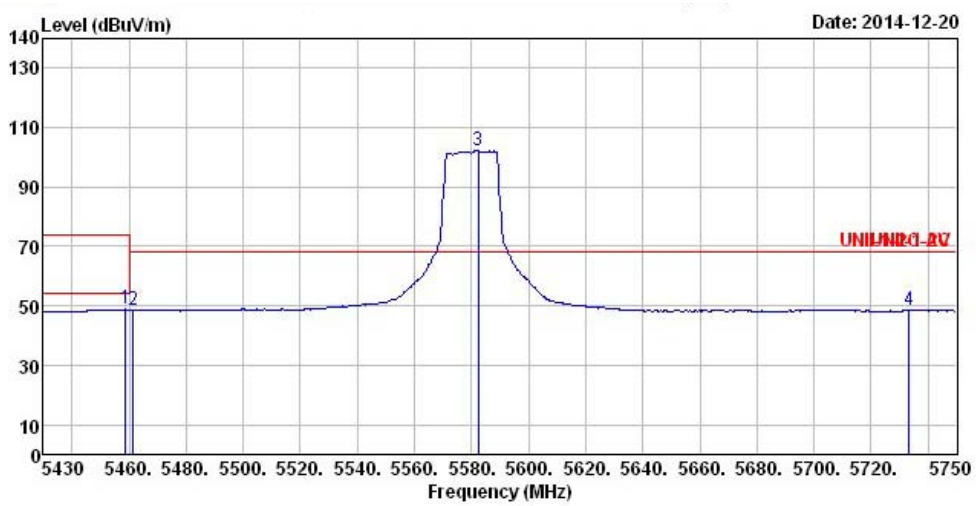
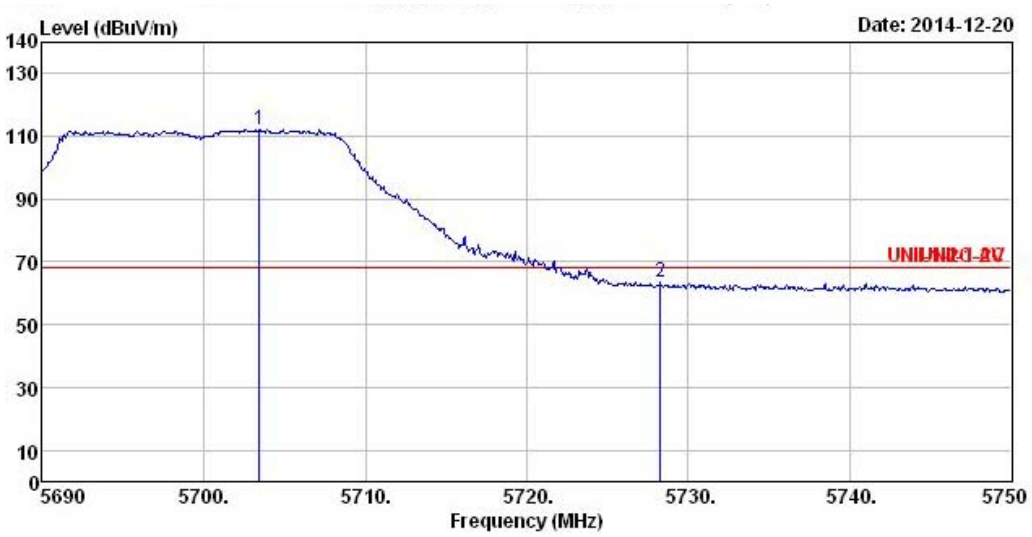
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 20MHz/ Nss3 MCS0/ Ch.116/ Ant. 1+2+3+4	**Polarization**	H



		Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1		5458.800	48.83	-5.17	54.00	40.81	34.13	6.31	32.42	Average	---	---
2		5461.360	48.72	-19.48	68.20	40.70	34.13	6.31	32.42	Average	---	---
3	*	5582.320	102.16	33.96	68.20	93.97	34.22	6.40	32.43	Average	---	---
4		5733.360	48.58	-19.62	68.20	40.30	34.24	6.48	32.44	Average	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5580 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

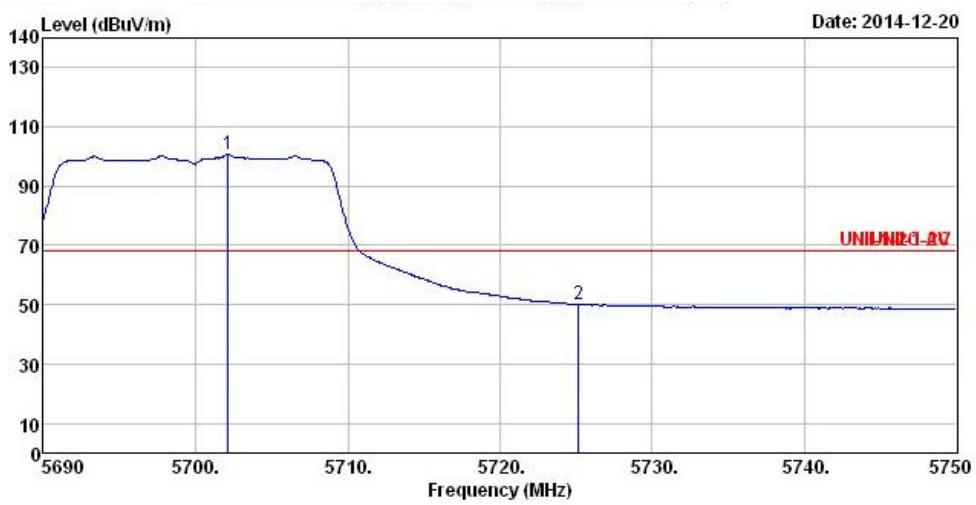
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 20MHz/ Nss3 MCS0/ Ch.140/ Ant. 1+2+3+4	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	* 5703.440	112.11	43.91	68.20	103.83	34.24	6.48	32.44	Peak	---	---
2	5728.280	63.49	-4.71	68.20	55.21	34.24	6.48	32.44	Peak	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5700 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

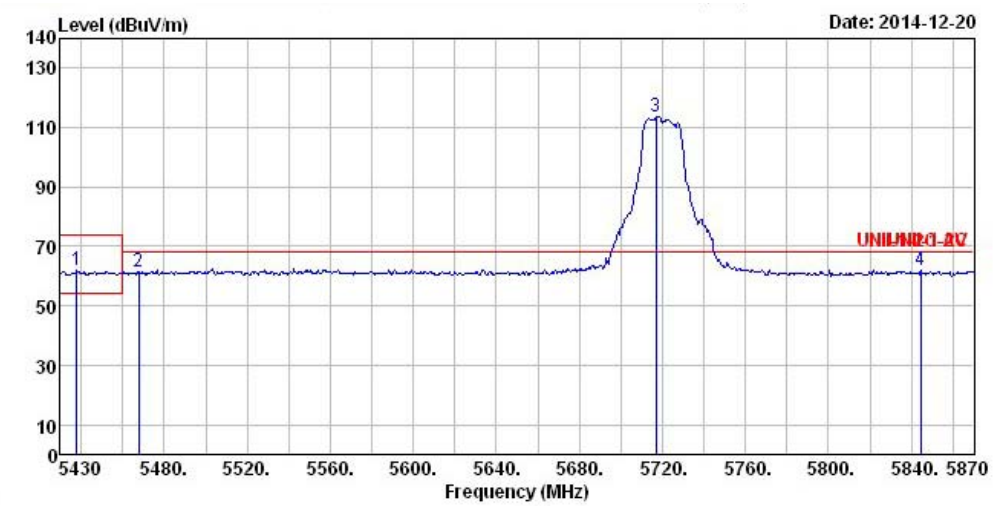
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 20MHz/ Nss3 MCS0/ Ch.140/ Ant. 1+2+3+4	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	* 5702.120	100.61	32.41	68.20	92.33	34.24	6.48	32.44	Average	---	---
2	5725.160	50.22	-17.98	68.20	41.94	34.24	6.48	32.44	Average	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5700 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

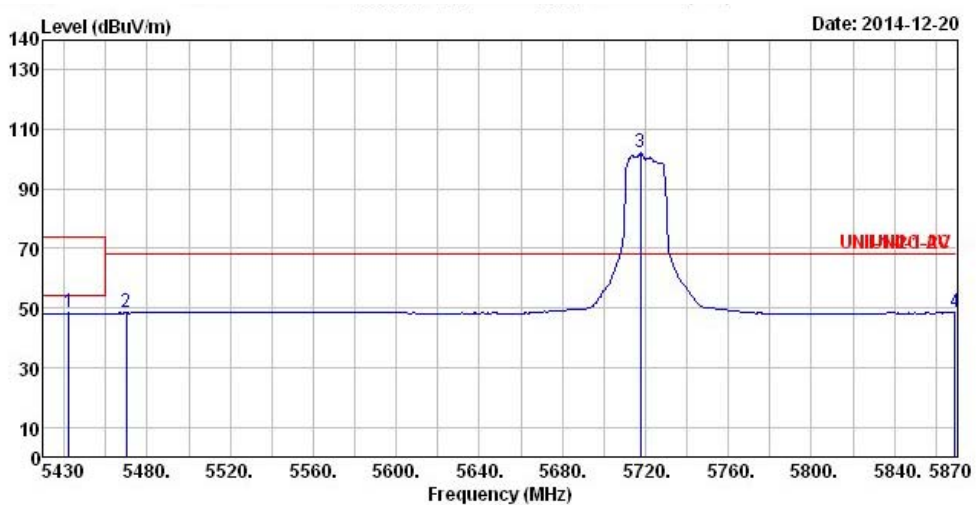
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 20MHz/ Nss3 MCS0/ Ch.144/ Ant. 1+2+3+4	**Polarization**	H



		Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1		5437.920	61.81	-12.19	74.00	53.81	34.11	6.31	32.42	Peak	---	---
2		5467.840	61.39	-6.81	68.20	53.30	34.15	6.36	32.42	Peak	---	---
3	*	5716.880	113.85	45.65	68.20	105.57	34.24	6.48	32.44	Peak	---	---
4		5844.480	62.18	-6.02	68.20	53.82	34.27	6.54	32.45	Peak	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5720 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

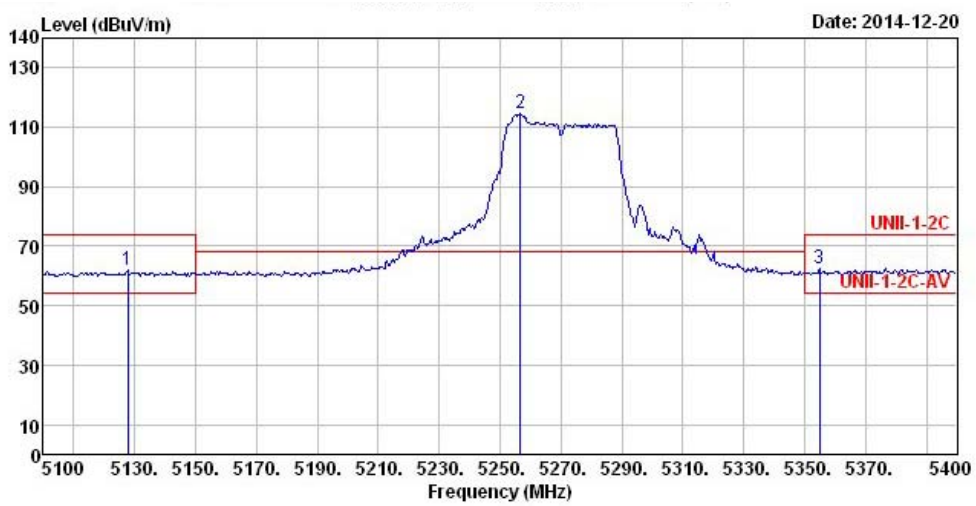
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 20MHz/ Nss3 MCS0/ Ch.144/ Ant. 1+2+3+4	**Polarization**	H



		Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1		5442.320	48.32	-5.68	54.00	40.32	34.11	6.31	32.42	Average	---	---
2		5470.000	48.34	-19.86	68.20	40.25	34.15	6.36	32.42	Average	---	---
3	*	5717.760	102.07	33.87	68.20	93.79	34.24	6.48	32.44	Average	---	---
4		5869.120	48.45	-19.75	68.20	40.07	34.27	6.56	32.45	Average	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5720 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

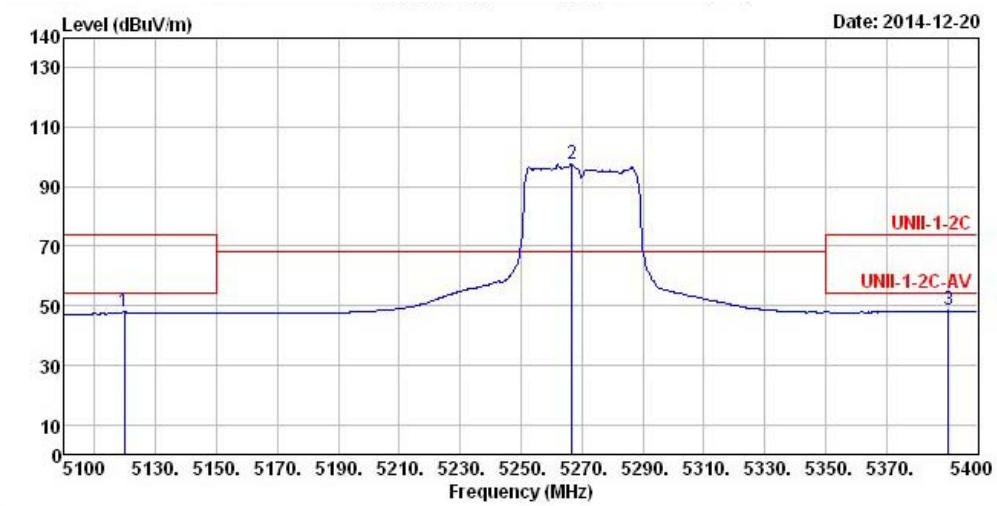
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 40MHz/ Nss3 MCS0/ Ch.54/ Ant. 1+2+3+4	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	5127.600	62.22	-11.78	74.00	55.05	33.69	5.91	32.43	Peak	---	---
2 *	5256.600	114.72	46.52	68.20	107.23	33.85	6.06	32.42	Peak	---	---
3	5355.000	62.69	-11.31	74.00	54.91	33.99	6.21	32.42	Peak	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5270 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

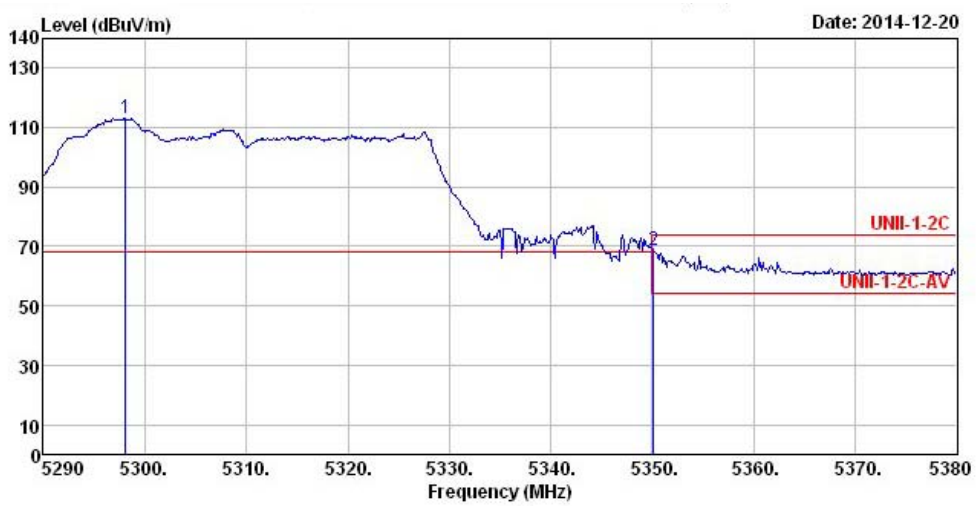
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 40MHz/ Nss3 MCS0/ Ch.54/ Ant. 1+2+3+4	**Polarization**	H



		Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1		5119.800	48.09	-5.91	54.00	40.95	33.66	5.91	32.43	Average	---	---
2	*	5266.800	97.70	29.50	68.20	90.19	33.87	6.06	32.42	Average	---	---
3		5390.400	48.32	-5.68	54.00	40.44	34.04	6.26	32.42	Average	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5270 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

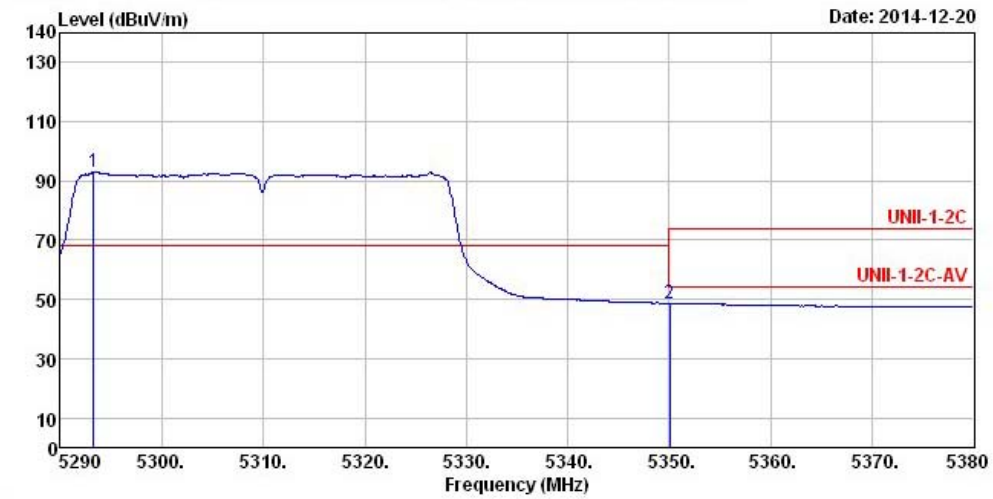
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 40MHz/ Nss3 MCS0/ Ch.62/ Ant. 1+2+3+4	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1 *	5298.100	113.05	44.85	68.20	105.44	33.92	6.11	32.42	Peak	---	---
2	5350.120	68.66	-5.34	74.00	60.88	33.99	6.21	32.42	Peak	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5310 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

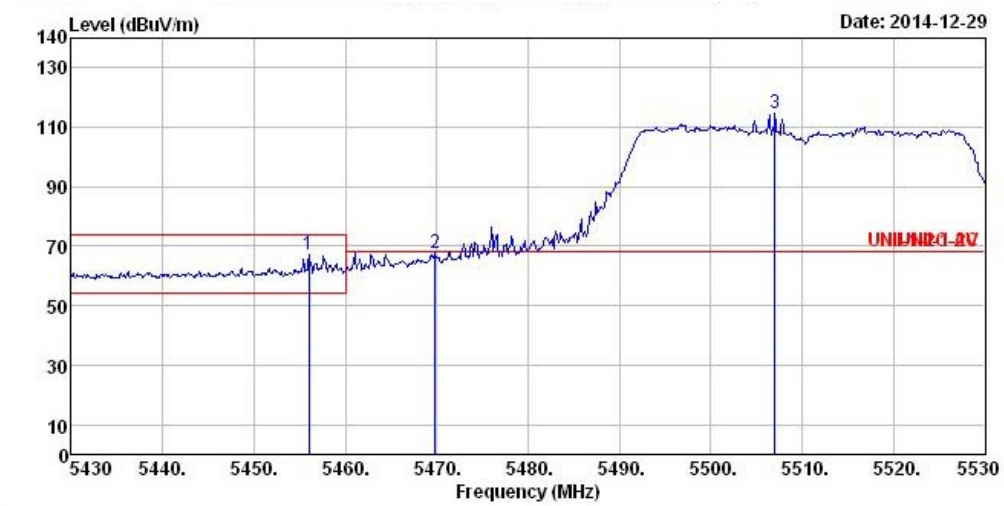
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 40MHz/ Nss3 MCS0/ Ch.62/ Ant. 1+2+3+4	**Polarization**	H



		Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	*	5293.240	93.19	24.99	68.20	85.58	33.92	6.11	32.42	Average	---	---
2		5350.030	48.67	-5.33	54.00	40.89	33.99	6.21	32.42	Average	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5310 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

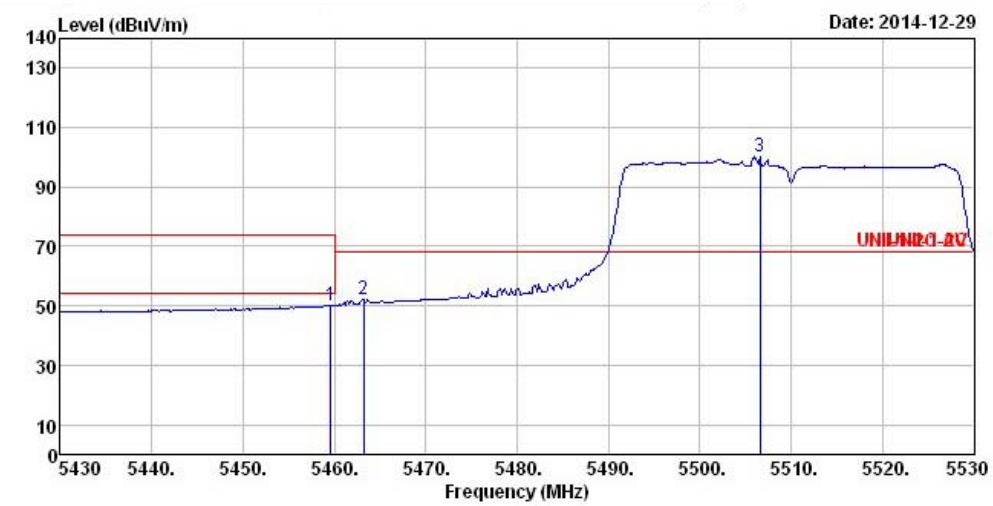
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 40MHz/ Nss3 MCS0/ Ch.102/ Ant. 1+2+3+4	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	5456.000	67.28	-6.72	74.00	59.26	34.13	6.31	32.42	Peak	---	---
2	5469.800	67.89	-0.31	68.20	59.80	34.15	6.36	32.42	Peak	---	---
3 *	5507.000	114.56	46.36	68.20	106.40	34.20	6.38	32.42	Peak	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5510 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

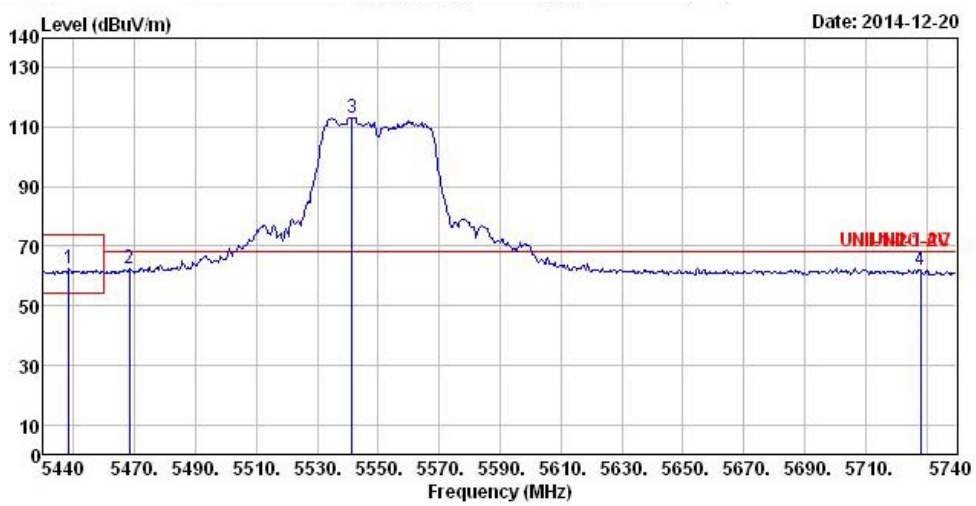
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 40MHz/ Nss3 MCS0/ Ch.102/ Ant. 1+2+3+4	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	5459.600	50.33	-3.67	54.00	42.31	34.13	6.31	32.42	Average	---	---
2	5463.200	52.38	-15.82	68.20	44.34	34.15	6.31	32.42	Average	---	---
3 *	5506.600	100.14	31.94	68.20	91.98	34.20	6.38	32.42	Average	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5510 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

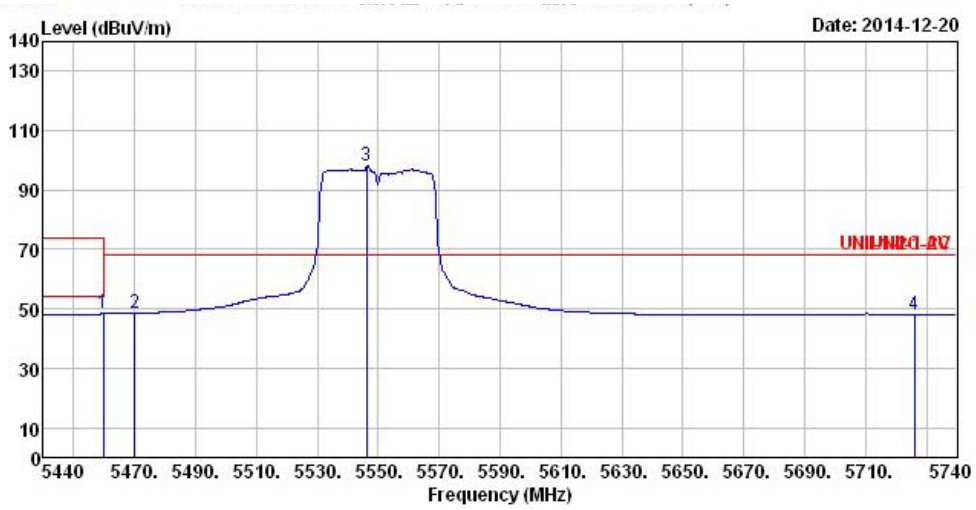
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 40MHz/ Nss3 MCS0/ Ch.110/ Ant. 1+2+3+4	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	5448.400	62.44	-11.56	74.00	54.42	34.13	6.31	32.42	Peak	---	---
2	5468.200	62.29	-5.91	68.20	54.20	34.15	6.36	32.42	Peak	---	---
3 *	5541.400	113.25	45.05	68.20	105.08	34.21	6.38	32.42	Peak	---	---
4	5728.000	62.18	-6.02	68.20	53.90	34.24	6.48	32.44	Peak	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5550 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

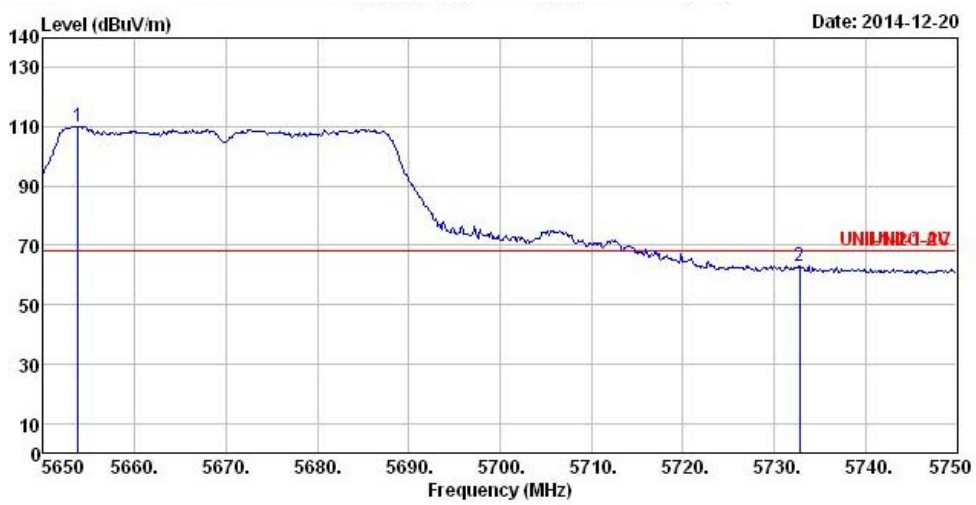
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 40MHz/ Nss3 MCS0/ Ch.110/ Ant. 1+2+3+4	**Polarization**	H



		Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1		5459.800	48.32	-5.68	54.00	40.30	34.13	6.31	32.42	Average	---	---
2		5470.000	48.56	-19.64	68.20	40.47	34.15	6.36	32.42	Average	---	---
3	*	5546.200	98.26	30.06	68.20	90.07	34.21	6.40	32.42	Average	---	---
4		5726.200	48.03	-20.17	68.20	39.75	34.24	6.48	32.44	Average	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5550 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

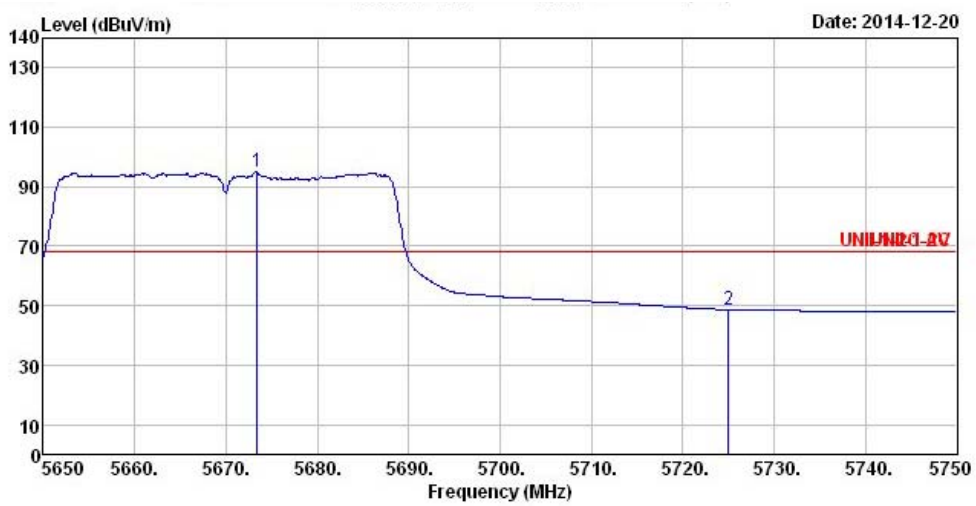
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 40MHz/ Nss3 MCS0/ Ch.134/ Ant. 1+2+3+4	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	* 5653.800	110.25	42.05	68.20	102.01	34.23	6.44	32.43	Peak	---	---
2	5732.800	63.18	-5.02	68.20	54.90	34.24	6.48	32.44	Peak	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5670 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

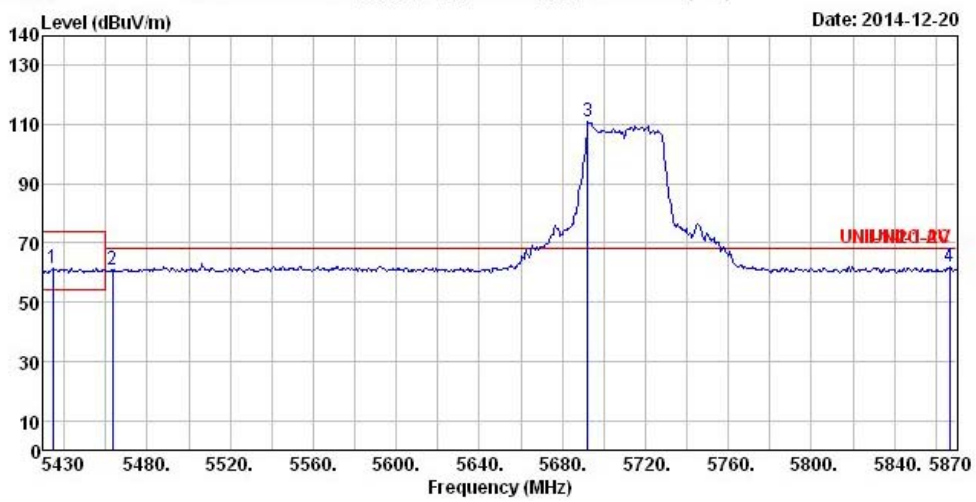
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 40MHz/ Nss3 MCS0/ Ch.134/ Ant. 1+2+3+4	**Polarization**	H



		Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	*	5673.400	95.07	26.87	68.20	86.81	34.23	6.46	32.43	Average	---	---
2		5725.000	48.70	-19.50	68.20	40.42	34.24	6.48	32.44	Average	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5670 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

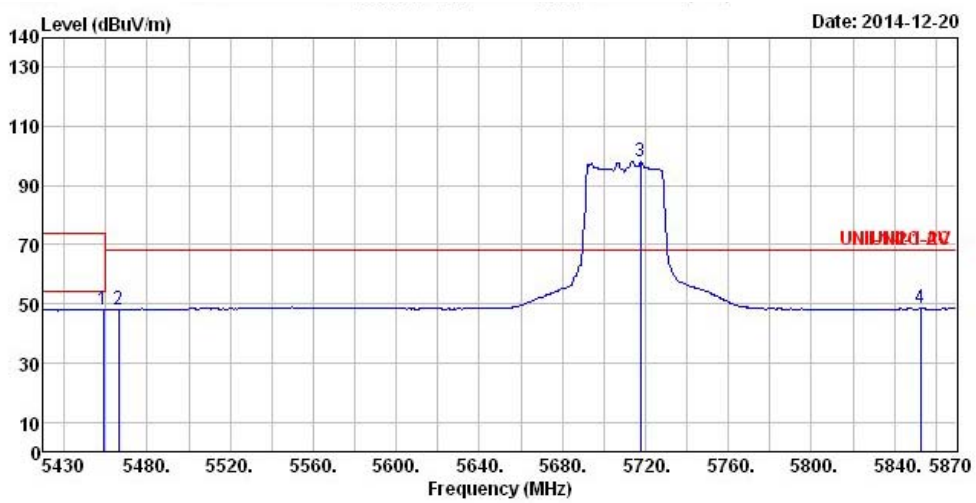
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 40MHz/ Nss3 MCS0/ Ch.142/ Ant. 1+2+3+4	**Polarization**	H



		Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1		5434.400	61.37	-12.63	74.00	53.37	34.11	6.31	32.42	Peak	---	---
2		5463.440	61.08	-7.12	68.20	53.04	34.15	6.31	32.42	Peak	---	---
3	*	5692.240	110.93	42.73	68.20	102.67	34.24	6.46	32.44	Peak	---	---
4		5866.480	61.83	-6.37	68.20	53.45	34.27	6.56	32.45	Peak	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5710 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

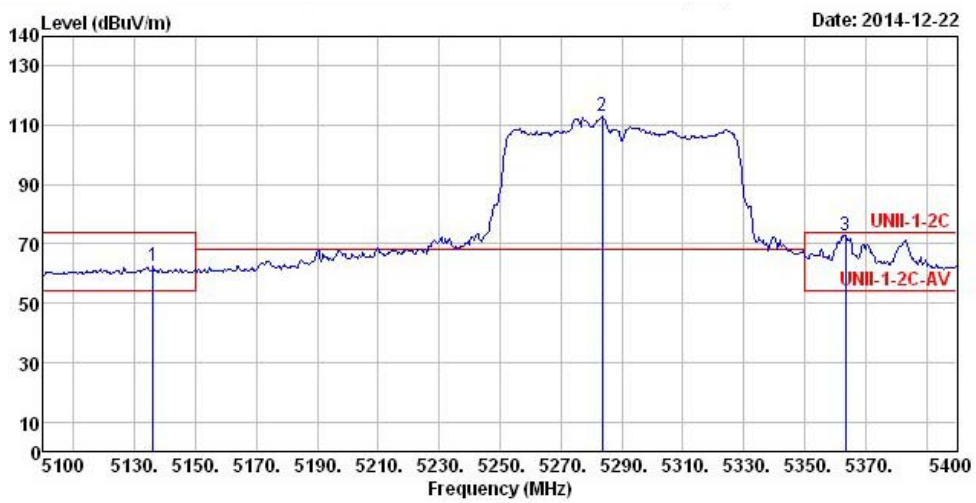
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 40MHz/ Nss3 MCS0/ Ch.142/ Ant. 1+2+3+4	**Polarization**	H



		Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1		5459.040	48.13	-5.87	54.00	40.11	34.13	6.31	32.42	Average	---	---
2		5466.080	48.22	-19.98	68.20	40.13	34.15	6.36	32.42	Average	---	---
3	*	5717.760	98.26	30.06	68.20	89.98	34.24	6.48	32.44	Average	---	---
4		5852.400	48.51	-19.69	68.20	40.15	34.27	6.54	32.45	Average	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5710 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

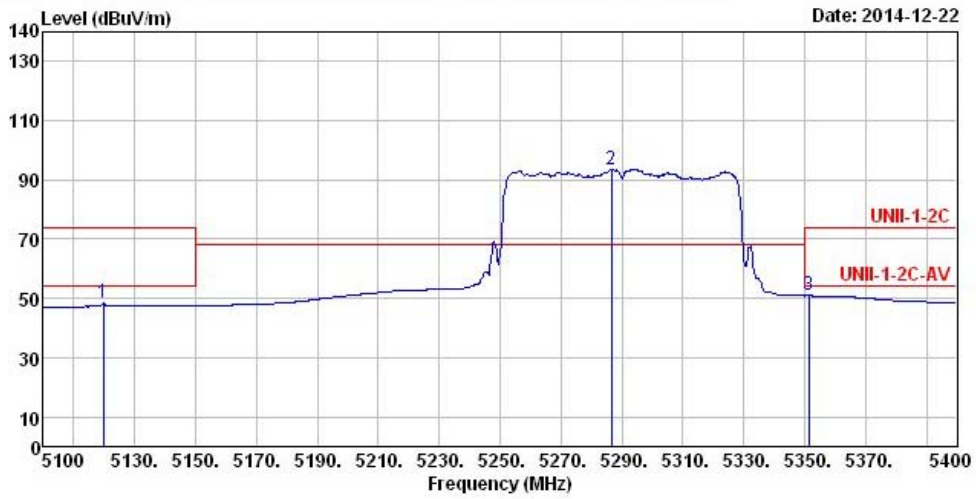
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 80MHz/ Nss3 MCS0/ Ch.58/ Ant. 1+2+3+4	**Polarization**	H



		Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1		5136.000	62.26	-11.74	74.00	55.09	33.69	5.91	32.43	Peak	---	---
2	*	5283.600	112.91	44.71	68.20	105.32	33.90	6.11	32.42	Peak	---	---
3		5363.400	72.78	-1.22	74.00	64.98	34.01	6.21	32.42	Peak	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5290 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

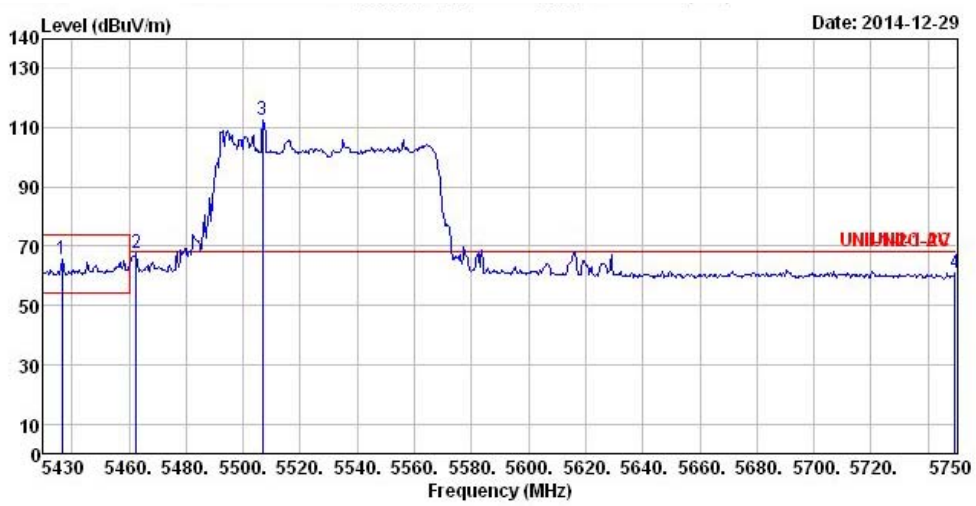
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 80MHz/ Nss3 MCS0/ Ch.58/ Ant. 1+2+3+4	**Polarization**	H



		Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1		5119.800	48.31	-5.69	54.00	41.17	33.66	5.91	32.43	Average	---	---
2	*	5286.600	93.72	25.52	68.20	86.13	33.90	6.11	32.42	Average	---	---
3		5351.400	50.98	-3.02	54.00	43.20	33.99	6.21	32.42	Average	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5290 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

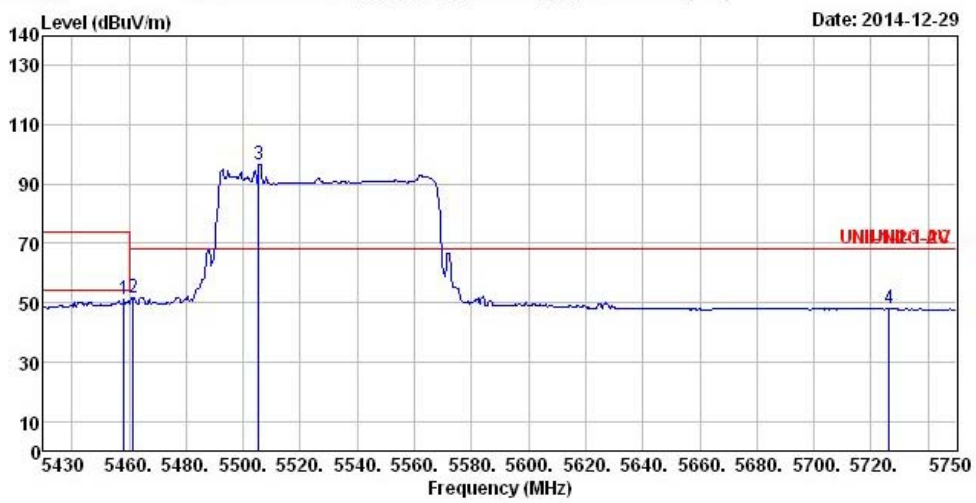
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 80MHz / Nss3 MCS0/ Ch.106/ Ant. 1+2+3+4	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	5436.400	65.46	-8.54	74.00	57.46	34.11	6.31	32.42	Peak	---	---
2	5462.640	67.77	-0.43	68.20	59.73	34.15	6.31	32.42	Peak	---	---
3 *	5506.800	112.39	44.19	68.20	104.23	34.20	6.38	32.42	Peak	---	---
4	5749.360	60.79	-7.41	68.20	52.48	34.25	6.50	32.44	Peak	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5530 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

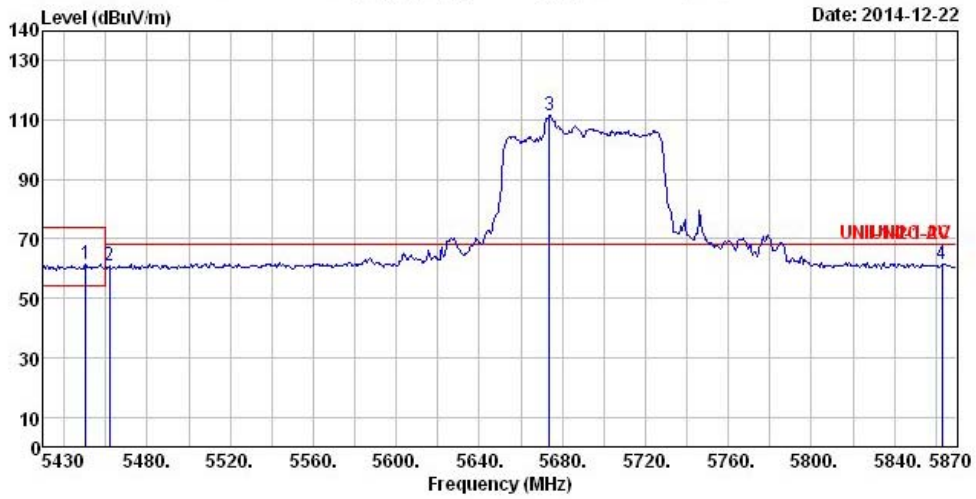
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 80MHz/ Nss3 MCS0/ Ch.106/ Ant. 1+2+3+4	**Polarization**	H



		Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1		5458.160	50.99	-3.01	54.00	42.97	34.13	6.31	32.42	Average	---	---
2		5461.360	51.78	-16.42	68.20	43.76	34.13	6.31	32.42	Average	---	---
3	*	5505.520	96.52	28.32	68.20	88.36	34.20	6.38	32.42	Average	---	---
4		5726.320	48.01	-20.19	68.20	39.73	34.24	6.48	32.44	Average	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5530 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

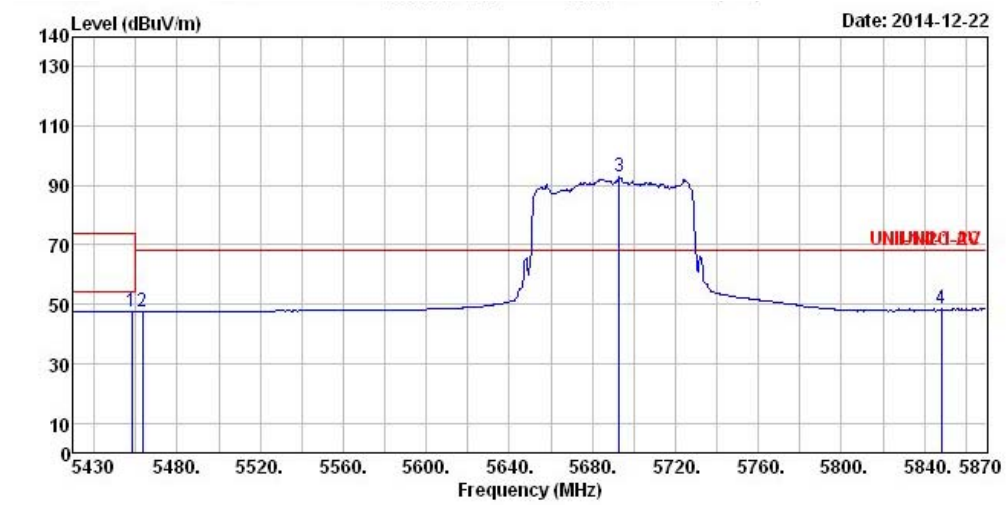
Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 80MHz / Nss3 MCS0/ Ch.138/ Ant. 1+2+3+4	**Polarization**	H



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1	5450.240	61.55	-12.45	74.00	53.53	34.13	6.31	32.42	Peak	---	---
2	5461.680	60.93	-7.27	68.20	52.91	34.13	6.31	32.42	Peak	---	---
3 *	5673.760	111.37	43.17	68.20	103.11	34.23	6.46	32.43	Peak	---	---
4	5862.960	61.58	-6.62	68.20	53.20	34.27	6.56	32.45	Peak	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5690 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

Band Edge and Fundamental Emissions			
Operating Mode	802.11ac 80MHz/ Nss3 MCS0/ Ch.138/ Ant. 1+2+3+4	**Polarization**	H



		Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	A/Pos	T/Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg
1		5458.160	47.48	-6.52	54.00	39.46	34.13	6.31	32.42	Average	---	---
2		5463.440	47.51	-20.69	68.20	39.47	34.15	6.31	32.42	Average	---	---
3	*	5693.120	92.87	24.67	68.20	84.61	34.24	6.46	32.44	Average	---	---
4		5848.000	48.50	-19.70	68.20	40.14	34.27	6.54	32.45	Average	---	---

Note 1: Item 3, 4 are the fundamental frequency at 5690 MHz
Note 2: Emission level (dBuV/m) = 20 log Emission level (uV/m).
Note 3: Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Note 4: Measurement worst emissions of receive antenna polarization: H (Horizontal)

5 Band-crossing Channel Measurement

5.1 Emission bandwidth Measurement for Band-Crossing Channel

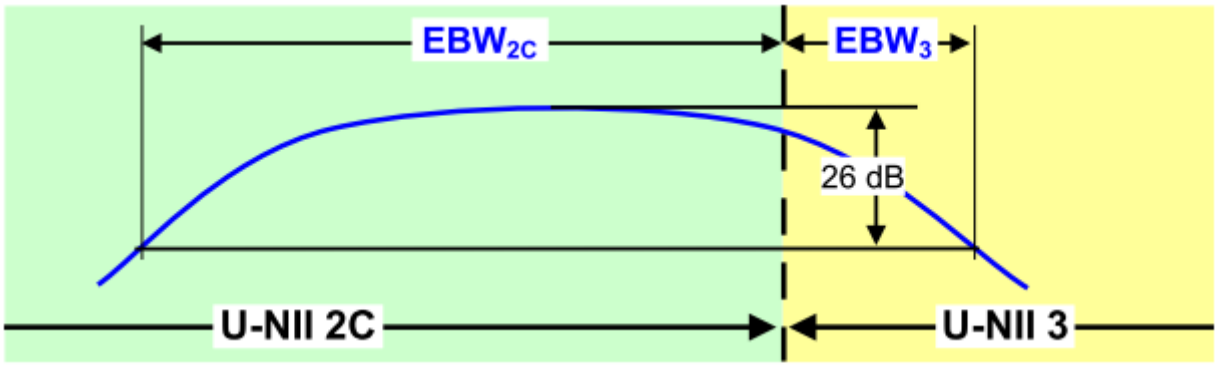
5.1.1 Limit

No restriction limits

5.1.2 26dB Bandwidth Measuring Instruments and Setting

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

Power Meter Parameter	Setting
Attenuation	Auto
Span Frequency	> 26dB Bandwidth
RB	Approximately 1% of the emission bandwidth.
VB	> RBW.
Detector	peak
Trace	max hold
Sweep Time	Auto

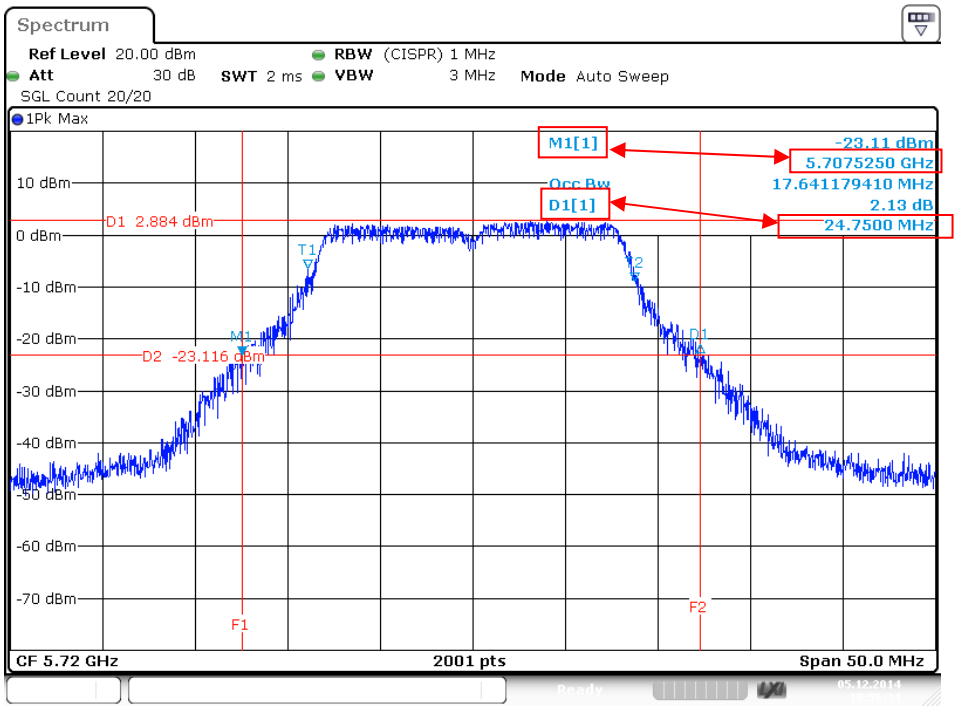


Emission Bandwidth (EBW) within a Band for Band-Crossing Signals

5.1.3 Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. Test was performed in accordance with KDB 644545 D03 Guidance for IEEE 802.11ac New Rules v01, in section “In-band emission limits (D)” , 8/14/2014
3. When measuring Emission bandwidth with multiple antenna systems, add every result of the values by mathematic formula.

Example:

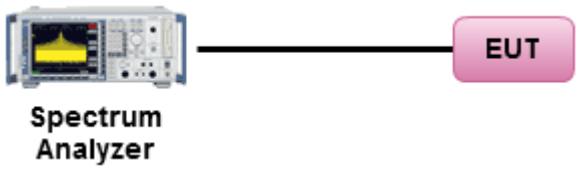


Date: 5.DEC.2014 18:56:34

4. EBW2C= 5.725GHz - M1[1]

   EBW3= M1[1] + D1[1](MHz)- 5.725GHz

5.1.4 Test Setup Layout

Maximum Conducted Output Power


5.1.5 Test Deviation

There are no deviation with the original standard.

5.1.6 EUT Operation during Test

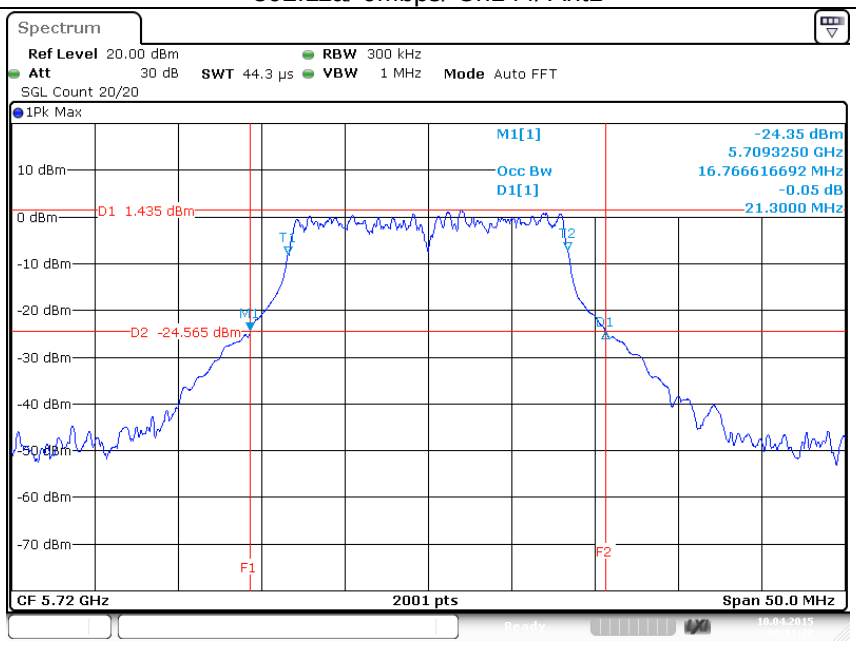
The EUT was programmed to be in continuously transmitting mode.

5.1.7 Test Result for Emission bandwidth

<CDD Mode>

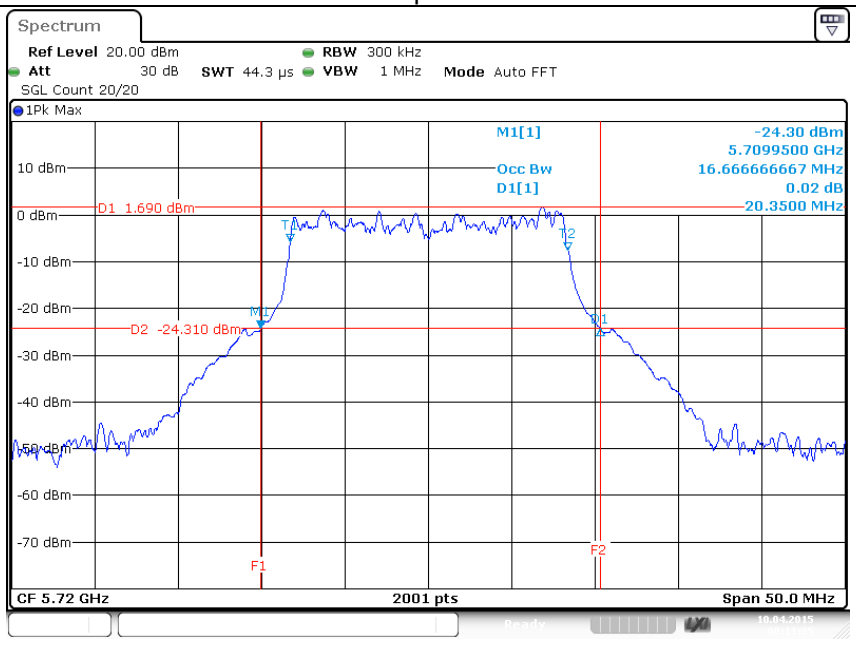
26dB Emission Bandwidth									
Worst Modulation Mode	Frequency (MHz)	26dB Emission Bandwidth							
		Ant 1		Ant 2		Ant 3		Ant 4	
		EBW2c	EBW3	EBW2c	EBW3	EBW2c	EBW3	EBW2c	EBW3
802.11a 20MHz	5720	15.70	5.60	15.10	5.30	15.70	5.50	15.70	7.00
802.11ac 20MHz	5720	17.00	5.60	16.50	5.70	17.00	6.20	16.70	5.60
802.11ac 40MHz	5710	36.50	6.10	36.40	6.70	36.20	6.30	36.30	6.30
802.11ac 80MHz	5690	75.50	7.00	74.60	4.70	75.00	7.00	76.90	5.40

802.11a/ 6Mbps/ Ch144/ Ant1



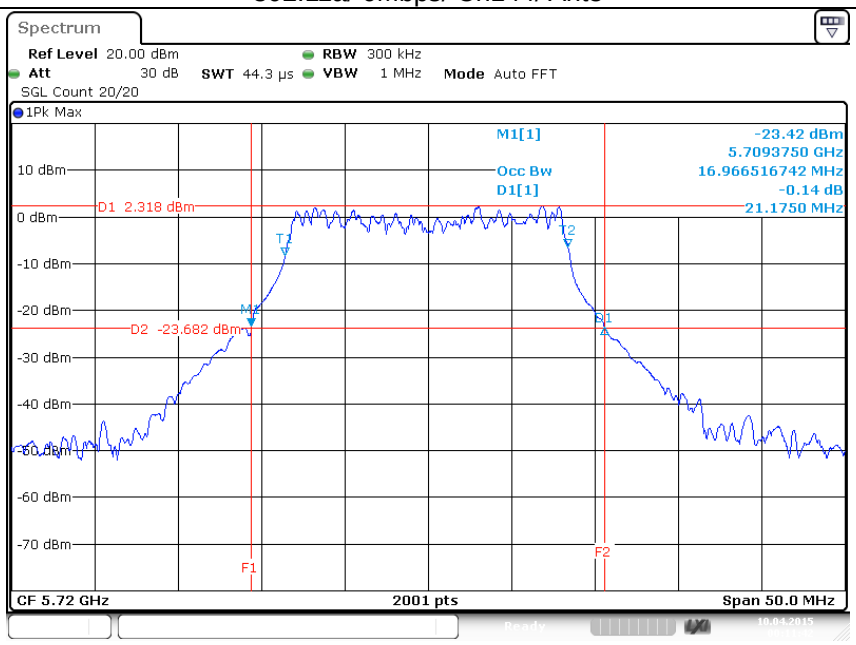
Date: 10.APR.2015 00:11:28

802.11a/ 6Mbps/ Ch144/ Ant2



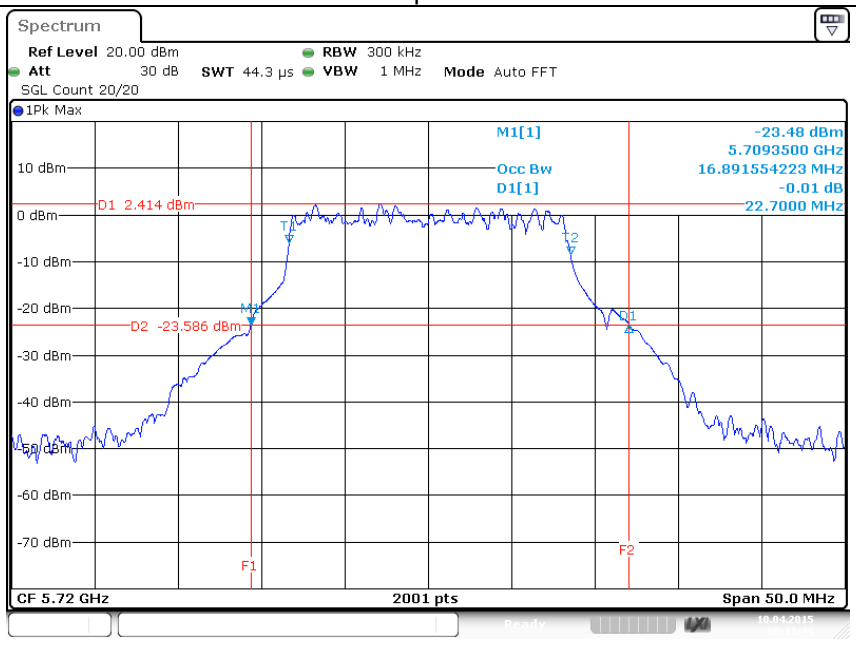
Date: 10.APR.2015 00:11:35

802.11a/ 6Mbps/ Ch144/ Ant3



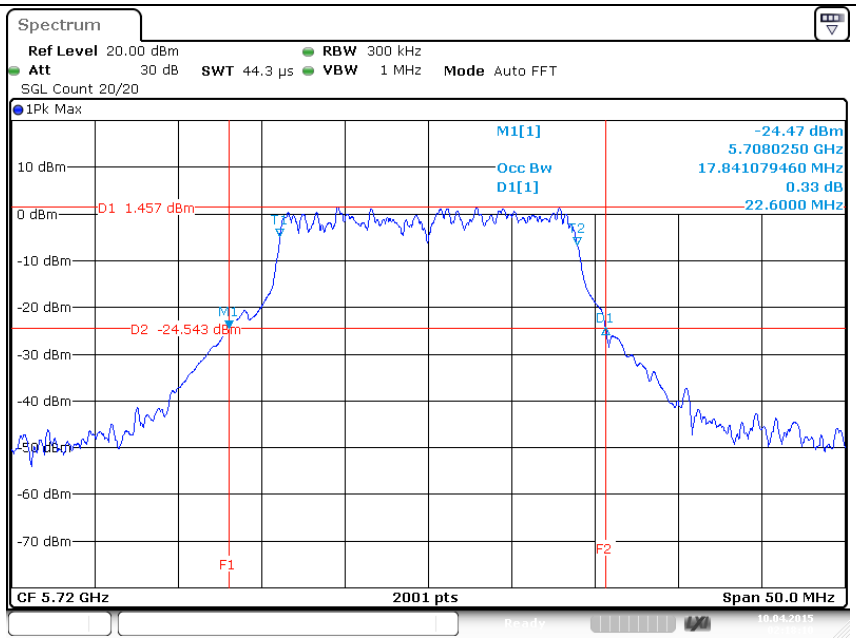
Date: 10.APR.2015 00:11:42

802.11a/ 6Mbps/ Ch144/ Ant4



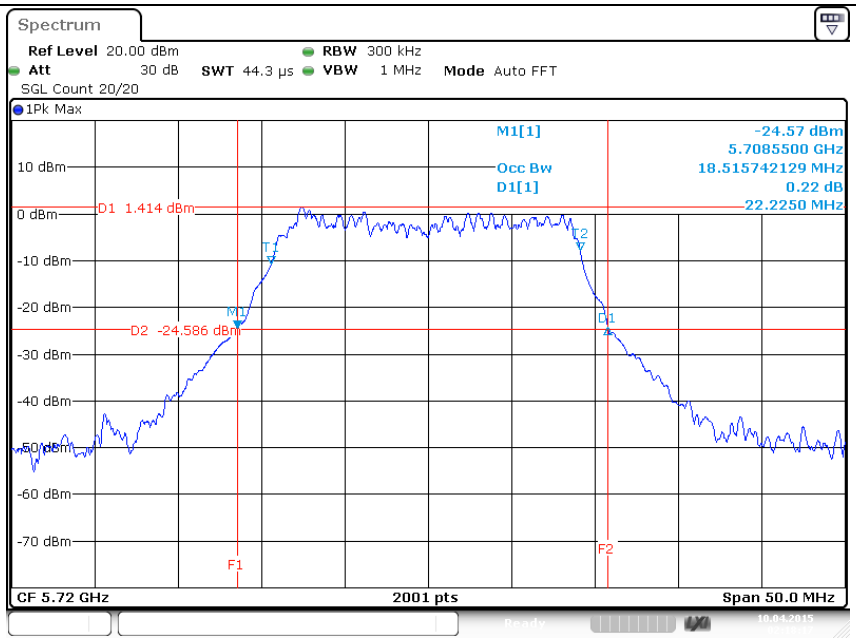
Date: 10.APR.2015 00:11:49

802.11ac 20MHz/ Nss1 MCS0/ Ch144/ Ant1



Date: 10.APR.2015 02:18:10

802.11ac 20MHz/ Nss1 MCS0/ Ch144/ Ant2



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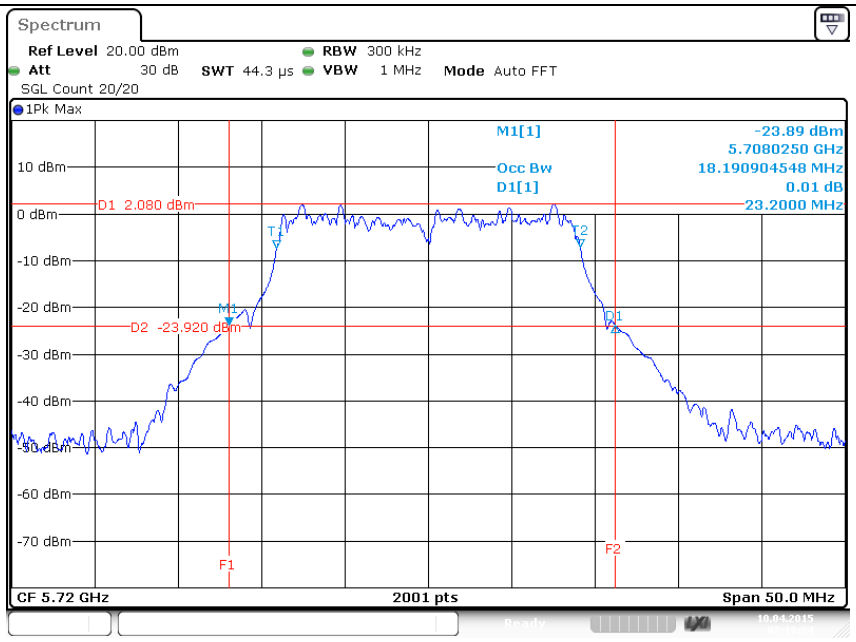
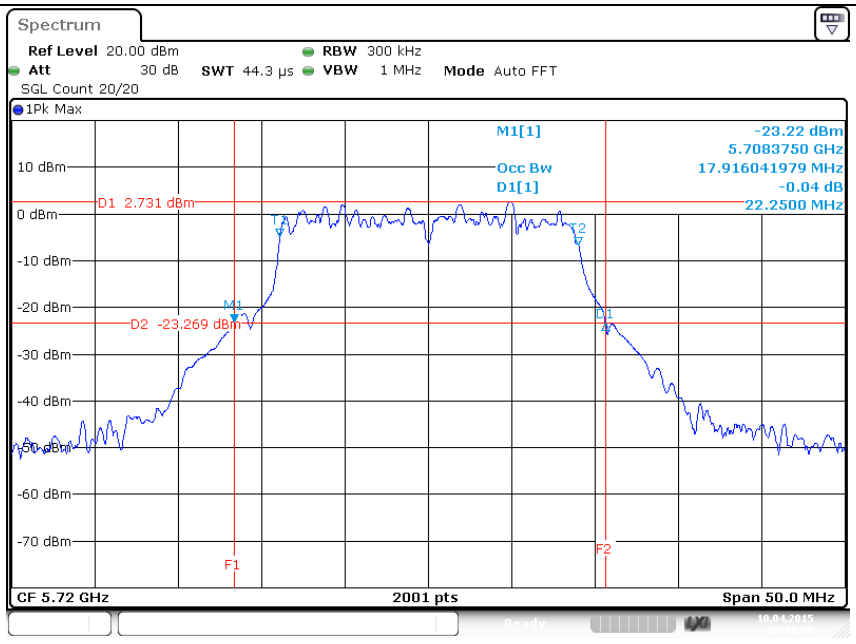
802.11ac 20MHz/ Nss1 MCS0/ Ch144/ Ant3



Date: 10.APR.2015 02:18:24

802.11ac 20MHz/ Nss1 MCS0/ Ch144/ Ant4



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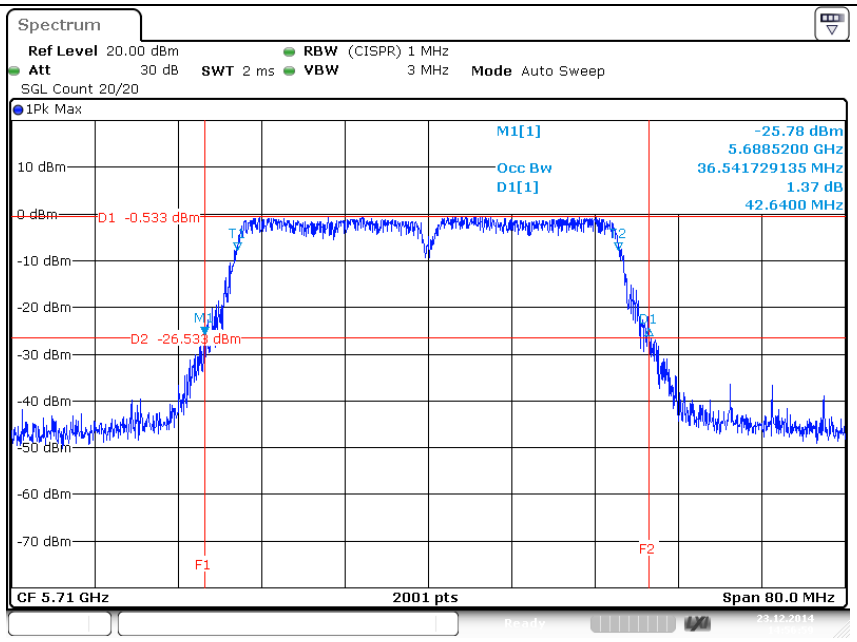
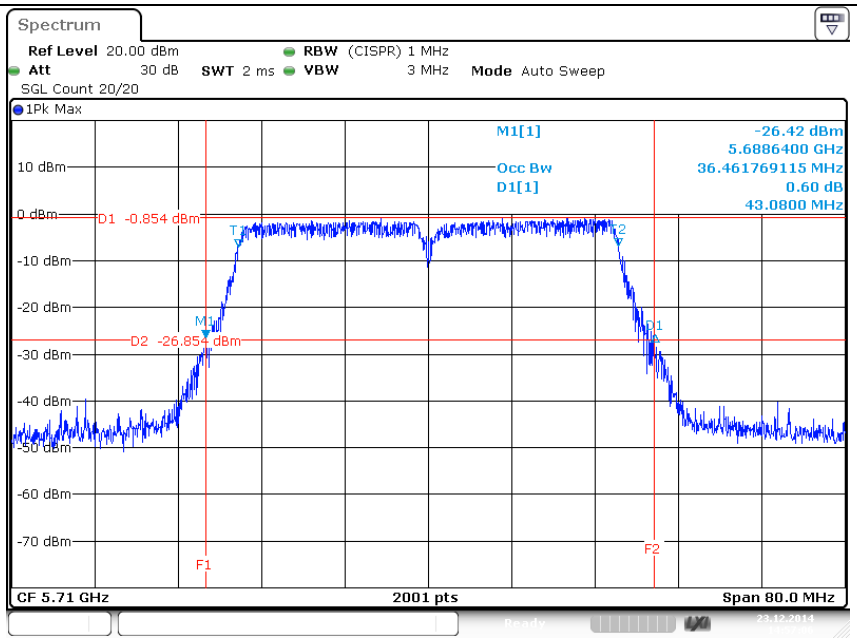
802.11ac 40MHz/ Nss1 MCS0/ Ch142/ Ant1



Date: 23.DEC.2014 14:56:59

802.11ac 40MHz/ Nss1 MCS0/ Ch142/ Ant2



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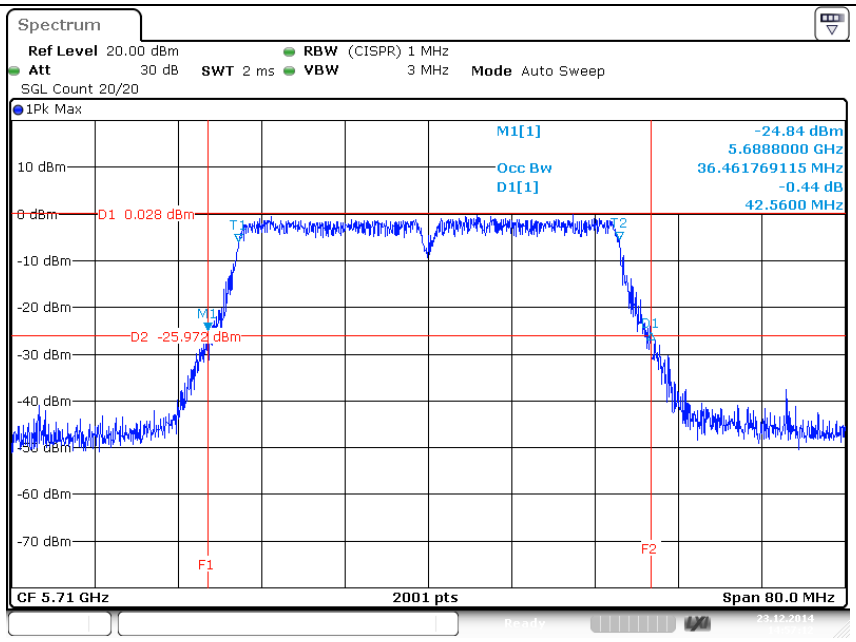
802.11ac 40MHz/ Nss1 MCS0/ Ch142/ Ant3



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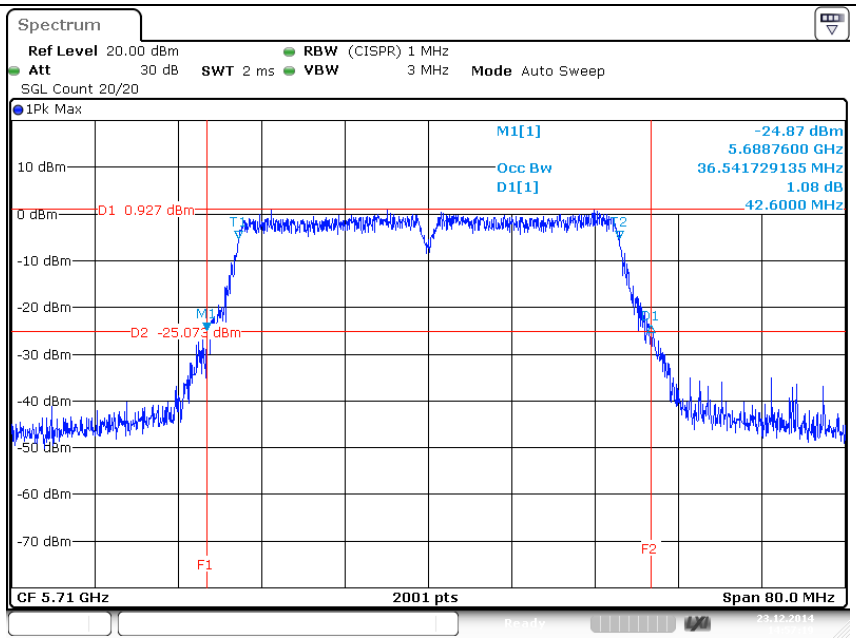
802.11ac 40MHz/ Nss1 MCS0/ Ch142/ Ant4



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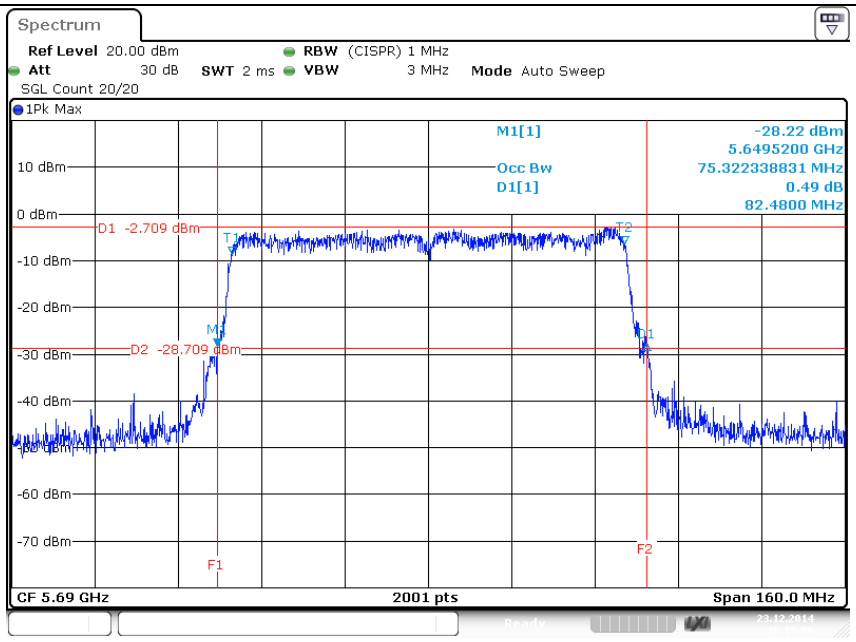
802.11ac 80MHz/ Nss1 MCS0/ Ch138/ Ant1



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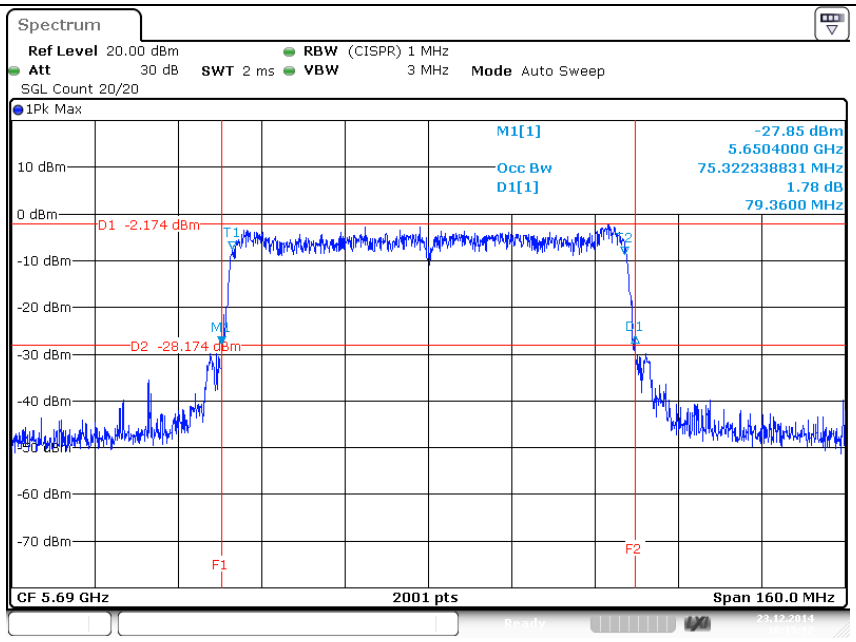
802.11ac 80MHz/ Nss1 MCS0/ Ch138/ Ant2



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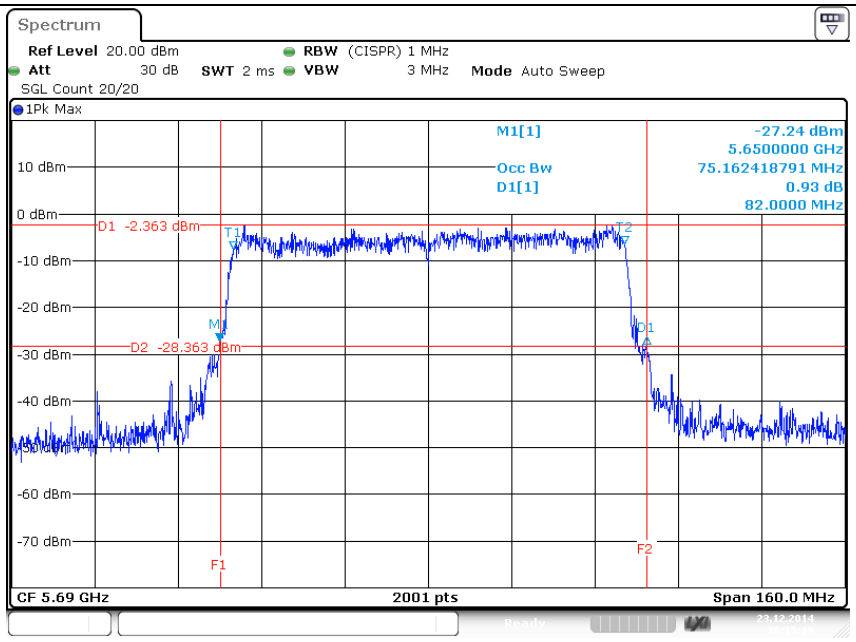
802.11ac 80MHz/ Nss1 MCS0/ Ch138/ Ant3



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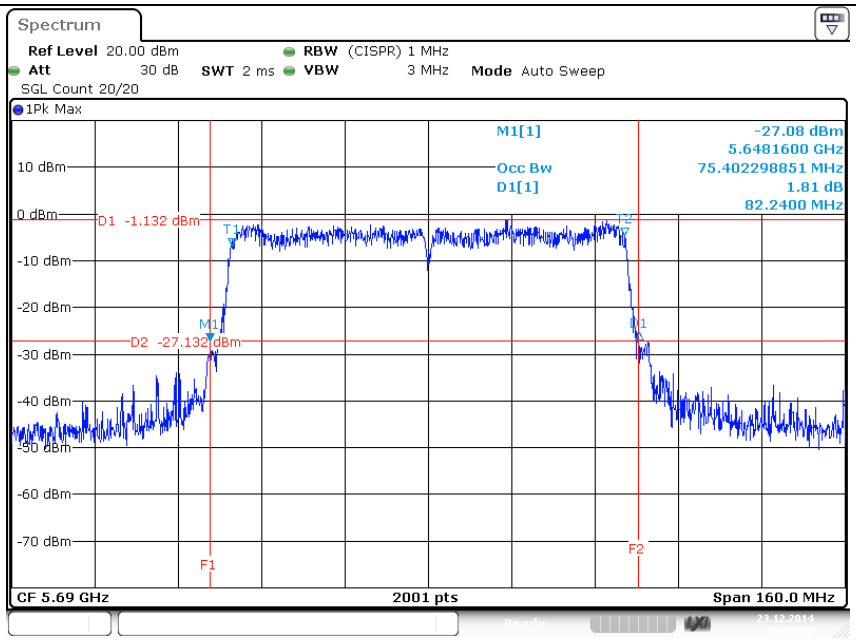
802.11ac 80MHz/ Nss1 MCS0/ Ch138/ Ant4

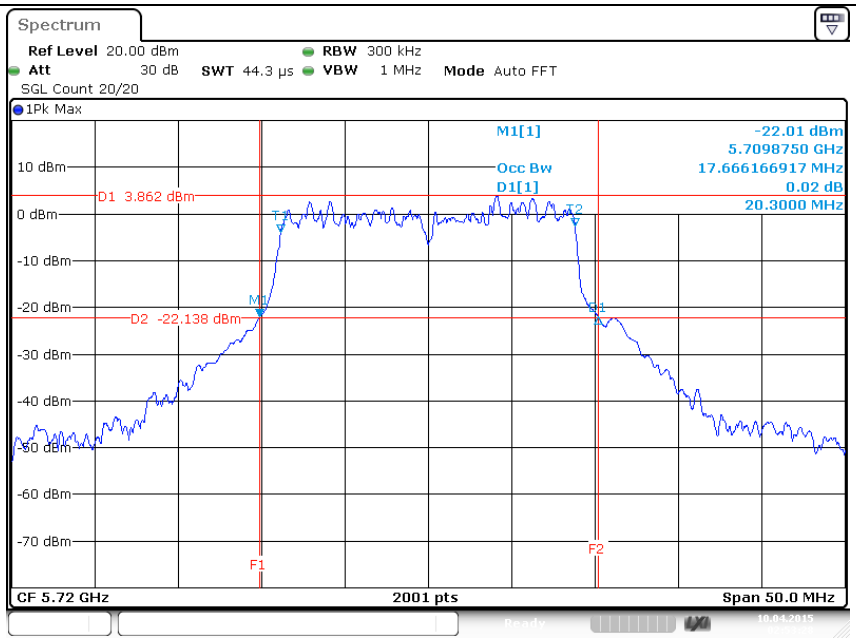


Date: 23.DEC.2014 16:15:25

<TXBF Mode Nss2 MCS0>

26dB Emission Bandwidth									
Worst Modulation Mode	Frequency (MHz)	26dB Emission Bandwidth							
		Ant 1		Ant 2		Ant 3		Ant 4	
		EBW2c	EBW3	EBW2c	EBW3	EBW2c	EBW3	EBW2c	EBW3
802.11ac 20MHz	5720	15.20	5.10	16.70	5.70	16.00	5.70	16.80	6.00
802.11ac 40MHz	5710	37.00	5.70	36.30	5.70	36.00	6.60	36.60	6.70
802.11ac 80MHz	5690	75.40	6.90	75.10	6.60	76.50	6.40	75.30	6.80

802.11ac 20MHz/ Nss2 MCS0/ Ch144/ Ant1



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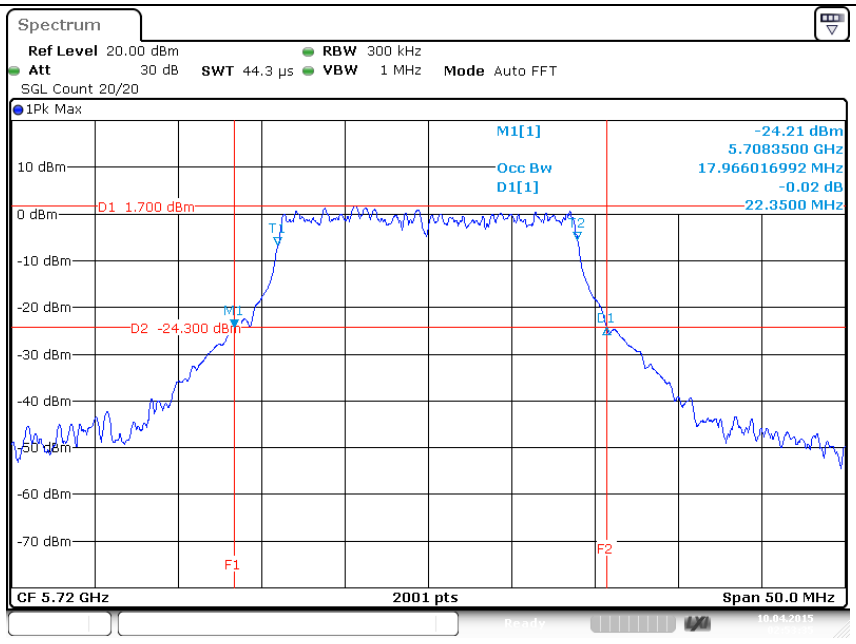
802.11ac 20MHz/ Nss2 MCS0/ Ch144/ Ant2



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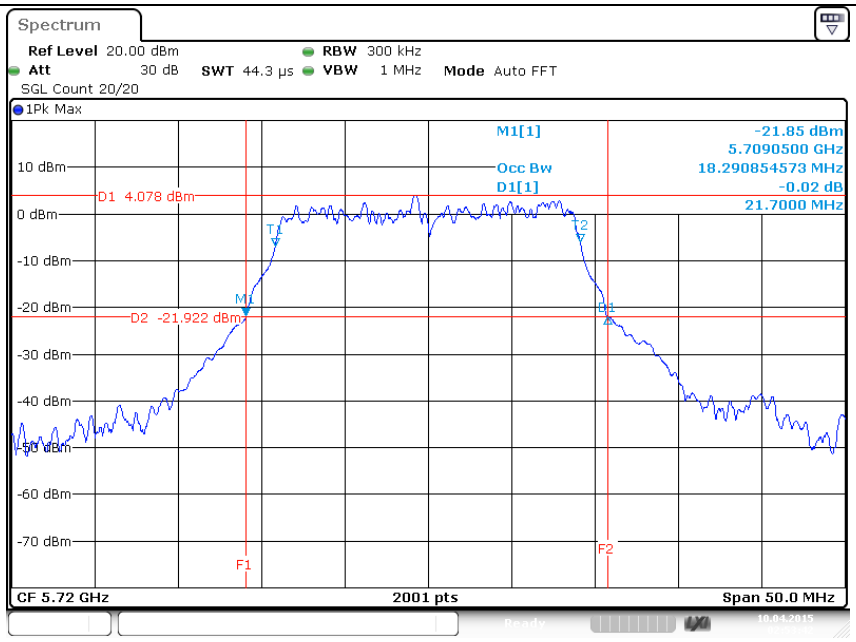
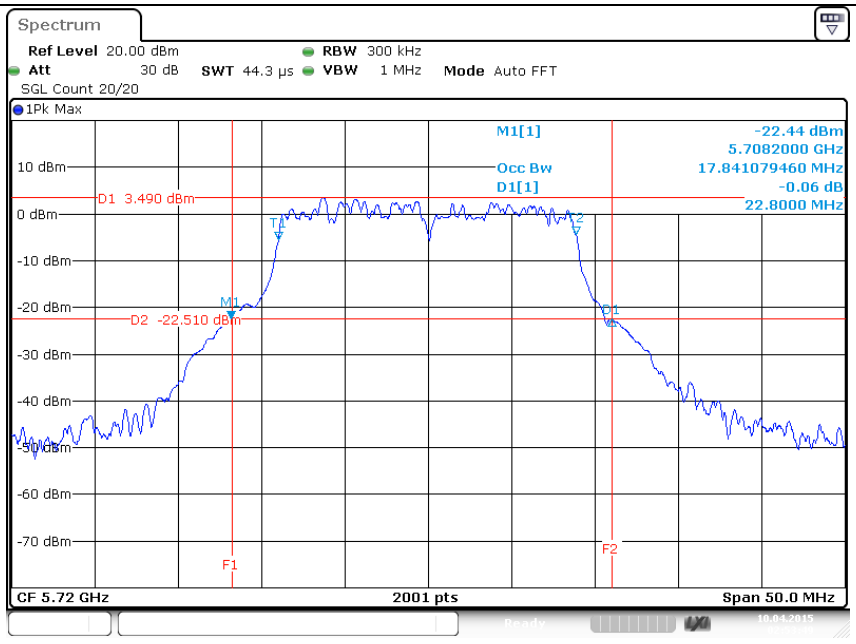
802.11ac 20MHz/ Nss2 MCS0/ Ch144/ Ant3



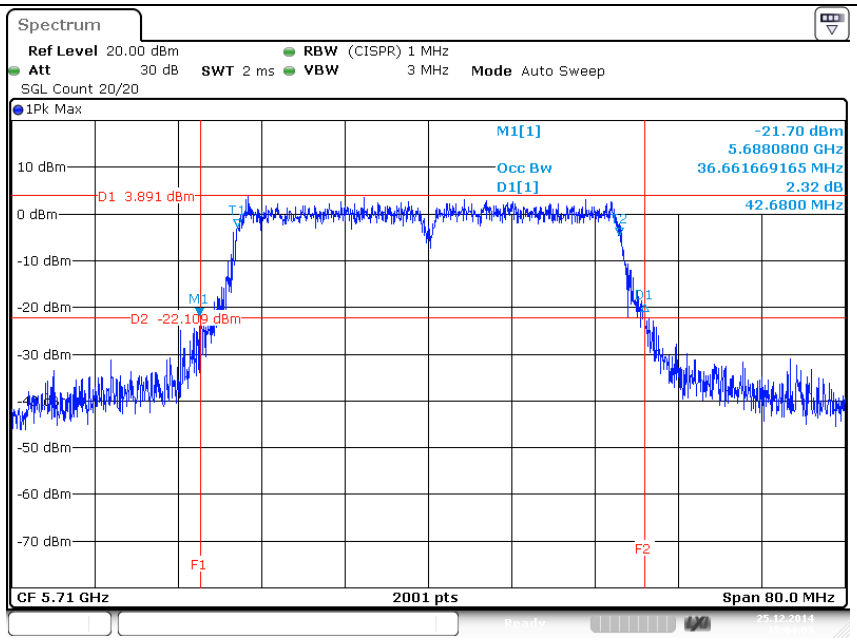
Date: 10.APR.2015 02:53:42

802.11ac 20MHz/ Nss2 MCS0/ Ch144/ Ant4



Date: 10.APR.2015 02:53:49

802.11ac 40MHz/ Nss2 MCS0/ Ch142/ Ant1



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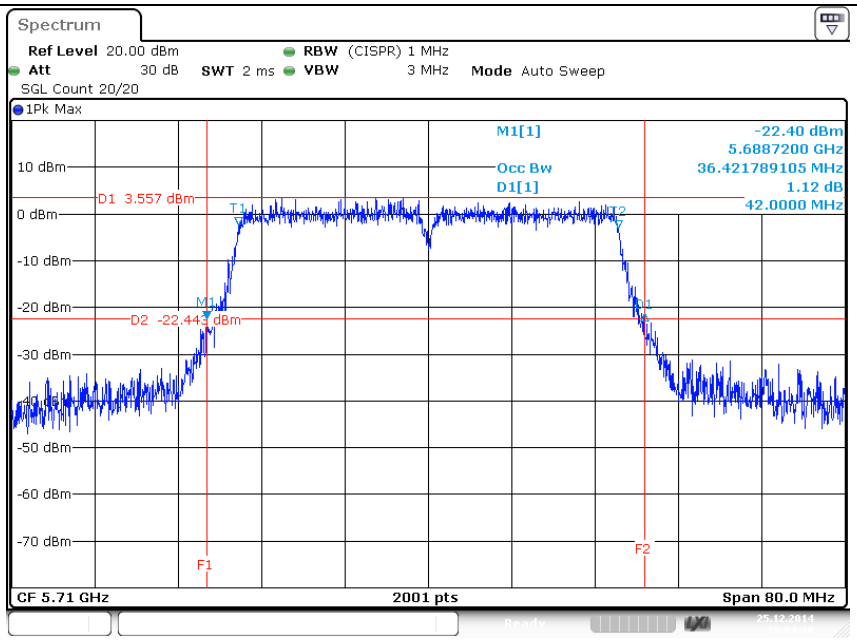
802.11ac 40MHz/ Nss2 MCS0/ Ch142/ Ant2



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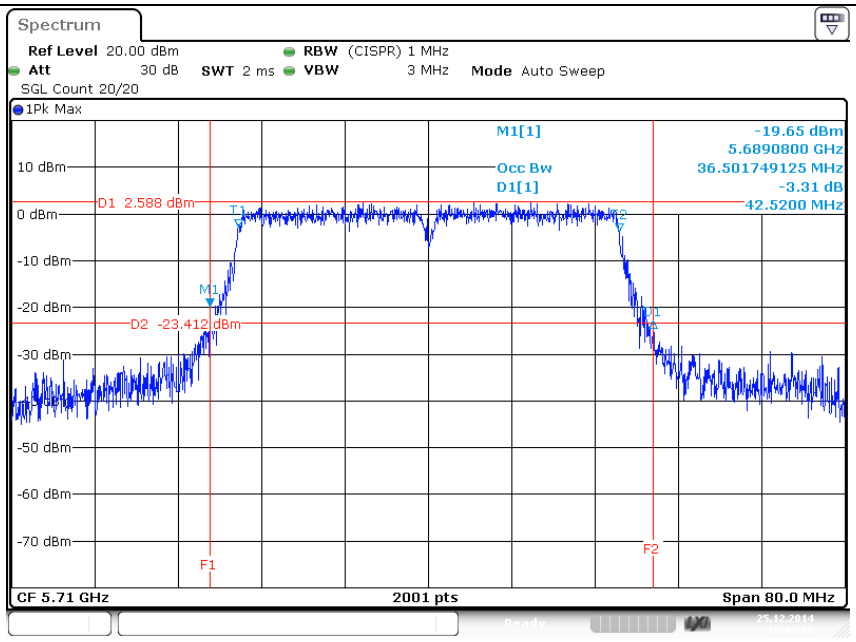
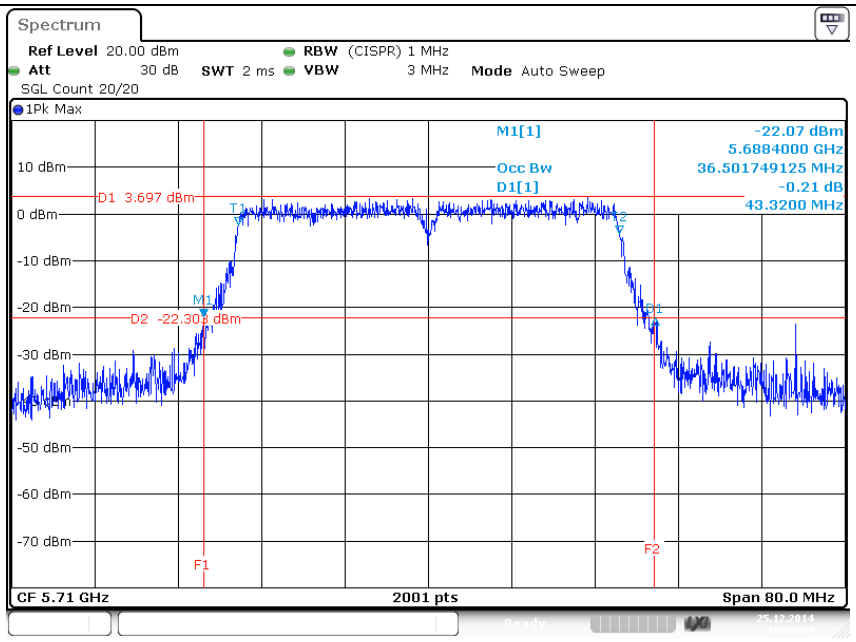
802.11ac 40MHz/ Nss2 MCS0/ Ch142/ Ant3



Date: 25.DEC.2014 15:04:16

802.11ac 40MHz/ Nss2 MCS0/ Ch142/ Ant4



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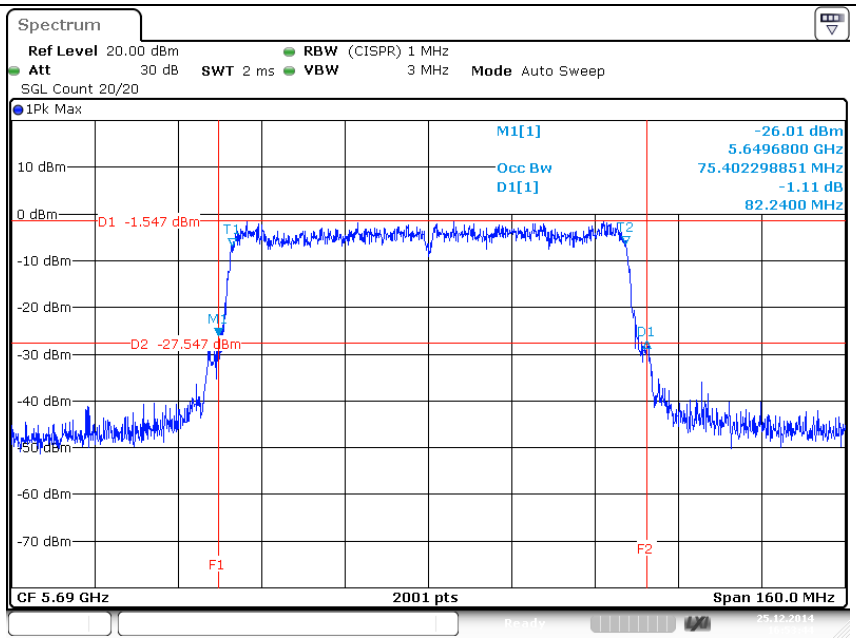
802.11ac 80MHz/ Nss2 MCS0/ Ch138/ Ant1



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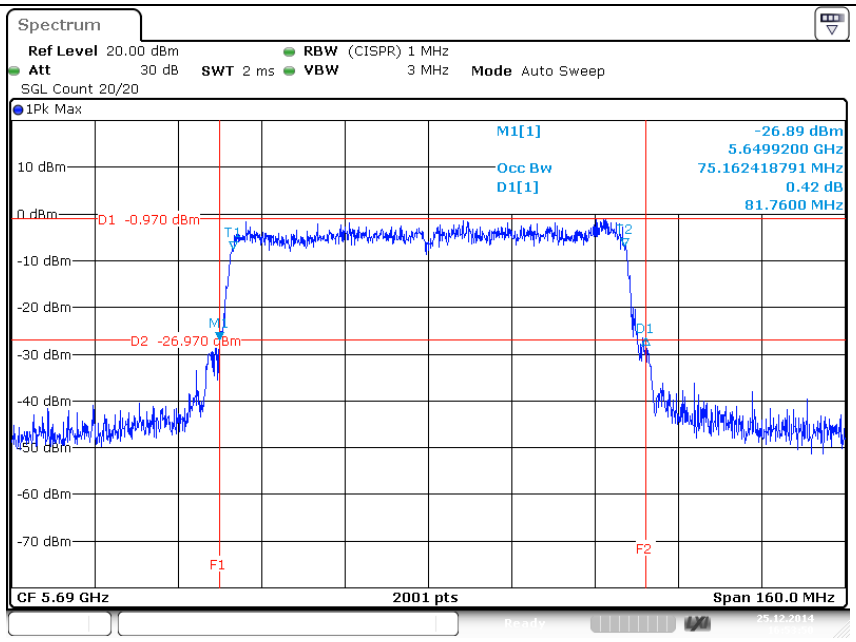

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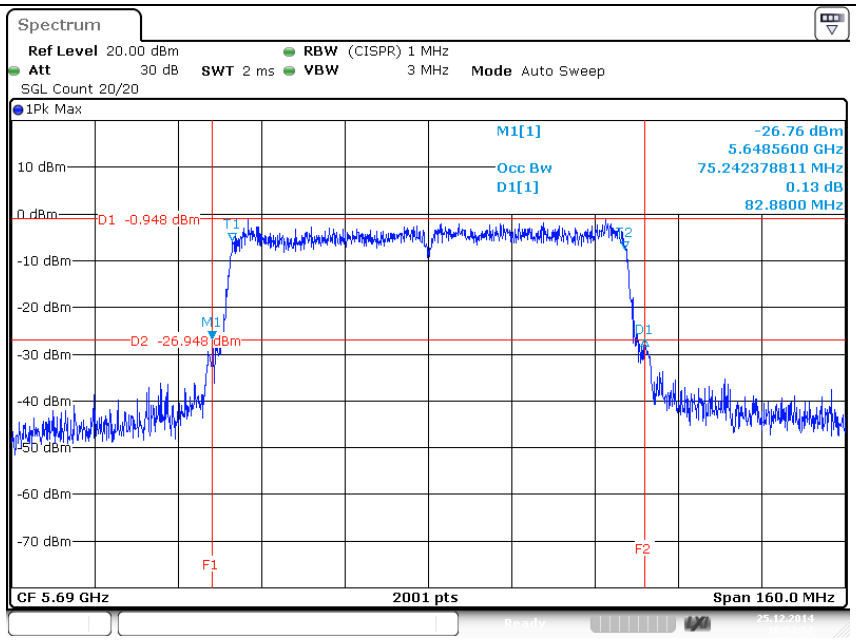

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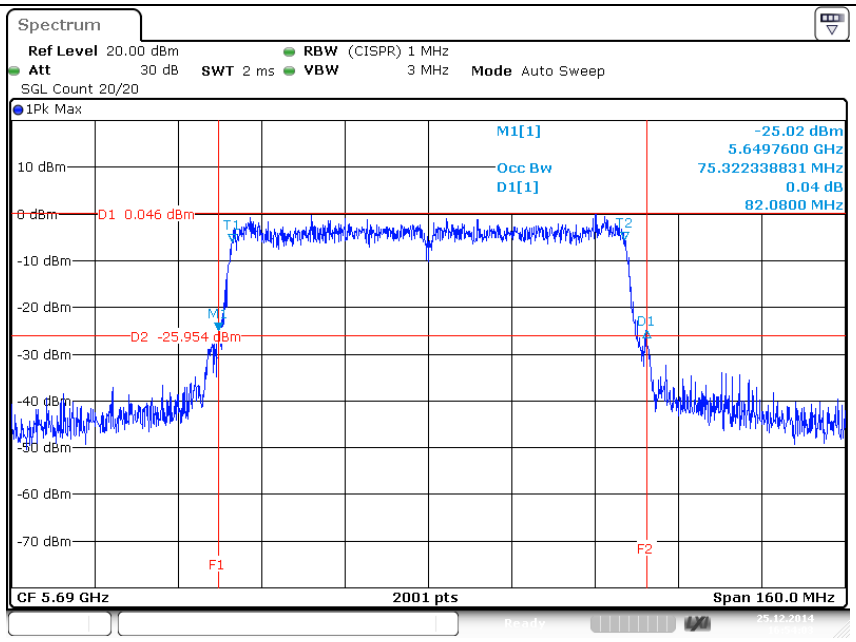
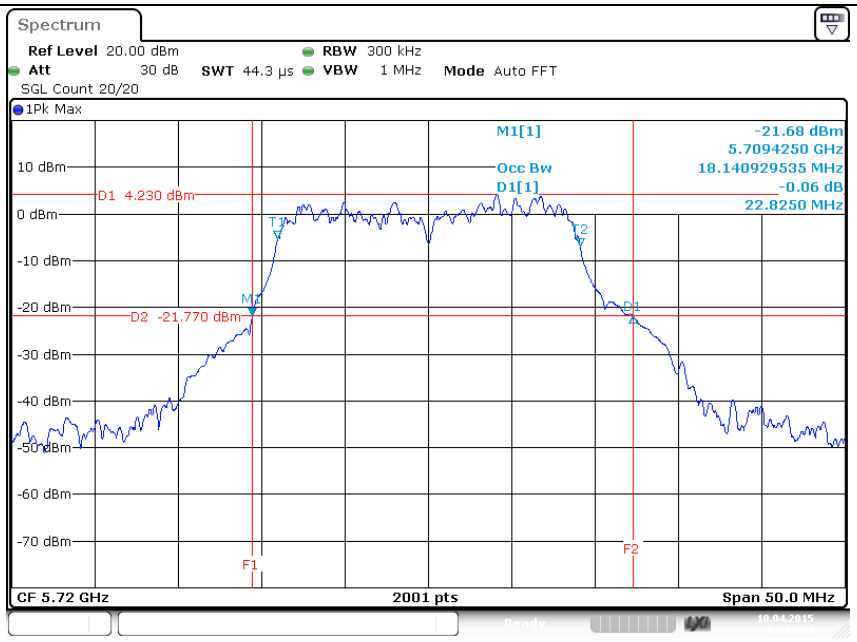


Date: 25.DEC.2014 16:54:03

<TXBF Mode Nss3 MCS0>

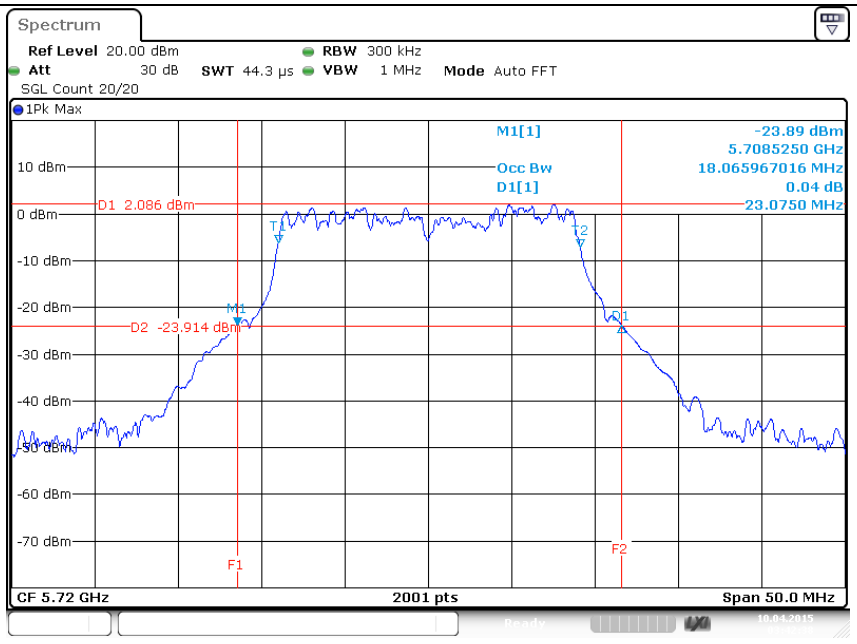
26dB Emission Bandwidth									
Worst Modulation Mode	Frequency (MHz)	26dB Emission Bandwidth							
		Ant 1		Ant 2		Ant 3		Ant 4	
		EBW2c	EBW3	EBW2c	EBW3	EBW2c	EBW3	EBW2c	EBW3
802.11ac 20MHz	5720	15.60	7.20	16.50	6.60	16.90	5.60	15.80	7.00
802.11ac 40MHz	5710	35.80	6.10	36.20	6.20	36.00	6.80	35.90	6.40
802.11ac 80MHz	5690	75.10	5.40	77.20	6.20	74.80	6.30	75.20	5.30

802.11ac 20MHz/ Nss3 MCS0/ Ch144/ Ant1



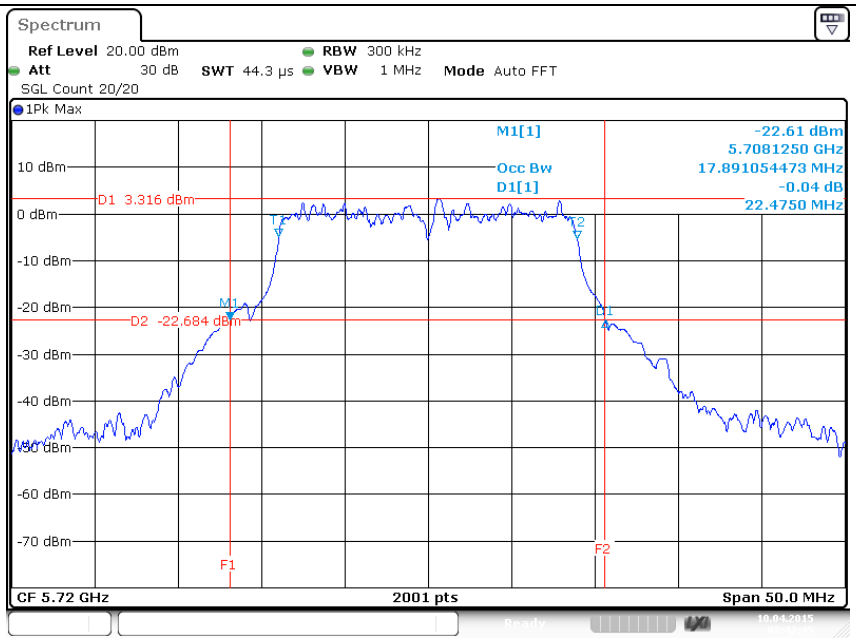
Date: 10.APR.2015 03:42:31

802.11ac 20MHz/ Nss3 MCS0/ Ch144/ Ant2



Date: 10.APR.2015 03:42:38

802.11ac 20MHz/ Nss3 MCS0/ Ch144/ Ant3



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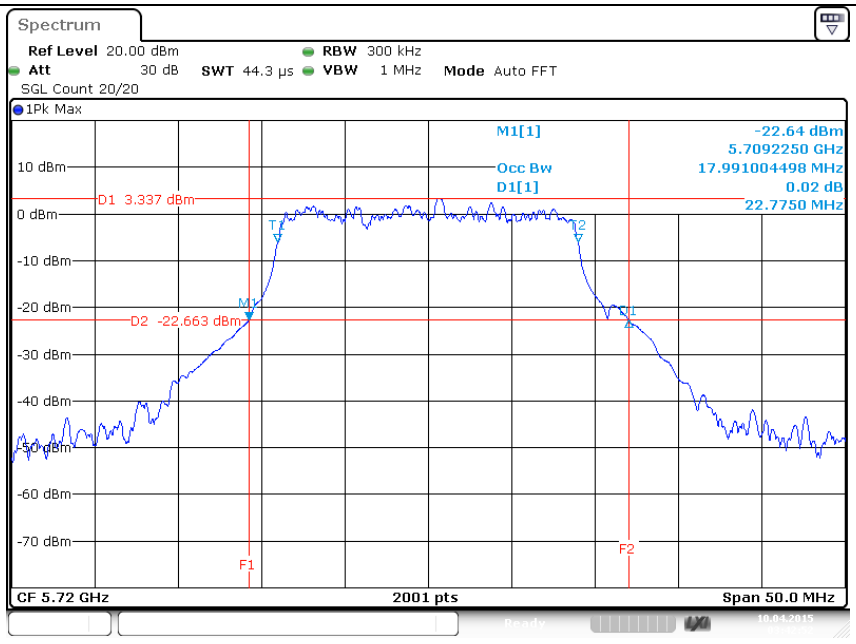

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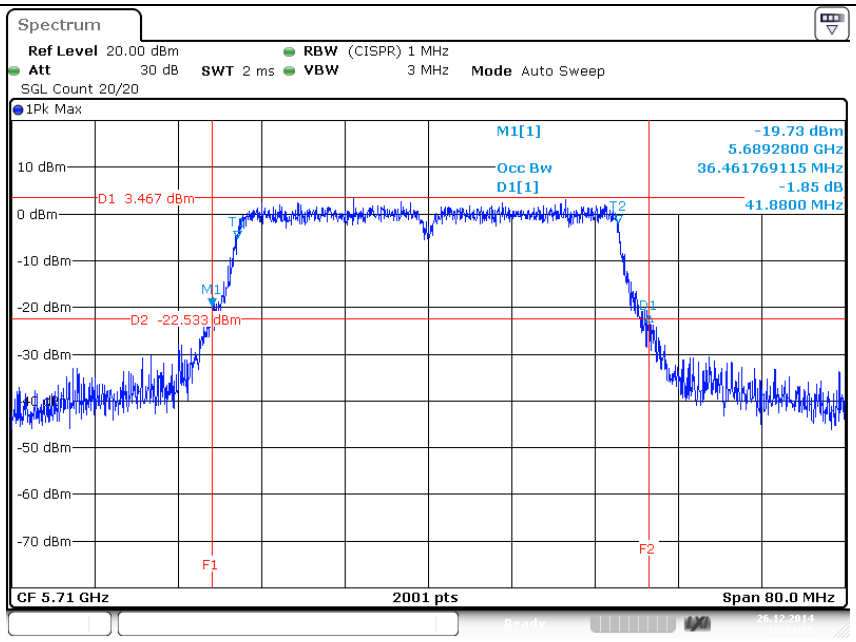
802.11ac 40MHz/ Nss3 MCS0/ Ch142/ Ant1



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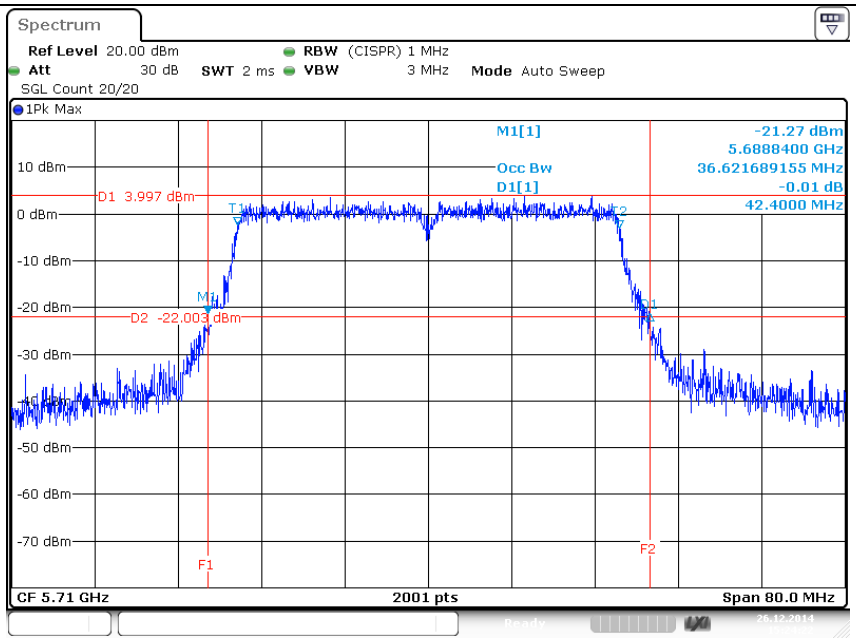

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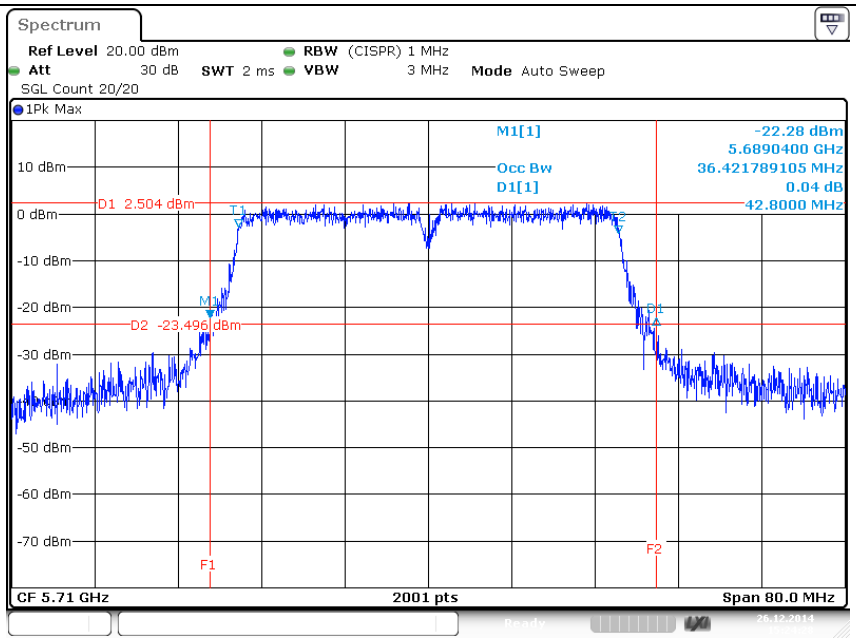

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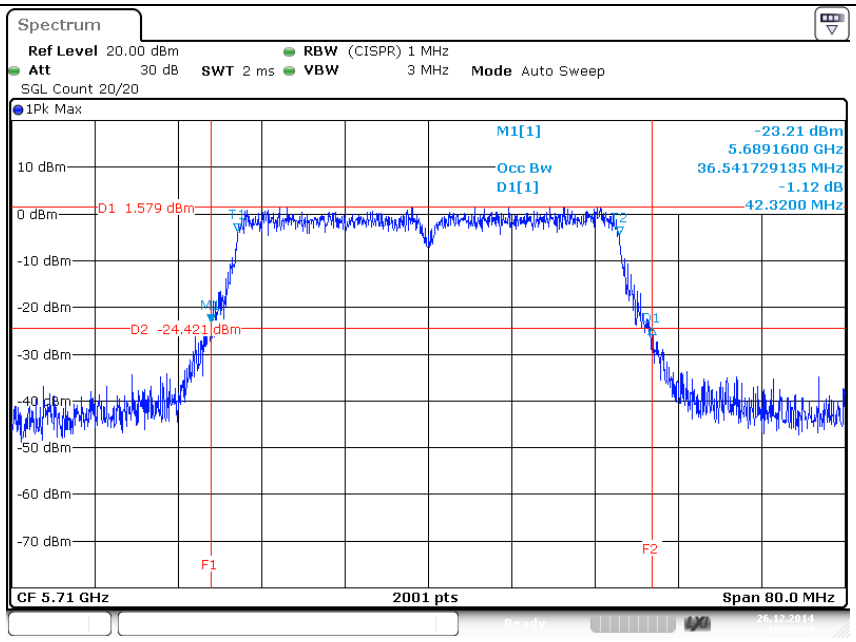
802.11ac 40MHz/ Nss3 MCS0/ Ch142/ Ant4



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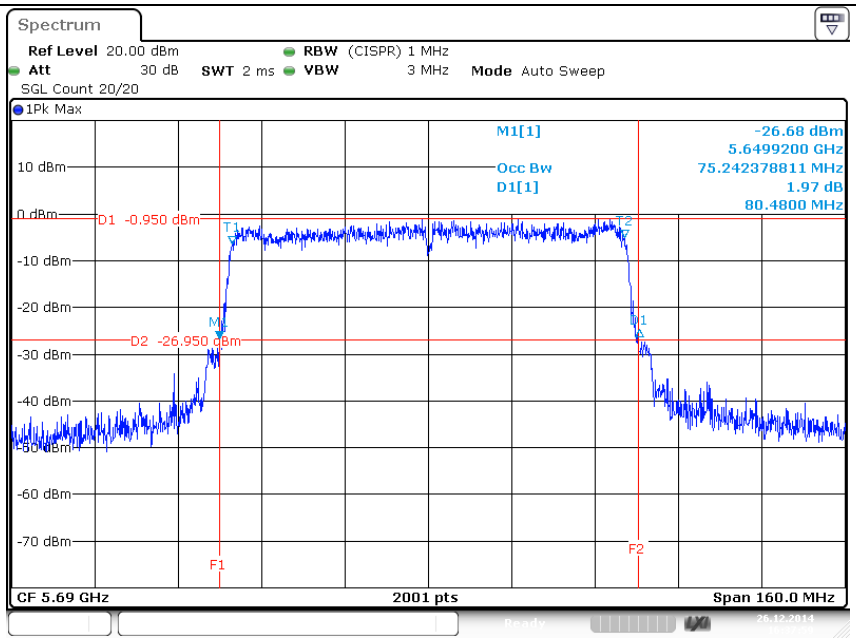
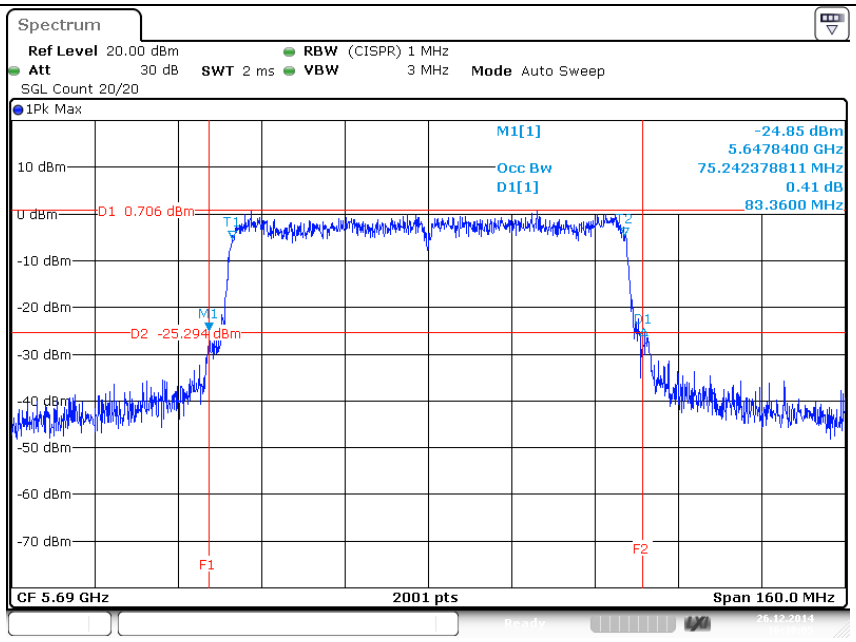
802.11ac 80MHz/ Nss3 MCS0/ Ch138/ Ant1



Date: 26.DEC.2014 16:37:59

802.11ac 80MHz/ Nss3 MCS0/ Ch138/ Ant2



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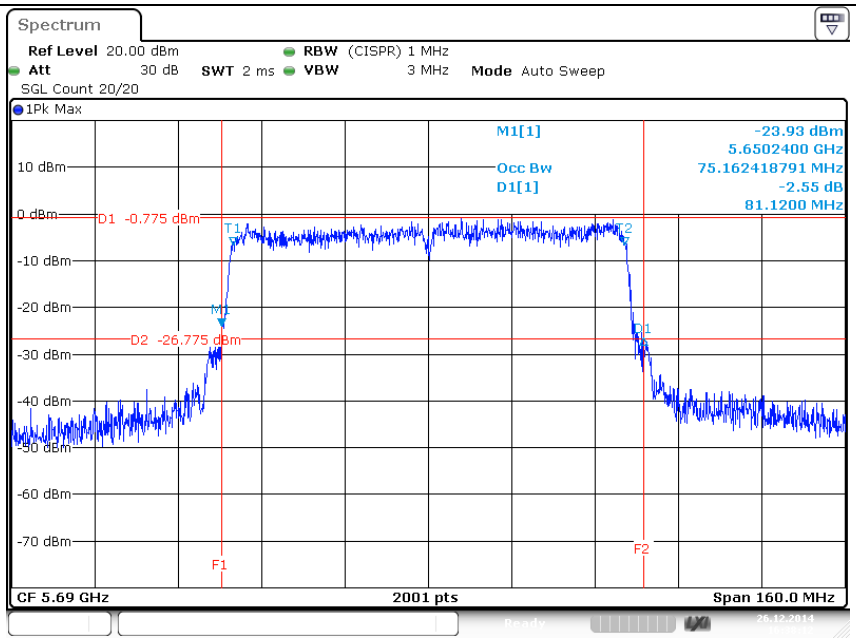
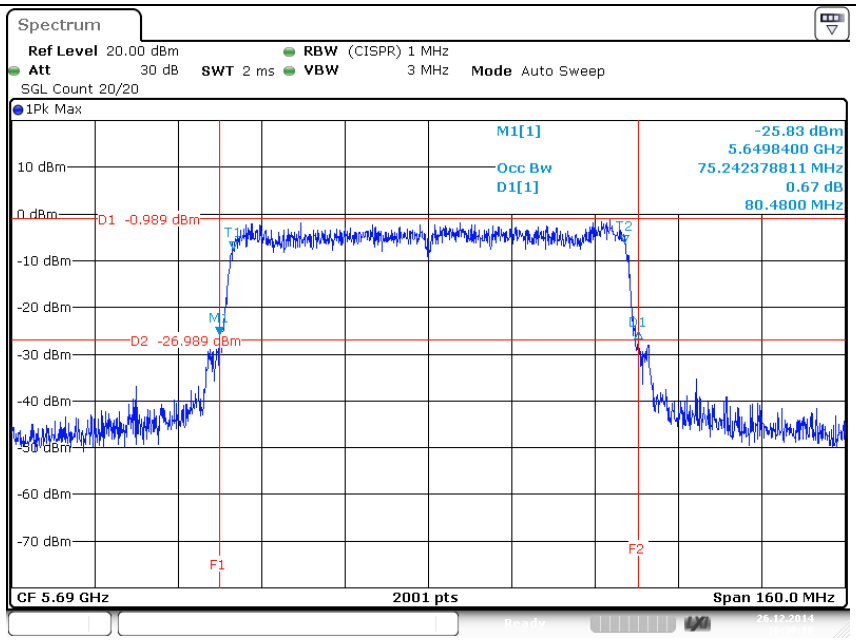
802.11ac 80MHz/ Nss3 MCS0/ Ch138/ Ant3



Date: 26.DEC.2014 16:38:12

802.11ac 80MHz/ Nss3 MCS0/ Ch138/ Ant4



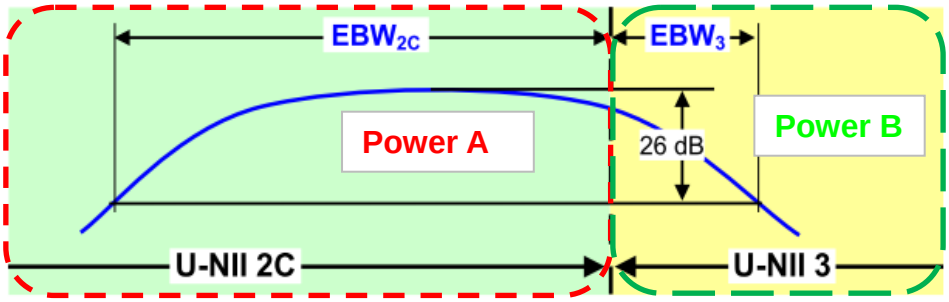
Date: 26.DEC.2014 16:38:18

5.2 Maximum Conducted Output Power Measurement for Band-Crossing Channel

5.2.1 Limit

Operation Band	EUT Category		LIMIT
U-NII-2C	v	---	250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	v	---	1 Watt (30 dBm)

NOTE: *B is the 26 dB emission bandwidth in megahertz



Emission Bandwidth (EBW) within a Band for Band-Crossing Signals

Limit was performed in accordance with KDB 644545 D03 Guidance for IEEE 802.11ac New Rules v01, in section “In-band emission limits (D)” , 8/14/2014

Power A: Limit based on EBW2c = 11+10log(EBW2c) when < 20MHz or 24dBm when > 20MHz (UNII-2C)

Power B: Limit based on EBW3 = 17+10log(EBW_3) when < 20MHz or 30dBm when > 20MHz (UNII-3)

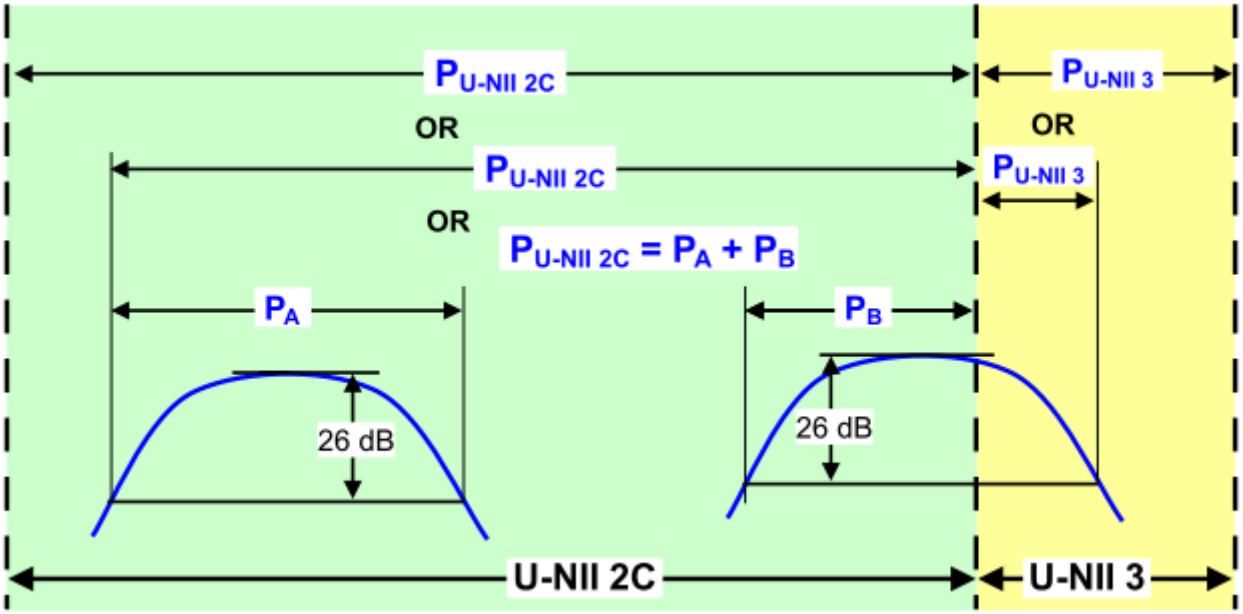
5.2.2 Measuring Instruments and Setting

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

Spectrum Parameter Setting	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal
RB	1 MHz
VB	≥ 3 MHz
Detector	RMS
Trace	Average
Number of points in sweep	≥ 2 Span / RBW
Sweep Time	Auto, trigger set to “free run”
Trace average	100 times

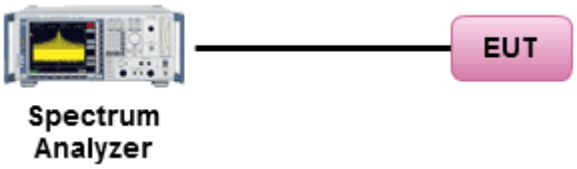
5.2.3 Test Procedures

1. The transmitter output (antenna port) was connected RF switch to the spectrum analyzer.
2. Measure the power of each spectrum segment by integrating across the EBW of that segment following the procedures of 789033 D02 General UNII Test Procedures New Rules v01, in section “Maximum conducted output power Method SA-2 (E)(2)(d)” , 06/06/2014
3. Test was performed in accordance with KDB 644545 D03 Guidance for IEEE 802.11ac New Rules v01, in section “In-band emission limits (D)” , 8/14/2014
4. If an EBW extends across the boundary between two adjacent bands, the boundary frequency between the bands serves as one edge of the frequency range to be integrated. Integration across an entire U-NII band without regard to 26-dB points is also acceptable for determining conducted output power within that band.
5. Integrate over the band or integrate over a span including the 26-dB EBWs of transmission segments within the band or integrate over 26-dB EBW of each transmission segment in the band and sum



6. When measuring maximum conducted output power with multiple antenna systems, add every result of the values by mathematic formula.
7. Adjust the measurement in dBm by adding 10 log(1/x) where x is the duty cycle. Record the average power level.

5.2.4 Test Setup Layout

Maximum Conducted Output Power


5.2.5 Test Deviation

There are no deviation with the original standard.

5.2.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

5.2.7 Test Signal Duty Cycle

Operated Mode for Worst Duty Cycle	
☒ Operated test mode for worst duty cycle	
Test Signal Duty Cycle (x)	**Power Duty Factor[dB] (10 log 1/x)**
☒ 100.00% - IEEE 802.11a	0
☒ 96.26% - IEEE 802.11ac (VHT20)	0.17
☒ 98.27% - IEEE 802.11ac (VHT40)	0.08
☒ 96.47% - IEEE 802.11ac (VHT80)	0.16

Note: When measuring the data for each output port, we measured the data by adding 10 log(1/x) where x is the duty cycle above the tablet.

5.2.8 Test Result for Maximum Conducted Output Power

Final Test Date	Jan. 18, 2015	Test Site No.	TH06-HY
Temperature	23.2℃	Humidity	61%
Configurations	802.11a	Duty Cycle	100%
Test Engineer	Leo		

<U-NII-2C, Power A, EBW2c, Ant. 1+2+3+4, CDD >

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Total Conducted Power (dBm)
		Ant1	Ant2	Ant3	Ant4			
144	5720 MHz	13.74	14.02	13.93	14.85	7.21	21.58	20.18
Result	Complied							

For U-NII-2C Band: Max Limit = 11dBm + 10log(EBW2c)

<U-NII-3, Power B, EBW3, Ant. 1+2+3+4, CDD >

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Total Conducted Power (dBm)
		Ant1	Ant2	Ant3	Ant4			
144	5720 MHz	8.27	8.11	8.26	8.71	7.21	23.03	14.36
Result	Complied							

For U-NII-3 Band: Max Limit = 17dBm + 10log(EBW3)

Final Test Date	Jan. 18, 2015	Test Site No.	TH06-HY
Temperature	23.2℃	Humidity	61%
Configurations	802.11ac 20MHz	Duty Cycle	100%
Test Engineer	Leo		

<U-NII-2C, Power A, EBW2c, Ant. 1+2+3+4, CDD >

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Total Conducted Power (dBm)
		Ant1	Ant2	Ant3	Ant4			
144	5720 MHz	14.20	14.53	14.01	14.84	7.21	21.96	20.43
Result	Complied							

For U-NII-2C Band: Max Limit = 11dBm + 10log(EBW2c)

<U-NII-3, Power B, EBW3, Ant. 1+2+3+4, CDD >

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Total Conducted Power (dBm)
		Ant1	Ant2	Ant3	Ant4			
144	5720 MHz	9.26	9.14	8.67	9.19	7.21	23.27	15.09
Result	Complied							

For U-NII-3 Band: Max Limit = 17dBm + 10log(EBW3)

Final Test Date	Jan. 18, 2015	Test Site No.	TH06-HY
Temperature	23.2℃	Humidity	61%
Configurations	802.11ac 40MHz	Duty Cycle	100%
Test Engineer	Leo		

<U-NII-2C, Power A, EBW2c, Ant. 1+2+3+4, CDD >

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Total Conducted Power (dBm)
		Ant1	Ant2	Ant3	Ant4			
142	5710 MHz	15.09	15.11	14.74	15.65	7.09	2.91	21.18
Result	Complied							

For U-NII-2C Band: Max Limit = 11dBm + 10log(EBW2c)

<U-NII-3, Power B, EBW3, Ant. 1+2+3+4, CDD >

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Total Conducted Power (dBm)
		Ant1	Ant2	Ant3	Ant4			
142	5710 MHz	5.06	5.53	5.00	5.98	7.09	23.77	12.43
Result	Complied							

For U-NII-3 Band: Max Limit = 17dBm + 10log(EBW3)

Final Test Date	Jan. 18, 2015	Test Site No.	TH06-HY
Temperature	23.2℃	Humidity	61%
Configurations	802.11ac 80MHz	Duty Cycle	100%
Test Engineer	Leo		

<U-NII-2C, Power A, EBW2c, Ant. 1+2+3+4, CDD >

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Total Conducted Power (dBm)
		Ant1	Ant2	Ant3	Ant4			
138	5690 MHz	15.05	14.20	14.53	15.76	6.92	23.08	20.95
Result	Complied							

For U-NII-2C Band: Max Limit = 11dBm + 10log(EBW2c)

<U-NII-3, Power B, EBW3, Ant. 1+2+3+4, CDD >

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Total Conducted Power (dBm)
		Ant1	Ant2	Ant3	Ant4			
138	5690 MHz	1.46	0.59	1.25	2.19	6.92	22.81	7.43
Result	Complied							

For U-NII-3 Band: Max Limit = 17dBm + 10log(EBW3)

Final Test Date	Jan. 18, 2015	Test Site No.	TH06-HY
Temperature	23.2℃	Humidity	61%
Configurations	802.11ac 20MHz	Duty Cycle	100%
Test Engineer	Leo		

< U-NII-2C, Power A, EBW2c, Ant. 1+2+3+4, TXBF NSS=2 >

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Total Conducted Power (dBm)
		Ant1	Ant2	Ant3	Ant4			
144	5720 MHz	15.23	15.46	15.37	16.38	4.22	22.82	21.65
Result	Complied							

For U-NII-2C Band: Max Limit = 11dBm + 10log(EBW2c)

< U-NII-3, Power B, EBW3, Ant. 1+2+3+4, TXBF NSS=2 >

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Total Conducted Power (dBm)
		Ant1	Ant2	Ant3	Ant4			
144	5720 MHz	10.13	10.06	10.03	10.58	4.22	24.08	16.22
Result	Complied							

For U-NII-3 Band: Max Limit = 17dBm + 10log(EBW3)

< U-NII-2C, Power A, EBW2c, Ant. 1+2+3+4, TXBF NSS=3>

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Total Conducted Power (dBm)
		Ant1	Ant2	Ant3	Ant4			
144	5720 MHz	16.05	15.80	15.61	16.17	5.19	22.93	21.93
Result	Complied							

For U-NII-2C Band: Max Limit = 11dBm + 10log(EBW2c)

< U-NII-3, Power B, EBW3, Ant. 1+2+3+4, TXBF NSS=3 >

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Total Conducted Power (dBm)
		Ant1	Ant2	Ant3	Ant4			
144	5720 MHz	11.05	10.37	10.31	10.45	5.19	25.29	16.58
Result	Complied							

For U-NII-3 Band: Max Limit = 17dBm + 10log(EBW3)

Final Test Date	Jan. 18, 2015	Test Site No.	TH06-HY
Temperature	23.2℃	Humidity	61%
Configurations	802.11ac 40MHz	Duty Cycle	100%
Test Engineer	Leo		

< U-NII-2C, Power A, EBW2c, Ant. 1+2+3+4, TXBF NSS=2>

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Total Conducted Power (dBm)
		Ant1	Ant2	Ant3	Ant4			
142	5710 MHz	15.84	15.95	15.81	16.94	4.09	24	22.18
Result	Complied							

For U-NII-2C Band: Max Limit = 11dBm + 10log(EBW2c)

< U-NII-3, Power B, EBW3, Ant. 1+2+3+4, TXBF NSS=2 >

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Total Conducted Power (dBm)
		Ant1	Ant2	Ant3	Ant4			
142	5710 MHz	5.79	6.25	5.95	7.11	4.09	24.56	12.32
Result	Complied							

For U-NII-3 Band: Max Limit = 17dBm + 10log(EBW3)

< U-NII-2C, Power A, EBW2c, Ant. 1+2+3+4, TXBF NSS=3>

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Total Conducted Power (dBm)
		Ant1	Ant2	Ant3	Ant4			
142	5710 MHz	16.96	16.33	16.68	16.76	5.10	24	22.71
Result	Complied							

For U-NII-2C Band: Max Limit = 11dBm + 10log(EBW2c)

< U-NII-3, Power B, EBW3, Ant. 1+2+3+4, TXBF NSS=3>

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Total Conducted Power (dBm)
		Ant1	Ant2	Ant3	Ant4			
142	5710 MHz	7.01	6.67	6.75	6.93	5.10	25.75	12.86
Result	Complied							

For U-NII-3 Band: Max Limit = 17dBm + 10log(EBW3)

Final Test Date	Jan. 18, 2015	Test Site No.	TH06-HY
Temperature	23.2℃	Humidity	61%
Configurations	802.11ac 80MHz	Duty Cycle	100%
Test Engineer	Leo		

< U-NII-2C, Power A, EBW2c, Ant. 1+2+3+4, TXBF NSS=2 >

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Total Conducted Power (dBm)
		Ant1	Ant2	Ant3	Ant4			
138	5690 MHz	16.01	16.24	15.62	16.46	3.92	24	22.11
Result	Complied							

For U-NII-2C Band: Max Limit = 11dBm + 10log(EBW2c)

< U-NII-3, Power B, EBW3, Ant. 1+2+3+4, TXBF NSS=2 >

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Total Conducted Power (dBm)
		Ant1	Ant2	Ant3	Ant4			
138	5690 MHz	2.41	2.81	2.23	2.83	3.92	25.06	8.59
Result	Complied							

For U-NII-3 Band: Max Limit = 17dBm + 10log(EBW3)

< U-NII-2C, Power A, EBW2c, Ant. 1+2+3+4, TXBF NSS=3 >

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Total Conducted Power (dBm)
		Ant1	Ant2	Ant3	Ant4			
138	5690 MHz	16.05	15.68	16.50	16.05	5.08	24	22.10
Result	Complied							

For U-NII-2C Band: Max Limit = 11dBm + 10log(EBW2c)

< U-NII-3, Power B, EBW3, Ant. 1+2+3+4, TXBF NSS=3 >

Channel	Frequency	Conducted Power (dBm)				Directional Gain	Max. Limit (dBm)	Total Conducted Power (dBm)
		Ant1	Ant2	Ant3	Ant4			
138	5690 MHz	2.48	2.41	3.08	2.49	5.08	25.16	8.64
Result	Complied							

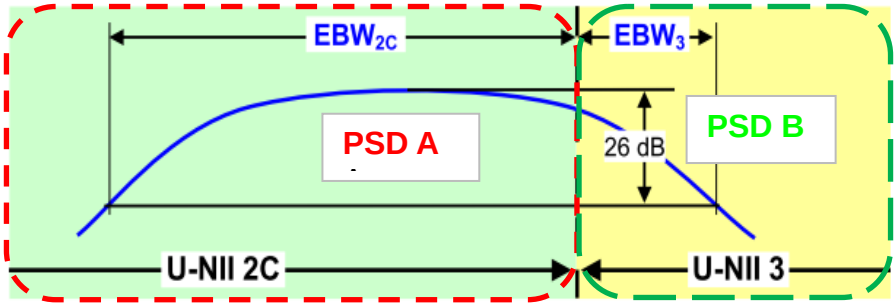
For U-NII-3 Band: Max Limit = 17dBm + 10log(EBW3)

5.3 Power Spectral Density Measurement for Band-Crossing Channel

5.3.1 Limit

Operation Band	EUT Category		LIMIT
U-NII-2C	v	---	11dBm/ MHz
U-NII-3	v	---	30 dBm/500kHz

Note: 23.01dBm/100kHz= 30dBm/500kHz-10log$(\frac{500kHz}{100kHz})$



Emission Bandwidth (EBW) within a Band for Band-Crossing Signals

Limit was performed in accordance with KDB 644545 D03 Guidance for IEEE 802.11ac New Rules v01, in section “In-band emission limits (D)” , 8/14/2014

PSD A: Limit based on EBW2c = 11dBm/ MHz

PSD B: Limit based on EBW3 = 30dBm/500kHz

5.3.2 Measuring Instruments and Setting

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

Spectrum Parameter Setting	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RB	1 MHz
VB	≥ 3 MHz
Detector	RMS
Trace	Average
Sweep Time	Auto, trigger set to “free run”
Trace average	100 times

For U-NII-3 band:

Spectrum Parameter Setting	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RB	500kHz
VB	≥ 3 RBW
Detector	RMS

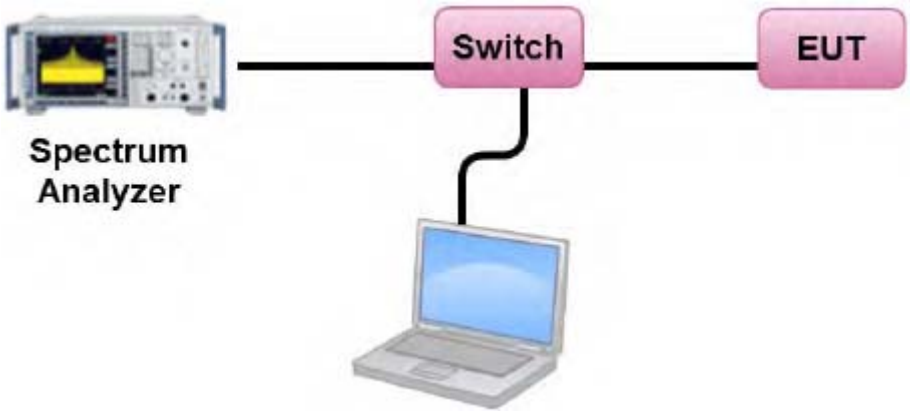
Trace	Average
Sweep Time	Auto, set to “free run”
Trace average	100 times

5.3.3 Test Procedures

1. The transmitter output (antenna port) was connected RF switch to the spectrum analyzer.
2. For U-NII-1, U-NII-2A & U-NII-2C Bands, PSD Measure was performed in accordance with 789033 D02 General UNII Test Procedures New Rules v01, in section “Maximum conducted output power (E)(2)(d) Method SA-2”, 06/06/2014
3. For U-NII-3 Band, PSD Measure was performed in accordance with 789033 D02 General UNII Test Procedures New Rules v01, in section “Maximum Power Spectral Density (F)(5)” , 10/31/2013
4. Multiple antenna systems was performed in accordance 662911 D01 Multiple Transmitter Output v02r01 in-Band Power Spectral Density (PSD) Measurements (b) Measure and sum spectral maxima across the outputs.
5. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value(peak) of each spectrum is determined.
6. These maximum values are then summed mathematically in linear power units across the outputs.

5.3.4 Test Setup Layout

Power Spectral Density



5.3.5 Test Deviation

There are no deviation with the original standard.

5.3.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

5.3.7 Test Signal Duty Cycle

Operated Mode for Worst Duty Cycle	
☒ Operated test mode for worst duty cycle	
Test Signal Duty Cycle (x)	**Power Duty Factor[dB] (10 log 1/x)**
☒ 100.00% - IEEE 802.11a	0
☒ 96.26% - IEEE 802.11ac (VHT20)	0.17
☒ 98.27% - IEEE 802.11ac (VHT40)	0.08
☒ 96.47% - IEEE 802.11ac (VHT80)	0.16

Note: When measuring the data for each output port, we measured the data by adding 10 log(1/x) where x is the duty cycle above the tablet.

5.3.8 Test Result of Power Spectral Density

Final Test Date	Jan. 18, 2015	Test Site No.	TH06-HY
Temperature	23.2 ℃	Humidity	61%
Configurations	802.11a	Duty Cycle	100%
Test Engineer	Leo		

Configuration IEEE 802.11a

< U-NII-2C, PSD A, EBW2c, Ant. 1+2+3+4, CDD >

Channel	Frequency	Power Density (dBm/MHz)				Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)
		Ant1	Ant2	Ant3	Ant4			
144	5720 MHz	2.49	2.35	2.27	3.19	8.61	7.21	9.79
Result	Complied							

< U-NII-3, PSD B, EBW3, Ant. 1+2+3+4, CDD >

Channel	Frequency	Power Density (dBm/500kHz)				Total Power Density (dBm/500kHz)	Directional Gain	Max. Limit (dBm/500kHz)
		Ant1	Ant2	Ant3	Ant4			
144	5720 MHz	0.51	0.34	0.42	0.88	6.56	7.21	28.79
Result	Complied							

Final Test Date	Jan. 18, 2015	Test Site No.	TH06-HY
Temperature	23.2 ℃	Humidity	61%
Configurations	802.11ac 20MHz	Duty Cycle	100%
Test Engineer	Leo		

Configuration IEEE 802.11ac 20MHz

< U-NII-2C, PSD A, EBW2c, Ant. 1+2+3+4, CDD >

Channel	Frequency	Power Density (dBm/MHz)				Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)
		Ant1	Ant2	Ant3	Ant4			
144	5720 MHz	2.98	2.84	2.65	3.04	8.90	7.21	9.79
Result	Complied							

< U-NII-3, PSD B, EBW3, Ant. 1+2+3+4, CDD >

Channel	Frequency	Power Density (dBm/500kHz)				Total Power Density (dBm/500kHz)	Directional Gain	Max. Limit (dBm/500kHz)
		Ant1	Ant2	Ant3	Ant4			
144	5720 MHz	0.86	0.69	0.27	0.18	6.53	7.21	28.79
Result	Complied							

Final Test Date	Jan. 18, 2015	Test Site No.	TH06-HY
Temperature	23.2 ℃	Humidity	61%
Configurations	802.11ac 40MHz	Duty Cycle	100%
Test Engineer	Leo		

Configuration IEEE 802.11ac40MHz

< U-NII-2C, PSD A, EBW2c, Ant. 1+2+3+4, CDD >

Channel	Frequency	Power Density (dBm/MHz)				Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)
		Ant1	Ant2	Ant3	Ant4			
142	5710 MHz	0.13	-0.43	-0.58	0.66	5.99	7.09	9.91
Result	Complied							

< U-NII-3, PSD B, EBW3, Ant. 1+2+3+4, CDD >

Channel	Frequency	Power Density (dBm/500kHz)				Total Power Density (dBm/500kHz)	Directional Gain	Max. Limit (dBm/500kHz)
		Ant1	Ant2	Ant3	Ant4			
142	5710 MHz	-2.02	-1.84	-2.23	-1.57	4.11	7.09	28.91
Result	Complied							

Final Test Date	Jan. 18, 2015	Test Site No.	TH06-HY
Temperature	23.2 ℃	Humidity	61%
Configurations	802.11ac 80MHz	Duty Cycle	100%
Test Engineer	Leo		

Configuration IEEE 802.11ac80MHz

< U-NII-2C, PSD A, EBW2c, Ant. 1+2+3+4, CDD >

Channel	Frequency	Power Density (dBm/MHz)				Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)
		Ant1	Ant2	Ant3	Ant4			
138	5690 MHz	-3.09	-3.71	-3.47	-2.47	2.86	6.92	10.08
Result	Complied							

< U-NII-3, PSD B, EBW3, Ant. 1+2+3+4, CDD >

Channel	Frequency	Power Density (dBm/500kHz)				Total Power Density (dBm/500kHz)	Directional Gain	Max. Limit (dBm/500kHz)
		Ant1	Ant2	Ant3	Ant4			
138	5690 MHz	-4.62	-5.89	-5.04	-4.23	1.12	6.92	29.08
Result	Complied							

Final Test Date	Jan. 18, 2015	Test Site No.	TH06-HY
Temperature	23.2 ℃	Humidity	61%
Configurations	802.11ac 20MHz TXBF	Duty Cycle	100%
Test Engineer	Leo		

Configuration IEEE 802.11ac 20MHz

< U-NII-2C, PSD A, EBW2c, Ant. 1+2+3+4, TXBF NSS2 >

Channel	Frequency	Power Density (dBm/MHz)				Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)
		Ant1	Ant2	Ant3	Ant4			
144	5720 MHz	3.84	3.67	4.00	4.78	10.11	4.22	11
Result	Complied							

< U-NII-3, PSD B, EBW3, Ant. 1+2+3+4, TXBF NSS2 >

Channel	Frequency	Power Density (dBm/500kHz)				Total Power Density (dBm/500kHz)	Directional Gain	Max. Limit (dBm/500kHz)
		Ant1	Ant2	Ant3	Ant4			
144	5720 MHz	1.80	1.61	1.64	2.12	7.81	4.22	30
Result	Complied							

< U-NII-2C, PSD A, EBW2c, Ant. 1+2+3+4, TXBF NSS3 >

Channel	Frequency	Power Density (dBm/MHz)				Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)
		Ant1	Ant2	Ant3	Ant4			
144	5720 MHz	4.67	3.99	3.85	4.46	10.28	5.19	11
Result	Complied							

< U-NII-3, PSD B, EBW3, Ant. 1+2+3+4, TXBF NSS3 >

Channel	Frequency	Power Density (dBm/500kHz)				Total Power Density (dBm/500kHz)	Directional Gain	Max. Limit (dBm/500kHz)
		Ant1	Ant2	Ant3	Ant4			
144	5720 MHz	2.67	1.90	1.81	1.90	8.10	5.19	30
Result	Complied							

Final Test Date	Jan. 18, 2015	Test Site No.	TH06-HY
Temperature	23.2 ℃	Humidity	61%
Configurations	802.11ac 40MHz TXBF	Duty Cycle	100%
Test Engineer	Leo		

Configuration IEEE 802.11ac 40MHz

< U-NII-2C, PSD A, EBW2c, Ant. 1+2+3+4, TXBF NSS2 >

Channel	Frequency	Power Density (dBm/MHz)				Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)
		Ant1	Ant2	Ant3	Ant4			
142	5710 MHz	0.71	0.47	0.68	1.44	6.86	4.09	11
Result	Complied							

< U-NII-3, PSD B, EBW3, Ant. 1+2+3+4, TXBF NSS2 >

Channel	Frequency	Power Density (dBm/500kHz)				Total Power Density (dBm/500kHz)	Directional Gain	Max. Limit (dBm/500kHz)
		Ant1	Ant2	Ant3	Ant4			
142	5710 MHz	-1.47	-1.10	-1.37	-0.18	5.02	4.09	30
Result	Complied							

< U-NII-2C, PSD A, EBW2c, Ant. 1+2+3+4, TXBF NSS3 >

Channel	Frequency	Power Density (dBm/MHz)				Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)
		Ant1	Ant2	Ant3	Ant4			
142	5710 MHz	1.97	0.96	1.36	1.30	7.43	5.1	11
Result	Complied							

< U-NII-3, PSD B, EBW3, Ant. 1+2+3+4, TXBF NSS3 >

Channel	Frequency	Power Density (dBm/500kHz)				Total Power Density (dBm/500kHz)	Directional Gain	Max. Limit (dBm/500kHz)
		Ant1	Ant2	Ant3	Ant4			
142	5710 MHz	-0.21	-0.39	-0.44	-0.37	5.67	5.1	30
Result	Complied							

Final Test Date	Jan. 18, 2015	Test Site No.	TH06-HY
Temperature	23.2 ℃	Humidity	61%
Configurations	802.11ac 80MHz TXBF	Duty Cycle	100%
Test Engineer	Leo		

Configuration IEEE 802.11ac 80MHz

< U-NII-2C, PSD A, EBW2c, Ant. 1+2+3+4, TXBF NSS2 >

Channel	Frequency	Power Density (dBm/MHz)				Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)
		Ant1	Ant2	Ant3	Ant4			
138	5690 MHz	-2.21	-1.78	-2.29	-1.70	4.03	3.92	11
Result	Complied							

< U-NII-3, PSD B, EBW3, Ant. 1+2+3+4, TXBF NSS2 >

Channel	Frequency	Power Density (dBm/500kHz)				Total Power Density (dBm/500kHz)	Directional Gain	Max. Limit (dBm/500kHz)
		Ant1	Ant2	Ant3	Ant4			
138	5690 MHz	-3.55	-3.47	-4.17	-3.49	2.36	3.92	30
Result	Complied							

< U-NII-2C, PSD A, EBW2c, Ant. 1+2+3+4, TXBF NSS3 >

Channel	Frequency	Power Density (dBm/MHz)				Total Power Density (dBm/MHz)	Directional Gain	Max. Limit (dBm/MHz)
		Ant1	Ant2	Ant3	Ant4			
138	5690 MHz	-2.27	-2.28	-1.37	-1.88	4.09	5.08	11
Result	Complied							

< U-NII-3, PSD B, EBW3, Ant. 1+2+3+4, TXBF NSS3 >

Channel	Frequency	Power Density (dBm/500kHz)				Total Power Density (dBm/500kHz)	Directional Gain	Max. Limit (dBm/500kHz)
		Ant1	Ant2	Ant3	Ant4			
138	5690 MHz	-3.26	-3.77	-3.44	-3.92	2.43	5.08	30
Result	Complied							

6 Frequency Stability

6.1 Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emissions is maintained within the band of operation under all conditions of normal operation as specified in the user's manual or ±20ppm (IEEE 802.11n specification).

6.2 Measuring Instruments and Setting

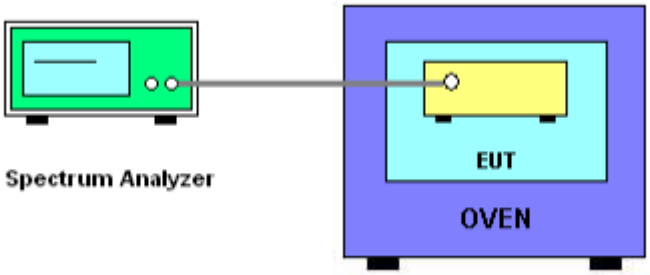
The following table is the setting of spectrum analyzer and receiver.

Spectrum Analyzer	Setting
Attenuation	Auto
Span Frequency	Entire absence of modulation emissions bandwidth
RB	10 kHz
VB	10 kHz
Sweep Time	Auto

6.3 Test Procedures

1. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
2. The EUT was programmed to be in continuously un-modulation transmitting mode.
3. Set the spectrum analyzer span to view the entire un-modulation emissions bandwidth.
4. Turn the EUT on and couple its output to a spectrum analyzer.
5. Turn the EUT off and set the chamber to the highest temperature specified.
6. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
7. Extreme temperature rule is -30°C~50°C.
8. Repeat step 4 and 5 with the temperature chamber set to the lowest temperature.
9. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

6.4 Test Setup Layout



6.5 Test Deviation

There is no deviation with the original standard.

6.6 EUT Operation during Test

The EUT was programmed to be in continuously un-modulation transmitting mode.

6.7 Test Result of Frequency Stability

FREQUEMCY STABILITY VERSUS TEMP.					
OPERATING FREQUENCY: 5260 MHz					
20 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	110.0	5260.0316	5260.0320	5260.0318	5260.0320
-20	110.0	5260.0220	5260.0230	5260.0234	5260.0238
-10	110.0	5260.0112	5260.0112	5260.0108	5260.0112
0	110.0	5259.9978	5259.9982	5259.9978	5259.9982
10	110.0	5259.9869	5259.9874	5259.9869	5259.9874
20	110.0	5259.9835	5259.9835	5259.9844	5259.9839
30	110.0	5259.9660	5259.9658	5259.9657	5259.9658
40	110.0	5259.9620	5259.9623	5259.9621	5259.9623
50	110.0	5259.9700	5259.9702	5259.9703	5259.9705
Max. Frequency Drift (ppm)		7.22	7.17	7.21	7.17

FREQUEMCY STABILITY VERSUS VOLTAGE					
OPERATING FREQUENCY: 5260 MHz					
20 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
20	126.5	5259.9981	5259.9978	5259.9981	5259.9978
	110.0	5259.9872	5259.9872	5259.9870	5259.9872
	93.5	5259.9965	5259.9963	5259.9963	5259.9964
Max. Frequency Drift (ppm)		2.43	2.43	2.47	2.43

FREQUEMCY STABILITY VERSUS TEMP.					
OPERATING FREQUENCY: 5300 MHz					
20 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	110.0	5300.0301	5300.0315	5300.0320	5300.0328
-20	110.0	5300.0217	5300.0220	5300.0230	5300.0228
-10	110.0	5300.0125	5300.0121	5300.0119	5300.0125
0	110.0	5299.9982	5299.9974	5299.9982	5299.9980
10	110.0	5299.9869	5299.9874	5299.9872	5299.9869
20	110.0	5299.9761	5299.9822	5299.9818	5299.9831
30	110.0	5299.9652	5299.9654	5299.9654	5299.9651
40	110.0	5299.9622	5299.9623	5299.9624	5299.9625
50	110.0	5299.9717	5299.9715	5299.9713	5299.9711
Max. Frequency Drift (ppm)		7.13	7.11	7.09	7.08

FREQUEMCY STABILITY VERSUS VOLTAGE					
OPERATING FREQUENCY: 5300 MHz					
20 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
20	126.5	5299.9943	5299.9945	5299.9943	5299.9944
	110.0	5299.9852	5299.9851	5299.9851	5299.9853
	93.5	5299.9921	5299.9920	5299.9921	5299.9922
Max. Frequency Drift (ppm)		2.79	2.81	2.81	2.77

FREQUEMCY STABILITY VERSUS TEMP.					
OPERATING FREQUENCY: 5320 MHz					
20 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	110.0	5320.0318	5320.0326	5320.0328	5320.0322
-20	110.0	5320.0230	5320.0218	5320.0220	5320.0230
-10	110.0	5320.0130	5320.0128	5320.0130	5320.0130
0	110.0	5319.9978	5319.9982	5319.9978	5319.9982
10	110.0	5319.9865	5319.9865	5319.9877	5319.9865
20	110.0	5319.9835	5319.9835	5319.9835	5319.9835
30	110.0	5319.9663	5319.9660	5319.9662	5319.9665
40	110.0	5319.9630	5319.9628	5319.9630	5319.9622
50	110.0	5319.9708	5319.9707	5319.9706	5319.9704
Max. Frequency Drift (ppm)		6.95	6.99	6.95	7.11

FREQUEMCY STABILITY VERSUS VOLTAGE					
OPERATING FREQUENCY: 5320 MHz					
20 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
20	126.5	5319.9968	5319.9970	5319.9966	5319.9966
	110.0	5319.9866	5319.9864	5319.9867	5319.9866
	93.5	5319.9940	5319.9941	5319.9941	5319.9942
Max. Frequency Drift (ppm)		2.52	2.56	2.50	2.52

FREQUEMCY STABILITY VERSUS TEMP.					
OPERATING FREQUENCY: 5500 MHz					
20 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	110.0	5500.0320	5500.0324	5500.0328	5500.0324
-20	110.0	5500.0234	5500.0230	5500.0234	5500.0230
-10	110.0	5500.0117	5500.0117	5500.0117	5500.0117
0	110.0	5499.9978	5499.9982	5499.9978	5499.9978
10	110.0	5499.9843	5499.9840	5499.9842	5499.9840
20	110.0	5499.9782	5499.9783	5499.9781	5499.9778
30	110.0	5499.9633	5499.9635	5499.9636	5499.9635
40	110.0	5499.9611	5499.9610	5499.9611	5499.9611
50	110.0	5499.9706	5499.9705	5499.9704	5499.9703
Max. Frequency Drift (ppm)		7.07	7.09	7.07	7.07

FREQUEMCY STABILITY VERSUS VOLTAGE					
OPERATING FREQUENCY: 5500 MHz					
20 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
20	126.5	5499.9920	5499.9916	5499.9920	5499.9918
	110.0	5499.9842	5499.9840	5499.9842	5499.9842
	93.5	5499.9896	5499.9898	5499.9900	5499.9896
Max. Frequency Drift (ppm)		2.87	2.91	2.87	2.87

FREQUEMCY STABILITY VERSUS TEMP.					
OPERATING FREQUENCY: 5580 MHz					
20 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	110.0	5580.0312	5580.0324	5580.0320	5580.0328
-20	110.0	5580.0230	5580.0234	5580.0234	5580.0234
-10	110.0	5580.0130	5580.0128	5580.0130	5580.0128
0	110.0	5579.9978	5579.9978	5579.9982	5579.9980
10	110.0	5579.9839	5579.9835	5579.9839	5579.9830
20	110.0	5579.9748	5579.9779	5579.9780	5579.9775
30	110.0	5579.9639	5579.9636	5579.9635	5579.9634
40	110.0	5579.9604	5579.9605	5579.9606	5579.9603
50	110.0	5579.9700	5579.9701	5579.9703	5579.9702
Max. Frequency Drift (ppm)		7.10	7.08	7.06	7.11

FREQUEMCY STABILITY VERSUS VOLTAGE					
OPERATING FREQUENCY: 5580 MHz					
20 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
20	126.5	5579.9913	5579.9913	5579.9913	5579.9913
	110.0	5579.9835	5579.9843	5579.9841	5579.9843
	93.5	5579.9895	5579.9893	5579.9895	5579.9895
Max. Frequency Drift (ppm)		2.96	2.81	2.85	2.81

FREQUEMCY STABILITY VERSUS TEMP.					
OPERATING FREQUENCY: 5700 MHz					
20 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	110.0	5700.0320	5700.0324	5700.0328	5700.0326
-20	110.0	5700.0243	5700.0238	5700.0234	5700.0238
-10	110.0	5700.0121	5700.0123	5700.0121	5700.0121
0	110.0	5699.9978	5699.9982	5699.9978	5699.9978
10	110.0	5699.9835	5699.9835	5699.9832	5699.9835
20	110.0	5699.9722	5699.9725	5699.9722	5699.9720
30	110.0	5699.9646	5699.9644	5699.9645	5699.9646
40	110.0	5699.9600	5699.9601	5699.9603	5699.9604
50	110.0	5699.9704	5699.9701	5699.9702	5699.9705
Max. Frequency Drift (ppm)		7.02	7.00	6.96	6.95

FREQUEMCY STABILITY VERSUS VOLTAGE					
OPERATING FREQUENCY: 5700 MHz					
20 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
20	126.5	5699.9898	5699.9896	5699.9896	5699.9896
	110.0	5699.9815	5699.9812	5699.9814	5699.9815
	93.5	5699.9866	5699.9866	5699.9866	5699.9866
Max. Frequency Drift (ppm)		3.25	3.30	3.26	3.25

FREQUEMCY STABILITY VERSUS TEMP.					
OPERATING FREQUENCY: 5720 MHz					
20 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	110.0	5720.0320	5720.0320	5720.0324	5720.0320
-20	110.0	5720.0238	5720.0234	5720.0234	5720.0238
-10	110.0	5720.0121	5720.0117	5720.0121	5720.0117
0	110.0	5719.9978	5719.9980	5719.9982	5719.9978
10	110.0	5719.9835	5719.9832	5719.9835	5719.9832
20	110.0	5719.9713	5719.9715	5719.9713	5719.9713
30	110.0	5719.9653	5719.9652	5719.9650	5719.9650
40	110.0	5719.9606	5719.9608	5719.9606	5719.9606
50	110.0	5719.9703	5719.9705	5719.9708	5719.9708
Max. Frequency Drift (ppm)		6.89	6.85	6.89	6.89

FREQUEMCY STABILITY VERSUS VOLTAGE					
OPERATING FREQUENCY: 5720 MHz					
20 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
20	126.5	5719.9908	5719.9910	5719.9910	5719.9908
	110.0	5719.9840	5719.9844	5719.9840	5719.9844
	93.5	5719.9883	5719.9885	5719.9883	5719.9885
Max. Frequency Drift (ppm)		2.80	2.73	2.80	2.73

FREQUEMCY STABILITY VERSUS TEMP.					
OPERATING FREQUENCY: 5270 MHz					
40 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	110.0	5270.0320	5270.0316	5270.0320	5270.0320
-20	110.0	5270.0225	5270.0221	5270.0221	5270.0225
-10	110.0	5270.0121	5270.0121	5270.0121	5270.0121
0	110.0	5269.9982	5269.9974	5269.9978	5269.9974
10	110.0	5269.9865	5269.9855	5269.9859	5269.9855
20	110.0	5269.9822	5269.9825	5269.9822	5269.9836
30	110.0	5269.9665	5269.9663	5269.9661	5269.9660
40	110.0	5269.9622	5269.9623	5269.9624	5269.9623
50	110.0	5269.9711	5269.9709	5269.9705	5269.9703
Max. Frequency Drift (ppm)		7.17	7.15	7.13	7.15

FREQUEMCY STABILITY VERSUS VOLTAGE					
OPERATING FREQUENCY: 5270 MHz					
40 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
20	126.5	5269.9962	5269.9962	5269.9960	5269.9964
	110.0	5269.9870	5269.9872	5269.9870	5269.9872
	93.5	5269.9940	5269.9938	5269.9940	5269.9940
Max. Frequency Drift (ppm)		2.47	2.43	2.47	2.43

FREQUEMCY STABILITY VERSUS TEMP.					
OPERATING FREQUENCY: 5310 MHz					
40 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	110.0	5310.0316	5310.0320	5310.0326	5310.0328
-20	110.0	5310.0225	5310.0221	5310.0221	5310.0221
-10	110.0	5310.0121	5310.0125	5310.0125	5310.0117
0	110.0	5309.9982	5309.9974	5309.9980	5309.9978
10	110.0	5309.9865	5309.9859	5309.9855	5309.9855
20	110.0	5309.9796	5309.9792	5309.9809	5309.9813
30	110.0	5309.9658	5309.9656	5309.9655	5309.9654
40	110.0	5309.9635	5309.9631	5309.9630	5309.9628
50	110.0	5309.9702	5309.9701	5309.9700	5309.9700
Max. Frequency Drift (ppm)		6.87	6.95	6.97	7.01

FREQUEMCY STABILITY VERSUS VOLTAGE					
OPERATING FREQUENCY: 5310 MHz					
40 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
20	126.5	5309.9946	5309.9944	5309.9946	5309.9944
	110.0	5309.9862	5309.9864	5309.9864	5309.9862
	93.5	5309.9934	5309.9932	5309.9934	5309.9934
Max. Frequency Drift (ppm)		2.60	2.56	2.56	2.60

FREQUEMCY STABILITY VERSUS TEMP.					
OPERATING FREQUENCY: 5510 MHz					
40 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	110.0	5510.0324	5510.0324	5510.0328	5510.0324
-20	110.0	5510.0230	5510.0225	5510.0225	5510.0225
-10	110.0	5510.0108	5510.0110	5510.0108	5510.0108
0	110.0	5509.9978	5509.9980	5509.9980	5509.9978
10	110.0	5509.9839	5509.9839	5509.9835	5509.9835
20	110.0	5509.9718	5509.9718	5509.9718	5509.9717
30	110.0	5509.9636	5509.9635	5509.9634	5509.9632
40	110.0	5509.9602	5509.9603	5509.9604	5509.9604
50	110.0	5509.9671	5509.9670	5509.9670	5509.9671
Max. Frequency Drift (ppm)		7.22	7.21	7.19	7.19

FREQUEMCY STABILITY VERSUS VOLTAGE					
OPERATING FREQUENCY: 5510 MHz					
40 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
20	126.5	5509.9915	5509.9910	5509.9913	5509.9910
	110.0	5509.9835	5509.9837	5509.9839	5509.9837
	93.5	5509.9891	5509.9895	5509.9891	5509.9891
Max. Frequency Drift (ppm)		2.99	2.96	2.92	2.96

FREQUEMCY STABILITY VERSUS TEMP.					
OPERATING FREQUENCY: 5550 MHz					
40 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	110.0	5550.0320	5550.0324	5550.0324	5550.0320
-20	110.0	5550.0234	5550.0234	5550.0234	5550.0238
-10	110.0	5550.0112	5550.0112	5550.0112	5550.0112
0	110.0	5549.9978	5549.9982	5549.9978	5549.9980
10	110.0	5549.9839	5549.9838	5549.9837	5549.9834
20	110.0	5549.9704	5549.9705	5549.9706	5549.9705
30	110.0	5549.9630	5549.9633	5549.9635	5549.9632
40	110.0	5549.9600	5549.9601	5549.9603	5549.9601
50	110.0	5549.9685	5549.9683	5549.9681	5549.9680
Max. Frequency Drift (ppm)		7.21	7.19	7.15	7.19

FREQUEMCY STABILITY VERSUS VOLTAGE					
OPERATING FREQUENCY: 5550 MHz					
40 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
20	126.5	5549.9915	5549.9912	5549.9915	5549.9912
	110.0	5549.9828	5549.9832	5549.9828	5549.9832
	93.5	5549.9888	5549.9886	5549.9888	5549.9886
Max. Frequency Drift (ppm)		3.10	3.03	3.10	3.03

FREQUEMCY STABILITY VERSUS TEMP.					
OPERATING FREQUENCY: 5670 MHz					
40 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	110.0	5670.0320	5670.0324	5670.0320	5670.0324
-20	110.0	5670.0234	5670.0234	5670.0234	5670.0234
-10	110.0	5670.0117	5670.0113	5670.0117	5670.0113
0	110.0	5669.9978	5669.9980	5669.9982	5669.9980
10	110.0	5669.9833	5669.9830	5669.9833	5669.9832
20	110.0	5669.9714	5669.9712	5669.9712	5669.9713
30	110.0	5669.9635	5669.9633	5669.9630	5669.9628
40	110.0	5669.9603	5669.9605	5669.9606	5669.9606
50	110.0	5669.9675	5669.9673	5669.9672	5669.9670
Max. Frequency Drift (ppm)		7.00	6.97	6.95	6.95

FREQUEMCY STABILITY VERSUS VOLTAGE					
OPERATING FREQUENCY: 5670 MHz					
40 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
20	126.5	5669.9920	5669.9916	5669.9920	5669.9916
	110.0	5669.9828	5669.9830	5669.9828	5669.9830
	93.5	5669.9892	5669.9891	5669.9891	5669.9892
Max. Frequency Drift (ppm)		3.03	3.00	3.03	3.00

FREQUEMCY STABILITY VERSUS TEMP.					
OPERATING FREQUENCY: 5710 MHz					
40 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	110.0	5710.0322	5710.0320	5710.0320	5710.0320
-20	110.0	5710.0225	5710.0225	5710.0230	5710.0230
-10	110.0	5710.0112	5710.0110	5710.0112	5710.0112
0	110.0	5709.9982	5709.9978	5709.9982	5709.9982
10	110.0	5709.9835	5709.9833	5709.9832	5709.9830
20	110.0	5709.9692	5709.9692	5709.9690	5709.9692
30	110.0	5709.9636	5709.9635	5709.9633	5709.9632
40	110.0	5709.9602	5709.9605	5709.9605	5709.9604
50	110.0	5709.9675	5709.9672	5709.9671	5709.9670
Max. Frequency Drift (ppm)		6.97	6.92	6.92	6.94

FREQUEMCY STABILITY VERSUS VOLTAGE					
OPERATING FREQUENCY: 5710 MHz					
40 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
20	126.5	5709.9918	5709.9918	5709.9916	5709.9916
	110.0	5709.9828	5709.9830	5709.9828	5709.9828
	93.5	5709.9884	5709.9884	5709.9888	5709.9888
Max. Frequency Drift (ppm)		3.01	2.98	3.01	3.01

FREQUEMCY STABILITY VERSUS TEMP.					
OPERATING FREQUENCY: 5290 MHz					
80 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	110.0	5290.0318	5290.0320	5290.0320	5290.0318
-20	110.0	5290.0221	5290.0221	5290.0221	5290.0221
-10	110.0	5290.0117	5290.0120	5290.0117	5290.0120
0	110.0	5289.9978	5289.9982	5289.9978	5289.9982
10	110.0	5289.9869	5289.9865	5289.9869	5289.9865
20	110.0	5289.9826	5289.9800	5289.9828	5289.9831
30	110.0	5289.9655	5289.9653	5289.9651	5289.9650
40	110.0	5289.9622	5289.9620	5289.9623	5289.9622
50	110.0	5289.9711	5289.9710	5289.9709	5289.9708
Max. Frequency Drift (ppm)		7.15	7.18	7.13	7.15

FREQUEMCY STABILITY VERSUS VOLTAGE					
OPERATING FREQUENCY: 5290 MHz					
80 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
20	126.5	5289.9988	5289.9988	5289.9986	5289.9988
	110.0	5289.9870	5289.9870	5289.9870	5289.9870
	93.5	5289.9942	5289.9941	5289.9946	5289.9946
Max. Frequency Drift (ppm)		2.46	2.46	2.46	2.46

FREQUEMCY STABILITY VERSUS TEMP.					
OPERATING FREQUENCY: 5530 MHz					
80 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	110.0	5530.0320	5530.0324	5530.0328	5530.0324
-20	110.0	5530.0225	5530.0221	5530.0221	5530.0221
-10	110.0	5530.0108	5530.0112	5530.0112	5530.0108
0	110.0	5529.9974	5529.9978	5529.9980	5529.9978
10	110.0	5529.9839	5529.9837	5529.9836	5529.9838
20	110.0	5529.9735	5529.9734	5529.9732	5529.9734
30	110.0	5529.9616	5529.9618	5529.9620	5529.9618
40	110.0	5529.9596	5529.9597	5529.9596	5529.9596
50	110.0	5529.9620	5529.9618	5529.9619	5529.9620
Max. Frequency Drift (ppm)		7.30	7.29	7.31	7.31

FREQUEMCY STABILITY VERSUS VOLTAGE					
OPERATING FREQUENCY: 5530 MHz					
80 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
20	126.5	5529.9890	5529.9894	5529.9894	5529.9890
	110.0	5529.9812	5529.9810	5529.9812	5529.9810
	93.5	5529.9866	5529.9868	5529.9866	5529.9868
Max. Frequency Drift (ppm)		3.40	3.44	3.40	3.44

FREQUEMCY STABILITY VERSUS TEMP.					
OPERATING FREQUENCY: 5690 MHz					
80 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
-30	110.0	5690.0320	5690.0324	5690.0320	5690.0320
-20	110.0	5690.0225	5690.0221	5690.0225	5690.0230
-10	110.0	5690.0112	5690.0108	5690.0112	5690.0108
0	110.0	5689.9974	5689.9978	5689.9980	5689.9980
10	110.0	5689.9839	5689.9839	5689.9835	5689.9833
20	110.0	5689.9714	5689.9713	5689.9714	5689.9714
30	110.0	5689.9623	5689.9625	5689.9626	5689.9628
40	110.0	5689.9595	5689.9594	5689.9596	5689.9596
50	110.0	5689.9622	5689.9623	5689.9625	5689.9624
Max. Frequency Drift (ppm)		7.12	7.14	7.10	7.10

FREQUEMCY STABILITY VERSUS VOLTAGE					
OPERATING FREQUENCY: 5690 MHz					
80 MHz		Ant. 1	Ant. 2	Ant. 3	Ant. 4
TEMP. (℃)	POWER SUPPLY (Vac)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)	Measured Frequency (MHz)
20	126.5	5689.9892	5689.9892	5689.9892	5689.9892
	110.0	5689.9812	5689.9812	5689.9814	5689.9816
	93.5	5689.9870	5689.9868	5689.9866	5689.9868
Max. Frequency Drift (ppm)		3.30	3.30	3.27	3.23

7 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver	R&S	ESCS 30	100174	9kHz ~ 2.75GHz	Apr. 14. 2014	AC Conduction
LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	8127-477	9kHz ~ 30MHz	Jan. 22, 2014	AC Conduction
RF Cable-CON	HUBER+SUHNER	RG213/U	07611832020001	9kHz ~ 30MHz	Oct. 31, 2014	AC Conduction
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	N/A	AC Conduction
4 Port switch	CEI	P4R-720120	TH06	1GHz~26.5GHz	Jul. 01, 2015	AC Conduction

Note: Calibration Interval of instruments listed above is one year.

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Spectrum Analyzer	R&S	FSV 40	101013	9KHz~40GHz	Jan. 25, 2014	RF Conducted
Temp. and Humidity Chamber	Giant Force	GTH-225-20-S	MAB0103-001	-20 ~ 100℃	Nov. 25, 2014	RF Conducted
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Jul. 31, 2014	RF Conducted
Power Sensor	Anritsu	MA2411B	1027452	300MHz ~ 40GHz	Nov. 25, 2014	RF Conducted
Power Meter	Anritsu	ML2495A	1124009	300MHz ~ 40GHz	Jul. 31, 2014	RF Conducted
RF Cable-1m	HUBER+SUHNER	SUCOFLEX_104	SN 324557	30MHz ~ 26.5GHz	Dec. 01, 2014	RF Conducted
RF Cable-1.5m	HUBER+SUHNER	SUCOFLEX_104	SN MY12586	30MHz ~ 26.5GHz	Dec. 01, 2014	RF Conducted
RF Cable-0.5m	HUBER+SUHNER	SUCOFLEX_103	10715/4 10716/4	30MHz ~ 26.5GHz	Dec. 01, 2014	RF Conducted
RF Cable-0.2m	HUBER+SUHNER	SUCOFLEX_103	10709/4	30MHz ~ 26.5GHz	Dec. 01, 2014	RF Conducted
AC Power Source	G.W	APS-9102	EL920581	AC 0V ~ 300V	Jul. 15, 2014	RF Conducted
Spectrum Analyzer	Agilent	N9010A	MY54200401	10Hz~44GHz	Aug. 16, 2014	RF Conducted
Power Meter	Agilent	U2021XA	MY53480019	50MHz~18GHz	Feb. 23, 2014	RF Conducted
Power Meter	Agilent	U2021XA	MY53510003	50MHz~18GHz	Feb. 25, 2014	RF Conducted
Power Meter	Agilent	U2021XA	MY54070003	50MHz~18GHz	Feb. 23, 2014	RF Conducted
Power Meter	Agilent	U2021XA	MY54060013	50MHz~18GHz	Feb. 23, 2014	RF Conducted

Note: Calibration Interval of instruments listed above is one year.