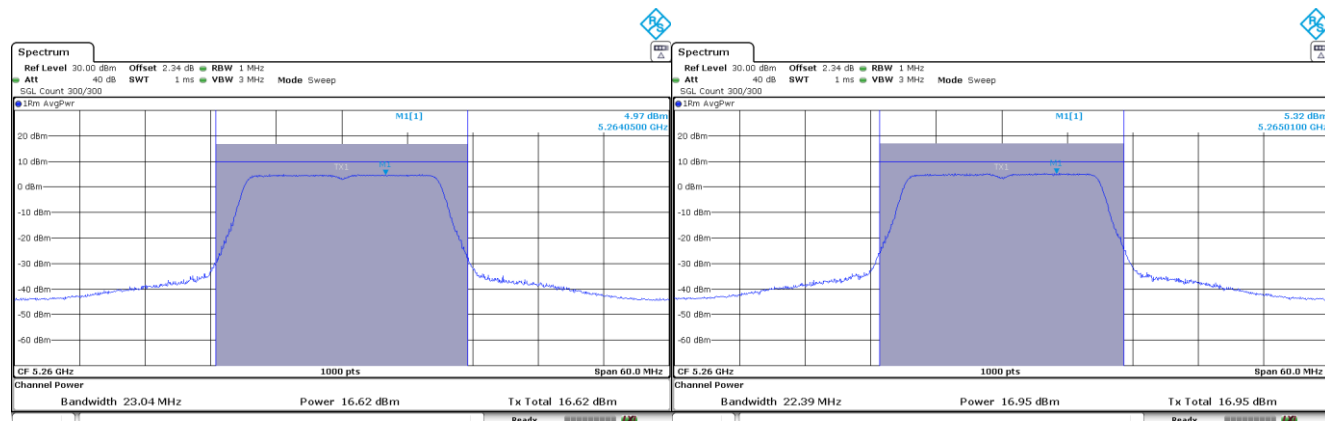


Mode : 802.11n HT20 – CDD – 20MHz – MIMO –CORE 0 & CORE 2

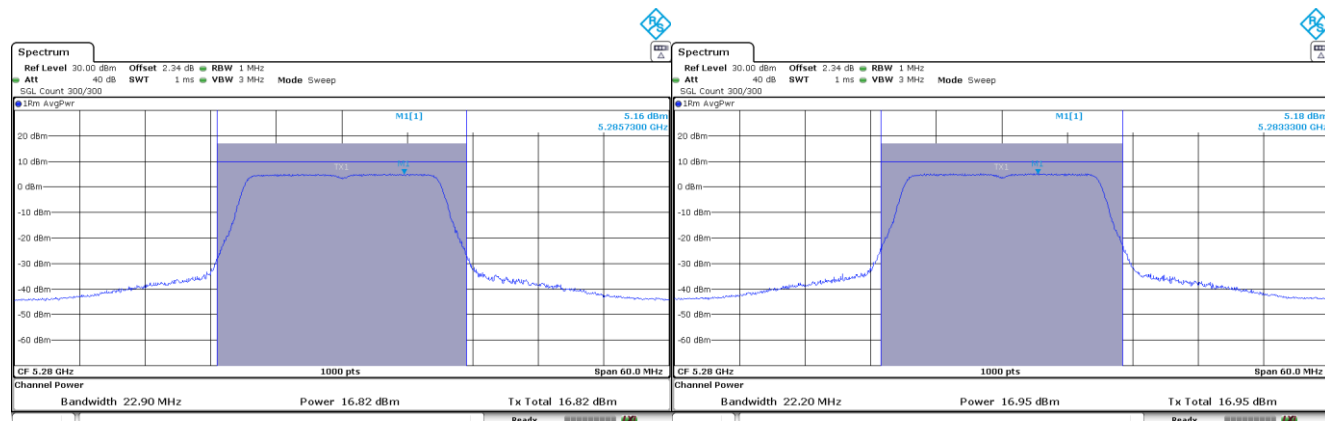
Channel 52



CORE 0

CORE 2

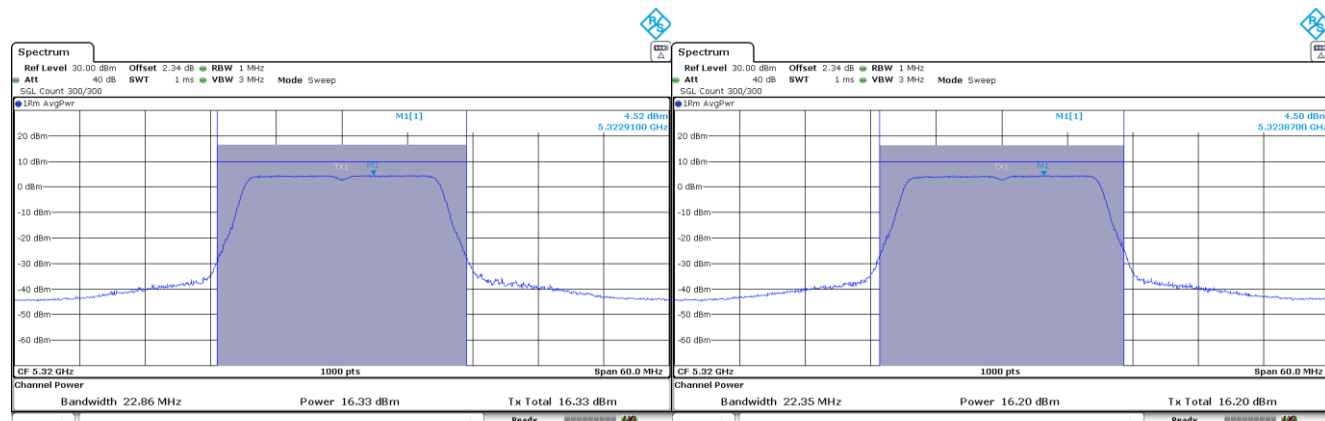
Channel 56



CORE 0

CORE 2

Channel 64

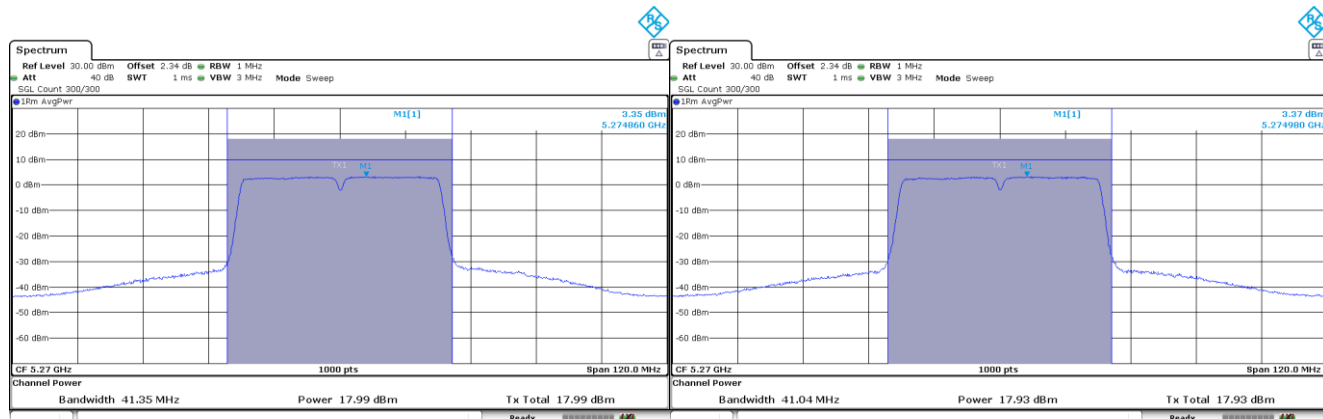


CORE 0

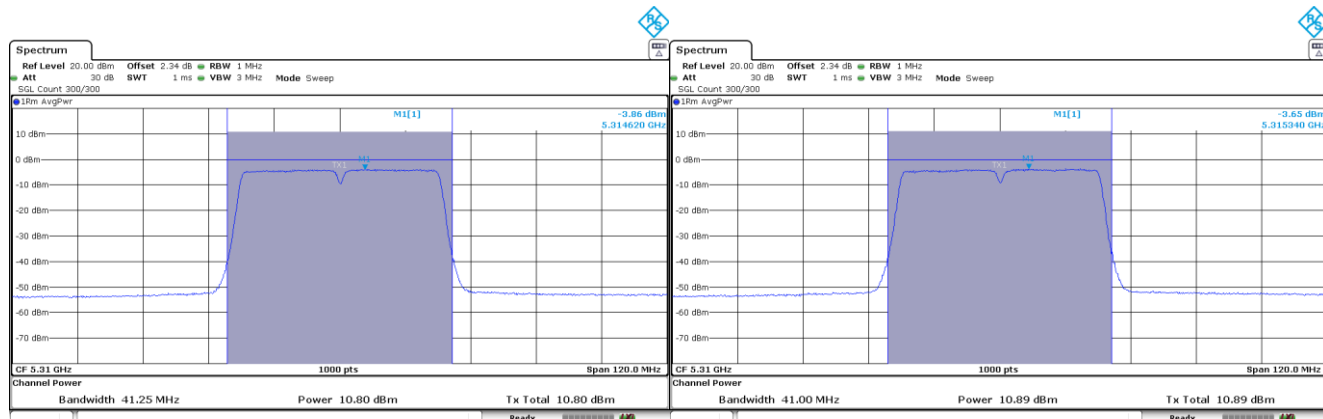
CORE 2

Mode : 802.11n HT40 – CDD – 40MHz – MIMO –CORE 0 & CORE 2

Channel 54

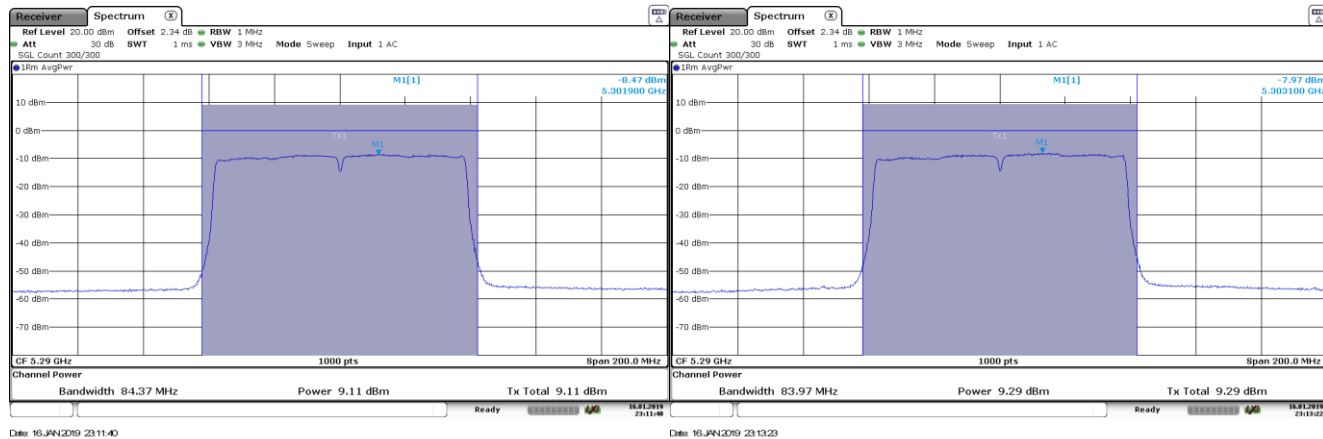


Channel 62



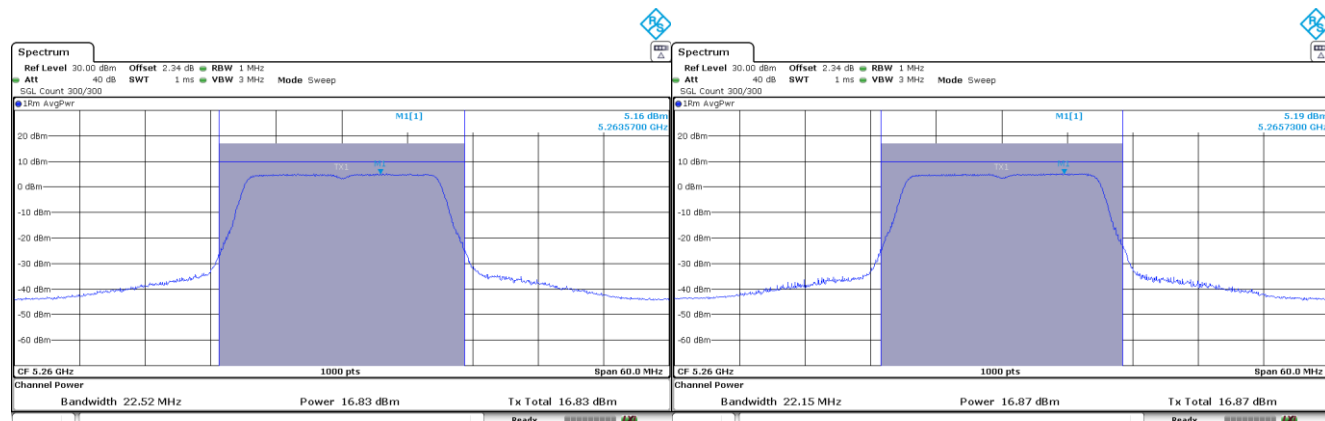
Mode : 802.11ac VHT80 – CDD – 80MHz – MIMO –CORE 0 & CORE 2

Channel 58



Mode : 802.11n HT20 – SDM – 20MHz – MIMO –CORE 0 & CORE 2

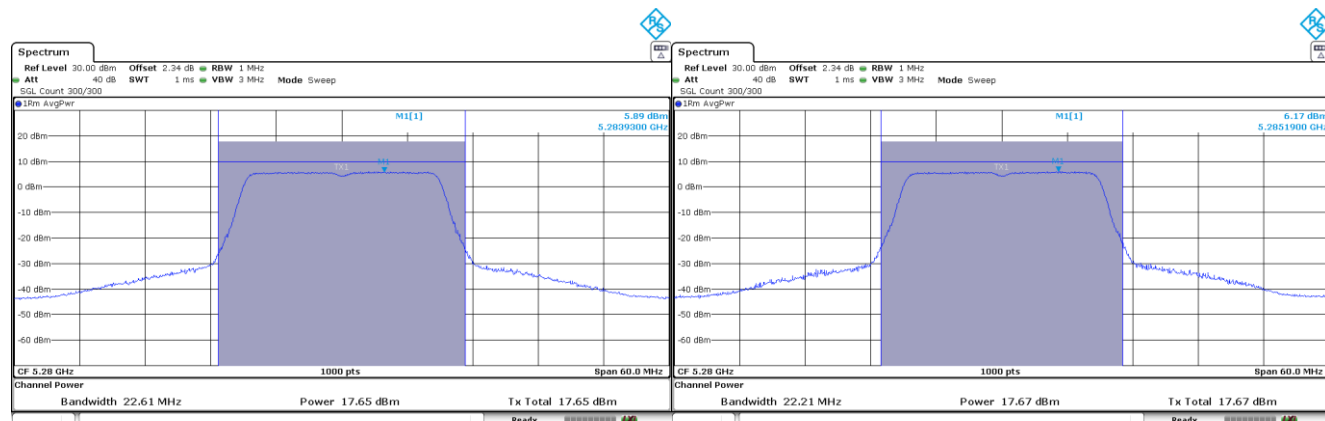
Channel 52



CORE 0

CORE 2

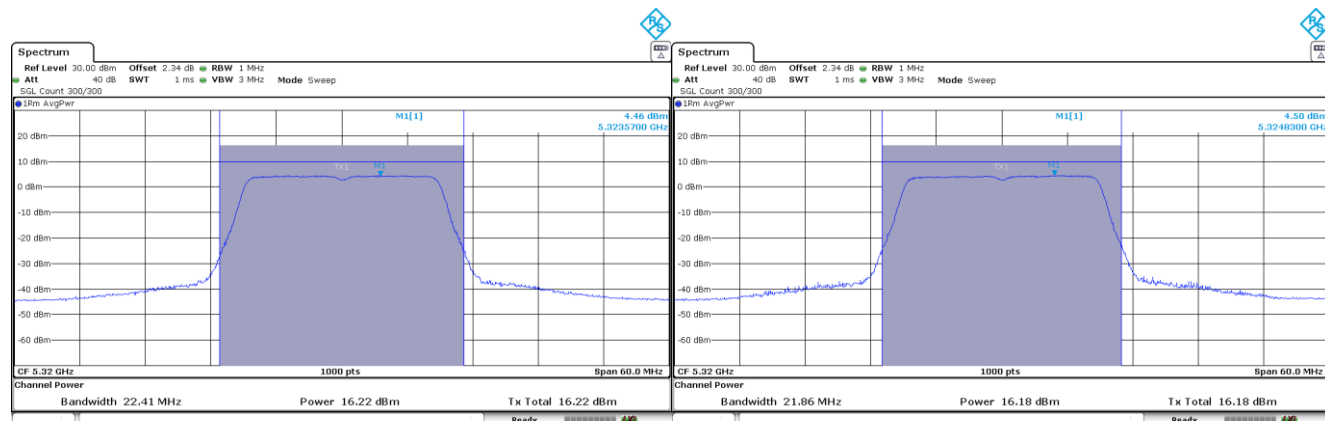
Channel 56



CORE 0

CORE 2

Channel 64

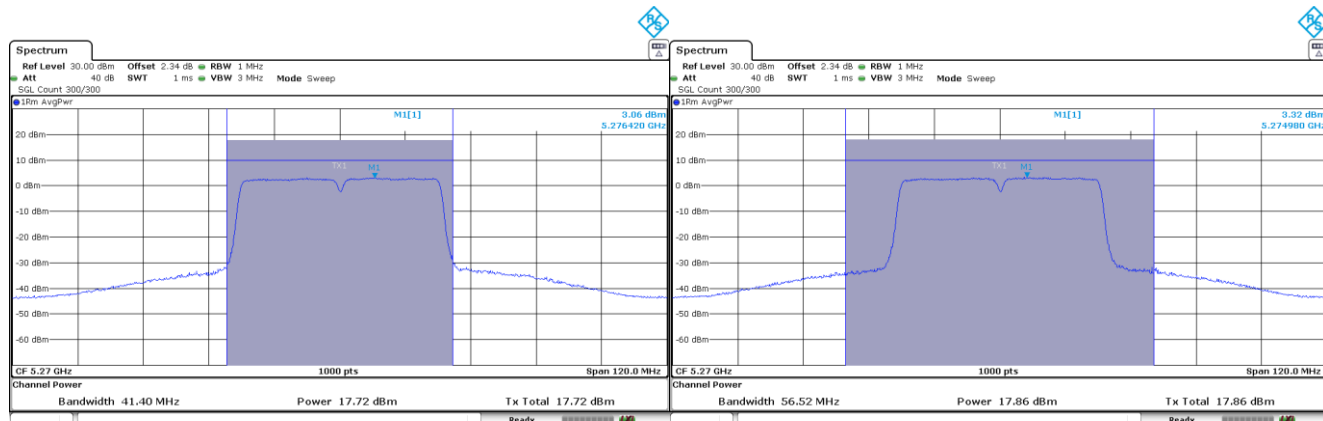


CORE 0

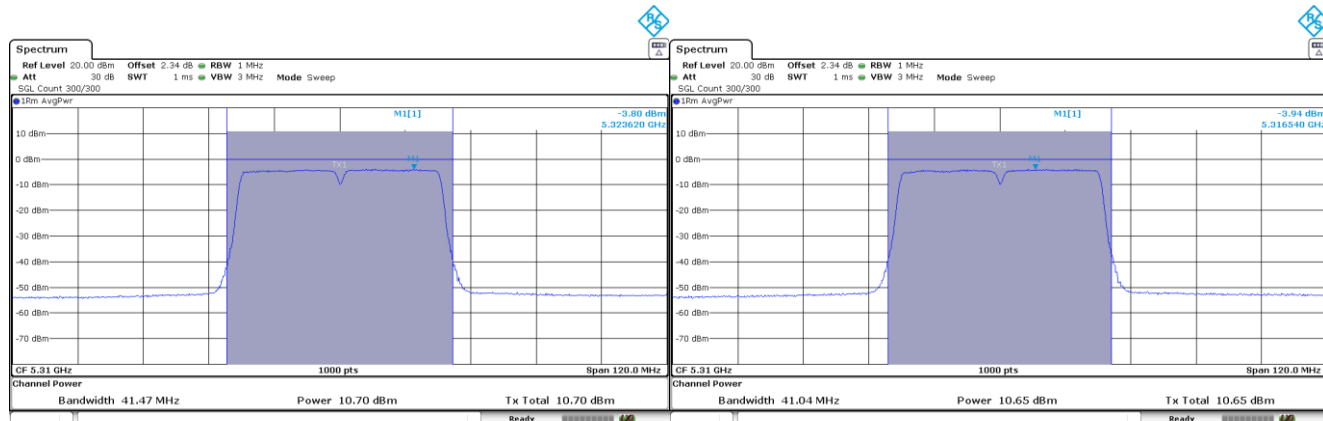
CORE 2

Mode : 802.11n HT40 – SDM – 40MHz – MIMO –CORE 0 & CORE 2

Channel 54

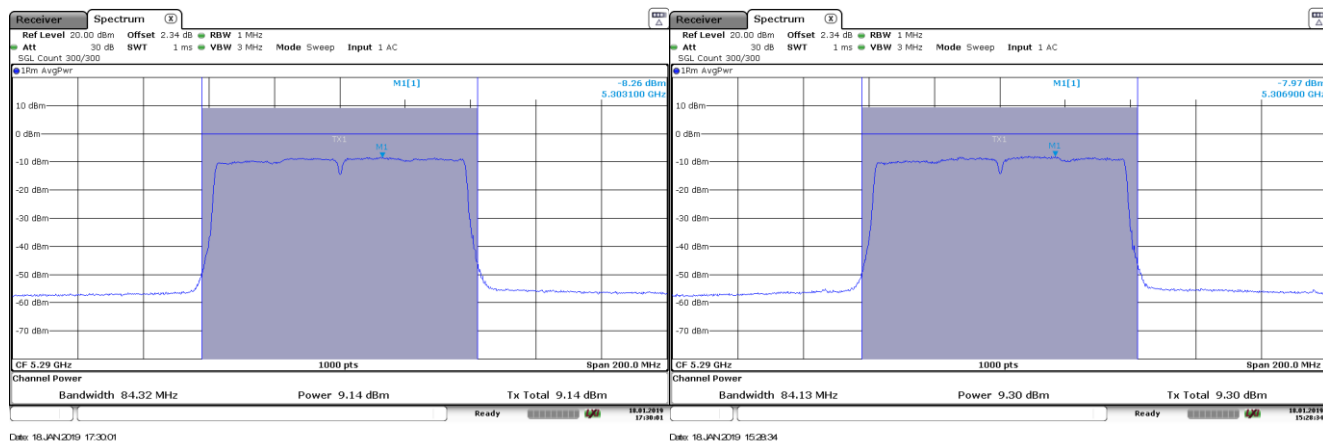


Channel 62



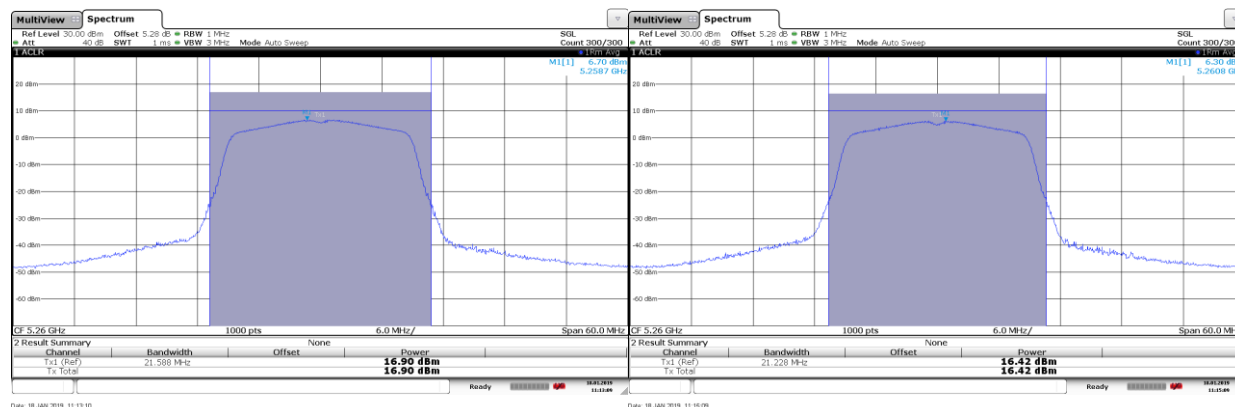
Mode : 802.11ac VHT80 – SDM – 80MHz – MIMO –CORE 0 & CORE 2

Channel 58



Mode : 802.11n HT20 – TxBF – 20MHz – MIMO –CORE 0 & CORE 2

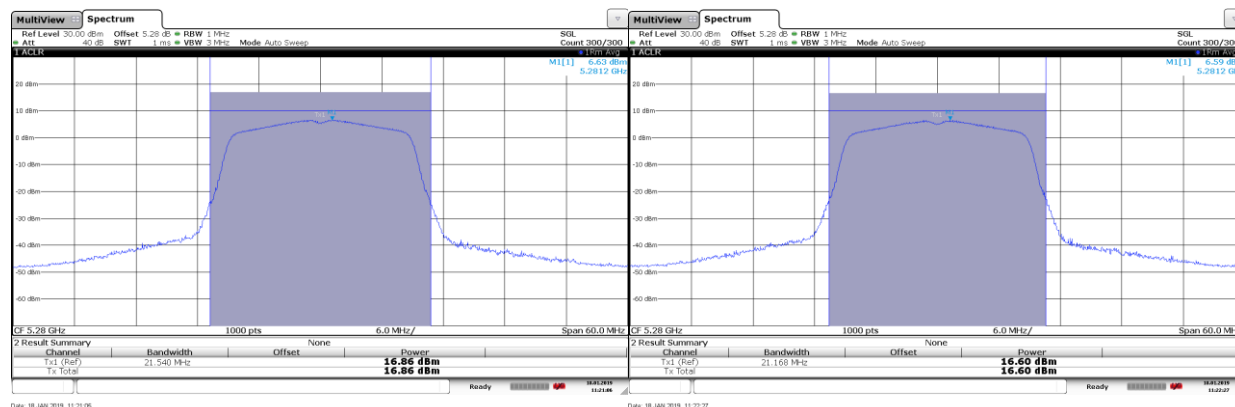
Channel 52



CORE 0

CORE 2

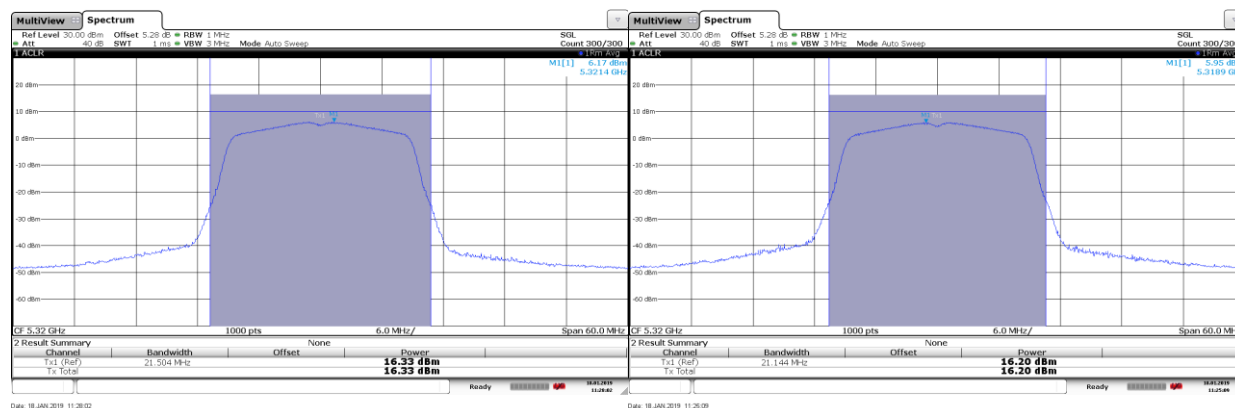
Channel 56



CORE 0

CORE 2

Channel 64

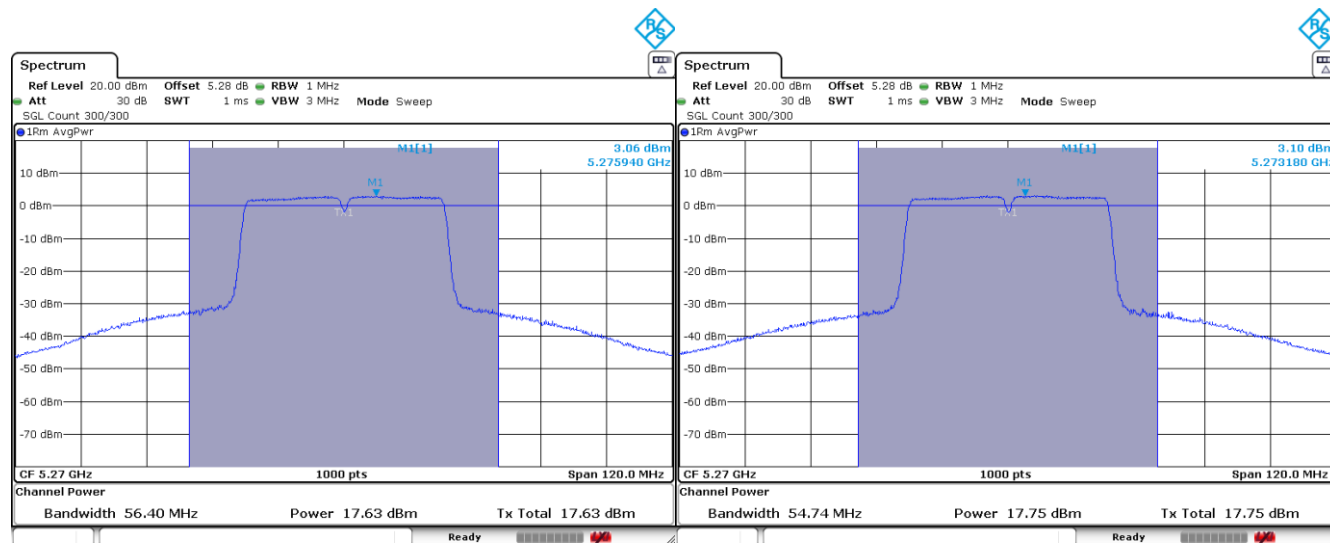


CORE 0

CORE 2

Mode : 802.11n HT40 – TxBF – 40MHz – MIMO –CORE 0 & CORE 2

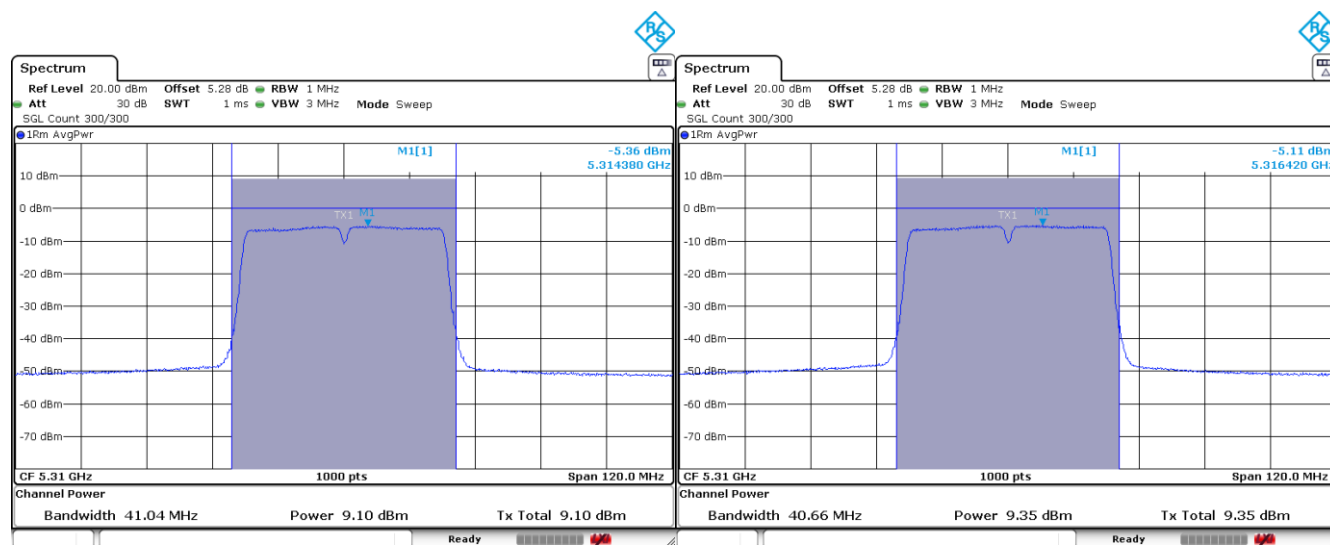
Channel 54



CORE 0

CORE 2

Channel 62

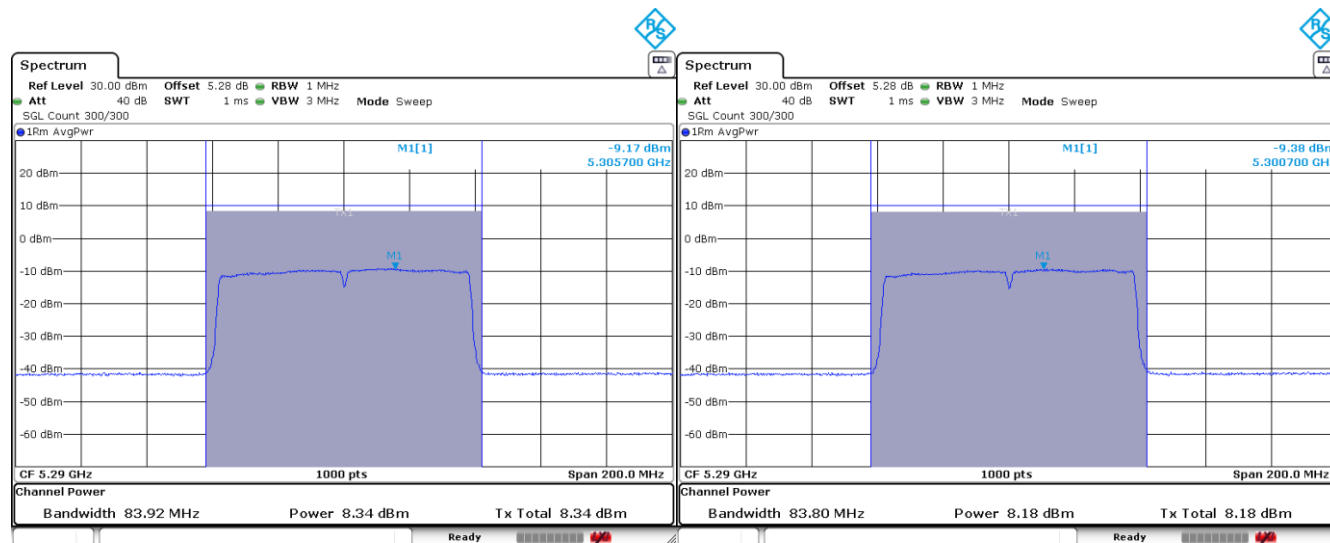


CORE 0

CORE 2

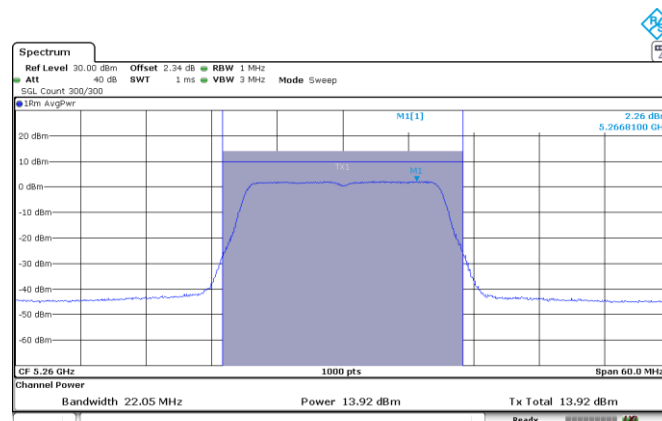
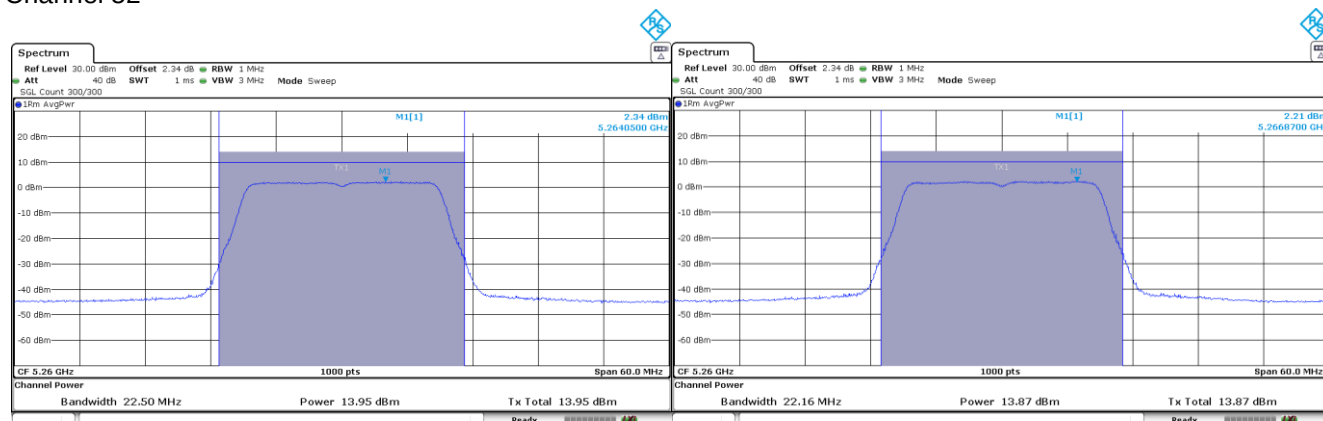
Mode : 802.11ac VHT80 – TxBF – 80MHz – MIMO – CORE 0 & CORE 2

Channel 58

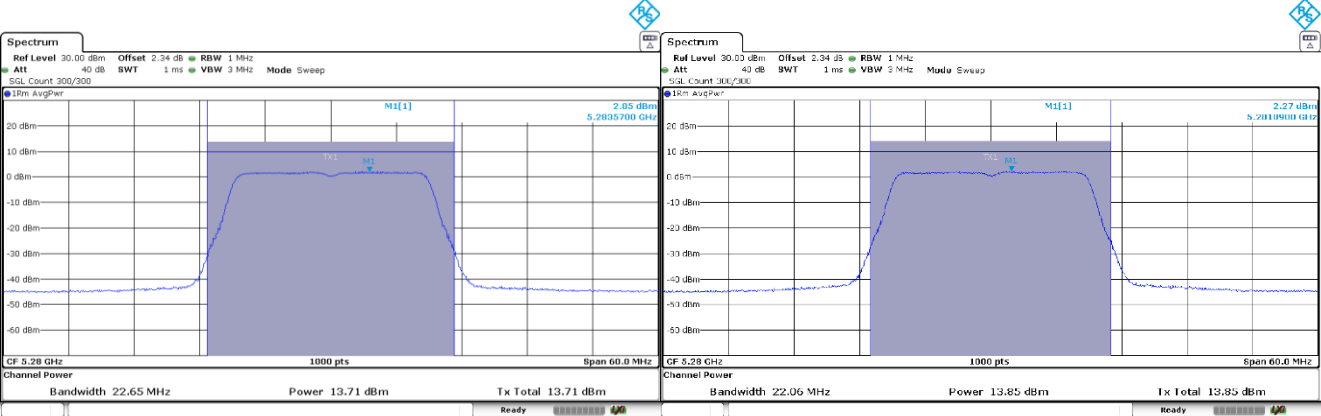


Mode : 802.11n HT20 – CDD – 20MHz – MIMO – CORE 0 & CORE 1 & CORE 2

Channel 52

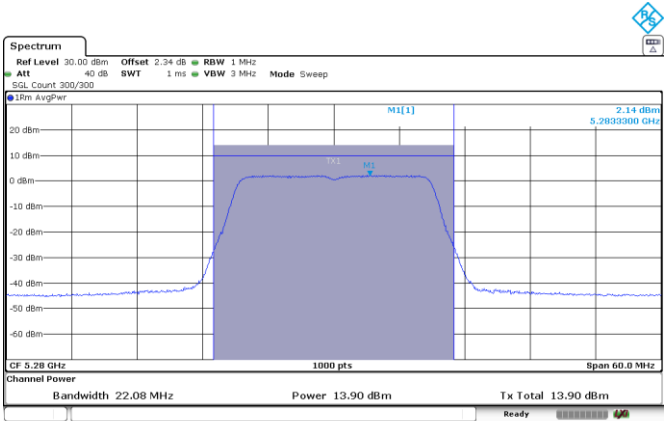


Channel 56



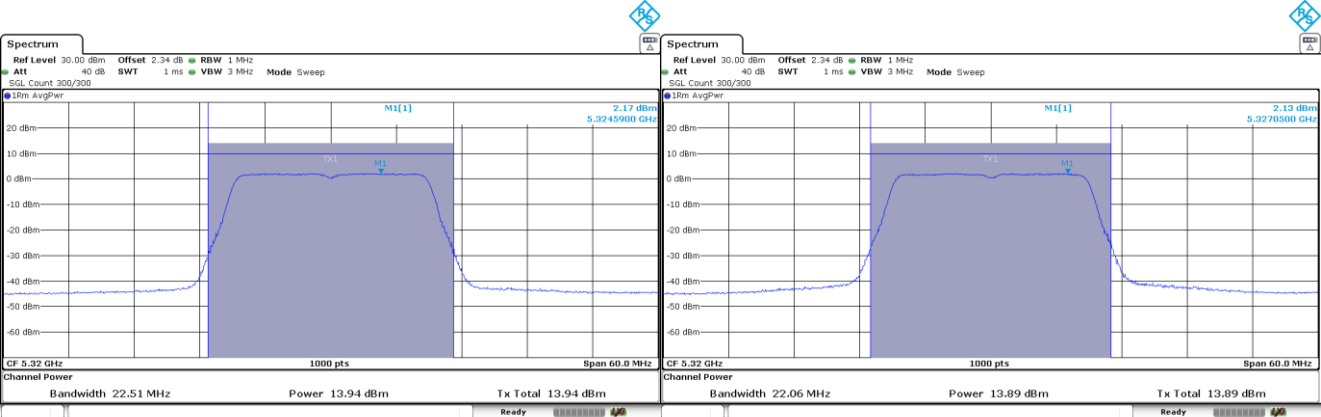
CORE 0

CORE 1



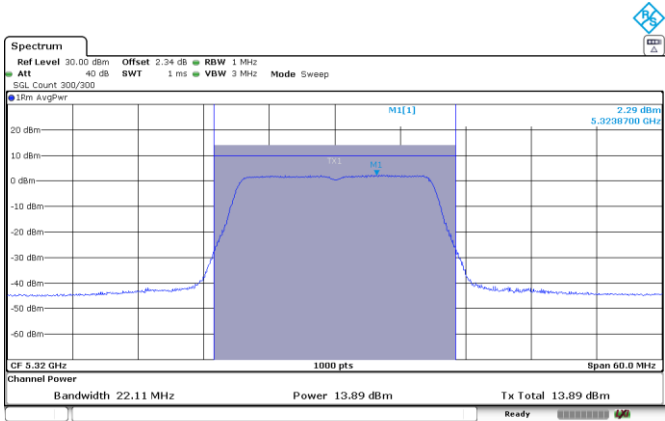
CORE 2

Channel 64



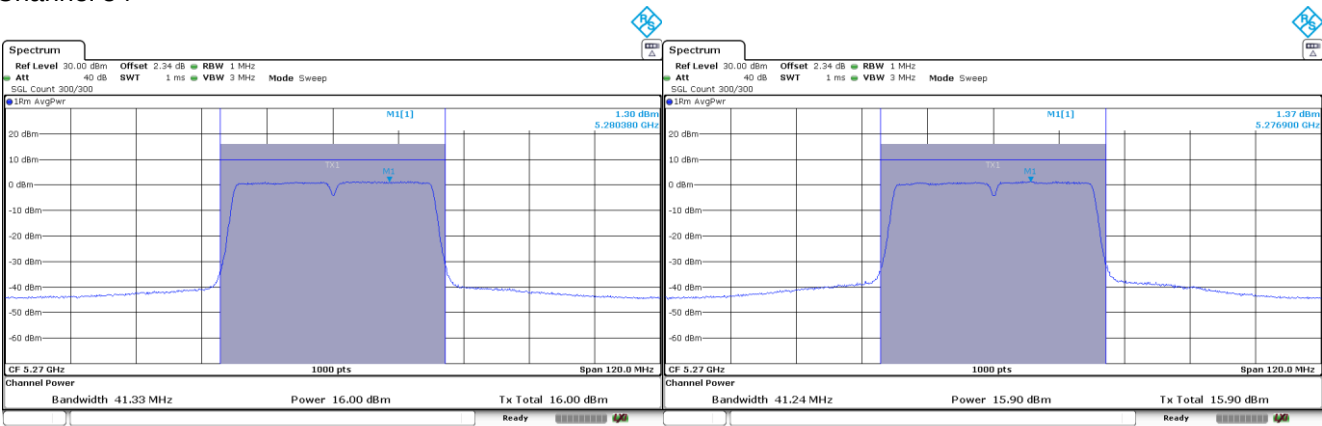
CORE 0

CORE 1



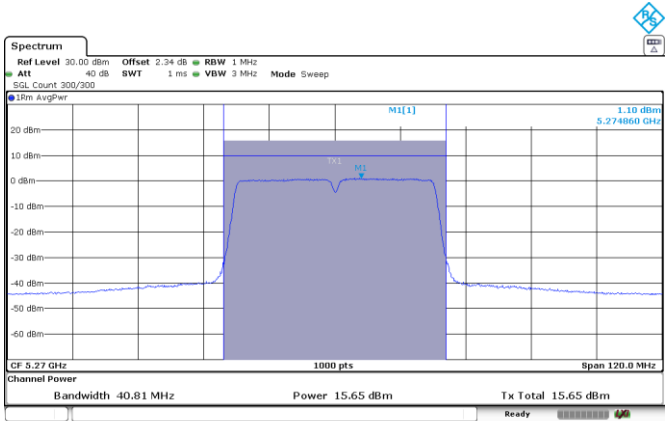
CORE 2

Mode : 802.11n HT40 – CDD – 40MHz – MIMO – CORE 0 & CORE 1 & CORE 2
Channel 54



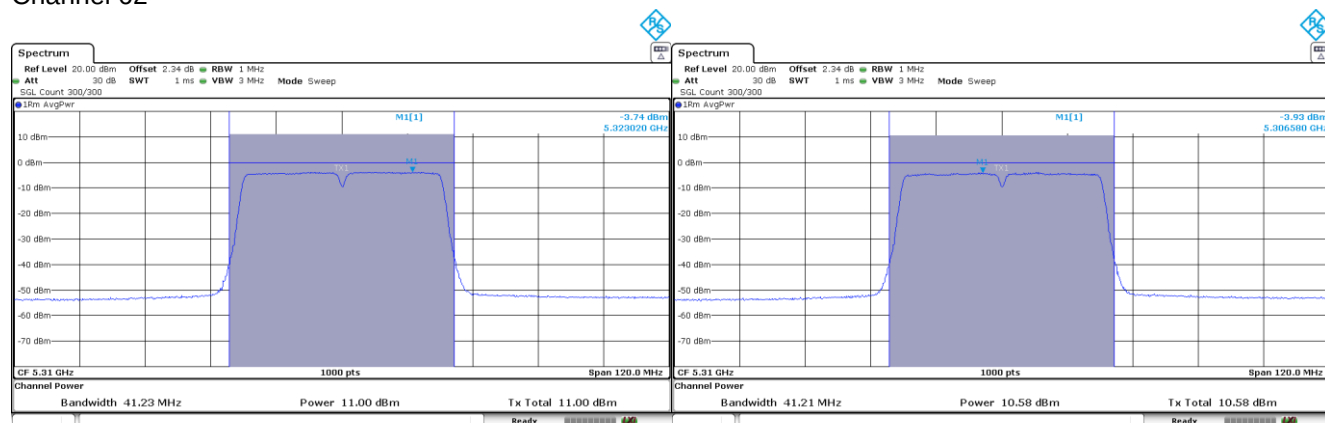
CORE 0

CORE 1



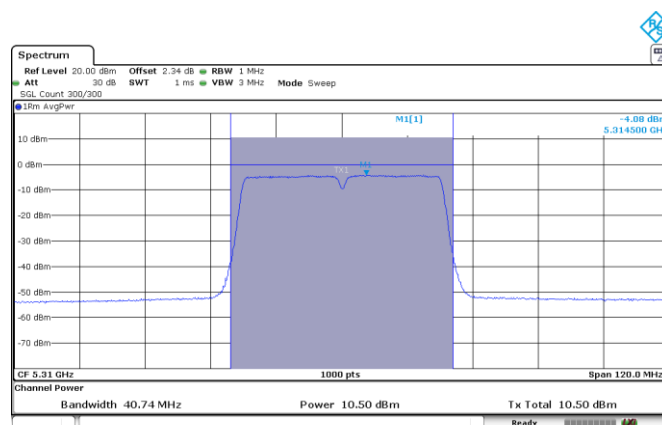
CORE 2

Channel 62



CORE 0

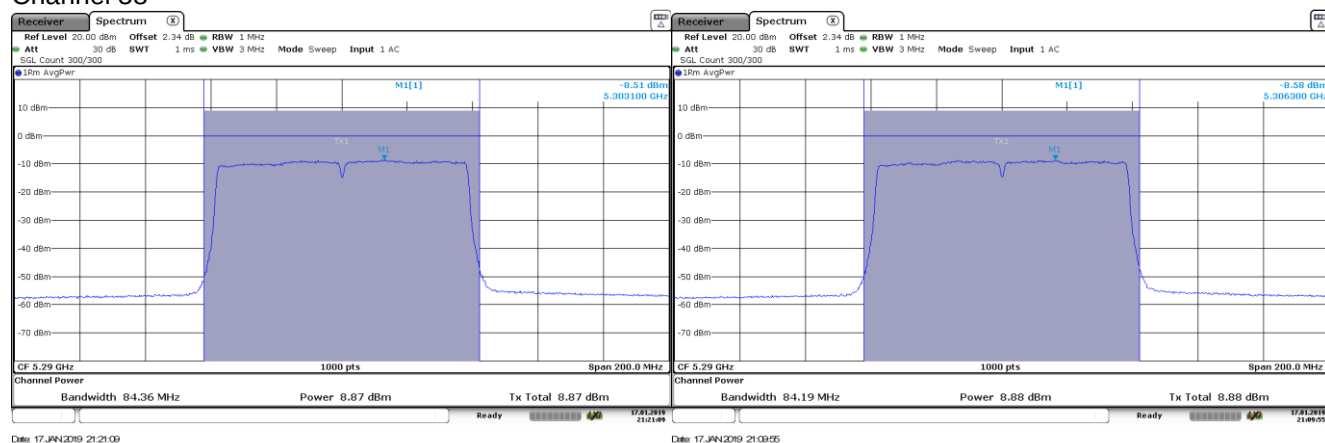
CORE 1



CORE 2

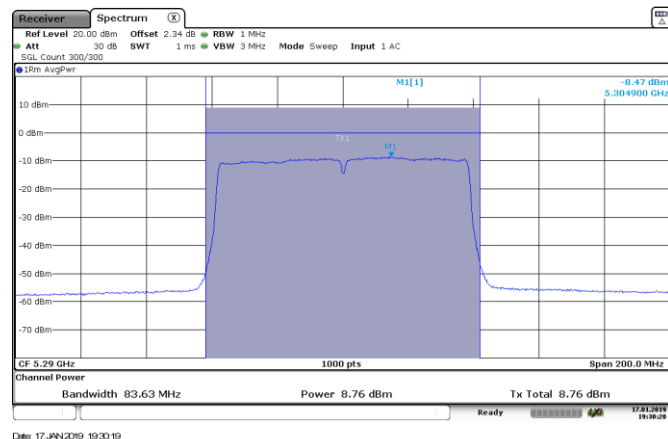
Mode : 802.11ac VHT80 – CDD – 80MHz – MIMO – CORE 0 & CORE 1 & CORE 2

Channel 58



CORE 0

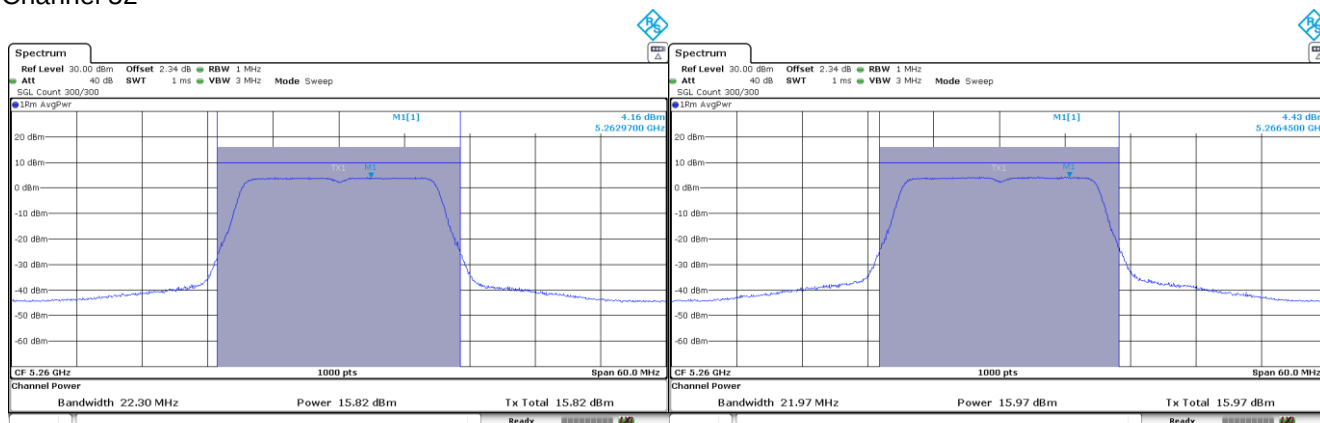
CORE 1



CORE 2

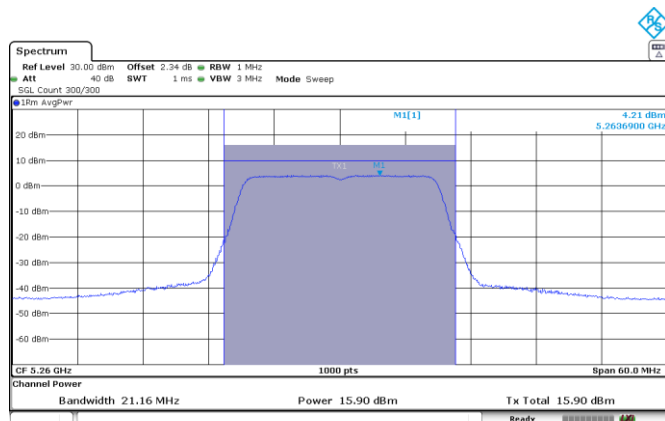
Mode : 802.11n HT20 – SDM – 20MHz – MIMO – CORE 0 & CORE 1 & CORE 2

Channel 52



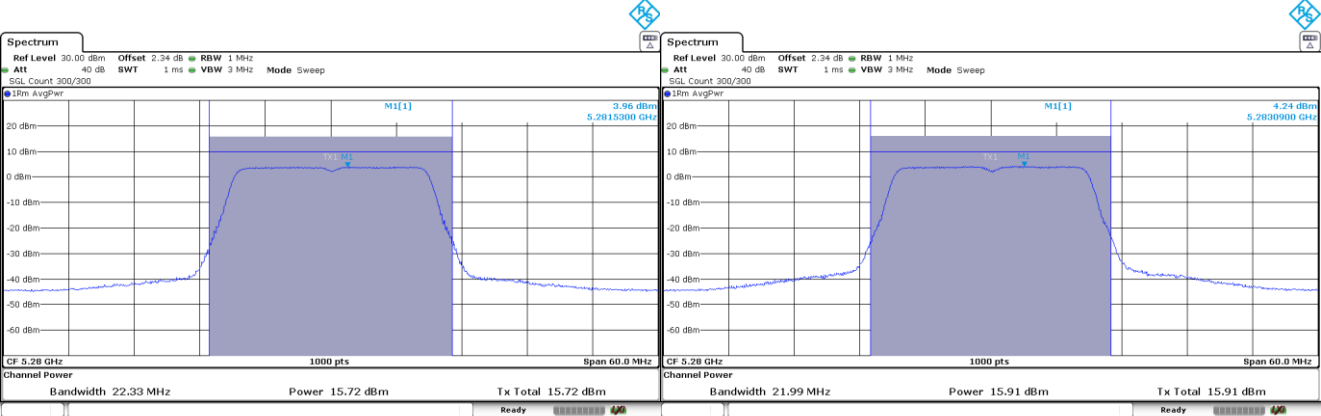
CORE 0

CORE 1



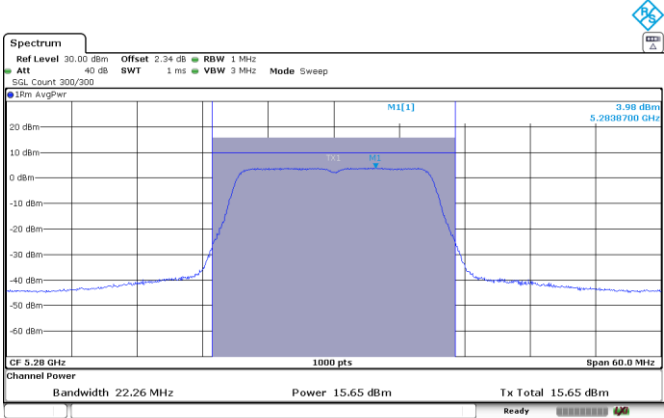
CORE 2

Channel 56



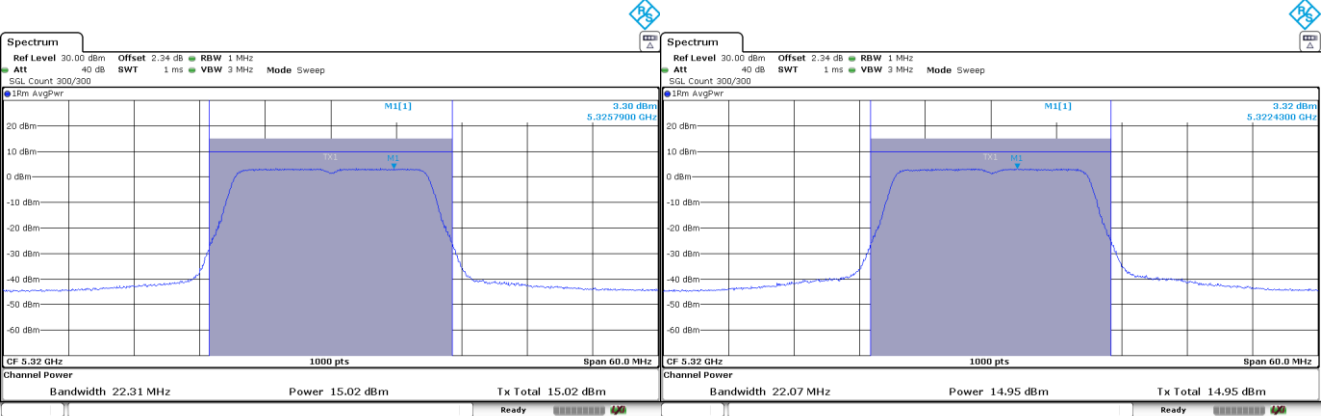
CORE 0

CORE 1



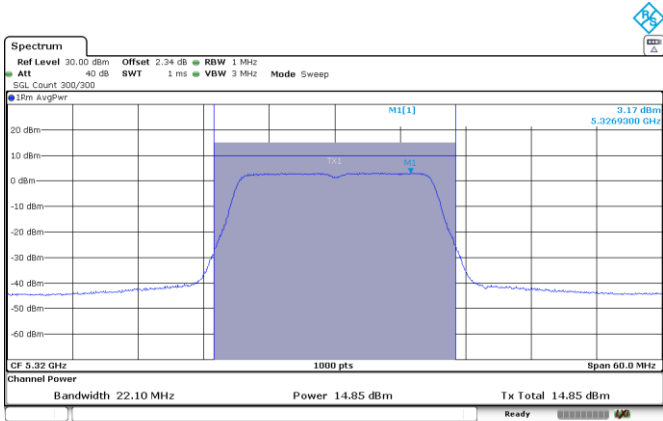
CORE 2

Channel 64



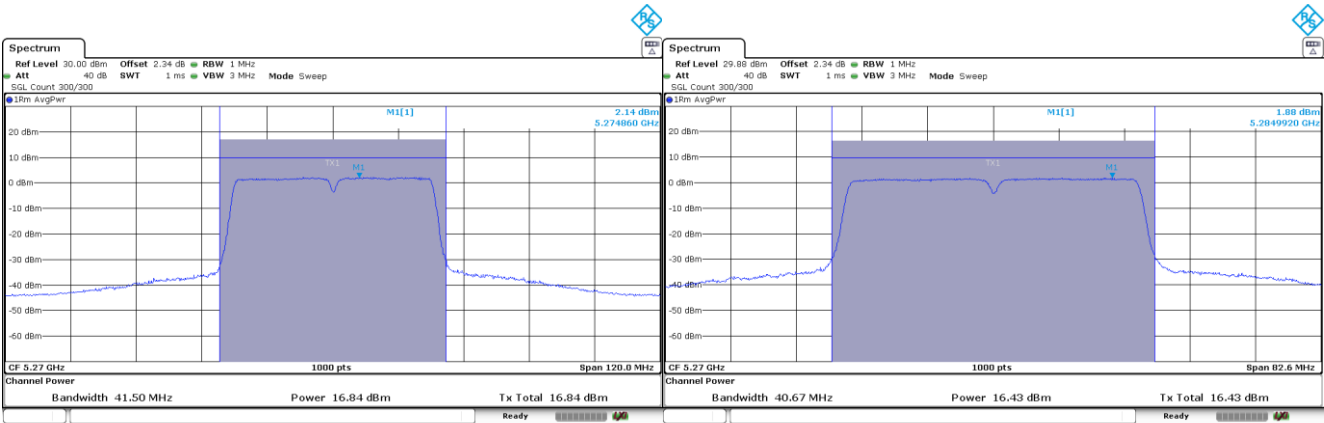
CORE 0

CORE 1



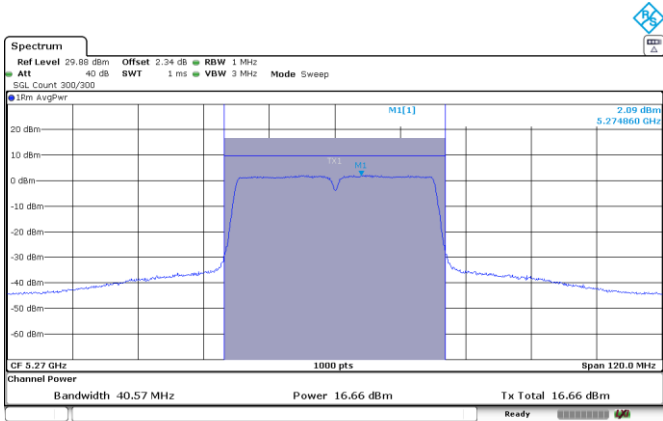
CORE 2

Mode : 802.11n HT40 – SDM – 40MHz – MIMO – CORE 0 & CORE 1 & CORE 2
Channel 54



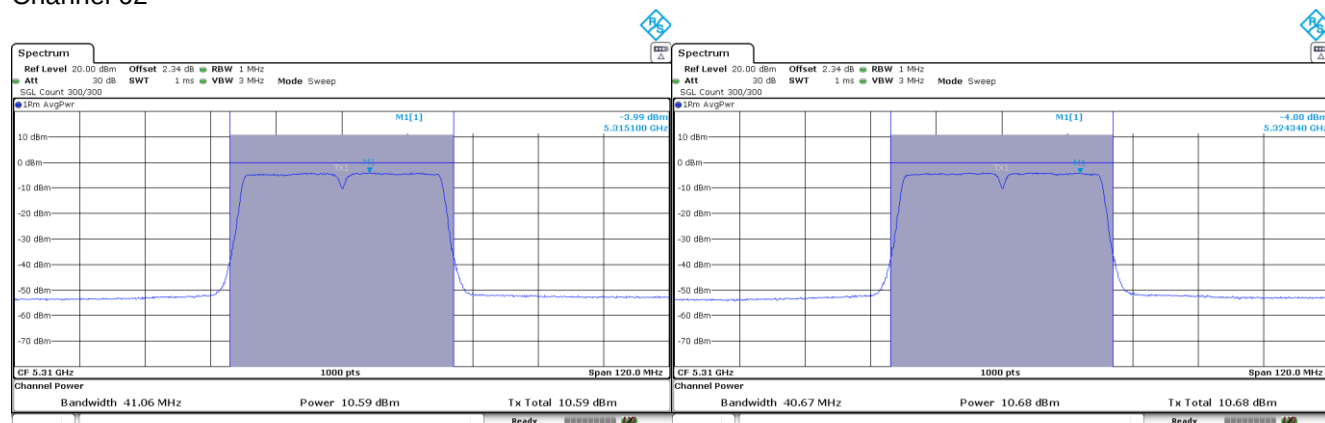
CORE 0

CORE 1



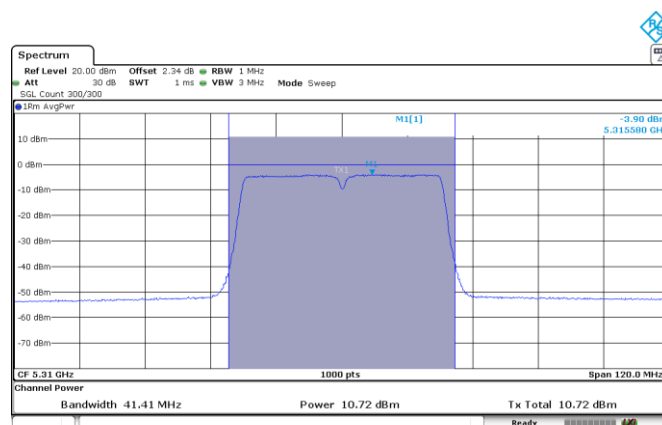
CORE 2

Channel 62



CORE 0

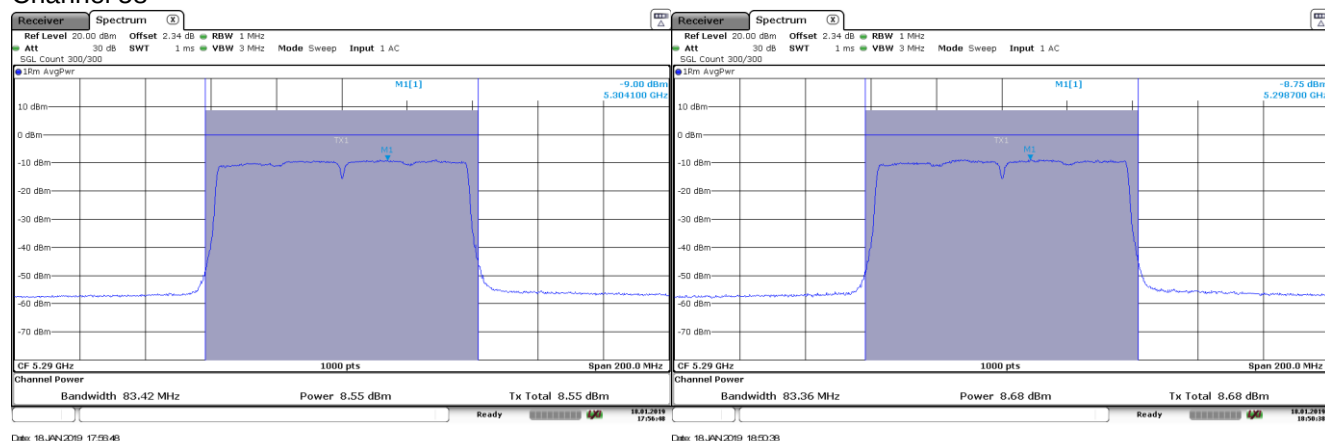
CORE 1



CORE 2

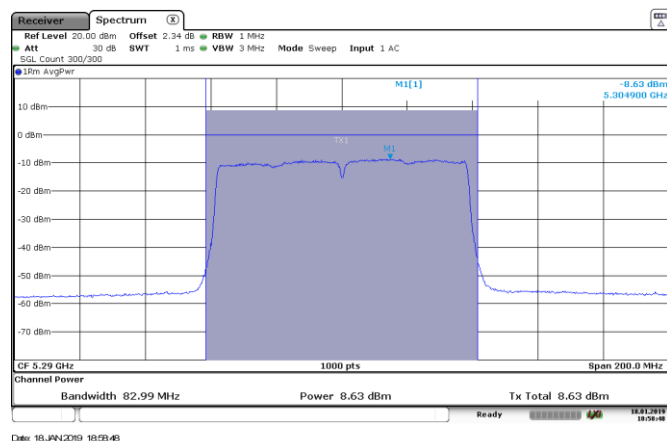
Mode : 802.11ac VHT80 – SDM – 80MHz – MIMO – CORE 0 & CORE 1 & CORE 2

Channel 58



CORE 0

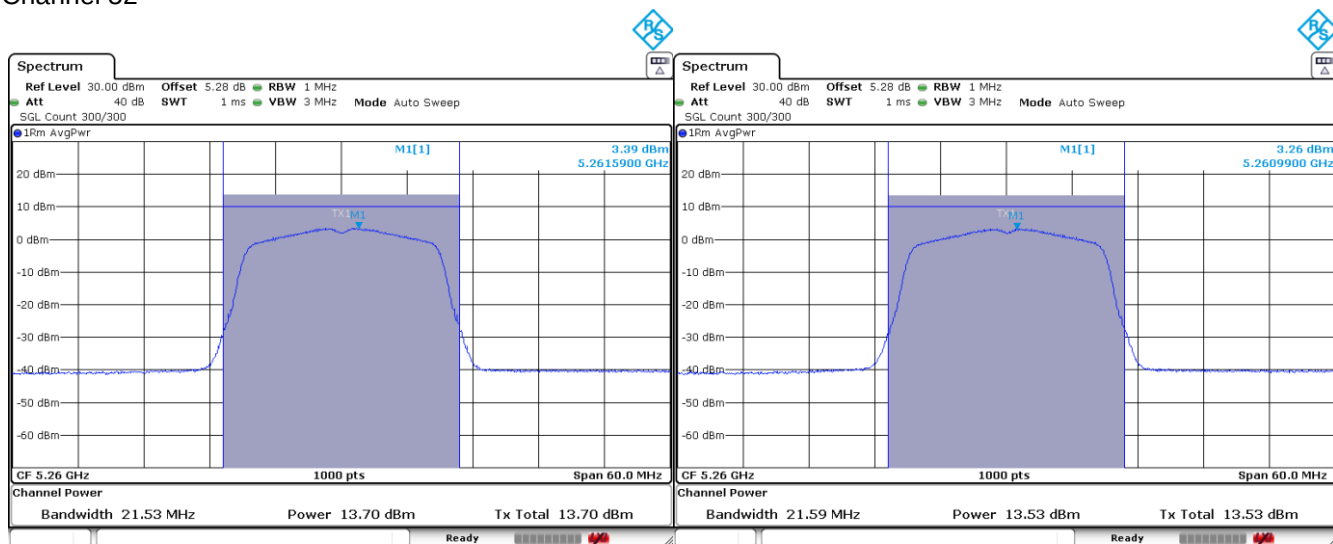
CORE 1



CORE 2

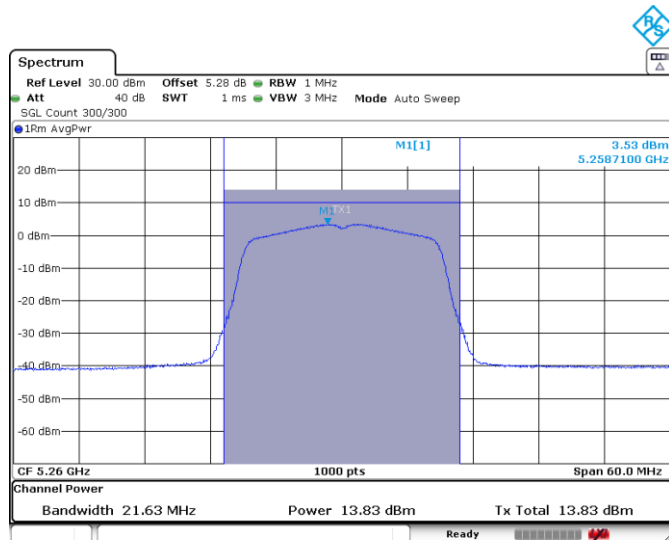
Mode : 802.11n HT20 – TxBF – 20MHz – MIMO – CORE 0 & CORE 1 & CORE 2

Channel 52



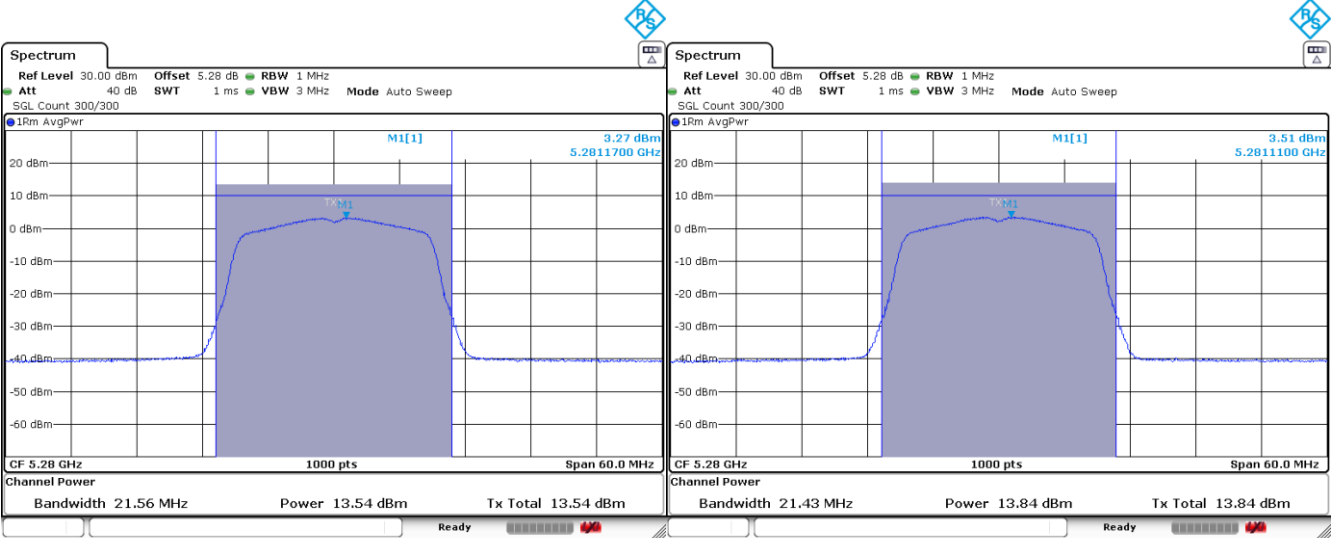
CORE 0

CORE 1



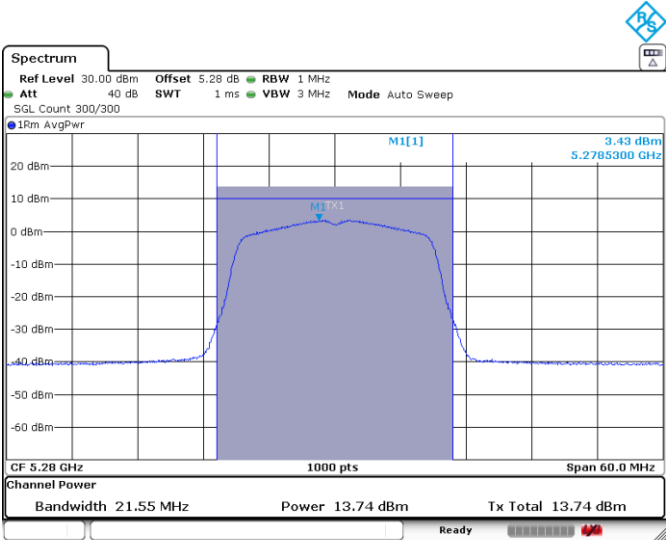
CORE 2

Channel 56



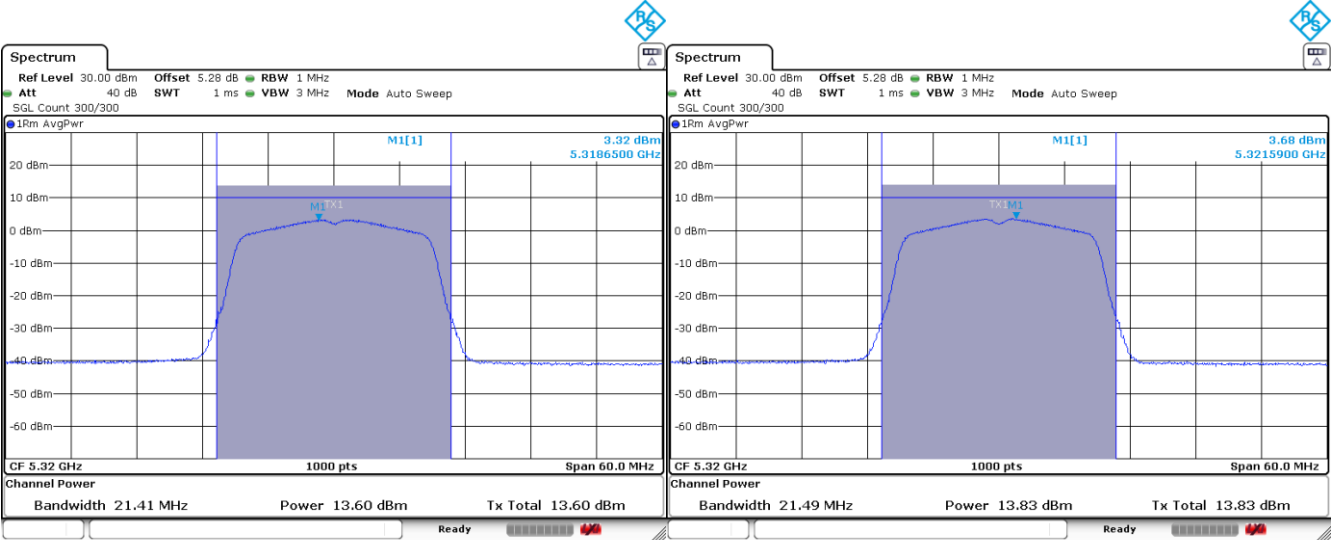
CORE 0

CORE 1



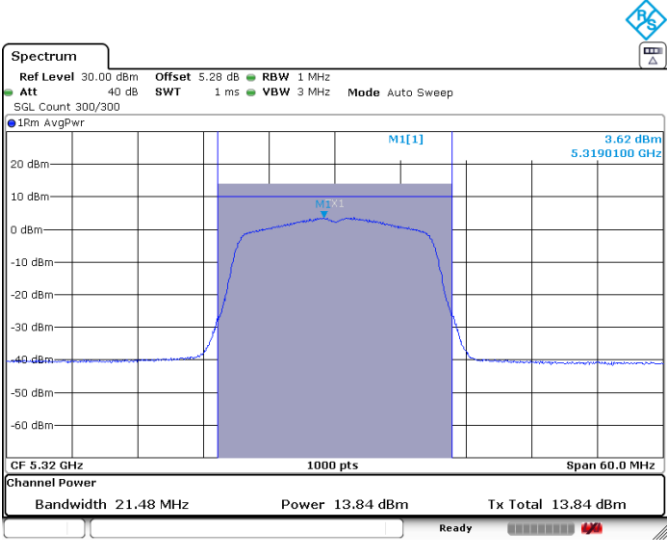
CORE 2

Channel 64



CORE 0

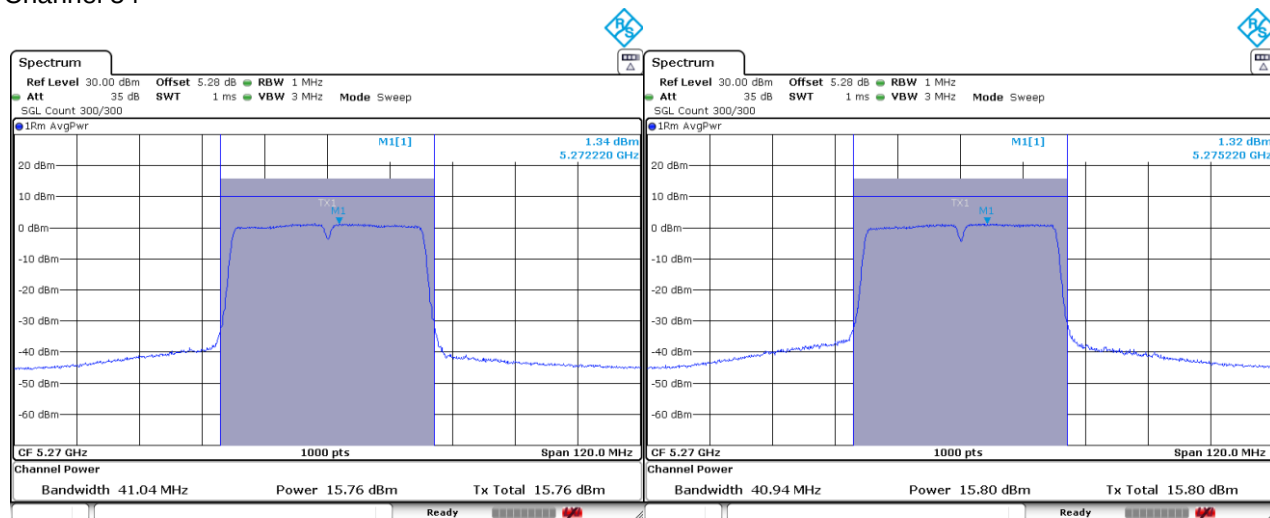
CORE 1



CORE 2

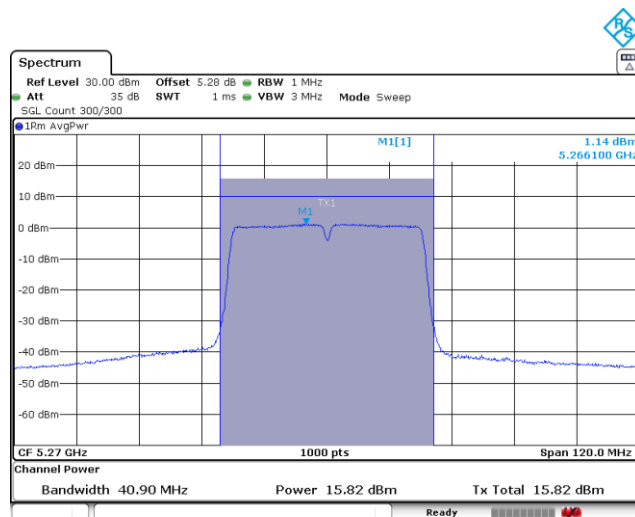
Mode : 802.11n HT40 – TxBF – 40MHz – MIMO – CORE 0 & CORE 1 & CORE 2

Channel 54



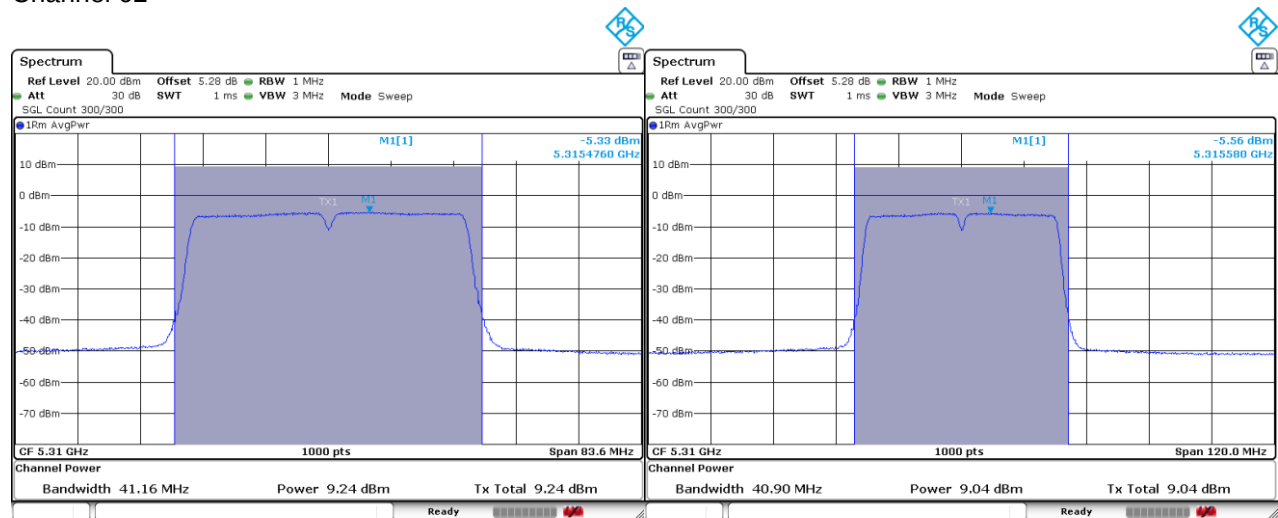
CORE 0

CORE 1



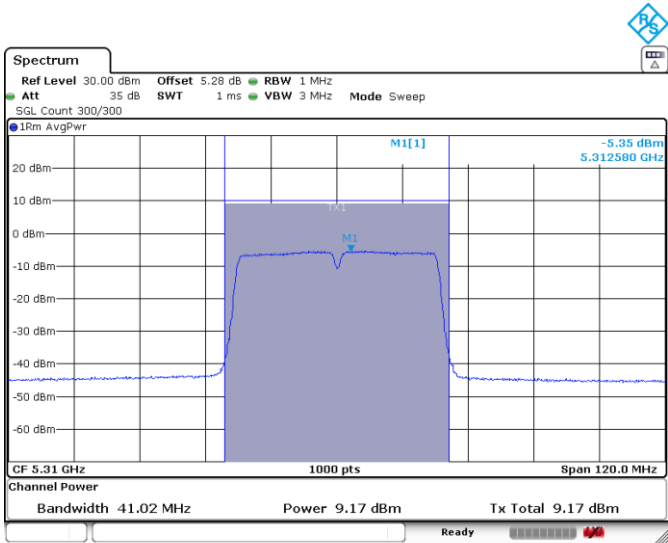
CORE 2

Channel 62



CORE 0

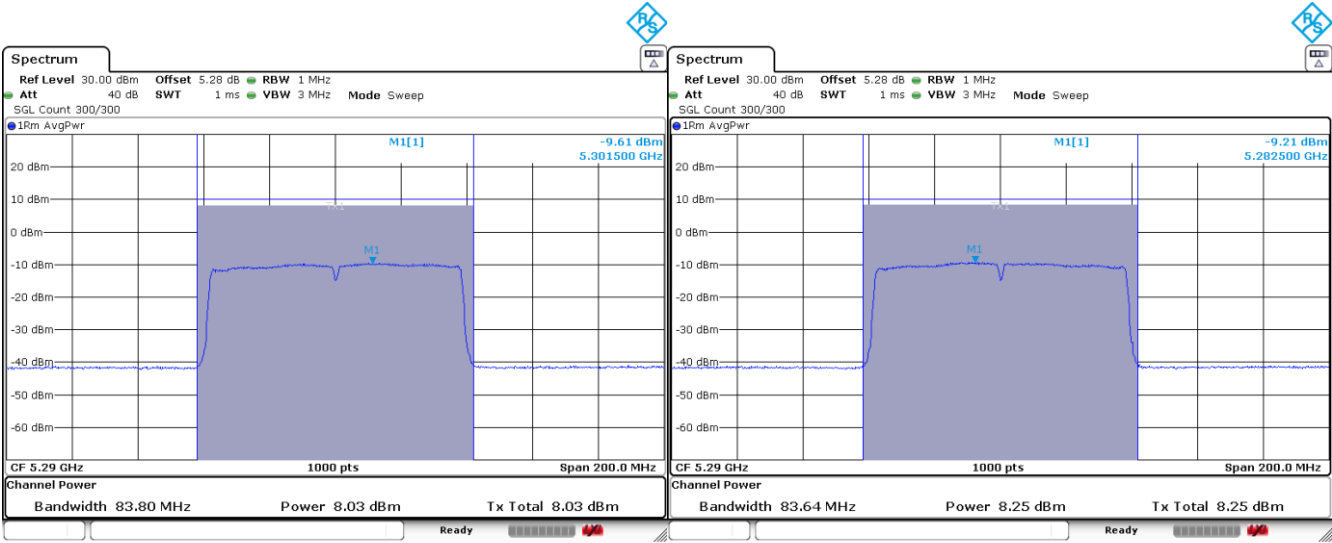
CORE 1



CORE 2

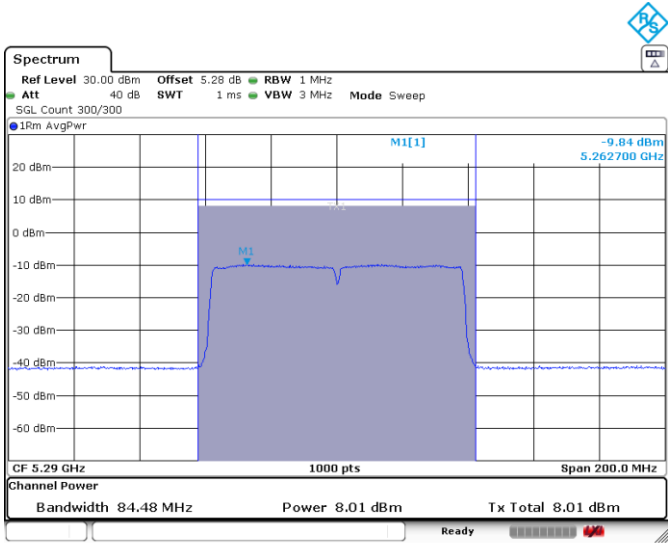
Mode : 802.11ac VHT80 – TxBF – 80MHz – MIMO – CORE 0 & CORE 1 & CORE 2

Channel 58



CORE 0

CORE 1



CORE 2

FCC Section 15.407 Subclause (a) (2) / RSS-247 Clause 6.2.2.1. Transmitter Maximum Power Spectral Density

FCC 15.407: 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.

RSS-247: The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

Within the emission bandwidth, when the peak spectral density per MHz over any continuous transmission exceeds the average (10 log10 B) value by more than 3 dB, the permissible power spectral density shall be reduced by the excess amount.

RESULTS

The maximum power spectral density (PSD) was measured using the method according to point F) referencing E.2.b) (Method SA-1) and E.2.b) (Method SA-2) of Guidance 789033 D02 General UNII Test Procedures New Rules v02r01.

For all SISO and MIMO SDM modes of operation, the antenna gain is < 6 dBi.

For 2Tx CDD and 2Tx TxBF modes, the EUT has a directional antenna gain of 6.69 dBi. In accordance with Part 15.407 (a)(1)(iv), the limit was reduced by the amount in dB the antenna gain exceeds 6 dBi. The limit has been reduced by 0.71 to 10.29 dBm.

For 3Tx CDD and 3Tx TxBF modes, the EUT has a directional antenna gain of 8.26 dBi. In accordance with Part 15.407 (a)(1)(iv), the limit was reduced by the amount in dB the antenna gain exceeds 6 dBi. The limit has been reduced by 2.10 to 8.90 dBm.

The PSD test uses the same setup than the transmitter maximum conducted output power test. The result of the Peak PSD was measured by setting a marker on the peak of the signal and the results are in the tables below.

FCC and Canada power setting

Mode : 802.11a - 20MHz – SISO – CORE 2

	channel 52 5260 MHz	channel 56 5280 MHz	channel 64 5320 MHz
PSD (dBm/MHz)	8.72	8.72	5
PSD Limit (dBm/MHz)	11		
Margin (dB)	2.28	2.28	6
Measurement uncertainty (dB)	<±1.20		

Mode : 802.11n HT20 - 20MHz – SISO – CORE 2

	channel 52 5260 MHz	channel 56 5280 MHz	channel 64 5320 MHz
PSD (dBm/MHz)	7.96	8.66	4.58
PSD Limit (dBm/MHz)	11		
Margin (dB)	3.04	2.34	6.42
Measurement uncertainty (dB)	<±1.20		

Mode : 802.11n HT40 - 40MHz – SISO – CORE 2

	channel 54 5270 MHz	channel 62 5310 MHz
PSD (dBm/MHz)	4.63	-2.97
Duty Cycle Correction Factor (dB)	0.10	0.10
PSD Corrected (dBm/MHz)	4.73	-2.87
PSD Limit (dBm/MHz)	11	
Margin (dB)	6.27	13.87
Measurement uncertainty (dB)	<±1.20	

Mode : 802.11ac VHT80 - 80MHz - SISO - CORE 2

	channel 58 5290 MHz
PSD (dBm/MHz)	-6.95
Duty Cycle Correction Factor (dB)	0.15
PSD Corrected (dBm/MHz)	-6.80
PSD Limit (dBm/MHz)	11
Margin (dB)	17.80
Measurement uncertainty (dB)	<±1.20

Mode : 802.11n HT20 - CDD - 20MHz - MIMO - CORE 0 & CORE 2

	channel 52 5260 MHz		channel 56 5280 MHz		channel 64 5320 MHz	
	CORE 0	CORE 2	CORE 0	CORE 2	CORE 0	CORE 2
PSD (dBm/MHz)	4.97	5.32	5.16	5.18	4.52	4.5
Combined PSD (dBm/MHz)	8.16		8.18		7.52	
PSD Limit (dBm/MHz)	10.29					
Margin (dB)	2.13		2.11		2.77	
Measurement uncertainty (dB)	<±1.20					

Mode : 802.11n HT40 - CDD - 40MHz - MIMO - CORE 0 & CORE 2

	channel 54 5270 MHz		channel 62 5310 MHz	
	CORE 0	CORE 2	CORE 0	CORE 2
PSD (dBm/MHz)	3.35	3.37	-3.86	-3.65
Duty Cycle Correction Factor (dB)	0.09	0.09	0.09	0.09
PSD Corrected (dBm/MHz)	3.44	3.46	-3.77	-3.56
Combined PSD (dBm/MHz)	6.46		-0.65	
PSD Limit (dBm/MHz)	10.29			
Margin (dB)	3.83		10.95	
Measurement uncertainty (dB)	<±1.20			

Mode : 802.11ac VHT80 – CDD – 80MHz – MIMO – CORE 0 & CORE 2

	channel 58 5290 MHz	
	CORE 0	CORE 2
PSD (dBm/MHz)	-8.47	-7.97
Duty Cycle Correction Factor (dB)	0.16	0.16
PSD corrected (dBm/MHz)	-8.31	-7.81
Combined PSD (dBm/MHz)	-5.04	
PSD Limit (dBm/MHz)	10.29	
Margin (dB)	15.33	
Measurement uncertainty (dB)	<±1.20	

Mode : 802.11n HT20 – SDM – 20MHz – MIMO – CORE 0 & CORE 2

	channel 52 5260 MHz		channel 56 5280 MHz		channel 64 5320 MHz	
	CORE 0	CORE 2	CORE 0	CORE 2	CORE 0	CORE 2
PSD (dBm/MHz)	5.16	5.19	5.89	6.17	4.46	4.50
Combined PSD (dBm/MHz)	8.19		9.04		7.49	
PSD Limit (dBm/MHz)	11					
Margin (dB)	2.81		1.96		3.51	
Measurement uncertainty (dB)	<±1.20					

Mode : 802.11n HT40 – SDM – 40MHz – MIMO – CORE 0 & CORE 2

	channel 54 5270 MHz		channel 62 5310 MHz	
	CORE 0	CORE 2	CORE 0	CORE 2
PSD (dBm/MHz)	3.06	3.32	-3.8	-3.94
Duty Cycle Correction Factor (dB)	0.14	0.14	0.14	0.14
PSD corrected (dBm/MHz)	3.20	3.46	-3.66	-3.80
Combined PSD (dBm/MHz)	6.35		-0.72	
PSD Limit (dBm/MHz)	11			
Margin (dB)	4.65		11.72	
Measurement uncertainty (dB)	<±1.20			

Mode : 802.11ac VHT80 – SDM – 80MHz – MIMO – CORE 0 & CORE 2

	channel 58 5290 MHz	
	CORE 0	CORE 2
PSD (dBm/MHz)	-8.26	-7.97
Duty Cycle Correction Factor (dB)	0.29	0.29
PSD corrected (dBm/MHz)	-7.97	-7.68
Combined PSD (dBm/MHz)	-4.81	
PSD Limit (dBm/MHz)	11	
Margin (dB)	15.81	
Measurement uncertainty (dB)	<±1.20	

Mode : 802.11n HT20 – TxBF – 20MHz – MIMO – CORE 0 & CORE 2

	channel 52 5260 MHz		channel 56 5280 MHz		channel 64 5320 MHz	
	CORE 0	CORE 2	CORE 0	CORE 2	CORE 0	CORE 2
PSD (dBm/MHz)	6.70	6.30	6.63	6.59	6.17	5.95
Duty Cycle Correction Factor (dB)	0.11	0.11	0.11	0.11	0.11	0.11
PSD corrected (dBm/MHz)	6.81	6.41	6.74	6.70	6.28	6.06
Combined PSD (dBm/MHz)	9.62		9.73		9.18	
PSD Limit (dBm/MHz)	10.29					
Margin (dB)	0.67		0.56		1.11	
Measurement uncertainty (dB)	<±1.20					

Mode : 802.11n HT40 – TxBF – 40MHz – MIMO – CORE 0 & CORE 2

	channel 54 5270 MHz		channel 62 5310 MHz	
	CORE 0	CORE 2	CORE 0	CORE 2
PSD (dBm/MHz)	3.06	3.10	-5.36	-5.11
Duty Cycle Correction Factor (dB)	0.13	0.13	0.13	0.13
PSD corrected (dBm/MHz)	3.19	3.23	-5.23	-4.98
Combined PSD (dBm/MHz)	6.22		-2.09	
PSD Limit (dBm/MHz)	10.29			
Margin (dB)	4.07		12.39	
Measurement uncertainty (dB)	<±1.20			

Mode : 802.11ac VHT80 – TxBF – 80MHz – MIMO – CORE 0 & CORE 2

	channel 58 5290 MHz	
	CORE 0	CORE 2
PSD (dBm/MHz)	-9.17	-9.38
Duty Cycle Correction Factor (dB)	0.11	0.11
PSD corrected (dBm/MHz)	-9.06	-9.27
Combined PSD (dBm/MHz)	-6.15	
PSD Limit (dBm/MHz)	10.29	
Margin (dB)	16.44	
Measurement uncertainty (dB)	<±1.20	

Mode : 802.11n HT20 – CDD – 20MHz – MIMO – CORE 0 & CORE 1 & CORE 2

	channel 52 5260 MHz			channel 56 5280 MHz		
	CORE 0	CORE 1	CORE 2	CORE 0	CORE 1	CORE 2
PSD (dBm/MHz)	2.34	2.21	2.26	2.05	2.27	2.14
Combined PSD (dBm/MHz)	7.04			6.93		
PSD Limit (dBm/MHz)	8.90					
Margin (dB)	1.86			1.97		
Measurement uncertainty (dB)	<±1.20					

	channel 64 5320 MHz		
	CORE 0	CORE 1	CORE 2
PSD (dBm/MHz)	2.17	2.13	2.29
Combined PSD (dBm/MHz)	6.97		
PSD Limit (dBm/MHz)	8.90		
Margin (dB)	1.93		
Measurement uncertainty (dB)	<±1.20		

Mode : 802.11n HT40 – CDD – 40MHz – MIMO – CORE 0 & CORE 1 & CORE 2

	channel 54 5270 MHz			channel 62 5310 MHz		
	CORE 0	CORE 1	CORE 2	CORE 0	CORE 1	CORE 2
PSD (dBm/MHz)	1.3	1.37	1.1	-3.74	-3.93	-4.08
Combined PSD (dBm/MHz)	6.03			0.86		
PSD Limit (dBm/MHz)	8.90					
Margin (dB)	2.87			8.04		
Measurement uncertainty (dB)	<±1.20					

Mode : 802.11ac VHT80 – CDD – 80MHz – MIMO – CORE 0 & CORE 1 & CORE 2

	channel 58 5290 MHz		
	CORE 0	CORE 1	CORE 2
PSD (dBm/MHz)	-8.51	-8.58	-8.47
Duty Cycle Correction Factor (dB)	0.18	0.18	0.18
PSD corrected (dBm/MHz)	-8.33	-8.40	-8.29
Combined PSD (dBm/MHz)	-3.57		
PSD Limit (dBm/MHz)	8.90		
Margin (dB)	12.47		
Measurement uncertainty (dB)	<±1.20		

Mode : 802.11n HT20 – SDM – 20MHz – MIMO – CORE 0 & CORE 1 & CORE 2

	channel 52 5260 MHz			channel 56 5280 MHz		
	CORE 0	CORE 1	CORE 2	CORE 0	CORE 1	CORE 2
PSD (dBm/MHz)	4.16	4.43	4.21	3.96	4.24	3.98
Duty Cycle Correction Factor (dB)	0.11	0.11	0.11	0.11	0.11	0.11
PSD corrected (dBm/MHz)	4.27	4.54	4.32	4.07	4.35	4.09
Combined PSD (dBm/MHz)	9.15			8.94		
PSD Limit (dBm/MHz)	11					
Margin (dB)	1.85			2.06		
Measurement uncertainty (dB)	<±1.20					

	channel 64 5320 MHz		
	CORE 0	CORE 1	CORE 2
PSD (dBm/MHz)	3.30	3.32	3.17
Duty Cycle Correction Factor (dB)	0.11	0.11	0.11
PSD corrected (dBm/MHz)	3.41	3.43	3.28
Combined PSD (dBm/MHz)	8.15		
PSD Limit (dBm/MHz)	11		
Margin (dB)	2.85		
Measurement uncertainty (dB)	<±1.20		

Mode : 802.11n HT40 – SDM – 40MHz – MIMO – CORE 0 & CORE 1 & CORE 2

	channel 54 5270 MHz			channel 62 5310 MHz		
	CORE 0	CORE 1	CORE 2	CORE 0	CORE 1	CORE 2
PSD (dBm/MHz)	2.14	2.42	2.36	-3.99	-4	-3.90
Duty Cycle Correction Factor (dB)	0.22	0.22	0.22	0.22	0.22	0.22
PSD corrected (dBm/MHz)	2.36	2.64	2.58	-3.77	-3.78	-3.68
Combined PSD (dBm/MHz)	7.30			1.03		
PSD Limit (dBm/MHz)	11					
Margin (dB)	3.70			9.97		
Measurement uncertainty (dB)	<±1.20					

Mode : 802.11ac VHT80 – SDM – 80MHz – MIMO – CORE 0 & CORE 1 & CORE 2

	channel 58 5290 MHz		
	CORE 0	CORE 1	CORE 2
PSD (dBm/MHz)	-9	-8.75	-8.63
Duty Cycle Correction Factor (dB)	0.37	0.37	0.37
PSD corrected (dBm/MHz)	-8.63	-8.38	-8.26
Combined PSD (dBm/MHz)	-3.65		
PSD Limit (dBm/MHz)	11		
Margin (dB)	14.65		
Measurement uncertainty (dB)	<±1.20		

Mode : 802.11n HT20 – TxBF – 20MHz – MIMO – CORE 0 & CORE 1 & CORE 2

	channel 52 5260 MHz			channel 56 5280 MHz		
	CORE 0	CORE 1	CORE 2	CORE 0	CORE 1	CORE 2
PSD (dBm/MHz)	3.26	3.39	3.53	3.27	3.51	3.43
Duty Cycle Correction Factor (dB)	0.14	0.14	0.14	0.14	0.14	0.14
PSD corrected (dBm/MHz)	3.40	3.53	3.67	3.41	3.65	3.57
Combined PSD (dBm/MHz)	8.30			8.31		
PSD Limit (dBm/MHz)	8.90					
Margin (dB)	0.60			0.59		
Measurement uncertainty (dB)	<±1.20					

	channel 64 5320 MHz		
	CORE 0	CORE 1	CORE 2
PSD (dBm/MHz)	3.32	3.68	3.62
Duty Cycle Correction Factor (dB)	0.14	0.14	0.14
PSD corrected (dBm/MHz)	3.46	3.82	3.76
Combined PSD (dBm/MHz)	8.45		
PSD Limit (dBm/MHz)	8.90		
Margin (dB)	0.45		
Measurement uncertainty (dB)	<±1.20		

Mode : 802.11n HT40 – TxBF – 40MHz – MIMO – CORE 0 & CORE 1 & CORE 2

	channel 54 5270 MHz			channel 62 5310 MHz		
	CORE 0	CORE 1	CORE 2	CORE 0	CORE 1	CORE 2
PSD (dBm/MHz)	1.34	1.32	1.14	-5.33	-5.56	-5.35
Duty Cycle Correction Factor (dB)	0.13	0.13	0.13	0.13	0.13	0.13
PSD corrected (dBm/MHz)	1.47	1.45	1.27	-5.20	-5.43	-5.22
Combined PSD (dBm/MHz)	6.17			-0.51		
PSD Limit (dBm/MHz)	8.90					
Margin (dB)	2.73			9.41		
Measurement uncertainty (dB)	<±1.20					

Mode : 802.11ac VHT80 – TxBF – 80MHz – MIMO – CORE 0 & CORE 1 & CORE 2

	channel 58 5290 MHz		
	CORE 0	CORE 1	CORE 2
PSD (dBm/MHz)	-9.61	-9.21	-9.84
Duty Cycle Correction Factor (dB)	0.12	0.12	0.12
PSD corrected (dBm/MHz)	-9.49	-9.09	-9.72
Combined PSD (dBm/MHz)	-4.65		
PSD Limit (dBm/MHz)	8.90		
Margin (dB)	13.55		
Measurement uncertainty (dB)	<±1.20		

FCC Section 15.407(b)(2)(6) /RSS-247 6.2.2.2. Transmitter Out of Band Radiated Emissions

SPECIFICATION

For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz (68.23 dBμV/m at 3 m distance).

Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)):

Frequency Range (MHz)	Field strength (μV/m)	Field strength (dBμV/m)	Measurement distance (m)
0.009-0.490	2400/F(kHz)	-	300
0.490-1.705	24000/F(kHz)	-	300
1.705 - 30.0	30	-	30
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
960 - 40000	500	54	3

The emission limits shown in the above table are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

For average radiated emission measurements above 1000 MHz, there is also a limit corresponding to 20 dB above the indicated values in the table is specified when measuring with peak detector function.

RESULTS:

The situation and orientation was varied to find the maximum radiated emission. It was also rotated 360° and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission.

Measurements were made in both horizontal and vertical planes of polarization.

All tests were performed in a semi-anechoic chamber at a distance of 3 m for the frequency range 30 MHz-40 GHz.

The field strength is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor includes antenna factor, cable loss and pre-amplifiers gain.

Test performed on the following worst case channel 60 (5300MHz):

- 802. 11n HT20: MCS0 / MIMO (3Tx CDD) on Core 0 & Core 1 & Core 2

Mode : 802.11n HT20 – CDD – 20MHz – MIMO – CORE 0 & CORE 1 & CORE 2

Frequency range 30 MHz-1000 MHz.

Note: The spurious emissions below 1 GHz do not depend on either the operating channel or the modulation mode selected in the EUT.

Spurious levels operating (radiated) closest to limit.

Spurious frequency (MHz)	Polarization	Detector	Emission Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Measurement Uncertainty (dB)
96.558	Vertical	Quasi-Peak	28.30	43.5	15.20	± 3.88
120.679	Vertical	Quasi-Peak	34.30	43.5	9.20	± 3.88
144.49	Horizontal	Quasi-Peak	29.10	43.5	14.40	± 3.88
168.967	Horizontal	Quasi-Peak	33.90	43.5	9.60	± 3.88
191.263	Horizontal	Quasi-Peak	39.80	43.5	3.70	± 3.88

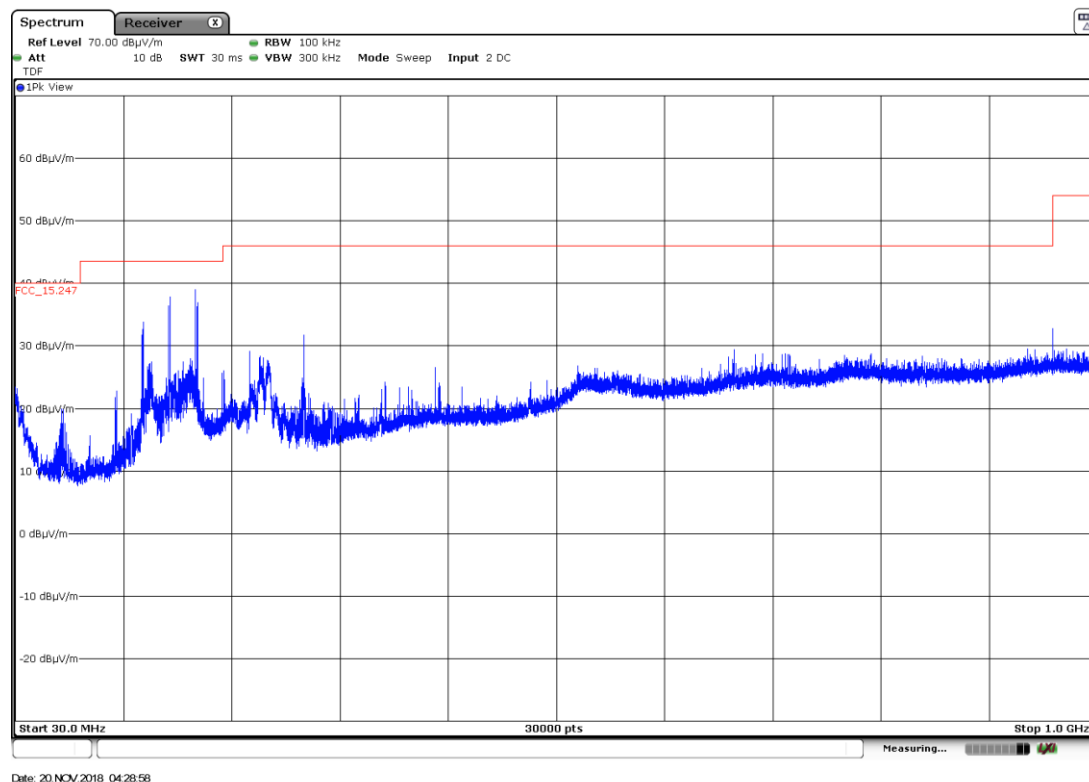
Frequency range 1 GHz-40 GHz

Channel 60 (5300MHz):

No spurious were found at less than 20 dB below the limit inside restricted bands.

Verdict: PASS

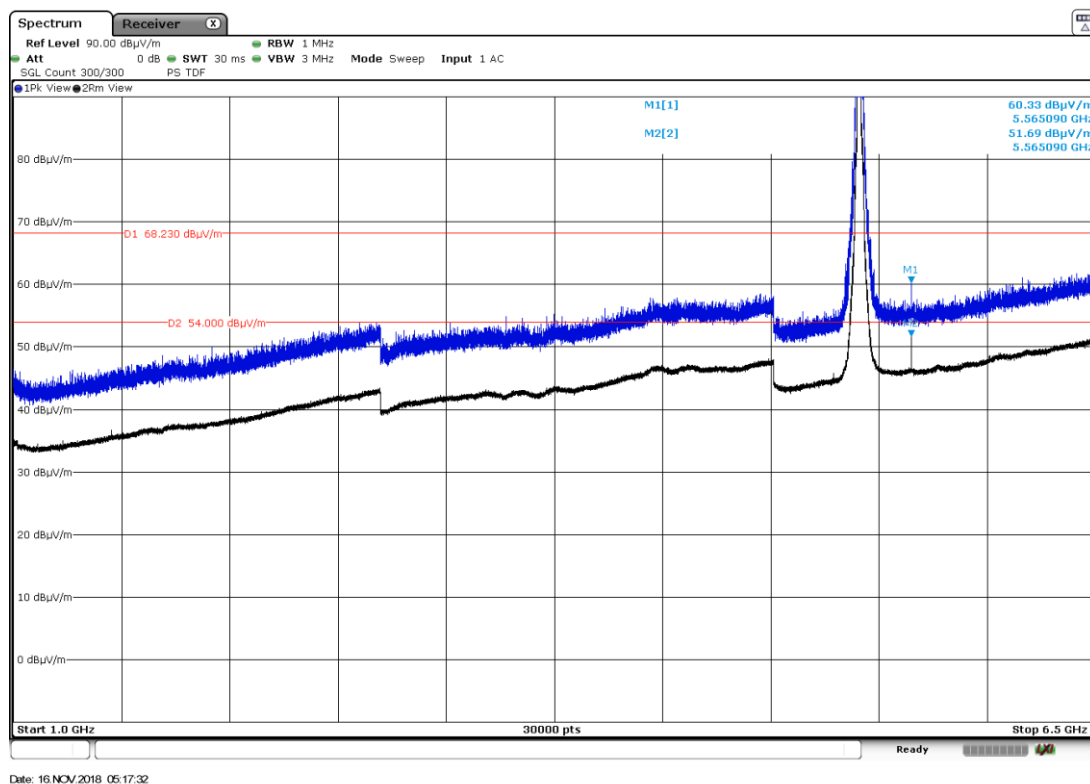
FREQUENCY RANGE 30 MHz-1000 MHz.



FREQUENCY RANGE 1 GHz to 6.5 GHz.

Mode : 802.11n HT20 – CDD – 20MHz – MIMO – CORE 0 & CORE 1 & CORE 2

Channel 60 (5300MHz):

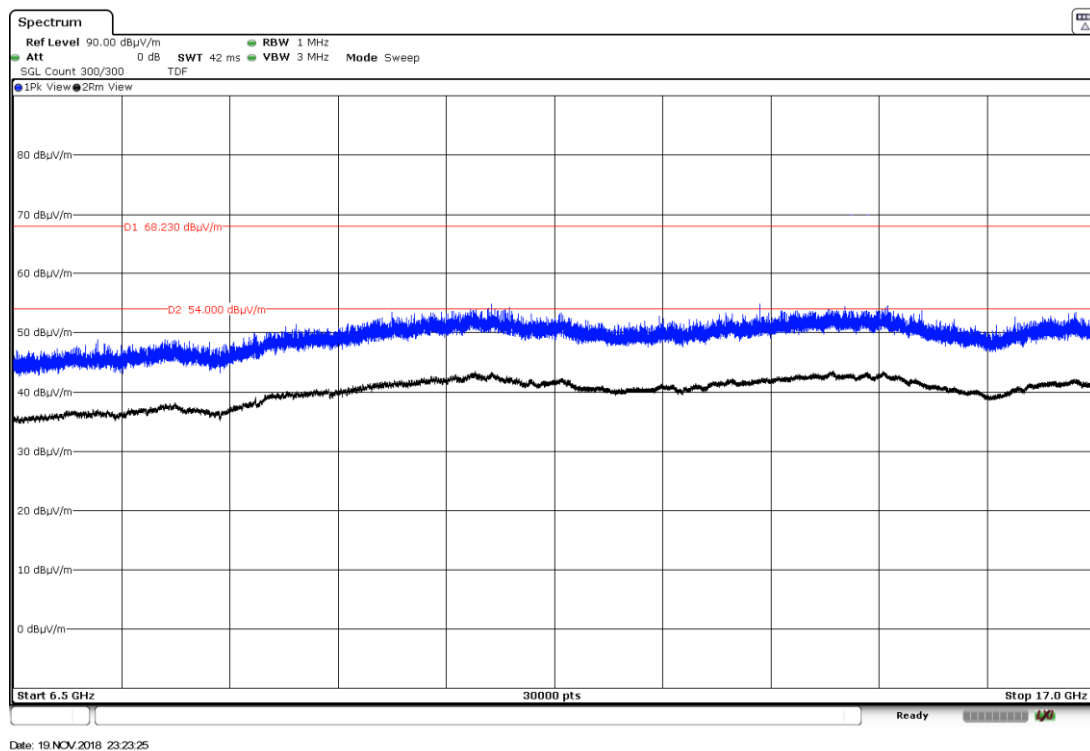


Note: The peak shown in the plot above the limit is the carrier frequency.

FREQUENCY RANGE 6.5 GHz to 17 GHz.

Mode : 802.11n HT20 – CDD – 20MHz – MIMO – CORE 0 & CORE 1 & CORE 2

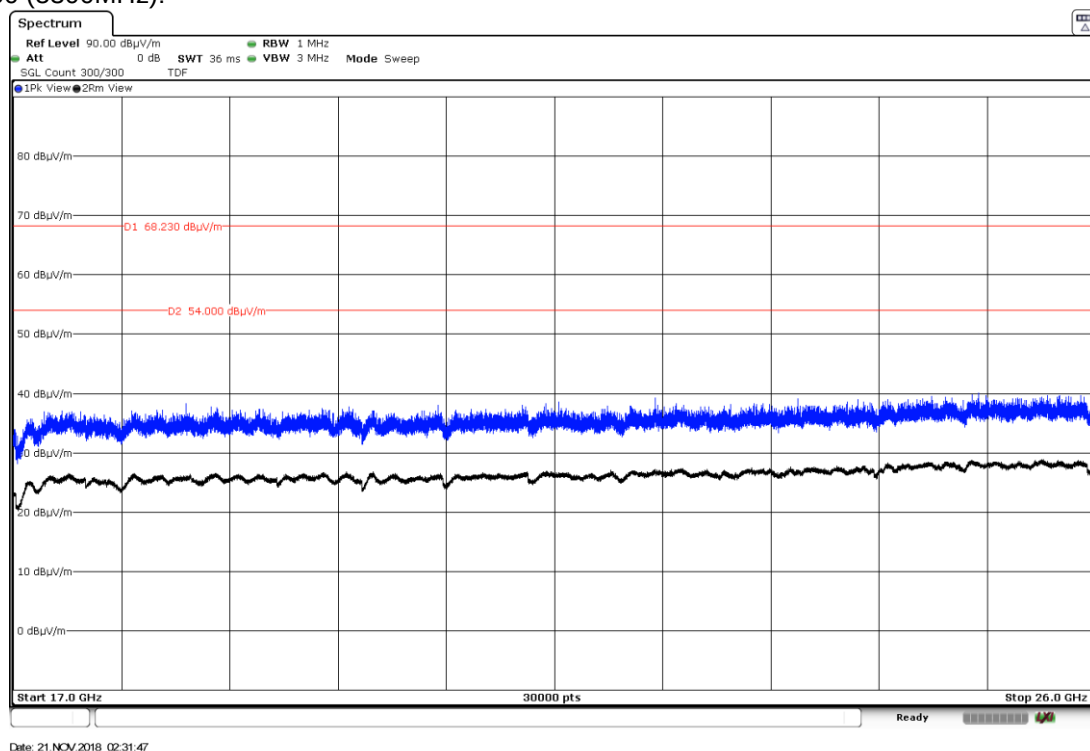
Channel 60 (5300MHz):



FREQUENCY RANGE 17 GHz to 26 GHz.

Mode : 802.11n HT20 – CDD – 20MHz – MIMO – CORE 0 & CORE 1 & CORE 2

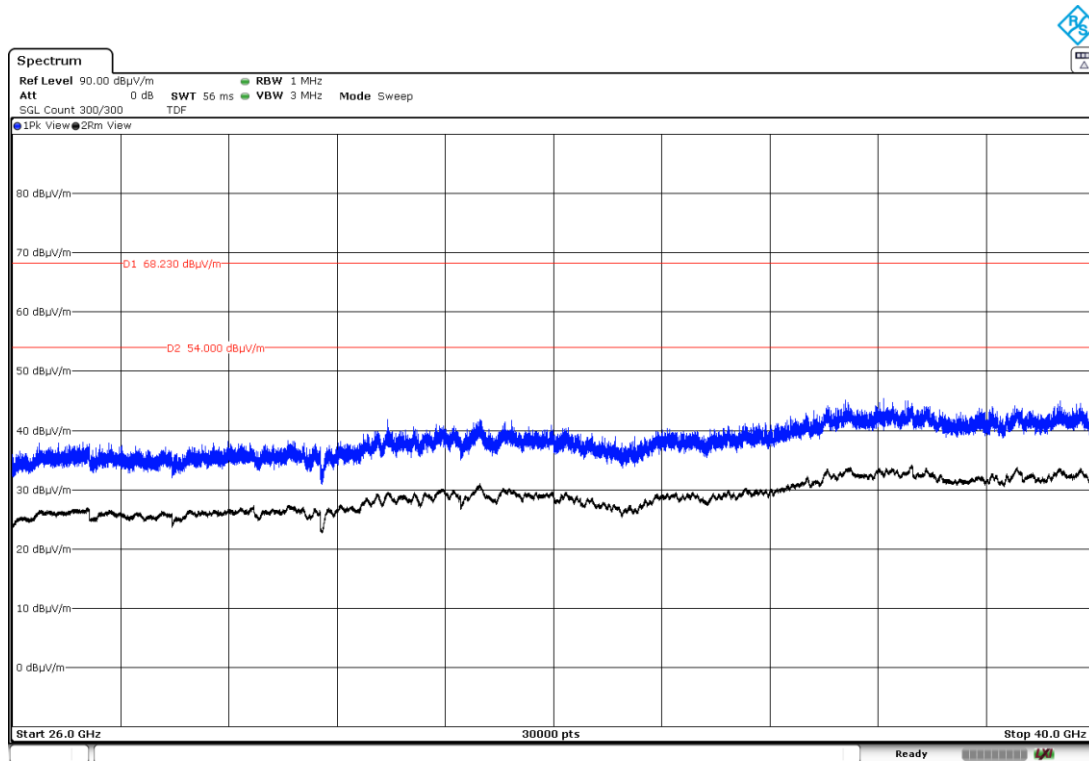
Channel 60 (5300MHz):



FREQUENCY RANGE 26 GHz to 40 GHz.

Mode : 802.11n HT20 – CDD – 20MHz – MIMO – CORE 0 & CORE 1 & CORE 2

Channel 60 (5300MHz):



FCC Section 15.407 Subclause (b) (2) / RSS-247 6.2.2.2. Transmitter Band Edge Radiated Emissions.

SPECIFICATION

For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of –27 dBm/MHz (68.20 dBμV/m at 3 m distance).

Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)):

Frequency Range (MHz)	Field strength (μV/m)	Field strength (dBμV/m)	Measurement distance (m)
0.009-0.490	2400/F(kHz)	-	300
0.490-1.705	24000/F(kHz)	-	300
1.705 - 30.0	30	-	30
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
960 - 40000	500	54	3

The emission limits shown in the above table are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

For average radiated emission measurements above 1000 MHz, there is also a limit corresponding to 20 dB above the indicated values in the table is specified when measuring with peak detector function.

RESULTS:

The field strength is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor includes antenna factor, cable loss and pre-amplifiers gain.

All emissions outside of the 5.15-5.35GHz band shall not exceed an EIRP of -27dBm/MHz. There are restricted bands of operation below band edge at 4.5-5.15 GHz also above the upper band edge at 5.35-5.46GHz therefore the provision of FCC Part 15.205 apply.

Field strength measurements using peak and average detector were performed in the restricted bands below 5.15GHz and above 5.35 GHz.

Test performed on the following worst cases modes in all relevant tests channels:

- 802.11a: 6 Mbit/s / SISO on Core 2
- 802.11n HT20: MCS0 / SISO on Core 2
- 802.11n HT40: MCS0 / SISO on Core 2
- 802.11ac VHT80: MCS0x1 / SISO on Core 2
- 802.11n HT20: MCS0 / MIMO / 2Tx CDD on Core 0 & Core 2
- 802.11n HT40: MCS0 / MIMO / 2Tx CDD on Core 0 & Core 2
- 802.11ac VHT80: MCS0x1 / MIMO / 2Tx CDD on Core 0 & Core 2
- 802.11n HT20: MCS8 / MIMO / 2Tx SDM on Core 0 & Core 2
- 802.11n HT40: MCS8 / MIMO / 2Tx SDM on Core 0 & Core 2
- 802.11ac VHT80: MCS0x2 / MIMO / 2Tx SDM on Core 0 & Core 2
- 802.11ac VHT20: MCS0x1 / MIMO / 2Tx TxBF on Core 0 & Core 2
- 802.11ac VHT40: MCS0x1 / MIMO / 2Tx TxBF on Core 0 & Core 2
- 802.11ac VHT80: MCS0x1 / MIMO / 2Tx TxBF on Core 0 & Core 2

- 802.11n HT20: MCS0 / MIMO / 3Tx CDD on Core 0 & Core 1 & Core 2
- 802.11n HT40: MCS0 / MIMO / 3Tx CDD on Core 0 & Core 1 & Core 2
- 802.11ac VHT80: MCS0x1 / MIMO / 3Tx CDD on Core 0 & Core 1 & Core 2

- 802.11n HT20: MCS16 / MIMO / 3Tx SDM on Core 0 & Core 1 & Core 2
- 802.11n HT40: MCS16 / MIMO / 3Tx SDM on Core 0 & Core 1 & Core 2
- 802.11ac VHT80: MCS0x3 / MIMO / 3Tx SDM on Core 0 & Core 1 & Core 2
- 802.11ac VHT20: MCS0x1 / MIMO / 3Tx TxBF on Core 0 & Core 1 & Core 2
- 802.11ac VHT40: MCS0x1 / MIMO / 3Tx TxBF on Core 0 & Core 1 & Core 2
- 802.11ac VHT80: MCS0x1 / MIMO / 3Tx TxBF on Core 0 & Core 1 & Core 2

Results for Mode: 802.11a - 20 MHz – SISO - CORE2

Results: Peak / Channel 52

Frequency (MHz)	Antenna Polarity	Peak Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement uncertainty (dB)	Verdict
5350	Vertical	58.17	74	15.83	<± 3.05	PASS
5427.595	Vertical	60.35	74	13.65	<± 3.05	PASS

Results: Average / Channel 52

Frequency (MHz)	Antenna Polarity	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement uncertainty (dB)	Verdict
5350	Vertical	47.55	54	6.45	<± 3.05	PASS
5351.365	Vertical	47.75	54	6.25	<± 3.05	PASS

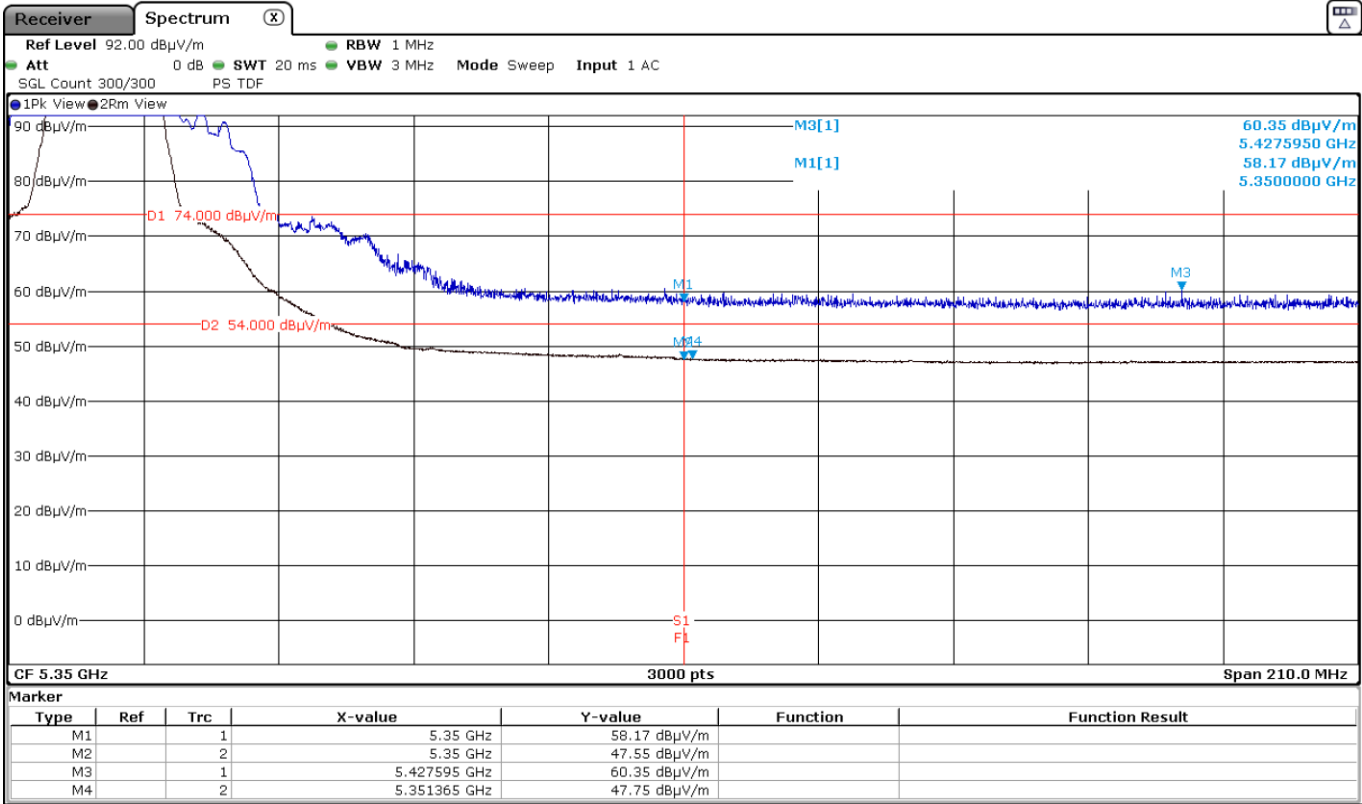
Results: Peak / Channel 64

Frequency (MHz)	Antenna Polarity	Peak Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement uncertainty (dB)	Verdict
5350	Vertical	64.75	74	9.25	<± 3.05	PASS
5350.227	Vertical	66.15	74	7.85	<± 3.05	PASS

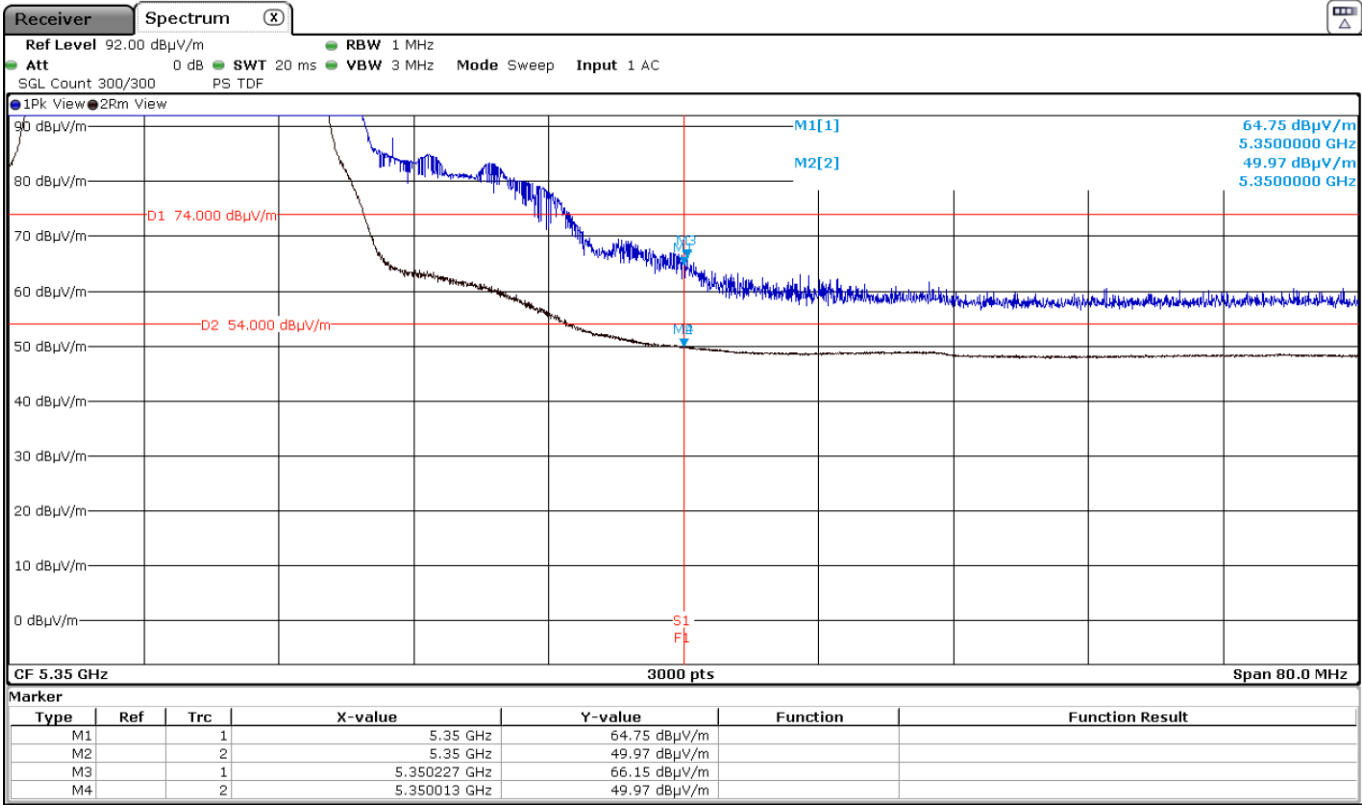
Results: Average / Channel 64

Frequency (MHz)	Antenna Polarity	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement uncertainty (dB)	Verdict
5350	Vertical	49.97	54	4.03	<± 3.05	PASS

5350 MHz to 5460 MHz Upper Band Edge Channel 52



5350 MHz to 5460 MHz Upper Band Edge Channel 64



Results: 802.11n HT20 - 20 MHz – SISO - CORE 2

Results: Peak / Channel 52

Frequency (MHz)	Antenna Polarity	Peak Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement uncertainty (dB)	Verdict
5350	Vertical	58.23	74	15.77	<± 3.05	PASS
5388.115	Vertical	59.69	74	14.31	<± 3.05	PASS

Results: Average / Channel 52

Frequency (MHz)	Antenna Polarity	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement uncertainty (dB)	Verdict
5350	Vertical	47.57	54	6.43	<± 3.05	PASS
5350.805	Vertical	47.66	54	6.34	<± 3.05	PASS

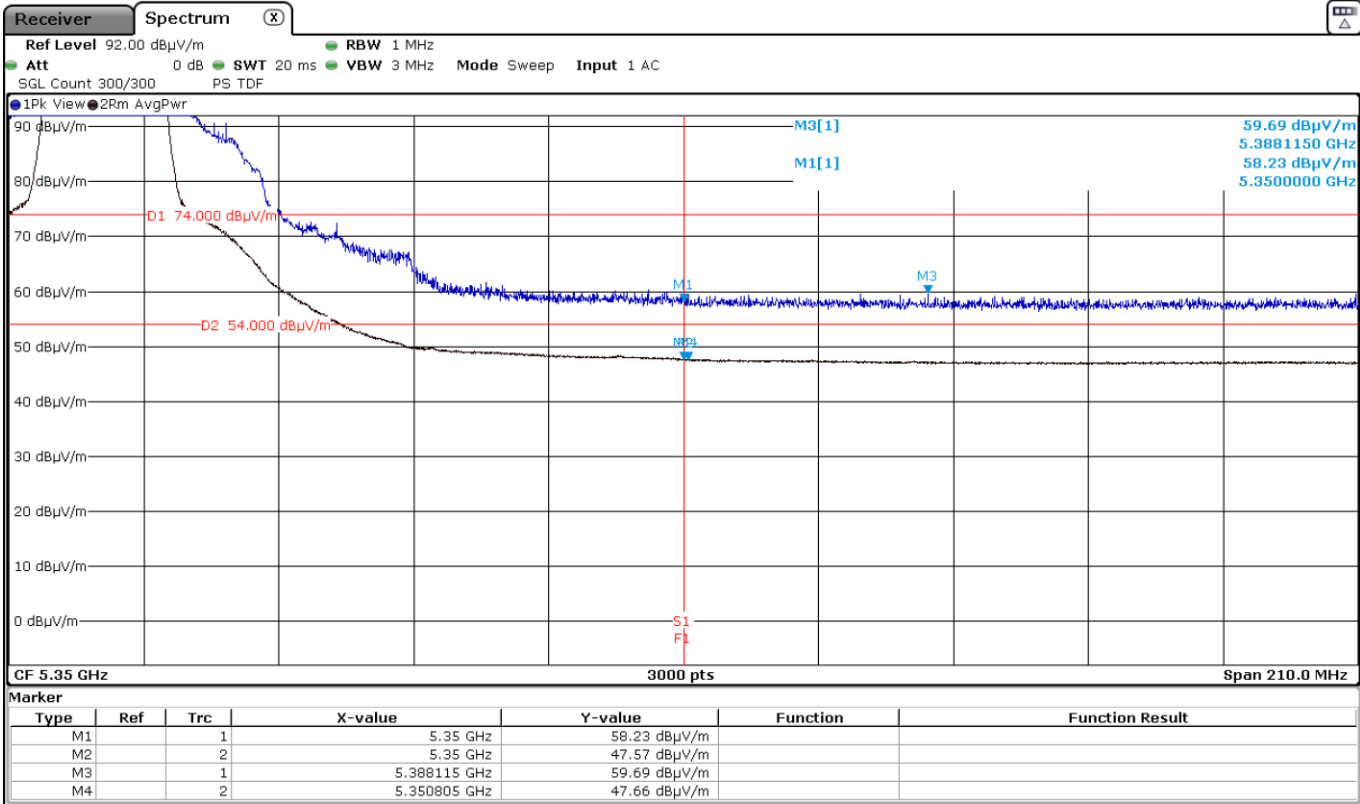
Results: Peak / Channel 64

Frequency (MHz)	Antenna Polarity	Peak Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement uncertainty (dB)	Verdict
5350	Vertical	63.31	74	10.69	<± 3.05	PASS
5350.533	Vertical	65.47	74	8.53	<± 3.05	PASS

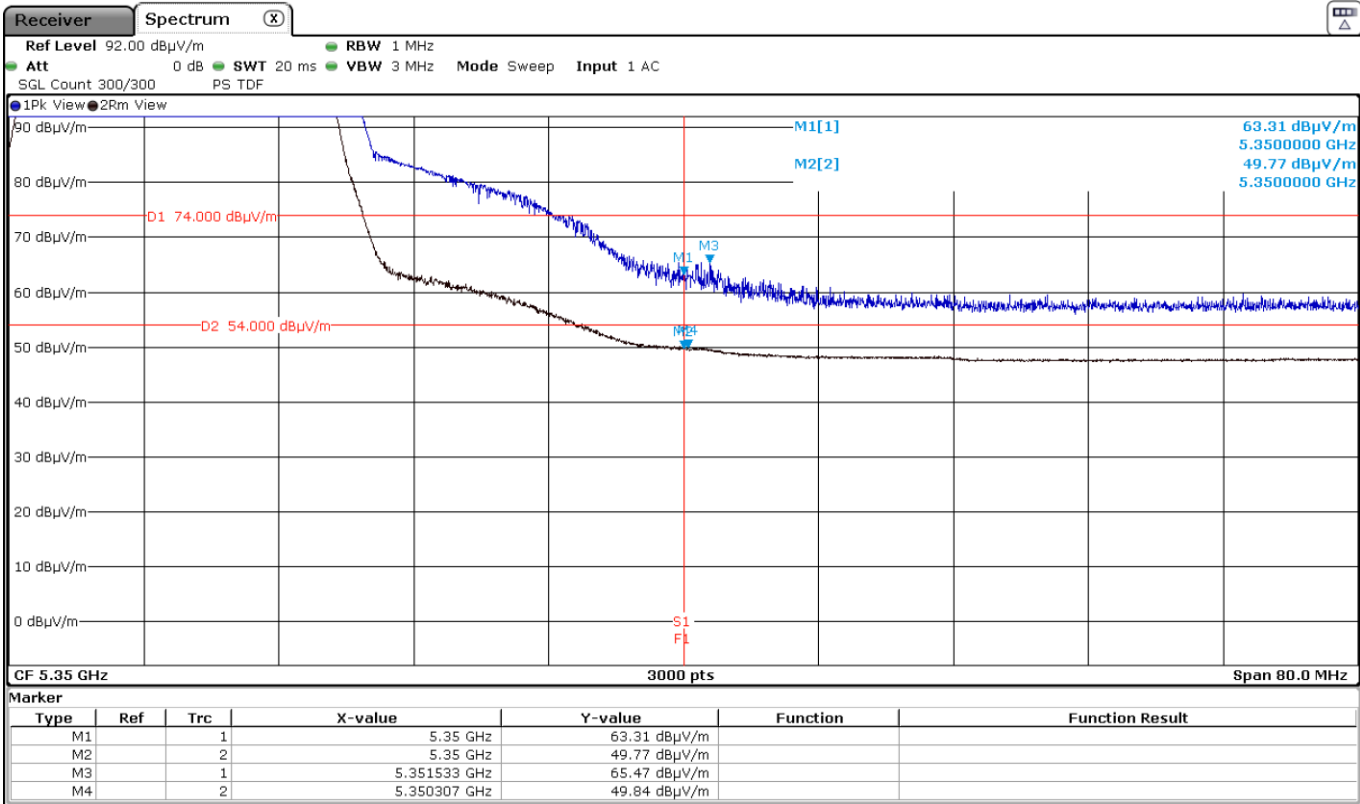
Results: Average / Channel 64

Frequency (MHz)	Antenna Polarity	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement uncertainty (dB)	Verdict
5350	Vertical	49.77	54	4.23	<± 3.05	PASS

5350 MHz to 5460 MHz Upper Band Edge Channel 52



5350 MHz to 5460 MHz Upper Band Edge Channel 64



Results for Mode: 802.11n HT20 – CDD - 20 MHz - MIMO - Core 0 + Core 2

Results: Peak / Channel 52

Frequency (MHz)	Antenna Polarity	Peak Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement uncertainty (dB)	Verdict
5350	Vertical	57.89	74	16.11	<± 3.05	PASS
5421.715	Vertical	59.84	74	14.16	<± 3.05	PASS

Results: Average / Channel 52

Frequency (MHz)	Antenna Polarity	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement uncertainty (dB)	Verdict
5350.105	Vertical	47.25	54	6.75	<± 3.05	PASS

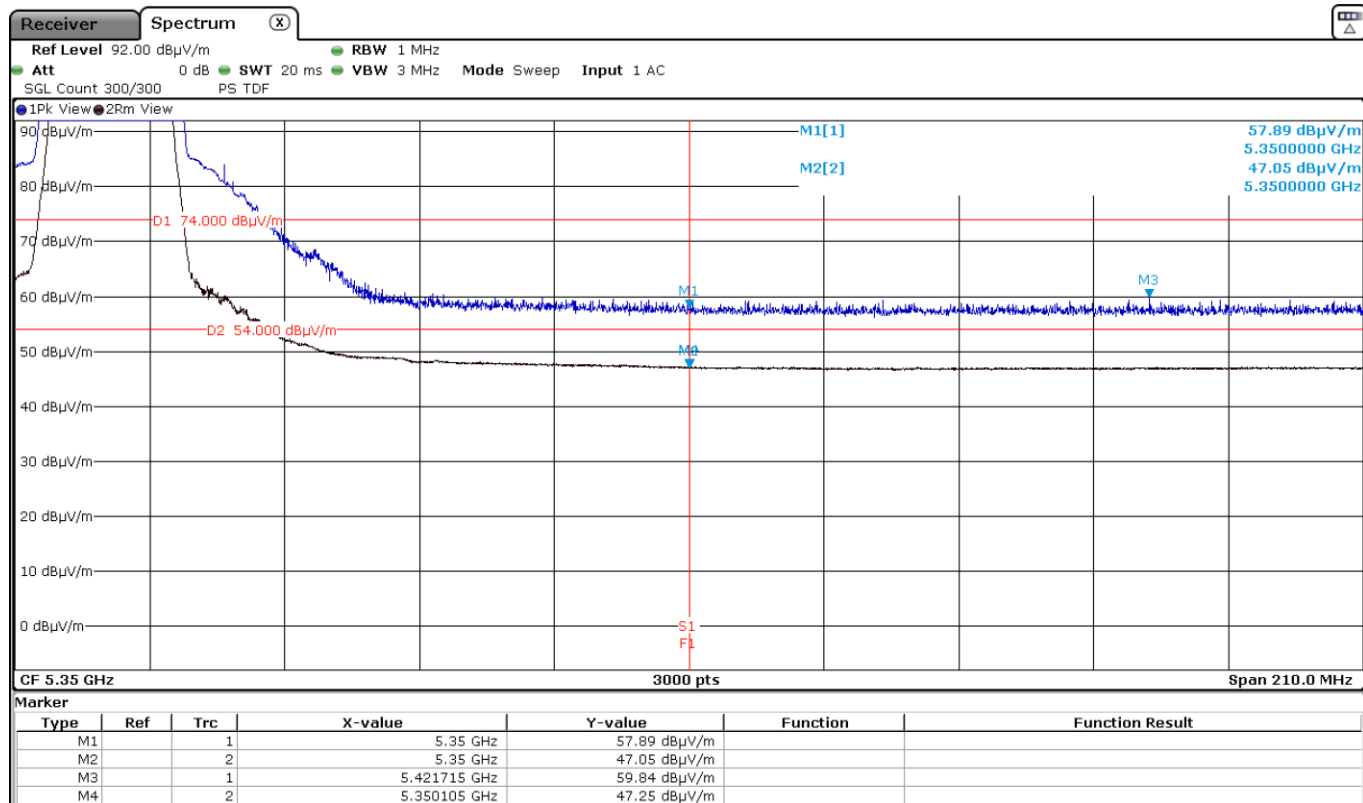
Results: Peak / Channel 64

Frequency (MHz)	Antenna Polarity	Peak Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement uncertainty (dB)	Verdict
5350	Vertical	63.17	74	10.83	<± 3.05	PASS
5350.413	Vertical	66.02	74	7.98	<± 3.05	PASS

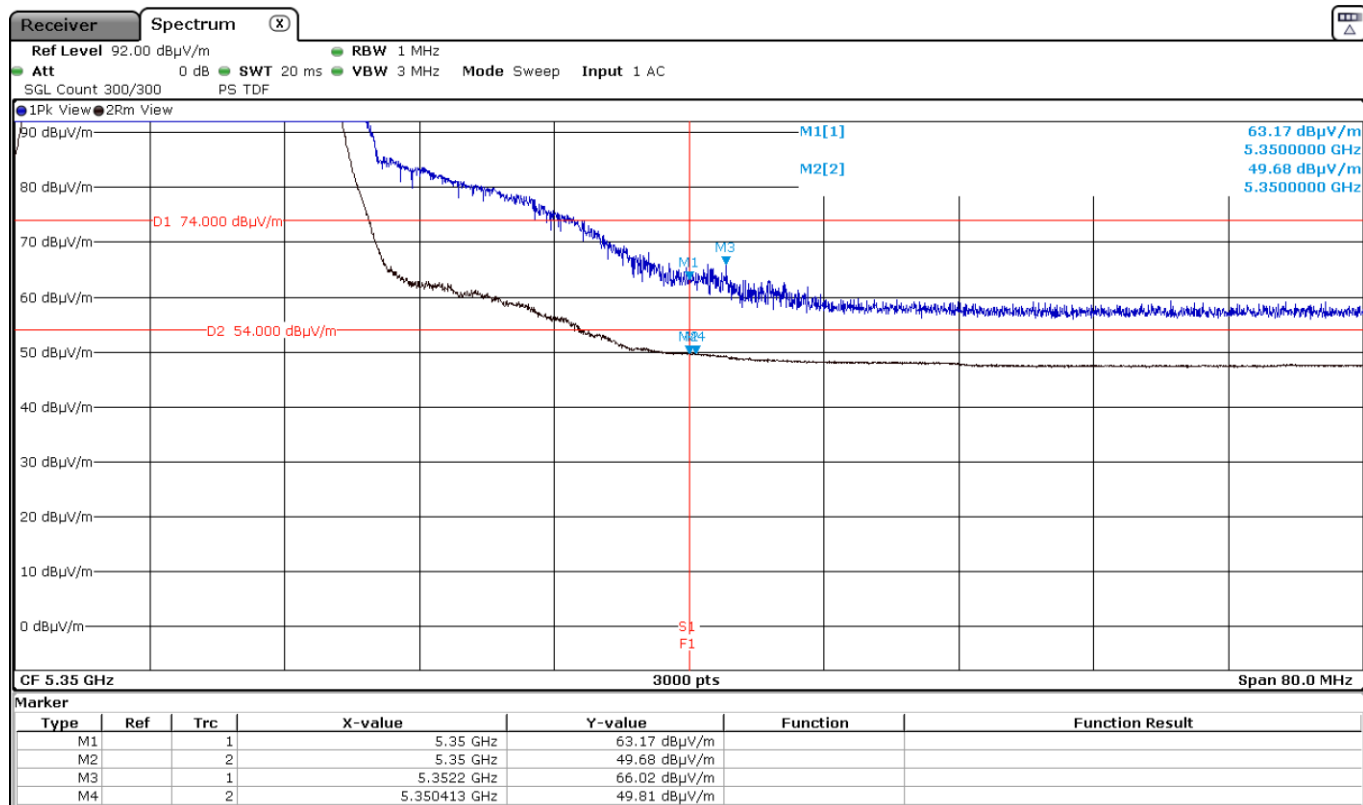
Results: Average / Channel 64

Frequency (MHz)	Antenna Polarity	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement uncertainty (dB)	Verdict
5350.413	Vertical	49.81	54	4.19	<± 3.05	PASS

5350 MHz to 5460 MHz Upper Band Edge Channel 52



5350 MHz to 5460 MHz Upper Band Edge Channel 64



Results for Mode: 802.11n HT20 – SDM - 20 MHz – MIMO - Core 0 + Core 2

Results: Peak / Channel 52

Frequency (MHz)	Antenna Polarity	Peak Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement uncertainty (dB)	Verdict
5350	Vertical	56.63	74	17.37	<± 3.05	PASS
5356.405	Vertical	59.15	74	14.85	<± 3.05	PASS

Results: Average / Channel 52

Frequency (MHz)	Antenna Polarity	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement uncertainty (dB)	Verdict
5350	Vertical	46.99	54	7.01	<± 3.05	PASS
5355.915	Vertical	47.13	54	6.87	<± 3.05	PASS

Results: Peak / Channel 64

Frequency (MHz)	Antenna Polarity	Peak Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement uncertainty (dB)	Verdict
5350	Vertical	65.83	74	8.17	<± 3.05	PASS
5350.787	Vertical	66.87	74	7.13	<± 3.05	PASS

Results: Average / Channel 64

Frequency (MHz)	Antenna Polarity	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Measurement uncertainty (dB)	Verdict
5350.013	Vertical	49.74	54	4.26	<± 3.05	PASS