

**ETSI EN 300 328 V2.2.2: 2019
AS/NZS 4268:2017: AMD 1:2021**

**TEST REPORT
For**

WiFi+Bluetooth 5.2 System on Module

MODEL: PIXI-IW416

Issued to:

TechNexion Ltd.

**16F-5, No. 736, Zhongzheng Road, ZhongHe District, 23511,
New Taipei City, Taiwan**

Issued by

Compliance Certification Services Inc.

Wugu Laboratory

**No.11, Wugong 6th Rd., Wugu Dist.,
New Taipei City, Taiwan.**

Issued Date: July 31, 2023

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Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
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Report No.: TMWK2305001493KR

1. TEST RESULT CERTIFICATION

Applicant: TechNexion Ltd.
16F-5, No. 736, Zhongzheng Road, ZhongHe District, 23511,
New Taipei City, Taiwan

Manufacturer: TechNexion Ltd.
16F-5, No. 736, Zhongzheng Road, ZhongHe District, 23511,
New Taipei City, Taiwan

Equipment Under Test: WiFi+Bluetooth 5.2 System on Module

Brand Name: TechNexion

Model Number: PIXI-IW416

Date of Test: May 19~June 20, 2023

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
ETSI EN 300 328 V2.2.2: 2019 AS/NZS 4268:2017: AMD 1:2021	Compliance
Statements of Conformity	
Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.	

The above equipment was tested by Compliance Certification Services Inc. for compliance with the requirements set forth in ETSI EN 300 328. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

This test report can be used for CE and UKCA marking application which is based on equivalent requirements between UK and EU. It is appropriate using designated standards to provide presumption of conformity with GB law.

Approved by:



Shawn Wu
Supervisor

2. EUT DESCRIPTION

Product	WiFi+Bluetooth 5.2 System on Module
Brand Name	TechNexion
Model Number	PIXI-IW416
Model Discrepancy	N/A
Received Date	May 16, 2023
EUT Power Rating	Power from host system. (DC 3.3V)
Frequency Range	IEEE 802.11b Mode: 2412 ~ 2472 MHz IEEE 802.11g Mode: 2412 ~ 2472 MHz IEEE 802.11n HT20 Mode: 2412 ~ 2472 MHz IEEE 802.11n HT40 Mode: 2422 ~ 2462 MHz Bluetooth: 2402 ~ 2480 MHz
Modulation Technique	IEEE 802.11b Mode: DSSS IEEE 802.11g Mode: OFDM IEEE 802.11n HT20 Mode: OFDM IEEE 802.11n HT40 Mode: OFDM Bluetooth 2.1 + EDR: GFSK for 1Mbps; $\pi/4$ -DQPSK for 2Mbps; 8DPSK for 3Mbps BLE 1M & 2M: GFSK
Number of Channels	IEEE 802.11b Mode: 13 Channels IEEE 802.11g Mode: 13 Channels IEEE 802.11n HT20 Mode: 13 Channels IEEE 802.11n HT40 Mode: 9 Channels Bluetooth 2.1 + EDR: 79 Channels BLE 1Mbps & 2Mbps: 40 Channels (37 hopping + 3 advertising Channel)
Antenna Specification	1. Type: PIFA Antenna Brand / Model: TechNexion / VM2450-25523-OOX-180 2400 ~ 2500MHz Gain: 2.5 dBi 2. Type: Dipole Antenna Brand / Model: TechNexion / VM2450-ASSY1005 2400 ~ 2500MHz Gain: 4 dBi (*worst case)
Temperature Range	-40°C ~ 85°C
H.W: Version	A1
S.W Version	1.0

Remark:

- For more details, please refer to the User's manual of the EUT.
- Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.

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3. TEST METHODOLOGY

3.1 GENERAL DESCRIPTION OF APPLIED STANDARDS

According to its specifications, the EUT must comply with the requirements of the following standards:

ETSI EN 300 328 –Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz band; Harmonised Standard for access to radio spectrum

3.2 DESCRIPTION OF TEST MODES

The EUT (Model: PIXI-IW416) had been tested under operating and standby condition has 1 transmit antenna and 1 receive antenna.

Software used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

Mode	Available Channel	Test Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11b	1 to 13	1, 7, 13	DSSS	DBPSK	1Mb/s
802.11g	1 to 13	1, 7, 13	OFDM	BPSK	6Mb/s
802.11n HT20	1 to 13	1, 7, 13	OFDM	BPSK	MCS0
802.11n HT40	3 to 11	3, 7, 11	OFDM	BPSK	MCS0

Bluetooth 2.1 + EDR

Following channels were selected for the radiated emission testing only as listed below:

Tested Channel	Modulation Type	Packet Type	Data Rate
Low, High	GFSK	DH 5	1
Low, High	$\pi/4$ -DQPSK	2DH 5	2
Low, High	8DPSK	3DH 5	3

BLE 1M & 2M

Tested Channel	Frequency (MHz)
Low	2402
High	2480

Normal Link: EUT for staying in normal used mode.

TX mode: Software used to control the EUT for staying in continuous transmitting mode is programmed.

RX mode: Software used to control the EUT for staying in continuous receiving mode is programmed.

3.2.1 The worst mode of measurement

Radiated Emission Measurement	
Test Condition	Emission for Unwanted and Fundamental
Power supply Mode	Mode 1: EUT Power by Host System (Dipole Antenna) Mode 2: EUT Power by Host System (PIFA Antenna)
Worst Mode	<input checked="" type="checkbox"/> Mode 1 <input type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4
Position	<input type="checkbox"/> Placed in fixed position. <input type="checkbox"/> Placed in fixed position at X-Plane (E2-Plane) <input type="checkbox"/> Placed in fixed position at Y-Plane (E1-Plane) <input checked="" type="checkbox"/> Placed in fixed position at Z-Plane (H-Plane)

Remark:

1. The worst mode was record in this test report.
2. The EUT pre-scanned in three axis ,X,Y, Z and two polarity, Horizontal and Vertical for radiated measurement. The worst case (Z-Plane) were recorded in this report.

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4 INSTRUMENT CALIBRATION

4.1 MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

4.2 MEASUREMENT EQUIPMENT USED

Equipment Used for Emissions Measurement

Wugu Fully Chamber B					
Name of Equipment	Manufacturer	Model	Serial Number	Cal. Date	Cal. Due
Thermo-Hygro Meter	WISEWIND	1206	D07	2022-12-19	2023-12-18
Bi-Log Antenna	Sunol Sciences	JB3	A030105	2022-08-03	2023-08-02
Signal Analyzer	R&S	FSV 40	101561	2022-08-05	2023-08-04
Signal Generator	Agilent	E8257C	US42340383	2022-06-29	2023-06-28
Pre-Amplifier	Anritsu	MH648A	M89145	2022-06-27	2023-06-26
Pre-Amplifier	EMEC	EM01G26G	060570	2022-06-27	2023-06-26
Bi-Log Antenna	Sunol Sciences	JB1	A052609	2023-02-09	2024-02-08
Antenna	SHWARZBECK	BBHA 9120 D	779	2023-02-03	2024-02-02
Cable	Huber+Suhner	104PEA	23452	2022-06-27	2023-06-26
Cable	Huber+Suhner	104PEA	33960	2022-06-27	2023-06-26
Horn Antenna	ETS LINDGREN	3117	00055165	2022-07-25	2023-07-24
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Software	e3 V9-210616c				

RF Conducted Test Site					
Name of Equipment	Manufacturer	Model	Serial Number	Cal. Date	Cal. Due
Cable	Woken	WC12	CC001	2022-06-27	2023-06-26
USB Wideband Power Sensor	AGILENT	U2021XA	MY54260020	2023-05-09	2024-05-08
USB Wideband Power Sensor	AGILENT	U2021XA	MY54260016	2023-05-09	2024-05-08
USB Wideband Power Sensor	AGILENT	U2021XA	MY54250027	2023-05-09	2024-05-08
USB Wideband Power Sensor	AGILENT	U2021XA	MY54260007	2023-05-09	2024-05-08
EXA Signal Analyzer	Keysight	N9010B	MY60242460	2023-02-02	2024-02-01
Constant Temperature Humidity Chamber	TERCHY	MHG-150LF	930619	2022-10-25	2023-10-24
Software	ETSI Standard Test System-V3.160422 & Radio Test Software Ver. 21				

Remark:

- Each piece of equipment is scheduled for calibration once a year.
- N.C.R. = No Calibration Required.

Adaptivity for WIFI 2.4GHz					
Name of Equipment	Manufacturer	Model	Serial Number	Cal. Date	Cal. Due
EXA Signal Analyzer	Keysight	N9010A	MY54200716	2022-10-13	2023-10-12
Vector Signal Generator	KEYSIGHT	N5138B	MY59100973	2022-08-10	2023-08-09
Vector Signal Generator	KEYSIGHT	N5182B/N5182BX07	MY61252828/ MY59362552	2023-02-01	2024-01-31
World Pallas	Adaptivity Box	AD3000	TW5451221	2022-09-16	2023-09-15
Attenuator	E-INSTRUMENT	EPA-600H	EC1400050	2023-06-13	2024-06-12
Directional Couplers	Agilent	87301D	MY44350252	2022-07-20	2023-07-19
Power Divider	Marvelous Microwave	MVE8586	16011206	2022-07-20	2023-07-19
Power Divider	Marvelous Microwave	MVE8586	16011205	2022-06-29	2023-06-28
Cable	Woken	SUMITOMO	13	2023-03-02	2024-03-01
Cable	Woken	SUMITOMO	12	2023-03-02	2024-03-01
Cable	Woken	SUMITOMO	11	2023-03-02	2024-03-01
Cable	Woken	SUMITOMO	10	2023-03-02	2024-03-01
Cable	Woken	SUMITOMO	9	2023-03-02	2024-03-01
Cable	Woken	SUMITOMO	7	2023-03-02	2024-03-01
Software	ETSI Standard Test System-V3.160422 & Radio Test Software Ver. 21				

Remark:

- Each piece of equipment is scheduled for calibration once a year.
- N.C.R. = No Calibration Required.

Receiver Blocking for WIFI					
Name of Equipment	Manufacturer	Model	Serial Number	Cal. Date	Cal. Due
Power Divider	Marvelous Microwave	MVE8586	16011205	2022-06-29	2023-06-28
Cable	Woken	SUMITOMO	6	2023-03-02	2024-03-01
Cable	Woken	SUMITOMO	5	2023-03-02	2024-03-01
Cable	Woken	SUMITOMO	4	2023-03-02	2024-03-01
EXA Signal Analyzer	Keysight	N9010A	MY54200716	2022-10-13	2023-10-12
WLAN Test Set	Anritsu	MT-8860C	1211004	2023-01-06	2024-01-05
Power Divider	Marvelous Microwave	MVE8586	16011206	2022-07-20	2023-07-19
Directional Couplers	Agilent	87301D	MY44350252	2022-07-20	2023-07-19
Vector Signal Generator	KEYSIGHT	N5182B/N5182BX07	MY61252828/ MY59362552	2023-02-01	2024-01-31
Software	LANLook				

Receiver Blocking for Bluetooth					
Name of Equipment	Manufacturer	Model	Serial Number	Cal. Date	Cal. Due
Cable	Woken	SUMITOMO	9	2023-03-02	2024-03-01
Cable	Woken	SUMITOMO	5	2023-03-02	2024-03-01
Cable	Woken	SUMITOMO	4	2023-03-02	2024-03-01
EXA Signal Analyzer	Keysight	N9010A	MY54200716	2022-10-13	2023-10-12
Wideband Radio Communication Tester	R&S	CMW 500	116875	2023-06-08	2024-06-07
Power Divider	Marvelous Microwave	MVE8586	16011206	2022-07-20	2023-07-19
Directional Couplers	Agilent	87301D	MY44350252	2022-07-20	2023-07-19
Vector Signal Generator	KEYSIGHT	N5182B/N5182BX07	MY61252828/ MY59362552	2023-02-01	2024-01-31
Software	N/A				

Remark:

- Each piece of equipment is scheduled for calibration once a year.
- N.C.R. = No Calibration Required.

4.3 MEASUREMENT UNCERTAINTY

For the test methods, according to the present document, the measurement uncertainty figures shall be calculated in accordance with TR 100 028-1 [2] and shall correspond to an expansion factor (coverage factor) $k = 1,96$ or $k = 2$ (which provide confidence levels of respectively 95 % and 95,45 % in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian)).

Table 7 is based on such expansion factors.

Table 7: Maximum measurement uncertainty

PARAMETER	UNCERTAINTY
Humidity	$\pm 0.66\%$
Temperatrue	$\pm 0.11^{\circ}\text{C}$
Influence of Power Supply (DC Voltage)	$\pm 0.7\%$
Influence of Power Supply (AC Voltage)	$\pm 1.4\%$
RF Output power	$\pm 0.261 \text{ dB}$
Maximum spectral power density	$\pm 0.440 \text{ dB}$
Occupied channel bandwidth	$\pm 2.7\%$
Transmitter unwanted emission in the OOB domain	$\pm 1.874 \text{ dB}$
Radiated Emission_9KHz-30MHz	$\pm 3.084 \text{ dB}$
Radiated Emission_30MHz-1GHz	$\pm 3.812 \text{ dB}$
Radiated Emission_1GHz-18GHz	$\pm 4.944 \text{ dB}$

5 TEST SUMMARY

ETSI EN 300 328 V2.2.2			
No	Test Item	Clause(s)	Result
1	RF Output Power	4.3.1.2 or 4.3.2.2	Compliance
2	Power Spectral Density	4.3.2.3	Compliance
3	Duty cycle, Tx-Sequence, Tx-gap	4.3.1.3 or 4.3.2.4	Not applicable ²
4	Accumulated Transmit time, Frequency Occupation &Hopping Sequence	4.3.1.4	Compliance
5	Hopping Frequency Separation	4.3.1.5	Compliance
6	Medium Utilization	4.3.1.6 or 4.3.2.5	Not applicable ²
7	Adaptivity	4.3.1.7 or 4.3.2.6	Compliance
8	Occupied Channel Bandwidth	4.3.1.8 or 4.3.2.7	Compliance
9	Transmitter unwanted emissions in the OOB domain	4.3.1.9 or 4.3.2.8	Compliance
10	Transmitter unwanted emissions in the spurious domain	4.3.1.10 or 4.3.2.9	Compliance
11	Receiver spurious emissions	4.3.1.11 or 4.3.2.10	Compliance
12	Receiver Blocking	4.3.1.12 or 4.3.2.11	Compliance
13	Geo-location capability	4.3.1.13 or 4.3.2.12	Not applicable ¹

Note:

Not applicable¹: The supplier declared that the equipment is unable to perform this function.

Not applicable²: EUT is adaptivity device.

6 FACILITIES AND ACCREDITATIONS

6.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

☒ No.11, Wugong 6th Rd., Wugu Dist., New Taipei City, Taiwan.

Tel: 886-2-2299-9720 / Fax: 886-2-2299-9721

7 SETUP OF EQUIPMENT UNDER TEST

7.1 SETUP CONFIGURATION OF EUT

See test photographs attached in Appendix A for the actual connections between EUT and support equipment.

7.2 SUPPORT EQUIPMENT

No.	Device Type	Brand	Model	Series No.	FCC ID
1	NB(G)	Lenovo	T460P	N/A	N/A
2	NB	Lenovo	TP00075A	N/A	N/A
3	AP	ASUS	RT-AX88U	N/A	MSQ-RTAXHP00

Remark:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

8 ETSI EN 300 328 REQUIREMENTS

8.1 RF OUTPUT POWER

LIMIT

FHSS Equipment:

The RF output power for FHSS equipment shall be equal to or less than 20 dBm.

For non-adaptive FHSS equipment, where the manufacturer has declared an RF output power lower than 20 dBm e.i.r.p., the RF output power shall be equal to or less than that declared value. This limit shall apply for any combination of power level and intended antenna assembly.

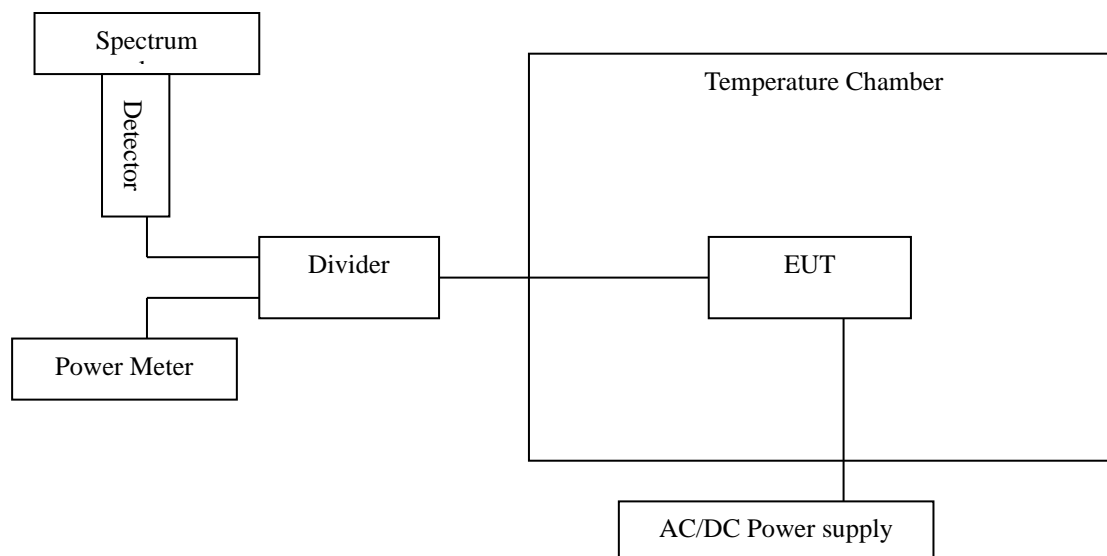
Non-FHSS equipment:

The RF output power for non-FHSS equipment shall be equal to or less than 20 dBm.

For non-adaptive non-FHSS equipment, where the manufacturer has declared an RF output power of less than 20 dBm e.i.r.p., the RF output power shall be equal to or less than that declared value. This limit shall apply for any combination of power level and intended antenna assembly.

Test Configuration

Temperature and Voltage Measurement (under normal and extreme test conditions)



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TEST PROCEDURE

- Please refer to ETSI EN 300 328 (V2.2.2) or the test conditions.
- Please refer to ETSI EN 300 328 (V2.2.2) for the measurement method.

TEST RESULTS

Compliance.

Temperature: 24.8~25.2°C

Test Date: May 19~23, 2023

Humidity: 52~60% RH

Tested By: David Li

Test Mode: 802.11b

Modulation type: DSSS

Antenna assembly gain: 4.00 dBi

EIRP = Pburst (Burst Power) + Gain

TEST CONDITIONS		TRANSMITTER POWER (dBm)		
Temperature(°C)	Voltage(V)	Lowest Frequency (CH Low)	Middle Frequency (CH Mid)	Highest Frequency (CH High)
-40	DC_3.3V	EIRP = 18.52 dBm Pburst= 14.52 dBm	EIRP = 18.80 dBm Pburst= 14.80 dBm	EIRP = 18.22 dBm Pburst= 14.22 dBm
25	DC_3.3V	EIRP = 18.15 dBm Pburst= 14.15 dBm	EIRP = 18.43 dBm Pburst= 14.43 dBm	EIRP = 17.87 dBm Pburst= 13.87 dBm
85	DC_3.3V	EIRP = 17.95 dBm Pburst= 13.95 dBm	EIRP = 18.21 dBm Pburst= 14.21 dBm	EIRP = 17.66 dBm Pburst= 13.66 dBm
Limit		20dBm		

Test Mode: 802.11g

Modulation type: OFDM

Antenna assembly gain: 4.00 dBi

EIRP = Pburst (Burst Power) + Gain

TEST CONDITIONS		TRANSMITTER POWER (dBm)		
Temperature(°C)	Voltage(V)	Lowest Frequency (CH Low)	Middle Frequency (CH Mid)	Highest Frequency (CH High)
-40	DC_3.3V	EIRP = 19.76 dBm Pburst= 15.76 dBm	EIRP = 19.80 dBm Pburst= 15.80 dBm	EIRP = 19.86 dBm Pburst= 15.86 dBm
25	DC_3.3V	EIRP = 19.37 dBm Pburst= 15.37 dBm	EIRP = 19.41 dBm Pburst= 15.41 dBm	EIRP = 19.49 dBm Pburst= 15.49 dBm
85	DC_3.3V	EIRP = 19.16 dBm Pburst= 15.16 dBm	EIRP = 19.18 dBm Pburst= 15.18 dBm	EIRP = 19.26 dBm Pburst= 15.26 dBm
Limit		20dBm		

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Test Mode: 802.11n_HT20M
Modulation type: OFDM

Antenna assembly gain: 4.00 dBi

EIRP = Pburst (Burst Power) + Gain

TEST CONDITIONS		TRANSMITTER POWER (dBm)		
Temperature(°C)	Voltage(V)	Lowest Frequency (CH Low)	Middle Frequency (CH Mid)	Highest Frequency (CH High)
-40	DC_3.3V	EIRP = 18.00 dBm Pburst= 14.00 dBm	EIRP = 18.15 dBm Pburst= 14.15 dBm	EIRP = 18.08 dBm Pburst= 14.08 dBm
25	DC_3.3V	EIRP = 17.61 dBm Pburst= 13.61 dBm	EIRP = 17.79 dBm Pburst= 13.79 dBm	EIRP = 17.74 dBm Pburst= 13.74 dBm
85	DC_3.3V	EIRP = 17.39 dBm Pburst= 13.39 dBm	EIRP = 17.56 dBm Pburst= 13.56 dBm	EIRP = 17.52 dBm Pburst= 13.52 dBm
Limit		20dBm		

Test Mode: 802.11n_HT40M
Modulation type: OFDM

Antenna assembly gain: 4.00 dBi

EIRP = Pburst (Burst Power) + Gain

TEST CONDITIONS		TRANSMITTER POWER (dBm)		
Temperature(°C)	Voltage(V)	Lowest Frequency (CH Low)	Middle Frequency (CH Mid)	Highest Frequency (CH High)
-40	DC_3.3V	EIRP = 19.08 dBm Pburst= 15.08 dBm	EIRP = 19.21 dBm Pburst= 15.21 dBm	EIRP = 19.14 dBm Pburst= 15.14 dBm
25	DC_3.3V	EIRP = 18.69 dBm Pburst= 14.69 dBm	EIRP = 18.83 dBm Pburst= 14.83 dBm	EIRP = 18.78 dBm Pburst= 14.78 dBm
85	DC_3.3V	EIRP = 18.48 dBm Pburst= 14.48 dBm	EIRP = 18.59 dBm Pburst= 14.59 dBm	EIRP = 18.56 dBm Pburst= 14.56 dBm
Limit		20dBm		

Temperature: 24.3~25.2°C

Test Date: May 19~24, 2023

Humidity: 50~60% RH

Tested By: Marco Chan

Bluetooth for GFSK (BR-1M)

Modulation type: GFSK

Antenna assembly gain: 4.00 dBi

EIRP = Pburst (Burst Power) + Gain

TEST CONDITIONS		TRANSMITTER POWER (dBm)	
Temperature(°C)	Voltage	Hopping	
-40	DC 3.3V	EIRP =	9.59 dBm
		Pburst=	5.59 dBm
25	DC 3.3V	EIRP =	9.23 dBm
		Pburst=	5.23 dBm
85	DC 3.3V	EIRP =	9.02 dBm
		Pburst=	5.02 dBm
Limit		20dBm	

Bluetooth for $\pi/4$ DQPSK

Modulation type: $\pi/4$ DQPSK

Antenna assembly gain: 4.00 dBi

EIRP = Pburst (Burst Power) + Gain

TEST CONDITIONS		TRANSMITTER POWER (dBm)	
Temperature(°C)	Voltage	Hopping	
-40	DC 3.3V	EIRP =	9.53 dBm
		Pburst=	5.53 dBm
25	DC 3.3V	EIRP =	9.15 dBm
		Pburst=	5.15 dBm
85	DC 3.3V	EIRP =	8.91 dBm
		Pburst=	4.91 dBm
Limit		20dBm	

Bluetooth for 8DPSK (EDR-3M)

Modulation type: 8DPSK

Antenna assembly gain:

4.00 dBi

EIRP = Pburst (Burst Power) + Gain

TEST CONDITIONS		TRANSMITTER POWER (dBm)	
Temperature(°C)	Voltage	Hopping	
-40	DC 3.3V	EIRP =	9.55 dBm
		Pburst=	5.55 dBm
25	DC 3.3V	EIRP =	9.17 dBm
		Pburst=	5.17 dBm
85	DC 3.3V	EIRP =	8.95 dBm
		Pburst=	4.95 dBm
Limit		20dBm	

Report No.: TMWK2305001493KR

Temperature: 25.2°C
Humidity: 58% RH

Test Date: May 19~20, 2023
Tested By: Marco Chan

BLE 1Mbps

Test Mode: BLE(1Mbps) Mode

Antenna assembly gain: 4.00 dBi

EIRP = Pburst (Burst Power) + Gain

TEST CONDITIONS		TRANSMITTER POWER (dBm)		
Temperature(°C)	Voltage(V)	Lowest Frequency	Middle Frequency	Highest Frequency
		(CH Low)	(CH Mid)	(CH High)
-40	DC_3.3V	EIRP = 9.90 dBm Pburst= 5.90 dBm	EIRP = 9.54 dBm Pburst= 5.54 dBm	EIRP = 9.91 dBm Pburst= 5.91 dBm
25	DC_3.3V	EIRP = 9.51 dBm Pburst= 5.51 dBm	EIRP = 9.17 dBm Pburst= 5.17 dBm	EIRP = 9.54 dBm Pburst= 5.54 dBm
85	DC_3.3V	EIRP = 9.28 dBm Pburst= 5.28 dBm	EIRP = 8.93 dBm Pburst= 4.93 dBm	EIRP = 9.32 dBm Pburst= 5.32 dBm
Limit		20dBm		

BLE 2Mbps

Test Mode: BLE(2Mbps) Mode

Antenna assembly gain: 4.00 dBi

EIRP = Pburst (Burst Power) + Gain

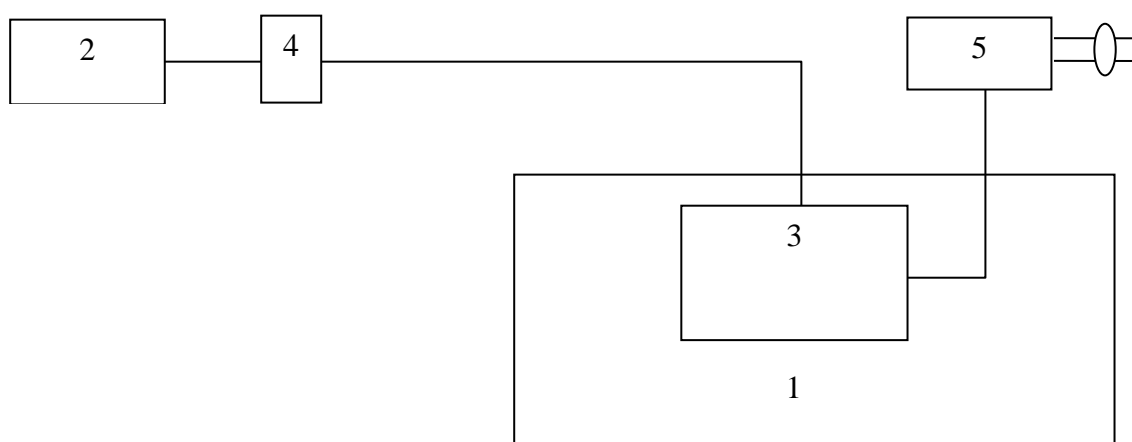
TEST CONDITIONS		TRANSMITTER POWER (dBm)		
Temperature(°C)	Voltage(V)	Lowest Frequency	Middle Frequency	Highest Frequency
		(CH Low)	(CH Mid)	(CH High)
-40	DC_3.3V	EIRP = 9.85 dBm Pburst= 5.85 dBm	EIRP = 9.51 dBm Pburst= 5.51 dBm	EIRP = 9.88 dBm Pburst= 5.88 dBm
25	DC_3.3V	EIRP = 9.49 dBm Pburst= 5.49 dBm	EIRP = 9.15 dBm Pburst= 5.15 dBm	EIRP = 9.53 dBm Pburst= 5.53 dBm
85	DC_3.3V	EIRP = 9.28 dBm Pburst= 5.28 dBm	EIRP = 8.91 dBm Pburst= 4.91 dBm	EIRP = 9.32 dBm Pburst= 5.32 dBm
Limit		20dBm		

8.2 MAXIMUM SPECTRAL POWER DENSITY

LIMIT

The maximum Power Spectral Density for non-FHSS equipment is 10 dBm per MHz.

Test Configuration



Legend

1. Wooden table
2. Spectrum analyzer
3. EUT
4. DC block
5. Power supply (Refer to power rating of section 2)

TEST PROCEDURE

1. Please refer to ETSI EN 300 328 (V2.2.2) for the test conditions.
2. Please refer to ETSI EN 300 328 (V2.2.2) for the measurement method.

TEST RESULTS

Compliance .

Report No.: TMWK2305001493KR

Temperature: 24.8~25.2°C

Test Date: May 19~23, 2023

Humidity: 52~60% RH

Tested By: David Li

802.11b

TEST CONDITIONS		Measured power density Reading(A) / (dBm / MHz)		
		Limit: 10 dBm/MHz		
Temperature	Voltage	CH Low	CH Mid	CH High
25	DC_3.3V	9.38	9.63	9.14

802.11g

TEST CONDITIONS		Measured power density Reading(A) / (dBm / MHz)		
		Limit: 10 dBm/MHz		
Temperature	Voltage	CH Low	CH Mid	CH High
25	DC_3.3V	8.04	8.14	8.15

802.11n_HT20M

TEST CONDITIONS		Measured power density Reading(A) / (dBm / MHz)		
		Limit: 10 dBm/MHz		
Temperature	Voltage	CH Low	CH Mid	CH High
25	DC_3.3V	6.15	6.13	6.08

802.11n_HT40M

TEST CONDITIONS		Measured power density Reading(A) / (dBm / MHz)		
		Limit: 10 dBm/MHz		
Temperature	Voltage	CH Low	CH Mid	CH High
25	DC_3.3V	4.37	4.58	4.34

Temperature: 25.2°C

Test Date: May 19~20, 2023

Humidity: 58% RH

Tested By: Marco Chan

Test Mode: BLE(1Mbps) Mode

TEST CONDITIONS		Measured power density Reading(A) / (dBm / MHz)		
		Limit: 10 dBm/MHz		
Temperature	Voltage	CH Low	CH Mid	CH High
25	DC_3.3V	9.45	9.11	9.48

Test Mode: BLE(2Mbps) Mode

TEST CONDITIONS		Measured power density Reading(A) / (dBm / MHz)		
		Limit: 10 dBm/MHz		
Temperature	Voltage	CH Low	CH Mid	CH High
25	DC_3.3V	8.37	8.01	8.40

Bluetooth 2.1 + EDR

The FHSS equipment are not required.

8.3 DUTY CYCLE, TX-SEQUENCE, TX-GAP

LIMIT

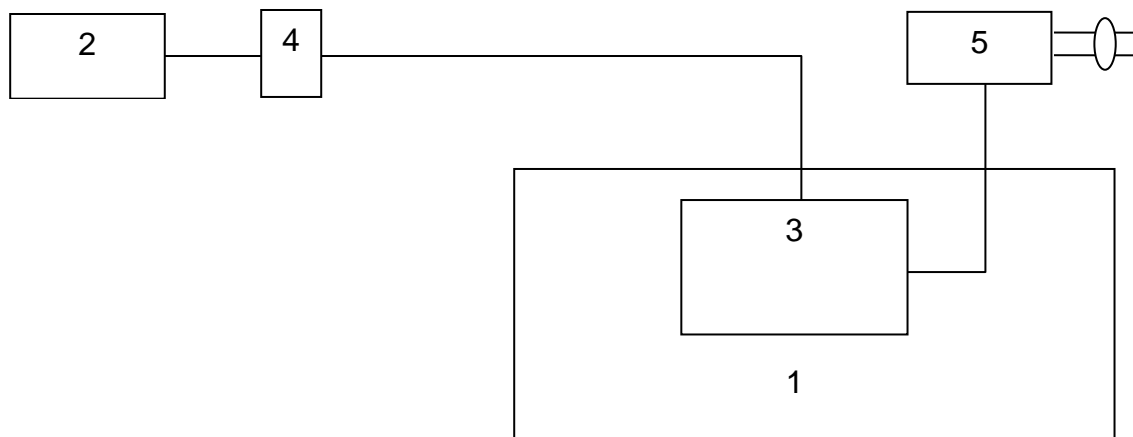
Non-adaptive FHSS equipment shall comply with the following:

- The Duty Cycle shall be equal to or less than the maximum value declared by the manufacturer.
- The maximum Tx-sequence time shall be 5 ms.
- The minimum Tx-gap time shall be 5 ms.

Non-FHSS equipment shall comply with the following:

- The Duty Cycle shall be equal to or less than the maximum value declared by the manufacturer.
- The Tx-sequence time shall be equal to or less than 10 ms.
- The minimum Tx-gap time following a Tx-sequence shall be equal to the duration of that proceeding Txsequence with a minimum of 3,5 ms.

Test Configuration



Legend

1. Wooden table
2. Spectrum analyzer
3. EUT
4. DC block
5. Power supply (Refer to power rating of section 2)

TEST PROCEDURE

1. Please refer to ETSI EN 300 328 (V2.2.2) for the test conditions.
2. Please refer to ETSI EN 300 328 (V2.2.2) for the measurement method.



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TEST RESULTS

N/A for Modulation Technology other than non-adaptive FHSS or non-adaptive wide band modulations other than FHSS.

8.4 DWELL TIME, MINIMUM FREQUENT OCCUPATION AND HOPPING SEQUENCE

LIMIT

Non-adaptive frequency hopping systems

The Accumulated Transmit Time on any hopping frequency shall not be greater than 15 ms within any observation period of 15 ms multiplied by the minimum number of hopping frequencies (N) that have to be used. In order for the FHSS equipment to comply with the Frequency Occupation requirement, it shall meet either of the following two options:

Option 1: Each hopping frequency of the Hopping Sequence shall be occupied at least once within a period not exceeding four times the product of the dwell time and the number of hopping frequencies in use.

Option 2: The probability that each hopping frequency is occupied shall be between $((1 / U) \times 25 \%)$ and 77 % where U is the number of hopping frequencies in use.

The Hopping Sequence(s) shall contain at least N hopping frequencies where N is either 5 or the result of 15 MHz divided by the minimum Hopping Frequency Separation in MHz, whichever is the greater.

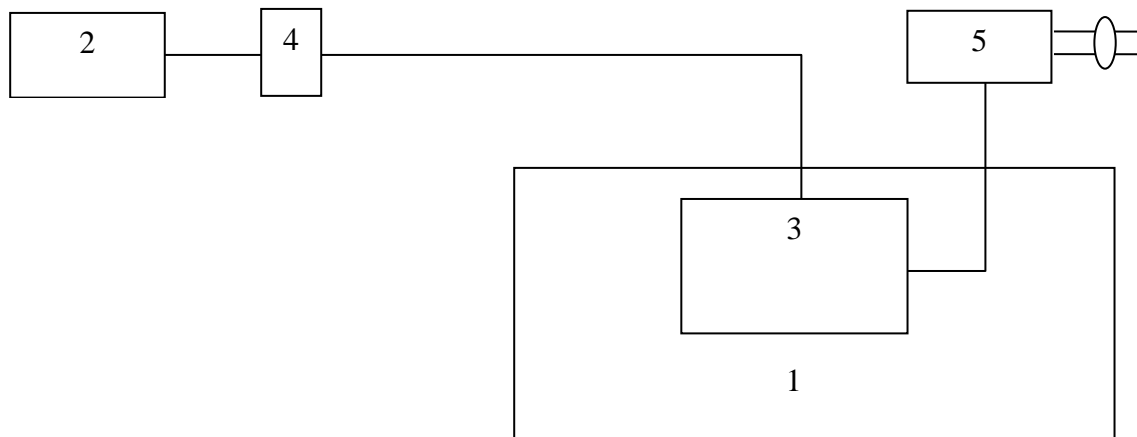
Adaptive frequency hopping systems

Adaptive FHSS equipment shall be capable of operating over a minimum of 70 % of the band specified in table 1. The Accumulated Transmit Time on any hopping frequency shall not be greater than 400 ms within any observation period of 400 ms multiplied by the minimum number of hopping frequencies (N) that have to be used. In order for the FHSS equipment to comply with the Frequency Occupation requirement, it shall meet either of the following two options:

Option 1: Each hopping frequency of the Hopping Sequence shall be occupied at least once within a period not exceeding four times the product of the dwell time and the number of hopping frequencies in use.

Option 2: The occupation probability for each frequency shall be between $((1 / U) \times 25 \%)$ and 77 % where U is the number of hopping frequencies in use. The Hopping Sequence(s) shall contain at least N hopping frequencies at all times, where N is either 15 or the result of 15 MHz divided by the minimum Hopping Frequency Separation in MHz, whichever is the greater.

Test Configuration



Legend

1. Wooden table
2. Spectrum analyzer
3. EUT
4. DC block
5. Power supply (Refer to power rating of section 2)

TEST PROCEDURE

1. Please refer to ETSI EN 300 328 (V2.2.2) for the test conditions.
2. Please refer to ETSI EN 300 328 (V2.2.2) for the measurement method.

Report No.: TMWK2305001493KR

TEST RESULTS

Temperature: 24.3~25.2°C

Test Date: May 19~24, 2023

Humidity: 50~60% RH

Tested By: Marco Chan

Dwell Time:

Dwell Time (DT) Result								
Modulation Mode	Freq. (MHz)	Duty Cycle Data Packet	Minimum Number of Hop Freq. (N)	Dwell Time per Hop(ms)	Number of Hoppin [N x MDT]	Mseasurement Time [N x MDT] (S)	Dwell Time in [N x MDT] (ms)	Max. Dwell Time (MDT) Limit (ms)
DH1	2441	DH5	79	0.40	62	31.6	24.80	400
DH3	2441	DH5	79	1.64	34	31.6	55.76	400
DH5	2441	DH5	79	2.88	26	31.6	74.88	400
3DH1	2441	DH5	79	0.40	63	31.6	25.20	400
3DH3	2441	DH5	79	1.64	36	31.6	59.04	400
3DH5	2441	DH5	79	2.92	22	31.6	64.24	400
Result		Complied						

Minimum Frequency Occupation Time Result:

Minimum Frequency Occupation Result								
Modulation Mode	Freq. (MHz)	Worst Duty Cycle Data Packet	Actual Number of Hopping Freq. (N)	Dwell Time per Hop (ms)	Number of Hoppin [4 X dwell time per hop X N]	[4 X dwell time per hop X N] (ms)	Dwell Time in [4 X dwell time per hop X N] (ms)	Min. Limit (ms)
DH1	2441	DH5	79	0.40	5	126.40	2.00	0.40
DH3	2441	DH5	79	1.64	3	518.24	4.92	1.64
DH5	2441	DH5	79	2.88	3	910.08	8.64	2.88
3DH1	2441	DH5	79	0.40	5	126.40	2.00	0.40
3DH3	2441	DH5	79	1.64	4	518.24	6.56	1.64
3DH5	2441	DH5	79	2.92	2	922.72	5.84	2.92
Result		Complied						



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Hopping sequence:

Mode: DH5

20dB BW (MHz)	Limit
78.66	
Hopping Sequence(%)	>70%
94.20	

Mode: 2DH5

20dB BW (MHz)	Limit
79.16	
Hopping Sequence(%)	>70%
94.80	

Mode: 3DH5

20dB BW (MHz)	Limit
79.33	
Hopping Sequence(%)	>70%
95.01	

8.5 HOPPING FREQUENCY SEPARATION

LIMIT

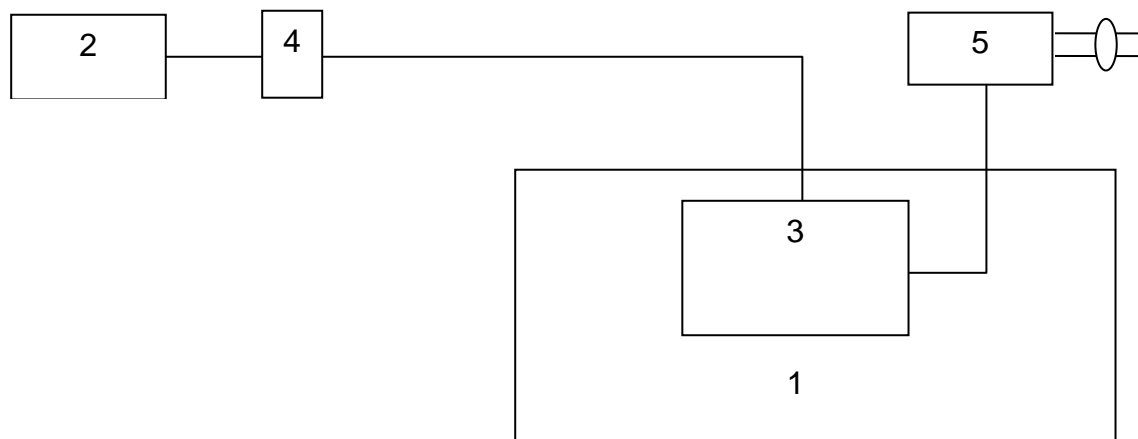
Non-adaptive frequency hopping systems

The minimum Hopping Frequency Separation shall be equal to Occupied Channel Bandwidth of a single hop, with a minimum separation of 100 kHz.

Adaptive frequency hopping systems

The minimum Hopping Frequency Separation shall be 100 kHz.

Test Configuration



Legend

1. Wooden table
2. Spectrum analyzer
3. EUT
4. DC block
5. Power supply (Refer to power rating of section 2)

TEST PROCEDURE

1. Please refer to ETSI EN 300 328 (V2.2.2) for the test conditions.
2. Please refer to ETSI EN 300 328 (V2.2.2) for the measurement method.

TEST RESULTS

Temperature: 24.3~25.2°C

Test Date: May 19~24, 2023

Humidity: 50~60% RH

Tested By: Marco Chan

Mode: GFSK

Channel Separation (MHz)	Result
1.0000	Pass

Mode: $\pi/4$ DQPSK

Channel Separation (MHz)	Result
1.0000	Pass

Mode: 8DPSK

Channel Separation (MHz)	Result
1.0000	Pass

8.6 MEDIUM UTILISATION

LIMIT

ETSI EN 300 328

The maximum Medium Utilisation factor for non-adaptive Frequency Hopping equipment shall be 10 %.

TEST PROCEDURE

1. Please refer to ETSI EN 300 328 (V2.2.2) for the test conditions.
2. Please refer to ETSI EN 300 328 (V2.2.2) for the measurement method.

TEST RESULTS

N/A for equipments that employs the adaptive mechanism. This given UE implements adaptive mechanism to identify transmission of likely presence in the band.

8.7 ADAPTIVITY

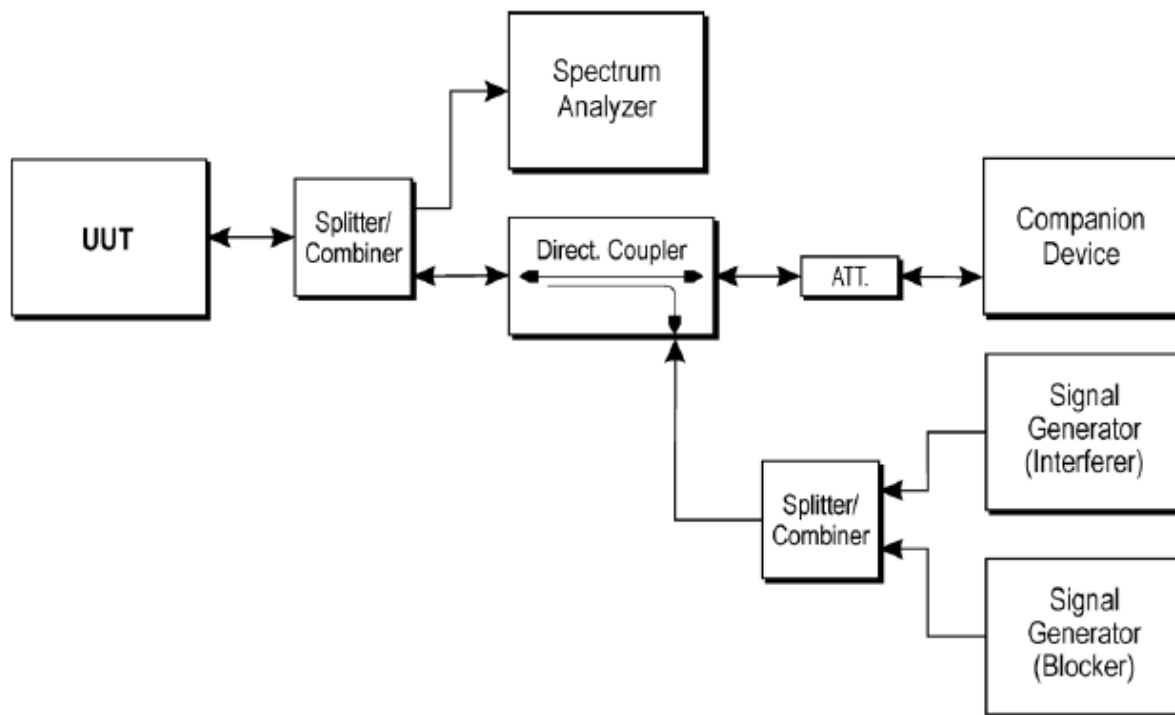
LIMIT

Requirement	Operational Mode			
	Non-LBT based Detect and Avoid	LBT based Detect and Avoid		
		Frame Based Equipment	Load Based Equipment (Base on 'Spectrum Sharing' mechanisms)	Load Based Equipment (Not using any of the mechanisms referenced)
Minimum Clear Channel Assessment (CCA) Time	NA	18 us (see note 1)	(see note 2)	18 us (see note 1)
Maximum Channel Occupancy (COT) Time	40 ms	1 ms to 10 ms	(see note 2)	13ms
Minimum Idle Period	5us	5% of COT	(see note 2)	18us (see note 3)
Extended CCA check	NA	NA	(see note 2)	18us~160us
Short Control Signalling Transmissions	Maximum duty cycle of 10 % within an observation period of 50 ms (see note 4)			
NOTE 1: The CCA time used by the equipment shall be declared by the supplier.				
NOTE 2:Load Based Equipment may implement an LBT based spectrum sharing mechanism based on the Clear ChannelAssessment (CCA) mode using energy detect, as described in IEEE 802.11™-2012 clause 9, clause 10, clause 16,clause 17, clause 19 and clause 20, or in IEEE 802.15.4™-2011 [i.4], clause 4, clause 5 and clause 8				
NOTE 3: The Idle Period in between transmissions is considered to be the CCA or the Extended CCA check as there are no transmissions during this period.				
NOTE 4: Adaptive equipment may or may not have Short Control Signalling Transmissions				

Threshold Level for LBT based Detect and Avoid (Load Based Equipment)	
Maximum transmit power (P _H) EIRP dBm	Threshold level (TL) (see notes 1 and 2)
20	-70 dBm / MHz
NOTE 1: For a 20 dBm e.i.r.p. transmitter the CCA threshold level (TL) shall be equal to or less than -70 dBm/MHz at the input to the receiver assuming a 0 dBi (receive) antenna assembly. This threshold level (TL) may be corrected for the (receive) antenna assembly gain (G)	
NOTE 2: For power levels less than 20 dBm e.i.r.p. the CCA threshold level may be relaxed to: TL = -70 dBm/MHz + 10 × log ₁₀ (100 mW / P _{out}) ; (P _{out} in mW e.i.r.p.)	

Unwanted signal parameters for LBT based Detect and Avoid (Load Based Equipment)		
Wanted signal mean power from companion device	Unwanted signal frequency (MHz)	Unwanted signal power (dBm)
sufficient to maintain the link (see note 2)	2 395 or 2 488,5 (see note 1)	-35 (see note 3)
NOTE 1: The highest frequency shall be used for testing operating channels within the range 2 400 MHz to 2 442 MHz, while the lowest frequency shall be used for testing operating channels within the range 2 442 MHz to 2 483,5 MHz. See clause 5.4.6.1.		
NOTE 2: A typical value which can be used in most cases is -50 dBm/MHz.		
NOTE 3: The level specified is the level at the UUT receiver input assuming a 0 dBi antenna assembly gain. In case of conducted measurements, this level has to be corrected for the (in-band) antenna assembly gain (G). In case of radiated measurements, this level is equivalent to a power flux density (PFD) in front of the UUT antenna.		

Test Configuration



TEST PROCEDURE

1. Please refer to ETSI EN 300 328 (V2.2.2) for the test conditions.
2. Please refer to ETSI EN 300 328 (V2.2.2) for the measurement method.

The spectrum analyser sweep was triggered by the start of the interfering signal , with the interfering signal present, a 100 % duty cycle CW signal is inserted as the blocking signal.

TEST RESULTS

Temperature: 24.5°C

Test Date: June 20, 2023

Humidity: 45% RH

Tested By: Jerry Chang

IEEE 802.11b Mode	Signal duration after interfering (s)	
	CH Low	CH High
	Pass	Pass

IEEE 802.11g Mode	Signal duration after interfering (s)	
	CH Low	CH High
	Pass	Pass

IEEE 802.11n HT20 Mode	Signal duration after interfering (s)	
	CH Low	CH High
	Pass	Pass

IEEE 802.11n HT40 Mode	Signal duration after interfering (s)	
	CH Low	CH High
	Pass	Pass

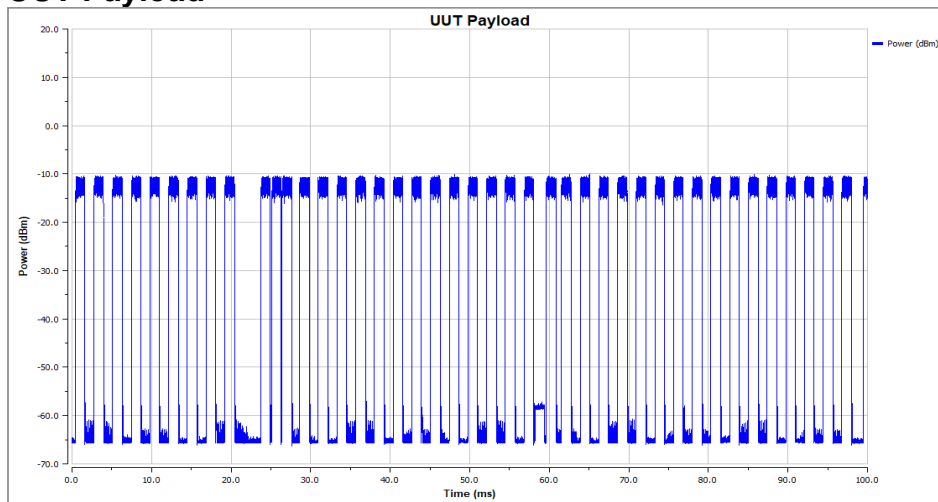


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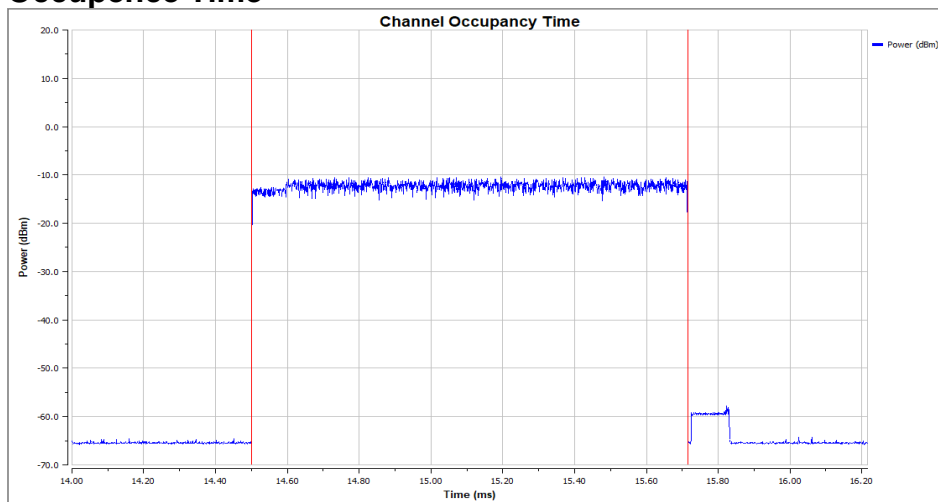
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Test results: IEEE 802.11b Mode, Low		Limit
UUT Payload (%)	50.97	>30%
Max COT (ms)	1.22	<13ms
Idle Period Time (us)	127.93	>18us
SCST TxOn / (TxOn + TxOff) (%)	0.00	<10%
Pulse Width within 50ms (us)	0.00	<5000us
Test Status	Pass	Pass

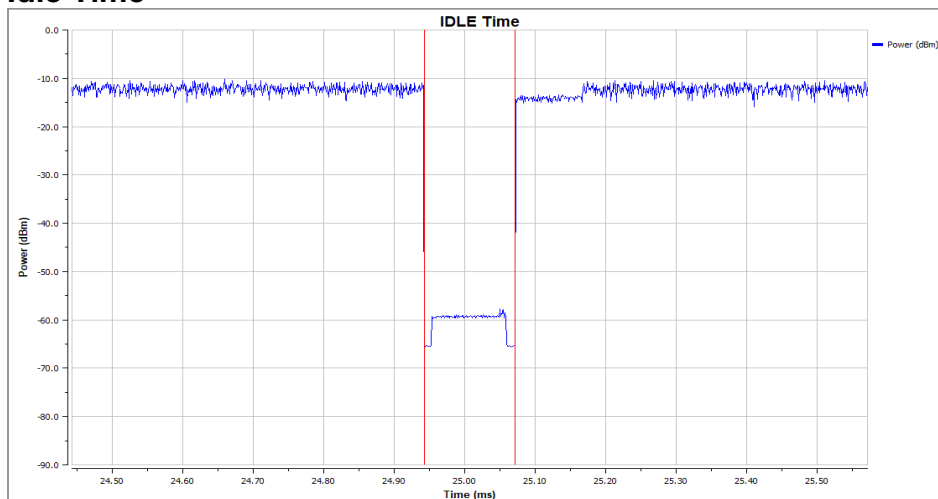
UUT Payload



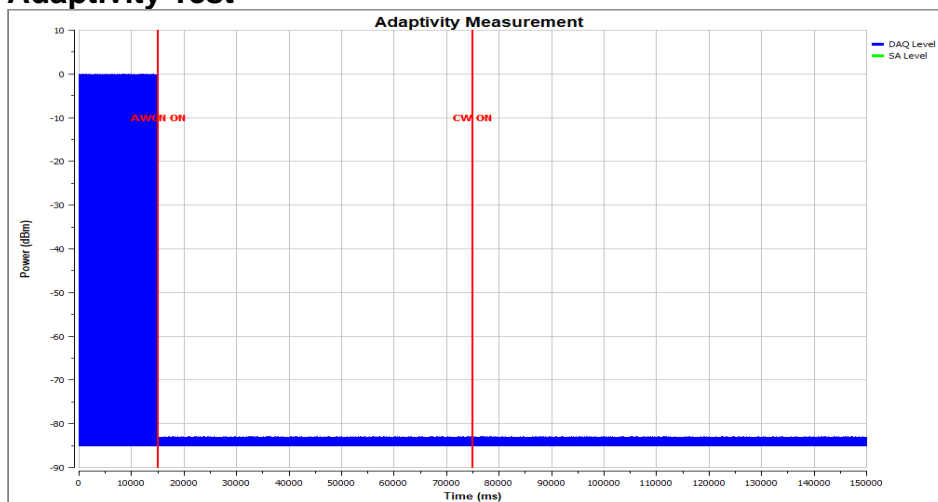
Occurrence Time



Idle Time

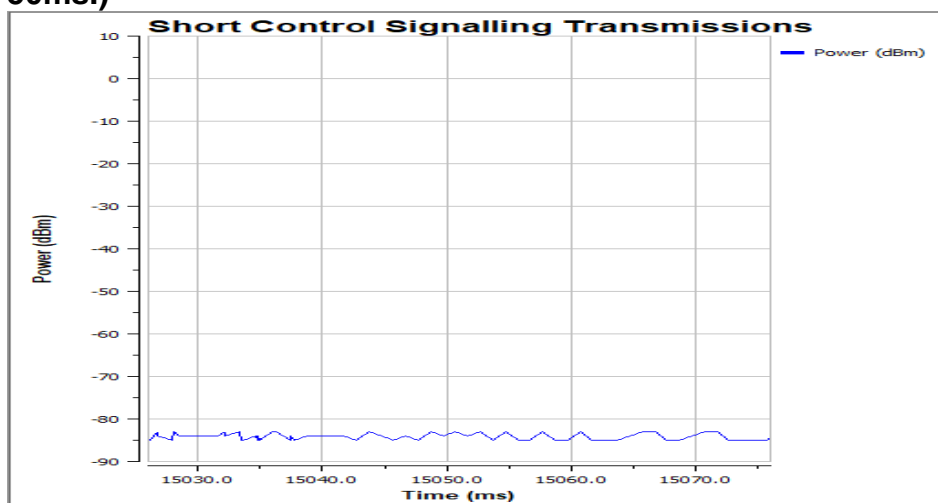


Adaptivity Test



Short control signalling check

(The monitoring time in the interference state is calculated by taking the worst 50ms.)



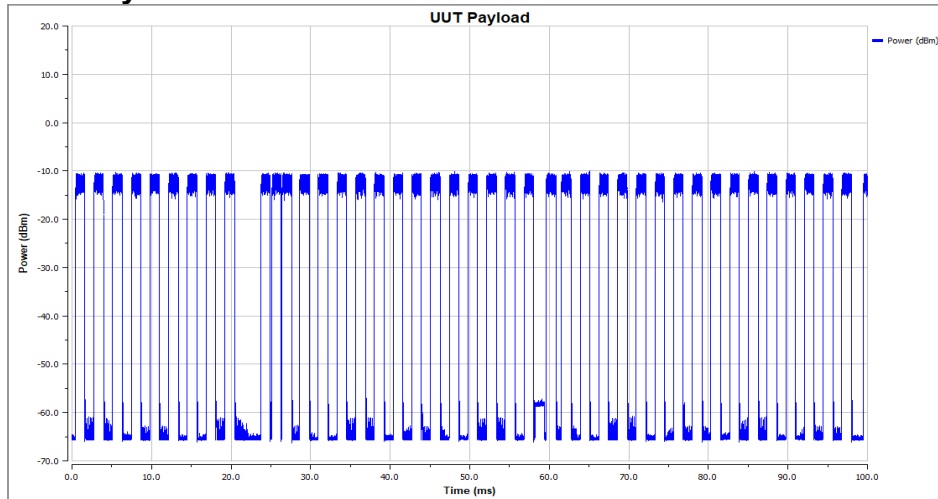


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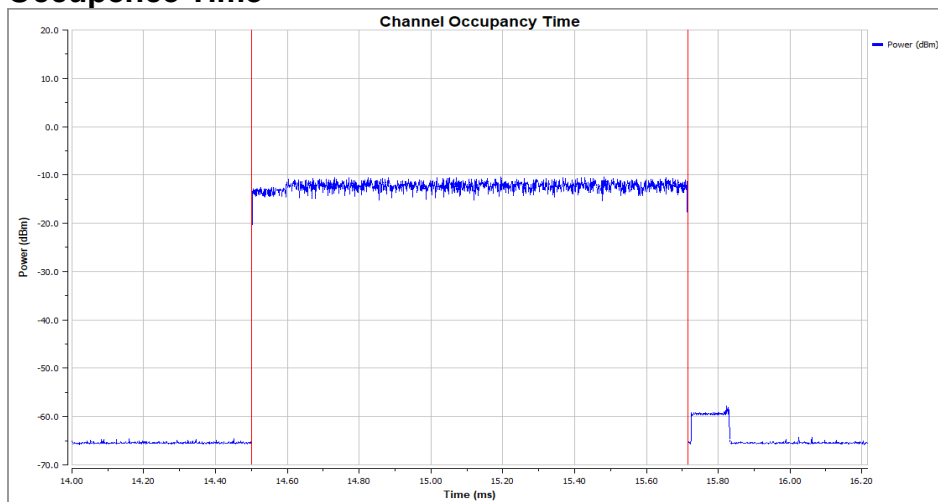
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Test results: IEEE 802.11b Mode, High		Limit
UUT Payload (%)	50.97	>30%
Max COT (ms)	1.22	<13ms
Idle Period Time (us)	127.93	>18us
SCST TxOn / (TxOn + TxOff) (%)	0.00	<10%
Pulse Width within 50ms (us)	0.00	<5000us
Test Status	Pass	Pass

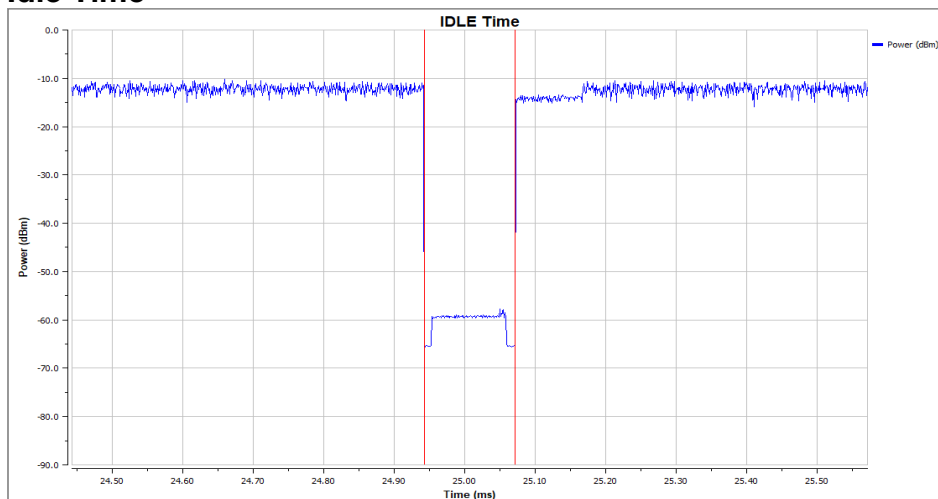
UUT Payload



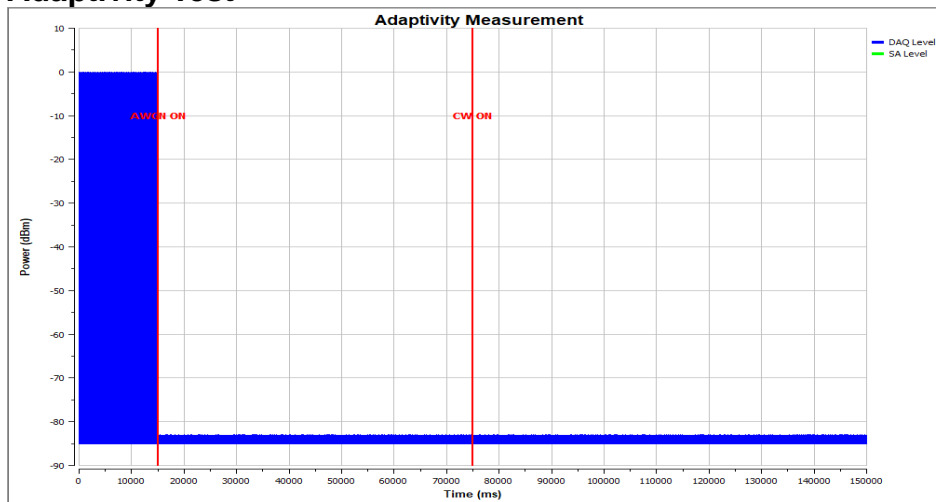
Occupence Time



Idle Time

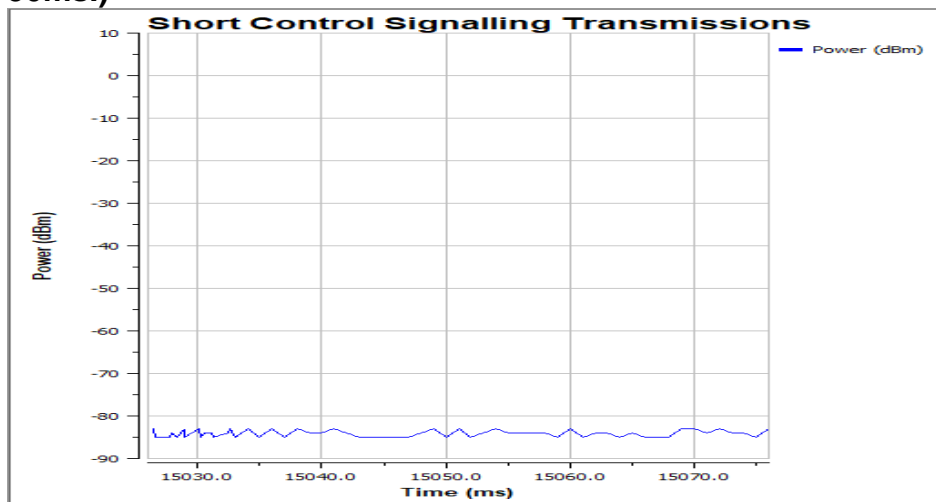


Adaptivity Test



Short control signalling check

(The monitoring time in the interference state is calculated by taking the worst 50ms.)



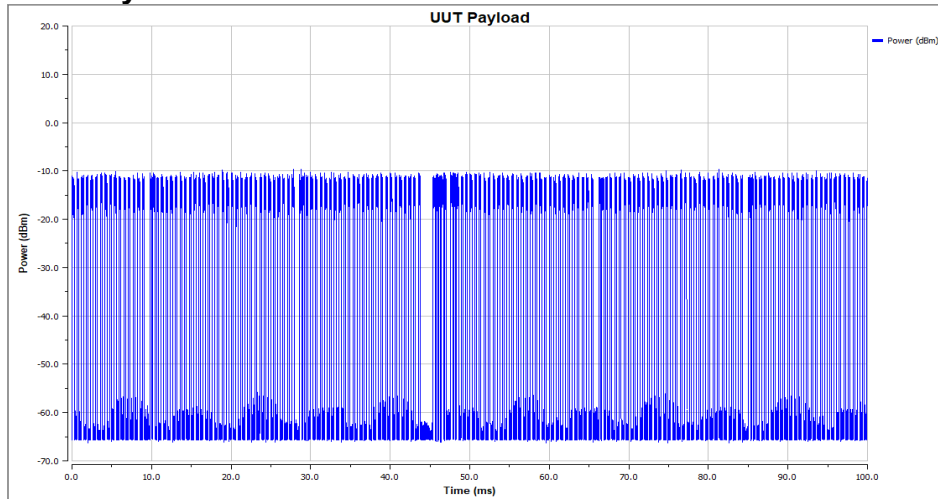


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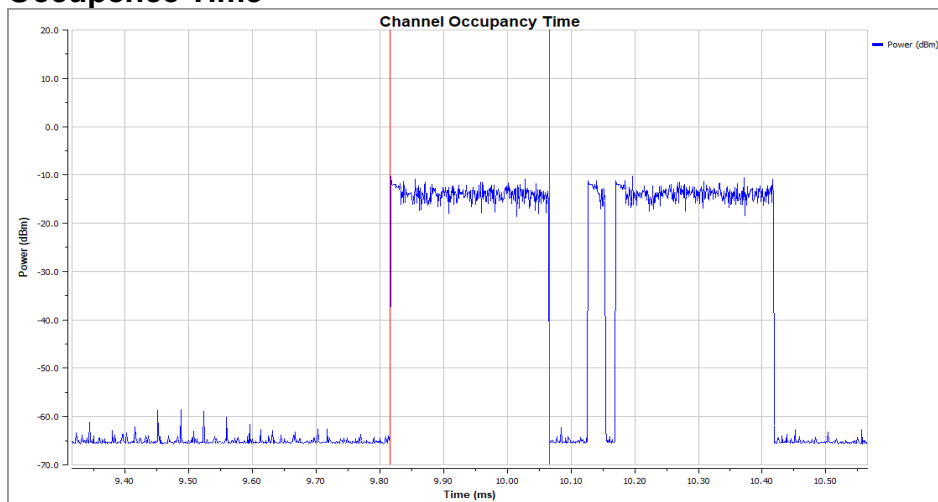
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Test results: IEEE 802.11g Mode, Low		Limit
UUT Payload (%)	42.58	>30%
Max COT (ms)	0.25	<13ms
Idle Period Time (us)	59.96	>18us
SCST TxOn / (TxOn + TxOff) (%)	0.00	<10%
Pulse Width within 50ms (us)	0.00	<5000us
Test Status	Pass	Pass

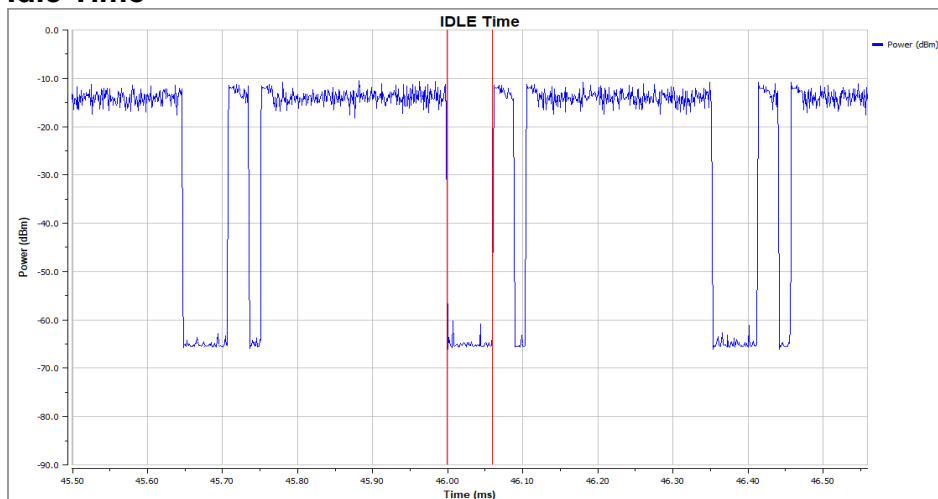
UUT Payload



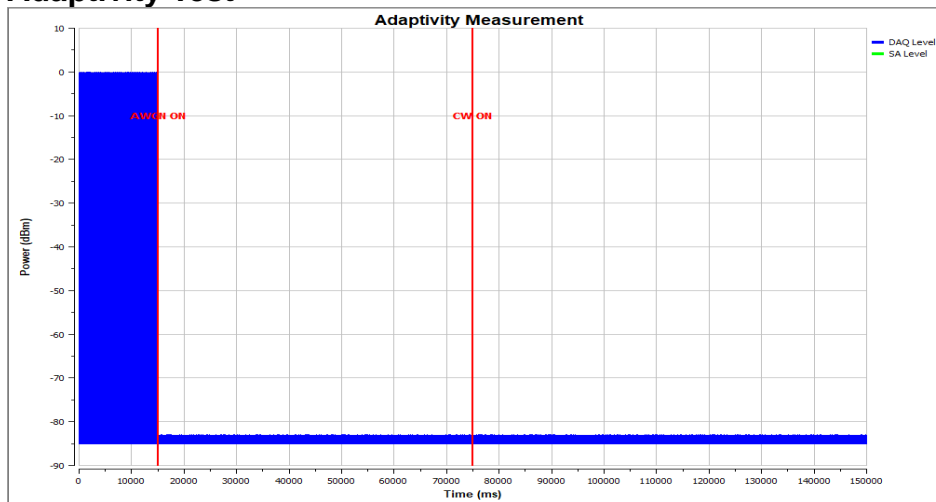
Occurrence Time



Idle Time

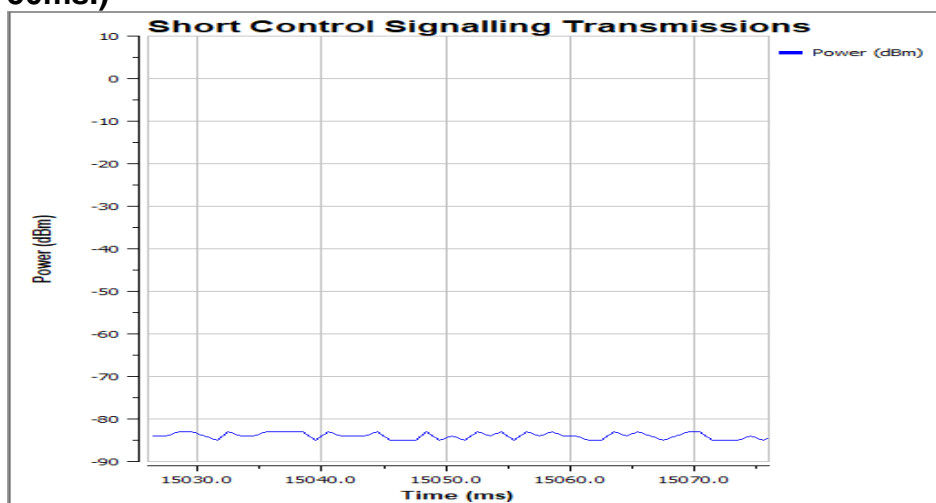


Adaptivity Test



Short control signalling check

(The monitoring time in the interference state is calculated by taking the worst 50ms.)



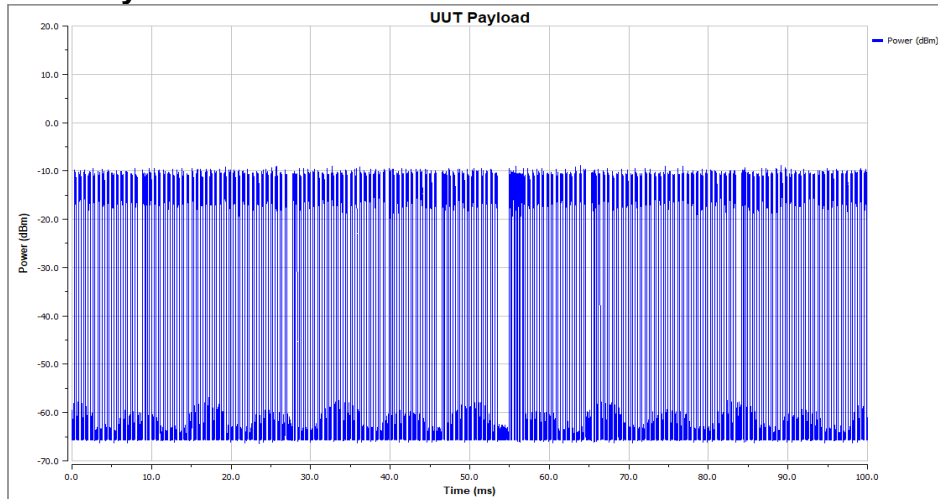


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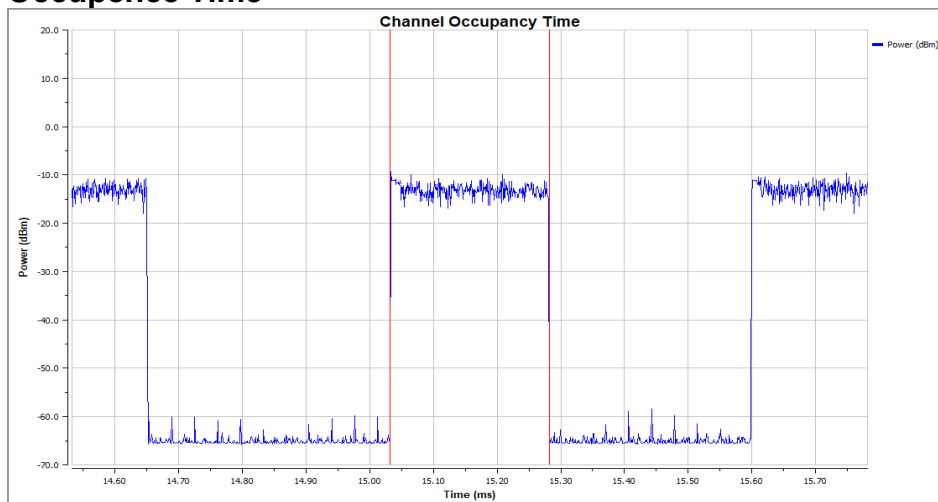
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Test results: IEEE 802.11g Mode, High		Limit
UUT Payload (%)	42.56	>30%
Max COT (ms)	0.25	<13ms
Idle Period Time (us)	59.96	>18us
SCST TxOn / (TxOn + TxOff) (%)	0.00	<10%
Pulse Width within 50ms (us)	0.00	<5000us
Test Status	Pass	Pass

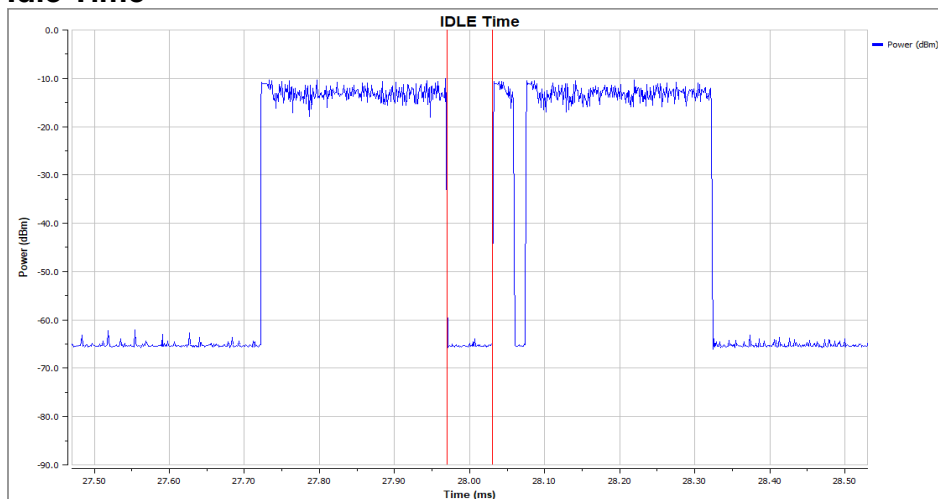
UUT Payload



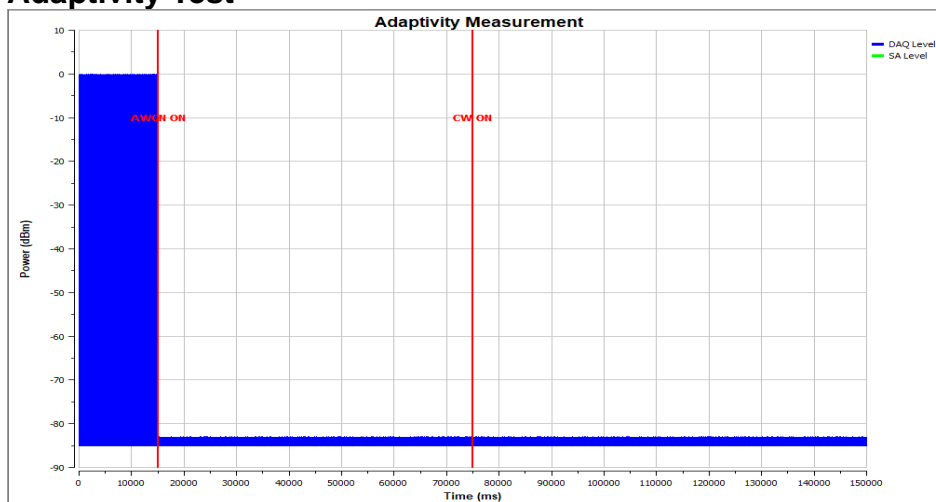
Occurrence Time



Idle Time

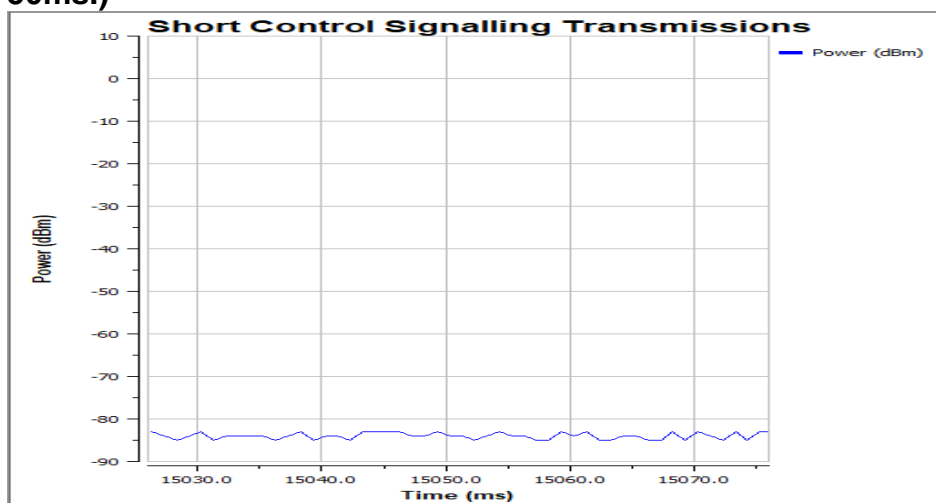


Adaptivity Test



Short control signalling check

(The monitoring time in the interference state is calculated by taking the worst 50ms.)



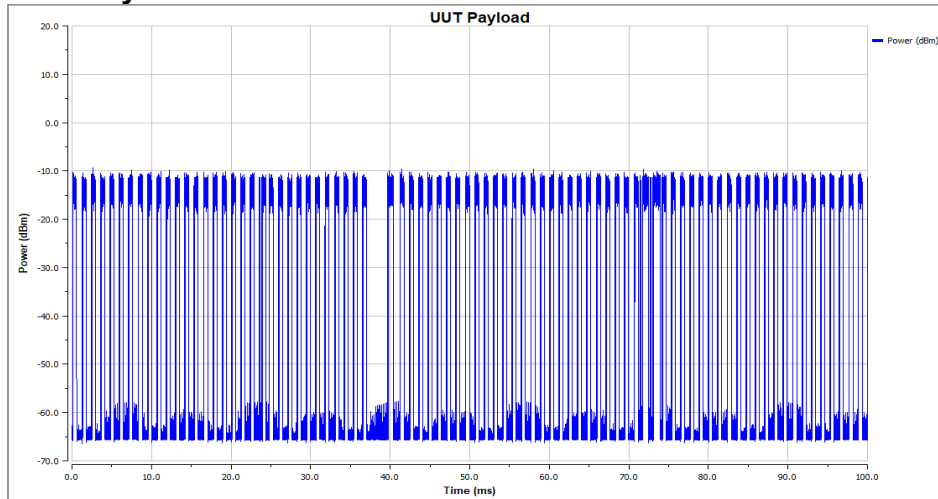


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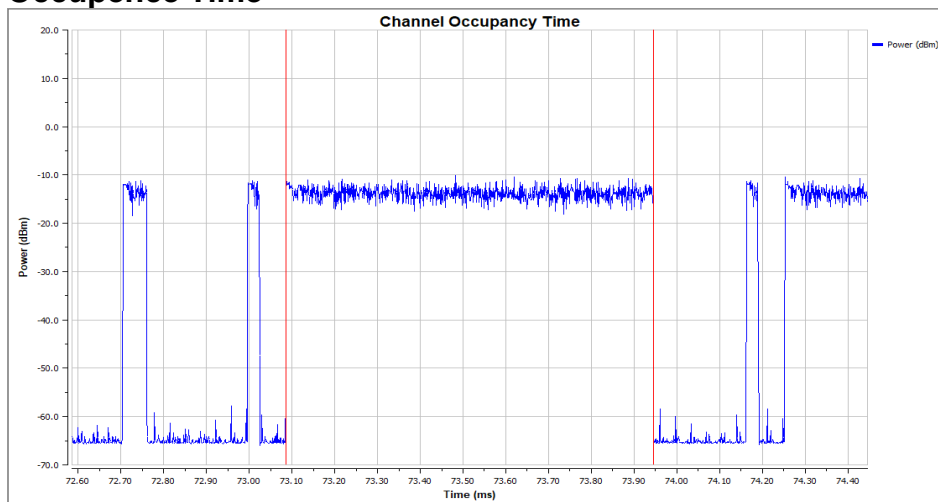
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Test results: IEEE 802.11n HT20 Mode, Low		Limit
UUT Payload (%)	39.60	>30%
Max COT (ms)	0.86	<13ms
Idle Period Time (us)	59.96	>18us
SCST TxOn / (TxOn + TxOff) (%)	0.00	<10%
Pulse Width within 50ms (us)	0.00	<5000us
Test Status	Pass	Pass

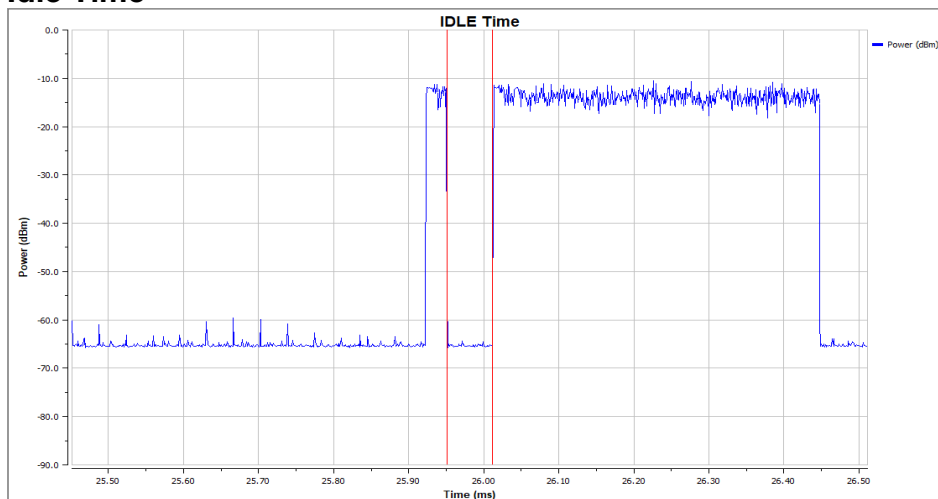
UUT Payload



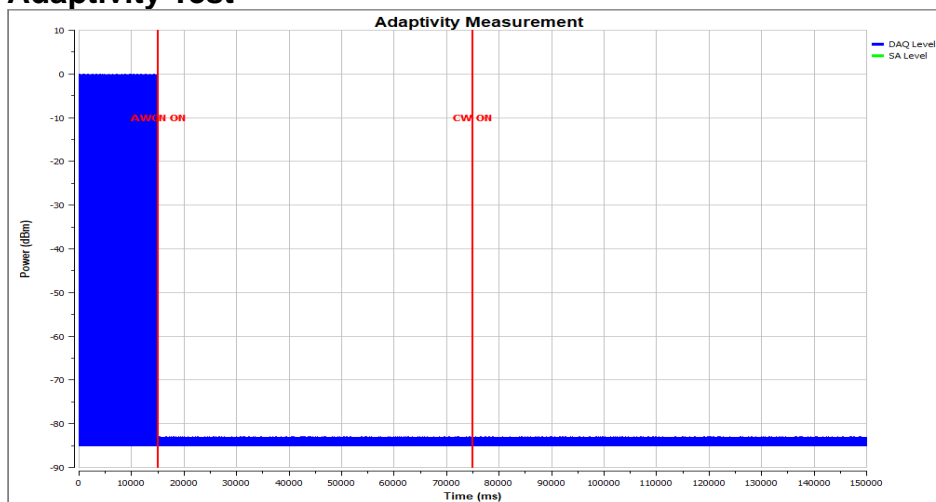
Occurrence Time



Idle Time

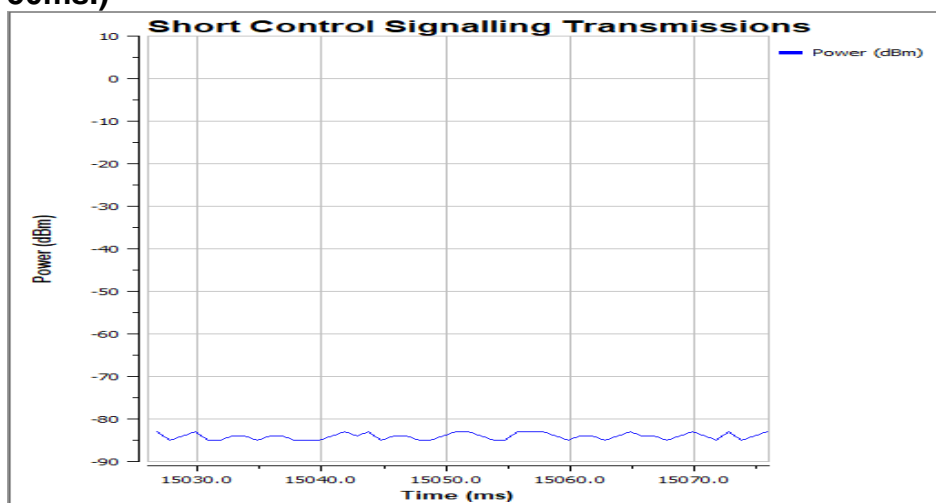


Adaptivity Test



Short control signalling check

(The monitoring time in the interference state is calculated by taking the worst 50ms.)



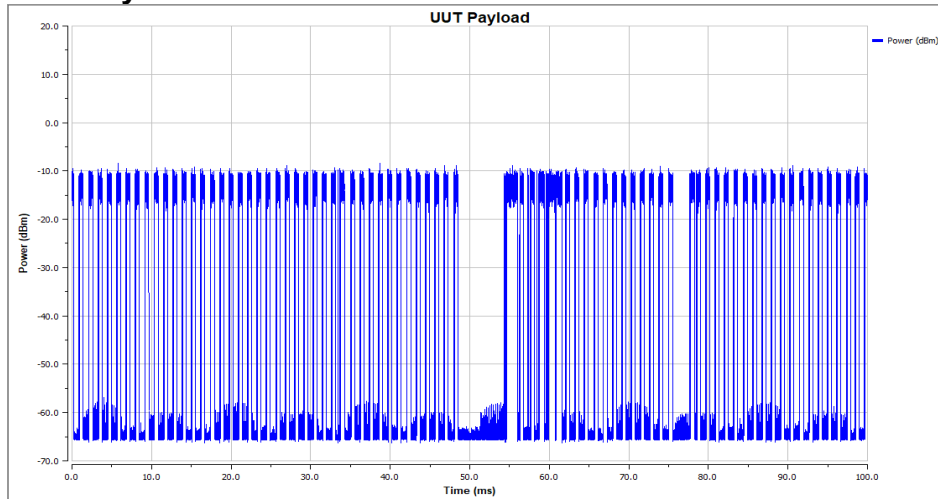


Report No.: TMWK2305001493KR

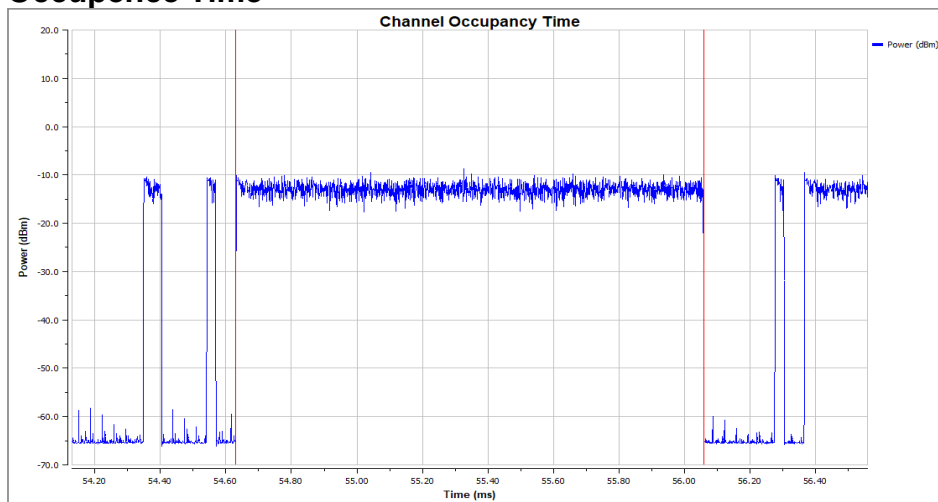
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Test results: IEEE 802.11ax HE20 Mode, High		Limit
UUT Payload (%)	38.98	>30%
Max COT (ms)	1.43	<13ms
Idle Period Time (us)	59.96	>18us
SCST TxOn / (TxOn + TxOff) (%)	0.00	<10%
Pulse Width within 50ms (us)	0.00	<5000us
Test Status	Pass	Pass

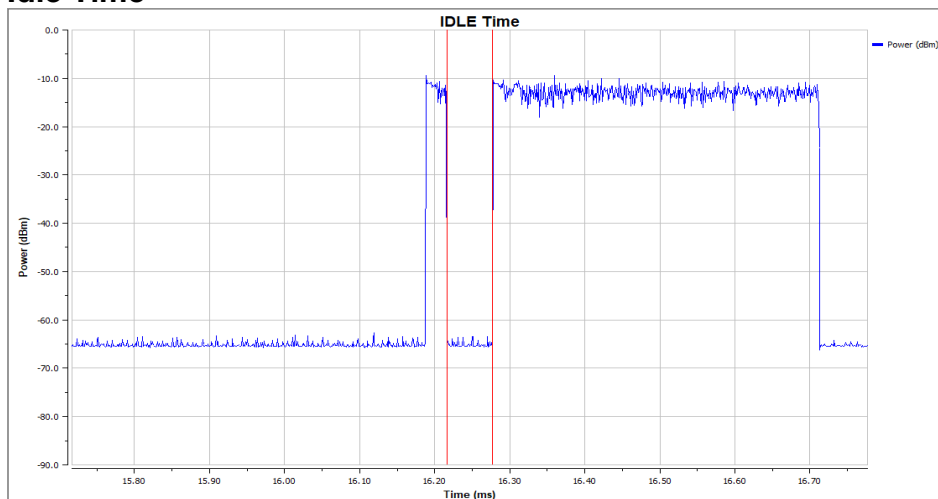
UUT Payload



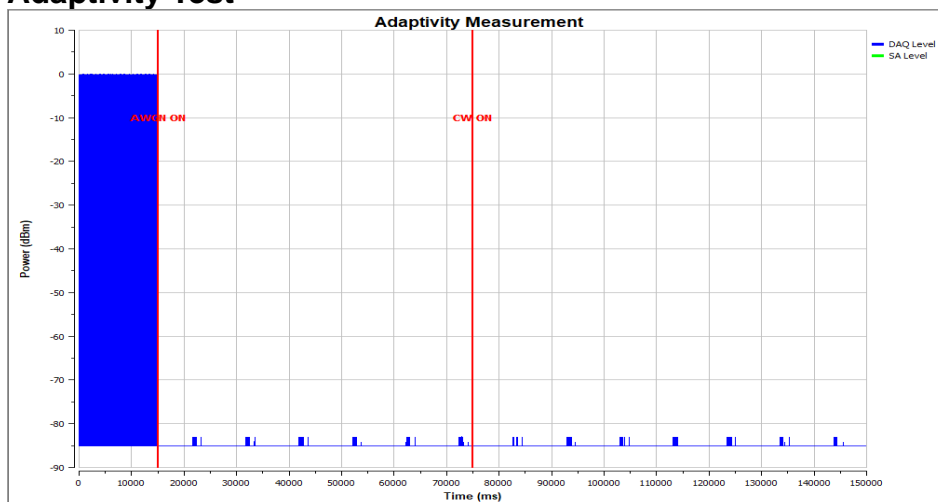
Occurrence Time



Idle Time

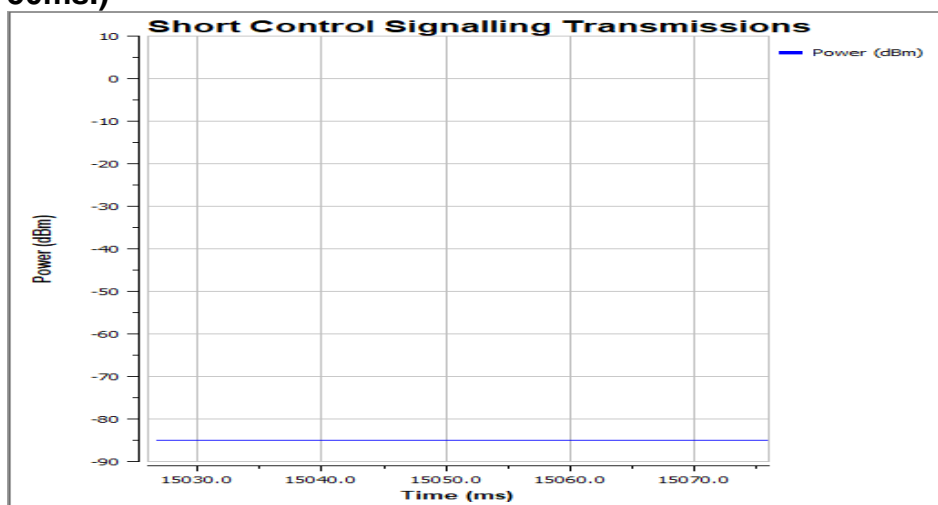


Adaptivity Test



Short control signalling check

(The monitoring time in the interference state is calculated by taking the worst 50ms.)



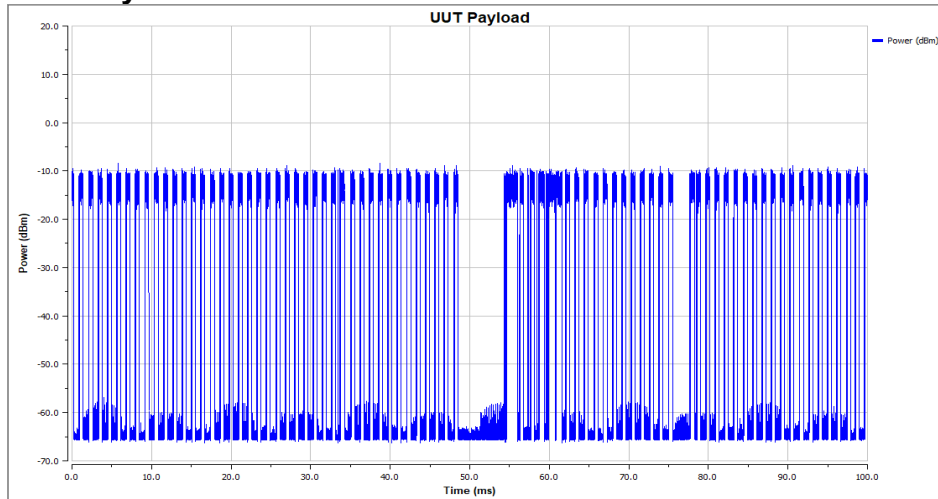


Report No.: TMWK2305001493KR

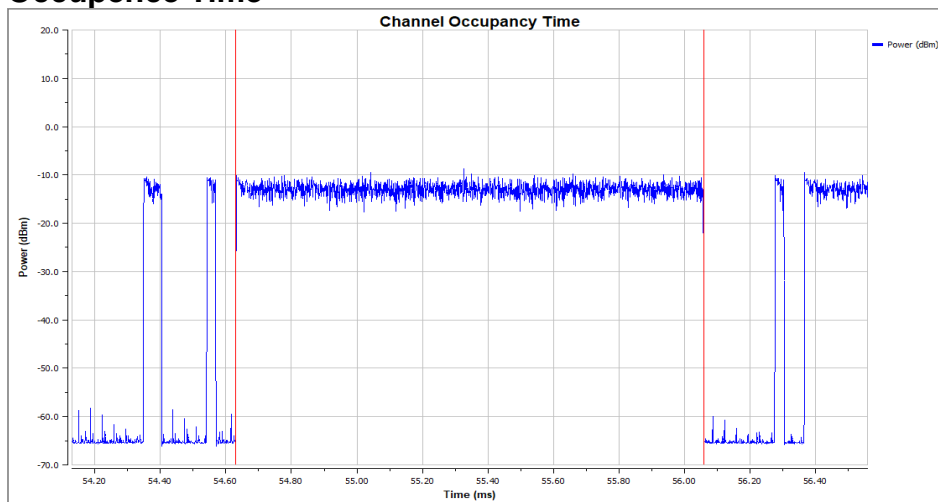
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Test results: IEEE 802.11n HT40 Mode, Low		Limit
UUT Payload (%)	38.98	>30%
Max COT (ms)	1.43	<13ms
Idle Period Time (us)	59.96	>18us
SCST TxOn / (TxOn + TxOff) (%)	0.00	<10%
Pulse Width within 50ms (us)	0.00	<5000us
Test Status	Pass	Pass

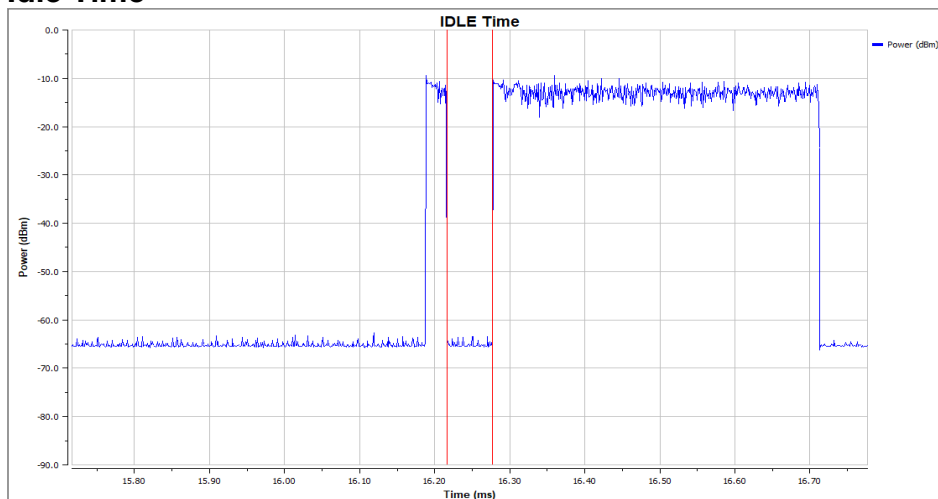
UUT Payload



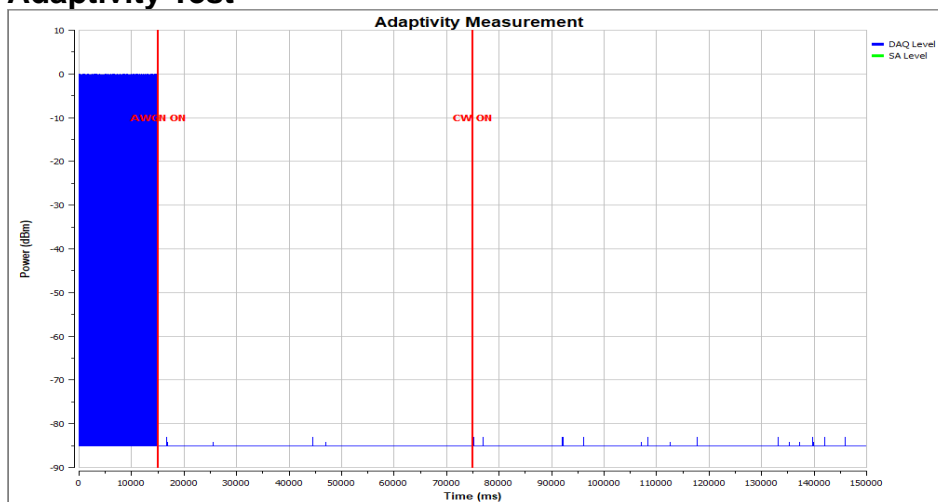
Occurrence Time



Idle Time

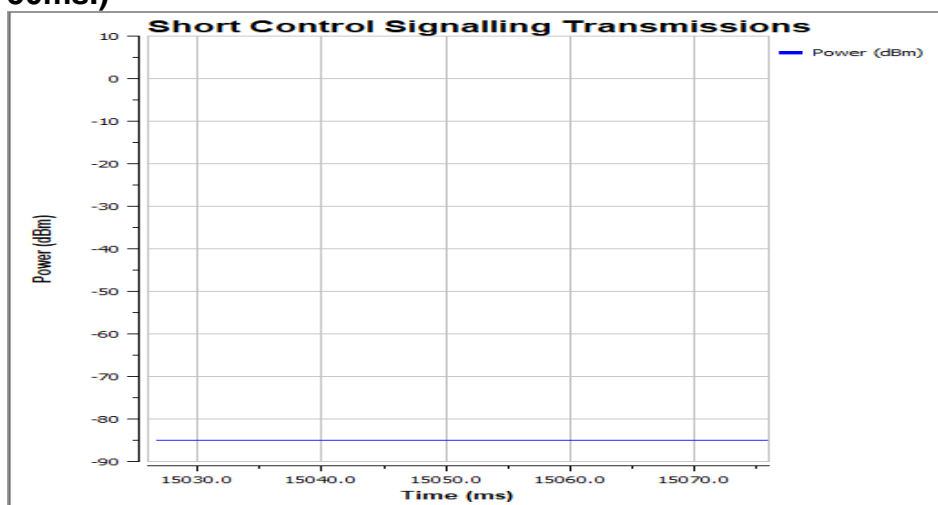


Adaptivity Test



Short control signalling check

(The monitoring time in the interference state is calculated by taking the worst 50ms.)



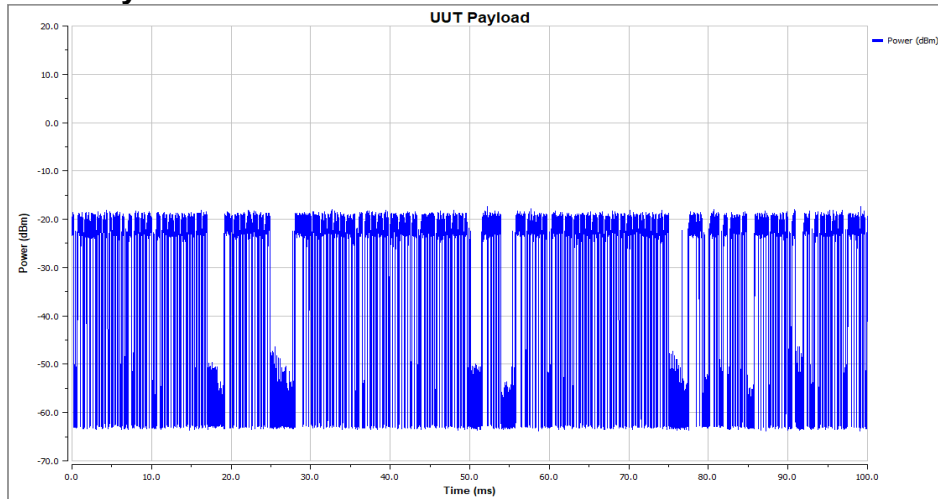


Report No.: TMWK2305001493KR

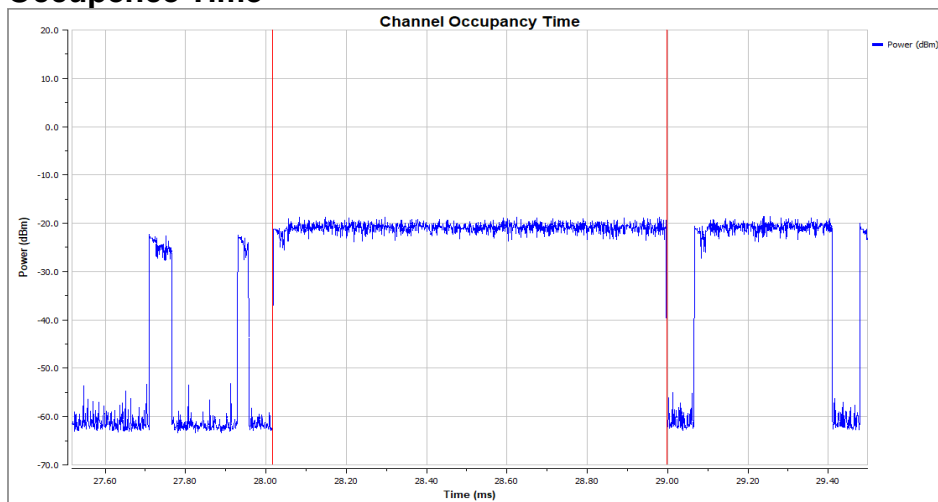
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Rev. 00

Test results: IEEE 802.11n HT40 Mode, High		Limit
UUT Payload (%)	59.22	>30%
Max COT (ms)	0.98	<13ms
Idle Period Time (us)	58.96	>18us
SCST TxOn / (TxOn + TxOff) (%)	0.00	<10%
Pulse Width within 50ms (us)	0.00	<5000us
Test Status	Pass	Pass

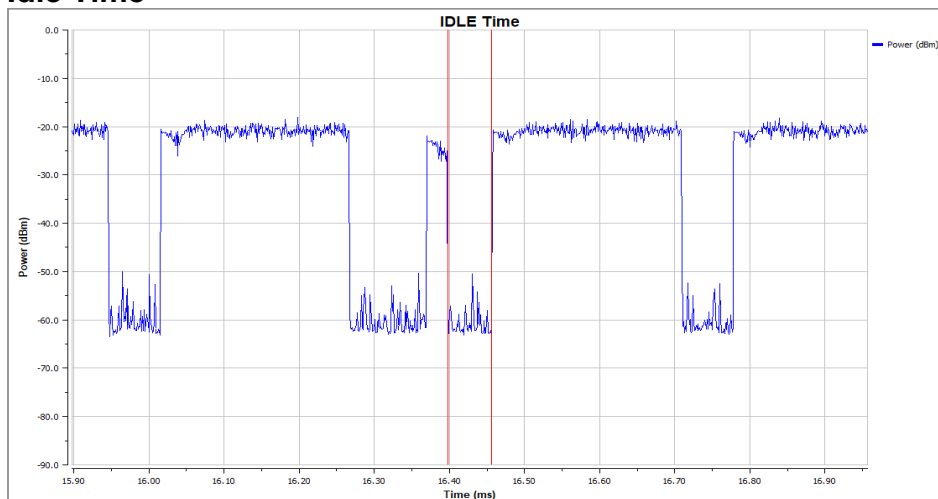
UUT Payload



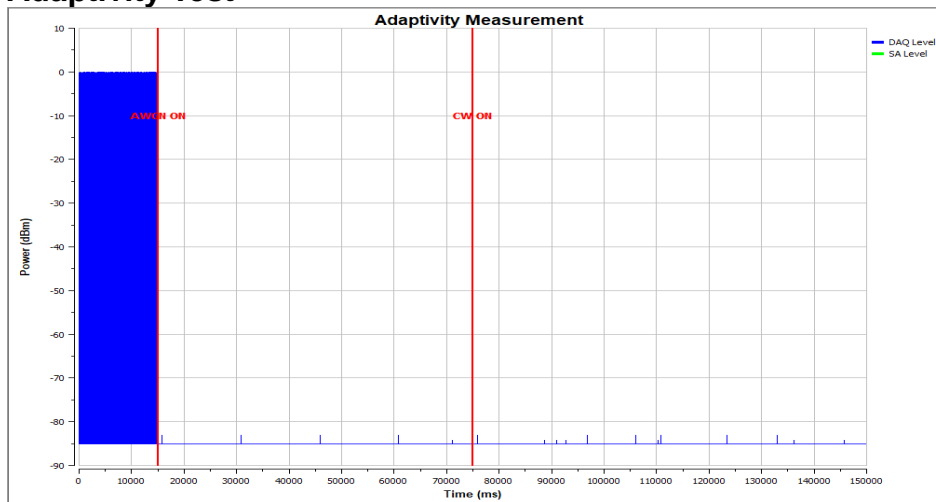
Occurrence Time



Idle Time

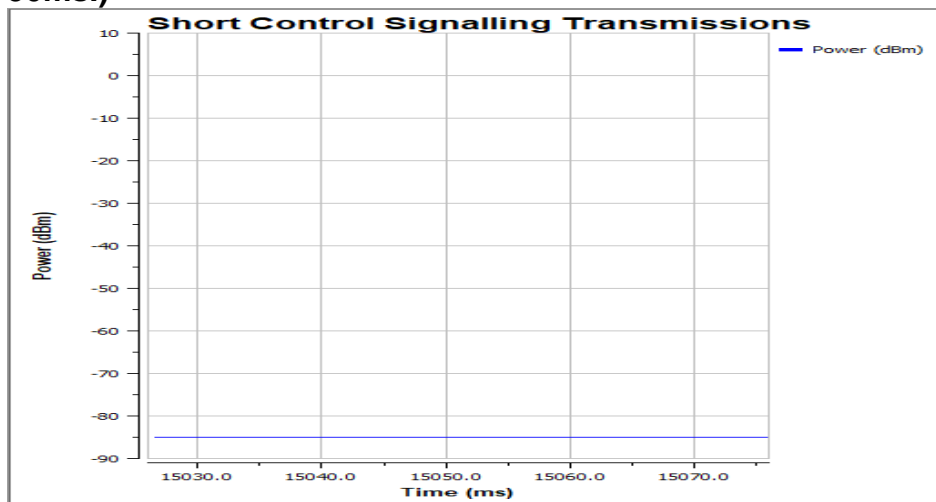


Adaptivity Test



Short control signalling check

(The monitoring time in the interference state is calculated by taking the worst 50ms.)



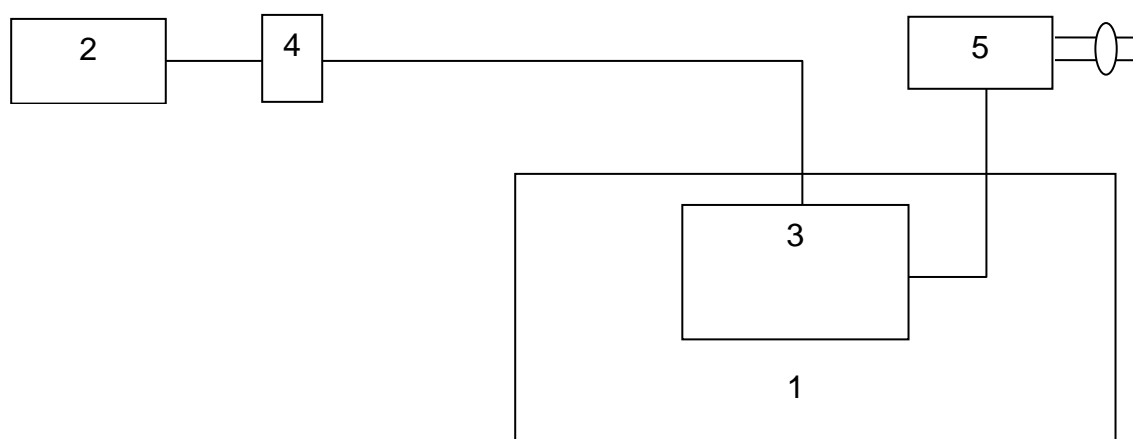
8.8 OCCUPIED CHANNEL BANDWIDTH

LIMIT

FHSS equipments: The Occupied Channel Bandwidth for each hopping frequency shall be within the band 2400 MHz ~ 2483.5 MHz. In addition, for non-adaptive FHSS equipment with e.i.r.p. greater than 10 dBm, the Occupied Channel Bandwidth for every occupied hopping frequency shall be equal to or less than 5 MHz.

Non-FHSS equipment: The Occupied Channel Bandwidth shall be within the band 2400 MHz ~ 2483.5 MHz. In addition, for non-adaptive non-FHSS equipment with e.i.r.p. greater than 10 dBm, the Occupied Channel Bandwidth shall be equal to or less than 20 MHz.

Test Configuration



Legend

1. Wooden table
2. Spectrum analyzer
3. EUT
4. DC block
5. Power supply (Refer to power rating of section 2)

TEST PROCEDURE

1. Please refer to ETSI EN 300 328 (V2.2.2) for the test conditions.
2. Please refer to ETSI EN 300 328 (V2.2.2) for the measurement method.

TEST RESULTS

Compliance.

Report No.: TMWK2305001493KR

Temperature: 24.8~25.2°C

Test Date: May 19~23, 2023

Humidity: 52~60% RH

Tested By: David Li

IEEE 802.11b Mode

Frequency	Measured Frequency (MHz)	Limit (MHz)	99% BW (MHz)
Lower Freq.	2406.050000	2400.00	11.951
Upper Freq.	2478.003000	2483.50	11.970

IEEE 802.11g Mode

Frequency	Measured Frequency (MHz)	Limit (MHz)	99% BW (MHz)
Lower Freq.	2403.703000	2400.00	16.646
Upper Freq.	2480.344000	2483.50	16.647

IEEE 802.11n HT20 Mode

Frequency	Measured Frequency (MHz)	Limit (MHz)	99% BW (MHz)
Lower Freq.	2403.138000	2400.00	17.766
Upper Freq.	2480.899000	2483.50	17.765

IEEE 802.11n HT40 Mode

Frequency	Measured Frequency (MHz)	Limit (MHz)	99% BW (MHz)
Lower Freq.	2403.834000	2400.00	36.379
Upper Freq.	2480.206000	2483.50	36.379

Report No.: TMWK2305001493KR

Temperature: 25.2°C

Test Date: May 19~20, 2023

Humidity: 58% RH

Tested By: Marco Chan

BLE 1Mbps & 2Mbps

Test Mode: BLE(1Mbps) Mode

Frequency	Measured Frequency (MHz)	Limit (MHz)	99% BW (MHz)
Lower Freq.	2401.506000	2400.00	1.0299
Upper Freq.	2480.537000	2483.50	1.0307

Test Mode: BLE(2Mbps) Mode

Frequency	Measured Frequency (MHz)	Limit (MHz)	99% BW (MHz)
Lower Freq.	2401.011000	2400.00	2.0508
Upper Freq.	2481.061000	2483.50	2.0494

Temperature: 24.3~25.2°C

Test Date: May 19~24, 2023

Humidity: 50~60% RH

Tested By: Marco Chan

Bluetooth

Modulation	Channel Center Frequency (MHz)	Occupied Channel Bandwidth (MHz)	Limit (MHz)	99% BW (MHz)
DH5	2402	2401.575000	2400.00	0.86748
	2480	2480.444000	2483.50	0.86807
2DH5	2402	2401.423000	2400.00	1.1794
	2480	2480.602000	2483.50	1.7880
3DH5	2402	2401.415000	2400.00	1.1937
	2480	2480.611000	2483.50	1.1946

8.9 TRANSMITTER UNWANTED EMISSIONS IN THE OOB DOMAIN

LIMIT

The transmitter unwanted emissions in the out-of-band domain but outside the allocated band, shall not exceed the values provided by the mask in figure 1.

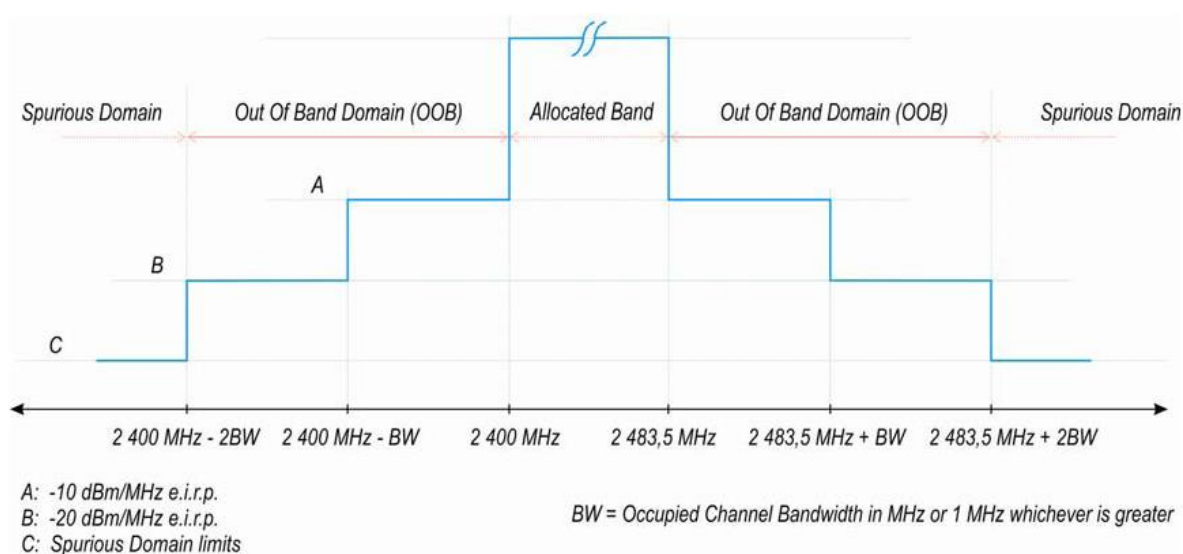
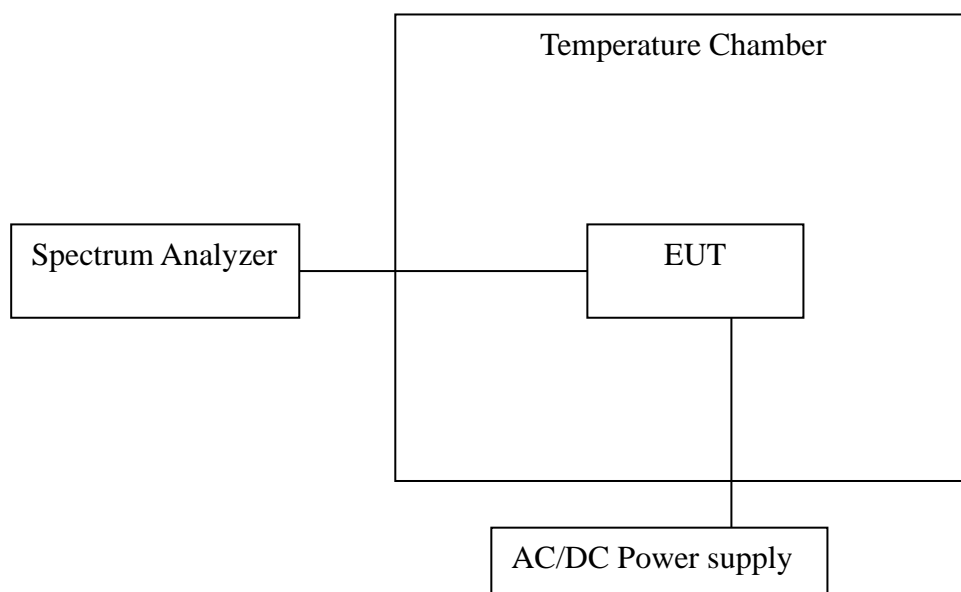


Figure 1: Transmit mask

Test Configuration

Temperature and Voltage Measurement (under normal and extreme test conditions)



TEST PROCEDURE

1. Please refer to ETSI EN 300 328 (V2.2.2) for the test conditions.
2. Please refer to ETSI EN 300 328 (V2.2.2) for the measurement method.

TEST RESULTS

Compliance.

WIFI 2.4GHz

Temperature: 24.8~25.2°C

Humidity: 52~60% RH

Test Date: May 19~23, 2023

Tested By: David Li

BLE (1Mbps&2Mbps)

Temperature: 25.2°C

Humidity: 58% RH

Test Date: May 19~20, 2023

Tested By: Marco Chan

Bluetooth

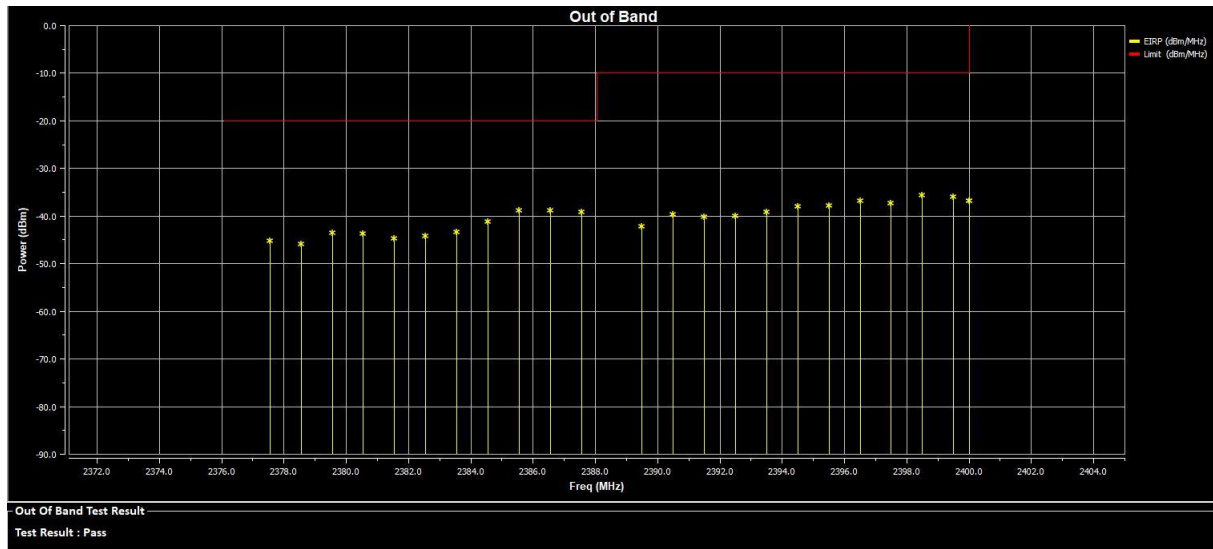
Temperature: 24.3~25.2°C

Humidity: 50~60% RH

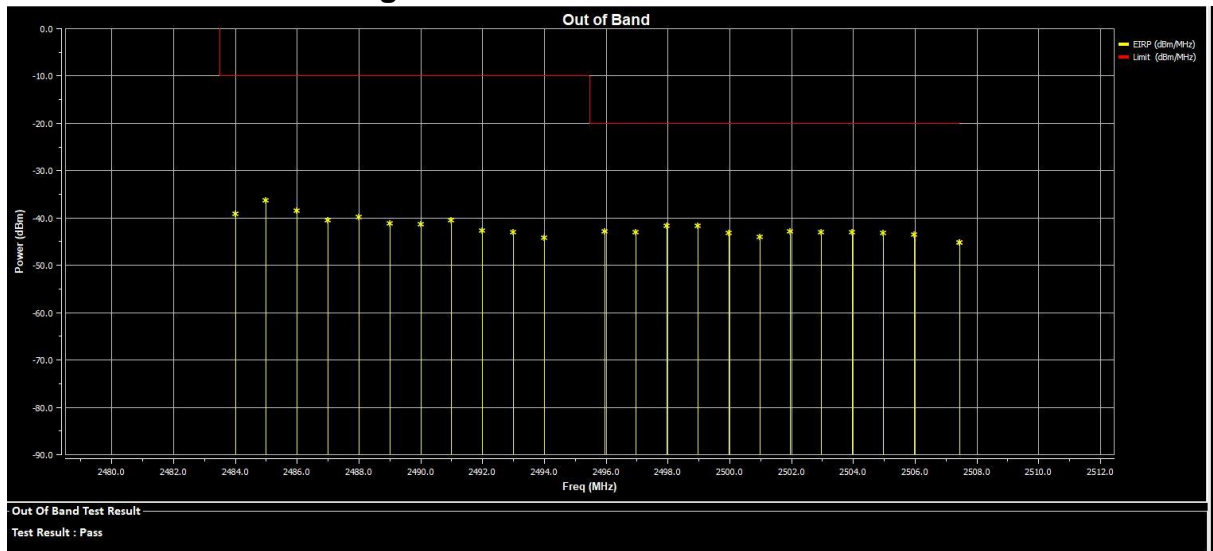
Test Date: May 19~24, 2023

Tested By: Marco Chan

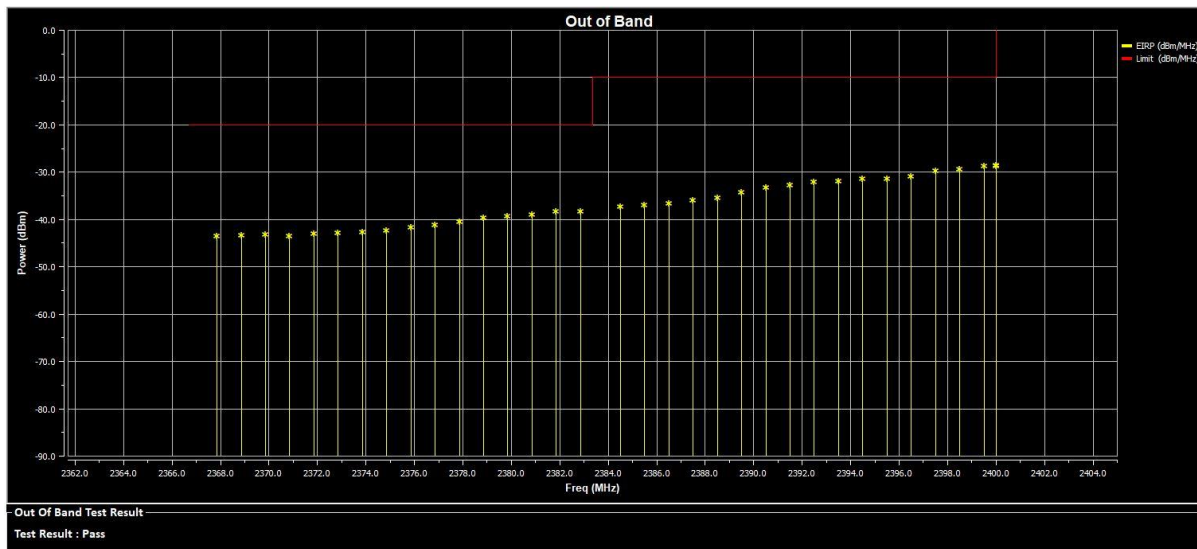
Test results: IEEE 802.11b Mode
25°C / DC_3.3V CH Low



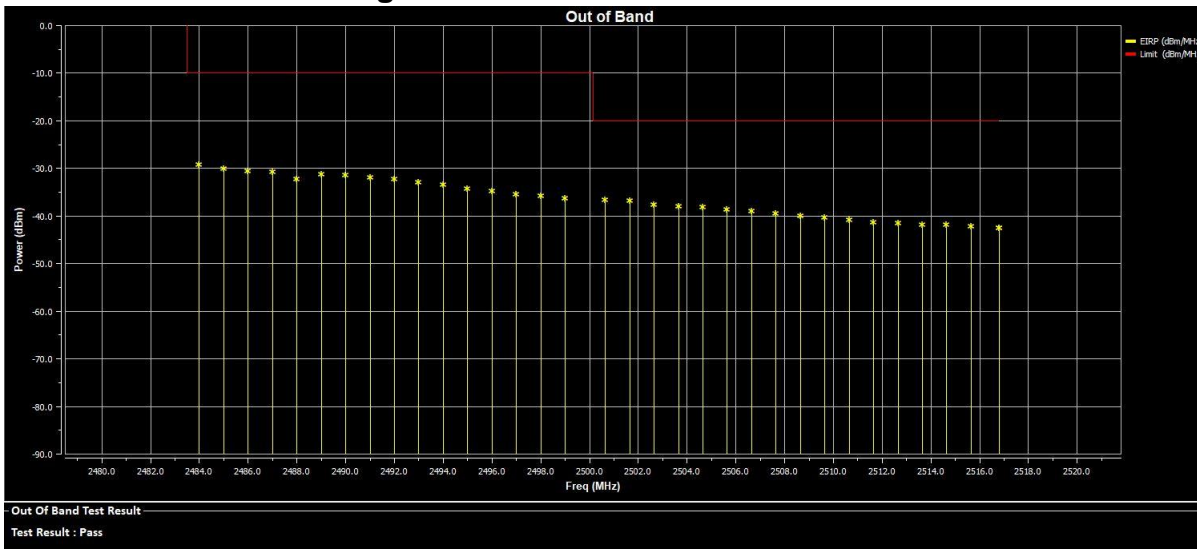
25°C / DC_3.3V CH High



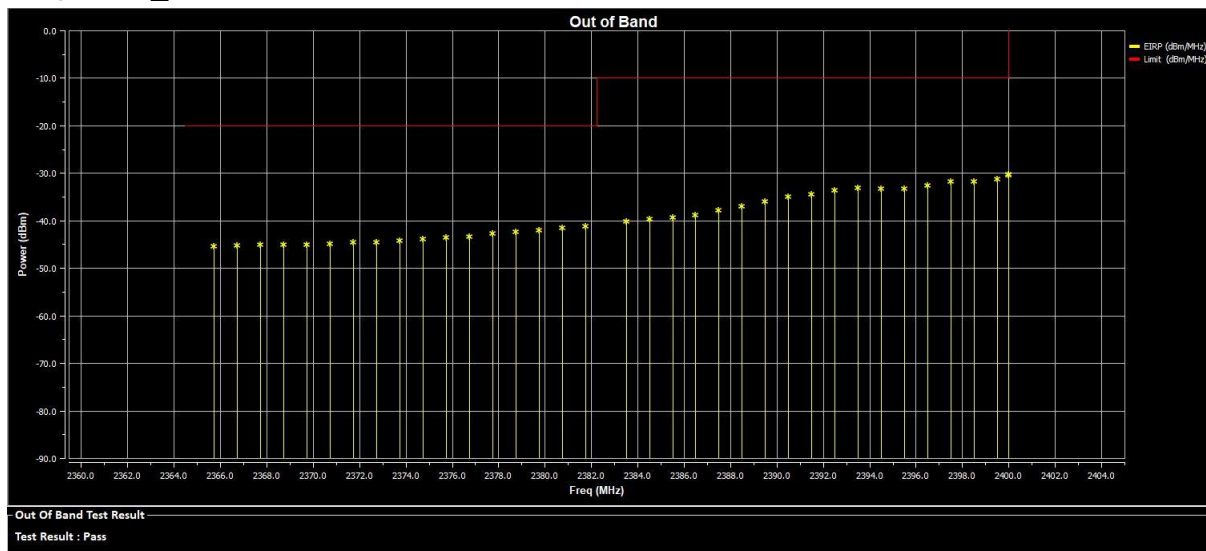
Test results: IEEE 802.11g Mode
25°C / DC_3.3V CH Low



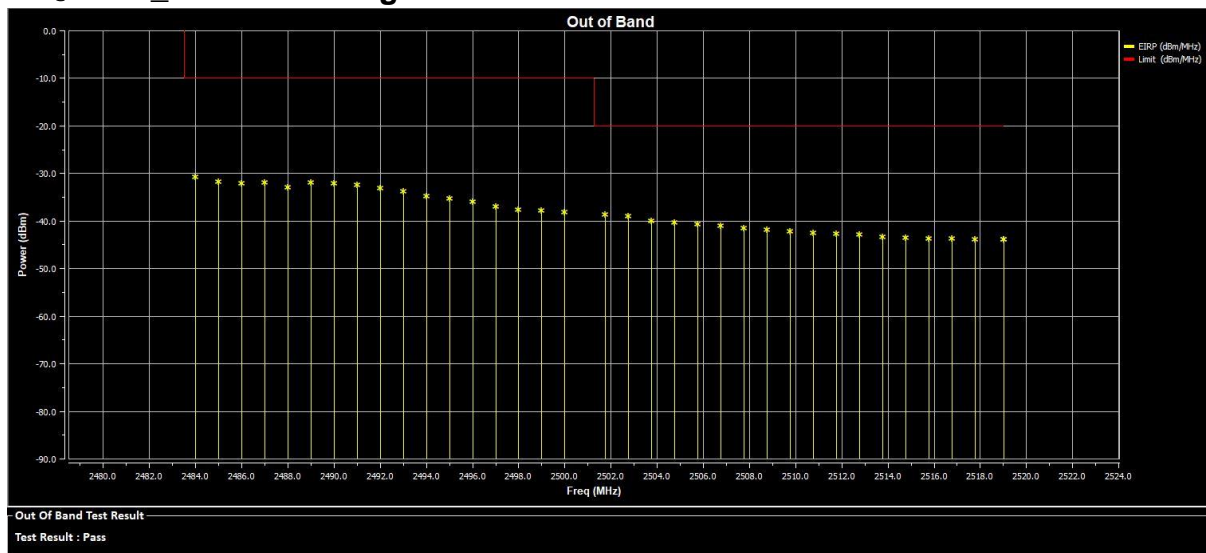
25°C / DC_3.3V CH High



Test results: IEEE 802.11n HT20 Mode:
25°C / DC_3.3V CH Low

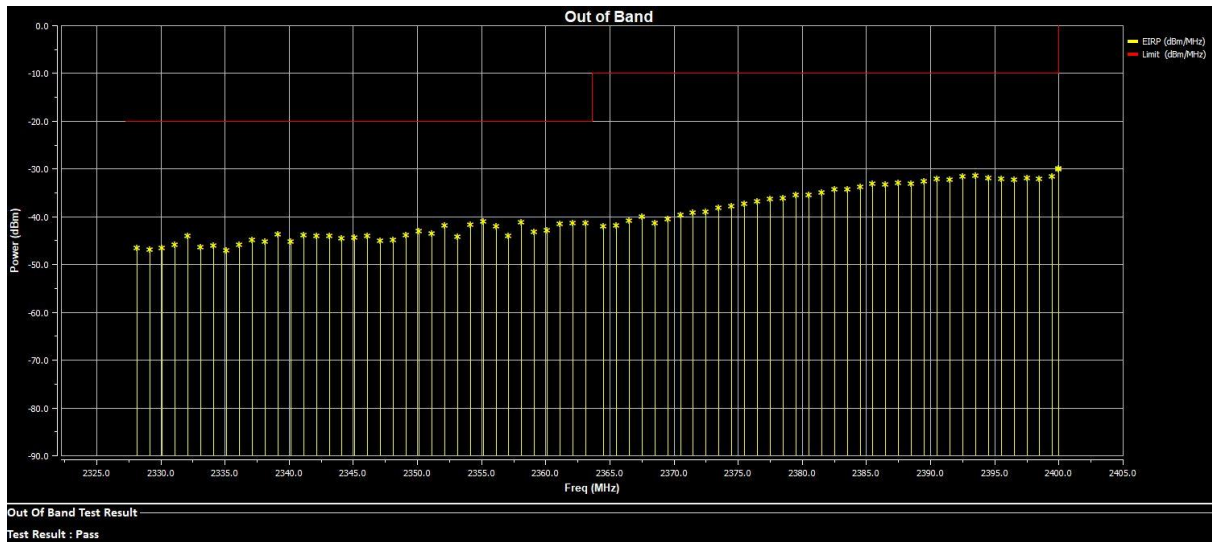


25°C / DC_3.3V CH High

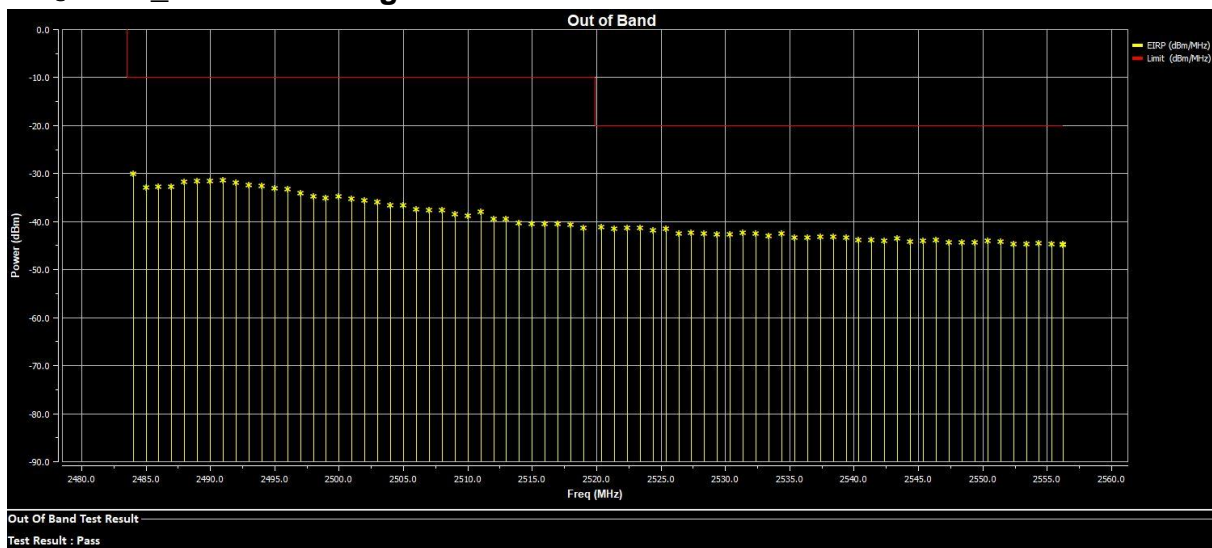


Report No.: TMWK2305001493KR

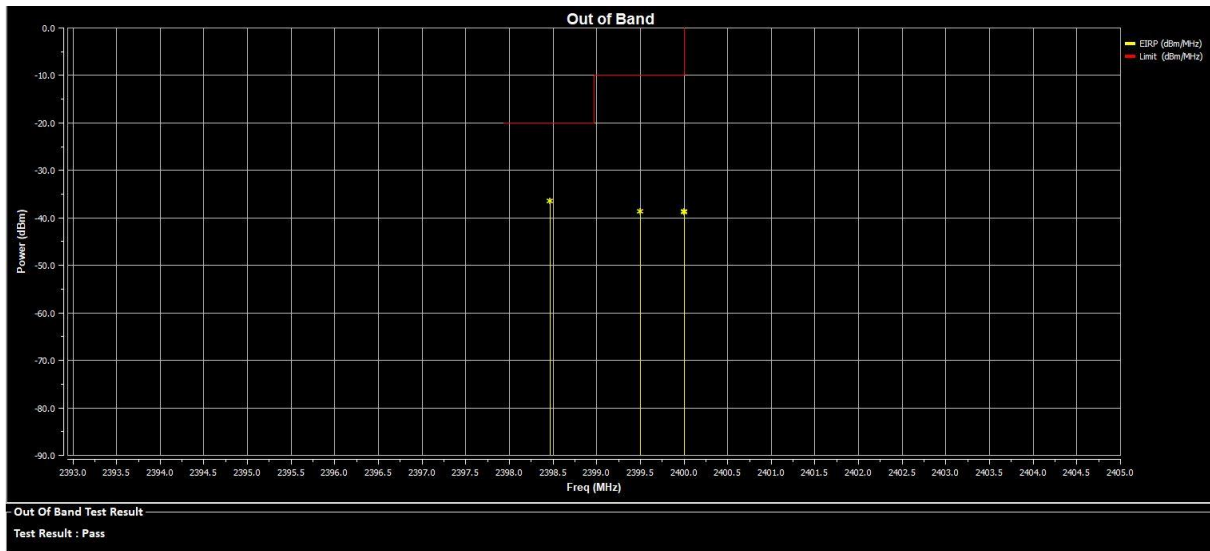
Test results: IEEE 802.11n HT40 Mode:
25°C / DC_3.3V CH Low



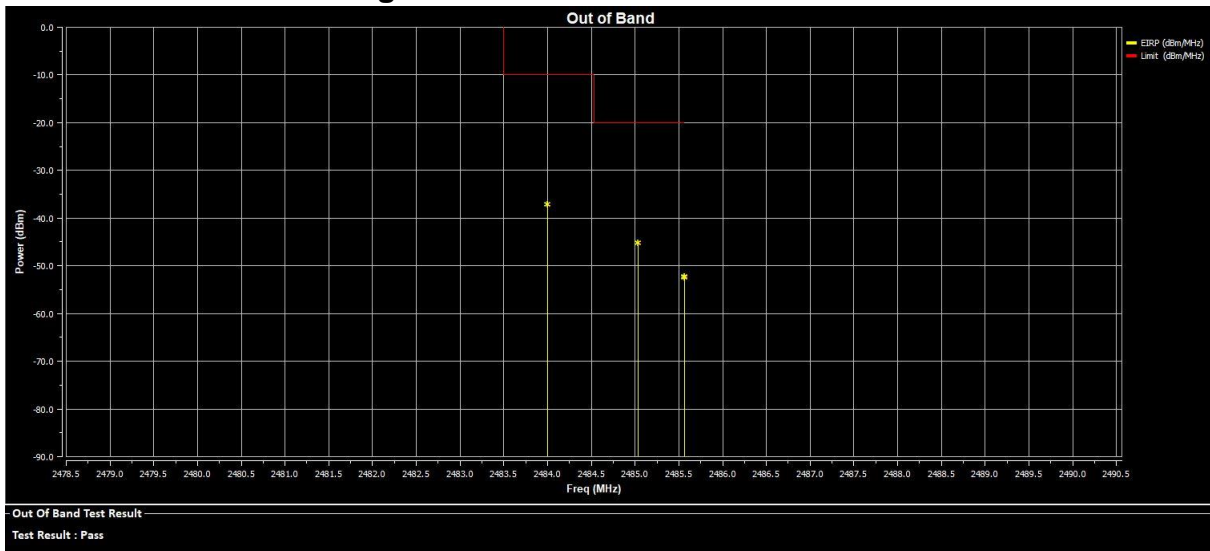
25°C / DC_3.3V CH High



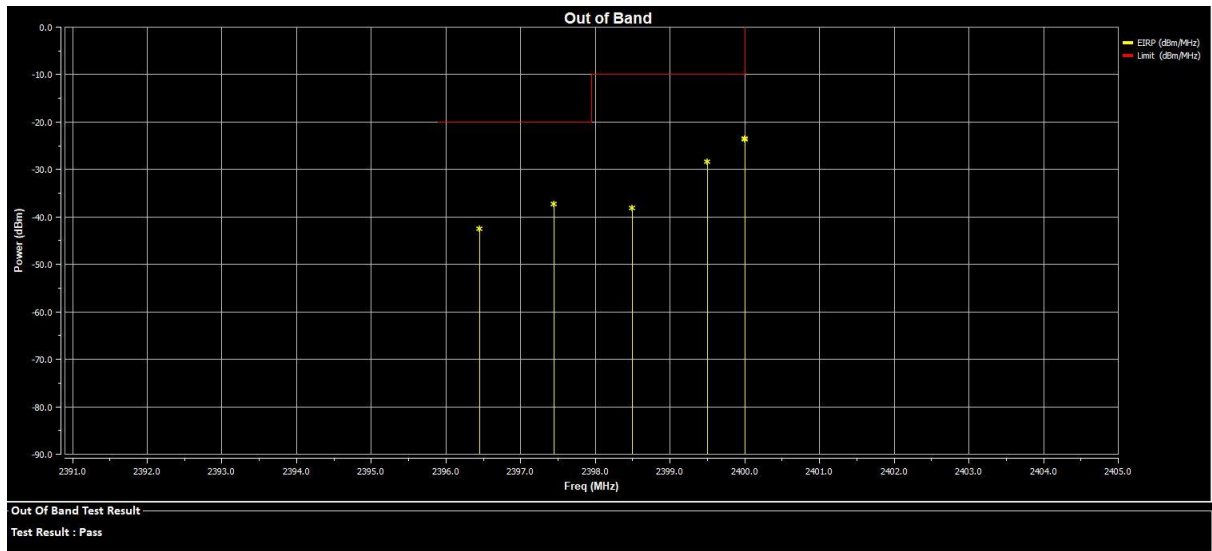
Test results: BLE 1Mbps
25°C / DC_3.3V CH Low



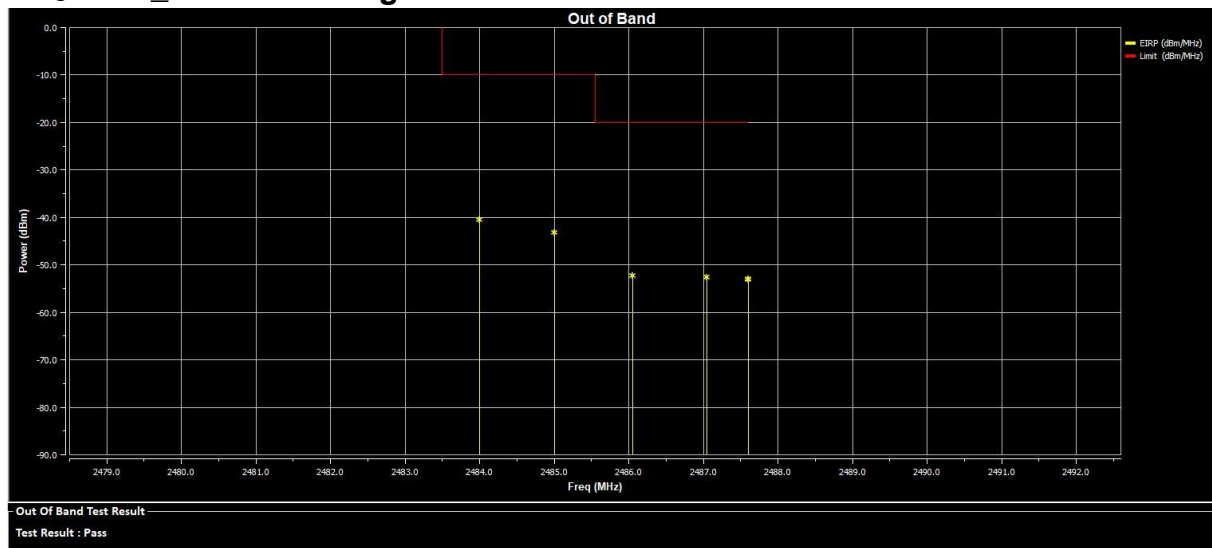
25°C / DC_3.3V CH High



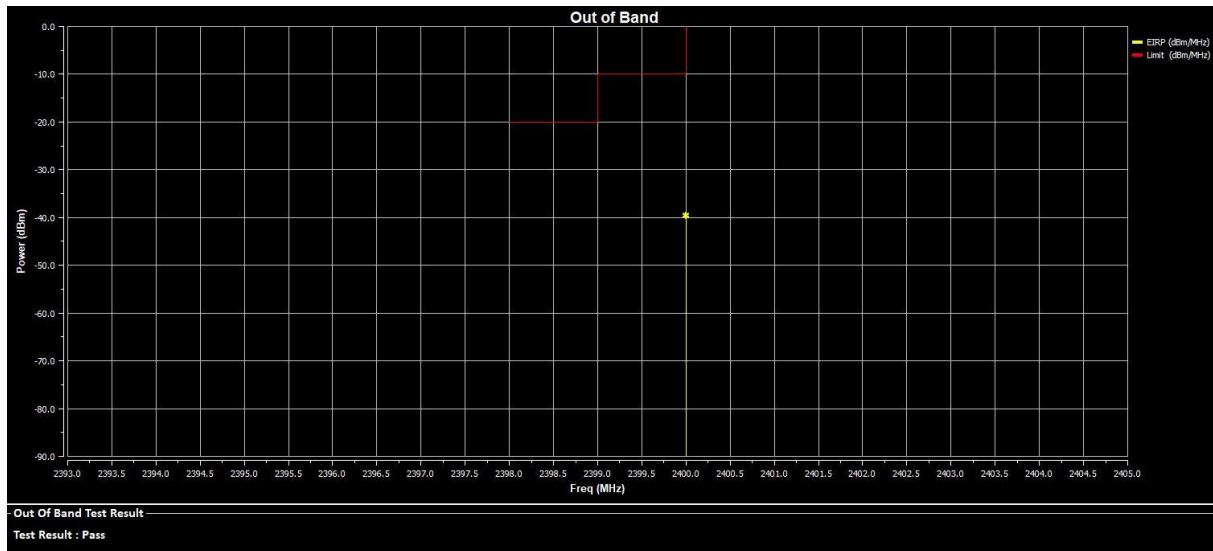
Test results: BLE 2Mbps
25°C / DC_3.3V CH Low



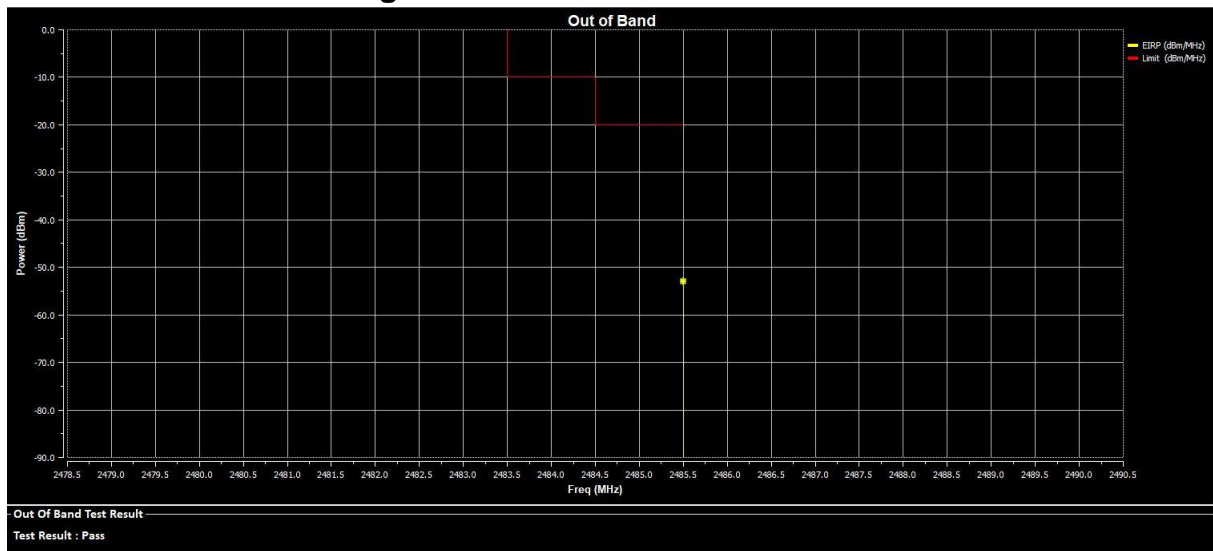
25°C / DC_3.3V CH High



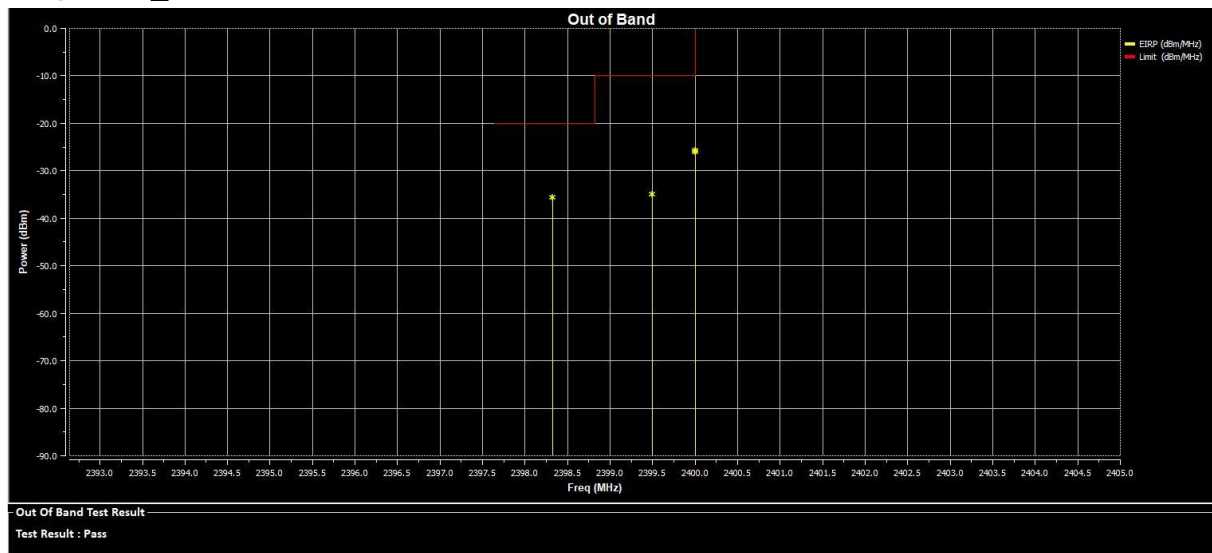
Test results: Bluetooth for GFSK (BR-1M)
25°C / DC_3.3V CH Low



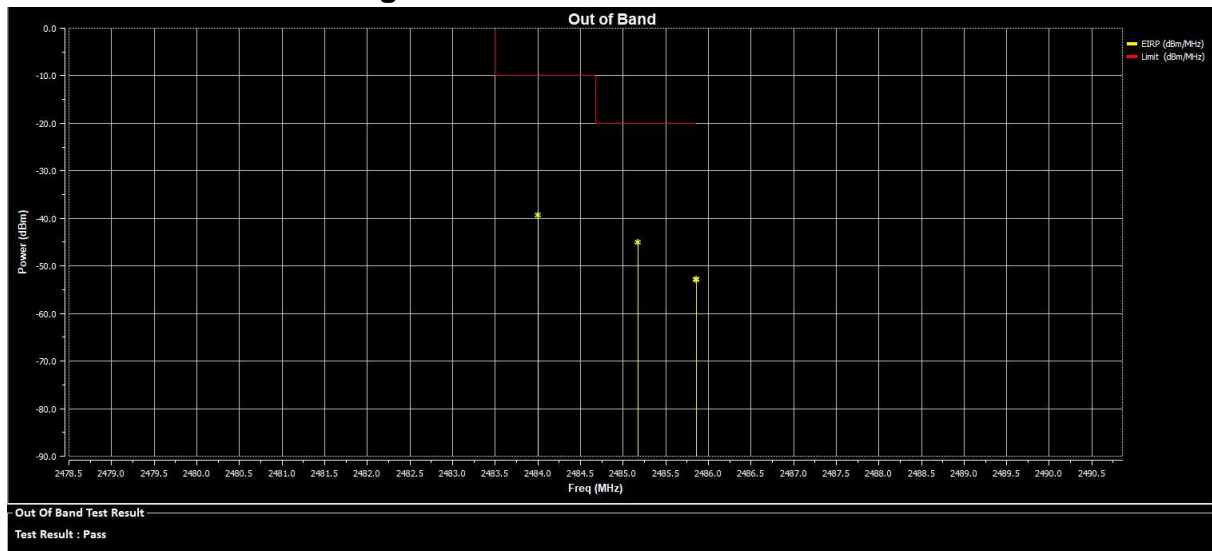
25°C / DC_3.3V CH High



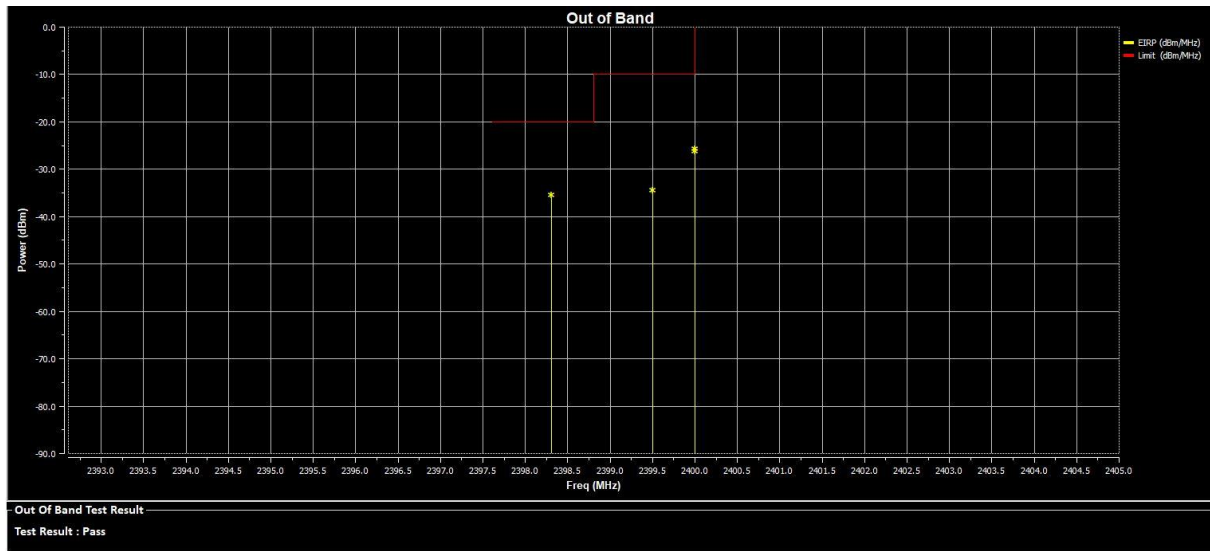
Test results: Bluetooth for $\pi/4$ DQPSK
25°C / DC_3.3V CH Low



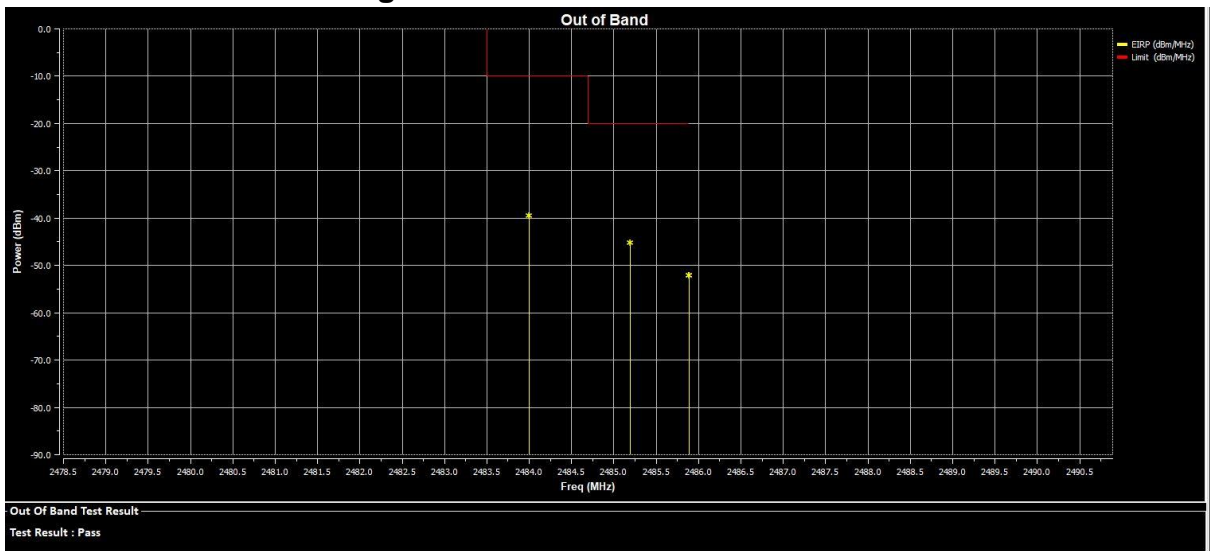
25°C / DC_3.3V CH High



Test results: Bluetooth for 8DPSK (EDR-3M)
25°C / DC_3.3V CH Low



25°C / DC_3.3V CH High



IEEE 802.11b Mode:

Test Condition		Out of Band Emissions		
		25.0		
		Frequency	Measure Power Result	Limit
Frequency	Voltage	MHz	dBm / MHz (e.i.r.p)	dBm / MHz (e.i.r.p)
2412MHz	DC_3.3V	2399.500	-36.4	-10
		2398.500	-36.1	-10
		2397.500	-37.7	-10
		2396.500	-37.2	-10
		2395.500	-38.1	-10
		2394.500	-38.4	-10
		2393.500	-39.5	-10
		2392.500	-40.4	-10
		2391.500	-40.6	-10
		2390.500	-40.0	-10
		2389.500	-42.5	-10
		2400.000	-37.3	-10
		2387.549	-39.6	-20
		2386.549	-39.3	-20
		2385.549	-39.2	-20
		2384.549	-41.5	-20
		2383.549	-43.7	-20
		2382.549	-44.6	-20
		2381.549	-45.1	-20
		2380.549	-44.1	-20
		2379.549	-44.0	-20
		2378.549	-46.3	-20
		2377.549	-45.5	-20
		2400.000	-37.2	-20

Test Condition		Out of Band Emissions		
		25.0		
		Frequency	Measure Power Result	Limit
Frequency	Voltage	MHz	dBm / MHz (e.i.r.p)	dBm / MHz (e.i.r.p)
2472MHz	DC_3.3V	2484.000	-39.6	-10
		2485.000	-36.7	-10
		2486.000	-38.8	-10
		2487.000	-40.8	-10
		2488.000	-40.2	-10
		2489.000	-41.6	-10
		2490.000	-41.8	-10
		2491.000	-40.8	-10
		2492.000	-43.1	-10
		2493.000	-43.4	-10
		2494.000	-44.6	-10
		2507.440	-45.7	-10
		2495.970	-43.2	-20
		2496.970	-43.3	-20
		2497.970	-42.0	-20
		2498.970	-42.0	-20
		2499.970	-43.5	-20
		2500.970	-44.4	-20
		2501.970	-43.3	-20
		2502.970	-43.4	-20
		2503.970	-43.4	-20
		2504.970	-43.6	-20
		2505.970	-44.0	-20
		2507.440	-45.7	-20

IEEE 802.11g Mode:

Test Condition		Out of Band Emissions		
		25.0		
		Frequency	Measure Power Result	Limit
Frequency	Voltage	MHz	dBm / MHz (e.i.r.p)	dBm / MHz (e.i.r.p)
2412MHz	DC_3.3V	2399.500	-29.2	-10
		2398.500	-29.8	-10
		2397.500	-30.1	-10
		2396.500	-31.3	-10
		2395.500	-31.8	-10
		2394.500	-31.8	-10
		2393.500	-32.3	-10
		2392.500	-32.4	-10
		2391.500	-33.2	-10
		2390.500	-33.7	-10
		2389.500	-34.7	-10
		2388.500	-35.8	-10
		2387.500	-36.4	-10
		2386.500	-36.9	-10
		2385.500	-37.3	-10
		2384.500	-37.6	-10
		2400.000	-28.9	-10
		2382.854	-38.7	-20
		2381.854	-38.7	-20
		2380.854	-39.4	-20
		2379.854	-39.7	-20
		2378.854	-40.1	-20
		2377.854	-40.9	-20
		2376.854	-41.5	-20
		2375.854	-42.0	-20
		2374.854	-42.7	-20
		2373.854	-43.1	-20
		2372.854	-43.3	-20
		2371.854	-43.5	-20
		2370.854	-43.9	-20
		2369.854	-43.6	-20
		2368.854	-43.8	-20
		2367.854	-44.0	-20
		2400.000	-29.0	-20

Test Condition		Out of Band Emissions		
		25.0		
		Frequency	Measure Power Result	Limit
Frequency	Voltage	MHz	dBm / MHz (e.i.r.p)	dBm / MHz (e.i.r.p)
2472MHz	DC_3.3V	2484.000	-29.6	-10
		2485.000	-30.5	-10
		2486.000	-30.9	-10
		2487.000	-31.1	-10
		2488.000	-32.6	-10
		2489.000	-31.6	-10
		2490.000	-31.9	-10
		2491.000	-32.3	-10
		2492.000	-32.7	-10
		2493.000	-33.3	-10
		2494.000	-33.8	-10
		2495.000	-34.7	-10
		2496.000	-35.1	-10
		2497.000	-35.8	-10
		2498.000	-36.2	-10
		2499.000	-36.6	-10
		2516.794	-42.9	-10
		2500.647	-37.0	-20
		2501.647	-37.2	-20
		2502.647	-38.0	-20
		2503.647	-38.4	-20
		2504.647	-38.6	-20
		2505.647	-39.1	-20
		2506.647	-39.4	-20
		2507.647	-39.9	-20
		2508.647	-40.4	-20
		2509.647	-40.7	-20
		2510.647	-41.3	-20
		2511.647	-41.7	-20
		2512.647	-41.9	-20
		2513.647	-42.2	-20
		2514.647	-42.3	-20
		2515.647	-42.6	-20
		2516.794	-42.8	-20

IEEE 802.11n HT20 Mode:

Test Condition		Out of Band Emissions		
		25.0		
		Frequency	Measure Power Result	Limit
Frequency	Voltage	MHz	dBm / MHz (e.i.r.p)	dBm / MHz (e.i.r.p)
2412MHz	DC_3.3V	2399.500	-31.7	-10
		2398.500	-32.2	-10
		2397.500	-32.2	-10
		2396.500	-33.0	-10
		2395.500	-33.7	-10
		2394.500	-33.6	-10
		2393.500	-33.5	-10
		2392.500	-34.0	-10
		2391.500	-34.8	-10
		2390.500	-35.3	-10
		2389.500	-36.4	-10
		2388.500	-37.3	-10
		2387.500	-38.2	-10
		2386.500	-39.1	-10
		2385.500	-39.8	-10
		2384.500	-40.0	-10
		2383.500	-40.5	-10
		2400.000	-30.7	-10
		2381.734	-41.6	-20
		2380.734	-41.9	-20
		2379.734	-42.3	-20
		2378.734	-42.8	-20
		2377.734	-43.1	-20
		2376.734	-43.7	-20
		2375.734	-43.9	-20
		2374.734	-44.2	-20
		2373.734	-44.6	-20
		2372.734	-44.9	-20
		2371.734	-44.9	-20
		2370.734	-45.2	-20
		2369.734	-45.4	-20
		2368.734	-45.4	-20
		2367.734	-45.5	-20
		2366.734	-45.5	-20
		2365.734	-45.7	-20
		2400.000	-30.7	-20

Test Condition		Out of Band Emissions		
		25.0		
		Frequency	Measure Power Result	Limit
Frequency	Voltage	MHz	dBm / MHz (e.i.r.p)	dBm / MHz (e.i.r.p)
2472MHz	DC_3.3V	2484.000	-31.2	-10
		2485.000	-32.2	-10
		2486.000	-32.5	-10
		2487.000	-32.3	-10
		2488.000	-33.3	-10
		2489.000	-32.4	-10
		2490.000	-32.5	-10
		2491.000	-32.7	-10
		2492.000	-33.5	-10
		2493.000	-34.1	-10
		2494.000	-35.1	-10
		2495.000	-35.7	-10
		2496.000	-36.3	-10
		2497.000	-37.3	-10
		2498.000	-38.0	-10
		2499.000	-38.2	-10
		2500.000	-38.5	-10
		2519.030	-44.2	-10
		2501.765	-39.0	-20
		2502.765	-39.4	-20
		2503.765	-40.3	-20
		2504.765	-40.8	-20
		2505.765	-41.1	-20
		2506.765	-41.4	-20
		2507.765	-41.9	-20
		2508.765	-42.2	-20
		2509.765	-42.6	-20
		2510.765	-42.9	-20
		2511.765	-43.1	-20
		2512.765	-43.3	-20
		2513.765	-43.8	-20
		2514.765	-43.9	-20
		2515.765	-44.0	-20
		2516.765	-44.1	-20
		2517.765	-44.3	-20
		2519.030	-44.3	-20

IEEE 802.11n HT40 Mode:

Test Condition		Out of Band Emissions		
		25.0		
		Frequency	Measure Power Result	Limit
Frequency	Voltage	MHz	dBm / MHz (e.i.r.p)	dBm / MHz (e.i.r.p)
2422MHz	DC_3.3V	2399.500	-31.9	-10
		2398.500	-32.5	-10
		2397.500	-32.3	-10
		2396.500	-32.6	-10
		2395.500	-32.5	-10
		2394.500	-32.3	-10
		2393.500	-31.8	-10
		2392.500	-31.9	-10
		2391.500	-32.6	-10
		2390.500	-32.5	-10
		2389.500	-33.0	-10
		2388.500	-33.4	-10
		2387.500	-33.4	-10
		2386.500	-33.6	-10
		2385.500	-33.6	-10
		2384.500	-34.1	-10
		2383.500	-34.6	-10
		2382.500	-34.7	-10
		2381.500	-35.3	-10
		2380.500	-35.8	-10
		2379.500	-35.9	-10
		2378.500	-36.4	-10
		2377.500	-36.7	-10
		2376.500	-37.3	-10
		2375.500	-37.7	-10
		2374.500	-38.3	-10
		2373.500	-38.5	-10
		2372.500	-39.3	-10
		2371.500	-39.6	-10
		2370.500	-40.1	-10
		2369.500	-41.0	-10
		2368.500	-41.7	-10
		2367.500	-40.4	-10
		2366.500	-41.2	-10
		2365.500	-42.3	-10
		2364.500	-42.4	-10
		2400.000	-30.4	-10

2422MHz	DC_3.3V	2363.121	-41.8	-20
		2362.121	-41.8	-20
		2361.121	-42.0	-20
		2360.121	-43.2	-20
		2359.121	-43.6	-20
		2358.121	-41.5	-20
		2357.121	-44.3	-20
		2356.121	-42.4	-20
		2355.121	-41.5	-20
		2354.121	-42.1	-20
		2353.121	-44.5	-20
		2352.121	-42.2	-20
		2351.121	-43.9	-20
		2350.121	-43.4	-20
		2349.121	-44.3	-20
		2348.121	-45.3	-20
		2347.121	-45.3	-20
		2346.121	-44.4	-20
		2345.121	-44.8	-20
		2344.121	-45.0	-20
		2343.121	-44.4	-20
		2342.121	-44.5	-20
		2341.121	-44.3	-20
		2340.121	-45.7	-20
		2339.121	-44.0	-20
		2338.121	-45.7	-20
		2337.121	-45.2	-20
		2336.121	-46.2	-20
		2335.121	-47.4	-20
		2334.121	-46.4	-20
		2333.121	-46.8	-20
		2332.121	-44.4	-20
		2331.121	-46.3	-20
		2330.121	-46.9	-20
		2329.121	-47.2	-20
		2328.121	-46.9	-20
		2400.000	-30.4	-20

Test Condition		Out of Band Emissions		
		25.0		
		Frequency	Measure Power Result	Limit
Frequency	Voltage	MHz	dBm / MHz (e.i.r.p)	dBm / MHz (e.i.r.p)
2462MHz	DC_3.3V	2484.000	-30.4	-10
		2485.000	-33.3	-10
		2486.000	-33.1	-10
		2487.000	-33.1	-10
		2488.000	-32.1	-10
		2489.000	-31.9	-10
		2490.000	-31.9	-10
		2491.000	-31.8	-10
		2492.000	-32.4	-10
		2493.000	-32.8	-10
		2494.000	-32.9	-10
		2495.000	-33.4	-10
		2496.000	-33.6	-10
		2497.000	-34.5	-10
		2498.000	-35.1	-10
		2499.000	-35.5	-10
		2500.000	-35.1	-10
		2501.000	-35.6	-10
		2502.000	-36.1	-10
		2503.000	-36.3	-10
		2504.000	-37.0	-10
		2505.000	-37.1	-10
		2506.000	-37.8	-10
		2507.000	-38.0	-10
		2508.000	-38.0	-10
		2509.000	-38.8	-10
		2510.000	-39.2	-10
		2511.000	-38.4	-10
		2512.000	-39.8	-10
		2513.000	-39.9	-10
		2514.000	-40.6	-10
		2515.000	-40.8	-10
		2516.000	-40.9	-10
		2517.000	-41.0	-10
		2518.000	-41.1	-10
		2519.000	-41.7	-10
		2556.258	-45.2	-10

2462MHz	DC_3.3V	2520.379	-41.6	-20
		2521.379	-41.8	-20
		2522.379	-41.6	-20
		2523.379	-41.7	-20
		2524.379	-42.3	-20
		2525.379	-41.8	-20
		2526.379	-42.9	-20
		2527.379	-42.7	-20
		2528.379	-42.9	-20
		2529.379	-43.1	-20
		2530.379	-43.1	-20
		2531.379	-42.7	-20
		2532.379	-42.9	-20
		2533.379	-43.4	-20
		2534.379	-42.9	-20
		2535.379	-43.8	-20
		2536.379	-43.8	-20
		2537.379	-43.5	-20
		2538.379	-43.5	-20
		2539.379	-43.7	-20
		2540.379	-44.3	-20
		2541.379	-44.3	-20
		2542.379	-44.5	-20
		2543.379	-44.0	-20
		2544.379	-44.6	-20
		2545.379	-44.5	-20
		2546.379	-44.3	-20
		2547.379	-44.7	-20
		2548.379	-44.8	-20
		2549.379	-44.7	-20
		2550.379	-44.4	-20
		2551.379	-44.6	-20
		2552.379	-45.0	-20
		2553.379	-45.1	-20
		2554.379	-44.9	-20
		2555.379	-45.1	-20
		2556.258	-45.1	-20

Test results: BLE 1Mbps

Test Condition			Out of Band Emissions		
Temp	Voltage	Freq. (MHz)	Frequency MHz	Measure Power Result dBm / MHz (e.i.r.p)	Limit dBm / MHz (e.i.r.p)
25	DC_3.3V	2402	2399.500	-39.10	-10
			2400.000	-39.13	-10
			2398.470	-36.87	-20
			2400.000	-39.06	-20
		2480	2484.000	-37.53	-10
			2485.562	-52.79	-10
			2485.031	-45.65	-20
			2485.562	-52.71	-20

Test results: BLE 2Mbps

Test Condition			Out of Band Emissions		
Temp	Voltage	Freq. (MHz)	Frequency MHz	Measure Power Result dBm / MHz (e.i.r.p)	Limit dBm / MHz (e.i.r.p)
25	DC_3.3V	2402	2399.500	-28.74	-10
			2398.500	-38.51	-10
			2400.000	-23.99	-10
			2397.449	-37.75	-20
			2396.449	-42.94	-20
			2400.000	-23.81	-20
		2480	2484.000	-40.85	-10
			2485.000	-43.63	-10
			2487.598	-53.53	-10
			2486.049	-52.68	-20
			2487.049	-52.93	-20
			2487.598	-53.37	-20

Test results: Bluetooth for GFSK (BR-1M)

Test Condition		Out of Band Emissions		
Temp	Voltage	Frequency MHz	Measure Power Result dBm / MHz (e.i.r.p)	Limit dBm / MHz (e.i.r.p)
25	DC 3.3V	2400.000	-39.85	-10
		2400.000	-40.11	-20
		2485.500	-53.48	-10
		2485.500	-53.18	-20

Test results: Bluetooth for $\pi/4$ DQPSK

Test Condition		Out of Band Emissions		
Temp	Voltage	Frequency MHz	Measure Power Result dBm / MHz (e.i.r.p)	Limit dBm / MHz (e.i.r.p)
25	DC 3.3V	2399.500	-35.27	-10
		2400.000	-26.06	-10
		2398.321	-36.02	-20
		2400.000	-26.45	-20
		2484.000	-39.68	-10
		2485.858	-53.32	-10
		2485.179	-45.49	-20
		2485.858	-53.17	-20

Test results: Bluetooth for 8DPSK (EDR-3M)

Test Condition		Out of Band Emissions		
Temp	Voltage	Frequency MHz	Measure Power Result dBm / MHz (e.i.r.p)	Limit dBm / MHz (e.i.r.p)
25	DC 3.3V	2399.500	-34.85	-10
		2400.000	-26.59	-10
		2398.306	-35.89	-20
		2400.000	-26.02	-20
		2484.000	-39.82	-10
		2485.890	-52.49	-10
		2485.195	-45.60	-20
		2485.890	-52.44	-20

8.10 TRANSMITTER UNWANTED EMISSIONS IN THE SPURIOUS DOMAIN

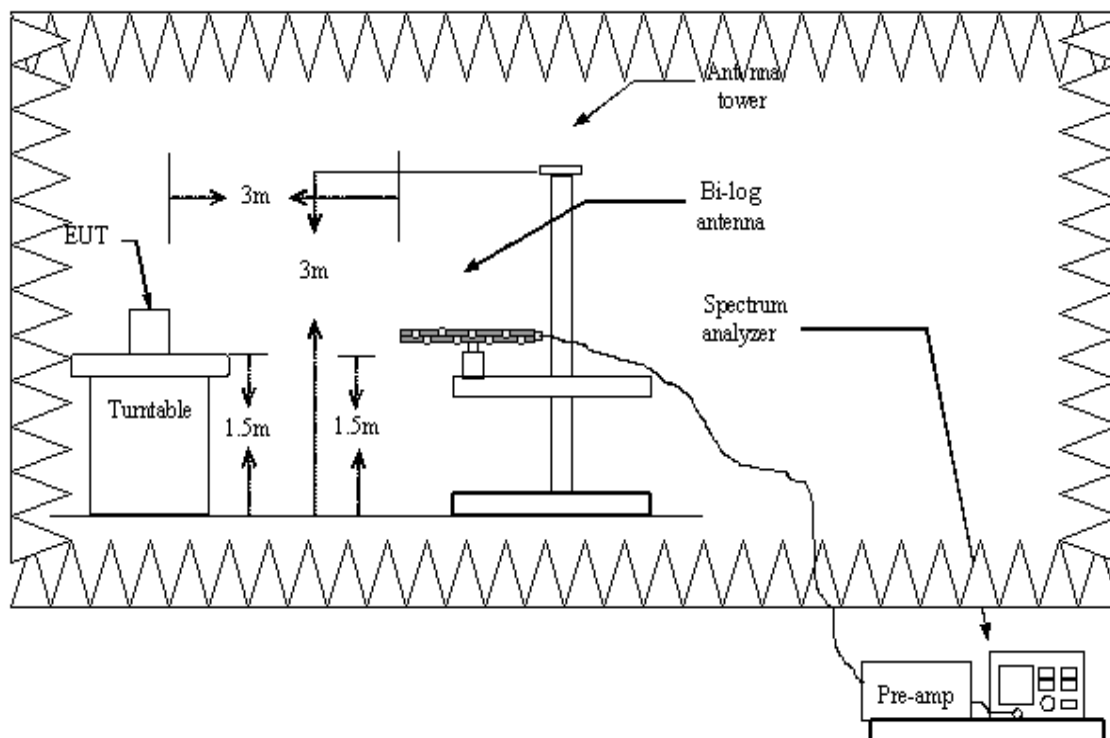
LIMIT

The transmitter unwanted emissions in the spurious domain shall not exceed the values given in table as below. In case of equipment with antenna connectors, these limits apply to emissions at the antenna port (conducted). For emissions radiated by the cabinet or emissions radiated by integral antenna equipment (without antenna connectors), these limits are e.r.p. for emissions up to 1 GHz and e.i.r.p. for emissions above 1 GHz.

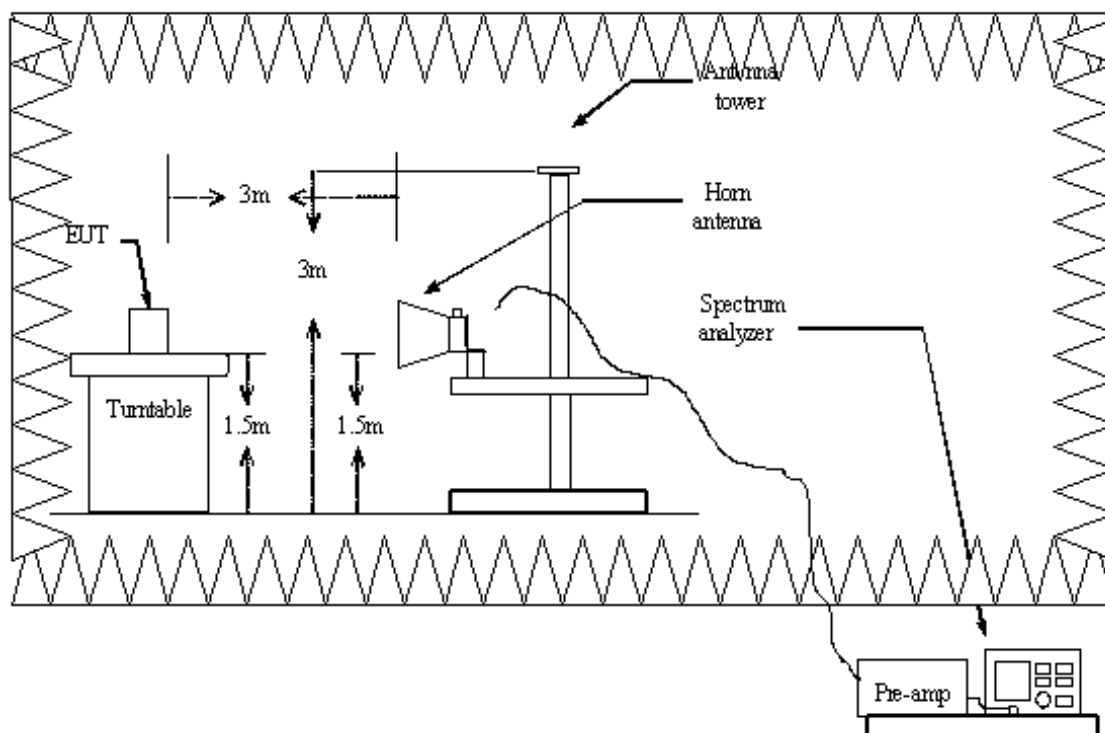
Frequency range	Maximum power	Bandwidth
30 MHz to 47 MHz	-36 dBm	100 kHz
47 MHz to 74 MHz	-54 dBm	100 kHz
74 MHz to 87,5 MHz	-36 dBm	100 kHz
87,5 MHz to 118 MHz	-54 dBm	100 kHz
118 MHz to 174 MHz	-36 dBm	100 kHz
174 MHz to 230 MHz	-54 dBm	100 kHz
230 MHz to 470 MHz	-36 dBm	100 kHz
470 MHz to 694 MHz	-54 dBm	100 kHz
694 MHz to 1 GHz	-36 dBm	100 kHz
1 GHz to 12,75 GHz	-30 dBm	1 MHz

Test Configuration

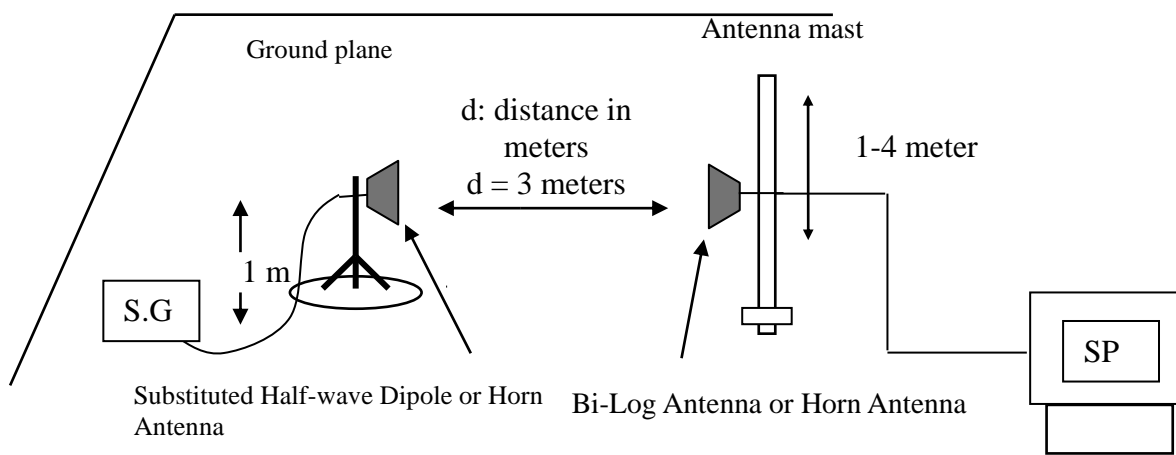
Below 1GHz



Above 1GHz



Substituted Method Test Set-up



TEST PROCEDURE

1. Please refer to ETSI EN 300 328 (V2.2.2) for the test conditions.
2. Please refer to ETSI EN 300 328 (V2.2.2) for the measurement methods.

TEST RESULTS

No value of the measurement limit is within 6dB, and therefore no further investigation and identification to measure emission with point of measurement is required.

Report No.: TMWK2305001493KR

Mode 1: Dipole Antenna

Test Mode: 802.11 b mode / TX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.40	-60.01	-52.75	-7.12	0.14	-54.00	-6.01	V
167.06	-71.36	-67.95	-3.19	0.22	-36.00	-35.36	V
249.96	-67.91	-68.15	0.52	0.28	-36.00	-31.91	V
290.31	-67.98	-67.69	0.02	0.31	-36.00	-31.98	V
350.02	-69.83	-70.11	0.64	0.36	-36.00	-33.83	V
601.28	-66.85	-67.61	1.26	0.50	-54.00	-12.85	V
4824.00	-52.30	-60.51	9.60	1.39	-30.00	-22.30	V
7236.00	-46.42	-56.25	11.47	1.64	-30.00	-16.42	V
9648.00	-45.56	-56.82	13.10	1.84	-30.00	-15.56	V
12060.00	-43.32	-54.11	12.80	2.01	-30.00	-13.32	V
150.01	-67.05	-61.92	-4.92	0.21	-36.00	-31.05	H
250.01	-59.69	-59.92	0.52	0.29	-36.00	-23.69	H
350.02	-66.58	-66.86	0.64	0.36	-36.00	-30.58	H
450.02	-64.41	-64.31	0.32	0.42	-36.00	-28.41	H
500.02	-66.04	-66.13	0.54	0.45	-54.00	-12.04	H
550.03	-60.58	-60.86	0.76	0.48	-54.00	-6.58	H
4824.00	-53.67	-61.88	9.60	1.39	-30.00	-23.67	H
7236.00	-48.47	-58.30	11.47	1.64	-30.00	-18.47	H
9648.00	-46.34	-57.60	13.10	1.84	-30.00	-16.34	H
12060.00	-44.65	-55.44	12.80	2.01	-30.00	-14.65	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11 b mode / TX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.40	-61.97	-54.71	-7.12	0.14	-54.00	-7.97	V
85.25	-65.36	-60.63	-4.57	0.16	-36.00	-29.36	V
150.01	-71.53	-66.40	-4.92	0.21	-36.00	-35.53	V
250.01	-70.08	-70.31	0.52	0.29	-36.00	-34.08	V
350.02	-69.01	-69.29	0.64	0.36	-36.00	-33.01	V
435.62	-68.57	-68.39	0.23	0.41	-36.00	-32.57	V
4944.00	-53.12	-61.51	9.79	1.40	-30.00	-23.12	V
7416.00	-48.21	-58.21	11.66	1.66	-30.00	-18.21	V
9888.00	-45.77	-56.91	13.00	1.86	-30.00	-15.77	V
12360.00	-41.65	-52.48	12.86	2.03	-30.00	-11.65	V
130.71	-68.01	-60.53	-7.29	0.19	-36.00	-32.01	H
150.01	-67.33	-62.20	-4.92	0.21	-36.00	-31.33	H
250.01	-60.07	-60.30	0.52	0.29	-36.00	-24.07	H
350.02	-67.67	-67.95	0.64	0.36	-36.00	-31.67	H
450.02	-64.84	-64.74	0.32	0.42	-36.00	-28.84	H
550.03	-60.46	-60.74	0.76	0.48	-54.00	-6.46	H
4944.00	-53.32	-61.71	9.79	1.40	-30.00	-23.32	H
7416.00	-48.85	-58.85	11.66	1.66	-30.00	-18.85	H
9888.00	-45.25	-56.39	13.00	1.86	-30.00	-15.25	H
12360.00	-44.58	-55.41	12.86	2.03	-30.00	-14.58	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11 g mode / TX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.40	-62.41	-55.15	-7.12	0.14	-54.00	-8.41	V
150.01	-71.96	-66.83	-4.92	0.21	-36.00	-35.96	V
250.01	-70.25	-70.48	0.52	0.29	-36.00	-34.25	V
350.02	-69.12	-69.40	0.64	0.36	-36.00	-33.12	V
374.02	-69.51	-69.78	0.64	0.37	-36.00	-33.51	V
450.02	-68.37	-68.27	0.32	0.42	-36.00	-32.37	V
4824.00	-53.94	-62.15	9.60	1.39	-30.00	-23.94	V
7236.00	-48.04	-57.87	11.47	1.64	-30.00	-18.04	V
9648.00	-45.88	-57.14	13.10	1.84	-30.00	-15.88	V
12060.00	-43.69	-54.48	12.80	2.01	-30.00	-13.69	V
150.01	-67.47	-62.34	-4.92	0.21	-36.00	-31.47	H
250.01	-59.63	-59.86	0.52	0.29	-36.00	-23.63	H
350.02	-67.18	-67.46	0.64	0.36	-36.00	-31.18	H
450.02	-64.08	-63.98	0.32	0.42	-36.00	-28.08	H
500.02	-66.06	-66.15	0.54	0.45	-54.00	-12.06	H
550.03	-60.79	-61.07	0.76	0.48	-54.00	-6.79	H
4824.00	-53.57	-61.78	9.60	1.39	-30.00	-23.57	H
7236.00	-49.05	-58.88	11.47	1.64	-30.00	-19.05	H
9648.00	-45.62	-56.88	13.10	1.84	-30.00	-15.62	H
12060.00	-44.99	-55.78	12.80	2.01	-30.00	-14.99	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11 g mode / TX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.40	-59.35	-52.09	-7.12	0.14	-54.00	-5.35	V
75.60	-66.84	-60.52	-6.17	0.15	-36.00	-30.84	V
149.96	-71.56	-66.44	-4.91	0.21	-36.00	-35.56	V
250.01	-69.36	-69.59	0.52	0.29	-36.00	-33.36	V
350.02	-68.54	-68.82	0.64	0.36	-36.00	-32.54	V
602.03	-67.33	-68.06	1.23	0.50	-54.00	-13.33	V
4944.00	-52.53	-60.92	9.79	1.40	-30.00	-22.53	V
7416.00	-47.79	-57.79	11.66	1.66	-30.00	-17.79	V
9888.00	-45.68	-56.82	13.00	1.86	-30.00	-15.68	V
12360.00	-41.17	-52.00	12.86	2.03	-30.00	-11.17	V
150.01	-67.84	-62.71	-4.92	0.21	-36.00	-31.84	H
250.01	-59.88	-60.11	0.52	0.29	-36.00	-23.88	H
350.02	-67.16	-67.44	0.64	0.36	-36.00	-31.16	H
450.02	-64.33	-64.23	0.32	0.42	-36.00	-28.33	H
500.02	-65.97	-66.06	0.54	0.45	-54.00	-11.97	H
550.03	-60.56	-60.84	0.76	0.48	-54.00	-6.56	H
4944.00	-53.51	-61.90	9.79	1.40	-30.00	-23.51	H
7416.00	-49.72	-59.72	11.66	1.66	-30.00	-19.72	H
9888.00	-46.23	-57.37	13.00	1.86	-30.00	-16.23	H
12360.00	-44.92	-55.75	12.86	2.03	-30.00	-14.92	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11n HT20 mode / TX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.35	-60.64	-53.36	-7.14	0.14	-54.00	-6.64	V
150.01	-71.50	-66.37	-4.92	0.21	-36.00	-35.50	V
250.01	-69.77	-70.00	0.52	0.29	-36.00	-33.77	V
350.02	-68.20	-68.48	0.64	0.36	-36.00	-32.20	V
470.82	-68.87	-68.62	0.18	0.43	-54.00	-14.87	V
562.78	-68.21	-68.38	0.65	0.48	-54.00	-14.21	V
4824.00	-53.94	-62.15	9.60	1.39	-30.00	-23.94	V
7236.00	-46.94	-56.77	11.47	1.64	-30.00	-16.94	V
9648.00	-46.17	-57.43	13.10	1.84	-30.00	-16.17	V
12060.00	-43.39	-54.18	12.80	2.01	-30.00	-13.39	V
150.01	-67.89	-62.76	-4.92	0.21	-36.00	-31.89	H
250.01	-59.57	-59.80	0.52	0.29	-36.00	-23.57	H
350.02	-66.94	-67.22	0.64	0.36	-36.00	-30.94	H
450.02	-64.85	-64.75	0.32	0.42	-36.00	-28.85	H
500.02	-64.64	-64.73	0.54	0.45	-54.00	-10.64	H
550.03	-60.70	-60.98	0.76	0.48	-54.00	-6.70	H
4824.00	-53.40	-61.61	9.60	1.39	-30.00	-23.40	H
7236.00	-48.55	-58.38	11.47	1.64	-30.00	-18.55	H
9648.00	-46.01	-57.27	13.10	1.84	-30.00	-16.01	H
12060.00	-44.93	-55.72	12.80	2.01	-30.00	-14.93	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11n HT20 mode / TX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.35	-60.66	-53.38	-7.14	0.14	-54.00	-6.66	V
150.01	-71.59	-66.46	-4.92	0.21	-36.00	-35.59	V
250.01	-69.04	-69.27	0.52	0.29	-36.00	-33.04	V
350.02	-69.92	-70.20	0.64	0.36	-36.00	-33.92	V
497.37	-68.43	-68.47	0.49	0.45	-54.00	-14.43	V
597.63	-67.66	-68.45	1.29	0.50	-54.00	-13.66	V
4944.00	-53.24	-61.63	9.79	1.40	-30.00	-23.24	V
7416.00	-48.86	-58.86	11.66	1.66	-30.00	-18.86	V
9888.00	-46.36	-57.50	13.00	1.86	-30.00	-16.36	V
12360.00	-43.04	-53.87	12.86	2.03	-30.00	-13.04	V
150.01	-68.69	-63.56	-4.92	0.21	-36.00	-32.69	H
250.01	-59.76	-59.99	0.52	0.29	-36.00	-23.76	H
350.02	-67.01	-67.29	0.64	0.36	-36.00	-31.01	H
450.02	-63.93	-63.83	0.32	0.42	-36.00	-27.93	H
500.02	-65.84	-65.93	0.54	0.45	-54.00	-11.84	H
550.03	-60.44	-60.72	0.76	0.48	-54.00	-6.44	H
4944.00	-52.31	-60.70	9.79	1.40	-30.00	-22.31	H
7416.00	-49.23	-59.23	11.66	1.66	-30.00	-19.23	H
9888.00	-45.28	-56.42	13.00	1.86	-30.00	-15.28	H
12360.00	-44.42	-55.25	12.86	2.03	-30.00	-14.42	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11n HT40 mode / TX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.40	-63.06	-55.80	-7.12	0.14	-54.00	-9.06	V
150.01	-71.99	-66.86	-4.92	0.21	-36.00	-35.99	V
250.01	-69.84	-70.07	0.52	0.29	-36.00	-33.84	V
350.02	-70.54	-70.82	0.64	0.36	-36.00	-34.54	V
480.27	-68.69	-68.33	0.08	0.44	-54.00	-14.69	V
550.03	-68.21	-68.49	0.76	0.48	-54.00	-14.21	V
4844.00	-53.28	-61.57	9.68	1.39	-30.00	-23.28	V
7266.00	-48.26	-58.11	11.50	1.65	-30.00	-18.26	V
9688.00	-46.61	-57.86	13.10	1.85	-30.00	-16.61	V
12110.00	-44.50	-55.28	12.80	2.02	-30.00	-14.50	V
150.01	-68.17	-63.04	-4.92	0.21	-36.00	-32.17	H
250.01	-59.39	-59.62	0.52	0.29	-36.00	-23.39	H
350.02	-67.17	-67.45	0.64	0.36	-36.00	-31.17	H
450.02	-64.45	-64.35	0.32	0.42	-36.00	-28.45	H
500.02	-66.04	-66.13	0.54	0.45	-54.00	-12.04	H
550.03	-60.88	-61.16	0.76	0.48	-54.00	-6.88	H
4844.00	-52.94	-61.23	9.68	1.39	-30.00	-22.94	H
7266.00	-48.53	-58.38	11.50	1.65	-30.00	-18.53	H
9688.00	-46.00	-57.25	13.10	1.85	-30.00	-16.00	H
12110.00	-44.83	-55.61	12.80	2.02	-30.00	-14.83	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11n HT40 mode / TX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.40	-61.14	-53.88	-7.12	0.14	-54.00	-7.14	V
203.36	-72.92	-71.57	-1.10	0.25	-54.00	-18.92	V
250.01	-69.11	-69.34	0.52	0.29	-36.00	-33.11	V
350.02	-69.46	-69.74	0.64	0.36	-36.00	-33.46	V
479.57	-68.77	-68.41	0.08	0.44	-54.00	-14.77	V
553.28	-67.69	-67.96	0.75	0.48	-54.00	-13.69	V
4924.00	-53.45	-61.80	9.75	1.40	-30.00	-23.45	V
7386.00	-47.94	-57.88	11.60	1.66	-30.00	-17.94	V
9848.00	-46.37	-57.51	13.00	1.86	-30.00	-16.37	V
12310.00	-44.75	-55.53	12.81	2.03	-30.00	-14.75	V
150.01	-67.18	-62.05	-4.92	0.21	-36.00	-31.18	H
250.01	-59.60	-59.83	0.52	0.29	-36.00	-23.60	H
350.02	-67.33	-67.61	0.64	0.36	-36.00	-31.33	H
450.02	-64.50	-64.40	0.32	0.42	-36.00	-28.50	H
550.03	-60.32	-60.60	0.76	0.48	-54.00	-6.32	H
649.23	-66.20	-66.19	0.51	0.52	-54.00	-12.20	H
4924.00	-53.25	-61.60	9.75	1.40	-30.00	-23.25	H
7386.00	-48.57	-58.51	11.60	1.66	-30.00	-18.57	H
9848.00	-46.32	-57.46	13.00	1.86	-30.00	-16.32	H
12310.00	-44.43	-55.21	12.81	2.03	-30.00	-14.43	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BLE 1Mbps / TX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
160.31	-71.23	-67.07	-3.94	0.22	-36.00	-35.23	V
249.96	-68.55	-68.79	0.52	0.28	-36.00	-32.55	V
350.02	-69.40	-69.68	0.64	0.36	-36.00	-33.40	V
499.82	-69.32	-69.41	0.54	0.45	-54.00	-15.32	V
549.98	-67.49	-67.78	0.76	0.47	-54.00	-13.49	V
612.13	-66.32	-66.63	0.81	0.50	-54.00	-12.32	V
4804.00	-48.79	-56.92	9.52	1.39	-30.00	-18.79	V
7206.00	-40.56	-50.33	11.41	1.64	-30.00	-10.56	V
9608.00	-46.99	-58.25	13.10	1.84	-30.00	-16.99	V
12010.00	-44.66	-55.45	12.80	2.01	-30.00	-14.66	V
150.01	-67.60	-62.47	-4.92	0.21	-36.00	-31.60	H
250.01	-59.29	-59.52	0.52	0.29	-36.00	-23.29	H
350.02	-67.23	-67.51	0.64	0.36	-36.00	-31.23	H
450.02	-64.51	-64.41	0.32	0.42	-36.00	-28.51	H
500.02	-65.41	-65.50	0.54	0.45	-54.00	-11.41	H
550.03	-60.54	-60.82	0.76	0.48	-54.00	-6.54	H
4804.00	-53.27	-61.40	9.52	1.39	-30.00	-23.27	H
7206.00	-45.21	-54.98	11.41	1.64	-30.00	-15.21	H
9608.00	-45.12	-56.38	13.10	1.84	-30.00	-15.12	H
12010.00	-45.77	-56.56	12.80	2.01	-30.00	-15.77	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BLE 1Mbps / TX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
85.10	-65.77	-60.99	-4.62	0.16	-36.00	-29.77	V
150.01	-72.10	-66.97	-4.92	0.21	-36.00	-36.10	V
250.01	-69.59	-69.82	0.52	0.29	-36.00	-33.59	V
350.02	-69.97	-70.25	0.64	0.36	-36.00	-33.97	V
450.02	-68.54	-68.44	0.32	0.42	-36.00	-32.54	V
541.98	-67.15	-67.38	0.70	0.47	-54.00	-13.15	V
4960.00	-49.92	-58.29	9.78	1.41	-30.00	-19.92	V
7440.00	-40.94	-51.04	11.76	1.66	-30.00	-10.94	V
9920.00	-46.43	-57.53	12.96	1.86	-30.00	-16.43	V
12400.00	-43.73	-54.60	12.90	2.03	-30.00	-13.73	V
150.01	-67.62	-62.49	-4.92	0.21	-36.00	-31.62	H
175.01	-72.19	-69.58	-2.38	0.23	-54.00	-18.19	H
250.01	-59.38	-59.61	0.52	0.29	-36.00	-23.38	H
350.02	-66.72	-67.00	0.64	0.36	-36.00	-30.72	H
450.02	-64.45	-64.35	0.32	0.42	-36.00	-28.45	H
550.03	-60.16	-60.44	0.76	0.48	-54.00	-6.16	H
4960.00	-53.26	-61.63	9.78	1.41	-30.00	-23.26	H
7440.00	-46.89	-56.99	11.76	1.66	-30.00	-16.89	H
9920.00	-46.27	-57.37	12.96	1.86	-30.00	-16.27	H
12400.00	-44.45	-55.32	12.90	2.03	-30.00	-14.45	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BLE 2Mbps / TX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
85.10	-66.90	-62.12	-4.62	0.16	-36.00	-30.90	V
250.01	-69.45	-69.68	0.52	0.29	-36.00	-33.45	V
350.02	-69.11	-69.39	0.64	0.36	-36.00	-33.11	V
450.02	-68.45	-68.35	0.32	0.42	-36.00	-32.45	V
512.37	-68.48	-68.67	0.65	0.46	-54.00	-14.48	V
606.23	-67.41	-67.94	1.03	0.50	-54.00	-13.41	V
4804.00	-48.63	-56.76	9.52	1.39	-30.00	-18.63	V
7206.00	-40.44	-50.21	11.41	1.64	-30.00	-10.44	V
9608.00	-46.16	-57.42	13.10	1.84	-30.00	-16.16	V
12010.00	-45.55	-56.34	12.80	2.01	-30.00	-15.55	V
150.01	-67.84	-62.71	-4.92	0.21	-36.00	-31.84	H
250.01	-59.60	-59.83	0.52	0.29	-36.00	-23.60	H
350.02	-67.25	-67.53	0.64	0.36	-36.00	-31.25	H
402.02	-70.52	-70.43	0.30	0.39	-36.00	-34.52	H
450.02	-64.84	-64.74	0.32	0.42	-36.00	-28.84	H
550.03	-60.50	-60.78	0.76	0.48	-54.00	-6.50	H
4804.00	-53.87	-62.00	9.52	1.39	-30.00	-23.87	H
7206.00	-47.31	-57.08	11.41	1.64	-30.00	-17.31	H
9608.00	-45.60	-56.86	13.10	1.84	-30.00	-15.60	H
12010.00	-44.94	-55.73	12.80	2.01	-30.00	-14.94	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BLE 2Mbps / TX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.50	-62.15	-54.93	-7.08	0.14	-54.00	-8.15	V
150.01	-71.05	-65.92	-4.92	0.21	-36.00	-35.05	V
250.01	-69.59	-69.82	0.52	0.29	-36.00	-33.59	V
350.02	-69.93	-70.21	0.64	0.36	-36.00	-33.93	V
473.87	-69.00	-68.68	0.11	0.43	-54.00	-15.00	V
549.98	-67.27	-67.56	0.76	0.47	-54.00	-13.27	V
4960.00	-49.80	-58.17	9.78	1.41	-30.00	-19.80	V
7440.00	-40.83	-50.93	11.76	1.66	-30.00	-10.83	V
9920.00	-45.62	-56.72	12.96	1.86	-30.00	-15.62	V
12400.00	-44.36	-55.23	12.90	2.03	-30.00	-14.36	V
150.01	-67.63	-62.50	-4.92	0.21	-36.00	-31.63	H
175.01	-71.79	-69.18	-2.38	0.23	-54.00	-17.79	H
250.01	-59.46	-59.69	0.52	0.29	-36.00	-23.46	H
350.02	-67.30	-67.58	0.64	0.36	-36.00	-31.30	H
450.02	-64.03	-63.93	0.32	0.42	-36.00	-28.03	H
550.03	-60.21	-60.49	0.76	0.48	-54.00	-6.21	H
4960.00	-52.31	-60.68	9.78	1.41	-30.00	-22.31	H
7440.00	-47.98	-58.08	11.76	1.66	-30.00	-17.98	H
9920.00	-45.76	-56.86	12.96	1.86	-30.00	-15.76	H
12400.00	-44.52	-55.39	12.90	2.03	-30.00	-14.52	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BT BR / TX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
85.15	-66.31	-61.55	-4.60	0.16	-36.00	-30.31	V
150.01	-71.34	-66.21	-4.92	0.21	-36.00	-35.34	V
250.01	-69.48	-69.71	0.52	0.29	-36.00	-33.48	V
350.02	-70.28	-70.56	0.64	0.36	-36.00	-34.28	V
450.02	-69.77	-69.67	0.32	0.42	-36.00	-33.77	V
576.58	-67.89	-68.08	0.68	0.49	-54.00	-13.89	V
4804.00	-47.11	-55.24	9.52	1.39	-30.00	-17.11	V
7206.00	-40.28	-50.05	11.41	1.64	-30.00	-10.28	V
9608.00	-45.69	-56.95	13.10	1.84	-30.00	-15.69	V
12010.00	-45.13	-55.92	12.80	2.01	-30.00	-15.13	V
150.01	-67.54	-62.41	-4.92	0.21	-36.00	-31.54	H
250.01	-59.35	-59.58	0.52	0.29	-36.00	-23.35	H
350.02	-66.96	-67.24	0.64	0.36	-36.00	-30.96	H
450.02	-63.98	-63.88	0.32	0.42	-36.00	-27.98	H
500.02	-66.10	-66.19	0.54	0.45	-54.00	-12.10	H
550.03	-60.46	-60.74	0.76	0.48	-54.00	-6.46	H
4804.00	-52.92	-61.05	9.52	1.39	-30.00	-22.92	H
7206.00	-46.17	-55.94	11.41	1.64	-30.00	-16.17	H
9608.00	-45.00	-56.26	13.10	1.84	-30.00	-15.00	H
12010.00	-45.00	-55.79	12.80	2.01	-30.00	-15.00	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BT BR / TX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
121.70	-75.24	-67.14	-7.91	0.19	-36.00	-39.24	V
164.01	-72.21	-68.44	-3.55	0.22	-36.00	-36.21	V
250.01	-69.88	-70.11	0.52	0.29	-36.00	-33.88	V
350.02	-69.81	-70.09	0.64	0.36	-36.00	-33.81	V
484.17	-69.00	-68.72	0.16	0.44	-54.00	-15.00	V
560.78	-67.77	-67.99	0.70	0.48	-54.00	-13.77	V
4960.00	-48.29	-56.66	9.78	1.41	-30.00	-18.29	V
7440.00	-42.45	-52.55	11.76	1.66	-30.00	-12.45	V
9920.00	-46.42	-57.52	12.96	1.86	-30.00	-16.42	V
12400.00	-43.97	-54.84	12.90	2.03	-30.00	-13.97	V
150.01	-67.46	-62.33	-4.92	0.21	-36.00	-31.46	H
225.01	-71.98	-72.11	0.40	0.27	-54.00	-17.98	H
250.01	-59.09	-59.32	0.52	0.29	-36.00	-23.09	H
350.02	-67.15	-67.43	0.64	0.36	-36.00	-31.15	H
450.02	-64.70	-64.60	0.32	0.42	-36.00	-28.70	H
550.03	-60.16	-60.44	0.76	0.48	-54.00	-6.16	H
4960.00	-52.02	-60.39	9.78	1.41	-30.00	-22.02	H
7440.00	-47.00	-57.10	11.76	1.66	-30.00	-17.00	H
9920.00	-45.74	-56.84	12.96	1.86	-30.00	-15.74	H
12400.00	-44.59	-55.46	12.90	2.03	-30.00	-14.59	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Mode 2: PIFA Antenna

Test Mode: 802.11 b mode / TX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.40	-60.41	-53.15	-7.12	0.14	-54.00	-6.41	V
83.05	-67.47	-62.48	-4.84	0.15	-36.00	-31.47	V
150.01	-72.27	-67.14	-4.92	0.21	-36.00	-36.27	V
250.01	-65.16	-65.39	0.52	0.29	-36.00	-29.16	V
350.02	-67.29	-67.57	0.64	0.36	-36.00	-31.29	V
467.72	-69.88	-69.65	0.20	0.43	-36.00	-33.88	V
4824.00	-53.52	-61.73	9.60	1.39	-30.00	-23.52	V
7236.00	-45.58	-55.41	11.47	1.64	-30.00	-15.58	V
9648.00	-45.62	-56.88	13.10	1.84	-30.00	-15.62	V
12060.00	-42.86	-53.65	12.80	2.01	-30.00	-12.86	V
43.20	-69.43	-54.54	-14.79	0.10	-36.00	-33.43	H
150.01	-70.23	-65.10	-4.92	0.21	-36.00	-34.23	H
250.01	-63.18	-63.41	0.52	0.29	-36.00	-27.18	H
350.02	-58.77	-59.05	0.64	0.36	-36.00	-22.77	H
400.02	-66.15	-66.06	0.30	0.39	-36.00	-30.15	H
450.02	-67.55	-67.45	0.32	0.42	-36.00	-31.55	H
4824.00	-53.67	-61.88	9.60	1.39	-30.00	-23.67	H
7236.00	-48.74	-58.57	11.47	1.64	-30.00	-18.74	H
9648.00	-44.88	-56.14	13.10	1.84	-30.00	-14.88	H
12060.00	-44.47	-55.26	12.80	2.01	-30.00	-14.47	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11 b mode / TX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.40	-61.85	-54.59	-7.12	0.14	-54.00	-7.85	V
84.85	-64.80	-60.01	-4.64	0.15	-36.00	-28.80	V
250.01	-66.12	-66.35	0.52	0.29	-36.00	-30.12	V
350.02	-67.89	-68.17	0.64	0.36	-36.00	-31.89	V
550.03	-66.60	-66.88	0.76	0.48	-54.00	-12.60	V
645.48	-65.55	-65.49	0.46	0.52	-54.00	-11.55	V
4944.00	-52.82	-61.21	9.79	1.40	-30.00	-22.82	V
7416.00	-46.30	-56.30	11.66	1.66	-30.00	-16.30	V
9888.00	-45.31	-56.45	13.00	1.86	-30.00	-15.31	V
12360.00	-41.56	-52.39	12.86	2.03	-30.00	-11.56	V
46.65	-66.59	-54.70	-11.78	0.11	-36.00	-30.59	H
135.91	-68.20	-61.53	-6.47	0.20	-36.00	-32.20	H
250.01	-63.46	-63.69	0.52	0.29	-36.00	-27.46	H
350.02	-58.32	-58.60	0.64	0.36	-36.00	-22.32	H
450.02	-68.14	-68.04	0.32	0.42	-36.00	-32.14	H
550.03	-66.02	-66.30	0.76	0.48	-54.00	-12.02	H
4944.00	-50.59	-58.98	9.79	1.40	-30.00	-20.59	H
7416.00	-48.14	-58.14	11.66	1.66	-30.00	-18.14	H
9888.00	-45.84	-56.98	13.00	1.86	-30.00	-15.84	H
12360.00	-44.41	-55.24	12.86	2.03	-30.00	-14.41	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11 g mode / TX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.40	-61.10	-53.84	-7.12	0.14	-54.00	-7.10	V
84.95	-66.20	-61.40	-4.65	0.15	-36.00	-30.20	V
150.01	-71.12	-65.99	-4.92	0.21	-36.00	-35.12	V
250.01	-66.42	-66.65	0.52	0.29	-36.00	-30.42	V
325.02	-64.93	-65.09	0.50	0.34	-36.00	-28.93	V
450.02	-68.26	-68.16	0.32	0.42	-36.00	-32.26	V
4824.00	-53.08	-61.29	9.60	1.39	-30.00	-23.08	V
7236.00	-45.52	-55.35	11.47	1.64	-30.00	-15.52	V
9648.00	-45.48	-56.74	13.10	1.84	-30.00	-15.48	V
12060.00	-44.69	-55.48	12.80	2.01	-30.00	-14.69	V
44.65	-69.00	-55.55	-13.35	0.10	-36.00	-33.00	H
133.96	-70.70	-63.70	-6.80	0.20	-36.00	-34.70	H
250.01	-63.03	-63.26	0.52	0.29	-36.00	-27.03	H
350.02	-58.58	-58.86	0.64	0.36	-36.00	-22.58	H
450.02	-67.66	-67.56	0.32	0.42	-36.00	-31.66	H
550.03	-65.99	-66.27	0.76	0.48	-54.00	-11.99	H
4824.00	-52.80	-61.01	9.60	1.39	-30.00	-22.80	H
7236.00	-47.71	-57.54	11.47	1.64	-30.00	-17.71	H
9648.00	-45.23	-56.49	13.10	1.84	-30.00	-15.23	H
12060.00	-44.57	-55.36	12.80	2.01	-30.00	-14.57	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11 g mode / TX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.40	-57.99	-50.73	-7.12	0.14	-54.00	-3.99	V
250.01	-65.77	-66.00	0.52	0.29	-36.00	-29.77	V
350.02	-68.13	-68.41	0.64	0.36	-36.00	-32.13	V
550.03	-66.92	-67.20	0.76	0.48	-54.00	-12.92	V
661.08	-65.35	-65.65	0.82	0.52	-54.00	-11.35	V
848.59	-63.14	-63.33	0.80	0.61	-36.00	-27.14	V
4944.00	-52.86	-61.25	9.79	1.40	-30.00	-22.86	V
7416.00	-46.96	-56.96	11.66	1.66	-30.00	-16.96	V
9888.00	-46.27	-57.41	13.00	1.86	-30.00	-16.27	V
12360.00	-41.19	-52.02	12.86	2.03	-30.00	-11.19	V
150.01	-70.06	-64.93	-4.92	0.21	-36.00	-34.06	H
250.01	-63.61	-63.84	0.52	0.29	-36.00	-27.61	H
350.02	-58.64	-58.92	0.64	0.36	-36.00	-22.64	H
450.02	-67.91	-67.81	0.32	0.42	-36.00	-31.91	H
550.03	-64.43	-64.71	0.76	0.48	-54.00	-10.43	H
929.80	-61.81	-61.80	0.63	0.64	-36.00	-25.81	H
4944.00	-52.66	-61.05	9.79	1.40	-30.00	-22.66	H
7416.00	-48.27	-58.27	11.66	1.66	-30.00	-18.27	H
9888.00	-44.80	-55.94	13.00	1.86	-30.00	-14.80	H
12360.00	-43.72	-54.55	12.86	2.03	-30.00	-13.72	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11n HT20 mode / TX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.45	-60.02	-52.78	-7.10	0.14	-54.00	-6.02	V
85.15	-67.45	-62.69	-4.60	0.16	-36.00	-31.45	V
250.01	-66.13	-66.36	0.52	0.29	-36.00	-30.13	V
350.02	-68.40	-68.68	0.64	0.36	-36.00	-32.40	V
449.97	-68.04	-67.94	0.32	0.42	-36.00	-32.04	V
550.03	-66.37	-66.65	0.76	0.48	-54.00	-12.37	V
4824.00	-53.51	-61.72	9.60	1.39	-30.00	-23.51	V
7236.00	-46.00	-55.83	11.47	1.64	-30.00	-16.00	V
9648.00	-44.48	-55.74	13.10	1.84	-30.00	-14.48	V
12060.00	-43.98	-54.77	12.80	2.01	-30.00	-13.98	V
150.01	-70.73	-65.60	-4.92	0.21	-36.00	-34.73	H
175.01	-71.54	-68.93	-2.38	0.23	-54.00	-17.54	H
250.01	-63.31	-63.54	0.52	0.29	-36.00	-27.31	H
350.02	-58.75	-59.03	0.64	0.36	-36.00	-22.75	H
400.07	-67.05	-66.96	0.30	0.39	-36.00	-31.05	H
550.03	-64.47	-64.75	0.76	0.48	-54.00	-10.47	H
4824.00	-53.43	-61.64	9.60	1.39	-30.00	-23.43	H
7236.00	-48.20	-58.03	11.47	1.64	-30.00	-18.20	H
9648.00	-45.04	-56.30	13.10	1.84	-30.00	-15.04	H
12060.00	-44.42	-55.21	12.80	2.01	-30.00	-14.42	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11n HT20 mode / TX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.35	-60.82	-53.54	-7.14	0.14	-54.00	-6.82	V
85.15	-67.29	-62.53	-4.60	0.16	-36.00	-31.29	V
250.01	-66.13	-66.36	0.52	0.29	-36.00	-30.13	V
350.07	-68.28	-68.56	0.64	0.36	-36.00	-32.28	V
450.02	-68.15	-68.05	0.32	0.42	-36.00	-32.15	V
617.43	-66.22	-66.44	0.73	0.51	-54.00	-12.22	V
4944.00	-52.12	-60.51	9.79	1.40	-30.00	-22.12	V
7416.00	-47.15	-57.15	11.66	1.66	-30.00	-17.15	V
9888.00	-46.43	-57.57	13.00	1.86	-30.00	-16.43	V
12360.00	-42.70	-53.53	12.86	2.03	-30.00	-12.70	V
150.01	-70.17	-65.04	-4.92	0.21	-36.00	-34.17	H
250.01	-62.99	-63.22	0.52	0.29	-36.00	-26.99	H
350.02	-58.49	-58.77	0.64	0.36	-36.00	-22.49	H
450.02	-68.03	-67.93	0.32	0.42	-36.00	-32.03	H
550.03	-65.48	-65.76	0.76	0.48	-54.00	-11.48	H
867.84	-63.36	-63.53	0.79	0.62	-36.00	-27.36	H
4944.00	-52.41	-60.80	9.79	1.40	-30.00	-22.41	H
7416.00	-48.28	-58.28	11.66	1.66	-30.00	-18.28	H
9888.00	-45.68	-56.82	13.00	1.86	-30.00	-15.68	H
12360.00	-43.97	-54.80	12.86	2.03	-30.00	-13.97	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11n HT40 mode / TX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.45	-61.59	-54.35	-7.10	0.14	-54.00	-7.59	V
85.05	-66.35	-61.56	-4.63	0.16	-36.00	-30.35	V
250.01	-66.33	-66.56	0.52	0.29	-36.00	-30.33	V
350.02	-68.14	-68.42	0.64	0.36	-36.00	-32.14	V
550.03	-66.04	-66.32	0.76	0.48	-54.00	-12.04	V
850.54	-63.53	-63.75	0.83	0.61	-36.00	-27.53	V
4844.00	-53.23	-61.52	9.68	1.39	-30.00	-23.23	V
7266.00	-47.46	-57.31	11.50	1.65	-30.00	-17.46	V
9688.00	-45.81	-57.06	13.10	1.85	-30.00	-15.81	V
12110.00	-44.43	-55.21	12.80	2.02	-30.00	-14.43	V
47.70	-67.62	-56.31	-11.20	0.11	-54.00	-13.62	H
150.01	-70.88	-65.75	-4.92	0.21	-36.00	-34.88	H
249.96	-62.88	-63.12	0.52	0.28	-36.00	-26.88	H
350.02	-58.86	-59.14	0.64	0.36	-36.00	-22.86	H
550.03	-65.60	-65.88	0.76	0.48	-54.00	-11.60	H
871.49	-63.61	-63.85	0.86	0.62	-36.00	-27.61	H
4844.00	-53.74	-62.03	9.68	1.39	-30.00	-23.74	H
7266.00	-48.26	-58.11	11.50	1.65	-30.00	-18.26	H
9688.00	-45.93	-57.18	13.10	1.85	-30.00	-15.93	H
12110.00	-44.66	-55.44	12.80	2.02	-30.00	-14.66	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11n HT40 mode / TX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.40	-58.79	-51.53	-7.12	0.14	-54.00	-4.79	V
85.15	-66.48	-61.72	-4.60	0.16	-36.00	-30.48	V
250.01	-66.70	-66.93	0.52	0.29	-36.00	-30.70	V
350.02	-67.64	-67.92	0.64	0.36	-36.00	-31.64	V
549.98	-66.73	-67.02	0.76	0.47	-54.00	-12.73	V
603.53	-66.33	-66.99	1.16	0.50	-54.00	-12.33	V
4924.00	-52.75	-61.10	9.75	1.40	-30.00	-22.75	V
7386.00	-46.64	-56.58	11.60	1.66	-30.00	-16.64	V
9848.00	-45.89	-57.03	13.00	1.86	-30.00	-15.89	V
12310.00	-43.18	-53.96	12.81	2.03	-30.00	-13.18	V
47.20	-68.77	-57.32	-11.34	0.11	-54.00	-14.77	H
150.01	-70.84	-65.71	-4.92	0.21	-36.00	-34.84	H
250.01	-63.12	-63.35	0.52	0.29	-36.00	-27.12	H
350.02	-58.62	-58.90	0.64	0.36	-36.00	-22.62	H
449.97	-67.80	-67.70	0.32	0.42	-36.00	-31.80	H
550.03	-64.98	-65.26	0.76	0.48	-54.00	-10.98	H
4924.00	-53.04	-61.39	9.75	1.40	-30.00	-23.04	H
7386.00	-48.71	-58.65	11.60	1.66	-30.00	-18.71	H
9848.00	-45.91	-57.05	13.00	1.86	-30.00	-15.91	H
12310.00	-43.06	-53.84	12.81	2.03	-30.00	-13.06	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BLE 1Mbps / TX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.40	-58.63	-51.37	-7.12	0.14	-54.00	-4.63	V
85.35	-66.54	-61.84	-4.54	0.16	-36.00	-30.54	V
250.01	-65.61	-65.84	0.52	0.29	-36.00	-29.61	V
350.02	-68.16	-68.44	0.64	0.36	-36.00	-32.16	V
524.98	-64.49	-64.79	0.76	0.46	-54.00	-10.49	V
890.49	-62.37	-62.80	1.06	0.63	-36.00	-26.37	V
4804.00	-51.81	-59.94	9.52	1.39	-30.00	-21.81	V
7206.00	-36.45	-46.22	11.41	1.64	-30.00	-6.45	V
9608.00	-46.29	-57.55	13.10	1.84	-30.00	-16.29	V
12010.00	-45.28	-56.07	12.80	2.01	-30.00	-15.28	V
42.55	-69.35	-53.91	-15.34	0.10	-36.00	-33.35	H
150.01	-70.42	-65.29	-4.92	0.21	-36.00	-34.42	H
250.01	-63.33	-63.56	0.52	0.29	-36.00	-27.33	H
350.02	-58.88	-59.16	0.64	0.36	-36.00	-22.88	H
550.03	-66.18	-66.46	0.76	0.48	-54.00	-12.18	H
901.54	-62.58	-63.01	1.06	0.63	-36.00	-26.58	H
4804.00	-53.45	-61.58	9.52	1.39	-30.00	-23.45	H
7206.00	-44.72	-54.49	11.41	1.64	-30.00	-14.72	H
9608.00	-45.83	-57.09	13.10	1.84	-30.00	-15.83	H
12010.00	-44.86	-55.65	12.80	2.01	-30.00	-14.86	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BLE 1Mbps / TX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.40	-61.47	-54.21	-7.12	0.14	-54.00	-7.47	V
85.10	-65.67	-60.89	-4.62	0.16	-36.00	-29.67	V
249.96	-66.61	-66.85	0.52	0.28	-36.00	-30.61	V
350.02	-68.44	-68.72	0.64	0.36	-36.00	-32.44	V
650.43	-65.39	-65.40	0.53	0.52	-54.00	-11.39	V
764.79	-63.37	-63.73	0.93	0.57	-36.00	-27.37	V
4960.00	-47.05	-55.42	9.78	1.41	-30.00	-17.05	V
7440.00	-37.79	-47.89	11.76	1.66	-30.00	-7.79	V
9920.00	-44.49	-55.59	12.96	1.86	-30.00	-14.49	V
12400.00	-44.29	-55.16	12.90	2.03	-30.00	-14.29	V
42.70	-68.80	-53.45	-15.25	0.10	-36.00	-32.80	H
150.01	-69.77	-64.64	-4.92	0.21	-36.00	-33.77	H
250.01	-63.71	-63.94	0.52	0.29	-36.00	-27.71	H
350.02	-59.04	-59.32	0.64	0.36	-36.00	-23.04	H
411.67	-59.80	-59.61	0.21	0.40	-36.00	-23.80	H
550.03	-65.21	-65.49	0.76	0.48	-54.00	-11.21	H
4960.00	-49.78	-58.15	9.78	1.41	-30.00	-19.78	H
7440.00	-44.11	-54.21	11.76	1.66	-30.00	-14.11	H
9920.00	-45.08	-56.18	12.96	1.86	-30.00	-15.08	H
12400.00	-44.36	-55.23	12.90	2.03	-30.00	-14.36	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BLE 2Mbps / TX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.45	-62.09	-54.85	-7.10	0.14	-54.00	-8.09	V
84.85	-67.04	-62.25	-4.64	0.15	-36.00	-31.04	V
250.01	-66.43	-66.66	0.52	0.29	-36.00	-30.43	V
350.02	-68.35	-68.63	0.64	0.36	-36.00	-32.35	V
549.98	-67.05	-67.34	0.76	0.47	-54.00	-13.05	V
938.70	-62.73	-62.80	0.71	0.64	-36.00	-26.73	V
4804.00	-53.03	-61.16	9.52	1.39	-30.00	-23.03	V
7206.00	-37.56	-47.33	11.41	1.64	-30.00	-7.56	V
9608.00	-45.77	-57.03	13.10	1.84	-30.00	-15.77	V
12010.00	-44.92	-55.71	12.80	2.01	-30.00	-14.92	V
43.80	-68.46	-54.41	-13.95	0.10	-36.00	-32.46	H
250.01	-63.27	-63.50	0.52	0.29	-36.00	-27.27	H
350.02	-58.99	-59.27	0.64	0.36	-36.00	-22.99	H
450.02	-67.30	-67.20	0.32	0.42	-36.00	-31.30	H
550.03	-66.20	-66.48	0.76	0.48	-54.00	-12.20	H
874.79	-62.72	-63.00	0.90	0.62	-36.00	-26.72	H
4804.00	-52.79	-60.92	9.52	1.39	-30.00	-22.79	H
7206.00	-45.60	-55.37	11.41	1.64	-30.00	-15.60	H
9608.00	-45.78	-57.04	13.10	1.84	-30.00	-15.78	H
12010.00	-44.93	-55.72	12.80	2.01	-30.00	-14.93	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BLE 2Mbps / TX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.40	-61.80	-54.54	-7.12	0.14	-54.00	-7.80	V
85.30	-67.00	-62.28	-4.56	0.16	-36.00	-31.00	V
150.01	-72.06	-66.93	-4.92	0.21	-36.00	-36.06	V
250.01	-66.76	-66.99	0.52	0.29	-36.00	-30.76	V
350.02	-67.87	-68.15	0.64	0.36	-36.00	-31.87	V
955.65	-61.66	-61.88	0.87	0.65	-36.00	-25.66	V
4960.00	-47.70	-56.07	9.78	1.41	-30.00	-17.70	V
7440.00	-38.56	-48.66	11.76	1.66	-30.00	-8.56	V
9920.00	-44.41	-55.51	12.96	1.86	-30.00	-14.41	V
12400.00	-44.24	-55.11	12.90	2.03	-30.00	-14.24	V
43.95	-67.90	-54.06	-13.74	0.10	-36.00	-31.90	H
150.01	-71.16	-66.03	-4.92	0.21	-36.00	-35.16	H
250.01	-63.26	-63.49	0.52	0.29	-36.00	-27.26	H
350.02	-58.76	-59.04	0.64	0.36	-36.00	-22.76	H
467.07	-61.29	-61.07	0.21	0.43	-36.00	-25.29	H
890.84	-62.60	-63.04	1.07	0.63	-36.00	-26.60	H
4960.00	-50.64	-59.01	9.78	1.41	-30.00	-20.64	H
7440.00	-45.53	-55.63	11.76	1.66	-30.00	-15.53	H
9920.00	-45.44	-56.54	12.96	1.86	-30.00	-15.44	H
12400.00	-44.13	-55.00	12.90	2.03	-30.00	-14.13	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BT BR / TX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.35	-59.70	-52.42	-7.14	0.14	-54.00	-5.70	V
142.81	-72.05	-66.36	-5.49	0.20	-36.00	-36.05	V
250.01	-66.76	-66.99	0.52	0.29	-36.00	-30.76	V
350.02	-67.95	-68.23	0.64	0.36	-36.00	-31.95	V
481.87	-69.29	-68.96	0.11	0.44	-54.00	-15.29	V
545.38	-67.78	-68.01	0.70	0.47	-54.00	-13.78	V
4804.00	-50.93	-59.06	9.52	1.39	-30.00	-20.93	V
7206.00	-38.63	-48.40	11.41	1.64	-30.00	-8.63	V
9608.00	-46.22	-57.48	13.10	1.84	-30.00	-16.22	V
12010.00	-44.86	-55.65	12.80	2.01	-30.00	-14.86	V
149.96	-70.79	-65.67	-4.91	0.21	-36.00	-34.79	H
250.01	-63.55	-63.78	0.52	0.29	-36.00	-27.55	H
350.02	-59.38	-59.66	0.64	0.36	-36.00	-23.38	H
450.02	-68.63	-68.53	0.32	0.42	-36.00	-32.63	H
540.23	-67.97	-68.21	0.71	0.47	-54.00	-13.97	H
550.03	-65.26	-65.54	0.76	0.48	-54.00	-11.26	H
4804.00	-53.08	-61.21	9.52	1.39	-30.00	-23.08	H
7206.00	-45.15	-54.92	11.41	1.64	-30.00	-15.15	H
9608.00	-45.63	-56.89	13.10	1.84	-30.00	-15.63	H
12010.00	-44.18	-54.97	12.80	2.01	-30.00	-14.18	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BT BR / TX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.40	-61.37	-54.11	-7.12	0.14	-54.00	-7.37	V
85.40	-65.72	-61.03	-4.53	0.16	-36.00	-29.72	V
149.96	-72.94	-67.82	-4.91	0.21	-36.00	-36.94	V
250.01	-66.84	-67.07	0.52	0.29	-36.00	-30.84	V
350.02	-68.55	-68.83	0.64	0.36	-36.00	-32.55	V
524.98	-67.15	-67.45	0.76	0.46	-54.00	-13.15	V
4960.00	-48.72	-57.09	9.78	1.41	-30.00	-18.72	V
7440.00	-38.92	-49.02	11.76	1.66	-30.00	-8.92	V
9920.00	-46.18	-57.28	12.96	1.86	-30.00	-16.18	V
12400.00	-44.09	-54.96	12.90	2.03	-30.00	-14.09	V
150.01	-71.39	-66.26	-4.92	0.21	-36.00	-35.39	H
250.01	-63.42	-63.65	0.52	0.29	-36.00	-27.42	H
350.02	-58.98	-59.26	0.64	0.36	-36.00	-22.98	H
450.02	-68.09	-67.99	0.32	0.42	-36.00	-32.09	H
512.47	-68.99	-69.18	0.65	0.46	-54.00	-14.99	H
550.03	-65.29	-65.57	0.76	0.48	-54.00	-11.29	H
4960.00	-50.47	-58.84	9.78	1.41	-30.00	-20.47	H
7440.00	-47.09	-57.19	11.76	1.66	-30.00	-17.09	H
9920.00	-45.67	-56.77	12.96	1.86	-30.00	-15.67	H
12400.00	-43.80	-54.67	12.90	2.03	-30.00	-13.80	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

8.11 RECEIVER SPURIOUS EMISSIONS

LIMIT

The receiver spurious emissions shall not exceed the values given in table 5. In case of FHSS equipment with antenna connectors, these limits apply to emissions at the antenna port (conducted). For emissions radiated by the cabinet or emissions radiated by integral antenna equipment (without antenna connectors), these limits are e.r.p. for emissions up to 1 GHz and e.i.r.p. for emissions above 1 GHz.

Frequency range	Maximum power	Bandwidth
30 MHz to 1 GHz	-57 dBm	100 kHz
1 GHz to 12,75 GHz	-47 dBm	1 MHz

Test Configuration

Radiated Spurious Emissions:

(Same as section 8.10 in this test report)

TEST PROCEDURE

1. Please refer to ETSI EN 300 328 (V2.2.2) for the test conditions.
2. Please refer to ETSI EN 300 328 (V2.2.2) for the measurement methods.

TEST RESULTS

Compliance .

Report No.: TMWK2305001493KR

Mode 1: Dipole Antenna

Test Mode: 802.11 b mode / RX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
84.90	-67.97	-63.18	-4.64	0.15	-57.00	-10.97	V
150.01	-70.83	-65.70	-4.92	0.21	-57.00	-13.83	V
250.01	-69.52	-69.75	0.52	0.29	-57.00	-12.52	V
350.02	-69.93	-70.21	0.64	0.36	-57.00	-12.93	V
493.42	-68.31	-68.25	0.39	0.45	-57.00	-11.31	V
612.43	-66.64	-66.94	0.80	0.50	-57.00	-9.64	V
2130.55	-49.90	-54.01	5.06	0.95	-47.00	-2.90	V
2656.07	-50.69	-55.85	6.21	1.05	-47.00	-3.69	V
63.70	-72.66	-65.10	-7.43	0.13	-57.00	-15.66	H
150.01	-67.80	-62.67	-4.92	0.21	-57.00	-10.80	H
350.02	-66.93	-67.21	0.64	0.36	-57.00	-9.93	H
450.02	-63.80	-63.70	0.32	0.42	-57.00	-6.80	H
500.02	-66.32	-66.41	0.54	0.45	-57.00	-9.32	H
550.03	-60.64	-60.92	0.76	0.48	-57.00	-3.64	H
2126.05	-52.65	-56.75	5.05	0.95	-47.00	-5.65	H
2482.56	-54.33	-58.88	5.57	1.02	-47.00	-7.33	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11 b mode / RX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.40	-61.35	-54.09	-7.12	0.14	-57.00	-4.35	V
150.01	-70.55	-65.42	-4.92	0.21	-57.00	-13.55	V
250.01	-69.27	-69.50	0.52	0.29	-57.00	-12.27	V
350.02	-69.46	-69.74	0.64	0.36	-57.00	-12.46	V
450.02	-68.18	-68.08	0.32	0.42	-57.00	-11.18	V
589.48	-66.10	-66.75	1.14	0.49	-57.00	-9.10	V
3195.59	-50.86	-56.59	6.88	1.15	-47.00	-3.86	V
4250.14	-52.91	-60.59	9.00	1.32	-47.00	-5.91	V
150.01	-67.78	-62.65	-4.92	0.21	-57.00	-10.78	H
350.02	-67.02	-67.30	0.64	0.36	-57.00	-10.02	H
450.02	-64.31	-64.21	0.32	0.42	-57.00	-7.31	H
500.02	-66.43	-66.52	0.54	0.45	-57.00	-9.43	H
550.03	-60.51	-60.79	0.76	0.48	-57.00	-3.51	H
621.28	-66.33	-66.50	0.68	0.51	-57.00	-9.33	H
1750.03	-54.71	-59.45	5.60	0.86	-47.00	-7.71	H
2661.57	-52.31	-57.48	6.22	1.05	-47.00	-5.31	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11 g mode / RX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
85.25	-65.59	-60.86	-4.57	0.16	-57.00	-8.59	V
150.01	-70.85	-65.72	-4.92	0.21	-57.00	-13.85	V
199.51	-73.10	-70.11	-2.74	0.25	-57.00	-16.10	V
249.96	-69.64	-69.88	0.52	0.28	-57.00	-12.64	V
390.42	-69.65	-69.74	0.47	0.38	-57.00	-12.65	V
544.58	-66.86	-67.08	0.69	0.47	-57.00	-9.86	V
2124.55	-49.97	-54.08	5.05	0.94	-47.00	-2.97	V
2844.08	-52.28	-57.97	6.78	1.09	-47.00	-5.28	V
150.01	-67.53	-62.40	-4.92	0.21	-57.00	-10.53	H
175.01	-72.07	-69.46	-2.38	0.23	-57.00	-15.07	H
350.02	-66.17	-66.45	0.64	0.36	-57.00	-9.17	H
450.02	-64.30	-64.20	0.32	0.42	-57.00	-7.30	H
500.02	-66.32	-66.41	0.54	0.45	-57.00	-9.32	H
550.03	-60.09	-60.37	0.76	0.48	-57.00	-3.09	H
1662.53	-50.92	-55.80	5.72	0.84	-47.00	-3.92	H
2660.07	-51.38	-56.55	6.22	1.05	-47.00	-4.38	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11 g mode / RX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
84.85	-67.59	-62.80	-4.64	0.15	-57.00	-10.59	V
150.01	-72.12	-66.99	-4.92	0.21	-57.00	-15.12	V
249.96	-69.28	-69.52	0.52	0.28	-57.00	-12.28	V
350.02	-69.38	-69.66	0.64	0.36	-57.00	-12.38	V
503.22	-68.39	-68.47	0.53	0.45	-57.00	-11.39	V
609.03	-66.63	-67.03	0.90	0.50	-57.00	-9.63	V
3003.59	-51.17	-56.56	6.51	1.12	-47.00	-4.17	V
3189.59	-52.66	-58.37	6.86	1.15	-47.00	-5.66	V
150.01	-68.09	-62.96	-4.92	0.21	-57.00	-11.09	H
200.01	-71.65	-68.68	-2.72	0.25	-57.00	-14.65	H
350.02	-67.57	-67.85	0.64	0.36	-57.00	-10.57	H
450.02	-64.62	-64.52	0.32	0.42	-57.00	-7.62	H
500.02	-65.74	-65.83	0.54	0.45	-57.00	-8.74	H
550.03	-60.90	-61.18	0.76	0.48	-57.00	-3.90	H
2126.55	-55.11	-59.21	5.05	0.95	-47.00	-8.11	H
3000.09	-54.57	-59.95	6.50	1.12	-47.00	-7.57	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11n HT20 mode / RX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
83.20	-67.41	-62.46	-4.80	0.15	-57.00	-10.41	V
150.01	-70.56	-65.43	-4.92	0.21	-57.00	-13.56	V
249.96	-69.43	-69.67	0.52	0.28	-57.00	-12.43	V
350.02	-69.51	-69.79	0.64	0.36	-57.00	-12.51	V
444.32	-69.59	-69.65	0.48	0.42	-57.00	-12.59	V
563.08	-67.86	-68.03	0.65	0.48	-57.00	-10.86	V
1249.01	-51.53	-54.80	4.00	0.73	-47.00	-4.53	V
3193.59	-51.25	-56.97	6.87	1.15	-47.00	-4.25	V
150.01	-67.78	-62.65	-4.92	0.21	-57.00	-10.78	H
175.01	-71.15	-68.54	-2.38	0.23	-57.00	-14.15	H
350.02	-67.61	-67.89	0.64	0.36	-57.00	-10.61	H
450.02	-63.79	-63.69	0.32	0.42	-57.00	-6.79	H
500.02	-66.68	-66.77	0.54	0.45	-57.00	-9.68	H
550.03	-60.46	-60.74	0.76	0.48	-57.00	-3.46	H
1750.03	-54.80	-59.54	5.60	0.86	-47.00	-7.80	H
2481.06	-54.81	-59.35	5.56	1.02	-47.00	-7.81	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11n HT20 mode / RX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
150.01	-70.99	-65.86	-4.92	0.21	-57.00	-13.99	V
250.01	-68.44	-68.67	0.52	0.29	-57.00	-11.44	V
350.02	-69.96	-70.24	0.64	0.36	-57.00	-12.96	V
450.02	-68.71	-68.61	0.32	0.42	-57.00	-11.71	V
535.73	-68.22	-68.47	0.72	0.47	-57.00	-11.22	V
619.53	-66.93	-67.13	0.71	0.51	-57.00	-9.93	V
1671.03	-52.27	-57.10	5.67	0.84	-47.00	-5.27	V
3000.09	-51.39	-56.77	6.50	1.12	-47.00	-4.39	V
150.01	-68.11	-62.98	-4.92	0.21	-57.00	-11.11	H
350.02	-67.08	-67.36	0.64	0.36	-57.00	-10.08	H
450.02	-64.84	-64.74	0.32	0.42	-57.00	-7.84	H
500.02	-66.25	-66.34	0.54	0.45	-57.00	-9.25	H
550.03	-59.78	-60.06	0.76	0.48	-57.00	-2.78	H
646.83	-66.05	-66.01	0.48	0.52	-57.00	-9.05	H
1945.54	-52.01	-55.79	4.69	0.91	-47.00	-5.01	H
2129.05	-51.71	-55.82	5.06	0.95	-47.00	-4.71	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11n HT40 mode / RX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
149.96	-71.55	-66.43	-4.91	0.21	-57.00	-14.55	V
200.81	-72.62	-70.04	-2.33	0.25	-57.00	-15.62	V
250.01	-69.45	-69.68	0.52	0.29	-57.00	-12.45	V
350.02	-70.08	-70.36	0.64	0.36	-57.00	-13.08	V
450.02	-68.37	-68.27	0.32	0.42	-57.00	-11.37	V
498.67	-67.72	-67.79	0.52	0.45	-57.00	-10.72	V
1599.03	-51.58	-57.06	6.30	0.82	-47.00	-4.58	V
2123.55	-50.13	-54.24	5.05	0.94	-47.00	-3.13	V
150.01	-67.42	-62.29	-4.92	0.21	-57.00	-10.42	H
350.02	-67.33	-67.61	0.64	0.36	-57.00	-10.33	H
450.02	-65.10	-65.00	0.32	0.42	-57.00	-8.10	H
500.02	-66.11	-66.20	0.54	0.45	-57.00	-9.11	H
550.03	-60.04	-60.32	0.76	0.48	-57.00	-3.04	H
636.03	-66.84	-66.73	0.40	0.51	-57.00	-9.84	H
1736.53	-55.55	-60.26	5.57	0.86	-47.00	-8.55	H
3190.09	-52.30	-58.01	6.86	1.15	-47.00	-5.30	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11n HT40 mode / RX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
150.01	-69.53	-64.40	-4.92	0.21	-57.00	-12.53	V
250.01	-69.22	-69.45	0.52	0.29	-57.00	-12.22	V
335.02	-71.93	-72.25	0.66	0.34	-57.00	-14.93	V
361.02	-70.05	-70.35	0.66	0.36	-57.00	-13.05	V
526.73	-68.45	-68.71	0.72	0.46	-57.00	-11.45	V
612.88	-67.19	-67.47	0.79	0.51	-57.00	-10.19	V
1951.04	-53.69	-57.47	4.69	0.91	-47.00	-6.69	V
2703.07	-54.45	-59.69	6.30	1.06	-47.00	-7.45	V
150.01	-67.08	-61.95	-4.92	0.21	-57.00	-10.08	H
175.01	-72.65	-70.04	-2.38	0.23	-57.00	-15.65	H
350.02	-67.38	-67.66	0.64	0.36	-57.00	-10.38	H
450.02	-64.20	-64.10	0.32	0.42	-57.00	-7.20	H
500.02	-66.22	-66.31	0.54	0.45	-57.00	-9.22	H
582.08	-66.55	-66.86	0.80	0.49	-57.00	-9.55	H
2125.05	-54.55	-58.65	5.05	0.95	-47.00	-7.55	H
3188.59	-53.23	-58.93	6.85	1.15	-47.00	-6.23	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BLE 1Mbps / RX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
149.96	-71.21	-66.09	-4.91	0.21	-57.00	-14.21	V
250.01	-69.28	-69.51	0.52	0.29	-57.00	-12.28	V
350.02	-70.74	-71.02	0.64	0.36	-57.00	-13.74	V
525.03	-62.90	-63.20	0.76	0.46	-57.00	-5.90	V
599.68	-67.42	-68.24	1.32	0.50	-57.00	-10.42	V
659.88	-64.95	-65.27	0.84	0.52	-57.00	-7.95	V
3000.59	-51.51	-56.89	6.50	1.12	-47.00	-4.51	V
3193.59	-51.48	-57.20	6.87	1.15	-47.00	-4.48	V
150.01	-67.33	-62.20	-4.92	0.21	-57.00	-10.33	H
175.01	-72.15	-69.54	-2.38	0.23	-57.00	-15.15	H
350.02	-67.20	-67.48	0.64	0.36	-57.00	-10.20	H
450.02	-64.28	-64.18	0.32	0.42	-57.00	-7.28	H
500.02	-65.50	-65.59	0.54	0.45	-57.00	-8.50	H
550.03	-60.61	-60.89	0.76	0.48	-57.00	-3.61	H
1750.03	-52.79	-57.53	5.60	0.86	-47.00	-5.79	H
3186.59	-54.92	-60.62	6.85	1.15	-47.00	-7.92	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BLE 1Mbps / RX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
86.95	-72.54	-68.13	-4.25	0.16	-57.00	-15.54	V
150.01	-71.22	-66.09	-4.92	0.21	-57.00	-14.22	V
250.01	-69.11	-69.34	0.52	0.29	-57.00	-12.11	V
350.02	-70.02	-70.30	0.64	0.36	-57.00	-13.02	V
450.02	-69.49	-69.39	0.32	0.42	-57.00	-12.49	V
576.88	-67.47	-67.66	0.68	0.49	-57.00	-10.47	V
3000.09	-52.86	-58.24	6.50	1.12	-47.00	-5.86	V
4251.14	-49.39	-57.07	9.00	1.32	-47.00	-2.39	V
150.01	-67.80	-62.67	-4.92	0.21	-57.00	-10.80	H
350.02	-67.23	-67.51	0.64	0.36	-57.00	-10.23	H
450.02	-64.81	-64.71	0.32	0.42	-57.00	-7.81	H
500.02	-65.97	-66.06	0.54	0.45	-57.00	-8.97	H
550.03	-60.60	-60.88	0.76	0.48	-57.00	-3.60	H
613.08	-66.06	-66.34	0.79	0.51	-57.00	-9.06	H
2000.04	-54.79	-58.27	4.40	0.92	-47.00	-7.79	H
2999.59	-54.02	-59.40	6.50	1.12	-47.00	-7.02	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BLE 2Mbps / RX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
87.50	-71.17	-66.61	-4.40	0.16	-57.00	-14.17	V
150.01	-70.69	-65.56	-4.92	0.21	-57.00	-13.69	V
249.96	-69.63	-69.87	0.52	0.28	-57.00	-12.63	V
350.02	-69.30	-69.58	0.64	0.36	-57.00	-12.30	V
464.52	-68.36	-68.15	0.22	0.43	-57.00	-11.36	V
550.03	-68.05	-68.33	0.76	0.48	-57.00	-11.05	V
1875.04	-55.31	-58.97	4.55	0.89	-47.00	-8.31	V
2466.56	-53.79	-58.31	5.53	1.01	-47.00	-6.79	V
150.01	-67.60	-62.47	-4.92	0.21	-57.00	-10.60	H
350.02	-65.30	-65.58	0.64	0.36	-57.00	-8.30	H
450.02	-64.15	-64.05	0.32	0.42	-57.00	-7.15	H
500.02	-65.45	-65.54	0.54	0.45	-57.00	-8.45	H
550.03	-60.35	-60.63	0.76	0.48	-57.00	-3.35	H
650.03	-65.54	-65.54	0.52	0.52	-57.00	-8.54	H
2662.57	-49.52	-54.70	6.23	1.05	-47.00	-2.52	H
3187.09	-52.78	-58.48	6.85	1.15	-47.00	-5.78	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BLE 2Mbps / RX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
157.66	-73.12	-68.71	-4.19	0.22	-57.00	-16.12	V
250.01	-68.70	-68.93	0.52	0.29	-57.00	-11.70	V
350.02	-69.97	-70.25	0.64	0.36	-57.00	-12.97	V
438.22	-69.30	-69.12	0.23	0.41	-57.00	-12.30	V
492.82	-68.50	-68.42	0.37	0.45	-57.00	-11.50	V
591.28	-67.07	-67.76	1.19	0.50	-57.00	-10.07	V
1683.03	-52.99	-57.75	5.60	0.84	-47.00	-5.99	V
3000.09	-51.78	-57.16	6.50	1.12	-47.00	-4.78	V
150.01	-67.80	-62.67	-4.92	0.21	-57.00	-10.80	H
350.02	-67.40	-67.68	0.64	0.36	-57.00	-10.40	H
450.02	-63.83	-63.73	0.32	0.42	-57.00	-6.83	H
500.02	-66.32	-66.41	0.54	0.45	-57.00	-9.32	H
550.03	-60.47	-60.75	0.76	0.48	-57.00	-3.47	H
641.63	-66.22	-66.10	0.40	0.52	-57.00	-9.22	H
1499.52	-54.62	-60.01	6.19	0.80	-47.00	-7.62	H
3000.59	-55.20	-60.58	6.50	1.12	-47.00	-8.20	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BT BR / RX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
84.80	-66.65	-61.87	-4.63	0.15	-57.00	-9.65	V
150.01	-71.75	-66.62	-4.92	0.21	-57.00	-14.75	V
250.01	-69.29	-69.52	0.52	0.29	-57.00	-12.29	V
350.02	-68.97	-69.25	0.64	0.36	-57.00	-11.97	V
550.03	-67.25	-67.53	0.76	0.48	-57.00	-10.25	V
606.48	-66.89	-67.41	1.02	0.50	-57.00	-9.89	V
3000.09	-52.09	-57.47	6.50	1.12	-47.00	-5.09	V
3597.11	-53.50	-60.17	7.89	1.22	-47.00	-6.50	V
150.01	-67.58	-62.45	-4.92	0.21	-57.00	-10.58	H
350.02	-67.69	-67.97	0.64	0.36	-57.00	-10.69	H
450.02	-63.84	-63.74	0.32	0.42	-57.00	-6.84	H
500.02	-64.62	-64.71	0.54	0.45	-57.00	-7.62	H
550.03	-60.38	-60.66	0.76	0.48	-57.00	-3.38	H
662.88	-65.86	-66.10	0.77	0.53	-57.00	-8.86	H
2127.55	-54.41	-58.52	5.06	0.95	-47.00	-7.41	H
3185.59	-51.39	-57.08	6.84	1.15	-47.00	-4.39	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BT BR / RX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
150.01	-71.03	-65.90	-4.92	0.21	-57.00	-14.03	V
174.06	-73.55	-70.89	-2.43	0.23	-57.00	-16.55	V
350.02	-70.04	-70.32	0.64	0.36	-57.00	-13.04	V
458.22	-67.60	-67.49	0.31	0.42	-57.00	-10.60	V
588.98	-67.33	-67.95	1.11	0.49	-57.00	-10.33	V
878.09	-62.69	-63.00	0.93	0.62	-57.00	-5.69	V
1658.53	-53.52	-58.43	5.75	0.84	-47.00	-6.52	V
2665.57	-53.63	-58.81	6.23	1.05	-47.00	-6.63	V
45.10	-66.75	-53.53	-13.11	0.11	-57.00	-9.75	H
150.01	-68.03	-62.90	-4.92	0.21	-57.00	-11.03	H
350.02	-67.27	-67.55	0.64	0.36	-57.00	-10.27	H
450.02	-64.90	-64.80	0.32	0.42	-57.00	-7.90	H
525.03	-66.03	-66.33	0.76	0.46	-57.00	-9.03	H
550.03	-60.68	-60.96	0.76	0.48	-57.00	-3.68	H
1750.03	-55.07	-59.81	5.60	0.86	-47.00	-8.07	H
3000.09	-53.86	-59.24	6.50	1.12	-47.00	-6.86	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Mode 2: PIFA Antenna

Test Mode: 802.11 b mode / RX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
83.20	-67.83	-62.88	-4.80	0.15	-57.00	-10.83	V
250.01	-65.89	-66.12	0.52	0.29	-57.00	-8.89	V
350.02	-68.04	-68.32	0.64	0.36	-57.00	-11.04	V
450.02	-68.34	-68.24	0.32	0.42	-57.00	-11.34	V
550.03	-66.47	-66.75	0.76	0.48	-57.00	-9.47	V
878.19	-62.31	-62.62	0.93	0.62	-57.00	-5.31	V
1500.02	-54.43	-59.83	6.20	0.80	-47.00	-7.43	V
1769.53	-55.63	-60.10	5.33	0.86	-47.00	-8.63	V
41.00	-69.07	-52.58	-16.39	0.10	-57.00	-12.07	H
150.01	-71.05	-65.92	-4.92	0.21	-57.00	-14.05	H
250.01	-62.87	-63.10	0.52	0.29	-57.00	-5.87	H
375.02	-68.35	-68.62	0.64	0.37	-57.00	-11.35	H
450.02	-67.61	-67.51	0.32	0.42	-57.00	-10.61	H
550.03	-64.61	-64.89	0.76	0.48	-57.00	-7.61	H
1231.51	-51.59	-54.80	3.93	0.72	-47.00	-4.59	H
1696.03	-55.11	-59.78	5.52	0.85	-47.00	-8.11	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11 b mode / RX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
84.85	-65.50	-60.71	-4.64	0.15	-57.00	-8.50	V
250.01	-66.45	-66.68	0.52	0.29	-57.00	-9.45	V
350.02	-67.88	-68.16	0.64	0.36	-57.00	-10.88	V
464.62	-68.66	-68.45	0.22	0.43	-57.00	-11.66	V
550.03	-66.77	-67.05	0.76	0.48	-57.00	-9.77	V
829.04	-62.97	-63.10	0.73	0.60	-57.00	-5.97	V
1690.03	-55.17	-59.88	5.56	0.85	-47.00	-8.17	V
1874.54	-55.33	-58.99	4.55	0.89	-47.00	-8.33	V
134.56	-70.78	-63.98	-6.60	0.20	-57.00	-13.78	H
250.01	-63.11	-63.34	0.52	0.29	-57.00	-6.11	H
450.02	-68.39	-68.29	0.32	0.42	-57.00	-11.39	H
550.03	-65.73	-66.01	0.76	0.48	-57.00	-8.73	H
629.08	-66.15	-66.19	0.55	0.51	-57.00	-9.15	H
875.34	-63.38	-63.66	0.90	0.62	-57.00	-6.38	H
1305.01	-52.36	-55.62	4.01	0.75	-47.00	-5.36	H
1609.53	-55.21	-60.58	6.20	0.83	-47.00	-8.21	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11 g mode / RX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
85.95	-67.62	-63.10	-4.36	0.16	-57.00	-10.62	V
250.01	-66.46	-66.69	0.52	0.29	-57.00	-9.46	V
350.02	-68.30	-68.58	0.64	0.36	-57.00	-11.30	V
550.03	-67.13	-67.41	0.76	0.48	-57.00	-10.13	V
648.48	-65.95	-65.93	0.50	0.52	-57.00	-8.95	V
882.79	-62.86	-63.22	0.98	0.62	-57.00	-5.86	V
1611.53	-54.50	-59.85	6.18	0.83	-47.00	-7.50	V
1875.04	-56.08	-59.74	4.55	0.89	-47.00	-9.08	V
47.10	-69.35	-57.87	-11.37	0.11	-57.00	-12.35	H
134.41	-70.91	-64.06	-6.65	0.20	-57.00	-13.91	H
175.01	-71.74	-69.13	-2.38	0.23	-57.00	-14.74	H
250.01	-63.10	-63.33	0.52	0.29	-57.00	-6.10	H
400.02	-66.80	-66.71	0.30	0.39	-57.00	-9.80	H
550.03	-64.96	-65.24	0.76	0.48	-57.00	-7.96	H
1269.51	-52.08	-55.34	4.00	0.74	-47.00	-5.08	H
2128.55	-56.26	-60.37	5.06	0.95	-47.00	-9.26	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11 g mode / RX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.40	-62.16	-54.90	-7.12	0.14	-57.00	-5.16	V
83.20	-66.51	-61.56	-4.80	0.15	-57.00	-9.51	V
250.01	-66.58	-66.81	0.52	0.29	-57.00	-9.58	V
350.02	-67.74	-68.02	0.64	0.36	-57.00	-10.74	V
450.02	-68.92	-68.82	0.32	0.42	-57.00	-11.92	V
550.03	-66.98	-67.26	0.76	0.48	-57.00	-9.98	V
1593.03	-53.46	-58.95	6.31	0.82	-47.00	-6.46	V
1678.03	-53.65	-58.44	5.63	0.84	-47.00	-6.65	V
41.00	-68.97	-52.48	-16.39	0.10	-57.00	-11.97	H
132.66	-72.32	-65.26	-6.86	0.20	-57.00	-15.32	H
250.01	-62.91	-63.14	0.52	0.29	-57.00	-5.91	H
450.02	-68.24	-68.14	0.32	0.42	-57.00	-11.24	H
550.03	-65.86	-66.14	0.76	0.48	-57.00	-8.86	H
885.84	-62.69	-63.08	1.01	0.62	-57.00	-5.69	H
1309.01	-52.24	-55.51	4.02	0.75	-47.00	-5.24	H
1700.53	-55.23	-59.88	5.50	0.85	-47.00	-8.23	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11n HT20 mode / RX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
85.25	-66.99	-62.26	-4.57	0.16	-57.00	-9.99	V
150.01	-71.89	-66.76	-4.92	0.21	-57.00	-14.89	V
250.01	-66.52	-66.75	0.52	0.29	-57.00	-9.52	V
350.02	-67.59	-67.87	0.64	0.36	-57.00	-10.59	V
550.03	-67.07	-67.35	0.76	0.48	-57.00	-10.07	V
910.95	-62.49	-62.89	1.03	0.63	-57.00	-5.49	V
1660.03	-51.66	-56.56	5.74	0.84	-47.00	-4.66	V
1874.54	-54.56	-58.22	4.55	0.89	-47.00	-7.56	V
39.10	-68.60	-50.04	-18.46	0.10	-57.00	-11.60	H
250.01	-63.44	-63.67	0.52	0.29	-57.00	-6.44	H
400.02	-67.25	-67.16	0.30	0.39	-57.00	-10.25	H
450.02	-67.67	-67.57	0.32	0.42	-57.00	-10.67	H
550.03	-65.38	-65.66	0.76	0.48	-57.00	-8.38	H
921.70	-62.28	-62.39	0.75	0.64	-57.00	-5.28	H
1273.51	-50.99	-54.25	4.00	0.74	-47.00	-3.99	H
1717.53	-54.89	-59.58	5.54	0.85	-47.00	-7.89	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11n HT20 mode / RX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.40	-62.49	-55.23	-7.12	0.14	-57.00	-5.49	V
85.10	-67.00	-62.22	-4.62	0.16	-57.00	-10.00	V
249.96	-66.65	-66.89	0.52	0.28	-57.00	-9.65	V
350.02	-68.52	-68.80	0.64	0.36	-57.00	-11.52	V
450.02	-68.46	-68.36	0.32	0.42	-57.00	-11.46	V
550.03	-66.17	-66.45	0.76	0.48	-57.00	-9.17	V
1566.02	-50.20	-55.75	6.37	0.82	-47.00	-3.20	V
1875.04	-55.22	-58.88	4.55	0.89	-47.00	-8.22	V
41.75	-68.89	-52.93	-15.86	0.10	-57.00	-11.89	H
150.01	-71.30	-66.17	-4.92	0.21	-57.00	-14.30	H
250.01	-63.46	-63.69	0.52	0.29	-57.00	-6.46	H
400.02	-65.69	-65.60	0.30	0.39	-57.00	-8.69	H
450.02	-67.14	-67.04	0.32	0.42	-57.00	-10.14	H
550.03	-65.68	-65.96	0.76	0.48	-57.00	-8.68	H
1271.01	-50.51	-53.77	4.00	0.74	-47.00	-3.51	H
1874.54	-54.40	-58.06	4.55	0.89	-47.00	-7.40	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11n HT40 mode / RX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
85.15	-67.49	-62.73	-4.60	0.16	-57.00	-10.49	V
250.01	-66.37	-66.60	0.52	0.29	-57.00	-9.37	V
350.02	-68.38	-68.66	0.64	0.36	-57.00	-11.38	V
450.02	-68.90	-68.80	0.32	0.42	-57.00	-11.90	V
550.03	-66.36	-66.64	0.76	0.48	-57.00	-9.36	V
895.09	-62.32	-62.88	1.19	0.63	-57.00	-5.32	V
1693.53	-55.26	-59.95	5.54	0.85	-47.00	-8.26	V
2437.06	-55.16	-59.62	5.47	1.01	-47.00	-8.16	V
40.35	-68.69	-51.22	-17.37	0.10	-57.00	-11.69	H
129.66	-70.45	-62.98	-7.28	0.19	-57.00	-13.45	H
175.01	-72.00	-69.39	-2.38	0.23	-57.00	-15.00	H
250.01	-63.14	-63.37	0.52	0.29	-57.00	-6.14	H
450.02	-67.22	-67.12	0.32	0.42	-57.00	-10.22	H
550.03	-65.09	-65.37	0.76	0.48	-57.00	-8.09	H
1742.53	-54.19	-58.92	5.59	0.86	-47.00	-7.19	H
2129.55	-52.11	-56.22	5.06	0.95	-47.00	-5.11	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: 802.11n HT40 mode / RX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
85.15	-66.64	-61.88	-4.60	0.16	-57.00	-9.64	V
250.01	-66.33	-66.56	0.52	0.29	-57.00	-9.33	V
350.02	-67.76	-68.04	0.64	0.36	-57.00	-10.76	V
450.02	-68.35	-68.25	0.32	0.42	-57.00	-11.35	V
550.03	-67.26	-67.54	0.76	0.48	-57.00	-10.26	V
879.54	-62.54	-62.87	0.95	0.62	-57.00	-5.54	V
2247.55	-51.96	-56.39	5.40	0.97	-47.00	-4.96	V
2654.57	-50.91	-56.07	6.21	1.05	-47.00	-3.91	V
42.55	-69.43	-53.99	-15.34	0.10	-57.00	-12.43	H
150.01	-70.74	-65.61	-4.92	0.21	-57.00	-13.74	H
250.01	-63.24	-63.47	0.52	0.29	-57.00	-6.24	H
450.02	-68.25	-68.15	0.32	0.42	-57.00	-11.25	H
550.03	-65.33	-65.61	0.76	0.48	-57.00	-8.33	H
828.54	-62.98	-63.11	0.73	0.60	-57.00	-5.98	H
1690.03	-53.02	-57.73	5.56	0.85	-47.00	-6.02	H
2128.55	-56.27	-60.38	5.06	0.95	-47.00	-9.27	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BLE 1Mbps / RX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.35	-60.82	-53.54	-7.14	0.14	-57.00	-3.82	V
84.25	-67.89	-63.16	-4.58	0.15	-57.00	-10.89	V
250.01	-66.29	-66.52	0.52	0.29	-57.00	-9.29	V
332.17	-66.17	-66.42	0.59	0.34	-57.00	-9.17	V
550.03	-66.59	-66.87	0.76	0.48	-57.00	-9.59	V
865.54	-62.79	-62.89	0.72	0.62	-57.00	-5.79	V
1493.52	-51.19	-56.49	6.10	0.80	-47.00	-4.19	V
1683.03	-53.07	-57.83	5.60	0.84	-47.00	-6.07	V
42.90	-69.01	-53.78	-15.13	0.10	-57.00	-12.01	H
133.36	-71.84	-64.79	-6.85	0.20	-57.00	-14.84	H
175.01	-71.61	-69.00	-2.38	0.23	-57.00	-14.61	H
250.01	-62.99	-63.22	0.52	0.29	-57.00	-5.99	H
450.02	-67.40	-67.30	0.32	0.42	-57.00	-10.40	H
550.03	-64.83	-65.11	0.76	0.48	-57.00	-7.83	H
1306.51	-52.68	-55.94	4.01	0.75	-47.00	-5.68	H
1696.53	-55.05	-59.72	5.52	0.85	-47.00	-8.05	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BLE 1Mbps / RX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.50	-62.13	-54.91	-7.08	0.14	-57.00	-5.13	V
85.10	-67.11	-62.33	-4.62	0.16	-57.00	-10.11	V
250.01	-66.36	-66.59	0.52	0.29	-57.00	-9.36	V
350.02	-68.06	-68.34	0.64	0.36	-57.00	-11.06	V
550.03	-65.67	-65.95	0.76	0.48	-57.00	-8.67	V
623.73	-65.61	-65.71	0.61	0.51	-57.00	-8.61	V
1298.01	-51.02	-54.28	4.00	0.74	-47.00	-4.02	V
1684.53	-53.60	-58.35	5.59	0.84	-47.00	-6.60	V
41.90	-69.18	-53.33	-15.75	0.10	-57.00	-12.18	H
132.71	-71.02	-63.96	-6.86	0.20	-57.00	-14.02	H
250.01	-63.56	-63.79	0.52	0.29	-57.00	-6.56	H
450.02	-68.20	-68.10	0.32	0.42	-57.00	-11.20	H
550.03	-65.81	-66.09	0.76	0.48	-57.00	-8.81	H
604.48	-66.77	-67.38	1.11	0.50	-57.00	-9.77	H
1303.51	-52.61	-55.88	4.01	0.74	-47.00	-5.61	H
1770.03	-56.11	-60.57	5.32	0.86	-47.00	-9.11	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BLE 2Mbps / RX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.40	-62.45	-55.19	-7.12	0.14	-57.00	-5.45	V
85.35	-66.62	-61.92	-4.54	0.16	-57.00	-9.62	V
250.01	-66.91	-67.14	0.52	0.29	-57.00	-9.91	V
350.02	-67.91	-68.19	0.64	0.36	-57.00	-10.91	V
550.03	-66.89	-67.17	0.76	0.48	-57.00	-9.89	V
824.54	-63.17	-63.26	0.69	0.60	-57.00	-6.17	V
1667.53	-55.59	-60.44	5.69	0.84	-47.00	-8.59	V
2127.05	-50.99	-55.09	5.05	0.95	-47.00	-3.99	V
39.65	-69.41	-51.19	-18.12	0.10	-57.00	-12.41	H
150.01	-71.63	-66.50	-4.92	0.21	-57.00	-14.63	H
250.01	-63.74	-63.97	0.52	0.29	-57.00	-6.74	H
400.02	-65.82	-65.73	0.30	0.39	-57.00	-8.82	H
450.02	-68.55	-68.45	0.32	0.42	-57.00	-11.55	H
550.03	-65.39	-65.67	0.76	0.48	-57.00	-8.39	H
1697.03	-54.42	-59.09	5.52	0.85	-47.00	-7.42	H
2126.55	-55.34	-59.44	5.05	0.95	-47.00	-8.34	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BLE 2Mbps / RX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.45	-62.43	-55.19	-7.10	0.14	-57.00	-5.43	V
85.25	-66.85	-62.12	-4.57	0.16	-57.00	-9.85	V
250.01	-66.95	-67.18	0.52	0.29	-57.00	-9.95	V
350.02	-67.90	-68.18	0.64	0.36	-57.00	-10.90	V
589.68	-66.46	-67.12	1.15	0.49	-57.00	-9.46	V
634.38	-66.17	-66.09	0.43	0.51	-57.00	-9.17	V
1625.53	-55.51	-60.72	6.04	0.83	-47.00	-8.51	V
1875.04	-56.48	-60.14	4.55	0.89	-47.00	-9.48	V
44.95	-68.72	-55.42	-13.20	0.10	-57.00	-11.72	H
150.01	-71.23	-66.10	-4.92	0.21	-57.00	-14.23	H
250.01	-63.70	-63.93	0.52	0.29	-57.00	-6.70	H
400.02	-67.69	-67.60	0.30	0.39	-57.00	-10.69	H
450.02	-68.33	-68.23	0.32	0.42	-57.00	-11.33	H
525.03	-64.44	-64.74	0.76	0.46	-57.00	-7.44	H
1759.03	-52.08	-56.69	5.47	0.86	-47.00	-5.08	H
2125.05	-53.85	-57.95	5.05	0.95	-47.00	-6.85	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BT BR / RX CH Low

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
68.40	-62.06	-54.80	-7.12	0.14	-57.00	-5.06	V
170.61	-73.05	-70.02	-2.80	0.23	-57.00	-16.05	V
250.01	-66.39	-66.62	0.52	0.29	-57.00	-9.39	V
350.02	-67.66	-67.94	0.64	0.36	-57.00	-10.66	V
450.07	-68.82	-68.72	0.32	0.42	-57.00	-11.82	V
550.03	-66.52	-66.80	0.76	0.48	-57.00	-9.52	V
3000.09	-50.60	-55.98	6.50	1.12	-47.00	-3.60	V
4257.64	-51.20	-58.90	9.02	1.32	-47.00	-4.20	V
43.80	-68.44	-54.39	-13.95	0.10	-57.00	-11.44	H
144.81	-70.93	-65.47	-5.25	0.21	-57.00	-13.93	H
250.01	-63.51	-63.74	0.52	0.29	-57.00	-6.51	H
400.02	-67.35	-67.26	0.30	0.39	-57.00	-10.35	H
450.02	-67.76	-67.66	0.32	0.42	-57.00	-10.76	H
550.03	-66.29	-66.57	0.76	0.48	-57.00	-9.29	H
3000.59	-51.36	-56.74	6.50	1.12	-47.00	-4.36	H
4250.64	-52.33	-60.01	9.00	1.32	-47.00	-5.33	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Report No.: TMWK2305001493KR

Test Mode: BT BR / RX CH High

Tested by: Ansel Wang

Ambient temperature: 25.2°C Relative humidity: 48%RH

Date: May 26, 2023

Freq. (MHz)	EIRP/ERP (dBm)	SG Output Level (dBm)	Antenna Gain (dBi/dBd)	Cable Loss (dB)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
75.55	-66.43	-60.10	-6.18	0.15	-57.00	-9.43	V
250.01	-66.63	-66.86	0.52	0.29	-57.00	-9.63	V
350.02	-67.41	-67.69	0.64	0.36	-57.00	-10.41	V
449.97	-68.60	-68.50	0.32	0.42	-57.00	-11.60	V
550.03	-66.56	-66.84	0.76	0.48	-57.00	-9.56	V
618.58	-66.70	-66.91	0.72	0.51	-57.00	-9.70	V
3000.09	-49.99	-55.37	6.50	1.12	-47.00	-2.99	V
4260.14	-52.43	-60.13	9.02	1.32	-47.00	-5.43	V
150.01	-71.63	-66.50	-4.92	0.21	-57.00	-14.63	H
250.01	-63.77	-64.00	0.52	0.29	-57.00	-6.77	H
424.42	-69.87	-69.70	0.23	0.40	-57.00	-12.87	H
450.07	-68.65	-68.55	0.32	0.42	-57.00	-11.65	H
550.03	-65.37	-65.65	0.76	0.48	-57.00	-8.37	H
610.53	-66.64	-66.99	0.85	0.50	-57.00	-9.64	H
1225.01	-51.12	-54.30	3.90	0.72	-47.00	-4.12	H
3000.59	-51.49	-56.87	6.50	1.12	-47.00	-4.49	H

Remark:

1. The emission behaviour belongs to narrowband spurious emission.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

8.12 RECEIVER BLOCKING

Limit

For equipment that supports a PER or FER test to be performed, the minimum performance criterion shall be a PER or FER less than or equal to 10 %. For equipment that does not support a PER or a FER test to be performed, the minimum performance criterion shall be no loss of the wireless transmission function needed for the intended use of the equipment.

WIFI 2.4GHz

Receiver Category	<input checked="" type="checkbox"/> Category 1 : Adaptive equipment with a maximum RF output power greater than 10 dBm e.i.r.p. shall be considered as receiver category 1 equipment. <input type="checkbox"/> Category 2 : Non-adaptive equipment with a Medium Utilization (MU) factor greater than 1 % and less than or equal to 10 % or adaptive equipment with a maximum RF output power of 10 dBm e.i.r.p. shall be considered as receiver category 2 equipment. <input type="checkbox"/> Category 3 : Non-adaptive equipment with a maximum Medium Utilization (MU) factor of 1 % or adaptive equipment with a maximum RF output power of 0 dBm e.i.r.p. shall be considered as receiver category 3 equipment
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Bluetooth & BLE

Receiver Category	<input type="checkbox"/> Category 1 : Adaptive equipment with a maximum RF output power greater than 10 dBm e.i.r.p. shall be considered as receiver category 1 equipment. <input checked="" type="checkbox"/> Category 2 : Non-adaptive equipment with a Medium Utilization (MU) factor greater than 1 % and less than or equal to 10 % or adaptive equipment with a maximum RF output power of 10 dBm e.i.r.p. shall be considered as receiver category 2 equipment. <input type="checkbox"/> Category 3 : Non-adaptive equipment with a maximum Medium Utilization (MU) factor of 1 % or adaptive equipment with a maximum RF output power of 0 dBm e.i.r.p. shall be considered as receiver category 3 equipment
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Category 1			
Wanted signal mean power from companion device (dBm) (see notes 1 and 4)	Blocking signal frequency (MHz)	Blocking signal power (dBm) (see note 4)	Type of blocking signal
$(-133 \text{ dBm} + 10 \times \log_{10}(\text{OCBW}))$ or -68 dBm whichever is less (see note 2)	2 380 2 504	-34	CW
$(-139 \text{ dBm} + 10 \times \log_{10}(\text{OCBW}))$ or -74 dBm whichever is less (see note 3)	2 300 2 330 2 360 2 524 2 584 2 674		

NOTE 1: OCBW is in Hz.

NOTE 2: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to $P_{\min} + 26 \text{ dB}$ where P_{\min} is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal.

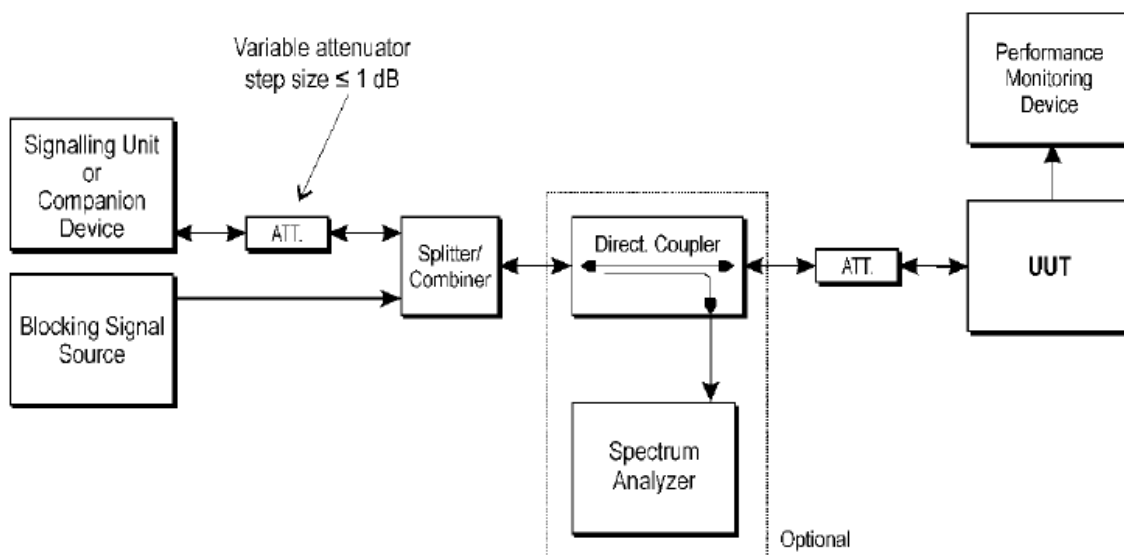
NOTE 3: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to $P_{\min} + 20 \text{ dB}$ where P_{\min} is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal.

NOTE 4: The level specified is the level at the UUT receiver input assuming a 0 dBi antenna assembly gain. In case of conducted measurements, this level has to be corrected for the (in-band) antenna assembly gain (G). In case of radiated measurements, this level is equivalent to a power flux density (PFD) in front of the UUT antenna with the UUT being configured/positioned as recorded in clause 5.4.3.2.2.

Category 2			
Wanted signal mean power from companion device (dBm) (see notes 1 and 3)	Blocking signal frequency (MHz)	Blocking signal power (dBm) (see note 3)	Type of blocking signal
$(-139 \text{ dBm} + 10 \times \log_{10}(\text{OCBW}) + 10 \text{ dB})$ or $(-74 \text{ dBm} + 10 \text{ dB})$ whichever is less (see note 2)	2 380 2 504 2 300 2 584	-34	CW
<p>NOTE 1: OCBW is in Hz.</p> <p>NOTE 2: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to $P_{\min} + 26 \text{ dB}$ where P_{\min} is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal.</p> <p>NOTE 3: The level specified is the level at the UUT receiver input assuming a 0 dBi antenna assembly gain. In case of conducted measurements, this level has to be corrected for the (in-band) antenna assembly gain (G). In case of radiated measurements, this level is equivalent to a power flux density (PFD) in front of the UUT antenna with the UUT being configured/positioned as recorded in clause 5.4.3.2.2.</p>			

Category 3			
Wanted signal mean power from companion device (dBm) (see notes 1 and 3)	Blocking signal frequency (MHz)	Blocking signal power (dBm) (see note 3)	Type of blocking signal
$(-139 \text{ dBm} + 10 \times \log_{10}(\text{OCBW}) + 20 \text{ dB})$ or $(-74 \text{ dBm} + 20 \text{ dB})$ whichever is less (see note 2)	2 380 2 504 2 300 2 584	-34	CW
<p>NOTE 1: OCBW is in Hz.</p> <p>NOTE 2: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to $P_{\min} + 30 \text{ dB}$ where P_{\min} is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal.</p> <p>NOTE 3: The level specified is the level at the UUT receiver input assuming a 0 dBi antenna assembly gain. In case of conducted measurements, this level has to be corrected for the (in-band) antenna assembly gain (G). In case of radiated measurements, this level is equivalent to a power flux density (PFD) in front of the UUT antenna with the UUT being configured/positioned as recorded in clause 5.4.3.2.2.</p>			

Test Configuration



TEST PROCEDURE

1. Please refer to ETSI EN 300 328 (V2.2.2) for the test conditions.
2. Please refer to ETSI EN 300 328 (V2.2.2) for the measurement method.

TEST RESULTS

Temperature: 25.2°C

Test Date: June 20, 2023

Humidity: 45% RH

Tested By: Jerry Chang

WIFI 2.4GHz

Receiver Blocking Result for V2.2.2 category 1						
Wanted signal mean power from companion device (dBm)	Wanted signal mean power from companion device (dBm)	Blocking signal frequency (MHz)	Blocking signal power (dBm)	Packet Error Rate (%)	Limit	Result
OCBW= 12.062 MHz						
802.11b CH 1	-64	2380	-34 + Gain = -30	0.1	≤ 10%	PASS
	-70	2300		0.0		
		2330		0.0		
		2360		0.0		
802.11b CH 13	-64	2504		0.0		
	-70	2524		0.0		
		2584		0.0		
		2674		1.0		

Bluetooth

Receiver Blocking Result for V2.2.2 category 2						
Configuration	Wanted signal mean power from companion device (dBm)	Blocking signal frequency (MHz)	Blocking signal power (dBm)	Packet Error Rate (%)	Limit	Result
OCBW= 0.86487 MHz						
BT Hopping	-65.63	2380	-34 + Gain = -30	0.0	≤ 10%	PASS
		2300		0.0		
		2504		0.0		
		2584		0.0		

BLE 1Mbps

Receiver Blocking Result for V2.2.2 category 2						
Configuration	Wanted signal mean power from companion device (dBm)	Blocking signal frequency (MHz)	Blocking signal power (dBm)	Packet Error Rate (%)	Limit	Result
OCBW= 1.0268 MHz						
BLE 1M CH 0	-64.89	2380	-34 + Gain = -30	0.0	$\leq 10\%$	PASS
		2300		0.0		
BLE 1M CH 39		2504		0.0		
		2584		0.0		

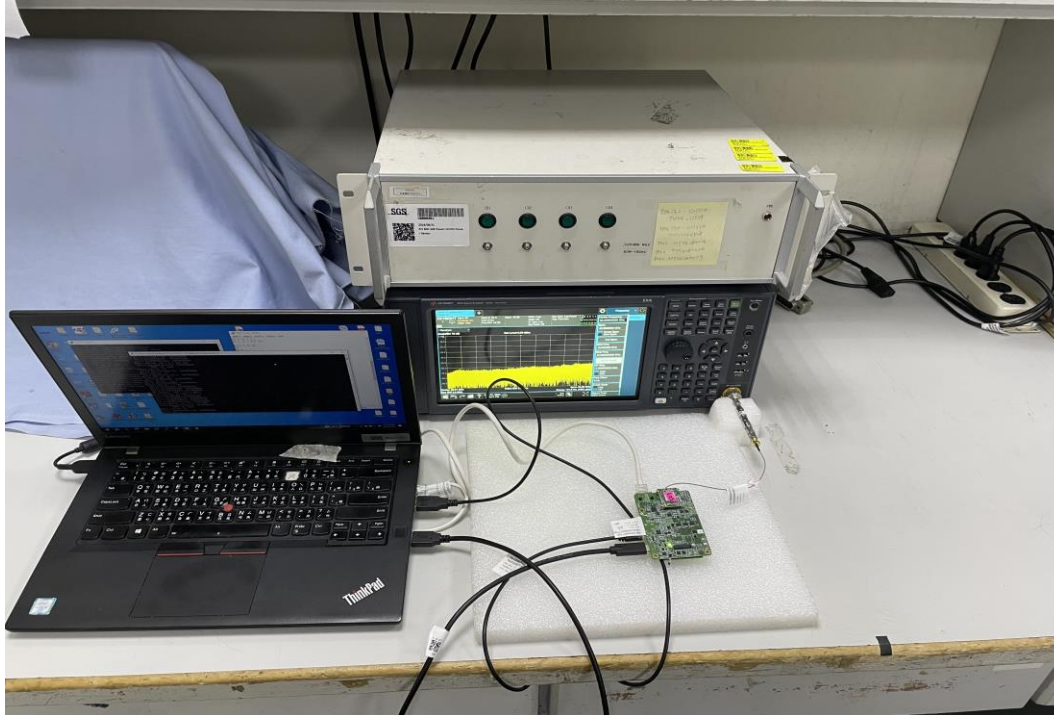
BLE 2Mbps

Receiver Blocking Result for V2.2.2 category 2						
Configuration	Wanted signal mean power from companion device (dBm)	Blocking signal frequency (MHz)	Blocking signal power (dBm)	Packet Error Rate (%)	Limit	Result
OCBW= 2.0438 MHz						
BLE 2M CH 0	-61.90	2380	-34 + Gain = -30	0.0	$\leq 10\%$	PASS
		2300		0.0		
BLE 2M CH 39		2504		0.0		
		2584		0.0		

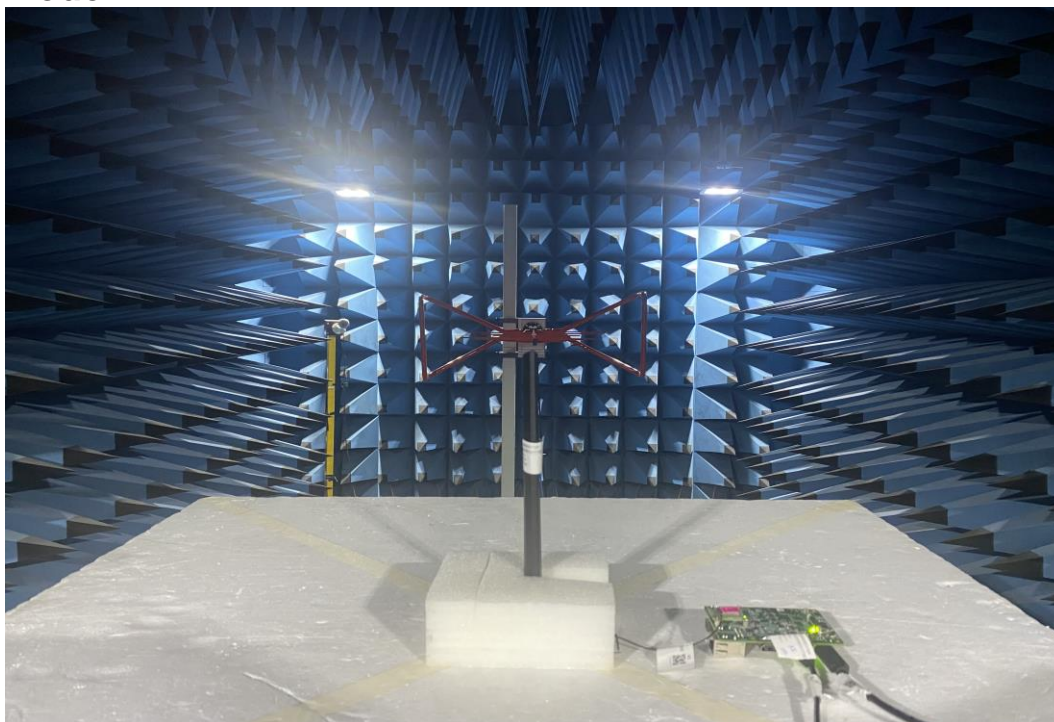
-- End of Test Report --

APPENDIX A PHOTOGRAPHS OF TEST SETUP

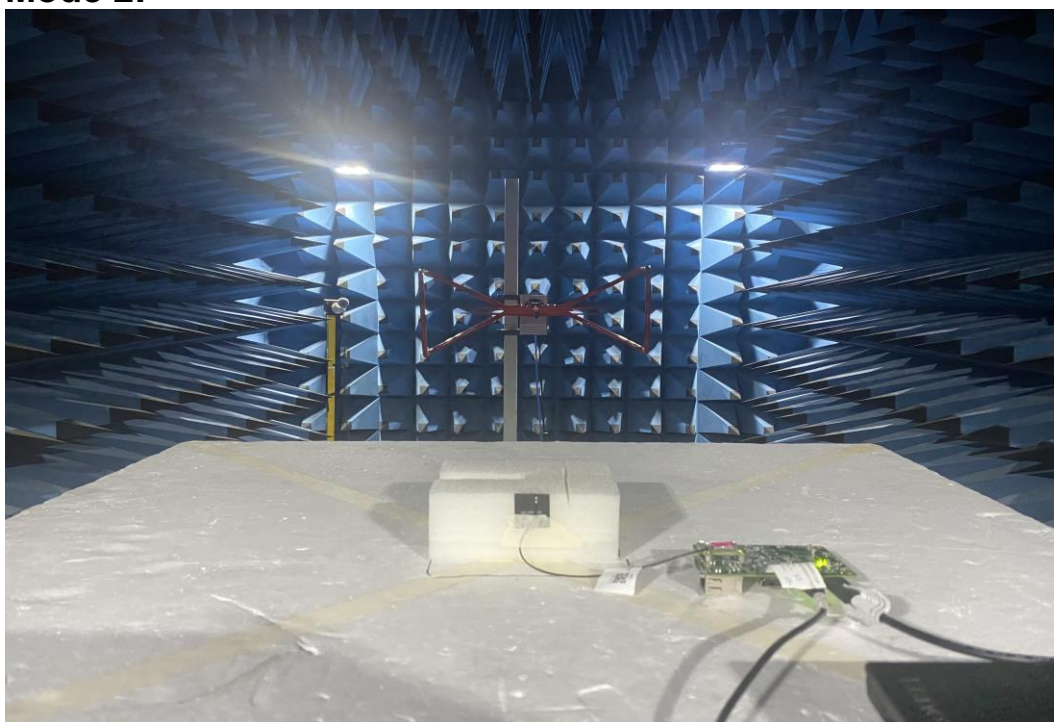
Conducted Emissions Setup Photos



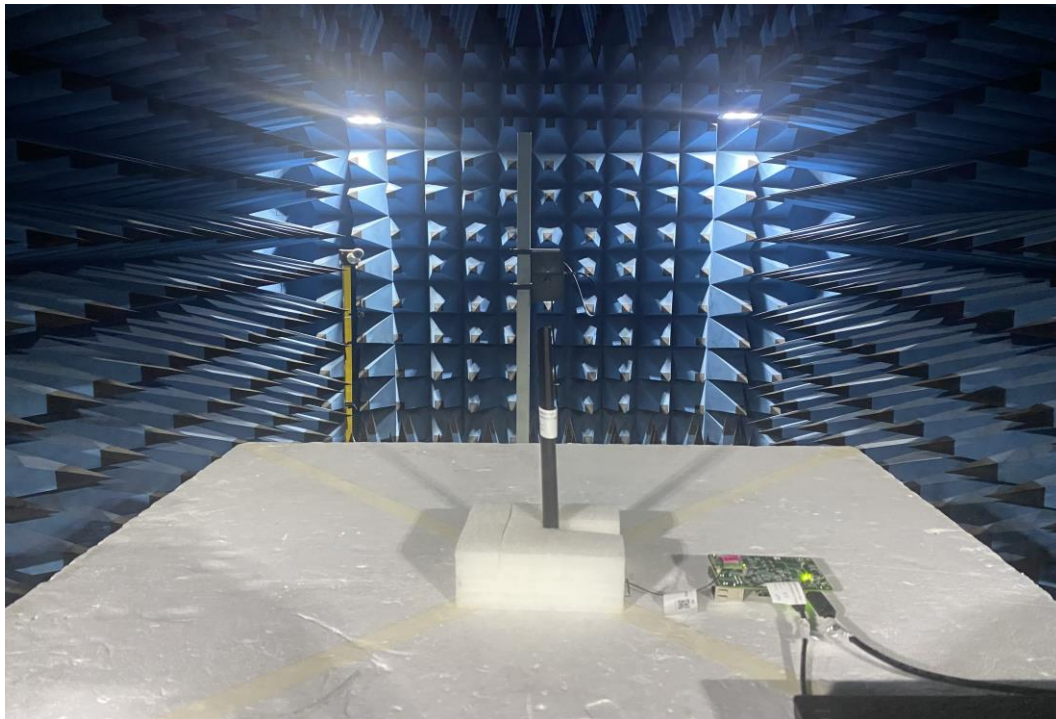
Radiated Emissions Setup Photos Below 1GHz Mode 1:



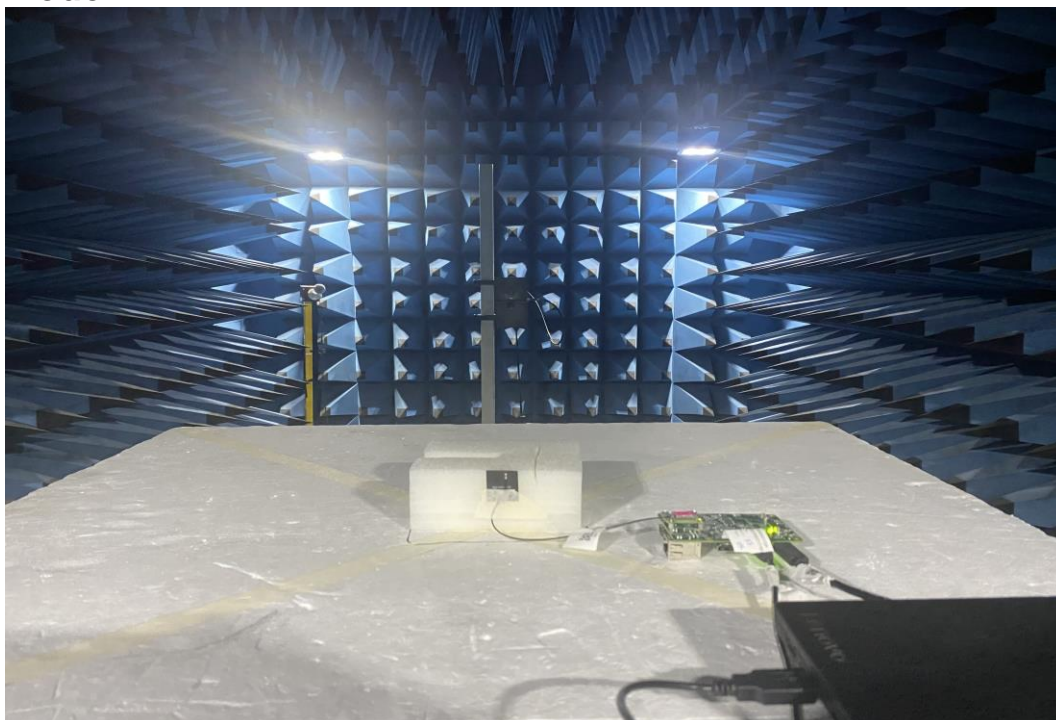
Mode 2:



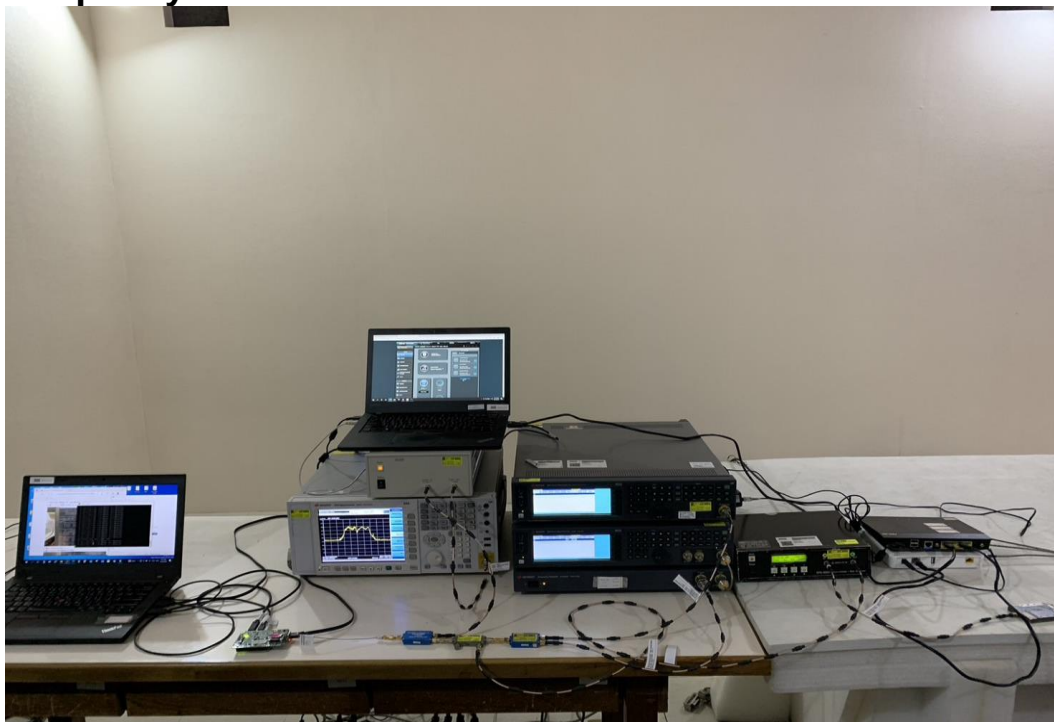
Above 1GHz Mode 1:



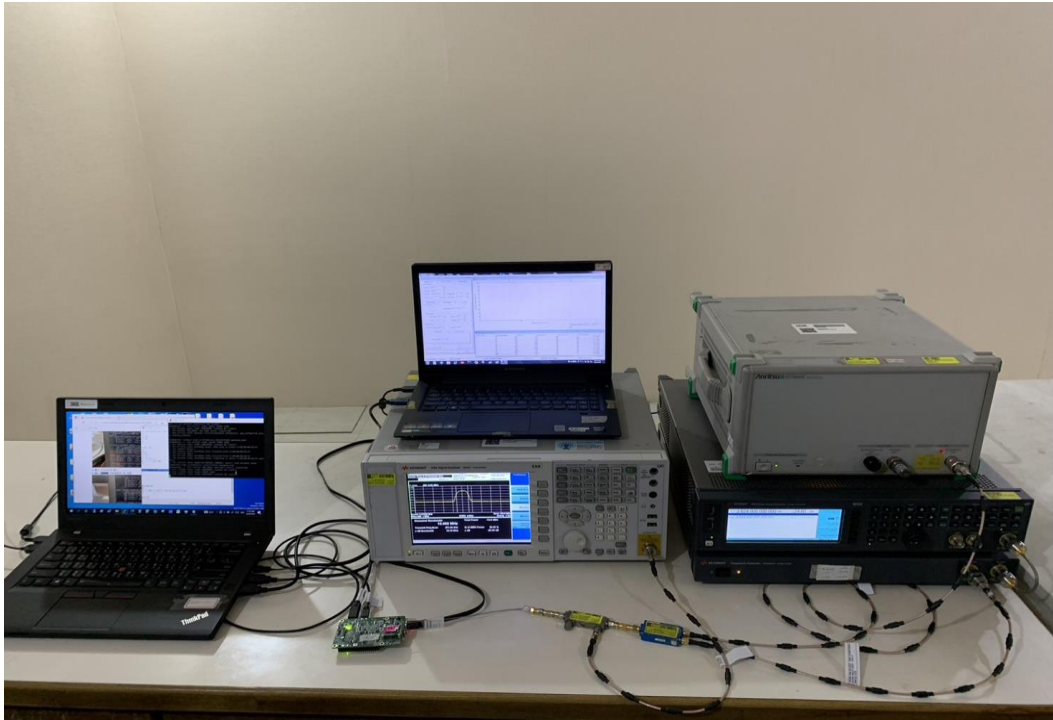
Mode 2:



Adaptivity



Receiver Blocking WIFI 2.4GHz



Bluetooth

