RF Test Report

For

Applicant Name:	**Shanghai AllyNav Technology Co.,Ltd.**
Address:	Room 201, Buliding 1,No 215, Gaoguang RD, Qingpu District,Shanghai, China
EUT Name:	GNSS Receiver
Brand Name:	N/A
Model Number:	R26pro
Series Model Number:	N/A
FCC ID:	2AT4HR26PRO

Issued By

Company name:	**BTF Testing Lab (Shenzhen) Co., Ltd.**
Address:	101/201/301, Building 1, Block 2, Tantou Industrial Park,Tantou Community, Songgang Subdistrict, Bao'an District, Shenzhen, China
Report number:	BTF250620R00103
Test standards:	FCC CFR Title 47 Part 15 Subpart C (§15.247)
Test conclusion:	Pass
Date of sample receipt:	2025-01-21
Test date:	2025-01-21 to 2025-06-19
Date of issue:	2025-06-19
Test by:	Sean He / Tester
Prepared by:	Chris Liu/ Project engineer
Approved by:	Ryan.CJ /EMC manager

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Revision History		
Version	Issue Date	Revisions Content
R_V0	2025-06-19	Original
Note: Once the revision has been made, then previous versions reports are invalid.		

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1 Introduction

1.1 Laboratory Location

Test location:	BTF Testing Lab (Shenzhen) Co., Ltd.
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Phone number:	+86-0755-23146130
Fax number:	+86-0755-23146130

1.2 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC - Designation No.: CN1409**

  BTF Testing Lab (Shenzhen) Co., Ltd. has been accredited as a testing laboratory by FCC (Federal Communications Commission). The test firm Registration No. is 695374.

- **CNAS - Registration No.: CNAS L17568**

  BTF Testing Lab (Shenzhen) Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L17568.

- **A2LA - Registration No.: 6660.01**

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1.3 Announcement

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2 Product Information

2.1 Application Information

Company Name:	Shanghai AllyNav Technology Co.,Ltd.
Address:	Room 201, Buliding 1,No 215, Gaoguang RD, Qingpu District,Shanghai, China

2.2 Manufacturer Information

Company Name:	Shanghai AllyNav Technology Co.,Ltd.
Address:	Room 201, Buliding 1,No 215, Gaoguang RD, Qingpu District,Shanghai, China

2.3 Factory Information

Company Name:	Shanghai AllyNav Technology Co.,Ltd.
Address:	Room 201, Buliding 1,No 215, Gaoguang RD, Qingpu District,Shanghai, China

2.4 General Description of Equipment under Test (EUT)

EUT name	GNSS Receiver
Under test model name	R26pro
Series model name	N/A
Description of model name differentiation	N/A
Hardware Version	V2.010
Software Version	V200.2.10
Rating:	Input Voltage 12VDC 2A

2.5 Technical Information

Operation frequency:	2412MHz ~ 2462MHz (for 802.11b/g/n-HT20) 2422MHz ~ 2452MHz (for 802.11n-HT40)
Channel numbers:	11 (for 802.11b/g/n-HT20) 7 (for 802.11n-HT40)
Channel separation:	5MHz
Modulation technology: (IEEE 802.11b)	DSSS-DBPSK, DQPSK, CCK
Modulation technology: (IEEE 802.11g/802.11n)	OFDM-BPSK, QPSK, 16QAM, 64QAM
Data rate:	802.11b: 1Mbps, 2Mbps, 5.5Mbps, 111Mbps 802.11g: 6Mbps, 9Mbps, 12Mbps etc., and up to 54Mbps 802.11n-HT20: 6.5Mbps, 13Mbps, 19.5Mbps etc., and up to 72.2Mbps 802.11n-HT40: 13.5Mbps, 27Mbps, 40.5Mbps etc., and up to 150Mbps
Max. Conducted Power:	17.40 dBm (IEEE 802.11n_40)
Antenna type:	Internal Antenna
Antenna gain:	2.07 dBi (declare by Applicant)
Antenna transmit mode:	SISO (1TX, 1RX)

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Channel List:

For 802.11b/g/n(HT20)

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

For 802.11n(HT40)

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
--	--	4	2427MHz	7	2442MHz	--	--
--	--	5	2432MHz	8	2447MHz	--	--
3	2422MHz	6	2437MHz	9	2452MHz		

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3 Summary of Test Results

3.1 Test Standards

Identity	Document Title
FCC CFR Title 47 Part 15 Subpart C (§15.247)	Intentional Radiators - Operation within the bands 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz.
ANSI C63.10-2020	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
KDB 558074 D01 15.247 Meas Guidance v05r02	Guidance for Compliance Measurements on Digital Transmission System, Frequency Hopping Spread Spectrum System, and Hybrid System Devices Operating Under Section 15.247 of The FCC Rules

3.2 Uncertainty of Test

Measurement	Value
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±1.5 dB
Power Spectral Density, conducted	±3.0 dB
Unwanted Emissions, conducted	±3.0 dB
Supply voltages	±3 %
Time	±5 %
Conducted Emission for LISN (9kHz ~ 150kHz)	±2.97 dB
Conducted Emission for LISN (150kHz ~ 30MHz)	±2.45 dB
Radiated Emission (30MHz ~ 1000MHz)	±4.80 dB
Radiated Emission (1GHz ~ 18GHz)	±4.82 dB
The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

3.3 Summary of Test Result

Item	Standard	Requirement	Result
Antenna requirement	47 CFR Part 15.247	Part 15.203	Pass
Conducted Emission at AC power line	47 CFR Part 15.247	47 CFR 15.207(a)	N/A
Occupied Bandwidth	47 CFR Part 15.247	47 CFR 15.247(a)(2)	Pass
Maximum Conducted Output Power	47 CFR Part 15.247	47 CFR 15.247(b)(3)	Pass
Power Spectral Density	47 CFR Part 15.247	47 CFR 15.247(e)	Pass
Emissions in non-restricted frequency bands	47 CFR Part 15.247	47 CFR 15.247(d)	Pass
Band edge emissions (Radiated)	47 CFR Part 15.247	47 CFR 15.247(d)	Pass
Emissions in restricted frequency bands (below 1GHz)	47 CFR Part 15.247	47 CFR 15.247(d)	Pass
Emissions in restricted frequency bands (above 1GHz)	47 CFR Part 15.247	47 CFR 15.247(d)	Pass

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4 Test Configuration

4.1 Test Equipment List

Radiated test method					
Test Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
EMI Receiver	Rohde &Schwarz	ESCI7	101032	2024/10/25	2025/10/24
Signal Analyzer	Rohde & Schwarz	FSQ40	100010	2024/10/25	2025/10/24
Log periodic antenna	Schwarzbeck	VULB 9168	01328	2024/10/28	2025/10/27
Preamplifier (30MHz ~ 1GHz)	Schwarzbeck	BBV9744	00246	2024/09/24	2025/09/23
Horn Antenna (1GHz ~18GHz)	Schwarzbeck	BBHA9120D	2597	2024/10/30	2025/10/29
Horn Antenna (15GHz ~ 40GHz)	SCHWARZBECK	BBHA9170	1157	2024/10/24	2025/10/23
Preamplifier (1GHz ~ 40GHz)	TST Pass	LNA10180G45	246	2024/09/24	2025/09/23
Test Software	Frad	EZ_EMC	Version: FA-03A2 RE+		

Conducted test method					
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	Keysight	N9020A	MY50410020	2024/10/25	2025/10/24
ESG Vector Signal Generator	Agilent	E4438C	MY45094854	2024/10/25	2025/10/24
MXG Vector Signal Generator	Agilent	N5182A	MY46240163	2024/10/25	2025/10/24
Wideband Radio Communication Tester	Rohde&Schwarz	CMW500	161997	2024/10/25	2025/10/24
Temperature Humidity Chamber	ZZCKONG	ZZ-K02A	20210928007	2024/10/25	2025/10/24
DC Power Supply	Tongmen	etm-6050c	20211026123	2024/10/25	2025/10/24
RF Control Unit	Techy	TR1029-1	/	2024/10/25	2025/10/24
RF Sensor Unit	Techy	TR1029-2	/	2024/10/25	2025/10/24
Test Software	TST Pass	/	Version: 2.0		

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4.2 Test Auxiliary Equipment

No.	Description	Manufacturer	Model	Serial Number	Certification
1	Adapter	Apple	A2244	N/A	N/A
2	Load	Yuebuzhe	YBZ	N/A	N/A

4.3 Test Modes

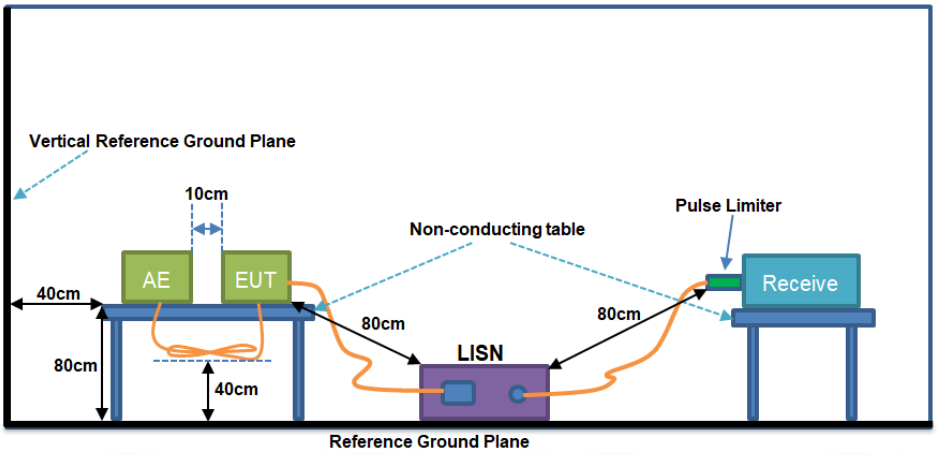
No.	Test Modes	Description
TM1	802.11b mode	Keep the EUT in 802.11b transmitting mode.
TM2	802.11g mode	Keep the EUT in 802.11g transmitting mode.
TM3	802.11n(HT20) mode	Keep the EUT in 802.11n(HT20) transmitting mode.
TM4	802.11n(HT40) mode	Keep the EUT in 802.11n(HT40) transmitting mode.

4.4 Test software

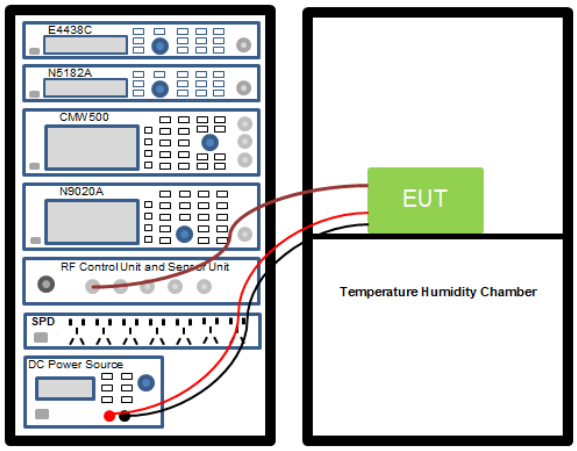
Test software:	QRCT4	Version:	N/A
Power Class:	15		

4.5 Test Setup Block

1) Conducted emission measurement:

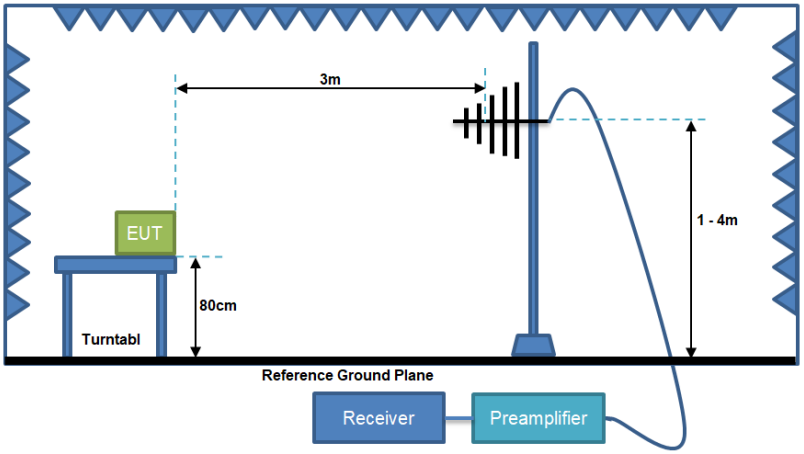


2) Conducted test method:

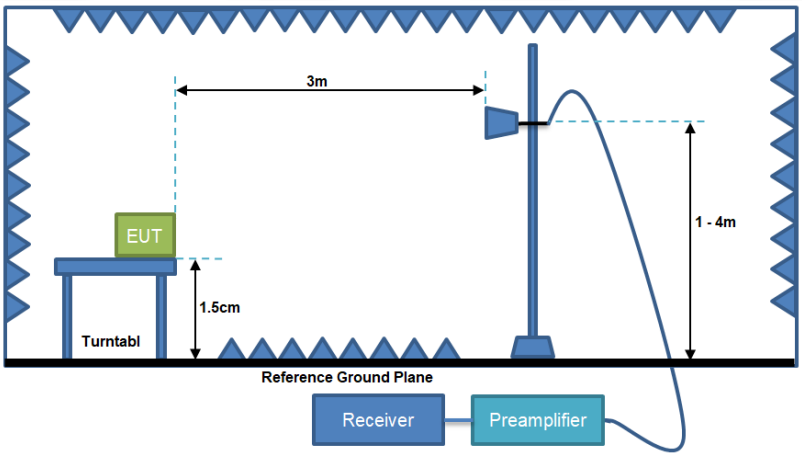


3) Radiated test method:

Below 1GHz



Above 1GHz

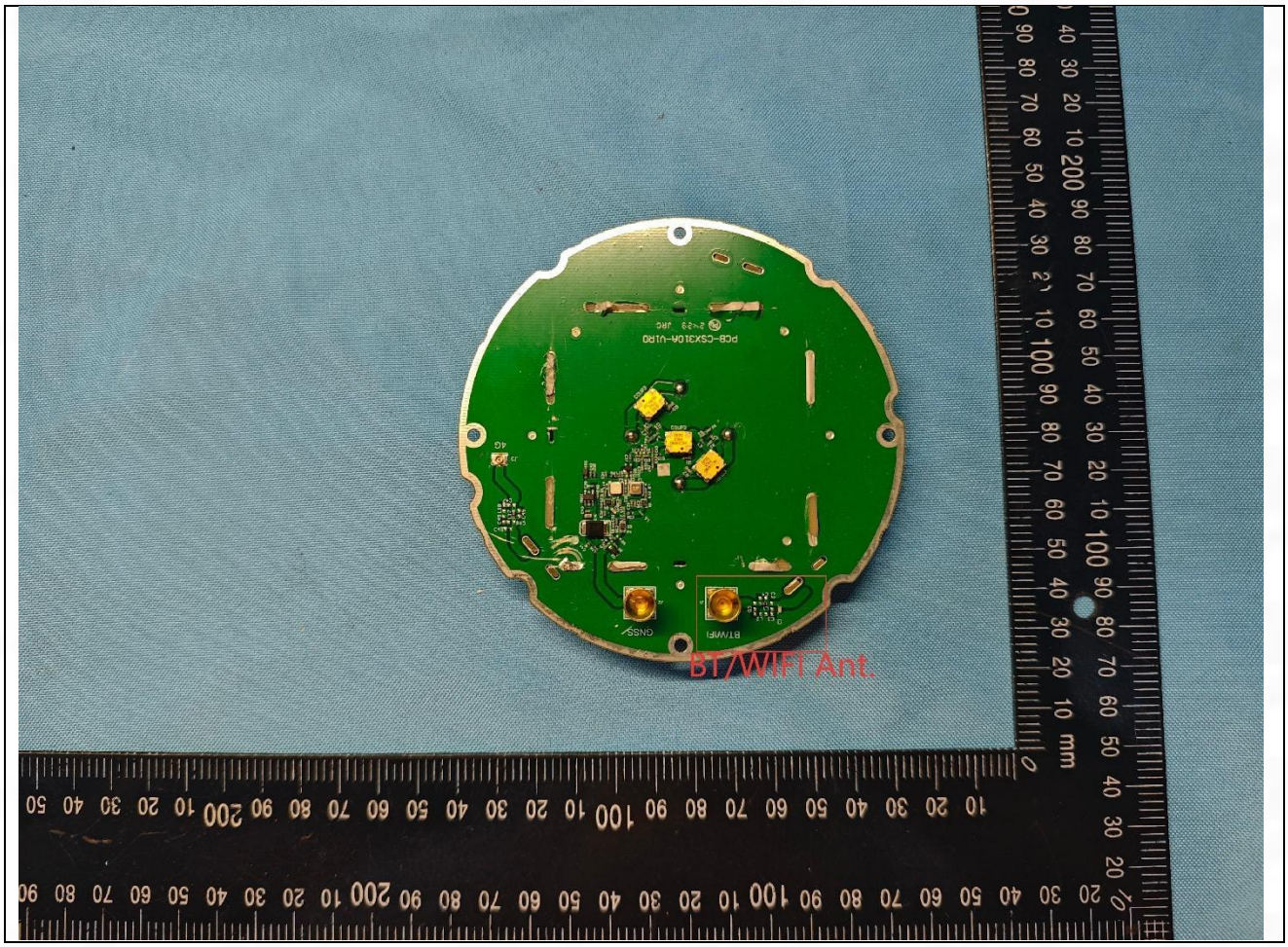


5 Evaluation Results (Evaluation)

5.1 Antenna requirement

Test Requirement:	An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

5.1.1 Conclusion:



6 Radio Spectrum Matter Test Results (RF)

6.1 Conducted Emission at AC power line

Test Requirement:	Except as shown in paragraphs (b)and (c)of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN).
Test Method:	Refer to ANSI C63.10-2020 section 6.2, standard test method for ac power-line conducted emissions from unlicensed wireless devices
Test Limit:	

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

6.1.1 E.U.T. Operation:

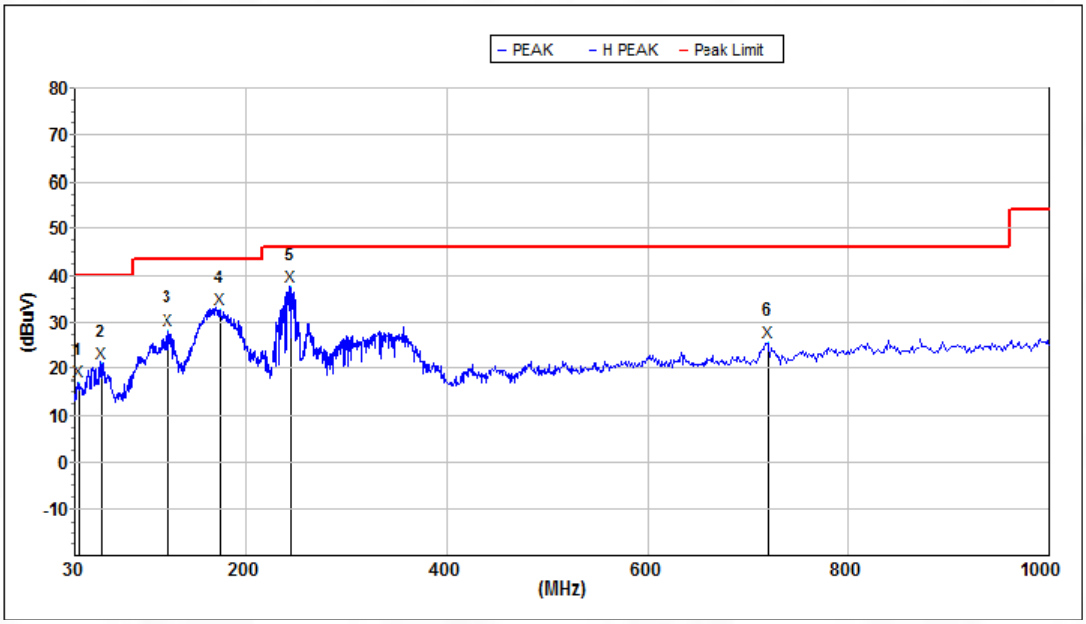
Operating Environment:	
Temperature:	23 °C
Humidity:	52 %
Atmospheric Pressure:	1010 hpa
Test Voltage	AC 120V

6.1.2 Test Setup

See section 4.5 for test setup description. The photo of test setup please refer to Appendix I Test Setup Photos

6.1.3 Test Data:

TM1 / Line: Horizontal / Band: 2.4G / BW: 40 / CH: H



Mk.	Freq.(MHz)	Level(dBuV)	Limit(dBuV)	Margin(dB)	Ant.F/G.(dB)	Amp.G.(dB)	Det.
1	34.336	17.3	40.0	22.7	18.7	31.8	peak
2	56.593	21.2	40.0	18.8	18.5	31.1	peak
3	123.050	28.2	43.5	15.3	16.8	31.0	peak
4	173.814	32.5	43.5	11.0	17.5	31.5	peak
5	245.090	37.6	46.0	8.4	17.4	32.0	peak
6	719.200	25.8	46.0	20.2	27.0	31.9	peak

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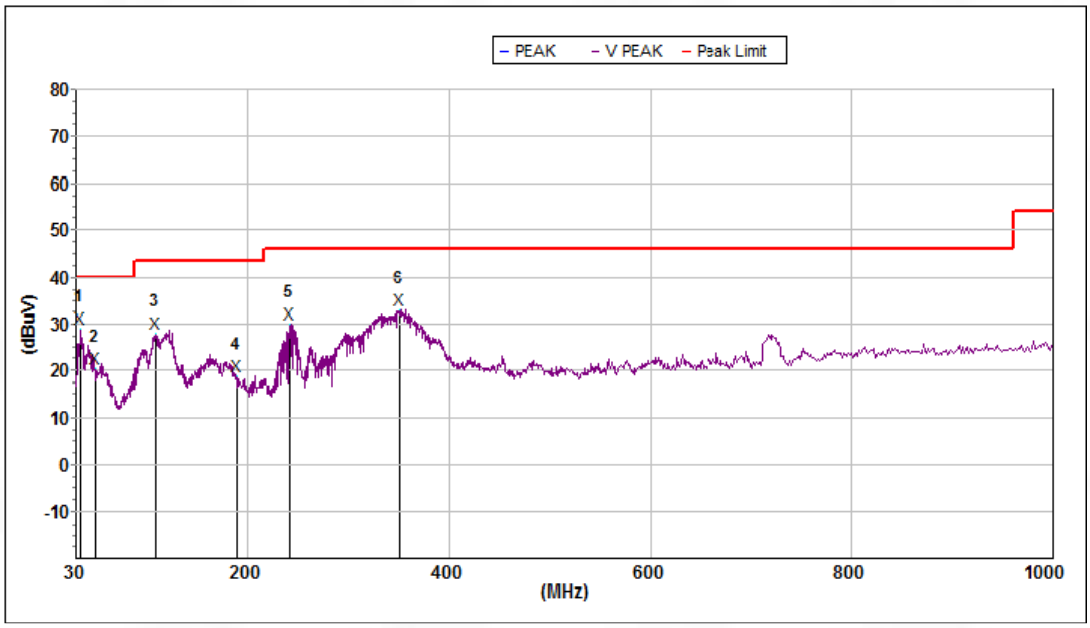
TM1 / Line: Vertical / Band: 2.4G / BW: 20 / CH: H



Mk.	Freq.(MHz)	Level(dBuV)	Limit(dBuV)	Margin(dB)	Ant.F/G.(dB)	Amp.G.(dB)	Det.
1	33.386	18.4	40.0	21.6	18.6	31.8	peak
2	85.149	15.0	40.0	25.0	14.8	31.8	peak
3	126.995	27.2	43.5	16.3	17.2	31.1	peak
4	170.195	29.8	43.5	13.7	17.8	31.5	peak
5	418.374	21.2	46.0	24.8	22.0	32.9	peak
6	690.774	25.9	46.0	20.1	26.6	31.9	peak

Note:
1.Margin = Result (Result =Reading + Factor)–Limit
2.Factor= Cable Loss +Antenna Factor-Amplifier Gain

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6.2 Occupied Bandwidth

Test Requirement:	Systems using digital modulation techniques may operate in the 902-928 MHz, and 2400-2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.
Test Method:	DTS bandwidth
Test Limit:	Section (a)(2), Systems using digital modulation techniques may operate in the 902-928 MHz, and 2400-2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.
Procedure:	a) Set RBW = 100 kHz. b) Set the VBW >= [3 × RBW]. c) Detector = peak. d) Trace mode = max hold. e) Sweep = auto couple. f) Allow the trace to stabilize. g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.2.1 E.U.T. Operation:

Operating Environment:	
Temperature:	23 °C
Humidity:	52 %
Atmospheric Pressure:	1010 hpa

6.2.2 Test Setup

See section 4.5 for test setup description. The photo of test setup please refer to Appendix I Test Setup Photos

6.2.3 Test Data:

Please Refer to Appendix-2.4G WIFI for Details.

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6.3 Maximum Conducted Output Power

Test Requirement:	For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.
Test Method:	Maximum peak conducted output power
Test Limit:	For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.
Procedure:	ANSI C63.10-2020, section 11.9.1 Maximum peak conducted output power

6.3.1 E.U.T. Operation:

Operating Environment:	
Temperature:	23 °C
Humidity:	52 %
Atmospheric Pressure:	1010 hpa

6.3.2 Test Setup

See section 4.5 for test setup description. The photo of test setup please refer to Appendix I Test Setup Photos

6.3.3 Test Data:

Please Refer to Appendix-2.4G WIFI for Details.

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6.4 Power Spectral Density

Test Requirement:	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.
Test Method:	Maximum power spectral density level in the fundamental emission
Test Limit:	For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

6.4.1 E.U.T. Operation:

Operating Environment:	
Temperature:	23 °C
Humidity:	52 %
Atmospheric Pressure:	1010 hpa

6.4.2 Test Setup

See section 4.5 for test setup description. The photo of test setup please refer to Appendix I Test Setup Photos

6.4.3 Test Data:

Please Refer to Appendix-2.4G WIFI for Details.

6.5 Emissions in non-restricted frequency bands

Test Requirement:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required.
Test Method:	Emissions in nonrestricted frequency bands
Test Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required.
Procedure:	ANSI C63.10-2020 Section 11.11.1, Section 11.11.2, Section 11.11.3

6.5.1 E.U.T. Operation:

Operating Environment:	
Temperature:	23 °C
Humidity:	52 %
Atmospheric Pressure:	1010 hpa
Test Voltage	DC 5V

6.5.2 Test Setup

See section 4.5 for test setup description. The photo of test setup please refer to Appendix I Test Setup Photos

6.5.3 Test Data:

Please Refer to Appendix-2.4G WIFI for Details.

6.6 Band edge emissions (Radiated)

Test Requirement:	In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).`
Test Method:	Radiated emissions tests
Test Limit:	

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100 **	3
88-216	150 **	3
216-960	200 **	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.

Procedure:	ANSI C63.10-2020 section 6.10.5.2

6.6.1 E.U.T. Operation:

Operating Environment:	
Temperature:	23 °C
Humidity:	52 %
Atmospheric Pressure:	1010 hpa
Test Voltage	AC 120V

6.6.2 Test Setup

See section 4.5 for test setup description. The photo of test setup please refer to Appendix I Test Setup Photos

6.6.3 Test Data:

Remark: During the test, pre-scan 802.11b,802.11g, 802.11n20, 802.11n40 mode, found 802.11n40 was worse case mode. The report only reflects the test data of worst mode.

Test Mode: 802.11n-HT40 Test Channel: Lowest channel, Test Polarization: Vertical							
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Detector	Result
11990.500	51.4	74.0	22.6	39.0	51.6	Peak	Pass
11990.500	42.3	54.0	11.7	39.0	51.6	AV	Pass
15024.150	50.5	74.0	23.5	39.1	51.6	Peak	Pass
15024.150	41.9	54.0	12.1	39.1	51.6	AV	Pass
Test Channel: Lowest channel, Test Polarization: Horizontal							
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Detector	Result
6336.300	52.2	74.0	21.8	34.9	51.6	Peak	Pass
6336.300	42.1	54.0	11.9	34.9	51.6	AV	Pass
9483.850	53.5	74.0	20.5	38.1	52.2	Peak	Pass
9483.850	44.2	54.0	9.8	38.1	52.2	AV	Pass
Test Channel: Highest channel, Test Polarization: Vertical							
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Detector	Result
6383.900	52.2	74.0	21.8	35.0	51.6	Peak	Pass
6383.900	42.2	54.0	11.8	35.0	51.6	AV	Pass
9377.600	53.0	74.0	21.0	38.1	52.3	Peak	Pass
9377.600	43.7	54.0	10.3	38.1	52.3	AV	Pass
Test Channel: Highest channel, Test Polarization: Horizontal							
Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Detector	Result
6978.900	51.3	74.0	22.7	36.0	51.7	Peak	Pass
6978.900	42.9	54.0	11.1	36.0	51.7	AV	Pass
9436.250	53.1	74.0	20.9	38.1	52.2	Peak	Pass
9436.250	45.1	54.0	8.9	38.1	52.2	AV	Pass

Note:
1.Margin = Result (Result =Reading + Factor)–Limit
2.Factor= Cable Loss +Antenna Factor-Amplifier Gain

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6.7 Emissions in restricted frequency bands (below 1GHz)

Test Requirement:	In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).`
Test Method:	Radiated emissions tests
Test Limit:	

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100 **	3
88-216	150 **	3
216-960	200 **	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.

Procedure:	ANSI C63.10-2020 section 6.6.4

6.7.1 E.U.T. Operation:

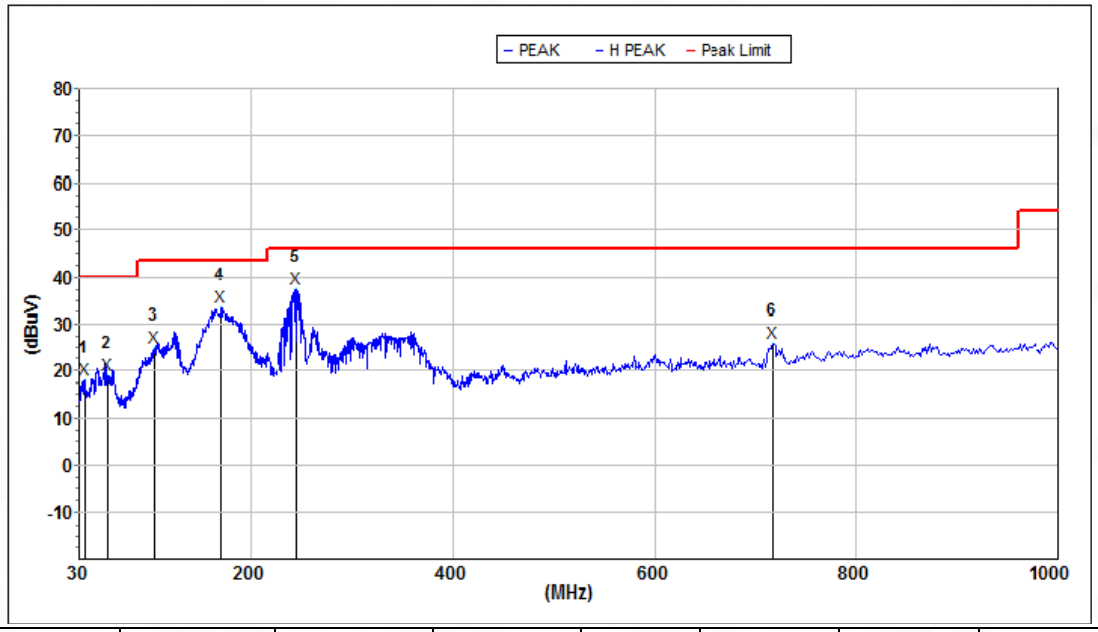
Operating Environment:	
Temperature:	23 °C
Humidity:	52 %
Atmospheric Pressure:	1010 hpa
Test Voltage	AC 120V

6.7.2 Test Setup

See section 4.5 for test setup description. The photo of test setup please refer to Appendix I Test Setup Photos

6.7.3 Test Data:

TM1 / Polarization: Horizontal / Band: 2.4G



Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Det.
1	35.313	18.3	40.0	21.7	18.7	31.8	peak
2	57.594	19.3	40.0	20.7	18.4	31.1	peak
3	103.080	25.1	43.5	18.4	15.1	30.8	peak
4	169.897	33.5	43.5	10.0	17.8	31.5	peak
5	245.951	37.5	46.0	8.5	17.4	32.0	peak
6	716.682	26.1	46.0	19.9	27.0	31.9	peak

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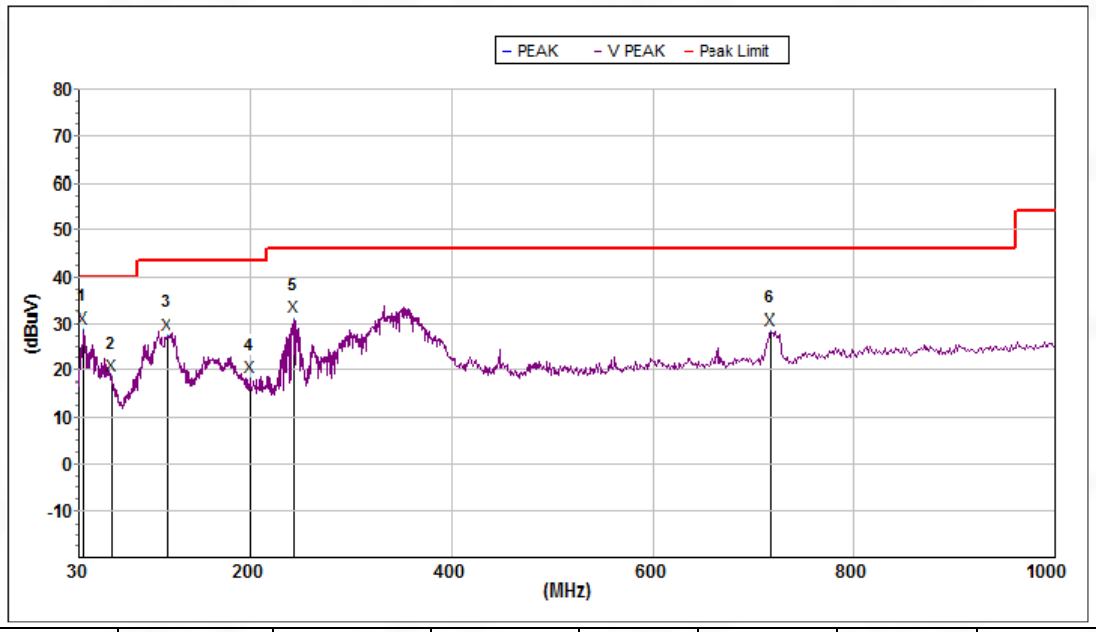
TM1 / Polarization: Vertical / Band: 2.4G



Mk.	Freq. (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Det.
1	34.336	29.1	40.0	10.9	18.7	31.8	peak
2	61.995	18.9	40.0	21.1	17.7	31.6	peak
3	117.155	27.8	43.5	15.7	16.3	31.0	peak
4	199.635	18.5	43.5	25.0	15.7	31.8	peak
5	244.232	31.2	46.0	14.8	17.4	32.0	peak
6	716.682	28.7	46.0	17.3	27.0	31.9	peak

Note:
1.Margin = Result (Result =Reading + Factor)–Limit
2.Factor= Cable Loss +Antenna Factor-Amplifier Gain

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6.8 Emissions in restricted frequency bands (above 1GHz)

Test Requirement:	In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)(see § 15.205(c)).`
Test Method:	Radiated emissions tests
Test Limit:	

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100 **	3
88-216	150 **	3
216-960	200 **	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.

Procedure:	ANSI C63.10-2020 section 6.6.4

6.8.1 E.U.T. Operation:

Operating Environment:	
Temperature:	23 °C
Humidity:	52 %
Atmospheric Pressure:	1010 hpa
Test Voltage	AC 120V

6.8.2 Test Setup

See section 4.5 for test setup description. The photo of test setup please refer to Appendix I Test Setup Photos

6.8.3 Test Data:

Remark: During the test, pre-scan 802.11b,802.11g, 802.11n20, 802.11n40 mode, found 802.11n40 was worse case mode. The report only reflects the test data of worst mode.

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 40 / CH: L

No.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Detector	P/F
1	2325.756	38.9	74.0	35.1	27.2	55.6	Peak	P
2	2324.102	24.9	54.0	29.1	27.2	55.6	AV	P
3	2357.592	38.2	74.0	35.8	27.3	55.6	Peak	P
4	2353.310	25.0	54.0	29.0	27.3	55.6	AV	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 40 / CH: L

No.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Detector	P/F
1	2330.541	41.3	74.0	32.7	27.2	55.6	Peak	P
2	2320.431	24.7	54.0	29.3	27.2	55.6	AV	P
3	2381.189	58.6	74.0	15.4	27.3	55.7	Peak	P
4	2490.533	25.2	54.0	28.8	27.6	55.7	AV	P

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 40 / CH: H

No.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Detector	P/F
1	2332.937	37.6	74.0	36.4	27.2	55.6	Peak	P
2	2329.804	24.9	54.0	29.1	27.2	55.6	AV	P
3	2369.923	37.7	74.0	36.3	27.3	55.6	Peak	P
4	2376.489	24.9	54.0	29.1	27.3	55.7	AV	P

TM1 / Polarization: Vertical / Band: 2.4G / BW: 40 / CH: H

No.	Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Marging (dB)	Ant.F/G. (dB)	Amp.G. (dB)	Detector	P/F
1	2338.476	37.7	74.0	36.3	27.2	55.6	Peak	P
2	2322.817	24.8	54.0	29.2	27.2	55.6	AV	P
3	2361.135	37.7	74.0	36.3	27.3	55.6	Peak	P
4	2353.682	25.1	54.0	28.9	27.3	55.6	AV	P

Note:
1.Margin = Result (Result =Reading + Factor)–Limit
2.Factor= Cable Loss +Antenna Factor-Amplifier Gain
3.Other 18G-25G Emission detected are more than 20dB below the limit.

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7 Test Setup Photos

Please refer to the Appendix I Test Setup Photos

8 EUT Constructional Details (EUT Photos)

Please refer to the Appendix II External Photos &Appendix III External Photos

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-- END OF REPORT --