

TEST REPORT

CERTIFICATE OF CONFORMITY

Standard: EN 300 328 V2.2.2 (2019-07)
Report No.: REBARR-WTW-P23110067A
Product: 2TX 11be (WiFi7) BW160 + BT/BLE Combo Card
Brand: MediaTek
Model No.: MT7925B14L
Received Date: 2023/12/6
Test Date: 2023/12/7 ~ 2024/4/10
Issued Date: 2024/4/26
Applicant: MediaTek Inc.
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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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Approved by: Jeremy Lin, **Date:** 2024/4/26
Jeremy Lin / Project Engineer

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Prepared by : Celine Chou / Senior Specialist



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Release Control Record

Issue No.	Description	Date Issued
REBARR-WTW-P23110067A	Original release.	2024/4/26

1 Certificate

Product: 2TX 11be (WiFi7) BW160 + BT/BLE Combo Card

Brand: MediaTek

Test Model: MT7925B14L

Sample Status: Engineering sample

Applicant: MediaTek Inc.

Test Date: 2023/12/7 ~ 2024/4/10

Standard: EN 300 328 V2.2.2 (2019-07)

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.

2 Summary of Test Results

EN 300 328 V2.2.2		
Clause	Test Item	Result
4.3.2.2	RF Output Power	Pass
4.3.2.3	Power Spectral Density	Pass
4.3.2.4	Duty cycle, Tx-sequence, Tx-gap	Not Applicable
4.3.2.5	Medium Utilization (MU) Factor	Not Applicable
4.3.2.6	Adaptivity	Refer to Note 1
4.3.2.7	Occupied Channel Bandwidth	Pass
4.3.2.8	Transmitter Unwanted Emissions in the out-of-band Domain	Pass
4.3.2.9	Transmitter Unwanted Emissions in the Spurious Domain up to 1 GHz	Pass
4.3.2.9	Transmitter Unwanted Emissions in the Spurious Domain above 1 GHz	Pass
4.3.2.10	Receiver Spurious Emissions up to 1 GHz	Pass
4.3.2.10	Receiver Spurious Emissions above 1 GHz	Pass
4.3.2.11	Receiver Blocking	Refer to Note 1
4.3.2.12	Geo-location capability	Not Applicable

Notes:

1. Adaptivity and receiver blocking testing data please refer to BV CPS report no.: REBARR-WTW-P23110067.
2. 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 ETSI TR 100 028-1 and ETSI TR 100 028-2:

Parameter	Uncertainty (±)
Occupied Channel Bandwidth	$1.132 \times 10^{-4} \%$
RF output power, conducted	1.371 dB
Power Spectral Density, conducted	1.371 dB
Unwanted Emissions, conducted	1.34 dB
All emissions, radiated	2.855 dB
Temperature	0.59 °C
Supply voltages	0.3 %
Time	2.53 %
RF Output Power	1.371 dB
Power Spectral Density	1.017 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description

Product	2TX 11be (WiFi7) BW160 + BT/BLE Combo Card
Brand	MediaTek
Test Model	MT7925B14L
Status of EUT	Engineering sample
Power Supply Rating	3.3Vdc from host equipment
Temperature Operating Range	-10 °C ~ 70 °C
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in VHT mode 1024QAM for OFDMA in 11ax mode 4096QAM for OFDMA in 11be mode
Modulation Technology	DSSS, OFDM, OFDMA
Transfer Rate	Up to 300 Mbps Up to 400 Mbps in VHT mode Up to 573.5 Mbps in 11ax mode Up to 688.2 Mbps in 11be mode
Operating Frequency	2.412 GHz ~ 2.472 GHz
Number of Channel	802.11b, 802.11g, 802.11n (HT20), VHT20, 802.11ax (HE20), 802.11be (EHT20): 13 802.11n (HT40), VHT40, 802.11ax (HE40), 802.11be (EHT40): 9
Resource Unit (RU)	Single RU: 26-tone, 52-tone, 106-tone, 242-tone, 484-tone Multi-RU (Small RU): 52-tone + 26-tone, 106-tone + 26-tone
Output Power (e.i.r.p.)	1TX: 15.02 dBm 2TX: 17.77 dBm
EUT Category	Adaptive Equipment without the possibility to switch to a non-adaptive mode

Note:

1. This report is issued as a supplementary report to the original BV CPS report no.: REBARR-WTW-P23110067. The difference is increasing conducted power for dynamic mode. Therefore, all tests test had been re-tested except adaptivity and receiver blocking test. Other testing data refer to original report.
2. There are Bluetooth and WLAN (2.4GHz & 5GHz & 6GHz) technology used for the EUT.
3. The Multi-RU mode is listed as below.

BW	52+26	106+26
20MHz	v	v
40MHz	v	v

4. Simultaneously transmission condition.

Condition	Technology	
1	WLAN 5GHz (2TX)	Bluetooth
2	WLAN 6GHz (2TX)	Bluetooth
3	WLAN 2.4GHz (1TX)	WLAN 5GHz (1TX)
4	WLAN 2.4GHz (1TX)	WLAN 6GHz (1TX)
5	WLAN 5GHz (1TX)	WLAN 6GHz (1TX)

Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.

5. The EUT support OFDMA and RU mode, therefore partial RU combination were investigated and the worst case scenario was identified. (The worst case data were presented in section 3.4)
6. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna No.	RF Chain No.	Brand	Model	Antenna Net Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type
1	Chain 0	PSA	RFMTA340718EMLB302	3.18 4.92	2.4~2.4835 5.15~5.895	PIFA	i-pex(MHF)
	Chain 1	PSA	RFMTA340718EMLB302	3.18 4.92	2.4~2.4835 5.15~5.895	PIFA	i-pex(MHF)
2	Chain 0	PSA	RFMTA311020EMMB301	1.71 4.82 4.76 4.29 4.61 4.09	2.4~2.4835 5.15~5.895 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex(MHF)
	Chain 1	PSA	RFMTA311020EMMB301	1.71 4.82 4.76 4.29 4.61 4.09	2.4~2.4835 5.15~5.895 5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex(MHF)
3	Chain 0	PSA	RFMTA421230IMMB701	-13.92 -13.91 -13.91 -14.46	5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex(MHF)
	Chain 1	PSA	RFMTA421230IMMB701	-13.92 -13.91 -13.91 -14.46	5.925~6.425 6.425~6.525 6.525~6.875 6.875~7.125	PIFA	i-pex(MHF)
4 Dynamic Gain	Chain 0	Declared antenna	-	-10.00 -9.92 -10.02 -16.52	2.4~2.4835 5.15~5.725 5.725~5.85 5.925~7.125	PIFA	i-pex(MHF)
	Chain 1	Declared antenna	-	-10.00 -9.92 -10.02 -16.52	2.4~2.4835 5.15~5.725 5.725~5.85 5.925~7.125	PIFA	i-pex(MHF)

*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.

*From the above transmission chains, the worst case was found in transmission on Chain 1 for 1TX diversity sample. Therefore only the test data of the mode was recorded in this report.

2. The EUT incorporates a MIMO function:

2.4 GHz Band		
Modulation Mode	TX & RX Configuration	
802.11b	1TX(diversity)/2TX	2RX
802.11g	1TX(diversity)/2TX	2RX
802.11n (HT20)	1TX(diversity)/2TX	2RX
802.11n (HT40)	1TX(diversity)/2TX	2RX
VHT20	1TX(diversity)/2TX	2RX
VHT40	1TX(diversity)/2TX	2RX
802.11ax (HE20)	1TX(diversity)/2TX	2RX
802.11ax (HE40)	1TX(diversity)/2TX	2RX
802.11be (EHT20)	1TX(diversity)/2TX	2RX
802.11be (EHT40)	1TX(diversity)/2TX	2RX
802.11ax (RU26/52/106/242/484)	1TX(diversity)/2TX	2RX
802.11be (RU26/52/106/242/484) (52+26/106+26)	1TX(diversity)/2TX	2RX

Note: The modulation and bandwidth are similar for 802.11n mode for 20 MHz (40 MHz), VHT mode for 20 MHz (40 MHz), 802.11ax mode for 20 MHz (40 MHz) and 802.11be mode for 20 MHz (40 MHz), therefore the manufacturer will control the power for 802.11n/VHT/802.11ax mode is the same as the 802.11be or more lower than it and investigated worst case to representative mode in test report.

3.3 Channel List

13 channels are provided for 802.11b, 802.11g, 802.11n (HT20), VHT20, 802.11ax (HE20), 802.11be (EHT20):

Channel	Frequency	Channel	Frequency
1	2412 MHz	8	2447 MHz
2	2417 MHz	9	2452 MHz
3	2422 MHz	10	2457 MHz
4	2427 MHz	11	2462 MHz
5	2432 MHz	12	2467 MHz
6	2437 MHz	13	2472 MHz
7	2442 MHz		

9 channels are provided for 802.11n (HT40), VHT40, 802.11ax (HE40), 802.11be (EHT40):

Channel	Frequency	Channel	Frequency
3	2422 MHz	8	2447 MHz
4	2427 MHz	9	2452 MHz
5	2432 MHz	10	2457 MHz
6	2437 MHz	11	2462 MHz
7	2442 MHz		

3.4 Test Mode Applicability and Tested Channel Detail

Pre-Scan:	1. EUT can be used in the following ways: X-axis/ Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition. 2. 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).
Worst Case:	1. X-axis/ Y-axis/ Z-axis Worst Condition: X-axis

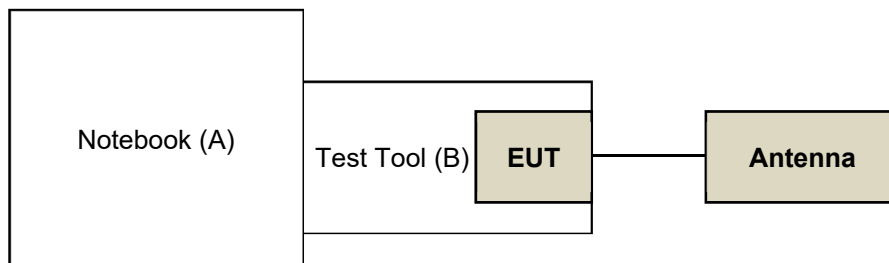
Following channel(s) was (were) selected for the final test as listed below:

Test Item	EUT Configure Mode	Mode	Tested Channel	Modulation	Data Rate Parameter	RU/MRU Index
RF Output Power / Power Spectral Density	B1, B2	802.11b	1, 7, 13	BPSK	1Mb/s	NA
		802.11g	1, 7, 13	BPSK	6Mb/s	NA
		802.11ax (HE20)	1, 7, 13	BPSK	MCS0	NA
		802.11ax (HE40)	3, 7, 11	BPSK	MCS0	NA
		802.11be (EHT20)	1, 7, 13	BPSK	MCS0	NA
		802.11be (EHT40)	3, 7, 11	BPSK	MCS0	NA
		802.11be (EHT20) 26-tone RU	1, 7, 13	BPSK	MCS0	0, 0, 8
		802.11be (EHT20) 52-tone RU	1, 7, 13	BPSK	MCS0	37, 37, 40
		802.11be (EHT20) 106-tone RU	1, 7, 13	BPSK	MCS0	53, 53, 54
		802.11be (EHT20) 52+26-tone MRU	1, 7, 13	BPSK	MCS0	70, 70, 72
		802.11be (EHT20) 106+26-tone MRU	1, 7, 13	BPSK	MCS0	82, 82, 83
Occupied Channel Bandwidth / Transmitter Unwanted Emissions in the out-of-band Domain	A1, A2	802.11b	1, 13	BPSK	1Mb/s	NA
		802.11g	1, 13	BPSK	6Mb/s	NA
		802.11be (EHT20)	1, 13	BPSK	MCS0	NA
		802.11be (EHT40)	3, 11	BPSK	MCS0	NA
Transmitter Unwanted Emissions in the Spurious Domain up to 1 GHz	A1, A2	802.11g	13	BPSK	6Mb/s	NA
Transmitter Unwanted Emissions in the Spurious Domain above 1 GHz	A1, A2	802.11b	1, 13	DBPSK	1Mb/s	NA
		802.11g	1, 13	BPSK	6Mb/s	NA
Receiver Spurious Emissions up to 1 GHz	A2	Receiver	13	-	-	NA
Receiver Spurious Emissions above 1 GHz	A2	Receiver	1, 13	-	-	NA
EUT Configure Mode:	A1	Dynamic mode 1TX (EUT Maximum Conducted Power + Ant. 1)				
	A2	Dynamic mode 2TX (EUT Maximum Conducted Power + Ant. 1)				
	B1	Dynamic mode 1TX (EUT Maximum Conducted Power + Ant. 4)				
	B2	Dynamic mode 2TX (EUT Maximum Conducted Power + Ant. 4)				

3.5 Test Program Used and Operation Descriptions

Controlling software QA Tool 0.0.2.100 has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.6 Connection Diagram of EUT and Peripheral Devices



3.7 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Notebook	DELL	E5410	1HC2XM1	N/A	Provided by Lab
B	Test Tool	Mediatek	MTK1849	NA	NA	Supplied by applicant

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Peak Power Analyzer Keysight	8990B	MY51000485	2024/1/21	2025/1/20
PXA Signal Analyzer Keysight	N9030B	MY57140488	2023/3/6	2024/3/5
Signal & Spectrum Analyzer R&S	FSV3044	101105	2023/2/22 2024/2/27	2024/2/21 2025/2/26
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A
Temperature & Humidity Chamber Terchy	HRM-120RF	931022	2022/12/27 2023/12/19	2023/12/26 2024/12/18
USB Wideband Power Sensor Keysight	U2021XA	MY55050005/MY55190004/MY55190007/MY55210005	2023/7/19	2024/7/18
Wideband Power Sensor Keysight	N1923A	MY58020002	2024/1/18	2025/1/17
		MY58140009	2024/1/18	2025/1/17

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/12/7 ~ 2024/3/1

4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Signal & Spectrum Analyzer R&S	FSV3044	101504	2023/6/5	2024/6/4
Software BV	ADT_RF Test Software V7.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room.
2. Tested Date: 2023/12/7 ~ 2024/3/1

4.3 Occupied Channel Bandwidth

Refer to section 4.2 to get information of the instruments.

4.4 Transmitter Unwanted Emissions in the out-of-band Domain

Refer to section 4.2 to get information of the instruments.

4.5 Transmitter Unwanted Emissions in the Spurious Domain up to 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna and Turntable controller Max-Full	MF7802	MF780208363	N/A	N/A
Antenna tower Max-Full	MFA-440H	A440H102-019	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-161	2023/10/17	2024/10/16
Preamplifier Agilent	8447D	2944A10634	2023/7/8	2024/7/7
PXA Signal Analyzer Agilent	N9030A	MY53120770	2024/3/13	2025/3/12
RF Coaxial Cable Woken	8D-FB	Cable-RF2-01	2023/7/8	2024/7/7
Signal Analyzer R&S	FSV40	100980	2023/5/3	2024/5/2
Software ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table ADT	N/A	SN30303	N/A	N/A

Notes:

1. The test was performed in HY - RF chamber 2
2. Tested Date: 2024/4/9 ~ 2024/4/10

4.6 Transmitter Unwanted Emissions in the Spurious Domain above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna and Turntable controller Max-Full	MF7802	MF780208363	N/A	N/A
Antenna tower Max-Full	MFA-440H	A440H102-019	N/A	N/A
Horn Antenna ETS-Lindgren	3117	00034130	2023/11/12	2024/11/11
Preamplifier Agilent	8449B	3008A01976	2023/7/8	2024/7/7
PXA Signal Analyzer Agilent	N9030A	MY53120770	2024/3/13	2025/3/12
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	Cable-RF2-03(246272/4)	2023/7/8	2024/7/7
RF Coaxial Cable INFINET	CA3501-3501- G.90(3m)&CA3501- 3501-F.90(2m)	INF090(3m)*2&TCF427S(2m)*1	2023/7/8	2024/7/7
Signal Analyzer R&S	FSV40	100980	2023/5/3	2024/5/2
Software ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table ADT	N/A	SN30303	N/A	N/A

Notes:

1. The test was performed in HY - RF chamber 2
2. Tested Date: 2024/4/9

4.7 Receiver Spurious Emissions up to 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna and Turntable controller Max-Full	MF7802	MF780208363	N/A	N/A
Antenna tower Max-Full	MFA-440H	A440H102-019	N/A	N/A
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-161	2023/10/17	2024/10/16
Preamplifier Agilent	8447D	2944A10634	2023/7/8	2024/7/7
PXA Signal Analyzer Agilent	N9030A	MY53120770	2024/3/13	2025/3/12
RF Coaxial Cable Woken	8D-FB	Cable-RF2-01	2023/7/8	2024/7/7
Signal Analyzer R&S	FSV40	100980	2023/5/3	2024/5/2
Software ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table ADT	N/A	SN30303	N/A	N/A

Notes:

1. The test was performed in HY - RF chamber 2
2. Tested Date: 2024/4/10

4.8 Receiver Spurious Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Antenna and Turntable controller Max-Full	MF7802	MF780208363	N/A	N/A
Antenna tower Max-Full	MFA-440H	A440H102-019	N/A	N/A
Horn Antenna ETS-Lindgren	3117	00034130	2023/11/12	2024/11/11
Preamplifier Agilent	8449B	3008A01976	2023/7/8	2024/7/7
PXA Signal Analyzer Agilent	N9030A	MY53120770	2024/3/13	2025/3/12
RF Coaxial Cable HUBER+SUHNER	SUCOFLEX 104	Cable-RF2-03(246272/4)	2023/7/8	2024/7/7
RF Coaxial Cable INFINET	CA3501-3501- G.90(3m)&CA3501- 3501-F.90(2m)	INF090(3m)*2&TCF427S(2m)*1	2023/7/8	2024/7/7
Signal Analyzer R&S	FSV40	100980	2023/5/3	2024/5/2
Software ADT	ADT_Radiated_ V7.6.15.9.5	N/A	N/A	N/A
Turn Table ADT	N/A	SN30303	N/A	N/A

Notes:

1. The test was performed in HY - RF chamber 2
2. Tested Date: 2024/4/10

5 Limits of Test Items

5.1 RF Output Power

Condition	Frequency Band	Limit (e.i.r.p.)
Under all test conditions	2400 ~ 2483.5 MHz	20 dBm

5.2 Power Spectral Density

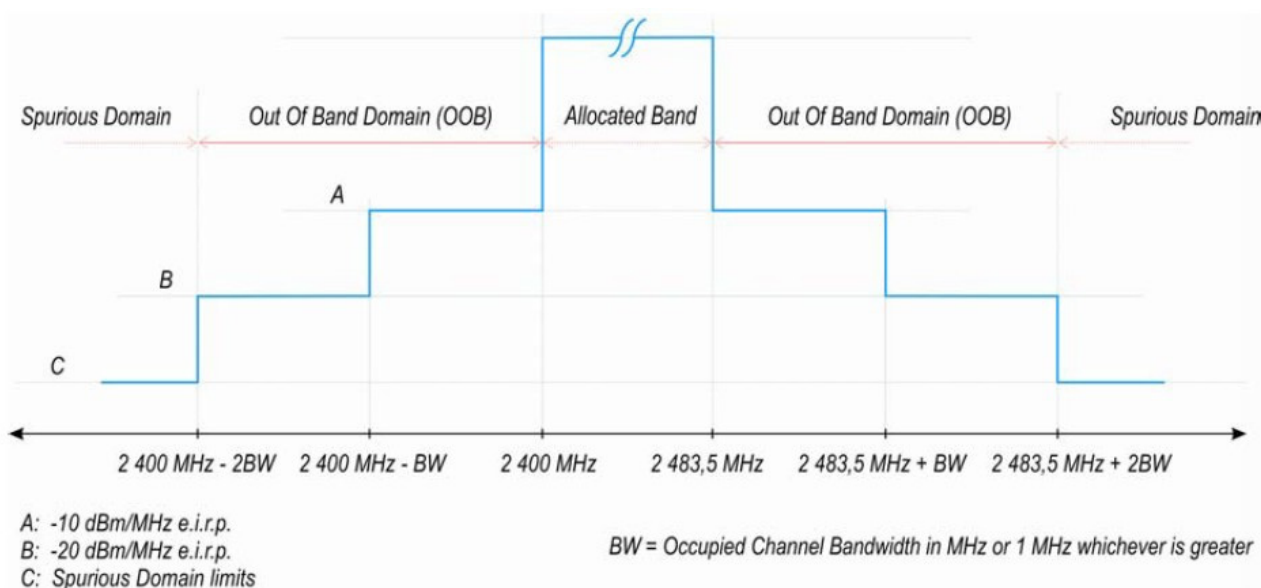
Condition	Frequency Band	Limit (e.i.r.p.)
Under normal conditions	2400 ~ 2483.5 MHz	10 dBm / 1 MHz

5.3 Occupied Channel Bandwidth

Condition		Limit
All types of equipment		Shall fall completely within the band 2400 to 2483.5 MHz.
Additional requirement	For non-adaptive non-FHSS system and e.i.r.p >10 dBm.	Less than 20 MHz
	For non-adaptive Frequency Hopping system and e.i.r.p >10 dBm.	Less than 5 MHz

5.4 Transmitter Unwanted Emissions in the out-of-band Domain

Condition	Limit
Under normal conditions	The transmitter unwanted emissions in the out-of-band domain shall not exceed the values provided by the mask in below figure.



5.5 Transmitter Unwanted Emissions in the Spurious Domain up to 1 GHz

Frequency Range	Maximum Power Limit	Bandwidth
30 MHz to 47 MHz	-36 dBm	100 kHz
47 MHz to 74 MHz	-54 dBm	100 kHz
74 MHz to 87.5 MHz	-36 dBm	100 kHz
87.5 MHz to 118 MHz	-54 dBm	100 kHz
118 MHz to 174 MHz	-36 dBm	100 kHz
174 MHz to 230 MHz	-54 dBm	100 kHz
230 MHz to 470 MHz	-36 dBm	100 kHz
470 MHz to 694 MHz	-54 dBm	100 kHz
694 MHz to 1 GHz	-36 dBm	100 kHz

Note: These limits are e.r.p. for emissions up to 1 GHz.

5.6 Transmitter Unwanted Emissions in the Spurious Domain above 1 GHz

Frequency Range	Maximum Power Limit	Bandwidth
1 GHz to 12.75 GHz	-30 dBm	1 MHz

Note: These limits are e.i.r.p. for emissions above 1 GHz.

5.7 Receiver Spurious Emissions up to 1 GHz

Frequency Range	Maximum Power Limit	Bandwidth
30 MHz to 1 GHz	-57 dBm	100 kHz

Note: These limits are e.r.p. for emissions up to 1 GHz.

5.8 Receiver Spurious Emissions above 1 GHz

Frequency Range	Maximum Power Limit	Bandwidth
1 GHz to 12.75 GHz	-47 dBm	1 MHz

Note: These limits are e.i.r.p. for emissions above 1 GHz.

6 Test Arrangements

6.1 RF Output Power

Test procedure refer to chapter 5.4.2 of EN 300 328 V2.2.2.

Measurement Method	Conducted measurement
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6.2 Power Spectral Density

Test procedure refer to chapter 5.4.3 of EN 300 328 V2.2.2.

Measurement Method	Conducted measurement
Option 1: For equipment with continuous and non-continuous transmissions	

6.3 Occupied Channel Bandwidth

Test procedure refer to chapter 5.4.7 of EN 300 328 V2.2.2.

Measurement Method	Conducted measurement
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6.4 Transmitter Unwanted Emissions in the out-of-band Domain

Test procedure refer to chapter 5.4.8 of EN 300 328 V2.2.2.

Measurement Method	Conducted measurement
Option 1: the results for each of the transmit chains for the corresponding 1 MHz segments shall be added and compared with the applicable limits.	

6.5 Transmitter Unwanted Emissions in the Spurious Domain up to 1 GHz

Test procedure refer to chapter 5.4.9 of EN 300 328 V2.2.2.

Measurement Method	Radiated measurement
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6.6 Transmitter Unwanted Emissions in the Spurious Domain above 1 GHz

Test procedure refer to chapter 5.4.9 of EN 300 328 V2.2.2.

Measurement Method	Radiated measurement
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6.7 Receiver Spurious Emissions up to 1 GHz

Test procedure refer to chapter 5.4.10 of EN 300 328 V2.2.2.

Measurement Method	Radiated measurement
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6.8 Receiver Spurious Emissions above 1 GHz

Test procedure refer to chapter 5.4.10 of EN 300 328 V2.2.2.

Measurement Method	Radiated measurement
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7 Test Results of Test Item

7.1 RF Output Power

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang
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Test Mode B1 (1TX)

802.11b

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
1	2412	14.67	14.35	14.93	20	Pass
7	2442	14.55	14.24	14.78	20	Pass
13	2472	14.67	14.32	14.95	20	Pass

802.11g

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
1	2412	14.53	14.21	14.81	20	Pass
7	2442	14.70	14.35	14.99	20	Pass
13	2472	14.78	14.40	15.02	20	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
1	2412	13.26	12.91	13.52	20	Pass
7	2442	13.21	12.84	13.49	20	Pass
13	2472	13.25	12.91	13.52	20	Pass

802.11ax (HE40)

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
3	2422	13.34	13.00	13.63	20	Pass
7	2442	13.31	12.95	13.58	20	Pass
11	2462	13.34	12.96	13.62	20	Pass

802.11be (EHT20)

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
1	2412	13.48	13.13	13.74	20	Pass
7	2442	13.50	13.13	13.78	20	Pass
13	2472	13.49	13.15	13.76	20	Pass

802.11be (EHT40)

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
3	2422	13.54	13.20	13.83	20	Pass
7	2442	13.56	13.20	13.83	20	Pass
11	2462	13.58	13.20	13.86	20	Pass

802.11be (EHT20) 26-tone RU

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
1	2412	11.82	11.47	12.08	20	Pass
7	2442	13.29	12.92	13.57	20	Pass
13	2472	10.86	10.52	11.13	20	Pass

802.11be (EHT20) 52-tone RU

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
1	2412	9.49	9.14	9.75	20	Pass
7	2442	13.21	12.84	13.49	20	Pass
13	2472	9.47	9.13	9.74	20	Pass

802.11be (EHT20) 106-tone RU

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
1	2412	10.03	9.68	10.29	20	Pass
7	2442	13.25	12.88	13.53	20	Pass
13	2472	10.08	9.74	10.35	20	Pass

802.11be (EHT20) 52+26-tone MRU

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
1	2412	10.49	10.14	10.75	20	Pass
7	2442	13.21	12.84	13.49	20	Pass
13	2472	10.79	10.45	11.06	20	Pass

802.11be (EHT20) 106+26-tone MRU

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
1	2412	10.06	9.71	10.32	20	Pass
7	2442	13.26	12.89	13.54	20	Pass
13	2472	10.47	10.13	10.74	20	Pass

Test Mode B2 (2TX)

802.11b

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
1	2412	17.34	17.02	17.60	20	Pass
7	2442	17.40	17.09	17.63	20	Pass
13	2472	17.40	17.05	17.68	20	Pass

802.11g

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
1	2412	17.36	17.04	17.64	20	Pass
7	2442	17.43	17.08	17.72	20	Pass
13	2472	17.53	17.15	17.77	20	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
1	2412	16.19	15.84	16.45	20	Pass
7	2442	16.20	15.83	16.48	20	Pass
13	2472	16.23	15.89	16.50	20	Pass

802.11ax (HE40)

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
3	2422	16.28	15.94	16.57	20	Pass
7	2442	16.29	15.93	16.56	20	Pass
11	2462	16.31	15.93	16.59	20	Pass

802.11be (EHT20)

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
1	2412	16.35	16.00	16.61	20	Pass
7	2442	16.37	16.00	16.65	20	Pass
13	2472	16.39	16.05	16.66	20	Pass

802.11be (EHT40)

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
3	2422	16.41	16.07	16.70	20	Pass
7	2442	16.44	16.08	16.71	20	Pass
11	2462	16.46	16.08	16.74	20	Pass

802.11be (EHT20) 26-tone RU

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
1	2412	13.30	12.95	13.56	20	Pass
7	2442	13.33	12.96	13.61	20	Pass
13	2472	13.32	12.98	13.59	20	Pass

802.11be (EHT20) 52-tone RU

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
1	2412	11.77	11.42	12.03	20	Pass
7	2442	16.33	15.96	16.61	20	Pass
13	2472	11.98	11.64	12.25	20	Pass

802.11be (EHT20) 106-tone RU

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
1	2412	12.26	11.91	12.52	20	Pass
7	2442	16.24	15.87	16.52	20	Pass
13	2472	12.33	11.99	12.60	20	Pass

802.11be (EHT20) 52+26-tone MRU

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
1	2412	12.83	12.48	13.09	20	Pass
7	2442	16.21	15.84	16.49	20	Pass
13	2472	12.47	12.13	12.74	20	Pass

802.11be (EHT20) 106+26-tone MRU

Channel	Frequency (MHz)	EIRP (dBm)			Limit (dBm)	Test Result
		Test Conditions				
		25 °C	-10 °C	70 °C		
1	2412	12.53	12.18	12.79	20	Pass
7	2442	16.22	15.85	16.50	20	Pass
13	2472	12.93	12.59	13.20	20	Pass

7.2 Power Spectral Density

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang
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Test Mode B1 (1TX)

802.11b

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
1	2412	5.09	10	Pass
7	2442	5.00	10	Pass
13	2472	5.07	10	Pass

802.11g

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
1	2412	3.33	10	Pass
7	2442	3.48	10	Pass
13	2472	3.55	10	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
1	2412	1.46	10	Pass
7	2442	1.45	10	Pass
13	2472	1.48	10	Pass

802.11ax (HE40)

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
3	2422	-1.10	10	Pass
7	2442	-1.04	10	Pass
11	2462	-1.02	10	Pass

802.11be (EHT20)

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
1	2412	1.76	10	Pass
7	2442	1.86	10	Pass
13	2472	1.82	10	Pass

802.11be (EHT40)

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
3	2422	-0.82	10	Pass
7	2442	-0.79	10	Pass
11	2462	-0.72	10	Pass

802.11be (EHT20) 26-tone RU

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
1	2412	8.16	10	Pass
7	2442	9.58	10	Pass
13	2472	7.17	10	Pass

802.11be (EHT20) 52-tone RU

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
1	2412	3.09	10	Pass
7	2442	6.62	10	Pass
13	2472	2.78	10	Pass

802.11be (EHT20) 106-tone RU

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
1	2412	0.71	10	Pass
7	2442	3.95	10	Pass
13	2472	0.71	10	Pass

802.11be (EHT20) 52+26-tone MRU

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
1	2412	2.21	10	Pass
7	2442	4.99	10	Pass
13	2472	2.65	10	Pass

802.11be (EHT20) 106+26-tone MRU

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
1	2412	0.47	10	Pass
7	2442	3.49	10	Pass
13	2472	0.93	10	Pass

Test Mode B2 (2TX)

802.11b

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
1	2412	7.77	10	Pass
7	2442	7.80	10	Pass
13	2472	7.81	10	Pass

802.11g

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
1	2412	6.18	10	Pass
7	2442	6.23	10	Pass
13	2472	6.34	10	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
1	2412	4.52	10	Pass
7	2442	4.43	10	Pass
13	2472	4.56	10	Pass

802.11ax (HE40)

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
3	2422	1.89	10	Pass
7	2442	1.88	10	Pass
11	2462	1.96	10	Pass

802.11be (EHT20)

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
1	2412	4.66	10	Pass
7	2442	4.80	10	Pass
13	2472	4.71	10	Pass

802.11be (EHT40)

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
3	2422	2.08	10	Pass
7	2442	2.10	10	Pass
11	2462	2.10	10	Pass

802.11be (EHT20) 26-tone RU

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
1	2412	9.71	10	Pass
7	2442	9.65	10	Pass
13	2472	9.61	10	Pass

802.11be (EHT20) 52-tone RU

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
1	2412	5.16	10	Pass
7	2442	9.67	10	Pass
13	2472	5.36	10	Pass

802.11be (EHT20) 106-tone RU

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
1	2412	2.90	10	Pass
7	2442	6.99	10	Pass
13	2472	3.00	10	Pass

802.11be (EHT20) 52+26-tone MRU

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
1	2412	4.57	10	Pass
7	2442	7.98	10	Pass
13	2472	4.37	10	Pass

802.11be (EHT20) 106+26-tone MRU

Channel	Frequency (MHz)	EIRP PSD (dBm/MHz)	EIRP PSD Limit (dBm/MHz)	Test Result
1	2412	4.30	10	Pass
7	2442	8.01	10	Pass
13	2472	4.81	10	Pass

7.3 Occupied Channel Bandwidth

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyong Wang
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Test Mode A1 (1TX)

802.11b

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	Measured Frequencies		Service Frequency Band (MHz)	Test Result
			FL (MHz)	FH (MHz)		
1	2412	14.28	2404.84	2419.12	2400 to 2483.5	Pass
13	2472	15.80	2464.08	2479.88		Pass

Notes:

1. FL is the lowest frequency of the 99% occupied bandwidth of power envelope.
2. FH is the highest frequency of the 99% occupied bandwidth of power envelope.

802.11g

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	Measured Frequencies		Service Frequency Band (MHz)	Test Result
			FL (MHz)	FH (MHz)		
1	2412	16.96	2403.52	2420.48	2400 to 2483.5	Pass
13	2472	16.88	2463.56	2480.44		Pass

Notes:

1. FL is the lowest frequency of the 99% occupied bandwidth of power envelope.
2. FH is the highest frequency of the 99% occupied bandwidth of power envelope.

802.11be (EHT20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	Measured Frequencies		Service Frequency Band (MHz)	Test Result
			FL (MHz)	FH (MHz)		
1	2412	19.28	2402.32	2421.60	2400 to 2483.5	Pass
13	2472	19.28	2462.36	2481.64		Pass

Notes:

1. FL is the lowest frequency of the 99% occupied bandwidth of power envelope.
2. FH is the highest frequency of the 99% occupied bandwidth of power envelope.

802.11be (EHT40)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	Measured Frequencies		Service Frequency Band (MHz)	Test Result
			FL (MHz)	FH (MHz)		
3	2422	37.92	2403.04	2440.96	2400 to 2483.5	Pass
11	2462	37.92	2442.96	2480.88		Pass

Notes:

1. FL is the lowest frequency of the 99% occupied bandwidth of power envelope.
2. FH is the highest frequency of the 99% occupied bandwidth of power envelope.

Test Mode A2 (2TX)

802.11b

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	Measured Frequencies		Service Frequency Band (MHz)	Test Result
			FL (MHz)	FH (MHz)		
1	2412	12.96	2405.52	2418.48	2400 to 2483.5	Pass
13	2472	13.08	2465.44	2478.52		Pass

Notes:

1. FL is the lowest frequency of the 99% occupied bandwidth of power envelope.
2. FH is the highest frequency of the 99% occupied bandwidth of power envelope.

802.11g

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	Measured Frequencies		Service Frequency Band (MHz)	Test Result
			FL (MHz)	FH (MHz)		
1	2412	16.92	2403.52	2420.44	2400 to 2483.5	Pass
13	2472	16.88	2463.56	2480.44		Pass

Notes:

1. FL is the lowest frequency of the 99% occupied bandwidth of power envelope.
2. FH is the highest frequency of the 99% occupied bandwidth of power envelope.

802.11be (EHT20)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	Measured Frequencies		Service Frequency Band (MHz)	Test Result
			FL (MHz)	FH (MHz)		
1	2412	19.32	2402.32	2421.64	2400 to 2483.5	Pass
13	2472	19.36	2462.32	2481.68		Pass

Notes:

1. FL is the lowest frequency of the 99% occupied bandwidth of power envelope.
2. FH is the highest frequency of the 99% occupied bandwidth of power envelope.

802.11be (EHT40)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)	Measured Frequencies		Service Frequency Band (MHz)	Test Result
			FL (MHz)	FH (MHz)		
3	2422	37.92	2403.04	2440.96	2400 to 2483.5	Pass
11	2462	37.92	2443.04	2480.96		Pass

Notes:

1. FL is the lowest frequency of the 99% occupied bandwidth of power envelope.
2. FH is the highest frequency of the 99% occupied bandwidth of power envelope.

7.4 Transmitter Unwanted Emissions in the out-of-band Domain

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Jisyoung Wang
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Test Mode A1 (1TX)

802.11b

Channel	Frequency (MHz)	Out-Of-Band Domain			Limit (dBm/MHz)	Test Result
		Frequency Range (MHz)	Worst Frequency (MHz)	Emission Level (dBm/MHz)		
1	2412	2371.44 ~ 2385.72	2383.50	-27.27	-20	Pass
		2385.72 ~ 2400	2399.50	-16.13	-10	Pass
13	2472	2483.5 ~ 2499.3	2485.50	-10.44	-10	Pass
		2499.3 ~ 2515.1	2499.50	-22.41	-20	Pass

802.11g

Channel	Frequency (MHz)	Out-Of-Band Domain			Limit (dBm/MHz)	Test Result
		Frequency Range (MHz)	Worst Frequency (MHz)	Emission Level (dBm/MHz)		
1	2412	2366.08 ~ 2383.04	2382.50	-25.84	-20	Pass
		2383.04 ~ 2400	2399.50	-13.40	-10	Pass
13	2472	2483.5 ~ 2500.38	2484.50	-13.92	-10	Pass
		2500.38 ~ 2517.26	2500.50	-29.23	-20	Pass

802.11be (EHT20)

Channel	Frequency (MHz)	Out-Of-Band Domain			Limit (dBm/MHz)	Test Result
		Frequency Range (MHz)	Worst Frequency (MHz)	Emission Level (dBm/MHz)		
1	2412	2361.44 ~ 2380.72	2380.50	-30.70	-20	Pass
		2380.72 ~ 2400	2399.50	-18.80	-10	Pass
13	2472	2483.5 ~ 2502.78	2484.50	-12.68	-10	Pass
		2502.78 ~ 2522.06	2503.50	-32.50	-20	Pass

802.11be (EHT40)

Channel	Frequency (MHz)	Out-Of-Band Domain			Limit (dBm/MHz)	Test Result
		Frequency Range (MHz)	Worst Frequency (MHz)	Emission Level (dBm/MHz)		
3	2422	2324.16 ~ 2362.08	2361.50	-33.47	-20	Pass
		2362.08 ~ 2400	2399.50	-13.01	-10	Pass
11	2462	2483.5 ~ 2521.42	2484.50	-12.81	-10	Pass
		2521.42 ~ 2559.34	2521.50	-33.36	-20	Pass

Test Mode A2 (2TX)

802.11b

Channel	Frequency (MHz)	Out-Of-Band Domain			Limit (dBm/MHz)	Test Result
		Frequency Range (MHz)	Worst Frequency (MHz)	Emission Level (dBm/MHz)		
1	2412	2374.08 ~ 2387.04	2386.50	-39.36	-20	Pass
		2387.04 ~ 2400	2399.50	-27.91	-10	Pass
13	2472	2483.5 ~ 2496.58	2484.50	-20.44	-10	Pass
		2496.58 ~ 2509.66	2497.50	-32.90	-20	Pass

802.11g

Channel	Frequency (MHz)	Out-Of-Band Domain			Limit (dBm/MHz)	Test Result
		Frequency Range (MHz)	Worst Frequency (MHz)	Emission Level (dBm/MHz)		
1	2412	2366.16 ~ 2383.08	2382.50	-26.17	-20	Pass
		2383.08 ~ 2400	2399.50	-12.85	-10	Pass
13	2472	2483.5 ~ 2500.38	2484.50	-10.49	-10	Pass
		2500.38 ~ 2517.26	2500.50	-25.51	-20	Pass

802.11be (EHT20)

Channel	Frequency (MHz)	Out-Of-Band Domain			Limit (dBm/MHz)	Test Result
		Frequency Range (MHz)	Worst Frequency (MHz)	Emission Level (dBm/MHz)		
1	2412	2361.36 ~ 2380.68	2380.50	-25.36	-20	Pass
		2380.68 ~ 2400	2399.50	-13.51	-10	Pass
13	2472	2483.5 ~ 2502.86	2484.50	-10.28	-10	Pass
		2502.86 ~ 2522.22	2503.50	-24.83	-20	Pass

802.11be (EHT40)

Channel	Frequency (MHz)	Out-Of-Band Domain			Limit (dBm/MHz)	Test Result
		Frequency Range (MHz)	Worst Frequency (MHz)	Emission Level (dBm/MHz)		
3	2422	2324.16 ~ 2362.08	2361.50	-31.94	-20	Pass
		2362.08 ~ 2400	2399.50	-11.08	-10	Pass
11	2462	2483.5 ~ 2521.42	2484.50	-10.92	-10	Pass
		2521.42 ~ 2559.34	2521.50	-33.31	-20	Pass

7.5 Transmitter Unwanted Emissions in the Spurious Domain up to 1 GHz

Test Mode A1 (1TX)

802.11g

Spurious Emission Frequency Range	30 MHz ~ 1 GHz	Operating Channel	13
Input Power	230 Vac, 50 Hz	Environmental Conditions	21°C, 73% RH
Tested By	Vanness Huang		

Spurious Emission Level				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
51.41	H	-75.69	-54.00	-21.69
62.75	V	-68.37	-54.00	-14.37
104.37	V	-64.06	-54.00	-10.06
107.93	H	-68.31	-54.00	-14.31
175.63	V	-77.26	-54.00	-23.26
195.39	H	-78.19	-54.00	-24.19
227.18	V	-78.58	-54.00	-24.58
501.37	H	-73.53	-54.00	-19.53
518.06	V	-67.74	-54.00	-13.74
585.99	H	-70.22	-54.00	-16.22
676.59	H	-70.76	-54.00	-16.76
678.18	V	-69.57	-54.00	-15.57

Test Mode A2 (2TX)

802.11g

Spurious Emission Frequency Range	30 MHz ~ 1 GHz	Operating Channel	13
Input Power	230 Vac, 50 Hz	Environmental Conditions	22°C, 74% RH
Tested By	Vanness Huang		

Spurious Emission Level				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
55.48	H	-77.08	-54.00	-23.08
60.17	V	-76.73	-54.00	-22.73
103.53	H	-77.47	-54.00	-23.47
105.24	V	-78.20	-54.00	-24.20
192.51	V	-79.04	-54.00	-25.04
195.39	H	-74.35	-54.00	-20.35
491.67	V	-73.04	-54.00	-19.04
496.10	H	-73.27	-54.00	-19.27
573.32	V	-71.51	-54.00	-17.51
579.62	H	-70.04	-54.00	-16.04
657.45	V	-69.87	-54.00	-15.87
658.06	H	-69.91	-54.00	-15.91

7.6 Transmitter Unwanted Emissions in the Spurious Domain above 1 GHz

Test Mode A1 (1TX)

802.11b

Spurious Emission Frequency Range	1 GHz ~ 12.75 GHz	Operating Channel	1, 13
Input Power	230 Vac, 50 Hz	Environmental Conditions	22°C, 74% RH
Tested By	Vanness Huang		

Spurious Emission Level					
Channel	Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
1	4824.00	H	-48.95	-30.00	-18.95
	4824.00	V	-48.41	-30.00	-18.41
13	4944.00	H	-48.72	-30.00	-18.72
	4944.00	V	-49.40	-30.00	-19.40

802.11g

Spurious Emission Frequency Range	1 GHz ~ 12.75 GHz	Operating Channel	1, 13
Input Power	230 Vac, 50 Hz	Environmental Conditions	22°C, 74% RH
Tested By	Vanness Huang		

Spurious Emission Level					
Channel	Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
1	4824.00	H	-47.88	-30.00	-17.88
	4824.00	V	-46.61	-30.00	-16.61
13	4944.00	H	-48.62	-30.00	-18.62
	4944.00	V	-50.42	-30.00	-20.42

Test Mode A2 (2TX)

802.11b

Spurious Emission Frequency Range	1 GHz ~ 12.75 GHz	Operating Channel	1, 13
Input Power	230 Vac, 50 Hz	Environmental Conditions	22°C, 74% RH
Tested By	Vanness Huang		

Spurious Emission Level					
Channel	Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
1	4824.00	H	-48.95	-30.00	-18.95
	4824.00	V	-49.05	-30.00	-19.05
13	4944.00	H	-48.45	-30.00	-18.45
	4944.00	V	-50.74	-30.00	-20.74

802.11g

Spurious Emission Frequency Range	1 GHz ~ 12.75 GHz	Operating Channel	1, 13
Input Power	230 Vac, 50 Hz	Environmental Conditions	22°C, 74% RH
Tested By	Vanness Huang		

Spurious Emission Level					
Channel	Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
1	4824.00	H	-48.06	-30.00	-18.06
	4824.00	V	-51.99	-30.00	-21.99
13	4944.00	H	-50.29	-30.00	-20.29
	4944.00	V	-52.66	-30.00	-22.66

7.7 Receiver Spurious Emissions up to 1 GHz

Test Mode A2

Spurious Emission Frequency Range	30 MHz ~ 1 GHz	Operating Channel	13
Input Power	230 Vac, 50 Hz	Environmental Conditions	21°C, 73% RH
Tested By	Vanness Huang		

Spurious Emission Level				
Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
90.85	H	-64.49	-57.00	-7.49
91.86	V	-64.05	-57.00	-7.05
121.93	H	-65.40	-57.00	-8.40
148.63	V	-68.30	-57.00	-11.30
256.11	V	-72.93	-57.00	-15.93
256.34	H	-71.23	-57.00	-14.23
389.11	V	-74.07	-57.00	-17.07
492.93	H	-72.25	-57.00	-15.25
569.40	V	-70.84	-57.00	-13.84
582.37	H	-70.00	-57.00	-13.00
835.42	V	-65.93	-57.00	-8.93
842.18	H	-66.52	-57.00	-9.52

7.8 Receiver Spurious Emissions above 1 GHz

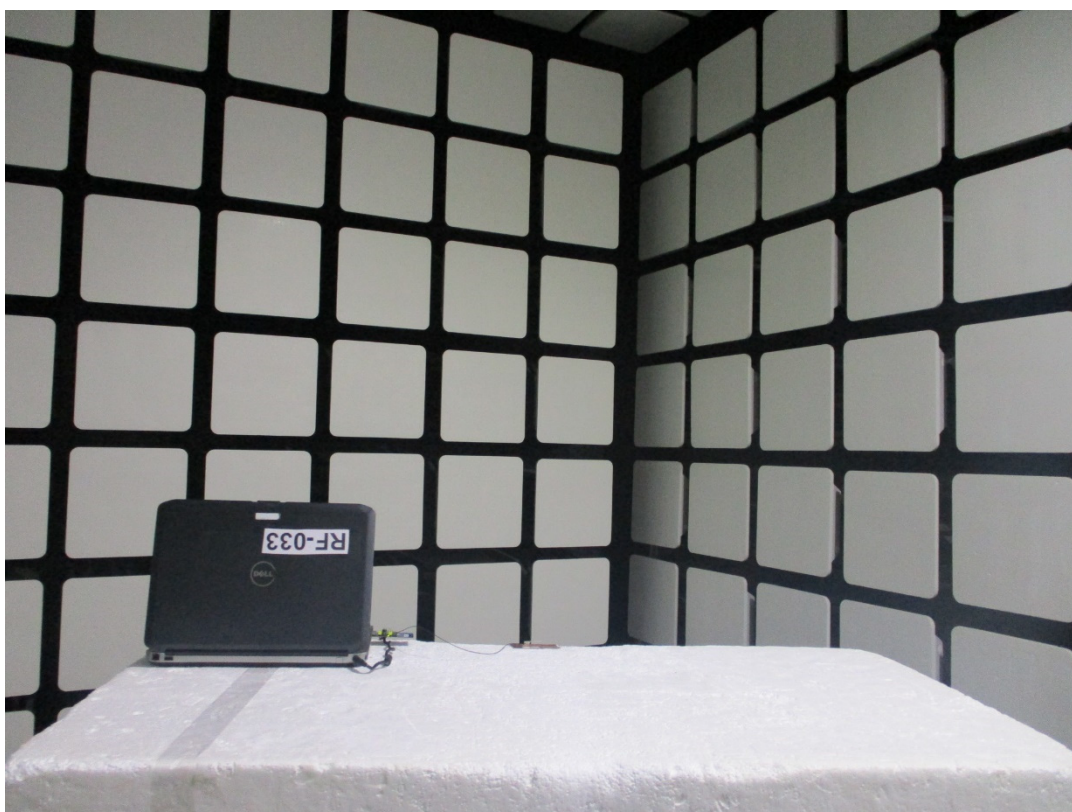
Test Mode A2 (2RX)

Spurious Emission Frequency Range	1 GHz ~ 12.75 GHz	Operating Channel	1, 13
Input Power	230 Vac, 50 Hz	Environmental Conditions	21°C, 73% RH
Tested By	Vanness Huang		

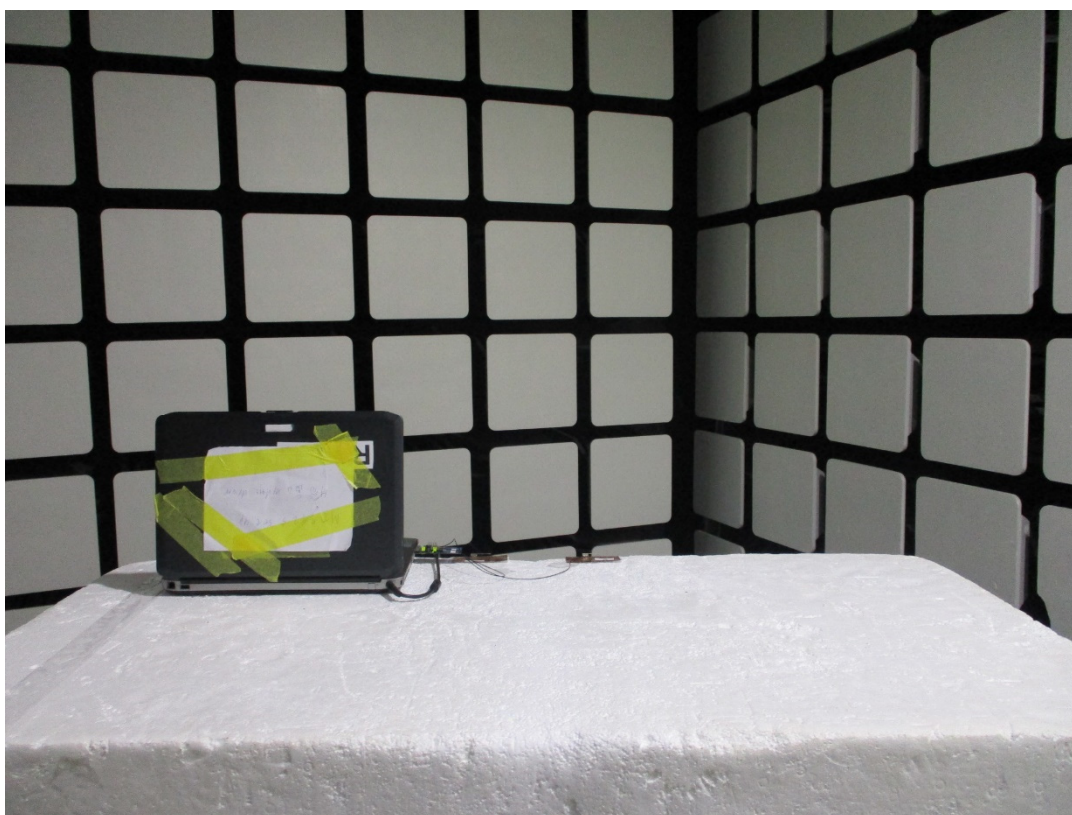
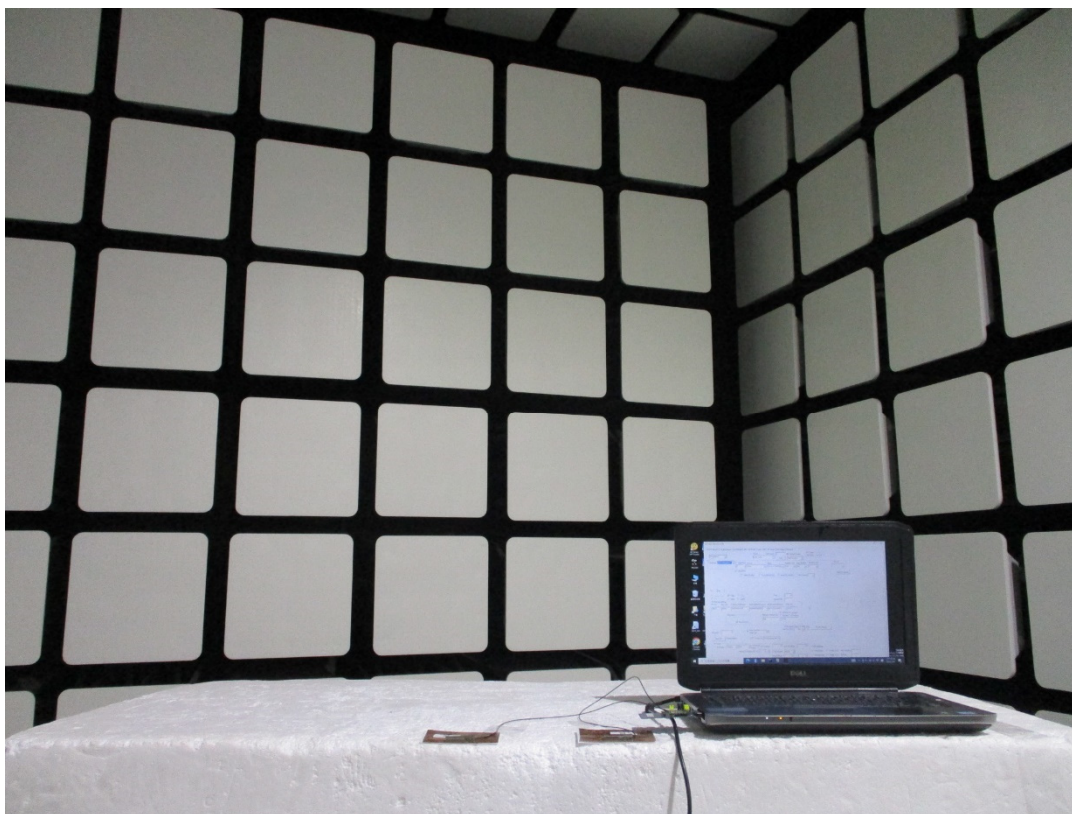
Spurious Emission Level					
Channel	Frequency (MHz)	Antenna Polarization	Level (dBm)	Limit (dBm)	Margin (dB)
1	4824.00	H	-54.11	-47.00	-7.11
	4824.00	V	-53.02	-47.00	-6.02
13	4944.00	H	-55.11	-47.00	-8.11
	4944.00	V	-52.99	-47.00	-5.99

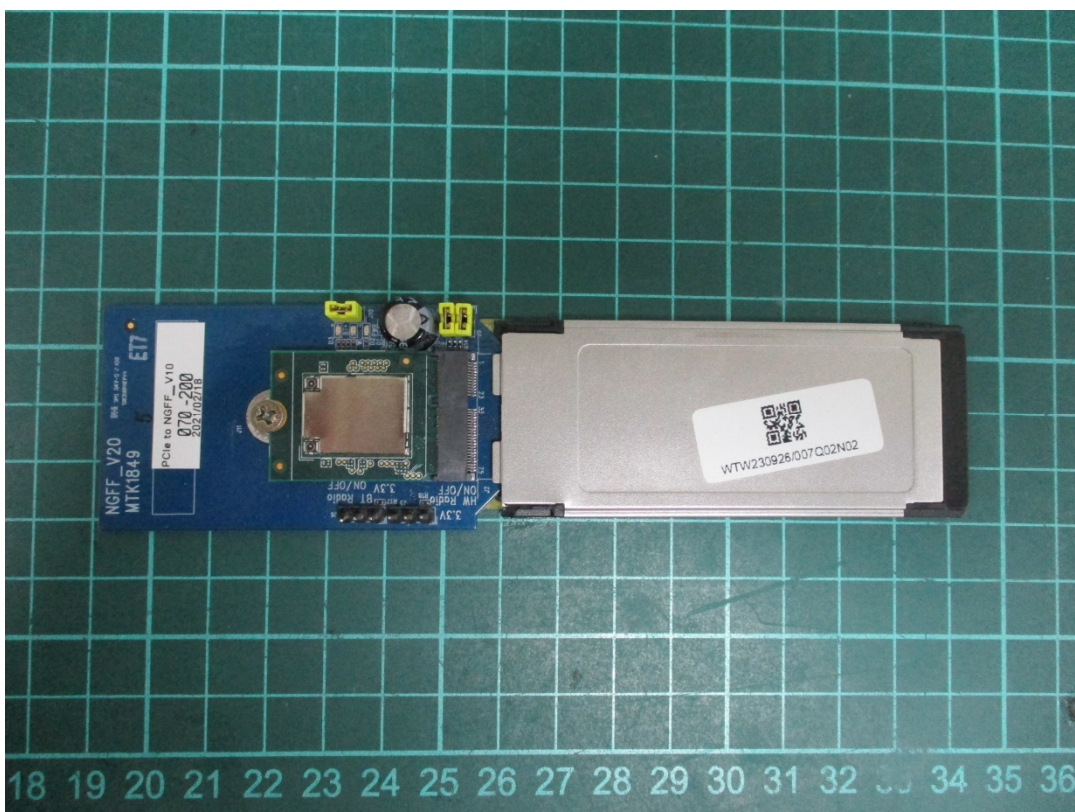
8 Pictures of Test Arrangements

1TX



2TX





Annex A-Conducted Output Power

Test Mode B1 (1TX)

Mode	Channel	Frequency (MHz)	Conducted Average (dBm)
11b	1	2412	24.67
	7	2442	24.55
	13	2472	24.67
11g	1	2412	24.53
	7	2442	24.70
	13	2472	24.78
802.11ax (HE20))	1	2412	23.26
	7	2442	23.21
	13	2472	23.25
802.11ax (HE40)	3	2422	23.34
	7	2442	23.31
	11	2462	23.34
802.11be (EHT20)	1	2412	23.48
	7	2442	23.50
	13	2472	23.49
802.11be (EHT40)	3	2422	23.54
	7	2442	23.56
	11	2462	23.58
802.11be (EHT20) 26-tone RU	1	2412	21.82
	7	2442	23.29
	13	2472	20.86
802.11be (EHT20) 52-tone RU	1	2412	19.49
	7	2442	23.21
	13	2472	19.47
802.11be (EHT20) 106-tone RU	1	2412	20.03
	7	2442	23.25
	13	2472	20.08
802.11be (EHT20) 52+26-tone MRU	1	2412	20.49
	7	2442	23.21
	13	2472	20.79
802.11be (EHT20) 106+26-tone MRU	1	2412	20.06
	7	2442	23.26
	13	2472	20.47

Test Mode B2 (2TX)

Mode	Channel	Frequency (MHz)	Conducted Average (dBm)		
			Chain 0	Chain 1	Total
11b	1	2412	24.01	24.63	27.34
	7	2442	24.19	24.58	27.40
	13	2472	24.05	24.71	27.40
11g	1	2412	24.10	24.58	27.36
	7	2442	24.09	24.72	27.43
	13	2472	24.21	24.81	27.53
802.11ax (HE20))	1	2412	23.08	23.28	26.19
	7	2442	23.13	23.24	26.20
	13	2472	23.16	23.28	26.23
802.11ax (HE40)	3	2422	23.16	23.37	26.28
	7	2442	23.21	23.34	26.29
	11	2462	23.22	23.38	26.31
802.11be (EHT20)	1	2412	23.13	23.54	26.35
	7	2442	23.18	23.53	26.37
	13	2472	23.20	23.56	26.39
802.11be (EHT40)	3	2422	23.19	23.60	26.41
	7	2442	23.24	23.61	26.44
	11	2462	23.26	23.63	26.46
802.11be (EHT20) 26-tone RU	1	2412	20.17	20.41	23.30
	7	2442	20.26	20.38	23.33
	13	2472	20.21	20.40	23.32
802.11be (EHT20) 52-tone RU	1	2412	18.59	18.92	21.77
	7	2442	23.25	23.38	26.33
	13	2472	18.83	19.10	21.98
802.11be (EHT20) 106-tone RU	1	2412	18.91	19.56	22.26
	7	2442	23.16	23.29	26.24
	13	2472	19.21	19.42	22.33
802.11be (EHT20) 52+26-tone MRU	1	2412	19.71	19.92	22.83
	7	2442	23.12	23.27	26.21
	13	2472	19.81	19.08	22.47
802.11be (EHT20) 106+26-tone MRU	1	2412	19.36	19.67	22.53
	7	2442	23.12	23.29	26.22
	13	2472	19.78	20.06	22.93

9 Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

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The address and road map of all our labs can be found in our web site also.

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