Prüfbericht-Nr.: *Test report no.:*	**CN22TWVE 002**	**Auftrags-Nr.:** *Order no.:*	**168349178**	**Seite 1 von 22** *Page 1 of 22*
Kunden-Referenz-Nr.: *Client reference no.:*	**N/A**	**Auftragsdatum:** *Order date:*	2021-12-23	
Auftraggeber: *Client:*	ZTE Corporation ZTE Plaza, Hi-Tech Park, Nanshan District, Shenzhen, Guangdong, P.R.China			
Prüfgegenstand: *Test item:*	RichMedia Box			
Bezeichnung / Typ-Nr.: *Identification / Type no.:*	ZXV10 B866V2F, ZXV10 B866V2F1, ZXV10 B866V2Fi, ZXV10 B866V2FA, ZXV10 B866V2FB, ZXV10 B866V2K, ZXV10 B866V2K1, ZXV10 B860HF, ZXV10 B860V2F, ZXV10 B870V2F, ZXV10 B766V2 (Trademark: ZTE)			
Auftrags-Inhalt: *Order content*:	Test Report			
Prüfgrundlage: *Test specification:*	CFR47 FCC Part 15: Subpart C Section 15.247 FCC KDB 558074 D01 15.247 Meas Guidance v05r02 FCC KDB 662911 D01 Multiple Transmitter Output v02r01 ANSI C63.10:2013			

Wareneingangsdatum: *Date of sample receipt:*	2021-12-29	Please refer to Photo Document
Prüfmuster-Nr.: *Test sample no:*	A003191348-002~004 A003199431-002	
Prüfzeitraum: *Testing period:*	2021-12-30 - 2022-01-20	
Ort der Prüfung: *Place of testing:*	TÜV Rheinland (Shenzhen) Co., Ltd.	
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland (Shenzhen) Co., Ltd.	
Prüfergebnis*: *Test result*:*	Pass	

geprüft von: *tested by:*	X Tim.zhang Signed by: Tim Zhang	**genehmigt von:** *authorized by:*	X Lin Lin Signed by: Lin Lin
Datum: *Date:* 2022-01-21		**Ausstellungsdatum:** *Issue date:* 2022-01-21	
Stellung */ Position:*	Project Manager	**Stellung** */ Position:*	Reviewer
Sonstiges */ Other:*	FCC ID: Q78-ZXV10905Y4A		

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt
Condition of the test item at delivery: *Test item complete and undamaged*

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
** Legend:*	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m. test specification(s)		*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

Test Summary

5.1.1 ANTENNA REQUIREMENT
RESULT: Pass

5.1.2 MAXIMUM CONDUCTED OUTPUT POWER
RESULT: Pass

5.1.3 CONDUCTED POWER SPECTRAL DENSITY
RESULT: Pass

5.1.4 6DB BANDWIDTH
RESULT: Pass

5.1.5 99% BANDWIDTH
RESULT: Pass

5.1.6 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 KHZ BANDWIDTH
RESULT: Pass

5.1.7 RADIATED SPURIOUS EMISSION
RESULT: Pass

5.1.8 CONDUCTED EMISSION ON AC MAINS
RESULT: Pass

Contents

1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Test Results of Wi-Fi 802.11 b/g/n

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.
No. 362 Huanguan Road Middle, Longhua District, 518110, Shenzhen, P. R. China.

FCC Registration No.: 694916
ISED wireless device testing laboratory: 25069

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Radio Spectrum Testing (SRD-Tonscend)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Cal. until**
EXA Signal Analyzer, Multi-touch	Keysight	N9010B	MY60241175	2022-09-28
MXG X-Series RF Vector Signal Generator	Keysight	N5182B	MY61250137	2022-09-28
EXG X-Series Microwave Analog Signal Generator	Keysight	N5173B	MY61250141	2022-09-28
DC power supply	Keysight	E3642A	MY61276100	2022-09-28
Power Control Unit	Tonscend	JS0806-4ADC	N/A	2022-09-28
Automation Control Unit	Tonscend	JS0806-2	21C8060396	2022-09-28
Test Software	Tonscend	JS1120-3	N/A	N/A
Control PC	Lenovo	TianYi510S-071MB	YLX23JMF	N/A
Shielding Room 8#	Albatross	SR8	APC17151-SR8	2024-06-22
Unwanted Emission Testing (TS9975)				
Equipment	**Manufacturer**	**Model**	**Serial No.**	**Cal. until**
EMI Test Receiver	R&S	ESR 7	102021	2022-08-10
Signal Analyzer	R&S	FSV 40	101439	2022-08-09
System Controller Interface	R&S	SCI-100	S10010038	N/A
Filterbank	R&S	Wlan	100759	2022-08-09
OSP	R&S	OSP 120	102040	N/A
Pre-amplifier	R&S	SCU08F1	08320031	2022-08-09
Amplifier	R&S	SCU-18F	180070	2022-08-09
Amplifier	R&S	SCU40A	100475	2022-08-09
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	2022-08-08
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	2022-08-08
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	2022-08-08
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	2022-09-13
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	2024-06-22

Conducted Emission				
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Until**
EMI Test Receiver	R&S	ESR3	102428	2022-08-10
Artificial Mains Network	R&S	ENV216	102333	2022-08-10
Artificial Mains Network	R&S	ENV432	101411	2022-08-10
EMC32 test software	R&S	EMC32(Ver.10.50.00)	N/A	N/A

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basics using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table.

Parameter	Uncertainty
Radio Frequency	±1 x 10-7
RF Power (conducted)	±2.5 dB
Radiated Emission of Transmitter, valid up to 26.5 GHz	±6 dB
Radiated Emission of Receiver, valid up to 26.5 GHz	±6 dB
Conducted Emission, (9kHz to 150kHz)/(150kHz to 30MHz)	± 3.70 dB / ± 3.30 dB
Temperature	±1 °C
Humidity	±5 %
Voltage (DC)	±1 %
Voltage (AC, <10kHz)	±2 %

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) Co., Ltd. file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at No. 362 Huanguan Road Middle, Longhua District, 518110, Shenzhen, P. R. China. is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3 General Product Information

3.1 Product Function and Intended Use

The EUT is a RichMedia Box, which supports Bluetooth (dual mode), 2.4GHz Wi-Fi 802.11 b/g/n and 5GHz Wi-Fi 802.11a/n/ac wireless technology.

According to the declaration of the applicant, the schematics, PCB layout and electronic components are identical, only the model no. is different for market strategy.
The EUT have four adapters, details as below table:

Description	Model	Rating	Manufacturer
Adapter 1#	UWP-12W-1210S	Input: 100-240V, 50/60Hz, 0.6A Output: 12.0V, 1.0A	I.T.E&AV POWER SUPPLY
Adapter 2#	KL-WA120100-B	Input: 100-240V, 50/60Hz, 0.6A Output: 12.0V, 1.0A	XIAMEN KELI ELECTRONIC CO., LTD
Adapter 3#	MN012E-L120100	Input: 100-240V, 50/60Hz, 0.6A Output: 12.0V, 1.0A	XIAMEN CASTEC ELECTRONIC INDUSTRY CO., LTD
Adapter 4#	RD1201000-C55-35MGD	Input: 100-240V, 50/60Hz, 0.6A Output: 12.0V, 1.0A	Shenzhen Ruide electronic industrial Co., Ltd.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment:	RichMedia Box
Type Designation:	ZXV10 B866V2F, ZXV10 B866V2F1, ZXV10 B866V2Fi, ZXV10 B866V2FA, ZXV10 B866V2FB, ZXV10 B866V2K, ZXV10 B866V2K1, ZXV10 B860HF, ZXV10 B860V2F, ZXV10 B870V2F, ZXV10 B766V2
Trademark:	ZTE
FCC ID:	Q78-ZXV10905Y4A
Operating Voltage:	AC 120~240V, 50/60Hz input via adapter
Testing Voltage:	AC 120V, 60Hz
Technical Specification of Bluetooth (dual mode)	
Operating Frequency:	2402 MHz to 2480 MHz
Type of Modulation:	GFSK, π/4-DQPSK, 8DPSK
Channel Number:	BDR & EDR mode:79 channels, Low Energy mode:40 channels
Channel Separation:	BDR & EDR mode: 1MHz, Low Energy mode: 2MHz
Data Rate:	BDR & EDR mode: 1Mbps, 3Mbps Low Energy mode: 1Mbps
Antenna Type:	Integral Antenna
Antenna Gain of Bluetooth:	3.0 dBi
Technical Specification of Wi-Fi 802.11 b/g/n	
Operating Frequency:	2412 - 2462 MHz for 802.11b/g/n(HT20) 2422 - 2452 MHz for 802.11n(HT40)
Type of Modulation:	DSSS(DBPSK/DQPSK/CCK)

	OFDM(BPSK/QPSK/16QAM/64QAM)
Data Rate:	6/9/12/18/24/36/48/54 Mbps for 802.11g MCS0 ~ MCS7 for 802.11n
Channel Number:	11 channels for 802.11b/g/n(HT20) 7 channels for 802.11n(HT40)
Channel Separation:	5 MHz
Antenna Type:	Integral Antenna
Number of Antenna:	2
Antenna Gain 1:	3.0 dBi
Antenna Gain 2:	3.0 dBi
Note: The EUT supports MIMO 2*2, any transmit signals are correlated with each other, so Directional gain = G_{ANT} + 10 log(N_{ANT}) dBi=6.01dBi≈6; The limit of output power is 30-(6.01-6) ≈30 The limit of power spectral density is 8.	
Technical Specification of Wi-Fi 802.11 a/n/ac	
Operating Frequency:	5180-5320MHz, 5500-5700MHz, 5745-5825MHz
Type of Modulation:	OFDM(BPSK/QPSK/16QAM/64QAM/256QAM)
Channel Number:	5180-5320MHz, 14CHs, 802.11 a/n20/n40/ac20/ac40/ac80 5500-5700MHz, 12CHs, 802.11 a/n20/n40/ac20/ac40/ac80 5745-5825MHz, 8CHs, 802.11 a/n20/n40/ac20/ac40/ac80
Channel Separation	5 MHz
Antenna Type:	Integral Antenna
Number of Antenna:	2
Antenna Gain 1:	3.5 dBi
Antenna Gain 2:	3.5 dBi

Table 3: RF Channel and Frequency of Wi-Fi 802.11 b/g/n

RF Channel	802.11 b/g/n(HT20)	802.11 n(HT40)
	Frequency (MHz)	Frequency (MHz)
01	**2412**	**/**
02	2417	/
03	2422	**2422**
04	2427	2427
05	2432	2432
06	**2437**	**2437**
07	2442	2442
08	2447	2447
09	2452	**2452**
10	2457	/
11	**2462**	**/**

Test frequencies are lowest channel: 2412 MHz, middle channel: 2437 MHz and highest channel: 2462 MHz for 802.11b/g/n(HT20)

Test frequencies are lowest channel: 2422 MHz, middle channel: 2437 MHz and highest channel: 2452 MHz for 802.11n(HT40)

3.3 Independent Operation Modes

The basic operation modes are:

A. On, Wi-Fi 802.11 b/g/n wireless transmitting mode
    1) Low Channel
    2) Middle Channel
    3) High Channel
B. On, Normal operation (Wi-Fi Link)
C. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- Application Form
- Operation Description
- Schematics
- PCB Layout
- User Manual
- Block Diagram
- Rating Label
- Parts List

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All tests were performed according to the procedures in ANSI C63.10: 2013.

According to clause 3.1, all tests were performed on model ZXV10 B866V2F in this report.

4.3 Special Accessories and Auxiliary Equipment

Table 4: Auxiliary Equipment Used during Test

Description	Manufacturer	Model	S/N
Laptop	Lenovo	T480	PF-16A6N8
LCD 4K Color Display	PHILIPS	272P7V	AUCA1833000075472
Soundbar	Fenda	NS-HTSB22	/
RJ45 cable	/	/	/
AV cable	/	/	/
HDMI cable	/	/	/
Optical fiber cable	/	/	/

4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

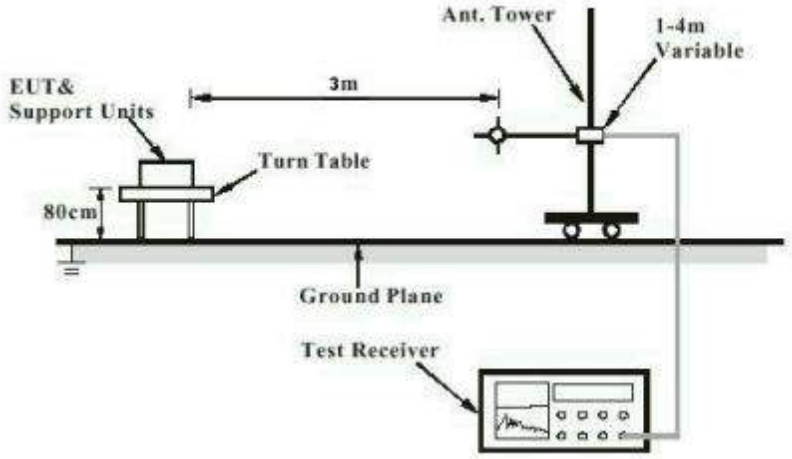


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

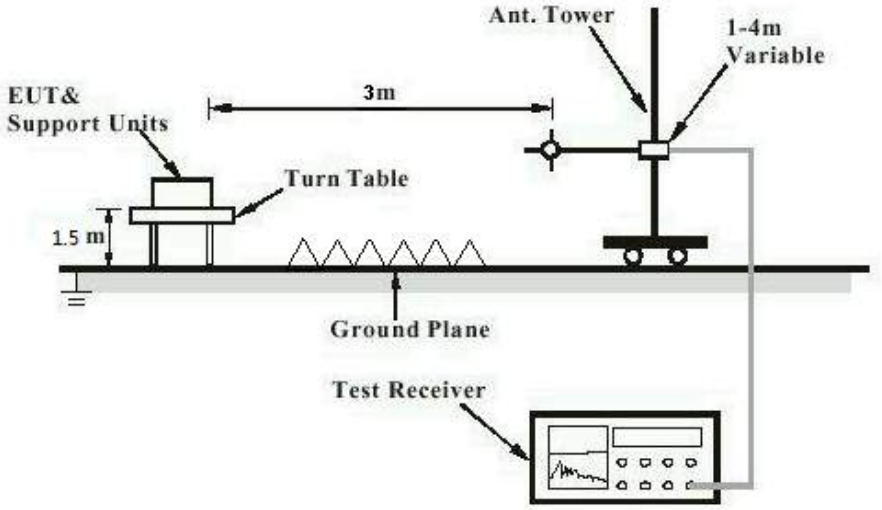


Diagram of Measurement Configuration for Mains Conduction Measurement

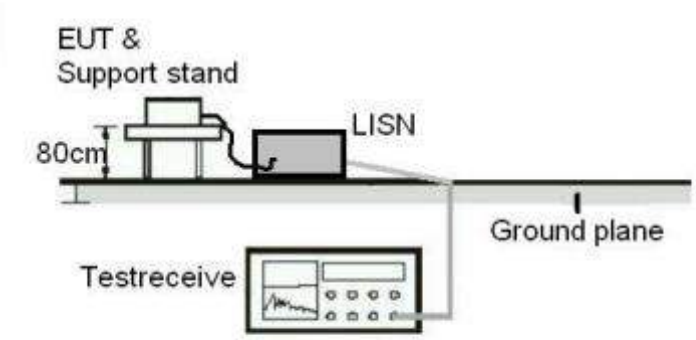
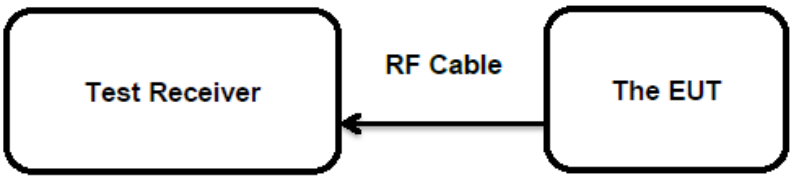


Diagram of Measurement Configuration for Conducted Transmitter Measurement



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: **Pass**

Test Specification
Test standard : FCC Part 15.247(b)(4) and Part 15.203

According to the manufacturer declared, the EUT have two integral antennas, Each antenna has a Max. antenna gain of 3 dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement.

Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

5.1.2 Maximum Conducted Output Power

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(b)(3)
Basic standard	:	ANSI C63.10: 2013
Limits	:	1.0 Watts
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2022-01-06
Input voltage	:	AC 120V, 60Hz
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 ℃
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

Table 5: Test Result of Maximum Conducted Output Power, SISO mode (Ant1)

Test Mode	Data Rate	Test Channel (MHz)	Measured Peak Power		Limit (W)
			(dBm)	(W)	
802.11b	1 Mbps	2412	15.22	0.0333	< 1.0
		2437	15.53	0.0357	
		2462	15.35	0.0343	
802.11g	6 Mbps	2412	19.99	0.0998	
		2437	19.87	0.0971	
		2462	19.84	0.0964	
802.11n (HT20)	MCS0	2412	20.16	0.1038	
		2437	20.07	0.1016	
		2462	20.12	0.1028	
802.11n (HT40)	MCS0	2422	19.92	0.0982	
		2437	20.00	0.1000	
		2452	20.13	0.1030	
Maximum Measured Value			20.16	0.1038	

Table 6: Test Result of Maximum Conducted Output Power, SISO mode (Ant2)

Test Mode	Data Rate	Test Channel (MHz)	Measured Peak Power		Limit (W)
			(dBm)	(W)	
802.11b	1 Mbps	2412	14.95	0.0313	< 1.0
		2437	15.40	0.0347	
		2462	14.96	0.0313	
802.11g	6 Mbps	2412	19.73	0.0940	
		2437	19.55	0.0902	
		2462	19.92	0.0982	
802.11n (HT20)	MCS0	2412	20.38	0.1091	
		2437	20.09	0.1021	
		2462	20.47	0.1114	
802.11n (HT40)	MCS0	2422	19.87	0.0971	
		2437	19.74	0.0942	
		2452	19.79	0.0953	
Maximum Measured Value			20.47	0.1114	

Table 7: Test Result of Maximum Conducted Output Power, MIMO mode (Ant1+2)

Test Mode	Data Rate	Test Channel (MHz)	Measured Peak Power		Limit (W)
			(dBm)	(W)	
802.11n (HT20)	MCS0	2412	23.28	0.2128	< 1.0
		2437	23.09	0.2037	
		2462	23.31	0.2143	
802.11n (HT40)	MCS0	2422	22.91	0.1954	
		2437	22.88	0.1941	
		2452	22.97	0.1982	
Maximum Measured Value			23.31	0.2143	

Note:
1) The cable loss is take into account in results.
2) Antenna gain(G) 1: 3.0 dBi
3) Antenna gain(G) 2: 3.0 dBi
4) Directional gain(G)=G_{ANT} + 10 log(N_{ANT}) dBi=6.01 dBi

5.1.3 Conducted Power Spectral Density

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(e)
Basic standard	:	ANSI C63.10: 2013
Limits	:	< 8 dBm / 3kHz
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2022-01-06
Input voltage	:	AC 120V, 60Hz
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 ℃
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

5.1.4 6dB Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(a)(2)
Basic standard	:	ANSI C63.10: 2013
Limits	:	> 500 kHz
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2022-01-06
Input voltage	:	AC 120V, 60Hz
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 ℃
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

5.1.5 99% Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(a)
Basic standard	:	ANSI C63.10: 2013
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2022-01-06
Input voltage	:	AC 120V, 60Hz
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 ℃
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

5.1.6 Conducted Spurious Emissions Measured in 100 kHz Bandwidth

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(d)
Basic standard	:	ANSI C63.10: 2013
Limits	:	20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2022-01-06
Input voltage	:	AC 120V, 60Hz
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	24.8 ℃
Relative humidity	:	55 %
Atmospheric pressure	:	101 kPa

Test results of 100kHz Bandwidth of Frequency Band Edge by Conducted method refer to test plots, and compliance is achieved as well.

For the measurement records, refer to the appendix A.

5.1.7 Radiated Spurious Emission

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.247(d) & FCC Part 15.205
Basic standard	:	ANSI C63.10: 2013
Limits	:	Refer to 15.209(a) of FCC part 15.247(d)
Kind of test site	:	3m Semi-anechoic Chamber

Test Setup

Date of testing	:	2022-01-10 to 2022-01-17
Input voltage	:	AC 120V, 60Hz
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	Refer to test result
Relative humidity	:	Refer to test result
Atmospheric pressure	:	101 kPa

Remark:
Testing was carried out within frequency range 9kHz to the tenth harmonics. All configurations tested for both MIMO and SISO, only worst-case mode data reported.

For the measurement records, refer to the appendix A.

5.1.8 Conducted Emission on AC Mains

RESULT: **Pass**

Test Specification

Test standard	:	FCC Part 15.207(a)
Basic standard	:	ANSI C63.10: 2013
Frequency range	:	0.15 – 30MHz
Limits	:	FCC Part 15.207(a)
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2022-01-16
Input voltage	:	AC 120V, 60Hz
Operation mode	:	B
Earthing	:	Not connected
Ambient temperature	:	23.1 ℃
Relative humidity	:	52 %
Atmospheric pressure	:	101 kPa

For the measurement records, refer to the appendix A.

6 Photographs of the Test Set-Up

For photographs of the test set-up, refer to the separate test photo file.

7 List of Tables

Appendix A: Test Results of Wi-Fi 802.11 b/g/n

Appendix A.1: Test Results of Conducted Power Spectral Density

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B-SISO	Ant1	2412	-3.97	≤8	PASS
	Ant2	2412	-3.97	≤8	PASS
	Total	--	--	--	--
	Ant1	2437	-3.17	≤8	PASS
	Ant2	2437	-3.56	≤8	PASS
	Total	--	--	--	--
	Ant1	2462	-4.01	≤8	PASS
	Ant2	2462	-4.04	≤8	PASS
	Total	--	--	--	--
11G-SISO	Ant1	2412	-5.46	≤8	PASS
	Ant2	2412	-5.81	≤8	PASS
	Total	--	--	--	--
	Ant1	2437	-5.07	≤8	PASS
	Ant2	2437	-4.54	≤8	PASS
	Total	--	--	--	--
	Ant1	2462	-5.11	≤8	PASS
	Ant2	2462	-5.56	≤8	PASS
	Total	--	--	--	--
11N20MIMO	Ant1	2412	-4.95	≤8	PASS
	Ant2	2412	-5.3	≤8	PASS
	total	2412	-2.11	≤8	PASS
	Ant1	2437	-5.65	≤8	PASS
	Ant2	2437	-4.38	≤8	PASS
	total	2437	-1.96	≤8	PASS
	Ant1	2462	-4.54	≤8	PASS
	Ant2	2462	-4.62	≤8	PASS
	total	2462	-1.57	≤8	PASS
11N40MIMO	Ant1	2422	-8.62	≤8	PASS
	Ant2	2422	-7.65	≤8	PASS
	total	2422	-5.10	≤8	PASS
	Ant1	2437	-7.21	≤8	PASS
	Ant2	2437	-7.83	≤8	PASS
	total	2437	-4.50	≤8	PASS
	Ant1	2452	-7.08	≤8	PASS
	Ant2	2452	-8.69	≤8	PASS
	total	2452	-4.80	≤8	PASS

11B-SISO_Ant1_2412

11B-SISO_Ant2_2412

11B-SISO_Ant1_2437

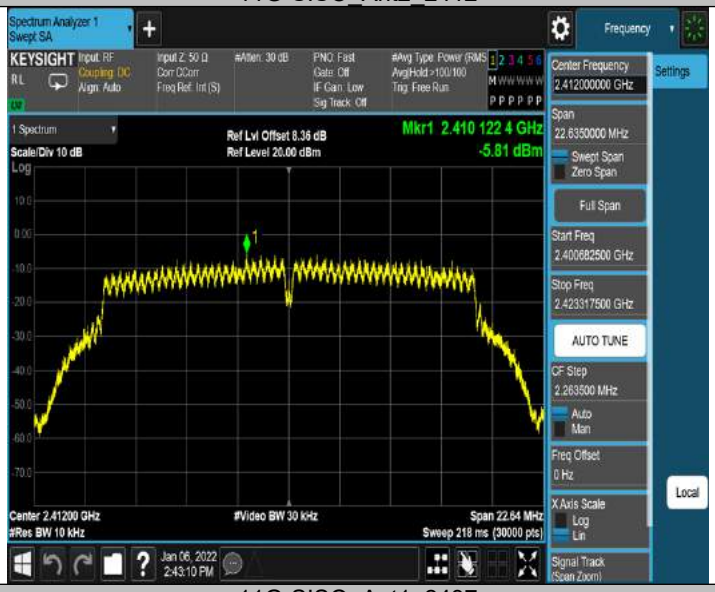
11B-SISO_Ant2_2437

11B-SISO_Ant1_2462

11B-SISO_Ant2_2462

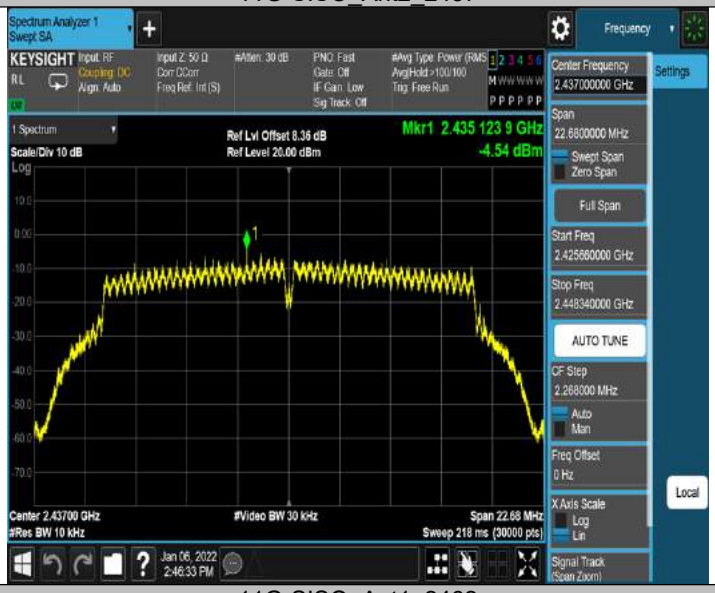
11G-SISO_Ant1_2412

11G-SISO_Ant2_2412



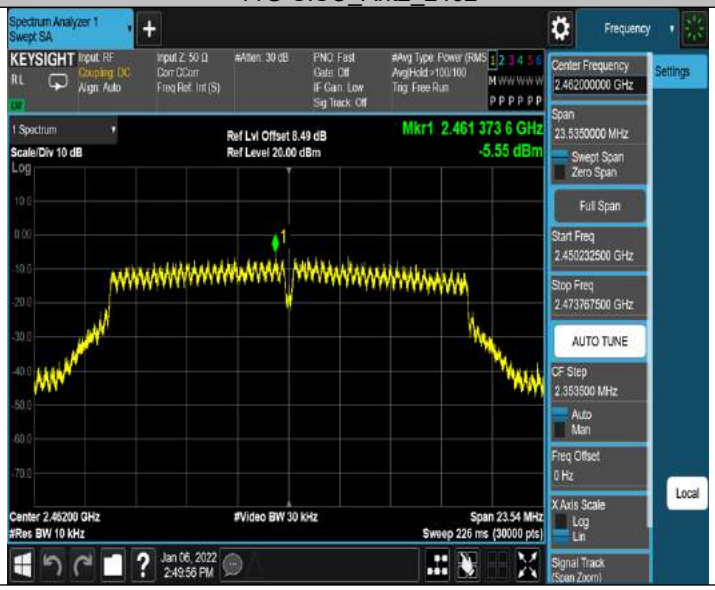
11G-SISO_Ant1_2437

11G-SISO_Ant2_2437

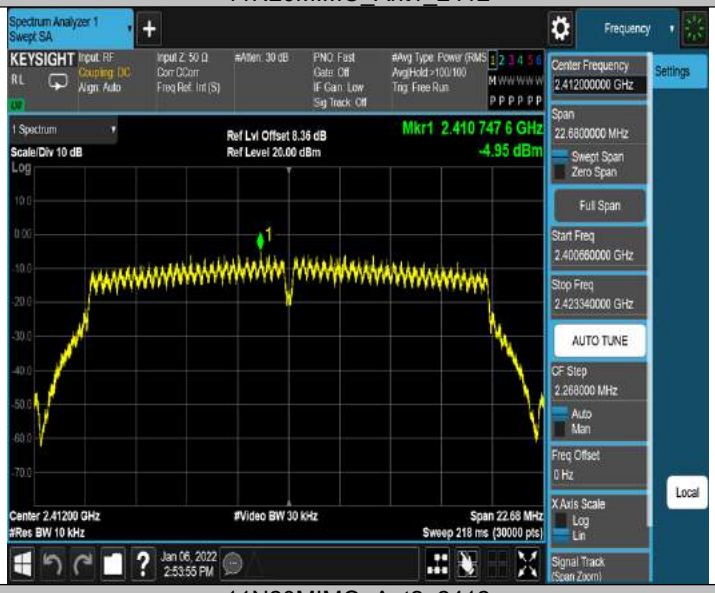


11G-SISO_Ant1_2462

11G-SISO_Ant2_2462

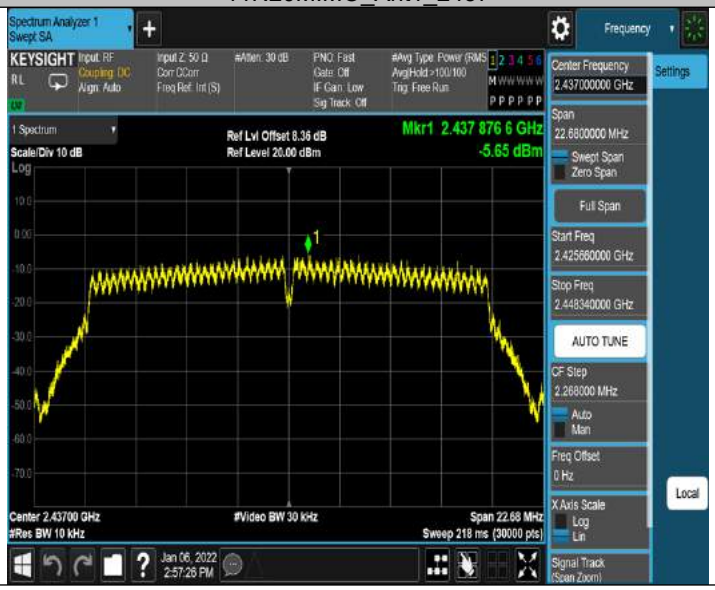


11N20MIMO_Ant1_2412

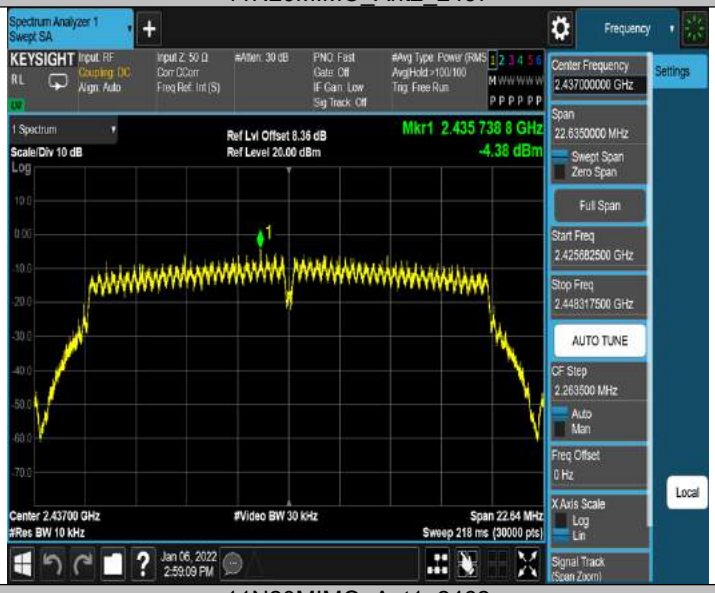


11N20MIMO_Ant2_2412

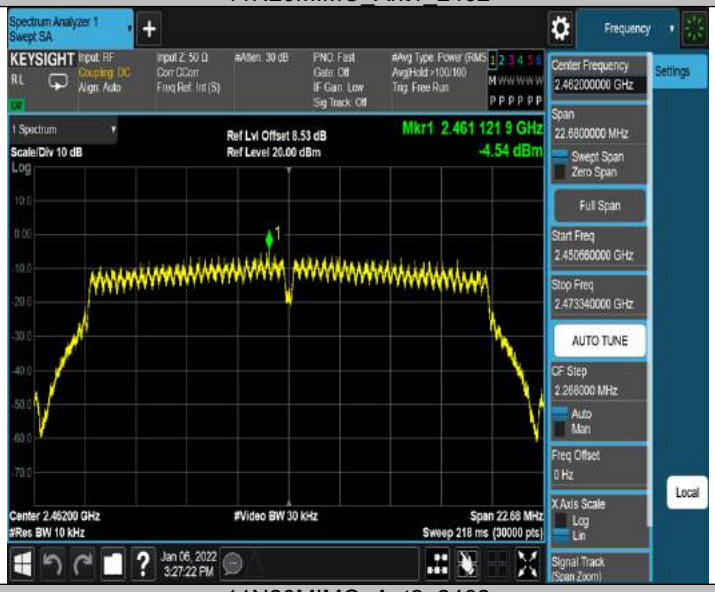
11N20MIMO_Ant1_2437



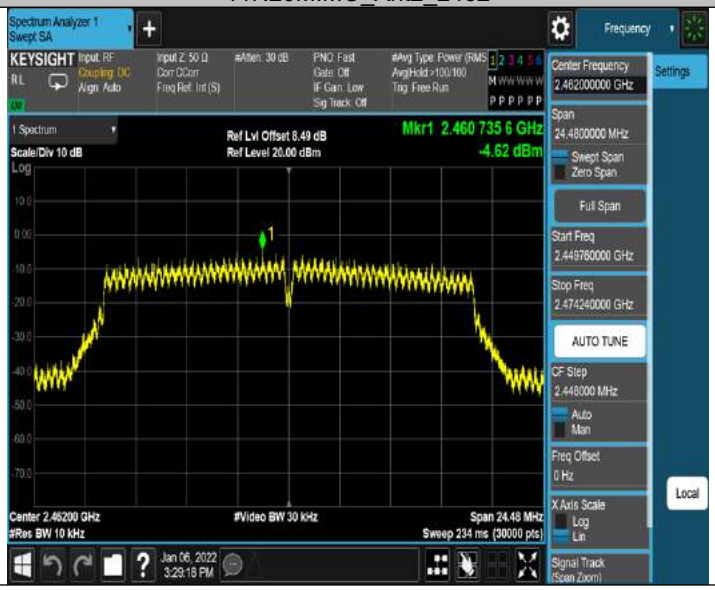
11N20MIMO_Ant2_2437



11N20MIMO_Ant1_2462



11N20MIMO_Ant2_2462



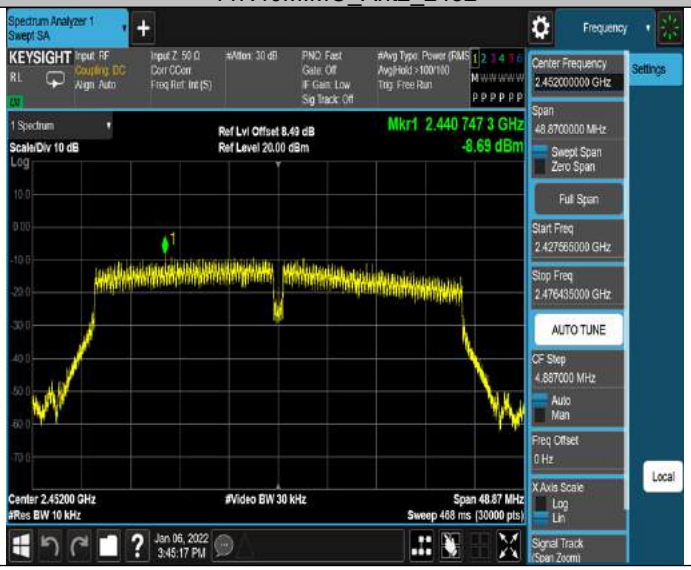
11N40MIMO_Ant1_2422

11N40MIMO_Ant2_2422

11N40MIMO_Ant1_2437

11N40MIMO_Ant2_2437

11N40MIMO_Ant1_2452

11N40MIMO_Ant2_2452


Appendix A.2: Test Results of 6dB Bandwidth

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B-SISO	Ant1	2412	9.030	2407.500	2416.530	0.5	PASS
	Ant2	2412	9.030	2407.500	2416.530	0.5	PASS
	Ant1	2437	8.580	2432.470	2441.050	0.5	PASS
	Ant2	2437	9.030	2432.500	2441.530	0.5	PASS
	Ant1	2462	8.550	2457.950	2466.500	0.5	PASS
	Ant2	2462	8.550	2457.500	2466.050	0.5	PASS
11G-SISO	Ant1	2412	15.120	2404.440	2419.560	0.5	PASS
	Ant2	2412	15.090	2404.470	2419.560	0.5	PASS
	Ant1	2437	15.090	2429.470	2444.560	0.5	PASS
	Ant2	2437	15.120	2429.440	2444.560	0.5	PASS
	Ant1	2462	15.090	2454.470	2469.560	0.5	PASS
	Ant2	2462	15.690	2453.870	2469.560	0.5	PASS
11N20MIMO	Ant1	2412	15.120	2404.440	2419.560	0.5	PASS
	Ant2	2412	15.630	2404.500	2420.130	0.5	PASS
	Ant1	2437	15.120	2429.440	2444.560	0.5	PASS
	Ant2	2437	15.090	2429.470	2444.560	0.5	PASS
	Ant1	2462	15.120	2454.440	2469.560	0.5	PASS
	Ant2	2462	16.320	2453.240	2469.560	0.5	PASS
11N40MIMO	Ant1	2422	35.100	2404.480	2439.580	0.5	PASS
	Ant2	2422	35.100	2404.480	2439.580	0.5	PASS
	Ant1	2437	35.040	2419.480	2454.520	0.5	PASS
	Ant2	2437	32.580	2419.480	2452.060	0.5	PASS
	Ant1	2452	36.060	2434.000	2470.060	0.5	PASS
	Ant2	2452	32.580	2434.420	2467.000	0.5	PASS

11B-SISO_Ant1_2412

11B-SISO_Ant2_2412

11B-SISO_Ant1_2437

11B-SISO_Ant2_2437

11B-SISO_Ant1_2462

11B-SISO_Ant2_2462

11G-SISO_Ant1_2412

11G-SISO_Ant2_2412

11G-SISO_Ant1_2437

11G-SISO_Ant2_2437

11G-SISO_Ant1_2462

11G-SISO_Ant2_2462

11N20MIMO_Ant1_2412

11N20MIMO_Ant2_2412

11N20MIMO_Ant1_2437

11N20MIMO_Ant2_2437

11N20MIMO_Ant1_2462

11N20MIMO_Ant2_2462

11N40MIMO_Ant1_2422

11N40MIMO_Ant2_2422

11N40MIMO_Ant1_2437

11N40MIMO_Ant2_2437

11N40MIMO_Ant1_2452

11N40MIMO_Ant2_2452

Appendix A.3: Test Results of 99% Bandwidth

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B-SISO	Ant1	2412	13.353	2405.325	2418.678	---	PASS
		2437	13.297	2430.363	2443.660	---	PASS
		2462	13.329	2455.314	2468.643	---	PASS
11G-SISO	Ant1	2412	16.800	2403.632	2420.432	---	PASS
		2437	16.853	2428.608	2445.461	---	PASS
		2462	16.774	2453.608	2470.382	---	PASS
11N20MIMO	Ant1	2412	17.770	2403.129	2420.899	---	PASS
		2437	17.768	2428.115	2445.883	---	PASS
		2462	17.748	2453.114	2470.862	---	PASS
11N40MIMO	Ant1	2422	36.178	2403.934	2440.112	---	PASS
		2437	35.982	2418.985	2454.967	---	PASS
		2452	36.134	2433.924	2470.058	---	PASS

11B-SISO_Ant1_2412

11B-SISO_Ant1_2437

11B-SISO_Ant1_2462

11G-SISO_Ant1_2412

11G-SISO_Ant1_2437

11G-SISO_Ant1_2462

11N20MIMO_Ant1_2412

11N20MIMO_Ant1_2437

11N20MIMO_Ant1_2462

11N40MIMO_Ant1_2422

11N40MIMO_Ant1_2437

11N40MIMO_Ant1_2452

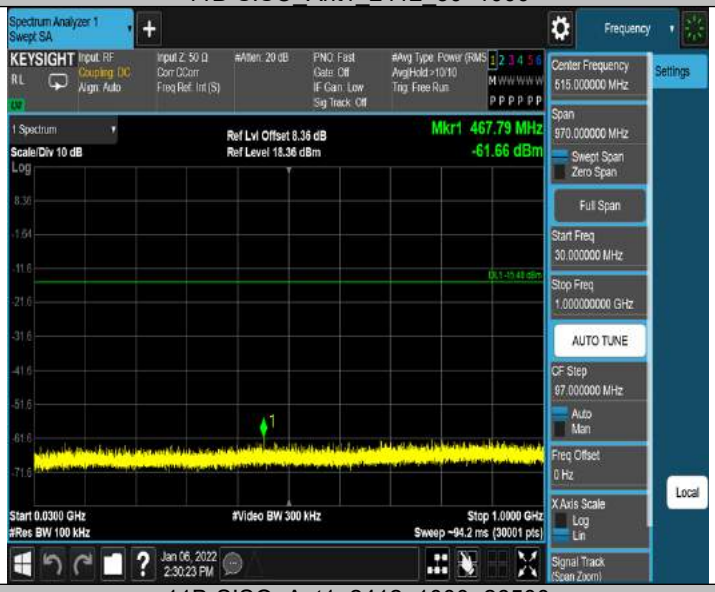
Appendix A.4: Test Results of Conducted Spurious Emissions Measured in 100 kHz Bandwidth

Conducted Spurious Emission

TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B-SISO	Ant1	2412	Reference	4.52	4.52	---	PASS
			30~1000	4.52	-61.66	≤-15.48	PASS
			1000~26500	4.52	-50.96	≤-15.48	PASS
		2437	Reference	4.88	4.88	---	PASS
			30~1000	4.88	-62.11	≤-15.12	PASS
			1000~26500	4.88	-44.27	≤-15.12	PASS
		2462	Reference	4.93	4.93	---	PASS
			30~1000	4.93	-61.44	≤-15.07	PASS
			1000~26500	4.93	-50.61	≤-15.07	PASS
11G-SISO	Ant1	2412	Reference	3.02	3.02	---	PASS
			30~1000	3.02	-61.47	≤-16.98	PASS
			1000~26500	3.02	-53.63	≤-16.98	PASS
		2437	Reference	3.14	3.14	---	PASS
			30~1000	3.14	-61.96	≤-16.86	PASS
			1000~26500	3.14	-51.26	≤-16.86	PASS
		2462	Reference	3.24	3.24	---	PASS
			30~1000	3.24	-62.2	≤-16.76	PASS
			1000~26500	3.24	-51.96	≤-16.76	PASS
11N20MIMO	Ant1	2412	Reference	3.45	3.45	---	PASS
			30~1000	3.45	-62.21	≤-16.55	PASS
			1000~26500	3.45	-53.22	≤-16.55	PASS
		2437	Reference	3.42	3.42	---	PASS
			30~1000	3.42	-61.71	≤-16.58	PASS
			1000~26500	3.42	-49.5	≤-16.58	PASS
		2462	Reference	3.15	3.15	---	PASS
			30~1000	3.15	-61.17	≤-16.85	PASS
			1000~26500	3.15	-52.37	≤-16.85	PASS
11N40MIMO	Ant1	2422	Reference	0.05	0.05	---	PASS
			30~1000	0.05	-59.2	≤-19.95	PASS
			1000~26500	0.05	-52.93	≤-19.95	PASS
		2437	Reference	0.57	0.57	---	PASS
			30~1000	0.57	-58.21	≤-19.43	PASS
			1000~26500	0.57	-52.35	≤-19.43	PASS
		2452	Reference	-0.02	-0.02	---	PASS
			30~1000	-0.02	-54.66	≤-20.02	PASS
			1000~26500	-0.02	-52.7	≤-20.02	PASS

11B-SISO_Ant1_2412_0~Reference

11B-SISO_Ant1_2412_30~1000



11B-SISO_Ant1_2412_1000~26500

11B-SISO_Ant1_2437_0~Reference

11B-SISO_Ant1_2437_30~1000

11B-SISO_Ant1_2437_1000~26500


11B-SISO_Ant1_2462_0~Reference

11B-SISO_Ant1_2462_30~1000

11B-SISO_Ant1_2462_1000~26500


11G-SISO_Ant1_2412_0~Reference

11G-SISO_Ant1_2412_30~1000

11G-SISO_Ant1_2412_1000~26500

11G-SISO_Ant1_2437_0~Reference

11G-SISO_Ant1_2437_30~1000

11G-SISO_Ant1_2437_1000~26500


11G-SISO_Ant1_2462_0~Reference

11G-SISO_Ant1_2462_30~1000

11G-SISO_Ant1_2462_1000~26500


11N20MIMO_Ant1_2412_0~Reference

11N20MIMO_Ant1_2412_30~1000

11N20MIMO_Ant1_2412_1000~26500

11N20MIMO_Ant1_2437_0~Reference

11N20MIMO_Ant1_2437_30~1000

11N20MIMO_Ant1_2437_1000~26500


11N20MIMO_Ant1_2462_0~Reference

11N20MIMO_Ant1_2462_30~1000

11N20MIMO_Ant1_2462_1000~26500


11N40MIMO_Ant1_2422_0~Reference

11N40MIMO_Ant1_2422_30~1000

11N40MIMO_Ant1_2422_1000~26500

11N40MIMO_Ant1_2437_0~Reference

11N40MIMO_Ant1_2437_30~1000

11N40MIMO_Ant1_2437_1000~26500


11N40MIMO_Ant1_2452_0~Reference

11N40MIMO_Ant1_2452_30~1000

11N40MIMO_Ant1_2452_1000~26500

Band Edge

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B-SISO	Ant1	Low	2412	4.47	-42.48	≤-15.53	PASS
		High	2462	4.77	-49.21	≤-15.23	PASS
11G-SISO	Ant1	Low	2412	3.07	-41.48	≤-16.93	PASS
		High	2462	3.34	-46.83	≤-16.67	PASS
11N20MIMO	Ant1	Low	2412	3.76	-42.12	≤-16.25	PASS
		High	2462	3.51	-47.35	≤-16.49	PASS
11N40MIMO	Ant1	Low	2422	0.10	-39.15	≤-19.9	PASS
		High	2452	-0.09	-48.76	≤-20.09	PASS

11B-SISO_Ant1_Low_2412

11B-SISO_Ant1_High_2462

11G-SISO_Ant1_Low_2412

11G-SISO_Ant1_High_2462

11N20MIMO_Ant1_Low_2412

11N20MIMO_Ant1_High_2462

11N40MIMO_Ant1_Low_2422

11N40MIMO_Ant1_High_2452


Note: 1. Testing was carried out within frequency range 9kHz to the tenth harmonics. The measurement results below 30MHz and 18GHz - 26.5GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported. 2. This testing was carried out on different modulations, but only the worst case was presented in this report. 3. We tested four adapter and recorded the wose case data in the report.

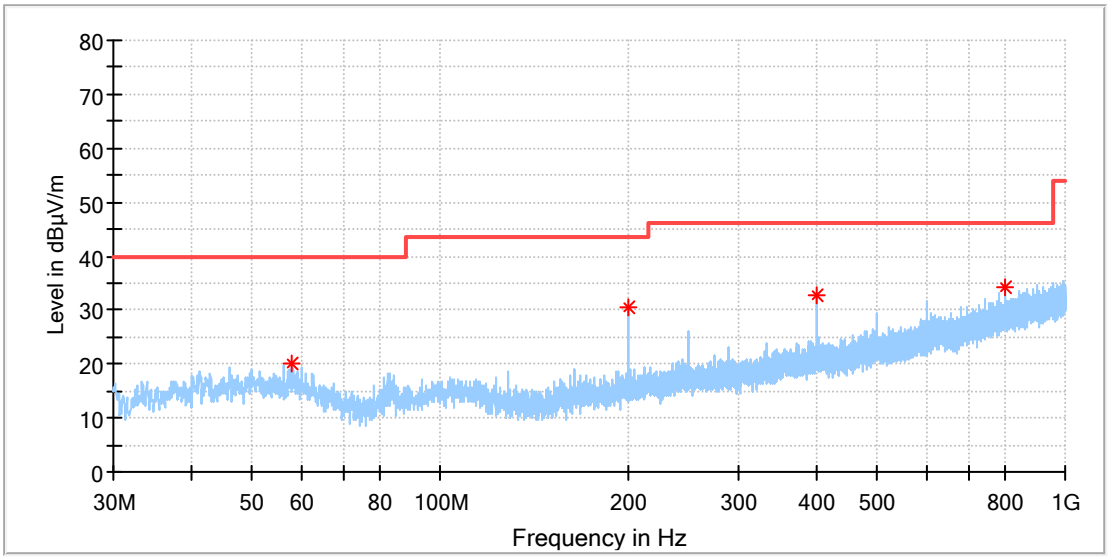
Appendix A.5: Test Results of Radiated Spurious Emissions

30MHz - 1GHz (Worst case)

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11b_Mid channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



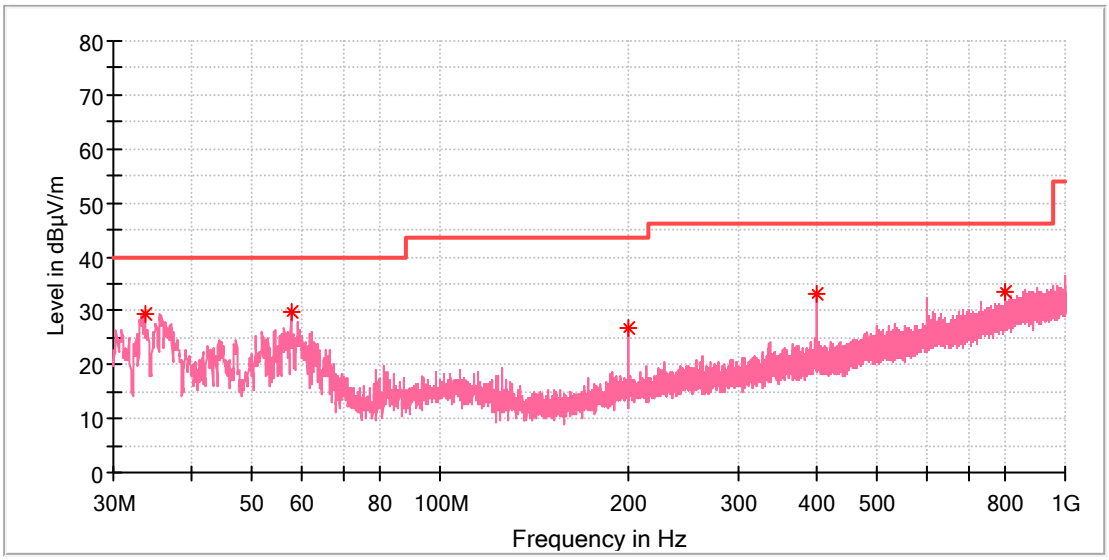
Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
58.033000	20.21	40.00	19.79	100.0	H	208.0	-18.8
200.041000	30.70	43.50	12.80	100.0	H	199.0	-19.0
400.006500	32.74	46.00	13.26	100.0	H	298.0	-13.6
800.034500	34.25	46.00	11.75	100.0	H	43.0	-6.4

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11b_Mid channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
33.637500	29.27	40.00	10.73	100.0	V	216.0	-22.4
57.742000	29.92	40.00	10.08	100.0	V	342.0	-18.7
199.992500	26.61	43.50	16.89	100.0	V	154.0	-19.0
400.006500	33.26	46.00	12.74	100.0	V	336.0	-13.6
800.034500	33.64	46.00	12.36	100.0	V	139.0	-6.4

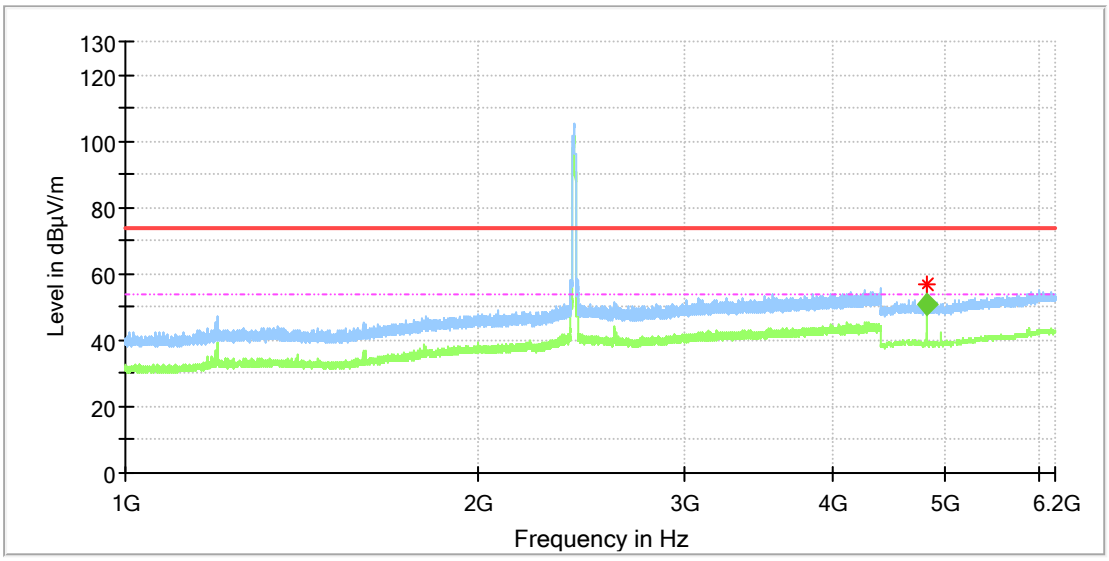
1GHz - 18GHz

Note: The highest waveform in the figure is Wi-Fi Fundamental.

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11b_Low channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4824.000000	56.56	---	74.00	17.44	100.0	H	200.0	11.8

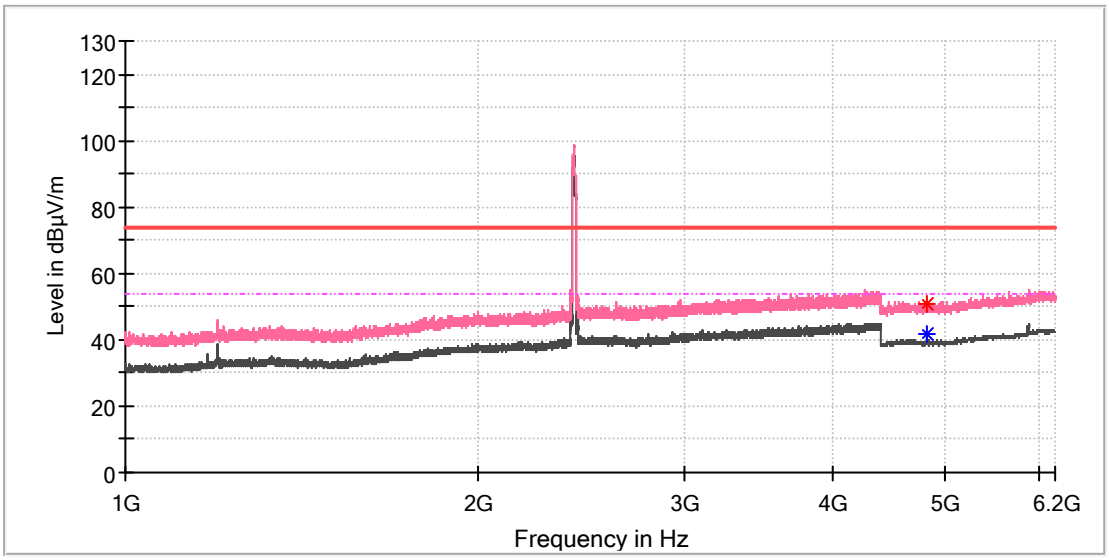
Final_Result

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4824.022222	50.96	54.00	3.04	100.0	H	195.0	11.8

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11b_Low channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4824.000000	50.72	---	74.00	23.28	100.0	V	230.0	11.8
4824.000000	---	41.63	54.00	12.37	100.0	V	230.0	11.8

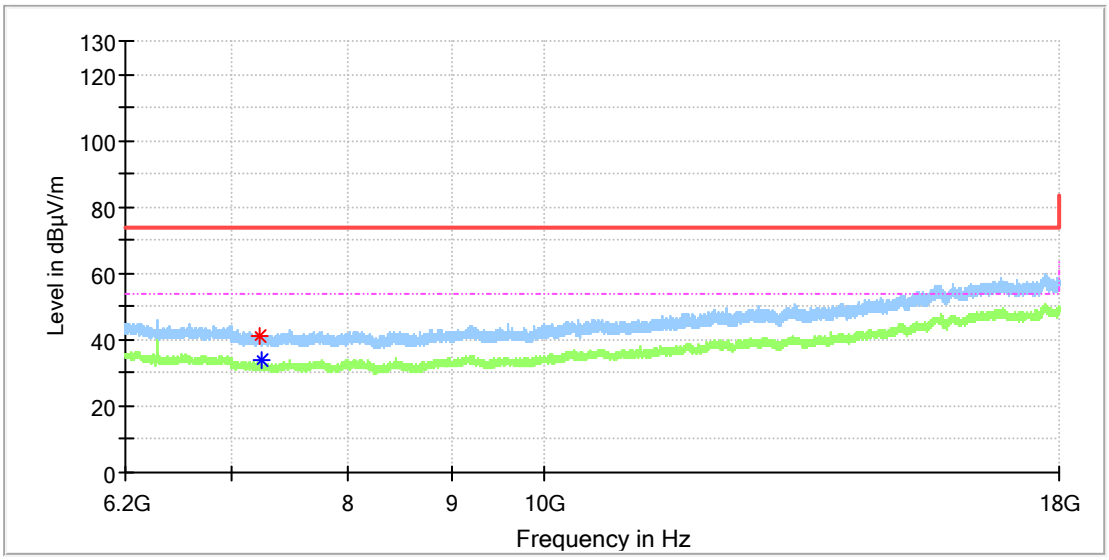
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11b_Low channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7222.666667	41.40	---	74.00	32.60	100.0	H	346.0	8.7
7238.891667	---	33.56	54.00	20.44	100.0	H	99.0	8.6

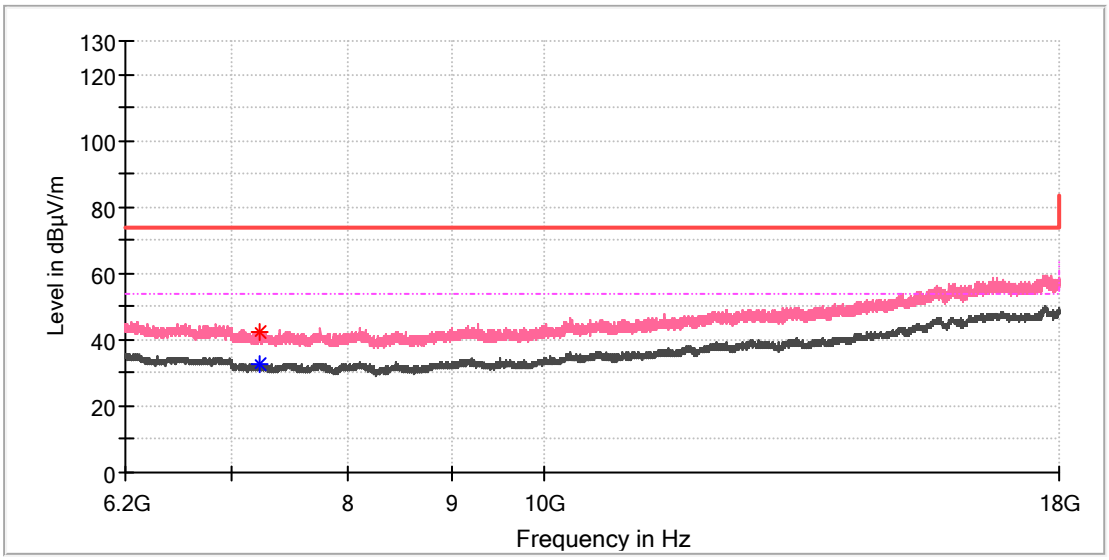
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11b_Low channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7232.008333	---	32.95	54.00	21.05	100.0	V	201.0	8.6
7233.975000	42.24	---	74.00	31.76	100.0	V	273.0	8.6

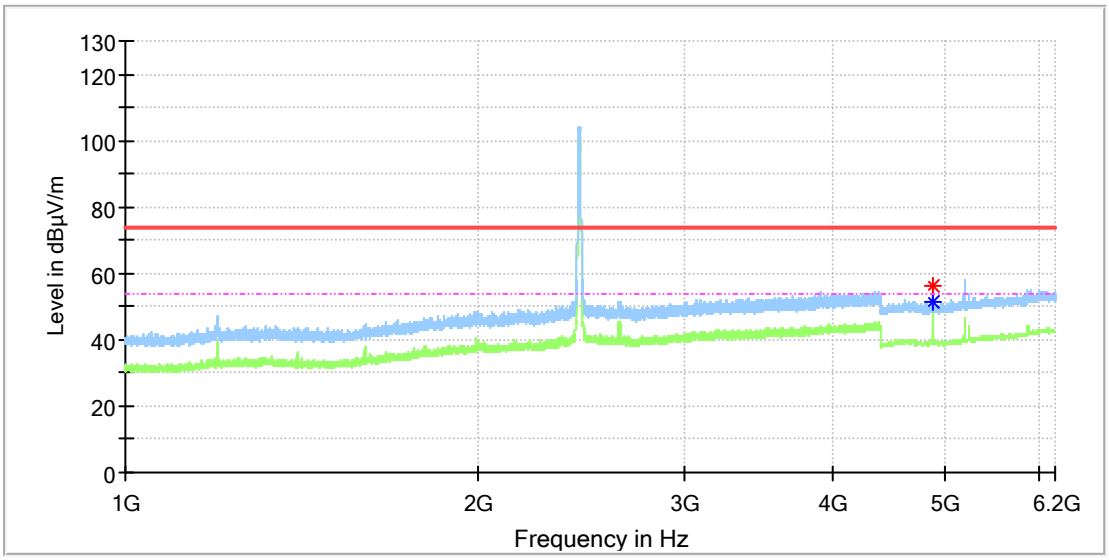
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11b_Mid channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4874.000000	56.01	---	74.00	17.99	100.0	H	190.0	11.8
4874.000000	---	51.63	54.00	2.37	100.0	H	190.0	11.8

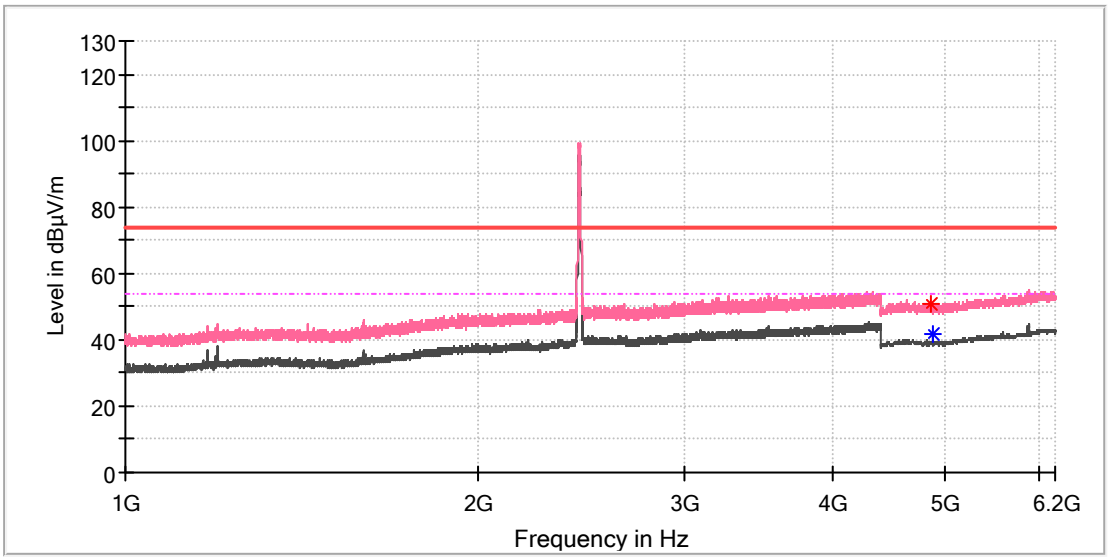
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11b_Mid channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4856.000000	50.83	---	74.00	23.17	100.0	V	280.0	11.8
4874.000000	---	41.57	54.00	12.43	100.0	V	280.0	11.8

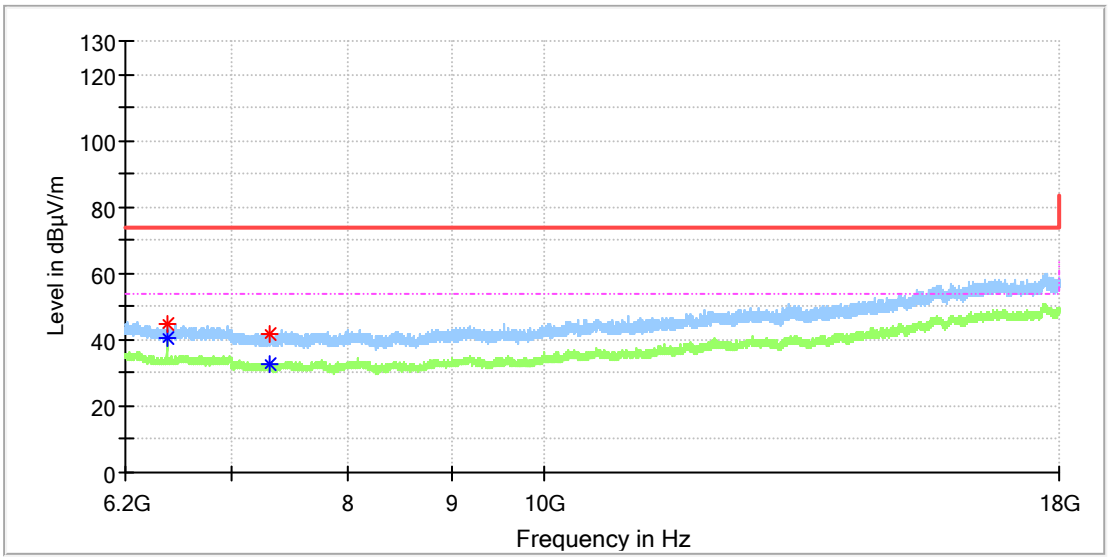
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11b_Mid channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
6498.441667	44.94	---	74.00	29.06	100.0	H	115.0	8.8
6498.441667	---	40.43	54.00	13.57	100.0	H	115.0	8.8
7309.691667	41.81	---	74.00	32.19	100.0	H	207.0	8.2
7312.641667	---	32.42	54.00	21.58	100.0	H	12.0	8.2

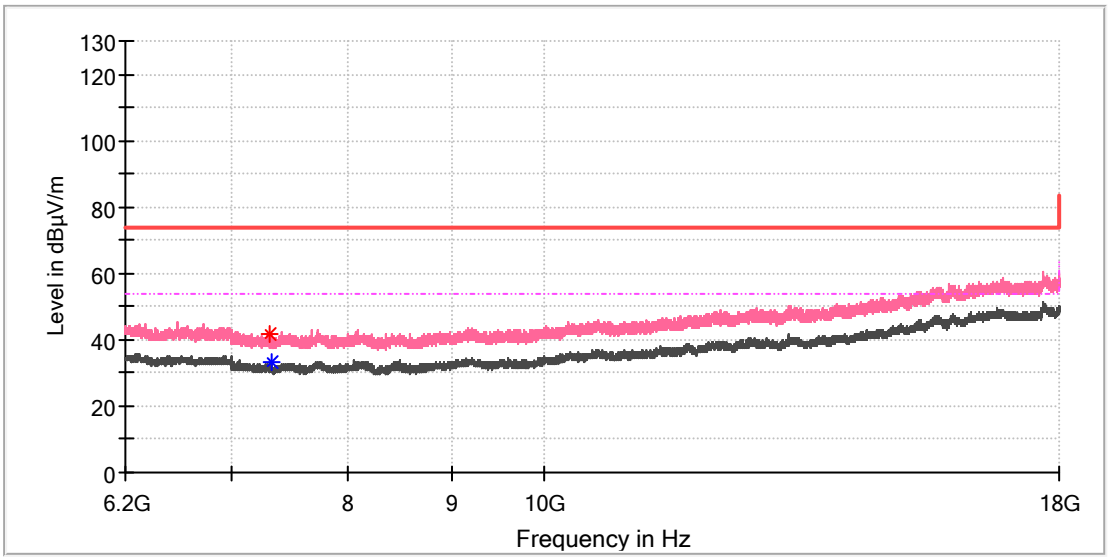
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11b_Mid channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7309.691667	41.69	---	74.00	32.31	100.0	V	246.0	8.2
7322.966667	---	33.29	54.00	20.71	100.0	V	311.0	8.2

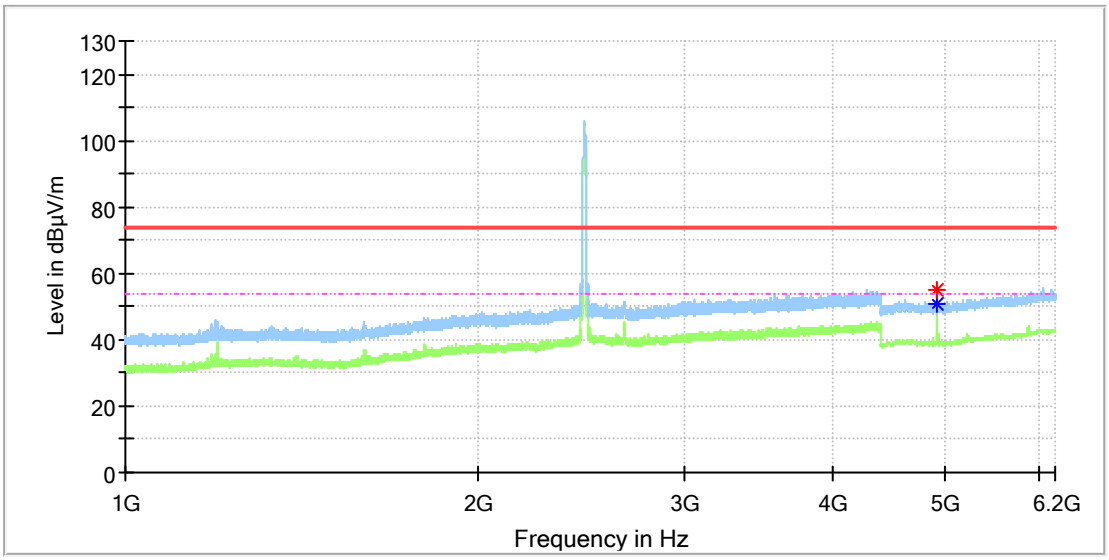
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11b_High channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4924.000000	54.78	---	74.00	19.22	100.0	H	200.0	11.8
4924.000000	---	50.83	54.00	3.17	100.0	H	200.0	11.8

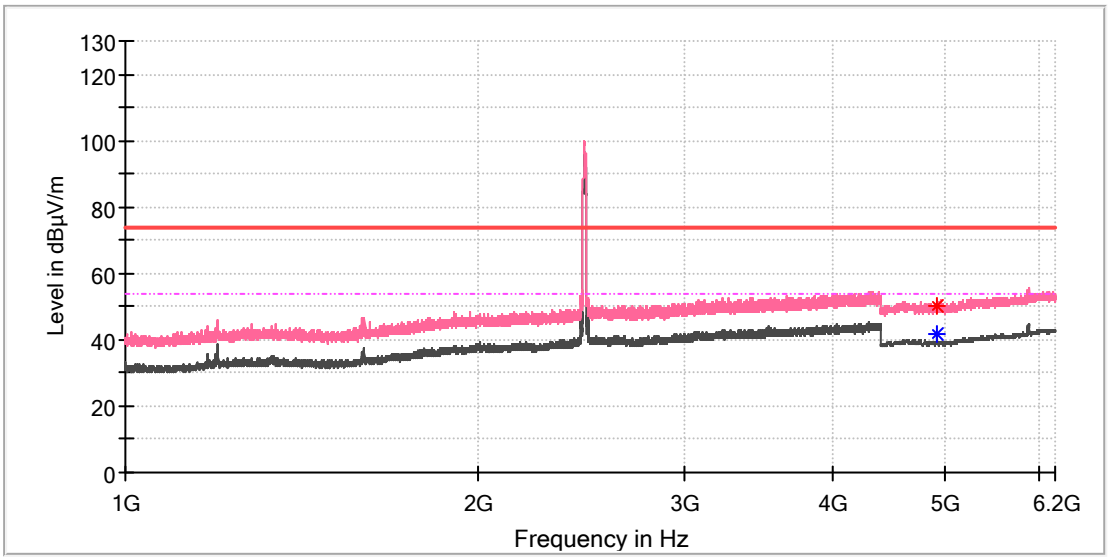
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11b_High channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4923.500000	---	41.45	54.00	12.55	100.0	V	80.0	11.8
4924.000000	50.44	---	74.00	23.56	100.0	V	87.0	11.8

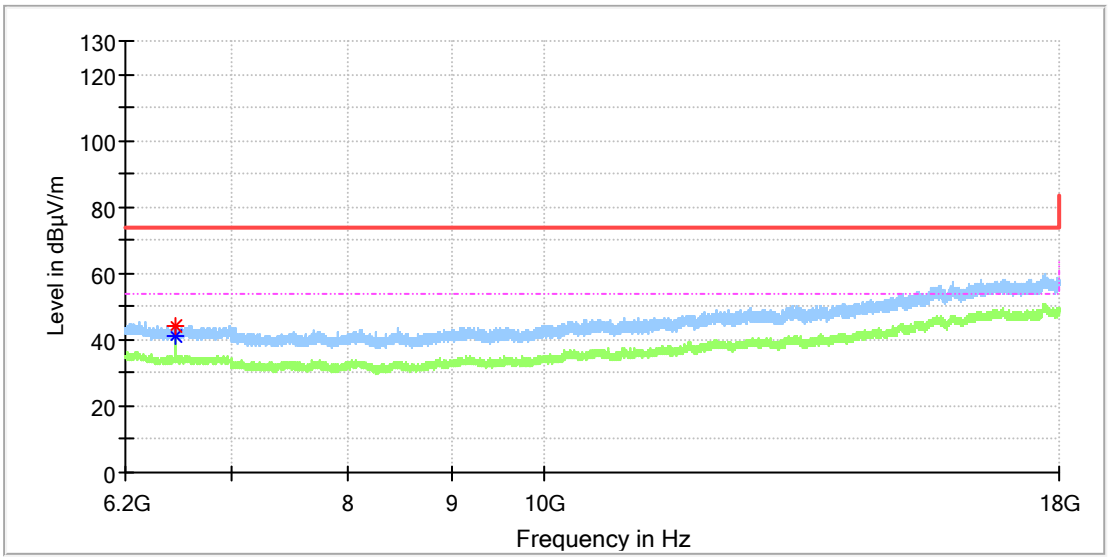
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11b_High channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
6565.308333	44.38	---	74.00	29.62	100.0	H	115.0	8.7
6565.308333	---	41.17	54.00	12.83	100.0	H	115.0	8.7

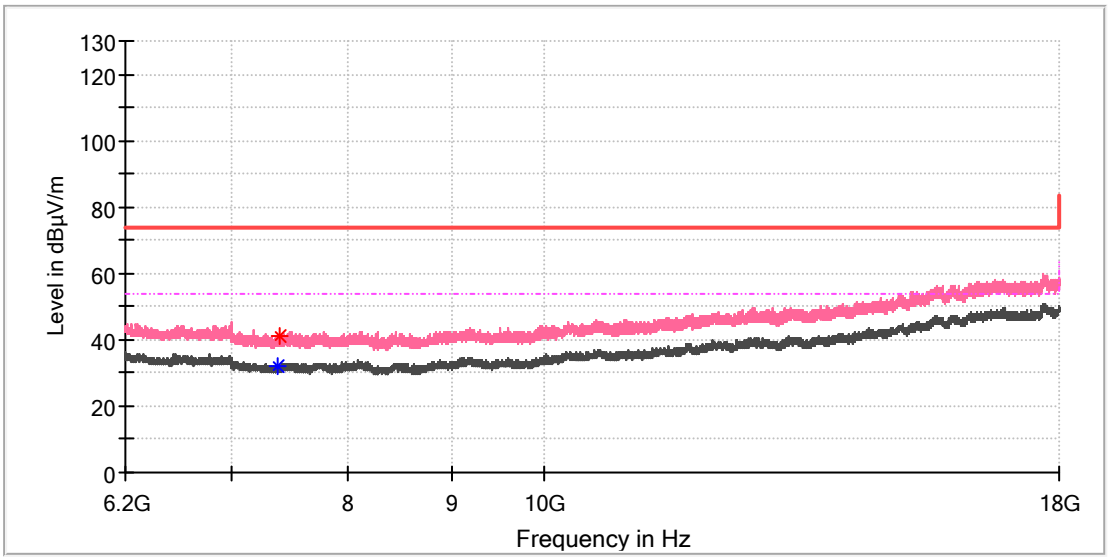
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11b_High channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7382.950000	---	32.02	54.00	21.98	100.0	V	95.0	8.2
7400.158333	41.19	---	74.00	32.81	100.0	V	183.0	8.3

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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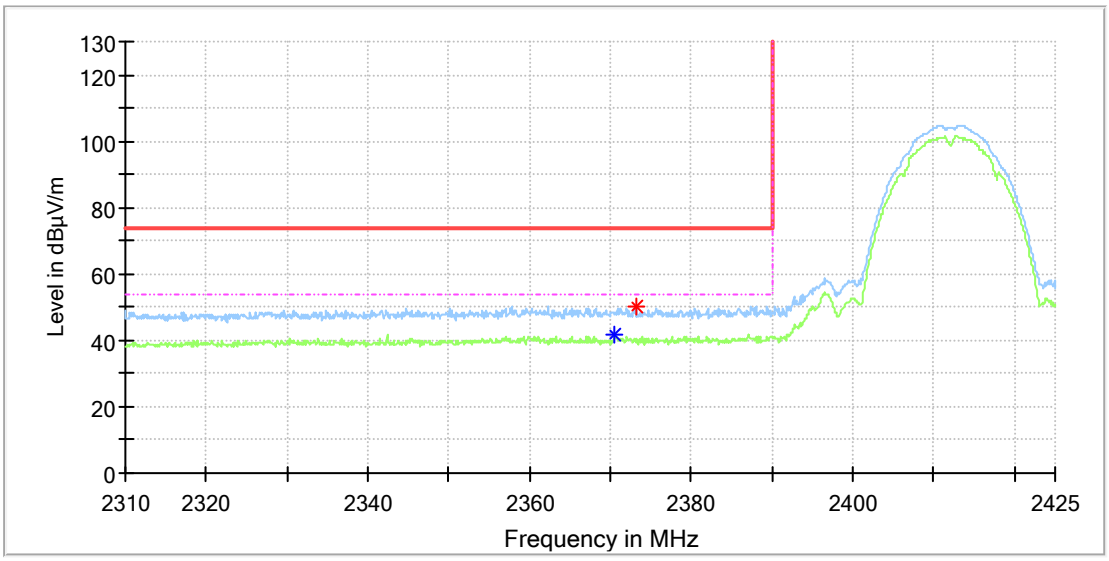
Appendix A.6: Test Results of Radiated Emissions in Restricted Bands

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11b_Low channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2370.500000	---	41.59	54.00	12.41	100.0	H	213.0	6.9
2373.200000	50.30	---	74.00	23.70	100.0	H	203.0	6.9

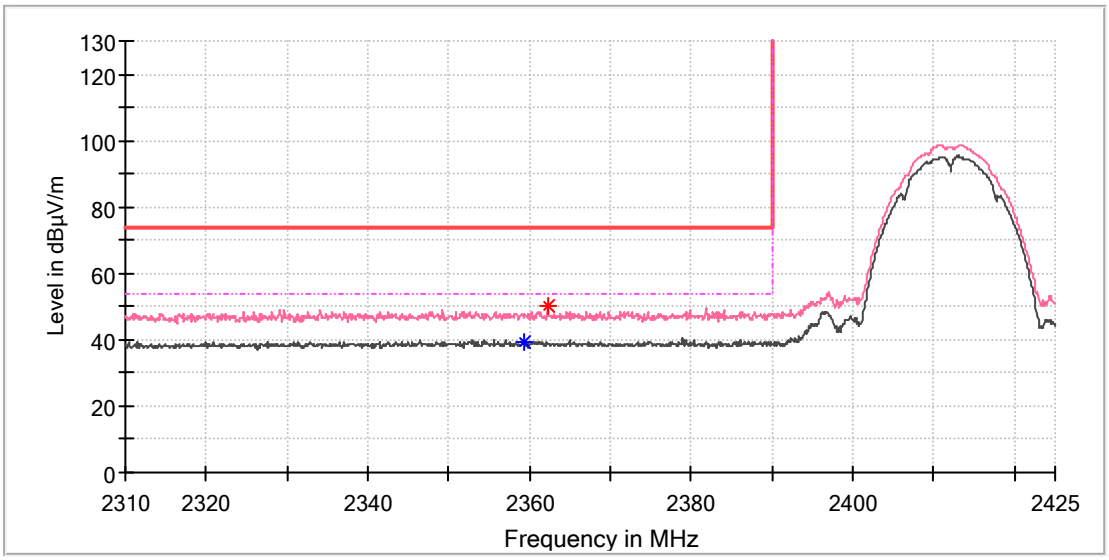
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11b_Low channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2359.400000	---	39.29	54.00	14.71	100.0	V	313.0	6.9
2362.200000	50.28	---	74.00	23.72	100.0	V	50.0	6.9

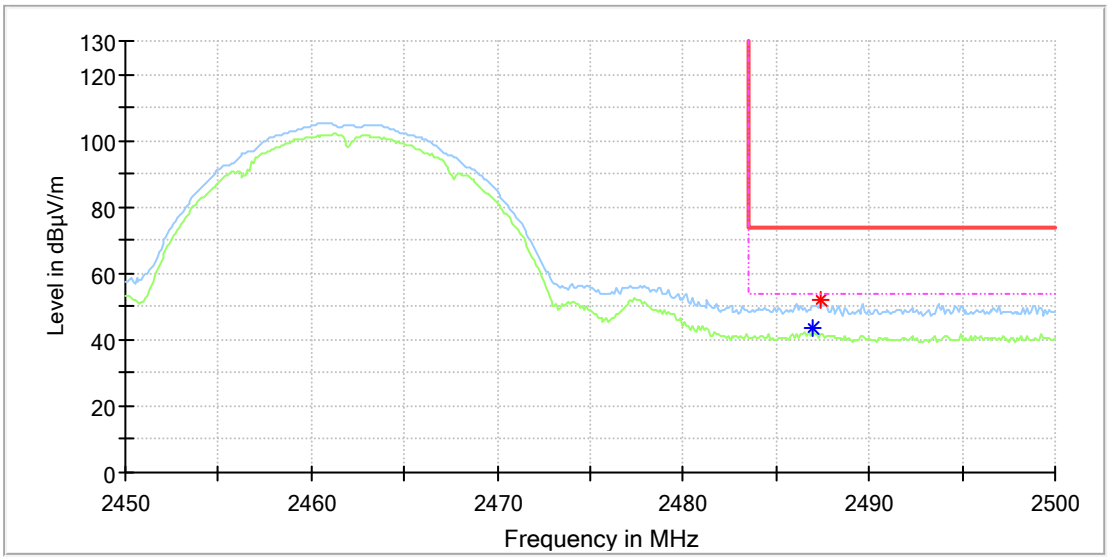
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11b_High channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2487.000000	---	43.34	54.00	10.66	100.0	H	236.0	7.4
2487.400000	52.09	---	74.00	21.91	100.0	H	264.0	7.4

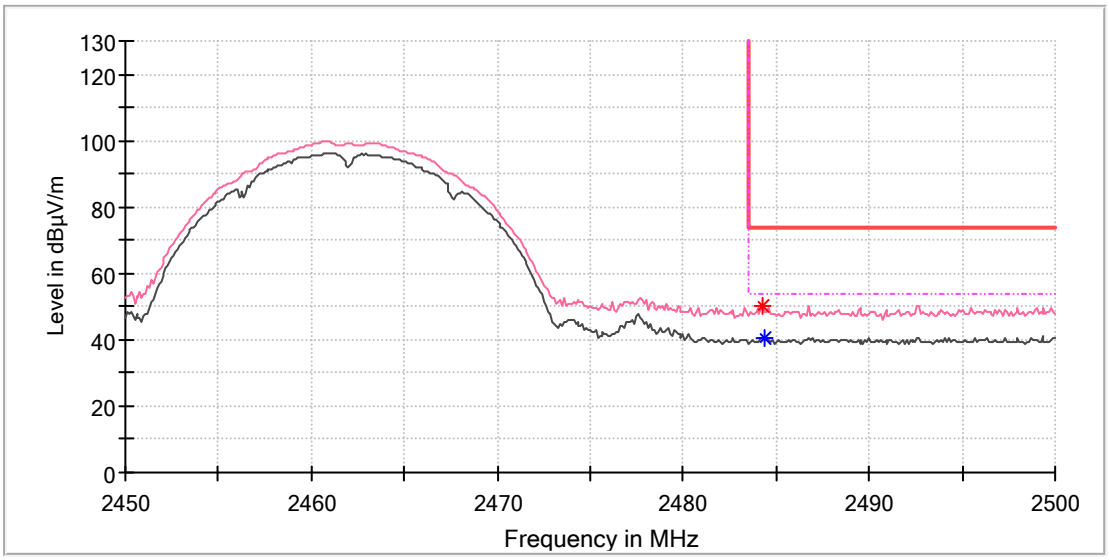
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11b_High channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2484.300000	50.18	---	74.00	23.82	100.0	V	313.0	7.4
2484.400000	---	40.58	54.00	13.42	100.0	V	60.0	7.4

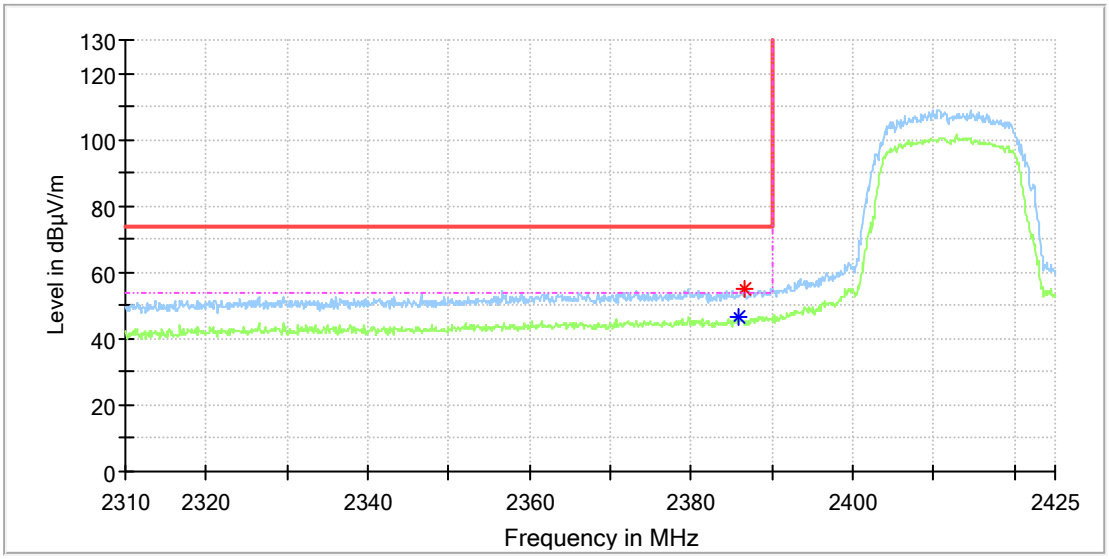
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11g_Low channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2385.800000	---	46.84	54.00	7.16	100.0	H	237.0	7.0
2386.600000	55.05	---	74.00	18.95	100.0	H	213.0	7.0

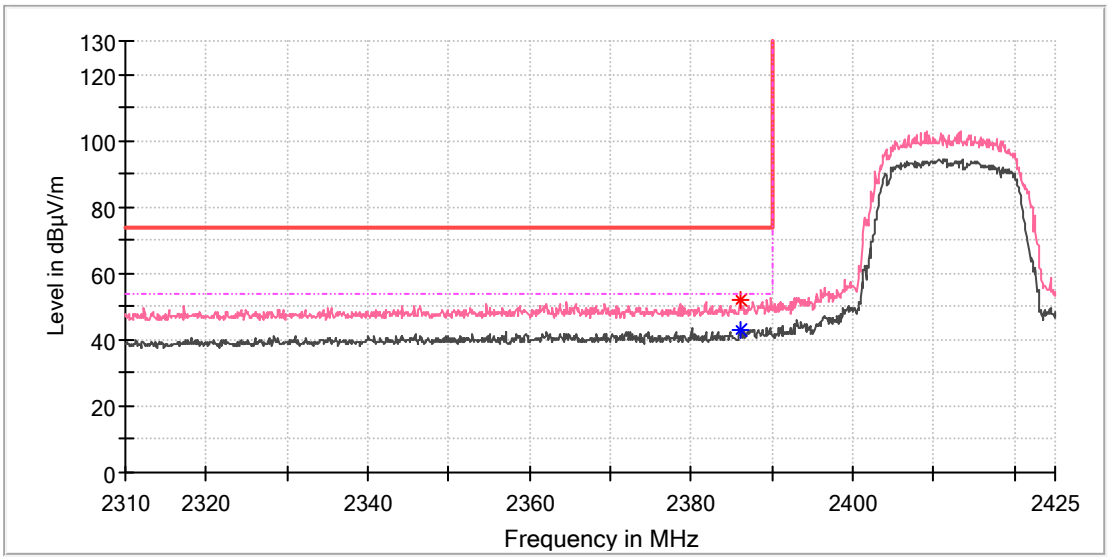
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11g_Low channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2386.000000	52.28	---	74.00	21.72	100.0	V	300.0	7.0
2386.100000	---	42.98	54.00	11.02	100.0	V	300.0	7.0

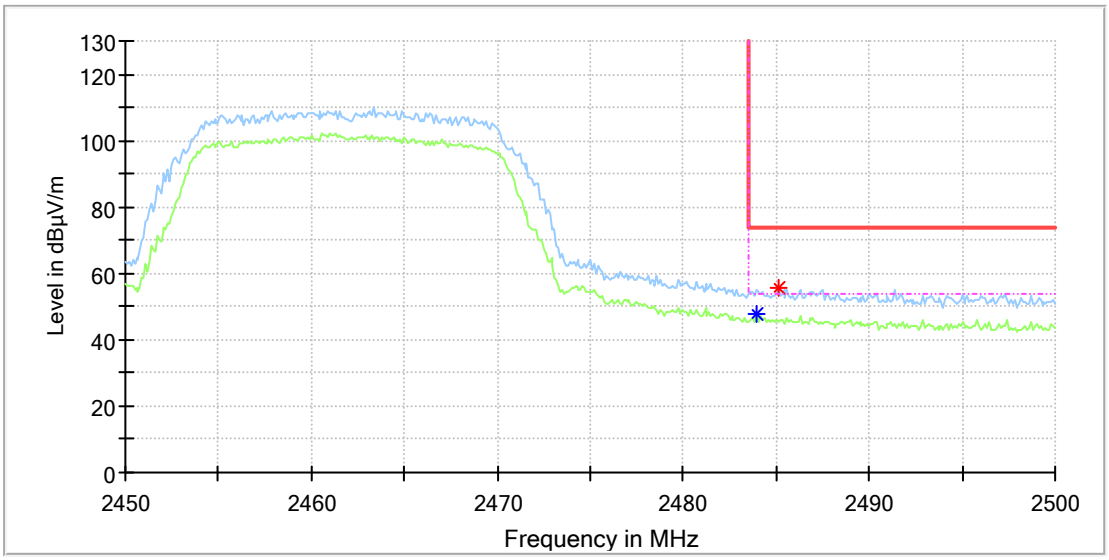
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11g_High channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2483.900000	---	47.47	54.00	6.53	100.0	H	232.0	7.4
2485.100000	55.50	---	74.00	18.50	100.0	H	159.0	7.4

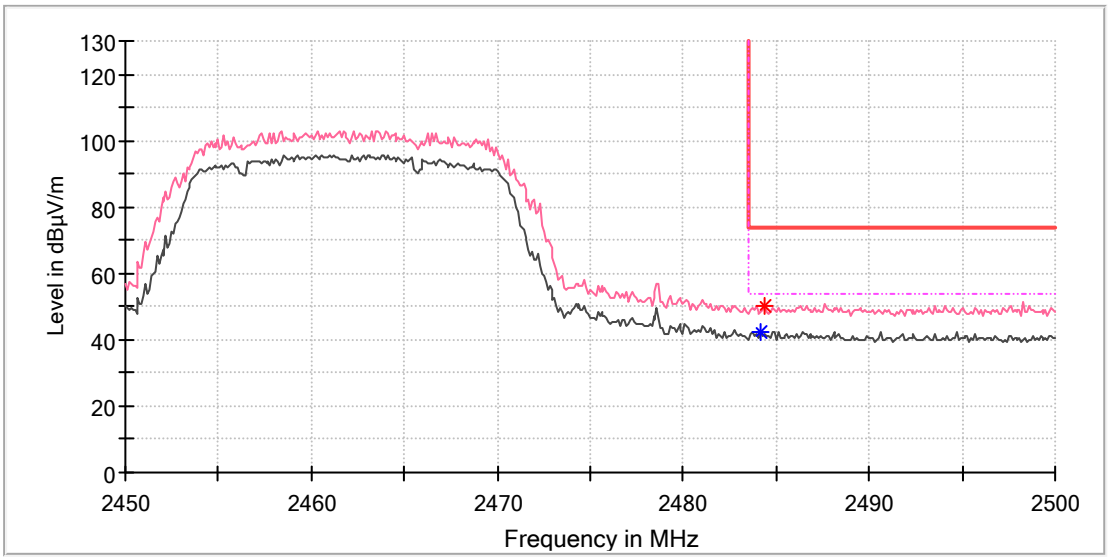
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11g_High channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2484.200000	---	42.36	54.00	11.65	100.0	V	138.0	7.4
2484.400000	50.22	---	74.00	23.78	100.0	V	188.0	7.4

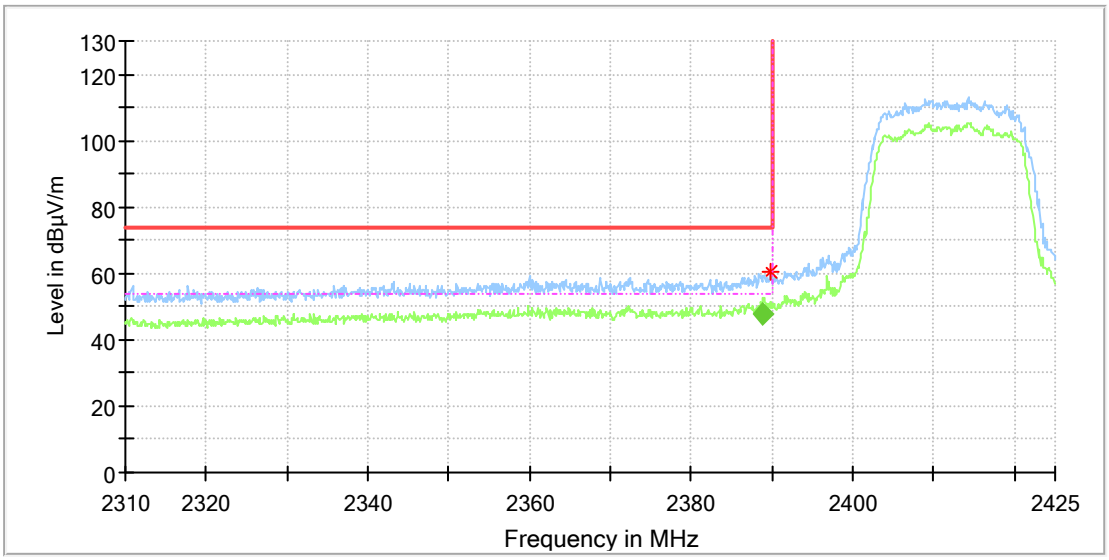
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11n20_Low channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2389.800000	60.69	---	74.00	13.31	100.0	H	148.0	7.0

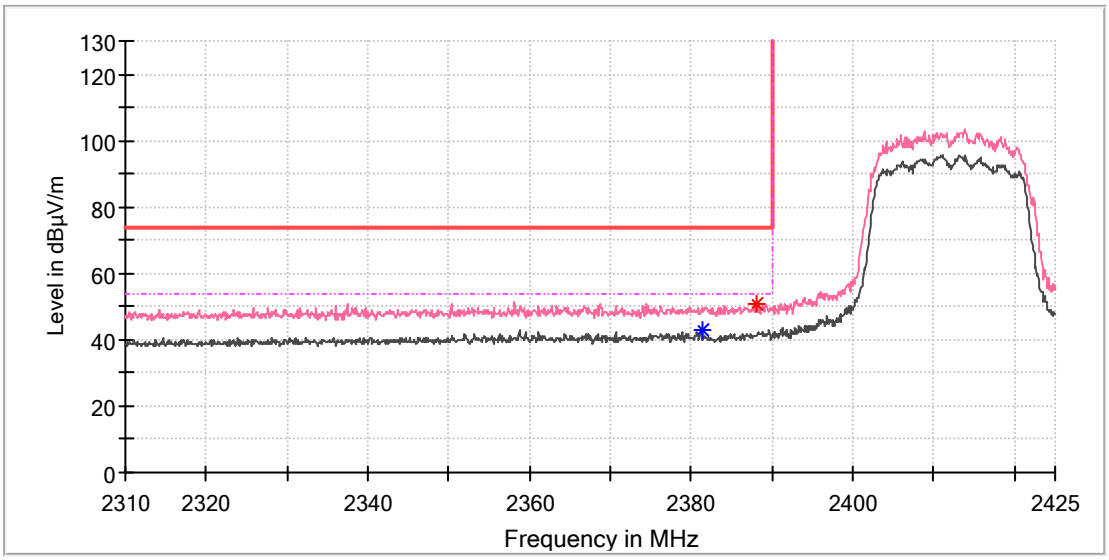
Final_Result

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2388.735700	47.70	54.00	6.30	100.0	H	143.0	7.0

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11n20_Low channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2381.300000	---	42.63	54.00	11.37	100.0	V	302.0	7.0
2388.000000	51.09	---	74.00	22.91	100.0	V	302.0	7.0

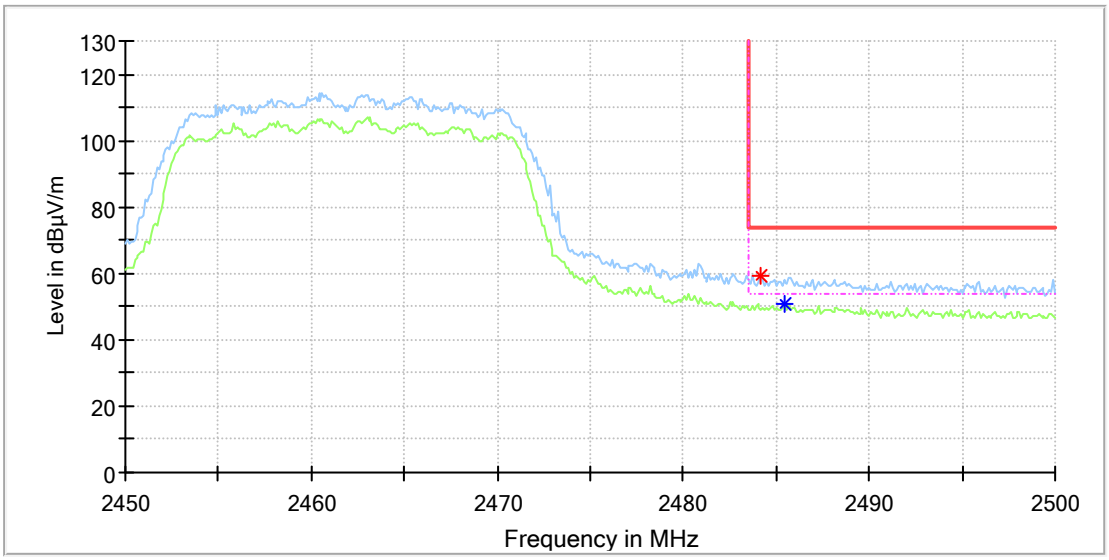
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11n20_High channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2484.200000	59.43	---	74.00	14.57	100.0	H	135.0	7.4
2485.400000	---	50.84	54.00	3.16	100.0	H	149.0	7.4

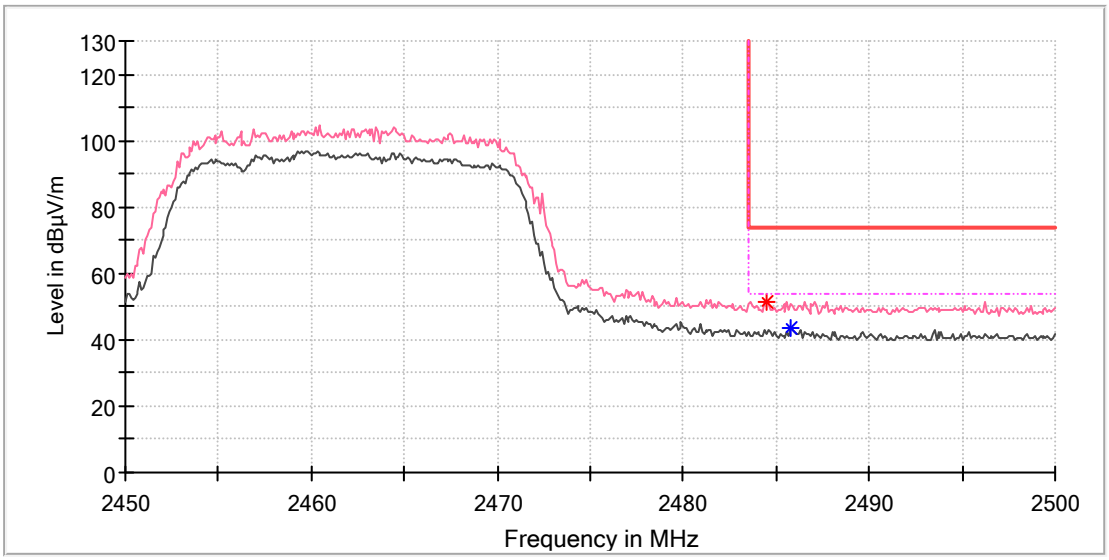
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11n20_High channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2484.500000	51.29	---	74.00	22.71	100.0	V	299.0	7.4
2485.800000	---	43.57	54.00	10.43	100.0	V	299.0	7.4

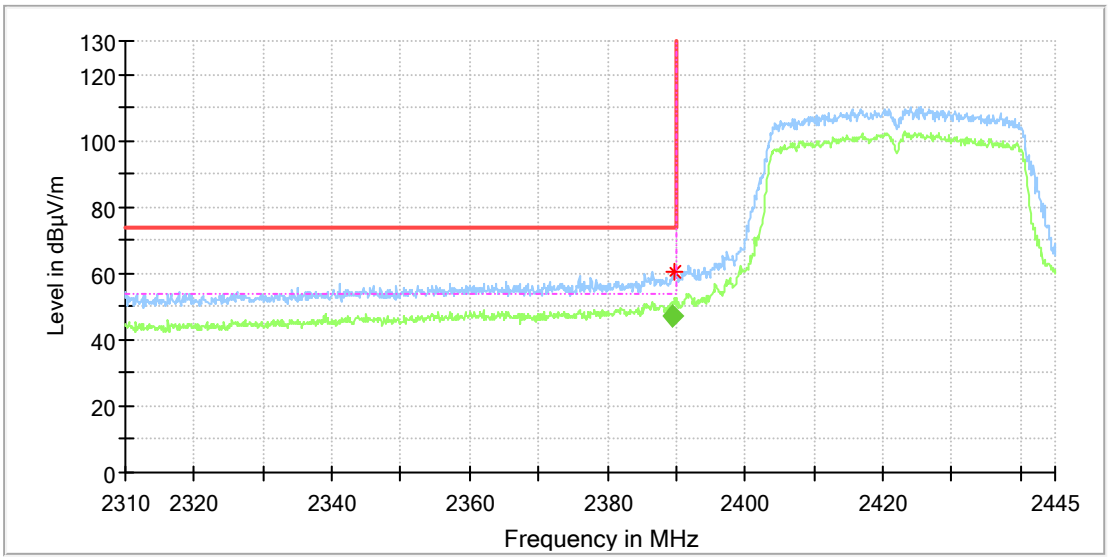
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11n40_Low channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2389.600000	60.51	---	74.00	13.49	100.0	H	154.0	7.0

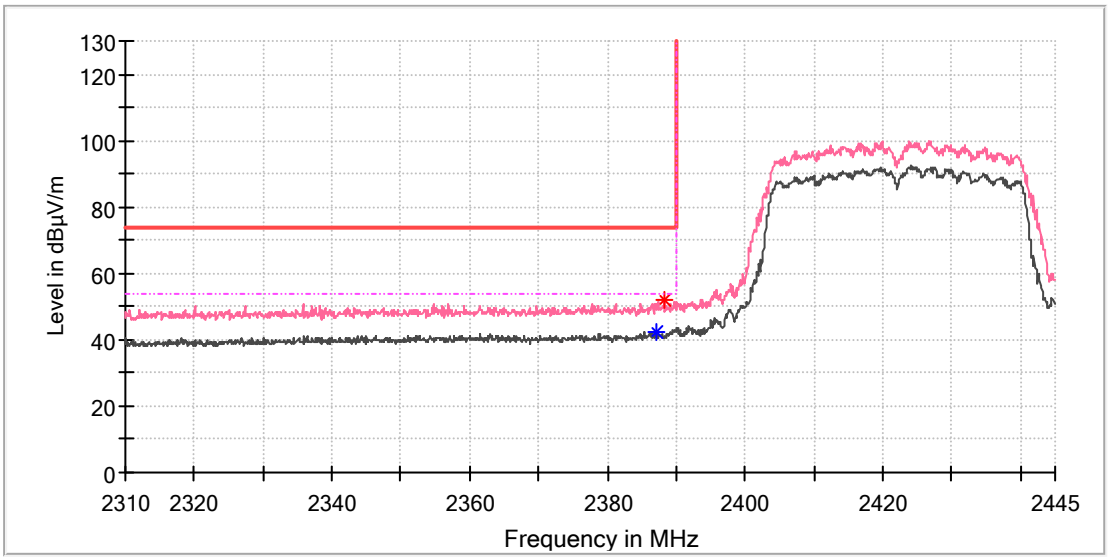
Final_Result

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2389.402900	47.15	54.00	6.85	100.0	H	140.0	7.0

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11n40_Low channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2387.000000	---	42.58	54.00	11.42	100.0	V	358.0	7.0
2388.300000	52.12	---	74.00	21.88	100.0	V	264.0	7.0

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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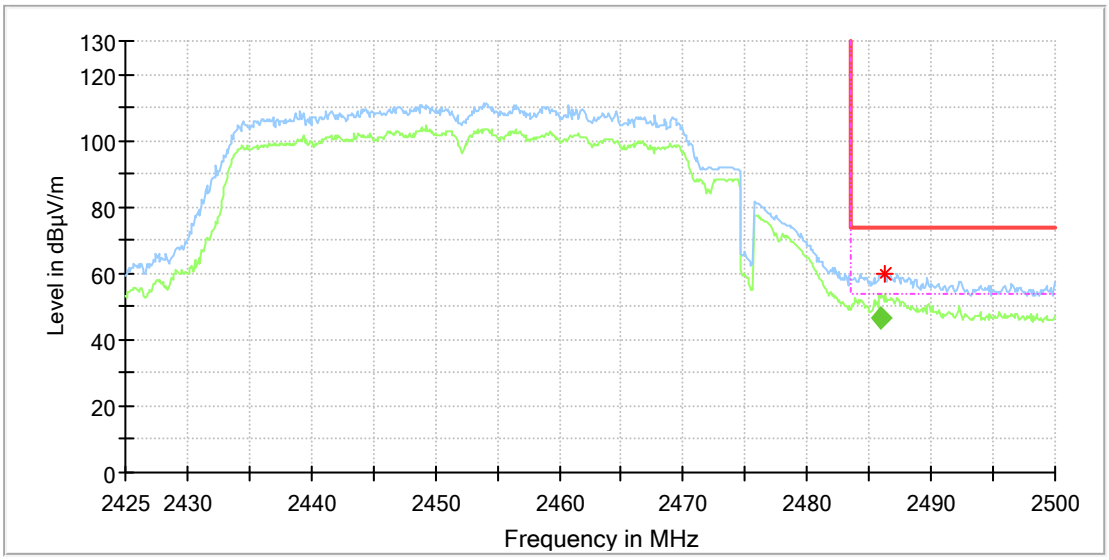
Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11n40_High channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2486.300000	59.82	---	74.00	14.18	100.0	H	127.0	7.4

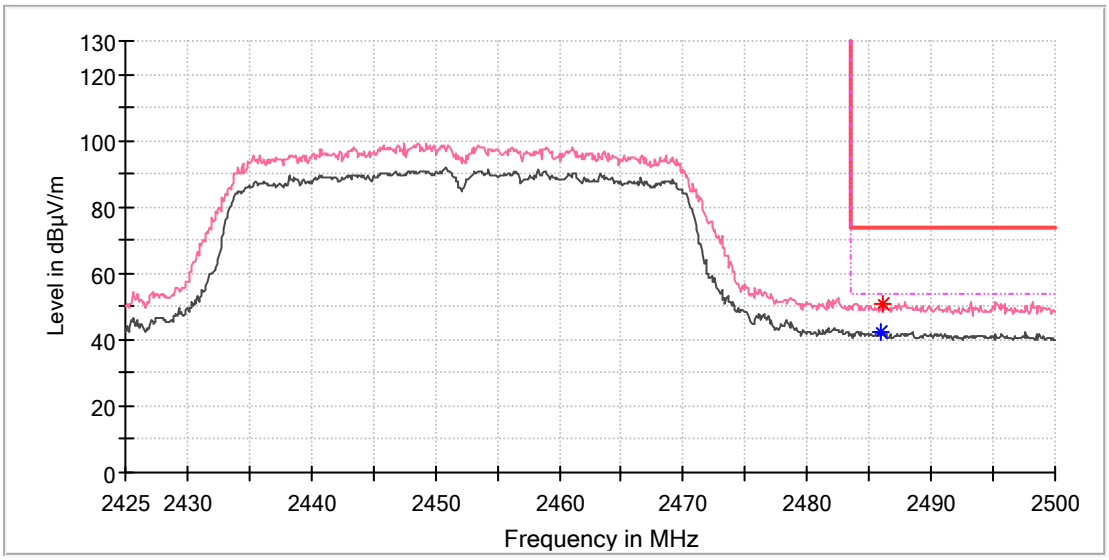
Final_Result

Frequency (MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2485.870900	46.71	54.00	7.29	100.0	H	122.0	7.4

Test Report

EUT Information

EUT Name:	RichMedia Box
Model:	ZXV10 B866V2F
Test Mode:	WIFI 2.4G_11n40_High channel
Order No/Sample No:	168349178/A003191348-002
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC 15.247
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
2485.900000	---	42.34	54.00	11.66	100.0	V	58.0	7.4
2486.100000	50.68	---	74.00	23.32	100.0	V	58.0	7.4

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
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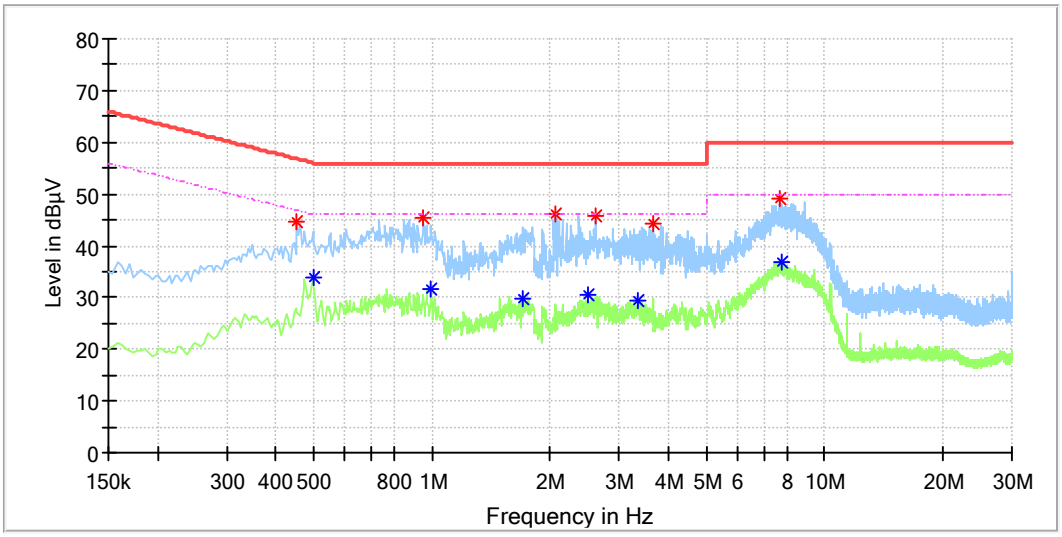
Appendix A.7: Test Results of Conducted Emission

1) We tested four adapters, but only the worst case was presented in this report.

Test Report

EUT Information

EUT Name:	RichMedia Box
Order No:	168349178
Model:	ZXV10 B866V2F
Test Mode:	WIFI operation
Test Voltage:	AC 120V/60Hz
Test By:	Shower Dai
Review By:	Gary Chen
Remark:	Adapter Model:UWP-12W-1210S



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.454000	44.78	---	56.80	12.03	L1	9.7
0.498000	---	33.86	46.03	12.17	L1	9.7
0.952000	45.37	---	56.00	10.63	L1	9.7
0.996000	---	31.71	46.00	14.29	L1	9.7
1.708000	---	29.80	46.00	16.20	L1	9.8
2.072000	46.30	---	56.00	9.70	L1	9.8
2.488000	---	30.43	46.00	15.57	L1	9.9
2.604000	45.83	---	56.00	10.17	L1	9.9
3.348000	---	29.50	46.00	16.50	L1	9.9
3.656000	44.34	---	56.00	11.66	L1	9.9
7.728000	49.13	---	60.00	10.87	L1	10.0
7.748000	---	36.70	50.00	13.30	L1	10.0

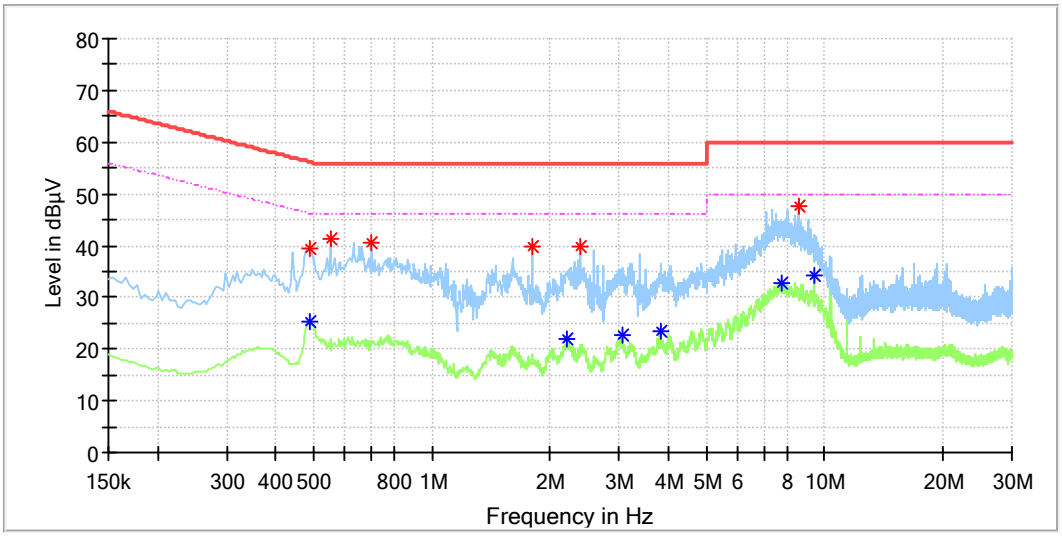
Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
---	---	---	---	---	---	---		---

Test Report

EUT Information

EUT Name:	RichMedia Box
Order No:	168349178
Model:	ZXV10 B866V2F
Test Mode:	WIFI operation
Test Voltage:	AC 120V/60Hz
Test By:	Shower Dai
Review By:	Gary Chen
Remark:	Adapter Model:UWP-12W-1210S



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.490000	---	25.14	46.17	21.03	N	9.7
0.490000	39.59	---	56.17	16.57	N	9.7
0.552000	41.31	---	56.00	14.69	N	9.7
0.704000	40.67	---	56.00	15.33	N	9.7
1.804000	39.69	---	56.00	16.31	N	9.7
2.216000	---	21.78	46.00	24.22	N	9.8
2.392000	39.96	---	56.00	16.04	N	9.8
3.044000	---	22.71	46.00	23.29	N	9.9
3.808000	---	23.49	46.00	22.51	N	9.9
7.736000	---	32.69	50.00	17.31	N	10.0
8.560000	47.54	---	60.00	12.46	N	10.0
9.372000	---	34.23	50.00	15.77	N	10.0

Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
---	---	---	---	---	---	---		---