

## **SPORTON International Inc.**

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## **FCC RADIO TEST REPORT**

Applicant's company	Motorola Solutions, Inc.	
Applicant Address	One Motorola Plaza Holtsville, NY 11742 USA	
FCC ID	UZ7AP7532	
Manufacturer's company	Wistron NeWeb Corporation	
Manufacturer Address	20 Park Avenue II, Hsinchu Science Park, Hsinchu 308, Taiwan, R.O.C.	

Product Name	Birch External (3x3 MIMO)
Brand Name	MOTOROLA
Model No.	AP-7532
Test Rule Part(s)	47 CFR FCC Part 15 Subpart E § 15.407
Test Freq. Range	5150 ~ 5250 MHz / 5725 ~ 5850 MHz
Received Date	Apr. 15, 2014
Final Test Date	Jun. 18, 2014
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 C63.10-2009, 47 CFR FCC Part 15 Subpart E, KDB789033 D02 v01, KDB662911 D01 v02r01, KDB644545 D01 v01r02.

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





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# History of This Test Report

Rev. 01	Initial issue of report	Jul. 03, 2014



Certificate No.: CB10306126

### 1. CERTIFICATE OF COMPLIANCE

Product Name : Birch External (3x3 MIMO)

Brand Name : MOTOROLA

Model No. : AP-7532

Applicant : Motorola Solutions, Inc.

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 Apr. 15, 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.

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## 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	7.10 dB			
4.2	15.407(a)	26dB Spectrum Bandwidth and 99% Occupied Bandwidth	Complies	-			
4.3	6dB Spectrum Bandwidth and 99% Occupied Bandwidth		Complies	-			
4.4	15.407(a)	Maximum Conducted Output Power	Complies	2.35 dB			
4.5	15.407(a)	Power Spectral Density	Complies	2.58 dB			
4.6	15.407(b)	Radiated Emissions	Complies	2.61 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 -		-			

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

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## 3. GENERAL INFORMATION

## 3.1. Product Details

## IEEE 802.11n/ac

Items	Description		
Product Type	WLAN (1TX,2TX,3TX/1RX,2RX,3RX)		
Radio Type	Intentional Transceiver		
Power Type	From power adapter or PoE		
Modulation	see the below table for IEEE 802.11n/ac		
Data Modulation	For 802.11n: OFDM (BPSK / QPSK / 16QAM / 64QAM)		
	For 802.11ac: OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)		
Data Rate (Mbps)	see the below table for IEEE 802.11n/ac		
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%)	Mode 1 (Ant. 2 Dipole antenna / 5dBi)		
	For Non-Beamforming Mode:		
	Band 1:		
	1TX: 802.11ac MCS0/Nss1 (VHT20): 36.64 MHz ;		
	802.11ac MCS0/Nss1 (VHT40): 48.32 MHz ;		
	802.11ac MC\$0/Nss1 (VHT80): 76.80 MHz		
	Band 4:		
	1TX: 802.11ac MCS0/Nss1 (VHT20): 26.72 MHz;		
	802.11ac MCS0/Nss1 (VHT40): 36.32 MHz ;		
	802.11ac MCS0/Nss1 (VHT80): 76.80 MHz		
	For STBC Mode:		
	Band 1:		
	2TX: 802.11ac MCS0/Nss1 (VHT20): 26.88 MHz;		
	802.11ac MCS0/Nss1 (VHT40): 48.96 MHz ;		
	802.11ac MCS0/Nss1 (VHT80): 76.80 MHz		
	Band 4:		
	2TX: 802.11ac MCS0/Nss1 (VHT20): 20.00 MHz;		
	802.11ac MCS0/Nss1 (VHT40): 36.16 MHz;		
	802.11ac MCS0/Nss1 (VHT80): 101.12 MHz		
	Band 1:		
	3TX: 802.11ac MCS0/Nss1 (VHT20): 22.24 MHz;		
	802.11ac MCS0/Nss1 (VHT40): 36.48 MHz;		
	802.11ac MCS0/Nss1 (VHT80): 75.52 MHz		

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Band 4:
3TX: 802.11ac MCS0/Nss1 (VHT20): 17.84 MHz;
    802.11ac MCS0/Nss1 (VHT40): 36.32 MHz;
    802.11ac MCS0/Nss1 (VHT80): 76.80 MHz
Mode 2 (Ant. 4 Panel antenna / 5.1dBi)
For Non-Beamforming Mode:
Band 1:
1TX: 802.11ac MCS0/Nss1 (VHT20): 24.32 MHz;
    802.11ac MCS0/Nss1 (VHT40): 46.08 MHz;
    802.11ac MCS0/Nss1 (VHT80): 76.16 MHz
Band 4:
1TX: 802.11ac MCS0/Nss1 (VHT20): 23.84 MHz;
    802.11ac MCS0/Nss1 (VHT40): 36.48 MHz;
    802.11ac MCS0/Nss1 (VHT80): 75.84 MHz
For STBC Mode:
Band 1:
2TX: 802.11ac MCS0/Nss1 (VHT20): 25.44 MHz;
    802.11ac MCS0/Nss1 (VHT40): 36.80 MHz;
    802.11ac MCS0/Nss1 (VHT80): 76.16 MHz
Band 4:
2TX: 802.11ac MCS0/Nss1 (VHT20): 24.80 MHz;
    802.11ac MCS0/Nss1 (VHT40): 36.32 MHz;
    802.11ac MCS0/Nss1 (VHT80): 75.84 MHz
Band 1:
3TX: 802.11ac MCS0/Nss1 (VHT20): 18.24 MHz;
    802.11ac MCS0/Nss1 (VHT40): 36.48 MHz;
    802.11ac MCS0/Nss1 (VHT80): 75.52 MHz
Band 4:
3TX: 802.11ac MCS0/Nss1 (VHT20): 18.00 MHz;
    802.11ac MCS0/Nss1 (VHT40): 36.16 MHz;
    802.11ac MCS0/Nss1 (VHT80): 75.84 MHz
```



```
Maximum Conducted Output Power
                                    Mode 1 (Ant. 2 Dipole antenna / 5dBi)
                                    For Non-Beamforming Mode:
                                    Band 1:
                                    1TX: 802.11n MCS0 (HT20): 21.94 dBm;
                                        802.11n MCS0 (HT40): 19.48 dBm;
                                        802.11ac MCS0/Nss1 (VHT20): 21.95 dBm;
                                        802.11ac MCS0/Nss1 (VHT40): 19.52 dBm;
                                        802.11ac MCS0/Nss1 (VHT80): 14.55 dBm
                                    Band 4:
                                    1TX: 802.11n MCS0 (HT20): 21.91 dBm;
                                        802.11n MCS0 (HT40): 16.75 dBm;
                                        802.11ac MCS0/Nss1 (VHT20): 21.96 dBm;
                                        802.11ac MCS0/Nss1 (VHT40): 16.71 dBm;
                                        802.11ac MCS0/Nss1 (VHT80): 15.08 dBm
                                    Band 1:
                                    2TX: 802.11n MCS0 (HT20): 23.70 dBm;
                                        802.11n MCS0 (HT40): 22.01 dBm;
                                        802.11ac MCS0/Nss1 (VHT20): 23.71 dBm;
                                        802.11ac MCS0/Nss1 (VHT40): 22.02 dBm;
                                        802.11ac MCS0/Nss1 (VHT80): 16.49 dBm
                                    Band 4:
                                    2TX: 802.11n MCS0 (HT20): 23.03 dBm;
                                        802.11n MCS0 (HT40): 17.15 dBm;
                                        802.11ac MCS0/Nss1 (VHT20): 23.02 dBm;
                                        802.11ac MCS0/Nss1 (VHT40): 17.14 dBm;
                                        802.11ac MCS0/Nss1 (VHT80): 17.13 dBm
                                    Band 1:
                                    3TX: 802.11n MCS0 (HT20): 22.72 dBm;
                                        802.11n MCS0 (HT40): 21.57 dBm;
                                        802.11ac MCS0/Nss1 (VHT20): 22.78 dBm;
                                        802.11ac MCS0/Nss1 (VHT40): 21.59 dBm;
                                        802.11ac MCS0/Nss1 (VHT80): 15.97 dBm
                                    Band 4:
                                    3TX: 802.11n MCS0 (HT20): 23.42 dBm;
                                        802.11n MCS0 (HT40): 18.53 dBm;
                                        802.11ac MCS0/Nss1 (VHT20): 23.45 dBm;
                                        802.11ac MCS0/Nss1 (VHT40): 18.57 dBm;
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802.11ac MCS0/Nss1 (VHT80): 16.76 dBm
For Beamforming Mode:
Band 1:
2TX: 802.11ac MCS0/Nss1 (VHT20): 22.98 dBm;
    802.11ac MCS0/Nss1 (VHT40): 21.34 dBm;
    802.11ac MCS0/Nss1 (VHT80): 15.78 dBm
Band 4:
2TX: 802.11ac MCS0/Nss1 (VHT20): 22.30 dBm;
    802.11ac MCS0/Nss1 (VHT40): 16.64 dBm;
    802.11ac MCS0/Nss1 (VHT80): 16.10 dBm
Band 1:
3TX: 802.11ac MCS0/Nss1 (VHT20): 22.27 dBm;
    802.11ac MCS0/Nss1 (VHT40): 21.26 dBm;
    802.11ac MCS0/Nss1 (VHT80): 14.60 dBm
Band 4:
3TX: 802.11ac MCS0/Nss1 (VHT20): 21.61 dBm;
    802.11ac MCS0/Nss1 (VHT40): 18.40 dBm;
    802.11ac MCS0/Nss1 (VHT80): 16.33 dBm
For STBC Mode:
Band 1:
2TX: 802.11ac MCS0/Nss1 (VHT20): 23.57 dBm;
    802.11ac MCS0/Nss1 (VHT40): 22.13 dBm;
    802.11ac MCS0/Nss1 (VHT80): 16.40 dBm
Band 4:
2TX: 802.11ac MCS0/Nss1 (VHT20): 23.16 dBm;
    802.11ac MCS0/Nss1 (VHT40): 17.74 dBm;
    802.11ac MCS0/Nss1 (VHT80): 16.58 dBm
Band 1:
3TX: 802.11ac MCS0/Nss1 (VHT20): 24.24 dBm;
    802.11ac MCS0/Nss1 (VHT40): 22.81 dBm;
    802.11ac MCS0/Nss1 (VHT80): 16.20 dBm
Band 4:
3TX: 802.11ac MCS0/Nss1 (VHT20): 23.93 dBm;
    802.11ac MCS0/Nss1 (VHT40): 19.45 dBm;
    802.11ac MCS0/Nss1 (VHT80): 17.45 dBm
```



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Mode 2 (Ant. 4 Panel antenna / 5.1dBi)
For Non-Beamforming Mode:
Band 1:
1TX: 802.11n MCS0 (HT20): 21.96 dBm;
    802.11n MCS0 (HT40): 21.83 dBm;
    802.11ac MCS0/Nss1 (VHT20): 21.96 dBm;
    802.11ac MCS0/Nss1 (VHT40): 21.96 dBm;
    802.11ac MCS0/Nss1 (VHT80): 16.34 dBm
Band 4:
1TX: 802.11n MCS0 (HT20): 21.84 dBm;
    802.11n MCS0 (HT40): 18.24 dBm;
    802.11ac MCS0/Nss1 (VHT20): 21.97 dBm;
    802.11ac MCS0/Nss1 (VHT40): 18.33 dBm;
    802.11ac MCS0/Nss1 (VHT80): 17.05 dBm
Band 1:
2TX: 802.11n MCS0 (HT20): 23.92 dBm;
    802.11n MCS0 (HT40): 21.97 dBm;
    802.11ac MCS0/Nss1 (VHT20): 24.24 dBm;
    802.11ac MCS0/Nss1 (VHT40): 22.26 dBm;
    802.11ac MCS0/Nss1 (VHT80): 17.78 dBm
Band 4:
2TX: 802.11n MCS0 (HT20): 23.52 dBm;
    802.11n MCS0 (HT40): 17.39 dBm;
    802.11ac MCS0/Nss1 (VHT20): 23.69 dBm;
    802.11ac MCS0/Nss1 (VHT40): 17.66 dBm;
    802.11ac MCS0/Nss1 (VHT80): 17.64 dBm
Band 1:
3TX: 802.11n MCS0 (HT20): 23.79 dBm;
    802.11n MCS0 (HT40): 22.31 dBm;
    802.11ac MCS0/Nss1 (VHT20): 24.04 dBm;
    802.11ac MCS0/Nss1 (VHT40): 22.43 dBm;
    802.11ac MCS0/Nss1 (VHT80): 16.76 dBm
Band 4:
3TX: 802.11n MCS0 (HT20): 23.88 dBm;
    802.11n MCS0 (HT40): 20.06 dBm;
    802.11ac MCS0/Nss1 (VHT20): 24.02 dBm;
    802.11ac MCS0/Nss1 (VHT40): 20.31 dBm;
    802.11ac MCS0/Nss1 (VHT80): 17.85 dBm
```

	For Beamforming Mode:			
	Band 1:			
	2TX: 802.11ac MCS0/Nss1 (VHT20): 23.05 dBm;			
	802.11ac MCS0/Nss1 (VHT40): 20.55 dBm ;			
	802.11ac MCS0/Nss1 (VHT80): 14.23 dBm			
	Band 4:			
	2TX: 802.11ac MCS0/Nss1 (VHT20): 21.16 dBm;			
	802.11ac MCS0/Nss1 (VHT40): 17.66 dBm ;			
	802.11ac MCS0/Nss1 (VHT80): 16.89 dBm			
	Band 1:			
	3TX: 802.11ac MCS0/Nss1 (VHT20): 23.76 dBm;			
	802.11ac MCS0/Nss1 (VHT40): 22.43 dBm ;			
	802.11ac MCS0/Nss1 (VHT80): 14.80 dBm			
	Band 4:			
	3TX: 802.11ac MCS0/Nss1 (VHT20): 22.27 dBm;			
	802.11ac MCS0/Nss1 (VHT40): 19.47 dBm ;			
	802.11ac MCS0/Nss1 (VHT80): 17.21 dBm			
	For STBC Mode:			
	Band 1:			
	2TX: 802.11ac MCS0/Nss1 (VHT20): 24.59 dBm;			
	802.11ac MCS0/Nss1 (VHT40): 22.89 dBm ;			
	802.11ac MCS0/Nss1 (VHT80): 17.98 dBm			
	Band 4:			
	2TX: 802.11ac MCS0/Nss1 (VHT20): 24.50 dBm;			
	802.11ac MCS0/Nss1 (VHT40): 19.22 dBm ;			
	802.11ac MCS0/Nss1 (VHT80): 17.26 dBm			
	Band 1:			
	3TX: 802.11ac MCS0/Nss1 (VHT20): 22.86 dBm;			
	802.11ac MCS0/Nss1 (VHT40): 23.94 dBm ;			
	802.11ac MCS0/Nss1 (VHT80): 17.56 dBm			
	Band 4:			
	3TX: 802.11ac MCS0/Nss1 (VHT20): 24.12 dBm;			
	802.11ac MCS0/Nss1 (VHT40): 19.71 dBm ;			
	802.11ac MCS0/Nss1 (VHT80): 18.77 dBm			
Carrier Frequencies	Please refer to section 3.4			
Antenna	Please refer to section 3.3			



## IEEE 802.11a

Items	Description
Product Type	WLAN (1TX,2TX,3TX/1RX,2RX,3RX)
Radio Type	Intentional Transceiver
Power Type	From power adapter or PoE
Modulation	OFDM for IEEE 802.11a
Data Modulation	OFDM (BPSK / QPSK / 16QAM / 64QAM)
Data Rate (Mbps)	OFDM (6/9/12/18/24/36/48/54)
Frequency Range	5150 ~ 5250 MHz / 5725 ~ 5850 MHz
Channel Number	9
Maximum Conducted Output Power	Mode 1 (Ant. 2 Dipole antenna / 5dBi)
	For Non-Beamforming Mode:
	1TX:Band 1: 21.93 dBm ; Band 4: 21.89 dBm
	2TX:Band 1: 23.66 dBm ; Band 4: 23.05 dBm
	3TX:Band 1: 22.75 dBm ; Band 4: 23.45 dBm
	For Beamforming Mode:
	2TX:Band 1: 22.96 dBm ; Band 4: 22.31 dBm
	3TX:Band 1: 22.28 dBm ; Band 4: 21.67 dBm
	Mode 2 (Ant. 4 Panel antenna / 5.1dBi)
	For Non-Beamforming Mode:
	1TX:Band 1: 21.87 dBm ; Band 4: 21.82 dBm
	2TX:Band 1: 23.91 dBm ; Band 4: 23.48 dBm
	3TX:Band 1: 23.78 dBm ; Band 4: 23.87 dBm
	For Beamforming Mode:
	2TX:Band 1: 22.91 dBm ; Band 4: 21.20 dBm
	3TX:Band 1: 23.78 dBm ; Band 4: 22.10 dBm
Carrier Frequencies	Please refer to section 3.4
Antenna	Please refer to section 3.3



Items	Description				
Communication Mode		Frame Based			
Beamforming Function	With beamforming	☐ Without beamforming			

Note: The product has beamforming function for 802.11g/n/ac in  $2400\sim2483.5MHz$  and 802.11a/n/ac in  $5150\sim5250MHz/5725\sim5850MHz$ .

#### 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	٧	Χ	Χ	٧	Х	Х	٧	Χ	Х
IEEE 802.11n	٧	٧	Х	٧	٧	Х	٧	٧	Х
IEEE 802.11ac	٧	٧	٧	٧	٧	٧	٧	٧	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 (VHT20)	1,2,3	MCS 0-9/Nss1-3
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). The 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

Power	Brand	Model	Rating
Adapter	Leader	NU60-H120500-13	INPUT: 100-240V ~ 50/60Hz, 1.4A
Adapter	Loadel	11000 11120000-10	OUTPUT: 12.0V, 5.0A

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#### 3.3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Connector G	Ante Gain		Cal Loss		True (d		
					2.4G	5G	2.4G	5G	2.4G	5G
1	MOTOROLA	ML-2452-APA2-01	Dipole	RP-SMA Male	3.17	4.85	1	1	3.17	4.85
2	MOTOROLA	ML-2452-HPA5-036	Dipole	RP-SMA Male	3	5	1	ı	3	5
3	MOTOROLA	ML-2452-APAG2A1-01	Dipole	RP-SMA Male	2.7	1.7	1	ı	2.7	1.7
4	MOTOROLA	ML-2452-PNA5-01R	Panel	N-Type Male	5.5	6	0.7	0.9	4.8	5.1

Note: Ant. 1~Ant. 4 are all have 6 same antennas for each. The EUT has two types of antenna. Only the highest gain antenna was selected from each different type of antenna to test and record in this report. Antenna 2 and 4 were selected to perform the test and recorded in this report.

#### <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. 1)

Both Chain 1 and Chain 2 support transmit and receive functions, but only one of them will be used at one time.

After evaluating, Chain 2 has been evaluated to be the worst case, so it's selected to record in this test report.

For 1TX (Ant. 4)

Both Chain 1 and Chain 2 support transmit and receive functions, but only one of them will be used at one time.

After evaluating, Chain 1 has been evaluated to be the worst case, so it's selected to record in this test report.

For 2TX

Chain 1 and Chain 2 could transmit/receive simultaneously.

For 3TX

Chain 1, Chain 2 and Chain 3 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

Both Chain 1 and Chain 2 support transmit and receive functions, but only one of them will be used at one time.

After evaluating, Chain 2 has been evaluated to be the worst case, so it's selected to record in this test report.

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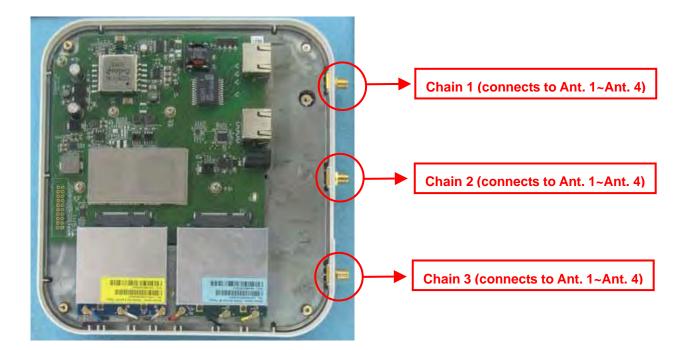


For 2TX

Chain 1 and Chain 2 could transmit/receive simultaneously.

For 3TX

Chain 1, Chain 2 and Chain 3 could transmit/receive simultaneously.



## 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
	36	5180 MHz	44	5220 MHz
5150~5250 MHz	38	5190 MHz	46	5230 MHz
Band 1	40	5200 MHz	48	5240 MHz
	42	5210 MHz	-	-
	149	5745 MHz	157	5785 MHz
5725~5850 MHz	151	5755 MHz	159	5795 MHz
Band 4	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	Мо	de	Data Rate	Channel	Chain			
AC Power Conducted Emission	Normal Link		-	-	-			
Max. Conducted Output Power	Non-beamforming Mode							
	11n HT20	Band 1&4	MCS0	36/40/48/149/	2			
				157/165	1+2			
					1+2+3			
	11n HT40	Band 1&4	MCS0	38/46/151/159	2			
					1+2			
					1+2+3			
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/	2			
				157/165	1+2			
					1+2+3			
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	2			
					1+2			
					1+2+3			
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	2			
					1+2			
					1+2+3			
	11a/BPSK	Band 1&4	6Mbps	36/40/48/149/	2			
				157/165	1+2			
					1+2+3			
	beamforming	g Mode						
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/	1+2			
				157/165	1+2+3			
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	1+2			
					1+2+3			
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	1+2			
					1+2+3			
	11a/BPSK	Band 1&4	6Mbps	36/40/48/149/	1+2			
				157/165	1+2+3			

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	STBC Mode							
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/	1+2			
				157/165	1+2+3			
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	1+2			
					1+2+3			
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	1+2			
					1+2+3			
Power Spectral Density	Non-beamfor	ming Mode						
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/	2			
				157/165	1+2			
					1+2+3			
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	2			
					1+2			
					1+2+3			
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	2			
					1+2			
					1+2+3			
	beamforming Mode							
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/	1+2			
				157/165	1+2+3			
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	1+2			
					1+2+3			
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	1+2			
					1+2+3			
	STBC Mode			<u></u>				
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/	1+2			
				157/165	1+2+3			
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	1+2			
					1+2+3			
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	1+2			
					1+2+3			
26dB&6dB Spectrum Bandwidth	Non-beamfor	ming Mode	_	T				
99% Occupied Bandwidth	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/	2			
Measurement				157/165				
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	2			
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	2			
	STBC Mode							

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	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/	1+2			
				157/165	1+2+3			
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	1+2			
					1+2+3			
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	1+2			
					1+2+3			
Radiated Emission Below 1GHz	Normal Link	•	-	-	-			
Radiated Emission Above 1GHz	Non-beamfor	ming Mode		•				
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/	2			
				157/165	1+2			
					1+2+3			
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	2			
					1+2			
					1+2+3			
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	2			
					1+2			
					1+2+3			
	beamforming Mode							
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/	1+2			
				157/165	1+2+3			
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	1+2			
					1+2+3			
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	1+2			
					1+2+3			
	STBC Mode	•	•	•	•			
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/	1+2			
				157/165	1+2+3			
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	1+2			
					1+2+3			
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	1+2			
					1+2+3			
Band Edge Emission	Non-beamfor	ming Mode						
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/	2			
				157/165	1+2			
					1+2+3			
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	2			
					1+2			
					1+2+3			

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	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	2
	TIGC VIIIO	balla 184	141000/14351	42/100	
					1+2
					1+2+3
	beamforming	g Mode			
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/	1+2
				157/165	1+2+3
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	1+2
					1+2+3
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	1+2
					1+2+3
	STBC Mode				
	11ac VHT20	Band 1&4	MCS0/Nss1	36/40/48/149/	1+2
				157/165	1+2+3
	11ac VHT40	Band 1&4	MCS0/Nss1	38/46/151/159	1+2
					1+2+3
	11ac VHT80	Band 1&4	MCS0/Nss1	42/155	1+2
					1+2+3
Frequency Stability	Un-modulatio	on .	-	40	1+2
					1+2+3

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

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The following test modes were performed for all tests:

#### For Conducted Emission test:

Test Mode 1: Normal Link - EUT + Ant. 4 + Adapter

Test Mode 2: Normal Link - EUT + Ant. 4 + PoE

Mode 1 performed as worst case, it was recorded in this report.

#### For Radiated Emission below 1GHz test:

Test Mode 1: Normal Link - EUT standing + Ant. 4 + Adapter

Test Mode 2: Normal Link - EUT laying + Ant. 4 + Adapter

Mode 1 has been evaluated to be the worst case, thus measurement will follow this same test mode for Mode 3.

Test Mode 3: Normal Link - EUT standing + Ant. 4 + PoE

Mode 1 performed as worst case, it was recorded in this report.

#### For Radiated Emission above 1GHz test:

There are two test modes, one is EUT standing, and the other is EUT laying. After evaluating, EUT standing has been evaluated to be the worst case. Consequently, measurements for Radiated Emission above 1GHz test will follow this same test mode.

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

Test Mode 2: CTX - EUT standing + Ant. 4

#### For other tests:

Test Mode 1: CTX - Ant. 2
Test Mode 2: CTX - Ant. 4

#### 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 Appendix B) and Radiated Emission Co-location (please refer to Appendix C) 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:	ddress: No.8, Lane 724, Bo-ai St., Jhubei City, Hsinchu County 302, Taiwan, R.O.C.									
TEL:	886	886-3-656-9065								
FAX:	886	886-3-656-9085								
Test Site N	О.	Site Category	Location	FCC Reg. No.	IC File No.	VCCI Reg. No				
03CH01-C	СВ	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).

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## 3.7. Table for Supporting Units

For Test Site No: CO01-CB

Support Unit Brand		Model	FCC ID
Notebook*3	DELL	E6430	DoC

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

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

Support Unit Brand		Model	FCC ID
Notebook	DELL	M1330	E2K4965AGNM

For Test Site No: TH01-CB

Support Unit	Brand	Model	FCC ID
Notebook	DELL	E6430	DoC

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## 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 Non-Beamforming Mode>

### Mode 1 (Ant. 2 Dipole antenna / 5dBi / 1TX)

#### Power Parameters of IEEE 802.11n MCS0 HT20

Test Software Version	Mtool_2.0.1.0							
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz		
MCS0 HT20	84	97	99	72	95	74		

#### Power Parameters of IEEE 802.11n MCS0 HT40

Test Software Version	Mtool_2.0.1.0						
Frequency	5190 MHz	5230 MHz	5755 MHz	5795 MHz			
MCS0 HT40	73	89	65	74			

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT20

Test Software Version	Mtool_2.0.1.0					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
MCS0/Nss1 VHT20	84	97	99	72	95	74

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT40

Test Software Version	Mtool_2.0.1.0						
Frequency	5190 MHz	5230 MHz	5755 MHz	5795 MHz			
MCS0/Nss1 VHT40	73	89	65	74			

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT80

Test Software Version	Mtool_2.0.1.0				
Frequency	5210 MHz	5775 MHz			
MCS0/Nss1 VHT80	70	69			

#### Power Parameters of IEEE 802.11a

Test Software Version	Mtool_2.0.1.0					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	84	97	99	72	95	74

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### Mode 1 (Ant. 2 Dipole antenna / 5dBi / 2TX)

### Power Parameters of IEEE 802.11n MCS0 HT20

Test Software Version	DOS					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
MCS0 HT20	81	95	95	66	90	66

### Power Parameters of IEEE 802.11n MCS0 HT40

Test Software Version	DOS					
Frequency	5190 MHz	5230 MHz	5755 MHz	5795 MHz		
MCS0 HT40	67	90	62	64		

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT20

Test Software Version	DOS					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
MCS0/Nss1 VHT20	81	95	95	66	90	66

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT40

Test Software Version	DOS						
Frequency	5190 MHz	5230 MHz	5755 MHz	5795 MHz			
MCS0/Nss1 VHT40	67	90	62	64			

### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT80

Test Software Version	DOS				
Frequency	5210 MHz	5775 MHz			
MCS0/Nss1 VHT80	66	65			

#### Power Parameters of IEEE 802.11a

Test Software Version	DOS					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	81	95	95	66	90	66

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### Mode 1 (Ant. 2 Dipole antenna / 5dBi / 3TX)

### Power Parameters of IEEE 802.11n MCS0 HT20

Test Software Version	MTOOL_2.0.1.0					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
MCS0 HT20	73	83	83	63	84	65

### Power Parameters of IEEE 802.11n MCS0 HT40

Test Software Version	MTOOL_2.0.1.0						
Frequency	5190 MHz	5230 MHz	5755 MHz	5795 MHz			
MCS0 HT40	60	79	56	63			

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT20

Test Software Version	MTOOL_2.0.1.0					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
MCS0/Nss1 VHT20	73	83	83	63	84	65

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT40

Test Software Version	MTOOL_2.0.1.0						
Frequency	5190 MHz	5230 MHz	5755 MHz	5795 MHz			
MCS0/Nss1 VHT40	60	79	56	63			

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT80

Test Software Version	MTOOL_2.0.1.0				
Frequency	5210 MHz	5775 MHz			
MCS0/Nss1 VHT80	56	57			

#### Power Parameters of IEEE 802.11a

Test Software Version	MTOOL_2.0.1.0					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	73	83	83	63	84	65

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### Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 1TX)

### Power Parameters of IEEE 802.11n MCS0 HT20

Test Software Version	DOS					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
MCS0 HT20	78	92	93	72	93	74

### Power Parameters of IEEE 802.11n MCS0 HT40

Test Software Version	DOS						
Frequency	5190 MHz	5230 MHz	5755 MHz	5795 MHz			
MCS0 HT40	74	94	71	78			

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT20

Test Software Version	DOS					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
MCS0/Nss1 VHT20	78	92	93	71	93	74

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT40

Test Software Version	DOS						
Frequency	5190 MHz	5230 MHz	5755 MHz	5795 MHz			
MCS0/Nss1 VHT40	72	93	69	78			

### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT80

Test Software Version	DOS				
Frequency	5210 MHz	5775 MHz			
MCS0/Nss1 VHT80	71	73			

#### Power Parameters of IEEE 802.11a

Test Software Version	DOS					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	78	92	93	71	93	74

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### Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 2TX)

### Power Parameters of IEEE 802.11n MCS0 HT20

Test Software Version	DOS					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
MCS0 HT20	73	89	93	65	91	67

### Power Parameters of IEEE 802.11n MCS0 HT40

Test Software Version	DOS					
Frequency	5190 MHz 5230 MHz 5755 MHz 5795					
MCS0 HT40	67	85	62	64		

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT20

Test Software Version	DOS					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
MCS0/Nss1 VHT20	73	89	93	64	90	66

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT40

Test Software Version	DOS						
Frequency	5190 MHz	5230 MHz	5755 MHz	5795 MHz			
MCS0/Nss1 VHT40	66	84	61	63			

### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT80

Test Software Version	DOS				
Frequency	5210 MHz	5775 MHz			
MCS0/Nss1 VHT80	65	63			

#### Power Parameters of IEEE 802.11a

Test Software Version	DOS					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	74	89	93	65	91	67

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### Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 3TX)

### Power Parameters of IEEE 802.11n MCS0 HT20

Test Software Version	MTOOL_2.0.1.0					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
MCS0 HT20	74	81	85	61	85	65

### Power Parameters of IEEE 802.11n MCS0 HT40

Test Software Version	MTOOL_2.0.1.0					
Frequency	5190 MHz	5230 MHz	5755 MHz	5795 MHz		
MCS0 HT40	60	79	62	68		

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT20

Test Software Version	MTOOL_2.0.1.0					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
MCS0/Nss1 VHT20	74	81	84	60	84	64

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT40

Test Software Version	MTOOL_2.0.1.0					
Frequency	5190 MHz	5230 MHz	5755 MHz	5795 MHz		
MCS0/Nss1 VHT40	58	77	60	66		

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT80

Test Software Version	MTOOL_2.0.1.0				
Frequency	5210 MHz	5775 MHz			
MCS0/Nss1 VHT80	54	56			

#### Power Parameters of IEEE 802.11a

Test Software Version	MTOOL_2.0.1.0					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	74	82	85	62	85	65

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### <For Beamforming Mode>

## Mode 1 (Ant. 2 Dipole antenna / 5dBi / 2TX)

## Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT20

Test Software Version	DOS					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
MCS0/Nss1 VHT20	78	92	92	66	87	66

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT40

Test Software Version	DOS						
Frequency	5190 MHz	5230 MHz	5755 MHz	5795 MHz			
MCS0/Nss1 VHT40	64	87	60	62			

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT80

Test Software Version	DOS					
Frequency	5210 MHz	5775 MHz				
MCS0/Nss1 VHT80	63	60				

### Power Parameters of IEEE 802.11a

Test Software Version	DOS						
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz	
802.11a	78	92	92	66	87	66	

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## Mode 1 (Ant. 2 Dipole antenna / 5dBi / 3TX)

### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT20

Test Software Version	MTOOL_2.0.1.0					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
MCS0/Nss1 VHT20	76	81	82	63	76	64

### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT40

Test Software Version	MTOOL_2.0.1.0						
Frequency	5190 MHz	5795 MHz					
MCS0/Nss1 VHT40	59	78	57	62			

### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT80

Test Software Version	MTOOL_2.0.1.0				
Frequency	5210 MHz	5775 MHz			
MCS0/Nss1 VHT80	50	55			

#### Power Parameters of IEEE 802.11a

Test Software Version	MTOOL_2.0.1.0						
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz	
802.11a	76	81	82	63	76	64	

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## Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 2TX)

### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT20

Test Software Version	DOS						
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz	
MCS0/Nss1 VHT20	69	87	84	62	80	63	

### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT40

Test Software Version	DOS						
Frequency	5190 MHz 5230 MHz 5755 MHz 5795						
MCS0/Nss1 VHT40	57	77	58	63			

### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT80

Test Software Version	DOS				
Frequency	5210 MHz	5775 MHz			
MCS0/Nss1 VHT80	50	60			

#### Power Parameters of IEEE 802.11a

Test Software Version	DOS					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	69	87	84	62	81	65

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## Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 3TX)

### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT20

Test Software Version	MTOOL_2.0.1.0						
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz	
MCS0/Nss1 VHT20	69	81	83	60	76	63	

### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT40

Test Software Version	MTOOL_2.0.1.0				
Frequency	5190 MHz	5230 MHz	5755 MHz	5795 MHz	
MCS0/Nss1 VHT40	57	77	57	63	

### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT80

Test Software Version	MTOOL_2.0.1.0		
Frequency	5210 MHz	5775 MHz	
MCS0/Nss1 VHT80	46	54	

#### Power Parameters of IEEE 802.11a

Test Software Version	MTOOL_2.0.1.0					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
802.11a	70	82	85	61	77	65

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#### <For STBC Mode>

### Mode 1 (Ant. 2 Dipole antenna / 5dBi / 2TX)

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT20

Test Software Version	DOS					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
MCS0/Nss1 VHT20	82	94	92	66	90	68

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT40

Test Software Version	DOS				
Frequency	5190 MHz	5230 MHz	5755 MHz	5795 MHz	
MCS0/Nss1 VHT40	71	90	62	66	

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT80

Test Software Version	DOS			
Frequency	5210 MHz	5775 MHz		
MCS0/Nss1 VHT80	65	62		

### Mode 1 (Ant. 2 Dipole antenna / 5dBi / 3TX)

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT20

Test Software Version	DOS					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
MCS0/Nss1 VHT20	78	91	93	65	86	68

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT40

Test Software Version	DOS			
Frequency	5190 MHz	5230 MHz	5755 MHz	5795 MHz
MCS0/Nss1 VHT40	60	84	61	66

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT80

Test Software Version	DOS			
Frequency	5210 MHz	5775 MHz		
MCS0/Nss1 VHT80	57	59		

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### Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 2TX)

### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT20

Test Software Version	DOS					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
MCS0/Nss1 VHT20	76	91	94	66	94	72

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT40

Test Software Version	DOS			
Frequency	5190 MHz	5230 MHz	5755 MHz	5795 MHz
MCS0/Nss1 VHT40	69	87	69	70

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT80

Test Software Version	DOS			
Frequency	5210 MHz	5775 MHz		
MCS0/Nss1 VHT80	66	62		

## Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 3TX)

### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT20

Test Software Version	DOS					
Frequency	5180 MHz	5200 MHz	5240 MHz	5745 MHz	5785 MHz	5825 MHz
MCS0/Nss1 VHT20	72	80	80	60	84	68

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT40

Test Software Version	DOS					
Frequency	5190 MHz	5230 MHz	5755 MHz	5795 MHz		
MCS0/Nss1 VHT40	64	84	62	64		

#### Power Parameters of IEEE 802.11ac MCS0/Nss1 VHT80

Test Software Version	DOS			
Frequency	5210 MHz	5775 MHz		
MCS0/Nss1 VHT80	58	60		

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## 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.

The measured result was added array gain 10\*log(2)=3.01dBi as worse case in beamforming mode.

The measured result was added array gain 10\*log(3)=4.77dBi as worse case in beamforming mode.

For Radiated Mode:

The EUT was programmed to be in continuously transmitting mode.

The measured result was added array gain 10\*log(2)=3.01dBi as worse case in beamforming mode.

The measured result was added array gain 10\*log(3)=4.77dBi as worse case in beamforming mode.

#### For STBC mode:

For Conducted Mode:

The EUT was programmed to be in continuously transmitting mode.

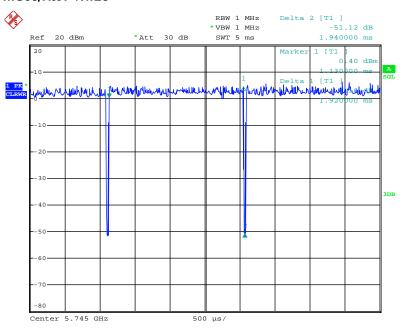
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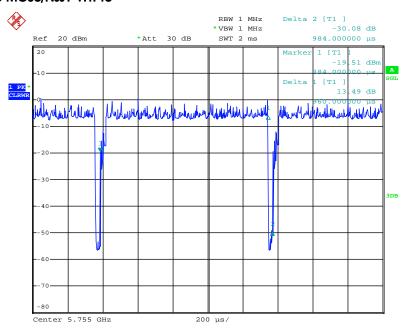
## 3.10. Duty Cycle

### IEEE 802.11ac MCS0/Nss1 VHT20



Date: 3.JUN.2014 14:47:47

#### IEEE 802.11ac MCS0/Nss1 VHT40



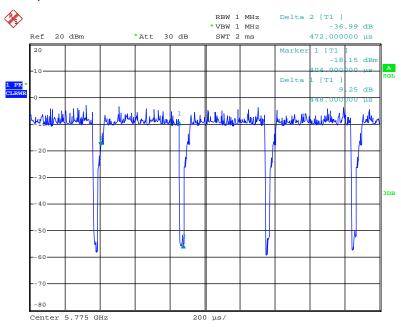
Date: 3.JUN.2014 14:48:43

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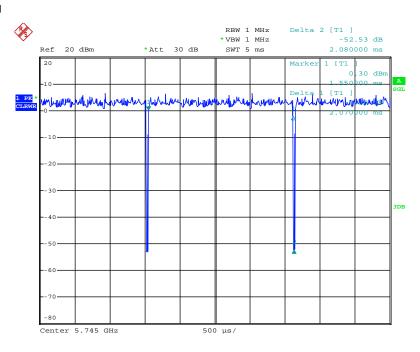


#### IEEE 802.11ac MCS0/Nss1 VHT80



Date: 3.JUN.2014 14:50:14

#### IEEE 802.11a



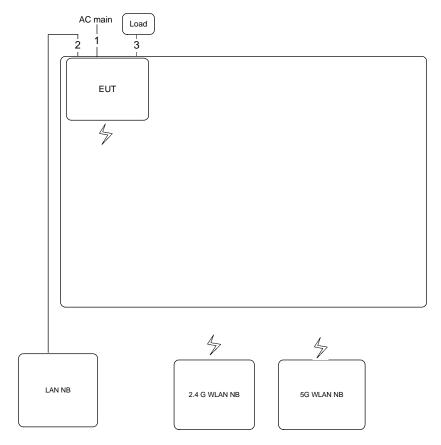
Date: 3.JUN.2014 14:46:54



## 3.11. Test Configurations

## 3.11.1. AC Power Line Conduction Emissions Test Configuration

Test Mode: Mode 1



Item	Connection	Shield	Length(m)	Remark
1	AC power cable	No	3.3m	-
2	RJ-45 cable	No	10m	-
3	Console cable	No	1.5m	Load

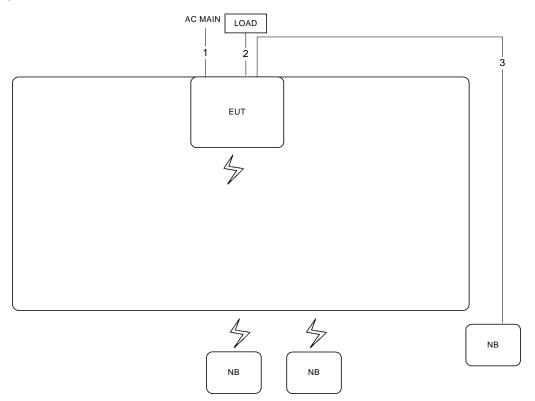
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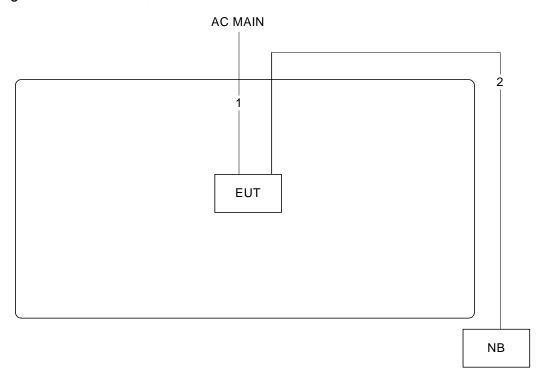
## 3.11.2. Radiation Emissions Test Configuration

Test Configuration:  $30 MHz \sim 1 GHz$  / Test Mode: Mode 1



Item	Connection	Shield	Length(m)	Remark
1	AC power cable	No	3.3m	-
2	Console cable	No	1.5m	Load
3	RJ-45 cable	No	10m	-

Test Configuration: above 1GHz / Test Mode: Mode 1  $\sim$  Mode 2



Item	Connection	Shield	Length(m)
1	AC power cable	No	3.3m
2	RJ-45 cable	No	10m

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#### 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.

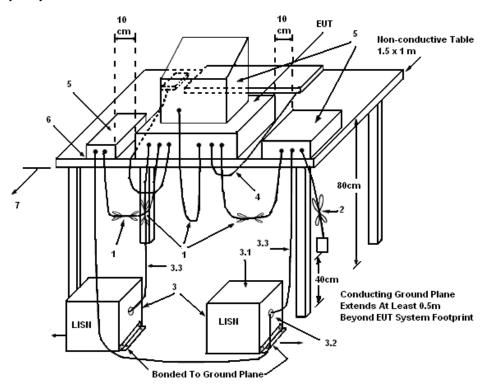
Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

#### 4.1.3. Test Procedures

- 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.

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#### 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  $\Omega$ . 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.

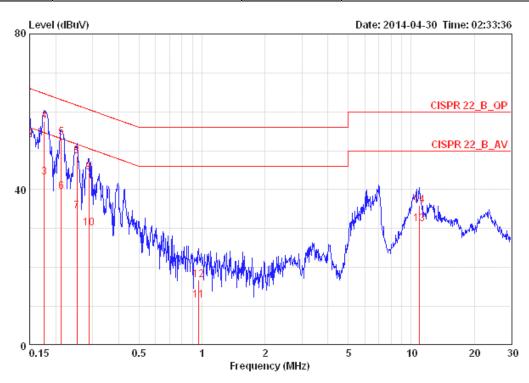
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#### 4.1.7. Results of AC Power Line Conducted Emissions Measurement

Temperature	24°C	Humidity	55%
Test Engineer	Parody Lin	Phase	Line
Configuration	Normal Link	Test Mode	Mode 1



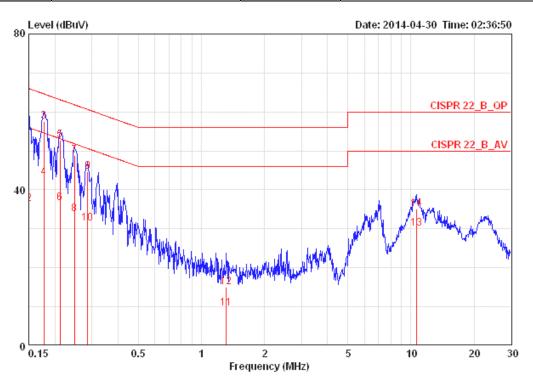
			over	LIMIT	TIZM	Kead	савте		
	Freq	Level	Limit	Line	Factor	Level	Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dB	dBuV	dB		
1	0.15000	36.79	-19.21	56.00	0.15	36.48	0.16	LINE	AVERAGE
2	0.15000	52.78	-13.22	66.00	0.15	52.47	0.16	LINE	QP
3	0.17584	43.07	-11.61	54.68	0.15	42.76	0.16	LINE	AVERAGE
4	0.17584	57.47	-7.21	64.68	0.15	57.16	0.16	LINE	QP
5	0.21279	53.36	-9.74	63.10	0.15	53.04	0.17	LINE	QP
6	0.21279	39.49	-13.61	53.10	0.15	39.17	0.17	LINE	AVERAGE
7	0.25211	34.47	-17.22	51.69	0.15	34.15	0.17	LINE	AVERAGE
8	0.25211	48.54	-13.15	61.69	0.15	48.22	0.17	LINE	QP
9	0.28782	44.36	-16.22	60.59	0.15	44.04	0.17	LINE	QP
10	0.28782	30.06	-20.52	50.59	0.15	29.74	0.17	LINE	AVERAGE
11	0.96328	11.45	-34.55	46.00	0.16	11.09	0.20	LINE	AVERAGE
12	0.96328	16.69	-39.31	56.00	0.16	16.33	0.20	LINE	QP
13	10.963	31.13	-18.87	50.00	0.39	30.35	0.39	LINE	AVERAGE
14	10.963	36.04	-23.96	60.00	0.39	35.26	0.39	LINE	QP

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Temperature	24°C	Humidity	55%
Test Engineer	Parody Lin	Phase	Neutral
Configuration	Normal Link	Test Mode	Mode 1



			0 ver	Limit	LISN	Read	Cable		
	Freq	Level	Limit	Line	Factor	Level	Loss	Pol/Phase	Remark
	MHz	dBuV	dB	dBuV	dB	dBuV	dB		
1	0.15000	52.72	-13.28	66.00	0.07	52.49	0.16	NEUTRAL	QP
2	0.15000	36.33	-19.67	56.00	0.07	36.10	0.16	NEUTRAL	AVERAGE
3	0.17678	57.53	-7.10	64.64	0.07	57.30	0.16	NEUTRAL	QP
4	0.17678	43.24	-11.39	54.64	0.07	43.01	0.16	NEUTRAL	AVERAGE
5	0.21167	52.65	-10.49	63.14	0.07	52.41	0.17	NEUTRAL	QP
6	0.21167	36.55	-16.59	53.14	0.07	36.31	0.17	NEUTRAL	AVERAGE
7	0.24814	48.90	-12.92	61.82	0.07	48.66	0.17	NEUTRAL	QP
8	0.24814	33.86	-17.96	51.82	0.07	33.62	0.17	NEUTRAL	AVERAGE
9	0.28630	44.58	-16.05	60.63	0.07	44.34	0.17	NEUTRAL	QP
10	0.28630	31.33	-19.30	50.63	0.07	31.09	0.17	NEUTRAL	AVERAGE
11	1.317	9.54	-36.46	46.00	0.09	9.23	0.22	NEUTRAL	AVERAGE
12	1.317	14.97	-41.03	56.00	0.09	14.66	0.22	NEUTRAL	QP
13	10.676	30.09	-19.91	50.00	0.28	29.42	0.39	NEUTRAL	AVERAGE
14	10.676	35.15	-24.85	60.00	0.28	34.48	0.39	NEUTRAL	QP

Note:

Level = Read Level + LISN Factor + Cable Loss.



### 4.2. 26dB Bandwidth and 99% Occupied Bandwidth Measurement

#### 4.2.1. Limit

No restriction limits.

#### 4.2.2. Measuring Instruments and Setting

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

26dB Bandwidth				
Spectrum Parameters	Setting			
Attenuation	Auto			
Span Frequency	> 26dB Bandwidth			
RBW	Approximately 1% of the emission bandwidth			
VBW	VBW > RBW			
Detector	Peak			
Trace	Max Hold			
Sweep Time	Auto			
99% Occupio	ed 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.
- 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.

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

### <For Non-Beamforming Mode>

Temperature	22°C	Humidity	55%		
Test Engineer	Serway Li	Configurations	IEEE 802.11ac		
Test Mode	Mode 1 (Ant. 2 Dipole antenna / 5dBi / 1TX)				

### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
36	5180 MHz	31.36	18.56
40	5200 MHz	48.00	32.00
48	5240 MHz	50.72	36.64

### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
38	5190 MHz	39.04	36.48
46	5230 MHz	82.56	48.32

### Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
42	5210 MHz	83.20	76.80

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Temperature	22°C	Humidity	55%
Test Engineer	Wen Chao	Configurations	IEEE 802.11ac
Test Mode	Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 1TX)		

### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
36	5180 MHz	20.80	18.24
40	5200 MHz	40.80	20.00
48	5240 MHz	43.20	24.32

## Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
38	5190 MHz	39.68	36.48
46	5230 MHz	84.16	46.08

### Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
42	5210 MHz	82.56	76.16

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#### <For STBC Mode>

Temperature	22°C	Humidity	55%
Test Engineer	Serway Li	Configurations	IEEE 802.11ac
Test Mode	Mode 1 (Ant. 2 Dipole antenna / 5dBi / 2TX)		

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
36	5180 MHz	23.68	18.08
40	5200 MHz	42.40	26.88
48	5240 MHz	40.16	25.44

## Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
38	5190 MHz	38.72	36.48
46	5230 MHz	80.00	48.96

### Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
42	5210 MHz	81.92	76.80

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Temperature	22°C	Humidity	55%
Test Engineer	Serway Li	Configurations	IEEE 802.11ac
Test Mode	Mode 1 (Ant. 2 Dipole antenna / 5dBi / 3TX)		

### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
36	5180 MHz	20.80	18.08
40	5200 MHz	38.72	19.52
48	5240 MHz	39.04	22.24

## Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
38	5190 MHz	39.04	36.48
46	5230 MHz	72.64	36.48

## Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
42	5210 MHz	81.92	75.52

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Temperature	22°C	Humidity	55%
Test Engineer	Wen Chao	Configurations	IEEE 802.11ac
Test Mode	Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 2TX)		

### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
36	5180 MHz	20.48	17.92
40	5200 MHz	35.52	19.52
48	5240 MHz	41.28	25.44

## Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
38	5190 MHz	39.04	36.48
46	5230 MHz	71.68	36.80

### Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
42	5210 MHz	81.92	76.16

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Temperature	22°C	Humidity	55%
Test Engineer	Wen Chao	Configurations	IEEE 802.11ac
Test Mode	Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 3TX)		

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
36	5180 MHz	20.48	17.92
40	5200 MHz	22.72	18.08
48	5240 MHz	23.04	18.24

## Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
38	5190 MHz	39.04	36.48
46	5230 MHz	66.88	36.48

### Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	26dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
42	5210 MHz	81.28	75.52

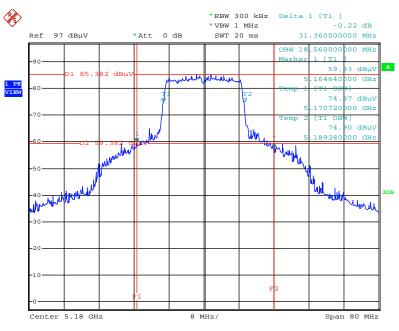
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### <For Non-Beamforming Mode>

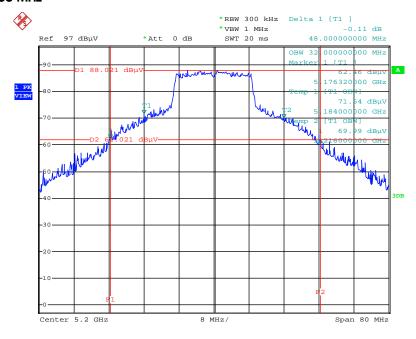
#### Mode 1 (Ant. 2 Dipole antenna / 5dBi / 1TX)

26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5180 MHz



Date: 17.JUN.2014 02:23:36

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5200 MHz

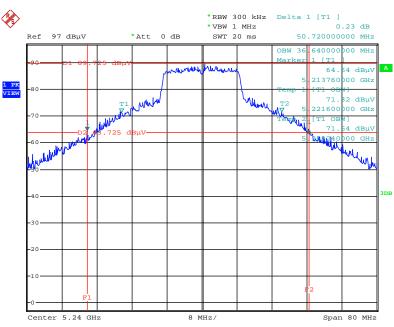


Date: 17.JUN.2014 02:24:52

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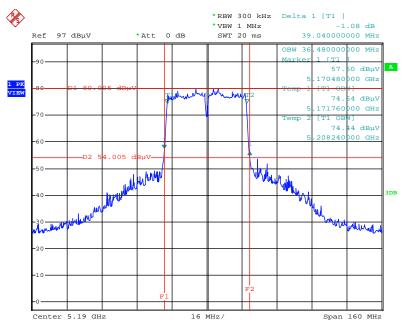


# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5240 MHz



Date: 17.JUN.2014 02:26:22

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2/5190 MHz

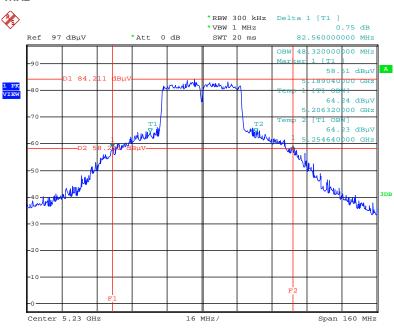


Date: 17.JUN.2014 02:34:46

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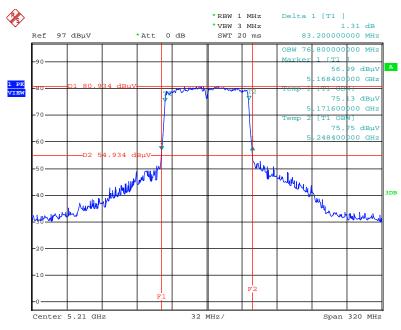


# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2 / 5230 MHz



Date: 17.JUN.2014 02:36:29

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2/5210 MHz

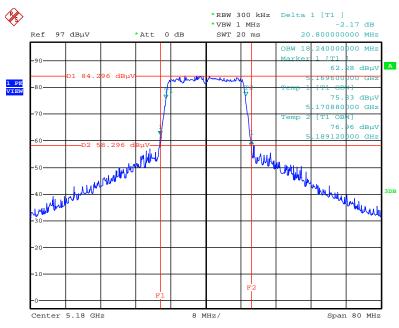


Date: 17.JUN.2014 02:42:37

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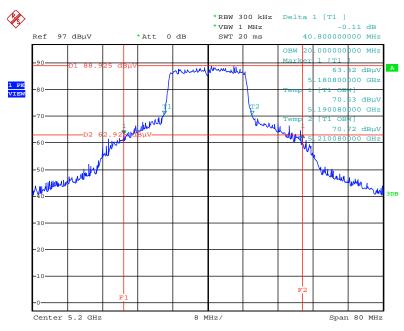
### Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 1TX)

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2/5180 MHz



Date: 18.JUN.2014 22:01:00

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5200 MHz

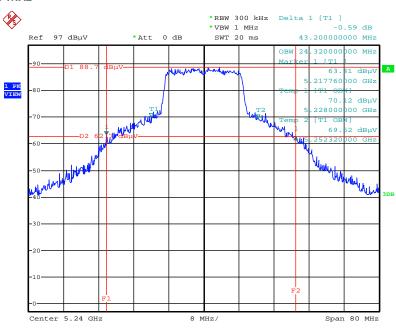


Date: 18.JUN.2014 22:01:33

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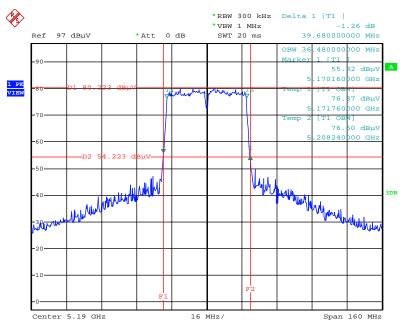


# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5240 MHz



Date: 18.JUN.2014 21:59:54

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2/5190 MHz

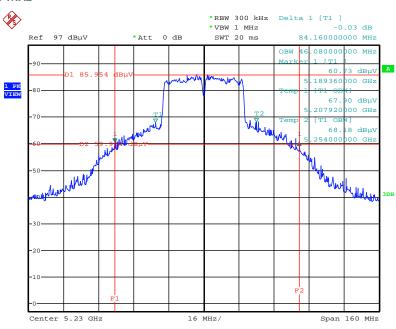


Date: 18.JUN.2014 22:02:07

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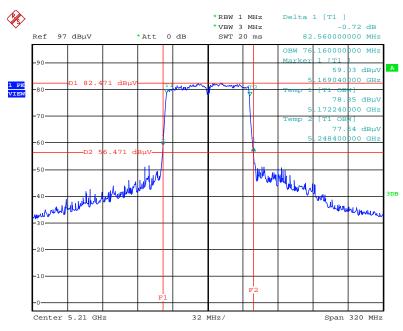


# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2 / 5230 MHz



Date: 18.JUN.2014 22:02:37

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2/5210 MHz



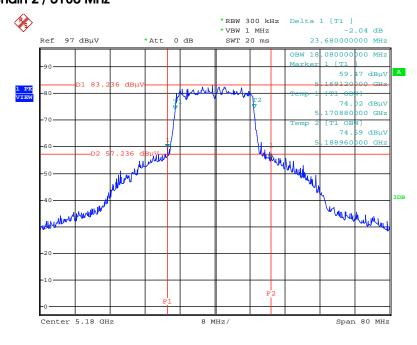
Date: 18.JUN.2014 22:03:18

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#### <For STBC Mode>

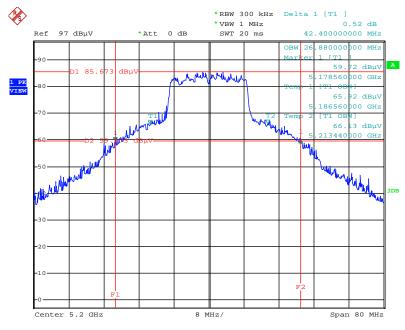
#### Mode 1 (Ant. 2 Dipole antenna / 5dBi / 2TX)

## 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5180 MHz



Date: 17.JUN.2014 02:52:36

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5200 MHz



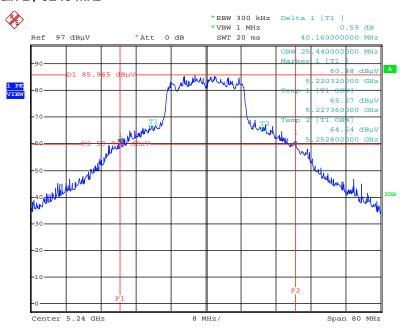
Date: 17.JUN.2014 02:54:10

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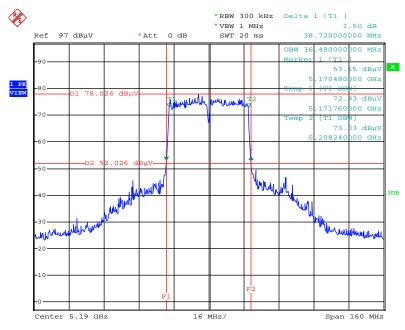


# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5240 MHz



Date: 17.JUN.2014 02:55:22

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5190 MHz

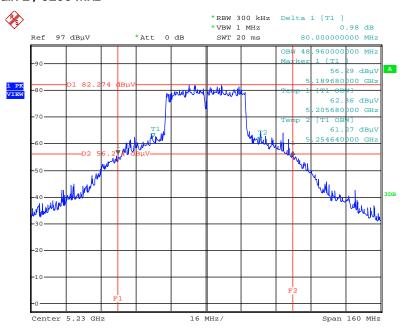


Date: 17.JUN.2014 03:02:23

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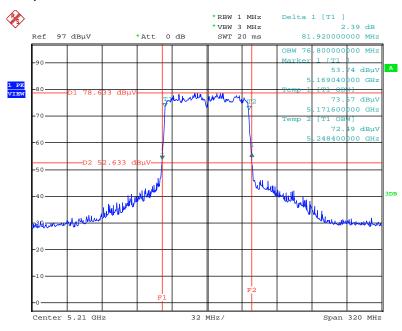


# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5230 MHz



Date: 17.JUN.2014 03:03:50

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5210 MHz

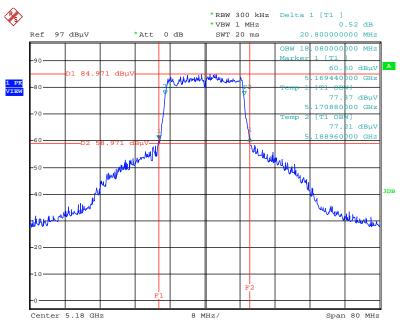


Date: 17.JUN.2014 03:10:05

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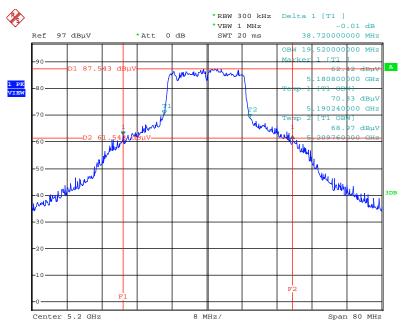
#### Mode 1 (Ant. 2 Dipole antenna / 5dBi / 3TX)

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3 / 5180 MHz



Date: 17.JUN.2014 03:16:46

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3 / 5200 MHz

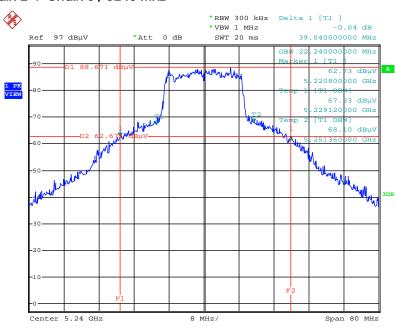


Date: 17.JUN.2014 03:18:55

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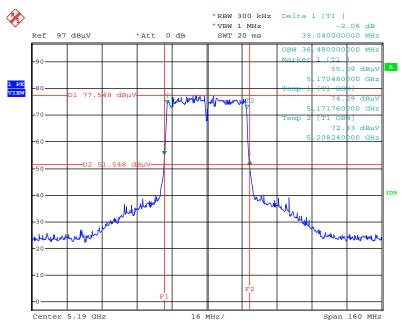


# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3 / 5240 MHz



Date: 17.JUN.2014 03:20:27

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3 / 5190 MHz

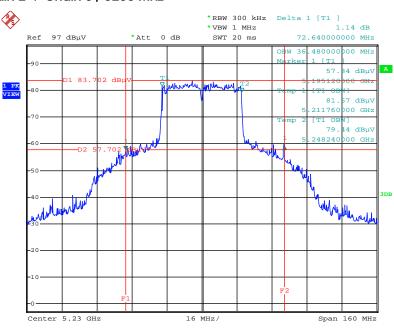


Date: 17.JUN.2014 03:27:12

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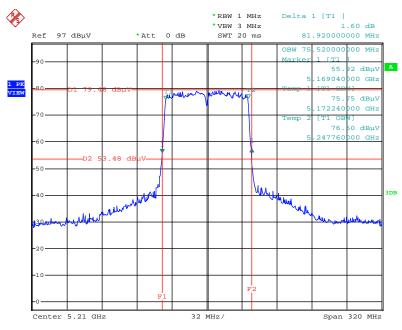


# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3 / 5230 MHz



Date: 17.JUN.2014 03:28:53

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3 / 5210 MHz

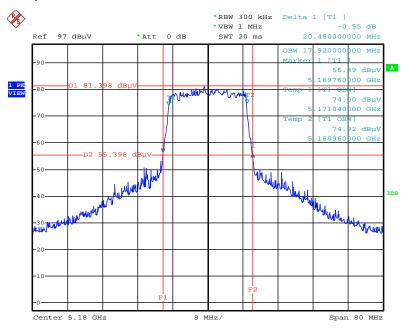


Date: 17.JUN.2014 03:33:49

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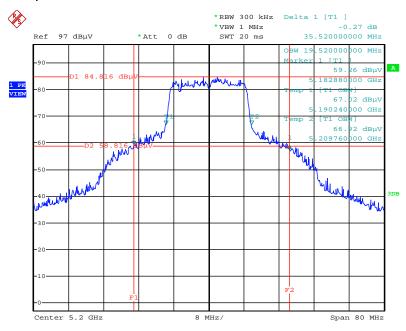
### Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 2TX)

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5180 MHz



Date: 18.JUN.2014 21:51:13

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5200 MHz

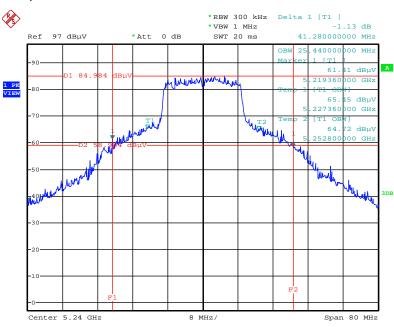


Date: 18.JUN.2014 21:52:19

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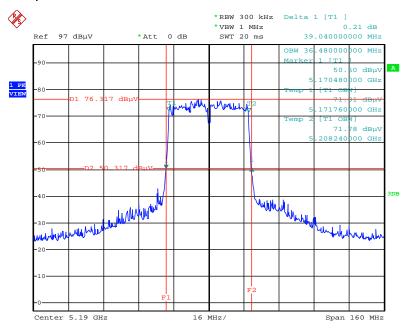


# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5240 MHz



Date: 18.JUN.2014 21:52:54

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5190 MHz

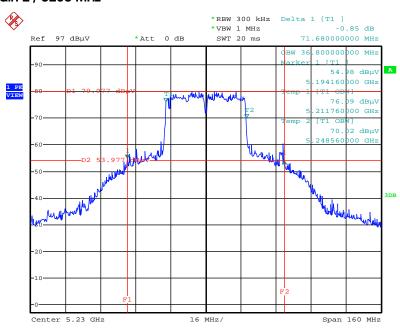


Date: 18.JUN.2014 21:38:51

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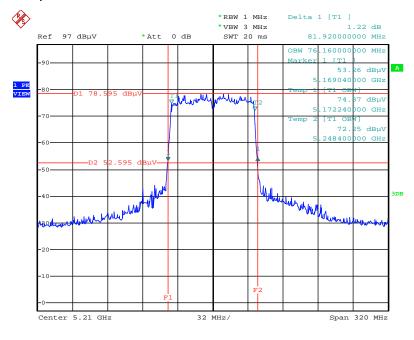


# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5230 MHz



Date: 18.JUN.2014 21:49:47

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5210 MHz

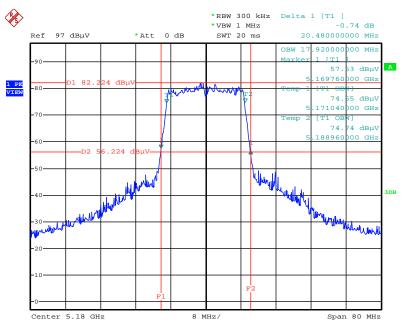


Date: 18.JUN.2014 21:38:01

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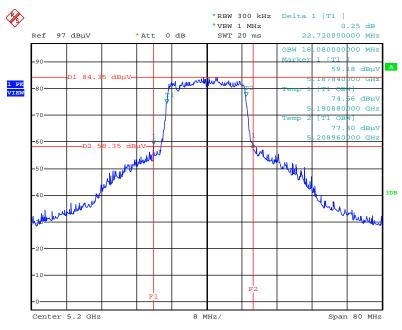
#### Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 3TX)

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3 / 5180 MHz



Date: 18.JUN.2014 21:25:39

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3 / 5200 MHz

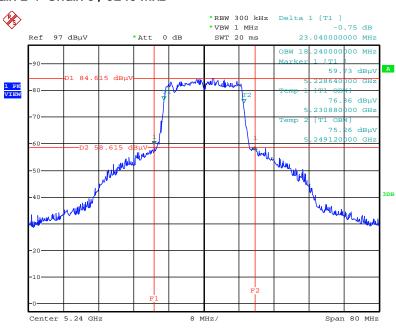


Date: 18.JUN.2014 21:26:14

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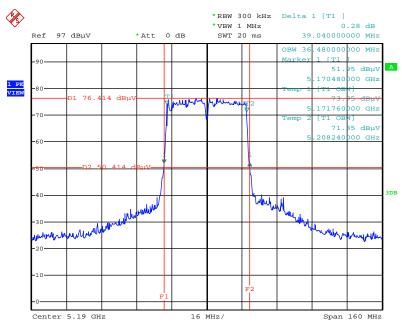


# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3 / 5240 MHz



Date: 18.JUN.2014 21:26:46

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3 / 5190 MHz

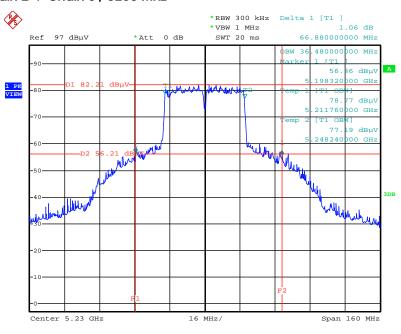


Date: 18.JUN.2014 21:27:33

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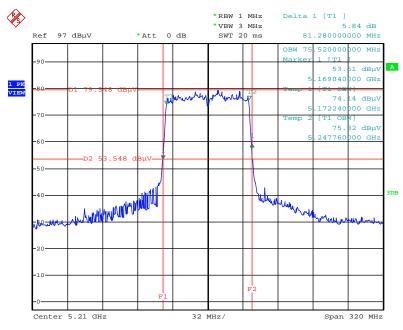


# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3 / 5230 MHz



Date: 18.JUN.2014 21:28:42

# 26dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3 / 5210 MHz



Date: 18.JUN.2014 21:29:51

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### 4.3. 6dB Spectrum Bandwidth and 99% Occupied 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.

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.
- 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.

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### 4.3.7. Test Result of 6dB Spectrum Bandwidth and 99% Occupied Bandwidth

### <For Non-Beamforming Mode>

Temperature	22°C	Humidity	55%
Test Engineer	Serway Li	Configurations	IEEE 802.11ac
Test Mode	Mode 1 (Ant. 2 Dipole antenna / 5dBi / 1TX)		

### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
149	5745 MHz	17.68	17.68	500	Complies
157	5785 MHz	17.60	26.72	500	Complies
165	5825 MHz	17.52	17.84	500	Complies

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
151	5755 MHz	36.48	36.32	500	Complies
159	5795 MHz	36.16	36.32	500	Complies

### Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
155	5775 MHz	75.84	76.80	500	Complies

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Temperature	22°C	Humidity	55%	
Test Engineer	Wen Chao	Configurations	IEEE 802.11ac	
Test Mode	Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 1TX)			

### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
149	5745 MHz	17.60	17.76	500	Complies
157	5785 MHz	17.52	23.84	500	Complies
165	5825 MHz	17.60	17.76	500	Complies

### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
151	5755 MHz	36.00	36.16	500	Complies
159	5795 MHz	36.48	36.48	500	Complies

## Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
155	5775 MHz	75.84	75.84	500	Complies

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#### <For STBC Mode>

Temperature	22°C	Humidity	55%		
Test Engineer	Serway Li	Configurations	IEEE 802.11ac		
Test Mode	Mode 1 (Ant. 2 Dipole antenna / 5dBi / 2TX)				

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
149	5745 MHz	17.60	17.68	500	Complies
157	5785 MHz	17.60	20.00	500	Complies
165	5825 MHz	17.60	17.76	500	Complies

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
151	5755 MHz	35.20	36.16	500	Complies
159	5795 MHz	35.52	36.16	500	Complies

## Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
155	5775 MHz	73.92	101.12	500	Complies

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Temperature	22°C	Humidity	55%		
Test Engineer	Serway Li	Configurations	IEEE 802.11ac		
Test Mode	Mode 1 (Ant. 2 Dipole antenna / 5dBi / 3TX)				

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
149	5745 MHz	16.64	17.68	500	Complies
157	5785 MHz	17.60	17.84	500	Complies
165	5825 MHz	17.68	17.68	500	Complies

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
151	5755 MHz	36.48	36.32	500	Complies
159	5795 MHz	36.32	36.32	500	Complies

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
155	5775 MHz	75.20	76.80	500	Complies

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Temperature	22°C	Humidity	55%		
Test Engineer	Wen Chao	Configurations	IEEE 802.11ac		
Test Mode	Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 2TX)				

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
149	5745 MHz	17.52	17.68	500	Complies
157	5785 MHz	16.96	24.80	500	Complies
165	5825 MHz	17.52	17.68	500	Complies

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
151	5755 MHz	35.04	36.32	500	Complies
159	5795 MHz	35.68	36.32	500	Complies

## Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
155	5775 MHz	74.88	75.84	500	Complies

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Temperature	22°C	Humidity	55%		
Test Engineer	Wen Chao	Configurations	IEEE 802.11ac		
Test Mode	Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 3TX)				

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
149	5745 MHz	17.52	17.76	500	Complies
157	5785 MHz	17.68	18.00	500	Complies
165	5825 MHz	17.52	17.68	500	Complies

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
151	5755 MHz	35.68	36.16	500	Complies
159	5795 MHz	36.16	36.16	500	Complies

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
155	5775 MHz	75.84	75.84	500	Complies

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

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

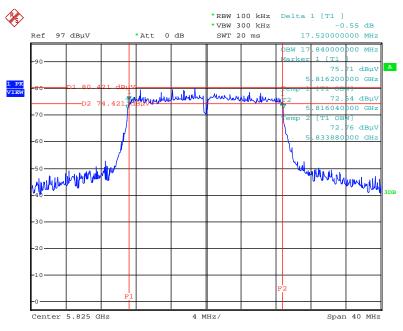
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#### <For Non-Beamforming Mode>

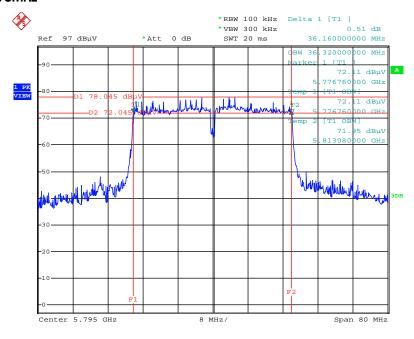
#### Mode 1 (Ant. 2 Dipole antenna / 5dBi / 1TX)

6 dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5825 MHz



Date: 17.JUN.2014 02:32:53

# 6 dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2 / 5795MHz

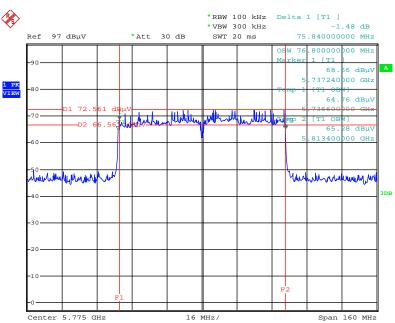


Date: 17.JUN.2014 02:39:45

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# 6 dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2 / 5775 MHz

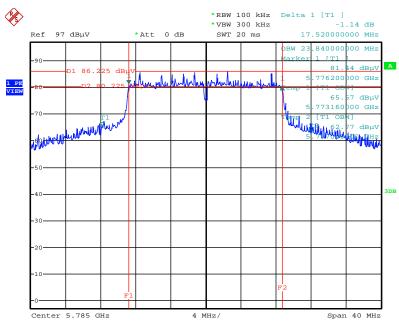


Date: 17.JUN.2014 02:44:49

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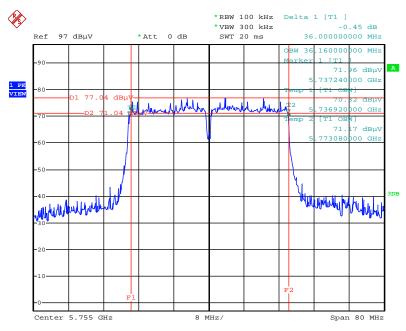
#### Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 1TX)

## 6 dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5785 MHz



Date: 18.JUN.2014 20:52:50

## 6 dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2 / 5755MHz

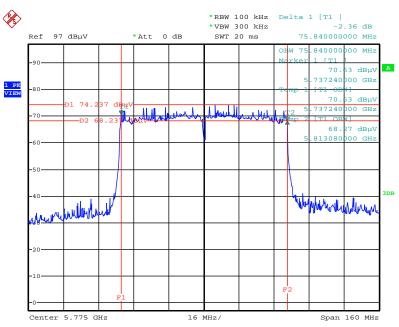


Date: 18.JUN.2014 20:54:33

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# 6 dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2 / 5775 MHz



Date: 18.JUN.2014 20:55:59

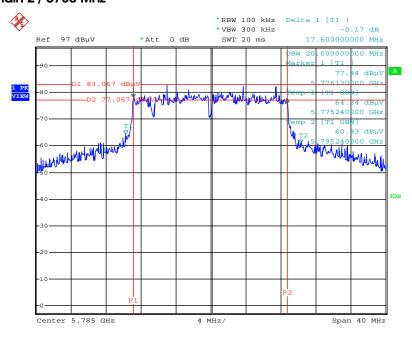
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#### <For STBC Mode>

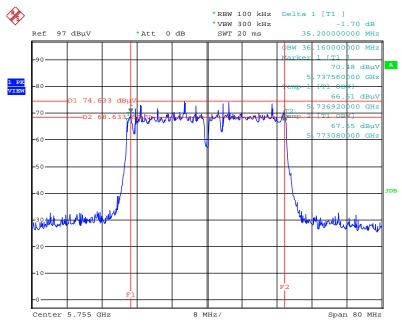
#### Mode 1 (Ant. 2 Dipole antenna / 5dBi / 2TX)

6 dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5785 MHz



Date: 17.JUN.2014 02:59:08

## 6 dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5755MHz

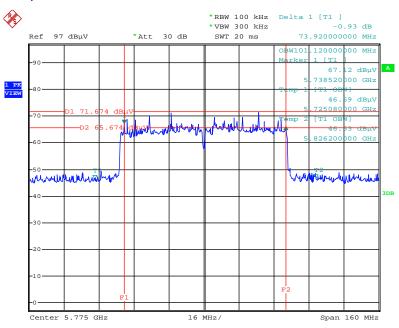


Date: 17.JUN.2014 03:05:23

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# 6 dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5775 MHz

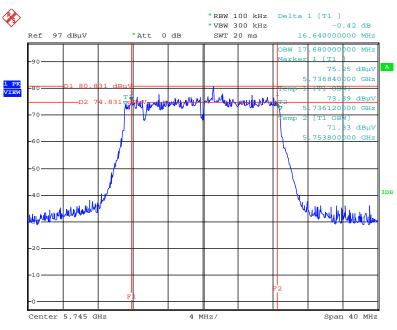


Date: 17.JUN.2014 03:13:12

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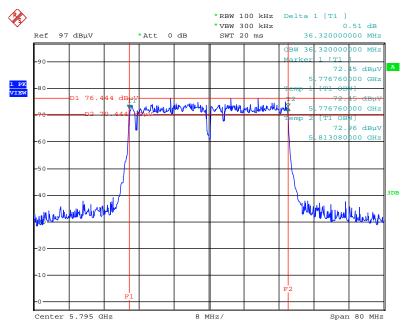
#### Mode 1 (Ant. 2 Dipole antenna / 5dBi / 3TX)

6 dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3 / 5745 MHz



Date: 17.JUN.2014 03:22:10

6 dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3 / 5795MHz

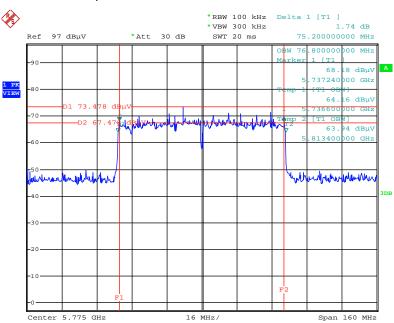


Date: 17.JUN.2014 03:32:01

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# 6 dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3 / 5775 MHz

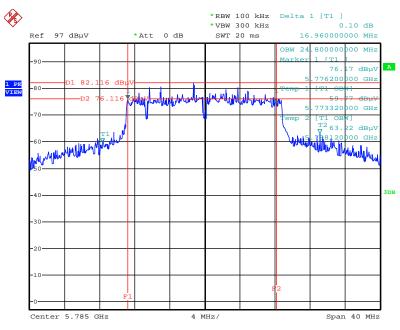


Date: 17.JUN.2014 03:35:29

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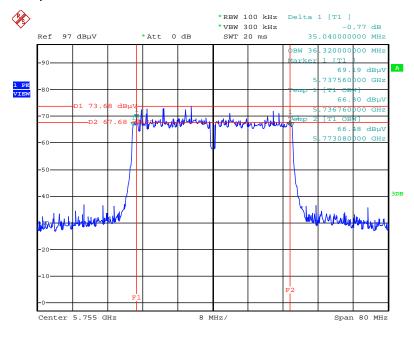
#### Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 2TX)

## 6 dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5785 MHz



Date: 18.JUN.2014 21:13:20

## 6 dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5755MHz

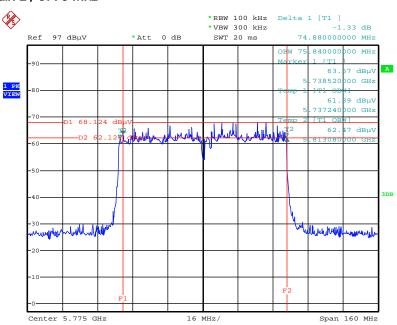


Date: 18.JUN.2014 21:15:00

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# 6 dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5775 MHz

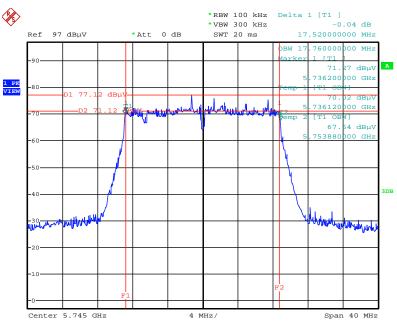


Date: 18.JUN.2014 21:16:42

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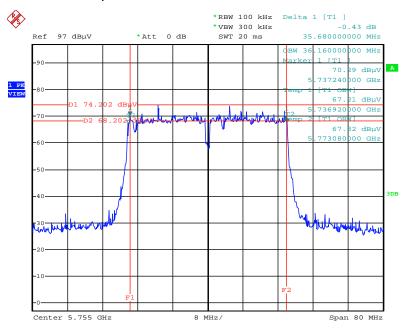
#### Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 3TX)

6 dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3 / 5745 MHz



Date: 18.JUN.2014 21:06:10

6 dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3 / 5755MHz

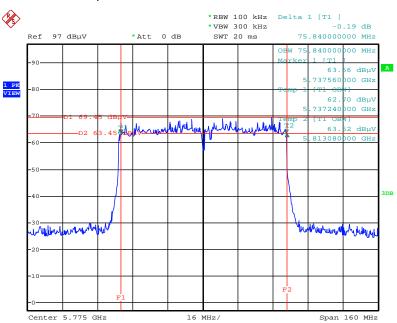


Date: 18.JUN.2014 21:04:14

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# 6 dB Bandwidth and 99% Occupied Bandwidth Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3 / 5775 MHz



Date: 18.JUN.2014 21:03:04

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#### 4.4. Maximum Conducted Output Power Measurement

#### 4.4.1. Limit

For the band 5.15~5.25 GHz, 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.

For the band 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. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

#### 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.

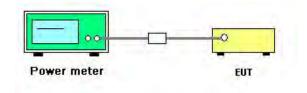
Power Meter Parameter	Setting
Detector	AVERAGE

#### 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).
- 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.

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## 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.

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#### 4.4.7. Test Result of Maximum Conducted Output Power

#### <For Non-Beamforming Mode>

Temperature	22°C	Humidity	55%		
Test Engineer	Serway Li	Configurations	IEEE 802.11a/n/ac		
Test Date	Jun. 16, 2014				
Test Mode	Mode 1 (Ant. 2 Dipole antenna / 5dBi / 1TX)				

#### Power Parameters of IEEE 802.11n MCS0 HT20 / Chain 2

	_	Conducted Power	Max. Limit	
Channel	Frequency	(dBm)	(dBm)	Result
36	5180 MHz	19.07	30.00	Complies
40	5200 MHz	21.94	30.00	Complies
48	5240 MHz	21.83	30.00	Complies
149	5745 MHz	16.41	30.00	Complies
157	5785 MHz	21.91	30.00	Complies
165	5825 MHz	16.68	30.00	Complies

#### Power Parameters of IEEE 802.11n MCS0 HT40 / Chain 2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
38	5190 MHz	15.76	30.00	Complies
46	5230 MHz	19.48	30.00	Complies
151	5755 MHz	14.63	30.00	Complies
159	5795 MHz	16.75	30.00	Complies

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
36	5180 MHz	19.11	30.00	Complies
40	5200 MHz	21.95	30.00	Complies
48	5240 MHz	21.86	30.00	Complies
149	5745 MHz	16.43	30.00	Complies
157	5785 MHz	21.96	30.00	Complies
165	5825 MHz	16.71	30.00	Complies

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## Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
38	5190 MHz	15.77	30.00	Complies
46	5230 MHz	19.52	30.00	Complies
151	5755 MHz	14.76	30.00	Complies
159	5795 MHz	16.71	30.00	Complies

## Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
42	5210 MHz	14.55	30.00	Complies
155	5775 MHz	15.08	30.00	Complies

## Configuration IEEE 802.11a / Chain 2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
36	5180 MHz	19.03	30.00	Complies
40	5200 MHz	21.93	30.00	Complies
48	5240 MHz	21.85	30.00	Complies
149	5745 MHz	16.42	30.00	Complies
157	5785 MHz	21.89	30.00	Complies
165	5825 MHz	16.75	30.00	Complies

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Temperature	22°C	Humidity	55%				
Test Engineer	Serway Li	Configurations	IEEE 802.11a/n/ac				
Test Date	Jun. 16, 2014	Jun. 16, 2014					
Test Mode	Mode 1 (Ant. 2 Dipole and	Mode 1 (Ant. 2 Dipole antenna / 5dBi / 2TX)					

#### Power Parameters of IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2

Channel	Eroguanov	Con	ducted Power (d	Max. Limit	Dogult	
Channel	Frequency	Chain 1	Chain 2	Total	(dBm)	Result
36	5180 MHz	16.94	17.92	20.47	30.00	Complies
40	5200 MHz	20.21	21.12	23.70	30.00	Complies
48	5240 MHz	19.81	20.35	23.10	30.00	Complies
149	5745 MHz	13.92	14.73	17.35	30.00	Complies
157	5785 MHz	19.55	20.44	23.03	30.00	Complies
165	5825 MHz	13.41	14.51	17.01	30.00	Complies

#### Power Parameters of IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2

Channel	Frequency	Con	ducted Power (d	Max. Limit	Result	
		Chain 1	Chain 2	Total	(dBm)	Kesuii
38	5190 MHz	13.35	14.72	17.10	30.00	Complies
46	5230 MHz	18.61	19.36	22.01	30.00	Complies
151	5755 MHz	13.56	14.13	16.86	30.00	Complies
159	5795 MHz	13.73	14.51	17.15	30.00	Complies

## Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2

Channel	Fraguanay	Con	ducted Power (d	Max. Limit	Result	
Charine	Frequency	Chain 1	Chain 2	Total	(dBm)	Kesuli
36	5180 MHz	16.89	17.93	20.45	30.00	Complies
40	5200 MHz	20.23	21.12	23.71	30.00	Complies
48	5240 MHz	19.76	20.38	23.09	30.00	Complies
149	5745 MHz	14.05	14.79	17.45	30.00	Complies
157	5785 MHz	19.52	20.45	23.02	30.00	Complies
165	5825 MHz	13.42	14.63	17.08	30.00	Complies

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### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2

Channel	Freeurones	Con	ducted Power (d	Max. Limit	Decult		
Channel	Frequency	Chain 1	Chain 2	Total	(dBm)	Result	
38	5190 MHz	13.58	14.65	17.16	30.00	Complies	
46	5230 MHz	18.65	19.35	22.02	30.00	Complies	
151	5755 MHz	13.57	14.05	16.83	30.00	Complies	
159	5795 MHz	13.76	14.47	17.14	30.00	Complies	

## Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2

Channel	Fraguanay	Con	ducted Power (d	Max. Limit	Result	
Charlie	Frequency	Chain 1	Chain 2	Total	(dBm)	Resuli
42	5210 MHz	12.54	14.26	16.49	30.00	Complies
155	5775 MHz	13.42	14.73	17.13	30.00	Complies

## Configuration IEEE 802.11a / Chain 1 + Chain 2

Channel	Eroguenov	Con	ducted Power (d	Max. Limit	Result	
Charine	Frequency	Chain 1	Chain 2	Total	(dBm)	Kesuli
36	5180 MHz	16.87	17.91	20.43	30.00	Complies
40	5200 MHz	20.16	21.09	23.66	30.00	Complies
48	5240 MHz	19.78	20.37	23.10	30.00	Complies
149	5745 MHz	14.03	14.66	17.37	30.00	Complies
157	5785 MHz	19.56	20.47	23.05	30.00	Complies
165	5825 MHz	13.43	14.65	17.09	30.00	Complies

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Temperature	22°C	Humidity	55%				
Test Engineer	Serway Li	Configurations	IEEE 802.11a/n/ac				
Test Date	Jun. 16, 2014	Jun. 16, 2014					
Test Mode	Mode 1 (Ant. 2 Dipole and	Mode 1 (Ant. 2 Dipole antenna / 5dBi / 3TX)					

#### Power Parameters of IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 + Chain 3

Channel Frequency		1	Conducted	Max. Limit	Dogult		
Channel Frequ	Frequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Result
36	5180 MHz	14.72	16.23	15.25	20.22	30.00	Complies
40	5200 MHz	17.28	18.43	18.06	22.72	30.00	Complies
48	5240 MHz	17.04	18.33	17.93	22.57	30.00	Complies
149	5745 MHz	13.38	14.09	13.62	18.48	30.00	Complies
157	5785 MHz	18.39	19.14	18.37	23.42	30.00	Complies
165	5825 MHz	13.21	14.55	13.96	18.71	30.00	Complies

#### Power Parameters of IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 + Chain 3

Channel Frequency		-	Conducted	Power (dBm)		Max. Limit	Result
Charinei	Channel Frequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Resuli
38	5190 MHz	11.58	12.91	12.25	17.05	30.00	Complies
46	5230 MHz	16.03	17.21	17.07	21.57	30.00	Complies
151	5755 MHz	11.81	12.52	11.87	16.85	30.00	Complies
159	5795 MHz	13.41	14.25	13.56	18.53	30.00	Complies

## Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3

Channel Frequency		1	Conducted		Max. Limit	Result	
Charine	Frequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Kesuli
36	5180 MHz	14.77	16.14	15.28	20.21	30.00	Complies
40	5200 MHz	17.26	18.38	18.31	22.78	30.00	Complies
48	5240 MHz	17.01	18.34	17.82	22.53	30.00	Complies
149	5745 MHz	13.35	14.11	13.67	18.49	30.00	Complies
157	5785 MHz	18.36	19.14	18.51	23.45	30.00	Complies
165	5825 MHz	13.31	14.52	14.03	18.75	30.00	Complies

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### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3

Channel Frequency		1	Conducted		Max. Limit	Result	
Channel	nel Frequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Kesuli
38	5190 MHz	11.62	12.85	12.37	17.08	30.00	Complies
46	5230 MHz	16.01	17.31	17.04	21.59	30.00	Complies
151	5755 MHz	11.78	12.41	12.03	16.85	30.00	Complies
159	5795 MHz	13.36	14.22	13.76	18.57	30.00	Complies

## Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3

Channel	Eroguepov	Conducted Power (dBm)				Max. Limit	Result
Channel Frequency	riequericy	Chain 1	Chain 2	Chain 3	Total	(dBm)	Resuli
42	5210 MHz	10.11	11.87	11.43	15.97	30.00	Complies
155	5775 MHz	11.34	12.52	12.03	16.76	30.00	Complies

#### Configuration IEEE 802.11a / Chain 1 + Chain 2 + Chain 3

Channel Frequency		Conducted Power (dBm)				Max. Limit	Result
Channel	Frequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Kesuli
36	5180 MHz	14.81	16.22	15.21	20.23	30.00	Complies
40	5200 MHz	17.36	18.34	18.17	22.75	30.00	Complies
48	5240 MHz	17.05	18.31	17.97	22.58	30.00	Complies
149	5745 MHz	13.46	14.13	13.38	18.44	30.00	Complies
157	5785 MHz	18.38	19.17	18.45	23.45	30.00	Complies
165	5825 MHz	13.28	14.58	13.91	18.73	30.00	Complies

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Temperature	22°C	Humidity	55%				
Test Engineer	Wen Chao	Configurations	IEEE 802.11a/n/ac				
Test Date	Jun. 18, 2014	Jun. 18, 2014					
Test Mode	Mode 2 (Ant. 4 Panel ante	enna / 5.1dBi / 1TX)					

#### Power Parameters of IEEE 802.11n MCS0 HT20 / Chain 2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
36	5180 MHz	18.24	30.00	Complies
40	5200 MHz	21.96	30.00	Complies
48	5240 MHz	21.79	30.00	Complies
149	5745 MHz	16.47	30.00	Complies
157	5785 MHz	21.84	30.00	Complies
165	5825 MHz	17.22	30.00	Complies

#### Power Parameters of IEEE 802.11n MCS0 HT40 / Chain 2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
38	5190 MHz	16.95	30.00	Complies
46	5230 MHz	21.83	30.00	Complies
151	5755 MHz	16.2	30.00	Complies
159	5795 MHz	18.24	30.00	Complies

## Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
36	5180 MHz	18.38	30.00	Complies
40	5200 MHz	21.96	30.00	Complies
48	5240 MHz	21.84	30.00	Complies
149	5745 MHz	16.63	30.00	Complies
157	5785 MHz	21.97	30.00	Complies
165	5825 MHz	17.47	30.00	Complies

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## Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
38	5190 MHz	16.93	30.00	Complies
46	5230 MHz	21.96	30.00	Complies
151	5755 MHz	16.38	30.00	Complies
159	5795 MHz	18.33	30.00	Complies

## Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
42	5210 MHz	16.34	30.00	Complies
155	5775 MHz	17.05	30.00	Complies

## Configuration IEEE 802.11a / Chain 2

Channel	Frequency	Conducted Power	Max. Limit	Result
S.I.G.I.II.O.	1104401107	(dBm)	(dBm)	No.
36	5180 MHz	18.14	30.00	Complies
40	5200 MHz	21.86	30.00	Complies
48	5240 MHz	21.87	30.00	Complies
149	5745 MHz	16.4	30.00	Complies
157	5785 MHz	21.82	30.00	Complies
165	5825 MHz	17.3	30.00	Complies

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Temperature	22°C	Humidity	55%				
Test Engineer	Wen Chao	Configurations	IEEE 802.11a/n/ac				
Test Date	Jun. 18, 2014	Jun. 18, 2014					
Test Mode	Mode 2 (Ant. 4 Panel ante	enna / 5.1dBi / 2TX)					

#### Power Parameters of IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2

Channel	Eroguanov	Con	ducted Power (d	Max. Limit	Dogult	
Channel Frequency	riequericy	Chain 1	Chain 2	Total	(dBm)	Result
36	5180 MHz	16	16.65	19.35	30.00	Complies
40	5200 MHz	19.8	21	23.45	30.00	Complies
48	5240 MHz	20.15	21.56	23.92	30.00	Complies
149	5745 MHz	13.7	14.65	17.21	30.00	Complies
157	5785 MHz	19.7	21.2	23.52	30.00	Complies
165	5825 MHz	14.31	15.32	17.85	30.00	Complies

#### Power Parameters of IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2

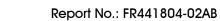
Channel Frequency	Fraguenov	Conducted Power (dBm)			Max. Limit	Result
	Chain 1	Chain 2	Total	(dBm)	Resuli	
38	5190 MHz	14.45	15.15	17.82	30.00	Complies
46	5230 MHz	18.35	19.49	21.97	30.00	Complies
151	5755 MHz	13.33	14.05	16.72	30.00	Complies
159	5795 MHz	14.02	14.71	17.39	30.00	Complies

## Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2

Channel	Eroguopov	Con	ducted Power (d	Max. Limit	Result	
Channel	Frequency	Chain 1	Chain 2	Total	(dBm)	Kesuli
36	5180 MHz	16.04	16.92	19.51	30.00	Complies
40	5200 MHz	19.98	21.14	23.61	30.00	Complies
48	5240 MHz	20.87	21.56	24.24	30.00	Complies
149	5745 MHz	14.03	14.96	17.53	30.00	Complies
157	5785 MHz	20.07	21.22	23.69	30.00	Complies
165	5825 MHz	14.41	15.52	18.01	30.00	Complies

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## Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2

Channel	Eroguenov	Con	ducted Power (d	Max. Limit	Result	
Charine	Frequency	Chain 1	Chain 2	Total	(dBm)	Kesuli
38	5190 MHz	14.82	15.34	18.10	30.00	Complies
46	5230 MHz	18.94	19.54	22.26	30.00	Complies
151	5755 MHz	13.47	14.51	17.03	30.00	Complies
159	5795 MHz	14.31	14.96	17.66	30.00	Complies

## Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2

Channel	Fraguanay	Con	ducted Power (d	dBm)	Max. Limit	Result
Charlie	Frequency	Chain 1	Chain 2	Total	(dBm)	Kesuli
42	5210 MHz	14.22	15.26	17.78	30.00	Complies
155	5775 MHz	14.03	15.15	17.64	30.00	Complies

## Configuration IEEE 802.11a / Chain 1 + Chain 2

Channel	Eroguenov	Con	ducted Power (d	Max. Limit	Result	
Charine	Channel Frequency		Chain 2	Total	(dBm)	Kesuli
36	5180 MHz	16	17	19.54	30.00	Complies
40	5200 MHz	19.8	21.05	23.48	30.00	Complies
48	5240 MHz	20.15	21.54	23.91	30.00	Complies
149	5745 MHz	13.72	14.62	17.20	30.00	Complies
157	5785 MHz	19.72	21.11	23.48	30.00	Complies
165	5825 MHz	14.25	15.4	17.87	30.00	Complies

Temperature	22°C	Humidity	55%				
Test Engineer	Wen Chao	Configurations	IEEE 802.11a/n/ac				
Test Date	Jun. 18, 2014	Jun. 18, 2014					
Test Mode	Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 3TX)						

#### Power Parameters of IEEE 802.11n MCS0 HT20 / Chain 1 + Chain 2 + Chain 3

Channel	Fraguanay	- 1	Conducted	Max. Limit	Result		
Channel Frequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Resuli	
36	5180 MHz	16.09	17.15	16.08	21.24	30.00	Complies
40	5200 MHz	18	19.12	18.16	23.23	30.00	Complies
48	5240 MHz	18.32	19.44	19.22	23.79	30.00	Complies
149	5745 MHz	12.9	13.52	13.69	18.15	30.00	Complies
157	5785 MHz	18.35	19.73	19.15	23.88	30.00	Complies
165	5825 MHz	13.95	14.83	14.32	19.15	30.00	Complies

#### Power Parameters of IEEE 802.11n MCS0 HT40 / Chain 1 + Chain 2 + Chain 3

Channel	Eroguepov		Conducted	Max. Limit	Result		
Charlie	el Frequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Kesuii
38	5190 MHz	12.8	13.46	12.63	17.75	30.00	Complies
46	5230 MHz	16.9	18.03	17.61	22.31	30.00	Complies
151	5755 MHz	13.24	14.15	14.38	18.72	30.00	Complies
159	5795 MHz	14.62	15.63	15.56	20.06	30.00	Complies

## Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3

Channel	Eroguenov		Conducted	Max. Limit	Result		
Channel	Frequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Kesuii
36	5180 MHz	16.32	17.44	16.41	21.53	30.00	Complies
40	5200 MHz	18.29	19.11	18.22	23.33	30.00	Complies
48	5240 MHz	18.88	19.49	19.42	24.04	30.00	Complies
149	5745 MHz	13.06	13.79	13.91	18.37	30.00	Complies
157	5785 MHz	18.76	19.71	19.23	24.02	30.00	Complies
165	5825 MHz	14.23	15.07	14.48	19.38	30.00	Complies

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### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3

Channel	Eroguanov	-	Conducted		Max. Limit	Result	
Charine	el Frequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Kesuii
38	5190 MHz	12.88	13.85	12.56	17.90	30.00	Complies
46	5230 MHz	17.26	18.18	17.47	22.43	30.00	Complies
151	5755 MHz	13.59	14.15	14.28	18.79	30.00	Complies
159	5795 MHz	15.11	15.81	15.67	20.31	30.00	Complies

## Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3

Channel	Fraguanay	Conducted Power (dBm)				Max. Limit	Result
Charlie	Frequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Resuli
42	5210 MHz	11.54	12.58	11.79	16.76	30.00	Complies
155	5775 MHz	12.38	13.18	13.59	17.85	30.00	Complies

#### Configuration IEEE 802.11a / Chain 1 + Chain 2 + Chain 3

Channel	Eroguanov		Conducted	Max. Limit	Result		
Channel Frequency	riequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Kesuli
36	5180 MHz	16.13	17.09	16.16	21.25	30.00	Complies
40	5200 MHz	17.9	19.28	18.24	23.29	30.00	Complies
48	5240 MHz	18.35	19.49	19.11	23.78	30.00	Complies
149	5745 MHz	13.26	13.7	13.99	18.43	30.00	Complies
157	5785 MHz	18.36	19.74	19.09	23.87	30.00	Complies
165	5825 MHz	14.05	15.02	14.26	19.23	30.00	Complies

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#### <For Beamforming Mode>

Temperature	<b>22</b> °C	Humidity	55%				
Test Engineer	Serway Li	Configurations	IEEE 802.11a/ac				
Test Date	Jun, 16, 2014	Jun, 16, 2014					
Test Mode	Mode 1 (Ant. 2 Dipole antenna / 5dBi / 2TX)						

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2

Channel	Fraguenes/	Con	ducted Power (d	Max. Limit	Result	
Charine	Frequency	Chain 1	Chain 2	Total	(dBm)	Kesuli
36	5180 MHz	16.11	17.25	19.73	27.99	Complies
40	5200 MHz	19.44	20.45	22.98	27.99	Complies
48	5240 MHz	19.15	19.71	22.45	27.99	Complies
149	5745 MHz	14.05	14.79	17.45	27.99	Complies
157	5785 MHz	18.94	19.61	22.30	27.99	Complies
165	5825 MHz	13.42	14.63	17.08	27.99	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.01 dBi > 6 dBi, So\ Band1\ Limit = 30-(8.01-6) = 27.99 dBm = 8.01 dBi > 6 dBi, So\ Band4\ Limit = 30-(8.01-6) = 27.99 dBm$ 

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2

Channel	F	Con	ducted Power (d	Max. Limit	Result	
Channel Frequency		Chain 1	Chain 2	Total	(dBm)	Kesuli
38	5190 MHz	12.72	13.81	16.31	27.99	Complies
46	5230 MHz	17.98	18.65	21.34	27.99	Complies
151	5755 MHz	12.84	13.39	16.13	27.99	Complies
159	5795 MHz	13.32	13.91	16.64	27.99	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.01 dBi > 6 dBi, So\ Band1\ Limit = 30-(8.01-6) = 27.99 dBm = 8.01 dBi > 6 dBi, So\ Band4\ Limit = 30-(8.01-6) = 27.99 dBm$ 

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#### Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2

Channel	Frequency	Con	ducted Power (d	Max. Limit	Result	
Charine	riequericy	Chain 1	Chain 2	Total	(dBm)	Kesuli
42	5210 MHz	11.83	13.55	15.78	27.99	Complies
155	5775 MHz	12.37	13.71	16.10	27.99	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.01 dBi > 6 dBi, So\ Band1\ Limit = 30-(8.01-6) = 27.99 dBm = 8.01 dBi > 6 dBi, So\ Band4\ Limit = 30-(8.01-6) = 27.99 dBm$ 

#### Configuration IEEE 802.11a / Chain 1 + Chain 2

Channel	Fra europ au	Con	ducted Power (d	Max. Limit	Result	
Channel	Frequency	Chain 1	Chain 2	Total	(dBm)	Kesuii
36	5180 MHz	16.12	17.21	19.71	27.99	Complies
40	5200 MHz	19.42	20.43	22.96	27.99	Complies
48	5240 MHz	19.17	19.76	22.49	27.99	Complies
149	5745 MHz	14.02	14.77	17.42	27.99	Complies
157	5785 MHz	18.91	19.65	22.31	27.99	Complies
165	5825 MHz	13.45	14.66	17.11	27.99	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.01 dBi > 6 dBi, So\ Band1\ Limit = 30-(8.01-6) = 27.99 dBm$ = 8.01 dBi > 6 dBi, So\ Band4\ Limit = 30-(8.01-6) = 27.99 dBm

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Temperature	22°C	Humidity	55%					
Test Engineer	Serway Li	Configurations	IEEE 802.11a/ac					
Test Date	Jun. 16, 2014	Jun. 16, 2014						
Test Mode	Mode 1 (Ant. 2 Dipole an	Mode 1 (Ant. 2 Dipole antenna / 5dBi / 3TX)						

### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3

Channel	Eroguepov	Conducted Power (dBm)				Max. Limit	Result
Channel	Frequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Resuli
36	5180 MHz	15.68	16.98	16.12	21.07	26.23	Complies
40	5200 MHz	16.64	18.02	17.62	22.24	26.23	Complies
48	5240 MHz	16.73	18.01	17.67	22.27	26.23	Complies
149	5745 MHz	13.42	14.15	13.57	18.50	26.23	Complies
157	5785 MHz	16.52	17.29	16.68	21.61	26.23	Complies
165	5825 MHz	13.08	14.22	13.64	18.44	26.23	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.77 dBi > 6 dBi, So\ Band1\ Limit = 30-(9.77-6) = 26.23 dBm = 9.77 dBi > 6 dBi, So\ Band4\ Limit = 30-(9.77-6) = 26.23 dBm$ 

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	1	Conducted	Max. Limit	Result		
Channel Frequency		Chain 1	Chain 2	Chain 3	Total	(dBm)	Kesuli
38	5190 MHz	11.51	12.89	12.17	17.00	26.23	Complies
46	5230 MHz	15.82	16.85	16.73	21.26	26.23	Complies
151	5755 MHz	12.15	12.76	12.27	17.17	26.23	Complies
159	5795 MHz	13.25	14.14	13.43	18.40	26.23	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.77 dBi > 6 dBi, So\ Band1\ Limit = 30-(9.77-6) = 26.23 dBm$ = 9.77 dBi > 6 dBi, So\ Band4\ Limit = 30-(9.77-6) = 26.23 dBm

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#### Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3

Channel Frequency			Conducted		Max. Limit	Result	
		Chain 1	Chain 2	Chain 3	Total	(dBm)	Kesuli
42	5210 MHz	8.85	10.45	10.03	14.60	26.23	Complies
155	5775 MHz	10.81	12.05	11.73	16.33	26.23	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.77 dBi > 6 dBi, So\ Band1\ Limit = 30-(9.77-6) = 26.23 dBm$ = 9.77 dBi > 6 dBi, So\ Band4\ Limit = 30-(9.77-6) = 26.23 dBm

#### Configuration IEEE 802.11a / Chain 1 + Chain 2 + Chain 3

Channel	Fre en la par		Conducted	Max. Limit	Result		
Charine	Frequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Kesuli
36	5180 MHz	15.51	17.07	16.15	21.06	26.23	Complies
40	5200 MHz	16.75	17.96	17.71	22.28	26.23	Complies
48	5240 MHz	16.65	18.03	17.66	22.26	26.23	Complies
149	5745 MHz	13.38	14.09	13.56	18.46	26.23	Complies
157	5785 MHz	16.57	17.35	16.73	21.67	26.23	Complies
165	5825 MHz	13.05	14.37	13.65	18.49	26.23	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.77 dBi > 6 dBi, So\ Band1\ Limit = 30-(9.77-6) = 26.23 dBm$ = 9.77 dBi > 6 dBi, So\ Band4\ Limit = 30-(9.77-6) = 26.23 dBm

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Temperature	22°C	Humidity	55%					
Test Engineer	Wen Chao	Configurations	IEEE 802.11a/ac					
Test Date	Jun, 18, 2014	Jun, 18, 2014						
Test Mode	Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 2TX)							

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2

Channel	Eroguanav	Con	ducted Power (d	Max. Limit	Result	
Charine	Frequency	Chain 1	Chain 2	Total	(dBm)	Kesuli
36	5180 MHz	15.16	15.81	18.51	27.89	Complies
40	5200 MHz	19.52	20.51	23.05	27.89	Complies
48	5240 MHz	18.72	19.21	21.98	27.89	Complies
149	5745 MHz	13.45	14.08	16.79	27.89	Complies
157	5785 MHz	17.83	18.44	21.16	27.89	Complies
165	5825 MHz	13.78	14.62	17.23	27.89	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.11 dBi > 6 dBi, So\ Band1\ Limit = 30-(8.11-6) = 27.89 dBm$ =  $8.11 dBi > 6 dBi, So\ Band4\ Limit = 30-(8.11-6) = 27.89 dBm$ 

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2

Channel	Eroguopov	Con	ducted Power (d	Max. Limit	Result	
Channel Frequency		Chain 1	Chain 2	Total	(dBm)	Kesuli
38	5190 MHz	12.81	13.22	16.03	27.89	Complies
46	5230 MHz	17.22	17.83	20.55	27.89	Complies
151	5755 MHz	13.06	13.48	16.29	27.89	Complies
159	5795 MHz	14.31	14.96	17.66	27.89	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.11 dBi > 6 dBi, So\ Band1\ Limit = 30-(8.11-6) = 27.89 dBm$ =  $8.11 dBi > 6 dBi, So\ Band4\ Limit = 30-(8.11-6) = 27.89 dBm$ 

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#### Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)			Max. Limit	Result
		Chain 1	Chain 2	Total	(dBm)	Kesuli
42	5210 MHz	10.76	11.64	14.23	27.89	Complies
155	5775 MHz	13.26	14.43	16.89	27.89	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.11 dBi > 6 dBi, So\ Band1\ Limit = 30-(8.11-6)=27.89 dBm$   $= 8.11 dBi > 6 dBi, So\ Band4\ Limit = 30-(8.11-6)=27.89 dBm$ 

#### Configuration IEEE 802.11a / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)			Max. Limit	Result
		Chain 1	Chain 2	Total	(dBm)	Kesuli
36	5180 MHz	15	15.7	18.37	27.89	Complies
40	5200 MHz	19.26	20.45	22.91	27.89	Complies
48	5240 MHz	18.18	19.13	21.69	27.89	Complies
149	5745 MHz	13.33	13.83	16.60	27.89	Complies
157	5785 MHz	17.6	18.7	21.20	27.89	Complies
165	5825 MHz	13.9	14.82	17.39	27.89	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.11 dBi > 6 dBi, So\ Band1\ Limit = 30-(8.11-6)=27.89 dBm = 8.11 dBi > 6 dBi, So\ Band4\ Limit = 30-(8.11-6)=27.89 dBm$ 

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Temperature	22°C	Humidity	55%				
Test Engineer	Wen Chao	Configurations	IEEE 802.11a/ac				
Test Date	Jun. 18, 2014	Jun. 18, 2014					
Test Mode	Mode 2 (Ant. 4 Panel ante	Mode 2 (Ant. 4 Panel antenna / 5.1 dBi / 3TX)					

### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3

Channel	Eroguepov		Conducted	Max. Limit	Result		
Charlie	Frequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Kesuli
36	5180 MHz	15.26	16.12	14.75	20.19	26.13	Complies
40	5200 MHz	18.29	19.11	18.22	23.33	26.13	Complies
48	5240 MHz	18.63	19.22	19.09	23.76	26.13	Complies
149	5745 MHz	13.06	13.79	13.91	18.37	26.13	Complies
157	5785 MHz	17.03	17.84	17.6	22.27	26.13	Complies
165	5825 MHz	13.81	14.83	14.21	19.07	26.13	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.87 dBi > 6 dBi, So\ Band1\ Limit = 30-(9.87-6) = 26.13 dBm = 9.87 dBi > 6 dBi, So\ Band4\ Limit = 30-(9.87-6) = 26.13 dBm$ 

### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3

Channel Freque	Frequency	Conducted Power (dBm)				Max. Limit	Result
	riequericy	Chain 1	Chain 2	Chain 3	Total	(dBm)	Kesuli
38	5190 MHz	12.71	13.45	12.1	17.56	26.13	Complies
46	5230 MHz	17.26	18.18	17.47	22.43	26.13	Complies
151	5755 MHz	12.72	13.24	13.51	17.94	26.13	Complies
159	5795 MHz	14.26	15.04	14.77	19.47	26.13	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.87 dBi > 6 dBi, So\ Band1\ Limit = 30-(9.87-6) = 26.13 dBm = 9.87 dBi > 6 dBi, So\ Band4\ Limit = 30-(9.87-6) = 26.13 dBm$ 

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#### Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3

Channel Frequency		1	Conducted		Max. Limit	Result	
		Chain 1	Chain 2	Chain 3	Total	(dBm)	Kesuli
42	5210 MHz	9.59	10.54	9.9	14.80	26.13	Complies
155	5775 MHz	11.8	12.67	12.77	17.21	26.13	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.87 dBi > 6 dBi, So\ Band1\ Limit = 30-(9.87-6) = 26.13 dBm$ = 9.87 dBi > 6 dBi, So\ Band4\ Limit = 30-(9.87-6) = 26.13 dBm

### Configuration IEEE 802.11a / Chain 1 + Chain 2 + Chain 3

Channel	Eroguepov		Conducted	Max. Limit	Result		
Charlie	Frequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Kesuli
36	5180 MHz	15.23	16.1	14.69	20.15	26.13	Complies
40	5200 MHz	17.9	19.28	18.24	23.29	26.13	Complies
48	5240 MHz	18.35	19.49	19.11	23.78	26.13	Complies
149	5745 MHz	12.88	13.58	13.65	18.15	26.13	Complies
157	5785 MHz	16.69	17.76	17.46	22.10	26.13	Complies
165	5825 MHz	14.05	15.02	14.26	19.23	26.13	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.87 dBi > 6 dBi, So\ Band1\ Limit = 30-(9.87-6) = 26.13 dBm$ = 9.87 dBi > 6 dBi, So\ Band4\ Limit = 30-(9.87-6) = 26.13 dBm

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#### <For STBC Mode>

Temperature	<b>22</b> °C	Humidity	55%				
Test Engineer	Serway Li	Configurations	IEEE 802.11ac				
Test Date	Jun. 16, 2014	Jun. 16, 2014					
Test Mode	Mode 1 (Ant. 2 Dipole antenna / 5dBi / 2TX)						

## Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2

Channel	Eroguanov	Con	ducted Power (d	Max. Limit	Dogult	
	Frequency	Chain 1	Chain 2	Total	(dBm)	Result
36	5180 MHz	17.26	18.33	20.84	30.00	Complies
40	5200 MHz	20.01	21.04	23.57	30.00	Complies
48	5240 MHz	19.22	19.88	22.57	30.00	Complies
149	5745 MHz	13.92	14.87	17.43	30.00	Complies
157	5785 MHz	19.62	20.63	23.16	30.00	Complies
165	5825 MHz	14.02	15.17	17.64	30.00	Complies

## Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2

Channel	Eroguepov	Con	ducted Power (d	Max. Limit	Result	
	Frequency	Chain 1	Chain 2	Total	(dBm)	Resuli
38	5190 MHz	14.28	15.52	17.95	30.00	Complies
46	5230 MHz	18.72	19.49	22.13	30.00	Complies
151	5755 MHz	13.65	14.07	16.88	30.00	Complies
159	5795 MHz	14.27	15.15	17.74	30.00	Complies

## Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2

Channol	Fraguanay	Con	ducted Power (d	Max. Limit	Result	
Channel Frequency		Chain 1	Chain 2	Total	(dBm)	Kesuli
42	5210 MHz	12.41	14.19	16.40	30.00	Complies
155	5775 MHz	12.92	14.14	16.58	30.00	Complies

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Temperature	22°C	Humidity	55%				
Test Engineer	Serway Li	Configurations	IEEE 802.11ac				
Test Date	Jun. 16, 2014	Jun. 16, 2014					
Test Mode	Mode 1 (Ant. 2 Dipole and	Mode 1 (Ant. 2 Dipole antenna / 5dBi / 3TX)					

# Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3

Channel	Fraguenes:	Conducted Power (dBm)				Max. Limit	Decult
Channel Fro	Frequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Result
36	5180 MHz	16.15	17.15	16.56	21.41	30.00	Complies
40	5200 MHz	19.31	20.15	18.83	24.24	30.00	Complies
48	5240 MHz	19.43	20.02	18.79	24.21	30.00	Complies
149	5745 MHz	13.86	14.82	13.67	18.92	30.00	Complies
157	5785 MHz	18.91	19.60	18.93	23.93	30.00	Complies
165	5825 MHz	14.16	15.24	14.74	19.51	30.00	Complies

# Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3

Channel Fraguency		-	Conducted		Max. Limit	Result	
Channel Frequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Resuli	
38	5190 MHz	11.63	12.81	12.32	17.05	30.00	Complies
46	5230 MHz	17.28	18.64	18.08	22.81	30.00	Complies
151	5755 MHz	13.27	14.02	13.25	18.30	30.00	Complies
159	5795 MHz	14.35	15.12	14.52	19.45	30.00	Complies

## Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3

Channel	Fraguanay	-	Conducted	Max. Limit	Result		
Charine	Frequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Kesuli
42	5210 MHz	10.54	11.93	11.68	16.20	30.00	Complies
155	5775 MHz	12.08	13.25	12.64	17.45	30.00	Complies

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Temperature	22°C	Humidity	55%				
Test Engineer	Wen Chao	Configurations	IEEE 802.11ac				
Test Date	Jun. 18, 2014	Jun. 18, 2014					
Test Mode	Mode 2 (Ant. 4 Panel antenna / 5.1 dBi / 2TX)						

## Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2

Channel	Eroguepov	Con	ducted Power (d	Max. Limit	Result	
Charmer	Frequency	Chain 1	Chain 2	Total	(dBm)	Kesuli
36	5180 MHz	16.83	17.78	20.34	30.00	Complies
40	5200 MHz	20.67	21.71	24.23	30.00	Complies
48	5240 MHz	21.14	21.98	24.59	30.00	Complies
149	5745 MHz	14.29	15.19	17.77	30.00	Complies
157	5785 MHz	20.9	22	24.50	30.00	Complies
165	5825 MHz	15.73	16.94	19.39	30.00	Complies

# Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2

Channel Frequency		Con	ducted Power (d	Max. Limit	Result	
Charine	Frequency	Chain 1	Chain 2	Total	(dBm)	Kesuli
38	5190 MHz	15.25	16.06	18.68	30.00	Complies
46	5230 MHz	19.44	20.28	22.89	30.00	Complies
151	5755 MHz	15.5	16.25	18.90	30.00	Complies
159	5795 MHz	15.88	16.51	19.22	30.00	Complies

## Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2

Channel	Frequency	Con	ducted Power (d	Max. Limit	Result	
Charine	riequericy	Chain 1	Chain 2	Total	(dBm)	Kesuli
42	5210 MHz	14.33	15.53	17.98	30.00	Complies
155	5775 MHz	13.65	14.77	17.26	30.00	Complies

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Temperature	22°C	Humidity	55%				
Test Engineer	Wen Chao	Configurations	IEEE 802.11ac				
Test Date	Jun. 18, 2014	Jun. 18, 2014					
Test Mode	Mode 2 (Ant. 4 Panel ante	Mode 2 (Ant. 4 Panel antenna / 5.1 dBi / 3TX)					

## Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3

Channel Frequency			Conducted	Max. Limit	Result		
Charine	Frequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Kesuii
36	5180 MHz	15.99	16.35	15.7	20.79	30.00	Complies
40	5200 MHz	18	18.41	17.84	22.86	30.00	Complies
48	5240 MHz	17.81	18.27	18	22.80	30.00	Complies
149	5745 MHz	12.92	13.93	13.92	18.39	30.00	Complies
157	5785 MHz	19.02	19.75	19.25	24.12	30.00	Complies
165	5825 MHz	15.14	15.88	15.18	20.18	30.00	Complies

## Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3

Channel	Channel Frequency		Conducted	Max. Limit	Result		
Channel	Frequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Kesuii
38	5190 MHz	14.24	14.88	13.8	19.10	30.00	Complies
46	5230 MHz	18.83	19.36	19.3	23.94	30.00	Complies
151	5755 MHz	13.97	14.6	14.83	19.25	30.00	Complies
159	5795 MHz	14.65	15.11	15.03	19.71	30.00	Complies

## Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3

Channel	Fraguanay	-	Conducted	Max. Limit	Result		
Charine	Frequency	Chain 1	Chain 2	Chain 3	Total	(dBm)	Kesuli
42	5210 MHz	12.64	13.13	12.56	17.56	30.00	Complies
155	5775 MHz	13.38	14.1	14.45	18.77	30.00	Complies

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#### 4.5. Power Spectral Density Measurement

#### 4.5.1. Limit

The power spectral density is defined as the highest level of power in dBm per MHz generated by the transmitter within the power envelope. The following table is power spectral density limits and decrease power density limit rule refer to section 4.4.1.

Frequency Range	Power Spectral Density limit
5.15~5.25 GHz	17 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.

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#### 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).
- 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

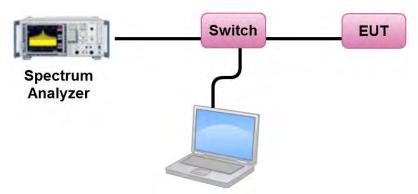
- Test procedures refer KDB662911 D01 v02r01 section In-Band Power Spectral Density (PSD)
   Measurements option (b) Measure and sum spectral maximal across the outputs.
- Use this procedure when the maximum conducted output power in the fundamental emission is
  used to demonstrate compliance. The EUT must be configured to transmit continuously at full power
  over the measurement duration.
- 3. Ensure that the number of measurement points in the sweep  $\geq 2$  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.

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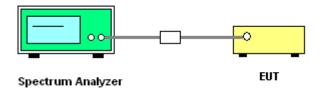


### 4.5.4. Test Setup Layout

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.

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## 4.5.7. Test Result of Power Spectral Density

### <For Non-Beamforming Mode>

Temperature	22°C	Humidity	55%
Test Engineer	Serway Li	Configurations	IEEE 802.11ac
Test Date	Jun. 16, 2014		
Test Mode	Mode 1 (Ant. 2 Dipole and	tenna / 5dBi / 1TX)	

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	2.22	17.00	Complies
40	5200 MHz	5.38	17.00	Complies
48	5240 MHz	6.95	17.00	Complies

Channel	Frequency	Total Power Density (dBm/3kHz)	BWCF factor	Total Power Density	Power Density Limit	Result
			3kHz to 500kHz	dBm/500kHz		
149	5745 MHz	-9.61	22.22	12.61	30.00	Complies
157	5785 MHz	-4.87	22.22	17.35	30.00	Complies
165	5825 MHz	-9.31	22.22	12.91	30.00	Complies

### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2

Channel	Frequency	Total Power Density Max. Limit (dBm/MHz) (dBm/MHz)		Result
38	5190 MHz	-3.37	17.00	Complies
46	5230 MHz	1.61	17.00	Complies

Channel	Frequency	Total Power Density (dBm/3kHz)	BWCF factor	Total Power Density	Power Density Limit	Result
			3kHz to 500kHz	dBm/500kHz		
151	5755 MHz	-14.95	22.22	7.27	30.00	Complies
159	5795 MHz	-12.36	22.22	9.86	30.00	Complies

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## Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210 MHz	-6.75	17.00	Complies

Channel	Frequency	Total Power Density (dBm/3kHz)	BWCF factor	Total Power Density	Power Density Limit	Result
			3kHz to 500kHz	dBm/s	500kHz	
155	5775 MHz	-16.63	22.22	5.59	30.00	Complies

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Temperature	22°C	Humidity	55%					
Test Engineer	Serway Li	Configurations	IEEE 802.11ac					
Test Date	Jun. 16, 2014	Jun. 16, 2014						
Test Mode	Mode 1 (Ant. 2 Dipole an	tenna / 5dBi / 2TX)						

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	4.42	14.99	Complies
40	5200 MHz	8.00	14.99	Complies
48	5240 MHz	8.48	14.99	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.01$ dBi >6dBi,So Band1 Limit =17-(8.01-6)=14.99dBm/MHz

Channel	Frequency	Power Density (dBm/3kHz)			BWCF factor	Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Total	3kHz to 500kHz	dBm/500kHz		
149	5745 MHz	-11.87	-11.49	-8.67	22.22	13.55	27.99	Complies
157	5785 MHz	-5.14	-4.05	-1.55	22.22	20.67	27.99	Complies
165	5825 MHz	-11.52	-11.19	-8.34	22.22	13.88	27.99	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.01\ dBi > 6\ dBi, So\ Band4\ Limit = 30-(8.01-6) = 27.99\ dBm$ 

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	•	
38	5190 MHz	-1.66	14.99	Complies
46	5230 MHz	4.44	14.99	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.01$ dBi >6dBi,So Band1 Limit =17-(8.01-6)=14.99dBm/MHz

Channel	Frequency	Power	,		BWCF factor	Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Total	3kHz to 500kHz	dBm/500kHz		
151	5755 MHz	-15.20	-14.94	-12.06	22.22	10.16	27.99	Complies
159	5795 MHz	-14.78	-14.55	-11.65	22.22	10.57	27.99	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.01\ dBi > 6\ dBi, So\ Band4\ Limit = 30-(8.01-6) = 27.99\ dBm$ 

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# Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210 MHz	-4.60	14.99	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.01$ dBi >6dBi,So Band1 Limit =17-(8.01-6)=14.99dBm/MHz

Channel	Frequency	Power	,, ,		BWCF factor	Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Total	3kHz to 500kHz	dBm/s	500kHz	
155	5775 MHz	-17.15	-15.45	-13.21	22.22	9.01	27.99	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.01 dBi > 6 dBi, So\ Band4\ Limit = 30-(8.01-6) = 27.99 dBm$ 

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Temperature	22°C	Humidity	55%					
Test Engineer	Serway Li	Configurations	IEEE 802.11ac					
Test Date	Jun. 16, 2014	Jun. 16, 2014						
Test Mode	Mode 1 (Ant. 2 Dipole an	tenna / 5dBi / 3TX)						

### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	4.86	13.23	Complies
40	5200 MHz	7.82	13.23	Complies
48	5240 MHz	8.20	13.23	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.77 dBi > 6 dBi, So\ Band1\ Limit = 17-(9.77-6) = 13.23 dBm/MHz$ 

Channel	Frequency	Pow				BWCF factor	Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Chain 3	Total	3kHz to 500kHz	dBm/s	500kHz	
149	5745 MHz	-12.17	-11.16	-12.11	-7.02	22.22	15.20	26.23	Complies
157	5785 MHz	-7.03	-6.62	-6.95	-2.09	22.22	20.13	26.23	Complies
165	5825 MHz	-12.59	-11.43	-12.86	-7.48	22.22	14.74	26.23	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.77 dBi > 6 dBi, So\ Band4\ Limit = 30-(9.77-6) = 26.23 dBm$ 

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	-0.96	13.23	Complies
46	5230 MHz	4.20	13.23	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.77 dBi > 6 dBi, So\ Band1\ Limit = 17-(9.77-6) = 13.23 dBm/MHz$ 

Channel	Frequency	Pow				BWCF factor	Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Chain 3	Total	3kHz to 500kHz	dBm/s	500kHz	
151	5755 MHz	-16.89	-15.48	-15.74	-11.22	22.22	11.00	26.23	Complies
159	5795 MHz	-13.58	-14.54	-15.27	-9.64	22.22	12.58	26.23	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.77$ dBi >6dBi,So Band4 Limit =30-(9.77-6)=26.23dBm

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### Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210 MHz	-4.95	13.23	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.77 dBi > 6 dBi, So\ Band1\ Limit = 17-(9.77-6) = 13.23 dBm/MHz$ 

Channel	Frequency	Pow	, , ,		BWCF factor	Total Power Density	Power Density Limit	Result	
		Chain 1	Chain 2	Chain 3	Total	3kHz to 500kHz	dBm/s	500kHz	
155	5775 MHz	-19.08	-16.81	-19.94	-13.63	22.22	8.59	26.23	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.77$ dBi >6dBi,So Band4 Limit =30-(9.77-6)=26.23dBm

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Temperature	22°C	Humidity	55%					
Test Engineer	Wen Chao	Configurations	IEEE 802.11ac					
Test Date	Jun. 18, 2014	Jun. 18, 2014						
Test Mode	Mode 2 (Ant. 4 Panel ante	Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 1TX)						

# Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	4.75	17.00	Complies
40	5200 MHz	8.46	17.00	Complies
48	5240 MHz	8.39	17.00	Complies

Channel	Frequency	Total Power Density (dBm/3kHz)	BWCF factor	Total Power Density	Power Density Limit	Result
			3kHz to 500kHz	dBm/s	500kHz	Complies
149	5745 MHz	-10.42	22.22	11.80	30.00	Complies
157	5785 MHz	-4.25	22.22	17.97	30.00	Complies
165	5825 MHz	-8.93	22.22	13.29	30.00	Complies

# Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	0.29	17.00	Complies
46	5230 MHz	5.54	17.00	Complies

Channel	Frequency	Total Power Density (dBm/3kHz)	BWCF factor	Total Power Density	Power Density Limit	Result
			3kHz to 500kHz	dBm/s	500kHz	
151	5755 MHz	-13.24	22.22	8.98	30.00	Complies
159	5795 MHz	-10.19	22.22	12.03	30.00	Complies

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## Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210 MHz	-3.26	17.00	Complies

Channel	Frequency	Total Power Density (dBm/3kHz)	BWCF factor	Total Power Density	Power Density Limit	Result
			3kHz to 500kHz	dBm/5	500kHz	
155	5775 MHz	-15.16	22.22	7.06	30.00	Complies

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Temperature	22°C	Humidity	55%					
Test Engineer	Wen Chao	Configurations	IEEE 802.11ac					
Test Date	Jun. 18, 2014	lun. 18, 2014						
Test Mode	Mode 2 (Ant. 4 Panel ante	enna / 5.1dBi / 2TX)						

### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	5.86	14.89	Complies
40	5200 MHz	10.11	14.89	Complies
48	5240 MHz	10.98	14.89	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.11$ dBi >6dBi,So Band1 Limit =17-(8.11-6)=14.89dBm/MHz

Channel	Frequency	Power	Density (dBn	n/3kHz)	BWCF factor	Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Total	3kHz to 500kHz	dBm/s	500kHz	
149	5745 MHz	-11.76	-11.68	-8.71	22.22	13.51	27.89	Complies
157	5785 MHz	-4.97	-4.91	-1.93	22.22	20.29	27.89	Complies
165	5825 MHz	-12.46	-11.53	-8.96	22.22	13.26	27.89	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.11 dBi > 6 dBi, So\ Band4\ Limit = 30-(8.11-6) = 27.89 dBm$ 

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2

Channel	Frequency	Total Power Density Max. Limit (dBm/MHz) (dBm/MHz)		Result
38	5190 MHz	1.30	14.89	Complies
46	5230 MHz	5.64	14.89	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.11$ dBi >6dBi,So Band1 Limit =17-(8.11-6)=14.89dBm/MHz

Channel	Frequency	Power	Power Density (dBm/3kHz)			Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Total	3kHz to 500kHz	dBm/s	500kHz	
151	5755 MHz	-15.13	-14.93	-12.02	22.22	10.20	27.89	Complies
159	5795 MHz	-15.81	-13.90	-11.74	22.22	10.48	27.89	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.11$ dBi >6dBi,So Band4 Limit =30-(8.11-6)=27.89dBm

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# Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210 MHz	-1.75	14.89	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.11$ dBi >6dBi,So Band1 Limit =17-(8.11-6)=14.89dBm/MHz

Channel	Frequency	Power	, ,		BWCF factor	Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Total	3kHz to 500kHz	dBm/s	500kHz	
155	5775 MHz	-19.19	-16.84	-14.85	22.22	7.37	27.89	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.11 dBi > 6 dBi, So\ Band4\ Limit = 30-(8.11-6) = 27.89 dBm$ 

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Temperature	22°C	Humidity	55%					
Test Engineer	Wen Chao	Configurations	IEEE 802.11ac					
Test Date	Jun. 18, 2014	un. 18, 2014						
Test Mode	Mode 2 (Ant. 4 Panel ante	enna / 5.1dBi / 3TX)						

### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	7.72	13.13	Complies
40	5200 MHz	9.58	13.13	Complies
48	5240 MHz	10.55	13.13	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.87 dBi > 6 dBi, So\ Band1\ Limit = 17-(9.87-6) = 13.13 dBm/MHz$ 

Channel	Frequency	Pow	er Density	/ (dBm/3kl	Hz)	BWCF factor	Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Chain 3	Total	3kHz to 500kHz	dBm/s	500kHz	
149	5745 MHz	-11.25	-11.29	-12.00	-6.73	22.22	15.49	26.13	Complies
157	5785 MHz	-6.83	-6.31	-7.27	-2.01	22.22	20.21	26.13	Complies
165	5825 MHz	-11.71	-11.32	-10.76	-6.47	22.22	15.75	26.13	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.87 dBi > 6 dBi, So\ Band4\ Limit = 30-(9.87-6) = 26.13 dBm$ 

### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density Max. Limit (dBm/MHz) (dBm/MHz)		Result
38	5190 MHz	1.28	13.13	Complies
46	5230 MHz	5.96	13.13	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.87 dBi$  >6dBi,So Band1 Limit = 17-(9.87-6)=13.13dBm/MHz

Channel	Frequency	requency	BWCF factor	Total Power Density	Power Density Limit	Result			
		Chain 1	Chain 2	Chain 3	Total	3kHz to 500kHz	dBm/5	500kHz	
151	5755 MHz	-15.60	-13.66	-15.03	-9.91	22.22	12.31	26.13	Complies
159	5795 MHz	-13.74	-13.70	-13.66	-8.93	22.22	13.29	26.13	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.87$ dBi >6dBi,So Band4 Limit =30-(9.87-6)=26.13dBm

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### Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210 MHz	-3.08	13.13	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.87 dBi > 6 dBi, So\ Band1\ Limit = 17-(9.87-6) = 13.13 dBm/MHz$ 

Channel	Frequency	Pow	,,			BWCF factor	Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Chain 3	Total	3kHz to 500kHz	dBm/s	500kHz	
155	5775 MHz	-20.33	-16.51	-18.92	-13.52	22.22	8.70	26.13	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.87$ dBi >6dBi,So Band4 Limit =30-(9.87-6)=26.13dBm

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#### <For Beamforming Mode>

Temperature	<b>22</b> °C	Humidity	55%			
Test Engineer	Serway Li	Configurations	IEEE 802.11ac			
Test Date	Jun. 16, 2014					
Test Mode	Mode 1 (Ant. 2 Dipole antenna / 5dBi / 2TX)					

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	3.58	14.99	Complies
40	5200 MHz	7.30	14.99	Complies
48	5240 MHz	7.90	14.99	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.01 dBi > 6 dBi, So\ Band1\ Limit = 17-(8.01-6) = 14.99 dBm/MHz$ 

Channel	Frequency	Power	Power Density (dBm/3kHz)			Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Total	3kHz to 500kHz	dBm/s	500kHz	
149	5745 MHz	-11.87	-11.49	-8.67	22.22	13.55	27.99	Complies
157	5785 MHz	-7.11	-6.60	-3.84	22.22	18.38	27.99	Complies
165	5825 MHz	-11.52	-11.19	-8.34	22.22	13.88	27.99	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.01$ dBi >6dBi,So Band4 Limit =30-(8.01-6)=27.99dBm

### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2

Channel	Frequency	Total Power Density Max. Limit (dBm/MHz) (dBm/MHz)		Result
38	5190 MHz	-2.31	14.99	Complies
46	5230 MHz	3.75	14.99	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.01$ dBi >6dBi,So Band1 Limit =17-(8.01-6)=14.99dBm/MHz

Channel	Frequency	Power	Density (dBn	n/3kHz)	BWCF factor	Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Total	3kHz to 500kHz	dBm/5	500kHz	
151	5755 MHz	-16.40	-15.81	-13.08	22.22	9.14	27.99	Complies
159	5795 MHz	-15.95	-15.25	-12.58	22.22	9.64	27.99	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.01 dBi > 6 dBi, So\ Band4\ Limit = 30-(8.01-6) = 27.99 dBm$ 

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# Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210 MHz	-5.31	14.99	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.01 dBi > 6 dBi, So\ Band1\ Limit = 17-(8.01-6) = 14.99 dBm/MHz$ 

Channel	Frequency	Power	, , ,		BWCF factor	Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Total	3kHz to 500kHz	dBm/s	500kHz	
155	5775 MHz	-18.83	-18.15	-15.47	22.22	6.75	27.99	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.01 dBi > 6 dBi, So\ Band4\ Limit = 30-(8.01-6) = 27.99 dBm$ 

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Temperature	22°C	Humidity	55%				
Test Engineer	Serway Li	Configurations	IEEE 802.11ac				
Test Date	Jun. 16, 2014						
Test Mode	Mode 1 (Ant. 2 Dipole antenna / 5dBi / 3TX)						

### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	5.74	13.23	Complies
40	5200 MHz	7.54	13.23	Complies
48	5240 MHz	8.12	13.23	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.77$ dBi >6dBi,So Band1 Limit =17-(9.77-6)=13.23dBm/MHz

Channel	Frequency	Pow	Power Density (dBm/3kHz)				Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Chain 3	Total	3kHz to 500kHz	dBm/s	500kHz	
149	5745 MHz	-12.20	-11.68	-11.73	-7.09	22.22	15.13	26.23	Complies
157	5785 MHz	-9.36	-8.67	-8.15	-3.93	22.22	18.29	26.23	Complies
165	5825 MHz	-13.60	-11.08	-13.12	-7.69	22.22	14.53	26.23	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.77 dBi > 6 dBi, So\ Band4\ Limit = 30-(9.77-6) = 26.23 dBm$ 

### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	-1.20	13.23	Complies
46	5230 MHz	4.05	13.23	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.77 dBi > 6 dBi, So\ Band1\ Limit = 17-(9.77-6) = 13.23 dBm/MHz$ 

Channel	Frequency	Pow			BWCF factor	Total Power Density	Power Density Limit	Result	
		Chain 1	Chain 2	Chain 3	Total	3kHz to 500kHz	dBm/5	500kHz	
151	5755 MHz	-16.02	-14.92	-16.02	-10.85	22.22	11.37	26.23	Complies
159	5795 MHz	-14.78	-13.94	-15.82	-10.01	22.22	12.21	26.23	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.77 dBi > 6 dBi, So\ Band4\ Limit = 30-(9.77-6) = 26.23 dBm$ 

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### Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210 MHz	-6.33	13.23	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.77 dBi > 6 dBi, So\ Band1\ Limit = 17-(9.77-6) = 13.23 dBm/MHz$ 

Channel	Frequency	Pow	,,,,,		BWCF factor	Total Power Density	Power Density Limit	Result	
		Chain 1	Chain 2	Chain 3	Total	3kHz to 500kHz	dBm/s	500kHz	
155	5775 MHz	-20.69	-19.83	-19.89	-15.35	22.22	6.87	26.23	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.77 dBi > 6 dBi, So\ Band4\ Limit = 30-(9.77-6) = 26.23 dBm$ 

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Temperature	22°C	Humidity	55%					
Test Engineer	Wen Chao	Configurations	IEEE 802.11ac					
Test Date	Jun. 18, 2014	Jun. 18, 2014						
Test Mode	Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 2TX)							

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	4.89	14.89	Complies
40	5200 MHz	9.67	14.89	Complies
48	5240 MHz	8.50	14.89	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.11$ dBi >6dBi,So Band1 Limit =17-(8.11-6)=14.89dBm/MHz

Channel	Frequency	Power	Density (dBn	n/3kHz)	BWCF factor	Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Total	3kHz to 500kHz	dBm/s	500kHz	
149	5745 MHz	-12.61	-12.64	-9.61	22.22	12.61	27.89	Complies
157	5785 MHz	-9.12	-5.61	-4.01	22.22	18.21	27.89	Complies
165	5825 MHz	-12.88	-11.05	-8.86	22.22	13.36	27.89	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.11 dBi > 6 dBi, So\ Band4\ Limit = 30-(8.11-6) = 27.89 dBm$ 

### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2

Channel	Frequency	Total Power Density Max. Limit (dBm/MHz) (dBm/MHz)		Result	
38	5190 MHz	-0.56	14.89	Complies	
46	5230 MHz	3.93	14.89	Complies	

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.11$ dBi >6dBi,So Band1 Limit =17-(8.11-6)=14.89dBm/MHz

Channel	Frequency	Power	Density (dBn	n/3kHz)	BWCF factor	Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Total	3kHz to 500kHz	dBm/s	500kHz	
151	5755 MHz	-16.63	-14.81	-12.62	22.22	9.60	27.89	Complies
159	5795 MHz	-14.74	-13.50	-11.07	22.22	11.15	27.89	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.11 dBi > 6 dBi, So\ Band4\ Limit = 30-(8.11-6) = 27.89 dBm$ 

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# Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210 MHz	-5.27	14.89	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.11$ dBi >6dBi,So Band1 Limit =17-(8.11-6)=14.89dBm/MHz

Channel	Frequency	Power	, ,		BWCF factor	Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Total	3kHz to 500kHz	dBm/s	500kHz	
155	5775 MHz	-19.98	-17.25	-15.39	22.22	6.83	27.89	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 8.11 dBi > 6 dBi, So\ Band4\ Limit = 30-(8.11-6) = 27.89 dBm$ 

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Temperature	22°C	Humidity	55%					
Test Engineer	Wen Chao	Configurations	IEEE 802.11ac					
Test Date	Jun. 18, 2014							
Test Mode	Mode 2 (Ant. 4 Panel ante	Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 3TX)						

### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	6.41	13.13	Complies
40	5200 MHz	9.58	13.13	Complies
48	5240 MHz	10.10	13.13	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.87 dBi > 6 dBi, So\ Band1\ Limit = 17-(9.87-6) = 13.13 dBm/MHz$ 

Channel	Frequency	Pow	Power Density (dBm/3kHz)				Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Chain 3	Total	3kHz to 500kHz	dBm/s	500kHz	
149	5745 MHz	-12.40	-12.69	-11.90	-7.55	22.22	14.67	26.13	Complies
157	5785 MHz	-8.71	-8.01	-8.84	-3.73	22.22	18.49	26.13	Complies
165	5825 MHz	-12.25	-11.02	-12.01	-6.96	22.22	15.26	26.13	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.87 dBi > 6 dBi, So\ Band4\ Limit = 30-(9.87-6) = 26.13 dBm$ 

### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density Max. Limit (dBm/MHz) (dBm/MHz)		Result
38	5190 MHz	1.01	13.13	Complies
46	5230 MHz	5.96	13.13	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.87 dBi > 6 dBi, So\ Band1\ Limit = 17-(9.87-6) = 13.13 dBm/MHz$ 

Channel	Frequency	Pow	er Density	/ (dBm/3kl	Hz)	BWCF factor	Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Chain 3	Total	3kHz to 500kHz	dBm/s	500kHz	
151	5755 MHz	-15.96	-15.99	-14.45	-10.63	22.22	11.59	26.13	Complies
159	5795 MHz	-14.77	-13.47	-15.19	-9.64	22.22	12.58	26.13	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.87 dBi > 6 dBi, So\ Band4\ Limit = 30-(9.87-6) = 26.13 dBm$ 

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### Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210 MHz	-4.85	13.13	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.87 dBi > 6 dBi, So\ Band1\ Limit = 17-(9.87-6) = 13.13 dBm/MHz$ 

Channel	Frequency	Pow				BWCF factor	Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Chain 3	Total	3kHz to 500kHz	dBm/5	500kHz	
155	5775 MHz	-20.51	-17.74	-19.74	-14.40	22.22	7.82	26.13	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 9.87 dBi > 6 dBi, So\ Band4\ Limit = 30-(9.87-6) = 26.13 dBm$ 

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#### <For STBC Mode>

Temperature	<b>22</b> °C	Humidity	55%					
Test Engineer	Serway Li	Configurations	IEEE 802.11ac					
Test Date	Jun. 16, 2014	Jun. 16, 2014						
Test Mode	Mode 1 (Ant. 2 Dipole antenna / 5dBi / 2TX)							

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	4.77	17.00	Complies
40	5200 MHz	7.82	17.00	Complies
48	5240 MHz	8.00	17.00	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5$ dBi <6dBi, so the limit doesn't reduce.

Channel	Frequency	Power	Power Density (dBm/3kHz)			Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Total	3kHz to 500kHz	dBm/s		
149	5745 MHz	-10.49	-9.94	-7.20	22.22	15.02	30.00	Complies
157	5785 MHz	-6.37	-5.37	-2.83	22.22	19.39	30.00	Complies
165	5825 MHz	-10.59	-10.26	-7.41	22.22	14.81	30.00	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5$ dBi <6dBi, so the limit doesn't reduce.

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	-0.81	17.00	Complies
46	5230 MHz	4.40	17.00	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5 dBi < 6 dBi$ , so the limit doesn't reduce.

Channel	Frequency	Power	Power Density (dBm/3kHz)			Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Total	3kHz to 500kHz	dBm/5		
151	5755 MHz	-15.74	-14.76	-12.21	22.22	10.01	30.00	Complies
159	5795 MHz	-13.88	-13.42	-10.63	22.22	11.59	30.00	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5$ dBi <6dBi, so the limit doesn't reduce.

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### Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result	
42	5210 MHz	-4.79	17.00	Complies	

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5$ dBi <6dBi, so the limit doesn't reduce.

Channel	Frequency	Power	, , ,		BWCF factor	Total Power Density	Power Density Limit	Result
		Chain 1 Chain 2 Total			3kHz to 500kHz	dBm/s	500kHz	
155	5775 MHz	-17.62	-16.89	-14.23	22.22	7.99	30.00	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5$ dBi <6dBi, so the limit doesn't reduce.

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Temperature	22°C	Humidity	55%						
Test Engineer	Serway Li	Configurations	IEEE 802.11ac						
Test Date	Jun. 16, 2014	Jun. 16, 2014							
Test Mode	Mode 1 (Ant. 2 Dipole and	Mode 1 (Ant. 2 Dipole antenna / 5dBi / 3TX)							

### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	5.81	17.00	Complies
40	5200 MHz	8.82	17.00	Complies
48	5240 MHz	9.57	17.00	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5$ dBi <6dBi, so the limit doesn't reduce.

Channel	Frequency	Pow				BWCF factor	Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Chain 3	Total	3kHz to 500kHz	dBm/s	500kHz	
149	5745 MHz	-10.88	-10.78	-10.35	-5.89	22.22	16.33	30.00	Complies
157	5785 MHz	-5.29	-6.87	-6.78	-1.48	22.22	20.74	30.00	Complies
165	5825 MHz	-10.81	-10.66	-10.63	-5.93	22.22	16.29	30.00	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5$ dBi <6dBi, so the limit doesn't reduce.

### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	-1.47	17.00	Complies
46	5230 MHz	5.17	17.00	Complies

Note:  $Directional\ gain = G_{ANT} + \overline{10\ log(N_{ANT}/N_{SS})} = 5$ dBi <6dBi, so the limit doesn't reduce.

Channel	Frequency	Pow	er Density	(dBm/3kl	Hz)	BWCF factor	Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Chain 3	Total	3kHz to 500kHz	dBm/5		
151	5755 MHz	-14.40	-14.79	-14.01	-9.62	22.22	12.60	30.00	Complies
159	5795 MHz	-13.46	-14.71	-14.02	-9.26	22.22	12.96	30.00	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5$ dBi <6dBi, so the limit doesn't reduce.

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### Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210 MHz	-4.81	17	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5$ dBi <6dBi, so the limit doesn't reduce.

Channel	nannel Frequency / /			BWCF factor	Total Power Density	Power Density Limit	Result		
		Chain 1	Chain 2	Chain 3	Total	3kHz to 500kHz	dBm/5	500kHz	
155	5775 MHz	-18.92	-17.46	-18.58	-13.50	22.22	8.72	30.00	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5$ dBi <6dBi, so the limit doesn't reduce.

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Temperature	22°C	Humidity	55%					
Test Engineer	Wen Chao	Configurations	IEEE 802.11ac					
Test Date	Jun. 18, 2014	Jun. 18, 2014						
Test Mode	Mode 2 (Ant. 4 Panel ante	Mode 2 (Ant. 4 Panel antenna / 5.1 dBi / 2TX)						

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	6.80	17.00	Complies
40	5200 MHz	10.91	17.00	Complies
48	5240 MHz	11.01	17.00	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5.1$ dBi <6dBi, so the limit doesn't reduce.

Channel	Frequency	Power	Power Density (dBm/3kHz)			Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Total	3kHz to 500kHz	dBm/s		
149	5745 MHz	-11.41	-11.49	-8.44	22.22	13.78	30.00	Complies
157	5785 MHz	-4.88	-3.96	-1.39	22.22	20.83	30.00	Complies
165	5825 MHz	-10.07	-9.55	-6.79	22.22	15.43	30.00	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5.1\ dBi < 6\ dBi$ , so the limit doesn't reduce.

#### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	1.93	17.00	Complies
46	5230 MHz	6.30	17.00	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5.1 dBi < 6dBi$ , so the limit doesn't reduce.

Channel	Frequency	Power	Power Density (dBm/3kHz)			Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Total	3kHz to 500kHz	dBm/500kHz		
151	5755 MHz	-13.78	-12.47	-10.07	22.22	12.15	30.00	Complies
159	5795 MHz	-13.85	-12.75	-10.25	22.22	11.97	30.00	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5.1 dBi < 6 dBi$ , so the limit doesn't reduce.

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# Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
42	5210 MHz	-1.70	17.00	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5.1 dBi < 6 dBi$ , so the limit doesn't reduce.

Channel	inel Frequency		BWCF factor	Total Power Density	Power Density Limit	Result		
		Chain 1	Chain 1 Chain 2 Total		3kHz to 500kHz	dBm/5	500kHz	
155	5775 MHz	-18.94	-16.43	-14.50	22.22	7.72	30.00	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5.1 dBi < 6dBi$ , so the limit doesn't reduce.

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Temperature	22°C	Humidity	55%					
Test Engineer	Wen Chao	Configurations	IEEE 802.11ac					
Test Date	Jun. 18, 2014	Jun. 18, 2014						
Test Mode	Mode 2 (Ant. 4 Panel ante	Mode 2 (Ant. 4 Panel antenna / 5.1 dBi / 3TX)						

### Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
36	5180 MHz	7.17	17.00	Complies
40	5200 MHz	9.54	17.00	Complies
48	5240 MHz	9.29	17.00	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5.1$ dBi <6dBi, so the limit doesn't reduce.

Channel	Frequency	Pow	Power Density (dBm/3kHz)				Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2	Chain 3	Total	3kHz to 500kHz	dBm/s	500kHz	
149	5745 MHz	-12.14	-13.37	-11.24	-7.39	22.22	14.83	30.00	Complies
157	5785 MHz	-6.48	-5.94	-6.66	-1.58	22.22	20.64	30.00	Complies
165	5825 MHz	-10.30	-9.33	-9.20	-4.81	22.22	17.41	30.00	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5.1 dBi < 6 dBi$ , so the limit doesn't reduce.

### Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
38	5190 MHz	2.52	17.00	Complies
46	5230 MHz	7.28	17.00	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5.1\ dBi < 6dBi$ , so the limit doesn't reduce.

Channel	Frequency	Pow	er Density	(dBm/3kl	Hz)	BWCF factor	Total Power Density	Power Density Limit	Result
		Chain 1	Chain 2 Chain 3 Total 3kHz to 500kHz dBm/500kHz				500kHz		
151	5755 MHz	-13.69	-13.91	-13.99	-9.09	22.22	13.13	30.00	Complies
159	5795 MHz	-12.89	-13.28	-14.39	-8.70	22.22	13.52	30.00	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5.1\ dBi$ , so the limit doesn't reduce.

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Report No.: FR441804-02AB

## Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Frequency Total Power Density (dBm/MHz)		Result	
42	5210 MHz	-2.04	17.00	Complies	

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5.1 dBi < 6 dBi,$  so the limit doesn't reduce.

Channel	Frequency	Power Density (dBm/3kHz)			BWCF factor	Total Power Density	Power Density Limit	Result	
		Chain 1	Chain 2	Chain 3	Total	3kHz to 500kHz	dBm/500kHz		
155	5775 MHz	-19.11	-17.70	-17.26	-13.18	22.22	9.04	30.00	Complies

Note:  $Directional\ gain = G_{ANT} + 10\ log(N_{ANT}/N_{SS}) = 5.1 dBi < 6 dBi$ , so the limit doesn't reduce.

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

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

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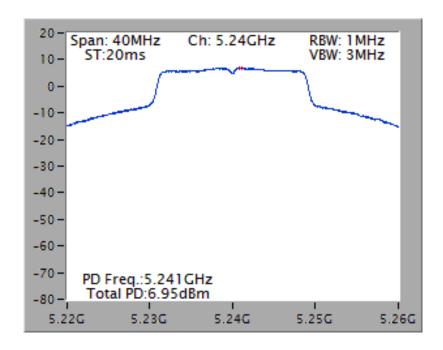




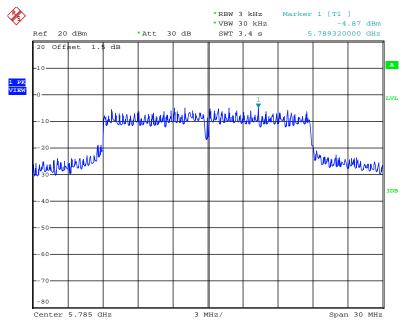
<For Non-Beamforming Mode>

Mode 1 (Ant. 2 Dipole antenna / 5dBi / 1TX)

Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT20 / Chain 2 / 5240 MHz



## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5785 MHz



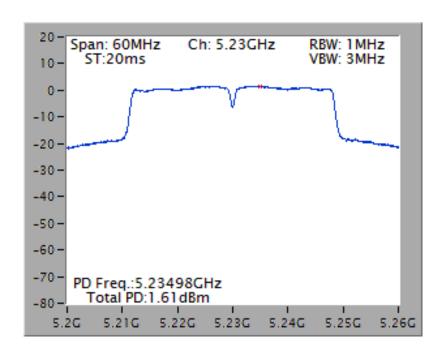
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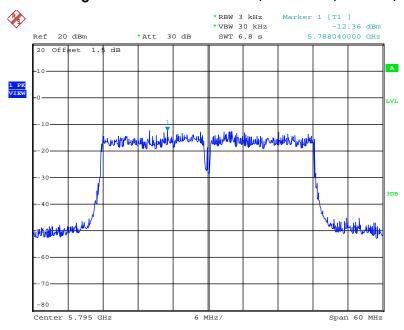




#### Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT40 / Chain 2 / 5230 MHz



### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2 / 5795 MHz

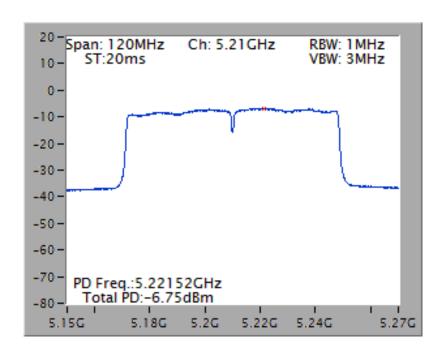


Date: 17.JUN.2014 03:50:28

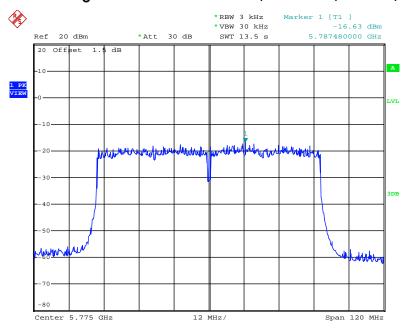




#### Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT80 / Chain 2 / 5210 MHz



### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2 / 5775 MHz

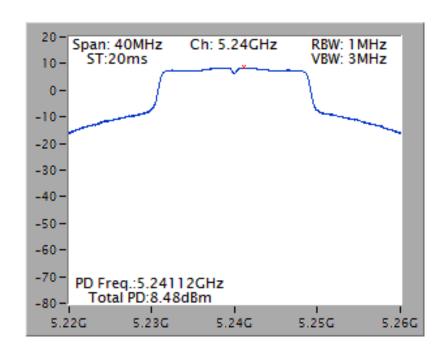


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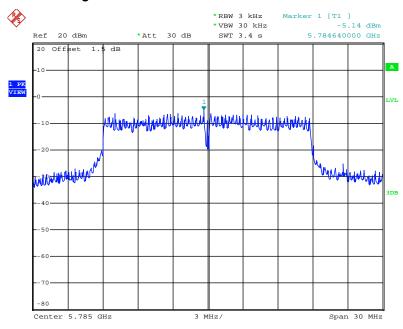


Mode 1 (Ant. 2 Dipole antenna / 5dBi / 2TX)

Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5240 MHz



### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 / 5785 MHz



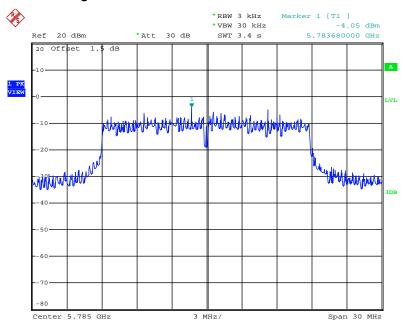
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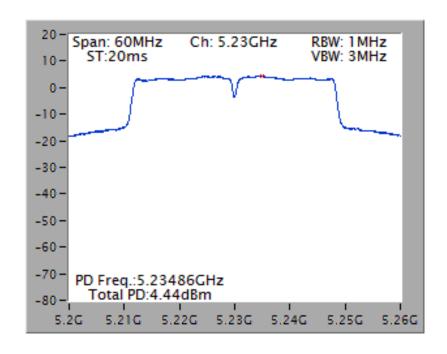


#### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5785 MHz



Date: 17.JUN.2014 04:07:10

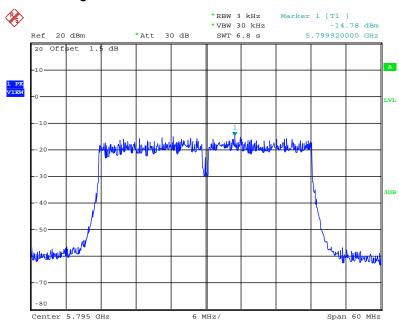
### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5230 MHz



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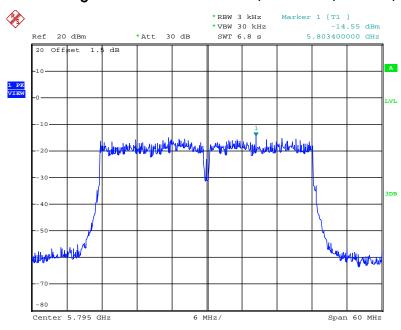


# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 / 5795 MHz



Date: 17.JUN.2014 04:15:58

### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2 / 5795 MHz



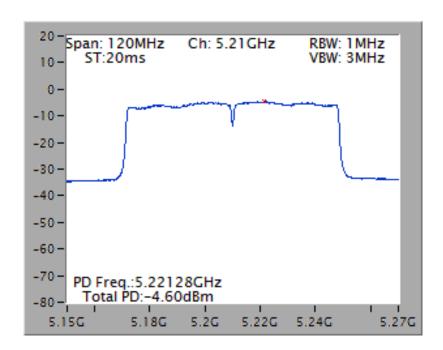
Date: 17.JUN.2014 04:15:28

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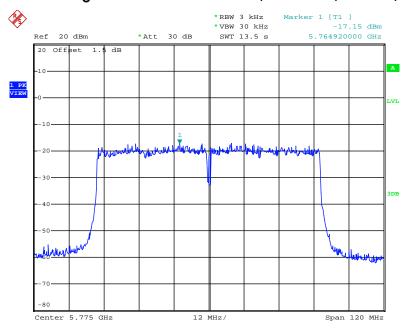




### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5210 MHz



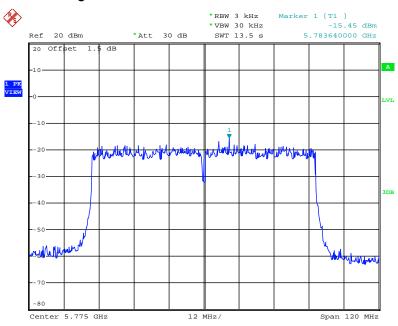
### Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT80 / Chain 1 / 5775 MHz



Date: 17.JUN.2014 04:20:02



# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2 / 5775 MHz

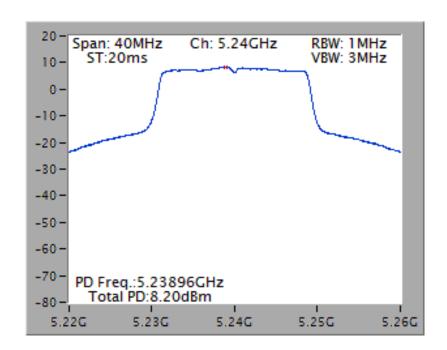


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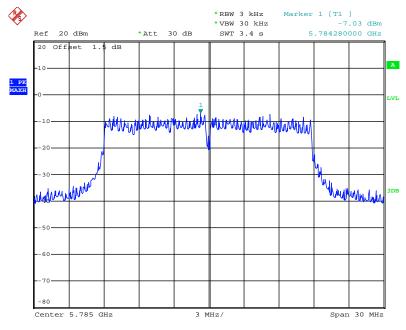


Mode 1 (Ant. 2 Dipole antenna / 5dBi / 3TX)

Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3 / 5240 MHz



## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 / 5785 MHz

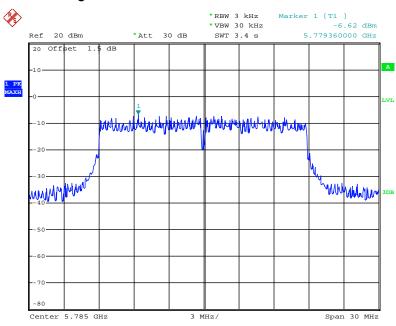


Date: 17.JUN.2014 19:05:57

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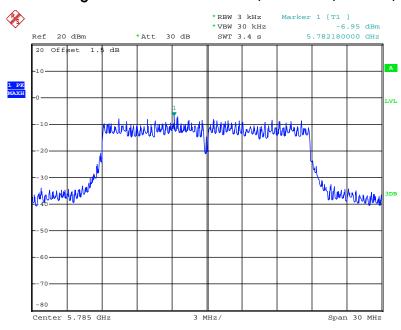


### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5785 MHz



Date: 17.JUN.2014 19:04:51

### Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT20 / Chain 3 / 5785 MHz



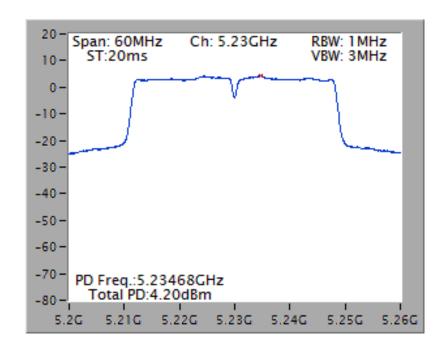
Date: 17.JUN.2014 19:03:41

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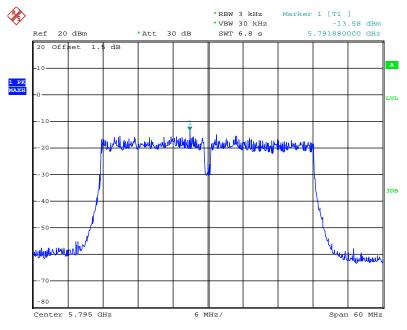




Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3 / 5230 MHz



## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 / 5795 MHz

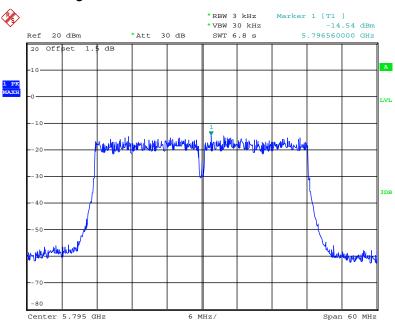


Date: 17.JUN.2014 19:12:46

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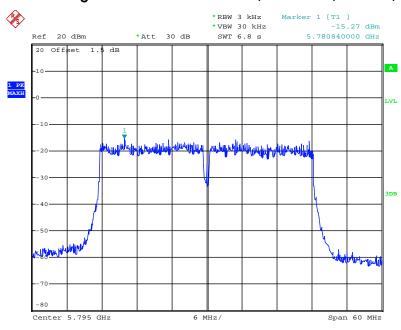


# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2 / 5795 MHz



Date: 17.JUN.2014 19:14:04

### Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT40 / Chain 3 / 5795 MHz



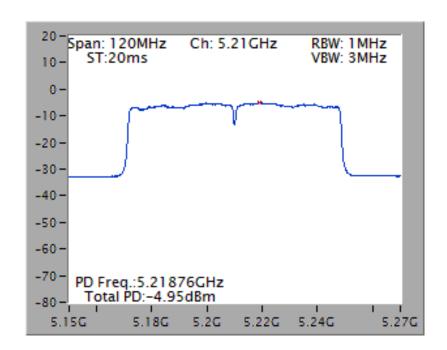
Date: 17.JUN.2014 19:15:15

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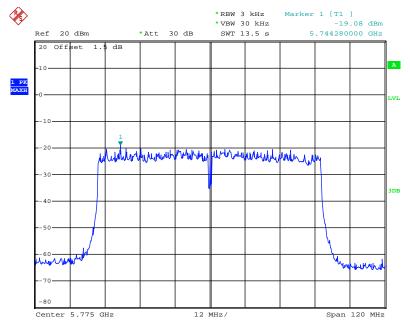




Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3 / 5210 MHz



## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 / 5775 MHz

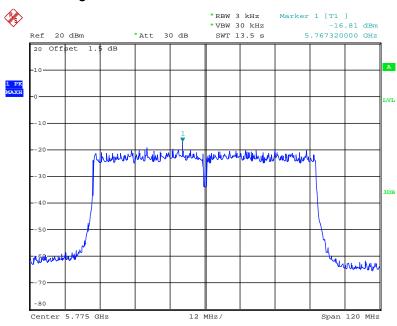


Date: 17.JUN.2014 19:18:54

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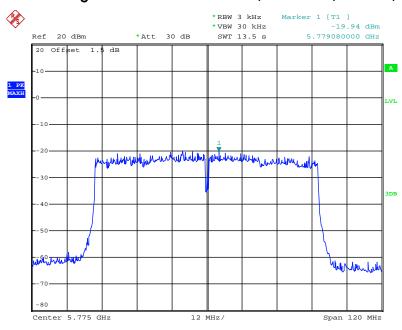


### Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT80 / Chain 2 / 5775 MHz



Date: 17.JUN.2014 19:17:30

### Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT80 / Chain 3 / 5775 MHz

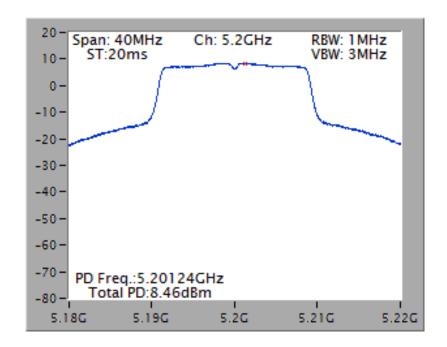


Date: 17.JUN.2014 19:16:21

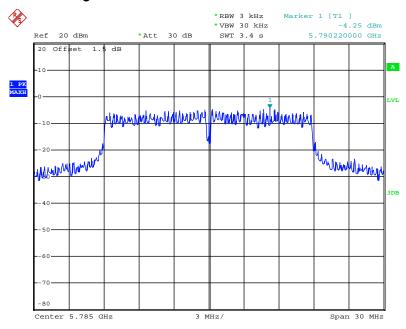


Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 1TX)

Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5200 MHz



### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5785 MHz



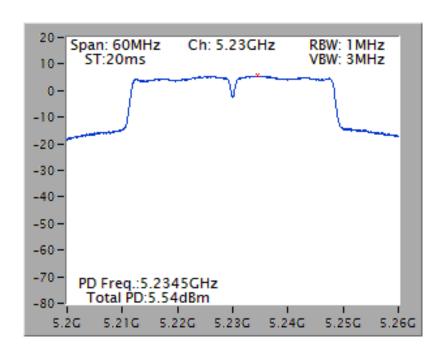
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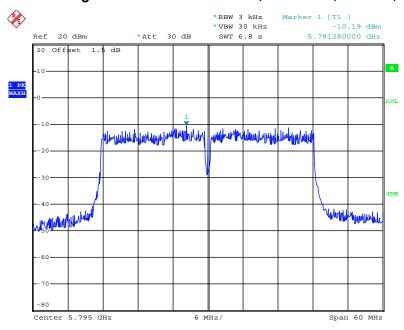




#### Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT40 / Chain 2 / 5230 MHz



### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2 / 5795 MHz

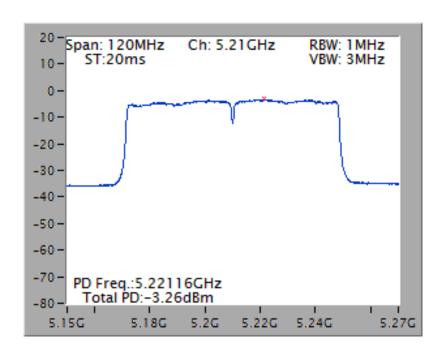


Date: 18.JUN.2014 15:23:32

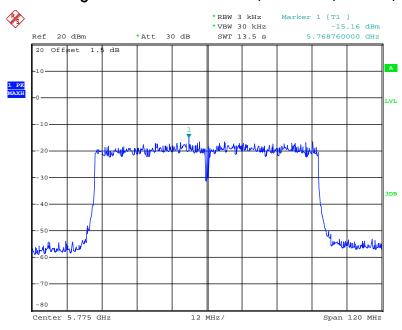




#### Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT80 / Chain 2 / 5210 MHz



### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2 / 5775 MHz

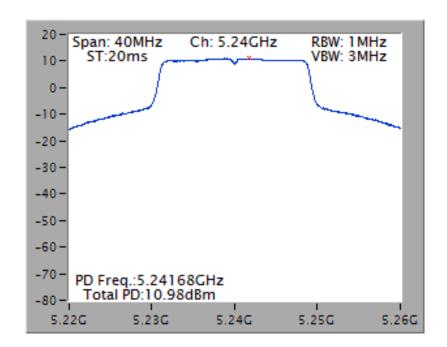


Date: 18.JUN.2014 15:24:20

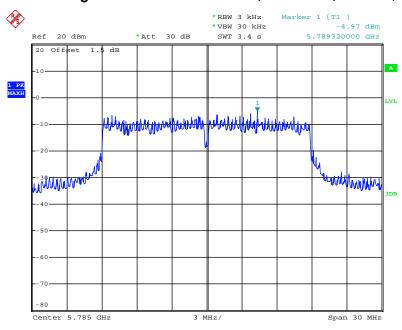


Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 2TX)

## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5240 MHz



### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 / 5785 MHz



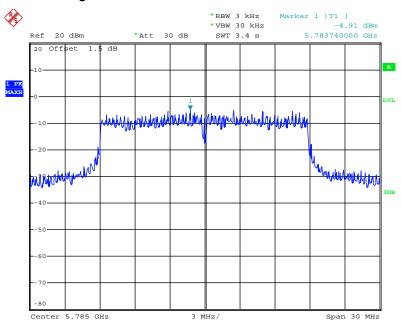
Date: 18.JUN.2014 17:30:22

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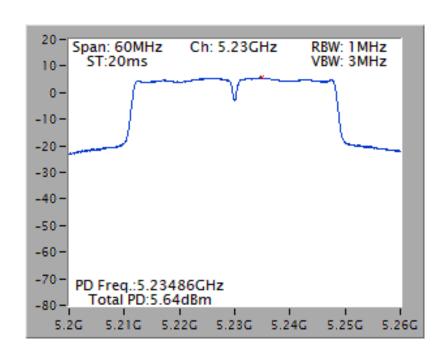


#### Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT20 / Chain 2 / 5785 MHz



Date: 18.JUN.2014 17:27:57

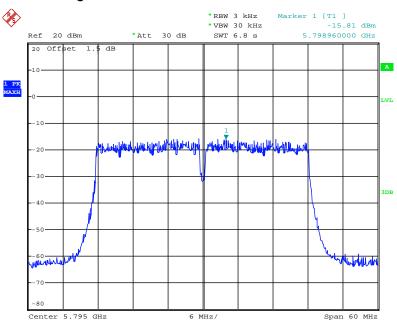
### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5230 MHz



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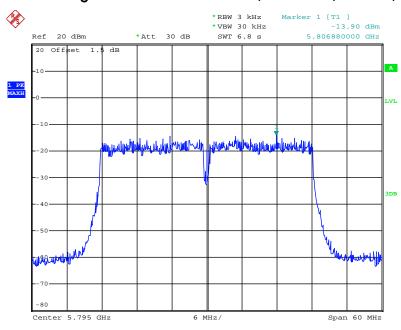


# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 / 5795 MHz



Date: 18.JUN.2014 17:35:06

### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2 / 5795 MHz



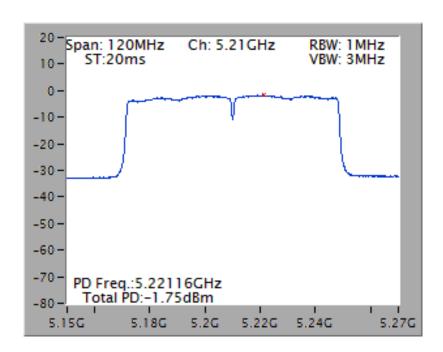
Date: 18.JUN.2014 17:35:51

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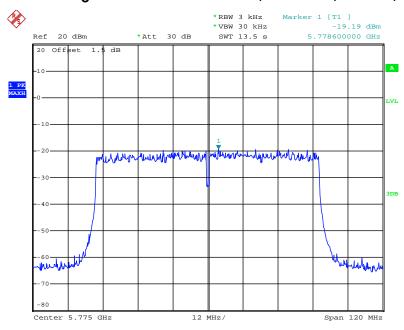




#### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5210 MHz



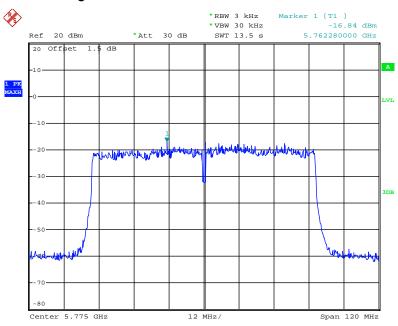
### Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT80 / Chain 1 / 5775 MHz



Date: 18.JUN.2014 17:37:54



# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2 / 5775 MHz

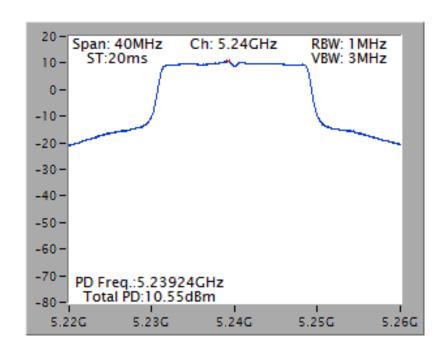


Date: 18.JUN.2014 17:36:54

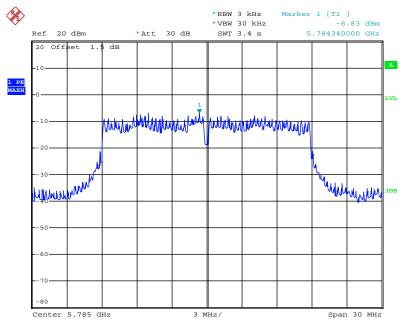


Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 3TX)

Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3 / 5240 MHz



## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 / 5785 MHz

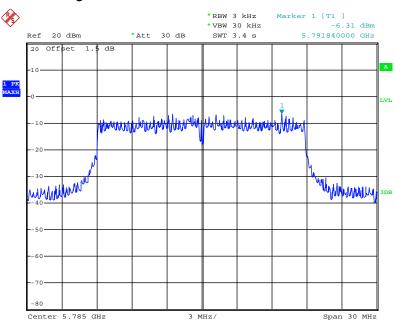


Date: 18.JUN.2014 15:43:00

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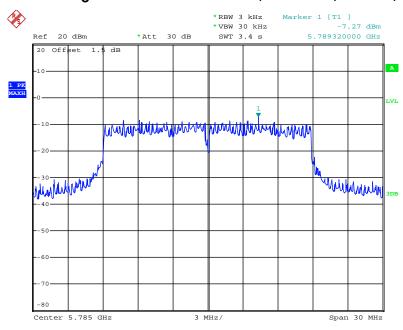


# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5785 MHz



Date: 18.JUN.2014 15:43:52

### Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT20 / Chain 3 / 5785 MHz

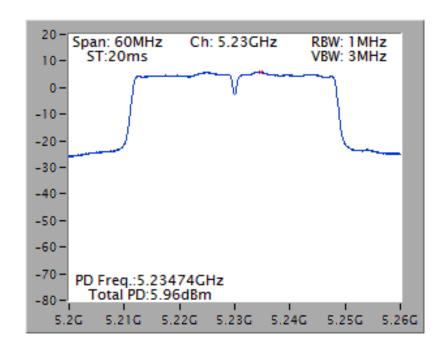


Date: 18.JUN.2014 15:44:43

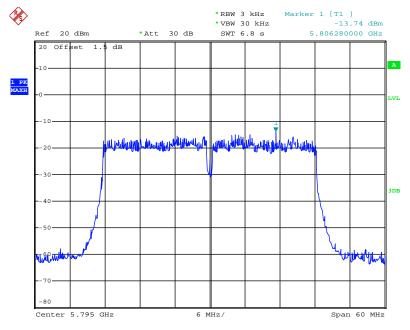




Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3 / 5230 MHz



## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 / 5795 MHz

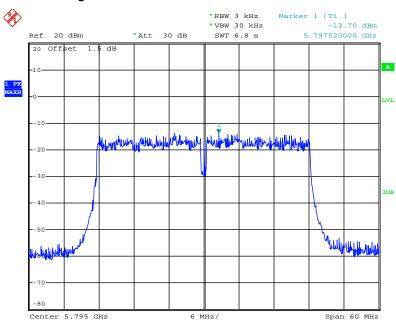


Date: 18.JUN.2014 15:34:02

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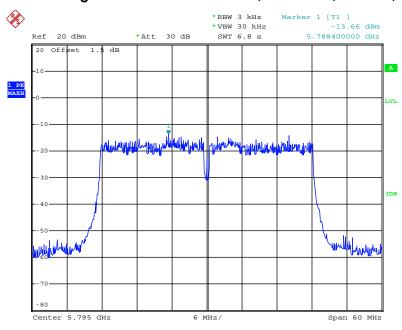


# Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT40 / Chain 2 / 5795 MHz



Date: 18.JUN.2014 15:34:56

### Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT40 / Chain 3 / 5795 MHz



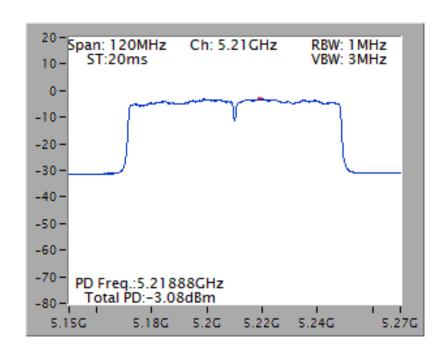
Date: 18.JUN.2014 15:35:46

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FCC ID: UZ7AP7532 Issued Date : Jul. 03, 2014

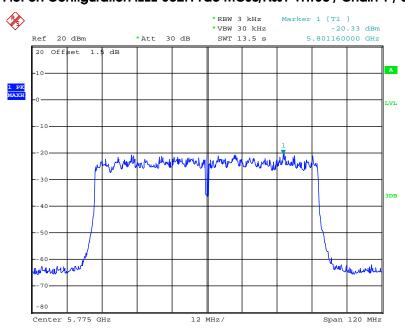




Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3 / 5210 MHz



#### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 / 5775 MHz

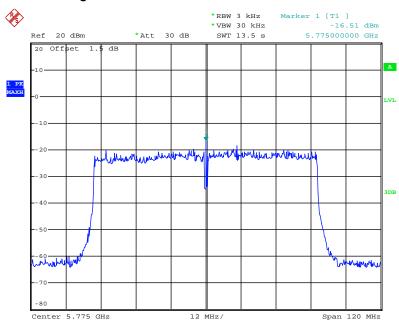


Date: 18.JUN.2014 15:28:46

Report Format Version: Rev. 01 Page No. : 169 of 467
FCC ID: UZ7AP7532 Issued Date : Jul. 03, 2014

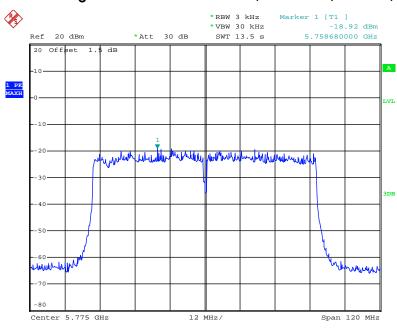


### Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT80 / Chain 2 / 5775 MHz



Date: 18.JUN.2014 15:27:11

### Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT80 / Chain 3 / 5775 MHz



Date: 18.JUN.2014 15:29:49

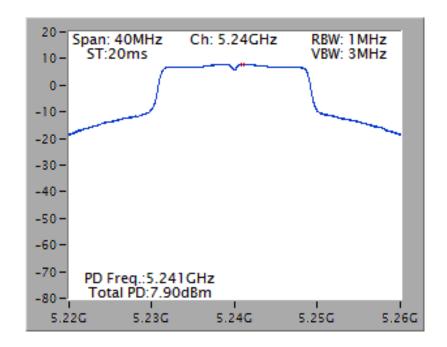
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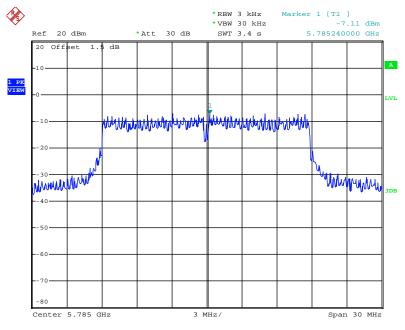
### <For Beamforming Mode>

Mode 1 (Ant. 2 Dipole antenna / 5dBi / 2TX)

Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5240 MHz



## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 / 5785 MHz



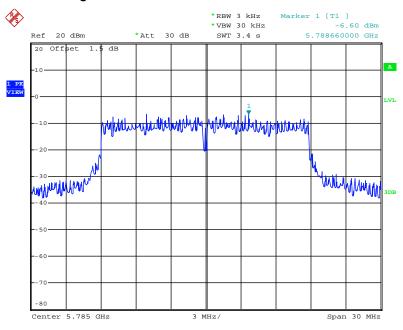
Date: 17.JUN.2014 04:38:50

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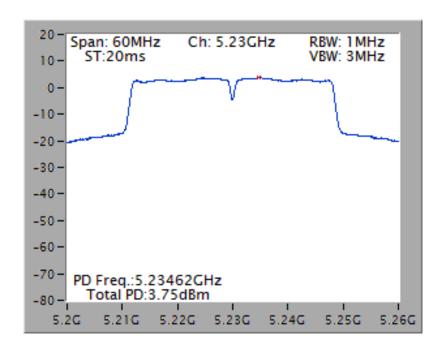


#### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5785 MHz



Date: 17.JUN.2014 04:38:15

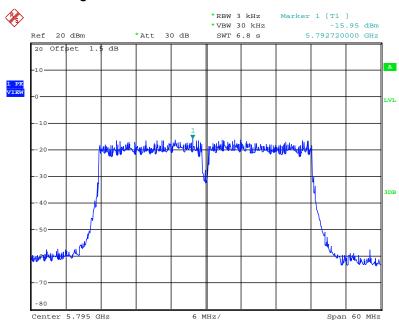
### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5230 MHz



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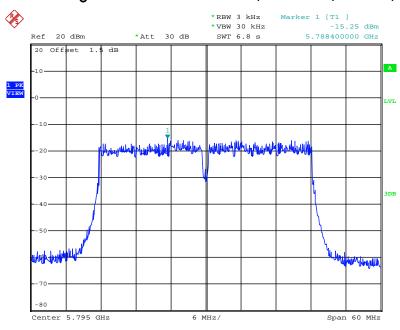


# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 / 5795 MHz



Date: 17.JUN.2014 04:31:05

### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2 / 5795 MHz

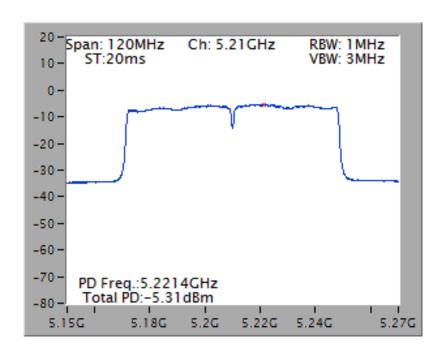


Date: 17.JUN.2014 04:30:19

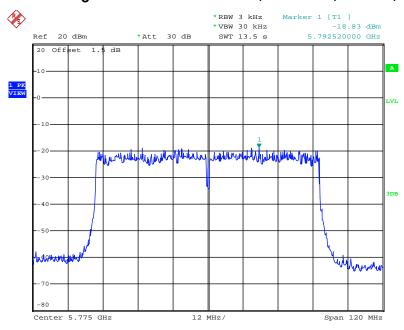




#### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5210 MHz



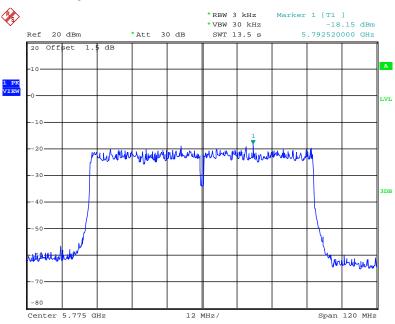
### Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT80 / Chain 1 / 5775 MHz



Date: 17.JUN.2014 04:28:10



# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2 / 5775 MHz



Date: 17.JUN.2014 04:25:41

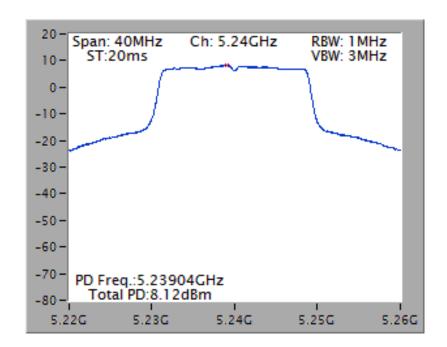
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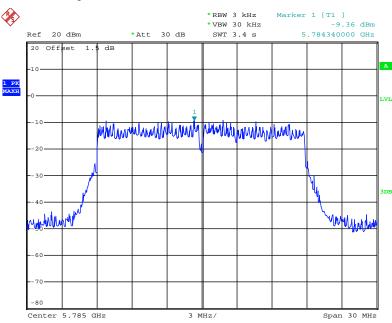


Mode 1 (Ant. 2 Dipole antenna / 5dBi / 3TX)

Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3 / 5240 MHz



## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 / 5785 MHz



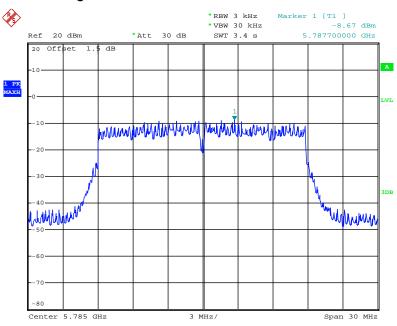
Date: 17.JUN.2014 20:24:52

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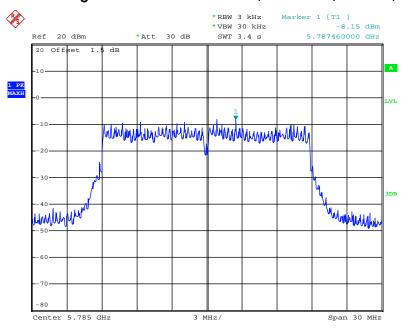


# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5785 MHz



Date: 17.JUN.2014 20:25:43

### Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT20 / Chain 3 / 5785 MHz



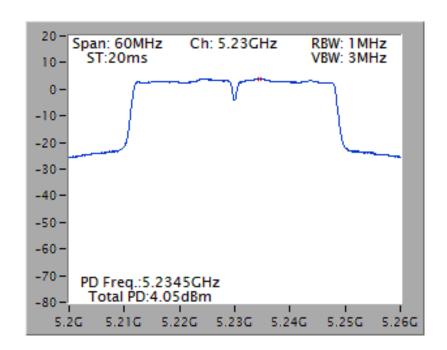
Date: 17.JUN.2014 20:26:25

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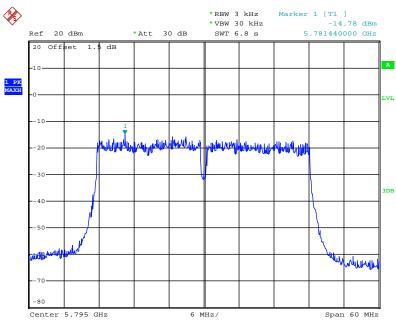




Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3 / 5230 MHz



# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 / 5795 MHz

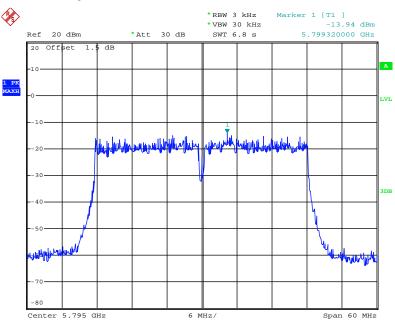


Date: 17.JUN.2014 20:19:11

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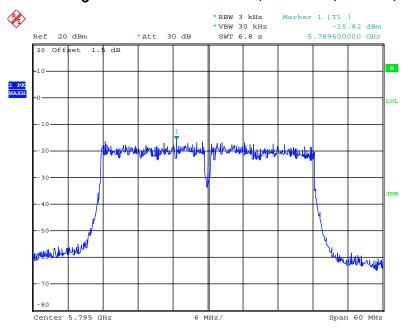


# Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT40 / Chain 2 / 5795 MHz



Date: 17.JUN.2014 20:19:59

## Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT40 / Chain 3 / 5795 MHz



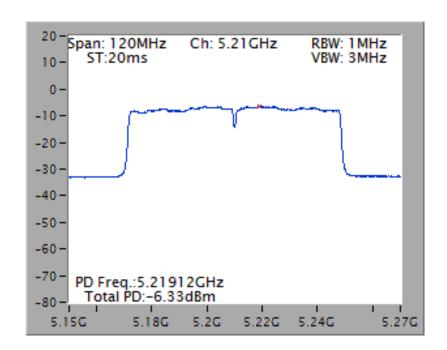
Date: 17.JUN.2014 20:20:46

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FCC ID: UZ7AP7532 Issued Date : Jul. 03, 2014

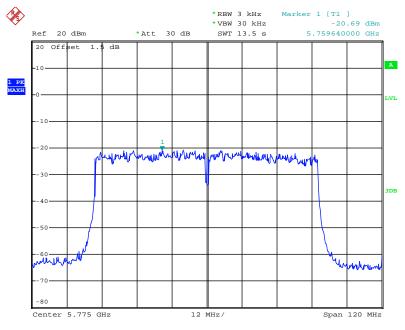




Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3 / 5210 MHz



# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 / 5775 MHz

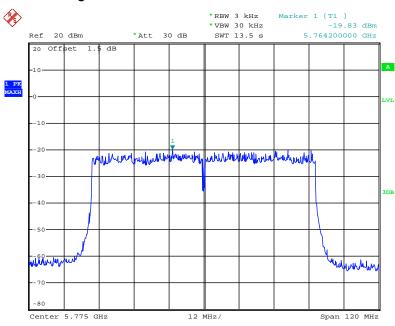


Date: 17.JUN.2014 20:13:26

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FCC ID: UZ7AP7532 Issued Date : Jul. 03, 2014

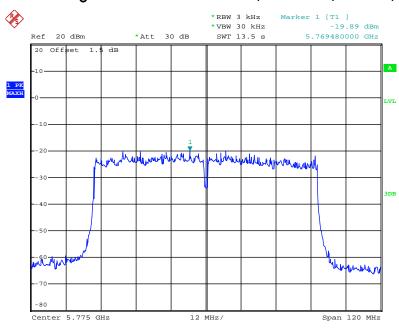


# Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT80 / Chain 2 / 5775 MHz



Date: 17.JUN.2014 20:15:02

## Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT80 / Chain 3 / 5775 MHz



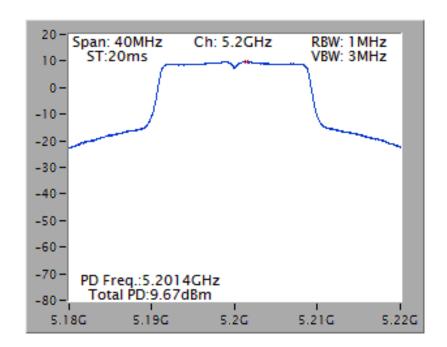
Date: 17.JUN.2014 20:16:04

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FCC ID: UZ7AP7532 Issued Date : Jul. 03, 2014

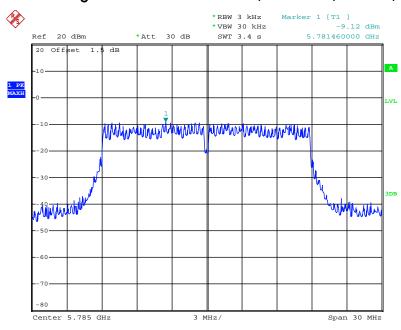


Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 2TX)

# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5200 MHz



## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 / 5785 MHz



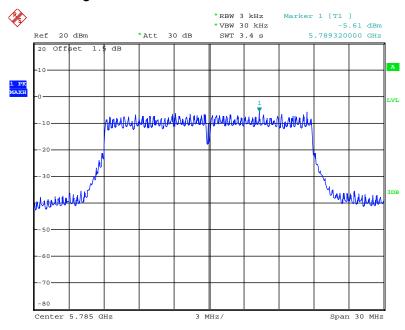
Date: 18.JUN.2014 17:56:06

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FCC ID: UZ7AP7532 Issued Date : Jul. 03, 2014



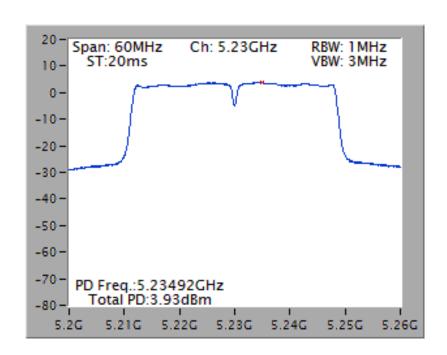


#### Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT20 / Chain 2 / 5785 MHz



Date: 18.JUN.2014 17:55:07

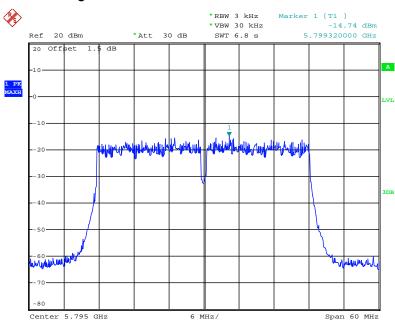
## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5230 MHz



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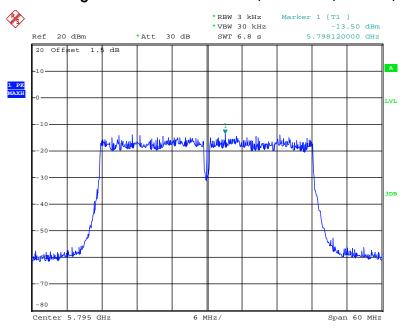


# Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT40 / Chain 1 / 5795 MHz



Date: 18.JUN.2014 18:02:20

## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2 / 5795 MHz



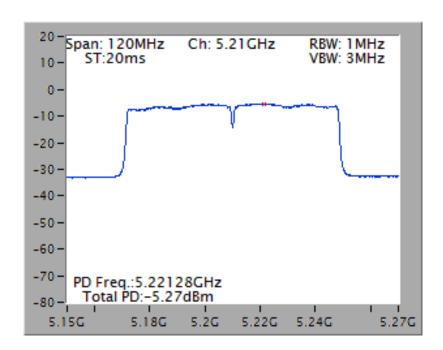
Date: 18.JUN.2014 18:04:32

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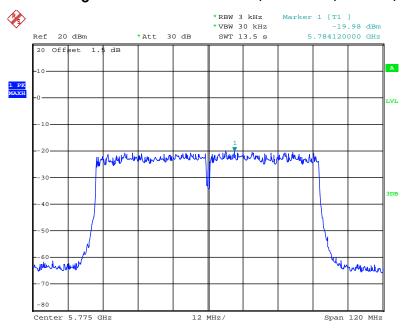




## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5210 MHz



## Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT80 / Chain 1 / 5775 MHz

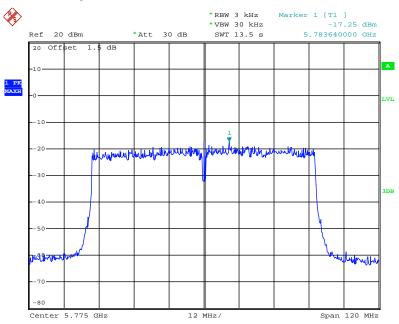


Date: 18.JUN.2014 18:07:05

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# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2 / 5775 MHz



Date: 18.JUN.2014 18:06:00

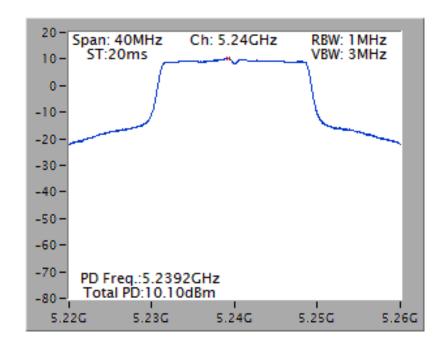
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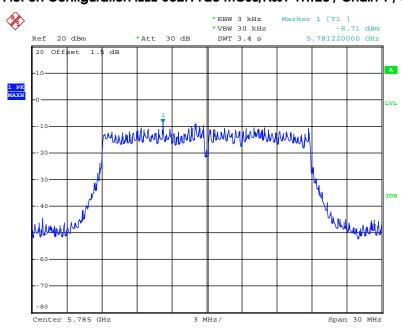


Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 3TX)

Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3 / 5240 MHz



#### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 / 5785 MHz

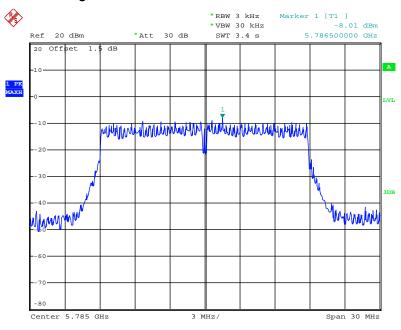


Date: 18.JUN.2014 15:56:48

Report Format Version: Rev. 01 Page No. : 187 of 467
FCC ID: UZ7AP7532 Issued Date : Jul. 03, 2014

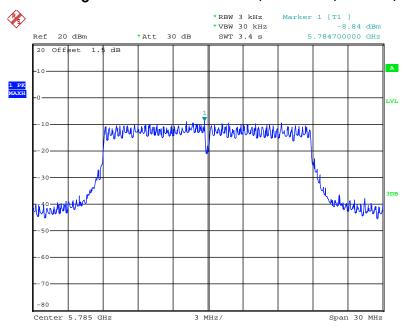


# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5785 MHz



Date: 18.JUN.2014 15:55:57

## Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT20 / Chain 3 / 5785 MHz



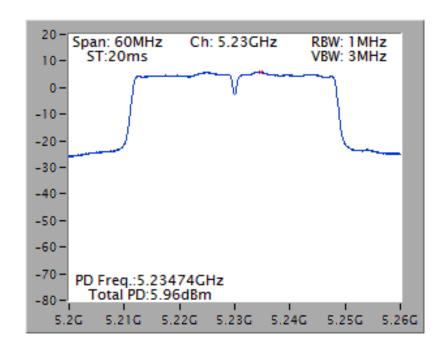
Date: 18.JUN.2014 15:55:03

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FCC ID: UZ7AP7532 Issued Date : Jul. 03, 2014

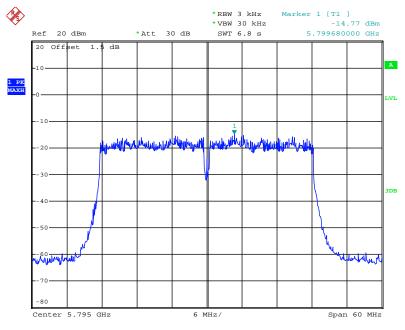




Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3 / 5230 MHz



# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 / 5795 MHz

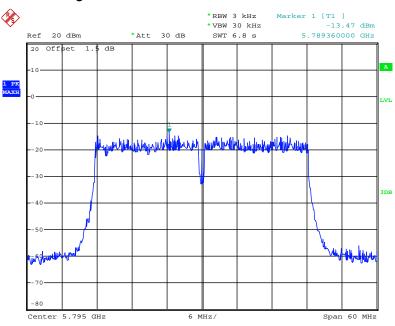


Date: 18.JUN.2014 16:30:53

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FCC ID: UZ7AP7532 Issued Date : Jul. 03, 2014

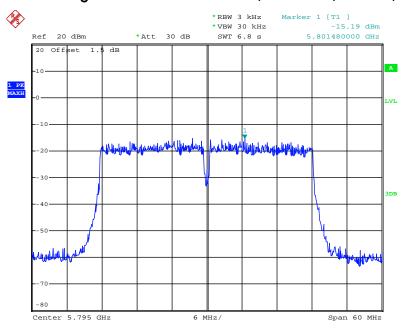


# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2 / 5795 MHz



Date: 18.JUN.2014 16:31:37

## Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT40 / Chain 3 / 5795 MHz



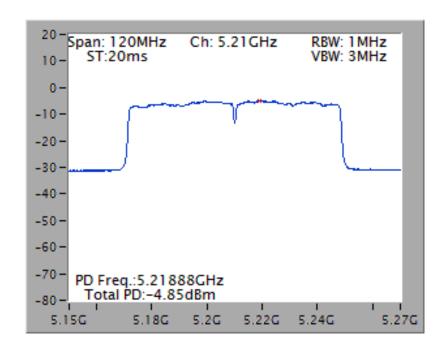
Date: 18.JUN.2014 16:32:18

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FCC ID: UZ7AP7532 Issued Date : Jul. 03, 2014

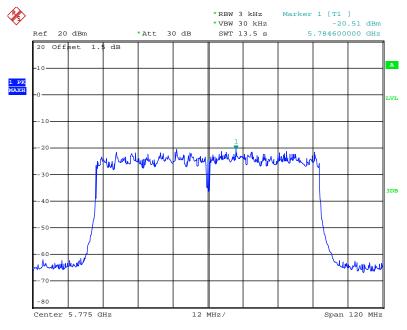




Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3 / 5210 MHz



# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 / 5775 MHz

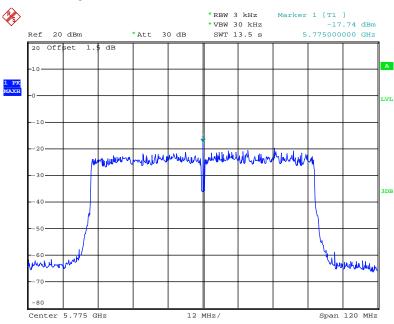


Date: 18.JUN.2014 16:34:55

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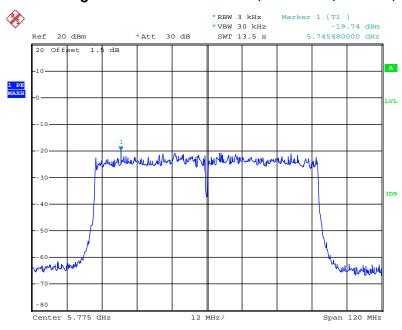


# Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT80 / Chain 2 / 5775 MHz



Date: 18.JUN.2014 16:34:01

## Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT80 / Chain 3 / 5775 MHz



Date: 18.JUN.2014 16:33:10

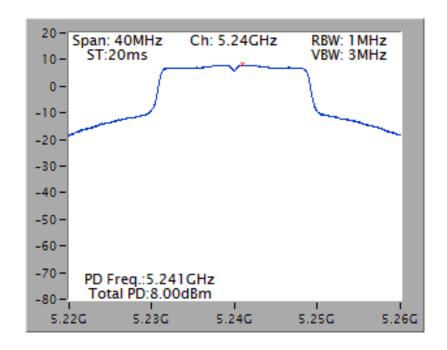
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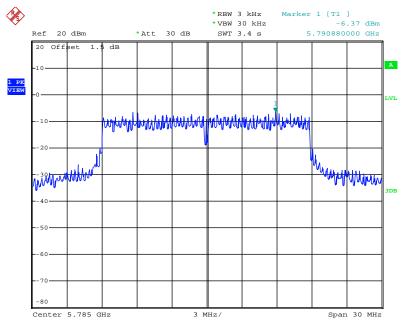
<For STBC Mode>

Mode 1 (Ant. 2 Dipole antenna / 5dBi / 2TX)

Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5240 MHz



# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 / 5785 MHz



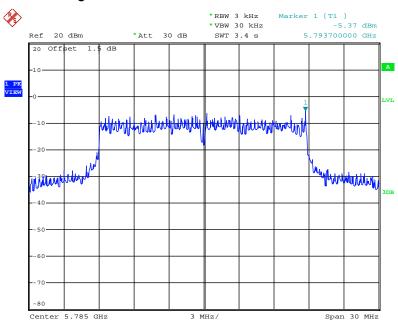
Date: 17.JUN.2014 04:46:11

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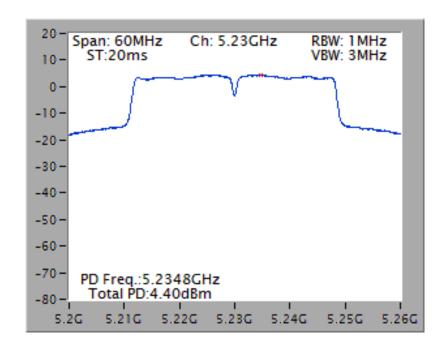


#### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5785 MHz



Date: 17.JUN.2014 04:45:30

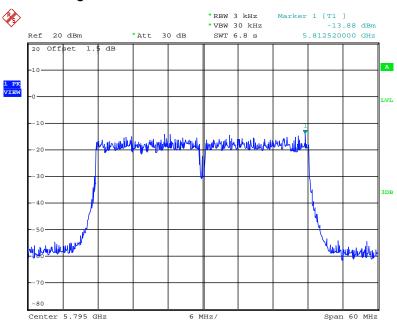
## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5230 MHz



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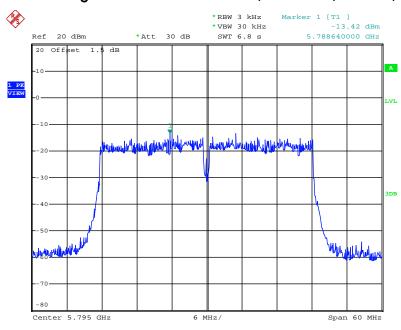


# Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT40 / Chain 1 / 5795 MHz



Date: 17.JUN.2014 04:54:14

## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2 / 5795 MHz



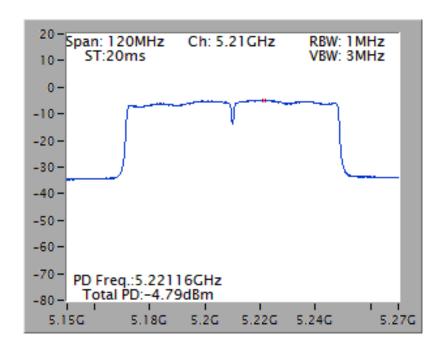
Date: 17.JUN.2014 04:53:41

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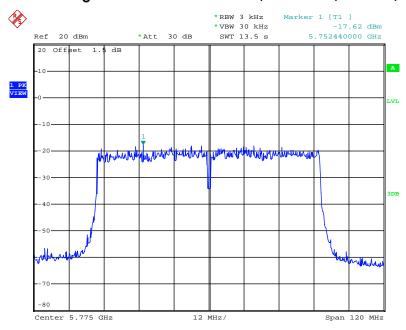




## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5210 MHz



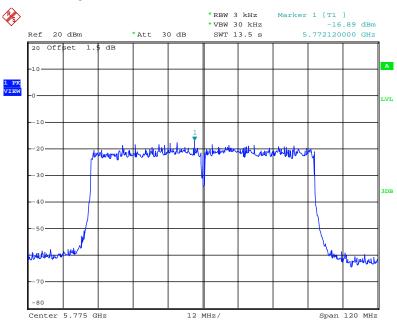
## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 / 5775 MHz



Date: 17.JUN.2014 04:57:39



# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2 / 5775 MHz



Date: 17.JUN.2014 04:56:35

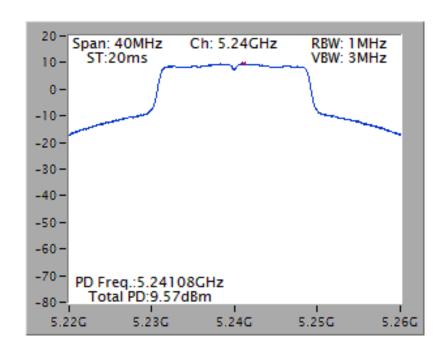
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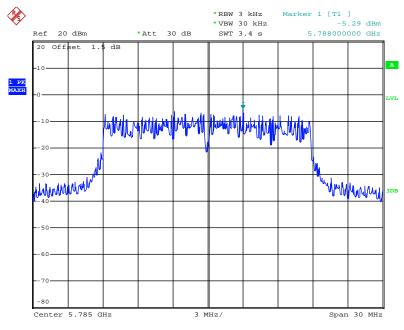


Mode 1 (Ant. 2 Dipole antenna / 5dBi / 3TX)

Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3 / 5240 MHz



# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 / 5785 MHz

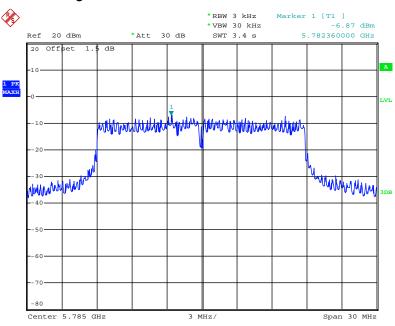


Date: 17.JUN.2014 20:48:02

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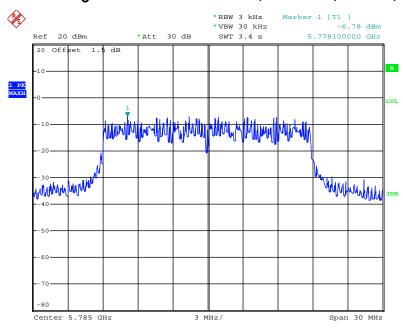


## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5785 MHz



Date: 17.JUN.2014 20:47:21

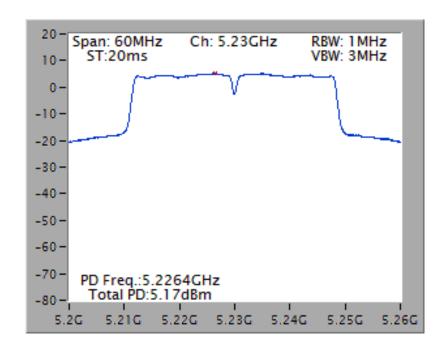
## Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT20 / Chain 3 / 5785 MHz



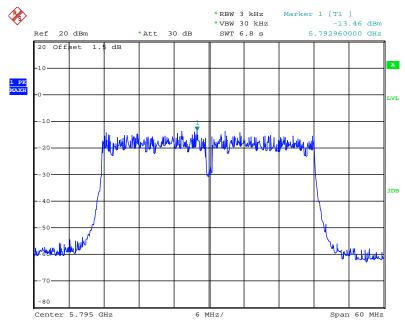
Date: 17.JUN.2014 20:46:13



Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3 / 5230 MHz



# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 / 5795 MHz

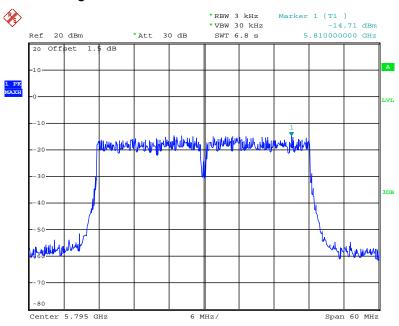


Date: 17.JUN.2014 20:53:35

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FCC ID: UZ7AP7532 Issued Date : Jul. 03, 2014

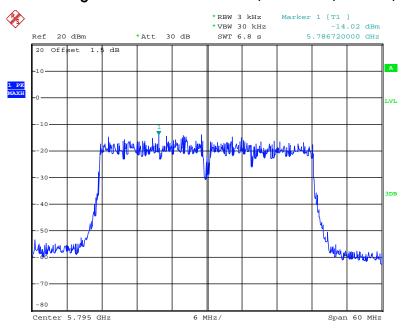


# Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT40 / Chain 2 / 5795 MHz



Date: 17.JUN.2014 20:54:22

## Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT40 / Chain 3 / 5795 MHz

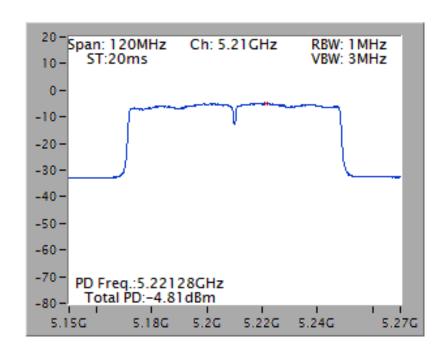


Date: 17.JUN.2014 20:55:06

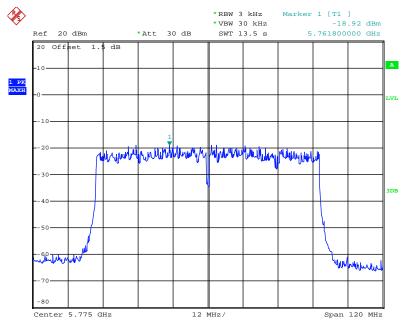




Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3 / 5210 MHz



# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 / 5775 MHz

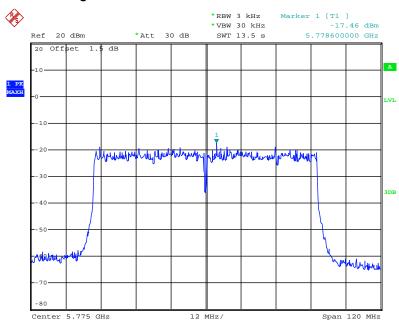


Date: 17.JUN.2014 20:58:10

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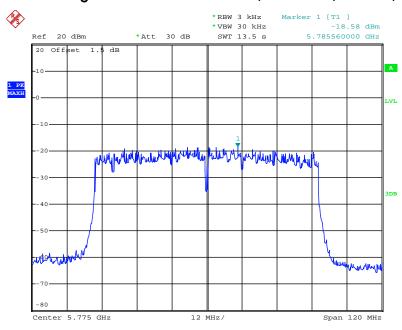


# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2 / 5775 MHz



Date: 17.JUN.2014 20:57:11

## Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT80 / Chain 3 / 5775 MHz

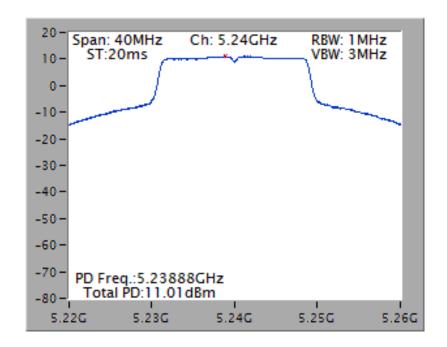


Date: 17.JUN.2014 20:56:06

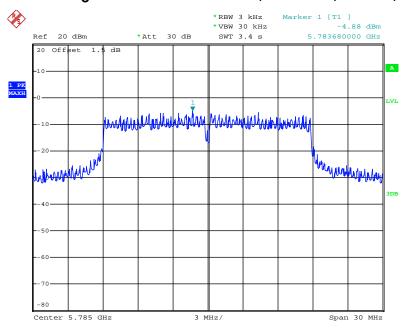


Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 2TX)

## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 / 5240 MHz



## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 / 5785 MHz



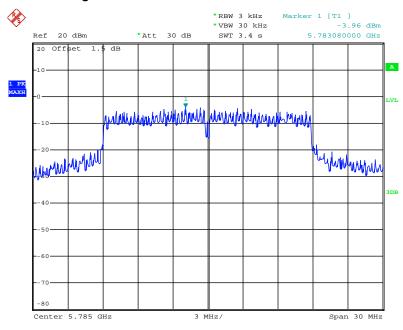
Date: 18.JUN.2014 18:26:13

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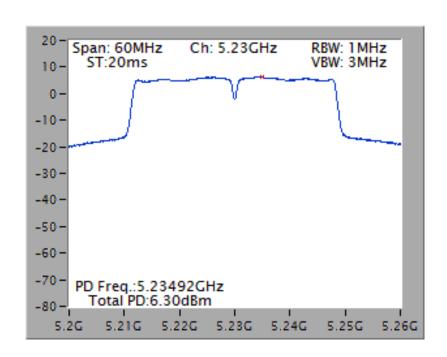


#### Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT20 / Chain 2 / 5785 MHz



Date: 18.JUN.2014 18:26:59

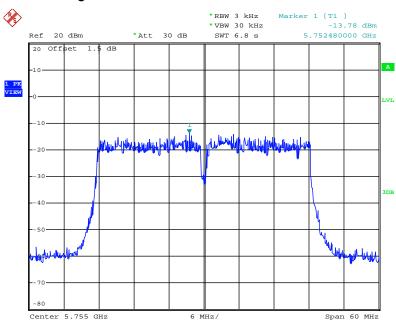
## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 / 5230 MHz



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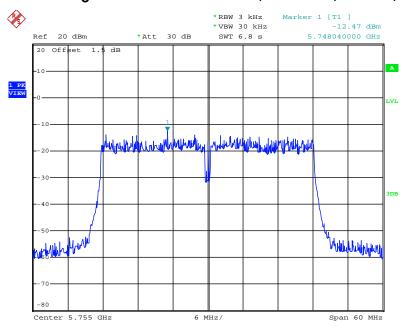


# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 / 5755 MHz



Date: 18.JUN.2014 20:13:49

## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2 / 5755 MHz

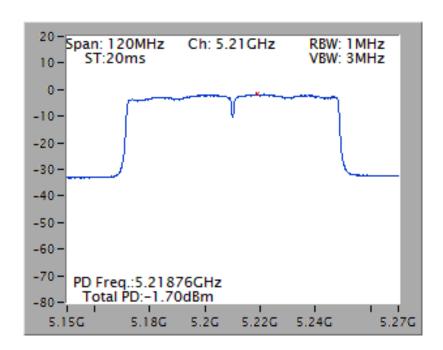


Date: 18.JUN.2014 20:17:10

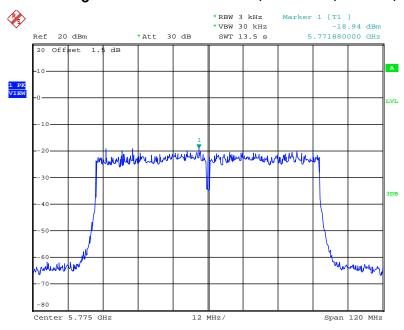




#### Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 / 5210 MHz



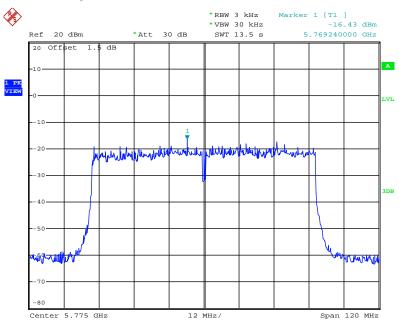
## Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT80 / Chain 1 / 5775 MHz



Date: 18.JUN.2014 20:27:17



# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2 / 5775 MHz

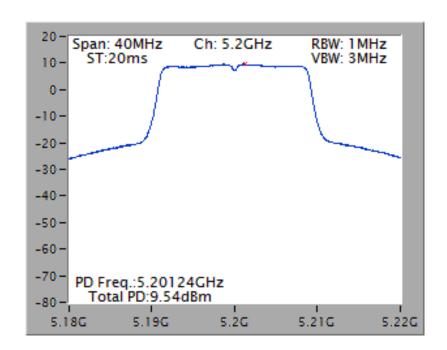


Date: 18.JUN.2014 20:26:20

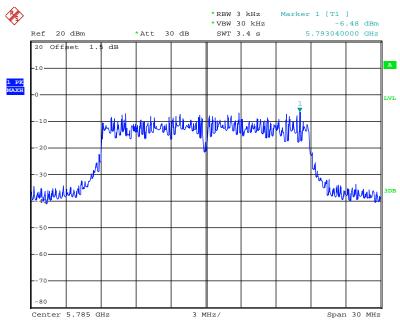


Mode 2 (Ant. 4 Panel antenna / 5.1dBi / 3TX)

Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 + Chain 2 + Chain 3 / 5200 MHz



# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 1 / 5785 MHz

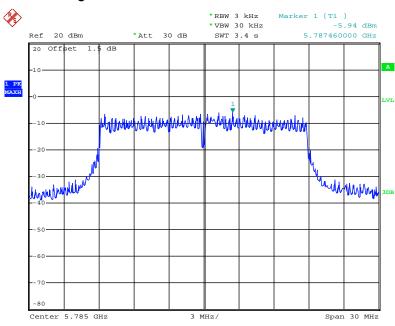


Date: 18.JUN.2014 16:42:33

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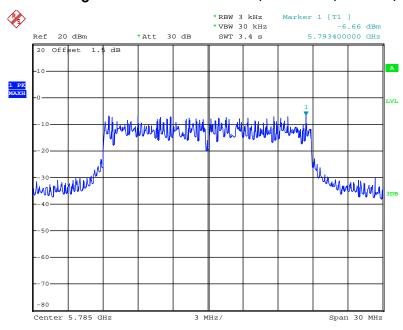


## Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT20 / Chain 2 / 5785 MHz



Date: 18.JUN.2014 16:41:48

## Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT20 / Chain 3 / 5785 MHz

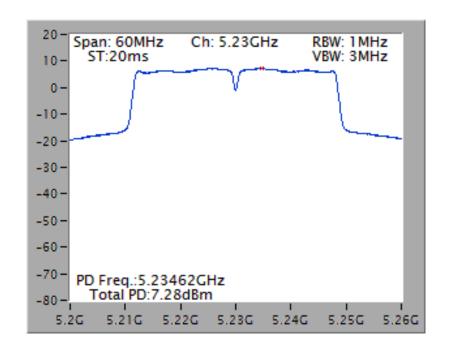


Date: 18.JUN.2014 16:40:49

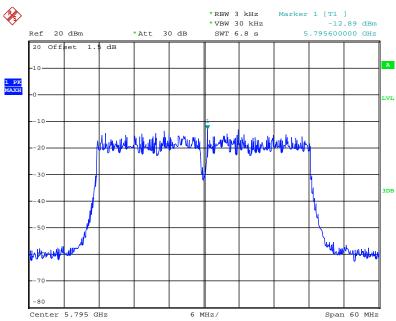




Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 + Chain 2 + Chain 3 / 5230 MHz



# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 1 / 5795 MHz

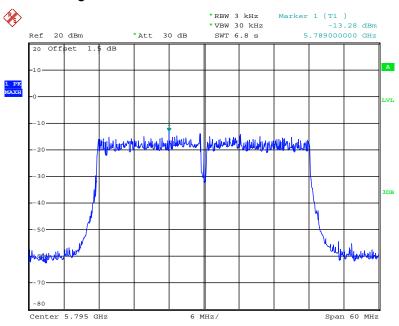


Date: 18.JUN.2014 17:04:15

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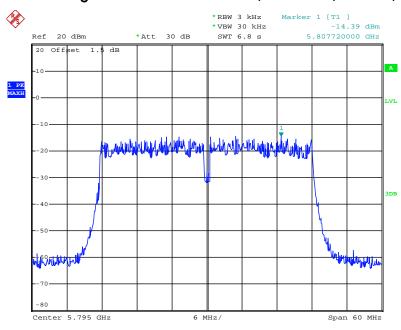


# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT40 / Chain 2 / 5795 MHz



Date: 18.JUN.2014 17:03:31

## Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT40 / Chain 3 / 5795 MHz



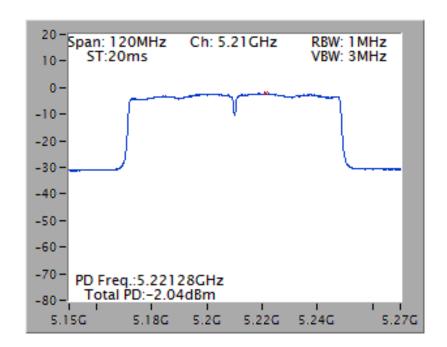
Date: 18.JUN.2014 17:02:44

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FCC ID: UZ7AP7532 Issued Date : Jul. 03, 2014

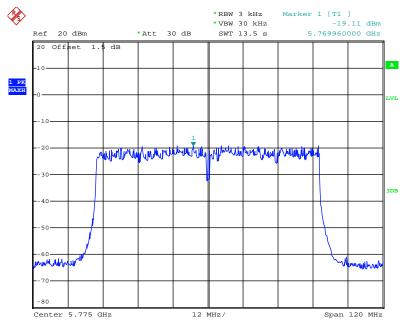




Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 + Chain 2 + Chain 3 / 5210 MHz



# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 1 / 5775 MHz

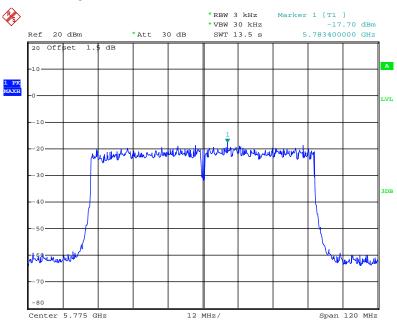


Date: 18.JUN.2014 17:07:31

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FCC ID: UZ7AP7532 Issued Date : Jul. 03, 2014

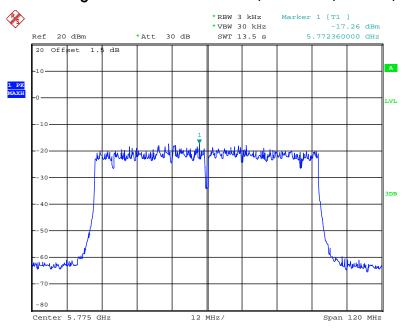


# Power Density Plot on Configuration IEEE 802.11ac MCS0/Nss1 VHT80 / Chain 2 / 5775 MHz



Date: 18.JUN.2014 17:06:21

## Power Density Plot on Configuration IEEE 802.11ac MCSO/Nss1 VHT80 / Chain 3 / 5775 MHz



Date: 18.JUN.2014 17:05:21