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FCC RADIO TEST REPORT

Applicant's company	**Lite-On Technology Corp.**
Applicant Address	Bldg. C, 90, Chien 1 Road, Chung Ho, New Taipei City 23585, Taiwan, R.O.C
FCC ID	**PPQ-WCBN4506R**
Manufacturer's company	**LITE-ON TECHNOLOGY (Changzhou) CO., LTD**
Manufacturer Address	A9 Building, No.88 Yanghu Road, Wujin Hi-Tech Industrial Development Zone, Changzhou City, Jiangsu Province 213100 China

Product Name	WLAN + BT Combo Module
Brand Name	LITE-ON
Model No.	WCBN4506R
Test Rule Part(s)	47 CFR FCC Part 15 Subpart E § 15.407
Test Freq. Range	5150 ~ 5350 MHz / 5470 ~ 5725 MHz / 5725 ~ 5850 MHz
Received Date	Sep. 08, 2015
Final Test Date	Oct. 08, 2015
Submission Type	Original Equipment

Statement

Test result included is for the IEEE 802.11n and IEEE 802.11a of the product.

The test result in this report refers exclusively to the presented test model / sample.

Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.

The measurements and test results shown in this test report were made in accordance with the procedures and found in compliance with the limit given in **ANSI C63.10-2013**, **47 CFR FCC Part 15 Subpart E, KDB789033 D02 v01, KDB662911 D01 v02r01.**

The test equipment used to perform the test is calibrated and traceable to NML/ROC.

TAF
Testing Laboratory
1190

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History of This Test Report

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR590501AB	Rev. 01	Initial issue of report	Nov. 04, 2015

1. VERIFICATION OF COMPLIANCE

Product Name	:	WLAN + BT Combo Module
Brand Name	:	LITE-ON
Model No.	:	WCBN4506R
Applicant	:	Lite-On Technology Corp.
Test Rule Part(s)	:	47 CFR FCC Part 15 Subpart E § 15.407

Sporton International as requested by the applicant to evaluate the EMC performance of the product sample received on Sep. 08, 2015 would like to declare that the tested sample has been evaluated and found to be in compliance with the tested rule parts. The data recorded as well as the test configuration specified is true and accurate for showing the sample's EMC nature.

Sam Chen
SPORTON INTERNATIONAL INC.

2. SUMMARY OF THE TEST RESULT

Applied Standard: 47 CFR FCC Part 15 Subpart E				
Part	**Rule Section**	**Description of Test**	**Result**	**Under Limit**
4.1	15.207	AC Power Line Conducted Emissions	Complies	15.35 dB
4.2	15.407(a)	26dB Spectrum Bandwidth and 99% Occupied Bandwidth	Complies	-
4.3	15.407(e)	6dB Spectrum Bandwidth	Complies	-
4.4	15.407(a)	Maximum Conducted Output Power	Complies	0.03 dB
4.5	15.407(a)	Power Spectral Density	Complies	0.04 dB
4.6	15.407(b)	Radiated Emissions	Complies	0.33 dB
4.7	15.407(b)	Band Edge Emissions	Complies	0.01 dB
4.8	15.407(g)	Frequency Stability	Complies	-
4.9	15.203	Antenna Requirements	Complies	-

3. GENERAL INFORMATION

3.1. Product Details

Items	Description
Product Type	WLAN (2TX, 2RX)
Radio Type	Intentional Transceiver
Power Type	From host system
Modulation	IEEE 802.11a: OFDM IEEE 802.11n: see the below table
Data Modulation	IEEE 802.11a/n: OFDM (BPSK / QPSK / 16QAM / 64QAM)
Data Rate (Mbps)	IEEE 802.11a: OFDM (6/9/12/18/24/36/48/54) IEEE 802.11n: see the below table
Frequency Range	5150 ~ 5350 MHz / 5470 ~ 5725 MHz / 5725 ~ 5850 MHz
Channel Number	25 for 20MHz bandwidth ; 12 for 40MHz bandwidth
Channel Band Width (99%)	For Mode 1: Band 1: IEEE 802.11a: 18.72 MHz IEEE 802.11n MCS0 (HT20): 18.84 MHz IEEE 802.11n MCS0 (HT40): 37.60 MHz Band 2: IEEE 802.11a: 19.80 MHz IEEE 802.11n MCS0 (HT20): 32.64 MHz IEEE 802.11n MCS0 (HT40): 44.40 MHz Band 3: IEEE 802.11a: 20.48 MHz IEEE 802.11n MCS0 (HT20): 32.64 MHz IEEE 802.11n MCS0 (HT40): 48.40 MHz Band 4: IEEE 802.11a: 33.96 MHz IEEE 802.11n MCS0 (HT20): 34.56 MHz IEEE 802.11n MCS0 (HT40): 38.20 MHz For Mode 2: Band 1: IEEE 802.11a: 30.24 MHz IEEE 802.11n MCS0 (HT20): 34.68 MHz IEEE 802.11n MCS0 (HT40): 37.00 MHz

	Band 2: IEEE 802.11a: 30.60 MHz IEEE 802.11n MCS0 (HT20): 34.32 MHz IEEE 802.11n MCS0 (HT40): 41.20 MHz Band 3: IEEE 802.11a: 27.48 MHz IEEE 802.11n MCS0 (HT20): 35.88 MHz IEEE 802.11n MCS0 (HT40): 48.00 MHz Band 4: IEEE 802.11a: 33.60 MHz IEEE 802.11n MCS0 (HT20): 37.68 MHz IEEE 802.11n MCS0 (HT40): 39.60 MHz
Maximum Conducted Output Power	For Mode 1: Band 1: IEEE 802.11a: 23.81 dBm IEEE 802.11n MCS0 (HT20): 23.69 dBm IEEE 802.11n MCS0 (HT40): 23.09 dBm Band 2: IEEE 802.11a: 23.75 dBm IEEE 802.11n MCS0 (HT20): 23.66 dBm IEEE 802.11n MCS0 (HT40): 23.97 dBm Band 3: IEEE 802.11a: 23.69 dBm IEEE 802.11n MCS0 (HT20): 23.89 dBm IEEE 802.11n MCS0 (HT40): 23.74 dBm Band 4: IEEE 802.11a: 24.86 dBm IEEE 802.11n MCS0 (HT20): 24.91 dBm IEEE 802.11n MCS0 (HT40): 22.52 dBm For Mode 2: Band 1: IEEE 802.11a: 23.12 dBm IEEE 802.11n MCS0 (HT20): 23.68 dBm IEEE 802.11n MCS0 (HT40): 21.67 dBm Band 2: IEEE 802.11a: 23.61 dBm IEEE 802.11n MCS0 (HT20): 23.63 dBm IEEE 802.11n MCS0 (HT40): 23.71 dBm

	Band 3: IEEE 802.11a: 23.86 dBm IEEE 802.11n MCS0 (HT20): 23.90 dBm IEEE 802.11n MCS0 (HT40): 23.60 dBm Band 4: IEEE 802.11a: 23.88 dBm IEEE 802.11n MCS0 (HT20): 24.88 dBm IEEE 802.11n MCS0 (HT40): 21.25 dBm
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3

Items	Description	
Communication Mode	☒ IP Based (Load Based)	☐ Frame Based
TPC Function	☐ With TPC	☒ Without TPC
Weather Band (5600~5650MHz)	☒ With 5600~5650MHz	☐ Without 5600~5650MHz
Beamforming Function	☐ With beamforming	☒ Without beamforming
Operating Mode	☐ Outdoor access point	
	☐ Indoor access point	
	☐ Fixed point-to-point access points	
	☒ Mobile and portable client devices	

Antenna and Band width

Antenna	Single (TX)		Two (TX)	
Band width Mode	20 MHz	40 MHz	20 MHz	40 MHz
IEEE 802.11a	X	X	V	X
IEEE 802.11n	X	X	V	V

IEEE 11n Spec.

Protocol	Number of Transmit Chains (NTX)	Data Rate / MCS
802.11n (HT20)	2	MCS0-15
802.11n (HT40)	2	MCS0-15
Note 1: IEEE Std. 802.11n modulation consists of HT20 and HT40 (HT: High Throughput). Then EUT supports HT20 and HT40. Note 2: Modulation modes consist of below configuration: HT20/HT40: IEEE 802.11n		

3.2. Accessories

N/A

3.3. Table for Filed Antenna

Set	Ant.	Brand Holder	Model Name	Antenna Type	Connector	Remark
1	1	SONY corporation	WCBN4506R	PIFA Antenna	N/A	Only for EUT 2 WiFi use
	2	SONY corporation	WCBN4506R	PIFA Antenna	N/A	Only for EUT 2 WiFi use
2	3	SONY corporation	WCBN4506R	Dipole Antenna	I-PEX	For EUT 1 WiFi and BT use For EUT 2 BT use
	4	SONY corporation	WCBN4506R	Dipole Antenna	I-PEX	For EUT 1 WiFi and BT use For EUT 2 BT use
3	5	Waka manufacturing Co.,Ltd.	01S1072-00	Dipole Antenna	I-PEX	Only for EUT 1 WiFi use
	6	Waka manufacturing Co.,Ltd.	01S1072-00	Dipole Antenna	I-PEX	Only for EUT 1 WiFi use

Set	Ant.	Gain (dBi)						
		BT-2.4GHz	WiFi-2.4GHz	WiFi-5GHz Band 1	WiFi-5GHz Band 2	WiFi-5GHz Band 3	WiFi-5GHz Band 4	Cable Length [mm]
1	1	-	0.71	1.81	1.81	2.14	1.8	N/A
	2	-	0.13	0.72	1.78	2.12	1.67	N/A
2 Note1	3	1.61	1.61	2.13	2.13	2.31	2.68	100-910mm Note2
	4	1.61	1.61	2.13	2.13	2.31	2.68	100-910mm Note2
3 Note1	5	-	2.06	2.41	2.87	1.89	2.7	90mm
	6	-	2.06	2.41	2.87	1.89	2.7	90mm

Note:

1. Gain with cable loss

2. Table for Cable loss Information

I-PEX Plug : Normal Type

Cable No.	Model Cable Color : Black	Cable No.	Model Cable Color : Gray	Cable No.	Model Cable Color : White	Brand	Cable Length [mm]	Phi [mm]	Connector Type	Cable Loss					
										2.4 GHz	2.45 GHz	2.5 GHz	5.15 GHz	5.5 GHz	5.85 GHz
1	822EKQ1000000001H1	83	822EKR1000000001H1	165	822EKP1000000001H1	I-PEX	100	1.13	MHF	0.51	0.51	0.52	0.79	0.80	0.82
2	822EKQ1100000001H1	84	822EKR1100000001H1	166	822EKP1100000001H1	I-PEX	110	1.13	MHF	0.54	0.54	0.55	0.84	0.85	0.87
3	822EKQ1200000001H1	85	822EKR1200000001H1	167	822EKP1200000001H1	I-PEX	120	1.13	MHF	0.57	0.57	0.58	0.88	0.90	0.92
4	822EKQ1300000001H1	86	822EKR1300000001H1	168	822EKP1300000001H1	I-PEX	130	1.13	MHF	0.60	0.60	0.62	0.93	0.94	0.97
5	822EKQ1400000001H1	87	822EKR1400000001H1	169	822EKP1400000001H1	I-PEX	140	1.13	MHF	0.63	0.64	0.65	0.98	0.99	1.02
6	822EKQ1500000001H1	88	822EKR1500000001H1	170	822EKP1500000001H1	I-PEX	150	1.13	MHF	0.67	0.67	0.68	1.02	1.04	1.07
7	822EKQ1600000001H1	89	822EKR1600000001H1	171	822EKP1600000001H1	I-PEX	160	1.13	MHF	0.70	0.70	0.71	1.07	1.09	1.12
8	822EKQ1700000001H1	90	822EKR1700000001H1	172	822EKP1700000001H1	I-PEX	170	1.13	MHF	0.73	0.73	0.74	1.11	1.14	1.17
9	822EKQ1800000001H1	91	822EKR1800000001H1	173	822EKP1800000001H1	I-PEX	180	1.13	MHF	0.76	0.76	0.77	1.16	1.18	1.22
10	822EKQ1900000001H1	92	822EKR1900000001H1	174	822EKP1900000001H1	I-PEX	190	1.13	MHF	0.79	0.79	0.81	1.21	1.23	1.27
11	822EKQ2000000001H1	93	822EKR2000000001H1	175	822EKP2000000001H1	I-PEX	200	1.13	MHF	0.82	0.83	0.84	1.25	1.28	1.32
12	822EKQ2100000001H1	94	822EKR2100000001H1	176	822EKP2100000001H1	I-PEX	210	1.13	MHF	0.85	0.86	0.87	1.30	1.33	1.37
13	822EKQ2200000001H1	95	822EKR2200000001H1	177	822EKP2200000001H1	I-PEX	220	1.13	MHF	0.88	0.89	0.90	1.35	1.37	1.42
14	822EKQ2300000001H1	96	822EKR2300000001H1	178	822EKP2300000001H1	I-PEX	230	1.13	MHF	0.91	0.92	0.93	1.39	1.42	1.47
15	822EKQ2400000001H1	97	822EKR2400000001H1	179	822EKP2400000001H1	I-PEX	240	1.13	MHF	0.95	0.95	0.96	1.44	1.47	1.52
16	822EKQ2500000001H1	98	822EKR2500000001H1	180	822EKP2500000001H1	I-PEX	250	1.13	MHF	0.98	0.98	1.00	1.48	1.52	1.57
17	822EKQ2600000001H1	99	822EKR2600000001H1	181	822EKP2600000001H1	I-PEX	260	1.13	MHF	1.01	1.02	1.03	1.53	1.57	1.62
18	822EKQ2700000001H1	100	822EKR2700000001H1	182	822EKP2700000001H1	I-PEX	270	1.13	MHF	1.04	1.05	1.06	1.58	1.61	1.67
19	822EKQ2800000001H1	101	822EKR2800000001H1	183	822EKP2800000001H1	I-PEX	280	1.13	MHF	1.07	1.08	1.09	1.62	1.66	1.72
20	822EKQ2900000001H1	102	822EKR2900000001H1	184	822EKP2900000001H1	I-PEX	290	1.13	MHF	1.10	1.11	1.12	1.67	1.71	1.77
21	822EKQ3000000001H1	103	822EKR3000000001H1	185	822EKP3000000001H1	I-PEX	300	1.13	MHF	1.13	1.14	1.15	1.72	1.76	1.82
22	822EKQ3100000001H1	104	822EKR3100000001H1	186	822EKP3100000001H1	I-PEX	310	1.13	MHF	1.16	1.17	1.19	1.76	1.81	1.87
23	822EKQ3200000001H1	105	822EKR3200000001H1	187	822EKP3200000001H1	I-PEX	320	1.13	MHF	1.19	1.21	1.22	1.81	1.85	1.92
24	822EKQ3300000001H1	106	822EKR3300000001H1	188	822EKP3300000001H1	I-PEX	330	1.13	MHF	1.23	1.24	1.25	1.85	1.90	1.97
25	822EKQ3400000001H1	107	822EKR3400000001H1	189	822EKP3400000001H1	I-PEX	340	1.13	MHF	1.26	1.27	1.28	1.90	1.95	2.02
26	822EKQ3500000001H1	108	822EKR3500000001H1	190	822EKP3500000001H1	I-PEX	350	1.13	MHF	1.29	1.30	1.31	1.95	2.00	2.07
27	822EKQ3600000001H1	109	822EKR3600000001H1	191	822EKP3600000001H1	I-PEX	360	1.13	MHF	1.32	1.33	1.34	1.99	2.05	2.12
28	822EKQ3700000001H1	110	822EKR3700000001H1	192	822EKP3700000001H1	I-PEX	370	1.13	MHF	1.35	1.36	1.38	2.04	2.09	2.17
29	822EKQ3800000001H1	111	822EKR3800000001H1	193	822EKP3800000001H1	I-PEX	380	1.13	MHF	1.38	1.39	1.41	2.09	2.14	2.22
30	822EKQ3900000001H1	112	822EKR3900000001H1	194	822EKP3900000001H1	I-PEX	390	1.13	MHF	1.41	1.43	1.44	2.13	2.19	2.27
31	822EKQ4000000001H1	113	822EKR4000000001H1	195	822EKP4000000001H1	I-PEX	400	1.13	MHF	1.44	1.46	1.47	2.18	2.24	2.32
32	822EKQ4100000001H1	114	822EKR4100000001H1	196	822EKP4100000001H1	I-PEX	410	1.13	MHF	1.47	1.49	1.50	2.23	2.28	2.37
33	822EKQ4200000001H1	115	822EKR4200000001H1	197	822EKP4200000001H1	I-PEX	420	1.13	MHF	1.51	1.52	1.53	2.27	2.33	2.42
34	822EKQ4300000001H1	116	822EKR4300000001H1	198	822EKP4300000001H1	I-PEX	430	1.13	MHF	1.54	1.55	1.57	2.32	2.38	2.47
35	822EKQ4400000001H1	117	822EKR4400000001H1	199	822EKP4400000001H1	I-PEX	440	1.13	MHF	1.57	1.58	1.60	2.36	2.43	2.52
36	822EKQ4500000001H1	118	822EKR4500000001H1	200	822EKP4500000001H1	I-PEX	450	1.13	MHF	1.60	1.62	1.63	2.41	2.48	2.57
37	822EKQ4600000001H1	119	822EKR4600000001H1	201	822EKP4600000001H1	I-PEX	460	1.13	MHF	1.63	1.65	1.66	2.46	2.52	2.62
38	822EKQ4700000001H1	120	822EKR4700000001H1	202	822EKP4700000001H1	I-PEX	470	1.13	MHF	1.66	1.68	1.69	2.50	2.57	2.67
39	822EKQ4800000001H1	121	822EKR4800000001H1	203	822EKP4800000001H1	I-PEX	480	1.13	MHF	1.69	1.71	1.72	2.55	2.62	2.72
40	822EKQ4900000001H1	122	822EKR4900000001H1	204	822EKP4900000001H1	I-PEX	490	1.13	MHF	1.72	1.74	1.76	2.60	2.67	2.77
41	822EKQ5000000001H1	123	822EKR5000000001H1	205	822EKP5000000001H1	I-PEX	500	1.13	MHF	1.75	1.77	1.79	2.64	2.72	2.82
42	822EKQ5100000001H1	124	822EKR5100000001H1	206	822EKP5100000001H1	I-PEX	510	1.13	MHF	1.79	1.81	1.82	2.69	2.76	2.87
43	822EKQ5200000001H1	125	822EKR5200000001H1	207	822EKP5200000001H1	I-PEX	520	1.13	MHF	1.82	1.84	1.85	2.73	2.81	2.92
44	822EKQ5300000001H1	126	822EKR5300000001H1	208	822EKP5300000001H1	I-PEX	530	1.13	MHF	1.85	1.87	1.88	2.78	2.86	2.97
45	822EKQ5400000001H1	127	822EKR5400000001H1	209	822EKP5400000001H1	I-PEX	540	1.13	MHF	1.88	1.90	1.91	2.83	2.91	3.02
46	822EKQ5500000001H1	128	822EKR5500000001H1	210	822EKP5500000001H1	I-PEX	550	1.13	MHF	1.91	1.93	1.95	2.87	2.96	3.07
47	822EKQ5600000001H1	129	822EKR5600000001H1	211	822EKP5600000001H1	I-PEX	560	1.13	MHF	1.94	1.96	1.98	2.92	3.00	3.12
48	822EKQ5700000001H1	130	822EKR5700000001H1	212	822EKP5700000001H1	I-PEX	570	1.13	MHF	1.97	2.00	2.01	2.97	3.05	3.17
49	822EKQ5800000001H1	131	822EKR5800000001H1	213	822EKP5800000001H1	I-PEX	580	1.13	MHF	2.00	2.03	2.04	3.01	3.10	3.22
50	822EKQ5900000001H1	132	822EKR5900000001H1	214	822EKP5900000001H1	I-PEX	590	1.13	MHF	2.03	2.06	2.07	3.06	3.15	3.27
51	822EKQ6000000001H1	133	822EKR6000000001H1	215	822EKP6000000001H1	I-PEX	600	1.13	MHF	2.07	2.09	2.11	3.11	3.20	3.32
52	822EKQ6100000001H1	134	822EKR6100000001H1	216	822EKP6100000001H1	I-PEX	610	1.13	MHF	2.10	2.12	2.14	3.15	3.24	3.36
53	822EKQ6200000001H1	135	822EKR6200000001H1	217	822EKP6200000001H1	I-PEX	620	1.13	MHF	2.13	2.15	2.17	3.20	3.29	3.41
54	822EKQ6300000001H1	136	822EKR6300000001H1	218	822EKP6300000001H1	I-PEX	630	1.13	MHF	2.16	2.18	2.20	3.24	3.34	3.46
55	822EKQ6400000001H1	137	822EKR6400000001H1	219	822EKP6400000001H1	I-PEX	640	1.13	MHF	2.19	2.22	2.23	3.29	3.39	3.51
56	822EKQ6500000001H1	138	822EKR6500000001H1	220	822EKP6500000001H1	I-PEX	650	1.13	MHF	2.22	2.25	2.26	3.34	3.43	3.56
57	822EKQ6600000001H1	139	822EKR6600000001H1	221	822EKP6600000001H1	I-PEX	660	1.13	MHF	2.25	2.28	2.30	3.38	3.48	3.61
58	822EKQ6700000001H1	140	822EKR6700000001H1	222	822EKP6700000001H1	I-PEX	670	1.13	MHF	2.28	2.31	2.33	3.43	3.53	3.66
59	822EKQ6800000001H1	141	822EKR6800000001H1	223	822EKP6800000001H1	I-PEX	680	1.13	MHF	2.31	2.34	2.36	3.48	3.58	3.71
60	822EKQ6900000001H1	142	822EKR6900000001H1	224	822EKP6900000001H1	I-PEX	690	1.13	MHF	2.34	2.37	2.39	3.52	3.63	3.76
61	822EKQ7000000001H1	143	822EKR7000000001H1	225	822EKP7000000001H1	I-PEX	700	1.13	MHF	2.38	2.41	2.42	3.57	3.67	3.81
62	822EKQ7100000001H1	144	822EKR7100000001H1	226	822EKP7100000001H1	I-PEX	710	1.13	MHF	2.41	2.44	2.45	3.61	3.72	3.86
63	822EKQ7200000001H1	145	822EKR7200000001H1	227	822EKP7200000001H1	I-PEX	720	1.13	MHF	2.44	2.47	2.49	3.66	3.77	3.91
64	822EKQ7300000001H1	146	822EKR7300000001H1	228	822EKP7300000001H1	I-PEX	730	1.13	MHF	2.47	2.50	2.52	3.71	3.82	3.96
65	822EKQ7400000001H1	147	822EKR7400000001H1	229	822EKP7400000001H1	I-PEX	740	1.13	MHF	2.50	2.53	2.55	3.75	3.87	4.01
66	822EKQ7500000001H1	148	822EKR7500000001H1	230	822EKP7500000001H1	I-PEX	750	1.13	MHF	2.53	2.56	2.58	3.80	3.91	4.06
67	822EKQ7600000001H1	149	822EKR7600000001H1	231	822EKP7600000001H1	I-PEX	760	1.13	MHF	2.56	2.60	2.61	3.85	3.96	4.11
68	822EKQ7700000001H1	150	822EKR7700000001H1	232	822EKP7700000001H1	I-PEX	770	1.13	MHF	2.59	2.63	2.64	3.89	4.01	4.16
69	822EKQ7800000001H1	151	822EKR7800000001H1	233	822EKP7800000001H1	I-PEX	780	1.13	MHF	2.62	2.66	2.68	3.94	4.06	4.21
70	822EKQ7900000001H1	152	822EKR7900000001H1	234	822EKP7900000001H1	I-PEX	790	1.13	MHF	2.66	2.69	2.71	3.98	4.11	4.26
71	822EKQ8000000001H1	153	822EKR8000000001H1	235	822EKP8000000001H1	I-PEX	800	1.13	MHF	2.69	2.72	2.74	4.03	4.15	4.31
72	822EKQ8100000001H1	154	822EKR8100000001H1	236	822EKP8100000001H1	I-PEX	810	1.13	MHF	2.72	2.75	2.77	4.08	4.20	4.36
73	822EKQ8200000001H1	155	822EKR8200000001H1	237	822EKP8200000001H1	I-PEX	820	1.13	MHF	2.75	2.79	2.80	4.12	4.25	4.41
74	822EKQ8300000001H1	156	822EKR8300000001H1	238	822EKP8300000001H1	I-PEX	830	1.13	MHF	2.78	2.82	2.83	4.17	4.30	4.46
75	822EKQ8400000001H1	157	822EKR8400000001H1	239	822EKP8400000001H1	I-PEX	840	1.13	MHF	2.81	2.85	2.87	4.22	4.34	4.51
76	822EKQ8500000001H1	158	822EKR8500000001H1	240	822EKP8500000001H1	I-PEX	850	1.13	MHF	2.84	2.88	2.90	4.26	4.39	4.56
77	822EKQ8600000001H1	159	822EKR8600000001H1	241	822EKP8600000001H1	I-PEX	860	1.13	MHF	2.87	2.91	2.93	4.31	4.44	4.61
78	822EKQ8700000001H1	160	822EKR8700000001H1	242	822EKP8700000001H1	I-PEX	870	1.13	MHF	2.90	2.94	2.96	4.36	4.49	4.66
79	822EKQ8800000001H1	161	822EKR8800000001H1	243	822EKP8800000001H1	I-PEX	880	1.13	MHF	2.94	2.97	2.99	4.40	4.54	4.71
80	822EKQ8900000001H1	162	822EKR8900000001H1	244	822EKP8900000001H1	I-PEX	890	1.13	MHF	2.97	3.01	3.02	4.45	4.58	4.76
81	822EKQ9000000001H1	163	822EKR9000000001H1	245	822EKP9000000001H1	I-PEX	900	1.13	MHF	3.00	3.04	3.06	4.49	4.63	4.81
82	822EKQ9100000001H1	164	822EKR9100000001H1	246	822EKP9100000001H1	I-PEX	910	1.13	MHF	3.03	3.07	3.09	4.54	4.68	4.86

I-PEX Plug : Smooth Insert Type

Cable No.	Model Cable Color : Black	Cable No.	Model Cable Color : Gray	Cable No.	Model Cable Color : White	Brand	Cable Length [mm]	Phi [mm]	Connector Type	Cable Loss					
										2.4 GHz	2.45 GHz	2.5 GHz	5.15 GHz	5.5 GHz	5.85 GHz
247	822EKQ1000000001H3	329	822EKR1000000001H3	411	822EKP1000000001H3	I-PEX	100	1.13	MHF	0.51	0.51	0.52	0.79	0.80	0.82
248	822EKQ1100000001H3	330	822EKR1100000001H3	412	822EKP1100000001H3	I-PEX	110	1.13	MHF	0.54	0.54	0.55	0.84	0.85	0.87
249	822EKQ1200000001H3	331	822EKR1200000001H3	413	822EKP1200000001H3	I-PEX	120	1.13	MHF	0.57	0.57	0.58	0.88	0.90	0.92
250	822EKQ1300000001H3	332	822EKR1300000001H3	414	822EKP1300000001H3	I-PEX	130	1.13	MHF	0.60	0.60	0.62	0.93	0.94	0.97
251	822EKQ1400000001H3	333	822EKR1400000001H3	415	822EKP1400000001H3	I-PEX	140	1.13	MHF	0.63	0.64	0.65	0.98	0.99	1.02
252	822EKQ1500000001H3	334	822EKR1500000001H3	416	822EKP1500000001H3	I-PEX	150	1.13	MHF	0.67	0.67	0.68	1.02	1.04	1.07
253	822EKQ1600000001H3	335	822EKR1600000001H3	417	822EKP1600000001H3	I-PEX	160	1.13	MHF	0.70	0.70	0.71	1.07	1.09	1.12
254	822EKQ1700000001H3	336	822EKR1700000001H3	418	822EKP1700000001H3	I-PEX	170	1.13	MHF	0.73	0.73	0.74	1.11	1.14	1.17
255	822EKQ1800000001H3	337	822EKR1800000001H3	419	822EKP1800000001H3	I-PEX	180	1.13	MHF	0.76	0.76	0.77	1.16	1.18	1.22
256	822EKQ1900000001H3	338	822EKR1900000001H3	420	822EKP1900000001H3	I-PEX	190	1.13	MHF	0.79	0.79	0.81	1.21	1.23	1.27
257	822EKQ2000000001H3	339	822EKR2000000001H3	421	822EKP2000000001H3	I-PEX	200	1.13	MHF	0.82	0.83	0.84	1.25	1.28	1.32
258	822EKQ2100000001H3	340	822EKR2100000001H3	422	822EKP2100000001H3	I-PEX	210	1.13	MHF	0.85	0.86	0.87	1.30	1.33	1.37
259	822EKQ2200000001H3	341	822EKR2200000001H3	423	822EKP2200000001H3	I-PEX	220	1.13	MHF	0.88	0.89	0.90	1.35	1.37	1.42
260	822EKQ2300000001H3	342	822EKR2300000001H3	424	822EKP2300000001H3	I-PEX	230	1.13	MHF	0.91	0.92	0.93	1.39	1.42	1.47
261	822EKQ2400000001H3	343	822EKR2400000001H3	425	822EKP2400000001H3	I-PEX	240	1.13	MHF	0.95	0.95	0.96	1.44	1.47	1.52
262	822EKQ2500000001H3	344	822EKR2500000001H3	426	822EKP2500000001H3	I-PEX	250	1.13	MHF	0.98	0.98	1.00	1.48	1.52	1.57
263	822EKQ2600000001H3	345	822EKR2600000001H3	427	822EKP2600000001H3	I-PEX	260	1.13	MHF	1.01	1.02	1.03	1.53	1.57	1.62
264	822EKQ2700000001H3	346	822EKR2700000001H3	428	822EKP2700000001H3	I-PEX	270	1.13	MHF	1.04	1.05	1.06	1.58	1.61	1.67
265	822EKQ2800000001H3	347	822EKR2800000001H3	429	822EKP2800000001H3	I-PEX	280	1.13	MHF	1.07	1.08	1.09	1.62	1.66	1.72
266	822EKQ2900000001H3	348	822EKR2900000001H3	430	822EKP2900000001H3	I-PEX	290	1.13	MHF	1.10	1.11	1.12	1.67	1.71	1.77
267	822EKQ3000000001H3	349	822EKR3000000001H3	431	822EKP3000000001H3	I-PEX	300	1.13	MHF	1.13	1.14	1.15	1.72	1.76	1.82
268	822EKQ3100000001H3	350	822EKR3100000001H3	432	822EKP3100000001H3	I-PEX	310	1.13	MHF	1.16	1.17	1.19	1.76	1.81	1.87
269	822EKQ3200000001H3	351	822EKR3200000001H3	433	822EKP3200000001H3	I-PEX	320	1.13	MHF	1.19	1.21	1.22	1.81	1.85	1.92
270	822EKQ3300000001H3	352	822EKR3300000001H3	434	822EKP3300000001H3	I-PEX	330	1.13	MHF	1.23	1.24	1.25	1.85	1.90	1.97
271	822EKQ3400000001H3	353	822EKR3400000001H3	435	822EKP3400000001H3	I-PEX	340	1.13	MHF	1.26	1.27	1.28	1.90	1.95	2.02
272	822EKQ3500000001H3	354	822EKR3500000001H3	436	822EKP3500000001H3	I-PEX	350	1.13	MHF	1.29	1.30	1.31	1.95	2.00	2.07
273	822EKQ3600000001H3	355	822EKR3600000001H3	437	822EKP3600000001H3	I-PEX	360	1.13	MHF	1.32	1.33	1.34	1.99	2.05	2.12
274	822EKQ3700000001H3	356	822EKR3700000001H3	438	822EKP3700000001H3	I-PEX	370	1.13	MHF	1.35	1.36	1.38	2.04	2.09	2.17
275	822EKQ3800000001H3	357	822EKR3800000001H3	439	822EKP3800000001H3	I-PEX	380	1.13	MHF	1.38	1.39	1.41	2.09	2.14	2.22
276	822EKQ3900000001H3	358	822EKR3900000001H3	440	822EKP3900000001H3	I-PEX	390	1.13	MHF	1.41	1.43	1.44	2.13	2.19	2.27
277	822EKQ4000000001H3	359	822EKR4000000001H3	441	822EKP4000000001H3	I-PEX	400	1.13	MHF	1.44	1.46	1.47	2.18	2.24	2.32
278	822EKQ4100000001H3	360	822EKR4100000001H3	442	822EKP4100000001H3	I-PEX	410	1.13	MHF	1.47	1.49	1.50	2.23	2.28	2.37
279	822EKQ4200000001H3	361	822EKR4200000001H3	443	822EKP4200000001H3	I-PEX	420	1.13	MHF	1.51	1.52	1.53	2.27	2.33	2.42
280	822EKQ4300000001H3	362	822EKR4300000001H3	444	822EKP4300000001H3	I-PEX	430	1.13	MHF	1.54	1.55	1.57	2.32	2.38	2.47
281	822EKQ4400000001H3	363	822EKR4400000001H3	445	822EKP4400000001H3	I-PEX	440	1.13	MHF	1.57	1.58	1.60	2.36	2.43	2.52
282	822EKQ4500000001H3	364	822EKR4500000001H3	446	822EKP4500000001H3	I-PEX	450	1.13	MHF	1.60	1.62	1.63	2.41	2.48	2.57
283	822EKQ4600000001H3	365	822EKR4600000001H3	447	822EKP4600000001H3	I-PEX	460	1.13	MHF	1.63	1.65	1.66	2.46	2.52	2.62
284	822EKQ4700000001H3	366	822EKR4700000001H3	448	822EKP4700000001H3	I-PEX	470	1.13	MHF	1.66	1.68	1.69	2.50	2.57	2.67
285	822EKQ4800000001H3	367	822EKR4800000001H3	449	822EKP4800000001H3	I-PEX	480	1.13	MHF	1.69	1.71	1.72	2.55	2.62	2.72
286	822EKQ4900000001H3	368	822EKR4900000001H3	450	822EKP4900000001H3	I-PEX	490	1.13	MHF	1.72	1.74	1.76	2.60	2.67	2.77
287	822EKQ5000000001H3	369	822EKR5000000001H3	451	822EKP5000000001H3	I-PEX	500	1.13	MHF	1.75	1.77	1.79	2.64	2.72	2.82
288	822EKQ5100000001H3	370	822EKR5100000001H3	452	822EKP5100000001H3	I-PEX	510	1.13	MHF	1.79	1.81	1.82	2.69	2.76	2.87
289	822EKQ5200000001H3	371	822EKR5200000001H3	453	822EKP5200000001H3	I-PEX	520	1.13	MHF	1.82	1.84	1.85	2.73	2.81	2.92
290	822EKQ5300000001H3	372	822EKR5300000001H3	454	822EKP5300000001H3	I-PEX	530	1.13	MHF	1.85	1.87	1.88	2.78	2.86	2.97
291	822EKQ5400000001H3	373	822EKR5400000001H3	455	822EKP5400000001H3	I-PEX	540	1.13	MHF	1.88	1.90	1.91	2.83	2.91	3.02
292	822EKQ5500000001H3	374	822EKR5500000001H3	456	822EKP5500000001H3	I-PEX	550	1.13	MHF	1.91	1.93	1.95	2.87	2.96	3.07
293	822EKQ5600000001H3	375	822EKR5600000001H3	457	822EKP5600000001H3	I-PEX	560	1.13	MHF	1.94	1.96	1.98	2.92	3.00	3.12
294	822EKQ5700000001H3	376	822EKR5700000001H3	458	822EKP5700000001H3	I-PEX	570	1.13	MHF	1.97	2.00	2.01	2.97	3.05	3.17
295	822EKQ5800000001H3	377	822EKR5800000001H3	459	822EKP5800000001H3	I-PEX	580	1.13	MHF	2.00	2.03	2.04	3.01	3.10	3.22
296	822EKQ5900000001H3	378	822EKR5900000001H3	460	822EKP5900000001H3	I-PEX	590	1.13	MHF	2.03	2.06	2.07	3.06	3.15	3.27
297	822EKQ6000000001H3	379	822EKR6000000001H3	461	822EKP6000000001H3	I-PEX	600	1.13	MHF	2.07	2.09	2.11	3.11	3.20	3.32
298	822EKQ6100000001H3	380	822EKR6100000001H3	462	822EKP6100000001H3	I-PEX	610	1.13	MHF	2.10	2.12	2.14	3.15	3.24	3.36
299	822EKQ6200000001H3	381	822EKR6200000001H3	463	822EKP6200000001H3	I-PEX	620	1.13	MHF	2.13	2.15	2.17	3.20	3.29	3.41
300	822EKQ6300000001H3	382	822EKR6300000001H3	464	822EKP6300000001H3	I-PEX	630	1.13	MHF	2.16	2.18	2.20	3.24	3.34	3.46
301	822EKQ6400000001H3	383	822EKR6400000001H3	465	822EKP6400000001H3	I-PEX	640	1.13	MHF	2.19	2.22	2.23	3.29	3.39	3.51
302	822EKQ6500000001H3	384	822EKR6500000001H3	466	822EKP6500000001H3	I-PEX	650	1.13	MHF	2.22	2.25	2.26	3.34	3.43	3.56
303	822EKQ6600000001H3	385	822EKR6600000001H3	467	822EKP6600000001H3	I-PEX	660	1.13	MHF	2.25	2.28	2.30	3.38	3.48	3.61
304	822EKQ6700000001H3	386	822EKR6700000001H3	468	822EKP6700000001H3	I-PEX	670	1.13	MHF	2.28	2.31	2.33	3.43	3.53	3.66
305	822EKQ6800000001H3	387	822EKR6800000001H3	469	822EKP6800000001H3	I-PEX	680	1.13	MHF	2.31	2.34	2.36	3.48	3.58	3.71
306	822EKQ6900000001H3	388	822EKR6900000001H3	470	822EKP6900000001H3	I-PEX	690	1.13	MHF	2.34	2.37	2.39	3.52	3.63	3.76
307	822EKQ7000000001H3	389	822EKR7000000001H3	471	822EKP7000000001H3	I-PEX	700	1.13	MHF	2.38	2.41	2.42	3.57	3.67	3.81
308	822EKQ7100000001H3	390	822EKR7100000001H3	472	822EKP7100000001H3	I-PEX	710	1.13	MHF	2.41	2.44	2.45	3.61	3.72	3.86
309	822EKQ7200000001H3	391	822EKR7200000001H3	473	822EKP7200000001H3	I-PEX	720	1.13	MHF	2.44	2.47	2.49	3.66	3.77	3.91
310	822EKQ7300000001H3	392	822EKR7300000001H3	474	822EKP7300000001H3	I-PEX	730	1.13	MHF	2.47	2.50	2.52	3.71	3.82	3.96
311	822EKQ7400000001H3	393	822EKR7400000001H3	475	822EKP7400000001H3	I-PEX	740	1.13	MHF	2.50	2.53	2.55	3.75	3.87	4.01
312	822EKQ7500000001H3	394	822EKR7500000001H3	476	822EKP7500000001H3	I-PEX	750	1.13	MHF	2.53	2.56	2.58	3.80	3.91	4.06
313	822EKQ7600000001H3	395	822EKR7600000001H3	477	822EKP7600000001H3	I-PEX	760	1.13	MHF	2.56	2.60	2.61	3.85	3.96	4.11
314	822EKQ7700000001H3	396	822EKR7700000001H3	478	822EKP7700000001H3	I-PEX	770	1.13	MHF	2.59	2.63	2.64	3.89	4.01	4.16
315	822EKQ7800000001H3	397	822EKR7800000001H3	479	822EKP7800000001H3	I-PEX	780	1.13	MHF	2.62	2.66	2.68	3.94	4.06	4.21
316	822EKQ7900000001H3	398	822EKR7900000001H3	480	822EKP7900000001H3	I-PEX	790	1.13	MHF	2.66	2.69	2.71	3.98	4.11	4.26
317	822EKQ8000000001H3	399	822EKR8000000001H3	481	822EKP8000000001H3	I-PEX	800	1.13	MHF	2.69	2.72	2.74	4.03	4.15	4.31
318	822EKQ8100000001H3	400	822EKR8100000001H3	482	822EKP8100000001H3	I-PEX	810	1.13	MHF	2.72	2.75	2.77	4.08	4.20	4.36
319	822EKQ8200000001H3	401	822EKR8200000001H3	483	822EKP8200000001H3	I-PEX	820	1.13	MHF	2.75	2.79	2.80	4.12	4.25	4.41
320	822EKQ8300000001H3	402	822EKR8300000001H3	484	822EKP8300000001H3	I-PEX	830	1.13	MHF	2.78	2.82	2.83	4.17	4.30	4.46
321	822EKQ8400000001H3	403	822EKR8400000001H3	485	822EKP8400000001H3	I-PEX	840	1.13	MHF	2.81	2.85	2.87	4.22	4.34	4.51
322	822EKQ8500000001H3	404	822EKR8500000001H3	486	822EKP8500000001H3	I-PEX	850	1.13	MHF	2.84	2.88	2.90	4.26	4.39	4.56
323	822EKQ8600000001H3	405	822EKR8600000001H3	487	822EKP8600000001H3	I-PEX	860	1.13	MHF	2.87	2.91	2.93	4.31	4.44	4.61
324	822EKQ8700000001H3	406	822EKR8700000001H3	488	822EKP8700000001H3	I-PEX	870	1.13	MHF	2.90	2.94	2.96	4.36	4.49	4.66
325	822EKQ8800000001H3	407	822EKR8800000001H3	489	822EKP8800000001H3	I-PEX	880	1.13	MHF	2.94	2.97	2.99	4.40	4.54	4.71
326	822EKQ8900000001H3	408	822EKR8900000001H3	490	822EKP8900000001H3	I-PEX	890	1.13	MHF	2.97	3.01	3.02	4.45	4.58	4.76
327	822EKQ9000000001H3	409	822EKR9000000001H3	491	822EKP9000000001H3	I-PEX	900	1.13	MHF	3.00	3.04	3.06	4.49	4.63	4.81
328	822EKQ9100000001H3	410	822EKR9100000001H3	492	822EKP9100000001H3	I-PEX	910	1.13	MHF	3.03	3.07	3.09	4.54	4.68	4.86

3. The EUT has three sets of antennas and there are two antennas for each set.
4. Set 2~3 are the same type antenna. Only the highest gain antenna (Set 2 for Bluetooth, 5G Band3, Set 3 for 2.4G, 5G Band 1, 2, 4) was selected to test and record in this report.

For 2.4GHz function:

For IEEE 802.11b/g/n mode (2TX/2RX)

Chain 1 and Chain 2 can be used as transmitting/receiving antenna.

Chain 1 and Chain 2 could transmit/receive simultaneously.

For 5GHz function:

For IEEE 802.11a/n mode (2TX/2RX)

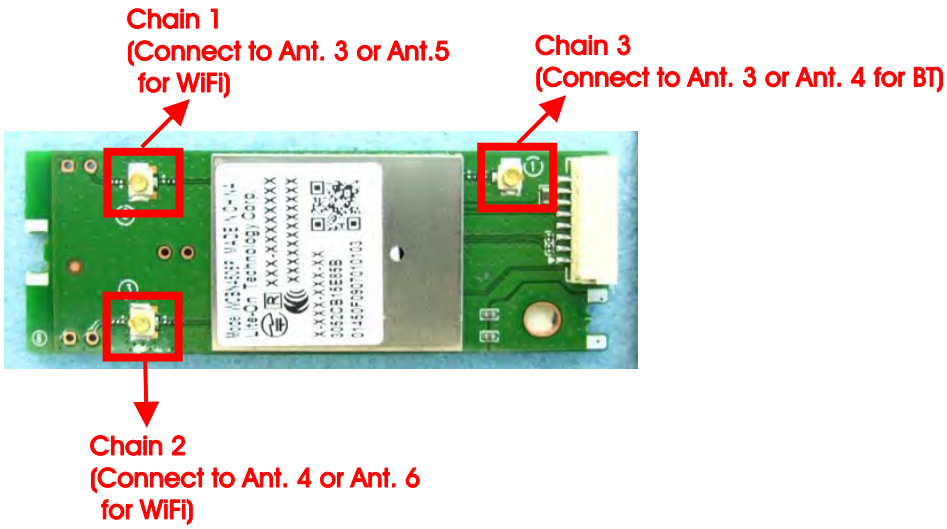
Chain 1 and Chain 2 can be used as transmitting/receiving antenna.

Chain 1 and Chain 2 could transmit/receive simultaneously.

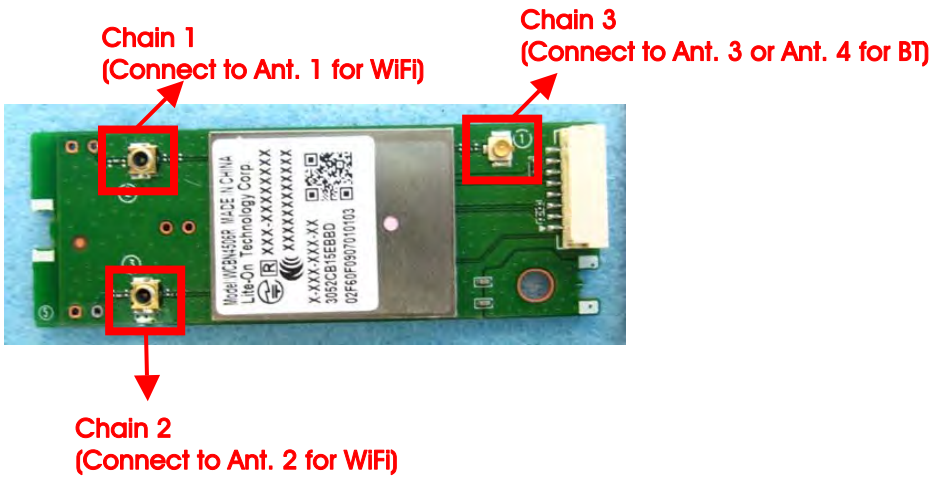
For Bluetooth function: (1TX/1RX)

Only Chain 3 can be used as transmitting/receiving antenna.

For EUT 1:



For EUT 2:



3.4. Table for Carrier Frequencies

The EUT has two bandwidth system.

For 20MHz bandwidth systems, use Channel 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 144, 149, 153, 157, 161, 165.

For 40MHz bandwidth systems, use Channel 38, 46, 54, 62, 102, 110, 118, 126, 134, 142, 151, 159.

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
5150~5250 MHz Band 1	36	5180 MHz	44	5220 MHz
	38	5190 MHz	46	5230 MHz
	40	5200 MHz	48	5240 MHz
5250~5350 MHz Band 2	52	5260 MHz	60	5300 MHz
	54	5270 MHz	62	5310 MHz
	56	5280 MHz	64	5320 MHz
5470~5725 MHz Band 3	100	5500 MHz	124	5620 MHz
	102	5510 MHz	126	5630 MHz
	104	5520 MHz	128	5640 MHz
	108	5540 MHz	132	5660 MHz
	110	5550 MHz	134	5670 MHz
	112	5560 MHz	136	5680 MHz
	116	5580 MHz	140	5700 MHz
	118	5590 MHz	142	5710 MHz
	120	5600 MHz	144	5720 MHz
5725~5850 MHz Band 4	149	5745 MHz	159	5795 MHz
	151	5755 MHz	161	5805 MHz
	153	5765 MHz	165	5825 MHz
	157	5785 MHz	-	-

3.5. Table for Test Modes

Preliminary tests were performed in different data rate to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode		Data Rate	Channel	Chain
AC Power Conducted Emission	Normal Link		-	-	-
Max. Conducted Output Power	11a/BPSK	Band 1-4	6Mbps	36/40/48/52/60/64 /100/116/140/144/ 149/157/165	1+2
	11n HT20	Band 1-4	MCS0	36/40/48/52/60/64 /100/116/140/144/ 149/157/165	1+2
	11n HT40	Band 1-4	MCS0	38/46/54/62/ 102/110/134/142/ 151/159	1+2
Power Spectral Density	11a/BPSK	Band 1-4	6Mbps	36/40/48/52/60/64 /100/116/140/144/ 149/157/165	1+2
	11n HT20	Band 1-4	MCS0	36/40/48/52/60/64 /100/116/140/144/ 149/157/165	1+2
	11n HT40	Band 1-4	MCS0	38/46/54/62/ 102/110/134/142/ 151/159	1+2
26dB Spectrum Bandwidth & 99% Occupied Bandwidth Measurement	11a/BPSK	Band 1-4	6Mbps	36/40/48/52/60/64 /100/116/140/144/ 149/157/165	1+2
	11n HT20	Band 1-4	MCS0	36/40/48/52/60/64 /100/116/140/144/ 149/157/165	1+2
	11n HT40	Band 1-4	MCS0	38/46/54/62/ 102/110/134/142/ 151/159	1+2

6dB Spectrum Bandwidth Measurement	11a/BPSK	Band 4	6Mbps	144/149/157/165	1+2
	11n HT20	Band 4	MCS0	144/149/157/165	1+2
	11n HT40	Band 4	MCS0	142/151/159	1+2
Radiated Emission Below 1GHz	Normal Link		-	-	-
Radiated Emission Above 1GHz	11a/BPSK	Band 1-4	6Mbps	36/40/48/52/60/64 /100/116/140/144/ 149/157/165	1+2
	11n HT20	Band 1-4	MCS0	36/40/48/52/60/64 /100/116/140/144/ 149/157/165	1+2
	11n HT40	Band 1-4	MCS0	38/46/54/62/ 102/110/134/142/ 151/159	1+2
Band Edge Emission	11a/BPSK	Band 1-4	6Mbps	36/40/48/52/60/64 /100/116/140/144/ 149/157/165	1+2
	11n HT20	Band 1-4	MCS0	36/40/48/52/60/64 /100/116/140/144/ 149/157/165	1+2
	11n HT40	Band 1-4	MCS0	38/46/54/62/ 102/110/134/142/ 151/159	1+2
Frequency Stability	20 MHz	Band 1-4	-	40/60/116/157	1
	40 MHz	Band 1-4	-	38/62/110/151	1

The following test modes were performed for all tests:

For Conducted Emission test:

Mode 1. Place EUT 1 in Z axis + Set 3 antenna (2.4GHz function) + Set 2 antenna (BT function)

Mode 2. Place EUT 1 in Z axis + Set 3 antenna (5GHz function) + Set 2 antenna (BT function)

Mode 3. Place EUT 2 in Z axis + Set 1 antenna (2.4GHz function) + Set 2 antenna (BT function)

Mode 4. Place EUT 2 in Z axis + Set 1 antenna (5GHz function) + Set 2 antenna (BT function)

Mode 2 is the worst case, so it was selected to record in this test report.

For Radiated Emission test below 1GHz:

Mode 1. Place EUT 1 in Z axis + Set 3 antenna (2.4GHz function) + Set 2 antenna (BT function)

Mode 2. Place EUT 1 in Z axis + Set 3 antenna (5GHz function) + Set 2 antenna (BT function)

Mode 3. Place EUT 2 in Z axis + Set 1 antenna (2.4GHz function) + Set 2 antenna (BT function)

Mode 4. Place EUT 2 in Z axis + Set 1 antenna (5GHz function) + Set 2 antenna (BT function)

Mode 1 is the worst case, so it was selected to record in this test report.

For Radiated Emission test above 1GHz:

The EUT was performed at X axis, Y axis and Z axis position. The worst case was found at Z axis, so it was selected to perform test and its test result was written in the report.

Mode 1. Place EUT 1 in Z axis + Set 3 antenna for 5G Band 1~2 and 4

Mode 1. Place EUT 1 in Z axis + Set 2 antenna for 5G Band 3

Mode 2. Place EUT 2 in Z axis + Set 1 antenna

For Radiated Emission Co-location test:

Place EUT 1 in Z axis generated the worst test result for Radiated emission below 1GHz test, thus the measurement for Radiated emission co-location test will follow this same test configuration.

Mode 1. Place EUT 1 in Z axis + Set 3 antenna (2.4GHz function) + Set 2 antenna (BT function)

Mode 2. Place EUT 1 in Z axis + Set 3 antenna (5GHz function) + Set 2 antenna (BT function).

For Co-location MPE and Radiated Emission Co-location Test:

The EUT could be applied with 2.4GHz WLAN function + BT function and 5GHz WLAN function + BT function; therefore Co-location Maximum Permissible Exposure (Please refer to FA590501) and Radiated Emission Co-location (please refer to Appendix B) tests are added for simultaneously transmit between 2.4GHz WLAN function + BT function and 5GHz WLAN function + BT function.

3.6. Table for Testing Locations

Test Site Location					
Address:	No.8, Lane 724, Bo-ai St., Jhubei City, Hsinchu County 302, Taiwan, R.O.C.				
TEL:	886-3-656-9065				
FAX:	886-3-656-9085				
Test Site No.	**Site Category**	**Location**	**FCC Reg. No.**	**IC File No.**	**VCCI Reg. No**
03CH01-CB	SAC	Hsin Chu	262045	IC 4086D	-
CO01-CB	Conduction	Hsin Chu	262045	IC 4086D	-
TH01-CB	OVEN Room	Hsin Chu	-	-	-

Open Area Test Site (OATS); Semi Anechoic Chamber (SAC).

3.7. Table for Multiple Listing

The brand/model names in the following table are all refer to the identical product.

EUT	Model Name	WiFi Antenna (Internal)	WiFi Antenna (External)	BT Antenna (External)
1	WCBN4506R	X	V	V
2		V	X	V

3.8. Table for Supporting Units

For Test Site No: 03CH01-CB

For Radiated Emission test below 1GHz

Support Unit	Brand	Model	FCC ID
NB	DELL	E6300	DoC
CBT Bluetooth tester	Anritsu	MT8852B	N/A
Mouse	HP	FM100	DoC
Earphone	SHYARO CHI	MIC-04	N/A
Wireless ac AP	Netgear	R6300V2	PY313200227
Fixtute	Liteon	TB006	N/A

For Radiated Emission test above 1GHz

Support Unit	Brand	Model	FCC ID
NB	DELL	E6300	DoC
Fixtute	Liteon	TB006	N/A

For Test Site No: CO01-CB

Support Unit	Brand	Model	FCC ID
AP Router	Planex	GW-AP54SGX	KA220030603014-1
NB	DELL	E6430	DoC
CBT Bluetooth tester	Anritsu	MT8852B	N/A
Fixture	Liteon	TB006	N/A
Mouse	HP	FM100	DoC
Earphone	e-Power	S90W	N/A

For Test Site No: TH01-CB

Support Unit	Brand	Model	FCC ID
NB	DELL	E6300	DoC
Fixture	Liteon	TB006	N/A

3.9. Table for Parameters of Test Software Setting

During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

For Mode 1:

Test Software Version	MT7662QA V1.0.3.14												
Mode	Test Frequency (MHz)												
	NCB: 20MHz												
	5180 MHz	5200 MHz	5240 MHz	5260 MHz	5300 MHz	5320 MHz	5500 MHz	5580 MHz	5700 MHz	5720 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	21/23	26/28	25/27	24/26	26/28	23/25	24/24	27/27	21/21	1F/20	1F/1F	2D/2D	24/24
802.11n MCS0 HT20	23/25	26/28	25/27	26/28	2B/2D	23/25	25/25	2D/2D	20/20	20/20	1E/1E	2D/2D	24/24

Mode	NCB: 40MHz									
802.11n MCS0 HT40	5190 MHz	5230 MHz	5270 MHz	5310 MHz	5510 MHz	5550 MHz	5670 MHz	5710 MHz	5755 MHz	5795 MHz
	1B/1D	24/26	26/28	19/1B	19/19	26/26	23/23	1F/20	19/19	25/25

For Mode 2:

Test Software Version	MT7662QA V1.0.3.14												
Mode	Test Frequency (MHz)												
	NCB: 20MHz												
	5180 MHz	5200 MHz	5240 MHz	5260 MHz	5300 MHz	5320 MHz	5500 MHz	5580 MHz	5700 MHz	5720 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	25/2A	2A/2F	24/27	2C/2F	2B/2F	25/29	25/29	28/2D	21/25	1E/20	1F/23	2C/2F	28/2D
802.11n MCS0 HT20	2A/2E	2D/30	2A/2C	2C/2F	2C/2F	2B/2F	29/2C	28/2D	23/27	1F/20	23/27	30/35	2F/32

Mode	NCB: 40MHz									
802.11n MCS0 HT40	5190 MHz	5230 MHz	5270 MHz	5310 MHz	5510 MHz	5550 MHz	5670 MHz	5710 MHz	5755 MHz	5795 MHz
	1B/21	20/25	24/28	1A/1F	1D/1E	25/28	21/25	1F/20	1B/1E	25/28

3.10. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.11. Duty Cycle

For Mode 1:

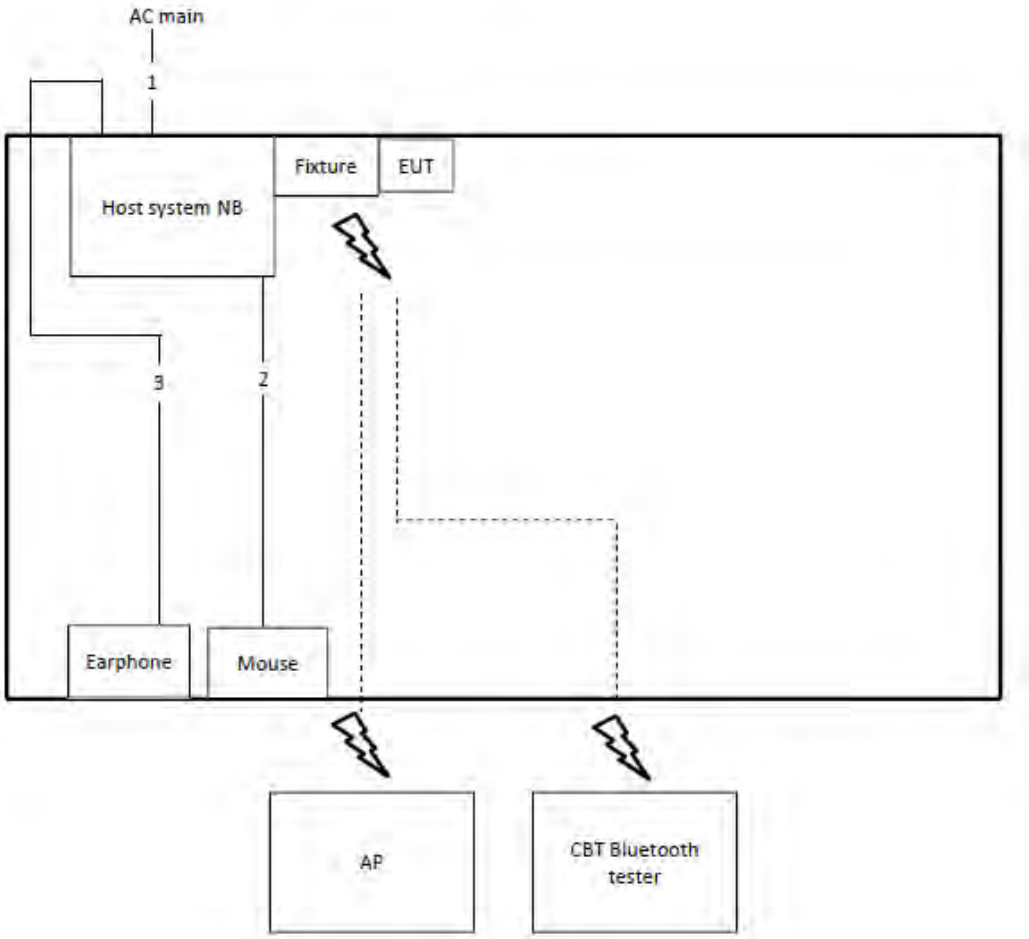
Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11a	1.439	2.922	49.24%	3.08	0.69
802.11n MCS0 HT20	1.338	1.546	86.55%	0.63	0.75
802.11n MCS0 HT40	0.633	0.869	72.84%	1.38	1.58

For Mode 2:

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11a	1.426	1.635	87.25%	0.59	0.70
802.11n MCS0 HT20	1.436	1.649	87.07%	0.60	0.70
802.11n MCS0 HT40	0.630	0.865	72.78%	1.38	1.59

3.12. Test Configurations

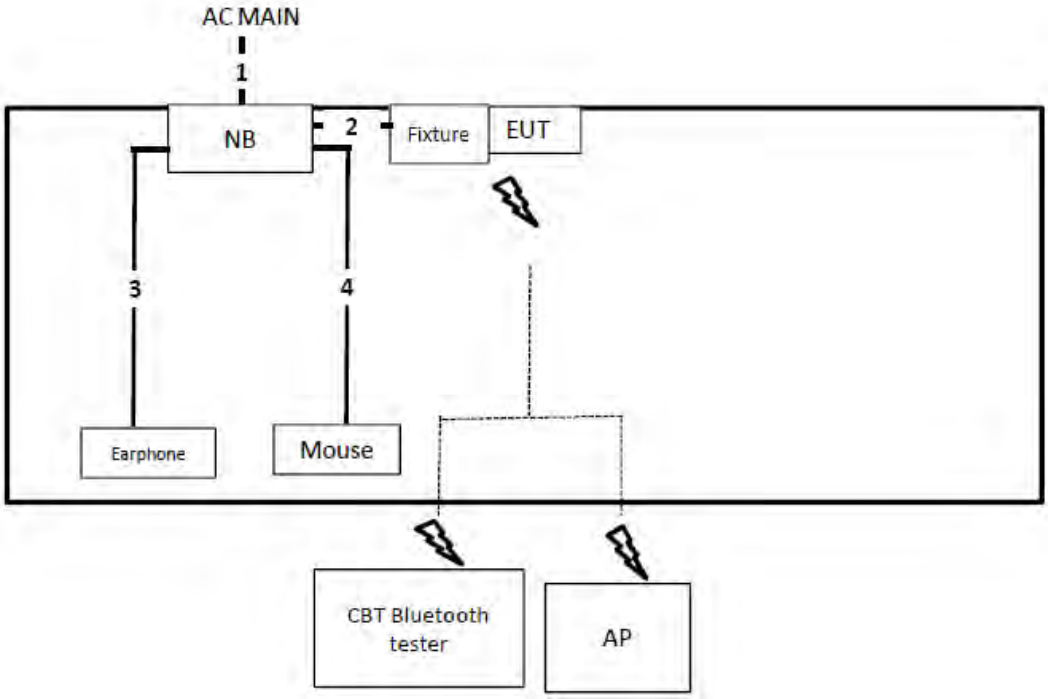
3.12.1. AC Power Line Conduction Emissions Test Configuration



Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	USB cable	No	1.8m
3	Audio cable	No	1.1m

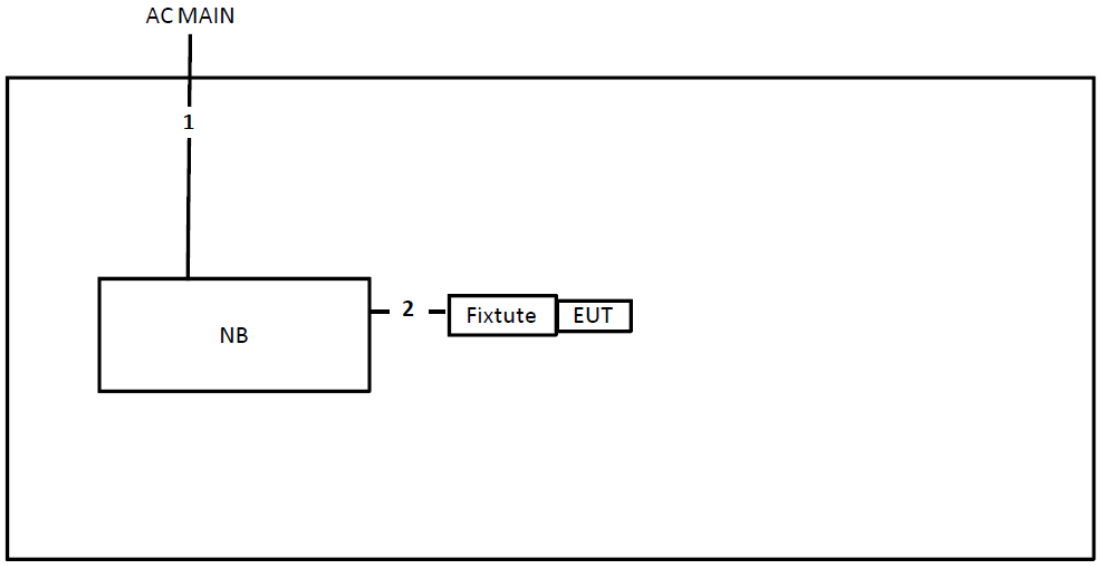
3.12.2. Radiation Emissions Test Configuration

Test Configuration: 30MHz ~1GHz



Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	USB cable	No	0.1m
3	Audio cable	No	1.1m
4	USB cable	No	1.8m

Test Configuration: above 1GHz



Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	USB cable	No	0.1m

4. TEST RESULT

4.1. AC Power Line Conducted Emissions Measurement

4.1.1. Limit

For this product that is designed to connect to the AC power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed below limits table.

Frequency (MHz)	QP Limit (dBuV)	AV Limit (dBuV)
0.15~0.5	66~56	56~46
0.5~5	56	46
5~30	60	50

4.1.2. Measuring Instruments and Setting

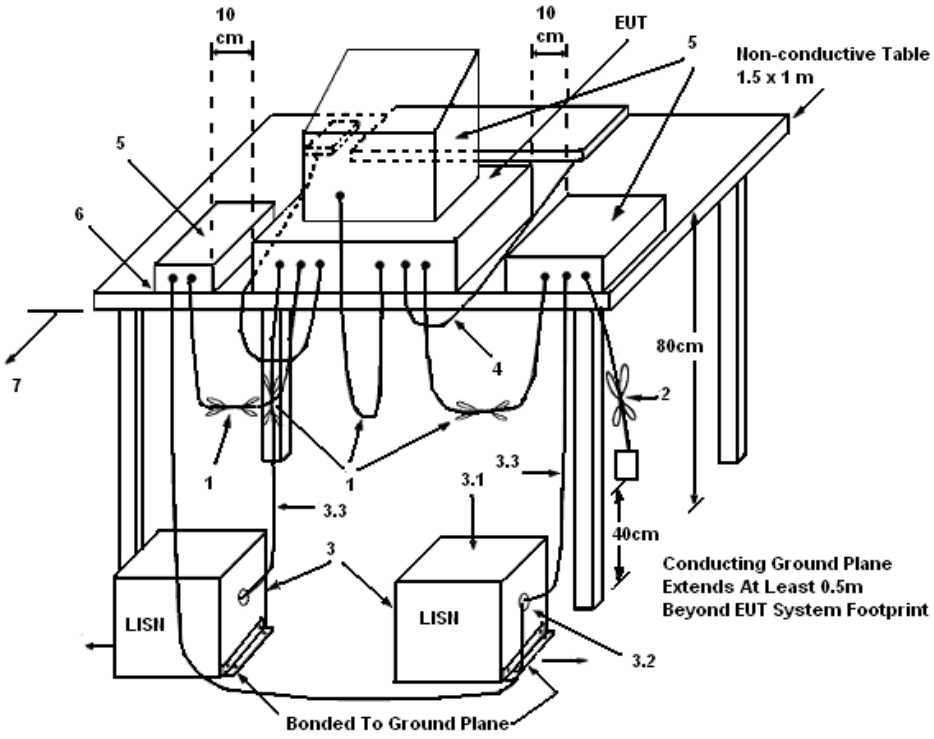
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

4.1.3. Test Procedures

1. Configure the EUT according to ANSI C63.10. The EUT or host of EUT has to be placed 0.4 meter far from the conducting wall of the shielding room and at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT or host of EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connected to the other LISNs. The LISN should provide 50uH/50ohms coupling impedance.
4. The frequency range from 150 kHz to 30 MHz was searched.
5. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. The measurement has to be done between each power line and ground at the power terminal.

4.1.4. Test Setup Layout



LEGEND:

(1) Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

(2) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

(3) EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω. LISN can be placed on top of, or immediately beneath, reference ground plane.

(3.1) All other equipment powered from additional LISN(s).

(3.2) Multiple outlet strip can be used for multiple power cords of non-EUT equipment.

(3.3) LISN at least 80 cm from nearest part of EUT chassis.

(4) Cables of hand-operated devices, such as keyboards, mice, etc., shall be placed as for normal use.

(5) Non-EUT components of EUT system being tested.

(6) Rear of EUT, including peripherals, shall all be aligned and flush with rear of tabletop.

(7) Rear of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.

4.1.5. Test Deviation

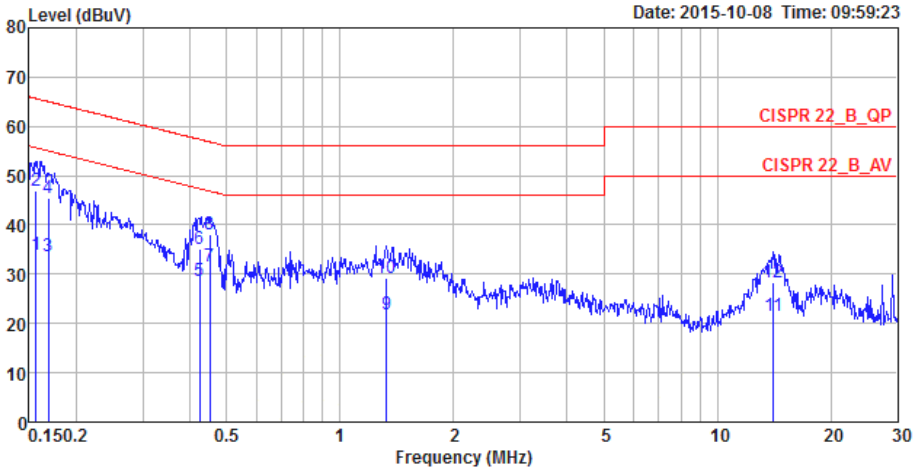
There is no deviation with the original standard.

4.1.6. EUT Operation during Test

The EUT was placed on the test table and programmed in normal function.

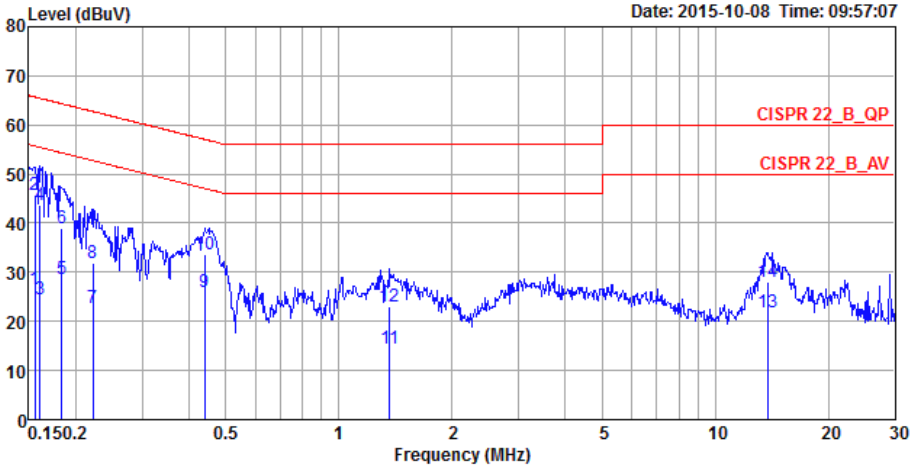
4.1.7. Results of AC Power Line Conducted Emissions Measurement

Temperature	24°C	Humidity	59%
Test Engineer	Ryo Fan	Phase	Line
Configuration	Normal Link	Test Mode	Mode 2



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1565	34.08	-21.57	55.65	24.13	9.93	0.02	LINE	Average
2	0.1565	47.08	-18.57	65.65	37.13	9.93	0.02	LINE	QP
3	0.1685	33.53	-21.50	55.03	23.58	9.93	0.02	LINE	Average
4	0.1685	45.56	-19.47	65.03	35.61	9.93	0.02	LINE	QP
5	0.4237	28.66	-18.71	47.37	18.69	9.93	0.04	LINE	Average
6	0.4237	35.04	-22.33	57.37	25.07	9.93	0.04	LINE	QP
7	0.4516	31.50	-15.35	46.85	21.53	9.93	0.04	LINE	Average
8	0.4516	38.14	-18.71	56.85	28.17	9.93	0.04	LINE	QP
9	1.3308	21.99	-24.01	46.00	11.97	9.97	0.05	LINE	Average
10	1.3308	29.12	-26.88	56.00	19.10	9.97	0.05	LINE	QP
11	14.0629	21.68	-28.32	50.00	11.12	10.31	0.25	LINE	Average
12	14.0629	28.21	-31.79	60.00	17.65	10.31	0.25	LINE	QP

Temperature	24°C	Humidity	59%
Test Engineer	Ryo Fan	Phase	Neutral
Configuration	Normal Link	Test Mode	Mode 2



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.1557	26.49	-29.20	55.69	16.69	9.78	0.02	NEUTRAL	Average
2	0.1557	45.69	-20.00	65.69	35.89	9.78	0.02	NEUTRAL	QP
3	0.1607	24.53	-30.90	55.43	14.73	9.78	0.02	NEUTRAL	Average
4	0.1607	43.63	-21.80	65.43	33.83	9.78	0.02	NEUTRAL	QP
5	0.1835	28.75	-25.58	54.33	18.94	9.79	0.02	NEUTRAL	Average
6	0.1835	38.90	-25.43	64.33	29.09	9.79	0.02	NEUTRAL	QP
7	0.2220	22.82	-29.92	52.74	13.00	9.79	0.03	NEUTRAL	Average
8	0.2220	31.80	-30.94	62.74	21.98	9.79	0.03	NEUTRAL	QP
9	0.4397	25.85	-21.22	47.07	16.02	9.79	0.04	NEUTRAL	Average
10	0.4397	33.58	-23.49	57.07	23.75	9.79	0.04	NEUTRAL	QP
11	1.3665	14.45	-31.55	46.00	4.58	9.82	0.05	NEUTRAL	Average
12	1.3665	22.93	-33.07	56.00	13.06	9.82	0.05	NEUTRAL	QP
13	13.7680	21.77	-28.23	50.00	11.43	10.09	0.25	NEUTRAL	Average
14	13.7680	28.01	-31.99	60.00	17.67	10.09	0.25	NEUTRAL	QP

Note:

Level = Read Level + LISN Factor + Cable Loss.

4.2. 26dB Bandwidth and 99% Occupied Bandwidth Measurement

4.2.1. Limit

No restriction limits.

4.2.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

26dB Bandwidth	
Spectrum Parameters	**Setting**
Attenuation	Auto
Span Frequency	> 26dB Bandwidth
RBW	Approximately 1% of the emission bandwidth
VBW	VBW > RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto
99% Occupied Bandwidth	
Spectrum Parameters	**Setting**
Span	1.5 times to 5.0 times the OBW
RBW	1 % to 5 % of the OBW
VBW	≥ 3 x RBW
Detector	Peak
Trace	Max Hold

4.2.3. Test Procedures

For Radiated 26dB Bandwidth and 99% Occupied Bandwidth Measurement:

1. The transmitter was radiated to the spectrum analyzer in peak hold mode.
2. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

4.2.4. Test Setup Layout

For Radiated 26dB Bandwidth and 99% Occupied Bandwidth Measurement:

This test setup layout is the same as that shown in section 4.6.4.

4.2.5. Test Deviation

There is no deviation with the original standard.

4.2.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.2.7. Test Result of 26dB Bandwidth and 99% Occupied Bandwidth

Temperature	24°C	Humidity	65%
Test Engineer	Clemens Fang & Andy Tsai & Lucas Huang		

For Mode 1:

Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11a	5180 MHz	22.92	16.92
	5200 MHz	35.64	18.72
	5240 MHz	34.68	17.76
	5260 MHz	29.40	17.28
	5300 MHz	36.48	19.80
	5320 MHz	30.24	17.28
	5500 MHz	29.76	17.28
	5580 MHz	34.32	18.48
	5700 MHz	27.48	17.28
	5745 MHz	24.48	17.04
	5785 MHz	54.24	33.96
	5825 MHz	31.44	17.64
802.11n MCS0 HT20	5180 MHz	28.08	18.12
	5200 MHz	36.84	18.84
	5240 MHz	34.20	18.60
	5260 MHz	37.56	19.68
	5300 MHz	49.20	32.64
	5320 MHz	32.64	18.36
	5500 MHz	33.12	18.36
	5580 MHz	48.72	32.64
	5700 MHz	27.24	18.00
	5745 MHz	20.64	17.76
	5785 MHz	51.12	34.56
	5825 MHz	33.72	18.60
802.11n MCS0 HT40	5190 MHz	41.40	36.40
	5230 MHz	76.40	37.60
	5270 MHz	90.40	44.40
	5310 MHz	41.40	36.40
	5510 MHz	41.80	36.40
	5550 MHz	79.40	38.00
	5670 MHz	63.60	37.00
	5755 MHz	41.80	36.40
	5795 MHz	78.00	38.20

Straddle Channel

Mode	Frequency	26dB BW (MHz)	99% OBW (MHz)	26dB BW F1 (MHz)	99% OBW T1 (MHz)	UNII 2C 26dB BW (MHz)	UNII 3 26dB BW (MHz)	UNII 2C 99% BW (MHz)	UNII 3 99% BW (MHz)
802.11a	5720 MHz	45.48	31.08	5697.68	5704.52	27.32	18.16	20.48	10.60
802.11n MCS0 HT20	5720 MHz	48.84	33.36	5695.28	5703.68	29.72	19.12	21.32	12.04
802.11n MCS0 HT40	5710 MHz	99.00	68.00	5661.00	5676.60	64.00	35.00	48.40	19.60

For Mode 2:

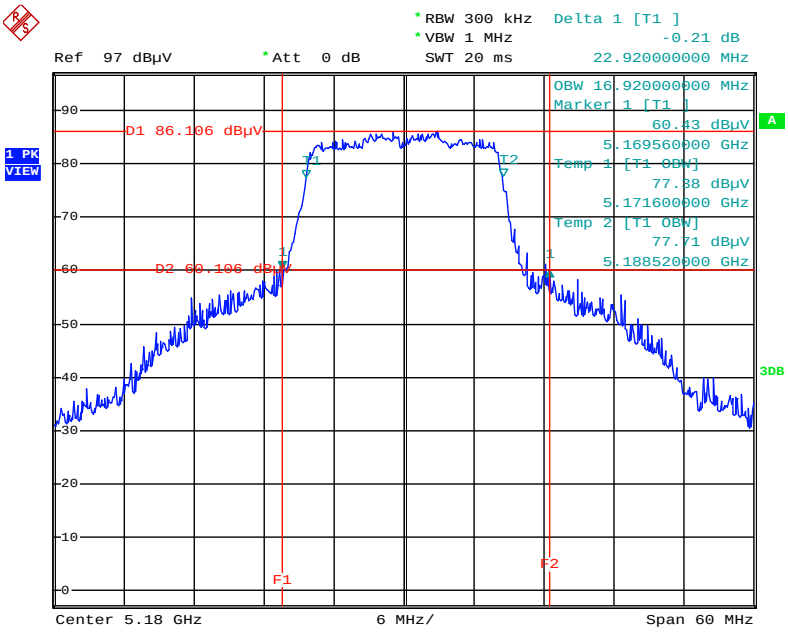
Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11a	5180 MHz	40.44	25.92
	5200 MHz	44.16	30.24
	5240 MHz	28.68	17.40
	5260 MHz	45.12	30.60
	5300 MHz	43.92	30.24
	5320 MHz	35.40	19.44
	5500 MHz	32.28	18.12
	5580 MHz	44.04	27.48
	5700 MHz	32.64	18.36
	5745 MHz	28.44	17.28
	5785 MHz	49.92	33.60
	5825 MHz	43.20	30.12
802.11n MCS0 HT20	5180 MHz	47.88	31.68
	5200 MHz	51.12	34.68
	5240 MHz	30.12	18.12
	5260 MHz	48.48	33.12
	5300 MHz	46.68	32.76
	5320 MHz	48.72	34.32
	5500 MHz	52.80	35.88
	5580 MHz	45.96	29.04
	5700 MHz	49.92	35.40
	5745 MHz	39.24	18.96
	5785 MHz	56.40	37.68
	5825 MHz	51.24	35.16
802.11n MCS0 HT40	5190 MHz	45.40	36.60
	5230 MHz	63.20	37.00
	5270 MHz	73.00	41.20
	5310 MHz	41.60	37.00
	5510 MHz	41.80	36.60
	5550 MHz	73.00	37.80
	5670 MHz	65.40	37.00
	5755 MHz	57.40	37.60
	5795 MHz	88.00	39.60

Straddle Channel

Mode	Frequency	26dB BW (MHz)	99% OBW (MHz)	26dB BW F1 (MHz)	99% OBW T1 (MHz)	UNII 2C 26dB BW (MHz)	UNII 3 26dB BW (MHz)	UNII 2C 99% BW (MHz)	UNII 3 99% BW (MHz)
802.11a	5720 MHz	46.56	31.68	5696.24	5704.64	28.76	17.80	20.36	11.32
802.11n MCS0 HT20	5720 MHz	50.40	33.60	5695.04	5703.68	29.96	20.44	21.32	12.28
802.11n MCS0 HT40	5710 MHz	99.00	67.40	5660.80	5677.00	64.20	34.80	48.00	19.40

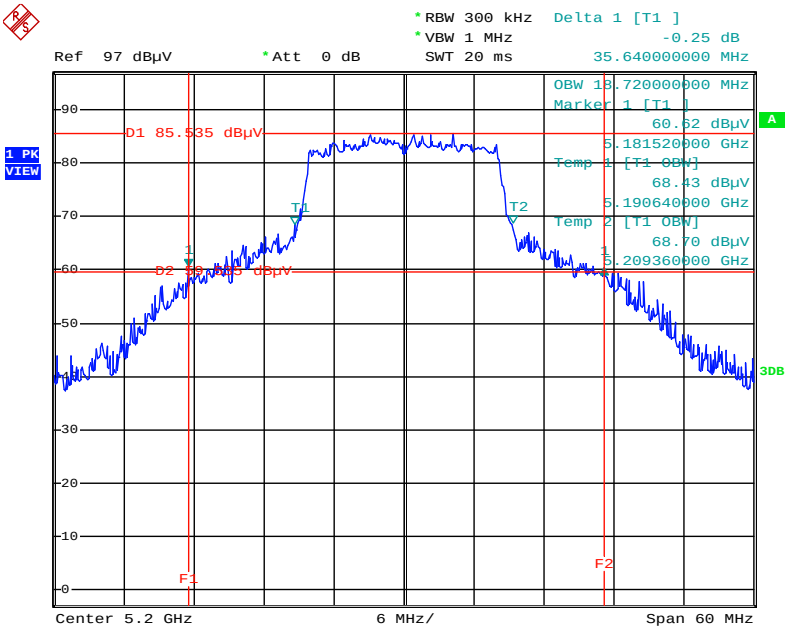
For Mode 1:

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5180 MHz



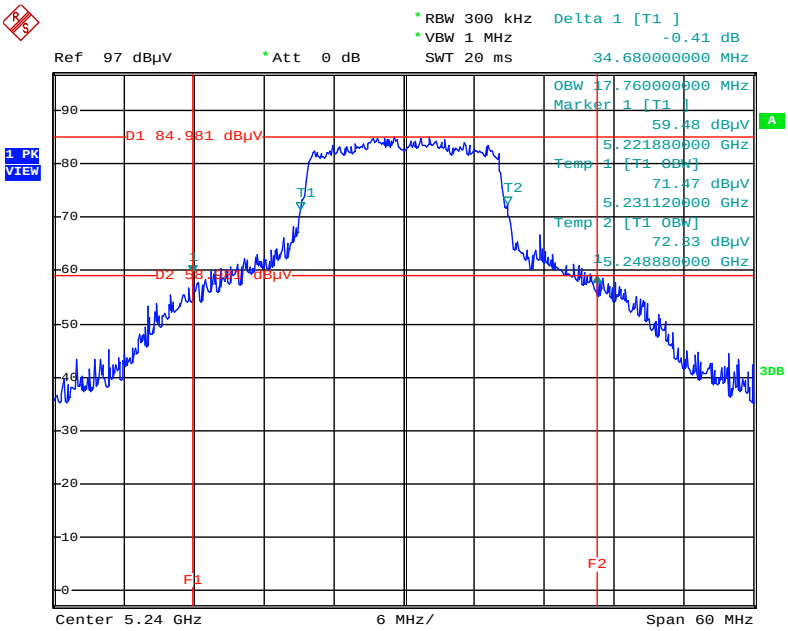
Date: 2.OCT.2015 20:45:52

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5200 MHz



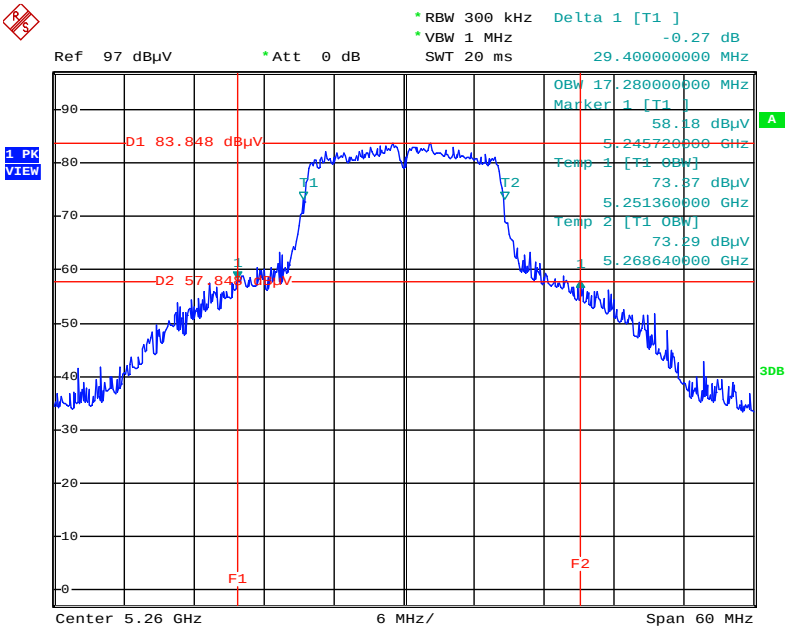
Date: 2.OCT.2015 20:46:51

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5240 MHz



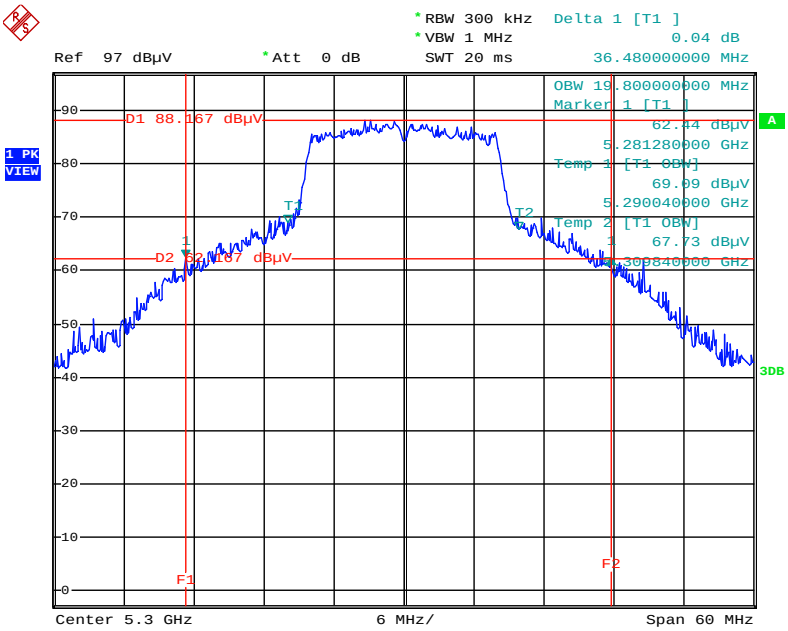
Date: 2.OCT.2015 20:50:02

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5260 MHz



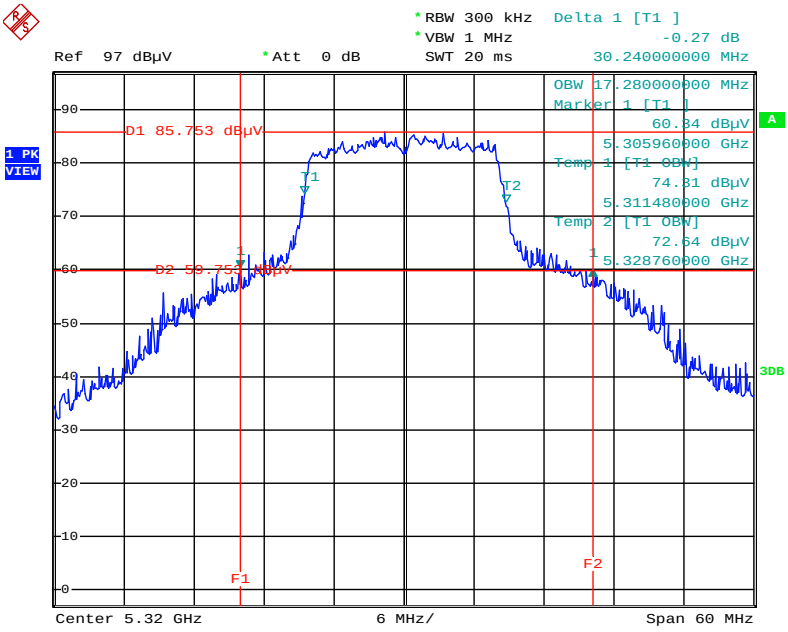
Date: 2.OCT.2015 20:51:33

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5300 MHz



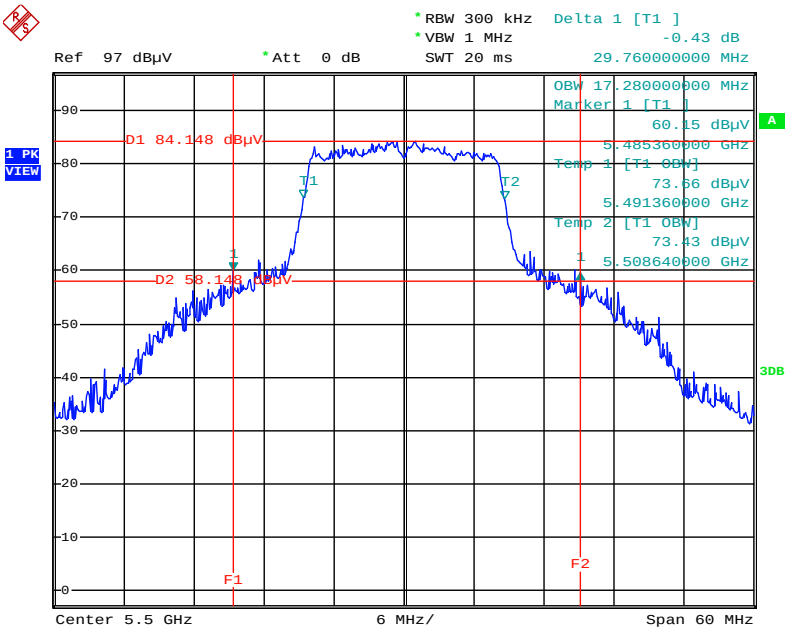
Date: 2.OCT.2015 20:53:11

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5320 MHz



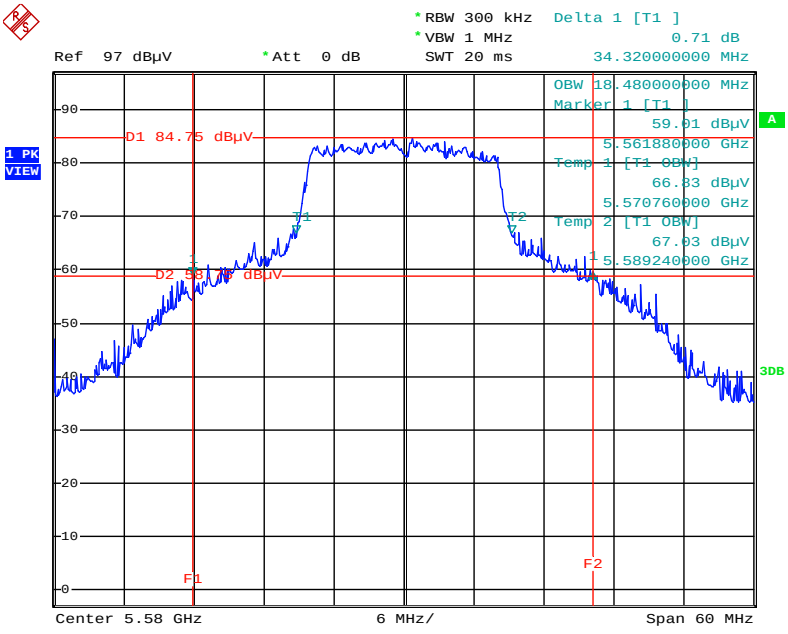
Date: 2.OCT.2015 20:54:40

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5500 MHz



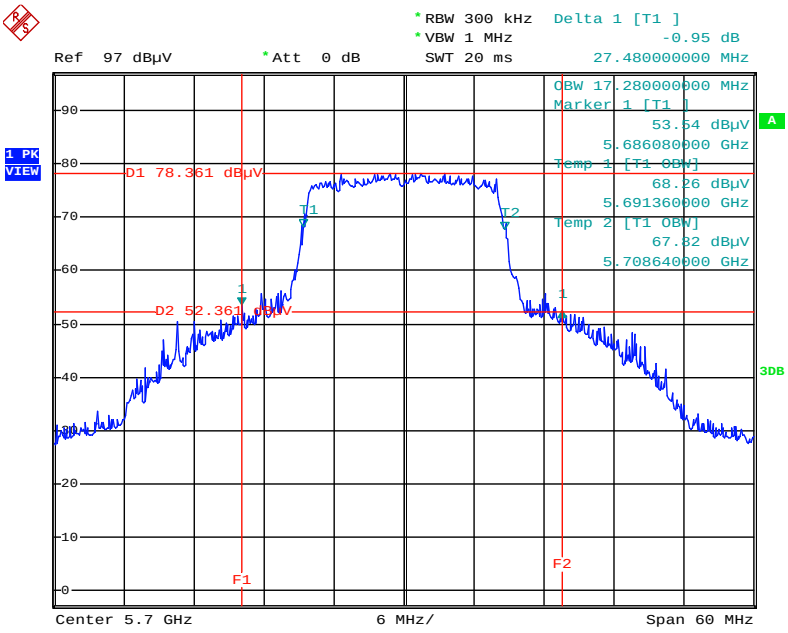
Date: 2.OCT.2015 20:55:45

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5580 MHz



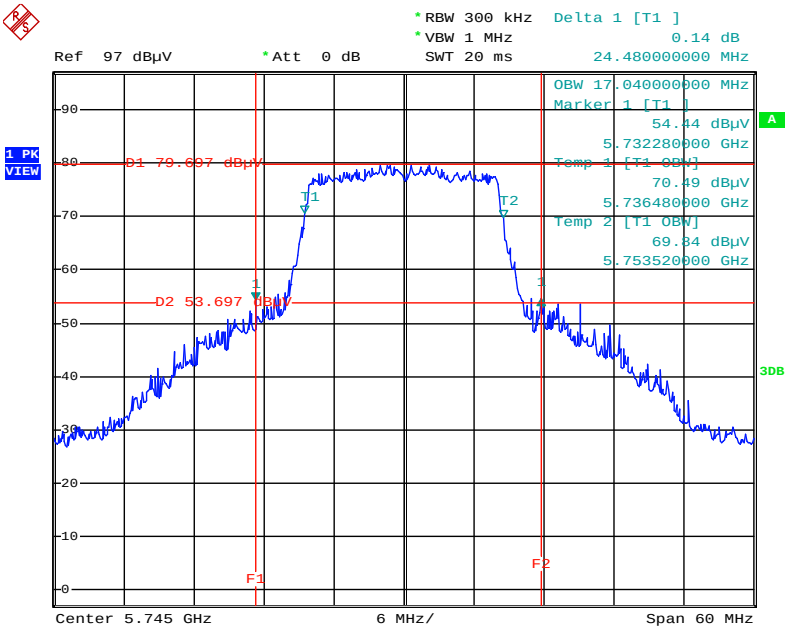
Date: 2.OCT.2015 21:09:31

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5700 MHz



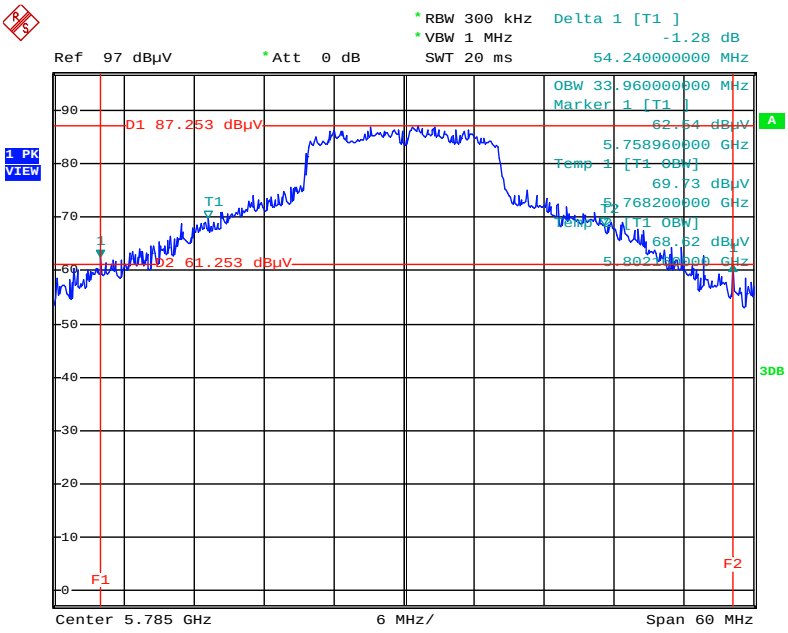
Date: 2.OCT.2015 21:10:49

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5745 MHz



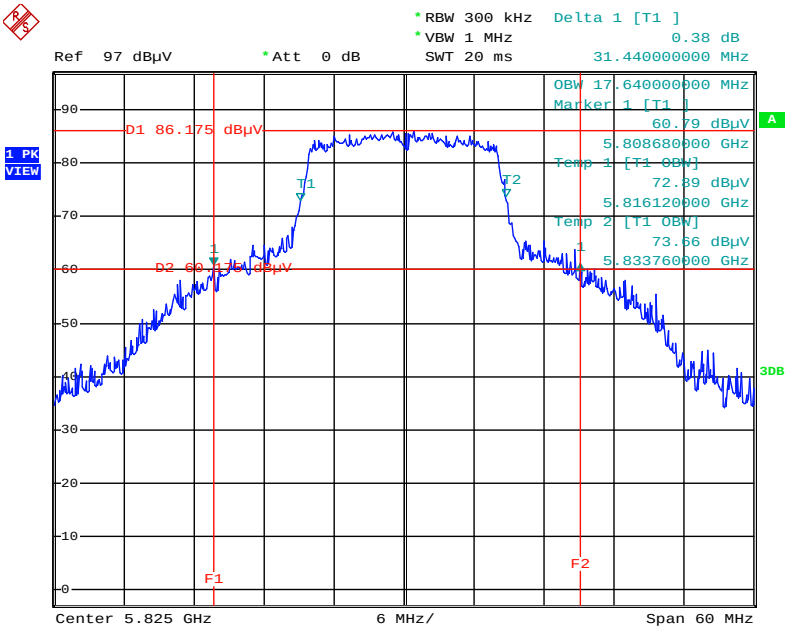
Date: 2.OCT.2015 21:20:16

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5785 MHz



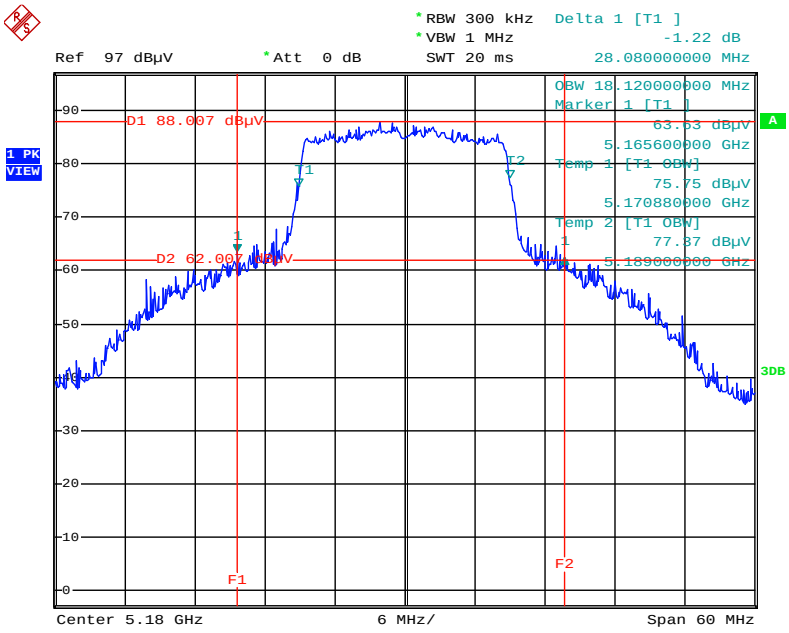
Date: 2.OCT.2015 21:16:21

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5825 MHz



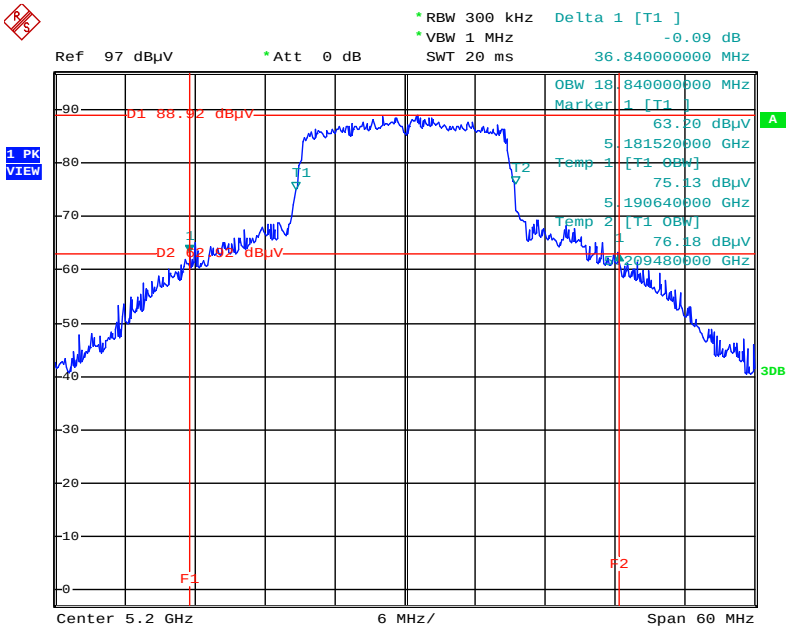
Date: 2.OCT.2015 21:17:55

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5180 MHz



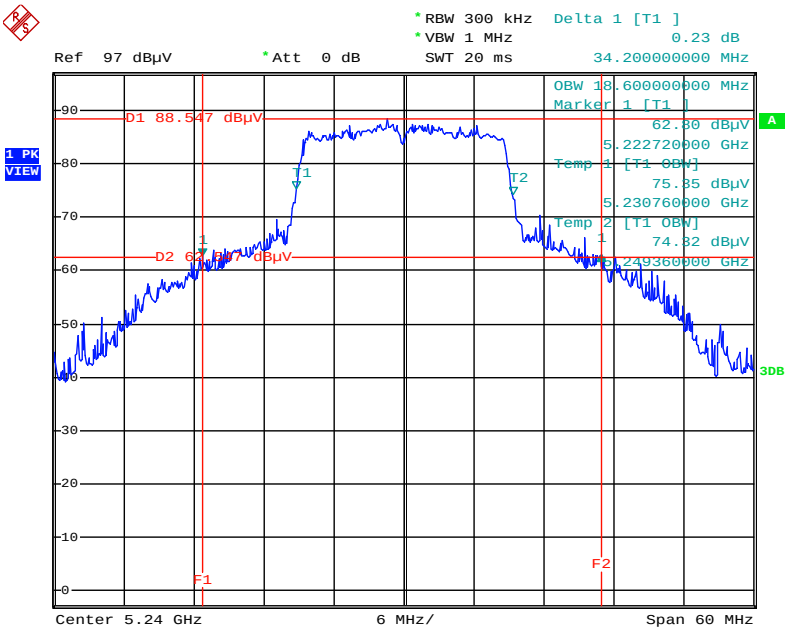
Date: 2.OCT.2015 21:49:30

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5200 MHz



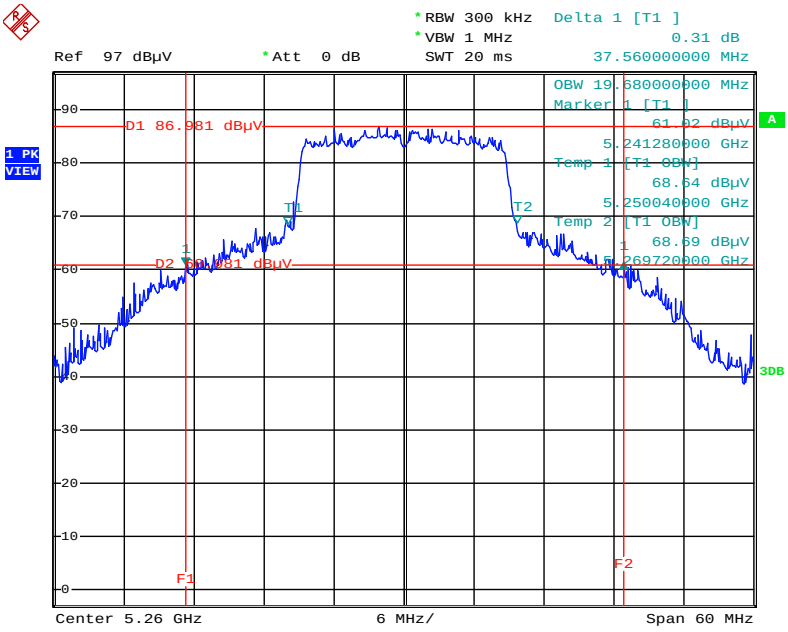
Date: 2.OCT.2015 21:50:07

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5240 MHz



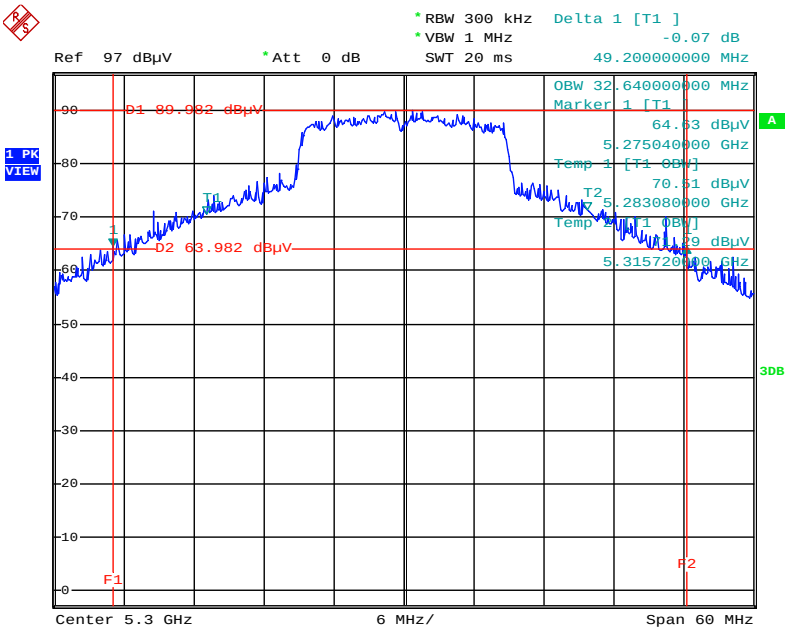
Date: 2.OCT.2015 21:51:06

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5260 MHz



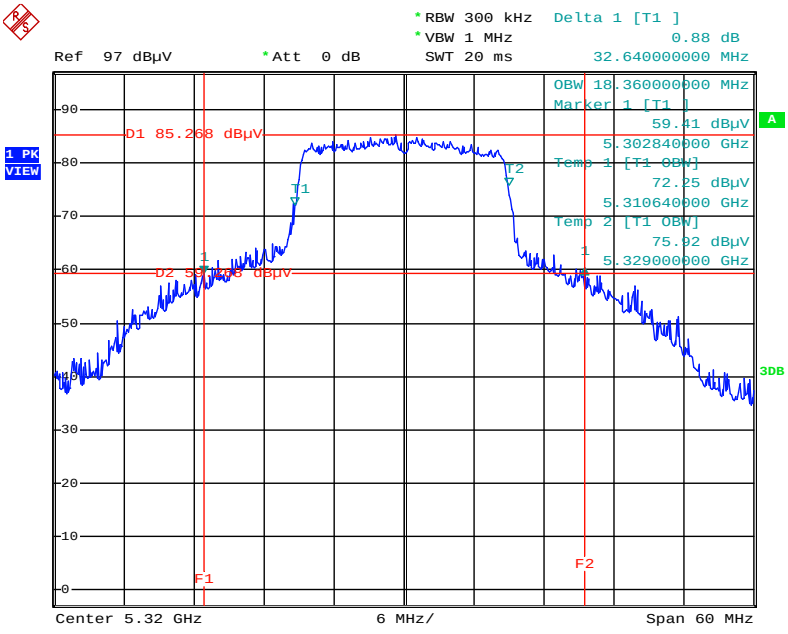
Date: 2.OCT.2015 22:01:56

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5300 MHz



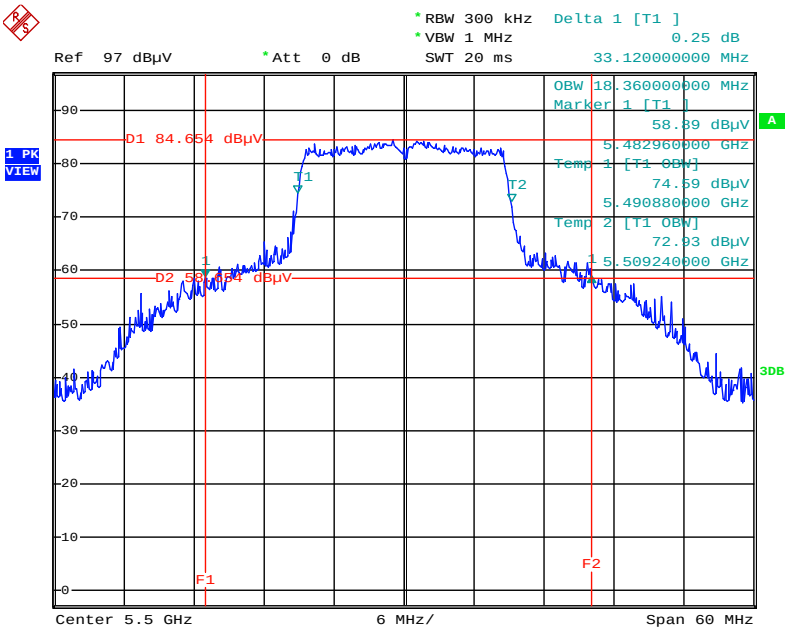
Date: 2.OCT.2015 22:02:53

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5320 MHz



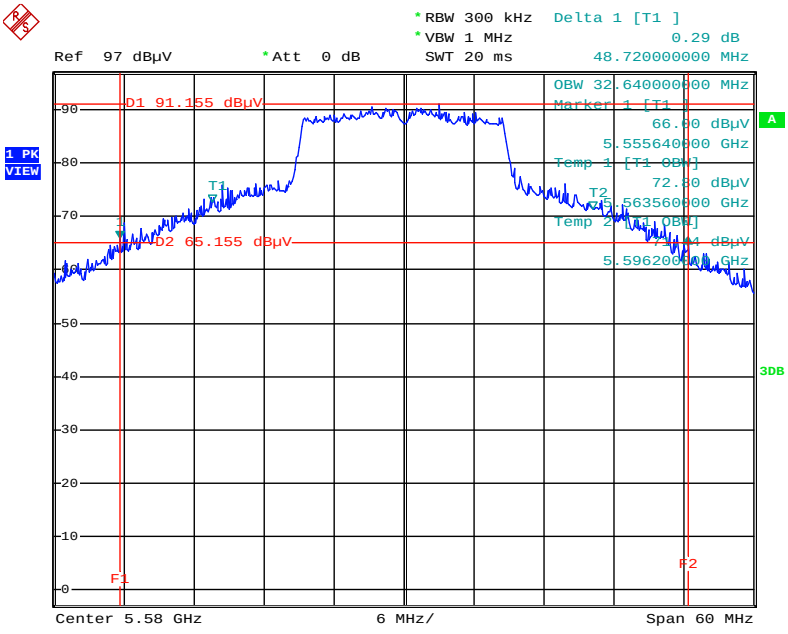
Date: 2.OCT.2015 22:03:39

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5500 MHz



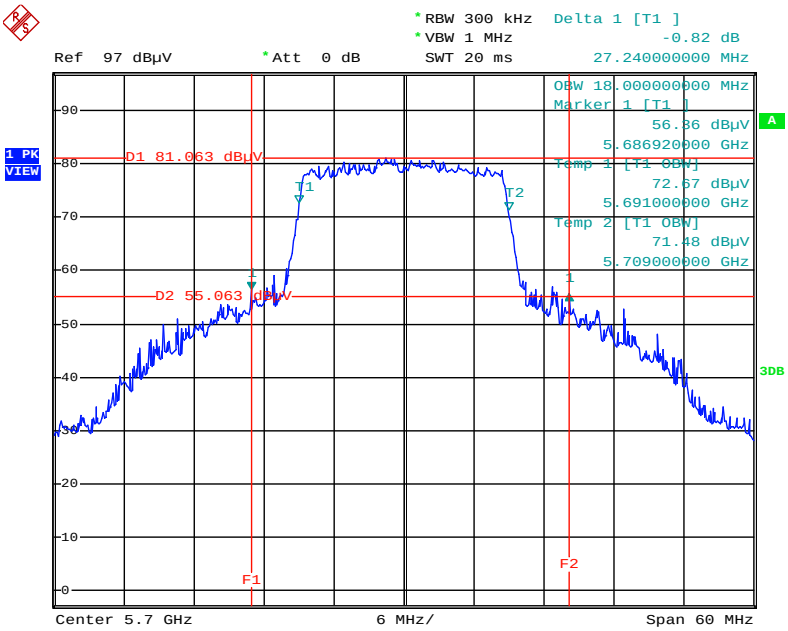
Date: 2.OCT.2015 22:04:15

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5580 MHz



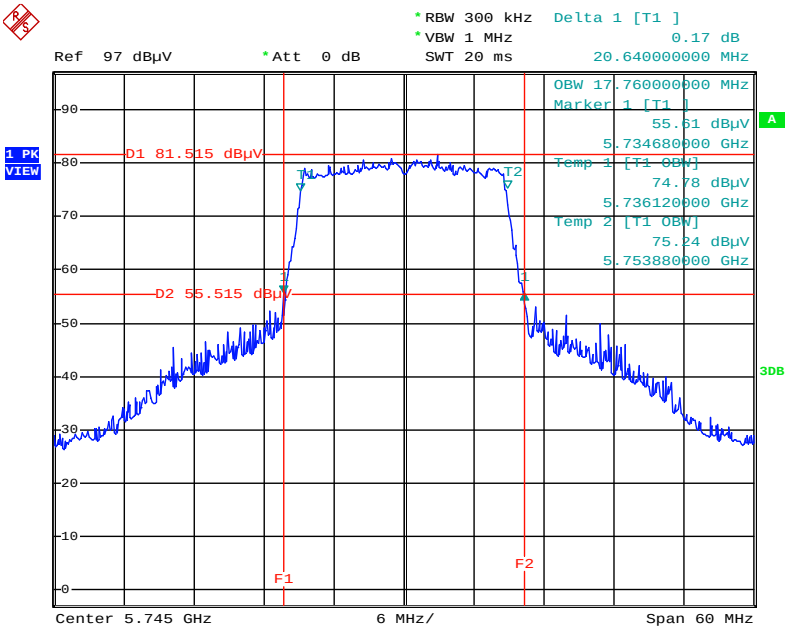
Date: 2.OCT.2015 22:04:51

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5700 MHz



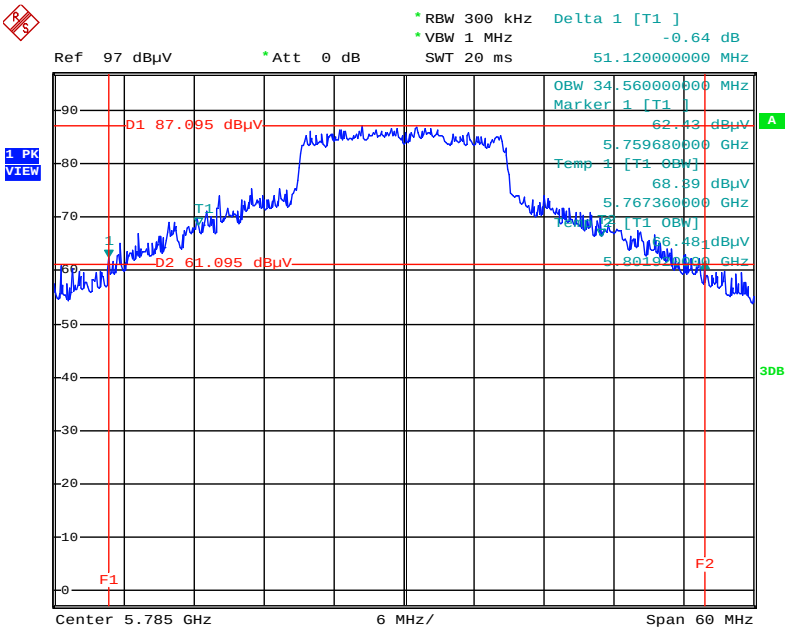
Date: 2.OCT.2015 22:05:19

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5745 MHz



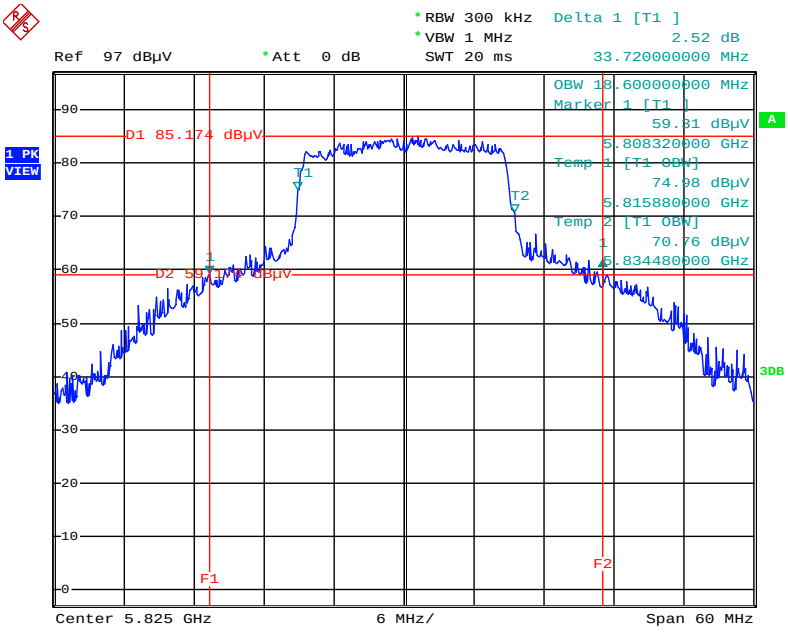
Date: 2.OCT.2015 22:05:56

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5785 MHz



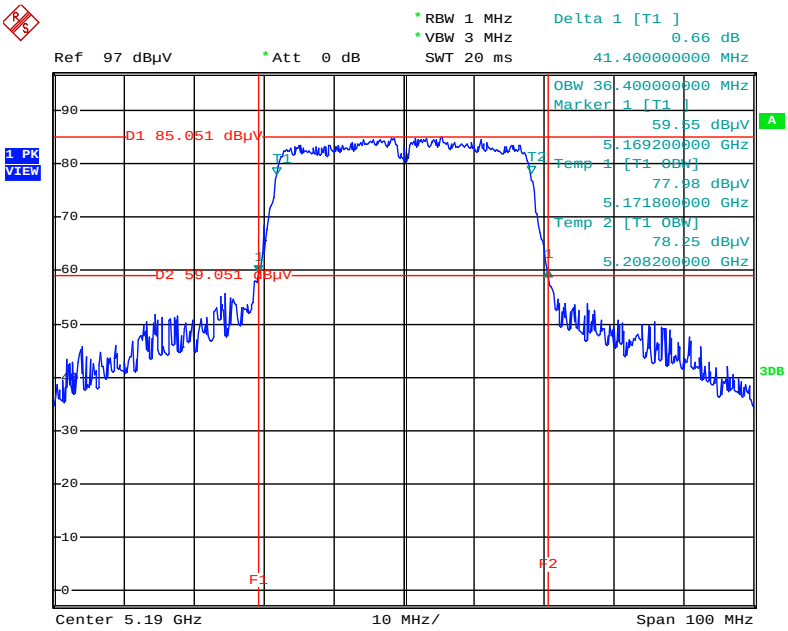
Date: 2.OCT.2015 22:07:12

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5825 MHz



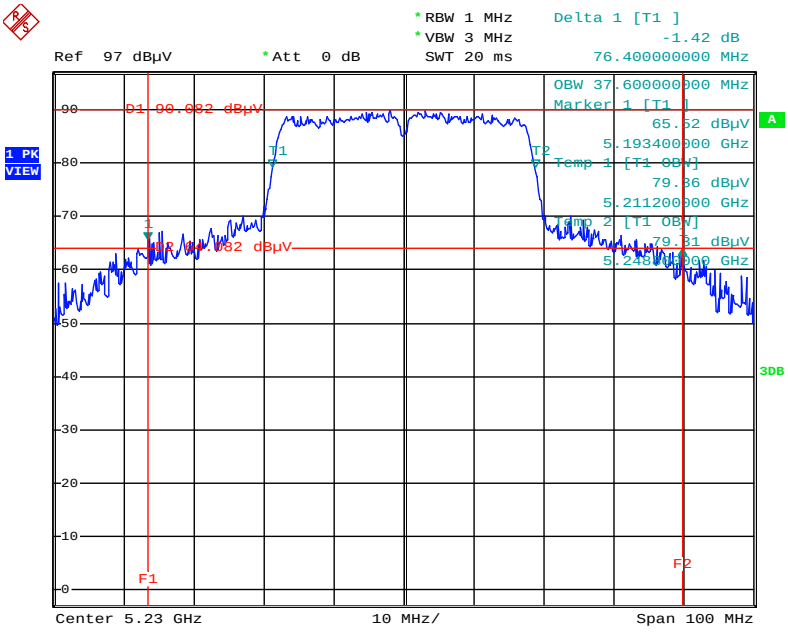
Date: 2.OCT.2015 22:07:45

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5190 MHz



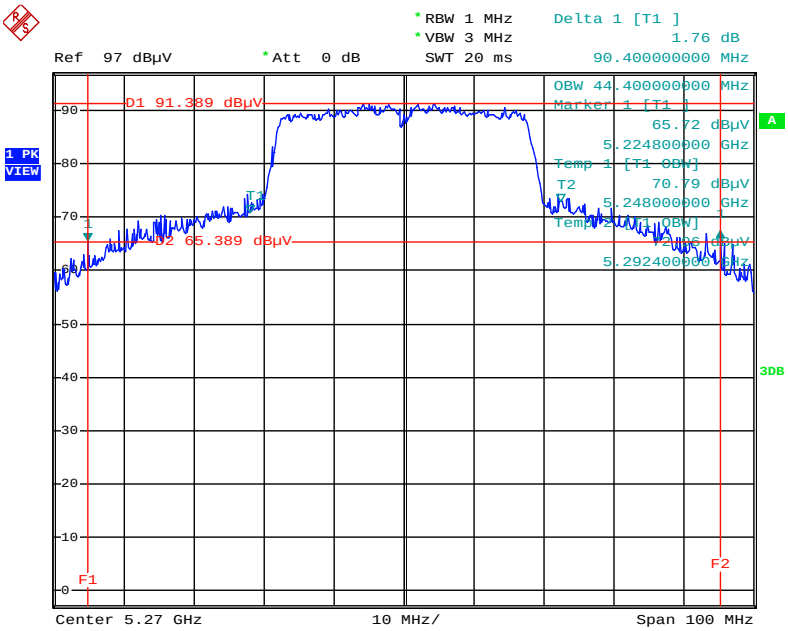
Date: 2.OCT.2015 22:11:33

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5230 MHz



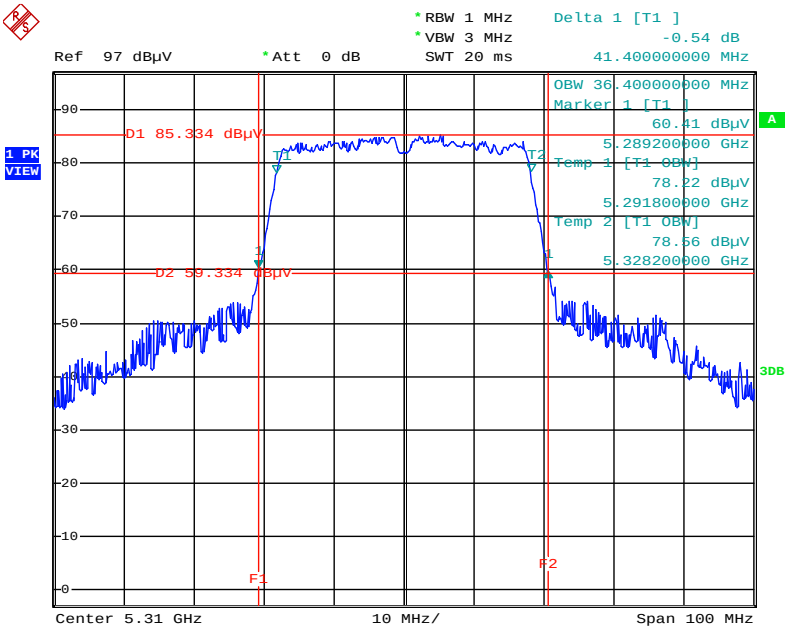
Date: 2.OCT.2015 22:12:00

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5270 MHz



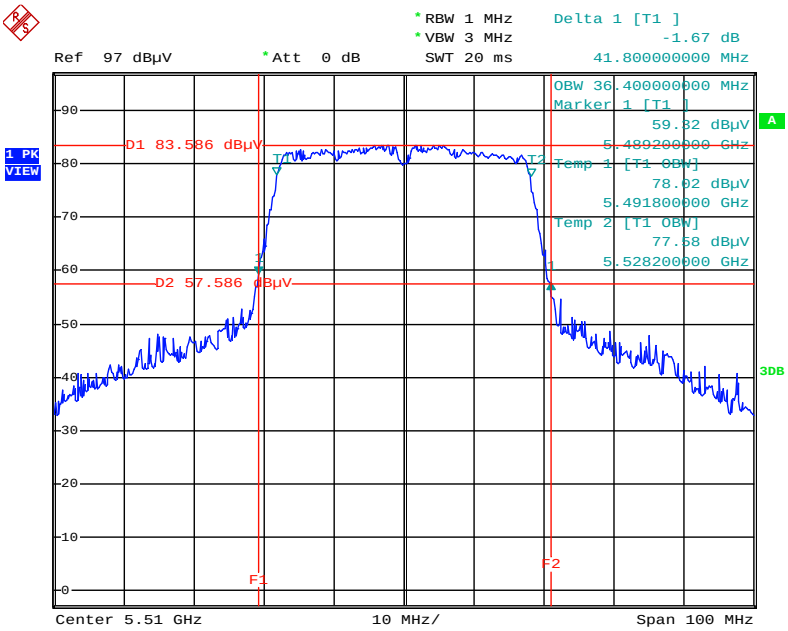
Date: 2.OCT.2015 22:12:30

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5310 MHz



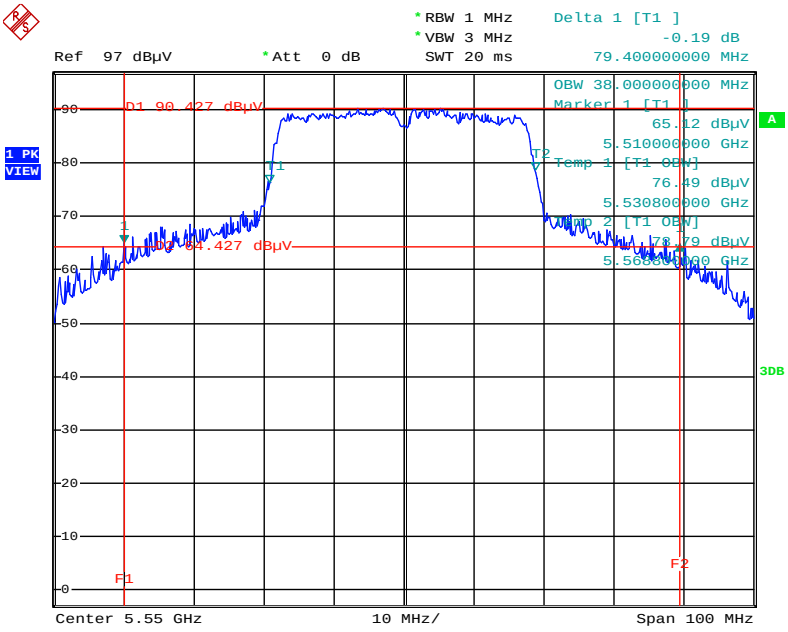
Date: 2.OCT.2015 22:13:02

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5510 MHz



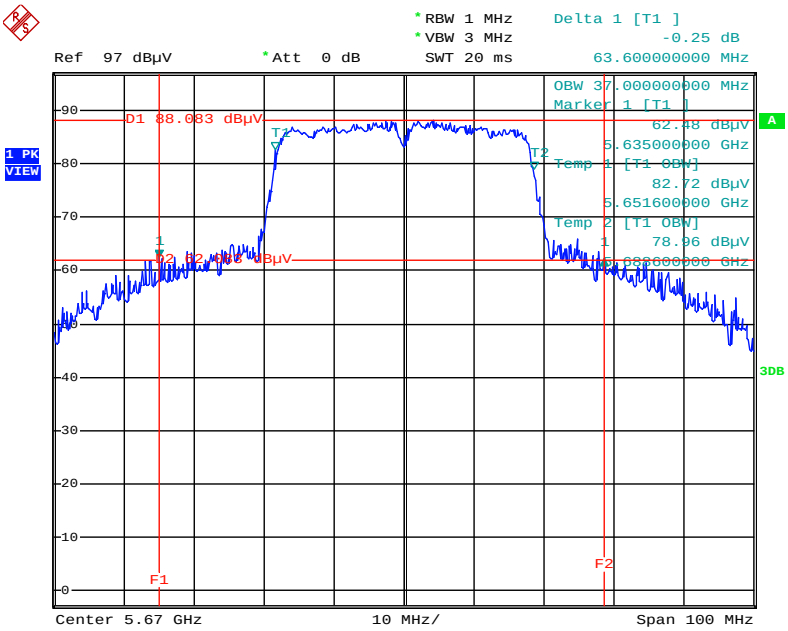
Date: 2.OCT.2015 22:13:32

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5550 MHz



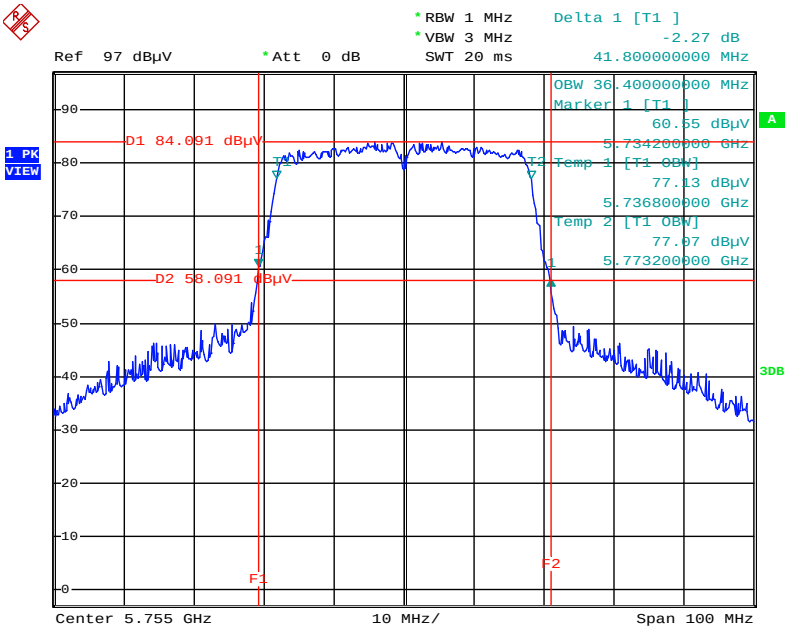
Date: 2.OCT.2015 22:14:03

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5670 MHz



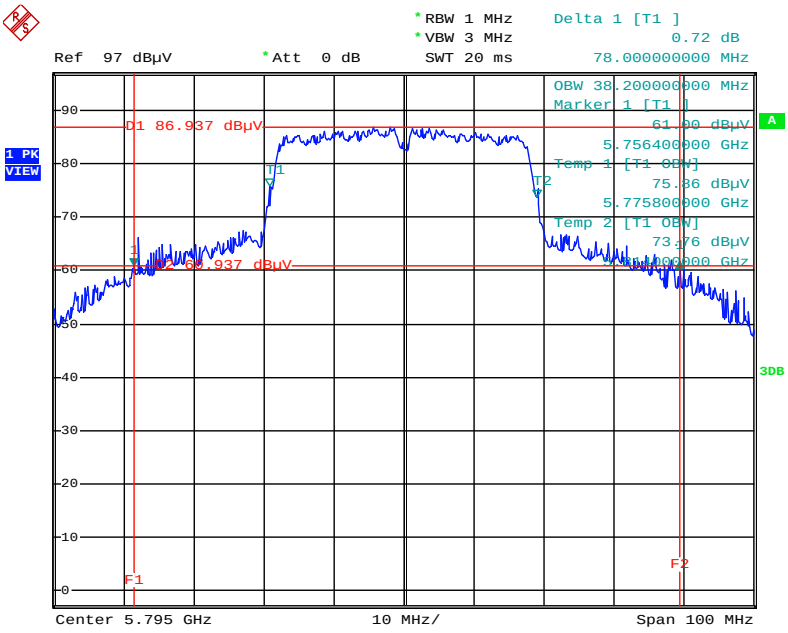
Date: 2.OCT.2015 22:14:28

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5755 MHz



Date: 2.OCT.2015 22:14:52

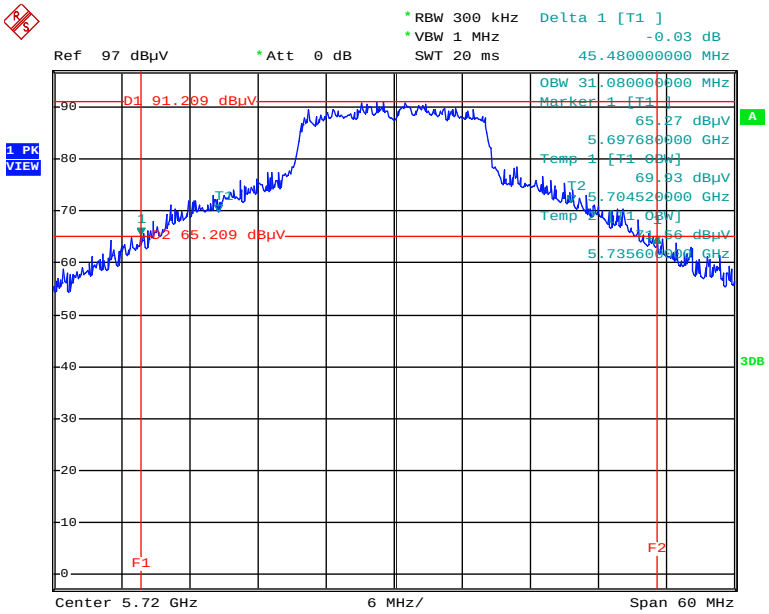
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5795 MHz



Date: 2.OCT.2015 22:15:54

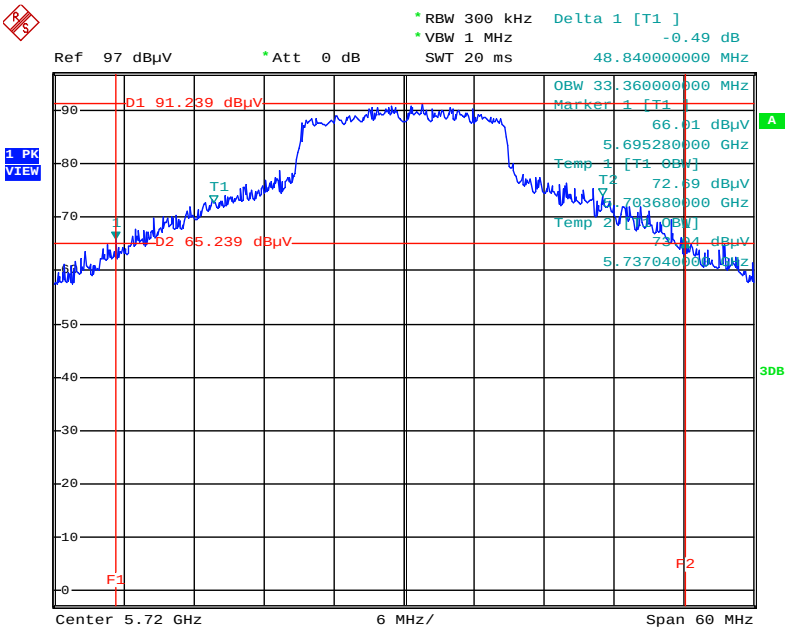
Straddle Channel

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5720 MHz



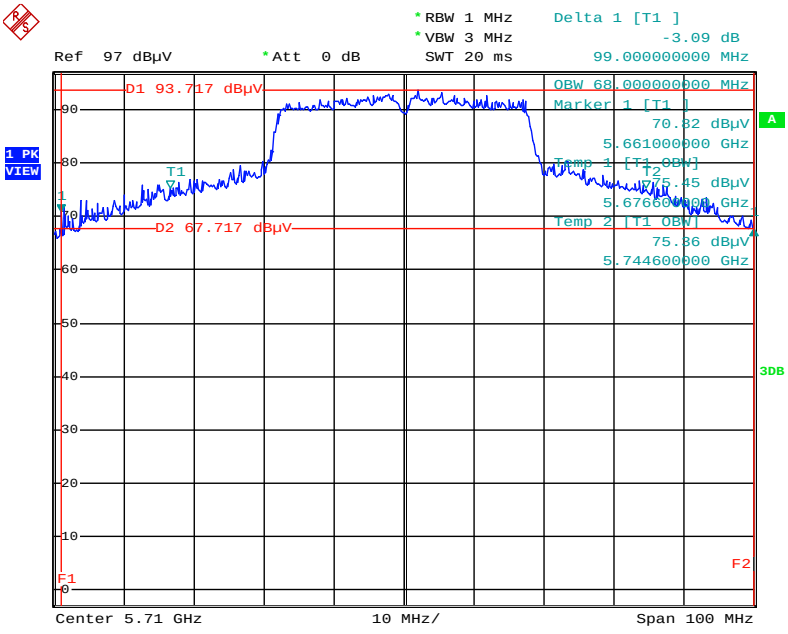
Date: 3.OCT.2015 10:43:40

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5720 MHz



Date: 3.OCT.2015 10:51:35

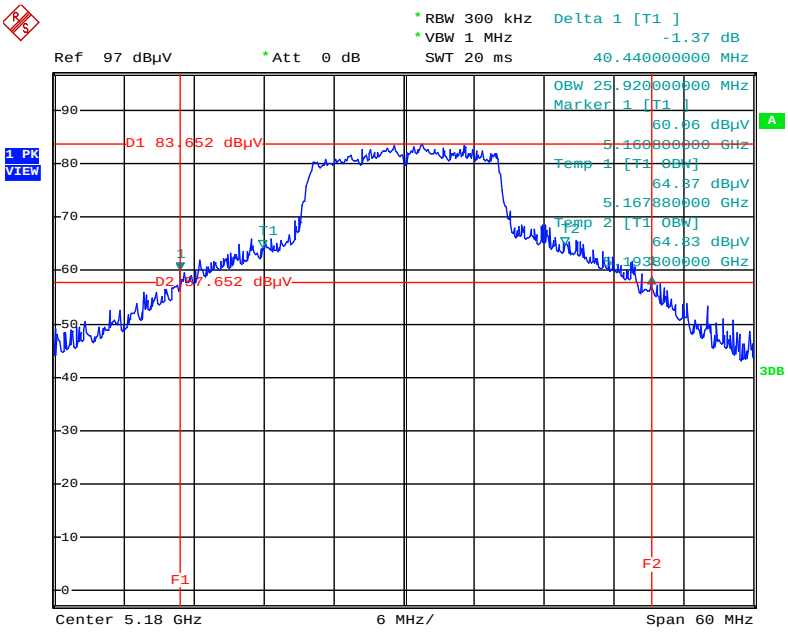
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5710 MHz



Date: 3.OCT.2015 10:52:56

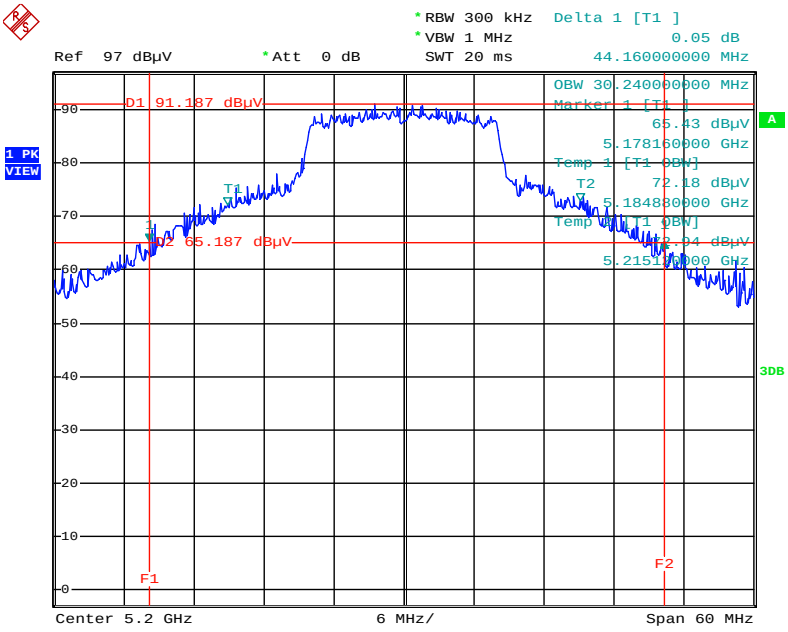
For Mode 2:

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5180 MHz



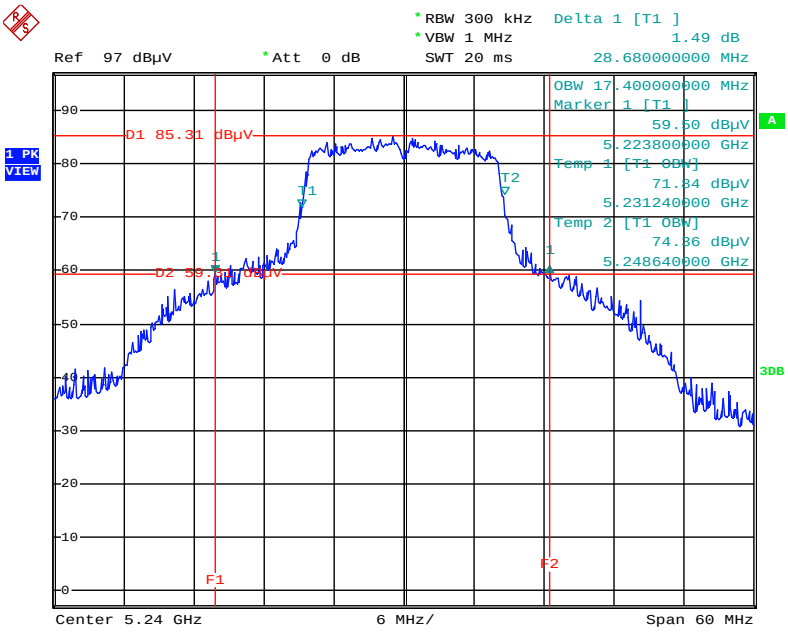
Date: 2.OCT.2015 20:46:24

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5200 MHz



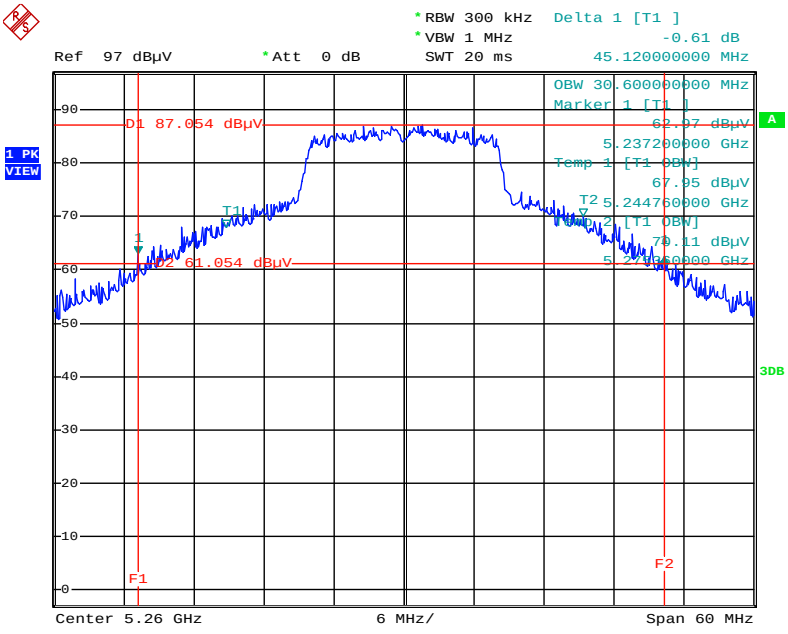
Date: 2.OCT.2015 20:47:20

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5240 MHz



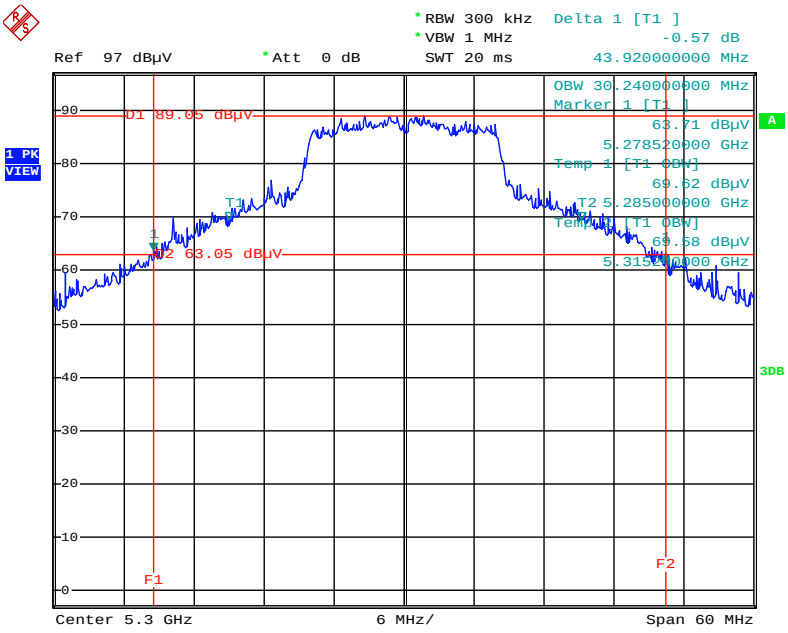
Date: 2.OCT.2015 20:50:21

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5260 MHz



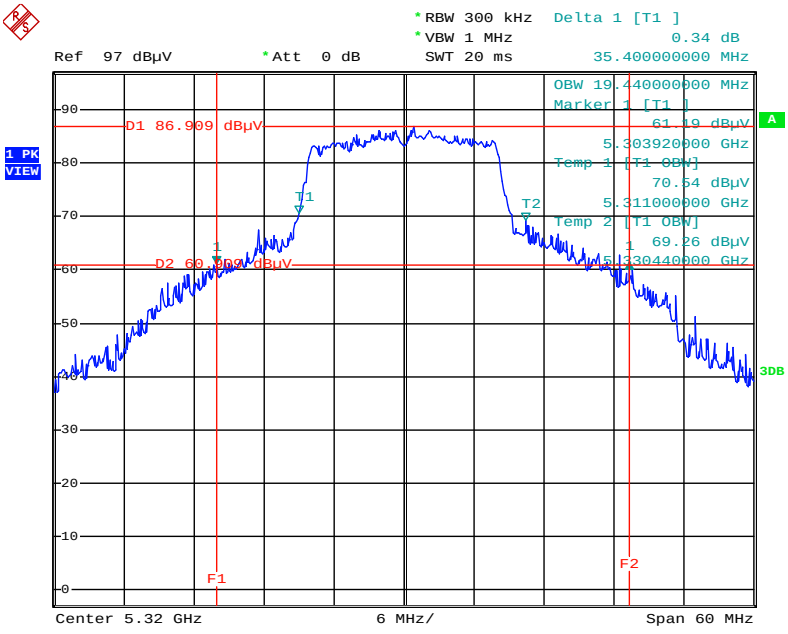
Date: 2.OCT.2015 20:52:29

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5300 MHz



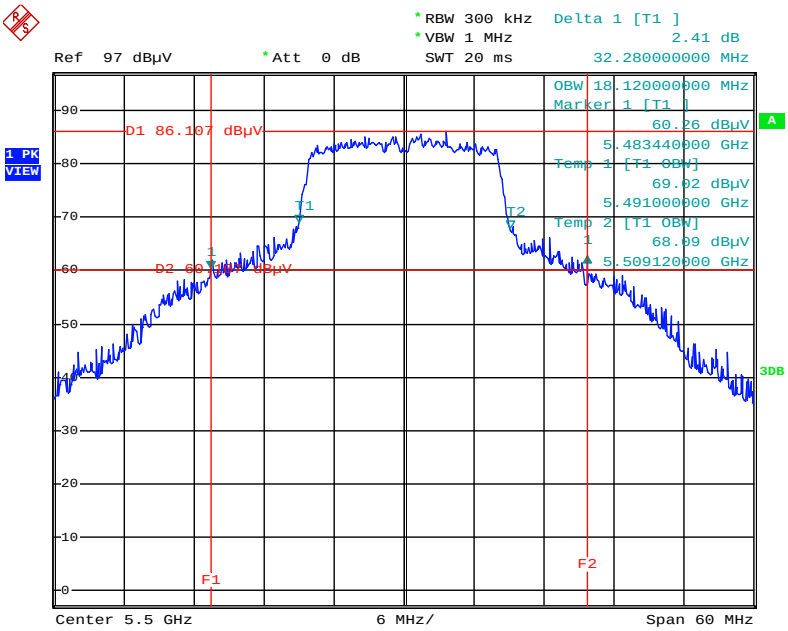
Date: 2.OCT.2015 20:53:33

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5320 MHz



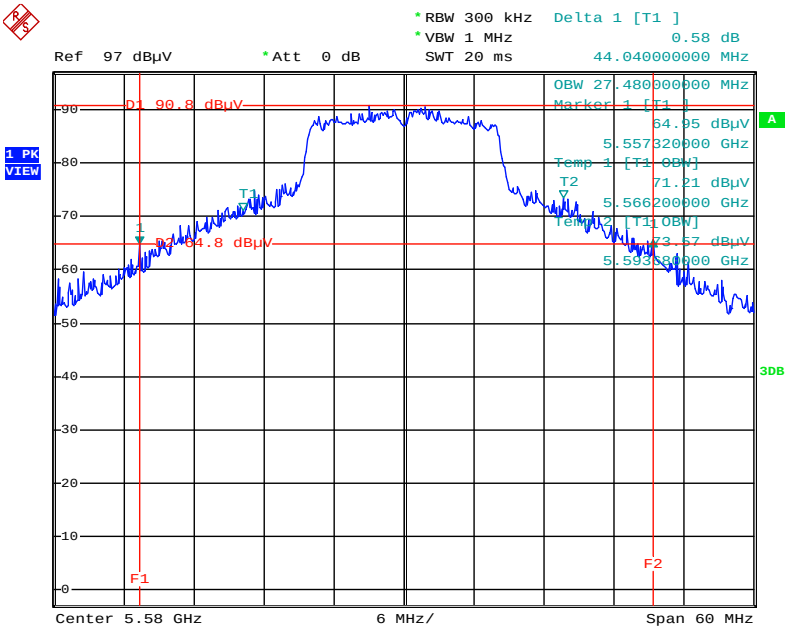
Date: 2.OCT.2015 20:55:00

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5500 MHz



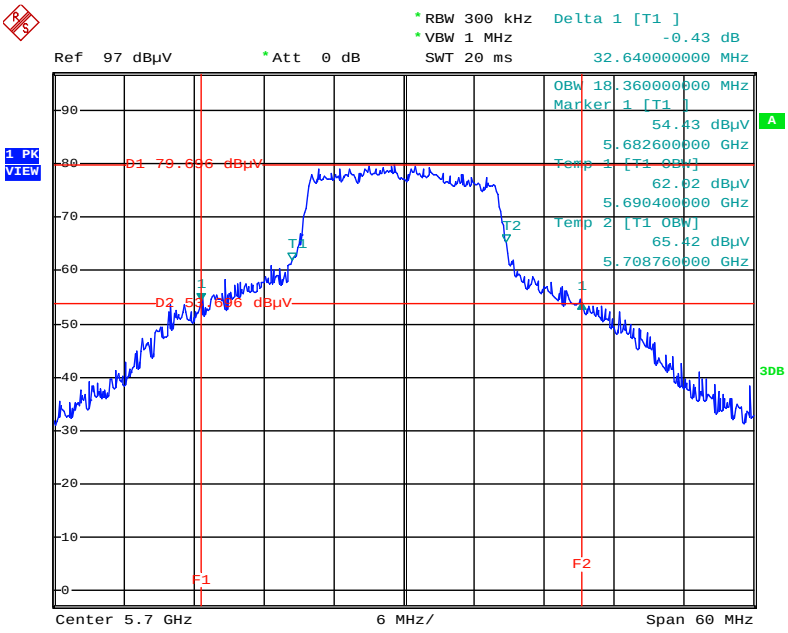
Date: 2.OCT.2015 20:56:51

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5580 MHz



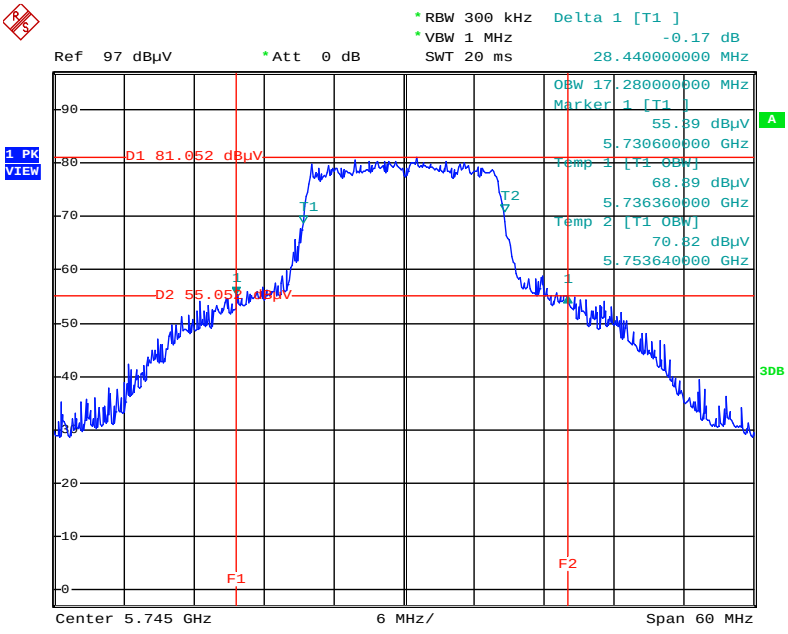
Date: 2.OCT.2015 21:10:13

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5700 MHz



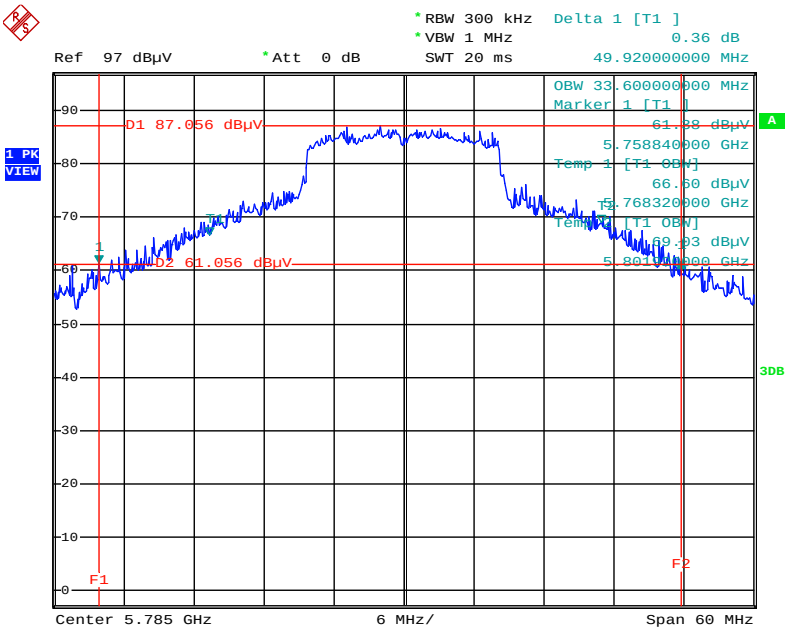
Date: 2.OCT.2015 21:03:53

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5745 MHz



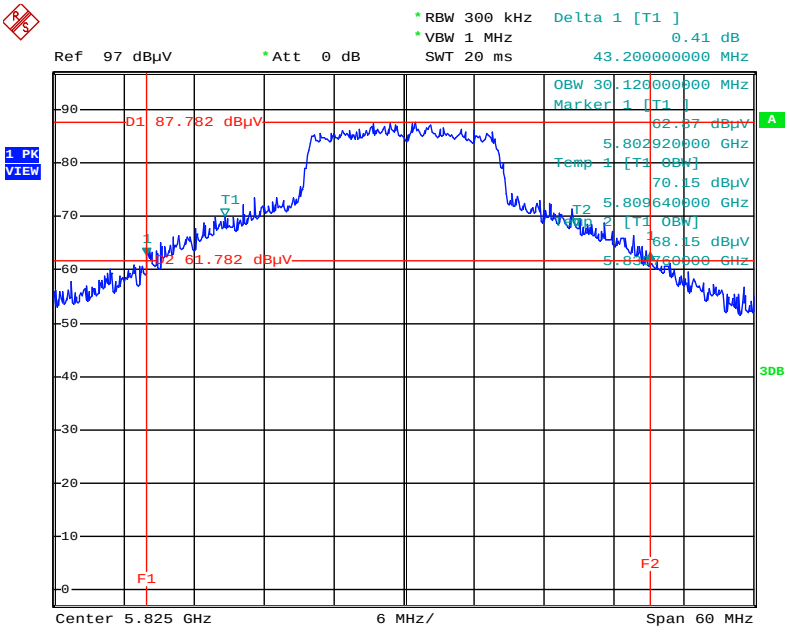
Date: 2.OCT.2015 21:19:38

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5785 MHz



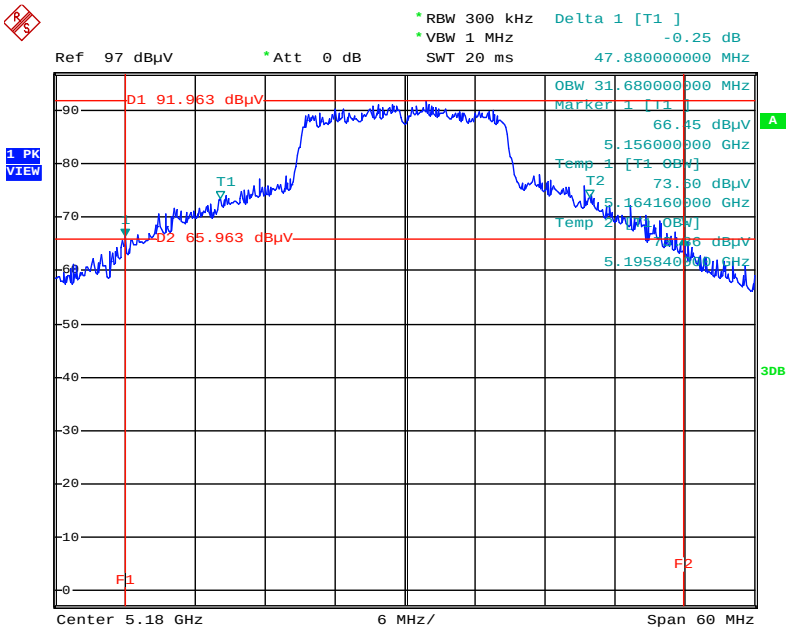
Date: 2.OCT.2015 21:17:09

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5825 MHz



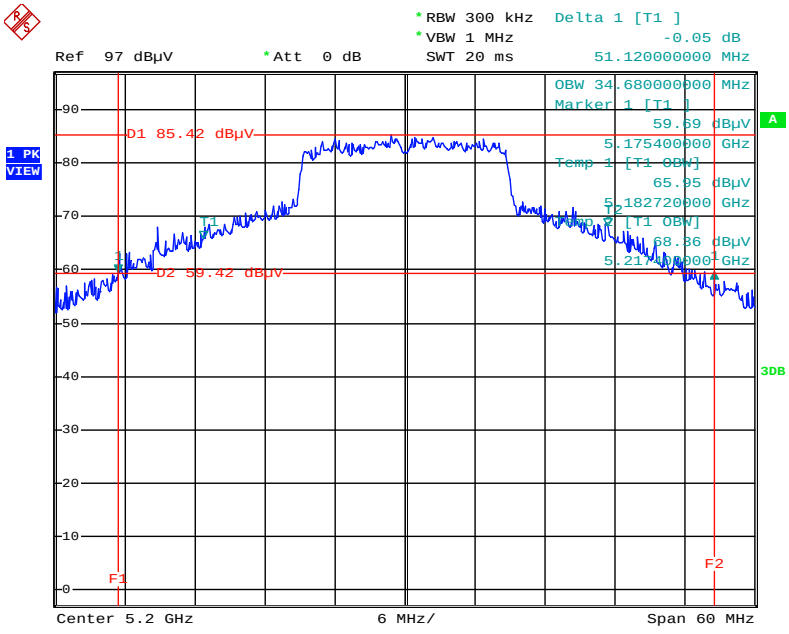
Date: 2.OCT.2015 21:18:18

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5180 MHz



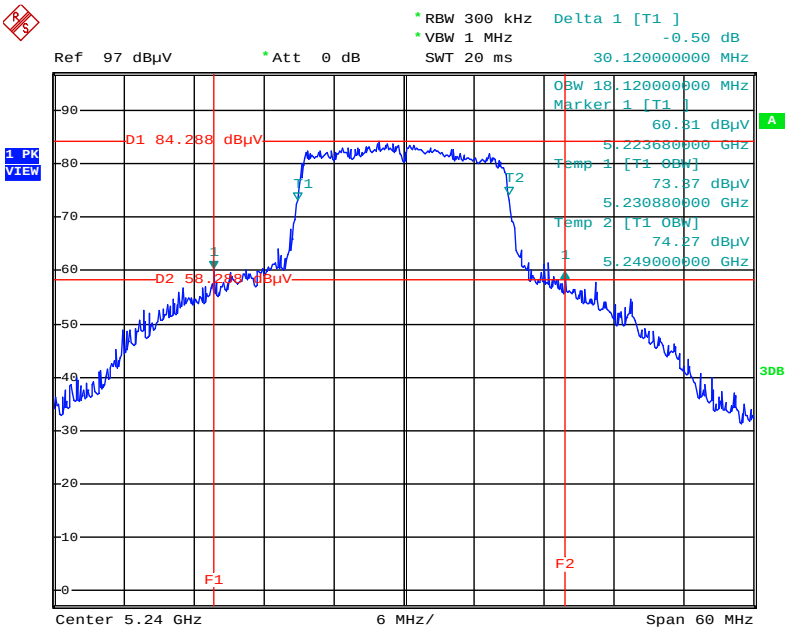
Date: 3.OCT.2015 00:28:22

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5200 MHz



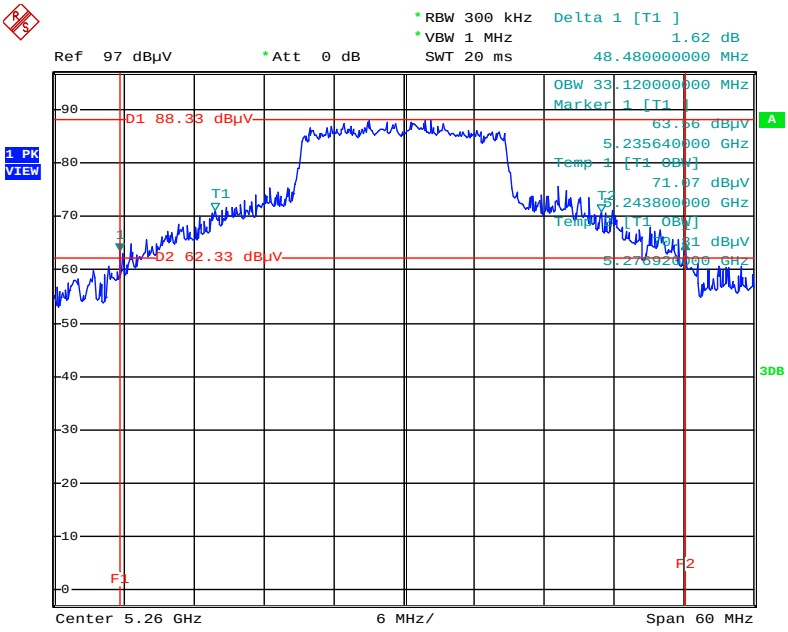
Date: 2.OCT.2015 21:50:28

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5240 MHz



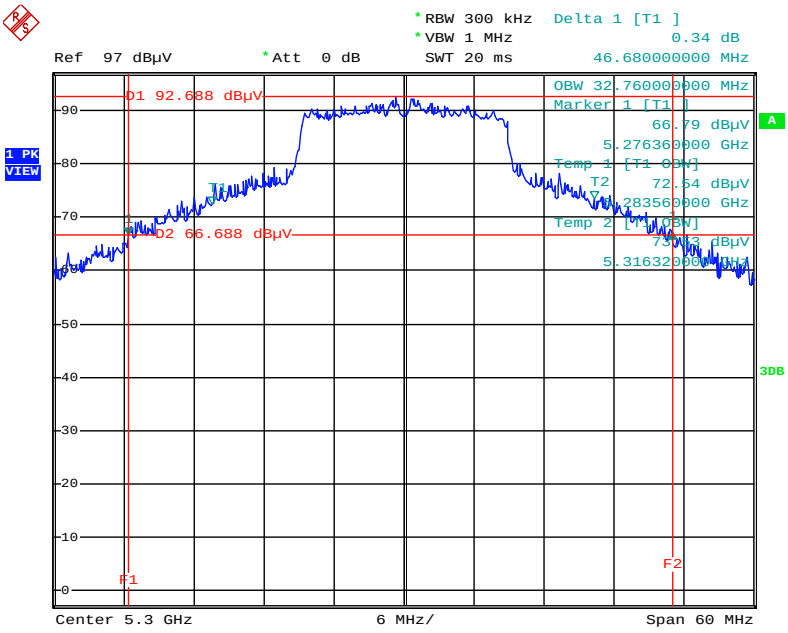
Date: 3.OCT.2015 02:14:38

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5260 MHz



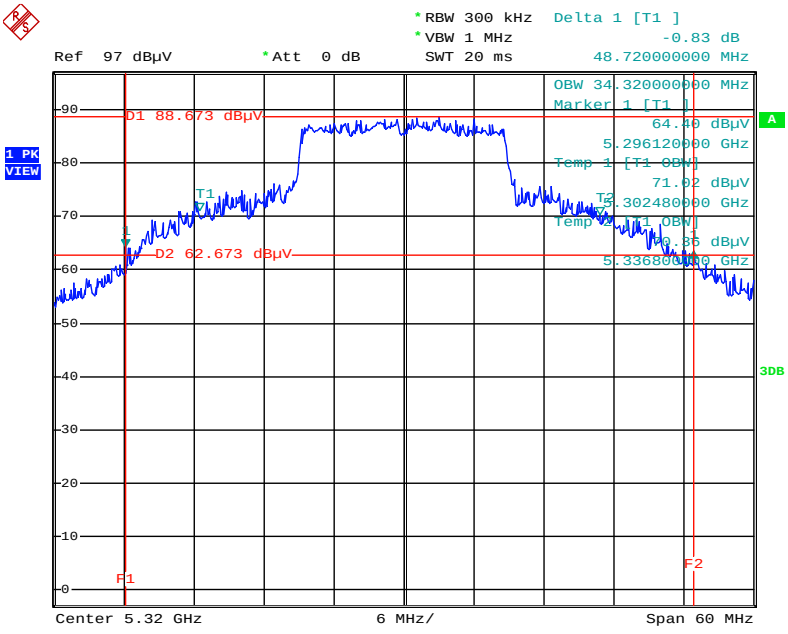
Date: 3.OCT.2015 00:47:20

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5300 MHz



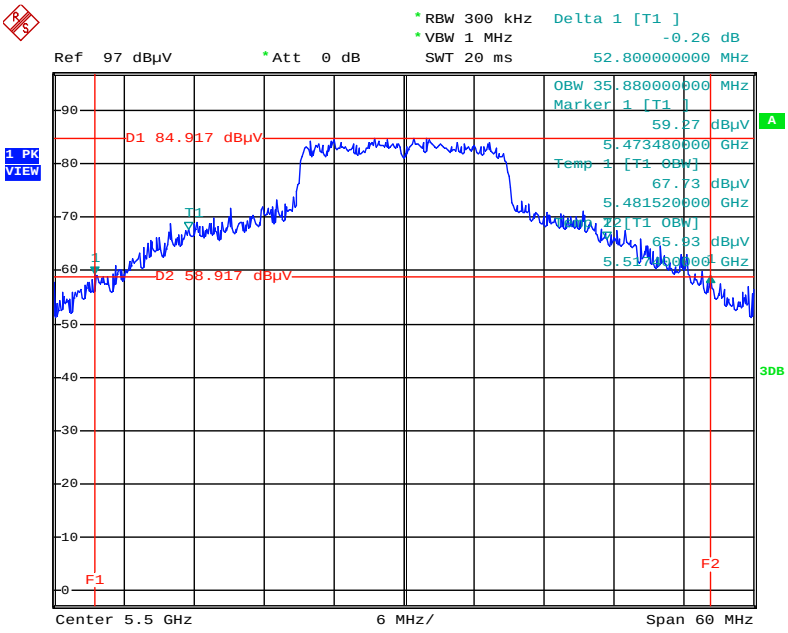
Date: 3.OCT.2015 00:48:08

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5320 MHz



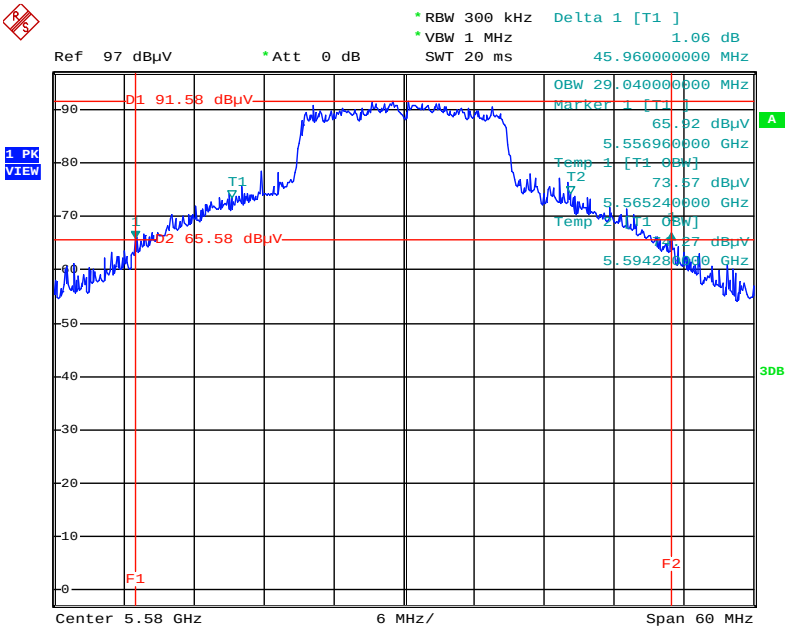
Date: 3.OCT.2015 00:48:41

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5500 MHz



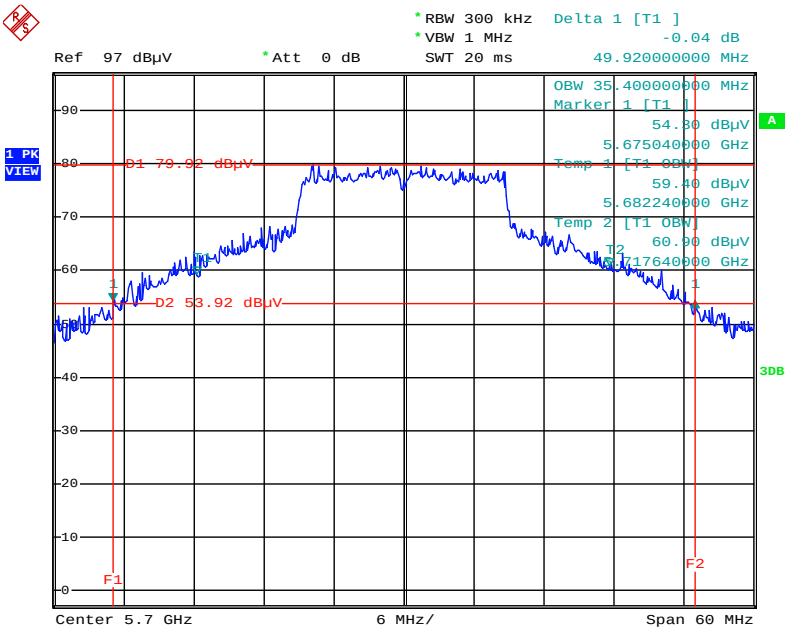
Date: 3.OCT.2015 00:52:03

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5580 MHz



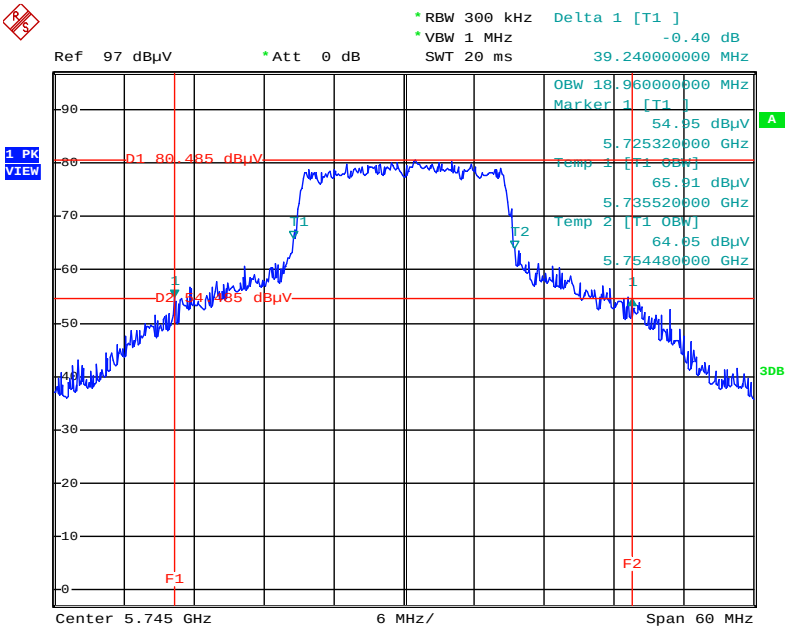
Date: 3.OCT.2015 00:52:43

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5700 MHz



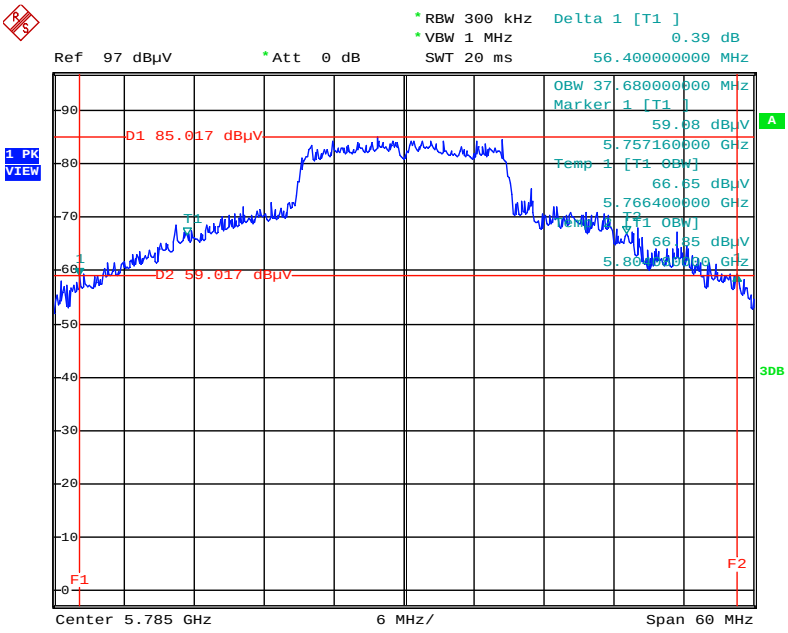
Date: 3.OCT.2015 00:53:11

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5745 MHz



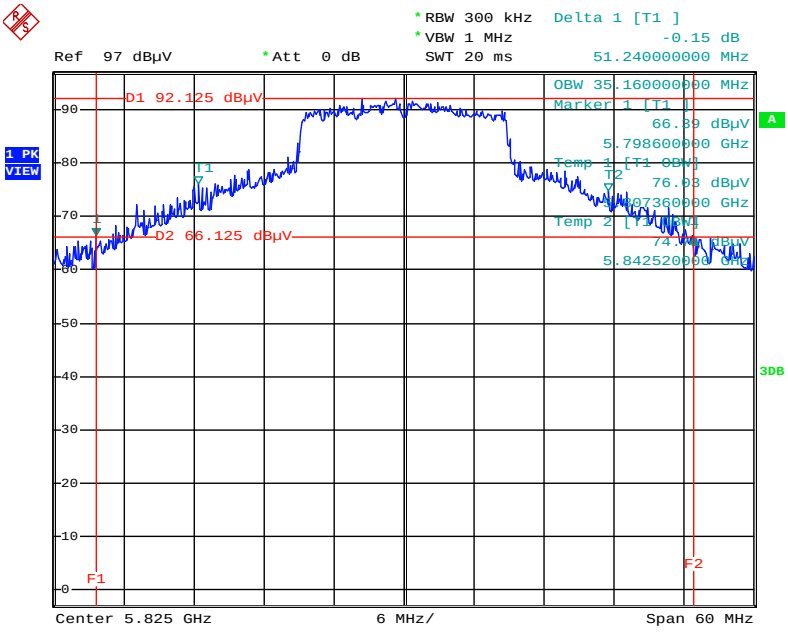
Date: 3.OCT.2015 00:53:36

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5785 MHz



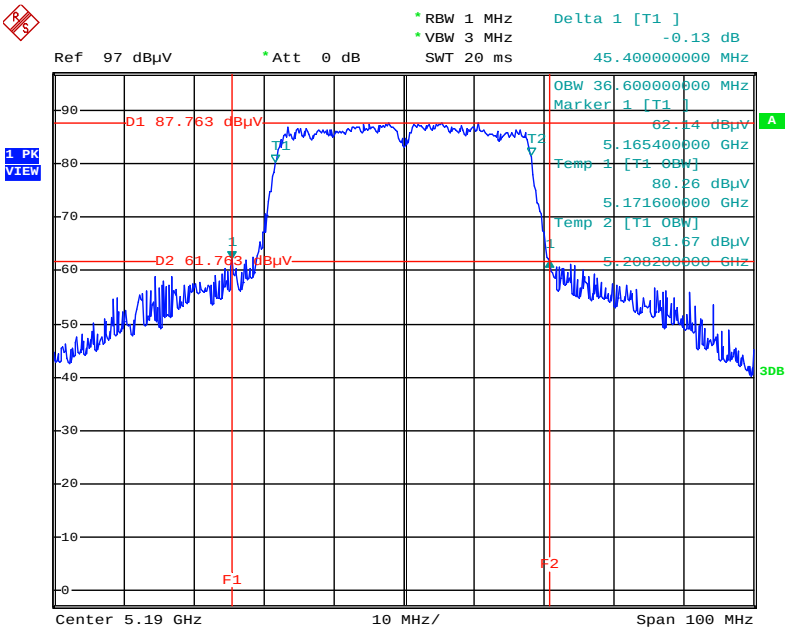
Date: 3.OCT.2015 00:55:02

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5825 MHz



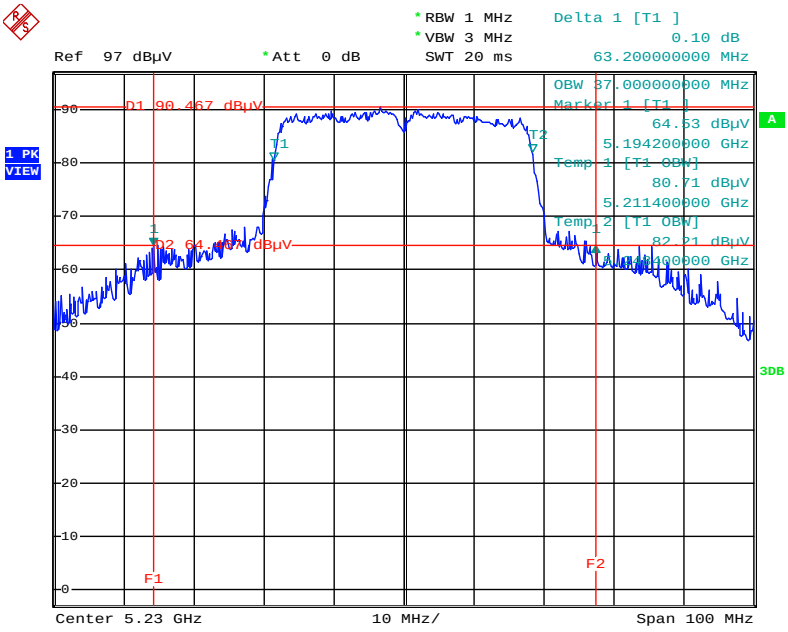
Date: 3.OCT.2015 00:55:57

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5190 MHz



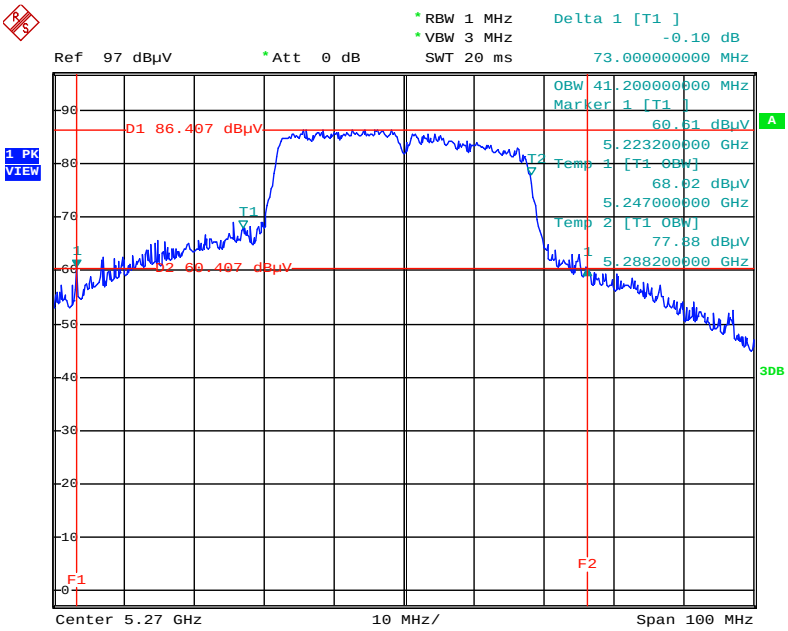
Date: 3.OCT.2015 00:59:11

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5230 MHz



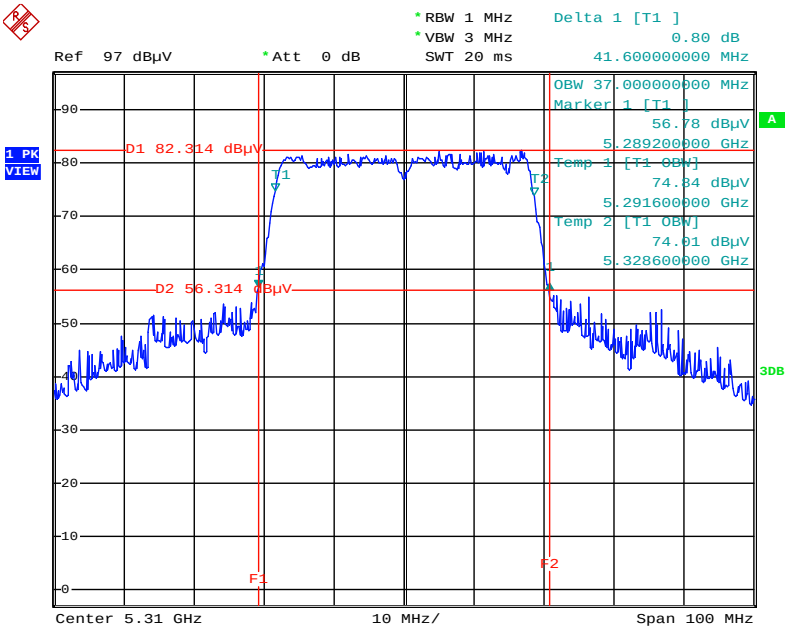
Date: 3.OCT.2015 00:59:45

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5270 MHz



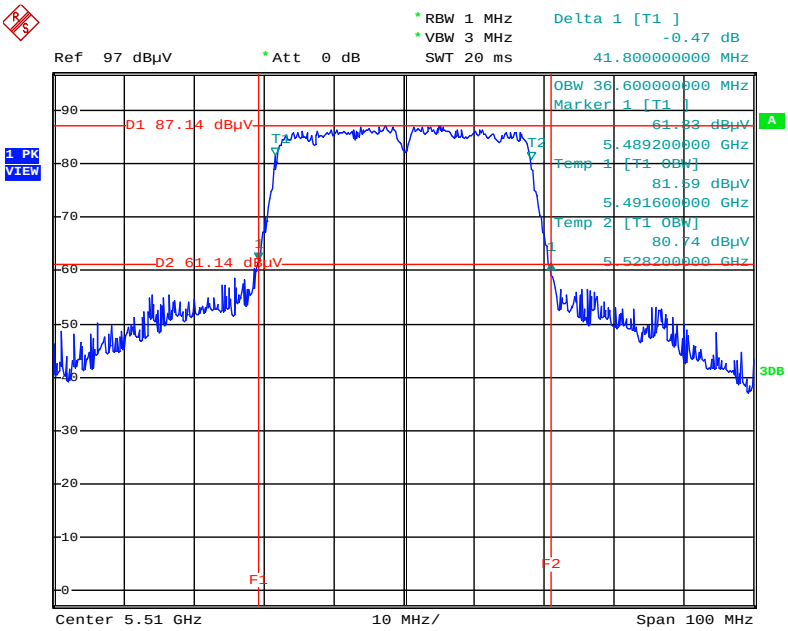
Date: 3.OCT.2015 01:00:42

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5310 MHz



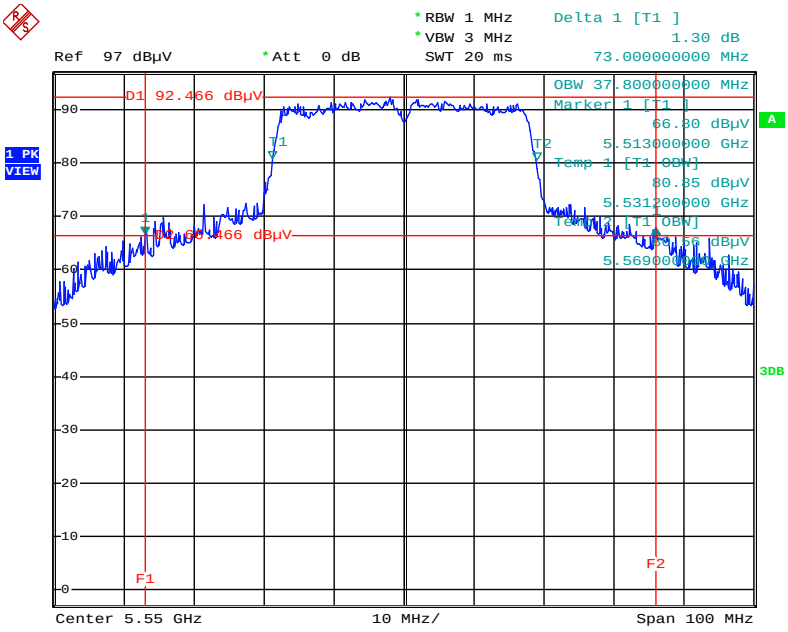
Date: 3.OCT.2015 01:01:25

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5510 MHz



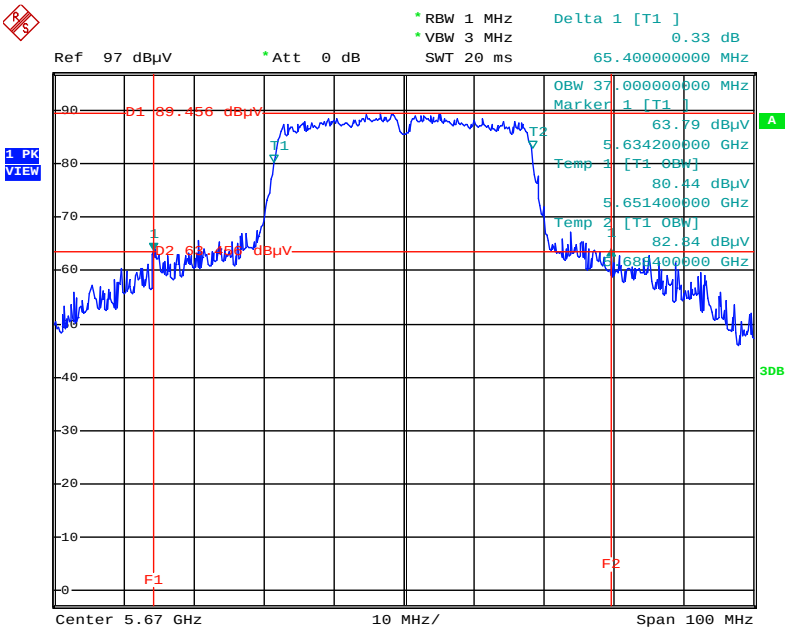
Date: 3.OCT.2015 01:01:58

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5550 MHz



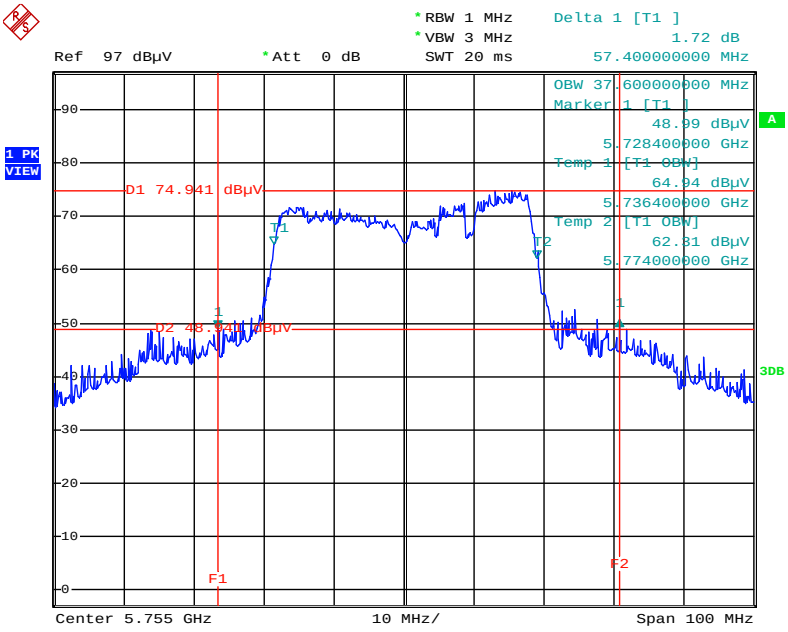
Date: 3.OCT.2015 01:02:30

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5670 MHz



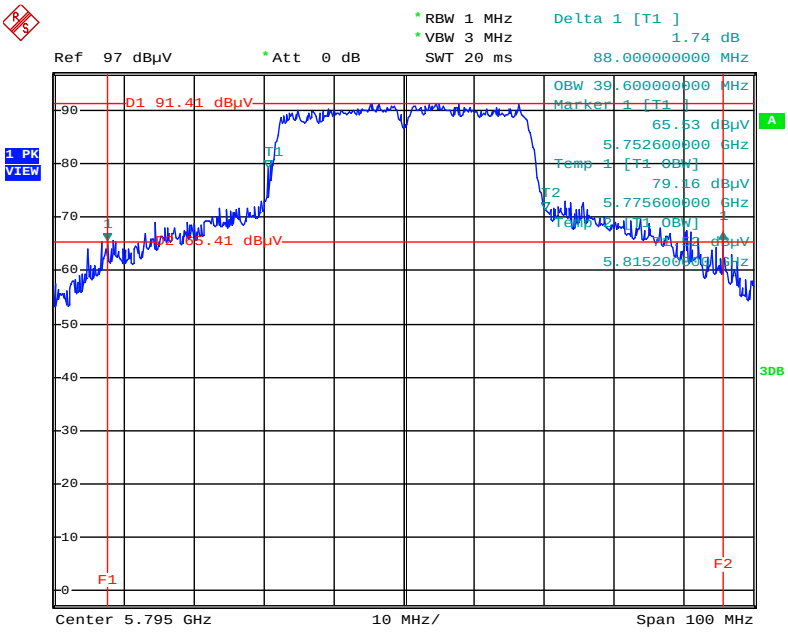
Date: 3.OCT.2015 01:02:58

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5755 MHz



Date: 3.OCT.2015 01:03:39

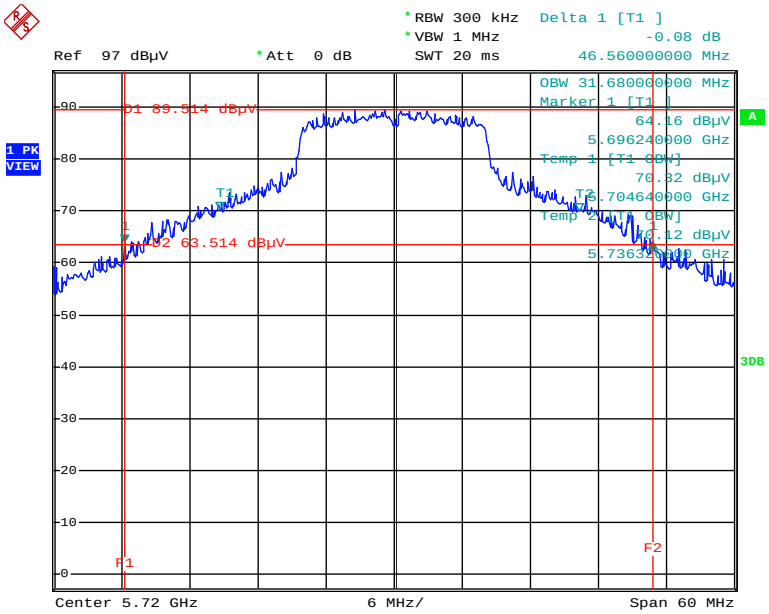
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5795 MHz



Date: 3.OCT.2015 01:04:42

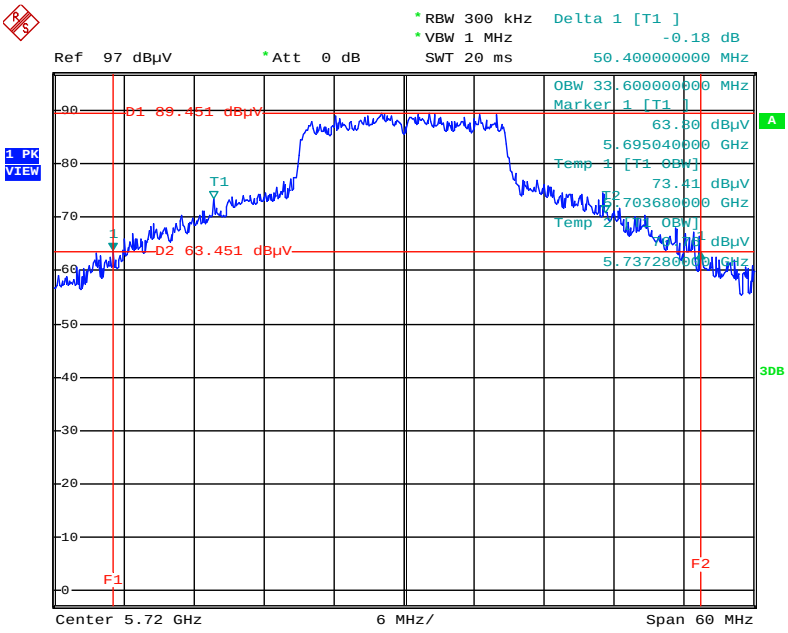
Straddle Channel

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5720 MHz



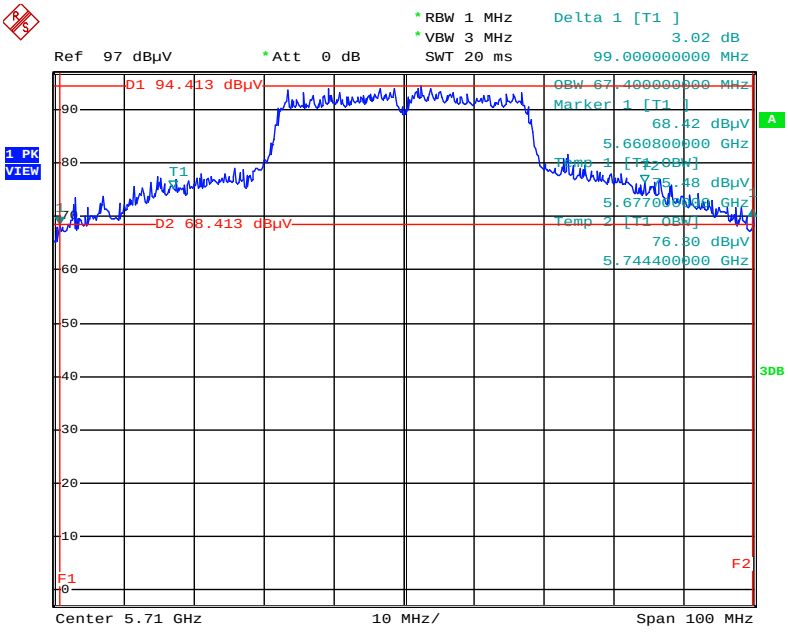
Date: 3.OCT.2015 11:46:10

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5720 MHz



Date: 3.OCT.2015 11:44:56

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5710 MHz



Date: 3.OCT.2015 11:43:01

4.3. 6dB Spectrum Bandwidth Measurement

4.3.1. Limit

For digital modulation systems, the minimum 6dB bandwidth shall be at least 500 kHz.

4.3.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of spectrum analyzer.

6dB Spectrum Bandwidth	
Spectrum Parameters	**Setting**
Attenuation	Auto
Span Frequency	> 6dB Bandwidth
RBW	100kHz
VBW	≥ 3 x RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

4.3.3. Test Procedures

For Radiated 6dB Bandwidth Measurement:

1. The transmitter was radiated to the spectrum analyzer in peak hold mode.
2. Test was performed in accordance with KDB789033 D02 v01 for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - section (C) Emission Bandwidth.
3. Multiple antenna system was performed in accordance with KDB662911 D01 v02r01 Emissions Testing of Transmitters with Multiple Outputs in the Same Band.
4. Measured the spectrum width with power higher than 6dB below carrier.

4.3.4. Test Setup Layout

For Radiated 6dB Bandwidth Measurement:

This test setup layout is the same as that shown in section 4.6.4.

4.3.5. Test Deviation

There is no deviation with the original standard.

4.3.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.3.7. Test Result of 6dB Spectrum Bandwidth

Temperature	24°C	Humidity	65%
Test Engineer	Clemens Fang & Andy Tsai & Lucas Huang		

For Mode 1:

Mode	Frequency	6dB Bandwidth (MHz)	Min. Limit (kHz)	Test Result
802.11a	5745 MHz	16.32	500	Complies
	5785 MHz	16.32	500	Complies
	5825 MHz	16.08	500	Complies
802.11n MCS0 HT20	5745 MHz	17.60	500	Complies
	5785 MHz	16.72	500	Complies
	5825 MHz	17.04	500	Complies
802.11n MCS0 HT40	5755 MHz	34.08	500	Complies
	5795 MHz	34.56	500	Complies

Straddle Channel

Mode	Frequency	6dB BW (MHz)	6dB BW M1 (MHz)	UNII 3 BW (MHz)	Min. Limit (kHz)	Test Result
802.11a	5720 MHz	16.32	5711.84	3.16	500	Complies
802.11n MCS0 HT20	5720 MHz	17.60	5711.20	3.80	500	Complies
802.11n MCS0 HT40	5710 MHz	31.36	5694.32	0.68	500	Complies

For Mode 2:

Mode	Frequency	6dB Bandwidth (MHz)	Min. Limit (kHz)	Test Result
802.11a	5745 MHz	16.32	500	Complies
	5785 MHz	16.32	500	Complies
	5825 MHz	16.32	500	Complies
802.11n MCS0 HT20	5745 MHz	16.96	500	Complies
	5785 MHz	17.20	500	Complies
	5825 MHz	17.12	500	Complies
802.11n MCS0 HT40	5755 MHz	36.32	500	Complies
	5795 MHz	34.24	500	Complies

Straddle Channel

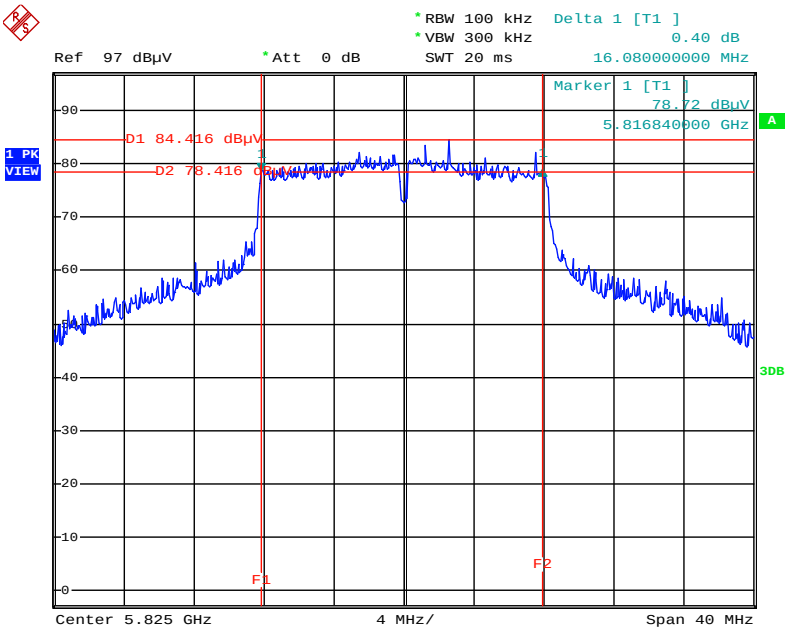
Mode	Frequency	6dB BW (MHz)	6dB BW M1 (MHz)	UNII 3 BW (MHz)	Min. Limit (kHz)	Test Result
802.11a	5720 MHz	16.40	5711.76	3.16	500	Complies
802.11n MCS0 HT20	5720 MHz	17.68	5711.20	3.88	500	Complies
802.11n MCS0 HT40	5710 MHz	35.68	5692.40	3.08	500	Complies

Note: All the test values were listed in the report.

For plots, only the channel with worse result was shown.

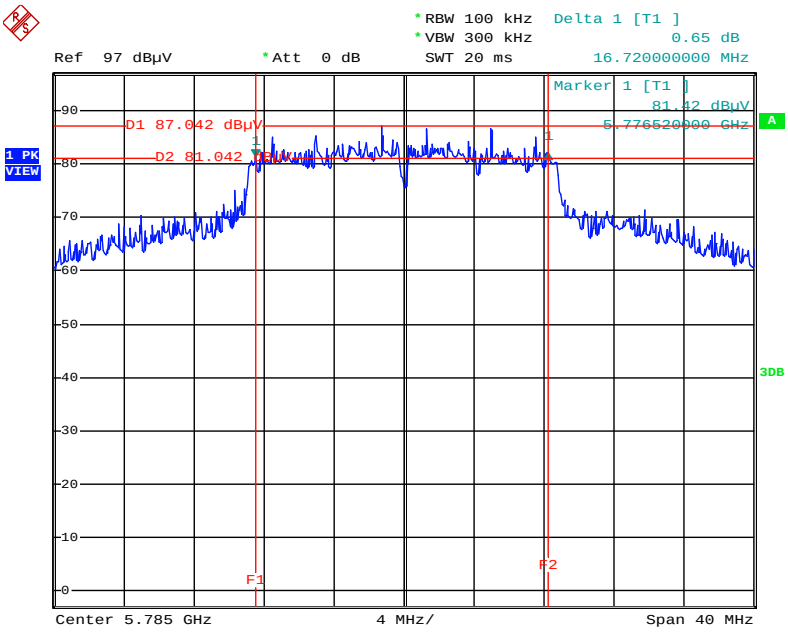
For Mode 1:

6 dB Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5825 MHz



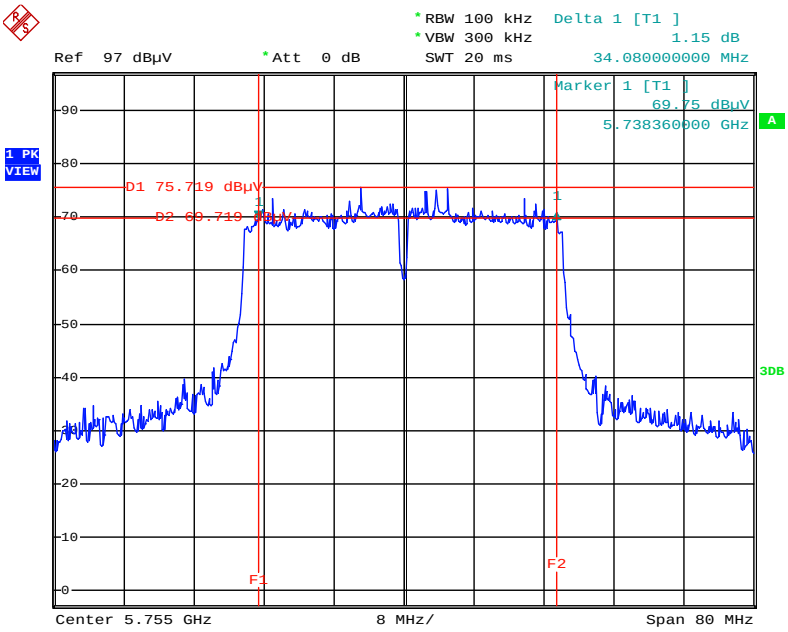
Date: 2.OCT.2015 21:45:01

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5785 MHz



Date: 2.OCT.2015 22:06:52

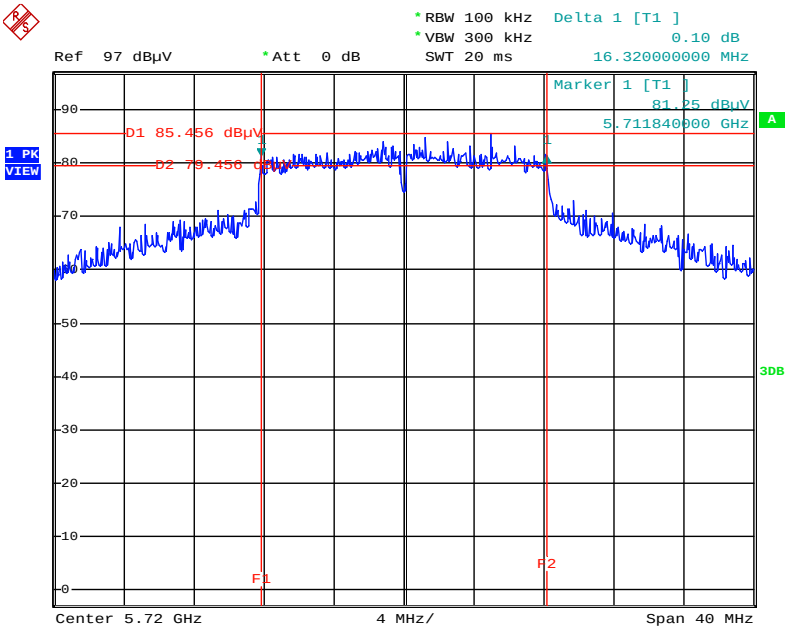
6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5755 MHz



Date: 2.OCT.2015 22:15:12

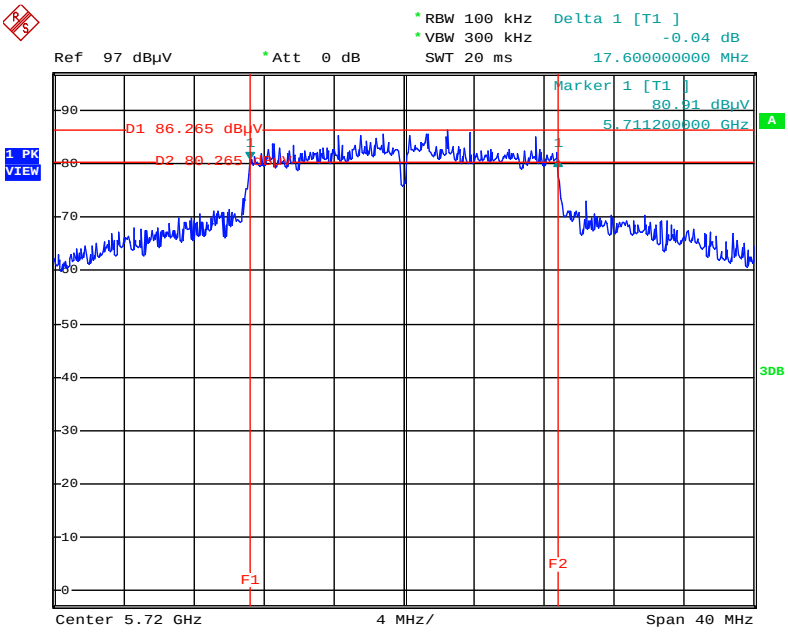
Straddle Channel

6 dB Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5720 MHz



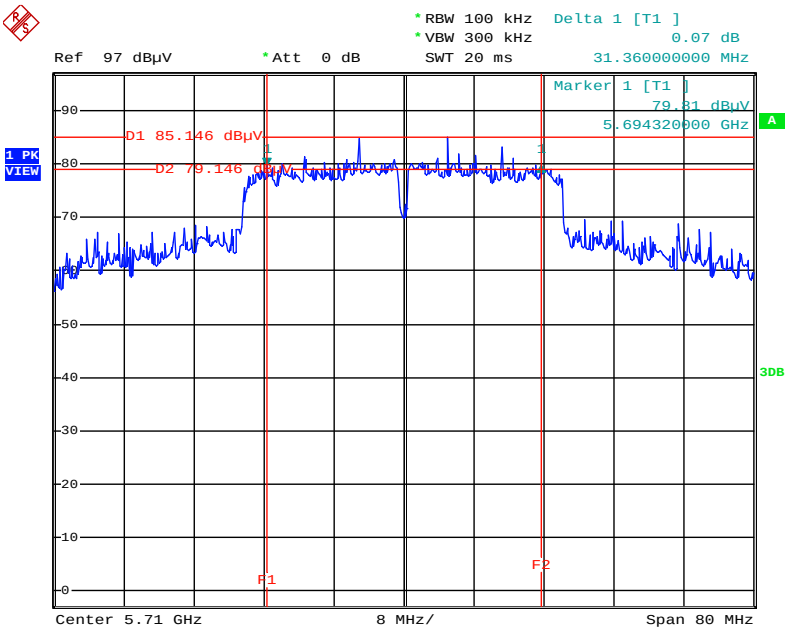
Date: 3.OCT.2015 11:01:38

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5720 MHz



Date: 3.OCT.2015 11:00:41

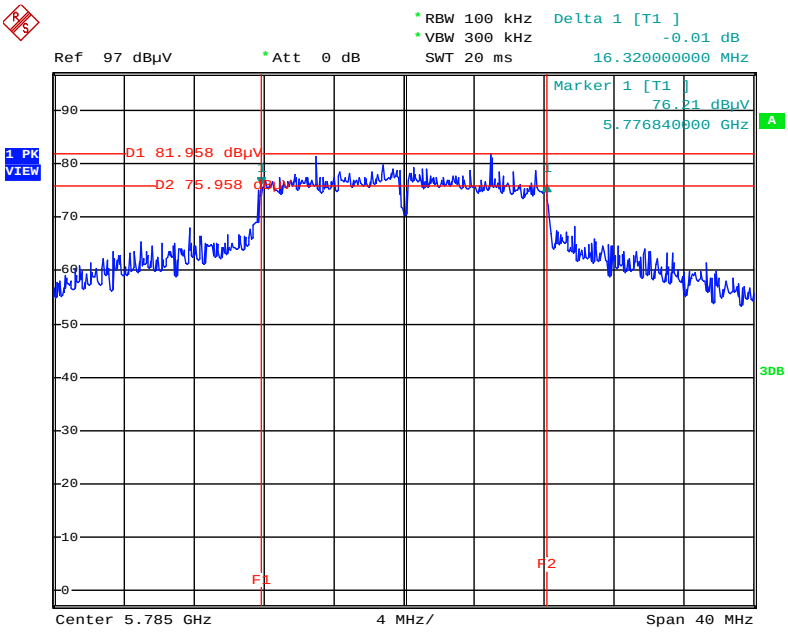
6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5710 MHz



Date: 3.OCT.2015 10:55:01

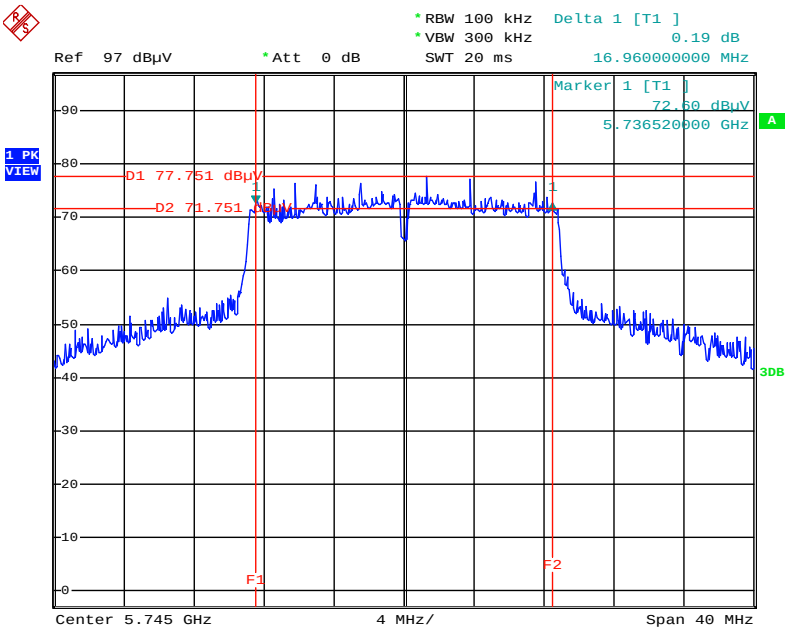
For Mode 2:

6 dB Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5785 MHz



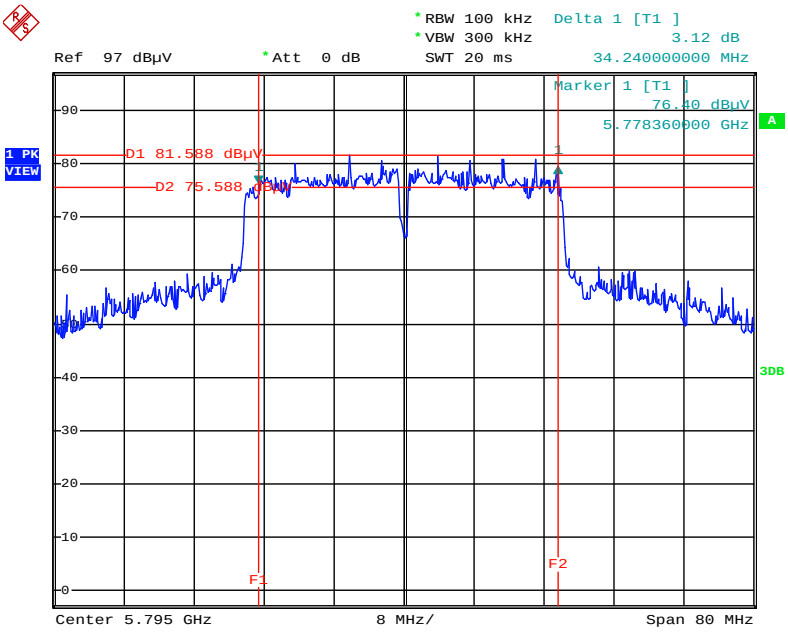
Date: 2.OCT.2015 21:43:19

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5745 MHz



Date: 3.OCT.2015 00:54:05

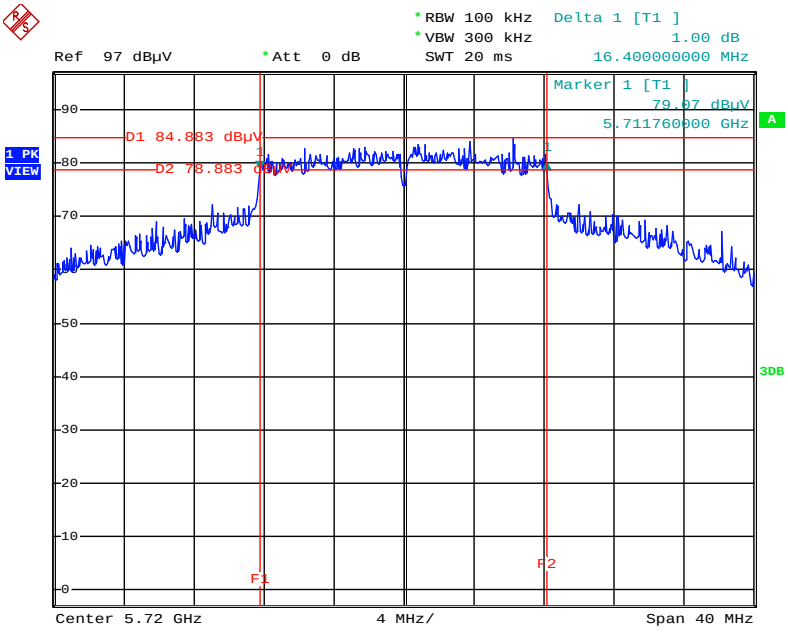
6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5795 MHz



Date: 3.OCT.2015 01:04:25

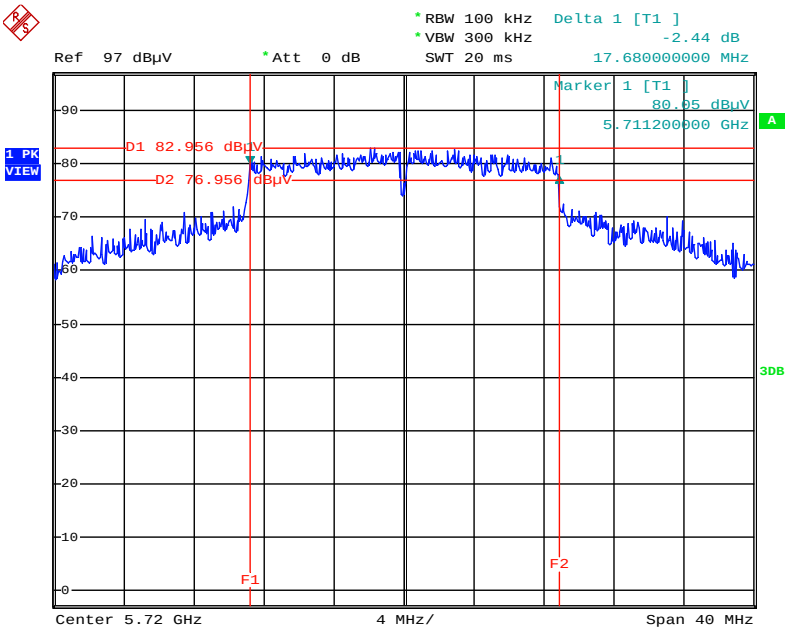
Straddle Channel

6 dB Bandwidth Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5720 MHz



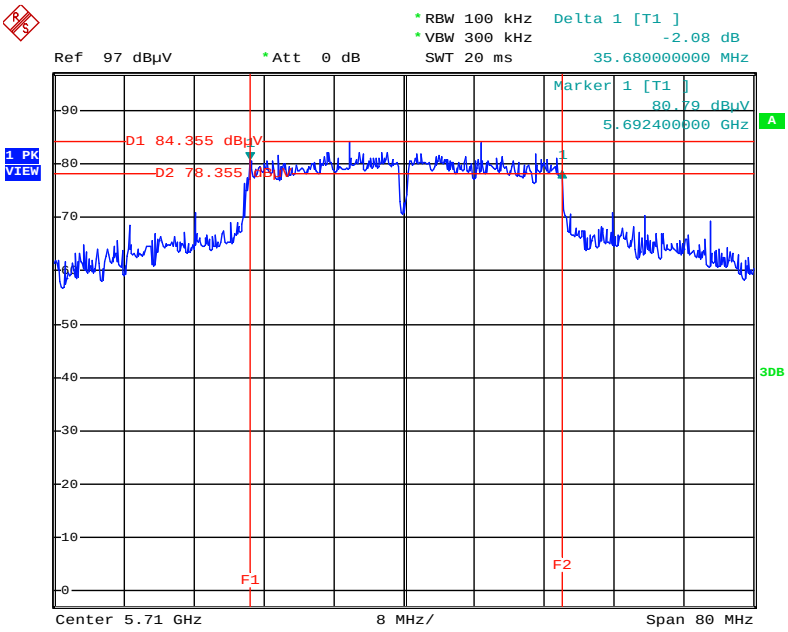
Date: 3.OCT.2015 11:21:53

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5720 MHz



Date: 3.OCT.2015 11:37:56

6 dB Bandwidth Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5710 MHz



Date: 3.OCT.2015 11:39:14

4.4. Maximum Conducted Output Power Measurement

4.4.1. Limit

Frequency Band			Limit
☒	5.15~5.25 GHz		
	Operating Mode		
	☐	Outdoor access point	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).
	☐	Indoor access point	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
	☐	Fixed point-to-point access points	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi.
	☒	Mobile and portable client devices	The maximum conducted output power over the frequency band of operation shall not exceed 250 mW (24dBm) provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

☒	5.25-5.35 GHz	The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
☒	5.470-5.725 GHz	
☒	5.725~5.85 GHz	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power.

4.4.2. Measuring Instruments and Setting

For straddle channel:

Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	1000 kHz
VBW	3000 kHz
Detector	RMS
Trace	Average Sweep count 100
Sweep Time	Auto

For other channel:

Please refer to section 5 of equipments list in this report. The following table is the setting of the power meter.

Power Meter Parameter	Setting
Bandwidth	50MHz bandwidth is greater than the EUT emission bandwidth
Detector	AVERAGE

4.4.3. Test Procedures

For straddle channel:

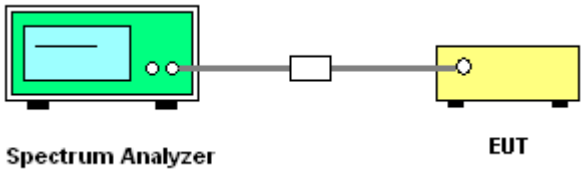
1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. Test was performed in accordance with FCC Public Notice DA 02-2138, August 30, 2002.

For other channel:

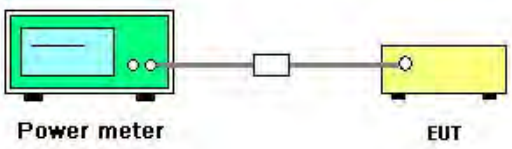
3. The transmitter output (antenna port) was connected to the power meter.
4. Test was performed in accordance with KDB789033 D02 v01 for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - section (E) Maximum conducted output power =>3. Measurement using a Power Meter (PM) =>b) Method PM-G (Measurement using a gated RF average power meter).
5. Multiple antenna systems was performed in accordance with KDB662911 D01 v02r01 Emissions Testing of Transmitters with Multiple Outputs in the Same Band.
6. When measuring maximum conducted output power with multiple antenna systems,add every result of the values by mathematic formula.

4.4.4. Test Setup Layout

For straddle channel:



For other channel:



4.4.5. Test Deviation

There is no deviation with the original standard.

4.4.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.4.7. Test Result of Maximum Conducted Output Power

Temperature	24°C	Humidity	65%
Test Engineer	Clemens Fang & Andy Tsai & Lucas Huang	Test Date	Oct. 02, 2015 ~ Oct. 03, 2015

For Mode 1:

Mode	Frequency	Conducted Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
802.11a	5180 MHz	17.86	17.73	20.81	24.00	Complies
	5200 MHz	20.91	20.68	23.81	24.00	Complies
	5240 MHz	19.96	19.89	22.94	24.00	Complies
	5260 MHz	19.41	19.26	22.35	24.00	Complies
	5300 MHz	20.65	20.83	23.75	24.00	Complies
	5320 MHz	18.70	19.03	21.88	24.00	Complies
	5500 MHz	19.16	18.52	21.86	24.00	Complies
	5580 MHz	20.89	20.46	23.69	24.00	Complies
	5700 MHz	17.35	17.33	20.35	24.00	Complies
	5745 MHz	15.88	16.22	19.06	30.00	Complies
	5785 MHz	21.72	21.98	24.86	30.00	Complies
	5825 MHz	18.54	18.93	21.75	30.00	Complies
802.11n MCS0 HT20	5180 MHz	19.07	18.76	21.93	24.00	Complies
	5200 MHz	20.97	20.36	23.69	24.00	Complies
	5240 MHz	20.25	19.88	23.08	24.00	Complies
	5260 MHz	20.51	20.68	23.61	24.00	Complies
	5300 MHz	20.93	20.35	23.66	24.00	Complies
	5320 MHz	18.91	18.93	21.93	24.00	Complies
	5500 MHz	19.43	19.03	22.24	24.00	Complies
	5580 MHz	21.06	20.70	23.89	24.00	Complies
	5700 MHz	16.88	16.63	19.77	24.00	Complies
	5745 MHz	15.87	15.63	18.76	30.00	Complies
	5785 MHz	21.93	21.86	24.91	30.00	Complies
	5825 MHz	18.51	18.56	21.55	30.00	Complies
802.11n MCS0 HT40	5190 MHz	15.14	14.99	18.08	24.00	Complies
	5230 MHz	20.15	20.01	23.09	24.00	Complies
	5270 MHz	21.15	20.76	23.97	24.00	Complies
	5310 MHz	14.53	14.48	17.52	24.00	Complies
	5510 MHz	13.44	13.34	16.40	24.00	Complies
	5550 MHz	21.02	20.42	23.74	24.00	Complies
	5670 MHz	18.56	18.41	21.50	24.00	Complies
	5755 MHz	13.16	13.51	16.35	30.00	Complies
	5795 MHz	19.42	19.60	22.52	30.00	Complies

Straddle Channel

Mode	Frequency	Conducted Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
802.11a	5720 MHz (UNII 2C)	19.51	19.44	22.49	24.00	Complies
	5720 MHz (UNII 3)	12.57	12.52	15.56	30.00	Complies
802.11n MCS0 HT20	5720 MHz (UNII 2C)	19.43	19.79	22.62	24.00	Complies
	5720 MHz (UNII 3)	13.03	13.41	16.23	30.00	Complies
802.11n MCS0 HT40	5710 MHz (UNII 2C)	20.61	20.50	23.57	24.00	Complies
	5710 MHz (UNII 3)	9.99	9.87	12.94	30.00	Complies

For Mode 2:

Mode	Frequency	Conducted Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
802.11a	5180 MHz	18.53	19.03	21.80	24.00	Complies
	5200 MHz	19.75	20.45	23.12	24.00	Complies
	5240 MHz	18.54	17.79	21.19	24.00	Complies
	5260 MHz	20.58	20.61	23.61	24.00	Complies
	5300 MHz	20.13	20.56	23.36	24.00	Complies
	5320 MHz	18.72	19.14	21.95	24.00	Complies
	5500 MHz	19.67	19.93	22.81	24.00	Complies
	5580 MHz	20.55	21.13	23.86	24.00	Complies
	5700 MHz	17.88	18.51	21.22	24.00	Complies
	5745 MHz	17.15	17.69	20.44	30.00	Complies
	5785 MHz	20.91	20.82	23.88	30.00	Complies
	5825 MHz	20.30	20.51	23.42	30.00	Complies
802.11n MCS0 HT20	5180 MHz	20.18	19.96	23.08	24.00	Complies
	5200 MHz	20.59	20.75	23.68	24.00	Complies
	5240 MHz	20.13	20.02	23.09	24.00	Complies
	5260 MHz	20.78	20.46	23.63	24.00	Complies
	5300 MHz	20.33	20.68	23.52	24.00	Complies
	5320 MHz	20.12	20.69	23.42	24.00	Complies
	5500 MHz	20.79	20.69	23.75	24.00	Complies
	5580 MHz	21.09	20.67	23.90	24.00	Complies
	5700 MHz	19.75	18.12	22.02	24.00	Complies
	5745 MHz	19.80	18.17	22.07	30.00	Complies
	5785 MHz	21.89	21.79	24.85	30.00	Complies
	5825 MHz	21.89	21.84	24.88	30.00	Complies
802.11n MCS0 HT40	5190 MHz	15.37	16.91	19.22	24.00	Complies
	5230 MHz	17.88	19.32	21.67	24.00	Complies
	5270 MHz	20.32	21.05	23.71	24.00	Complies
	5310 MHz	14.77	15.97	18.42	24.00	Complies
	5510 MHz	15.47	15.18	18.34	24.00	Complies
	5550 MHz	19.99	20.98	23.52	24.00	Complies
	5670 MHz	19.25	17.45	21.45	24.00	Complies
	5755 MHz	15.64	14.31	18.04	30.00	Complies
	5795 MHz	18.27	18.20	21.25	30.00	Complies

Straddle Channel

Mode	Frequency	Conducted Power (dBm)			Max. Limit (dBm)	Result
		Chain 1	Chain 2	Total		
802.11a	5720 MHz (UNII 2C)	19.68	19.12	22.42	24.00	Complies
	5720 MHz (UNII 3)	12.77	12.13	15.47	30.00	Complies
802.11n MCS0 HT20	5720 MHz (UNII 2C)	19.44	19.42	22.44	24.00	Complies
	5720 MHz (UNII 3)	13.05	12.98	16.03	30.00	Complies
802.11n MCS0 HT40	5710 MHz (UNII 2C)	20.52	20.66	23.60	24.00	Complies
	5710 MHz (UNII 3)	9.93	10.06	13.01	30.00	Complies

Note: All the test values were listed in the report.

For plots, only the channel with worse result was shown.

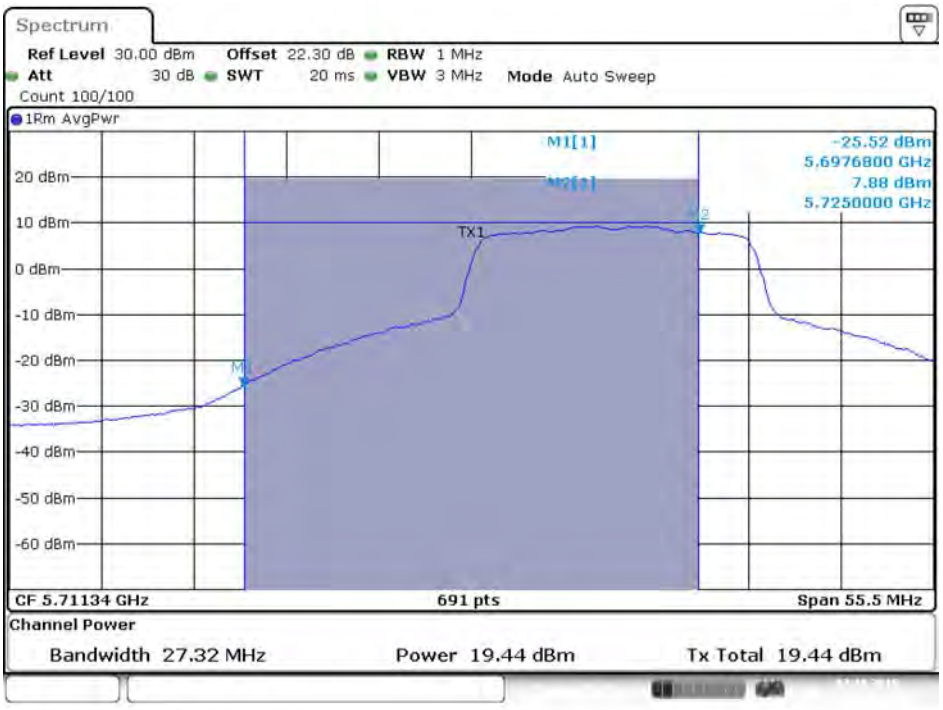
Straddle Channel

For Mode 1:

Conducted Output Power Plot on Configuration IEEE 802.11a / Chain 1 / 5720 MHz (UNII 2C)

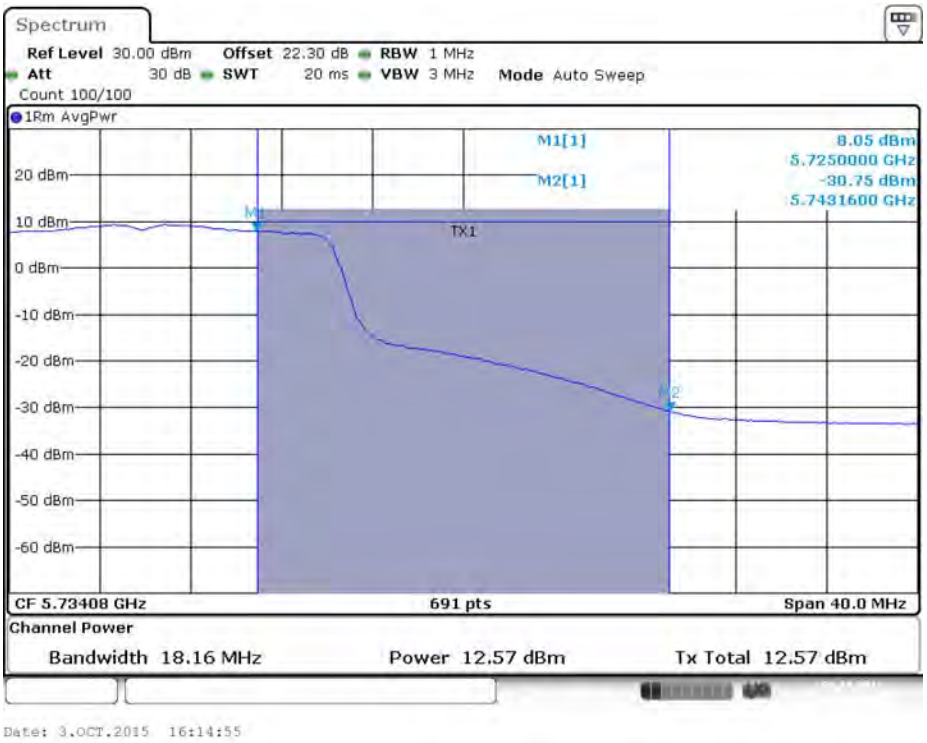
Date: 3.OCT.2015 16:13:25

Conducted Output Power Plot on Configuration IEEE 802. 11a / Chain 2 / 5720 MHz (UNII 2C)

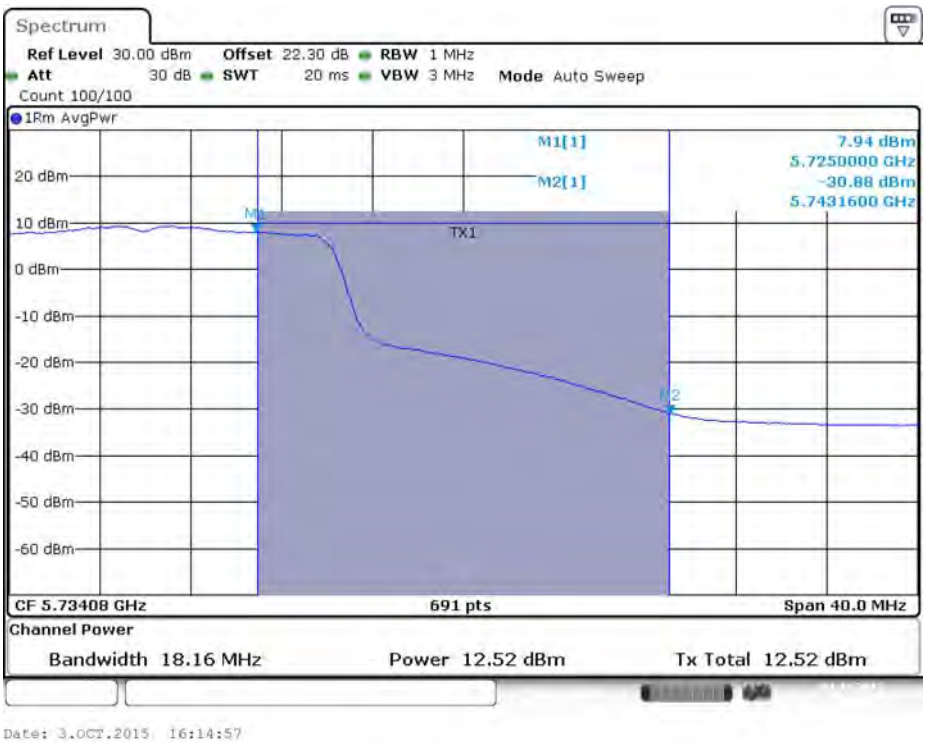


Date: 3.OCT.2015 16:14:54

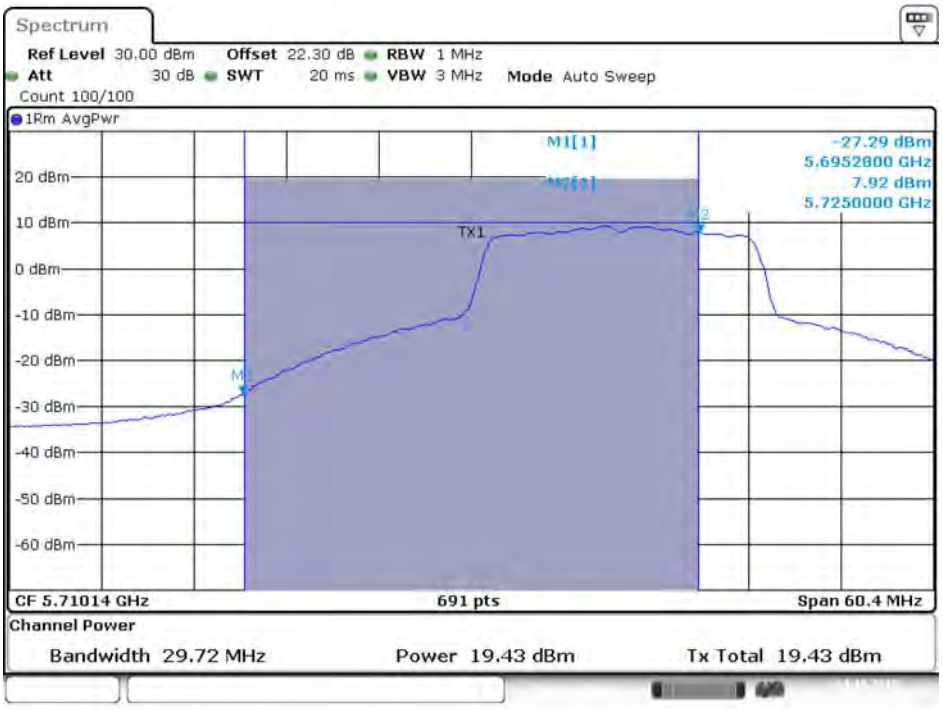
Conducted Output Power Plot on Configuration IEEE 802.11a / Chain 1 / 5720 MHz (UNII 3)



Conducted Output Power Plot on Configuration IEEE 802. 11a / Chain 2 / 5720 MHz (UNII 3)

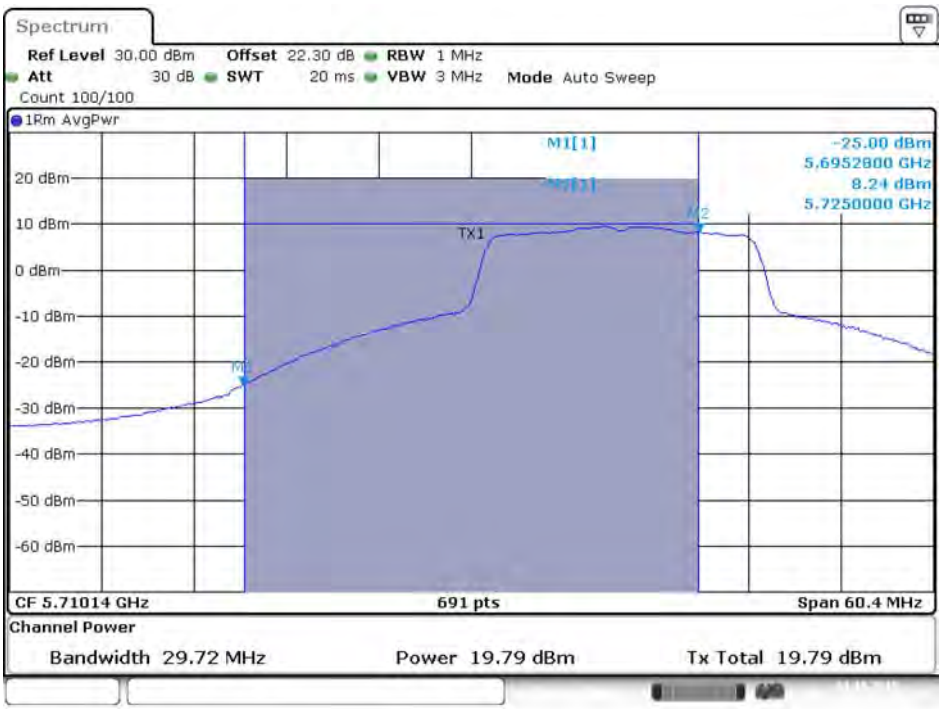


Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 / 5720 MHz (UNII 2C)



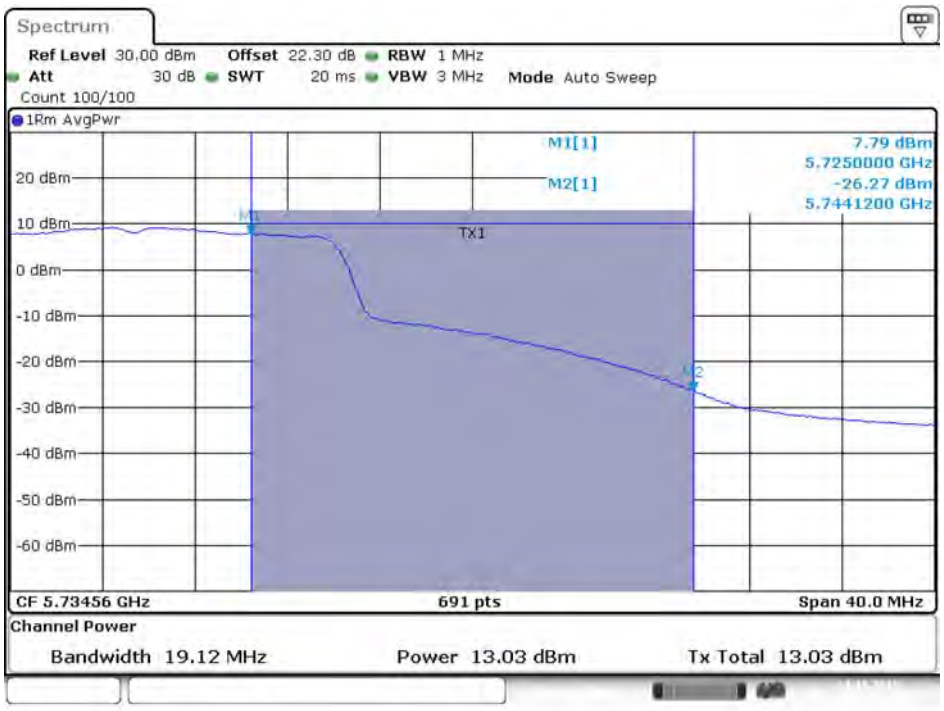
Date: 3.OCT.2015 16:05:19

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 2 / 5720 MHz (UNII 2C)



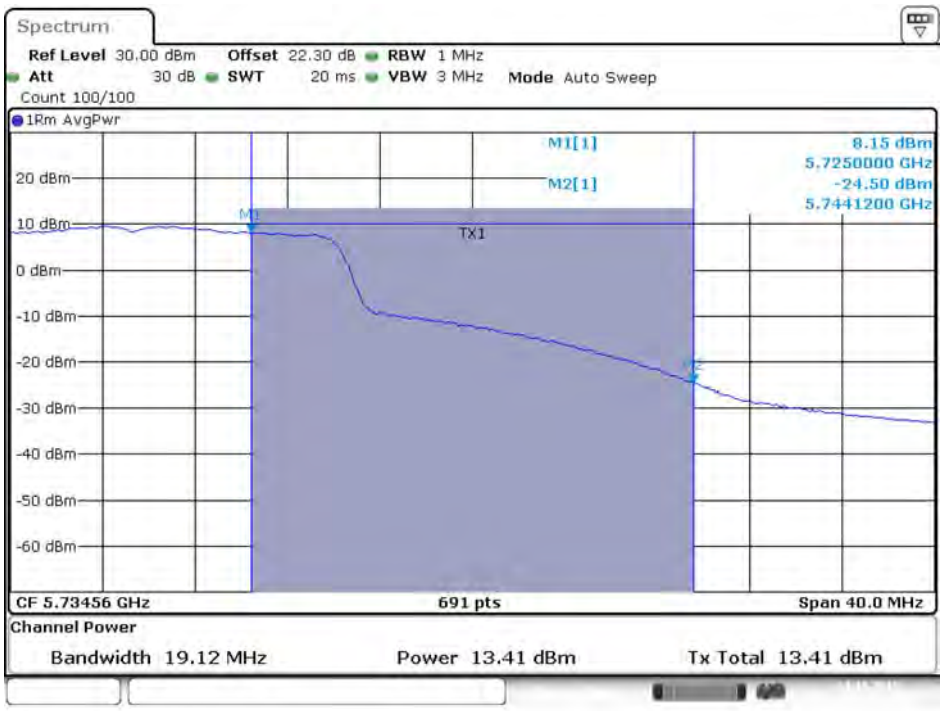
Date: 3.OCT.2015 16:05:26

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 / 5720 MHz (UNII 3)



Date: 3.OCT.2015 16:05:23

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 2 / 5720 MHz (UNII 3)



Date: 3.OCT.2015 16:05:30

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 / 5710 MHz (UNII 2C)

Date: 3.OCT.2015 15:57:05

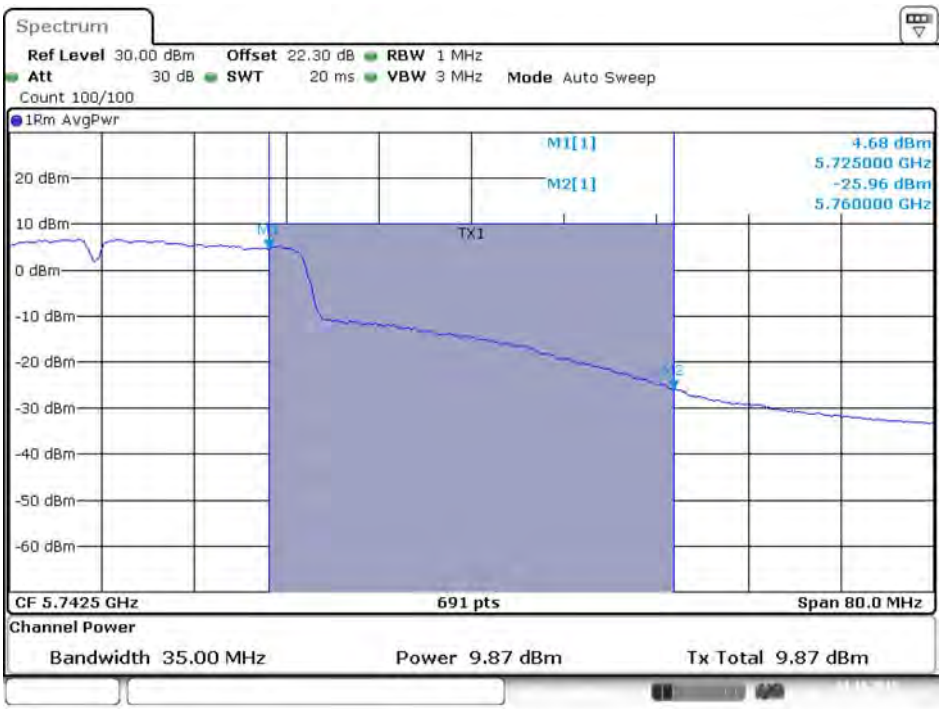
Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 2 / 5710 MHz (UNII 2C)

Date: 3.OCT.2015 15:57:12

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 / 5710 MHz (UNII 3)

Date: 3.OCT.2015 15:57:08

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 2 / 5710 MHz (UNII 3)



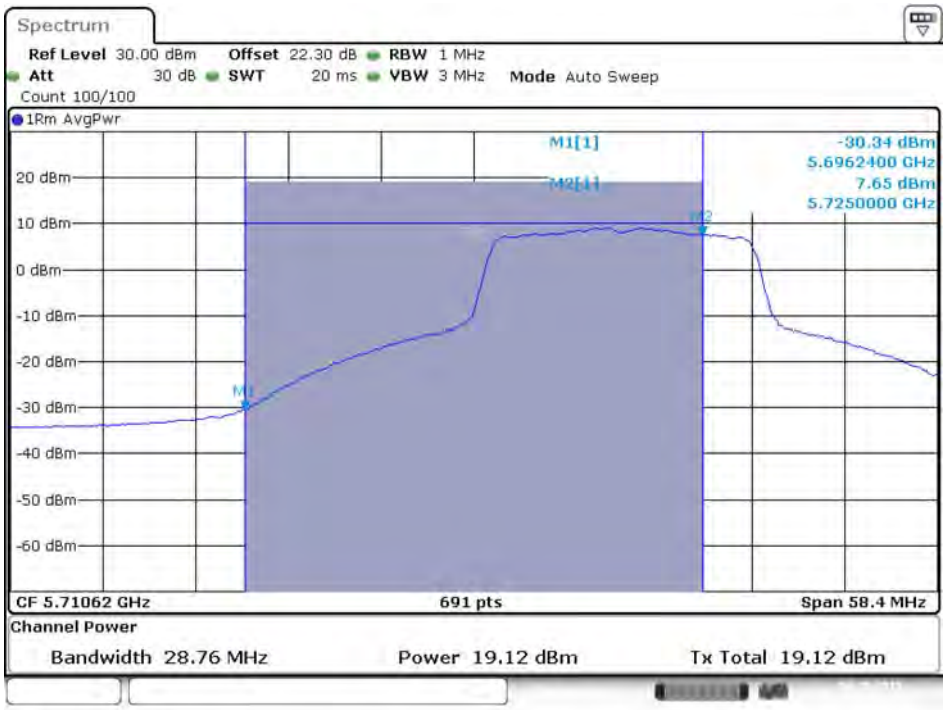
Date: 3.OCT.2015 15:57:15

For Mode 2:

Conducted Output Power Plot on Configuration IEEE 802.11a / Chain 1 / 5720 MHz (UNII 2C)

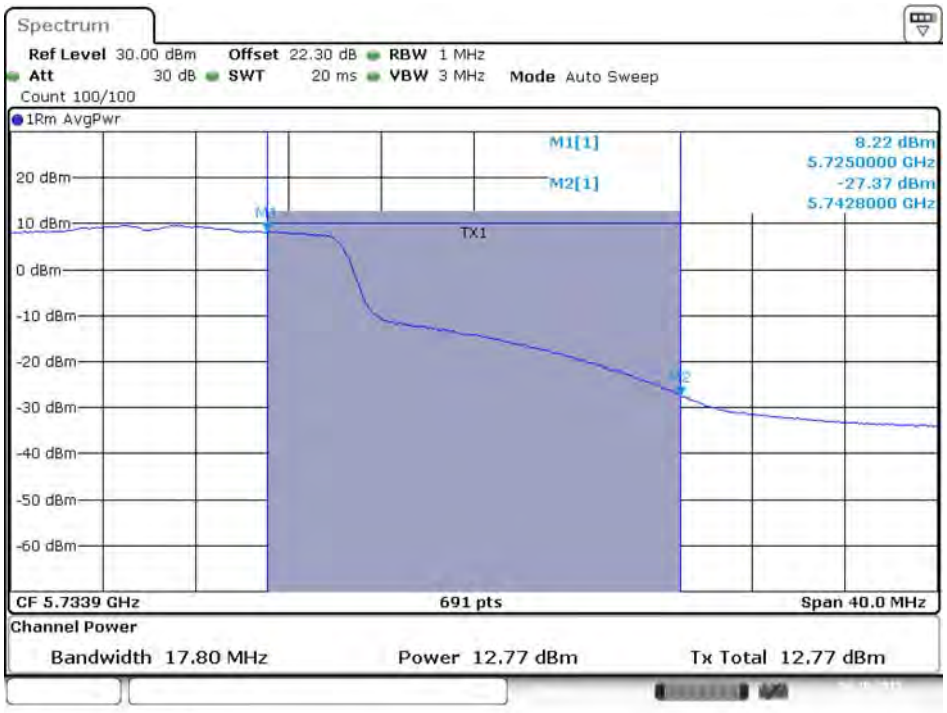
Date: 3.OCT.2015 15:25:07

Conducted Output Power Plot on Configuration IEEE 802. 11a / Chain 2 / 5720 MHz (UNII 2C)



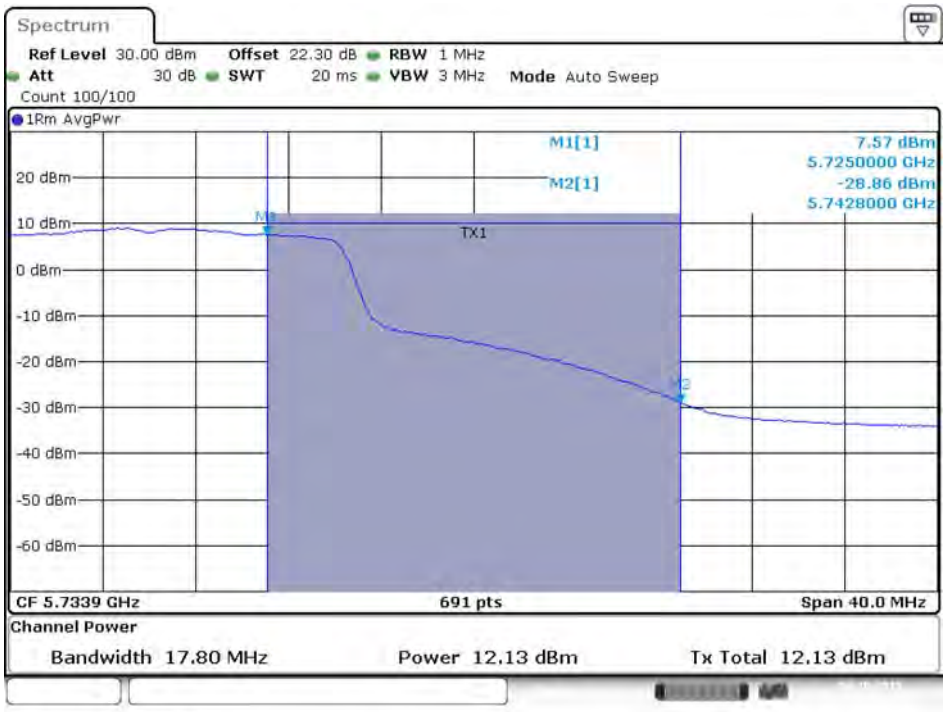
Date: 3.OCT.2015 15:25:14

Conducted Output Power Plot on Configuration IEEE 802.11a / Chain 1 / 5720 MHz (UNII 3)



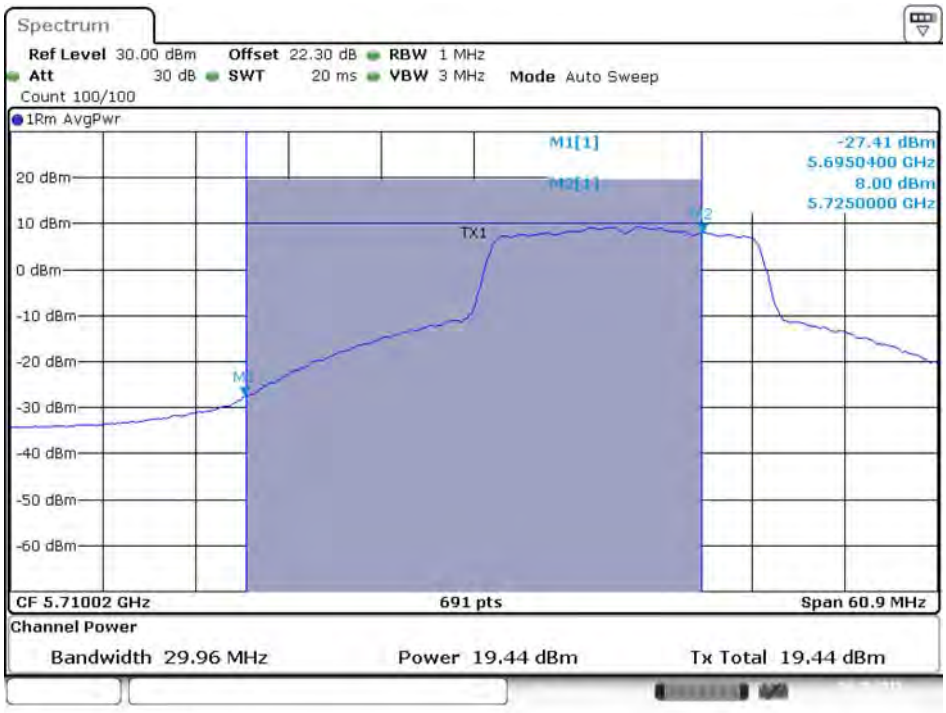
Date: 3.OCT.2015 15:25:10

Conducted Output Power Plot on Configuration IEEE 802. 11a / Chain 2 / 5720 MHz (UNII 3)



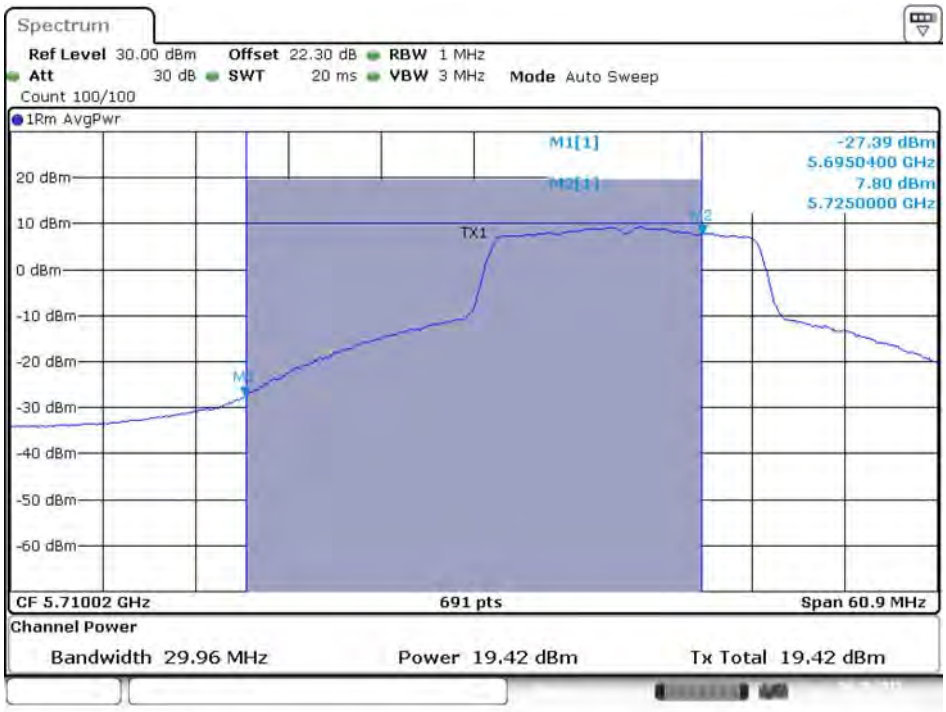
Date: 3.OCT.2015 15:25:17

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 / 5720 MHz (UNII 2C)



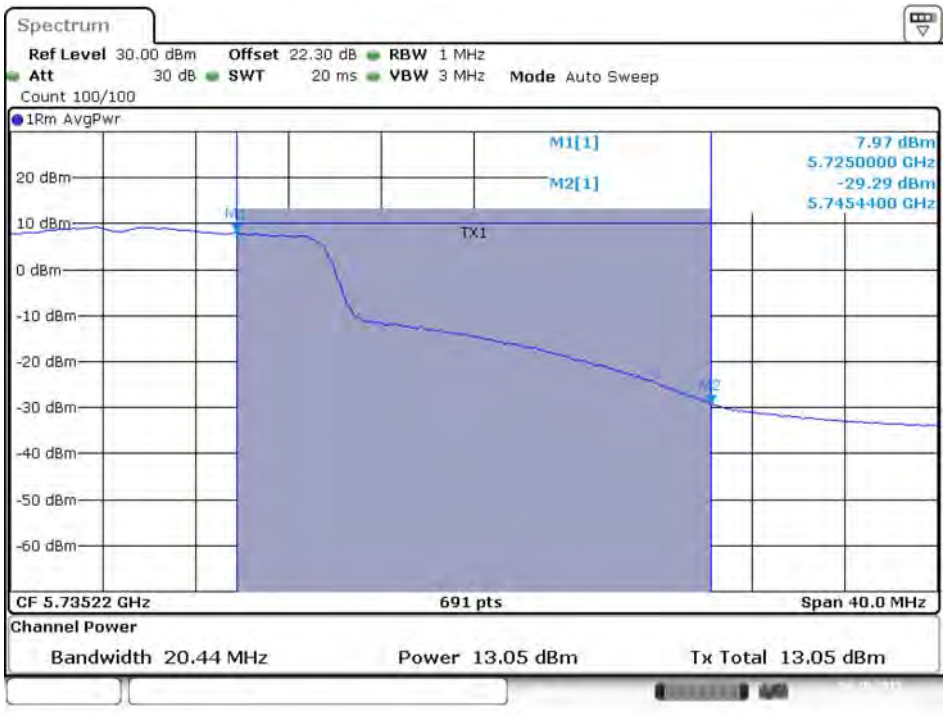
Date: 3.OCT.2015 15:36:32

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 2 / 5720 MHz (UNII 2C)



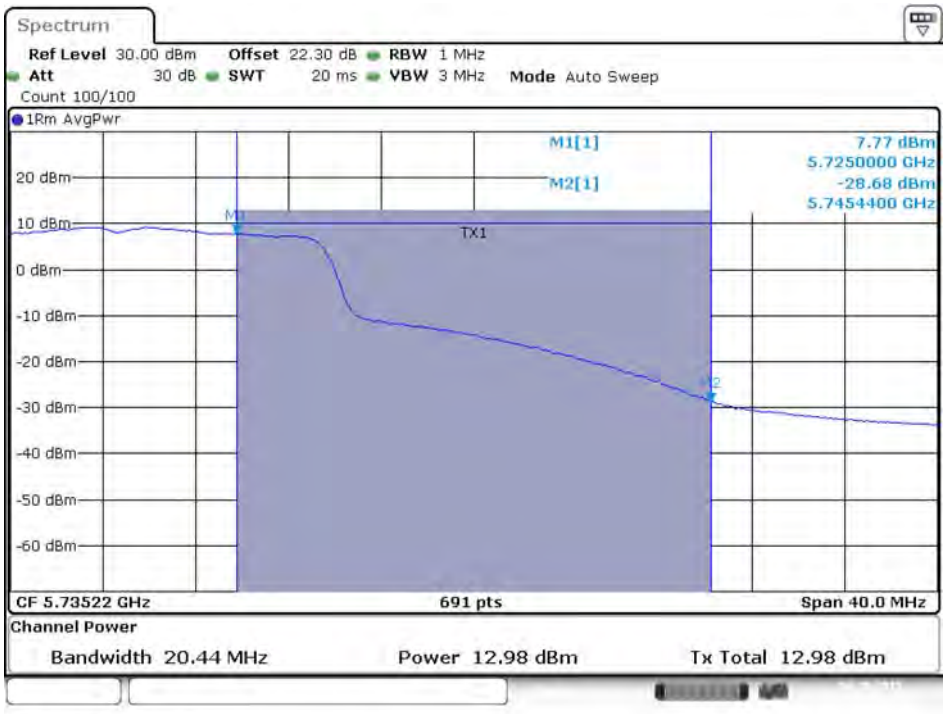
Date: 3.OCT.2015 15:36:40

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 / 5720 MHz (UNII 3)



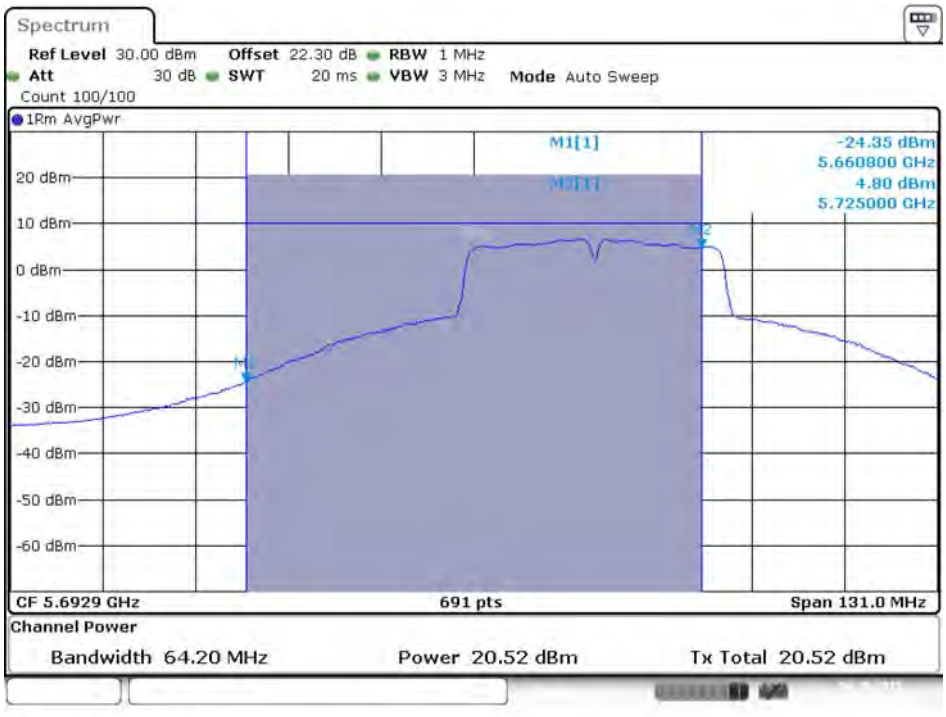
Date: 3.OCT.2015 15:36:36

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 2 / 5720 MHz (UNII 3)



Date: 3.OCT.2015 15:36:43

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 / 5710 MHz (UNII 2C)

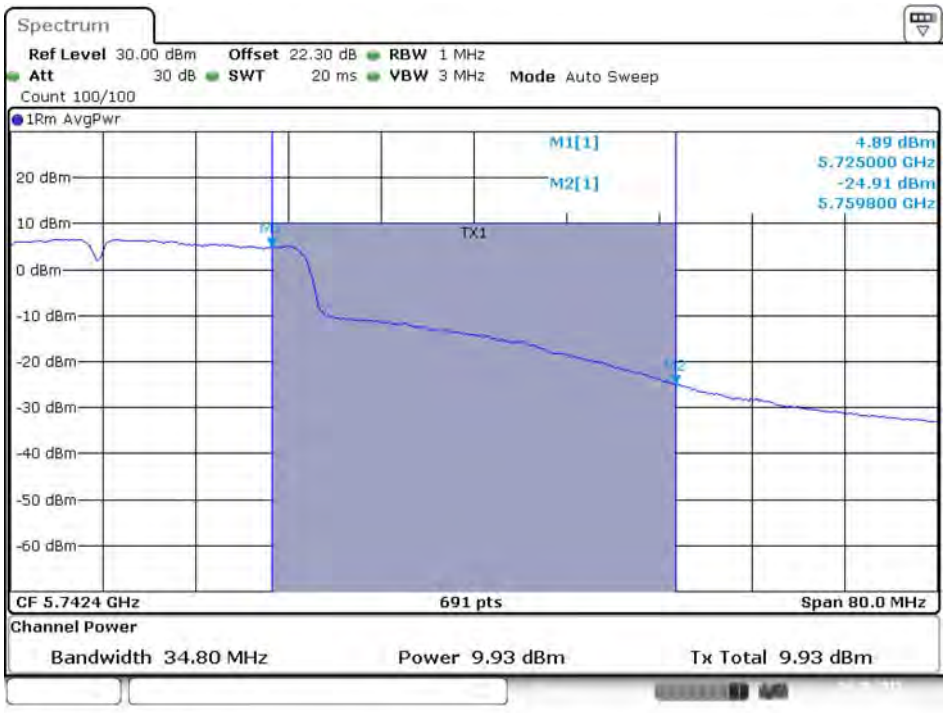


Date: 3.OCT.2015 15:42:27

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 2 / 5710 MHz (UNII 2C)

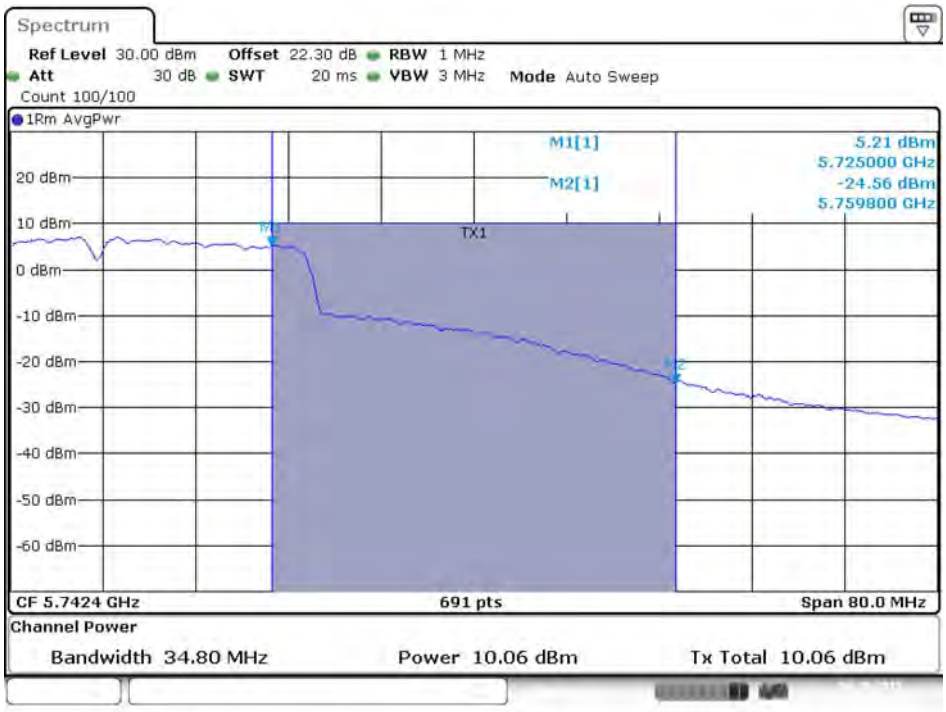
Date: 3.OCT.2015 15:42:34

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 / 5710 MHz (UNII 3)



Date: 3.OCT.2015 15:42:30

Conducted Output Power Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 2 / 5710 MHz (UNII 3)



Date: 3.OCT.2015 15:42:37

4.5. Power Spectral Density Measurement

4.5.1. Limit

The following table is power spectral density limits and decrease power density limit rule refer to section 4.4.1.

Frequency Band			Limit
☒	5.15~5.25 GHz		
	Operating Mode		
	☐	Outdoor access point	17 dBm/MHz
	☐	Indoor access point	17 dBm/MHz
	☐	Fixed point-to-point access points	17 dBm/MHz
	☒	Mobile and portable client devices	11 dBm/MHz
☒	5.25-5.35 GHz		11 dBm/MHz
☒	5.470-5.725 GHz		11 dBm/MHz
☒	5.725~5.85 GHz		30 dBm/500kHz

4.5.2. Measuring Instruments and Setting

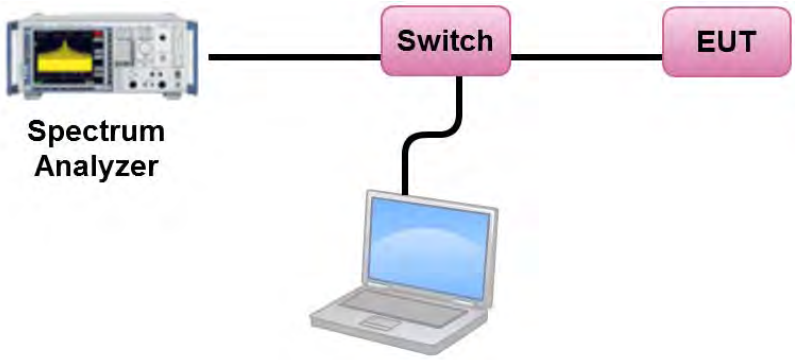
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	1000 kHz
VBW	3000 kHz
Detector	RMS
Trace	AVERAGE
Sweep Time	Auto
Trace Average	100 times
Note: If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW) to the measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.	

4.5.3. Test Procedures

1. The transmitter output (antenna port) was connected RF switch to the spectrum analyzer.
2. Test was performed in accordance with KDB789033 D02 v01 for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - section (F) Maximum Power Spectral Density (PSD).
3. Multiple antenna systems was performed in accordance KDB662911 D01 v02r01 in-Band Power Spectral Density (PSD) Measurements (a) Measure and sum the spectra across the outputs.
4. When measuring first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3 and so on up to the Nth output to obtain the value for the first frequency bin of the summed spectrum. The summed spectrum value for each of the other frequency bins is computed in the same way.
5. For 5.725~5.85 GHz, the measured result of PSD level must add 10log(500kHz/RBW) and the final result should ≤ 30 dBm.

4.5.4. Test Setup Layout



4.5.5. Test Deviation

There is no deviation with the original standard.

4.5.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.5.7. Test Result of Power Spectral Density

Temperature	24°C	Humidity	65%
Test Engineer	Clemens Fang & Andy Tsai & Lucas Huang	Test Date	Oct. 02, 2015 ~ Oct. 03, 2015

For Mode 1:

Configuration IEEE 802.11a / Chain 1 + Chain 2

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	7.76	11.00	Complies
40	5200 MHz	10.68	11.00	Complies
48	5240 MHz	9.76	11.00	Complies
52	5260 MHz	9.16	11.00	Complies
60	5300 MHz	10.75	11.00	Complies
64	5320 MHz	8.86	11.00	Complies
100	5500 MHz	8.61	11.00	Complies
116	5580 MHz	10.72	11.00	Complies
140	5700 MHz	7.32	11.00	Complies

Note:

5G Band 1= $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{EQC}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =5.42dBi <6dBi, so the limit doesn't reduce.

5G Band 2= $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{EQC}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =5.88dBi <6dBi, so the limit doesn't reduce.

5G Band 3= $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{EQC}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =5.32dBi <6dBi, so the limit doesn't reduce.

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
149	5745 MHz	6.09	-3.01	3.08	30.00	Complies
157	5785 MHz	11.72	-3.01	8.71	30.00	Complies
165	5825 MHz	8.86	-3.01	5.85	30.00	Complies

Note:

5G Band 4= $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{EQC}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =5.71dBi <6dBi, so the limit doesn't reduce.

Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	9.01	11.00	Complies
40	5200 MHz	10.68	11.00	Complies
48	5240 MHz	9.98	11.00	Complies
52	5260 MHz	10.68	11.00	Complies
60	5300 MHz	10.39	11.00	Complies
64	5320 MHz	8.59	11.00	Complies
100	5500 MHz	9.06	11.00	Complies
116	5580 MHz	10.92	11.00	Complies
140	5700 MHz	6.75	11.00	Complies

Note:

5G Band 1= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{seg}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.42dBi <6dBi, so the limit doesn't reduce.

5G Band 2= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{seg}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.88dBi <6dBi, so the limit doesn't reduce.

5G Band 3= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{seg}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.32dBi <6dBi, so the limit doesn't reduce.

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
149	5745 MHz	5.68	-3.01	2.67	30.00	Complies
157	5785 MHz	11.79	-3.01	8.78	30.00	Complies
165	5825 MHz	8.59	-3.01	5.58	30.00	Complies

Note:

5G Band 4= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{seg}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.71dBi <6dBi, so the limit doesn't reduce.

Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	1.91	11.00	Complies
46	5230 MHz	6.84	11.00	Complies
54	5270 MHz	7.98	11.00	Complies
62	5310 MHz	1.54	11.00	Complies
102	5510 MHz	0.41	11.00	Complies
110	5550 MHz	7.41	11.00	Complies
134	5670 MHz	5.55	11.00	Complies

Note:

5G Band 1= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.42dBi <6dBi, so the limit doesn't reduce.

5G Band 2= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.88dBi <6dBi, so the limit doesn't reduce.

5G Band 3= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.32dBi <6dBi, so the limit doesn't reduce.

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
151	5755 MHz	0.38	-3.01	-2.63	30.00	Complies
159	5795 MHz	6.45	-3.01	3.44	30.00	Complies

Note:

5G Band 4= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.71dBi <6dBi, so the limit doesn't reduce.

Straddle Channel

Configuration IEEE 802.11a / Chain 1 + Chain 2

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
144	5720 MHz (UNII 2C)	10.96	11.00	Complies

Note:

5G (UNII2C)= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{eqq}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.32dBi <6dBi, so the limit doesn't reduce.

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
144	5720 MHz (UNII 3)	9.55	-3.01	6.54	30.00	Complies

Note:

5G (UNII3)= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{eqq}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.71dBi <6dBi, so the limit doesn't reduce.

Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
144	5720 MHz (UNII 2C)	10.75	11.00	Complies

Note:

5G (UNII2C)= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{eqq}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.32dBi <6dBi, so the limit doesn't reduce.

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
144	5720 MHz (UNII 3)	9.37	-3.01	6.36	30.00	Complies

Note:

5G (UNII3)= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{eqq}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.71dBi <6dBi, so the limit doesn't reduce.

Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
142	5710 MHz (UNII 2C)	8.23	11.00	Complies

Note:

5G (UNII2C)= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.32dBi <6dBi, so the limit doesn't reduce.

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
142	5710 MHz (UNII 3)	6.74	-3.01	3.73	30.00	Complies

Note:

5G (UNII3)= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.71dBi <6dBi, so the limit doesn't reduce.

For Mode 2:

Configuration IEEE 802.11a / Chain 1 + Chain 2

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	8.63	11.00	Complies
40	5200 MHz	10.16	11.00	Complies
48	5240 MHz	7.82	11.00	Complies
52	5260 MHz	10.52	11.00	Complies
60	5300 MHz	10.18	11.00	Complies
64	5320 MHz	8.63	11.00	Complies
100	5500 MHz	9.77	11.00	Complies
116	5580 MHz	10.65	11.00	Complies
140	5700 MHz	7.95	11.00	Complies

Note:

5G Band 1= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =4.29dBi <6dBi, so the limit doesn't reduce.

5G Band 2= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =4.81dBi <6dBi, so the limit doesn't reduce.

5G Band 3= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.14dBi <6dBi, so the limit doesn't reduce.

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
149	5745 MHz	7.35	-3.01	4.34	30.00	Complies
157	5785 MHz	10.65	-3.01	7.64	30.00	Complies
165	5825 MHz	10.18	-3.01	7.17	30.00	Complies

Note:

5G Band 4= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =4.75dBi <6dBi, so the limit doesn't reduce.

Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	10.00	11.00	Complies
40	5200 MHz	10.41	11.00	Complies
48	5240 MHz	10.20	11.00	Complies
52	5260 MHz	10.40	11.00	Complies
60	5300 MHz	10.45	11.00	Complies
64	5320 MHz	10.50	11.00	Complies
100	5500 MHz	10.44	11.00	Complies
116	5580 MHz	10.73	11.00	Complies
140	5700 MHz	9.03	11.00	Complies

Note:

5G Band 1= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{seg}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =4.29dBi <6dBi, so the limit doesn't reduce.

5G Band 2= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{seg}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =4.81dBi <6dBi, so the limit doesn't reduce.

5G Band 3= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{seg}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.14dBi <6dBi, so the limit doesn't reduce.

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
149	5745 MHz	9.10	-3.01	6.09	30.00	Complies
157	5785 MHz	11.52	-3.01	8.51	30.00	Complies
165	5825 MHz	11.85	-3.01	8.84	30.00	Complies

Note:

5G Band 4= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{seg}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =4.75dBi <6dBi, so the limit doesn't reduce.

Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	2.91	11.00	Complies
46	5230 MHz	5.66	11.00	Complies
54	5270 MHz	7.44	11.00	Complies
62	5310 MHz	2.43	11.00	Complies
102	5510 MHz	2.41	11.00	Complies
110	5550 MHz	7.13	11.00	Complies
134	5670 MHz	5.31	11.00	Complies

Note:

5G Band 1= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{agg}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =4.29dBi <6dBi, so the limit doesn't reduce.

5G Band 2= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{agg}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =4.81dBi <6dBi, so the limit doesn't reduce.

5G Band 3= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{agg}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.14dBi <6dBi, so the limit doesn't reduce.

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
151	5755 MHz	2.01	-3.01	-1.00	30.00	Complies
159	5795 MHz	5.21	-3.01	2.20	30.00	Complies

Note:

5G Band 4= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{agg}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =4.75dBi <6dBi, so the limit doesn't reduce.

Straddle Channel

Configuration IEEE 802.11a / Chain 1 + Chain 2

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
144	5720 MHz (UNII 2C)	10.77	11.00	Complies

Note:

5G (UNII2C)= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{eqq}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.14dBi <6dBi, so the limit doesn't reduce.

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
144	5720 MHz (UNII 3)	9.52	-3.01	6.51	30.00	Complies

Note:

5G (UNII3)= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{eqq}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =4.75dBi <6dBi, so the limit doesn't reduce.

Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
144	5720 MHz (UNII 2C)	10.93	11.00	Complies

Note:

5G (UNII2C)= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{eqq}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.14dBi <6dBi, so the limit doesn't reduce.

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
144	5720 MHz (UNII 3)	9.48	-3.01	6.47	30.00	Complies

Note:

5G (UNII3)= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{eqq}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =4.75dBi <6dBi, so the limit doesn't reduce.

Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
142	5710 MHz (UNII 2C)	8.13	11.00	Complies

Note:

5G (UNII2C)= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{SEQ}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =5.14dBi <6dBi, so the limit doesn't reduce.

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
142	5710 MHz (UNII 3)	6.68	-3.01	3.67	30.00	Complies

Note:

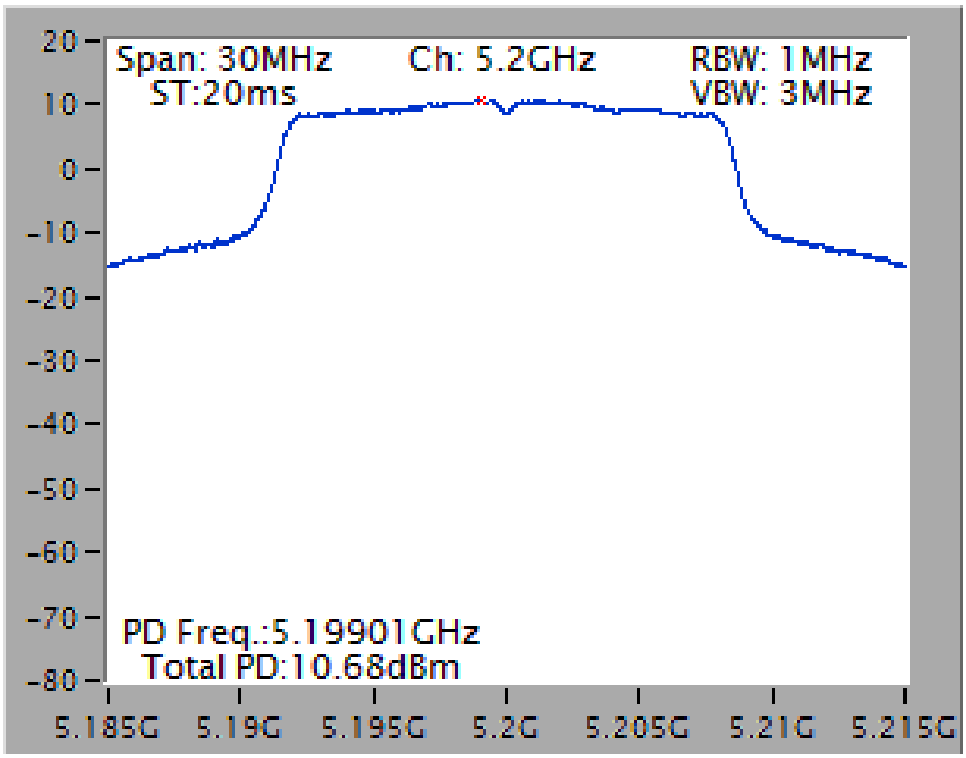
5G (UNII3)= $DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{ANT}} \left\{ \sum_{k=1}^{N_{SEQ}} g_{j,k} \right\}^2}{N_{ANT}} \right]$ =4.75dBi <6dBi, so the limit doesn't reduce.

Note: All the test values were listed in the report.

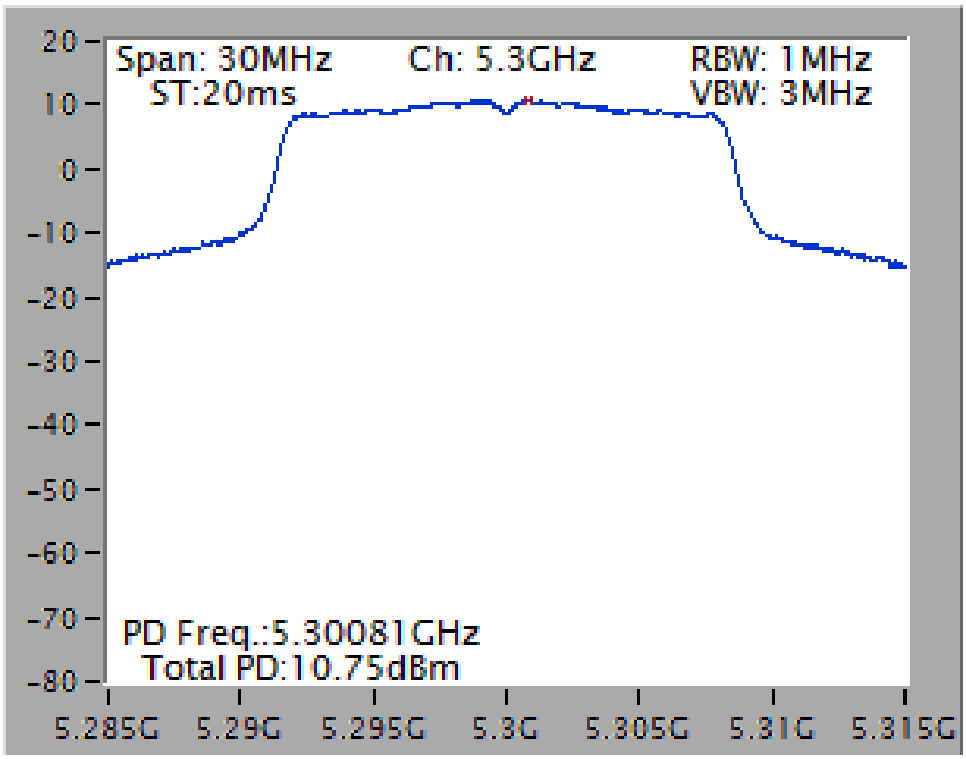
For plots, only the channel with worse result was shown.

For Mode 1:

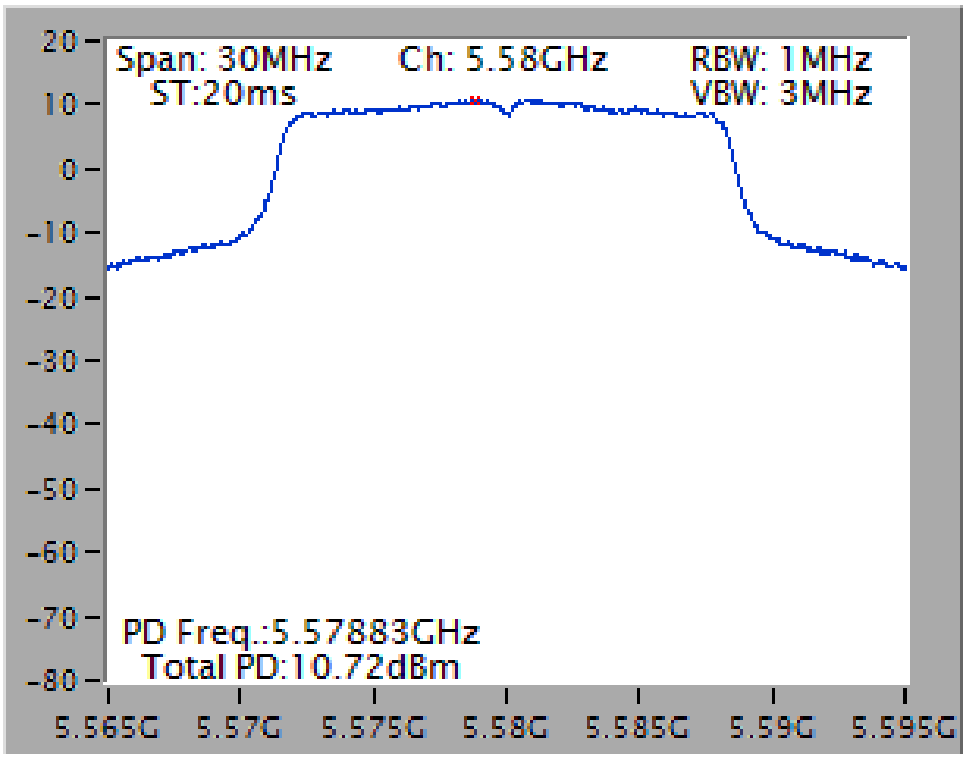
Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5200 MHz



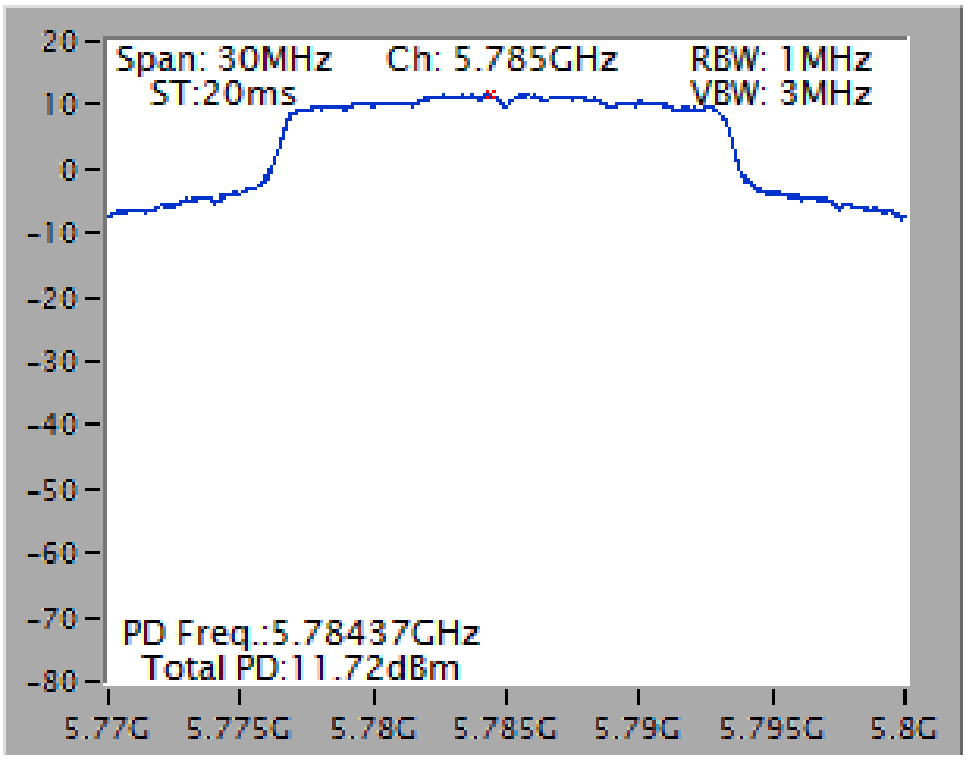
Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5300 MHz



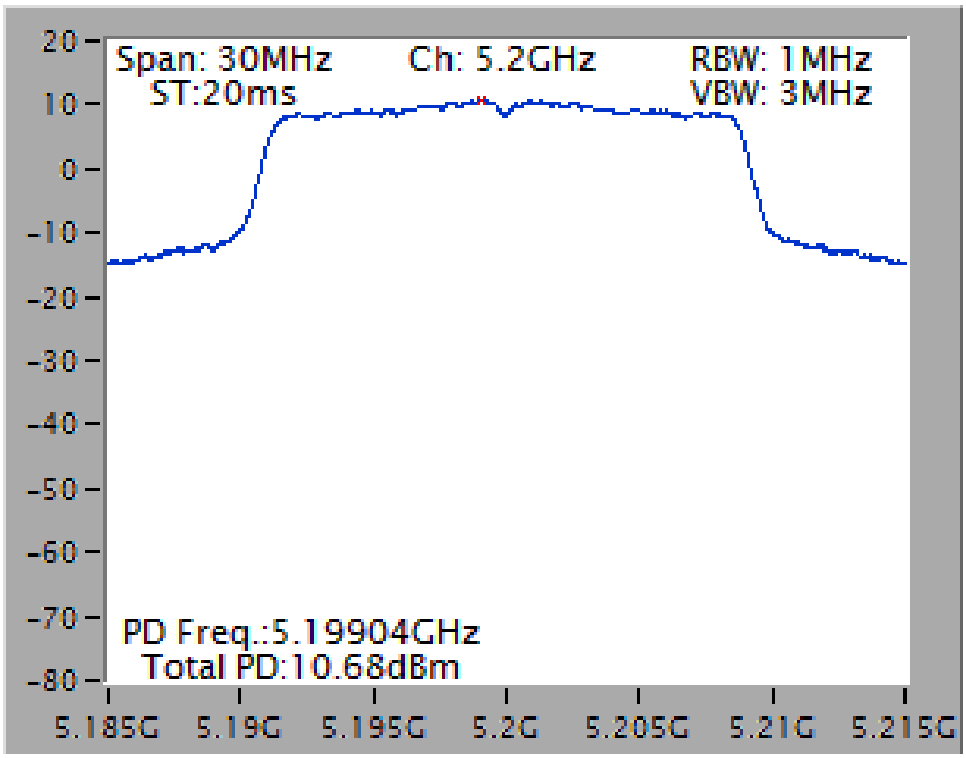
Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5580 MHz



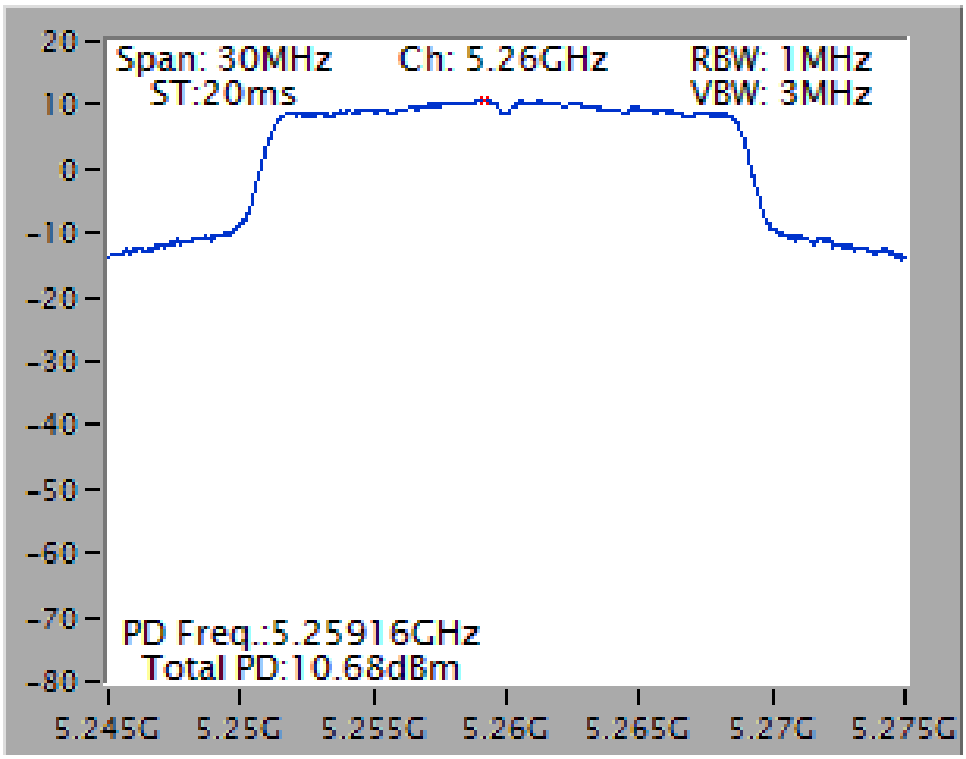
Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5785 MHz



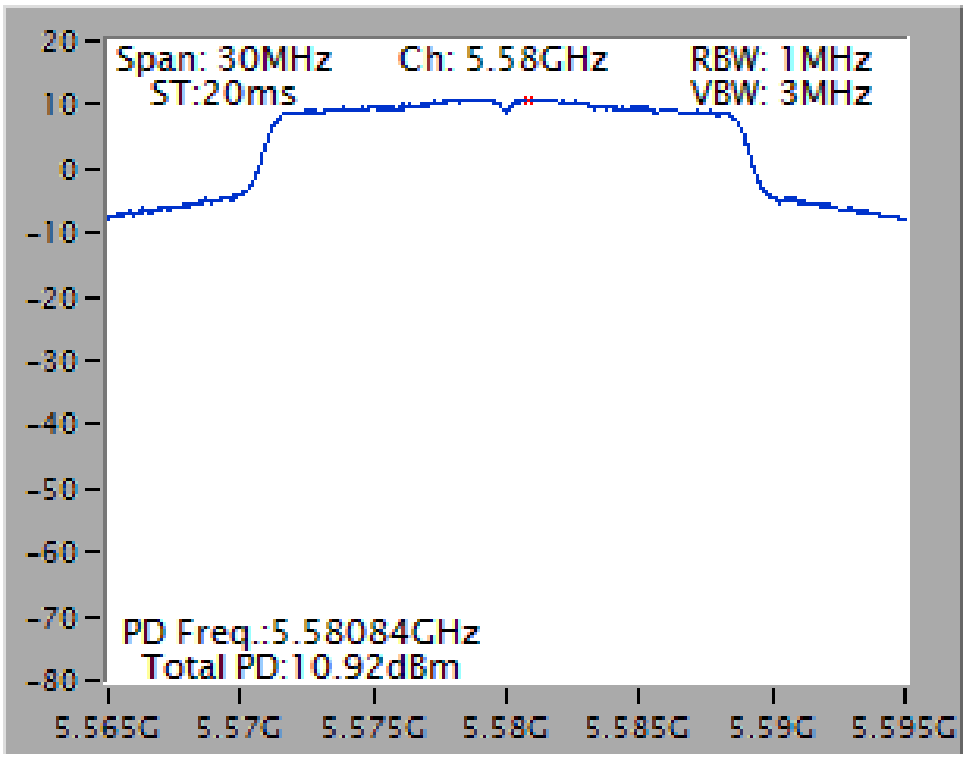
Power Density Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5200 MHz



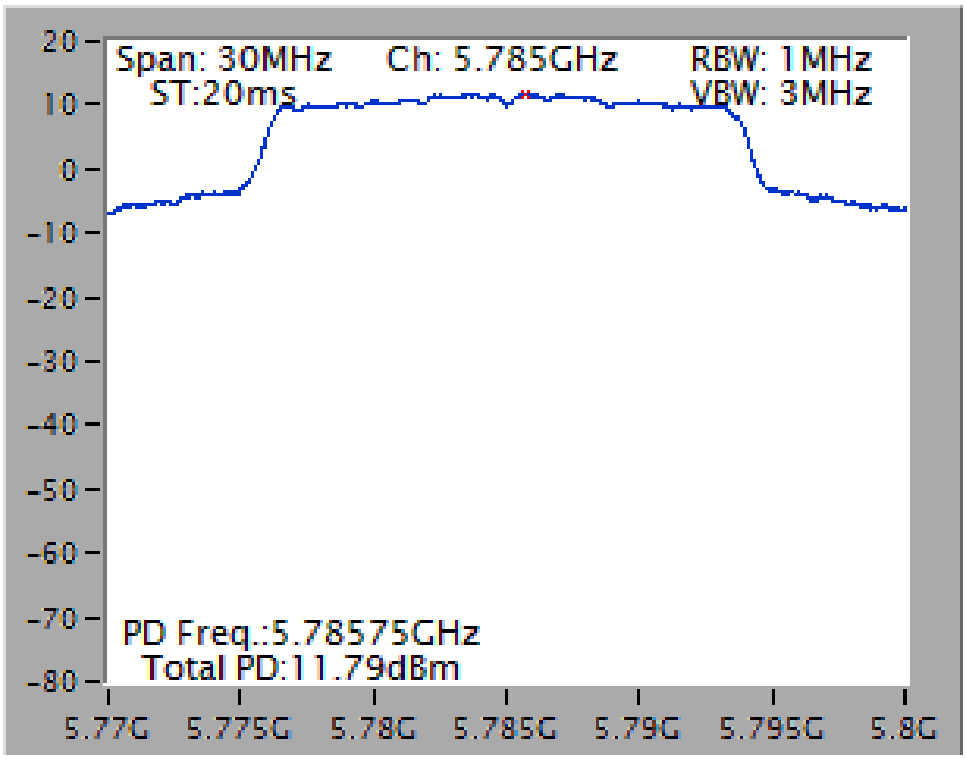
Power Density Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5260 MHz



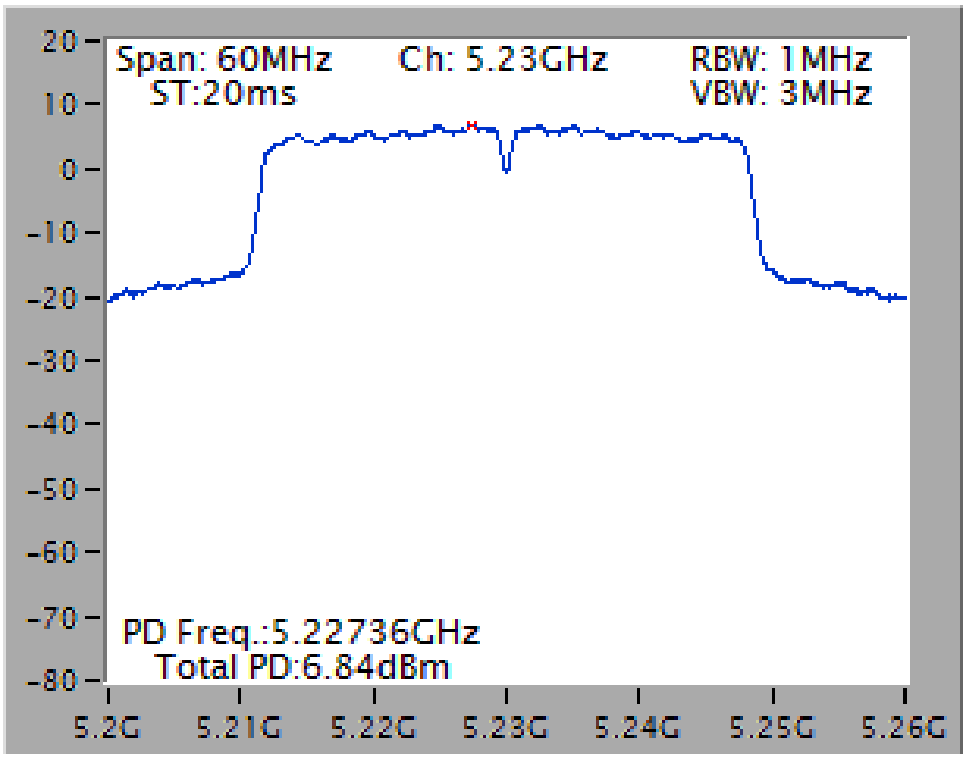
Power Density Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5580 MHz



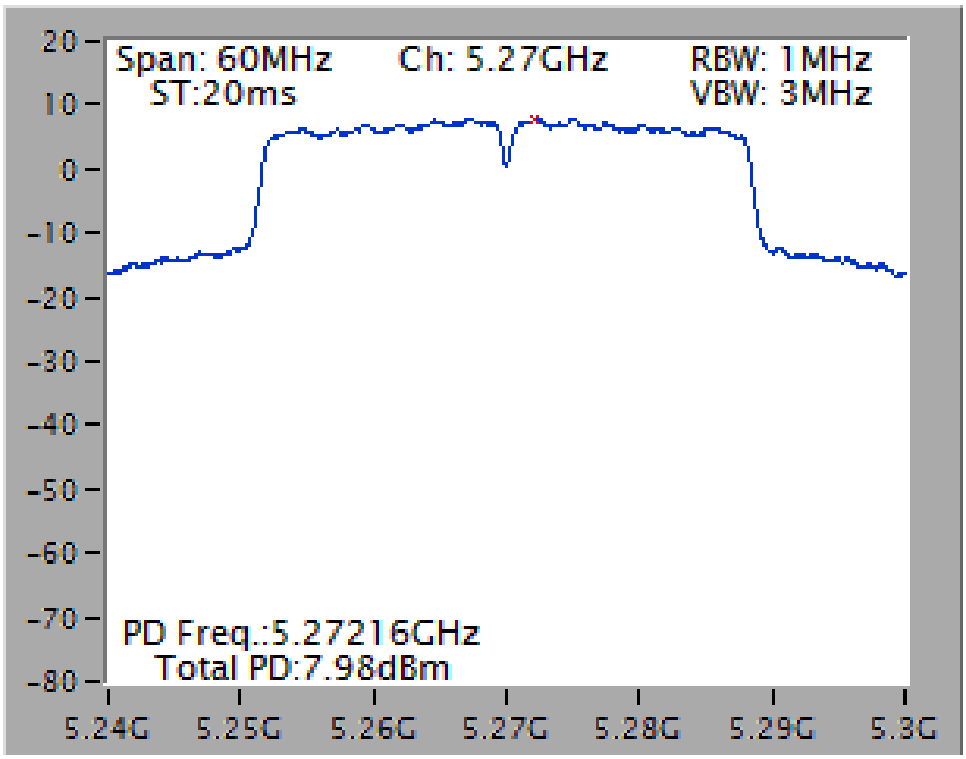
Power Density Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5785 MHz



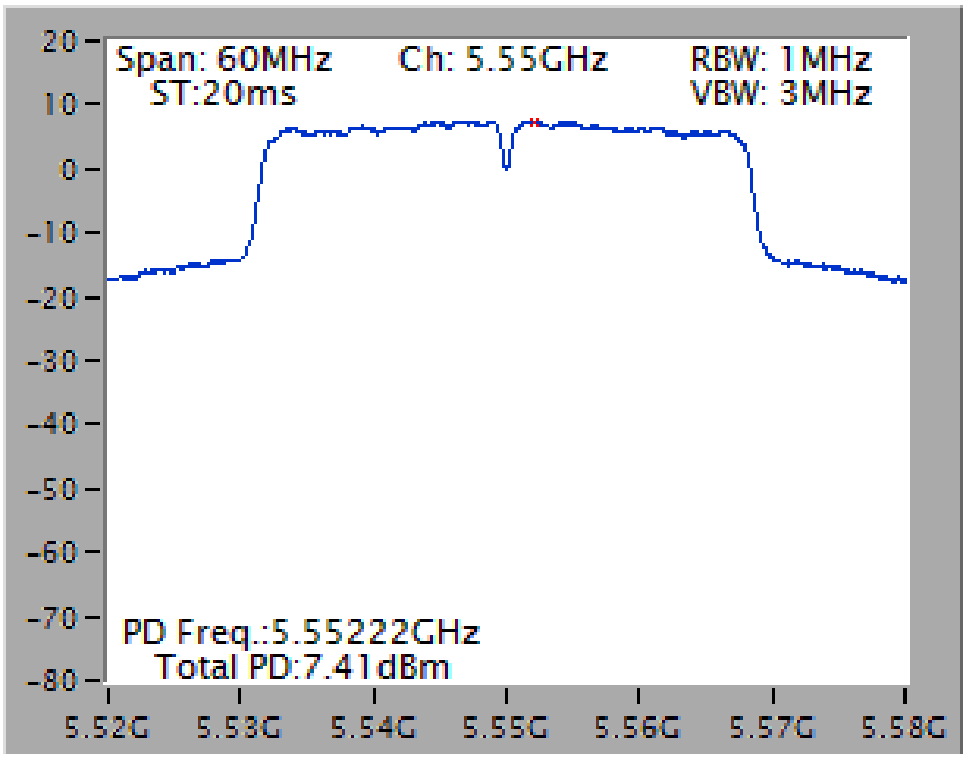
Power Density Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5230 MHz



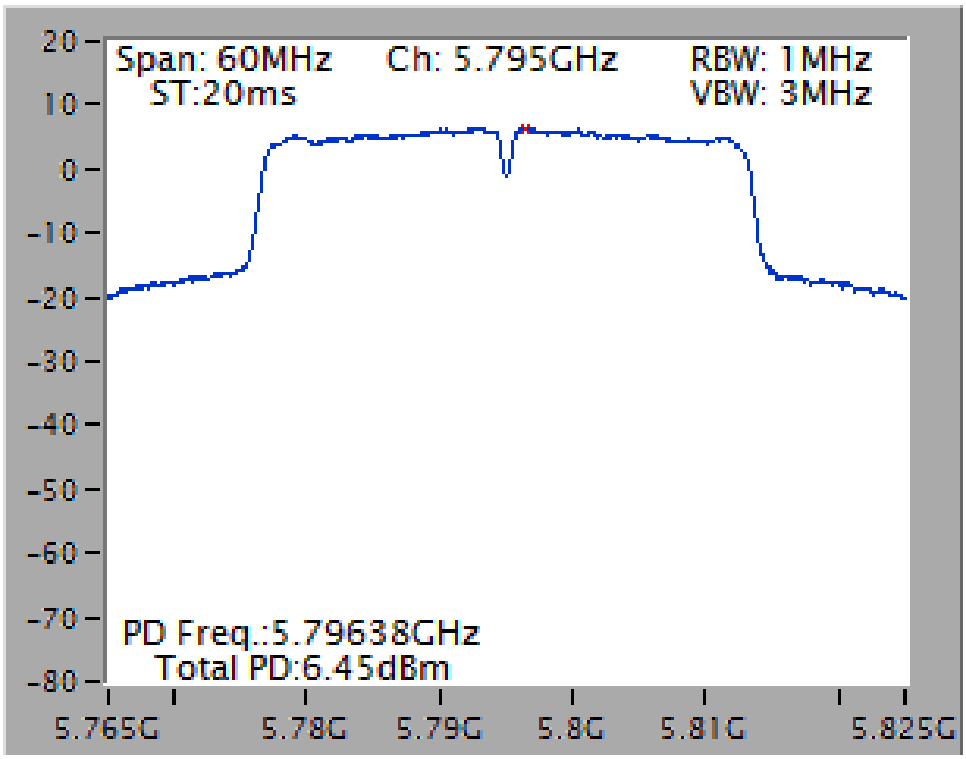
Power Density Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5270 MHz



Power Density Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5550 MHz

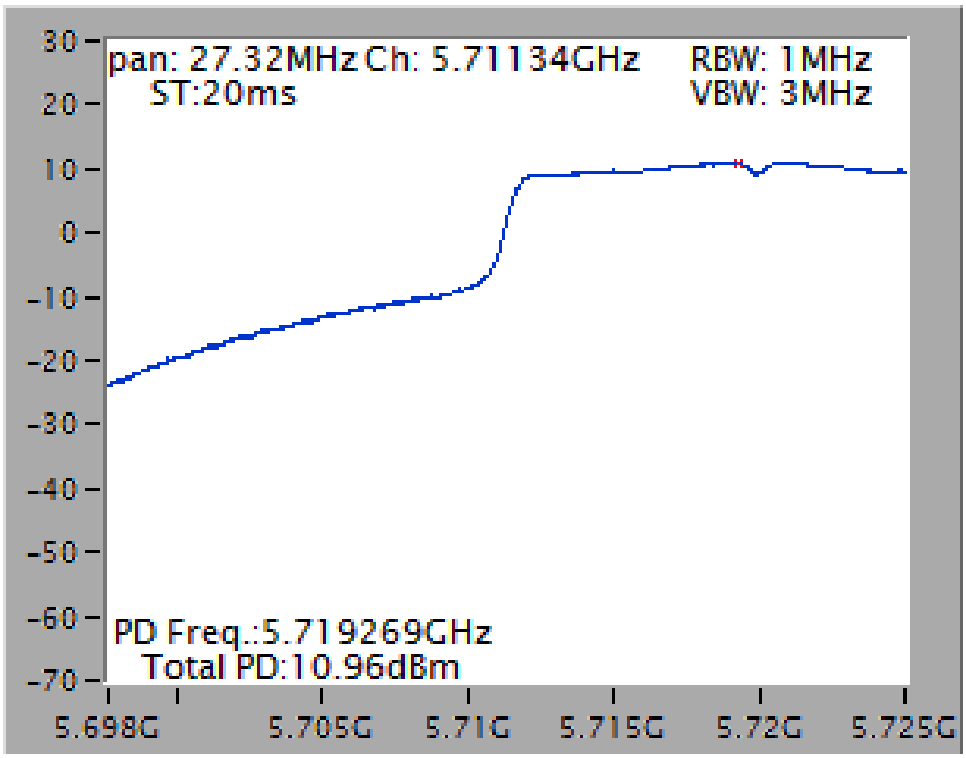


Power Density Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5795 MHz

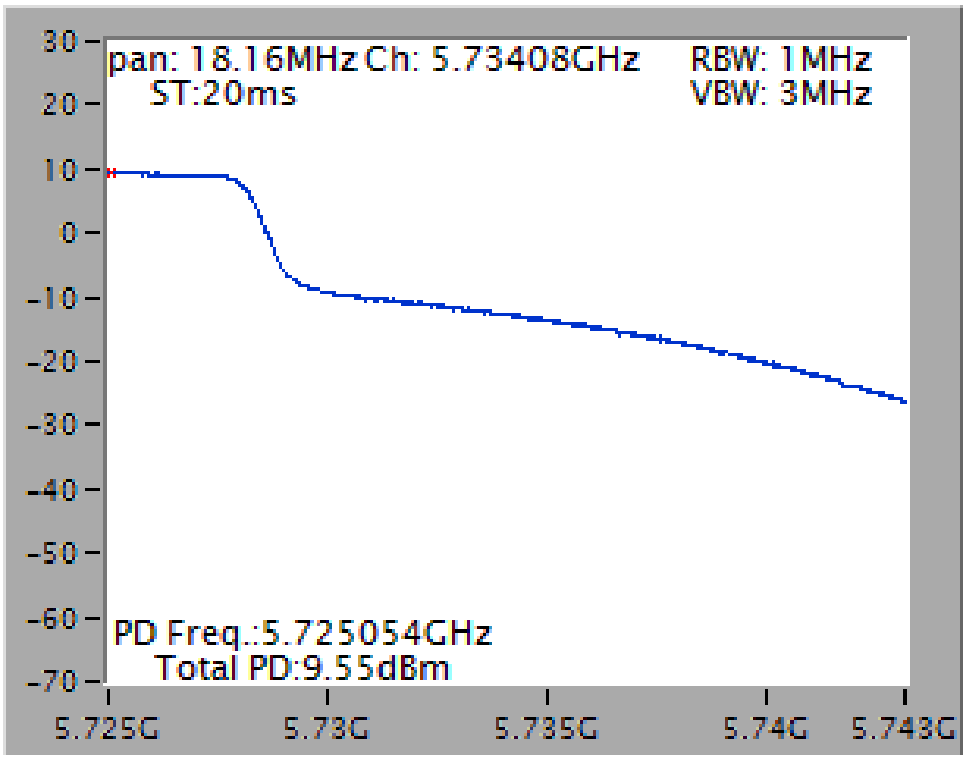


Straddle Channel

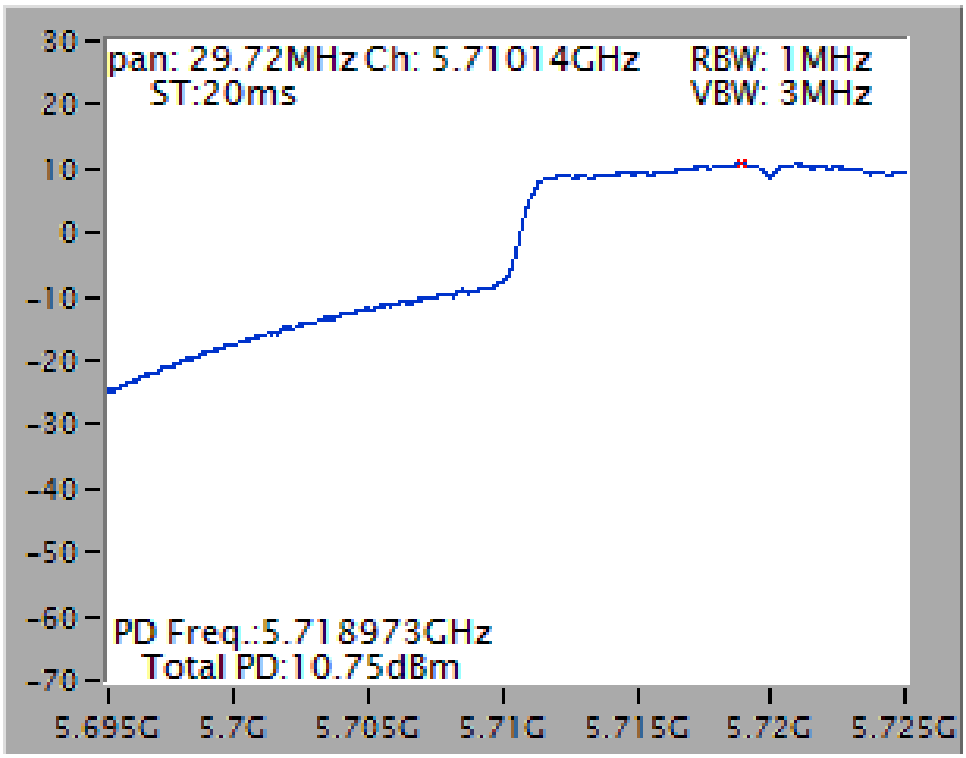
Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5720 MHz (UNII 2C)



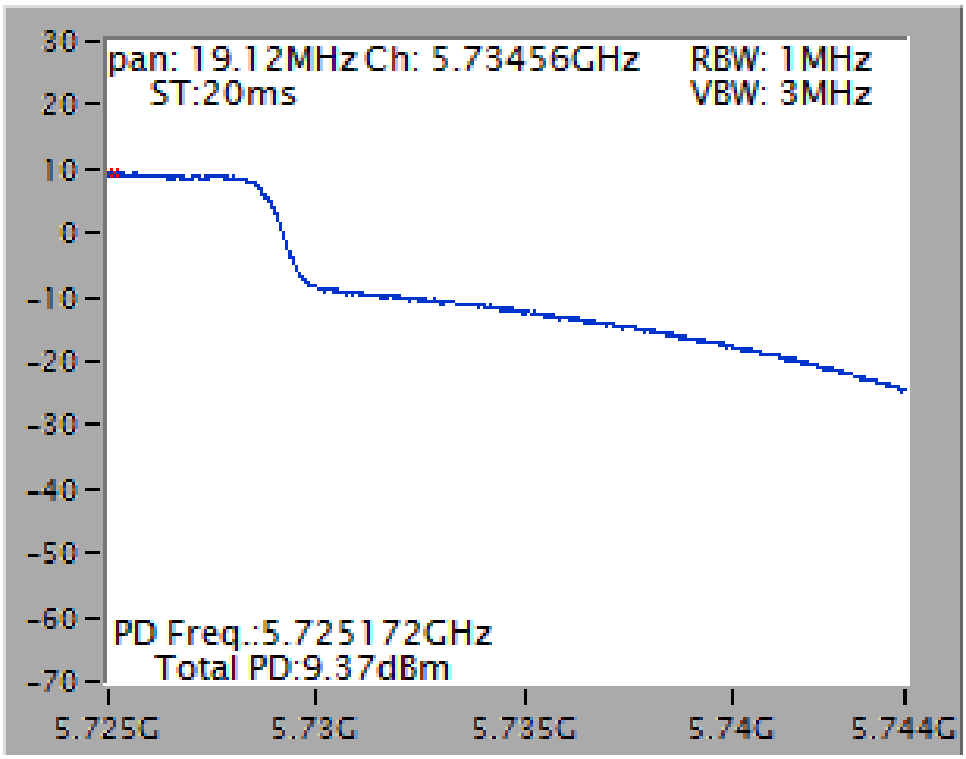
Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5720 MHz (UNII 3)



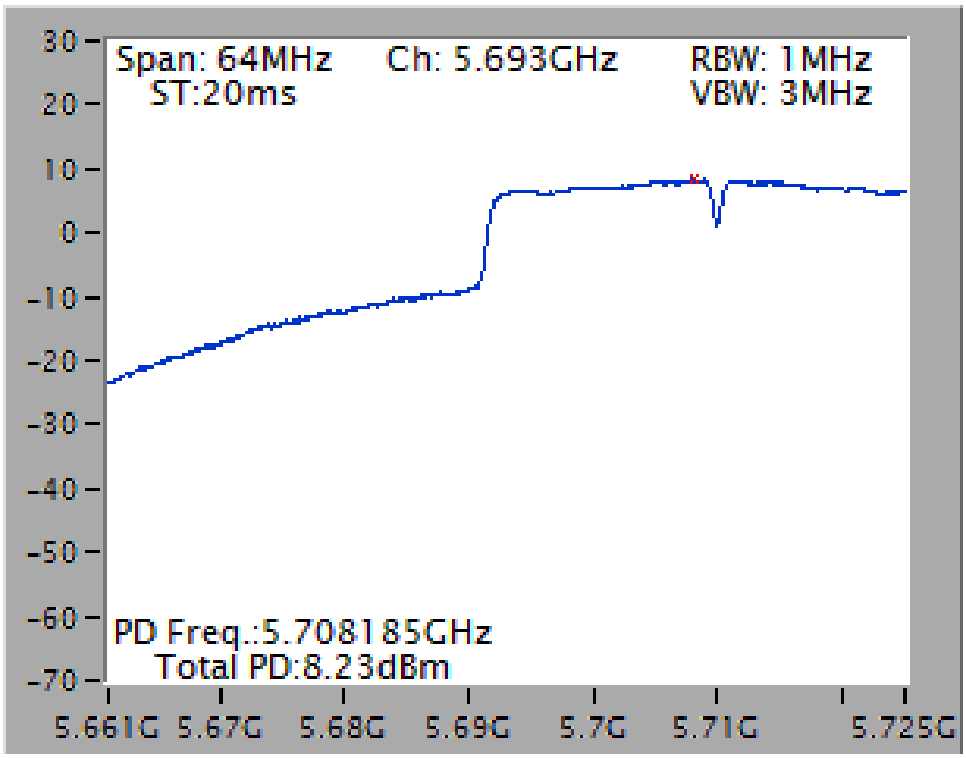
Power Density Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5720 MHz (UNII 2C)



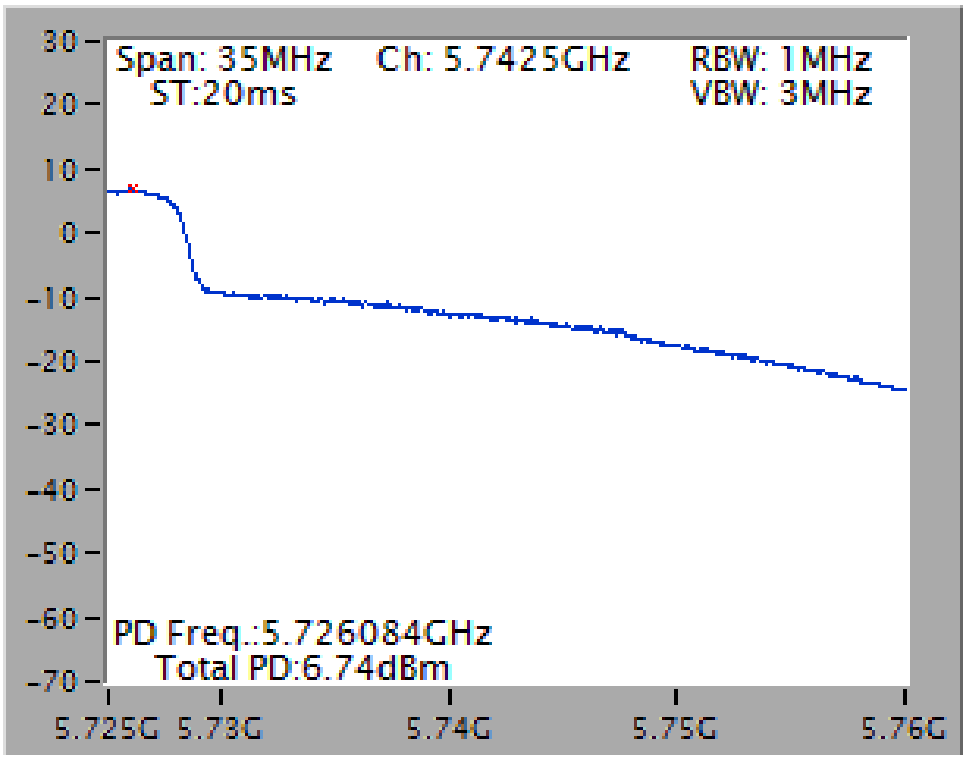
Power Density Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5720 MHz (UNII 3)



Power Density Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5720 MHz (UNII 2C)

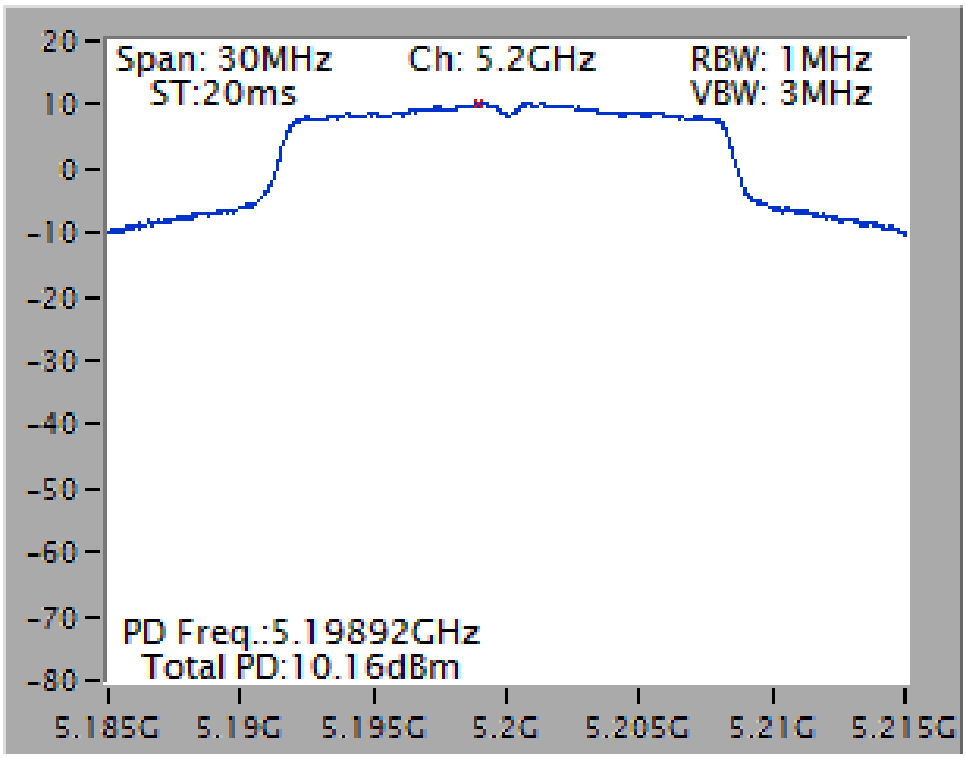


Power Density Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5720 MHz (UNII 3)

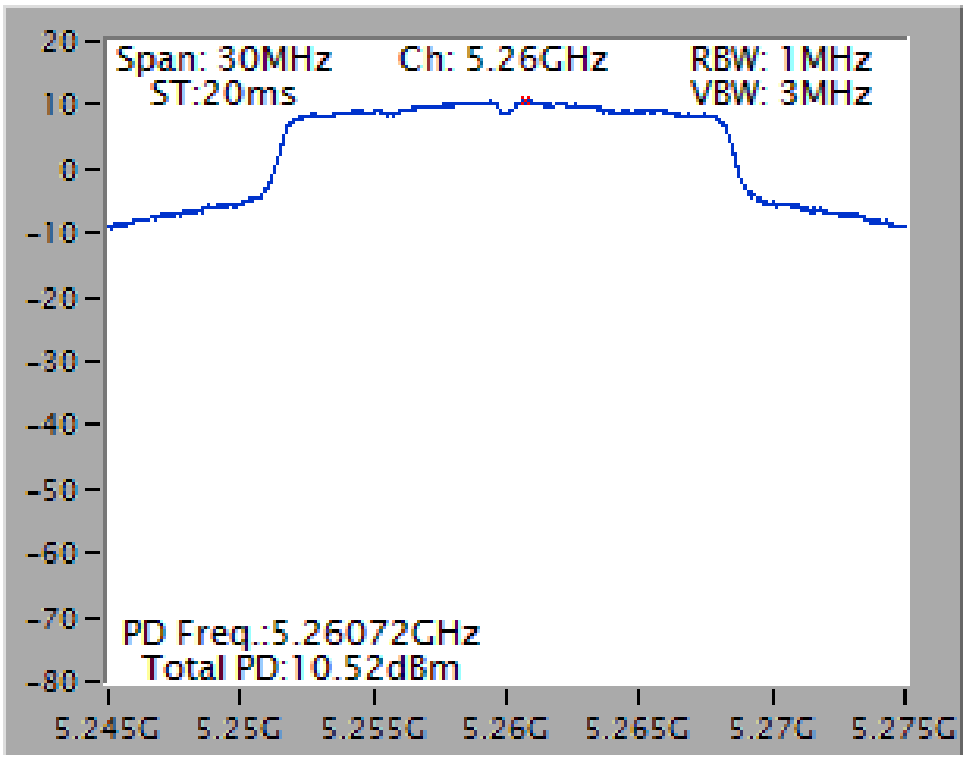


For Mode 2:

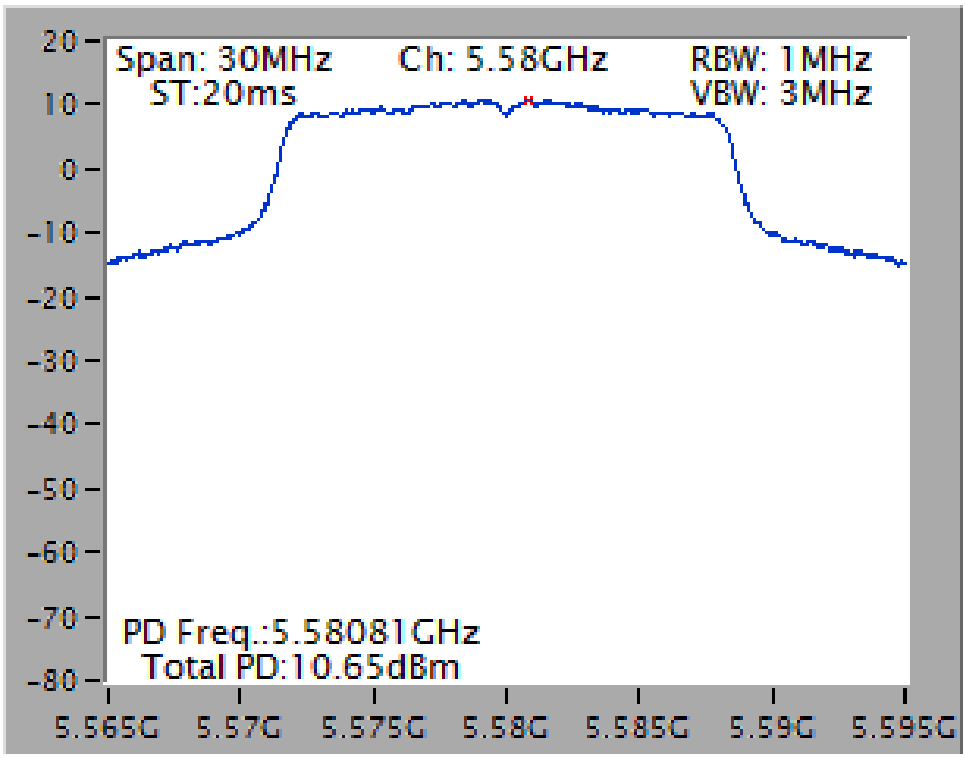
Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5200 MHz



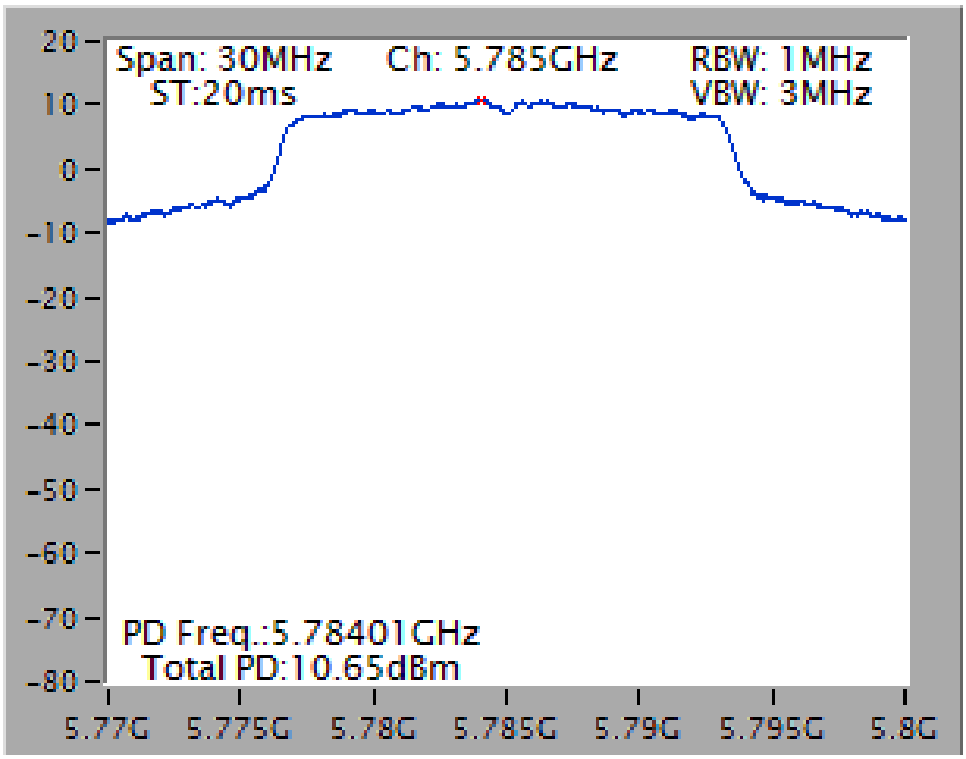
Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5260 MHz



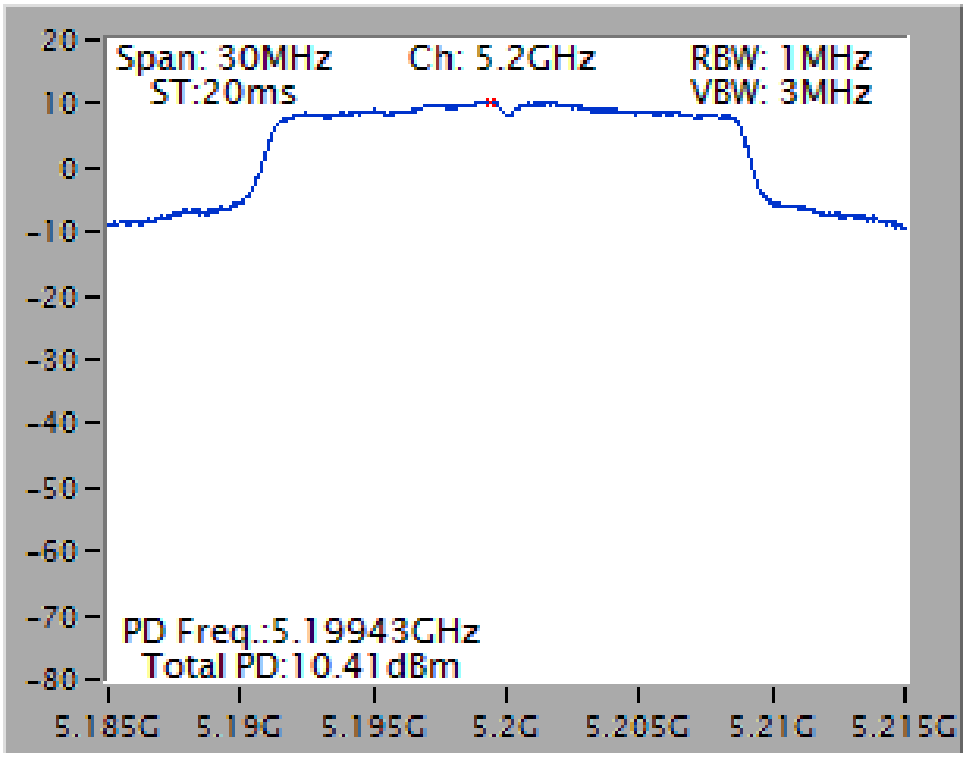
Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5580 MHz



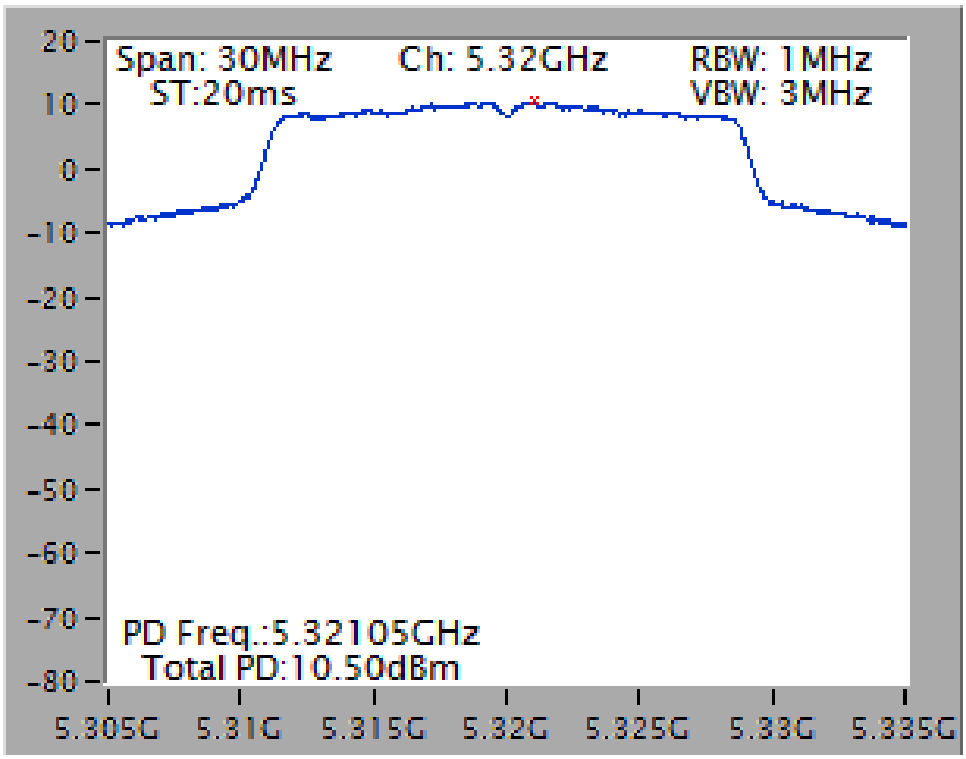
Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5785 MHz



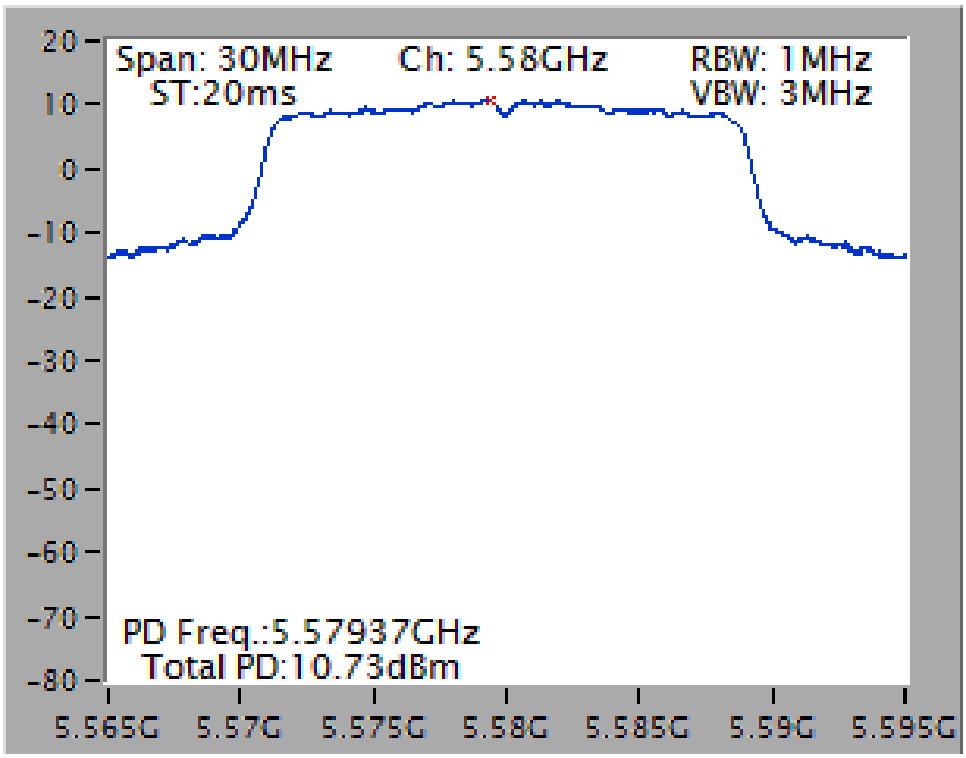
Power Density Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5200 MHz



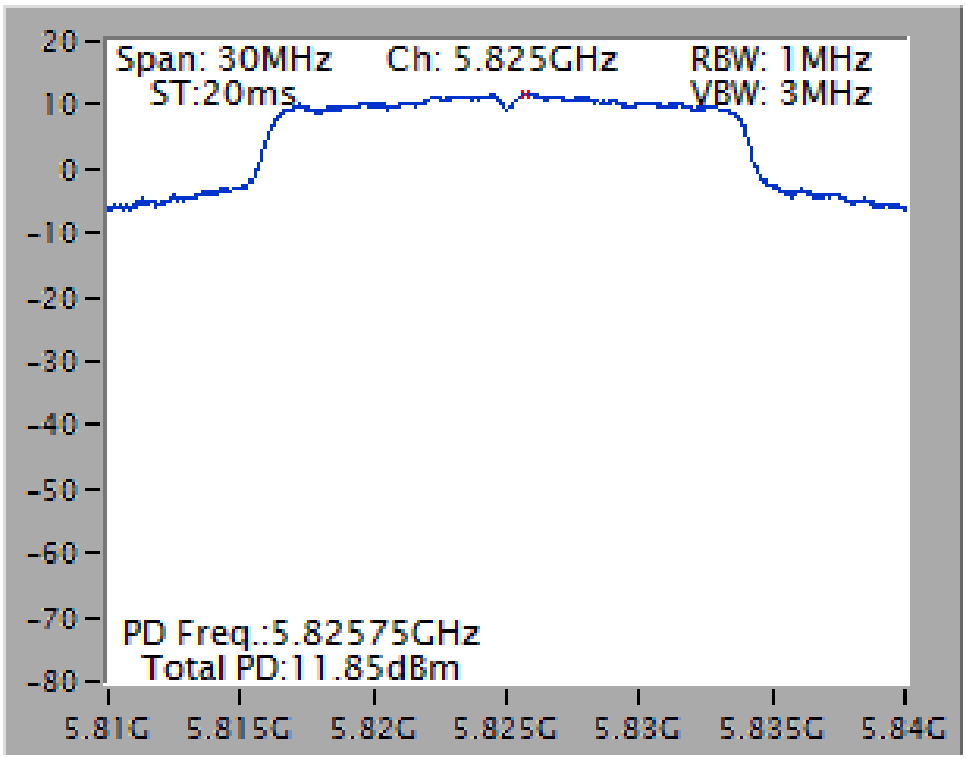
Power Density Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5320 MHz



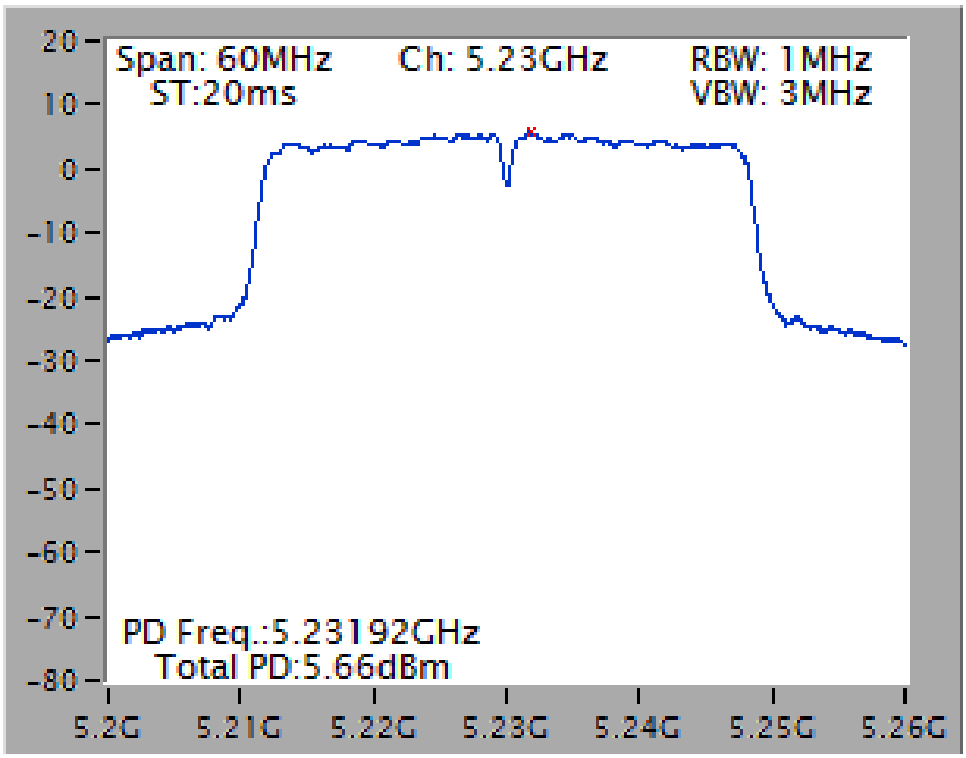
Power Density Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5580 MHz



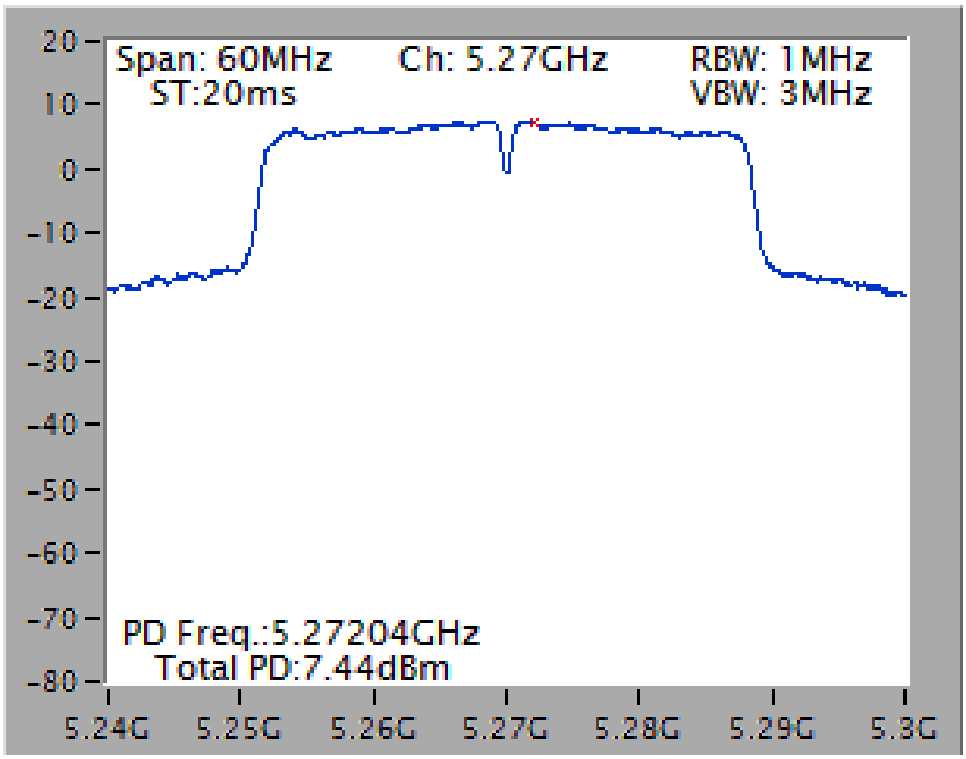
Power Density Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5825 MHz



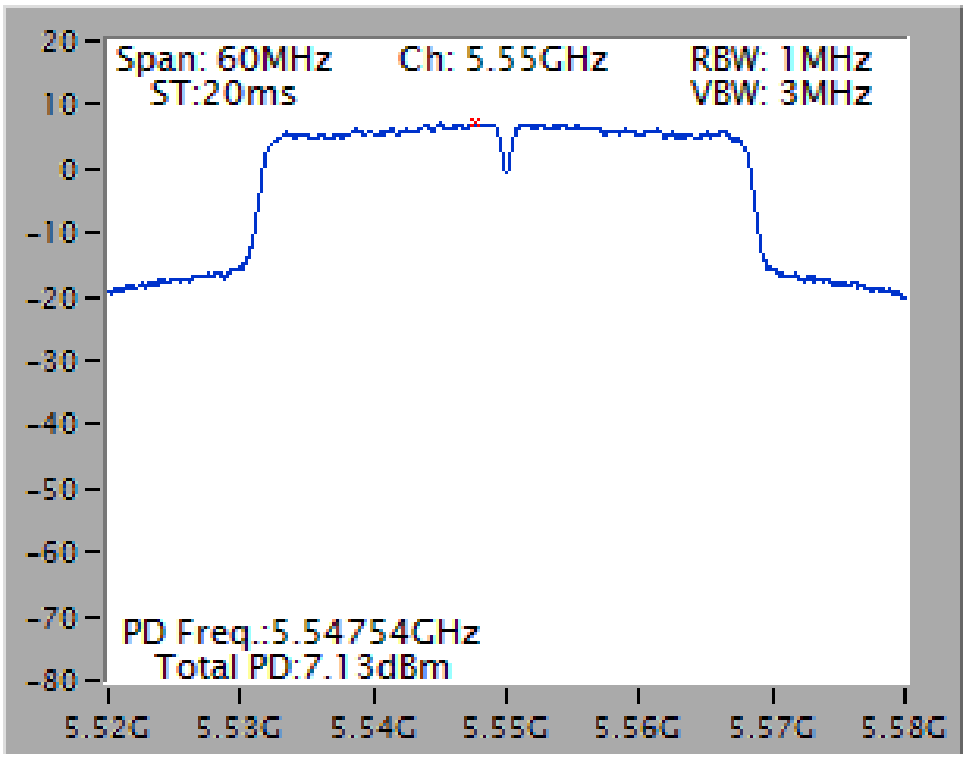
Power Density Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5230 MHz



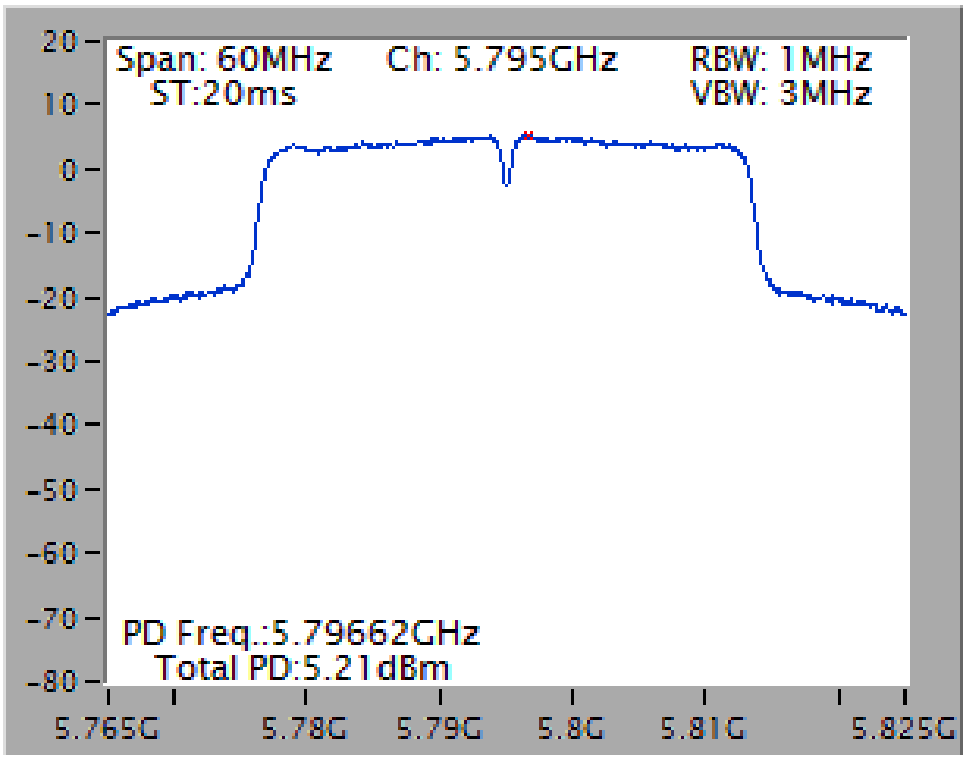
Power Density Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5270 MHz



Power Density Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5550 MHz

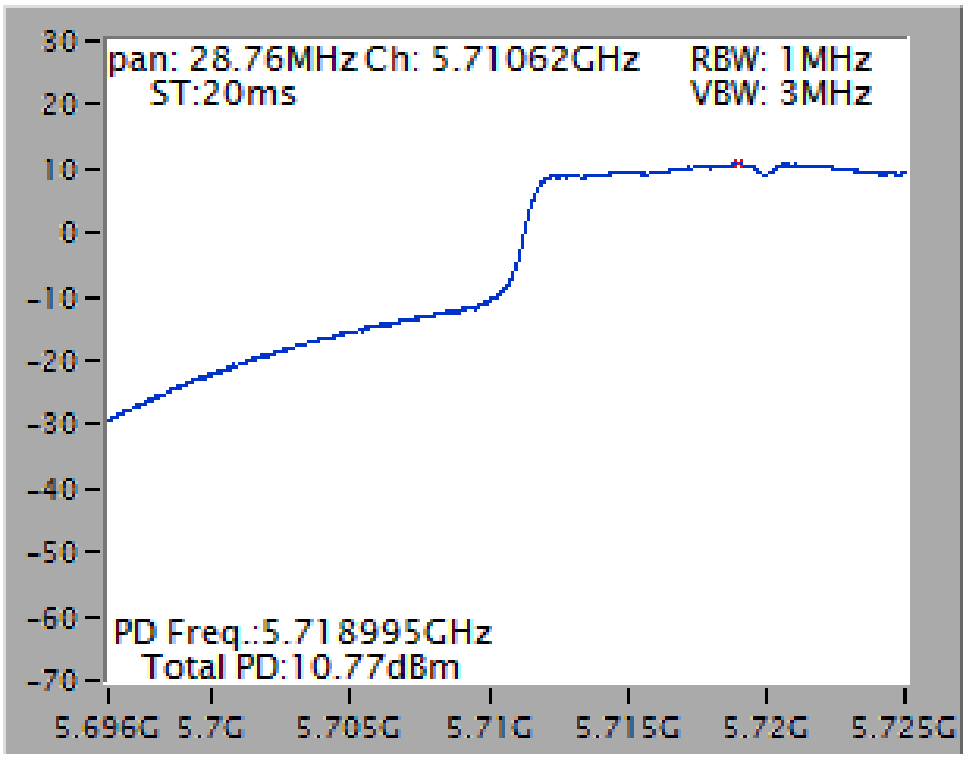


Power Density Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5795 MHz

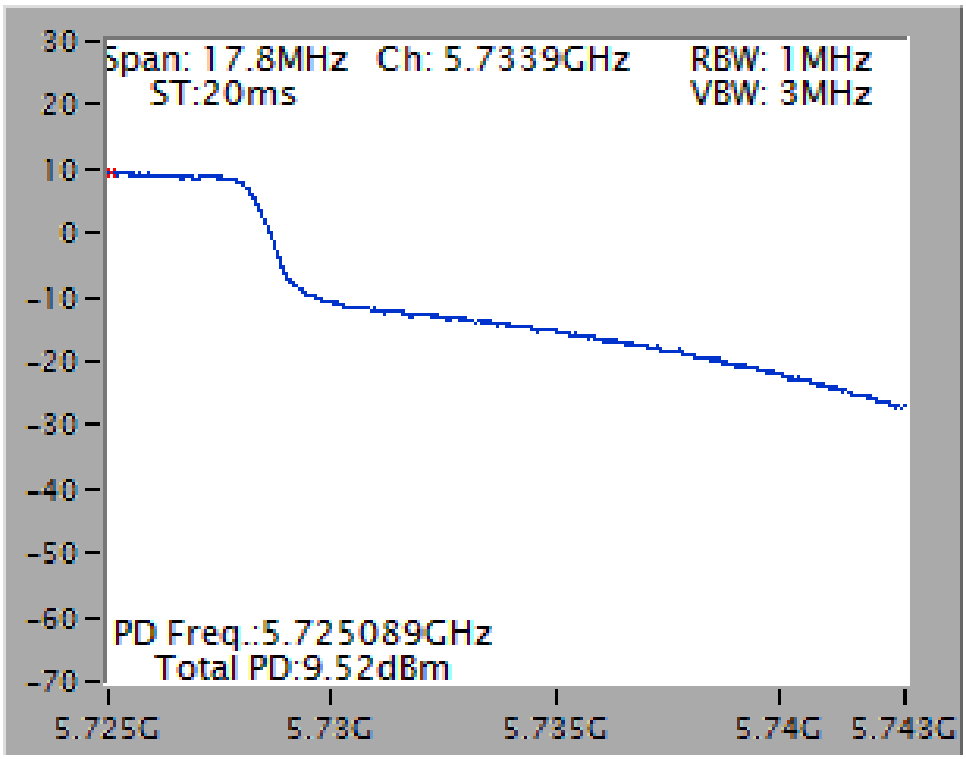


Straddle Channel

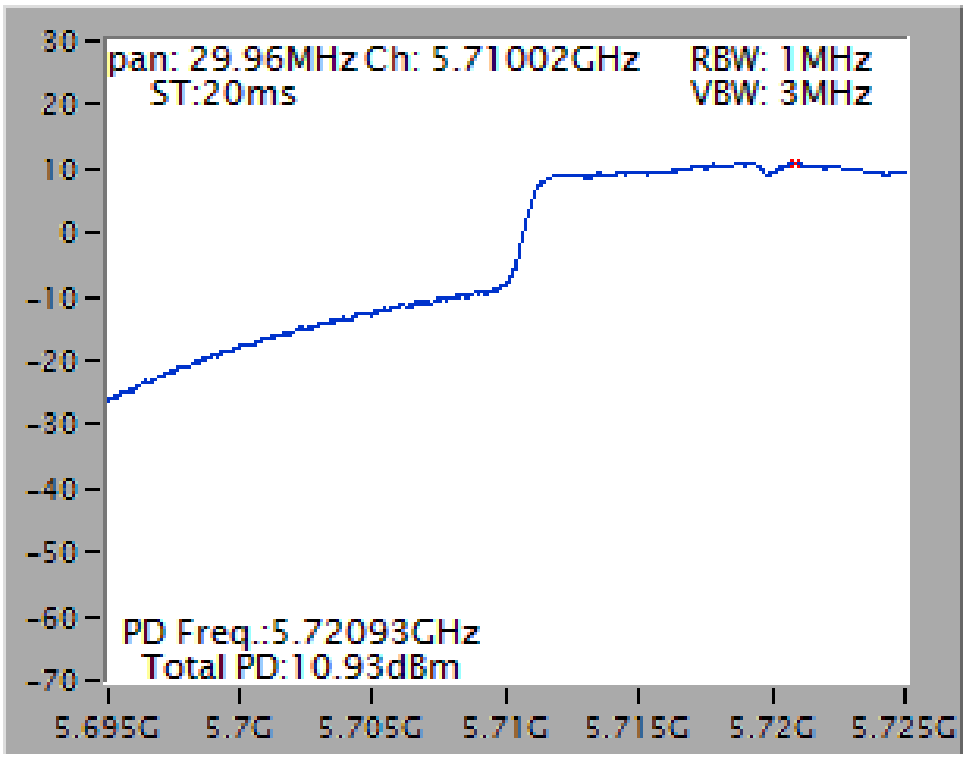
Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5720 MHz (UNII 2C)



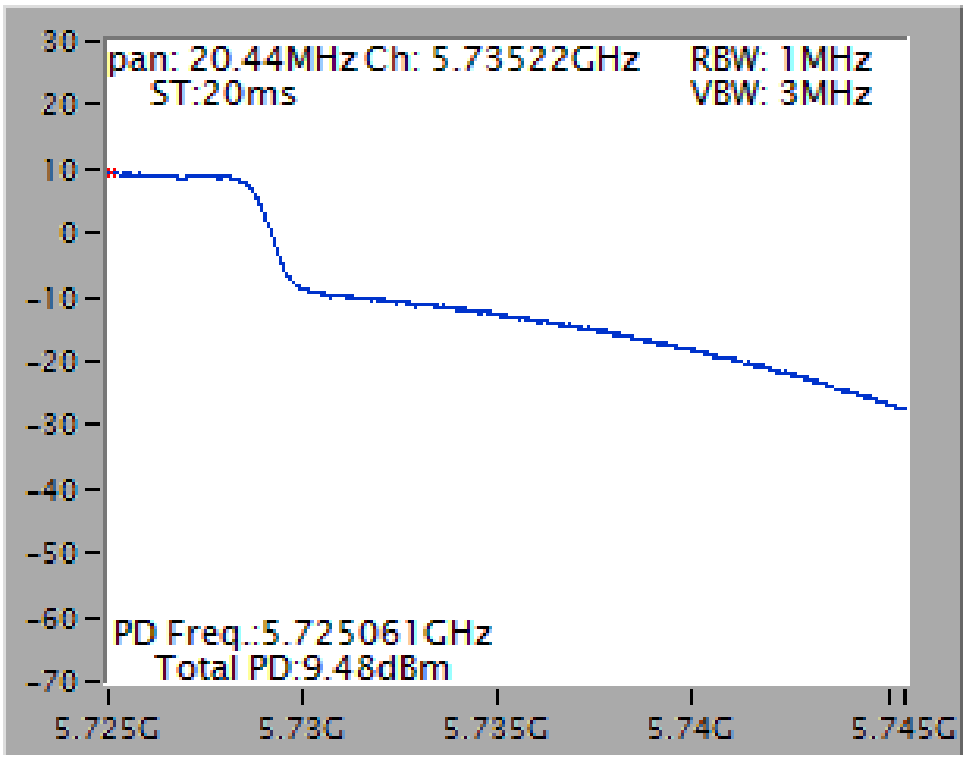
Power Density Plot on Configuration IEEE 802.11a / Chain 1 + Chain 2 / 5720 MHz (UNII 3)



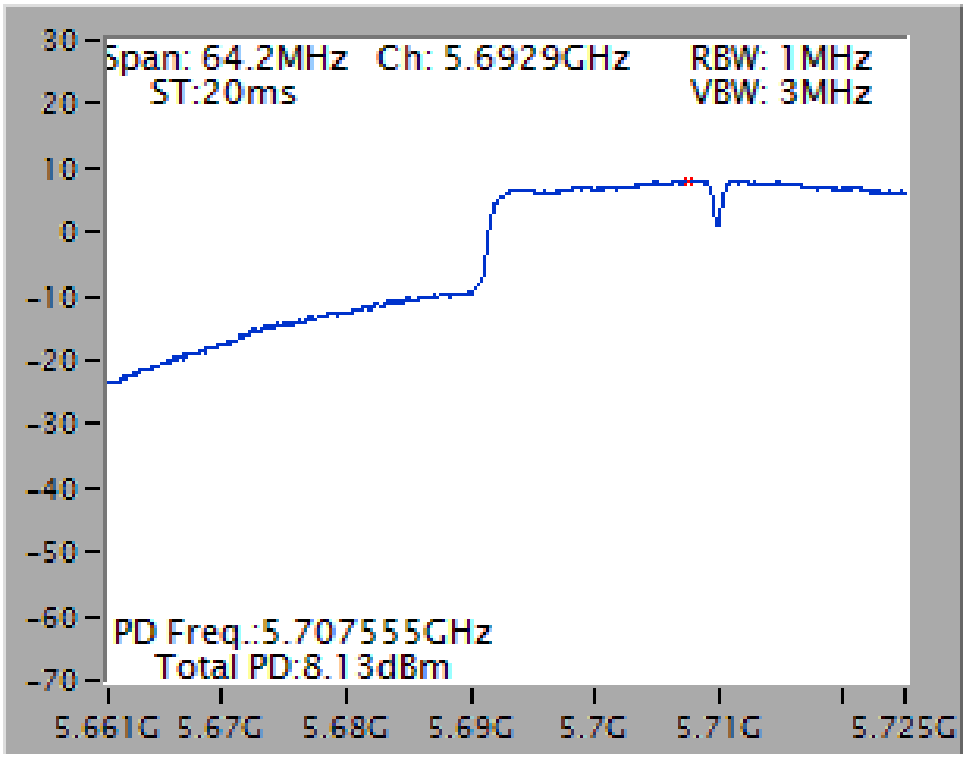
Power Density Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5720 MHz (UNII 2C)



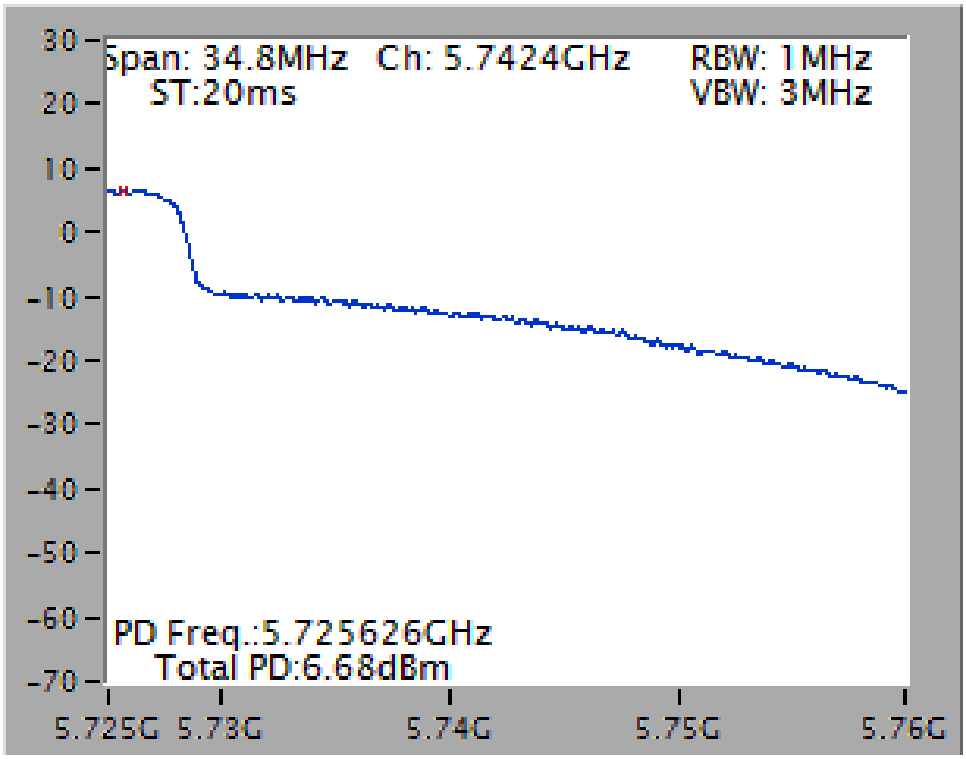
Power Density Plot on Configuration IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 / 5720 MHz (UNII 3)



Power Density Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5720 MHz (UNII 2C)



Power Density Plot on Configuration IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 / 5720 MHz (UNII 3)



4.6. Radiated Emissions Measurement

4.6.1. Limit

For transmitters operating in the 5.15-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

For transmitters operating in the 5.470-5.725 GHz band: all emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of −27 dBm/MHz.

In addition, In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.6.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	40 GHz
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 1/T for Average
RBW / VBW (Emission in non-restricted band)	1MHz / 3MHz for peak

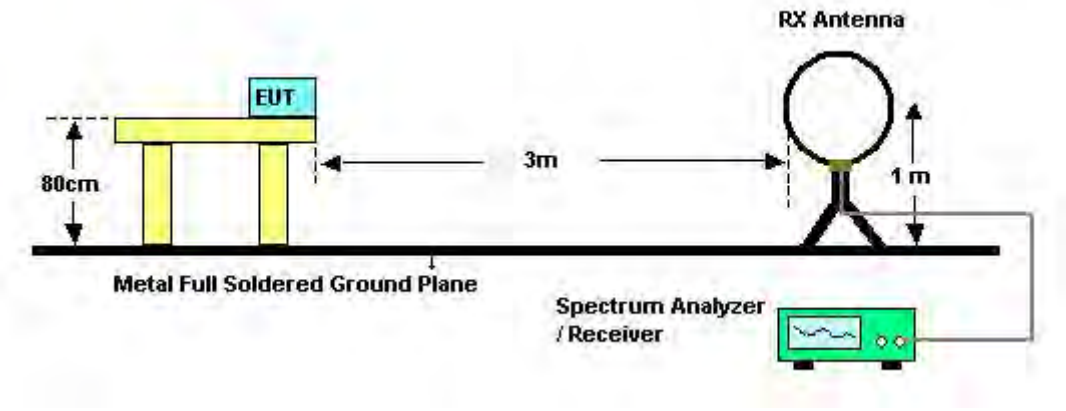
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RBW 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RBW 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RBW 120kHz for QP

4.6.3. Test Procedures

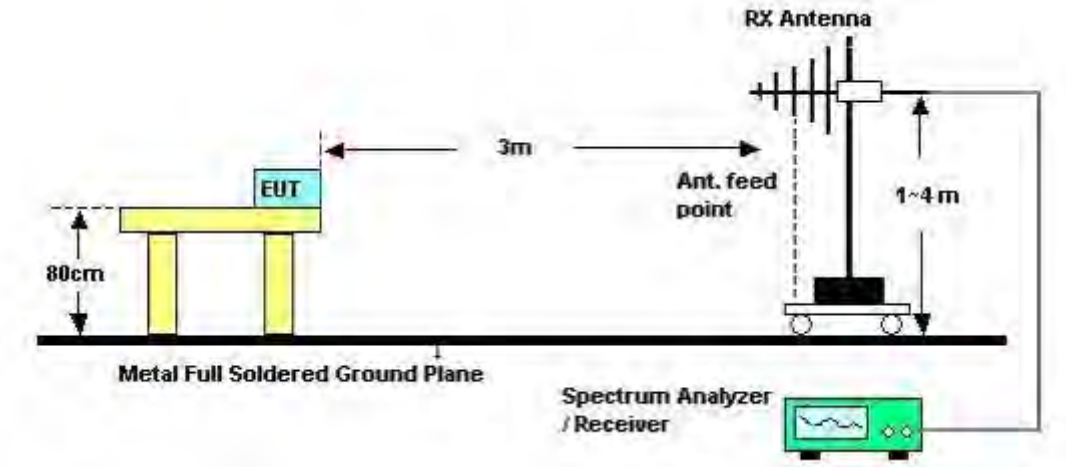
1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 1m & 3m far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and 3MHz RBW for peak reading. Then 1MHz RBW and 1/T VBW for average reading in spectrum analyzer.
7. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
8. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
9. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High – Low scan is not required in this case.

4.6.4. Test Setup Layout

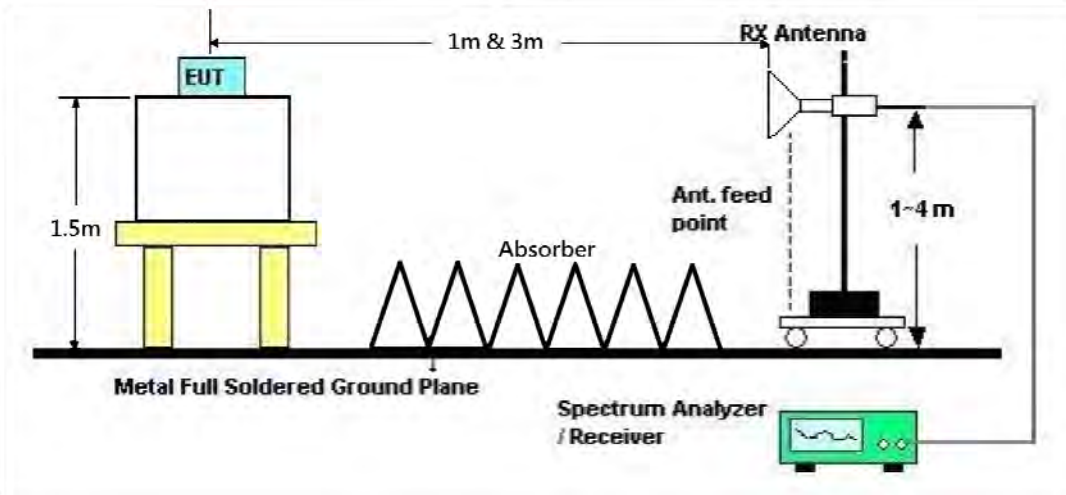
For Radiated Emissions: 9kHz ~30MHz



For Radiated Emissions: 30MHz~1GHz



For Radiated Emissions: Above 1GHz



4.6.5. Test Deviation

There is no deviation with the original standard.

4.6.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.6.7. Results of Radiated Emissions (9kHz~30MHz)

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	Normal Link
Test Date	Sep. 16, 2015	Test Mode	Mode 1

Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

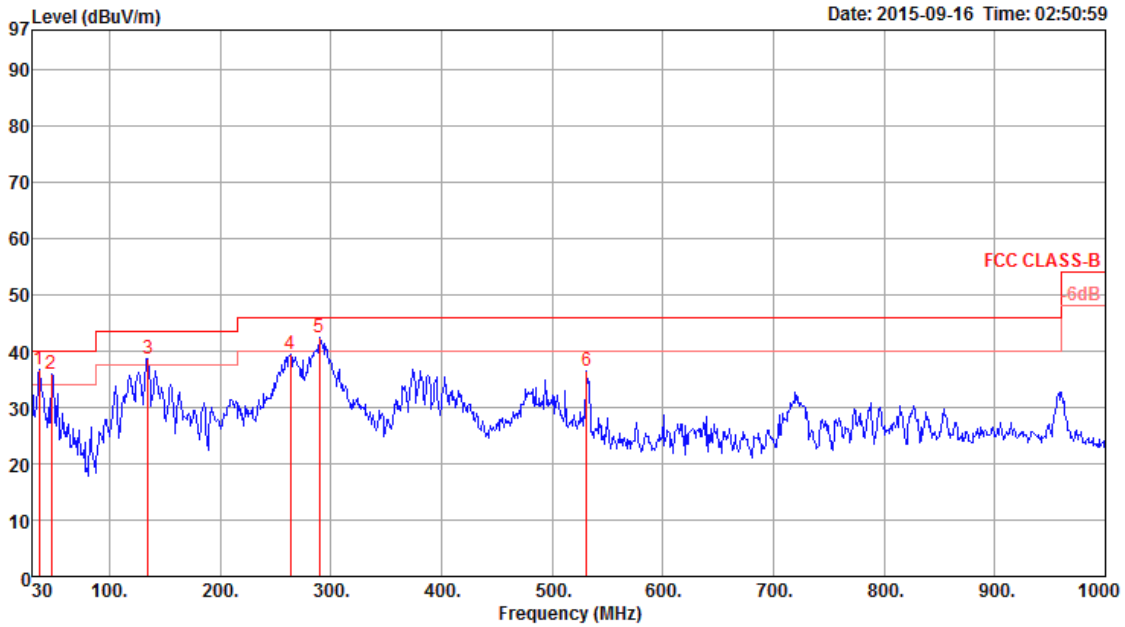
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

4.6.8. Results of Radiated Emissions (30MHz~1GHz)

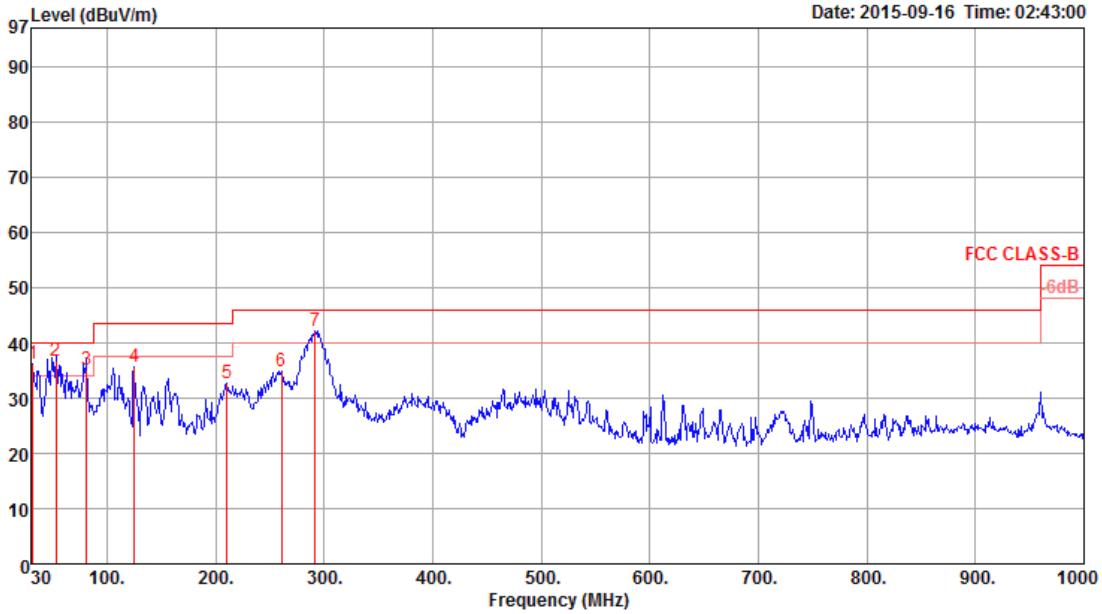
Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	Normal Link
Test Mode	Mode 1		

Horizontal



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	36.79	36.77	40.00	-3.23	47.57	0.68	16.04	27.52	Peak	100	0	HORIZONTAL
2	47.46	35.92	40.00	-4.08	53.05	0.80	10.35	28.28	Peak	100	0	HORIZONTAL
3	134.76	38.61	43.50	-4.89	53.05	1.40	12.25	28.09	Peak	100	0	HORIZONTAL
4	263.77	39.49	46.00	-6.51	51.31	1.85	13.90	27.57	Peak	100	0	HORIZONTAL
5	289.96	42.30	46.00	-3.70	54.12	1.98	13.70	27.50	Peak	100	0	HORIZONTAL
6	531.49	36.56	46.00	-9.44	44.08	2.74	18.43	28.69	Peak	100	0	HORIZONTAL

Vertical



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	31.94	36.16	40.00	-3.84	43.72	0.65	18.94	27.15	Peak	400	0	VERTICAL
2	53.28	36.61	40.00	-3.39	55.71	0.85	8.51	28.46	QP	198	261	VERTICAL
3	81.41	35.15	40.00	-4.85	54.74	1.00	7.77	28.36	QP	158	203	VERTICAL
4	125.06	35.60	43.50	-7.90	49.87	1.33	12.55	28.15	Peak	400	0	VERTICAL
5	210.42	32.59	43.50	-10.91	47.80	1.69	10.80	27.70	Peak	400	0	VERTICAL
6	260.86	34.81	46.00	-11.19	46.51	1.83	14.05	27.58	Peak	400	0	VERTICAL
7	291.90	42.15	46.00	-3.85	53.92	1.99	13.74	27.50	Peak	400	0	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

4.6.9. Results for Radiated Emissions (1GHz~40GHz)

For Mode 1:

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 36 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15534.33	59.06	74.00	-14.94	42.04	12.58	38.14	33.70	138	310	Peak	HORIZONTAL
2	15539.49	46.43	54.00	-7.57	29.41	12.58	38.14	33.70	138	310	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15537.72	60.35	74.00	-13.65	43.33	12.58	38.14	33.70	155	104	Peak	VERTICAL
2	15539.36	47.82	54.00	-6.18	30.80	12.58	38.14	33.70	155	104	Average	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 40 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15591.92	60.20	74.00	-13.80	43.31	12.58	38.06	33.75	158	14	Peak	HORIZONTAL
2	15601.57	47.09	54.00	-6.91	30.26	12.58	38.03	33.78	158	14	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15596.03	52.83	54.00	-1.17	35.97	12.58	38.03	33.75	168	215	Average	VERTICAL
2	15600.38	67.33	74.00	-6.67	50.50	12.58	38.03	33.78	168	215	Peak	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 48 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15720.64	53.52	54.00	-0.48	36.99	12.57	37.84	33.88	121	2	Average	HORIZONTAL
2	15721.92	67.78	74.00	-6.22	51.25	12.57	37.84	33.88	121	2	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15720.96	66.43	74.00	-7.57	49.90	12.57	37.84	33.88	145	189	Peak	VERTICAL
2	15721.79	52.43	54.00	-1.57	35.90	12.57	37.84	33.88	145	189	Average	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 52 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15774.78	64.81	74.00	-9.19	48.41	12.57	37.76	33.93	119	280	Peak	HORIZONTAL
2	15781.03	50.80	54.00	-3.20	34.42	12.57	37.76	33.95	119	280	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15778.69	53.43	54.00	-0.57	37.05	12.57	37.76	33.95	163	174	Average	VERTICAL
2	15781.73	68.01	74.00	-5.99	51.66	12.57	37.73	33.95	163	174	Peak	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 60 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15899.13	67.42	74.00	-6.58	51.33	12.57	37.57	34.05	120	13	Peak	HORIZONTAL
2	15903.40	53.67	54.00	-0.33	37.61	12.57	37.54	34.05	120	13	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15900.03	64.45	74.00	-9.55	48.36	12.57	37.57	34.05	146	212	Peak	VERTICAL
2	15901.25	51.21	54.00	-2.79	35.15	12.57	37.54	34.05	146	212	Average	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 64 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15957.34	62.27	74.00	-11.73	46.38	12.56	37.46	34.13	239	35	Peak	HORIZONTAL
2	15959.36	48.54	54.00	-5.46	32.65	12.56	37.46	34.13	239	35	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15959.90	47.96	54.00	-6.04	32.07	12.56	37.46	34.13	152	185	Average	VERTICAL
2	15965.10	61.52	74.00	-12.48	45.63	12.56	37.46	34.13	152	185	Peak	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 100 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11002.66	56.35	74.00	-17.65	40.78	10.55	38.40	33.38	157	31	Peak	HORIZONTAL
2	11007.05	43.49	54.00	-10.51	27.90	10.55	38.42	33.38	157	31	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10992.37	55.66	74.00	-18.34	40.09	10.55	38.40	33.38	158	289	Peak	VERTICAL
2	11007.72	43.53	54.00	-10.47	27.94	10.55	38.42	33.38	158	289	Average	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 116 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11152.63	43.60	54.00	-10.40	27.83	10.60	38.55	33.38	162	328	Average	HORIZONTAL
2	11166.99	56.86	74.00	-17.14	41.06	10.61	38.57	33.38	162	328	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11153.81	43.48	54.00	-10.52	27.71	10.60	38.55	33.38	162	48	Average	VERTICAL
2	11166.57	55.81	74.00	-18.19	40.01	10.61	38.57	33.38	162	48	Peak	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 140 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11405.99	57.14	74.00	-16.86	41.02	10.69	38.80	33.37	139	132	Peak	HORIZONTAL
2	11406.01	44.08	54.00	-9.92	27.96	10.69	38.80	33.37	139	132	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11397.69	44.18	54.00	-9.82	28.06	10.69	38.80	33.37	158	211	Average	VERTICAL
2	11406.03	56.35	74.00	-17.65	40.23	10.69	38.80	33.37	158	211	Peak	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 142 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11439.93	57.07	74.00	-16.93	40.92	10.69	38.83	33.37	165	305	Peak	HORIZONTAL
2	11439.95	44.30	54.00	-9.70	28.15	10.69	38.83	33.37	165	305	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11439.91	57.61	74.00	-16.39	41.46	10.69	38.83	33.37	142	190	Peak	VERTICAL
2	11440.07	44.34	54.00	-9.66	28.19	10.69	38.83	33.37	142	190	Average	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 149 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11489.91	56.90	74.00	-17.10	40.68	10.71	38.88	33.37	150	98	Peak	HORIZONTAL
2	11490.09	44.10	54.00	-9.90	27.88	10.71	38.88	33.37	150	98	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11490.03	57.20	74.00	-16.80	40.98	10.71	38.88	33.37	155	195	Peak	VERTICAL
2	11490.04	44.19	54.00	-9.81	27.97	10.71	38.88	33.37	155	195	Average	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 157 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11450.06	44.36	54.00	-9.64	28.18	10.70	38.85	33.37	160	198	Average	HORIZONTAL
2	11450.10	57.64	74.00	-16.36	41.46	10.70	38.85	33.37	160	198	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11450.04	58.63	74.00	-15.37	42.45	10.70	38.85	33.37	146	275	Peak	VERTICAL
2	11450.07	44.45	54.00	-9.55	28.27	10.70	38.85	33.37	146	275	Average	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 165 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11649.92	56.59	74.00	-17.41	40.21	10.81	38.98	33.41	155	195	Peak	HORIZONTAL
2	11650.07	44.31	54.00	-9.69	27.93	10.81	38.98	33.41	155	195	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11649.92	44.14	54.00	-9.86	27.76	10.81	38.98	33.41	146	137	Average	VERTICAL
2	11649.97	57.31	74.00	-16.69	40.93	10.81	38.98	33.41	146	137	Peak	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 36 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15531.51	57.95	74.00	-16.05	40.93	12.58	38.14	33.70	177	301	Peak	HORIZONTAL
2	15535.00	44.87	54.00	-9.13	27.85	12.58	38.14	33.70	177	301	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15534.36	58.08	74.00	-15.92	41.06	12.58	38.14	33.70	173	281	Peak	VERTICAL
2	15547.34	45.31	54.00	-8.69	28.31	12.58	38.12	33.70	173	281	Average	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 40 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15596.09	45.13	54.00	-8.87	28.27	12.58	38.03	33.75	152	74	Average	HORIZONTAL
2	15599.39	57.28	74.00	-16.72	40.45	12.58	38.03	33.78	152	74	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15596.22	45.32	54.00	-8.68	28.46	12.58	38.03	33.75	152	206	Average	VERTICAL
2	15600.48	58.76	74.00	-15.24	41.93	12.58	38.03	33.78	152	206	Peak	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 48 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15717.28	57.84	74.00	-16.16	41.31	12.57	37.84	33.88	158	191	Peak	HORIZONTAL
2	15724.84	44.88	54.00	-9.12	28.35	12.57	37.84	33.88	158	191	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15717.24	59.67	74.00	-14.33	43.14	12.57	37.84	33.88	156	185	Peak	VERTICAL
2	15723.14	45.94	54.00	-8.06	29.41	12.57	37.84	33.88	156	185	Average	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 52 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15779.33	44.83	54.00	-9.17	28.45	12.57	37.76	33.95	158	329	Average	HORIZONTAL
2	15788.85	57.69	74.00	-16.31	41.34	12.57	37.73	33.95	158	329	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15777.28	65.38	74.00	-8.62	49.00	12.57	37.76	33.95	169	172	Peak	VERTICAL
2	15782.05	51.44	54.00	-2.56	35.09	12.57	37.73	33.95	169	172	Average	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 60 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10595.67	42.30	54.00	-11.70	27.37	10.16	38.40	33.63	157	256	Average	HORIZONTAL
2	10603.08	56.53	74.00	-17.47	41.56	10.19	38.40	33.62	157	256	Peak	HORIZONTAL
3	15896.35	58.42	74.00	-15.58	42.33	12.57	37.57	34.05	153	243	Peak	HORIZONTAL
4	15908.21	44.68	54.00	-9.32	28.66	12.56	37.54	34.08	153	243	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10595.71	42.60	54.00	-11.40	27.67	10.16	38.40	33.63	153	227	Average	VERTICAL
2	10600.42	55.68	74.00	-18.32	40.75	10.16	38.40	33.63	153	227	Peak	VERTICAL
3	15898.14	60.73	74.00	-13.27	44.64	12.57	37.57	34.05	173	171	Peak	VERTICAL
4	15901.99	47.49	54.00	-6.51	31.43	12.57	37.54	34.05	173	171	Average	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 64 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10644.90	55.74	74.00	-18.26	40.73	10.21	38.40	33.60	151	204	Peak	HORIZONTAL
2	10649.20	42.25	54.00	-11.75	27.24	10.21	38.40	33.60	151	204	Average	HORIZONTAL
3	15950.19	45.06	54.00	-8.94	29.12	12.56	37.48	34.10	153	224	Average	HORIZONTAL
4	15963.14	57.66	74.00	-16.34	41.77	12.56	37.46	34.13	153	224	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10633.81	42.48	54.00	-11.52	27.47	10.21	38.40	33.60	153	291	Average	VERTICAL
2	10645.13	55.78	74.00	-18.22	40.77	10.21	38.40	33.60	153	291	Peak	VERTICAL
3	15956.57	57.92	74.00	-16.08	42.03	12.56	37.46	34.13	150	246	Peak	VERTICAL
4	15962.34	44.62	54.00	-9.38	28.73	12.56	37.46	34.13	150	246	Average	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 100 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10995.22	55.67	74.00	-18.33	40.10	10.55	38.40	33.38	168	182	Peak	HORIZONTAL
2	11002.37	42.81	54.00	-11.19	27.24	10.55	38.40	33.38	168	182	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11002.21	56.29	74.00	-17.71	40.72	10.55	38.40	33.38	165	160	Peak	VERTICAL
2	11005.54	43.05	54.00	-10.95	27.46	10.55	38.42	33.38	165	160	Average	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 116 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11155.63	42.57	54.00	-11.43	26.80	10.60	38.55	33.38	170	250	Average	HORIZONTAL
2	11157.34	56.10	74.00	-17.90	40.33	10.60	38.55	33.38	170	250	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11159.89	55.76	74.00	-18.24	39.97	10.60	38.57	33.38	173	226	Peak	VERTICAL
2	11164.42	43.01	54.00	-10.99	27.21	10.61	38.57	33.38	173	226	Average	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 140 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10396.44	56.00	74.00	-18.00	41.09	10.14	38.52	33.75	175	296	Peak	HORIZONTAL
2	10401.59	42.29	54.00	-11.71	27.38	10.13	38.52	33.74	175	296	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10395.99	55.27	74.00	-18.73	40.36	10.14	38.52	33.75	173	274	Peak	VERTICAL
2	10396.15	42.53	54.00	-11.47	27.62	10.14	38.52	33.75	173	274	Average	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 142 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11441.39	43.70	54.00	-10.30	27.55	10.69	38.83	33.37	172	217	Average	HORIZONTAL
2	11443.48	57.40	74.00	-16.60	41.24	10.70	38.83	33.37	172	217	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11442.47	57.12	74.00	-16.88	40.96	10.70	38.83	33.37	176	182	Peak	VERTICAL
2	11444.05	43.92	54.00	-10.08	27.76	10.70	38.83	33.37	176	182	Average	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 149 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11487.15	43.51	54.00	-10.49	27.29	10.71	38.88	33.37	171	220	Average	HORIZONTAL
2	11489.36	57.35	74.00	-16.65	41.13	10.71	38.88	33.37	171	220	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11487.39	43.67	54.00	-10.33	27.45	10.71	38.88	33.37	169	200	Average	VERTICAL
2	11487.90	57.19	74.00	-16.81	40.97	10.71	38.88	33.37	169	200	Peak	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 157 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11567.20	43.45	54.00	-10.55	27.14	10.75	38.94	33.38	172	275	Average	HORIZONTAL
2	11573.62	56.47	74.00	-17.53	40.16	10.76	38.94	33.39	172	275	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11569.21	56.85	74.00	-17.15	40.54	10.75	38.94	33.38	170	253	Peak	VERTICAL
2	11572.39	43.49	54.00	-10.51	27.18	10.76	38.94	33.39	170	253	Average	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 165 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11650.30	56.94	74.00	-17.06	40.56	10.81	38.98	33.41	166	278	Peak	HORIZONTAL
2	11652.88	43.57	54.00	-10.43	27.18	10.81	38.99	33.41	166	278	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11651.79	43.52	54.00	-10.48	27.13	10.81	38.99	33.41	169	299	Average	VERTICAL
2	11654.18	56.71	74.00	-17.29	40.32	10.81	38.99	33.41	169	299	Peak	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 38 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15569.82	45.18	54.00	-8.82	28.24	12.58	38.09	33.73	163	234	Average	HORIZONTAL
2	15572.44	58.56	74.00	-15.44	41.62	12.58	38.09	33.73	163	234	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15567.97	45.42	54.00	-8.58	28.48	12.58	38.09	33.73	168	210	Average	VERTICAL
2	15569.84	58.20	74.00	-15.80	41.26	12.58	38.09	33.73	168	210	Peak	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 46 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15687.65	58.85	74.00	-15.15	42.22	12.58	37.90	33.85	159	242	Peak	HORIZONTAL
2	15689.74	45.12	54.00	-8.88	28.49	12.58	37.90	33.85	159	242	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15689.92	59.30	74.00	-14.70	42.67	12.58	37.90	33.85	161	264	Peak	VERTICAL
2	15691.69	45.34	54.00	-8.66	28.71	12.58	37.90	33.85	161	264	Average	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 54 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15808.35	57.67	74.00	-16.33	41.38	12.57	37.70	33.98	157	140	Peak	HORIZONTAL
2	15809.22	44.59	54.00	-9.41	28.30	12.57	37.70	33.98	157	140	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	15810.33	44.78	54.00	-9.22	28.49	12.57	37.70	33.98	161	160	Average	VERTICAL
2	15811.47	57.47	74.00	-16.53	41.18	12.57	37.70	33.98	161	160	Peak	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 62 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10619.33	56.23	74.00	-17.77	41.26	10.19	38.40	33.62	158	140	Peak	HORIZONTAL
2	10622.48	42.42	54.00	-11.58	27.45	10.19	38.40	33.62	158	140	Average	HORIZONTAL
3	15928.79	44.87	54.00	-9.13	28.88	12.56	37.51	34.08	162	168	Average	HORIZONTAL
4	15931.33	58.05	74.00	-15.95	42.08	12.56	37.51	34.10	162	168	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	10618.13	55.27	74.00	-18.73	40.30	10.19	38.40	33.62	160	120	Peak	VERTICAL
2	10621.45	42.56	54.00	-11.44	27.59	10.19	38.40	33.62	160	120	Average	VERTICAL
3	15930.08	58.38	74.00	-15.62	42.39	12.56	37.51	34.08	164	150	Peak	VERTICAL
4	15930.35	44.89	54.00	-9.11	28.92	12.56	37.51	34.10	164	150	Average	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 102 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11019.38	56.84	74.00	-17.16	41.24	10.56	38.42	33.38	158	183	Peak	HORIZONTAL
2	11020.88	43.37	54.00	-10.63	27.77	10.56	38.42	33.38	158	183	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11020.00	43.13	54.00	-10.87	27.53	10.56	38.42	33.38	161	159	Average	VERTICAL
2	11021.30	56.84	74.00	-17.16	41.24	10.56	38.42	33.38	161	159	Peak	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 110 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11097.85	56.42	74.00	-17.58	40.72	10.58	38.50	33.38	152	177	Peak	HORIZONTAL
2	11102.49	42.80	54.00	-11.20	27.10	10.58	38.50	33.38	152	177	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11098.20	43.07	54.00	-10.93	27.37	10.58	38.50	33.38	155	150	Average	VERTICAL
2	11099.61	56.29	74.00	-17.71	40.59	10.58	38.50	33.38	155	150	Peak	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 134 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11339.16	43.05	54.00	-10.95	27.03	10.66	38.73	33.37	156	182	Average	HORIZONTAL
2	11342.09	56.85	74.00	-17.15	40.82	10.67	38.73	33.37	156	182	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11340.74	43.31	54.00	-10.69	27.28	10.67	38.73	33.37	150	158	Average	VERTICAL
2	11340.83	57.09	74.00	-16.91	41.06	10.67	38.73	33.37	150	158	Peak	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 142 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11418.18	57.08	74.00	-16.92	40.94	10.69	38.82	33.37	159	217	Peak	HORIZONTAL
2	11421.72	43.62	54.00	-10.38	27.48	10.69	38.82	33.37	159	217	Average	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11417.57	43.83	54.00	-10.17	27.69	10.69	38.82	33.37	161	206	Average	VERTICAL
2	11421.62	56.81	74.00	-17.19	40.67	10.69	38.82	33.37	161	206	Peak	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 151 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11507.56	43.67	54.00	-10.33	27.42	10.72	38.90	33.37	159	248	Average	HORIZONTAL
2	11509.84	56.96	74.00	-17.04	40.71	10.72	38.90	33.37	159	248	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11507.96	43.71	54.00	-10.29	27.46	10.72	38.90	33.37	161	237	Average	VERTICAL
2	11508.09	57.26	74.00	-16.74	41.01	10.72	38.90	33.37	161	237	Peak	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 159 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11588.41	43.56	54.00	-10.44	27.24	10.76	38.95	33.39	153	246	Average	HORIZONTAL
2	11589.23	57.55	74.00	-16.45	41.23	10.76	38.95	33.39	153	246	Peak	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	11588.29	43.60	54.00	-10.40	27.28	10.76	38.95	33.39	156	226	Average	VERTICAL
2	11589.47	56.62	74.00	-17.38	40.30	10.76	38.95	33.39	156	226	Peak	VERTICAL

For Mode 2:

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 36 / Chain 1 + Chain 2
Test Date	Sep. 28, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15541.70	42.72	54.00	-11.28	28.90	10.77	38.25	35.20	Average	110	14	HORIZONTAL
2	15543.17	54.90	74.00	-19.10	41.08	10.77	38.25	35.20	Peak	110	14	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15536.60	56.82	74.00	-17.18	43.00	10.77	38.25	35.20	Peak	110	175	VERTICAL
2	15538.72	44.33	54.00	-9.67	30.51	10.77	38.25	35.20	Average	110	175	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 40 / Chain 1 + Chain 2
Test Date	Sep. 28, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15602.72	45.18	54.00	-8.82	31.48	10.78	38.16	35.24	Average	102	3	HORIZONTAL
2	15605.10	57.51	74.00	-16.49	43.81	10.78	38.16	35.24	Peak	102	3	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15598.33	47.33	54.00	-6.67	33.61	10.78	38.16	35.22	Average	111	144	VERTICAL
2	15600.51	60.41	74.00	-13.59	46.71	10.78	38.16	35.24	Peak	111	144	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 48 / Chain 1 + Chain 2
Test Date	Sep. 28, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15715.32	56.65	74.00	-17.35	43.15	10.79	37.99	35.28	Peak	102	4	HORIZONTAL
2	15719.97	44.44	54.00	-9.56	30.94	10.79	37.99	35.28	Average	102	4	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15721.03	45.01	54.00	-8.99	31.51	10.79	37.99	35.28	Average	103	200	VERTICAL
2	15722.05	56.85	74.00	-17.15	43.35	10.79	37.99	35.28	Peak	103	200	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 52 / Chain 1 + Chain 2
Test Date	Sep. 28, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15780.13	60.13	74.00	-13.87	46.74	10.80	37.91	35.32	Peak	105	25	HORIZONTAL
2	15780.22	46.69	54.00	-7.31	33.30	10.80	37.91	35.32	Average	105	25	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15780.74	64.28	74.00	-9.72	50.89	10.80	37.91	35.32	Peak	102	179	VERTICAL
2	15781.35	50.81	54.00	-3.19	37.42	10.80	37.91	35.32	Average	102	179	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 60 / Chain 1 + Chain 2
Test Date	Sep. 28, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10592.53	52.99	74.00	-21.01	40.75	8.62	38.58	34.96	Peak	107	327	HORIZONTAL
2	10608.24	40.27	54.00	-13.73	28.00	8.64	38.58	34.95	Average	107	327	HORIZONTAL
3	15899.97	61.23	74.00	-12.77	48.04	10.81	37.74	35.36	Peak	104	22	HORIZONTAL
4	15900.45	48.75	54.00	-5.25	35.56	10.81	37.74	35.36	Average	104	22	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10596.06	52.45	74.00	-21.55	40.21	8.62	38.58	34.96	Peak	140	253	VERTICAL
2	10603.91	40.04	54.00	-13.96	27.77	8.64	38.58	34.95	Average	140	253	VERTICAL
3	15898.37	63.91	74.00	-10.09	50.72	10.81	37.74	35.36	Peak	110	178	VERTICAL
4	15901.35	51.20	54.00	-2.80	38.03	10.81	37.72	35.36	Average	110	178	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 64 / Chain 1 + Chain 2
Test Date	Sep. 28, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10639.26	53.04	74.00	-20.96	40.75	8.66	38.57	34.94	Peak	162	159	HORIZONTAL
2	10646.03	40.42	54.00	-13.58	28.13	8.66	38.57	34.94	Average	162	159	HORIZONTAL
3	15962.79	45.88	54.00	-8.12	32.81	10.82	37.65	35.40	Average	101	338	HORIZONTAL
4	15964.52	58.84	74.00	-15.16	45.77	10.82	37.65	35.40	Peak	101	338	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10641.99	40.32	54.00	-13.68	28.03	8.66	38.57	34.94	Average	138	25	VERTICAL
2	10642.02	52.77	74.00	-21.23	40.48	8.66	38.57	34.94	Peak	138	25	VERTICAL
3	15961.99	49.48	54.00	-4.52	36.41	10.82	37.65	35.40	Average	105	274	VERTICAL
4	15962.82	62.11	74.00	-11.89	49.04	10.82	37.65	35.40	Peak	105	274	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 100 / Chain 1 + Chain 2
Test Date	Sep. 28, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10990.35	52.79	74.00	-21.21	40.15	8.93	38.50	34.79	Peak	191	214	HORIZONTAL
2	10994.01	40.54	54.00	-13.46	27.90	8.93	38.50	34.79	Average	191	214	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10998.97	53.93	74.00	-20.07	41.29	8.93	38.50	34.79	Peak	162	325	VERTICAL
2	11000.38	40.71	54.00	-13.29	28.07	8.93	38.50	34.79	Average	162	325	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 116 / Chain 1 + Chain 2
Test Date	Sep. 28, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11156.47	52.96	74.00	-21.04	40.04	9.03	38.68	34.79	Peak	174	244	HORIZONTAL
2	11165.87	40.53	54.00	-13.47	27.58	9.04	38.70	34.79	Average	174	244	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11151.60	40.60	54.00	-13.40	27.68	9.03	38.68	34.79	Average	114	36	VERTICAL
2	11157.31	52.98	74.00	-21.02	40.06	9.03	38.68	34.79	Peak	114	36	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 140 / Chain 1 + Chain 2
Test Date	Sep. 28, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11391.92	54.73	74.00	-19.27	41.39	9.18	38.96	34.80	Peak	173	171	HORIZONTAL
2	11397.18	41.71	54.00	-12.29	28.34	9.19	38.98	34.80	Average	173	171	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11395.35	54.52	74.00	-19.48	41.18	9.18	38.96	34.80	Peak	165	238	VERTICAL
2	11398.59	41.43	54.00	-12.57	28.06	9.19	38.98	34.80	Average	165	238	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 142 / Chain 1 + Chain 2
Test Date	Sep. 28, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11444.33	41.54	54.00	-12.46	28.11	9.21	39.02	34.80	Average	129	139	HORIZONTAL
2	11444.49	54.13	74.00	-19.87	40.70	9.21	39.02	34.80	Peak	129	139	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11434.68	54.00	74.00	-20.00	40.57	9.21	39.02	34.80	Peak	180	59	VERTICAL
2	11443.33	41.79	54.00	-12.21	28.36	9.21	39.02	34.80	Average	180	59	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 149 / Chain 1 + Chain 2
Test Date	Sep. 28, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11482.63	54.05	74.00	-19.95	40.53	9.24	39.08	34.80	Peak	143	208	HORIZONTAL
2	11484.55	41.56	54.00	-12.44	28.04	9.24	39.08	34.80	Average	143	208	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11483.01	41.65	54.00	-12.35	28.13	9.24	39.08	34.80	Average	162	306	VERTICAL
2	11493.69	54.45	74.00	-19.55	40.93	9.24	39.08	34.80	Peak	162	306	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 157 / Chain 1 + Chain 2
Test Date	Sep. 28, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11570.32	54.01	74.00	-19.99	40.43	9.26	39.14	34.82	Peak	145	193	HORIZONTAL
2	11575.42	41.35	54.00	-12.65	27.77	9.26	39.14	34.82	Average	145	193	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11566.67	54.08	74.00	-19.92	40.49	9.26	39.14	34.81	Peak	176	229	VERTICAL
2	11572.82	41.58	54.00	-12.42	28.00	9.26	39.14	34.82	Average	176	229	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 165 / Chain 1 + Chain 2
Test Date	Sep. 28, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11643.72	41.36	54.00	-12.64	27.73	9.28	39.18	34.83	Average	158	148	HORIZONTAL
2	11648.49	53.61	74.00	-20.39	39.99	9.28	39.18	34.84	Peak	158	148	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11647.76	54.79	74.00	-19.21	41.17	9.28	39.18	34.84	Peak	168	206	VERTICAL
2	11655.71	41.35	54.00	-12.65	27.72	9.28	39.19	34.84	Average	168	206	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 36 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15536.92	56.68	74.00	-17.32	42.86	10.77	38.25	35.20	Peak	103	2	HORIZONTAL
2	15539.62	44.16	54.00	-9.84	30.34	10.77	38.25	35.20	Average	103	2	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15535.19	58.59	74.00	-15.41	44.77	10.77	38.25	35.20	Peak	112	136	VERTICAL
2	15545.80	45.56	54.00	-8.44	31.75	10.78	38.23	35.20	Average	112	136	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 40 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15593.43	56.81	74.00	-17.19	43.07	10.78	38.18	35.22	Peak	102	6	HORIZONTAL
2	15598.32	44.45	54.00	-9.55	30.73	10.78	38.16	35.22	Average	102	6	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15605.05	46.68	54.00	-7.32	32.98	10.78	38.16	35.24	Average	109	153	VERTICAL
2	15617.31	58.76	74.00	-15.24	45.09	10.78	38.13	35.24	Peak	109	153	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 48 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15710.71	58.16	74.00	-15.84	44.64	10.79	38.01	35.28	Peak	101	2	HORIZONTAL
2	15719.36	45.78	54.00	-8.22	32.28	10.79	37.99	35.28	Average	101	2	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15716.79	46.62	54.00	-7.38	33.12	10.79	37.99	35.28	Average	110	143	VERTICAL
2	15725.37	59.05	74.00	-14.95	45.55	10.79	37.99	35.28	Peak	110	143	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 52 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15771.11	57.21	74.00	-16.79	43.81	10.80	37.91	35.31	Peak	112	359	HORIZONTAL
2	15781.12	45.28	54.00	-8.72	31.89	10.80	37.91	35.32	Average	112	359	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15773.51	45.69	54.00	-8.31	32.29	10.80	37.91	35.31	Average	106	200	VERTICAL
2	15780.48	57.87	74.00	-16.13	44.48	10.80	37.91	35.32	Peak	106	200	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 60 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10608.09	39.95	54.00	-14.05	27.68	8.64	38.58	34.95	Average	169	33	HORIZONTAL
2	10623.08	52.42	74.00	-21.58	40.14	8.65	38.58	34.95	Peak	169	33	HORIZONTAL
3	15899.52	45.88	54.00	-8.12	32.69	10.81	37.74	35.36	Average	101	359	HORIZONTAL
4	15899.60	57.86	74.00	-16.14	44.67	10.81	37.74	35.36	Peak	101	359	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10580.05	53.32	74.00	-20.68	41.08	8.62	38.58	34.96	Peak	130	36	VERTICAL
2	10599.04	40.17	54.00	-13.83	27.91	8.64	38.58	34.96	Average	130	36	VERTICAL
3	15894.95	46.55	54.00	-7.45	33.36	10.81	37.74	35.36	Average	104	155	VERTICAL
4	15897.28	59.08	74.00	-14.92	45.89	10.81	37.74	35.36	Peak	104	155	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 64 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10625.50	39.91	54.00	-14.09	27.63	8.65	38.58	34.95	Average	132	236	HORIZONTAL
2	10629.58	52.82	74.00	-21.18	40.53	8.65	38.58	34.94	Peak	132	236	HORIZONTAL
3	15968.81	45.90	54.00	-8.10	32.86	10.82	37.62	35.40	Average	102	197	HORIZONTAL
4	15978.99	58.22	74.00	-15.78	45.18	10.82	37.62	35.40	Peak	102	197	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10665.00	39.77	54.00	-14.23	27.44	8.69	38.57	34.93	Average	137	123	VERTICAL
2	10665.00	48.98	74.00	-25.02	36.65	8.69	38.57	34.93	Peak	137	123	VERTICAL
3	15966.49	46.47	54.00	-7.53	33.40	10.82	37.65	35.40	Average	102	200	VERTICAL
4	15968.57	58.63	74.00	-15.37	45.59	10.82	37.62	35.40	Peak	102	200	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 100 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10981.49	40.30	54.00	-13.70	27.68	8.92	38.50	34.80	Average	134	291	HORIZONTAL
2	11021.96	53.05	74.00	-20.95	40.35	8.95	38.54	34.79	Peak	134	291	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10985.66	53.40	74.00	-20.60	40.77	8.92	38.50	34.79	Peak	172	264	VERTICAL
2	10996.71	40.41	54.00	-13.59	27.77	8.93	38.50	34.79	Average	172	264	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 116 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11168.81	54.83	74.00	-19.17	41.88	9.04	38.70	34.79	Peak	148	134	HORIZONTAL
2	11179.63	40.47	54.00	-13.53	27.49	9.05	38.72	34.79	Average	148	134	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11157.20	40.46	54.00	-13.54	27.54	9.03	38.68	34.79	Average	159	205	VERTICAL
2	11160.48	53.50	74.00	-20.50	40.55	9.04	38.70	34.79	Peak	159	205	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 140 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11386.22	53.56	74.00	-20.44	40.22	9.18	38.96	34.80	Peak	136	215	HORIZONTAL
2	11388.22	41.40	54.00	-12.60	28.06	9.18	38.96	34.80	Average	136	215	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11413.78	41.33	54.00	-12.67	27.93	9.20	39.00	34.80	Average	151	178	VERTICAL
2	11414.26	54.72	74.00	-19.28	41.32	9.20	39.00	34.80	Peak	151	178	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 142 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11421.89	41.32	54.00	-12.68	27.92	9.20	39.00	34.80	Average	168	133	HORIZONTAL
2	11437.12	54.15	74.00	-19.85	40.72	9.21	39.02	34.80	Peak	168	133	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11444.01	54.22	74.00	-19.78	40.79	9.21	39.02	34.80	Peak	159	109	VERTICAL
2	11450.98	41.44	54.00	-12.56	27.98	9.22	39.04	34.80	Average	159	109	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 149 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11465.88	41.72	54.00	-12.28	28.23	9.23	39.06	34.80	Average	120	86	HORIZONTAL
2	11470.69	53.99	74.00	-20.01	40.50	9.23	39.06	34.80	Peak	120	86	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11472.37	41.22	54.00	-12.78	27.73	9.23	39.06	34.80	Average	170	144	VERTICAL
2	11474.21	54.66	74.00	-19.34	41.17	9.23	39.06	34.80	Peak	170	144	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 157 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11572.40	41.17	54.00	-12.83	27.59	9.26	39.14	34.82	Average	169	311	HORIZONTAL
2	11581.86	53.96	74.00	-20.04	40.38	9.26	39.14	34.82	Peak	169	311	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11573.93	53.73	74.00	-20.27	40.15	9.26	39.14	34.82	Peak	152	260	VERTICAL
2	11583.06	41.26	54.00	-12.74	27.66	9.27	39.15	34.82	Average	152	260	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 165 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11632.93	53.22	74.00	-20.78	39.61	9.27	39.17	34.83	Peak	184	208	HORIZONTAL
2	11642.79	41.50	54.00	-12.50	27.87	9.28	39.18	34.83	Average	184	208	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11644.55	41.25	54.00	-12.75	27.62	9.28	39.18	34.83	Average	150	140	VERTICAL
2	11648.72	54.60	74.00	-19.40	40.98	9.28	39.18	34.84	Peak	150	140	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 38 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15545.16	42.15	54.00	-11.85	28.34	10.78	38.23	35.20	Average	158	273	HORIZONTAL
2	15553.65	54.41	74.00	-19.59	40.61	10.78	38.23	35.21	Peak	158	273	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15552.61	54.66	74.00	-19.34	40.86	10.78	38.23	35.21	Peak	138	202	VERTICAL
2	15568.80	42.70	54.00	-11.30	28.93	10.78	38.20	35.21	Average	138	202	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 46 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15694.62	55.01	74.00	-18.99	41.46	10.79	38.03	35.27	Peak	100	198	HORIZONTAL
2	15697.76	42.44	54.00	-11.56	28.91	10.79	38.01	35.27	Average	100	198	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15683.51	55.87	74.00	-18.13	42.32	10.79	38.03	35.27	Peak	113	204	VERTICAL
2	15691.92	44.15	54.00	-9.85	30.60	10.79	38.03	35.27	Average	113	204	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 54 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15803.24	59.08	74.00	-14.92	45.74	10.80	37.87	35.33	Peak	103	0	HORIZONTAL
2	15807.92	46.29	54.00	-7.71	32.95	10.80	37.87	35.33	Average	103	0	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15809.46	45.98	54.00	-8.02	32.64	10.80	37.87	35.33	Average	104	200	VERTICAL
2	15815.87	58.91	74.00	-15.09	45.60	10.80	37.84	35.33	Peak	104	200	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 62 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10627.18	52.75	74.00	-21.25	40.46	8.65	38.58	34.94	Peak	175	240	HORIZONTAL
2	10627.34	40.27	54.00	-13.73	27.98	8.65	38.58	34.94	Average	175	240	HORIZONTAL
3	15932.28	41.55	54.00	-12.45	28.43	10.81	37.70	35.39	Average	125	73	HORIZONTAL
4	15935.71	55.40	74.00	-18.60	42.31	10.81	37.67	35.39	Peak	125	73	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10623.27	53.19	74.00	-20.81	40.91	8.65	38.58	34.95	Peak	155	21	VERTICAL
2	10625.96	40.05	54.00	-13.95	27.77	8.65	38.58	34.95	Average	155	21	VERTICAL
3	15921.89	55.11	74.00	-18.89	41.98	10.81	37.70	35.38	Peak	148	250	VERTICAL
4	15929.81	42.59	54.00	-11.41	29.46	10.81	37.70	35.38	Average	148	250	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 102 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11013.81	39.88	54.00	-14.12	27.21	8.94	38.52	34.79	Average	163	120	HORIZONTAL
2	11022.88	51.93	74.00	-22.07	39.23	8.95	38.54	34.79	Peak	163	120	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11014.62	40.27	54.00	-13.73	27.60	8.94	38.52	34.79	Average	113	276	VERTICAL
2	11025.83	53.06	74.00	-20.94	40.36	8.95	38.54	34.79	Peak	113	276	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 110 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11102.34	41.03	54.00	-12.97	28.21	8.99	38.62	34.79	Average	128	271	HORIZONTAL
2	11109.36	52.22	74.00	-21.78	39.37	9.00	38.64	34.79	Peak	128	271	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11102.66	40.11	54.00	-13.89	27.29	8.99	38.62	34.79	Average	158	64	VERTICAL
2	11105.67	53.23	74.00	-20.77	40.41	8.99	38.62	34.79	Peak	158	64	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 134 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11345.03	53.57	74.00	-20.43	40.30	9.15	38.92	34.80	Peak	192	135	HORIZONTAL
2	11347.92	41.65	54.00	-12.35	28.38	9.15	38.92	34.80	Average	192	135	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11333.21	53.38	74.00	-20.62	40.14	9.14	38.90	34.80	Peak	105	272	VERTICAL
2	11349.36	41.56	54.00	-12.44	28.29	9.15	38.92	34.80	Average	105	272	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 142 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11430.71	41.56	54.00	-12.44	28.13	9.21	39.02	34.80	Average	120	312	HORIZONTAL
2	11432.82	53.96	74.00	-20.04	40.53	9.21	39.02	34.80	Peak	120	312	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11448.53	41.23	54.00	-12.77	27.77	9.22	39.04	34.80	Average	167	30	VERTICAL
2	11449.04	54.75	74.00	-19.25	41.29	9.22	39.04	34.80	Peak	167	30	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 151 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11507.40	41.27	54.00	-12.73	27.72	9.25	39.10	34.80	Average	138	213	HORIZONTAL
2	11509.94	53.93	74.00	-20.07	40.38	9.25	39.10	34.80	Peak	138	213	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11503.40	41.61	54.00	-12.39	28.06	9.25	39.10	34.80	Average	120	136	VERTICAL
2	11518.59	53.95	74.00	-20.05	40.39	9.25	39.11	34.80	Peak	120	136	VERTICAL

Temperature	25℃	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 159 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11585.29	41.45	54.00	-12.55	27.85	9.27	39.15	34.82	Average	149	236	HORIZONTAL
2	11598.33	54.60	74.00	-19.40	41.01	9.27	39.15	34.83	Peak	149	236	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11585.99	42.14	54.00	-11.86	28.54	9.27	39.15	34.82	Average	137	295	VERTICAL
2	11586.19	54.28	74.00	-19.72	40.68	9.27	39.15	34.82	Peak	137	295	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

4.7. Band Edge Emissions Measurement

4.7.1. Limit

For transmitters operating in the 5.15-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

For transmitters operating in the 5.470-5.725 GHz band: all emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of −27 dBm/MHz.

In addition, In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.7.2. Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	100 MHz
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 1/T for Average
RBW / VBW (Emission in non-restricted band)	1MHz / 3MHz for Peak

4.7.3. Test Procedures

1. The test procedure is the same as section 4.6.3.

4.7.4. Test Setup Layout

This test setup layout is the same as that shown in section 4.6.4.

4.7.5. Test Deviation

There is no deviation with the original standard.

4.7.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.7.7. Test Result of Band Edge and Fundamental Emissions

For Mode 1:

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 36, 40, 48 / Chain 1 + Chain 2
Test Date	Sep. 12, 2015		

Channel 36

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5150.00	53.79	54.00	-0.21	49.45	5.51	33.17	34.34	203	248	VERTICAL	Average
2	5150.00	70.62	74.00	-3.38	66.28	5.51	33.17	34.34	203	248	VERTICAL	Peak
* 3	5178.84	117.17			112.76	5.52	33.23	34.34	203	248	VERTICAL	Peak
* 4	5180.87	107.50			103.09	5.52	33.23	34.34	203	248	VERTICAL	Average

Item 3, 4 are the fundamental frequency at 5180 MHz.

Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5148.84	68.90	74.00	-5.10	64.56	5.51	33.17	34.34	204	291	VERTICAL	Peak
2	5149.71	53.43	54.00	-0.57	49.09	5.51	33.17	34.34	204	291	VERTICAL	Average
* 3	5198.84	110.38			105.94	5.53	33.25	34.34	204	291	VERTICAL	Average
* 4	5203.18	120.04			115.57	5.53	33.28	34.34	204	291	VERTICAL	Peak

Item 3, 4 are the fundamental frequency at 5200 MHz.

Channel 48

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5138.71	60.77	74.00	-13.23	56.46	5.51	33.15	34.35	206	294	VERTICAL	Peak
2	5150.00	50.00	54.00	-4.00	45.66	5.51	33.17	34.34	206	294	VERTICAL	Average
* 3	5240.87	120.56			116.01	5.55	33.34	34.34	206	294	VERTICAL	Peak
* 4	5241.30	110.21			105.66	5.55	33.34	34.34	206	294	VERTICAL	Average
5	5350.00	49.90	54.00	-4.10	45.10	5.59	33.53	34.32	206	294	VERTICAL	Average
6	5350.87	61.40	74.00	-12.60	56.60	5.59	33.53	34.32	206	294	VERTICAL	Peak

Item 3, 4 are the fundamental frequency at 5240 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 52, 60, 64 / Chain 1 + Chain 2
Test Date	Sep. 12, 2015		

Channel 52

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5148.26	61.33	74.00	-12.67	56.99	5.51	33.17	34.34	205	251	VERTICAL	Peak
2	5150.00	48.44	54.00	-5.56	44.10	5.51	33.17	34.34	205	251	VERTICAL	Average
* 3	5258.26	121.22			116.63	5.56	33.36	34.33	205	251	VERTICAL	Peak
* 4	5260.87	111.76			107.17	5.56	33.36	34.33	205	251	VERTICAL	Average
5	5350.00	49.09	54.00	-4.91	44.29	5.59	33.53	34.32	205	251	VERTICAL	Average
6	5353.04	61.92	74.00	-12.08	57.12	5.59	33.53	34.32	205	251	VERTICAL	Peak

Item 3, 4 are the fundamental frequency at 5260 MHz.

Channel 60

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
* 1	5297.97	120.98			116.29	5.57	33.45	34.33	200	294	VERTICAL	Peak
* 2	5298.26	111.07			106.38	5.57	33.45	34.33	200	294	VERTICAL	Average
3	5350.00	53.71	54.00	-0.29	48.91	5.59	33.53	34.32	200	294	VERTICAL	Average
4	5351.16	72.61	74.00	-1.39	67.81	5.59	33.53	34.32	200	294	VERTICAL	Peak

Item 1, 2 are the fundamental frequency at 5300 MHz.

Channel 64

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
* 1	5321.01	107.41			102.69	5.58	33.47	34.33	239	251	VERTICAL	Average
* 2	5321.74	117.38			112.66	5.58	33.47	34.33	239	251	VERTICAL	Peak
3	5350.00	53.77	54.00	-0.23	48.97	5.59	33.53	34.32	239	251	VERTICAL	Average
4	5351.30	69.88	74.00	-4.12	65.08	5.59	33.53	34.32	239	251	VERTICAL	Peak

Item 1, 2 are the fundamental frequency at 5320 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 100, 116, 140, 142 / Chain 1 + Chain 2
Test Date	Sep. 12, 2015		

Channel 100

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5457.26	62.83	74.00	-11.17	57.79	5.63	33.72	34.31	228	352	VERTICAL	Peak
2	5460.00	49.53	54.00	-4.47	44.49	5.63	33.72	34.31	228	352	VERTICAL	Average
3	5468.55	70.62	74.00	-3.38	65.54	5.64	33.75	34.31	228	352	VERTICAL	Peak
4	5470.00	53.46	54.00	-0.54	48.38	5.64	33.75	34.31	228	352	VERTICAL	Average
* 5	5499.13	108.98			103.84	5.65	33.80	34.31	228	352	VERTICAL	Average
* 6	5502.60	118.87			113.73	5.65	33.80	34.31	228	352	VERTICAL	Peak

Item 5, 6 are the fundamental frequency at 5500 MHz.

Channel 116

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5449.58	59.80	74.00	-14.20	54.77	5.63	33.72	34.32	247	110	VERTICAL	Peak
2	5460.00	48.14	54.00	-5.86	43.10	5.63	33.72	34.31	247	110	VERTICAL	Average
3	5465.37	59.55	74.00	-14.45	54.48	5.63	33.75	34.31	247	110	VERTICAL	Peak
4	5467.11	48.77	54.00	-5.23	43.70	5.63	33.75	34.31	247	110	VERTICAL	Average
* 5	5578.26	121.94			116.50	5.72	34.05	34.33	247	110	VERTICAL	Peak
* 6	5579.42	111.53			106.09	5.72	34.05	34.33	247	110	VERTICAL	Average
7	5725.00	49.25	54.00	-4.75	43.26	5.85	34.50	34.36	247	110	VERTICAL	Average
8	5734.26	62.14	74.00	-11.86	56.13	5.87	34.50	34.36	247	110	VERTICAL	Peak

Item 5, 6 are the fundamental frequency at 5580 MHz.

Channel 140

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
* 1	5697.68	116.36			110.48	5.83	34.40	34.35	250	350	VERTICAL	Peak
* 2	5698.84	106.40			100.52	5.83	34.40	34.35	250	350	VERTICAL	Average
3	5725.00	53.87	54.00	-0.13	47.88	5.85	34.50	34.36	250	350	VERTICAL	Average
4	5728.18	69.92	74.00	-4.08	63.91	5.87	34.50	34.36	250	350	VERTICAL	Peak

Item 1, 2 are the fundamental frequency at 5700 MHz.

Channel 142

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
* 1	5719.42	111.13			105.19	5.85	34.45	34.36	220	350	VERTICAL	Average
* 2	5722.32	121.96			115.97	5.85	34.50	34.36	220	350	VERTICAL	Peak
3	5850.00	49.67	54.00	-4.33	43.26	5.95	34.85	34.39	220	350	VERTICAL	Average
4	5874.89	62.91	74.00	-11.09	56.38	5.97	34.95	34.39	220	350	VERTICAL	Peak

Item 1, 2 are the fundamental frequency at 5720 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 149, 157, 165 / Chain 1 + Chain 2
Test Date	Sep. 12, 2015		

Channel 149

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5714.71	65.04	68.20	-3.16	59.10	5.85	34.45	34.36	200	11	VERTICAL	Peak
2	5724.42	77.69	78.20	-0.51	71.70	5.85	34.50	34.36	200	11	VERTICAL	Peak
* 3	5745.87	104.37			98.31	5.88	34.55	34.37	200	11	VERTICAL	Average
* 4	5748.18	115.01			108.95	5.88	34.55	34.37	200	11	VERTICAL	Peak

Item 3, 4 are the fundamental frequency at 5745 MHz.

Channel 157

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5711.53	65.85	68.20	-2.35	59.91	5.85	34.45	34.36	229	351	VERTICAL	Peak
2	5725.00	73.46	78.20	-4.74	67.47	5.85	34.50	34.36	229	351	VERTICAL	Peak
* 3	5786.16	111.14			104.95	5.92	34.65	34.38	229	351	VERTICAL	Average
* 4	5787.32	121.47			115.28	5.92	34.65	34.38	229	351	VERTICAL	Peak
5	5851.16	65.86	78.20	-12.34	59.45	5.95	34.85	34.39	229	351	VERTICAL	Peak
6	5860.00	63.45	68.20	-4.75	56.99	5.95	34.90	34.39	229	351	VERTICAL	Peak

Item 3, 4 are the fundamental frequency at 5785 MHz.

Channel 165

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Pol/Phase	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
* 1	5826.16	107.93			101.57	5.94	34.80	34.38	259	139	VERTICAL	Average
* 2	5826.45	117.87			111.51	5.94	34.80	34.38	259	139	VERTICAL	Peak
3	5850.00	77.80	78.20	-0.40	71.39	5.95	34.85	34.39	259	139	VERTICAL	Peak
4	5860.29	67.84	68.20	-0.36	61.38	5.95	34.90	34.39	259	139	VERTICAL	Peak

Item 1, 2 are the fundamental frequency at 5825 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 36, 40, 48 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Channel 36

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5146.99	70.93	74.00	-3.07	64.03	6.21	33.74	33.05	243	196	Peak	VERTICAL
2	5150.00	53.98	54.00	-0.02	47.08	6.21	33.74	33.05	243	196	Average	VERTICAL
* 3	5179.36	105.61			98.63	6.24	33.79	33.05	243	196	Average	VERTICAL
* 4	5182.24	114.62			107.64	6.24	33.79	33.05	243	196	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5180 MHz.

Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5148.08	70.19	74.00	-3.81	63.29	6.21	33.74	33.05	200	156	Peak	VERTICAL
2	5150.00	53.89	54.00	-0.11	46.99	6.21	33.74	33.05	200	156	Average	VERTICAL
* 3	5200.64	108.31			101.27	6.27	33.82	33.05	200	156	Average	VERTICAL
* 4	5205.13	118.28			111.24	6.27	33.82	33.05	200	156	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5200 MHz.

Channel 48

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5126.06	57.65	74.00	-16.35	50.82	6.17	33.71	33.05	223	200	Peak	VERTICAL
2	5150.00	46.17	54.00	-7.83	39.27	6.21	33.74	33.05	223	200	Average	VERTICAL
* 3	5239.04	115.62			108.50	6.30	33.87	33.05	223	200	Peak	VERTICAL
* 4	5240.96	106.58			99.46	6.30	33.87	33.05	223	200	Average	VERTICAL
5	5352.02	46.35	54.00	-7.65	38.88	6.47	34.06	33.06	223	200	Average	VERTICAL
6	5352.50	58.45	74.00	-15.55	50.98	6.47	34.06	33.06	223	200	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5240 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 52, 60, 64 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Channel 52

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5122.50	57.17	74.00	-16.83	50.36	6.17	33.69	33.05	222	215	Peak	VERTICAL
2	5128.27	45.67	54.00	-8.33	38.84	6.17	33.71	33.05	222	215	Average	VERTICAL
* 3	5261.44	106.58			99.37	6.34	33.93	33.06	222	215	Average	VERTICAL
* 4	5263.85	116.26			109.05	6.34	33.93	33.06	222	215	Peak	VERTICAL
5	5350.39	46.56	54.00	-7.44	39.09	6.47	34.06	33.06	222	215	Average	VERTICAL
6	5363.37	58.90	74.00	-15.10	51.40	6.47	34.09	33.06	222	215	Peak	VERTICAL

Item 3, 4 are the fundamental frequency at 5260 MHz.

Channel 60

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
* 1	5299.04	106.88			99.56	6.40	33.98	33.06	213	219	Average	VERTICAL
* 2	5299.04	116.89			109.57	6.40	33.98	33.06	213	219	Peak	VERTICAL
3	5350.00	51.88	54.00	-2.12	44.41	6.47	34.06	33.06	213	219	Average	VERTICAL
4	5352.56	68.67	74.00	-5.33	61.20	6.47	34.06	33.06	213	219	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5300 MHz.

Channel 64

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
* 1	5321.28	104.97			97.62	6.40	34.01	33.06	211	157	Average	VERTICAL
* 2	5321.60	114.67			107.32	6.40	34.01	33.06	211	157	Peak	VERTICAL
3	5350.00	53.55	54.00	-0.45	46.08	6.47	34.06	33.06	211	157	Average	VERTICAL
4	5352.05	68.14	74.00	-5.86	60.67	6.47	34.06	33.06	211	157	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5320 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 100, 116, 140, 142 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Channel 100

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5458.33	60.49	74.00	-13.51	52.73	6.60	34.22	33.06	201	158	Peak	VERTICAL
2	5460.00	48.64	54.00	-5.36	40.88	6.60	34.22	33.06	201	158	Average	VERTICAL
3	5468.91	72.87	74.00	-1.13	65.08	6.60	34.25	33.06	201	158	Peak	VERTICAL
4	5470.00	53.66	54.00	-0.34	45.87	6.60	34.25	33.06	201	158	Average	VERTICAL
* 5	5497.44	115.28			107.41	6.63	34.30	33.06	201	158	Peak	VERTICAL
* 6	5500.64	106.47			98.60	6.63	34.30	33.06	201	158	Average	VERTICAL

Item 5, 6 are the fundamental frequency at 5500 MHz.

Channel 116

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5453.56	46.64	54.00	-7.36	38.88	6.60	34.22	33.06	199	195	Average	VERTICAL
2	5456.92	59.08	74.00	-14.92	51.32	6.60	34.22	33.06	199	195	Peak	VERTICAL
3	5465.77	58.76	74.00	-15.24	50.97	6.60	34.25	33.06	199	195	Peak	VERTICAL
4	5466.06	46.93	54.00	-7.07	39.14	6.60	34.25	33.06	199	195	Average	VERTICAL
* 5	5580.96	119.60			111.63	6.72	34.34	33.09	199	195	Peak	VERTICAL
* 6	5581.44	109.34			101.37	6.72	34.34	33.09	199	195	Average	VERTICAL
7	5725.00	46.63	54.00	-7.37	38.50	6.83	34.43	33.13	199	195	Average	VERTICAL
8	5725.00	57.53	74.00	-16.47	49.40	6.83	34.43	33.13	199	195	Peak	VERTICAL

Item 5, 6 are the fundamental frequency at 5580 MHz.

Channel 140

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
* 1	5701.44	105.03			96.92	6.81	34.42	33.12	197	199	Average	VERTICAL
* 2	5701.60	114.54			106.43	6.81	34.42	33.12	197	199	Peak	VERTICAL
3	5725.00	53.75	54.00	-0.25	45.62	6.83	34.43	33.13	197	199	Average	VERTICAL
4	5725.00	71.29	74.00	-2.71	63.16	6.83	34.43	33.13	197	199	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5700 MHz.

Channel 142

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
* 1	5718.08	116.97			108.84	6.83	34.43	33.13	192	159	Peak	VERTICAL
* 2	5720.48	107.05			98.92	6.83	34.43	33.13	192	159	Average	VERTICAL
3	5853.65	57.49	74.00	-16.51	49.19	6.95	34.52	33.17	192	159	Peak	VERTICAL
4	5856.06	46.85	54.00	-7.15	38.55	6.95	34.52	33.17	192	159	Average	VERTICAL

Item 1, 2 are the fundamental frequency at 5720 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 149, 157, 165 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Channel 149

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5712.95	60.43	74.00	-13.57	52.31	6.83	34.42	33.13	205	174	Peak	VERTICAL
2	5715.00	48.39	54.00	-5.61	40.27	6.83	34.42	33.13	205	174	Average	VERTICAL
3	5725.00	77.71	78.20	-0.49	69.58	6.83	34.43	33.13	205	174	Peak	VERTICAL
* 4	5742.76	111.52			103.36	6.86	34.44	33.14	205	174	Peak	VERTICAL
* 5	5744.04	102.35			94.19	6.86	34.44	33.14	205	174	Average	VERTICAL

Item 4, 5 are the fundamental frequency at 5745 MHz.

Channel 157

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5711.92	48.26	54.00	-5.74	40.14	6.83	34.42	33.13	206	178	Average	VERTICAL
2	5712.56	60.74	74.00	-13.26	52.62	6.83	34.42	33.13	206	178	Peak	VERTICAL
3	5721.86	70.64	78.20	-7.56	62.51	6.83	34.43	33.13	206	178	Peak	VERTICAL
* 4	5784.36	117.45			109.24	6.90	34.47	33.16	206	178	Peak	VERTICAL
* 5	5786.92	107.96			99.74	6.90	34.48	33.16	206	178	Average	VERTICAL
6	5850.71	63.57	78.20	-14.63	55.28	6.95	34.51	33.17	206	178	Peak	VERTICAL
7	5860.32	47.64	54.00	-6.36	39.33	6.97	34.52	33.18	206	178	Average	VERTICAL
8	5860.64	60.43	74.00	-13.57	52.12	6.97	34.52	33.18	206	178	Peak	VERTICAL

Item 4, 5 are the fundamental frequency at 5785 MHz.

Channel 165

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
* 1	5823.72	115.24			106.98	6.92	34.50	33.16	204	196	Peak	VERTICAL
* 2	5824.36	105.68			97.42	6.92	34.50	33.16	204	196	Average	VERTICAL
3	5850.00	77.73	78.20	-0.47	69.44	6.95	34.51	33.17	204	196	Peak	VERTICAL
4	5860.58	49.87	54.00	-4.13	41.56	6.97	34.52	33.18	204	196	Average	VERTICAL
5	5860.58	69.30	74.00	-4.70	60.99	6.97	34.52	33.18	204	196	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5825 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 38, 46 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Channel 38

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5148.65	69.74	74.00	-4.26	62.84	6.21	33.74	33.05	222	152	Peak	VERTICAL
2	5149.62	53.88	54.00	-0.12	46.98	6.21	33.74	33.05	222	152	Average	VERTICAL
* 3	5181.99	107.75			100.77	6.24	33.79	33.05	222	152	Peak	VERTICAL
* 4	5188.72	98.46			91.48	6.24	33.79	33.05	222	152	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5190 MHz.

Channel 46

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5149.23	62.92	74.00	-11.08	56.02	6.21	33.74	33.05	218	202	Peak	VERTICAL
2	5150.00	50.18	54.00	-3.82	43.28	6.21	33.74	33.05	218	202	Average	VERTICAL
* 3	5226.64	114.06			106.94	6.30	33.87	33.05	218	202	Peak	VERTICAL
* 4	5230.96	104.86			97.74	6.30	33.87	33.05	218	202	Average	VERTICAL

Item 3, 4 are the fundamental frequency at 5230 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 54, 62 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Channel 54

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
* 1	5271.92	104.37			97.13	6.37	33.93	33.06	197	216	Average	VERTICAL
* 2	5271.92	113.51			106.27	6.37	33.93	33.06	197	216	Peak	VERTICAL
3	5350.00	53.51	54.00	-0.49	46.04	6.47	34.06	33.06	197	216	Average	VERTICAL
4	5350.00	66.89	74.00	-7.11	59.42	6.47	34.06	33.06	197	216	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5270 MHz.

Channel 62

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
* 1	5307.12	108.52			101.20	6.40	33.98	33.06	204	155	Peak	VERTICAL
* 2	5311.28	98.04			90.69	6.40	34.01	33.06	204	155	Average	VERTICAL
3	5350.00	72.31	74.00	-1.69	64.84	6.47	34.06	33.06	204	155	Peak	VERTICAL
4	5350.39	53.51	54.00	-0.49	46.04	6.47	34.06	33.06	204	155	Average	VERTICAL

Item 1, 2 are the fundamental frequency at 5310 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 102, 110, 134, 142 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Channel 102

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5459.36	48.94	54.00	-5.06	41.18	6.60	34.22	33.06	219	197	Average	VERTICAL
2	5459.68	60.58	74.00	-13.42	52.82	6.60	34.22	33.06	219	197	Peak	VERTICAL
3	5469.62	53.55	54.00	-0.45	45.76	6.60	34.25	33.06	219	197	Average	VERTICAL
4	5469.62	67.53	74.00	-6.47	59.74	6.60	34.25	33.06	219	197	Peak	VERTICAL
* 5	5508.40	108.59			100.71	6.65	34.30	33.07	219	197	Peak	VERTICAL
* 6	5511.28	99.04			91.16	6.65	34.30	33.07	219	197	Average	VERTICAL

Item 5, 6 are the fundamental frequency at 5510 MHz.

Channel 110

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5459.14	65.34	74.00	-8.66	57.58	6.60	34.22	33.06	218	173	Peak	VERTICAL
2	5460.00	50.49	54.00	-3.51	42.73	6.60	34.22	33.06	218	173	Average	VERTICAL
3	5469.23	68.07	68.20	-0.13	60.28	6.60	34.25	33.06	218	173	Peak	VERTICAL
* 4	5543.75	115.74			107.82	6.68	34.32	33.08	218	173	Peak	VERTICAL
* 5	5549.04	105.39			97.46	6.68	34.33	33.08	218	173	Average	VERTICAL

Item 4, 5 are the fundamental frequency at 5550 MHz.

Channel 134

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
* 1	5671.28	102.91			94.84	6.79	34.40	33.12	183	177	Average	VERTICAL
* 2	5673.53	112.05			103.98	6.79	34.40	33.12	183	177	Peak	VERTICAL
3	5725.45	69.02	74.00	-4.98	60.89	6.83	34.43	33.13	183	177	Peak	VERTICAL
4	5725.77	53.59	54.00	-0.41	45.46	6.83	34.43	33.13	183	177	Average	VERTICAL

Item 1, 2 are the fundamental frequency at 5670 MHz.

Channel 142

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
* 1	5711.28	105.68			97.56	6.83	34.42	33.13	222	158	Average	VERTICAL
* 2	5711.92	115.42			107.30	6.83	34.42	33.13	222	158	Peak	VERTICAL
3	5850.39	48.54	54.00	-5.46	40.25	6.95	34.51	33.17	222	158	Average	VERTICAL
4	5850.39	60.06	74.00	-13.94	51.77	6.95	34.51	33.17	222	158	Peak	VERTICAL

Item 1, 2 are the fundamental frequency at 5710 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 151, 159 / Chain 1 + Chain 2
Test Date	Sep. 14, 2015		

Channel 151

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5714.62	67.54	74.00	-6.46	59.42	6.83	34.42	33.13	211	178	Peak	VERTICAL
2	5715.00	53.72	54.00	-0.28	45.60	6.83	34.42	33.13	211	178	Average	VERTICAL
3	5719.74	72.69	78.20	-5.51	64.56	6.83	34.43	33.13	211	178	Peak	VERTICAL
* 4	5751.15	106.73			98.57	6.86	34.44	33.14	211	178	Peak	VERTICAL
* 5	5752.44	97.41			89.23	6.86	34.46	33.14	211	178	Average	VERTICAL

Item 4, 5 are the fundamental frequency at 5755 MHz.

Channel 159

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB	cm	deg		
1	5712.79	50.86	54.00	-3.14	42.74	6.83	34.42	33.13	205	177	Average	VERTICAL
2	5714.23	66.04	74.00	-7.96	57.92	6.83	34.42	33.13	205	177	Peak	VERTICAL
3	5722.89	71.74	78.20	-6.46	63.61	6.83	34.43	33.13	205	177	Peak	VERTICAL
* 4	5793.56	104.36			96.14	6.90	34.48	33.16	205	177	Average	VERTICAL
* 5	5796.44	113.82			105.60	6.90	34.48	33.16	205	177	Peak	VERTICAL
6	5856.54	75.36	78.20	-2.84	67.06	6.95	34.52	33.17	205	177	Peak	VERTICAL
7	5860.00	53.95	54.00	-0.05	45.64	6.97	34.52	33.18	205	177	Average	VERTICAL
8	5861.35	73.99	74.00	-0.01	65.68	6.97	34.52	33.18	205	177	Peak	VERTICAL

Item 4, 5 are the fundamental frequency at 5795 MHz.

For Mode 2:

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 36, 40, 48 / Chain 1 + Chain 2
Test Date	Sep. 26, 2015		

Channel 36

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5139.62	66.75	74.00	-7.25	61.58	6.13	34.04	35.00	Peak	158	128	VERTICAL
2	5150.00	53.97	54.00	-0.03	48.80	6.13	34.04	35.00	Average	158	128	VERTICAL
* 3	5180.96	97.89			92.65	6.15	34.09	35.00	Average	158	128	VERTICAL
* 4	5180.96	108.08			102.84	6.15	34.09	35.00	Peak	158	128	VERTICAL

Item 3, 4 are the fundamental frequency at 5180 MHz.

Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5147.44	57.85	74.00	-16.15	52.68	6.13	34.04	35.00	Peak	101	49	HORIZONTAL
2	5149.68	45.28	54.00	-8.72	40.11	6.13	34.04	35.00	Average	101	49	HORIZONTAL
* 3	5197.76	109.54			104.26	6.16	34.12	35.00	Peak	101	49	HORIZONTAL
* 4	5201.28	99.18			93.90	6.16	34.12	35.00	Average	101	49	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5200 MHz.

Channel 48

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5099.14	55.12	74.00	-18.88	50.07	6.10	33.96	35.01	Peak	102	188	HORIZONTAL
2	5146.25	42.96	54.00	-11.04	37.79	6.13	34.04	35.00	Average	102	188	HORIZONTAL
* 3	5239.04	97.48			92.13	6.18	34.17	35.00	Average	102	188	HORIZONTAL
* 4	5239.04	107.67			102.32	6.18	34.17	35.00	Peak	102	188	HORIZONTAL
5	5350.00	42.78	54.00	-11.22	37.16	6.26	34.36	35.00	Average	102	188	HORIZONTAL
6	5358.75	55.85	74.00	-18.15	50.23	6.26	34.36	35.00	Peak	102	188	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5240 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 52, 60, 64 / Chain 1 + Chain 2
Test Date	Sep. 26, 2015		

Channel 52

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5122.50	54.78	74.00	-19.22	49.68	6.11	33.99	35.00	Peak	103	187	HORIZONTAL
2	5136.44	42.82	54.00	-11.18	37.69	6.12	34.01	35.00	Average	103	187	HORIZONTAL
* 3	5260.96	98.82			93.38	6.21	34.23	35.00	Average	103	187	HORIZONTAL
* 4	5262.40	108.66			103.22	6.21	34.23	35.00	Peak	103	187	HORIZONTAL
5	5350.00	42.63	54.00	-11.37	37.01	6.26	34.36	35.00	Average	103	187	HORIZONTAL
6	5378.75	55.82	74.00	-18.18	50.12	6.28	34.41	34.99	Peak	103	187	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5260 MHz.

Channel 60

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
* 1	5300.96	99.51			94.00	6.23	34.28	35.00	Average	125	130	VERTICAL
* 2	5301.60	109.86			104.35	6.23	34.28	35.00	Peak	125	130	VERTICAL
3	5350.00	44.04	54.00	-9.96	38.42	6.26	34.36	35.00	Average	125	130	VERTICAL
4	5353.21	56.91	74.00	-17.09	51.29	6.26	34.36	35.00	Peak	125	130	VERTICAL

Item 1, 2 are the fundamental frequency at 5300 MHz.

Channel 64

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
* 1	5318.40	107.30			101.75	6.24	34.31	35.00	Peak	100	51	HORIZONTAL
* 2	5318.72	97.35			91.80	6.24	34.31	35.00	Average	100	51	HORIZONTAL
3	5350.00	52.34	54.00	-1.66	46.72	6.26	34.36	35.00	Average	100	51	HORIZONTAL
4	5350.00	70.24	74.00	-3.76	64.62	6.26	34.36	35.00	Peak	100	51	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5320 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 100, 116, 140, 142 / Chain 1 + Chain 2
Test Date	Sep. 26, 2015		

Channel 100

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5459.46	61.15	74.00	-12.85	55.29	6.33	34.52	34.99	Peak	121	133	VERTICAL
2	5460.00	46.13	54.00	-7.87	40.27	6.33	34.52	34.99	Average	121	133	VERTICAL
3	5468.75	72.24	74.00	-1.76	66.34	6.34	34.55	34.99	Peak	121	133	VERTICAL
4	5470.00	53.99	54.00	-0.01	48.09	6.34	34.55	34.99	Average	121	133	VERTICAL
* 5	5498.40	110.37			104.40	6.36	34.60	34.99	Peak	121	133	VERTICAL
* 6	5500.64	100.73			94.76	6.36	34.60	34.99	Average	121	133	VERTICAL

Item 5, 6 are the fundamental frequency at 5500 MHz.

Channel 116

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5451.15	55.91	74.00	-18.09	50.05	6.33	34.52	34.99	Peak	108	1	VERTICAL
2	5460.00	43.35	54.00	-10.65	37.49	6.33	34.52	34.99	Average	108	1	VERTICAL
3	5464.71	56.31	74.00	-17.69	50.41	6.34	34.55	34.99	Peak	108	1	VERTICAL
4	5470.00	43.54	54.00	-10.46	37.64	6.34	34.55	34.99	Average	108	1	VERTICAL
* 5	5579.04	97.43			91.44	6.39	34.61	35.01	Average	108	1	VERTICAL
* 6	5582.89	107.24			101.24	6.39	34.62	35.01	Peak	108	1	VERTICAL
7	5725.00	43.41	54.00	-10.59	37.35	6.45	34.64	35.03	Average	108	1	VERTICAL
8	5725.00	54.75	74.00	-19.25	48.69	6.45	34.64	35.03	Peak	108	1	VERTICAL

Item 5, 6 are the fundamental frequency at 5580 MHz.

Channel 140

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
* 1	5699.36	107.74			101.70	6.43	34.64	35.03	Peak	258	134	VERTICAL
* 2	5700.64	97.86			91.81	6.44	34.64	35.03	Average	258	134	VERTICAL
3	5725.00	53.80	54.00	-0.20	47.74	6.45	34.64	35.03	Average	258	134	VERTICAL
4	5726.60	70.82	74.00	-3.18	64.76	6.45	34.64	35.03	Peak	258	134	VERTICAL

Item 1, 2 are the fundamental frequency at 5700 MHz.

Channel 142

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
* 1	5721.44	97.50			91.44	6.45	34.64	35.03	Average	100	133	HORIZONTAL
* 2	5723.37	107.53			101.47	6.45	34.64	35.03	Peak	100	133	HORIZONTAL
3	5850.00	55.18	74.00	-18.82	49.08	6.49	34.67	35.06	Peak	100	133	HORIZONTAL
4	5857.50	43.54	54.00	-10.46	37.43	6.50	34.67	35.06	Average	100	133	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5720 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11a CH 149, 157, 165 / Chain 1 + Chain 2
Test Date	Sep. 26, 2015		

Channel 149

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5713.27	60.60	74.00	-13.40	54.55	6.44	34.64	35.03	Peak	132	133	VERTICAL
2	5715.00	47.06	54.00	-6.94	41.01	6.44	34.64	35.03	Average	132	133	VERTICAL
3	5725.00	77.80	78.20	-0.40	71.74	6.45	34.64	35.03	Peak	132	133	VERTICAL
* 4	5743.72	97.06			91.00	6.45	34.65	35.04	Average	132	133	VERTICAL
* 5	5743.72	107.04			100.98	6.45	34.65	35.04	Peak	132	133	VERTICAL

Item 4, 5 are the fundamental frequency at 5745 MHz.

Channel 157

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5709.36	56.26	68.20	-11.94	50.21	6.44	34.64	35.03	Peak	264	134	VERTICAL
2	5722.50	57.54	78.20	-20.66	51.48	6.45	34.64	35.03	Peak	264	134	VERTICAL
* 3	5784.04	109.54			103.47	6.46	34.66	35.05	Peak	264	134	VERTICAL
* 4	5785.96	99.00			92.92	6.47	34.66	35.05	Average	264	134	VERTICAL
5	5851.28	55.80	78.20	-22.40	49.70	6.49	34.67	35.06	Peak	264	134	VERTICAL
6	5881.47	56.70	68.20	-11.50	50.59	6.50	34.68	35.07	Peak	264	134	VERTICAL

Item 3, 4 are the fundamental frequency at 5785 MHz.

Channel 165

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
* 1	5825.64	97.87			91.78	6.48	34.67	35.06	Average	260	135	VERTICAL
* 2	5826.92	108.23			102.14	6.48	34.67	35.06	Peak	260	135	VERTICAL
3	5850.00	77.81	78.20	-0.39	71.71	6.49	34.67	35.06	Peak	260	135	VERTICAL
4	5860.00	49.15	54.00	-4.85	43.05	6.50	34.67	35.07	Average	260	135	VERTICAL
5	5860.90	71.24	74.00	-2.76	65.14	6.50	34.67	35.07	Peak	260	135	VERTICAL

Item 1, 2 are the fundamental frequency at 5825 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 36, 40, 48 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Channel 36

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5149.23	72.10	74.00	-1.90	66.93	6.13	34.04	35.00	Peak	100	188	HORIZONTAL
2	5150.00	52.78	54.00	-1.22	47.61	6.13	34.04	35.00	Average	100	188	HORIZONTAL
* 3	5179.04	108.91			103.67	6.15	34.09	35.00	Peak	100	188	HORIZONTAL
* 4	5181.60	99.53			94.29	6.15	34.09	35.00	Average	100	188	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5180 MHz.

Channel 40

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5148.72	60.78	74.00	-13.22	55.61	6.13	34.04	35.00	Peak	114	187	HORIZONTAL
2	5149.36	46.58	54.00	-7.42	41.41	6.13	34.04	35.00	Average	114	187	HORIZONTAL
* 3	5198.08	109.66			104.38	6.16	34.12	35.00	Peak	114	187	HORIZONTAL
* 4	5200.64	100.00			94.72	6.16	34.12	35.00	Average	114	187	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5200 MHz.

Channel 48

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5109.71	55.39	74.00	-18.61	50.30	6.11	33.99	35.01	Peak	123	142	VERTICAL
2	5139.04	43.48	54.00	-10.52	38.35	6.12	34.01	35.00	Average	123	142	VERTICAL
* 3	5239.04	104.25			98.90	6.18	34.17	35.00	Peak	123	142	VERTICAL
* 4	5239.52	94.88			89.53	6.18	34.17	35.00	Average	123	142	VERTICAL
5	5350.58	43.51	54.00	-10.49	37.89	6.26	34.36	35.00	Average	123	142	VERTICAL
6	5377.50	56.00	74.00	-18.00	50.30	6.28	34.41	34.99	Peak	123	142	VERTICAL

Item 3, 4 are the fundamental frequency at 5240 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 52, 60, 64 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Channel 52

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5121.06	55.89	74.00	-18.11	50.79	6.11	33.99	35.00	Peak	122	130	VERTICAL
* 2	5148.46	43.16	54.00	-10.84	37.99	6.13	34.04	35.00	Average	122	130	VERTICAL
* 3	5258.56	107.47			102.03	6.21	34.23	35.00	Peak	122	130	VERTICAL
4	5260.48	97.06			91.62	6.21	34.23	35.00	Average	122	130	VERTICAL
5	5380.67	56.07	74.00	-17.93	50.37	6.28	34.41	34.99	Peak	122	130	VERTICAL
6	5402.79	43.93	54.00	-10.07	38.19	6.29	34.44	34.99	Average	122	130	VERTICAL

Item 3, 4 are the fundamental frequency at 5260 MHz.

Channel 60

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
* 1	5298.40	109.04			103.53	6.23	34.28	35.00	Peak	110	187	HORIZONTAL
* 2	5300.96	99.60			94.09	6.23	34.28	35.00	Average	110	187	HORIZONTAL
3	5350.00	45.10	54.00	-8.90	39.48	6.26	34.36	35.00	Average	110	187	HORIZONTAL
4	5351.28	56.61	74.00	-17.39	50.99	6.26	34.36	35.00	Peak	110	187	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5300 MHz.

Channel 64

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
* 1	5317.76	106.80			101.25	6.24	34.31	35.00	Peak	101	128	HORIZONTAL
* 2	5319.36	97.43			91.88	6.24	34.31	35.00	Average	101	128	HORIZONTAL
3	5350.00	53.57	54.00	-0.43	47.95	6.26	34.36	35.00	Average	101	128	HORIZONTAL
4	5350.00	70.08	74.00	-3.92	64.46	6.26	34.36	35.00	Peak	101	128	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5320 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 100, 116, 140, 142 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Channel 100

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5454.17	60.38	74.00	-13.62	54.52	6.33	34.52	34.99	Peak	122	144	VERTICAL
2	5459.30	47.49	54.00	-6.51	41.63	6.33	34.52	34.99	Average	122	144	VERTICAL
3	5469.23	68.93	74.00	-5.07	63.03	6.34	34.55	34.99	Peak	122	144	VERTICAL
4	5470.00	53.22	54.00	-0.78	47.32	6.34	34.55	34.99	Average	122	144	VERTICAL
* 5	5497.76	111.02			105.05	6.36	34.60	34.99	Peak	122	144	VERTICAL
* 6	5498.72	101.15			95.18	6.36	34.60	34.99	Average	122	144	VERTICAL

Item 5, 6 are the fundamental frequency at 5500 MHz.

Channel 116

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5394.10	43.72	54.00	-10.28	38.02	6.28	34.41	34.99	Average	143	131	VERTICAL
2	5398.11	57.02	74.00	-16.98	51.28	6.29	34.44	34.99	Peak	143	131	VERTICAL
3	5468.40	56.56	74.00	-17.44	50.66	6.34	34.55	34.99	Peak	143	131	VERTICAL
4	5469.42	43.93	54.00	-10.07	38.03	6.34	34.55	34.99	Average	143	131	VERTICAL
* 5	5581.60	97.07			91.07	6.39	34.62	35.01	Average	143	131	VERTICAL
* 6	5581.60	106.90			100.90	6.39	34.62	35.01	Peak	143	131	VERTICAL
7	5777.92	57.52	74.00	-16.48	51.45	6.46	34.66	35.05	Peak	143	131	VERTICAL
8	5815.58	44.06	54.00	-9.94	37.98	6.48	34.66	35.06	Average	143	131	VERTICAL

Item 5, 6 are the fundamental frequency at 5580 MHz.

Channel 140

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
* 1	5697.44	106.04			100.00	6.43	34.64	35.03	Peak	100	184	HORIZONTAL
* 2	5701.92	96.44			90.39	6.44	34.64	35.03	Average	100	184	HORIZONTAL
3	5725.00	53.58	54.00	-0.42	47.52	6.45	34.64	35.03	Average	100	184	HORIZONTAL
4	5729.17	64.53	74.00	-9.47	58.47	6.45	34.64	35.03	Peak	100	184	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5700 MHz.

Channel 142

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
* 1	5719.20	98.18			92.12	6.45	34.64	35.03	Average	100	185	HORIZONTAL
* 2	5721.60	107.67			101.61	6.45	34.64	35.03	Peak	100	185	HORIZONTAL
3	5933.14	56.27	68.20	-11.93	50.14	6.52	34.69	35.08	Peak	100	185	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5720 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT20 CH 149, 157, 165 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Channel 149

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5715.00	46.01	54.00	-7.99	39.96	6.44	34.64	35.03	Average	104	185	HORIZONTAL
2	5715.00	64.70	74.00	-9.30	58.65	6.44	34.64	35.03	Peak	104	185	HORIZONTAL
3	5723.85	77.43	78.20	-0.77	71.37	6.45	34.64	35.03	Peak	104	185	HORIZONTAL
*4	5744.04	95.49			89.43	6.45	34.65	35.04	Average	104	185	HORIZONTAL
*5	5746.60	104.84			98.78	6.45	34.65	35.04	Peak	104	185	HORIZONTAL

Item 4, 5 are the fundamental frequency at 5745 MHz.

Channel 157

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5646.54	55.90	74.00	-18.10	49.88	6.41	34.63	35.02	Peak	100	186	HORIZONTAL
2	5710.96	44.36	54.00	-9.64	38.31	6.44	34.64	35.03	Average	100	186	HORIZONTAL
3	5721.06	61.88	78.20	-16.32	55.82	6.45	34.64	35.03	Peak	100	186	HORIZONTAL
*4	5784.04	99.00			92.93	6.46	34.66	35.05	Average	100	186	HORIZONTAL
*5	5784.04	111.33			105.26	6.46	34.66	35.05	Peak	100	186	HORIZONTAL
6	5850.48	56.89	78.20	-21.31	50.79	6.49	34.67	35.06	Peak	100	186	HORIZONTAL
7	5860.96	44.15	54.00	-9.85	38.05	6.50	34.67	35.07	Average	100	186	HORIZONTAL
8	5929.23	57.09	74.00	-16.91	50.96	6.52	34.69	35.08	Peak	100	186	HORIZONTAL

Item 4, 5 are the fundamental frequency at 5785 MHz.

Channel 165

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
*1	5826.28	96.45			90.36	6.48	34.67	35.06	Average	104	67	HORIZONTAL
*2	5826.92	106.94			100.85	6.48	34.67	35.06	Peak	104	67	HORIZONTAL
3	5850.00	78.09	78.20	-0.11	71.99	6.49	34.67	35.06	Peak	104	67	HORIZONTAL
4	5860.26	49.22	54.00	-4.78	43.12	6.50	34.67	35.07	Average	104	67	HORIZONTAL
5	5860.90	68.50	74.00	-5.50	62.40	6.50	34.67	35.07	Peak	104	67	HORIZONTAL

Item 1, 2 are the fundamental frequency at 5825 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 38, 46 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Channel 38

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5148.97	71.05	74.00	-2.95	65.88	6.13	34.04	35.00	Peak	104	145	VERTICAL
2	5149.62	53.67	54.00	-0.33	48.50	6.13	34.04	35.00	Average	104	145	VERTICAL
*3	5183.91	102.68			97.44	6.15	34.09	35.00	Peak	104	145	VERTICAL
*4	5188.40	93.48			88.24	6.15	34.09	35.00	Average	104	145	VERTICAL

Item 3, 4 are the fundamental frequency at 5190 MHz.

Channel 46

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5146.67	44.10	54.00	-9.90	38.93	6.13	34.04	35.00	Average	104	139	VERTICAL
2	5146.67	57.79	74.00	-16.21	52.62	6.13	34.04	35.00	Peak	104	139	VERTICAL
*3	5226.80	104.16			98.81	6.18	34.17	35.00	Peak	104	139	VERTICAL
*4	5228.08	95.41			90.06	6.18	34.17	35.00	Average	104	139	VERTICAL

Item 3, 4 are the fundamental frequency at 5230 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 54, 62 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Channel 54

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
* 1	5274.81	107.25			101.81	6.21	34.23	35.00	Peak	125	143	VERTICAL
* 2	5276.41	97.97			92.50	6.22	34.25	35.00	Average	125	143	VERTICAL
3	5350.00	51.73	54.00	-2.27	46.11	6.26	34.36	35.00	Average	125	143	VERTICAL
4	5354.94	66.79	74.00	-7.21	61.17	6.26	34.36	35.00	Peak	125	143	VERTICAL

Item 1, 2 are the fundamental frequency at 5270 MHz.

Channel 62

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
* 1	5309.36	103.97			98.46	6.23	34.28	35.00	Peak	115	142	VERTICAL
* 2	5312.24	94.11			88.56	6.24	34.31	35.00	Average	115	142	VERTICAL
3	5350.00	52.96	54.00	-1.04	47.34	6.26	34.36	35.00	Average	115	142	VERTICAL
4	5350.39	67.51	74.00	-6.49	61.89	6.26	34.36	35.00	Peak	115	142	VERTICAL

Item 1, 2 are the fundamental frequency at 5310 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 102, 110, 134, 142 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Channel 102

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5460.00	47.47	54.00	-6.53	41.61	6.33	34.52	34.99	Average	115	144	VERTICAL
2	5460.00	59.56	74.00	-14.44	53.70	6.33	34.52	34.99	Peak	115	144	VERTICAL
3	5469.30	68.07	74.00	-5.93	62.17	6.34	34.55	34.99	Peak	115	144	VERTICAL
4	5470.00	53.40	54.00	-0.60	47.50	6.34	34.55	34.99	Average	115	144	VERTICAL
* 5	5505.51	104.21			98.25	6.36	34.60	35.00	Peak	115	144	VERTICAL
* 6	5508.72	95.07			89.11	6.36	34.60	35.00	Average	115	144	VERTICAL

Item 5, 6 are the fundamental frequency at 5510 MHz.

Channel 110

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5460.00	49.18	54.00	-4.82	43.32	6.33	34.52	34.99	Average	121	144	VERTICAL
2	5460.00	63.21	74.00	-10.79	57.35	6.33	34.52	34.99	Peak	121	144	VERTICAL
3	5466.67	66.29	74.00	-7.71	60.39	6.34	34.55	34.99	Peak	121	144	VERTICAL
4	5470.00	52.63	54.00	-1.37	46.73	6.34	34.55	34.99	Average	121	144	VERTICAL
* 5	5539.58	109.81			103.83	6.37	34.61	35.00	Peak	121	144	VERTICAL
* 6	5545.19	99.48			93.50	6.37	34.61	35.00	Average	121	144	VERTICAL

Item 5, 6 are the fundamental frequency at 5550 MHz.

Channel 134

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
* 1	5665.19	103.38			97.36	6.42	34.63	35.03	Peak	132	132	VERTICAL
* 2	5668.40	92.89			86.86	6.43	34.63	35.03	Average	132	132	VERTICAL
3	5725.00	53.76	54.00	-0.24	47.70	6.45	34.64	35.03	Average	132	132	VERTICAL
4	5726.89	66.89	74.00	-7.11	60.83	6.45	34.64	35.03	Peak	132	132	VERTICAL

Item 1, 2 are the fundamental frequency at 5670 MHz.

Channel 142

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
* 1	5711.60	97.72			91.67	6.44	34.64	35.03	Average	133	145	VERTICAL
* 2	5712.40	108.13			102.08	6.44	34.64	35.03	Peak	133	145	VERTICAL
3	5912.72	56.47	68.20	-11.73	50.35	6.52	34.68	35.08	Peak	133	145	VERTICAL

Item 1, 2 are the fundamental frequency at 5710 MHz.

Temperature	25°C	Humidity	69%
Test Engineer	Paul Chen & Peter Wu	Configurations	IEEE 802.11n MCS0 HT40 CH 151, 159 / Chain 1 + Chain 2
Test Date	Sep. 27, 2015		

Channel 151

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5712.53	67.33	68.20	-0.87	61.28	6.44	34.64	35.03	Peak	103	186	HORIZONTAL
2	5722.15	74.85	78.20	-3.35	68.79	6.45	34.64	35.03	Peak	103	186	HORIZONTAL
* 3	5753.40	91.04			84.97	6.46	34.65	35.04	Average	103	186	HORIZONTAL
* 4	5759.81	100.84			94.78	6.46	34.65	35.05	Peak	103	186	HORIZONTAL

Item 3, 4 are the fundamental frequency at 5755 MHz.

Channel 159

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	5712.47	62.75	74.00	-11.25	56.70	6.44	34.64	35.03	Peak	102	184	HORIZONTAL
2	5715.00	49.96	54.00	-4.04	43.91	6.44	34.64	35.03	Average	102	184	HORIZONTAL
3	5722.89	70.81	78.20	-7.39	64.75	6.45	34.64	35.03	Peak	102	184	HORIZONTAL
* 4	5793.40	104.24			98.16	6.47	34.66	35.05	Peak	102	184	HORIZONTAL
* 5	5796.60	94.85			88.77	6.47	34.66	35.05	Average	102	184	HORIZONTAL
6	5850.00	71.72	78.20	-6.48	65.62	6.49	34.67	35.06	Peak	102	184	HORIZONTAL
7	5860.00	53.36	54.00	-0.64	47.26	6.50	34.67	35.07	Average	102	184	HORIZONTAL
8	5863.11	68.06	74.00	-5.94	61.96	6.50	34.67	35.07	Peak	102	184	HORIZONTAL

Item 4, 5 are the fundamental frequency at 5795 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m)

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

4.8. Frequency Stability Measurement

4.8.1. Limit

In-band emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band (IEEE 802.11n specification).

4.8.2. Measuring Instruments and Setting

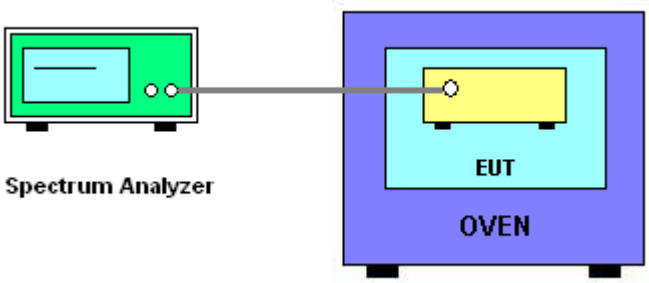
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Entire absence of modulation emissions bandwidth
RBW	10 kHz
VBW	10 kHz
Sweep Time	Auto

4.8.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. EUT have transmitted absence of modulation signal and fixed channelize.
3. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth.
4. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings.
5. fc is declaring of channel frequency. Then the frequency error formula is (fc-f)/fc × 10^6 ppm and the limit is less than ±20ppm (IEEE 802.11nspecification).
6. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
7. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
8. Extreme temperature is -10°C~60°C.

4.8.4. Test Setup Layout



4.8.5. Test Deviation

There is no deviation with the original standard.

4.8.6. EUT Operation during Test

The EUT was programmed to be in continuously un-modulation transmitting mode.

4.8.7. Test Result of Frequency Stability

Temperature	24°C	Humidity	65%
Test Engineer	Clemens Fang & Andy Tsai & Lucas Huang	Test Date	Oct. 02, 2015 ~ Oct. 03, 2015

For Mode 1:

Mode: 20 MHz / Chain 1

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5199.9965	5199.9952	5199.9936	5199.9917
110.00	5199.9953	5199.9940	5199.9924	5199.9905
93.50	5199.9938	5199.9925	5199.9909	5199.9890
Max. Deviation (MHz)	0.0062	0.0075	0.0091	0.0110
Max. Deviation (ppm)	1.19	1.44	1.75	2.12
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-10	5199.9992	5199.9979	5199.9963	5199.9944
0	5199.9978	5199.9965	5199.9949	5199.9930
10	5199.9965	5199.9952	5199.9936	5199.9917
20	5199.9953	5199.9940	5199.9924	5199.9905
30	5199.9938	5199.9925	5199.9909	5199.9890
40	5199.9923	5199.9910	5199.9894	5199.9875
50	5199.9915	5199.9898	5199.9883	5199.9863
60	5199.9907	5199.9894	5199.9872	5199.9859
Max. Deviation (MHz)	0.0093	0.0106	0.0128	0.0141
Max. Deviation (ppm)	1.79	2.04	2.46	2.71
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5300 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5299.9973	5299.9960	5299.9944	5299.9925
110.00	5299.9961	5299.9948	5299.9932	5299.9913
93.50	5299.9946	5299.9933	5299.9917	5299.9898
Max. Deviation (MHz)	0.0054	0.0067	0.0083	0.0102
Max. Deviation (ppm)	1.02	1.26	1.57	1.92
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5300 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-10	5300.0000	5299.9987	5299.9971	5299.9952
0	5299.9986	5299.9973	5299.9957	5299.9938
10	5299.9973	5299.9960	5299.9944	5299.9925
20	5299.9961	5299.9948	5299.9932	5299.9913
30	5299.9946	5299.9933	5299.9917	5299.9898
40	5299.9931	5299.9918	5299.9902	5299.9883
50	5299.9919	5299.9907	5299.9890	5299.9872
60	5299.9915	5299.9902	5299.9886	5299.9867
Max. Deviation (MHz)	0.0085	0.0098	0.0114	0.0133
Max. Deviation (ppm)	1.60	1.85	2.15	2.51
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5580 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5579.9981	5579.9968	5579.9952	5579.9933
110.00	5579.9969	5579.9956	5579.9940	5579.9921
93.50	5579.9954	5579.9941	5579.9925	5579.9906
Max. Deviation (MHz)	0.0046	0.0059	0.0075	0.0094
Max. Deviation (ppm)	0.82	1.06	1.34	1.68
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5580 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-10	5580.0008	5579.9995	5579.9979	5579.9960
0	5579.9994	5579.9981	5579.9965	5579.9946
10	5579.9981	5579.9968	5579.9952	5579.9933
20	5579.9969	5579.9956	5579.9940	5579.9921
30	5579.9954	5579.9941	5579.9925	5579.9906
40	5579.9939	5579.9926	5579.9910	5579.9891
50	5579.9927	5579.9915	5579.9898	5579.9879
60	5579.9923	5579.9911	5579.9894	5579.9875
Max. Deviation (MHz)	0.0077	0.0089	0.0106	0.0125
Max. Deviation (ppm)	1.38	1.59	1.90	2.24
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5785.0000	5784.9987	5784.9971	5784.9952
110.00	5784.9988	5784.9975	5784.9959	5784.9940
93.50	5784.9973	5784.9960	5784.9944	5784.9925
Max. Deviation (MHz)	0.0027	0.0040	0.0056	0.0075
Max. Deviation (ppm)	0.47	0.69	0.97	1.30
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-10	5785.0027	5785.0014	5784.9998	5784.9979
0	5785.0013	5785.0000	5784.9984	5784.9965
10	5785.0000	5784.9987	5784.9971	5784.9952
20	5784.9988	5784.9975	5784.9959	5784.9940
30	5784.9973	5784.9960	5784.9944	5784.9925
40	5784.9958	5784.9945	5784.9929	5784.9910
50	5784.9947	5784.9933	5784.9918	5784.9898
60	5784.9942	5784.9929	5784.9913	5784.9894
Max. Deviation (MHz)	0.0058	0.0071	0.0087	0.0106
Max. Deviation (ppm)	1.00	1.23	1.50	1.83
Result	Complies			

Mode: 40 MHz / Chain 1

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5190.0004	5189.9991	5189.9975	5189.9956
110.00	5189.9992	5189.9979	5189.9963	5189.9944
93.50	5189.9977	5189.9964	5189.9948	5189.9929
Max. Deviation (MHz)	0.0023	0.0036	0.0052	0.0071
Max. Deviation (ppm)	0.44	0.69	1.00	1.37
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-10	5190.0031	5190.0018	5190.0002	5189.9983
0	5190.0017	5190.0004	5189.9988	5189.9969
10	5190.0004	5189.9991	5189.9975	5189.9956
20	5189.9992	5189.9979	5189.9963	5189.9944
30	5189.9977	5189.9964	5189.9948	5189.9929
40	5189.9962	5189.9949	5189.9933	5189.9914
50	5189.9952	5189.9938	5189.9922	5189.9905
60	5189.9945	5189.9932	5189.9916	5189.9897
Max. Deviation (MHz)	0.0055	0.0068	0.0084	0.0103
Max. Deviation (ppm)	1.06	1.31	1.62	1.98
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5310 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5310.0000	5309.9987	5309.9971	5309.9952
110.00	5309.9988	5309.9975	5309.9959	5309.9940
93.50	5309.9973	5309.9960	5309.9944	5309.9925
Max. Deviation (MHz)	0.0027	0.0040	0.0056	0.0075
Max. Deviation (ppm)	0.51	0.75	1.05	1.41
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5310 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-10	5310.0027	5310.0014	5309.9998	5309.9979
0	5310.0013	5310.0000	5309.9984	5309.9965
10	5310.0000	5309.9987	5309.9971	5309.9952
20	5309.9988	5309.9975	5309.9959	5309.9940
30	5309.9973	5309.9960	5309.9944	5309.9925
40	5309.9958	5309.9945	5309.9929	5309.9910
50	5309.9947	5309.9934	5309.9919	5309.9899
60	5309.9941	5309.9928	5309.9912	5309.9893
Max. Deviation (MHz)	0.0059	0.0072	0.0088	0.0107
Max. Deviation (ppm)	1.11	1.36	1.66	2.02
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5550 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5549.9995	5549.9982	5549.9966	5549.9947
110.00	5549.9983	5549.9970	5549.9954	5549.9935
93.50	5549.9968	5549.9955	5549.9939	5549.9920
Max. Deviation (MHz)	0.0032	0.0045	0.0061	0.0080
Max. Deviation (ppm)	0.58	0.81	1.10	1.44
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5550 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-10	5550.0022	5550.0009	5549.9993	5549.9974
0	5550.0008	5549.9995	5549.9979	5549.9960
10	5549.9995	5549.9982	5549.9966	5549.9947
20	5549.9983	5549.9970	5549.9954	5549.9935
30	5549.9968	5549.9955	5549.9939	5549.9920
40	5549.9953	5549.9940	5549.9924	5549.9905
50	5549.9944	5549.9928	5549.9913	5549.9894
60	5549.9936	5549.9923	5549.9907	5549.9888
Max. Deviation (MHz)	0.0064	0.0077	0.0093	0.0112
Max. Deviation (ppm)	1.15	1.39	1.68	2.02
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5754.9994	5754.9981	5754.9965	5754.9946
110.00	5754.9982	5754.9969	5754.9953	5754.9934
93.50	5754.9967	5754.9954	5754.9938	5754.9919
Max. Deviation (MHz)	0.0033	0.0046	0.0062	0.0081
Max. Deviation (ppm)	0.57	0.80	1.08	1.41
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-10	5755.0021	5755.0008	5754.9992	5754.9973
0	5755.0007	5754.9994	5754.9978	5754.9959
10	5754.9994	5754.9981	5754.9965	5754.9946
20	5754.9982	5754.9969	5754.9953	5754.9934
30	5754.9967	5754.9954	5754.9938	5754.9919
40	5754.9952	5754.9939	5754.9923	5754.9904
50	5754.9941	5754.9929	5754.9914	5754.9893
60	5754.9935	5754.9922	5754.9906	5754.9887
Max. Deviation (MHz)	0.0065	0.0078	0.0094	0.0113
Max. Deviation (ppm)	1.13	1.36	1.63	1.96
Result	Complies			

For Mode 2:

Mode: 20 MHz / Chain 1

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5199.9965	5199.9952	5199.9936	5199.9917
110.00	5199.9953	5199.9940	5199.9924	5199.9905
93.50	5199.9938	5199.9925	5199.9909	5199.9890
Max. Deviation (MHz)	0.0062	0.0075	0.0091	0.0110
Max. Deviation (ppm)	1.19	1.44	1.75	2.12
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5200 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-10	5199.9992	5199.9979	5199.9963	5199.9944
0	5199.9978	5199.9965	5199.9949	5199.9930
10	5199.9965	5199.9952	5199.9936	5199.9917
20	5199.9953	5199.9940	5199.9924	5199.9905
30	5199.9938	5199.9925	5199.9909	5199.9890
40	5199.9923	5199.9910	5199.9894	5199.9875
50	5199.9915	5199.9898	5199.9883	5199.9863
60	5199.9907	5199.9894	5199.9872	5199.9859
Max. Deviation (MHz)	0.0093	0.0106	0.0128	0.0141
Max. Deviation (ppm)	1.79	2.04	2.46	2.71
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5300 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5299.9973	5299.9960	5299.9944	5299.9925
110.00	5299.9961	5299.9948	5299.9932	5299.9913
93.50	5299.9946	5299.9933	5299.9917	5299.9898
Max. Deviation (MHz)	0.0054	0.0067	0.0083	0.0102
Max. Deviation (ppm)	1.02	1.26	1.57	1.92
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5300 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-10	5300.0000	5299.9987	5299.9971	5299.9952
0	5299.9986	5299.9973	5299.9957	5299.9938
10	5299.9973	5299.9960	5299.9944	5299.9925
20	5299.9961	5299.9948	5299.9932	5299.9913
30	5299.9946	5299.9933	5299.9917	5299.9898
40	5299.9931	5299.9918	5299.9902	5299.9883
50	5299.9919	5299.9907	5299.9890	5299.9872
60	5299.9915	5299.9902	5299.9886	5299.9867
Max. Deviation (MHz)	0.0085	0.0098	0.0114	0.0133
Max. Deviation (ppm)	1.60	1.85	2.15	2.51
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5580 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5579.9981	5579.9968	5579.9952	5579.9933
110.00	5579.9969	5579.9956	5579.9940	5579.9921
93.50	5579.9954	5579.9941	5579.9925	5579.9906
Max. Deviation (MHz)	0.0046	0.0059	0.0075	0.0094
Max. Deviation (ppm)	0.82	1.06	1.34	1.68
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5580 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-10	5580.0008	5579.9995	5579.9979	5579.9960
0	5579.9994	5579.9981	5579.9965	5579.9946
10	5579.9981	5579.9968	5579.9952	5579.9933
20	5579.9969	5579.9956	5579.9940	5579.9921
30	5579.9954	5579.9941	5579.9925	5579.9906
40	5579.9939	5579.9926	5579.9910	5579.9891
50	5579.9927	5579.9915	5579.9898	5579.9879
60	5579.9923	5579.9911	5579.9894	5579.9875
Max. Deviation (MHz)	0.0077	0.0089	0.0106	0.0125
Max. Deviation (ppm)	1.38	1.59	1.90	2.24
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5785.0000	5784.9987	5784.9971	5784.9952
110.00	5784.9988	5784.9975	5784.9959	5784.9940
93.50	5784.9973	5784.9960	5784.9944	5784.9925
Max. Deviation (MHz)	0.0027	0.0040	0.0056	0.0075
Max. Deviation (ppm)	0.47	0.69	0.97	1.30
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5785 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-10	5785.0027	5785.0014	5784.9998	5784.9979
0	5785.0013	5785.0000	5784.9984	5784.9965
10	5785.0000	5784.9987	5784.9971	5784.9952
20	5784.9988	5784.9975	5784.9959	5784.9940
30	5784.9973	5784.9960	5784.9944	5784.9925
40	5784.9958	5784.9945	5784.9929	5784.9910
50	5784.9947	5784.9933	5784.9918	5784.9898
60	5784.9942	5784.9929	5784.9913	5784.9894
Max. Deviation (MHz)	0.0058	0.0071	0.0087	0.0106
Max. Deviation (ppm)	1.00	1.23	1.50	1.83
Result	Complies			

Mode: 40 MHz / Chain 1

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5190.0004	5189.9991	5189.9975	5189.9956
110.00	5189.9992	5189.9979	5189.9963	5189.9944
93.50	5189.9977	5189.9964	5189.9948	5189.9929
Max. Deviation (MHz)	0.0023	0.0036	0.0052	0.0071
Max. Deviation (ppm)	0.44	0.69	1.00	1.37
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5190 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-10	5190.0031	5190.0018	5190.0002	5189.9983
0	5190.0017	5190.0004	5189.9988	5189.9969
10	5190.0004	5189.9991	5189.9975	5189.9956
20	5189.9992	5189.9979	5189.9963	5189.9944
30	5189.9977	5189.9964	5189.9948	5189.9929
40	5189.9962	5189.9949	5189.9933	5189.9914
50	5189.9952	5189.9938	5189.9922	5189.9905
60	5189.9945	5189.9932	5189.9916	5189.9897
Max. Deviation (MHz)	0.0055	0.0068	0.0084	0.0103
Max. Deviation (ppm)	1.06	1.31	1.62	1.98
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5310 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5310.0000	5309.9987	5309.9971	5309.9952
110.00	5309.9988	5309.9975	5309.9959	5309.9940
93.50	5309.9973	5309.9960	5309.9944	5309.9925
Max. Deviation (MHz)	0.0027	0.0040	0.0056	0.0075
Max. Deviation (ppm)	0.51	0.75	1.05	1.41
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5310 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-10	5310.0027	5310.0014	5309.9998	5309.9979
0	5310.0013	5310.0000	5309.9984	5309.9965
10	5310.0000	5309.9987	5309.9971	5309.9952
20	5309.9988	5309.9975	5309.9959	5309.9940
30	5309.9973	5309.9960	5309.9944	5309.9925
40	5309.9958	5309.9945	5309.9929	5309.9910
50	5309.9947	5309.9934	5309.9919	5309.9899
60	5309.9941	5309.9928	5309.9912	5309.9893
Max. Deviation (MHz)	0.0059	0.0072	0.0088	0.0107
Max. Deviation (ppm)	1.11	1.36	1.66	2.02
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5550 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5549.9995	5549.9982	5549.9966	5549.9947
110.00	5549.9983	5549.9970	5549.9954	5549.9935
93.50	5549.9968	5549.9955	5549.9939	5549.9920
Max. Deviation (MHz)	0.0032	0.0045	0.0061	0.0080
Max. Deviation (ppm)	0.58	0.81	1.10	1.44
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5550 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-10	5550.0022	5550.0009	5549.9993	5549.9974
0	5550.0008	5549.9995	5549.9979	5549.9960
10	5549.9995	5549.9982	5549.9966	5549.9947
20	5549.9983	5549.9970	5549.9954	5549.9935
30	5549.9968	5549.9955	5549.9939	5549.9920
40	5549.9953	5549.9940	5549.9924	5549.9905
50	5549.9944	5549.9928	5549.9913	5549.9894
60	5549.9936	5549.9923	5549.9907	5549.9888
Max. Deviation (MHz)	0.0064	0.0077	0.0093	0.0112
Max. Deviation (ppm)	1.15	1.39	1.68	2.02
Result	Complies			

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
126.50	5754.9994	5754.9981	5754.9965	5754.9946
110.00	5754.9982	5754.9969	5754.9953	5754.9934
93.50	5754.9967	5754.9954	5754.9938	5754.9919
Max. Deviation (MHz)	0.0033	0.0046	0.0062	0.0081
Max. Deviation (ppm)	0.57	0.80	1.08	1.41
Result	Complies			

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(°C)	5755 MHz			
	0 Minute	2 Minute	5 Minute	10 Minute
-10	5755.0021	5755.0008	5754.9992	5754.9973
0	5755.0007	5754.9994	5754.9978	5754.9959
10	5754.9994	5754.9981	5754.9965	5754.9946
20	5754.9982	5754.9969	5754.9953	5754.9934
30	5754.9967	5754.9954	5754.9938	5754.9919
40	5754.9952	5754.9939	5754.9923	5754.9904
50	5754.9941	5754.9929	5754.9914	5754.9893
60	5754.9935	5754.9922	5754.9906	5754.9887
Max. Deviation (MHz)	0.0065	0.0078	0.0094	0.0113
Max. Deviation (ppm)	1.13	1.36	1.63	1.96
Result	Complies			

4.9. Antenna Requirements

4.9.1. Limit

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

4.9.2. Antenna Connector Construction

Please refer to section 3.3 in this test report; antenna connector complied with the requirements.

5. LIST OF MEASURING EQUIPMENTS

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMI Test Receiver	R&S	ESCS 30	100355	9kHz ~ 2.75GHz	Apr. 22, 2015	Conduction (CO01-CB)
LISN	F.C.C.	FCC-LISN-50-16-2	04083	150kHz ~ 100MHz	Dec. 02, 2014	Conduction (CO01-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Dec. 02, 2014	Conduction (CO01-CB)
COND Cable	Woken	Cable	01	150kHz ~ 30MHz	Dec. 03, 2014	Conduction (CO01-CB)
Software	Audix	E3	5.410e	-	N.C.R.	Conduction (CO01-CB)
BILOG ANTENNA	Schaffner	CBL6112D	22021	20MHz ~ 2GHz	May 06, 2015	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Oct. 28, 2014	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 21, 2015	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Feb. 24, 2015	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 12, 2015	Radiation (03CH01-CB)
Pre-Amplifier	WM	TF-130N-R1	923365	26GHz ~ 40GHz	Nov. 25, 2014	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Nov. 06, 2014	Radiation (03CH01-CB)
EMI Receiver	Agilent	N9038A	MY52260123	9kHz ~ 8.4GHz	Jan. 21, 2015	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-1	N/A	30 MHz ~ 1 GHz	Nov. 15, 2014	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-1	N/A	1 GHz ~ 40 GHz	Nov. 15, 2014	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-2	N/A	1 GHz ~ 40 GHz	Nov. 15, 2014	Radiation (03CH01-CB)
Loop Antenna	Teseq	HLA 6120	24155	9kHz - 30 MHz	Mar. 12, 2015*	Radiation (03CH01-CB)
Spectrum analyzer	R&S	FSP40	100979	9kHz~40GHz	Dec. 12, 2014	Conducted (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz – 26.5 GHz	Nov. 15, 2014	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-8	1 GHz – 26.5 GHz	Nov. 15, 2014	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz – 26.5 GHz	Nov. 15, 2014	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz – 26.5 GHz	Nov. 15, 2014	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz – 26.5 GHz	Nov. 15, 2014	Conducted (TH01-CB)

Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 03, 2014	Conducted (TH01-CB)

Note: Calibration Interval of instruments listed above is one year.

"*" Calibration Interval of instruments listed above is two years.

NCR means Non-Calibration required.

6. MEASUREMENT UNCERTAINTY

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.2 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%