

Global United Technology Services Co., Ltd.

Report No.: GTSL202103000257F01

TEST REPORT

Applicant: Shenzhen Jingyi Smart Technology Co., Ltd.

Address of Applicant: Room1102, Building 5E, Shenzhen software Industry Base,

Binghai Av., Yuehai Street, Nanshan District, Shenzhen,

China

Manufacturer: Shenzhen Jingyi Smart Technology Co., Ltd.

Address of Room1102, Building 5E, Shenzhen software Industry Base, Binghai Av., Yuehai Street, Nanshan District, Shenzhen, Manufacturer:

China

Equipment Under Test (EUT)

Product Name: Badge camera

Model No.: T0

Trade Mark:

FCC ID: 2AZCCPET0

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247

Date of sample receipt: March 17, 2021

March 17, 2021- March 23, 2021 **Date of Test:**

Date of report issued: March 23, 2021

PASS * Test Result:

Authorized Signature:

Robinson Luo Laboratory Manager

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver. Page 1 of 72

^{*} In the configuration tested, the EUT complied with the standards specified above.



2 Version

Version No.	Date	Description
00	March 23, 2021	Original

Prepared By:	Date:	March 23, 2021
	Project Engineer	
Check By:	Date:	March 23, 2021



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4 Test Summary

Test Item	Section	Result
Antenna requirement	FCC part 15.203/15.247 (c)	Pass
AC Power Line Conducted Emission	FCC part 15.207	Pass
Conducted Peak Output Power	FCC part 15.247 (b)(3)	Pass
Channel Bandwidth & 99% OCB	FCC part 15.247 (a)(2)	Pass
Power Spectral Density	FCC part 15.247 (e)	Pass
Band Edge	FCC part 15.247(d)	Pass
Spurious Emission	FCC part 15.205/15.209	Pass

Remark: Test according to ANSI C63.10:2013 and RSS-Gen

Pass: The EUT complies with the essential requirements in the standard.

Measurement Uncertainty

Test Item	Frequency Range	Measurement Uncertainty	Notes
Radiated Emission	30MHz-200MHz	3.8039dB	(1)
Radiated Emission	200MHz-1GHz	3.9679dB	(1)
Radiated Emission	1GHz-18GHz	4.29dB	(1)
Radiated Emission	18GHz-40GHz	3.30dB	(1)
AC Power Line Conducted Emission	0.15MHz ~ 30MHz	3.44dB	(1)
Note (1): The measurement unce	ertainty is for coverage factor of ka	=2 and a level of confidence of 9	95%.



5 General Information

5.1 General Description of EUT

Product Name:	Badge camera
Model No.:	ТО
Serial No.:	DSJ-JLYT0A1R100092
Hardware Version:	EP-PT0MB03-6L
Software Version:	T0_1.0.72
Test sample(s) ID:	GTSL202103000257-1
Sample(s) Status:	Engineer sample
Channel numbers:	802.11b/802.11g /802.11n(HT20): 11
Channel separation:	5MHz
Modulation technology:	802.11b: Direct Sequence Spread Spectrum (DSSS) 802.11g/802.11n(H20):
	Orthogonal Frequency Division Multiplexing (OFDM)
Antenna Type:	FPC
Antenna gain:	-0.72dBi
Power supply:	Adapter MODEL: HNDC050200X1 INPUT:100-240V~50/60Hz 0.45A Max OUTPUT:DC 5V, 2.0A
	Built in battery
	Model No.:822750
	Capacitance:1450mAh
	Rated Voltage: DC 3.8V

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Operation Frequency each of channel							
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		

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Test channel	Frequency (MHz)
rest channel	802.11b/802.11g/802.11n(HT20)
Lowest channel	2412MHz
Middle channel	2437MHz
Highest channel	2462MHz

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5.2 Test mode

Transmitting mode Keep the EUT in continuously transmitting mode

Remark: During the test, the dutycycle >98%, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Pre-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.

Mode	802.11b	802.11g	802.11n(HT20)
Data rate	1Mbps	6Mbps	6.5Mbps

5.3 Description of Support Units

None.

5.4 Deviation from Standards

None.

5.5 Abnormalities from Standard Conditions

None.

5.6 Test Facility

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

• FCC —Registration No.: 381383

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Registration 381383.

• IC —Registration No.: 9079A

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A

• NVLAP (LAB CODE:600179-0)

Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). LAB CODE:600179-0

5.7 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.

Address: No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102

Tel: 0755-27798480 Fax: 0755-27798960

5.8 Additional Instructions

Test Software	CMD Command
Power level setup	Default

Global United Technology Services Co., Ltd.

No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone,

Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102



6 Test Instruments list

Radiated Emission:							
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)	
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	July. 02 2020	July. 01 2025	
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A	
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	June. 25 2020	June. 24 2021	
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	June. 25 2020	June. 24 2021	
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	June. 25 2020	June. 24 2021	
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	June. 25 2020	June. 24 2021	
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A	
8	Coaxial Cable	GTS	N/A	GTS213	June. 25 2020	June. 24 2021	
9	Coaxial Cable	GTS	N/A	GTS211	June. 25 2020	June. 24 2021	
10	Coaxial cable	GTS	N/A	GTS210	June. 25 2020	June. 24 2021	
11	Coaxial Cable	GTS	N/A	GTS212	June. 25 2020	June. 24 2021	
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	June. 25 2020	June. 24 2021	
13	Amplifier(2GHz-20GHz)	HP	84722A	GTS206	June. 25 2020	June. 24 2021	
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June. 25 2020	June. 24 2021	
15	Band filter	Amindeon	82346	GTS219	June. 25 2020	June. 24 2021	
16	Power Meter	Anritsu	ML2495A	GTS540	June. 25 2020	June. 24 2021	
17	Power Sensor	Anritsu	MA2411B	GTS541	June. 25 2020	June. 24 2021	
18	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	June. 25 2020	June. 24 2021	
19	Splitter	Agilent	11636B	GTS237	June. 25 2020	June. 24 2021	
20	Loop Antenna	ZHINAN	ZN30900A	GTS534	June. 25 2020	June. 24 2021	
21	Breitband hornantenne	SCHWARZBECK	BBHA 9170	GTS579	Oct. 18 2020	Oct. 17 2021	
22	Amplifier	TDK	PA-02-02	GTS574	Oct. 18 2020	Oct. 17 2021	
23	Amplifier	TDK	PA-02-03	GTS576	Oct. 18 2020	Oct. 17 2021	
24	PSA Series Spectrum Analyzer	Rohde & Schwarz	FSP	GTS578	June. 25 2020	June. 24 2021	

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Cond	Conducted Emission							
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)		
1	Shielding Room	ZhongYu Electron	7.3(L)x3.1(W)x2.9(H)	GTS252	May.15 2019	May.14 2022		
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 25 2020	June. 24 2021		
3	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	June. 25 2020	June. 24 2021		
4	ENV216 2-L-V- NETZNACHB.DE	ROHDE&SCHWARZ	ENV216	GTS226	June. 25 2020	June. 24 2021		
5	Coaxial Cable	GTS	N/A	GTS227	N/A	N/A		
6	EMI Test Software	AUDIX	E3	N/A	N/A	N/A		
7	Thermo meter	KTJ	TA328	GTS233	June. 25 2020	June. 24 2021		
8	Absorbing clamp	Elektronik- Feinmechanik	MDS21	GTS229	June. 25 2020	June. 24 2021		
9	ISN	SCHWARZBECK	NTFM 8158	GTD565	June. 25 2020	June. 24 2021		

RF C	RF Conducted Test:									
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)				
1	MXA Signal Analyzer	Agilent	N9020A	GTS566	June. 25 2020	June. 24 2021				
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 25 2020	June. 24 2021				
3	Spectrum Analyzer	Agilent	E4440A	GTS533	June. 25 2020	June. 24 2021				
4	MXG vector Signal Generator	Agilent	N5182A	GTS567	June. 25 2020	June. 24 2021				
5	ESG Analog Signal Generator	Agilent	E4428C	GTS568	June. 25 2020	June. 24 2021				
6	USB RF Power Sensor	DARE	RPR3006W	GTS569	June. 25 2020	June. 24 2021				
7	RF Switch Box	Shongyi	RFSW3003328	GTS571	June. 25 2020	June. 24 2021				
8	Programmable Constant Temp & Humi Test Chamber	WEWON	WHTH-150L-40-880	GTS572	June. 25 2020	June. 24 2021				

Gene	General used equipment:								
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)			
1	Humidity/ Temperature Indicator	KTJ	TA328	GTS243	June. 25 2020	June. 24 2021			
2	Barometer	ChangChun	DYM3	GTS255	June. 25 2020	June. 24 2021			



7 Test results and Measurement Data

7.1 Antenna requirement

Standard requirement: FCC Part15 C Section 15.203 /247(c)

15.203 requirement:

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

15.247(c) (1)(i) requirement:

(i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

EUT Antenna:

The antennas are FPC antenna, the best case gain of the antenna is -0.72dBi, reference to the appendix II for details



7.2 Conducted Emissions

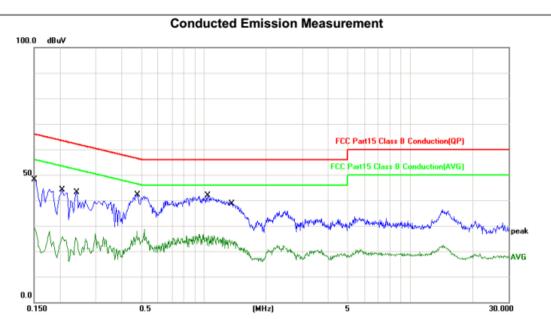
Test Requirement:	FCC Part15 C Section 15.207					
Test Method:	ANSI C63.10:2013					
Test Frequency Range:	150KHz to 30MHz					
Receiver setup:	RBW=9KHz, VBW=30KHz, Sv	weep time=auto				
Limit:	- (111)	Limit	(dBuV)			
	Frequency range (MHz)	Quasi-peak		erage		
	0.15-0.5	66 to 56*	56 t	o 46*		
	0.5-5	56		46		
	5-30	60	Ę	50		
	* Decreases with the logarithm	n of the frequency.				
Test setup:	Reference Plane					
	AUX Equipment E.U.T Test table/Insulation plane Remark E.U.T. Equipment Under Test LISN: Line Impedence Stabilization Network Test table height=0.8m	EMI Receiver	ower			
Test procedure:	The E.U.T and simulators a line impedance stabilization 50ohm/50uH coupling impedance.	network (L.I.S.N.).	This provide	sa		
	2. The peripheral devices are LISN that provides a 50ohn termination. (Please refer to photographs).	n/50uH coupling imp	edance with	50ohm		
3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be clacked according to ANSI C63.10:2013 on conducted measurement.						
Test Instruments:	Refer to section 6.0 for details					
Test mode:	Refer to section 5.2 for details					
Test environment:	Temp.: 25 °C Hum	nid.: 52%	Press.:	1012mbar		
Test voltage:	AC 120V, 60Hz					
Test results:	Pass					

Remark: Both high and low voltages have been tested to show only the worst low voltage test data.



Measurement data Line:

Report No.: GTSL202103000257F01

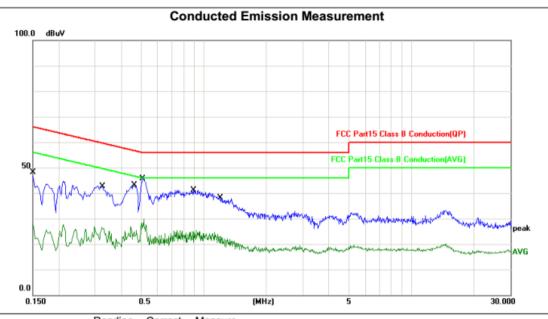


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	24.26	19.49	43.75	66.00	-22.25	QP	
2		0.1500	7.67	19.49	27.16	56.00	-28.84	AVG	
3		0.2060	19.40	19.53	38.93	63.37	-24.44	QP	
4		0.2060	3.87	19.53	23.40	53.37	-29.97	AVG	
5		0.2420	17.96	19.53	37.49	62.03	-24.54	QP	
6		0.2420	2.38	19.53	21.91	52.03	-30.12	AVG	
7	*	0.4780	18.37	19.53	37.90	56.37	-18.47	QP	
8		0.4780	4.87	19.53	24.40	46.37	-21.97	AVG	
9		1.0460	16.72	19.67	36.39	56.00	-19.61	QP	
10		1.0460	3.30	19.67	22.97	46.00	-23.03	AVG	
11		1.3620	14.10	19.76	33.86	56.00	-22.14	QP	
12		1.3620	2.04	19.76	21.80	46.00	-24.20	AVG	



Neutral:

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No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	23.65	19.70	43.35	66.00	-22.65	QP	
2		0.1500	7.09	19.70	26.79	56.00	-29.21	AVG	
3		0.3260	19.58	19.70	39.28	59.55	-20.27	QP	
4		0.3260	4.73	19.70	24.43	49.55	-25.12	AVG	
5		0.4620	17.97	19.73	37.70	56.66	-18.96	QP	
6		0.4620	2.86	19.73	22.59	46.66	-24.07	AVG	
7	*	0.5100	21.45	19.74	41.19	56.00	-14.81	QP	
8		0.5100	6.85	19.74	26.59	46.00	-19.41	AVG	
9		0.8940	16.46	19.85	36.31	56.00	-19.69	QP	
10		0.8940	2.24	19.85	22.09	46.00	-23.91	AVG	
11		1.2060	12.72	19.95	32.67	56.00	-23.33	QP	
12		1.2060	0.42	19.95	20.37	46.00	-25.63	AVG	

Notes:

- 1. An initial pre-scan was performed on the line and neutral lines with peak detector.
- 2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- 3. Final Level =Receiver Read level + LISN Factor + Cable Loss
- 4. If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both limits and measurement with the average detector receiver is unnecessary.



7.3 Conducted Peak Output Power

Test Requirement :	FCC Part15 C Section 15.247 (b)(3)				
Test Method :	KDB558074 D01 15.247 Meas Guidance v05r02				
Limit:	30dBm				
Test setup:	Power Meter E.U.T Non-Conducted Table Ground Reference Plane				
Test Instruments:	Refer to section 6.0 for details				
Test mode:	Refer to section 5.2 for details				
Test results:	Pass				



Measurement Data

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Test CH	Peak Output Power (dBm)	Limit(dBm)	Result
1631 011	802.11b	Limit(dBin)	Mesuit
Lowest	15.79		
Middle	15.89	30.00	Pass
Highest	15.68		

Test CH	Peak Output Power (dBm)	Limit(dBm)	Result
163t Off	802.11g	Limit(dBin)	
Lowest	22.21		
Middle	22.63	30.00	Pass
Highest	21.82		

	Peak Output Power (dBm)			
Test CH	802.11n (HT20)	Limit(dBm)	Result	
Lowest	20.77			
Middle	22.40	30.00	Pass	
Highest	21.22			



7.4 Channel Bandwidth & 99% Occupy Bandwidth

Test Requirement :	FCC Part15 C Section 15.247 (a)(2)			
Test Method :	KDB558074 D01 15.247 Meas Guidance v05r02			
Limit:	>500KHz			
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane			
Test Instruments:	Refer to section 6.0 for details			
Test mode:	Refer to section 5.2 for details			
Test results:	Pass			



Measurement Data

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Test CH					
	802.11b	902 11a	802.11n	Limit(KHz)	Result
	002.110	802.11g	(HT20)		
Lowest	8.640	16.440	17.000		
Middle	9.080	16.480	17.280	>500	Pass
Highest	8.120	16.400	17.720		

Test CH	Ç			
	802.11b	802.11g	802.11n (HT20)	Result
Lowest	14.112	17.448	18.259	
Middle	14.146	17.734	18.401	Pass
Highest	14.251	17.460	18.306	



Test plot as follows:

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802.11b 802.11g





Lowest channel



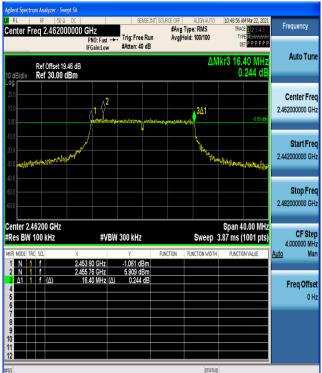


Middle channel



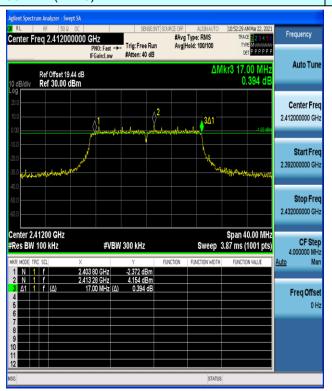


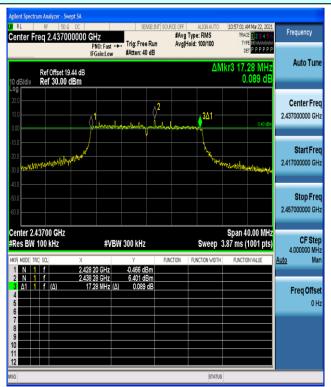




Highest channel

802.11n(HT20)





Lowest channel Middle channel





Highest channel



Test plot as follows:

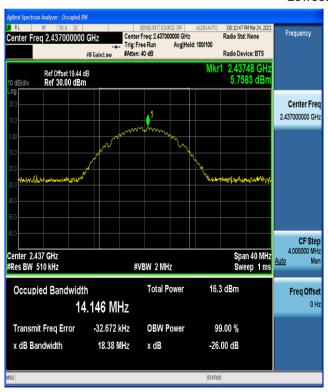
Report No.: GTSL202103000257F01







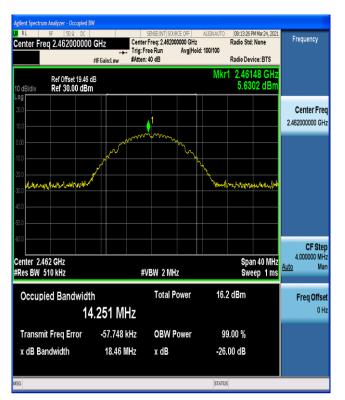
Lowest channel

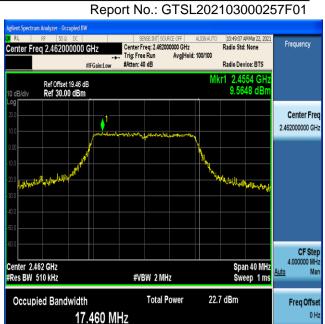




Middle channel







OBW Power

x dB

99.00 %

-26.00 dB

Highest channel

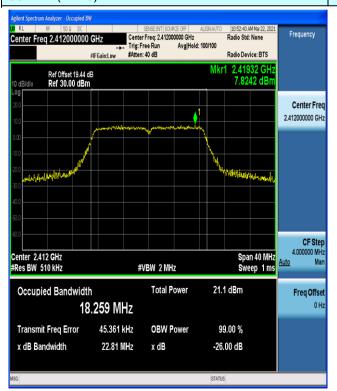
Transmit Freq Error

x dB Bandwidth

-11.031 kHz

25.03 MHz

802.11n(HT20)



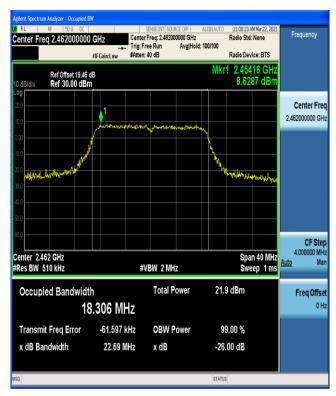


Lowest channel Middle channel

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Highest channel



7.5 Power Spectral Density

Test Requirement:	FCC Part15 C Section 15.247 (e)						
Test Method:	KDB558074 D01 15.247 Meas Guidance v05r02						
Limit:	8dBm/3kHz						
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane						
Test Instruments:	Refer to section 6.0 for details						
Test mode:	Refer to section 5.2 for details						
Test results:	Pass						



Measurement Data

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Test CH	Power Spectral Density (dBm/3kHz) 802.11b	Limit (dBm/3kHz)	Result
Lowest	-7.94		
Middle	-7.89	8.00	Pass
Highest	-9.30		

Test CH	Power Spectral Density (dBm/3kHz)	Limit	Result	
1631 011	802.11g	(dBm/3kHz)	rvesuit	
Lowest	-8.41			
Middle	-6.37	8.00	Pass	
Highest	-7.68			

	Power Spectral Density (dBm/3kHz)	Limit		
Test CH	802.11n (HT20)	(dBm/3kHz)	Result	
Lowest	-9.52			
Middle	-8.27	8.00	Pass	
Highest	-9.04			

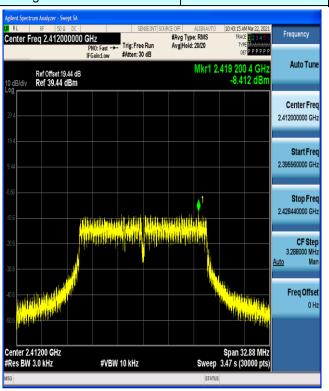


Test plot as follows:

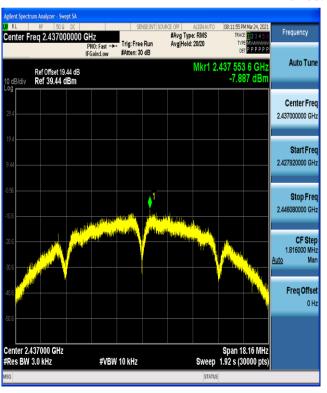
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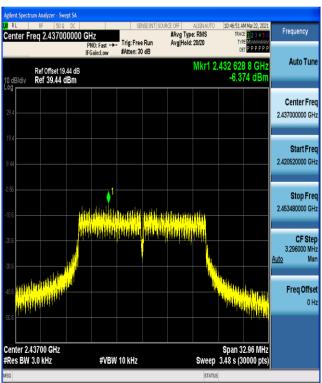
802.11b 802.11g





Lowest channel

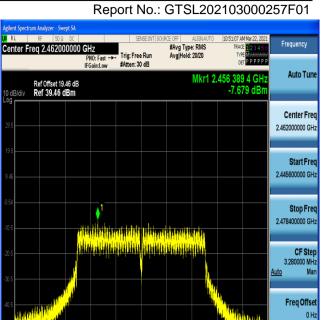




Middle channel







#VBW 10 kHz

Span 32.80 MHz

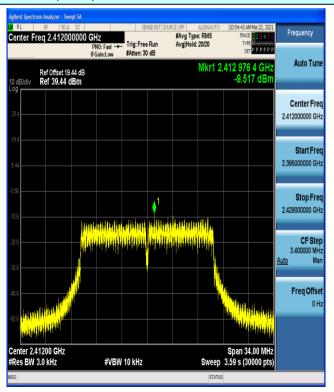
Sweep 3.46 s (30000 pts)

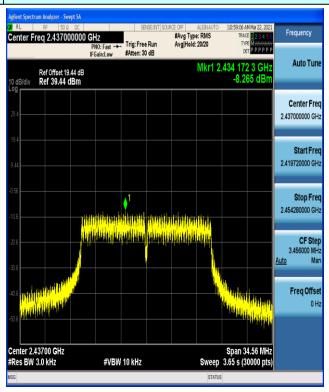
Highest channel

Center 2.46200 GHz

Res BW 3.0 kHz

802.11n(HT20)



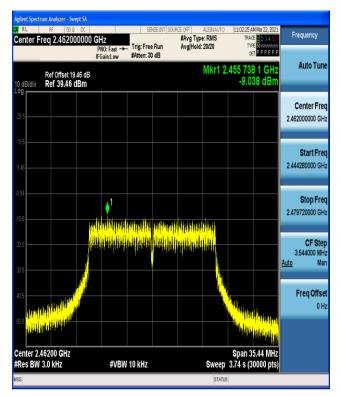


Lowest channel Middle channel

Global United Technology Services Co., Ltd.

No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102





Highest channel



7.6 Band edges

7.6.1 Conducted Emission Method

Took Doorving against	FOO Death F O Continue 45 047 (1)							
Test Requirement:	FCC Part15 C Section 15.247 (d)							
Test Method:	KDB558074 D01 15.247 Meas Guidance v05r02							
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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.							
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane							
Test Instruments:	Refer to section 6.0 for details							
Test mode:	Refer to section 5.2 for details							
Test results:	Pass							



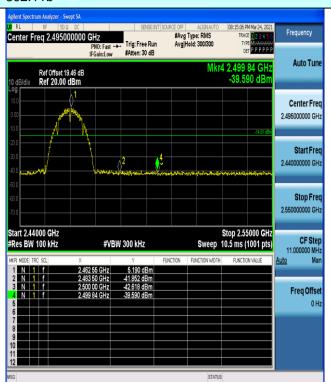
Test plot as follows:

Report No.: GTSL202103000257F01

Test mode:



802.11b



Lowest channel

Highest channel







Highest channel

Global United Technology Services Co., Ltd.

No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102





Lowest channel Highest channel



7.6.2 Radiated Emission Method

Report No.: GTSL202103000257F01

Test Requirement:	FCC Part15 C S	Section 15.209	and 15.205							
Test Method:	ANSI C63.10: 2013									
Test Frequency Range:	All of the restrict bands were tested, only the worst band's (2310MHz to 2500MHz) data was showed.									
Test site:	Measurement Distance: 3m									
Receiver setup:	Frequency Detector RBW VBW Value									
·		Peak	1MHz	3MHz	Peak					
	Above 1GHz	Average	1MHz	3MHz	Average					
Limit:	Freque		Limit (dBuV/	/m @3m)	Value					
	Above 1	GHz	54.0		Average					
Test setup:	7.5070	0.1.2	74.0	0	Peak					
	Tum Table < 1m 4m > v									
Test Procedure:	1. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. 7. The radiation measurements are performed in X, Y, Z axis positioning.									
Test Instruments:	Refer to section									
Test mode:	Refer to section	5.2 for details								
Test results:	Pass									



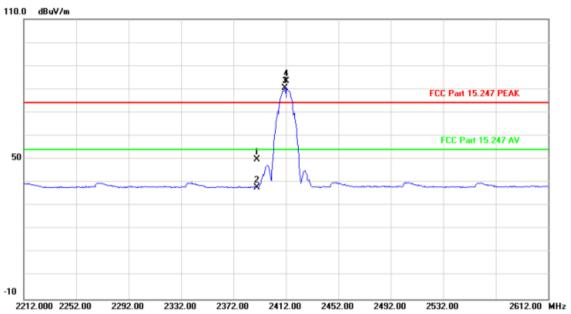
Measurement data:

Report No.: GTSL202103000257F01

Test mode: 802.11b Test channel: 1 Lowest

Vertical

Radiated Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2390.000	58.84	-9.11	49.73	74.00	-24.27	peak			
2		2390.000	47.10	-9.11	37.99	54.00	-16.01	AVG			
3	*	2411.200	89.54	-9.10	80.44	54.00	26.44	AVG			
4	Χ	2412.000	92.65	-9.10	83.55	74.00	9.55	peak			



2212.000 2252.00

2292.00

2332.00

2372.00

Report No.: GTSL202103000257F01

Horizontal

Radiated Emission 100.0 dBuV/m FCC Part 15.247 PEAK FCC Part 15.247 AV

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2390.000	59.46	-9.11	50.35	74.00	-23.65	peak			
2		2390.000	48.09	-9.11	38.98	54.00	-15.02	AVG			
3	*	2411.200	102.93	-9.10	93.83	54.00	39.83	AVG			
4	Х	2412.000	106.32	-9.10	97.22	74.00	23.22	peak			

2412.00

2452.00

2492.00

2532.00

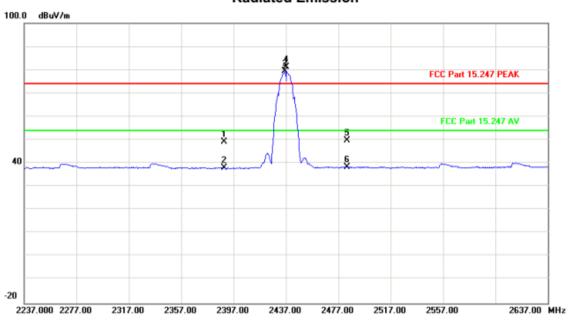
2612.00 MHz



Test mode: 802.11b Test channel: 6 Middle

Vertical

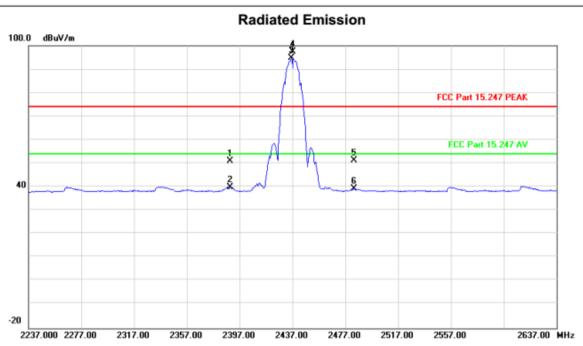
Radiated Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2390.000	58.38	-9.11	49.27	74.00	-24.73	peak			
2		2390.000	47.07	-9.11	37.96	54.00	-16.04	AVG			
3	*	2436.200	88.59	-9.10	79.49	54.00	25.49	AVG			
4	Χ	2437.000	90.29	-9.10	81.19	74.00	7.19	peak			
5		2483.500	58.89	-9.08	49.81	74.00	-24.19	peak			
6		2483.500	47.56	-9.08	38.48	54.00	-15.52	AVG			



Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2390.000	60.06	-9.11	50.95	74.00	-23.05	peak			
2		2390.000	48.98	-9.11	39.87	54.00	-14.13	AVG			
3	*	2436.200	103.72	-9.10	94.62	54.00	40.62	AVG			
4	Χ	2437.000	106.62	-9.10	97.52	74.00	23.52	peak			
5		2483.500	60.28	-9.08	51.20	74.00	-22.80	peak			
6		2483.500	48.22	-9.08	39.14	54.00	-14.86	AVG			



Test mode: 802.11b Test channel: 11 Highest

Vertical

Radiated Emission 100.0 dBuV/m FCC Part 15.247 PEAK FCC Part 15.247 AV 20 2262.000 2302.00 2342.00 2382.00 2422.00 2462.00 2502.00 2542.00 2582.00 2662.00 MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2461.200	89.42	-9.09	80.33	54.00	26.33	AVG			
2	Х	2462.000	90.94	-9.09	81.85	74.00	7.85	peak			
3		2483.500	58.50	-9.08	49.42	74.00	-24.58	peak			
4		2483.500	47.35	-9.08	38.27	54.00	-15.73	AVG			



Horizontal

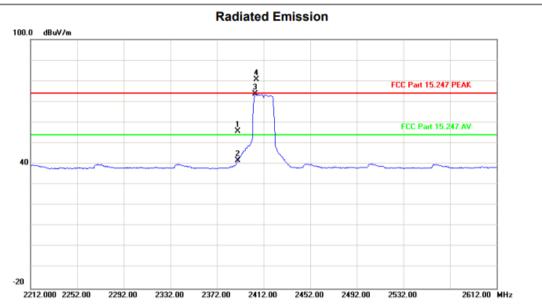
Radiated Emission 100.0 dBuV/m FCC Part 15.247 PEAK FCC Part 15.247 AV 2262.000 2302.00 2342.00 2382.00 2422.00 2462.00 2502.00 2542.00 2582.00 2662.00 MHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2461.200	103.17	-9.09	94.08	54.00	40.08	AVG			
2	X	2461.600	105.20	-9.09	96.11	74.00	22.11	peak			
3		2483.500	59.37	-9.08	50.29	74.00	-23.71	peak			
4		2483.500	47.88	-9.08	38.80	54.00	-15.20	AVG			



Test mode: 802.11g Test channel: 1 Lowest

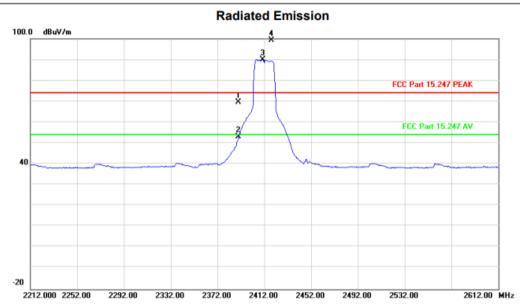
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2390.000	64.94	-9.11	55.83	74.00	-18.17	peak			
2		2390.000	50.67	-9.11	41.56	54.00	-12.44	AVG			
3	*	2404.800	82.83	-9.10	73.73	54.00	19.73	AVG			
4	Х	2405.610	89.85	-9.10	80.75	74.00	6.75	peak			



Horizontal

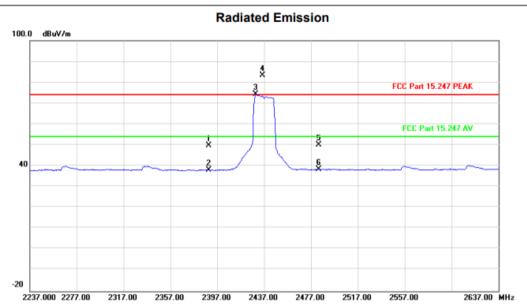


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2390.000	78.66	-9.11	69.55	74.00	-4.45	peak			
2		2390.000	62.03	-9.11	52.92	54.00	-1.08	AVG			
3	*	2410.400	99.17	-9.10	90.07	54.00	36.07	AVG			
4	Х	2418.390	108.48	-9.10	99.38	74.00	25.38	peak			



Test mode: 802.11g Test channel: 6 Middle

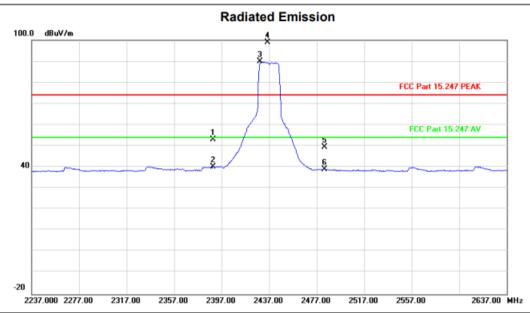
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2390.000	58.92	-9.11	49.81	74.00	-24.19	peak			
2		2390.000	47.08	-9.11	37.97	54.00	-16.03	AVG			
3	*	2429.800	83.31	-9.10	74.21	54.00	20.21	AVG			
4	X	2435.800	92.41	-9.10	83.31	74.00	9.31	peak			
5		2483.500	59.17	-9.08	50.09	74.00	-23.91	peak			
6		2483.500	47.55	-9.08	38.47	54.00	-15.53	AVG			



Horizontal

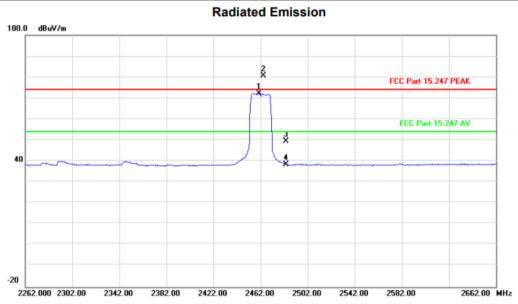


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2390.000	62.18	-9.11	53.07	74.00	-20.93	peak			
2		2390.000	49.25	-9.11	40.14	54.00	-13.86	AVG			
3	*	2429.400	99.15	-9.10	90.05	54.00	36.05	AVG			
4	Χ	2435.800	107.92	-9.10	98.82	74.00	24.82	peak			
5		2483.500	58.65	-9.08	49.57	74.00	-24.43	peak			
6		2483.500	48.02	-9.08	38.94	54.00	-15.06	AVG			



Test mode: 802.11g Test channel: 11 Highest

Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2460.800	81.38	-9.09	72.29	54.00	18.29	AVG			
2	Х	2464.400	89.85	-9.09	80.76	74.00	6.76	peak			
3		2483.500	58.65	-9.08	49.57	74.00	-24.43	peak			
4		2483.500	47.47	-9.08	38.39	54.00	-15.61	AVG			



Horizontal

Radiated Emission 100.0 dBuV/m FCC Part 15.247 PEAK FCC Part 15.247 AV 20 2262.000 2302.00 2342.00 2382.00 2422.00 2462.00 2502.00 2542.00 2582.00 2662.00 MHz

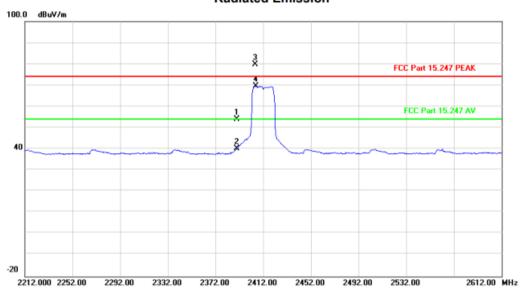
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2455.600	95.96	-9.09	86.87	54.00	32.87	AVG			
2	X	2456.810	104.20	-9.09	95.11	74.00	21.11	peak			
3		2483.500	64.78	-9.08	55.70	74.00	-18.30	peak			
4		2483.500	51.65	-9.08	42.57	54.00	-11.43	AVG			



Test mode: 802.11n(HT20) Test channel: 1 Lowest

Vertical

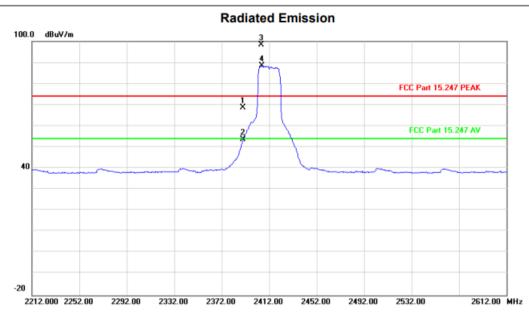
Radiated Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2390.000	63.13	-9.11	54.02	74.00	-19.98	peak			
2		2390.000	49.38	-9.11	40.27	54.00	-13.73	AVG			
3	Χ	2405.210	88.94	-9.10	79.84	74.00	5.84	peak			
4	*	2406.000	78.63	-9.10	69.53	54.00	15.53	AVG			



Horizontal

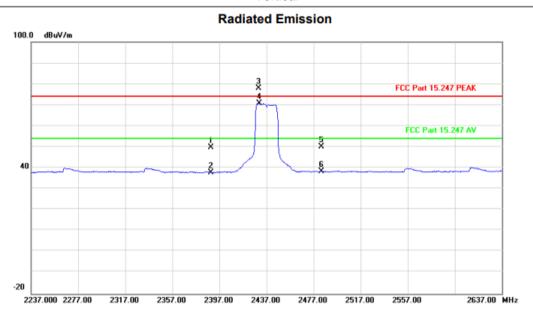


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2390.000	77.82	-9.11	68.71	74.00	-5.29	peak			
2		2390.000	62.62	-9.11	53.51	54.00	-0.49	AVG			
3	Χ	2405.210	107.32	-9.10	98.22	74.00	24.22	peak			
4	*	2406.000	97.46	-9.10	88.36	54.00	34.36	AVG			



Test mode: 802.11n(HT20) Test channel: 6 Middle

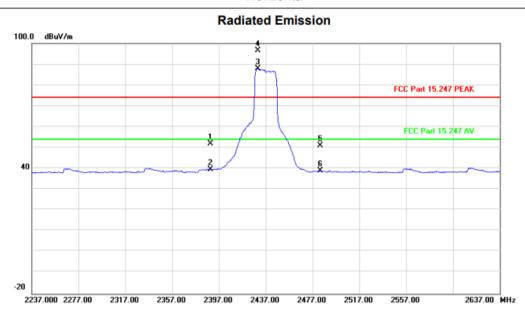
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2390.000	58.91	-9.11	49.80	74.00	-24.20	peak			
2		2390.000	46.99	-9.11	37.88	54.00	-16.12	AVG			
3	Х	2430.210	87.09	-9.10	77.99	74.00	3.99	peak			
4	*	2431.000	79.84	-9.10	70.74	54.00	16.74	AVG			
5		2483.500	59.25	-9.08	50.17	74.00	-23.83	peak			
6		2483.500	47.43	-9.08	38.35	54.00	-15.65	AVG			



Horizontal

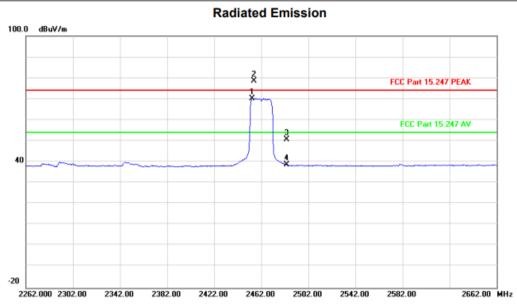


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2390.000	60.84	-9.11	51.73	74.00	-22.27	peak			
2		2390.000	48.66	-9.11	39.55	54.00	-14.45	AVG			
3	*	2430.200	96.95	-9.10	87.85	54.00	33.85	AVG			
4	Χ	2430.210	105.79	-9.10	96.69	74.00	22.69	peak			
5		2483.500	60.13	-9.08	51.05	74.00	-22.95	peak			
6		2483.500	47.95	-9.08	38.87	54.00	-15.13	AVG			



Test mode: 802.11n(HT20) Test channel: 11 Highest

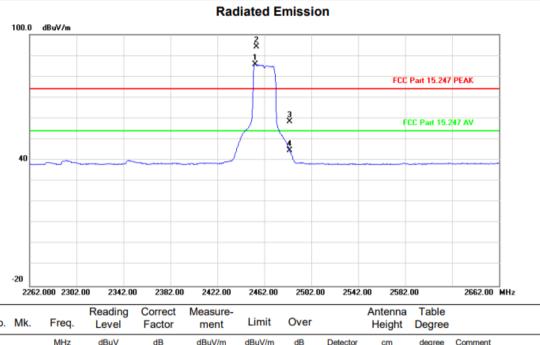
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2454.400	79.34	-9.09	70.25	54.00	16.25	AVG			
2	X	2455.610	87.70	-9.09	78.61	74.00	4.61	peak			
3		2483.500	59.62	-9.08	50.54	74.00	-23.46	peak			
4		2483.500	47.81	-9.08	38.73	54.00	-15.27	AVG			



Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2454.410	94.95	-9.09	85.86	54.00	31.86	AVG			
2	X	2455.210	103.21	-9.09	94.12	74.00	20.12	peak			
3		2483.500	67.56	-9.08	58.48	74.00	-15.52	peak			
4		2483.500	53.74	-9.08	44.66	54.00	-9.34	AVG			

Remarks:

- 1. The pre-test were performed on lowest, middle and highest frequencies.
- 2. Final Level =Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor
- 3. The emission levels of other frequencies are very lower than the limit and not show in test report.



7.7 Spurious Emission

7.7.1 Conducted Emission Method

Test Requirement:	FCC Part15 C Section 15.247 (d)					
Test Method:	KDB558074 D01 15.247 Meas Guidance v05r02					
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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.					
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane					
Test Instruments:	Refer to section 6.0 for details					
Test mode:	Refer to section 5.2 for details					
Test results: Pass						



Test plot as follows:

Report No.: GTSL202103000257F01

802.11b

Lowest channel



Middle channel





Highest channel

Report No.: GTSL202103000257F01





802.11g

Lowest channel



Middle channel





Highest channel

Report No.: GTSL202103000257F01



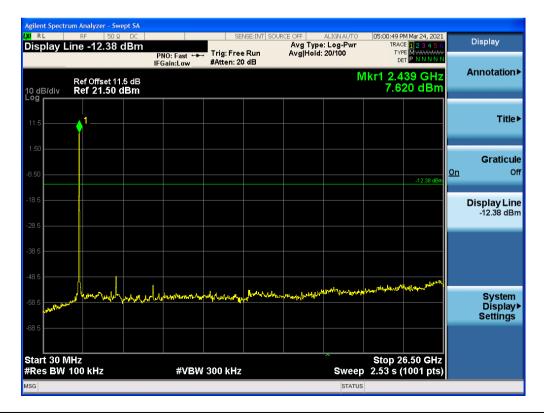


802.11n(HT20)

Lowest channel



Middle channel





Highest channel



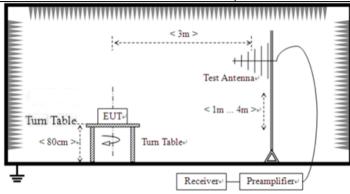


7.7.2 Radiated Emission Method

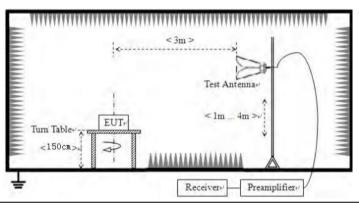
Report No.: GTSL202103000257F01

FCC Part15 C Section ANSI C63.10: 2013 9kHz to 25GHz Measurement Distant Frequency 9KHz-150KHz	nce: 3										
9kHz to 25GHz Measurement Distan Frequency 9KHz-150KHz		3m									
Measurement Distan Frequency 9KHz-150KHz											
Frequency 9KHz-150KHz											
9KHz-150KHz		7111									
		Detector	RBW	VBW	/ Value						
		ıasi-peak	200H:	z 600H	z Quasi-peak						
150KHz-30MHz	Qι	ıasi-peak	9KHz	30KH	z Quasi-peak						
30MHz-1GHz	Qι	ıasi-peak	120KF	z 300KF	Hz Quasi-peak						
Abovo 1CHz		Peak	1MHz	2 3MH:	z Peak						
Above IGHZ		Peak	1MHz	10Hz	z Average						
Frequency		Limit (u\	//m)	Value	Measurement Distance						
0.009MHz-0.490M	300m										
0.490MHz-1.705M	Hz	QP	300m								
1.705MHz-30MH	Z	30		QP	30m						
30MHz-88MHz		100		QP							
88MHz-216MHz	<u>'</u>	150		QP							
216MHz-960MH	Z	200		QP	3m						
960MHz-1GHz	500			QP	3111						
Above 1GHz		500		Average							
7.5575 15112		5000		Peak							
For radiated emiss	ions	from 9kH	z to 30 1	ЛHz							
< 80cm >	÷	Tes za Turn Table√	t Antenna								
	150KHz-30MHz 30MHz-1GHz Above 1GHz Frequency 0.009MHz-0.490M 0.490MHz-1.705M 1.705MHz-30MH 30MHz-88MHz 88MHz-216MHz 216MHz-960MHz 960MHz-1GHz Above 1GHz For radiated emiss	150KHz-30MHz Qu 30MHz-1GHz Qu Above 1GHz Frequency 0.009MHz-0.490MHz 0.490MHz-1.705MHz 1.705MHz-30MHz 30MHz-88MHz 88MHz-216MHz 216MHz-960MHz 960MHz-1GHz Above 1GHz For radiated emissions	150KHz-30MHz	150KHz-30MHz	150KHz-30MHz						





For radiated emissions above 1GHz



Test Procedure:

- 1. The EUT was placed on the top of a rotating table (0.8m for below 1G and 1.5m for above 1G) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
- 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
- 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Test Instruments:

Refer to section 6.0 for details



Test mode:	Refer to sec	ction 5.2 for d	letails			
Test voltage:	AC120V 60	Hz				
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1012mbar
Test voltage:	AC 120V, 6	0Hz				
Test results:	Pass					

Remarks:

1. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.

Measurement data:

■ 9kHz~30MHz

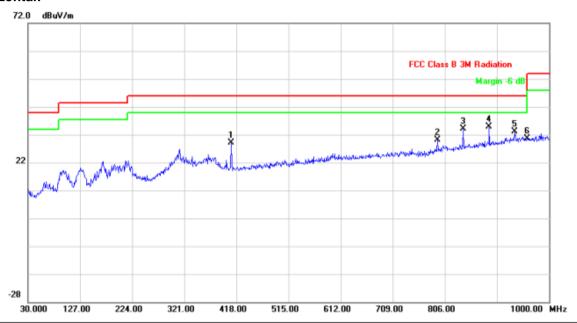
The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and according to 15.31(o) & RSS-Gen 6.13, the test result no need to reported.



■ Below 1GHz

Pre-scan all test modes, found worst case at 802.11b 2462MHz, and so only show the test result of 802.11b 2462MHz

Horizontal:

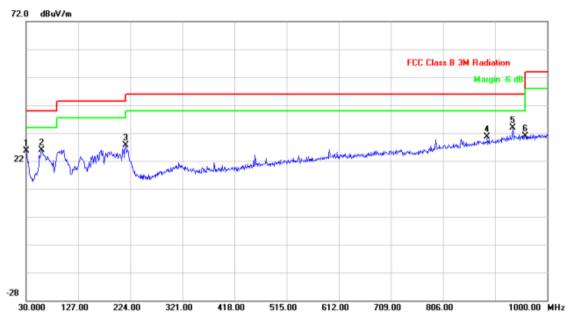


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		408.3000	9.74	19.29	29.03	46.00	-16.97	QP	100	326	
2		792.4200	3.63	26.41	30.04	46.00	-15.96	QP	100	285	
3		839.9500	6.70	27.35	34.05	46.00	-11.95	QP	100	297	
4	*	888.4500	6.42	28.35	34.77	46.00	-11.23	QP	100	1	
5		935.9800	3.25	30.00	33.25	46.00	-12.75	QP	100	29	
6		959.2600	0.40	30.16	30.56	46.00	-15.44	QP	100	94	



Vertical:

Report No.: GTSL202103000257F01



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		30.0000	11.50	14.21	25.71	40.00	-14.29	QP	100	344	
2		59.1000	11.27	14.64	25.91	40.00	-14.09	QP	100	114	
3		215.2700	11.69	15.83	27.52	43.50	-15.98	QP	100	359	
4		888.4500	2.34	28.35	30.69	46.00	-15.31	QP	100	99	
5	*	935.9800	3.94	30.00	33.94	46.00	-12.06	QP	100	251	
6		959.2600	0.77	30.16	30.93	46.00	-15.07	QP	200	30	



■ Above 1GHz

Report No.: GTSL202103000257F01

Test	mod	le:	8	302.11b		-	Test cha	nnel: 1		Lowest	
						Verti	cal				
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4818.750	57.30	-1.66	55.64	74.00	-18.36	peak			
2	*	4819.260	54.95	-1.66	53.29	54.00	-0.71	AVG			
3		7239.250	46.13	4.43	50.56	74.00	-23.44	peak			
4		7239.330	40.67	4.43	45.10	54.00	-8.90	AVG			
						Horizo	ontal				
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4818.750	56.70	-1.66	55.04	74.00	-18.96	peak			
2	*	4824.000	54.60	-1.63	52.97	54.00	-1.03	AVG			

Remarks:

3

4

7236.000

7239.250

48.86

43.05

4.42

4.43

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

74.00

54.00

-20.72

-6.52

peak

AVG

53.28

47.48



Test	mod	de:		802.11b			Test cha	nnel: 6		Middle	
						Vert	ical				
No.	Reading No. Mk. Freq. Level			Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4877.500	46.87	-1.29	45.58	74.00	-28.42	peak			
2	*	4879.150	43.12	-1.28	41.84	54.00	-12.16	AVG			

Horizontal

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4874.000	55.32	-1.31	54.01	74.00	-19.99	peak			
2	*	4877.500	53.16	-1.29	51.87	54.00	-2.13	AVG			
3		7309.750	48.94	4.54	53.48	74.00	-20.52	peak			
4		7310.000	42.48	4.54	47.02	54.00	-6.98	AVG			

Remarks:

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



Test	mod	de:	8	802.11b		-	Test cha	nnel: 1	1	Highest	
			'			Verti	cal		•		
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4924.500	46.23	-0.99	45.24	74.00	-28.76	peak			
2	*	4925.870	43.87	-0.98	42.89	54.00	-11.11	AVG			
						Horizo	ntal				
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4924.000	54.78	-0.99	53.79	74.00	-20.21	peak			
2	*	4924.500	52.53	-0.99	51.54	54.00	-2.46	AVG			
3		7386.000	40.15	4.67	44.82	54.00	-9.18	AVG			
4		7392.000	46.72	4.68	51.40	74.00	-22.60	peak			

Remarks:

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



Γest	mod	le:		802.11g		7	Test cha	nnel: 1		lowest	
			•			Verti	cal		•		
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4807.000	53.82	-1.74	52.08	74.00	-21.92	peak			
2		4824.000	42.96	-1.63	41.33	54.00	-12.67	AVG			
3		7227.500	51.78	4.41	56.19	74.00	-17.81	peak			
4	*	7230.000	39.80	4.41	44.21	54.00	-9.79	AVG			
						Horizo	ntal				
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4818.750	60.71	-1.66	59.05	74.00	-14.95	peak			
2		4824.000	49.39	-1.63	47.76	54.00	-6.24	AVG			
3	*	7236.000	43.86	4.42	48.28	54.00	-5.72	AVG			
4		7251.000	55.99	4.45	60.44	74.00	-13.56	peak			

Remarks:

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



7309.750

48.76

4.54

53.30

Report No.: GTSL202103000257F01

Tes	t mo	de:		802.11g			Test cha	annel: 6		Middle			
	Vertical												
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree			
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment		
1		4877.500	48.43	-1.29	47.14	74.00	-26.86	peak					
2		4879.100	36.74	-1.28	35.46	54.00	-18.54	AVG					
3	*	7308.000	37.45	4.54	41.99	54.00	-12.01	AVG					

Horizontal

-20.70

peak

74.00

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4865.750	57.69	-1.36	56.33	74.00	-17.67	peak			
2		4872.000	45.45	-1.32	44.13	54.00	-9.87	AVG			
3		7298.000	55.45	4.52	59.97	74.00	-14.03	peak			
4	*	7308.000	43.66	4.54	48.20	54.00	-5.80	AVG			

Remarks:

4

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



Test	Test mode:			802.11g			Test chai	nnel: 11		Highest	
						Verti	cal				
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4924.500	47.17	-0.99	46.18	74.00	-27.82	peak			
2		4926.200	35.74	-0.98	34.76	54.00	-19.24	AVG			
3		7392.000	45.84	4.68	50.52	74.00	-23.48	peak			
4	*	7394.200	33.97	4.68	38.65	54.00	-15.35	AVG			
						Horizo	ontal				
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4924.000	45.01	-0.99	44.02	54.00	-9.98	AVG			
2		4924.500	58.11	-0.99	57.12	74.00	-16.88	peak			

AVG

peak

Remarks:

3 *

4

7384.000

7392.000

40.87

52.48

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

54.00

74.00

-8.47

-16.84

45.53

57.16

4.66

4.68



Test	mod	de:	8	302.11n(H	IT20)	1	est cha	nnel: 1		Lowest	
			•			Verti	cal				
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4818.750	53.19	-1.66	51.53	74.00	-22.47	peak			
2		4819.600	41.22	-1.66	39.56	54.00	-14.44	AVG			
3	*	7230.000	38.86	4.41	43.27	54.00	-10.73	AVG			
4		7239.250	52.41	4.43	56.84	74.00	-17.16	peak			
						Horizo	ntal				
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4818.750	60.11	-1.66	58.45	74.00	-15.55	peak			
2		4824.000	47.88	-1.63	46.25	54.00	-7.75	AVG			
3	*	7236.000	42.33	4.42	46.75	54.00	-7.25	AVG			
4		7239.250	54.76	4.43	59.19	74.00	-14.81	peak			

Remarks:

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



Гest	mod	le:	8	302.11n(H	IT20)	1	est cha	nnel: 6		Middle	
			'			Verti	cal		•		
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4865.750	51.88	-1.36	50.52	74.00	-23.48	peak			
2		4867.150	39.72	-1.35	38.37	54.00	-15.63	AVG			
3		7309.750	51.96	4.54	56.50	74.00	-17.50	peak			
4	*	7311.000	40.41	4.54	44.95	54.00	-9.05	AVG			
						Horizo	ntal				
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4865.750	54.11	-1.36	52.75	74.00	-21.25	peak			
2		4873.000	42.30	-1.32	40.98	54.00	-13.02	AVG			
3		7309.750	57.46	4.54	62.00	74.00	-12.00	peak			
4	*	7311.000	45.95	4.54	50.49	54.00	-3.51	AVG			

Remarks:

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



Te	Test mode:				802.11n(H	T20)	-	Test char	nnel: 11		Highest	
							Verti	cal				
No) .	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
	1		4924.500	51.10	-0.99	50.11	74.00	-23.89	peak			
	2		4925.950	38.97	-0.98	37.99	54.00	-16.01	AVG			
	3		7380.250	48.38	4.66	53.04	74.00	-20.96	peak			
	4	*	7384.000	36.95	4.66	41.61	54.00	-12.39	AVG			

Horizontal

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		4924.000	39.79	-0.99	38.80	54.00	-15.20	AVG			
2		4924.500	52.20	-0.99	51.21	74.00	-22.79	peak			
3	*	7382.000	42.88	4.66	47.54	54.00	-6.46	AVG			
4		7392.000	54.63	4.68	59.31	74.00	-14.69	peak			

Remarks:

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



8 Test Setup Photo

Reference to the appendix I for details.

9 EUT Constructional Details

Reference to the appendix II for details.

