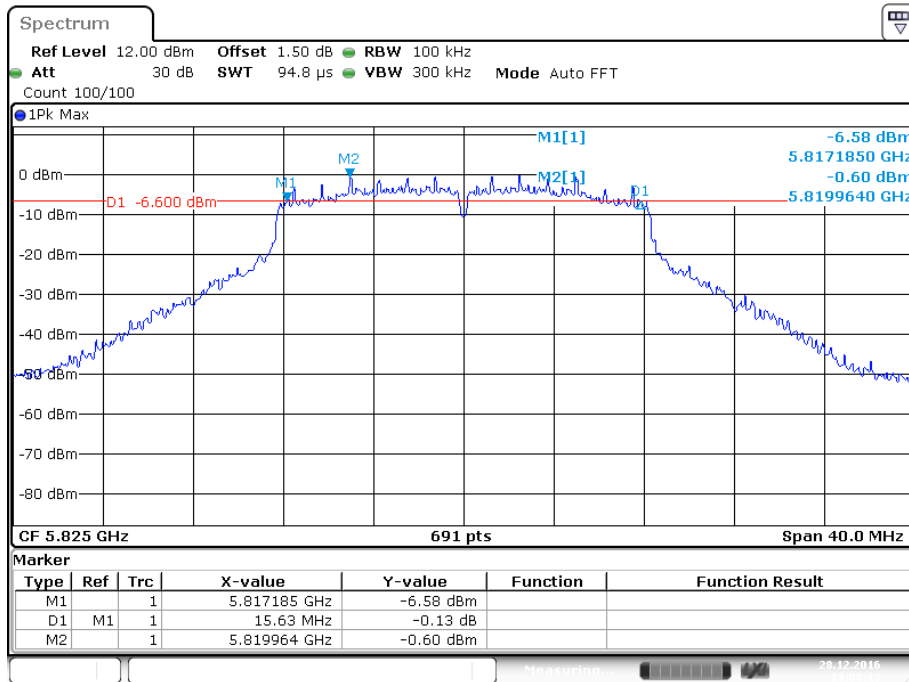
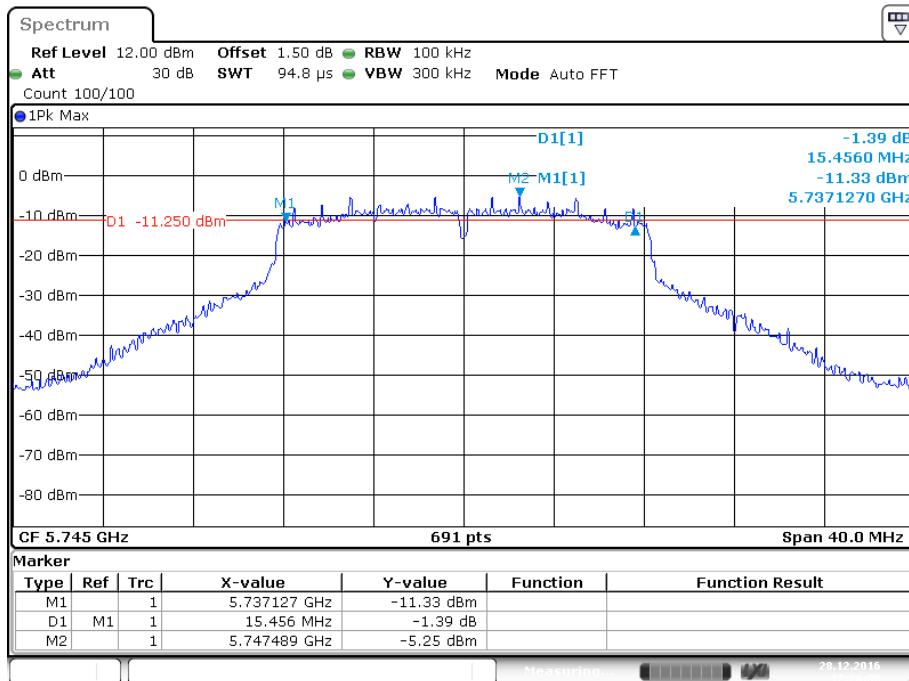


5825MHz



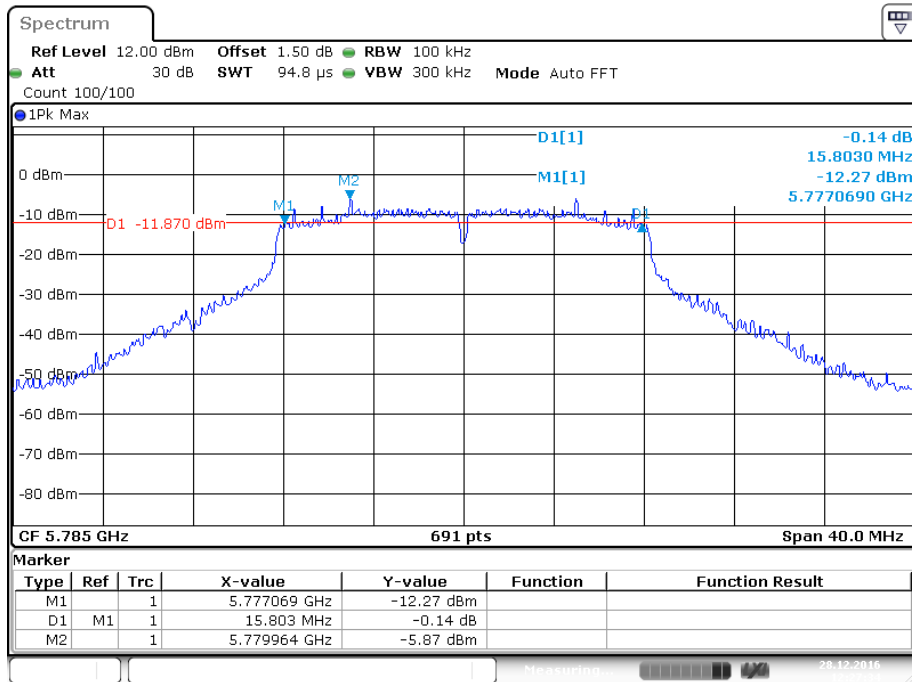
Date: 28 DEC 2016 13:00:13

IEEE 802.11a mode / 5745 ~ 5825MHz(chain 1)
5745MHz



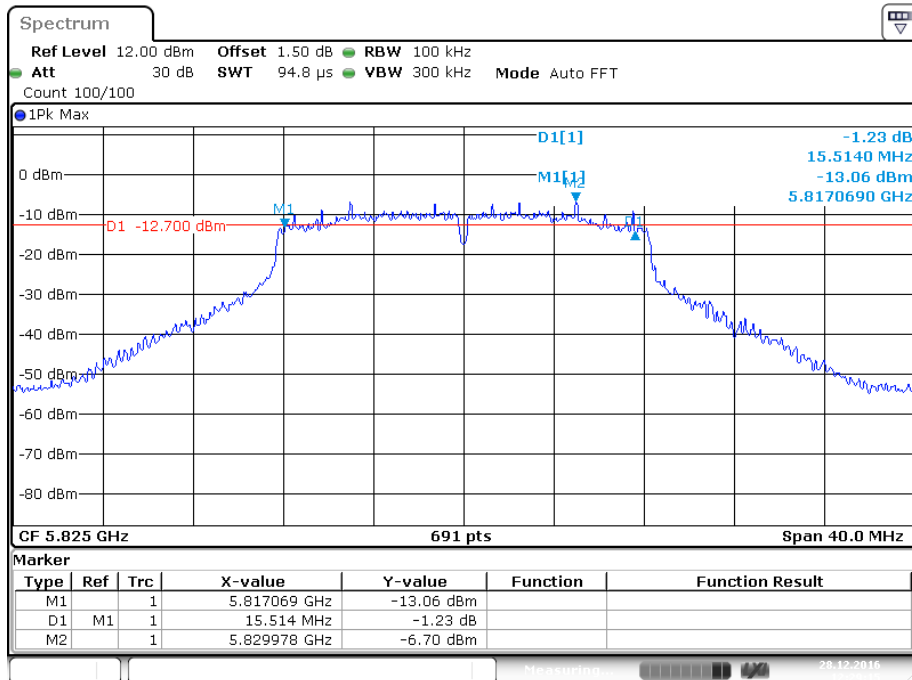
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5785MHz



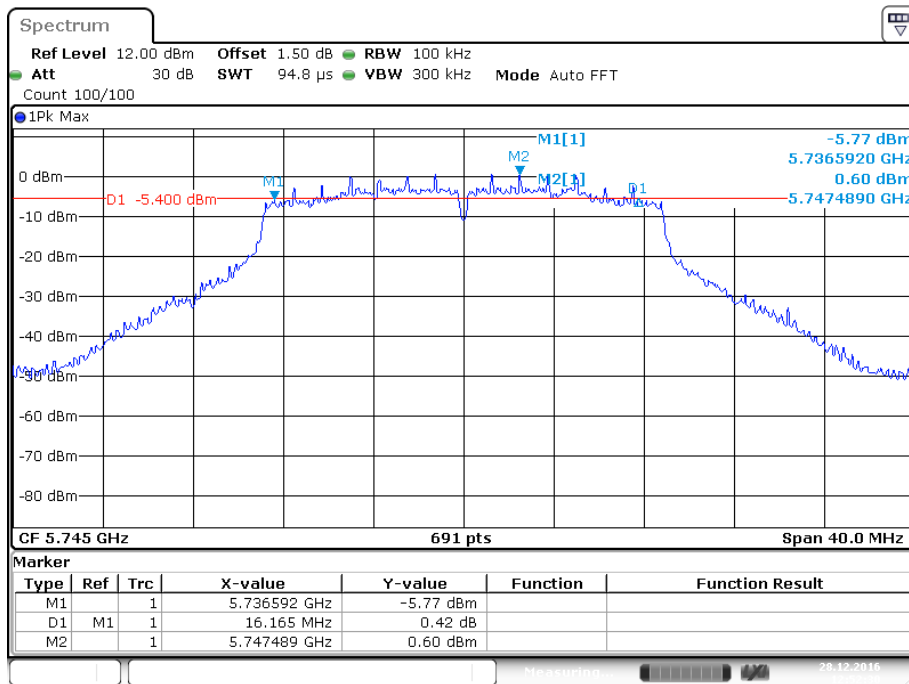
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5825MHz

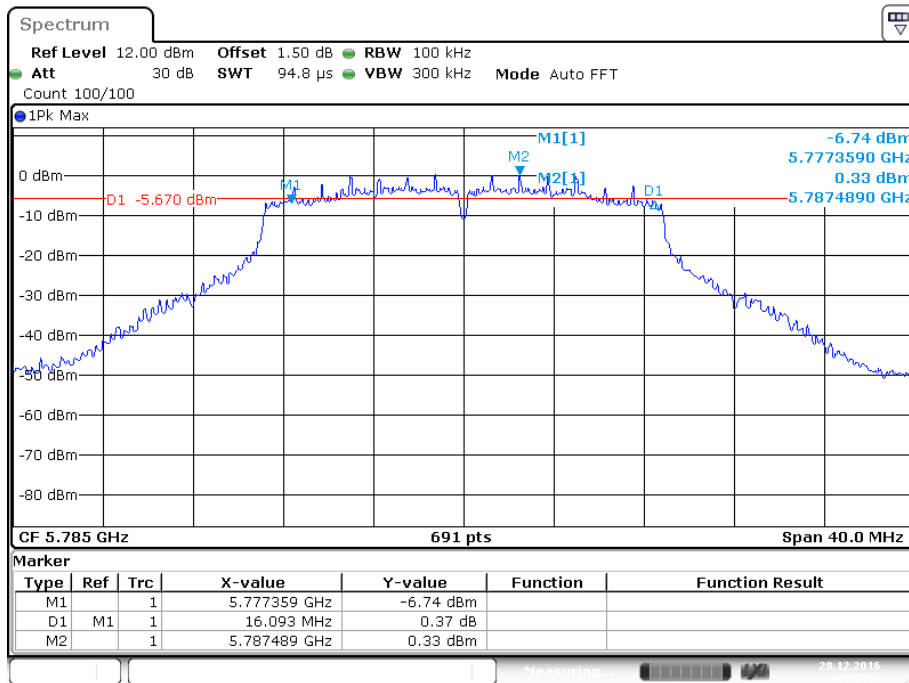


Date: 28 DEC. 2016 12:29:15

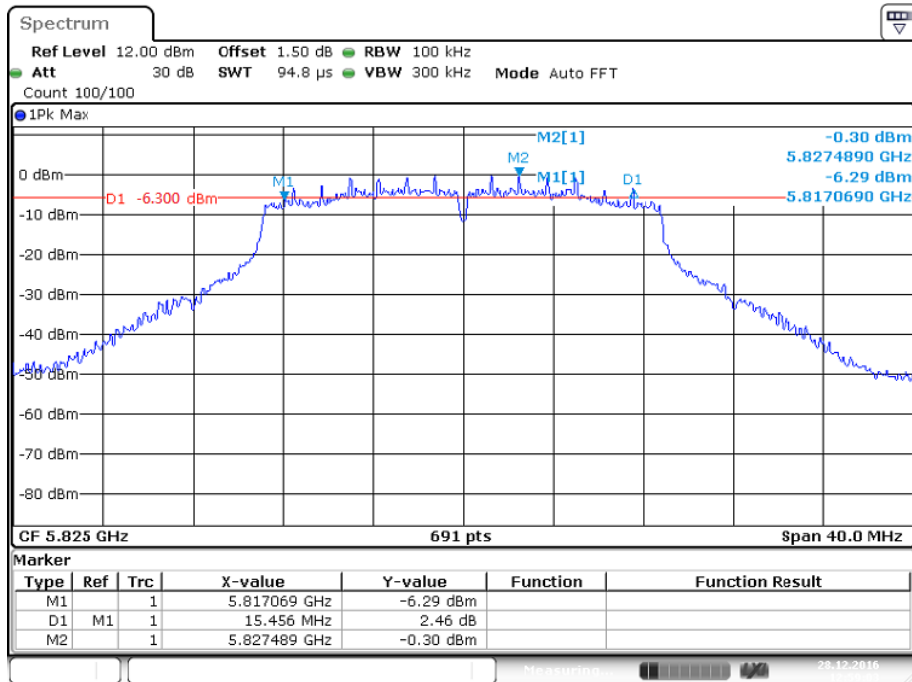
IEEE 802.11n HT20 Mode / 5745 ~ 5825MHz (chain0)
5745MHz



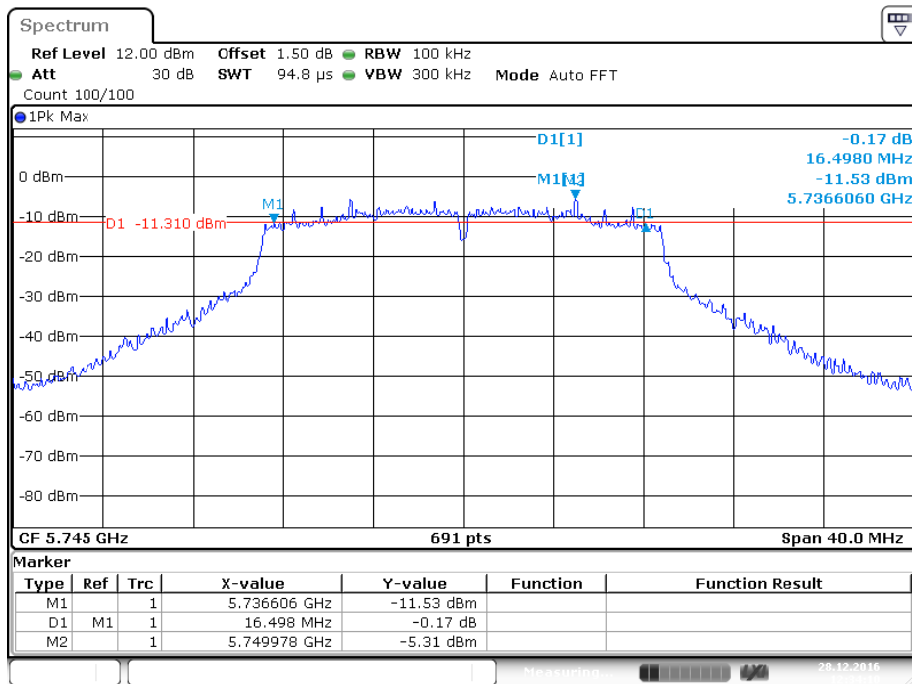
5785MHz



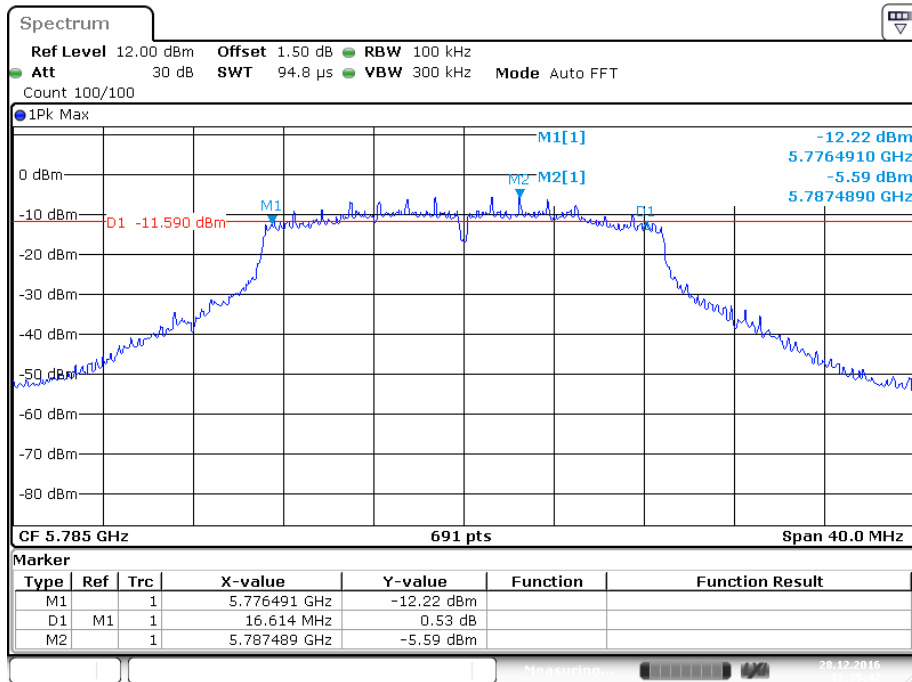
5825MHz



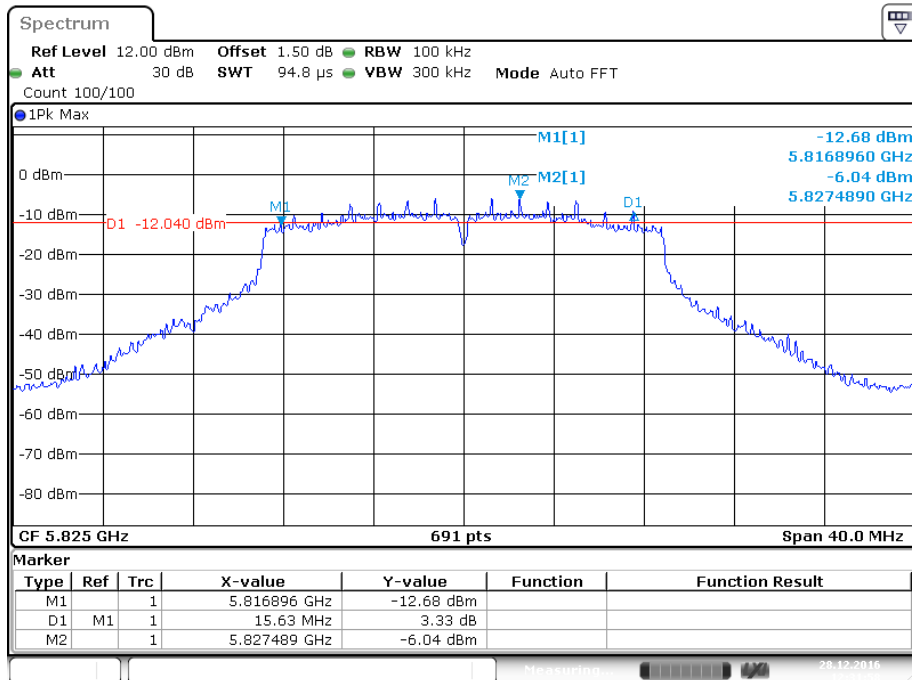
IEEE 802.11n HT20 Mode / 5745 ~ 5825MHz (chain 1)
5745MHz



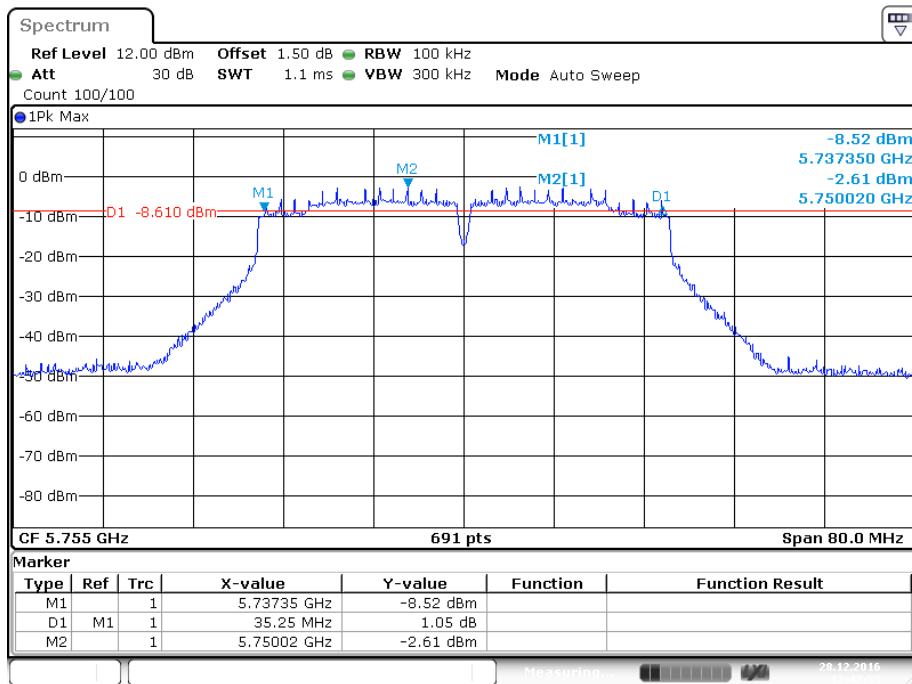
5785MHz



5825MHz

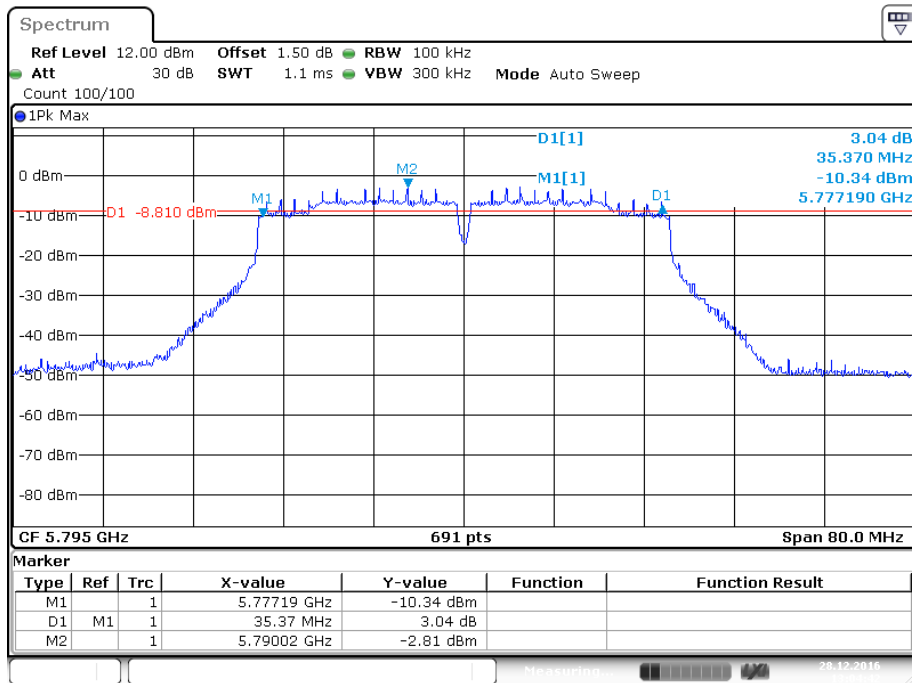


IEEE 802.11n HT40 Mode / 5755 ~ 5795MHz (chain0)
5755MHz



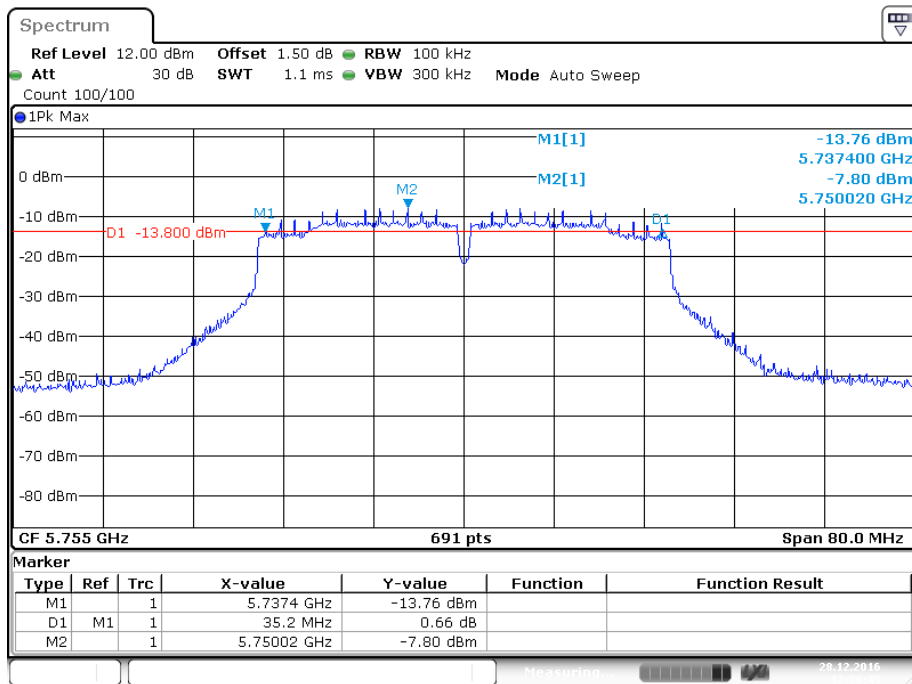
Date: 28 DEC 2016 12:47:53

5795MHz



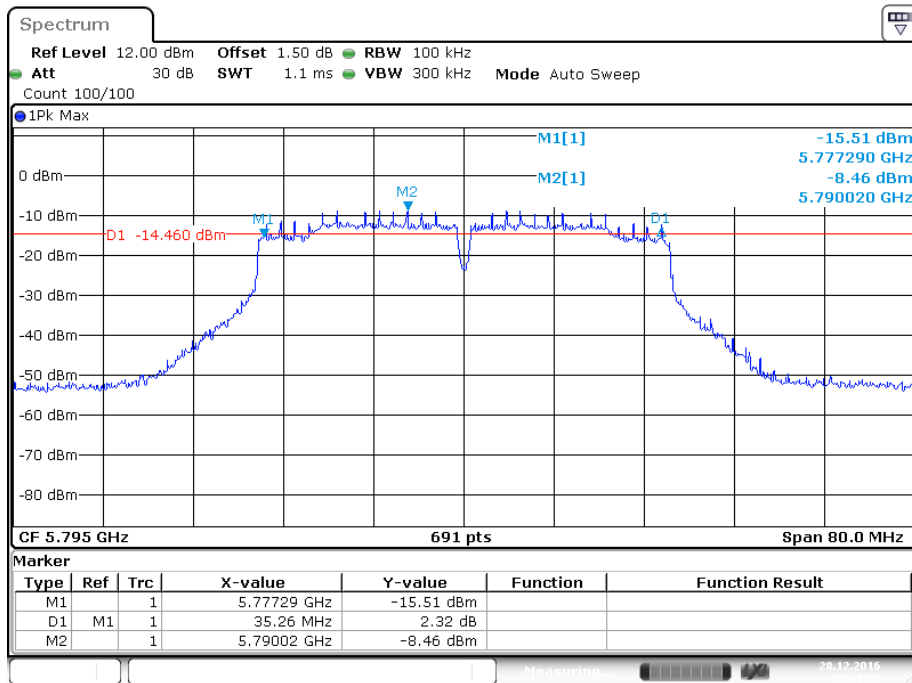
Date: 28 DEC 2016 13:04:42

IEEE 802.11n HT40 Mode / 5755 ~ 5795MHz (chain 1)
5755MHz



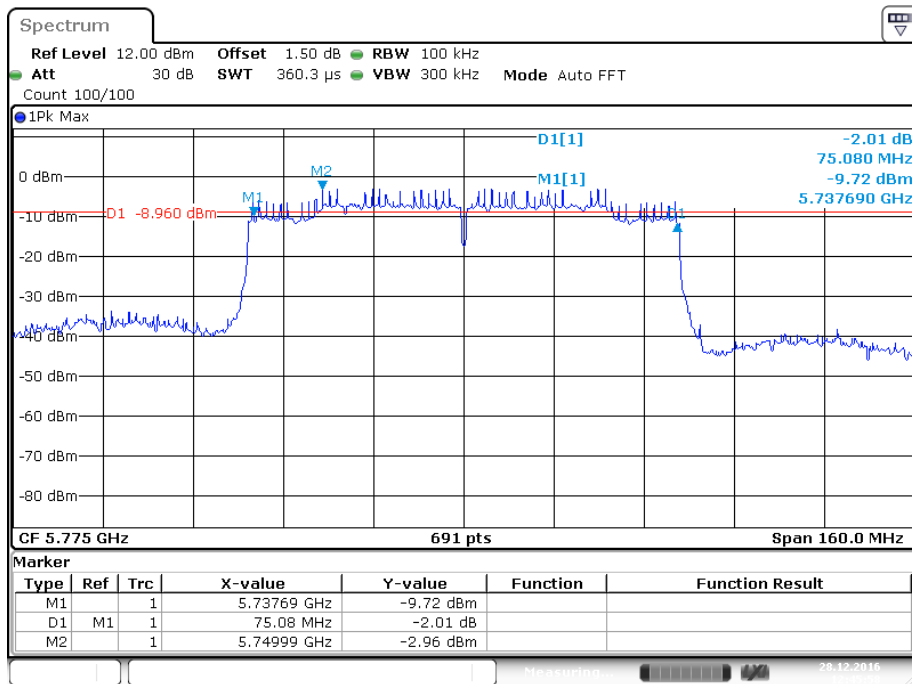
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5795MHz

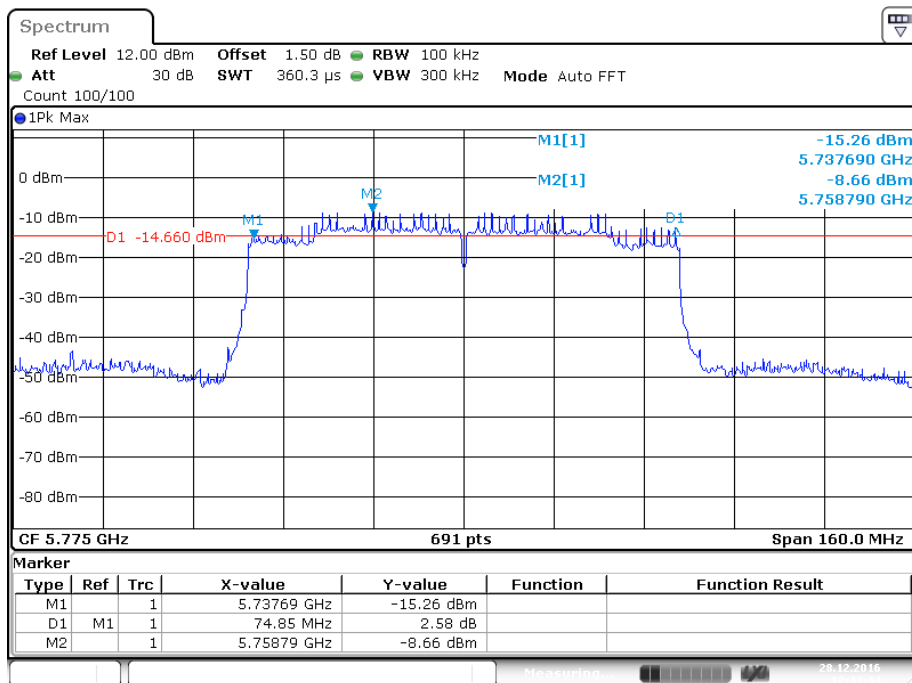


Date: 28 DEC 2016 12:41:39

IEEE 802.11ac VHT80 Mode / 5775MHz (chain 0)
5775MHz



IEEE 802.11ac VHT80 Mode / 5775MHz (chain 1)
5775MHz



9 FCC §15.247(b)(3) – Maximum Output Power

9.1 Applicable Standard

(a) Power limits:

(1) For the band 5.15-5.25 GHz.

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. 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.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. 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.

(iv) For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. 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.

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. 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.

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz

band. 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.

9.2 Test Procedure

According to KDB 789033 D02 General UNII Test Procedures New Rules v01r03

The bandwidth 80MHz and cross band use spectrum analyzer, other bandwidth use PM

9.3 Test Equipment List and Details

| Descriptions | Manufacturer | Models | Serial Numbers | Calibration Date | Calibration Due Date |
|-------------------|-----------------|--------|----------------|------------------|----------------------|
| Cable | WOKEN | SFL402 | 00100A1F6A192S | N.C.R | N.C.R |
| Spectrum Analyzer | Rohde & Schwarz | FSV40 | 101203 | 2016/7/14 | 2017/7/13 |
| Power Meter | HP | E4418B | US39402167 | 2016/5/30 | 2017/5/29 |
| Power Sensor | Agilent | E9300A | US39210953 | 2016/5/30 | 2017/5/29 |

***Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Taiwan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

9.4 Test Environmental Conditions

| | |
|---------------------------|----------|
| Temperature: | 24°C |
| Relative Humidity: | 57 % |
| ATM Pressure: | 1020 hPa |

The testing was performed by David Hsu on 2016-12-28-2016-12-29.

9.5 Test Results

SISO

| UNII Band | Mode | Channel | Frequency (MHz) | Maximum Conducted Average Output Power (dBm) | | DUTY FACTOR (dB) | Maximum Conducted Average Output Power with factor (dBm) | | Limit (dBm) |
|--------------|---------------|---------|-----------------|--|---------|------------------|--|---------|-------------|
| | | | | Chain 0 | Chain 1 | | Chain 0 | Chain 1 | |
| 5150-5250MHz | 802.11 a | Low | 5180 | 12.19 | 12.97 | 0 | 12.19 | 12.97 | 24 |
| | | Middle | 5200 | 12.13 | 13.70 | 0 | 12.13 | 13.70 | 24 |
| | | High | 5240 | 12.89 | 13.09 | 0 | 12.89 | 13.09 | 24 |
| | 5G 802.11 n20 | Low | 5180 | 11.79 | 12.18 | 0 | 11.79 | 12.18 | 24 |
| | | Middle | 5200 | 12.71 | 13.08 | 0 | 12.71 | 13.08 | 24 |
| | | High | 5240 | 12.7 | 12.94 | 0 | 12.7 | 12.94 | 24 |
| | 5G 802.11 n40 | Low | 5190 | 10.73 | 12.29 | 0.13 | 10.86 | 12.42 | 24 |
| | | High | 5230 | 12.8 | 13.51 | 0.13 | 12.93 | 13.64 | 24 |
| | 802.11 ac80 | Middle | 5210 | 11.96 | 11.29 | 0.41 | 12.37 | 11.7 | 24 |
| 5250-5350MHz | 802.11 a | Low | 5260 | 13.72 | 13.53 | 0 | 13.72 | 13.53 | 24 |
| | | Middle | 5280 | 13.47 | 12.92 | 0 | 13.47 | 12.92 | 24 |
| | | High | 5320 | 12.18 | 10.04 | 0 | 12.18 | 10.04 | 24 |
| | 5G 802.11 n20 | Low | 5260 | 13.97 | 13.54 | 0 | 13.97 | 13.54 | 24 |
| | | Middle | 5280 | 13.43 | 13.28 | 0 | 13.43 | 13.28 | 24 |
| | | High | 5320 | 12.97 | 12.83 | 0 | 12.97 | 12.83 | 24 |
| | 5G 802.11 n40 | Low | 5270 | 14.16 | 14.04 | 0.13 | 14.29 | 14.17 | 24 |
| | | High | 5310 | 12.11 | 12.06 | 0.13 | 12.24 | 12.19 | 24 |
| | 802.11 ac80 | Middle | 5290 | 11.99 | 10.72 | 0.41 | 12.4 | 11.13 | 24 |
| 5470-5725MHz | 802.11 a | Low | 5500 | 12.67 | 13.14 | 0 | 12.67 | 13.14 | 24 |
| | | Middle | 5580 | 14.21 | 14.12 | 0 | 14.21 | 14.12 | 24 |
| | | High | 5700 | 11.18 | 10.96 | 0 | 11.18 | 10.96 | 24 |
| | 5G 802.11 n20 | Low | 5500 | 11.98 | 11.06 | 0 | 11.98 | 11.06 | 24 |
| | | Middle | 5580 | 13.91 | 14.41 | 0 | 13.91 | 14.41 | 24 |
| | | High | 5700 | 11.24 | 10.82 | 0 | 11.24 | 10.82 | 24 |
| | 5G 802.11 n40 | Low | 5510 | 12.47 | 11.42 | 0.13 | 12.6 | 11.55 | 24 |
| | | Middle | 5590 | 12.46 | 12.75 | 0.13 | 12.59 | 12.88 | 24 |
| | | High | 5670 | 14.35 | 14.60 | 0.13 | 14.48 | 14.73 | 24 |
| 802.11 ac80 | Low | 5530 | 12.21 | 11.85 | 0.41 | 12.62 | 12.26 | 24 | |

| | | | | | | | | | |
|-------------------------------|------------------|--------|------|-------|-------|------|-------|-------|----|
| | | High | 5610 | 12.11 | 12.00 | 0.41 | 12.52 | 12.41 | 24 |
| 5470-5725MHz Cross Band | 802.11ac20 | High | 5720 | 12.79 | 12.51 | 0 | 12.79 | 12.51 | 24 |
| | 802.11ac40 | High | 5710 | 13.33 | 13.31 | 0.13 | 13.46 | 13.44 | 24 |
| | 802.11ac80 | High | 5690 | 13.44 | -2.34 | 0.41 | 13.85 | -1.93 | 24 |
| 5725-5850MHz Cross Band | 802.11ac20 | High | 5720 | 0.80 | -0.30 | 0 | 0.8 | -0.3 | 30 |
| | 802.11ac40 | High | 5710 | 0.98 | 0.89 | 0.13 | 1.11 | 1.02 | 30 |
| | 802.11ac80 | High | 5690 | -2.34 | -2.4 | 0.41 | -1.93 | -1.99 | 30 |
| 5725-5850MHz | 802.11 a | Low | 5745 | 14.39 | 14.16 | 0 | 14.39 | 14.16 | 30 |
| | | Middle | 5785 | 14.11 | 13.89 | 0 | 14.11 | 13.89 | 30 |
| | | High | 5825 | 14.36 | 14.53 | 0 | 14.36 | 14.53 | 30 |
| | 5G 802.11 n20 | Low | 5745 | 14.31 | 14.38 | 0 | 14.31 | 14.38 | 30 |
| | | Middle | 5785 | 14.08 | 14.13 | 0 | 14.08 | 14.13 | 30 |
| | | High | 5825 | 14.32 | 14.22 | 0 | 14.32 | 14.22 | 30 |
| | 5G 802.11 n40 | Low | 5755 | 15.53 | 15.69 | 0.13 | 15.66 | 15.82 | 30 |
| | | High | 5795 | 14.56 | 14.78 | 0.13 | 14.69 | 14.91 | 30 |
| | 802.11 ac80 | Middle | 5775 | 14.95 | 14.89 | 0.41 | 15.36 | 15.3 | 30 |

The 5250-5350MHz and 5470-5725MHz power limit $11\text{dBm} + 10 \cdot \log(\text{min BW})$ over 24dBm,
So Limit is 24dBm.

MIMO

| UNII Band | Mode | Channel | Frequency (MHz) | Maximum Conducted Average Output Power (dBm) | | | DUTY FACTOR (dB) | Maximum Conducted Average Output Power with factor (dBm) | Limit (dBm) |
|--------------|---------------|---------|-----------------|--|---------|-------|------------------|--|-------------|
| | | | | Chain 0 | Chain 1 | Total | | Total | |
| 5150-5250MHz | 5G 802.11 n20 | Low | 5180 | 10.02 | 10.01 | 13.03 | 0 | 13.03 | 24 |
| | | Middle | 5200 | 9.23 | 9.75 | 12.51 | 0 | 12.51 | 24 |
| | | High | 5240 | 9.53 | 9.74 | 12.65 | 0 | 12.65 | 24 |
| | 5G 802.11 n40 | Low | 5190 | 8.13 | 8.43 | 11.29 | 0.13 | 11.42 | 24 |
| | | High | 5230 | 10.37 | 10.25 | 13.32 | 0.13 | 13.45 | 24 |
| | 802.11 ac80 | Middle | 5210 | 9.20 | 9.68 | 12.46 | 0.41 | 12.87 | 24 |
| 5250-5350MHz | 5G 802.11 n20 | Low | 5260 | 9.80 | 9.90 | 12.86 | 0 | 12.86 | 24 |
| | | Middle | 5280 | 10.05 | 10.21 | 13.14 | 0 | 13.14 | 24 |
| | | High | 5320 | 9.27 | 10.11 | 12.72 | 0 | 12.72 | 24 |
| | 5G 802.11 n40 | Low | 5270 | 10.21 | 9.87 | 13.05 | 0.13 | 13.18 | 24 |
| | | High | 5310 | 10.11 | 10.03 | 13.08 | 0.13 | 13.21 | 24 |

| | | | | | | | | | |
|-------------------------|---------------|--------|------|-------|-------|-------|------|-------|----|
| | 802.11 ac80 | Middle | 5290 | 8.22 | 9.22 | 11.76 | 0.41 | 12.17 | 24 |
| 5470-5725MHz | 5G 802.11 n20 | Low | 5500 | 9.3 | 8.59 | 11.97 | 0 | 11.97 | 24 |
| | | Middle | 5580 | 9.98 | 9.64 | 12.82 | 0 | 12.82 | 24 |
| | | High | 5700 | 9.39 | 9.67 | 12.54 | 0 | 12.54 | 24 |
| | 5G 802.11 n40 | Low | 5510 | 9.43 | 9.23 | 12.34 | 0.13 | 12.47 | 24 |
| | | Middle | 5590 | 9.73 | 8.87 | 12.33 | 0.13 | 12.46 | 24 |
| | | High | 5670 | 10.36 | 11.16 | 13.79 | 0.13 | 13.92 | 24 |
| | 802.11 ac80 | Low | 5530 | 10.70 | 10.06 | 13.4 | 0.41 | 13.81 | 24 |
| | | High | 5610 | 11.01 | 10.81 | 13.92 | 0.41 | 14.33 | 24 |
| 5470-5725MHz Cross Band | 802.11ac20 | High | 5720 | 9.65 | 9.55 | 12.61 | 0 | 12.61 | 24 |
| | 802.11ac40 | High | 5710 | 11.72 | 10.82 | 14.3 | 0.13 | 14.43 | 24 |
| | 802.11ac80 | High | 5690 | 11.42 | 11.04 | 14.24 | 0.41 | 14.65 | 24 |
| 5725-5850MHz Cross Band | 802.11ac20 | High | 5720 | 2.23 | 2.31 | 5.28 | 0 | 5.28 | 30 |
| | 802.11ac40 | High | 5710 | -0.99 | -1.48 | 1.78 | 0.13 | 1.91 | 30 |
| | 802.11ac80 | High | 5690 | -4.35 | -4.5 | -1.41 | 0.41 | -1 | 30 |
| 5725-5850MHz | 5G 802.11 n20 | Low | 5745 | 11.24 | 11 | 14.13 | 0 | 14.13 | 30 |
| | | Middle | 5785 | 10.27 | 10.45 | 13.37 | 0 | 13.37 | 30 |
| | | High | 5825 | 10.64 | 10.38 | 13.52 | 0 | 13.52 | 30 |
| | 5G 802.11 n40 | Low | 5755 | 10.33 | 10.23 | 13.29 | 0.13 | 13.42 | 30 |
| | | High | 5795 | 10.2 | 10.15 | 13.19 | 0.13 | 13.32 | 30 |
| | 802.11 ac80 | Middle | 5775 | 11.19 | 10.23 | 13.75 | 0.41 | 14.16 | 30 |

The 5250-5350MHz and 5470-5725MHz power limit $11\text{dBm} + 10 \cdot \log(\text{min BW})$ over 24 dBm, So Limit is 24 dBm.

The device is a client device. the 2 antenna maximum antenna gain are 4.5dBi, and employed Cyclic Delay

Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, forpower measurements on the devices:

Array Gain = 0 dB for NANT ≤ 4 ;

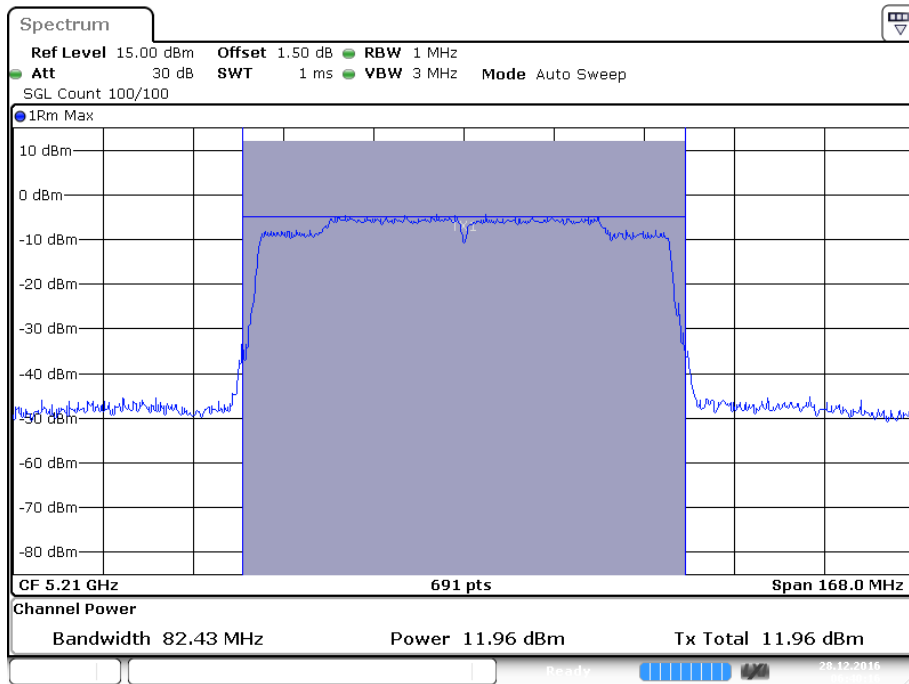
So:

Directional gain = GANT + Array Gain = 4.5+0 =4.5 dBi < 6 dBi

Note: 802.11ac80 and cross band were tested using spectrum, other 5 GHz bands and modes were tested using power meter.

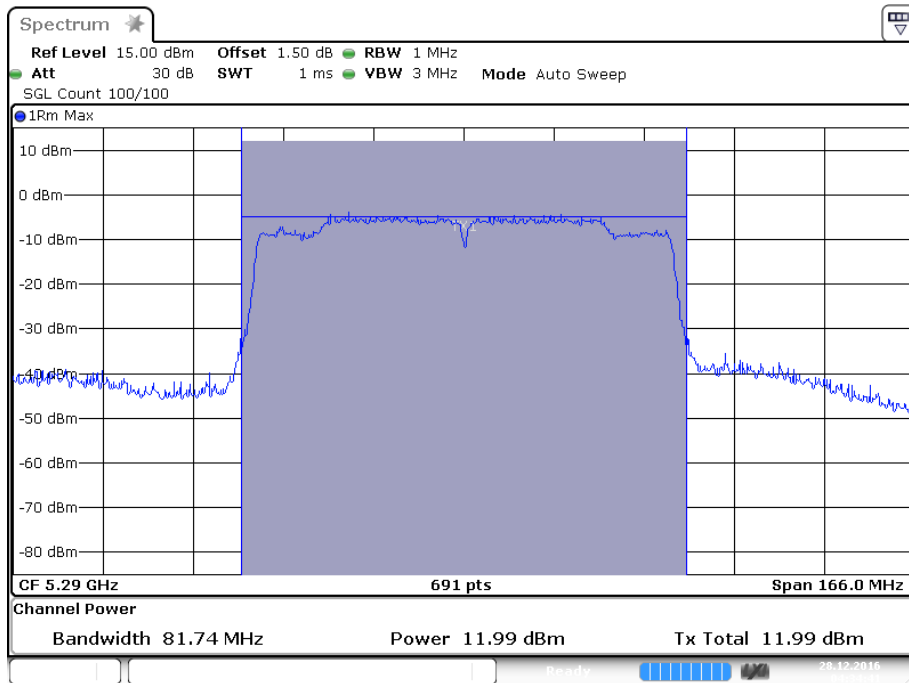
Please refer to the following plots

SISO
IEEE 802.11ac VHT80 Mode / 5210~5775MHz (chain 0)
5210MHz



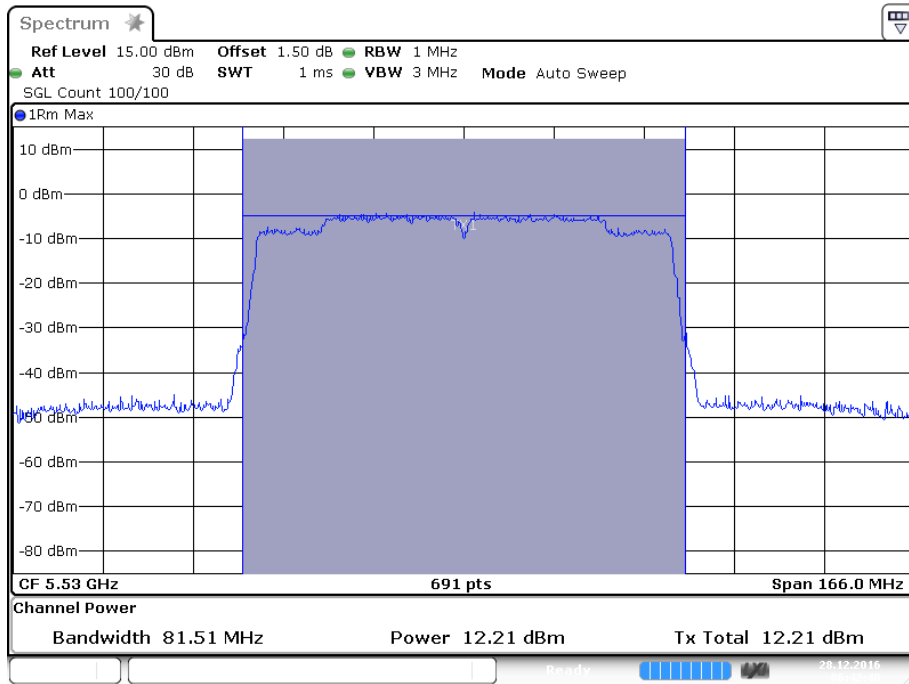
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5290MHz



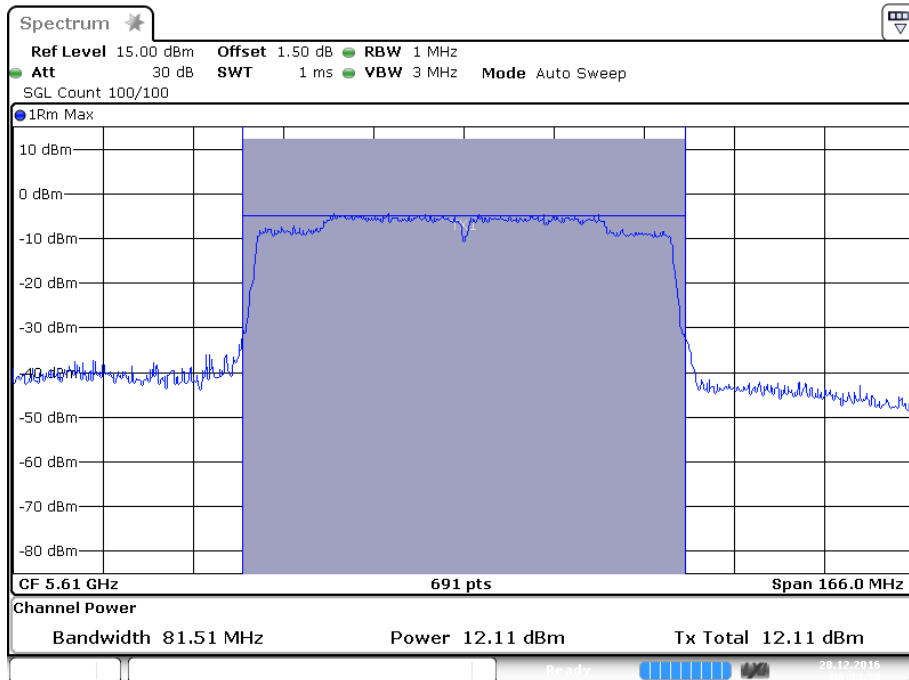
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5530MHz



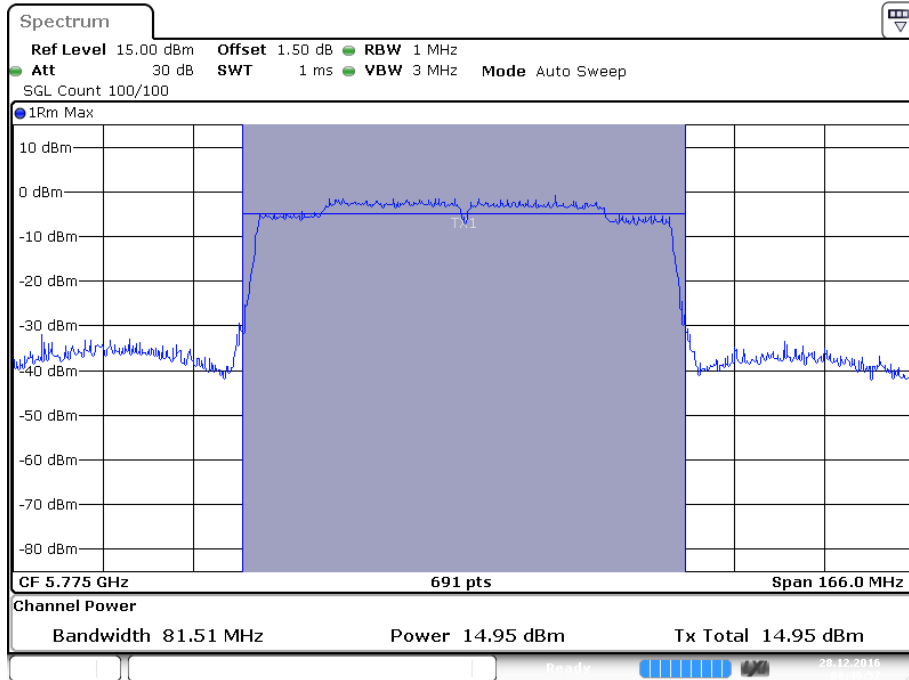
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5610MHz



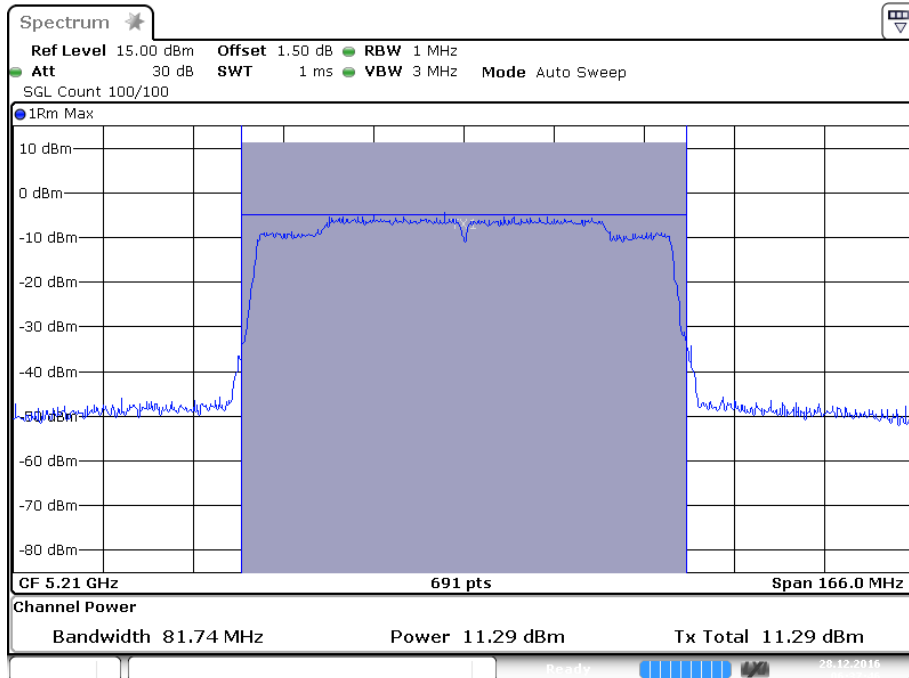
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5775MHz



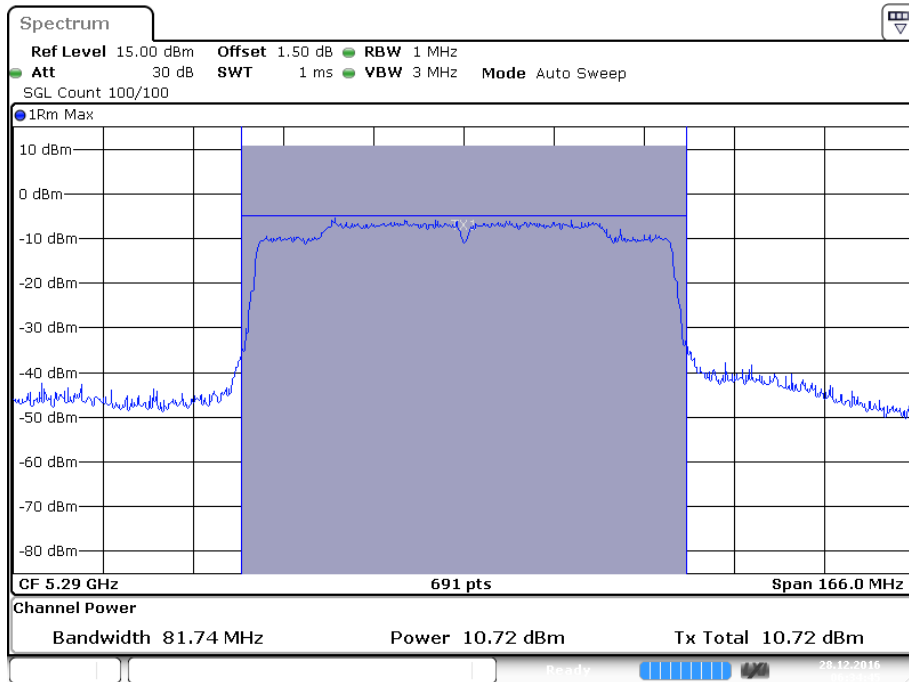
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IEEE 802.11ac VHT80 Mode / 5210~5775MHz (chain 1)
5210MHz



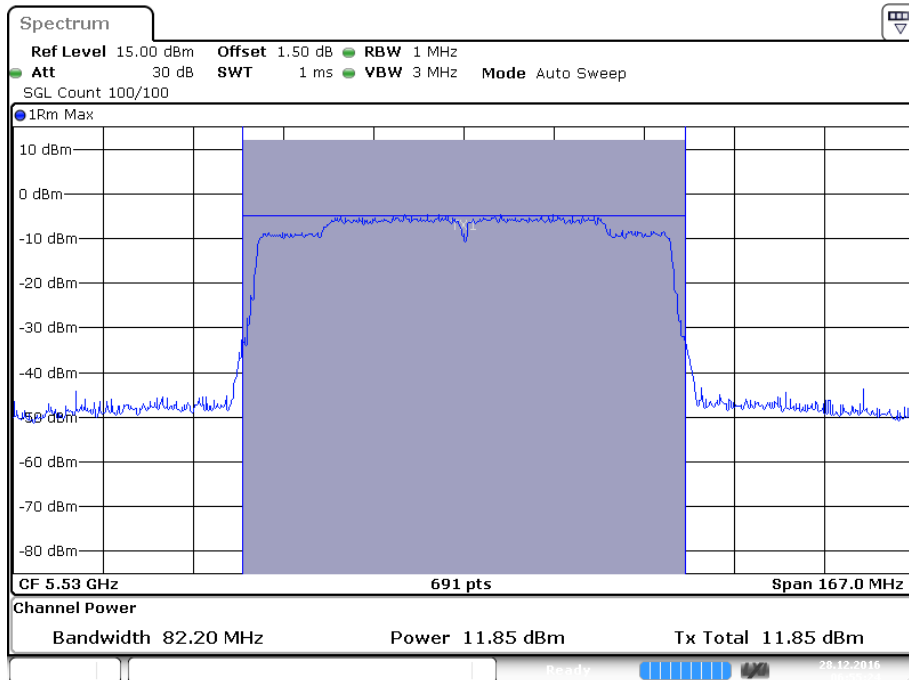
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5290MHz



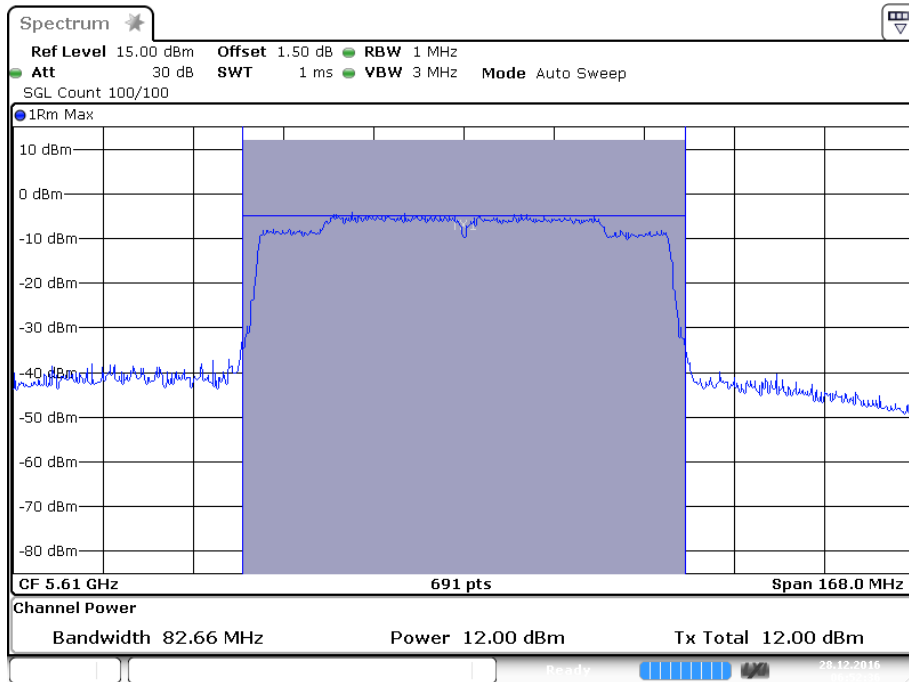
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5530MHz



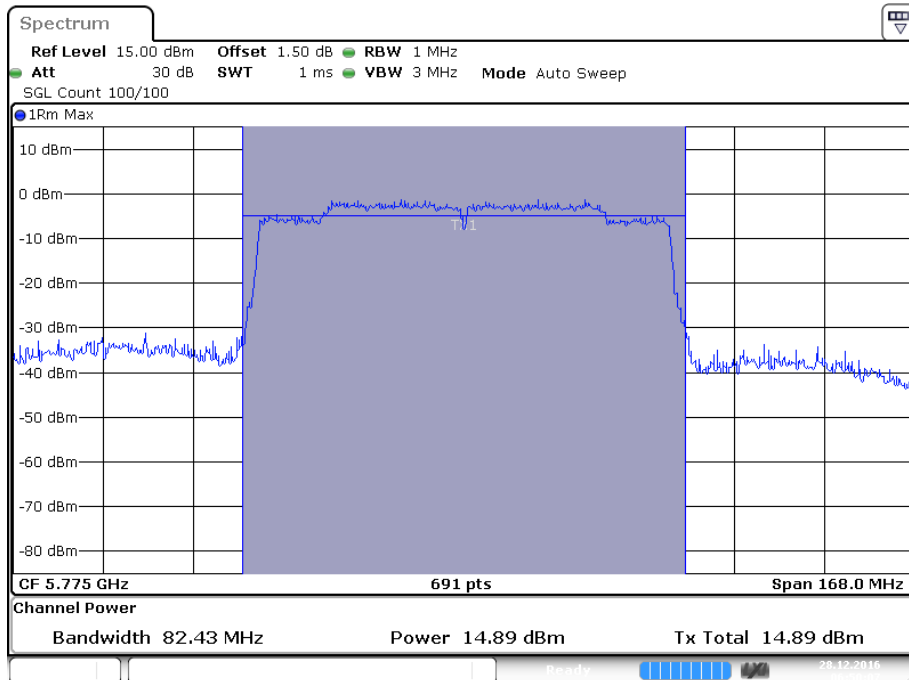
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5610MHz



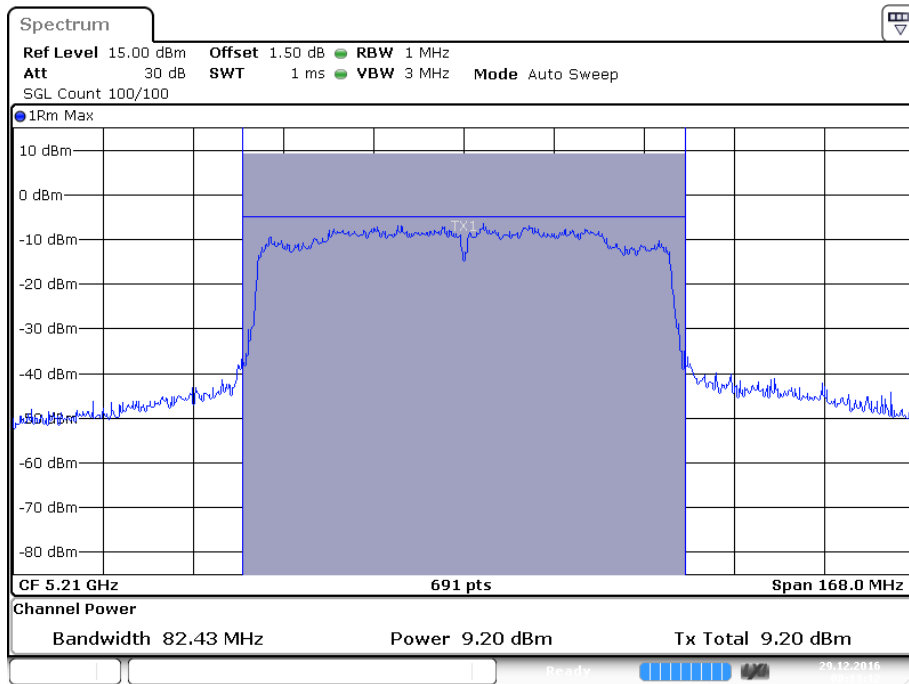
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5775MHz



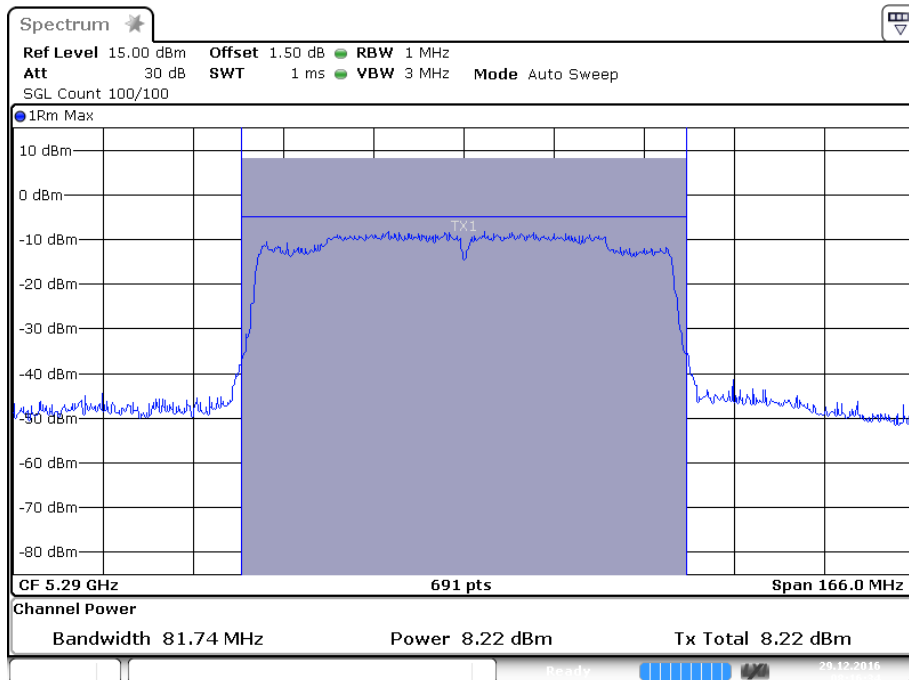
Date: 28 DEC 2016 06:50:07

MIMO
IEEE 802.11ac VHT80 Mode / 5210~5775MHz (chain 0)
5210MHz



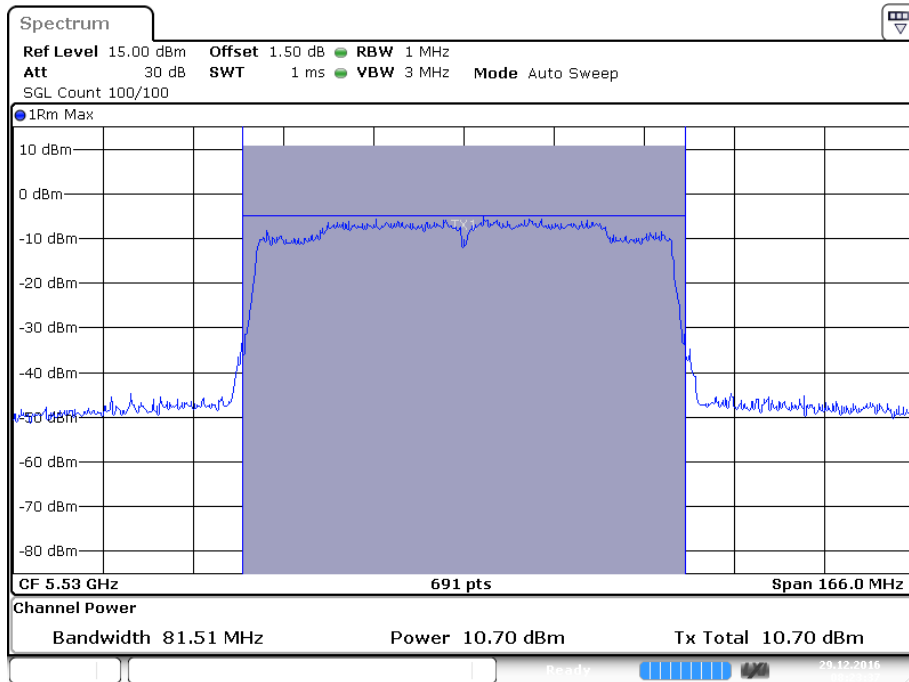
Date:29.DEC.2016 08:13:12

5290MHz



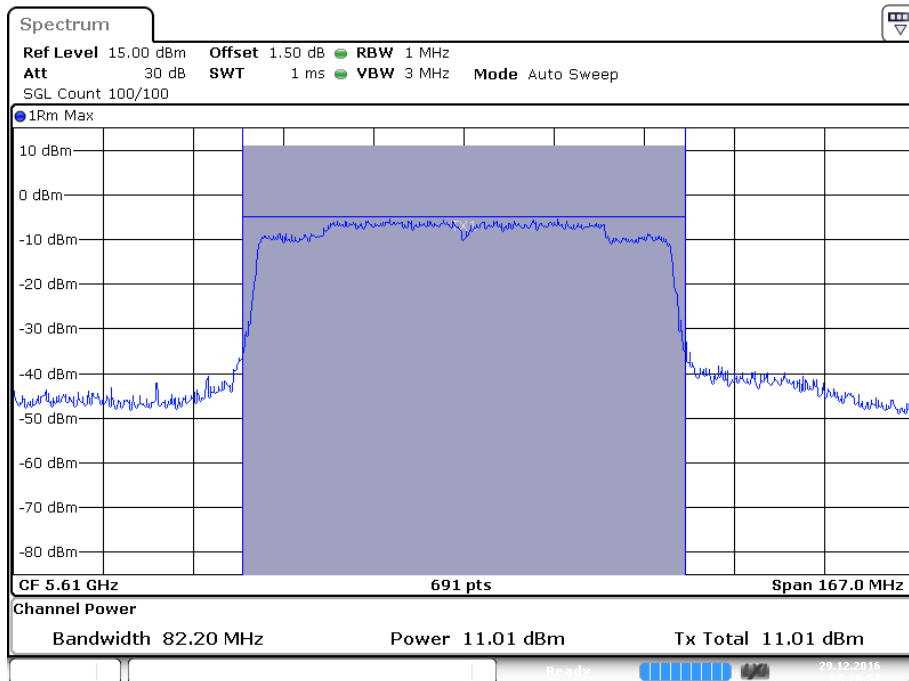
Date:29.DEC.2016 08:16:34

5530MHz



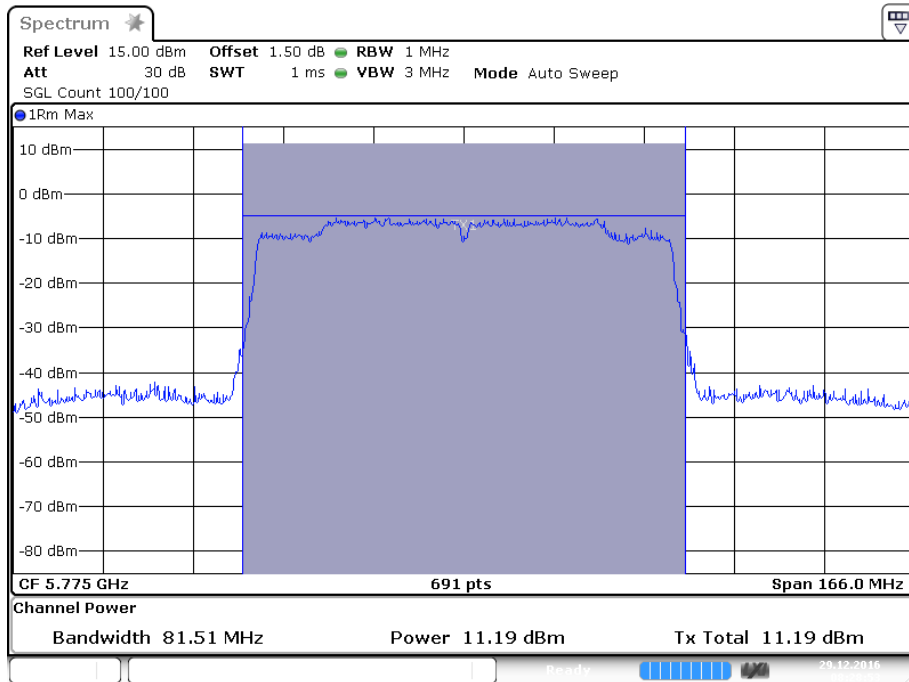
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5610MHz



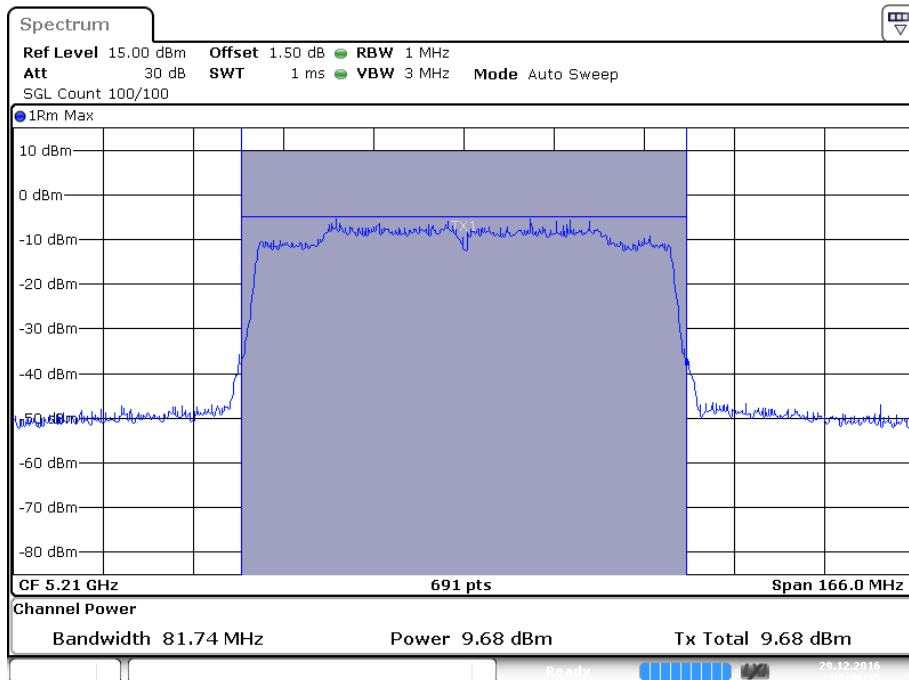
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5775MHz



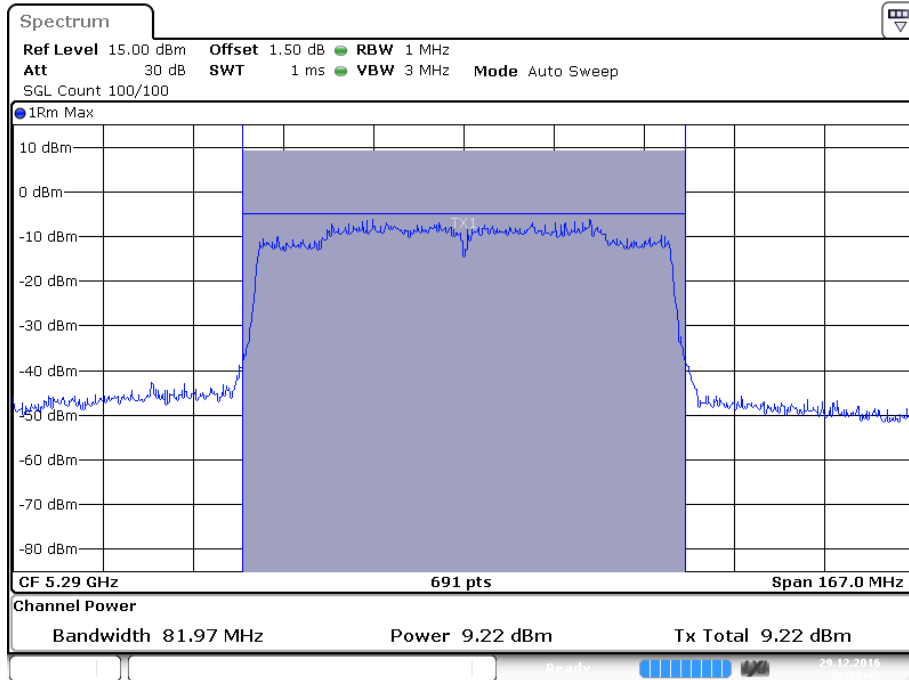
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IEEE 802.11ac VHT80 Mode / 5210~5775MHz (chain 1)
5210MHz



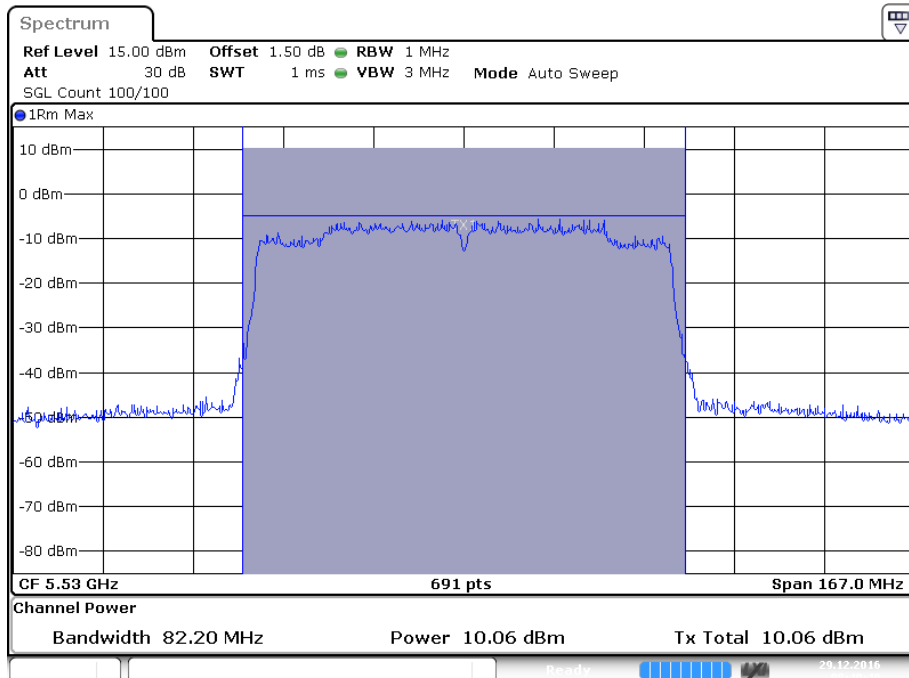
Date: 29 DEC 2016 08:36:35

5290MHz



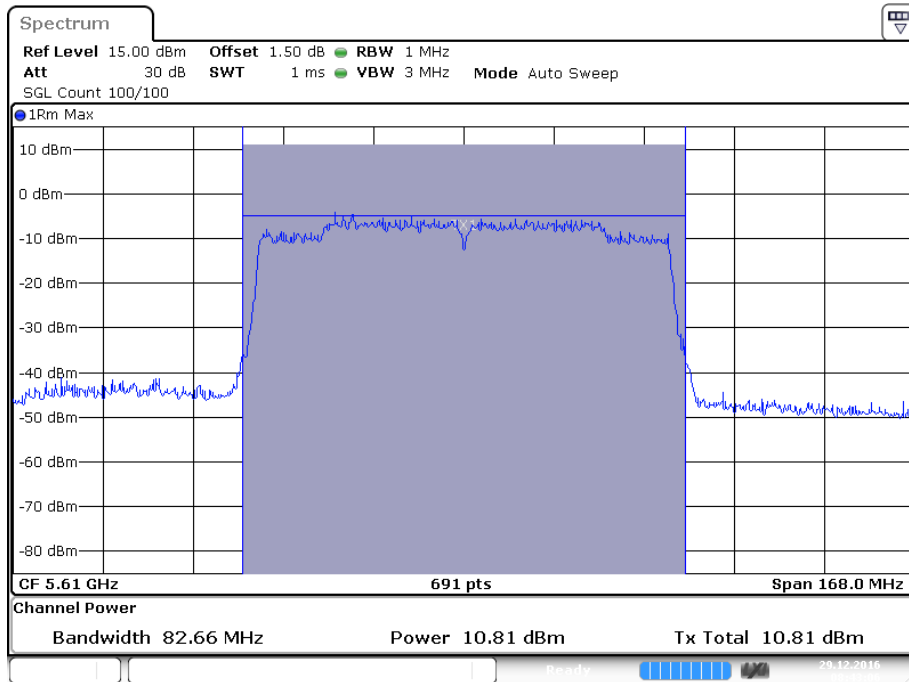
Date: 29 DEC 2016 08:38:42

5530MHz



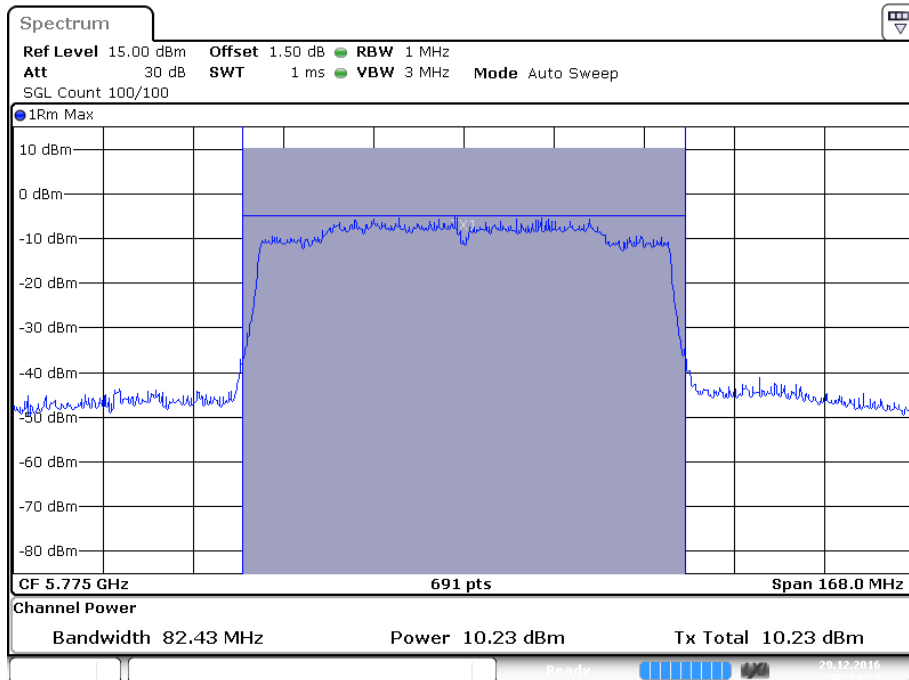
Date: 29 DEC 2016 08:40:41

5610MHz



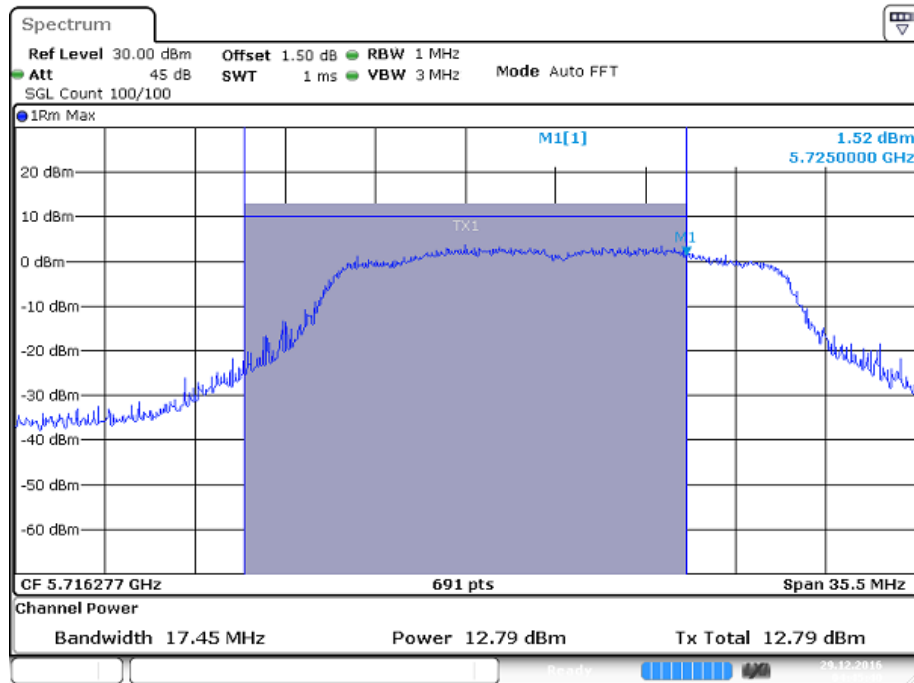
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5775MHz



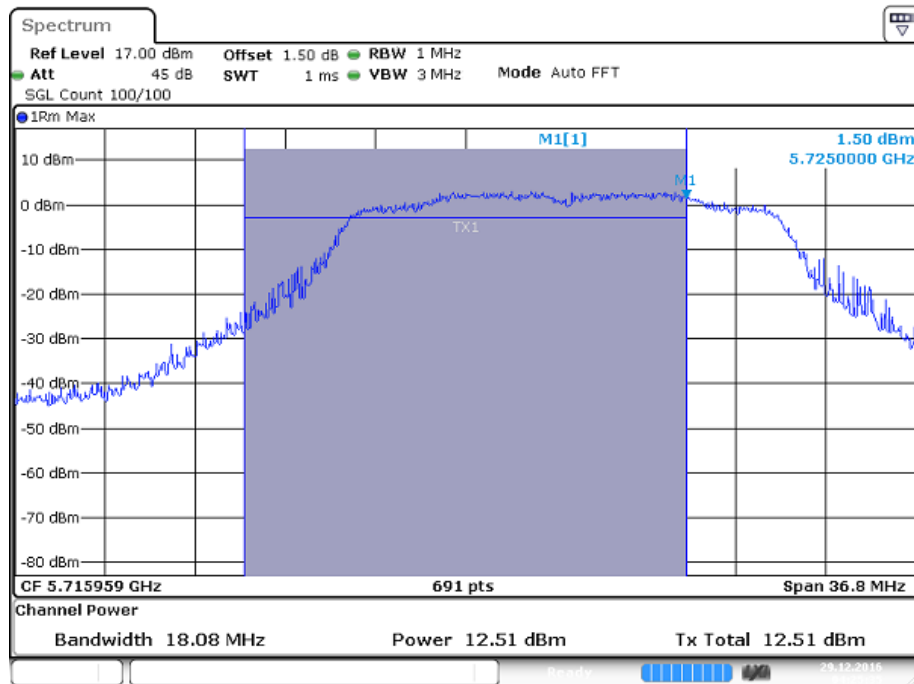
Date: 29 DEC 2016 08:34:23

SISO
IEEE 802.11ac VHT20 mode Cross Band edge / 5470 ~ 5725MHz(chain 0)
5720MHz



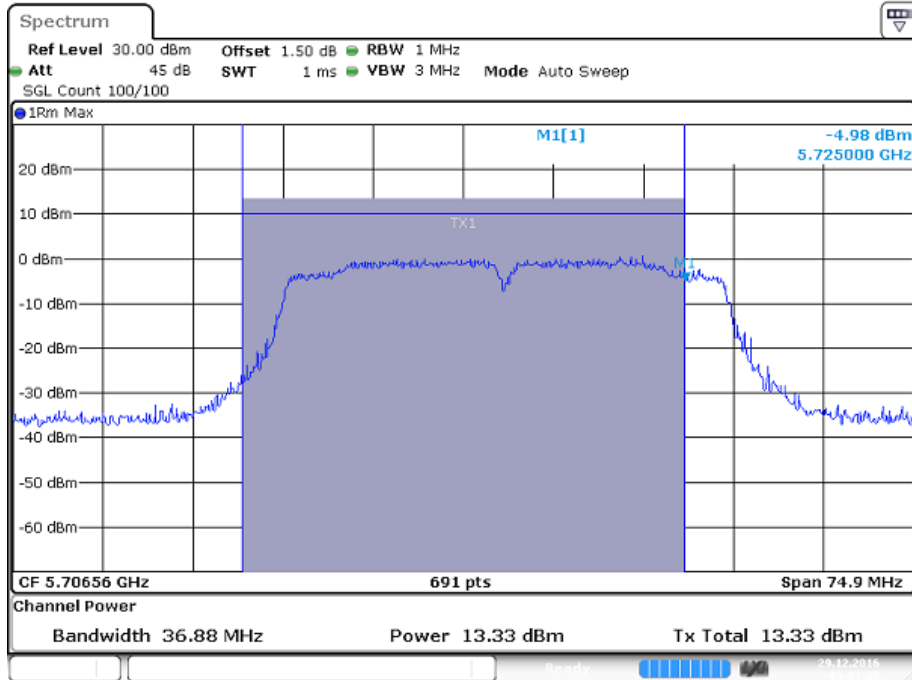
Date: 29 DEC 2016 04:45:41

IEEE 802.11ac VHT20 mode Cross Band edge / 5470 ~ 5725MHz (chain 1)
5720MHz

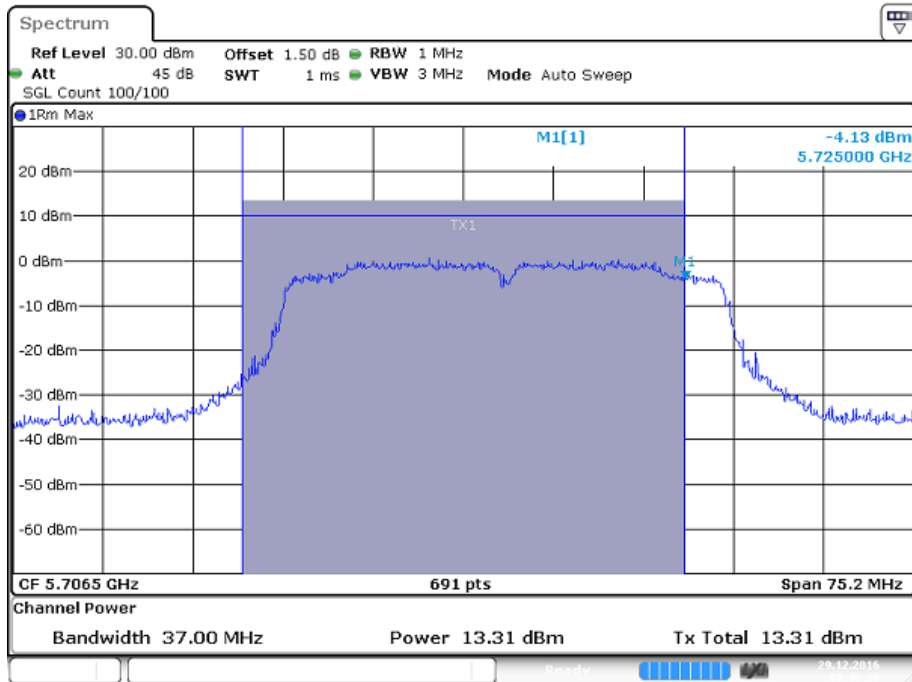


Date: 29 DEC 2016 04:25:35

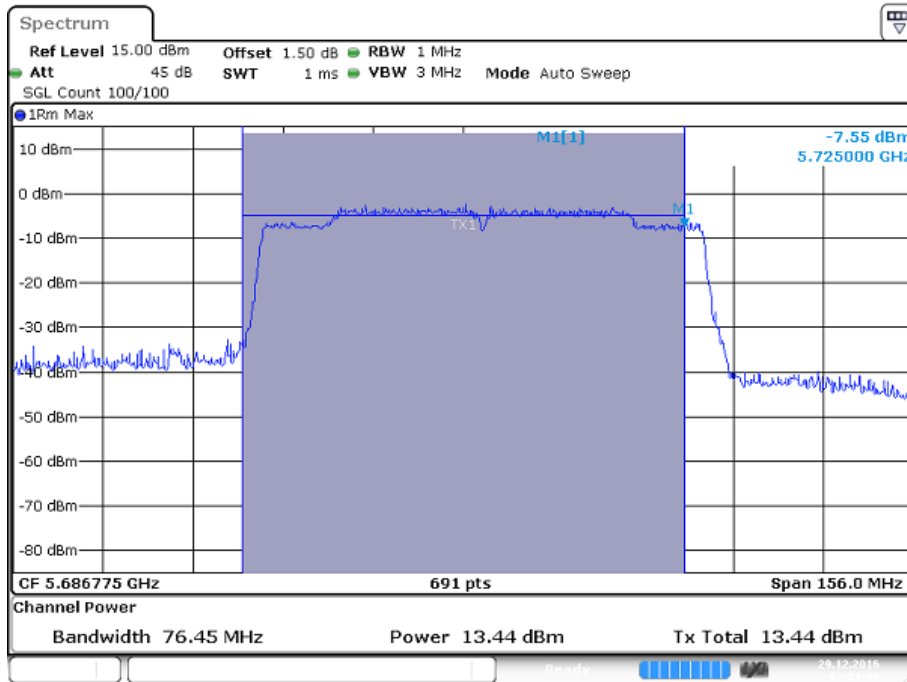
**IEEE 802.11ac VHT40 mode Cross Band edge / 5470 ~ 5725MHz(chain 0)
5710MHz**



**IEEE 802.11ac VHT40 mode Cross Band edge / 5470 ~ 5725MHz (chain 1)
5710MHz**

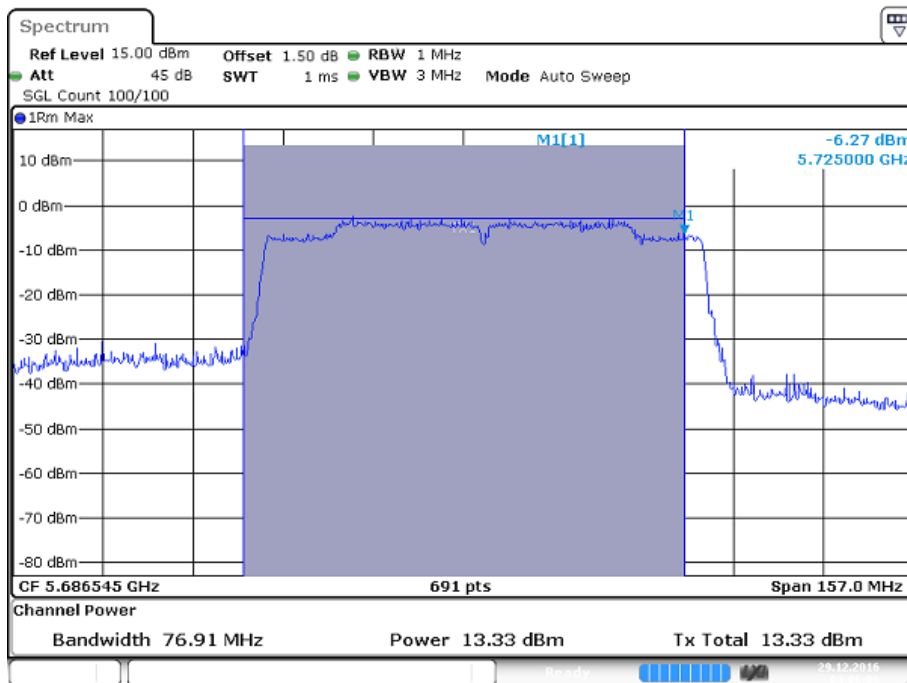


**IEEE 802.11ac VHT80 mode Cross Band edge / 5470 ~ 5725MHz(chain 0)
5690MHz**



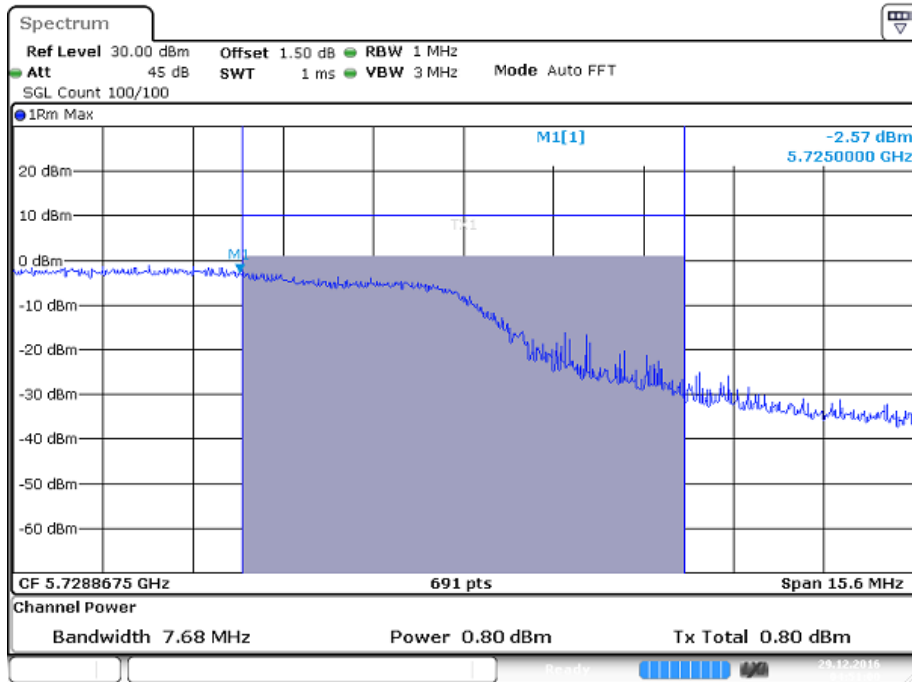
Date: 29 DEC 2016 02:51:30

**IEEE 802.11ac VHT80 mode Cross Band edge / 5470 ~ 5725MHz (chain 1)
5690MHz**

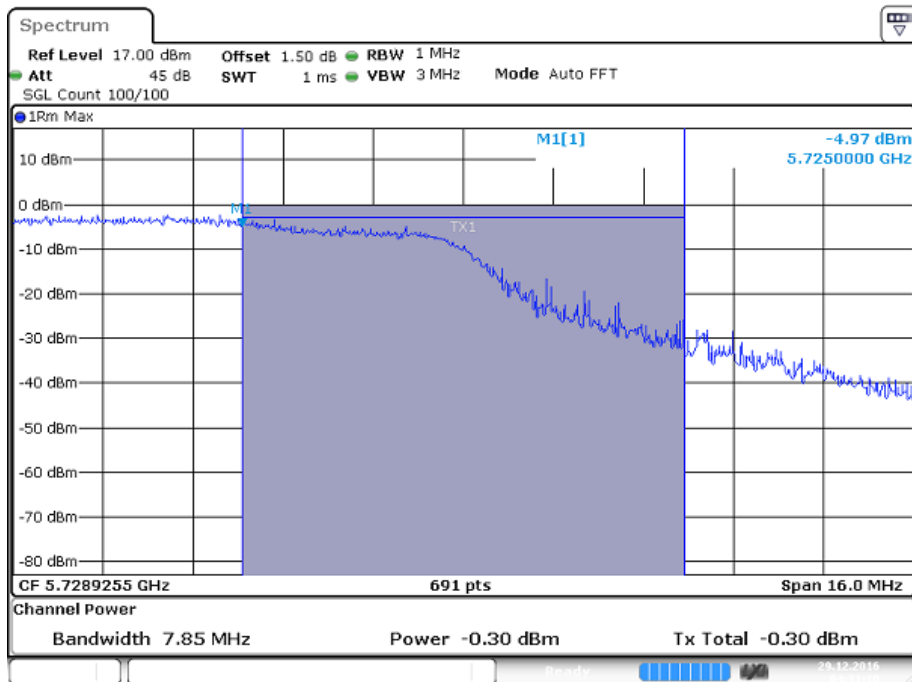


Date: 29 DEC 2016 04:06:07

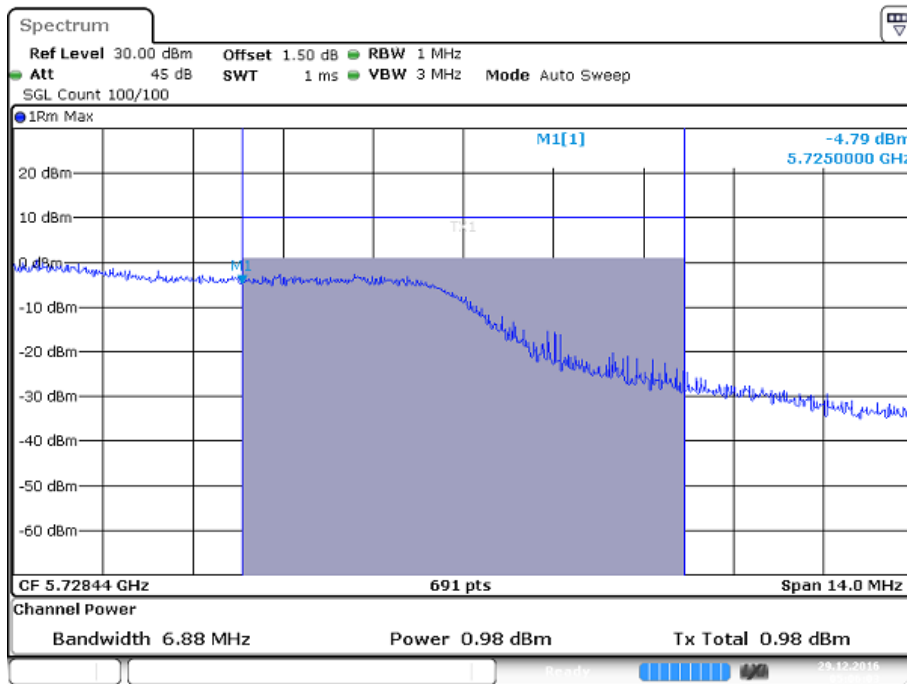
**IEEE 802.11ac VHT20 mode Cross Band edge / 5725 ~ 5850MHz(chain 0)
5720MHz**



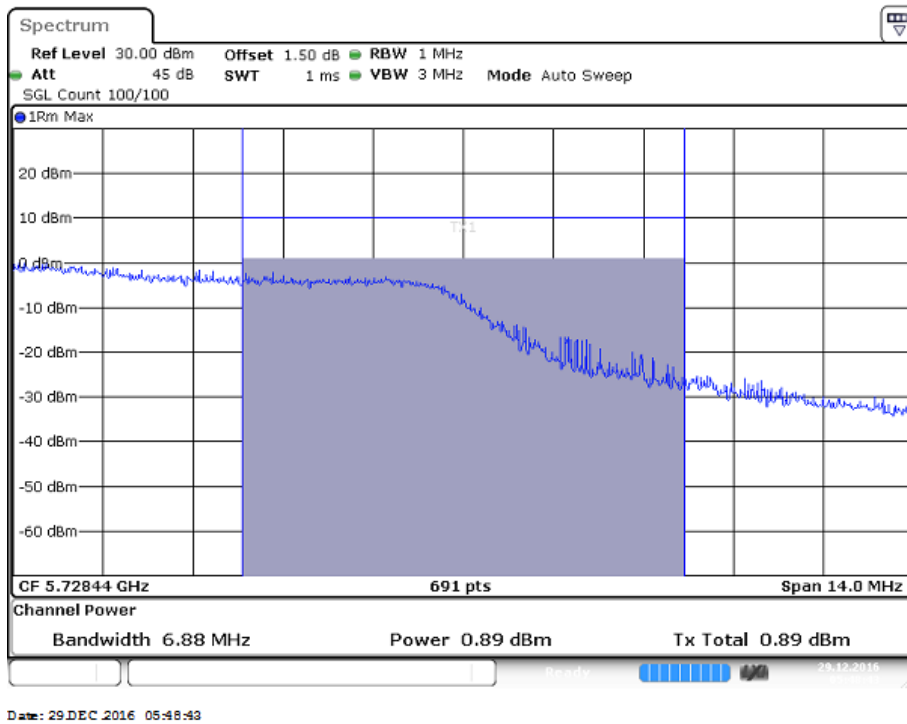
**IEEE 802.11ac VHT20 mode Cross Band edge /5725 ~ 5850MHz (chain 1)
5720MHz**



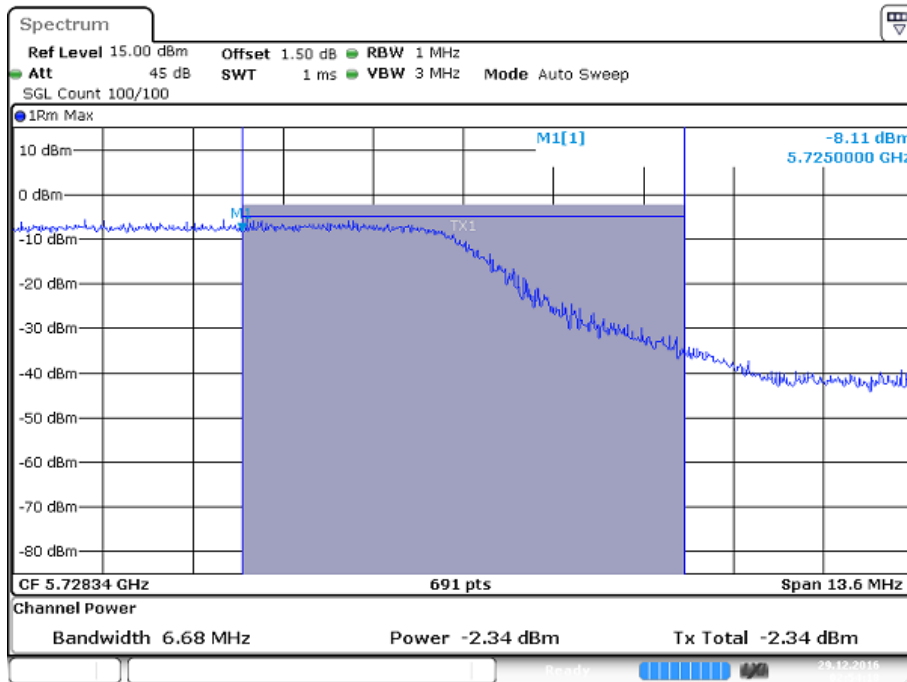
**IEEE 802.11ac VHT40 mode Cross Band edge / 5725 ~ 5850MHz(chain 0)
5710MHz**



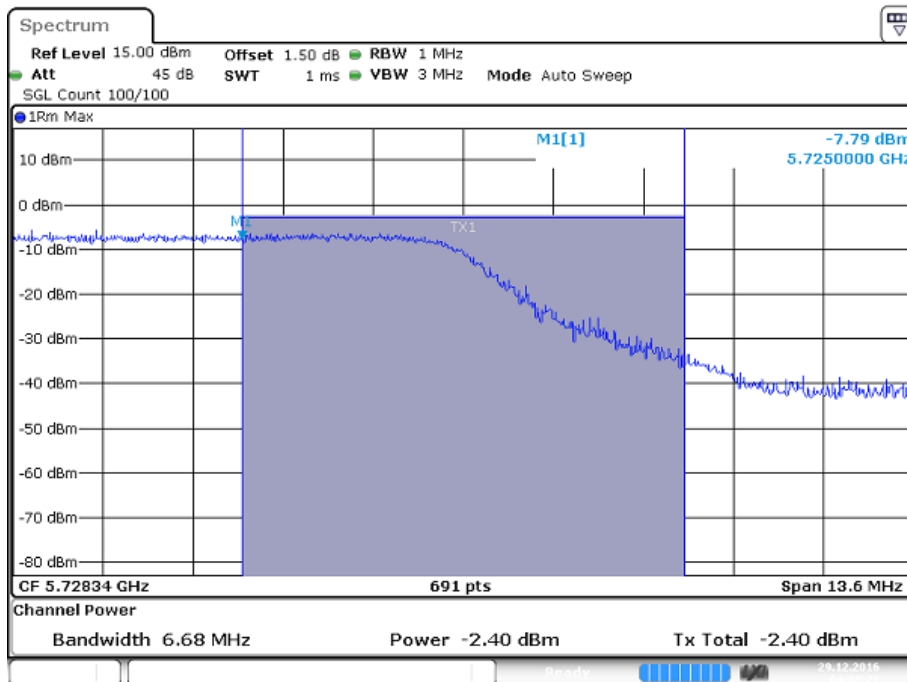
**IEEE 802.11ac VHT40 mode Cross Band edge / 5725 ~ 5850MHz (chain 1)
5710MHz**



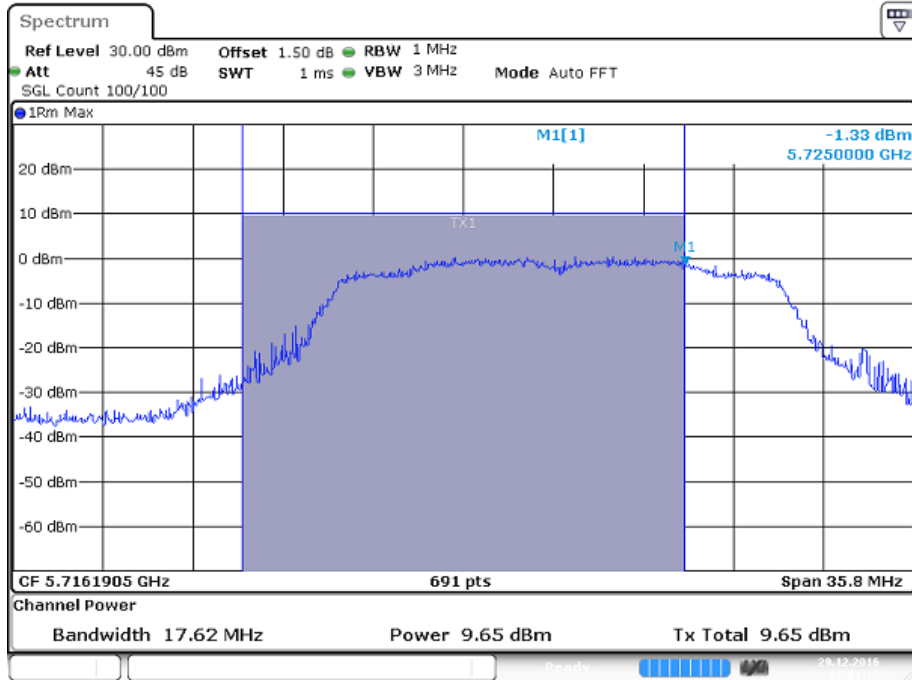
**IEEE 802.11ac VHT80 mode Cross Band edge / 5725 ~ 5850MHz(chain 0)
5690MHz**



**IEEE 802.11ac VHT80 mode Cross Band edge / 5725 ~ 5850MHz (chain 1)
5690MHz**

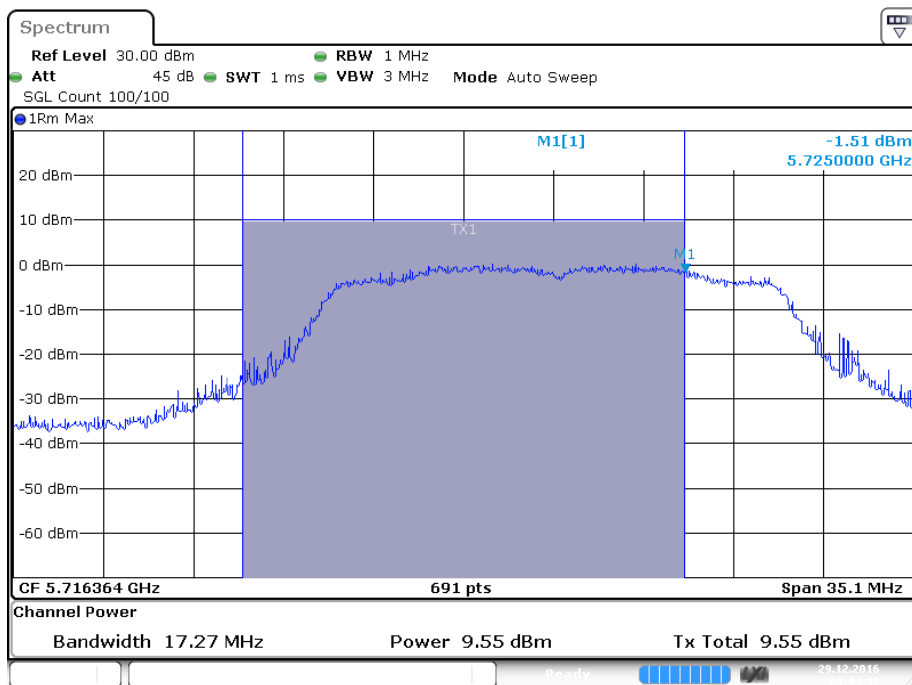


MIMO
IEEE 802.11ac VHT20 mode Cross Band edge / 5470 ~ 5725MHz(chain 0)
5720MHz



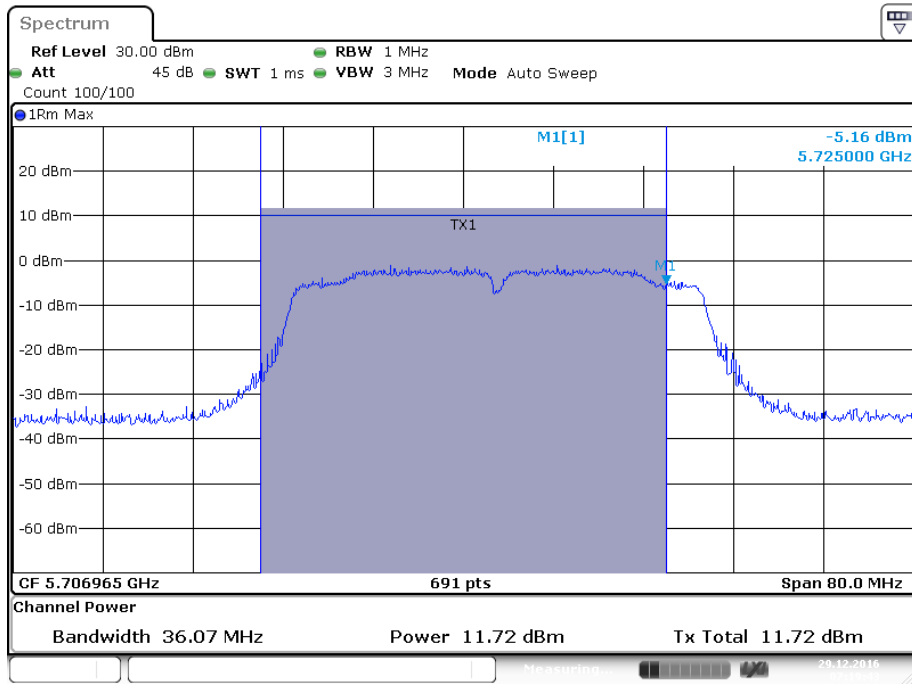
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IEEE 802.11ac VHT20 mode Cross Band edge / 5470 ~ 5725MHz(chain 1)

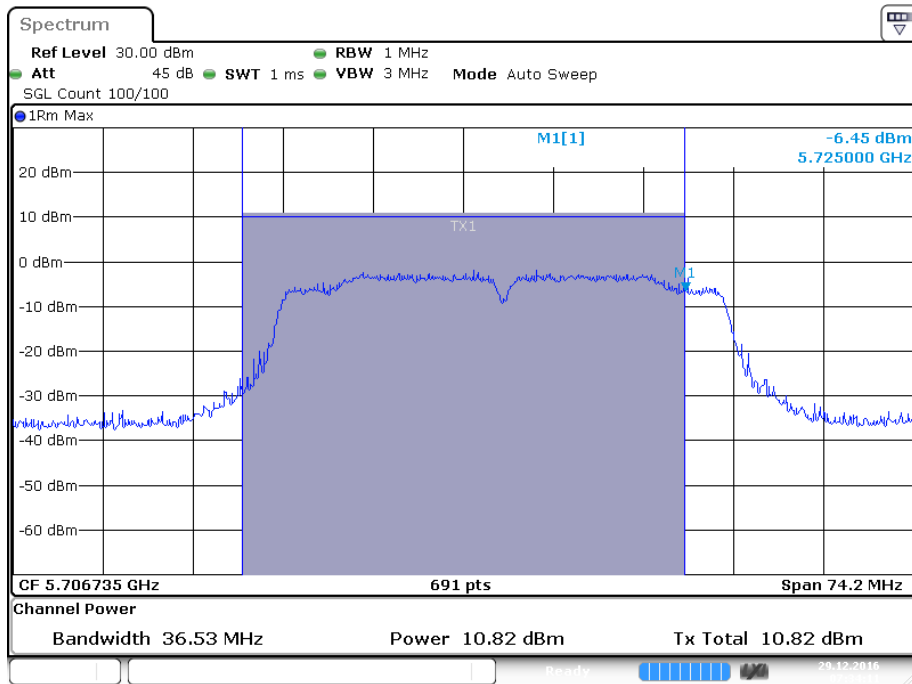


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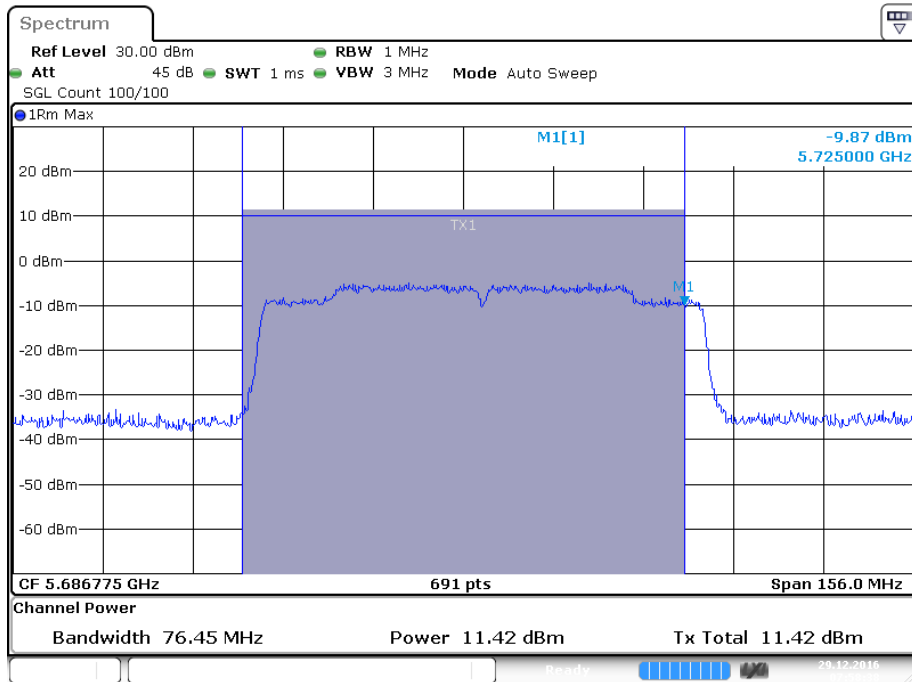
**IEEE 802.11ac VHT40 mode Cross Band edge / 5470 ~ 5725MHz(chain 0)
5710MHz**



**IEEE 802.11ac VHT40 mode Cross Band edge / 5470 ~ 5725MHz(chain 1)
5710MHz**

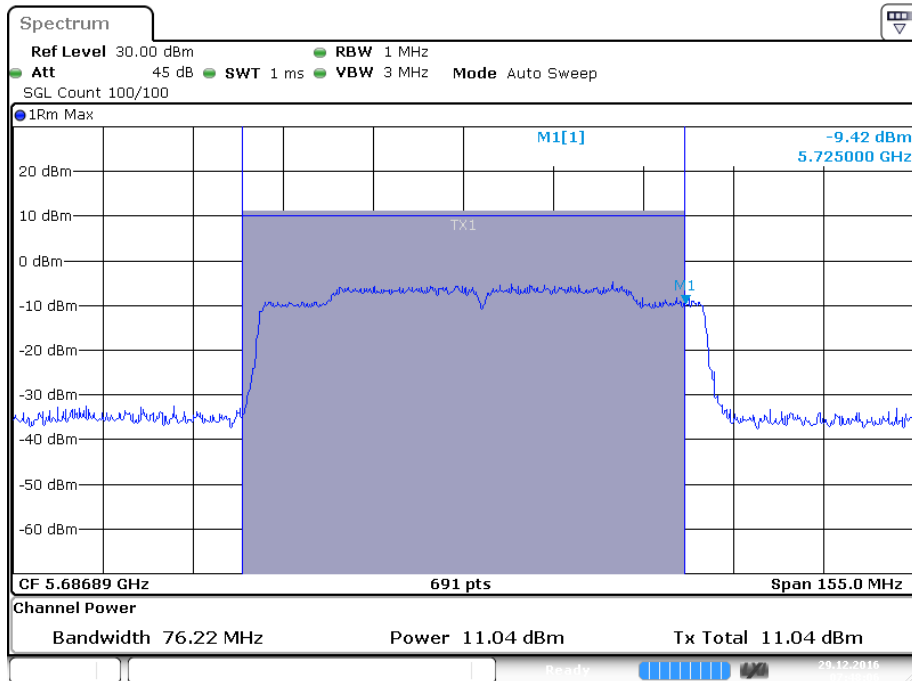


**IEEE 802.11ac VHT80 mode Cross Band edge / 5470 ~ 5725MHz(chain 0)
5690MHz**



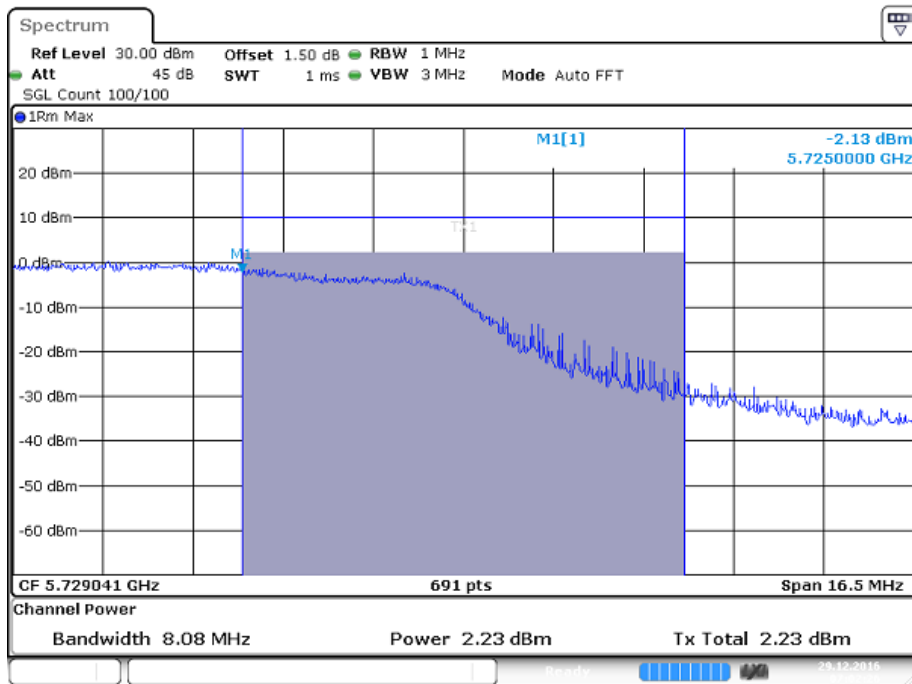
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**IEEE 802.11ac VHT80 mode Cross Band edge / 5470 ~ 5725MHz(chain 1)
5690MHz**



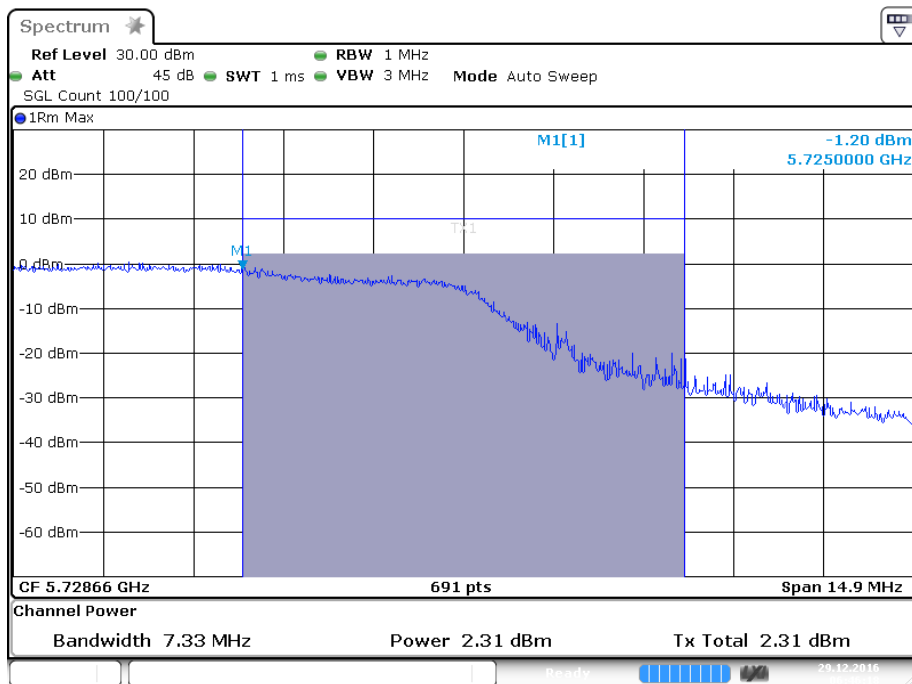
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**IEEE 802.11ac VHT20 mode Cross Band edge / 5725 ~ 5850MHz(chain 0)
5720MHz**



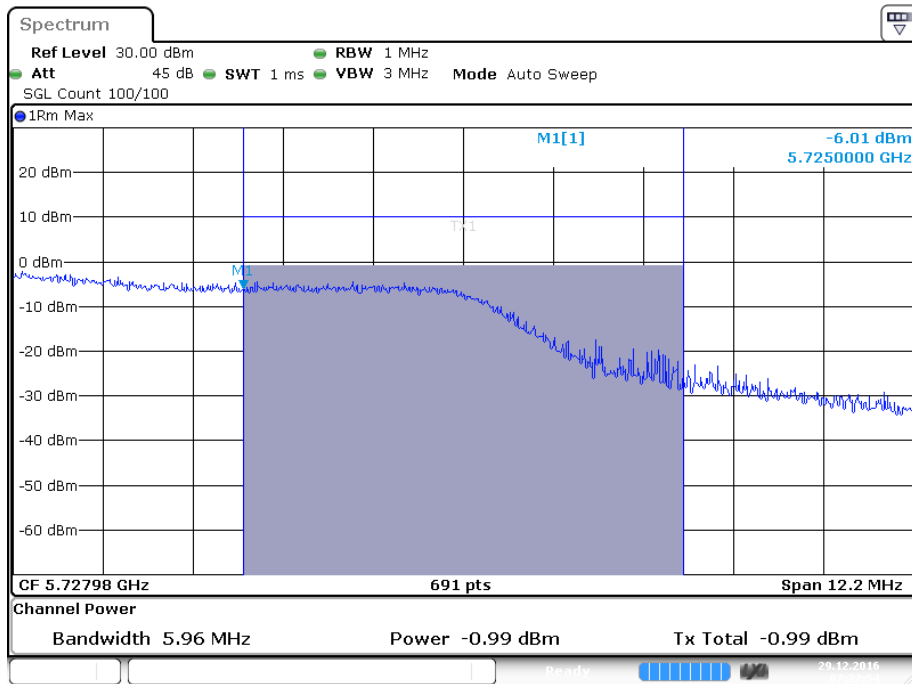
Date: 29 DEC 2016 07:02:26

**IEEE 802.11ac VHT20 mode Cross Band edge / 5725 ~ 5850MHz(chain 1)
5720MHz**



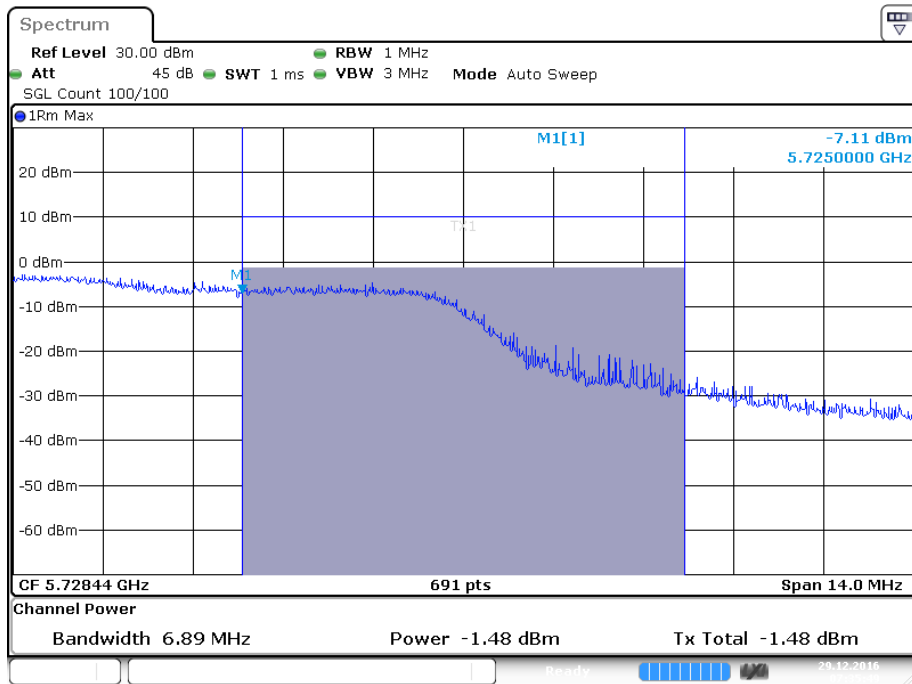
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**IEEE 802.11ac VHT40 mode Cross Band edge / 5725 ~ 5850MHz(chain 0)
5710MHz**



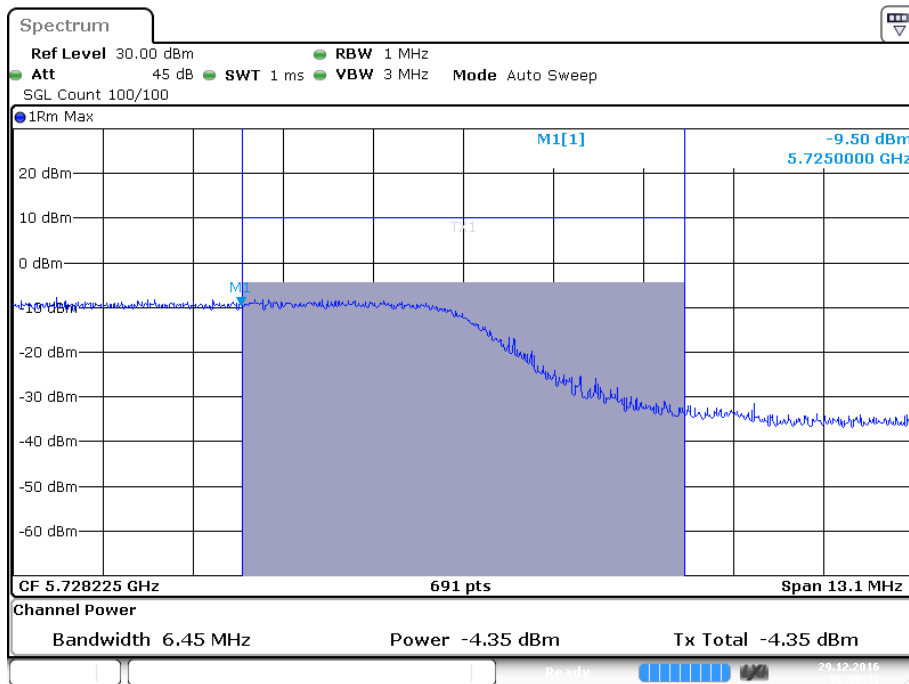
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**IEEE 802.11ac VHT40 mode Cross Band edge / 5725 ~ 5850MHz(chain 1)
5710MHz**

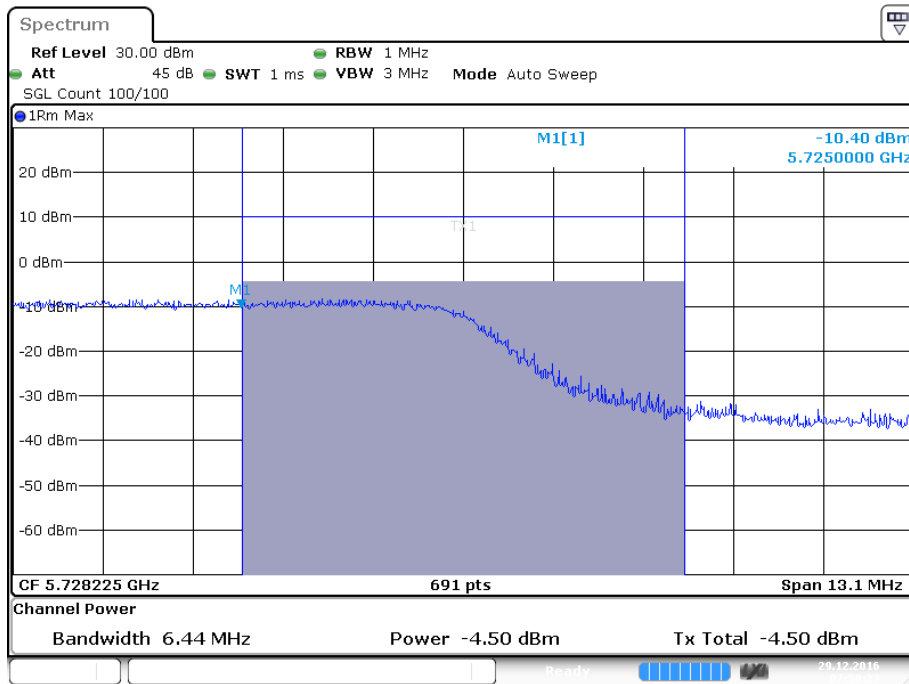


Date: 29 DEC 2016 07:35:50

**IEEE 802.11ac VHT80 mode Cross Band edge / 5725 ~ 5850MHz(chain 0)
5690MHz**



**IEEE 802.11ac VHT80 mode Cross Band edge / 5725 ~ 5850MHz(chain 1)
5690MHz**



10 FCC §15.247(e) – Power Spectral Density

10.1 Applicable Standard

(a) Power limits:

(1) For the band 5.15-5.25 GHz.

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. 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.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. 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.

(iv) For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. 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.

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. 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.

(3) For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. 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.

10.2 Test Procedure

According to KDB 789033 D02 General UNII Test Procedures New Rules v01r03

10.3 Test Equipment List and Details

| Descriptions | Manufacturer | Models | Serial Numbers | Calibration Date | Calibration Due Date |
|-------------------|-----------------|--------|----------------|------------------|----------------------|
| Cable | WOKEN | SFL402 | 00100A1F6A192S | N.C.R | N.C.R |
| Spectrum Analyzer | Rohde & Schwarz | FSV40 | 101203 | 2016/7/14 | 2017/7/13 |

***Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Taiwan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

10.4 Test Environmental Conditions

| | |
|---------------------------|----------|
| Temperature: | 25°C |
| Relative Humidity: | 54 % |
| ATM Pressure: | 1020 hPa |

The testing was performed by David Hsu on 2016-12-30.

10.5 Test Results

Test Mode: Transmitting

Note: per output power test, the SISO mode was the worst,so only SISO mode was test for this item,and used to evaluate MIMO mode compliance.

| UNII Band | Mode | Channel | Frequency (MHz) | Power Spectral Density (dBm/MHz) | | Total Power spectral Density without factor | Duty Factor | Total Power spectral Density with factor | Limit (dBm/MHz) |
|--------------|--------------|----------|-----------------|----------------------------------|---------|---|-------------|--|-----------------|
| | | | | Chain 0 | Chain 1 | | | | |
| 5150-5250MHz | 802.11 a | Low | 5180 | 2.73 | 2.86 | 5.8 | 0 | 5.8 | 9.49 |
| | | Middle | 5200 | 3.25 | 3.59 | 6.43 | 0 | 6.43 | 9.49 |
| | | High | 5240 | 3.88 | 3.33 | 6.62 | 0 | 6.62 | 9.49 |
| | 802.11 n20 | Low | 5180 | 1.54 | 2.28 | 4.93 | 0 | 4.93 | 9.49 |
| | | Middle | 5200 | 3.36 | 2.75 | 6.07 | 0 | 6.07 | 9.49 |
| | | High | 5240 | 3.22 | 2.59 | 5.92 | 0 | 5.92 | 9.49 |
| | 802.11 n40 | Low | 5190 | -2.31 | -2.22 | 0.75 | 0.13 | 0.88 | 9.49 |
| | | High | 5230 | -2.24 | -0.44 | 1.72 | 0.13 | 1.85 | 9.49 |
| | 802.11 ac80 | Middle | 5210 | -3.72 | -4.54 | -1.11 | 0.41 | -0.7 | 9.49 |
| | 5250-5350MHz | 802.11 a | Low | 5260 | 3.96 | 3.48 | 6.73 | 0 | 6.73 |
| Middle | | | 5280 | 3.94 | 3.66 | 6.81 | 0 | 6.81 | 9.49 |
| High | | | 5320 | 2.43 | 2.85 | 5.65 | 0 | 5.65 | 9.49 |
| 802.11 n20 | | Low | 5260 | 4.36 | 3.23 | 6.82 | 0 | 6.82 | 9.49 |
| | | Middle | 5280 | 3 | 2.91 | 5.97 | 0 | 5.97 | 9.49 |
| | | High | 5320 | 2.87 | 5.32 | 7.19 | 0 | 7.19 | 9.49 |
| 802.11 n40 | | Low | 5270 | 1.22 | 0.53 | 3.89 | 0.13 | 4.02 | 9.49 |
| | | High | 5310 | -0.85 | 0.98 | 3.12 | 0.13 | 3.25 | 9.49 |
| 802.11 ac80 | | Middle | 5290 | -4.25 | -4.68 | -1.46 | 0.41 | -1.05 | 9.49 |
| 5470-5725MHz | | 802.11 a | Low | 5500 | 2.72 | 2.61 | 5.68 | 0 | 5.68 |
| | Middle | | 5580 | 4.24 | 3.29 | 6.79 | 0 | 6.79 | 9.49 |
| | High | | 5700 | 1.35 | 0.4 | 3.9 | 0 | 3.9 | 9.49 |
| | 802.11 n20 | Low | 5500 | 1.38 | 0.66 | 4.04 | 0 | 4.04 | 9.49 |
| | | Middle | 5580 | 1.93 | 1.85 | 4.9 | 0 | 4.9 | 9.49 |

| | | High | 5700 | -0.58 | 0.1 | 2.78 | 0 | 2.78 | 9.49 |
|-----------------|-------------|---------|-----------------|----------------------|---------|-------------------------------------|-------------|---|--------------------|
| | 802.11 n40 | Low | 5510 | -0.2 | -0.09 | 2.87 | 0.13 | 3.00 | 9.49 |
| | | Middle | 5590 | -0.25 | -0.85 | 2.47 | 0.13 | 2.60 | 9.49 |
| | | High | 5670 | 1.08 | 1.09 | 4.1 | 0.13 | 4.23 | 9.49 |
| | 802.11 ac80 | Low | 5530 | -2.39 | -3.04 | -0.13 | 0.41 | 0.28 | 9.49 |
| | | High | 5610 | -2.41 | -3.94 | -0.13 | 0.41 | 0.28 | 9.49 |
| Cross Band edge | 802.11ac20 | High | 5720 | 3.95 | 4.39 | 7.18 | 0.00 | 7.18 | 9.49 |
| | 802.11ac40 | High | 5710 | 2.78 | 1.04 | 4.96 | 0.13 | 5.09 | 9.49 |
| | 802.11ac80 | High | 5690 | -5.31 | -1.08 | 0.07 | 0.41 | 0.48 | 9.49 |
| UNIIBand | Mode | Channel | Frequency (MHz) | Reading (dBm/500kHz) | | Power Spectral Density (dBm/500kHz) | Duty Factor | Total Power spectral Density with factor (dBm/500kHz) | Limit (dBm/500kHz) |
| | | | | Chain 0 | Chain 1 | | | | |
| 5725-5850 MHz | 802.11 a | Low | 5745 | 4.84 | 2.88 | 6.93 | 0 | 6.93 | 28.49 |
| | | Middle | 5785 | 4.57 | 2.4 | 6.56 | 0 | 6.56 | 28.49 |
| | | High | 5825 | 4.09 | 1.87 | 6.06 | 0 | 6.06 | 28.49 |
| | 802.11 n20 | Low | 5745 | 3.69 | 2.05 | 5.92 | 0 | 5.92 | 28.49 |
| | | Middle | 5785 | 3.44 | 2.03 | 5.77 | 0 | 5.77 | 28.49 |
| | | High | 5825 | 3.63 | 3.03 | 6.35 | 0 | 6.35 | 28.49 |
| | 802.11 n40 | Low | 5755 | 2.32 | 3.19 | 5.78 | 0.13 | 5.91 | 28.49 |
| | | High | 5795 | 2.65 | 2.52 | 5.6 | 0.13 | 5.73 | 28.49 |
| | 802.11 ac80 | Middle | 5775 | 0.43 | -2.16 | 6.79 | 0.41 | 7.2 | 28.49 |
| Cross Band edge | 802.11ac20 | High | 5720 | 4.33 | 3.2 | 6.77 | 0 | 6.77 | 28.49 |
| | 802.11ac40 | High | 5710 | -0.81 | -3.56 | 0.93 | 0.13 | 1.06 | 28.49 |
| | 802.11ac80 | High | 5690 | -6.75 | -6.53 | -3.63 | 0.41 | -3.22 | 28.49 |

Note: the device is a client device. the 2 antenna maximum antenna gain are 4.5dBi, and employed Cyclic Delay Diversity (CDD) for 802.11 MIMO transmitting, per KDB 662911 D01 Multiple Transmitter Output v02r01, for power spectral density (PSD) measurements on the devices:

Array Gain = $10 \log(N_{ANT}/N_{SS})$ dB.

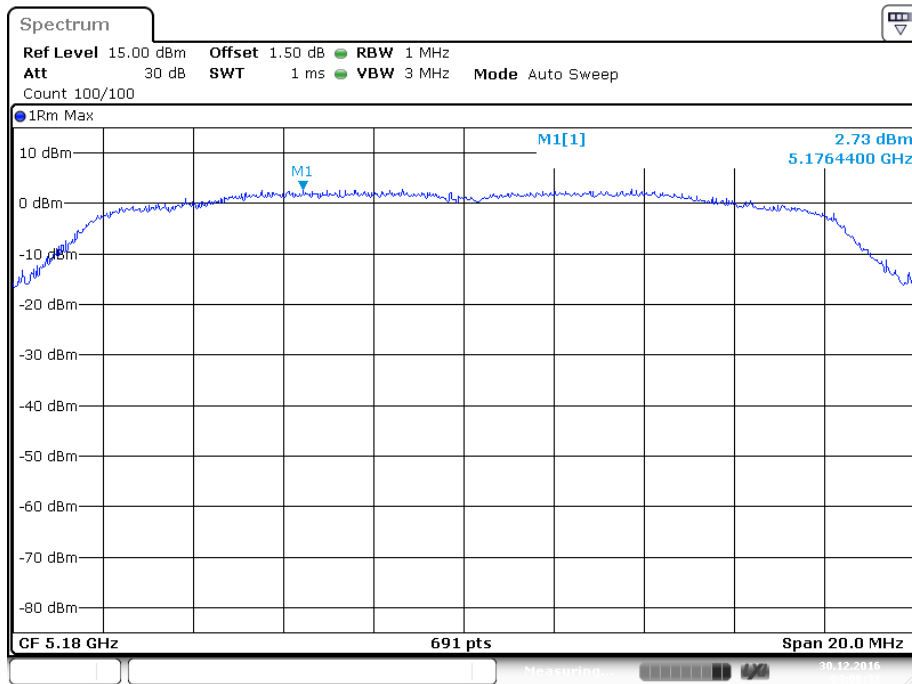
So:

Directional gain = $G_{ANT} + \text{Array Gain} = 4.5 + 10 \log(2) = 7.51$ dBi

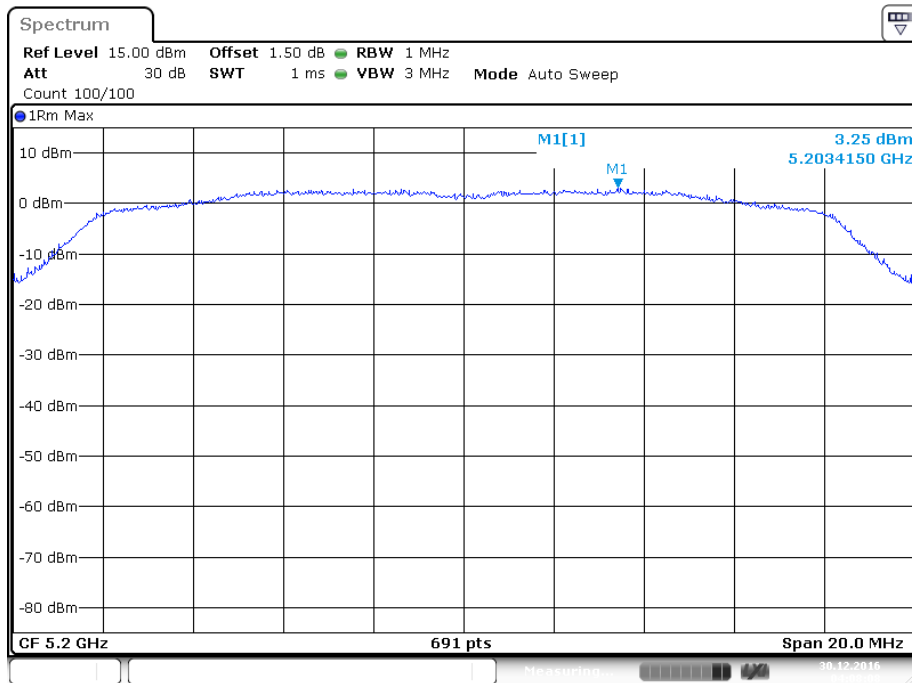
The Power density Limits was reduce 1.51dB

Please refer to the following plots

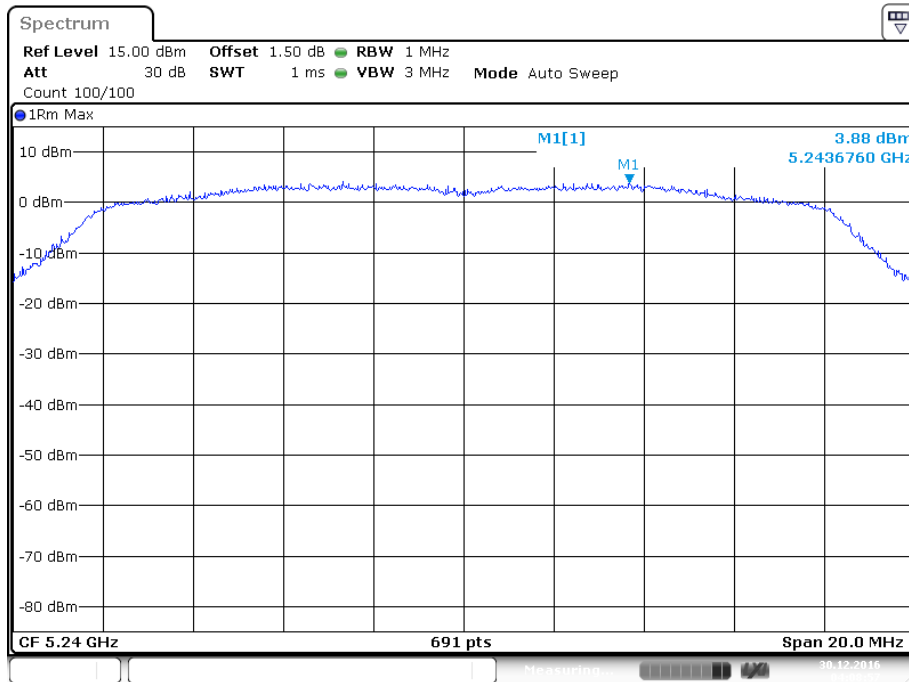
**IEEE 802.11a mode / 5150 ~ 5250MHz(chain0)
5180MHz**



5200MHz

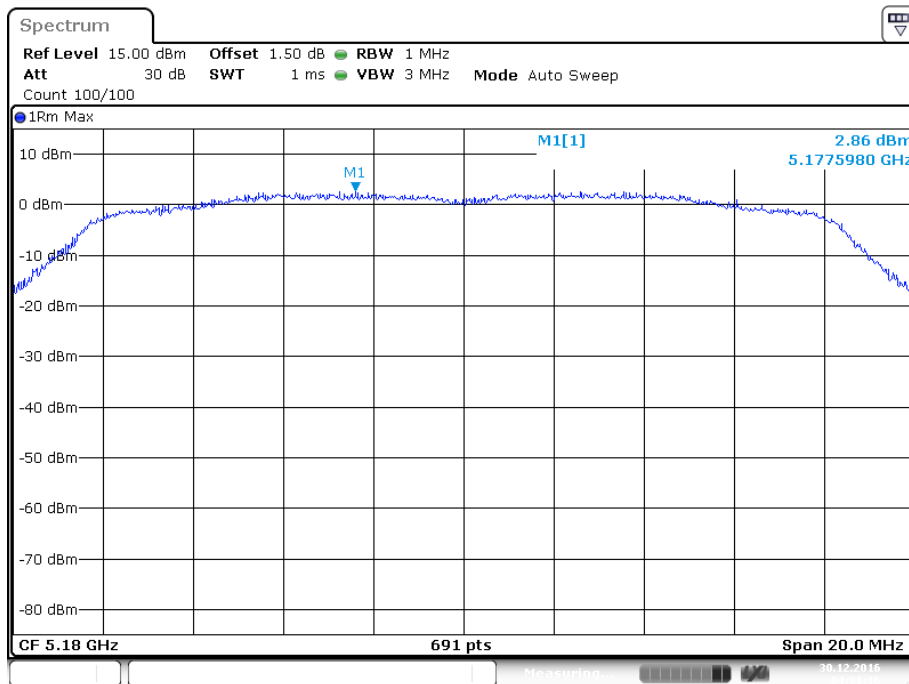


5240MHz



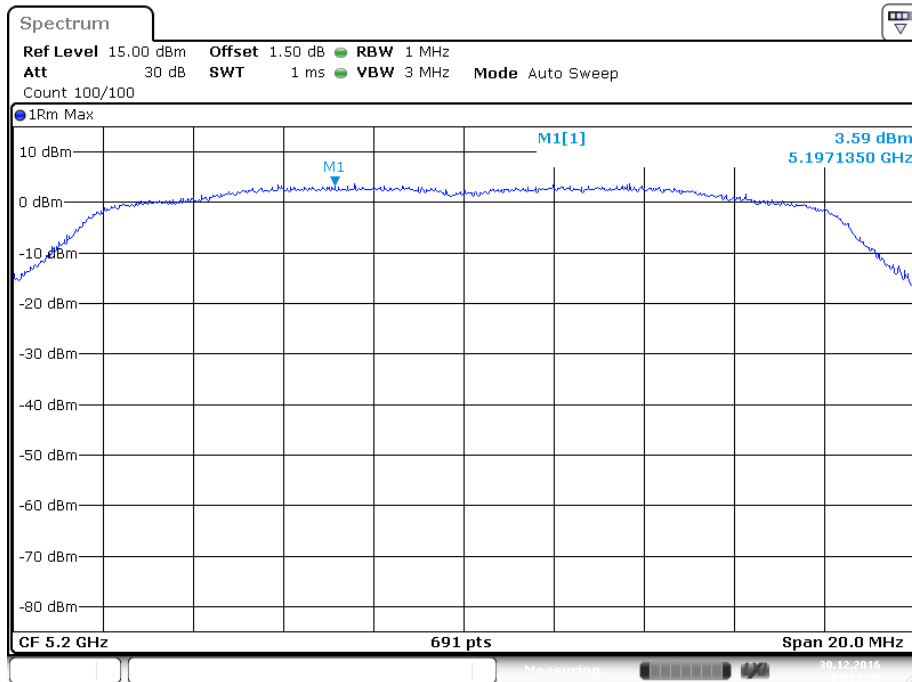
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IEEE 802.11a mode / 5150 ~ 5250MHz(chain 1)
5180MHz



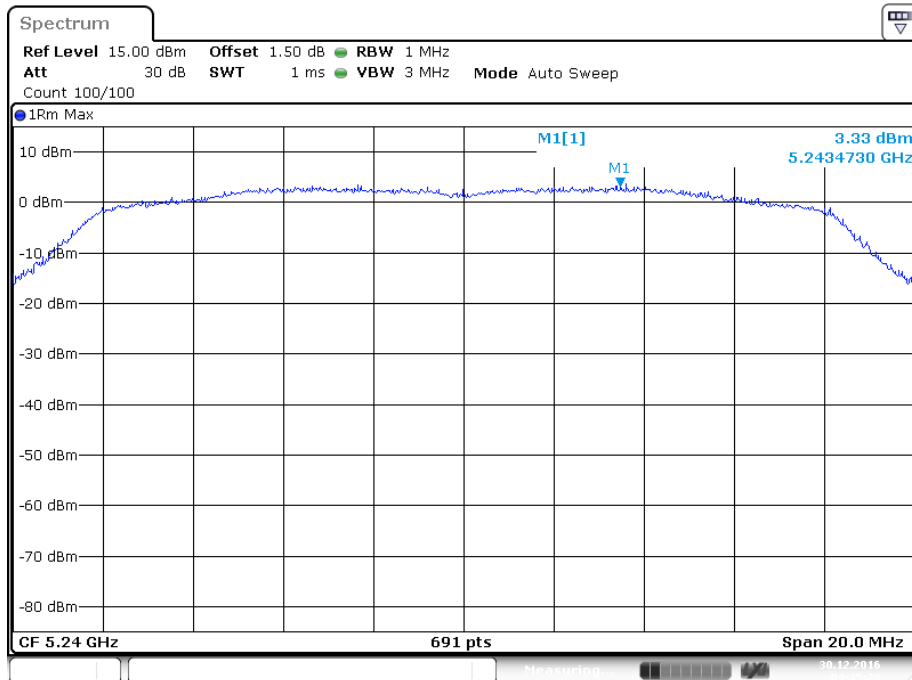
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5200MHz



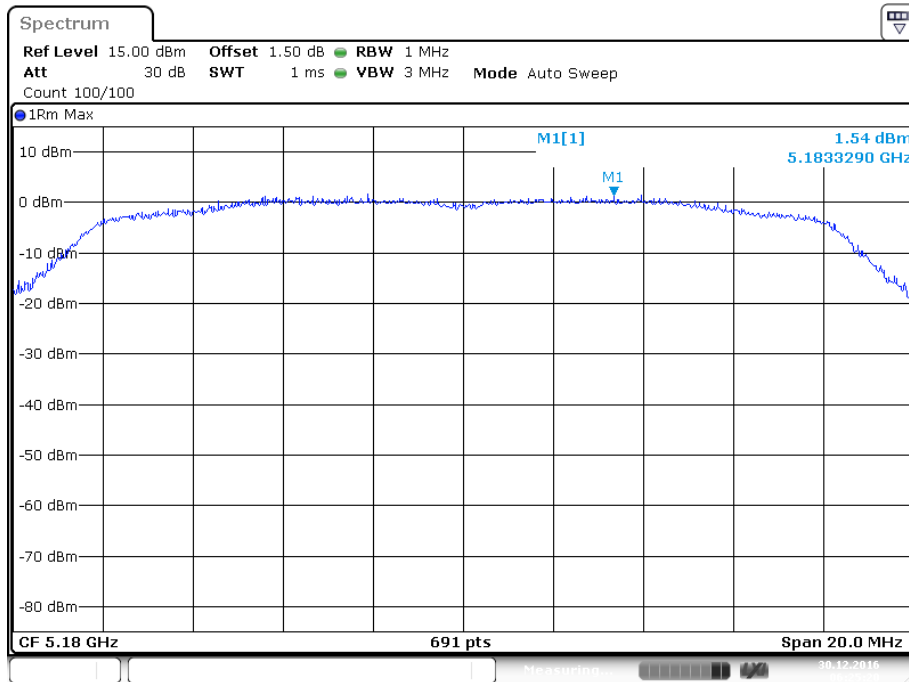
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5240MHz

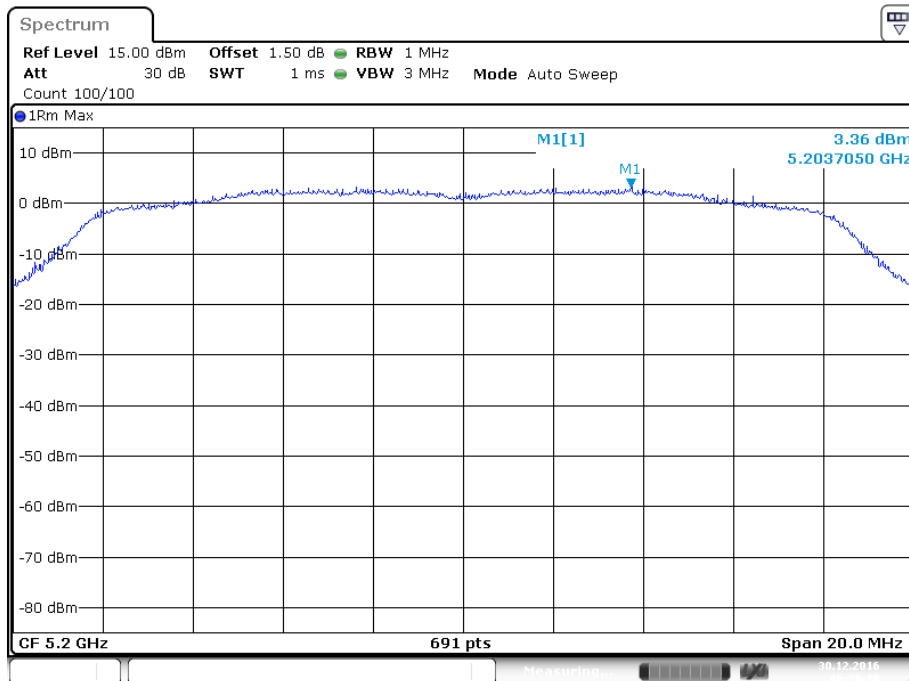


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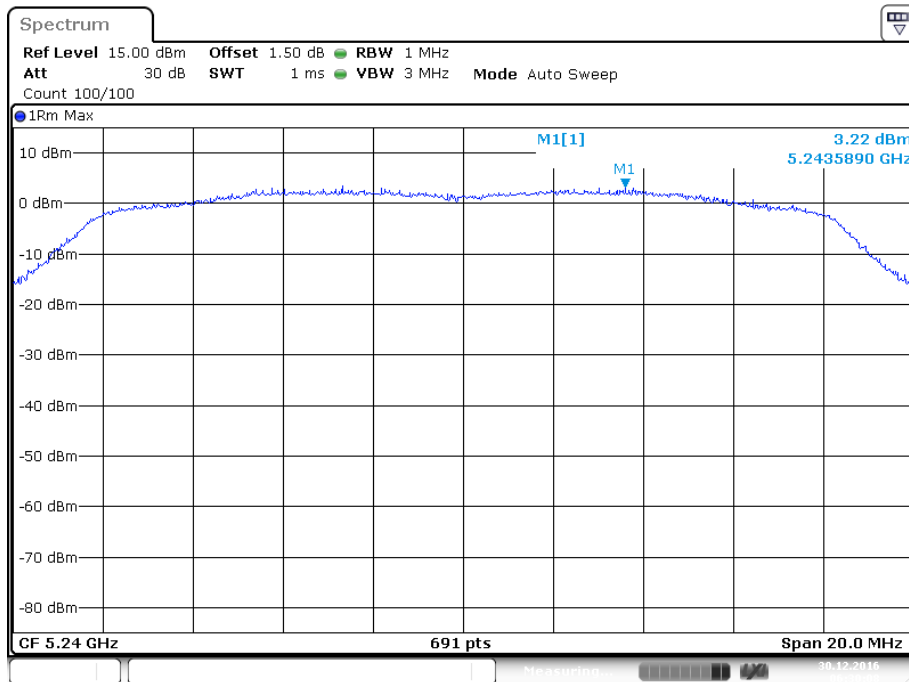
**IEEE 802.11n HT20 mode / 5150 ~ 5250MHz(chain0)
5180MHz**



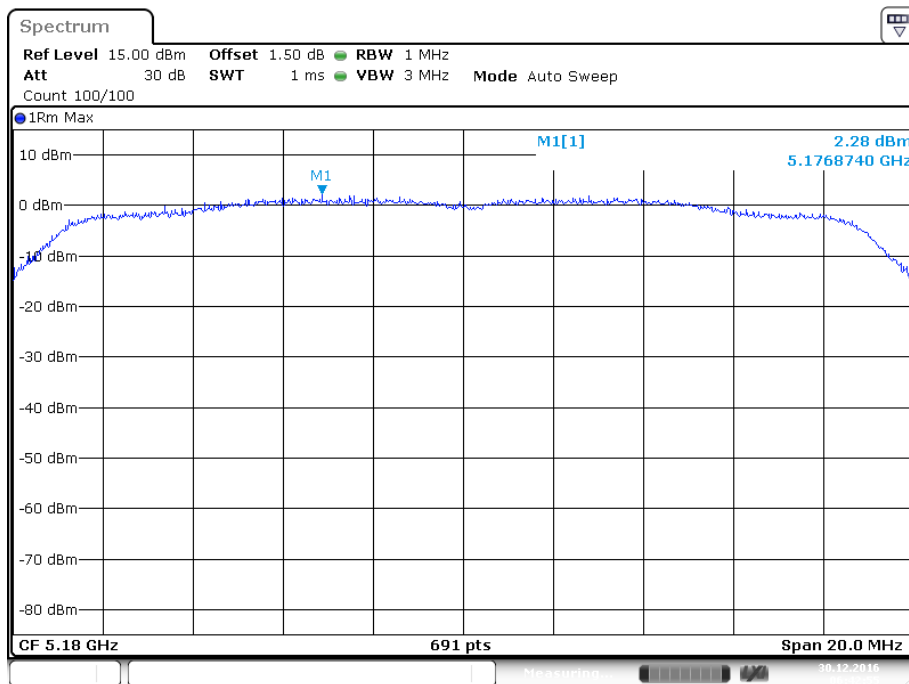
5200MHz



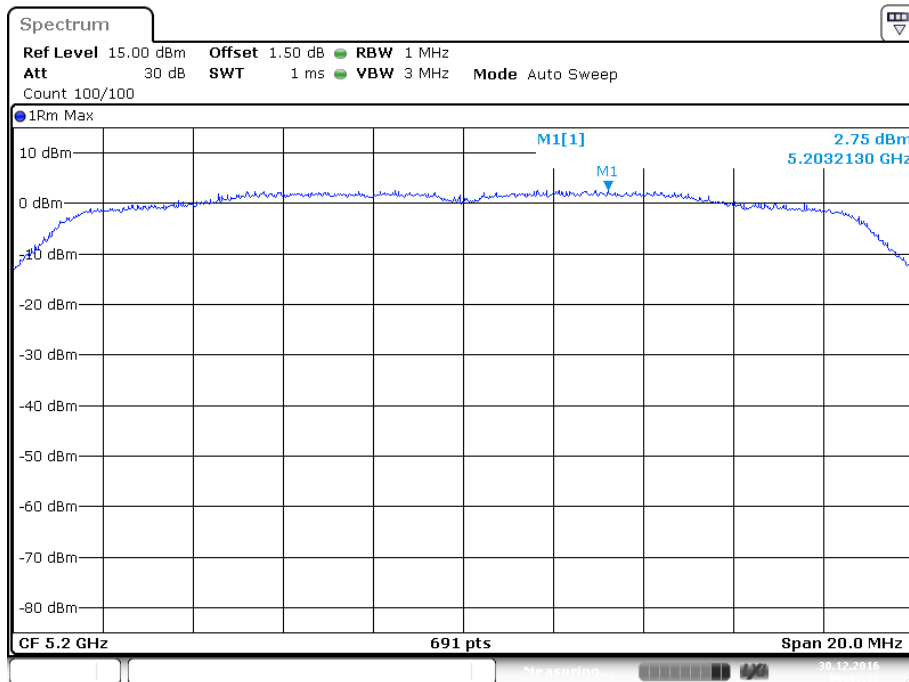
5240MHz



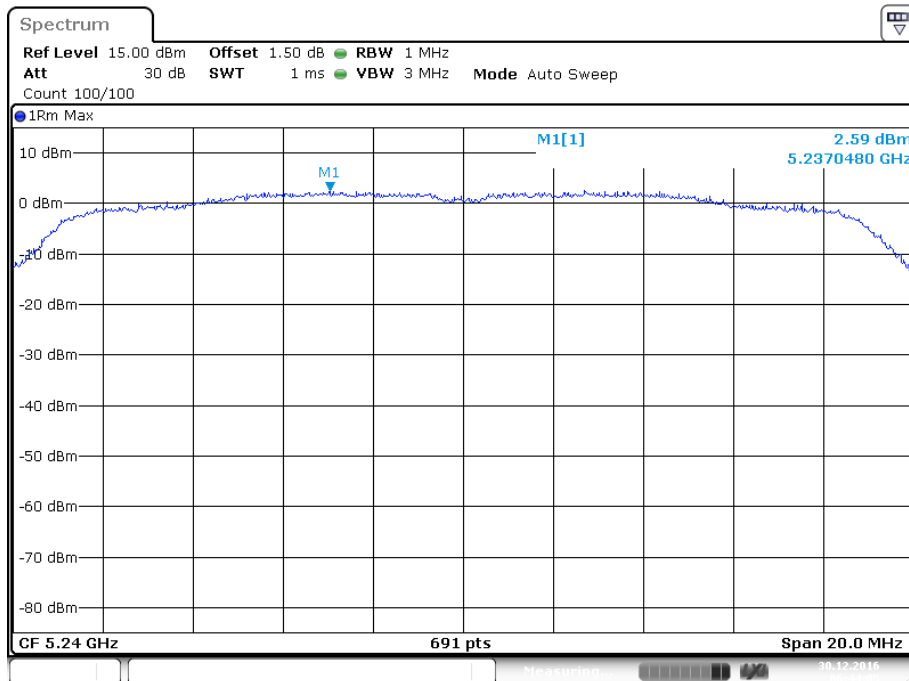
IEEE 802.11n HT20 mode / 5150 ~ 5250MHz(chain 1)
5180MHz



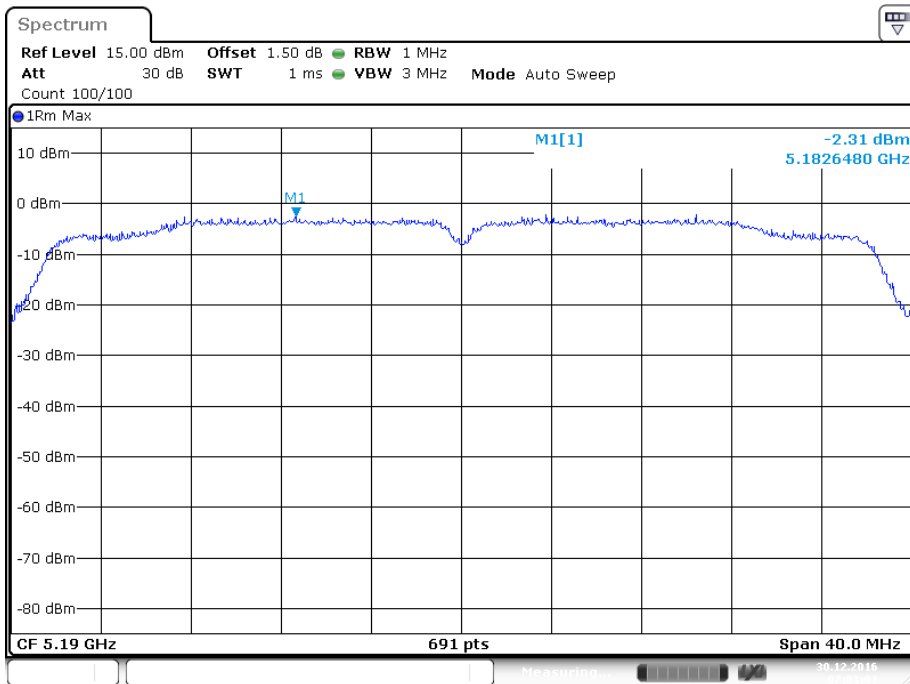
5200MHz



5240MHz

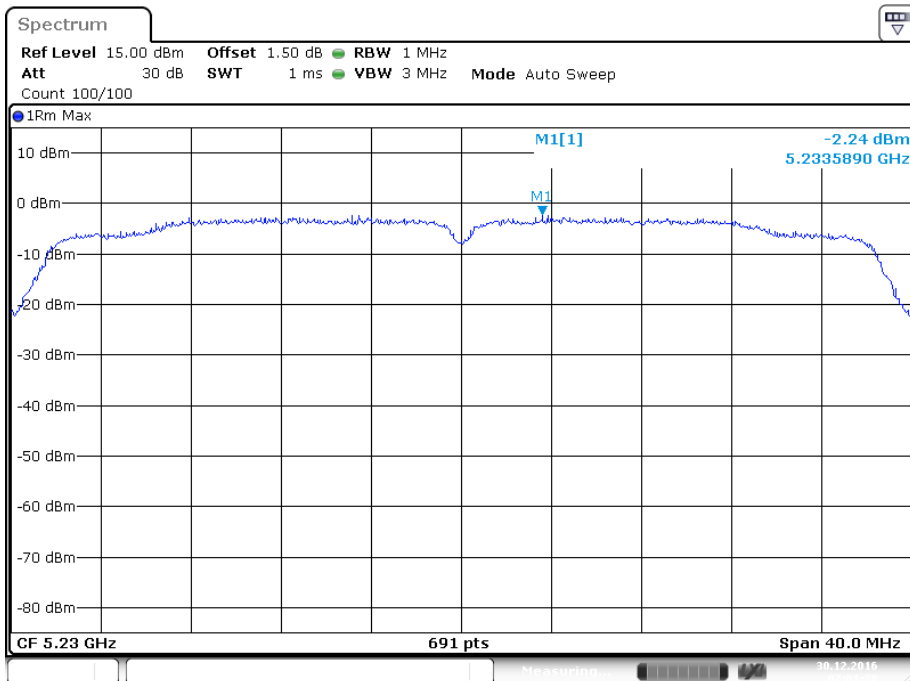


**IEEE 802.11n HT40 mode / 5150 ~ 5250MHz(chain0)
5190MHz**



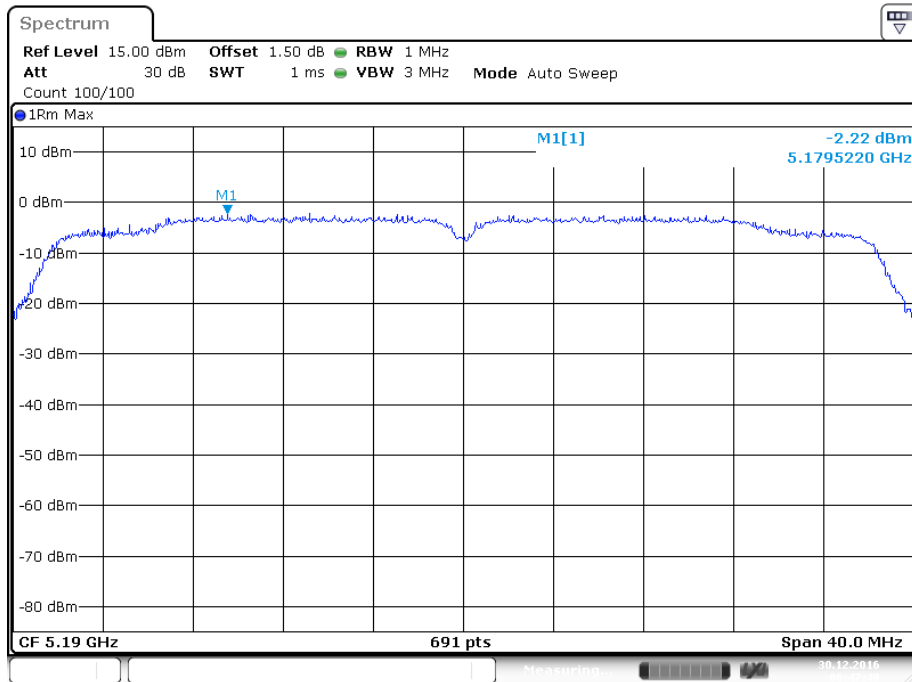
Date: 30 DEC 2016 07:01:01

5230MHz



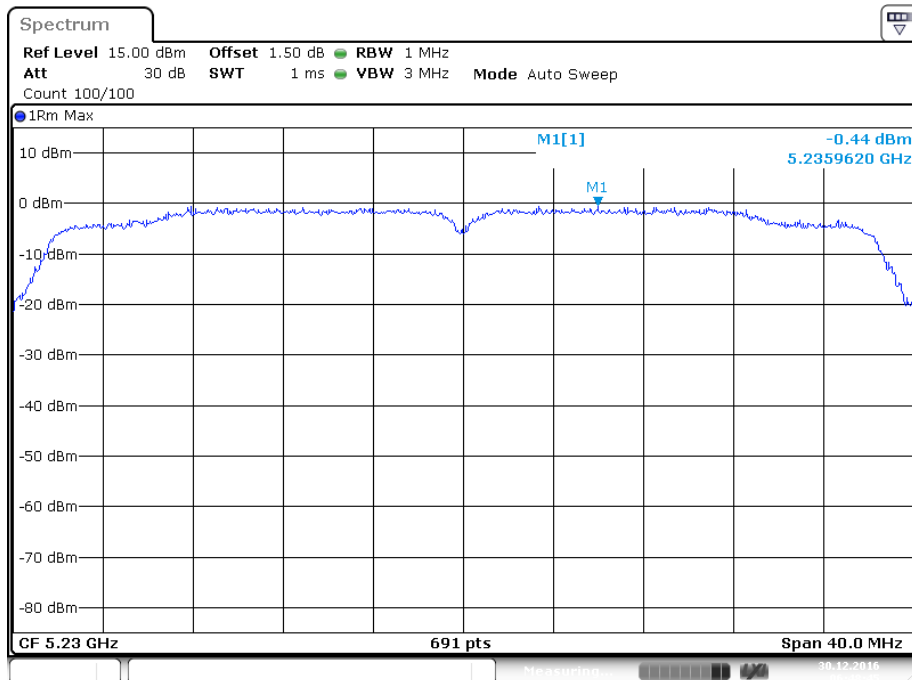
Date: 30 DEC 2016 07:01:39

**IEEE 802.11n HT40 mode / 5150 ~ 5250MHz(chain 1)
5190MHz**



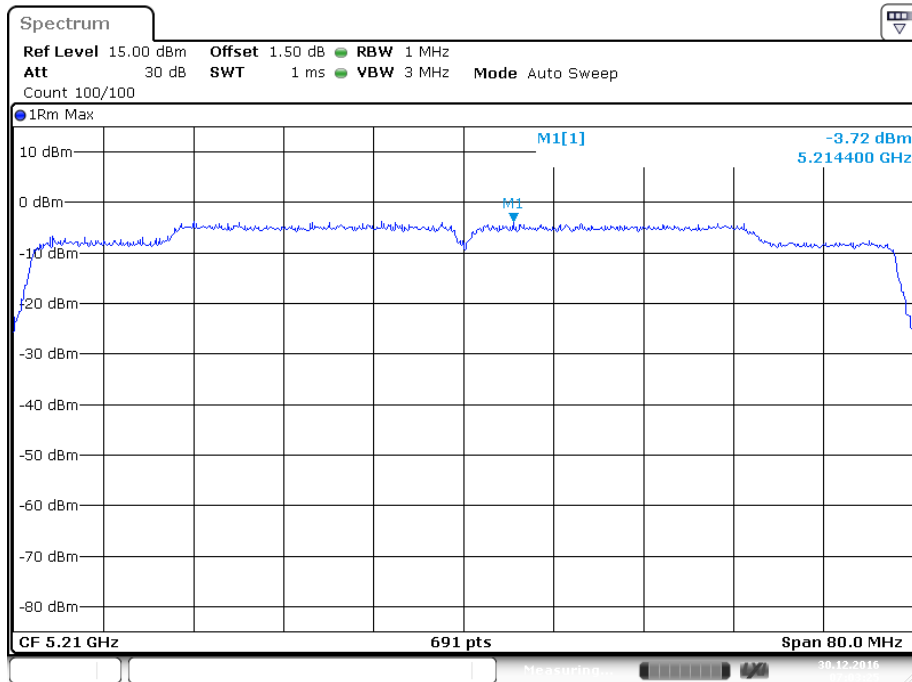
Date: 30 DEC.2016 06:47:49

5230MHz

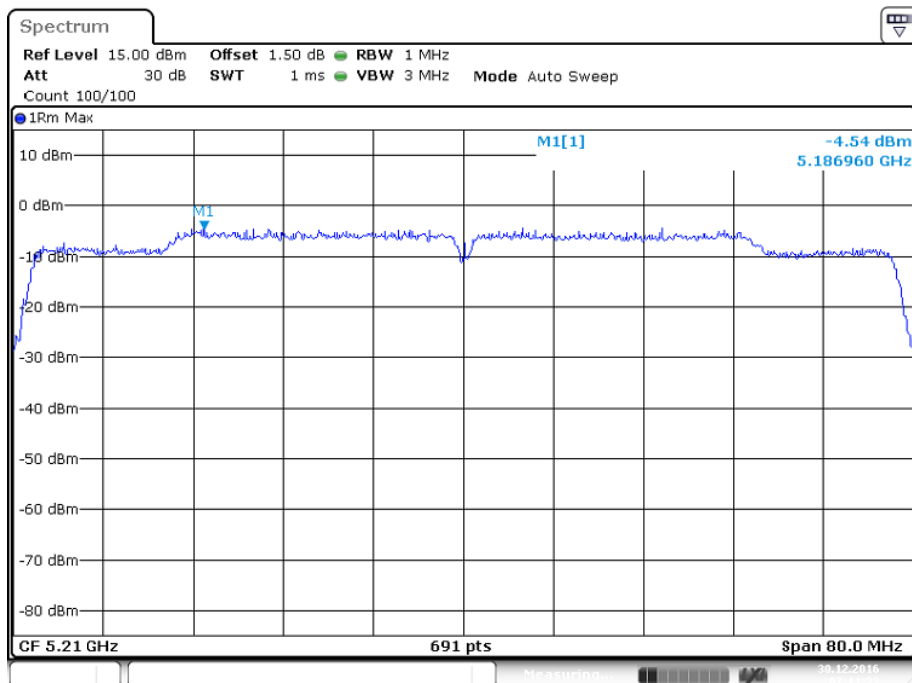


Date: 30 DEC.2016 06:48:46

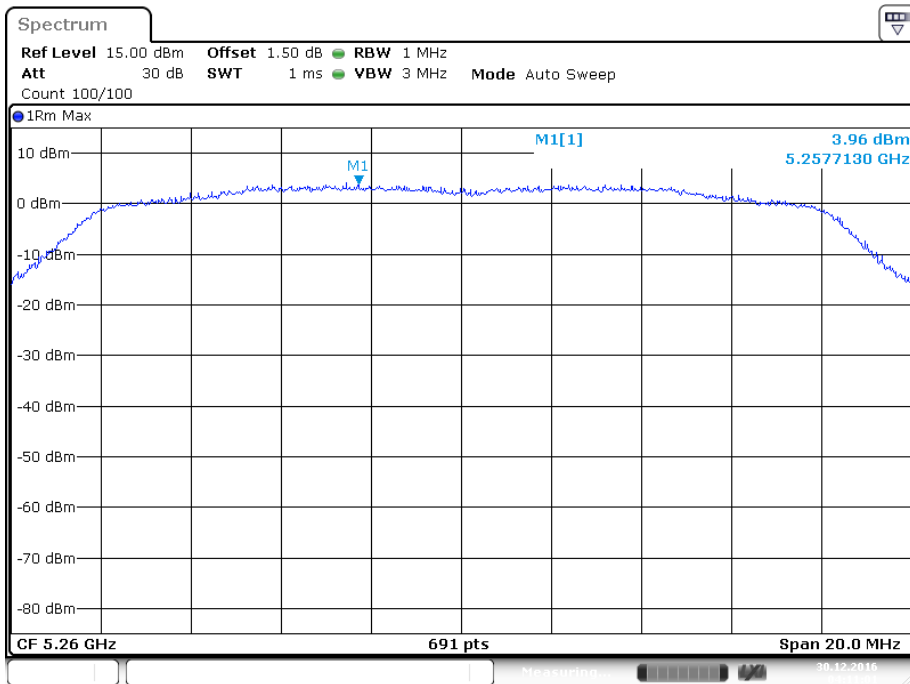
**IEEE 802.11ac VHT80 mode / 5150 ~ 5250MHz(chain0)
5210MHz**



**IEEE 802.11ac VHT80 mode / 5150 ~ 5250MHz(chain 1)
5210MHz**

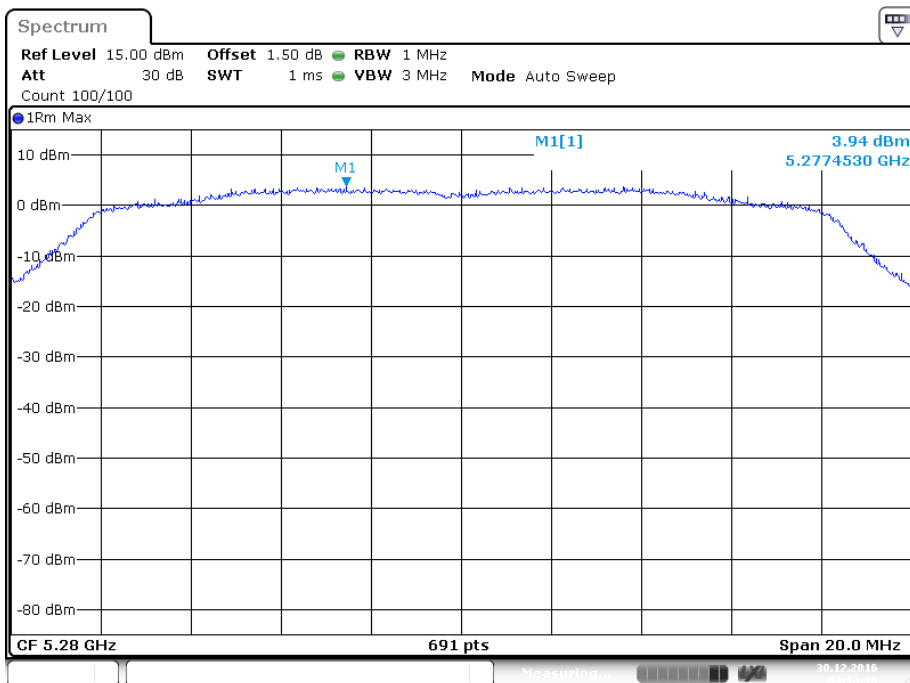


**IEEE 802.11a mode / 5250 ~ 5350MHz(chain 0)
5260MHz**



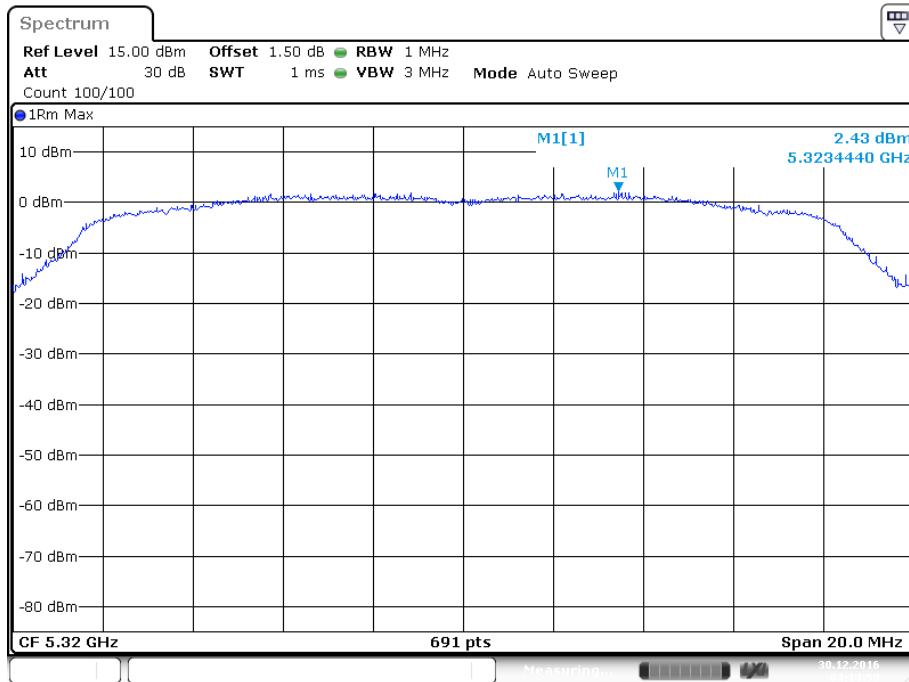
Date: 30 DEC 2016 04:11:01

5280MHz

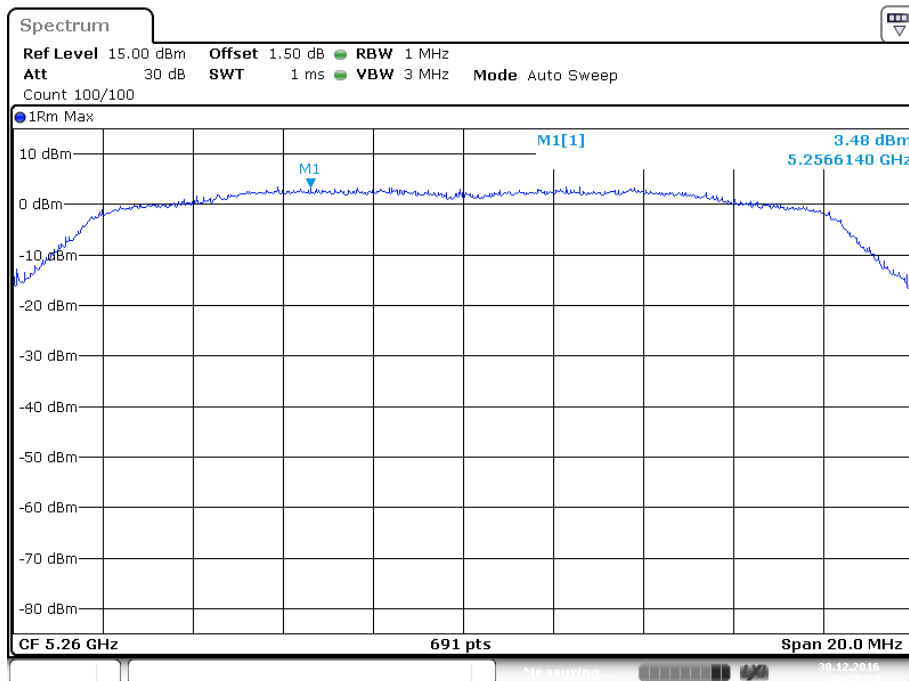


Date: 30 DEC 2016 04:13:18

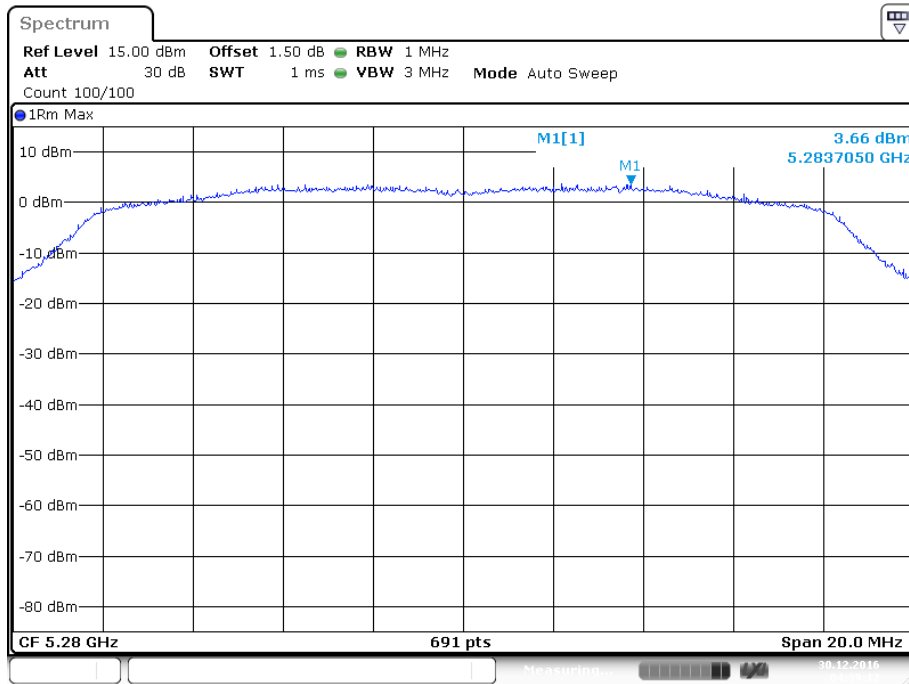
5320MHz



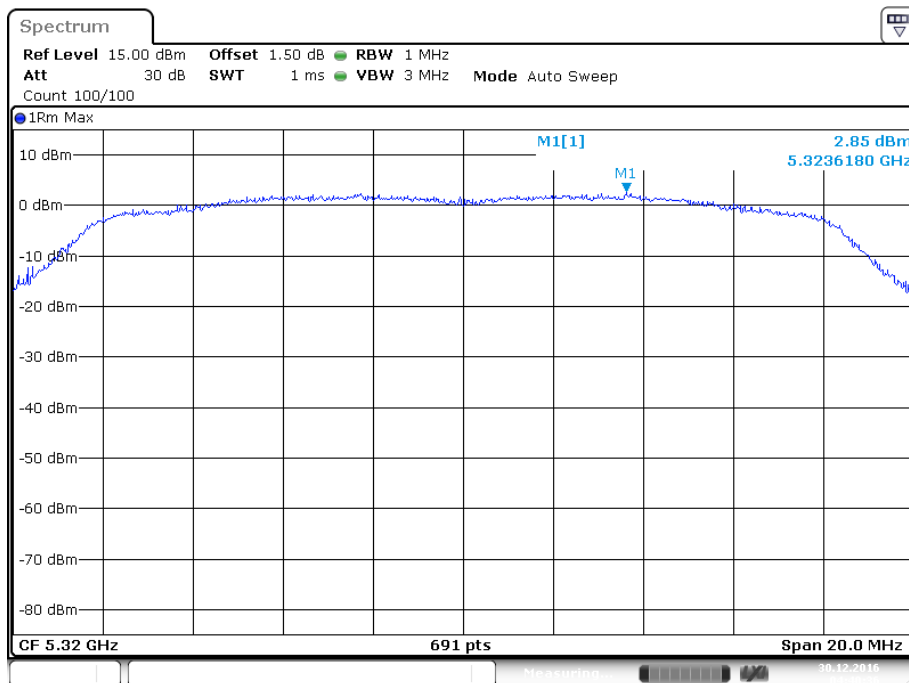
IEEE 802.11a mode / 5250 ~ 5350MHz(chain 1)
5260MHz



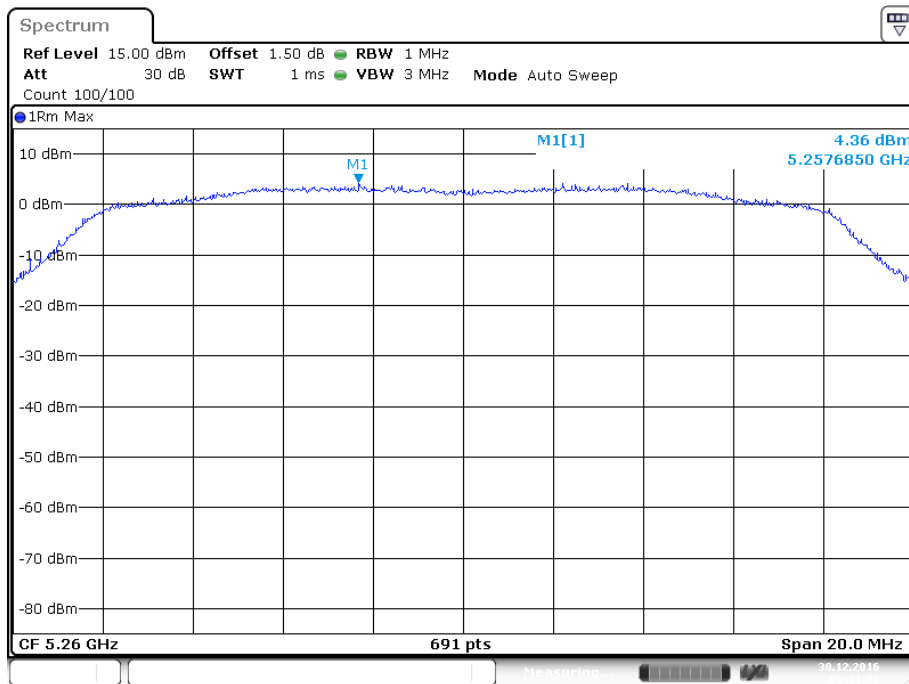
5280MHz



5320MHz

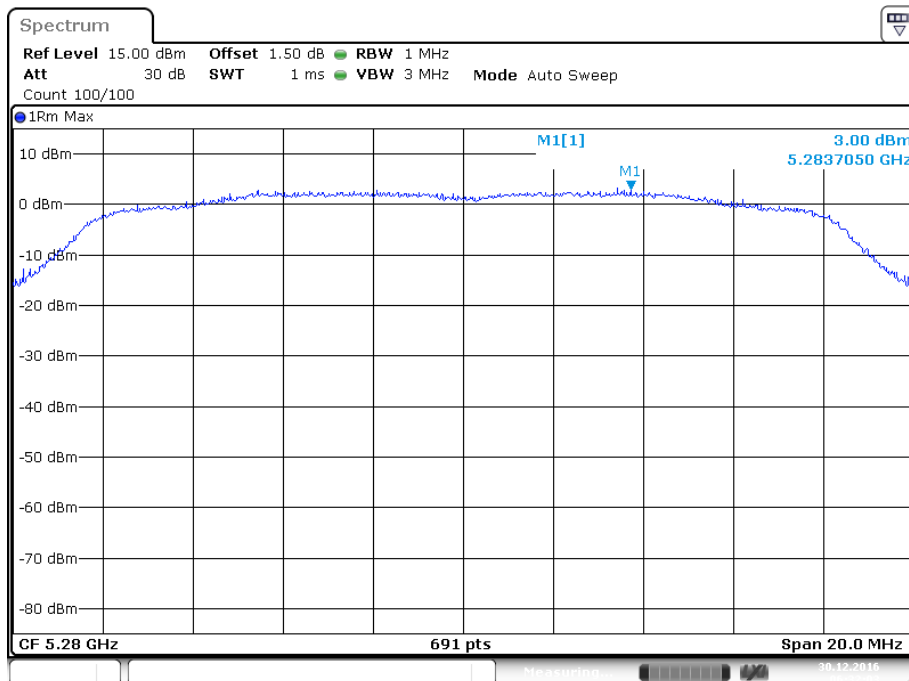


**IEEE 802.11n HT20 mode / 5250 ~ 5350MHz(chain 0)
5260MHz**



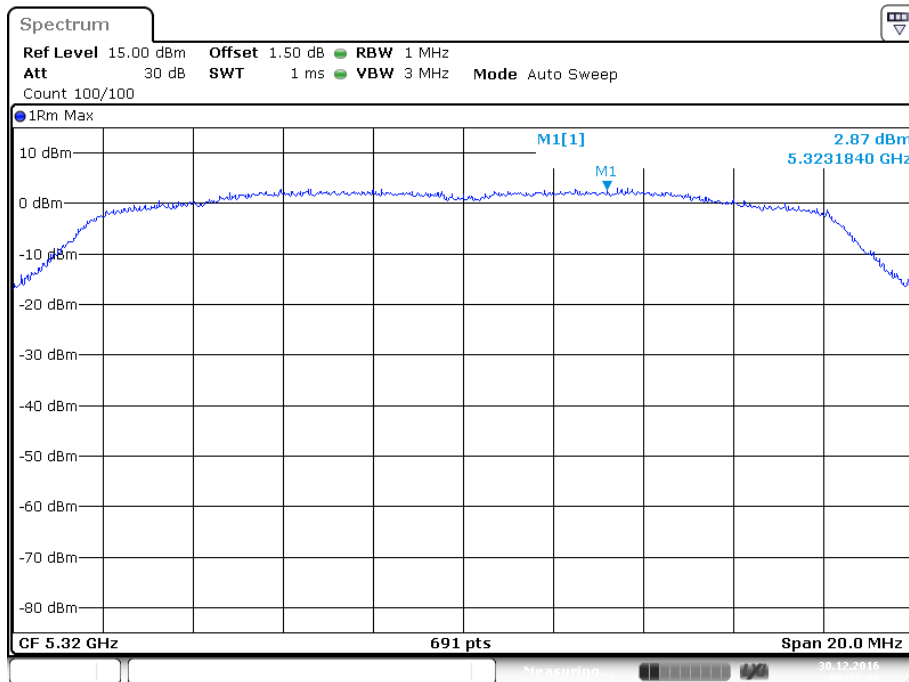
Date: 30 DEC. 2016 06:31:06

5280MHz

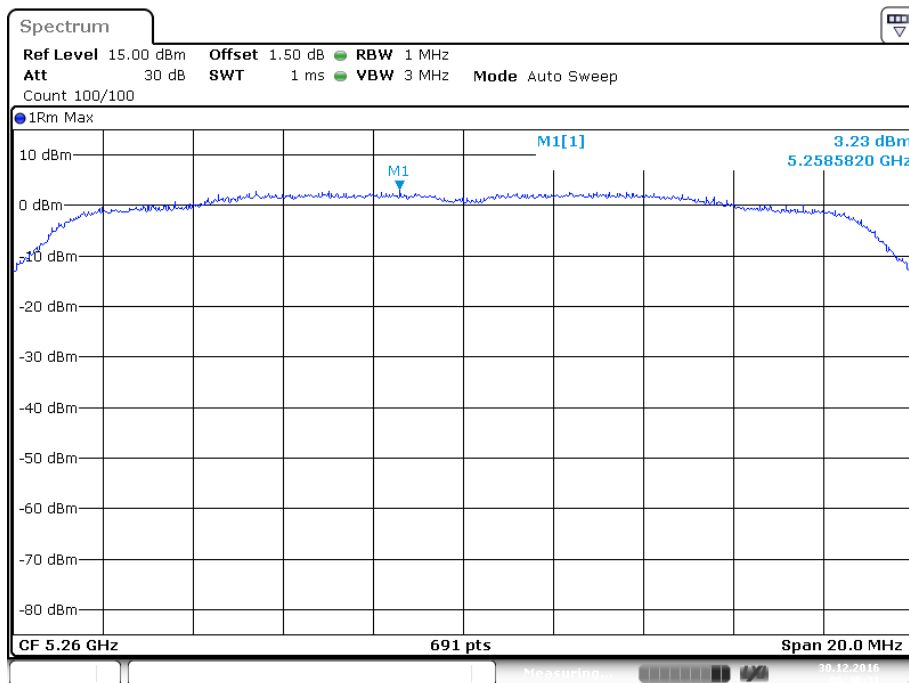


Date: 30 DEC. 2016 06:32:03

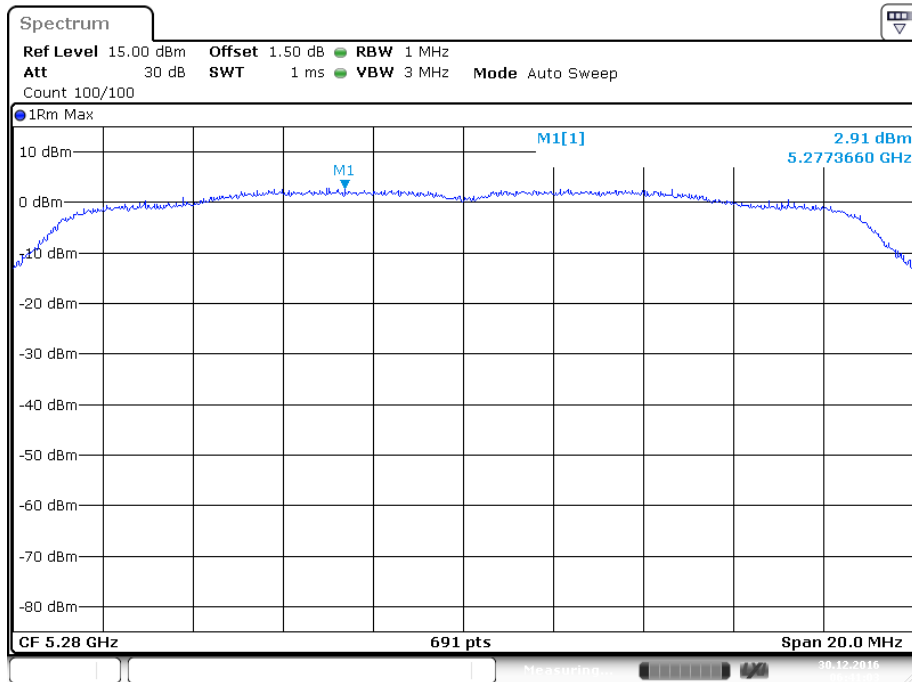
5320MHz



IEEE 802.11nHT20 mode / 5250 ~ 5350MHz(chain 1)
5260MHz

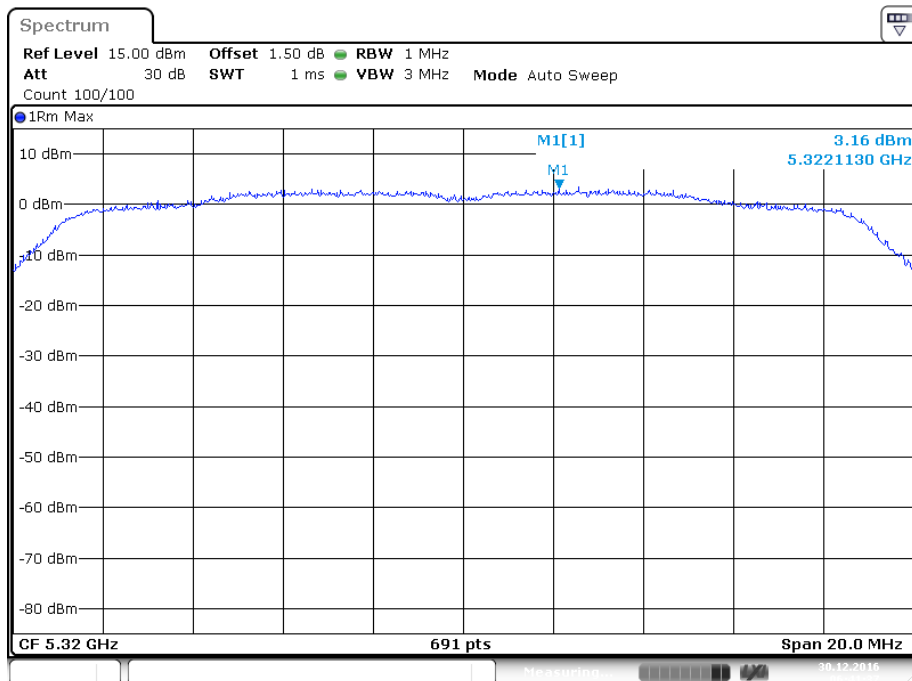


5280MHz



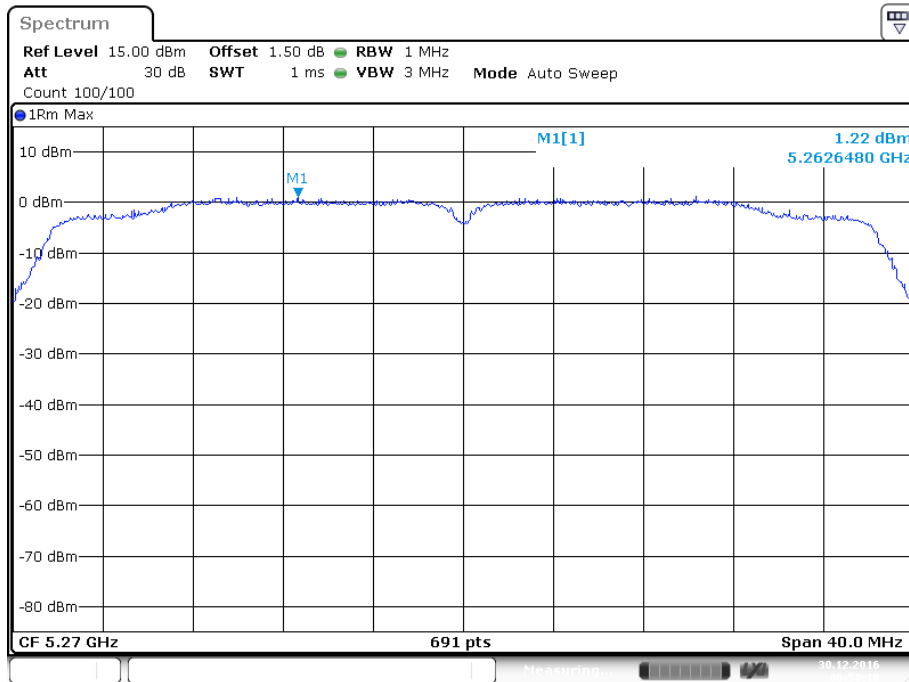
Date: 30 DEC 2016 06:41:03

5320MHz



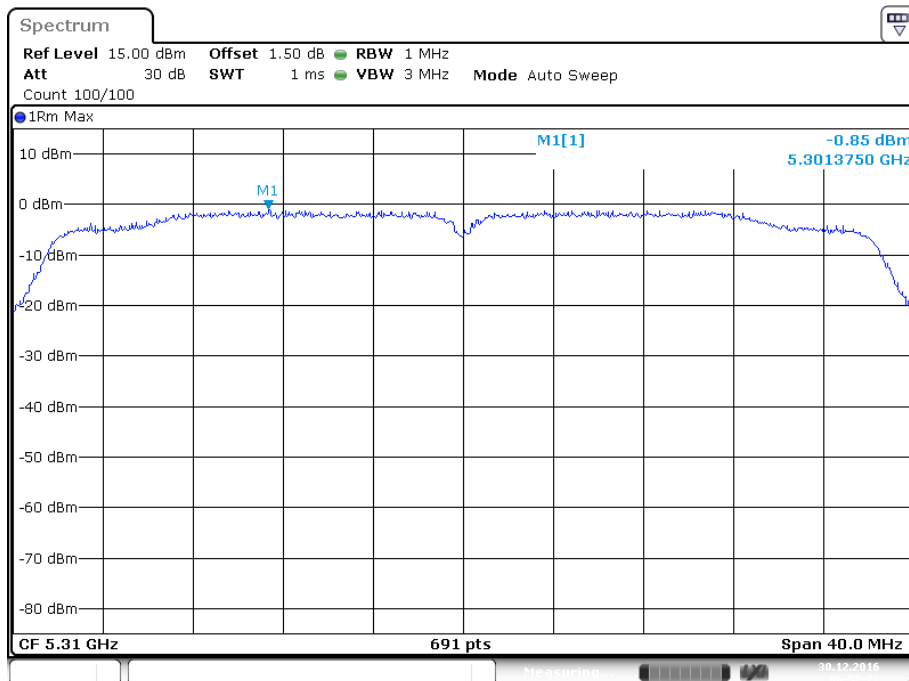
Date: 30 DEC 2016 06:41:37

**IEEE 802.11n HT40 mode / 5250 ~ 5350MHz(chain0)
5270MHz**



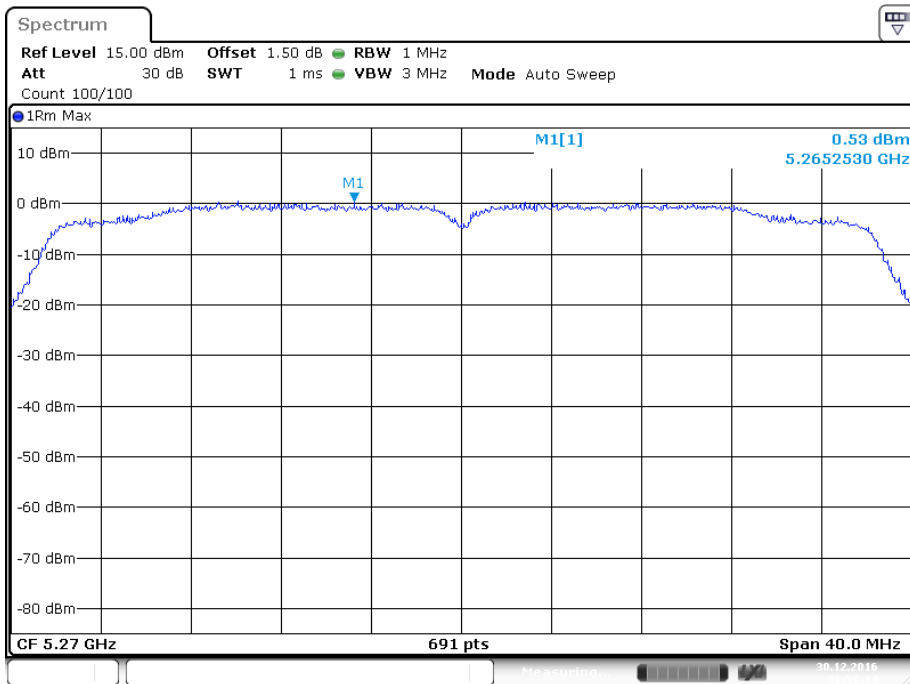
Date: 30 DEC 2016 06:58:16

5310MHz



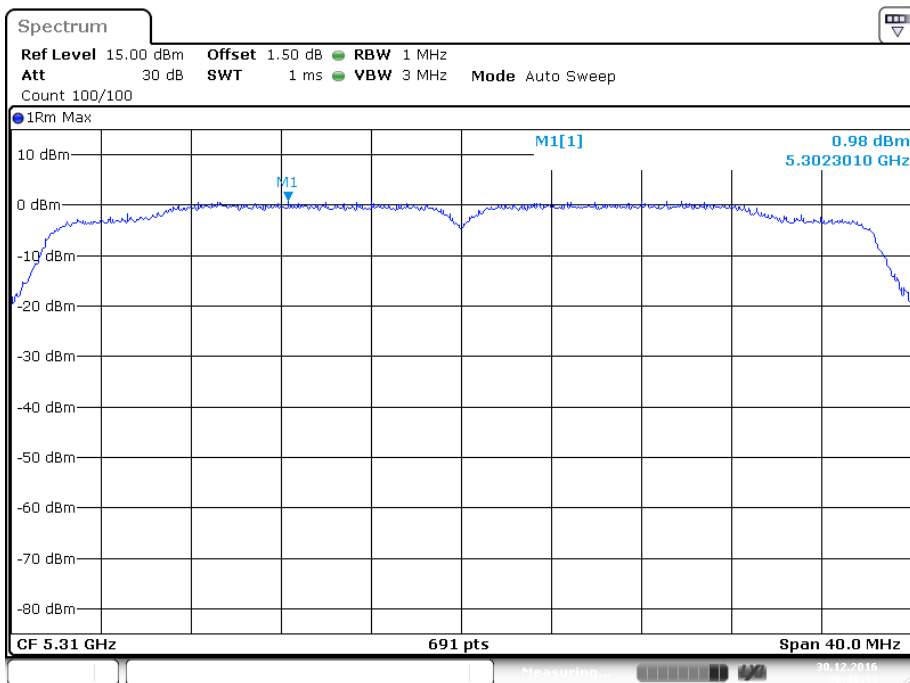
Date: 30 DEC 2016 06:57:22

**IEEE 802.11n HT40 mode / 5250 ~ 5350MHz(chain 1)
5270MHz**



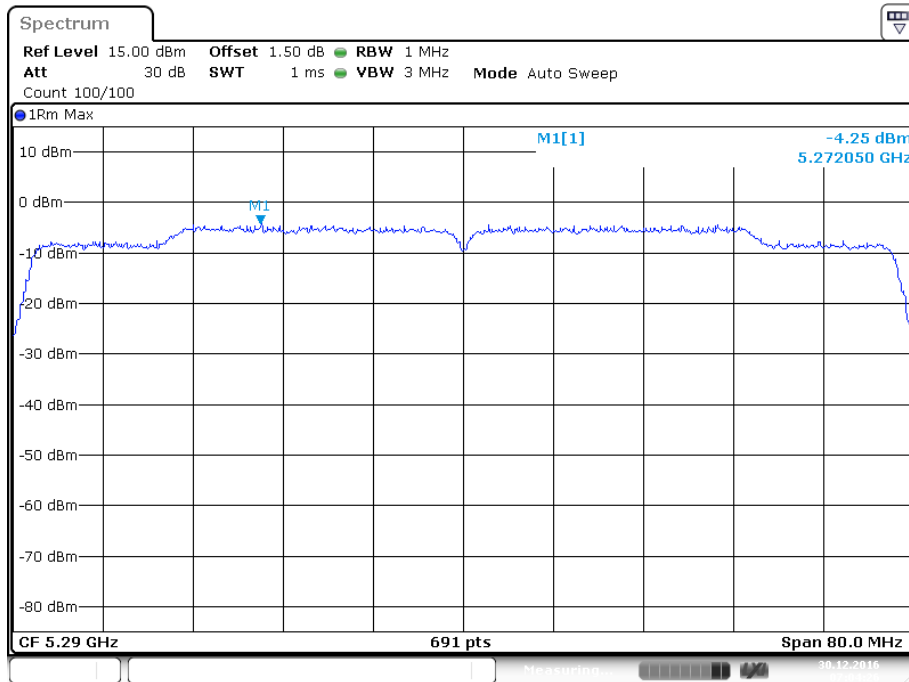
Date: 30 DEC 2016 06:50:35

5310MHz

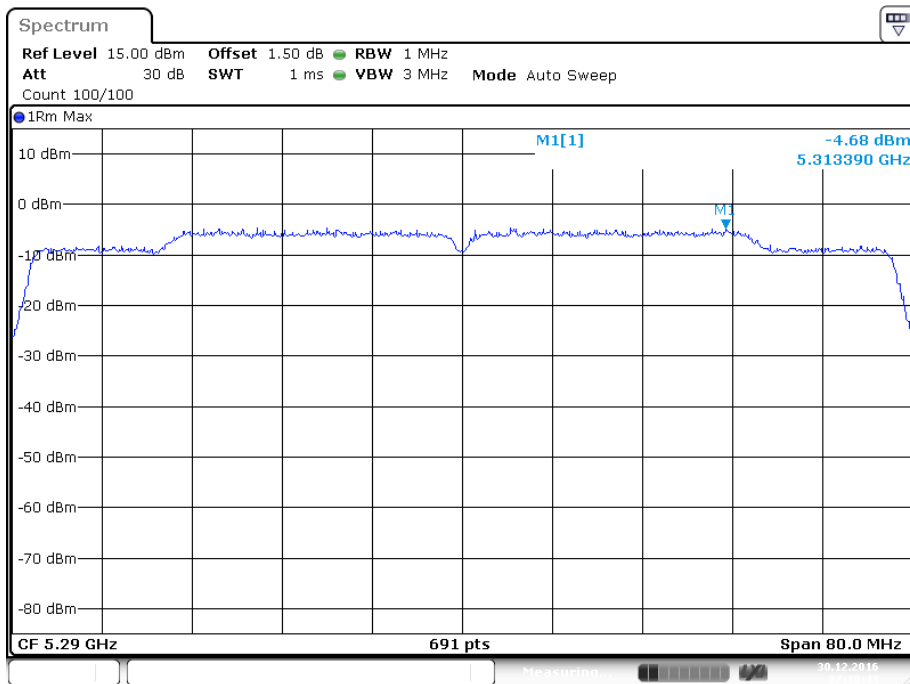


Date: 30 DEC 2016 06:49:43

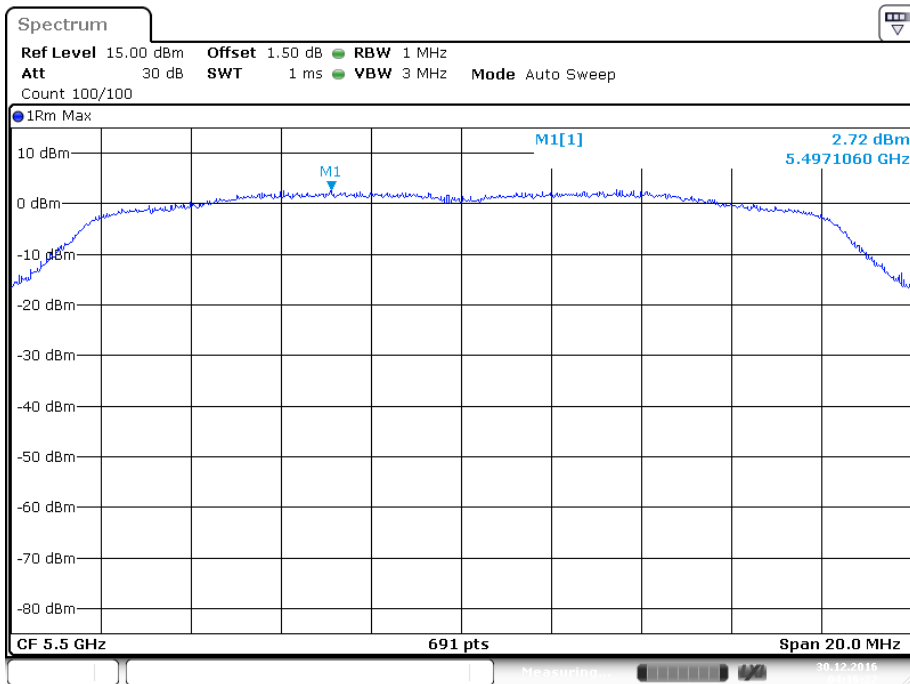
**IEEE 802.11ac VHT80 mode / 5250 ~ 5350MHz(chain0)
5290MHz**



**IEEE 802.11ac VHT80 mode / 5250 ~ 5350MHz(chain 1)
5290MHz**

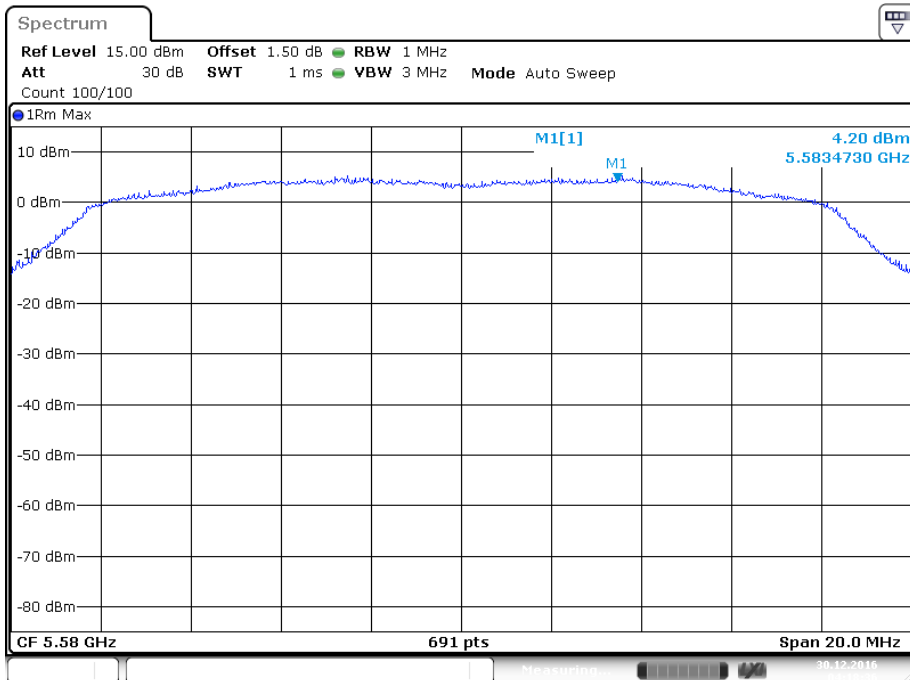


**IEEE 802.11a mode / 5470 ~ 5725MHz(chain0)
5500MHz**



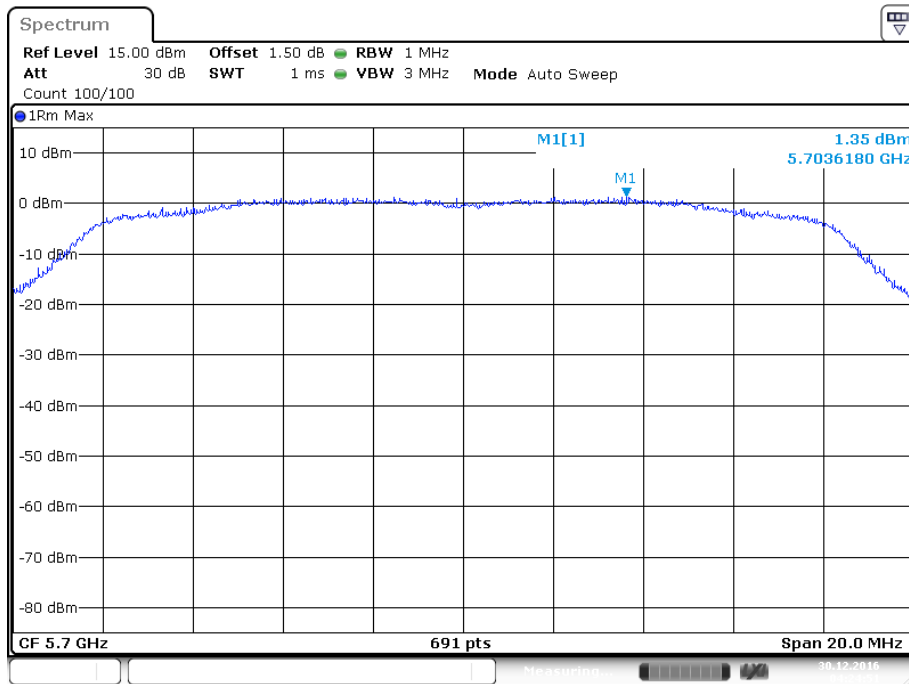
Date: 30 DEC 2016 04:16:23

5580MHz



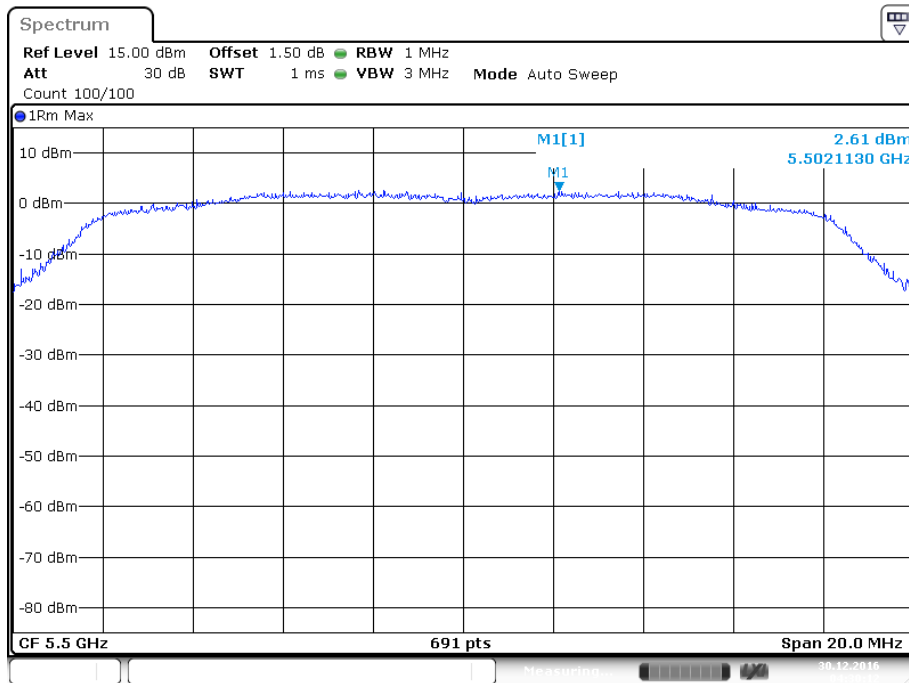
Date: 30 DEC 2016 04:18:37

5700MHz



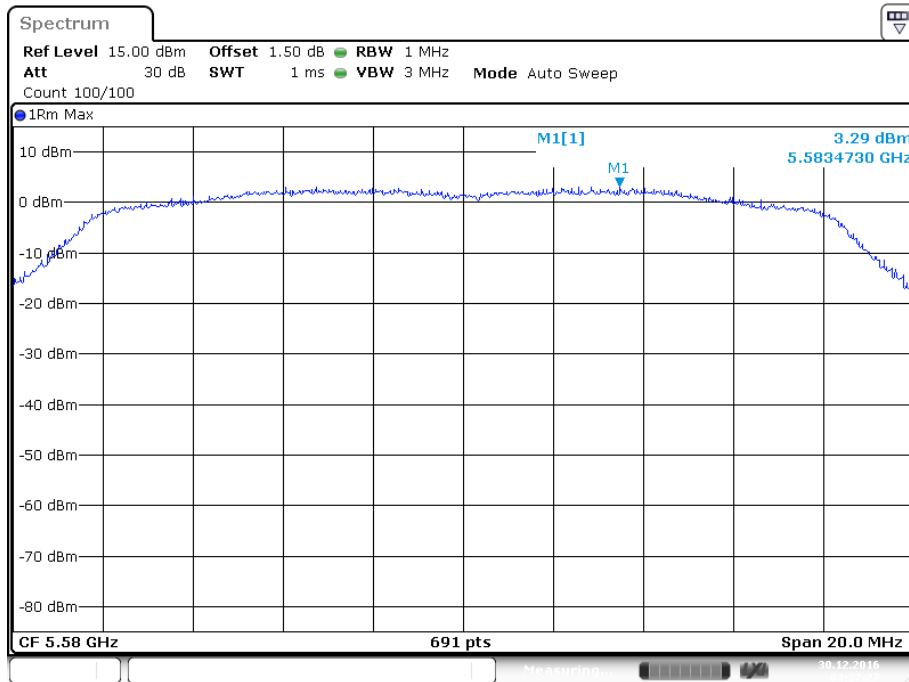
Date: 30 DEC 2016 04:24:52

**IEEE 802.11a mode / 5470 ~ 5725MHz(chain 1)
5500MHz**

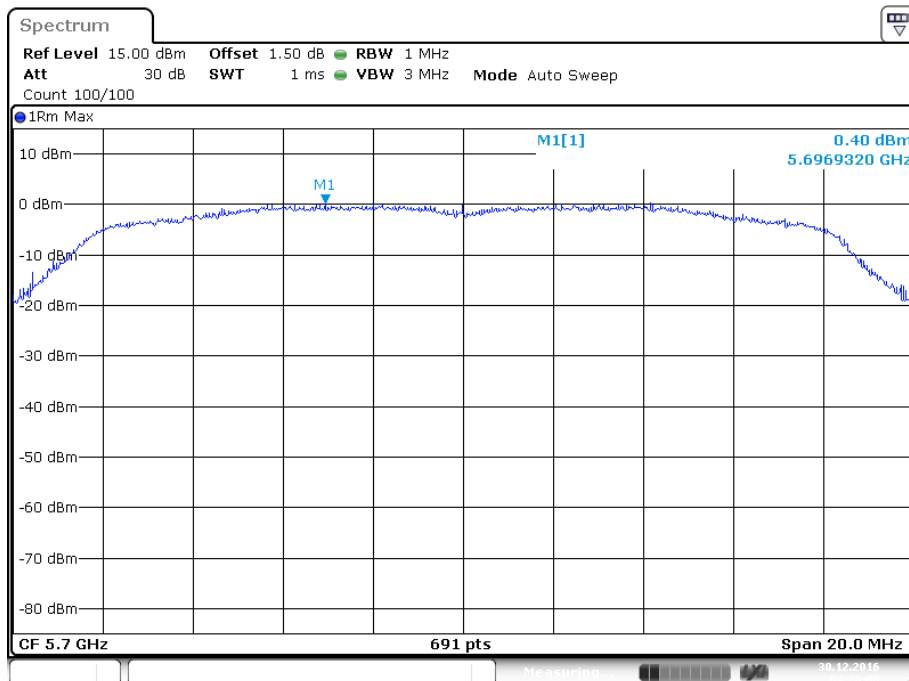


Date: 30 DEC 2016 04:30:12

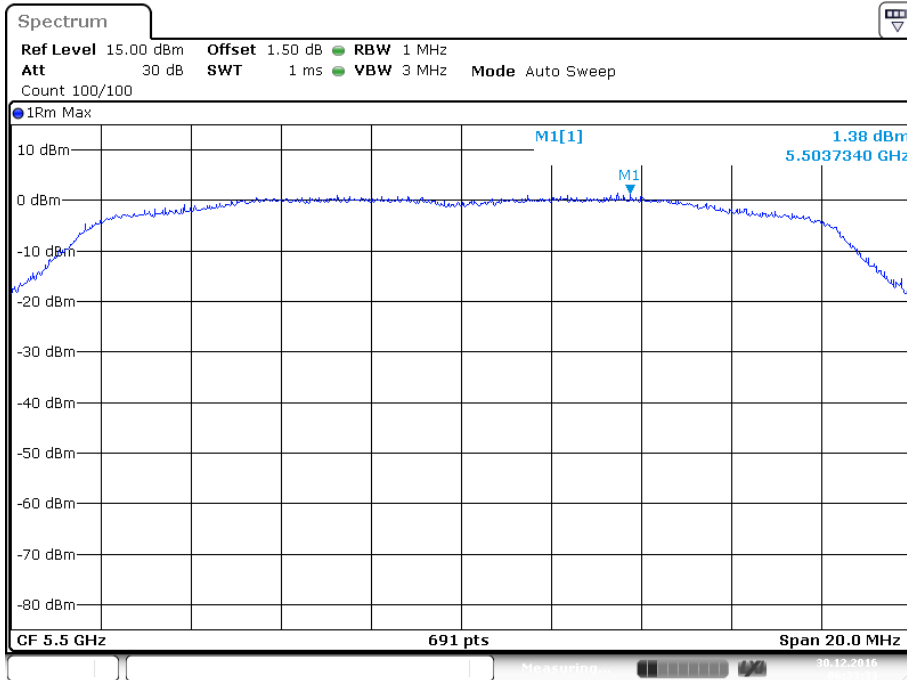
5580MHz



5700MHz

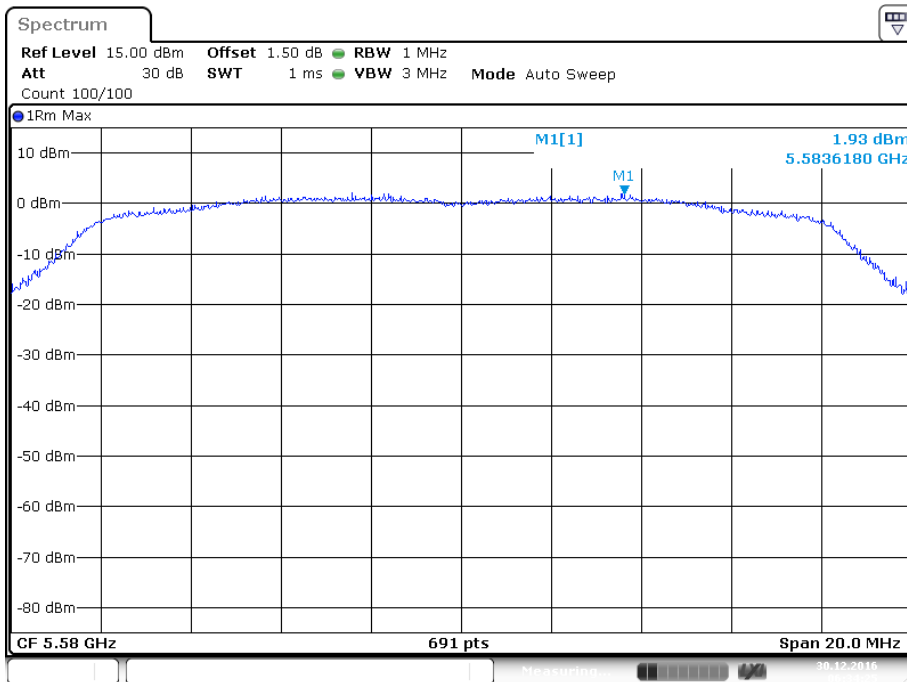


**IEEE 802.11n HT20 mode / 5470 ~ 5725MHz(chain0)
5500MHz**



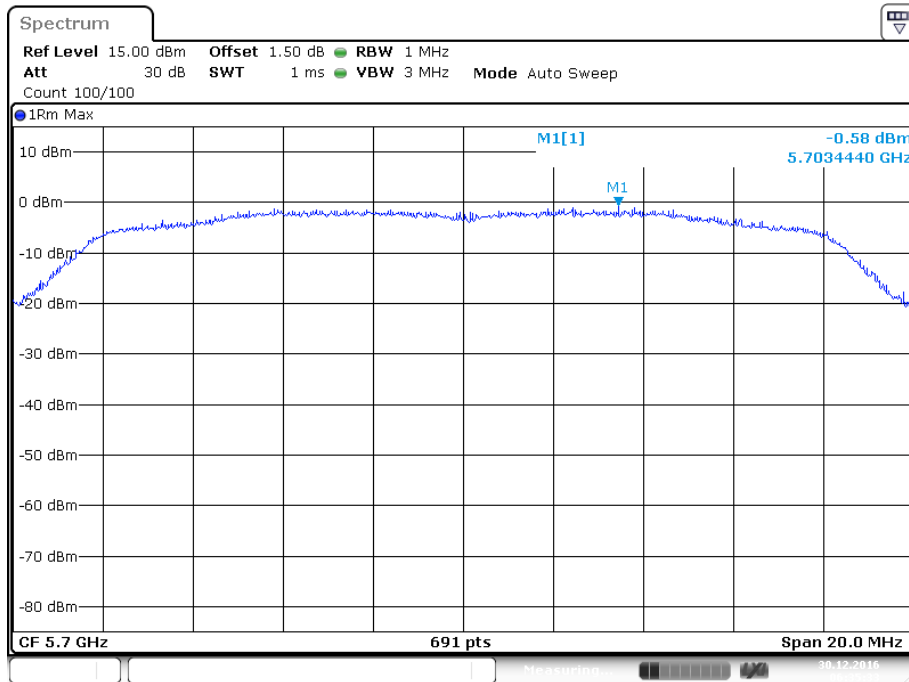
Date: 30 DEC.2016 06:33:34

5580MHz



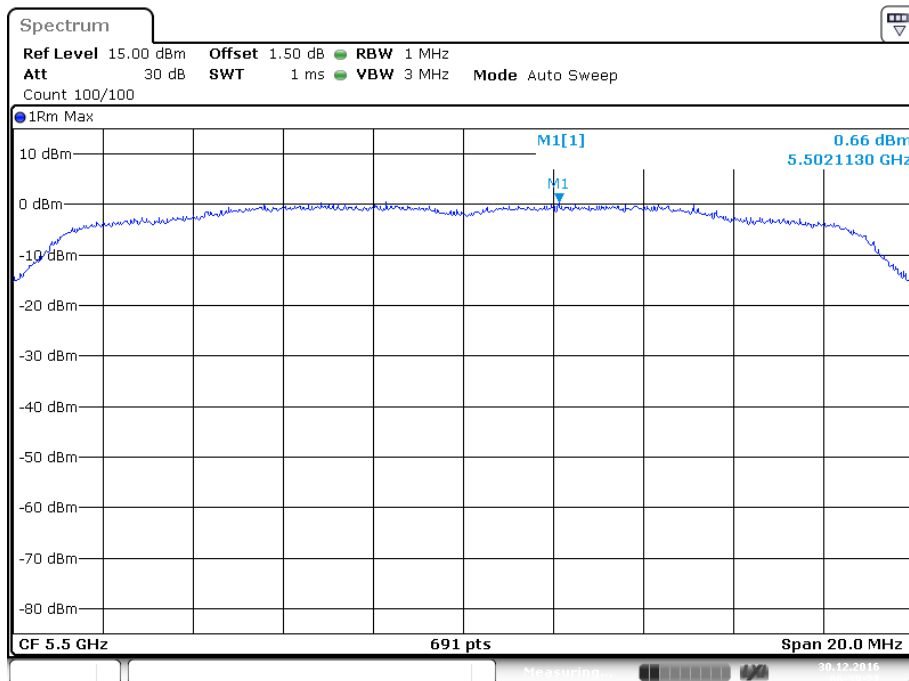
Date: 30 DEC.2016 06:34:25

5700MHz



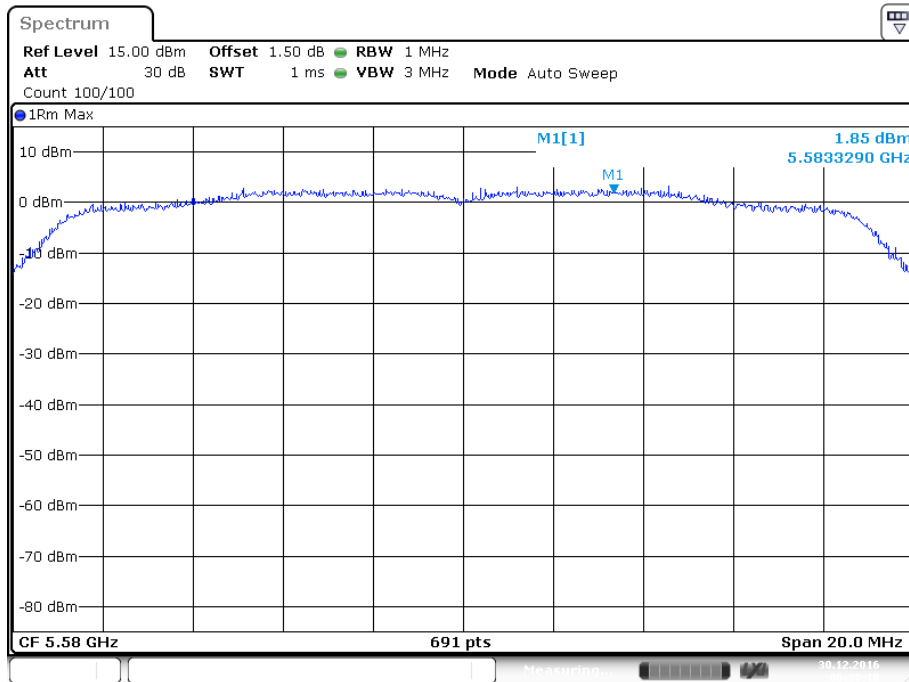
Date: 30 DEC 2016 06:35:33

IEEE 802.11n HT20 mode / 5470 ~ 5725MHz(chain 1)
5500MHz



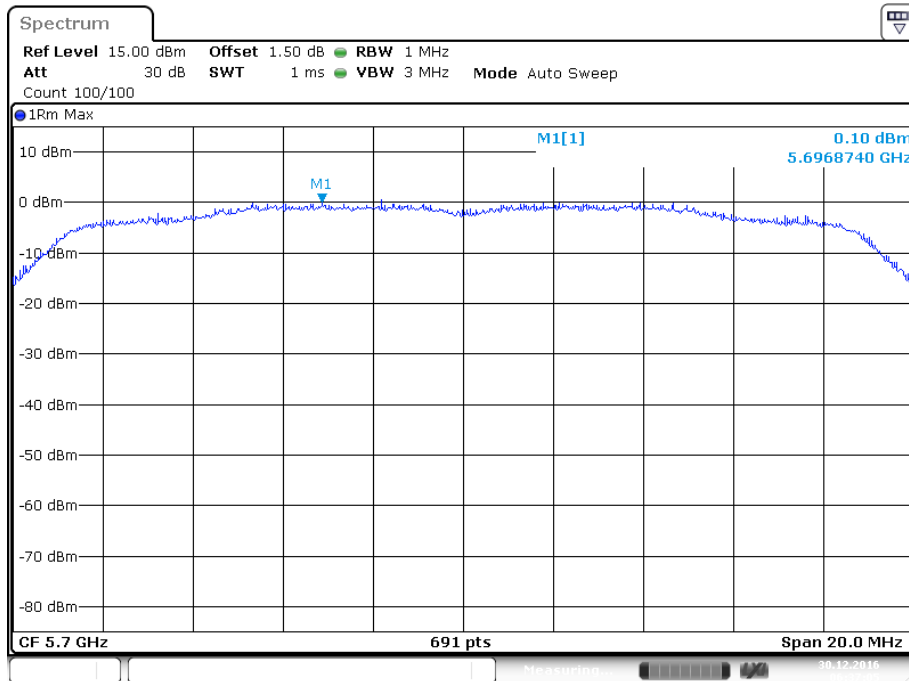
Date: 30 DEC 2016 06:39:21

5580MHz



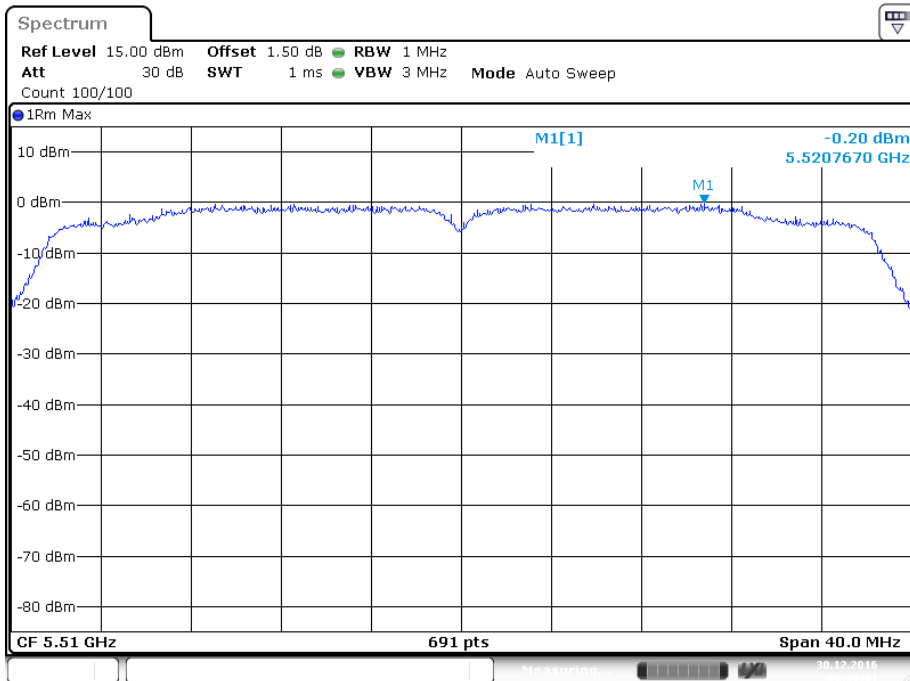
Date: 30 DEC. 2016 06:38:10

5700MHz



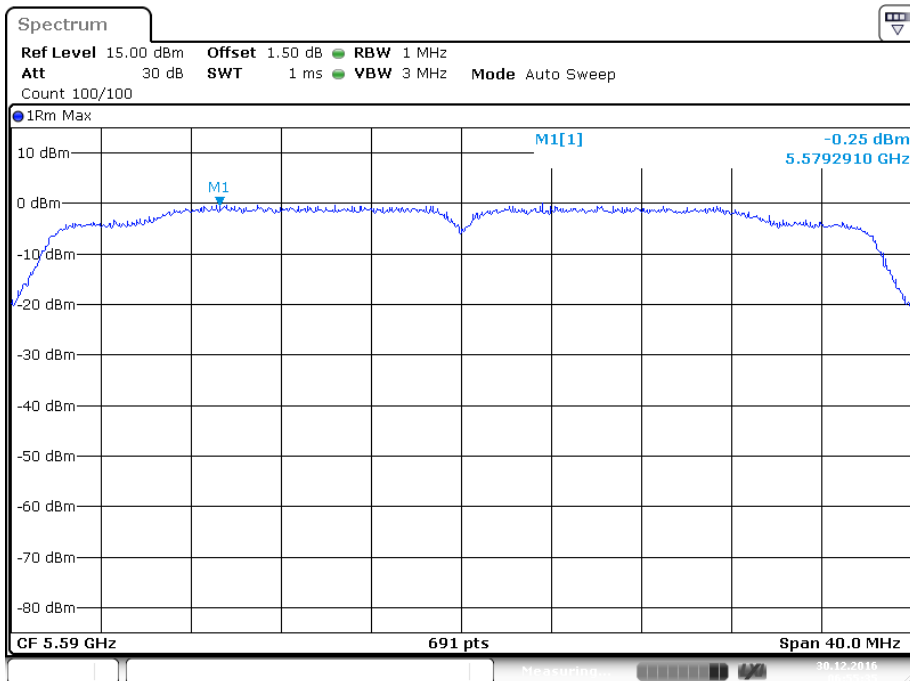
Date: 30 DEC. 2016 06:37:05

**IEEE 802.11n HT40 mode / 5470 ~ 5725MHz(chain0)
5510MHz**



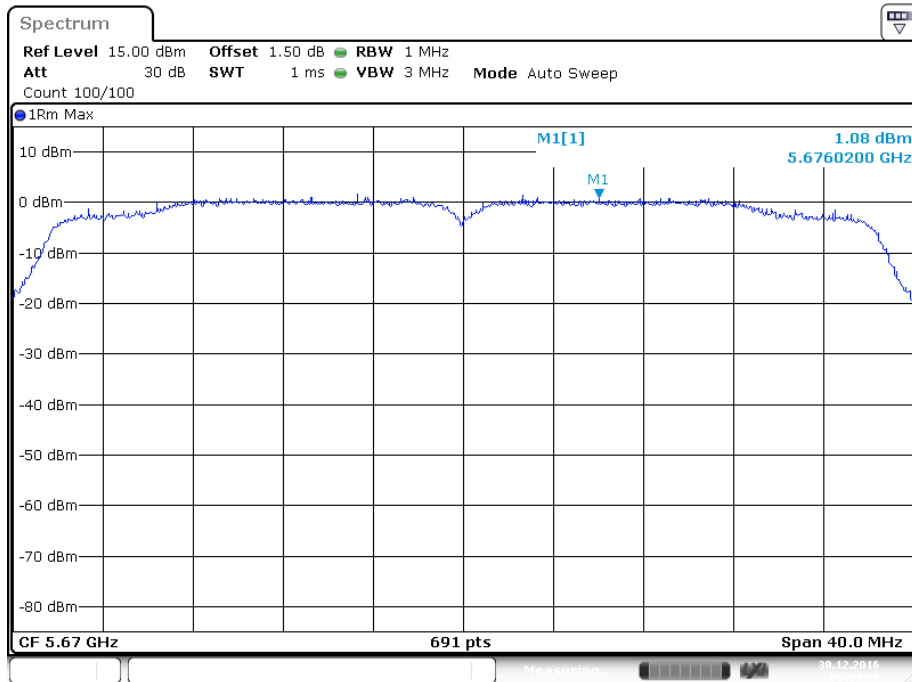
Date: 30 DEC 2016 06:56:11

5590MHz



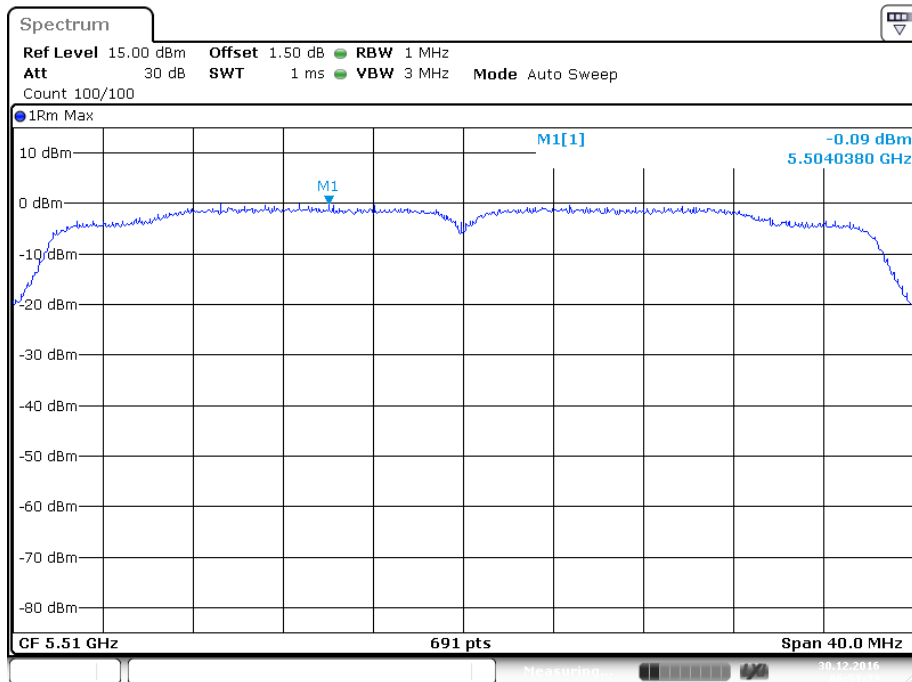
Date: 30 DEC 2016 06:55:36

5670MHz



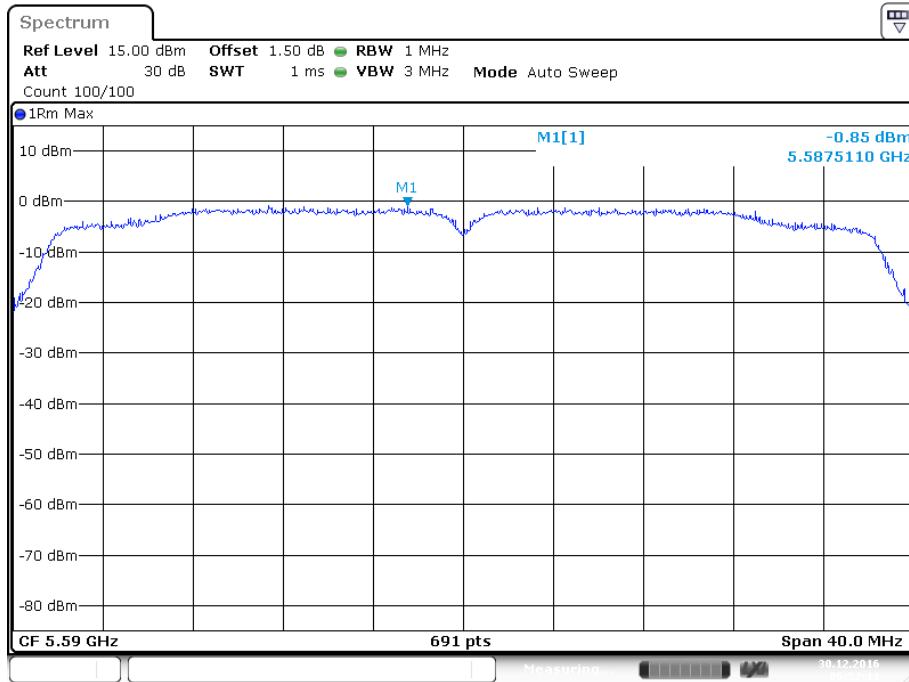
Date: 30 DEC.2016 06:54:38

IEEE 802.11n HT40 mode / 5470 ~ 5725MHz(chain 1)
5510MHz

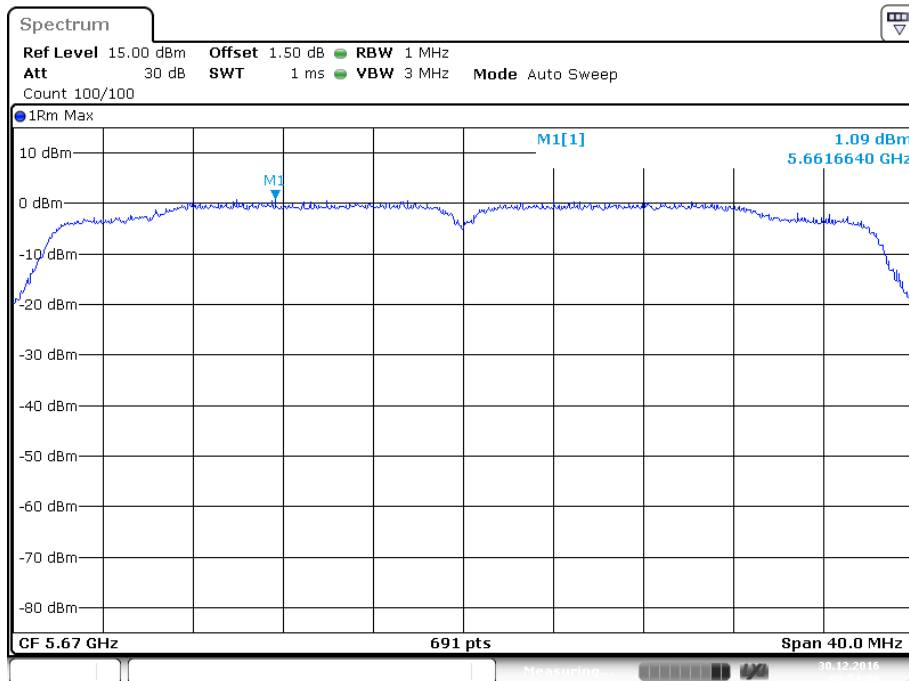


Date: 30 DEC.2016 06:51:34

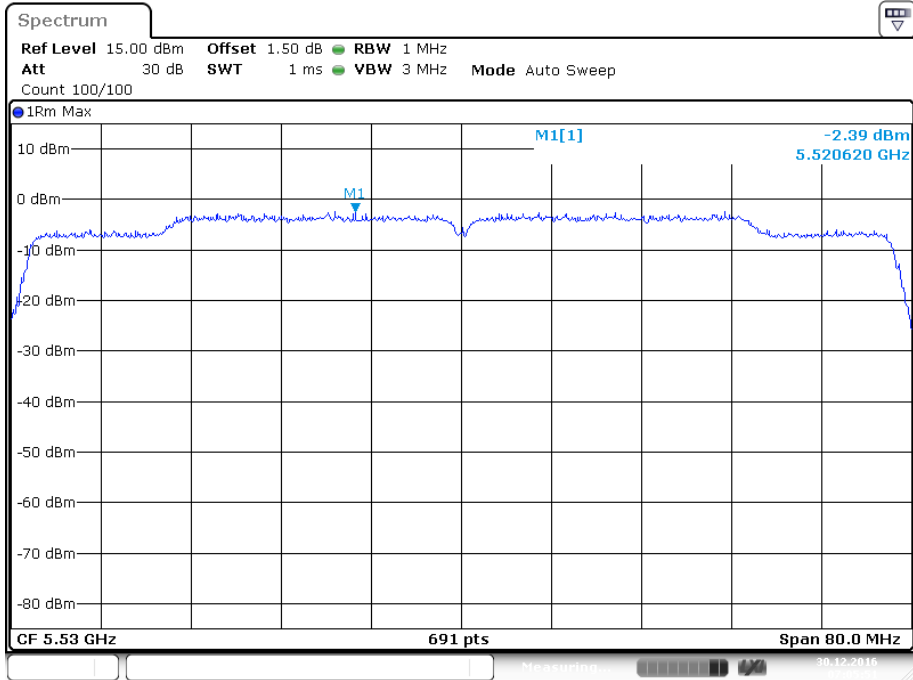
5590MHz



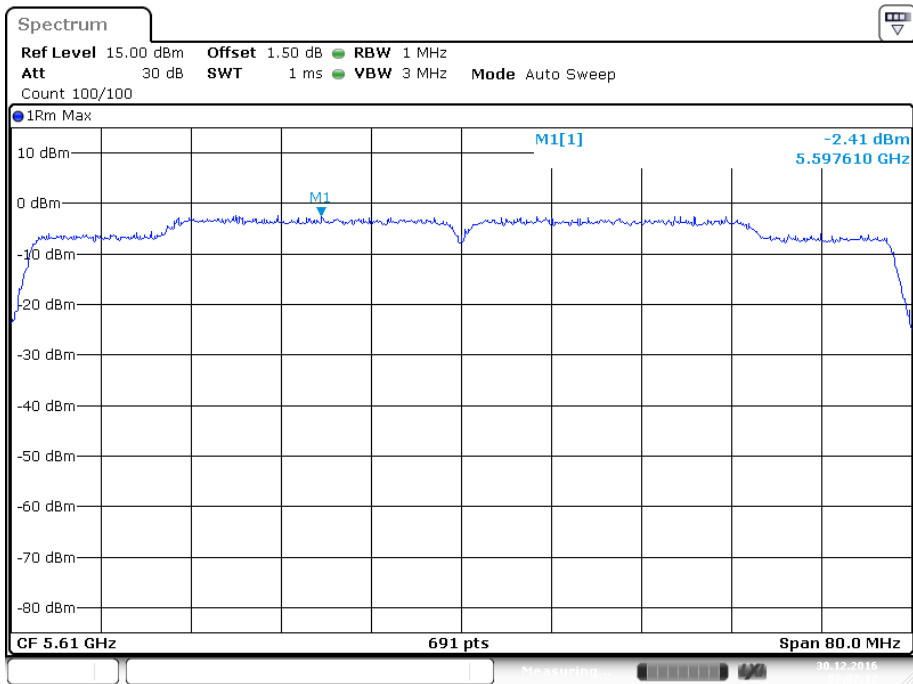
5670MHz



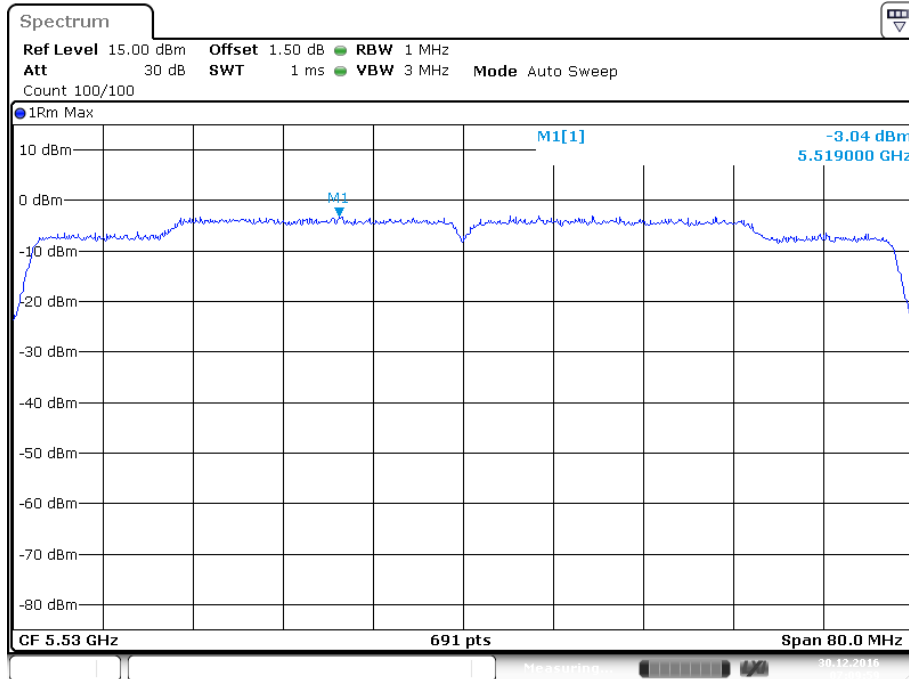
IEEE 802.11ac VHT80 mode / 5470 ~ 5725MHz(chain0)
5530MHz



5610MHz

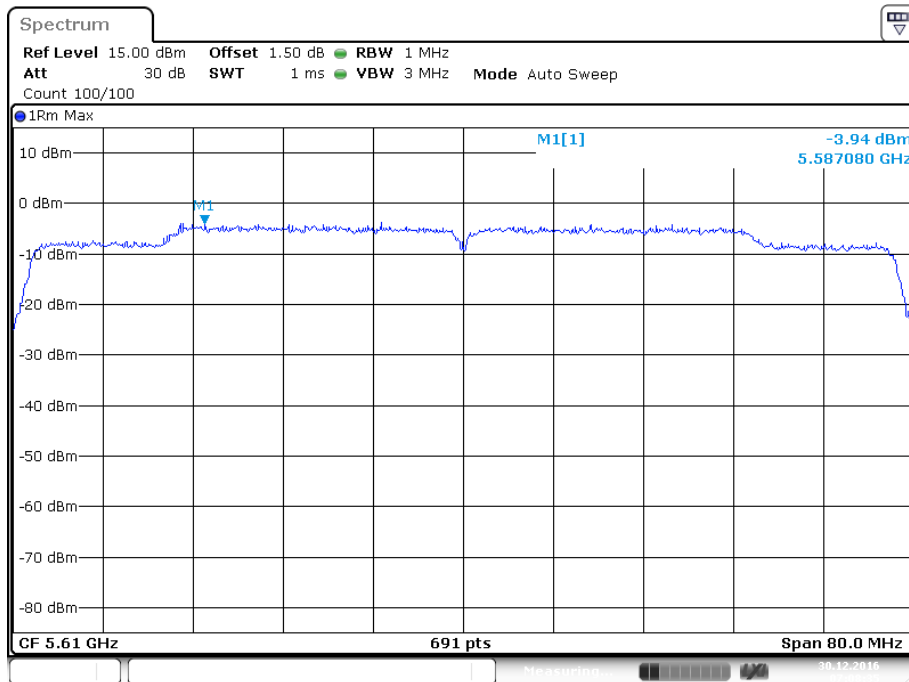


**IEEE 802.11ac VHT80 mode / 5470 ~ 5725MHz(chain 1)
5530MHz**



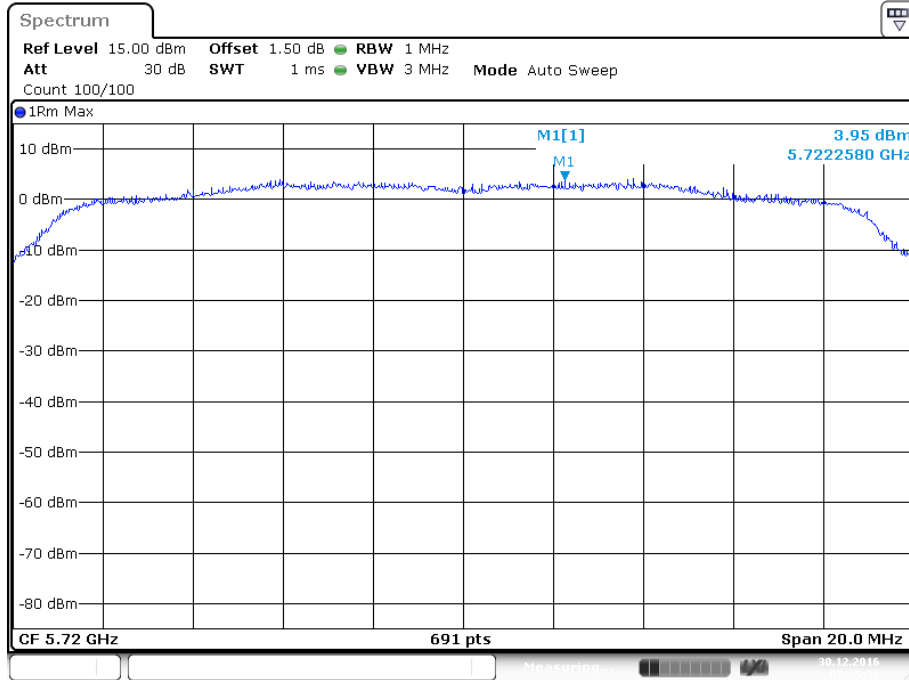
Date: 30 DEC 2016 07:09:59

5610MHz



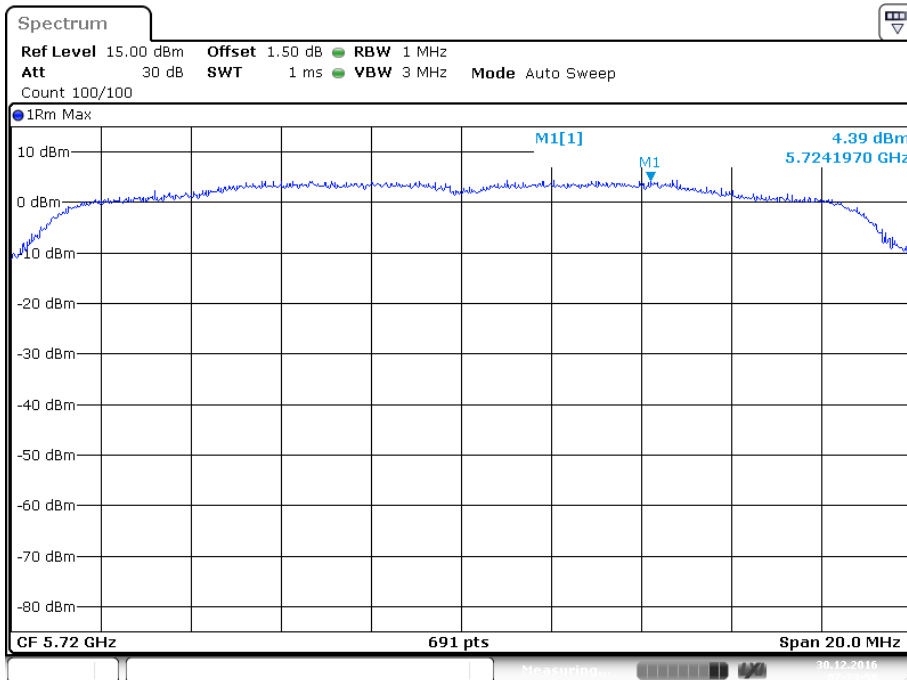
Date: 30 DEC 2016 07:08:35

**IEEE 802.11ac VHT20 mode Cross Band edge / 5470 ~ 5725MHz(chain 0)
5720MHz**



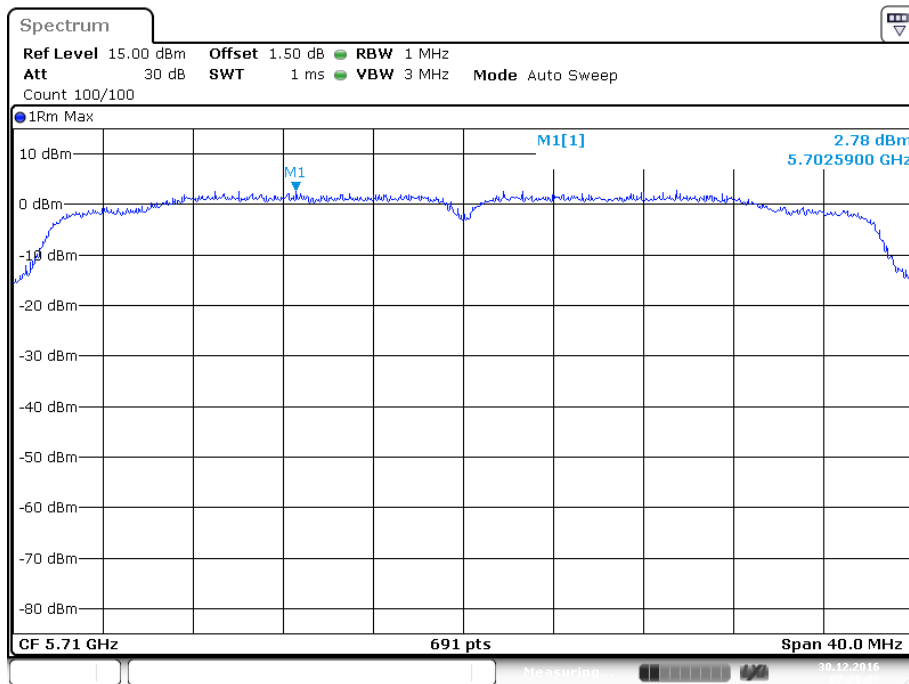
Date: 30 DEC 2016 07:25:33

**IEEE 802.11ac VHT20 mode Cross Band edge / 5470 ~ 5725MHz(chain 1)
5720MHz**



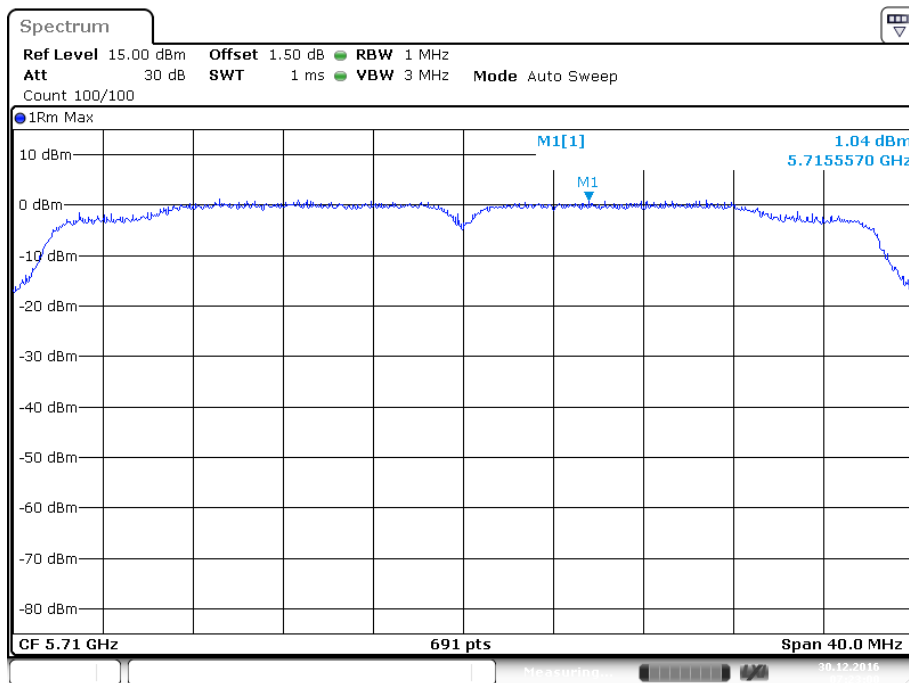
Date: 30 DEC 2016 07:23:58

**IEEE 802.11ac VHT40 mode Cross Band edge / 5470 ~ 5725MHz(chain 0)
5710MHz**



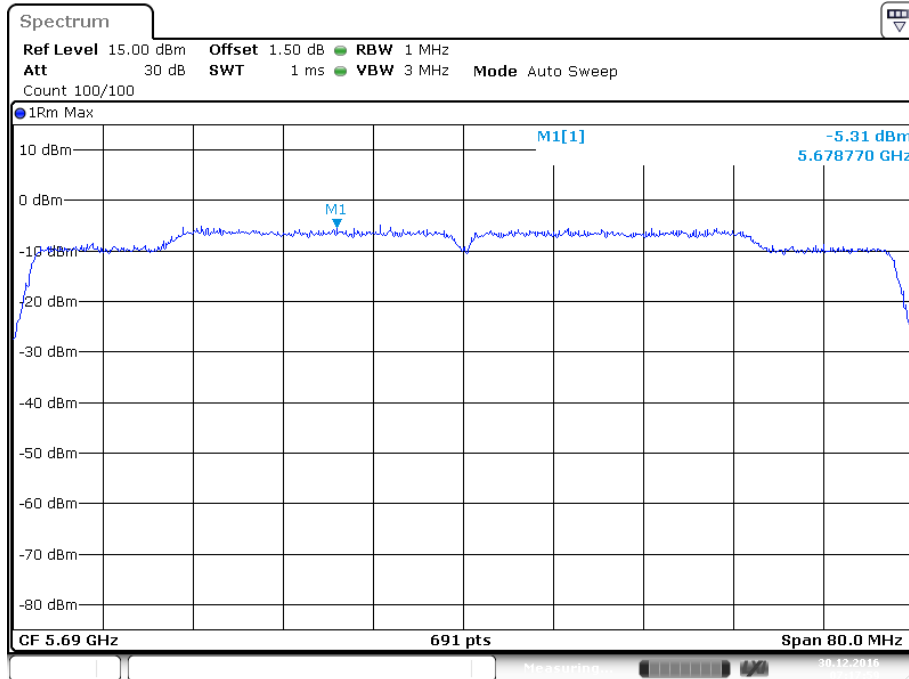
Date: 30 DEC. 2016 07:20:03

**IEEE 802.11ac VHT40 mode Cross Band edge / 5470 ~ 5725MHz(chain 1)
5710MHz**



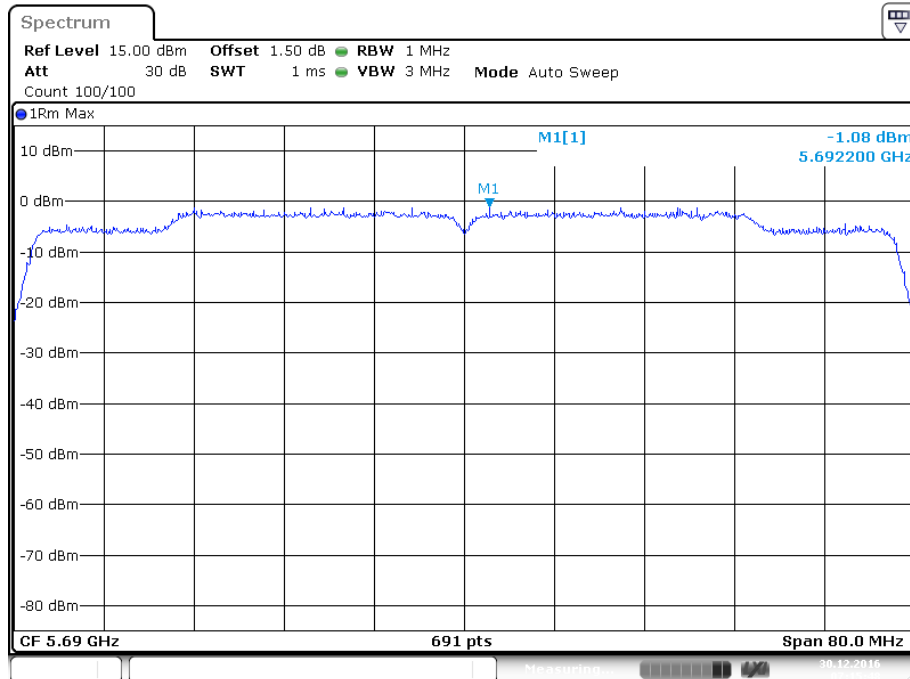
Date: 30 DEC. 2016 07:23:00

**IEEE 802.11ac VHT80 mode Cross Band edge / 5470 ~ 5725MHz(chain 0)
5690MHz**



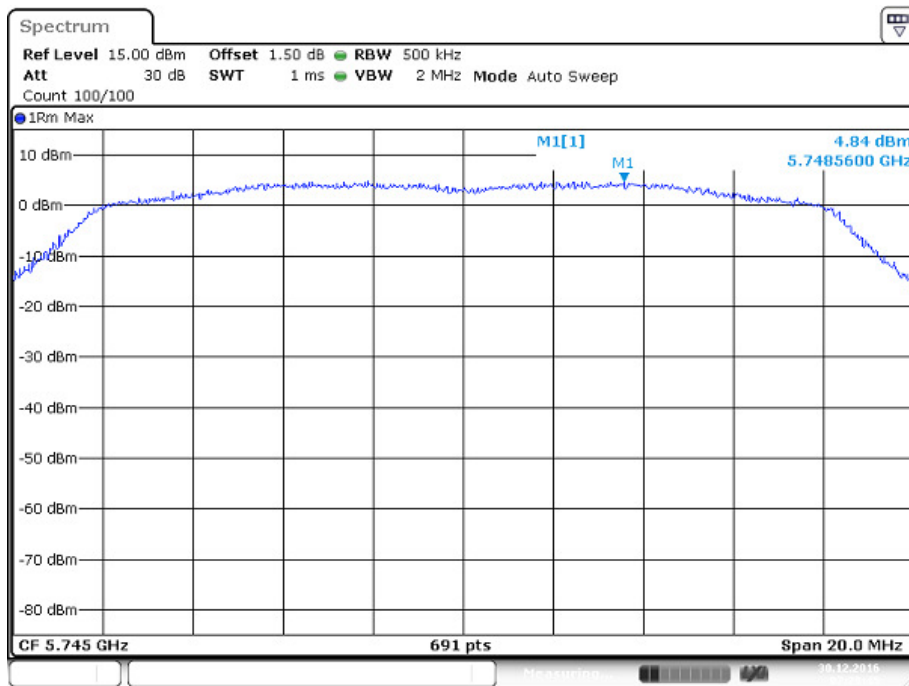
Date: 30.DEC.2016 07:17:59

**IEEE 802.11ac VHT80 mode Cross Band edge / 5470 ~ 5725MHz(chain 1)
5690MHz**



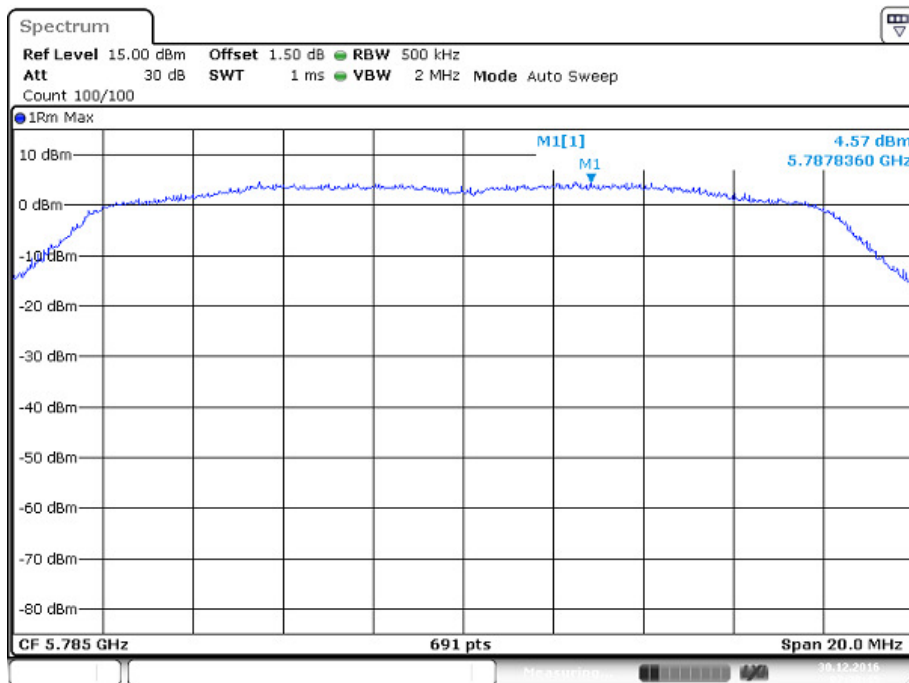
Date: 30.DEC.2016 07:15:48

**IEEE 802.11a mode / 5725 ~ 5850MHz(chain0)
5745MHz**



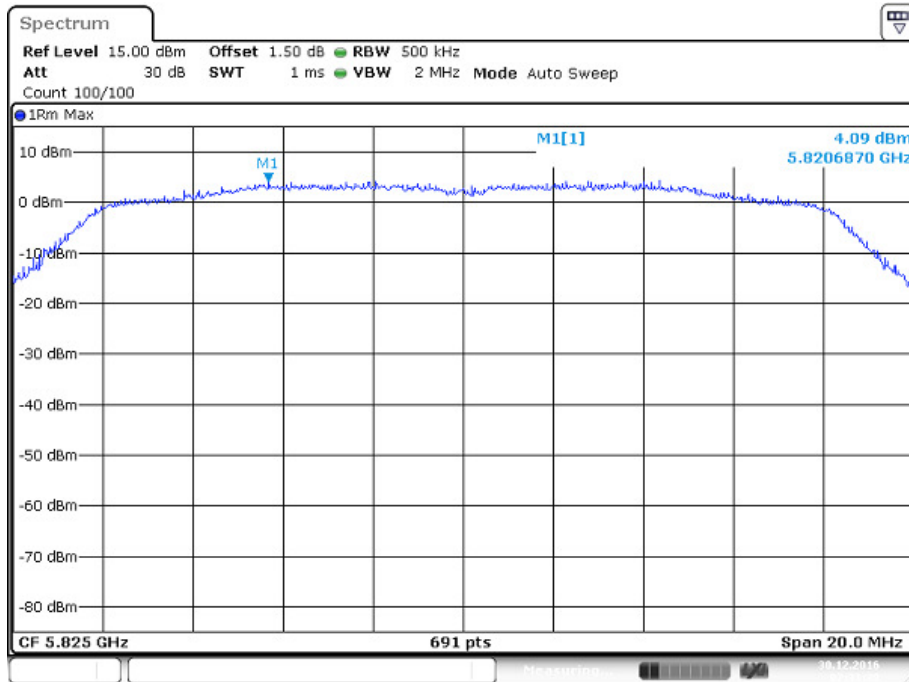
Date: 30.DEC 2016 07:29:45

5785MHz



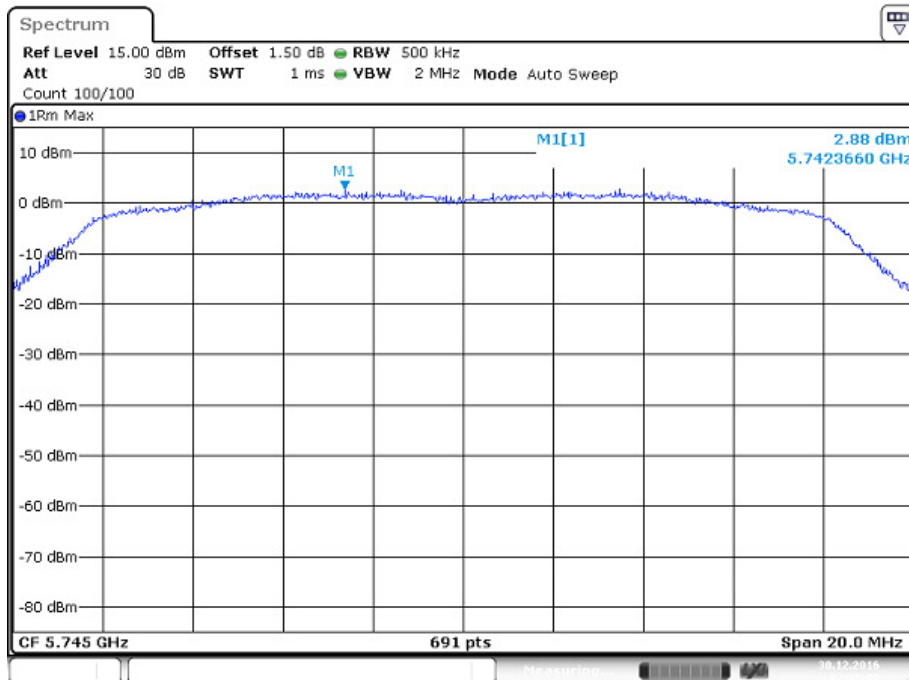
Date: 30.DEC 2016 07:30:46

5825MHz



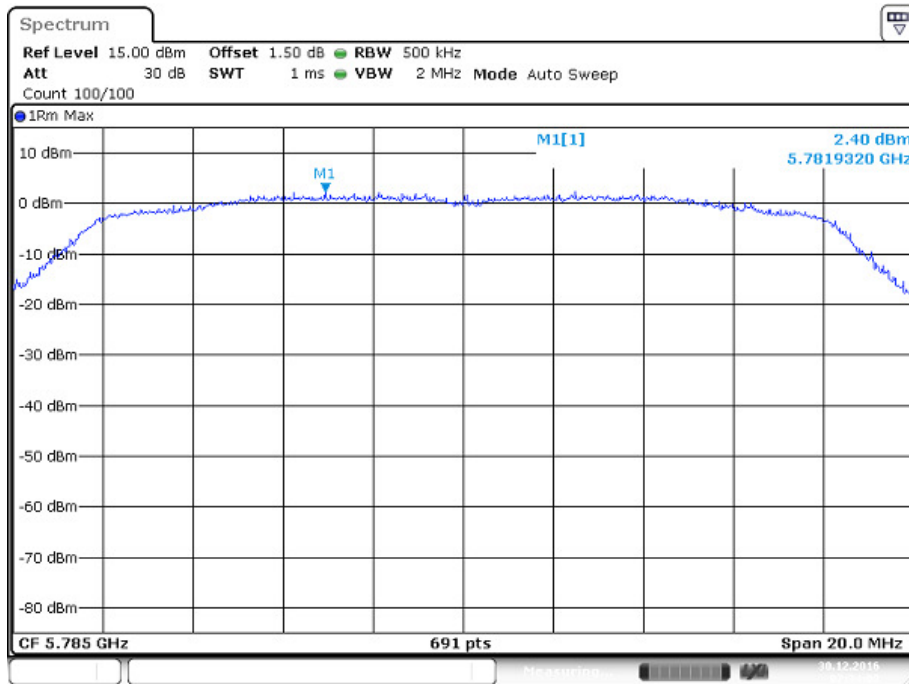
Date: 30 DEC 2016 07:31:38

**IEEE 802.11a mode / 5725 ~ 5850MHz(chain 1)
5745MHz**

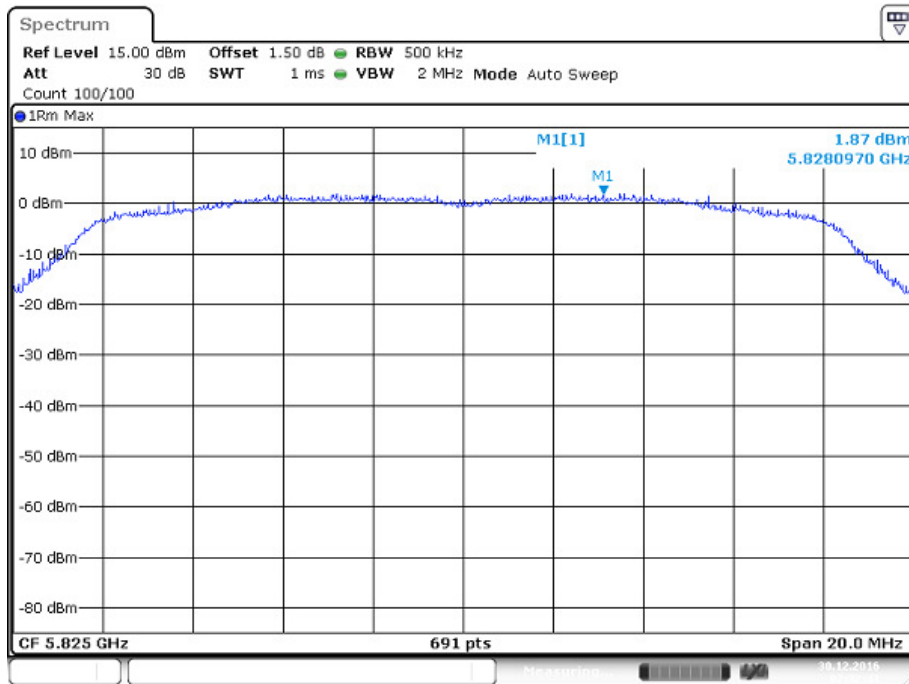


Date: 30 DEC 2016 07:35:00

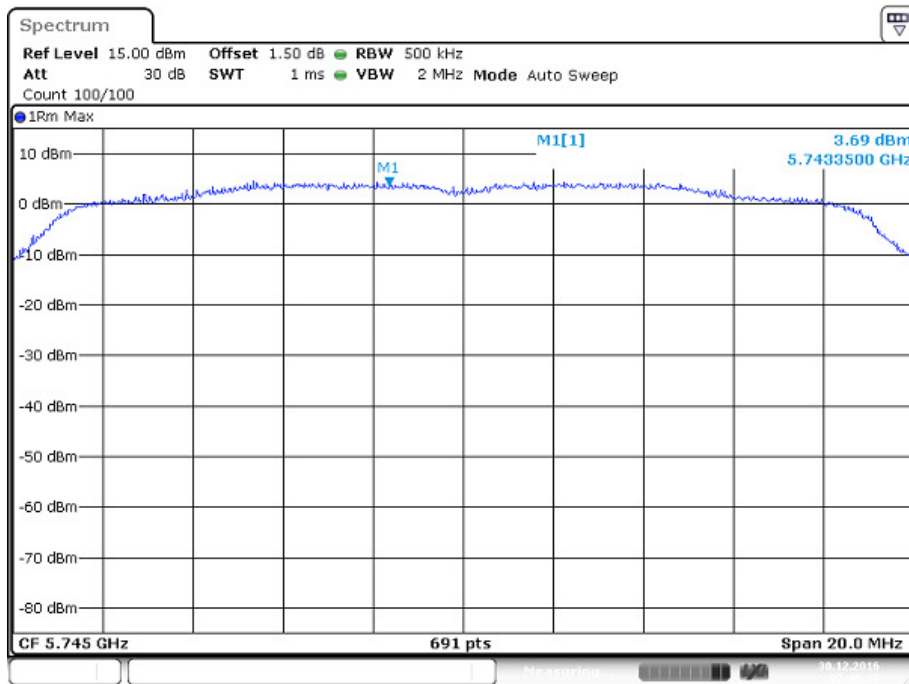
5785MHz



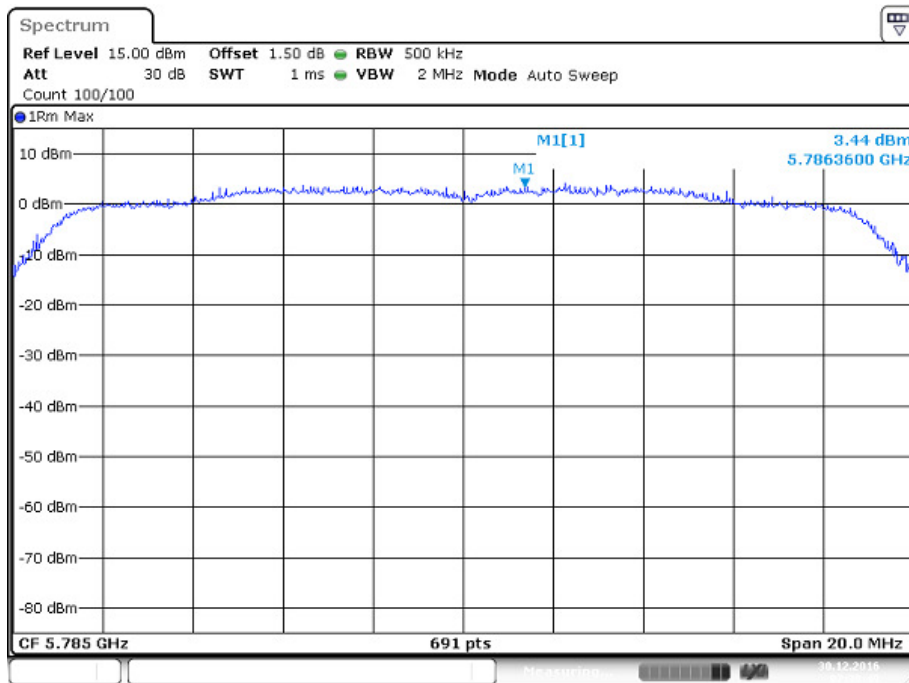
5825MHz



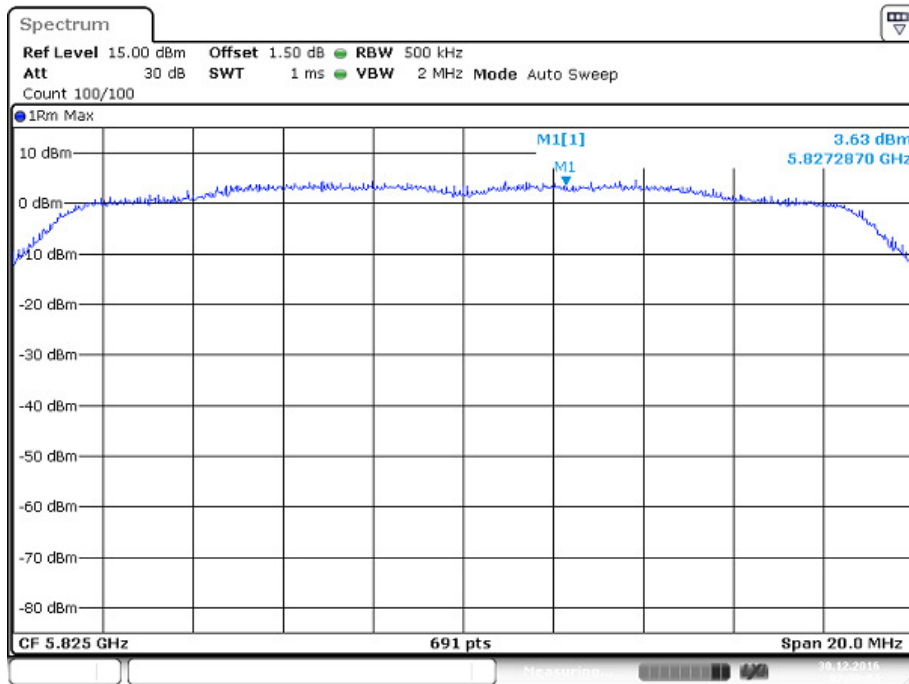
**IEEE 802.11n HT20 mode / 5725 ~ 5850MHz(chain0)
5745MHz**



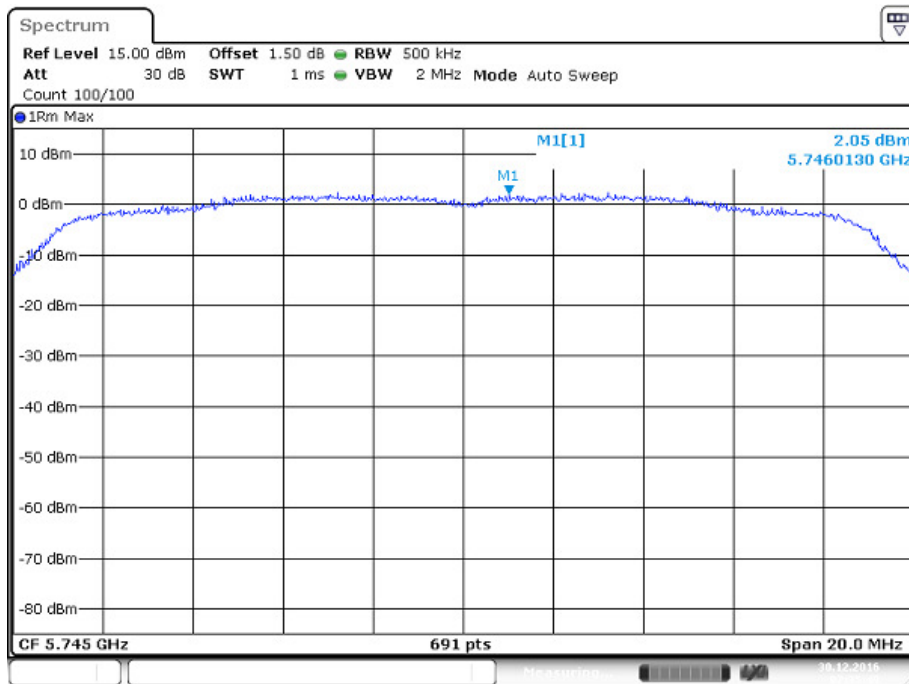
5785MHz



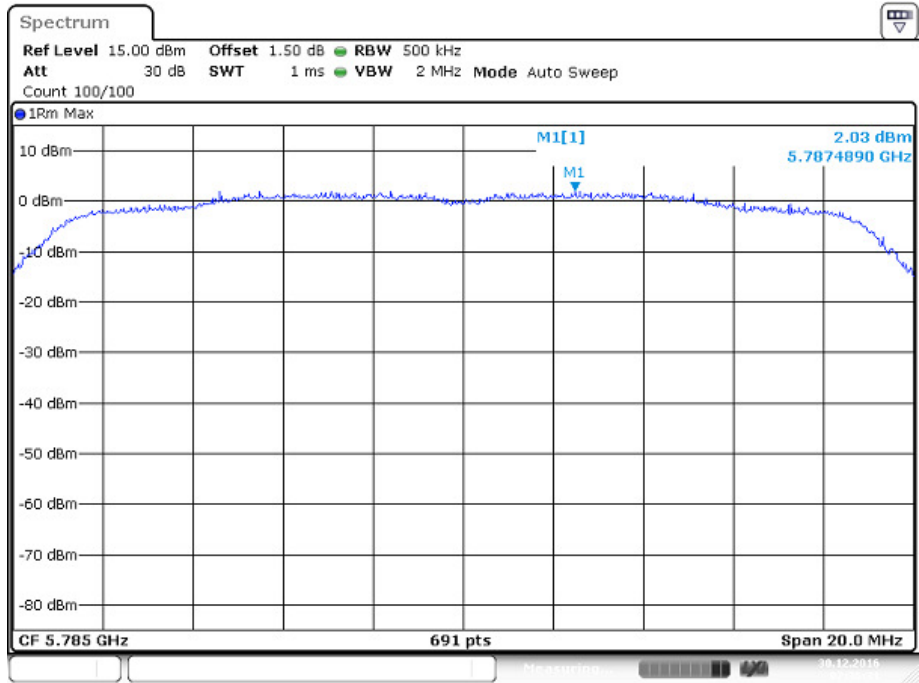
5825MHz



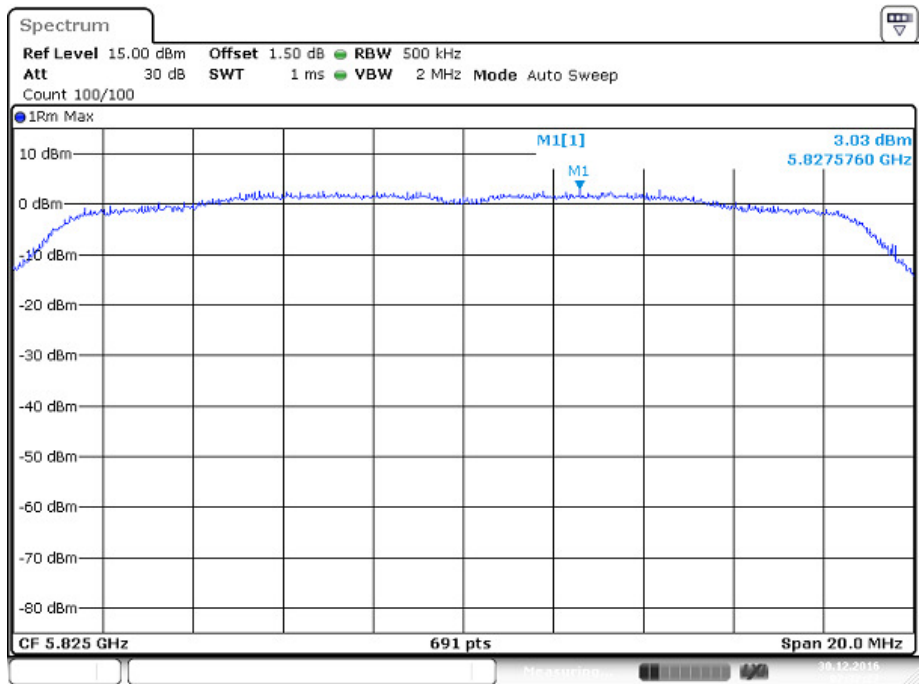
**IEEE 802.11n HT20 mode / 5725 ~ 5850MHz(chain 1)
5745MHz**



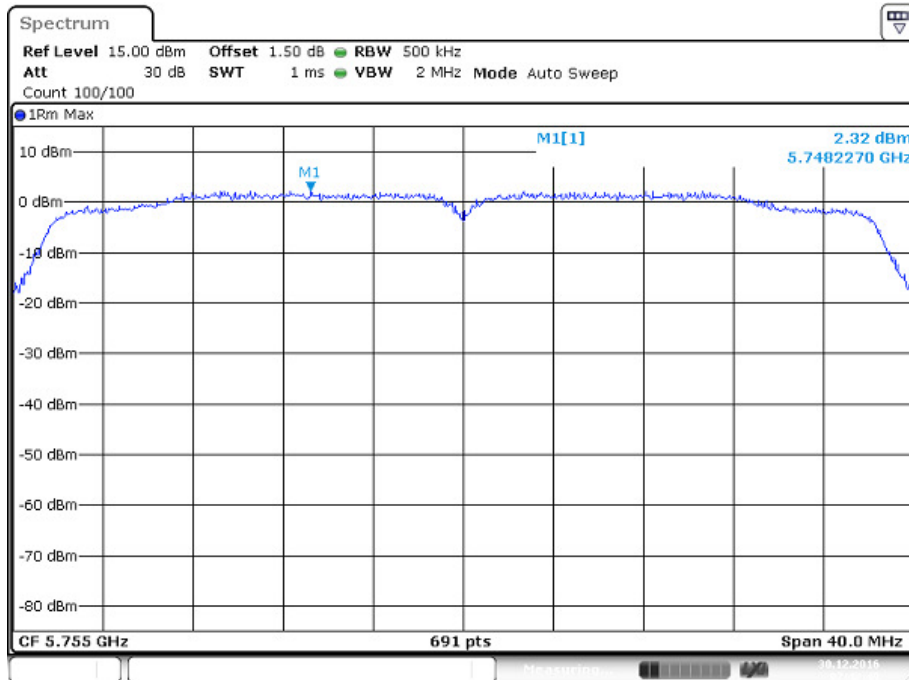
5785MHz



5825MHz

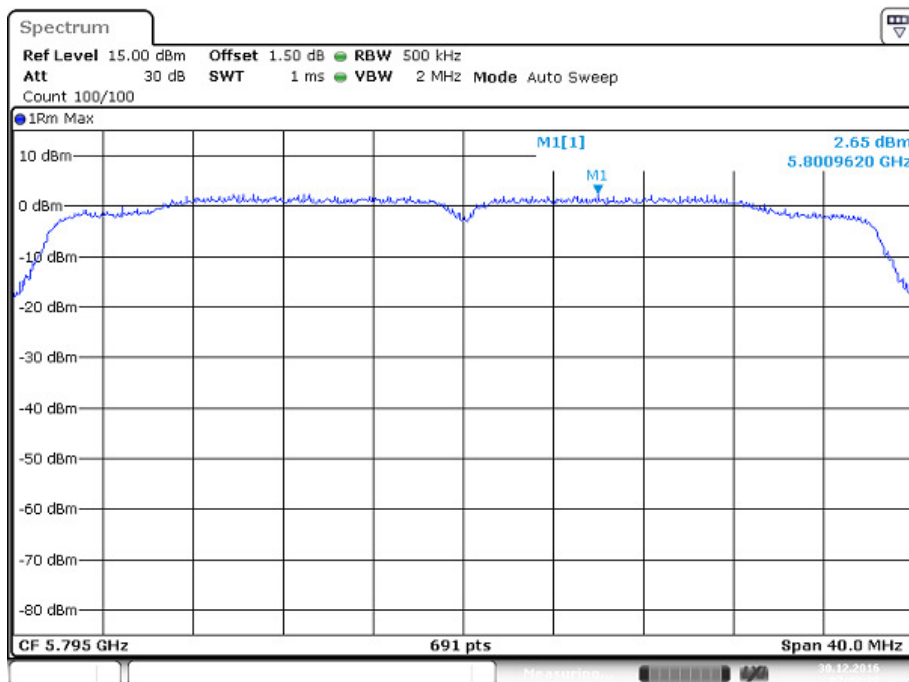


**IEEE 802.11n HT40 mode / 5725 ~ 5850MHz(chain0)
5755MHz**



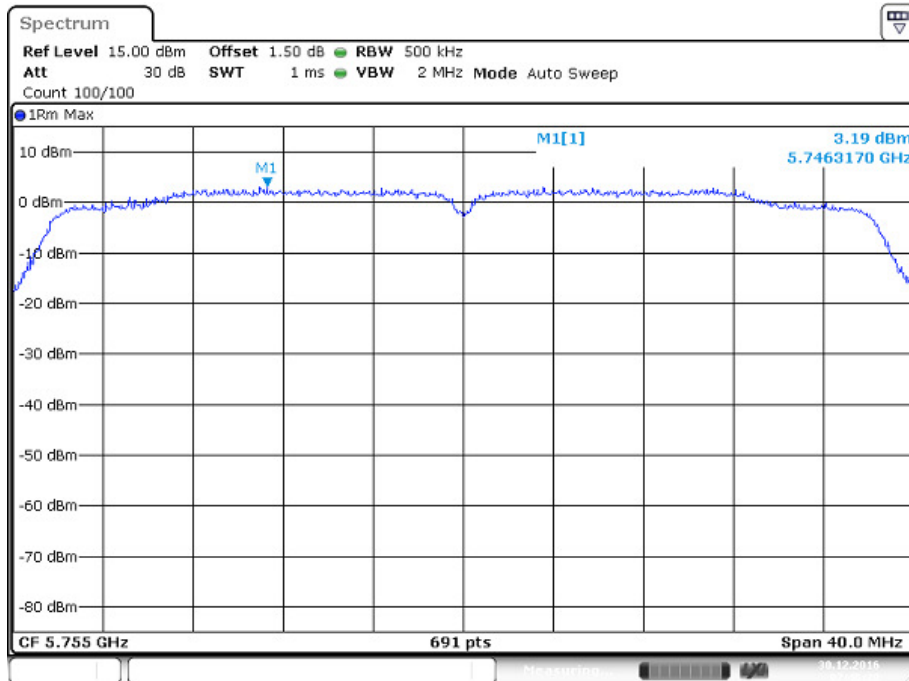
Date: 30 DEC 2016 07:42:49

5795MHz



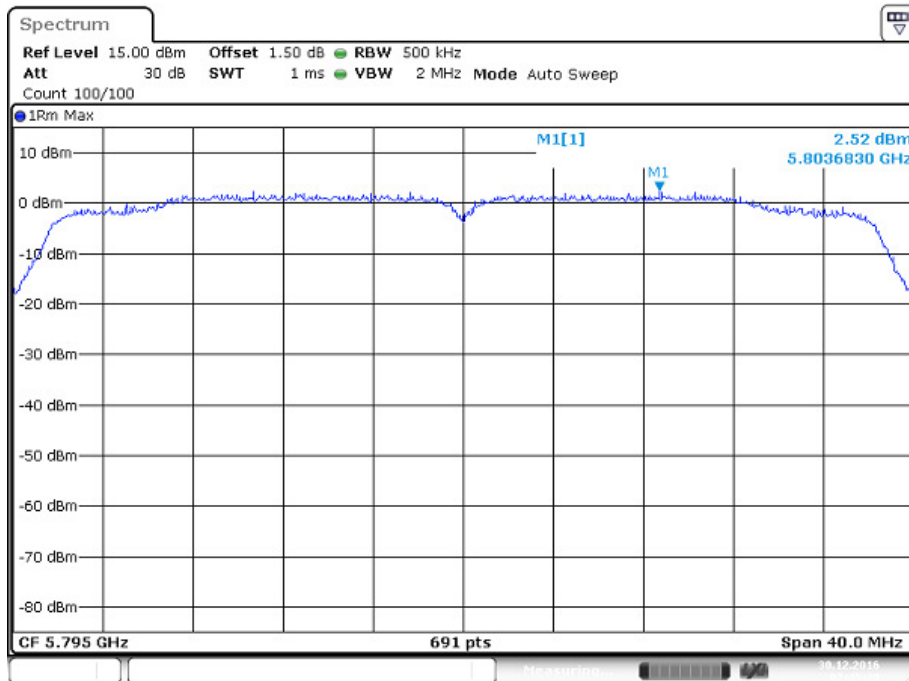
Date: 30 DEC 2016 07:43:38

**IEEE 802.11n HT40 mode / 5725 ~ 5850MHz(chain 1)
5755MHz**



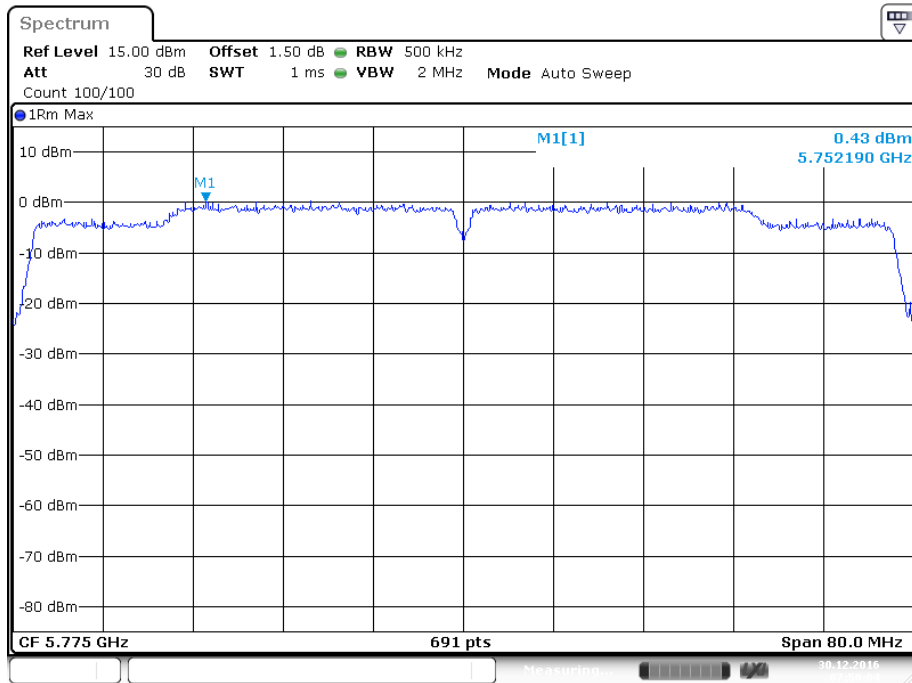
Date: 30 DEC 2016 07:46:21

5795MHz

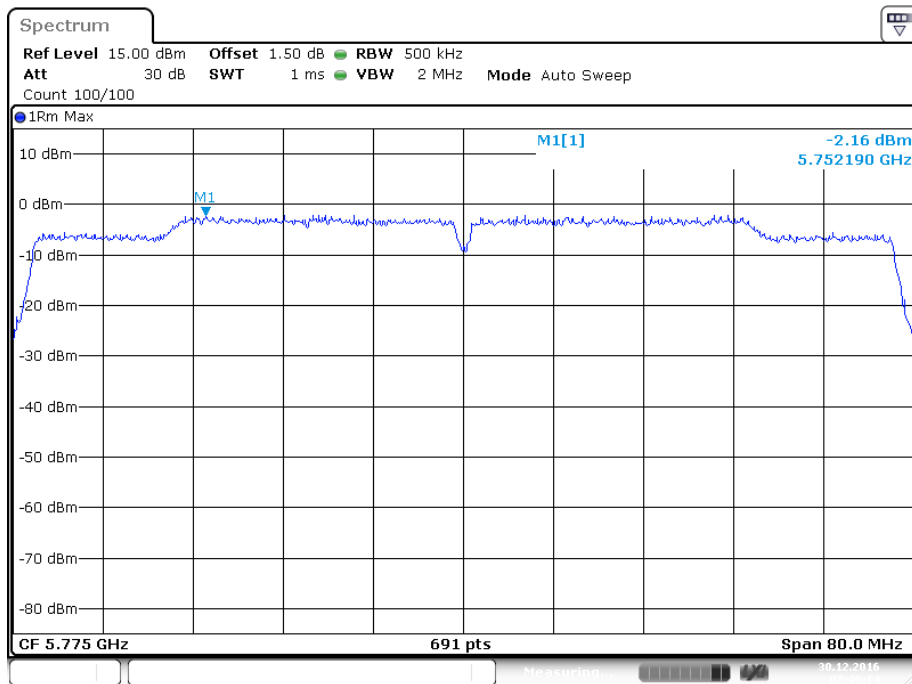


Date: 30 DEC 2016 07:45:21

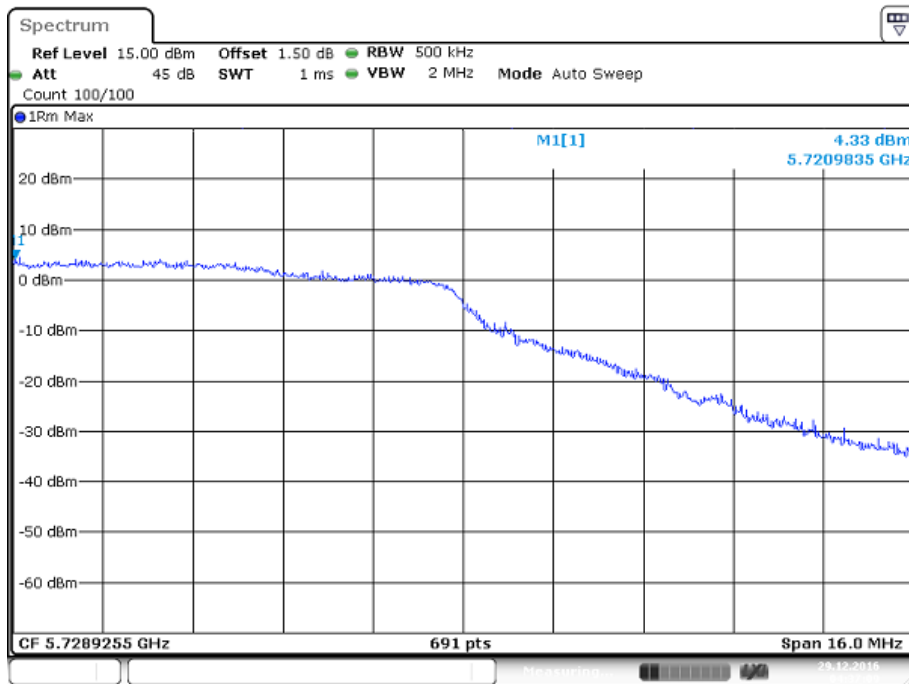
**IEEE 802.11ac VHT80 mode / 5725 ~ 5850MHz(chain0)
5775MHz**



**IEEE 802.11ac VHT80 mode / 5725 ~ 5850MHz(chain 1)
5775MHz**

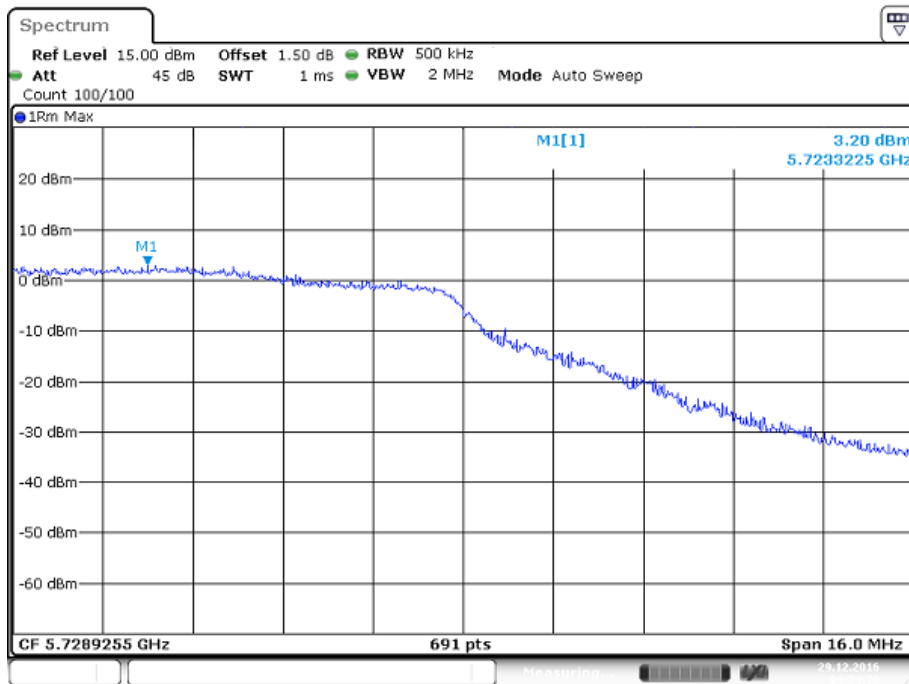


**IEEE 802.11ac VHT20 mode Cross Band edge / 5725 ~ 5850MHz(chain 0)
5720MHz**



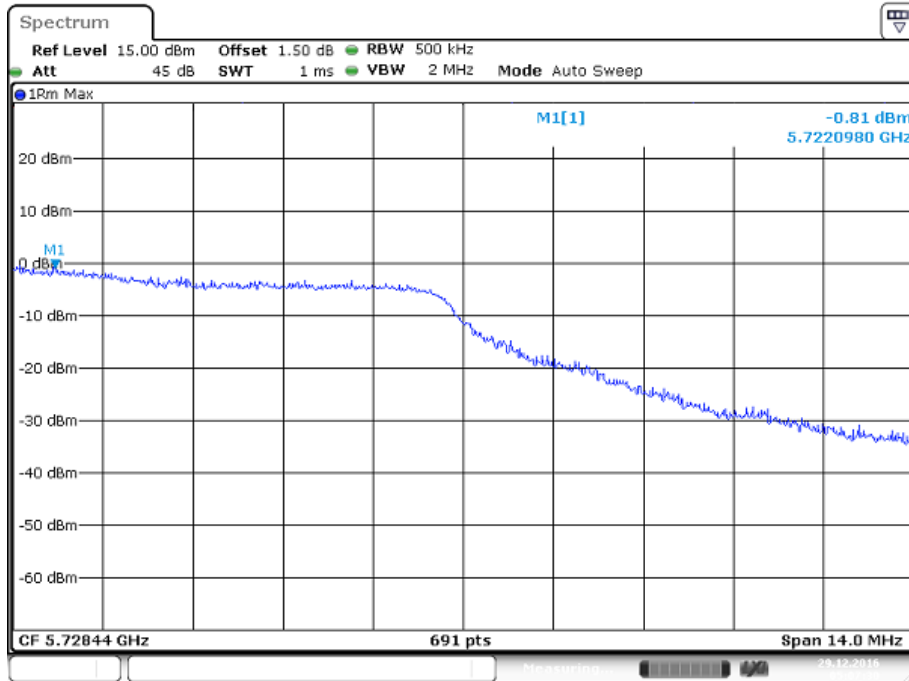
Date: 29 DEC 2016 04:27:10

**IEEE 802.11ac VHT20 mode Cross Band edge / 5725 ~ 5850MHz(chain 1)
5720MHz**



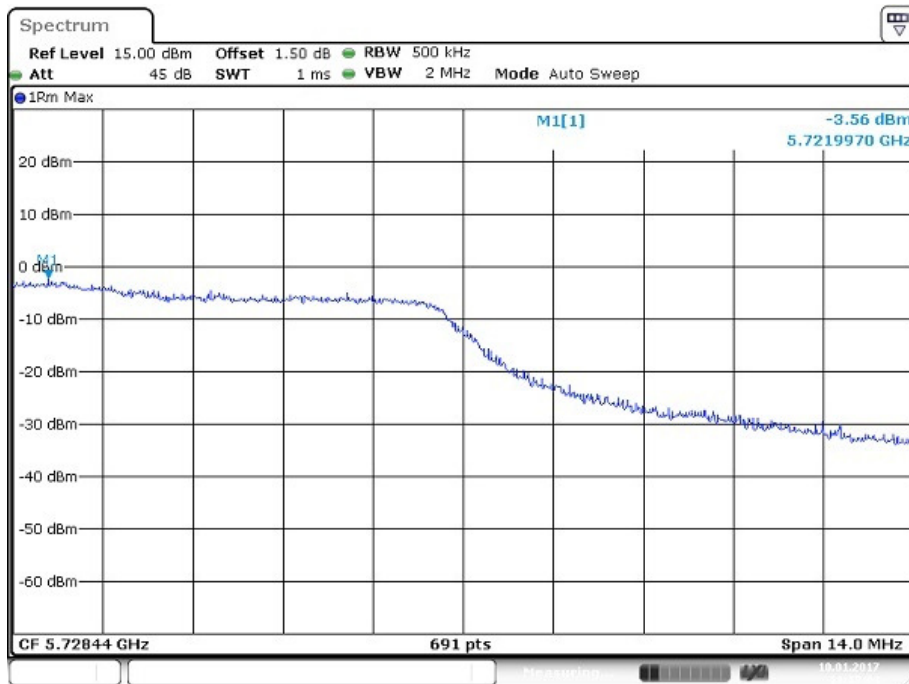
Date: 29 DEC 2016 04:24:20

**IEEE 802.11ac VHT40 mode Cross Band edge / 5725 ~ 5850MHz(chain 0)
5710MHz**



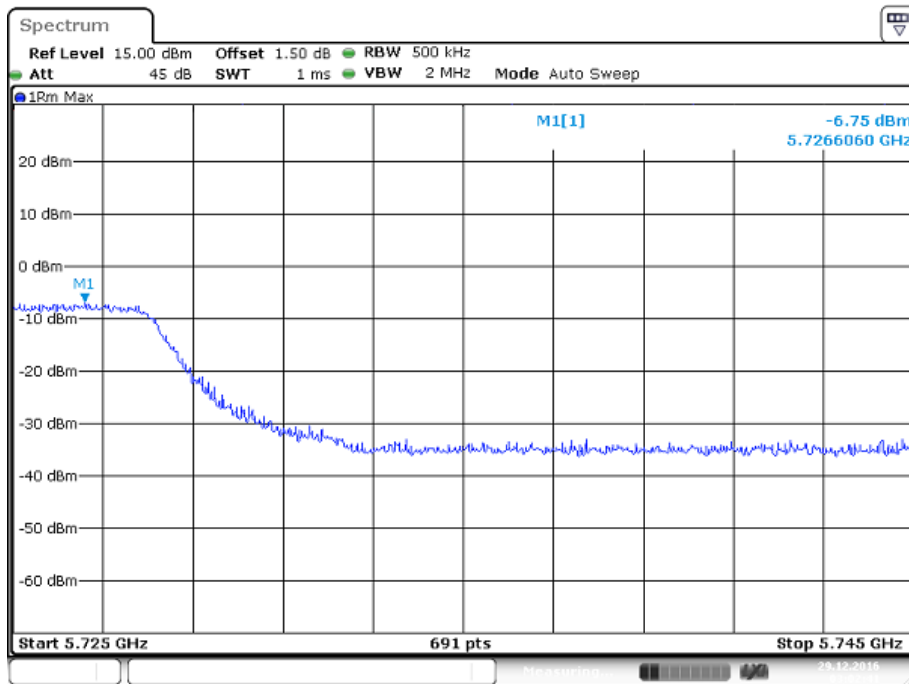
Date: 29 DEC 2016 05:07:31

**IEEE 802.11ac VHT40 mode Cross Band edge / 5725 ~ 5850MHz(chain 1)
5710MHz**



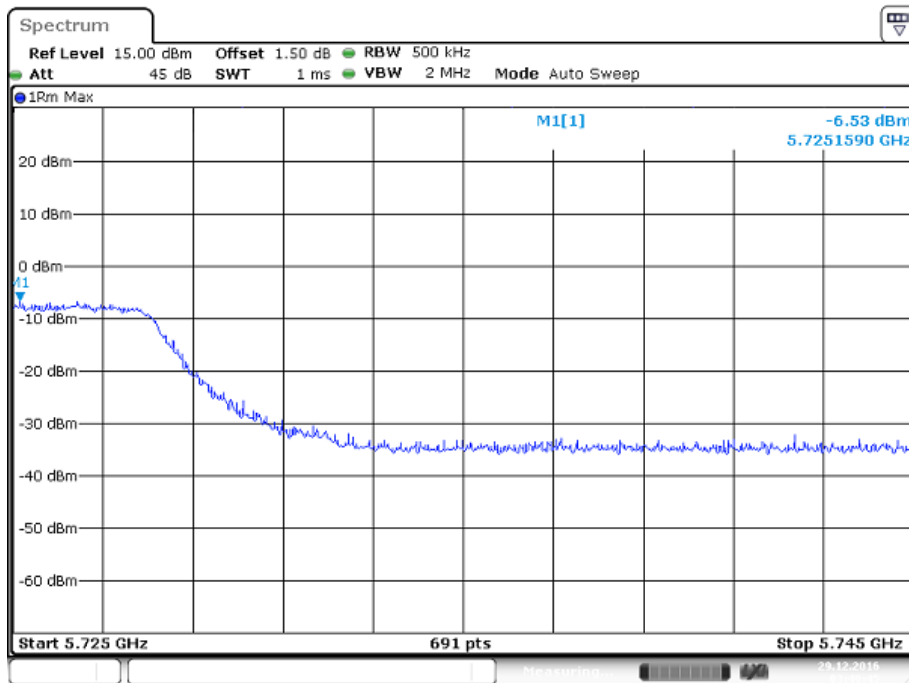
Date: 29 DEC 2016 05:51:23

**IEEE 802.11ac VHT80 mode Cross Band edge / 5725 ~ 5850MHz(chain 0)
5690MHz**



Date: 29 DEC 2016 03:02:42

**IEEE 802.11ac VHT80 mode Cross Band edge / 5725 ~ 5850MHz(chain 1)
5690MHz**



Date: 29 DEC 2016 03:49:45

----- END OF REPORT -----