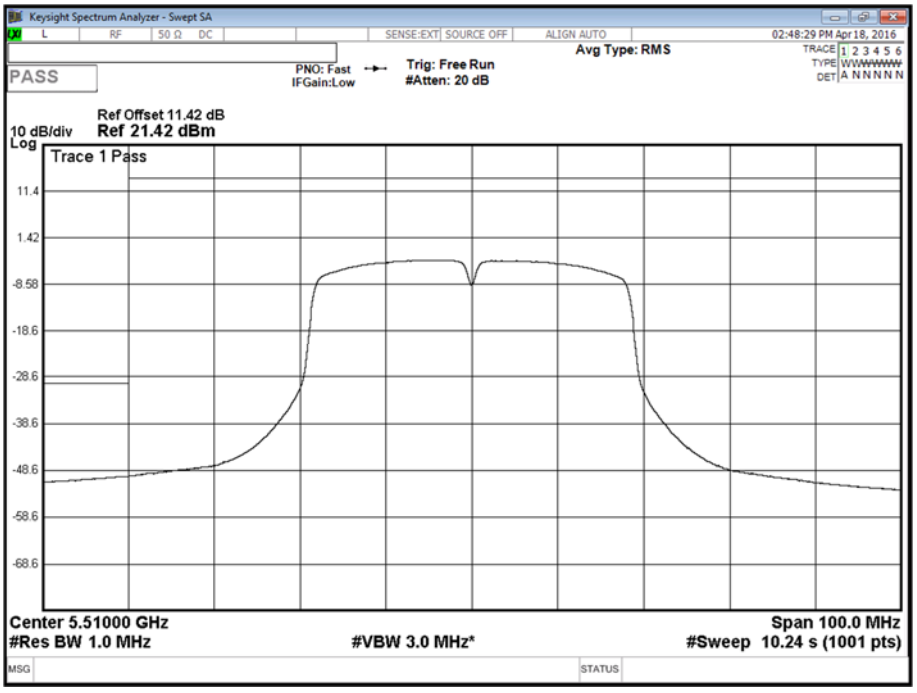
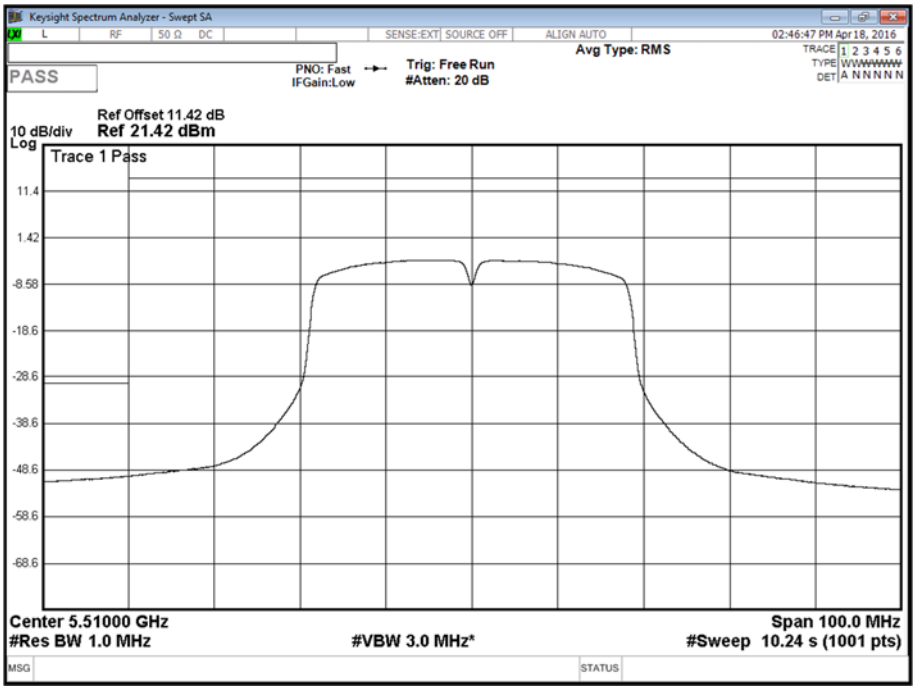
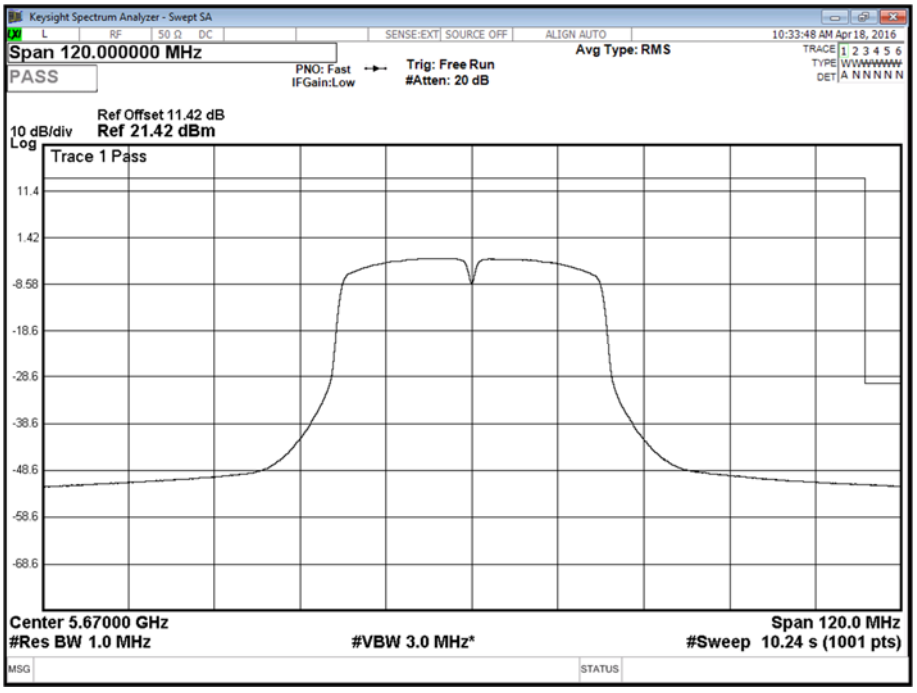
802.11n - 5 GHz 40 MHz Bandwidth, 5510 MHz, +55.0, 3.7 V DC Frequency Band 3, Frequency Stability Plot



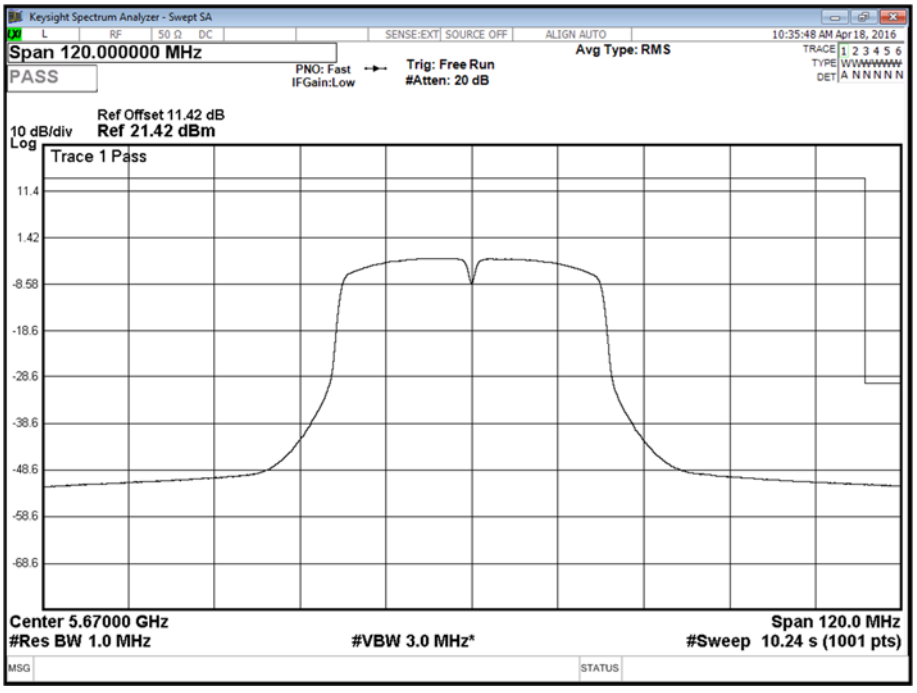
802.11n - 5 GHz 40 MHz Bandwidth, 5510 MHz, +55.0, 4.0 V DC, Frequency Band 3, Frequency Stability Plot



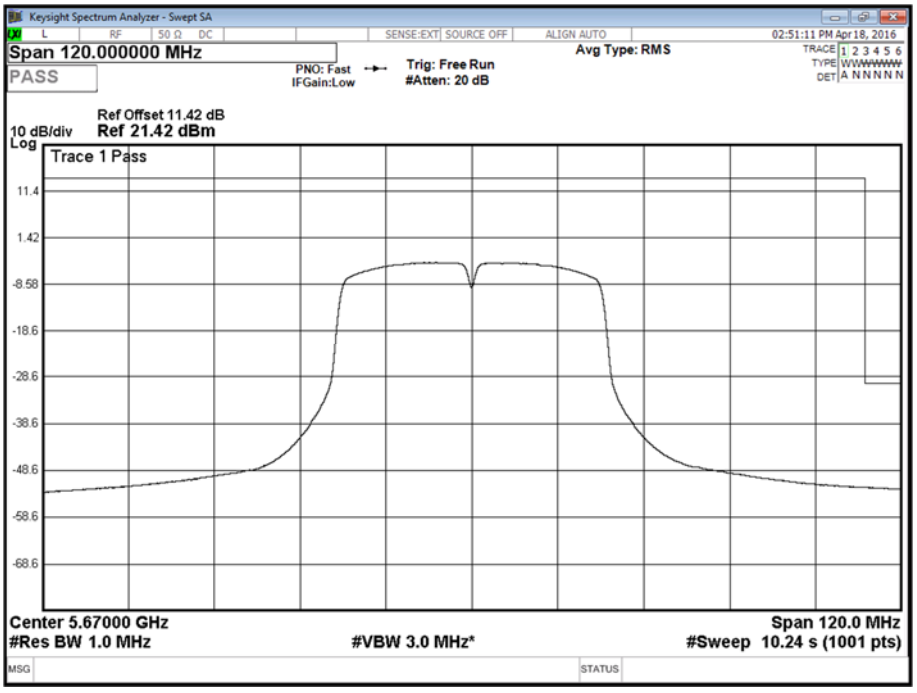
802.11n - 5 GHz 40 MHz Bandwidth, 5670 MHz, -10.0, 3.7 V DC Frequency Band 3, Frequency Stability Plot



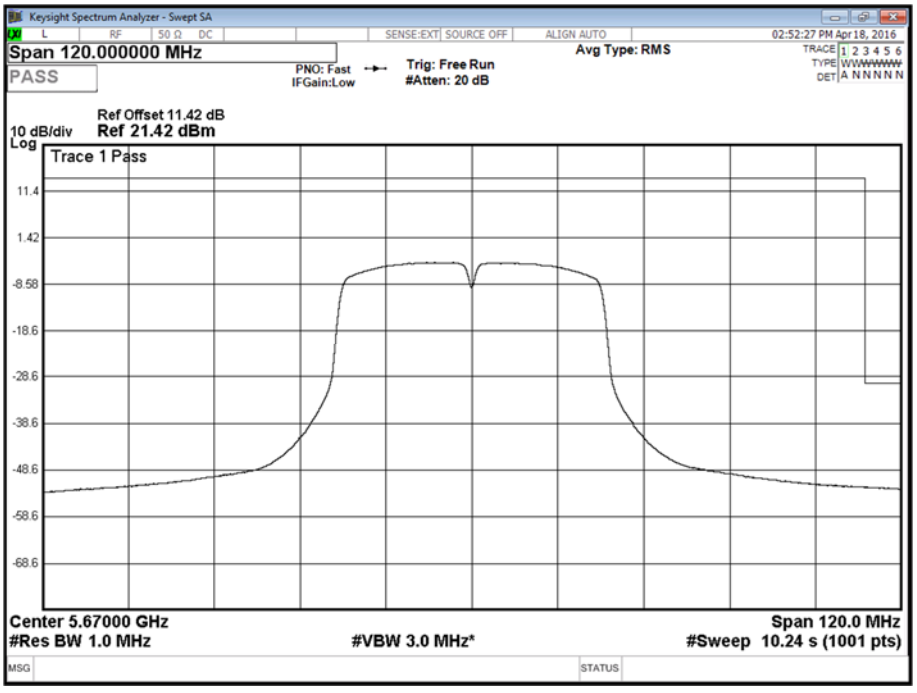
802.11n - 5 GHz 40 MHz Bandwidth, 5670 MHz, -10.0, 4.0 V DC, Frequency Band 3, Frequency Stability Plot



802.11n - 5 GHz 40 MHz Bandwidth, 5670 MHz, +55.0, 3.7 V DC Frequency Band 3, Frequency Stability Plot



802.11n - 5 GHz 40 MHz Bandwidth, 5670 MHz, +55.0, 4.0 V DC, Frequency Band 3, Frequency Stability Plot



FCC 47 CFR Part 15, Limit Clause 15.407 (g)

Fundamental shall be maintained within the band of operation under all conditions of normal operations as specified in the user's manual.

Product Service

2.7 RESTRICTED BAND EDGES

2.7.1 Specification Reference

FCC 47 CFR Part 15E, Clause 15.205

2.7.2 Equipment Under Test and Modification State

S/N: IMEI 004401115723831 - Modification State 0

2.7.3 Date of Test

3 April 2016 & 4 April 2016

2.7.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.7.5 Test Procedure

Testing was performed in accordance with ANSI C63.10, Clause 12.7.4.4.

Remarks

Average measurements were performed in accordance with ANSI C63.10, Clause 12.7.7.3.

2.7.6 Environmental Conditions

Ambient Temperature	18.6 - 20.5°C
Relative Humidity	36.0 - 38.0%

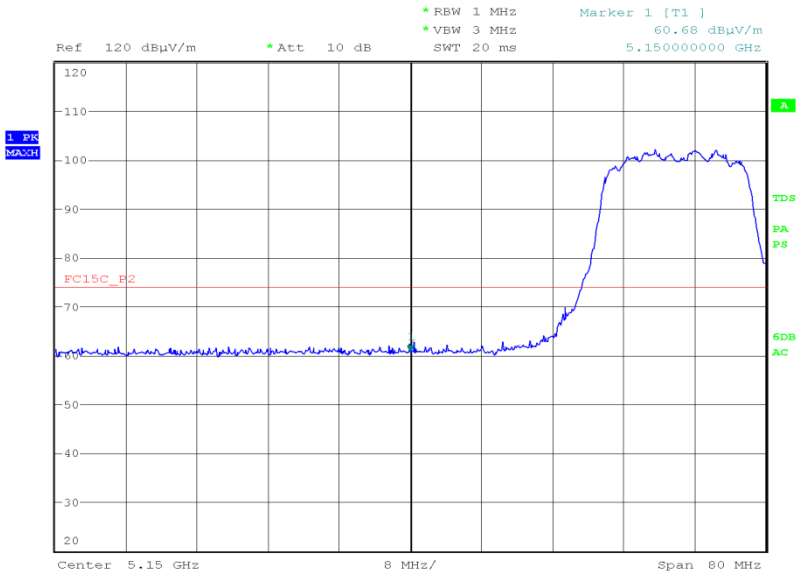
Product Service

2.7.7 Test Results

802.11a, 6 Mbps, Restricted Band Edges Results

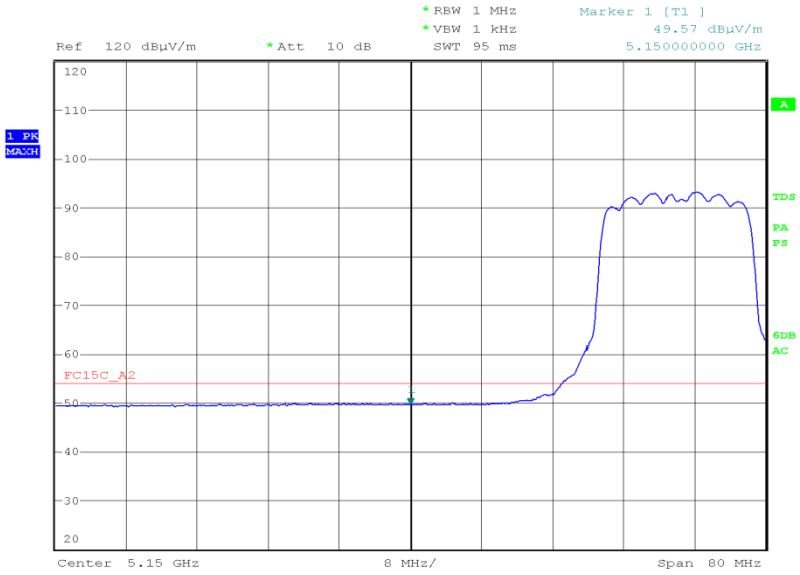
5180 MHz		5320 MHz		5500 MHz	
Measured Frequency 5150 MHz		Measured Frequency 5350 MHz		Measured Frequency 5460 MHz	
dBµV/m		dBµV/m		dBµV/m	
Final Peak	Final Average	Final Peak	Final Average	Final Peak	Final Average
60.68	49.57	61.86	50.68	61.66	50.09

802.11a, 5180 MHz, Measured Frequency 5150 MHz, 6 Mbps, Final Peak, Restricted Band Edges Plot



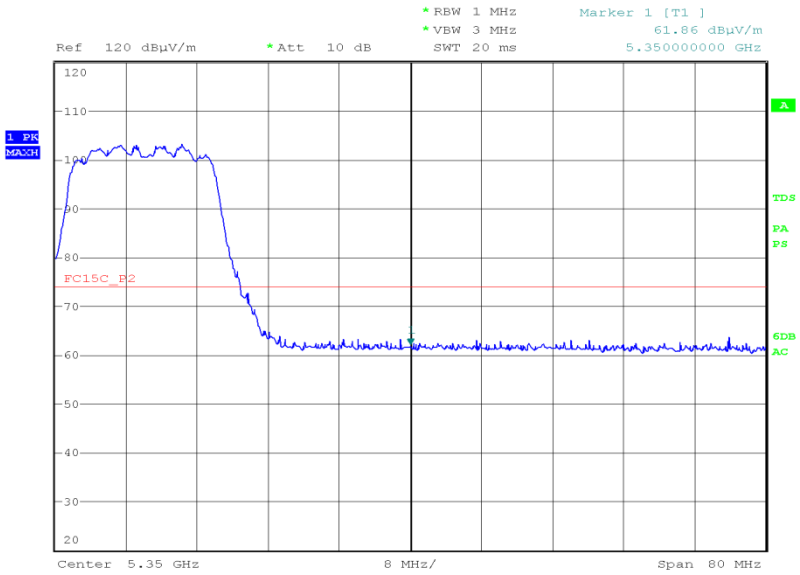
Product Service

802.11a, 5180 MHz, Measured Frequency 5150 MHz, 6 Mbps, Final Average, Restricted Band Edges Plot



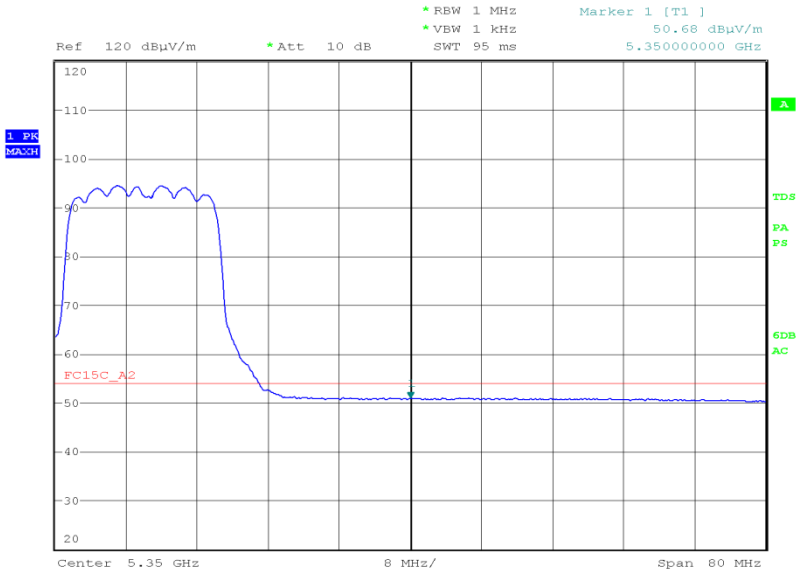
Date: 3.APR.2016 09:11:39

802.11a, 5320 MHz, Measured Frequency 5350 MHz, 6 Mbps, Final Peak, Restricted Band Edges Plot



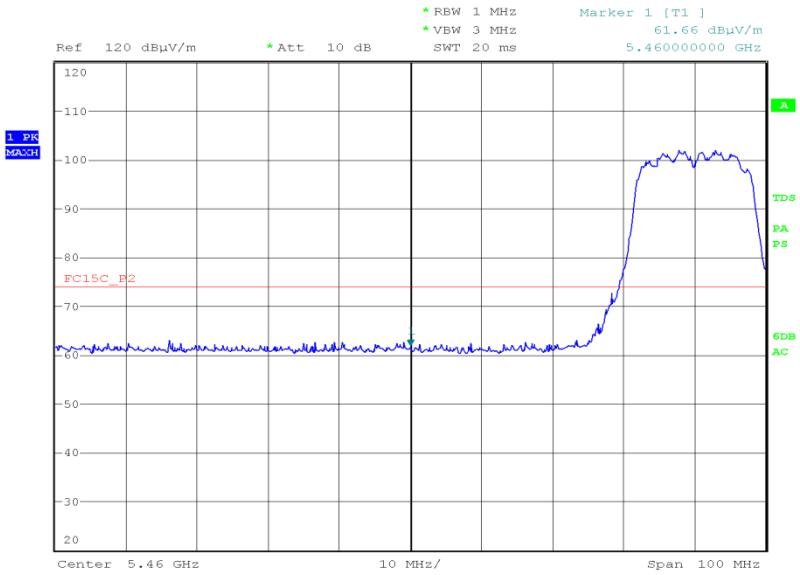
Date: 3.APR.2016 09:18:56

802.11a, 5320 MHz, Measured Frequency 5350 MHz, 6 Mbps, Final Average, Restricted Band Edges Plot



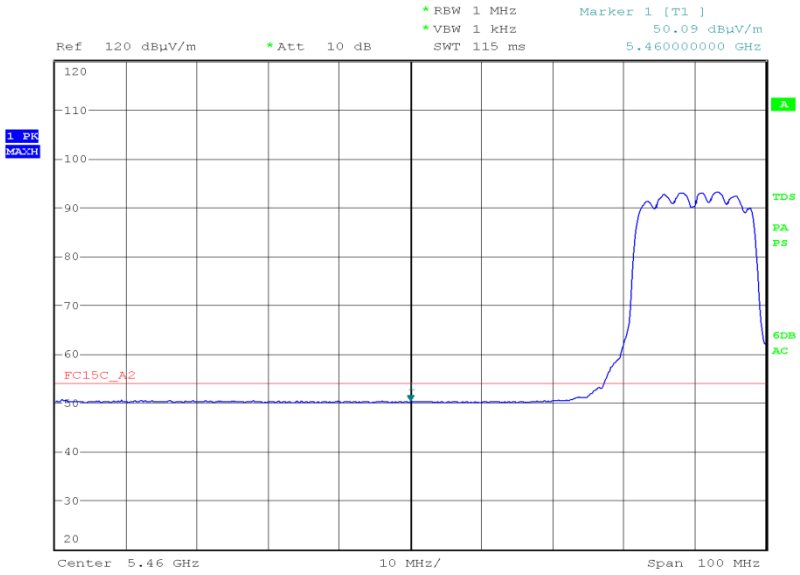
Date: 3.APR.2016 09:18:15

802.11a, 5500 MHz, Measured Frequency 5460 MHz, 6 Mbps, Final Peak, Restricted Band Edges Plot



Date: 3.APR.2016 09:27:28

802.11a, 5500 MHz, Measured Frequency 5460 MHz, 6 Mbps, Final Average, Restricted Band Edges Plot

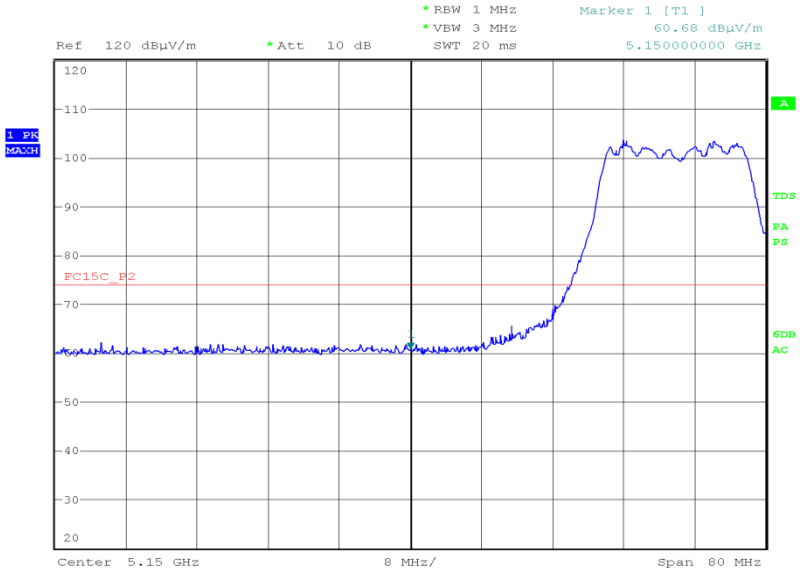


Date: 3.APR.2016 09:28:14

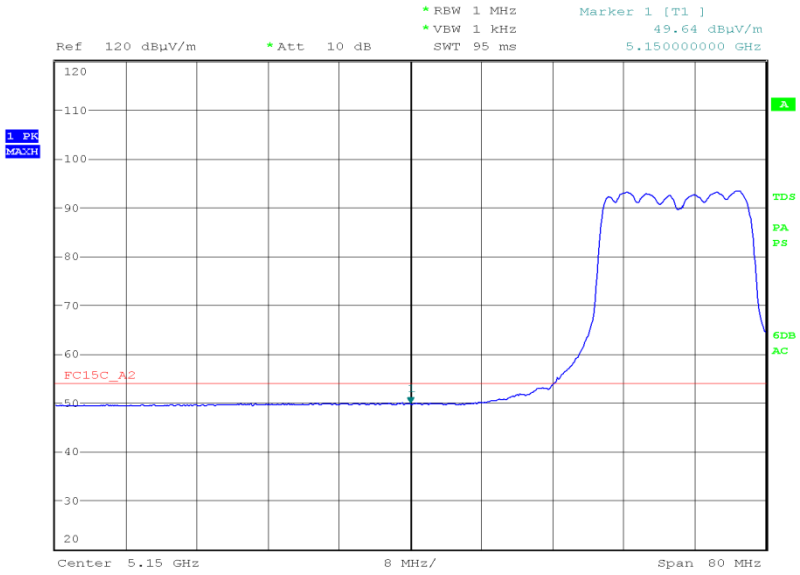
802.11a, 36 Mbps, Restricted Band Edges Results

5180 MHz		5320 MHz		5500 MHz	
Measured Frequency 5150 MHz		Measured Frequency 5350 MHz		Measured Frequency 5460 MHz	
dBµV/m		dBµV/m		dBµV/m	
Final Peak	Final Average	Final Peak	Final Average	Final Peak	Final Average
60.68	49.64	61.62	50.55	60.73	50.02

802.11a, 5180 MHz, Measured Frequency 5150 MHz, 36 Mbps, Final Peak, Restricted Band Edges Plot

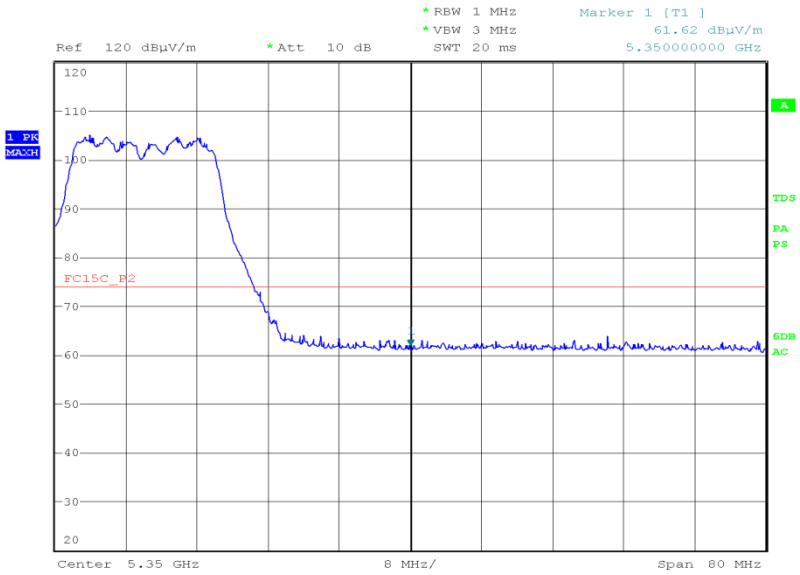


802.11a, 5180 MHz, Measured Frequency 5150 MHz, 36 Mbps, Final Average, Restricted Band Edges Plot



Date: 3.APR.2016 09:56:57

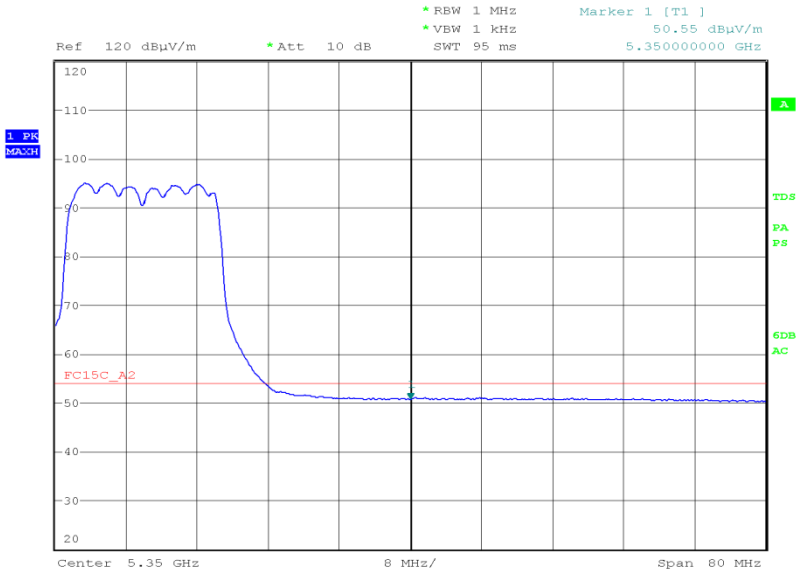
802.11a, 5320 MHz, Measured Frequency 5350 MHz, 36 Mbps, Final Peak, Restricted Band Edges Plot



Date: 3.APR.2016 10:03:49

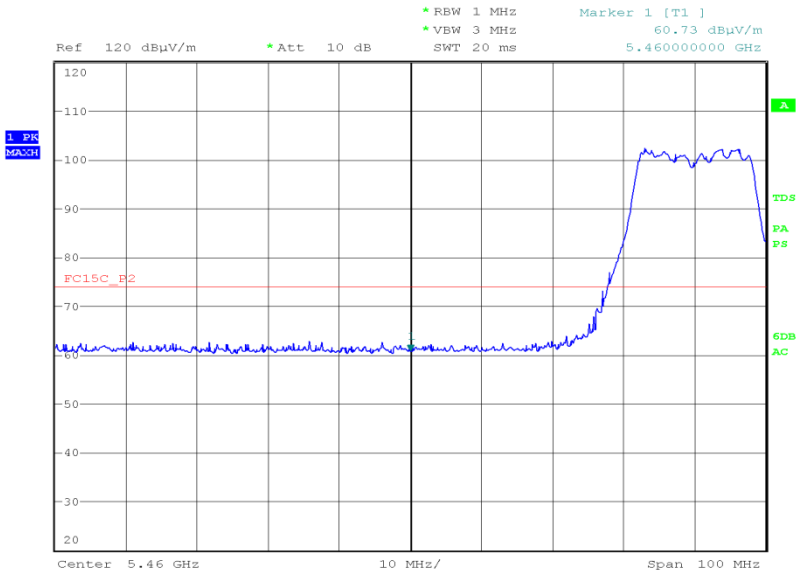
Product Service

802.11a, 5320 MHz, Measured Frequency 5350 MHz, 36 Mbps, Final Average, Restricted Band Edges Plot



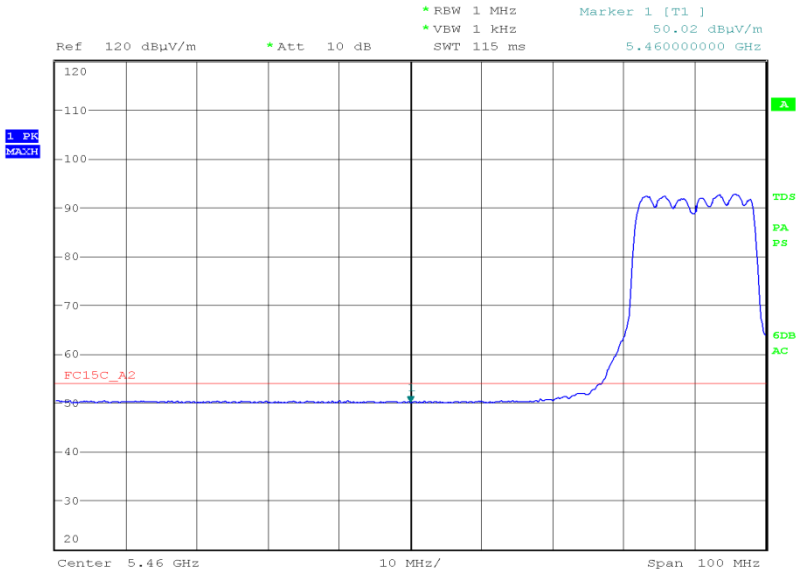
Date: 3.APR.2016 10:04:18

802.11a, 5500 MHz, Measured Frequency 5460 MHz, 36 Mbps, Final Peak, Restricted Band Edges Plot



Date: 3.APR.2016 10:09:03

802.11a, 5500 MHz, Measured Frequency 5460 MHz, 36 Mbps, Final Average, Restricted Band Edges Plot



Date: 3.APR.2016 10:09:32

Remark

The test was performed on 6 Mbps because this was deemed the worst case data rate for Conducted Output Power.

The test was performed on 36 Mbps because this was deemed the worst case data rate for 6 dB Bandwidth.

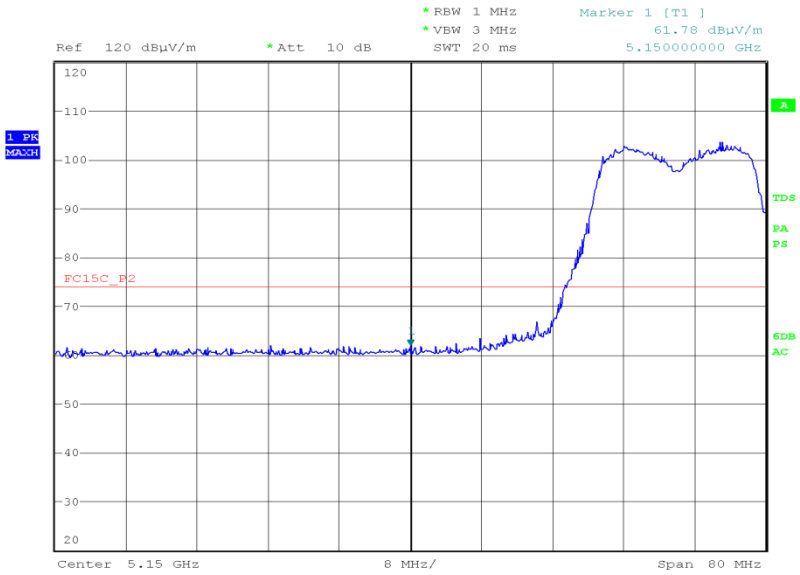
FCC 47 CFR Part 15, Limit Clause 15.205

	Peak (dBµV/m)	Average (dBµV/m)
Restricted Bands of Operation	74	54

802.11ac - 5 GHz 20 MHz Bandwidth, MCS3, Restricted Band Edges Results

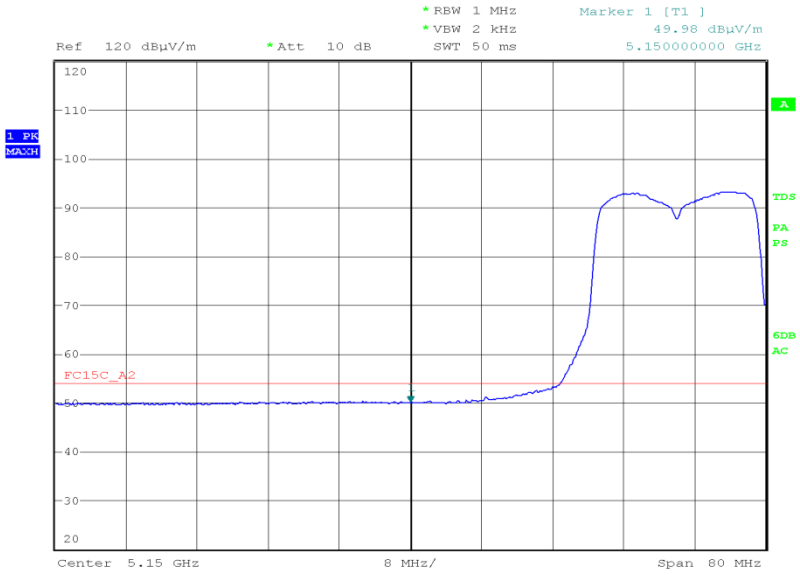
5180 MHz		5320 MHz		5500 MHz	
Measured Frequency 5150 MHz		Measured Frequency 5350 MHz		Measured Frequency 5460 MHz	
dBµV/m		dBµV/m		dBµV/m	
Final Peak	Final Average	Final Peak	Final Average	Final Peak	Final Average
61.78	49.98	61.57	51.12	60.87	50.25

802.11ac - 5 GHz 20 MHz Bandwidth, 5180 MHz, Measured Frequency 5150 MHz, MCS3, Final Peak, Restricted Band Edges Plot

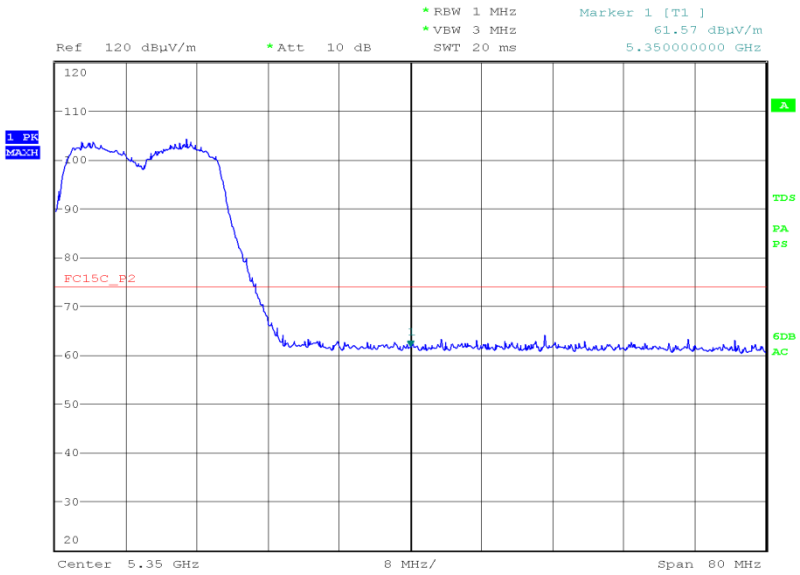


Date: 3.APR.2016 14:09:44

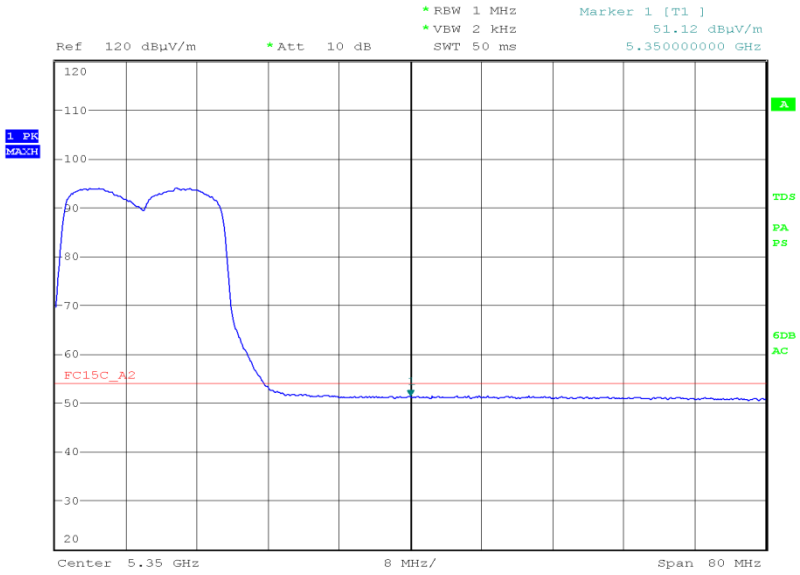
802.11ac - 5 GHz 20 MHz Bandwidth, 5180 MHz, Measured Frequency 5150 MHz, MCS3, Final Average, Restricted Band Edges Plot



802.11ac - 5 GHz 20 MHz Bandwidth, 5320 MHz, Measured Frequency 5350 MHz, MCS3, Final Peak, Restricted Band Edges Plot

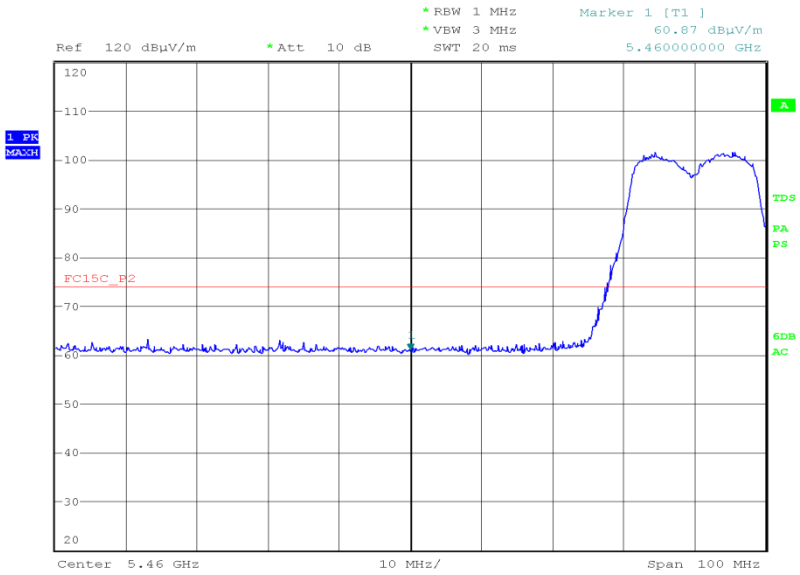


802.11ac - 5 GHz 20 MHz Bandwidth, 5320 MHz, Measured Frequency 5350 MHz, MCS3, Final Average, Restricted Band Edges Plot



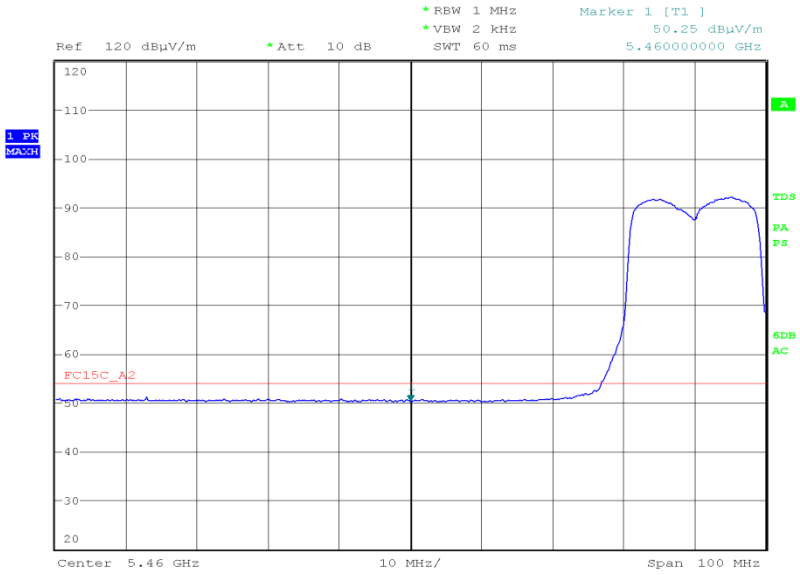
Date: 3.APR.2016 14:14:26

802.11ac - 5 GHz 20 MHz Bandwidth, 5500 MHz, Measured Frequency 5460 MHz, MCS3, Final Peak, Restricted Band Edges Plot



Date: 3.APR.2016 14:20:36

802.11ac - 5 GHz 20 MHz Bandwidth, 5500 MHz, Measured Frequency 5460 MHz, MCS3, Final Average, Restricted Band Edges Plot

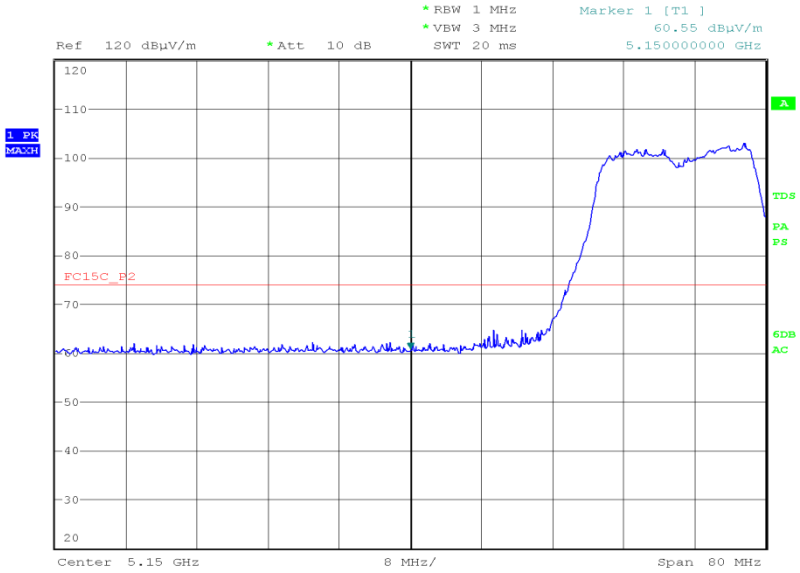


Date: 3.APR.2016 14:21:11

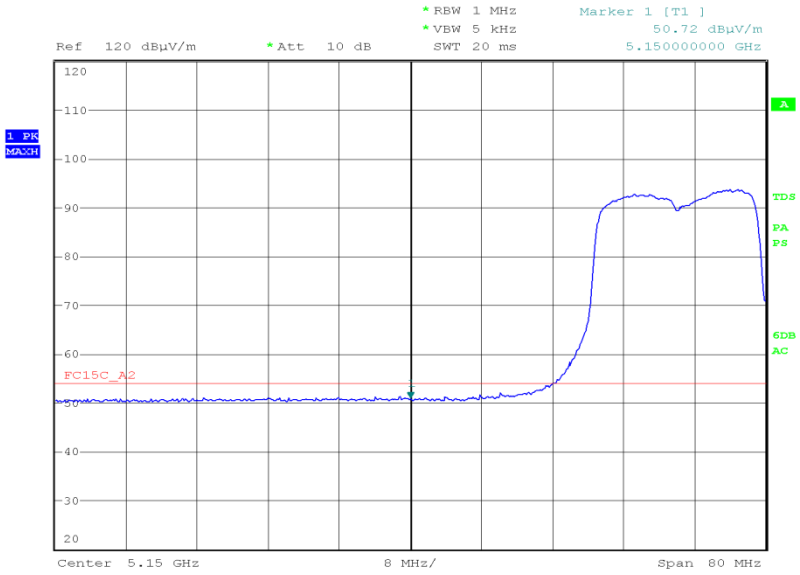
802.11ac - 5 GHz 20 MHz Bandwidth, MCS5, Restricted Band Edges Results

5180 MHz		5320 MHz		5500 MHz	
Measured Frequency 5150 MHz		Measured Frequency 5350 MHz		Measured Frequency 5460 MHz	
dBµV/m		dBµV/m		dBµV/m	
Final Peak	Final Average	Final Peak	Final Average	Final Peak	Final Average
60.55	50.72	62.08	47.76	60.45	46.85

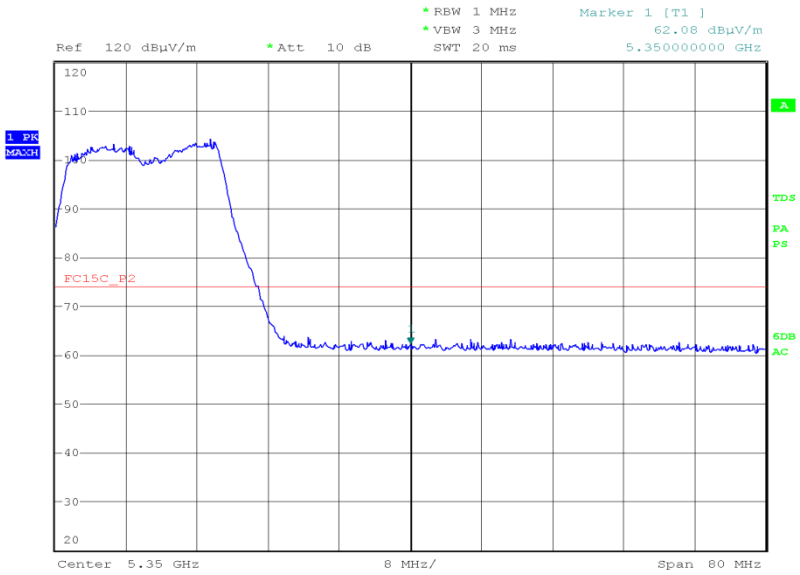
802.11ac - 5 GHz 20 MHz Bandwidth, 5180 MHz, Measured Frequency 5150 MHz, MCS5, Final Peak, Restricted Band Edges Plot



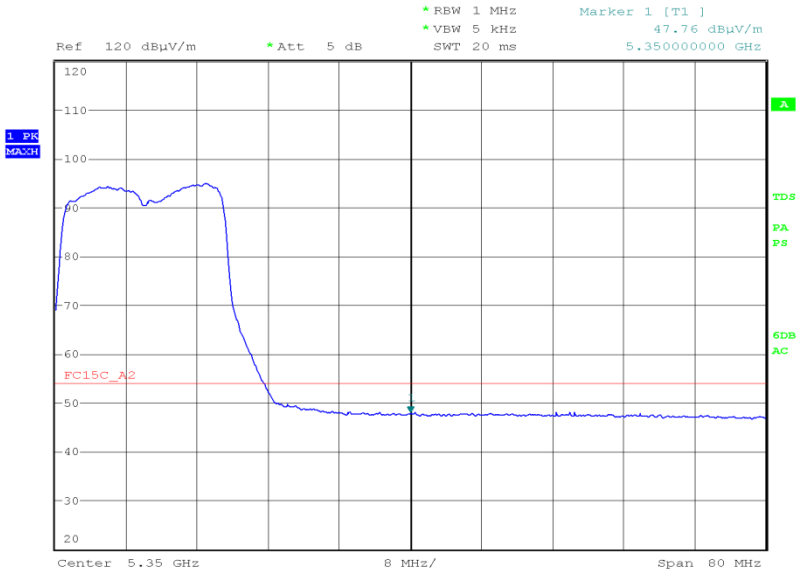
802.11ac - 5 GHz 20 MHz Bandwidth, 5180 MHz, Measured Frequency 5150 MHz, MCS5, Final Average, Restricted Band Edges Plot



802.11ac - 5 GHz 20 MHz Bandwidth, 5320 MHz, Measured Frequency 5350 MHz, MCS5, Final Peak, Restricted Band Edges Plot

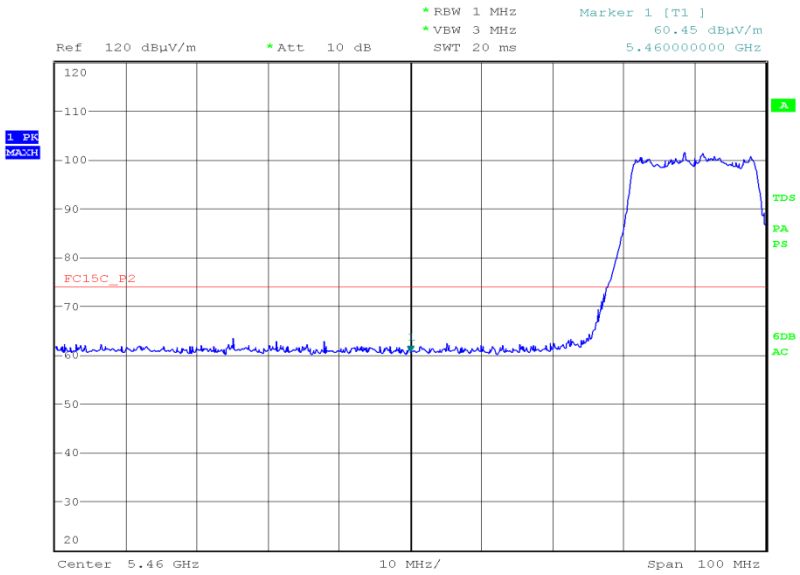


802.11ac - 5 GHz 20 MHz Bandwidth, 5320 MHz, Measured Frequency 5350 MHz, MCS5, Final Average, Restricted Band Edges Plot



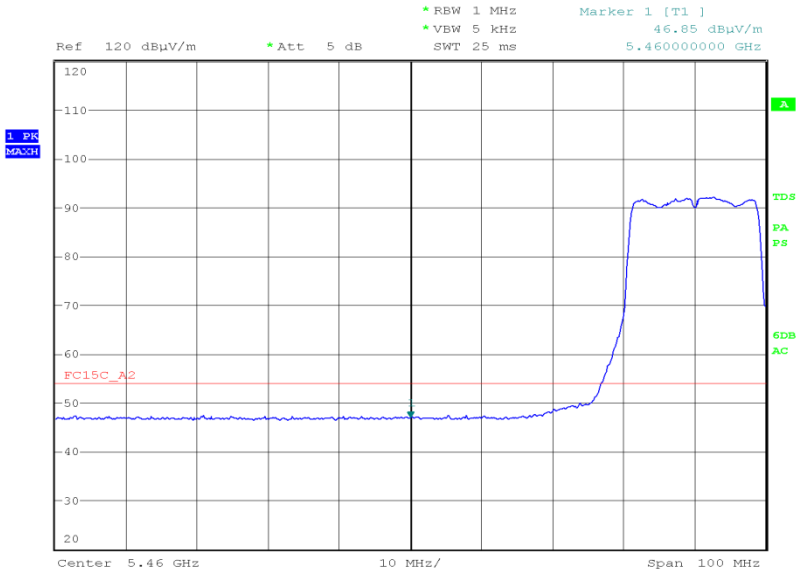
Date: 3.APR.2016 14:57:37

802.11ac - 5 GHz 20 MHz Bandwidth, 5500 MHz, Measured Frequency 5460 MHz, MCS5, Final Peak, Restricted Band Edges Plot



Date: 3.APR.2016 15:03:50

802.11ac - 5 GHz 20 MHz Bandwidth, 5500 MHz, Measured Frequency 5460 MHz, MCS5, Final Average, Restricted Band Edges Plot



Remark

The test was performed on MCS3 because this was deemed the worst case data rate for Conducted Output Power.

The test was performed on MCS5 because this was deemed the worst case data rate for 6 dB Bandwidth.

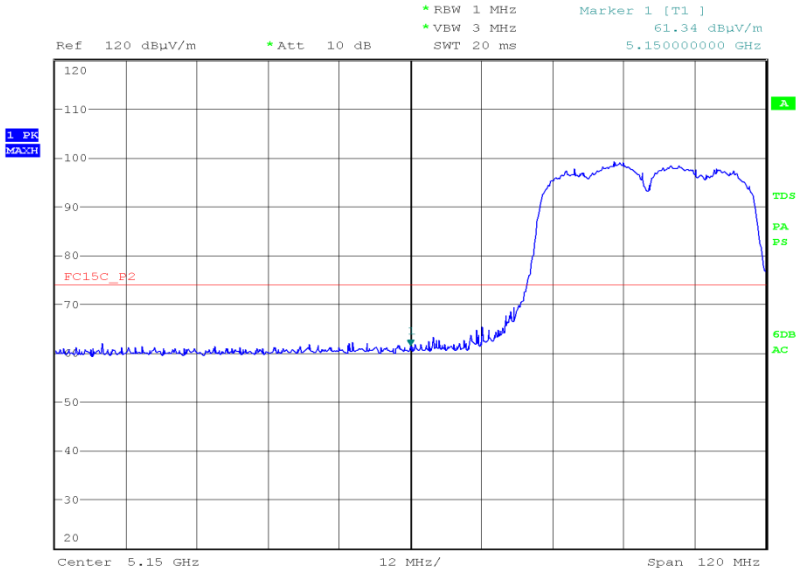
FCC 47 CFR Part 15, Limit Clause 15.205

	Peak (dBµV/m)	Average (dBµV/m)
Restricted Bands of Operation	74	54

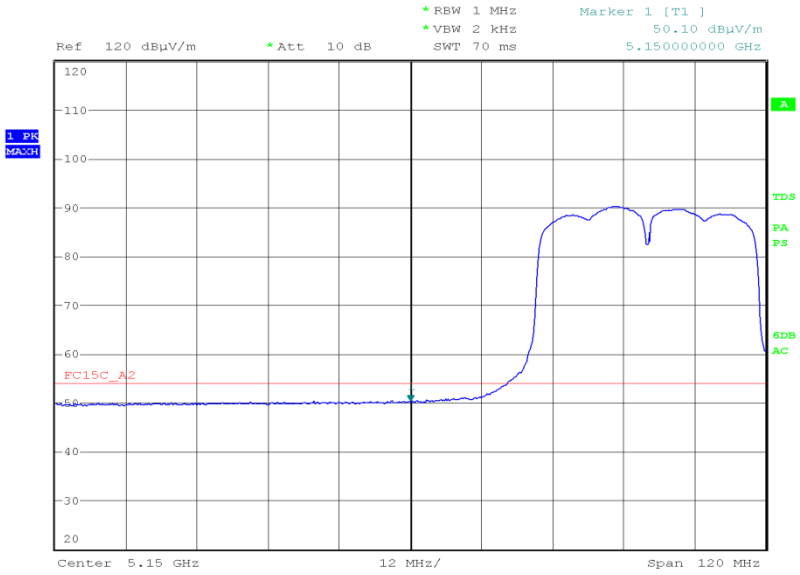
802.11ac - 5 GHz 40 MHz Bandwidth, MCS0, Restricted Band Edges Results

5190 MHz		5310 MHz		5510 MHz	
Measured Frequency 5150 MHz		Measured Frequency 5350 MHz		Measured Frequency 5460 MHz	
dBµV/m		dBµV/m		dBµV/m	
Final Peak	Final Average	Final Peak	Final Average	Final Peak	Final Average
61.34	50.10	61.96	51.17	60.64	50.33

802.11ac - 5 GHz 40 MHz Bandwidth, 5190 MHz, Measured Frequency 5150 MHz, MCS0, Final Peak, Restricted Band Edges Plot

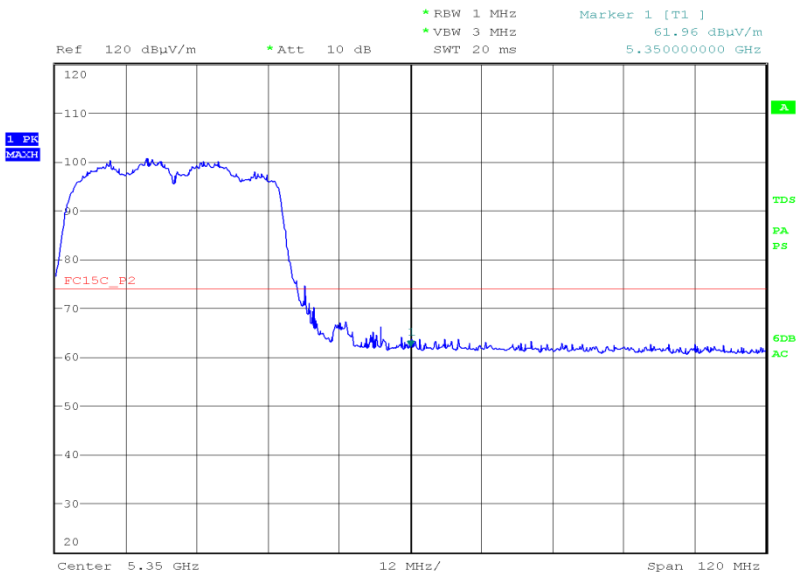


802.11ac - 5 GHz 40 MHz Bandwidth, 5190 MHz, Measured Frequency 5150 MHz, MCS0, Final Average, Restricted Band Edges Plot



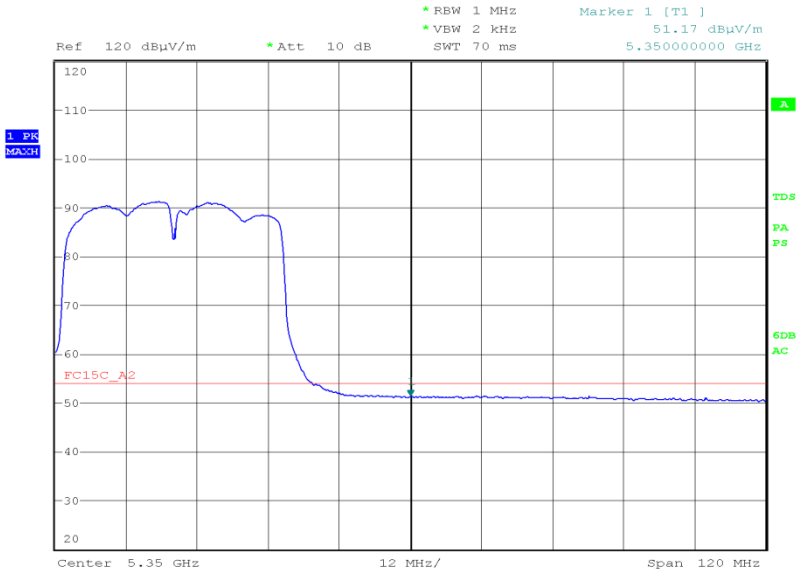
Date: 3.APR.2016 15:23:24

802.11ac - 5 GHz 40 MHz Bandwidth, 5310 MHz, Measured Frequency 5350 MHz, MCS0, Final Peak, Restricted Band Edges Plot

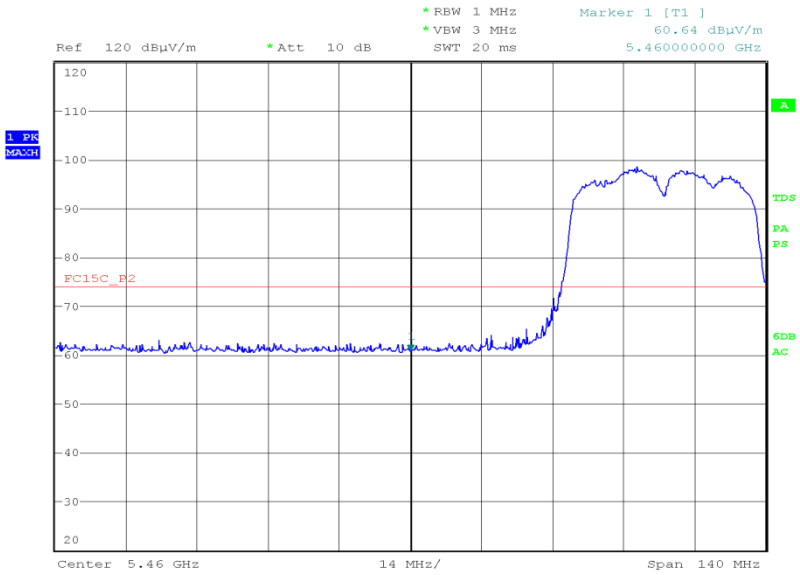


Date: 3.APR.2016 15:29:51

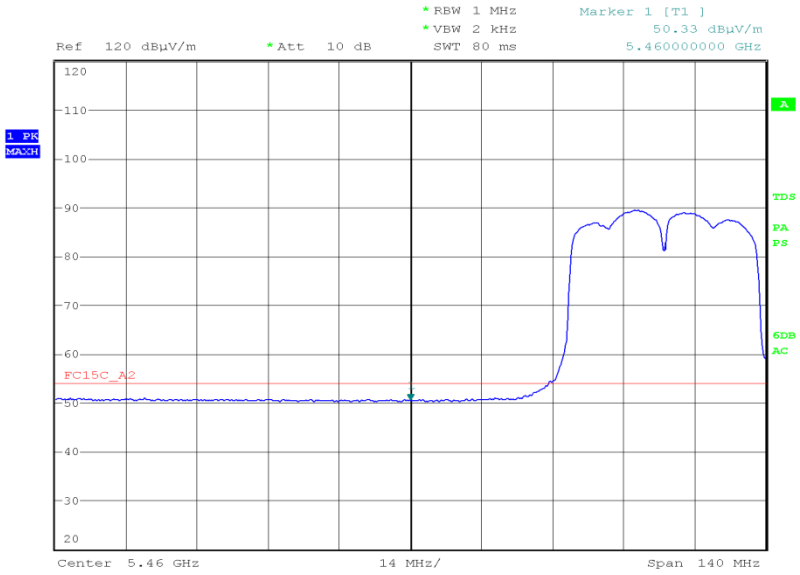
802.11ac - 5 GHz 40 MHz Bandwidth, 5310 MHz, Measured Frequency 5350 MHz, MCS0, Final Average, Restricted Band Edges Plot



802.11ac - 5 GHz 40 MHz Bandwidth, 5510 MHz, Measured Frequency 5460 MHz, MCS0, Final Peak, Restricted Band Edges Plot



802.11ac - 5 GHz 40 MHz Bandwidth, 5510 MHz, Measured Frequency 5460 MHz, MCS0, Final Average, Restricted Band Edges Plot



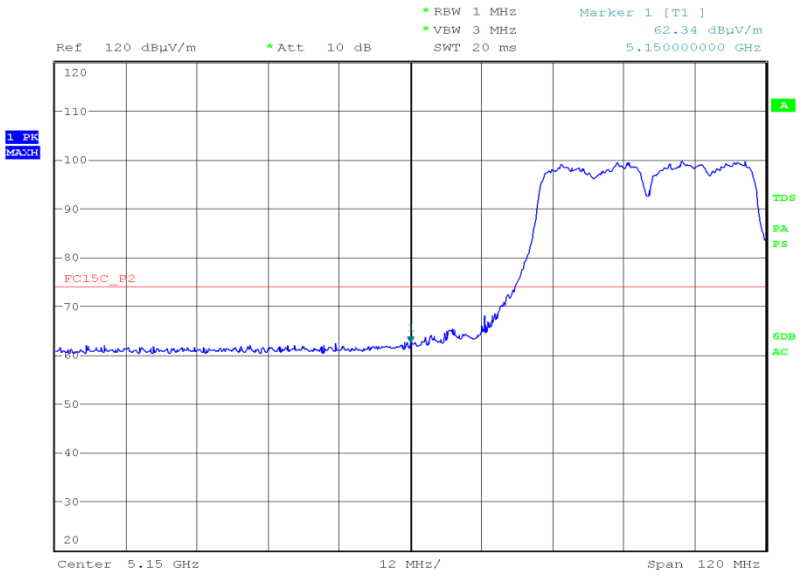
Date: 3.APR.2016 15:34:52

Product Service

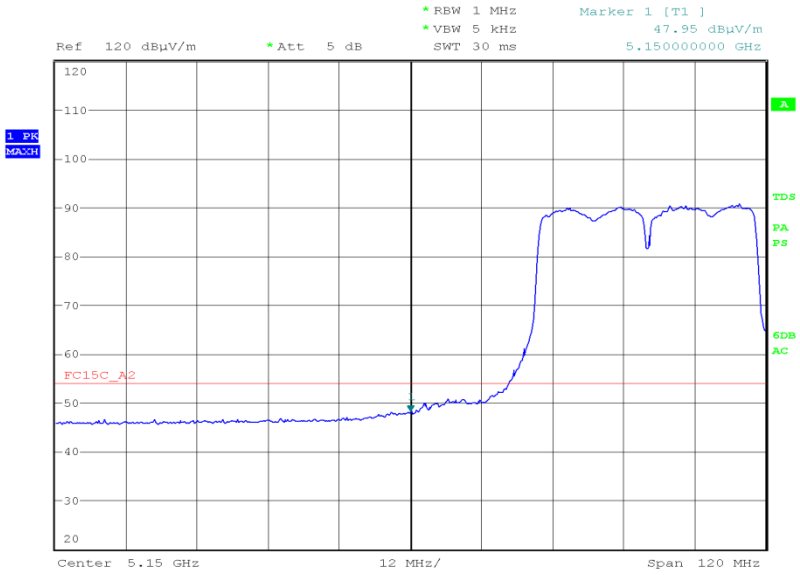
802.11ac - 5 GHz 40 MHz Bandwidth, MCS3, Restricted Band Edges Results

5190 MHz		5310 MHz		5510 MHz	
Measured Frequency 5150 MHz		Measured Frequency 5350 MHz		Measured Frequency 5460 MHz	
dBµV/m		dBµV/m		dBµV/m	
Final Peak	Final Average	Final Peak	Final Average	Final Peak	Final Average
62.34	47.95	61.89	48.12	61.00	46.81

802.11ac - 5 GHz 40 MHz Bandwidth, 5190 MHz, Measured Frequency 5150 MHz, MCS3, Final Peak, Restricted Band Edges Plot

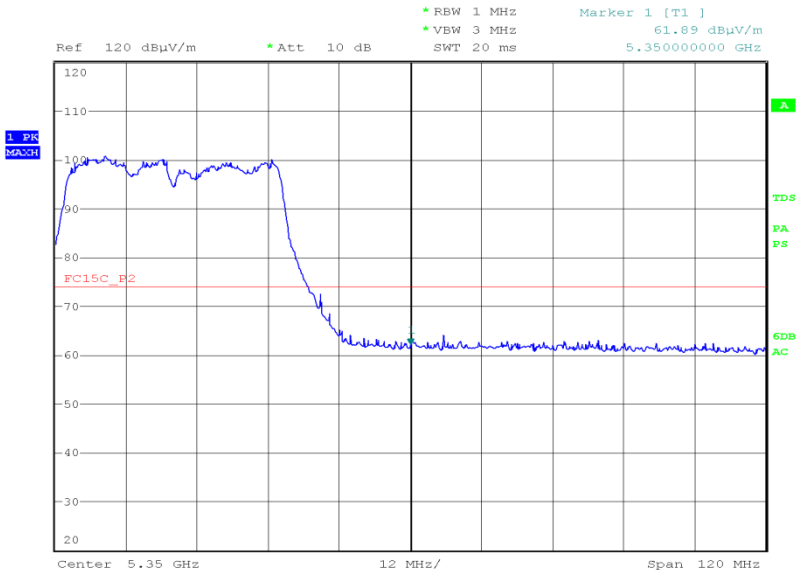


802.11ac - 5 GHz 40 MHz Bandwidth, 5190 MHz, Measured Frequency 5150 MHz, MCS3, Final Average, Restricted Band Edges Plot



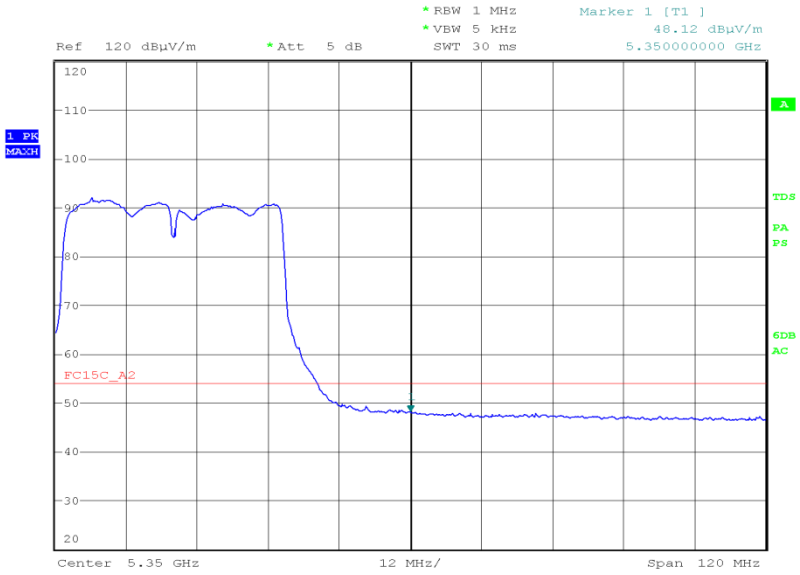
Date: 3.APR.2016 15:55:12

802.11ac - 5 GHz 40 MHz Bandwidth, 5310 MHz, Measured Frequency 5350 MHz, MCS3, Final Peak, Restricted Band Edges Plot



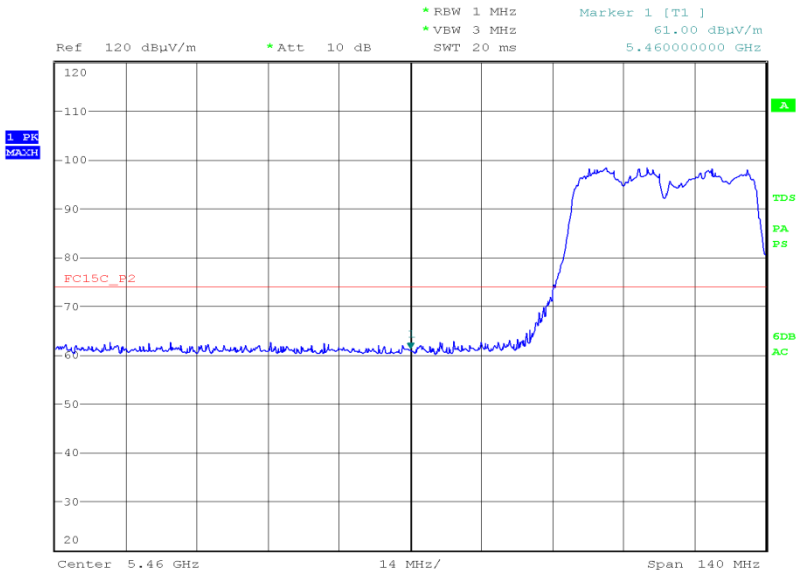
Date: 3.APR.2016 16:00:16

802.11ac - 5 GHz 40 MHz Bandwidth, 5310 MHz, Measured Frequency 5350 MHz, MCS3, Final Average, Restricted Band Edges Plot



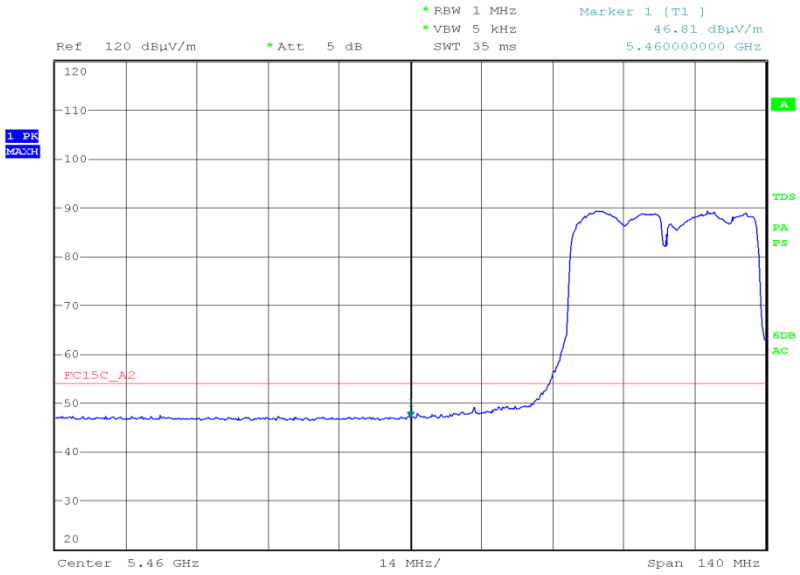
Date: 3.APR.2016 16:01:44

802.11ac - 5 GHz 40 MHz Bandwidth, 5510 MHz, Measured Frequency 5460 MHz, MCS3, Final Peak, Restricted Band Edges Plot



Date: 3.APR.2016 16:09:27

802.11ac - 5 GHz 40 MHz Bandwidth, 5510 MHz, Measured Frequency 5460 MHz, MCS3, Final Average, Restricted Band Edges Plot



Remark

The test was performed on MCS0 because this was deemed the worst case data rate for Conducted Output Power.

The test was performed on MCS3 because this was deemed the worst case data rate for 6 dB Bandwidth.

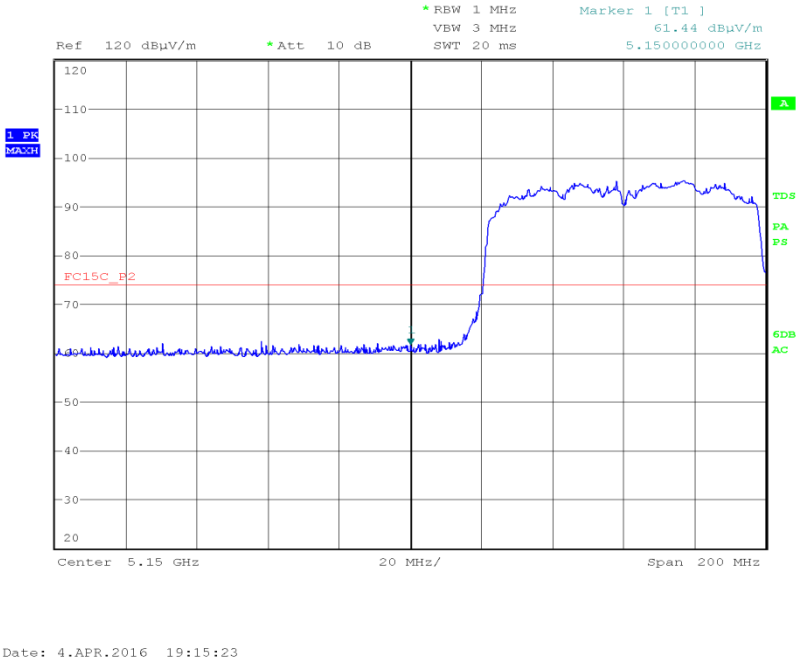
FCC 47 CFR Part 15, Limit Clause 15.205

	Peak (dBµV/m)	Average (dBµV/m)
Restricted Bands of Operation	74	54

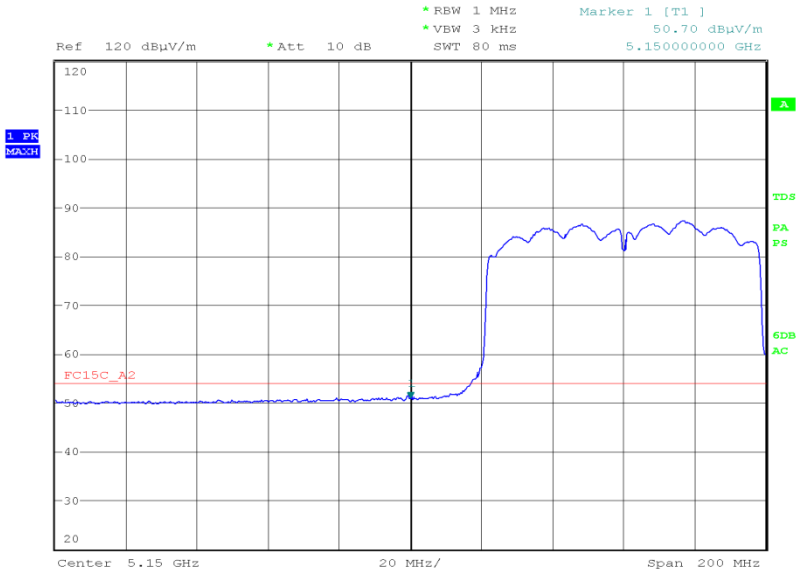
802.11ac - 5 GHz 80 MHz Bandwidth, MCS0, Restricted Band Edges Results

5210 MHz		5290 MHz		5530 MHz	
Measured Frequency 5150 MHz		Measured Frequency 5350 MHz		Measured Frequency 5460 MHz	
dBµV/m		dBµV/m		dBµV/m	
Final Peak	Final Average	Final Peak	Final Average	Final Peak	Final Average
61.44	50.70	61.87	47.81	61.38	47.24

802.11ac - 5 GHz 80 MHz Bandwidth, 5210 MHz, Measured Frequency 5150 MHz, MCS0, Final Peak, Restricted Band Edges Plot

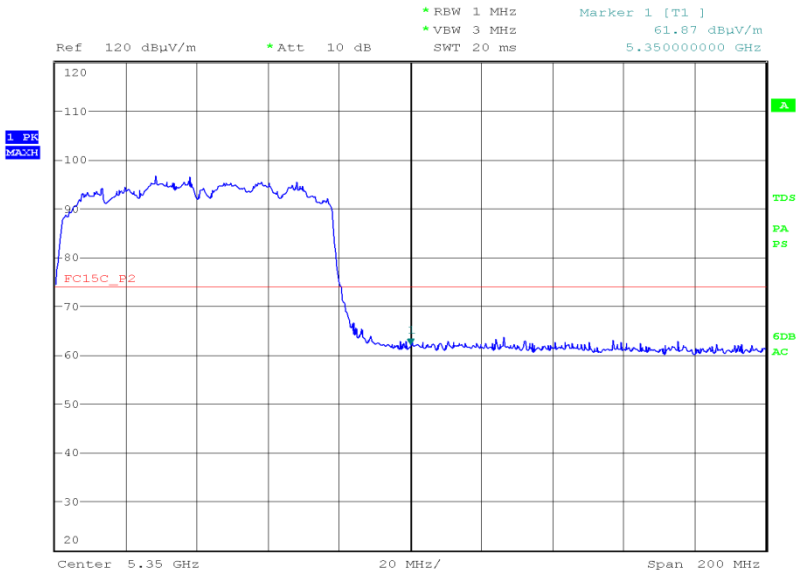


802.11ac - 5 GHz 80 MHz Bandwidth, 5210 MHz, Measured Frequency 5150 MHz, MCS0, Final Average, Restricted Band Edges Plot



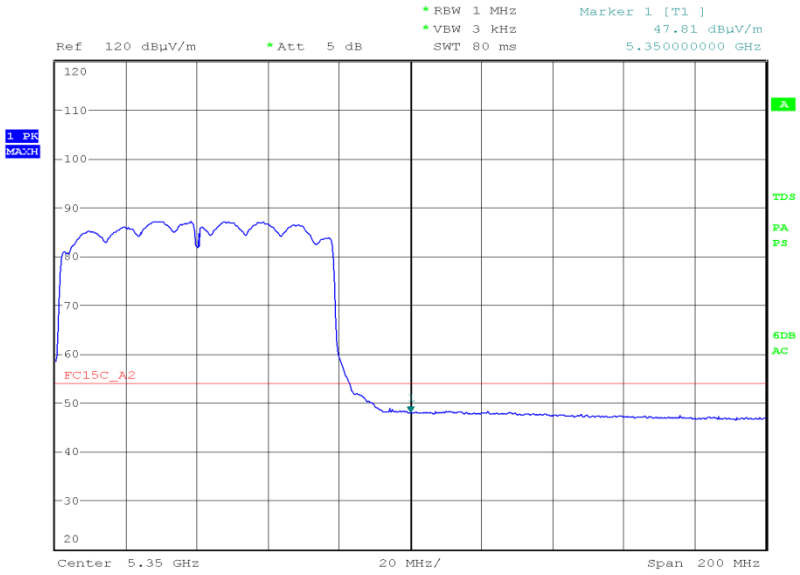
Date: 4.APR.2016 19:27:30

802.11ac - 5 GHz 80 MHz Bandwidth, 5290 MHz, Measured Frequency 5350 MHz, MCS0, Final Peak, Restricted Band Edges Plot

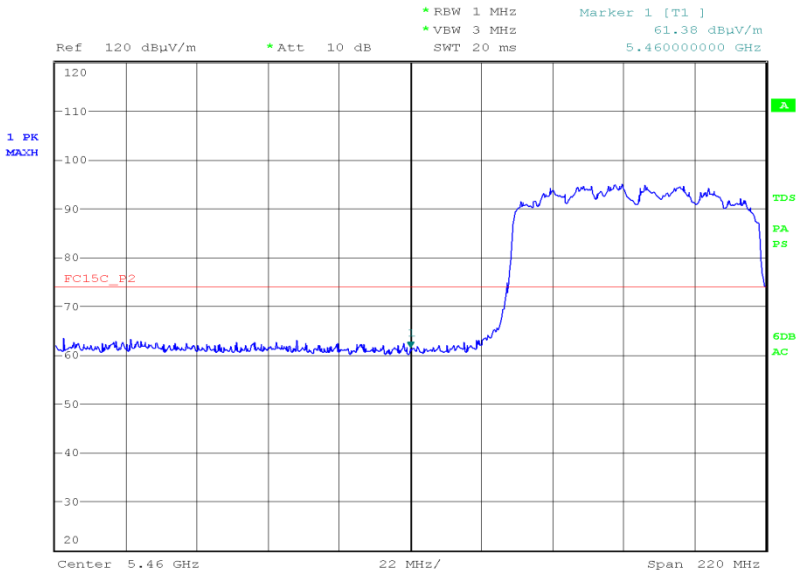


Date: 4.APR.2016 19:23:45

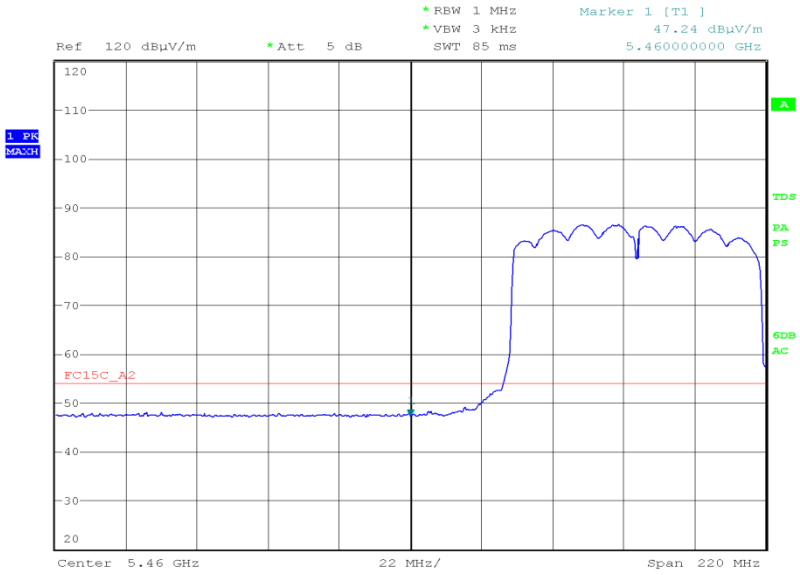
802.11ac - 5 GHz 80 MHz Bandwidth, 5290 MHz, Measured Frequency 5350 MHz, MCS0, Final Average, Restricted Band Edges Plot



802.11ac - 5 GHz 80 MHz Bandwidth, 5530 MHz, Measured Frequency 5460 MHz, MCS0, Final Peak, Restricted Band Edges Plot



802.11ac - 5 GHz 80 MHz Bandwidth, 5530 MHz, Measured Frequency 5460 MHz, MCS0, Final Average, Restricted Band Edges Plot



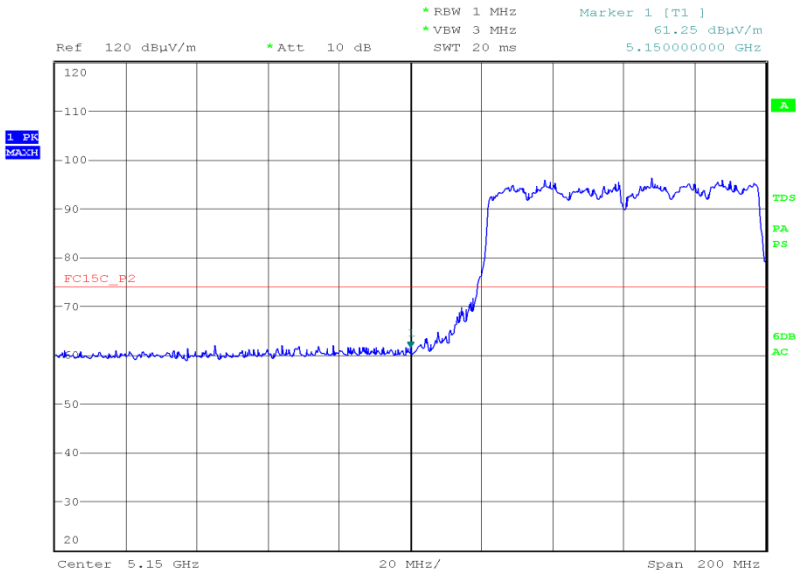
Date: 4.APR.2016 19:36:11

Product Service

802.11ac - 5 GHz 80 MHz Bandwidth, MCS6, Restricted Band Edges Results

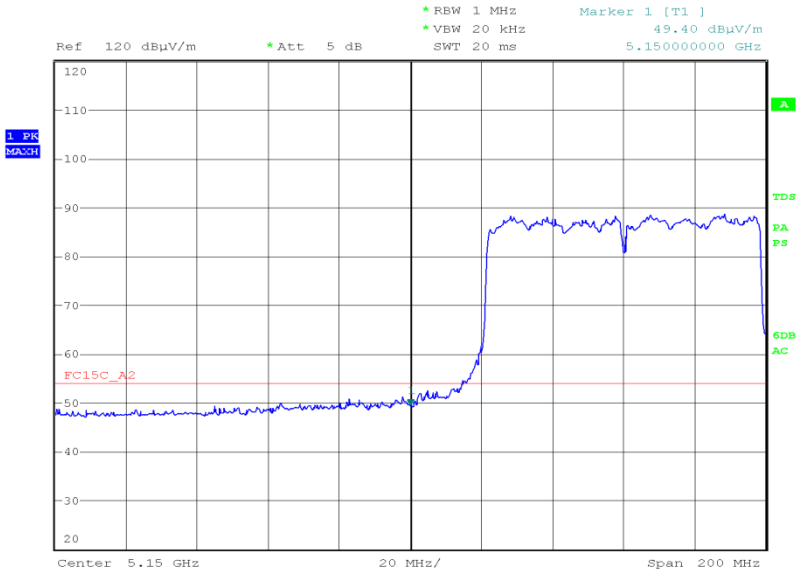
5210 MHz		5290 MHz		5530 MHz	
Measured Frequency 5150 MHz		Measured Frequency 5350 MHz		Measured Frequency 5460 MHz	
dBµV/m		dBµV/m		dBµV/m	
Final Peak	Final Average	Final Peak	Final Average	Final Peak	Final Average
61.25	49.40	61.14	50.17	62.12	49.75

802.11ac - 5 GHz 80 MHz Bandwidth, 5210 MHz, Measured Frequency 5150 MHz, MCS6, Final Peak, Restricted Band Edges Plot



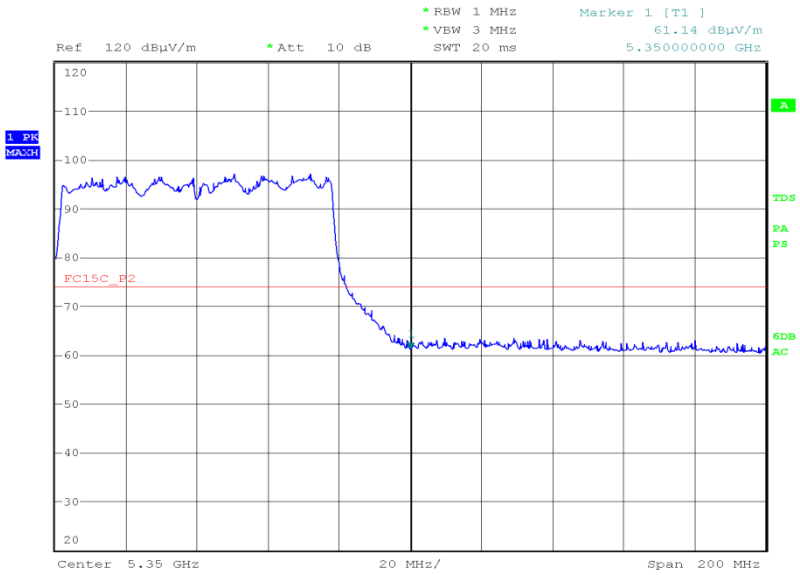
Date: 4.APR.2016 19:52:39

802.11ac - 5 GHz 80 MHz Bandwidth, 5210 MHz, Measured Frequency 5150 MHz, MCS6, Final Average, Restricted Band Edges Plot



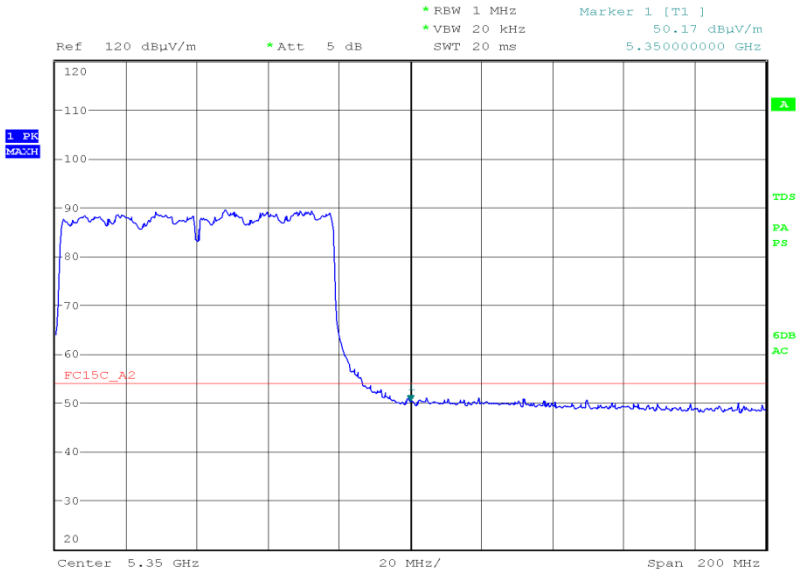
Date: 4.APR.2016 19:53:37

802.11ac - 5 GHz 80 MHz Bandwidth, 5290 MHz, Measured Frequency 5350 MHz, MCS6, Final Peak, Restricted Band Edges Plot

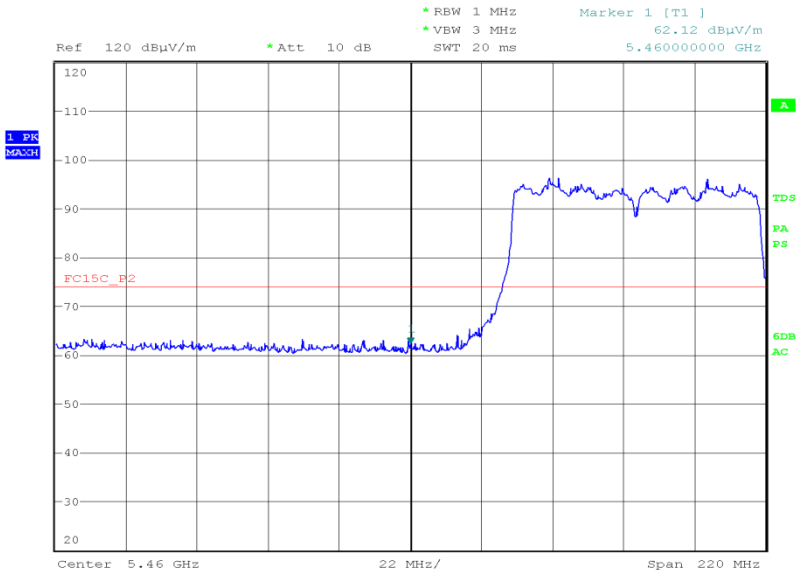


Date: 4.APR.2016 20:00:01

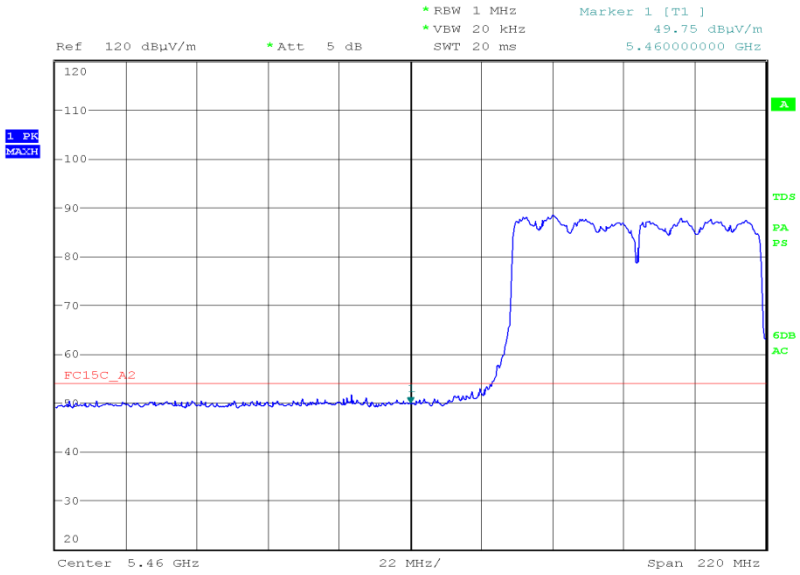
802.11ac - 5 GHz 80 MHz Bandwidth, 5290 MHz, Measured Frequency 5350 MHz, MCS6, Final Average, Restricted Band Edges Plot



802.11ac - 5 GHz 80 MHz Bandwidth, 5530 MHz, Measured Frequency 5460 MHz, MCS6, Final Peak, Restricted Band Edges Plot



802.11ac - 5 GHz 80 MHz Bandwidth, 5530 MHz, Measured Frequency 5460 MHz, MCS6, Final Average, Restricted Band Edges Plot



Remark

The test was performed on MCS0 because this was deemed the worst case data rate for Conducted Output Power.

The test was performed on MCS6 because this was deemed the worst case data rate for 6 dB Bandwidth.

FCC 47 CFR Part 15, Limit Clause 15.205

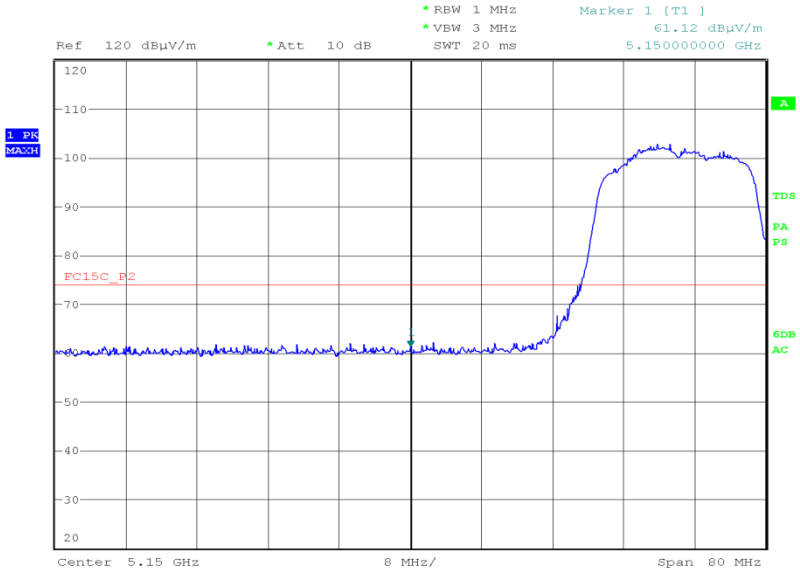
	Peak (dBµV/m)	Average (dBµV/m)
Restricted Bands of Operation	74	54

Product Service

802.11n - 5 GHz 20 MHz Bandwidth, MCS0, Restricted Band Edges Results

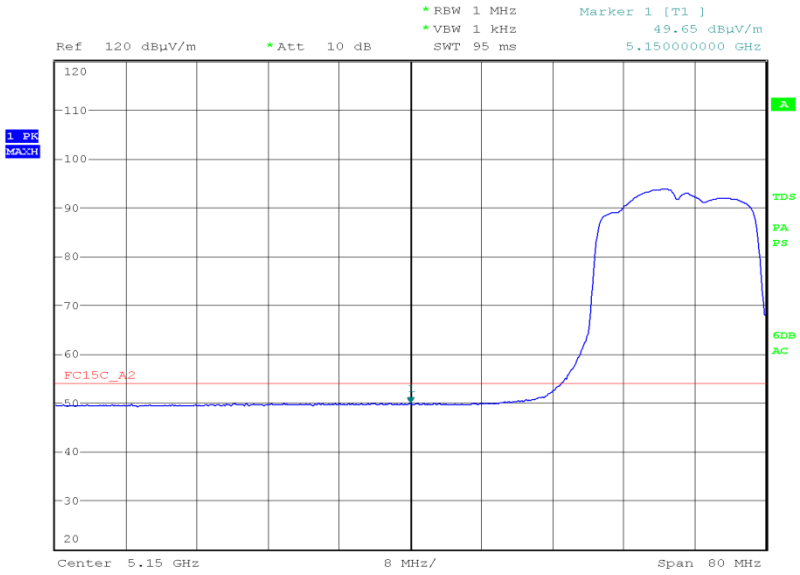
5180 MHz		5320 MHz		5500 MHz	
Measured Frequency 5150 MHz		Measured Frequency 5350 MHz		Measured Frequency 5460 MHz	
dBµV/m		dBµV/m		dBµV/m	
Final Peak	Final Average	Final Peak	Final Average	Final Peak	Final Average
61.12	49.65	61.89	50.95	61.56	50.17

802.11n - 5 GHz 20 MHz Bandwidth, 5180 MHz, Measured Frequency 5150 MHz, MCS0, Final Peak, Restricted Band Edges Plot



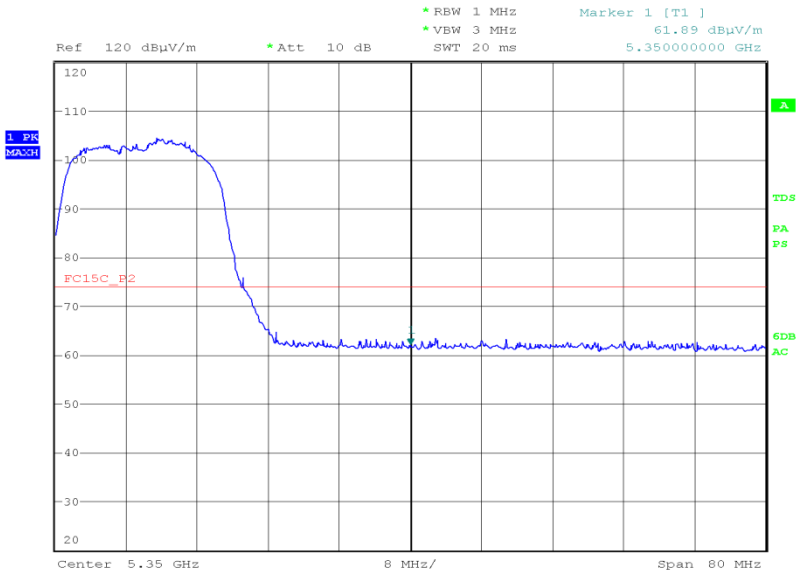
Product Service

802.11n - 5 GHz 20 MHz Bandwidth, 5180 MHz, Measured Frequency 5150 MHz, MCS0, Final Average, Restricted Band Edges Plot



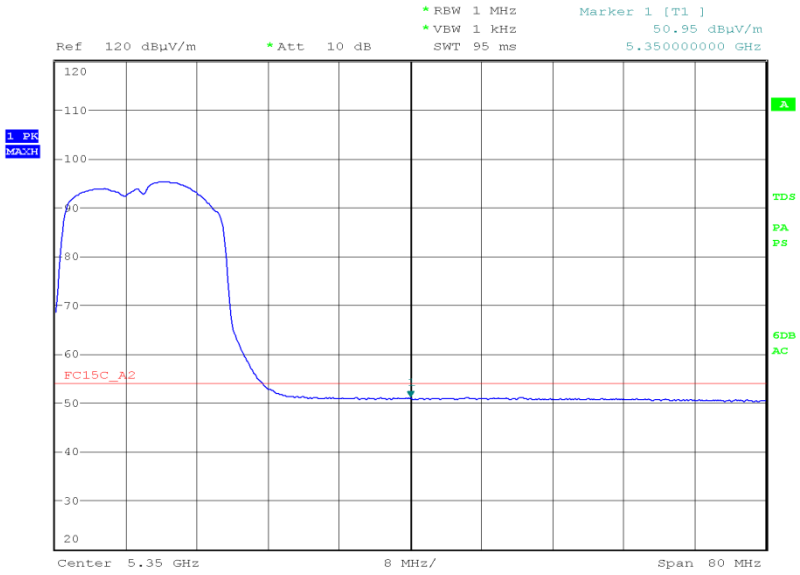
Date: 3.APR.2016 10:25:25

802.11n - 5 GHz 20 MHz Bandwidth, 5320 MHz, Measured Frequency 5350 MHz, MCS0, Final Peak, Restricted Band Edges Plot

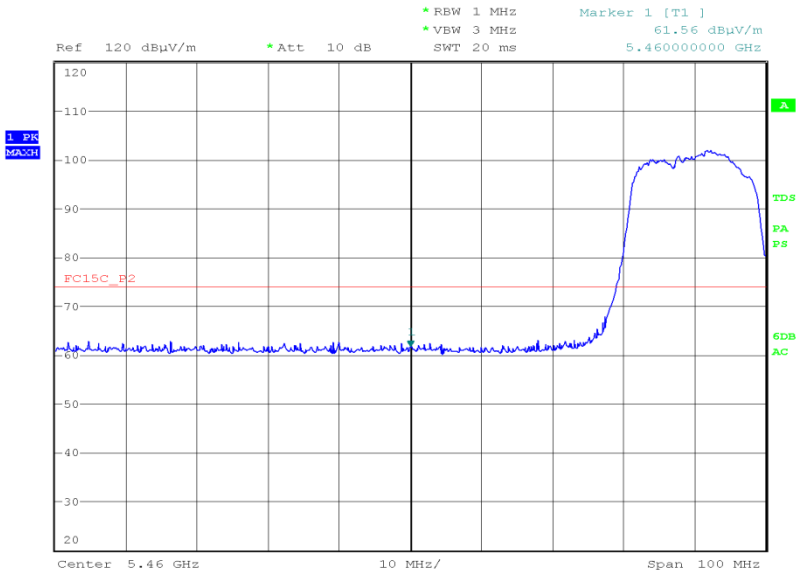


Date: 3.APR.2016 10:30:06

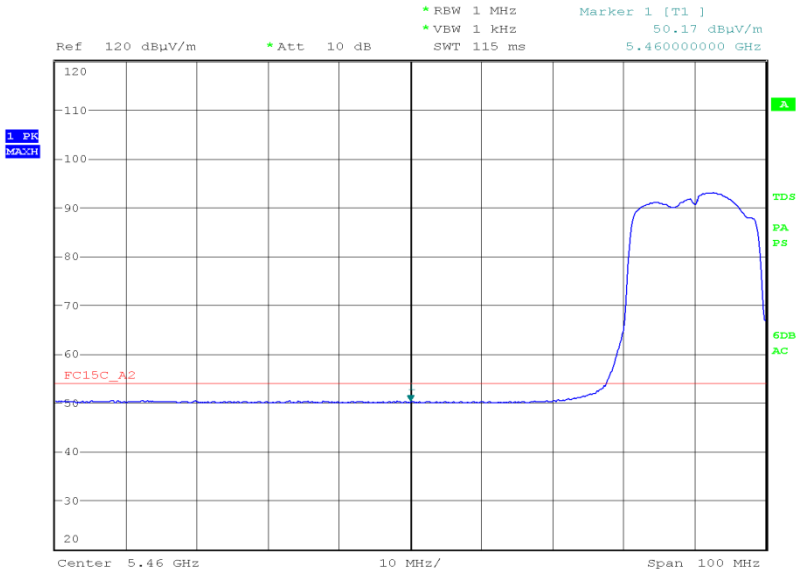
802.11n - 5 GHz 20 MHz Bandwidth, 5320 MHz, Measured Frequency 5350 MHz, MCS0, Final Average, Restricted Band Edges Plot



802.11n - 5 GHz 20 MHz Bandwidth, 5500 MHz, Measured Frequency 5460 MHz, MCS0, Final Peak, Restricted Band Edges Plot



802.11n - 5 GHz 20 MHz Bandwidth, 5500 MHz, Measured Frequency 5460 MHz, MCS0, Final Average, Restricted Band Edges Plot



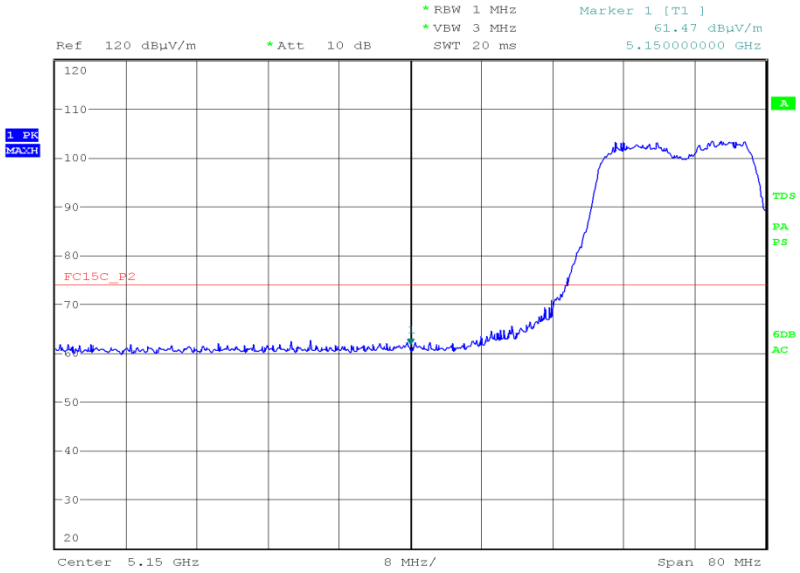
Date: 3.APR.2016 10:36:06

Product Service

802.11n - 5 GHz 20 MHz Bandwidth, MCS4, Restricted Band Edges Results

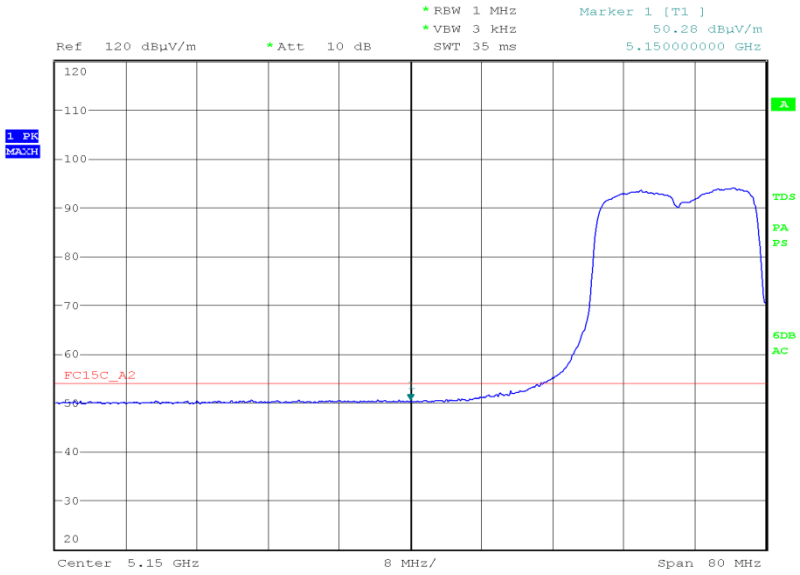
5180 MHz		5320 MHz		5500 MHz	
Measured Frequency 5150 MHz		Measured Frequency 5350 MHz		Measured Frequency 5460 MHz	
dBµV/m		dBµV/m		dBµV/m	
Final Peak	Final Average	Final Peak	Final Average	Final Peak	Final Average
61.47	50.28	61.70	51.32	61.34	50.66

802.11n - 5 GHz 20 MHz Bandwidth, 5180 MHz, Measured Frequency 5150 MHz, MCS4, Final Peak, Restricted Band Edges Plot

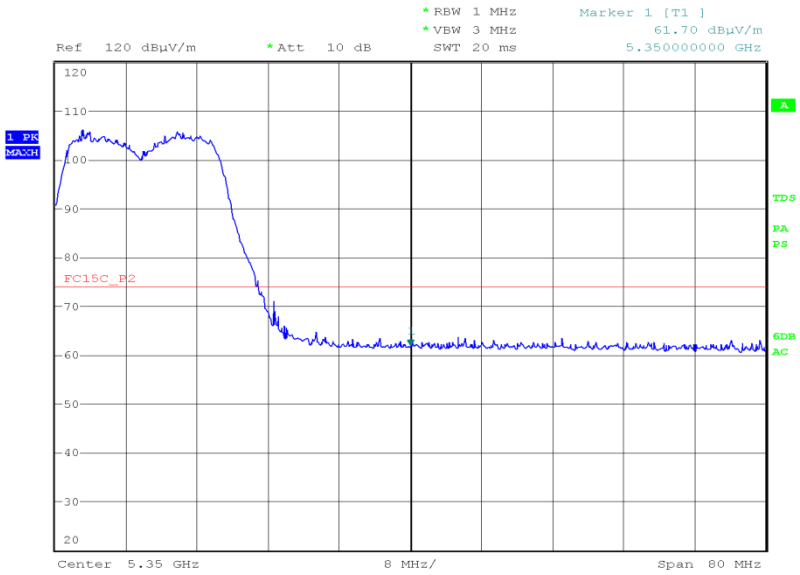


Product Service

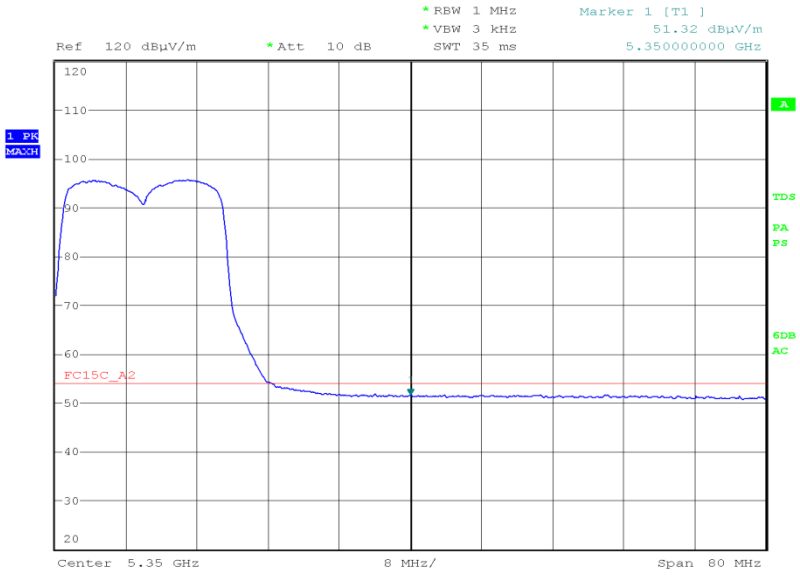
802.11n - 5 GHz 20 MHz Bandwidth, 5180 MHz, Measured Frequency 5150 MHz, MCS4, Final Average, Restricted Band Edges Plot



802.11n - 5 GHz 20 MHz Bandwidth, 5320 MHz, Measured Frequency 5350 MHz, MCS4, Final Peak, Restricted Band Edges Plot

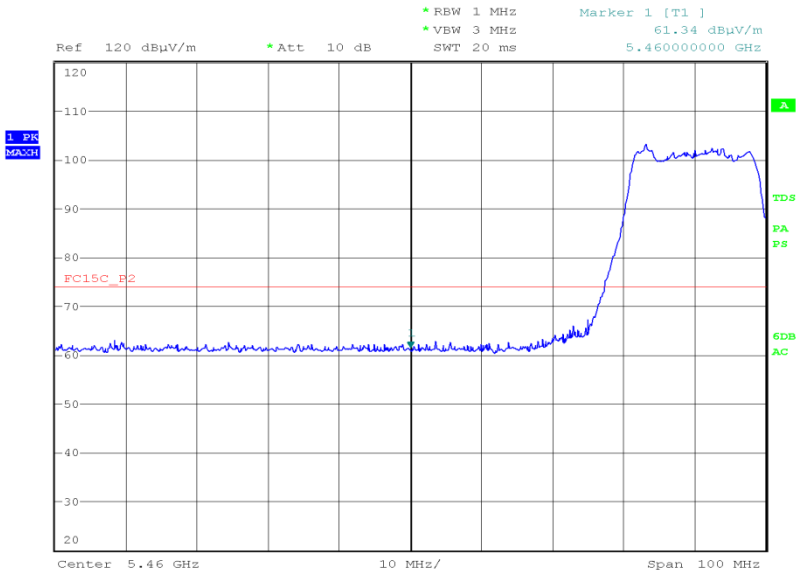


802.11n - 5 GHz 20 MHz Bandwidth, 5320 MHz, Measured Frequency 5350 MHz, MCS4, Final Average, Restricted Band Edges Plot



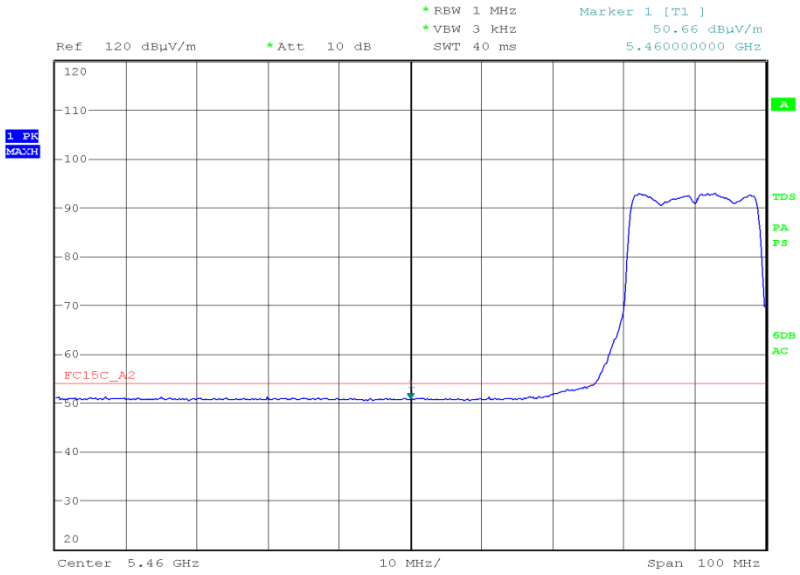
Date: 3.APR.2016 10:58:38

802.11n - 5 GHz 20 MHz Bandwidth, 5500 MHz, Measured Frequency 5460 MHz, MCS4, Final Peak, Restricted Band Edges Plot



Date: 3.APR.2016 11:07:09

802.11n - 5 GHz 20 MHz Bandwidth, 5500 MHz, Measured Frequency 5460 MHz, MCS4, Final Average, Restricted Band Edges Plot



Date: 3.APR.2016 11:07:39

Remark

The test was performed on MCS0 because this was deemed the worst case data rate for Conducted Output Power.

The test was performed on MCS4 because this was deemed the worst case data rate for 6 dB Bandwidth.

FCC 47 CFR Part 15, Limit Clause 15.205

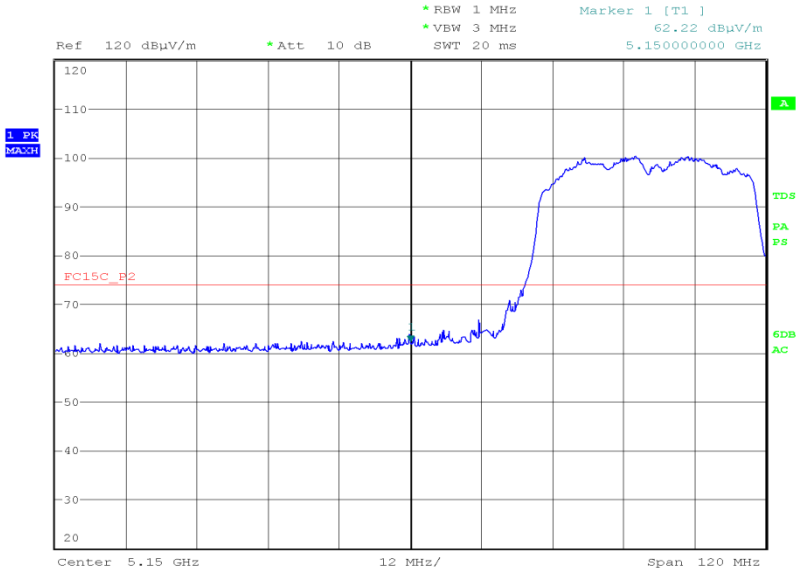
	Peak (dBµV/m)	Average (dBµV/m)
Restricted Bands of Operation	74	54

Product Service

802.11n - 5 GHz 40 MHz Bandwidth, MCS0, Restricted Band Edges Results

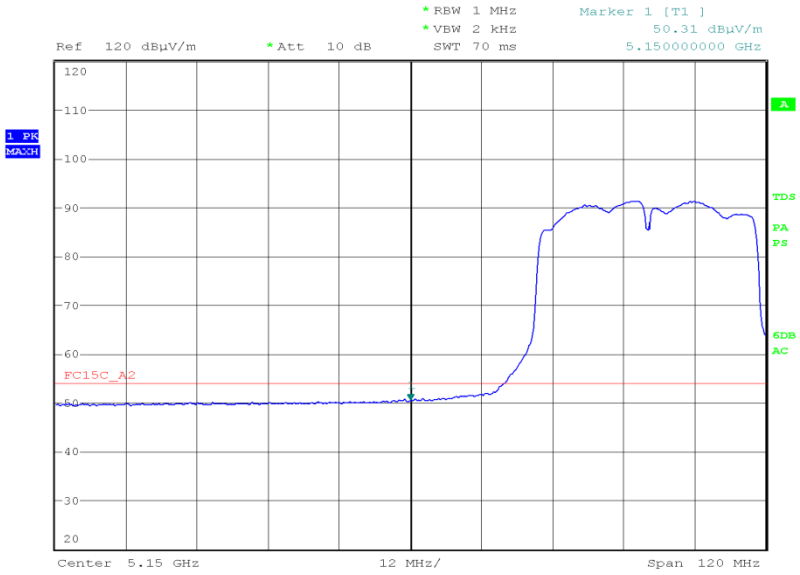
5190 MHz		5310 MHz		5510 MHz	
Measured Frequency 5150 MHz		Measured Frequency 5350 MHz		Measured Frequency 5460 MHz	
dBµV/m		dBµV/m		dBµV/m	
Final Peak	Final Average	Final Peak	Final Average	Final Peak	Final Average
62.22	50.31	63.82	51.15	60.96	50.40

802.11n - 5 GHz 40 MHz Bandwidth, 5190 MHz, Measured Frequency 5150 MHz, MCS0, Final Peak, Restricted Band Edges Plot



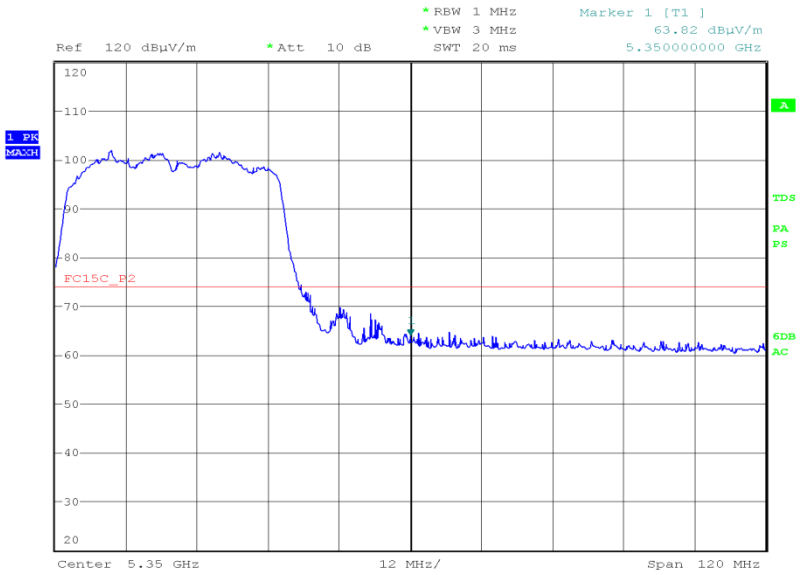
Date: 3.APR.2016 11:37:28

802.11n - 5 GHz 40 MHz Bandwidth, 5190 MHz, Measured Frequency 5150 MHz, MCS0, Final Average, Restricted Band Edges Plot



Date: 3.APR.2016 11:38:44

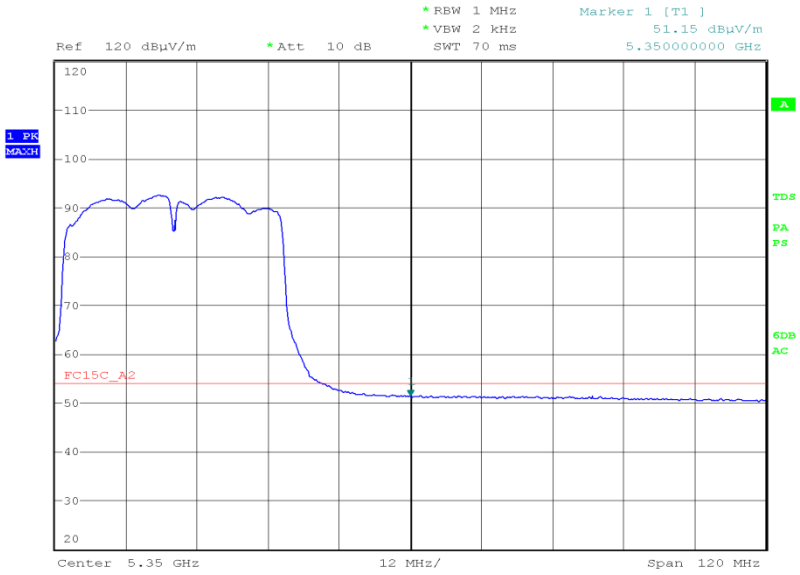
802.11n - 5 GHz 40 MHz Bandwidth, 5310 MHz, Measured Frequency 5350 MHz, MCS0, Final Peak, Restricted Band Edges Plot



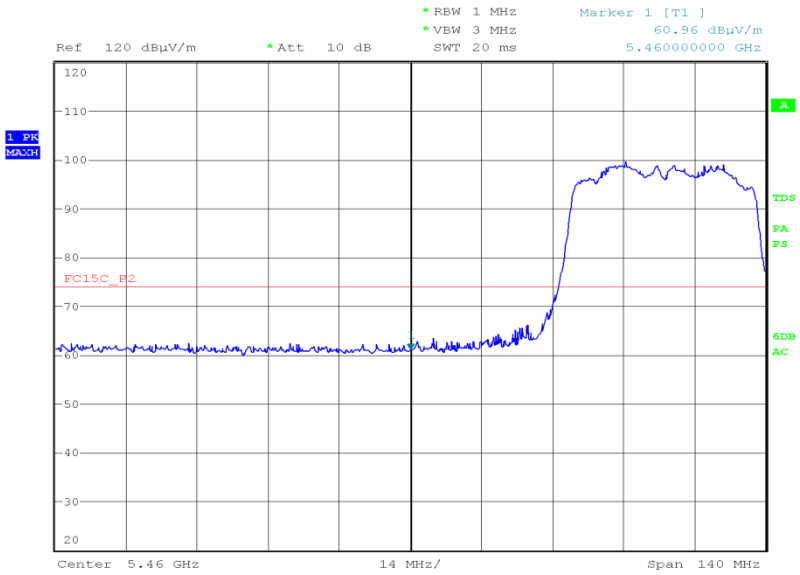
Date: 3.APR.2016 11:45:28

Product Service

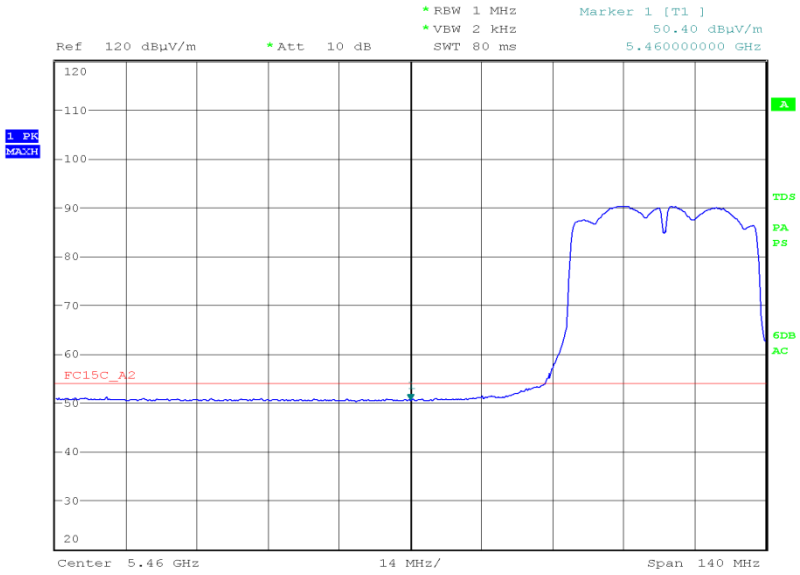
802.11n - 5 GHz 40 MHz Bandwidth, 5310 MHz, Measured Frequency 5350 MHz, MCS0, Final Average, Restricted Band Edges Plot



802.11n - 5 GHz 40 MHz Bandwidth, 5510 MHz, Measured Frequency 5460 MHz, MCS0, Final Peak, Restricted Band Edges Plot



802.11n - 5 GHz 40 MHz Bandwidth, 5510 MHz, Measured Frequency 5460 MHz, MCS0, Final Average, Restricted Band Edges Plot

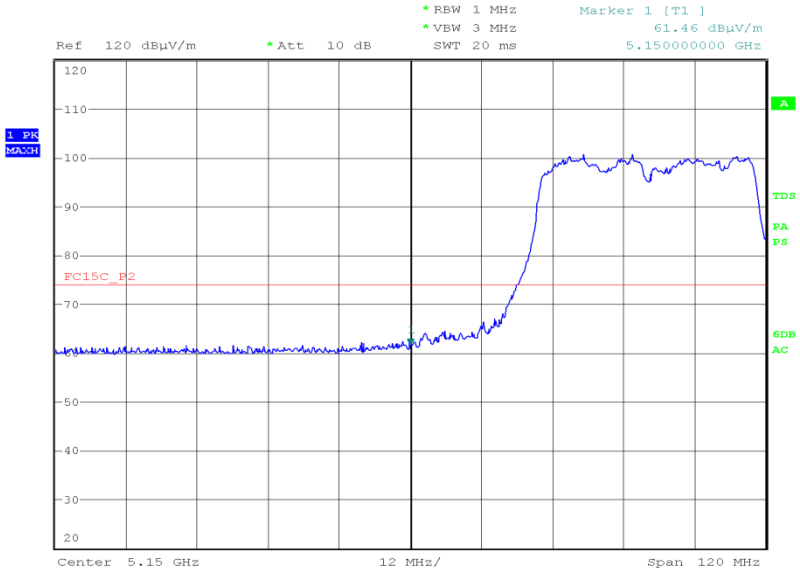


Date: 3.APR.2016 11:50:33

802.11n - 5 GHz 40 MHz Bandwidth, MCS7, Restricted Band Edges Results

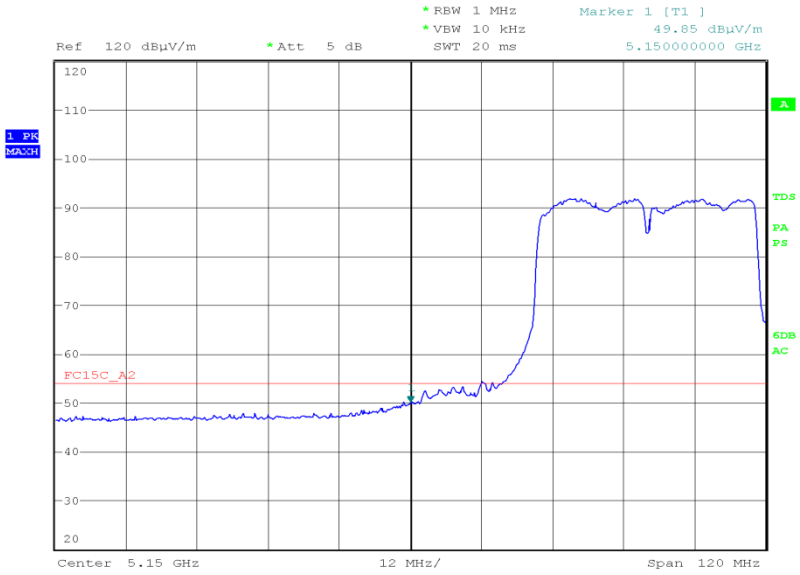
5190 MHz		5310 MHz		5510 MHz	
Measured Frequency 5150 MHz		Measured Frequency 5350 MHz		Measured Frequency 5460 MHz	
dBµV/m		dBµV/m		dBµV/m	
Final Peak	Final Average	Final Peak	Final Average	Final Peak	Final Average
61.46	49.85	62.09	48.92	63.18	47.92

802.11n - 5 GHz 40 MHz Bandwidth, 5190 MHz, Measured Frequency 5150 MHz, MCS7, Final Peak, Restricted Band Edges Plot



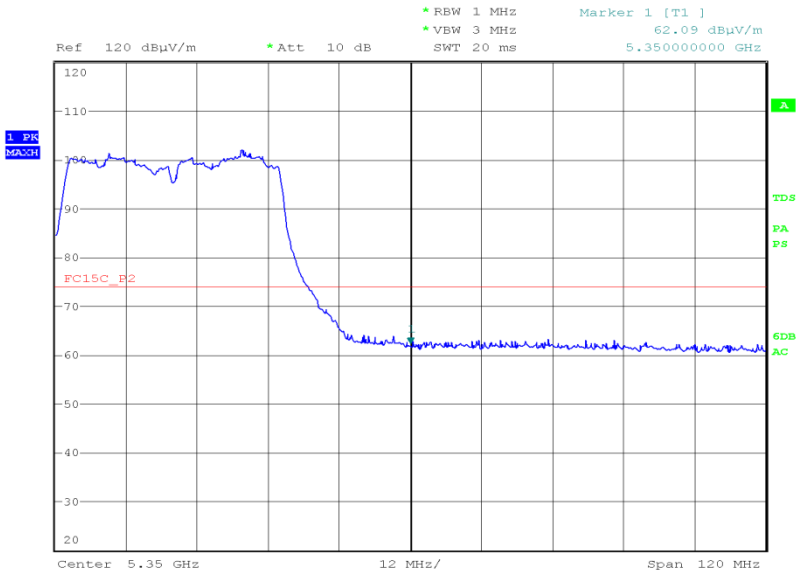
Product Service

802.11n - 5 GHz 40 MHz Bandwidth, 5190 MHz, Measured Frequency 5150 MHz, MCS7, Final Average, Restricted Band Edges Plot



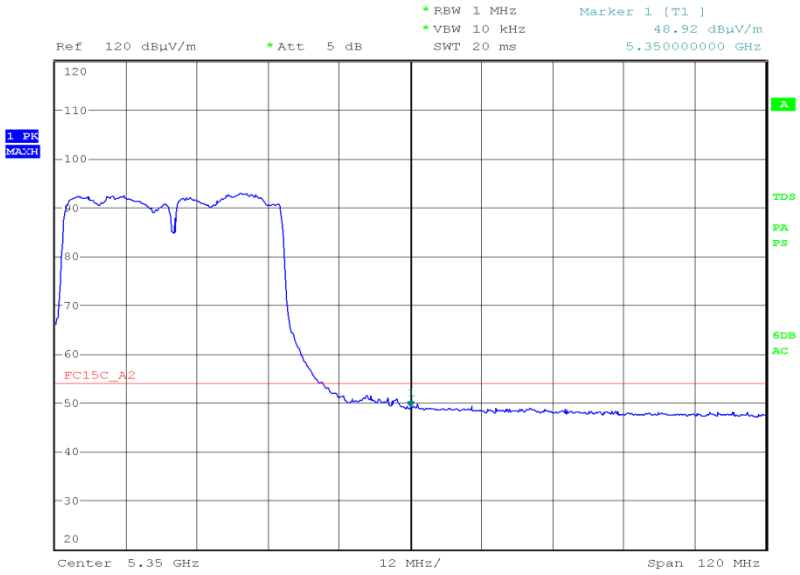
Date: 3.APR.2016 12:22:37

802.11n - 5 GHz 40 MHz Bandwidth, 5310 MHz, Measured Frequency 5350 MHz, MCS7, Final Peak, Restricted Band Edges Plot



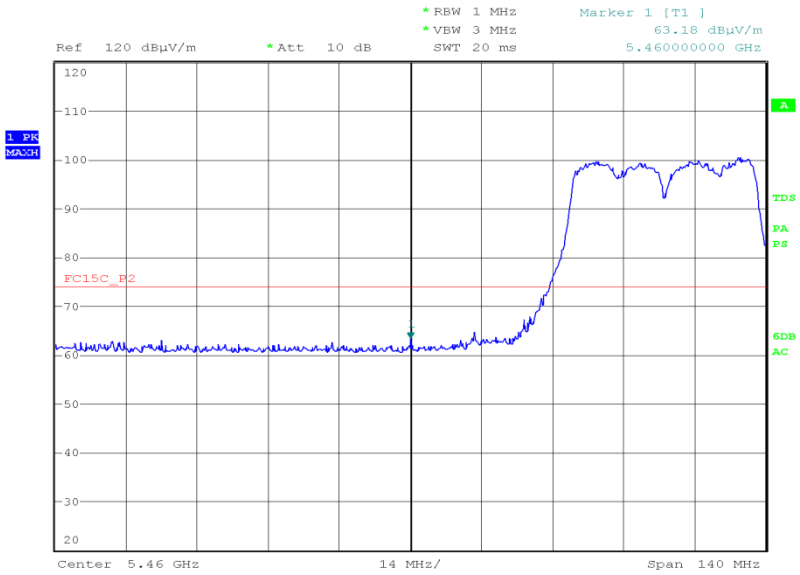
Date: 3.APR.2016 12:27:59

802.11n - 5 GHz 40 MHz Bandwidth, 5310 MHz, Measured Frequency 5350 MHz, MCS7, Final Average, Restricted Band Edges Plot



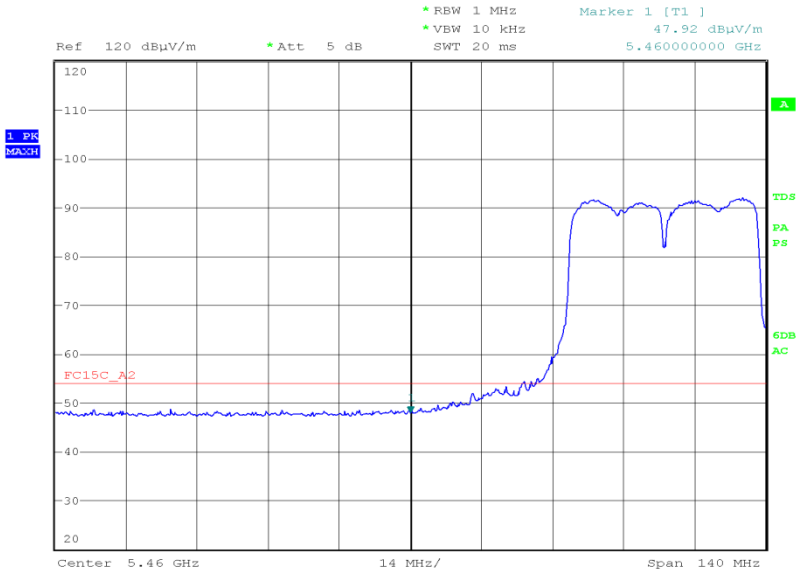
Date: 3.APR.2016 12:28:47

802.11n - 5 GHz 40 MHz Bandwidth, 5510 MHz, Measured Frequency 5460 MHz, MCS7, Final Peak, Restricted Band Edges Plot



Date: 3.APR.2016 12:34:35

802.11n - 5 GHz 40 MHz Bandwidth, 5510 MHz, Measured Frequency 5460 MHz, MCS7, Final Average, Restricted Band Edges Plot



Remark

The test was performed on MCS0 because this was deemed the worst case data rate for Conducted Output Power.

The test was performed on MCS7 because this was deemed the worst case data rate for 6 dB Bandwidth.

FCC 47 CFR Part 15, Limit Clause 15.205

	Peak (dBµV/m)	Average (dBµV/m)
Restricted Bands of Operation	74	54

Product Service

2.8 AUTHORISED BAND EDGES

2.8.1 Specification Reference

FCC 47 CFR Part 15E, Clause 15.407 (b)(1)(2)(3)(4)

2.8.2 Equipment Under Test and Modification State

S/N: IMEI 004401115723831 - Modification State 0

2.8.3 Date of Test

3 April 2016 & 4 April 2016

2.8.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.8.5 Test Procedure

Testing was performed in accordance with ANSI C63.10, Clause 12.7.4.4.

Remarks

The following formula was used as per ANSI C63.10, Clause 12.7.4.4 to convert from field strength (dBµV/m) to E.I.R.P (dBm).

E.I.R.P (dBm) = (E x d)2 / 30

For a measurement distance of 3m, the used conversion factor from dBµV/m to dBm is -95.3 dB.

2.8.6 Environmental Conditions

Ambient Temperature	18.6 - 20.5°C
Relative Humidity	36.0 - 38.0%

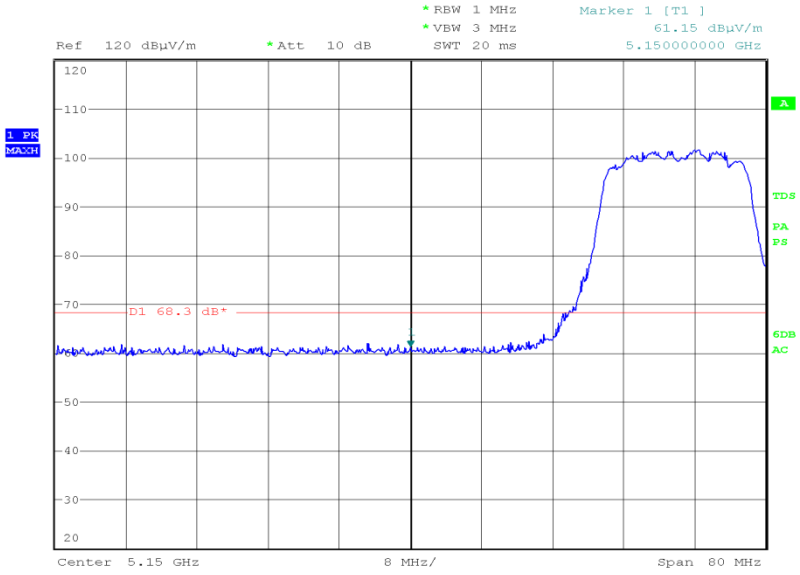
Product Service

2.8.7 Test Results

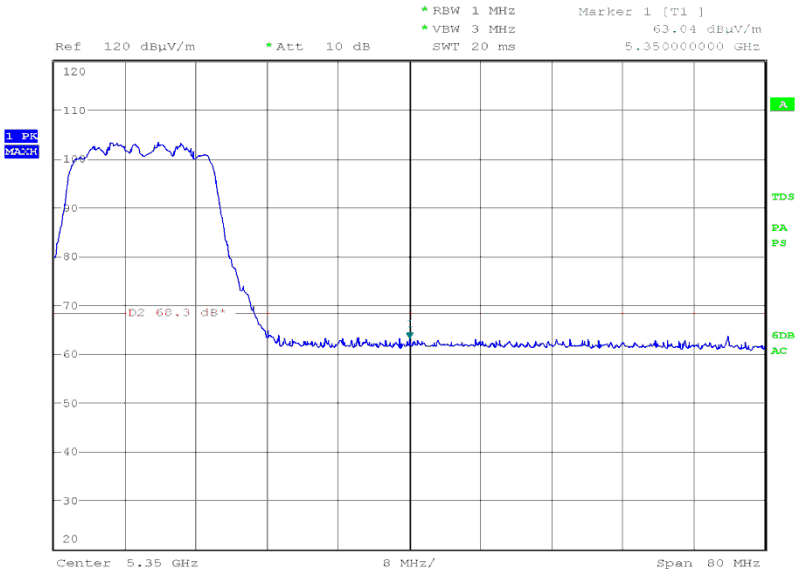
802.11a, 6 Mbps, Authorised Band Edges Results

5180 MHz	5320 MHz	5500 MHz	5700 MHz
Measured Frequency 5150 MHz	Measured Frequency 5350 MHz	Measured Frequency 5470 MHz	Measured Frequency 5725 MHz
dBm	dBm	dBm	dBm
Final Peak	Final Peak	Final Peak	Final Peak
-34.05	-32.16	-33.88	-33.45

802.11a, 5180 MHz, Measured Frequency 5150 MHz, 6 Mbps, Final Peak, Authorised Band Edges Plot

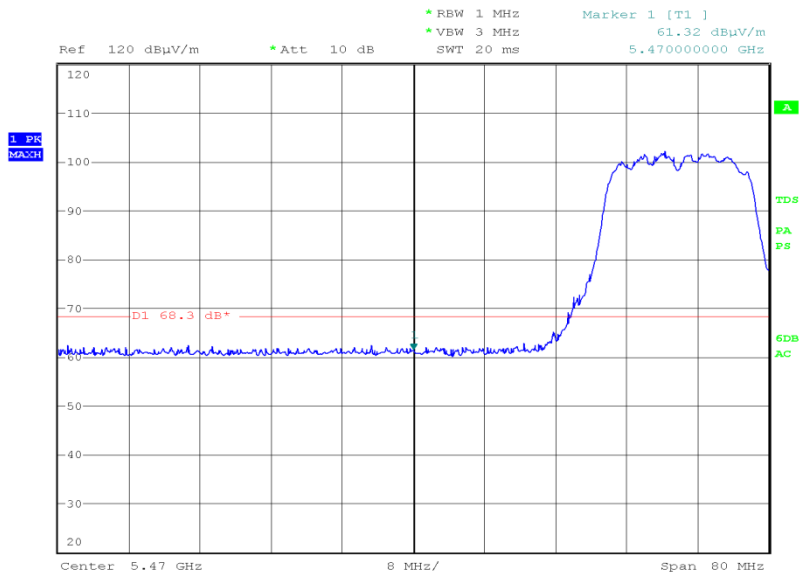


802.11a, 5320 MHz, Measured Frequency 5350 MHz, 6 Mbps, Final Peak, Authorised Band Edges Plot



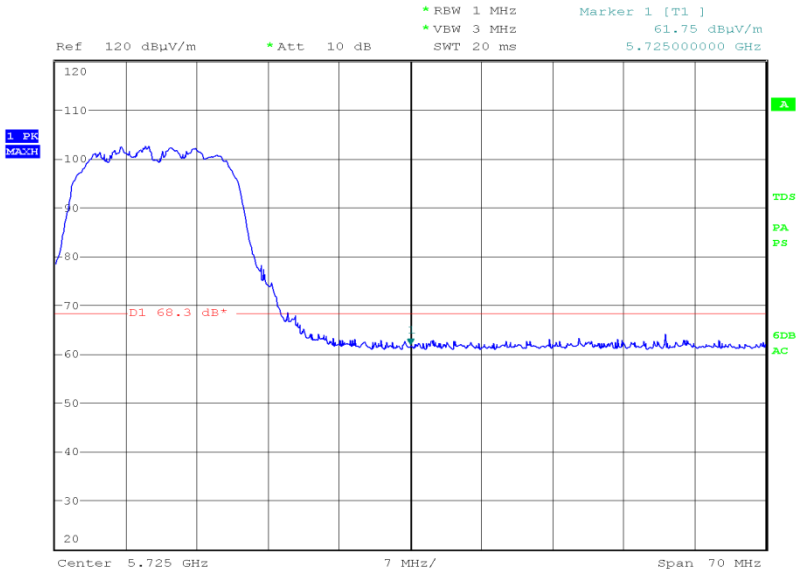
Date: 3.APR.2016 09:19:33

802.11a, 5500 MHz, Measured Frequency 5470 MHz, 6 Mbps, Final Peak, Authorised Band Edges Plot



Date: 3.APR.2016 09:29:25

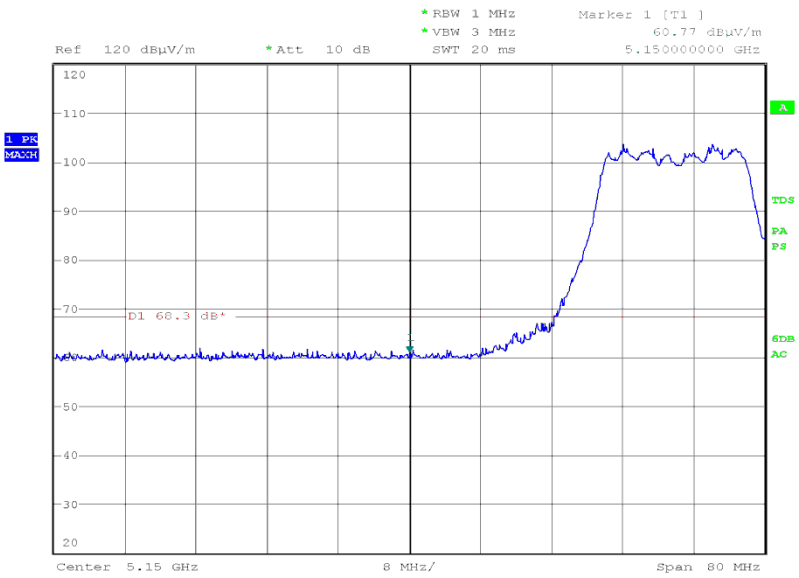
802.11a, 5700 MHz, Measured Frequency 5725 MHz, 6 Mbps, Final Peak, Authorised Band Edges Plot



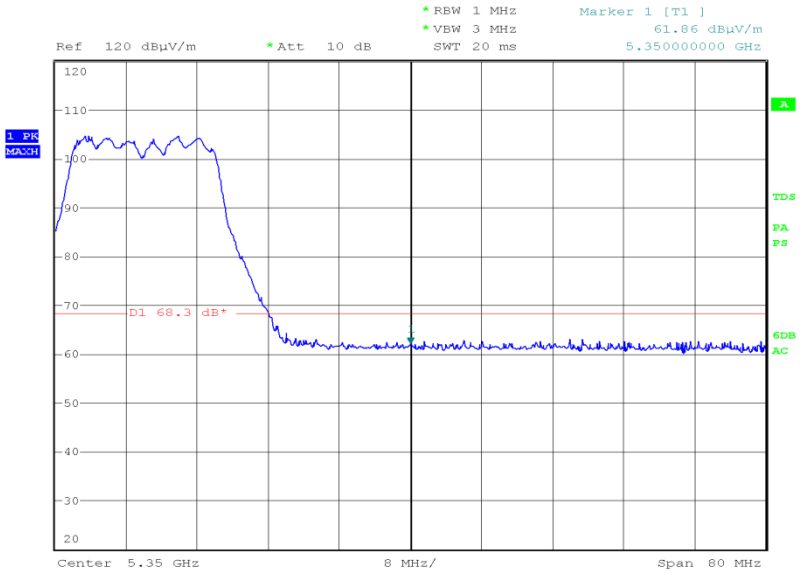
802.11a, 36 Mbps, Authorised Band Edges Results

5180 MHz	5320 MHz	5500 MHz	5700 MHz
Measured Frequency 5150 MHz	Measured Frequency 5350 MHz	Measured Frequency 5470 MHz	Measured Frequency 5725 MHz
dBm	dBm	dBm	dBm
Final Peak	Final Peak	Final Peak	Final Peak
-34.43	-33.34	-33.29	-34.24

802.11a, 5180 MHz, Measured Frequency 5150 MHz, 36 Mbps, Final Peak, Authorised Band Edges Plot

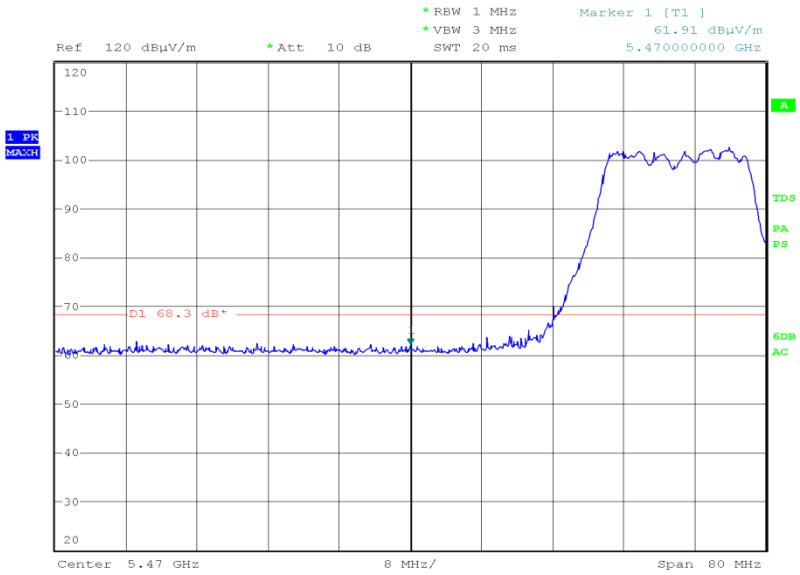


802.11a, 5320 MHz, Measured Frequency 5350 MHz, 36 Mbps, Final Peak, Authorised Band Edges Plot



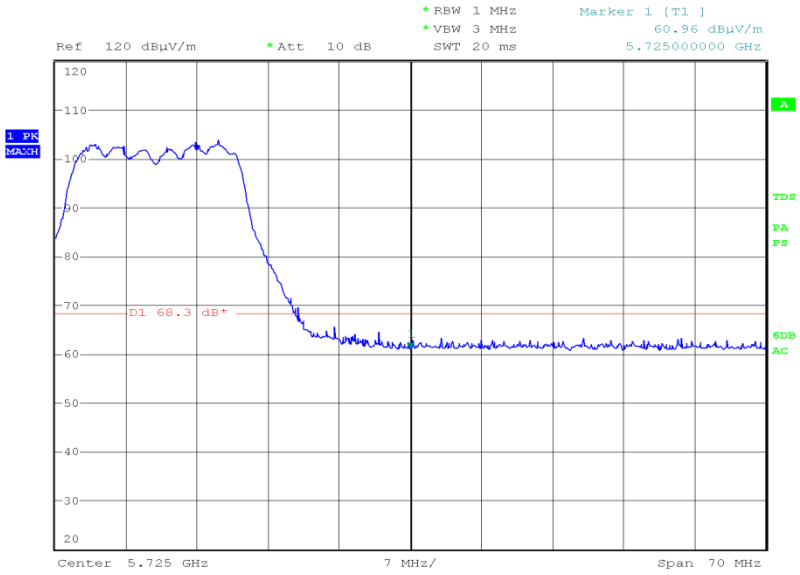
Date: 3.APR.2016 10:02:15

802.11a, 5500 MHz, Measured Frequency 5470 MHz, 36 Mbps, Final Peak, Authorised Band Edges Plot



Date: 3.APR.2016 10:10:38

802.11a, 5700 MHz, Measured Frequency 5725 MHz, 36 Mbps, Final Peak, Authorised Band Edges Plot



Remark

The test was performed on 6 Mbps because this was deemed the worst case data rate for Conducted Output Power.

The test was performed on 36 Mbps because this was deemed the worst case data rate for 6 dB Bandwidth.

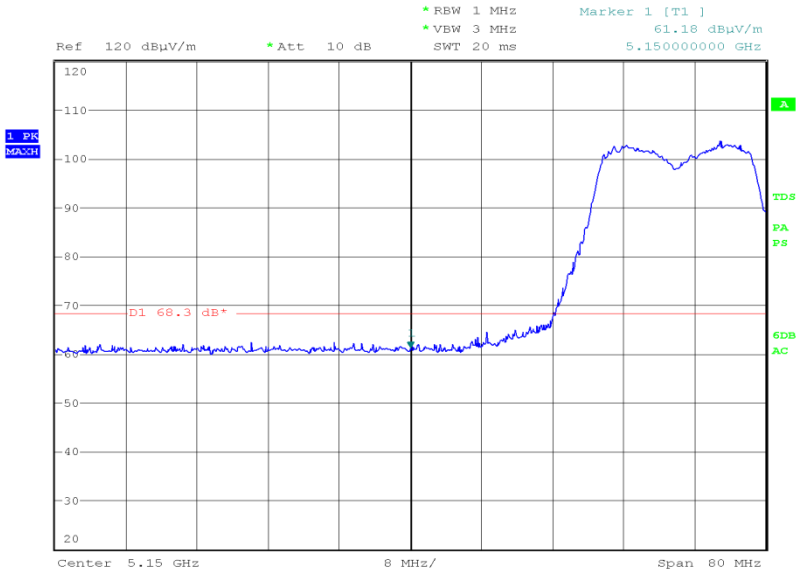
FCC 47 CFR Part 15, Limit Clause 15.407 (b(1)(2)(3)(4)

5.15 GHz to 5.35 GHz	-27 dBm/MHz
5.25 GHz to 5.35 GHz	-27 dBm/MHz
5.47 GHz to 5.725 GHz	-27 dBm/MHz
5.725 GHz to 5.850 GHz	-17 dBm/MHz

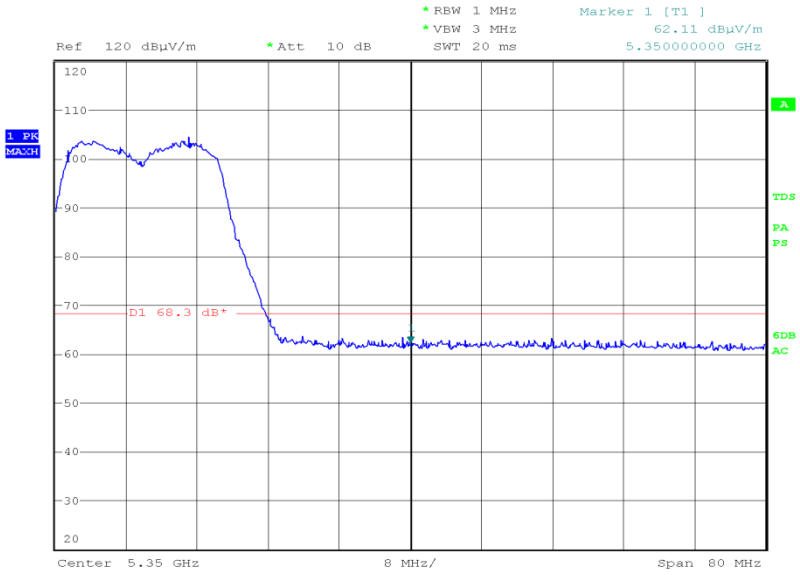
802.11ac - 5 GHz 20 MHz Bandwidth, MCS3, Authorised Band Edges Results

5180 MHz	5320 MHz	5500 MHz	5700 MHz
Measured Frequency 5150 MHz	Measured Frequency 5350 MHz	Measured Frequency 5470 MHz	Measured Frequency 5725 MHz
dBm	dBm	dBm	dBm
Final Peak	Final Peak	Final Peak	Final Peak
-34.02	-33.09	-34.03	-33.71

802.11ac - 5 GHz 20 MHz Bandwidth, 5180 MHz, Measured Frequency 5150 MHz, MCS3, Final Peak, Authorised Band Edges Plot

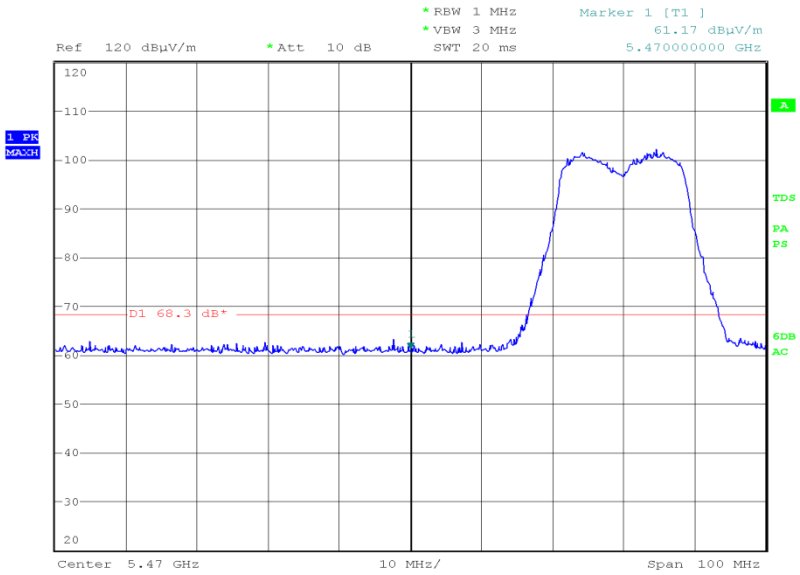


802.11ac - 5 GHz 20 MHz Bandwidth, 5320 MHz, Measured Frequency 5350 MHz, MCS3, Final Peak, Authorised Band Edges Plot



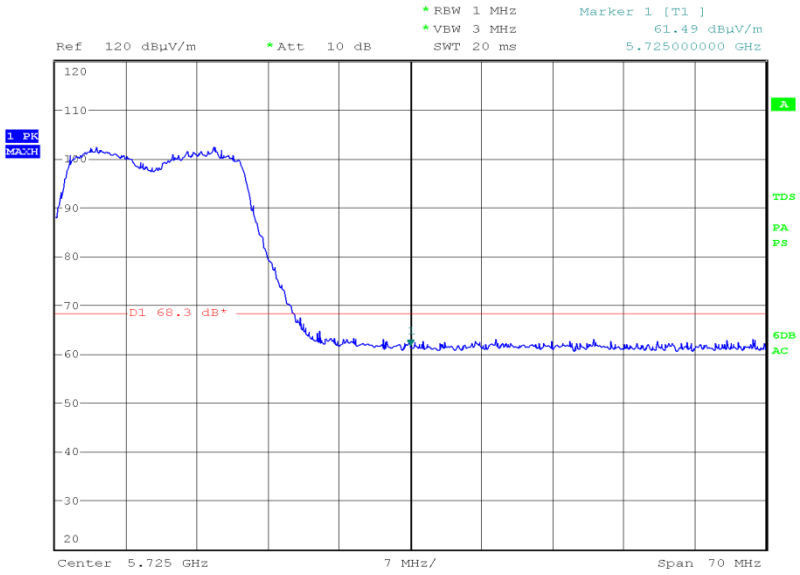
Date: 3.APR.2016 14:16:20

802.11ac - 5 GHz 20 MHz Bandwidth, 5500 MHz, Measured Frequency 5470 MHz, MCS3, Final Peak, Authorised Band Edges Plot



Date: 3.APR.2016 14:22:04

802.11ac - 5 GHz 20 MHz Bandwidth, 5700 MHz, Measured Frequency 5725 MHz, MCS3, Final Peak, Authorised Band Edges Plot

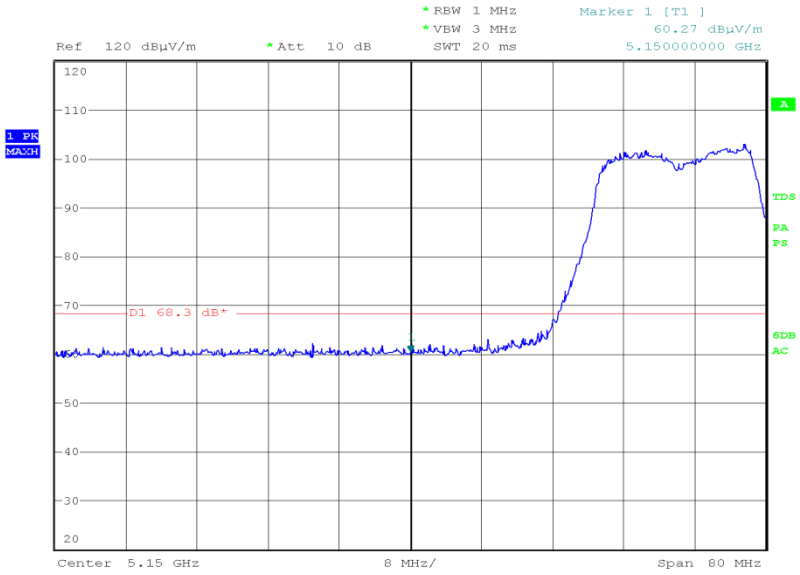


Product Service

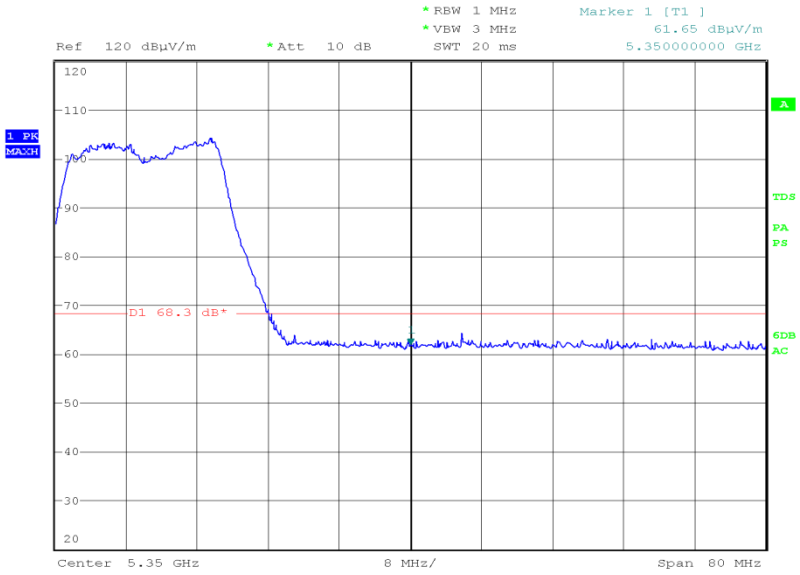
802.11ac - 5 GHz 20 MHz Bandwidth, MCS5, Authorised Band Edges Results

5180 MHz	5320 MHz	5500 MHz	5700 MHz
Measured Frequency 5150 MHz	Measured Frequency 5350 MHz	Measured Frequency 5470 MHz	Measured Frequency 5725 MHz
dBm	dBm	dBm	dBm
Final Peak	Final Peak	Final Peak	Final Peak
-33.09	-33.55	-33.80	-33.58

802.11ac - 5 GHz 20 MHz Bandwidth, 5180 MHz, Measured Frequency 5150 MHz, MCS5, Final Peak, Authorised Band Edges Plot

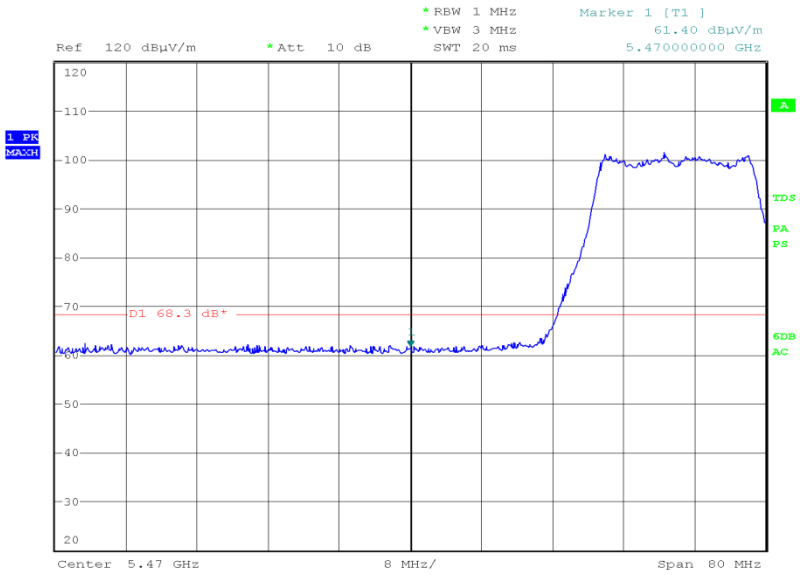


802.11ac - 5 GHz 20 MHz Bandwidth, 5320 MHz, Measured Frequency 5350 MHz, MCS5, Final Peak, Authorised Band Edges Plot



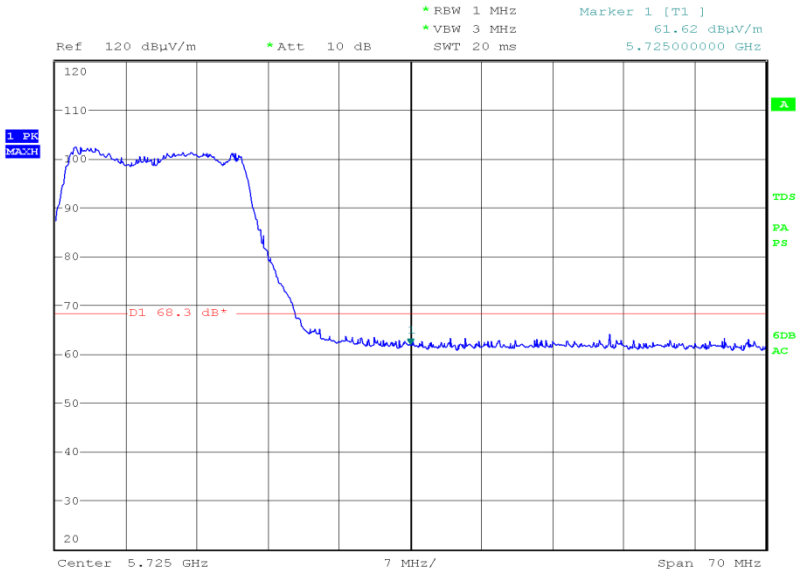
Date: 3.APR.2016 14:59:56

802.11ac - 5 GHz 20 MHz Bandwidth, 5500 MHz, Measured Frequency 5470 MHz, MCS5, Final Peak, Authorised Band Edges Plot



Date: 3.APR.2016 15:06:12

802.11ac - 5 GHz 20 MHz Bandwidth, 5700 MHz, Measured Frequency 5725 MHz, MCS5, Final Peak, Authorised Band Edges Plot



Remark

The test was performed on MCS3 because this was deemed the worst case data rate for Conducted Output Power.

The test was performed on MCS5 because this was deemed the worst case data rate for 6 dB Bandwidth.

FCC 47 CFR Part 15, Limit Clause 15.407 (b(1)(2)(3)(4)

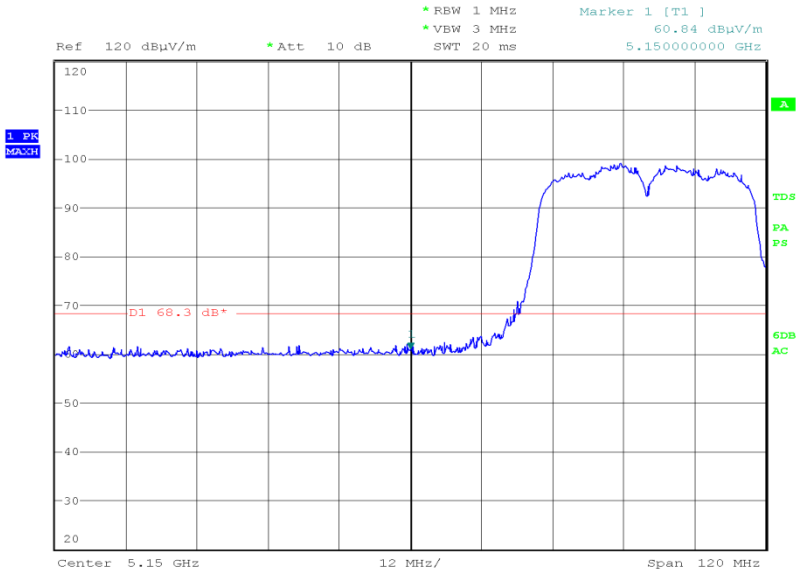
5.15 GHz to 5.35 GHz	-27 dBm/MHz
5.25 GHz to 5.35 GHz	-27 dBm/MHz
5.47 GHz to 5.725 GHz	-27 dBm/MHz
5.725 GHz to 5.850 GHz	-17 dBm/MHz

Product Service

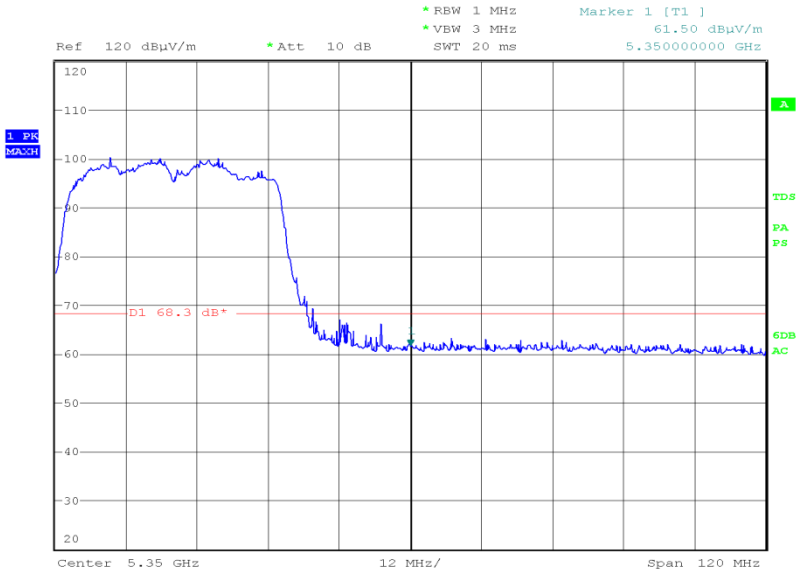
802.11ac - 5 GHz 40 MHz Bandwidth, MCS0, Authorised Band Edges Results

5190 MHz	5310 MHz	5510 MHz	5670 MHz
Measured Frequency 5150 MHz	Measured Frequency 5350 MHz	Measured Frequency 5470 MHz	Measured Frequency 5725 MHz
dBm	dBm	dBm	dBm
Final Peak	Final Peak	Final Peak	Final Peak
-34.36	-33.70	-33.32	-34.96

802.11ac - 5 GHz 40 MHz Bandwidth, 5190 MHz, Measured Frequency 5150 MHz, MCS0, Final Peak, Authorised Band Edges Plot

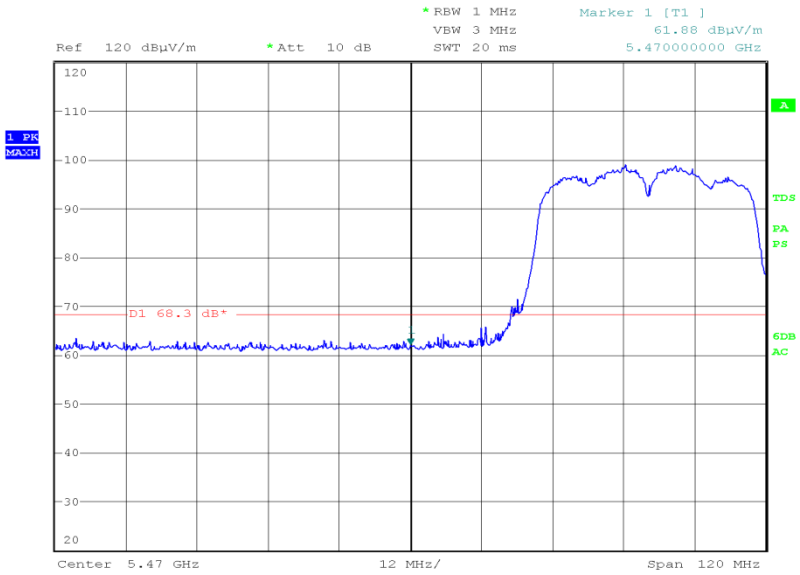


802.11ac - 5 GHz 40 MHz Bandwidth, 5310 MHz, Measured Frequency 5350 MHz, MCS0, Final Peak, Authorised Band Edges Plot



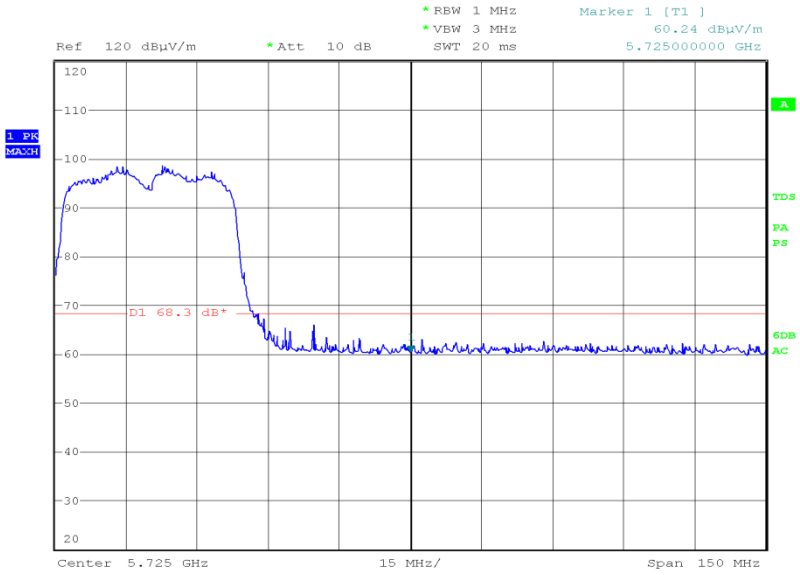
Date: 3.APR.2016 15:29:04

802.11ac - 5 GHz 40 MHz Bandwidth, 5510 MHz, Measured Frequency 5470 MHz, MCS0, Final Peak, Authorised Band Edges Plot



Date: 4.APR.2016 18:59:36

802.11ac - 5 GHz 40 MHz Bandwidth, 5670 MHz, Measured Frequency 5725 MHz, MCS0, Final Peak, Authorised Band Edges Plot

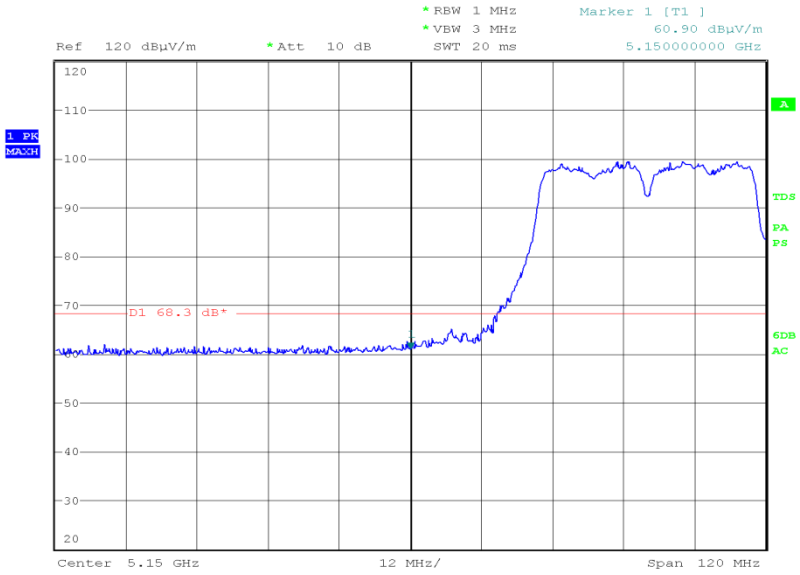


Date: 3.APR.2016 15:39:12

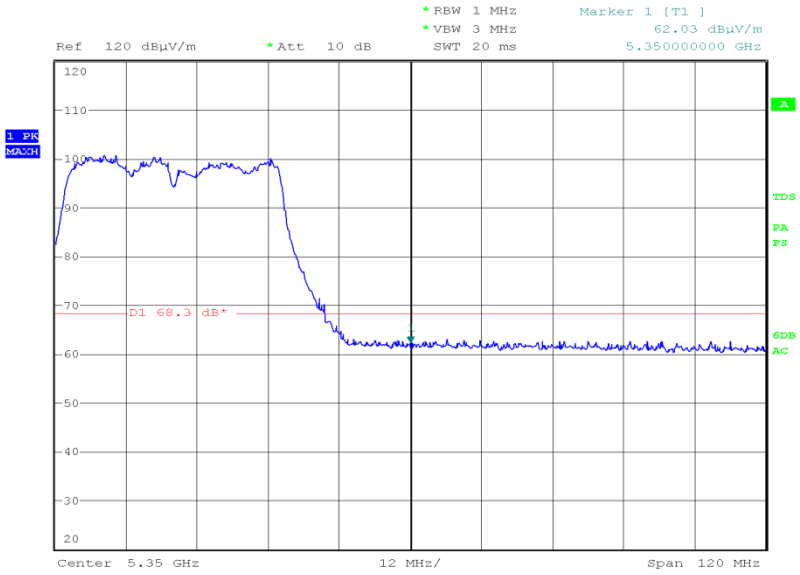
802.11ac - 5 GHz 40 MHz Bandwidth, MCS3, Authorised Band Edges Results

5190 MHz	5310 MHz	5510 MHz	5670 MHz
Measured Frequency 5150 MHz	Measured Frequency 5350 MHz	Measured Frequency 5470 MHz	Measured Frequency 5725 MHz
dBm	dBm	dBm	dBm
Final Peak	Final Peak	Final Peak	Final Peak
-33.70	-33.17	-34.13	-33.51

802.11ac - 5 GHz 40 MHz Bandwidth, 5190 MHz, Measured Frequency 5150 MHz, MCS3, Final Peak, Authorised Band Edges Plot

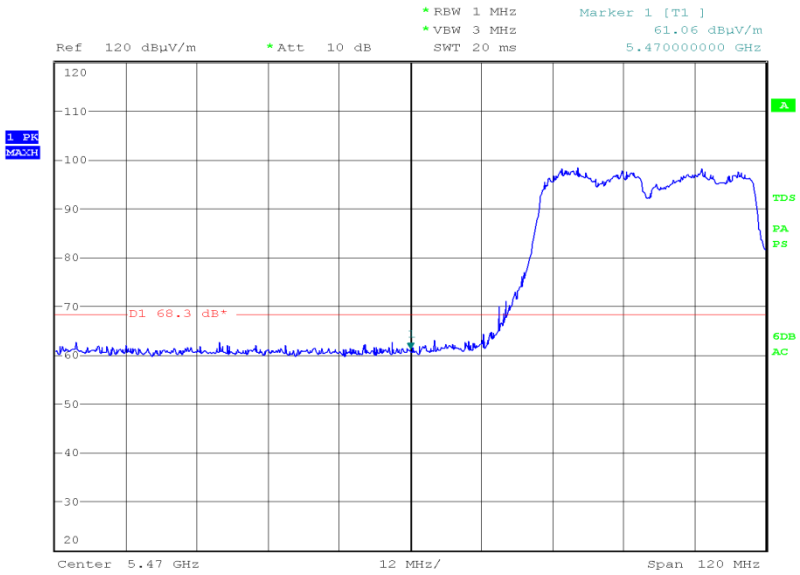


802.11ac - 5 GHz 40 MHz Bandwidth, 5310 MHz, Measured Frequency 5350 MHz, MCS3, Final Peak, Authorised Band Edges Plot



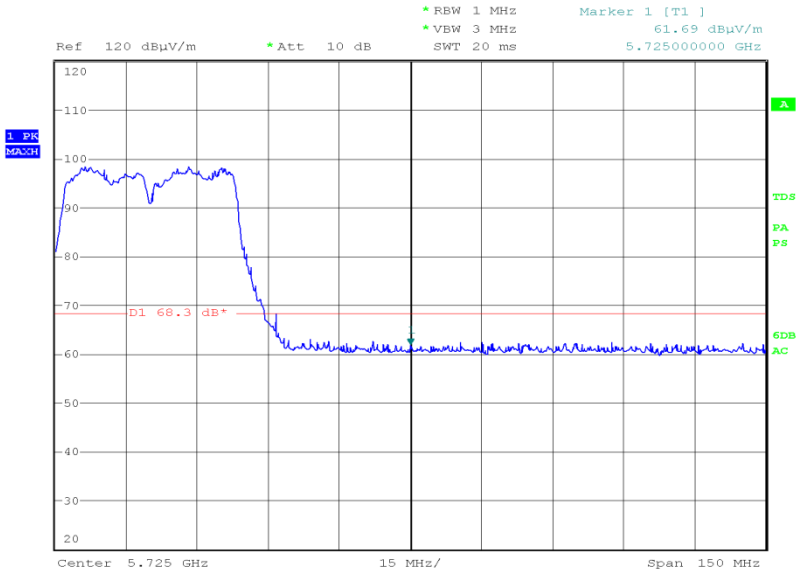
Date: 3.APR.2016 16:16:24

802.11ac - 5 GHz 40 MHz Bandwidth, 5510 MHz, Measured Frequency 5470 MHz, MCS3, Final Peak, Authorised Band Edges Plot



Date: 3.APR.2016 16:10:51

802.11ac - 5 GHz 40 MHz Bandwidth, 5670 MHz, Measured Frequency 5725 MHz, MCS3, Final Peak, Authorised Band Edges Plot



Remark

The test was performed on MCS0 because this was deemed the worst case data rate for Conducted Output Power.

The test was performed on MCS3 because this was deemed the worst case data rate for 6 dB Bandwidth.

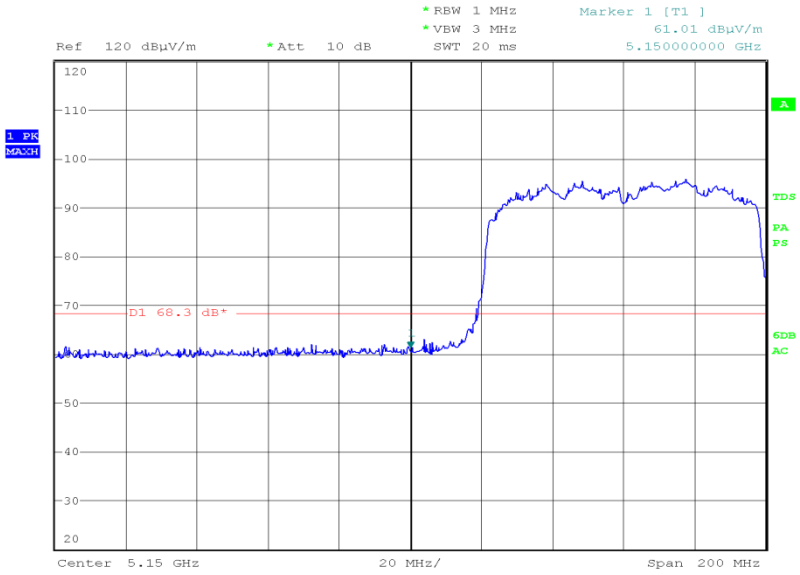
FCC 47 CFR Part 15, Limit Clause 15.407 (b(1)(2)(3)(4)

5.15 GHz to 5.35 GHz	-27 dBm/MHz
5.25 GHz to 5.35 GHz	-27 dBm/MHz
5.47 GHz to 5.725 GHz	-27 dBm/MHz
5.725 GHz to 5.850 GHz	-17 dBm/MHz

802.11ac - 5 GHz 80 MHz Bandwidth, MCS0, Authorised Band Edges Results

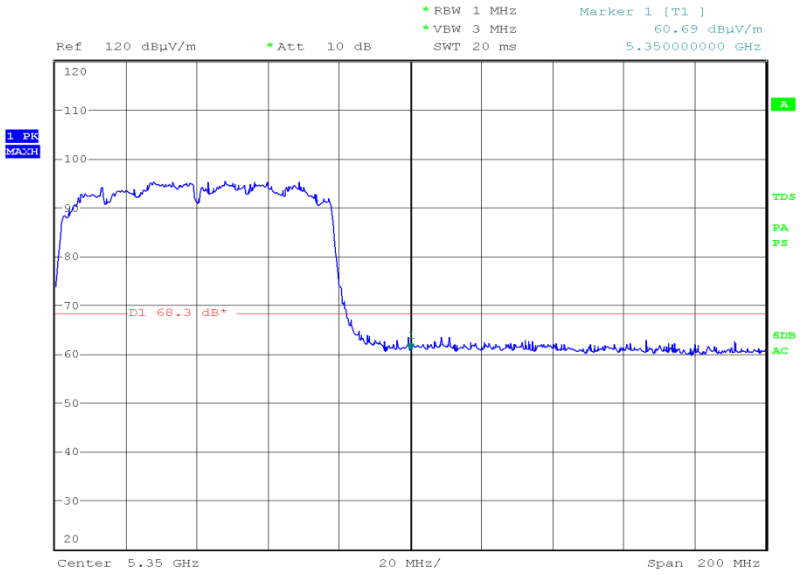
5210 MHz	5290 MHz	5530 MHz	5610 MHz
Measured Frequency 5150 MHz	Measured Frequency 5350 MHz	Measured Frequency 5470 MHz	Measured Frequency 5725 MHz
dBm	dBm	dBm	dBm
Final Peak	Final Peak	Final Peak	Final Peak
-34.19	-34.51	-33.95	-34.66

802.11ac - 5 GHz 80 MHz Bandwidth, 5210 MHz, Measured Frequency 5150 MHz, MCS0, Final Peak, Authorised Band Edges Plot

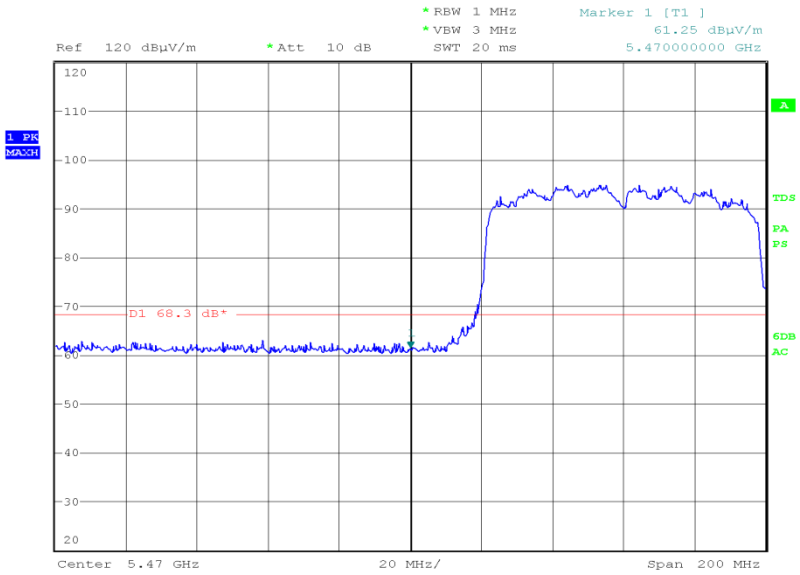


Product Service

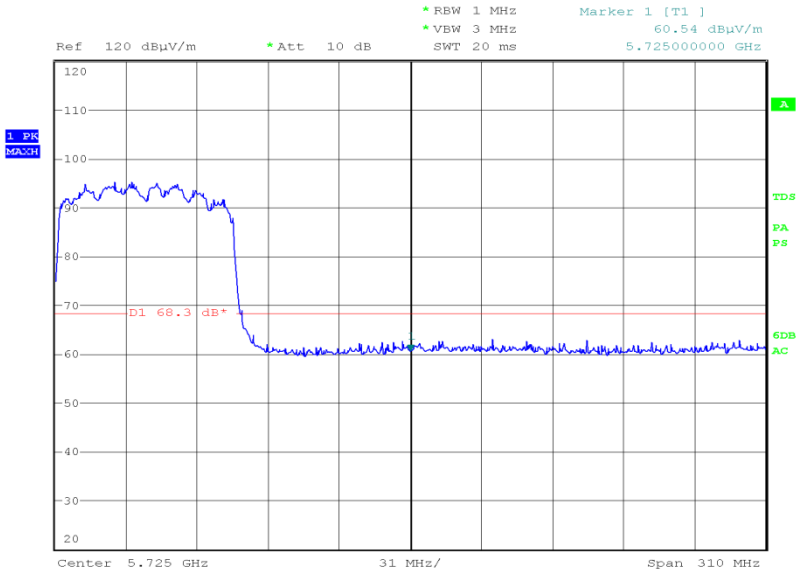
802.11ac - 5 GHz 80 MHz Bandwidth, 5290 MHz, Measured Frequency 5350 MHz, MCS0, Final Peak, Authorised Band Edges Plot



802.11ac - 5 GHz 80 MHz Bandwidth, 5530 MHz, Measured Frequency 5470 MHz, MCS0, Final Peak, Authorised Band Edges Plot



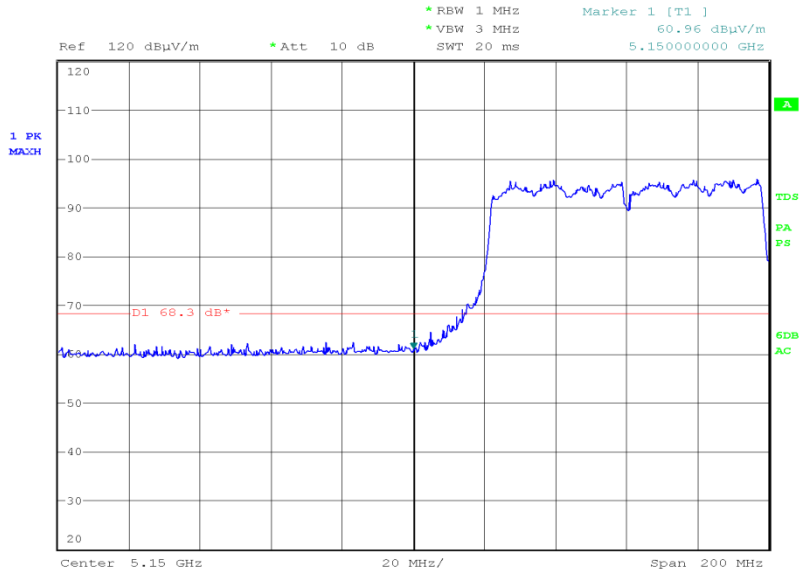
802.11ac - 5 GHz 80 MHz Bandwidth, 5610 MHz, Measured Frequency 5725 MHz, MCS0, Final Peak, Authorised Band Edges Plot



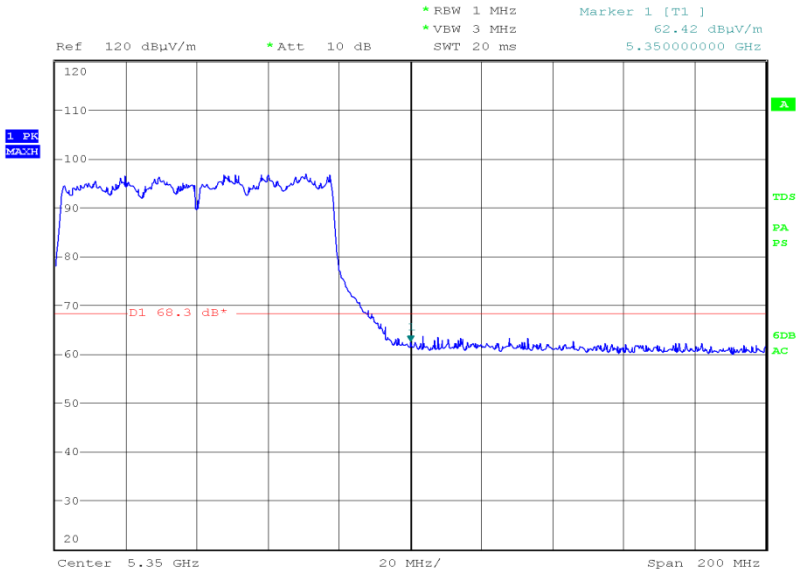
802.11ac - 5 GHz 80 MHz Bandwidth, MCS6, Authorised Band Edges Results

5210 MHz	5290 MHz	5530 MHz	5610 MHz
Measured Frequency 5150 MHz	Measured Frequency 5350 MHz	Measured Frequency 5470 MHz	Measured Frequency 5725 MHz
dBm	dBm	dBm	dBm
Final Peak	Final Peak	Final Peak	Final Peak
-34.51	-32.78	-33.53	-33.92

802.11ac - 5 GHz 80 MHz Bandwidth, 5210 MHz, Measured Frequency 5150 MHz, MCS6, Final Peak, Authorised Band Edges Plot

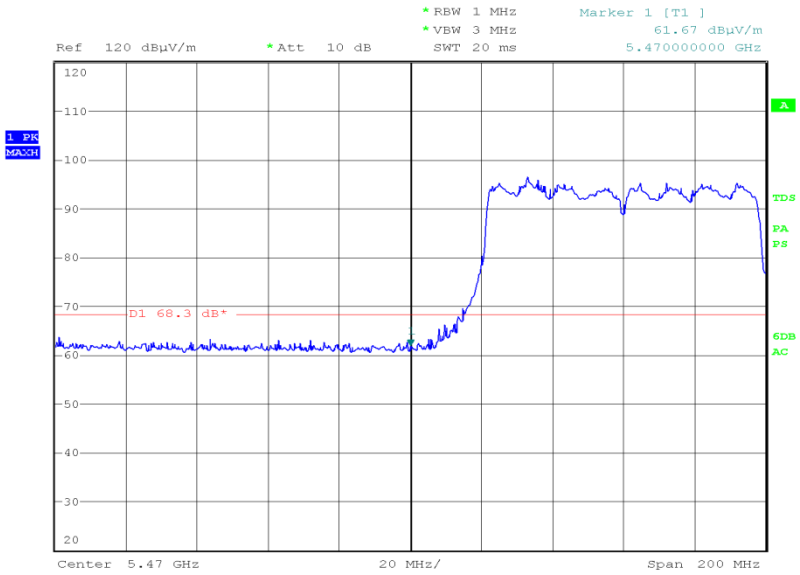


802.11ac - 5 GHz 80 MHz Bandwidth, 5290 MHz, Measured Frequency 5350 MHz, MCS6, Final Peak, Authorised Band Edges Plot



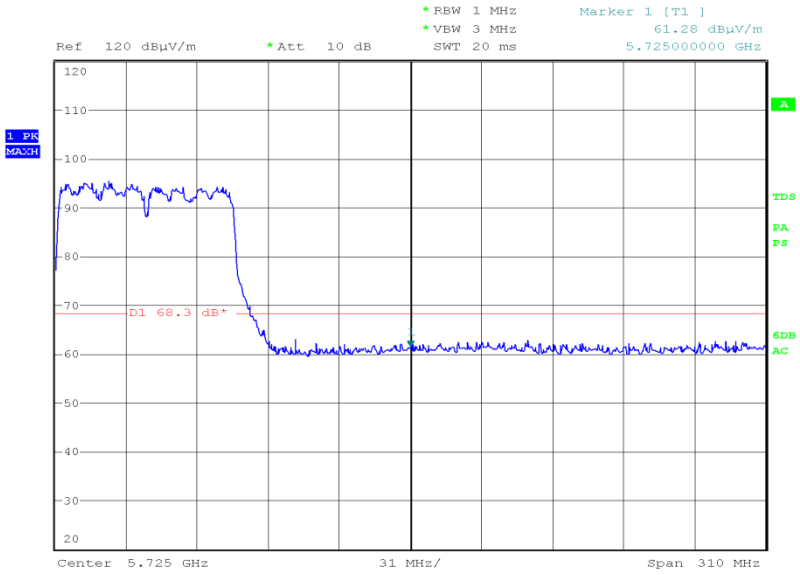
Date: 4.APR.2016 19:58:28

802.11ac - 5 GHz 80 MHz Bandwidth, 5530 MHz, Measured Frequency 5470 MHz, MCS6, Final Peak, Authorised Band Edges Plot



Date: 4.APR.2016 20:08:05

802.11ac - 5 GHz 80 MHz Bandwidth, 5610 MHz, Measured Frequency 5725 MHz, MCS6, Final Peak, Authorised Band Edges Plot



Remark

The test was performed on MCS0 because this was deemed the worst case data rate for Conducted Output Power.

The test was performed on MCS6 because this was deemed the worst case data rate for 6 dB Bandwidth.

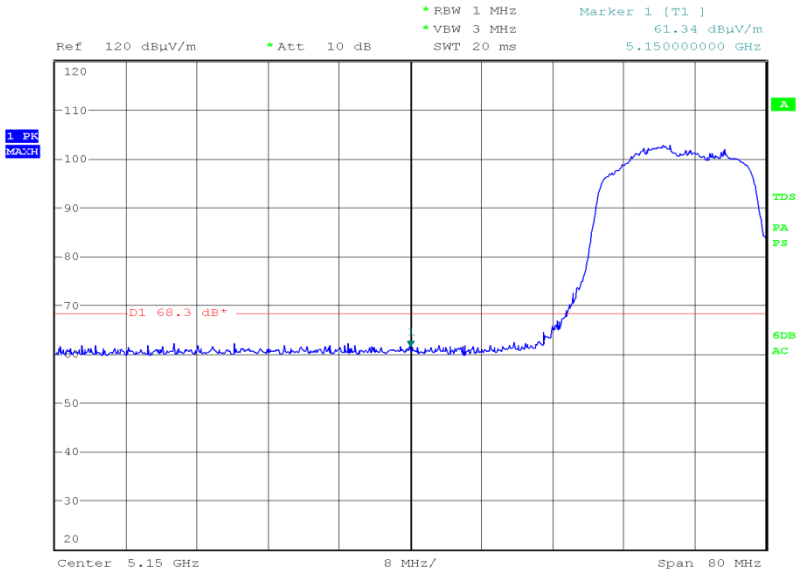
FCC 47 CFR Part 15, Limit Clause 15.407 (b(1)(2)(3)(4)

5.15 GHz to 5.35 GHz	-27 dBm/MHz
5.25 GHz to 5.35 GHz	-27 dBm/MHz
5.47 GHz to 5.725 GHz	-27 dBm/MHz
5.725 GHz to 5.850 GHz	-17 dBm/MHz

802.11n - 5 GHz 20 MHz Bandwidth, MCS0, Authorised Band Edges Results

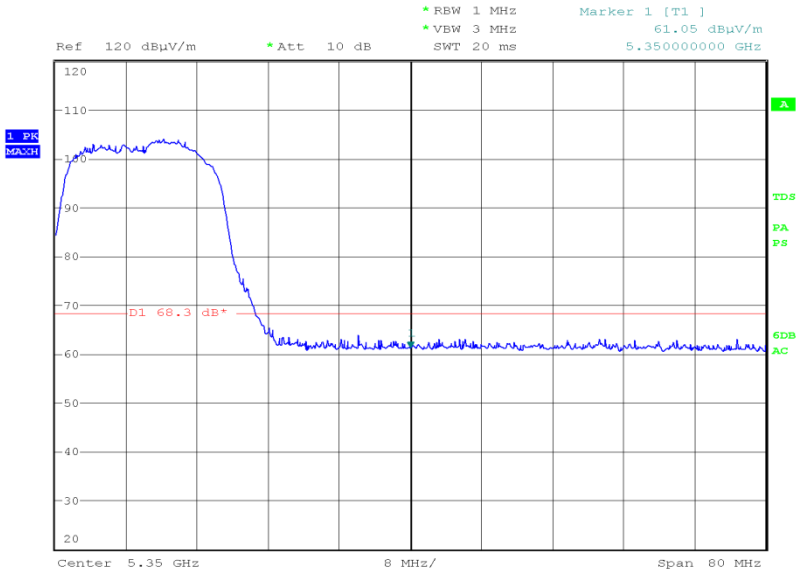
5180 MHz	5320 MHz	5500 MHz	5700 MHz
Measured Frequency 5150 MHz	Measured Frequency 5350 MHz	Measured Frequency 5470 MHz	Measured Frequency 5725 MHz
dBm	dBm	dBm	dBm
Final Peak	Final Peak	Final Peak	Final Peak
-33.86	-34.15	-33.37	-33.76

802.11n - 5 GHz 20 MHz Bandwidth, 5180 MHz, Measured Frequency 5150 MHz, MCS0, Final Peak, Authorised Band Edges Plot



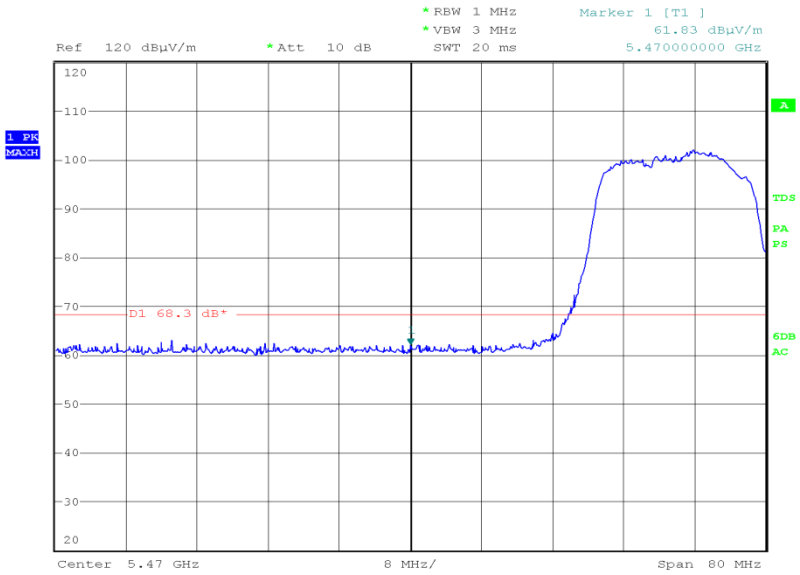
Date: 3.APR.2016 10:23:01

802.11n - 5 GHz 20 MHz Bandwidth, 5320 MHz, Measured Frequency 5350 MHz, MCS0, Final Peak, Authorised Band Edges Plot



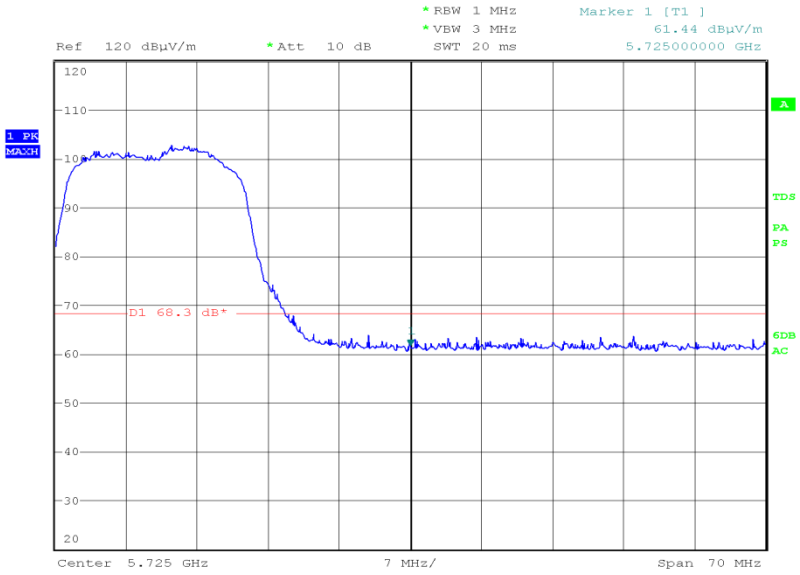
Date: 3.APR.2016 10:30:51

802.11n - 5 GHz 20 MHz Bandwidth, 5500 MHz, Measured Frequency 5470 MHz, MCS0, Final Peak, Authorised Band Edges Plot



Date: 3.APR.2016 10:36:59

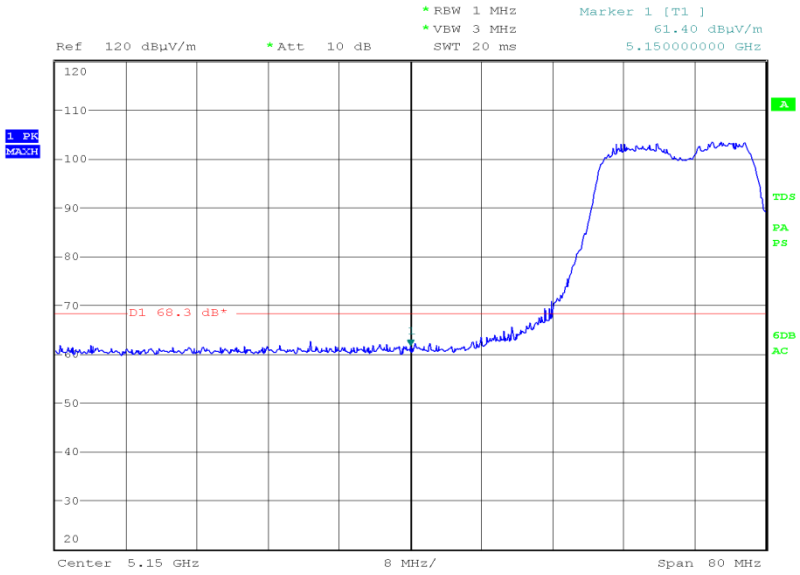
802.11n - 5 GHz 20 MHz Bandwidth, 5700 MHz, Measured Frequency 5725 MHz, MCS0, Final Peak, Authorised Band Edges Plot



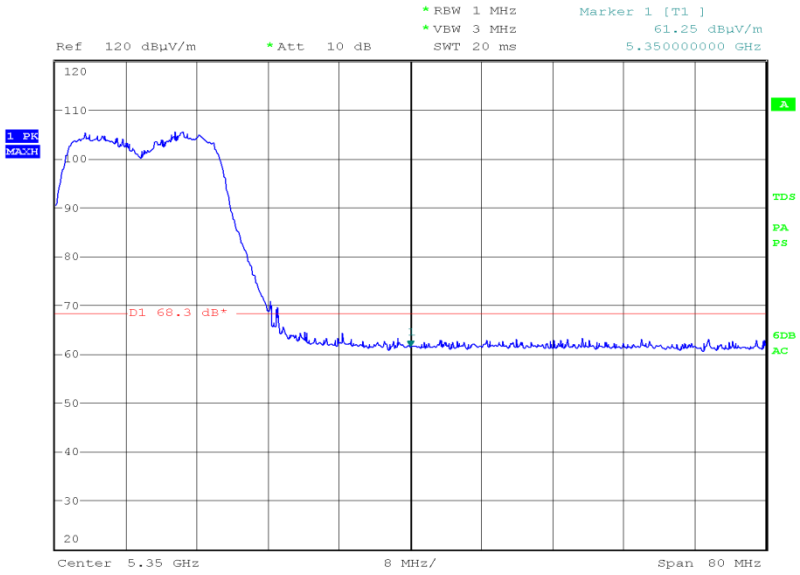
802.11n - 5 GHz 20 MHz Bandwidth, MCS4, Authorised Band Edges Results

5180 MHz	5320 MHz	5500 MHz	5700 MHz
Measured Frequency 5150 MHz	Measured Frequency 5350 MHz	Measured Frequency 5470 MHz	Measured Frequency 5725 MHz
dBm	dBm	dBm	dBm
Final Peak	Final Peak	Final Peak	Final Peak
-34.15	-33.95	-34.59	-33.32

802.11n - 5 GHz 20 MHz Bandwidth, 5180 MHz, Measured Frequency 5150 MHz, MCS4, Final Peak, Authorised Band Edges Plot

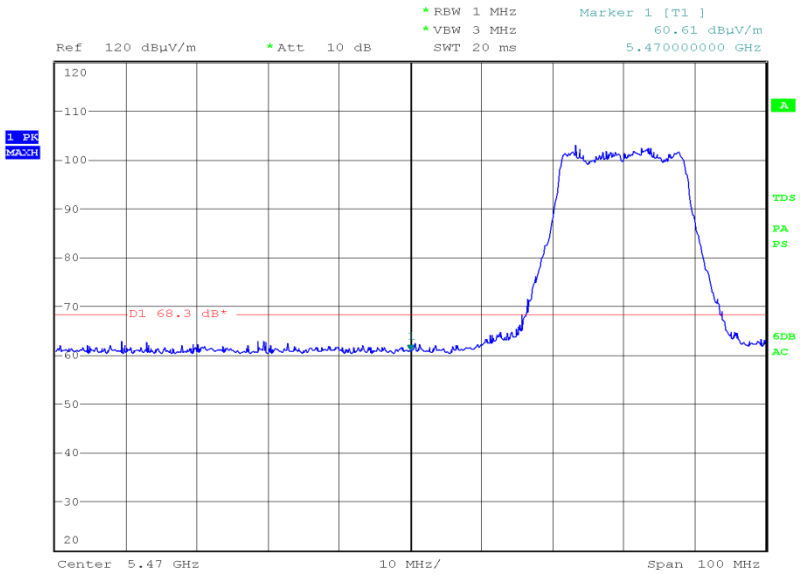


802.11n - 5 GHz 20 MHz Bandwidth, 5320 MHz, Measured Frequency 5350 MHz, MCS4, Final Peak, Authorised Band Edges Plot



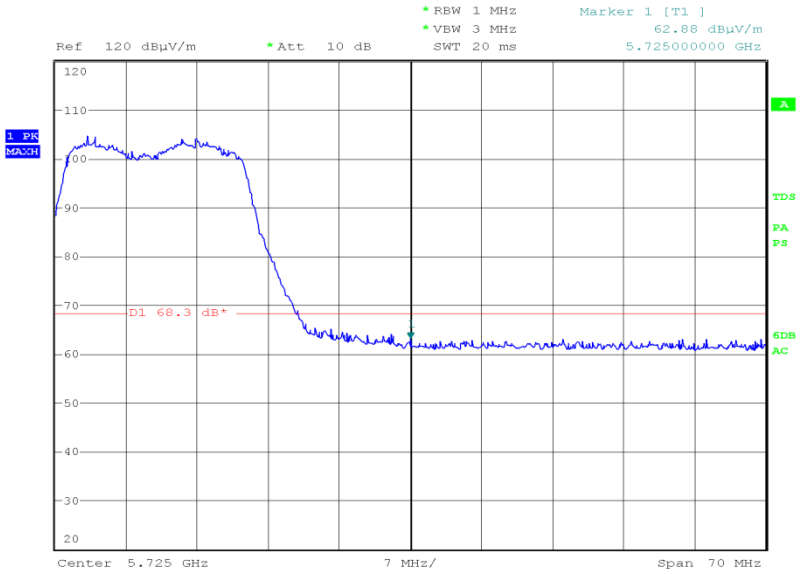
Date: 3.APR.2016 10:59:39

802.11n - 5 GHz 20 MHz Bandwidth, 5500 MHz, Measured Frequency 5470 MHz, MCS4, Final Peak, Authorised Band Edges Plot



Date: 3.APR.2016 11:08:47

802.11n - 5 GHz 20 MHz Bandwidth, 5700 MHz, Measured Frequency 5725 MHz, MCS4, Final Peak, Authorised Band Edges Plot



Remark

The test was performed on MCS0 because this was deemed the worst case data rate for Conducted Output Power.

The test was performed on MCS4 because this was deemed the worst case data rate for 6 dB Bandwidth.

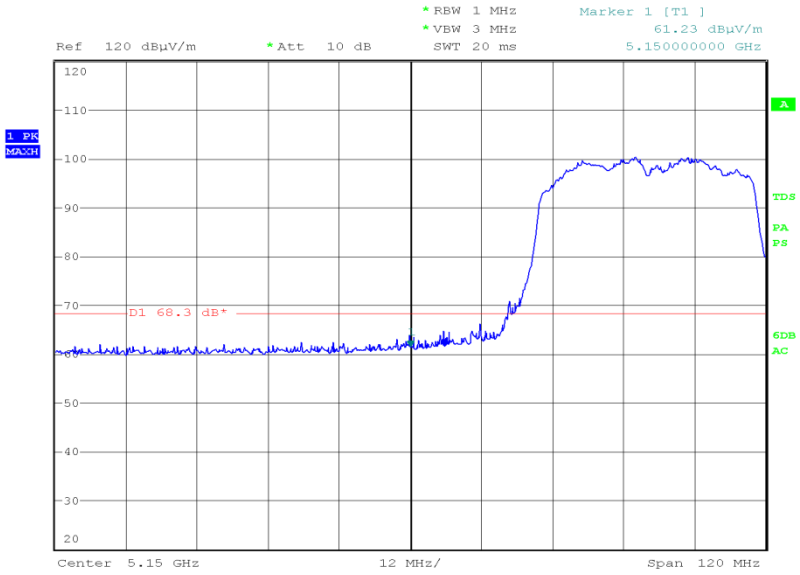
FCC 47 CFR Part 15, Limit Clause 15.407 (b(1)(2)(3)(4)

5.15 GHz to 5.35 GHz	-27 dBm/MHz
5.25 GHz to 5.35 GHz	-27 dBm/MHz
5.47 GHz to 5.725 GHz	-27 dBm/MHz
5.725 GHz to 5.850 GHz	-17 dBm/MHz

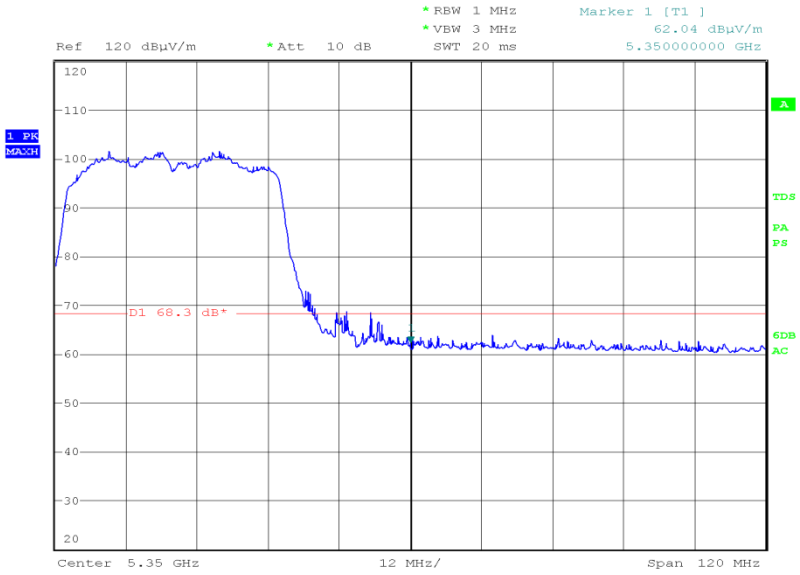
802.11n - 5 GHz 40 MHz Bandwidth, MCS0, Authorised Band Edges Results

5190 MHz	5310 MHz	5510 MHz	5670 MHz
Measured Frequency 5150 MHz	Measured Frequency 5350 MHz	Measured Frequency 5470 MHz	Measured Frequency 5725 MHz
dBm	dBm	dBm	dBm
Final Peak	Final Peak	Final Peak	Final Peak
-33.97	-33.16	-34.54	-34.30

802.11n - 5 GHz 40 MHz Bandwidth, 5190 MHz, Measured Frequency 5150 MHz, MCS0, Final Peak, Authorised Band Edges Plot

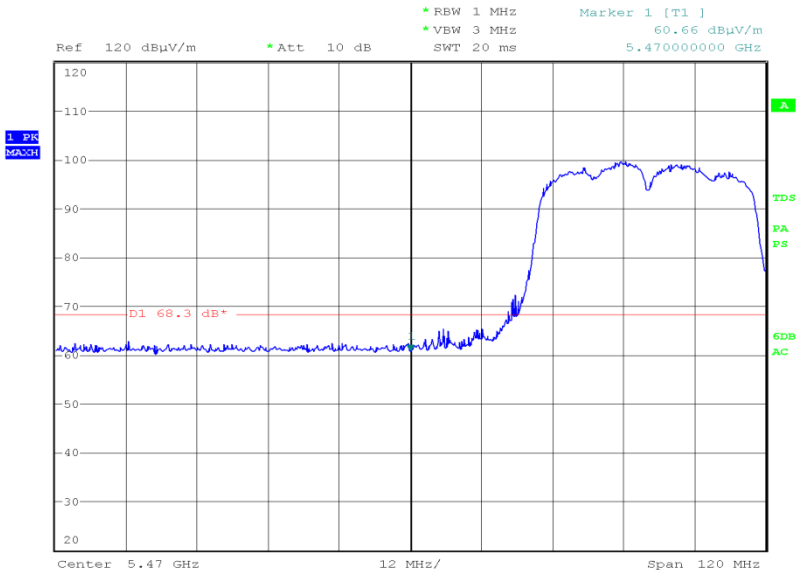


802.11n - 5 GHz 40 MHz Bandwidth, 5310 MHz, Measured Frequency 5350 MHz, MCS0, Final Peak, Authorised Band Edges Plot



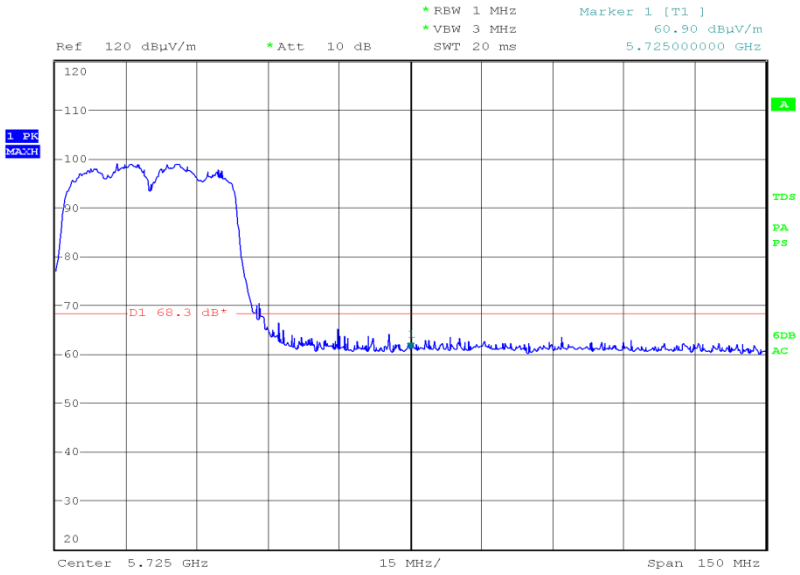
Date: 3.APR.2016 11:44:56

802.11n - 5 GHz 40 MHz Bandwidth, 5510 MHz, Measured Frequency 5470 MHz, MCS0, Final Peak, Authorised Band Edges Plot



Date: 3.APR.2016 12:08:05

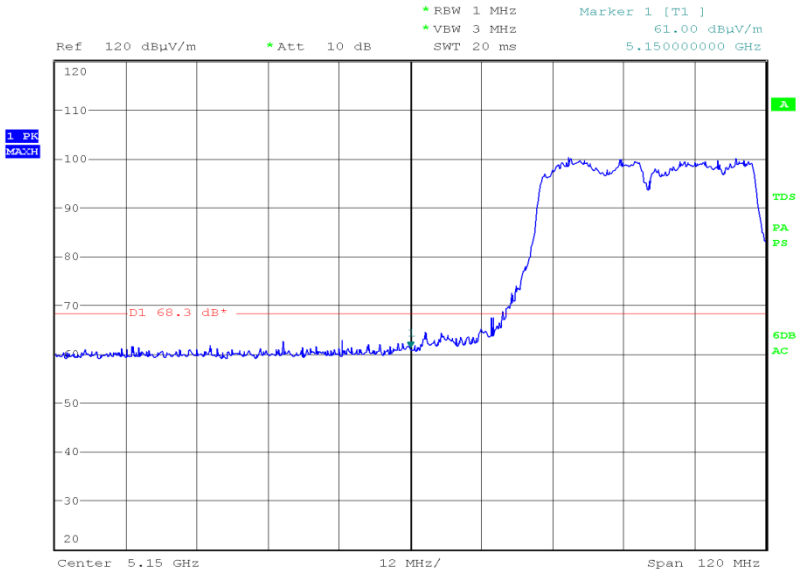
802.11n - 5 GHz 40 MHz Bandwidth, 5670 MHz, Measured Frequency 5725 MHz, MCS0, Final Peak, Authorised Band Edges Plot



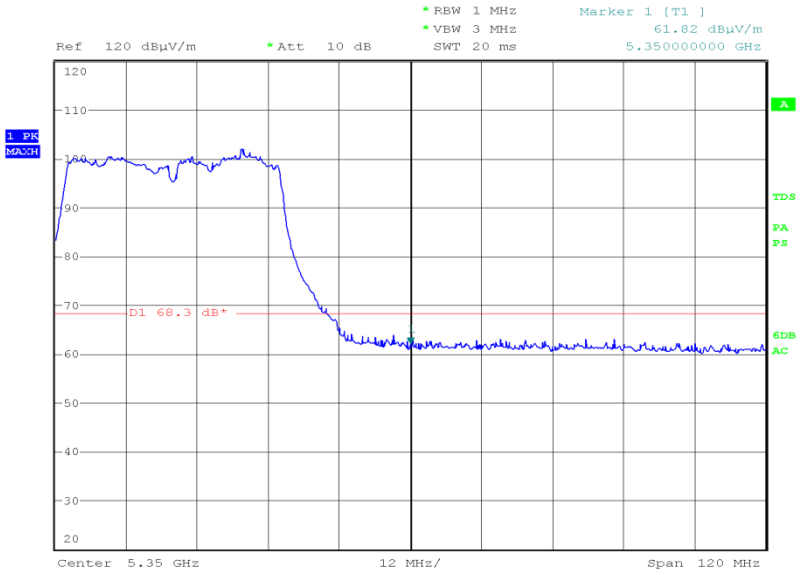
802.11n - 5 GHz 40 MHz Bandwidth, MCS7, Authorised Band Edges Results

5190 MHz	5310 MHz	5510 MHz	5670 MHz
Measured Frequency 5150 MHz	Measured Frequency 5350 MHz	Measured Frequency 5470 MHz	Measured Frequency 5725 MHz
dBm	dBm	dBm	dBm
Final Peak	Final Peak	Final Peak	Final Peak
-33.16	-33.38	-33.93	-34.53

802.11n - 5 GHz 40 MHz Bandwidth, 5190 MHz, Measured Frequency 5150 MHz, MCS7, Final Peak, Authorised Band Edges Plot

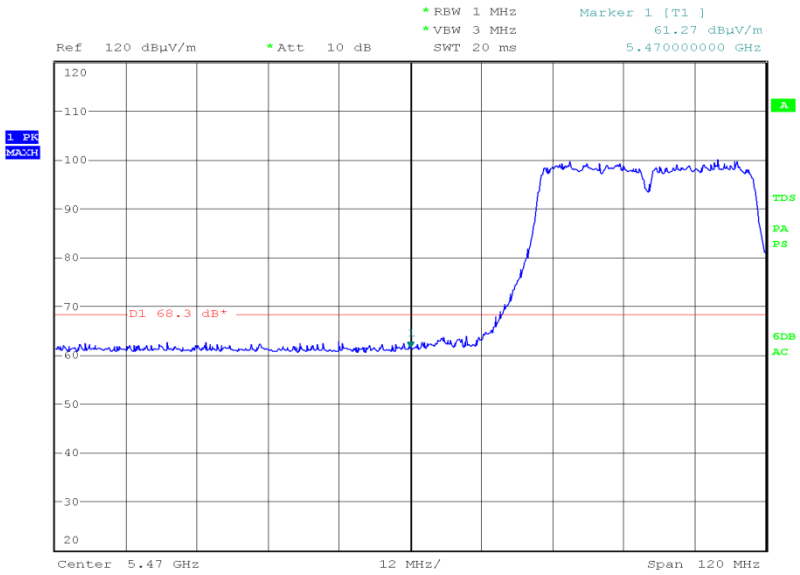


802.11n - 5 GHz 40 MHz Bandwidth, 5310 MHz, Measured Frequency 5350 MHz, MCS7, Final Peak, Authorised Band Edges Plot



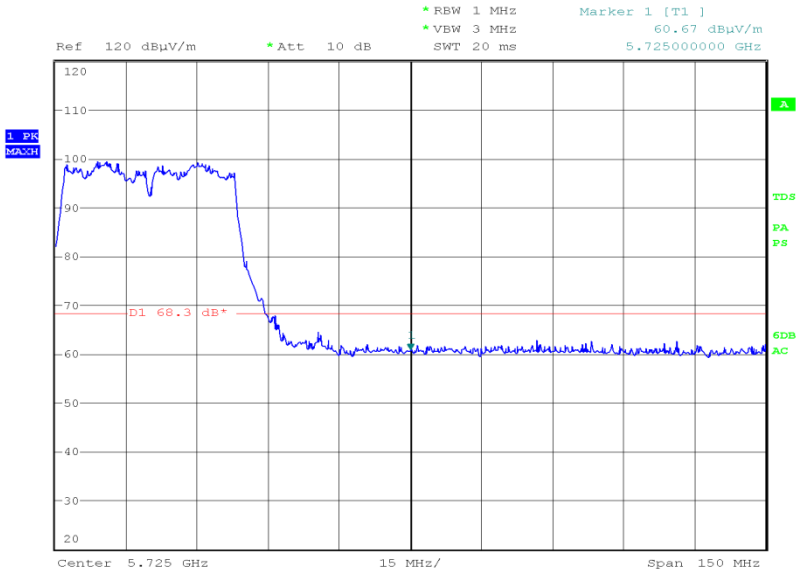
Date: 3.APR.2016 12:27:16

802.11n - 5 GHz 40 MHz Bandwidth, 5510 MHz, Measured Frequency 5470 MHz, MCS7, Final Peak, Authorised Band Edges Plot



Date: 3.APR.2016 13:53:19

802.11n - 5 GHz 40 MHz Bandwidth, 5670 MHz, Measured Frequency 5725 MHz, MCS7, Final Peak, Authorised Band Edges Plot



Remark

The test was performed on MCS0 because this was deemed the worst case data rate for Conducted Output Power.

The test was performed on MCS7 because this was deemed the worst case data rate for 6 dB Bandwidth.

FCC 47 CFR Part 15, Limit Clause 15.407 (b(1)(2)(3)(4)

5.15 GHz to 5.35 GHz	-27 dBm/MHz
5.25 GHz to 5.35 GHz	-27 dBm/MHz
5.47 GHz to 5.725 GHz	-27 dBm/MHz
5.725 GHz to 5.850 GHz	-17 dBm/MHz

Product Service

SECTION 3

TEST EQUIPMENT USED

Product Service

3.1 TEST EQUIPMENT USED

List of absolute measuring and other principal items of test equipment.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Due
Section 2.1 – AC Line Conducted Emissions					
LISN	Rohde & Schwarz	ESH2-Z5	17	12	11-Feb-2017
Screened Room (5)	Rainford	Rainford	1545	36	20-Dec-2017
Transient Limiter	Hewlett Packard	11947A	2377	12	16-Feb-2017
Multimeter	Iso-tech	IDM101	2417	12	29-Sep-2016
Hygromer	Rotronic	A1	2677	12	11-Jun-2016
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	2-Nov-2016
7m Armoured RF Cable	SSI Cable Corp.	1501-13-13-7m WA(-)	3600	-	TU
Section 2.2 - 26 dB Bandwidth					
Multimeter	Iso-tech	IDM-101	466	12	11-Sep-2016
Attenuator (20dB/ 2W)	Pasternack	PE7004-20	489	12	30-Oct-2016
Rubidium Standard	Rohde & Schwarz	XSRM	1316	6	3-Sep-2016
Programmable Power Supply	Iso-tech	IPS 2010	2435	-	O/P Mon
Hygrometer	Rotronic	I-1000	3220	12	19-Aug-2016
Network Analyser	Rohde & Schwarz	ZVA 40	3548	12	2-Sep-2016
Combiner/Splitter	Weinschel	1506A	3878	12	2-Jun-2016
Calibration Unit	Rohde & Schwarz	ZV-Z54	4368	12	7-Sep-2016
Frequency Standard	Spectracom	Secure Sync 1200-0408-0601	4393	6	3-Sep-2016
1 metre N-Type Cable	Florida Labs	NMS-235SP-39.4-NMS	4511	12	2-Mar-2017
1 metre SMA Cable	Florida Labs	SMS-235SP-39.4-SMS	4512	12	29-Jan-2017
PXA Signal Analyser	Keysight Technologies	N9030A	4654	12	8-Oct-2016
1 metre SMA Cable	IW Microwave	3PS-1806LC-394-3PS	4662	12	6-Nov-2016
Section 2.3- Maximum Conducted Output Power					
Multimeter	Fluke	75 Mk3	455	12	10-Sep-2016
Attenuator (20dB/ 2W)	Pasternack	PE7004-20	489	12	30-Oct-2016
Power Supply	Iso-tech	IPS 2010	2439	-	O/P Mon
Hygrometer	Rotronic	I-1000	3220	12	19-Aug-2016
Network Analyser	Rohde & Schwarz	ZVA 40	3548	12	2-Sep-2016
Combiner/Splitter	Weinschel	1506A	3878	12	2-Jun-2016
P-Series Power Meter	Agilent Technologies	N1911A	3981	12	25-Sep-2016
50 MHz-18 GHz Wideband Power Sensor	Agilent Technologies	N1921A	3983	12	25-Sep-2016
Calibration Unit	Rohde & Schwarz	ZV-Z54	4368	12	7-Sep-2016
1 metre N-Type Cable	Florida Labs	NMS-235SP-39.4-NMS	4511	12	2-Mar-2017
1 metre SMA Cable	Florida Labs	SMS-235SP-39.4-SMS	4512	12	29-Jan-2017
Section 2.4 - Peak Power Spectral Density					
Multimeter	Iso-tech	IDM-101	466	12	11-Sep-2016
Rubidium Standard	Rohde & Schwarz	XSRM	1316	6	3-Sep-2016
Programmable Power Supply	Iso-tech	IPS 2010	2435	-	O/P Mon
Hygrometer	Rotronic	I-1000	3220	12	19-Aug-2016
Network Analyser	Rohde & Schwarz	ZVA 40	3548	12	2-Sep-2016
Calibration Unit	Rohde & Schwarz	ZV-Z54	4368	12	7-Sep-2016
Frequency Standard	Spectracom	Secure Sync 1200-0408-0601	4393	6	3-Sep-2016
PXA Signal Analyser	Keysight Technologies	N9030A	4654	12	8-Oct-2016
1 metre SMA Cable	IW Microwave	3PS-1806LC-394-3PS	4662	12	6-Nov-2016

Product Service

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Due
Section 2.5 - Spurious Radiated Emissions					
Filter (High Pass)	Lorch	SHP7-7000-SR	566	12	23-Feb-2017
Antenna 18-40GHz (Double Ridge Guide)	Q-Par Angus Ltd	QSH 180K	1511	24	27-Nov-2016
Pre-Amplifier	Phase One	PS04-0086	1533	12	30-Jul-2016
18GHz - 40GHz Pre-Amplifier	Phase One	PSO4-0087	1534	12	23-Dec-2016
Screened Room (5)	Rainford	Rainford	1545	36	20-Dec-2017
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Cable (2m)	Rosenberger	FA147A2020002020	2195	12	19-Aug-2016
Hygromer	Rotronic	A1	2677	12	11-Jun-2016
Antenna (Bilog)	Chase	CBL6143	2904	24	11-Jun-2017
Signal Generator (10MHz to 40GHz)	Rohde & Schwarz	SMR40	3171	12	28-Sep-2016
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	2-Nov-2016
9m RF Cable (N Type)	Rhophase	NPS-2303-9000-NPS	3791	-	TU
Tilt Antenna Mast	maturo Gmbh	TAM 4.0-P	3916	-	TU
Mast Controller	maturo Gmbh	NCD	3917	-	TU
Cable 1503 2M 2.92(P)m 2.92(P)m	Rhophase	KPS-1503A-2000-KPS	4293	12	9-Jun-2016
1GHz to 8GHz Low Noise Amplifier	Wright Technologies	APS04-0085	4365	12	6-Oct-2016
Cable (Yellow, Rx, Km-Km 2m)	Scott Cables	KPS-1501-2000-KPS	4527	-	TU
Cable (Rx, SMAm-SMAm 0.5m)	Scott Cables	SLSLL18-SMSM-00.50M	4528	-	TU
Double Ridged Waveguide Horn Antenna	ETS-Lindgren	3117	4722	12	29-Dec-2016
Section 2.6 - Frequency Stability					
Climatic Chamber	Votsch	VT4002	161	-	O/P Mon
Attenuator 10dB/25W	Weinschel	46-10-43	400	12	18-Jun-2016
Digital Temperature Indicator + T/C	Fluke	51	412	12	2-Mar-2017
Multimeter	Iso-tech	IDM-101	466	12	11-Sep-2016
Temperature Chamber	Montford	2F3	467	-	O/P Mon
Rubidium Standard	Rohde & Schwarz	XSRM	1316	6	3-Sep-2016
Programmable Power Supply	Iso-tech	IPS 2010	2435	-	O/P Mon
Hygrometer	Rotronic	I-1000	3220	12	19-Aug-2016
Network Analyser	Rohde & Schwarz	ZVA 40	3548	12	2-Sep-2016
Calibration Unit	Rohde & Schwarz	ZV-Z54	4368	12	7-Sep-2016
Frequency Standard	Spectracom	Secure Sync 1200-0408-0601	4393	6	3-Sep-2016
PXA Signal Analyser	Keysight Technologies	N9030A	4654	12	8-Oct-2016
1 metre SMA Cable	IW Microwave	3PS-1806LC-394-3PS	4662	12	6-Nov-2016
Section 2.7 - Restricted Band Edges					
Screened Room (5)	Rainford	Rainford	1545	36	20-Dec-2017
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Hygromer	Rotronic	A1	2677	12	11-Jun-2016
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	2-Nov-2016
10mohm Resistor	Cropico	RS3	3616	48	12-Mar-2017
9m RF Cable (N Type)	Rhophase	NPS-2303-9000-NPS	3791	-	TU
Tilt Antenna Mast	maturo Gmbh	TAM 4.0-P	3916	-	TU
Mast Controller	maturo Gmbh	NCD	3917	-	TU
Cable (Yellow, Rx, Km-Km 2m)	Scott Cables	KPS-1501-2000-KPS	4527	-	TU
Cable (Rx, SMAm-SMAm 0.5m)	Scott Cables	SLSLL18-SMSM-00.50M	4528	-	TU
Double Ridged Waveguide Horn Antenna	ETS-Lindgren	3117	4722	12	29-Dec-2016

Product Service

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Due
Section 2.8 - Authorised Band Edges					
Screened Room (5)	Rainford	Rainford	1545	36	20-Dec-2017
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Hygromer	Rotronic	A1	2677	12	11-Jun-2016
EMI Test Receiver	Rohde & Schwarz	ESU40	3506	12	2-Nov-2016
9m RF Cable (N Type)	Rhophase	NPS-2303-9000-NPS	3791	-	TU
Tilt Antenna Mast	maturo Gmbh	TAM 4.0-P	3916	-	TU
Mast Controller	maturo Gmbh	NCD	3917	-	TU
Cable (Yellow, Rx, Km-Km 2m)	Scott Cables	KPS-1501-2000-KPS	4527	-	TU
Cable (Rx, SMAm-SMAm 0.5m)	Scott Cables	SLSLL18-SMSM-00.50M	4528	-	TU
Double Ridged Waveguide Horn Antenna	ETS-Lindgren	3117	4722	12	29-Dec-2016

TU – Traceability Unscheduled
O/P MON – Output Monitored with Calibrated Equipment

Product Service

3.2 MEASUREMENT UNCERTAINTY

For a 95% confidence level, the measurement uncertainties for defined systems are:-

Test Discipline	MU
Frequency Stability	± 90.32 Hz
26 dB Bandwidth	± 5.72 kHz
Maximum Conducted Output Power	Conducted: ± 0.70 dB
AC Line Conducted Emissions	± 3.2 dB
Peak Power Spectral Density	± 3.0 dB
Restricted Band Edges	Conducted: ± 3.454 dB Radiated: ± 3.08 dB
Authorised Band Edges	Conducted: ± 3.454 dB Radiated: ± 3.08 dB
Spurious Radiated Emissions	± 3.08 dB

Product Service

SECTION 4

ACCREDITATION, DISCLAIMERS AND COPYRIGHT

Product Service

4.1 ACCREDITATION, DISCLAIMERS AND COPYRIGHT

UKAS TESTING 0141

This report relates only to the actual item/items tested.

Our UKAS Accreditation does not cover opinions and interpretations and any expressed are outside the scope of our UKAS Accreditation.

Results of tests not covered by our UKAS Accreditation Schedule are marked NUA (Not UKAS Accredited).