

Global United Technology Services Co., Ltd.

Report No.: GTS201909000203F01

Spectrum Report

Autel Intelligent Tech. Corp., Ltd. Applicant:

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Nanshan, Shenzhen 518055, China

Autel Intelligent Tech. Corp., Ltd. Manufacturer:

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Province, China.

AUTEL VIETNAM COMPANY LIMITED Factory 2:

4th Floor, Factory#6, Land#CN1, An Duong Industrial Zone. **Address of Factory 2:**

Hong Phong Township, An Duong County, Hai Phong, Viet

Nam

Equipment Under Test (EUT)

Product Name: MaxiFlash VCMI

Model No.: MaxiFlash VCMI

Trade Mark: Autel

FCC ID: WQ8VCMI1911

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

September 25, 2019 Date of sample receipt:

September 25-29, 2019 **Date of Test:**

September 29, 2019 Date of report issued:

PASS * Test Result:

Authorized Signature:

Robinson Lo **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.

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



2 Version

Version No.	Date	Description
00	September 29, 2019	Original

Prepared By:	Jamellu	Date:	September 29, 2019
	Project Engineer		
Check By:	Job inson b	Date:	September 29, 2019
	Reviewer	_	



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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	3.44dB	(1)	
Note (1): The measurement unce	ertainty is for coverage factor of k	=2 and a level of confidence of	95%.



5 General Information

5.1 General Description of EUT

Product Name:	MaxiFlash VCMI
Model No.:	MaxiFlash VCMI
Serial No.:	123456789101112
Hardware Version:	V6
Software Version:	V1.00.10
Test sample(s) ID:	GTS201909000203-1
Sample(s) Status	Engineer sample
Channel numbers:	802.11b/802.11g /802.11n(HT20): 11
	802.11n(HT40):7
Channel separation:	5MHz
Modulation technology:	802.11b: Direct Sequence Spread Spectrum (DSSS)
	802.11g/802.11n(H20)/802.11n(HT40):
	Orthogonal Frequency Division Multiplexing (OFDM)
Antenna Type:	Integral Antenna
Automoria	ANT 1: 1.9dBi
Antenna gain:	ANT 2: 1.9dBi
Power supply:	Adapter
	Model: A361-1203000DI
	Input: AC 100-240V, 50/60Hz, 1.5A
	Output: DC 12V, 3000mA
	Rechargeable battery: DC3.8V 3750mAh 14.25Wh



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)	802.11n(HT40)		
Lowest channel	2412MHz	2422MHz		
Middle channel	2437MHz	2437MHz		
Highest channel	2462MHz	2452MHz		



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)	802.11n(HT40)
Data rate	1Mbps	6Mbps	6.5Mbps	13Mbps

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	Special test command provided by manufacturer
Power level setup	Default



6 Test Instruments list

Radi	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. 03 2015	July. 02 2020		
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. 26 2019	June. 25 2020		
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	June. 26 2019	June. 25 2020		
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	June. 26 2019	June. 25 2020		
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	June. 26 2019	June. 25 2020		
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A		
8	Coaxial Cable	GTS	N/A	GTS213	June. 26 2019	June. 25 2020		
9	Coaxial Cable	GTS	N/A	GTS211	June. 26 2019	June. 25 2020		
10	Coaxial cable	GTS	N/A	GTS210	June. 26 2019	June. 25 2020		
11	Coaxial Cable	GTS	N/A	GTS212	June. 26 2019	June. 25 2020		
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	June. 26 2019	June. 25 2020		
13	Amplifier(2GHz-20GHz)	HP	84722A	GTS206	June. 26 2019	June. 25 2020		
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June. 26 2019	June. 25 2020		
15	Band filter	Amindeon	82346	GTS219	June. 26 2019	June. 25 2020		
16	Power Meter	Anritsu	ML2495A	GTS540	June. 26 2019	June. 25 2020		
17	Power Sensor	Anritsu	MA2411B	GTS541	June. 26 2019	June. 25 2020		
18	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	June. 26 2019	June. 25 2020		
19	Splitter	Agilent	11636B	GTS237	June. 26 2019	June. 25 2020		
20	Loop Antenna	ZHINAN	ZN30900A	GTS534	June. 26 2019	June. 25 2020		
21	Breitband hornantenne	SCHWARZBECK	BBHA 9170	GTS579	Oct. 20 2018	Oct. 19 2019		
22	Amplifier	TDK	PA-02-02	GTS574	Oct. 20 2018	Oct. 19 2019		
23	Amplifier	TDK	PA-02-03	GTS576	Oct. 20 2018	Oct. 19 2019		
24	PSA Series Spectrum Analyzer	Rohde & Schwarz	FSP	GTS578	June. 26 2019	June. 25 2020		



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. 26 2019	June. 25 2020		
3	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	June. 26 2019	June. 25 2020		
4	Artificial Mains Network	SCHWARZBECK MESS	NSLK8127	GTS226	June. 26 2019	June. 25 2020		
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. 26 2019	June. 25 2020		
8	Absorbing clamp	Elektronik- Feinmechanik	MDS21	GTS229	June. 26 2019	June. 25 2020		
9	ISN	SCHWARZBECK	NTFM 8158	GTD565	June. 26 2019	June. 25 2020		

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. 26 2019	June. 25 2020				
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 26 2019	June. 25 2020				
3	Spectrum Analyzer	Agilent	E4440A	GTS533	June. 26 2019	June. 25 2020				
4	MXG vector Signal Generator	Agilent	N5182A	GTS567	June. 26 2019	June. 25 2020				
5	ESG Analog Signal Generator	Agilent	E4428C	GTS568	June. 26 2019	June. 25 2020				
6	USB RF Power Sensor	DARE	RPR3006W	GTS569	June. 26 2019	June. 25 2020				
7	RF Switch Box	Shongyi	RFSW3003328	GTS571	June. 26 2019	June. 25 2020				
8	Programmable Constant Temp & Humi Test Chamber	WEWON	WHTH-150L-40-880	GTS572	June. 26 2019	June. 25 2020				

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. 26 2019	June. 25 2020				
2	Barometer	ChangChun	DYM3	GTS255	June. 26 2019	June. 25 2020				



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 integral antenna, the best case gain of the antennas are 1.9dBi, reference to the appendix II for details



7.2 Conducted Emissions

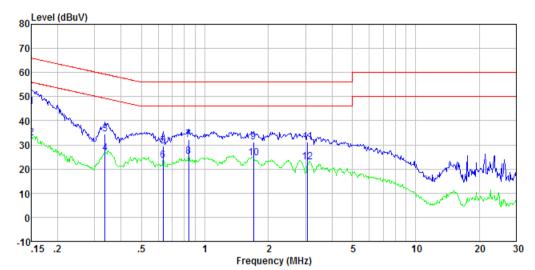
Test Requirement:	FCC Part15 C Section 15.207					
Test Method:	ANSI C63.10:2013					
Test Frequency Range:	150KHz to 30MHz					
Receiver setup:	RBW=9KHz, VBW=30KHz, Sv	weep time=auto				
Limit:	Frequency range (MHz)	Limit	(dBuV)			
		Quasi-peak	Average			
	0.15-0.5	66 to 56*	56 to 46*			
	0.5-5	56	46			
	5-30 * Decreases with the logarithm	60	50			
Test setup:	Reference Plane	•				
	LISN 40cm 80cm Filter AC power Equipment Test table/Insulation plane Remark E.U.T. Equipment Under Test LISN: Line Impedence Stabilization Network Test table height=0.8m					
Test procedure:	 The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 500hm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 500hm/50uH coupling impedance with 500hm termination. (Please refer to the block diagram of the test setup and photographs). Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative 					
To at In atmiss sizes	positions of equipment and all of the interface cables must be changed 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 Humid.: 52% Press.: 1012mbar					
Test voltage:	AC 120V, 60Hz					
	Pass					



Measurement data

Report No.: GTS201909000203F01

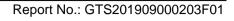
Line:

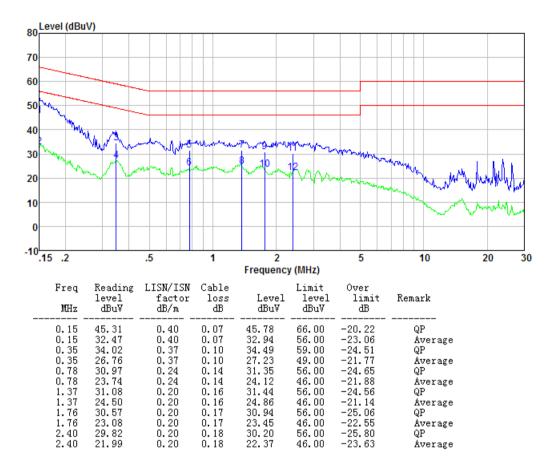


Freq MHz	Reading level dBuV	LISN/ISN factor dB/m	Cable loss dB	Level dBuV	Limit level dBuV	Over limit dB	Remark
0.15	45.39	0.40	0.07	45.86	66.00	-20.14	QP
0.15	32.43	0.40	0.07	32.90	56.00	-23.10	Average
0.34	33.99	0.38	0.10	34.47	59.31	-24.84	QP
0.34	26.08	0.38	0.10	26.56	49.31	-22.75	Average
0.63	29.03	0.28	0.12	29.43	56.00	-26.57	QP
0.63	23.12	0.28	0.12	23.52	46.00	-22.48	Äverage
0.84	31.81	0.23	0.14	32.18	56.00	-23.82	QP
0.84	24.87	0.23	0.14	25.24	46.00	-20.76	Äverage
1.70	30.77	0.20	0.17	31.14	56.00	-24.86	QP Ŭ
1.70	24.29	0.20	0.17	24.66	46.00	-21.34	Äverage
3.07	30.88	0.20	0.19	31.27	56.00	-24.73	QP
3.07	22 46	0.20	0.19	22 85	46 00	-23 15	Average



Neutral:



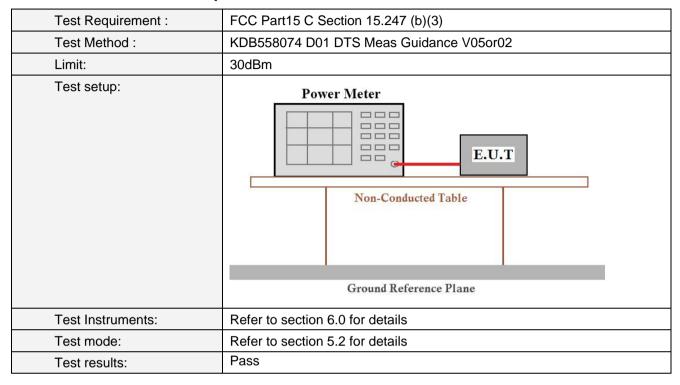


Notes:

- 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



Measurement Data

ANT 1:

Test CH		Peak Outp	Limit(dBm)	Result		
Test Off	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)	Limit(abin)	Nesuit
Lowest	15.84	15.98	15.92	15.00		
Middle	15.33	15.82	15.57	15.42	30.00	Pass
Highest	15.46	15.55	15.30	14.98		

ANT 2:

Test CH		Peak Outp	Limit(dBm)	Result		
1651 011	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)	Limit(abin)	Nesuit
Lowest	15.02	14.87	14.65	14.38		Pass
Middle	14.39	14.56	14.39	14.43	30.00	
Highest	14.69	15.45	14.69	14.30		



MIMO:

Modulation	Test CH	Peak Output Power (dBm)		Sum Output Power (dBm)	Limit (dBm)	Result			
	Lowest	ANT 1	15.92	18.34					
	Lowest	ANT 2	14.65	10.34					
902 11 ₀ /UT20\	Middle	ANT 1	15.57	10.02	20	Door			
802.11n(HT20)	Middle	ANT 2	14.39	18.03	30	Pass			
	Llighoot	ANT 1	15.30	40.00					
	Highest	ANT 2	14.69	18.02					
Modulation	Test CH	Peak Output	Power (dBm)	Sum Output Power (dBm)	Limit (dBm)	Result			
	Lowest	ANT 1	15.00	17.71					
	Lowest	ANT 2	14.38	17.71					
802.11n(HT40)	Middle	ANT 1	15.42	17.06	20	Door			
	Middle	ANT 2	14.43	17.96	30	Pass			
	LP-bt	ANT 1	14.98	17.66					
	Highest	ANT 2	14.30	17.66					



7.4 Channel Bandwidth & 99% Occupy Bandwidth

Test Requirement :	FCC Part15 C Section 15.247 (a)(2)
Test Method :	KDB558074 D01 DTS Meas Guidance V05or02
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

ANT 1:

Test CH		Channel E		Limit(KHz)	Result	
Test CIT	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)	Liiiii(Ki iZ)	Nesuit
Lowest	10.141	16.586	17.806	36.3082		
Middle	10.117	16.575	5 17.826 36.2822		>500	Pass
Highest	10.105	16.558	17.745	36.2943		

Test CH		Result			
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)	Result
Lowest	13.7649	16.4983	17.6831	36.633	
Middle	13.8201	16.4984	17.6881	36.649	Pass
Highest	13.7642	16.5148	17.6734	36.633	

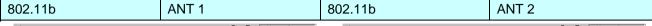
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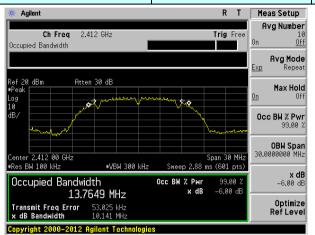
Test CH		Channel E		Limit(KHz)	Result	
Test on	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)		Nesuit
Lowest	10.277	16.574	17.692	36.649		
Middle	10.130	16.610	17.815	36.636	>500	Pass
Highest	10.125	16.469	17.659	36.663		

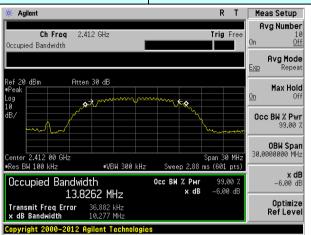
Test CH		Result			
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)	Result
Lowest	13.8262	16.5166	18.0394	36.3386	
Middle	13.8182	16.9645	17.7045	36.3244	Pass
Highest	13.8163	16.5398	18.0316	36.3369	



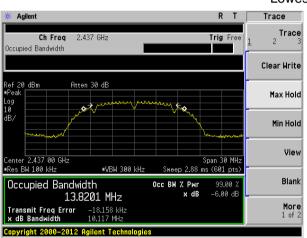
Test plot as follows:

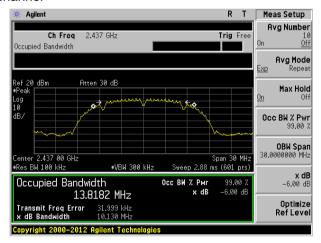




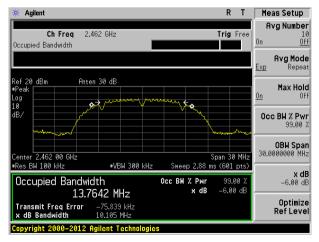


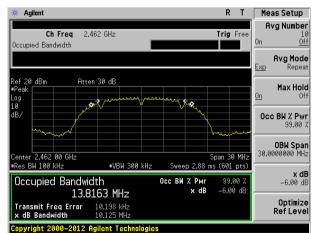
Lowest channel





Middle channel

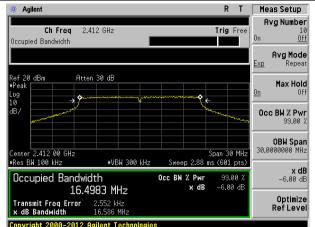


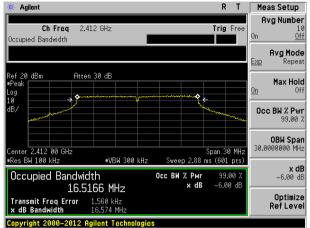


Highest channel

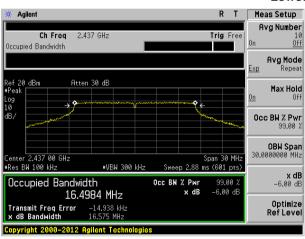


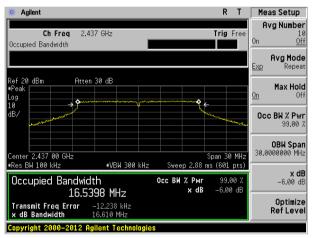




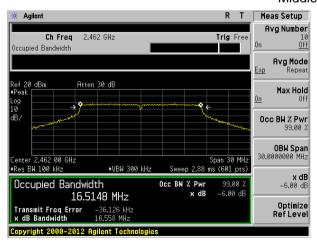


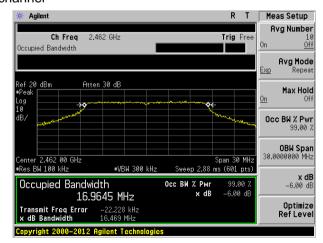
Lowest channel





Middle channel



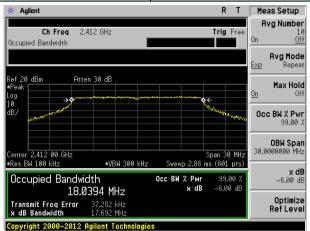


Highest channel

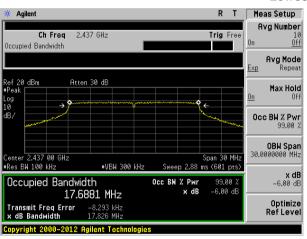


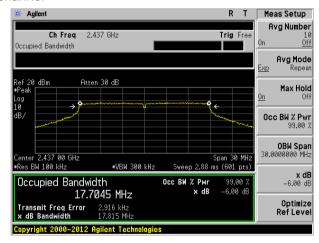
802.11n(HT20) ANT 1 802.11n(HT20) ANT 2



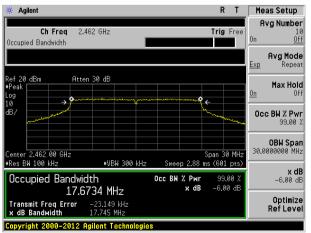


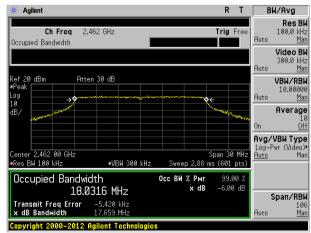
Lowest channel





Middle channel

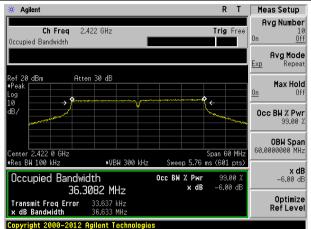


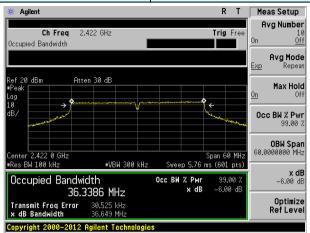


Highest channel

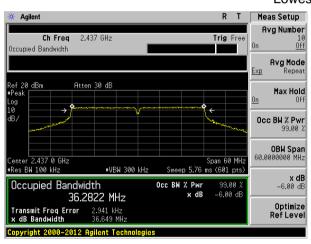


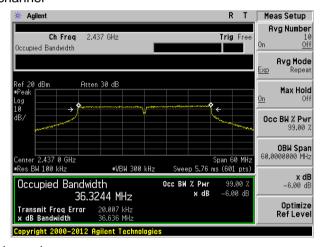
802.11n(HT40) ANT 1 802.11n(HT40) ANT 2 ** Agilent R T Meas Setup ** Agilent R T Meas Setup



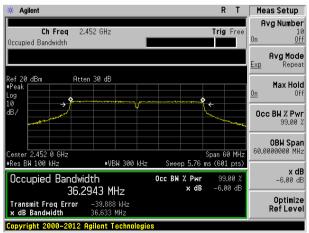


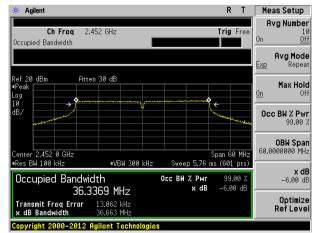
Lowest channel





Middle channel





Highest channel



7.5 Power Spectral Density

Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	KDB558074 D01 DTS Meas Guidance V05or02
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

ANT 1:

Test CH		Power Spectra	Limit	Result		
1631 011	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)	(dBm/3kHz)	Nesuit
Lowest	-8.76	-12.73	-13.18	-16.13		
Middle	-11.85	-12.19	-13.67	-16.55	8.00	Pass
Highest	-9.92	-12.67	-14.17	-16.46		

ANT 2:

Test CH		Power Spectra	Limit	Result		
1631 011	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)	(dBm/3kHz)	Nesuit
Lowest	-10.30	-12.40	-14.18	-16.13		
Middle	-10.73	-13.56	-13.88	-16.15	8.00	Pass
Highest	-9.74	-14.02	-14.17	-16.20		



MIMO:

Report No.: GTS201909000203F01

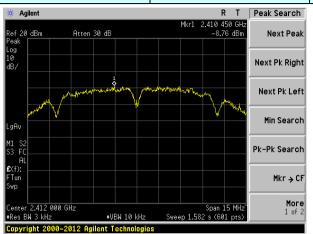
Modulation	Test CH	Power Spectral Density (dBm/3kHz)		Sum Output Power(dBm)	Limit (dBm/3kHz)	Result
	1	ANT 1	-13.18	40.00		
	Lowest	ANT 2	-14.18	-10.66		
	Middle	ANT 1	-13.67	10.76	0	Pass
802.11n(HT20)	Middle	ANT 2	-13.88	-10.76	8	
	Highest	ANT 1	-14.17	-11.19		
		ANT 2	-14.17	-11.19		
	Lowest	ANT 1	-16.13	-13.19	8	
	Lowest	ANT 2	-16.13	-13.19		Pass
002 11n/UT40\	Middle	ANT 1	-16.55	12.27		
802.11n(HT40)	Ivildale	ANT 2	-16.15	-13.37		
	Highoot	ANT 1	-16.46	40.00		
	Highest	ANT 2	-16.20	-13.28		

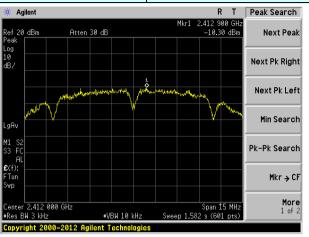


Test plot as follows:

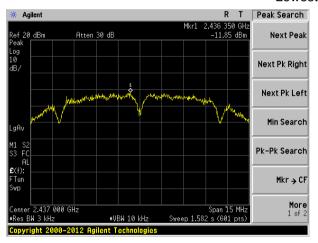
Report No.: GTS201909000203F01

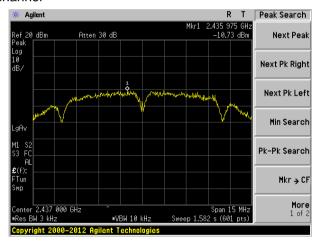




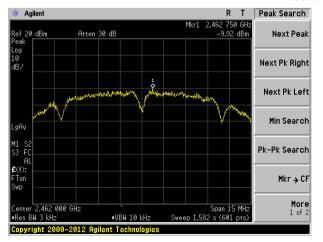


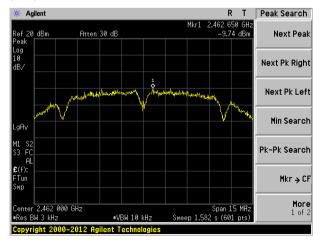
Lowest channel





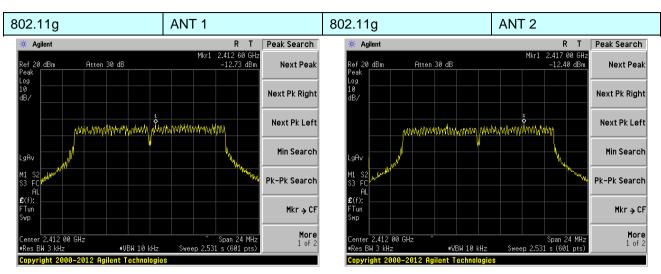
Middle channel



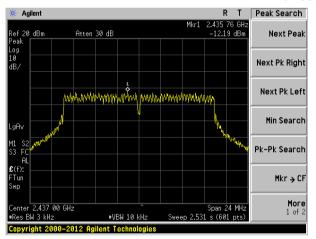


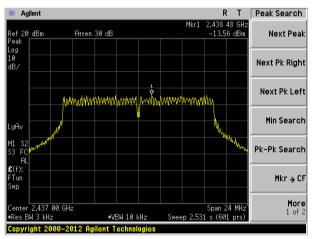
Highest channel



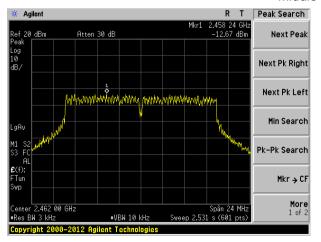


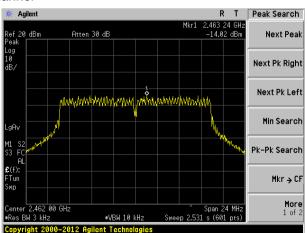
Lowest channel





Middle channel

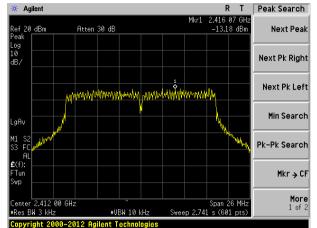


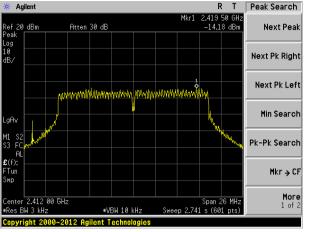


Highest channel

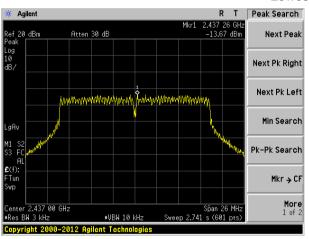


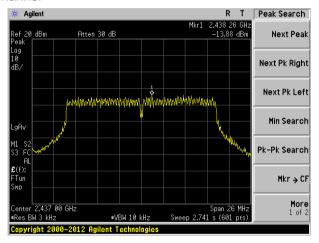
ANT 1 ANT 2 802.11n(HT20) 802.11n(HT20) Peak Search Agilent R T Agilent Peak Search 2.416 07 GH: -13.18 dBm 2.419 50 GH: -14.18 dBm ef 20 dBm Atten 30 dB Next Peak Atten 30 dB Next Peak



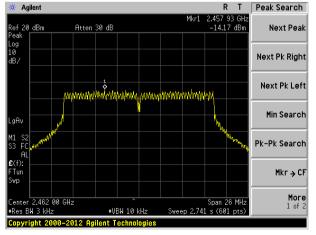


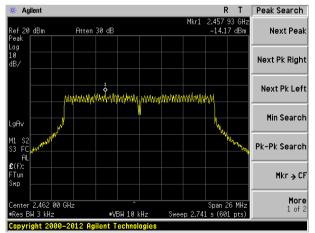
Lowest channel





Middle channel

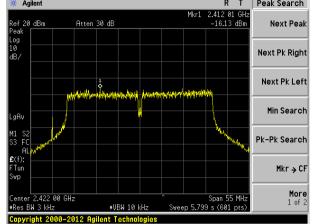


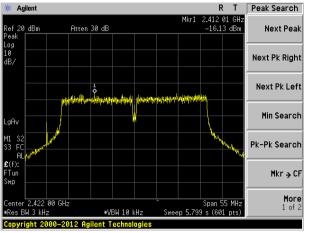


Highest channel

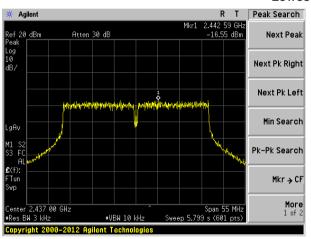


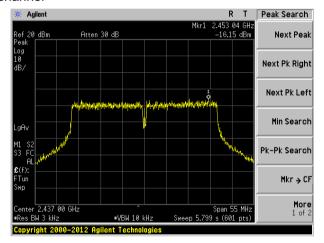




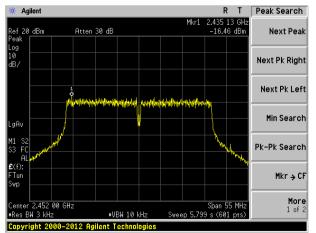


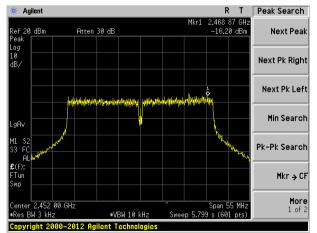
Lowest channel





Middle channel





Highest channel



7.6 Band edges

7.6.1 Conducted Emission Method

Test Requirement:	FCC Part15 C Section 15.247 (d)				
Test Method:	KDB558074 D01 DTS Meas Guidance V05or02				
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.: GTS201909000203F01

ANT 1:

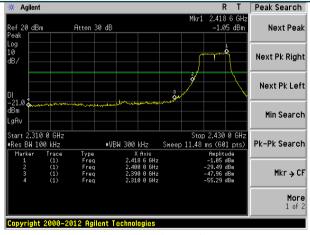
Lowest channel

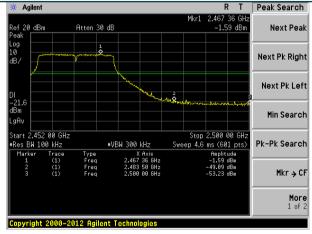
Highest channel

Test mode:

802.11g

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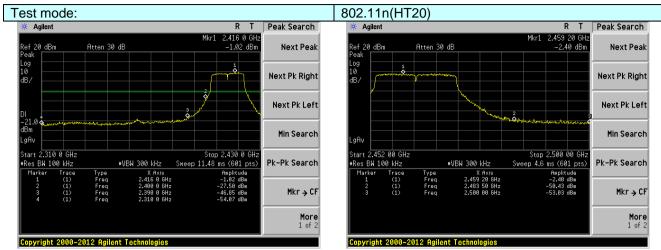


Lowest channel

Highest channel

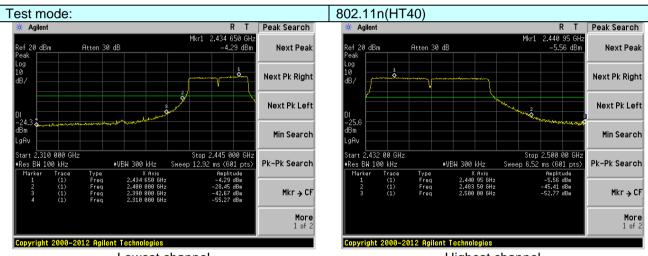
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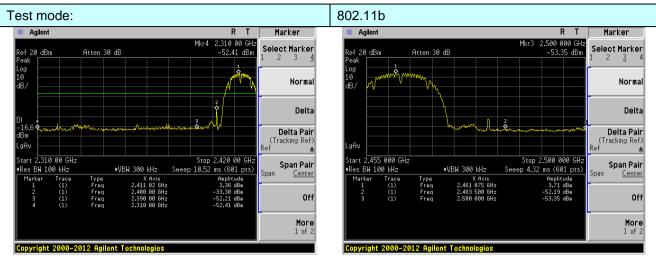
Lowest channel

Highest channel





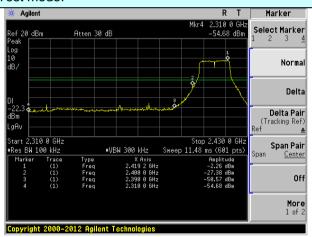
ANT 2:



Lowest channel

Highest channel

Test mode:



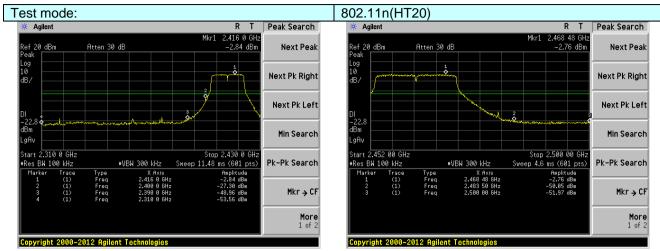
802.11g



Lowest channel

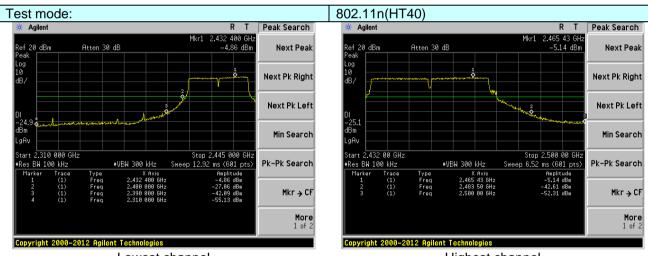
Highest channel





Lowest channel

Highest channel





7.6.2 Radiated Emission Method

Test Requirement:	FCC Part15 C S	Section 15.209	and 15.20				
Test Method:	ANSI C63.10: 2						
Test Frequency Range:	All of the restric	t bands were t	ested, only	the worst b	and's (2310MHz to		
	2500MHz) data						
Test site:	Measurement D		1				
Receiver setup:	Frequency	Detector	RBW	VBW	Value		
	Above 1GHz	Peak	1MHz	3MHz	Peak		
	718070 10112	Average	1MHz	3MHz	Average		
Limit:	Frequency Limit (dBuV/m @3m) Value						
	Above 1GHz 54.00 Averag 74.00 Peak						
Test setup:	Tum Table		Test Antenna < 1m 4m > Receiver	eamplifier			
Test Procedure:	the ground at determine the 2. The EUT was antenna, white tower. 3. The antenna ground to det horizontal an measuremen 4. For each sus and then the and the rotal the maximum 5. The test-recesspecified Ball 6. If the emission the limit specified Ball 6. If the emission the EUT whave 10dB meak or average sheet. 7. The radiation And found the	t a 3 meter came position of the set 3 meters a ch was mounted height is varied termine the maximum the maximum that the maximum that the maximum that the meter is an tenna was turned an reading. The server system was and width with Maximum that the level of the Edified, then testified, then testified argin would be the age method as a measurements.	aber. The talk is highest race away from the don the top of the from one naximum value izations of the from 0 decreases as to Peak aximum Hole UT in peaking could be also the could be also the from 0 decreases are performing which is a re-tested or specified are sare performing which is a re-tested or specified are sare performing which is a re-tested or specified are sare performing which is a re-tested or sare performents.	ole was rotadiation. The interference of a variable enter to four the field the antenna at the was arranged this from 1 mgrees to 360 at Detect Fuld Mode, mode was a stopped and the emissione by one und then reported in X, Y, t is worse content to the in X, Y, the state of the emissione of the	le-height antenna r meters above the I strength. Both are set to make the ed to its worst case meter to 4 meters 0 degrees to find unction and 10dB lower than d the peak values ions that did not sing peak, quasi-		
Test Instruments:		6.0 for details	•				
	I tolol to occion						
Test mode:	Refer to section						



Measurement data:

Report No.: GTS201909000203F01

All antannas	have too	4 001.4	.h	٨١	UT 4	
All antennas	nave tes	τ, οπιν ι	me worst	case Ar	1	report.

All allicilla	o maro toot,	only the m	J. G. Gudo 7					
Test mode:		802.1	1b	Tes	st channel:	l	_owest	
Peak value								-
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2310.00	39.83	27.14	6.19	42.04	31.12	74.00	-42.88	Horizontal
2390.00	48.23	27.37	6.31	42.11	39.80	74.00	-34.20	Horizontal
2310.00	38.38	27.14	6.19	42.04	29.67	74.00	-44.33	Vertical
2390.00	49.54	27.37	6.31	42.11	41.11	74.00	-32.89	Vertical
Average va	lue:							
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2310.00	30.11	27.14	6.19	42.04	21.40	54.00	-32.60	Horizontal
2390.00	37.21	27.37	6.31	42.11	28.78	54.00	-25.22	Horizontal
2310.00	28.79	27.14	6.19	42.04	20.08	54.00	-33.92	Vertical
2390.00	39.20	27.37	6.31	42.11	30.77	54.00	-23.23	Vertical
Test mode:		802.1	1b	Tes	st channel:	ŀ	Highest	
Peak value					_		_	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	48.70	27.66	6.45	42.01	40.80	74.00	-33.20	Horizontal
2500.00	41.11	27.70	6.47	42.00	33.28	74.00	-40.72	Horizontal
2483.50	48.59	27.66	6.45	42.01	40.69	74.00	-33.31	Vertical
2500.00	42.31	27.70	6.47	42.00	34.48	74.00	-39.52	Vertical
Average va	lue:							
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	37.20	27.66	6.45	42.01	29.30	54.00	-24.70	Horizontal
2500.00	33.65	27.70	6.47	42.00	25.82	54.00	-28.18	Horizontal
2483.50	37.99	27.66	6.45	42.01	30.09	54.00	-23.91	Vertical

32.46

2500.00

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27.70

6.47

42.00

24.63

54.00

-29.37

Vertical



Test mode:		802.1	1g	Tes	st channel:		Lowest	
Peak value	:							
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	I Imit	Polarization
2310.00	39.58	27.14	6.19	42.04	30.87	74.00	-43.13	Horizontal
2390.00	47.90	27.37	6.31	42.11	39.47	74.00	-34.53	Horizontal
2310.00	38.12	27.14	6.19	42.04	29.41	74.00	-44.59	Vertical
2390.00	49.14	27.37	6.31	42.11	40.71	74.00	-33.29	Vertical
Average va	lue:							
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	I Imit	Polarization
2310.00	29.94	27.14	6.19	42.04	21.23	54.00	-32.77	Horizontal
2390.00	37.01	27.37	6.31	42.11	28.58	54.00	-25.42	Horizontal
2310.00	28.59	27.14	6.19	42.04	19.88	54.00	-34.12	Vertical
2390.00	38.97	27.37	6.31	42.11	30.54	54.00	-23.46	Vertical
Test mode:		802.1	1g	Tes	st channel:		Highest	
Peak value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	I I imit	Polarization
2483.50	48.35	27.66	6.45	42.01	40.45	74.00	-33.55	Horizontal
2500.00	40.84	27.70	0.47	40.00				t
0.400 50		21.10	6.47	42.00	33.01	74.00	-40.99	Horizontal
2483.50	48.18	27.66	6.47	42.00 42.01	33.01 40.28	74.00 74.00	-40.99 -33.72	Horizontal Vertical
2500.00	48.18 41.99							
	41.99	27.66	6.45	42.01	40.28	74.00	-33.72	Vertical
2500.00	41.99	27.66	6.45	42.01	40.28	74.00	-33.72 -39.84 Over	Vertical
2500.00 Average va Frequency	41.99 lue: Read Level	27.66 27.70 Antenna Factor	6.45 6.47 Cable Loss	42.01 42.00 Preamp Factor	40.28 34.16 Level	74.00 74.00 Limit Line	-33.72 -39.84 Over Limit	Vertical Vertical
2500.00 Average va Frequency (MHz)	41.99 lue: Read Level (dBuV)	27.66 27.70 Antenna Factor (dB/m)	6.45 6.47 Cable Loss (dB)	42.01 42.00 Preamp Factor (dB)	40.28 34.16 Level (dBuV/m)	74.00 74.00 Limit Line (dBuV/m)	-33.72 -39.84 Over Limit (dB)	Vertical Vertical Polarization
2500.00 Average value Frequency (MHz) 2483.50	41.99 lue: Read Level (dBuV) 36.99	27.66 27.70 Antenna Factor (dB/m) 27.66	6.45 6.47 Cable Loss (dB) 6.45	42.01 42.00 Preamp Factor (dB) 42.01	40.28 34.16 Level (dBuV/m) 29.09	74.00 74.00 Limit Line (dBuV/m) 54.00	-33.72 -39.84 Over Limit (dB) -24.91	Vertical Vertical Polarization Horizontal



Test mode:		802.1	1n(HT20)	Tes	st channel:	L	owest	
Peak value	:							
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2310.00	39.55	27.14	6.19	42.04	30.84	74.00	-43.16	Horizontal
2390.00	47.85	27.37	6.31	42.11	39.42	74.00	-34.58	Horizontal
2310.00	38.08	27.14	6.19	42.04	29.37	74.00	-44.63	Vertical
2390.00	49.08	27.37	6.31	42.11	40.65	74.00	-33.35	Vertical
Average va	lue:							
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2310.00	29.91	27.14	6.19	42.04	21.20	54.00	-32.80	Horizontal
2390.00	36.98	27.37	6.31	42.11	28.55	54.00	-25.45	Horizontal
2310.00	28.56	27.14	6.19	42.04	19.85	54.00	-34.15	Vertical
2390.00	38.94	27.37	6.31	42.11	30.51	54.00	-23.49	Vertical
		<u> </u>						
Test mode:		802.1	1n(HT20)	Tes	st channel:	H	Highest	
Peak value	:							
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	48.30	07.00	` '					
0500.00	40.00	27.66	6.45	42.01	40.40	74.00	-33.60	Horizontal
2500.00	40.80	27.70	6.45 6.47	42.01 42.00	40.40 32.97	74.00 74.00	` ′	Horizontal Horizontal
2483.50							-33.60	
	40.80	27.70	6.47	42.00	32.97	74.00	-33.60 -41.03	Horizontal
2483.50	40.80 48.13 41.94	27.70 27.66	6.47 6.45	42.00 42.01	32.97 40.23	74.00 74.00	-33.60 -41.03 -33.77	Horizontal Vertical
2483.50 2500.00 Average va Frequency (MHz)	40.80 48.13 41.94	27.70 27.66	6.47 6.45	42.00 42.01	32.97 40.23	74.00 74.00	-33.60 -41.03 -33.77	Horizontal Vertical Vertical Polarization
2483.50 2500.00 Average va Frequency	40.80 48.13 41.94 Iue: Read Level	27.70 27.66 27.70 Antenna Factor	6.47 6.45 6.47 Cable Loss	42.00 42.01 42.00 Preamp Factor	32.97 40.23 34.11 Level	74.00 74.00 74.00 Limit Line	-33.60 -41.03 -33.77 -39.89 Over Limit	Horizontal Vertical Vertical
2483.50 2500.00 Average va Frequency (MHz)	40.80 48.13 41.94 Ilue: Read Level (dBuV)	27.70 27.66 27.70 Antenna Factor (dB/m)	6.47 6.45 6.47 Cable Loss (dB)	42.00 42.01 42.00 Preamp Factor (dB)	32.97 40.23 34.11 Level (dBuV/m)	74.00 74.00 74.00 Limit Line (dBuV/m)	-33.60 -41.03 -33.77 -39.89 Over Limit (dB)	Horizontal Vertical Vertical Polarization
2483.50 2500.00 Average va Frequency (MHz) 2483.50	40.80 48.13 41.94 Iue: Read Level (dBuV) 36.96	27.70 27.66 27.70 Antenna Factor (dB/m) 27.66	6.47 6.45 6.47 Cable Loss (dB) 6.45	42.00 42.01 42.00 Preamp Factor (dB) 42.01	32.97 40.23 34.11 Level (dBuV/m) 29.06	74.00 74.00 74.00 Limit Line (dBuV/m) 54.00	-33.60 -41.03 -33.77 -39.89 Over Limit (dB) -24.94	Horizontal Vertical Vertical Polarization Horizontal



Test mode:		802.1	1n(HT40)	Te	st channel:	L	owest	
Peak value	:							
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2310.00	39.45	27.14	6.19	42.04	30.74	74.00	-43.26	Horizontal
2390.00	47.73	27.37	6.31	42.11	39.30	74.00	-34.70	Horizontal
2310.00	37.98	27.14	6.19	42.04	29.27	74.00	-44.73	Vertical
2390.00	48.93	27.37	6.31	42.11	40.50	74.00	-33.50	Vertical
Average va	lue:							
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2310.00	39.45	27.14	6.19	42.04	30.74	74.00	-43.26	Horizontal
2390.00	47.73	27.37	6.31	42.11	39.30	74.00	-34.70	Horizontal
2310.00	37.98	27.14	6.19	42.04	29.27	74.00	-44.73	Vertical
2390.00	48.93	27.37	6.31	42.11	40.50	74.00	-33.50	Vertical
Test mode:		802.1	1n(HT40)	Te	st channel:	H	Highest	
Peak value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	48.16	27.66	6.45	42.01	40.26	74.00	-33.74	Horizontal
2500.00	40.70	27.70	6.47	42.00	32.87	74.00	-41.13	Horizontal
2483.50	47.97	27.66	6.45	42.01	40.07	74.00	-33.93	Vertical
2500.00	41.82	27.70	6.47	42.00	33.99	74.00	-40.01	Vertical
Average va	lue:						•	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	36.88	27.66	6.45	42.01	28.98	54.00	-25.02	Horizontal
0500.00								

2500.00 Remarks:

2500.00

2483.50

1. Only the worst case Main Antenna test data.

27.70

27.66

27.70

33.40

37.63

32.19

2. The pre-test were performed on lowest, middle and highest frequencies, only the worst case's (lowest and highest frequencies) data was showed.

42.00

42.01

42.00

25.57

29.73

24.36

54.00

54.00

54.00

-28.43

-24.27

-29.64

3. Final Level = Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor

6.47

6.45

6.47

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

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Horizontal

Vertical

Vertical



7.7 Spurious Emission

7.7.1 Conducted Emission Method

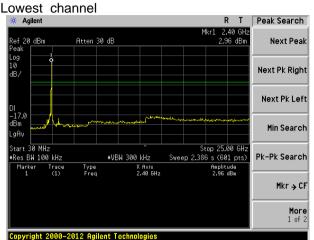
Test Requirement:	FCC Part15 C Section 15.247 (d)								
	KDB558074 D01 DTS Meas Guidance V05or02								
Test Method:									
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the 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								

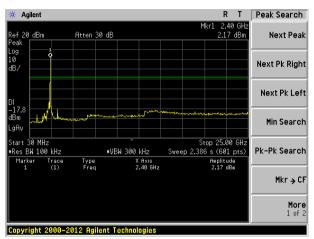


Test plot as follows:

Report No.: GTS201909000203F01

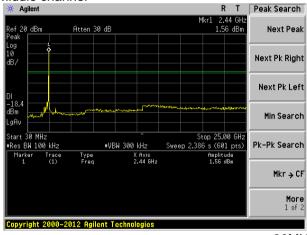


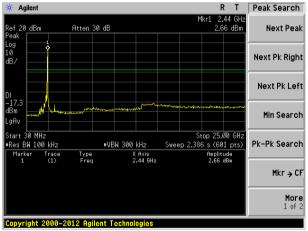




30MHz~25GHz

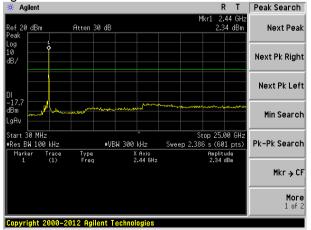
Middle channel

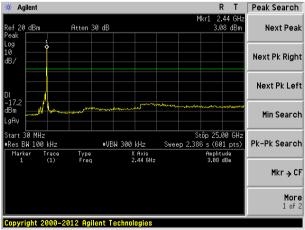




30MHz~25GHz

Highest channel

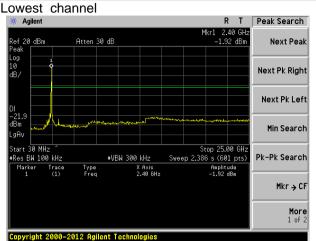


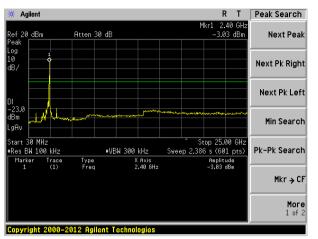


30MHz~25GHz



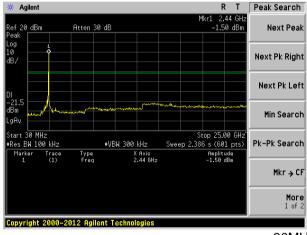
ANT 1 802.11g ANT 2 802.11g

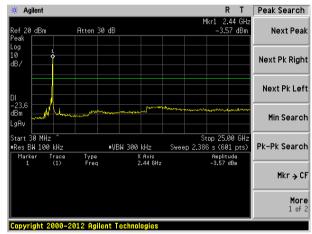




30MHz~25GHz

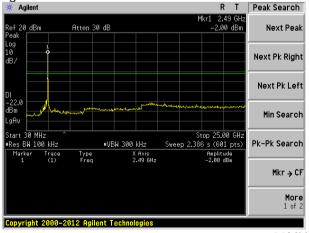
Middle channel

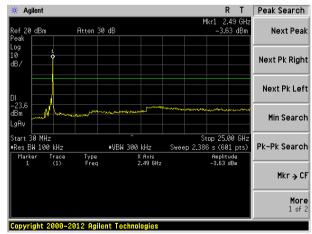




30MHz~25GHz

Highest channel

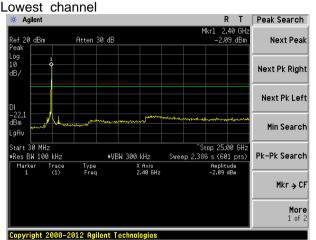


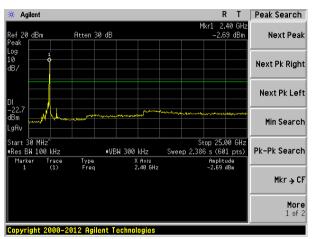


30MHz~25GHz



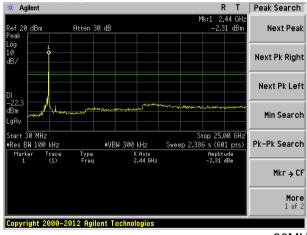
ANT 1 802.11n(HT20) ANT 2 802.11n(HT20)

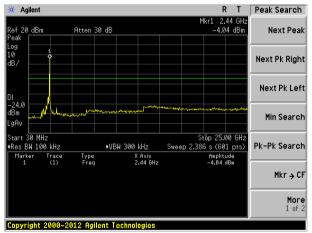




30MHz~25GHz

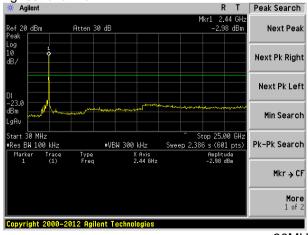
Middle channel

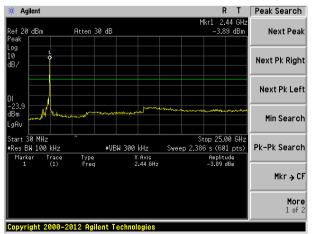




30MHz~25GHz

Highest channel

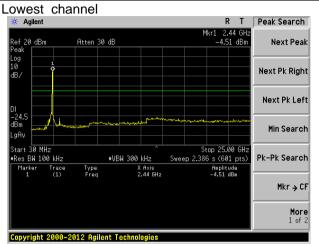


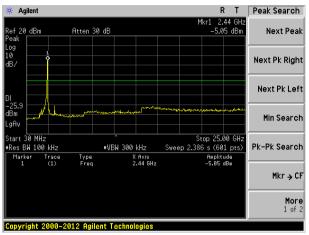


30MHz~25GHz



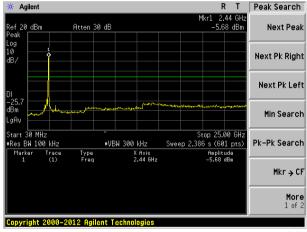
ANT 1 802.11n(HT40) ANT 2 802.11n(HT40)

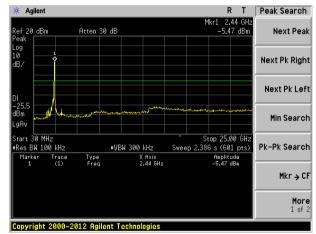




30MHz~25GHz

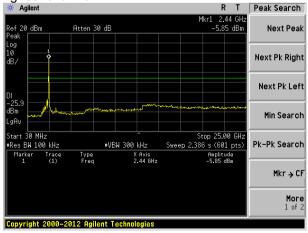
Middle channel

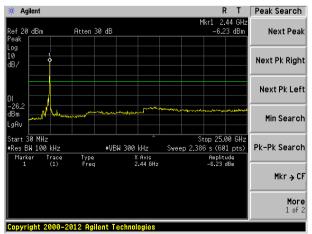




30MHz~25GHz

Highest channel





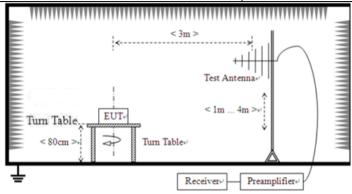
30MHz~25GHz



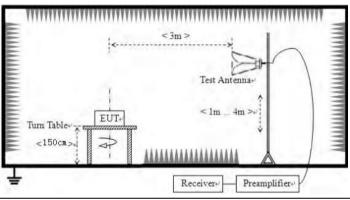
7.7.2 Radiated Emission Method

FCC Part15 C Section 15.209								
ANSI C63.10: 2013								
9kHz to 25GHz								
Measurement Distar	nce:	3m						
Frequency Detector RBW VBW Value								
9KHz-150KHz	Qı	ıasi-peak	ıasi-peak 200l		600Hz	z Quasi-peak		
150KHz-30MHz Q		ıasi-peak 9Kl		lz	30KH	z Quasi-peak		
30MHz-1GHz Quas		ıasi-peak	100K	Hz	300KH	z Quasi-peak		
Above 1GHz	Above 1CHz Peak		1MF	łz	3MHz	z Peak		
Above 1G112		Peak	1MF	Ιz	10Hz	Average		
Frequency		Limit (u\	//m)	٧	'alue	Measurement Distance		
0.009MHz-0.490M	lHz	2400/F(k	(Hz)		QP	300m		
0.490MHz-1.705M	lHz	24000/F(KHz)		QP	300m		
1.705MHz-30MH	lz	30		QP		30m		
30MHz-88MHz		100			QP			
88MHz-216MHz	<u>z</u>	150			QP			
216MHz-960MH	Z	200			QP	3m		
960MHz-1GHz		500		QP		OIII		
Above 1GHz		500		Average				
7.5575 15112		5000)	F	Peak			
For radiated emiss	sions	from 9kH	z to 30)MH	Z			
Tum Table Tum Table Im Receiver For radiated emissions from 30MHz to1GHz								
	ANSI C63.10: 2013 9kHz to 25GHz Measurement Distar Frequency 9KHz-150KHz 150KHz-30MHz 30MHz-1GHz Above 1GHz Frequency 0.009MHz-0.490M 0.490MHz-1.705M 1.705MHz-30MH 30MHz-88MHz 88MHz-216MHz 216MHz-960MH 960MHz-1GHz Above 1GHz For radiated emiss	ANSI C63.10: 2013 9kHz to 25GHz Measurement Distance: 3 Frequency 9KHz-150KHz Qu 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	ANSI C63.10: 2013	ANSI C63.10: 2013 9kHz to 25GHz Measurement Distance: 3m Frequency Detector RBN 9KHz-150KHz Quasi-peak 200H 150KHz-30MHz Quasi-peak 9KH 30MHz-1GHz Quasi-peak 100K Above 1GHz Peak 1MH Peak 1MH Frequency Limit (uV/m) 0.009MHz-0.490MHz 2400/F(KHz) 0.490MHz-1.705MHz 24000/F(KHz) 1.705MHz-30MHz 30 30MHz-88MHz 100 88MHz-216MHz 150 216MHz-960MHz 200 960MHz-1GHz 500 Above 1GHz 5000 For radiated emissions from 9kHz to 30	ANSI C63.10: 2013 9kHz to 25GHz Measurement Distance: 3m Frequency	ANSI C63.10: 2013 9kHz to 25GHz Measurement Distance: 3m Frequency Detector RBW VBW 9KHz-150KHz Quasi-peak 200Hz 600Hz 150KHz-30MHz Quasi-peak 9KHz 30KHz 30MHz-1GHz Quasi-peak 100KHz 300KHz Above 1GHz Peak 1MHz 10Hz Frequency Limit (uV/m) Value 0.009MHz-0.490MHz 2400/F(KHz) QP 0.490MHz-1.705MHz 24000/F(KHz) QP 1.705MHz-30MHz 30 QP 30MHz-88MHz 100 QP 88MHz-216MHz 150 QP 216MHz-960MHz 200 QP 960MHz-1GHz 500 QP Above 1GHz 500 Average 5000 Peak For radiated emissions from 9kHz to 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.
- 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



	Report No.: GTS201909000203F0									
Test mode:	Refer to s	Refer to section 5.2 for details								
Test voltage:	AC120V 6	AC120V 60Hz								
Test environment:	Temp.:	Temp.: 25 °C Humid.: 52% Press.: 1012mba								
Test voltage:	AC 120V,	AC 120V, 60Hz								
Test results:	Pass		_	_						

Remarks:

- 1. Only the worst case Main Antenna test data.
- 2. 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

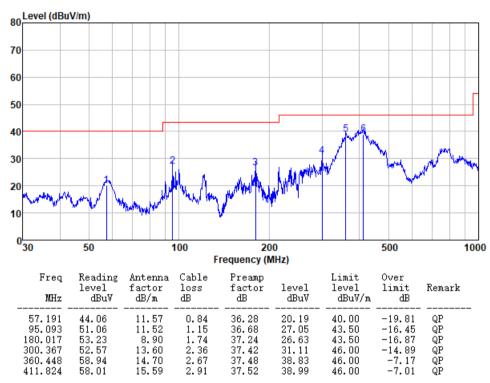
The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and according to 15.31(o) & RSS-Gen 6.13, the test result no need to reported.

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■ Below 1GHz

Horizontal:



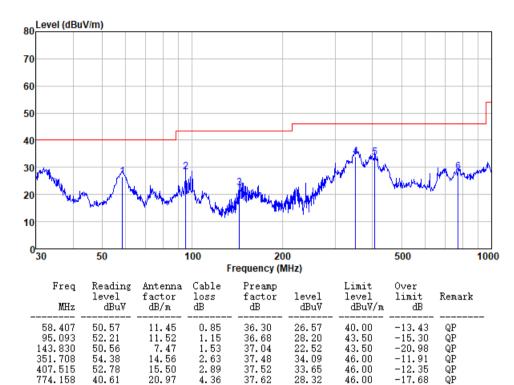
Remarks: level = Reading level + Antenna factor + Cable loss - Preamp Factor



Vertical:

Report No.: GTS201909000203F01

-17.68



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

4.36

37.62

28.32

46.00

774.158

40.61

20.97



■ Above 1GHz

All antennas have test, only the worst case ANT 1 report.

Test mode:		802.11b			channel:	Lowest			
Peak value:									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization	
4824.00	39.47	31.79	8.62	32.10	47.78	74.00	-26.22	Vertical	
7236.00	33.70	36.19	11.68	31.97	49.60	74.00	-24.40	Vertical	
9648.00	32.34	38.07	14.16	31.56	53.01	74.00	-20.99	Vertical	
12060.00	*					74.00		Vertical	
14472.00	*					74.00		Vertical	
16884.00	*					74.00		Vertical	
4824.00	38.27	31.79	8.62	32.10	46.58	74.00	-27.42	Horizontal	
7236.00	33.51	36.19	11.68	31.97	49.41	74.00	-24.59	Horizontal	
9648.00	31.95	38.07	14.16	31.56	52.62	74.00	-21.38	Horizontal	
12060.00	*					74.00		Horizontal	
14472.00	*					74.00		Horizontal	
16884.00	*					74.00		Horizontal	
Average val	ue:								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization	
4824.00	28.62	31.79	8.62	32.10	36.93	54.00	-17.07	Vertical	
7236.00	22.58	36.19	11.68	31.97	38.48	54.00	-15.52	Vertical	
9648.00	22.70	38.07	14.16	31.56	43.37	54.00	-10.63	Vertical	
12060.00	*					54.00		Vertical	
14472.00	*					54.00		Vertical	
16884.00	*					54.00		Vertical	
4824.00	27.85	31.79	8.62	32.10	36.16	54.00	-17.84	Horizontal	
7236.00	22.11	36.19	11.68	31.97	38.01	54.00	-15.99	Horizontal	
9648.00	21.71	38.07	14.16	31.56	42.38	54.00	-11.62	Horizontal	
12060.00	*					54.00		Horizontal	
14472.00	*					54.00		Horizontal	
16884.00	*					54.00		Horizontal	

Remark:

^{1.} Final Level =Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor

^{2. &}quot;*", means this data is the too weak instrument of signal is unable to test.



Test mode:		802.11b			Test channel:			Midd	le	
Peak value:										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Fa	amp ctor B)	Level (dBuV/m)	Limit (dBu		Over Limit (dB)	polarization
4874.00	38.67	31.85	8.66	32	.12	47.06	74.00		-26.94	Vertical
7311.00	33.86	36.37	11.71	31	.91	50.03	74.	00	-23.97	Vertical
9748.00	33.42	38.27	14.25	31	.56	54.38	74.	00	-19.62	Vertical
12185.00	*						74.	00		Vertical
14622.00	*						74.	00		Vertical
17059.00	*						74.	00		Vertical
4874.00	39.25	31.85	8.66	32	.12	47.64	74.	00	-26.36	Horizontal
7311.00	32.55	36.37	11.71	31	.91	48.72	74.	00	-25.28	Horizontal
9748.00	33.34	38.27	14.25	31	.56	54.30	74.	00	-19.70	Horizontal
12185.00	*						74.	00		Horizontal
14622.00	*						74.	00		Horizontal
17059.00	*						74.	00		Horizontal
Average val	ue:									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Fa	amp ctor B)	Level (dBuV/m)	Limit (dBu		Over Limit (dB)	polarization
4874.00	29.57	31.85	8.66	32	.12	37.96	54.	00	-16.04	Vertical
7311.00	22.19	36.37	11.71	31	.91	38.36	54.	00	-15.64	Vertical
9748.00	22.69	38.27	14.25	31	.56	43.65	54.	00	-10.35	Vertical
12185.00	*						54.	00		Vertical
14622.00	*						54.	00		Vertical
17059.00	*						54.	00		Vertical
4874.00	29.40	31.85	8.66	32	.12	37.79	54.	00	-16.21	Horizontal
7311.00	21.65	36.37	11.71	31	.91	37.82	54.	00	-16.18	Horizontal
9748.00	23.06	38.27	14.25	31	.56	44.02	54.	00	-9.98	Horizontal
12185.00	*						54.	00		Horizontal
14622.00	*						54.	00		Horizontal
17059.00	*						54.	00		Horizontal

- 1. Final Level =Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor
- 2. "*", means this data is the too weak instrument of signal is unable to test.



Test mode:		802.11b			Test channel:		Highest			
Peak value:										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Fa	amp ctor (B)	Level (dBuV/m)	Limit (dBu\		Over Limit (dB)	polarization
4924.00	43.71	31.90	8.70	32	.15	52.16	74.00		-21.84	Vertical
7386.00	34.22	36.49	11.76	31	.83	50.64	74.	00	-23.36	Vertical
9848.00	36.50	38.62	14.31	31	.77	57.66	74.	00	-16.34	Vertical
12310.00	*						74.	00		Vertical
14772.00	*						74.	00		Vertical
17234.00	*						74.	00		Vertical
4924.00	43.19	31.90	8.70	32	.15	51.64	74.	00	-22.36	Horizontal
7386.00	33.22	36.49	11.76	31	.83	49.64	74.	00	-24.36	Horizontal
9848.00	32.71	38.62	14.31	31	.77	53.87	74.	00	-20.13	Horizontal
12310.00	*						74.	00		Horizontal
14772.00	*						74.	00		Horizontal
17234.00	*						74.	00		Horizontal
Average val	ue:									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Fa	amp ctor (B)	Level (dBuV/m)	Limit (dBu\		Over Limit (dB)	polarization
4924.00	34.71	31.90	8.70	32	.15	43.16	54.	00	-10.84	Vertical
7386.00	24.16	36.49	11.76	31	.83	40.58	54.	00	-13.42	Vertical
9848.00	25.02	38.62	14.31	31	.77	46.18	54.	00	-7.82	Vertical
12310.00	*						54.	00		Vertical
14772.00	*						54.	00		Vertical
17234.00	*						54.	00		Vertical
4924.00	33.62	31.90	8.70	32	.15	42.07	54.	00	-11.93	Horizontal
7386.00	22.63	36.49	11.76	31	.83	39.05	54.	00	-14.95	Horizontal
9848.00	21.99	38.62	14.31	31	.77	43.15	54.	00	-10.85	Horizontal
12310.00	*						54.	00		Horizontal
14772.00	*						54.	00		Horizontal
17234.00	*		-				54.	00		Horizontal

- 1. Final Level =Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor
- 2. "*", means this data is the too weak instrument of signal is unable to test.



Test mode:		802.11g			Test	channel:		lowes		
Peak value:										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Fa	amp ctor dB)	Level (dBuV/m)	Limit (dBu)		Over Limit (dB)	polarization
4824.00	39.32	31.79	8.62	32	.10	47.63	74.	00	-26.37	Vertical
7236.00	33.60	36.19	11.68	31	.97	49.50	74.	00	-24.50	Vertical
9648.00	32.27	38.07	14.16	31	.56	52.94	74.	00	-21.06	Vertical
12060.00	*						74.	00		Vertical
14472.00	*						74.	00		Vertical
16884.00	*						74.	00		Vertical
4824.00	38.14	31.79	8.62	32	.10	46.45	74.	00	-27.55	Horizontal
7236.00	33.43	36.19	11.68	31	.97	49.33	74.	00	-24.67	Horizontal
9648.00	31.88	38.07	14.16	31	.56	52.55	74.	00	-21.45	Horizontal
12060.00	*						74.	00		Horizontal
14472.00	*						74.	00		Horizontal
16884.00	*						74.	00		Horizontal
Average val	ue:		•							
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Fa	amp ctor dB)	Level (dBuV/m)	Limit (dBu)		Over Limit (dB)	polarization
4824.00	28.48	31.79	8.62	32	.10	36.79	54.	00	-17.21	Vertical
7236.00	22.49	36.19	11.68	31	.97	38.39	54.	00	-15.61	Vertical
9648.00	22.64	38.07	14.16	31	.56	43.31	54.	00	-10.69	Vertical
12060.00	*						54.	00		Vertical
14472.00	*						54.	00		Vertical
16884.00	*						54.	00		Vertica
4824.00	27.73	31.79	8.62	32	.10	36.04	54.	00	-17.96	Horizontal
7236.00	22.03	36.19	11.68	31	.97	37.93	54.	00	-16.07	Horizontal
9648.00	21.65	38.07	14.16	31	.56	42.32	54.	00	-11.68	Horizontal
12060.00	*						54.	00		Horizontal
14472.00	*						54.	00		Horizontal
16884.00	*						54.	00		Horizontal

- 1. Final Level =Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor
- 2. "*", means this data is the too weak instrument of signal is unable to test.



Test mode:		802.11g			Test	channel:		Midd	le	
Peak value:										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Fa	eamp ctor dB)	Level (dBuV/m)	Limit (dBu)		Over Limit (dB)	polarization
4874.00	38.54	31.85	8.66	32	2.12	46.93	74.	00	-27.07	Vertical
7311.00	33.78	36.37	11.71	31	.91	49.95	74.	00	-24.05	Vertical
9748.00	33.37	38.27	14.25	31	.56	54.33	74.	00	-19.67	Vertical
12185.00	*						74.	00		Vertical
14622.00	*						74.	00		Vertical
17059.00	*						74.	00		Vertical
4874.00	39.15	31.85	8.66	32	2.12	47.54	74.	00	-26.46	Horizontal
7311.00	32.48	36.37	11.71	31	.91	48.65	74.	00	-25.35	Horizontal
9748.00	33.28	38.27	14.25	31	.56	54.24	74.	00	-19.76	Horizontal
12185.00	*						74.	00		Horizontal
14622.00	*						74.	00		Horizontal
17059.00	*						74.	00		Horizontal
Average val										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Fa	eamp ctor dB)	Level (dBuV/m)	Limit (dBu		Over Limit (dB)	polarization
4874.00	29.46	31.85	8.66	32	2.12	37.85	54.	00	-16.15	Vertical
7311.00	22.11	36.37	11.71	31	.91	38.28	54.	00	-15.72	Vertical
9748.00	22.64	38.27	14.25	31	.56	43.60	54.	00	-10.40	Vertical
12185.00	*						54.	00		Vertical
14622.00	*						54.	00		Vertical
17059.00	*						54.	00		Vertical
4874.00	29.30	31.85	8.66	32	2.12	37.69	54.	00	-16.31	Horizontal
7311.00	21.58	36.37	11.71	31	.91	37.75	54.	00	-16.25	Horizontal
9748.00	23.01	38.27	14.25	31	.56	43.97	54.	00	-10.03	Horizontal
12185.00	*						54.	00		Horizontal
14622.00	*						54.	00		Horizontal
17059.00	*						54.	00		Horizontal

- 1. Final Level =Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor
- 2. "*", means this data is the too weak instrument of signal is unable to test.



Test mode:		802.11g		Test	channel:	Highe	est	
Peak value:								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4924.00	43.49	31.90	8.70	32.15	51.94	74.00	-22.06	Vertical
7386.00	34.08	36.49	11.76	31.83	50.50	74.00	-23.50	Vertical
9848.00	36.40	38.62	14.31	31.77	57.56	74.00	-16.44	Vertical
12310.00	*					74.00		Vertical
14772.00	*					74.00		Vertical
17234.00	*					74.00		Vertical
4924.00	43.01	31.90	8.70	32.15	51.46	74.00	-22.54	Horizontal
7386.00	33.10	36.49	11.76	31.83	49.52	74.00	-24.48	Horizontal
9848.00	32.62	38.62	14.31	31.77	53.78	74.00	-20.22	Horizontal
12310.00	*					74.00		Horizontal
14772.00	*					74.00		Horizontal
17234.00	*					74.00		Horizontal
Average val								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4924.00	34.51	31.90	8.70	32.15	42.96	54.00	-11.04	Vertical
7386.00	24.03	36.49	11.76	31.83	40.45	54.00	-13.55	Vertical
9848.00	24.93	38.62	14.31	31.77	46.09	54.00	-7.91	Vertical
12310.00	*					54.00		Vertical
14772.00	*					54.00		Vertical
17234.00	*					54.00		Vertical
4924.00	33.45	31.90	8.70	32.15	41.90	54.00	-12.10	Horizontal
7386.00	22.51	36.49	11.76	31.83	38.93	54.00	-15.07	Horizontal
9848.00	21.90	38.62	14.31	31.77	43.06	54.00	-10.94	Horizontal
12310.00	*					54.00		Horizontal
14772.00	*					54.00		Horizontal
17234.00	*					54.00		Horizontal

Final Level =Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor
 "*", means this data is the too weak instrument of signal is unable to test.



Test mode:		802.11n(H	IT20)		Test	channel:		Lowe	st	
Peak value:										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Fa	amp ctor IB)	Level (dBuV/m)	Limit (dBu		Over Limit (dB)	polarization
4824.00	39.13	31.79	8.62	32	.10	47.44	74.00		-26.56	Vertical
7236.00	33.48	36.19	11.68	31	.97	49.38	74.	00	-24.62	Vertical
9648.00	32.19	38.07	14.16	31	.56	52.86	74.	00	-21.14	Vertical
12060.00	*						74.	00		Vertical
14472.00	*						74.	00		Vertical
16884.00	*						74.	00		Vertical
4824.00	37.98	31.79	8.62	32	.10	46.29	74.	00	-27.71	Horizontal
7236.00	33.32	36.19	11.68	31	.97	49.22	74.	00	-24.78	Horizontal
9648.00	31.79	38.07	14.16	31	.56	52.46	74.	00	-21.54	Horizontal
12060.00	*						74.	00		Horizontal
14472.00	*						74.	00		Horizontal
16884.00	*						74.	00		Horizontal
Average val	ue:									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Fa	amp ctor IB)	Level (dBuV/m)	Limit (dBu		Over Limit (dB)	polarization
4824.00	28.30	31.79	8.62	32	.10	36.61	54.	00	-17.39	Vertical
7236.00	22.37	36.19	11.68	31	.97	38.27	54.	00	-15.73	Vertical
9648.00	22.55	38.07	14.16	31	.56	43.22	54.	00	-10.78	Vertical
12060.00	*						54.	00		Vertical
14472.00	*						54.	00		Vertical
16884.00	*						54.	00		Vertical
4824.00	27.58	31.79	8.62	32	.10	35.89	54.	00	-18.11	Horizontal
7236.00	21.92	36.19	11.68	31	.97	37.82	54.	00	-16.18	Horizontal
9648.00	21.57	38.07	14.16	31	.56	42.24	54.	00	-11.76	Horizontal
12060.00	*						54.	00		Horizontal
14472.00	*						54.	00		Horizontal
16884.00	*						54.	00	<u> </u>	Horizontal

- 1. Final Level =Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor
- 2. "*", means this data is the too weak instrument of signal is unable to test.



Test mode:		802.11n(H	IT20)		Test channel:			Midd	le	
Peak value:										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Fa	amp ctor IB)	Level (dBuV/m)	Limit (dBu		Over Limit (dB)	polarization
4874.00	38.39	31.85	8.66	32	.12	46.78	74.	00	-27.22	Vertical
7311.00	33.68	36.37	11.71	31	.91	49.85	74.	00	-24.15	Vertical
9748.00	33.30	38.27	14.25	31	.56	54.26	74.	00	-19.74	Vertical
12185.00	*						74.	00		Vertical
14622.00	*						74.	00		Vertical
17059.00	*						74.	00		Vertical
4874.00	39.02	31.85	8.66	32	.12	47.41	74.	00	-26.59	Horizontal
7311.00	32.40	36.37	11.71	31	.91	48.57	74.	00	-25.43	Horizontal
9748.00	33.22	38.27	14.25	31	.56	54.18	74.	00	-19.82	Horizontal
12185.00	*						74.	00		Horizontal
14622.00	*						74.	00		Horizontal
17059.00	*						74.	00		Horizontal
Average val	ue:									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Fa	amp ctor IB)	Level (dBuV/m)	Limit (dBu		Over Limit (dB)	polarization
4874.00	29.31	31.85	8.66	32	.12	37.70	54.	00	-16.30	Vertical
7311.00	22.02	36.37	11.71	31	.91	38.19	54.	00	-15.81	Vertical
9748.00	22.57	38.27	14.25	31	.56	43.53	54.	00	-10.47	Vertical
12185.00	*						54.	00		Vertical
14622.00	*						54.	00		Vertical
17059.00	*						54.	00		Vertical
4874.00	29.18	31.85	8.66	32	.12	37.57	54.	00	-16.43	Horizontal
7311.00	21.50	36.37	11.71	31	.91	37.67	54.	00	-16.33	Horizontal
9748.00	22.95	38.27	14.25	31	.56	43.91	54.	00	-10.09	Horizontal
12185.00	*						54.	00		Horizontal
14622.00	*						54.	00		Horizontal
17059.00	*						54.	00		Horizontal

- 1. Final Level =Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor
- 2. "*", means this data is the too weak instrument of signal is unable to test.



Test mode:		802.11n(H	IT20)		Test channel: High		Highe	est		
Peak value:										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Fa	amp ctor IB)	Level (dBuV/m)	Limit (dBu\		Over Limit (dB)	polarization
4924.00	43.22	31.90	8.70	32	.15	51.67	74.	00	-22.33	4924.00
7386.00	33.91	36.49	11.76	31	.83	50.33	74.	00	-23.67	7386.00
9848.00	36.28	38.62	14.31	31	.77	57.44	74.	00	-16.56	9848.00
12310.00	*						74.	00		Vertical
14772.00	*						74.	00		Vertical
17234.00	*						74.	00		Vertical
4924.00	42.78	31.90	8.70	32	.15	51.23	74.	00	-22.77	Horizontal
7386.00	32.95	36.49	11.76	31	.83	49.37	74.	00	-24.63	Horizontal
9848.00	32.51	38.62	14.31	31	.77	53.67	74.	00	-20.33	Horizontal
12310.00	*						74.	00		Horizontal
14772.00	*						74.	00		Horizontal
17234.00	*						74.	00		Horizontal
Average val										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Fa	amp ctor IB)	Level (dBuV/m)	Limit (dBu\		Over Limit (dB)	polarization
4924.00	34.26	31.90	8.70	32	.15	42.71	54.	00	-11.29	Vertical
7386.00	23.87	36.49	11.76	31	.83	40.29	54.	00	-13.71	Vertical
9848.00	24.81	38.62	14.31	31	.77	45.97	54.	00	-8.03	Vertical
12310.00	*						54.	00		Vertical
14772.00	*						54.	00		Vertical
17234.00	*						54.	00		Vertical
4924.00	33.23	31.90	8.70	32	.15	41.68	54.	00	-12.32	Horizontal
7386.00	22.36	36.49	11.76	31	.83	38.78	54.	00	-15.22	Horizontal
9848.00	21.79	38.62	14.31	31	.77	42.95	54.0	00	-11.05	Horizontal
12310.00	*						54.	00		Horizontal
14772.00	*						54.	00		Horizontal
17234.00	*						54.	00		Horizontal

¹ Final Level =Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor

^{2 &}quot;*", means this data is the too weak instrument of signal is unable to test.



Test mode:		802.11n(H	T40) Test channel:		annel:	Lowest				
Peak value:				•						
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Pream Facto (dB)	or /	Level (dBuV/m)	Limit (dBu\		Over Limit (dB)	polarization
4844.00	38.42	31.81	8.63	32.1	1	46.75	74.0	00	-27.25	Vertical
7266.00	33.03	36.28	11.69	31.94	1	49.06	74.0	00	-24.94	Vertical
9688.00	31.87	38.13	14.21	31.52	2	52.69	74.0	00	-21.31	Vertical
12060.00	*						74.0	00		Vertical
14472.00	*						74.0	00		Vertical
16884.00	*						74.0	00		Vertical
4844.00	37.38	31.81	8.63	32.1	1	45.71	74.0	00	-28.29	Horizontal
7266.00	32.93	36.28	11.69	31.94	4	48.96	74.0	00	-25.04	Horizontal
9688.00	31.51	38.13	14.21	31.52	2	52.33	74.0	00	-21.67	Horizontal
12060.00	*						74.0	00		Horizontal
14472.00	*						74.0	00		Horizontal
16884.00	*						74.0	00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4844.00	27.65	31.81	8.63	32.11	35.98	54.00	-18.02	Vertical
7266.00	21.94	36.28	11.69	31.94	37.97	54.00	-16.03	Vertical
9688.00	22.25	38.13	14.21	31.52	43.07	54.00	-10.93	Vertical
12060.00	*					54.00		Vertical
14472.00	*					54.00		Vertical
16884.00	*					54.00		Vertical
4844.00	27.02	31.81	8.63	32.11	35.35	54.00	-18.65	Horizontal
7266.00	21.54	36.28	11.69	31.94	37.57	54.00	-16.43	Horizontal
9688.00	21.29	38.13	14.21	31.52	42.11	54.00	-11.89	Horizontal
12060.00	*					54.00		Horizontal
14472.00	*			_		54.00		Horizontal
16884.00	*					54.00		Horizontal

^{1.} Final Level =Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor

^{2. &}quot;*", means this data is the too weak instrument of signal is unable to test.



Test mode:		802.11n(H	IT40)	Test	channel:	Midd	le	
Peak value:								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4874.00	37.80	31.85	8.66	32.12	46.19	74.00	-27.81	Vertical
7311.00	33.31	36.37	11.71	31.91	49.48	74.00	-24.52	Vertical
9748.00	33.03	38.27	14.25	31.56	53.99	74.00	-20.01	Vertical
12185.00	*					74.00		Vertical
14622.00	*					74.00		Vertical
17059.00	*					74.00		Vertical
4874.00	38.52	31.85	8.66	32.12	46.91	74.00	-27.09	Horizontal
7311.00	32.07	36.37	11.71	31.91	48.24	74.00	-25.76	Horizontal
9748.00	32.98	38.27	14.25	31.56	53.94	74.00	-20.06	Horizontal
12185.00	*					74.00		Horizontal
14622.00	*					74.00		Horizontal
17059.00	*					74.00		Horizontal
Average val	ue:							
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4874.00	28.77	31.85	8.66	32.12	37.16	54.00	-16.84	Vertical
7311.00	21.66	36.37	11.71	31.91	37.83	54.00	-16.17	Vertical
9748.00	22.31	38.27	14.25	31.56	43.27	54.00	-10.73	Vertical
12185.00	*					54.00		Vertical
14622.00	*					54.00		Vertical
17059.00	*					54.00		Vertical
4874.00	28.71	31.85	8.66	32.12	37.10	54.00	-16.90	Horizontal
7311.00	21.19	36.37	11.71	31.91	37.36	54.00	-16.64	Horizontal
9748.00	22.71	38.27	14.25	31.56	43.67	54.00	-10.33	Horizontal
12185.00	*					54.00		Horizontal
14622.00	*					54.00		Horizontal
17059.00	*					54.00		Horizontal

^{1.} Final Level =Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor

^{2. &}quot;*", means this data is the too weak instrument of signal is unable to test.



Test mode:		802.11n(H	IT40)	Test channel:		High	Highest		
Peak value:									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	1 41/41	Limit Line (dBuV/m)	Over Limit (dB)	polarization	
4904.00	42.21	31.88	8.68	32.13	50.64	74.00	-23.36	Vertical	
7356.00	33.28	36.45	11.75	31.86	49.62	74.00	-24.38	Vertical	
9808.00	35.82	38.43	14.29	31.68	56.86	74.00	-17.14	Vertical	
12310.00	*					74.00		Vertical	
14772.00	*					74.00		Vertical	
17234.00	*					74.00		Vertical	
4904.00	41.93	31.88	8.68	32.13	50.36	74.00	-23.64	Horizontal	
7356.00	32.39	36.45	11.75	31.86	48.73	74.00	-25.27	Horizontal	
9808.00	32.08	38.43	14.29	31.68	53.12	74.00	-20.88	Horizontal	
12310.00	*					74.00		Horizontal	
14772.00	*					74.00		Horizontal	
17234.00	*					74.00		Horizontal	
Average val						_			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	1 404	Limit Line (dBuV/m)	Over Limit (dB)	polarization	
4904.00	33.33	31.88	8.68	32.13	41.76	54.00	-12.24	Vertical	
7356.00	23.25	36.45	11.75	31.86	39.59	54.00	-14.41	Vertical	
9808.00	24.37	38.43	14.29	31.68	45.41	54.00	-8.59	Vertical	
12310.00	*					54.00		Vertical	
14772.00	*					54.00		Vertical	
17234.00	*					54.00		Vertical	
4904.00	32.43	31.88	8.68	32.13	40.86	54.00	-13.14	Horizontal	
7356.00	21.82	36.45	11.75	31.86	38.16	54.00	-15.84	Horizontal	
9808.00	21.38	38.43	14.29	31.68	42.42	54.00	-11.58	Horizontal	
12310.00	*					54.00		Horizontal	
14772.00	*					54.00		Horizontal	
17234.00	*					54.00		Horizontal	

¹ Final Level =Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor

^{2 &}quot;*", means this data is the too weak instrument of signal is unable to test.



8 Test Setup Photo

Reference to the appendix I for details.

9 EUT Constructional Details

Reference to the appendix II for details.

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