

FCC REPORT

Applicant: Autel Intelligent Tech. Corp., Ltd.

Address of Applicant: 6th - 10th Floor, Building B1, Zhiyuan, xueyuan road, Xili, Nanshan, Shenzhen, China

Equipment Under Test (EUT)

Product Name: AUTEL

Model No.: MaxiSys Elite

Trade Mark: AUTEL

FCC ID: WQ8MAXISYSELITE

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247:2013

Date of sample receipt: September 30, 2014

Date of Test: October 10-29, 2014

Date of report issued: October 31, 2014

Test Result : PASS *

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

Authorized Signature:

A circular blue ink seal for GTS Laboratory Testing is visible. The seal contains the text "GTS", "LABORATORY TESTING", and "GLOBAL UNITED TECHNOLOGY SERVICES CO., LTD." around the perimeter. A handwritten signature in black ink is written across the seal.

Robinson Lo

Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the GTS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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2 Version

Version No.	Date	Description
00	October 31, 2014	Original

Prepared By:

Edward. Pan

Date:

October 31, 2014

Project Engineer

Check By:

Hank. Yan

Date:

October 31, 2014

Reviewer

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4 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203/15.247 (c)	Pass
AC Power Line Conducted Emission	15.207	Pass
Conducted Peak Output Power	15.247 (b)(3)	Pass
Channel Bandwidth	15.247 (a)(2)	Pass
Power Spectral Density	15.247 (e)	Pass
Band Edge	15.247(d)	Pass
Spurious Emission	15.205/15.209	Pass

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

5 General Information

5.1 Client Information

Applicant:	Autel Intelligent Tech. Corp., Ltd.
Address of Applicant:	6th - 10th Floor, Building B1, Zhiyuan, xueyuan road, Xili, Nanshan, Shenzhen, China
Manufacturer:	Autel Intelligent Tech. Corp., Ltd.
Address of Manufacturer:	6th - 10th Floor, Building B1, Zhiyuan, xueyuan road, Xili, Nanshan, Shenzhen, China

5.2 General Description of EUT

Product Name:	AUTOMOTIVE DIAGNOSTIC & ANALYSIS SYSTEM
Model No.:	MaxiSys Elite
Operation Frequency:	802.11b/802.11g/802.11n(HT20) @2.4G Band: 2412MHz~2462MHz 802.11n(HT40) @2.4G Band: 2422MHz~2452MHz 802.11a/802.11n(HT20)/802.11ac(HT20) @5.8G Band: 5745MHz ~ 5825MHz 802.11n(HT40)/ 802.11ac(HT40) @ 5.8G Band: 5755MHz ~ 5795MHz 802.11ac(HT80): 5775MHz
Channel numbers:	802.11b/802.11g/802.11n(HT20) @2.4G Band: 11 802.11n(HT40) @2.4G Band: 7 802.11a/802.11n(HT20)/802.11ac(HT20) @5.8G Band: 5 802.11n(HT40)/ 802.11ac(HT40) @ 5.8G Band: 2 802.11ac(HT80): 1
Channel bandwidth:	802.11a/802.11b/802.11g/802.11n(HT20)/802.11ac(HT20) : 20MHz 802.11n(HT40)/802.11ac(HT40) : 40MHz 802.11ac(HT80): 80MHz
Modulation technology:	802.11b: Direct Sequence Spread Spectrum (DSSS) 802.11a/802.11g/802.11n(H20)/802.11n(H40)/802.11ac(HT20) /802.11ac(HT40) /802.11ac(HT80): Orthogonal Frequency Division Multiplexing (OFDM)
Antenna Type:	Integral Antenna
Antenna gain:	0.68dBi for 2.4G band(declare by Applicant) 0.85dBi for 5G band(declare by Applicant)
Power supply:	AC-DC Power Supply: Model No.:EGTSA36-120300T6I Input: AC 100~240V~50/60Hz 1.0A Output: DC 12.0V 3.0A Or DC 3.7V Li-ion Battery

Operation Frequency each of channel @ 2.4G Band							
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		

Operation Frequency each of channel @ 5.8G Band							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
149	5745MHz	153	5765MHz	155	5775MHz	157	5785MHz
161	5805MHz	165	5825MHz				

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)				
	2.4G Band		5.8G Band		
	802.11b 802.11g 802.11n(HT20)	802.11n(HT40)	802.11a 802.11n(HT20) 802.11ac(HT20)	802.11n(HT40) 802.11ac(HT40)	802.11ac(HT80)
Lowest channel	2412	2422	5745	5755	
Middle channel	2437	2437	5785		5775
Highest channel	2462	2452	5825	5795	

5.3 Test mode

Transmitting mode	Keep the EUT in continuously transmitting mode
<i>Remark: During the test, 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.</i>	

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:

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

Mode	Data rate
802.11a	6Mbps
802.11b	1Mbps
802.11g	6Mbps
802.11n(HT20)	6.5Mbps
802.11n(HT40)	13Mbps
802.11ac(HT20)	6.5Mbps
802.11ac(HT40)	13.5Mbps
802.11ac(HT80)	29.3Mbps

5.4 Description of Support Units

None.

5.5 Test Facility

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

- **CNAS —Registration No.: CNAS L5775**

CNAS has accredited Global United Technology Services Co., Ltd. To ISO/IEC 17025 General Requirements for the competence of testing and calibration laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **FCC —Registration No.: 600491**

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 600491, June 28, 2013.

- **Industry Canada (IC) —Registration No.: 9079A-2**

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-2, June 26, 2013.

5.6 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.

Address: 2nd Floor, Block No.2, Laodong Industrial Zone, Xixiang Road Baoan District, Shenzhen, China

Tel: 0755-27798480

Fax: 0755-27798960

6 Test Instruments list

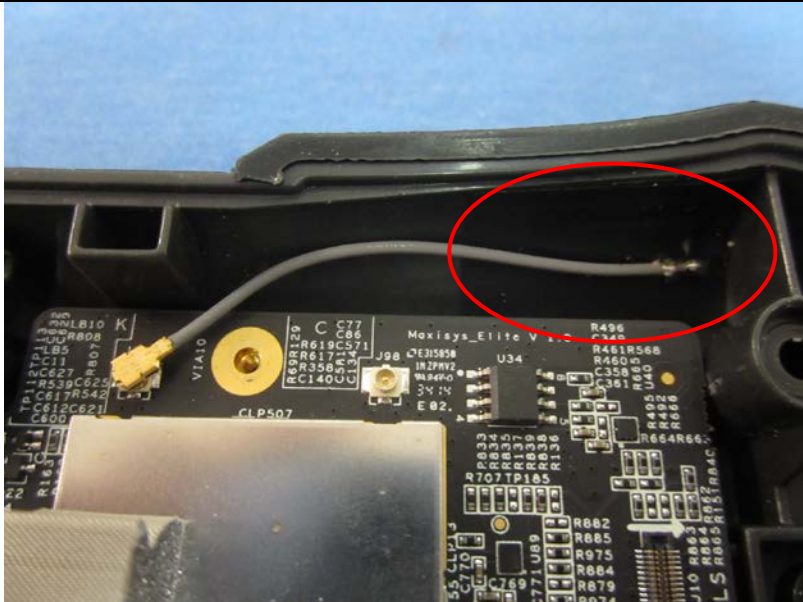
Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	Mar. 29 2013	Mar. 28 2015
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	July 01 2014	June 30 2015
4	Spectrum analyzer	Agilent	E4447A	GTS516	July 01 2014	June 30 2015
5	Spectrum Analyzer	Agilent	E4440A	GTS533	Nov. 20 2013	Nov. 19 2014
6	BiConiLog Antenna	SCHWARZBECK MESS- ELEKTRONIK	VULB9163	GTS214	Feb. 23 2014	Feb. 22 2015
7	Double -ridged waveguide horn	SCHWARZBECK MESS- ELEKTRONIK	9120D-829	GTS208	July 01 2014	June 30 2015
8	Horn Antenna	ETS-LINDGREN	3160	GTS217	Mar. 29 2014	Mar. 28 2015
9	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
10	Coaxial Cable	GTS	N/A	GTS213	Mar. 29 2014	Mar. 28 2015
11	Coaxial Cable	GTS	N/A	GTS211	Mar. 29 2014	Mar. 28 2015
12	Coaxial cable	GTS	N/A	GTS210	Mar. 29 2014	Mar. 28 2015
13	Coaxial Cable	GTS	N/A	GTS212	Mar. 29 2014	Mar. 28 2015
14	Amplifier(100kHz- 3GHz)	HP	8347A	GTS204	July 01 2014	June 30 2015
15	Amplifier(2GHz- 20GHz)	HP	8349B	GTS206	July 01 2014	June 30 2015
16	Amplifier (18-40GHz)	MITEQ	AMF-6F-18004000- 29-8P	GTS534	July 01 2014	June 30 2015
17	Band filter	Amindeon	82346	GTS219	Mar. 29 2014	Mar. 28 2015
18	Constant temperature and humidity box	Oregon Scientific	BA-888	GTS248	Mar. 29 2014	Mar. 28 2015
19	D.C. Power Supply	Instek	PS-3030	GTS232	Mar. 29 2014	Mar. 28 2015
20	Universal radio communication tester	Rohde & Schwarz	CMU200	GTS235	Mar. 29 2014	Mar. 28 2015
21	Splitter	Agilent	11636B	GTS237	Mar. 29 2014	Mar. 28 2015
22	Power Meter	Anritsu	ML2495A	GTS540	July 01 2014	June 30 2015
23	Power Sensor	Anritsu	MA2411B	GTS541	July 01 2014	June 30 2015

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	7.0(L)x3.0(W)x3.0(H)	GTS264	July 01 2014	June 30 2015
2	EMI Test Receiver	Rohde & Schwarz	ESCS30	GTS223	July 01 2014	June 30 2015
3	10dB Pulse Limita	Rohde & Schwarz	N/A	GTS224	July 01 2014	June 30 2015
4	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	July 01 2014	June 30 2015
5	LISN	SCHWARZBECK MESS- ELEKTRONIK	NSLK 8127	GTS226	July 01 2014	June 30 2015
6	Coaxial Cable	GTS	N/A	GTS227	July 01 2014	June 30 2015
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A

General used equipment:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Barometer	ChangChun	DYM3	GTS257	July 08 2014	July 07 2015

7 Test results and Measurement Data

7.1 Antenna requirement:

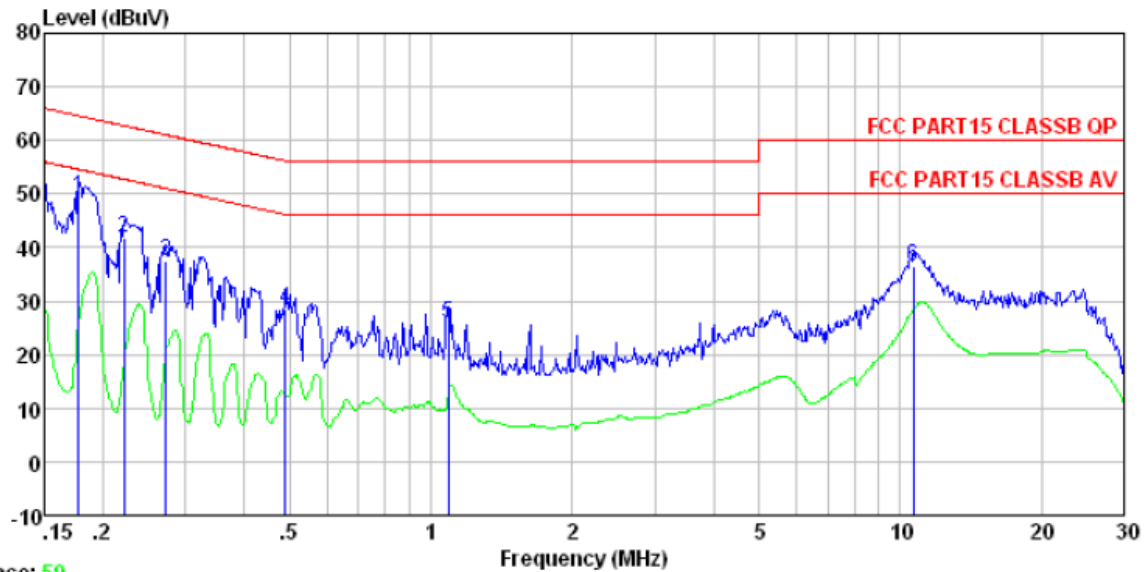
Standard requirement:	FCC Part15 C Section 15.203 /247(c)
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique 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.	
E.U.T Antenna:	
<i>The antenna is Integral antenna, the best case gain of the antenna is 0.68dBi</i>	
 The photograph shows the internal circuit board of a device. A red circle highlights a specific area on the board, which appears to be a small component or a solder joint. The board is populated with various electronic components, including resistors, capacitors, and integrated circuits. The text 'Maxisys_Elite V' is visible on the board, along with various component labels like 'R496', 'R461R568', 'R460D', 'C358', 'R460', 'R461', 'R462', 'R463', 'R464', 'R465', 'R466', 'R467', 'R468', 'R469', 'R470', 'R471', 'R472', 'R473', 'R474', 'R475', 'R476', 'R477', 'R478', 'R479', 'R480', 'R481', 'R482', 'R483', 'R484', 'R485', 'R486', 'R487', 'R488', 'R489', 'R490', 'R491', 'R492', 'R493', 'R494', 'R495', 'R496', 'R497', 'R498', 'R499', 'R500', 'R501', 'R502', 'R503', 'R504', 'R505', 'R506', 'R507', 'R508', 'R509', 'R510', 'R511', 'R512', 'R513', 'R514', 'R515', 'R516', 'R517', 'R518', 'R519', 'R520', 'R521', 'R522', 'R523', 'R524', 'R525', 'R526', 'R527', 'R528', 'R529', 'R530', 'R531', 'R532', 'R533', 'R534', 'R535', 'R536', 'R537', 'R538', 'R539', 'R540', 'R541', 'R542', 'R543', 'R544', 'R545', 'R546', 'R547', 'R548', 'R549', 'R550', 'R551', 'R552', 'R553', 'R554', 'R555', 'R556', 'R557', 'R558', 'R559', 'R560', 'R561', 'R562', 'R563', 'R564', 'R565', 'R566', 'R567', 'R568', 'R569', 'R570', 'R571', 'R572', 'R573', 'R574', 'R575', 'R576', 'R577', 'R578', 'R579', 'R580', 'R581', 'R582', 'R583', 'R584', 'R585', 'R586', 'R587', 'R588', 'R589', 'R590', 'R591', 'R592', 'R593', 'R594', 'R595', 'R596', 'R597', 'R598', 'R599', 'R600', 'R601', 'R602', 'R603', 'R604', 'R605', 'R606', 'R607', 'R608', 'R609', 'R610', 'R611', 'R612', 'R613', 'R614', 'R615', 'R616', 'R617', 'R618', 'R619', 'R620', 'R621', 'R622', 'R623', 'R624', 'R625', 'R626', 'R627', 'R628', 'R629', 'R630', 'R631', 'R632', 'R633', 'R634', 'R635', 'R636', 'R637', 'R638', 'R639', 'R640', 'R641', 'R642', 'R643', 'R644', 'R645', 'R646', 'R647', 'R648', 'R649', 'R650', 'R651', 'R652', 'R653', 'R654', 'R655', 'R656', 'R657', 'R658', 'R659', 'R660', 'R661', 'R662', 'R663', 'R664', 'R665', 'R666', 'R667', 'R668', 'R669', 'R670', 'R671', 'R672', 'R673', 'R674', 'R675', 'R676', 'R677', 'R678', 'R679', 'R680', 'R681', 'R682', 'R683', 'R684', 'R685', 'R686', 'R687', 'R688', 'R689', 'R690', 'R691', 'R692', 'R693', 'R694', 'R695', 'R696', 'R697', 'R698', 'R699', 'R700', 'R701', 'R702', 'R703', 'R704', 'R705', 'R706', 'R707', 'R708', 'R709', 'R710', 'R711', 'R712', 'R713', 'R714', 'R715', 'R716', 'R717', 'R718', 'R719', 'R720', 'R721', 'R722', 'R723', 'R724', 'R725', 'R726', 'R727', 'R728', 'R729', 'R730', 'R731', 'R732', 'R733', 'R734', 'R735', 'R736', 'R737', 'R738', 'R739', 'R740', 'R741', 'R742', 'R743', 'R744', 'R745', 'R746', 'R747', 'R748', 'R749', 'R750', 'R751', 'R752', 'R753', 'R754', 'R755', 'R756', 'R757', 'R758', 'R759', 'R760', 'R761', 'R762', 'R763', 'R764', 'R765', 'R766', 'R767', 'R768', 'R769', 'R770', 'R771', 'R772', 'R773', 'R774', 'R775', 'R776', 'R777', 'R778', 'R779', 'R780', 'R781', 'R782', 'R783', 'R784', 'R785', 'R786', 'R787', 'R788', 'R789', 'R790', 'R791', 'R792', 'R793', 'R794', 'R795', 'R796', 'R797', 'R798', 'R799', 'R800', 'R801', 'R802', 'R803', 'R804', 'R805', 'R806', 'R807', 'R808', 'R809', 'R810', 'R811', 'R812', 'R813', 'R814', 'R815', 'R816', 'R817', 'R818', 'R819', 'R820', 'R821', 'R822', 'R823', 'R824', 'R825', 'R826', 'R827', 'R828', 'R829', 'R830', 'R831', 'R832', 'R833', 'R834', 'R835', 'R836', 'R837', 'R838', 'R839', 'R840', 'R841', 'R842', 'R843', 'R844', 'R845', 'R846', 'R847', 'R848', 'R849', 'R850', 'R851', 'R852', 'R853', 'R854', 'R855', 'R856', 'R857', 'R858', 'R859', 'R860', 'R861', 'R862', 'R863', 'R864', 'R865', 'R866', 'R867', 'R868', 'R869', 'R870', 'R871', 'R872', 'R873', 'R874', 'R875', 'R876', 'R877', 'R878', 'R879', 'R880', 'R881', 'R882', 'R883', 'R884', 'R885', 'R886', 'R887', 'R888', 'R889', 'R890', 'R891', 'R892', 'R893', 'R894', 'R895', 'R896', 'R897', 'R898', 'R899', 'R900', 'R901', 'R902', 'R903', 'R904', 'R905', 'R906', 'R907', 'R908', 'R909', 'R910', 'R911', 'R912', 'R913', 'R914', 'R915', 'R916', 'R917', 'R918', 'R919', 'R920', 'R921', 'R922', 'R923', 'R924', 'R925', 'R926', 'R927', 'R928', 'R929', 'R930', 'R931', 'R932', 'R933', 'R934', 'R935', 'R936', 'R937', 'R938', 'R939', 'R940', 'R941', 'R942', 'R943', 'R944', 'R945', 'R946', 'R947', 'R948', 'R949', 'R950', 'R951', 'R952', 'R953', 'R954', 'R955', 'R956', 'R957', 'R958', 'R959', 'R960', 'R961', 'R962', 'R963', 'R964', 'R965', 'R966', 'R967', 'R968', 'R969', 'R970', 'R971', 'R972', 'R973', 'R974', 'R975', 'R976', 'R977', 'R978', 'R979', 'R980', 'R981', 'R982', 'R983', 'R984', 'R985', 'R986', 'R987', 'R988', 'R989', 'R990', 'R991', 'R992', 'R993', 'R994', 'R995', 'R996', 'R997', 'R998', 'R999', 'R1000'. The board is also labeled with 'CLP507' and 'VIA10'. A yellow connector is visible on the left side of the board.	

7.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207		
Test Method:	ANSI C63.4:2003		
Test Frequency Range:	150KHz to 30MHz		
Class / Severity:	Class B		
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep 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	60	50
* Decreases with the logarithm of the frequency.			
Test setup:	Reference Plane 40cm 80cm LISN AUX Equipment E.U.T. Test table/Insulation plane LISN Filter AC power EMI Receiver Remark: E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m		
Test procedure:	1. 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 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 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 changed according to ANSI C63.4: 2003 on conducted measurement.		
Test Instruments:	Refer to section 6.0 for details		
Test mode:	Refer to section 5.3 for details		
Test results:	Pass		

Measurement data

Line:



Trace: 59

Condition : FCC PART15 CLASSB QP LISN-2013 LINE

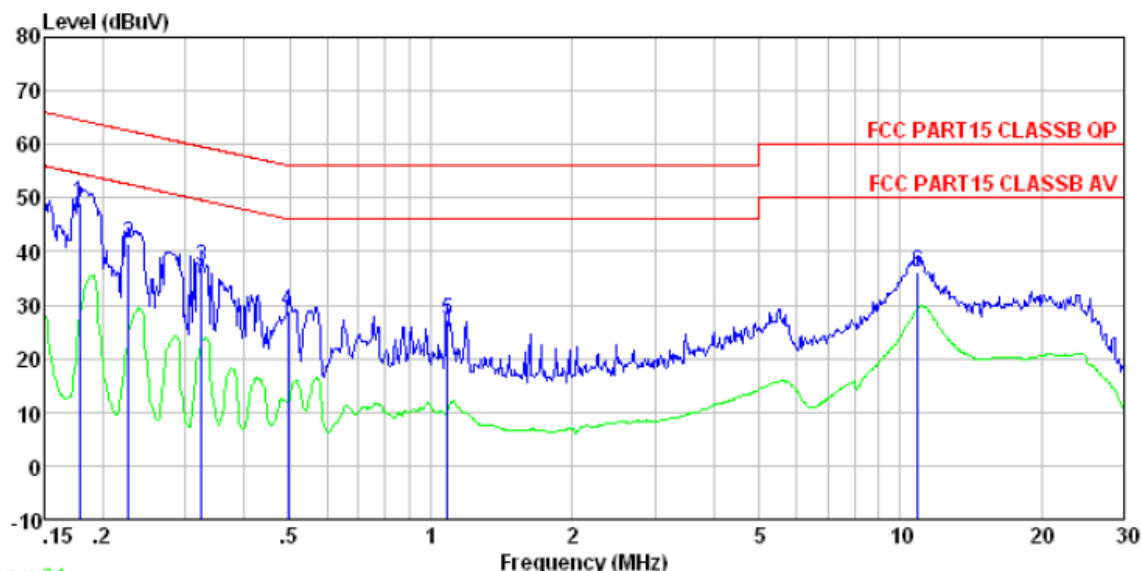
Job No. : 1675RF

Test mode : WiFi mode (2.4G)

Test Engineer: Mike

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.178	49.21	0.14	0.13	49.48	64.59	-15.11	QP
2	0.222	41.72	0.13	0.12	41.97	62.74	-20.77	QP
3	0.273	37.22	0.11	0.10	37.43	61.03	-23.60	QP
4	0.489	28.43	0.12	0.11	28.66	56.19	-27.53	QP
5	1.088	25.60	0.13	0.13	25.86	56.00	-30.14	QP
6	10.676	36.02	0.32	0.19	36.53	60.00	-23.47	QP

Neutral:



Trace: 61

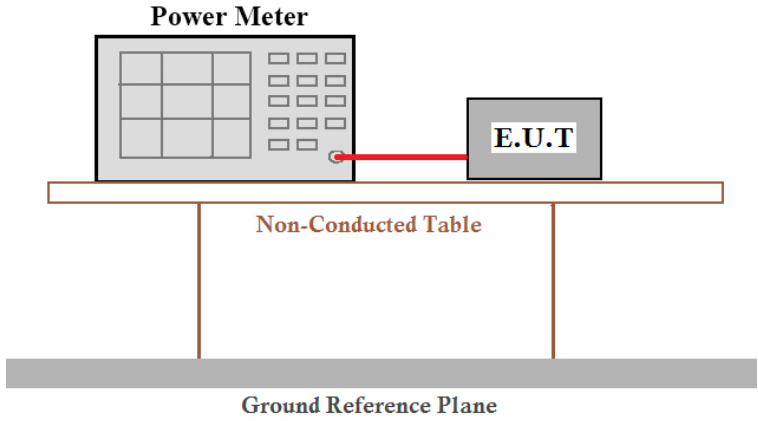
Condition : FCC PART15 CLASSB QP LISN-2013 NEUTRAL
 Job No. : 1675RF
 Test mode : WiFi mode (2.4G)
 Test Engineer: Mike

	Freq	Read	LISN	Cable	Level	Limit	Over	
	MHz	Level	Factor	Loss	dBuV	Line	Limit	Remark
		dBuV	dB	dB		dBuV	dB	
1	0.179	48.87	0.07	0.13	49.07	64.55	-15.48	QP
2	0.227	41.23	0.06	0.12	41.41	62.57	-21.16	QP
3	0.325	36.92	0.06	0.10	37.08	59.57	-22.49	QP
4	0.497	28.55	0.06	0.11	28.72	56.05	-27.33	QP
5	1.082	27.11	0.08	0.13	27.32	56.00	-28.68	QP
6	10.905	35.57	0.27	0.19	36.03	60.00	-23.97	QP

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

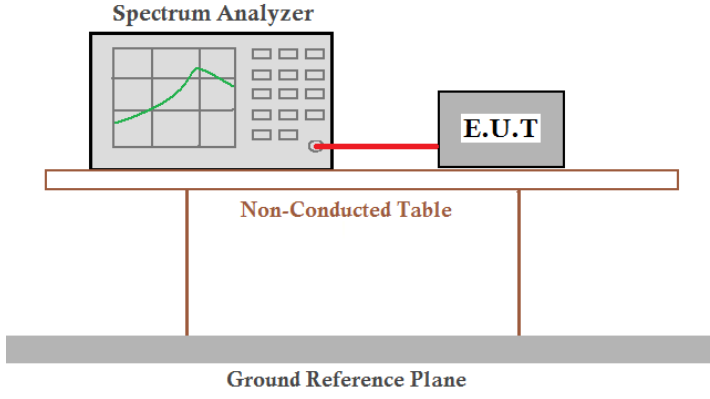
Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	ANSI C63.4:2003 and KDB558074 D01 DTS Meas Guidance V03
Limit:	30dBm
Test setup:	 The diagram illustrates the test setup. A Power Meter is connected to an E.U.T (Equipment Under Test) via a red cable. Both the Power Meter and the E.U.T are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Measurement Data

2.4G Band						
Test CH	Peak Output Power (dBm)				Limit (dBm)	Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)		
Lowest	12.44	12.40	11.08	12.91	30.00	Pass
Middle	13.77	13.77	12.38	13.70		
Highest	14.89	14.80	13.27	14.53		

5.8G Band								
Test CH	Peak Output Power (dBm)						Limit (dBm)	Result
	802.11a	802.11n(H T20)	802.11ac(HT20)	802.11n(H T40)	802.11ac(HT40)	802.11ac(HT80)		
Lowest	12.88	12.53	12.45	12.96	13.08		30.00	Pass
Middle	12.06	12.08	12.12			12.78		
Highest	11.38	11.43	11.68	12.50	12.41			

7.4 Channel Bandwidth

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	ANSI C63.4:2003 and KDB558074 D01 DTS Meas Guidance V03
Limit:	>500KHz
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

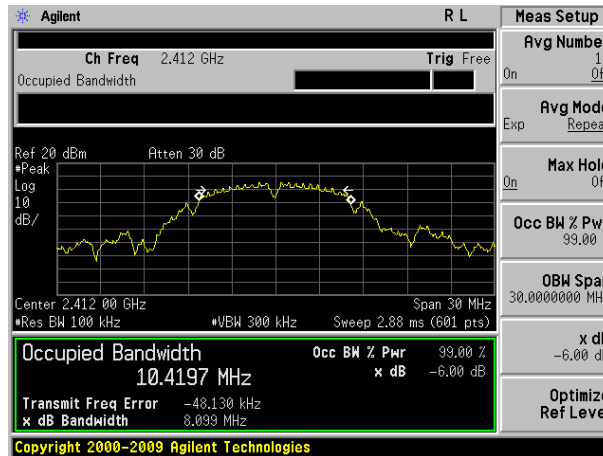
Measurement Data

2.4G Band						
Test CH	Channel Bandwidth (MHz)				Limit (KHz)	Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)		
Lowest	8.099	16.391	17.615	35.838	>500	Pass
Middle	8.067	16.402	17.636	36.130		
Highest	8.068	16.397	17.644	36.381		

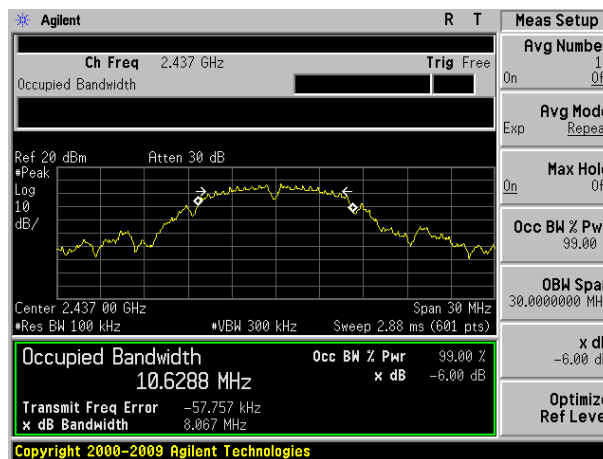
5.8G Band								
Test CH	Channel Bandwidth (MHz)						Limit (KHz)	Result
	802.11a	802.11n(H T20)	802.11ac(HT20)	802.11n(H T40)	802.11ac(HT40)	802.11ac(HT80)		
Lowest	16.448	17.732	17.725	36.497	36.527		>500	Pass
Middle	16.398	17.738	17.745			76.365		
Highest	16.433	17.748	17.738	36.508	36.436			

Test plot as follows:

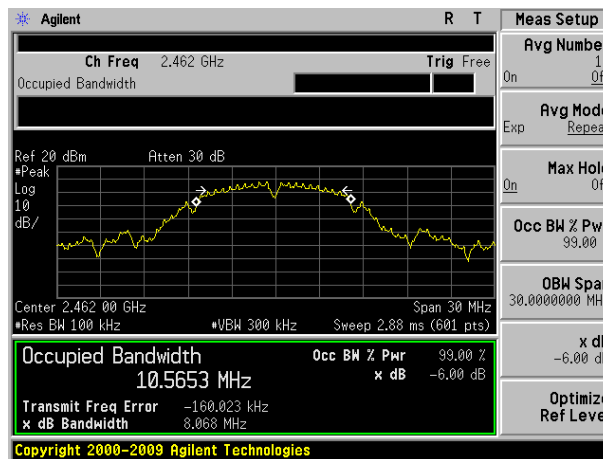
Test mode:	802.11b
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Lowest channel

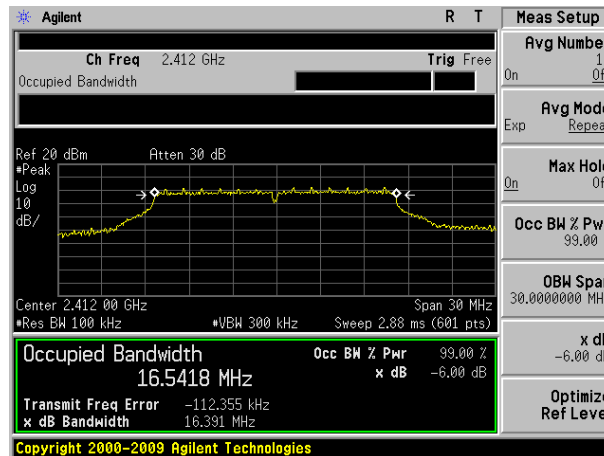


Middle channel

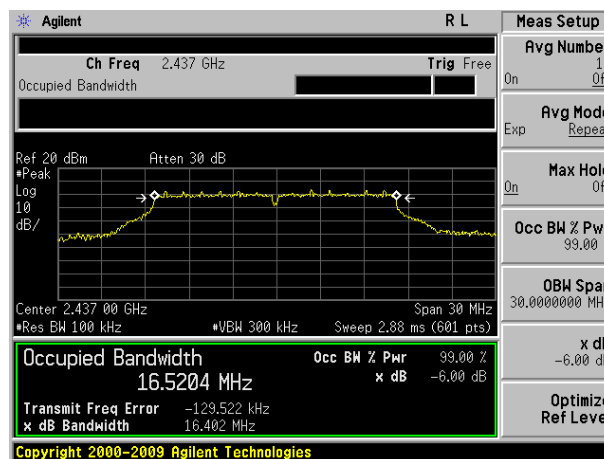


Highest channel

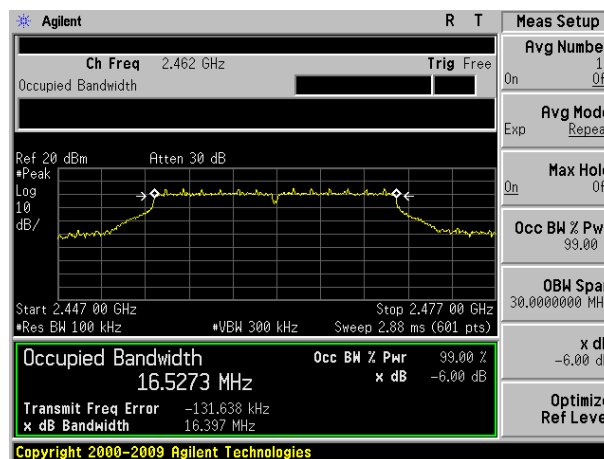
Test mode:	802.11g
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Lowest channel

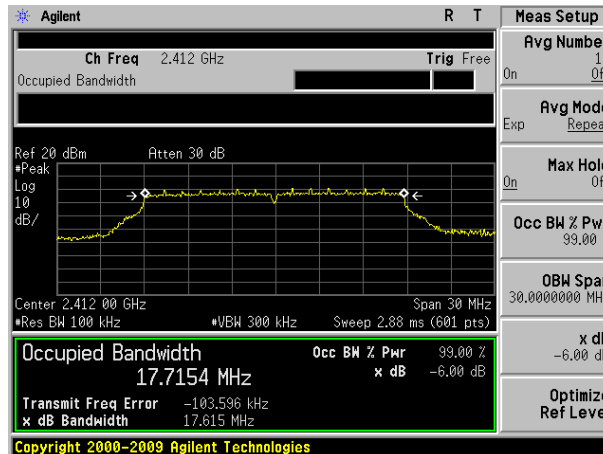


Middle channel

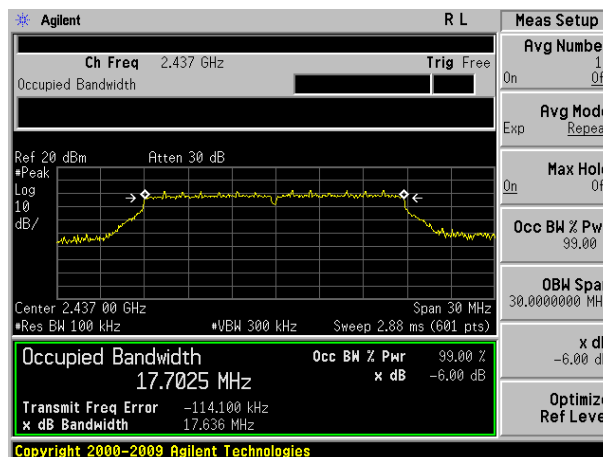


Highest channel

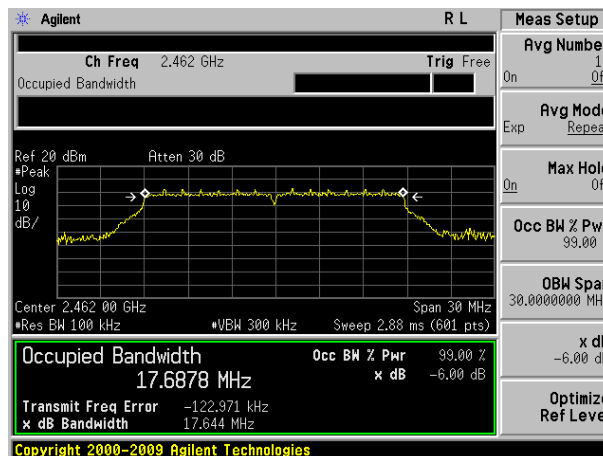
Test mode:	802.11n(HT20) @ 2.4G Band
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Lowest channel

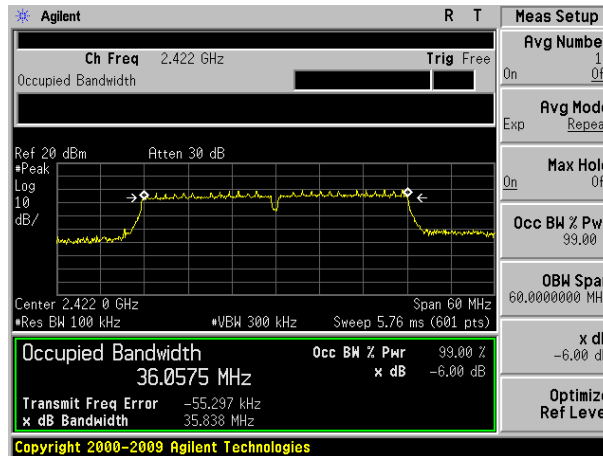


Middle channel

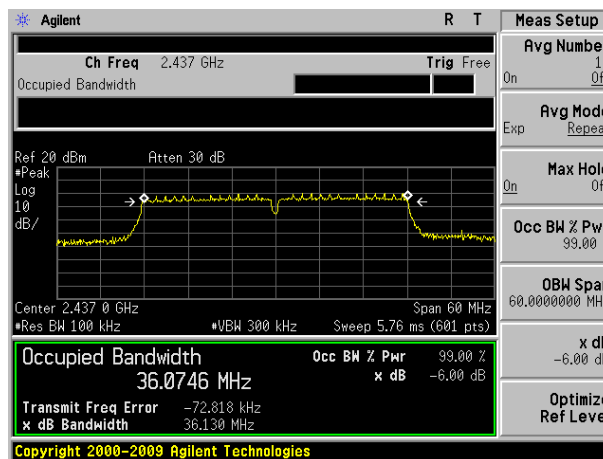


Highest channel

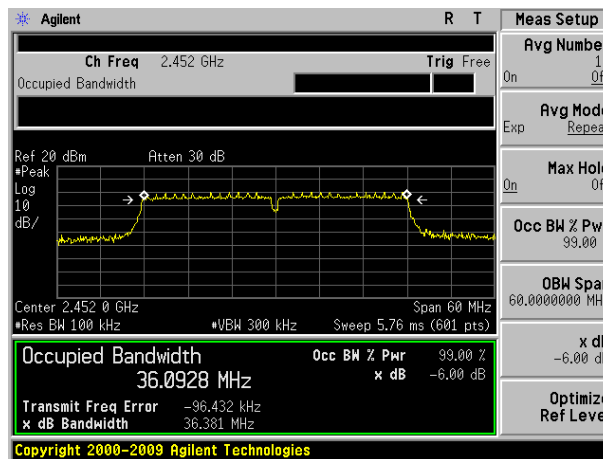
Test mode:	802.11n(HT40) @ 2.4G Band
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Lowest channel

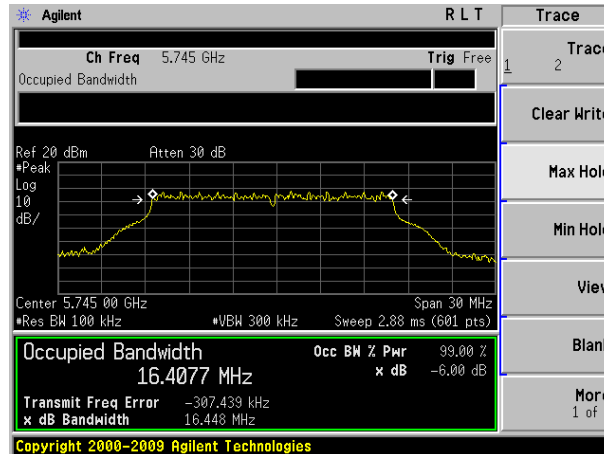


Middle channel

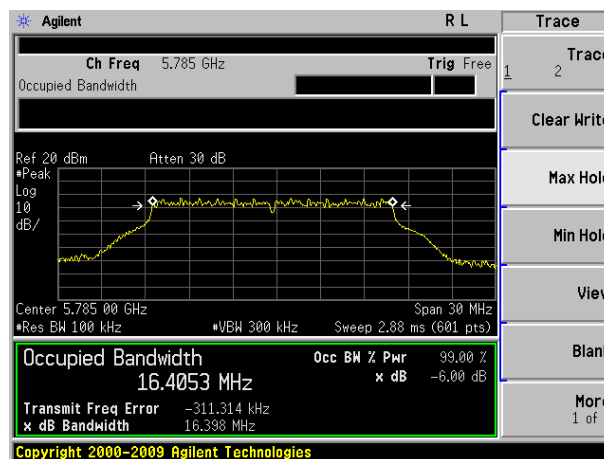


Highest channel

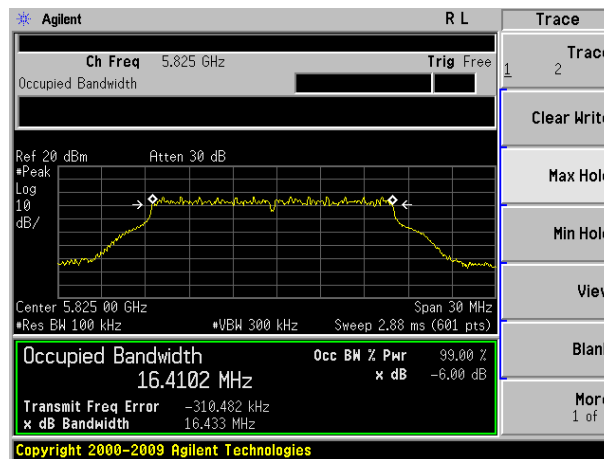
Test mode:	802.11a
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Lowest channel

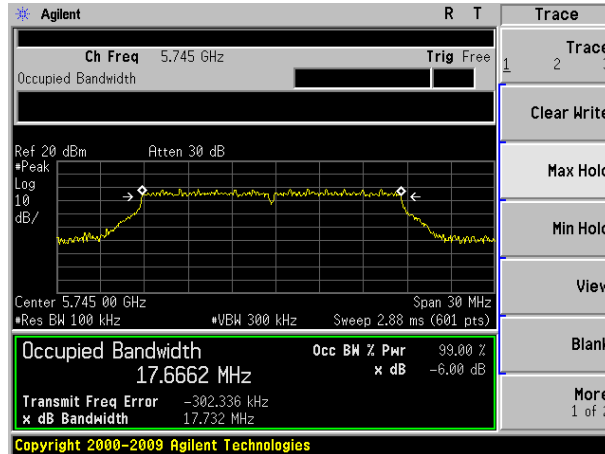


Middle channel

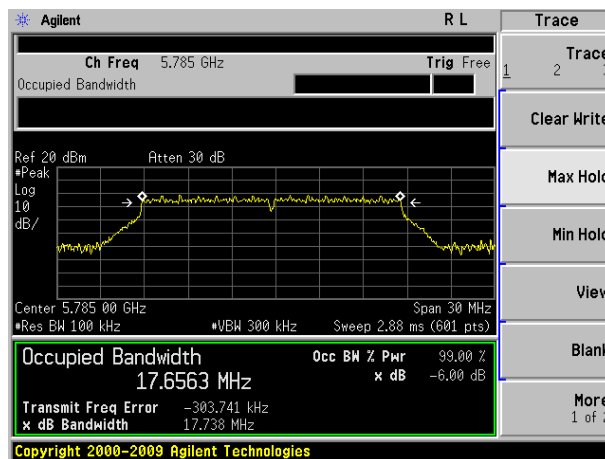


Highest channel

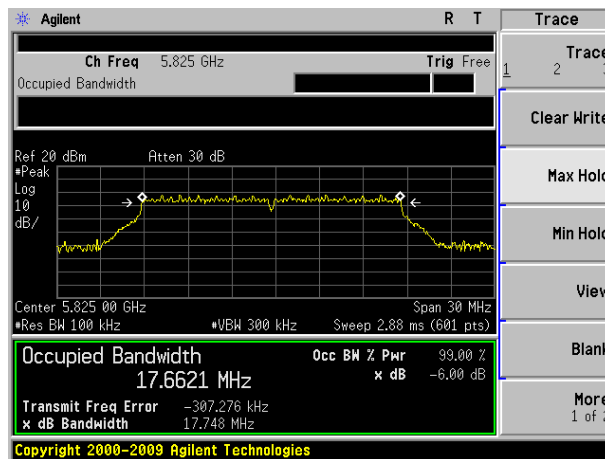
Test mode:	802.11n(HT20) @ 5.8G Band
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Lowest channel

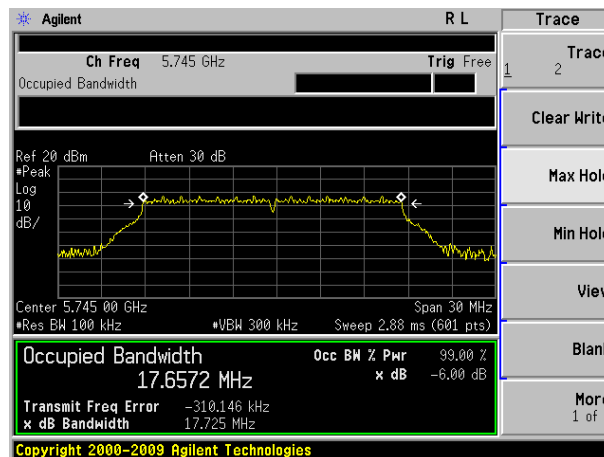


Middle channel

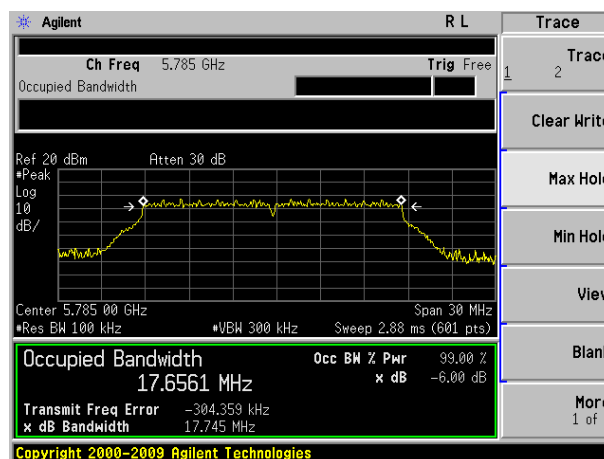


Highest channel

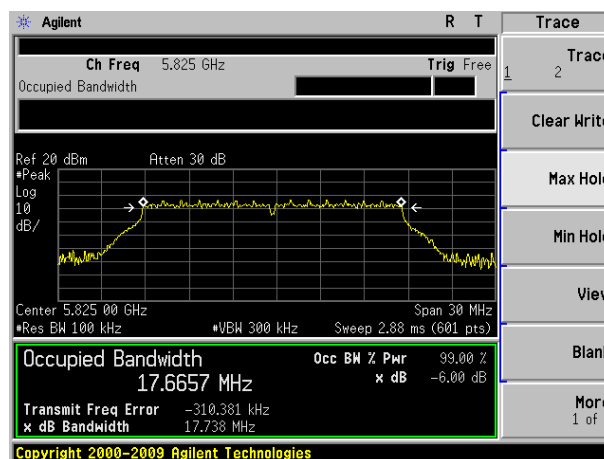
Test mode:	802.11ac(HT20)
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Lowest channel

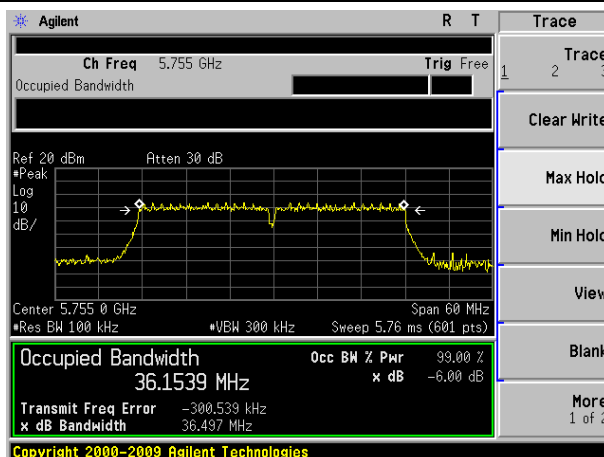


Middle channel

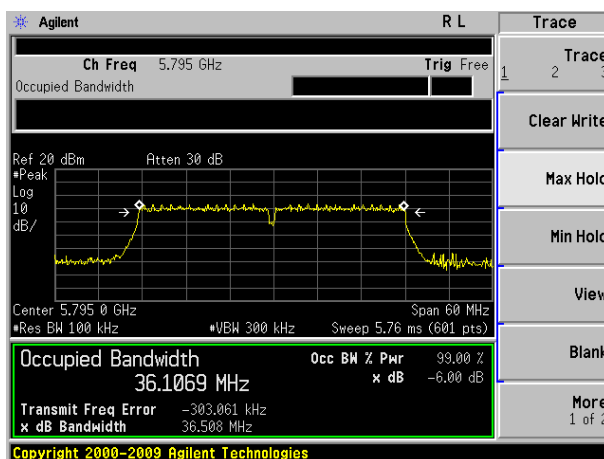


Highest channel

Test mode:	802.11n(HT40) @ 5.8G Band
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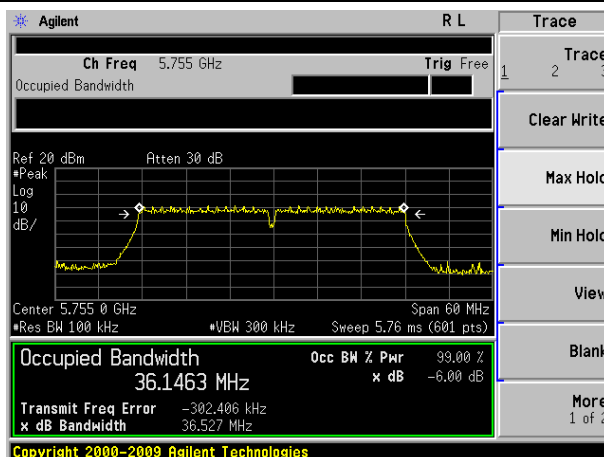


Lowest channel

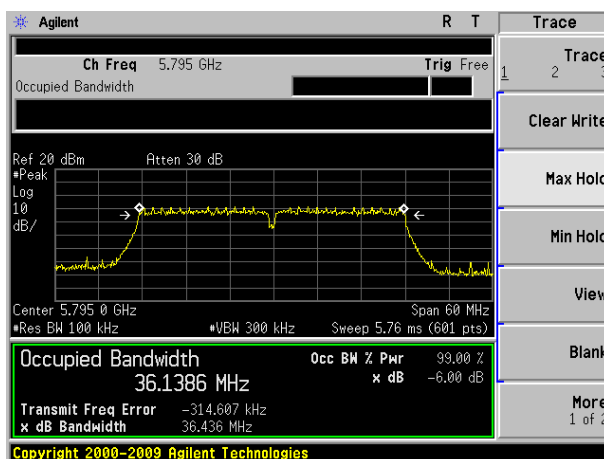


Highest channel

Test mode:	802.11ac(HT40)
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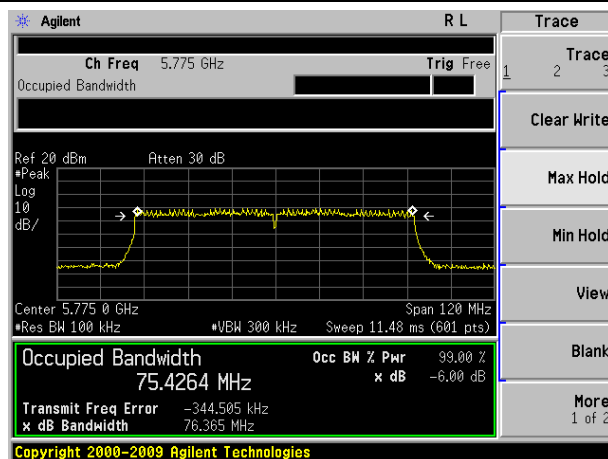


Lowest channel



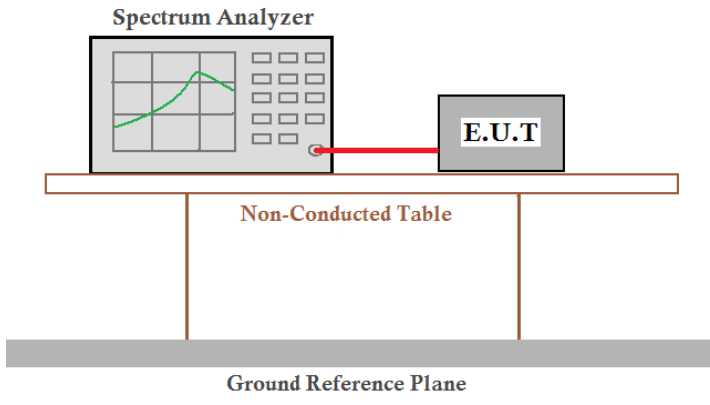
Highest channel

Test mode:	802.11ac(HT80)
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Middle channel

7.5 Power Spectral Density

Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	ANSI C63.4:2003 and KDB558074 D01 DTS Meas Guidance V03
Limit:	8dBm
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

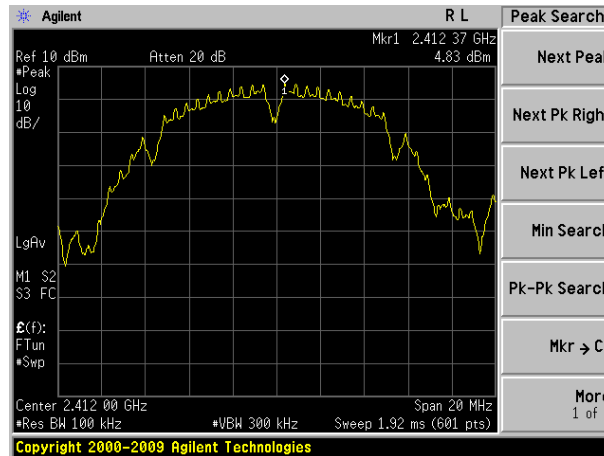
Measurement Data

2.4G Band						
Test CH	Power Spectral Density (dBm)				Limit (dBm/3kHz)	Result
	802.11b	802.11g	802.11n(HT20)	802.11n(HT40)		
Lowest	4.83	1.38	-0.06	-1.52	8.00	Pass
Middle	6.14	2.91	1.47	-1.04		
Highest	6.87	3.31	2.00	-0.57		

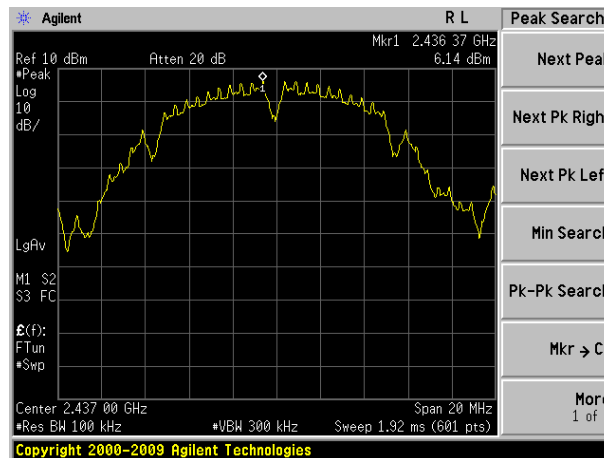
5.8G Band							
Test CH	Power Spectral Density (dBm)						Result
	802.11a	802.11n(HT20)	802.11ac(HT20)	802.11n(HT40)	802.11ac(HT40)	802.11ac(HT80)	
Lowest	-2.55	-1.38	-2.73	-6.47	-8.95		8.00
Middle	-2.69	-1.55	-2.78			-10.53	
Highest	-3.12	-1.88	-3.20	-6.56	-8.85		

Test plot as follows:

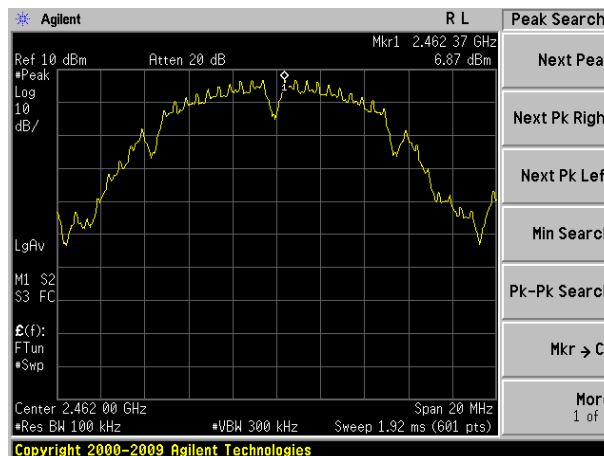
Test mode:	802.11b
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Lowest channel

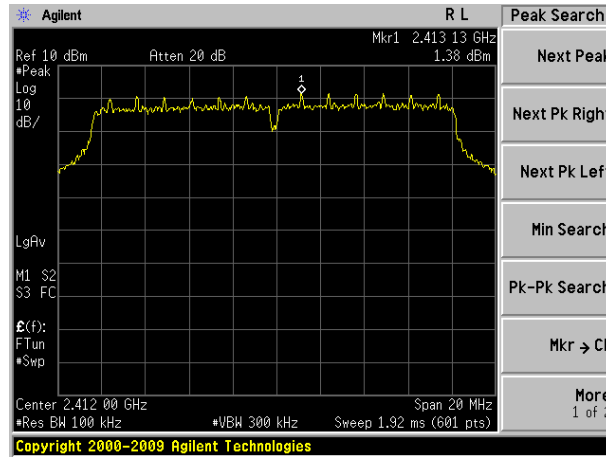


Middle channel

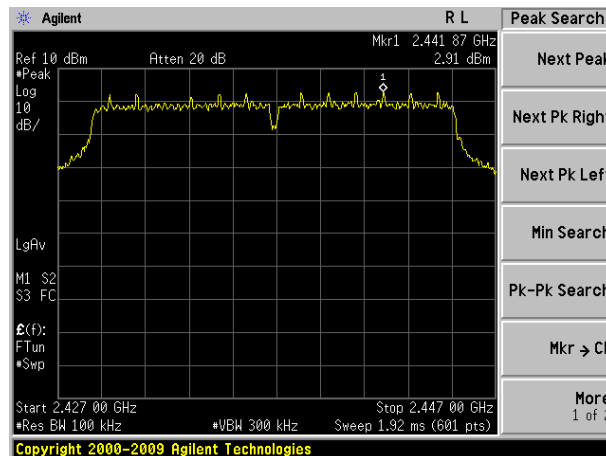


Highest channel

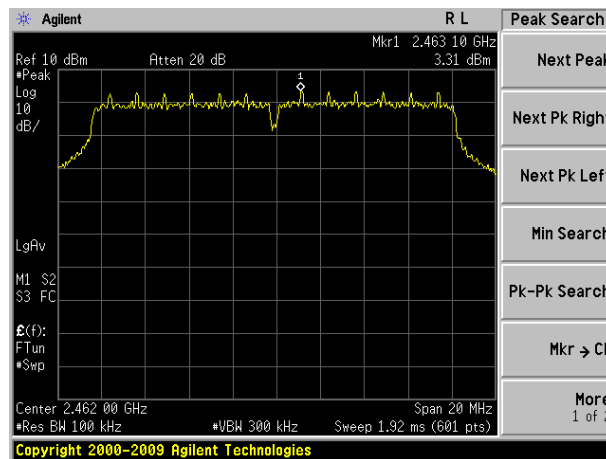
Test mode:	802.11g
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Lowest channel

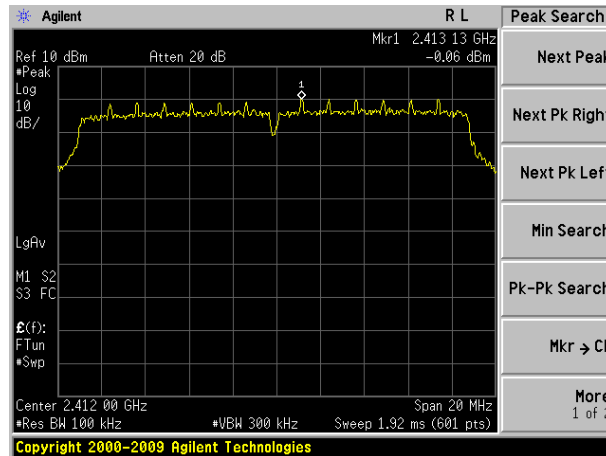


Middle channel

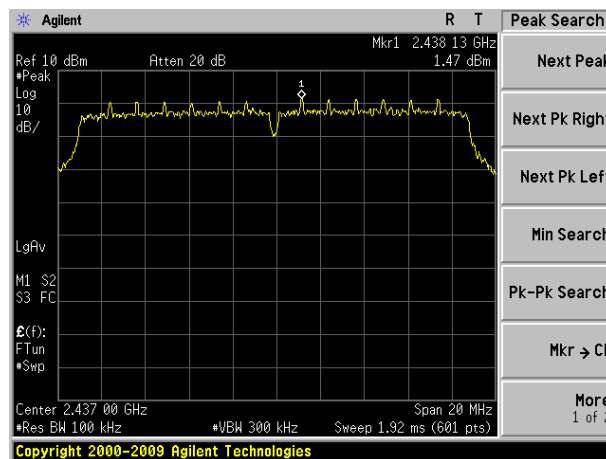


Highest channel

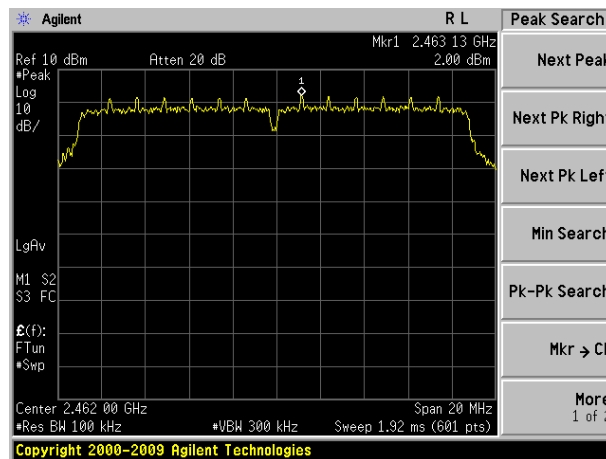
Test mode:	802.11n(HT20) @ 2.4G Band
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Lowest channel

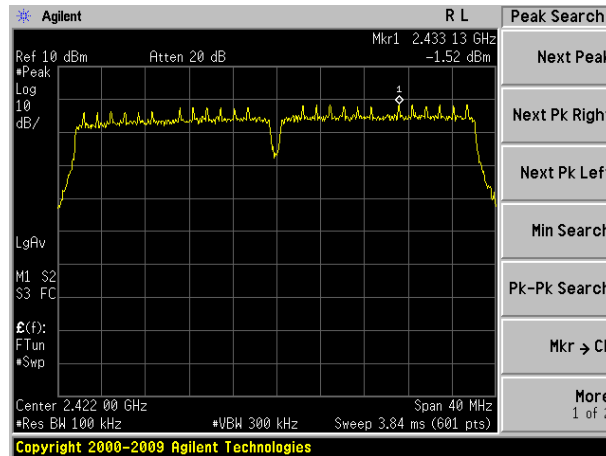


Middle channel

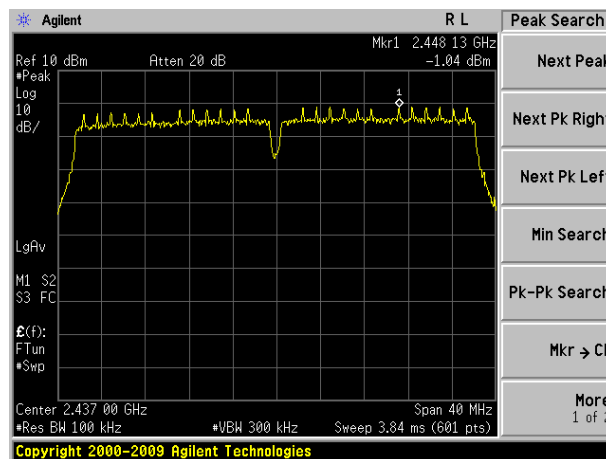


Highest channel

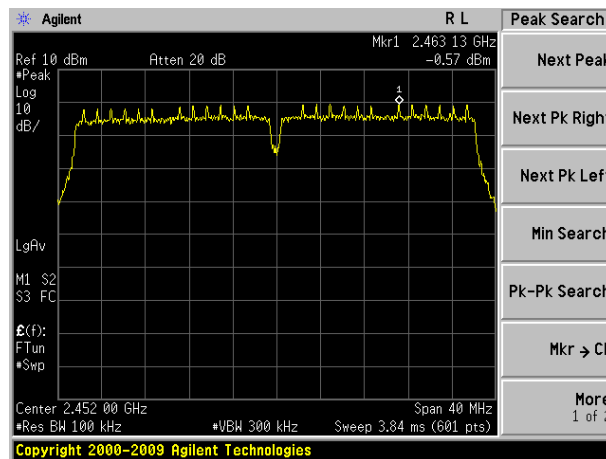
Test mode:	802.11n(HT40) @ 2.4G Band
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Lowest channel

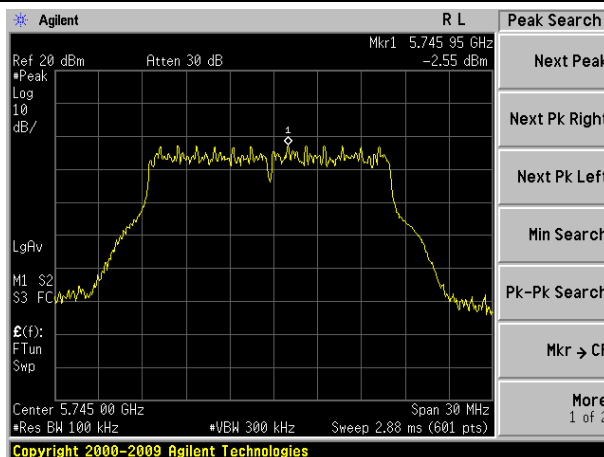


Middle channel

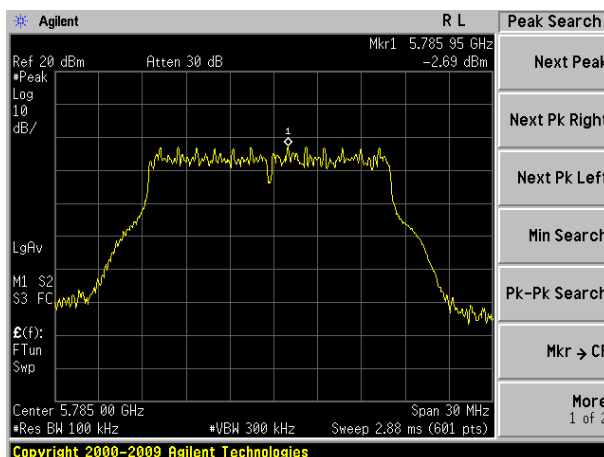


Highest channel

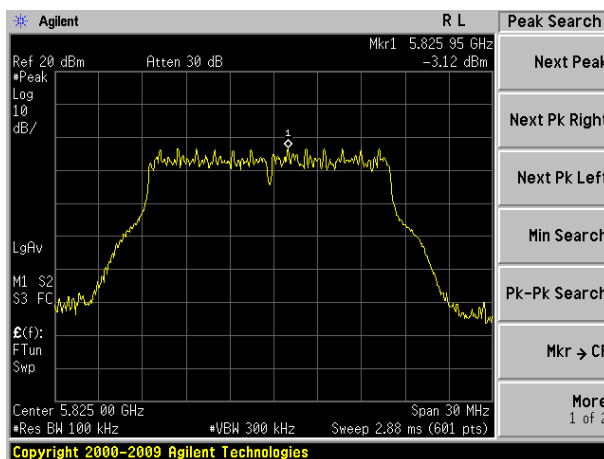
Test mode:	802.11a
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Lowest channel

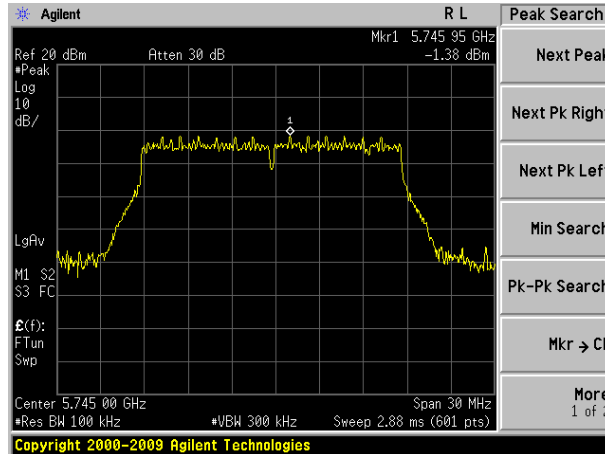


Middle channel

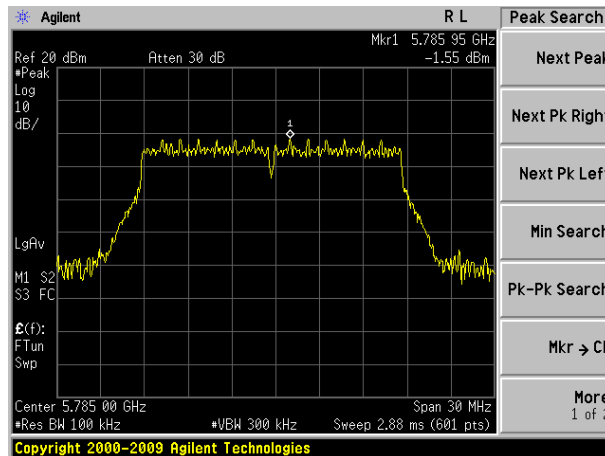


Highest channel

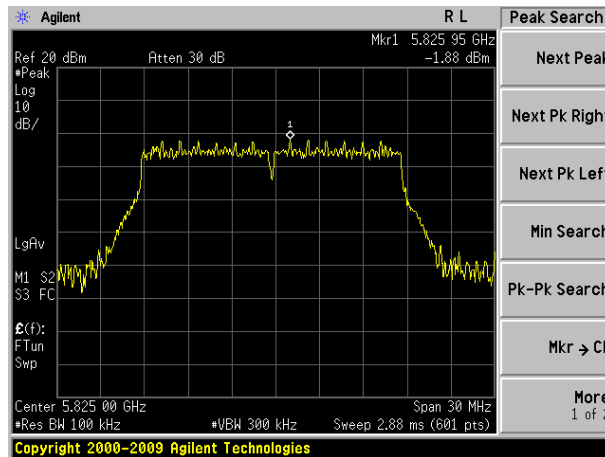
Test mode:	802.11n(HT20) @ 5.8G Band
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Lowest channel

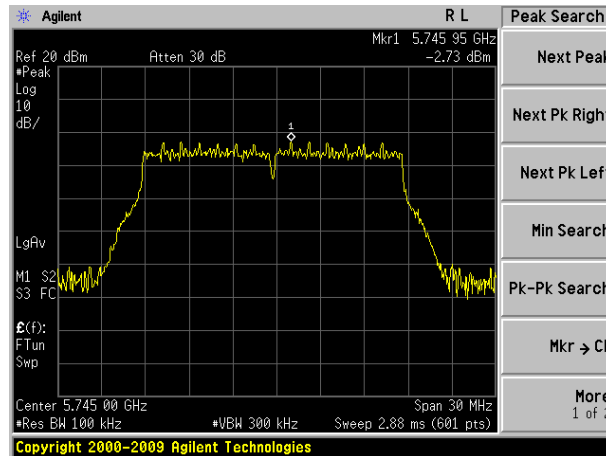


Middle channel

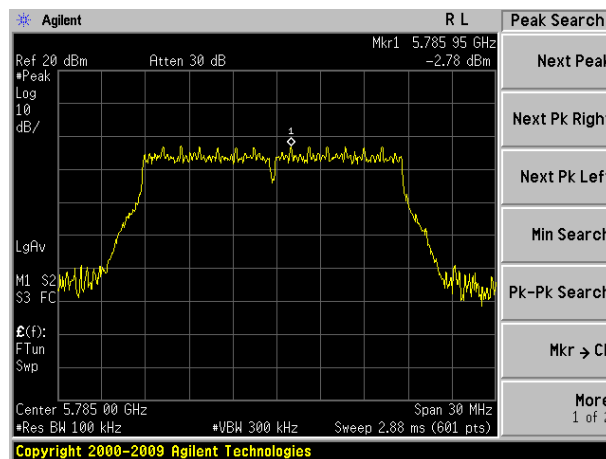


Highest channel

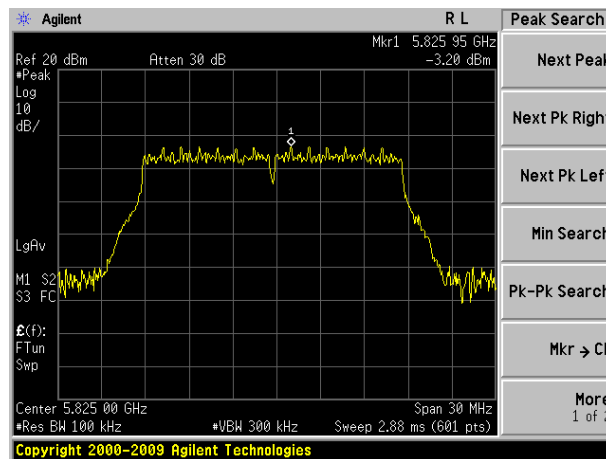
Test mode:	802.11ac(HT20)
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Lowest channel

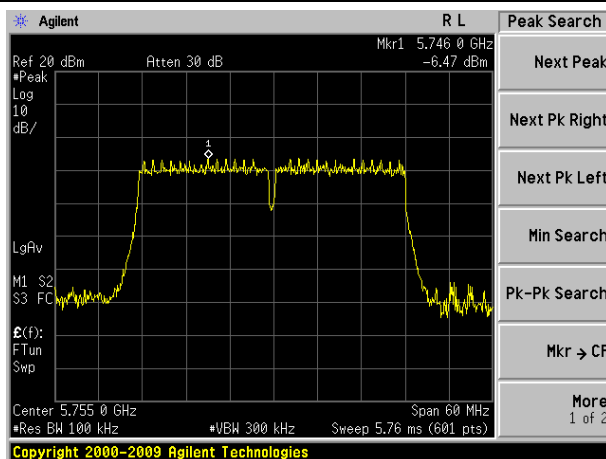


Middle channel

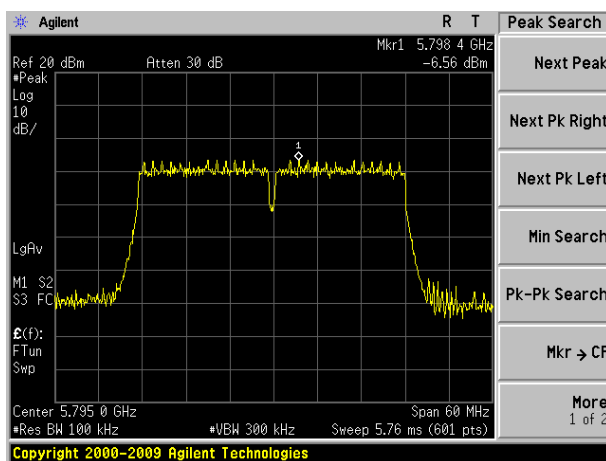


Highest channel

Test mode:	802.11n(HT40) @ 5.8G Band
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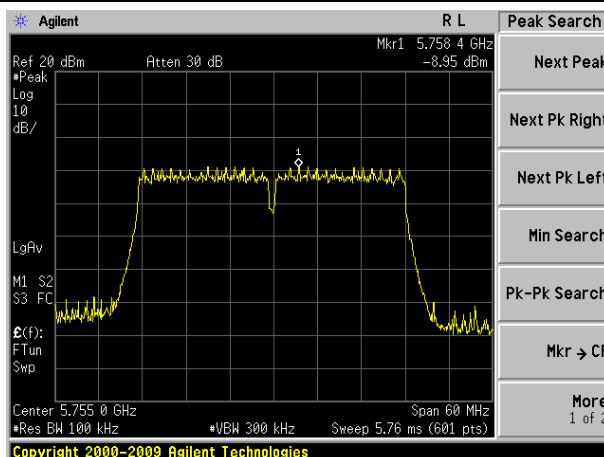


Lowest channel

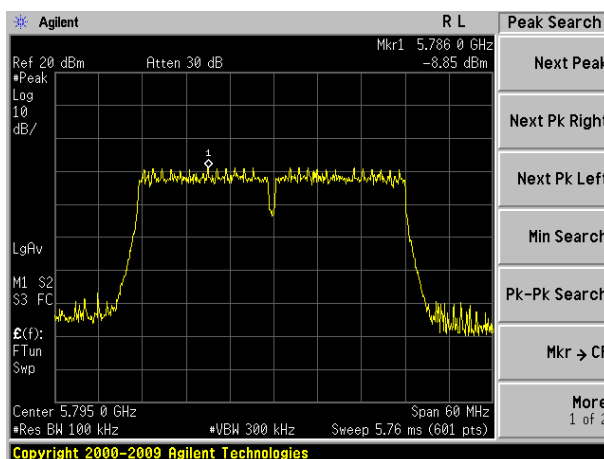


Highest channel

Test mode:	802.11ac(HT40)
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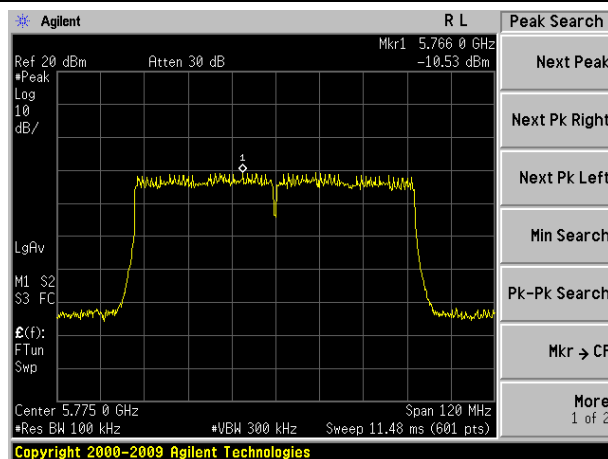


Lowest channel



Highest channel

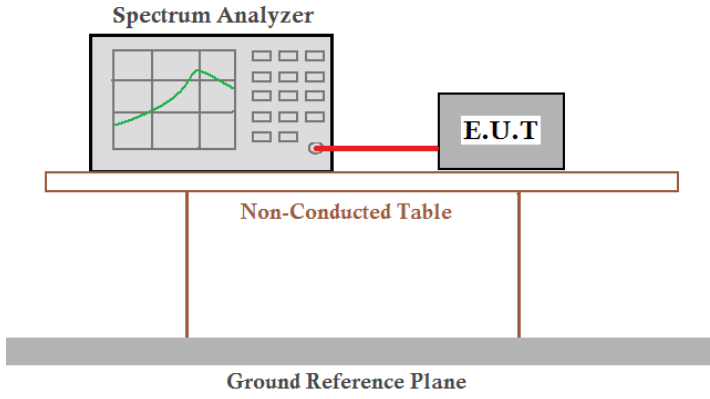
Test mode:	802.11ac(HT80)
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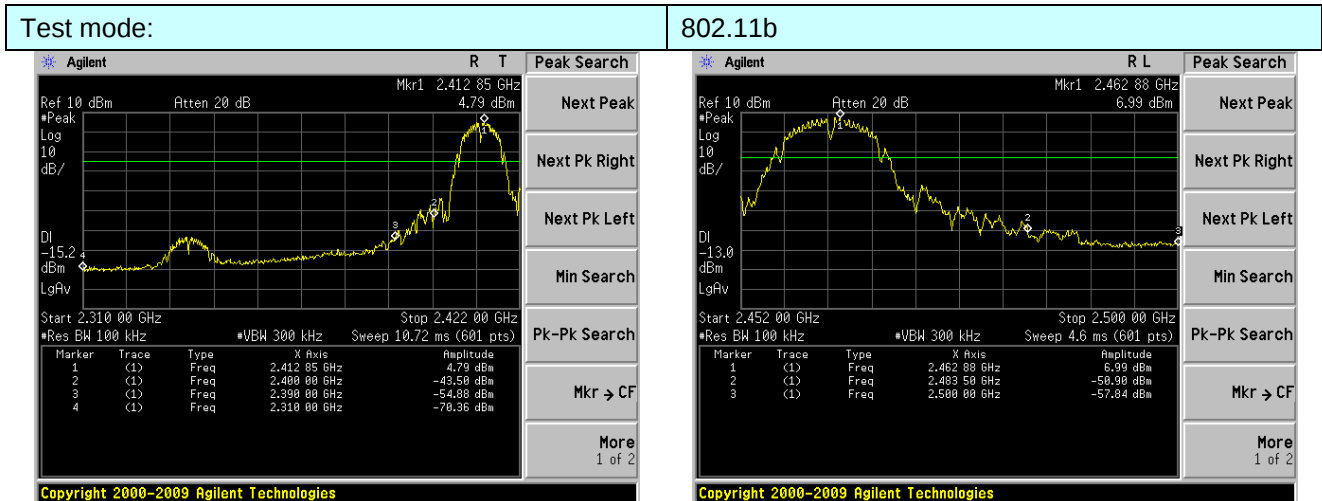
Middle channel

7.6 Band edges

7.6.1 Conducted Emission Method

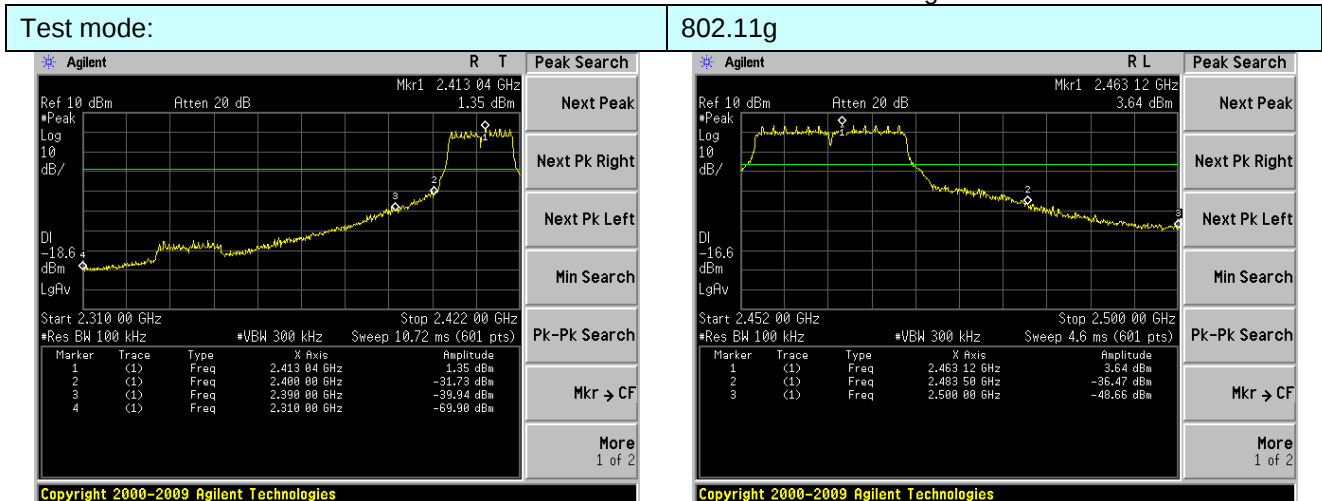
Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.4:2003 and KDB558074 D01 DTS Meads Guidance V03
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional 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:	 The diagram illustrates the test setup for conducted emission measurement. A Spectrum Analyzer is connected via a red cable to an E.U.T. (Equipment Under Test). Both are placed on a Non-Conducted Table, which is supported by two vertical legs. Below the table is a Ground Reference Plane, represented by a thick grey bar.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Test plot as follows:



Lowest channel

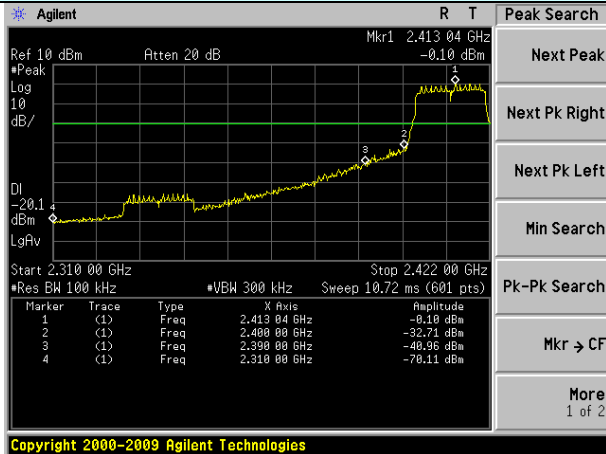
Highest channel



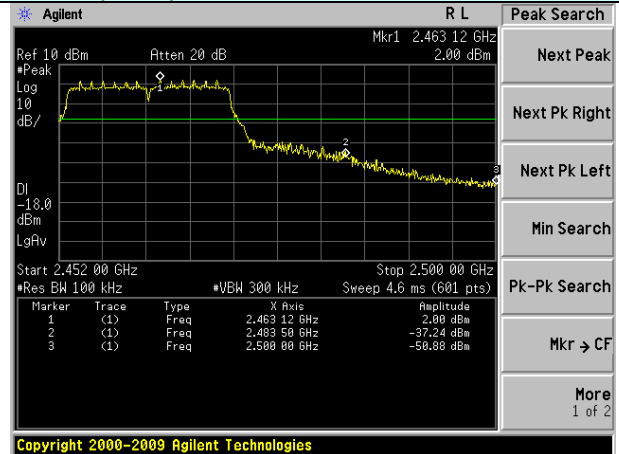
Lowest channel

Highest channel

Test mode: 802.11n(HT20) @ 2.4G Band

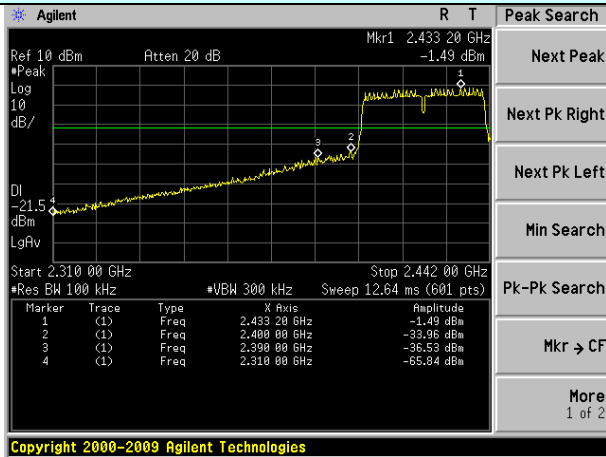


Lowest channel

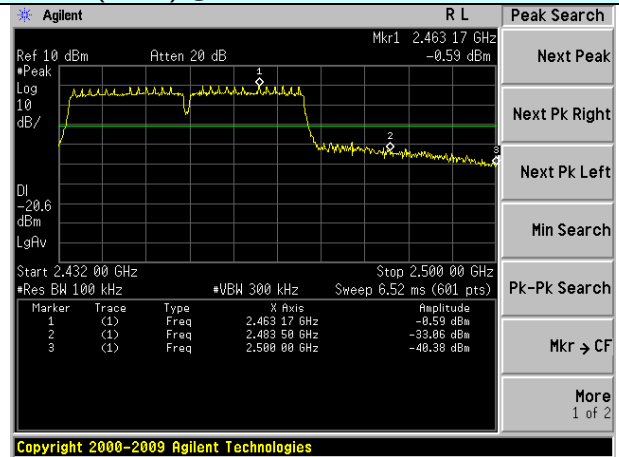


Highest channel

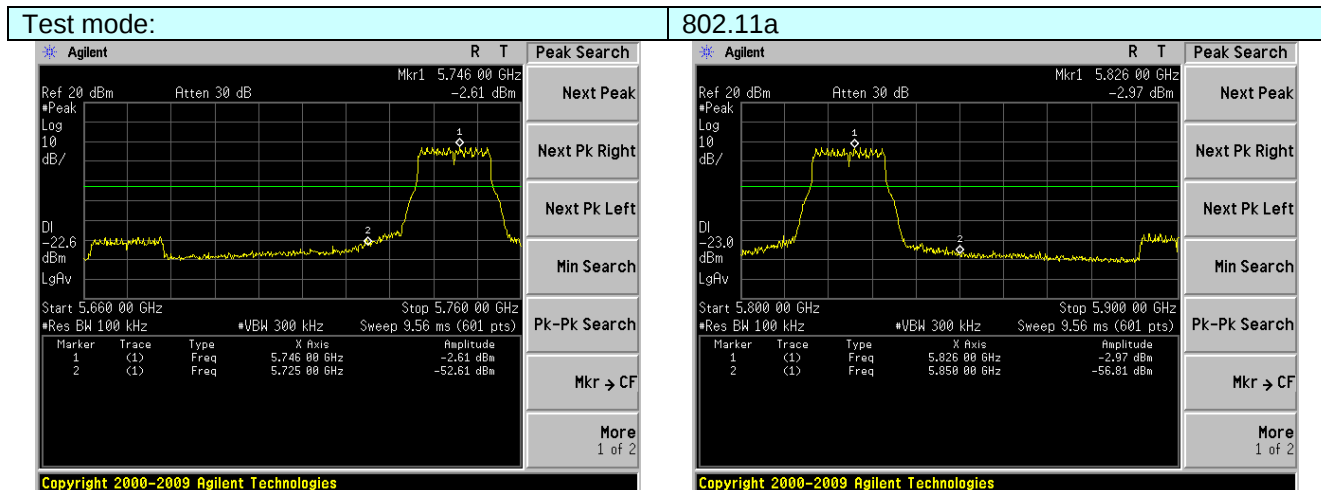
Test mode: 802.11n(HT40) @ 2.4G Band



Lowest channel

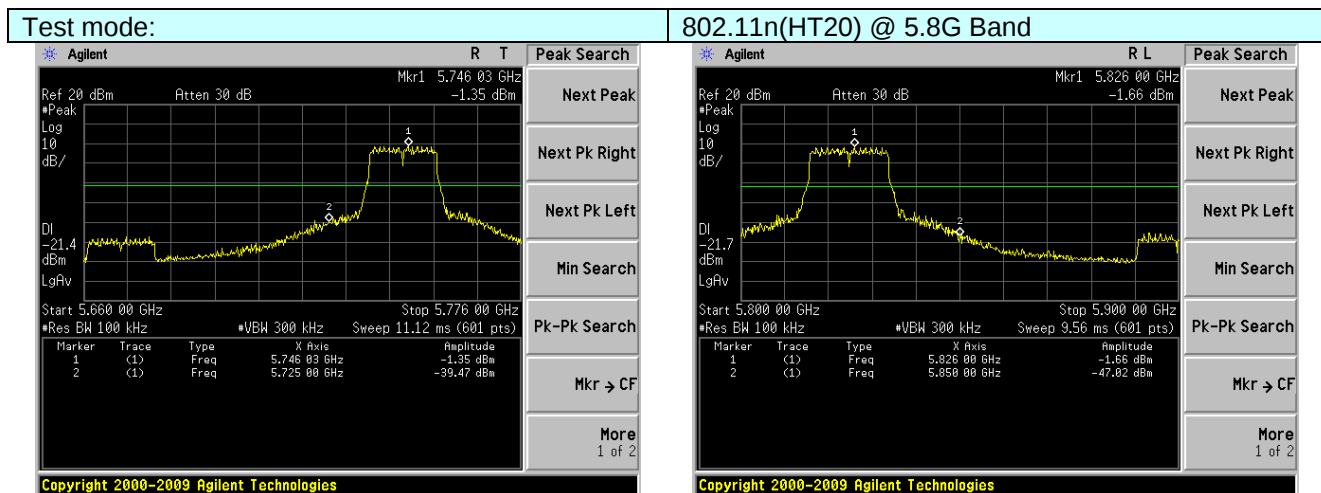


Highest channel



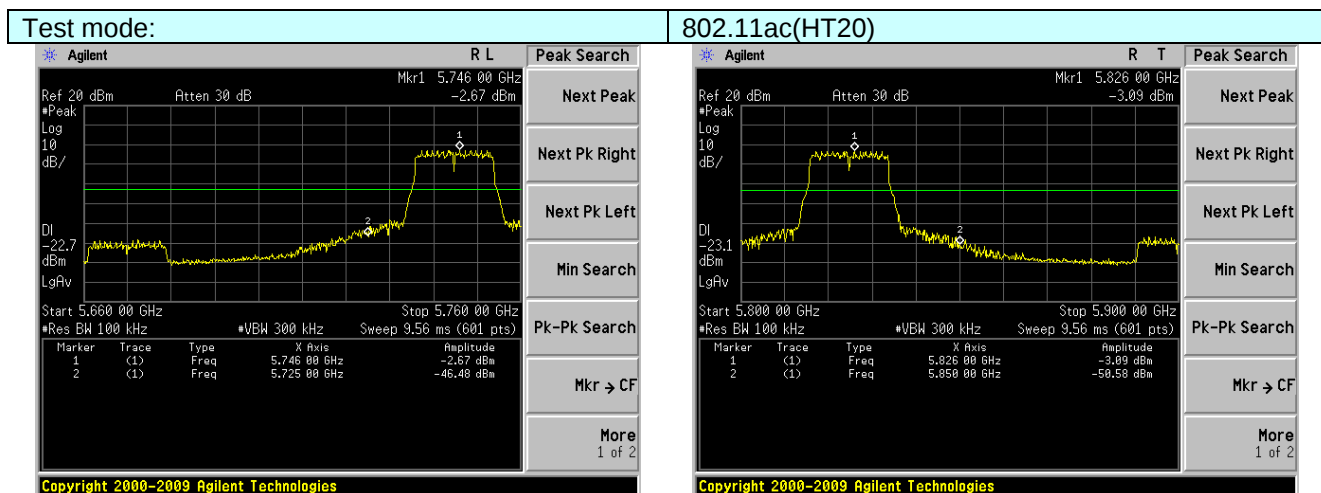
Lowest channel

Highest channel



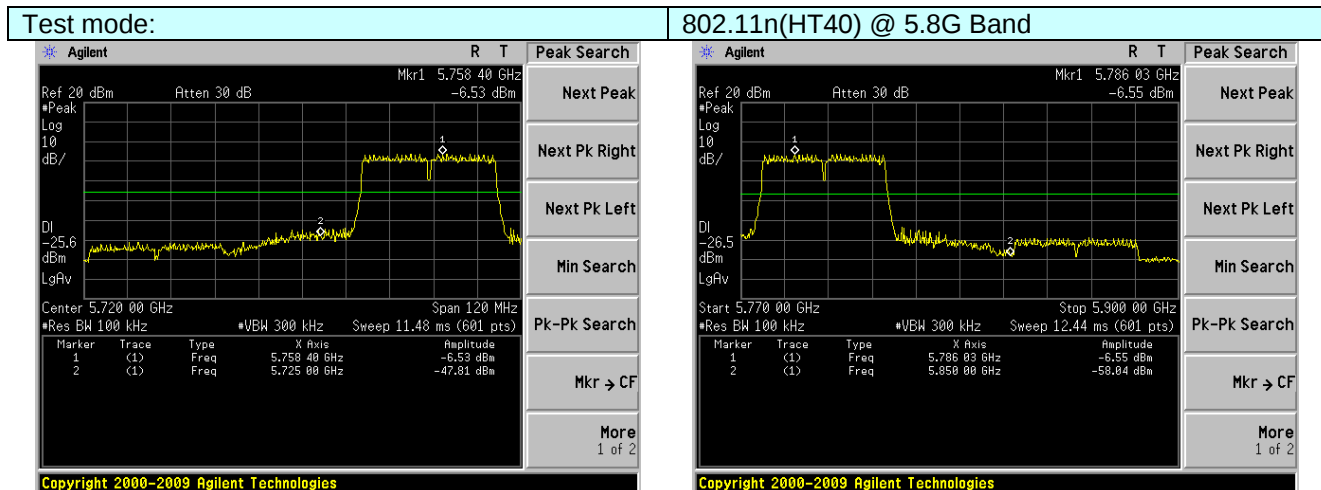
Lowest channel

Highest channel



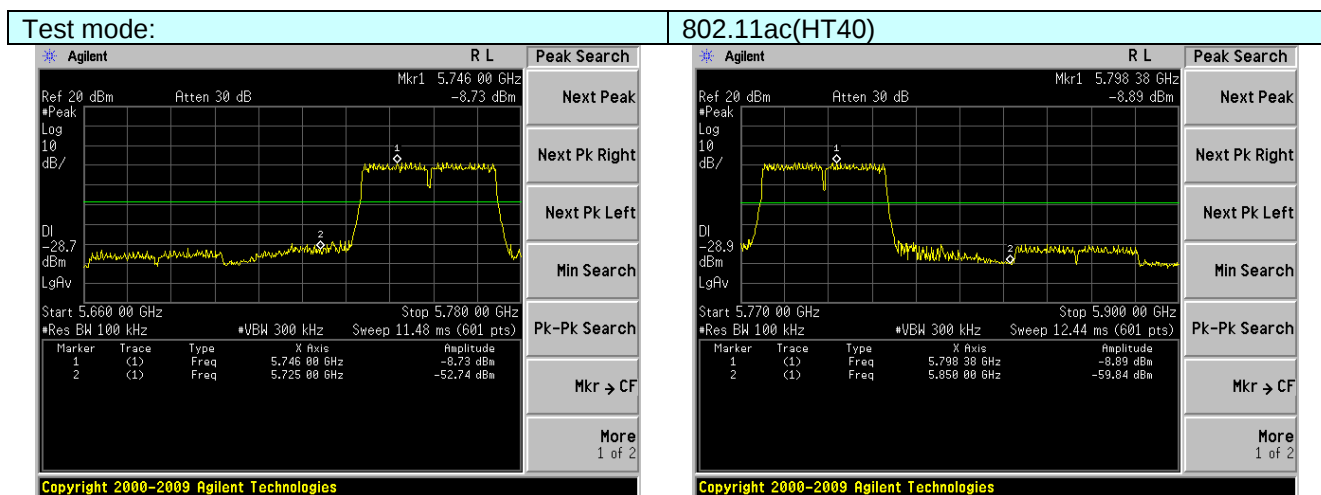
Lowest channel

Highest channel



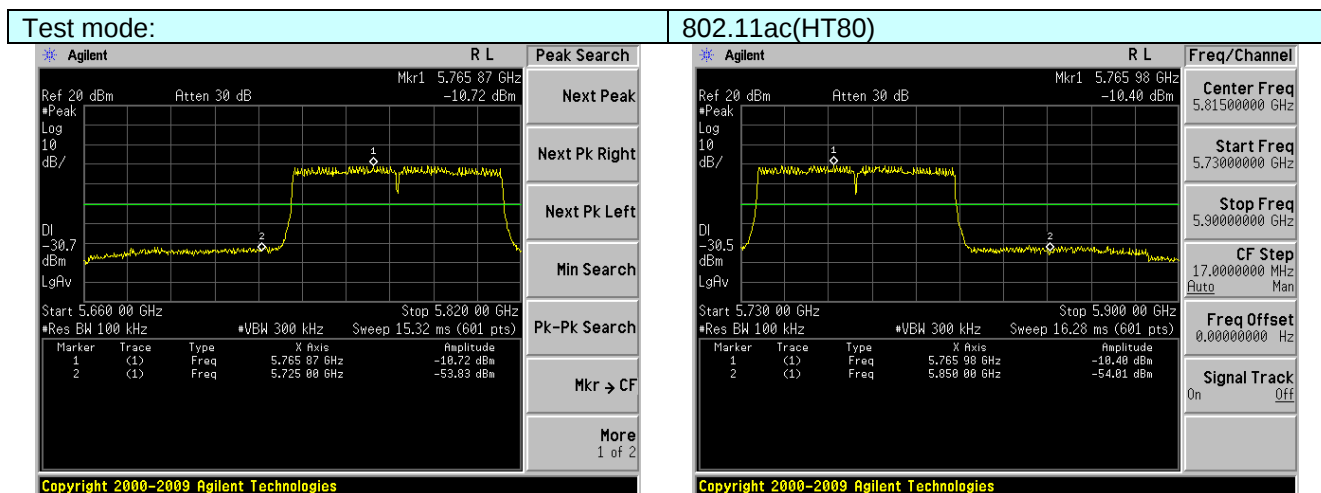
Lowest channel

Highest channel



Lowest channel

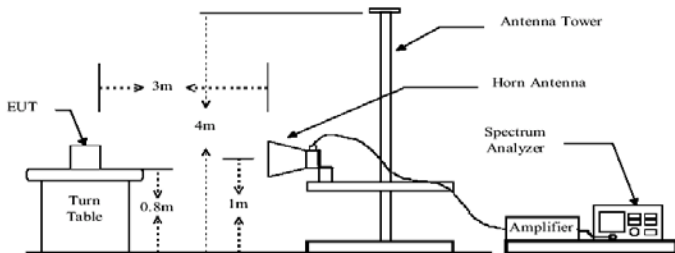
Highest channel



Lowest channel

Highest channel

7.6.2 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.4: 2003				
Test Frequency Range:	30MHz to 40GHz, only worse case is reported				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Value
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average
Limit:	Frequency		Limit (dBuV/m @3m)		Value
	Above 1GHz		54.00		Average
			74.00		Peak
Test setup:					
Test Procedure:	1. The EUT was placed on the top of a rotating table 0.8 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. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.				
Test Instruments:	Refer to section 6.0 for details				
Test mode:	Refer to section 5.3 for details				
Test results:	Pass				

Measurement data:

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

Test mode:	802.11b	Test channel:	Lowest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2390.00	52.89	27.59	5.38	34.01	51.85	74.00	-22.15	Horizontal
2400.00	62.33	27.58	5.39	34.01	61.29	74.00	-12.71	Horizontal
2390.00	54.66	27.59	5.38	34.01	53.62	74.00	-20.38	Vertical
2400.00	64.46	27.58	5.39	34.01	63.42	74.00	-10.58	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2390.00	39.30	27.59	5.38	34.01	38.26	54.00	-15.74	Horizontal
2400.00	47.73	27.58	5.39	34.01	46.69	54.00	-7.31	Horizontal
2390.00	41.22	27.59	5.38	34.01	40.18	54.00	-13.82	Vertical
2400.00	48.95	27.58	5.39	34.01	47.91	54.00	-6.09	Vertical

Test mode:	802.11b	Test channel:	Highest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	54.09	27.53	5.47	33.92	53.17	74.00	-20.83	Horizontal
2500.00	49.51	27.55	5.49	29.93	52.62	74.00	-21.38	Horizontal
2483.50	56.60	27.53	5.47	33.92	55.68	74.00	-18.32	Vertical
2500.00	52.26	27.55	5.49	29.93	55.37	74.00	-18.63	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	39.85	27.53	5.47	33.92	38.93	54.00	-15.07	Horizontal
2500.00	35.72	27.55	5.49	29.93	38.83	54.00	-15.17	Horizontal
2483.50	41.91	27.53	5.47	33.92	40.99	54.00	-13.01	Vertical
2500.00	37.65	27.55	5.49	29.93	40.76	54.00	-13.24	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test mode:	802.11g	Test channel:	Lowest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2390.00	50.86	27.59	5.38	34.01	49.82	74.00	-24.18	Horizontal
2400.00	59.61	27.58	5.39	34.01	58.57	74.00	-15.43	Horizontal
2390.00	52.49	27.59	5.38	34.01	51.45	74.00	-22.55	Vertical
2400.00	61.19	27.58	5.39	34.01	60.15	74.00	-13.85	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2390.00	37.85	27.59	5.38	34.01	36.81	54.00	-17.19	Horizontal
2400.00	46.06	27.58	5.39	34.01	45.02	54.00	-8.98	Horizontal
2390.00	39.60	27.59	5.38	34.01	38.56	54.00	-15.44	Vertical
2400.00	47.12	27.58	5.39	34.01	46.08	54.00	-7.92	Vertical

Test mode:	802.11g	Test channel:	Highest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	51.18	27.53	5.47	33.92	50.26	74.00	-23.74	Horizontal
2500.00	47.26	27.55	5.49	29.93	50.37	74.00	-23.63	Horizontal
2483.50	53.27	27.53	5.47	33.92	52.35	74.00	-21.65	Vertical
2500.00	49.62	27.55	5.49	29.93	52.73	74.00	-21.27	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	38.09	27.53	5.47	33.92	37.17	54.00	-16.83	Horizontal
2500.00	34.35	27.55	5.49	29.93	37.46	54.00	-16.54	Horizontal
2483.50	39.97	27.53	5.47	33.92	39.05	54.00	-14.95	Vertical
2500.00	36.20	27.55	5.49	29.93	39.31	54.00	-14.69	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test mode:	802.11n(HT20) @ 2.4G Band	Test channel:	Lowest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2390.00	51.57	27.59	5.38	34.01	50.53	74.00	-23.47	Horizontal
2400.00	60.56	27.58	5.39	34.01	59.52	74.00	-14.48	Horizontal
2390.00	53.25	27.59	5.38	34.01	52.21	74.00	-21.79	Vertical
2400.00	62.34	27.58	5.39	34.01	61.30	74.00	-12.70	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2390.00	38.36	27.59	5.38	34.01	37.32	54.00	-16.68	Horizontal
2400.00	46.64	27.58	5.39	34.01	45.60	54.00	-8.40	Horizontal
2390.00	40.17	27.59	5.38	34.01	39.13	54.00	-14.87	Vertical
2400.00	47.76	27.58	5.39	34.01	46.72	54.00	-7.28	Vertical

Test mode:	802.11n(HT20) @ 2.4G Band	Test channel:	Highest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	52.20	27.53	5.47	33.92	51.28	74.00	-22.72	Horizontal
2500.00	48.05	27.55	5.49	29.93	51.16	74.00	-22.84	Horizontal
2483.50	54.44	27.53	5.47	33.92	53.52	74.00	-20.48	Vertical
2500.00	50.55	27.55	5.49	29.93	53.66	74.00	-20.34	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	38.71	27.53	5.47	33.92	37.79	54.00	-16.21	Horizontal
2500.00	34.83	27.55	5.49	29.93	37.94	54.00	-16.06	Horizontal
2483.50	40.65	27.53	5.47	33.92	39.73	54.00	-14.27	Vertical
2500.00	36.70	27.55	5.49	29.93	39.81	54.00	-14.19	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test mode:	802.11n(HT40) @ 2.4G Band	Test channel:	Lowest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2390.00	49.82	27.59	5.38	34.01	48.78	74.00	-25.22	Horizontal
2400.00	58.22	27.58	5.39	34.01	57.18	74.00	-16.82	Horizontal
2390.00	51.37	27.59	5.38	34.01	50.33	74.00	-23.67	Vertical
2400.00	59.52	27.58	5.39	34.01	58.48	74.00	-15.52	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2390.00	37.11	27.59	5.38	34.01	36.07	54.00	-17.93	Horizontal
2400.00	45.20	27.58	5.39	34.01	44.16	54.00	-9.84	Horizontal
2390.00	38.78	27.59	5.38	34.01	37.74	54.00	-16.26	Vertical
2400.00	46.19	27.58	5.39	34.01	45.15	54.00	-8.85	Vertical

Test mode:	802.11n(HT40) @ 2.4G Band	Test channel:	Highest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	49.69	27.53	5.47	33.92	48.77	74.00	-25.23	Horizontal
2500.00	46.10	27.55	5.49	29.93	49.21	74.00	-24.79	Horizontal
2483.50	51.57	27.53	5.47	33.92	50.65	74.00	-23.35	Vertical
2500.00	48.27	27.55	5.49	29.93	51.38	74.00	-22.62	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
2483.50	37.19	27.53	5.47	33.92	36.27	54.00	-17.73	Horizontal
2500.00	33.65	27.55	5.49	29.93	36.76	54.00	-17.24	Horizontal
2483.50	38.98	27.53	5.47	33.92	38.06	54.00	-15.94	Vertical
2500.00	35.45	27.55	5.49	29.93	38.56	54.00	-15.44	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test mode:	802.11a	Test channel:	Lowest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	41.10	32.68	9.97	23.86	59.89	74.00	-14.11	Horizontal
5741.35	82.13	32.56	9.86	23.85	100.70	N/A	N/A	Horizontal
5725.00	43.48	32.68	9.97	23.86	62.27	74.00	-11.73	Vertical
5741.35	87.85	32.56	9.86	23.85	106.42	N/A	N/A	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	30.25	32.68	9.97	23.86	49.04	54.00	-4.96	Horizontal
5741.35	73.38	32.56	9.86	23.85	91.95	N/A	N/A	Horizontal
5725.00	31.67	32.68	9.97	23.86	50.46	54.00	-3.54	Vertical
5741.35	78.95	32.56	9.86	23.85	97.52	N/A	N/A	Vertical

Test mode:	802.11a	Test channel:	Highest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5826.20	80.47	32.68	9.97	23.86	99.26	N/A	N/A	Horizontal
5850.00	39.74	32.70	9.99	23.87	58.56	74.00	-15.44	Horizontal
5826.20	86.33	32.68	9.97	23.86	105.12	N/A	N/A	Vertical
5850.00	41.22	32.70	9.99	23.87	60.04	74.00	-13.96	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5826.20	71.18	32.68	9.97	23.86	89.97	N/A	N/A	Horizontal
5850.00	29.26	32.70	9.99	23.87	48.08	54.00	-5.92	Horizontal
5826.20	77.55	32.68	9.97	23.86	96.34	N/A	N/A	Vertical
5850.00	29.41	32.70	9.99	23.87	48.23	54.00	-5.77	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test mode:	802.11n(HT20) @ 5.8G Band	Test channel:	Lowest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	39.30	32.68	9.97	23.86	58.09	74.00	-15.91	Horizontal
5742.19	79.58	32.56	9.86	23.85	98.15	N/A	N/A	Horizontal
5725.00	42.47	32.68	9.97	23.86	61.26	74.00	-12.74	Vertical
5742.19	86.63	32.56	9.86	23.85	105.20	N/A	N/A	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	30.30	32.68	9.97	23.86	49.09	54.00	-4.91	Horizontal
5742.19	71.41	32.56	9.86	23.85	89.98	N/A	N/A	Horizontal
5725.00	31.50	32.68	9.97	23.86	50.29	54.00	-3.71	Vertical
5742.19	77.96	32.56	9.86	23.85	96.53	N/A	N/A	Vertical

Test mode:	802.11n(HT20) @ 5.8G Band	Test channel:	Highest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5826.20	78.84	32.68	9.97	23.86	97.63	N/A	N/A	Horizontal
5850.00	39.42	32.70	9.99	23.87	58.24	74.00	-15.76	Horizontal
5826.20	86.21	32.68	9.97	23.86	105.00	N/A	N/A	Vertical
5850.00	41.19	32.70	9.99	23.87	60.01	74.00	-13.99	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5826.20	69.00	32.68	9.97	23.86	87.79	N/A	N/A	Horizontal
5850.00	29.73	32.70	9.99	23.87	48.55	54.00	-5.45	Horizontal
5826.20	77.70	32.68	9.97	23.86	96.49	N/A	N/A	Vertical
5850.00	30.67	32.70	9.99	23.87	49.49	54.00	-4.51	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test mode:	802.11ac(HT20)	Test channel:	Lowest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	39.45	32.68	9.97	23.86	58.24	74.00	-15.76	Horizontal
5742.19	79.33	32.56	9.86	23.85	97.90	N/A	N/A	Horizontal
5725.00	41.16	32.68	9.97	23.86	59.95	74.00	-14.05	Vertical
5742.19	86.27	32.56	9.86	23.85	104.84	N/A	N/A	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	29.17	32.68	9.97	23.86	47.96	54.00	-6.04	Horizontal
5742.19	71.26	32.56	9.86	23.85	89.83	N/A	N/A	Horizontal
5725.00	30.74	32.68	9.97	23.86	49.53	54.00	-4.47	Vertical
5742.19	77.53	32.56	9.86	23.85	96.10	N/A	N/A	Vertical

Test mode:	802.11ac(HT20)	Test channel:	Highest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5827.44	78.74	32.68	9.97	23.86	97.53	N/A	N/A	Horizontal
5850.00	39.46	32.74	10.04	23.87	58.37	74.00	-15.63	Horizontal
5827.44	85.86	32.68	9.97	23.86	104.65	N/A	N/A	Vertical
5850.00	41.15	32.74	10.04	23.87	60.06	74.00	-13.94	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5827.44	69.53	32.68	9.97	23.86	88.32	N/A	N/A	Horizontal
5850.00	29.78	32.74	10.04	23.87	48.69	54.00	-5.31	Horizontal
5827.44	77.17	32.68	9.97	23.86	95.96	N/A	N/A	Vertical
5850.00	30.61	32.74	10.04	23.87	49.52	54.00	-4.48	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test mode:	802.11n(HT40) @ 5.8G Band	Test channel:	Lowest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	39.14	32.53	9.83	23.84	57.66	74.00	-16.34	Horizontal
5745.00	77.82	32.56	9.86	23.85	96.39	N/A	N/A	Horizontal
5725.00	39.79	32.53	9.83	23.84	58.31	74.00	-15.69	Vertical
5745.00	85.23	32.56	9.86	23.85	103.80	N/A	N/A	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	28.75	32.53	9.83	23.84	47.27	54.00	-6.73	Horizontal
5745.00	69.38	32.56	9.86	23.85	87.95	N/A	N/A	Horizontal
5725.00	29.18	32.53	9.83	23.84	47.70	54.00	-6.30	Vertical
5745.00	76.56	32.56	9.86	23.85	95.13	N/A	N/A	Vertical

Test mode:	802.11n(HT40) @ 5.8G Band	Test channel:	Highest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5784.88	81.24	32.63	9.90	23.85	99.92	N/A	N/A	Horizontal
5850.00	40.25	32.70	9.99	23.87	59.07	74.00	-14.93	Horizontal
5784.88	86.79	32.63	9.90	23.85	105.47	N/A	N/A	Vertical
5850.00	44.49	32.70	9.99	23.87	63.31	74.00	-10.69	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5784.88	72.38	32.63	9.90	23.85	91.06	N/A	N/A	Horizontal
5850.00	29.26	32.70	9.99	23.87	48.08	54.00	-5.92	Horizontal
5784.88	75.59	32.63	9.90	23.85	94.27	N/A	N/A	Vertical
5850.00	29.41	32.70	9.99	23.87	48.23	54.00	-5.77	Vertical

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test mode:	802.11ac(HT40)	Test channel:	Lowest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	38.85	32.53	9.83	23.84	57.37	74.00	-16.63	Horizontal
5748.00	78.63	32.56	9.86	23.85	97.20	N/A	N/A	Horizontal
5725.00	40.52	32.53	9.83	23.84	59.04	74.00	-14.96	Vertical
5748.00	85.85	32.56	9.86	23.85	104.42	N/A	N/A	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	28.53	32.53	9.83	23.84	47.05	54.00	-6.95	Horizontal
5748.00	70.24	32.56	9.86	23.85	88.81	N/A	N/A	Horizontal
5725.00	30.69	32.53	9.83	23.84	49.21	54.00	-4.79	Vertical
5748.00	76.66	32.56	9.86	23.85	95.23	N/A	N/A	Vertical

Test mode:	802.11ac(HT40)	Test channel:	Highest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5784.88	80.87	32.63	9.90	23.85	99.55	N/A	N/A	Horizontal
5850.00	39.40	32.70	9.99	23.87	58.22	74.00	-15.78	Horizontal
5784.88	85.94	32.63	9.90	23.85	104.62	N/A	N/A	Vertical
5850.00	42.51	32.70	9.99	23.87	61.33	74.00	-12.67	Vertical

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5784.88	71.17	32.63	9.90	23.85	89.85	N/A	N/A	Horizontal
5850.00	29.89	32.70	9.99	23.87	48.71	54.00	-5.29	Horizontal
5784.88	76.26	32.63	9.90	23.85	94.94	N/A	N/A	Vertical
5850.00	31.11	32.70	9.99	23.87	49.93	54.00	-4.07	Vertical

Remark:

1. Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Test mode:	802.11ac(HT80)	Test channel:	Middle
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	38.73	32.53	9.83	23.84	57.25	74.00	-16.75	Horizontal
5771.88	78.35	32.61	9.88	23.85	96.99	N/A	N/A	Horizontal
5850.00	38.15	32.70	9.99	23.87	56.97	74.00	-17.03	Horizontal
5725.00	39.06	32.53	9.83	23.84	57.58	74.00	-16.42	Vertical
5771.88	84.16	32.61	9.88	23.85	102.80	N/A	N/A	Vertical
5850.00	38.31	32.70	9.99	23.87	57.13	74.00	-16.87	Vertical

Average value:

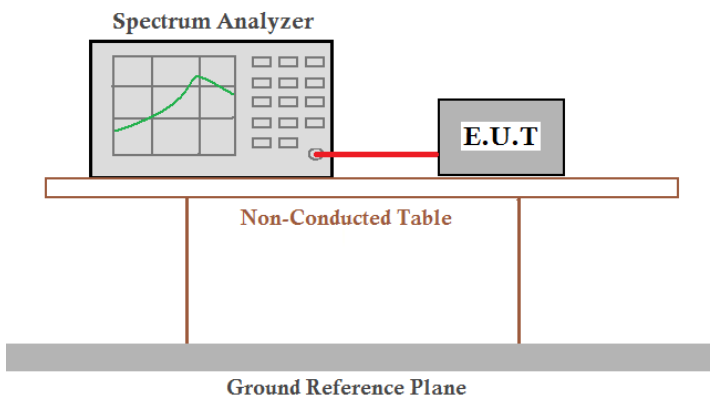
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
5725.00	28.65	32.53	9.83	23.84	47.17	54.00	-6.83	Horizontal
5771.88	69.95	32.61	9.88	23.85	88.59	N/A	N/A	Horizontal
5850.00	28.04	32.70	9.99	23.87	46.86	54.00	-7.14	Horizontal
5725.00	29.48	32.53	9.83	23.84	48.00	54.00	-6.00	Vertical
5771.88	75.70	32.61	9.88	23.85	94.34	N/A	N/A	Vertical
5850.00	29.33	32.70	9.99	23.87	48.15	54.00	-5.85	Vertical

Remark:

1. Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

7.7 Spurious Emission

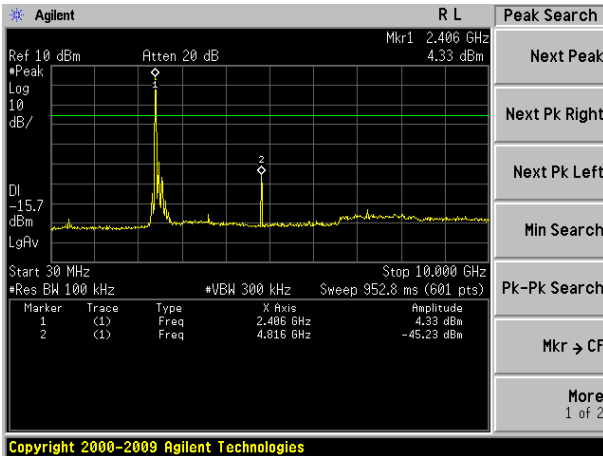
7.7.1 Conducted Emission Method

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.4:2003 and KDB558074 D01 DTS Meas Guidance V03
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:	 The diagram illustrates the test setup for conducted emission measurement. A Spectrum Analyzer is connected via a red cable to an E.U.T. (Equipment Under Test). Both are placed on a Non-Conducted Table, which is supported by two vertical legs. Below the table is a Ground Reference Plane, represented by a thick grey bar.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

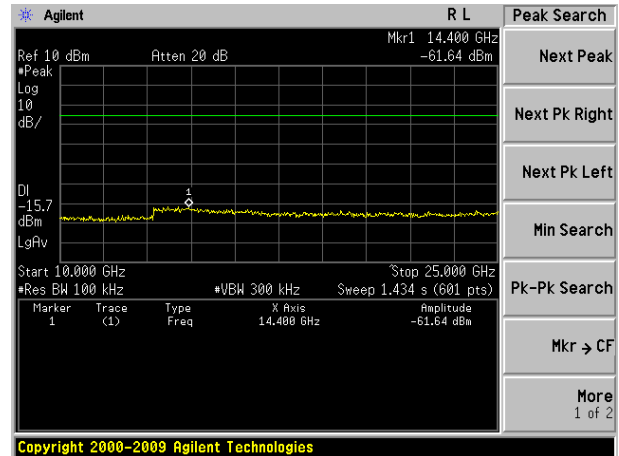
Test plot as follows:

Test mode:	802.11b
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Lowest channel

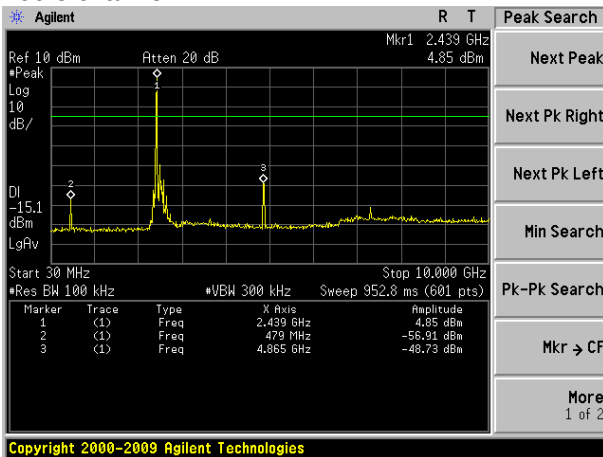


30MHz~10GHz

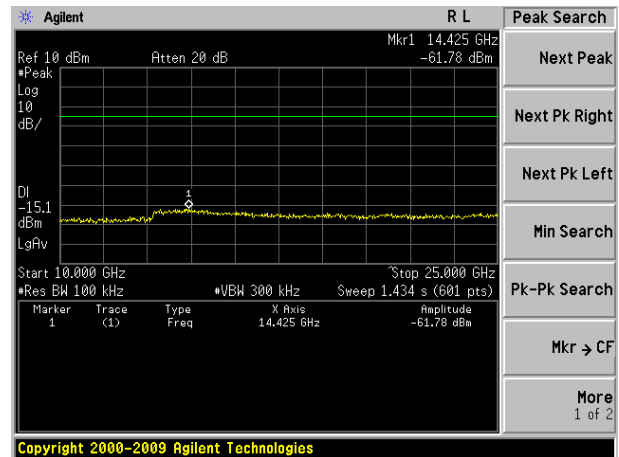


10GHz~25GHz

Middle channel

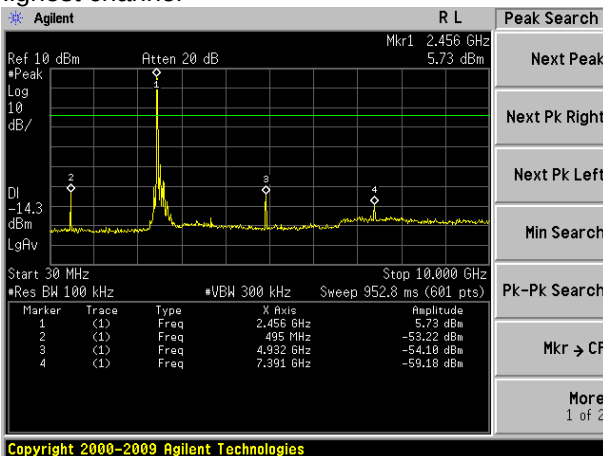


30MHz~10GHz

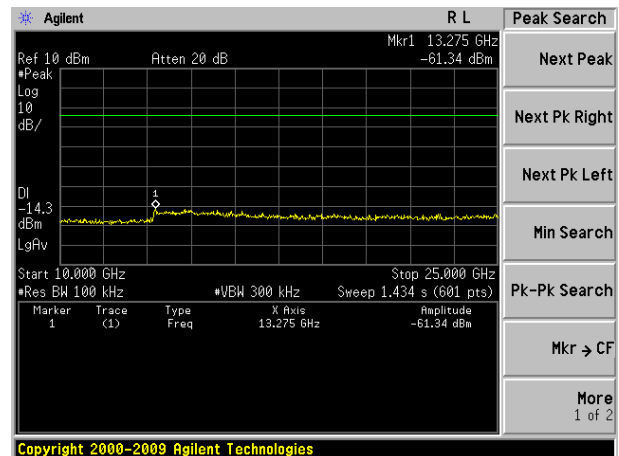


10GHz~25GHz

Highest channel



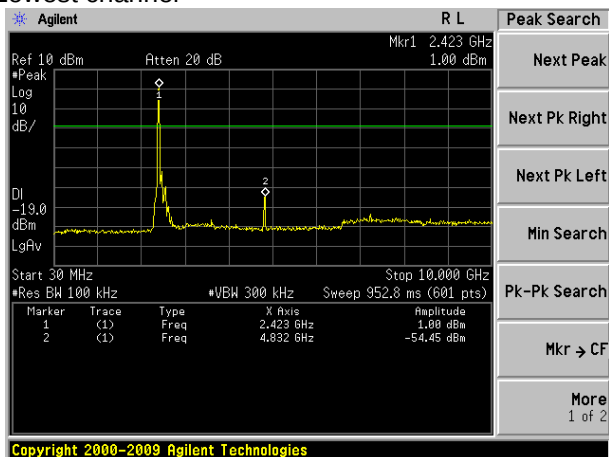
30MHz~10GHz



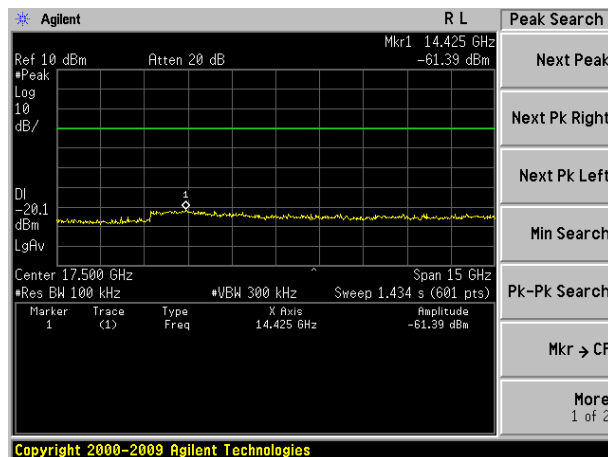
10GHz~25GHz

Test mode:	802.11g
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Lowest channel

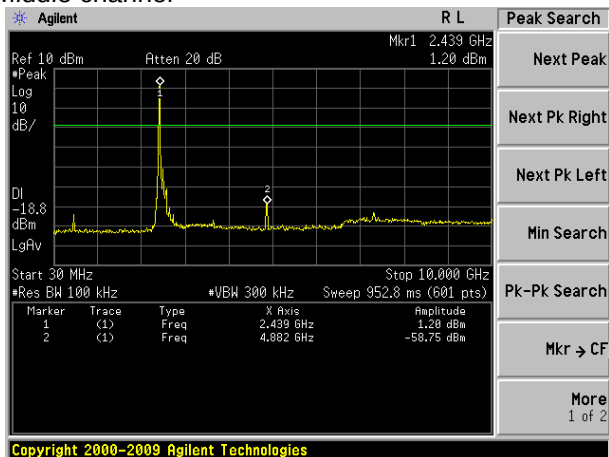


30MHz~10GHz

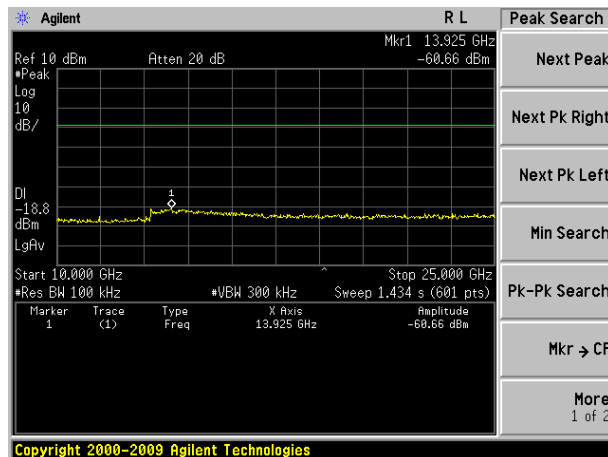


10GHz~25GHz

Middle channel

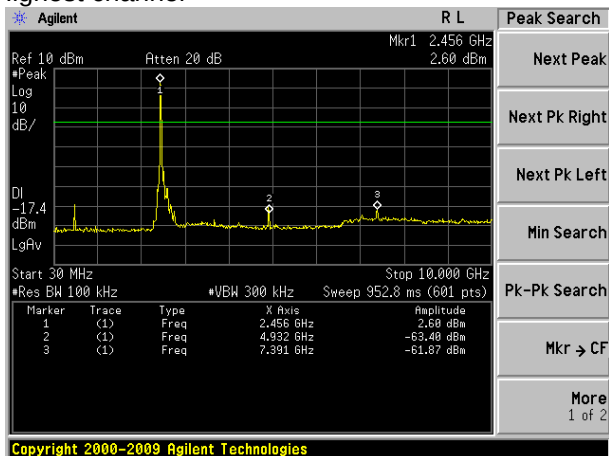


30MHz~10GHz

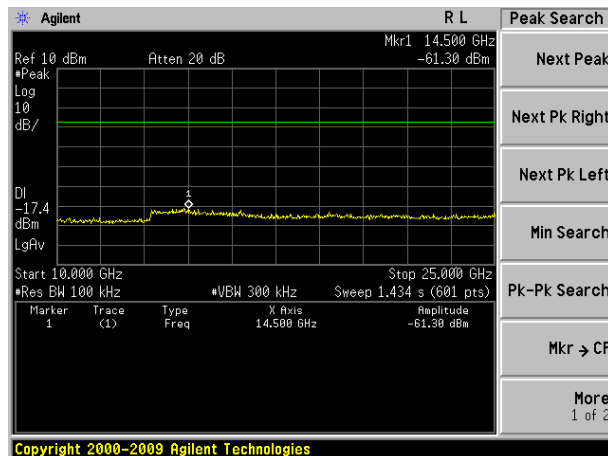


10GHz~25GHz

Highest channel



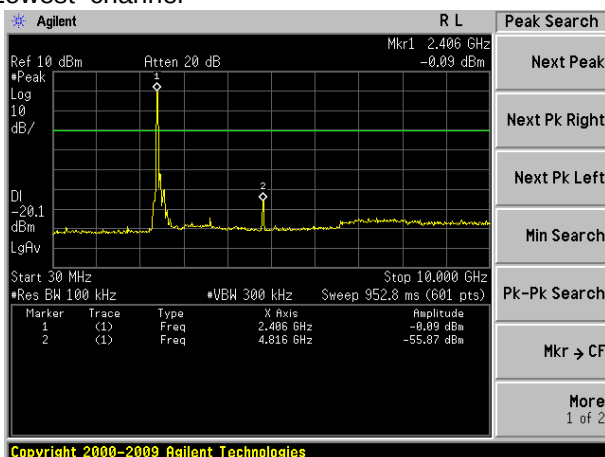
30MHz~10GHz



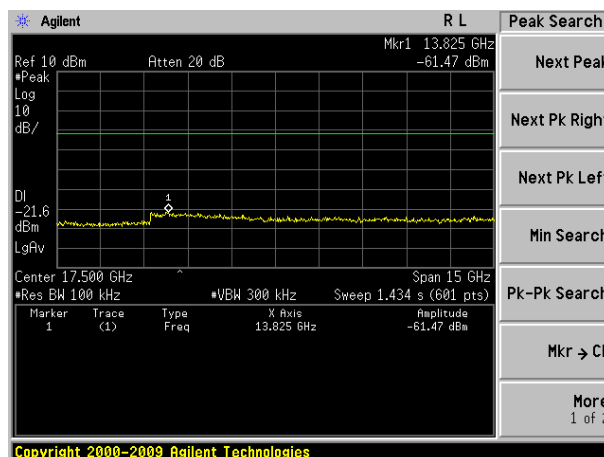
10GHz~25GHz

Test mode:	802.11n(HT20) @ 2.4G Band
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Lowest channel

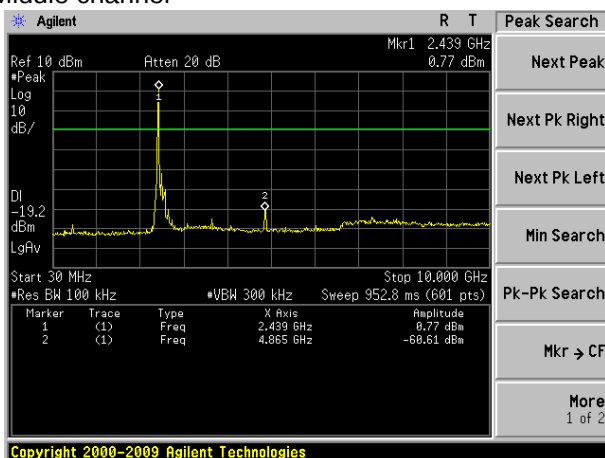


30MHz~10GHz

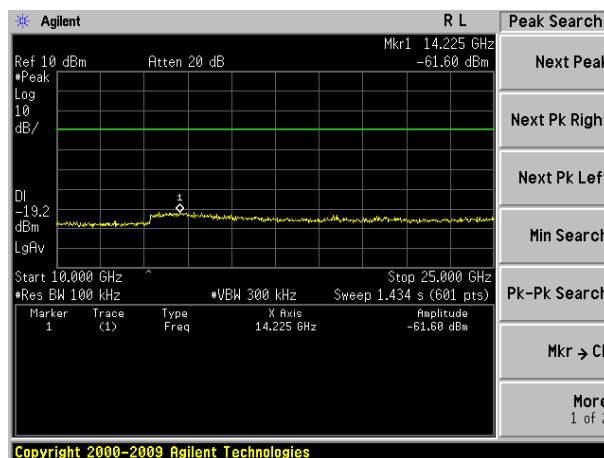


10GHz~25GHz

Middle channel

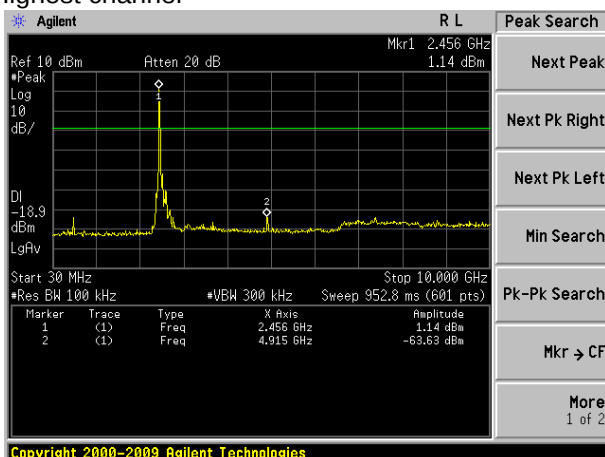


30MHz~10GHz

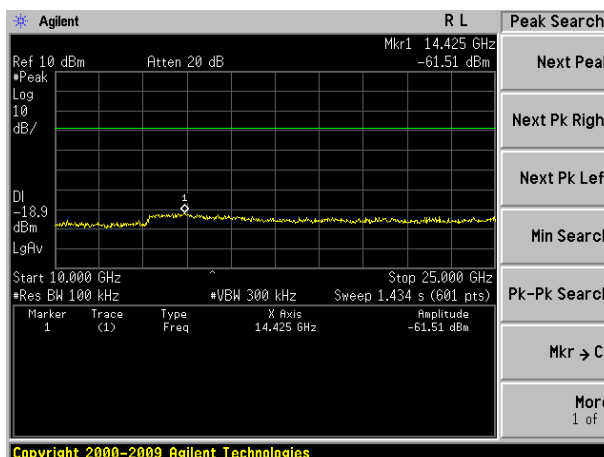


10GHz~25GHz

Highest channel



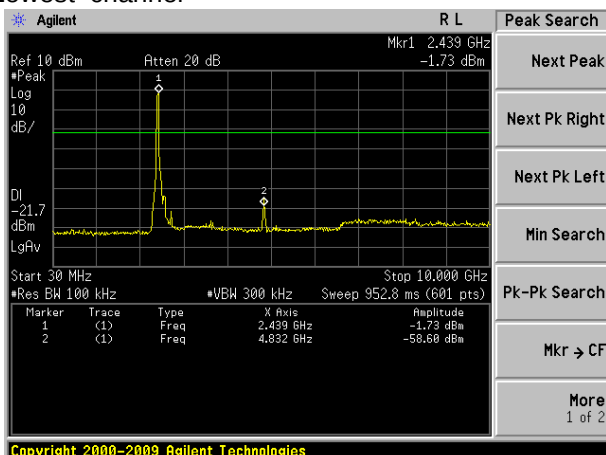
30MHz~10GHz



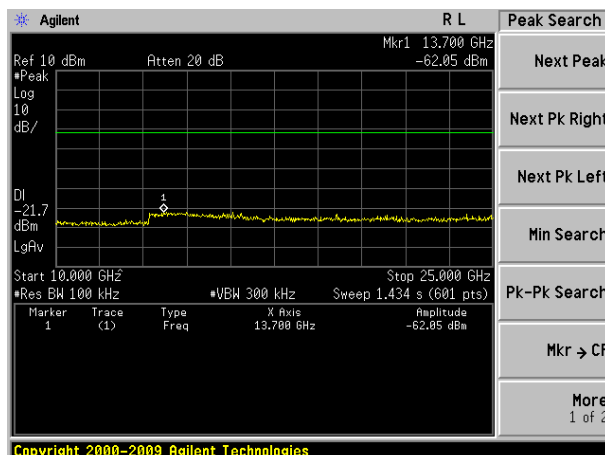
10GHz~25GHz

Test mode:	802.11n(HT40) @ 2.4G Band
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Lowest channel

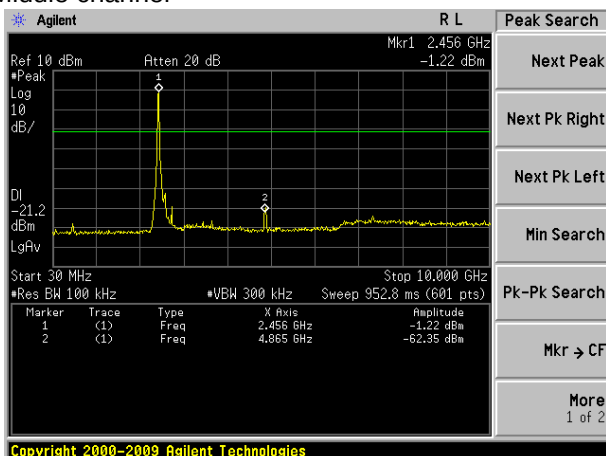


30MHz~10GHz

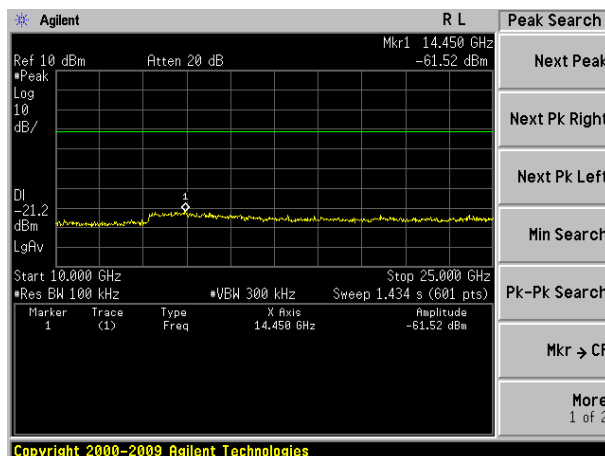


10GHz~25GHz

Middle channel

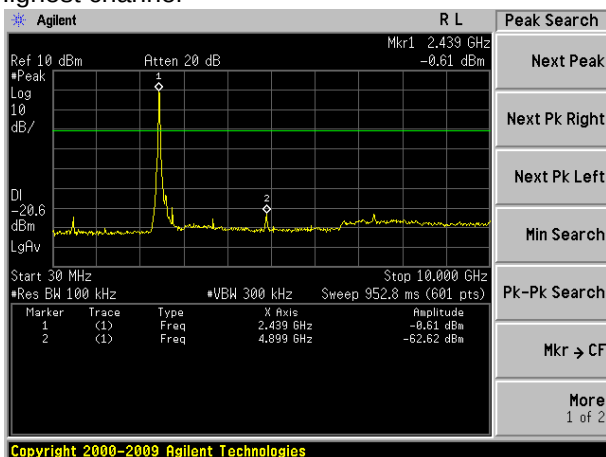


30MHz~10GHz

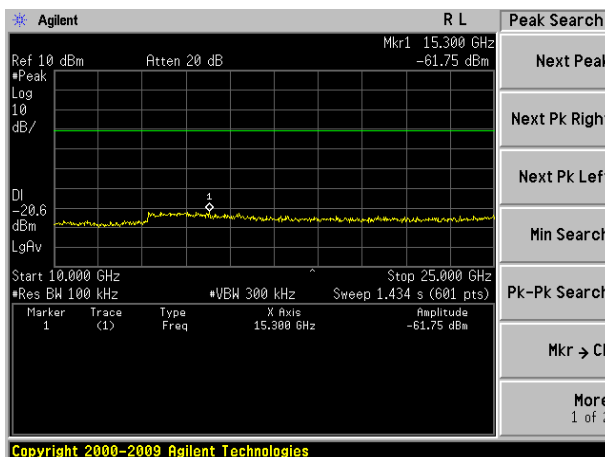


10GHz~25GHz

Highest channel



30MHz~10GHz

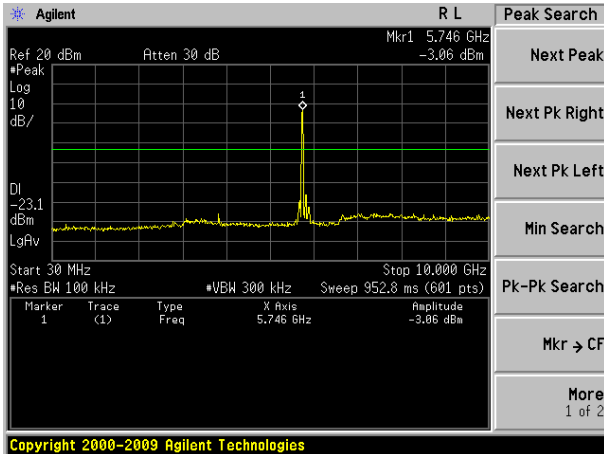


10GHz~25GHz

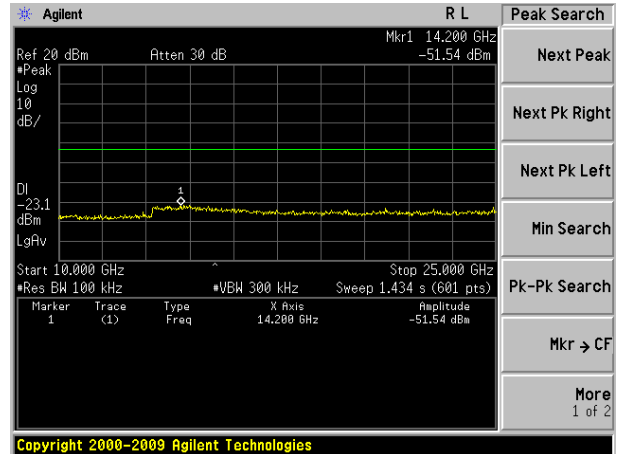
Test mode:

802.11a

Lowest channel

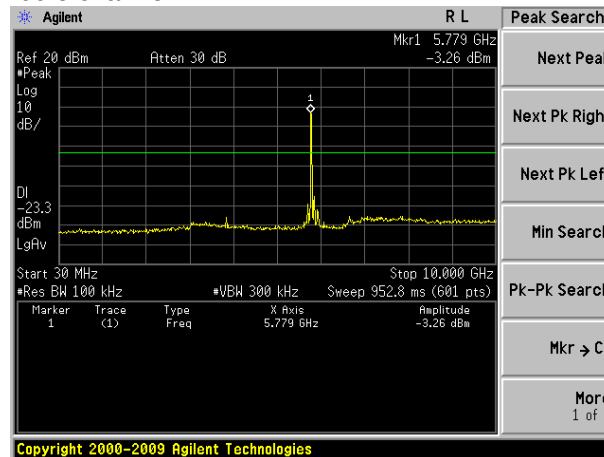


30MHz~10GHz

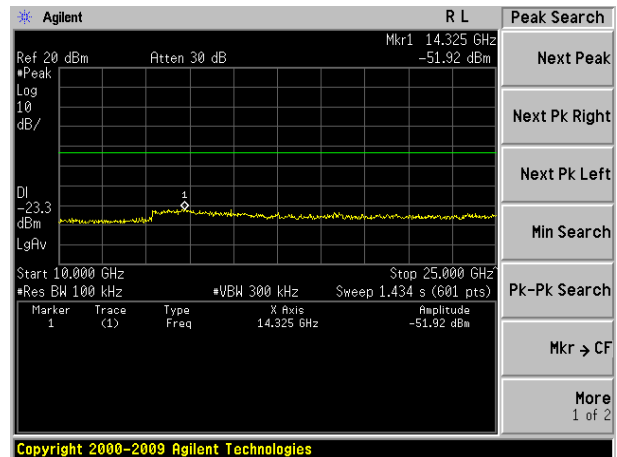


10GHz~25GHz

Middle channel

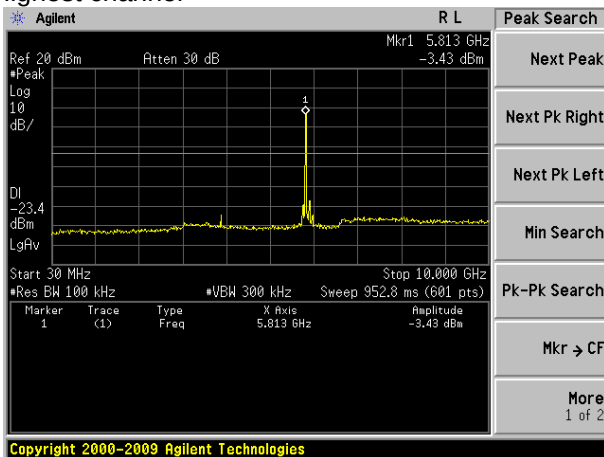


30MHz~10GHz

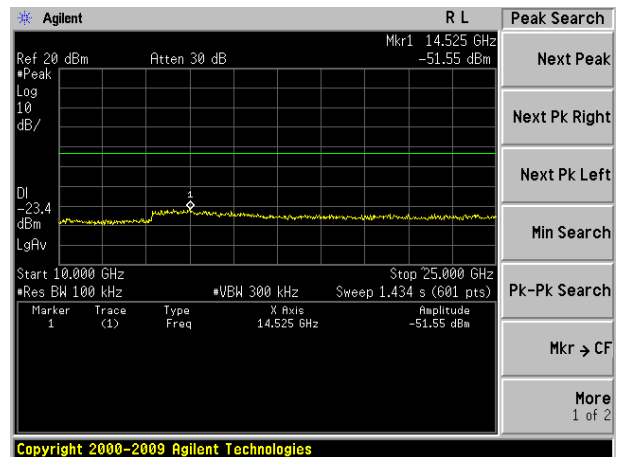


10GHz~25GHz

Highest channel



30MHz~10GHz

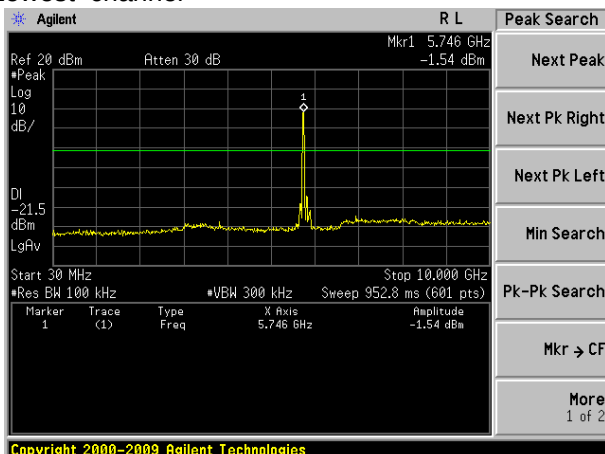


10GHz~25GHz

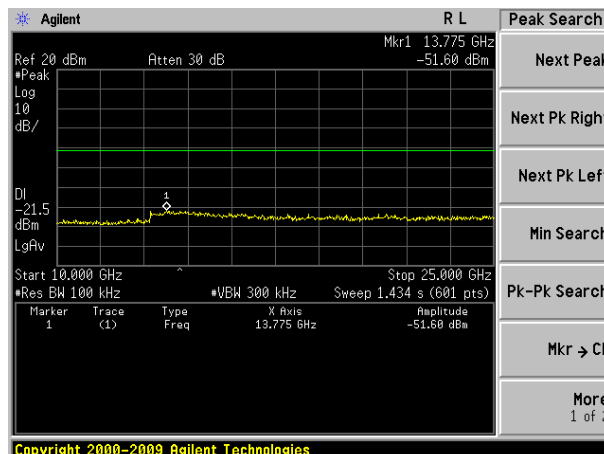
Remark: The test trace is same as the base noise (the test frequency range: 25GHz~40GHz), therefore no data appear in the report.

Test mode:	802.11n(HT20) @ 5.8G Band
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Lowest channel

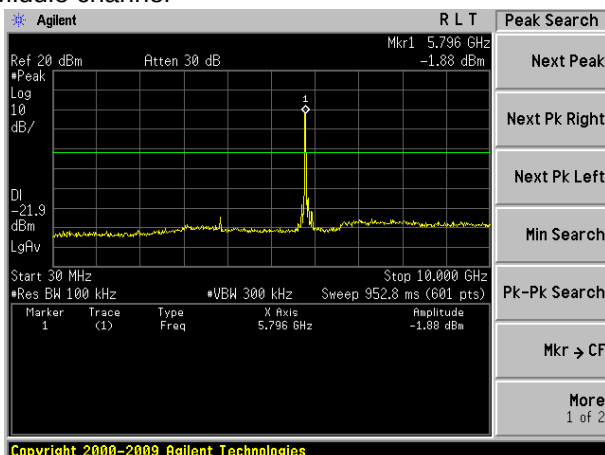


30MHz~10GHz

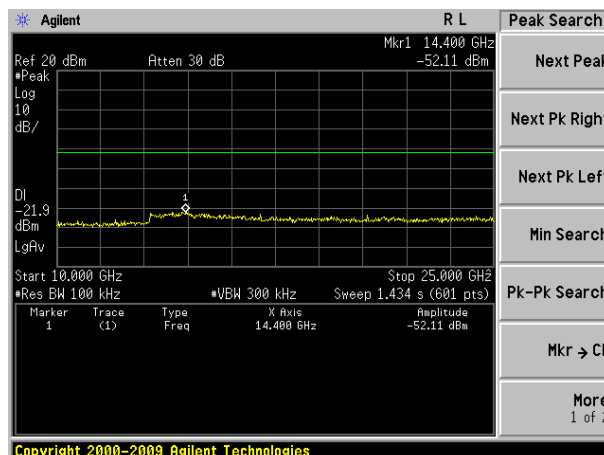


10GHz~25GHz

Middle channel

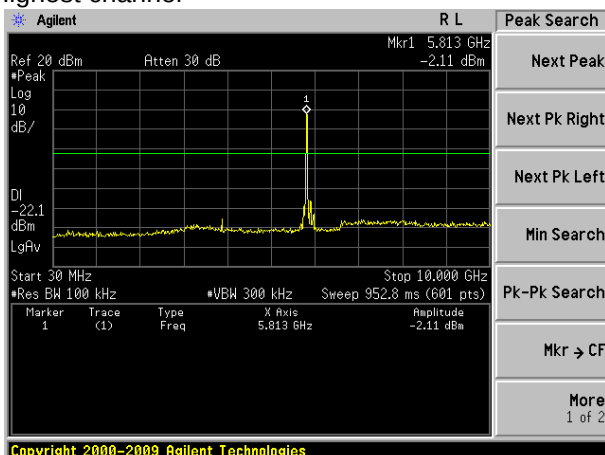


30MHz~10GHz

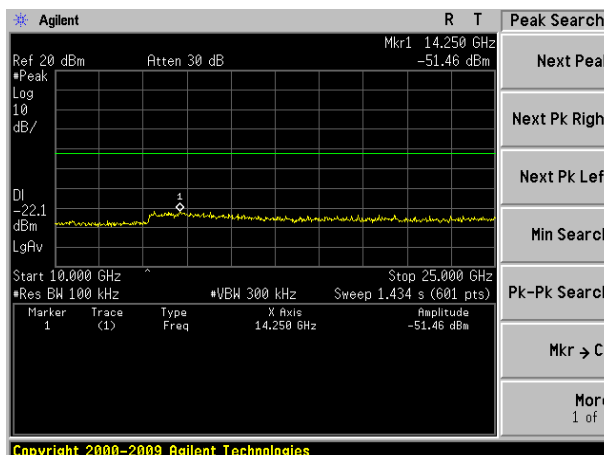


10GHz~25GHz

Highest channel



30MHz~10GHz

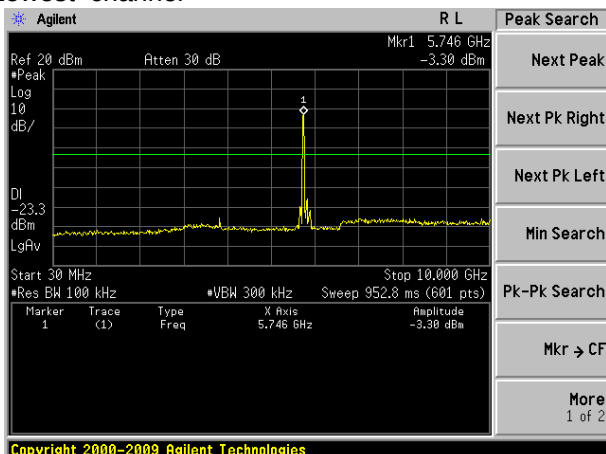


10GHz~25GHz

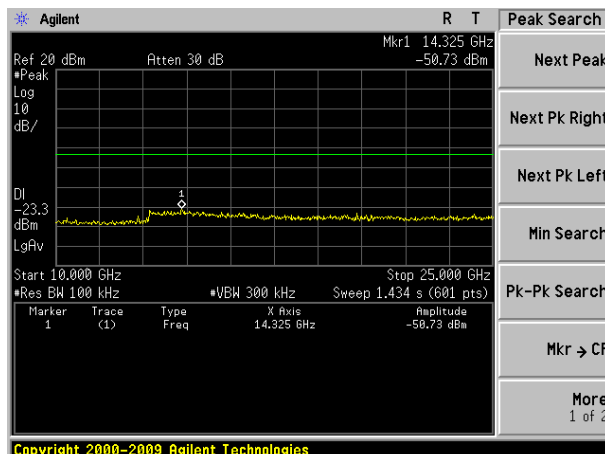
Remark: The test trace is same as the base noise (the test frequency range: 25GHz~40GHz), therefore no data appear in the report.

Test mode:	802.11ac(HT20)
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Lowest channel

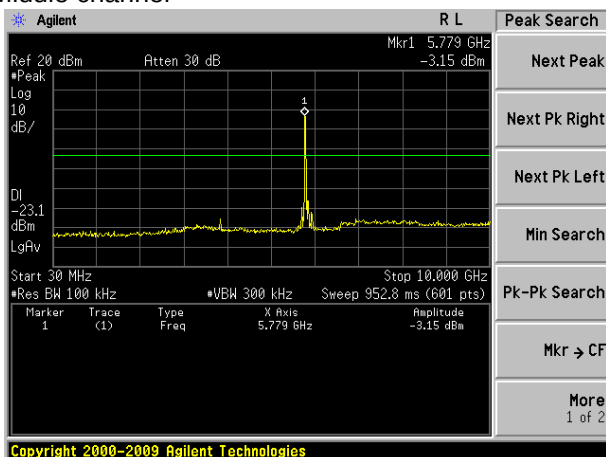


30MHz~10GHz

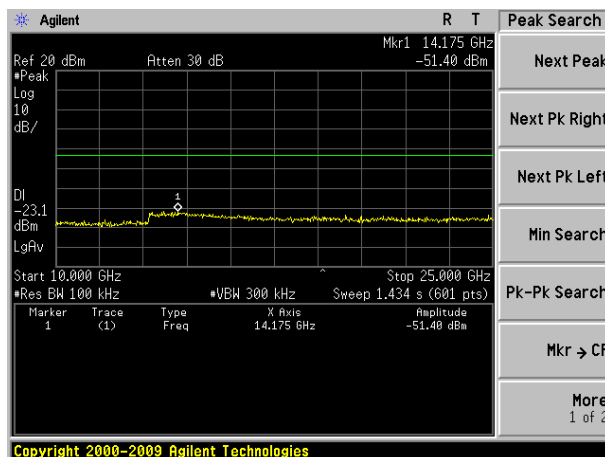


10GHz~25GHz

Middle channel

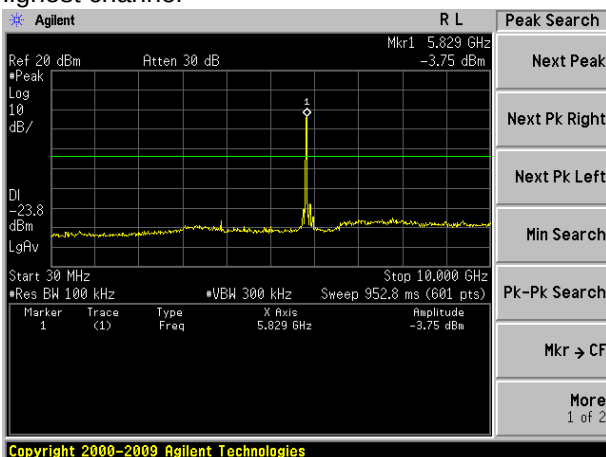


30MHz~10GHz

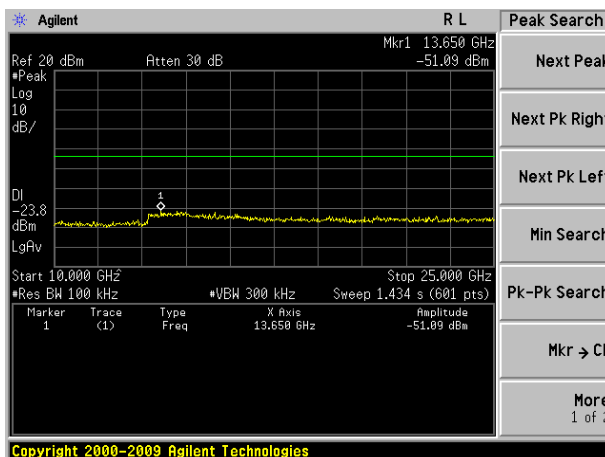


10GHz~25GHz

Highest channel



30MHz~10GHz

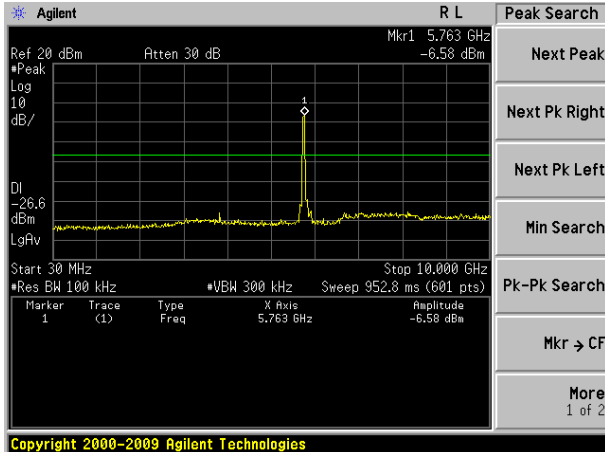


10GHz~25GHz

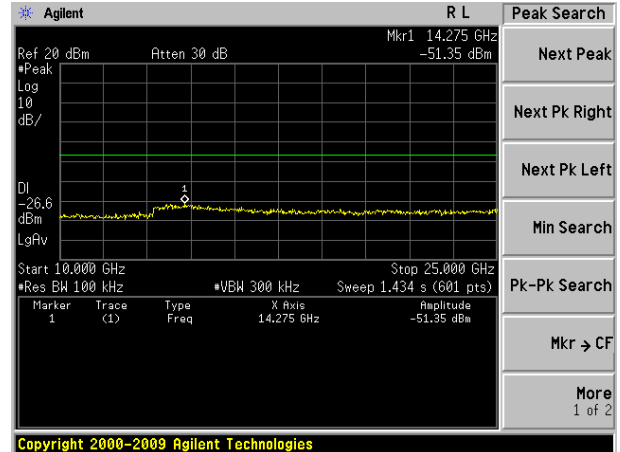
Remark: The test trace is same as the base noise (the test frequency range: 25GHz~40GHz), therefore no data appear in the report.

Test mode:	802.11n(HT40) @ 5.8G Band
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Lowest channel

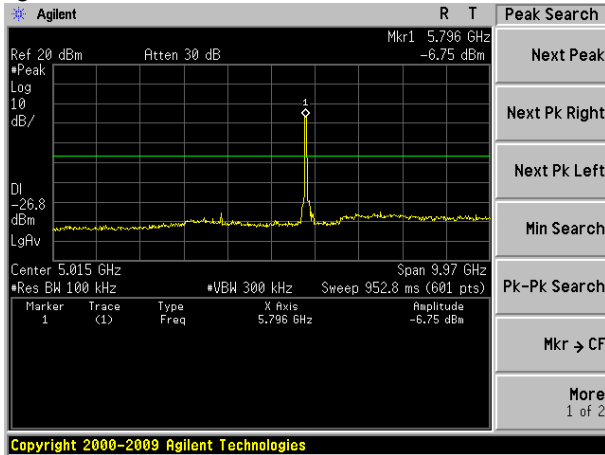


30MHz~10GHz

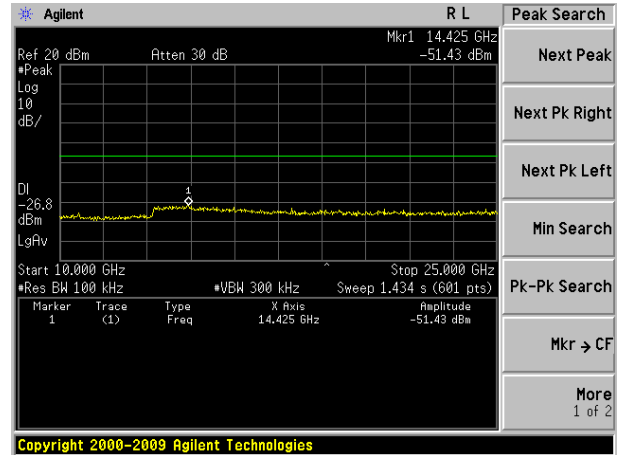


10GHz~25GHz

Highest channel



30MHz~10GHz

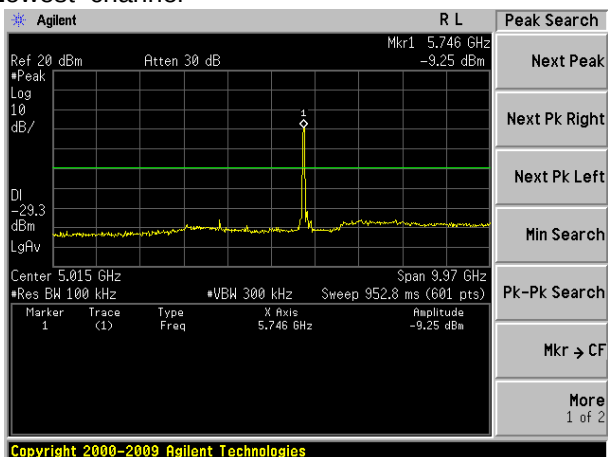


10GHz~25GHz

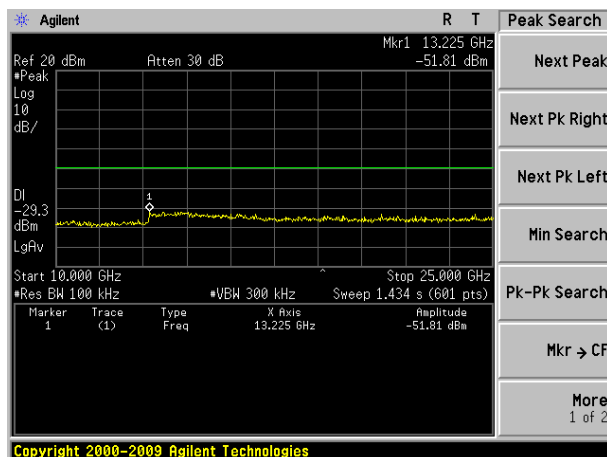
Remark: The test trace is same as the base noise (the test frequency range: 25GHz~40GHz), therefore no data appear in the report.

Test mode:	802.11ac(HT40)
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Lowest channel

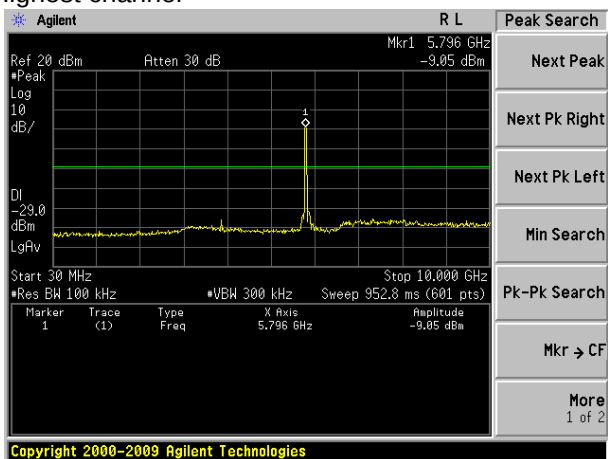


30MHz~10GHz

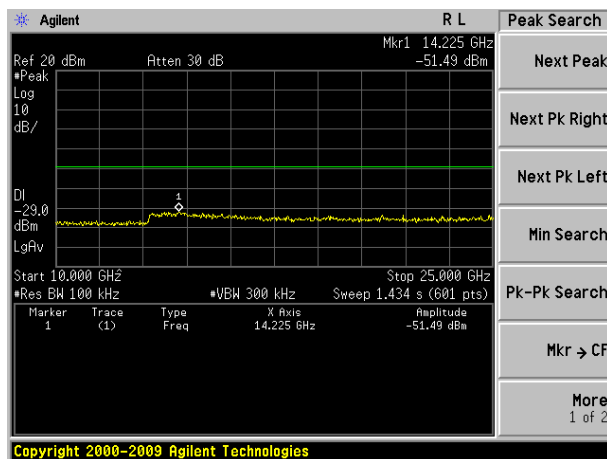


10GHz~25GHz

Highest channel



30MHz~10GHz

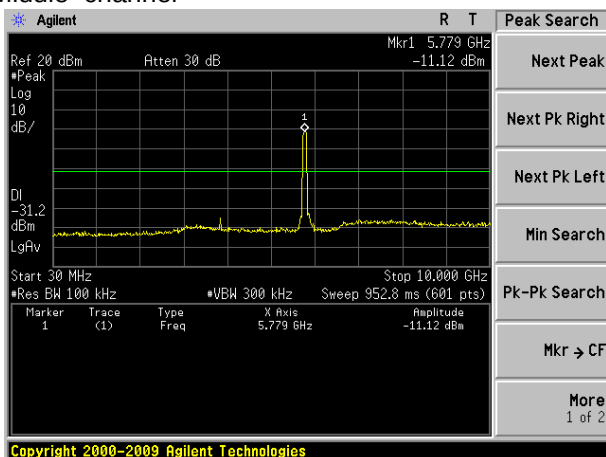


10GHz~25GHz

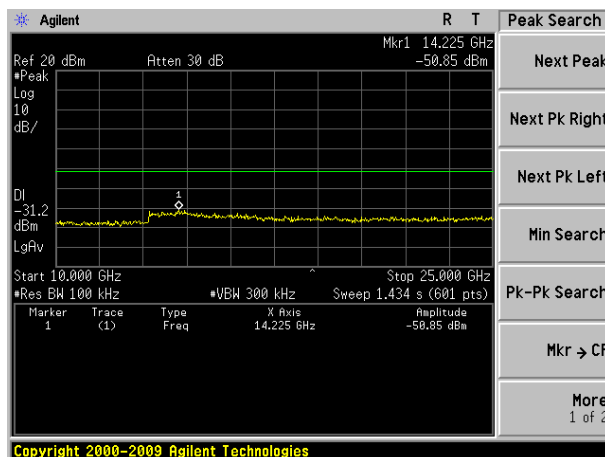
Remark: The test trace is same as the base noise (the test frequency range: 25GHz~40GHz), therefore no data appear in the report.

Test mode:	802.11ac(HT80)
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Middle channel



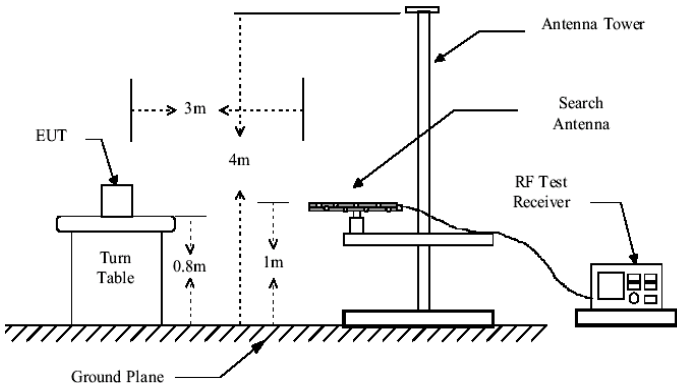
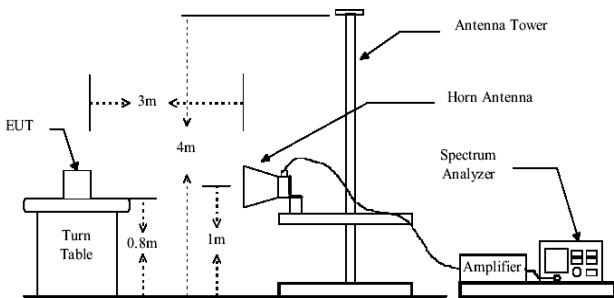
30MHz~10GHz



10GHz~25GHz

Remark: The test trace is same as the base noise (the test frequency range: 25GHz~40GHz), therefore no data appear in the report.

7.7.2 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209				
Test Method:	ANSI C63.4: 2003				
Test Frequency Range:	30MHz to 40GHz				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Value
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average
Limit:	Frequency		Limit (dBuV/m @3m)		Value
	30MHz-88MHz		40.00		Quasi-peak
	88MHz-216MHz		43.50		Quasi-peak
	216MHz-960MHz		46.00		Quasi-peak
	960MHz-1GHz		54.00		Quasi-peak
	Above 1GHz		54.00		Average
			74.00		Peak
Test setup:	Below 1GHz				
					
Test setup:	Above 1GHz				
					

Test Procedure:	1. The EUT was placed on the top of a rotating table 0.8 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. And found the X axis positioning which it is worse case, only the test worst case mode is recorded in the report.
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.3 for details
Test results:	Pass

Remark:

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

■ Below 1GHz

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
31.07	53.17	14.32	0.56	32.06	35.99	40.00	-4.01	Vertical
38.62	48.99	15.25	0.65	32.06	32.83	40.00	-7.17	Vertical
45.38	50.13	15.54	0.72	32.00	34.39	40.00	-5.61	Vertical
54.26	49.52	15.05	0.81	31.95	33.43	40.00	-6.57	Vertical
153.20	57.41	10.39	1.59	31.99	37.40	43.50	-6.10	Vertical
400.43	40.18	17.10	2.85	31.89	28.24	46.00	-17.76	Vertical
55.42	44.93	14.98	0.82	31.95	28.78	40.00	-11.22	Horizontal
152.13	46.20	10.35	1.58	31.99	26.14	43.50	-17.36	Horizontal
204.96	44.75	12.74	1.87	32.14	27.22	43.50	-16.28	Horizontal
324.46	46.15	15.53	2.49	32.10	32.07	46.00	-13.93	Horizontal
396.24	43.05	16.97	2.83	31.90	30.95	46.00	-15.05	Horizontal
638.37	37.64	20.59	3.87	31.10	31.00	46.00	-15.00	Horizontal

■ Above 1GHz

Test mode:	802.11b	Test channel:	Lowest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4824.00	40.56	31.79	8.62	32.10	48.87	74.00	-25.13	Vertical
7236.00	34.39	36.19	11.68	31.97	50.29	74.00	-23.71	Vertical
9648.00	32.83	38.07	14.16	31.56	53.50	74.00	-20.50	Vertical
12060.00	*					74.00		Vertical
14472.00	*					74.00		Vertical
16884.00	*					74.00		Vertical
4824.00	39.19	31.79	8.62	32.10	47.50	74.00	-26.50	Horizontal
7236.00	34.11	36.19	11.68	31.97	50.01	74.00	-23.99	Horizontal
9648.00	32.40	38.07	14.16	31.56	53.07	74.00	-20.93	Horizontal
12060.00	*					74.00		Horizontal
14472.00	*					74.00		Horizontal
16884.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4824.00	29.62	31.79	8.62	32.10	37.93	54.00	-16.07	Vertical
7236.00	23.25	36.19	11.68	31.97	39.15	54.00	-14.85	Vertical
9648.00	23.17	38.07	14.16	31.56	43.84	54.00	-10.16	Vertical
12060.00	*					54.00		Vertical
14472.00	*					54.00		Vertical
16884.00	*					54.00		Vertical
4824.00	28.71	31.79	8.62	32.10	37.02	54.00	-16.98	Horizontal
7236.00	22.69	36.19	11.68	31.97	38.59	54.00	-15.41	Horizontal
9648.00	22.15	38.07	14.16	31.56	42.82	54.00	-11.18	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. “*”, means this data is the too weak instrument of signal is unable to test.

Test mode:	802.11b	Test channel:	Middle
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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	39.57	31.85	8.66	32.12	47.96	74.00	-26.04	Vertical
7311.00	34.43	36.37	11.71	31.91	50.60	74.00	-23.40	Vertical
9748.00	33.83	38.27	14.25	31.56	54.79	74.00	-19.21	Vertical
12185.00	*					74.00		Vertical
14622.00	*					74.00		Vertical
17059.00	*					74.00		Vertical
4874.00	40.01	31.85	8.66	32.12	48.40	74.00	-25.60	Horizontal
7311.00	33.05	36.37	11.71	31.91	49.22	74.00	-24.78	Horizontal
9748.00	33.71	38.27	14.25	31.56	54.67	74.00	-19.33	Horizontal
12185.00	*					74.00		Horizontal
14622.00	*					74.00		Horizontal
17059.00	*					74.00		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
4874.00	30.40	31.85	8.66	32.12	38.79	54.00	-15.21	Vertical
7311.00	22.74	36.37	11.71	31.91	38.91	54.00	-15.09	Vertical
9748.00	23.08	38.27	14.25	31.56	44.04	54.00	-9.96	Vertical
12185.00	*					54.00		Vertical
14622.00	*					54.00		Vertical
17059.00	*					54.00		Vertical
4874.00	30.11	31.85	8.66	32.12	38.50	54.00	-15.50	Horizontal
7311.00	22.14	36.37	11.71	31.91	38.31	54.00	-15.69	Horizontal
9748.00	23.42	38.27	14.25	31.56	44.38	54.00	-9.62	Horizontal
12185.00	*					54.00		Horizontal
14622.00	*					54.00		Horizontal
17059.00	*					54.00		Horizontal

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor
2. “*”, means this data is too weak instrument of signal is unable to test.

Test mode:	802.11b	Test channel:	Highest
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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	45.26	31.90	8.70	32.15	53.71	74.00	-20.29	Vertical
7386.00	35.20	36.49	11.76	31.83	51.62	74.00	-22.38	Vertical
9848.00	37.20	38.62	14.31	31.77	58.36	74.00	-15.64	Vertical
12310.00	*					74.00		Vertical
14772.00	*					74.00		Vertical
17234.00	*					74.00		Vertical
4924.00	44.50	31.90	8.70	32.15	52.95	74.00	-21.05	Horizontal
7386.00	34.07	36.49	11.76	31.83	50.49	74.00	-23.51	Horizontal
9848.00	33.36	38.62	14.31	31.77	54.52	74.00	-19.48	Horizontal
12310.00	*					74.00		Horizontal
14772.00	*					74.00		Horizontal
17234.00	*					74.00		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
4924.00	36.14	31.90	8.70	32.15	44.59	54.00	-9.41	Vertical
7386.00	25.11	36.49	11.76	31.83	41.53	54.00	-12.47	Vertical
9848.00	25.69	38.62	14.31	31.77	46.85	54.00	-7.15	Vertical
12310.00	*					54.00		Vertical
14772.00	*					54.00		Vertical
17234.00	*					54.00		Vertical
4924.00	34.85	31.90	8.70	32.15	43.30	54.00	-10.70	Horizontal
7386.00	23.46	36.49	11.76	31.83	39.88	54.00	-14.12	Horizontal
9848.00	22.61	38.62	14.31	31.77	43.77	54.00	-10.23	Horizontal
12310.00	*					54.00		Horizontal
14772.00	*					54.00		Horizontal
17234.00	*					54.00		Horizontal

Remark:

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:	lowest
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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	39.20	31.79	8.62	32.10	47.51	74.00	-26.49	Vertical
7236.00	33.53	36.19	11.68	31.97	49.43	74.00	-24.57	Vertical
9648.00	32.22	38.07	14.16	31.56	52.89	74.00	-21.11	Vertical
12060.00	*					74.00		Vertical
14472.00	*					74.00		Vertical
16884.00	*					74.00		Vertical
4824.00	38.04	31.79	8.62	32.10	46.35	74.00	-27.65	Horizontal
7236.00	33.36	36.19	11.68	31.97	49.26	74.00	-24.74	Horizontal
9648.00	31.84	38.07	14.16	31.56	52.51	74.00	-21.49	Horizontal
12060.00	*					74.00		Horizontal
14472.00	*					74.00		Horizontal
16884.00	*					74.00		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
4824.00	28.37	31.79	8.62	32.10	36.68	54.00	-17.32	Vertical
7236.00	22.42	36.19	11.68	31.97	38.32	54.00	-15.68	Vertical
9648.00	22.59	38.07	14.16	31.56	43.26	54.00	-10.74	Vertical
12060.00	*					54.00		Vertical
14472.00	*					54.00		Vertical
16884.00	*					54.00		Vertical
4824.00	27.63	31.79	8.62	32.10	35.94	54.00	-18.06	Horizontal
7236.00	21.96	36.19	11.68	31.97	37.86	54.00	-16.14	Horizontal
9648.00	21.60	38.07	14.16	31.56	42.27	54.00	-11.73	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. “*”, means this data is the too weak instrument of signal is unable to test.

Test mode:	802.11g	Test channel:	Middle
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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	38.45	31.85	8.66	32.12	46.84	74.00	-27.16	Vertical
7311.00	33.72	36.37	11.71	31.91	49.89	74.00	-24.11	Vertical
9748.00	33.32	38.27	14.25	31.56	54.28	74.00	-19.72	Vertical
12185.00	*					74.00		Vertical
14622.00	*					74.00		Vertical
17059.00	*					74.00		Vertical
4874.00	39.06	31.85	8.66	32.12	47.45	74.00	-26.55	Horizontal
7311.00	32.43	36.37	11.71	31.91	48.60	74.00	-25.40	Horizontal
9748.00	33.24	38.27	14.25	31.56	54.20	74.00	-19.80	Horizontal
12185.00	*					74.00		Horizontal
14622.00	*					74.00		Horizontal
17059.00	*					74.00		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
4874.00	29.37	31.85	8.66	32.12	37.76	54.00	-16.24	Vertical
7311.00	22.05	36.37	11.71	31.91	38.22	54.00	-15.78	Vertical
9748.00	22.59	38.27	14.25	31.56	43.55	54.00	-10.45	Vertical
12185.00	*					54.00		Vertical
14622.00	*					54.00		Vertical
17059.00	*					54.00		Vertical
4874.00	29.22	31.85	8.66	32.12	37.61	54.00	-16.39	Horizontal
7311.00	21.53	36.37	11.71	31.91	37.70	54.00	-16.30	Horizontal
9748.00	22.97	38.27	14.25	31.56	43.93	54.00	-10.07	Horizontal
12185.00	*					54.00		Horizontal
14622.00	*					54.00		Horizontal
17059.00	*					54.00		Horizontal

Remark:

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:	Highest
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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	43.32	31.90	8.70	32.15	51.77	74.00	-22.23	Vertical
7386.00	33.98	36.49	11.76	31.83	50.40	74.00	-23.60	Vertical
9848.00	36.32	38.62	14.31	31.77	57.48	74.00	-16.52	Vertical
12310.00	*					74.00		Vertical
14772.00	*					74.00		Vertical
17234.00	*					74.00		Vertical
4924.00	42.87	31.90	8.70	32.15	51.32	74.00	-22.68	Horizontal
7386.00	33.00	36.49	11.76	31.83	49.42	74.00	-24.58	Horizontal
9848.00	32.55	38.62	14.31	31.77	53.71	74.00	-20.29	Horizontal
12310.00	*					74.00		Horizontal
14772.00	*					74.00		Horizontal
17234.00	*					74.00		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
4924.00	34.36	31.90	8.70	32.15	42.81	54.00	-11.19	Vertical
7386.00	23.93	36.49	11.76	31.83	40.35	54.00	-13.65	Vertical
9848.00	24.85	38.62	14.31	31.77	46.01	54.00	-7.99	Vertical
12310.00	*					54.00		Vertical
14772.00	*					54.00		Vertical
17234.00	*					54.00		Vertical
4924.00	33.31	31.90	8.70	32.15	41.76	54.00	-12.24	Horizontal
7386.00	22.42	36.49	11.76	31.83	38.84	54.00	-15.16	Horizontal
9848.00	21.83	38.62	14.31	31.77	42.99	54.00	-11.01	Horizontal
12310.00	*					54.00		Horizontal
14772.00	*					54.00		Horizontal
17234.00	*					54.00		Horizontal

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Pre-amplifier Factor
2. “*”, means this data is too weak instrument of signal is unable to test.

Test mode:	802.11n(HT20) @ 2.4G Band	Test channel:	Lowest
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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	39.87	31.79	8.62	32.10	48.18	74.00	-25.82	Vertical
7236.00	33.95	36.19	11.68	31.97	49.85	74.00	-24.15	Vertical
9648.00	32.52	38.07	14.16	31.56	53.19	74.00	-20.81	Vertical
12060.00	*					74.00		Vertical
14472.00	*					74.00		Vertical
16884.00	*					74.00		Vertical
4824.00	38.61	31.79	8.62	32.10	46.92	74.00	-27.08	Horizontal
7236.00	33.73	36.19	11.68	31.97	49.63	74.00	-24.37	Horizontal
9648.00	32.12	38.07	14.16	31.56	52.79	74.00	-21.21	Horizontal
12060.00	*					74.00		Horizontal
14472.00	*					74.00		Horizontal
16884.00	*					74.00		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
4824.00	28.99	31.79	8.62	32.10	37.30	54.00	-16.70	Vertical
7236.00	22.83	36.19	11.68	31.97	38.73	54.00	-15.27	Vertical
9648.00	22.88	38.07	14.16	31.56	43.55	54.00	-10.45	Vertical
12060.00	*					54.00		Vertical
14472.00	*					54.00		Vertical
16884.00	*					54.00		Vertical
4824.00	28.17	31.79	8.62	32.10	36.48	54.00	-17.52	Horizontal
7236.00	22.32	36.19	11.68	31.97	38.22	54.00	-15.78	Horizontal
9648.00	21.87	38.07	14.16	31.56	42.54	54.00	-11.46	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. “*”, means this data is the too weak instrument of signal is unable to test.

Test mode:	802.11n(HT20) @ 2.4G Band	Test channel:	Middle
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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	39.00	31.85	8.66	32.12	47.39	74.00	-26.61	Vertical
7311.00	34.07	36.37	11.71	31.91	50.24	74.00	-23.76	Vertical
9748.00	33.57	38.27	14.25	31.56	54.53	74.00	-19.47	Vertical
12185.00	*					74.00		Vertical
14622.00	*					74.00		Vertical
17059.00	*					74.00		Vertical
4874.00	39.53	31.85	8.66	32.12	47.92	74.00	-26.08	Horizontal
7311.00	32.74	36.37	11.71	31.91	48.91	74.00	-25.09	Horizontal
9748.00	33.48	38.27	14.25	31.56	54.44	74.00	-19.56	Horizontal
12185.00	*					74.00		Horizontal
14622.00	*					74.00		Horizontal
17059.00	*					74.00		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
4874.00	29.88	31.85	8.66	32.12	38.27	54.00	-15.73	Vertical
7311.00	22.39	36.37	11.71	31.91	38.56	54.00	-15.44	Vertical
9748.00	22.83	38.27	14.25	31.56	43.79	54.00	-10.21	Vertical
12185.00	*					54.00		Vertical
14622.00	*					54.00		Vertical
17059.00	*					54.00		Vertical
4874.00	29.66	31.85	8.66	32.12	38.05	54.00	-15.95	Horizontal
7311.00	21.83	36.37	11.71	31.91	38.00	54.00	-16.00	Horizontal
9748.00	23.20	38.27	14.25	31.56	44.16	54.00	-9.84	Horizontal
12185.00	*					54.00		Horizontal
14622.00	*					54.00		Horizontal
17059.00	*					54.00		Horizontal

Remark:

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(HT20) @ 2.4G Band	Test channel:	Highest
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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	44.28	31.90	8.70	32.15	52.73	74.00	-21.27	4924.00
7386.00	34.58	36.49	11.76	31.83	51.00	74.00	-23.00	7386.00
9848.00	36.76	38.62	14.31	31.77	57.92	74.00	-16.08	9848.00
12310.00	*					74.00		Vertical
14772.00	*					74.00		Vertical
17234.00	*					74.00		Vertical
4924.00	43.68	31.90	8.70	32.15	52.13	74.00	-21.87	Horizontal
7386.00	33.53	36.49	11.76	31.83	49.95	74.00	-24.05	Horizontal
9848.00	32.95	38.62	14.31	31.77	54.11	74.00	-19.89	Horizontal
12310.00	*					74.00		Horizontal
14772.00	*					74.00		Horizontal
17234.00	*					74.00		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
4924.00	35.24	31.90	8.70	32.15	43.69	54.00	-10.31	Vertical
7386.00	24.51	36.49	11.76	31.83	40.93	54.00	-13.07	Vertical
9848.00	25.27	38.62	14.31	31.77	46.43	54.00	-7.57	Vertical
12310.00	*					54.00		Vertical
14772.00	*					54.00		Vertical
17234.00	*					54.00		Vertical
4924.00	34.07	31.90	8.70	32.15	42.52	54.00	-11.48	Horizontal
7386.00	22.93	36.49	11.76	31.83	39.35	54.00	-14.65	Horizontal
9848.00	22.22	38.62	14.31	31.77	43.38	54.00	-10.62	Horizontal
12310.00	*					54.00		Horizontal
14772.00	*					54.00		Horizontal
17234.00	*					54.00		Horizontal

Remark:

- 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(HT40) @ 2.4G Band	Test channel:	Lowest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4844.00	38.23	31.81	8.63	32.11	46.56	74.00	-27.44	Vertical
7266.00	32.91	36.28	11.69	31.94	48.94	74.00	-25.06	Vertical
9688.00	31.78	38.13	14.21	31.52	52.60	74.00	-21.40	Vertical
12060.00	*					74.00		Vertical
14472.00	*					74.00		Vertical
16884.00	*					74.00		Vertical
4844.00	37.22	31.81	8.63	32.11	45.55	74.00	-28.45	Horizontal
7266.00	32.83	36.28	11.69	31.94	48.86	74.00	-25.14	Horizontal
9688.00	31.43	38.13	14.21	31.52	52.25	74.00	-21.75	Horizontal
12060.00	*					74.00		Horizontal
14472.00	*					74.00		Horizontal
16884.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
4844.00	27.47	31.81	8.63	32.11	35.80	54.00	-18.20	Vertical
7266.00	21.83	36.28	11.69	31.94	37.86	54.00	-16.14	Vertical
9688.00	22.16	38.13	14.21	31.52	42.98	54.00	-11.02	Vertical
12060.00	*					54.00		Vertical
14472.00	*					54.00		Vertical
16884.00	*					54.00		Vertical
4844.00	26.86	31.81	8.63	32.11	35.19	54.00	-18.81	Horizontal
7266.00	21.44	36.28	11.69	31.94	37.47	54.00	-16.53	Horizontal
9688.00	21.21	38.13	14.21	31.52	42.03	54.00	-11.97	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. “*”, means this data is the too weak instrument of signal is unable to test.

Test mode:	802.11n(HT40) @ 2.4G Band	Test channel:	Middle
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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	37.64	31.85	8.66	32.12	46.03	74.00	-27.97	Vertical
7311.00	33.21	36.37	11.71	31.91	49.38	74.00	-24.62	Vertical
9748.00	32.96	38.27	14.25	31.56	53.92	74.00	-20.08	Vertical
12185.00	*					74.00		Vertical
14622.00	*					74.00		Vertical
17059.00	*					74.00		Vertical
4874.00	38.39	31.85	8.66	32.12	46.78	74.00	-27.22	Horizontal
7311.00	31.99	36.37	11.71	31.91	48.16	74.00	-25.84	Horizontal
9748.00	32.91	38.27	14.25	31.56	53.87	74.00	-20.13	Horizontal
12185.00	*					74.00		Horizontal
14622.00	*					74.00		Horizontal
17059.00	*					74.00		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
4874.00	28.63	31.85	8.66	32.12	37.02	54.00	-16.98	Vertical
7311.00	21.56	36.37	11.71	31.91	37.73	54.00	-16.27	Vertical
9748.00	22.24	38.27	14.25	31.56	43.20	54.00	-10.80	Vertical
12185.00	*					54.00		Vertical
14622.00	*					54.00		Vertical
17059.00	*					54.00		Vertical
4874.00	28.59	31.85	8.66	32.12	36.98	54.00	-17.02	Horizontal
7311.00	21.10	36.37	11.71	31.91	37.27	54.00	-16.73	Horizontal
9748.00	22.65	38.27	14.25	31.56	43.61	54.00	-10.39	Horizontal
12185.00	*					54.00		Horizontal
14622.00	*					54.00		Horizontal
17059.00	*					54.00		Horizontal

Remark:

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(HT40) @ 2.4G Band	Test channel:	Highest
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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
4904.00	41.94	31.88	8.68	32.13	50.37	74.00	-23.63	Vertical
7356.00	33.10	36.45	11.75	31.86	49.44	74.00	-24.56	Vertical
9808.00	35.70	38.43	14.29	31.68	56.74	74.00	-17.26	Vertical
12310.00	*					74.00		Vertical
14772.00	*					74.00		Vertical
17234.00	*					74.00		Vertical
4904.00	41.70	31.88	8.68	32.13	50.13	74.00	-23.87	Horizontal
7356.00	32.24	36.45	11.75	31.86	48.58	74.00	-25.42	Horizontal
9808.00	31.97	38.43	14.29	31.68	53.01	74.00	-20.99	Horizontal
12310.00	*					74.00		Horizontal
14772.00	*					74.00		Horizontal
17234.00	*					74.00		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
4904.00	33.08	31.88	8.68	32.13	41.51	54.00	-12.49	Vertical
7356.00	23.08	36.45	11.75	31.86	39.42	54.00	-14.58	Vertical
9808.00	24.25	38.43	14.29	31.68	45.29	54.00	-8.71	Vertical
12310.00	*					54.00		Vertical
14772.00	*					54.00		Vertical
17234.00	*					54.00		Vertical
4904.00	32.22	31.88	8.68	32.13	40.65	54.00	-13.35	Horizontal
7356.00	21.68	36.45	11.75	31.86	38.02	54.00	-15.98	Horizontal
9808.00	21.28	38.43	14.29	31.68	42.32	54.00	-11.68	Horizontal
12310.00	*					54.00		Horizontal
14772.00	*					54.00		Horizontal
17234.00	*					54.00		Horizontal

Remark:

- 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.

Remark: Only the data of worst case at each channel plan (nominal bandwidth=20MHz, 40MHz, 80MHz) is reported.

Test mode:	802.11a	Test channel:	lowest
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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
11490.00	24.74	39.89	14.97	34.54	45.06	74.00	-28.94	Vertical
17235.00	23.15	45.14	18.98	33.66	53.61	74.00	-20.39	Vertical
22980.00	*					74.00		Vertical
28725.00	*					74.00		Vertical
34470.00	*					74.00		Vertical
11490.00	25.33	39.89	14.97	34.54	45.65	74.00	-28.35	Horizontal
17235.00	23.68	45.14	18.98	33.66	54.14	74.00	-19.86	Horizontal
22980.00	*					74.00		Horizontal
28725.00	*					74.00		Horizontal
34470.00	*					74.00		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
11490.00	15.58	39.89	14.97	34.54	35.90	54.00	-18.10	Vertical
17235.00	14.28	45.14	18.98	33.66	44.74	54.00	-9.26	Vertical
22980.00	*					54.00		Vertical
28725.00	*					54.00		Vertical
34470.00	*					54.00		Vertical
11490.00	16.39	39.89	14.97	34.54	36.71	54.00	-17.29	Horizontal
17235.00	14.71	45.14	18.98	33.66	45.17	54.00	-8.83	Horizontal
22980.00	*					54.00		Horizontal
28725.00	*					54.00		Horizontal
34470.00	*							Horizontal

Remark:

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:	802.11a	Test channel:	Middle
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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
11570.00	26.99	39.76	14.99	34.75	46.99	74.00	-27.01	Vertical
17355.00	24.98	46.19	18.98	34.45	55.70	74.00	-18.30	Vertical
23140.00	*					74.00		Vertical
28925.00	*					74.00		Vertical
34710.00	*					74.00		Vertical
11570.00	24.49	39.76	14.99	34.75	44.49	74.00	-29.51	Horizontal
17355.00	23.74	46.19	18.98	34.45	54.46	74.00	-19.54	Horizontal
23140.00	*					74.00		Horizontal
28925.00	*					74.00		Horizontal
34710.00	*					74.00		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
11570.00	17.01	39.76	14.99	34.75	37.01	54.00	-16.99	Vertical
17355.00	15.40	46.19	18.98	34.45	46.12	54.00	-7.88	Vertical
23140.00	*					54.00		Vertical
28925.00	*					54.00		Vertical
34710.00	*					54.00		Vertical
11570.00	17.63	39.76	14.99	34.75	37.63	54.00	-16.37	Horizontal
17355.00	15.71	46.19	18.98	34.45	46.43	54.00	-7.57	Horizontal
23140.00	*					54.00		Horizontal
28925.00	*					54.00		Horizontal
34710.00	*							Horizontal

Remark:

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:	802.11a	Test channel:	Highest
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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
11650.00	26.49	39.61	14.99	34.86	46.23	74.00	-27.77	Vertical
17475.00	24.57	46.78	18.97	34.95	55.37	74.00	-18.63	Vertical
23300.00	*					74.00		Vertical
29125.00	*					74.00		Vertical
34950.00	*					74.00		Vertical
11650.00	24.43	39.61	14.99	34.86	44.17	74.00	-29.83	Horizontal
17475.00	23.42	46.78	18.97	34.95	54.22	74.00	-19.78	Horizontal
23300.00	*					74.00		Horizontal
29125.00	*					74.00		Horizontal
34950.00	*					74.00		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
11650.00	16.60	39.61	14.99	34.86	36.34	54.00	-17.66	Vertical
17475.00	15.08	46.78	18.97	34.95	45.88	54.00	-8.12	Vertical
23300.00	*					54.00		Vertical
29125.00	*					54.00		Vertical
34950.00	*					54.00		Vertical
11650.00	17.27	39.61	14.99	34.86	37.01	54.00	-16.99	Horizontal
17475.00	15.42	46.78	18.97	34.95	46.22	54.00	-7.78	Horizontal
23300.00	*					54.00		Horizontal
29125.00	*					54.00		Horizontal
34950.00	*					54.00		Horizontal

Remark:

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:	802.11ac(HT40)	Test channel:	Lowest
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11510.00	28.38	39.76	14.99	34.75	48.38	74.00	-25.62	Vertical
17265.00	26.11	46.19	18.98	34.45	56.83	74.00	-17.17	Vertical
23020.00	*					74.00		Vertical
28775.00	*					74.00		Vertical
34530.00	*					74.00		Vertical
11510.00	26.18	39.76	14.99	34.75	46.18	74.00	-27.82	Horizontal
17265.00	25.06	46.19	18.98	34.45	55.78	74.00	-18.22	Horizontal
23020.00	*					74.00		Horizontal
28775.00	*					74.00		Horizontal
34530.00	*					74.00		Horizontal

Average value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11510.00	17.81	39.76	14.99	34.75	37.81	54.00	-16.19	Vertical
17265.00	16.03	46.19	18.98	34.45	46.75	54.00	-7.25	Vertical
23020.00	*					54.00		Vertical
28775.00	*					54.00		Vertical
34530.00	*					54.00		Vertical
11510.00	18.32	39.76	14.99	34.75	38.32	54.00	-15.68	Horizontal
17265.00	16.27	46.19	18.98	34.45	46.99	54.00	-7.01	Horizontal
23020.00	*					54.00		Horizontal
28775.00	*					54.00		Horizontal
34530.00	*					54.00		Horizontal

Remark:

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:	802.11ac(HT40)	Test channel:	Highest
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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
11590.00	28.60	39.76	14.99	34.75	48.60	74.00	-25.40	Vertical
17385.00	26.29	46.19	18.98	34.45	57.01	74.00	-16.99	Vertical
23180.00	*					74.00		Vertical
28975.00	*					74.00		Vertical
34770.00	*					74.00		Vertical
11590.00	26.45	39.76	14.99	34.75	46.45	74.00	-27.55	Horizontal
17385.00	25.27	46.19	18.98	34.45	55.99	74.00	-18.01	Horizontal
23180.00	*					74.00		Horizontal
28975.00	*					74.00		Horizontal
34770.00	*					74.00		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
11590.00	17.93	39.76	14.99	34.75	37.93	54.00	-16.07	Vertical
17385.00	16.12	46.19	18.98	34.45	46.84	54.00	-7.16	Vertical
23180.00	*					54.00		Vertical
28975.00	*					54.00		Vertical
34770.00	*					54.00		Vertical
11590.00	18.42	39.76	14.99	34.75	38.42	54.00	-15.58	Horizontal
17385.00	16.35	46.19	18.98	34.45	47.07	54.00	-6.93	Horizontal
23180.00	*					54.00		Horizontal
28975.00	*					54.00		Horizontal
34770.00	*					54.00		Horizontal

Remark:

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:	802.11ac(HT80)	Test channel:	Middle
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Peak value:

Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11550.00	27.19	39.76	14.99	34.75	47.19	74.00	-26.81	Vertical
17325.00	25.15	46.19	18.98	34.45	55.87	74.00	-18.13	Vertical
23100.00	*					74.00		Vertical
28875.00	*					74.00		Vertical
34650.00	*					74.00		Vertical
11550.00	25.29	39.76	14.99	34.75	45.29	74.00	-28.71	Horizontal
17325.00	24.09	46.19	18.98	34.45	54.81	74.00	-19.19	Horizontal
23100.00	*					74.00		Horizontal
28875.00	*					74.00		Horizontal
34650.00	*					74.00		Horizontal

Average value:

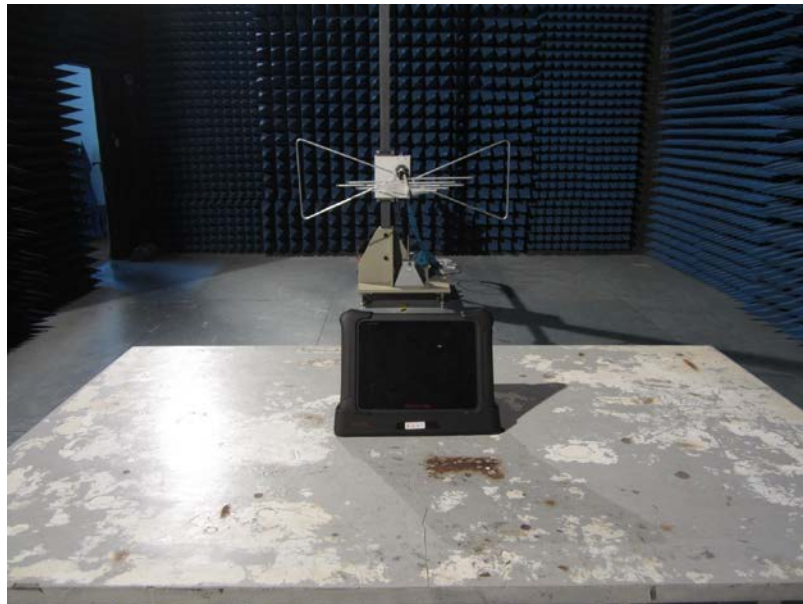
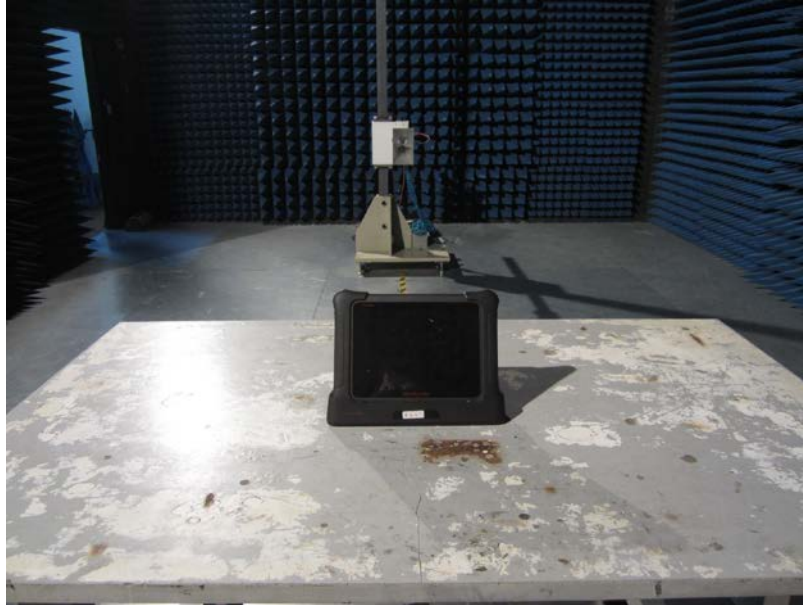
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	polarization
11550.00	17.07	39.76	14.99	34.75	37.07	54.00	-16.93	Vertical
17325.00	15.45	46.19	18.98	34.45	46.17	54.00	-7.83	Vertical
23100.00	*					54.00		Vertical
28875.00	*					54.00		Vertical
34650.00	*					54.00		Vertical
11550.00	17.68	39.76	14.99	34.75	37.68	54.00	-16.32	Horizontal
17325.00	15.75	46.19	18.98	34.45	46.47	54.00	-7.53	Horizontal
23100.00	*					54.00		Horizontal
28875.00	*					54.00		Horizontal
34650.00	*					54.00		Horizontal

Remark:

- 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.

8 Test Setup Photo

Radiated Emission



Conducted Emission



9 EUT Constructional Details

Reference to the test report No. GTSE14090167502

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