

FCC Test Report

Report No.: 2505Q45199EE

Applicant: Shenzhen Qianyan Technology LTD

Address: No.3301, Block C, Section 1, Chuangzhi Yuncheng Building,

Liuxian Avenue, Xili Community, Xili Street, Nanshan District,

Shenzhen, China

Product Name: Govee Outdoor UpDown Wall Light

Product Model: H7076

Multiple Models: N/A

Trade Mark: Govee

FCC ID: 2A7VD-H7076

Standards: FCC CFR Title 47 Part 15C (§15.247)

Test Date: 2025-03-06 to 2025-04-10

Test Result: Complied

Report Date: 2025-04-15

Reviewed by:

Approved by:

Abel Chen

Project Engineer

Jacob Kong

Jacob Gong

Manager

Prepared by:

World Alliance Testing & Certification (Shenzhen) Co., Ltd

No. 1002, East Block, Laobing Building, Xingye Road 3012, Xixiang street, Bao'an District, Shenzhen, Guangdong, People's Republic of China



This report may contain data that are not covered by the NVLAP accreditation and shall be marked with an asterisk "★"

Report Template: TR-4-E-009/V1.2 Page 1 of 61



Announcement

- 1. This test report shall not be reproduced except in full, without the written approval of World Alliance Testing & Certification (Shenzhen) Co., Ltd
- 2. The results in this report apply only to the sample tested.
- 3. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.
- 4. The information marked "#" is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included.

Revision History

Version No.	Issued Date	Description
00	2025-04-15	Original

Report Template: TR-4-E-009/V1.2 Page 2 of 61



Contents

1	Gen	eral Info	rmation	4
	1.1	Client	Information	4
	1.2	Produ	ct Description of EUT	4
	1.3	Anten	na information	4
	1.4	Relate	ed Submittal(s)/Grant(s)	5
	1.5	Meas	urement Uncertainty	5
	1.6	Labor	atory Location	5
	1.7	Test N	Nethodology	5
2	Desc	cription	of Measurement	6
	2.1	Test C	Configuration	6
	2.2	Test A	uxiliary Equipment	7
	2.3	Interc	onnecting Cables	7
	2.4	Block	Diagram of Connection between EUT and AE	7
	2.5	Test S	Setup	8
	2.6	Test F	Procedure	10
	2.7	Meas	urement Method	.11
	2.8	Meas	urement Equipment	12
3	Test	Results		13
	3.1	Test S	Summary	13
	3.2			
	3.3	AC Li	ne Conducted Emissions Test Data	15
	3.4		ted emission Test Data	
	3.5		onducted Test Data	
		3.5.1	6dB Emission Bandwidth	
		3.5.2	99% Occupied Bandwidth	
		3.5.3	Maximum Conducted Peak Output Power	50
		3.5.4	Power Spectral Density	50
		3.5.5	100 kHz Bandwidth of Frequency Band Edge	50
		3.5.6	Duty Cycle	51
4	Test	Setup F	Photo	60
5	E.U.	T Photo		61



1 General Information

1.1 Client Information

Applicant:	Shenzhen Qianyan Technology LTD
Address:	No.3301, Block C, Section 1, Chuangzhi Yuncheng Building, Liuxian Avenue, Xili Community, Xili Street, Nanshan District, Shenzhen, China
Manufacturer:	Shenzhen Qianyan Technology LTD
Address:	No.3301, Block C, Section 1, Chuangzhi Yuncheng Building, Liuxian Avenue, Xili Community, Xili Street, Nanshan District, Shenzhen, China

1.2 Product Description of EUT

The EUT is Govee Outdoor UpDown Wall Light that contains BLE and 2.4G WLAN radios, this report covers the full testing of the 2.4G WLAN radio.

Sample Serial Number	2YUV-6 for CE test, 2YUV-1 for RE test, 2YUV-2 for RF conducted test (assigned by WATC)
Sample Received Date	2025-02-25
Sample Status	Good Condition
Frequency Range	2412MHz - 2472MHz(802.11b, g, n-HT20)
Maximum Conducted Peak Output Power	17.47dBm
Modulation Technology	DSSS, OFDM
Antenna Gain#	2.28dBi
Spatial Streams#	SISO (1TX, 1RX)
Power Supply	100V~240VAC 50/60Hz
Adapter Information	N/A
Modification	Sample No Modification by the test lab

1.3 Antenna information

15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Device Antenna information:

The Wi-Fi antenna is an internal antenna which cannot replace by end-user. Please see product internal photos for details.

Report Template: TR-4-E-009/V1.2 Page 4 of 61



1.4 Related Submittal(s)/Grant(s)

No Related Submittal(s)/Grant(s)

1.5 Measurement Uncertainty

in a mode and in one of taring			
meter	Expanded Uncertainty (Confidence of 95%(U = 2Uc(y)))		
cted Emissions	±3.14dB		
Below 30MHz	±2.78dB		
Below 1GHz	±4.84dB		
Above 1GHz	±5.44dB		
	1.75dB		
	0.74dB		
	150Hz		
	0.34%		
	0.74dB		
	Below 30MHz Below 1GHz Above 1GHz		

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

1.6 Laboratory Location

World Alliance Testing & Certification (Shenzhen) Co., Ltd

No. 1002, East Block, Laobing Building, Xingye Road 3012, Xixiang street, Bao'an District, Shenzhen, Guangdong, People's Republic of China

Tel: +86-755-29691511, Email: qa@watc.com.cn

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 463912, the FCC Designation No.: CN5040.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0160.

1.7 Test Methodology

FCC CFR 47 Part 2

FCC CFR 47 Part 15

KDB 558074 D01 15.247 Meas Guidance v05r02

ANSI C63.10-2020

Unless otherwise stated there are no any additions to, deviations, or exclusions from the method

Report Template: TR-4-E-009/V1.2 Page 5 of 61



2 Description of Measurement

2.1 Test Configuration

Operating channels:							
Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)		
1	2412	6	2437	11	2462		
2	2417	7	2442	12	2467		
3	2422	8	2447	13	2472		
4	2427	9	2452	/	/		
5	2432	10	2457	/	/		

According to ANSI C63.10-2020 chapter 5.6.1 Table 11 requirement, select lowest channel, middle channel, and highest channel in the frequency range in which device operates for testing. The detailed frequency points are as follows:

802.11b, 802.11g, 802.11n-HT20							
Lowest channel Middle channel Highest channel							
Channel No. Frequency Channel No. Freque		Frequency (MHz)	Channel No.	Frequency (MHz)			
1	2412	7	2442	13	2472		

Test Mode:						
Transmitting mode:	Keep the EUT in	Keep the EUT in continuous transmitting with modulation				
Exercise software [#] :	AmebaZ2_mpto	ol_1V3				
Worst-case Power Level Setting [#]						
Mode	Data rate	Low Channel	Middle Channel	High Channel		
802.11b	1Mbps	70	70	70		
802.11g	6Mbps	36	36	36		
802.11n-HT20	6.5Mbps	6.5Mbps 33 33 33				
The exercise softwa	re and the maximum	power setting that pro	vided by manufacture	er.		

Worst-Case Configuration:

For radiated emissions, EUT was investigated in three orthogonal orientation, the worst-case orientation was recorded in report

For AC power line conducted emission and radiated emission 9kHz-1GHz and above 18GHz were performed with the EUT transmits at the channel with highest output power as worst-case scenario.

For radiated emissions below 30MHz, three antenna orientations (parallel, perpendicular, gound-parallel) were tested, only record the worse case test data in report.

Report Template: TR-4-E-009/V1.2 Page 6 of 61

Report No.: 2505Q45199EE

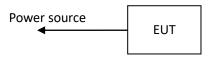
2.2 Test Auxiliary Equipment

Manufacturer	cturer Description Model		Serial Number	
/	/	/	/	

2.3 Interconnecting Cables

Manufacturer	Description	Length(m)	From	То
unknown	AC Power cable	1.0	Power source	EUT

2.4 Block Diagram of Connection between EUT and AE



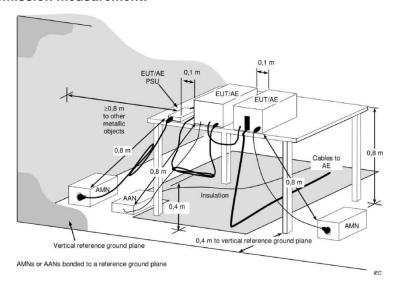
Note: for reference only, the actual connection setup used for testing please refer to the test photos.

Report Template: TR-4-E-009/V1.2 Page 7 of 61



2.5 Test Setup

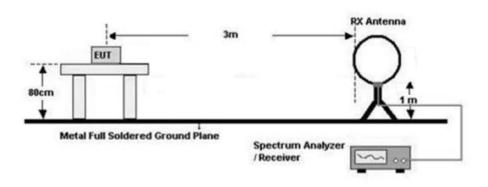
1) Conducted emission measurement:



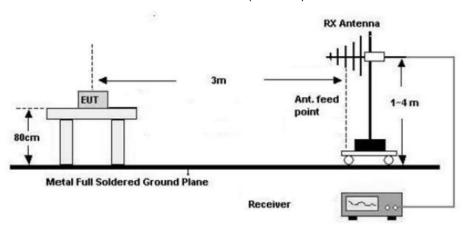
Note: The 0.8 m distance specified between EUT/AE/PSU and AMN/AAN, is applicable only to the EUT being measured. If the device is AE then it shall be >0.8 m.

2) Radiated emission measurement:

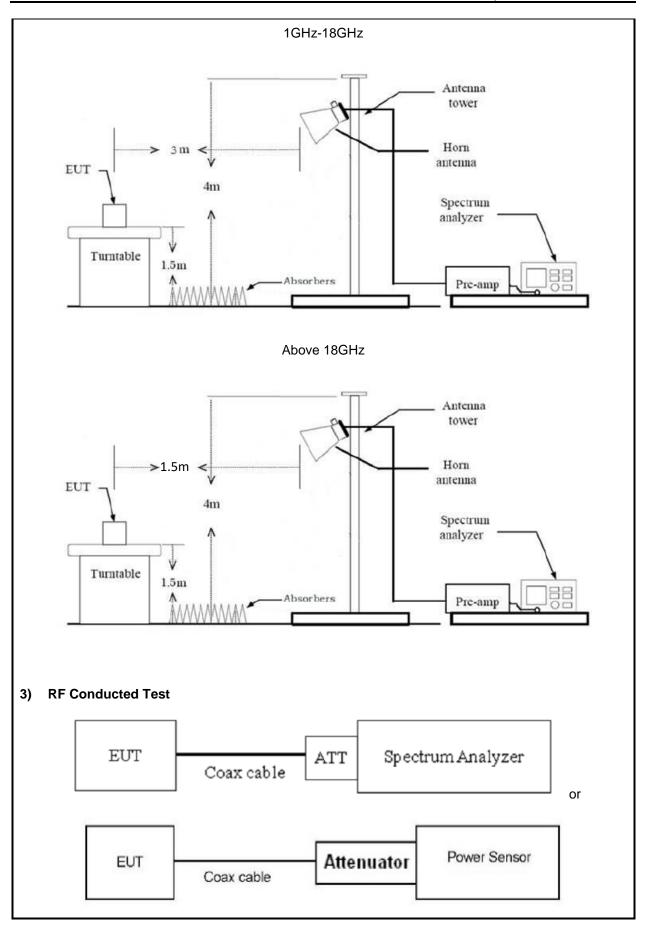
Below 30MHz (3m SAC)



30MHz-1GHz (3m SAC)









2.6 Test Procedure

Conducted emission:

- 1. The E.U.T is placed on a non-conducting table 40cm from the vertical ground plane and 80cm above the horizontal ground plane (Please refer to the block diagram of the test setup and photographs).
- Both sides of A.C. line are checked for maximum conducted interference. In order to find the
 maximum emission, the relative positions of equipment and all of the interface cables must be
 changed according to ANSI C63.10 on conducted measurement.
- 3. Line conducted data is recorded for both Line and Neutral

Radiated Emission Procedure:

a) For below 30MHz

- 1. All measurements were made at a test distance of 3 m. The measured data was extrapolated from the test distance (3m) to the specification distance (300 m from 9-490 kHz and 30 m from 490 kHz- 30 MHz) to clearly show the relative levels of fundamental and spurious emissions and demonstrate compliance with the requirement that the level of any spurious emissions be below the level of the intentionally transmitted signal. The extrapolation factor for the limits were 40*Log (test distance / specification distance).
- 2. Loop antenna use, investigation was done on the three antenna orientations (parallel, perpendicular, gound-parallel)
- 3. The RBW/VBW of receiver is set to 200Hz/1kHz for 9kHz to 150kHz range, to 9kHz/30kHz for 150kHz to 30MHz range for scan Peak emission, 200Hz/9kHz IF BW was used for final measurement in the Quasi-peak or average detection mode for frequency range 9~150kHz/150kHz~30MHz respectively.
- 4. If the Peak emission complies with the QP limit, then perform final measurement is optional.

b) For 30MHz-1GHz:

- 1. The EUT was placed on the tabletop of a rotating table 0.8 m the ground at a 3 m semi anechoic chamber. The measurement distance from the EUT to the receiving antenna is 3 m.
- 2. EUT works in each mode of operation that needs to be tested. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations.
- 3. The RBW/VBW of receiver is set to 100kHz/300kHz for scan Peak emission, 120kHz IF BW was used for final measurement in the Quasi-peak detection mode.
- 4. If the Peak emission complies with the QP limit, then perform final measurement is optional.

c) For above 1GHz:

- The EUT was placed on the tabletop of a rotating table 1.5 m the ground at a 3 m fully anechoic room.
 The measurement distance from the EUT to the receiving antenna is 3 m (1-18GHz) and 1.5 m
 (above 18GHz).
- 2. EUT works in each mode of operation that needs to be tested, and having the EUT continuously working. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations.

Report Template: TR-4-E-009/V1.2 Page 10 of 61



- 3. The RBW/VBW of spectrum analyzer is set to 1MHz/3MHz for scan Peak emission, for measured average emission, reduce the VBW to 10Hz(for duty cycle≥98%), or ≥1/T(for duty cycle<98%). T is minimum transmission duration. (Note: a high VBW (for example 1kHz, not less than 1/T) may used to scan average emissions to avoid long sweep time.)
- 4. If the Peak emission complies with the Average limit, then perform average measurement is optional.
- 5. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data.
- 6. Base on FCC 15.31 (f): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

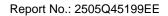
RF Conducted Test:

- 1. The antenna port of EUT was connected to the RF port of the test equipment (Power Meter or Spectrum analyzer) through Attenuator and RF cable.
- 2. The cable assembly insertion loss of 9.0dB (including 6.0 dB Attenuator and 3.0 dB cable) was entered as an offset in the power meter. Note: Actual cable loss was unavailable at the time of testing, therefore a loss of 3.0dB was assumed as worst case. This was later verified to be true by laboratory. (if the RF cable provided by client, the cable loss declared by client)
- 3. The EUT is keeping in continuous transmission mode and tested in all modulation modes.

2.7 Measurement Method

Description of Test	Measurement Method	
AC Line Conducted Emissions	ANSI C63.10-2020 Section 6.2	
Maximum Conducted Output Power	ANSI C63.10-2020 Section 11.9.1.2 PKPM1 Peak power meter method or	
	ANSI C63.10-2020 Section 11.9.2.3.2 Method AVGPM-G	
Power Spectral Density	ANSI C63.10-2020 Section 11.10.2 Method PKPSD (peak PSD)	
6 dB Emission Bandwidth	ANSI C63.10-2020 Section 11.8.1	
99% Occupied Bandwidth	ANSI C63.10-2020 Section 6.9.3	
100kHz Bandwidth of Frequency Band Edge	ANSI C63.10-2020 Section 6.10	
Radiated emission	ANSI C63.10-2020 Section 11.11&11.12	
Duty Cycle	ANSI C63.10-2020 Section 11.6	

Report Template: TR-4-E-009/V1.2 Page 11 of 61





2.8 Measurement Equipment

Manufacturer	Description	Model	Management	Calibration	Calibration		
Wanuracturer	2000p	Wodei	No.	Date	Due Date		
AC Line Conducted Emission Test							
ROHDE&	EMI TEST	ESR	101817	2024/6/4	2025/6/3		
SCHWARZ	RECEIVER	_,,,,,,,			2227/2		
R&S	LISN	ENV216	101748	2024/6/4	2025/6/3		
N/A	Coaxial Cable	NO.12	N/A	2024/6/4	2025/6/3		
Farad	Test Software	EZ-EMC	Ver. EMEC-3A1	/	/		
		Radiated Emission	n Test				
R&S	EMI test receiver	ESR3	102758	2024/6/4	2025/6/3		
ROHDE&	SPECTRUM	FSV40-N	101608	2024/6/4	2025/6/3		
SCHWARZ	ANALYZER	1 3 7 40-14	101000	2024/0/4	2020/0/3		
SONOMA INSTRUMENT	Low frequency amplifier	310	186014	2024/6/4	2025/6/3		
A.H. Systems	PREAMPLIFIER	PAM-0118P	531	2024/6/4	2025/6/3		
COM-POWER	Amplifier	PAM-840A	461306	2024/8/7	2025/8/6		
BACL	Loop Antenna	1313-1A	4010611	2024/2/7	2027/2/6		
SCHWARZBECK	Log - periodic wideband antenna	VULB 9163	9163-872	2023/7/7	2026/7/6		
Astro Antenna Ltd	Horn antenna	AHA-118S	3015	2023/7/6	2026/7/5		
Ducommun technologies	Horn Antenna	ARH-4223-02	1007726-03	2023/7/10	2026/7/9		
Oulitong	Band Reject Filter	OBSF-2400-248 3.5-50N	OE02103119	2024/6/4	2025/6/3		
Unknown	6.7G High Pass Filter	Unknown	6.7G	2024/6/4	2025/6/3		
N/A	Coaxial Cable	NO.9	N/A	2024/6/4	2025/6/3		
N/A	Coaxial Cable	NO.13	N/A	2024/8/7	2025/8/6		
N/A	Coaxial Cable	NO.15	N/A	2024/6/4	2025/6/3		
N/A	Coaxial Cable	NO.16	N/A	2024/6/4	2025/6/3		
N/A	Coaxial Cable	NO.17	N/A	2024/6/4	2025/6/3		
Audix	Test Software	E3	191218 V9	/	/		
		RF Conducted	Test		•		
ROHDE&	SPECTRUM	FSV40	101419	2024/6/4	2025/6/3		
SCHWARZ	ANALYZER				3=3,3,0		
ANRITSU	USB Power Sensor	MA24418A	12620	2024/6/4	2025/6/3		
narda	6dB attenuator	603-06-1	N/A	2024/6/4	2025/6/3		

Note: All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or International standards.

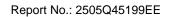
Report Template: TR-4-E-009/V1.2 Page 12 of 61



3 Test Results

3.1 Test Summary

FCC Rules	Description of Test	Result
§15.203	Antenna Requirement	Compliance
§15.207 (a)	AC Line Conducted Emissions	Compliance
§15.247(b)(3)	Maximum Conducted Output Power	Compliance
§15.247(e)	Power Spectral Density	Compliance
§15.247 (a)(2)	6 dB Emission Bandwidth	Compliance
-	99% Occupied Bandwidth	Report only
§15.247(d)	100kHz Bandwidth of Frequency Band Edge	Compliance
§15.205, §15.209, §15.247(d)	Radiated emission	Compliance
-	Duty Cycle	Report only





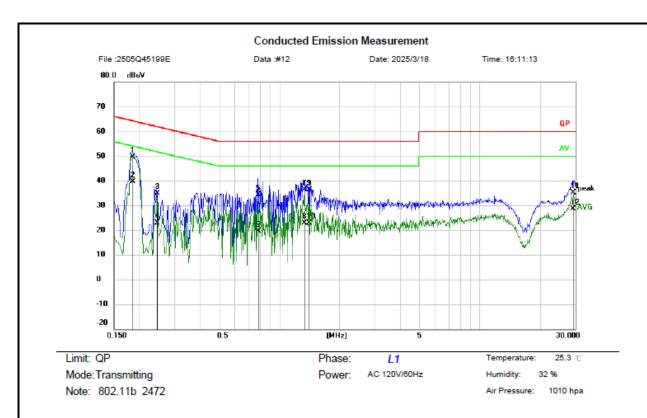
3.2 Limit

Test items	Limit
AC Line Conducted Emissions	See details §15.207 (a)
Conducted Output Power	For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt.
6dB Emission Bandwidth	The minimum 6 dB bandwidth shall be at least 500 kHz.
Power Spectral Density	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.
Spurious Emissions, 100kHz Bandwidth of Frequency Band Edge	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.205(c)).



3.3 AC Line Conducted Emissions Test Data

Test Date:	2025-03-18	Test By:	Ryan Zhang
Environment condition:	Temperature: 25.3°C; Relative	Humidity:32%; ATM Pr	essure: 101.0kPa

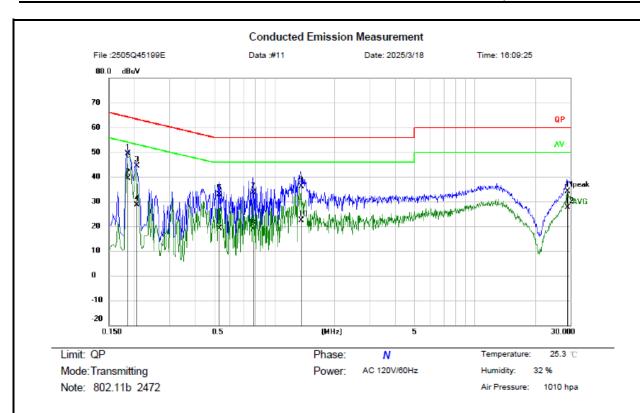


Receiver Setting: 0.15~30MHz: Pre-scan: RBW: 9kHz, DET: PK/AV; Final measure: RBW: 9kHz, DET: QP/AV

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over Limit		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1860	39.10	10.63	49.73	64.21	-14.48	QP	
2		0.1860	28.93	10.63	39.56	54.21	-14.65	AVG	
3		0.2460	24.32	10.67	34.99	61.89	-26.90	QP	
4		0.2460	12.32	10.67	22.99	51.89	-28.90	AVG	
5		0.7820	23.60	10.78	34.38	56.00	-21.62	QP	
6		0.7820	8.82	10.78	19.60	46.00	-26.40	AVG	
7		1.3300	25.57	10.90	36.47	56.00	-19.53	QP	
8		1.3300	12.01	10.90	22.91	46.00	-23.09	AVG	
9		1.4060	25.57	10.82	36.39	56.00	-19.61	QP	
10		1.4060	12.08	10.82	22.90	46.00	-23.10	AVG	
11		29.0860	23.75	11.36	35.11	60.00	-24.89	QP	
12		29.0860	17.34	11.36	28.70	50.00	-21.30	AVG	

*:Maximum data x:Over limit !:over margin Engineer Signature: Ryan





Receiver Setting: 0.15~30MHz: Pre-scan: RBW: 9kHz, DET: PK/AV; Final measure: RBW: 9kHz, DET: QP/AV

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over Limit		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1860	38.96	10.46	49.42	64.21	-14.79	QP	
2		0.1860	28.91	10.46	39.37	54.21	-14.84	AVG	
3		0.2060	33.86	10.47	44.33	63.37	-19.04	QP	
4		0.2060	18.26	10.47	28.73	53.37	-24.64	AVG	
5		0.5299	22.02	10.76	32.78	56.00	-23.22	QP	
6		0.5299	8.47	10.76	19.23	46.00	-26.77	AVG	
7		0.7820	23.04	10.58	33.62	56.00	-22.38	QP	
8		0.7820	8.26	10.58	18.84	46.00	-27.16	AVG	
9		1.3580	25.81	10.31	36.12	56.00	-19.88	QP	
10		1.3580	12.14	10.31	22.45	46.00	-23.55	AVG	
11		29.0580	22.80	11.28	34.08	60.00	-25.92	QP	
12		29.0580	16.44	11.28	27.72	50.00	-22.28	AVG	

*:Maximum data	x:Over limit	!:over margin	Engineer Signature:	Ryan
----------------	--------------	---------------	---------------------	------

Remark:

Measurement (dBuV)= Reading Level (dBuV) + Correct Factor(dB)

Correct Factor (dB)= LISN Voltage Division Factor (dB)+ Cable loss(dB)

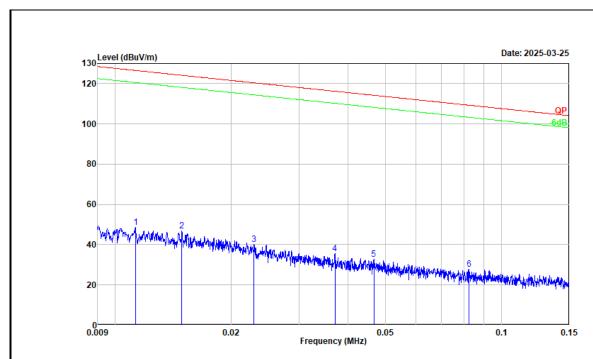
Over Limit= Measurement - Limit



3.4 Radiated emission Test Data

9 kHz-30MHz:

Test Date:	2025-03-25	Test By:	Luke Li
Environment condition:	Temperature: 22.9°C; Relative	Humidity:56%; ATM Pres	ssure: 100.3kPa



Project No. : 2505Q45199E-RF Test Mode : Transmitting Test Voltage : AC 120V/60Hz

Environment : 22.9℃/56%R.H./100.3kPa

Tested by : Luke Li Polarization : PARALLEL Remark : 802.11b 2472

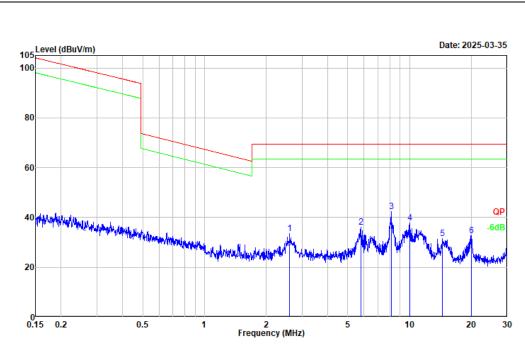
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
1	0.011	12.24	36.47	48.71	126.55	-77.84	Peak
2	0.015	12.53	34.18	46.71	124.15	-77.44	Peak
3	0.023	11.12	29.11	40.23	120.41	-80.18	Peak
4	0.037	12.33	23.15	35.48	116.23	-80.75	Peak
5	0.047	11.48	21.18	32.66	114.21	-81.55	Peak
6	0.082	11.66	16.21	27.87	109.28	-81.41	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain Result = Reading + Factor

Over Limit = Result - Limit
SA setting: RBW/VBW: 200Hz/1kHz, DET: PK

Report Template: TR-4-E-009/V1.2





Environment : 22.9℃/56%R.H./100.3kPa

Tested by : Luke Li Polarization : PARALLEL Remark : 802.11b 2472

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector	
1	2.594	36.56	-2.85	33.71	69.54	-35.83	Peak	
2	5.774	40.10	-4.04	36.06	69.54	-33.48	Peak	
3	8.127	46.07	-3.81	42.26	69.54	-27.28	Peak	
4	9.992	41.31	-3.41	37.90	69.54	-31.64	Peak	
5	14.479	35.11	-3.51	31.60	69.54	-37.94	Peak	
6	20.003	35.77	-3.08	32.69	69.54	-36.85	Peak	

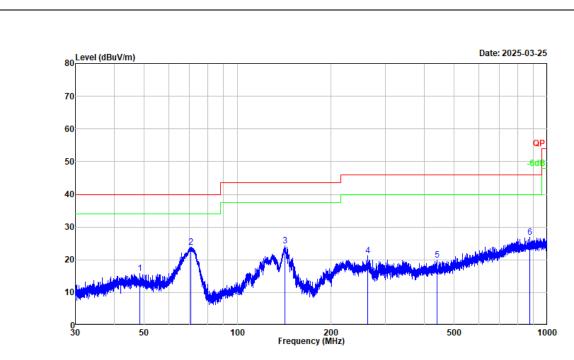
Remarks: Factor = Antenna factor + Cable loss - Preamp gain Result = Reading + Factor

Result = Reading + Factor
Over Limit = Result - Limit
SA setting: RBW/VBW: 9kHz/30kHz, DET: PK



30MHz-1GHz:

Test Date:	2025-03-25	Test By:	Luke Li
Environment condition:	Temperature: 22.9°C; Relative	Humidity:56%; ATM F	ressure: 100.3kPa



Project No. : 2505Q45199E-RF Test Mode : Transmitting Test Voltage : AC 120V/60Hz

 ${\tt Environment} \ : \ 22.9\,{\tt ^C/56\%R.H./100.3kPa}$

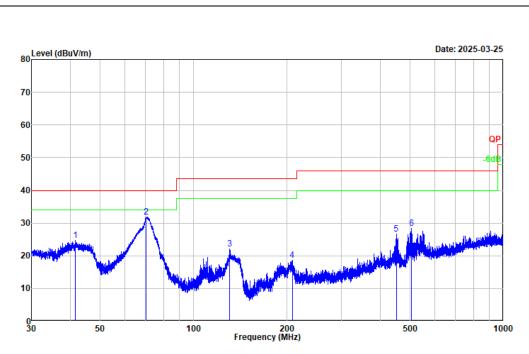
Tested by : Luke Li Polarization : horizontal Remark : 802.11b 2472

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	48.395	27.81	-12.08	15.73	40.00	-24.27	Peak
2	70.615	40.47	-16.52	23.95	40.00	-16.05	Peak
3	142.200	41.78	-17.48	24.30	43.50	-19.20	Peak
4	263.126	33.28	-12.09	21.19	46.00	-24.81	Peak
5	439.425	28.23	-8.27	19.96	46.00	-26.04	Peak
6	877.552	28.60	-1.69	26.91	46.00	-19.09	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain Result = Reading + Factor

Over Limit = Result - Limit
SA setting: Pre-scan: RBW/VBW: 100kHz/300kHz, DET: PK
Final measure: RBW: 120kHz, DET: QP





Environment : 22.9℃/56%R.H./100.3kPa

Tested by : Luke Li Polarization : vertical : 802.11b 2472 Remark

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
1	41.567	37.24	-12.53	24.71	40.00	-15.29	Peak
2	70.429	48.34	-16.44	31.90	40.00	-8.10	Peak
3	131.067	39.29	-17.17	22.12	43.50	-21.38	Peak
4	208.215	32.45	-13.78	18.67	43.50	-24.83	Peak
5	450.937	35.02	-8.27	26.75	46.00	-19.25	Peak
6	505.149	35.65	-7.23	28.42	46.00	-17.58	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain Result = Reading + Factor

Over Limit = Result - Limit
SA setting: Pre-scan: RBW/VBW: 100kHz/300kHz, DET: PK
Final measure: RBW: 120kHz, DET: QP





Above 1GHz:

Test Date:	2025-03-06~2025-04-10	Test By:	Bard Huang, Luke Li
Environment condition:	Temperature: 22.5~22.9°C; Re ATM Pressure: 100.3~101.5kP	, ,	

Frequency (MHz)	Reading level (dBµV)	Polar	Corrected Factor (dB/m)	Corrected Amplitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Remark	
			802.1	1b				
			Low Cha	annel				
4824.000	54.17	horizontal	-2.29	51.88	74.00	-22.12	Peak	
4824.000	55.98	vertical	-2.29	53.69	74.00	-20.31	Peak	
2228.000	54.34	horizontal	-3.19	51.15	74.00	-22.85	Peak	
1594.000	54.54	vertical	-4.26	50.28	74.00	-23.72	Peak	
Middle Channel								
4884.000	49.65	horizontal	-1.84	47.81	74.00	-26.19	Peak	
4884.000	52.63	vertical	-1.84	50.79	74.00	-23.21	Peak	
1594.000	52.18	horizontal	-4.26	47.92	74.00	-26.08	Peak	
1596.000	56.07	vertical	-4.24	51.83	74.00	-22.17	Peak	
			High Ch	annel			T	
4944.000	49.59	horizontal	-1.70	47.89	74.00	-26.11	Peak	
4944.000	51.01	vertical	-1.70	49.31	74.00	-24.69	Peak	
1599.000	51.76	horizontal	-4.22	47.54	74.00	-26.46	Peak	
1593.000	53.87	vertical	-4.27	49.60	74.00	-24.40	Peak	
			802.1	1g				
			Low Ch	annel			T	
4824.000	49.43	horizontal	-2.29	47.14	74.00	-26.86	Peak	
4824.000	50.95	vertical	-2.29	48.66	74.00	-25.34	Peak	
1596.000	52.89	horizontal	-4.24	48.65	74.00	-25.35	Peak	
1596.000	56.93	vertical	-4.24	52.69	74.00	-21.31	Peak	
			Middle C	hannel				
4884.000	49.30	horizontal	-1.84	47.46	74.00	-26.54	Peak	
4884.000	48.74	vertical	-1.84	46.90	74.00	-27.10	Peak	
		,	High Ch	annel	,			
4944.000	48.57	horizontal	-1.70	46.87	74.00	-27.13	Peak	
4944.000	48.47	vertical	-1.70	46.77	74.00	-27.23	Peak	
1595.000	55.38	horizontal	-4.25	51.13	74.00	-22.87	Peak	
1658.000	53.10	vertical	-3.81	49.29	74.00	-24.71	Peak	
			802.11	n20				

Report Template: TR-4-E-009/V1.2 Page 21 of 61



	Low Channel									
4824.000	49.21	horizontal	74.00	-27.08	Peak					
4824.000	49.49	vertical	-2.29	47.20	74.00	-26.80	Peak			
1598.000	53.37	horizontal	-4.23	49.14	74.00	-24.86	Peak			
1597.000	55.65	vertical	-4.23	51.42	74.00	-22.58	Peak			
			Middle C	hannel						
4884.000	48.78	horizontal	-1.84	46.94	74.00	-27.06	Peak			
4884.000	48.92	vertical	-1.84	47.08	74.00	-26.92	Peak			
1593.000	52.11	horizontal	-4.27	47.84	74.00	-26.16	Peak			
1599.000	52.33	vertical	-4.22	48.11	74.00	-25.89	Peak			
2127.000	55.30	vertical	-3.97	51.33	74.00	-22.67	Peak			
			High Ch	annel						
4944.000	48.20	horizontal	-1.70	46.50	74.00	-27.50	Peak			
4944.000	47.89	vertical	-1.70	46.19	74.00	-27.81	Peak			
2130.000	53.05	horizontal	-3.96	49.09	74.00	-24.91	Peak			
1595.000	55.66	vertical	-4.25	51.41	74.00	-22.59	Peak			

Remark:

Corrected Amplitude= Reading level + corrected Factor

Corrected Factor = Antenna factor + Cable loss – Amplifier gain

Margin = Corrected Amplitude – Limit

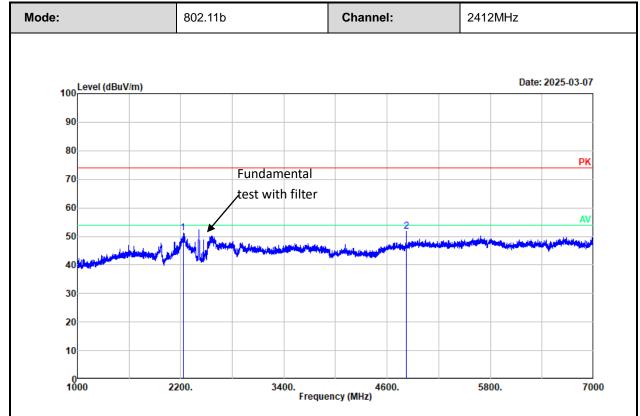
For the test result of Peak below the Peak limit more than 20dB, which can compliance with the average limit, just the Peak level was recorded.

The emission levels of other frequencies that were lower than the limit 20dB not show in test report.

For emissions in 18GHz-25GHz range, all emissions were investigated and in the noise floor level.



Test plot for worst case as below:



Project No. : 2505Q45199E Test Mode : Transmitting Test Voltage : AC 120V/60Hz

Environment : 22.5° C/56%R.H./101.5kPa

Tested by : Bard Huang Polarization : horizontal : 802.11b 2412 Remark

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)		Over Limit (dB)	Detector
1	2228.000	54.34	-3.19	51.15	74.00	-22.85	Peak
2	4824.000	54.17	-2.29	51.88	74.00	-22.12	Peak

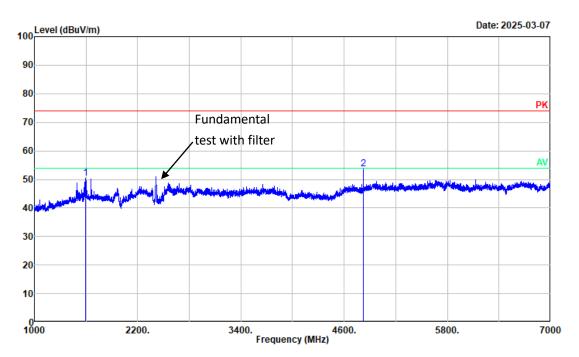
Remarks: Factor = Antenna factor + Cable loss - Preamp gain Result = Reading + Factor

Over Limit = Result - Limit

SA setting: Peak: RBW/VBW: 1MHz/3MHz, DET: PK Average: RBW/VBW: 1MHz/1kHz, DET: PK







Environment : 22.5° C/56%R.H./101.5kPa

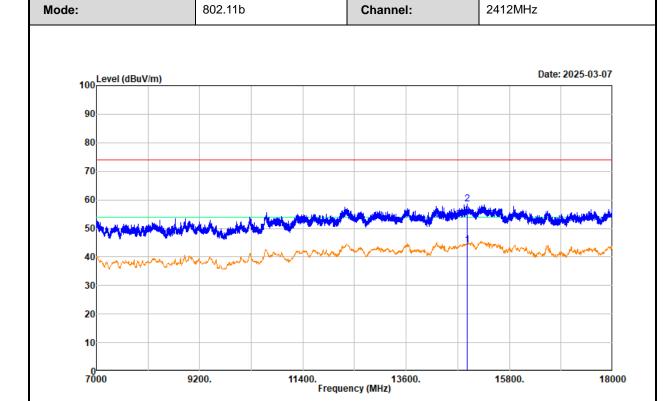
Tested by : Bard Huang Polarization : vertical Remark : 802.11b 2412

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)		Over Limit (dB)	Detector
1	1594.000	54.54	-4.26	50.28	74.00	-23.72	Peak
2	4824.000	55.98	-2.29	53.69	74.00	-20.31	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain

Result = Reading + Factor





Environment : 22.5° C/56%R.H./101.5kPa

Tested by : Bard Huang Polarization : horizontal Remark : 802.11b 2412

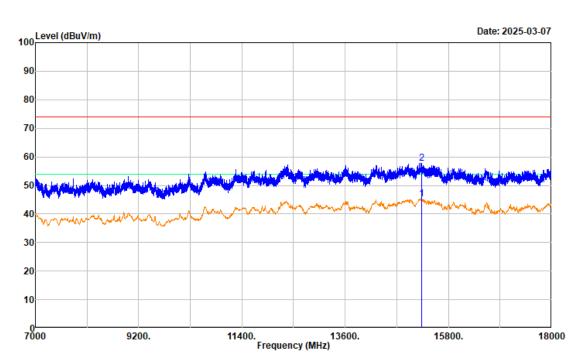
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
1	14896.000	37.55	6.53	44.08	54.00	-9.92	Average
2	14896.000	52.05	6.53	58.58	74.00	-15.42	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain

Result = Reading + Factor







Environment : $22.5\,^{\circ}$ C/56%R.H./101.5kPa Tested by : Bard Huang Polarization : vertical Remark : 802.11b 2412

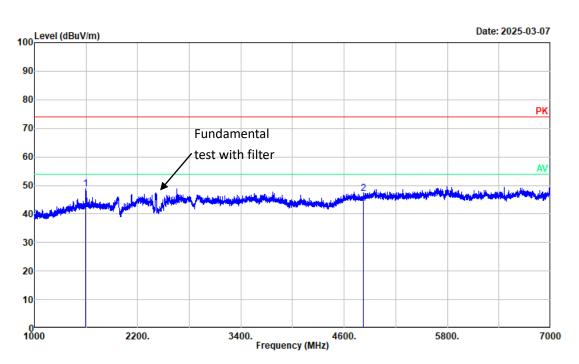
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	15228.000	39.02	6.26	45.28	54.00	-8.72	Average
2	15228.000	51.52	6.26	57.78	74.00	-16.22	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain

Result = Reading + Factor







Environment : 22.5° C/56%R.H./101.5kPa

Tested by : Bard Huang Polarization : horizontal Remark : 802.11g 2412

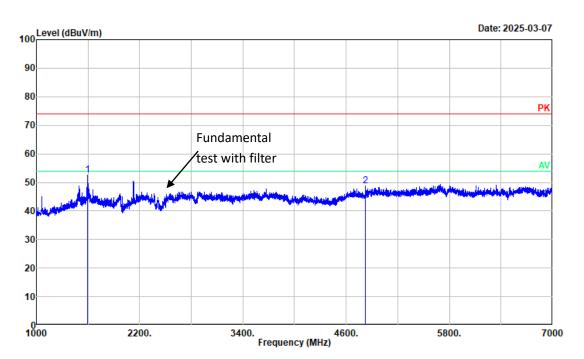
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector	
1	1596.000	52.89	-4.24	48.65	74.00	-25.35	Peak	
2	4824.000	49.43	-2.29	47.14	74.00	-26.86	Peak	

Remarks: Factor = Antenna factor + Cable loss - Preamp gain

Result = Reading + Factor







Environment : 22.5° C/56%R.H./101.5kPa

Tested by : Bard Huang Polarization : vertical Remark : 802.11g 2412

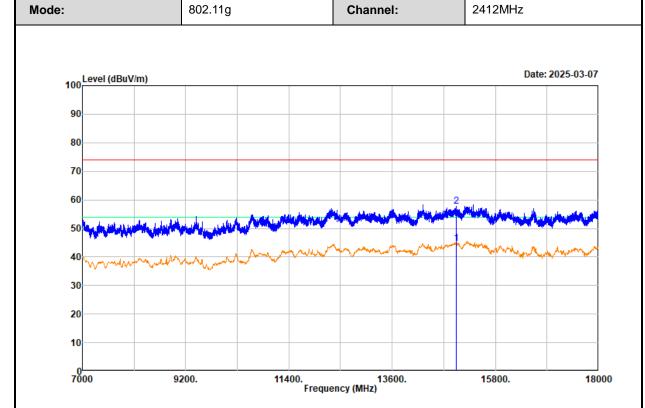
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector	
1	1596.000	56.93	-4.24	52.69	74.00	-21.31	Peak	
2	4824.000	50.95	-2.29	48.66	74.00	-25.34	Peak	

Remarks: Factor = Antenna factor + Cable loss - Preamp gain

Result = Reading + Factor Over Limit = Result - Limit

SA setting: Peak: RBW/VBW: 1MHz/3MHz, DET: PK
Average: RBW/VBW: 1MHz/1kHz, DET: PK





Environment : 22.5° C/56%R.H./101.5kPa

Tested by : Bard Huang Polarization : horizontal Remark : 802.11g 2412

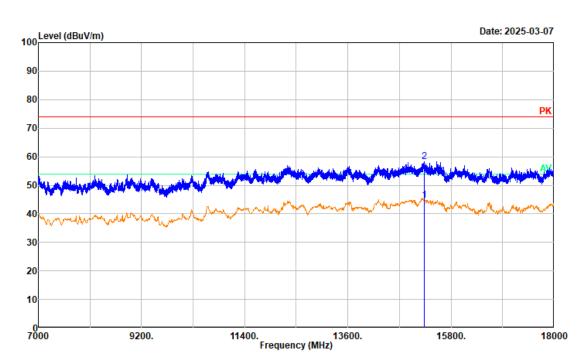
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector	
1	14965.000	38.16	6.60	44.76	54.00	-9.24	Average	
2	14965.000	51.24	6.60	57.84	74.00	-16.16	Peak	

Remarks: Factor = Antenna factor + Cable loss - Preamp gain

Result = Reading + Factor







Environment : $22.5^{\circ}/56\%R.H./101.5kPa$

Tested by : Bard Huang Polarization : vertical Remark : 802.11g 2412

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
1 2	15227.000	38.58	6.26	44.84	54.00	-9.16	Average
	15227.000	52.04	6.26	58.30	74.00	-15.70	Peak

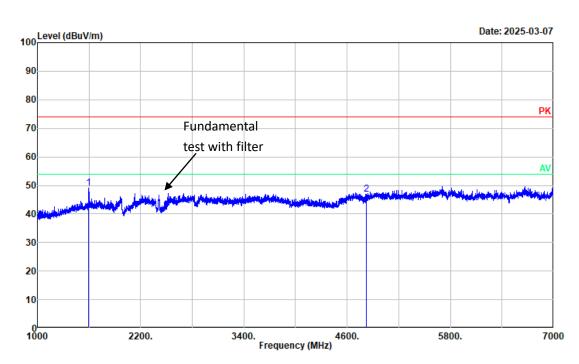
Remarks: Factor = Antenna factor + Cable loss - Preamp gain

Result = Reading + Factor Over Limit = Result - Limit
SA setting: Peak: RBW/VBW: 1MHz/3MHz, DET: PK

Average: RBW/VBW: 1MHz/1kHz, DET: PK







Environment : 22.5° C/56%R.H./101.5kPa

Tested by : Bard Huang Polarization : horizontal Remark : 802.11n 2412

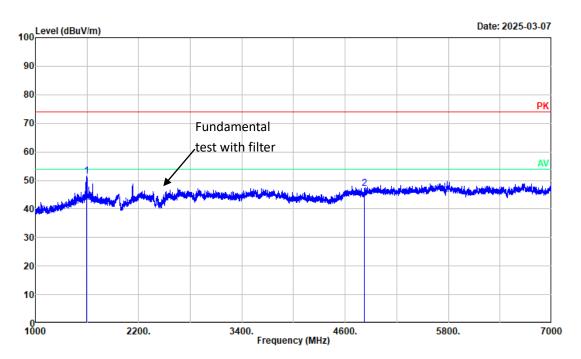
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector	
1	1598.000	53.37	-4.23	49.14	74.00	-24.86	Peak	_
2	4824.000	49.21	-2.29	46.92	74.00	-27.08	Peak	

Remarks: Factor = Antenna factor + Cable loss - Preamp gain

Result = Reading + Factor







Environment : 22.5° C/56%R.H./101.5kPa

Tested by : Bard Huang Polarization : vertical Remark : 802.11n 2412

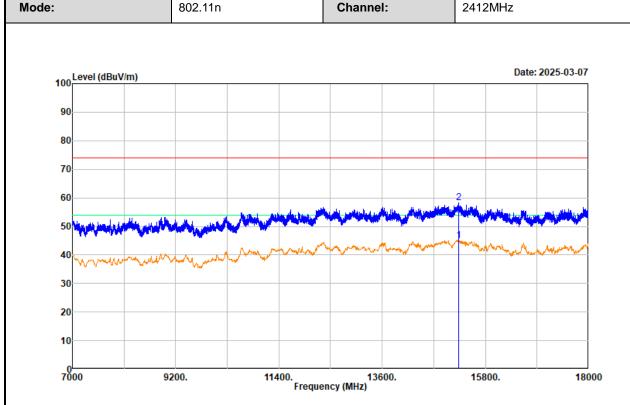
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
1	1597.000	55.65	-4.23	51.42	74.00	-22.58	Peak
2	4824.000	49.49	-2.29	47.20	74.00	-26.80	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain

Result = Reading + Factor Over Limit = Result - Limit

SA setting: Peak: RBW/VBW: 1MHz/3MHz, DET: PK
Average: RBW/VBW: 1MHz/1kHz, DET: PK





Environment : 22.5° C/56%R.H./101.5kPa

Tested by : Bard Huang Polarization : horizontal : 802.11n 2412 Remark

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	15222.000	38.77	6.27	45.04	54.00	-8.96	Average
2	15222.000	51.92	6.27	58.19	74.00	-15.81	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain Result = Reading + Factor

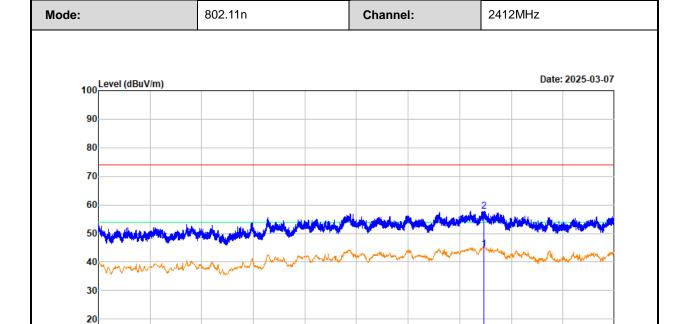
15800.

18000



10

7000



Project No. : 2505Q45199E Test Mode : Transmitting Test Voltage : AC 120V/60Hz

9200.

Environment : $22.5\,^{\circ}$ C/56%R.H./101.5kPa Tested by : Bard Huang Polarization : vertical Remark : 802.11n 2412

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
1	15215.000	38.10	6.27	44.37	54.00	-9.63	Average
2	15215.000	51.50	6.27	57.77	74.00	-16.23	Peak

11400. Frequency (MHz)

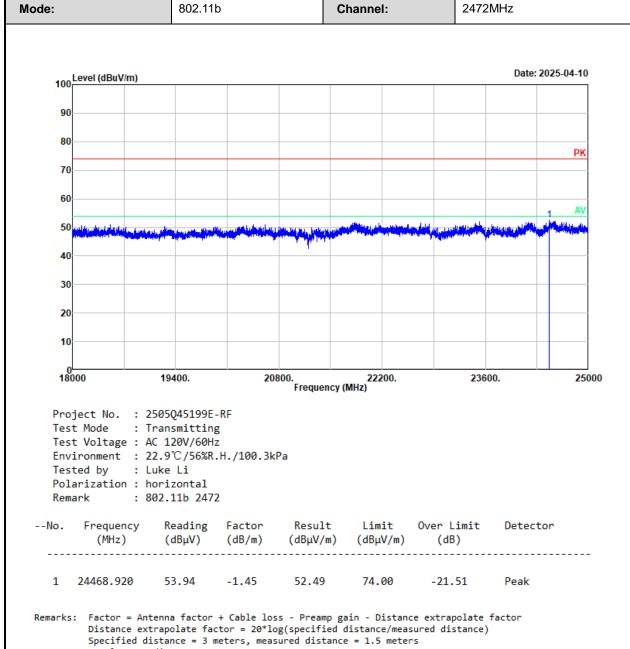
13600.

Remarks: Factor = Antenna factor + Cable loss - Preamp gain

Result = Reading + Factor Over Limit = Result - Limit
SA setting: Peak: RBW/VBW: 1MHz/3MHz, DET: PK

Average: RBW/VBW: 1MHz/1kHz, DET: PK

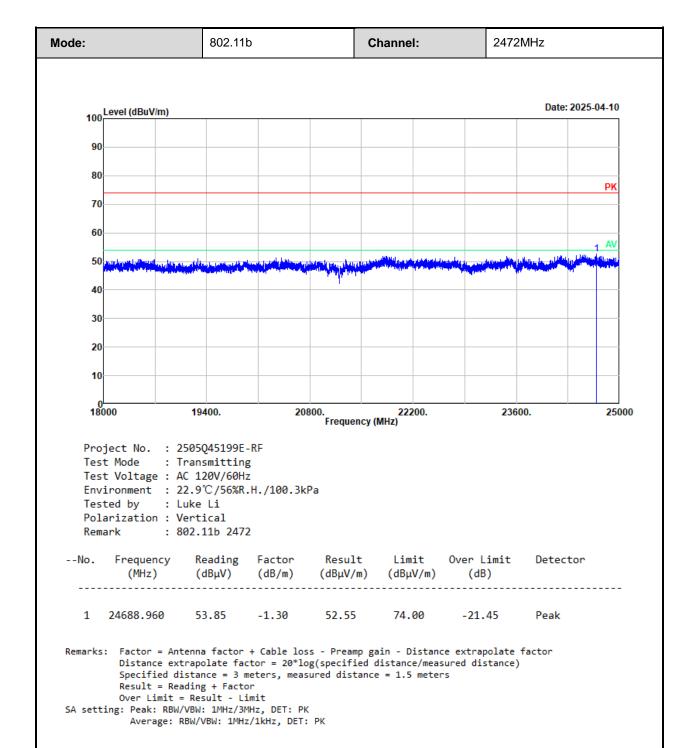




Result = Reading + Factor
Over Limit = Result - Limit

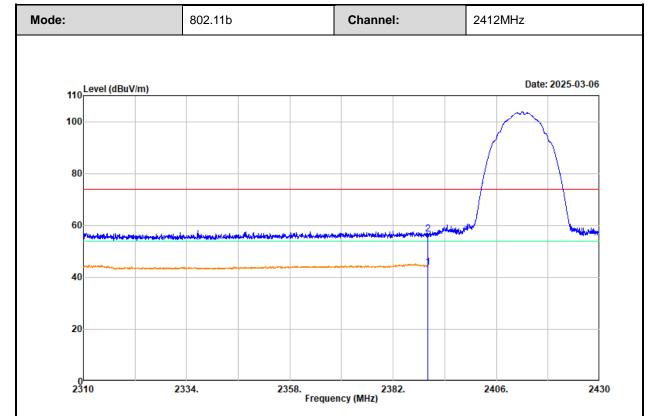
SA setting: Peak: RBW/VBW: 1MHz/3MHz, DET: PK
Average: RBW/VBW: 1MHz/1kHz, DET: PK







Radiated Band edge:



Project No. : 2505Q45199E Test Mode : Transmitting Test Voltage : AC 120V/60Hz

Environment : $22.5\,^{\circ}$ C/56%R.H./101.5kPa Tested by : Bard Huang Polarization : horizontal : 802.11b 2412 Remark

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1 2	2389.980	36.76	7.00	43.76	54.00	-10.24	Average
	2389.980	49.75	7.00	56.75	74.00	-17.25	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain Result = Reading + Factor

Over Limit = Result - Limit SA setting: Peak: RBW/VBW: 1MHz/3MHz, DET: PK Average: RBW/VBW: 1MHz/1kHz, DET: PK

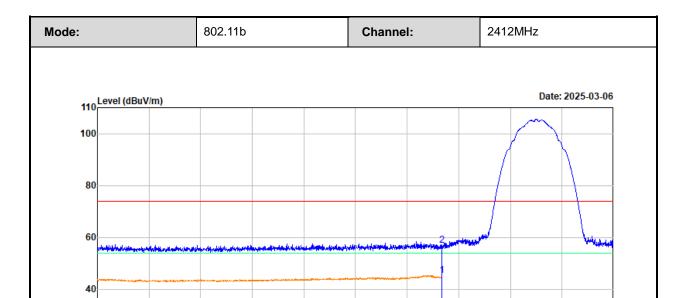
2406.

2430



20

2310



Project No. : 2505Q45199E Test Mode : Transmitting Test Voltage : AC 120V/60Hz

2334.

Environment : $22.5\,^{\circ}\text{C}/56\%\text{R.H.}/101.5\text{kPa}$ Tested by : Bard Huang Polarization : vertical Remark : 802.11b 2412

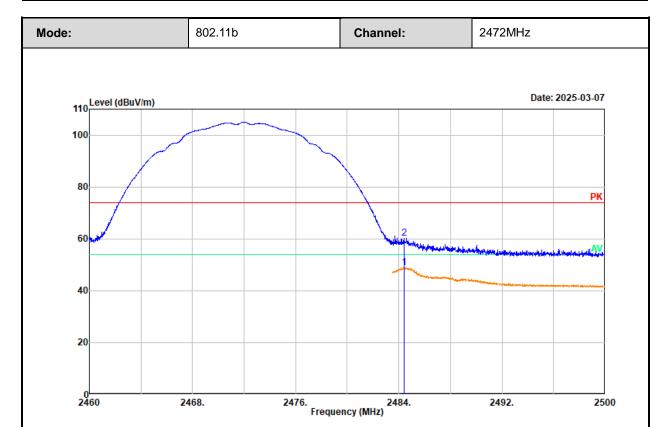
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
1 2	2389.980	38.27	7.00	45.27	54.00	-8.73	Average
	2389.980	49.84	7.00	56.84	74.00	-17.16	Peak

2358. Frequency (MHz)

2382.

Remarks: Factor = Antenna factor + Cable loss - Preamp gain





Environment : 22.5° C/56%R.H./101.5kPa

Tested by : Bard Huang Polarization : horizontal Remark : 802.11b 2472

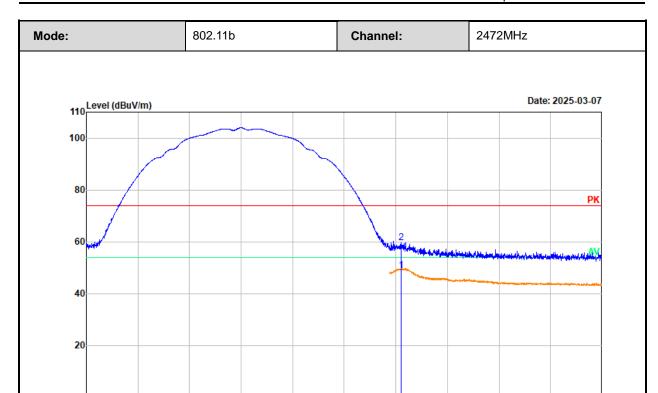
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
1	2484.400	41.67	7.20	48.87	54.00	-5.13	Average
2	2484.400	53.00	7.20	60.20	74.00	-13.80	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain

Result = Reading + Factor

Over Limit = Result - Limit
SA setting: Peak: RBW/VBW: 1MHz/3MHz, DET: PK
Average: RBW/VBW: 1MHz/1kHz, DET: PK





2460

Environment : 22.5° C/56%R.H./101.5kPa

2468.

Tested by : Bard Huang Polarization : vertical Remark : 802.11b 2472

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
1	2484.420	41.82	7.20	49.02	54.00	-4.98	Average
2	2484.420	52.34	7.20	59.54	74.00	-14.46	Peak

2476. Frequency (MHz)

2484.

2492.

2500

Remarks: Factor = Antenna factor + Cable loss - Preamp gain

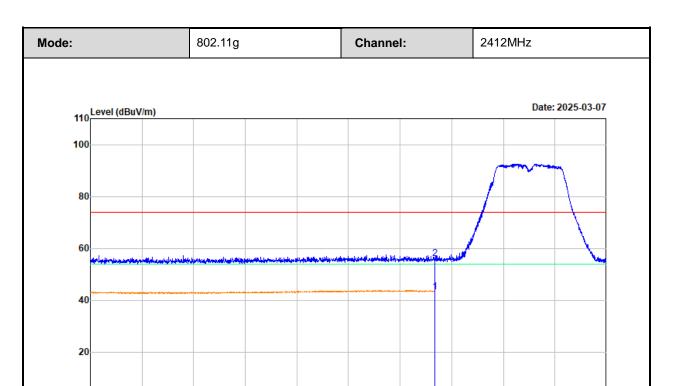
Result = Reading + Factor

Over Limit = Result - Limit
SA setting: Peak: RBW/VBW: 1MHz/3MHz, DET: PK
Average: RBW/VBW: 1MHz/1kHz, DET: PK

2406.

2430





Project No. : 2505Q45199E Test Mode : Transmitting Test Voltage : AC 120V/60Hz

2310

Environment : 22.5° C/56%R.H./101.5kPa

2334.

Tested by : Bard Huang Polarization : horizontal Remark : 802.11g 2412

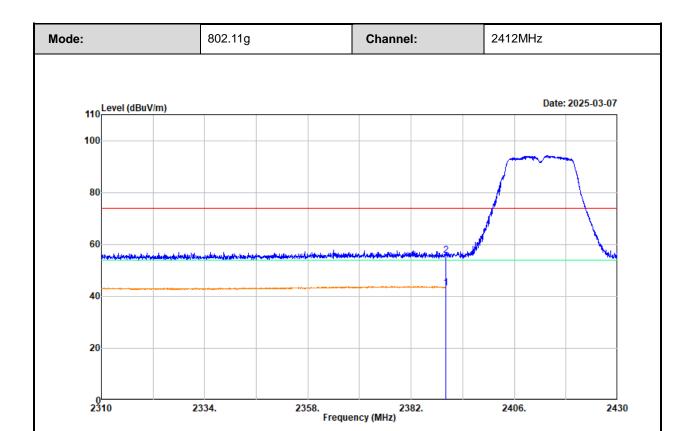
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2389.980	36.36	7.00	43.36	54.00	-10.64	Average
1	2309.900	30.30	7.00	43.30	34.00	-10.04	Average
2	2389.980	48.92	7.00	55.92	74.00	-18.08	Peak

2358. Frequency (MHz)

2382.

Remarks: Factor = Antenna factor + Cable loss - Preamp gain





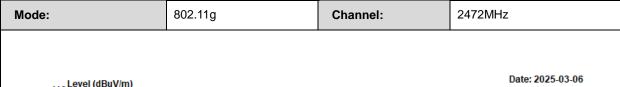
Environment : $22.5\,^{\circ}\text{C}/56\%\text{R.H.}/101.5\text{kPa}$ Tested by : Bard Huang

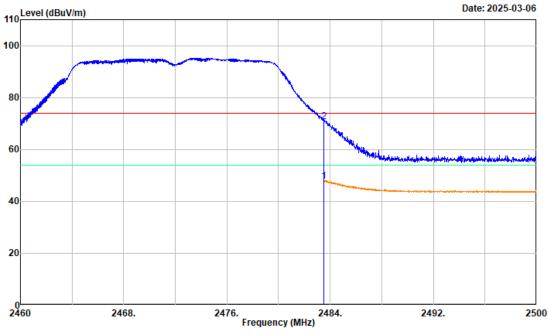
Polarization : vertical Remark : 802.11g 2412

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1 2	2389.980	36.30	7.00	43.30	54.00	-10.70	Average
	2389.980	48.83	7.00	55.83	74.00	-18.17	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain







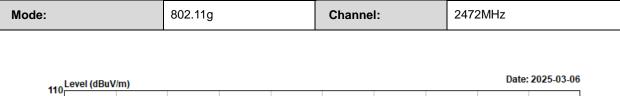
Environment : $22.5\,^{\circ}\text{C}/56\%\text{R.H.}/101.5\text{kPa}$ Tested by : Bard Huang

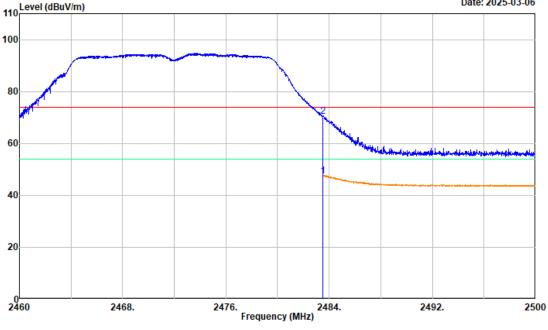
Polarization : horizontal Remark : 802.11g 2472

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2483.500	40.41	7.20	47.61	54.00	-6.39	Average
2	2483.500	63.52	7.20	70.72	74.00	-3.28	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain





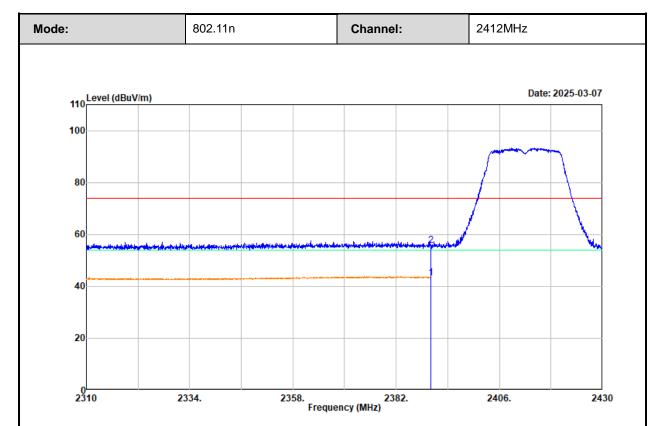


Environment : $22.5\,^{\circ}\text{C}/56\%\text{R.H.}/101.5\text{kPa}$ Tested by : Bard Huang

Polarization : vertical Remark : 802.11g 2472

Remarks: Factor = Antenna factor + Cable loss - Preamp gain





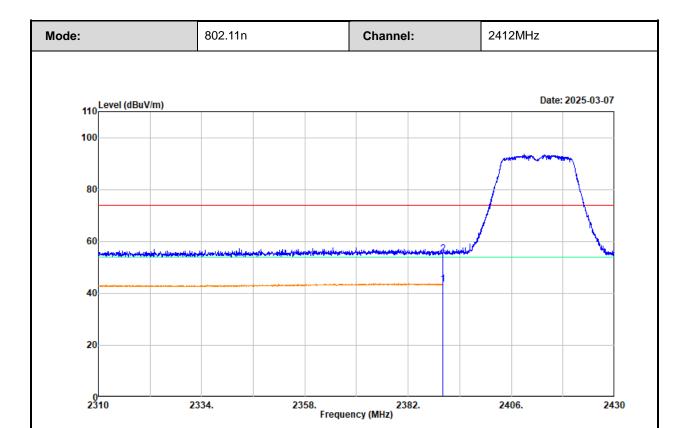
Environment : 22.5° C/56%R.H./101.5kPa

Tested by : Bard Huang Polarization : horizontal Remark : 802.11n 2412

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
1	2200 000	36 45	7.00	42.45	E4 00	10.05	A
1	2389.980	36.15	7.00	43.15	54.00	-10.85	Average
2	2389.980	48.87	7.00	55.87	74.00	-18.13	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain





Environment : $22.5\,^{\circ}\text{C}/56\%\text{R.H.}/101.5\text{kPa}$ Tested by : Bard Huang

Polarization : vertical Remark : 802.11n 2412

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
1 2	2389.980	36.44	7.00	43.44	54.00	-10.56	Average
	2389.980	48.18	7.00	55.18	74.00	-18.82	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain

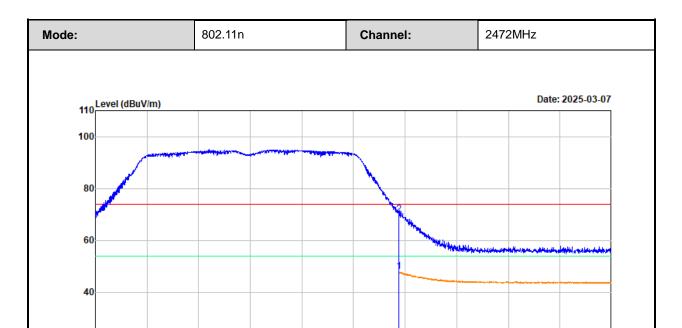
2492.

2500



20

2460



Project No. : 2505Q45199E Test Mode : Transmitting Test Voltage : AC 120V/60Hz

Environment : $22.5\,^{\circ}\text{C}/56\%\text{R.H.}/101.5\text{kPa}$ Tested by : Bard Huang

2468.

Polarization : horizontal Remark : 802.11n 2472

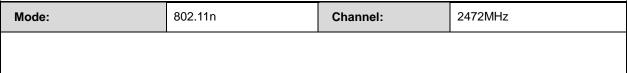
No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Over Limit (dB)	Detector
1	2483.500	40.88	7.20	48.08	54.00	-5.92	Average
2	2483.500	62.98	7.20	70.18	74.00	-3.82	Peak

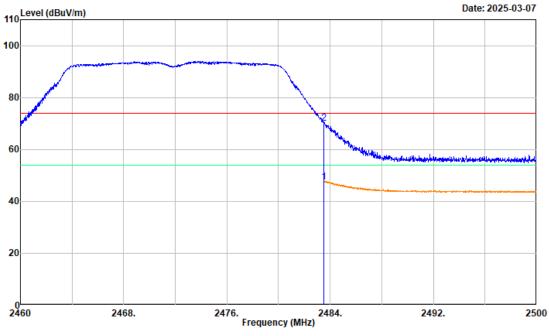
2476. Frequency (MHz)

2484.

Remarks: Factor = Antenna factor + Cable loss - Preamp gain







Environment : $22.5\,^{\circ}\text{C}/56\%\text{R.H.}/101.5\text{kPa}$ Tested by : Bard Huang Polarization : vertical Remark : 802.11n 2472

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBμV/m)	Over Limit (dB)	Detector
1	2483.500	40.34	7.20	47.54	54.00	-6.46	Average
2	2483.500	62.97	7.20	70.17	74.00	-3.83	Peak

Remarks: Factor = Antenna factor + Cable loss - Preamp gain



3.5 RF Conducted Test Data

Test Date:	2025-03-14	Test By:	Ryan Zhang	
Environment condition:	Temperature: 23.6°C;RelativeHumidity:60%; ATM Pressure: 100.8kPa			

3.5.1 6dB Emission Bandwidth

Mode	Test Frequency	Result	Limit	Verdict	
	(MHz)	(MHz)	(MHz)		
	2412	9.209	≥0.5	Pass	
802.11b	2442	9.209	≥0.5	Pass	
	2472	9.209	≥0.5	Pass	
802.11g	2412	16.497	≥0.5	Pass	
	2442	16.497	≥0.5	Pass	
	2472	16.497	≥0.5	Pass	
802.11n20	2412	17.778	≥0.5	Pass	
	2442	17.738	≥0.5	Pass	
	2472	17.778	≥0.5	Pass	

3.5.2 99% Occupied Bandwidth

Mode	Test Frequency	99% OBW	
Wiode	(MHz)	(MHz)	
	2412	14.080	
802.11b	2442	14.080	
	2472	14.080	
802.11g	2412	16.640	
	2442	16.600	
	2472	16.600	
802.11n20	2412	17.840	
	2442	17.800	
	2472	17.800	

Report Template: TR-4-E-009/V1.2 Page 49 of 61



3.5.3 Maximum Conducted Peak Output Power

Mode	Test Frequency (MHz)	Peak Output Power(dBm)	Limit (dBm)	Verdict
802.11b	2412	17.12	30	Pass
	2442	17.33	30	Pass
	2472	17.47	30	Pass
802.11g	2412	12.55	30	Pass
	2442	12.84	30	Pass
	2472	13.05	30	Pass
802.11n20	2412	11.27	30	Pass
	2442	11.51	30	Pass
	2472	11.70	30	Pass

3.5.4 Power Spectral Density

Mode	Test Frequency (MHz)	Result (dBm/3kHz)	Limit (dBm/3kHz)	Verdict	
	2412	-15.88	8	Pass	
802.11b	2442	-15.62	8	Pass	
	2472	-15.47	8	Pass	
802.11g	2412	-26.49	8	Pass	
	2442	-26.15	8	Pass	
	2472	-25.92	8	Pass	
	2412	-26.73	8	Pass	
802.11n20	2442	-26.36	8	Pass	
	2472	-26.17	8	Pass	

3.5.5 100 kHz Bandwidth of Frequency Band Edge

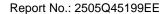
Mode	Mode Test Frequency (MHz)		Limit (dB)	Verdict
002.115	2412	47.08	20	Pass
802.11b	2472	48.34	20	Pass
802.11g	2412	30.06	20	Pass
	2472	30.45	20	Pass
802.11n20	2412	31.59	20	Pass
	2472	29.02	20	Pass



3.5.6 Duty Cycle

.Mode	Test Frequency (MHz)	Ton (ms)	Ton+Toff (ms)	Duty Cycle (%)	Duty Cycle Factor(dB)	1/Ton (Hz)	VBW Setting (kHz)
802.11b	2442	100	100	100	0	NA	0.010
802.11g	2442	100	100	100	0	NA	0.010
802.11n20	2442	100	100	100	0	NA	0.010

Duty Cycle = Ton/(Ton+Toff)*100%



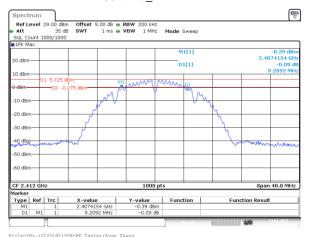


Test Plots:

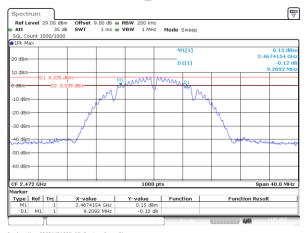
6 dB Emission Bandwidth:

2412~2472

802.11b_2412MHz

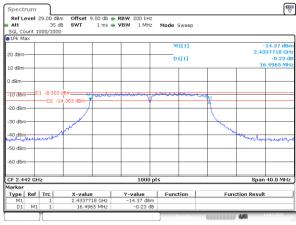


802.11b_2472MHz



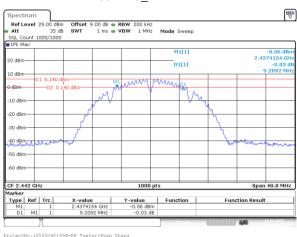
ProjectNo.:2505Q45199B-RF Tester:Ryan Zhang Date: 14.MAR.2025 16:05:01

802.11g_2442MHz

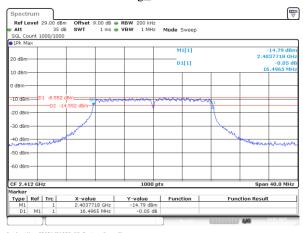


Date: 14.MAR.2025 16:13:52

802.11b_2442MHz

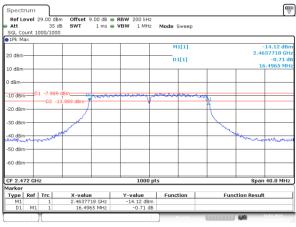


802.11g_2412MHz



ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang Date: 14.MAR.2025 16:10:37

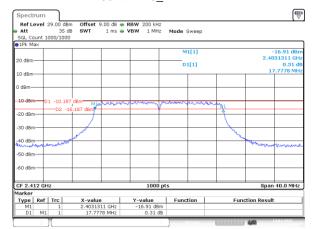
802.11g_2472MHz



Date: 14.MAR.2025 16:16:40

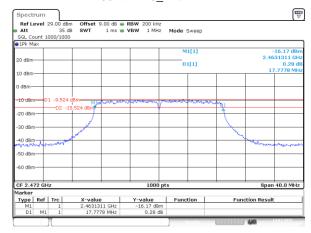


802.11n20_2412MHz



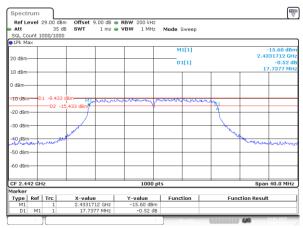
ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang

802.11n20_2472MHz

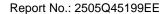


ProjectNo.:2505Q45199B-RF Tester:Ryan Zhang Date: 14.MAR.2025 16:33:03

802.11n20_2442MHz



ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang

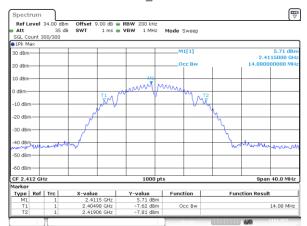




99% Occupied Bandwidth:

2412~2472

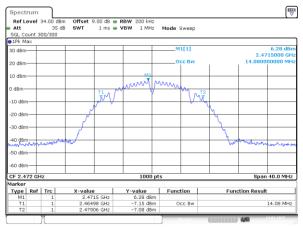
802.11b_2412MHz



ProjectNo.:2505Q45199B-RF Tester:Ryan Zhang

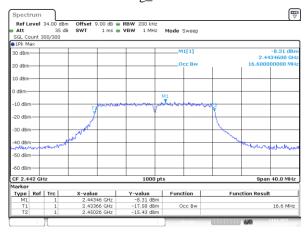
Date: 14.MAR.2025 15:57:05

802.11b_2472MHz



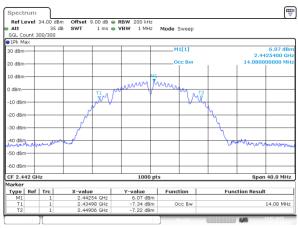
ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang

802.11g_2442MHz



ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang Date: 14.MAR.2025 16:14:16

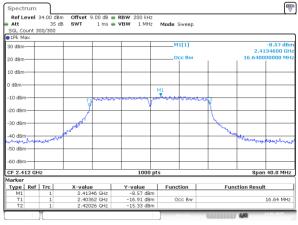
802.11b_2442MHz



ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang

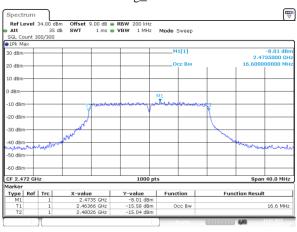
Date: 14.MAR.2025 16:02:17

802.11g_2412MHz



ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang

802.11g_2472MHz

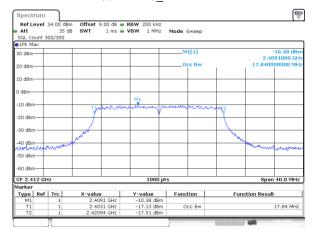


ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang

Date: 14.MAR.2025 16:17:04



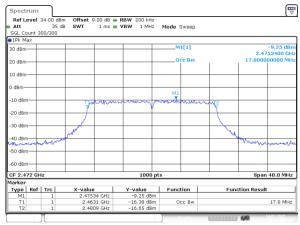
802.11n20_2412MHz



ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang

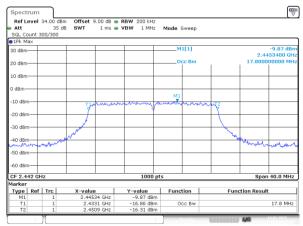
Date: 14.MAR.2025 16:26:05

802.11n20_2472MHz

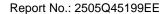


ProjectNo.:2505Q45199B-RF Tester:Ryan Zhang Date: 14.MAR.2025 16:33:29

802.11n20_2442MHz



ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang

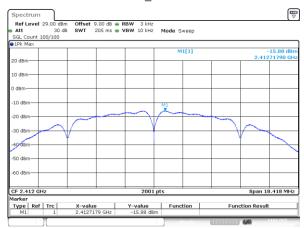




Power Spectral Density:

2412~2472

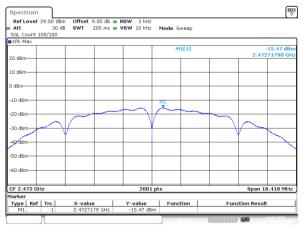
802.11b_2412MHz



ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang

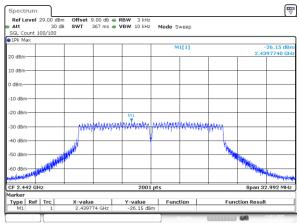
Date: 14.MAR.2025 15:59:47

802.11b_2472MHz



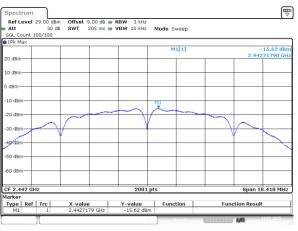
ProjectNo.:2505045199E-RF Tester:Rvan Zhang

802.11g_2442MHz



ProjectNo.:2505Q45199B-RF Tester:Ryan Zhang Date: 14.MAR.2025 16:15:17

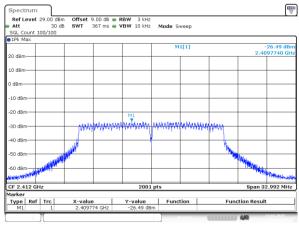
802.11b_2442MHz



ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang

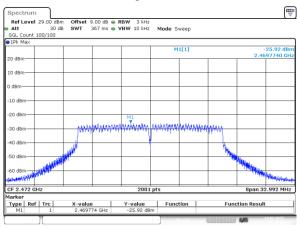
Date: 14.MAR.2025 16:02:58

802.11g_2412MHz



ProjectNo.:2505045199E-RF Tester:Rvan Zhang

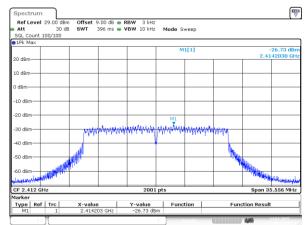
802.11g_2472MHz



ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang Date: 14.MAR.2025 16:18:32

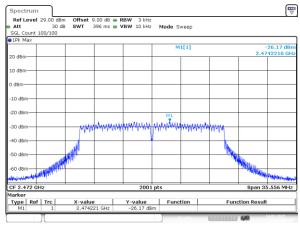


802.11n20_2412MHz



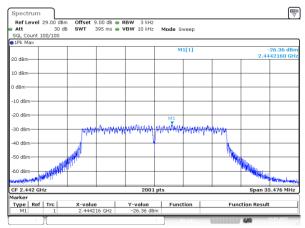
ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang

802.11n20_2472MHz

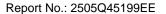


ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang Date: 14.MAR.2025 16:35:01

802.11n20_2442MHz



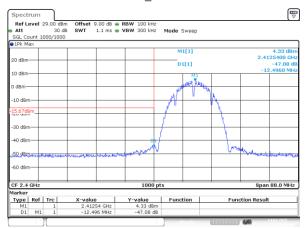
ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang





100kHz Bandwidth of Frequency Band Edge: 2412~2472

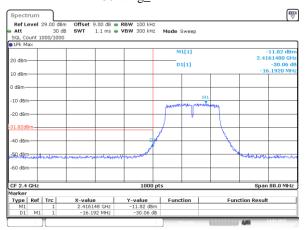
802.11b_2412MHz



ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang

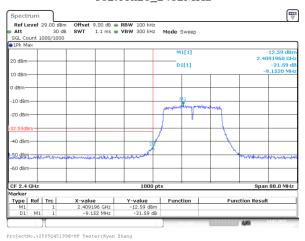
Date: 14.MAR.2025 15:59:00

802.11g_2412MHz



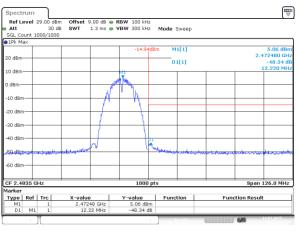
ProjectNo.:2505045199E-RF Tester:Rvan Zhang

802.11n20_2412MHz



Date: 14.MAR.2025 16:26:29

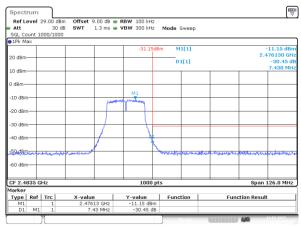
802.11b_2472MHz



ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang

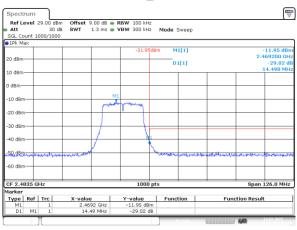
Date: 14.MAR.2025 16:05:51

802.11g_2472MHz



ProjectNo.: 2505045199E-RF Tester: Rvan Zhang

802.11n20_2472MHz



ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang

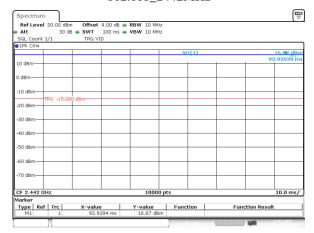
Date: 14.MAR.2025 16:33:54



Duty Cycle:

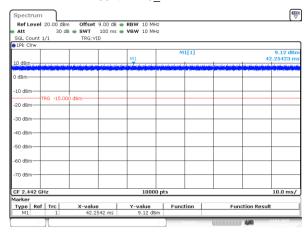
2412~2472

802.11b_2442MHz

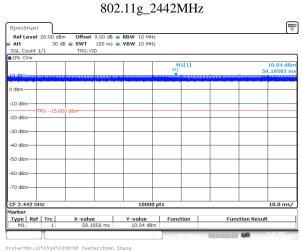


ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang

802.11n20_2442MHz



ProjectNo.:2505Q45199E-RF Tester:Ryan Zhang Date: 14.MAR.2025 16:29:18





4 Test Setup Photo

Please refer to the attachment 2505Q45199E Test Setup photo.



5 E.U.T Photo

Please refer to the attachment 2505Q45199E External photo and 2505Q45199E Internal photo.

---End of Report---