak
7 pp	10460.00	57.17	41.17	16.00	68.20	-11.03	200	6	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1 Condition: PART 15E 3m Vertical Remark : 11AX\_HE40\_TX\_CH46

Tested by: Charles Hsiao

Rate : MCSØ Power : 25/25

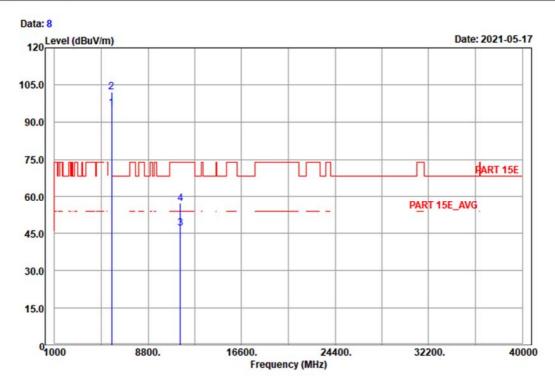
RB/VB : 1 MHz / 1 KHz

		Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark
	-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1	pp	5150.00	50.74	40.69	10.05	54.00	-3.26	181	0	Average
2		5150.00	61.01	50.96	10.05	74.00	-12.99	181	0	Peak
3		5230.00	106.44	96.30	10.14			181	0	Average
4		5230.00	113.42	103.28	10.14			181	0	Peak
5		5350.00	44.30	34.07	10.23	54.00	-9.70	181	0	Average
6		5350.00	56.01	45.78	10.23	74.00	-17.99	181	0	Peak
7	pk	10460.00	62.63	46.63	16.00	68.20	-5.57	201	285	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: PART 15E 3m Horizontal Remark : 11AX\_HE40\_TX\_CH151

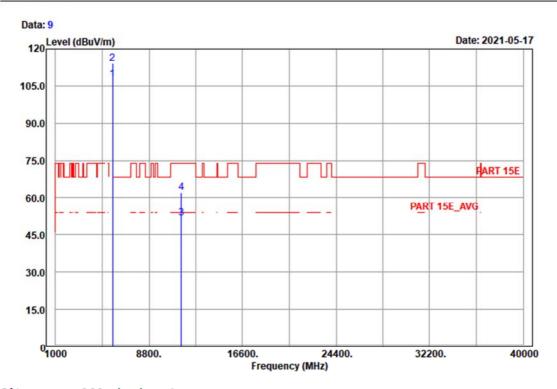
Tested by: Karl Lee
Rate : MCS0
Power : 24.5/24.5
RB/VB : 1 MHz / 1 KHz

		/ 1	Read		Limit	Over	APos	TPos	
	Freq	Level	Level	Factor	Line	Limit			Remark
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1	5755.00	95.64	84.74	10.90			100	108	Average
2	5755.00	102.14	91.24	10.90			100	108	Peak
3 p	p 11510.00	47.09	30.58	16.51	54.00	-6.91	204	209	Average
4 p	k 11510.00	57.32	40.81	16.51	74.00	-16.68	204	209	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1 Condition: PART 15E 3m Vertical Remark : 11AX\_HE40\_TX\_CH151

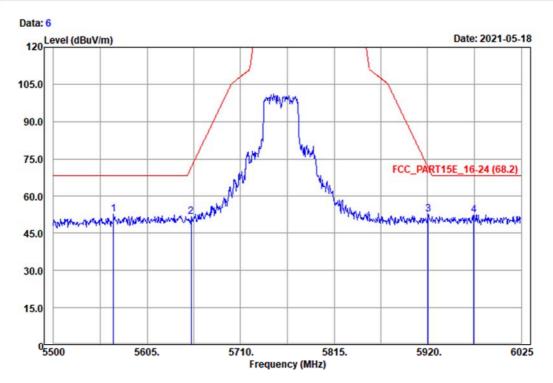
Tested by: Karl Lee
Rate : MCS0
Power : 24.5/24.5
RB/VB : 1 MHz / 1 KHz

		Freq	Level	Read Level	Factor	Limit Line		APos	TPos	Remark
	-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1		5755.00	107.42	96.52	10.90			197	0	Average
2		5755.00	114.00	103.10	10.90			197	0	Peak
3	pp	11510.00	51.67	35.16	16.51	54.00	-2.33	216	268	Average
4	pk	11510.00	62.17	45.66	16.51	74.00	-11.83	216	268	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: FCC\_PART15E\_16-24 (68.2) 3m Horizontal

Remark : 11AX\_HE40\_TX\_CH151

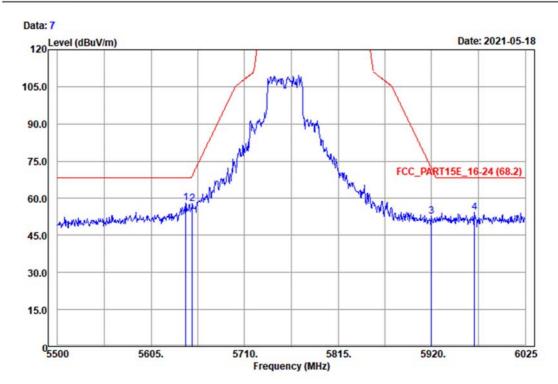
Tested by: Karl Lee
Rate : MCS0
Power : 24.5/24.5
RB/VB : 1 MHz / 1 KHz

			Read		Limit	Over	APos	TPos	
	Freq	Level	Level	Factor	Line	Limit			Remark
-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1 pp	5567.20	52.56	41.86	10.70	68.20	-15.64	100	108	Peak
2	5654.35	51.57	40.70	10.87	71.42	-19.85	100	108	Peak
3	5920.53	52.55	41.46	11.09	71.51	-18.96	100	108	Peak
4	5971.98	52.46	41.21	11.25	68.20	-15.74	100	108	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: FCC\_PART15E\_16-24 (68.2) 3m Vertical

Remark : 11AX\_HE40\_TX\_CH151

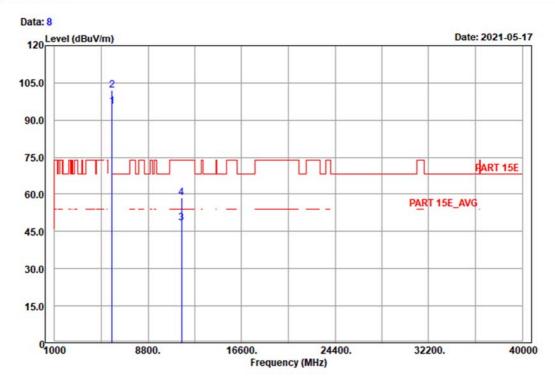
Tested by: Karl Lee
Rate : MCS0
Power : 24.5/24.5
RB/VB : 1 MHz / 1 KHz

	Freq	Level	Read Level	Factor	Limit Line		APos	TPos	Remark
-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg	
1 pp	5643.85	58.17	47.34	10.83	68.20	-10.03	197	0	Peak
2	5651.20	58.01	47.14	10.87	69.09	-11.08	197	0	Peak
3	5920.00	52.67	41.58	11.09	71.90	-19.23	197	0	Peak
4	5968.30	54.32	43.09	11.23	68.20	-13.88	197	0	Peak

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.







Site : 966 chamber 1

Condition: PART 15E 3m Horizontal Remark : 11AX\_HE40\_TX\_CH159

Tested by: Karl Lee Rate : MCS0 Power : 25/25

RB/VB : 1 MHz / 1 KHz

	Freq	Level					APos	TPos	Remark
-	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB -	cm	deg	
	5795.00	95.62	84.80	10.82			100	108	Average
	5795.00	102.13	91.31	10.82			100	108	Peak
pp	11590.00	48.43	31.92	16.51	54.00	-5.57	177	216	Average
pk	11590.00	58.61	42.10	16.51	74.00	-15.39	177	216	Peak
۰		MHz 5795.00 5795.00 pp 11590.00	MHz dBuV/m 5795.00 95.62 5795.00 102.13 pp 11590.00 48.43	Freq Level Level  MHz dBuV/m dBuV  5795.00 95.62 84.80 5795.00 102.13 91.31 pp 11590.00 48.43 31.92	MHz dBuV/m dBuV dB/m 5795.00 95.62 84.80 10.82 5795.00 102.13 91.31 10.82 pp 11590.00 48.43 31.92 16.51	Freq Level Level Factor Line  MHz dBuV/m dBuV dB/m dBuV/m  5795.00 95.62 84.80 10.82 5795.00 102.13 91.31 10.82 pp 11590.00 48.43 31.92 16.51 54.00	Freq Level Level Factor Line Limit	Freq Level Level Factor Line Limit  MHz dBuV/m dBuV dB/m dBuV/m dB cm  5795.00 95.62 84.80 10.82 100 5795.00 102.13 91.31 10.82 100 pp 11590.00 48.43 31.92 16.51 54.00 -5.57 177	Freq Level Level Factor Line Limit  MHz dBuV/m dBuV dB/m dBuV/m dB cm deg  5795.00 95.62 84.80 10.82 100 108  5795.00 102.13 91.31 10.82 100 108  op 11590.00 48.43 31.92 16.51 54.00 -5.57 177 216

- 1. Level(dBuV/m) = Read Level(dBuV) + Factor(dB/m)
- 2. Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB)
- 3. The other emission levels were very low against the limit.
- 4. Over limit = Level Limit value
- 5. The emission levels of other frequencies were very low against the limit.