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FCC RADIO TEST REPORT

Applicant's company	**ZEBRA TECHNOLOGIES CORPORATION**
Applicant Address	One Motorola Plaza Holtsville, NY 11742 USA
FCC ID	**H9PAP7562**
Manufacturer's company	**Wistron NeWeb Corporation**
Manufacturer Address	20 Park Avenue II, Hsinchu Science Park, Hsinchu 308 Taiwan

Product Name	802.11 abgn/ac Access Point
Brand Name	ZEBRA
Model No.	AP-7562
Test Rule Part(s)	47 CFR FCC Part 15 Subpart E § 15.407
Test Freq. Range	5150 ~ 5250 MHz / 5725 ~ 5850 MHz
Received Date	Dec. 04, 2014
Final Test Date	Mar. 02, 2015
Submission Type	Original Equipment

Statement

Test result included is for the IEEE 802.11n and IEEE 802.11a/ac 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, KDB644545 D03 v01.**

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
FR4D0448AB	Rev. 01	Initial issue of report	Mar. 26, 2015

1. VERIFICATION OF COMPLIANCE

Product Name	:	802.11 abgn/ac Access Point
Brand Name	:	ZEBRA
Model No.	:	AP-7562
Applicant	:	ZEBRA TECHNOLOGIES CORPORATION
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 Dec. 04, 2014 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	4.14 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	0.10 dB
4.5	15.407(a)	Power Spectral Density	Complies	-
4.6	15.407(b)	Radiated Emissions	Complies	1.17 dB
4.7	15.407(b)	Band Edge Emissions	Complies	1.00 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 (1TX,2TX,3TX/1RX,2RX,3RX)
Radio Type	Intentional Transceiver
Power Type	From PoE
Modulation	IEEE 802.11a: OFDM IEEE 802.11n/ac: see the below table
Data Modulation	IEEE 802.11a/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) IEEE 802.11ac: OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)
Data Rate (Mbps)	IEEE 802.11a: OFDM (6/9/12/18/24/36/48/54) IEEE 802.11n/ac: see the below table
Frequency Range	5150 ~ 5250 MHz / 5725 ~ 5850 MHz
Channel Number	9 for 20MHz bandwidth ; 4 for 40MHz bandwidth 2 for 80MHz bandwidth
Channel Band Width (99%)	**For Band 1 and Band 4 (Master and client without radar detection):** **<For Non-Beamforming Mode>** Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 1TX) For outdoor use Band 1: IEEE 802.11ac MCS0/Nss1 (VHT20): 18.12 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 37.00 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.00 MHz Band 4: IEEE 802.11ac MCS0/Nss1 (VHT20): 21.24 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 37.20 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.00 MHz Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 1TX) For indoor use Band 1: IEEE 802.11ac MCS0/Nss1 (VHT20): 22.08 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 47.80 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.00 MHz Mode 2: (Ant.8 Panel antenna / 5.1dBi / 1TX) Band 1: IEEE 802.11ac MCS0/Nss1 (VHT20): 27.00 MHz

	IEEE 802.11ac MCS0/Nss1 (VHT40): 41.00 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.00 MHz Band 4: IEEE 802.11ac MCS0/Nss1 (VHT20): 26.04 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 37.00 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.00 MHz Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 1TX) Band 1: IEEE 802.11ac MCS0/Nss1 (VHT20): 22.32 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 38.20 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.40 MHz Band 4: IEEE 802.11ac MCS0/Nss1 (VHT20): 20.28 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 37.00 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.00 MHz <For STBC Mode> Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX) For outdoor use Band 1: IEEE 802.11ac MCS0/Nss1 (VHT20): 18.00 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 36.80 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.00 MHz Band 4: IEEE 802.11ac MCS0/Nss1 (VHT20): 22.92 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 37.00 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.00 MHz Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX) For outdoor use Band 1: IEEE 802.11ac MCS0/Nss1 (VHT20): 17.88 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 36.80 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.00 MHz Band 4: IEEE 802.11ac MCS0/Nss1 (VHT20): 22.08 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 37.00 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.00 MHz

	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX) For indoor use Band 1: IEEE 802.11ac MCS0/Nss1 (VHT20): 22.80 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 41.40 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.00 MHz Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX) For indoor use Band 1: IEEE 802.11ac MCS0/Nss1 (VHT20): 18.84 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 38.80 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.00 MHz Mode 2: (Ant.8 Panel antenna / 5.1dBi / 2TX) Band 1: IEEE 802.11ac MCS0/Nss1 (VHT20): 18.84 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 37.40 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.00 MHz Band 4: IEEE 802.11ac MCS0/Nss1 (VHT20): 19.68 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 36.80 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.00 MHz Mode 2: (Ant.8 Panel antenna / 5.1dBi / 3TX) Band 1: IEEE 802.11ac MCS0/Nss1 (VHT20): 18.84 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 37.20 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.00 MHz Band 4: IEEE 802.11ac MCS0/Nss1 (VHT20): 18.60 MHz IEEE 802.11ac MCS0/Nss1 (VHT40): 37.00 MHz IEEE 802.11ac MCS0/Nss1 (VHT80): 76.00 MHz Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 2TX) Band 1: IEEE 802.11ac MCS0/Nss2 (VHT20): 20.40 MHz IEEE 802.11ac MCS0/Nss2 (VHT40): 37.40 MHz IEEE 802.11ac MCS0/Nss2 (VHT80): 76.00 MHz Band 4: IEEE 802.11ac MCS0/Nss2 (VHT20): 20.76 MHz

	IEEE 802.11ac MCS0/Nss2 (VHT40): 36.80 MHz IEEE 802.11ac MCS0/Nss2 (VHT80): 76.00 MHz Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 3TX) Band 1: IEEE 802.11ac MCS0/Nss2 (VHT20): 17.88 MHz IEEE 802.11ac MCS0/Nss2 (VHT40): 37.00 MHz IEEE 802.11ac MCS0/Nss2 (VHT80): 76.00 MHz Band 4: IEEE 802.11ac MCS0/Nss2 (VHT20): 18.12 MHz IEEE 802.11ac MCS0/Nss2 (VHT40): 37.00 MHz IEEE 802.11ac MCS0/Nss2 (VHT80): 76.00 MHz
Maximum Conducted Output Power	**For Band 1 and Band 4 (Master and client without radar detection):** **<For Non-Beamforming Mode>** Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 1TX) For outdoor use Band 1: IEEE 802.11a: 15.25 dBm IEEE 802.11n MCS0 (HT20): 15.26 dBm IEEE 802.11n MCS0 (HT40): 15.30 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 15.29 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 15.28 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 15.27 dBm Band 4: IEEE 802.11a: 21.97 dBm IEEE 802.11n MCS0 (HT20): 21.95 dBm IEEE 802.11n MCS0 (HT40): 17.94 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 21.98 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 17.91 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 16.60 dBm Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX) For outdoor use Band 1: IEEE 802.11a: 15.29 dBm IEEE 802.11n MCS0 (HT20): 15.30 dBm IEEE 802.11n MCS0 (HT40): 15.22 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 15.30 dBm

	IEEE 802.11ac MCS0/Nss1 (VHT40): 15.31 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 15.28 dBm Band 4: IEEE 802.11a: 24.86 dBm IEEE 802.11n MCS0 (HT20): 24.91 dBm IEEE 802.11n MCS0 (HT40): 19.90 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 24.86 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 19.93 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 17.89 dBm Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX) For outdoor use Band 1: IEEE 802.11a: 15.21 dBm IEEE 802.11n MCS0 (HT20): 15.20 dBm IEEE 802.11n MCS0 (HT40): 15.28 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 15.19 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 15.26 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 15.28 dBm Band 4: IEEE 802.11a: 24.02 dBm IEEE 802.11n MCS0 (HT20): 23.88 dBm IEEE 802.11n MCS0 (HT40): 21.87 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 24.03 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 21.96 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 19.26 dBm Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 1TX) For indoor use Band 1: IEEE 802.11a: 21.98 dBm IEEE 802.11n MCS0 (HT20): 21.96 dBm IEEE 802.11n MCS0 (HT40): 21.96 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 21.96 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 21.94 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 17.26 dBm Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX) For indoor use Band 1: IEEE 802.11a: 24.84 dBm

	IEEE 802.11n MCS0 (HT20): 24.92 dBm IEEE 802.11n MCS0 (HT40): 23.48 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 24.83 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 23.46 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 19.72 dBm Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX) For indoor use Band 1: IEEE 802.11a: 23.83 dBm IEEE 802.11n MCS0 (HT20): 23.84 dBm IEEE 802.11n MCS0 (HT40): 24.66 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 23.81 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 24.59 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 20.61 dBm Mode 2: (Ant.8 Panel antenna / 5.1dBi / 1TX) Band 1: IEEE 802.11a: 21.91 dBm IEEE 802.11n MCS0 (HT20): 21.89 dBm IEEE 802.11n MCS0 (HT40): 21.85 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 21.88 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 21.84 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 17.03 dBm Band 4: IEEE 802.11a: 21.96 dBm IEEE 802.11n MCS0 (HT20): 21.97 dBm IEEE 802.11n MCS0 (HT40): 18.51 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 21.92 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 18.34 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 16.15 dBm Mode 2: (Ant.8 Panel antenna / 5.1dBi / 2TX) Band 1: IEEE 802.11a: 24.93 dBm IEEE 802.11n MCS0 (HT20): 24.94 dBm IEEE 802.11n MCS0 (HT40): 23.84 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 24.99 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 23.78 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 17.73 dBm

	Band 4: IEEE 802.11a: 24.67 dBm IEEE 802.11n MCS0 (HT20): 24.68 dBm IEEE 802.11n MCS0 (HT40): 18.70 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 24.66 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 18.99 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 18.29 dBm Mode 2: (Ant.8 Panel antenna / 5.1dBi / 3TX) Band 1: IEEE 802.11a: 26.41 dBm IEEE 802.11n MCS0 (HT20): 26.42 dBm IEEE 802.11n MCS0 (HT40): 23.88 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 26.33 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 24.09 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 18.11 dBm Band 4: IEEE 802.11a: 24.44 dBm IEEE 802.11n MCS0 (HT20): 24.44 dBm IEEE 802.11n MCS0 (HT40): 20.32 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 24.46 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 20.36 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 19.84 dBm Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 1TX) Band 1: IEEE 802.11a: 21.52 dBm IEEE 802.11n MCS0 (HT20): 21.43 dBm IEEE 802.11n MCS0 (HT40): 19.65 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 21.49 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 19.53 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 14.16 dBm Band 4: IEEE 802.11a: 20.78 dBm IEEE 802.11n MCS0 (HT20): 20.78 dBm IEEE 802.11n MCS0 (HT40): 16.59 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 20.84 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 16.58 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 13.73 dBm

	Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 2TX) Band 1: IEEE 802.11a: 24.72 dBm IEEE 802.11n MCS0 (HT20): 24.62 dBm IEEE 802.11n MCS0 (HT40): 21.99 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 24.67 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 22.00 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 14.83 dBm Band 4: IEEE 802.11a: 23.65 dBm IEEE 802.11n MCS0 (HT20): 23.54 dBm IEEE 802.11n MCS0 (HT40): 17.47 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 23.55 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 17.48 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 16.30 dBm Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 3TX) Band 1: IEEE 802.11a: 23.40 dBm IEEE 802.11n MCS0 (HT20): 23.43 dBm IEEE 802.11n MCS0 (HT40): 22.23 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 23.39 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 22.16 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 14.17 dBm Band 4: IEEE 802.11a: 23.57 dBm IEEE 802.11n MCS0 (HT20): 23.42 dBm IEEE 802.11n MCS0 (HT40): 18.93 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 23.54 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 19.06 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 14.66 dBm <For Beamforming Mode> Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX) For outdoor use Band 1: IEEE 802.11a: 12.28 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 12.29 dBm

	IEEE 802.11ac MCS0/Nss1 (VHT40): 12.30 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 12.09 dBm Band 4: IEEE 802.11a: 24.62 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 24.70 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 19.60 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 17.89 dBm Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX) For outdoor use Band 1: IEEE 802.11a: 10.34 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 10.34 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 10.26 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 9.99 dBm Band 4: IEEE 802.11a: 23.77 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 23.78 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 20.48 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 18.60 dBm Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX) For indoor use Band 1: IEEE 802.11a: 24.84 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 24.67 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 24.85 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 20.23 dBm Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX) For indoor use Band 1: IEEE 802.11a: 23.83 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 23.78 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 23.59 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 20.85 dBm Mode 2: (Ant.8 Panel antenna / 5.1dBi / 2TX) Band 1: IEEE 802.11a: 24.97 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 24.97 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 23.42 dBm

	IEEE 802.11ac MCS0/Nss1 (VHT80): 19.27 dBm Band 4: IEEE 802.11a: 24.43 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 24.63 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 20.66 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 17.46 dBm Mode 2: (Ant.8 Panel antenna / 5.1dBi / 3TX) Band 1: IEEE 802.11a: 24.70 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 24.71 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 24.19 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 17.99 dBm Band 4: IEEE 802.11a: 23.39 dBm IEEE 802.11ac MCS0/Nss1 (VHT20): 23.35 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 20.69 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 18.52 dBm Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 2TX) Band 1: IEEE 802.11a: 22.84 dBm IEEE 802.11ac MCS0/Nss2 (VHT20): 22.77 dBm IEEE 802.11ac MCS0/Nss2 (VHT40): 21.71 dBm IEEE 802.11ac MCS0/Nss2 (VHT80): 14.42 dBm Band 4: IEEE 802.11a: 23.00 dBm IEEE 802.11ac MCS0/Nss2 (VHT20): 23.05 dBm IEEE 802.11ac MCS0/Nss2 (VHT40): 16.68 dBm IEEE 802.11ac MCS0/Nss2 (VHT80): 16.03 dBm Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 3TX) Band 1: IEEE 802.11a: 22.65 dBm IEEE 802.11ac MCS0/Nss2 (VHT20): 22.54 dBm IEEE 802.11ac MCS0/Nss2 (VHT40): 21.86 dBm IEEE 802.11ac MCS0/Nss2 (VHT80): 14.17 dBm Band 4: IEEE 802.11a: 21.56 dBm

	IEEE 802.11ac MCS0/Nss2 (VHT20): 21.49 dBm IEEE 802.11ac MCS0/Nss2 (VHT40): 18.74 dBm IEEE 802.11ac MCS0/Nss2 (VHT80): 14.54 dBm <For STBC Mode> Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX) For outdoor use Band 1: IEEE 802.11ac MCS0/Nss1 (VHT20): 15.24 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 15.23 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 15.25 dBm Band 4: IEEE 802.11ac MCS0/Nss1 (VHT20): 24.82 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 20.11 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 18.01 dBm Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX) For outdoor use Band 1: IEEE 802.11ac MCS0/Nss1 (VHT20): 15.25 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 15.29 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 15.21 dBm Band 4: IEEE 802.11ac MCS0/Nss1 (VHT20): 26.63 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 20.57 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 19.76 dBm Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX) For indoor use Band 1: IEEE 802.11ac MCS0/Nss1 (VHT20): 24.86 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 24.71 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 20.22 dBm Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX) For indoor use Band 1: IEEE 802.11ac MCS0/Nss1 (VHT20): 26.16 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 26.23 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 20.55 dBm

	Mode 2: (Ant.8 Panel antenna / 5.1dBi / 2TX) Band 1: IEEE 802.11ac MCS0/Nss1 (VHT20): 24.94 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 24.02 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 19.02 dBm Band 4: IEEE 802.11ac MCS0/Nss1 (VHT20): 24.89 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 20.60 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 18.75 dBm Mode 2: (Ant.8 Panel antenna / 5.1dBi / 3TX) Band 1: IEEE 802.11ac MCS0/Nss1 (VHT20): 26.54 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 25.12 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 19.01 dBm Band 4: IEEE 802.11ac MCS0/Nss1 (VHT20): 26.26 dBm IEEE 802.11ac MCS0/Nss1 (VHT40): 20.98 dBm IEEE 802.11ac MCS0/Nss1 (VHT80): 19.38 dBm Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 2TX) Band 1: IEEE 802.11ac MCS0/Nss2 (VHT20): 24.62 dBm IEEE 802.11ac MCS0/Nss2 (VHT40): 22.61 dBm IEEE 802.11ac MCS0/Nss2 (VHT80): 16.70 dBm Band 4: IEEE 802.11ac MCS0/Nss2 (VHT20): 24.13 dBm IEEE 802.11ac MCS0/Nss2 (VHT40): 18.44 dBm IEEE 802.11ac MCS0/Nss2 (VHT80): 16.88 dBm Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 3TX) Band 1: IEEE 802.11ac MCS0/Nss2 (VHT20): 22.20 dBm IEEE 802.11ac MCS0/Nss2 (VHT40): 23.42 dBm IEEE 802.11ac MCS0/Nss2 (VHT80): 17.01 dBm Band 4: IEEE 802.11ac MCS0/Nss2 (VHT20): 23.98 dBm IEEE 802.11ac MCS0/Nss2 (VHT40): 19.92 dBm IEEE 802.11ac MCS0/Nss2 (VHT80): 17.53 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
Beamforming Function	☒ With beamforming	☐ Without beamforming
STBC Function	☒ With STBC	☐ Without STBC
LDPC Function	☒ With LDPC	☐ Without LDPC
Operating Mode	☒ Outdoor access point with client without radar detection	
	☒ Indoor access point with client without radar detection	
	☒ Fixed point-to-point access points	
	☐ Mobile and portable client devices	

Note1: The product has beamforming function for 802.11g/n/ac in 2.4GHz and 802.11a/n/ac in 5GHz.

Note2: The product has STBC and LDPC in 2TX/3TX function for 802.11n/ac in 2.4GHz and 802.11n/ac in 5GHz.

Antenna and Band width

Antenna	Single (TX)			Two (TX)			Three (TX)		
Band width Mode	20 MHz	40 MHz	80 MHz	20 MHz	40 MHz	80 MHz	20 MHz	40 MHz	80 MHz
IEEE 802.11a	V	X	X	V	X	X	V	X	X
IEEE 802.11n	V	V	X	V	V	X	V	V	X
IEEE 802.11ac	V	V	V	V	V	V	V	V	V

IEEE 11n/ac Spec.

Protocol	Number of Transmit Chains (NTX)	Data Rate / MCS
802.11n (HT20)	1,2,3	MCS 0-23
802.11n (HT40)	1,2,3	MCS 0-23
802.11ac (VHT40)	1,2,3	MCS 0-9/Nss1-3
802.11ac (VHT80)	1,2,3	MCS 0-9/Nss1-3

Note 1: IEEE Std. 802.11n modulation consists of HT20 and HT40 (HT: High Throughput). Then EUT support HT20 and HT40.

Note 2: IEEE Std. 802.11ac modulation consists of VHT20, VHT40, VHT80 and VHT160 (VHT: Very High Throughput). Then EUT supports VHT20, VHT40 in 2.4GHz and supports VHT20, VHT40, VHT80 in 5GHz.

Note 3: Modulation modes consist of below configuration:
HT20/HT40: IEEE 802.11n, VHT20/VHT40/VHT80: IEEE 802.11ac

3.2. Accessories

N/A

3.3. Table for Filed Antenna

Ant.	Brand	Zebra P/N	Antenna Type	Connector	Indoor/ Outdoor	Antenna Gain (dBi)		Cable Loss (dB)		True Gain (dBi)	
						2.4G	5G	2.4G	5G	2.4G	5G
1	Zebra	ML-5299-HPA5-01	Dipole	N Male	Indoor/ Outdoor	-	5.6	-	0.9	-	4.7
2	Zebra	ML-2452-HPAG4A6-01	Dipole	N Male	Indoor/ Outdoor	4	7.3	-	-	4	7.3
3	Laird	ML-2499-FHPA5-01R	Dipole	N Male	Indoor/ Outdoor	5.3	-	0.7	-	4.6	-
4	Zebra	ML-2499-HPA4-01	Dipole	N Male	Indoor/ Outdoor	4.5	-	0.7	-	3.8	-
5	Zebra	ML-2452-HPA6X6-036	Dipole	N Male	Indoor/ Outdoor	4	6	0.7	0.9	3.3	5.1
6	Zebra	ML-2452-HPA6-01	Dipole	N Male	Indoor/ Outdoor	5.3	6.1	-	-	5.3	6.1
7	Zebra	ML-2499-5PNL-72-N	Panel	N Male	Indoor/ Outdoor	6.5	-	-	-	6.5	-
8	Zebra	ML-2452-PNA5-01R	Panel	N Male	Indoor/ Outdoor	5.5	6	0.7	0.9	4.8	5.1
9	Zebra	ML-2452-PNL3M3-1	CROSS-POLARIZED PANEL ANTENNA*	N Female	Indoor/ Outdoor	Note 1					

Note 1:

Antenna	Antenna Gain (dBi)		Cable loss (dB)		True Gain (dBi)	
	2.4GHz	5GHz	2.4GHz	5GHz	2.4GHz	5GHz
A	9.5	9.2	0.7	0.9	8.8	8.3
B	6.6	6.8	0.7	0.9	5.9	5.9
C	9.7	9.1	0.7	0.9	9	8.2

Note 2: Ant. 1~9 are the different antenna type in the antenna list. Only the highest gain antenna was selected from each different type of antenna to test and record in this report. Ant. 6, Ant. 7 and Ant. 9 for 2.4GHz and Ant. 2, Ant. 8 and Ant. 9 for 5GHz were selected to perform the test and recorded in this report.

Note 3: *This Antenna has 3 of the same CROSS-POLARIZED PANEL ANTENNA in a single housing.

<For 2.4GHz Band>

For IEEE 802.11b/g/n/ac mode (1TX,2TX,3TX/1RX,2RX,3RX):

The EUT can support 1TX, 2TX, 3TX and 1RX, 2RX, 3RX functions.

For 1TX (Ant. 6 and Ant. 7)

Both Chain 4 and Chain 5 support transmit and receive functions, but only one of them will be used at one time.

After evaluating, Chain 5 has been evaluated to be the worst case, so it's selected to record in this test report.

For 1TX (Ant. 9)

Both Chain 4 and Chain 5 support transmit and receive functions, but only one of them will be used at one time.

After evaluating, Chain 4 has been evaluated to be the worst case, so it's selected to record in this test report.

For 2TX

Chain 4 and Chain 5 could transmit/receive simultaneously.

For 3TX

Chain 4, Chain 5 and Chain 6 could transmit/receive simultaneously.

<For 5GHz Band>

For IEEE 802.11a/n/ac mode (1TX,2TX,3TX/1RX,2RX,3RX):

The EUT can support 1TX, 2TX, 3TX and 1RX, 2RX, 3RX functions.

For 1TX (Ant. 2)

Both Chain 4 and Chain 5 support transmit and receive functions, but only one of them will be used at one time.

After evaluating, Chain 5 has been evaluated to be the worst case, so it's selected to record in this test report.

For 1TX (Ant. 8 and Ant. 9)

Both Chain 4 and Chain 5 support transmit and receive functions, but only one of them will be used at one time.

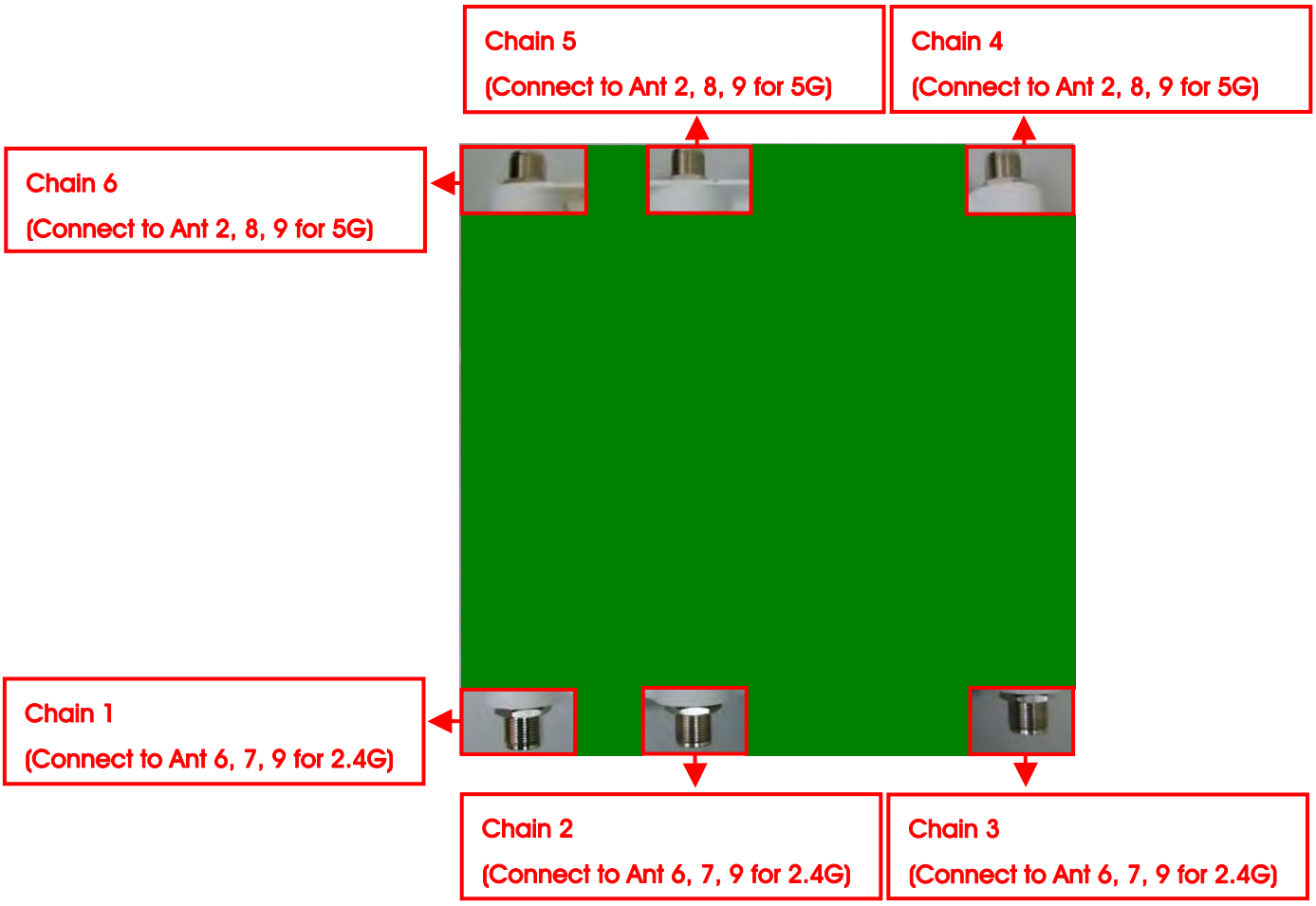
After evaluating, Chain 4 has been evaluated to be the worst case, so it's selected to record in this test report.

For 2TX

Chain 4 and Chain 5 could transmit/receive simultaneously.

For 3TX

Chain 4, Chain 5 and Chain 6 could transmit/receive simultaneously.


Chain 5
(Connect to Ant 2, 8, 9 for 5G)
Chain 4
(Connect to Ant 2, 8, 9 for 5G)
Chain 6
(Connect to Ant 2, 8, 9 for 5G)
Chain 1
(Connect to Ant 6, 7, 9 for 2.4G)
Chain 2
(Connect to Ant 6, 7, 9 for 2.4G)
Chain 3
(Connect to Ant 6, 7, 9 for 2.4G)

3.4. Table for Carrier Frequencies

There are three bandwidth systems.

For 20MHz bandwidth systems, use Channel 36, 40, 44, 48, 149, 153, 157, 161, 165.

For 40MHz bandwidth systems, use Channel 38, 46, 151, 159.

For 80MHz bandwidth systems, use Channel 42, 155.

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
	42	5210 MHz	-	-
5725~5850 MHz Band 4	149	5745 MHz	157	5785 MHz
	151	5755 MHz	159	5795 MHz
	153	5765 MHz	161	5805 MHz
	155	5775 MHz	165	5825 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	For Non-Beamforming Mode				
	11a/BPSK	Band 1&4	6Mbps	36/40/48/149/ 157/165	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	11n HT20	Band 1&4	MCS0	36/40/48/149/ 157/165	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	11n HT40	Band 1&4	MCS0	38/46/151/159	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/ 157/165	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)

	For Beamforming Mode				
	11a/BPSK	Band 1&4	6Mbps	36/40/48/149/157/165	4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	11ac VHT20	Band 1&4	MCS0/Nss1 MCS0/Nss2	36/40/48/149/157/165	4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	11ac VHT40	Band 1&4	MCS0/Nss1 MCS0/Nss2	38/46/151/159	4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	11ac VHT80	Band 1&4	MCS0/Nss1 MCS0/Nss2	42/155	4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	For STBC Mode				
	11ac VHT20	Band 1&4	MCS0/Nss1 MCS0/Nss2	36/40/48/149/157/165	4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	11ac VHT40	Band 1&4	MCS0/Nss1 MCS0/Nss2	38/46/151/159	4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	11ac VHT80	Band 1&4	MCS0/Nss1 MCS0/Nss2	42/155	4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
Power Spectral Density	For Non-Beamforming Mode				
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/157/165	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)

	For Beamforming Mode				
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/ 157/165	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
			MCS0/Nss2		
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
			MCS0/Nss2		
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
			MCS0/Nss2		
	For STBC Mode				
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/ 157/165	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
			MCS0/Nss2		
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
			MCS0/Nss2		
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
			MCS0/Nss2		

26dB Spectrum Bandwidth & 99% Occupied Bandwidth Measurement	For Non-Beamforming Mode				
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/157/165	4 (Ant. 8, 9) 5 (Ant. 2)
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	4 (Ant. 8, 9) 5 (Ant. 2)
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	4 (Ant. 8, 9) 5 (Ant. 2)
	For STBC Mode				
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/157/165	4+5 (Ant.2, 8. 9)
			MCS0/Nss2		4+5+6 (Ant.2, 8. 9)
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	4+5 (Ant.2, 8. 9)
			MCS0/Nss2		4+5+6 (Ant.2, 8. 9)
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	4+5 (Ant.2, 8. 9)
			MCS0/Nss2		4+5+6 (Ant.2, 8. 9)
6dB Spectrum Bandwidth Measurement	For Non-Beamforming Mode				
	11ac VHT20	Band 4	MCS0/Nss1	149/157/165	4 (Ant. 8, 9) 5 (Ant. 2)
	11ac VHT40	Band 4	MCS0/Nss1	151/159	4 (Ant. 8, 9) 5 (Ant. 2)
	11ac VHT80	Band 4	MCS0/Nss1	155	4 (Ant. 8, 9) 5 (Ant. 2)
	For STBC Mode				
	11ac VHT20	Band 4	MCS0/Nss1	149/157/165	4+5 (Ant.2, 8. 9)
			MCS0/Nss2		4+5+6 (Ant.2, 8. 9)
	11ac VHT40	Band 4	MCS0/Nss1	151/159	4+5 (Ant.2, 8. 9)
			MCS0/Nss2		4+5+6 (Ant.2, 8. 9)
	11ac VHT80	Band 4	MCS0/Nss1	155	4+5 (Ant.2, 8. 9)
			MCS0/Nss2		4+5+6 (Ant.2, 8. 9)
Radiated Emission Below 1GHz	Normal Link		-	-	-

Radiated Emission Above 1GHz	For Non-Beamforming Mode				
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/ 157/165	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	For Beamforming Mode				
	11ac VHT20	Band 1&4	MCS0/Nss1 MCS0/Nss2	36/40/48/149/ 157/165	4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	11ac VHT40	Band 1&4	MCS0/Nss1 MCS0/Nss2	38/46/151/159	4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	11ac VHT80	Band 1&4	MCS0/Nss1 MCS0/Nss2	42/155	4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	For STBC Mode				
	11ac VHT20	Band 1&4	MCS0/Nss1 MCS0/Nss2	36/40/48/149/ 157/165	4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	11ac VHT40	Band 1&4	MCS0/Nss1 MCS0/Nss2	38/46/151/159	4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	11ac VHT80	Band 1&4	MCS0/Nss1 MCS0/Nss2	42/155	4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
Band Edge Emission	For Non-Beamforming Mode				
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/ 157/165	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)

	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	4 (Ant. 8, 9) 5 (Ant. 2) 4+5 (Ant.2, 8. 9) 4+5+6 (Ant.2, 8. 9)
	For Beamforming Mode				
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/157/165	4+5 (Ant.2, 8. 9)
			MCS0/Nss2		4+5+6 (Ant.2, 8. 9)
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	4+5 (Ant.2, 8. 9)
			MCS0/Nss2		4+5+6 (Ant.2, 8. 9)
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	4+5 (Ant.2, 8. 9)
			MCS0/Nss2		4+5+6 (Ant.2, 8. 9)
	For STBC Mode				
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/157/165	4+5 (Ant.2, 8. 9)
			MCS0/Nss2		4+5+6 (Ant.2, 8. 9)
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	4+5 (Ant.2, 8. 9)
			MCS0/Nss2		4+5+6 (Ant.2, 8. 9)
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	4+5 (Ant.2, 8. 9)
			MCS0/Nss2		4+5+6 (Ant.2, 8. 9)
Frequency Stability	20 MHz	Band 1&4	-	40/157	4+5+6
	40 MHz	Band 1&4	-	38/151	4+5+6
	80 MHz	Band 1&4	-	42/155	4+5+6

Note 1: VHT20/VHT40 covers HT20/HT40, due to same modulation.

Note 2: The EUT only can standing use.

Note 3: The PoE is for measurement only, would not be marketed.

The PoE information as below:

Power	Brand	Model	Rating
PoE	MOTOROLA	AP-PSBIAS-7161	Input: 100-240Vac, 50/60Hz, 1.0A Output: 55Vdc

Note 4: Point-to-Multiple covers point-to-point.

The following test modes were performed for all tests:

Ant. 9 is the higher gain antenna, so it was selected to perform Conducted Emission test and Radiated Emission below 1GHz test:

For Conducted Emission test:

Test Mode 1: Normal Link - EUT standing + PoE + Ant.9

For Radiated Emission below 1GHz test:

Test Mode 1: Normal Link - EUT standing + PoE + Ant.9

For Radiated Emission above 1GHz test:

Test Mode 1: CTX - EUT standing + Ant. 2

Test Mode 2: CTX - EUT standing + Ant. 8

Test Mode 3: CTX - EUT standing + Ant. 9

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

The EUT could be applied with 2.4GHz WLAN function and 5GHz WLAN function; therefore Co-location Maximum Permissible Exposure (Please refer to FA4D0488) and Radiated Emission Co-location (please refer to Appendix B) tests are added for simultaneously transmit between 2.4GHz WLAN function and 5GHz WLAN 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 Supporting Units

For Test Site No: 03CH01-CB (For Below 1GHz)

Support Unit	Brand	Model	FCC ID
Notebook	DELL	M1330	E2K4965AGNM
Notebook	DELL	M1340	E2K4965AGNM
Notebook	DELL	E6430	DoC
Notebook	DELL	E6430	DoC
PoE	MOTOROLA	AP-PSBIAS-7161	DoC

For Test Site No: 03CH01-CB (For Above 1GHz)

For Non-beamforming and STBC Mode

Support Unit	Brand	Model	FCC ID
Notebook	DELL	M1330	E2K4965AGNM
PoE	MOTOROLA	AP-PSBIAS-7161	DoC

For beamforming Mode

Support Unit	Brand	Model	FCC ID
Notebook	DELL	M1330	E2K4965AGNM
Notebook	DELL	M1340	E2K4965AGNM
WLAN ac Dongle	Netgear	A6200	PY312200200
PoE	MOTOROLA	AP-PSBIAS-7161	DoC

For Test Site No: CO01-CB

Support Unit	Brand	Model	FCC ID
Notebook	DELL	E6430	DoC
Notebook	DELL	E6430	DoC
Notebook	DELL	E6430	DoC
Notebook	DELL	E6430	DoC
PoE	MOTOROLA	AP-PSBIAS-7161	DoC

For Test Site No: TH01-CB

Support Unit	Brand	Model	FCC ID
Notebook	DELL	E6220	DoC
PoE	MOTOROLA	AP-PSBIAS-7161	DoC

3.8. 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 Band 1 and Band 4 (Master and client without radar detection):

<For Non-Beamforming Mode>

Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 1TX) / For outdoor use

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	64	64	64	67	92	91
802.11n MCS0 HT20	64	64	64	67	92	71
802.11ac MCS0/Nss1 VHT20	64	64	64	67	92	71
Mode	NCB: 40MHz					
	5190 MHz		5230 MHz	5755 MHz		5795 MHz
802.11n MCS0 HT40	64		63	61		74
802.11ac MCS0/Nss1 VHT40	64		63	61		74
Mode	NCB: 80MHz					
802.11ac MCS0/Nss1 VHT80	5210 MHz			5775 MHz		
	65			66		

Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX) / For outdoor use

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	52	52	52	68	90	92
802.11n MCS0 HT20	52	52	52	68	90	92
802.11ac MCS0/Nss1 VHT20	52	52	52	68	90	92
Mode	NCB: 40MHz					
	5190 MHz		5230 MHz	5755 MHz		5795 MHz
802.11n MCS0 HT40	51		51	66		70
802.11ac MCS0/Nss1 VHT40	51		51	66		70
Mode	NCB: 80MHz					
802.11ac MCS0/Nss1 VHT80	5210 MHz			5775 MHz		
	52			62		

Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX) / For outdoor use

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	46	46	46	66	80	67
802.11n MCS0 HT20	46	46	46	66	80	67
802.11ac MCS0/Nss1 VHT20	46	46	46	66	80	67
Mode	NCB: 40MHz					
	5190 MHz		5230 MHz	5755 MHz		5795 MHz
802.11n MCS0 HT40	46		45	59		71
802.11ac MCS0/Nss1 VHT40	46		46	59		71
Mode	NCB: 80MHz					
802.11ac MCS0/Nss1 VHT80	5210 MHz			5775 MHz		
	46			60		

Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 1TX) / For indoor use

Test Software Version	Mtool_2.0.1.0		
Mode	Test Frequency (MHz)		
	NCB: 20MHz		
	5180 MHz	5200 MHz	5240 MHz
802.11a	83	92	92
802.11n MCS0 HT20	83	92	92
802.11ac MCS0/Nss1 VHT20	83	92	92
Mode	NCB: 40MHz		
	5190 MHz	5230 MHz	
802.11n MCS0 HT40	76	92	
802.11ac MCS0/Nss1 VHT40	76	92	
Mode	NCB: 80MHz		
802.11ac MCS0/Nss1 VHT80	5210 MHz		
	72		

Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX) / For indoor use

Test Software Version	Mtool_2.0.1.0		
Mode	Test Frequency (MHz)		
	NCB: 20MHz		
	5180 MHz	5200 MHz	5240 MHz
802.11a	82	92	85
802.11n MCS0 HT20	82	92	85
802.11ac MCS0/Nss1 VHT20	82	92	85
Mode	NCB: 40MHz		
	5190 MHz	5230 MHz	
802.11n MCS0 HT40	71	86	
802.11ac MCS0/Nss1 VHT40	71	86	
Mode	NCB: 80MHz		
802.11ac MCS0/Nss1 VHT80	5210 MHz		
	71		

Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX) / For indoor use

Test Software Version	Mtool_2.0.1.0		
Mode	Test Frequency (MHz)		
	NCB: 20MHz		
	5180 MHz	5200 MHz	5240 MHz
802.11a	77	80	80
802.11n MCS0 HT20	77	80	80
802.11ac MCS0/Nss1 VHT20	77	80	80
Mode	NCB: 40MHz		
	5190 MHz	5230 MHz	
802.11n MCS0 HT40	65	83	
802.11ac MCS0/Nss1 VHT40	65	83	
Mode	NCB: 80MHz		
802.11ac MCS0/Nss1 VHT80	5210 MHz		
	67		

Mode 2: (Ant.8 Panel antenna / 5.1dBi / 1TX)

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	81	91	90	69	92	70
802.11n MCS0 HT20	81	91	90	69	92	70
802.11ac MCS0/Nss1 VHT20	81	91	90	69	92	70
Mode	NCB: 40MHz					
	5190 MHz		5230 MHz	5755 MHz		5795 MHz
802.11n MCS0 HT40	73		88	62		73
802.11ac MCS0/Nss1 VHT40	73		88	62		73
Mode	NCB: 80MHz					
802.11ac MCS0/Nss1 VHT80	5210 MHz			5775 MHz		
	71			65		

Mode 2: (Ant.8 Panel antenna / 5.1dBi / 2TX)

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	79	89	89	62	88	66
802.11n MCS0 HT20	79	89	89	62	88	66
802.11ac MCS0/Nss1 VHT20	79	89	89	62	88	66
Mode	NCB: 40MHz					
	5190 MHz		5230 MHz	5755 MHz		5795 MHz
802.11n MCS0 HT40	68		85	59		62
802.11ac MCS0/Nss1 VHT40	68		85	59		62
Mode	NCB: 80MHz					
802.11ac MCS0/Nss1 VHT80	5210 MHz			5775 MHz		
	60			60		

Mode 2: (Ant.8 Panel antenna / 5.1dBi / 3TX)

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	75	82	87	60	80	65
802.11n MCS0 HT20	75	82	87	60	80	65
802.11ac MCS0/Nss1 VHT20	75	82	87	60	80	65
Mode	NCB: 40MHz					
	5190 MHz		5230 MHz	5755 MHz		5795 MHz
802.11n MCS0 HT40	63		79	57		62
802.11ac MCS0/Nss1 VHT40	63		79	57		62
Mode	NCB: 80MHz					
802.11ac MCS0/Nss1 VHT80	5210 MHz			5775 MHz		
	55			60		

Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 1TX)

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	77	91	89	64	90	69
802.11n MCS0 HT20	77	91	89	64	90	69
802.11ac MCS0/Nss1 VHT20	77	91	89	64	90	69
Mode	NCB: 40MHz					
	5190 MHz		5230 MHz	5755 MHz		5795 MHz
802.11n MCS0 HT40	70		85	61		70
802.11ac MCS0/Nss1 VHT40	70		85	61		70
Mode	NCB: 80MHz					
802.11ac MCS0/Nss1 VHT80	5210 MHz			5775 MHz		
	65			63		

Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 2TX)

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	77	88	91	62	87	65
802.11n MCS0 HT20	77	88	91	62	87	65
802.11ac MCS0/Nss1 VHT20	77	88	91	62	87	65
Mode	NCB: 40MHz					
	5190 MHz	5230 MHz		5755 MHz	5795 MHz	
802.11n MCS0 HT40	71	82		58	61	
802.11ac MCS0/Nss1 VHT40	71	82		58	61	
Mode	NCB: 80MHz					
802.11ac MCS0/Nss1 VHT80	5210 MHz			5775 MHz		
	54			59		

Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 3TX)

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	71	78	80	60	80	63
802.11n MCS0 HT20	71	78	80	60	80	63
802.11ac MCS0/Nss1 VHT20	71	78	80	60	80	63
Mode	NCB: 40MHz					
	5190 MHz	5230 MHz		5755 MHz	5795 MHz	
802.11n MCS0 HT40	59	76		53	61	
802.11ac MCS0/Nss1 VHT40	59	76		53	61	
Mode	NCB: 80MHz					
802.11ac MCS0/Nss1 VHT80	5210 MHz			5775 MHz		
	43			46		

<For Beamforming Mode>

Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX) / For outdoor use

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	39	38	39	66	91	70
802.11ac MCS0/Nss1 VHT20	39	38	39	66	91	70
Mode	NCB: 40MHz					
802.11ac MCS0/Nss1 VHT40	5190 MHz		5230 MHz		5755 MHz	5795 MHz
	39		38		64	69
Mode	NCB: 80MHz					
802.11ac MCS0/Nss1 VHT80	5210 MHz				5775 MHz	
	40				62	

Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX) / For outdoor use

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	26	26	26	62	79	66
802.11ac MCS0/Nss1 VHT20	26	26	26	62	79	66
Mode	NCB: 40MHz					
802.11ac MCS0/Nss1 VHT40	5190 MHz		5230 MHz		5755 MHz	5795 MHz
	26		26		59	65
Mode	NCB: 80MHz					
802.11ac MCS0/Nss1 VHT80	5210 MHz				5775 MHz	
	26				58	

Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX) / For indoor use

Test Software Version	Mtool_2.0.1.0		
Mode	Test Frequency (MHz)		
	NCB: 20MHz		
	5180 MHz	5200 MHz	5240 MHz
802.11a	82	92	77
802.11ac MCS0/Nss1 VHT20	82	91	77
Mode	NCB: 40MHz		
802.11ac MCS0/Nss1 VHT40	5190 MHz	5230 MHz	
	71	92	
Mode	NCB: 80MHz		
802.11ac MCS0/Nss1 VHT80	5210 MHz		
	73		

Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX) / For indoor use

Test Software Version	Mtool_2.0.1.0		
Mode	Test Frequency (MHz)		
	NCB: 20MHz		
	5180 MHz	5200 MHz	5240 MHz
802.11a	77	79	80
802.11ac MCS0/Nss1 VHT20	77	79	80
Mode	NCB: 40MHz		
802.11ac MCS0/Nss1 VHT40	5190 MHz	5230 MHz	
	68	79	
Mode	NCB: 80MHz		
802.11ac MCS0/Nss1 VHT80	5210 MHz		
	68		

Mode 2: (Ant.8 Panel antenna / 5.1dBi / 2TX)

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	79	89	89	62	87	68
802.11ac MCS0/Nss1 VHT20	79	89	89	62	87	68
Mode	NCB: 40MHz					
802.11ac MCS0/Nss1 VHT40	5190 MHz		5230 MHz		5755 MHz	5795 MHz
	64		83		58	69
Mode	NCB: 80MHz					
802.11ac MCS0/Nss1 VHT80	5210 MHz				5775 MHz	
	66				57	

Mode 2: (Ant.8 Panel antenna / 5.1dBi / 3TX)

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	69	75	81	60	75	65
802.11ac MCS0/Nss1 VHT20	69	75	81	60	75	65
Mode	NCB: 40MHz					
802.11ac MCS0/Nss1 VHT40	5190 MHz		5230 MHz		5755 MHz	5795 MHz
	63		79		55	62
Mode	NCB: 80MHz					
802.11ac MCS0/Nss1 VHT80	5210 MHz				5775 MHz	
	54				54	

Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 2TX)

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	73	84	85	60	85	65
802.11ac MCS0/Nss2 VHT20	73	84	85	60	85	65
Mode	NCB: 40MHz					
802.11ac MCS0/Nss2 VHT40	5190 MHz		5230 MHz		5755 MHz	5795 MHz
	68		81		56	59
Mode	NCB: 80MHz					
802.11ac MCS0/Nss2 VHT80	5210 MHz				5775 MHz	
	52				58	

Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 3TX)

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	70	75	77	60	72	62
802.11ac MCS0/Nss2 VHT20	70	75	77	60	72	62
Mode	NCB: 40MHz					
802.11ac MCS0/Nss2 VHT40	5190 MHz		5230 MHz		5755 MHz	5795 MHz
	58		75		51	60
Mode	NCB: 80MHz					
802.11ac MCS0/Nss2 VHT80	5210 MHz				5775 MHz	
	43				45	

<For STBC Mode>

Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX) / For outdoor use

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11ac MCS0/Nss1 VHT20	52	52	52	71	92	72
Mode	NCB: 40MHz					
802.11ac MCS0/Nss1 VHT40	5190 MHz		5230 MHz		5755 MHz	5795 MHz
	51		52		64	70
Mode	NCB: 80MHz					
802.11ac MCS0/Nss1 VHT80	5210 MHz				5775 MHz	
	52				62	

Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX) / For outdoor use

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11ac MCS0/Nss1 VHT20	47	46	47	69	92	73
Mode	NCB: 40MHz					
802.11ac MCS0/Nss1 VHT40	5190 MHz		5230 MHz		5755 MHz	5795 MHz
	46		46		62	65
Mode	NCB: 80MHz					
802.11ac MCS0/Nss1 VHT80	5210 MHz				5775 MHz	
	46				62	

Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX) / For indoor use

Test Software Version	Mtool_2.0.1.0		
Mode	Test Frequency (MHz)		
	NCB: 20MHz		
	5180 MHz	5200 MHz	5240 MHz
802.11ac MCS0/Nss1 VHT20	82	92	92
Mode	NCB: 40MHz		
802.11ac MCS0/Nss1 VHT40	5190 MHz	5230 MHz	
	74	91	
Mode	NCB: 80MHz		
802.11ac MCS0/Nss1 VHT80	5210 MHz		
	73		

Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX) / For indoor use

Test Software Version	Mtool_2.0.1.0		
Mode	Test Frequency (MHz)		
	NCB: 20MHz		
	5180 MHz	5200 MHz	5240 MHz
802.11ac MCS0/Nss1 VHT20	79	89	89
Mode	NCB: 40MHz		
802.11ac MCS0/Nss1 VHT40	5190 MHz	5230 MHz	
	72	90	
Mode	NCB: 80MHz		
802.11ac MCS0/Nss1 VHT80	5210 MHz		
	68		

Mode 2: (Ant.8 Panel antenna / 5.1dBi / 2TX)

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11ac MCS0/Nss1 VHT20	79	89	89	66	89	74
Mode	NCB: 40MHz					
802.11ac MCS0/Nss1 VHT40	5190 MHz		5230 MHz		5755 MHz	5795 MHz
	69		85		63	69
Mode	NCB: 80MHz					
802.11ac MCS0/Nss1 VHT80	5210 MHz				5775 MHz	
	65				62	

Mode 2: (Ant.8 Panel antenna / 5.1dBi / 3TX)

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11ac MCS0/Nss1 VHT20	76	85	89	66	87	69
Mode	NCB: 40MHz					
802.11ac MCS0/Nss1 VHT40	5190 MHz		5230 MHz		5755 MHz	5795 MHz
	68		83		60	63
Mode	NCB: 80MHz					
802.11ac MCS0/Nss1 VHT80	5210 MHz				5775 MHz	
	59				58	

Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 2TX)

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11ac MCS0/Nss2 VHT20	78	89	91	64	90	70
Mode	NCB: 40MHz					
802.11ac MCS0/Nss2 VHT40	5190 MHz		5230 MHz		5755 MHz	5795 MHz
	66		84		59	66
Mode	NCB: 80MHz					
802.11ac MCS0/Nss2 VHT80	5210 MHz				5775 MHz	
	62				61	

Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 3TX)

Test Software Version	Mtool_2.0.1.0					
Mode	Test Frequency (MHz)					
	NCB: 20MHz					
	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11ac MCS0/Nss2 VHT20	72	76	76	64	81	68
Mode	NCB: 40MHz					
802.11ac MCS0/Nss2 VHT40	5190 MHz		5230 MHz		5755 MHz	5795 MHz
	65		81		58	65
Mode	NCB: 80MHz					
802.11ac MCS0/Nss2 VHT80	5210 MHz				5775 MHz	
	57				57	

3.9. EUT Operation during Test

For non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

For beamforming mode:

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

For Radiated Mode:

During the test, the following programs under WIN XP were executed.

The program was executed as follows:

1. During the test, the EUT operation to normal function.
2. Executed command fixed test channel under DOS.
3. Executed "Lantest.exe " to link with the remote workstation to receive and transmit packet by WLAN ac dongle and transmit duty cycle no less 98%.

For STBC mode:

The EUT was programmed to be in continuously transmitting mode.

3.10. Duty Cycle

<For Non-Beamforming Mode>

For 1TX

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11ac MCS0/Nss1 VHT20	1.900	1.950	97.44%	0.11	0.53
802.11ac MCS0/Nss1 VHT40	0.940	0.984	95.53%	0.20	1.06
802.11ac MCS0/Nss1 VHT80	0.442	0.482	91.70%	0.38	2.26

For 2TX

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11ac MCS0/Nss1 VHT20	1.930	1.950	98.97%	0.04	0.01
802.11ac MCS0/Nss1 VHT40	0.920	0.970	94.85%	0.23	1.09
802.11ac MCS0/Nss1 VHT80	0.432	0.484	89.26%	0.49	2.31

For 3TX

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11ac MCS0/Nss1 VHT20	1.930	1.950	98.97%	0.04	0.01
802.11ac MCS0/Nss1 VHT40	0.920	0.970	94.85%	0.23	1.09
802.11ac MCS0/Nss1 VHT80	0.432	0.488	88.52%	0.53	2.31

<For Beamforming Mode>

For 2TX

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11ac MCS0/Nss1 VHT20	3.700	3.800	97.37%	0.12	0.27
802.11ac MCS0/Nss1 VHT40	4.600	4.720	97.46%	0.11	0.22
802.11ac MCS0/Nss1 VHT80	5.020	5.160	97.29%	0.12	0.20

For 3TX

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11ac MCS0/Nss1 VHT20	3.820	3.940	96.95%	0.13	0.26
802.11ac MCS0/Nss1 VHT40	4.520	4.660	97.00%	0.13	0.22
802.11ac MCS0/Nss1 VHT80	4.960	5.100	97.25%	0.12	0.20

<For STBC Mode>

For 2TX

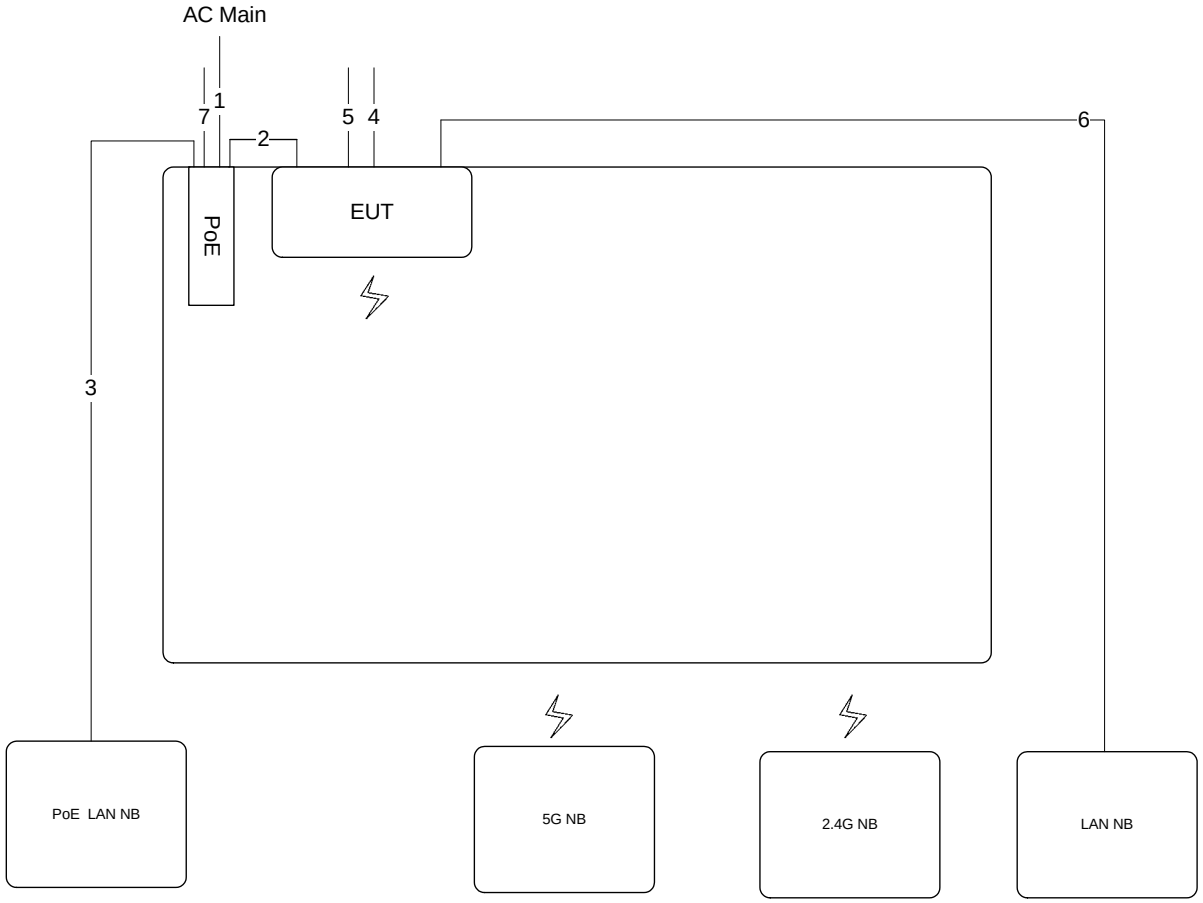
Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11ac MCS0/Nss1 VHT20	1.940	1.960	98.98%	0.04	0.01
802.11ac MCS0/Nss1 VHT40	0.920	0.970	94.85%	0.23	1.09
802.11ac MCS0/Nss1 VHT80	0.440	0.492	89.43%	0.49	2.27

For 3TX

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle (%)	Duty Factor (dB)	1/T Minimum VBW (kHz)
802.11ac MCS0/Nss1 VHT20	1.920	1.960	97.96%	0.09	0.52
802.11ac MCS0/Nss1 VHT40	0.928	0.984	94.31%	0.25	1.08
802.11ac MCS0/Nss1 VHT80	0.434	0.484	89.67%	0.47	2.30

3.11. Test Configurations

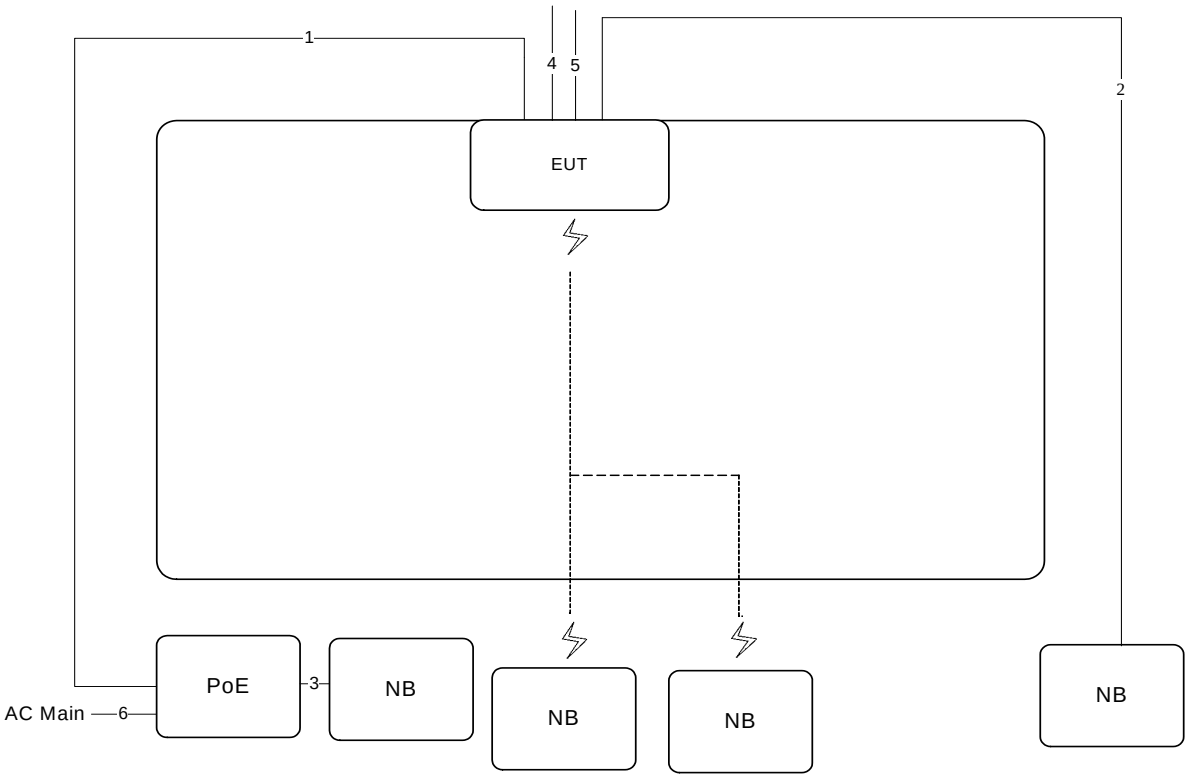
3.11.1. AC Power Line Conduction Emissions Test Configuration



Item	Connection	Shielded	Length(m)
1	Power cable	No	3
2	RJ-45 cable	No	1.5
3	RJ-45 cable	No	10
4	Ground cable	No	1.8
5	Console cable	No	1.5
6	RJ-45 cable	No	10
7	Ground cable	No	2

3.11.2. Radiation Emissions Test Configuration

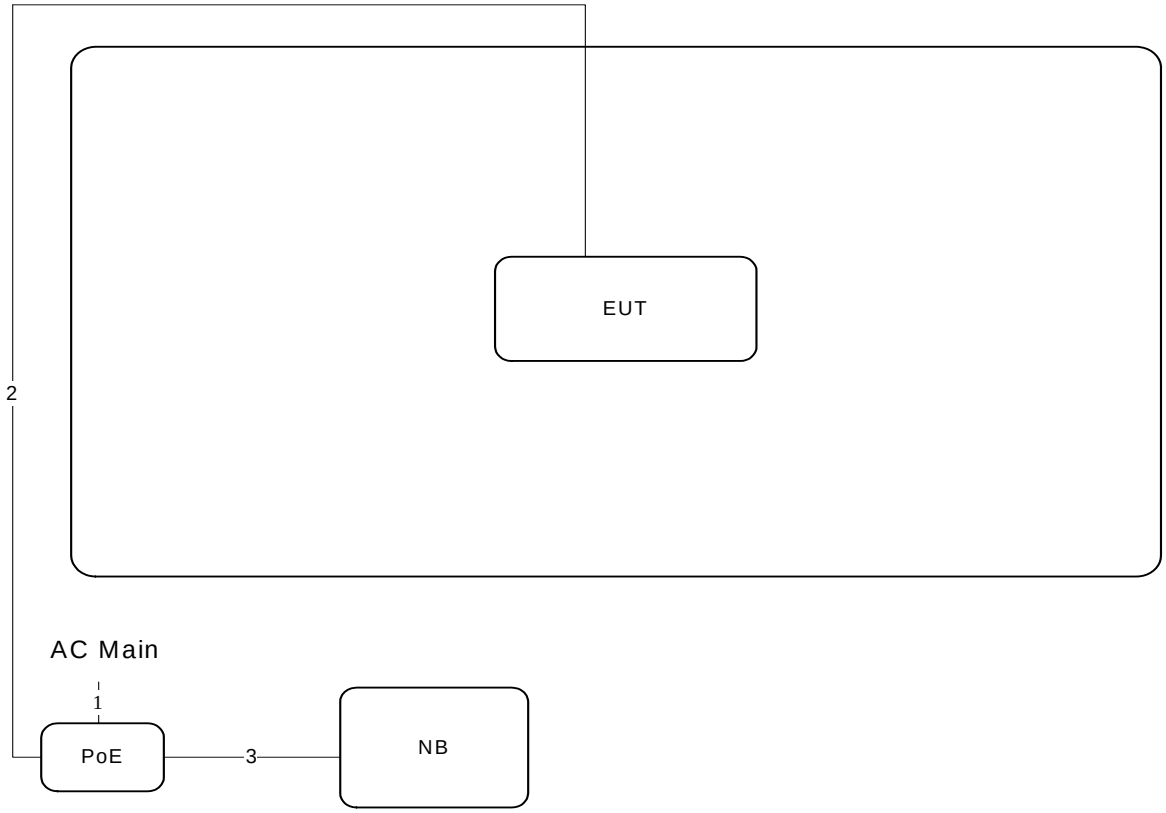
Test Configuration: 30MHz ~1GHz



Item	Connection	Shielded	Length(m)
1	RJ-45 cable	No	50
2	RJ-45 cable	No	10
3	RJ-45 cable	No	1.5
4	Ground cable	No	1.8
5	Console cable	No	1.5
6	Power cable	No	1.5

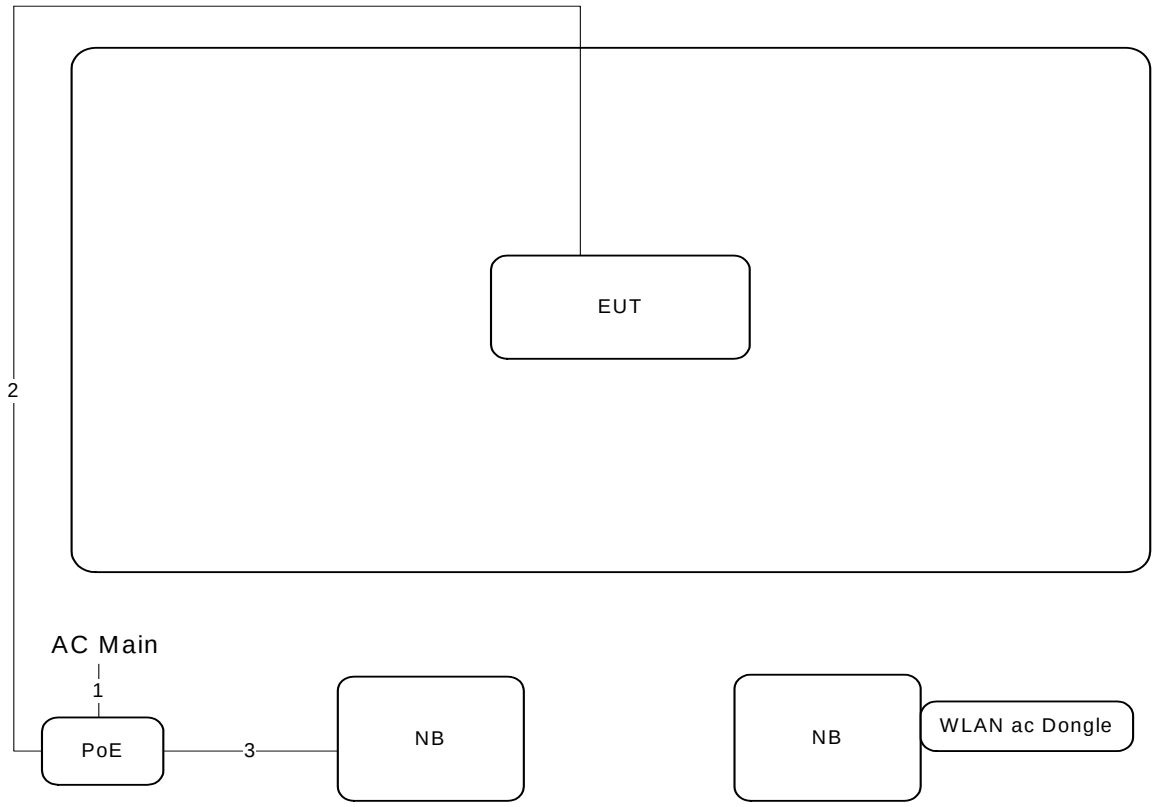
Test Configuration: above 1GHz:

For Non-Beamforming Mode



Item	Connection	Shielded	Length(m)
1	Power cable	No	1.5
2	RJ-45 cable	No	10
3	RJ-45 cable	No	1.5

For Beamforming Mode



Item	Connection	Shielded	Length(m)
1	Power cable	No	1.5
2	RJ-45 cable	No	10
3	RJ-45 cable	No	1.5

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

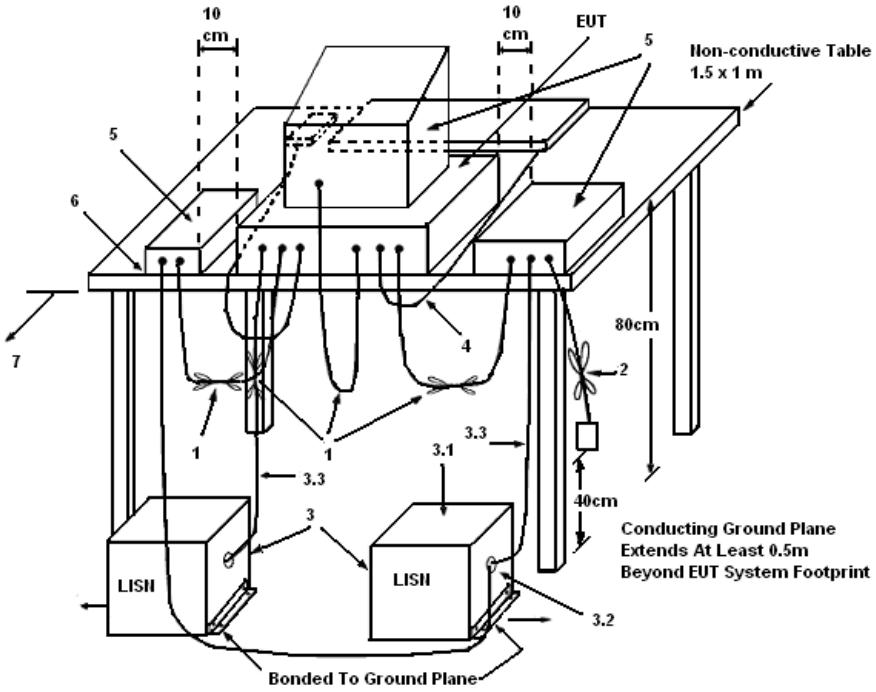
Please refer to section 5 of equipments list in this report. The following table is the setting of the receiver.

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

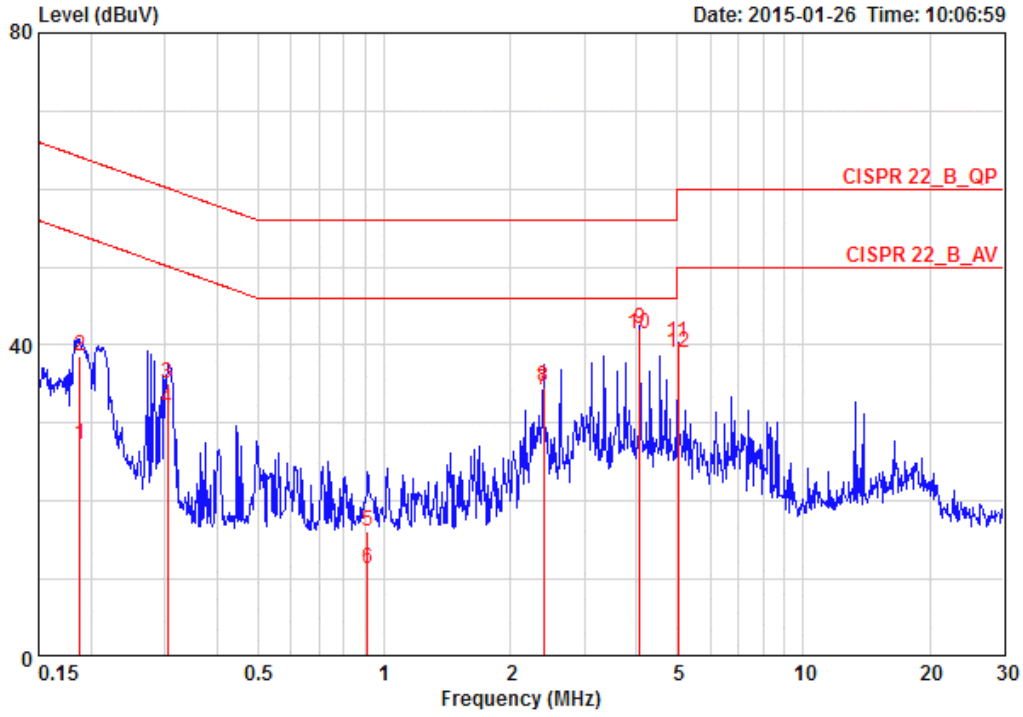
There is no deviation with the original standard.

4.1.6. EUT Operation during Test

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

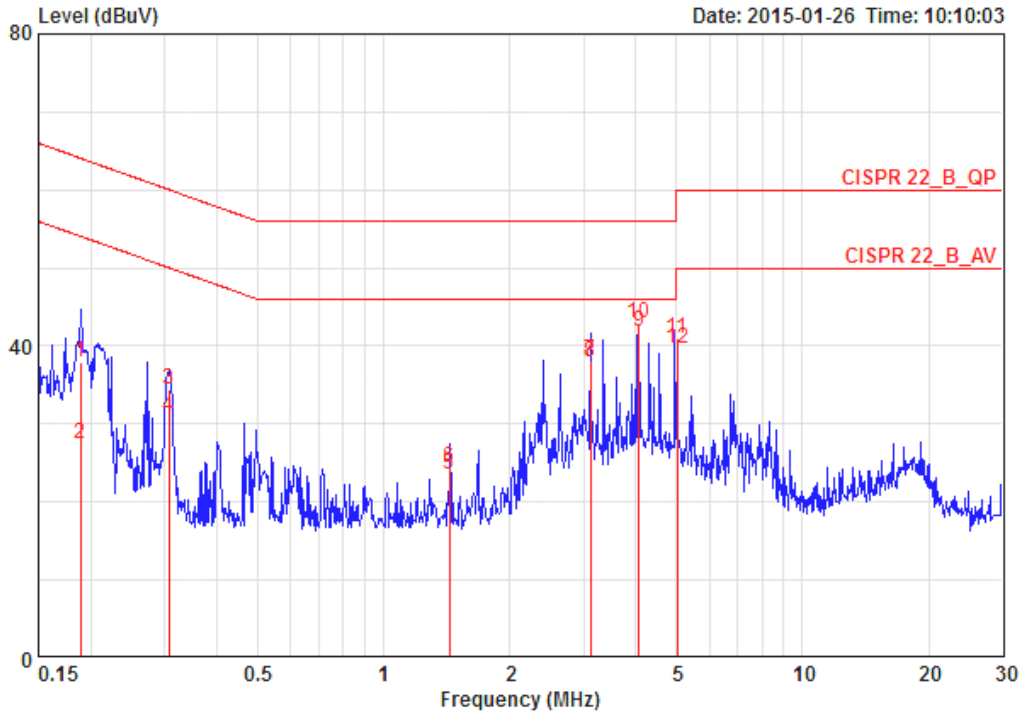
4.1.7. Results of AC Power Line Conducted Emissions Measurement

Temperature	23°C	Humidity	56%
Test Engineer	Parody Lin	Phase	Line
Configuration	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.18814	27.24	-26.88	54.12	17.22	9.78	0.24	AVERAGE	LINE
2	0.18814	38.55	-25.57	64.12	28.53	9.78	0.24	QP	LINE
3	0.30509	35.01	-25.09	60.10	24.96	9.77	0.28	QP	LINE
4	0.30509	31.73	-18.37	50.10	21.68	9.77	0.28	AVERAGE	LINE
5	0.91357	16.18	-39.82	56.00	6.08	9.77	0.33	QP	LINE
6	0.91357	11.38	-34.62	46.00	1.28	9.77	0.33	AVERAGE	LINE
7	2.396	34.16	-11.84	46.00	24.07	9.74	0.36	AVERAGE	LINE
8	2.396	34.55	-21.45	56.00	24.46	9.74	0.36	QP	LINE
9	4.073	42.14	-13.86	56.00	32.06	9.71	0.37	QP	LINE
10	4.073	41.43	-4.57	46.00	31.35	9.71	0.37	AVERAGE	LINE
11	5.031	40.30	-19.70	60.00	30.24	9.68	0.38	QP	LINE
12	5.031	39.03	-10.97	50.00	28.97	9.68	0.38	AVERAGE	LINE

Temperature	23°C	Humidity	56%
Test Engineer	Parody Lin	Phase	Neutral
Configuration	Normal Link		



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB	dB		
1	0.18938	38.02	-26.04	64.06	27.86	9.92	0.24	QP	NEUTRAL
2	0.18938	27.46	-26.60	54.06	17.30	9.92	0.24	AVERAGE	NEUTRAL
3	0.30671	34.50	-25.55	60.06	24.31	9.91	0.28	QP	NEUTRAL
4	0.30671	30.95	-19.10	50.06	20.76	9.91	0.28	AVERAGE	NEUTRAL
5	1.437	23.54	-22.46	46.00	13.29	9.91	0.34	AVERAGE	NEUTRAL
6	1.437	24.48	-31.52	56.00	14.23	9.91	0.34	QP	NEUTRAL
7	3.114	38.12	-17.88	56.00	27.88	9.87	0.36	QP	NEUTRAL
8	3.114	37.86	-8.14	46.00	27.62	9.87	0.36	AVERAGE	NEUTRAL
9 @	4.072	41.86	-4.14	46.00	31.63	9.86	0.37	AVERAGE	NEUTRAL
10	4.072	42.99	-13.01	56.00	32.76	9.86	0.37	QP	NEUTRAL
11	5.029	40.92	-19.08	60.00	30.70	9.84	0.38	QP	NEUTRAL
12	5.029	39.58	-10.42	50.00	29.36	9.84	0.38	AVERAGE	NEUTRAL

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

For Band 1 and Band 4 (Master and client without radar detection):

<For Non-Beamforming Mode>

Temperature	22℃	Humidity	63%
Test Engineer	Nick Peng		
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 1TX)		

For outdoor use

For Chain 5

Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac MCS0/Nss1 VHT20	5180 MHz	20.88	18.12
	5200 MHz	21.00	18.12
	5240 MHz	20.76	18.12
	5745 MHz	21.00	18.12
	5785 MHz	41.04	21.24
	5825 MHz	20.88	18.12
802.11ac MCS0/Nss1 VHT40	5190 MHz	41.20	37.00
	5230 MHz	41.00	36.80
	5755 MHz	41.40	37.00
	5795 MHz	50.80	37.20
802.11ac MCS0/Nss1 VHT80	5210 MHz	83.20	76.00
	5775 MHz	83.20	76.00

Temperature	22℃	Humidity	63%
Test Engineer	Nick Peng		
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 1TX)		

For indoor use

For Chain 5

Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac MCS0/Nss1 VHT20	5180 MHz	28.92	17.40
	5200 MHz	38.40	22.08
	5240 MHz	39.48	21.96
802.11ac MCS0/Nss1 VHT40	5190 MHz	48.20	36.80
	5230 MHz	90.40	47.80
802.11ac MCS0/Nss1 VHT80	5210 MHz	82.40	76.00

Temperature	22℃	Humidity	63%
Test Engineer	Nick Peng		
Test Mode	Mode 2: (Ant.8 Panel antenna / 5.1dBi / 1TX)		

For Chain 4

Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac MCS0/Nss1 VHT20	5180 MHz	24.00	18.36
	5200 MHz	45.36	27.00
	5240 MHz	39.00	20.04
	5745 MHz	20.64	18.24
	5785 MHz	45.00	26.04
	5825 MHz	21.00	18.12
802.11ac MCS0/Nss1 VHT40	5190 MHz	42.20	37.00
	5230 MHz	87.00	41.00
	5755 MHz	41.40	36.80
	5795 MHz	41.20	37.00
802.11ac MCS0/Nss1 VHT80	5210 MHz	82.80	76.00
	5775 MHz	82.80	76.00

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng, Lucas Huang		
Test Mode	Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 1TX)		

For Chain 4

Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac MCS0/Nss1 VHT20	5180 MHz	22.68	18.12
	5200 MHz	41.88	22.32
	5240 MHz	39.96	19.56
	5745 MHz	20.76	18.12
	5785 MHz	40.80	20.28
	5825 MHz	20.88	18.12
802.11ac MCS0/Nss1 VHT40	5190 MHz	41.40	36.80
	5230 MHz	83.20	38.20
	5755 MHz	41.40	37.00
	5795 MHz	41.40	37.00
802.11ac MCS0/Nss1 VHT80	5210 MHz	82.40	76.40
	5775 MHz	82.80	76.00

<For STBC Mode>

Temperature	22℃	Humidity	63%
Test Engineer	Nick Peng		
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX)		

For outdoor use

For Chain 4 + Chain 5

Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac MCS0/Nss1 VHT20	5180 MHz	20.52	18.00
	5200 MHz	20.52	17.88
	5240 MHz	20.64	17.88
	5745 MHz	20.64	17.88
	5785 MHz	42.60	22.92
	5825 MHz	20.76	18.00
802.11ac MCS0/Nss1 VHT40	5190 MHz	40.80	36.80
	5230 MHz	41.00	36.60
	5755 MHz	41.00	36.80
	5795 MHz	41.00	37.00
802.11ac MCS0/Nss1 VHT80	5210 MHz	82.80	76.00
	5775 MHz	82.40	76.00

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng		
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX)		

For outdoor use

For Chain 4 + Chain 5 + Chain 6

Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac MCS0/Nss1 VHT20	5180 MHz	20.52	17.88
	5200 MHz	20.52	17.88
	5240 MHz	20.40	17.88
	5745 MHz	20.64	18.00
	5785 MHz	41.88	22.08
	5825 MHz	20.64	18.00
802.11ac MCS0/Nss1 VHT40	5190 MHz	41.20	36.80
	5230 MHz	41.00	36.80
	5755 MHz	41.20	37.00
	5795 MHz	41.00	37.00
802.11ac MCS0/Nss1 VHT80	5210 MHz	82.40	76.00
	5775 MHz	82.00	76.00

Temperature	22℃	Humidity	63%
Test Engineer	Nick Peng		
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX)		

For indoor use

For Chain 4 + Chain 5

Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac MCS0/Nss1 VHT20	5180 MHz	22.92	17.88
	5200 MHz	41.04	22.80
	5240 MHz	37.44	21.24
802.11ac MCS0/Nss1 VHT40	5190 MHz	45.20	36.80
	5230 MHz	79.60	41.40
802.11ac MCS0/Nss1 VHT80	5210 MHz	81.60	76.00

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng		
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX)		

For indoor use

For Chain 4 + Chain 5 + Chain 6

Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac MCS0/Nss1 VHT20	5180 MHz	21.00	18.00
	5200 MHz	36.72	18.84
	5240 MHz	34.20	18.60
802.11ac MCS0/Nss1 VHT40	5190 MHz	41.20	36.80
	5230 MHz	80.40	38.80
802.11ac MCS0/Nss1 VHT80	5210 MHz	82.00	76.00

Temperature	22℃	Humidity	63%
Test Engineer	Nick Peng		
Test Mode	Mode 2: (Ant.8 Panel antenna / 5.1dBi / 2TX)		

For Chain 4 + Chain 5

Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac MCS0/Nss1 VHT20	5180 MHz	21.12	18.00
	5200 MHz	36.12	18.84
	5240 MHz	35.16	18.84
	5745 MHz	20.64	17.88
	5785 MHz	39.60	19.68
	5825 MHz	21.24	18.00
802.11ac MCS0/Nss1 VHT40	5190 MHz	41.20	36.80
	5230 MHz	72.80	37.40
	5755 MHz	40.80	36.80
	5795 MHz	40.60	36.60
802.11ac MCS0/Nss1 VHT80	5210 MHz	81.60	76.00
	5775 MHz	82.40	76.00

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng		
Test Mode	Mode 2: (Ant.8 Panel antenna / 5.1dBi / 3TX)		

For Chain 4 + Chain 5 + Chain 6

Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac MCS0/Nss1 VHT20	5180 MHz	20.40	18.00
	5200 MHz	29.52	18.24
	5240 MHz	34.92	18.84
	5745 MHz	20.28	18.00
	5785 MHz	33.36	18.60
	5825 MHz	20.52	18.00
802.11ac MCS0/Nss1 VHT40	5190 MHz	40.60	36.80
	5230 MHz	70.60	37.20
	5755 MHz	41.00	36.80
	5795 MHz	40.80	37.00
802.11ac MCS0/Nss1 VHT80	5210 MHz	82.00	76.00
	5775 MHz	82.00	76.00

Temperature	22℃	Humidity	63%
Test Engineer	Nick Peng, Lucas Huang		
Test Mode	Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 2TX)		

For Chain 4 + Chain 5

Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac MCS0/Nss2 VHT20	5180 MHz	20.64	17.88
	5200 MHz	36.00	18.72
	5240 MHz	38.04	20.40
	5745 MHz	20.52	17.88
	5785 MHz	38.88	20.76
	5825 MHz	20.52	18.00
802.11ac MCS0/Nss2 VHT40	5190 MHz	41.00	36.80
	5230 MHz	72.80	37.40
	5755 MHz	40.80	36.80
	5795 MHz	41.00	36.60
802.11ac MCS0/Nss2 VHT80	5210 MHz	82.00	76.00
	5775 MHz	81.60	76.00

Temperature	22℃	Humidity	63%
Test Engineer	Nick Peng, Lucas Huang		
Test Mode	Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 3TX)		

For Chain 4 + Chain 5 + Chain 6

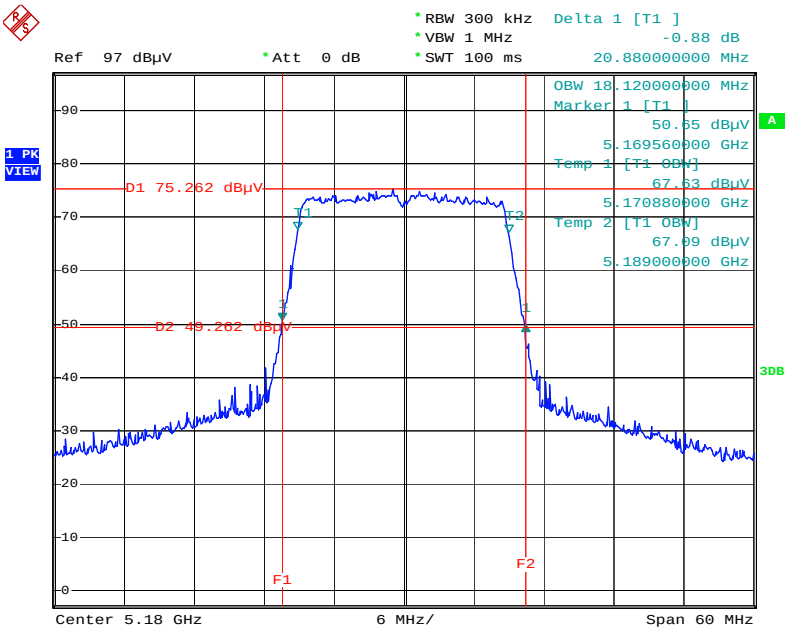
Mode	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
802.11ac MCS0/Nss2 VHT20	5180 MHz	20.64	17.88
	5200 MHz	20.76	17.88
	5240 MHz	20.52	17.88
	5745 MHz	20.52	17.88
	5785 MHz	23.28	18.12
	5825 MHz	20.64	18.00
802.11ac MCS0/Nss2 VHT40	5190 MHz	41.00	36.80
	5230 MHz	51.00	37.00
	5755 MHz	41.20	37.00
	5795 MHz	41.00	36.80
802.11ac MCS0/Nss2 VHT80	5210 MHz	82.00	76.00
	5775 MHz	82.80	76.00

For Band 1 and Band 4 (Master and client without radar detection):

<For Non-Beamforming Mode>

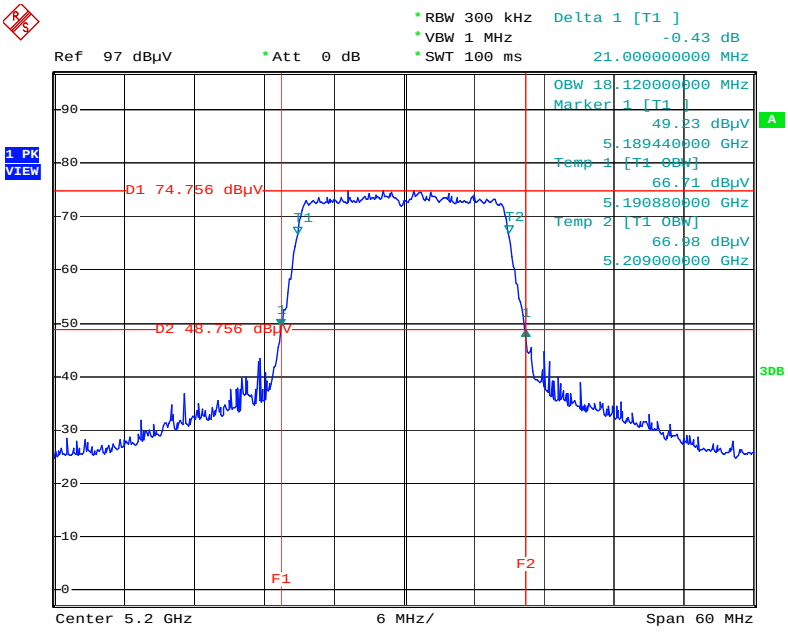
Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 1TX) / For outdoor use

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 5 / 5180 MHz



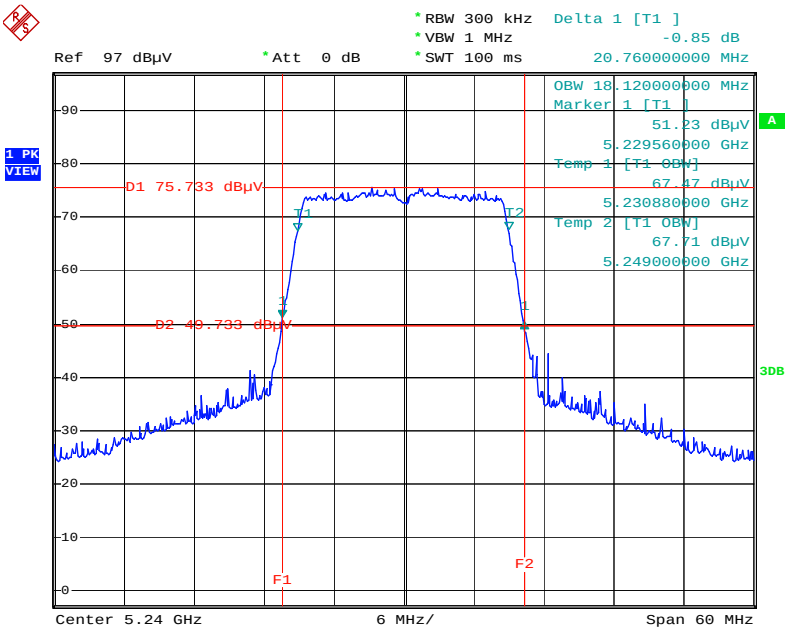
Date: 14.JAN.2015 19:15:03

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 5 / 5200 MHz



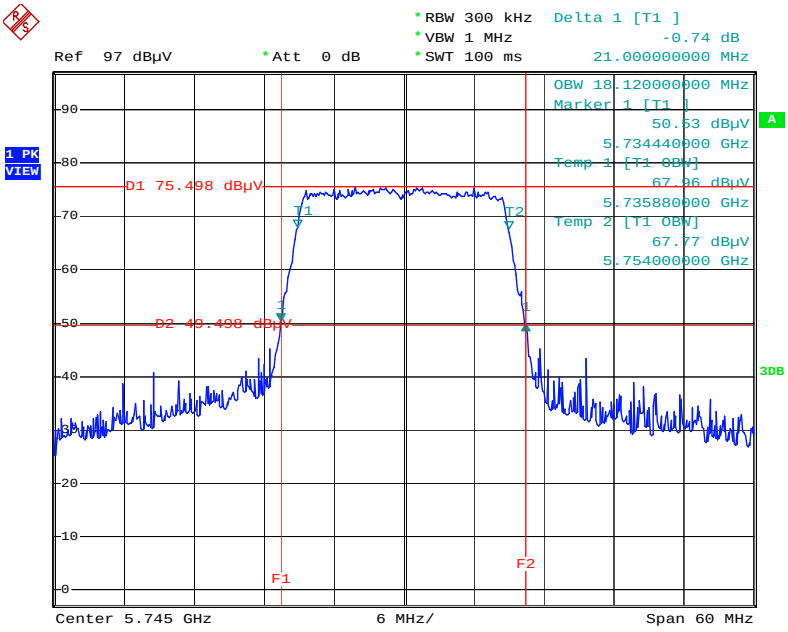
Date: 14.JAN.2015 19:15:57

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 5 / 5240 MHz



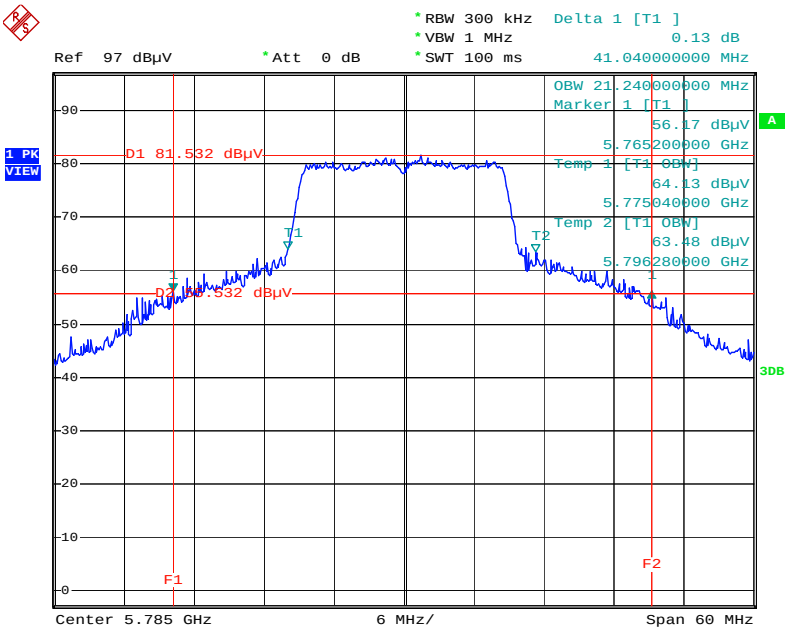
Date: 14.JAN.2015 19:16:44

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 5 / 5745 MHz



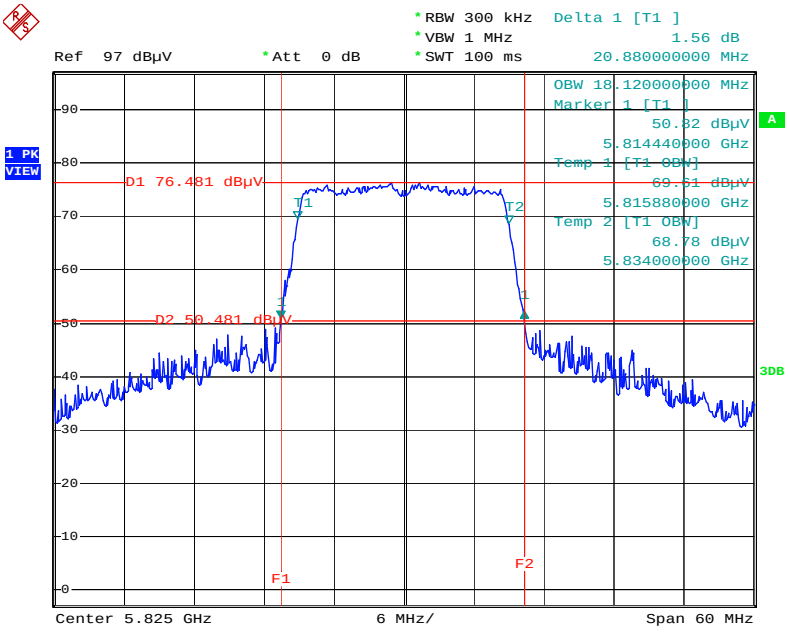
Date: 14.JAN.2015 19:18:03

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 5 / 5785 MHz



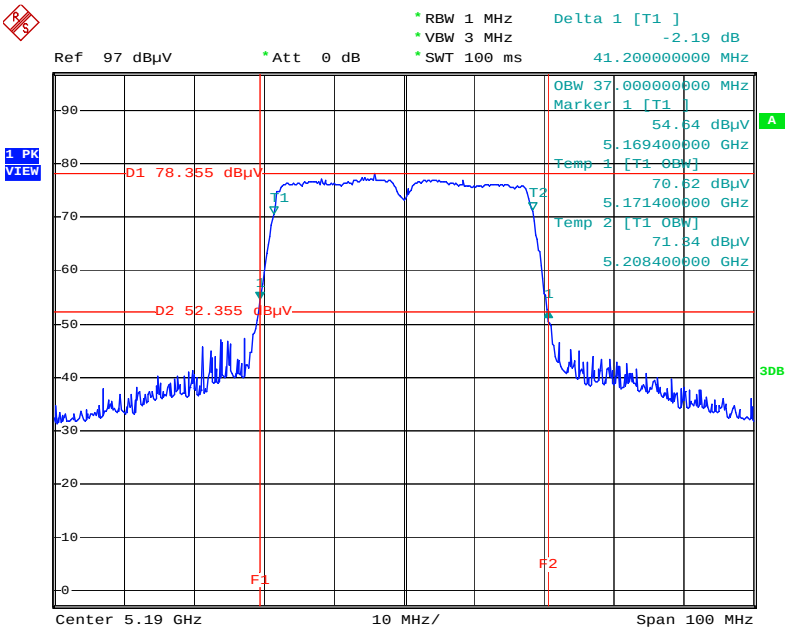
Date: 14.JAN.2015 19:19:58

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 5 / 5825 MHz



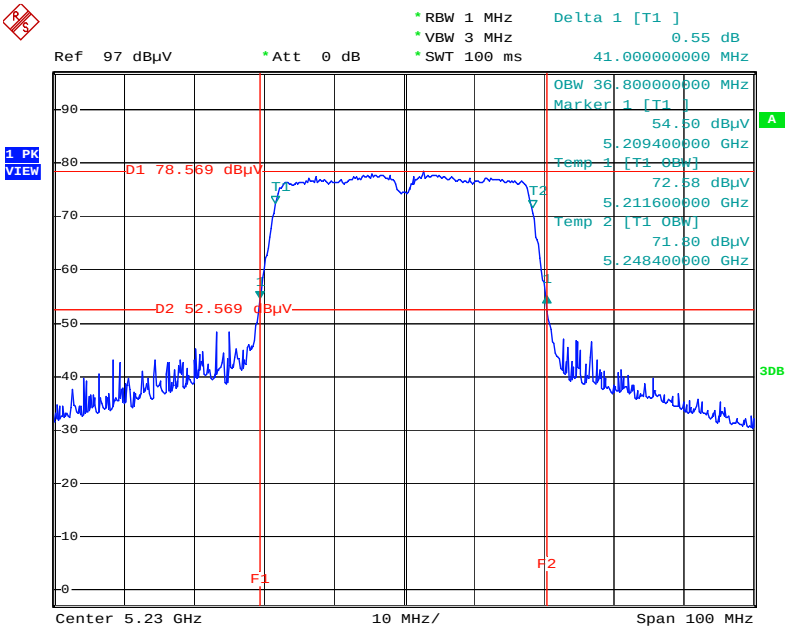
Date: 14.JAN.2015 19:21:07

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 5 / 5190 MHz



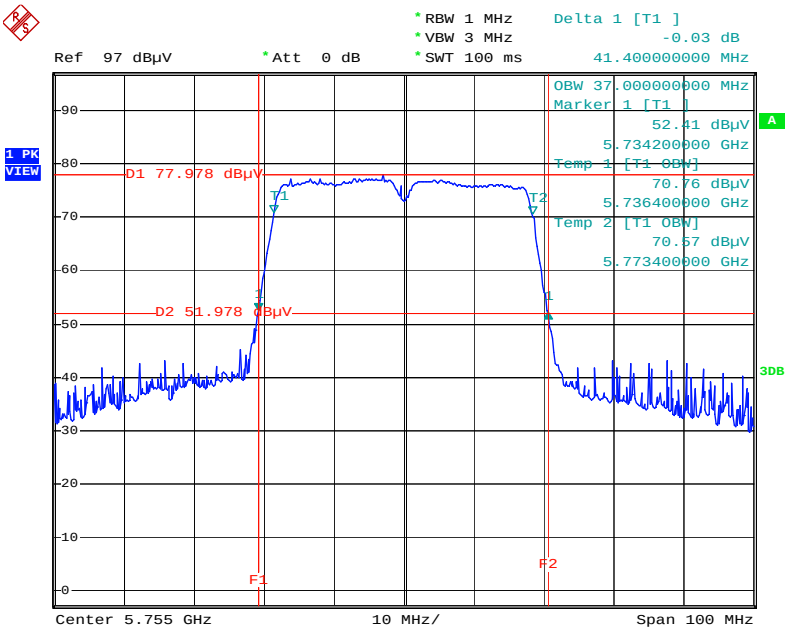
Date: 14.JAN.2015 19:23:17

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 5 / 5230 MHz



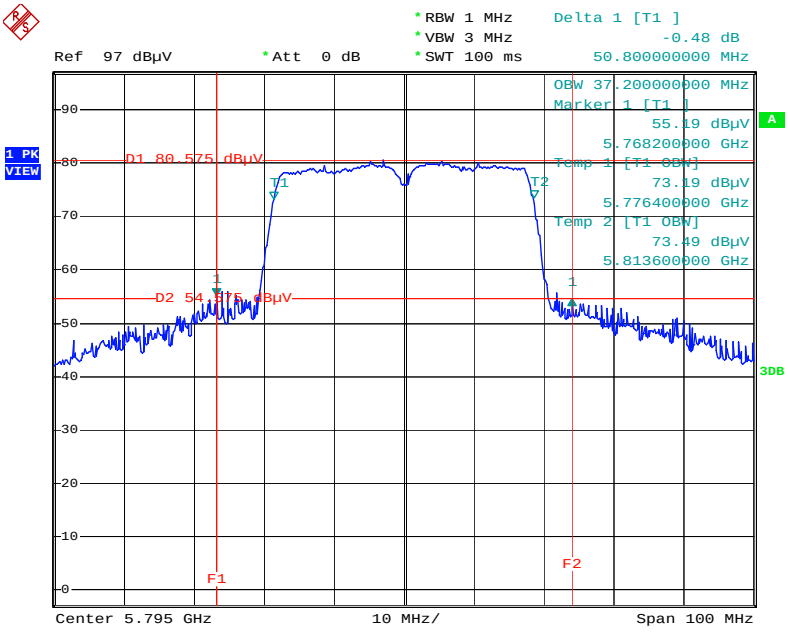
Date: 14.JAN.2015 19:24:02

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 5 / 5755 MHz



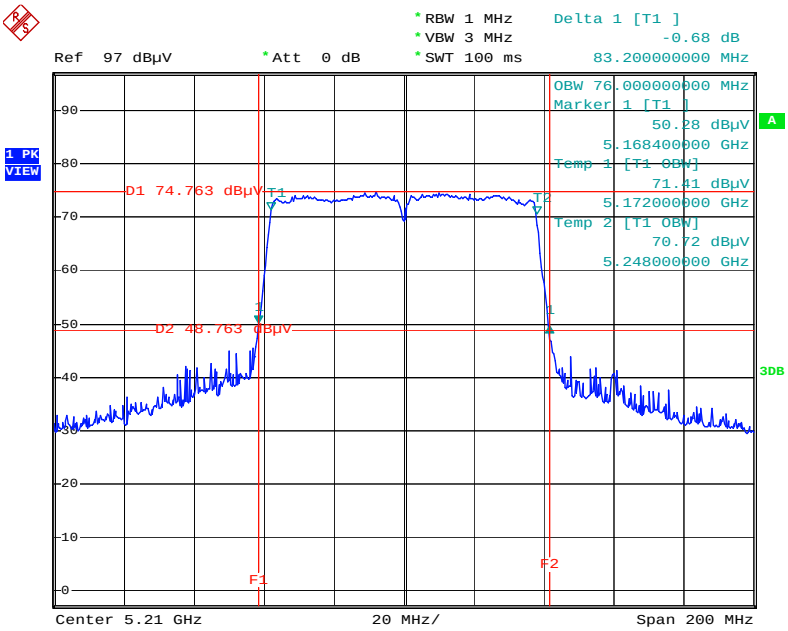
Date: 14.JAN.2015 19:24:41

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 5 / 5795 MHz



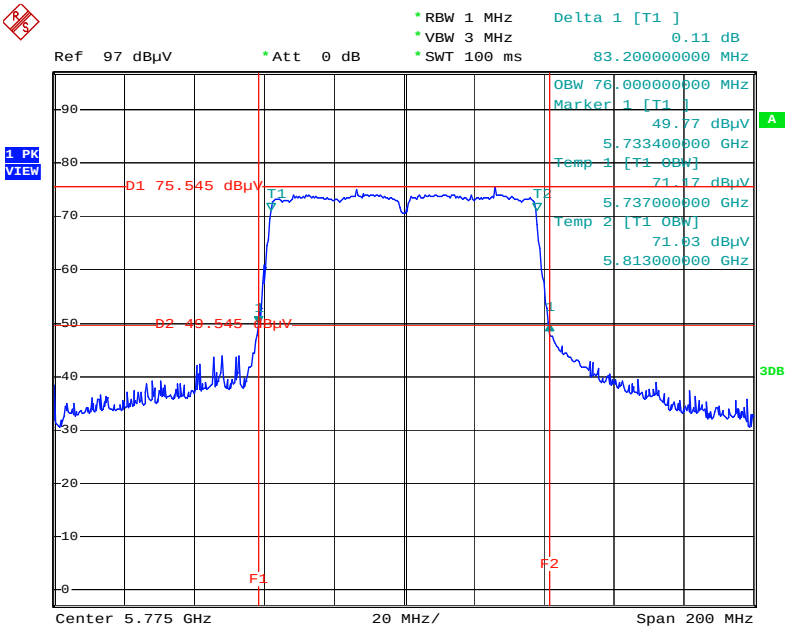
Date: 14.JAN.2015 19:26:07

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 5 / 5210 MHz



Date: 14.JAN.2015 19:27:54

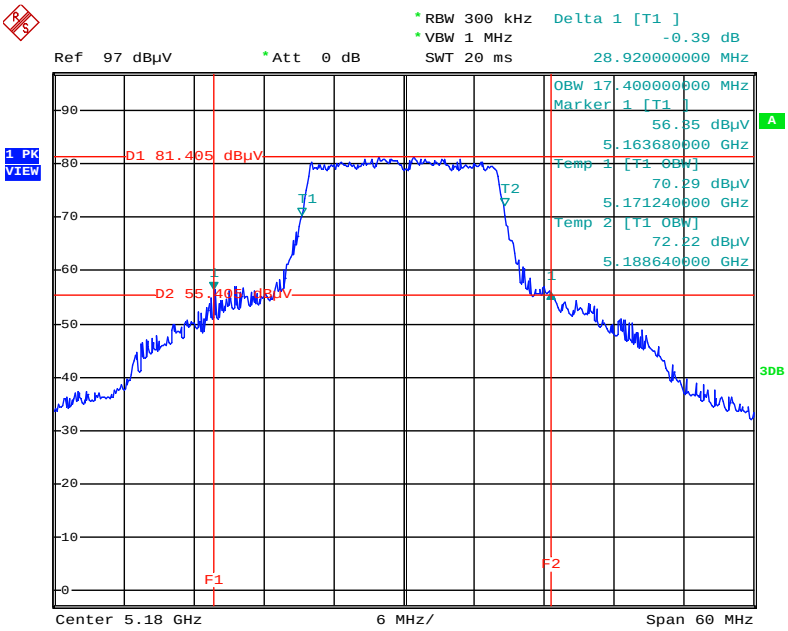
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 5 / 5775 MHz



Date: 14.JAN.2015 19:28:46

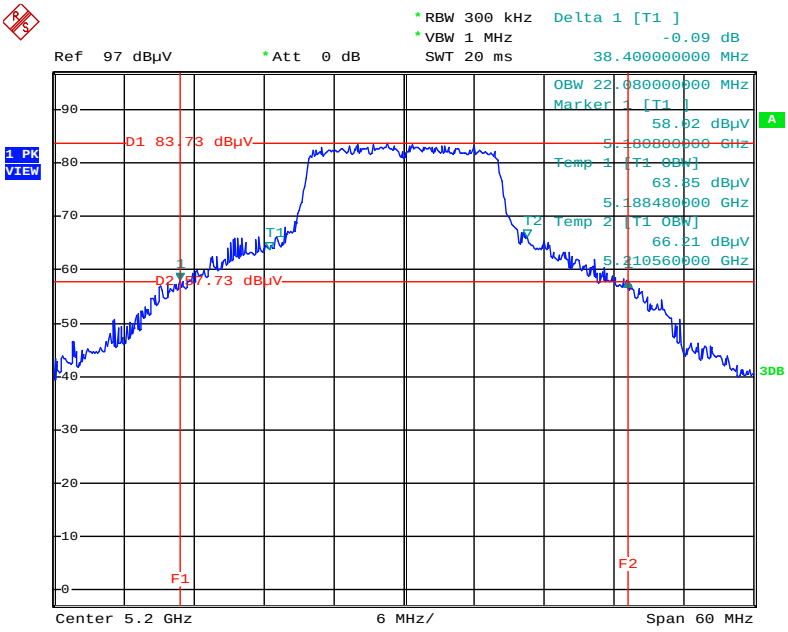
Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 1TX) / For indoor use

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 5 / 5180 MHz



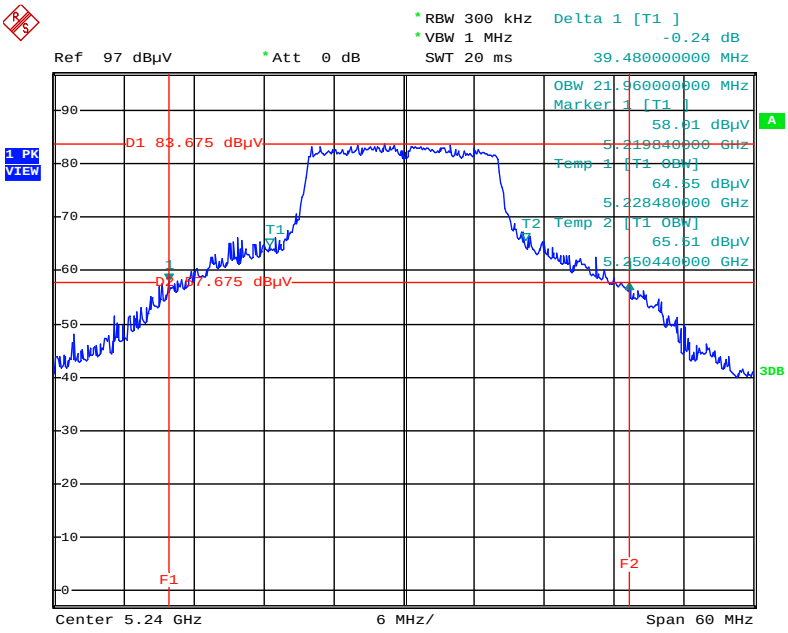
Date: 2.MAR.2015 15:12:45

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 5 / 5200 MHz



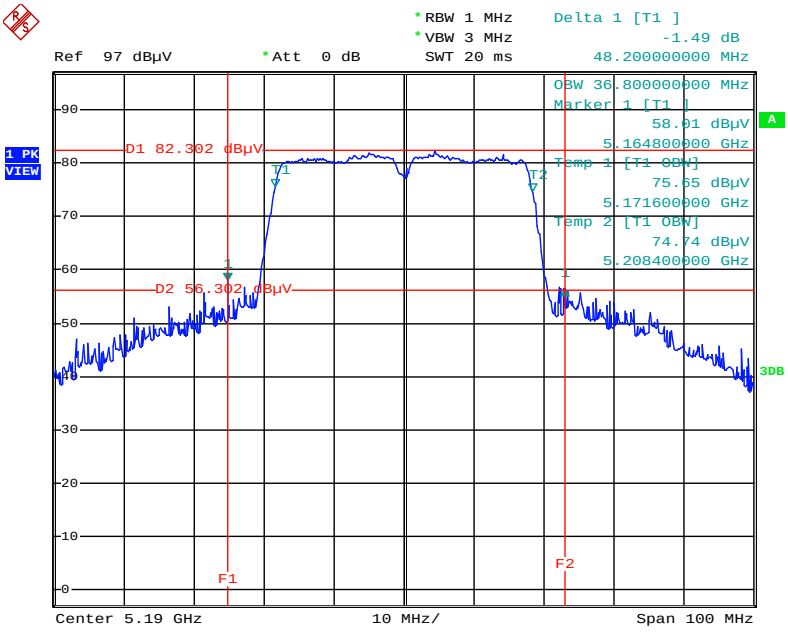
Date: 2.MAR.2015 15:15:21

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 5 / 5240 MHz



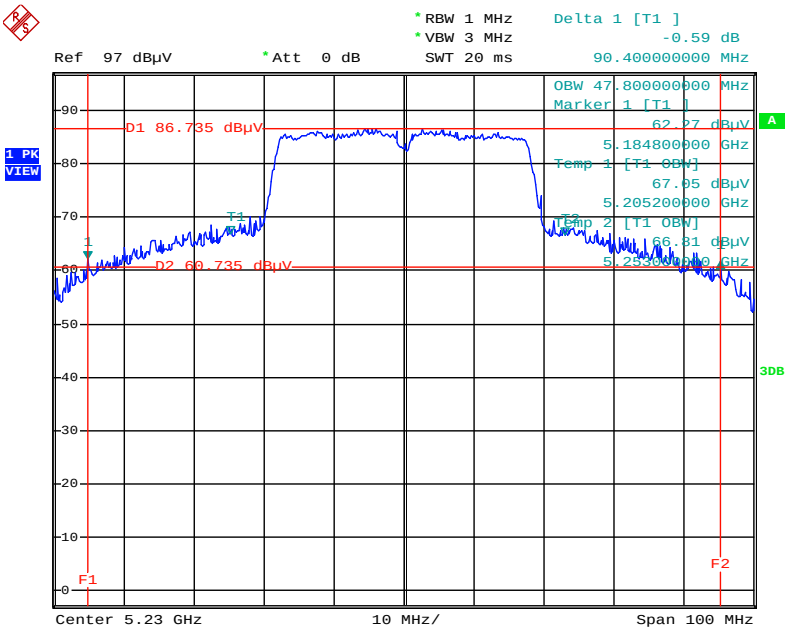
Date: 2.MAR.2015 15:16:03

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 5 / 5190 MHz



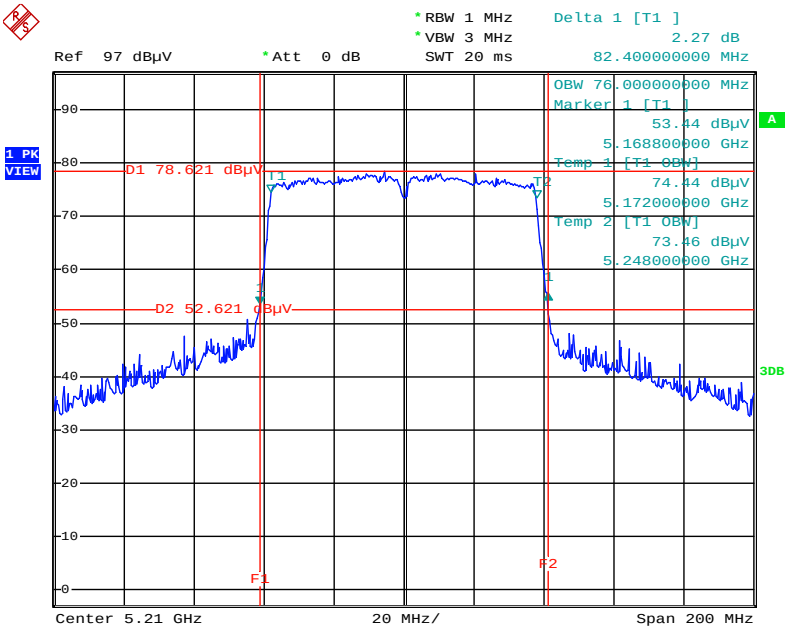
Date: 2.MAR.2015 15:20:49

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 5 / 5230 MHz



Date: 2.MAR.2015 15:22:10

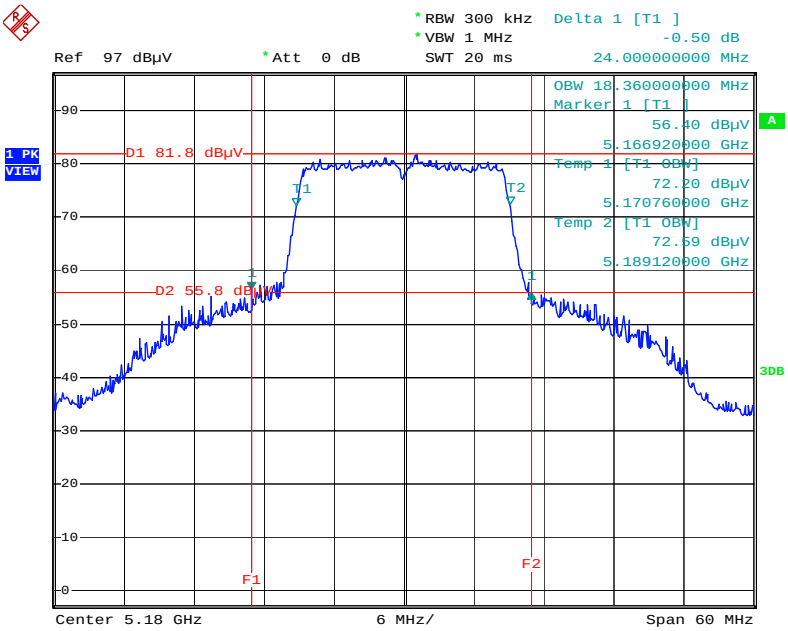
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 5 / 5210 MHz



Date: 2.MAR.2015 15:23:47

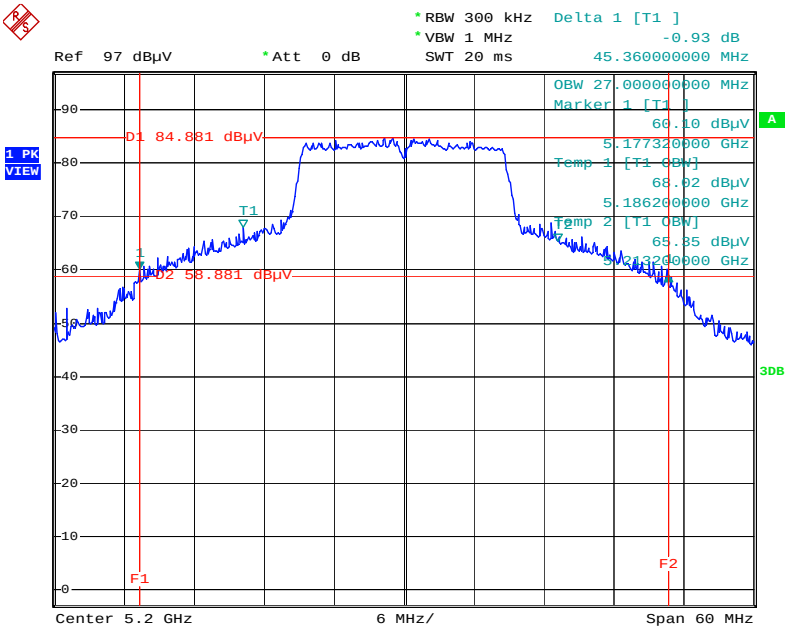
Mode 2: (Ant.8 Panel antenna / 5.1dBi / 1TX)

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 / 5180 MHz



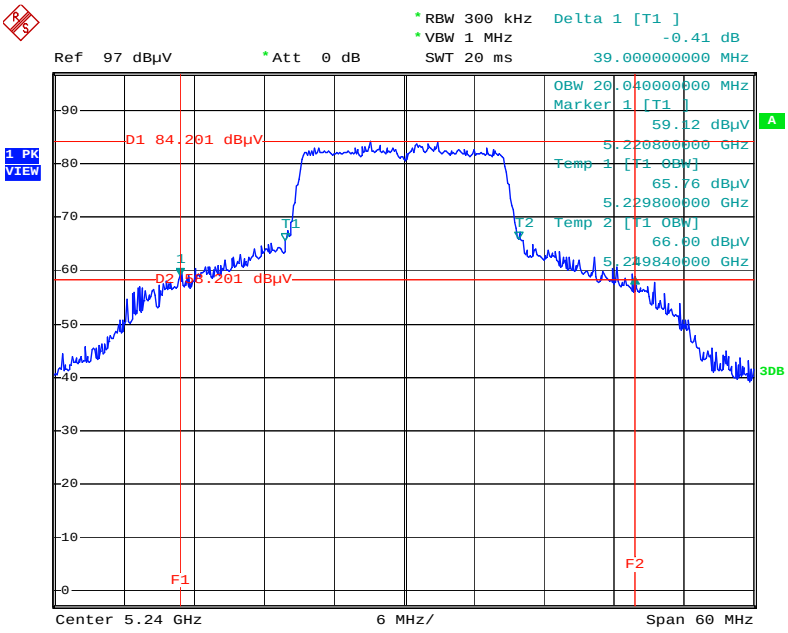
Date: 12.JAN.2015 10:30:19

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 / 5200 MHz



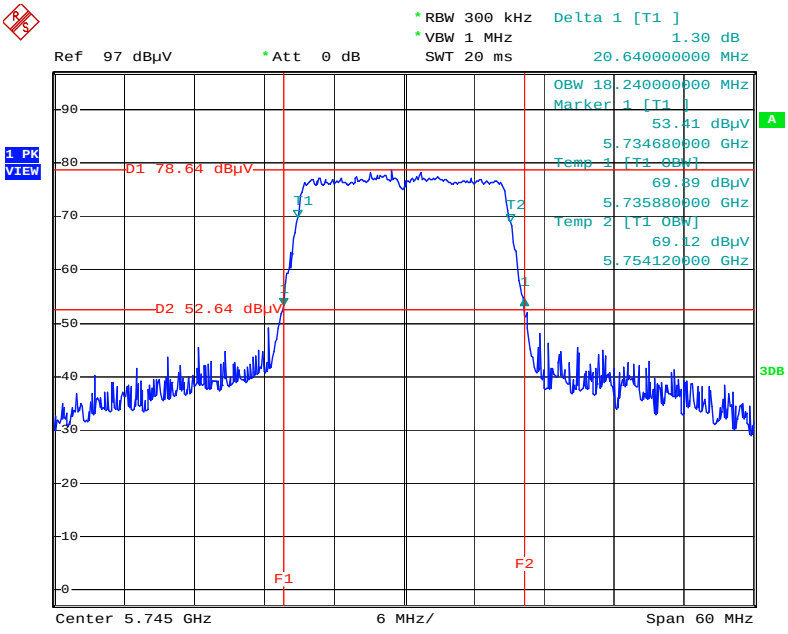
Date: 12.JAN.2015 10:32:59

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 / 5240 MHz



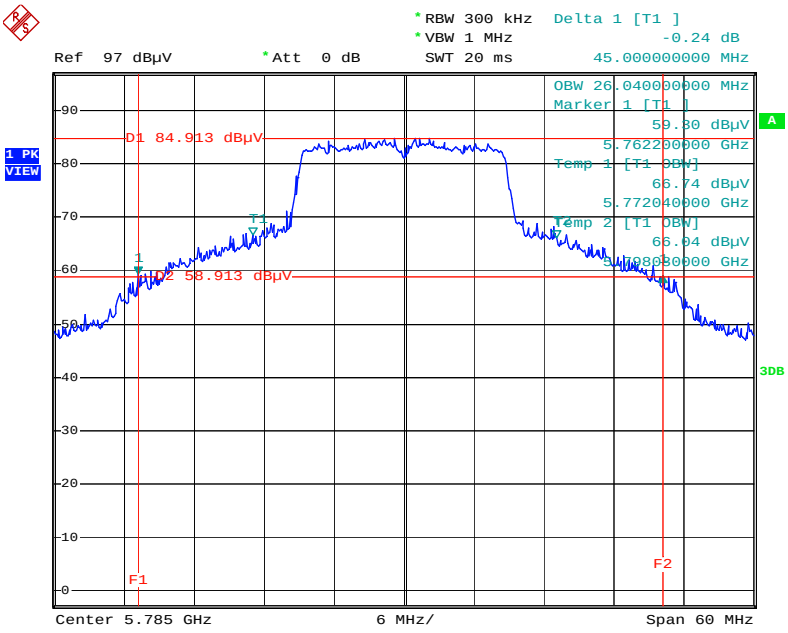
Date: 12.JAN.2015 10:37:44

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 / 5745 MHz



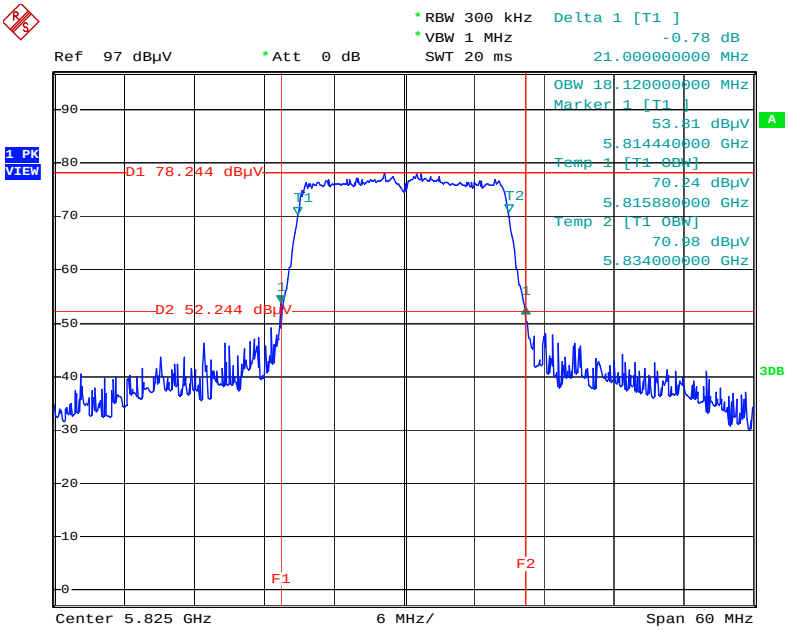
Date: 12.JAN.2015 10:40:47

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 / 5785 MHz



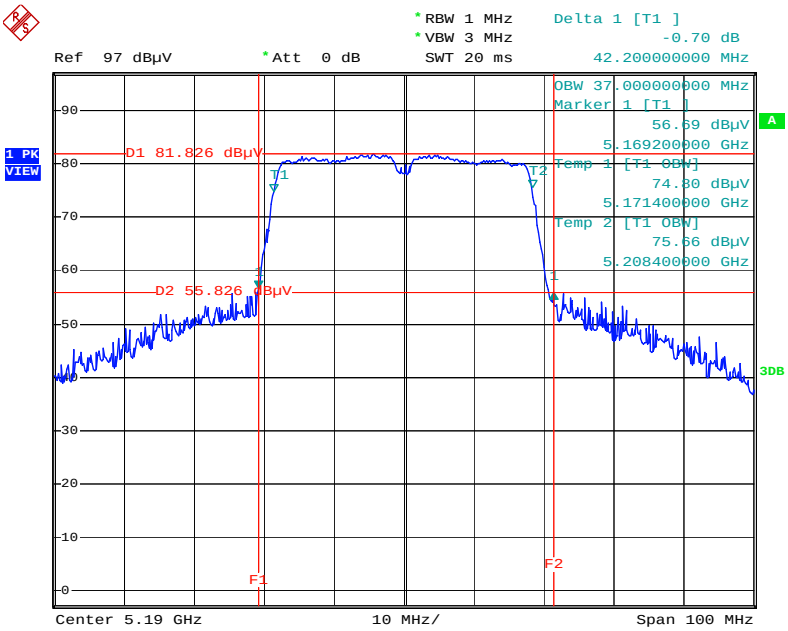
Date: 12.JAN.2015 10:42:05

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 / 5825 MHz



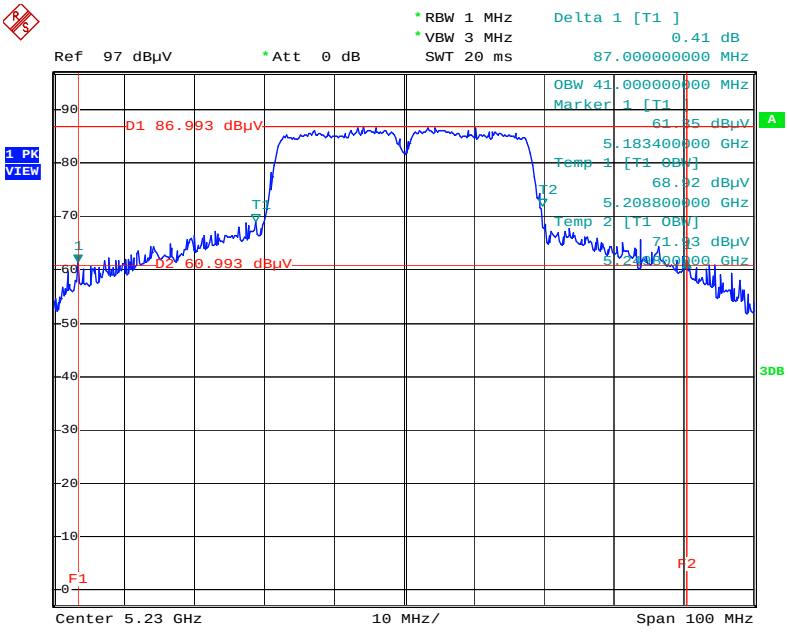
Date: 12.JAN.2015 10:43:12

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 / 5190 MHz



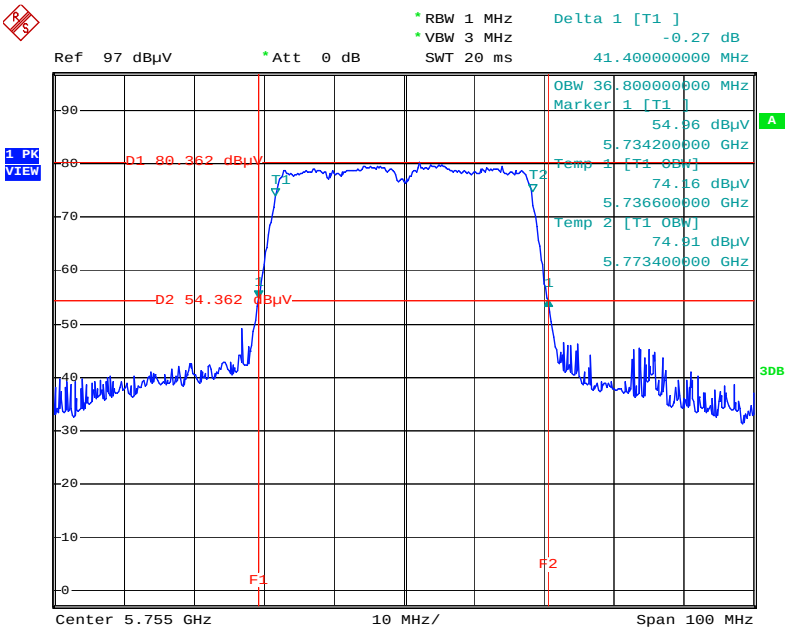
Date: 12.JAN.2015 10:47:14

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 / 5230 MHz



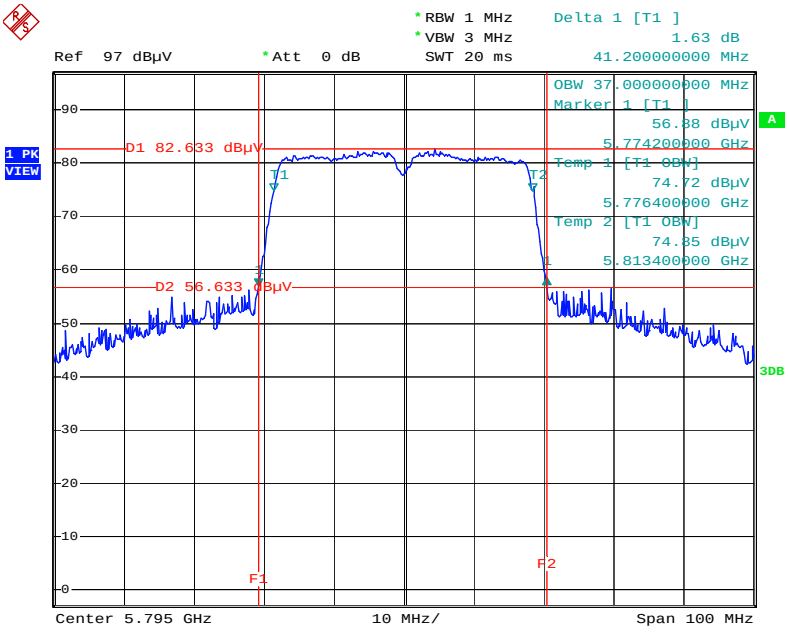
Date: 12.JAN.2015 10:48:49

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 / 5755 MHz



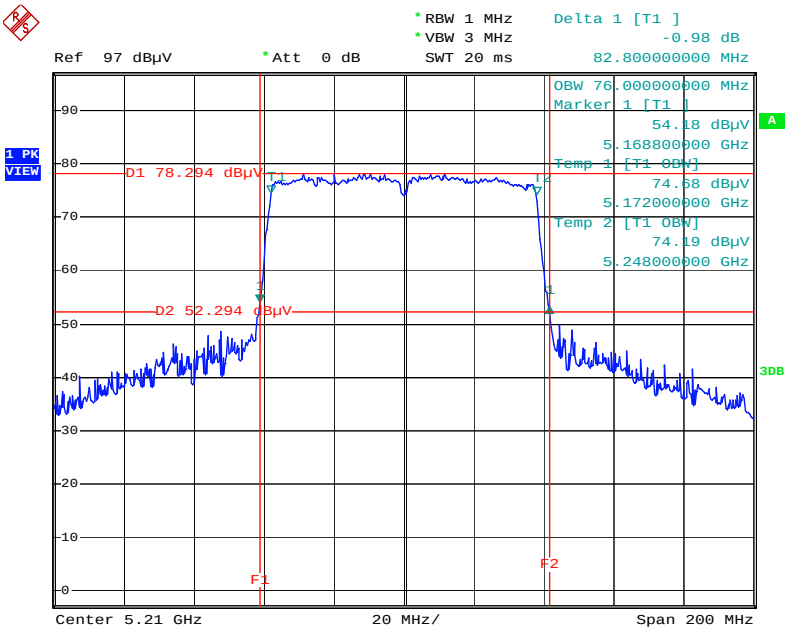
Date: 12.JAN.2015 10:50:17

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 / 5795 MHz



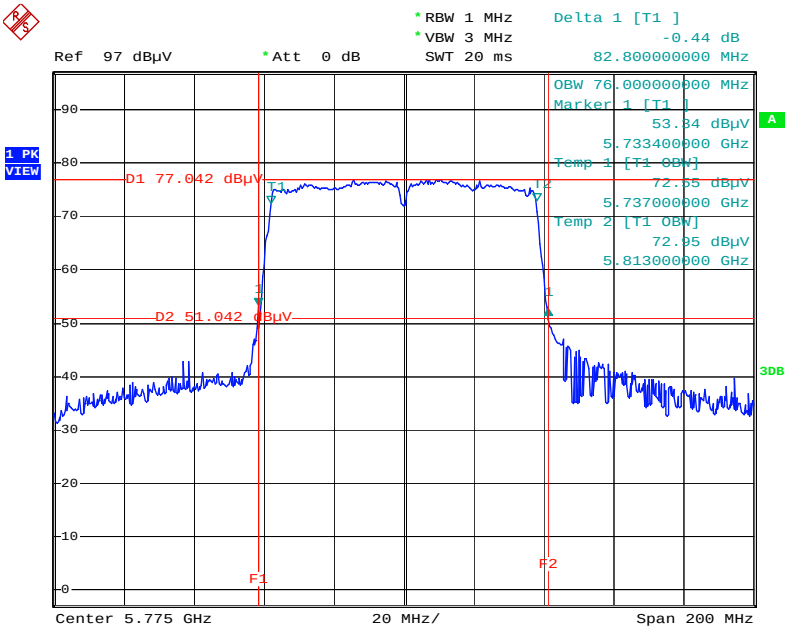
Date: 12.JAN.2015 10:51:31

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 / 5210 MHz



Date: 12.JAN.2015 10:54:04

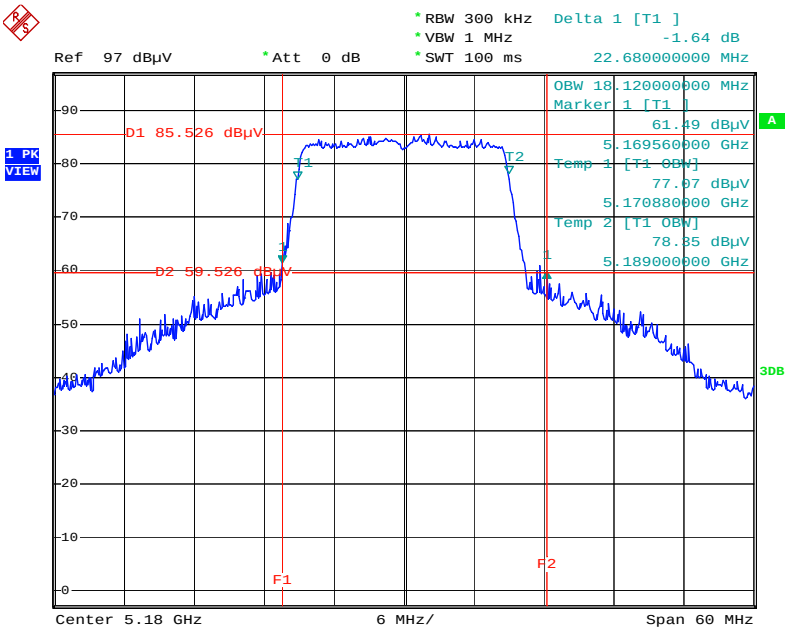
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 / 5775 MHz



Date: 12.JAN.2015 10:55:55

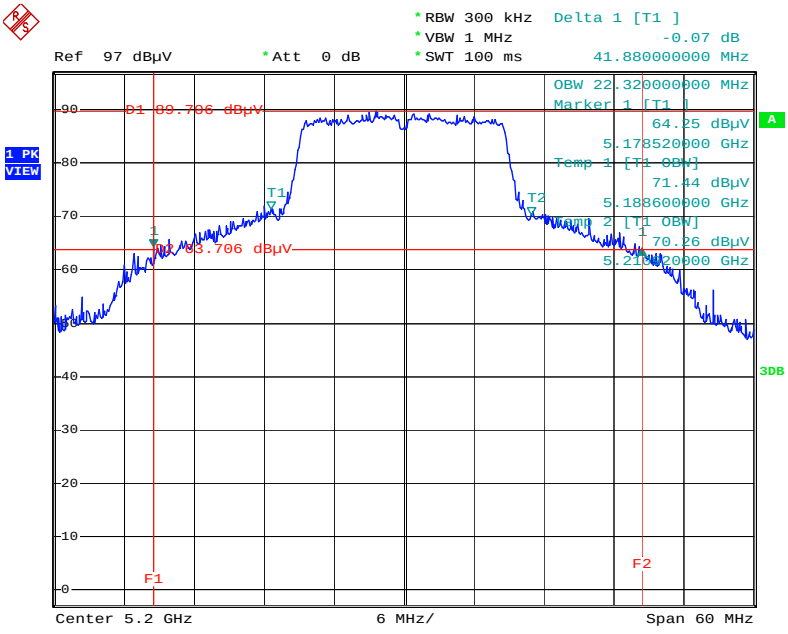
Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 1TX)

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 / 5180 MHz



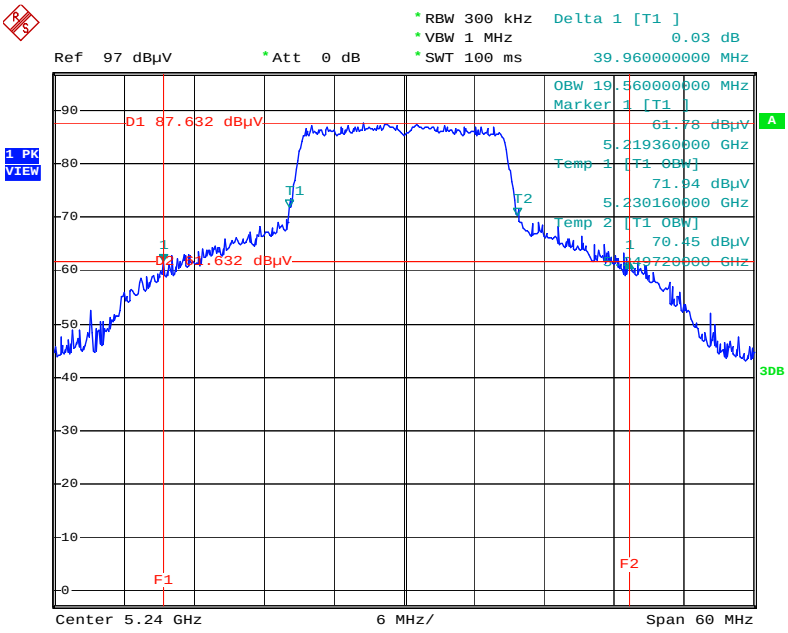
Date: 8.JAN.2015 22:01:32

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 / 5200 MHz



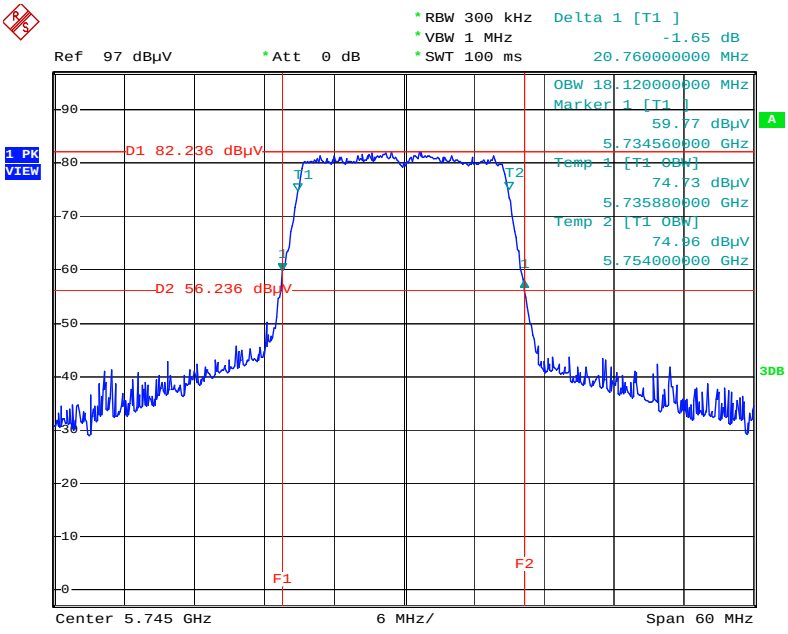
Date: 8.JAN.2015 22:02:42

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 / 5240 MHz



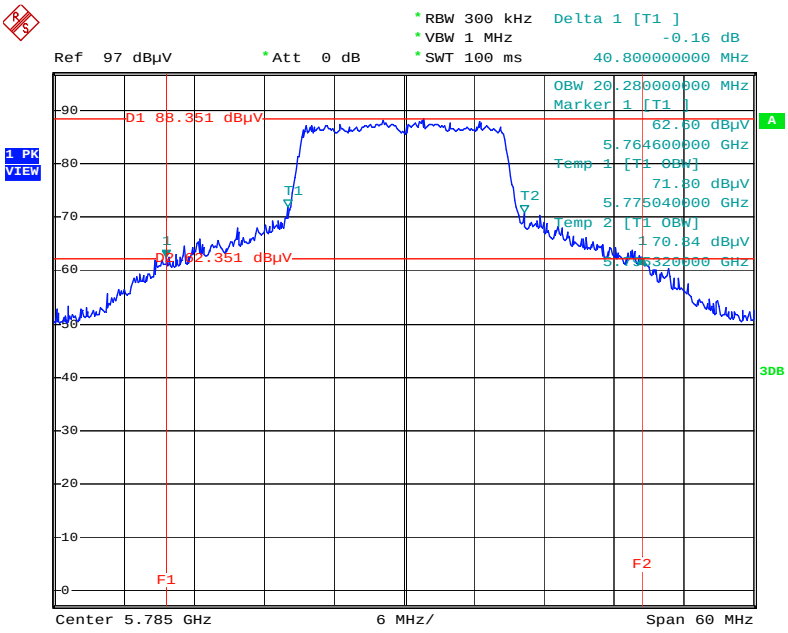
Date: 9.JAN.2015 23:58:26

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 / 5745 MHz



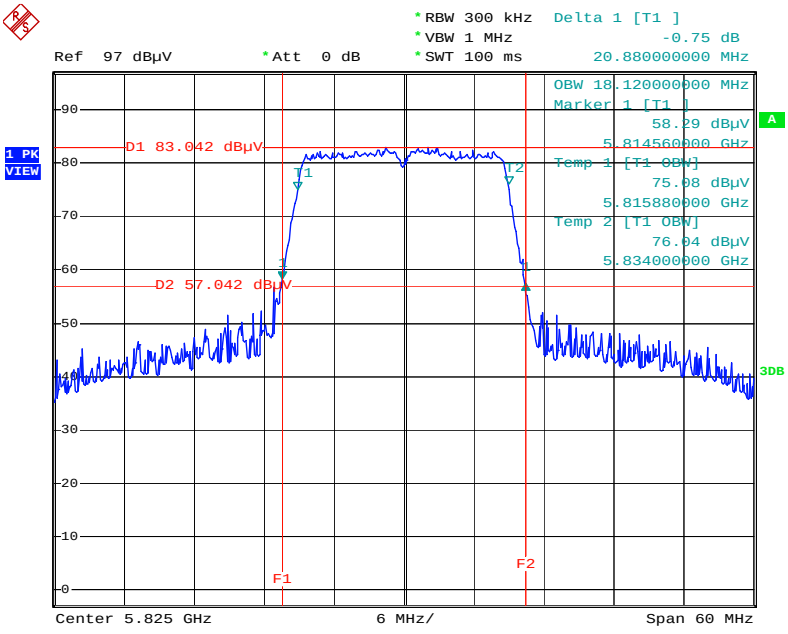
Date: 8.JAN.2015 22:04:31

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 / 5785 MHz



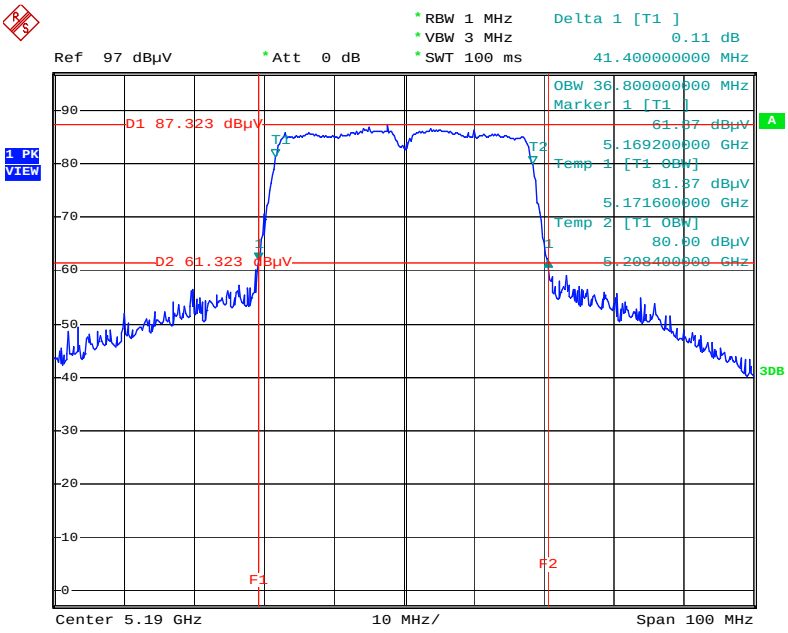
Date: 8.JAN.2015 22:06:02

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 / 5825 MHz



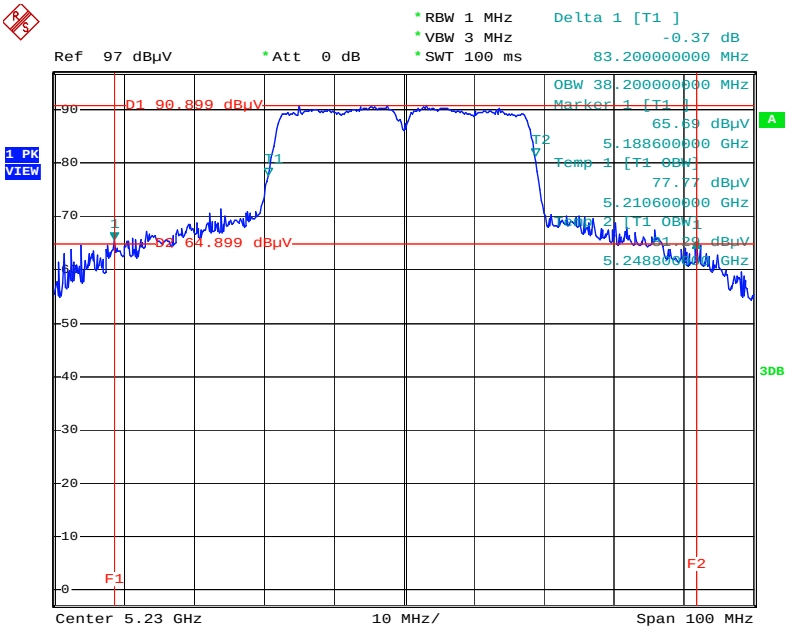
Date: 8.JAN.2015 22:06:49

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 / 5190 MHz



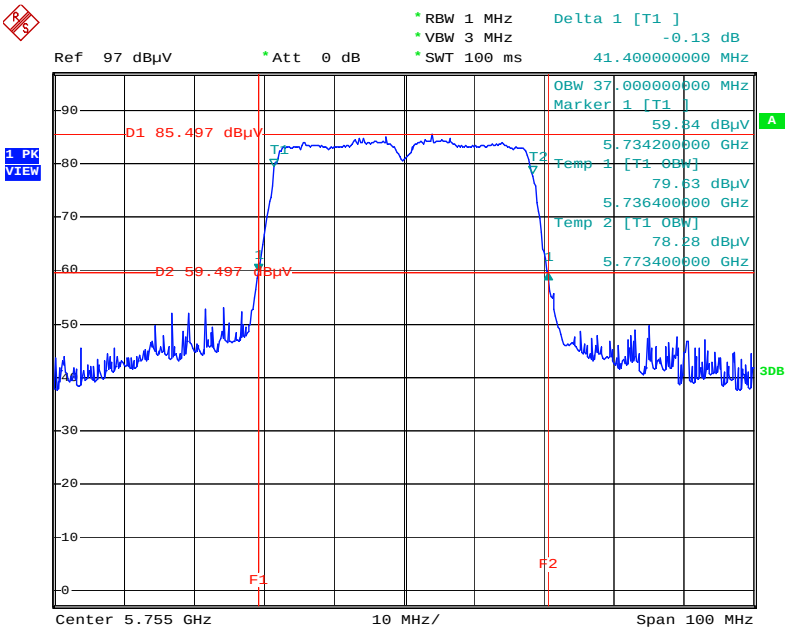
Date: 8.JAN.2015 22:08:49

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 / 5230 MHz



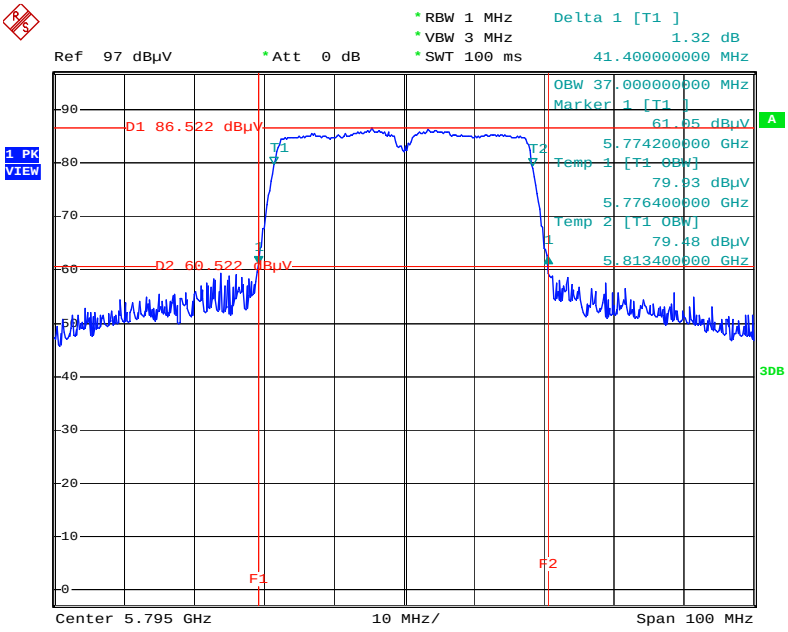
Date: 8.JAN.2015 22:15:04

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 / 5755 MHz



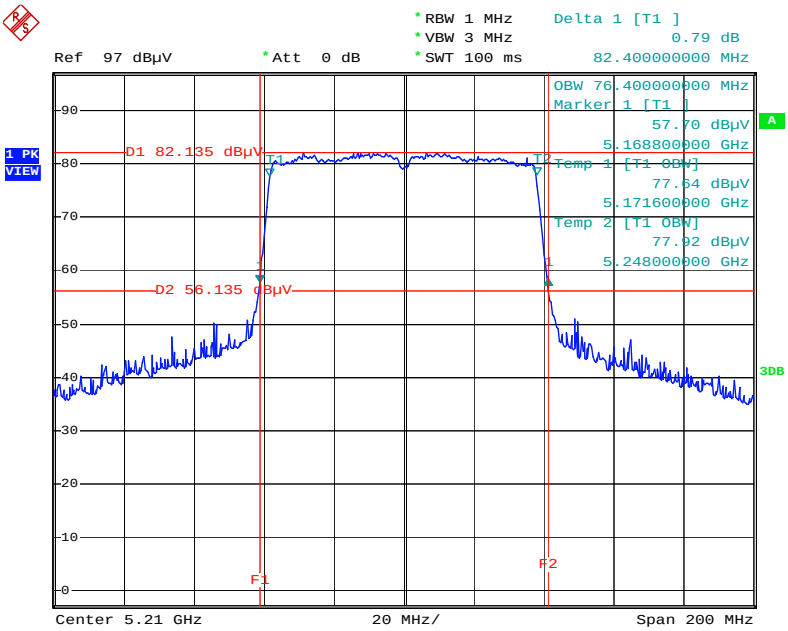
Date: 8.JAN.2015 22:16:45

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 / 5795 MHz



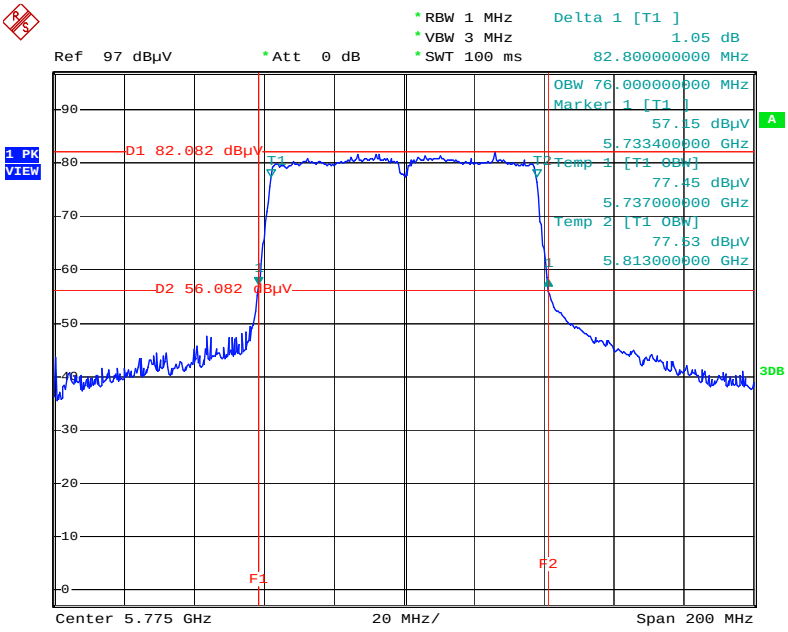
Date: 8.JAN.2015 22:17:28

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 / 5210 MHz



Date: 8.JAN.2015 22:18:39

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 / 5775 MHz

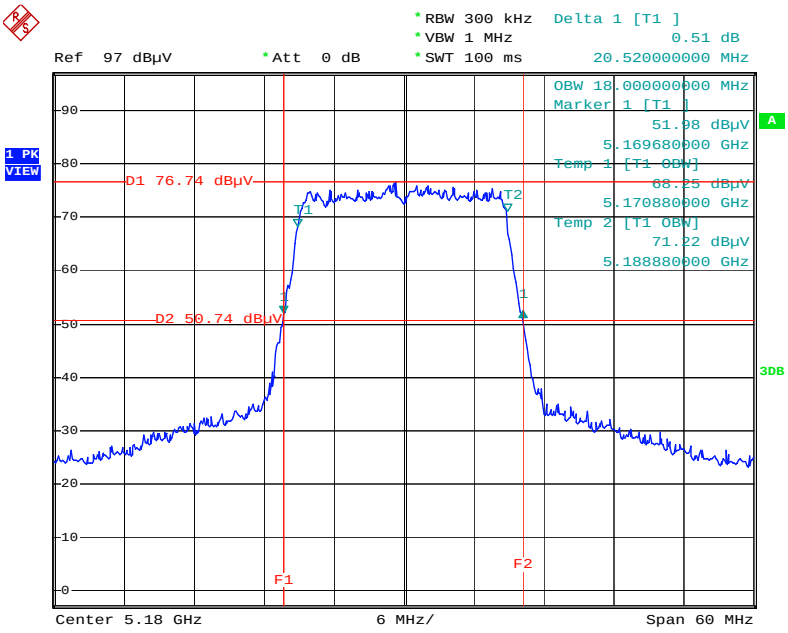


Date: 8.JAN.2015 22:19:33

<For STBC Mode>

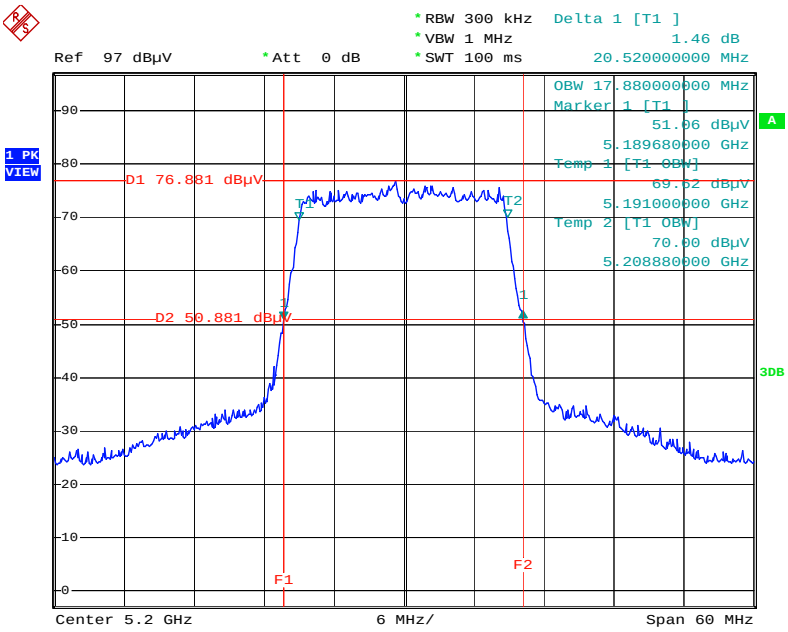
Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX) / For outdoor use

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 / 5180 MHz



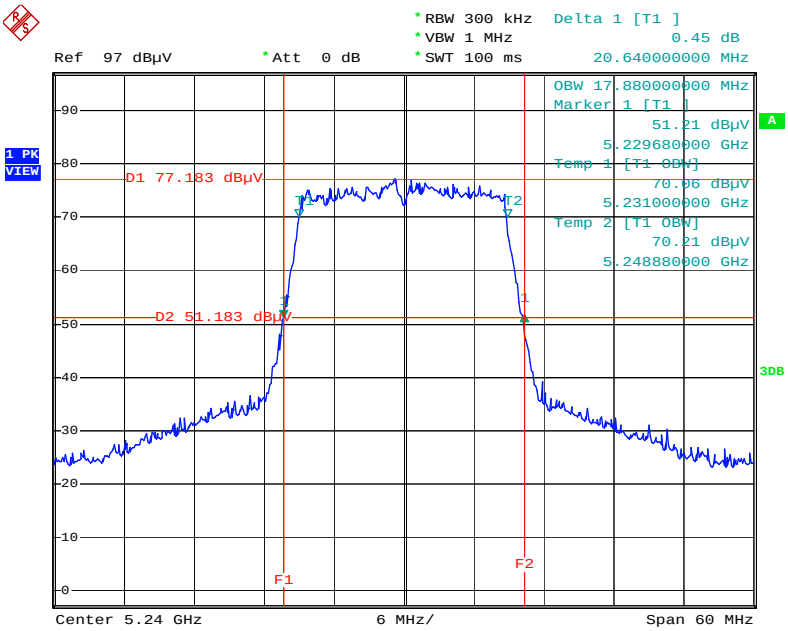
Date: 14.JAN.2015 19:32:55

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 / 5200 MHz



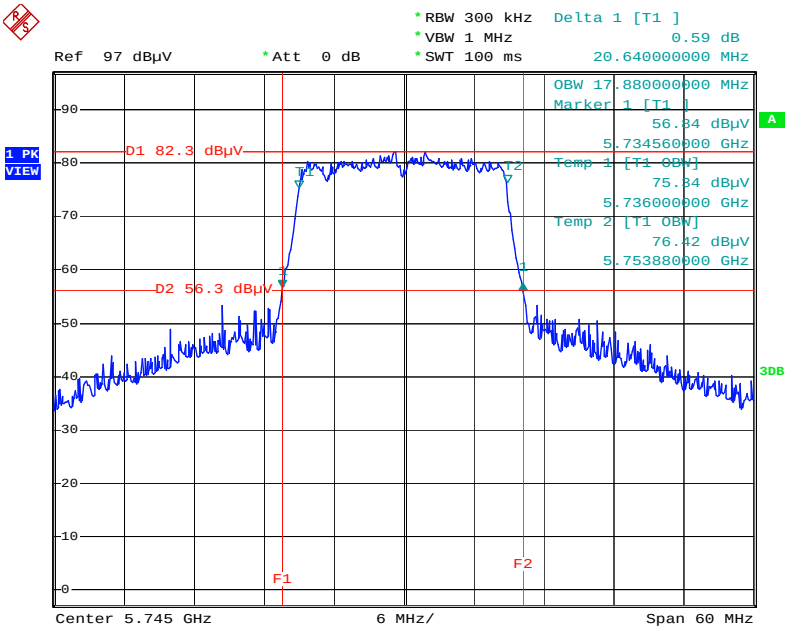
Date: 14.JAN.2015 19:33:49

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 / 5240 MHz



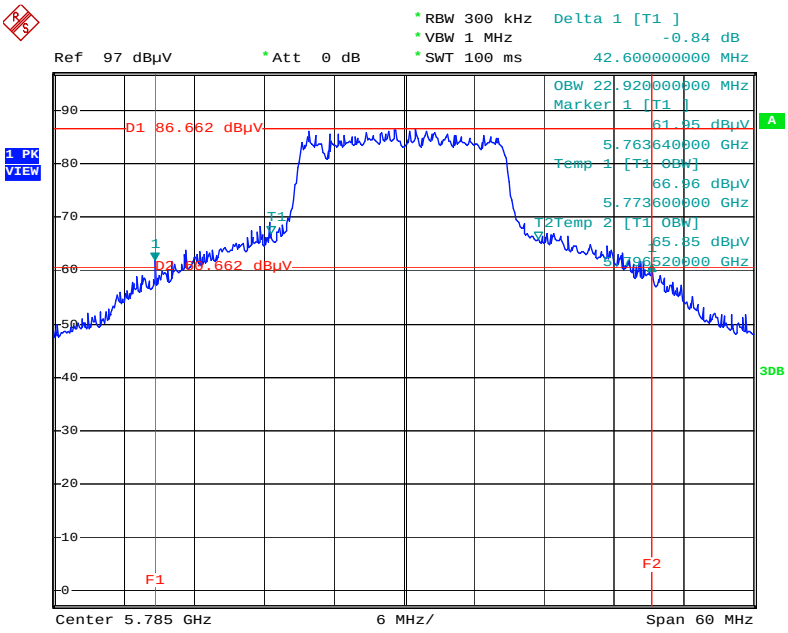
Date: 14.JAN.2015 19:34:25

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 / 5745 MHz



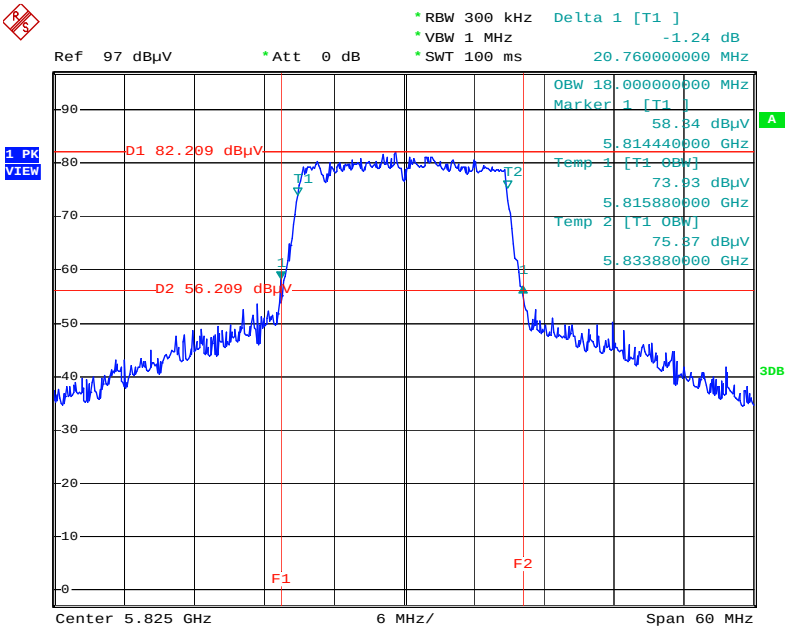
Date: 14.JAN.2015 19:35:18

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 / 5785 MHz



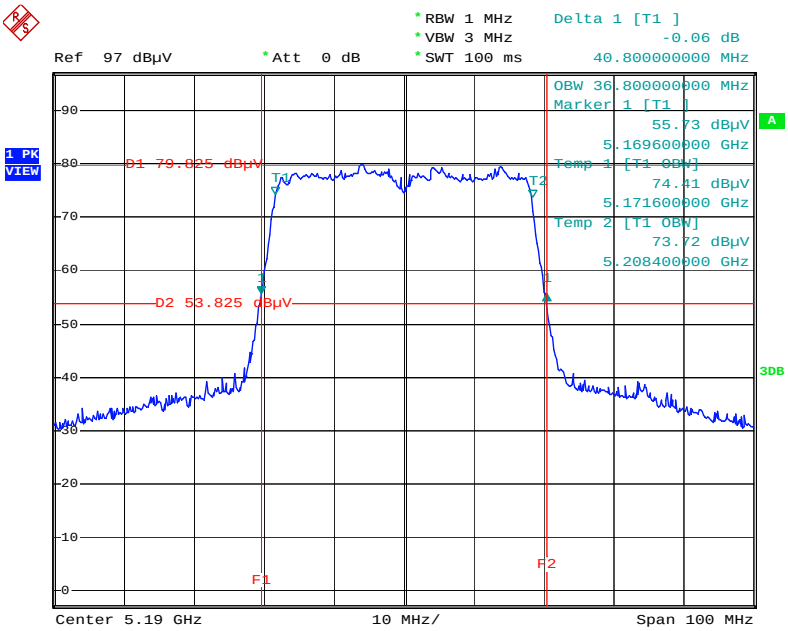
Date: 14.JAN.2015 19:36:09

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 / 5825 MHz



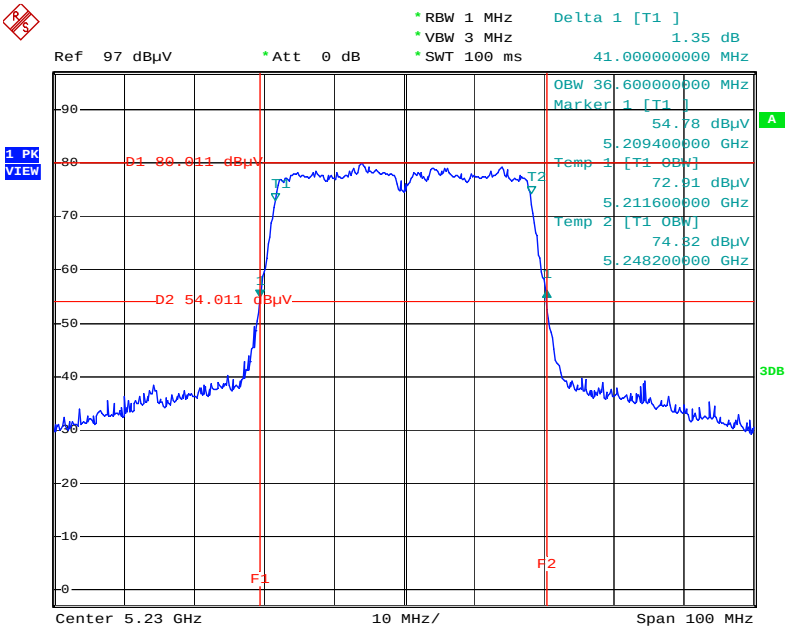
Date: 14.JAN.2015 19:40:37

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 / 5190 MHz



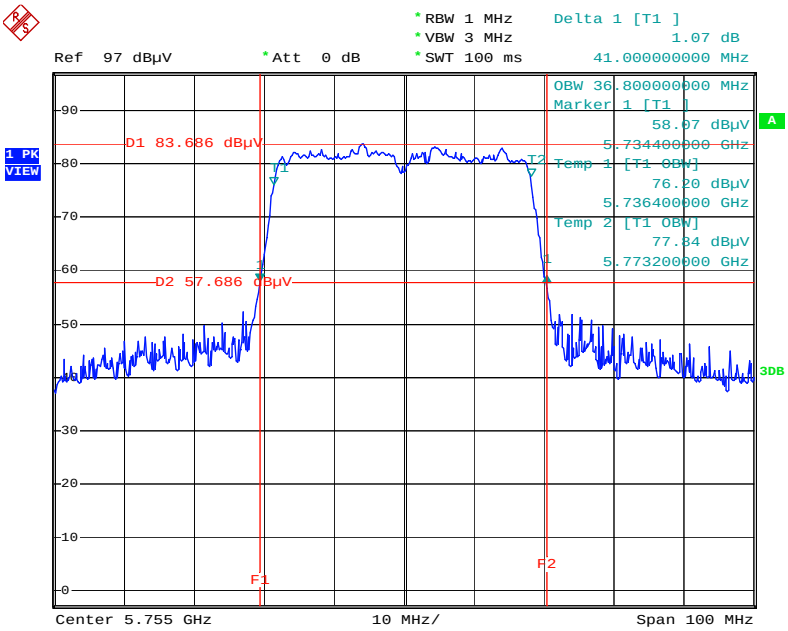
Date: 14.JAN.2015 19:56:28

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 / 5230 MHz



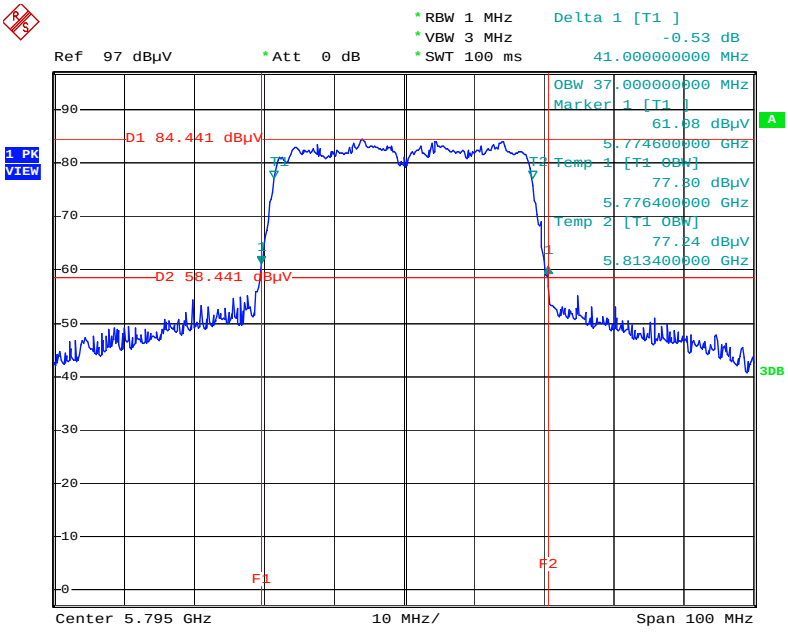
Date: 14.JAN.2015 19:58:04

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 / 5755 MHz



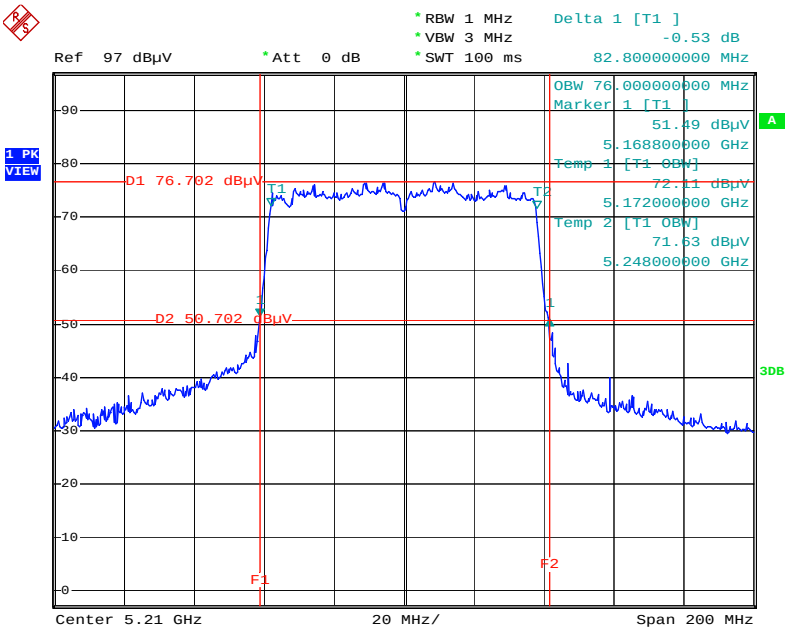
Date: 14.JAN.2015 19:59:24

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 / 5795 MHz



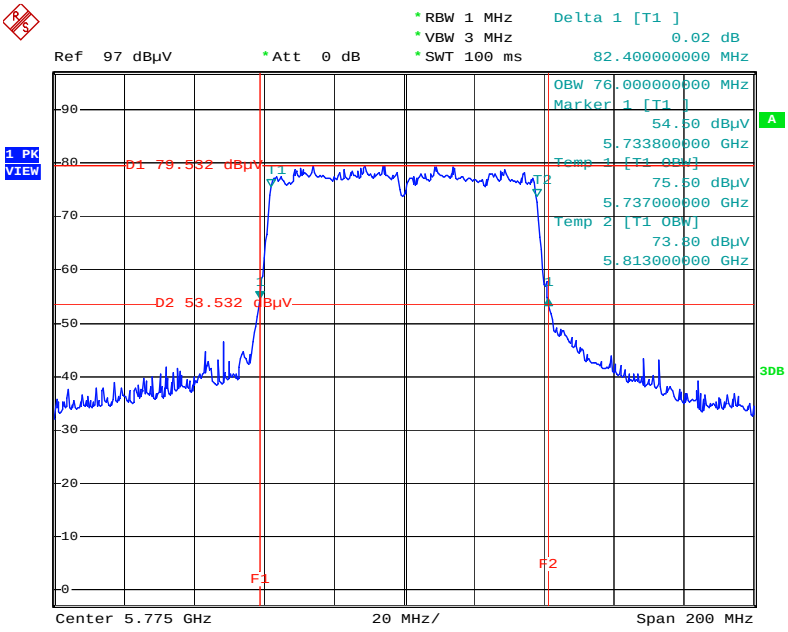
Date: 14.JAN.2015 20:02:18

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 + Chain 5 / 5210 MHz



Date: 14.JAN.2015 20:03:55

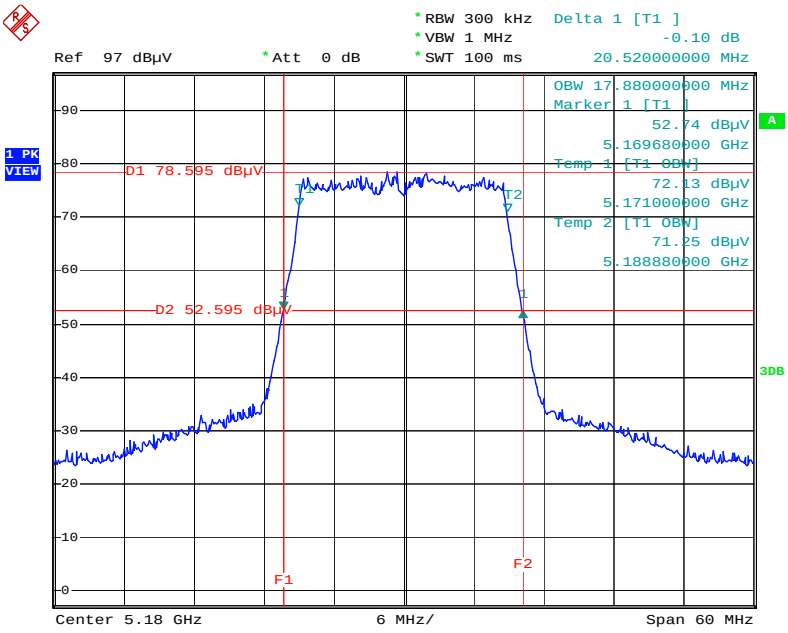
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 + Chain 5 / 5775 MHz



Date: 14.JAN.2015 20:05:01

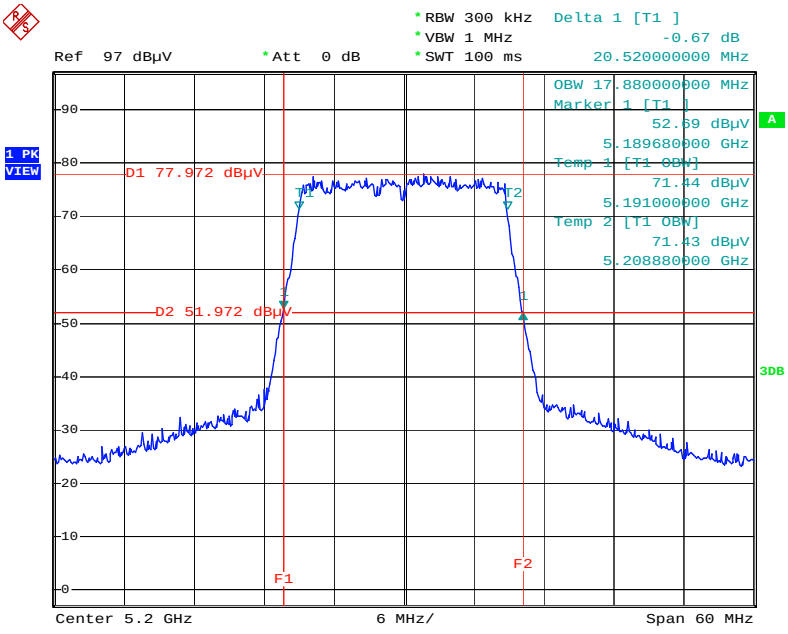
Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX) / For outdoor use

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5180 MHz



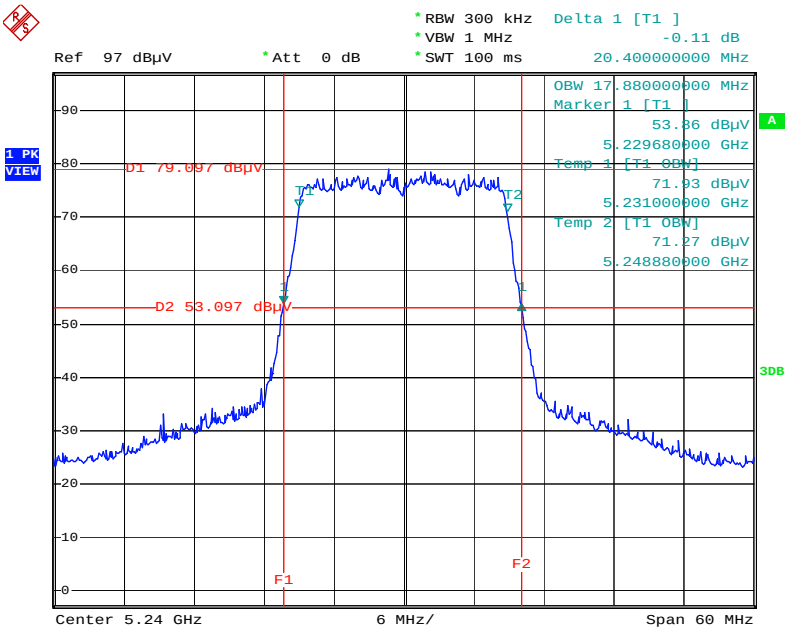
Date: 14.JAN.2015 20:08:05

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5200 MHz



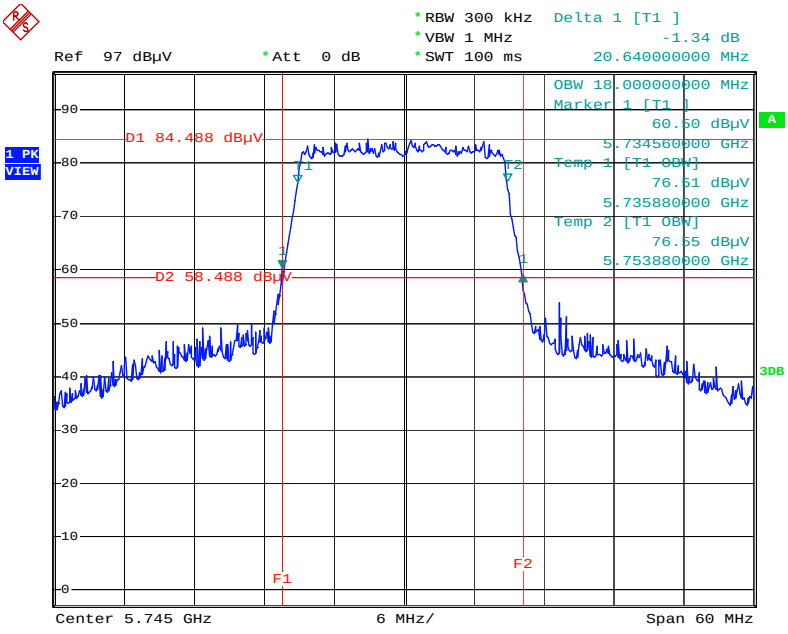
Date: 14.JAN.2015 20:08:40

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5240 MHz



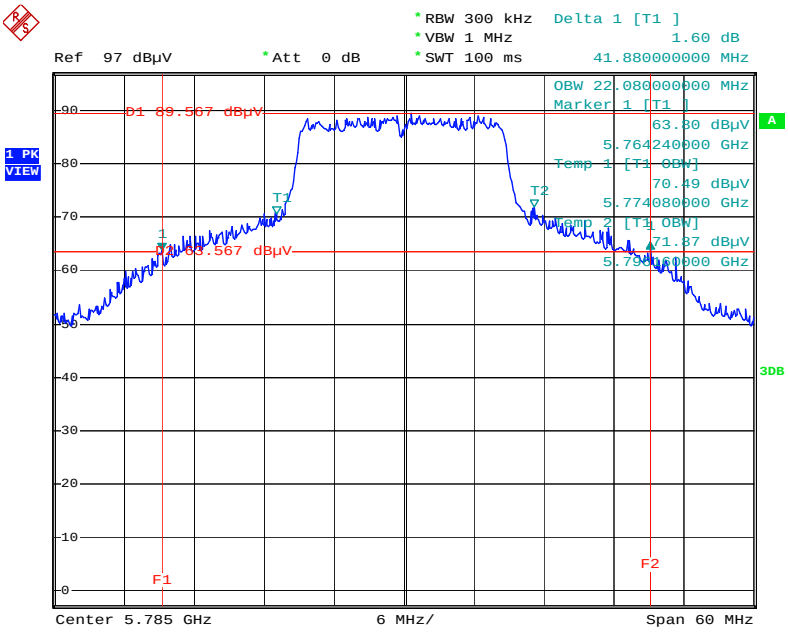
Date: 14.JAN.2015 20:09:24

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5745 MHz



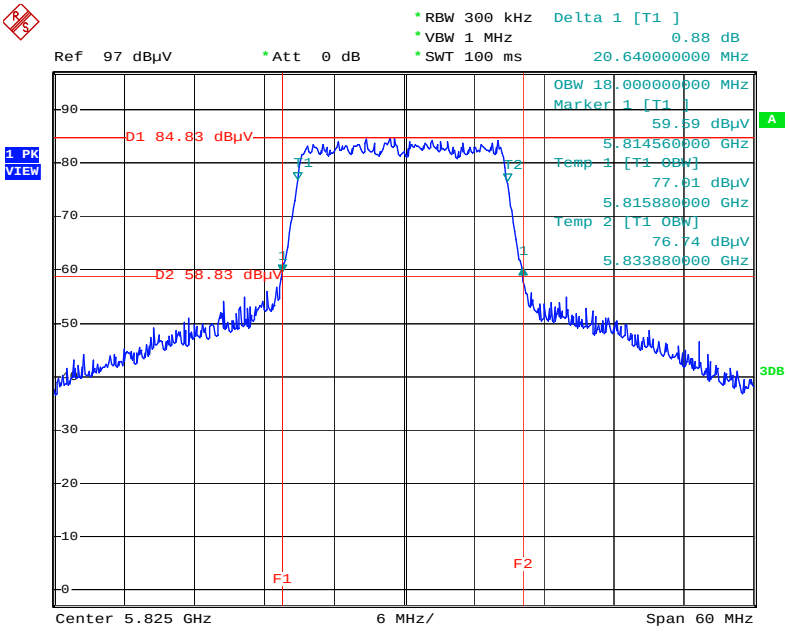
Date: 14.JAN.2015 20:10:17

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5785 MHz



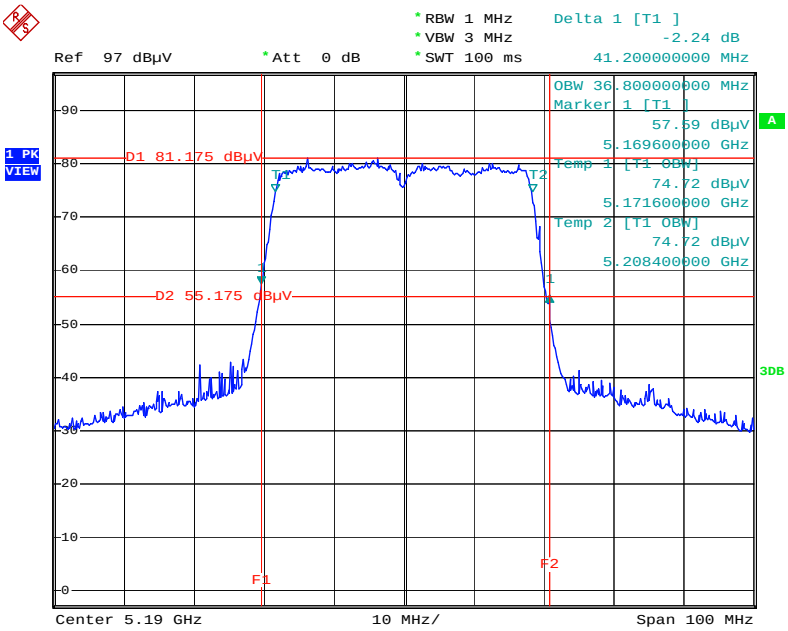
Date: 14.JAN.2015 20:12:00

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5825 MHz



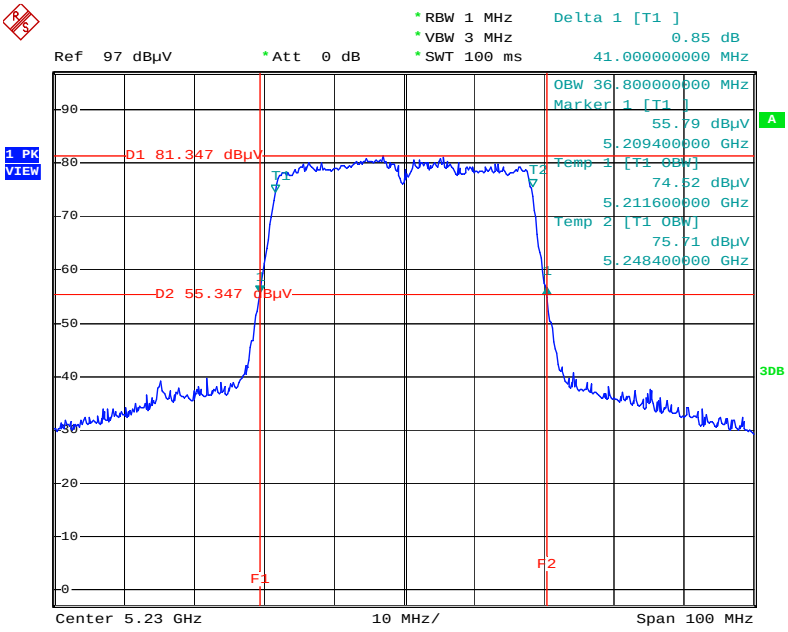
Date: 14.JAN.2015 20:13:20

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 + Chain 6 / 5190 MHz



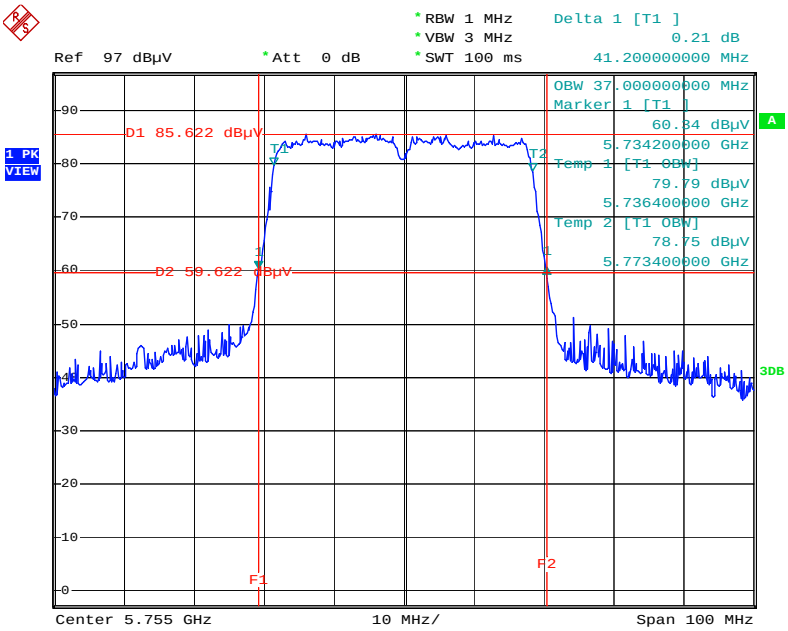
Date: 14.JAN.2015 20:14:48

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 + Chain 6 / 5230 MHz



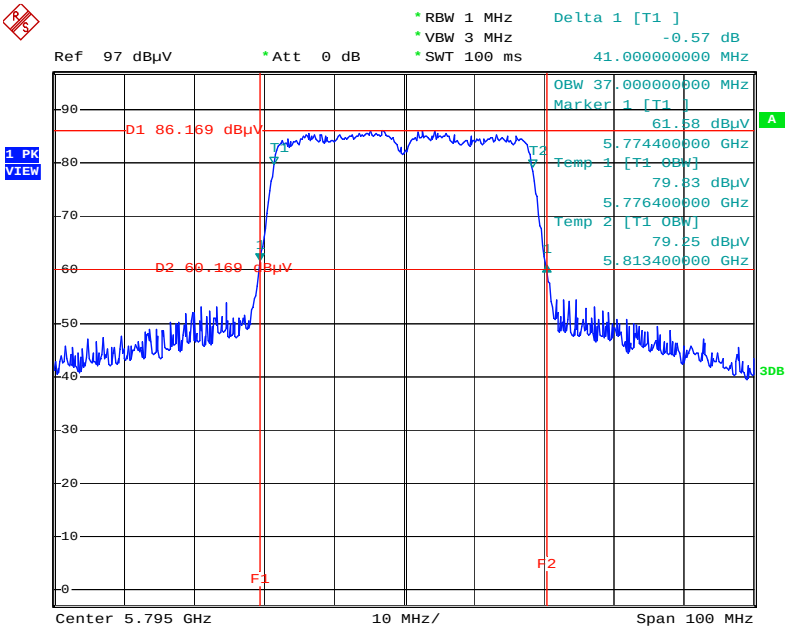
Date: 14.JAN.2015 20:15:23

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 + Chain 6 / 5755 MHz



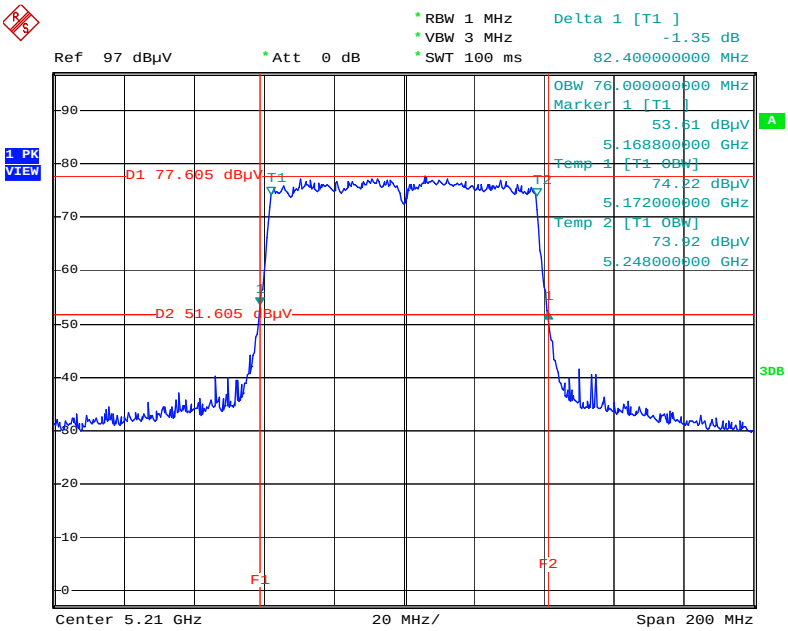
Date: 14.JAN.2015 20:16:17

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 + Chain 6 / 5795 MHz



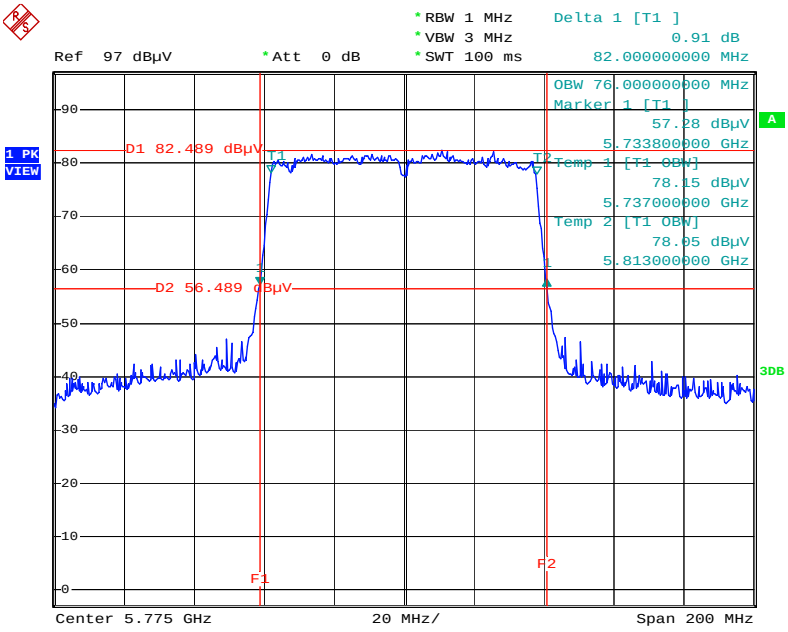
Date: 14.JAN.2015 20:17:23

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 + Chain 5 + Chain 6 / 5210 MHz



Date: 14.JAN.2015 20:19:23

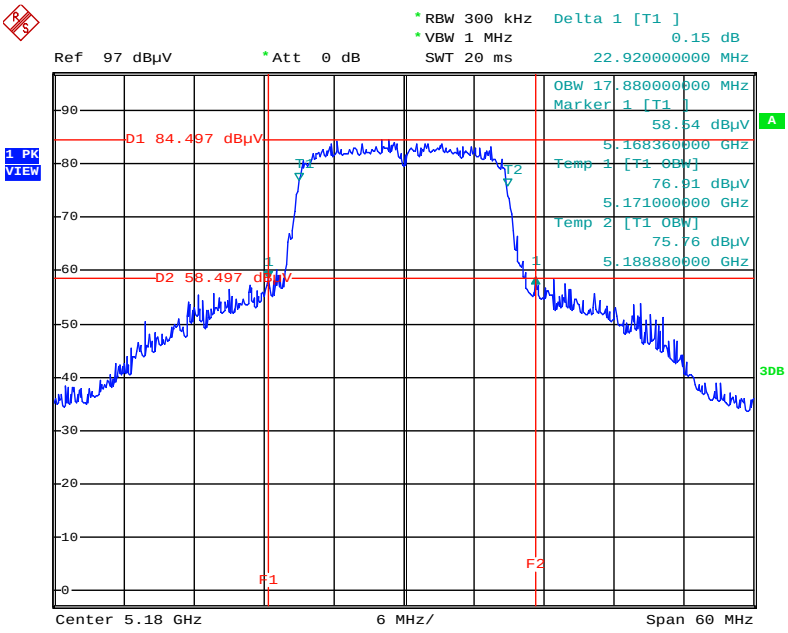
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 + Chain 5 + Chain 6 / 5775 MHz



Date: 14.JAN.2015 20:20:17

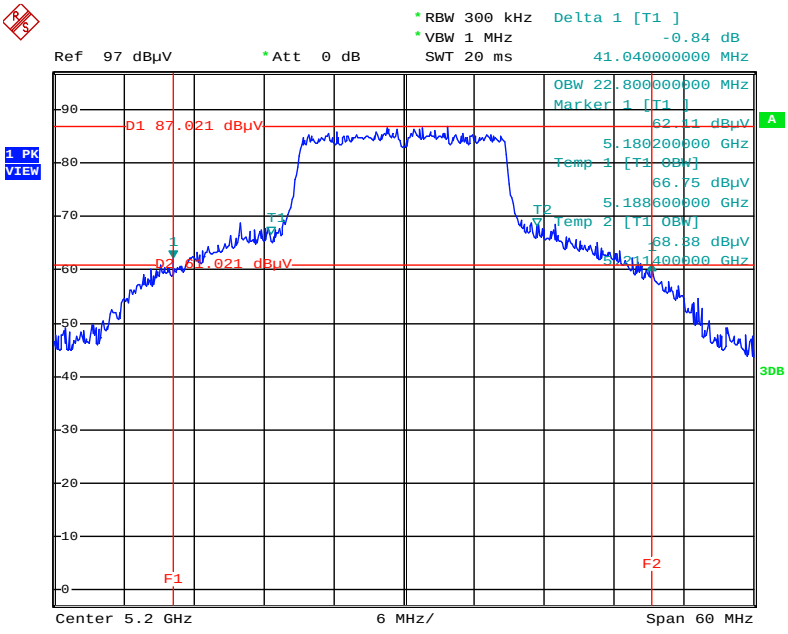
Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX) / For indoor use

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 / 5180 MHz



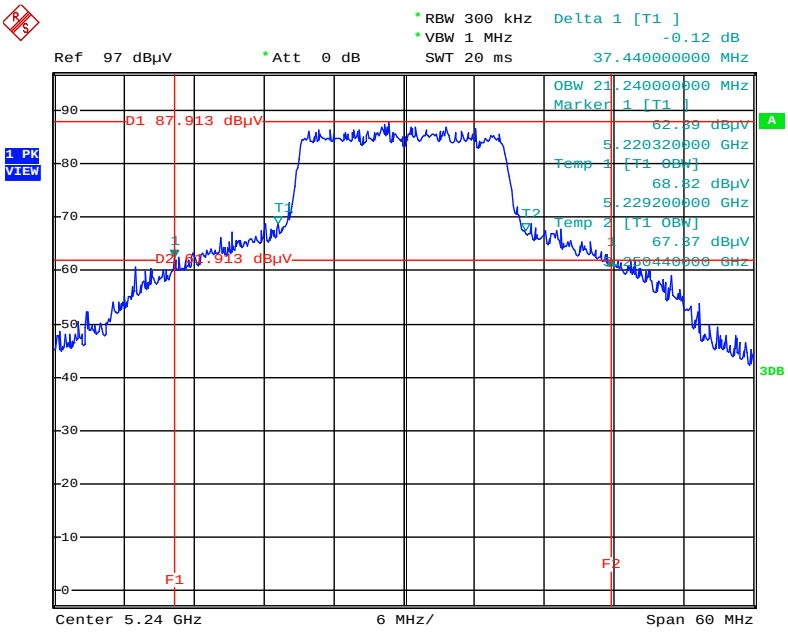
Date: 2.MAR.2015 17:00:32

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 / 5200 MHz



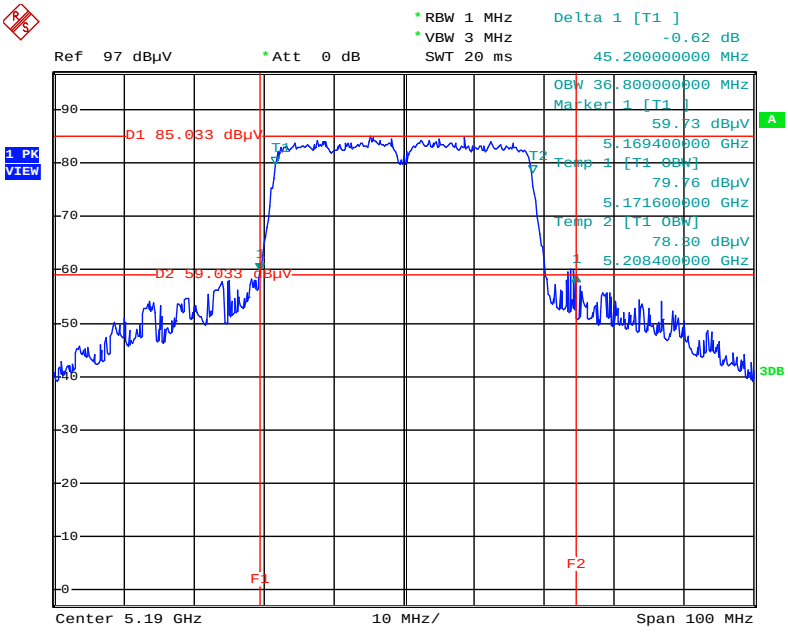
Date: 2.MAR.2015 17:01:31

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 / 5240 MHz



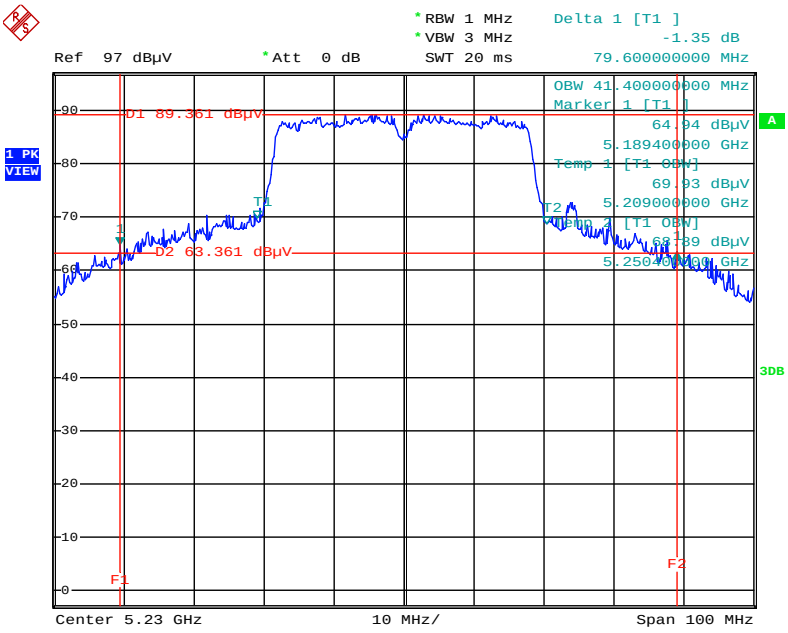
Date: 2.MAR.2015 17:02:27

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 / 5190 MHz



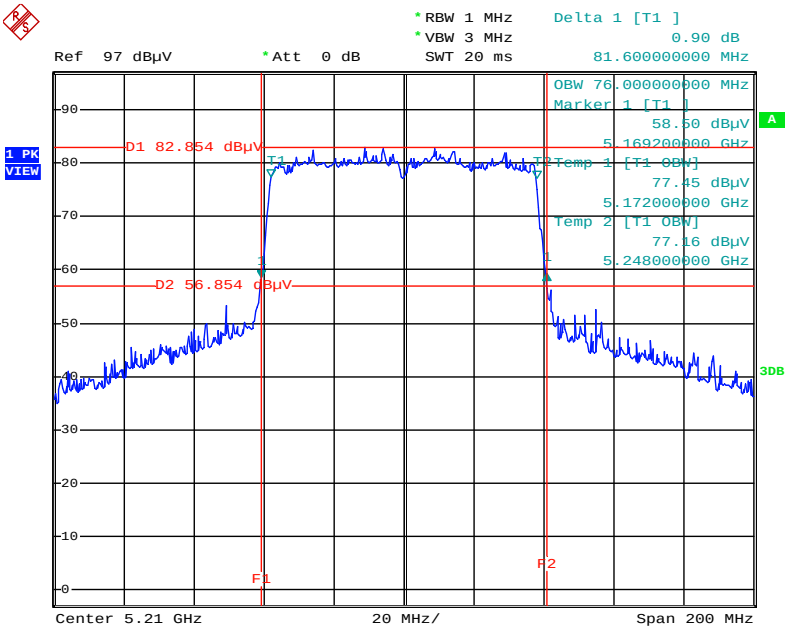
Date: 2.MAR.2015 17:04:16

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 / 5230 MHz



Date: 2.MAR.2015 17:05:49

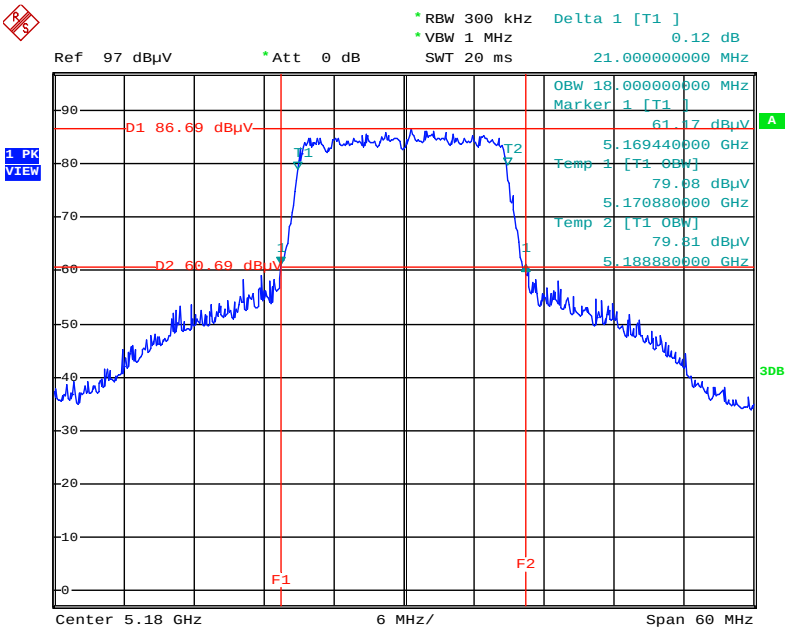
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 + Chain 5 / 5210 MHz



Date: 2.MAR.2015 18:19:10

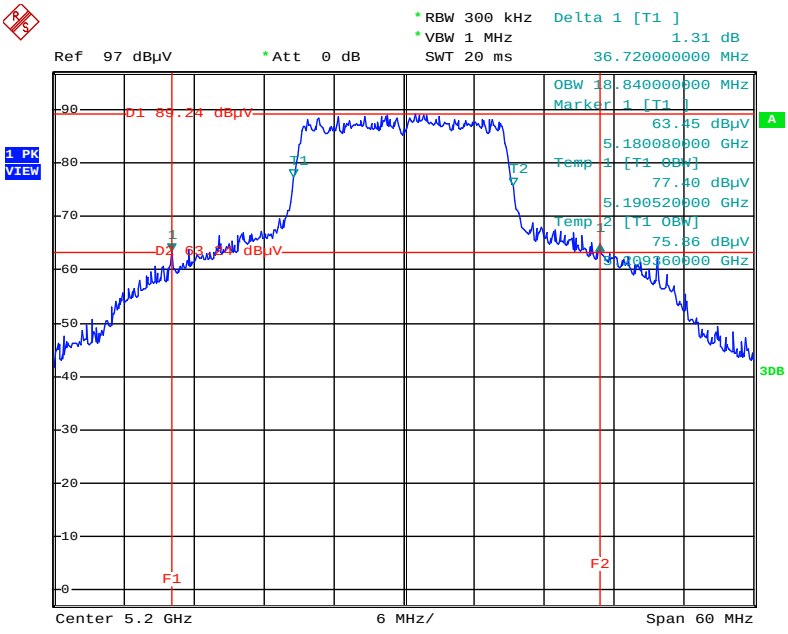
Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX) / For indoor use

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5180 MHz



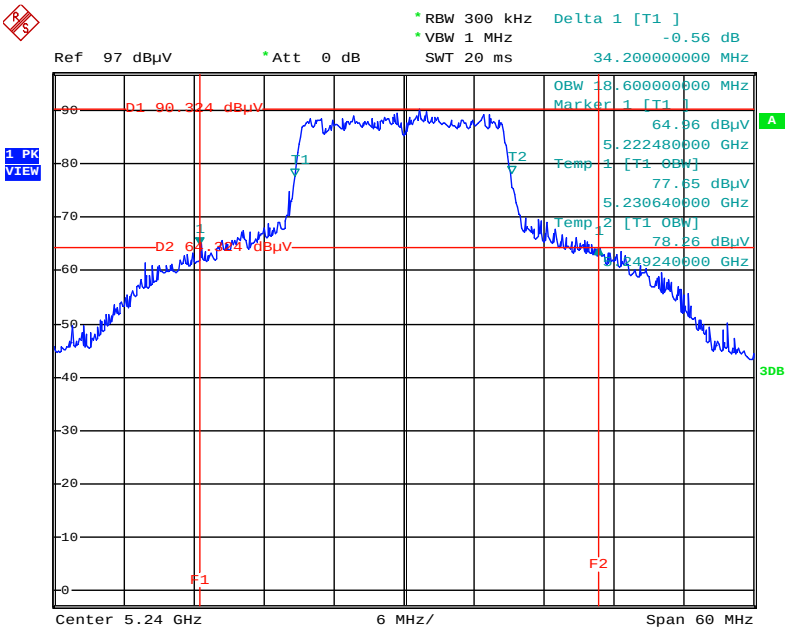
Date: 2.MAR.2015 18:21:58

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5200 MHz



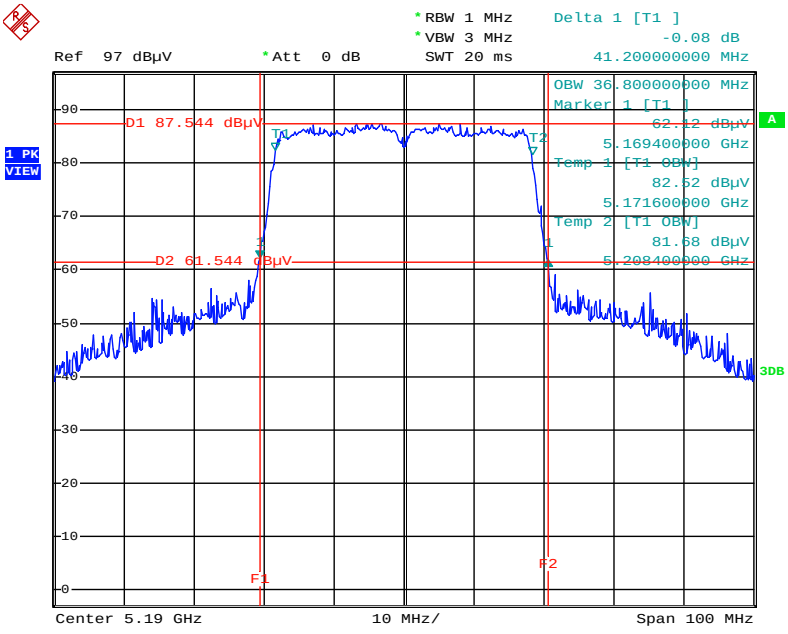
Date: 2.MAR.2015 18:22:39

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5240 MHz



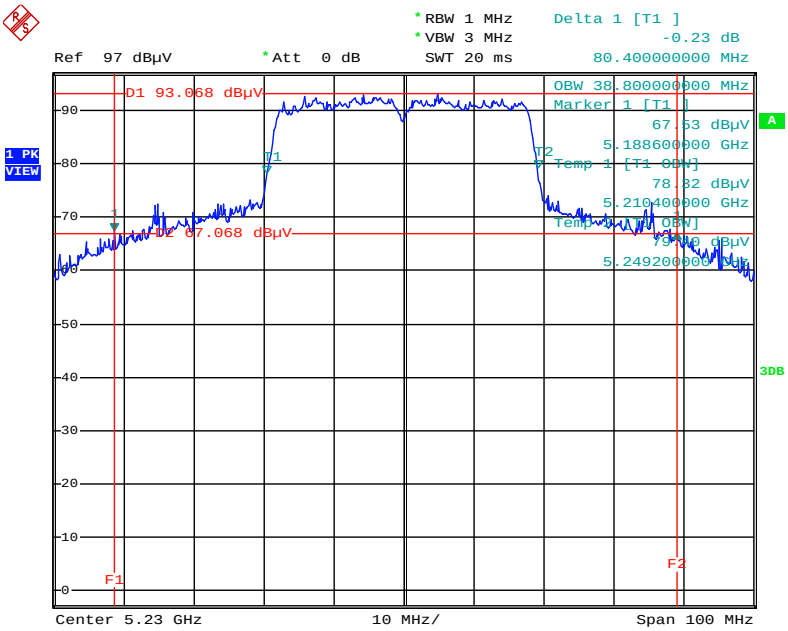
Date: 2.MAR.2015 18:23:24

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 + Chain 6 / 5190 MHz



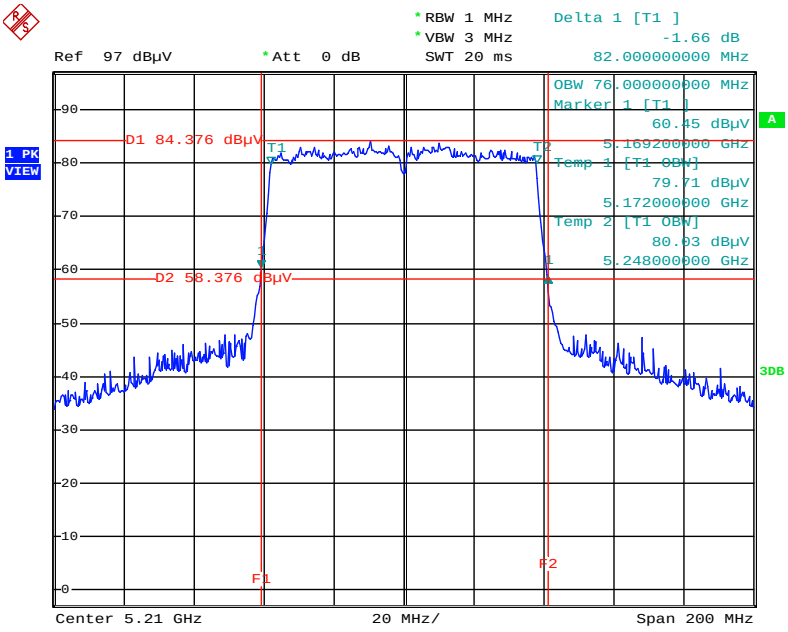
Date: 2.MAR.2015 18:24:23

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 + Chain 6 / 5230 MHz



Date: 2.MAR.2015 18:25:31

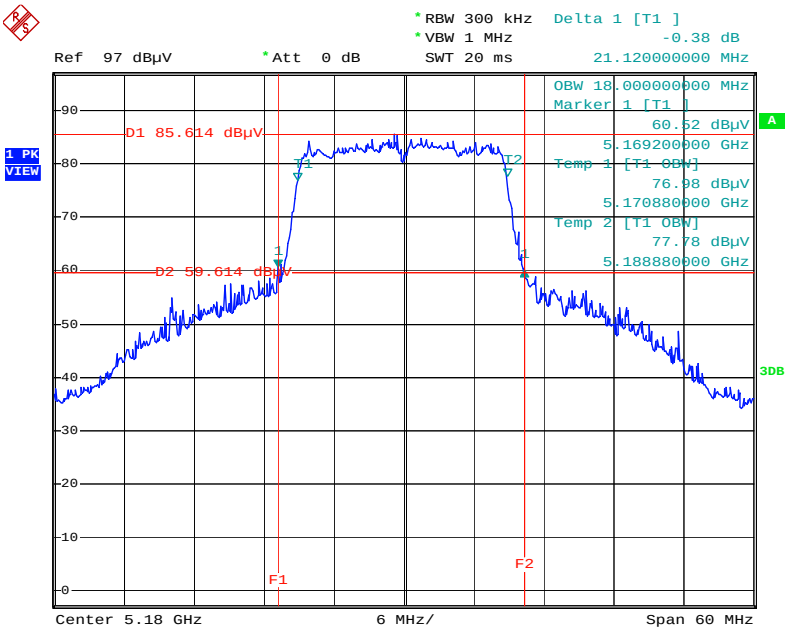
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 + Chain 5 + Chain 6 / 5210 MHz



Date: 2.MAR.2015 18:26:23

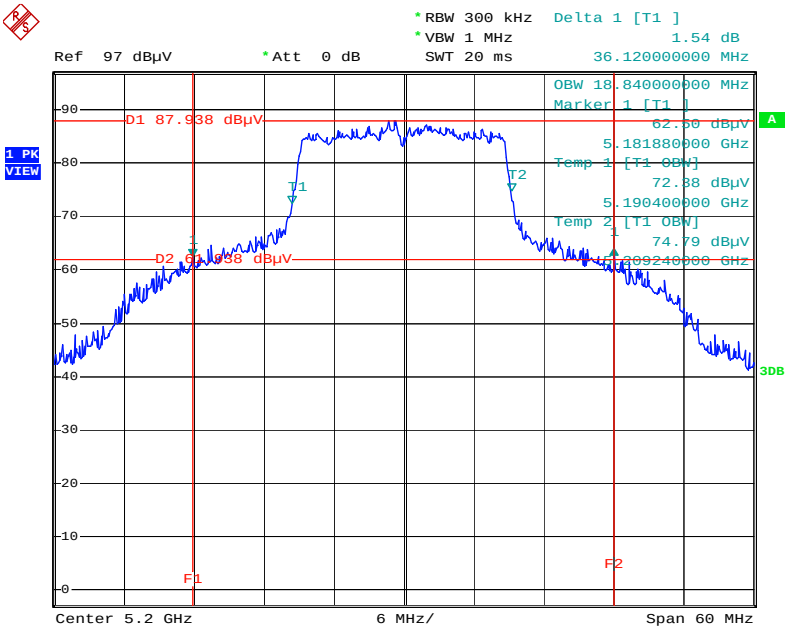
Mode 2: (Ant.8 Panel antenna / 5.1dBi / 2TX)

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 / 5180 MHz



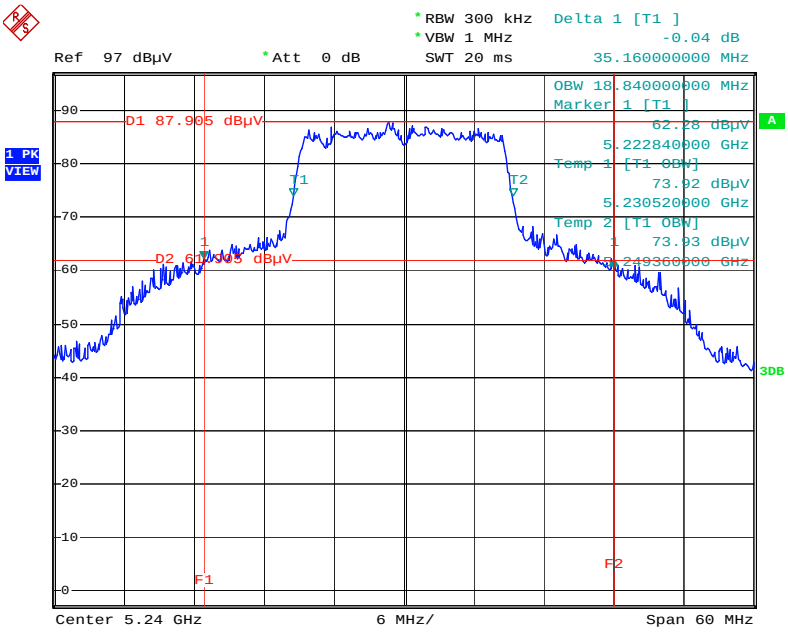
Date: 12.JAN.2015 17:25:24

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 / 5200 MHz



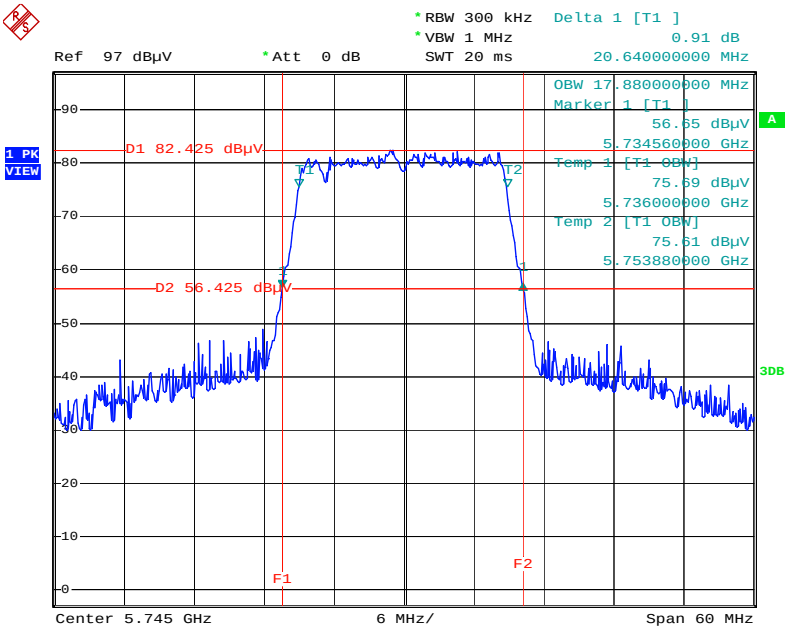
Date: 12.JAN.2015 17:27:12

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 / 5240 MHz



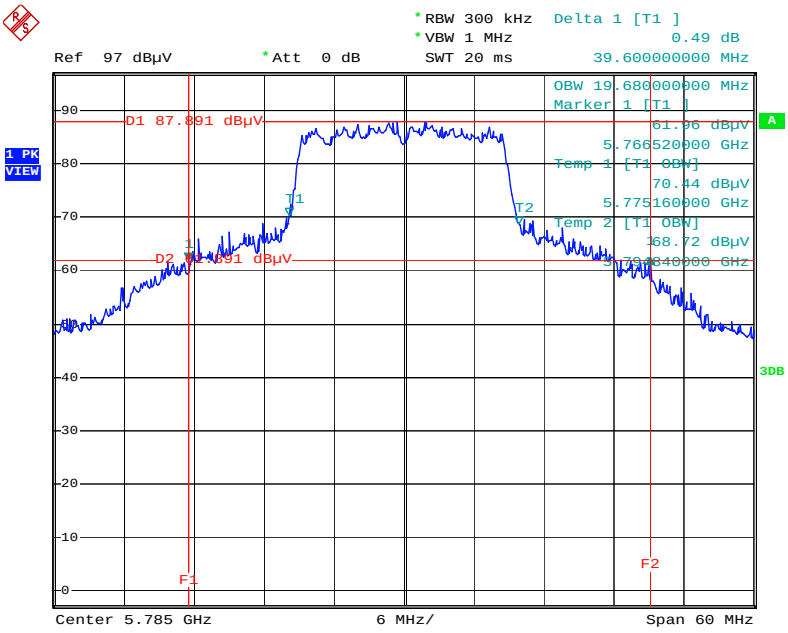
Date: 12.JAN.2015 17:27:56

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 / 5745 MHz



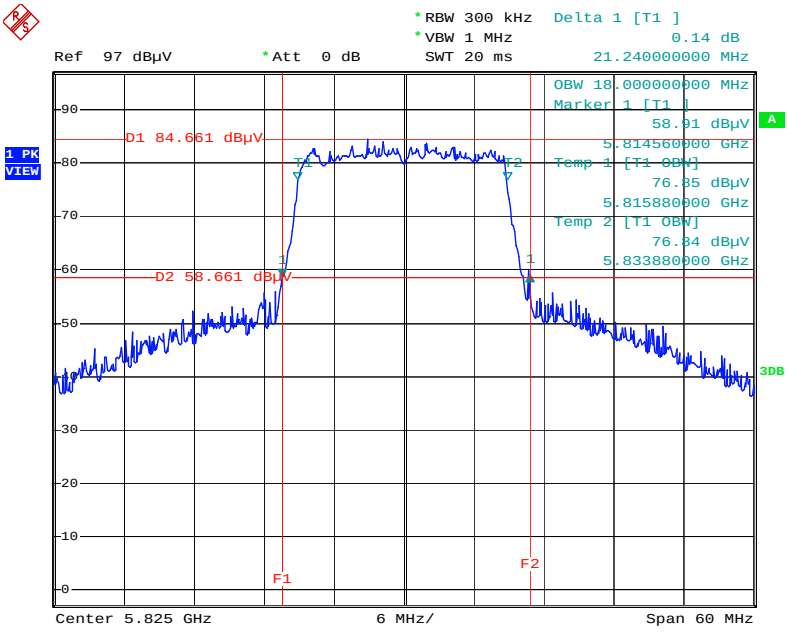
Date: 12.JAN.2015 17:29:02

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 / 5785 MHz



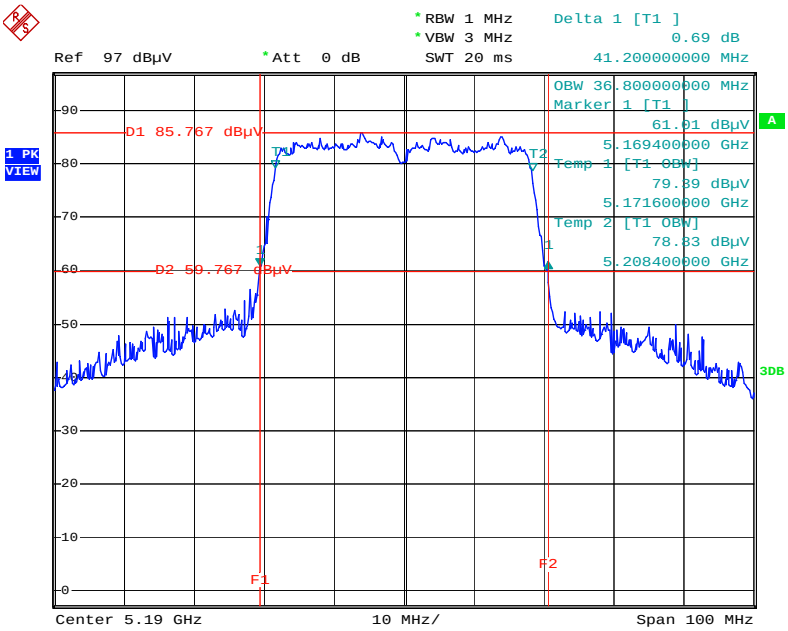
Date: 12.JAN.2015 17:31:21

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 / 5825 MHz



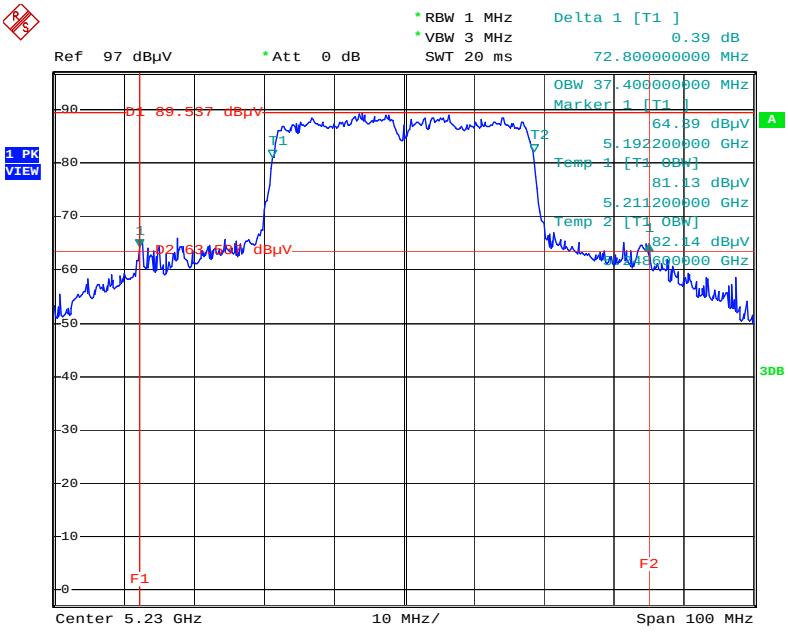
Date: 12.JAN.2015 17:33:26

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 / 5190 MHz



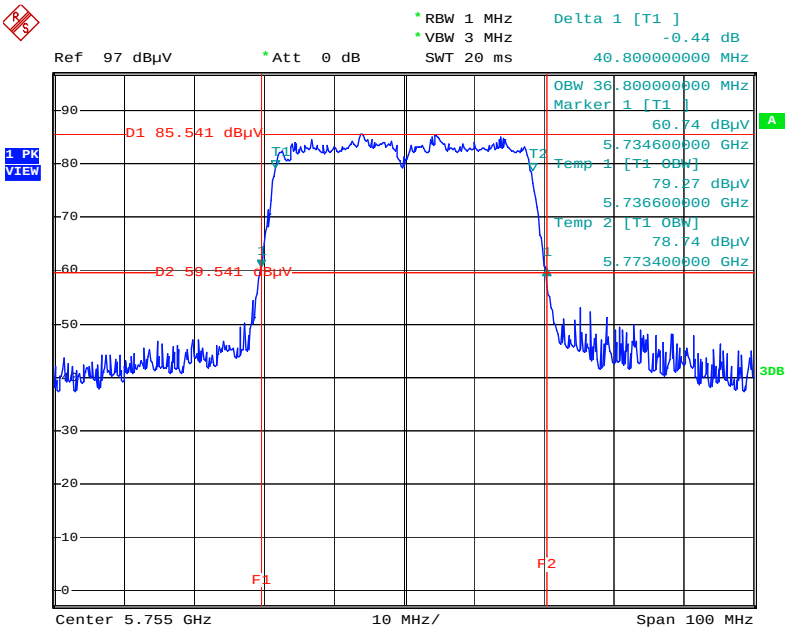
Date: 12.JAN.2015 17:34:37

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 / 5230 MHz



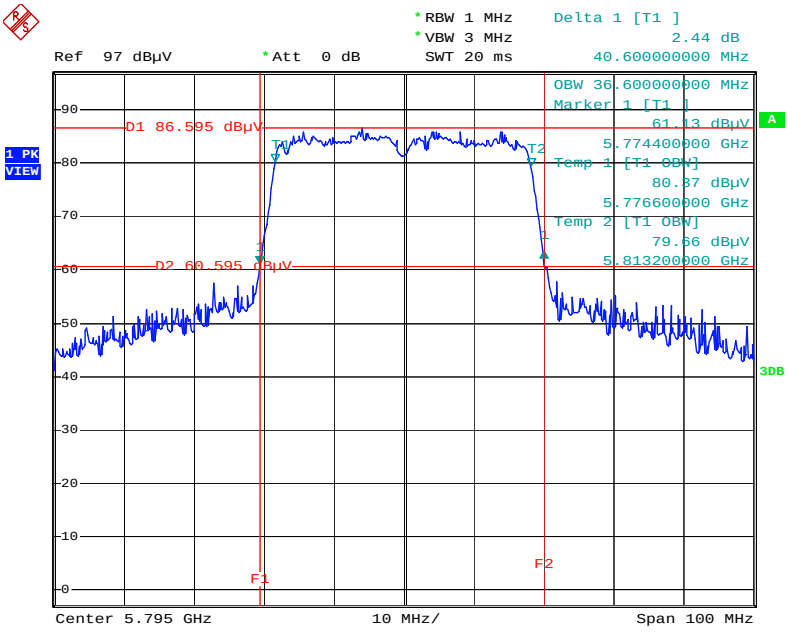
Date: 12.JAN.2015 17:35:27

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 / 5755 MHz



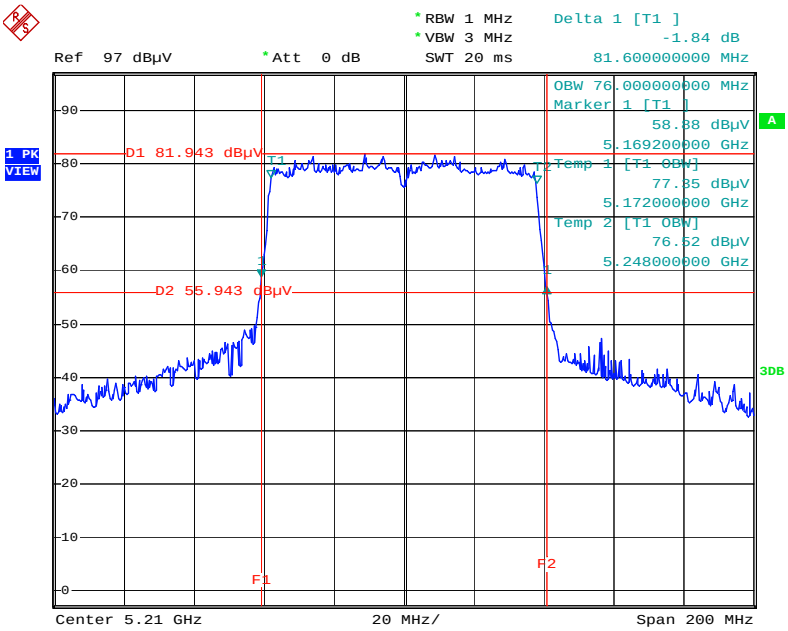
Date: 12.JAN.2015 17:36:01

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 / 5795 MHz



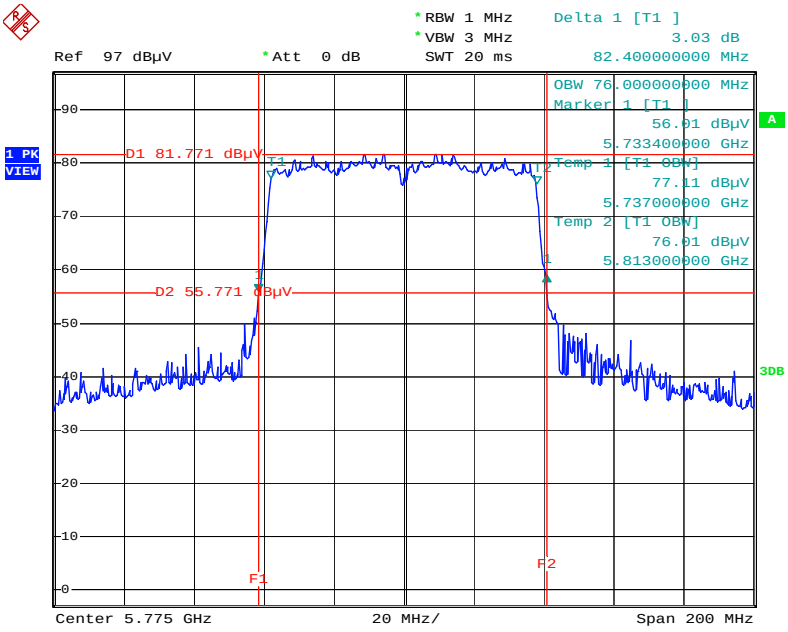
Date: 12.JAN.2015 17:37:12

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 + Chain 5 / 5210 MHz



Date: 12.JAN.2015 17:39:13

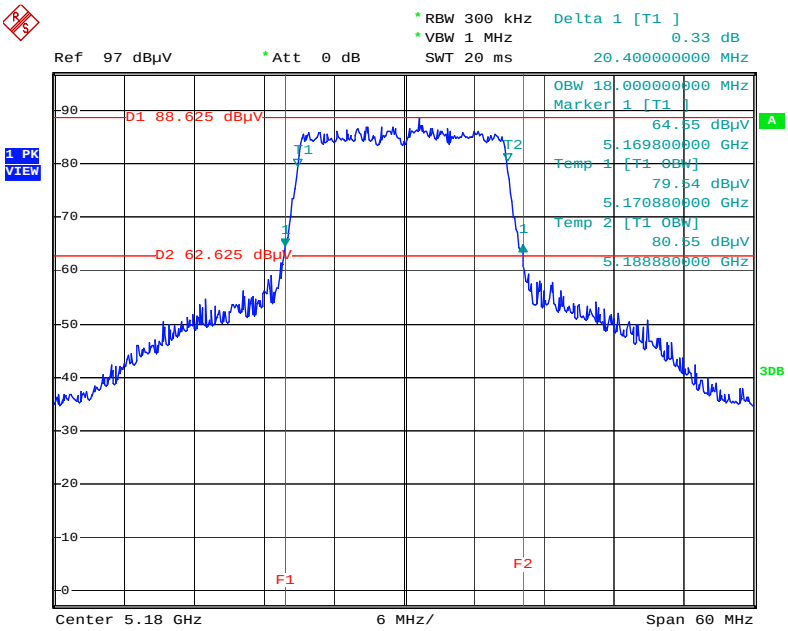
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 + Chain 5 / 5775 MHz



Date: 12.JAN.2015 17:40:39

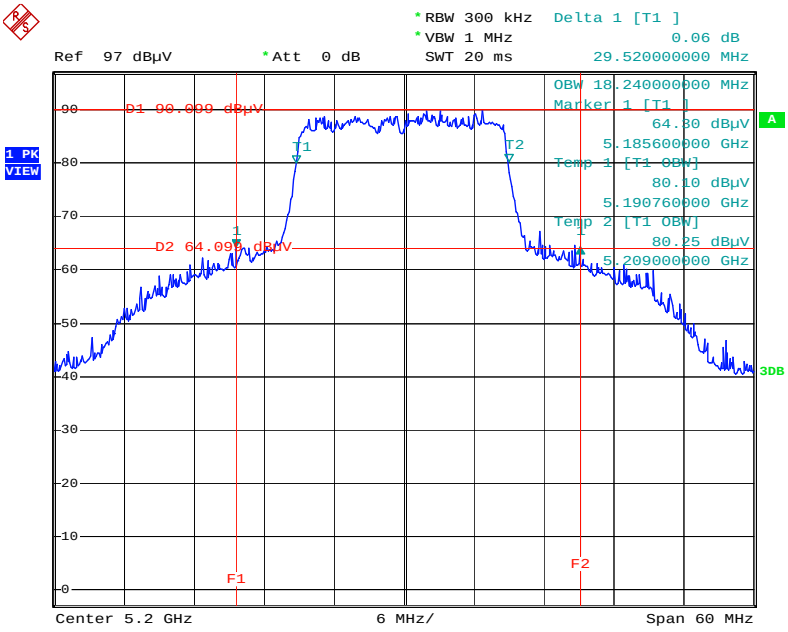
Mode 2: (Ant.8 Panel antenna / 5.1dBi / 3TX)

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5180 MHz



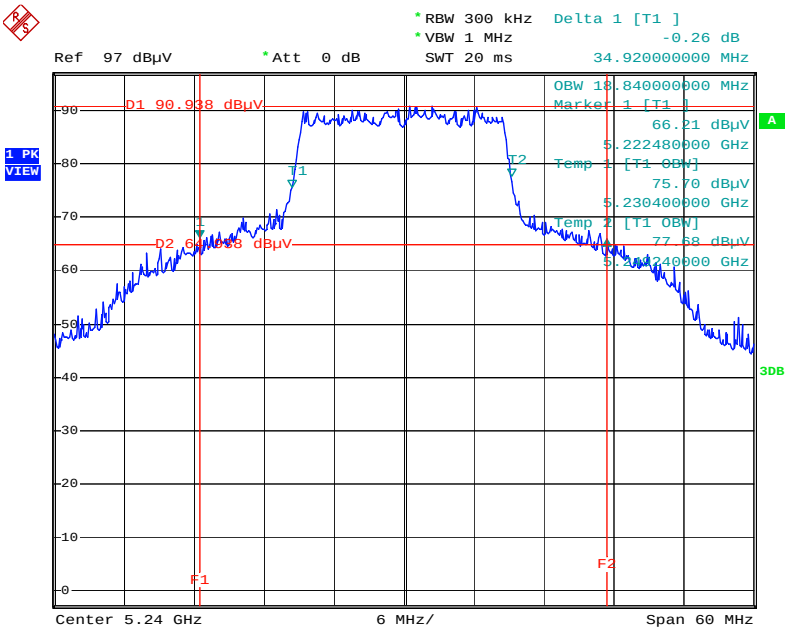
Date: 12.JAN.2015 16:22:41

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5200 MHz

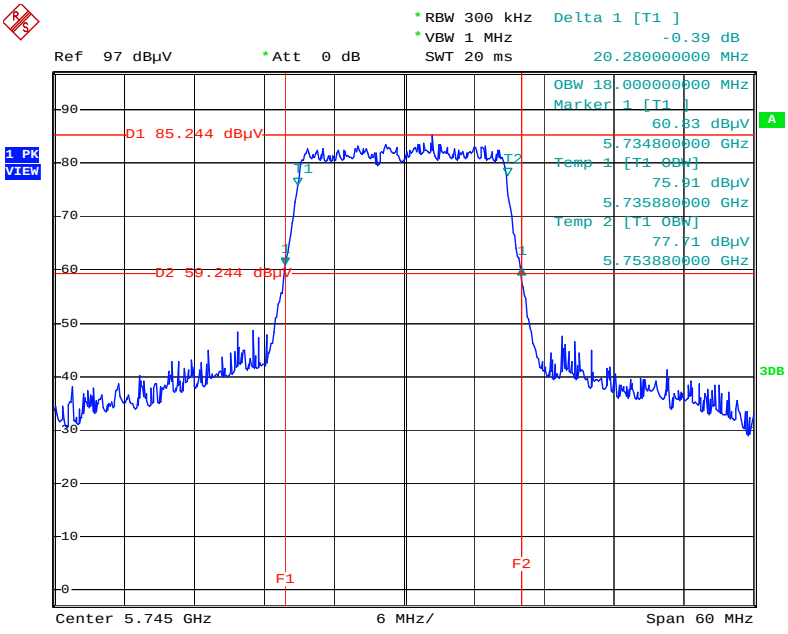


Date: 12.JAN.2015 16:24:23

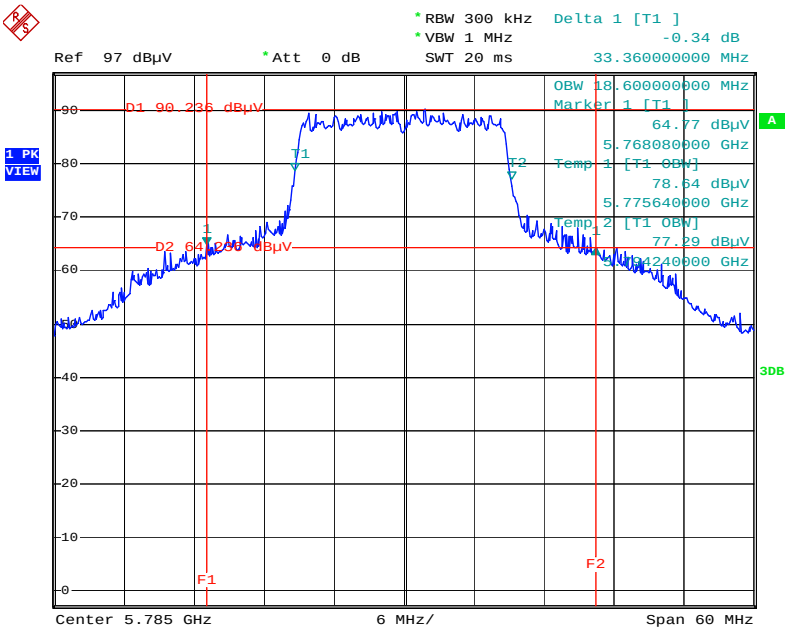
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5240 MHz



26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5745 MHz

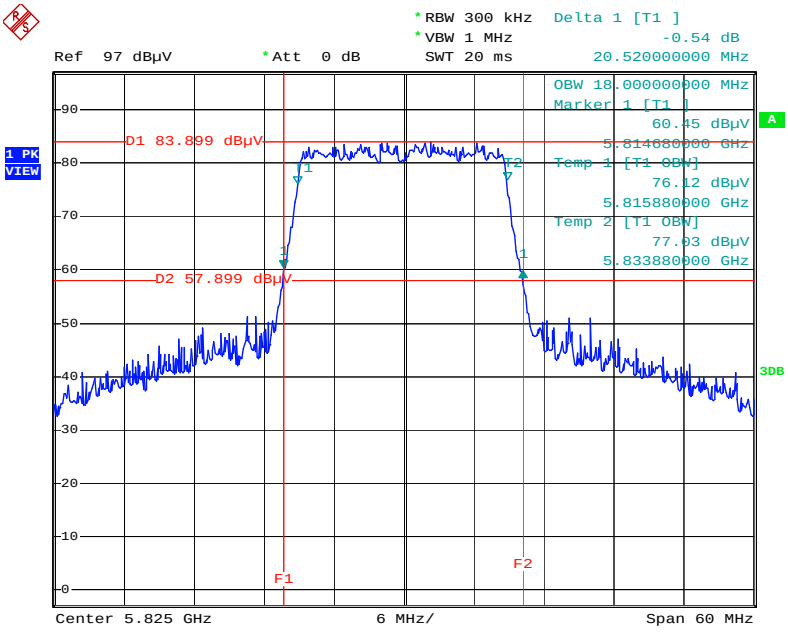


26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5785 MHz



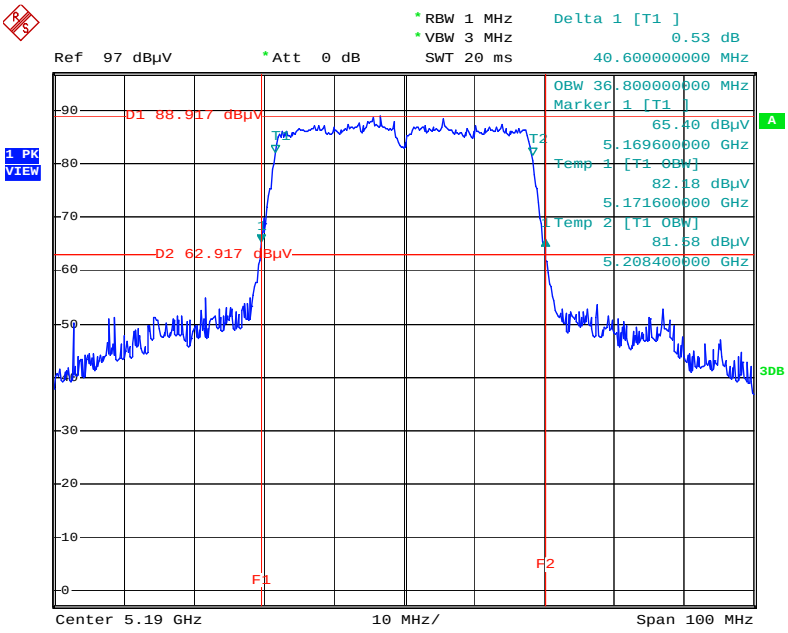
Date: 12.JAN.2015 16:58:24

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5825 MHz



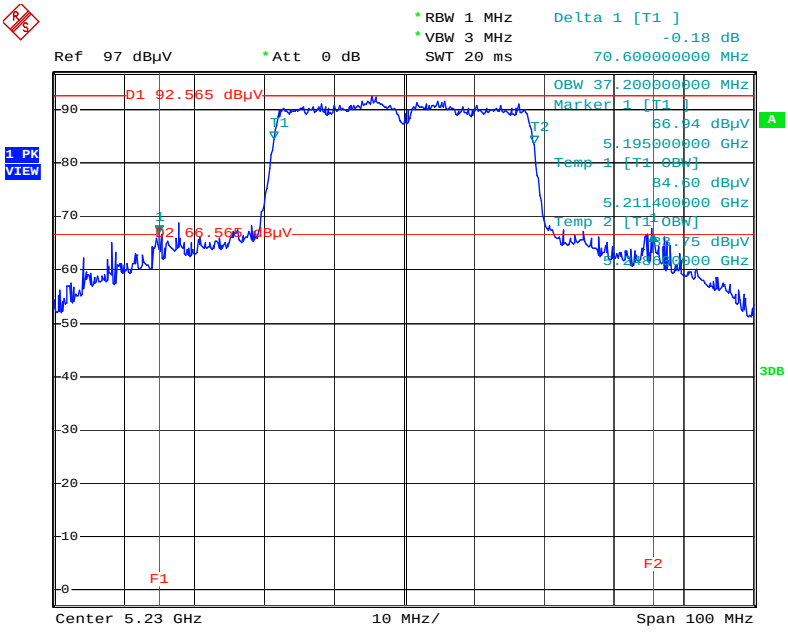
Date: 13.JAN.2015 00:13:03

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 + Chain 6 / 5190 MHz



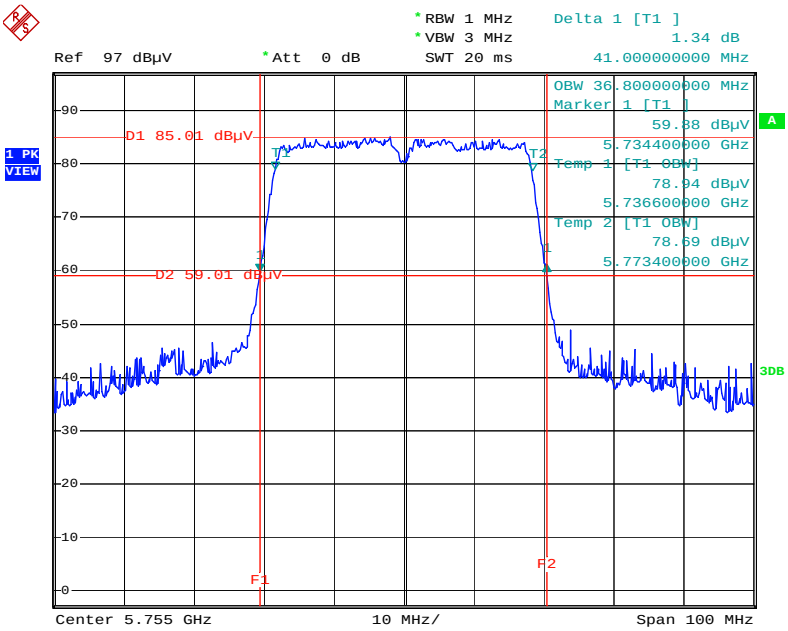
Date: 12.JAN.2015 17:15:39

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 + Chain 6 / 5230 MHz



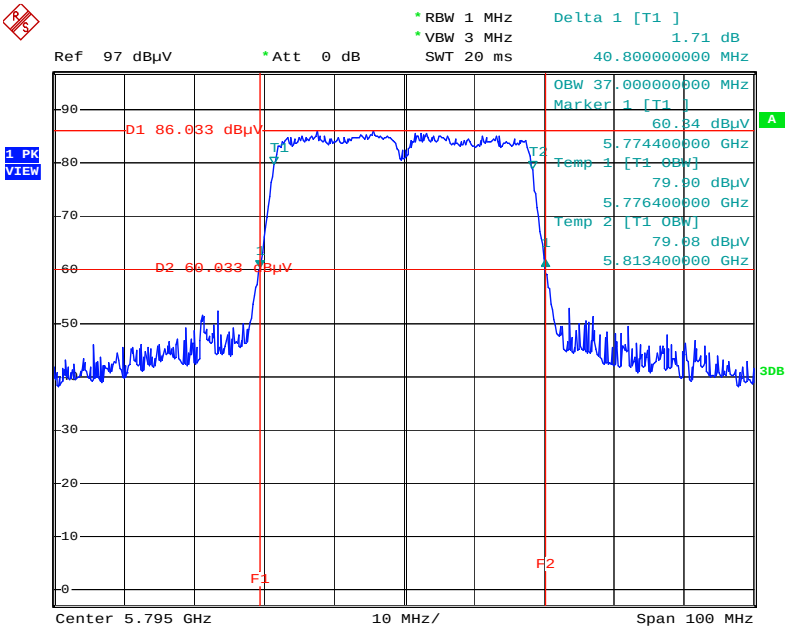
Date: 12.JAN.2015 17:16:10

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 + Chain 6 / 5755 MHz



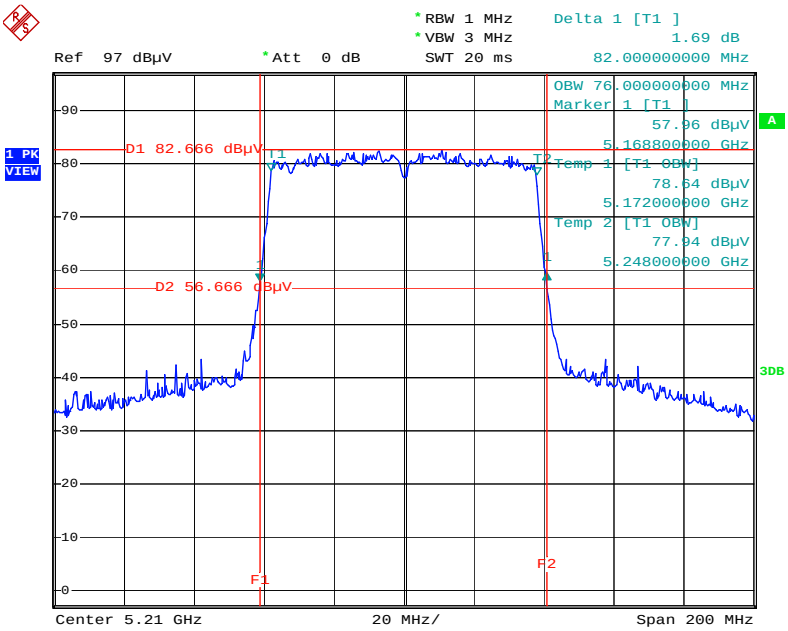
Date: 13.JAN.2015 00:28:19

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 + Chain 6 / 5795 MHz



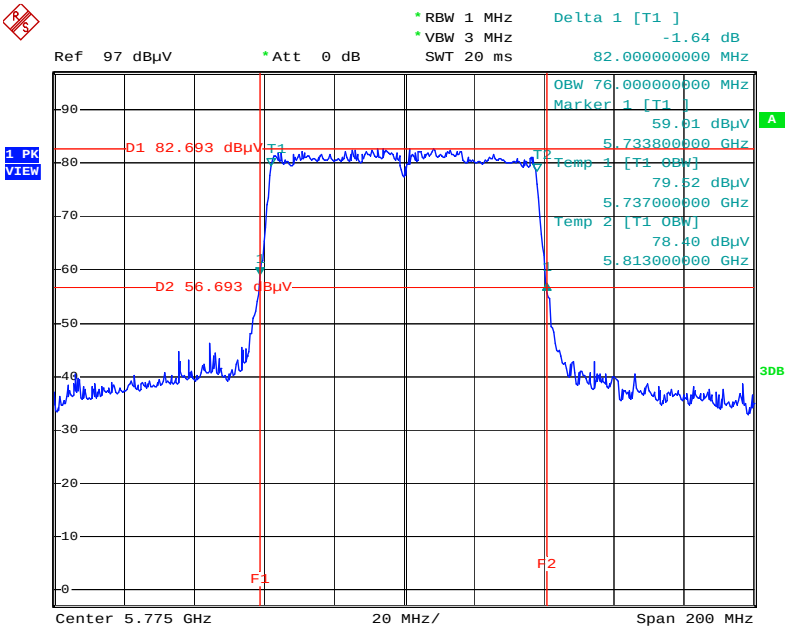
Date: 13.JAN.2015 00:27:30

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 + Chain 5 + Chain 6 / 5210 MHz



Date: 12.JAN.2015 17:18:00

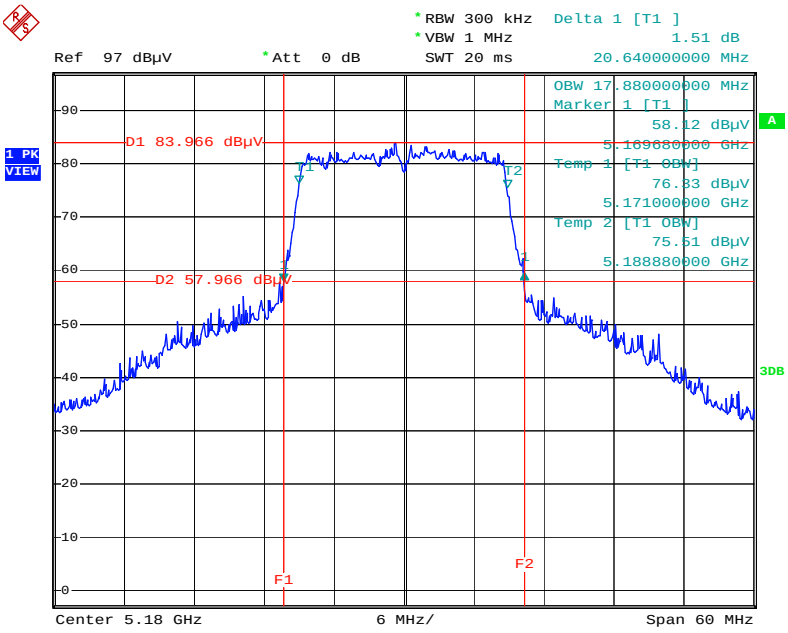
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 + Chain 5 + Chain 6 / 5775 MHz



Date: 12.JAN.2015 17:21:28

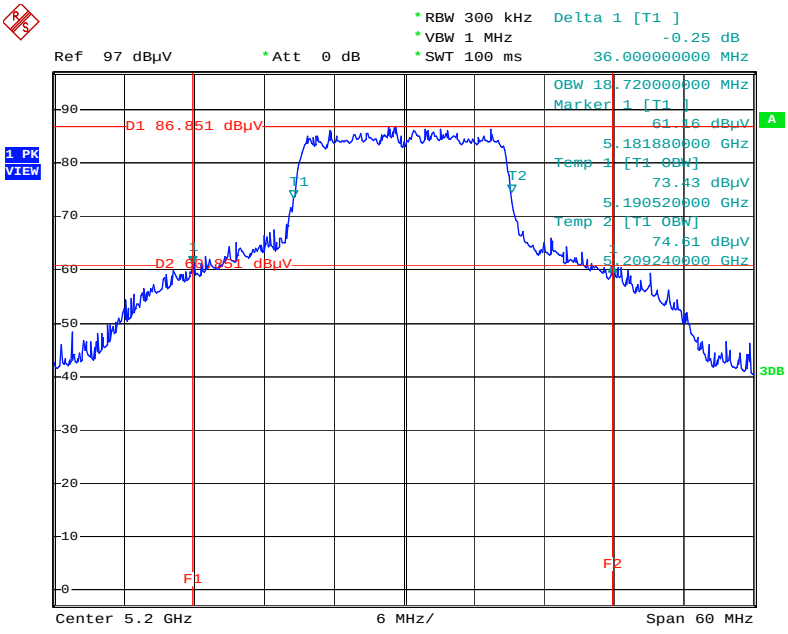
Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 2TX)

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT20 / Chain 4 + Chain 5 / 5180 MHz



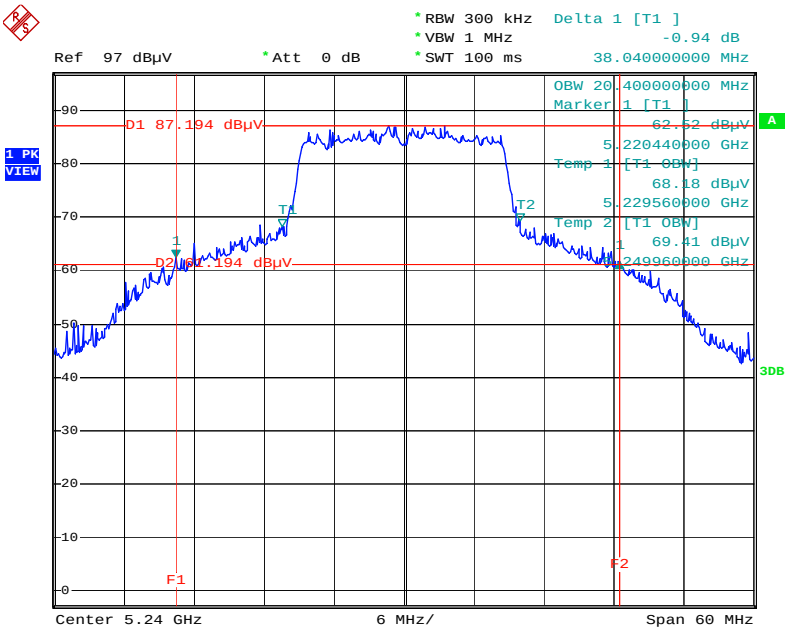
Date: 9.JAN.2015 22:17:39

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT20 / Chain 4 + Chain 5 / 5200 MHz



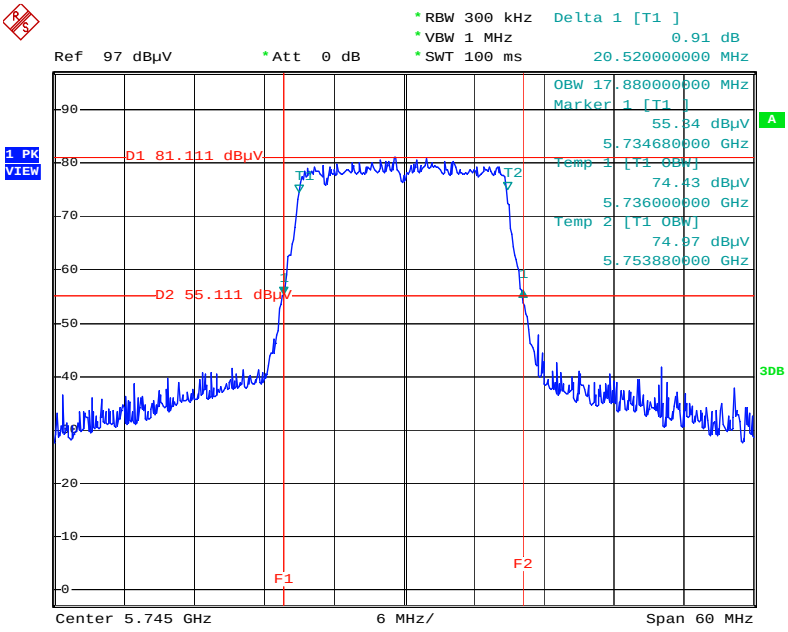
Date: 9.JAN.2015 22:20:09

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT20 / Chain 4 + Chain 5 / 5240 MHz



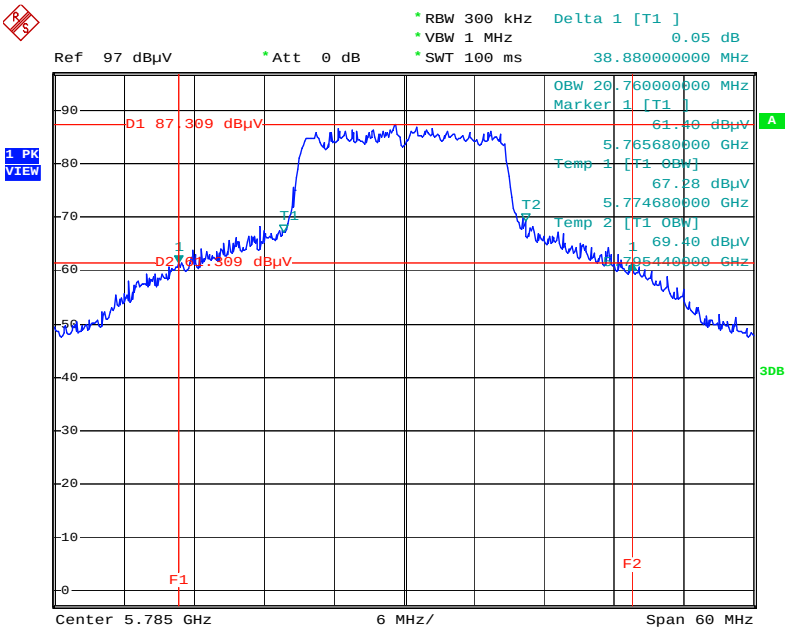
Date: 10.JAN.2015 00:08:33

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT20 / Chain 4 + Chain 5 / 5745 MHz



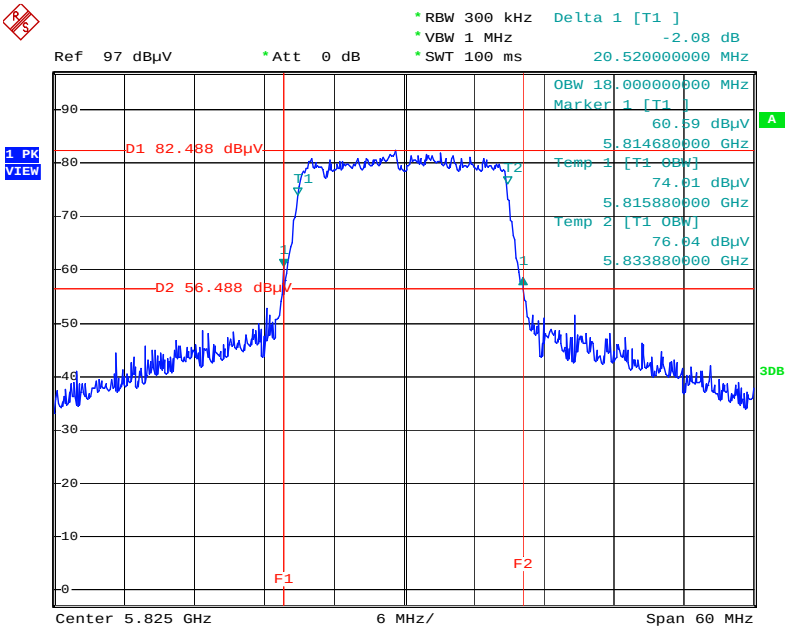
Date: 9.JAN.2015 22:38:34

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT20 / Chain 4 + Chain 5 / 5785 MHz



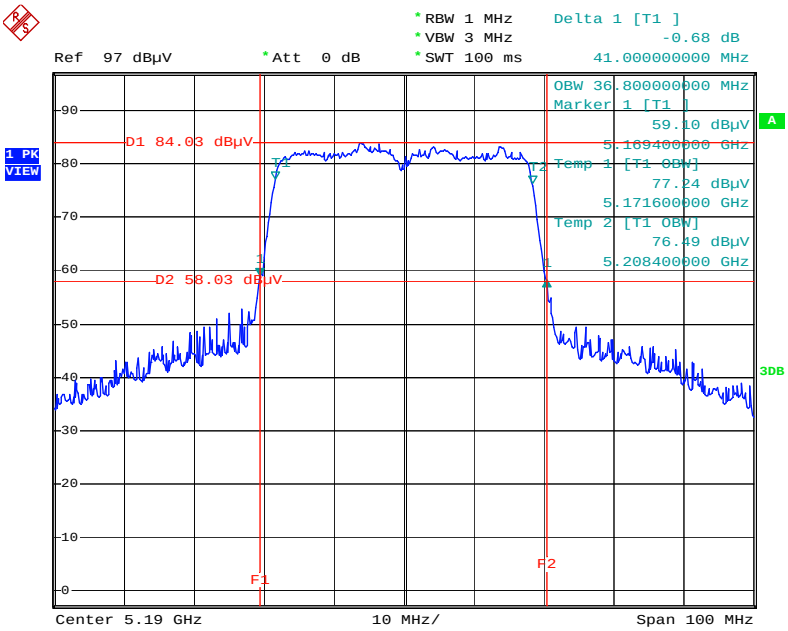
Date: 9.JAN.2015 22:41:14

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT20 / Chain 4 + Chain 5 / 5825 MHz



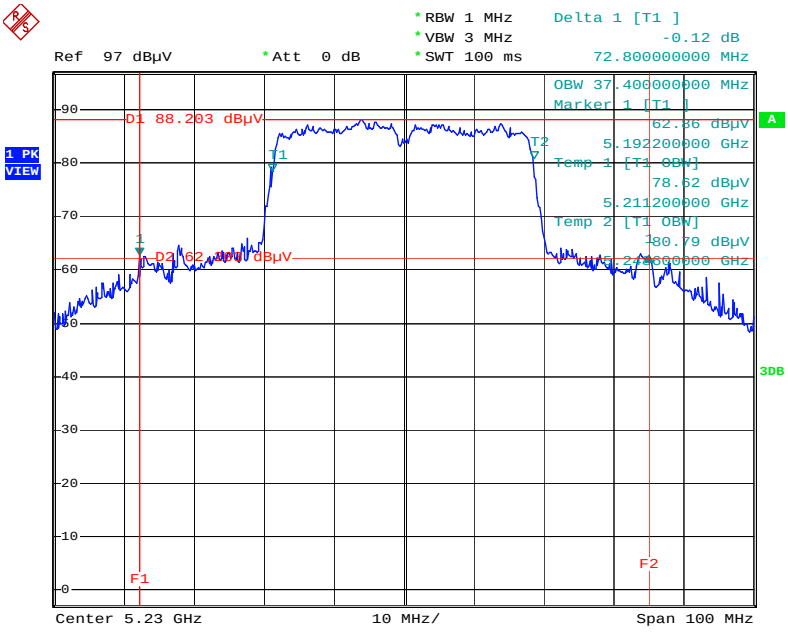
Date: 9.JAN.2015 22:44:09

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT40 / Chain 4 + Chain 5 / 5190 MHz



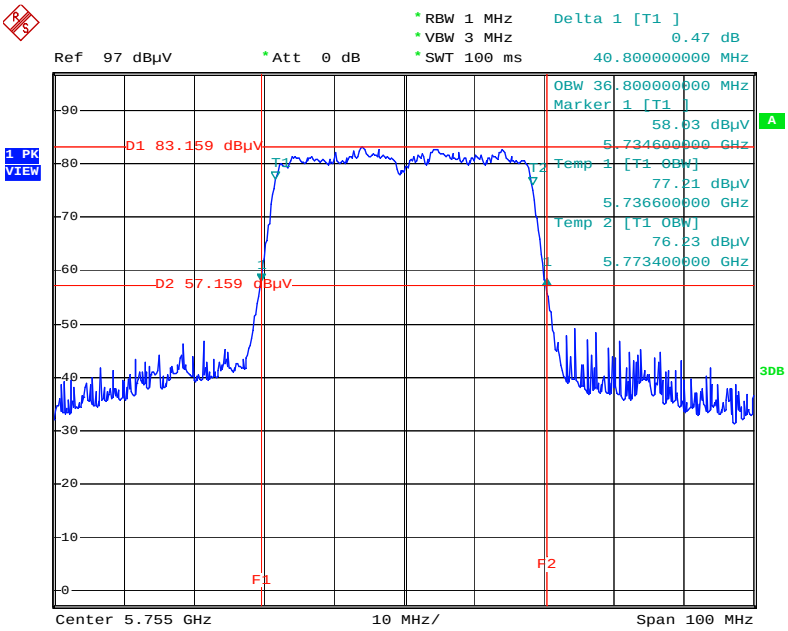
Date: 9.JAN.2015 22:47:36

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT40 / Chain 4 + Chain 5 / 5230 MHz



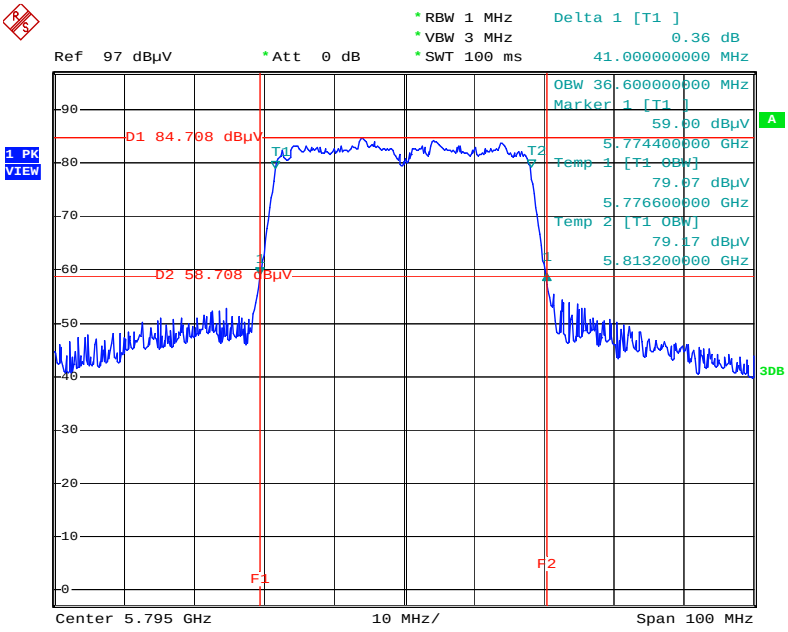
Date: 9.JAN.2015 22:49:34

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT40 / Chain 4 + Chain 5 / 5755 MHz



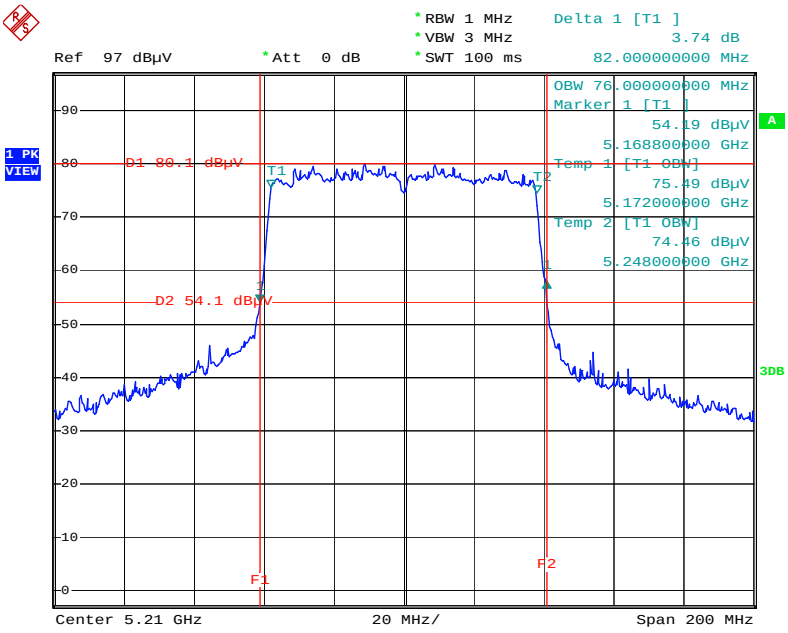
Date: 9.JAN.2015 22:51:14

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT40 / Chain 4 + Chain 5 / 5795 MHz



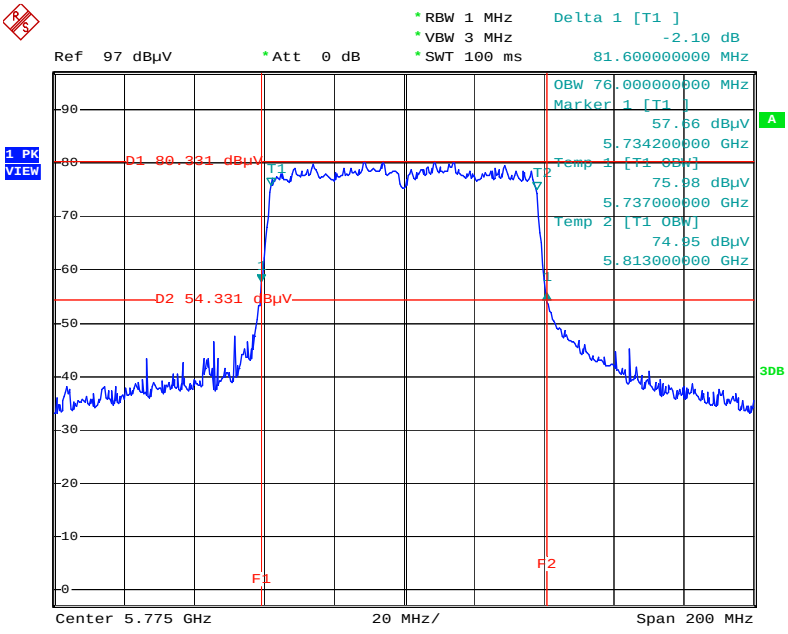
Date: 9.JAN.2015 22:53:57

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT80 / Chain 4 + Chain 5 / 5210 MHz



Date: 9.JAN.2015 22:56:26

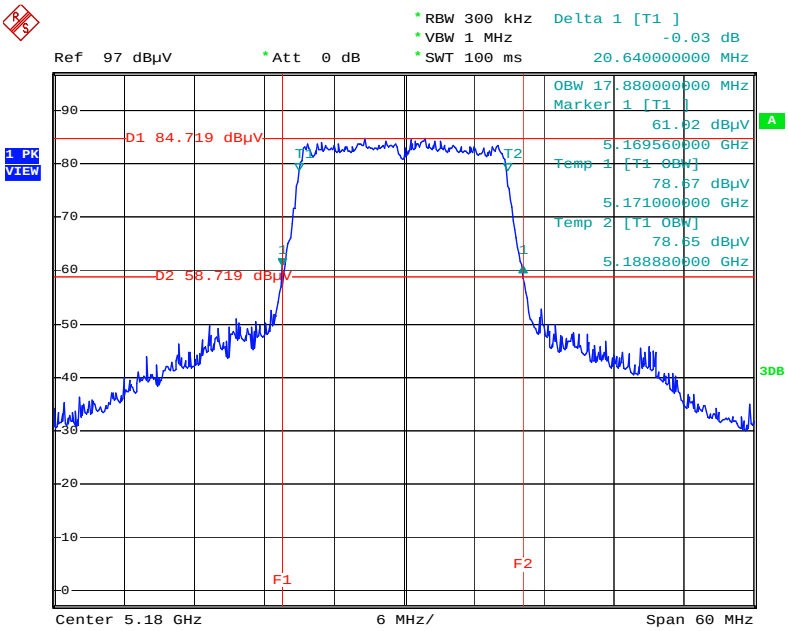
26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT80 / Chain 4 + Chain 5 / 5775 MHz



Date: 9.JAN.2015 22:58:43

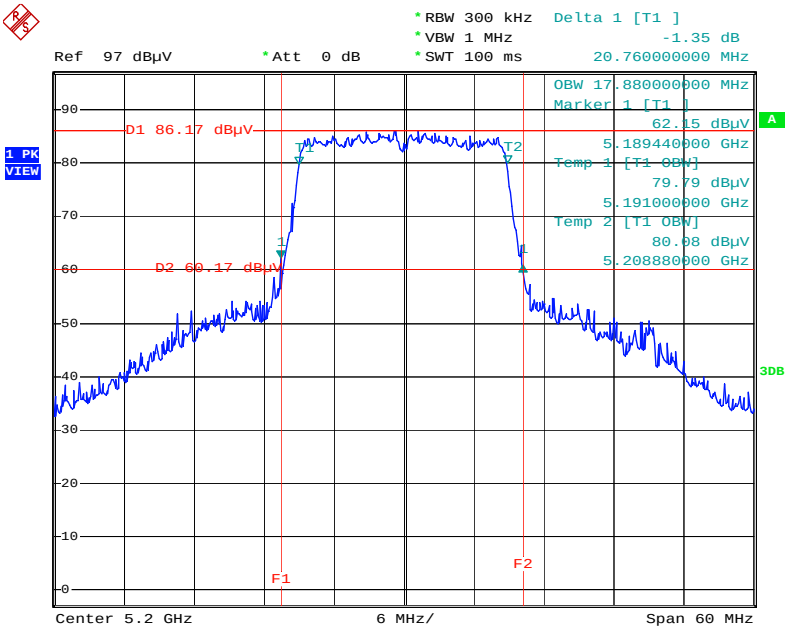
Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 3TX)

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5180 MHz



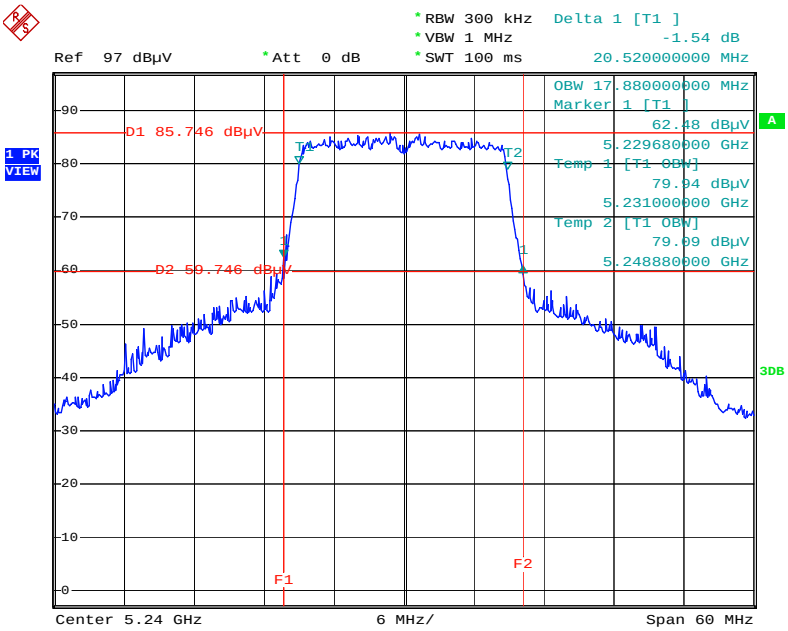
Date: 9.JAN.2015 22:18:25

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5200 MHz



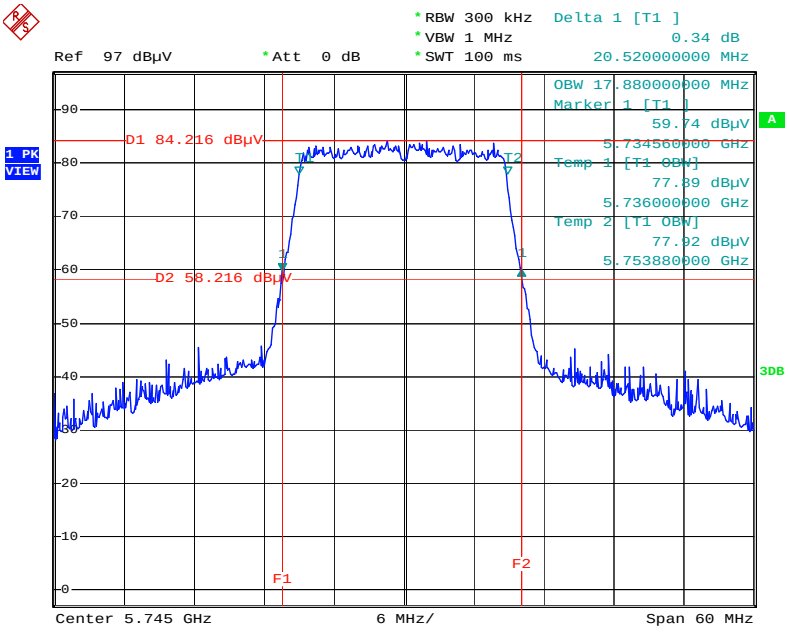
Date: 9.JAN.2015 22:20:42

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5240 MHz



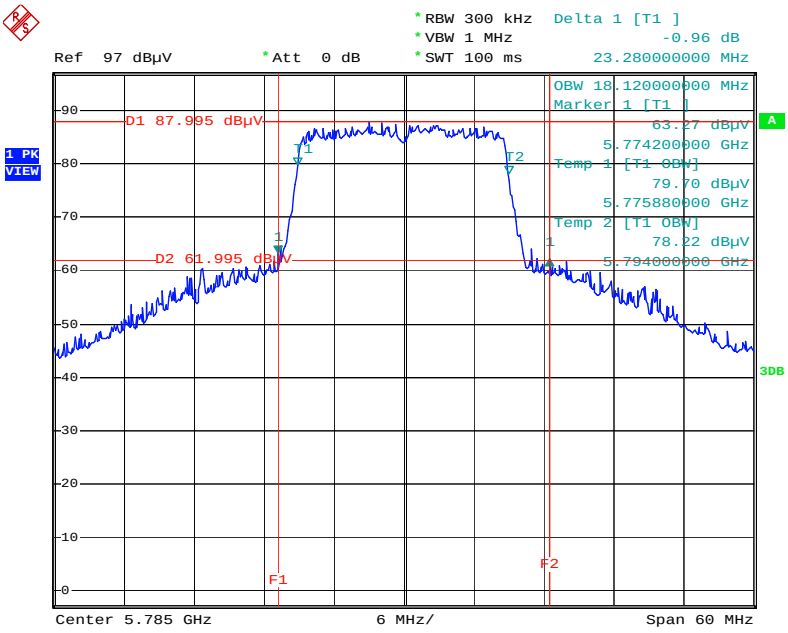
Date: 9.JAN.2015 22:22:28

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5745 MHz



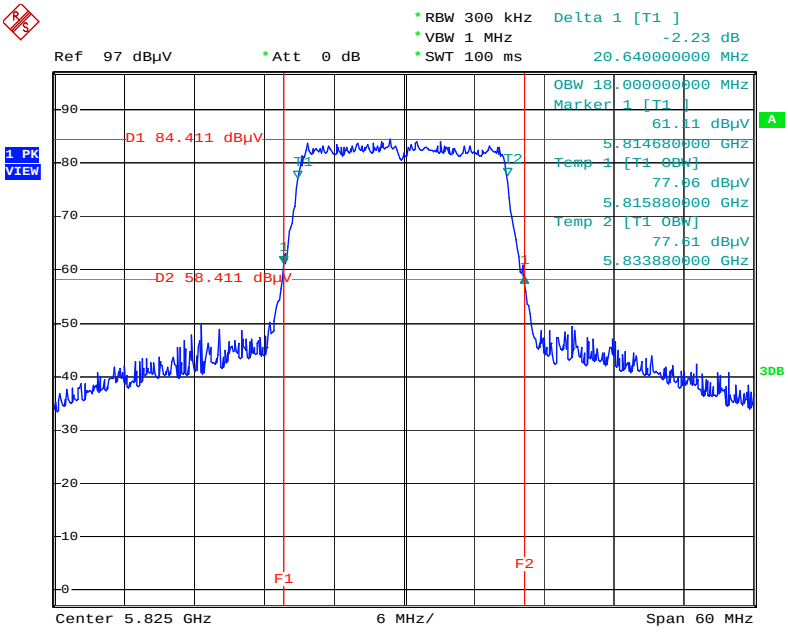
Date: 9.JAN.2015 22:39:40

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5785 MHz



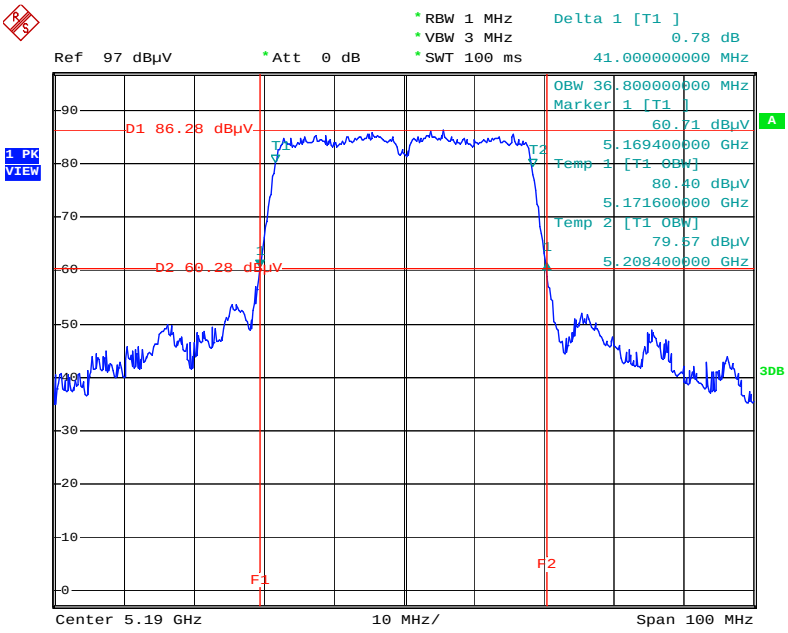
Date: 9.JAN.2015 22:42:20

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5825 MHz



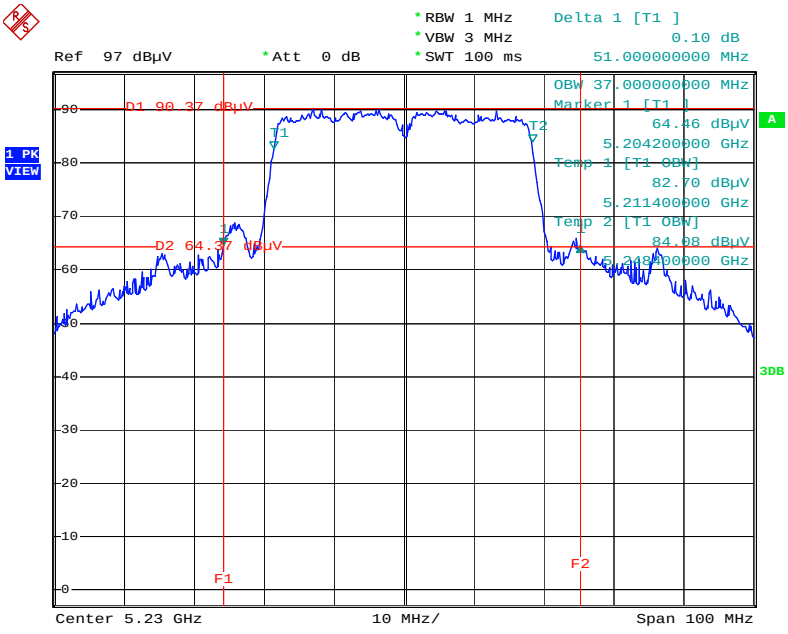
Date: 9.JAN.2015 22:45:15

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT40 / Chain 4 + Chain 5 + Chain 6 / 5190 MHz



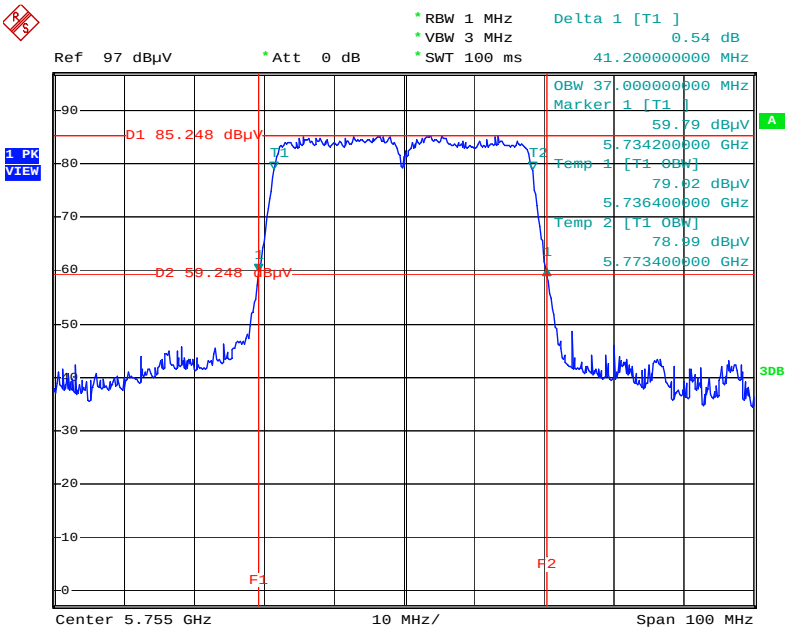
Date: 9.JAN.2015 22:48:00

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT40 / Chain 4 + Chain 5 + Chain 6 / 5230 MHz



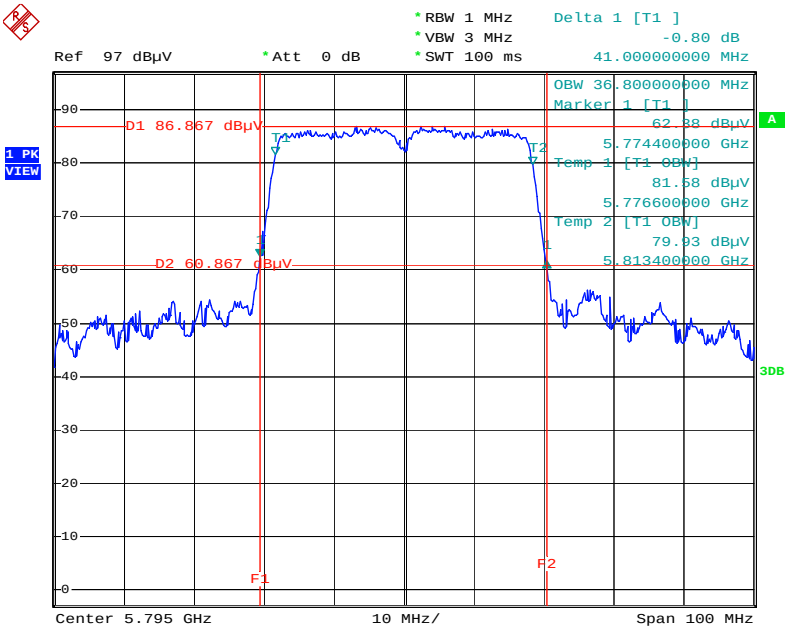
Date: 9.JAN.2015 22:50:05

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT40 / Chain 4 + Chain 5 + Chain 6 / 5755 MHz



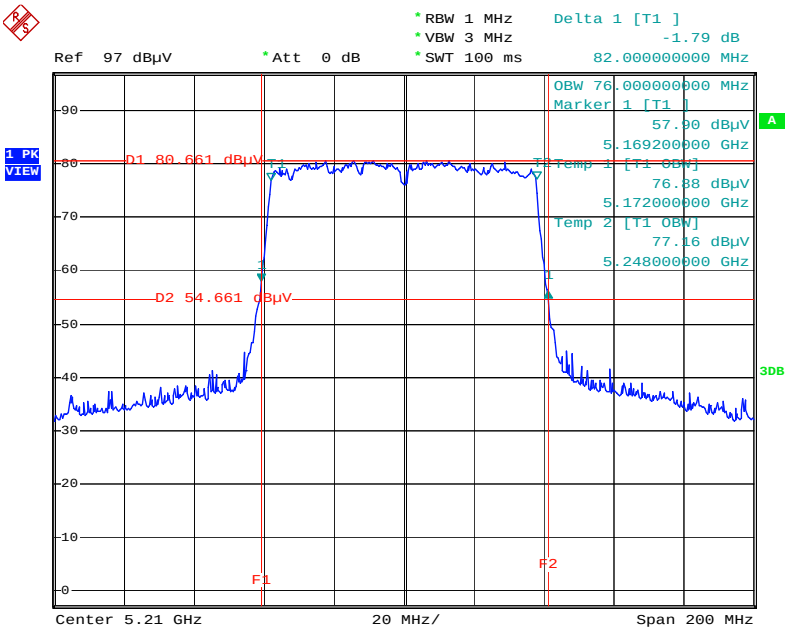
Date: 9.JAN.2015 22:52:09

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT40 / Chain 4 + Chain 5 + Chain 6 / 5795 MHz



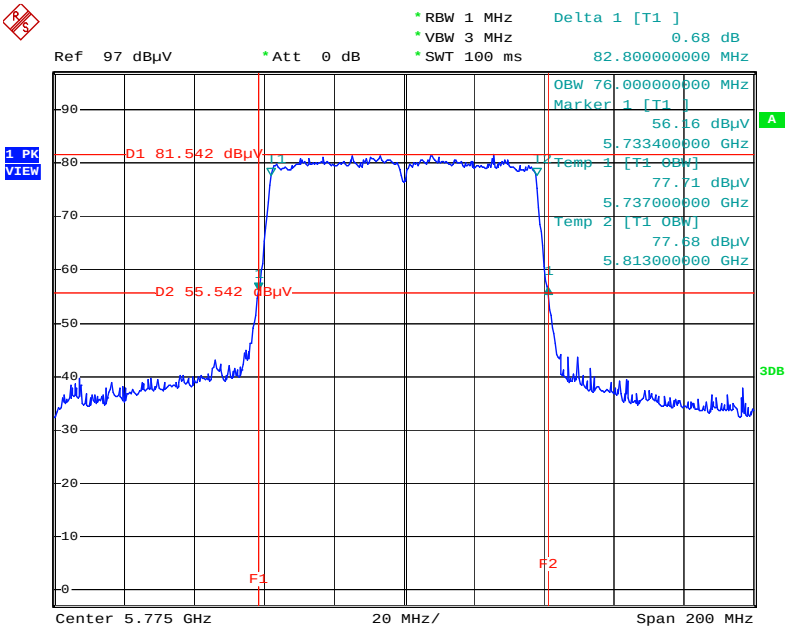
Date: 9.JAN.2015 22:55:00

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT80 / Chain 4 + Chain 5 + Chain 6 / 5210 MHz



Date: 9.JAN.2015 22:57:40

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT80 / Chain 4 + Chain 5 + Chain 6 / 5775 MHz



Date: 9.JAN.2015 22:59:57

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	approximately 1% of the emission bandwidth
VBW	VBW > 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

For Band 4 (Master and client without radar detection):

<For Non-Beamforming Mode>

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng		
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 1TX)		

For Chain 5

Mode	Frequency	6dB Bandwidth (MHz)	Min. Limit (kHz)	Test Result
802.11ac MCS0/Nss1 VHT20	5745 MHz	17.68	500	Complies
	5785 MHz	17.60	500	Complies
	5825 MHz	17.60	500	Complies
802.11ac MCS0/Nss1 VHT40	5755 MHz	36.32	500	Complies
	5795 MHz	36.32	500	Complies
802.11ac MCS0/Nss1 VHT80	5775 MHz	76.80	500	Complies

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng		
Test Mode	Mode 2: (Ant.8 Panel antenna / 5.1dBi / 1TX)		

For Chain 4

Mode	Frequency	6dB Bandwidth (MHz)	Min. Limit (kHz)	Test Result
802.11ac MCS0/Nss1 VHT20	5745 MHz	17.68	500	Complies
	5785 MHz	17.60	500	Complies
	5825 MHz	17.68	500	Complies
802.11ac MCS0/Nss1 VHT40	5755 MHz	36.48	500	Complies
	5795 MHz	36.32	500	Complies
802.11ac MCS0/Nss1 VHT80	5775 MHz	75.20	500	Complies

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng, Lucas Huang		
Test Mode	Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 1TX)		

For Chain 4

Mode	Frequency	6dB Bandwidth (MHz)	Min. Limit (kHz)	Test Result
802.11ac MCS0/Nss1 VHT20	5745 MHz	17.68	500	Complies
	5785 MHz	17.60	500	Complies
	5825 MHz	17.60	500	Complies
802.11ac MCS0/Nss1 VHT40	5755 MHz	36.32	500	Complies
	5795 MHz	36.32	500	Complies
802.11ac MCS0/Nss1 VHT80	5775 MHz	76.40	500	Complies

<For STBC Mode>

Temperature	22℃	Humidity	63%
Test Engineer	Nick Peng		
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX)		

For Chain 4 + Chain 5

Mode	Frequency	6dB Bandwidth (MHz)	Min. Limit (kHz)	Test Result
802.11ac MCS0/Nss1 VHT20	5745 MHz	17.60	500	Complies
	5785 MHz	15.36	500	Complies
	5825 MHz	17.28	500	Complies
802.11ac MCS0/Nss1 VHT40	5755 MHz	35.36	500	Complies
	5795 MHz	36.00	500	Complies
802.11ac MCS0/Nss1 VHT80	5775 MHz	73.60	500	Complies

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng		
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX)		

For Chain 4 + Chain 5 + Chain 6

Mode	Frequency	6dB Bandwidth (MHz)	Min. Limit (kHz)	Test Result
802.11ac MCS0/Nss1 VHT20	5745 MHz	17.68	500	Complies
	5785 MHz	17.60	500	Complies
	5825 MHz	17.68	500	Complies
802.11ac MCS0/Nss1 VHT40	5755 MHz	36.32	500	Complies
	5795 MHz	36.32	500	Complies
802.11ac MCS0/Nss1 VHT80	5775 MHz	76.40	500	Complies

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng		
Test Mode	Mode 2: (Ant.8 Panel antenna / 5.1dBi / 2TX)		

For Chain 4 + Chain 5

Mode	Frequency	6dB Bandwidth (MHz)	Min. Limit (kHz)	Test Result
802.11ac MCS0/Nss1 VHT20	5745 MHz	17.52	500	Complies
	5785 MHz	15.76	500	Complies
	5825 MHz	16.96	500	Complies
802.11ac MCS0/Nss1 VHT40	5755 MHz	35.36	500	Complies
	5795 MHz	35.68	500	Complies
802.11ac MCS0/Nss1 VHT80	5775 MHz	72.00	500	Complies

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng		
Test Mode	Mode 2: (Ant.8 Panel antenna / 5.1dBi / 3TX)		

For Chain 4 + Chain 5 + Chain 6

Mode	Frequency	6dB Bandwidth (MHz)	Min. Limit (kHz)	Test Result
802.11ac MCS0/Nss1 VHT20	5745 MHz	15.04	500	Complies
	5785 MHz	17.60	500	Complies
	5825 MHz	17.60	500	Complies
802.11ac MCS0/Nss1 VHT40	5755 MHz	36.32	500	Complies
	5795 MHz	36.32	500	Complies
802.11ac MCS0/Nss1 VHT80	5775 MHz	75.20	500	Complies

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng, Lucas Huang		
Test Mode	Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 2TX)		

For Chain 4 + Chain 5

Mode	Frequency	6dB Bandwidth (MHz)	Min. Limit (kHz)	Test Result
802.11ac MCS0/Nss2 VHT20	5745 MHz	17.60	500	Complies
	5785 MHz	15.60	500	Complies
	5825 MHz	17.60	500	Complies
802.11ac MCS0/Nss2 VHT40	5755 MHz	35.36	500	Complies
	5795 MHz	36.32	500	Complies
802.11ac MCS0/Nss2 VHT80	5775 MHz	75.20	500	Complies

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng, Lucas Huang		
Test Mode	Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 3TX)		

For Chain 4 + Chain 5 + Chain 6

Mode	Frequency	6dB Bandwidth (MHz)	Min. Limit (kHz)	Test Result
802.11ac MCS0/Nss2 VHT20	5745 MHz	17.76	500	Complies
	5785 MHz	17.60	500	Complies
	5825 MHz	17.60	500	Complies
802.11ac MCS0/Nss2 VHT40	5755 MHz	36.32	500	Complies
	5795 MHz	36.32	500	Complies
802.11ac MCS0/Nss2 VHT80	5775 MHz	76.40	500	Complies

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

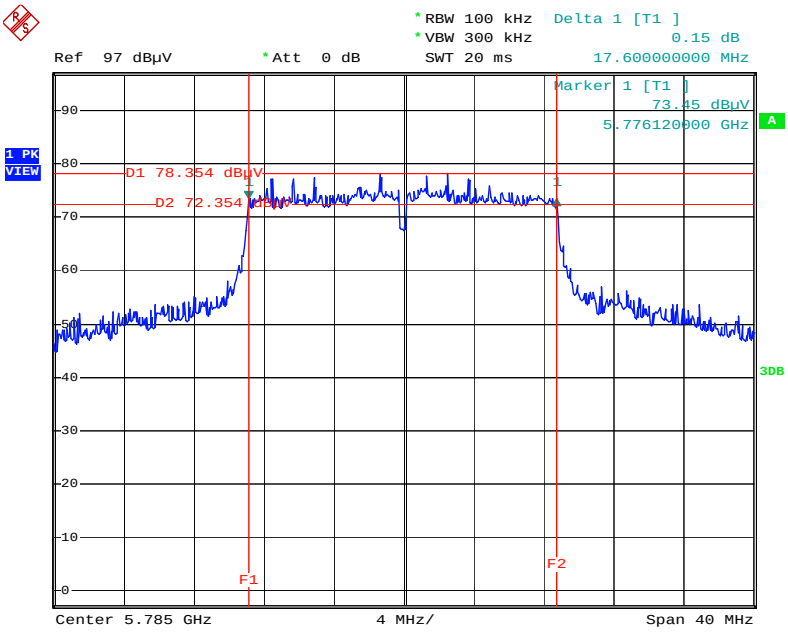
For plots, only the channel with worse result was shown.

For Band 4 (Master and client without radar detection):

<For Non-Beamforming Mode>

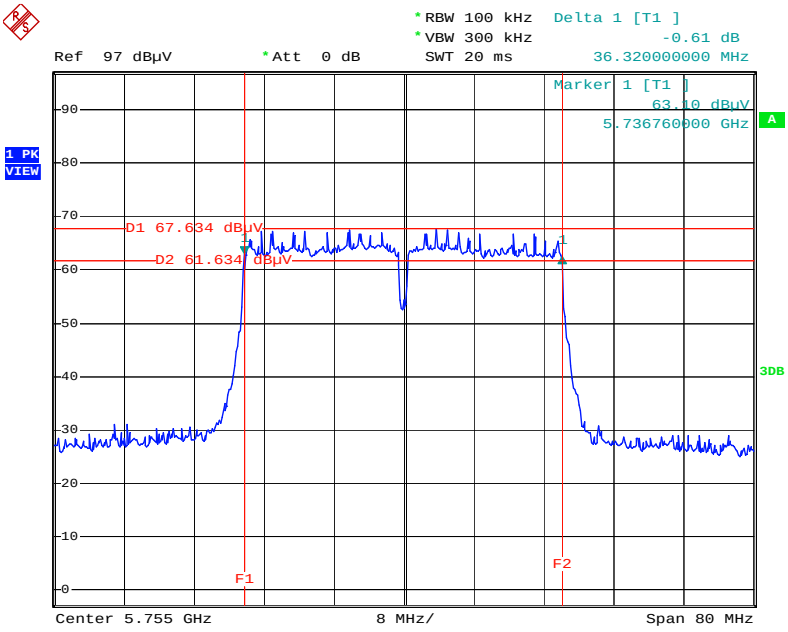
Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 1TX)

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 5 / 5785 MHz



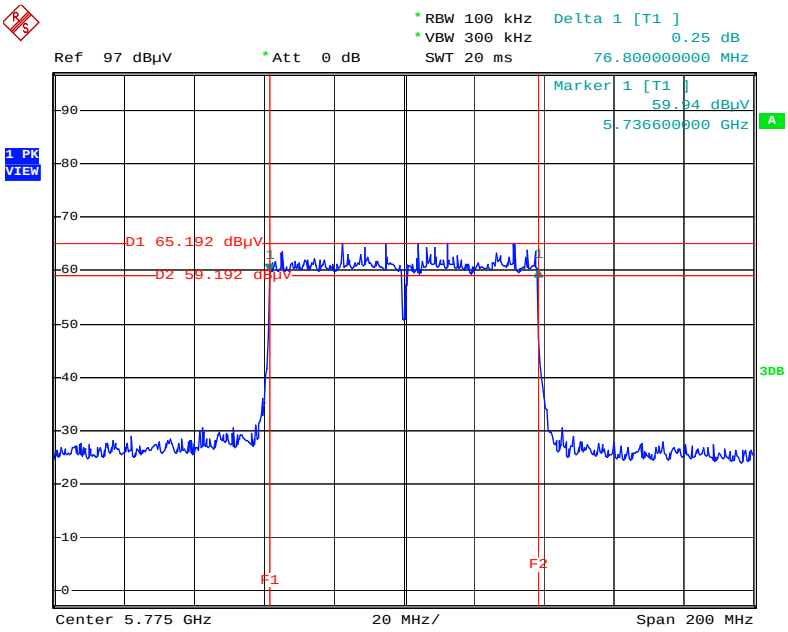
Date: 14.JAN.2015 19:20:30

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 5 / 5755MHz



Date: 14.JAN.2015 19:25:31

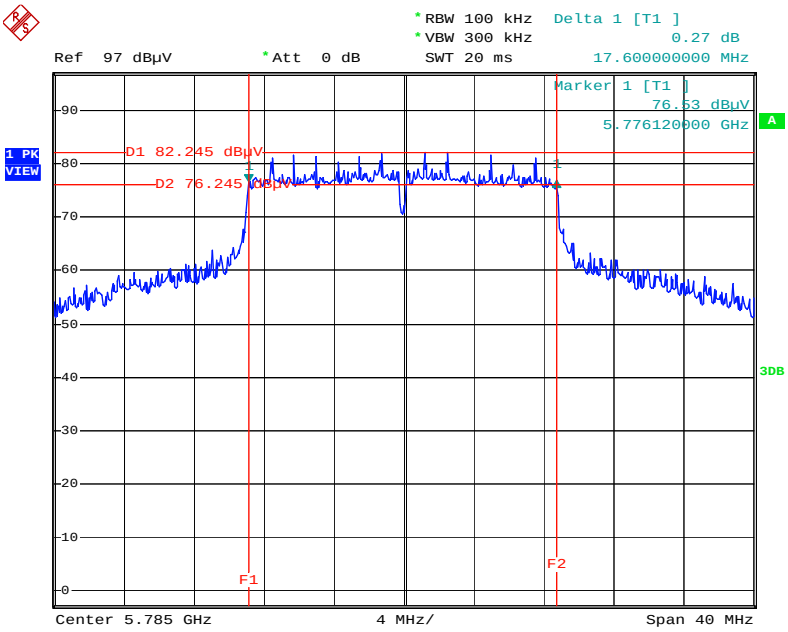
6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 5 / 5775 MHz



Date: 14.JAN.2015 19:29:22

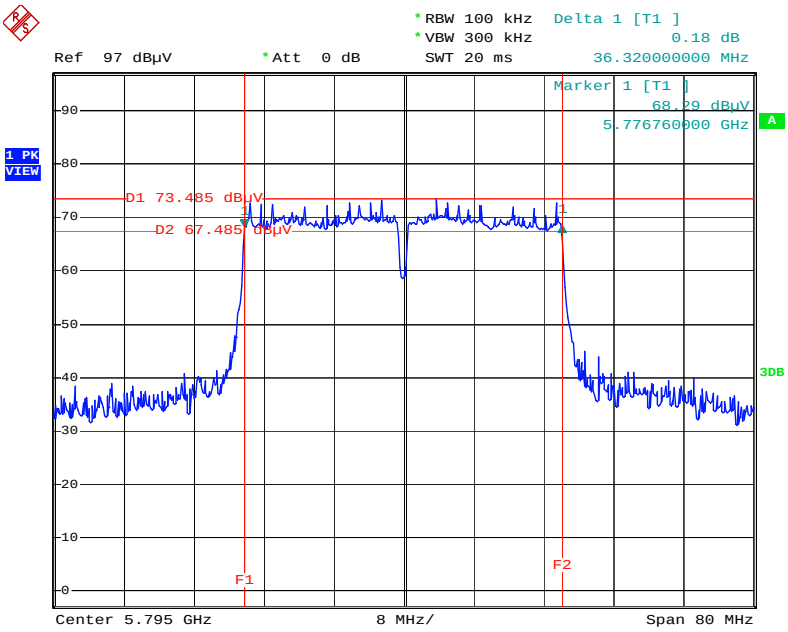
Mode 2: (Ant.8 Panel antenna / 5.1dBi / 1TX)

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 / 5785 MHz



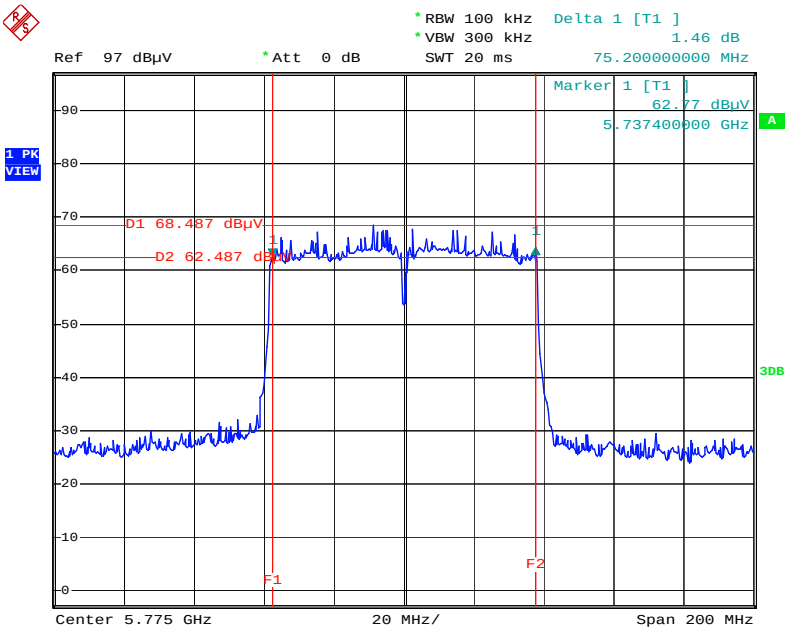
Date: 12.JAN.2015 11:14:37

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 / 5795MHz



Date: 12.JAN.2015 12:48:03

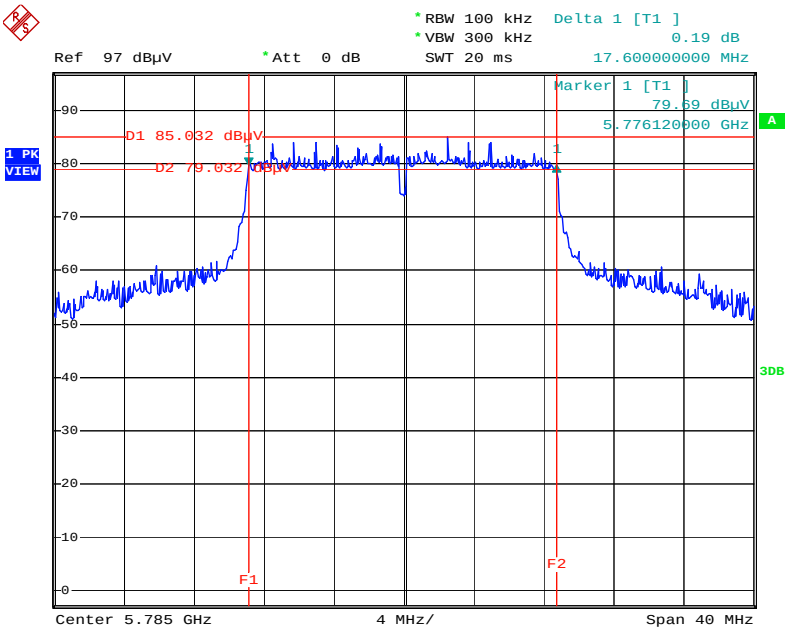
6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 / 5775 MHz



Date: 12.JAN.2015 12:51:05

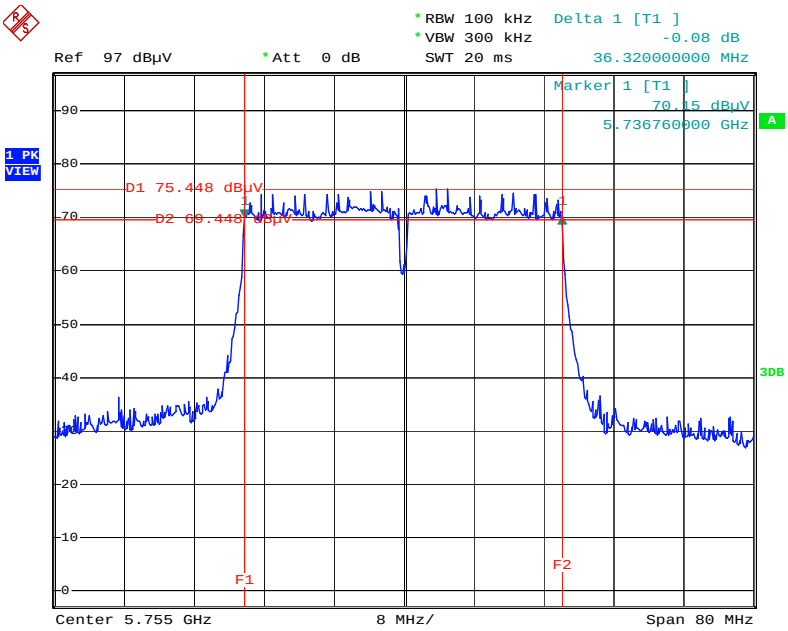
Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 1TX)

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 / 5785 MHz



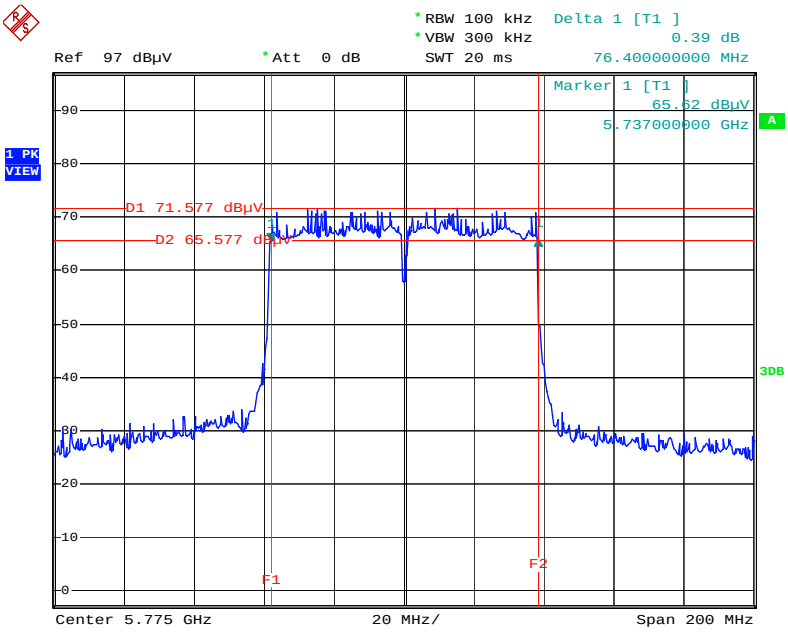
Date: 8.JAN.2015 22:25:26

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 / 5755MHz



Date: 8.JAN.2015 22:48:57

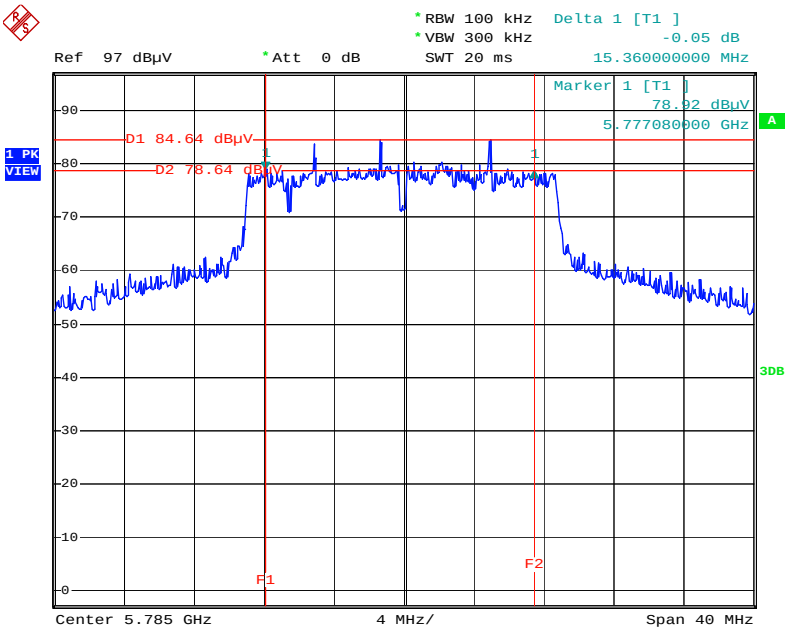
6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 / 5775 MHz



<For STBC Mode>

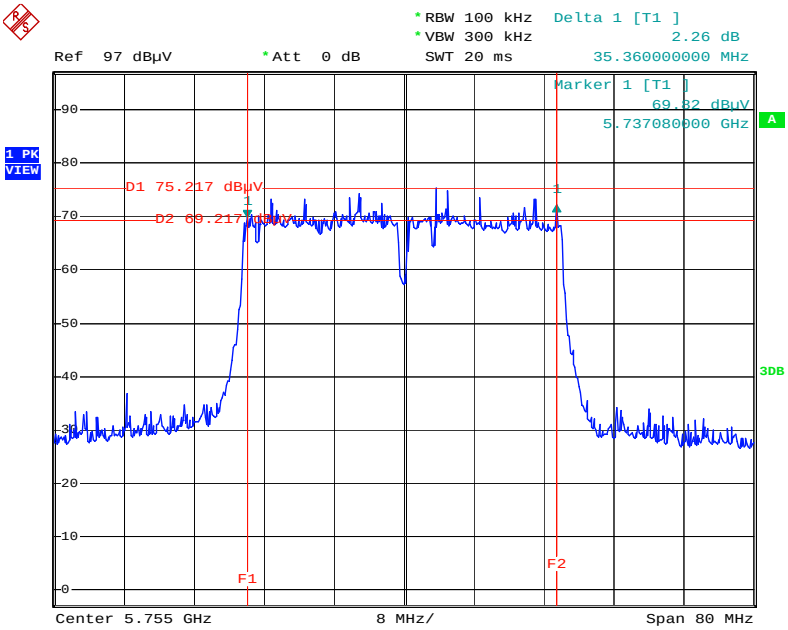
Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX)

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 / 5785 MHz



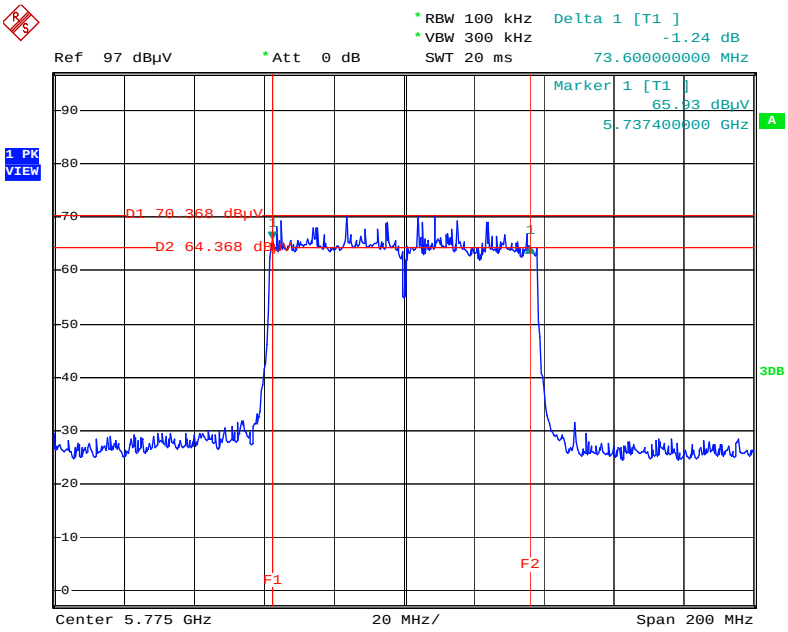
Date: 14.JAN.2015 19:37:08

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 / 5755MHz



Date: 14.JAN.2015 20:01:27

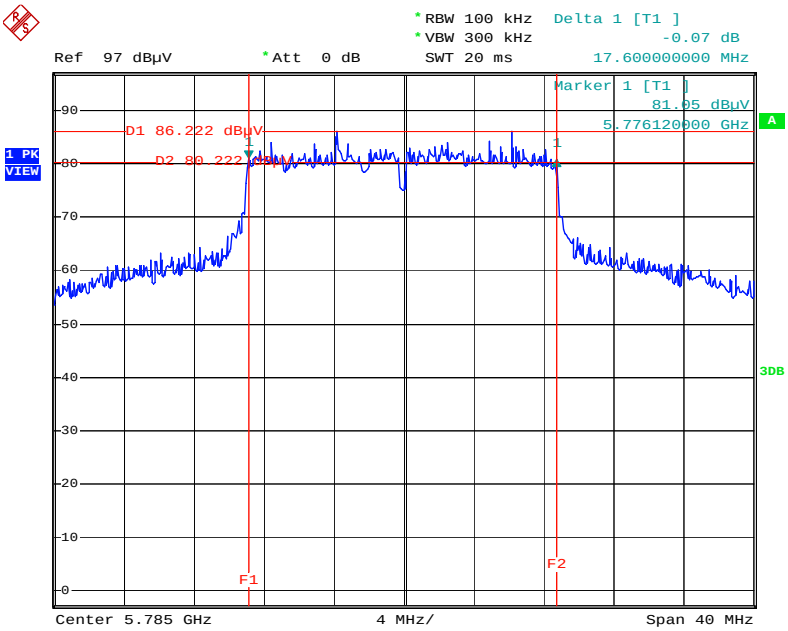
6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 + Chain 5 / 5775 MHz



Date: 14.JAN.2015 20:05:47

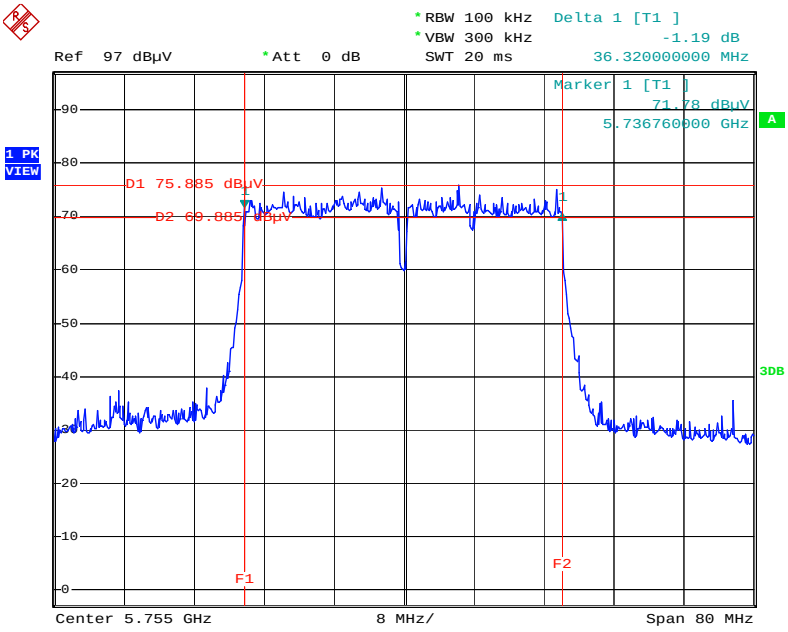
Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX)

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5785 MHz



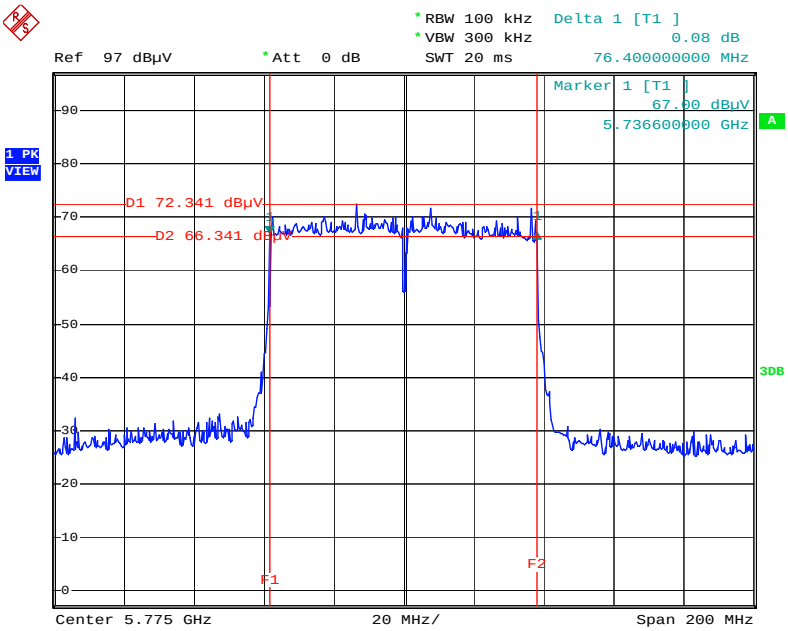
Date: 14.JAN.2015 20:12:36

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 + Chain 6 / 5755MHz



Date: 14.JAN.2015 20:16:34

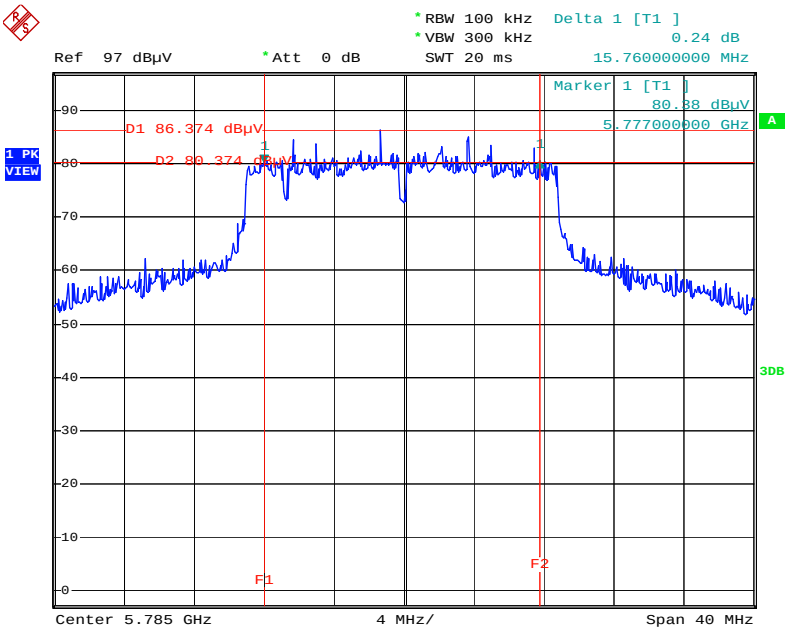
6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 + Chain 5 + Chain 6 / 5775 MHz



Date: 14.JAN.2015 20:20:34

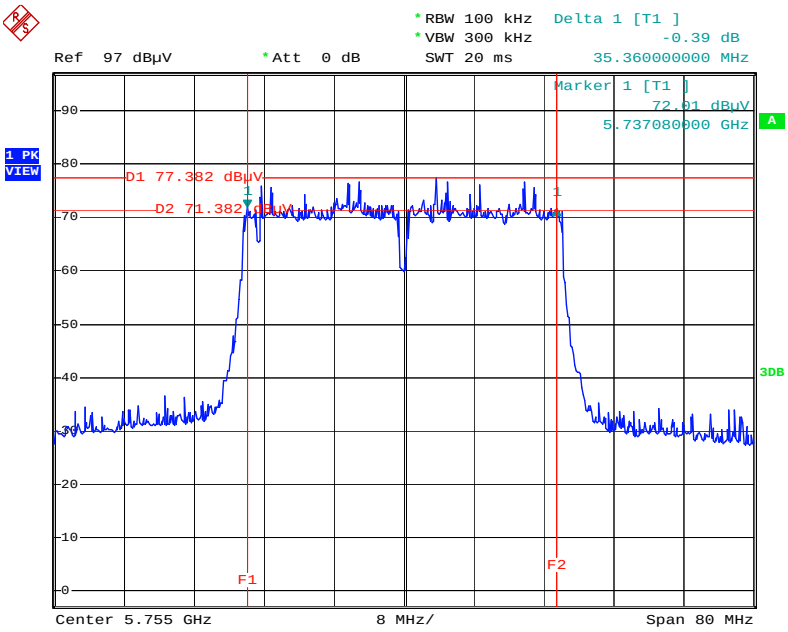
Mode 2: (Ant.8 Panel antenna / 5.1dBi / 2TX)

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 / 5785 MHz



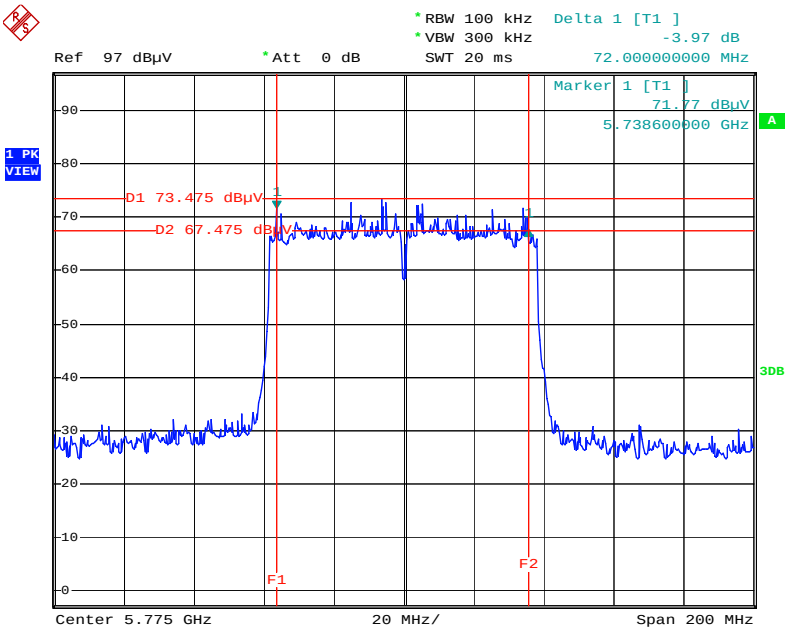
Date: 12.JAN.2015 17:32:46

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 / 5755MHz



Date: 12.JAN.2015 17:36:20

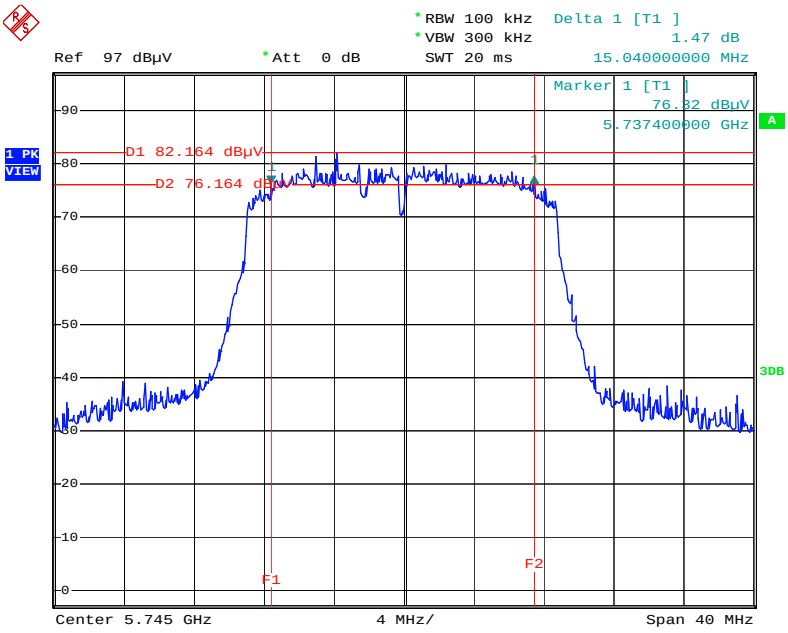
6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 + Chain 5 / 5775 MHz



Date: 12.JAN.2015 17:41:10

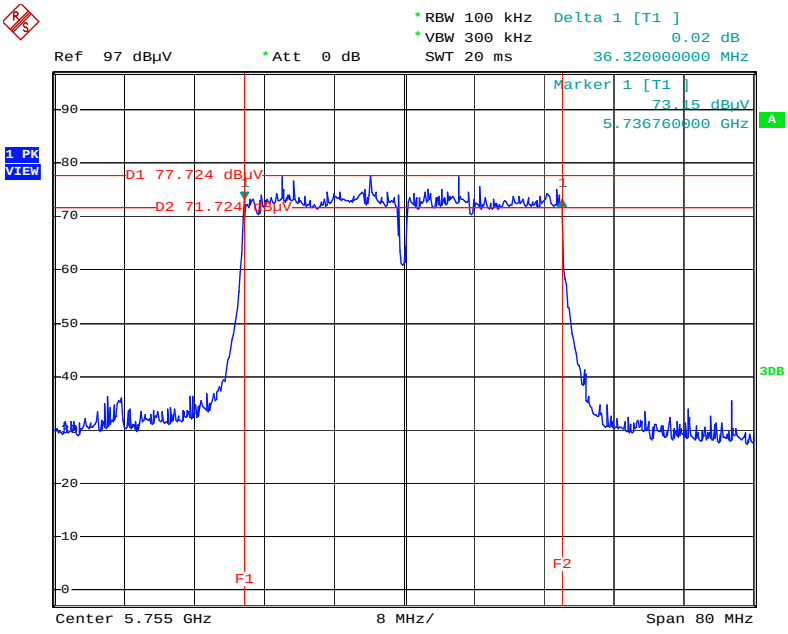
Mode 2: (Ant.8 Panel antenna / 5.1dBi / 3TX)

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5745 MHz



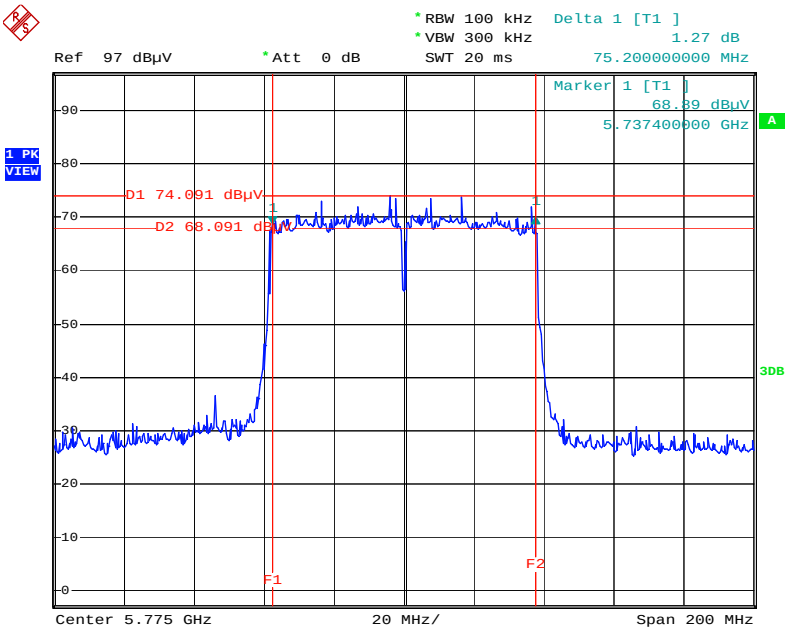
Date: 12.JAN.2015 16:57:32

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 + Chain 6 / 5755MHz



Date: 12.JAN.2015 17:11:24

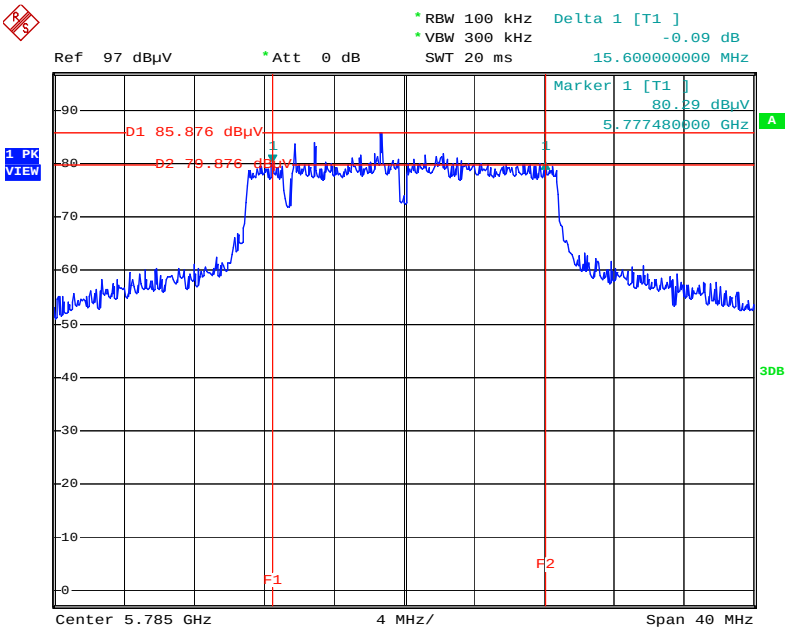
6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 + Chain 5 + Chain 6 / 5775 MHz



Date: 12.JAN.2015 17:21:59

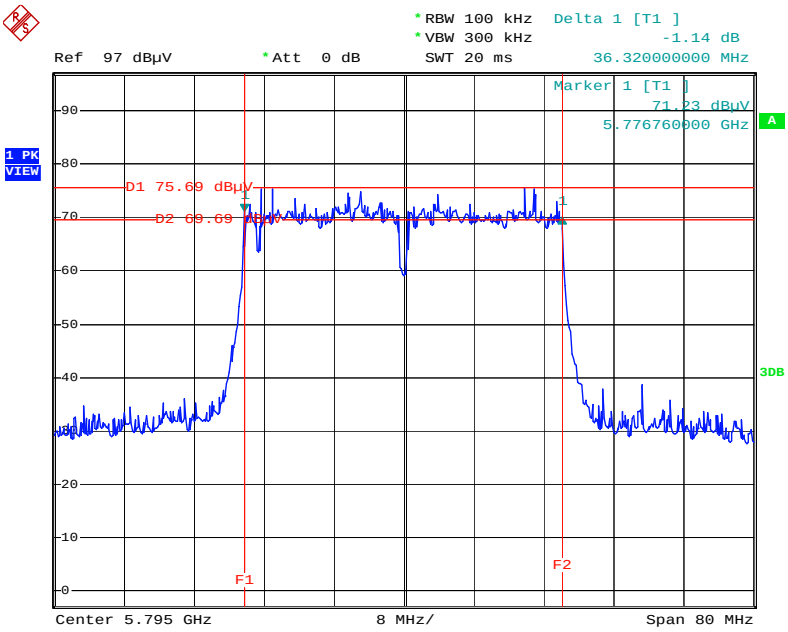
Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 2TX)

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT20 / Chain 4 + Chain 5 / 5785 MHz



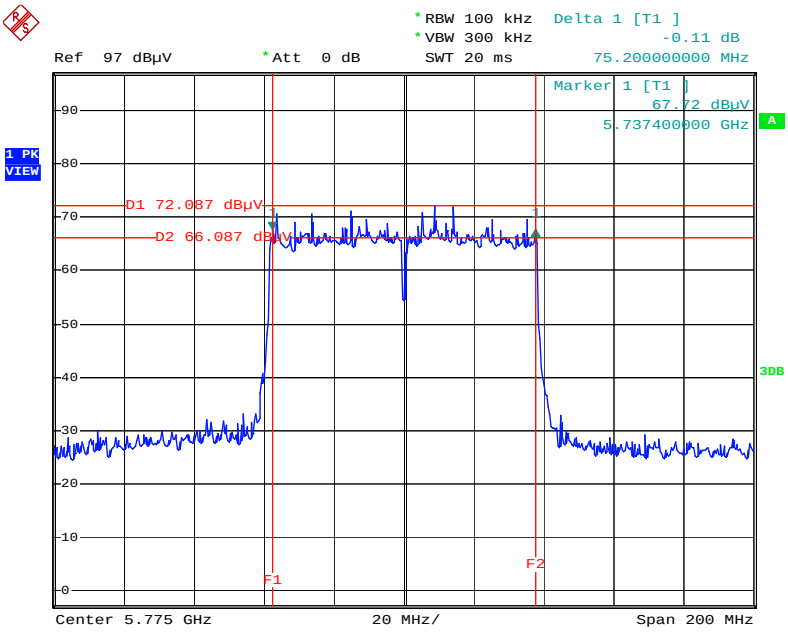
Date: 9.JAN.2015 22:41:46

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT40 / Chain 4 + Chain 5 / 5795MHz



Date: 9.JAN.2015 22:54:23

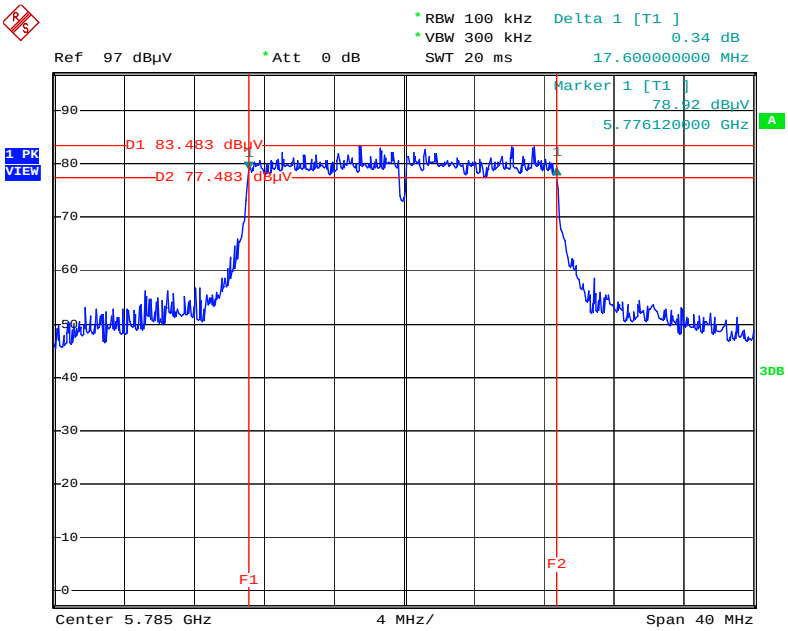
6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT80 / Chain 4 + Chain 5 / 5775 MHz



Date: 9.JAN.2015 22:59:21

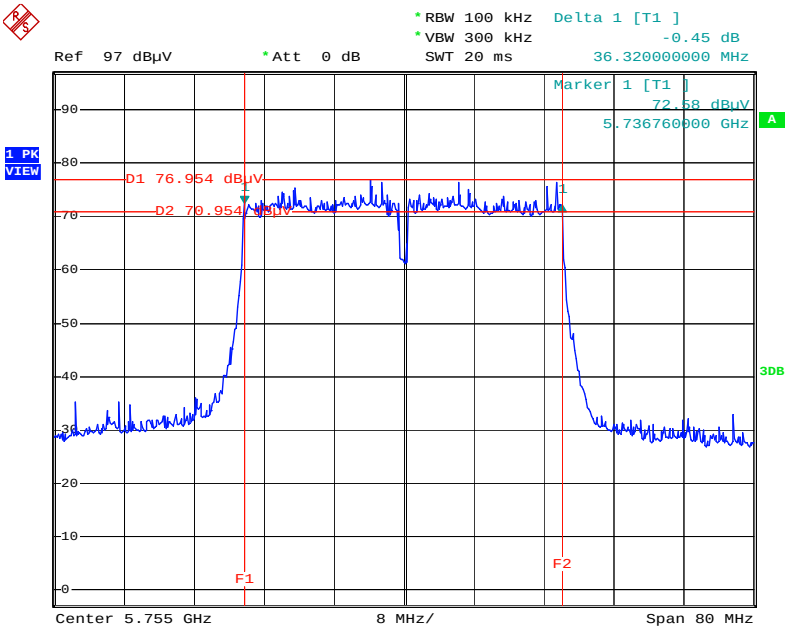
Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 3TX)

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT20 / Chain 4 + Chain 5 + Chain 6 / 5785 MHz



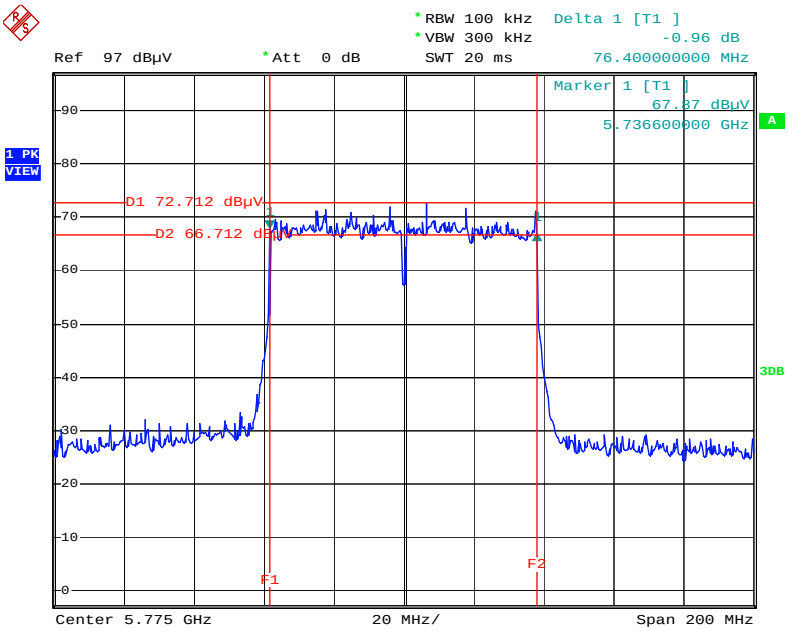
Date: 9.JAN.2015 22:42:56

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT40 / Chain 4 + Chain 5 + Chain 6 / 5755MHz



Date: 9.JAN.2015 22:52:58

6 dB Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss2 VHT80 / Chain 4 + Chain 5 + Chain 6 / 5775 MHz



Date: 9.JAN.2015 23:00:19

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.

☒	5.725~5.85 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

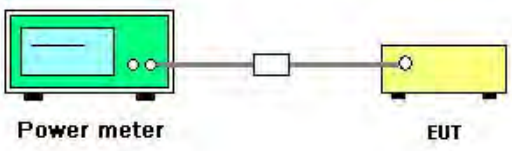
Please refer to section 5 of equipments list in this report. The following table is the setting of the power meter.

Power Meter Parameter	Setting
Detector	AVERAGE

4.4.3. Test Procedures

1. The transmitter output (antenna port) was connected to the power meter.
2. 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).
3. Multiple antenna systems was performed in accordance with KDB662911 D01 v02r01 Emissions Testing of Transmitters with Multiple Outputs in the Same Band.
4. 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



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

For Band 1 and Band 4 (Master and client without radar detection):

<For Non-Beamforming Mode>

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Jan. 14, 2015
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 1TX)		

For outdoor use

Mode	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 5		
802.11a	5180 MHz	15.20	28.70	Complies
	5200 MHz	15.25	28.70	Complies
	5240 MHz	15.16	28.70	Complies
	5745 MHz	16.38	28.70	Complies
	5785 MHz	21.97	28.70	Complies
	5825 MHz	17.19	28.70	Complies
802.11n MCS0 HT20	5180 MHz	15.22	28.70	Complies
	5200 MHz	15.26	28.70	Complies
	5240 MHz	15.17	28.70	Complies
	5745 MHz	16.29	28.70	Complies
	5785 MHz	21.95	28.70	Complies
	5825 MHz	17.21	28.70	Complies
802.11n MCS0 HT40	5190 MHz	15.29	28.70	Complies
	5230 MHz	15.30	28.70	Complies
	5755 MHz	14.91	28.70	Complies
	5795 MHz	17.94	28.70	Complies
802.11ac MCS0/Nss1 VHT20	5180 MHz	15.19	28.70	Complies
	5200 MHz	15.29	28.70	Complies
	5240 MHz	15.16	28.70	Complies
	5745 MHz	16.24	28.70	Complies
	5785 MHz	21.98	28.70	Complies
	5825 MHz	17.10	28.70	Complies

802.11ac MCS0/Nss1 VHT40	5190 MHz	15.28	28.70	Complies
	5230 MHz	15.25	28.70	Complies
	5755 MHz	14.91	28.70	Complies
	5795 MHz	17.91	28.70	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	15.27	28.70	Complies
	5775 MHz	16.60	28.70	Complies

Note: Antenna gain=7.30dBi >6dBi,So Band1, 4 Limit =30-(7.30-6)=28.70dBm/MHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Jan. 14, 2015
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX)		

For outdoor use

Mode	Frequency	Conducted Power (dBm)			Max. Limit (dBm)	Result
		Chain 4	Chain 5	Total		
802.11a	5180 MHz	12.00	12.43	15.23	28.70	Complies
	5200 MHz	12.11	12.45	15.29	28.70	Complies
	5240 MHz	12.13	12.40	15.28	28.70	Complies
	5745 MHz	16.01	16.49	19.27	28.70	Complies
	5785 MHz	21.26	21.64	24.46	28.70	Complies
	5825 MHz	21.77	21.93	24.86	28.70	Complies
802.11n MCS0 HT20	5180 MHz	12.01	12.44	15.24	28.70	Complies
	5200 MHz	12.12	12.46	15.30	28.70	Complies
	5240 MHz	12.13	12.41	15.28	28.70	Complies
	5745 MHz	15.93	16.49	19.23	28.70	Complies
	5785 MHz	21.16	21.55	24.37	28.70	Complies
	5825 MHz	21.82	21.97	24.91	28.70	Complies
802.11n MCS0 HT40	5190 MHz	11.99	12.26	15.14	28.70	Complies
	5230 MHz	12.07	12.35	15.22	28.70	Complies
	5755 MHz	15.77	16.24	19.02	28.70	Complies
	5795 MHz	16.88	16.89	19.90	28.70	Complies
802.11ac MCS0/Nss1 VHT20	5180 MHz	12.01	12.44	15.24	28.70	Complies
	5200 MHz	12.12	12.46	15.30	28.70	Complies
	5240 MHz	12.13	12.41	15.28	28.70	Complies
	5745 MHz	15.98	16.43	19.22	28.70	Complies
	5785 MHz	21.22	21.48	24.36	28.70	Complies
	5825 MHz	21.76	21.94	24.86	28.70	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	12.06	12.26	15.17	28.70	Complies
	5230 MHz	12.23	12.36	15.31	28.70	Complies
	5755 MHz	15.62	16.08	18.87	28.70	Complies
	5795 MHz	16.84	16.99	19.93	28.70	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	11.99	12.54	15.28	28.70	Complies
	5775 MHz	14.62	15.12	17.89	28.70	Complies

Note: Antenna gain=7.30dBi >6dBi,So Band1, 4 Limit =30-(7.30-6)=28.70dBm/MHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Jan. 14, 2015
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX)		

For outdoor use

Mode	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Result
		Chain 4	Chain 5	Chain 6	Total		
802.11a	5180 MHz	10.05	10.61	10.34	15.11	28.70	Complies
	5200 MHz	10.28	10.61	10.43	15.21	28.70	Complies
	5240 MHz	10.22	10.80	10.13	15.16	28.70	Complies
	5745 MHz	15.37	16.04	15.79	20.51	28.70	Complies
	5785 MHz	19.02	19.33	19.38	24.02	28.70	Complies
	5825 MHz	15.81	16.13	15.98	20.75	28.70	Complies
802.11n MCS0 HT20	5180 MHz	10.06	10.66	10.38	15.14	28.70	Complies
	5200 MHz	10.33	10.60	10.22	15.16	28.70	Complies
	5240 MHz	10.25	10.82	10.20	15.20	28.70	Complies
	5745 MHz	15.53	16.05	15.93	20.61	28.70	Complies
	5785 MHz	18.79	19.18	19.34	23.88	28.70	Complies
	5825 MHz	15.73	16.11	16.15	20.77	28.70	Complies
802.11n MCS0 HT40	5190 MHz	10.12	10.83	10.55	15.28	28.70	Complies
	5230 MHz	10.07	10.94	10.11	15.16	28.70	Complies
	5755 MHz	14.42	14.43	14.24	19.14	28.70	Complies
	5795 MHz	16.93	17.13	17.24	21.87	28.70	Complies
802.11ac MCS0/Nss1 VHT20	5180 MHz	10.04	10.63	10.43	15.14	28.70	Complies
	5200 MHz	10.26	10.60	10.25	15.14	28.70	Complies
	5240 MHz	10.23	10.81	10.20	15.19	28.70	Complies
	5745 MHz	15.75	16.03	15.67	20.59	28.70	Complies
	5785 MHz	18.97	19.36	19.42	24.03	28.70	Complies
	5825 MHz	15.81	16.17	16.16	20.82	28.70	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	10.05	10.85	10.44	15.23	28.70	Complies
	5230 MHz	10.08	11.01	10.31	15.26	28.70	Complies
	5755 MHz	14.09	14.50	14.28	19.06	28.70	Complies
	5795 MHz	17.04	17.28	17.23	21.96	28.70	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	10.33	10.67	10.53	15.28	28.70	Complies
	5775 MHz	14.06	14.66	14.71	19.26	28.70	Complies

Note: Antenna gain=7.30dBi >6dBi,So Band1, 4 Limit =30-(7.30-6)=28.70dBm/MHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Mar. 02, 2015
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 1TX)		

For indoor use

Mode	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 5		
802.11a	5180 MHz	19.94	28.70	Complies
	5200 MHz	21.98	28.70	Complies
	5240 MHz	21.97	28.70	Complies
802.11n MCS0 HT20	5180 MHz	19.92	28.70	Complies
	5200 MHz	21.96	28.70	Complies
	5240 MHz	21.96	28.70	Complies
802.11n MCS0 HT40	5190 MHz	18.12	28.70	Complies
	5230 MHz	21.96	28.70	Complies
802.11ac MCS0/Nss1 VHT20	5180 MHz	19.72	28.70	Complies
	5200 MHz	21.91	28.70	Complies
	5240 MHz	21.96	28.70	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	18.21	28.70	Complies
	5230 MHz	21.94	28.70	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	17.26	28.70	Complies

Note: Antenna gain=7.30dBi >6dBi,So Band1 Limit =30-(7.30-6)=28.70dBm/MHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Mar. 02, 2015
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX)		

For indoor use

Mode	Frequency	Conducted Power (dBm)			Max. Limit (dBm)	Result
		Chain 4	Chain 5	Total		
802.11a	5180 MHz	19.34	19.58	22.47	28.70	Complies
	5200 MHz	21.67	21.98	24.84	28.70	Complies
	5240 MHz	20.02	20.45	23.25	28.70	Complies
802.11n MCS0 HT20	5180 MHz	19.17	19.68	22.44	28.70	Complies
	5200 MHz	21.85	21.96	24.92	28.70	Complies
	5240 MHz	19.94	20.46	23.22	28.70	Complies
802.11n MCS0 HT40	5190 MHz	16.55	16.96	19.77	28.70	Complies
	5230 MHz	20.33	20.61	23.48	28.70	Complies
802.11ac MCS0/Nss1 VHT20	5180 MHz	19.40	19.64	22.53	28.70	Complies
	5200 MHz	21.73	21.91	24.83	28.70	Complies
	5240 MHz	19.88	20.46	23.19	28.70	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	16.67	16.92	19.81	28.70	Complies
	5230 MHz	20.31	20.58	23.46	28.70	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	16.48	16.92	19.72	28.70	Complies

Note: Antenna gain=7.30dBi >6dBi,So Band1 Limit =30-(7.30-6)=28.70dBm/MHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Mar. 02, 2015
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX)		

For indoor use

Mode	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Result
		Chain 4	Chain 5	Chain 6	Total		
802.11a	5180 MHz	18.01	18.32	18.46	23.04	28.70	Complies
	5200 MHz	18.85	19.14	19.18	23.83	28.70	Complies
	5240 MHz	18.81	19.19	19.17	23.83	28.70	Complies
802.11n MCS0 HT20	5180 MHz	17.86	18.37	18.42	23.00	28.70	Complies
	5200 MHz	18.88	19.11	19.21	23.84	28.70	Complies
	5240 MHz	18.81	19.16	19.19	23.83	28.70	Complies
802.11n MCS0 HT40	5190 MHz	15.58	15.58	15.21	20.23	28.70	Complies
	5230 MHz	19.80	19.74	20.13	24.66	28.70	Complies
802.11ac MCS0/Nss1 VHT20	5180 MHz	17.78	18.32	18.38	22.94	28.70	Complies
	5200 MHz	18.81	19.11	19.19	23.81	28.70	Complies
	5240 MHz	18.63	19.17	19.20	23.78	28.70	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	15.32	15.55	15.05	20.08	28.70	Complies
	5230 MHz	19.46	19.83	20.14	24.59	28.70	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	15.62	16.21	15.67	20.61	28.70	Complies

Note: Antenna gain=7.30dBi >6dBi,So Band1 Limit =30-(7.30-6)=28.70dBm/MHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Jan. 12, 2015
Test Mode	Mode 2: (Ant.8 Panel antenna / 5.1dBi / 1TX)		

Mode	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 4		
802.11a	5180 MHz	20.22	30.00	Complies
	5200 MHz	21.91	30.00	Complies
	5240 MHz	21.56	30.00	Complies
	5745 MHz	17.68	30.00	Complies
	5785 MHz	21.96	30.00	Complies
	5825 MHz	17.76	30.00	Complies
802.11n MCS0 HT20	5180 MHz	20.12	30.00	Complies
	5200 MHz	21.89	30.00	Complies
	5240 MHz	21.55	30.00	Complies
	5745 MHz	17.58	30.00	Complies
	5785 MHz	21.97	30.00	Complies
	5825 MHz	17.53	30.00	Complies
802.11n MCS0 HT40	5190 MHz	17.85	30.00	Complies
	5230 MHz	21.85	30.00	Complies
	5755 MHz	15.81	30.00	Complies
	5795 MHz	18.51	30.00	Complies
802.11ac MCS0/Nss1 VHT20	5180 MHz	20.23	30.00	Complies
	5200 MHz	21.88	30.00	Complies
	5240 MHz	21.58	30.00	Complies
	5745 MHz	17.47	30.00	Complies
	5785 MHz	21.92	30.00	Complies
	5825 MHz	17.67	30.00	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	18.01	30.00	Complies
	5230 MHz	21.84	30.00	Complies
	5755 MHz	16.01	30.00	Complies
	5795 MHz	18.34	30.00	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	17.03	30.00	Complies
	5775 MHz	16.15	30.00	Complies

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Jan. 12, 2015
Test Mode	Mode 2: (Ant.8 Panel antenna / 5.1dBi / 2TX)		

Mode	Frequency	Conducted Power (dBm)			Max. Limit (dBm)	Result
		Chain 4	Chain 5	Total		
802.11a	5180 MHz	19.22	19.61	22.43	30.00	Complies
	5200 MHz	21.89	21.94	24.93	30.00	Complies
	5240 MHz	21.91	21.92	24.93	30.00	Complies
	5745 MHz	15.11	15.89	18.53	30.00	Complies
	5785 MHz	21.04	22.21	24.67	30.00	Complies
	5825 MHz	15.65	16.79	19.27	30.00	Complies
802.11n MCS0 HT20	5180 MHz	19.23	19.63	22.44	30.00	Complies
	5200 MHz	21.87	21.95	24.92	30.00	Complies
	5240 MHz	21.92	21.94	24.94	30.00	Complies
	5745 MHz	14.88	15.84	18.40	30.00	Complies
	5785 MHz	21.12	22.16	24.68	30.00	Complies
	5825 MHz	15.44	16.72	19.14	30.00	Complies
802.11n MCS0 HT40	5190 MHz	16.17	16.85	19.53	30.00	Complies
	5230 MHz	20.74	20.92	23.84	30.00	Complies
	5755 MHz	14.38	15.15	17.79	30.00	Complies
	5795 MHz	15.51	15.87	18.70	30.00	Complies
802.11ac MCS0/Nss1 VHT20	5180 MHz	19.35	19.42	22.40	30.00	Complies
	5200 MHz	21.88	21.95	24.93	30.00	Complies
	5240 MHz	21.97	21.98	24.99	30.00	Complies
	5745 MHz	15.48	15.97	18.74	30.00	Complies
	5785 MHz	21.41	21.88	24.66	30.00	Complies
	5825 MHz	15.83	16.71	19.30	30.00	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	16.17	16.99	19.61	30.00	Complies
	5230 MHz	20.55	20.97	23.78	30.00	Complies
	5755 MHz	14.91	15.24	18.09	30.00	Complies
	5795 MHz	15.99	15.96	18.99	30.00	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	14.51	14.92	17.73	30.00	Complies
	5775 MHz	15.02	15.52	18.29	30.00	Complies

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng, Lucas Huang	Test Date	Jan. 08, 2015 ~ Jan. 12, 2015
Test Mode	Mode 2: (Ant.8 Panel antenna / 5.1dBi / 3TX)		

Mode	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Result
		Chain 4	Chain 5	Chain 6	Total		
802.11a	5180 MHz	17.75	18.65	18.05	22.94	30.00	Complies
	5200 MHz	19.58	20.32	20.31	24.85	30.00	Complies
	5240 MHz	21.00	21.89	21.96	26.41	30.00	Complies
	5745 MHz	14.35	15.38	14.78	19.63	30.00	Complies
	5785 MHz	19.04	20.24	19.65	24.44	30.00	Complies
	5825 MHz	15.28	16.47	15.86	20.67	30.00	Complies
802.11n MCS0 HT20	5180 MHz	17.81	18.52	17.99	22.89	30.00	Complies
	5200 MHz	19.52	20.38	20.19	24.82	30.00	Complies
	5240 MHz	21.12	21.88	21.89	26.42	30.00	Complies
	5745 MHz	14.32	15.22	14.58	19.49	30.00	Complies
	5785 MHz	19.16	20.05	19.76	24.44	30.00	Complies
	5825 MHz	15.32	16.41	15.74	20.62	30.00	Complies
802.11n MCS0 HT40	5190 MHz	15.02	15.51	14.87	19.91	30.00	Complies
	5230 MHz	18.68	19.59	19.02	23.88	30.00	Complies
	5755 MHz	13.88	14.46	14.08	18.92	30.00	Complies
	5795 MHz	15.42	15.81	15.39	20.32	30.00	Complies
802.11ac MCS0/Nss1 VHT20	5180 MHz	18.01	18.43	18.36	23.04	30.00	Complies
	5200 MHz	19.76	20.47	20.38	24.99	30.00	Complies
	5240 MHz	21.13	21.53	21.98	26.33	30.00	Complies
	5745 MHz	14.65	15.24	14.78	19.67	30.00	Complies
	5785 MHz	19.41	19.87	19.77	24.46	30.00	Complies
	5825 MHz	15.57	16.23	16.08	20.74	30.00	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	15.24	15.67	15.25	20.16	30.00	Complies
	5230 MHz	19.23	19.40	19.32	24.09	30.00	Complies
	5755 MHz	14.33	14.62	14.46	19.24	30.00	Complies
	5795 MHz	15.41	15.65	15.70	20.36	30.00	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	13.02	13.54	13.45	18.11	30.00	Complies
	5775 MHz	14.63	15.33	15.21	19.84	30.00	Complies

Temperature	22℃	Humidity	63%
Test Engineer	Nick Peng, Lucas Huang	Test Date	Jan. 08, 2015 ~ Jan. 13, 2015
Test Mode	Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 1TX)		

Mode	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 4		
802.11a	5180 MHz	17.74	27.70	Complies
	5200 MHz	21.52	27.70	Complies
	5240 MHz	21.11	27.70	Complies
	5745 MHz	14.55	27.70	Complies
	5785 MHz	20.78	27.70	Complies
	5825 MHz	15.41	27.70	Complies
802.11n MCS0 HT20	5180 MHz	17.62	27.70	Complies
	5200 MHz	21.43	27.70	Complies
	5240 MHz	21.11	27.70	Complies
	5745 MHz	14.56	27.70	Complies
	5785 MHz	20.78	27.70	Complies
	5825 MHz	15.34	27.70	Complies
802.11n MCS0 HT40	5190 MHz	15.86	27.70	Complies
	5230 MHz	19.65	27.70	Complies
	5755 MHz	14.09	27.70	Complies
	5795 MHz	16.59	27.70	Complies
802.11ac MCS0/Nss1 VHT20	5180 MHz	17.64	27.70	Complies
	5200 MHz	21.49	27.70	Complies
	5240 MHz	21.11	27.70	Complies
	5745 MHz	14.43	27.70	Complies
	5785 MHz	20.84	27.70	Complies
	5825 MHz	15.48	27.70	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	15.84	27.70	Complies
	5230 MHz	19.53	27.70	Complies
	5755 MHz	14.11	27.70	Complies
	5795 MHz	16.58	27.70	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	14.16	27.70	Complies
	5775 MHz	13.73	27.70	Complies

Note: Antenna gain=8.30dBi >6dBi,So Band1, 4 Limit =30-(8.30-6)=27.70dBm/MHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Jan. 08, 2015
Test Mode	Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 2TX)		

Mode	Frequency	Conducted Power (dBm)			Max. Limit (dBm)	Result
		Chain 4	Chain 5	Total		
802.11a	5180 MHz	17.68	18.03	20.87	27.70	Complies
	5200 MHz	20.72	20.78	23.76	27.70	Complies
	5240 MHz	21.68	21.74	24.72	27.70	Complies
	5745 MHz	13.87	14.79	17.36	27.70	Complies
	5785 MHz	20.14	21.08	23.65	27.70	Complies
	5825 MHz	14.61	15.32	17.99	27.70	Complies
802.11n MCS0 HT20	5180 MHz	17.77	18.12	20.96	27.70	Complies
	5200 MHz	20.63	20.88	23.77	27.70	Complies
	5240 MHz	21.57	21.65	24.62	27.70	Complies
	5745 MHz	14.07	14.83	17.48	27.70	Complies
	5785 MHz	20.04	20.97	23.54	27.70	Complies
	5825 MHz	14.55	15.41	18.01	27.70	Complies
802.11n MCS0 HT40	5190 MHz	15.72	16.38	19.07	27.70	Complies
	5230 MHz	18.92	19.04	21.99	27.70	Complies
	5755 MHz	13.38	13.63	16.52	27.70	Complies
	5795 MHz	14.34	14.58	17.47	27.70	Complies
802.11ac MCS0/Nss1 VHT20	5180 MHz	17.73	18.05	20.90	27.70	Complies
	5200 MHz	20.65	20.82	23.75	27.70	Complies
	5240 MHz	21.53	21.78	24.67	27.70	Complies
	5745 MHz	14.08	14.85	17.49	27.70	Complies
	5785 MHz	20.05	20.98	23.55	27.70	Complies
	5825 MHz	14.53	15.42	18.01	27.70	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	15.81	16.38	19.11	27.70	Complies
	5230 MHz	18.63	19.33	22.00	27.70	Complies
	5755 MHz	13.48	13.81	16.66	27.70	Complies
	5795 MHz	14.36	14.57	17.48	27.70	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	11.46	12.16	14.83	27.70	Complies
	5775 MHz	12.85	13.68	16.30	27.70	Complies

Note: Antenna gain=8.30dBi >6dBi,So Band1, 4 Limit =30-(8.30-6)=27.70dBm/MHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng, Lucas Huang	Test Date	Jan. 08, 2015 ~ Jan. 13, 2015
Test Mode	Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 3TX)		

Mode	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Result
		Chain 4	Chain 5	Chain 6	Total		
802.11a	5180 MHz	15.91	16.42	15.99	20.88	27.70	Complies
	5200 MHz	17.75	18.21	18.29	22.86	27.70	Complies
	5240 MHz	18.39	18.94	18.54	23.40	27.70	Complies
	5745 MHz	13.61	14.36	13.67	18.66	27.70	Complies
	5785 MHz	18.40	19.08	18.88	23.57	27.70	Complies
	5825 MHz	14.03	14.93	14.43	19.25	27.70	Complies
802.11n MCS0 HT20	5180 MHz	16.07	16.28	15.94	20.87	27.70	Complies
	5200 MHz	17.84	18.04	18.03	22.74	27.70	Complies
	5240 MHz	18.41	18.99	18.56	23.43	27.70	Complies
	5745 MHz	13.68	14.13	13.52	18.56	27.70	Complies
	5785 MHz	18.37	18.93	18.64	23.42	27.70	Complies
	5825 MHz	14.14	14.78	14.38	19.21	27.70	Complies
802.11n MCS0 HT40	5190 MHz	13.08	13.82	13.09	18.12	27.70	Complies
	5230 MHz	17.18	17.92	17.24	22.23	27.70	Complies
	5755 MHz	11.65	12.56	11.82	16.80	27.70	Complies
	5795 MHz	14.31	14.23	13.92	18.93	27.70	Complies
802.11ac MCS0/Nss1 VHT20	5180 MHz	16.03	16.44	15.85	20.88	27.70	Complies
	5200 MHz	17.76	18.11	18.09	22.76	27.70	Complies
	5240 MHz	18.47	18.88	18.49	23.39	27.70	Complies
	5745 MHz	13.53	14.12	13.61	18.53	27.70	Complies
	5785 MHz	18.36	19.07	18.86	23.54	27.70	Complies
	5825 MHz	14.02	14.87	14.32	19.19	27.70	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	13.15	13.84	12.94	18.10	27.70	Complies
	5230 MHz	17.10	17.88	17.15	22.16	27.70	Complies
	5755 MHz	11.88	12.62	11.76	16.87	27.70	Complies
	5795 MHz	14.48	14.35	14.02	19.06	27.70	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	9.31	9.62	9.25	14.17	27.70	Complies
	5775 MHz	9.42	10.42	9.76	14.66	27.70	Complies

Note: Antenna gain=8.30dBi >6dBi,So Band1, 4 Limit =30-(8.30-6)=27.70dBm/MHz

<For Beamforming Mode>

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Jan. 14, 2015
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX)		

For outdoor use

Mode	Frequency	Conducted Power (dBm)			Max. Limit (dBm)	Result
		Chain 4	Chain 5	Total		
802.11a	5180 MHz	9.31	9.22	12.28	25.69	Complies
	5200 MHz	8.88	9.13	12.02	25.69	Complies
	5240 MHz	8.95	9.44	12.21	25.69	Complies
	5745 MHz	15.48	16.15	18.84	25.69	Complies
	5785 MHz	21.48	21.74	24.62	25.69	Complies
	5825 MHz	16.58	16.78	19.69	25.69	Complies
802.11ac MCS0/Nss1 VHT20	5180 MHz	9.30	9.25	12.29	25.69	Complies
	5200 MHz	8.89	9.12	12.02	25.69	Complies
	5240 MHz	9.01	9.45	12.25	25.69	Complies
	5745 MHz	15.75	16.03	18.90	25.69	Complies
	5785 MHz	21.54	21.83	24.70	25.69	Complies
	5825 MHz	16.61	16.78	19.71	25.69	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	9.13	9.45	12.30	25.69	Complies
	5230 MHz	9.07	8.84	11.97	25.69	Complies
	5755 MHz	15.40	15.70	18.56	25.69	Complies
	5795 MHz	16.48	16.70	19.60	25.69	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	8.75	9.39	12.09	25.69	Complies
	5775 MHz	14.62	15.12	17.89	25.69	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$=10.31dBi >6dBi,So Band1, 4 Limit =30-(10.31-6)=25.69dBm/MHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Jan. 14, 2015
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX)		

For outdoor use

Mode	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Result
		Chain 4	Chain 5	Chain 6	Total		
802.11a	5180 MHz	5.35	6.01	5.32	10.34	23.93	Complies
	5200 MHz	5.22	5.98	5.44	10.33	23.93	Complies
	5240 MHz	5.26	5.78	5.49	10.29	23.93	Complies
	5745 MHz	14.77	15.12	14.88	19.70	23.93	Complies
	5785 MHz	18.77	19.08	19.13	23.77	23.93	Complies
	5825 MHz	15.45	15.97	15.67	20.47	23.93	Complies
802.11ac MCS0/Nss1 VHT20	5180 MHz	5.34	6.00	5.33	10.34	23.93	Complies
	5200 MHz	5.26	5.97	5.45	10.34	23.93	Complies
	5240 MHz	5.26	5.77	5.48	10.28	23.93	Complies
	5745 MHz	14.31	14.84	14.82	19.43	23.93	Complies
	5785 MHz	18.72	19.11	19.17	23.78	23.93	Complies
	5825 MHz	15.57	15.80	15.83	20.51	23.93	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	5.02	5.69	5.72	10.26	23.93	Complies
	5230 MHz	4.88	5.76	5.02	10.01	23.93	Complies
	5755 MHz	14.09	14.50	14.28	19.06	23.93	Complies
	5795 MHz	15.58	15.84	15.71	20.48	23.93	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	5.49	5.15	5.01	9.99	23.93	Complies
	5775 MHz	13.44	13.99	14.04	18.60	23.93	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} 10^{\frac{G_{j,k}}{20}}\right\}^2}{N_{ANT}}\right]$=12.07dBi >6dBi,So Band1, 4 Limit =30-(12.07-6)=23.93dBm/MHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Mar. 02, 2015
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX)		

For indoor use

Mode	Frequency	Conducted Power (dBm)			Max. Limit (dBm)	Result
		Chain 4	Chain 5	Total		
802.11a	5180 MHz	19.34	19.58	22.47	25.69	Complies
	5200 MHz	21.67	21.98	24.84	25.69	Complies
	5240 MHz	17.99	18.52	21.27	25.69	Complies
802.11ac MCS0/Nss1 VHT20	5180 MHz	19.40	19.64	22.53	25.69	Complies
	5200 MHz	21.54	21.78	24.67	25.69	Complies
	5240 MHz	17.88	18.51	21.22	25.69	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	16.67	16.92	19.81	25.69	Complies
	5230 MHz	21.73	21.94	24.85	25.69	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	16.89	17.52	20.23	25.69	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{k=1}^{N_{SS}}\left\{\sum_{j=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =10.31dBi >6dBi,So Band1, 4 Limit =30-(10.31-6)=25.69dBm/MHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Mar. 02, 2015
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX)		

For indoor use

Mode	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Result
		Chain 4	Chain 5	Chain 6	Total		
802.11a	5180 MHz	18.01	18.32	18.46	23.04	23.93	Complies
	5200 MHz	18.68	18.83	19.16	23.67	23.93	Complies
	5240 MHz	18.81	19.19	19.17	23.83	23.93	Complies
802.11ac MCS0/Nss1 VHT20	5180 MHz	17.78	18.32	18.38	22.94	23.93	Complies
	5200 MHz	18.58	18.76	19.13	23.60	23.93	Complies
	5240 MHz	18.63	19.17	19.20	23.78	23.93	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	15.67	16.32	15.88	20.74	23.93	Complies
	5230 MHz	18.46	18.83	19.14	23.59	23.93	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	15.70	16.40	16.11	20.85	23.93	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} g_{j,k}\right\}^2}{N_{ANT}}\right]$ =12.07dBi >6dBi,So Band1, 4 Limit =30-(12.07-6)=23.93dBm/MHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Jan. 12, 2015
Test Mode	Mode 2: (Ant.8 Panel antenna / 5.1dBi / 2TX)		

Mode	Frequency	Conducted Power (dBm)			Max. Limit (dBm)	Result
		Chain 4	Chain 5	Total		
802.11a	5180 MHz	19.16	19.64	22.42	27.89	Complies
	5200 MHz	21.93	21.98	24.97	27.89	Complies
	5240 MHz	21.92	21.97	24.96	27.89	Complies
	5745 MHz	15.14	15.81	18.50	27.89	Complies
	5785 MHz	20.82	21.95	24.43	27.89	Complies
	5825 MHz	16.14	17.11	19.66	27.89	Complies
802.11ac MCS0/Nss1 VHT20	5180 MHz	19.35	19.42	22.40	27.89	Complies
	5200 MHz	21.91	21.98	24.96	27.89	Complies
	5240 MHz	21.94	21.98	24.97	27.89	Complies
	5745 MHz	15.48	15.97	18.74	27.89	Complies
	5785 MHz	21.27	21.94	24.63	27.89	Complies
	5825 MHz	16.64	17.13	19.90	27.89	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	15.87	16.07	18.98	27.89	Complies
	5230 MHz	20.16	20.65	23.42	27.89	Complies
	5755 MHz	14.81	15.16	18.00	27.89	Complies
	5795 MHz	17.69	17.60	20.66	27.89	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	15.95	16.54	19.27	27.89	Complies
	5775 MHz	14.22	14.67	17.46	27.89	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{ANT}}\left\{\sum_{i=1}^{N_{ANT}} M_{j,i}\right\}^2}{N_{ANT}}\right]$ =8.11dBi >6dBi,So Band1, 4 Limit =30-(8.11-6)=27.89dBm/MHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Jan. 12, 2015
Test Mode	Mode 2: (Ant.8 Panel antenna / 5.1dBi / 3TX)		

Mode	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Result
		Chain 4	Chain 5	Chain 6	Total		
802.11a	5180 MHz	16.72	16.88	16.58	21.50	26.13	Complies
	5200 MHz	18.13	18.61	18.21	23.09	26.13	Complies
	5240 MHz	19.54	20.19	20.04	24.70	26.13	Complies
	5745 MHz	14.89	15.19	14.81	19.74	26.13	Complies
	5785 MHz	18.36	18.79	18.69	23.39	26.13	Complies
	5825 MHz	15.76	16.39	16.21	20.90	26.13	Complies
802.11ac MCS0/Nss1 VHT20	5180 MHz	16.68	16.92	16.59	21.50	26.13	Complies
	5200 MHz	18.12	18.64	18.26	23.12	26.13	Complies
	5240 MHz	19.64	20.15	20.02	24.71	26.13	Complies
	5745 MHz	14.85	15.15	14.86	19.73	26.13	Complies
	5785 MHz	18.31	18.81	18.61	23.35	26.13	Complies
	5825 MHz	15.71	16.38	16.01	20.81	26.13	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	15.07	15.84	15.27	20.18	26.13	Complies
	5230 MHz	19.08	19.64	19.51	24.19	26.13	Complies
	5755 MHz	14.04	14.33	14.02	18.90	26.13	Complies
	5795 MHz	16.12	15.87	15.76	20.69	26.13	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	13.01	13.43	13.20	17.99	26.13	Complies
	5775 MHz	13.21	14.02	13.98	18.52	26.13	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} 10^{\frac{G_{j,k}}{20}}\right\}^2}{N_{ANT}}\right]$ =9.87dBi >6dBi,So Band1, 4 Limit =30-(9.87-6)=26.13dBm/MHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Jan. 08, 2015
Test Mode	Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 2TX)		

Mode	Frequency	Conducted Power (dBm)			Max. Limit (dBm)	Result
		Chain 4	Chain 5	Total		
802.11a	5180 MHz	16.67	16.98	19.84	27.70	Complies
	5200 MHz	19.48	19.72	22.61	27.70	Complies
	5240 MHz	19.73	19.92	22.84	27.70	Complies
	5745 MHz	13.49	14.49	17.03	27.70	Complies
	5785 MHz	19.55	20.39	23.00	27.70	Complies
	5825 MHz	14.48	15.52	18.04	27.70	Complies
802.11ac MCS0/Nss2 VHT20	5180 MHz	16.59	17.02	19.82	27.70	Complies
	5200 MHz	19.51	19.69	22.61	27.70	Complies
	5240 MHz	19.67	19.85	22.77	27.70	Complies
	5745 MHz	13.48	14.48	17.02	27.70	Complies
	5785 MHz	19.59	20.45	23.05	27.70	Complies
	5825 MHz	14.51	15.48	18.03	27.70	Complies
802.11ac MCS0/Nss2 VHT40	5190 MHz	14.86	15.68	18.30	27.70	Complies
	5230 MHz	18.37	19.01	21.71	27.70	Complies
	5755 MHz	12.88	13.38	16.15	27.70	Complies
	5795 MHz	13.34	13.98	16.68	27.70	Complies
802.11ac MCS0/Nss2 VHT80	5210 MHz	11.07	11.72	14.42	27.70	Complies
	5775 MHz	12.52	13.46	16.03	27.70	Complies

Note: Antenna gain=8.30dBi >6dBi,So Band1, 4 Limit =30-(8.30-6)=27.70dBm/MHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng, Lucas Huang	Test Date	Jan. 08, 2015 ~ Jan. 13, 2015
Test Mode	Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 3TX)		

Mode	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Result
		Chain 4	Chain 5	Chain 6	Total		
802.11a	5180 MHz	15.84	16.18	15.63	20.66	26.64	Complies
	5200 MHz	17.11	17.58	17.26	22.09	26.64	Complies
	5240 MHz	17.53	18.24	17.84	22.65	26.64	Complies
	5745 MHz	13.51	14.18	13.58	18.54	26.64	Complies
	5785 MHz	16.32	17.16	16.85	21.56	26.64	Complies
	5825 MHz	13.89	14.65	14.12	19.00	26.64	Complies
802.11ac MCS0/Nss2 VHT20	5180 MHz	15.76	16.10	15.58	20.59	26.64	Complies
	5200 MHz	17.01	17.57	17.03	21.98	26.64	Complies
	5240 MHz	17.53	18.13	17.63	22.54	26.64	Complies
	5745 MHz	13.45	14.16	13.51	18.49	26.64	Complies
	5785 MHz	16.32	17.03	16.78	21.49	26.64	Complies
	5825 MHz	13.78	14.63	13.98	18.92	26.64	Complies
802.11ac MCS0/Nss2 VHT40	5190 MHz	12.51	13.41	12.62	17.64	26.64	Complies
	5230 MHz	16.78	17.44	17.02	21.86	26.64	Complies
	5755 MHz	11.61	12.09	11.42	16.49	26.64	Complies
	5795 MHz	14.09	14.05	13.77	18.74	26.64	Complies
802.11ac MCS0/Nss2 VHT80	5210 MHz	9.29	9.67	9.23	14.17	26.64	Complies
	5775 MHz	9.18	10.28	9.78	14.54	26.64	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{beam}}\left\{\sum_{i=1}^{N_{ANT}} SS_{i,k}\right\}^2}{N_{ANT}}\right]$=9.36dBi >6dBi,So Band1, 4 Limit =30-(9.36-6)=26.64dBm/MHz

<For STBC Mode>

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Jan. 14, 2015
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX)		

For outdoor use

Mode	Frequency	Conducted Power (dBm)			Max. Limit (dBm)	Result
		Chain 4	Chain 5	Total		
802.11ac MCS0/Nss1 VHT20	5180 MHz	11.94	12.44	15.21	28.70	Complies
	5200 MHz	12.01	12.43	15.24	28.70	Complies
	5240 MHz	12.07	12.23	15.16	28.70	Complies
	5745 MHz	16.97	17.29	20.14	28.70	Complies
	5785 MHz	21.64	21.97	24.82	28.70	Complies
	5825 MHz	17.06	17.38	20.23	28.70	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	11.88	12.36	15.14	28.70	Complies
	5230 MHz	11.87	12.54	15.23	28.70	Complies
	5755 MHz	15.57	15.93	18.76	28.70	Complies
	5795 MHz	17.02	17.18	20.11	28.70	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	11.93	12.52	15.25	28.70	Complies
	5775 MHz	14.61	15.36	18.01	28.70	Complies

Note: Antenna gain =7.30dBi >6dBi,So Band1, 4 Limit =30-(7.30-6)=28.70dBm/MHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Jan. 14, 2015
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX)		

For outdoor use

Mode	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Result
		Chain 4	Chain 5	Chain 6	Total		
802.11ac MCS0/Nss1 VHT20	5180 MHz	10.13	10.83	10.46	15.25	28.70	Complies
	5200 MHz	10.22	10.33	10.41	15.09	28.70	Complies
	5240 MHz	10.24	10.78	10.34	15.23	28.70	Complies
	5745 MHz	16.24	16.68	16.62	21.29	28.70	Complies
	5785 MHz	21.66	21.92	21.98	26.63	28.70	Complies
	5825 MHz	17.02	17.62	17.58	22.19	28.70	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	10.01	10.68	10.51	15.18	28.70	Complies
	5230 MHz	10.11	10.98	10.41	15.29	28.70	Complies
	5755 MHz	14.86	15.32	15.27	19.93	28.70	Complies
	5795 MHz	15.32	16.05	16.00	20.57	28.70	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	10.17	10.54	10.58	15.21	28.70	Complies
	5775 MHz	14.39	15.26	15.25	19.76	28.70	Complies

Note: Antenna gain =7.30dBi >6dBi,So Band1, 4 Limit =30-(7.30-6)=28.70dBm/MHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Mar. 02, 2015
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX)		

For indoor use

Mode	Frequency	Conducted Power (dBm)			Max. Limit (dBm)	Result
		Chain 4	Chain 5	Total		
802.11ac MCS0/Nss1 VHT20	5180 MHz	19.31	19.73	22.54	28.70	Complies
	5200 MHz	21.63	21.96	24.81	28.70	Complies
	5240 MHz	21.72	21.98	24.86	28.70	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	17.20	17.65	20.44	28.70	Complies
	5230 MHz	21.65	21.74	24.71	28.70	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	16.80	17.58	20.22	28.70	Complies

Note: Antenna gain =7.30dBi >6dBi,So Band1, 4 Limit =30-(7.30-6)=28.70dBm/MHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Mar. 02, 2015
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX)		

For indoor use

Mode	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Result
		Chain 4	Chain 5	Chain 6	Total		
802.11ac MCS0/Nss1 VHT20	5180 MHz	18.12	18.63	18.74	23.28	28.70	Complies
	5200 MHz	20.86	21.17	21.96	26.13	28.70	Complies
	5240 MHz	20.94	21.18	21.97	26.16	28.70	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	16.56	16.94	16.78	21.53	28.70	Complies
	5230 MHz	21.07	21.27	21.97	26.23	28.70	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	15.29	16.06	15.96	20.55	28.70	Complies

Note: Antenna gain =7.30dBi >6dBi,So Band1, 4 Limit =30-(7.30-6)=28.70dBm/MHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Jan. 12, 2015
Test Mode	Mode 2: (Ant.8 Panel antenna / 5.1dBi / 2TX)		

Mode	Frequency	Conducted Power (dBm)			Max. Limit (dBm)	Result
		Chain 4	Chain 5	Total		
802.11ac MCS0/Nss1 VHT20	5180 MHz	19.41	19.57	22.50	30.00	Complies
	5200 MHz	21.89	21.94	24.93	30.00	Complies
	5240 MHz	21.92	21.93	24.94	30.00	Complies
	5745 MHz	16.03	16.79	19.44	30.00	Complies
	5785 MHz	21.79	21.97	24.89	30.00	Complies
	5825 MHz	17.86	18.74	21.33	30.00	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	16.78	17.20	20.01	30.00	Complies
	5230 MHz	20.95	21.07	24.02	30.00	Complies
	5755 MHz	16.13	16.42	19.29	30.00	Complies
	5795 MHz	17.57	17.61	20.60	30.00	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	15.74	16.26	19.02	30.00	Complies
	5775 MHz	15.42	16.04	18.75	30.00	Complies

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Jan. 12, 2015
Test Mode	Mode 2: (Ant.8 Panel antenna / 5.1dBi / 3TX)		

Mode	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Result
		Chain 4	Chain 5	Chain 6	Total		
802.11ac MCS0/Nss1 VHT20	5180 MHz	18.24	18.56	18.45	23.19	30.00	Complies
	5200 MHz	20.72	21.22	21.27	25.85	30.00	Complies
	5240 MHz	21.45	21.86	21.98	26.54	30.00	Complies
	5745 MHz	16.24	16.83	16.35	21.25	30.00	Complies
	5785 MHz	21.16	21.82	21.45	26.26	30.00	Complies
	5825 MHz	16.90	17.34	17.13	21.90	30.00	Complies
802.11ac MCS0/Nss1 VHT40	5190 MHz	15.94	16.67	16.50	21.15	30.00	Complies
	5230 MHz	19.91	20.35	20.75	25.12	30.00	Complies
	5755 MHz	15.13	15.59	15.25	20.10	30.00	Complies
	5795 MHz	16.31	16.37	15.93	20.98	30.00	Complies
802.11ac MCS0/Nss1 VHT80	5210 MHz	14.03	14.41	14.26	19.01	30.00	Complies
	5775 MHz	14.21	14.82	14.78	19.38	30.00	Complies

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng, Lucas Huang	Test Date	Jan. 08, 2015 ~ Jan. 13, 2015
Test Mode	Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 2TX)		

Mode	Frequency	Conducted Power (dBm)			Max. Limit (dBm)	Result
		Chain 4	Chain 5	Total		
802.11ac MCS0/Nss2 VHT20	5180 MHz	17.84	18.19	21.03	27.70	Complies
	5200 MHz	20.87	20.97	23.93	27.70	Complies
	5240 MHz	21.49	21.72	24.62	27.70	Complies
	5745 MHz	14.57	15.31	17.97	27.70	Complies
	5785 MHz	20.68	21.51	24.13	27.70	Complies
	5825 MHz	15.72	16.68	19.24	27.70	Complies
802.11ac MCS0/Nss2 VHT40	5190 MHz	14.85	15.27	18.08	27.70	Complies
	5230 MHz	19.52	19.68	22.61	27.70	Complies
	5755 MHz	13.72	14.03	16.89	27.70	Complies
	5795 MHz	15.02	15.81	18.44	27.70	Complies
802.11ac MCS0/Nss2 VHT80	5210 MHz	13.28	14.07	16.70	27.70	Complies
	5775 MHz	13.38	14.31	16.88	27.70	Complies

Note: Antenna gain =8.30dBi >6dBi,So Band1, 4 Limit =30-(8.30-6)=27.70dBm/MHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng, Lucas Huang	Test Date	Jan. 08, 2015 ~ Jan. 13, 2015
Test Mode	Mode 3: (Ant.9 CROSS-POLARIZED PANEL ANTENNA / Chain 4: 8.3, Chain 5: 5.9, Chain 6: 8.2dBi / 3TX)		

Mode	Frequency	Conducted Power (dBm)				Max. Limit (dBm)	Result
		Chain 4	Chain 5	Chain 6	Total		
802.11ac MCS0/Nss2 VHT20	5180 MHz	15.97	16.24	16.16	20.90	27.70	Complies
	5200 MHz	17.02	17.64	17.61	22.20	27.70	Complies
	5240 MHz	17.11	17.56	17.37	22.12	27.70	Complies
	5745 MHz	14.58	15.42	14.69	19.68	27.70	Complies
	5785 MHz	19.05	19.32	19.26	23.98	27.70	Complies
	5825 MHz	15.18	16.01	15.78	20.44	27.70	Complies
802.11ac MCS0/Nss2 VHT40	5190 MHz	14.34	14.78	14.22	19.22	27.70	Complies
	5230 MHz	18.38	18.81	18.73	23.42	27.70	Complies
	5755 MHz	12.48	13.68	13.05	17.87	27.70	Complies
	5795 MHz	14.78	15.65	14.97	19.92	27.70	Complies
802.11ac MCS0/Nss2 VHT80	5210 MHz	11.97	12.53	12.21	17.01	27.70	Complies
	5775 MHz	12.28	13.09	12.87	17.53	27.70	Complies

Note: Antenna gain =8.30dBi >6dBi,So Band1, 4 Limit =30-(8.30-6)=27.70dBm/MHz

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
☒	5.725~5.85 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.

For 5.15~5.25 GHz

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

For 5.725~5.85 GHz

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Set the span to 1.5 times the DTS channel bandwidth.
RBW	RBW ≥ 1/T
VBW	VBW ≥ 3 RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto couple
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

For 5.15~5.25 GHz

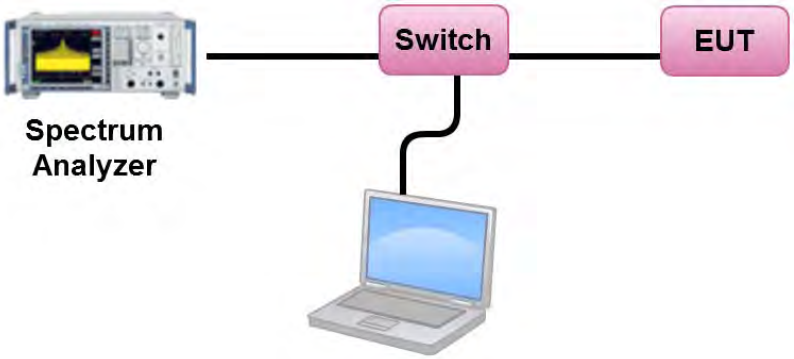
1. The transmitter output (antenna port) was connected RF switch to the spectrum analyzer.
2. Test was performed in accordance with KDB789033 D02 v01 for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - section (F) Maximum Power Spectral Density (PSD).
3. Multiple 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.

For 5.725~5.85 GHz

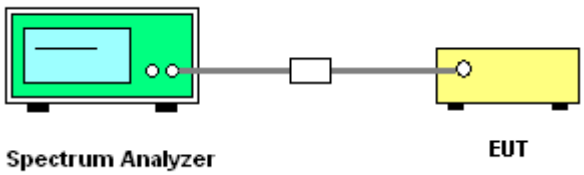
1. Test procedures refer KDB662911 D01 v02r01 section In-Band Power Spectral Density (PSD) Measurements option (b) Measure and sum spectral maximal across the outputs.
2. Use this procedure when the maximum conducted output power in the fundamental emission is used to demonstrate compliance. The EUT must be configured to transmit continuously at full power over the measurement duration.
3. Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW (use of a greater number of measurement points than this minimum requirement is recommended).
4. Use the peak marker function to determine the maximum level in any 3 kHz band segment within the fundamental EBW.
5. The measured result of PSD level must add 10log(500kHz/RBW) and the final result should ≤ 30 dBm.

4.5.4. Test Setup Layout

For 5.15~5.25 GHz



For 5.725~5.85 GHz



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

For Band 1 and Band 4 (Master and client without radar detection):

<For Non-Beamforming Mode>

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Jan. 14, 2015
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 1TX)		

For outdoor use

Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 5

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	1.26	15.70	Complies
40	5200 MHz	1.01	15.70	Complies
48	5240 MHz	1.21	15.70	Complies

Note: Antenna gain=7.3dBi >6dBi,So Band1 Limit =17-(7.3-6)=15.70dBm/MHz

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
149	5745 MHz	2.60	-3.01	-0.41	28.70	Complies
157	5785 MHz	8.02	-3.01	5.01	28.70	Complies
165	5825 MHz	2.90	-3.01	-0.11	28.70	Complies

Note: Antenna gain=7.3dBi >6dBi,So Band4 Limit =30-(7.3-6)=28.70dBm/500kHz

Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 5

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	-1.44	15.70	Complies
46	5230 MHz	-1.37	15.70	Complies

Note: Antenna gain=7.3dBi >6dBi,So Band1 Limit =17-(7.3-6)=15.70dBm/MHz

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
151	5755 MHz	-1.37	-3.01	-4.38	28.70	Complies
159	5795 MHz	0.84	-3.01	-2.17	28.70	Complies

Note: Antenna gain=7.3dBi >6dBi,So Band4 Limit =30-(7.3-6)=28.70dBm/500kHz

Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 5

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210 MHz	-4.20	15.70	Complies

Note: Antenna gain=7.3dBi >6dBi,So Band1 Limit =17-(7.3-6)=15.70dBm/MHz

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
155	5775 MHz	-4.16	-3.01	-7.17	28.70	Complies

Note: Antenna gain=7.3dBi >6dBi,So Band4 Limit =30-(7.3-6)=28.70dBm/500kHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Jan. 14, 2015
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 2TX)		

For outdoor use

Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	2.11	12.69	Complies
40	5200 MHz	2.13	12.69	Complies
48	5240 MHz	2.09	12.69	Complies

Note: $Directional Gain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} a_{j,k}\right\}^2}{N_{ANT}}\right]$=10.31dBi >6dBi,So Band1 Limit =17-(10.31-6)=12.69dBm/MHz

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
149	5745 MHz	5.94	-3.01	2.93	25.69	Complies
157	5785 MHz	10.95	-3.01	7.94	25.69	Complies
165	5825 MHz	10.90	-3.01	7.89	25.69	Complies

Note: $Directional Gain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} a_{j,k}\right\}^2}{N_{ANT}}\right]$=10.31dBi >6dBi,So Band4 Limit =30-(10.31-6)=25.69dBm/500kHz

Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	-1.40	12.69	Complies
46	5230 MHz	-1.11	12.69	Complies

Note: $Directional Gain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} a_{j,k}\right\}^2}{N_{ANT}}\right]$=10.31dBi >6dBi,So Band1 Limit =17-(10.31-6)=12.69dBm/MHz

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
151	5755 MHz	3.09	-3.01	0.08	25.69	Complies
159	5795 MHz	3.23	-3.01	0.22	25.69	Complies

Note: $Directional Gain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\left\{\sum_{k=1}^{N_{ANT}} a_{j,k}\right\}^2}{N_{ANT}}\right]$=10.31dBi >6dBi,So Band4 Limit =30-(10.31-6)=25.69dBm/500kHz

Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 + Chain 5

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210 MHz	-4.32	12.69	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{ANT}}\left\{\sum_{k=1}^{N_{SS}} g_{j,k}\right\}^2}{N_{ANT}}\right]$=10.31dBi >6dBi,So Band1 Limit =17-(10.31-6)=12.69dBm/MHz

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
155	5775 MHz	-1.60	-3.01	-4.61	25.69	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{ANT}}\left\{\sum_{k=1}^{N_{SS}} g_{j,k}\right\}^2}{N_{ANT}}\right]$=10.31dBi >6dBi,So Band4 Limit =30-(10.31-6)=25.69dBm/500kHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Jan. 14, 2015
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 3TX)		

For outdoor use

Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 4 + Chain 5 + Chain 6

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	2.20	10.93	Complies
40	5200 MHz	2.35	10.93	Complies
48	5240 MHz	2.36	10.93	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{ANT}}\left\{\sum_{i=1}^{N_{ANT}} a_{j,k}\right\}^2}{N_{ANT}}\right]$=12.07dBi >6dBi,So Band1 Limit =17-(12.07-6)=10.93dBm/MHz

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
149	5745 MHz	7.25	-3.01	4.24	23.93	Complies
157	5785 MHz	10.48	-3.01	7.47	23.93	Complies
165	5825 MHz	6.77	-3.01	3.76	23.93	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{ANT}}\left\{\sum_{i=1}^{N_{ANT}} a_{j,k}\right\}^2}{N_{ANT}}\right]$=12.07dBi >6dBi,So Band4 Limit =30-(12.07-6)=23.93dBm/500kHz

Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 4 + Chain 5 + Chain 6

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	-0.74	10.93	Complies
46	5230 MHz	-0.48	10.93	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{ANT}}\left\{\sum_{i=1}^{N_{ANT}} a_{j,k}\right\}^2}{N_{ANT}}\right]$=12.07dBi >6dBi,So Band1 Limit =17-(12.07-6)=10.93dBm/MHz

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
151	5755 MHz	2.88	-3.01	-0.13	23.93	Complies
159	5795 MHz	5.33	-3.01	2.32	23.93	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{ANT}}\left\{\sum_{i=1}^{N_{ANT}} a_{j,k}\right\}^2}{N_{ANT}}\right]$=12.07dBi >6dBi,So Band4 Limit =30-(12.07-6)=23.93dBm/500kHz

Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 4 + Chain 5 + Chain 6

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210 MHz	-3.87	10.93	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{ANT}}\left\{\sum_{k=1}^{N_{SS}} g_{j,k}\right\}^2}{N_{ANT}}\right]$=12.07dBi >6dBi,So Band1 Limit =17-(12.07-6)=10.93dBm/MHz

Channel	Frequency	Power Density (dBm/MHz)	10log(500kHz/RBW) Factor (dB)	Power Density (dBm/500kHz)	Power Density Limit (dBm/500kHz)	Result
155	5775 MHz	-0.73	-3.01	-3.74	23.93	Complies

Note: $DirectionalGain = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{ANT}}\left\{\sum_{k=1}^{N_{SS}} g_{j,k}\right\}^2}{N_{ANT}}\right]$=12.07dBi >6dBi,So Band4 Limit =30-(12.07-6)=23.93dBm/500kHz

Temperature	22°C	Humidity	63%
Test Engineer	Nick Peng	Test Date	Mar. 02, 2015
Test Mode	Mode 1: (Ant.2 Dipole antenna / 7.3dBi / 1TX)		

For indoor use

Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 5

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	6.77	15.70	Complies
40	5200 MHz	9.33	15.70	Complies
48	5240 MHz	9.38	15.70	Complies

Note: Antenna gain=7.3dBi >6dBi,So Band1 Limit =17-(7.3-6)=15.70dBm/MHz

Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 5

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	1.50	15.70	Complies
46	5230 MHz	6.37	15.70	Complies

Note: Antenna gain=7.3dBi >6dBi,So Band1 Limit =17-(7.3-6)=15.70dBm/MHz

Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 5

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210 MHz	-2.35	15.70	Complies

Note: Antenna gain=7.3dBi >6dBi,So Band1 Limit =17-(7.3-6)=15.70dBm/MHz