

RF TEST REPORT

FCC ID: 2AVIM-HCS01

Test Report No.....: RF260427003-01-002

Product(s) Name.....: Notebook Computer

Model(s).....: Chromebook HCS01, Chromebook HCS****, HC****, HNB-EC****

(* uses 0-9, A-Z, a-z, - "or blank, Indicating different appearance colors, different sales channels and sales regions codes, while the rest are exactly the same, this does not affect safety and electromagnetic compatibility)

Trade Mark.....: Haitech

Applicant.....: CHINA HAINERGY NEW ENERGY CORP.,LIMITED

Address.....: Unit 1908, 19/F, Harbour Centre, 25 Harbour Road, Wan Chai, HongKong, China

Receipt Date.....: 2026.07.03

Test Date.....: 2026.07.06~2026.09.20

Issued Date.....: 2026.09.22

Standards.....: 47 CFR FCC Part 15, Subpart E(Section 15.407);

ANSI C63.10-2020+Cor. 1-2023

Testing Laboratory.....: Shenzhen Haiyun Standard Technical Co., Ltd.

Prepared By:	Checked By:	Approved By:	
Lemon He	Black Ding	Tim Zhang	
<i>Lemon He</i>	<i>Black Ding</i>	<i>Tim.zhang</i>	

Table of Contents

History of this test report.....	4
1. General Information	5
1.1 Applicant	5
1.2 Manufacturer	5
1.3 Basic Description of Equipment Under Test	5
1.4 Transmit Operating Mode	6
2. Summary of Test Results.....	7
2.1 Summary of Test Items	7
2.2 Application of Standard	7
2.3 Test Instruments.....	8
2.4 Operation Mode	9
2.5 Test Condition	9
2.6 Duty Cycle of Test Signal	9
2.7 Measurement Uncertainty.....	9
2.8 Test Location.....	10
2.9 SUPPORT UNITS	10
2.10 Deviation from Standards.....	10
2.11 Abnormalities from Standard Conditions.....	10
3. Test Procedure And Results	11
3.1 AC Power Line Conducted Emission	11
3.1.1 Limit.....	11
3.1.2 Test Procedure	11
3.1.3 Test Setup	11
3.1.4 Test Result.....	12
3.2 Radiated Emission	14
3.2.1 Limit.....	14
3.2.2 Test Procedure	15
3.2.3 Test Setup	16
3.2.4 Test Result.....	17
3.3 Spectrum Bandwidth	21
3.3.1 Limit.....	21
3.3.2 Test Procedure	21

3.3.3	Test Setup	22
3.3.4	Test Result.....	22
3.4	Conducted Output Power.....	23
3.4.1	Limit.....	23
3.4.2	Test Procedure	23
3.4.3	Test Setup	23
3.4.4	Table of Parameters of Text Software Setting.....	24
3.4.5	The Result.....	25
3.5	Power Spectral Density.....	32
3.5.1	Limit.....	32
3.5.2	Test Procedure	32
3.5.3	Test Setup	33
3.5.4	The Result.....	33

History of this test report

Original Report Issue Date: 2026.09.22

☒ No additional attachment

☐ Additional attachments were issued following record

Attachment No.	Issue Date	Description

1. General Information

1.1 Applicant

CHINA HAINERGY NEW ENERGY CORP.,LIMITED

Unit 1908, 19/F, Harbour Centre, 25 Harbour Road, Wan Chai, HongKong, China

1.2 Manufacturer

Qingdao Hainergy Technology Corp., Ltd

Room 309 (A), Baotai Office Building, No. 45, Beijing Road, Qianwan Bonded Port Area, Qingdao Zone, China (Shandong) Pilot Free Trade Zone

1.3 Basic Description of Equipment Under Test

Sample No.	POC260427003-S001	
Product Name	Notebook Computer	
Model name	Chromebook HCS01, Chromebook HCS****, HC****, HNB-EC**** (* uses 0-9, A-Z, a-z, - "or blank, Indicating different appearance colors, different sales channels and sales regions codes, while the rest are exactly the same, this does not affect safety and electromagnetic compatibility)	
Test model	Chromebook HCS01	
Model difference	Only the model name and appearance colors are different	
Trade Mark	Haitech	
Power Supply	DC 15V from adapter or DC 7.7V from battery	
Operate temperature	-10℃~45℃	
EUT Stage	○ Product Unit	● Final-Sample
Operating Band	5150MHz ~5250MHz; 5250MHz ~5350MHz 5470MHz ~5725MHz; 5725MHz ~5850MHz	
Product Type	IEEE 802.11a/n/ac/ax: WLAN (MIMO)	
Nominal Bandwidth	20MHz / 40MHz / 80MHz	
Modulation	OFDM, OFDMA	
Antenna gain	Ant1: 2.72dBi, Ant2: 2.80dBi	
Antenna type	PIFA antenna	
Data Rate (Mbps)	IEEE 802.11a mode: 6/9/12/18/24/36/48/54 IEEE 802.11n mode: up to 300 IEEE 802.11ac mode: up to 866.6 IEEE 802.11ax mode: up to 1201	
Type of Device	Client device	
DFS Function (Client devices)	●	5250MHz ~5350MHz
	●	5470MHz ~5725MHz

Channel Information			
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5150-5250	802.11a /n /ac /ax (20MHz)	5180-5240	36-48
5250-5350		5260-5320	52-64
5470-5725		5500-5720	100-144
5725-5850		5745-5825	149-165
5150-5250	802.11n /ac /ax (40MHz)	5190-5230	38-46
5250-5350		5270-5310	54-62
5470-5725		5510-5710	102-142
5725-5850		5755-5795	151-159
5150-5250	802.11ac /ax (80MHz)	5210	42
5250-5350		5290	58
5470-5725		5530-5690	106-138
5725-5850		5775	155

Note: For 802.11ax mode only support full RU mode.

1.4 Transmit Operating Mode

Transmit Operating Mode					Transmit Multiple Antennas					
☐	Operating mode 1 (single antenna)				☐	1TX				
☒	Operating mode 2 (multiple antenna, no beam forming)				☒	2TX	☐	3TX	☐	4TX
☐	Operating mode 3 (multiple antenna, with beam forming)				☐	2TX	☐	3TX	☐	4TX
☒	802.11a	Operating mode	☐	1TX	☒	2TX	☐	3TX	☐	4TX
☒	802.11n(20MHz)	Operating mode	☐	1TX	☒	2TX	☐	3TX	☐	4TX
☒	802.11n(40MHz)	Operating mode	☐	1TX	☒	2TX	☐	3TX	☐	4TX
☒	802.11ac(20MHz)	Operating mode	☐	1TX	☒	2TX	☐	3TX	☐	4TX
☒	802.11ac(40MHz)	Operating mode	☐	1TX	☒	2TX	☐	3TX	☐	4TX
☒	802.11ac(80MHz)	Operating mode	☐	1TX	☒	2TX	☐	3TX	☐	4TX
☒	802.11ax(20MHz)	Operating mode	☐	1TX	☒	2TX	☐	3TX	☐	4TX
☒	802.11ax(40MHz)	Operating mode	☐	1TX	☒	2TX	☐	3TX	☐	4TX
☒	802.11ax(80MHz)	Operating mode	☐	1TX	☒	2TX	☐	3TX	☐	4TX

2. Summary of Test Results

2.1 Summary of Test Items

47 CFR FCC Part 15, Subpart E (Section 15.407)			
Test item	Standard	Results	Remarks
AC Power Conducted Emission	15.207 15.407(b)	Pass	Meet the requirement of the limit
Radiated Emission and Restricted bands of operation	15.205(a) 15.209(a) 15.407(b)	Pass	Meet the requirement of the limit
Antenna Requirements	15.203	Compliance	Note1
Spectrum Bandwidth	15.407(a) 15.407(e)	Note2	Meet the requirement of the limit
Conducted Output Power	15.407(a)	Pass	Meet the requirement of the limit
Power Spectral Density	15.407(a)	Note2	Meet the requirement of the limit
Dynamic Frequency Selection (DFS)	15.407(h)	Pass	See the report RF260427003-01-005 for details

Note:

- 1.The EUT has two PIFA antennas arrangement which was permanently attached.
2. For test data, please refer to the report RF200317E01-1.
3. Module report RF200317E01-1(FCC ID: RAS-MT7921), this module is used for Notebook Computer with change in antenna type. Therefore, the conducted output power and radiated emission and band edge and AC power conducted emission were tested with reference to the original report, while the rest remained unchanged.
4. For MIMO mode, Directional gain=2.80dBi; for PSD, Directional gain=2.80+ 10og2=5.81dBi, the final test results for PSD remain PASS

2.2 Application of Standard

47 CFR FCC Part 15, Subpart E

KDB 662911 D01 Multiple Transmitter Output v02r01

KDB 789033 D02 General UNII Test Procedures New Rules v02r01

KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02

ANSI C63.10-2020+Cor. 1-2023

2.3 Test Instruments

No.	Name of Equipment	Manufacturer	Model Number	Serial Number	Inventory No.	Last Calibration	Due Calibration
Radiated Emission							
1	Test receiver	Rohde&Schwarz	ESU	100184	JLE011	2026/2/27	2027/2/26
2	Log periodic antenna	Schwarzbeck	VULB 9168	1151	JLE012	2025/4/12	2028/4/11
3	Low frequency amplifier	/	LNA 0920N	2014	JLE023	2026/2/27	2027/2/26
4	High frequency amplifier	Schwarzbeck	BBV 9718	9718-284	JLE024	2026/2/27	2027/2/26
5	Horn Antenna	SCHWARZBECK	BBHA 9120 D	02670	JLE028	2025/4/12	2028/4/11
6	Temp&Humidity Recorder	Meideshi	JR900	/	JLE021	2026/4/8	2027/4/7
7	Horn Antenna	SCHWARZBECK	BBHA 9170	9170#685	JLE029	2024/7/15	2027/7/14
8	Loop Antenna	SCHWARZBECK	FMZB1519B	00029	JLE030	2024/7/15	2027/7/14
9	Broadband preamplifier	Schwarzbeck	BBV9721	9721-019	JLE025	2026/2/27	2027/2/26
10	Filter	dsusoft	ZBSF6-C5170-5330-544	07227557	/	N/A	N/A
11	Filter	dsusoft	ZBSF6-C5495-5705-1309	07227558	/	N/A	N/A
12	Filter	dsusoft	ZBSF6-C5745-5830-1310	07227559	/	N/A	N/A
13	Filter	dsusoft	ZBSF6-C2400-2483.5-543	07227559	/	N/A	N/A
14	10dB attenuator	dsusoft	10dB	/	/	N/A	N/A
15	Filter	dsusoft	ZBSF6-C3000-18000-174	07227597	/	N/A	N/A
16	Filter	dsusoft	ZBSF6-C6500-18000-547	07227595	/	N/A	N/A
17	Test software	Farad Technology Co., Ltd	EZ-EMC Ver.TW-03A2				
Conducted Emission							
1	LISN	Rohde&Schwarz	ENV216	100075	JLE002	2026/2/27	2027/2/26
2	ISN	Schwarzbeck	CATE 5 8158	#171	JLE003	2026/2/27	2027/2/26
3	ISN	Schwarzbeck	CAT 3 8158	00187	JLE032	2026/2/27	2027/2/26
4	Test receiver	Rohde&Schwarz	ESCI	100718	JLE010	2026/2/27	2027/2/26
5	Pulse limiter	Rohde&Schwarz	ESH3-Z2	102299	JLE047	2026/2/27	2027/2/26
6	Temp&Humidity Recorder	Meideshi	JR900	/	JLE020	2026/4/8	2027/4/7
7	Test software	Farad Technology Co., Ltd	EZ-EMC Ver.TW-03A2				
RF Conducted Emissions							
1	MXA Signal Analyzer	Keysight	N9010A	MY51440158	JLE087	2026/9/10	2027/9/9
2	Spectrum Analyzer	Rohde&Schwarz	FSP	6625-01-522-9603	JLE121	2026/1/19	2027/1/18
3	RF Control Unit	dsusoft	JS0806-2	21G8060449	JLE053	2026/2/27	2027/2/26
4	power supply unit	dsusoft	JS0806-4ADC	N/A	JLE055	2026/2/27	2027/2/26
5	VXG Signal Generator	Keysight	N5182B	MY59100855	JLE068	2026/4/11	2027/4/10
6	EXG Analog Signal Generator	Keysight	N5173B	MY59101282	JLE052	2026/2/27	2027/2/26
7	Wideband Radio Communication Tester	Rohde&Schwarz	CMW500	1201.0002K5 0-116064-Dt	JLE054	2026/2/27	2027/2/26
8	Test software	dsusoft	JS1120-3 Ver.3.2.22.0				

2.4 Operation Mode

The EUT was supplied by and it was run in TX mode that was controlled by Master provided RF testing program. The worst case test result was showed in the report.

2.5 Test Condition

Test Item	Environmental conditions	Input Power	Tested by
AC Power Conducted Emission	23.7°C, 49% RH	AC 120V/60Hz	Keith Huang
Radiated Emission	24.2°C, 49% RH	AC 120V/60Hz	Keith Huang
Conducted Output Power	23.5°C, 52% RH	DC 7.7V	Elio Lin

Note: The applicant declare the operating environment of EUT as below:

Normal conditions: 120V AC, 0~45°C

2.6 Duty Cycle of Test Signal

Test result: PASS

Note: For test data, please refer to the report RF200317E01-1.

2.7 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Uncertainty	
Parameter	Uncertainty
Occupied Channel Bandwidth	±102kHz
RF power conducted	±0.243dB
Power Spectral Density	±0.743dB
Conducted Spurious Emission	±1.328dB
Conducted emission(9kHz~30MHz) AC main	±2.68dB
Radiated emission(9kHz~30MHz)	±3.50dB
Radiated emission (30MHz~1GHz)	±4.20dB
Radiated emission (1GHz~18GHz)	±5.10dB
Radiated emission (18GHz~40GHz)	±5.26dB

2.8 Test Location

Company:	Shenzhen Haiyun Standard Technical Co., Ltd.
Address:	No. 110-113, 115, 116, Block B, Jinyuan Business Building, Bao'an District, Shenzhen, China
CNAS Registration Number:	CNAS L18252
FCC Designation Number	CN1340
CAB identifier	CN0145
A2LA Certificate Number	6823.01

2.9 SUPPORT UNITS

Support Equipment				
No.	Equipment	Model Name	Manufacturer	Remarks
1	Mouse	HP KM10L	HP	9GLCKM25071307
2	keyboard	PW11	LENOVO	/
3	USB Disk	/	Kingston	/
4	Earphone	/	/	/
5	Adapter	AS24PD-0503000EUC	Guangbao	/

2.10 Deviation from Standards

None

2.11 Abnormalities from Standard Conditions

None

3. Test Procedure And Results

3.1 AC Power Line Conducted Emission

3.1.1 Limit

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μ V)	Average Level dB(μ V)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. * Decreasing linearly with logarithm of frequency.

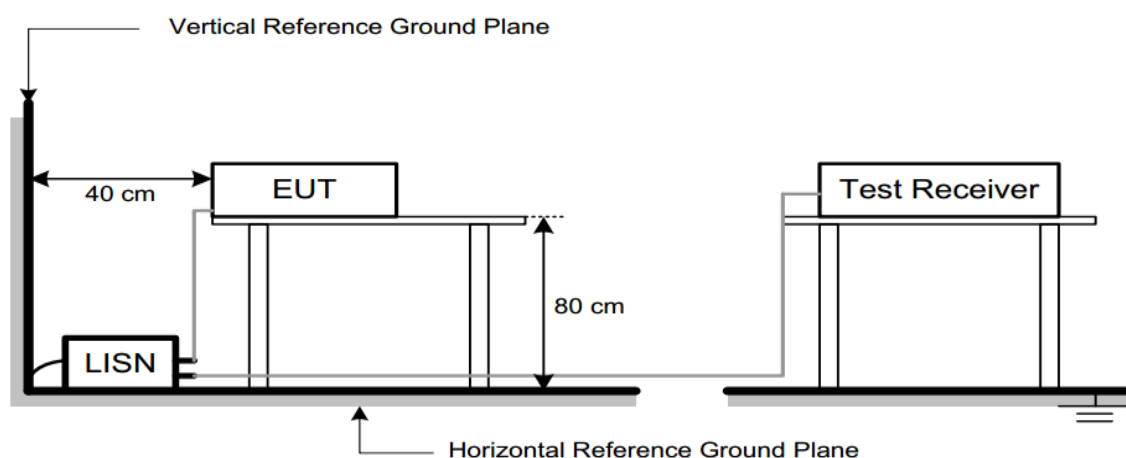
2. The lower limit shall apply at the transition frequencies.

3.1.2 Test Procedure

Test Method	
●Conducted Measurement	○Radiated Measurement
Test Channels	
○ Lowest, Middle and Highest Channel	○ Lowest and Highest Channel
Environmental conditions	
●Normal	○Normal and Extreme
Note:●:Test ○:No Test	

- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

3.1.3 Test Setup



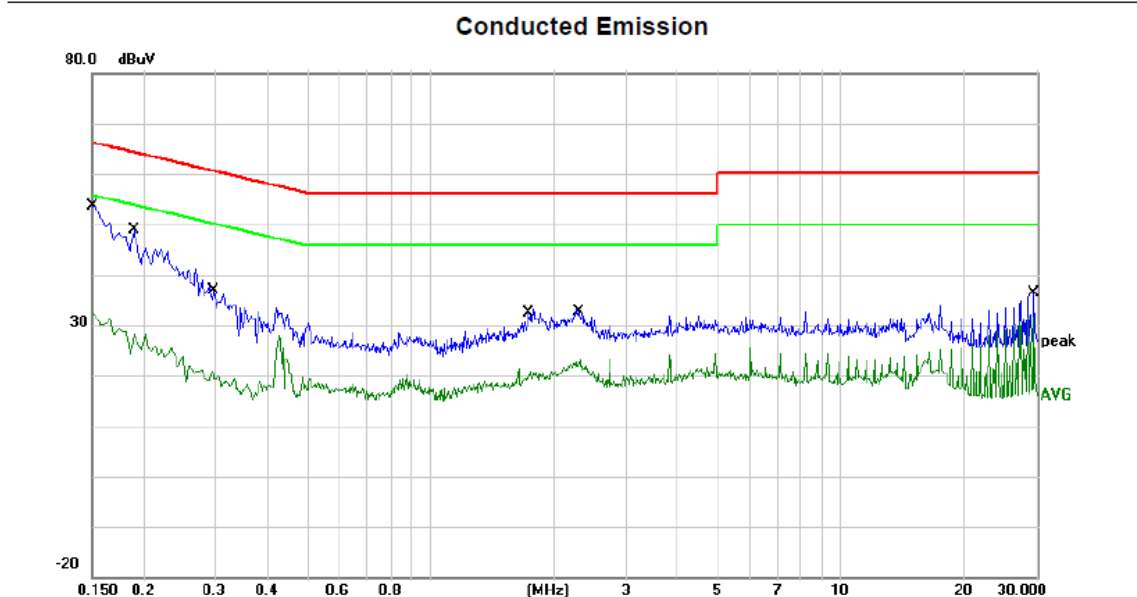
3.1.4 Test Result

Note:

1. Correct Factor = LISN Factor + Cable Loss + Pulse Limiter Factor, the value was added to Original Receiver Reading by the software automatically.
2. Measurement = Reading + Correct Factor.
3. Over = Measurement – Limit
4. The TX 11A-CDD Mode Channel 165 is found to be the worst case and recorded.

150kHz~30MHz	TX 11A-CDD Mode Channel 165
--------------	-----------------------------

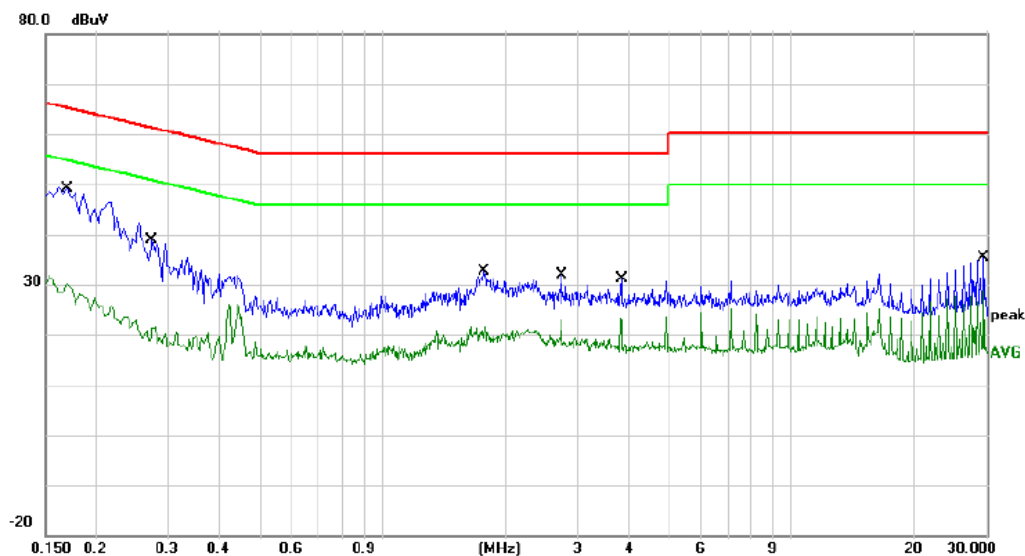
Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1	*	0.1514	26.79	19.56	46.35	65.92	-19.57	QP		
2		0.1514	8.71	19.56	28.27	55.92	-27.65	AVG		
3		0.1888	20.42	19.56	39.98	64.09	-24.11	QP		
4		0.1888	4.47	19.56	24.03	54.09	-30.06	AVG		
5		0.2980	8.96	19.46	28.42	60.30	-31.88	QP		
6		0.2980	-1.42	19.46	18.04	50.30	-32.26	AVG		
7		1.7665	5.52	19.26	24.78	56.00	-31.22	QP		
8		1.7665	-0.42	19.26	18.84	46.00	-27.16	AVG		
9		2.2954	6.87	19.27	26.14	56.00	-29.86	QP		
10		2.2954	2.15	19.27	21.42	46.00	-24.58	AVG		
11		29.6533	1.05	19.60	20.65	60.00	-39.35	QP		
12		29.6533	-3.86	19.60	15.74	50.00	-34.26	AVG		

Neutral

Conducted Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1	*	0.1680	25.10	19.50	44.60	65.06	-20.46	QP		
2		0.1680	8.16	19.50	27.66	55.06	-27.40	AVG		
3		0.2732	11.74	19.56	31.30	61.02	-29.72	QP		
4		0.2732	0.55	19.56	20.11	51.02	-30.91	AVG		
5		1.7843	5.25	19.54	24.79	56.00	-31.21	QP		
6		1.7843	-0.20	19.54	19.34	46.00	-26.66	AVG		
7		2.7520	4.23	19.52	23.75	56.00	-32.25	QP		
8		2.7520	-1.83	19.52	17.69	46.00	-28.31	AVG		
9		3.8060	2.28	19.47	21.75	56.00	-34.25	QP		
10		3.8060	-3.23	19.47	16.24	46.00	-29.76	AVG		
11		29.6001	1.15	19.88	21.03	60.00	-38.97	QP		
12		29.6001	-3.70	19.88	16.18	50.00	-33.82	AVG		

3.2 Radiated Emission

3.2.1 Limit

1) Limit of radiated emission measurement:

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

Frequency (MHz)	Distance Meters(m)	Field Strength Limit	
		$\mu\text{V/m}$	$\text{dB}(\mu\text{V})/\text{m}$
0.009 – 0.49	300	$2400/F(\text{kHz})$	-
0.490 – 1.705	30	$24000/F(\text{kHz})$	-
1.705 – 30	30	30	-
30~88	3	100	40.0
88~216	3	150	43.5
216~960	3	200	46.0
960~1000	3	500	54.0
Above 1000	3	74.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak) 54.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average)	

Note: (1) Emission level $\text{dB}\mu\text{V} = 20 \log \text{Emission level } \mu\text{V/m}$

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

2) Limit of unwanted emission out of the restricted bands:

Frequency(MHz)	EIRP Limit(dBm/MHz)	Equivalent Field Strength at 3m($\text{dB}\mu\text{V/m}$)
5150-5250	-27	68.2
5250-5350	-27	68.2
5470-5725	-27	68.2
5725-5850	-27 NOTE (2)	68.2
	10 NOTE (2)	105.2
	15.6 NOTE (2)	110.8
	27 NOTE (2)	122.2

Note: (1) The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength: $E[\text{dB}\mu\text{V/m}] = \text{EIRP}[\text{dBm}] + 95.2$, for $d=3\text{m}$

(2) According to 15.407(b)(4)(i), all emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

3.2.2 Test Procedure

Test Method	
○Conducted Measurement	●Radiated Measurement
Test Channels	
●Lowest, Middle and Highest Channel	○ Lowest and Highest Channel
Environmental conditions	
●Normal	○Normal and Extreme
Note:●:Test ○:No Test	

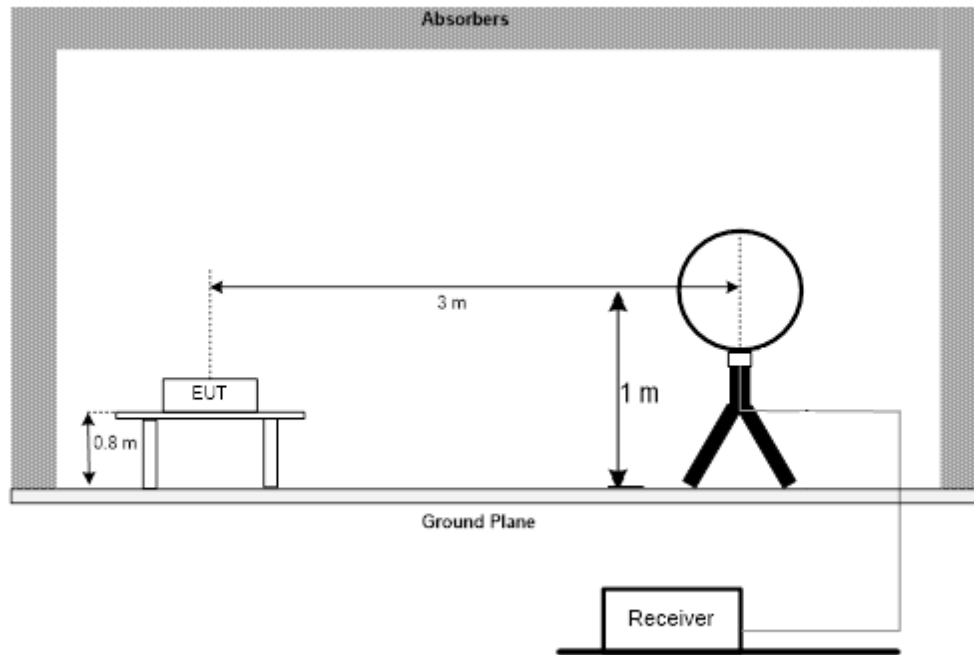
- a) The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1 GHz)
- b) The measuring distance of 3 m or 1.5m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- c) The height of the equipment or of the substitution antenna shall be 0.8m or 1.5m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d) For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
- e) The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.
- f) The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- g) All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform (below 1 GHz)
- h) All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (above 1 GHz)
- i) For the actual test configuration, please refer to the related Item -EUT Test Photos.
- j) The following table is the setting of the receiver:

Spectrum Parameters	Setting
Start ~ Stop Frequency	9 kHz~150 kHz for RBW 200 Hz
Start ~ Stop Frequency	0.15 MHz~30 MHz for RBW 9 kHz
Start ~ Stop Frequency	30 MHz~1000 MHz for RBW 100 kHz

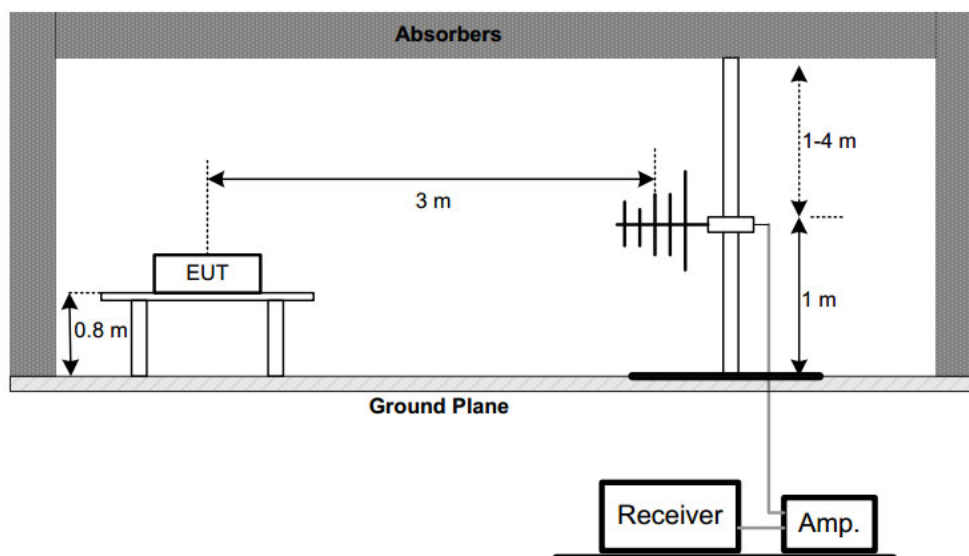
Spectrum Parameters	Setting
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic or 40 GHz, whichever is lower
RBW / VBW (Emission in restricted band)	1 MHz / 3 MHz for PK value 1 MHz / 1/T Hz for AVG value

3.2.3 Test Setup

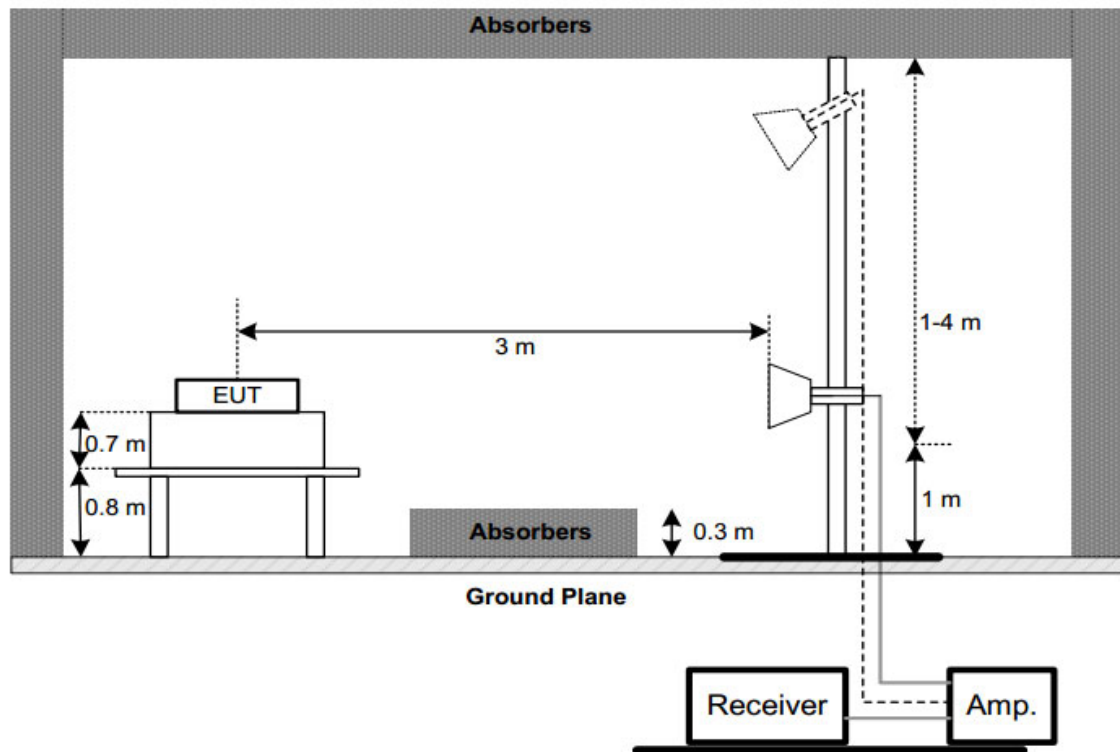
(A) Radiated Emission Test Set-Up Frequency Below 30 MHz



(B) Radiated Emission Test Set-Up Frequency 30 MHz-1000 MHz



(C) Radiated Emission Test Set-Up Frequency Above 1 GHz



3.2.4 Test Result

1) Radiated emission: 9kHz-30MHz

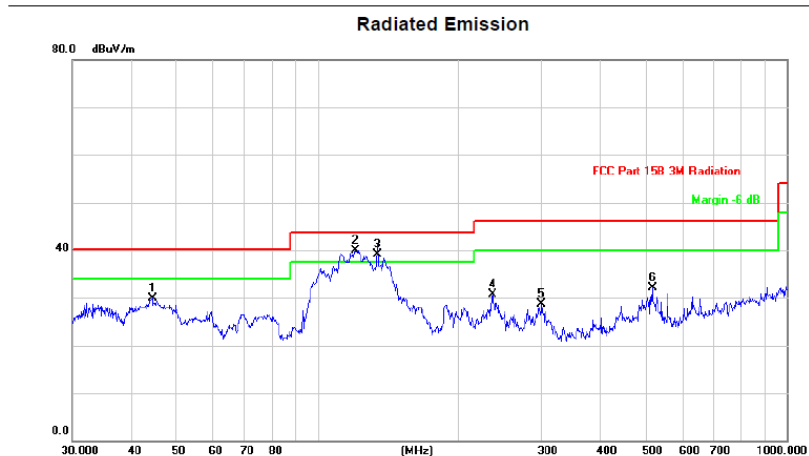
The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not recorded in this report.

2) Radiated emission: 30MHz-1GHz

Note:

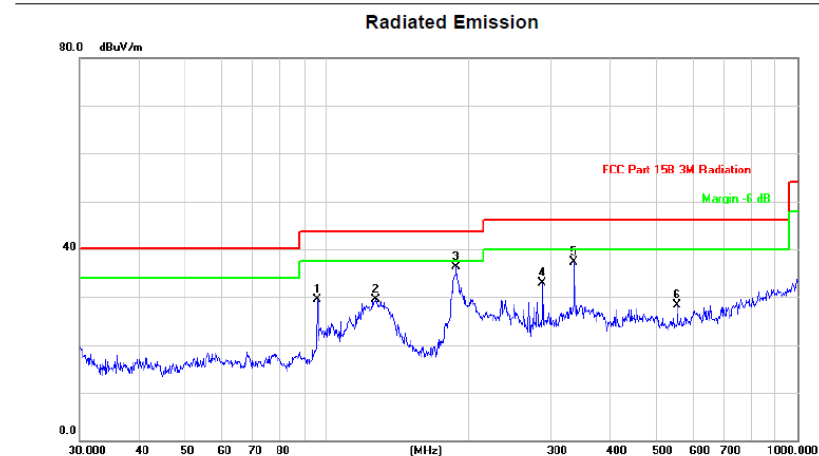
1. Measurement = Reading + Correct Factor.
2. Over = Measurement – Limit
3. The TX 11A-CDD Mode Channel 165 is found to be the worst case and recorded.

VERTICAL



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Detector
		MHz	dBuV	Factor	ment	dBuV/m	dB	
1		44.4307	40.67	-10.83	29.84	40.00	-10.16	peak
2	*	120.2766	51.11	-11.26	39.85	43.50	-3.65	peak
3	!	134.0880	50.17	-11.00	39.17	43.50	-4.33	QP
4		235.8163	42.98	-12.26	30.72	46.00	-15.28	peak
5		300.3672	38.48	-9.86	28.62	46.00	-17.38	peak
6		517.2480	36.59	-4.56	32.03	46.00	-13.97	peak

HORIZONTAL



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Detector
		MHz	dBuV	Factor	ment	dBuV/m	dB	
1		95.7622	43.75	-14.18	29.57	43.50	-13.93	peak
2		127.6645	40.72	-11.15	29.57	43.50	-13.93	peak
3	*	189.0740	48.67	-12.45	36.22	43.50	-7.28	peak
4		287.9904	43.66	-10.79	32.87	46.00	-13.13	peak
5		336.0350	46.10	-8.86	37.24	46.00	-8.76	peak
6		556.7743	31.83	-3.44	28.39	46.00	-17.61	peak

3) Radiated emission: Above 1GHz

Frequency (MHz)	Read Level (dBμV)	Polarization	Factor (dB/m)	Measurement (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
11A-CDD TX CH36							
4500.00	41.50	H	4.45	45.95	74.00	28.05	peak
5150.00	44.19	H	6.04	50.23	74.00	23.77	peak
10360.00	44.27	H	7.25	51.52	68.20	16.68	peak
4500.00	41.64	V	4.45	46.09	74.00	27.91	peak
5150.00	46.47	V	6.04	52.51	74.00	21.49	peak
10360.00	45.53	V	7.25	52.78	68.20	15.42	peak
11A-CDD TX CH40							
10400.00	44.07	H	7.39	51.46	68.20	16.74	peak
10400.00	45.24	V	7.39	52.63	68.20	15.57	peak
11A-CDD TX CH48							
10480.00	43.81	H	7.60	51.41	68.20	16.79	peak
10480.00	44.97	V	7.60	52.57	68.20	15.63	peak
11A-CDD TX CH52							
10520.00	43.60	H	7.71	51.31	68.20	16.89	peak
10520.00	44.78	V	7.71	52.49	68.20	15.71	peak
11A-CDD TX CH56							
10560.00	43.57	H	7.81	51.38	68.20	16.82	peak
10560.00	44.72	V	7.81	52.53	68.20	15.67	peak
11A-CDD TX CH64							
5350.00	44.02	H	5.25	49.27	74.00	24.73	peak
5460.00	40.36	H	5.03	45.39	74.00	28.61	peak
10640.00	48.54	H	7.87	56.41	74.00	17.59	peak
5350.00	46.54	V	5.25	51.79	74.00	22.21	peak
5460.00	41.62	V	5.03	46.65	74.00	27.35	peak
10640.00	49.65	V	7.87	57.52	74.00	16.48	peak
11A-CDD TX CH100							
5350.00	39.71	H	5.25	44.96	74.00	29.04	peak
5460.00	44.59	H	5.03	49.62	74.00	24.38	peak
11000.00	42.21	H	7.38	49.59	74.00	24.41	peak
5350.00	40.03	V	5.25	45.28	74.00	28.72	peak
5460.00	46.91	V	5.03	51.94	74.00	22.06	peak
11000.00	44.73	V	7.38	52.11	74.00	21.89	peak
11A-CDD TX CH116							
11160.00	42.33	H	7.54	49.87	74.00	24.13	peak
11160.00	44.72	V	7.54	52.26	74.00	21.74	peak
11A-CDD TX CH144							
11440.00	42.29	H	7.64	49.93	74.00	24.07	peak
11440.00	44.80	V	7.64	52.44	74.00	21.56	peak

11A-CDD TX CH149							
5650.00	42.94	H	5.72	48.66	68.20	19.54	peak
5700.00	44.49	H	6.00	50.49	105.20	54.71	peak
5720.00	53.35	H	5.82	59.17	110.80	51.63	peak
5725.00	60.15	H	5.78	65.93	122.20	56.27	peak
11490.00	41.99	H	7.76	49.75	74.00	24.25	peak
5650.00	43.59	V	5.72	49.31	68.20	18.89	peak
5700.00	45.42	V	6.00	51.42	105.20	53.78	peak
5720.00	53.67	V	5.82	59.49	110.80	51.31	peak
5725.00	60.45	V	5.78	66.23	122.20	55.97	peak
11490.00	44.38	V	7.76	52.14	74.00	21.86	peak
11A-CDD TX CH157							
11570.00	42.39	H	7.60	49.99	74.00	24.01	peak
11570.00	44.68	V	7.60	52.28	74.00	21.72	peak
11A-CDD TX CH165							
5850.00	54.67	H	6.79	61.46	122.20	60.74	peak
5855.00	49.43	H	6.72	56.15	110.80	54.65	peak
5875.00	45.03	H	6.46	51.49	105.20	53.71	peak
5925.00	41.90	H	6.46	48.36	68.20	19.84	peak
11650.00	43.13	H	7.45	50.58	74.00	23.42	peak
5850.00	55.63	V	6.79	62.42	122.20	59.78	peak
5855.00	49.62	V	6.72	56.34	110.80	54.46	peak
5875.00	45.53	V	6.46	51.99	105.20	53.21	peak
5925.00	42.78	V	6.46	49.24	68.20	18.96	peak
11650.00	45.30	V	7.45	52.75	74.00	21.25	peak

Note:

1. The other emission levels were very low against the limit.
2. Measurement = Reading Level+ Correct Factor, Margin = Limit- Measurement
3. Worst case for 802.11A-CDD mode was recorded.

3.3 Spectrum Bandwidth

3.3.1 Limit

FCC Part15, Subpart E (15.407)			
Section	Test Item	Limit	Frequency Range (MHz)
15.407(a)	26 dB Bandwidth	-	5150-5250
	26 dB Bandwidth	-	5250-5350
15.407(e)	26 dB Bandwidth	-	5470-5725
	26 dB Bandwidth	-	5725-5850
	6 dB Bandwidth	Minimum 500 kHz	5725-5850

3.3.2 Test Procedure

Test Method	
●Conducted Measurement	○Radiated Measurement
Test Channels	
●Lowest, Middle and Highest Channel	○ Lowest and Highest Channel
Environmental conditions	
●Normal	○Normal and Extreme
Note:●:Test ○:No Test	

a) The EUT was directly connected to the tonscond test system and antenna output port as show in the block diagram below.

b) the spectrum analyser is set as follow:

For 26 dB Bandwidth

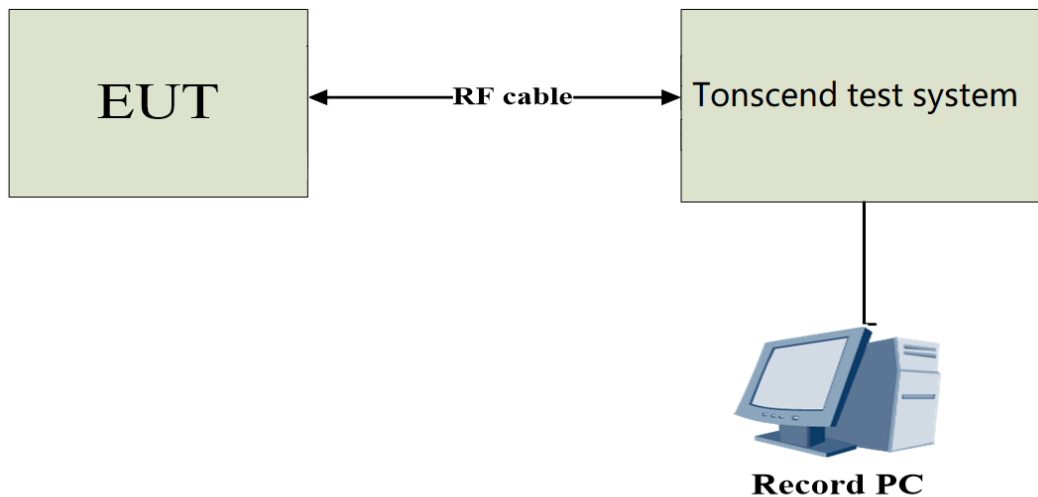
Centre Frequency	The centre frequency of the channel under test
RBW	1% to 5% of the emission bandwidth
VBW	> RBW
Frequency span	2 x Nominal Channel Bandwidth
Detector Mode	Peak
Trace Mode	Max Hold
Sweep Time	Auto Couple

For 6 dB Bandwidth

Centre Frequency	The centre frequency of the channel under test
RBW	100 kHz
VBW	300 kHz
Frequency span	2 x Nominal Channel Bandwidth
Detector Mode	Peak
Trace Mode	Max Hold
Sweep Time	Auto Couple

- c) Wait for the trace to stabilize then find the peak value of the trace and place the analyser marker on this peak.
- d) Use the -26/-6dB bandwidth function of the spectrum analyser to measure the -26/-6dB Bandwidth of the EUT. This value shall be recorded.
- e) Make sure that the power envelope is sufficiently above the noise floor of the analyser to avoid the noise signals left and right from the power envelope being taken into account by this measurement.

3.3.3 Test Setup



3.3.4 Test Result

3.3.5.1 26 dB Bandwidth

Test result: PASS

Note: For test data, please refer to the report RF200317E01-1.

3.3.5.2 Min emission bandwidth

Test result: PASS

Note: For test data, please refer to the report RF200317E01-1.

3.4 Conducted Output Power

3.4.1 Limit

FCC Part15, Subpart E (15.407)			
Section	Test Item	Limit	Frequency Range (MHz)
15.407(a)	Conducted Output Power	Master device: 1 Watt (30 dBm) Client device: 250 mW (23.98 dBm)	5150-5250
		250 mW (23.98 dBm)	5250-5350
		250 mW (23.98 dBm)	5470-5725
		1 Watt (30dBm)	5725-5850

Note:

- For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
- For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10log B, where B is the 26dB Bandwidth in megahertz.

3.4.2 Test Procedure

Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note:●:Test ○:No Test	

- The EUT was directly connected to the power meter and antenna output port as show in the block diagram below.
- Test was performed in accordance with method of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

3.4.3 Test Setup



3.4.4 Table of Parameters of Text Software Setting

UNII-1			
Test Software Version	Developer mode		
Frequency (MHz)	5180	5200	5240
IEEE 802.11a	8	8	8
IEEE 802.11n20	8	8	8
IEEE 802.11ac20	8	8	8
IEEE 802.11ax20	8	8	8
Frequency (MHz)	5190	5230	
IEEE 802.11n40	8	8	
IEEE 802.11ac40	8	8	
IEEE 802.11ax40	8	8	
Frequency (MHz)	5210		
IEEE 802.11ac80	8		
IEEE 802.11ax80	8		

UNII-2A			
Test Software Version	Developer mode		
Frequency (MHz)	5260	5280	5320
IEEE 802.11a	8	8	8
IEEE 802.11n20	8	8	8
IEEE 802.11ac20	8	8	8
IEEE 802.11ax20	8	8	8
Frequency (MHz)	5270	5310	
IEEE 802.11n40	8	8	
IEEE 802.11ac40	8	8	
IEEE 802.11ax40	8	8	
Frequency (MHz)	5290		
IEEE 802.11ac80	8		
IEEE 802.11ax80	8		

UNII-2C			
Test Software Version	Developer mode		
Frequency (MHz)	5500	5580	5720
IEEE 802.11a	9	9	9
IEEE 802.11n20	9	9	9
IEEE 802.11ac20	9	9	9
IEEE 802.11ax20	9	9	9
Frequency (MHz)	5510	5550	5710
IEEE 802.11n40	9	9	9
IEEE 802.11ac40	9	9	9
IEEE 802.11ax40	9	9	9
Frequency (MHz)	5530	5610	5690
IEEE 802.11ac80	9	9	9
IEEE 802.11ax80	9	9	9

UNII-3			
Test Software Version	Developer mode		
Frequency (MHz)	5745	5785	5825
IEEE 802.11a	9	9	9
IEEE 802.11n20	9	9	9
IEEE 802.11ac20	9	9	9
IEEE 802.11ax20	9	9	9
Frequency (MHz)	5755	5795	
IEEE 802.11n40	9	9	
IEEE 802.11ac40	9	9	
IEEE 802.11ax40	9	9	
Frequency (MHz)	5775		
IEEE 802.11ac80	9		
IEEE 802.11ax80	9		

3.4.5 The Result

Test Mode	Antenna	Frequency[MHz]	Result [dBm]	Limit [dBm]	Verdict
11A-CDD	Ant1	5180	8.89	≤23.98	PASS
11A-CDD	Ant2	5180	8.60	≤23.98	PASS
11A-CDD	total	5180	11.76	≤23.98	PASS
11A-CDD	Ant1	5200	8.86	≤23.98	PASS
11A-CDD	Ant2	5200	8.64	≤23.98	PASS
11A-CDD	total	5200	11.76	≤23.98	PASS
11A-CDD	Ant1	5240	8.83	≤23.98	PASS

11A-CDD	Ant2	5240	8.59	≤23.98	PASS
11A-CDD	total	5240	11.72	≤23.98	PASS
11A-CDD	Ant1	5260	9.06	≤23.98	PASS
11A-CDD	Ant2	5260	8.84	≤23.98	PASS
11A-CDD	total	5260	11.96	≤23.98	PASS
11A-CDD	Ant1	5280	8.96	≤23.98	PASS
11A-CDD	Ant2	5280	8.67	≤23.98	PASS
11A-CDD	total	5280	11.83	≤23.98	PASS
11A-CDD	Ant1	5320	8.96	≤23.98	PASS
11A-CDD	Ant2	5320	8.55	≤23.98	PASS
11A-CDD	total	5320	11.77	≤23.98	PASS
11A-CDD	Ant1	5500	9.85	≤23.98	PASS
11A-CDD	Ant2	5500	9.70	≤23.98	PASS
11A-CDD	total	5500	12.79	≤23.98	PASS
11A-CDD	Ant1	5580	10.06	≤23.98	PASS
11A-CDD	Ant2	5580	9.62	≤23.98	PASS
11A-CDD	total	5580	12.86	≤23.98	PASS
11A-CDD	Ant1	5720	9.86	≤23.98	PASS
11A-CDD	Ant2	5720	9.74	≤23.98	PASS
11A-CDD	total	5720	12.81	≤23.98	PASS
11A-CDD	Ant1	5745	10.03	≤30.00	PASS
11A-CDD	Ant2	5745	9.82	≤30.00	PASS
11A-CDD	total	5745	12.93	≤30.00	PASS
11A-CDD	Ant1	5785	10.04	≤30.00	PASS
11A-CDD	Ant2	5785	9.66	≤30.00	PASS
11A-CDD	total	5785	12.86	≤30.00	PASS
11A-CDD	Ant1	5825	10.01	≤30.00	PASS
11A-CDD	Ant2	5825	9.70	≤30.00	PASS
11A-CDD	total	5825	12.87	≤30.00	PASS
11N20MIMO	Ant1	5180	8.73	≤23.98	PASS
11N20MIMO	Ant2	5180	8.61	≤23.98	PASS
11N20MIMO	total	5180	11.68	≤23.98	PASS
11N20MIMO	Ant1	5200	8.85	≤23.98	PASS
11N20MIMO	Ant2	5200	8.56	≤23.98	PASS
11N20MIMO	total	5200	11.72	≤23.98	PASS
11N20MIMO	Ant1	5240	8.75	≤23.98	PASS
11N20MIMO	Ant2	5240	8.68	≤23.98	PASS
11N20MIMO	total	5240	11.72	≤23.98	PASS
11N20MIMO	Ant1	5260	8.77	≤23.98	PASS
11N20MIMO	Ant2	5260	8.66	≤23.98	PASS
11N20MIMO	total	5260	11.73	≤23.98	PASS
11N20MIMO	Ant1	5280	8.91	≤23.98	PASS
11N20MIMO	Ant2	5280	8.55	≤23.98	PASS
11N20MIMO	total	5280	11.74	≤23.98	PASS

11N20MIMO	Ant1	5320	8.77	≤23.98	PASS
11N20MIMO	Ant2	5320	8.51	≤23.98	PASS
11N20MIMO	total	5320	11.65	≤23.98	PASS
11N20MIMO	Ant1	5500	9.94	≤23.98	PASS
11N20MIMO	Ant2	5500	9.62	≤23.98	PASS
11N20MIMO	total	5500	12.79	≤23.98	PASS
11N20MIMO	Ant1	5580	9.95	≤23.98	PASS
11N20MIMO	Ant2	5580	9.70	≤23.98	PASS
11N20MIMO	total	5580	12.84	≤23.98	PASS
11N20MIMO	Ant1	5720	9.75	≤23.98	PASS
11N20MIMO	Ant2	5720	9.70	≤23.98	PASS
11N20MIMO	total	5720	12.73	≤23.98	PASS
11N20MIMO	Ant1	5745	9.89	≤30.00	PASS
11N20MIMO	Ant2	5745	9.72	≤30.00	PASS
11N20MIMO	total	5745	12.82	≤30.00	PASS
11N20MIMO	Ant1	5785	9.89	≤30.00	PASS
11N20MIMO	Ant2	5785	9.66	≤30.00	PASS
11N20MIMO	total	5785	12.79	≤30.00	PASS
11N20MIMO	Ant1	5825	9.77	≤30.00	PASS
11N20MIMO	Ant2	5825	9.68	≤30.00	PASS
11N20MIMO	total	5825	12.74	≤30.00	PASS
11N40MIMO	Ant1	5190	8.89	≤23.98	PASS
11N40MIMO	Ant2	5190	8.54	≤23.98	PASS
11N40MIMO	total	5190	11.73	≤23.98	PASS
11N40MIMO	Ant1	5230	8.75	≤23.98	PASS
11N40MIMO	Ant2	5230	8.67	≤23.98	PASS
11N40MIMO	total	5230	11.72	≤23.98	PASS
11N40MIMO	Ant1	5270	8.69	≤23.98	PASS
11N40MIMO	Ant2	5270	8.45	≤23.98	PASS
11N40MIMO	total	5270	11.58	≤23.98	PASS
11N40MIMO	Ant1	5310	8.64	≤23.98	PASS
11N40MIMO	Ant2	5310	8.42	≤23.98	PASS
11N40MIMO	total	5310	11.54	≤23.98	PASS
11N40MIMO	Ant1	5510	9.75	≤23.98	PASS
11N40MIMO	Ant2	5510	9.63	≤23.98	PASS
11N40MIMO	total	5510	12.70	≤23.98	PASS
11N40MIMO	Ant1	5550	9.78	≤23.98	PASS
11N40MIMO	Ant2	5550	9.46	≤23.98	PASS
11N40MIMO	total	5550	12.63	≤23.98	PASS
11N40MIMO	Ant1	5710	9.79	≤23.98	PASS
11N40MIMO	Ant2	5710	9.60	≤23.98	PASS
11N40MIMO	total	5710	12.71	≤23.98	PASS
11N40MIMO	Ant1	5755	9.85	≤30.00	PASS
11N40MIMO	Ant2	5755	9.62	≤30.00	PASS

11N40MIMO	total	5755	12.75	≤30.00	PASS
11N40MIMO	Ant1	5795	9.72	≤30.00	PASS
11N40MIMO	Ant2	5795	9.53	≤30.00	PASS
11N40MIMO	total	5795	12.64	≤30.00	PASS
11AC20MIMO	Ant1	5180	8.82	≤23.98	PASS
11AC20MIMO	Ant2	5180	8.49	≤23.98	PASS
11AC20MIMO	total	5180	11.67	≤23.98	PASS
11AC20MIMO	Ant1	5200	8.76	≤23.98	PASS
11AC20MIMO	Ant2	5200	8.47	≤23.98	PASS
11AC20MIMO	total	5200	11.63	≤23.98	PASS
11AC20MIMO	Ant1	5240	8.89	≤23.98	PASS
11AC20MIMO	Ant2	5240	8.66	≤23.98	PASS
11AC20MIMO	total	5240	11.79	≤23.98	PASS
11AC20MIMO	Ant1	5260	8.64	≤23.98	PASS
11AC20MIMO	Ant2	5260	8.48	≤23.98	PASS
11AC20MIMO	total	5260	11.57	≤23.98	PASS
11AC20MIMO	Ant1	5280	8.67	≤23.98	PASS
11AC20MIMO	Ant2	5280	8.48	≤23.98	PASS
11AC20MIMO	total	5280	11.58	≤23.98	PASS
11AC20MIMO	Ant1	5320	8.74	≤23.98	PASS
11AC20MIMO	Ant2	5320	8.59	≤23.98	PASS
11AC20MIMO	total	5320	11.68	≤23.98	PASS
11AC20MIMO	Ant1	5500	9.67	≤23.98	PASS
11AC20MIMO	Ant2	5500	9.63	≤23.98	PASS
11AC20MIMO	total	5500	12.66	≤23.98	PASS
11AC20MIMO	Ant1	5580	9.80	≤23.98	PASS
11AC20MIMO	Ant2	5580	9.63	≤23.98	PASS
11AC20MIMO	total	5580	12.72	≤23.98	PASS
11AC20MIMO	Ant1	5720	9.77	≤23.98	PASS
11AC20MIMO	Ant2	5720	9.40	≤23.98	PASS
11AC20MIMO	total	5720	12.60	≤23.98	PASS
11AC20MIMO	Ant1	5745	9.64	≤30.00	PASS
11AC20MIMO	Ant2	5745	9.35	≤30.00	PASS
11AC20MIMO	total	5745	12.51	≤30.00	PASS
11AC20MIMO	Ant1	5785	9.77	≤30.00	PASS
11AC20MIMO	Ant2	5785	9.55	≤30.00	PASS
11AC20MIMO	total	5785	12.68	≤30.00	PASS
11AC20MIMO	Ant1	5825	9.82	≤30.00	PASS
11AC20MIMO	Ant2	5825	9.62	≤30.00	PASS
11AC20MIMO	total	5825	12.73	≤30.00	PASS
11AC40MIMO	Ant1	5190	8.70	≤23.98	PASS
11AC40MIMO	Ant2	5190	8.66	≤23.98	PASS
11AC40MIMO	total	5190	11.69	≤23.98	PASS
11AC40MIMO	Ant1	5230	8.89	≤23.98	PASS

11AC40MIMO	Ant2	5230	8.66	≤23.98	PASS
11AC40MIMO	total	5230	11.79	≤23.98	PASS
11AC40MIMO	Ant1	5270	8.87	≤23.98	PASS
11AC40MIMO	Ant2	5270	8.63	≤23.98	PASS
11AC40MIMO	total	5270	11.77	≤23.98	PASS
11AC40MIMO	Ant1	5310	8.80	≤23.98	PASS
11AC40MIMO	Ant2	5310	8.51	≤23.98	PASS
11AC40MIMO	total	5310	11.67	≤23.98	PASS
11AC40MIMO	Ant1	5510	9.80	≤23.98	PASS
11AC40MIMO	Ant2	5510	9.51	≤23.98	PASS
11AC40MIMO	total	5510	12.67	≤23.98	PASS
11AC40MIMO	Ant1	5550	9.72	≤23.98	PASS
11AC40MIMO	Ant2	5550	9.58	≤23.98	PASS
11AC40MIMO	total	5550	12.66	≤23.98	PASS
11AC40MIMO	Ant1	5710	9.78	≤23.98	PASS
11AC40MIMO	Ant2	5710	9.50	≤23.98	PASS
11AC40MIMO	total	5710	12.65	≤23.98	PASS
11AC40MIMO	Ant1	5755	9.68	≤30.00	PASS
11AC40MIMO	Ant2	5755	9.52	≤30.00	PASS
11AC40MIMO	total	5755	12.61	≤30.00	PASS
11AC40MIMO	Ant1	5795	9.61	≤30.00	PASS
11AC40MIMO	Ant2	5795	9.58	≤30.00	PASS
11AC40MIMO	total	5795	12.61	≤30.00	PASS
11AC80MIMO	Ant1	5210	8.67	≤23.98	PASS
11AC80MIMO	Ant2	5210	8.39	≤23.98	PASS
11AC80MIMO	total	5210	11.54	≤23.98	PASS
11AC80MIMO	Ant1	5290	8.76	≤23.98	PASS
11AC80MIMO	Ant2	5290	8.36	≤23.98	PASS
11AC80MIMO	total	5290	11.57	≤23.98	PASS
11AC80MIMO	Ant1	5530	9.75	≤23.98	PASS
11AC80MIMO	Ant2	5530	9.51	≤23.98	PASS
11AC80MIMO	total	5530	12.64	≤23.98	PASS
11AC80MIMO	Ant1	5610	9.78	≤23.98	PASS
11AC80MIMO	Ant2	5610	9.54	≤23.98	PASS
11AC80MIMO	total	5610	12.67	≤23.98	PASS
11AC80MIMO	Ant1	5690	9.76	≤23.98	PASS
11AC80MIMO	Ant2	5690	9.51	≤23.98	PASS
11AC80MIMO	total	5690	12.64	≤23.98	PASS
11AC80MIMO	Ant1	5775	9.80	≤30.00	PASS
11AC80MIMO	Ant2	5775	9.55	≤30.00	PASS
11AC80MIMO	total	5775	12.69	≤30.00	PASS
11AX20MIMO	Ant1	5180	8.77	≤23.98	PASS
11AX20MIMO	Ant2	5180	8.45	≤23.98	PASS
11AX20MIMO	total	5180	11.62	≤23.98	PASS

11AX20MIMO	Ant1	5200	8.77	≤23.98	PASS
11AX20MIMO	Ant2	5200	8.49	≤23.98	PASS
11AX20MIMO	total	5200	11.64	≤23.98	PASS
11AX20MIMO	Ant1	5240	8.70	≤23.98	PASS
11AX20MIMO	Ant2	5240	8.58	≤23.98	PASS
11AX20MIMO	total	5240	11.65	≤23.98	PASS
11AX20MIMO	Ant1	5260	8.65	≤23.98	PASS
11AX20MIMO	Ant2	5260	8.41	≤23.98	PASS
11AX20MIMO	total	5260	11.54	≤23.98	PASS
11AX20MIMO	Ant1	5280	8.84	≤23.98	PASS
11AX20MIMO	Ant2	5280	8.45	≤23.98	PASS
11AX20MIMO	total	5280	11.66	≤23.98	PASS
11AX20MIMO	Ant1	5320	8.81	≤23.98	PASS
11AX20MIMO	Ant2	5320	8.51	≤23.98	PASS
11AX20MIMO	total	5320	11.68	≤23.98	PASS
11AX20MIMO	Ant1	5500	9.85	≤23.98	PASS
11AX20MIMO	Ant2	5500	9.56	≤23.98	PASS
11AX20MIMO	total	5500	12.72	≤23.98	PASS
11AX20MIMO	Ant1	5580	9.75	≤23.98	PASS
11AX20MIMO	Ant2	5580	9.43	≤23.98	PASS
11AX20MIMO	total	5580	12.61	≤23.98	PASS
11AX20MIMO	Ant1	5720	9.65	≤23.98	PASS
11AX20MIMO	Ant2	5720	9.40	≤23.98	PASS
11AX20MIMO	total	5720	12.53	≤23.98	PASS
11AX20MIMO	Ant1	5745	9.73	≤30.00	PASS
11AX20MIMO	Ant2	5745	9.41	≤30.00	PASS
11AX20MIMO	total	5745	12.59	≤30.00	PASS
11AX20MIMO	Ant1	5785	9.72	≤30.00	PASS
11AX20MIMO	Ant2	5785	9.63	≤30.00	PASS
11AX20MIMO	total	5785	12.69	≤30.00	PASS
11AX20MIMO	Ant1	5825	9.74	≤30.00	PASS
11AX20MIMO	Ant2	5825	9.63	≤30.00	PASS
11AX20MIMO	total	5825	12.69	≤30.00	PASS
11AX40MIMO	Ant1	5190	8.70	≤23.98	PASS
11AX40MIMO	Ant2	5190	8.51	≤23.98	PASS
11AX40MIMO	total	5190	11.62	≤23.98	PASS
11AX40MIMO	Ant1	5230	8.75	≤23.98	PASS
11AX40MIMO	Ant2	5230	8.59	≤23.98	PASS
11AX40MIMO	total	5230	11.68	≤23.98	PASS
11AX40MIMO	Ant1	5270	8.73	≤23.98	PASS
11AX40MIMO	Ant2	5270	8.54	≤23.98	PASS
11AX40MIMO	total	5270	11.65	≤23.98	PASS
11AX40MIMO	Ant1	5310	8.85	≤23.98	PASS
11AX40MIMO	Ant2	5310	8.62	≤23.98	PASS

11AX40MIMO	total	5310	11.75	≤23.98	PASS
11AX40MIMO	Ant1	5510	9.78	≤23.98	PASS
11AX40MIMO	Ant2	5510	9.54	≤23.98	PASS
11AX40MIMO	total	5510	12.67	≤23.98	PASS
11AX40MIMO	Ant1	5550	9.74	≤23.98	PASS
11AX40MIMO	Ant2	5550	9.56	≤23.98	PASS
11AX40MIMO	total	5550	12.66	≤23.98	PASS
11AX40MIMO	Ant1	5710	9.89	≤23.98	PASS
11AX40MIMO	Ant2	5710	9.48	≤23.98	PASS
11AX40MIMO	total	5710	12.70	≤23.98	PASS
11AX40MIMO	Ant1	5755	9.79	≤30.00	PASS
11AX40MIMO	Ant2	5755	9.42	≤30.00	PASS
11AX40MIMO	total	5755	12.62	≤30.00	PASS
11AX40MIMO	Ant1	5795	9.79	≤30.00	PASS
11AX40MIMO	Ant2	5795	9.62	≤30.00	PASS
11AX40MIMO	total	5795	12.72	≤30.00	PASS
11AX80MIMO	Ant1	5210	8.81	≤23.98	PASS
11AX80MIMO	Ant2	5210	8.38	≤23.98	PASS
11AX80MIMO	total	5210	11.61	≤23.98	PASS
11AX80MIMO	Ant1	5290	8.57	≤23.98	PASS
11AX80MIMO	Ant2	5290	8.43	≤23.98	PASS
11AX80MIMO	total	5290	11.51	≤23.98	PASS
11AX80MIMO	Ant1	5530	9.60	≤23.98	PASS
11AX80MIMO	Ant2	5530	9.43	≤23.98	PASS
11AX80MIMO	total	5530	12.53	≤23.98	PASS
11AX80MIMO	Ant1	5610	9.73	≤23.98	PASS
11AX80MIMO	Ant2	5610	9.52	≤23.98	PASS
11AX80MIMO	total	5610	12.64	≤23.98	PASS
11AX80MIMO	Ant1	5690	9.74	≤23.98	PASS
11AX80MIMO	Ant2	5690	9.50	≤23.98	PASS
11AX80MIMO	total	5690	12.63	≤23.98	PASS
11AX80MIMO	Ant1	5775	9.78	≤30.00	PASS
11AX80MIMO	Ant2	5775	9.48	≤30.00	PASS
11AX80MIMO	total	5775	12.64	≤30.00	PASS

Note: The duty cycle factor is compensated in the average conducted output power.

Directional gain = 2.80dBi

3.5 Power Spectral Density

3.5.1 Limit

FCC Part15, Subpart E (15.407)			
Section	Test Item	Limit	Frequency Range (MHz)
15.407(a)	Power Spectral Density	Master device: 17 dBm/MHz Client device: 11 dBm/MHz	5150-5250
		11 dBm/MHz	5250-5350
		11 dBm/MHz	5470-5725
		30 dBm/500 kHz	5725-5850

Note:

- For UNII-3, according to KDB publication 789033 D02 General UNII Test Procedures New Rules v02r01, section II.F.5., it is acceptable to set RBW at 300kHz and VBW at 1500kHz if the spectrum analyzer does not have 500 kHz RBW. Then, add $10 \log (500 \text{ kHz}/300 \text{ kHz})$ to the measured result, i.e. 2.22 dB.
- During the test of U-NII 3 PSD, the measurement result with RBW=300kHz has been added 2.22 dB by compensating offset, $\text{offset} = \text{cable loss} + \text{duty factor} + 10 \log(500\text{kHz}/300\text{kHz})$.

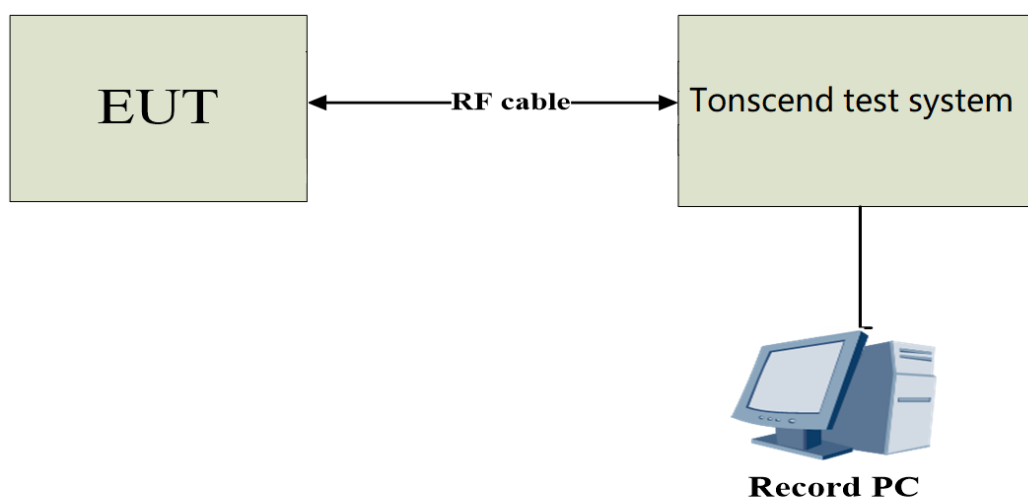
3.5.2 Test Procedure

Test Method	
☒ Conducted Measurement	☐ Radiated Measurement
Test Channels	
☒ Lowest, Middle and Highest Channel	☐ Lowest and Highest Channel
Environmental conditions	
☒ Normal	☐ Normal and Extreme
Note: ☒ :Test ☐ :No Test	

a) The EUT was directly connected to the tonscond test system and antenna output port as show in the block diagram below. Spectrum analyser settings as following:

Centre Frequency	The centre frequency of the channel under test
RBW	= 1 MHz (Band1/2/3); = 300kHz (Band4)
VBW	$\geq 3 \times \text{RBW}$
Frequency span	2 x Nominal Channel Bandwidth
Detector Mode	RMS
Trace Mode	Max Hold
Sweep Time	Auto Couple

3.5.3 Test Setup



3.5.4 The Result

Test result: PASS

Note: For test data, please refer to the report RF200317E01-1.

Statement

1. The report is invalid without the official seal or special seal of Shenzhen Haiyun Standard Technical Co., Ltd. (hereinafter referred to as the unit).
2. The report is invalid without the signature of the approver.
3. The report is invalid if altered arbitrarily.
4. The report shall not be partially copied without the written approval of the unit.
5. The reported test results are only valid for the tested samples.
6. If there is any objection to the test report, it shall be submitted to the test unit within 15 days from the date of receiving the report, and the overdue shall not be accepted.

Shenzhen Haiyun Standard Technical Co., Ltd.

Address: Room 110, 111, 112, 113, 115, 116, Block B, Jinyuan Business Building, No. 302, Xixiang Avenue, Labor Community, Xixiang Street, Baoan District, Shenzhen, China

(END OF REPORT)