4.3. Maximum Conducted Output Power Measurement

4.3.1. Limit

For the 5.25-5.35 GHz and 5.470-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log B, where B is the 26-dB emission bandwidth in MHz. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725~5.825 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1 W or 17 dBm + 10 log B, where B is the 26-dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 17 dBm in any 1ŕMHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain up to 23 dBi without any corresponding reduction in the transmitter peak output power or peak power spectral density. For fixed, point-to-point U-NII transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in peak transmitter power and peak power spectral density for each 1 dB of antenna gain in excess of 23 dBi would be required.

4.3.2. Measuring Instruments and Setting

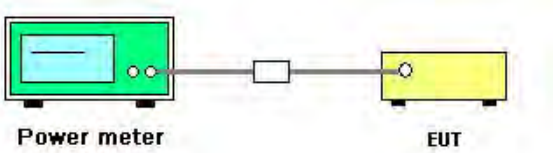
The following table is the setting of the peak power meter.

Power Meter Parameter	Setting
Bandwidth	50MHz bandwidth is greater than the EUT emission bandwidth
Detector	AVERAGE

4.3.3. Test Procedures

1. The transmitter output (antenna port) was connected to the power meter.
2. Test was performed in accordance with KDB 789033 Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E,section (C) Maximum conducted output power =>(4) Method PM (Measurement using an RF average power meter) Multiple antenna systems was performed in accordance with KDB 662911 Emissions Testing of Transmitters with Multiple Outputs in the Same Band.
3. When measuring maximum conducted output power with multiple antenna systems,add every result of the values by mathematic formula.

4.3.4. Test Setup Layout



4.3.5. Test Deviation

There is no deviation with the original standard.

4.3.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.3.7. Test Result of Maximum Conducted Output Power

Temperature	25°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	IEEE 802.11n
Test Date	May 23, 2012	Test Mode	Mode 1 (Ant. 6 Dipole antenna / 8dBi)

1TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	19.39	22.00	Complies
60	5300 MHz	21.40	22.00	Complies
64	5320 MHz	17.54	22.00	Complies
100	5500 MHz	14.41	22.00	Complies
116	5580 MHz	19.41	22.00	Complies
140	5700 MHz	10.50	22.00	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
54	5270 MHz	20.97	22.00	Complies
62	5310 MHz	13.88	22.00	Complies
102	5510MHz	10.42	22.00	Complies
110	5550 MHz	18.35	22.00	Complies
134	5670 MHz	14.50	22.00	Complies

2TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
52	5260 MHz	14.45	16.85	18.82	18.99	Complies
60	5300 MHz	15.28	16.25	18.80	18.99	Complies
64	5320 MHz	15.12	16.32	18.77	18.99	Complies
100	5500 MHz	11.32	12.75	15.10	18.99	Complies
116	5580 MHz	15.30	16.11	18.73	18.99	Complies
140	5700 MHz	10.02	11.64	13.92	18.99	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.01dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (11.01dBi -6)=18.99dBm.

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
54	5270 MHz	14.69	16.62	18.77	18.99	Complies
62	5310 MHz	13.00	13.52	16.28	18.99	Complies
102	5510MHz	6.81	8.94	11.01	18.99	Complies
110	5550 MHz	13.84	15.89	18.00	18.99	Complies
134	5670 MHz	13.00	14.01	16.54	18.99	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.01dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (11.01dBi -6)=18.99dBm.

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
52	5260 MHz	17.36	19.59	21.63	22.00	Complies
60	5300 MHz	17.68	19.37	21.62	22.00	Complies
64	5320 MHz	16.70	18.70	20.82	22.00	Complies
100	5500 MHz	14.77	14.95	17.87	22.00	Complies
116	5580 MHz	18.41	18.97	21.71	22.00	Complies
140	5700 MHz	11.40	13.07	15.33	22.00	Complies

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
54	5270 MHz	17.61	19.60	21.73	22.00	Complies
62	5310 MHz	13.83	14.47	17.17	22.00	Complies
102	5510MHz	8.70	10.70	12.82	22.00	Complies
110	5550 MHz	13.75	15.90	17.97	22.00	Complies
134	5670 MHz	14.65	15.69	18.21	22.00	Complies

3TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
52	5260 MHz	10.58	12.31	12.81	16.77	17.23	Complies
60	5300 MHz	9.88	10.66	11.40	15.46	17.23	Complies
64	5320 MHz	11.01	12.15	13.20	16.98	17.23	Complies
100	5500 MHz	10.50	12.41	13.34	17.01	17.23	Complies
116	5580 MHz	10.38	12.44	12.67	16.72	17.23	Complies
140	5700 MHz	10.04	11.20	11.34	15.67	17.23	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =12.77dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (12.77dBi -6)=17.23dBm.

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
54	5270 MHz	10.93	12.36	12.58	16.79	17.23	Complies
62	5310 MHz	10.17	10.86	11.52	15.66	17.23	Complies
102	5510MHz	6.48	8.76	9.31	13.12	17.23	Complies
110	5550 MHz	10.01	12.82	13.39	17.08	17.23	Complies
134	5670 MHz	10.98	12.91	12.91	17.13	17.23	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =12.77dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (12.77dBi -6)=17.23dBm.

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
52	5260 MHz	11.96	14.38	14.86	18.68	19.00	Complies
60	5300 MHz	13.00	14.37	14.64	18.83	19.00	Complies
64	5320 MHz	12.44	13.82	14.87	18.59	19.00	Complies
100	5500 MHz	11.55	12.44	14.16	17.63	19.00	Complies
116	5580 MHz	12.73	14.31	14.89	18.84	19.00	Complies
140	5700 MHz	10.96	11.68	12.47	16.52	19.00	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (11dBi -6)=19.00dBm.

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
54	5270 MHz	12.40	14.52	14.71	18.77	19.00	Complies
62	5310 MHz	10.07	10.78	11.42	15.56	19.00	Complies
102	5510MHz	6.97	9.31	9.99	13.71	19.00	Complies
110	5550 MHz	11.95	14.47	14.92	18.73	19.00	Complies
134	5670 MHz	12.75	14.23	14.87	18.81	19.00	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (11dBi -6)=19.00dBm.

Configuration IEEE 802.11n MCS16 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
52	5260 MHz	15.07	17.52	17.27	21.52	22.00	Complies
60	5300 MHz	15.75	17.64	17.26	21.73	22.00	Complies
64	5320 MHz	12.41	13.87	14.80	18.57	22.00	Complies
100	5500 MHz	13.48	14.16	15.43	19.20	22.00	Complies
116	5580 MHz	15.84	16.77	18.04	21.75	22.00	Complies
140	5700 MHz	11.78	12.63	13.48	17.46	22.00	Complies

Configuration IEEE 802.11n MCS16 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
54	5270 MHz	15.30	17.57	17.12	21.54	22.00	Complies
62	5310 MHz	9.67	10.23	10.93	15.08	22.00	Complies
102	5510MHz	6.27	8.68	9.17	12.98	22.00	Complies
110	5550 MHz	15.56	17.20	18.30	21.93	22.00	Complies
134	5670 MHz	15.49	16.42	16.62	20.98	22.00	Complies

Temperature	25°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	IEEE 802.11a
Test Date	May 23, 2012	Test Mode	Mode 1 (Ant. 6 Dipole antenna / 8dBi)

1TX

Configuration IEEE 802.11a / Chain 1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	21.68	22.00	Complies
60	5300 MHz	21.76	22.00	Complies
64	5320 MHz	18.46	22.00	Complies
100	5500 MHz	16.49	22.00	Complies
116	5580 MHz	21.62	22.00	Complies
140	5700 MHz	12.92	22.00	Complies

2TX

Configuration IEEE 802.11a / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
52	5260 MHz	14.31	16.66	18.65	18.99	Complies
60	5300 MHz	15.28	16.30	18.83	18.99	Complies
64	5320 MHz	15.24	16.57	18.97	18.99	Complies
100	5500 MHz	13.69	15.28	17.57	18.99	Complies
116	5580 MHz	15.01	16.42	18.78	18.99	Complies
140	5700 MHz	12.01	13.46	15.81	18.99	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.01dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (11.01dBi -6)=18.99dBm.

3TX

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

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
52	5260 MHz	10.52	12.11	12.63	16.61	17.23	Complies
60	5300 MHz	11.06	12.13	12.43	16.68	17.23	Complies
64	5320 MHz	10.94	12.10	13.03	16.88	17.23	Complies
100	5500 MHz	10.51	12.39	13.19	16.94	17.23	Complies
116	5580 MHz	10.73	12.31	12.48	16.68	17.23	Complies
140	5700 MHz	9.39	10.88	11.23	15.34	17.23	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =12.77dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (12.77dBi -6)=17.23dBm.

Temperature	25°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	IEEE 802.11n
Test Date	May 23, 2012	Test Mode	Mode 2 (Ant. 7 Patch antenna / 2.3dBi)

1TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	22.17	24.00	Complies
60	5300 MHz	22.32	24.00	Complies
64	5320 MHz	19.74	24.00	Complies
100	5500 MHz	16.80	24.00	Complies
116	5580 MHz	22.34	24.00	Complies
140	5700 MHz	15.25	24.00	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
54	5270 MHz	22.56	24.00	Complies
62	5310 MHz	15.86	24.00	Complies
102	5510MHz	14.97	24.00	Complies
110	5550 MHz	20.84	24.00	Complies
134	5670 MHz	17.66	24.00	Complies

2TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
52	5260 MHz	19.50	21.41	23.57	24.00	Complies
60	5300 MHz	19.88	21.19	23.59	24.00	Complies
64	5320 MHz	17.50	19.33	21.52	24.00	Complies
100	5500 MHz	13.43	14.16	16.82	24.00	Complies
116	5580 MHz	20.39	21.44	23.96	24.00	Complies
140	5700 MHz	12.77	13.70	16.27	24.00	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
54	5270 MHz	20.18	21.55	23.93	24.00	Complies
62	5310 MHz	14.48	14.86	17.68	24.00	Complies
102	5510MHz	12.03	13.84	16.04	24.00	Complies
110	5550 MHz	18.85	20.33	22.66	24.00	Complies
134	5670 MHz	16.19	16.53	19.37	24.00	Complies

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
52	5260 MHz	19.78	21.57	23.78	24.00	Complies
60	5300 MHz	19.95	21.20	23.63	24.00	Complies
64	5320 MHz	16.70	18.68	20.81	24.00	Complies
100	5500 MHz	16.64	17.06	19.87	24.00	Complies
116	5580 MHz	19.98	21.07	23.57	24.00	Complies
140	5700 MHz	14.42	15.03	17.75	24.00	Complies

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
54	5270 MHz	20.01	21.33	23.73	24.00	Complies
62	5310 MHz	14.60	14.86	17.74	24.00	Complies
102	5510MHz	14.22	15.03	17.65	24.00	Complies
110	5550 MHz	19.84	21.68	23.87	24.00	Complies
134	5670 MHz	17.28	18.77	21.10	24.00	Complies

3TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
52	5260 MHz	16.14	18.38	18.34	22.51	22.93	Complies
60	5300 MHz	16.47	18.19	17.94	22.37	22.93	Complies
64	5320 MHz	14.57	15.98	16.34	20.47	22.93	Complies
100	5500 MHz	10.81	12.23	12.90	16.84	22.93	Complies
116	5580 MHz	16.60	17.58	18.81	22.53	22.93	Complies
140	5700 MHz	10.71	11.39	12.36	16.31	22.93	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =7.07dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (7.07dBi -6)=22.93dBm.

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
54	5270 MHz	16.44	18.36	18.03	22.46	22.93	Complies
62	5310 MHz	12.76	13.50	14.26	18.32	22.93	Complies
102	5510MHz	8.49	10.60	11.10	14.97	22.93	Complies
110	5550 MHz	16.24	18.32	18.86	22.72	22.93	Complies
134	5670 MHz	14.67	15.57	15.77	20.13	22.93	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =7.07dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (7.07dBi -6)=22.93dBm.

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
52	5260 MHz	17.73	19.61	19.49	23.80	24.00	Complies
60	5300 MHz	17.80	19.54	19.46	23.78	24.00	Complies
64	5320 MHz	14.36	15.65	16.18	20.23	24.00	Complies
100	5500 MHz	13.48	14.10	15.86	19.37	24.00	Complies
116	5580 MHz	17.36	18.77	19.66	23.47	24.00	Complies
140	5700 MHz	13.43	13.77	14.88	18.84	24.00	Complies

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
54	5270 MHz	18.00	19.74	19.48	23.91	24.00	Complies
62	5310 MHz	13.47	14.04	14.43	18.77	24.00	Complies
102	5510MHz	10.70	12.24	13.88	17.24	24.00	Complies
110	5550 MHz	16.94	19.24	19.91	23.64	24.00	Complies
134	5670 MHz	15.12	16.72	16.92	21.10	24.00	Complies

Temperature	25°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	IEEE 802.11a
Test Date	May 23, 2012	Test Mode	Mode 2 (Ant. 7 Patch antenna / 2.3dBi)

1TX

Configuration IEEE 802.11a / Chain 1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	22.33	24.00	Complies
60	5300 MHz	22.54	24.00	Complies
64	5320 MHz	19.93	24.00	Complies
100	5500 MHz	17.23	24.00	Complies
116	5580 MHz	22.54	24.00	Complies
140	5700 MHz	15.17	24.00	Complies

2TX

Configuration IEEE 802.11a / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
52	5260 MHz	19.36	21.33	23.47	24.00	Complies
60	5300 MHz	19.95	21.03	23.53	24.00	Complies
64	5320 MHz	16.92	18.81	20.98	24.00	Complies
100	5500 MHz	14.60	14.94	17.78	24.00	Complies
116	5580 MHz	19.96	21.04	23.54	24.00	Complies
140	5700 MHz	13.83	14.49	17.18	24.00	Complies

3TX

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

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
52	5260 MHz	16.22	18.44	18.32	22.54	22.93	Complies
60	5300 MHz	16.43	18.31	17.96	22.41	22.93	Complies
64	5320 MHz	15.25	17.21	17.89	21.69	22.93	Complies
100	5500 MHz	11.44	12.62	14.17	17.66	22.93	Complies
116	5580 MHz	16.61	17.70	18.77	22.55	22.93	Complies
140	5700 MHz	11.70	12.04	13.03	17.07	22.93	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =7.07dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (7.07dBi -6)=22.93dBm.

Temperature	25°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	IEEE 802.11n
Test Date	May 23, 2012	Test Mode	Mode 3 (Ant. 8 Panel antenna / 10.5dBi)

1TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	19.15	19.50	Complies
60	5300 MHz	18.05	19.50	Complies
64	5320 MHz	11.53	19.50	Complies
100	5500 MHz	9.20	19.50	Complies
116	5580 MHz	19.42	19.50	Complies
140	5700 MHz	9.74	19.50	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
54	5270 MHz	15.87	19.50	Complies
62	5310 MHz	7.95	19.50	Complies
102	5510MHz	7.83	19.50	Complies
110	5550 MHz	16.14	19.50	Complies
134	5670 MHz	12.68	19.50	Complies

2TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
52	5260 MHz	7.88	9.36	11.69	16.49	Complies
60	5300 MHz	7.06	8.96	11.12	16.49	Complies
64	5320 MHz	6.79	8.77	10.90	16.49	Complies
100	5500 MHz	8.31	10.27	12.41	16.49	Complies
116	5580 MHz	8.99	11.18	13.23	16.49	Complies
140	5700 MHz	6.09	8.71	10.60	16.49	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =13.51dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (13.51dBi -6)=16.49dBm.

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
54	5270 MHz	6.78	7.93	10.40	16.49	Complies
62	5310 MHz	5.51	6.82	9.22	16.49	Complies
102	5510MHz	5.23	7.86	9.75	16.49	Complies
110	5550 MHz	8.27	11.40	13.12	16.49	Complies
134	5670 MHz	6.86	9.27	11.24	16.49	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =13.51dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (13.51dBi -6)=16.49dBm.

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
52	5260 MHz	6.16	7.79	10.06	19.50	Complies
60	5300 MHz	6.25	7.76	10.08	19.50	Complies
64	5320 MHz	5.79	7.87	9.96	19.50	Complies
100	5500 MHz	7.85	9.42	11.72	19.50	Complies
116	5580 MHz	8.63	10.96	12.96	19.50	Complies
140	5700 MHz	6.19	8.41	10.45	19.50	Complies

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
54	5270 MHz	7.01	7.97	10.53	19.50	Complies
62	5310 MHz	5.58	6.65	9.16	19.50	Complies
102	5510MHz	5.03	7.67	9.56	19.50	Complies
110	5550 MHz	8.59	11.39	13.22	19.50	Complies
134	5670 MHz	6.75	9.33	11.24	19.50	Complies

3TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
52	5260 MHz	-1.18	1.05	0.45	4.98	14.73	Complies
60	5300 MHz	-1.31	0.49	-0.39	4.43	14.73	Complies
64	5320 MHz	-1.80	0.46	0.01	4.43	14.73	Complies
100	5500 MHz	-1.13	0.56	1.38	5.16	14.73	Complies
116	5580 MHz	-0.21	1.54	2.39	6.14	14.73	Complies
140	5700 MHz	-1.57	0.33	0.16	4.49	14.73	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =15.27dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (15.27dBi -6)=14.73dBm.

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
54	5270 MHz	-1.47	0.37	-0.33	4.36	14.73	Complies
62	5310 MHz	-1.51	0.14	-0.54	4.19	14.73	Complies
102	5510MHz	-1.29	0.48	1.50	5.15	14.73	Complies
110	5550 MHz	-0.52	2.27	3.12	6.65	14.73	Complies
134	5670 MHz	-1.51	0.27	0.34	4.55	14.73	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =15.27dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (15.27dBi -6)=14.73dBm.

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
52	5260 MHz	-2.04	0.05	-0.25	4.12	16.50	Complies
60	5300 MHz	-1.74	-0.06	-1.02	3.89	16.50	Complies
64	5320 MHz	-1.97	0.11	-0.31	4.14	16.50	Complies
100	5500 MHz	-0.87	0.35	1.12	5.05	16.50	Complies
116	5580 MHz	-1.14	0.53	1.36	5.14	16.50	Complies
140	5700 MHz	-1.49	0.23	-0.11	4.38	16.50	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =13.5dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (13.5dBi -6)=16.50dBm.

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
54	5270 MHz	-1.47	0.39	-0.32	4.37	16.50	Complies
62	5310 MHz	-1.29	0.08	-0.41	4.27	16.50	Complies
102	5510MHz	-1.09	0.61	1.56	5.26	16.50	Complies
110	5550 MHz	0.79	3.59	3.89	7.73	16.50	Complies
134	5670 MHz	-1.68	0.32	0.44	4.57	16.50	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =13.5dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (13.5dBi -6)=16.50dBm.

Configuration IEEE 802.11n MCS16 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
52	5260 MHz	-1.08	1.58	0.73	5.32	19.50	Complies
60	5300 MHz	-1.93	-0.07	-0.93	3.86	19.50	Complies
64	5320 MHz	-2.08	0.06	-0.35	4.08	19.50	Complies
100	5500 MHz	-1.07	0.21	1.08	4.93	19.50	Complies
116	5580 MHz	0.30	1.85	2.82	6.55	19.50	Complies
140	5700 MHz	-0.41	1.77	1.40	5.79	19.50	Complies

Configuration IEEE 802.11n MCS16 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
54	5270 MHz	-1.49	0.25	-0.26	4.33	19.50	Complies
62	5310 MHz	-1.26	0.29	-0.51	4.32	19.50	Complies
102	5510MHz	-0.04	2.09	2.79	6.54	19.50	Complies
110	5550 MHz	-1.24	1.20	2.13	5.69	19.50	Complies
134	5670 MHz	-0.70	1.68	1.48	5.72	19.50	Complies

Temperature	25°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	IEEE 802.11a
Test Date	May 23, 2012	Test Mode	Mode 3 (Ant. 8 Panel antenna / 10.5dBi)

1TX

Configuration IEEE 802.11a / Chain 1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	19.07	19.50	Complies
60	5300 MHz	18.79	19.50	Complies
64	5320 MHz	12.36	19.50	Complies
100	5500 MHz	10.27	19.50	Complies
116	5580 MHz	19.23	19.50	Complies
140	5700 MHz	10.87	19.50	Complies

2TX

Configuration IEEE 802.11a / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
52	5260 MHz	7.13	8.35	10.79	16.49	Complies
60	5300 MHz	6.69	8.33	10.60	16.49	Complies
64	5320 MHz	6.25	7.98	10.21	16.49	Complies
100	5500 MHz	6.39	8.88	10.82	16.49	Complies
116	5580 MHz	12.79	13.82	16.35	16.49	Complies
140	5700 MHz	5.76	7.88	9.96	16.49	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =13.51dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (13.51dBi -6)=16.49dBm.

3TX

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

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
52	5260 MHz	-0.91	1.45	1.04	5.41	14.73	Complies
60	5300 MHz	-0.83	1.14	0.24	5.03	14.73	Complies
64	5320 MHz	-1.08	1.05	0.54	5.03	14.73	Complies
100	5500 MHz	0.17	1.00	1.99	5.89	14.73	Complies
116	5580 MHz	8.29	10.11	10.68	14.58	14.73	Complies
140	5700 MHz	-1.32	0.54	0.31	4.69	14.73	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =15.27dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (15.27dBi -6)=14.73dBm.

Temperature	25°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	IEEE 802.11n
Test Date	May 23, 2012	Test Mode	Mode 4 (Ant. 9 Yagi antenna / 8dBi)

1TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	21.79	22.00	Complies
60	5300 MHz	17.99	22.00	Complies
64	5320 MHz	12.51	22.00	Complies
100	5500 MHz	11.56	22.00	Complies
116	5580 MHz	20.95	22.00	Complies
140	5700 MHz	10.42	22.00	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
54	5270 MHz	16.13	22.00	Complies
62	5310 MHz	8.70	22.00	Complies
102	5510MHz	9.41	22.00	Complies
110	5550 MHz	19.07	22.00	Complies
134	5670 MHz	16.27	22.00	Complies

2TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
52	5260 MHz	10.47	12.14	14.40	18.99	Complies
60	5300 MHz	-1.07	0.99	3.09	18.99	Complies
64	5320 MHz	-0.88	1.11	3.24	18.99	Complies
100	5500 MHz	4.34	5.68	8.07	18.99	Complies
116	5580 MHz	15.04	16.53	18.86	18.99	Complies
140	5700 MHz	1.19	2.59	4.96	18.99	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.01dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (11.01dBi -6)=18.99dBm.

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
54	5270 MHz	11.57	12.94	15.32	18.99	Complies
62	5310 MHz	6.75	8.18	10.53	18.99	Complies
102	5510MHz	5.34	6.65	9.05	18.99	Complies
110	5550 MHz	4.72	7.72	9.48	18.99	Complies
134	5670 MHz	3.68	5.84	7.90	18.99	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.01dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (11.01dBi -6)=18.99dBm.

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
52	5260 MHz	10.36	12.25	14.42	22.00	Complies
60	5300 MHz	-0.93	1.03	3.17	22.00	Complies
64	5320 MHz	-0.99	0.96	3.10	22.00	Complies
100	5500 MHz	3.96	5.24	7.66	22.00	Complies
116	5580 MHz	18.69	18.94	21.83	22.00	Complies
140	5700 MHz	1.32	2.75	5.10	22.00	Complies

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
54	5270 MHz	11.41	12.84	15.19	15.19	Complies
62	5310 MHz	6.53	7.73	10.18	10.18	Complies
102	5510MHz	4.68	6.32	8.59	22.00	Complies
110	5550 MHz	4.39	7.10	8.96	22.00	Complies
134	5670 MHz	3.00	5.36	7.35	22.00	Complies

3TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
52	5260 MHz	8.13	9.66	10.44	14.28	17.23	Complies
60	5300 MHz	-1.46	0.40	-0.44	4.34	17.23	Complies
64	5320 MHz	-2.18	-0.04	0.01	4.15	17.23	Complies
100	5500 MHz	3.13	4.46	4.77	8.95	17.23	Complies
116	5580 MHz	10.65	12.87	13.24	17.17	17.23	Complies
140	5700 MHz	-0.59	0.66	0.73	5.08	17.23	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =12.77dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (12.77dBi -6)=17.23dBm.

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
54	5270 MHz	7.63	9.31	8.83	13.42	17.23	Complies
62	5310 MHz	4.72	6.21	6.16	10.52	17.23	Complies
102	5510MHz	2.99	4.61	5.02	9.06	17.23	Complies
110	5550 MHz	2.04	4.76	4.85	8.83	17.23	Complies
134	5670 MHz	0.28	2.37	2.03	6.42	17.23	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =12.77dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (12.77dBi -6)=17.23dBm.

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
52	5260 MHz	8.14	9.51	10.29	14.17	19.00	Complies
60	5300 MHz	-2.65	-0.81	-1.59	3.15	19.00	Complies
64	5320 MHz	-2.31	-0.31	-0.25	3.91	19.00	Complies
100	5500 MHz	2.62	4.08	4.55	8.60	19.00	Complies
116	5580 MHz	12.59	14.18	14.83	18.74	19.00	Complies
140	5700 MHz	-2.29	-1.17	-0.70	3.43	19.00	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (11dBi -6)=19.00dBm.

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
54	5270 MHz	4.74	6.93	6.24	10.83	19.00	Complies
62	5310 MHz	5.74	7.04	6.86	11.35	19.00	Complies
102	5510MHz	2.67	4.43	5.00	8.91	19.00	Complies
110	5550 MHz	2.42	5.20	5.20	9.23	19.00	Complies
134	5670 MHz	-0.28	1.94	1.80	6.04	19.00	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (11dBi -6)=19.00dBm.

Configuration IEEE 802.11n MCS16 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
52	5260 MHz	8.80	10.62	11.06	15.04	22.00	Complies
60	5300 MHz	-0.96	0.85	0.11	4.83	22.00	Complies
64	5320 MHz	-1.19	0.94	0.97	5.12	22.00	Complies
100	5500 MHz	2.55	3.83	4.24	8.37	22.00	Complies
116	5580 MHz	15.69	16.46	17.86	21.54	22.00	Complies
140	5700 MHz	-2.71	-1.54	-1.11	3.04	22.00	Complies

Configuration IEEE 802.11n MCS16 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
54	5270 MHz	7.52	9.18	8.92	13.37	22.00	Complies
62	5310 MHz	5.88	7.23	7.08	11.54	22.00	Complies
102	5510MHz	2.59	4.33	4.82	8.78	22.00	Complies
110	5550 MHz	1.49	4.04	4.19	8.17	22.00	Complies
134	5670 MHz	0.96	3.03	2.77	7.12	22.00	Complies

Temperature	25°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	IEEE 802.11a
Test Date	May 23, 2012	Test Mode	Mode 4 (Ant. 9 Yagi antenna / 8dBi)

1TX

Configuration IEEE 802.11a / Chain 1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	21.87	22.00	Complies
60	5300 MHz	19.62	22.00	Complies
64	5320 MHz	13.75	22.00	Complies
100	5500 MHz	12.88	22.00	Complies
116	5580 MHz	21.73	22.00	Complies
140	5700 MHz	11.84	22.00	Complies

2TX

Configuration IEEE 802.11a / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
52	5260 MHz	9.85	11.45	13.73	18.99	Complies
60	5300 MHz	-1.46	0.56	2.68	18.99	Complies
64	5320 MHz	-1.27	0.84	2.92	18.99	Complies
100	5500 MHz	4.09	5.29	7.74	18.99	Complies
116	5580 MHz	15.31	15.89	18.62	18.99	Complies
140	5700 MHz	0.77	2.22	4.57	18.99	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.01dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (11.01dBi -6)=18.99dBm.

3TX

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

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
52	5260 MHz	7.32	9.33	9.44	13.57	17.23	Complies
60	5300 MHz	-2.22	-0.13	-1.04	3.72	17.23	Complies
64	5320 MHz	-2.23	-0.22	-0.24	3.97	17.23	Complies
100	5500 MHz	2.13	3.76	4.10	8.18	17.23	Complies
116	5580 MHz	10.39	12.61	12.65	16.77	17.23	Complies
140	5700 MHz	-0.59	0.77	0.86	5.17	17.23	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =12.77dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (12.77dBi -6)=17.23dBm.

Temperature	25°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	IEEE 802.11n
Test Date	May 23, 2012	Test Mode	Mode 5 (Ant. 5 Facade antenna / 2.5dBi)

1TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	22.03	24.00	Complies
60	5300 MHz	22.40	24.00	Complies
64	5320 MHz	18.17	24.00	Complies
100	5500 MHz	17.13	24.00	Complies
116	5580 MHz	22.35	24.00	Complies
140	5700 MHz	14.23	24.00	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
54	5270 MHz	21.68	24.00	Complies
62	5310 MHz	14.77	24.00	Complies
102	5510MHz	13.24	24.00	Complies
110	5550 MHz	21.71	24.00	Complies
134	5670 MHz	16.59	24.00	Complies

2TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
52	5260 MHz	19.75	21.21	23.55	24.00	Complies
60	5300 MHz	20.41	21.33	23.90	24.00	Complies
64	5320 MHz	18.40	19.78	22.15	24.00	Complies
100	5500 MHz	14.90	15.46	18.20	24.00	Complies
116	5580 MHz	19.05	19.74	22.42	24.00	Complies
140	5700 MHz	13.16	13.75	16.48	24.00	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
54	5270 MHz	19.90	21.21	23.61	24.00	Complies
62	5310 MHz	16.51	16.68	19.61	24.00	Complies
102	5510MHz	12.29	14.62	16.62	24.00	Complies
110	5550 MHz	19.75	21.41	23.67	24.00	Complies
134	5670 MHz	18.03	18.88	21.49	24.00	Complies

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
52	5260 MHz	19.79	21.42	23.69	24.00	Complies
60	5300 MHz	20.14	21.06	23.63	24.00	Complies
64	5320 MHz	17.86	19.45	21.74	24.00	Complies
100	5500 MHz	15.64	16.32	19.00	24.00	Complies
116	5580 MHz	19.97	21.21	23.64	24.00	Complies
140	5700 MHz	13.46	14.31	16.92	24.00	Complies

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
54	5270 MHz	19.79	21.15	23.53	24.00	Complies
62	5310 MHz	13.94	14.30	17.13	24.00	Complies
102	5510MHz	11.58	14.08	16.02	24.00	Complies
110	5550 MHz	19.84	21.86	23.98	24.00	Complies
134	5670 MHz	16.52	17.64	20.13	24.00	Complies

3TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
52	5260 MHz	16.24	18.62	18.32	22.62	22.73	Complies
60	5300 MHz	16.82	18.37	17.88	22.51	22.73	Complies
64	5320 MHz	16.05	18.11	18.29	22.37	22.73	Complies
100	5500 MHz	10.86	12.24	13.90	17.28	22.73	Complies
116	5580 MHz	16.34	17.31	18.62	22.30	22.73	Complies
140	5700 MHz	10.72	11.55	12.50	16.42	22.73	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =7.27dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (7.27dBi -6)=22.73dBm.

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
54	5270 MHz	16.90	18.57	17.93	22.62	22.73	Complies
62	5310 MHz	13.94	14.64	15.24	19.41	22.73	Complies
102	5510MHz	17.28	22.73	17.28	16.48	22.73	Complies
110	5550 MHz	22.30	22.73	22.30	22.51	22.73	Complies
134	5670 MHz	16.42	22.73	16.42	19.88	22.73	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =7.27dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (7.27dBi -6)=22.73dBm.

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
52	5260 MHz	17.44	19.60	19.26	23.64	24.00	Complies
60	5300 MHz	17.88	19.33	19.05	23.57	24.00	Complies
64	5320 MHz	15.51	17.43	17.71	21.76	24.00	Complies
100	5500 MHz	13.13	14.00	15.48	19.08	24.00	Complies
116	5580 MHz	17.72	19.20	19.75	23.74	24.00	Complies
140	5700 MHz	12.54	12.85	14.07	17.98	24.00	Complies

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
54	5270 MHz	17.94	19.82	19.32	23.87	24.00	Complies
62	5310 MHz	13.41	14.07	14.58	18.82	24.00	Complies
102	5510MHz	11.14	12.81	14.32	17.72	24.00	Complies
110	5550 MHz	17.62	19.49	20.16	23.99	24.00	Complies
134	5670 MHz	15.34	16.20	16.52	20.82	24.00	Complies

Temperature	25°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	IEEE 802.11a
Test Date	May 23, 2012	Test Mode	Mode 5 (Ant. 5 Facade antenna / 2.5dBi)

1TX

Configuration IEEE 802.11a / Chain 1

Channel	Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	21.92	24.00	Complies
60	5300 MHz	22.17	24.00	Complies
64	5320 MHz	18.24	24.00	Complies
100	5500 MHz	16.91	24.00	Complies
116	5580 MHz	22.20	24.00	Complies
140	5700 MHz	14.58	24.00	Complies

2TX

Configuration IEEE 802.11a / Chain 1 + Chain 2

Channel	Frequency	Conducted Power (dBm)		Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2			
52	5260 MHz	19.78	21.64	23.82	24.00	Complies
60	5300 MHz	19.97	21.15	23.61	24.00	Complies
64	5320 MHz	18.75	20.26	22.58	24.00	Complies
100	5500 MHz	15.40	15.80	18.61	24.00	Complies
116	5580 MHz	19.86	21.07	23.52	24.00	Complies
140	5700 MHz	13.54	14.18	16.88	24.00	Complies

3TX

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

Channel	Frequency	Conducted Power (dBm)			Total Conducted Power (dBm)	Max. Limit (dBm)	Result
		Chain 1	Chain 2	Chain 3			
52	5260 MHz	16.09	18.54	18.38	22.58	22.73	Complies
60	5300 MHz	16.64	18.16	17.64	22.30	22.73	Complies
64	5320 MHz	16.27	18.42	18.66	22.68	22.73	Complies
100	5500 MHz	13.47	14.24	15.91	19.43	22.73	Complies
116	5580 MHz	16.48	17.12	18.55	22.24	22.73	Complies
140	5700 MHz	14.85	16.11	16.42	20.62	22.73	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =7.27dBi > 6dBi, so the conducted power limit = (24 or 11 + 10log B) - (7.27dBi -6)=22.73dBm.

4.4. Power Spectral Density Measurement

4.4.1. Limit

The power spectral density is defined as the highest level of power in dBm per MHz generated by the transmitter within the power envelope. The following table is power spectral density limits and decrease power density limit rule refer to section 4.3.1.

Frequency Range	Power Spectral Density limit (dBm/MHz)
5.25-5.35 GHz	11
5470-5725	11

4.4.2. Measuring Instruments and Setting

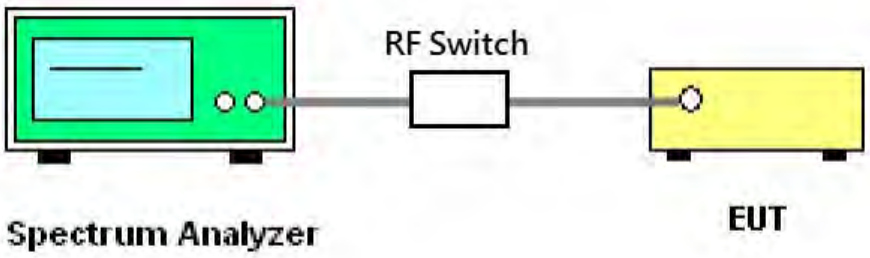
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RB	1000 kHz
VB	3000 kHz
Detector	RMS
Trace	AVERAGE
Sweep Time	Auto
Trace Average	100 times

4.4.3. Test Procedures

1. The transmitter output (antenna port) was connected RF switch to the spectrum analyzer.
2. Test was performed in accordance with KDB 789033 Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E,section (C) Maximum conducted output power => (d) Method SA-2 (trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).
3. Multiple antenna systems was performed in accordance with KDB 662911 in-Band Power Spectral Density (PSD) Measurements (1) Measure and sum the spectra across the outputs.
4. When measuring first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3 and so on up to the Nth output to obtain the value for the first frequency bin of the summed spectrum. the summed spectrum value for each of the other frequency bins is computed in the same way.

4.4.4. Test Setup Layout



4.4.5. Test Deviation

There is no deviation with the original standard.

4.4.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.4.7. Test Result of Power Spectral Density

Temperature	25°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	IEEE 802.11n
Test Date	May 23, 2012	Test Mode	Mode 1 (Ant. 6 Dipole antenna / 8dBi)

1TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	8.53	9.00	Complies
60	5300 MHz	8.56	9.00	Complies
64	5320 MHz	5.06	9.00	Complies
100	5500 MHz	1.95	9.00	Complies
116	5580 MHz	8.73	9.00	Complies
140	5700 MHz	-1.68	9.00	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	6.54	9.00	Complies
62	5310 MHz	-1.05	9.00	Complies
102	5510MHz	-5.07	9.00	Complies
110	5550 MHz	3.13	9.00	Complies
134	5670 MHz	-0.74	9.00	Complies

2TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	5.33	5.99	Complies
60	5300 MHz	5.82	5.99	Complies
64	5320 MHz	5.94	5.99	Complies
100	5500 MHz	2.86	5.99	Complies
116	5580 MHz	5.70	5.99	Complies
140	5700 MHz	0.91	5.99	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.01dBi > 6dBi, so the Band 2-3 power density limit =11 - (11.01dBi -6)=5.99dBm.

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	4.43	5.99	Complies
62	5310 MHz	1.72	5.99	Complies
102	5510MHz	-3.57	5.99	Complies
110	5550 MHz	3.13	5.99	Complies
134	5670 MHz	1.74	5.99	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.01dBi > 6dBi, so the Band 2-3 power density limit =11 - (11.01dBi -6)=5.99dBm.

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	8.86	9.00	Complies
60	5300 MHz	8.71	9.00	Complies
64	5320 MHz	7.82	9.00	Complies
100	5500 MHz	4.83	9.00	Complies
116	5580 MHz	8.85	9.00	Complies
140	5700 MHz	2.16	9.00	Complies

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	6.27	9.00	Complies
62	5310 MHz	2.15	9.00	Complies
102	5510MHz	-2.10	9.00	Complies
110	5550 MHz	2.80	9.00	Complies
134	5670 MHz	3.39	9.00	Complies

3TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	3.99	4.23	Complies
60	5300 MHz	3.66	4.23	Complies
64	5320 MHz	3.99	4.23	Complies
100	5500 MHz	3.92	4.23	Complies
116	5580 MHz	3.70	4.23	Complies
140	5700 MHz	1.92	4.23	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =12.77dBi > 6dBi, so the Band 2-3 power density limit =11 - (12.77dBi -6)=4.23dBm.

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	1.17	4.23	Complies
62	5310 MHz	0.13	4.23	Complies
102	5510MHz	-2.48	4.23	Complies
110	5550 MHz	1.32	4.23	Complies
134	5670 MHz	1.74	4.23	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =12.77dBi > 6dBi, so the Band 2-3 power density limit =11 - (12.77dBi -6)=4.23dBm.

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	5.58	6.00	Complies
60	5300 MHz	5.66	6.00	Complies
64	5320 MHz	5.89	6.00	Complies
100	5500 MHz	5.14	6.00	Complies
116	5580 MHz	5.92	6.00	Complies
140	5700 MHz	3.75	6.00	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11dBi > 6dBi, so the Band 2-3 power density limit =11 - (11dBi -6)=6.00dBm.

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	2.98	6.00	Complies
62	5310 MHz	-0.42	6.00	Complies
102	5510MHz	-1.98	6.00	Complies
110	5550 MHz	2.74	6.00	Complies
134	5670 MHz	3.21	6.00	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11dBi > 6dBi, so the Band 2-3 power density limit =11 - (11dBi -6)=6.00dBm.

Configuration IEEE 802.11n MCS16 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	8.76	9.00	Complies
60	5300 MHz	8.88	9.00	Complies
64	5320 MHz	5.42	9.00	Complies
100	5500 MHz	6.21	9.00	Complies
116	5580 MHz	8.89	9.00	Complies
140	5700 MHz	4.26	9.00	Complies

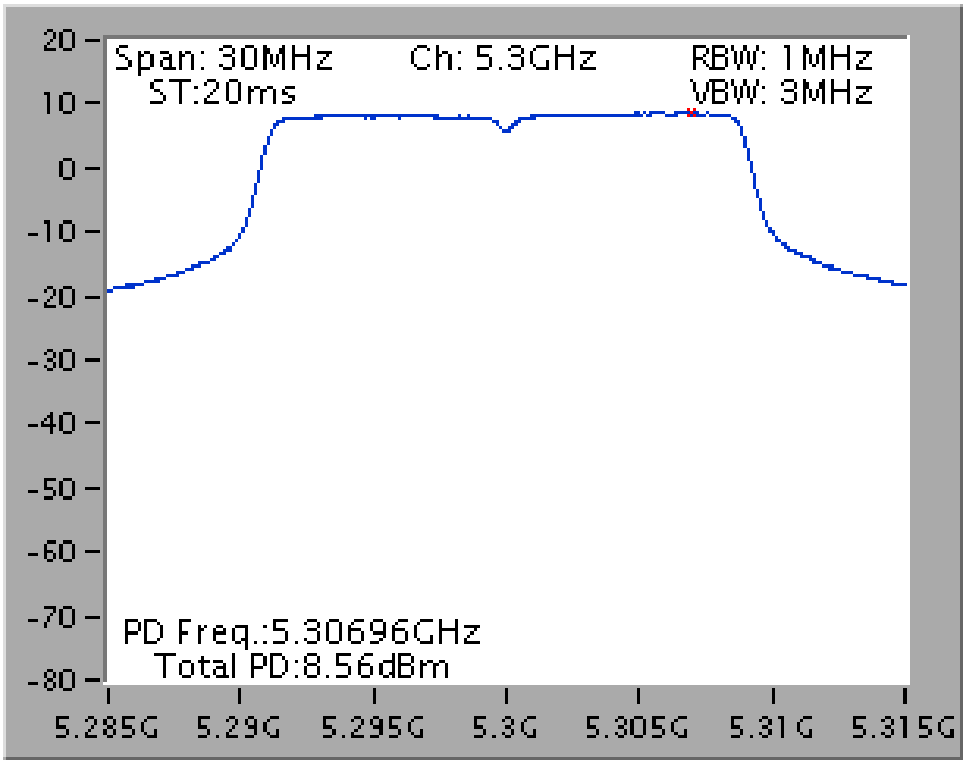
Configuration IEEE 802.11n MCS16 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	5.84	9.00	Complies
62	5310 MHz	-0.28	9.00	Complies
102	5510MHz	-2.58	9.00	Complies
110	5550 MHz	6.05	9.00	Complies
134	5670 MHz	5.55	9.00	Complies

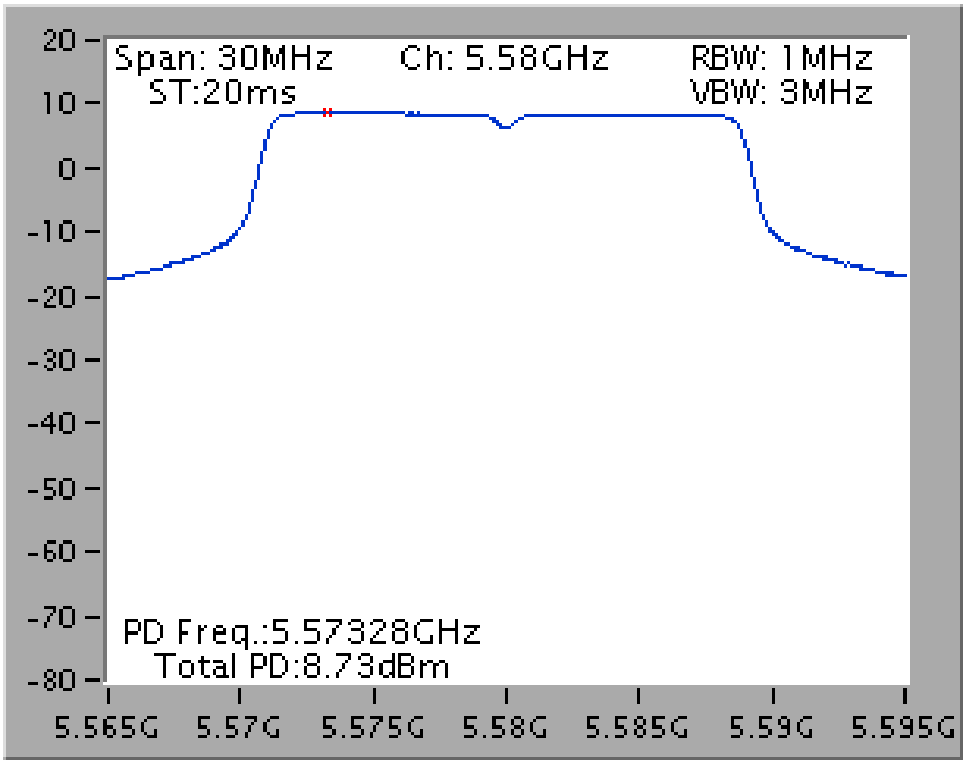
Note: All the test values were listed in the report.

For plots, only the channel with maximum results was shown.

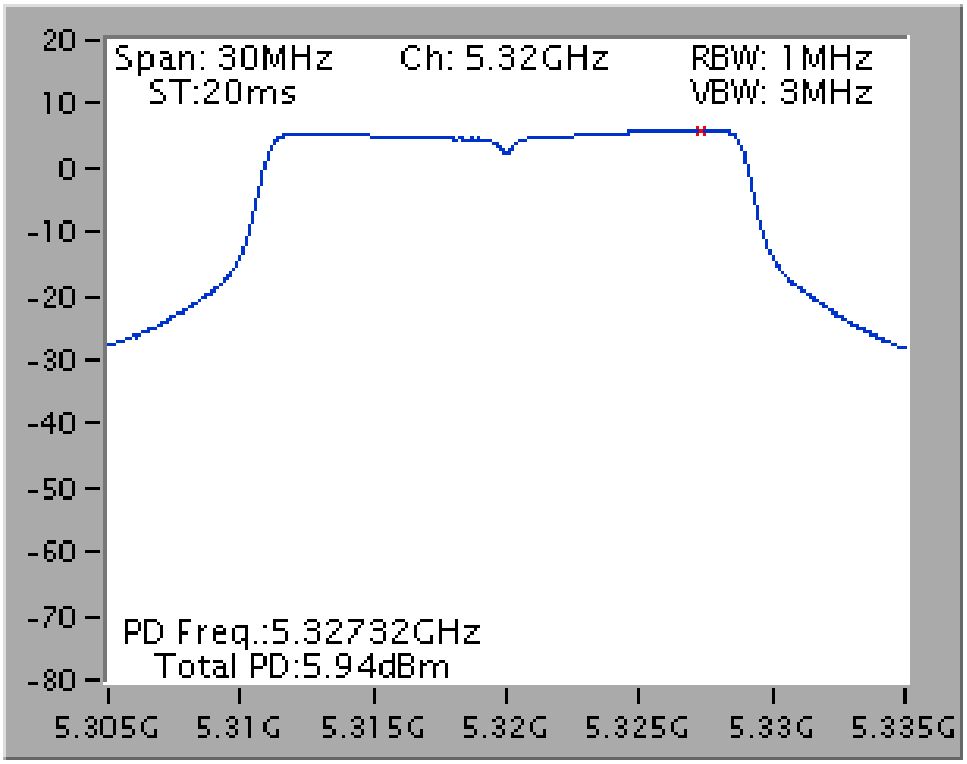
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 / 5300 MHz (1TX)



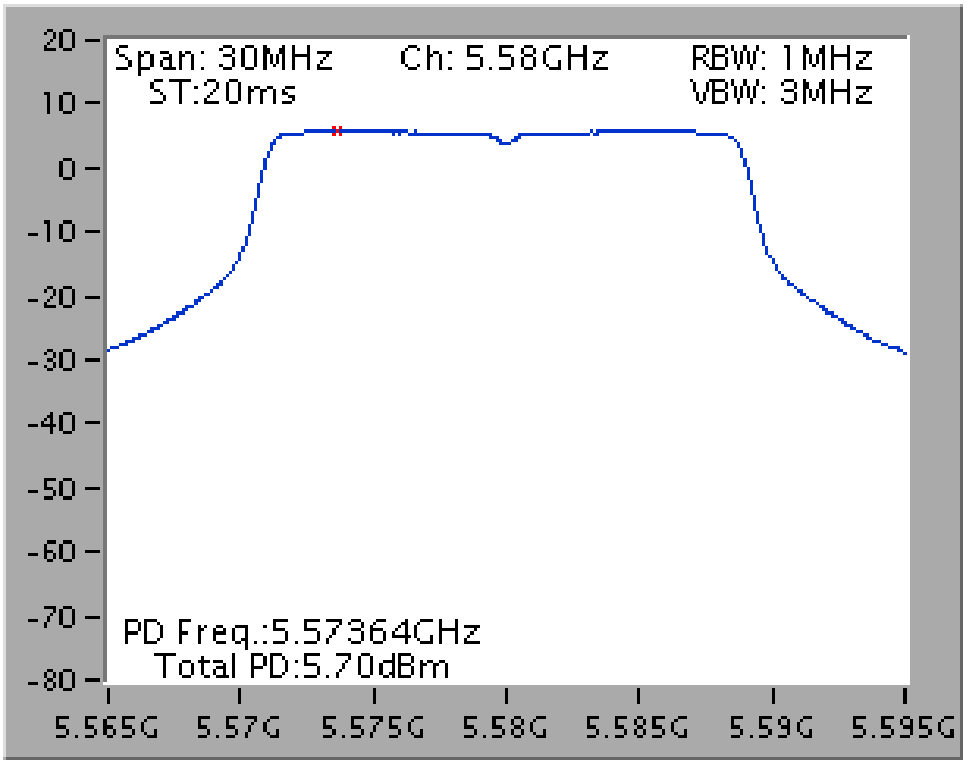
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 / 5580 MHz (1TX)



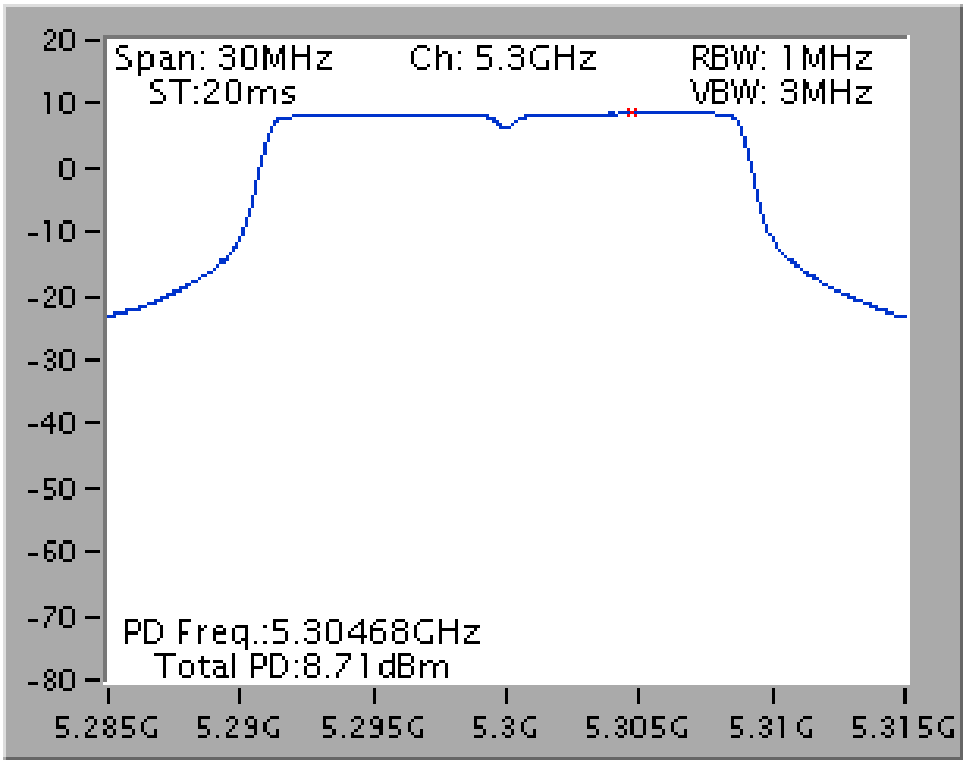
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1+ Chain 2 / 5320 MHz (2TX)



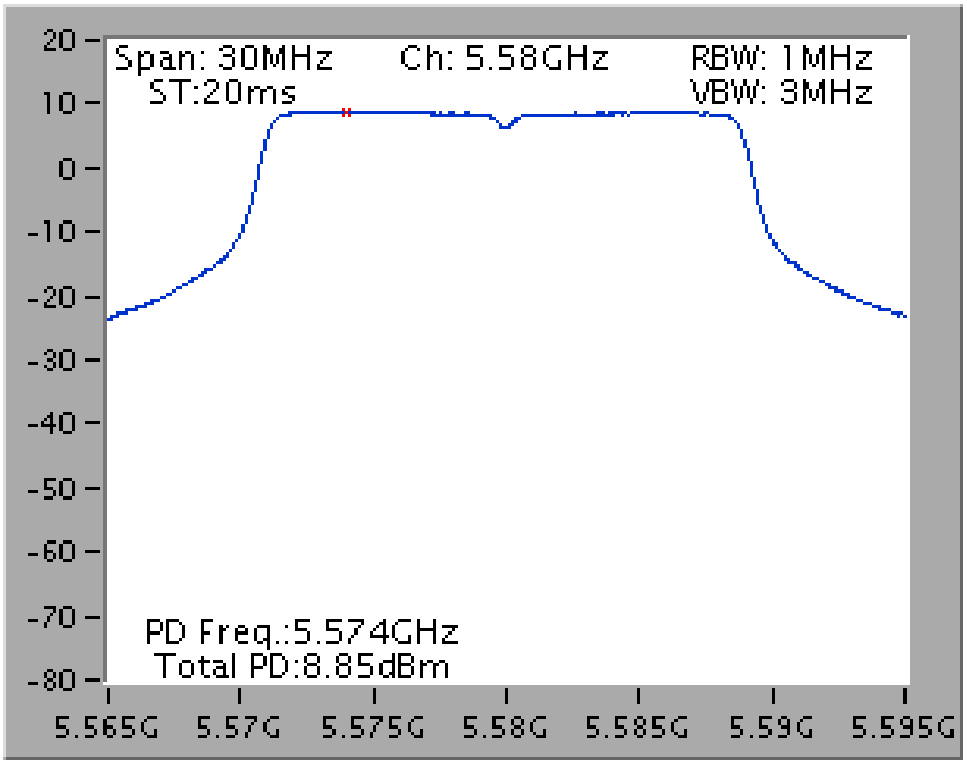
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1+ Chain 2 / 5580 MHz (2TX)



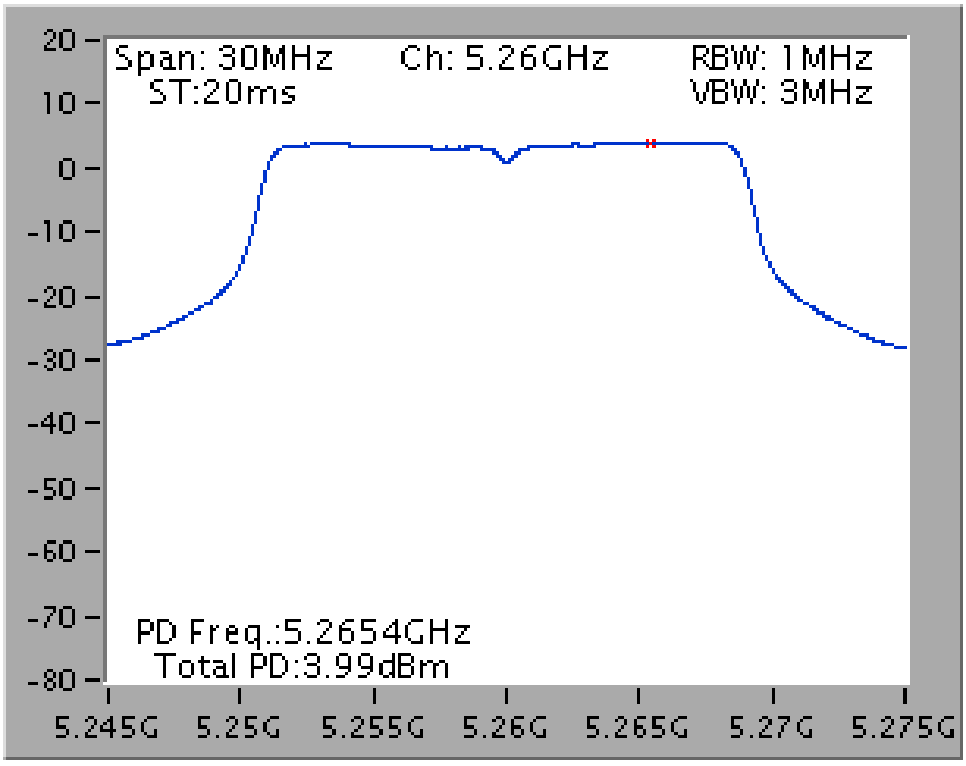
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1+ Chain 2 / 5300 MHz (2TX)



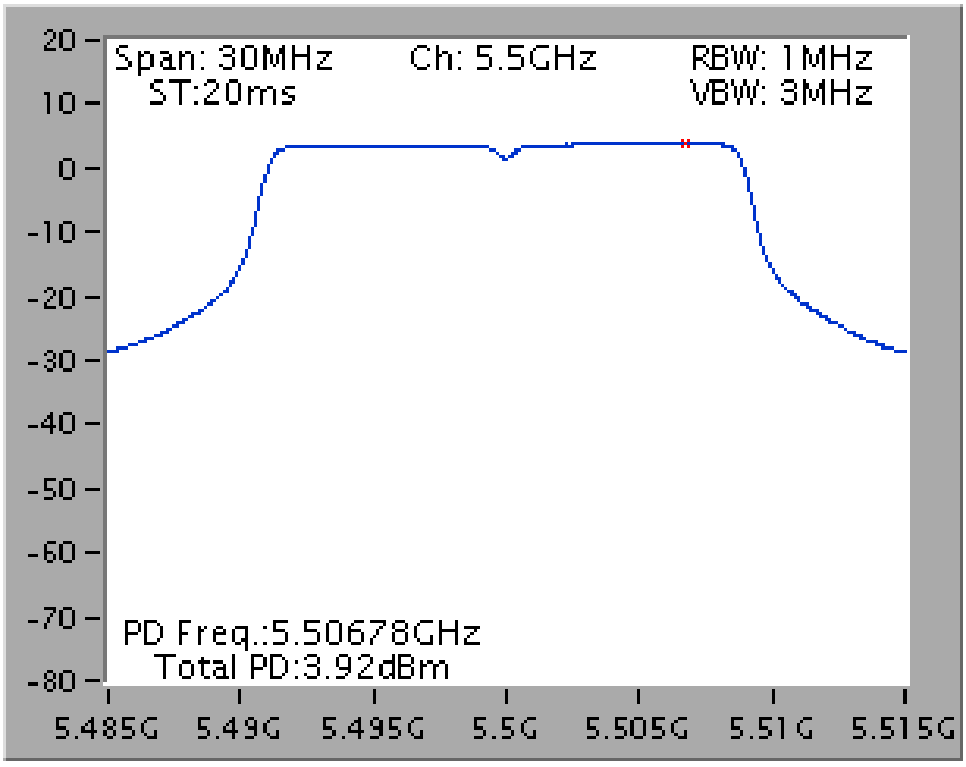
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1+ Chain 2 / 5580 MHz (2TX)



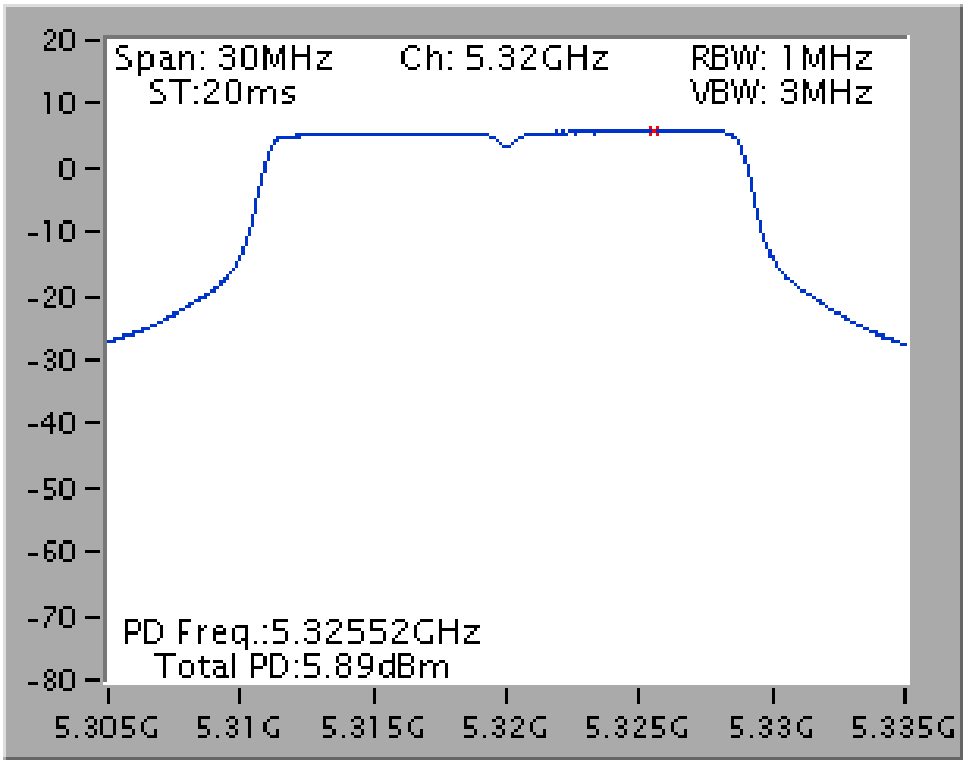
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1+ Chain 2 + Chain 3 / 5260 MHz (3TX)



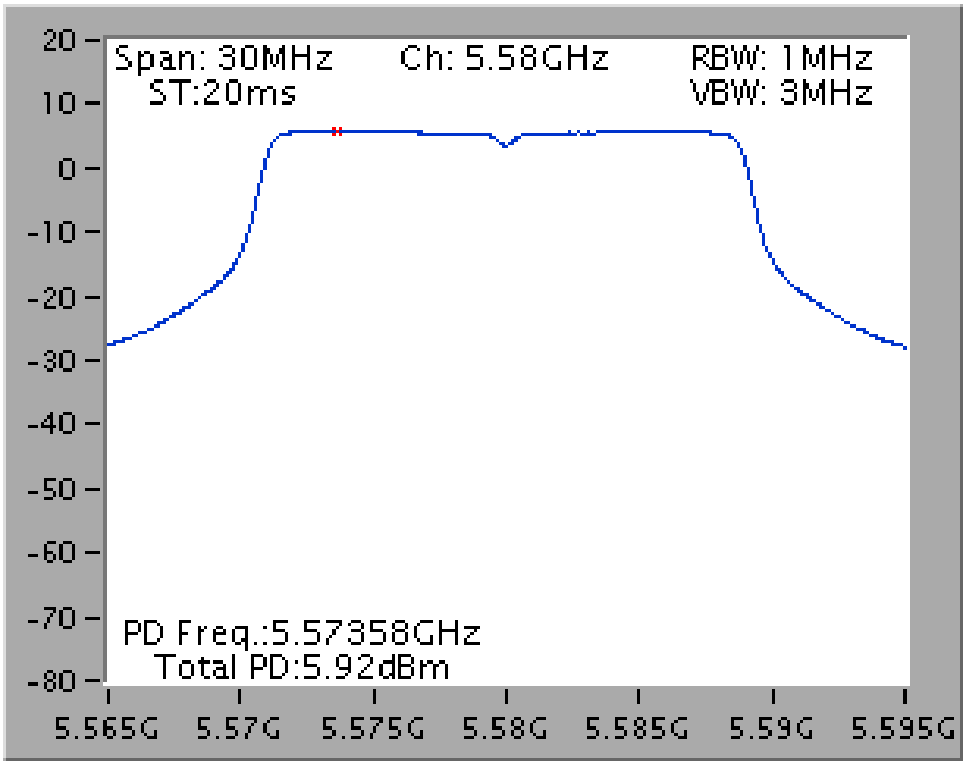
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1+ Chain 2 + Chain 3 / 5500 MHz (3TX)



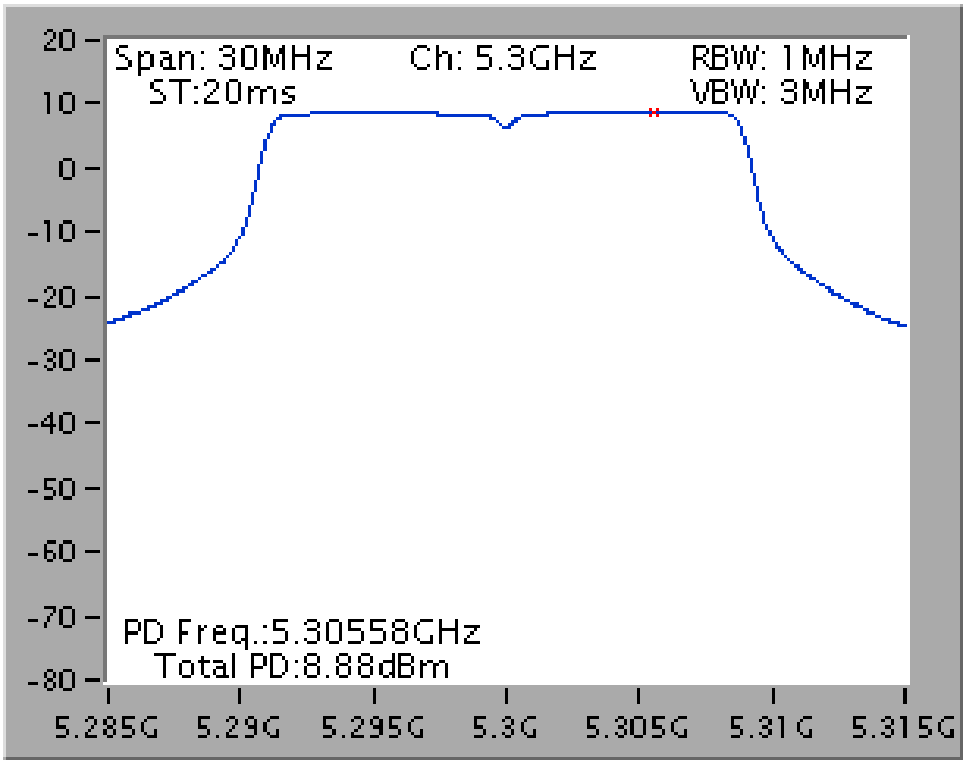
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1+ Chain 2 + Chain 3 / 5320 MHz (3TX)



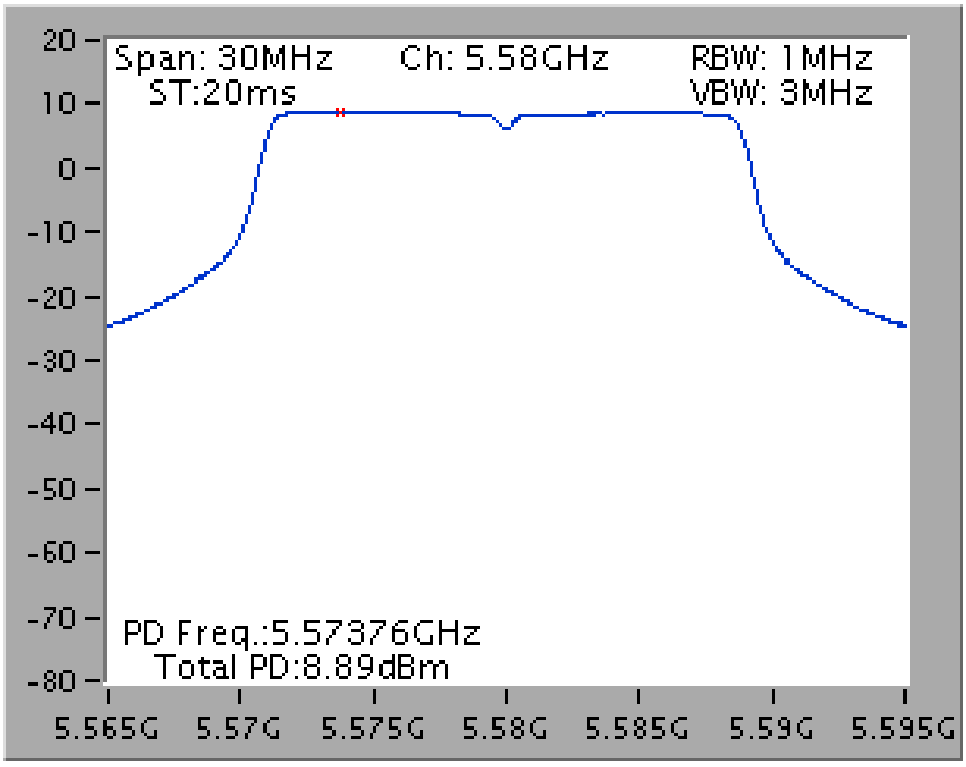
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1+ Chain 2 + Chain 3 / 5580 MHz (3TX)



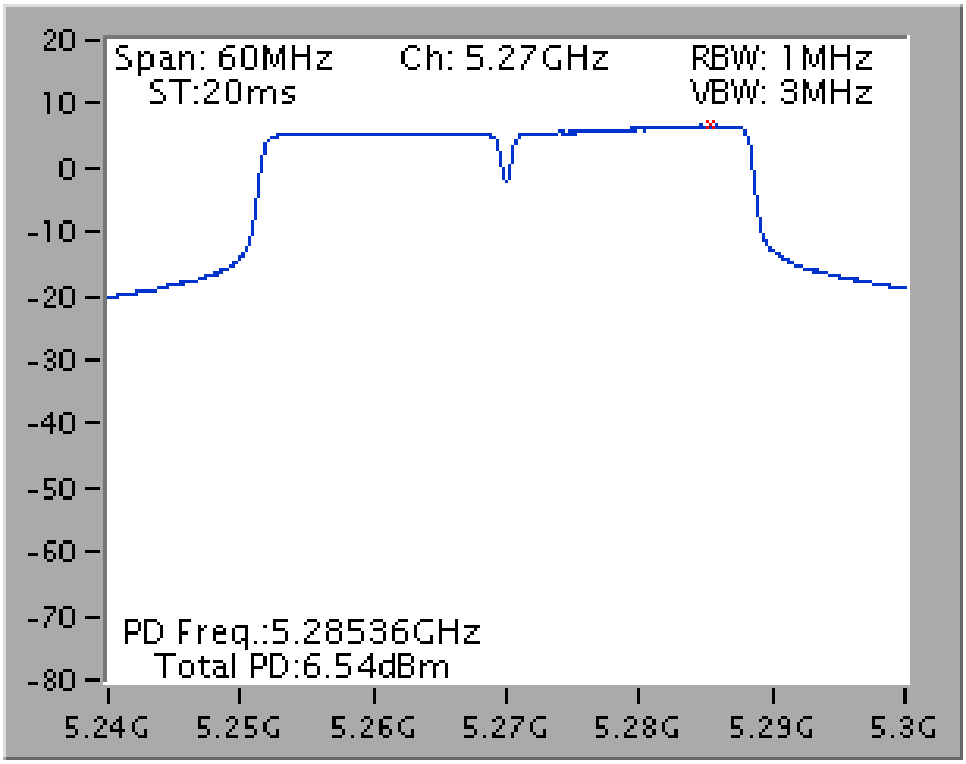
Power Density Plot on Configuration IEEE 802.11n MCS16 20MHz / Chain 1+ Chain 2 + Chain 3 / 5300 MHz (3TX)



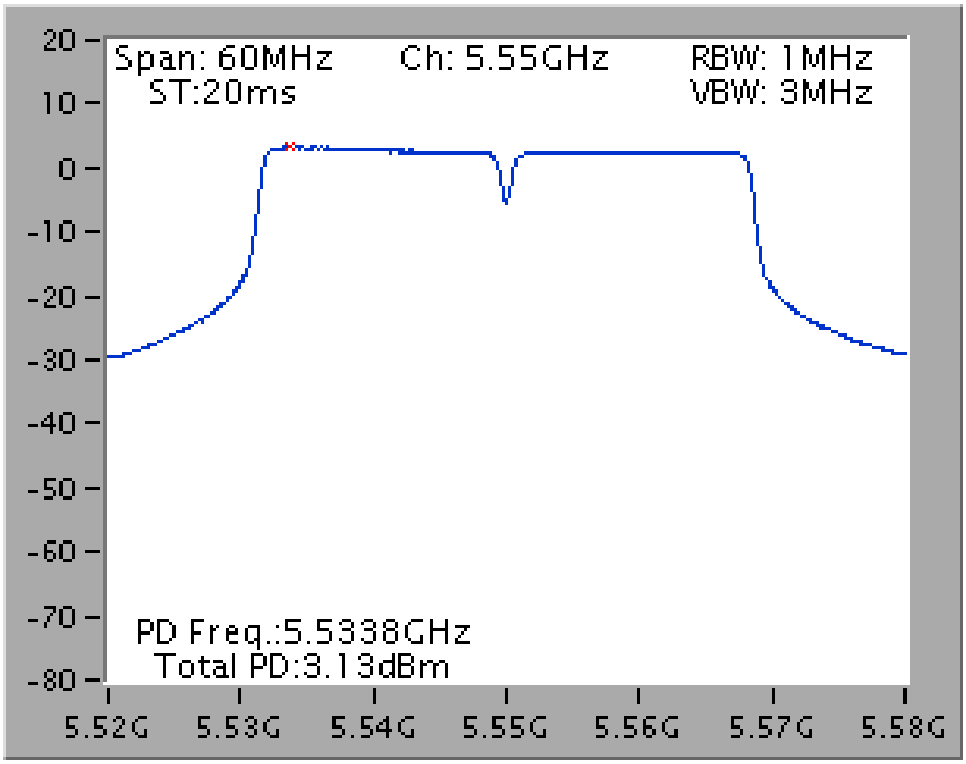
Power Density Plot on Configuration IEEE 802.11n MCS16 20MHz / Chain 1+ Chain 2 + Chain 3 / 5580 MHz (3TX)



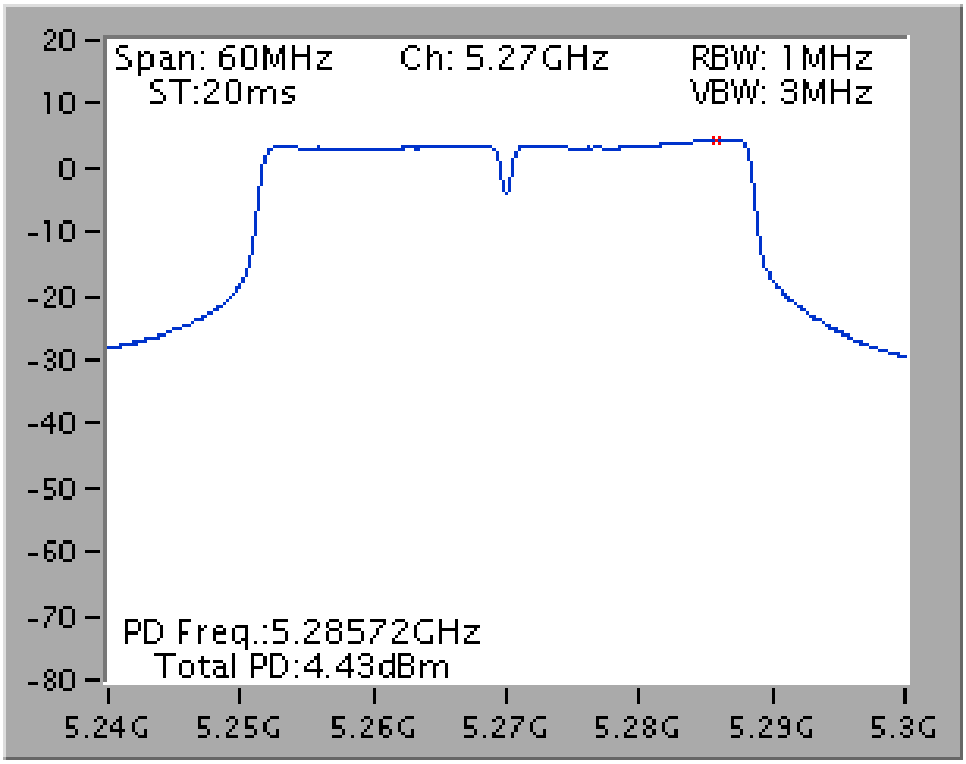
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 / 5270 MHz (1TX)



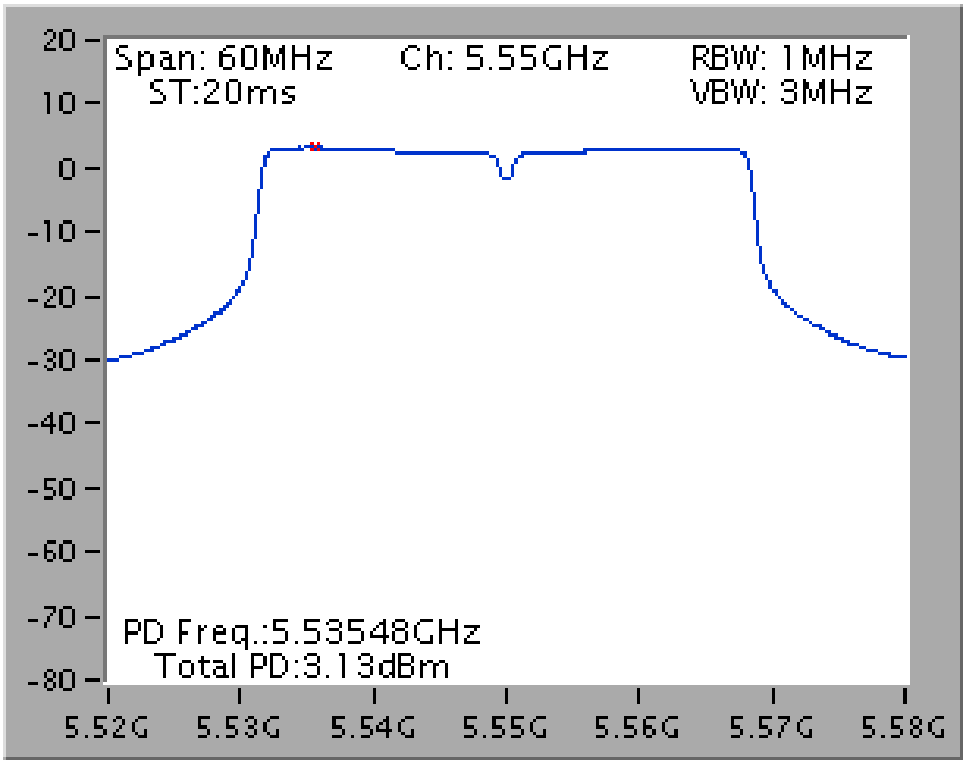
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 / 5550 MHz (1TX)



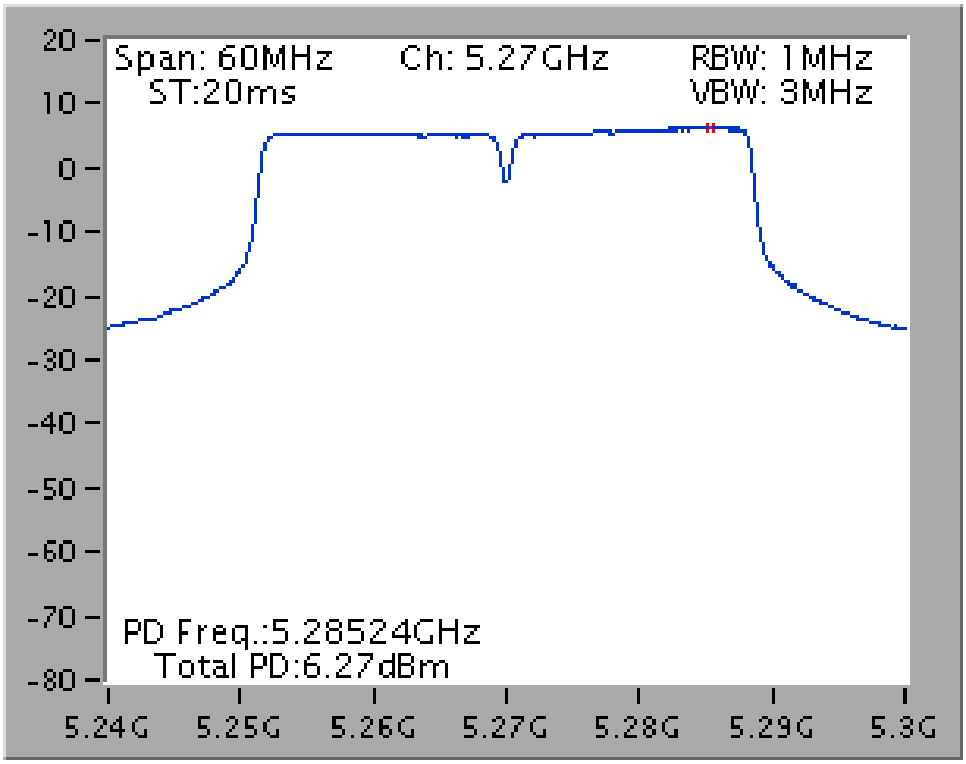
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1+ Chain 2 / 5270 MHz (2TX)



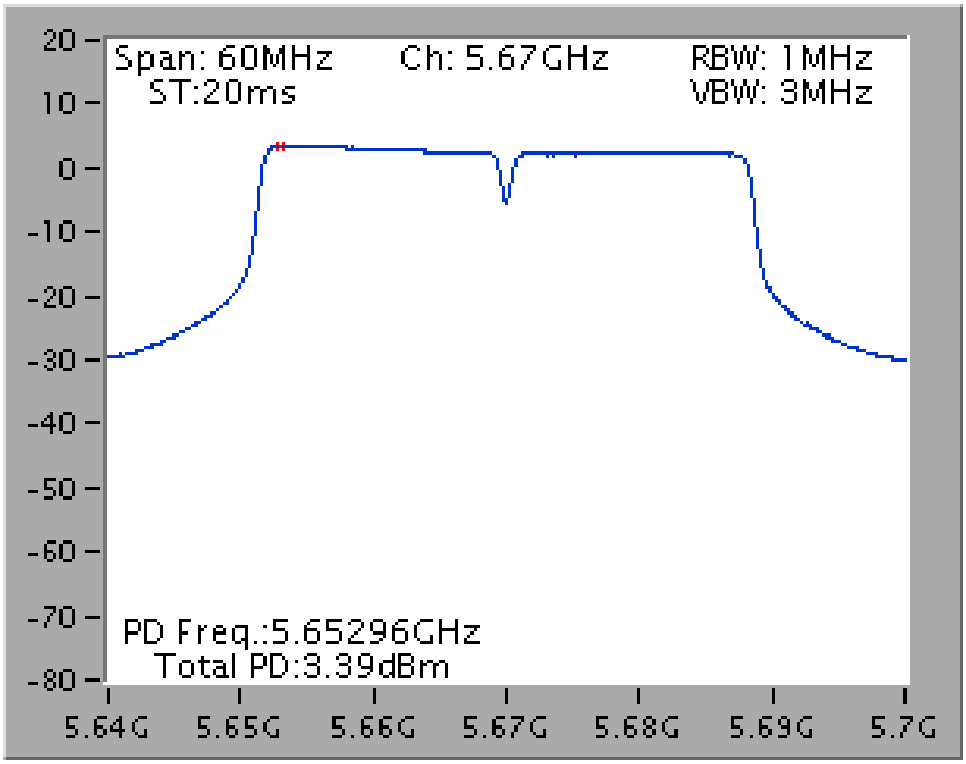
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1+ Chain 2 / 5550 MHz (2TX)



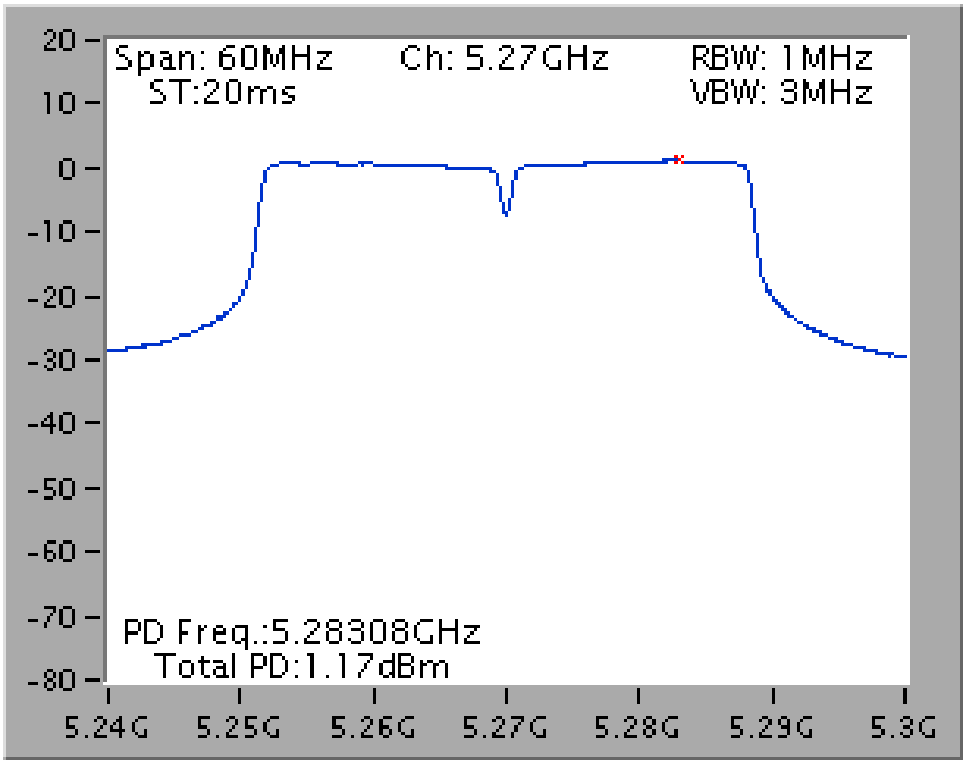
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1+ Chain 2 / 5270 MHz (2TX)



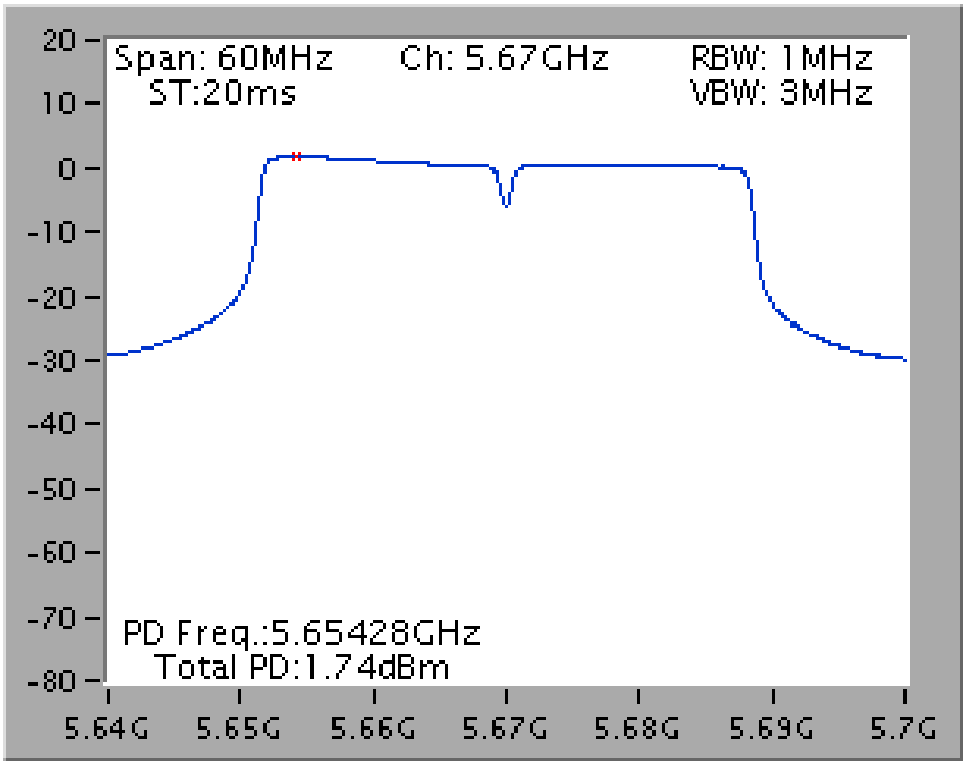
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1+ Chain 2 / 5670 MHz (2TX)



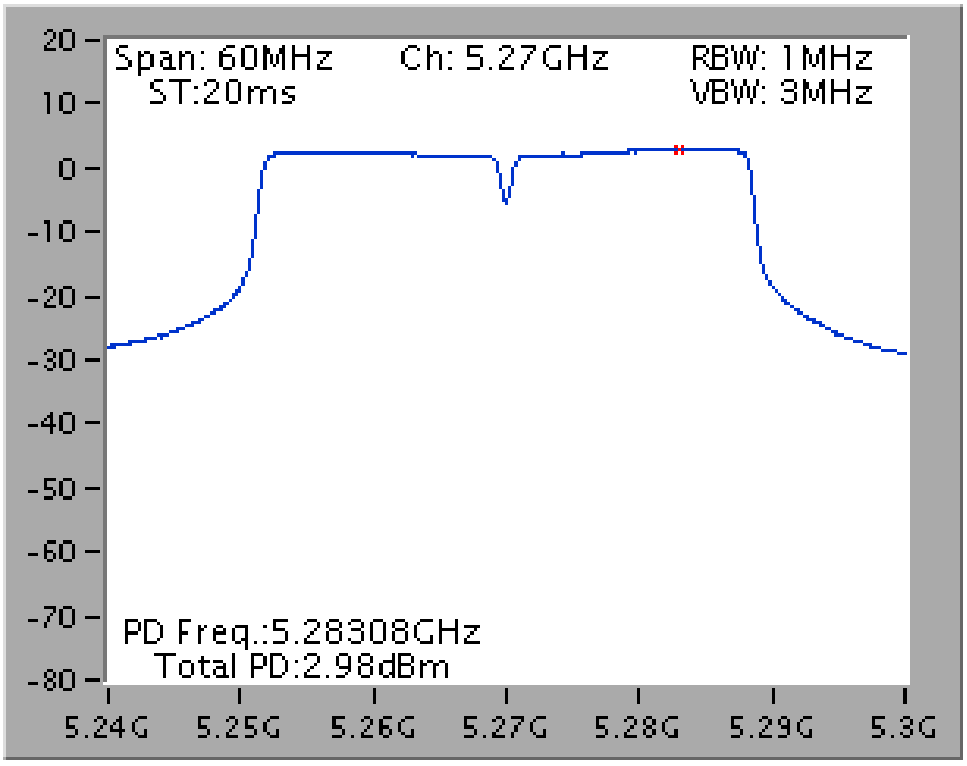
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1+ Chain 2 + Chain 3 / 5270 MHz (3TX)



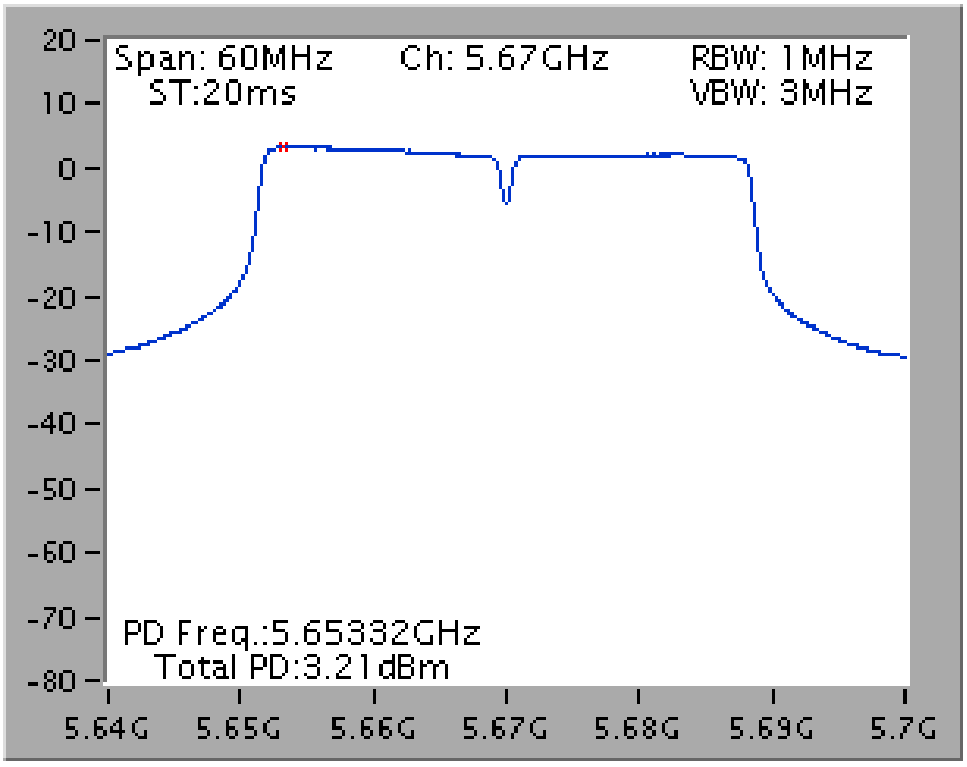
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1+ Chain 2 + Chain 3 / 5670 MHz (3TX)



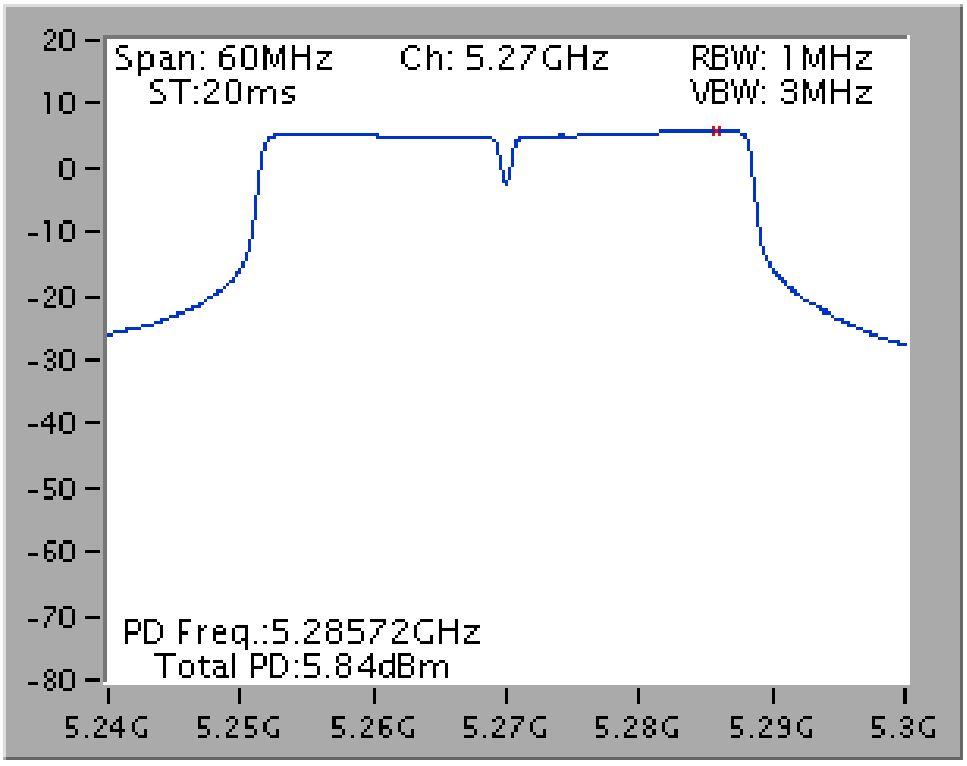
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1+ Chain 2 + Chain 3 / 5270 MHz (3TX)



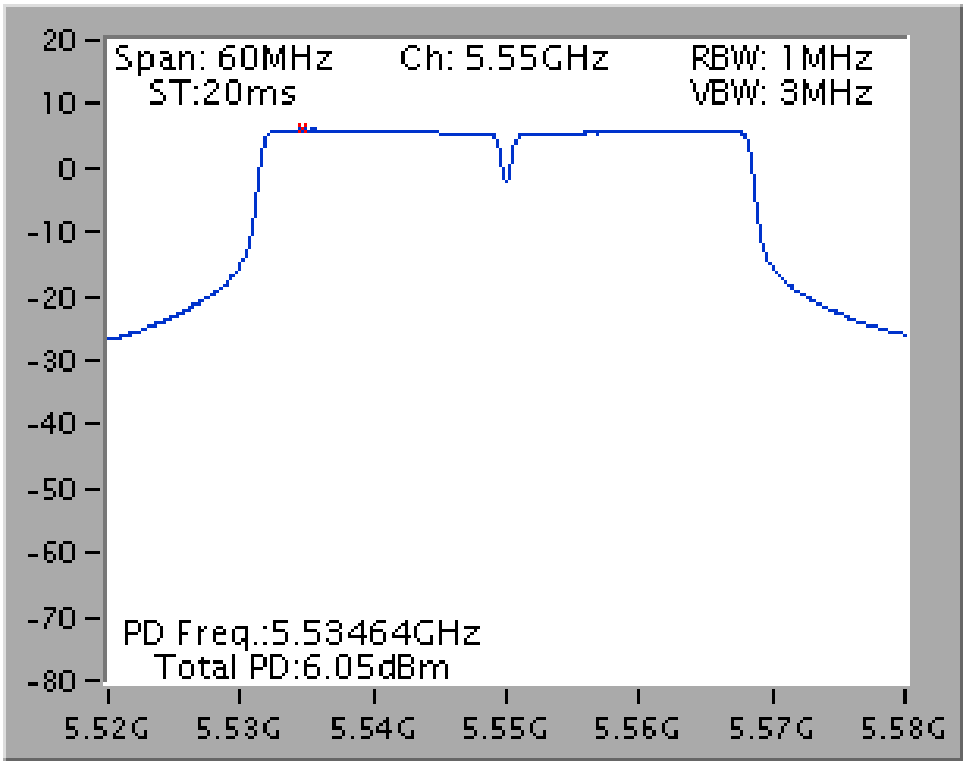
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1+ Chain 2 + Chain 3 / 5670 MHz (3TX)



Power Density Plot on Configuration IEEE 802.11n MCS16 40MHz / Chain 1+ Chain 2 + Chain 3 / 5270 MHz (3TX)



Power Density Plot on Configuration IEEE 802.11n MCS16 40MHz / Chain 1+ Chain 2 + Chain 3 / 5550 MHz (3TX)



Temperature	25°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	IEEE 802.11n
Test Date	May 23, 2012	Test Mode	Mode 2 (Ant. 7 Patch antenna / 2.3dBi)

1TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	9.92	11.00	Complies
60	5300 MHz	9.38	11.00	Complies
64	5320 MHz	6.89	11.00	Complies
100	5500 MHz	4.00	11.00	Complies
116	5580 MHz	9.84	11.00	Complies
140	5700 MHz	2.61	11.00	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	7.45	11.00	Complies
62	5310 MHz	0.02	11.00	Complies
102	5510MHz	-0.91	11.00	Complies
110	5550 MHz	5.43	11.00	Complies
134	5670 MHz	2.34	11.00	Complies

2TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	10.79	11.00	Complies
60	5300 MHz	10.43	11.00	Complies
64	5320 MHz	8.41	11.00	Complies
100	5500 MHz	4.09	11.00	Complies
116	5580 MHz	10.81	11.00	Complies
140	5700 MHz	3.60	11.00	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	8.47	11.00	Complies
62	5310 MHz	2.09	11.00	Complies
102	5510MHz	0.01	11.00	Complies
110	5550 MHz	6.46	11.00	Complies
134	5670 MHz	3.53	11.00	Complies

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	10.84	11.00	Complies
60	5300 MHz	10.45	11.00	Complies
64	5320 MHz	7.73	11.00	Complies
100	5500 MHz	7.04	11.00	Complies
116	5580 MHz	10.94	11.00	Complies
140	5700 MHz	4.85	11.00	Complies

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	8.10	11.00	Complies
62	5310 MHz	1.69	11.00	Complies
102	5510MHz	1.81	11.00	Complies
110	5550 MHz	8.08	11.00	Complies
134	5670 MHz	5.69	11.00	Complies

3TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	9.43	9.93	Complies
60	5300 MHz	9.86	9.93	Complies
64	5320 MHz	8.13	9.93	Complies
100	5500 MHz	4.80	9.93	Complies
116	5580 MHz	9.91	9.93	Complies
140	5700 MHz	3.89	9.93	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =7.07dBi > 6dBi, so the Band 2-3 power density limit =11 - (7.07dBi -6)=9.93dBm.

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	7.30	9.93	Complies
62	5310 MHz	3.41	9.93	Complies
102	5510MHz	0.11	9.93	Complies
110	5550 MHz	7.65	9.93	Complies
134	5670 MHz	5.40	9.93	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =7.07dBi > 6dBi, so the Band 2-3 power density limit =11 - (7.07dBi -6)=9.93dBm.

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	10.47	11.00	Complies
60	5300 MHz	10.93	11.00	Complies
64	5320 MHz	7.42	11.00	Complies
100	5500 MHz	6.82	11.00	Complies
116	5580 MHz	10.61	11.00	Complies
140	5700 MHz	6.38	11.00	Complies

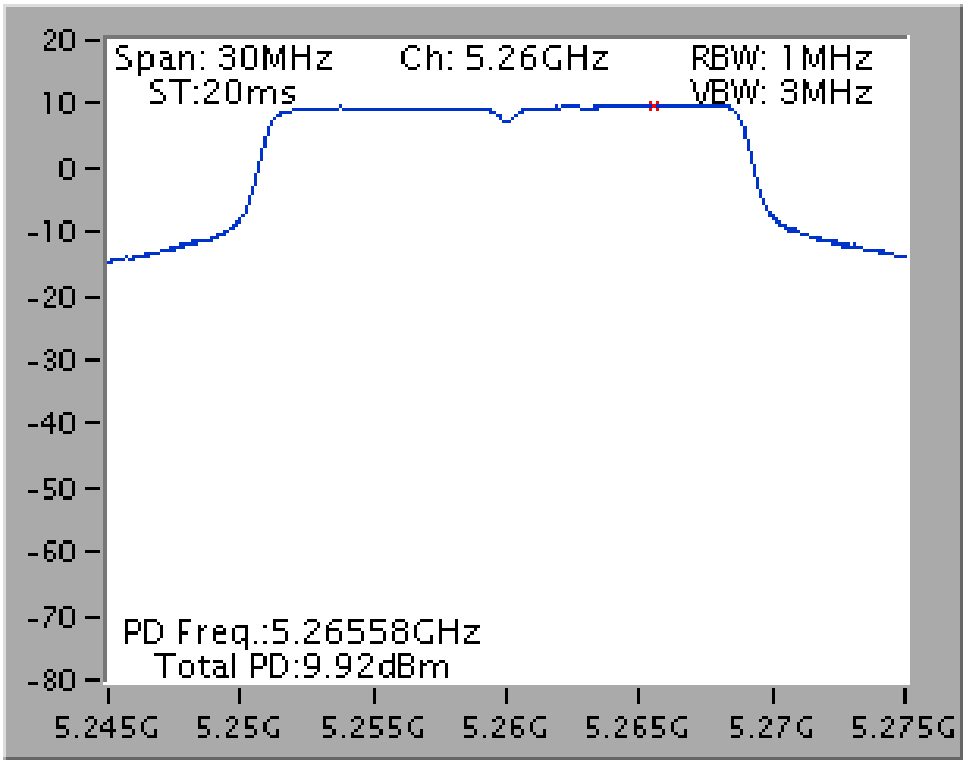
Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	8.78	11.00	Complies
62	5310 MHz	3.48	11.00	Complies
102	5510MHz	2.19	11.00	Complies
110	5550 MHz	8.62	11.00	Complies
134	5670 MHz	6.71	11.00	Complies

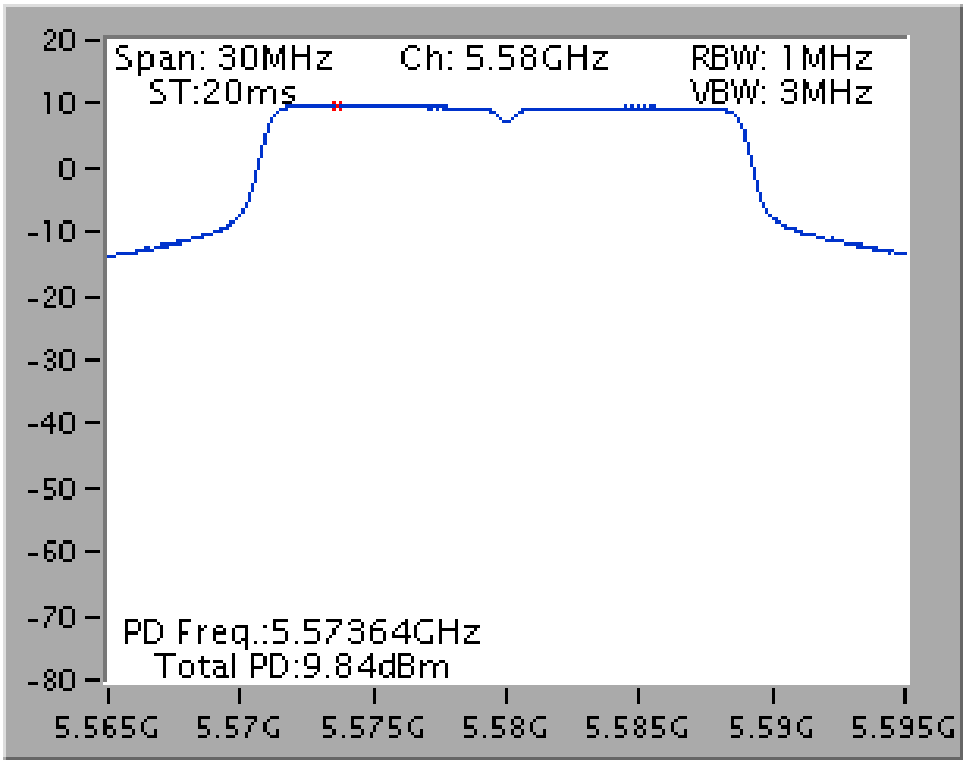
Note: All the test values were listed in the report.

For plots, only the channel with maximum results was shown.

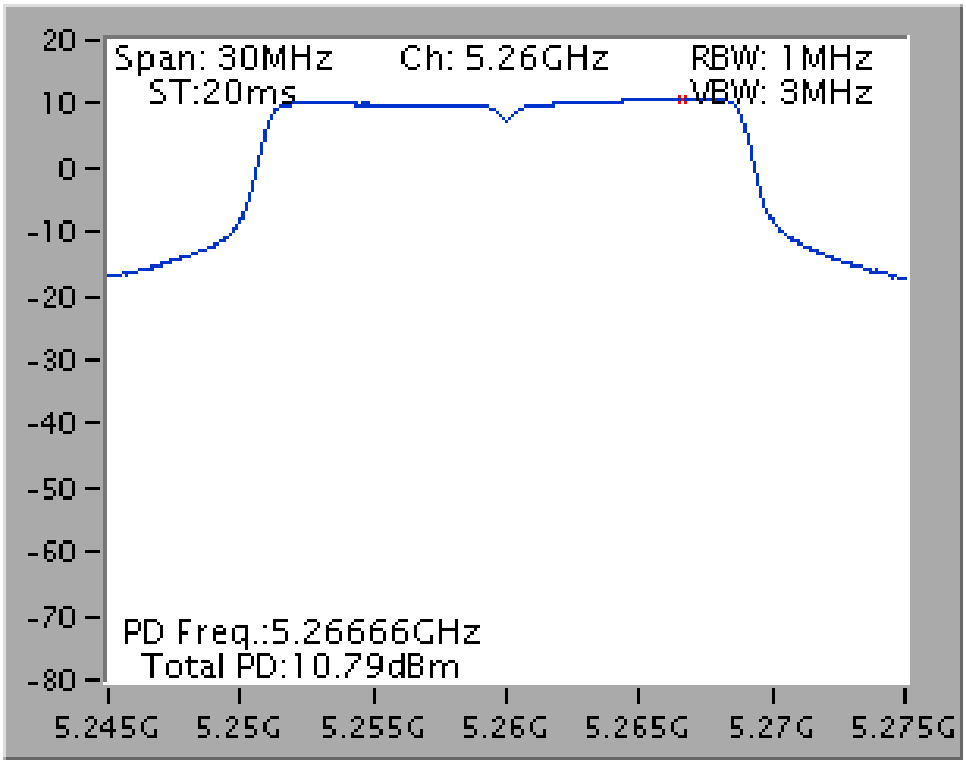
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 / 5260 MHz (1TX)



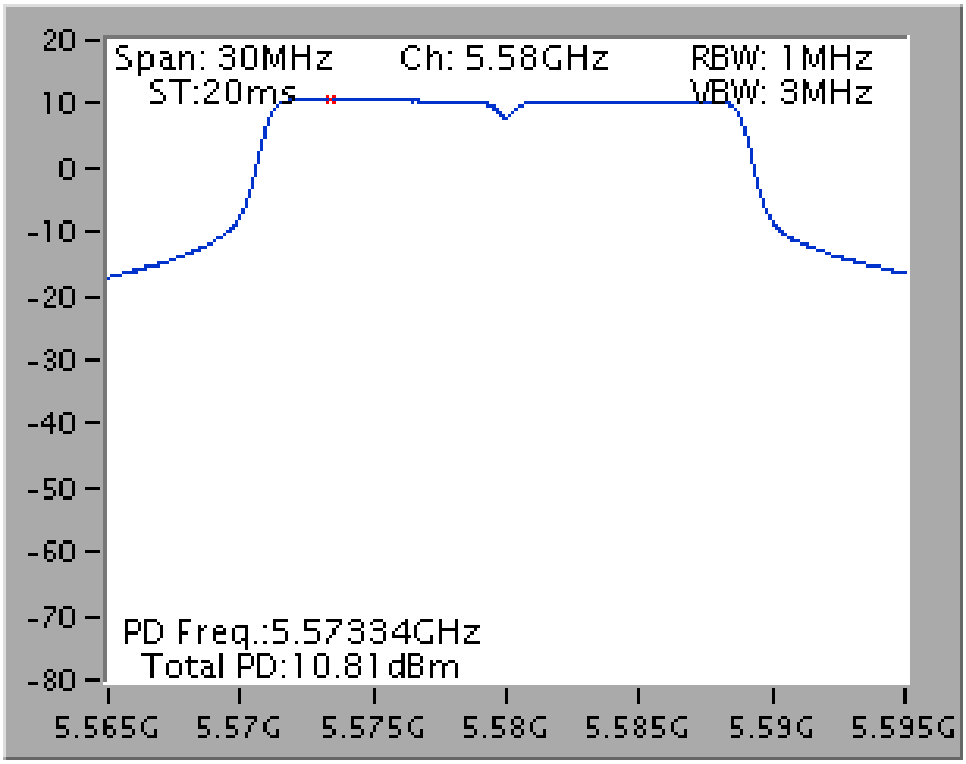
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 / 5580 MHz (1TX)



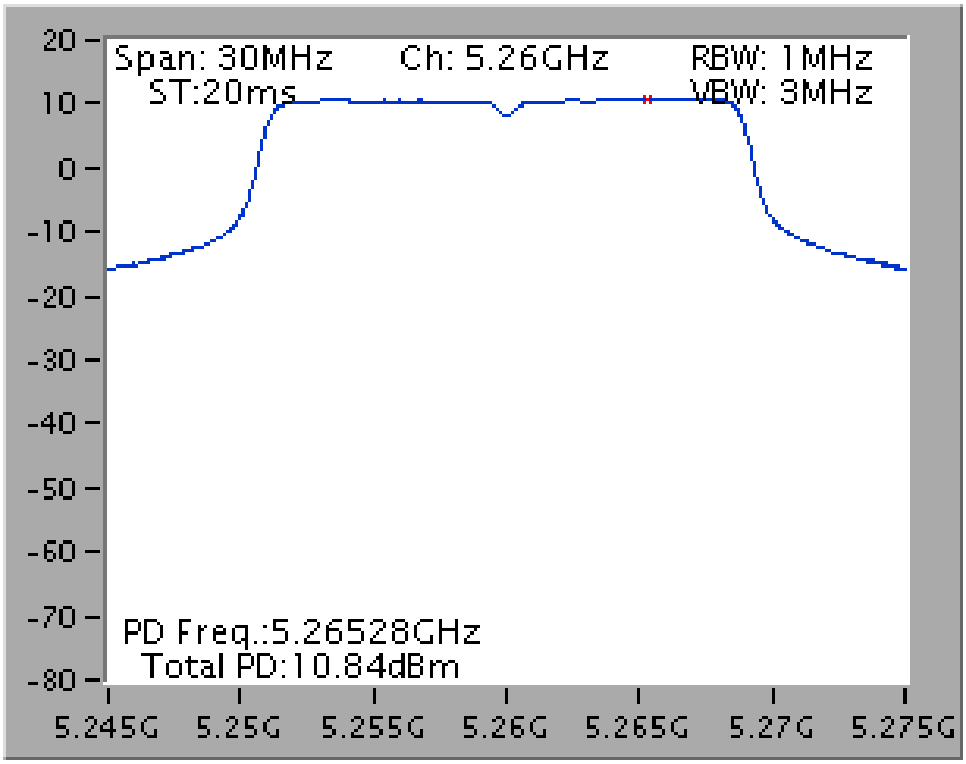
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1+ Chain 2 / 5260 MHz (2TX)



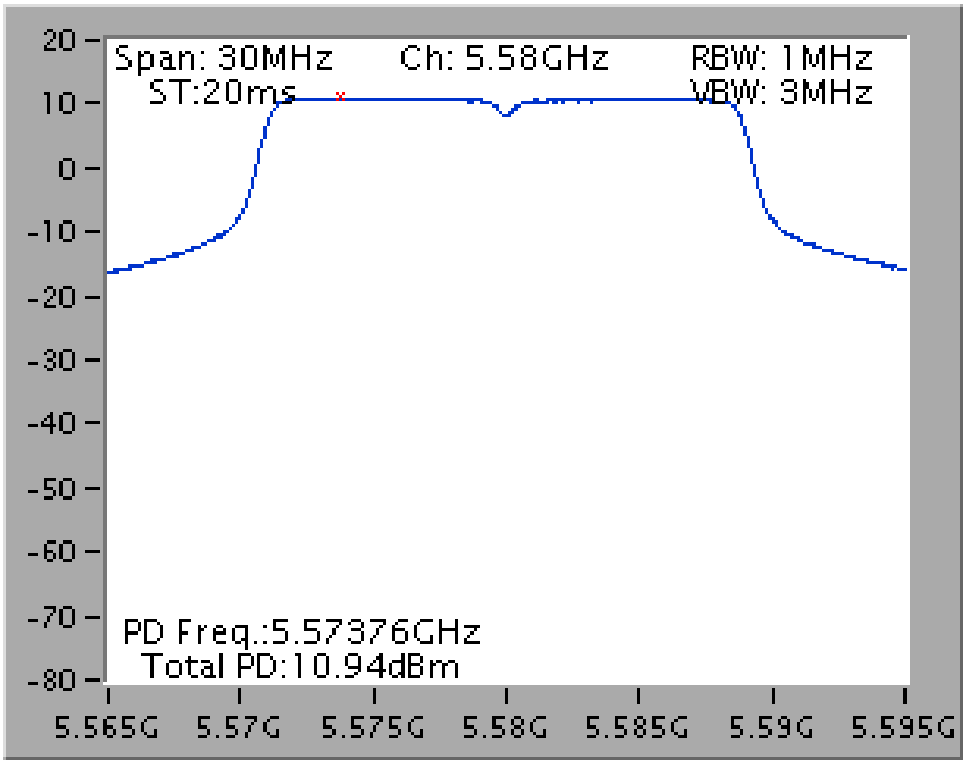
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1+ Chain 2 / 5580 MHz (2TX)



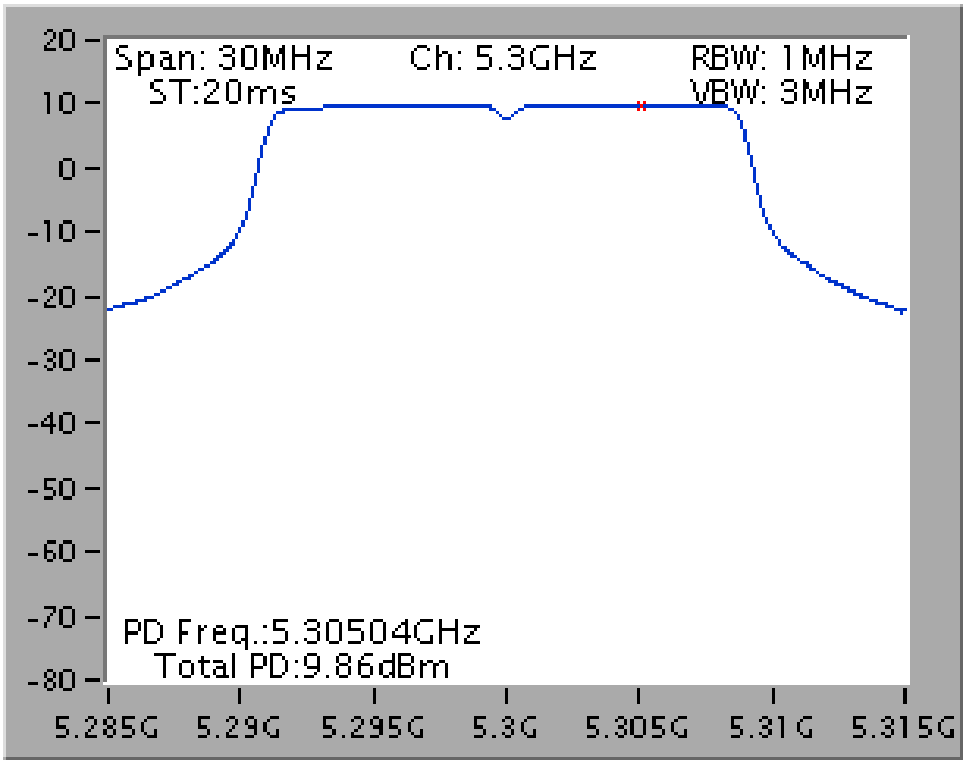
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1+ Chain 2 / 5260 MHz (2TX)



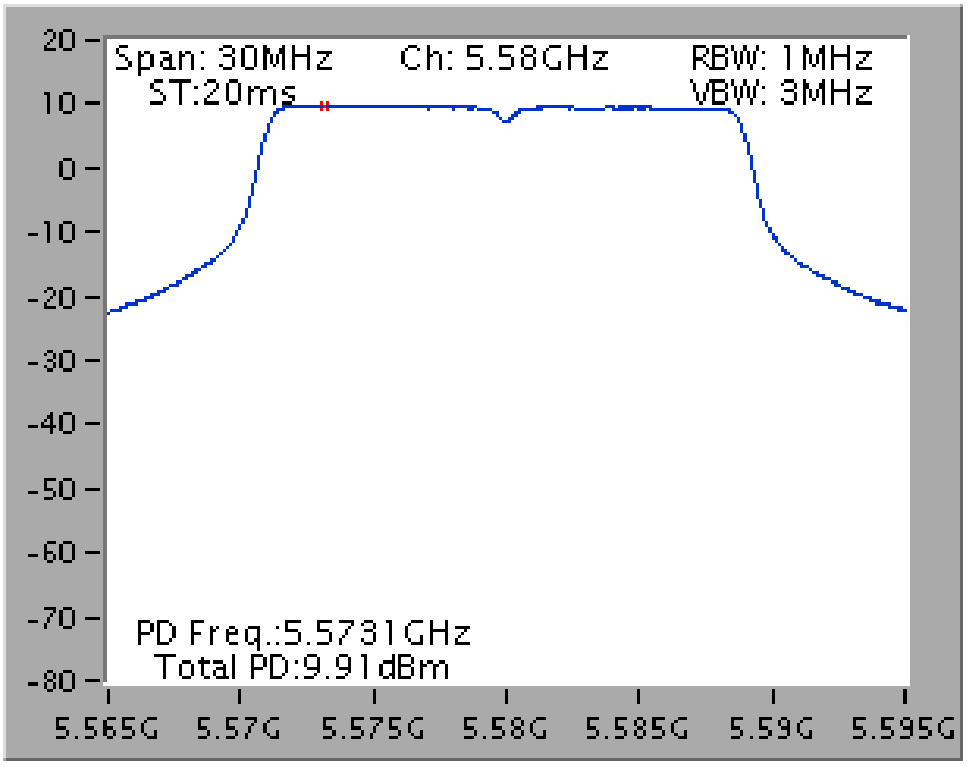
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1+ Chain 2 / 5580 MHz (2TX)



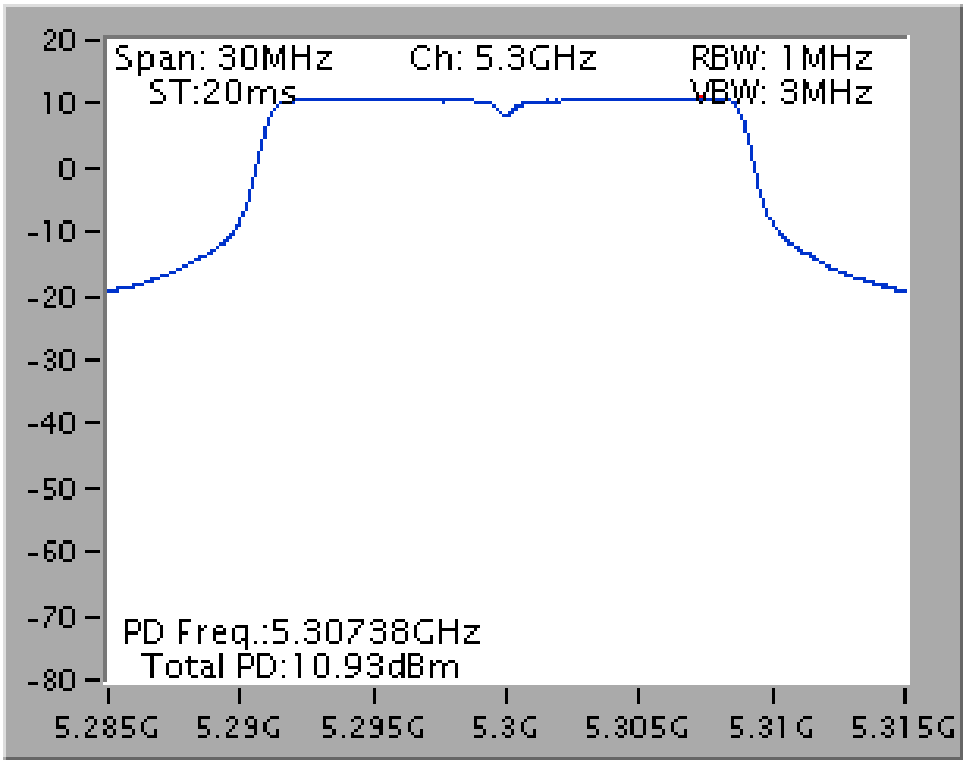
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1+ Chain 2 + Chain 3 / 5300 MHz (3TX)



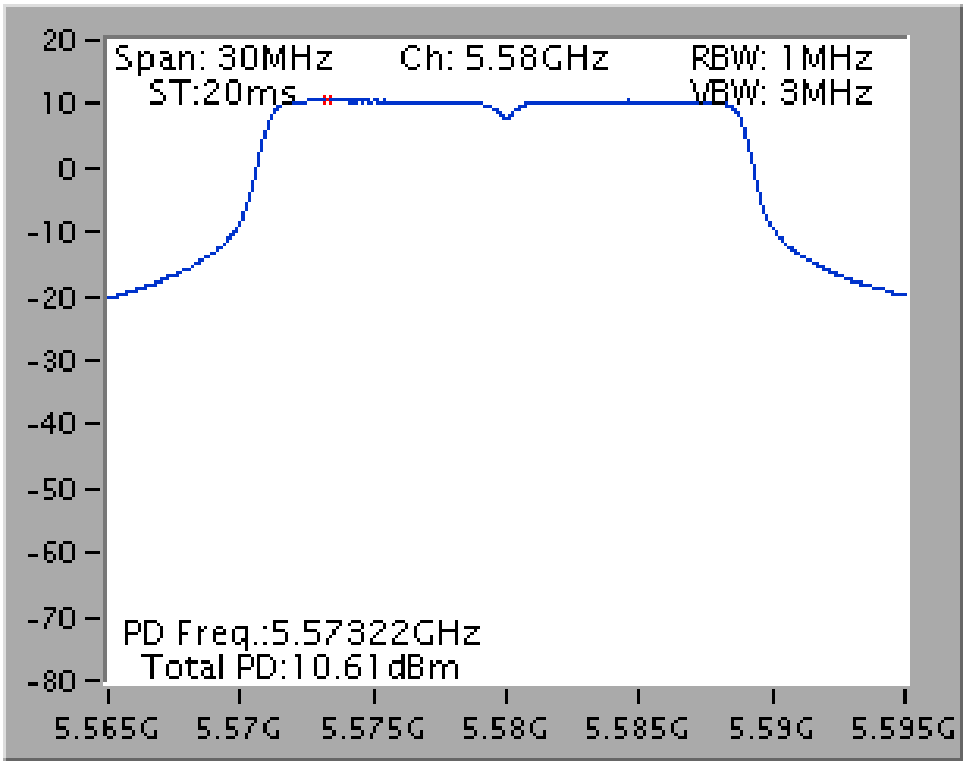
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1+ Chain 2 + Chain 3 / 5580 MHz (3TX)



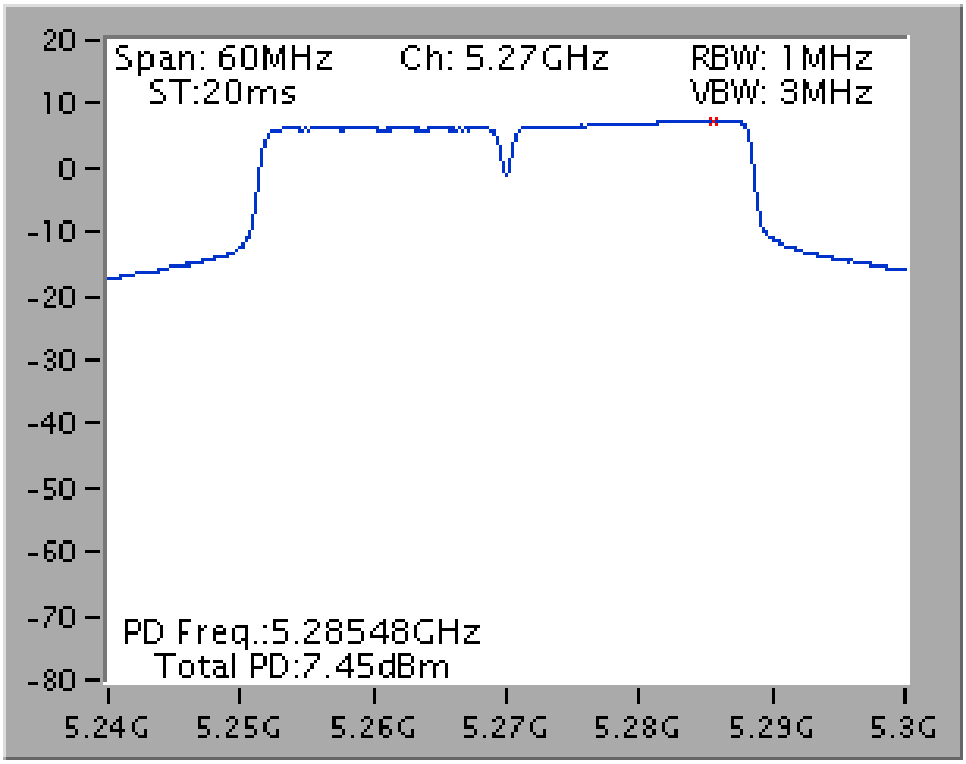
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1+ Chain 2 + Chain 3 / 5300 MHz (3TX)



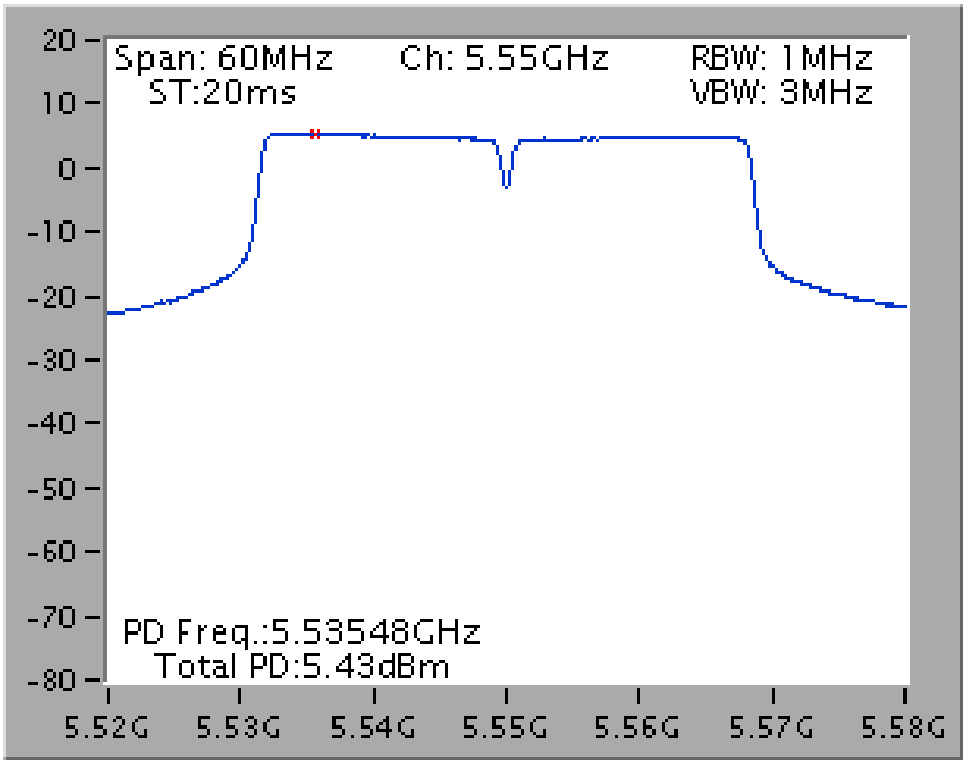
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1+ Chain 2 + Chain 3 / 5580 MHz (3TX)



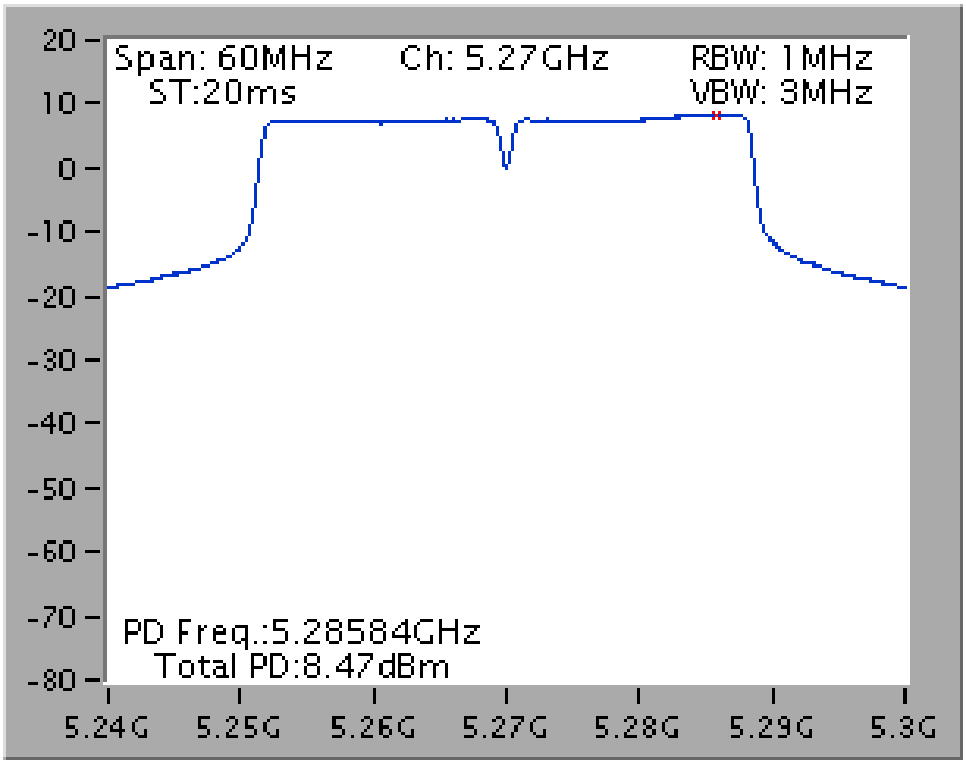
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 / 5270 MHz (1TX)



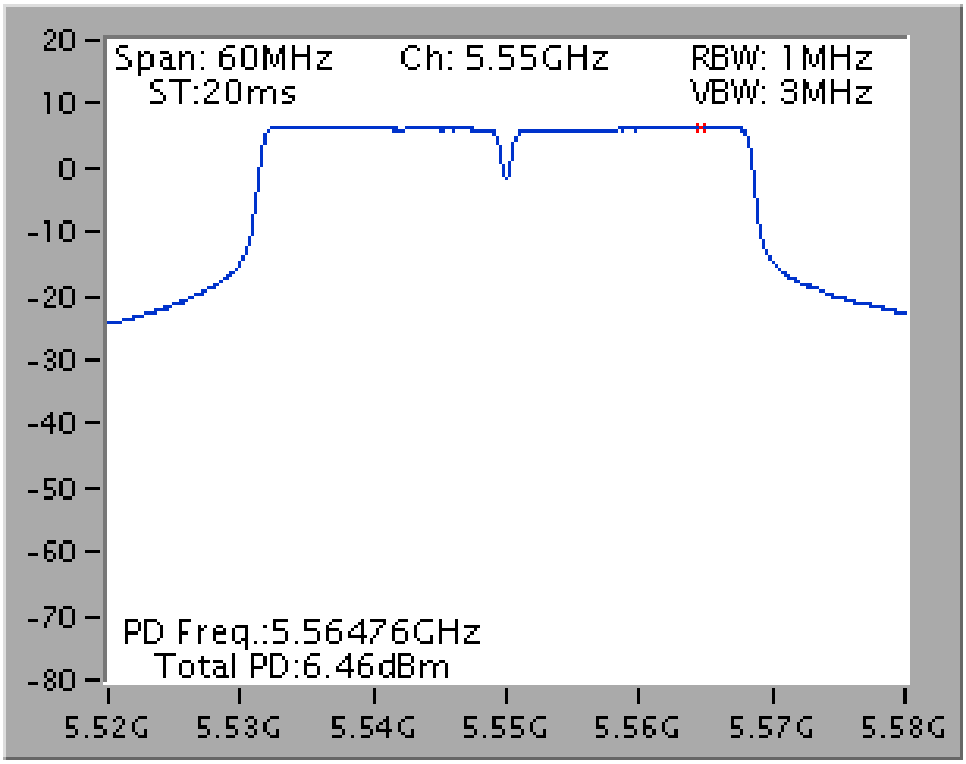
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 / 5550 MHz (1TX)



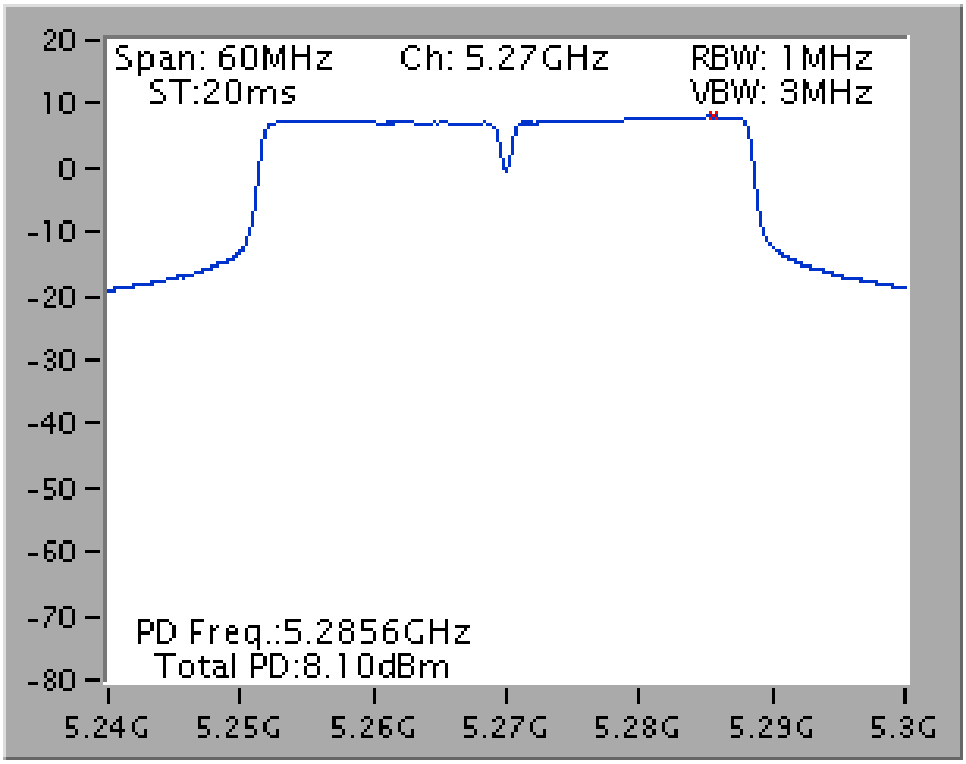
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1+ Chain 2 / 5270 MHz (2TX)



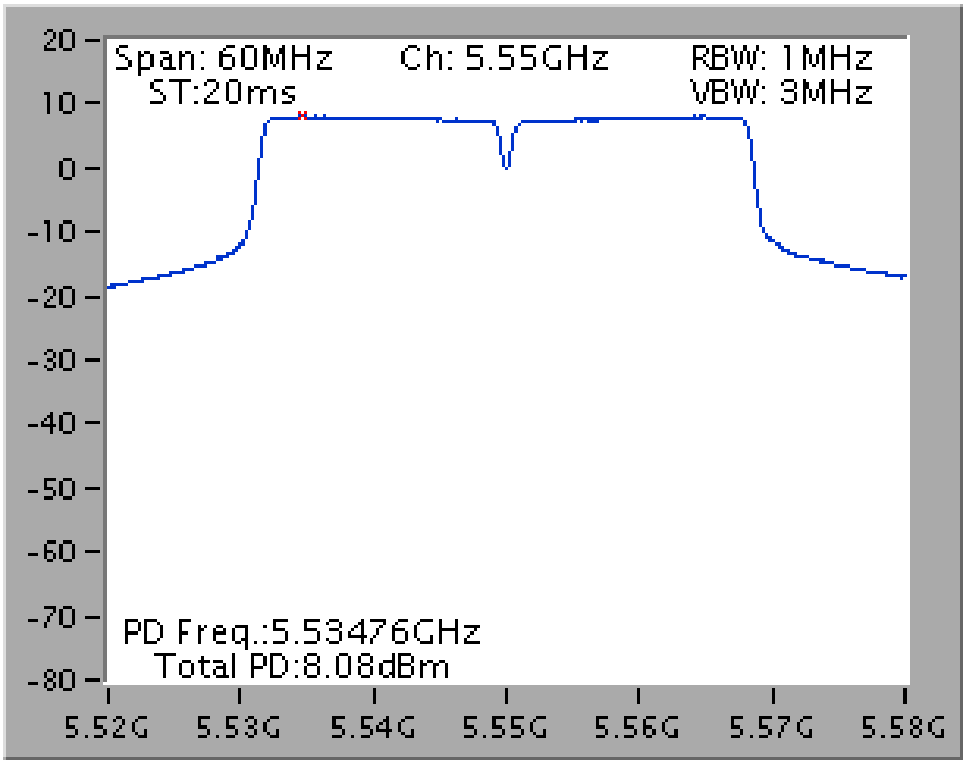
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1+ Chain 2 / 5550 MHz (2TX)



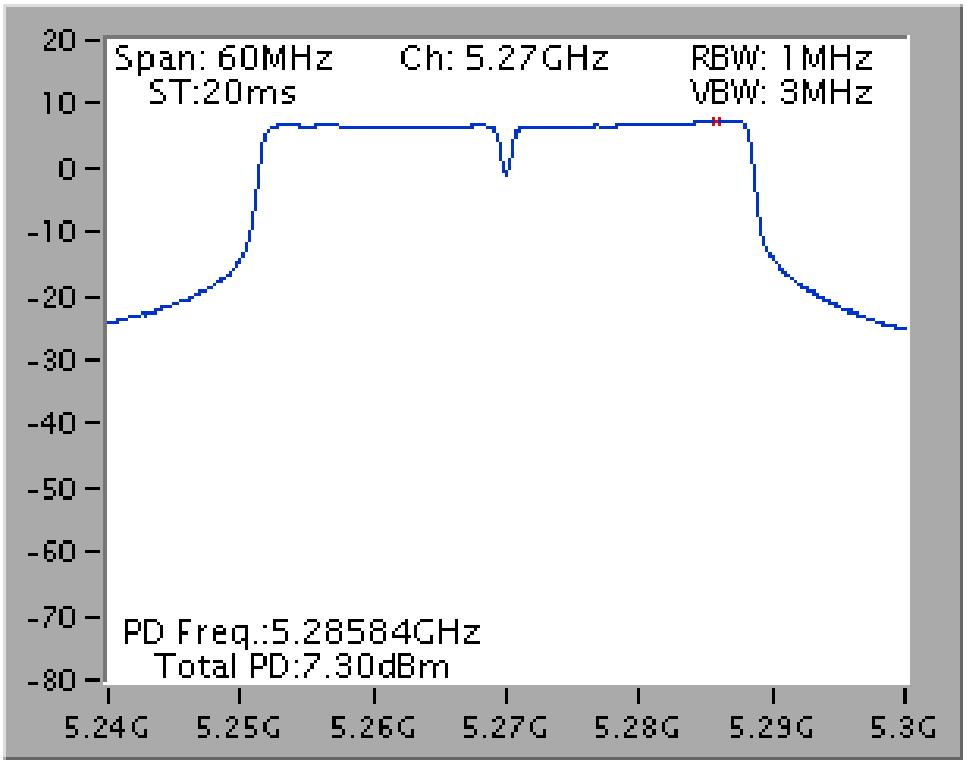
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1+ Chain 2 / 5270 MHz (2TX)



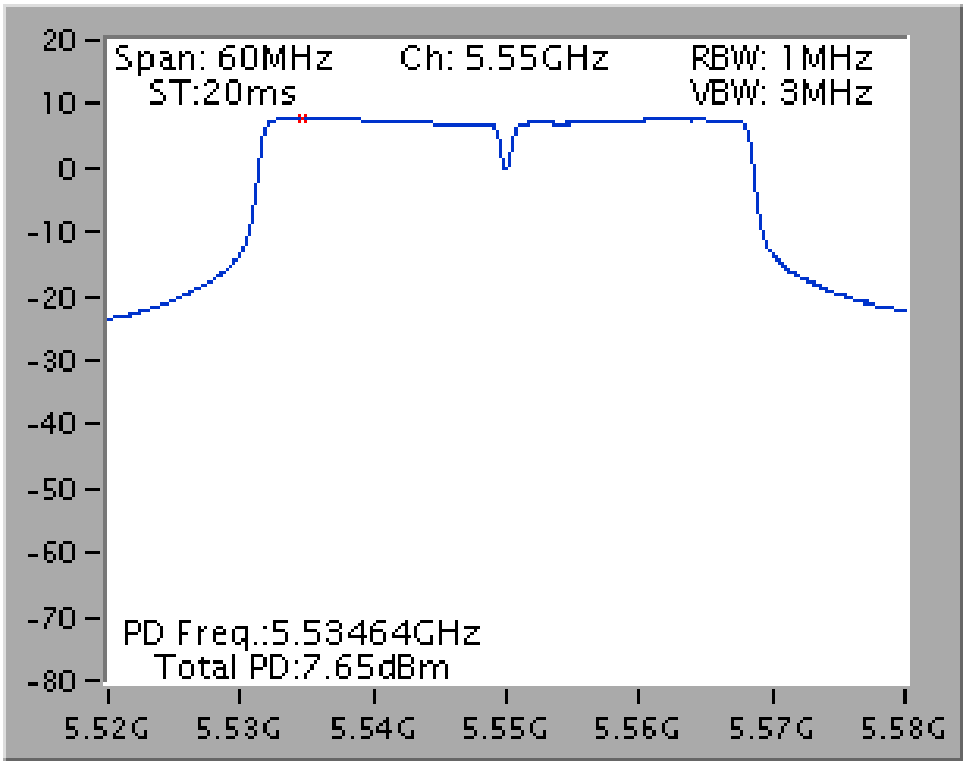
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1+ Chain 2 / 5550 MHz (2TX)



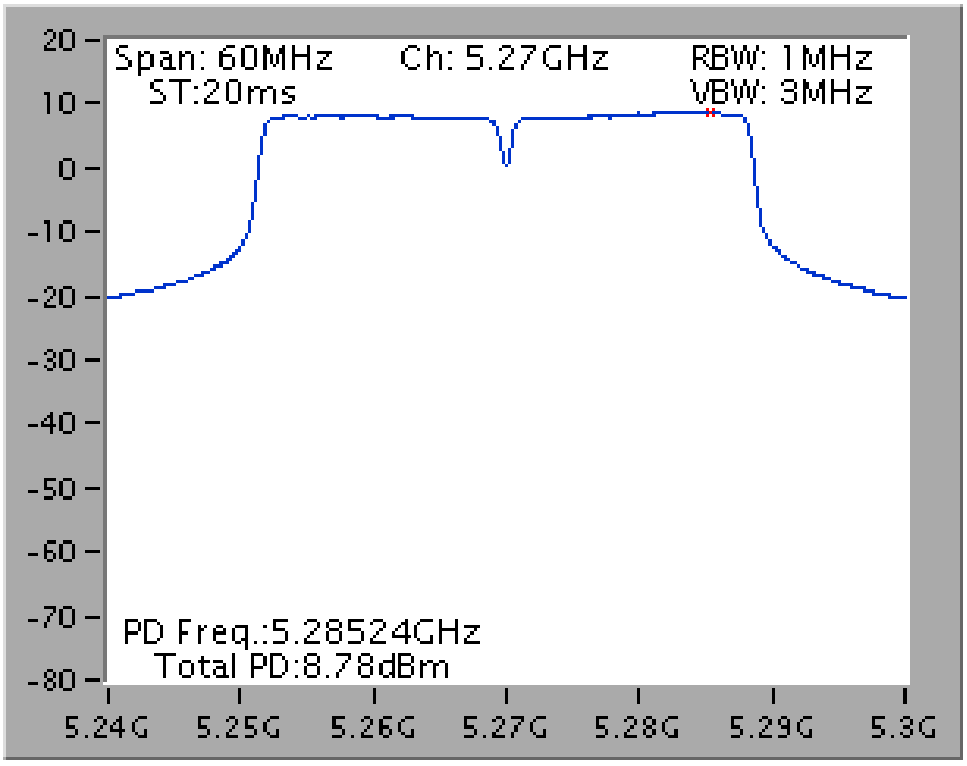
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1+ Chain 2 + Chain 3 / 5270 MHz (3TX)



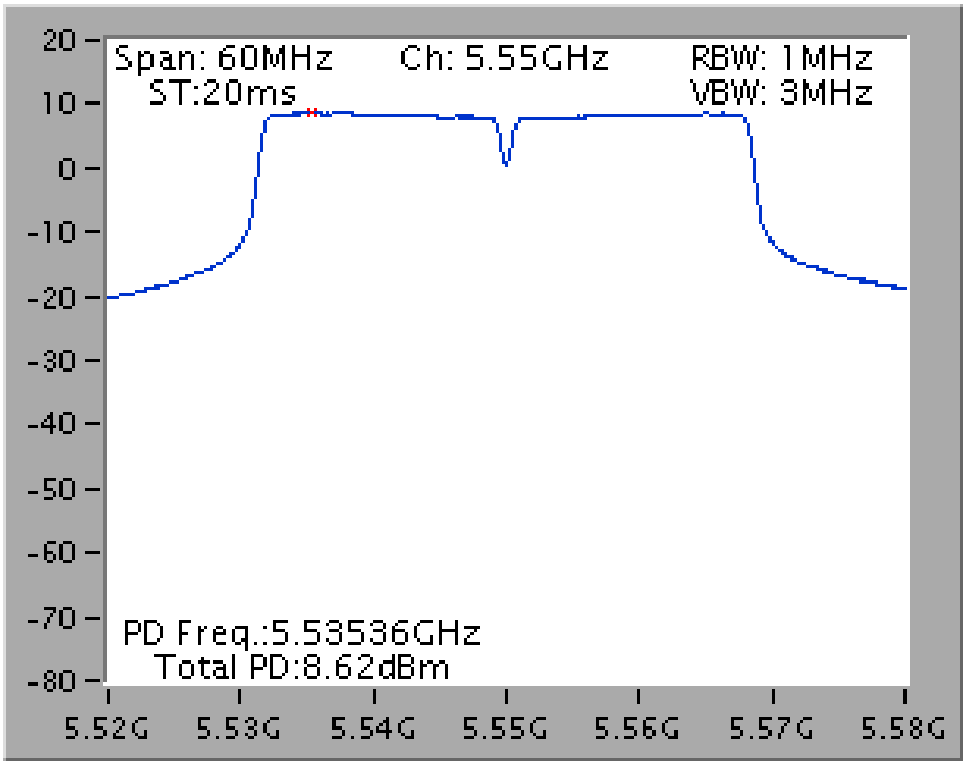
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1+ Chain 2 + Chain 3 / 5550 MHz (3TX)



Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1+ Chain 2 + Chain 3 / 5270 MHz (3TX)



Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1+ Chain 2 + Chain 3 / 5550 MHz (3TX)



Temperature	25°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	IEEE 802.11n
Test Date	May 23, 2012	Test Mode	Mode 3 (Ant. 8 Panel antenna / 10.5dBi)

1TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	6.07	6.50	Complies
60	5300 MHz	6.21	6.50	Complies
64	5320 MHz	1.06	6.50	Complies
100	5500 MHz	-1.06	6.50	Complies
116	5580 MHz	6.14	6.50	Complies
140	5700 MHz	-0.46	6.50	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	3.46	6.50	Complies
62	5310 MHz	-4.82	6.50	Complies
102	5510MHz	-6.08	6.50	Complies
110	5550 MHz	3.52	6.50	Complies
134	5670 MHz	0.06	6.50	Complies

2TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	1.02	3.49	Complies
60	5300 MHz	0.29	3.49	Complies
64	5320 MHz	0.37	3.49	Complies
100	5500 MHz	2.27	3.49	Complies
116	5580 MHz	2.94	3.49	Complies
140	5700 MHz	0.26	3.49	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =13.51dBi > 6dBi, so the Band 2-3 power density limit =11 - (13.51dBi -6)=3.49dBm.

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	-2.10	3.49	Complies
62	5310 MHz	-3.31	3.49	Complies
102	5510MHz	-3.30	3.49	Complies
110	5550 MHz	0.15	3.49	Complies
134	5670 MHz	-1.51	3.49	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =13.51dBi > 6dBi, so the Band 2-3 power density limit =11 - (13.51dBi -6)=3.49dBm.

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	0.14	6.50	Complies
60	5300 MHz	-0.16	6.50	Complies
64	5320 MHz	0.11	6.50	Complies
100	5500 MHz	1.70	6.50	Complies
116	5580 MHz	2.73	6.50	Complies
140	5700 MHz	0.41	6.50	Complies

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	-2.26	6.50	Complies
62	5310 MHz	-3.50	6.50	Complies
102	5510MHz	-2.76	6.50	Complies
110	5550 MHz	0.13	6.50	Complies
134	5670 MHz	-1.15	6.50	Complies

3TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	-7.25	1.73	Complies
60	5300 MHz	-8.24	1.73	Complies
64	5320 MHz	-8.03	1.73	Complies
100	5500 MHz	-7.23	1.73	Complies
116	5580 MHz	-6.05	1.73	Complies
140	5700 MHz	-7.63	1.73	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =15.27dBi > 6dBi, so the Band 2-3 power density limit =11 - (15.27dBi -6)=1.73dBm.

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	-10.83	1.73	Complies
62	5310 MHz	-10.50	1.73	Complies
102	5510MHz	-9.78	1.73	Complies
110	5550 MHz	-7.47	1.73	Complies
134	5670 MHz	-10.19	1.73	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =15.27dBi > 6dBi, so the Band 2-3 power density limit =11 - (15.27dBi -6)=1.73dBm.

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	-8.25	3.50	Complies
60	5300 MHz	-8.31	3.50	Complies
64	5320 MHz	-8.04	3.50	Complies
100	5500 MHz	-7.24	3.50	Complies
116	5580 MHz	-7.14	3.50	Complies
140	5700 MHz	-7.76	3.50	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =13.5dBi > 6dBi, so the Band 2-3 power density limit =11 - (13.5dBi -6)=3.50dBm.

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	-10.69	3.50	Complies
62	5310 MHz	-10.57	3.50	Complies
102	5510MHz	-9.83	3.50	Complies
110	5550 MHz	-7.59	3.50	Complies
134	5670 MHz	-10.13	3.50	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(\text{N})\ \text{dBi}$ =13.5dBi > 6dBi, so the Band 2-3 power density limit =11 - (13.5dBi -6)=3.50dBm.

Configuration IEEE 802.11n MCS16 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	-7.10	6.50	Complies
60	5300 MHz	-8.30	6.50	Complies
64	5320 MHz	-8.05	6.50	Complies
100	5500 MHz	-7.35	6.50	Complies
116	5580 MHz	-5.28	6.50	Complies
140	5700 MHz	-7.80	6.50	Complies

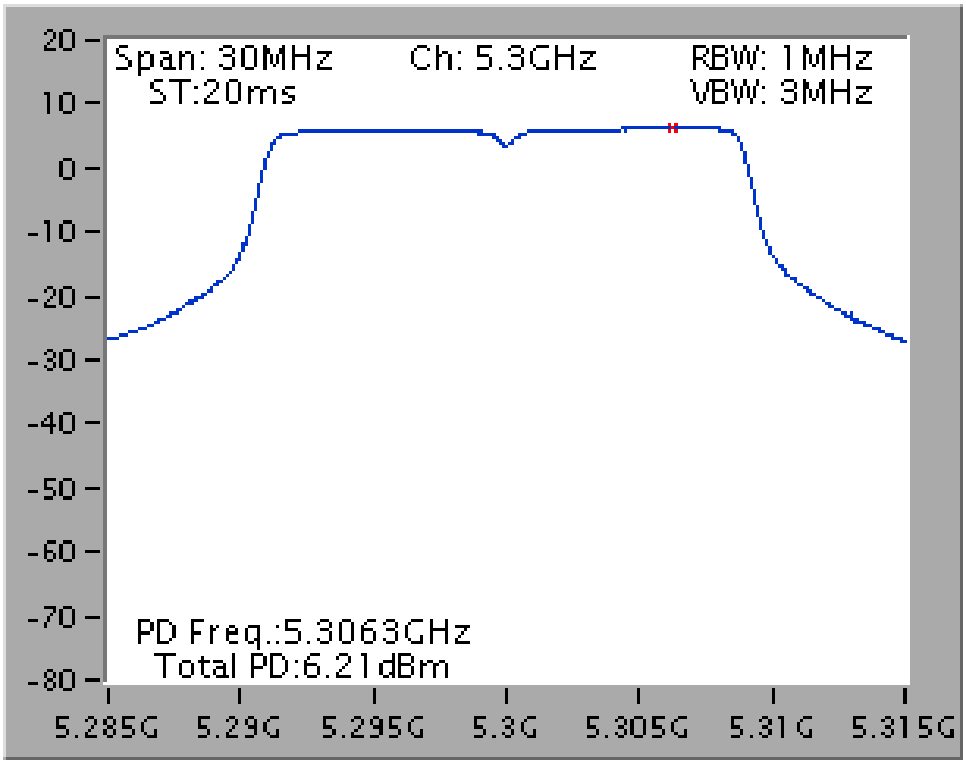
Configuration IEEE 802.11n MCS16 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	-10.67	6.50	Complies
62	5310 MHz	-10.58	6.50	Complies
102	5510MHz	-8.65	6.50	Complies
110	5550 MHz	-9.53	6.50	Complies
134	5670 MHz	-8.91	6.50	Complies

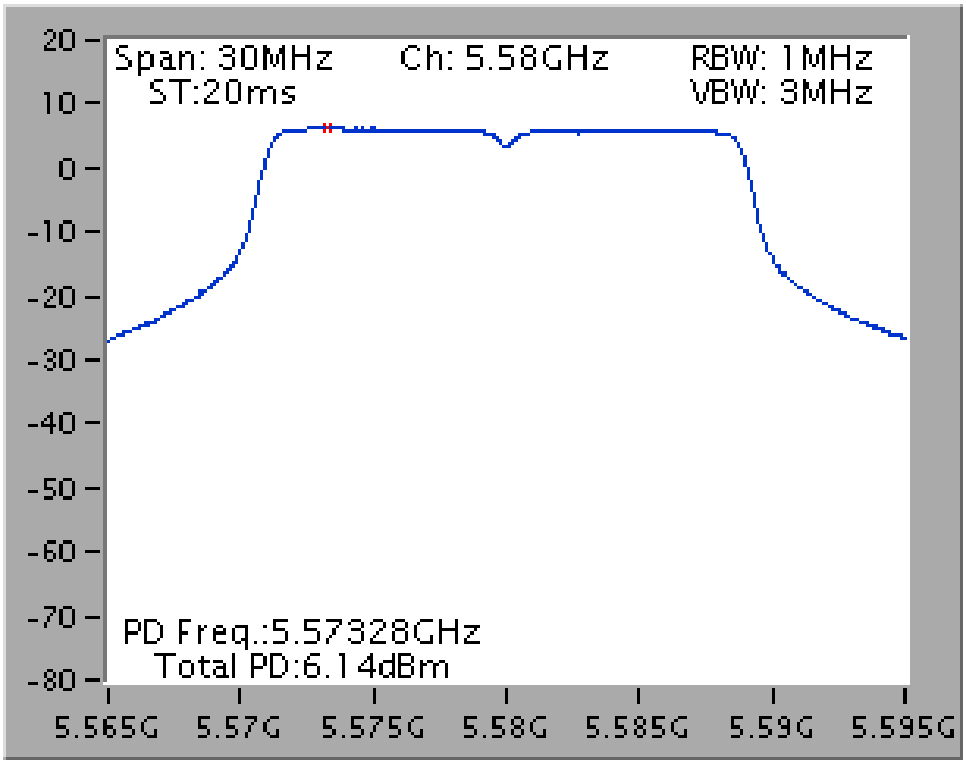
Note: All the test values were listed in the report.

For plots, only the channel with maximum results was shown.

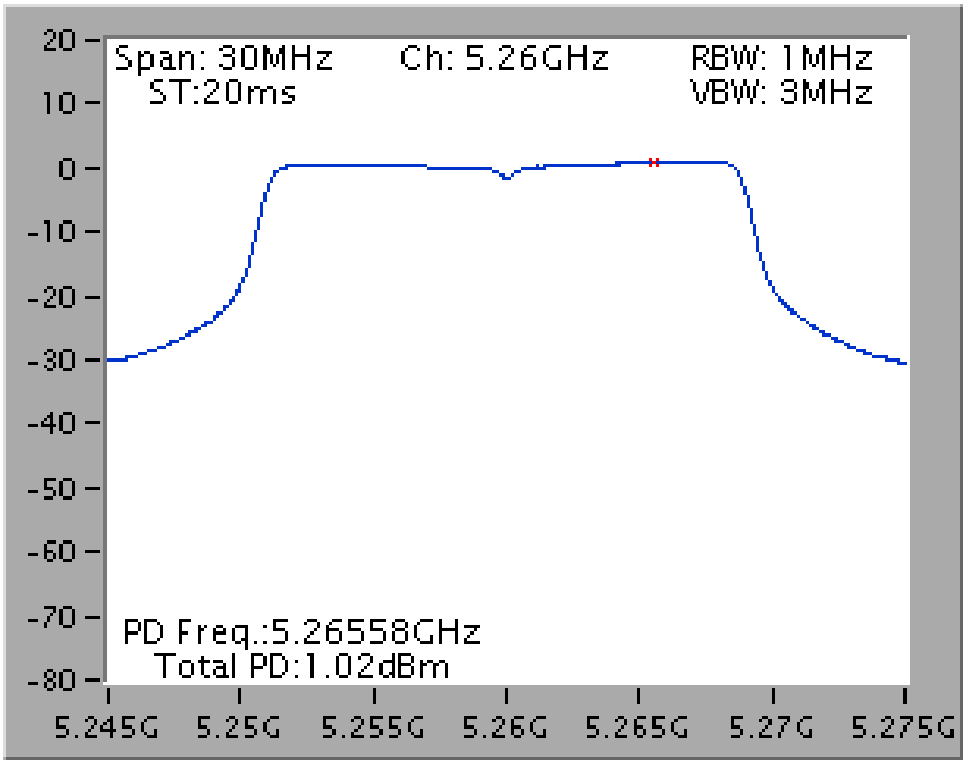
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 / 5300 MHz (1TX)



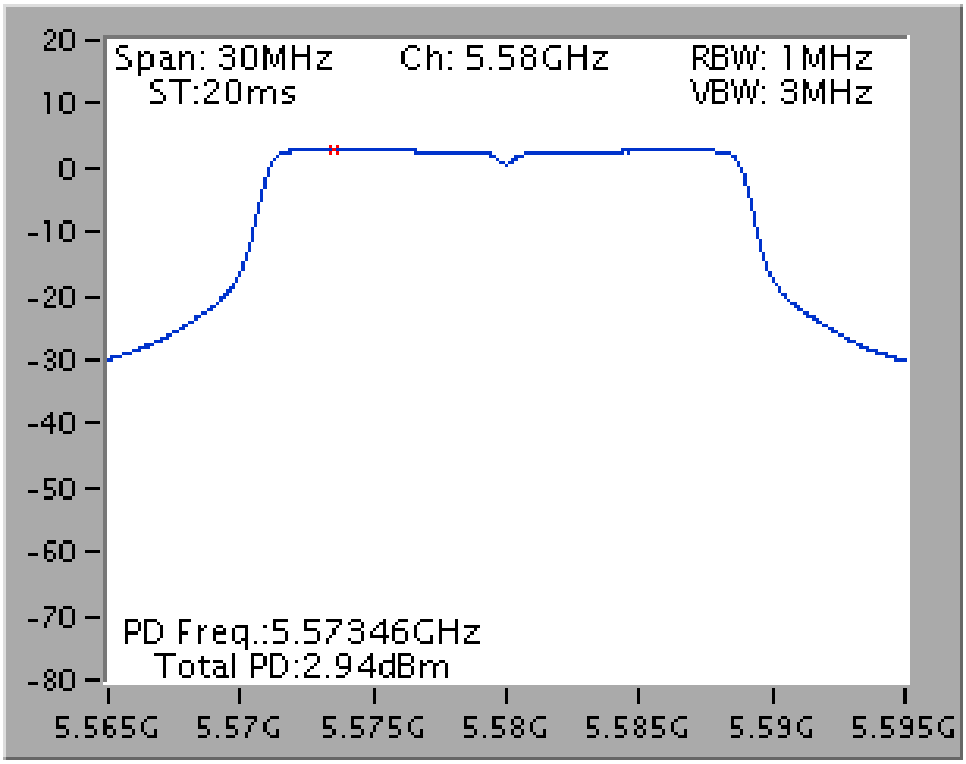
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 / 5580 MHz (1TX)



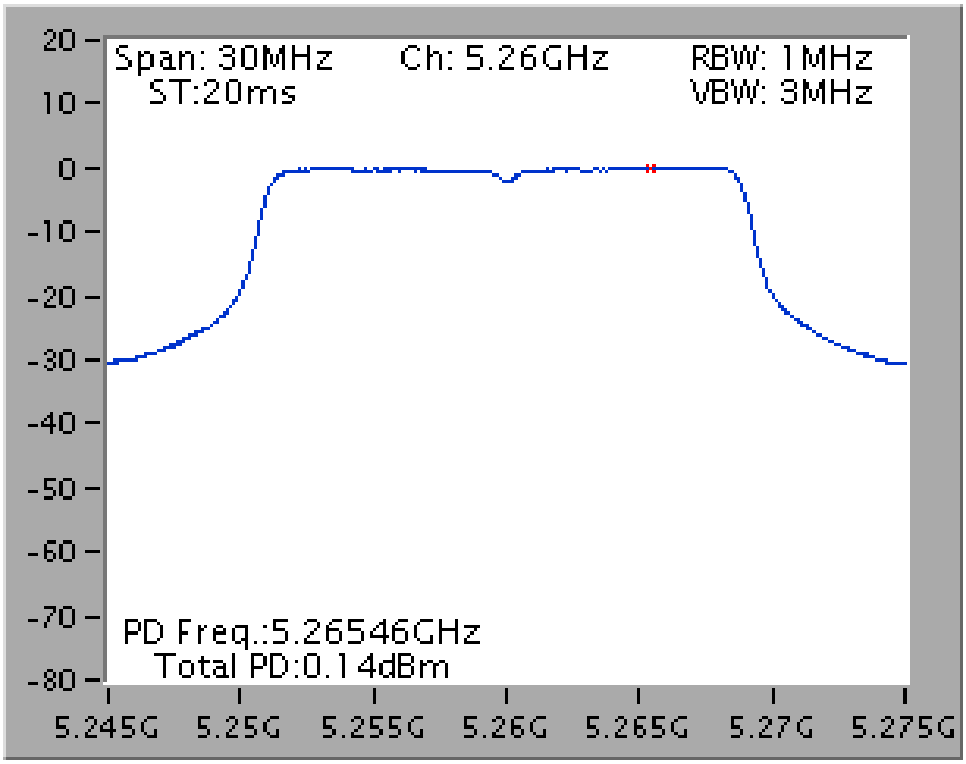
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1+ Chain 2 / 5260 MHz (2TX)



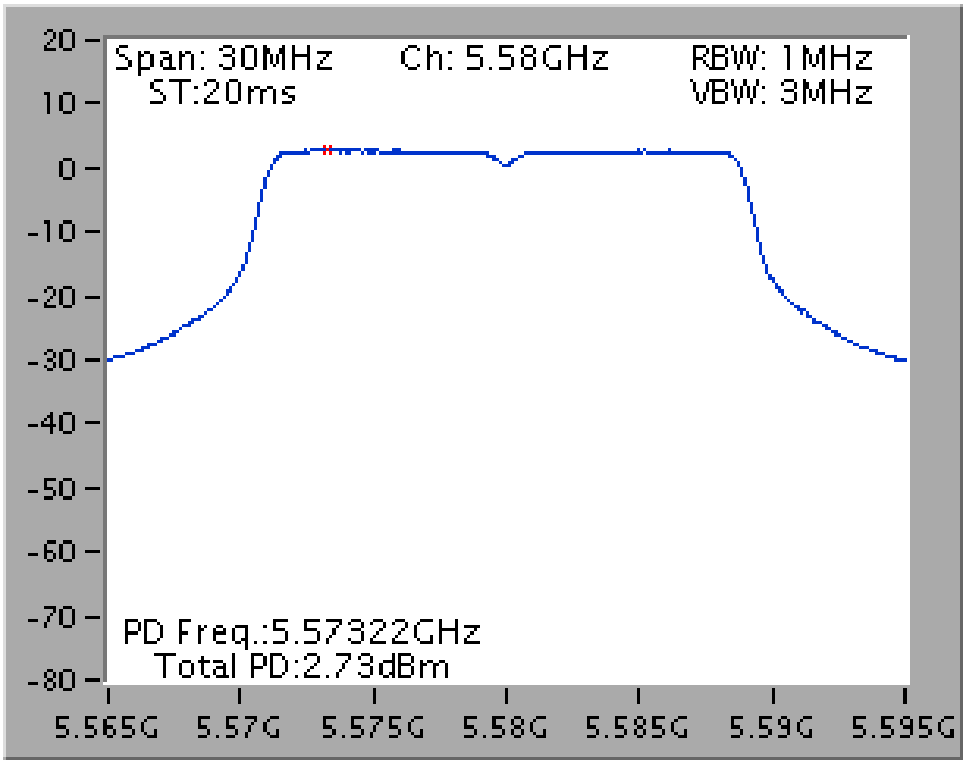
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1+ Chain 2 / 5580 MHz (2TX)



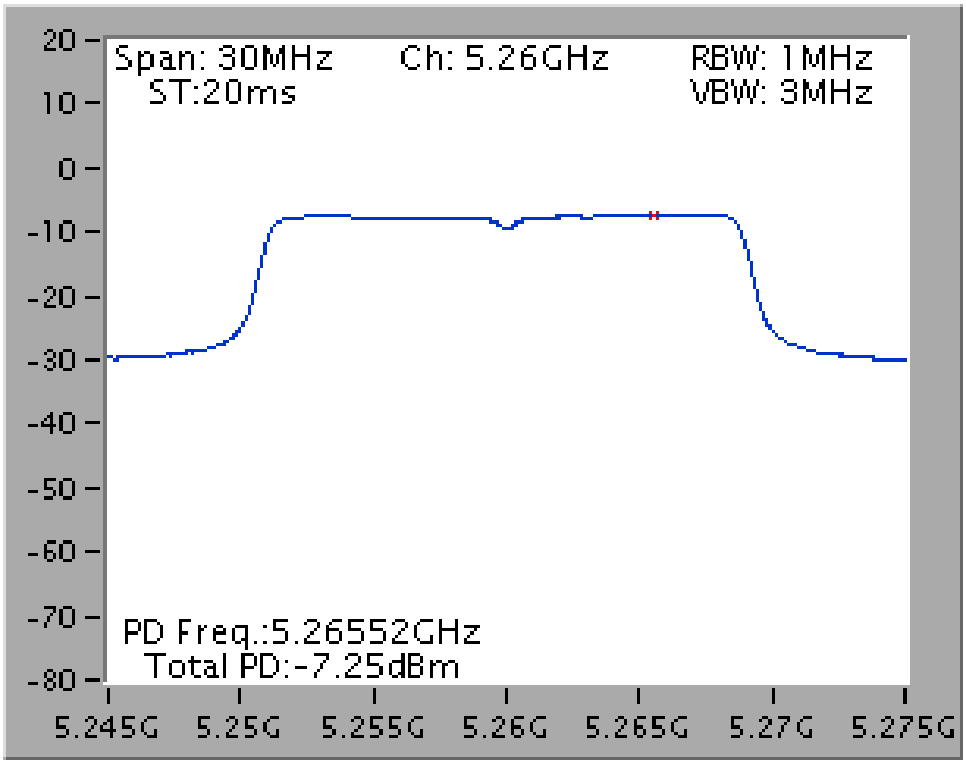
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1+ Chain 2 / 5260 MHz (2TX)



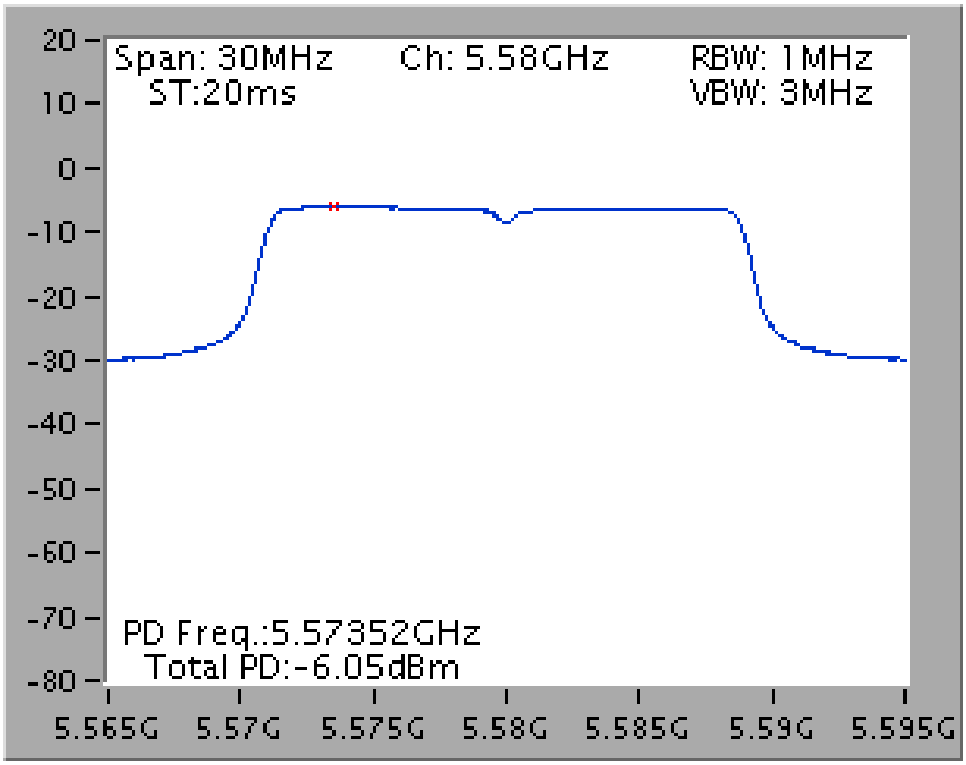
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1+ Chain 2 / 5580 MHz (2TX)



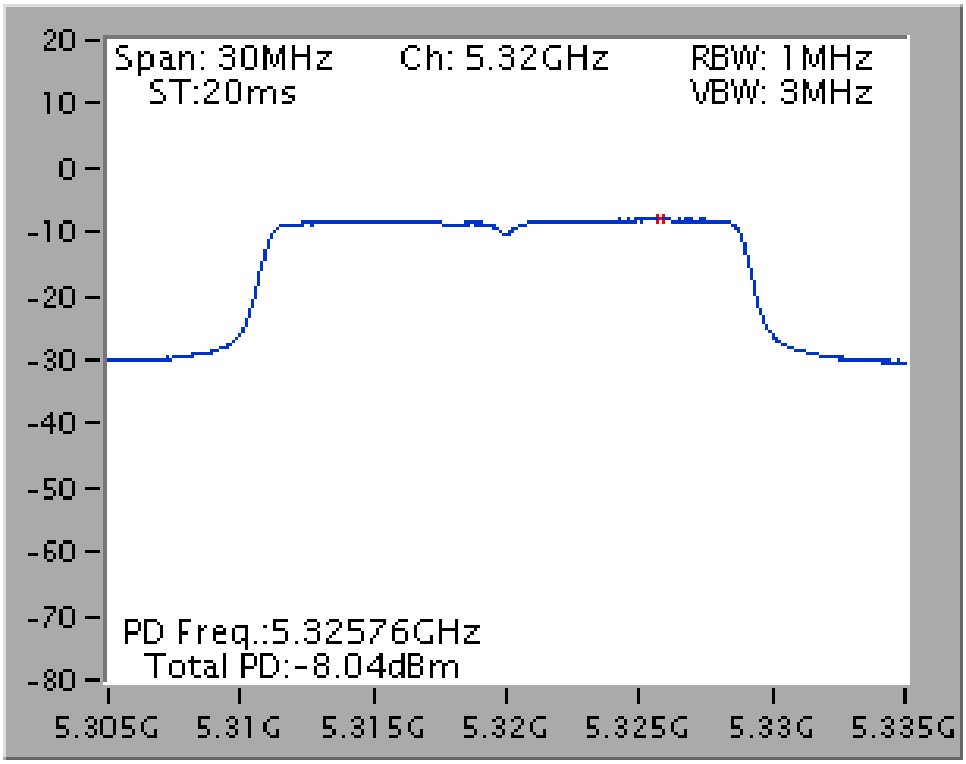
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1+ Chain 2 + Chain 3 / 5260 MHz (3TX)



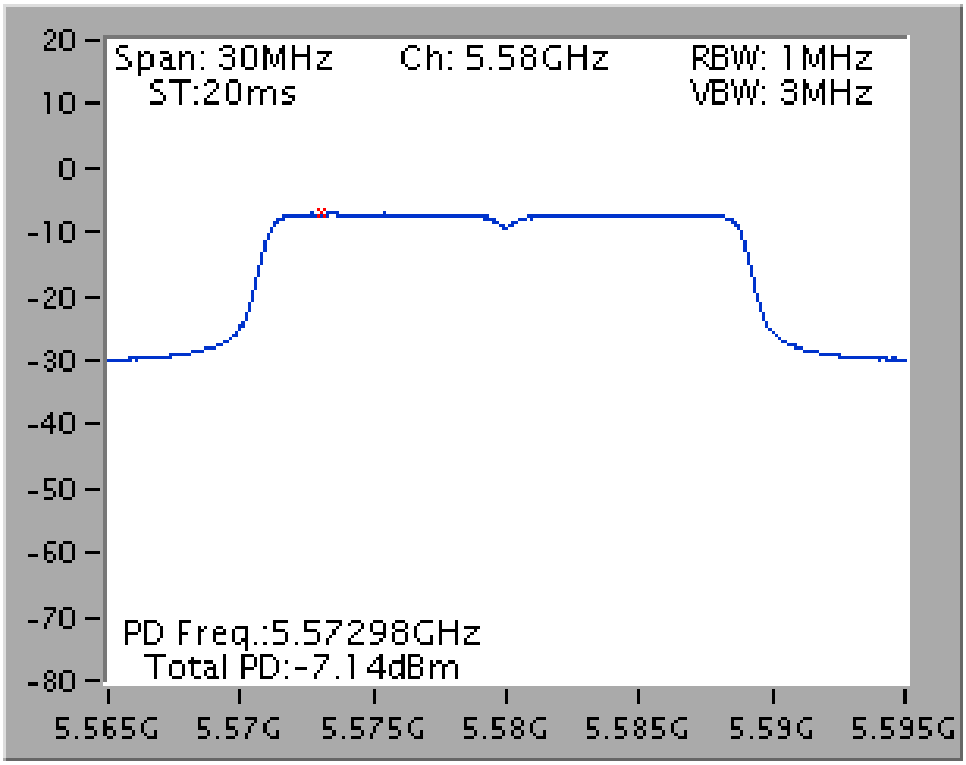
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1+ Chain 2 + Chain 3 / 5580 MHz (3TX)



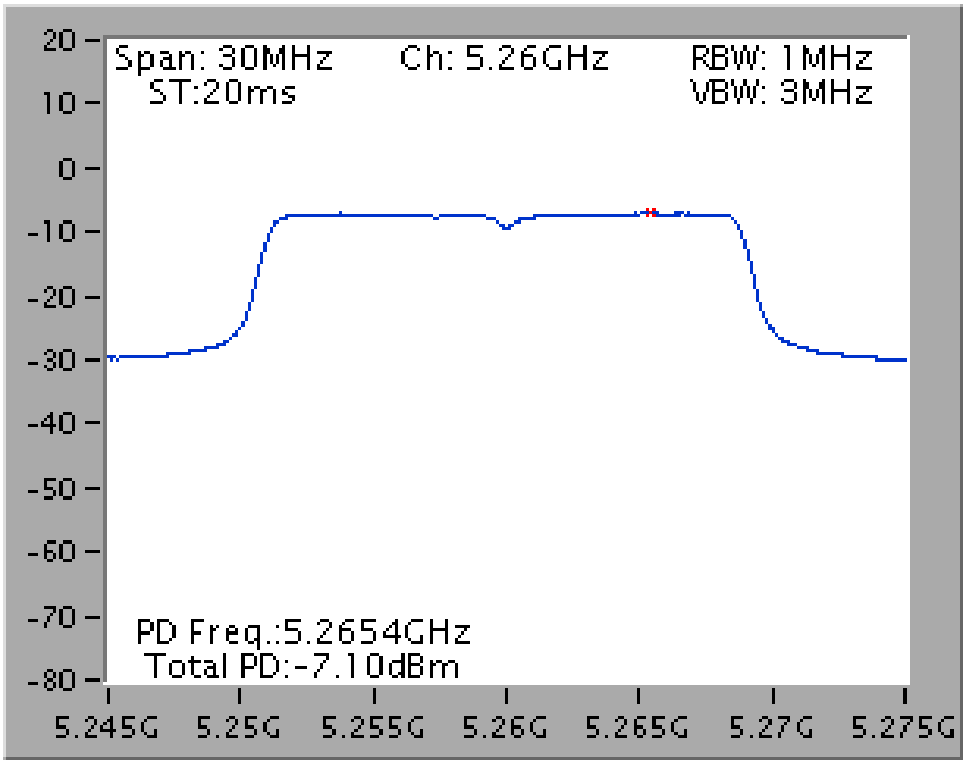
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1+ Chain 2 + Chain 3 / 5320 MHz (3TX)



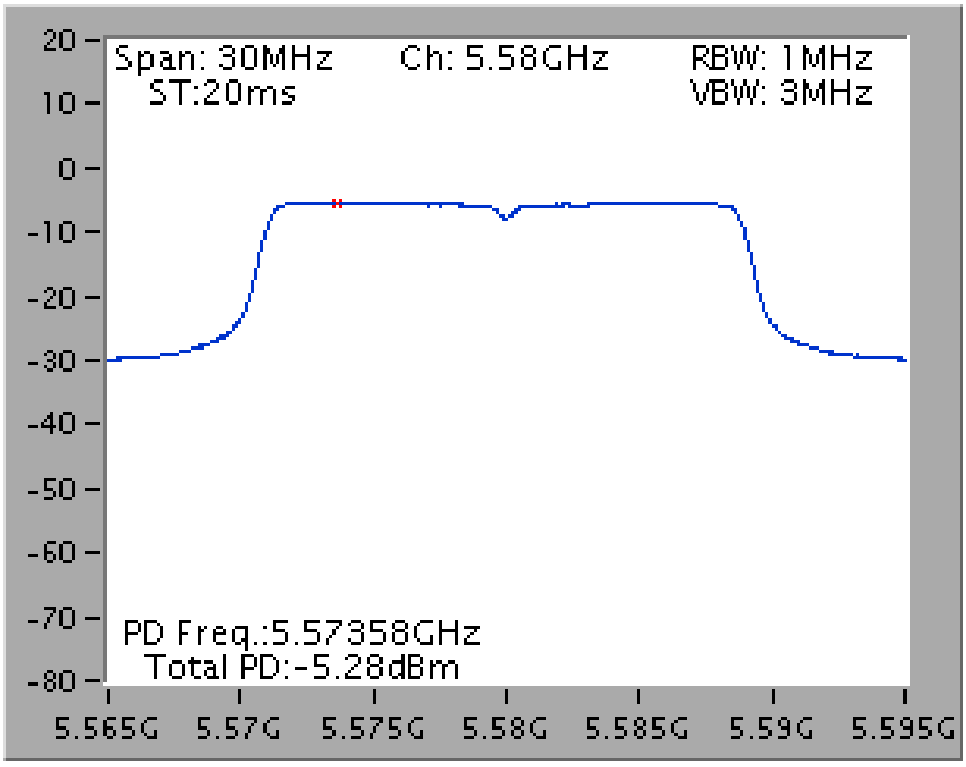
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1+ Chain 2 + Chain 3 / 5580 MHz (3TX)



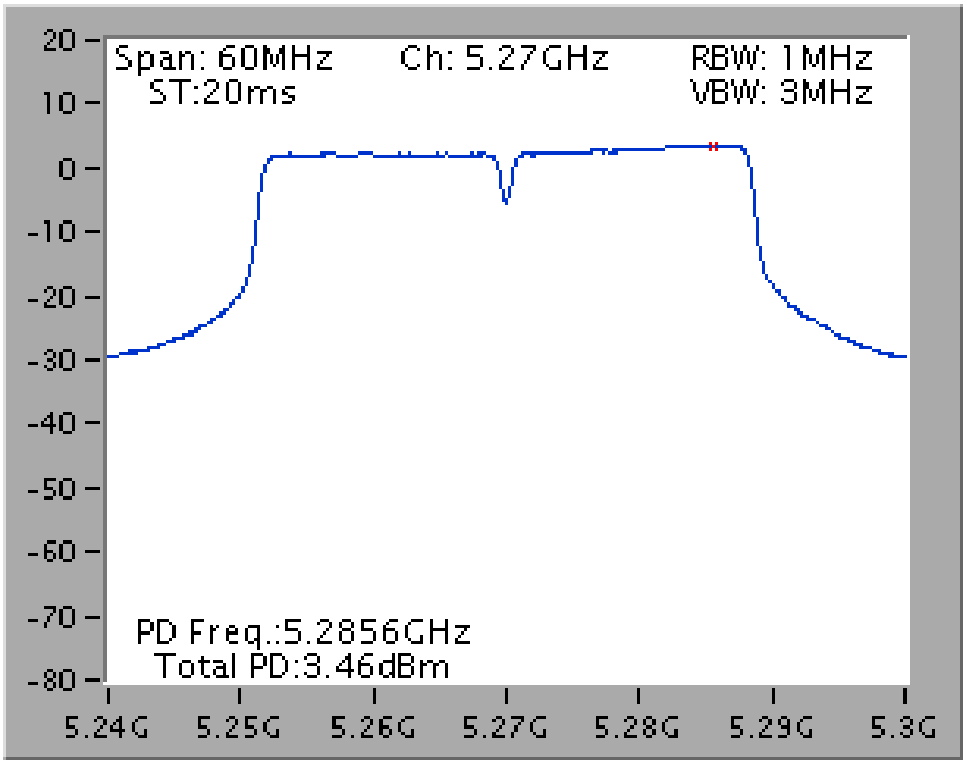
Power Density Plot on Configuration IEEE 802.11n MCS16 20MHz / Chain 1+ Chain 2 + Chain 3 / 5260 MHz (3TX)



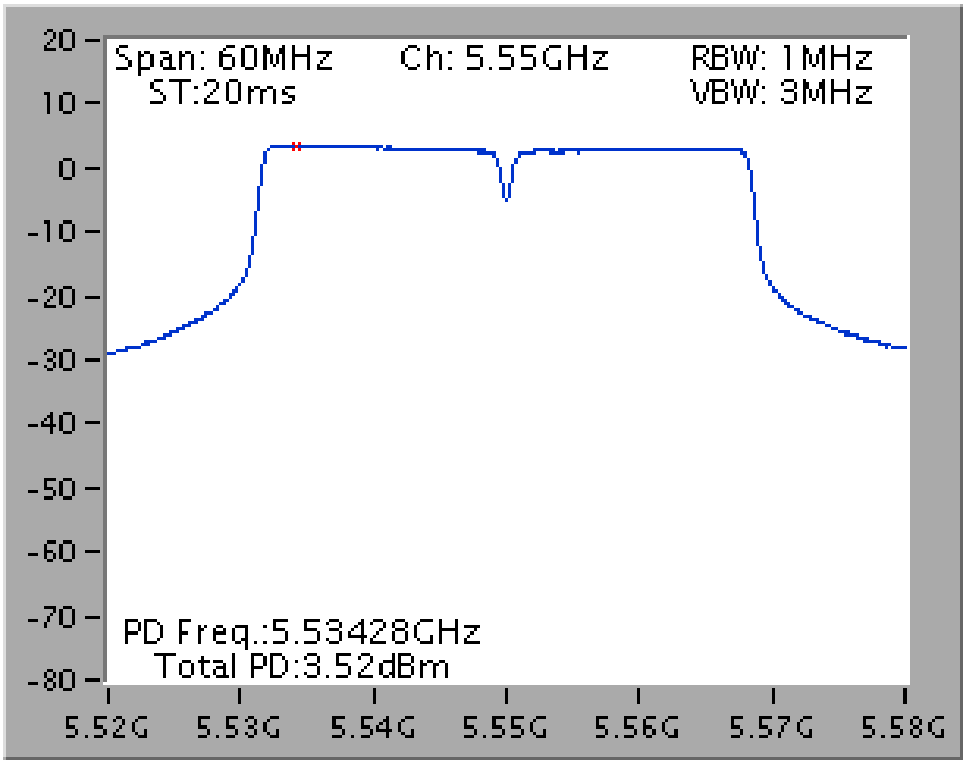
Power Density Plot on Configuration IEEE 802.11n MCS16 20MHz / Chain 1+ Chain 2 + Chain 3 / 5580 MHz (3TX)



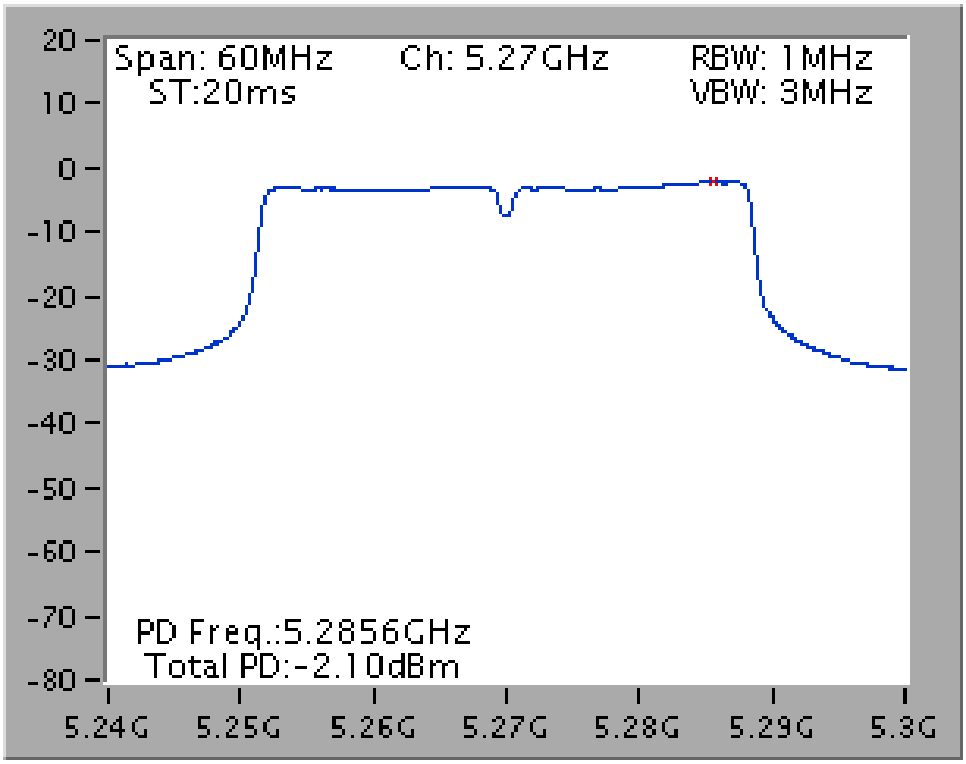
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 / 5270 MHz (1TX)



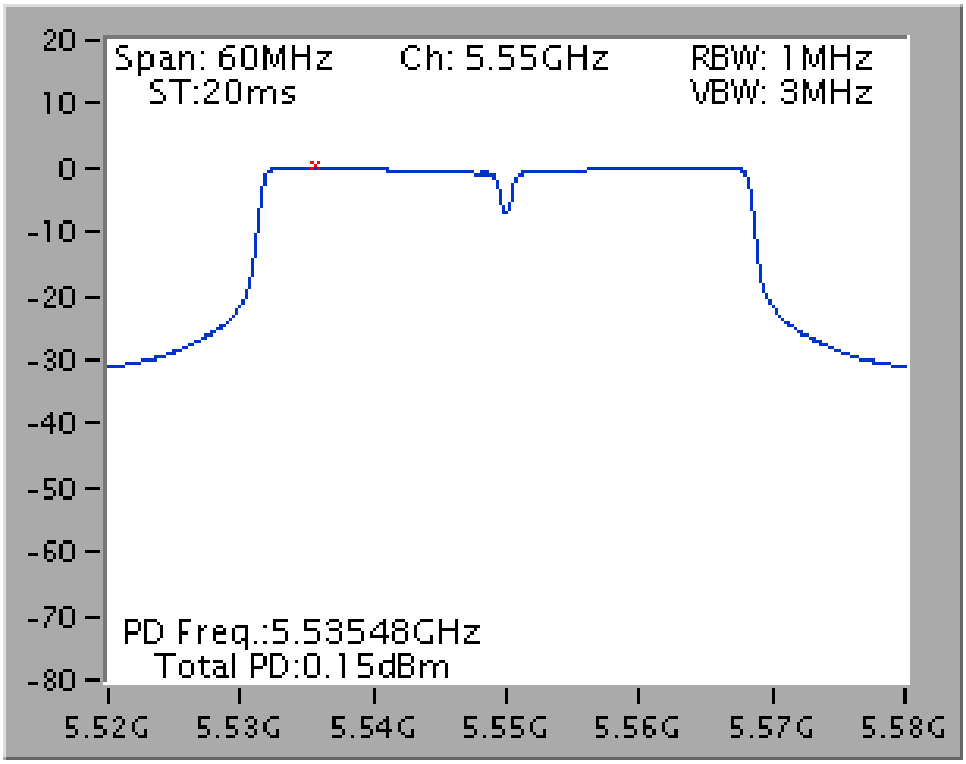
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 / 5550 MHz (1TX)



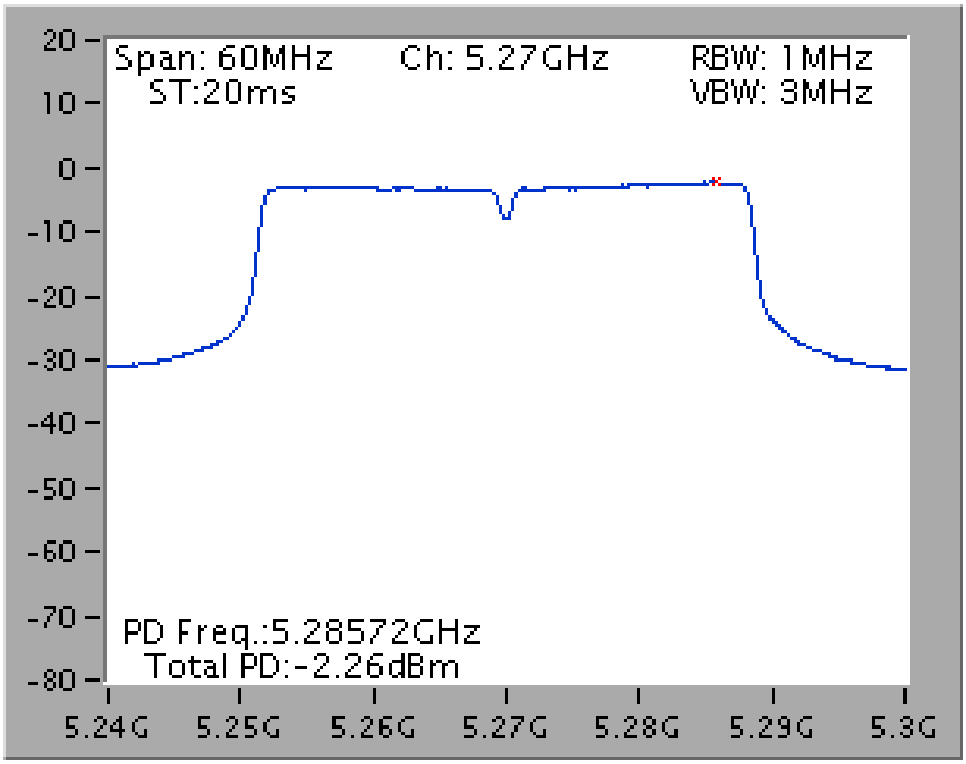
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1+ Chain 2 / 5270 MHz (2TX)



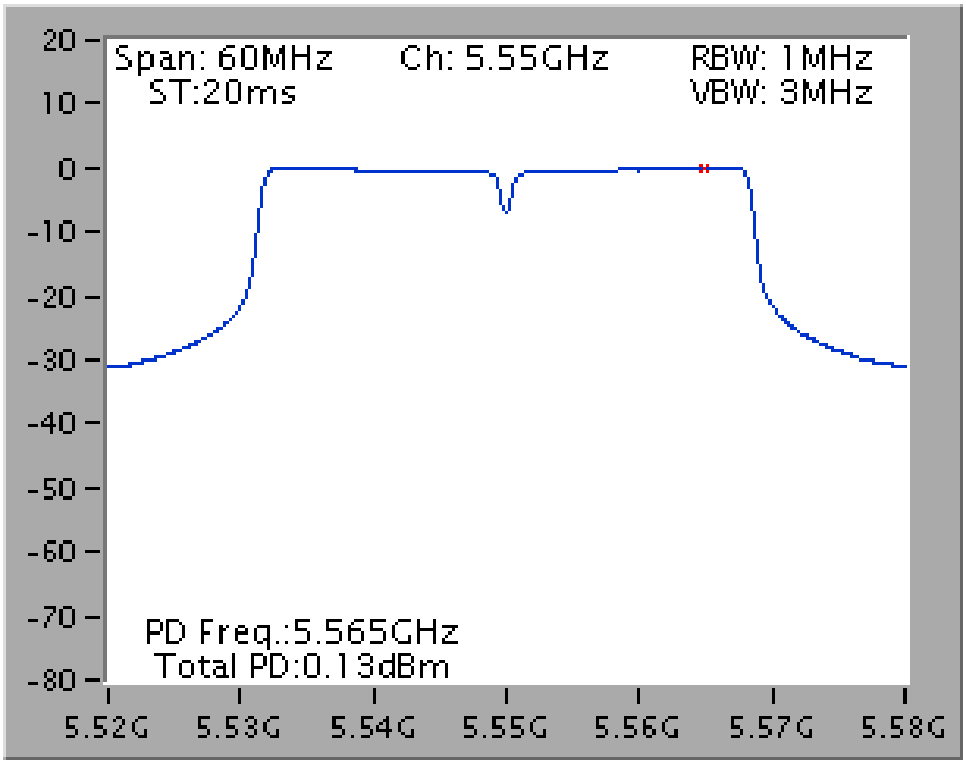
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1+ Chain 2 / 5550 MHz (2TX)



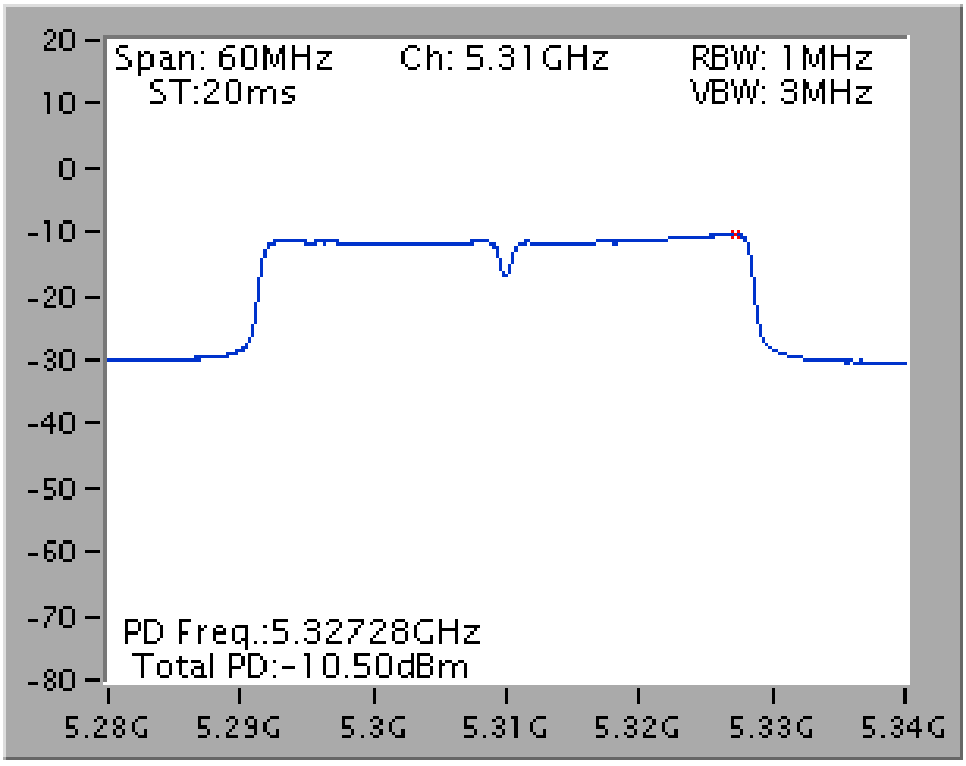
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1+ Chain 2 / 5270 MHz (2TX)



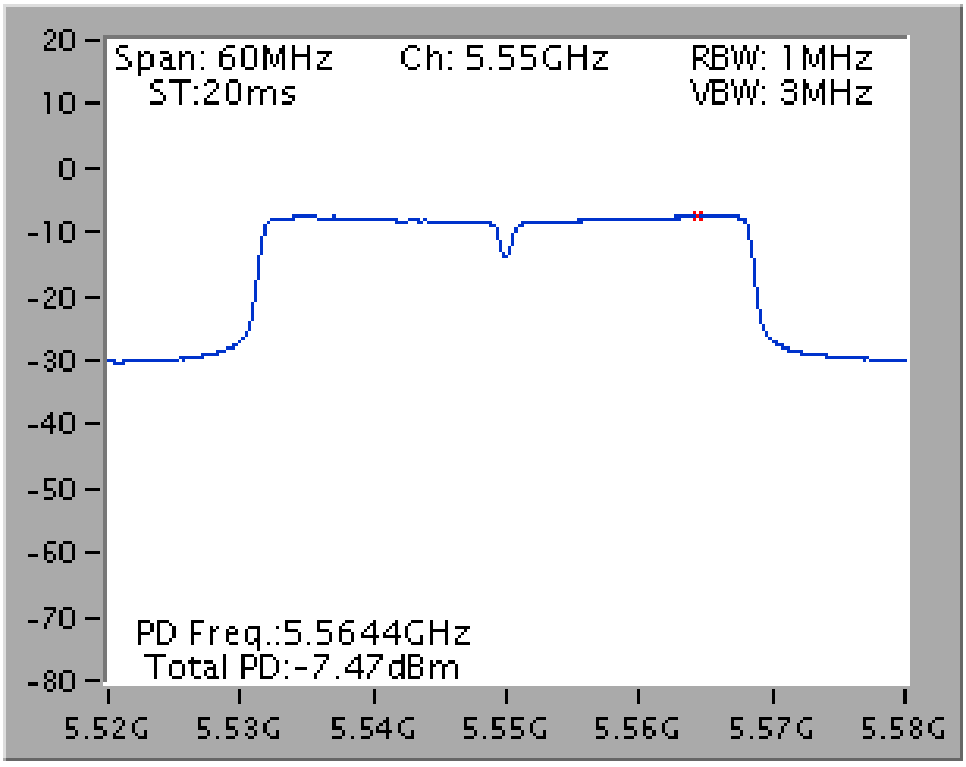
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1+ Chain 2 / 5550 MHz (2TX)



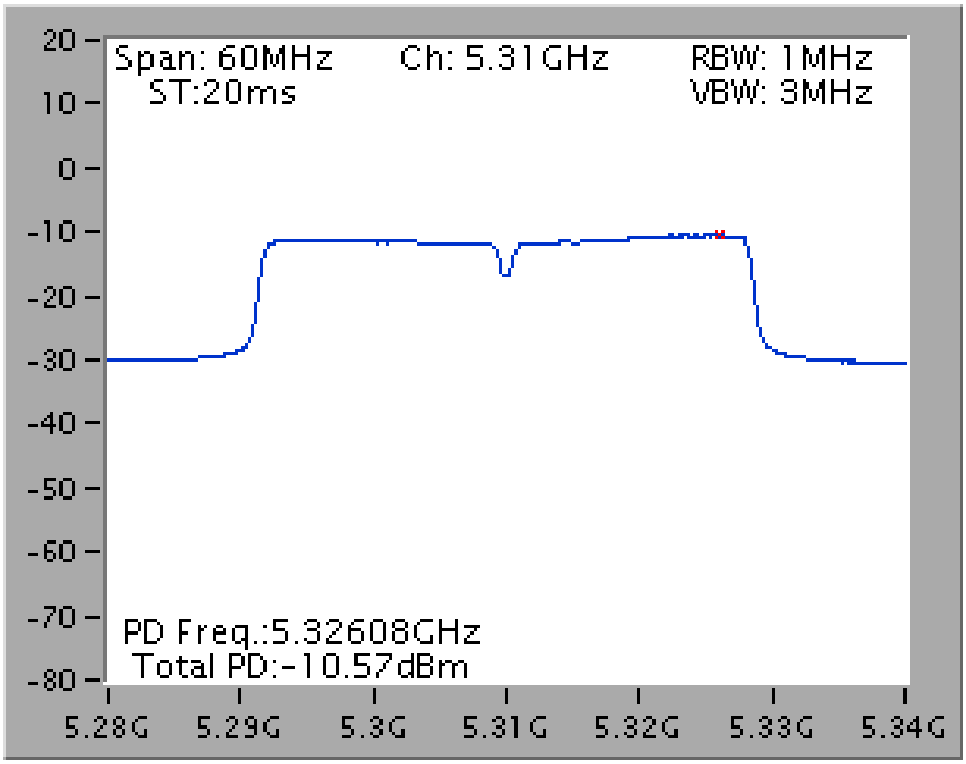
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1+ Chain 2 + Chain 3 / 5310 MHz (3TX)



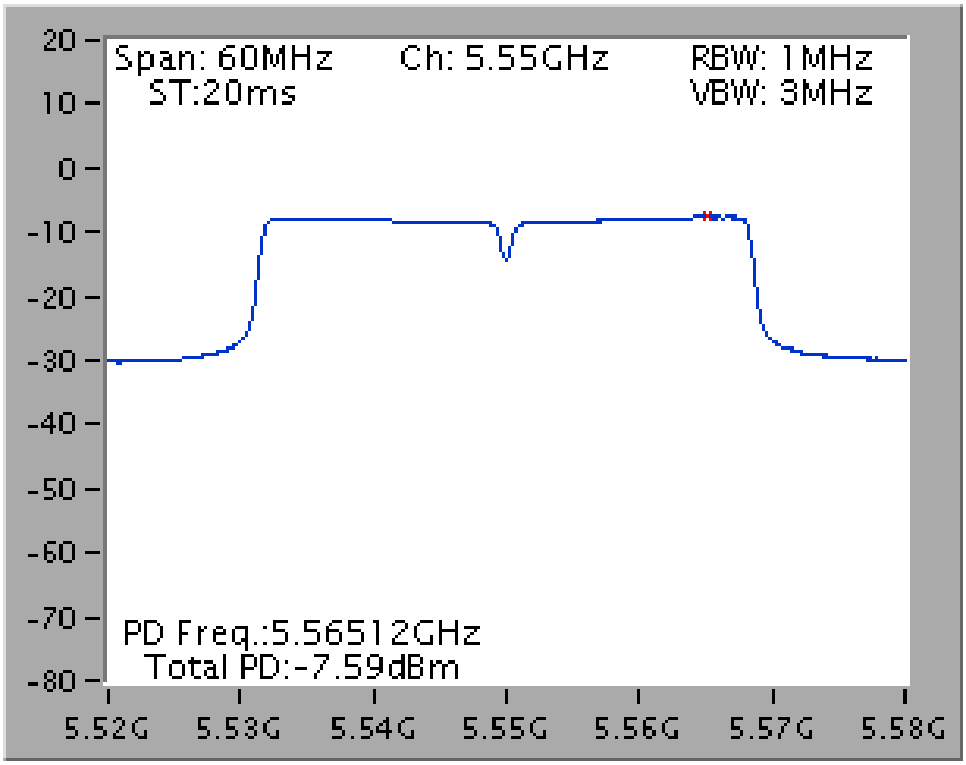
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1+ Chain 2 + Chain 3 / 5550 MHz (3TX)



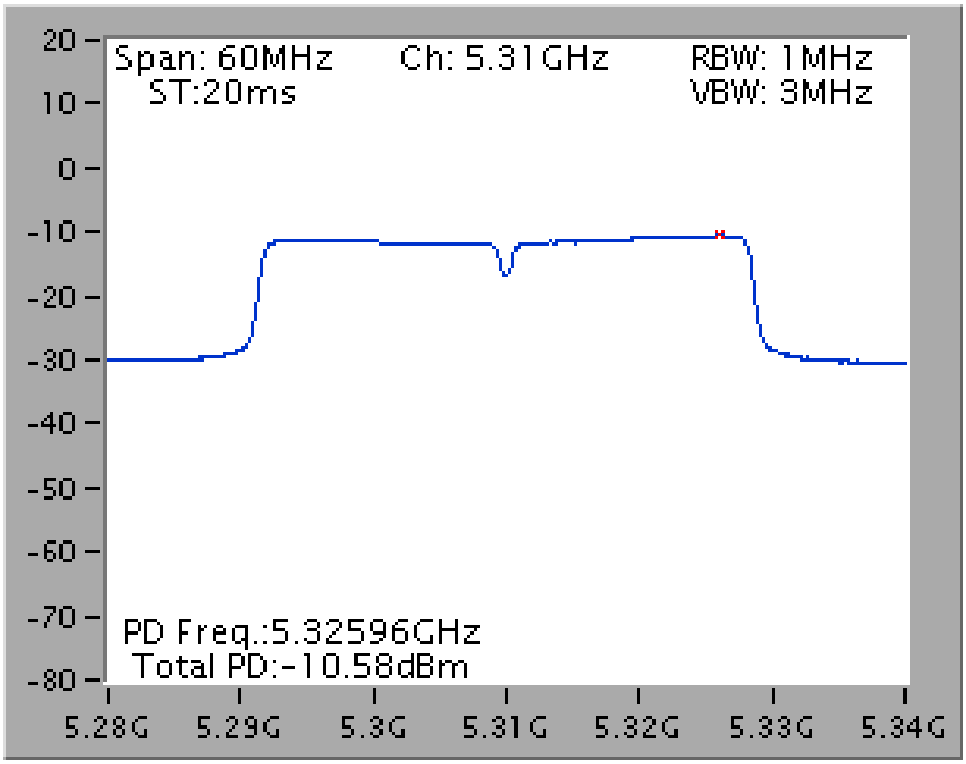
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1+ Chain 2 + Chain 3 / 5310 MHz (3TX)



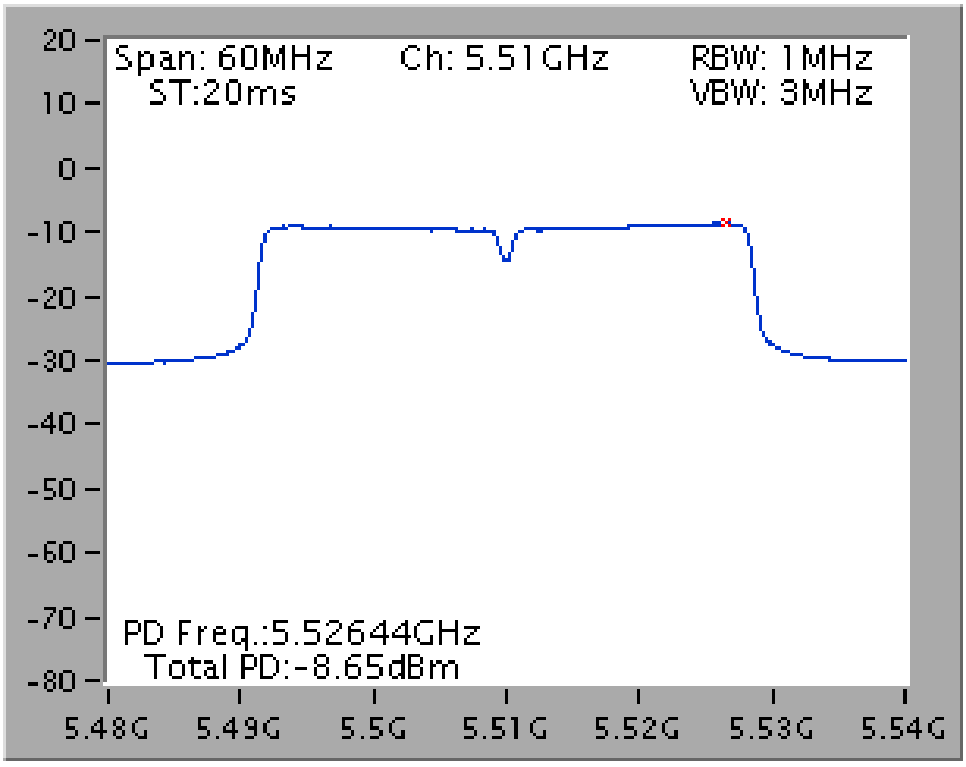
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1+ Chain 2 + Chain 3 / 5550 MHz (3TX)



Power Density Plot on Configuration IEEE 802.11n MCS16 40MHz / Chain 1+ Chain 2 + Chain 3 / 5310 MHz (3TX)



Power Density Plot on Configuration IEEE 802.11n MCS16 40MHz / Chain 1+ Chain 2 + Chain 3 / 5510 MHz (3TX)



Temperature	25°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	IEEE 802.11n
Test Date	May 23, 2012	Test Mode	Mode 4 (Ant. 9 Yagi antenna / 8dBi)

1TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	8.76	9.00	Complies
60	5300 MHz	4.29	9.00	Complies
64	5320 MHz	-1.12	9.00	Complies
100	5500 MHz	-2.17	9.00	Complies
116	5580 MHz	8.70	9.00	Complies
140	5700 MHz	-3.19	9.00	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	1.29	9.00	Complies
62	5310 MHz	-6.35	9.00	Complies
102	5510MHz	-6.60	9.00	Complies
110	5550 MHz	3.49	9.00	Complies
134	5670 MHz	0.48	9.00	Complies

2TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	1.38	5.99	Complies
60	5300 MHz	-9.31	5.99	Complies
64	5320 MHz	-9.11	5.99	Complies
100	5500 MHz	-4.60	5.99	Complies
116	5580 MHz	5.64	5.99	Complies
140	5700 MHz	-8.25	5.99	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.01dBi > 6dBi, so the Band 2-3 power density limit =11 - (11.01dBi -6)=5.99dBm.

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	-1.31	5.99	Complies
62	5310 MHz	-6.16	5.99	Complies
102	5510MHz	-7.82	5.99	Complies
110	5550 MHz	-7.49	5.99	Complies
134	5670 MHz	-8.53	5.99	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11.01dBi > 6dBi, so the Band 2-3 power density limit =11 - (11.01dBi -6)=5.99dBm.

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	1.95	9.00	Complies
60	5300 MHz	-9.32	9.00	Complies
64	5320 MHz	-9.18	9.00	Complies
100	5500 MHz	-4.42	9.00	Complies
116	5580 MHz	8.76	9.00	Complies
140	5700 MHz	-8.04	9.00	Complies

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	-0.48	9.00	Complies
62	5310 MHz	-5.31	9.00	Complies
102	5510MHz	-6.78	9.00	Complies
110	5550 MHz	-6.40	9.00	Complies
134	5670 MHz	-8.77	9.00	Complies

3TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	0.98	4.23	Complies
60	5300 MHz	-9.04	4.23	Complies
64	5320 MHz	-8.74	4.23	Complies
100	5500 MHz	-4.38	4.23	Complies
116	5580 MHz	3.88	4.23	Complies
140	5700 MHz	-8.46	4.23	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =12.77dBi > 6dBi, so the Band 2-3 power density limit =11 - (12.77dBi -6)=4.23dBm.

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	-2.76	4.23	Complies
62	5310 MHz	-5.12	4.23	Complies
102	5510MHz	-6.78	4.23	Complies
110	5550 MHz	-7.10	4.23	Complies
134	5670 MHz	-9.46	4.23	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =12.77dBi > 6dBi, so the Band 2-3 power density limit =11 - (12.77dBi -6)=4.23dBm.

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	1.27	6.00	Complies
60	5300 MHz	-9.58	6.00	Complies
64	5320 MHz	-8.82	6.00	Complies
100	5500 MHz	-4.03	6.00	Complies
116	5580 MHz	5.56	6.00	Complies
140	5700 MHz	-9.44	6.00	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11dBi > 6dBi, so the Band 2-3 power density limit =11 - (11dBi -6)=6.00dBm.

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	-4.56	6.00	Complies
62	5310 MHz	-4.23	6.00	Complies
102	5510MHz	-6.68	6.00	Complies
110	5550 MHz	-6.48	6.00	Complies
134	5670 MHz	-9.15	6.00	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =11dBi > 6dBi, so the Band 2-3 power density limit =11 - (11dBi -6)=6.00dBm.

Configuration IEEE 802.11n MCS16 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	2.11	9.00	Complies
60	5300 MHz	-7.76	9.00	Complies
64	5320 MHz	-7.55	9.00	Complies
100	5500 MHz	-4.11	9.00	Complies
116	5580 MHz	8.49	9.00	Complies
140	5700 MHz	-9.98	9.00	Complies

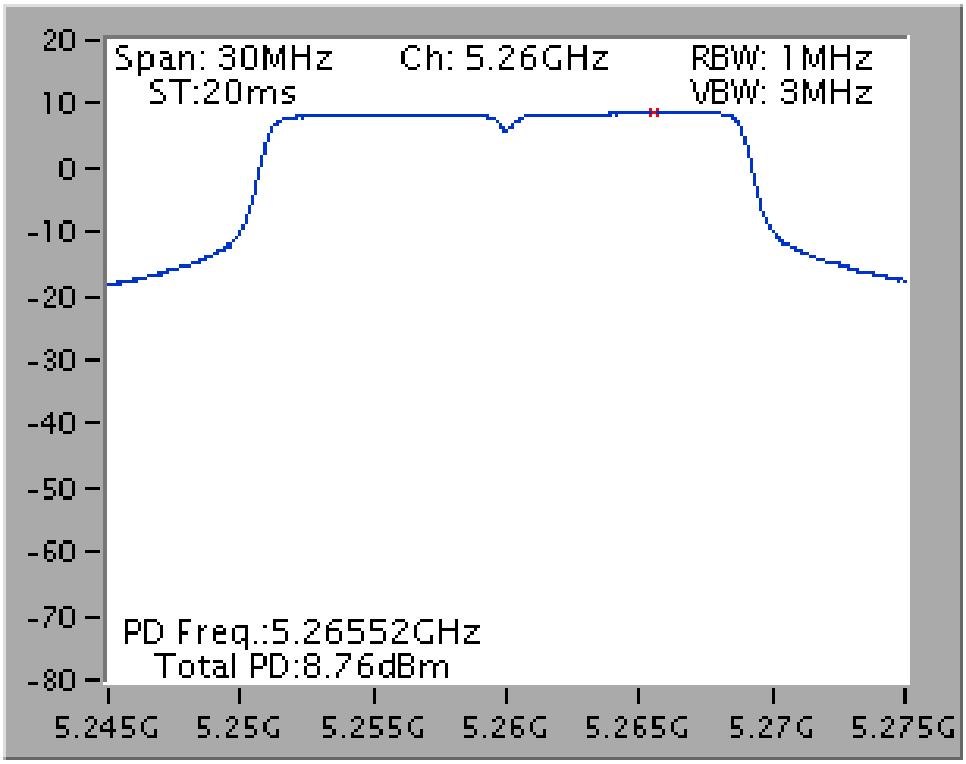
Configuration IEEE 802.11n MCS16 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	-1.92	9.00	Complies
62	5310 MHz	-3.62	9.00	Complies
102	5510MHz	-6.61	9.00	Complies
110	5550 MHz	-7.39	9.00	Complies
134	5670 MHz	-8.06	9.00	Complies

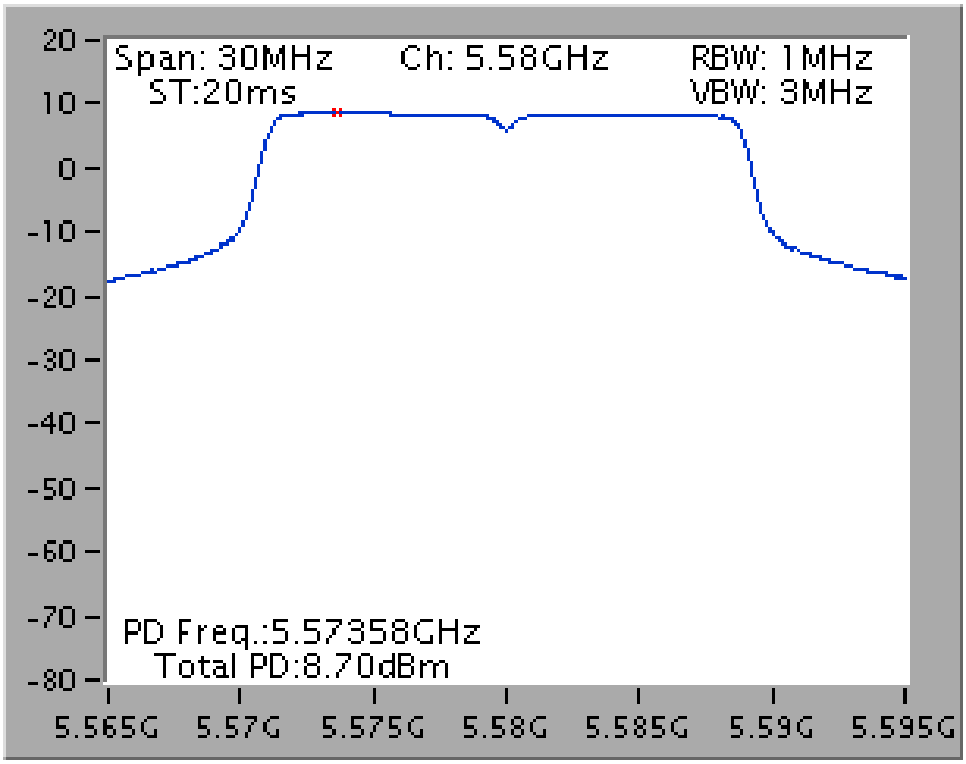
Note: All the test values were listed in the report.

For plots, only the channel with maximum results was shown.

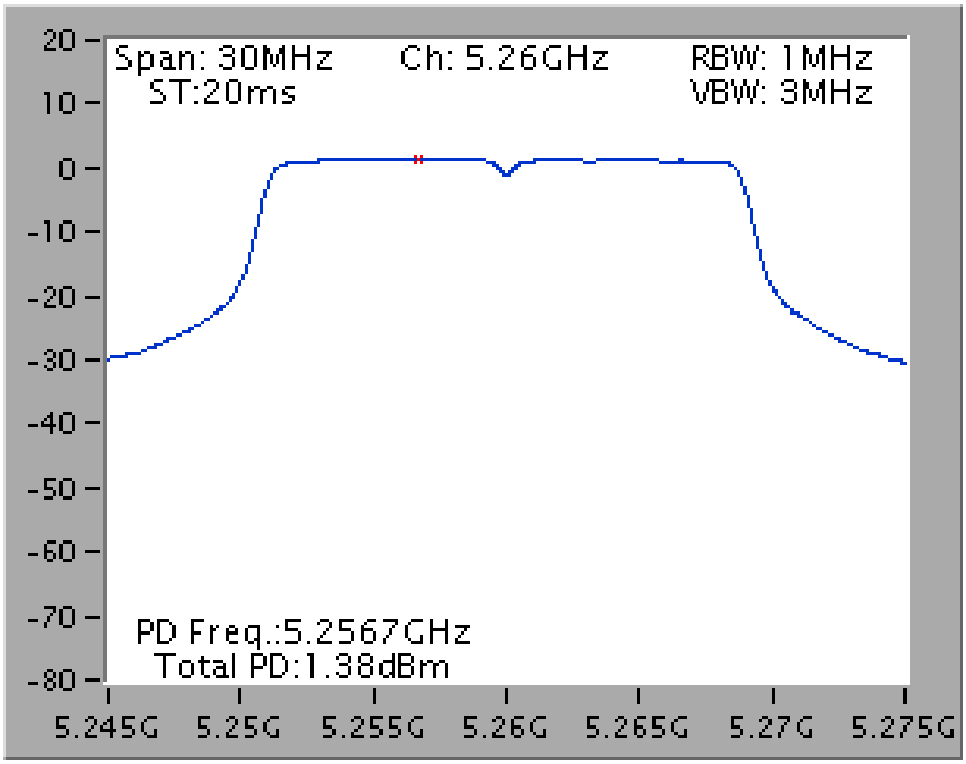
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 / 5260 MHz (1TX)



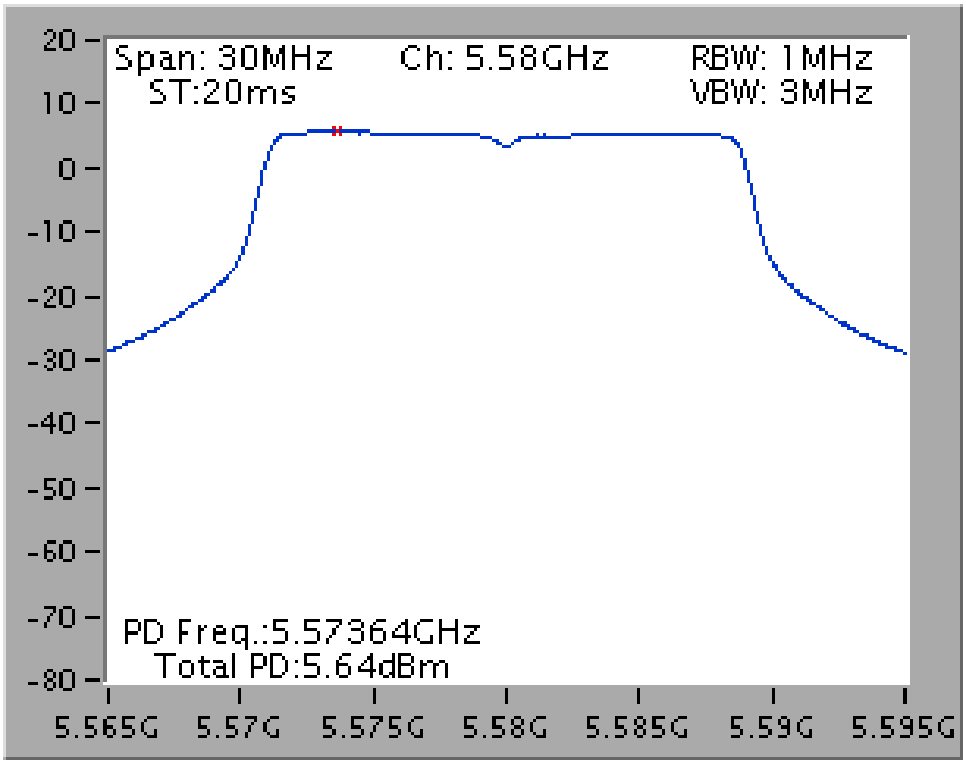
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 / 5580 MHz (1TX)



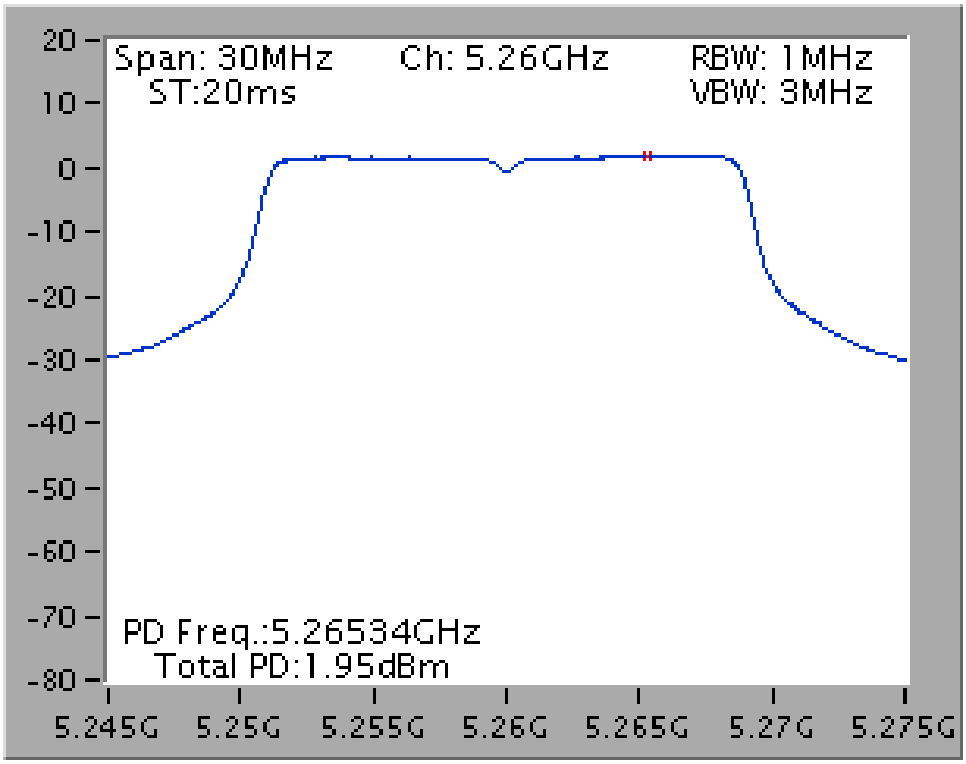
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1+ Chain 2 / 5260 MHz (2TX)



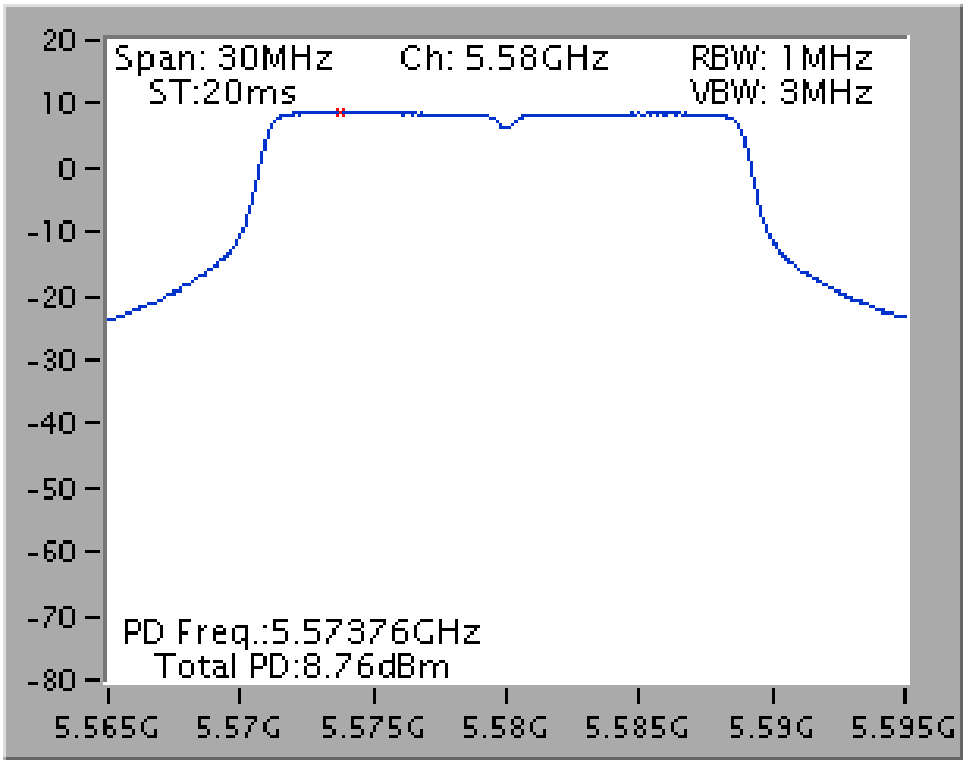
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1+ Chain 2 / 5580 MHz (2TX)



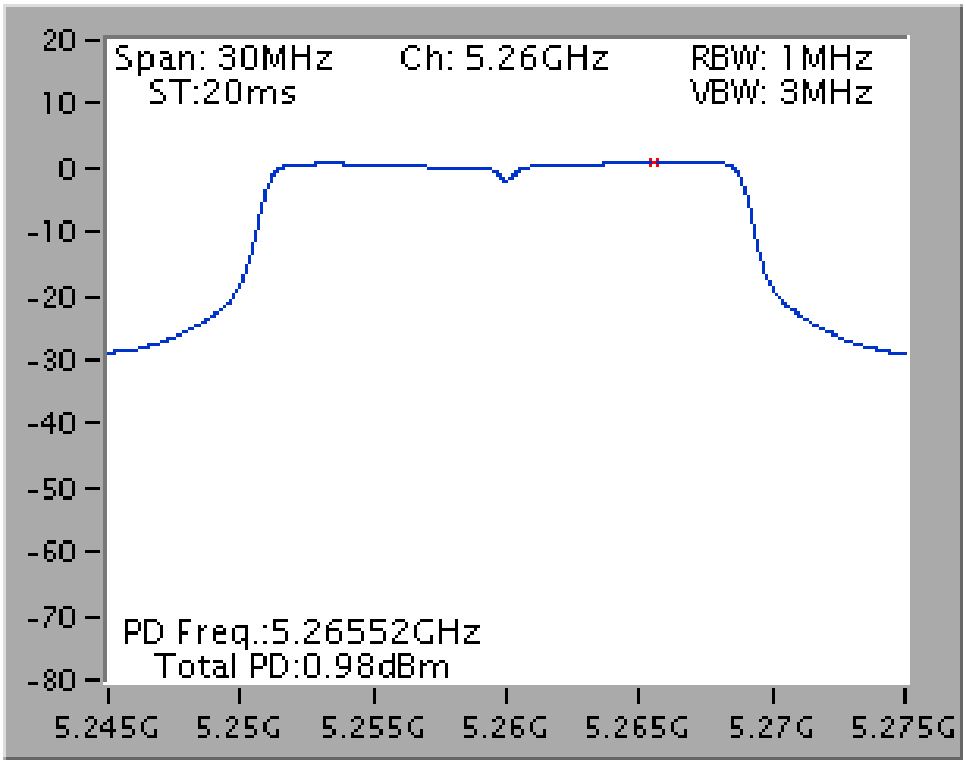
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1+ Chain 2 / 5260 MHz (2TX)



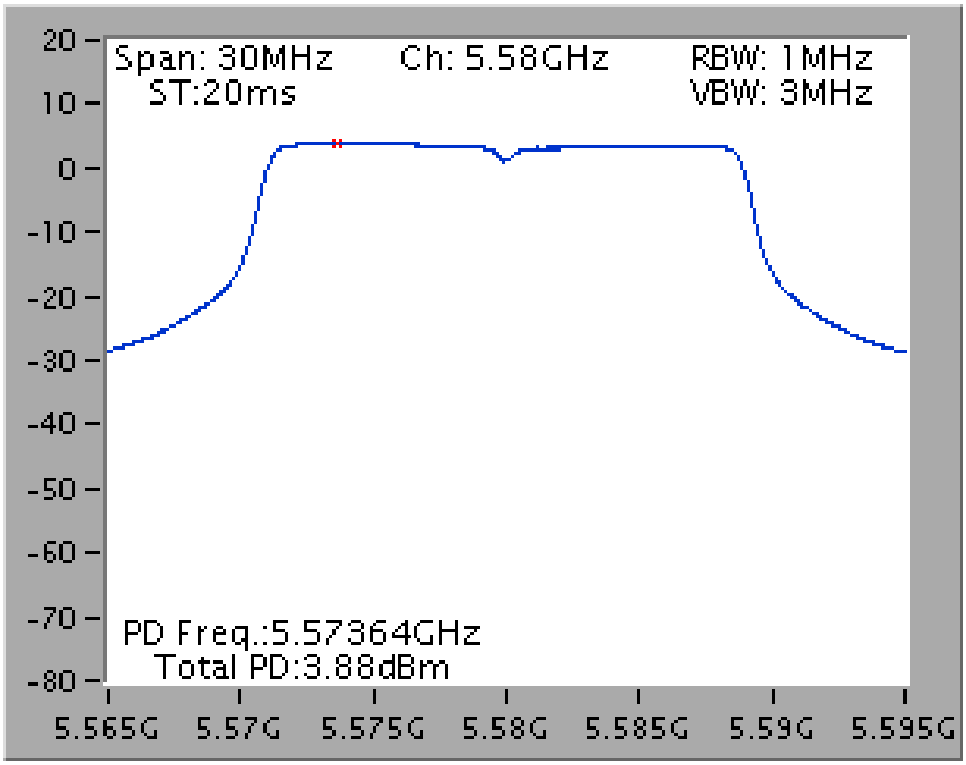
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1+ Chain 2 / 5580 MHz (2TX)



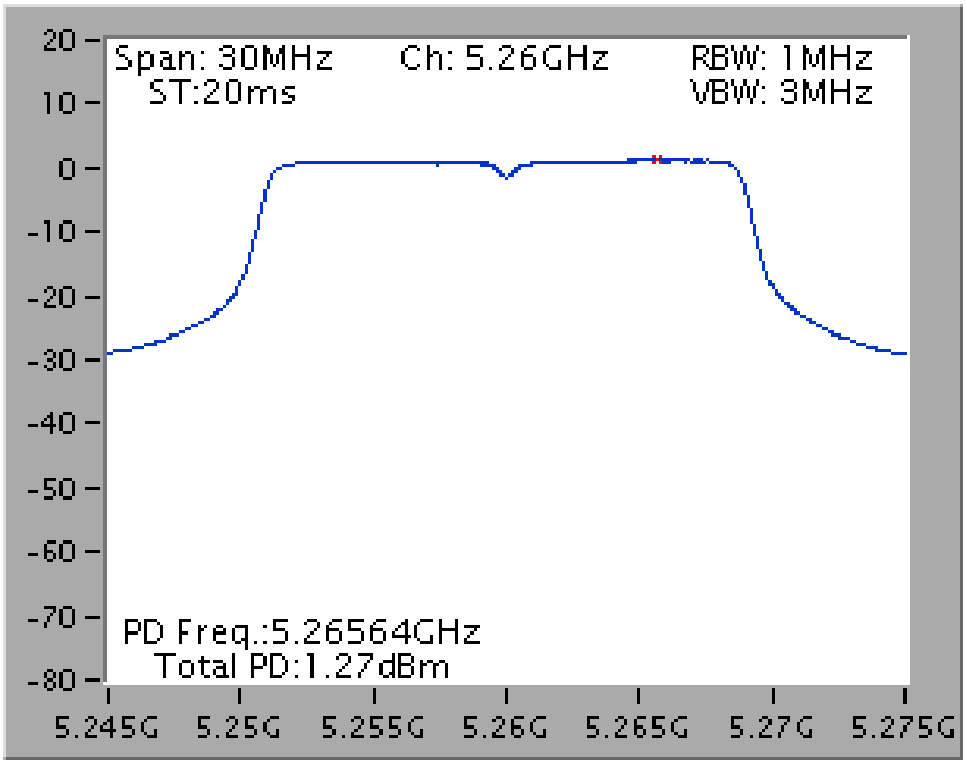
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1+ Chain 2 + Chain 3 / 5260 MHz (3TX)



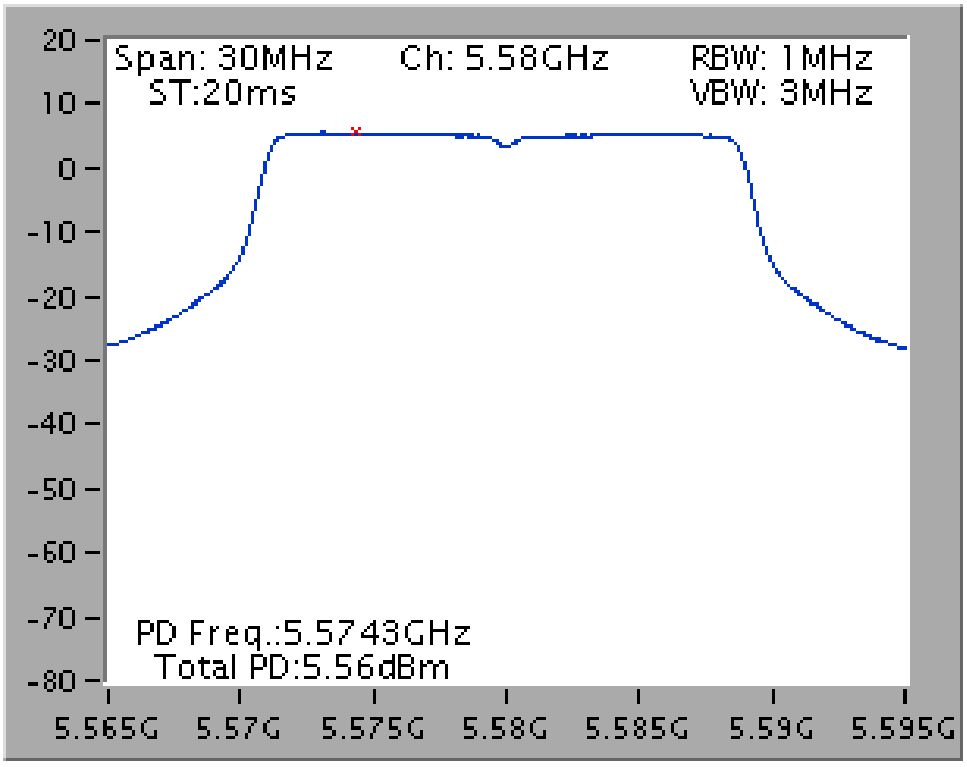
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1+ Chain 2 + Chain 3 / 5580 MHz (3TX)



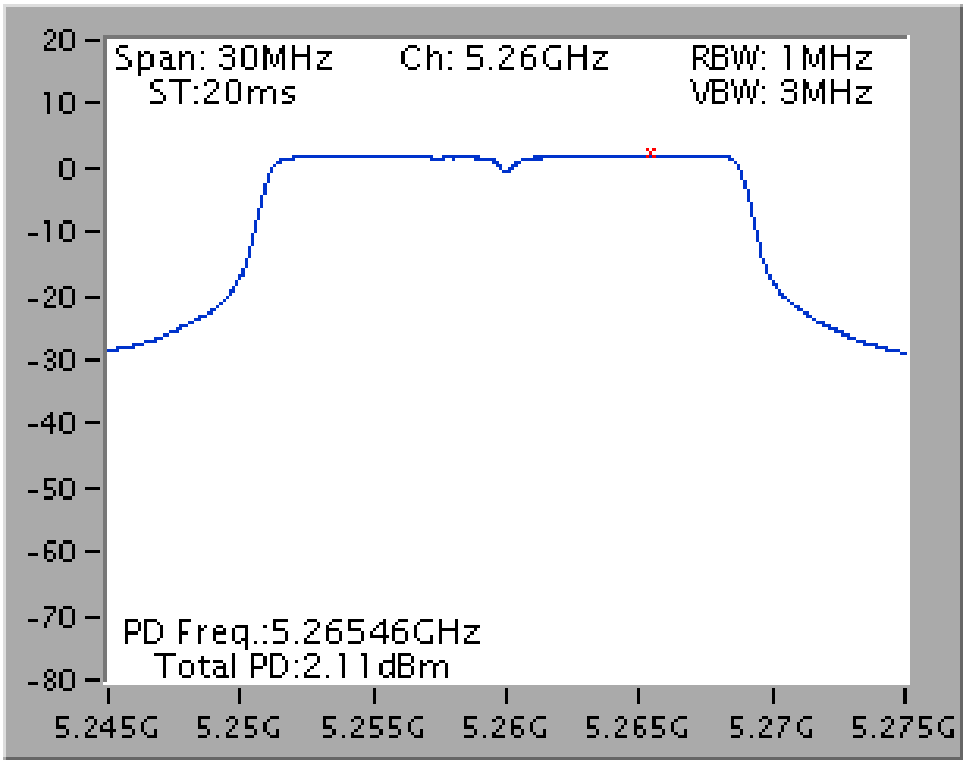
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1+ Chain 2 + Chain 3 / 5260 MHz (3TX)



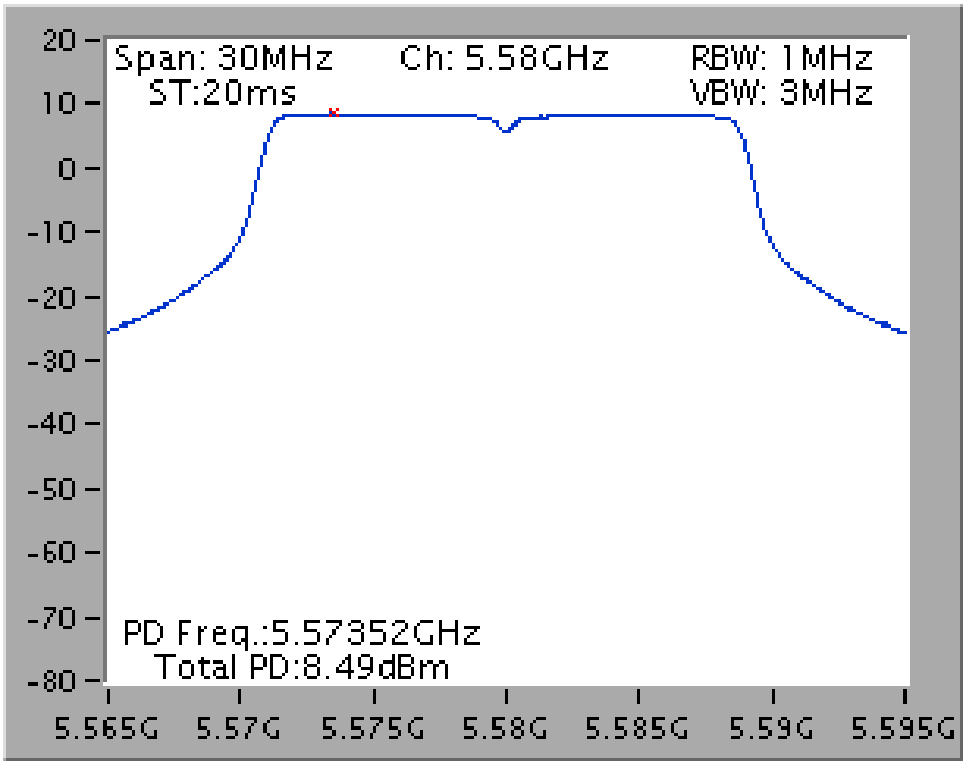
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1+ Chain 2 + Chain 3 / 5580 MHz (3TX)



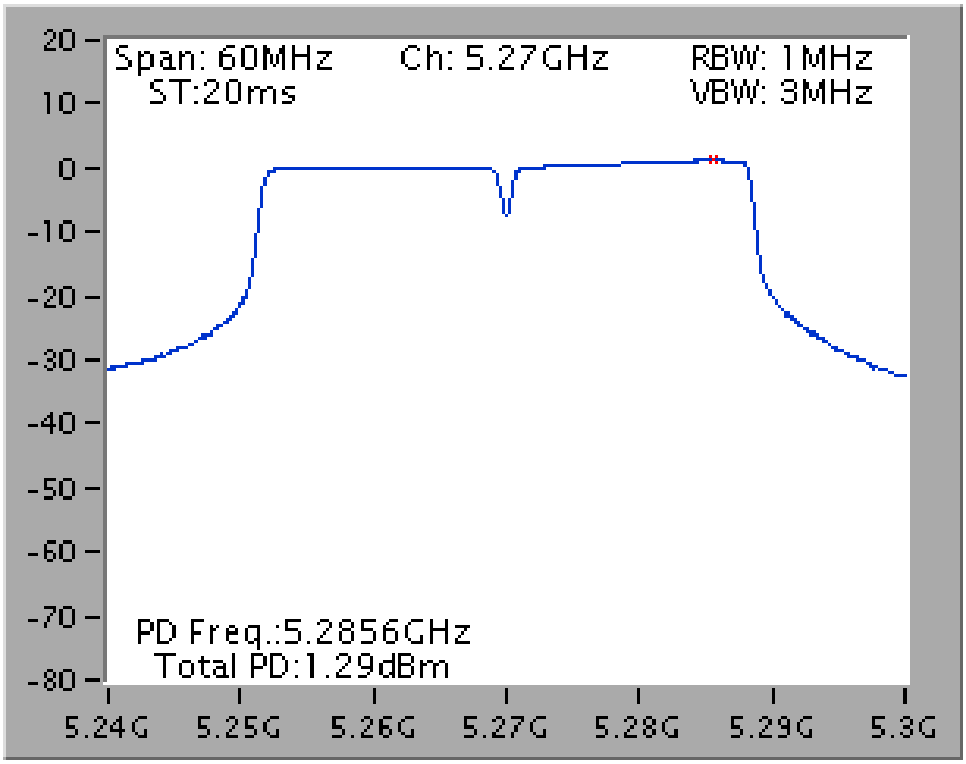
Power Density Plot on Configuration IEEE 802.11n MCS16 20MHz / Chain 1+ Chain 2 + Chain 3 / 5260 MHz (3TX)



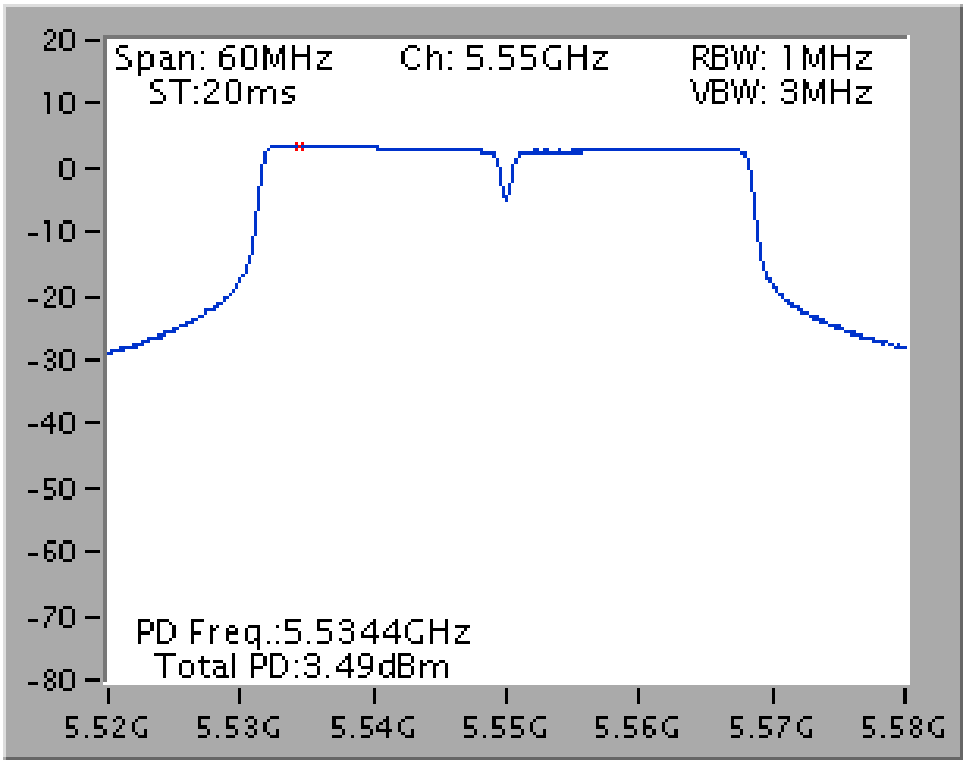
Power Density Plot on Configuration IEEE 802.11n MCS16 20MHz / Chain 1+ Chain 2 + Chain 3 / 5580 MHz (3TX)



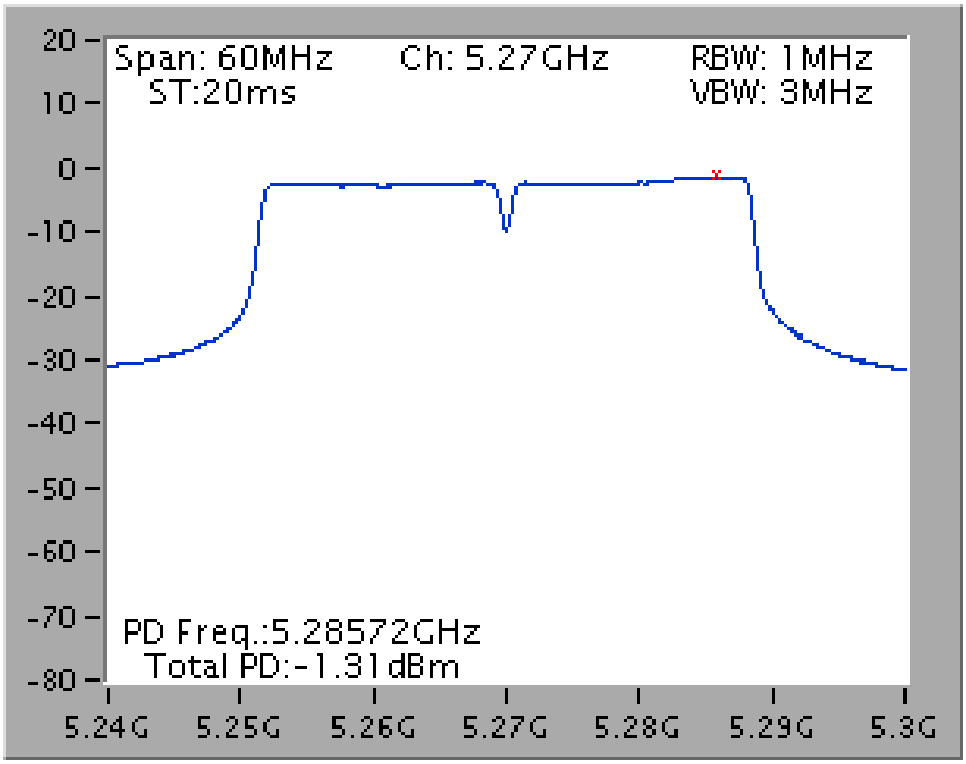
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 / 5270 MHz (1TX)



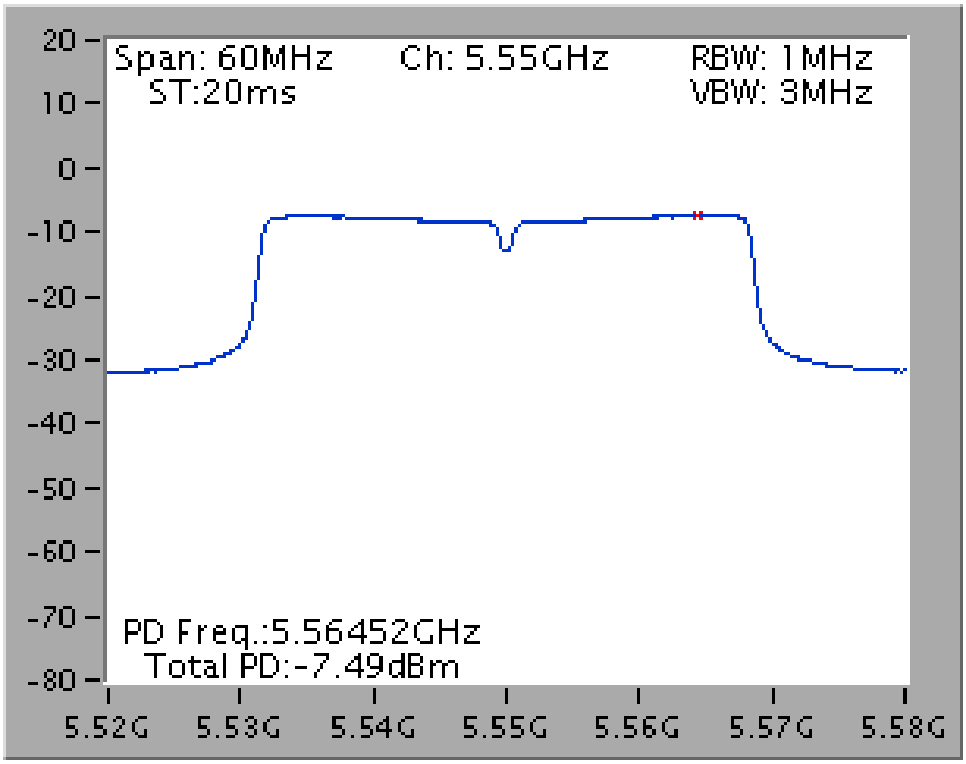
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 / 5550 MHz (1TX)



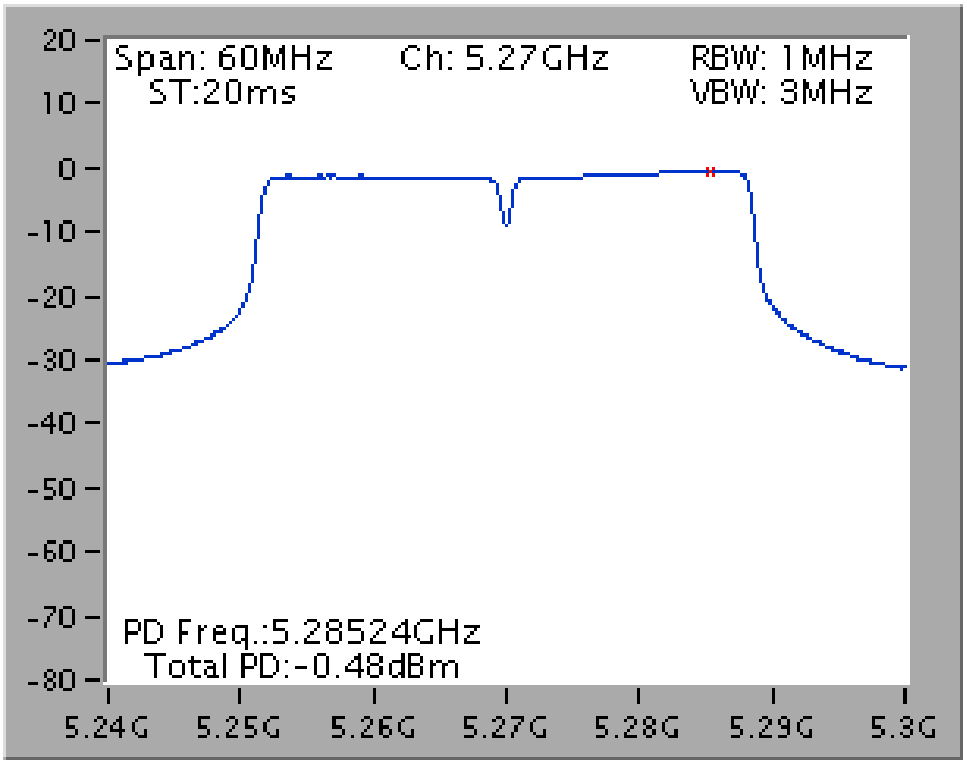
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1+ Chain 2 / 5270 MHz (2TX)



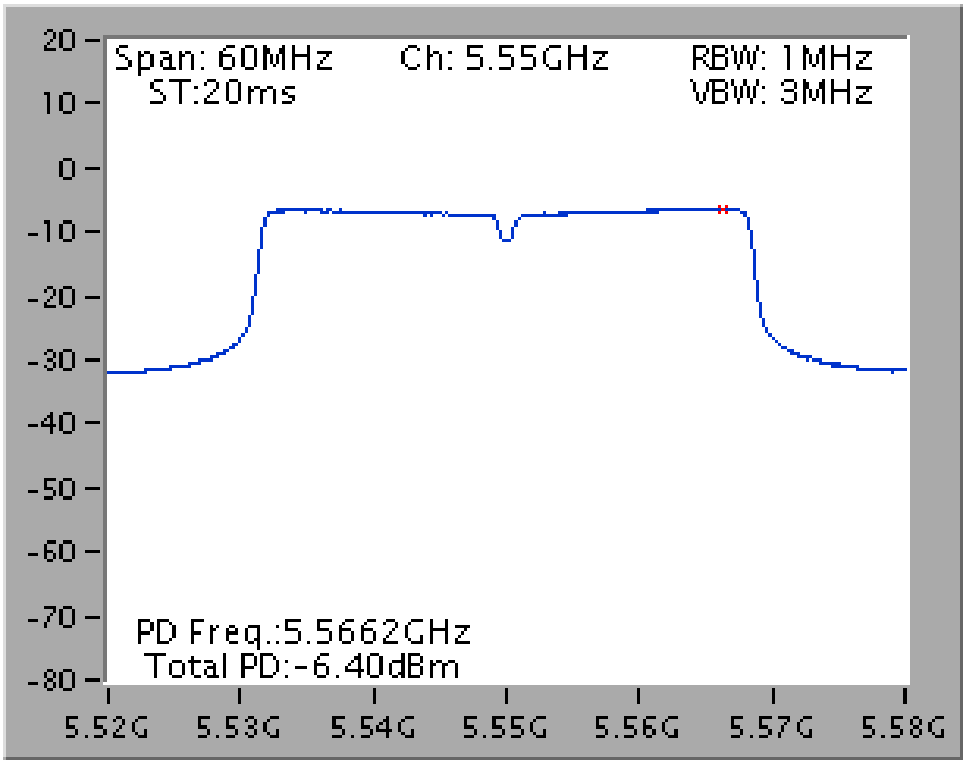
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1+ Chain 2 / 5550 MHz (2TX)



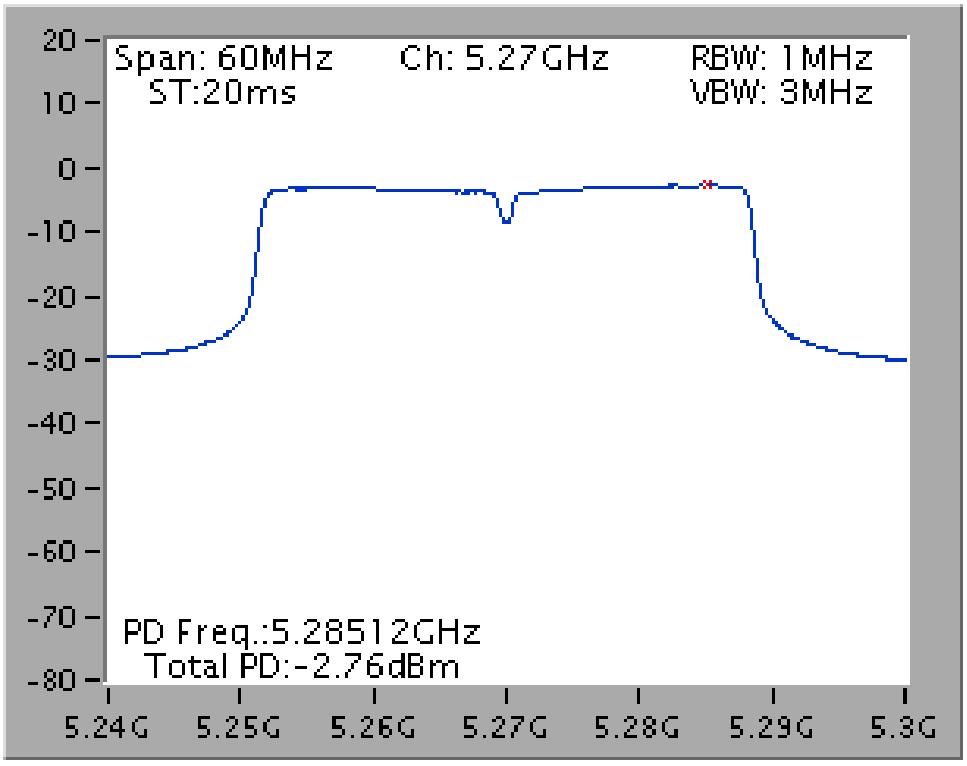
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1+ Chain 2 / 5270 MHz (2TX)



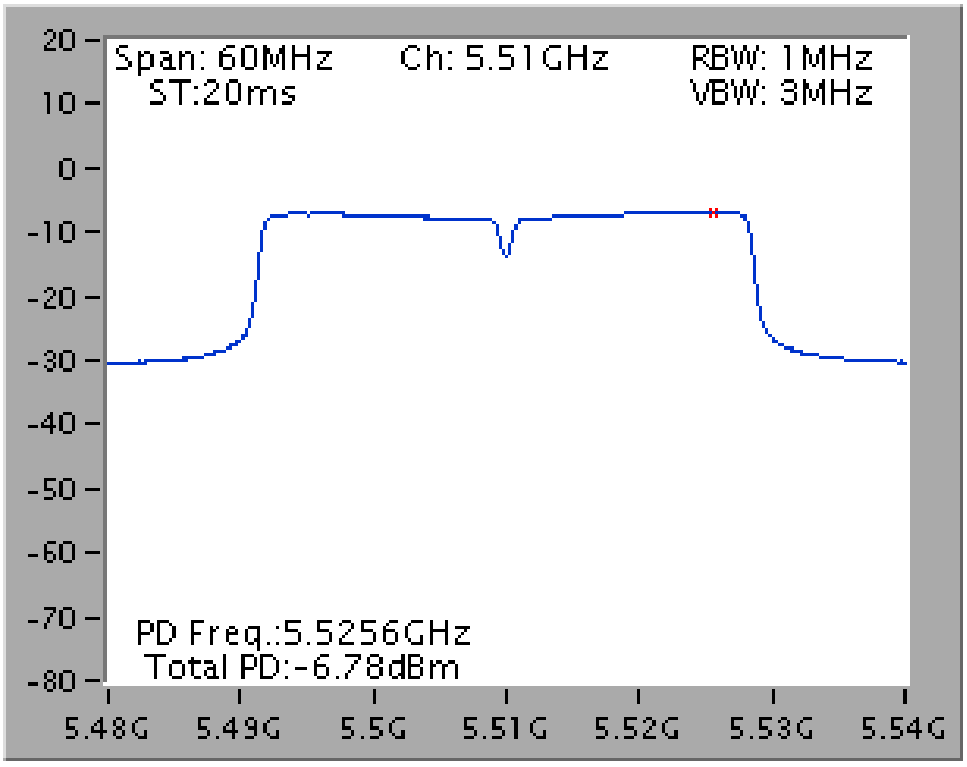
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1+ Chain 2 / 5550 MHz (2TX)



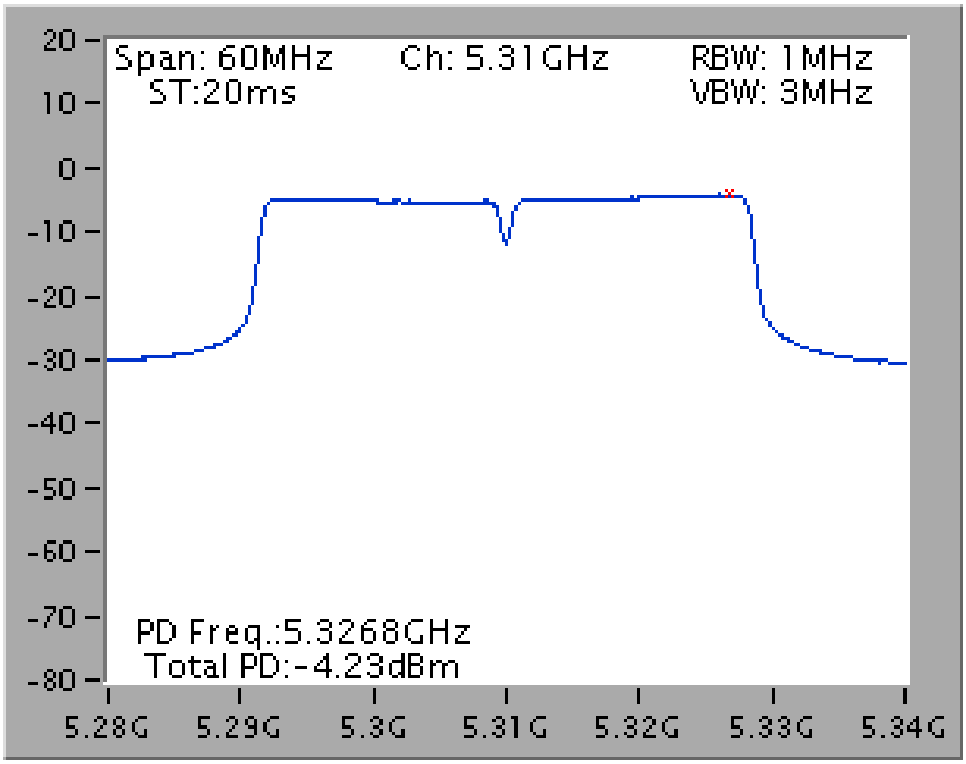
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1+ Chain 2 + Chain 3 / 5270 MHz (3TX)



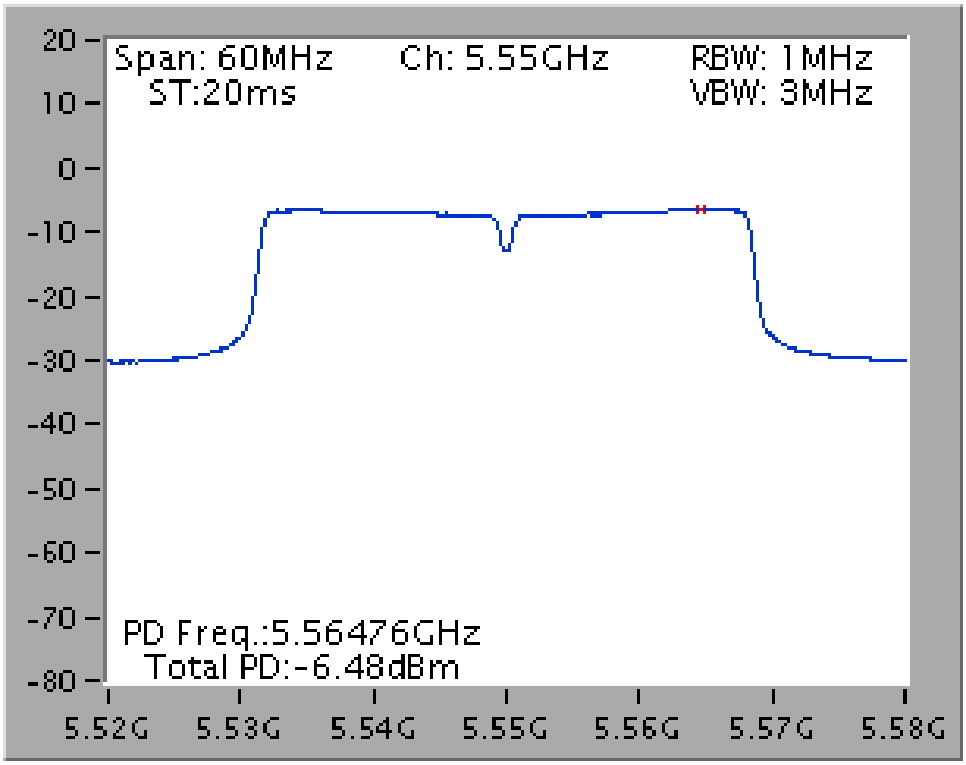
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1+ Chain 2 + Chain 3 / 5510 MHz (3TX)



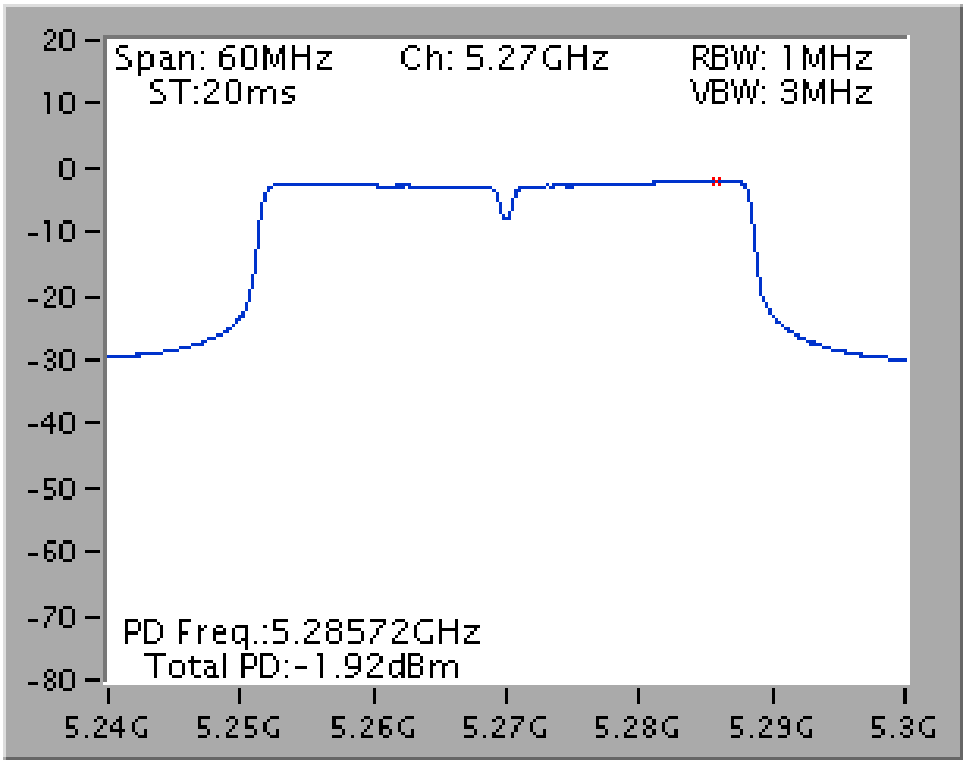
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1+ Chain 2 + Chain 3 / 5310 MHz (3TX)



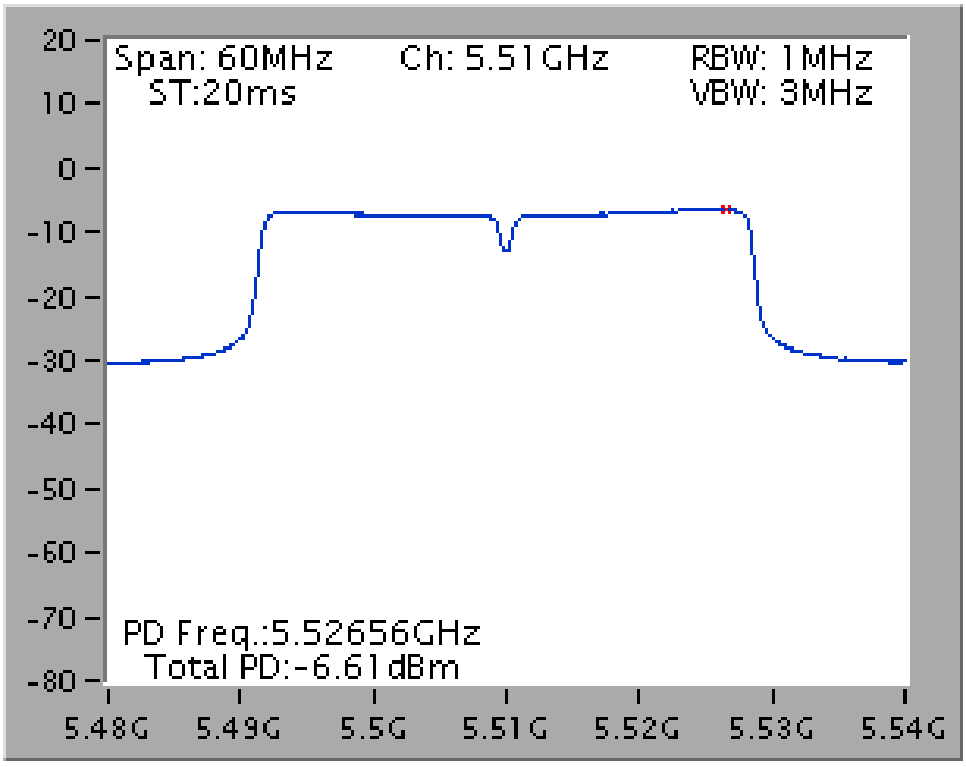
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1+ Chain 2 + Chain 3 / 5550 MHz (3TX)



Power Density Plot on Configuration IEEE 802.11n MCS16 40MHz / Chain 1+ Chain 2 + Chain 3 / 5270 MHz (3TX)



Power Density Plot on Configuration IEEE 802.11n MCS16 40MHz / Chain 1+ Chain 2 + Chain 3 / 5510 MHz (3TX)



Temperature	25°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	IEEE 802.11n
Test Date	May 23, 2012	Test Mode	Mode 5 (Ant. 5 Facade antenna / 2.5dBi)

1TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	8.77	11.00	Complies
60	5300 MHz	8.32	11.00	Complies
64	5320 MHz	3.77	11.00	Complies
100	5500 MHz	3.17	11.00	Complies
116	5580 MHz	9.05	11.00	Complies
140	5700 MHz	0.65	11.00	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1

Channel	Frequency	Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	6.22	11.00	Complies
62	5310 MHz	-1.55	11.00	Complies
102	5510MHz	-3.12	11.00	Complies
110	5550 MHz	5.85	11.00	Complies
134	5670 MHz	0.60	11.00	Complies

2TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	10.38	11.00	Complies
60	5300 MHz	10.75	11.00	Complies
64	5320 MHz	9.40	11.00	Complies
100	5500 MHz	5.83	11.00	Complies
116	5580 MHz	10.08	11.00	Complies
140	5700 MHz	3.89	11.00	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	8.48	11.00	Complies
62	5310 MHz	3.65	11.00	Complies
102	5510MHz	0.96	11.00	Complies
110	5550 MHz	7.80	11.00	Complies
134	5670 MHz	5.44	11.00	Complies

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	10.77	11.00	Complies
60	5300 MHz	10.48	11.00	Complies
64	5320 MHz	8.57	11.00	Complies
100	5500 MHz	5.93	11.00	Complies
116	5580 MHz	10.77	11.00	Complies
140	5700 MHz	4.01	11.00	Complies

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	7.96	11.00	Complies
62	5310 MHz	1.84	11.00	Complies
102	5510MHz	0.54	11.00	Complies
110	5550 MHz	8.36	11.00	Complies
134	5670 MHz	5.15	11.00	Complies

3TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	8.91	9.73	Complies
60	5300 MHz	9.63	9.73	Complies
64	5320 MHz	9.35	9.73	Complies
100	5500 MHz	4.49	9.73	Complies
116	5580 MHz	9.63	9.73	Complies
140	5700 MHz	3.42	9.73	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =7.27dBi > 6dBi, so the Band 2-3 power density limit =11 - (7.27dBi -6)=9.73dBm.

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	6.39	9.73	Complies
62	5310 MHz	3.52	9.73	Complies
102	5510MHz	0.60	9.73	Complies
110	5550 MHz	6.76	9.73	Complies
134	5670 MHz	5.03	9.73	Complies

Note: $\text{Directional gain} = G_{ANT} + 10\log(N)\ \text{dBi}$ =7.27dBi > 6dBi, so the Band 2-3 power density limit =11 - (7.27dBi -6)=9.73dBm.

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
52	5260 MHz	10.53	11.00	Complies
60	5300 MHz	10.72	11.00	Complies
64	5320 MHz	8.81	11.00	Complies
100	5500 MHz	6.12	11.00	Complies
116	5580 MHz	10.97	11.00	Complies
140	5700 MHz	5.26	11.00	Complies

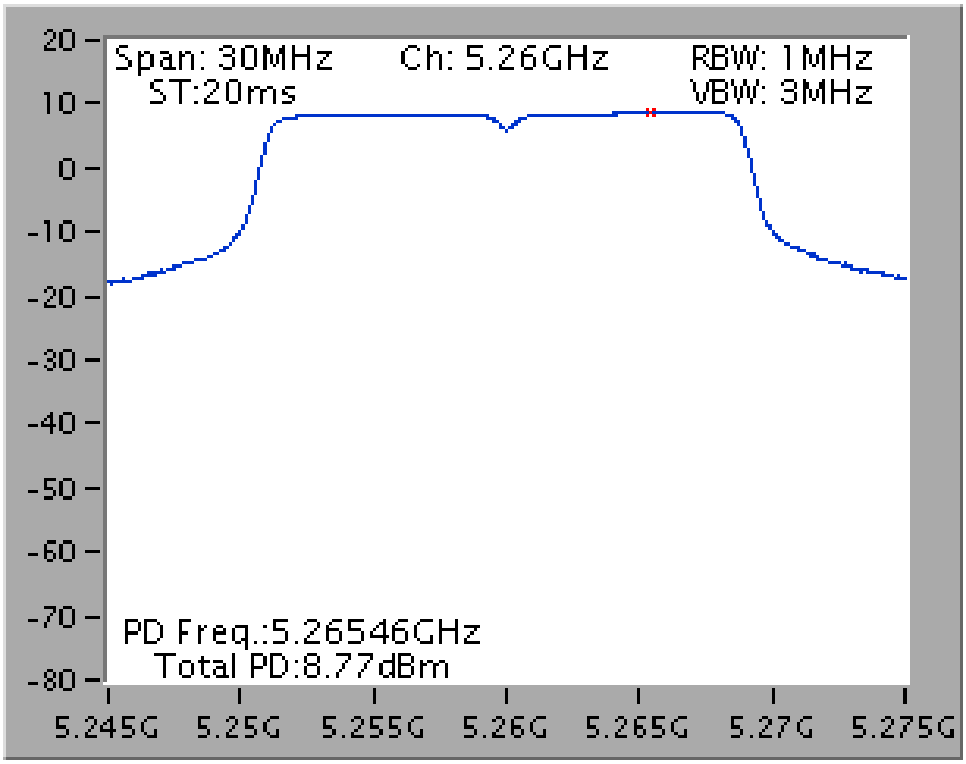
Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Total Power Density (dBm/MHz)	Max. Limit (dBm/MHz)	Result
54	5270 MHz	8.01	11.00	Complies
62	5310 MHz	3.16	11.00	Complies
102	5510MHz	1.86	11.00	Complies
110	5550 MHz	8.06	11.00	Complies
134	5670 MHz	5.73	11.00	Complies

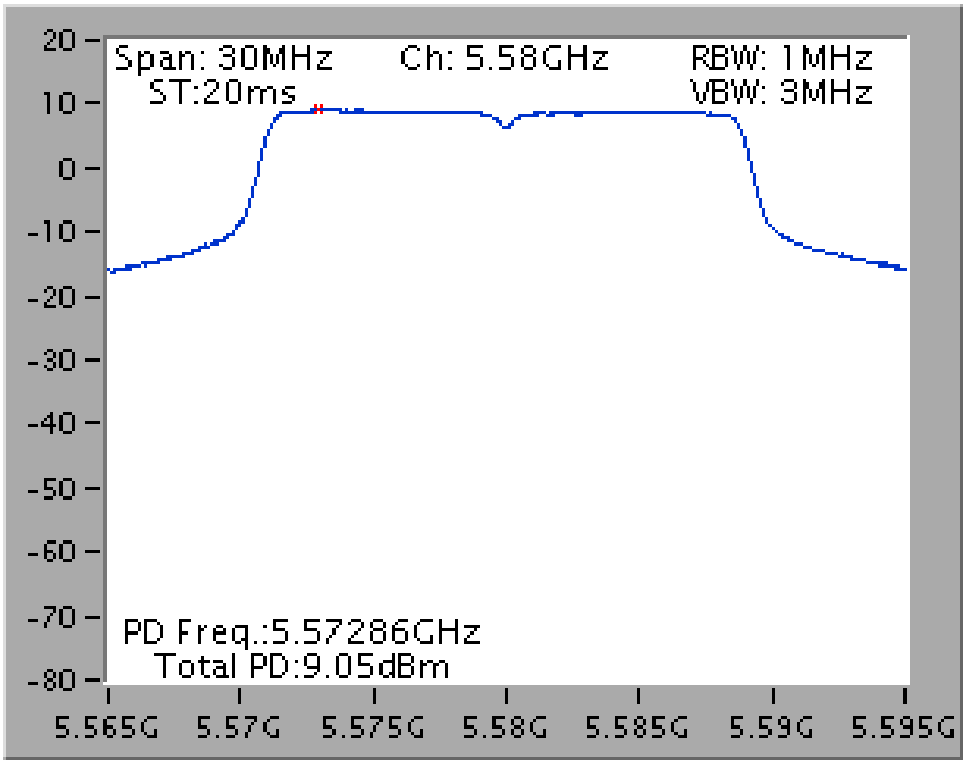
Note: All the test values were listed in the report.

For plots, only the channel with maximum results was shown.

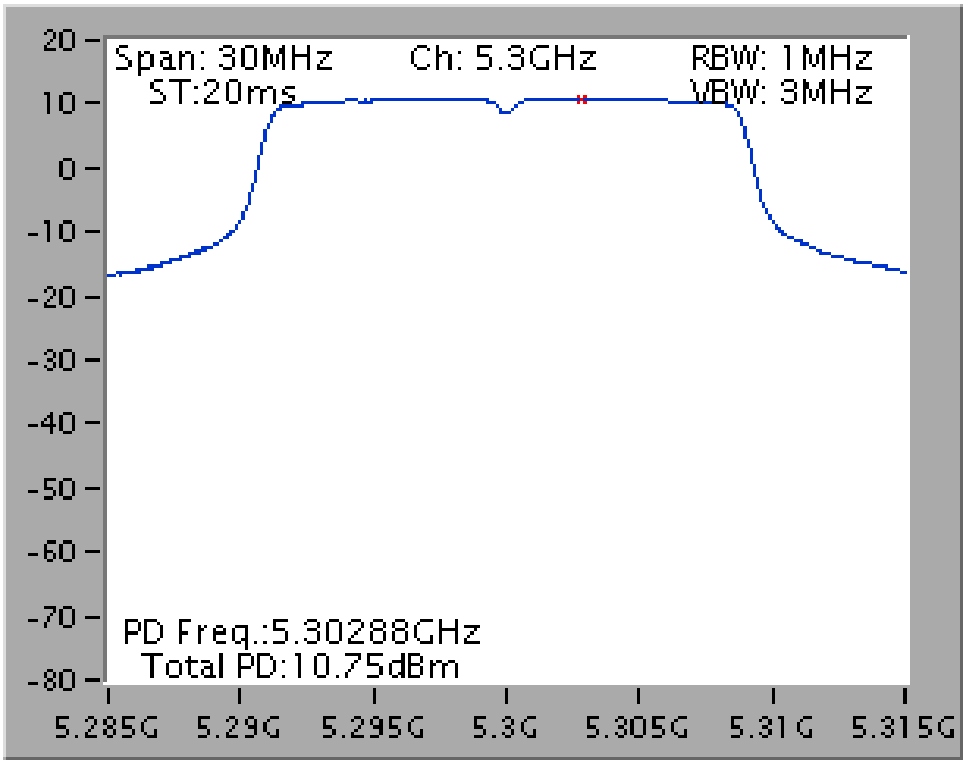
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 / 5260 MHz (1TX)



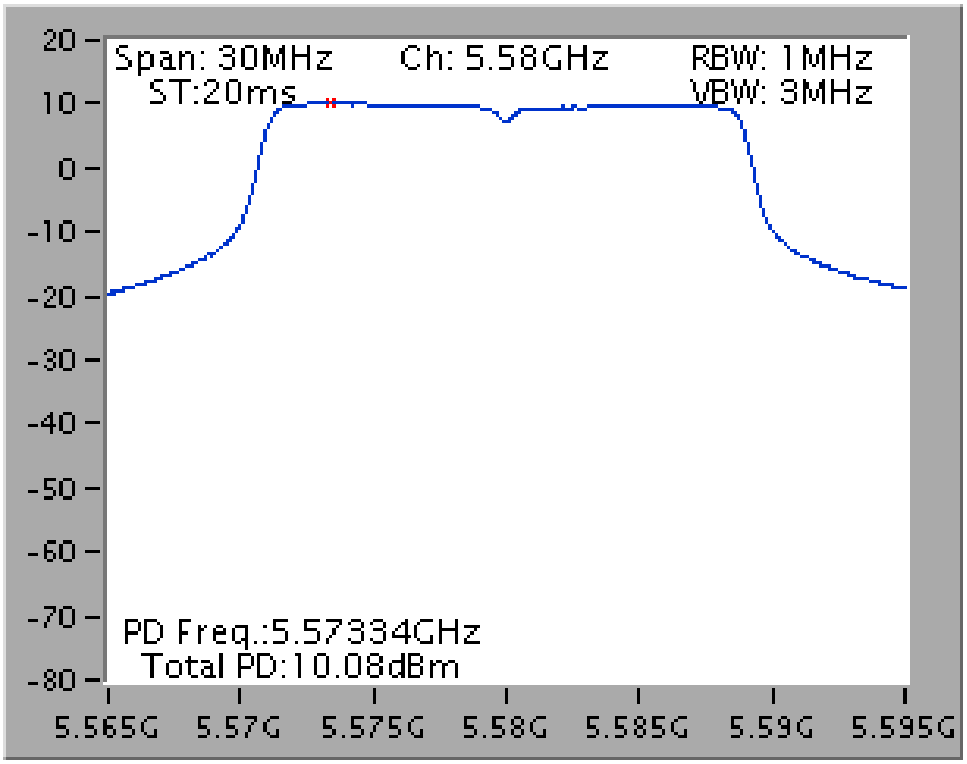
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 / 5580 MHz (1TX)



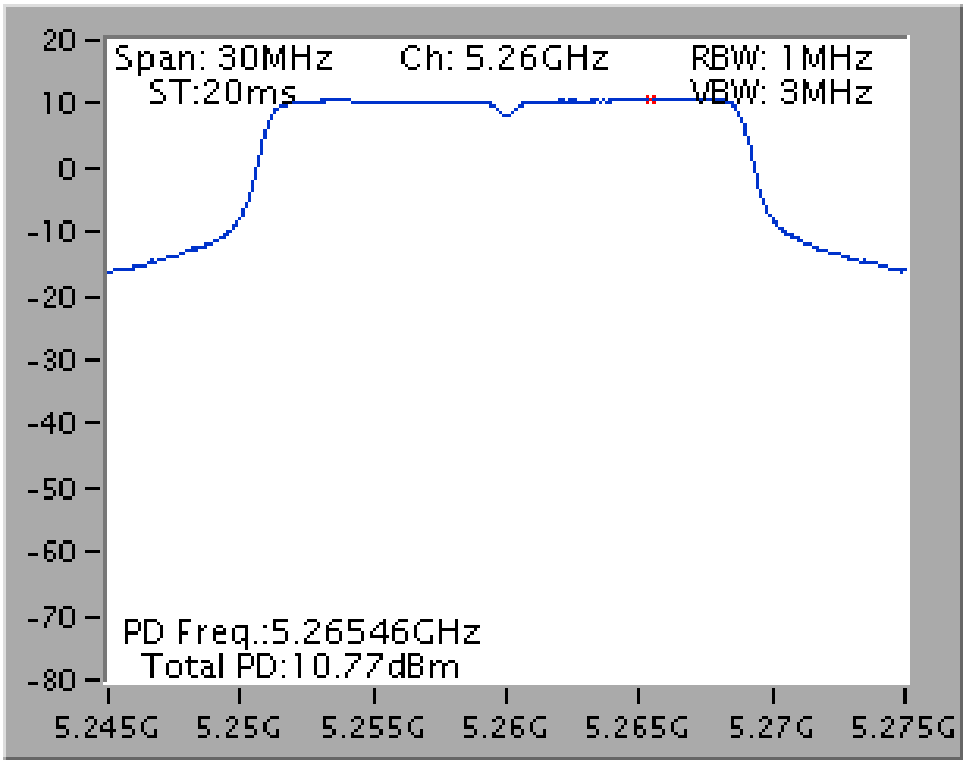
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1+ Chain 2 / 5300 MHz (2TX)



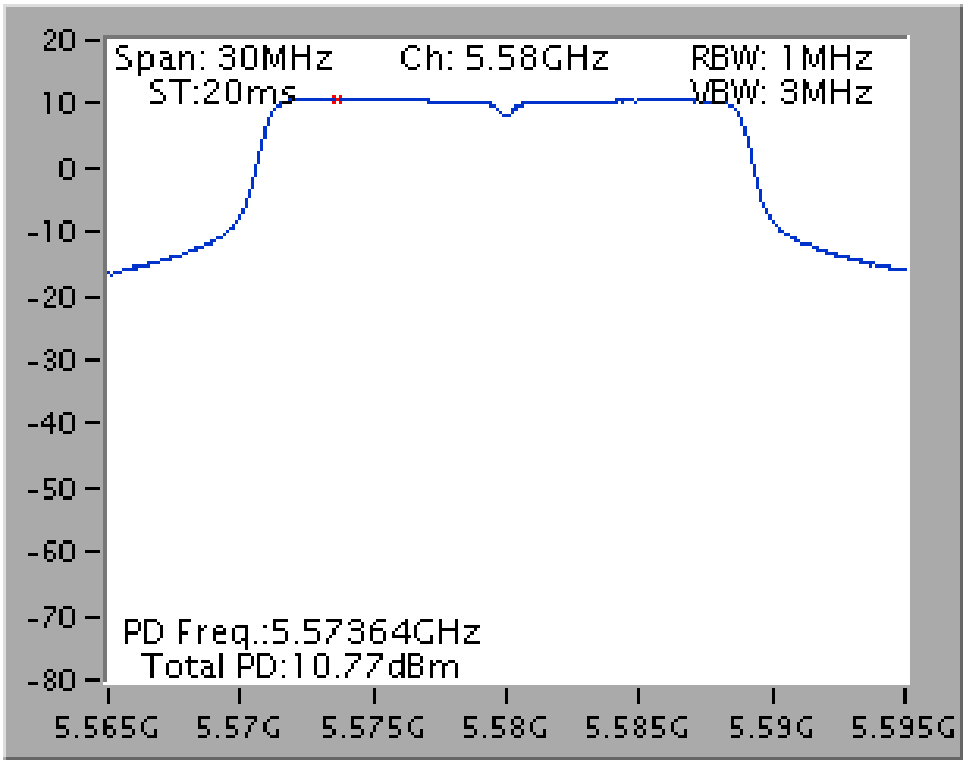
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1+ Chain 2 / 5580 MHz (2TX)



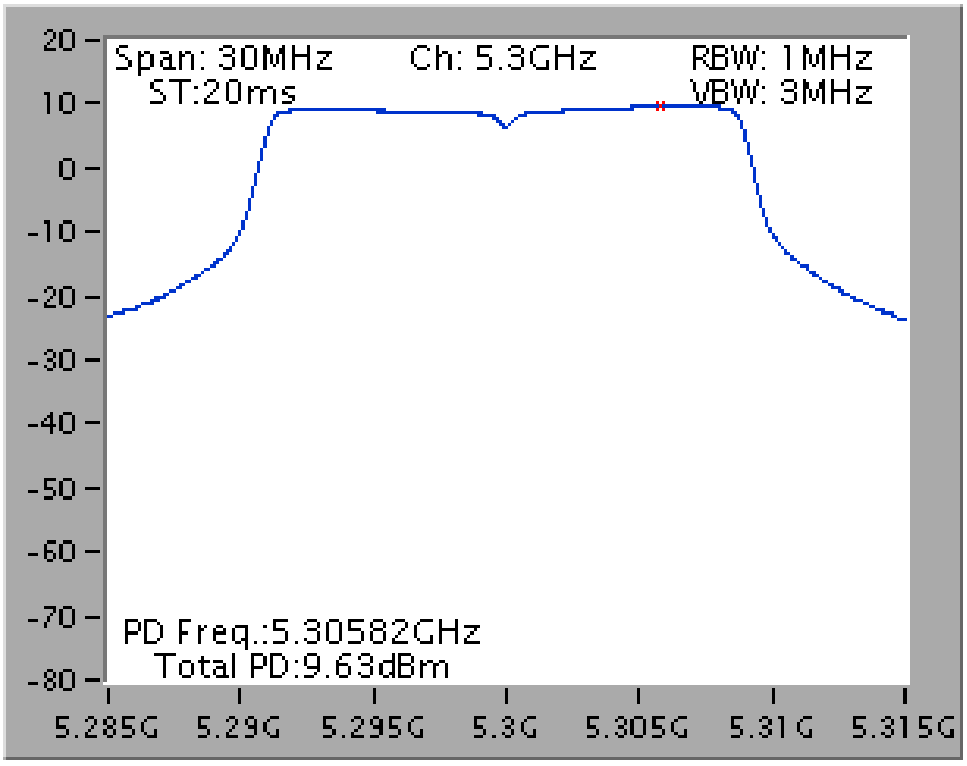
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1+ Chain 2 / 5260 MHz (2TX)



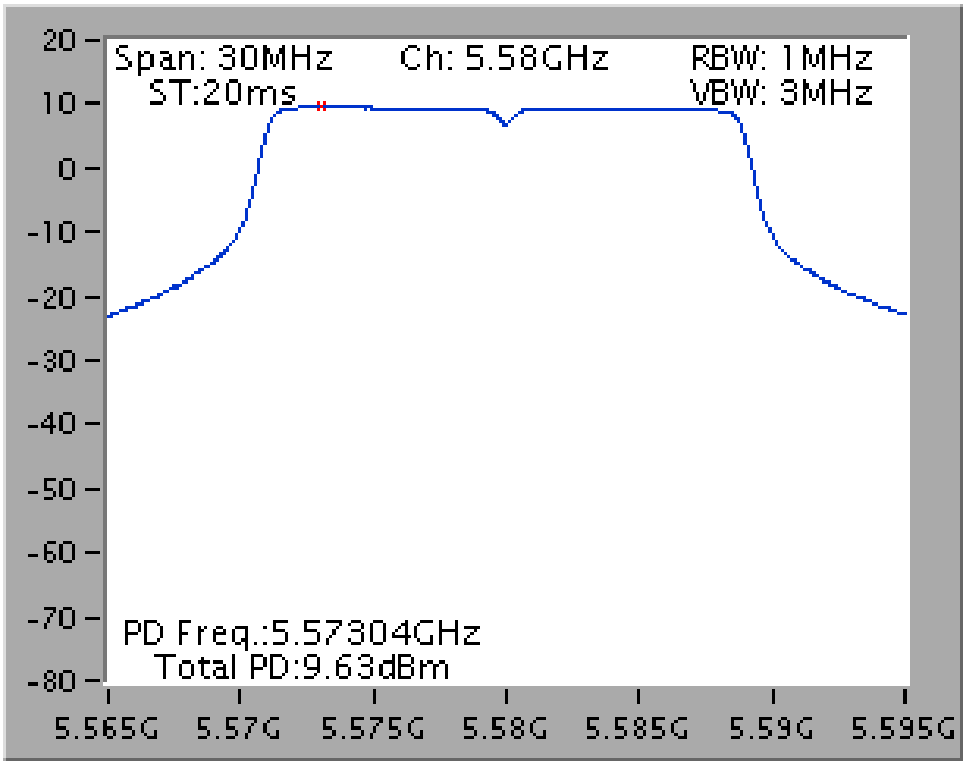
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1+ Chain 2 / 5580 MHz (2TX)



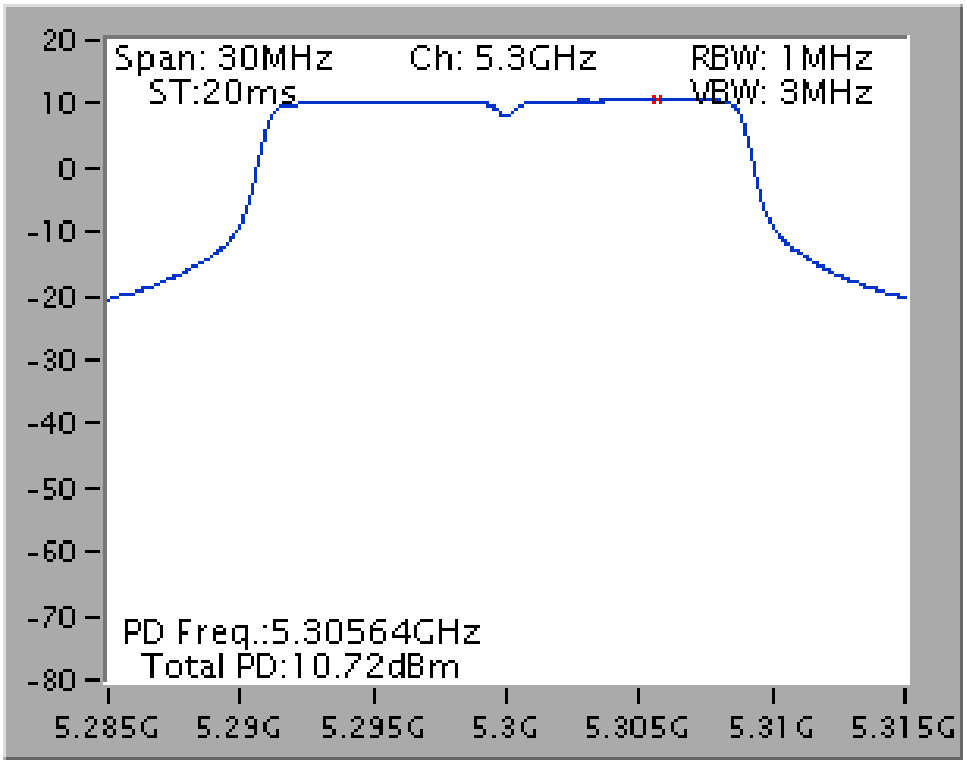
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1+ Chain 2 + Chain 3 / 5300 MHz (3TX)



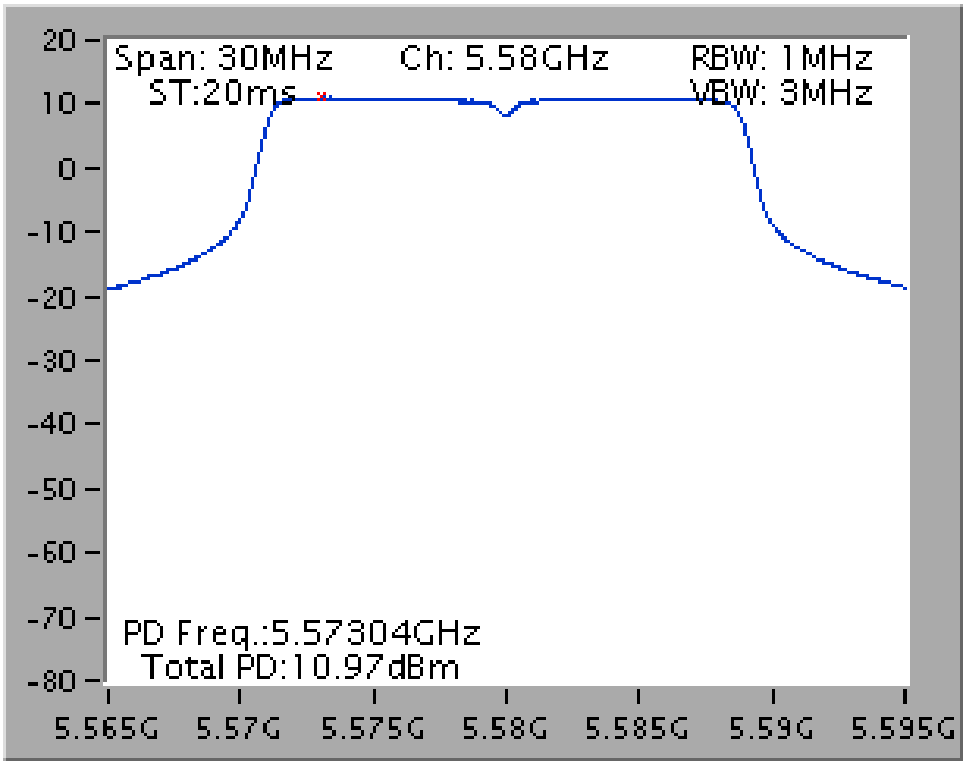
Power Density Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1+ Chain 2 + Chain 3 / 5580 MHz (3TX)



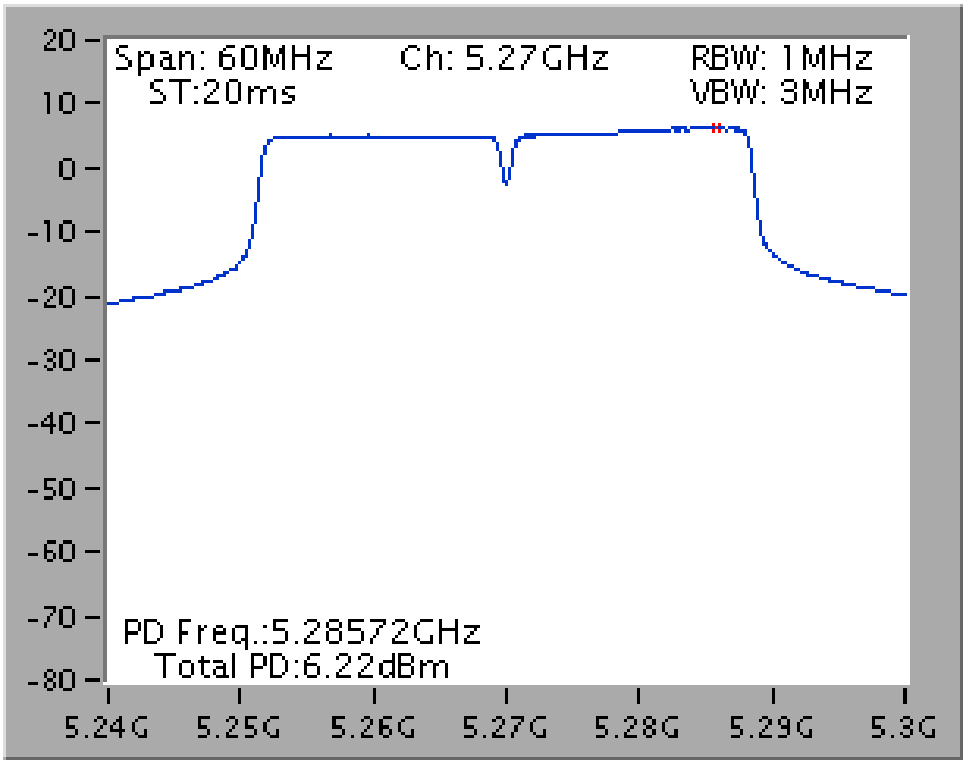
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1+ Chain 2 + Chain 3 / 5300 MHz (3TX)



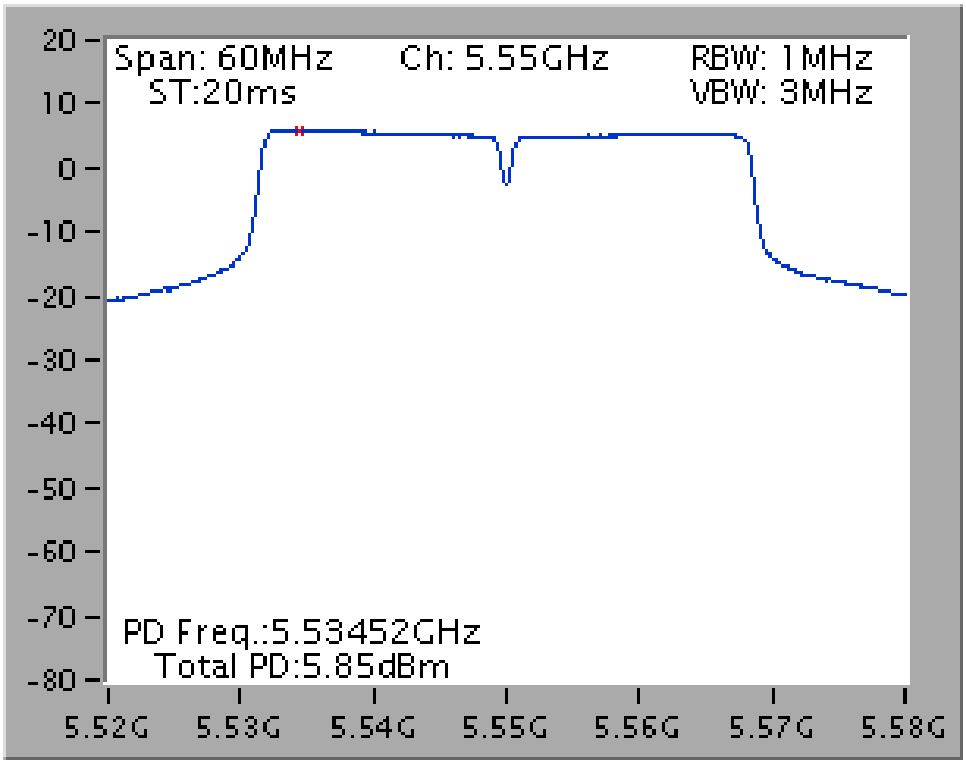
Power Density Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1+ Chain 2 + Chain 3 / 5580 MHz (3TX)



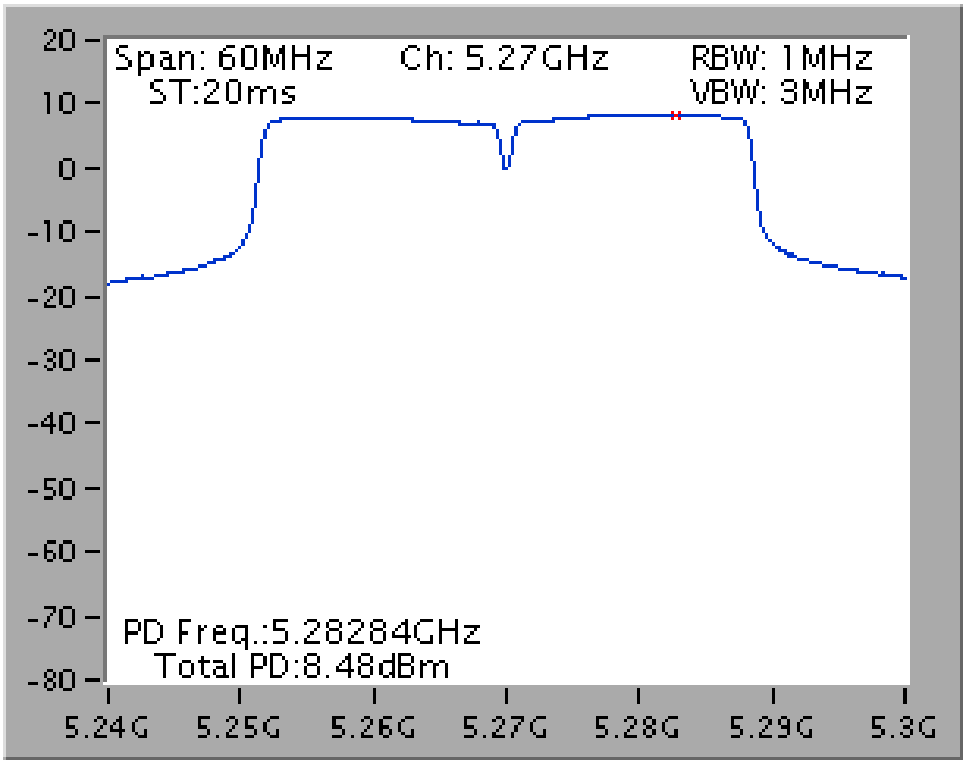
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 / 5270 MHz (1TX)



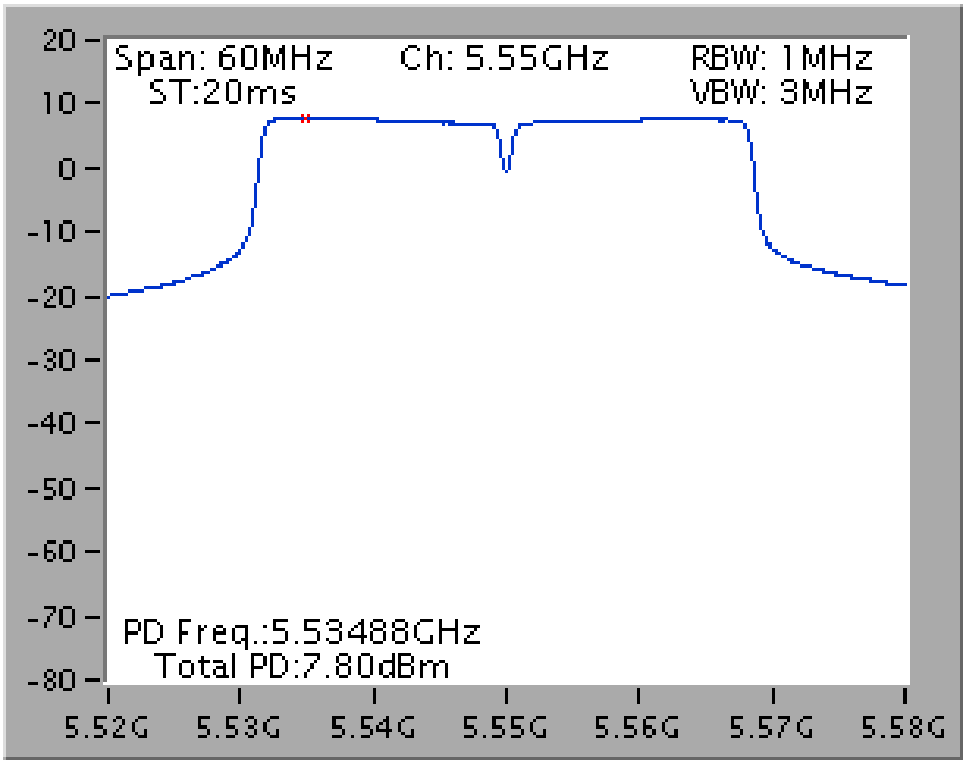
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 / 5550 MHz (1TX)



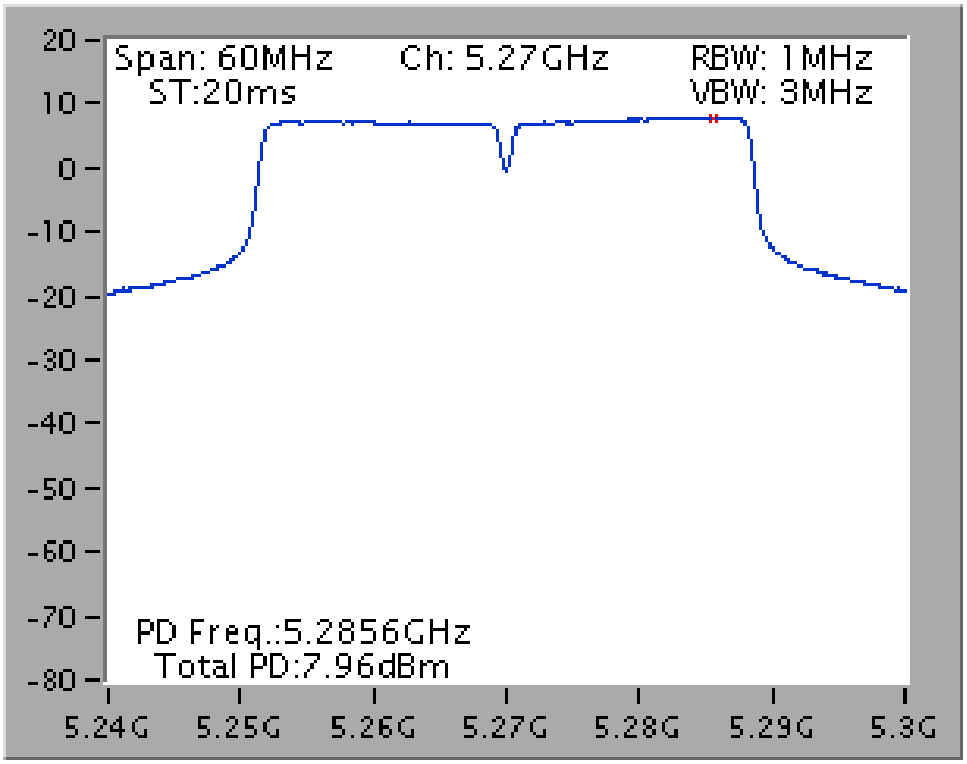
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1+ Chain 2 / 5270 MHz (2TX)



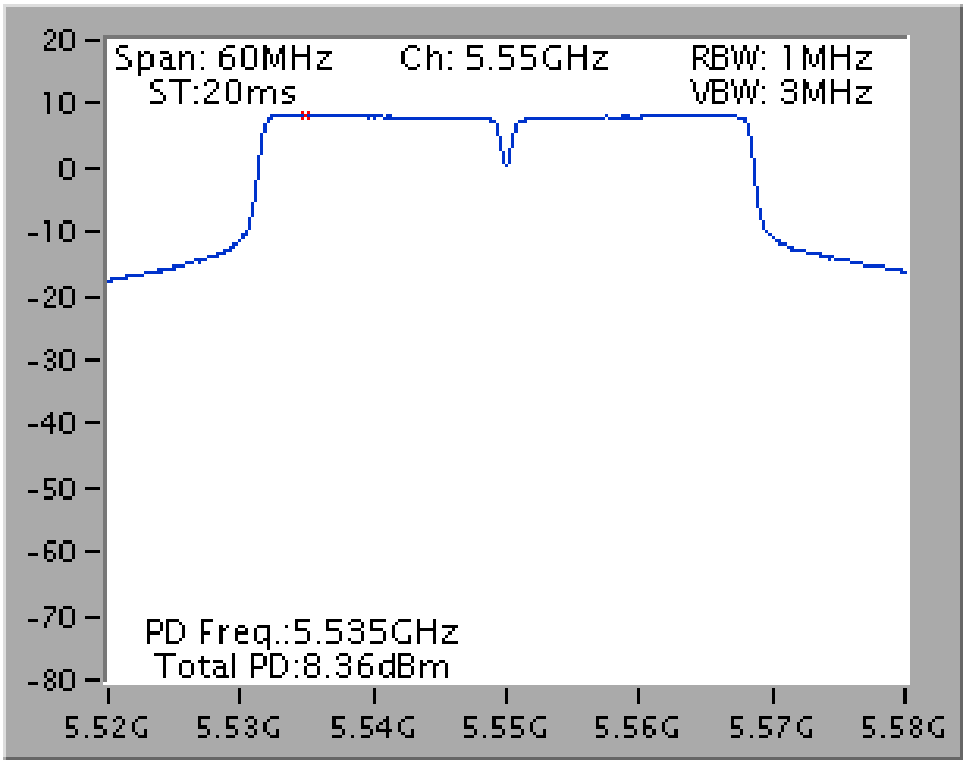
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1+ Chain 2 / 5550 MHz (2TX)



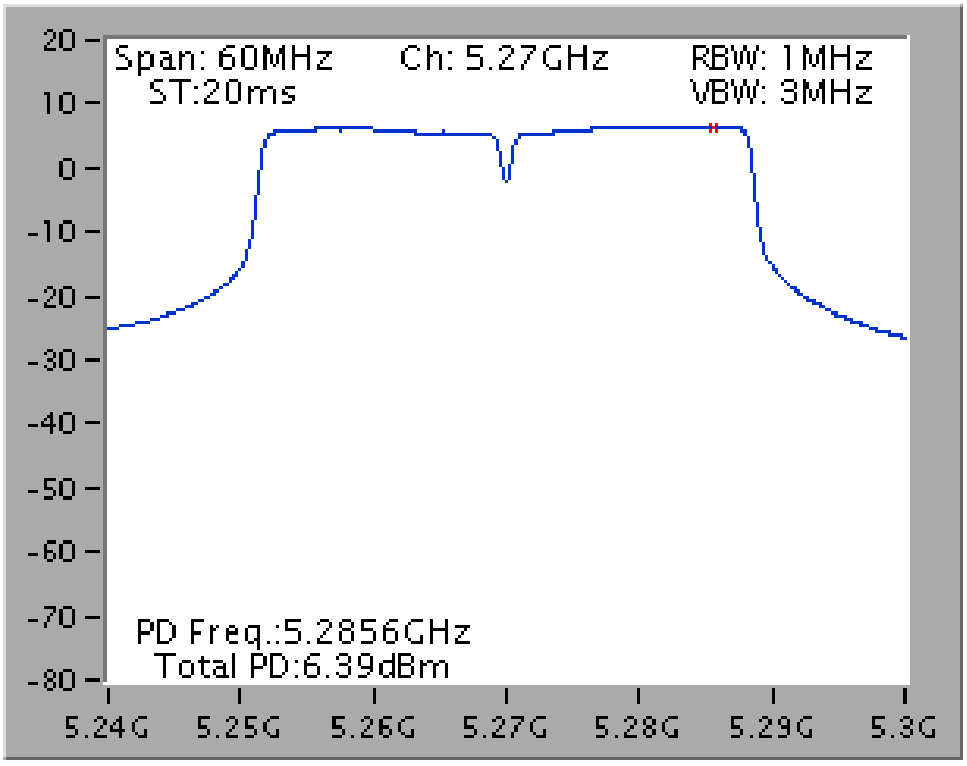
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1+ Chain 2 / 5270 MHz (2TX)



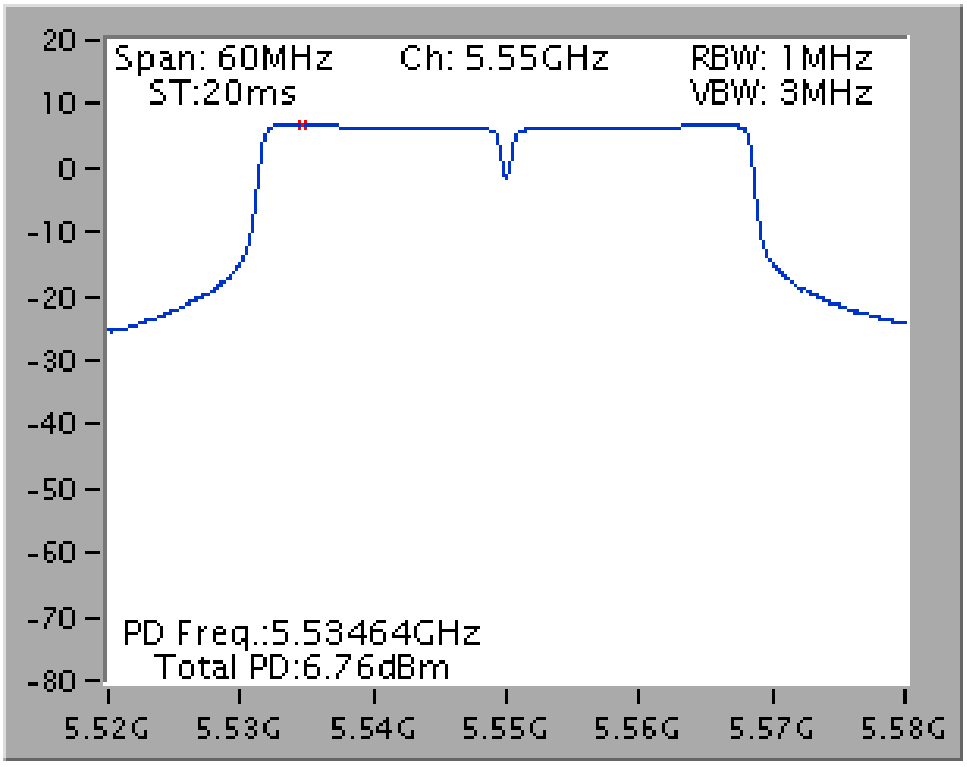
Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1+ Chain 2 / 5550 MHz (2TX)



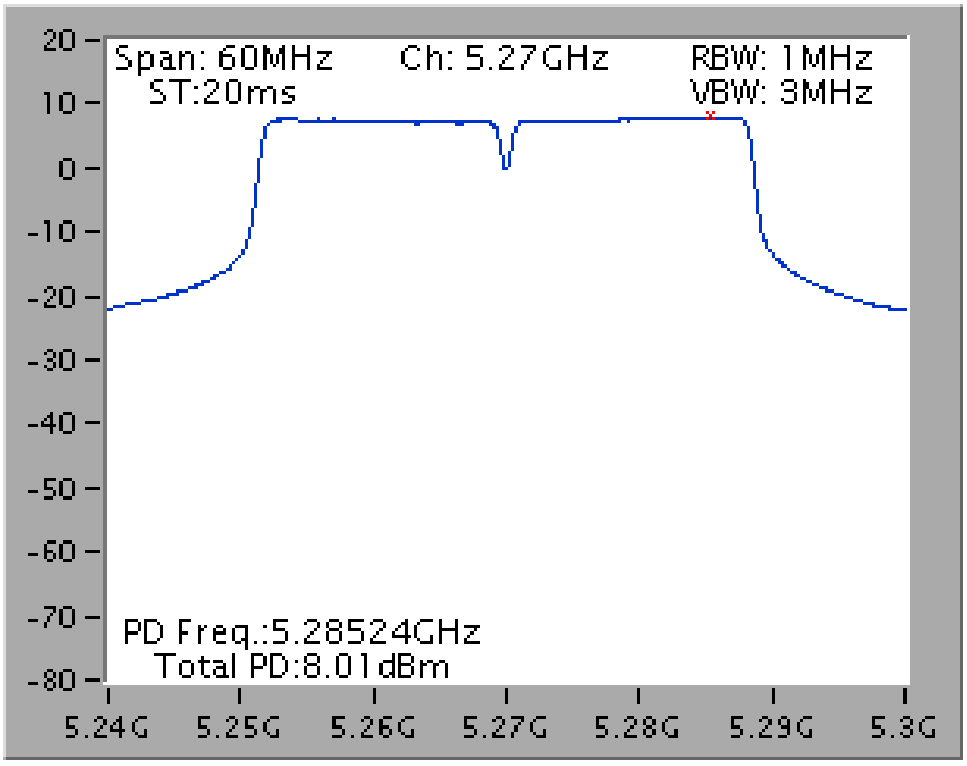
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1+ Chain 2 + Chain 3 / 5270 MHz (3TX)



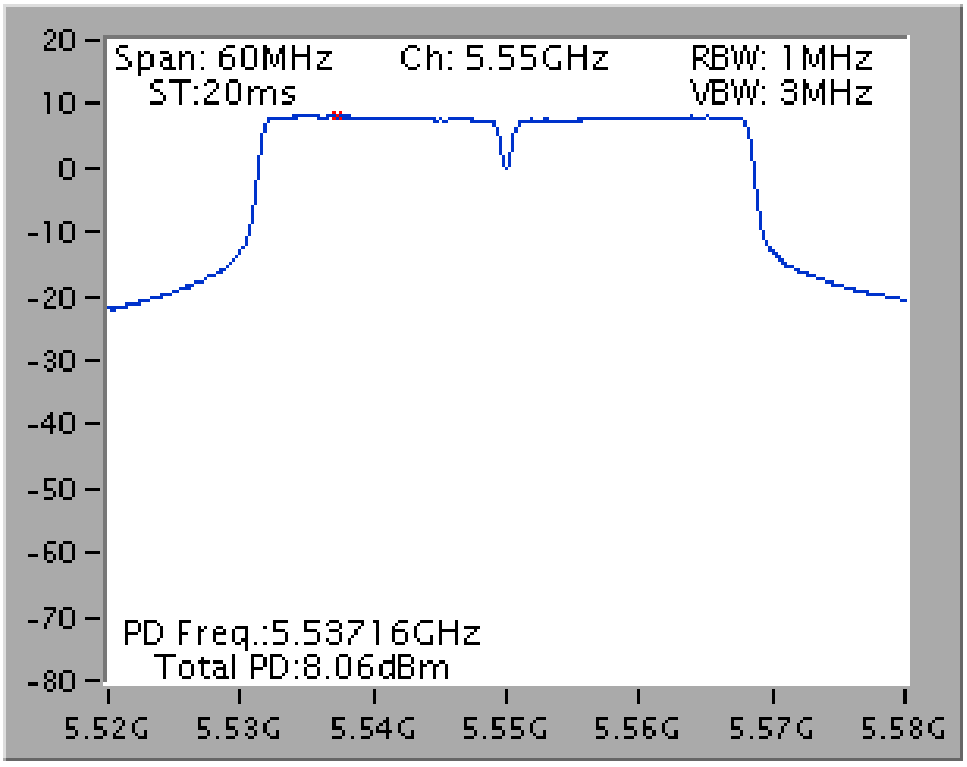
Power Density Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1+ Chain 2 + Chain 3 / 5550 MHz (3TX)



Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1+ Chain 2 + Chain 3 / 5270 MHz (3TX)



Power Density Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1+ Chain 2 + Chain 3 / 5550 MHz (3TX)



4.5. Peak Excursion Measurement

4.5.1. Limit

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emissions bandwidth whichever is less.

4.5.2. Measuring Instruments and Setting

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

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RB	1000 kHz (Peak Trace) / 1000 kHz (Average Trace)
VB	3000 kHz (Peak Trace) / 300 kHz (Average Trace)
Detector	Peak (Peak Trace) / Sample (Average Trace)
Trace	Max Hold
Sweep Time	60s

4.5.3. Test Procedures

4. The test procedure is the same as section 4.6.3.
5. Test was performed in accordance with KDB 789033 Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Subpart E,section Peak excursion measurement method.
6. Peak trace, Set RBW =1MHz, VBW = 3MHz, Span >26dB bandwidth, Max. hold.
7. Average trace, Set RBW =1MHz, VBW = 300KHz, Span >26dB bandwidth, trace average 100.
8. Delta mark peak trace maximum frequency and average trace same frequency.
9. Compute the ratio of the maximum of the peak-max-hold spectrum to the maximum of the average.

4.5.4. Test Setup Layout

This test setup layout is the same as that shown in section 4.6.4.

4.5.5. Test Deviation

There is no deviation with the original standard.

4.5.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.5.7. Test Result of Peak Excursion

Temperature	25°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	IEEE 802.11n
Test Mode	Mode 1 (Ant. 6 Dipole antenna / 8dBi)		

1TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	6.22	13	Complies
60	5300 MHz	3.06	13	Complies
64	5320 MHz	6.06	13	Complies
100	5500 MHz	5.83	13	Complies
116	5580 MHz	4.97	13	Complies
140	5700 MHz	5.76	13	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	5.54	13	Complies
62	5310 MHz	4.45	13	Complies
102	5510MHz	6.37	13	Complies
110	5550 MHz	5.49	13	Complies
134	5670 MHz	6.33	13	Complies

2TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	6.79	13	Complies
60	5300 MHz	5.14	13	Complies
64	5320 MHz	5.21	13	Complies
100	5500 MHz	6.53	13	Complies
116	5580 MHz	4.77	13	Complies
140	5700 MHz	5.94	13	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	6.39	13	Complies
62	5310 MHz	6.08	13	Complies
102	5510MHz	6.32	13	Complies
110	5550 MHz	6.05	13	Complies
134	5670 MHz	5.99	13	Complies

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	6.21	13	Complies
60	5300 MHz	6.70	13	Complies
64	5320 MHz	6.75	13	Complies
100	5500 MHz	4.22	13	Complies
116	5580 MHz	5.89	13	Complies
140	5700 MHz	5.67	13	Complies

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	6.16	13	Complies
62	5310 MHz	5.56	13	Complies
102	5510MHz	6.02	13	Complies
110	5550 MHz	6.05	13	Complies
134	5670 MHz	6.27	13	Complies

3TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	6.96	13	Complies
60	5300 MHz	5.21	13	Complies
64	5320 MHz	5.09	13	Complies
100	5500 MHz	4.13	13	Complies
116	5580 MHz	5.81	13	Complies
140	5700 MHz	4.56	13	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	5.39	13	Complies
62	5310 MHz	5.55	13	Complies
102	5510MHz	5.50	13	Complies
110	5550 MHz	5.61	13	Complies
134	5670 MHz	6.54	13	Complies

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	6.40	13	Complies
60	5300 MHz	6.49	13	Complies
64	5320 MHz	6.87	13	Complies
100	5500 MHz	4.84	13	Complies
116	5580 MHz	6.54	13	Complies
140	5700 MHz	5.67	13	Complies

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	5.36	13	Complies
62	5310 MHz	6.83	13	Complies
102	5510MHz	6.73	13	Complies
110	5550 MHz	6.93	13	Complies
134	5670 MHz	5.48	13	Complies

Configuration IEEE 802.11n MCS16 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.16	13	Complies
60	5300 MHz	6.26	13	Complies
64	5320 MHz	6.20	13	Complies
100	5500 MHz	5.48	13	Complies
116	5580 MHz	6.41	13	Complies
140	5700 MHz	5.70	13	Complies

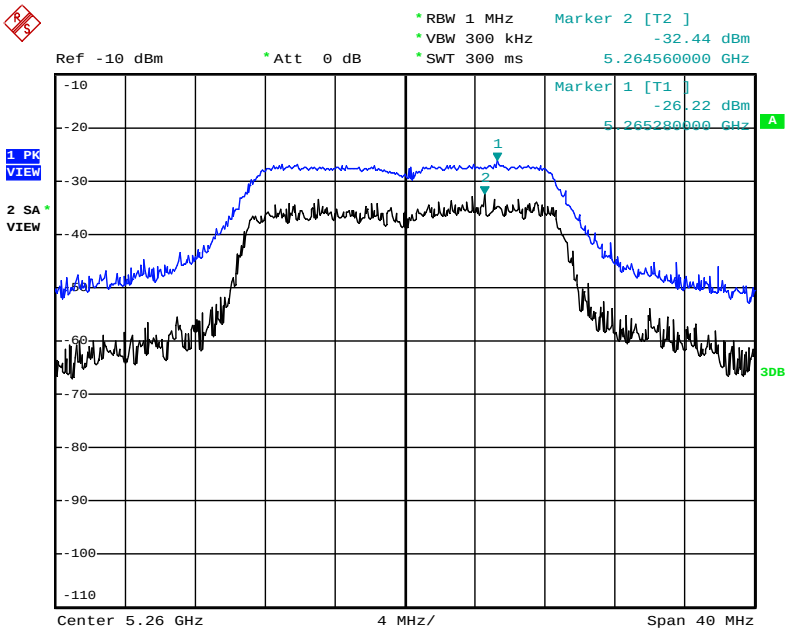
Configuration IEEE 802.11n MCS16 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	5.94	13	Complies
62	5310 MHz	7.98	13	Complies
102	5510MHz	6.05	13	Complies
110	5550 MHz	6.63	13	Complies
134	5670 MHz	6.25	13	Complies

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

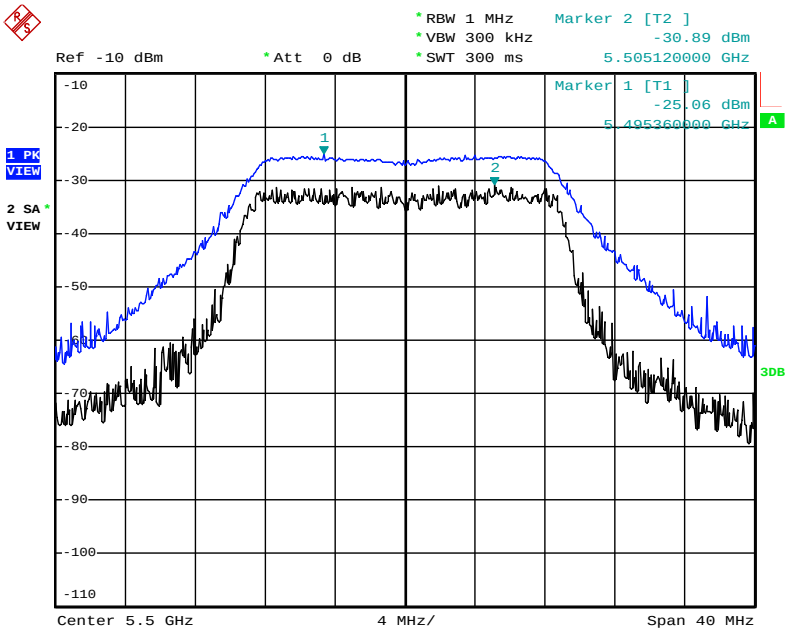
For plots, only the channel with maximum results was shown.

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 / 5260 MHz (1TX)



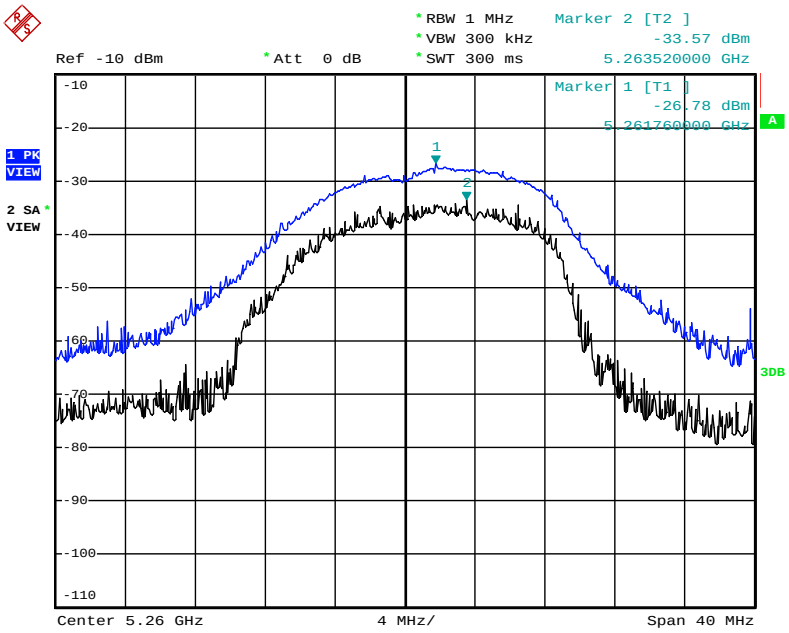
Date: 4.JUN.2012 19:41:53

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 / 5550 MHz (1TX)



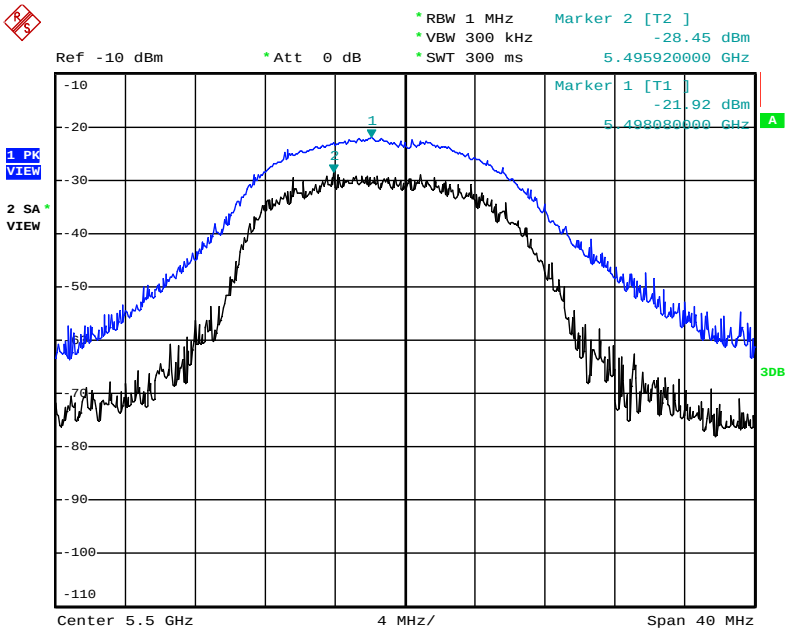
Date: 4.JUN.2012 19:39:50

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 / 5260 MHz (2TX)



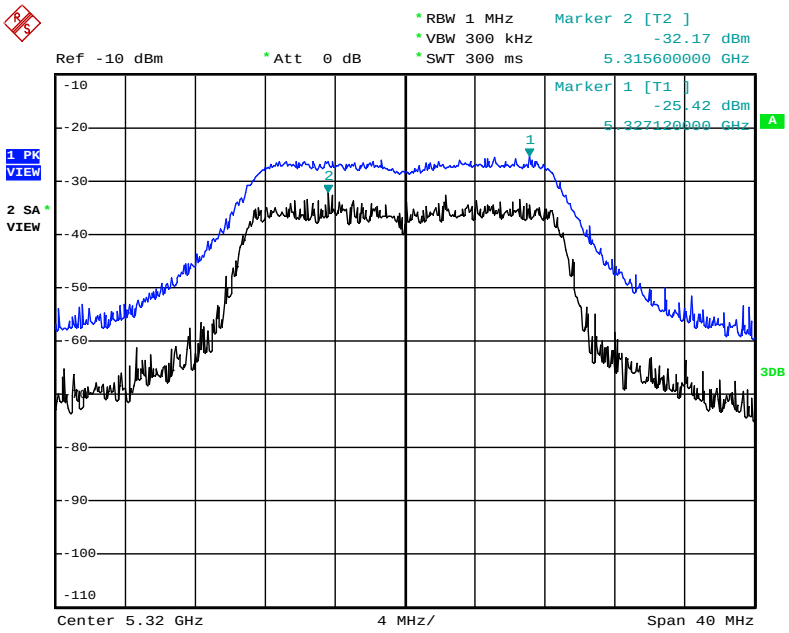
Date: 4.JUN.2012 19:52:57

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 / 5500 MHz (2TX)



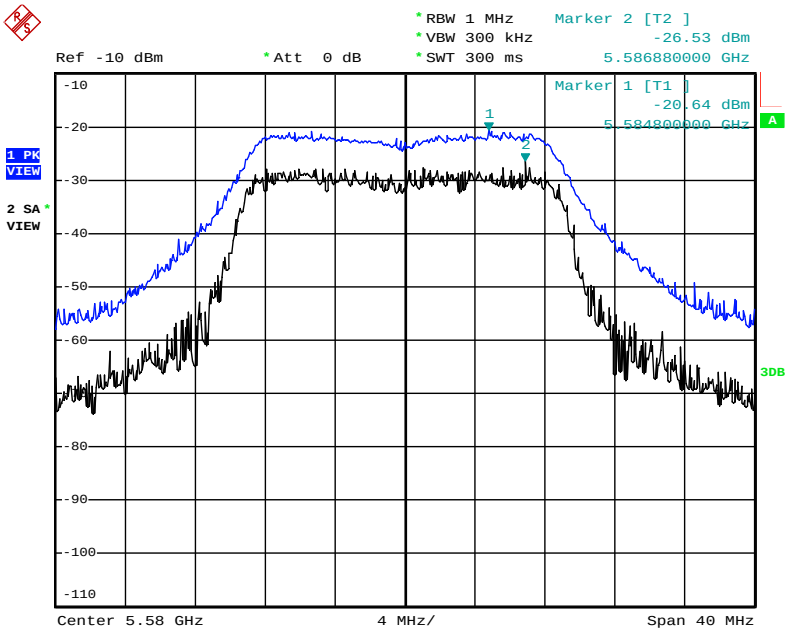
Date: 4.JUN.2012 19:54:13

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 / 5320 MHz (2TX)



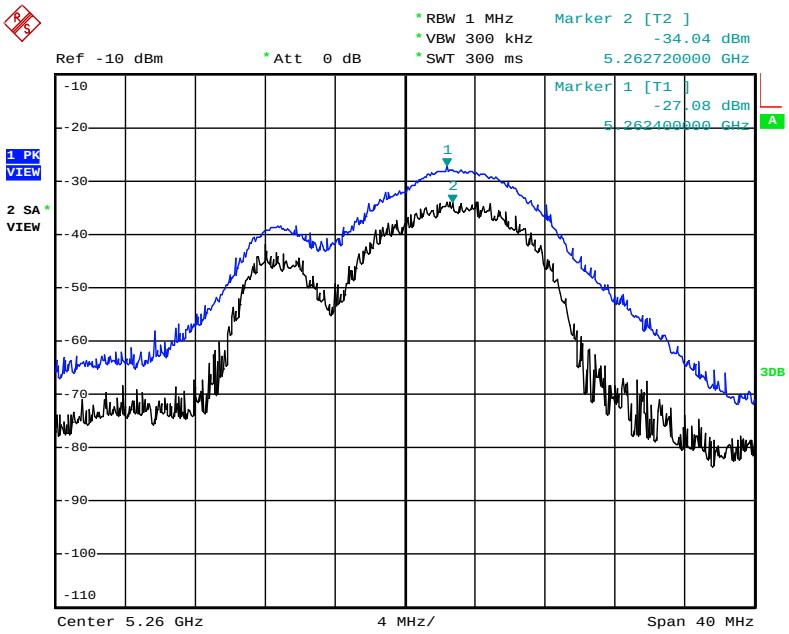
Date: 4.JUN.2012 19:51:32

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 / 5580 MHz (2TX)



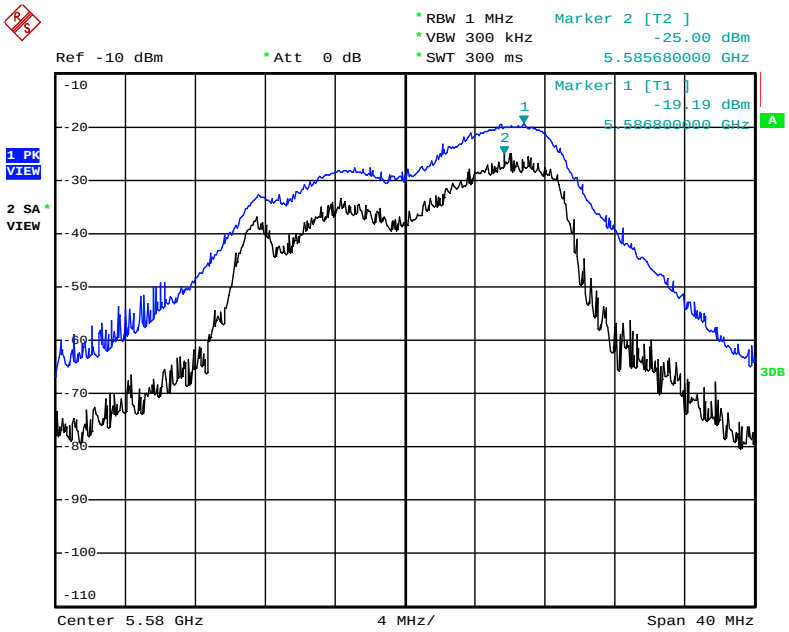
Date: 4.JUN.2012 19:50:34

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3 / 5260 MHz (3TX)



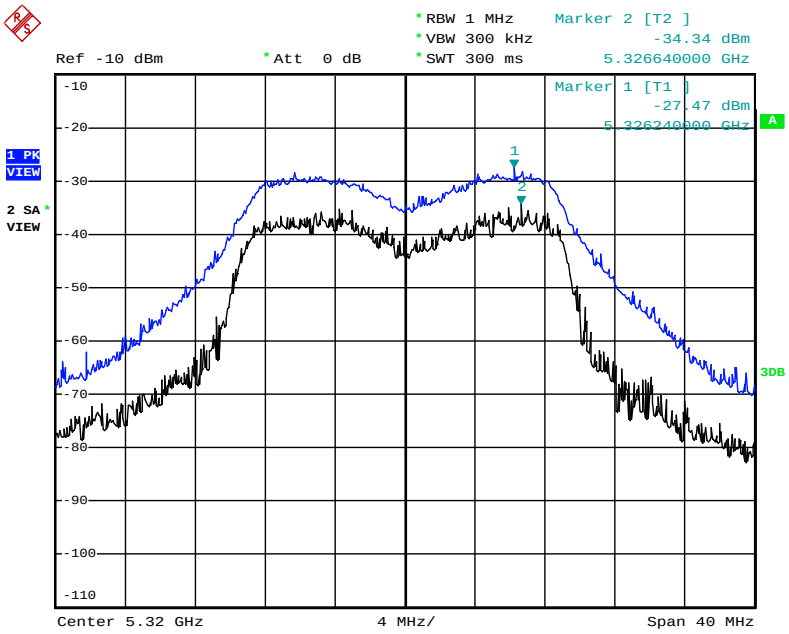
Date: 4.JUN.2012 19:57:58

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3 / 5580 MHz (3TX)



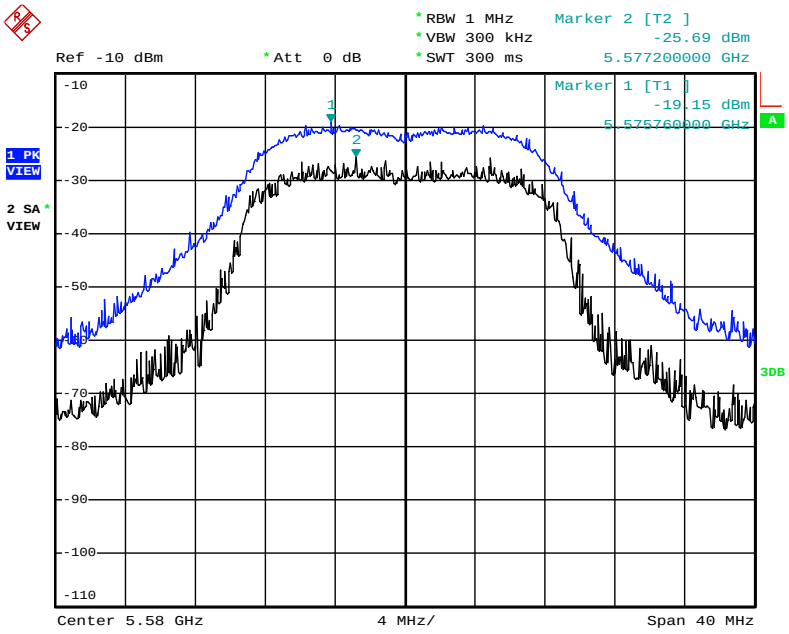
Date: 4.JUN.2012 19:56:18

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3 / 5320 MHz (3TX)



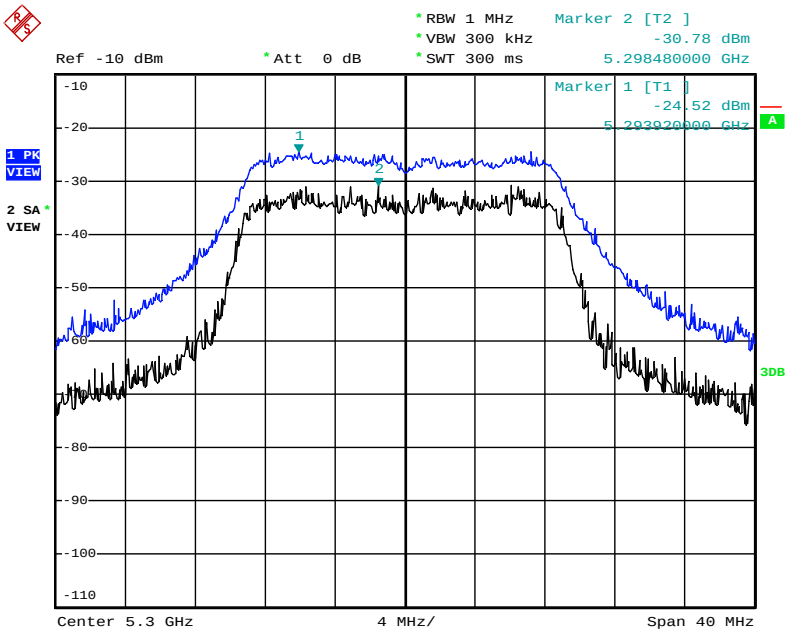
Date: 4.JUN.2012 19:59:22

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3 / 5580 MHz (3TX)



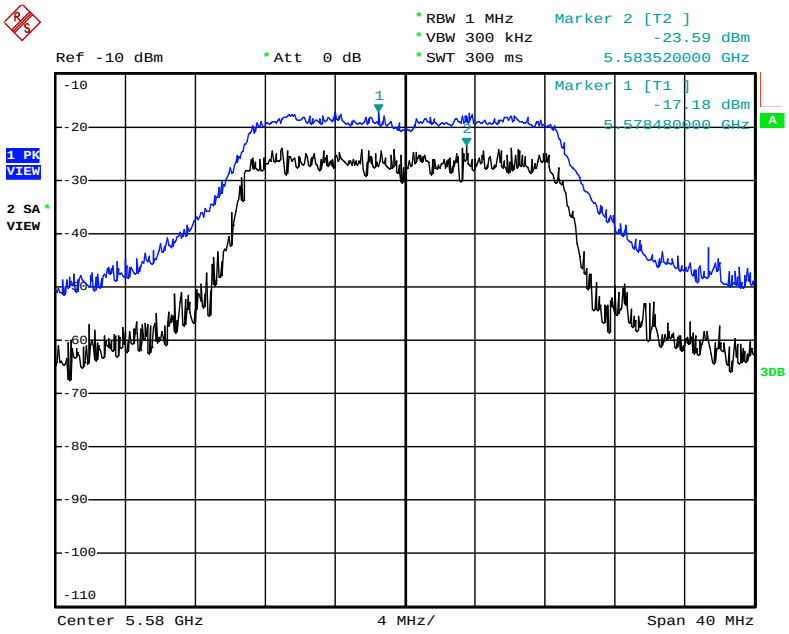
Date: 4.JUN.2012 20:00:10

Peak Excursion Plot on Configuration IEEE 802.11n MCS16 20MHz / Chain 1 + Chain 2 + Chain 3 / 5300 MHz (3TX)



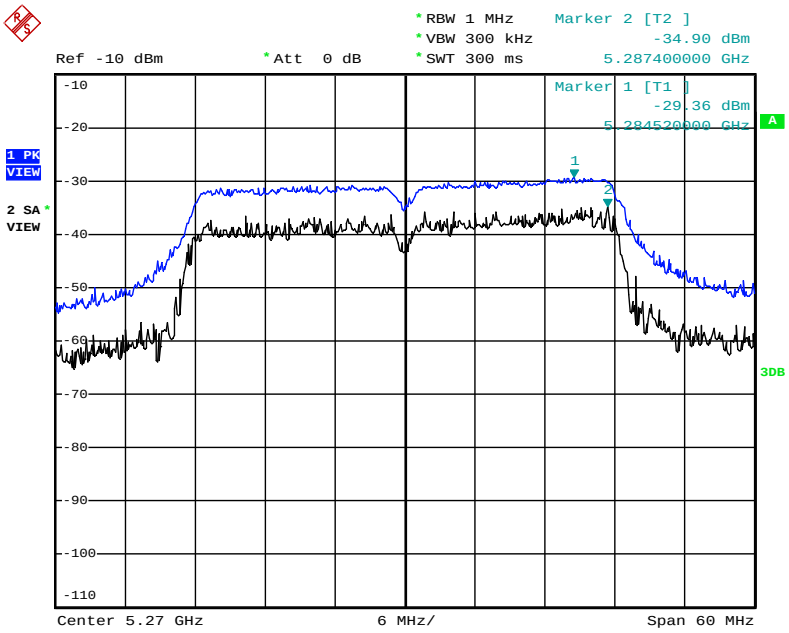
Date: 4.JUN.2012 20:02:50

Peak Excursion Plot on Configuration IEEE 802.11n MCS16 20MHz / Chain 1 + Chain 2 + Chain 3 / 5580 MHz (3TX)



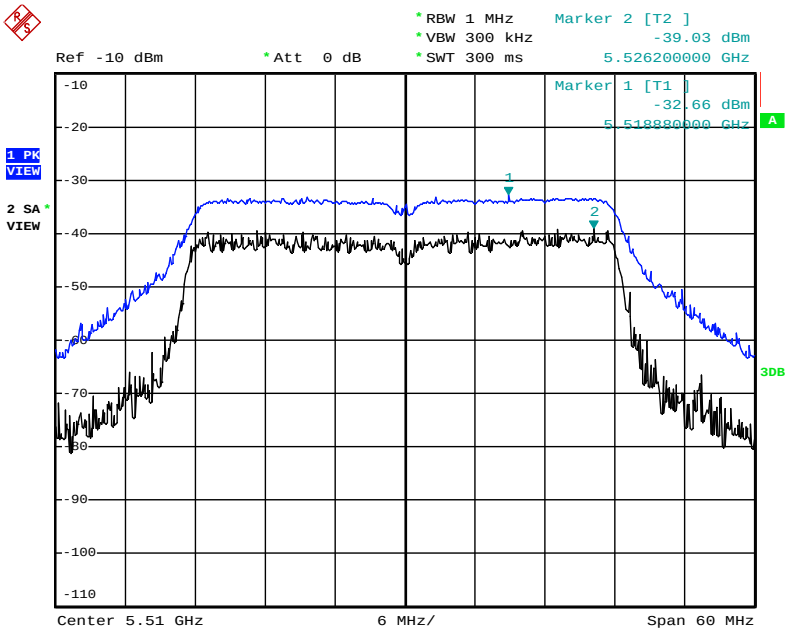
Date: 4.JUN.2012 20:01:43

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 / 5270 MHz (1TX)



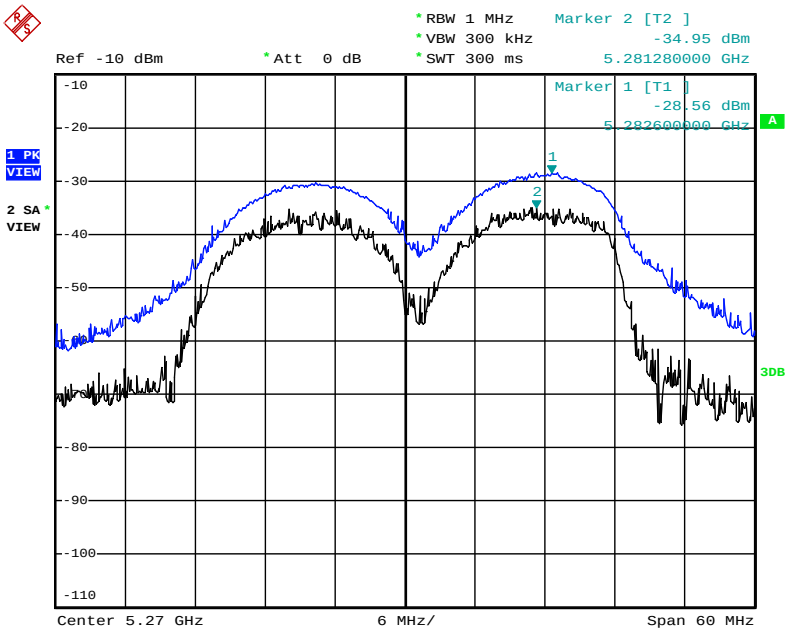
Date: 4.JUN.2012 19:42:26

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 / 5510 MHz (1TX)



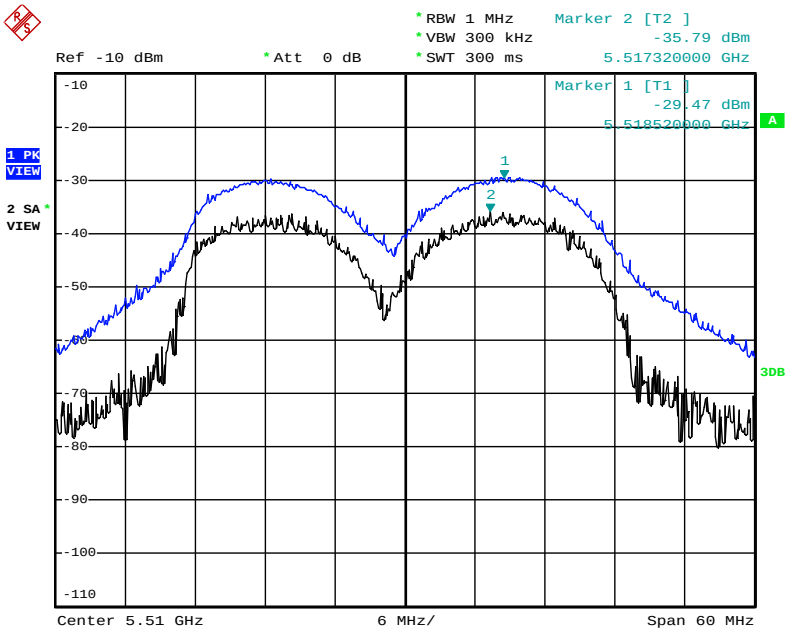
Date: 4.JUN.2012 19:43:24

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 / 5270 MHz (2TX)



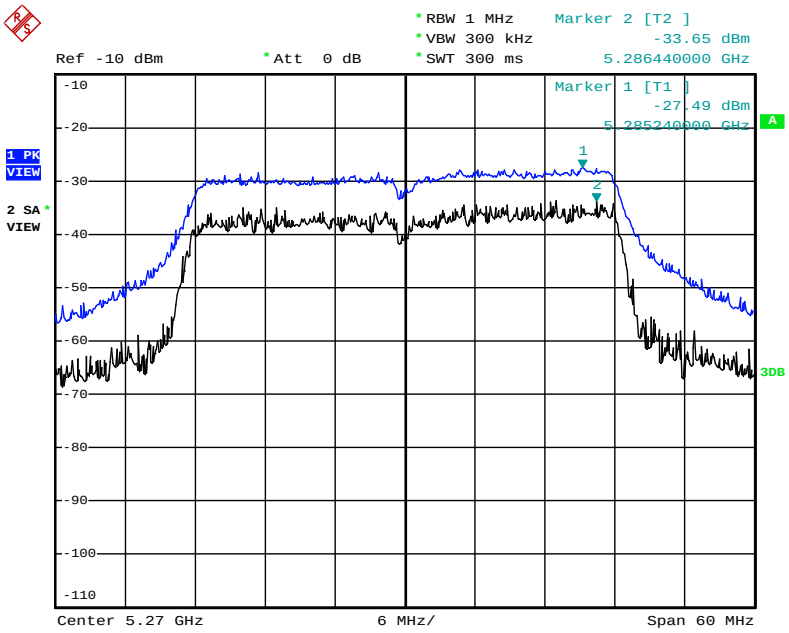
Date: 4.JUN.2012 19:46:39

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 / 5510 MHz (2TX)



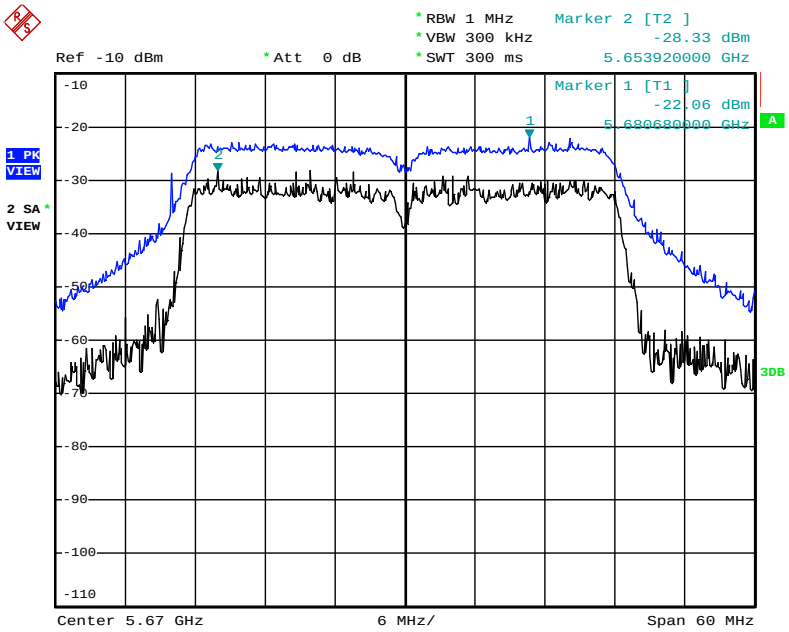
Date: 4.JUN.2012 19:45:38

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 / 5270 MHz (2TX)



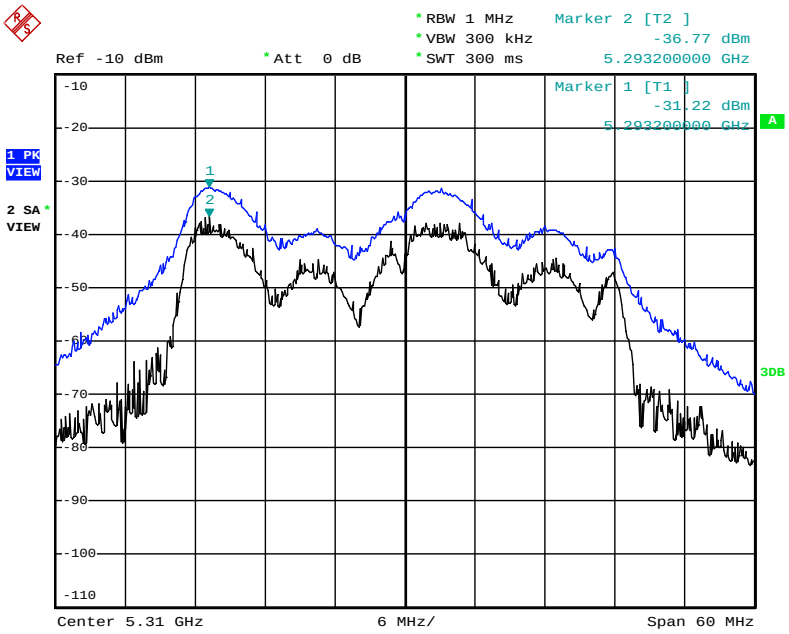
Date: 4.JUN.2012 19:47:28

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 / 5670 MHz (2TX)



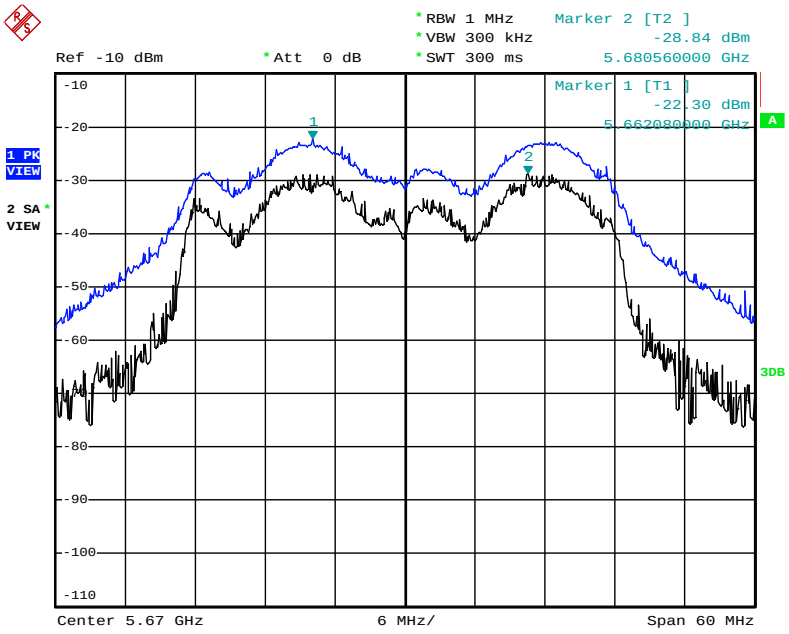
Date: 4.JUN.2012 19:49:14

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3 / 5310 MHz (3TX)



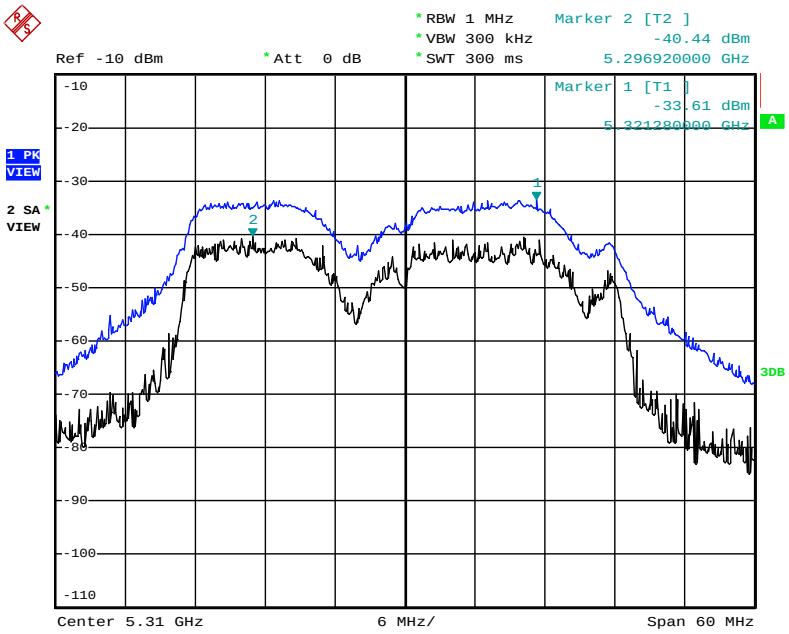
Date: 4.JUN.2012 20:09:11

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3 / 5670 MHz (3TX)



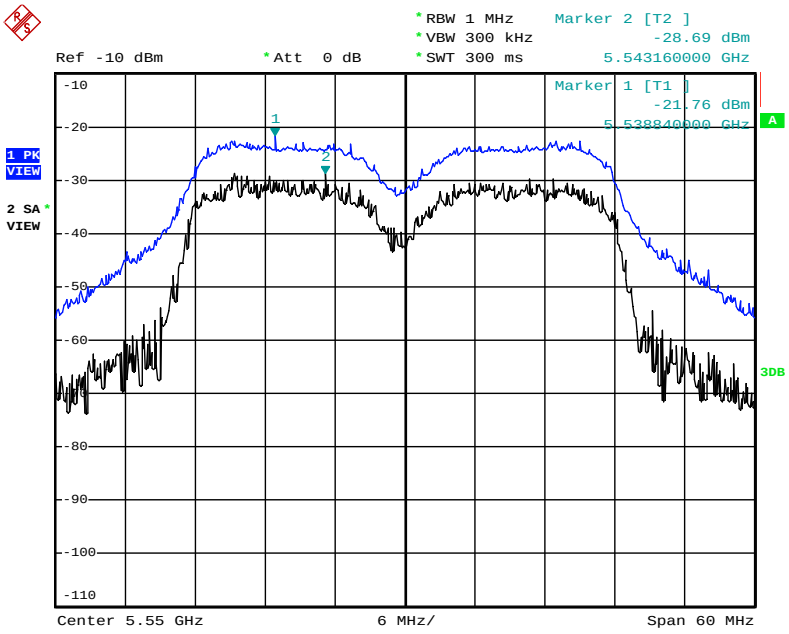
Date: 4.JUN.2012 20:10:29

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3 / 5310 MHz (3TX)



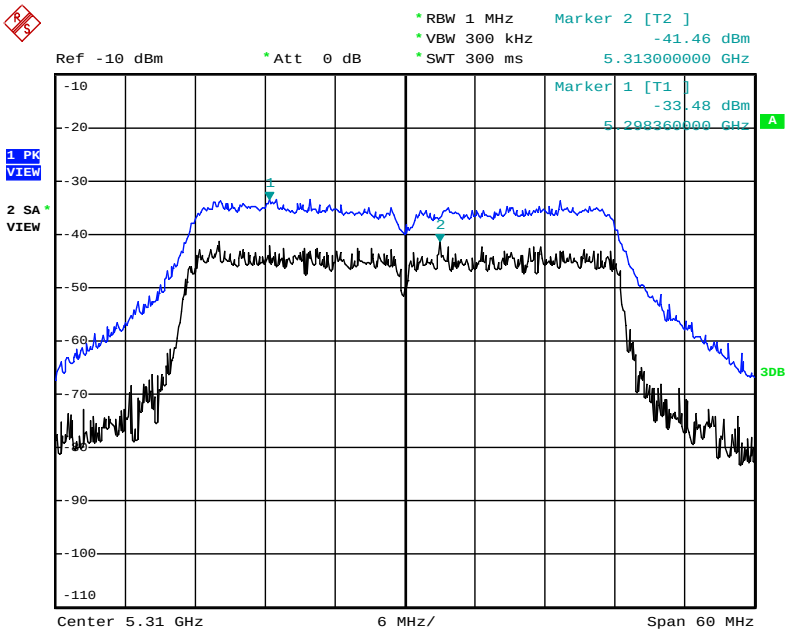
Date: 4.JUN.2012 20:07:59

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3 / 5550 MHz (3TX)



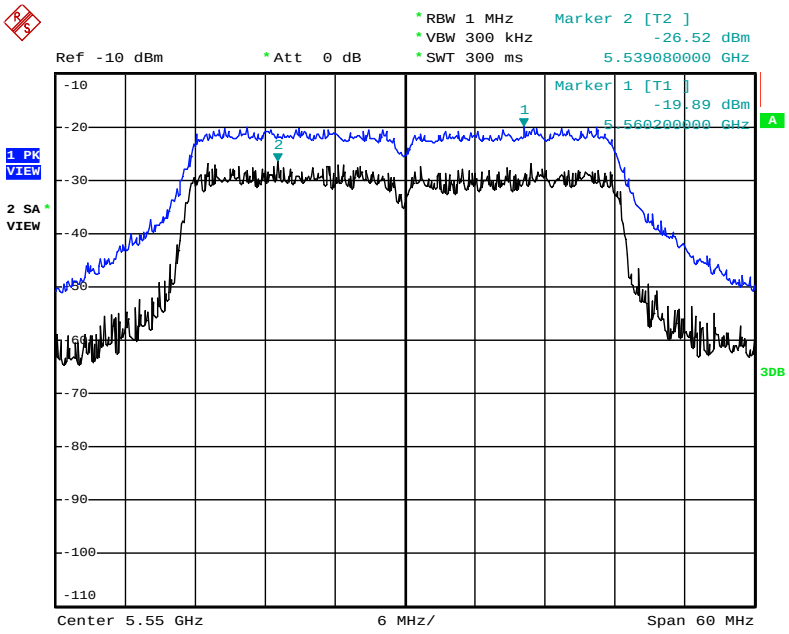
Date: 4.JUN.2012 20:06:40

Peak Excursion Plot on Configuration IEEE 802.11n MCS16 40MHz / Chain 1 + Chain 2 + Chain 3 / 5310 MHz (3TX)



Date: 4.JUN.2012 20:04:37

Peak Excursion Plot on Configuration IEEE 802.11n MCS16 40MHz / Chain 1 + Chain 2 + Chain 3 / 5550 MHz (3TX)



Date: 4.JUN.2012 20:05:24

Temperature	25°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	IEEE 802.11n
Test Mode	Mode 2 (Ant. 7 Patch antenna / 2.3dBi)		

1TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.48	13	Complies
60	5300 MHz	5.60	13	Complies
64	5320 MHz	5.57	13	Complies
100	5500 MHz	5.62	13	Complies
116	5580 MHz	4.67	13	Complies
140	5700 MHz	5.83	13	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	5.14	13	Complies
62	5310 MHz	6.48	13	Complies
102	5510MHz	4.41	13	Complies
110	5550 MHz	5.65	13	Complies
134	5670 MHz	5.37	13	Complies

2TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.33	13	Complies
60	5300 MHz	5.73	13	Complies
64	5320 MHz	5.15	13	Complies
100	5500 MHz	5.55	13	Complies
116	5580 MHz	5.75	13	Complies
140	5700 MHz	6.63	13	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	5.18	13	Complies
62	5310 MHz	5.28	13	Complies
102	5510MHz	5.99	13	Complies
110	5550 MHz	5.36	13	Complies
134	5670 MHz	5.25	13	Complies

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.03	13	Complies
60	5300 MHz	5.73	13	Complies
64	5320 MHz	4.98	13	Complies
100	5500 MHz	5.99	13	Complies
116	5580 MHz	5.80	13	Complies
140	5700 MHz	6.12	13	Complies

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	6.49	13	Complies
62	5310 MHz	5.90	13	Complies
102	5510MHz	6.50	13	Complies
110	5550 MHz	4.83	13	Complies
134	5670 MHz	5.48	13	Complies

3TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	7.59	13	Complies
60	5300 MHz	6.20	13	Complies
64	5320 MHz	6.30	13	Complies
100	5500 MHz	5.10	13	Complies
116	5580 MHz	6.03	13	Complies
140	5700 MHz	5.47	13	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	7.06	13	Complies
62	5310 MHz	6.00	13	Complies
102	5510MHz	5.99	13	Complies
110	5550 MHz	6.59	13	Complies
134	5670 MHz	6.05	13	Complies

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.42	13	Complies
60	5300 MHz	6.49	13	Complies
64	5320 MHz	4.82	13	Complies
100	5500 MHz	6.13	13	Complies
116	5580 MHz	5.38	13	Complies
140	5700 MHz	5.72	13	Complies

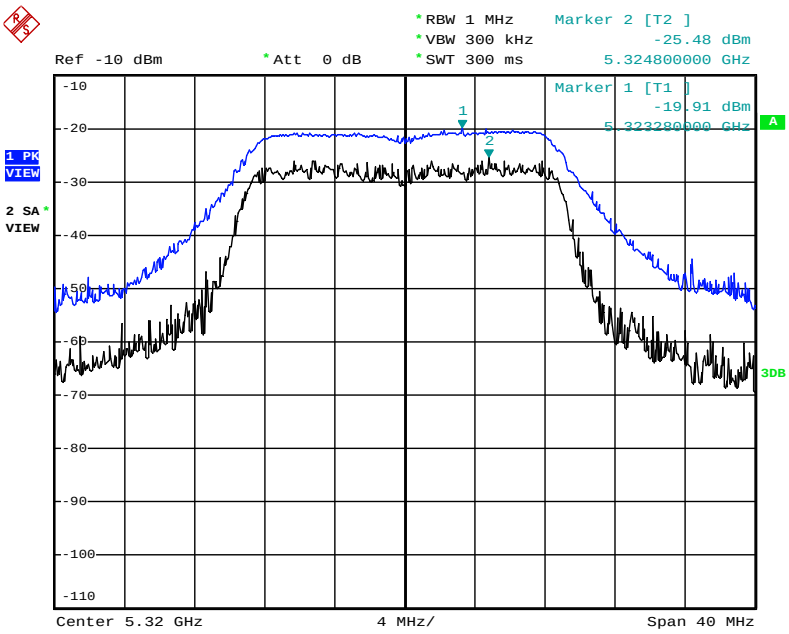
Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	5.85	13	Complies
62	5310 MHz	6.52	13	Complies
102	5510MHz	4.75	13	Complies
110	5550 MHz	6.75	13	Complies
134	5670 MHz	6.92	13	Complies

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

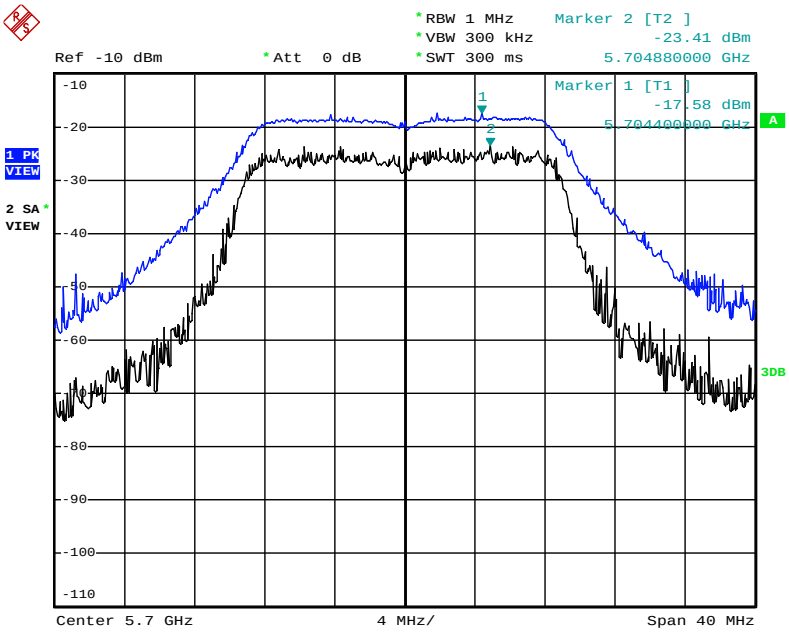
For plots, only the channel with maximum results was shown.

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 / 5320 MHz (1TX)



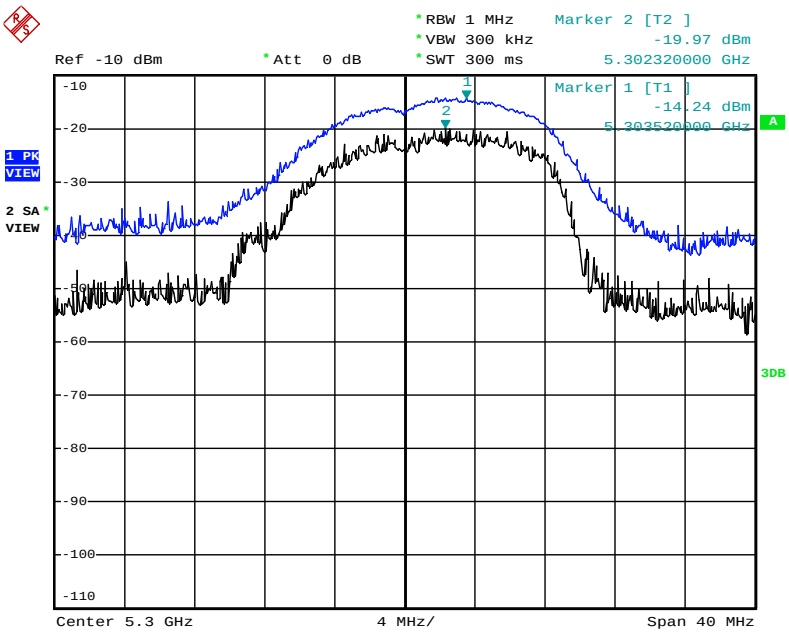
Date: 4.JUN.2012 17:59:30

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 / 5700 MHz (1TX)



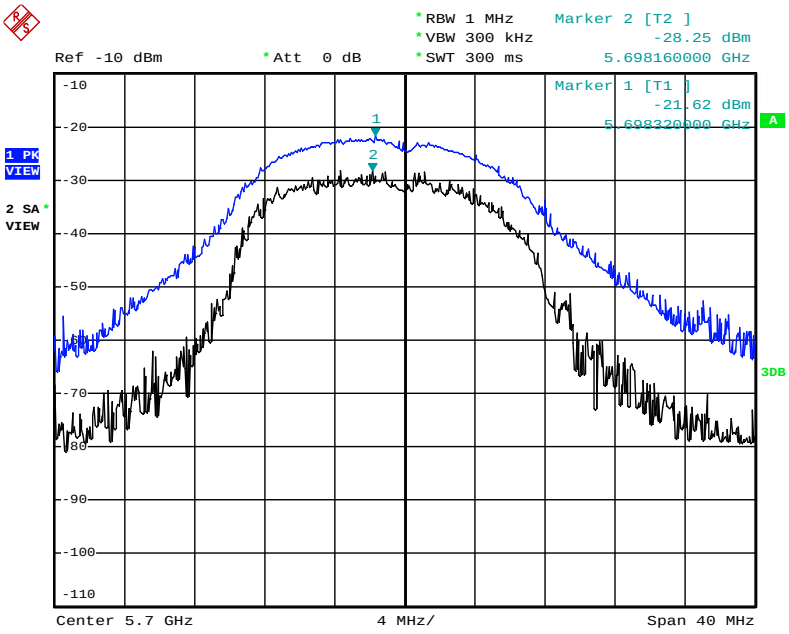
Date: 4.JUN.2012 18:05:40

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 / 5300 MHz (2TX)



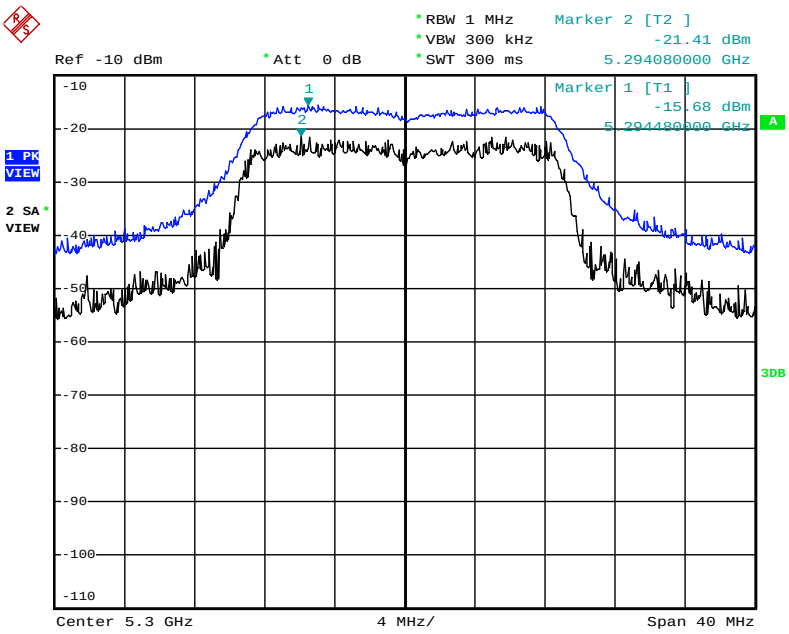
Date: 4.JUN.2012 18:19:38

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 / 5700 MHz (2TX)



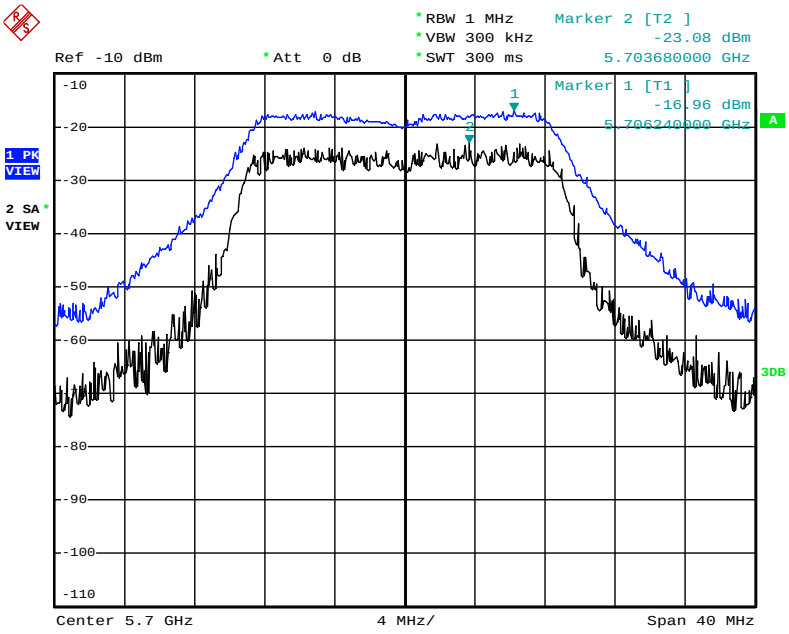
Date: 4.JUN.2012 18:22:45

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 / 5300 MHz (2TX)



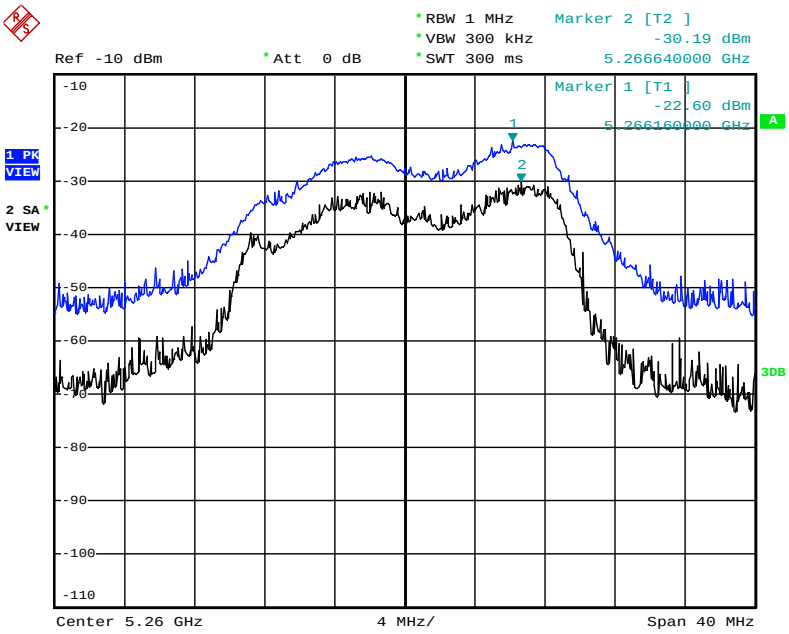
Date: 4.JUN.2012 18:17:11

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 / 5700 MHz (2TX)

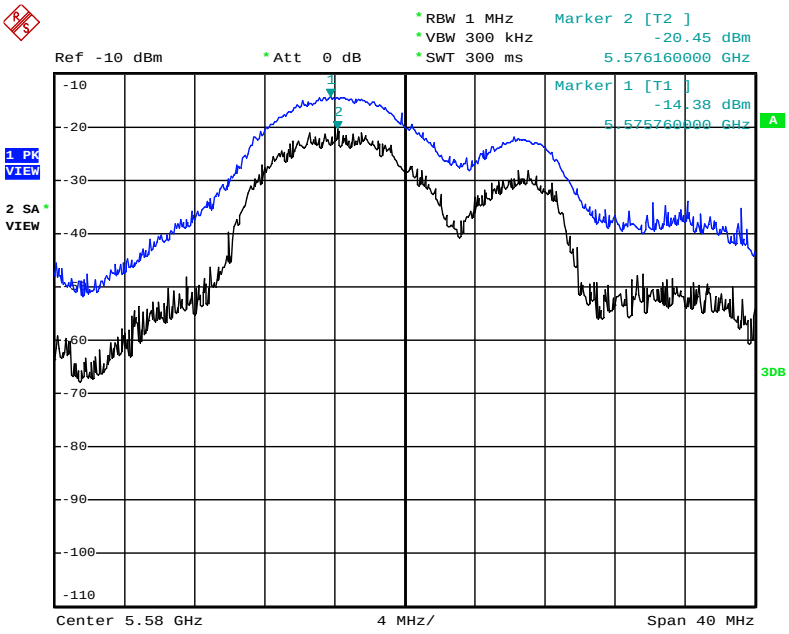


Date: 4.JUN.2012 18:15:26

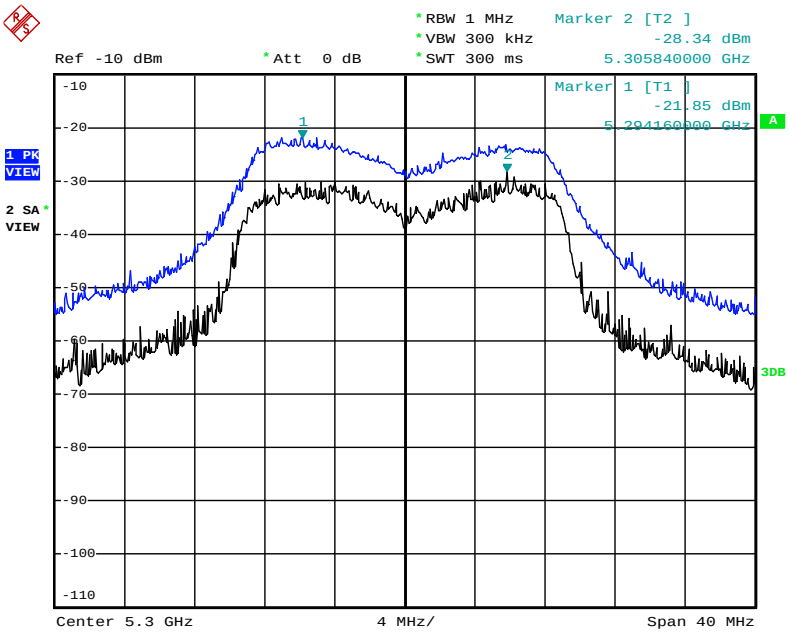
Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3 / 5260 MHz (3TX)



Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3 / 5580 MHz (3TX)

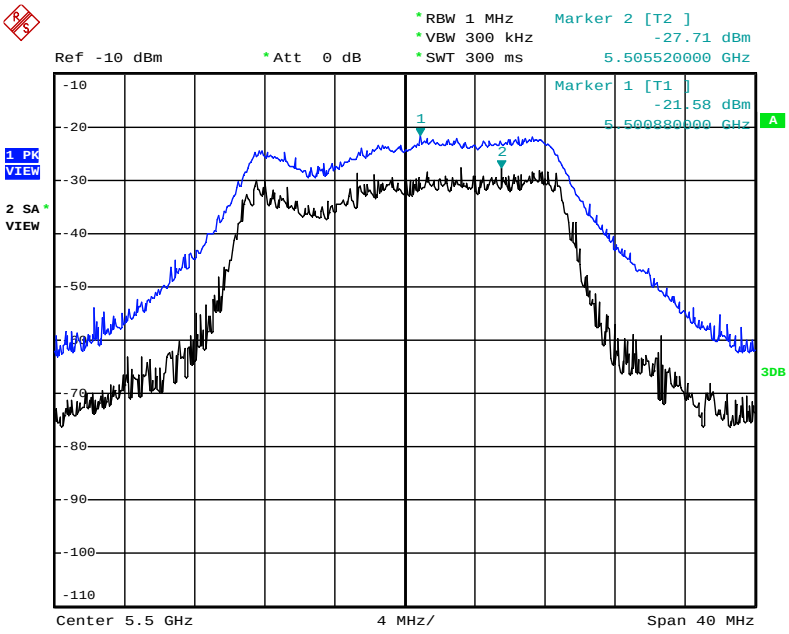


Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3 / 5300 MHz (3TX)



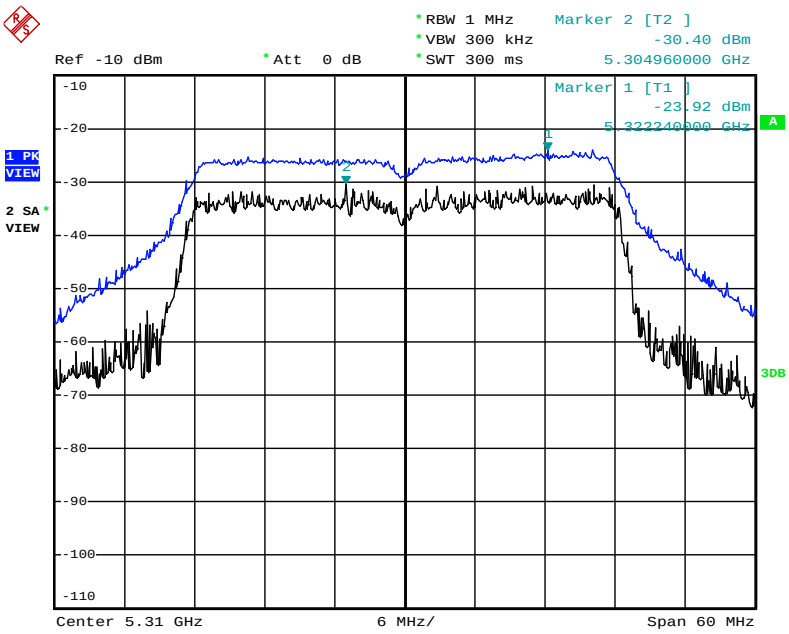
Date: 4.JUN.2012 18:27:06

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3 / 5500 MHz (3TX)



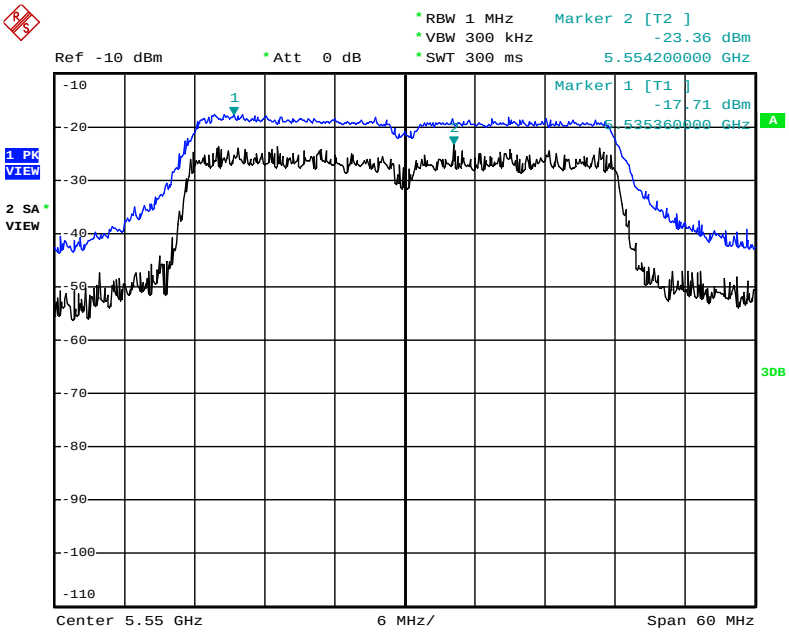
Date: 4.JUN.2012 18:28:05

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 / 5310 MHz (1TX)



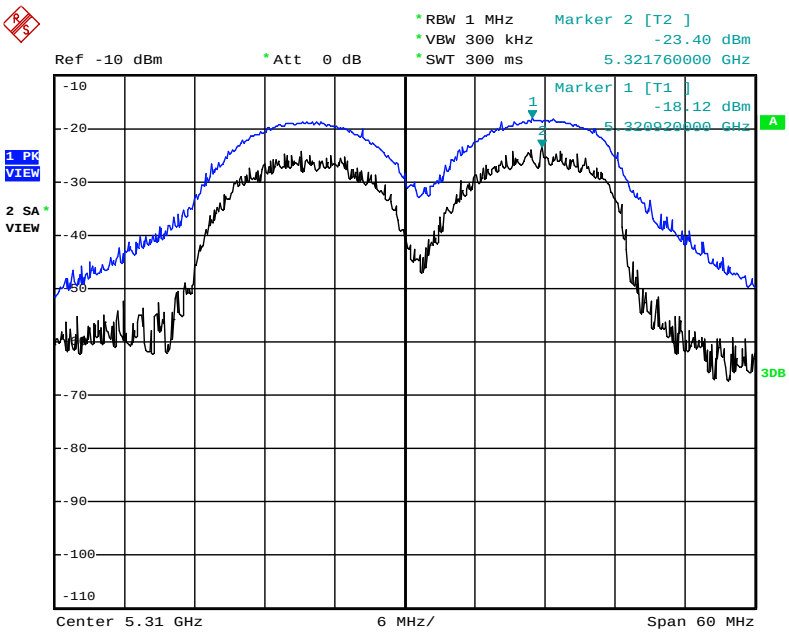
Date: 4.JUN.2012 18:07:05

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 / 5550 MHz (1TX)



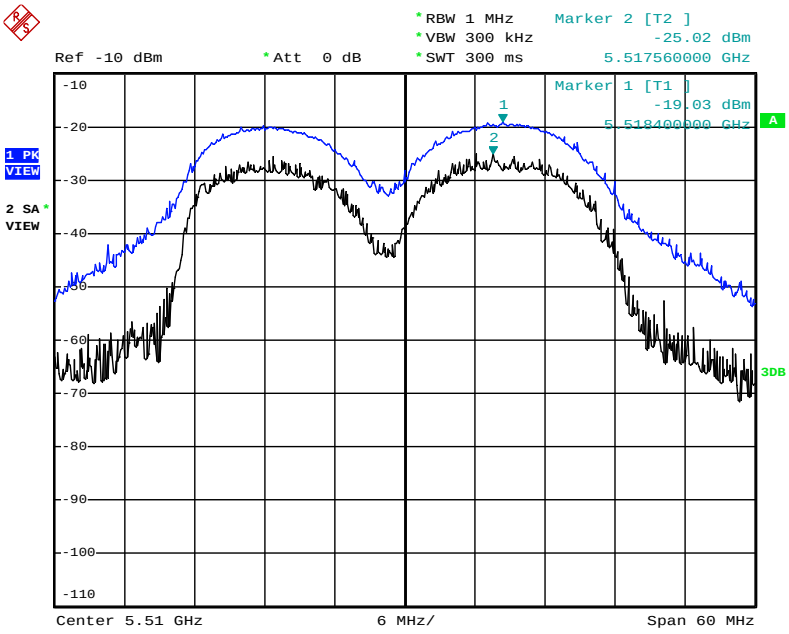
Date: 4.JUN.2012 18:08:02

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 / 5310 MHz (2TX)



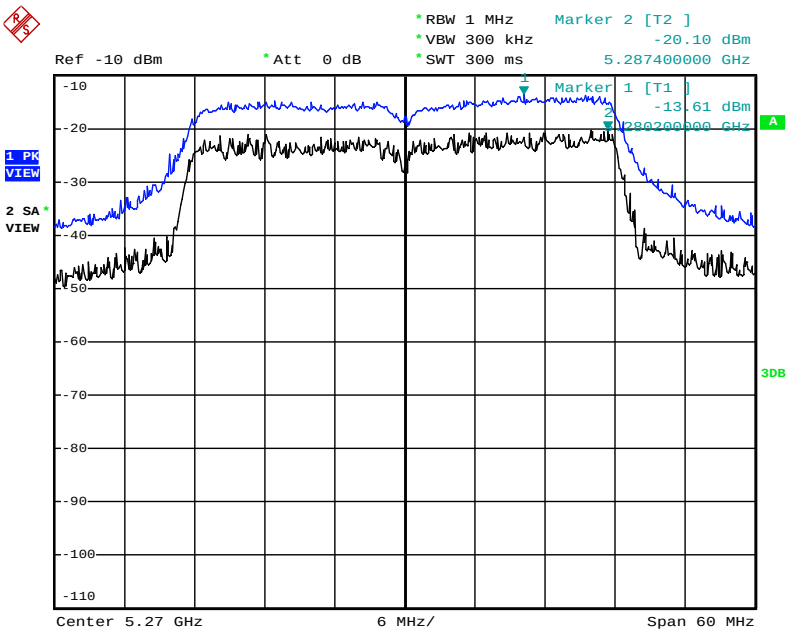
Date: 4.JUN.2012 18:11:13

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 / 5510 MHz (2TX)



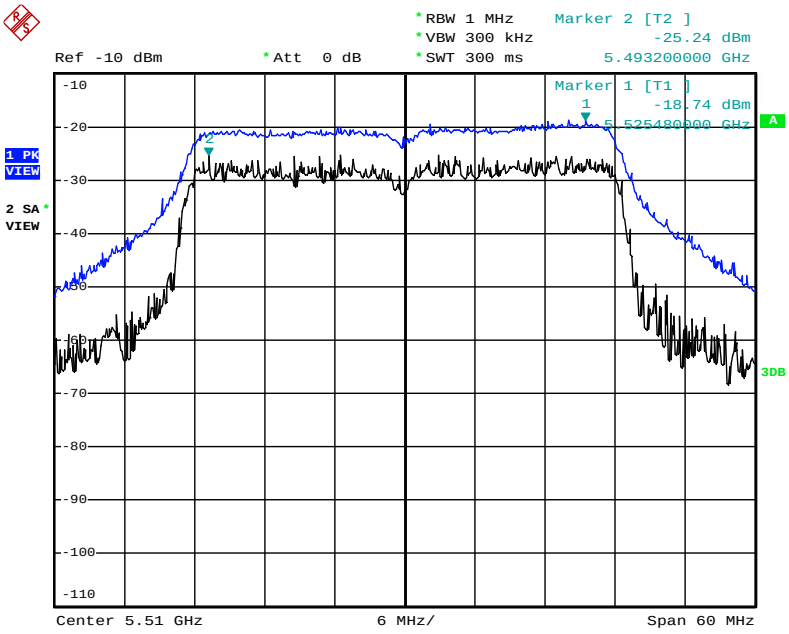
Date: 4.JUN.2012 18:10:46

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 / 5270 MHz (2TX)



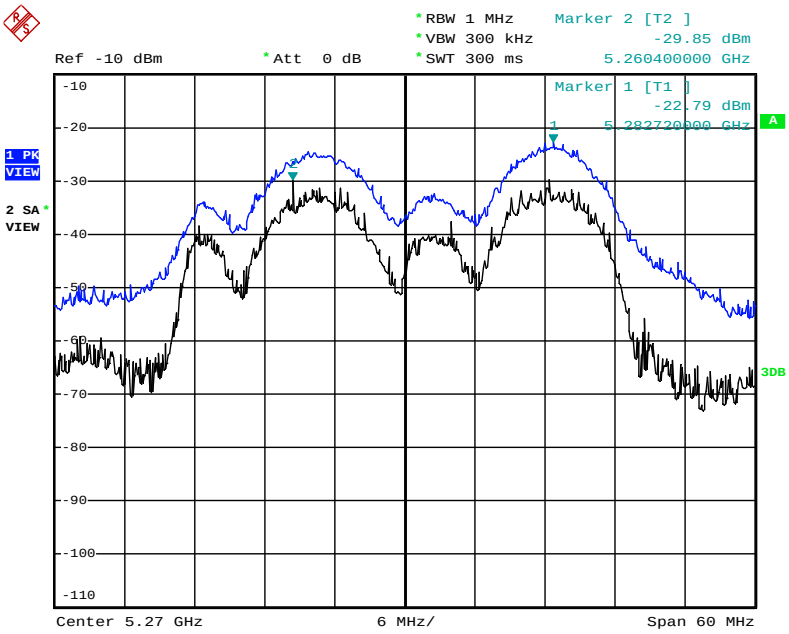
Date: 4.JUN.2012 18:12:22

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 / 5510 MHz (2TX)



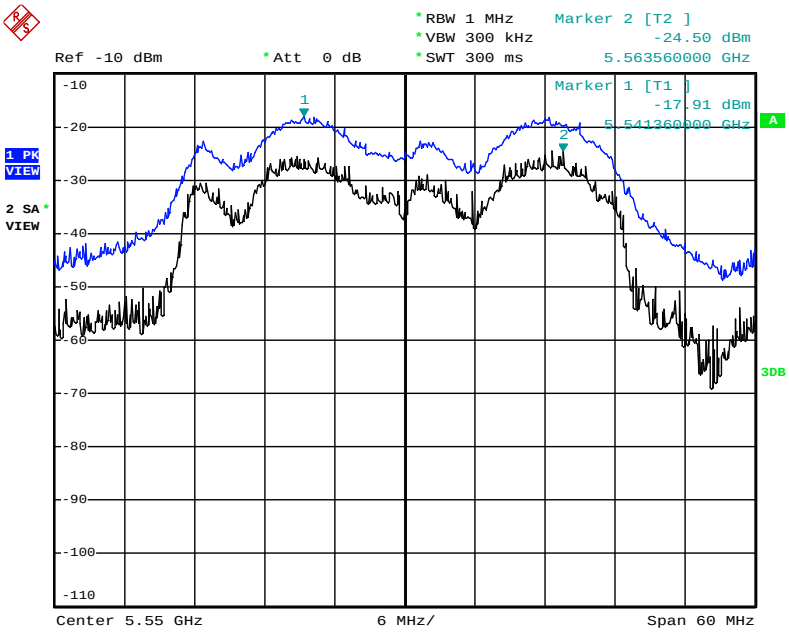
Date: 4.JUN.2012 18:13:19

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3 / 5270 MHz (3TX)



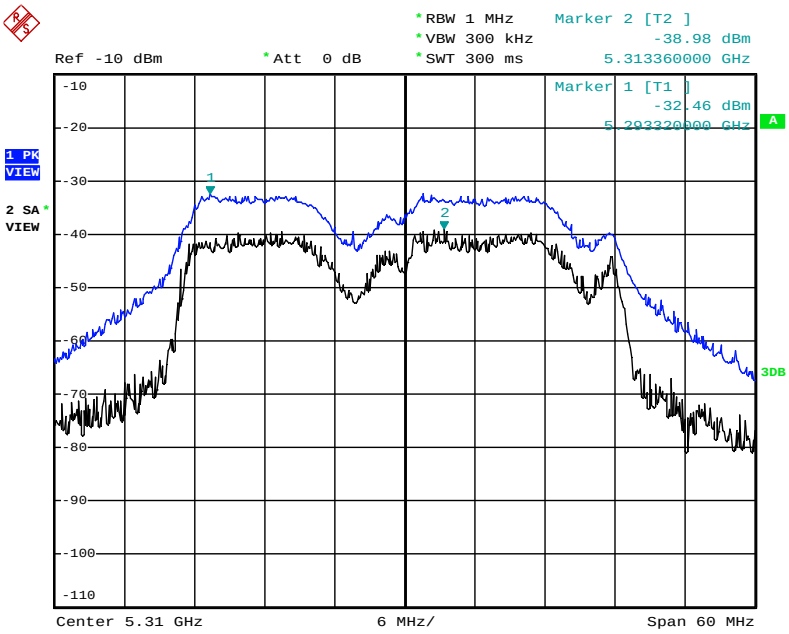
Date: 4.JUN.2012 18:32:01

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3 / 5550 MHz (3TX)



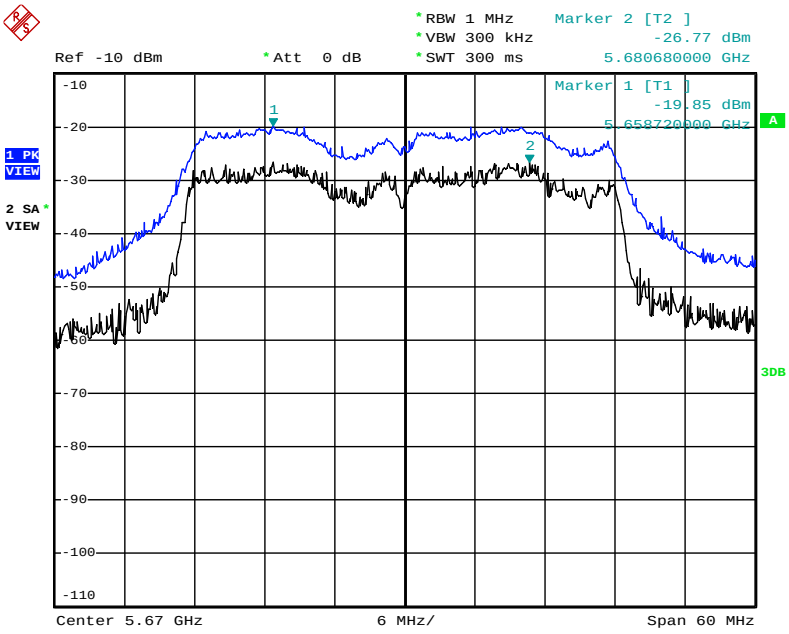
Date: 4.JUN.2012 18:33:19

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3 / 5310 MHz (3TX)



Date: 4.JUN.2012 18:31:05

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3 / 5670 MHz (3TX)



Date: 4.JUN.2012 18:29:38

Temperature	25°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	IEEE 802.11n
Test Mode	Mode 3 (Ant. 8 Panel antenna / 10.5dBi)		

1TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.17	13	Complies
60	5300 MHz	5.71	13	Complies
64	5320 MHz	5.73	13	Complies
100	5500 MHz	6.17	13	Complies
116	5580 MHz	4.85	13	Complies
140	5700 MHz	5.72	13	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	6.06	13	Complies
62	5310 MHz	5.71	13	Complies
102	5510MHz	6.68	13	Complies
110	5550 MHz	5.69	13	Complies
134	5670 MHz	5.62	13	Complies

2TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.64	13	Complies
60	5300 MHz	5.93	13	Complies
64	5320 MHz	5.81	13	Complies
100	5500 MHz	4.88	13	Complies
116	5580 MHz	5.82	13	Complies
140	5700 MHz	5.26	13	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	5.82	13	Complies
62	5310 MHz	5.15	13	Complies
102	5510MHz	5.52	13	Complies
110	5550 MHz	5.69	13	Complies
134	5670 MHz	6.00	13	Complies

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.78	13	Complies
60	5300 MHz	5.74	13	Complies
64	5320 MHz	4.92	13	Complies
100	5500 MHz	5.24	13	Complies
116	5580 MHz	4.28	13	Complies
140	5700 MHz	5.49	13	Complies

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	5.65	13	Complies
62	5310 MHz	6.83	13	Complies
102	5510MHz	5.73	13	Complies
110	5550 MHz	6.09	13	Complies
134	5670 MHz	5.55	13	Complies

3TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.46	13	Complies
60	5300 MHz	5.43	13	Complies
64	5320 MHz	5.73	13	Complies
100	5500 MHz	6.20	13	Complies
116	5580 MHz	4.94	13	Complies
140	5700 MHz	5.27	13	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	5.82	13	Complies
62	5310 MHz	5.81	13	Complies
102	5510MHz	6.21	13	Complies
110	5550 MHz	6.15	13	Complies
134	5670 MHz	5.20	13	Complies

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.99	13	Complies
60	5300 MHz	5.30	13	Complies
64	5320 MHz	6.03	13	Complies
100	5500 MHz	6.30	13	Complies
116	5580 MHz	5.90	13	Complies
140	5700 MHz	6.50	13	Complies

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	6.36	13	Complies
62	5310 MHz	6.13	13	Complies
102	5510MHz	5.67	13	Complies
110	5550 MHz	4.23	13	Complies
134	5670 MHz	7.05	13	Complies

Configuration IEEE 802.11n MCS16 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.38	13	Complies
60	5300 MHz	6.06	13	Complies
64	5320 MHz	5.50	13	Complies
100	5500 MHz	6.81	13	Complies
116	5580 MHz	6.00	13	Complies
140	5700 MHz	5.54	13	Complies

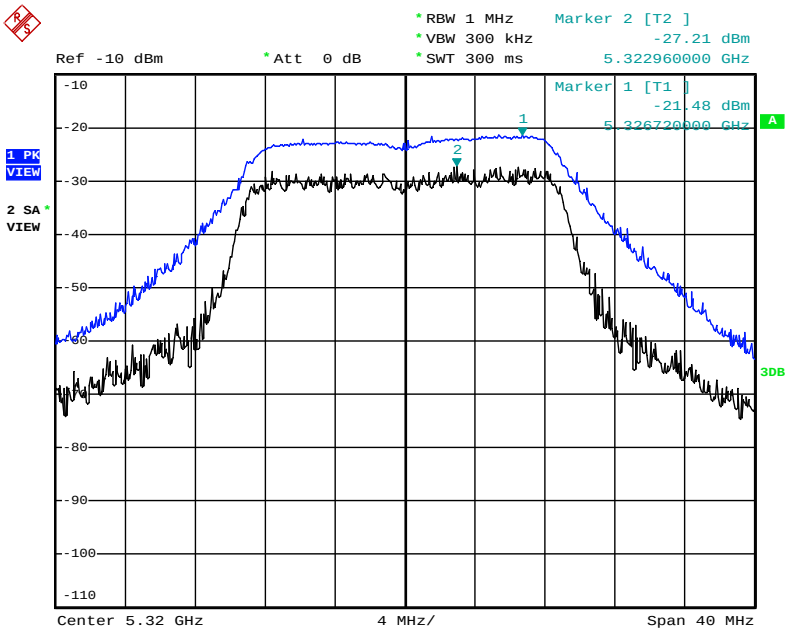
Configuration IEEE 802.11n MCS16 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	5.53	13	Complies
62	5310 MHz	5.38	13	Complies
102	5510MHz	5.92	13	Complies
110	5550 MHz	5.75	13	Complies
134	5670 MHz	5.57	13	Complies

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

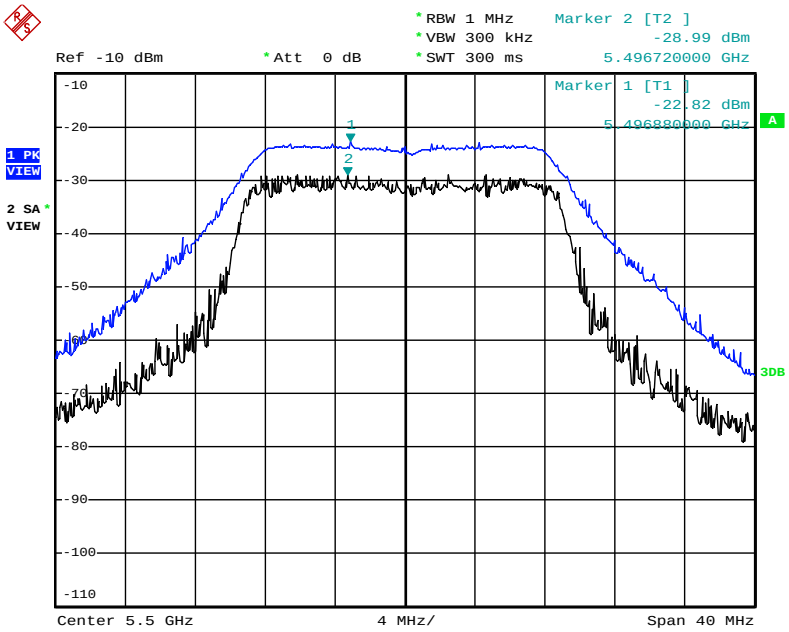
For plots, only the channel with maximum results was shown.

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 / 5320 MHz (1TX)



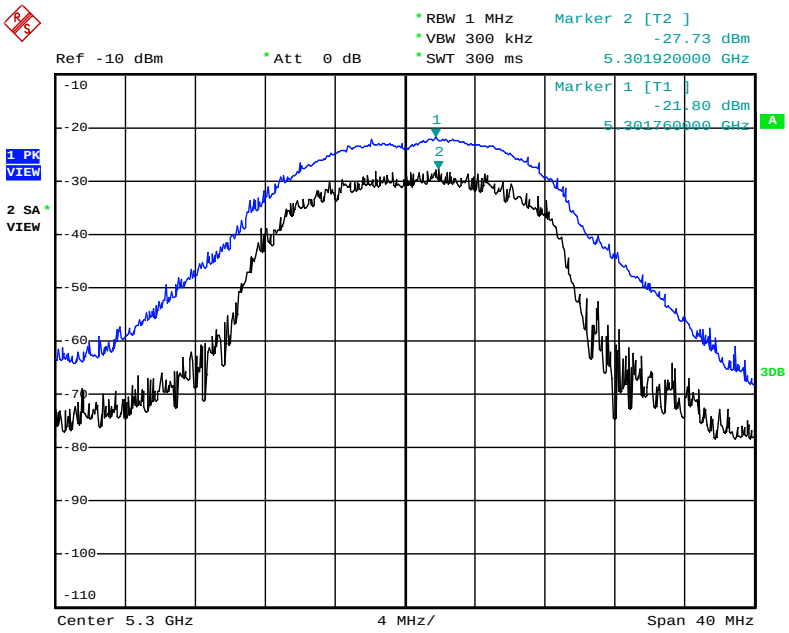
Date: 9.JUN.2012 15:14:10

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 / 5500 MHz (1TX)



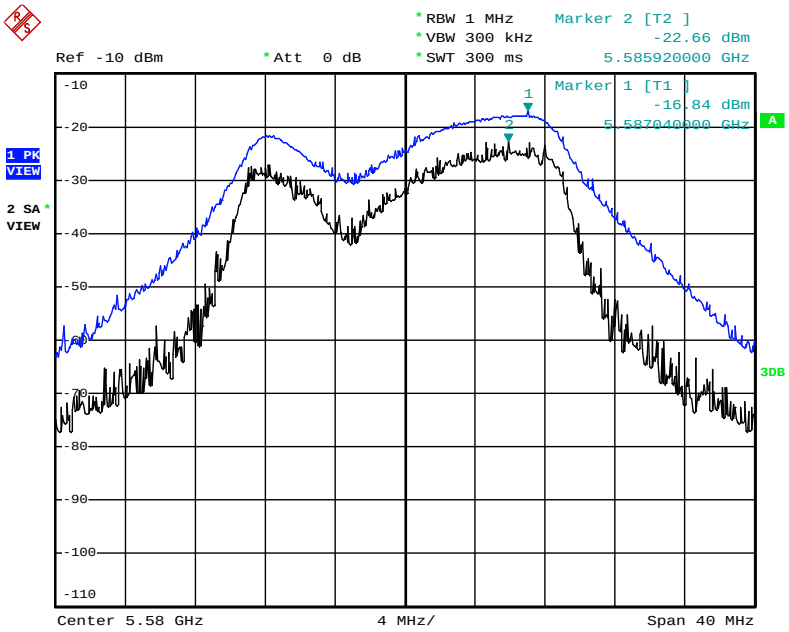
Date: 9.JUN.2012 15:13:38

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 / 5300 MHz (2TX)



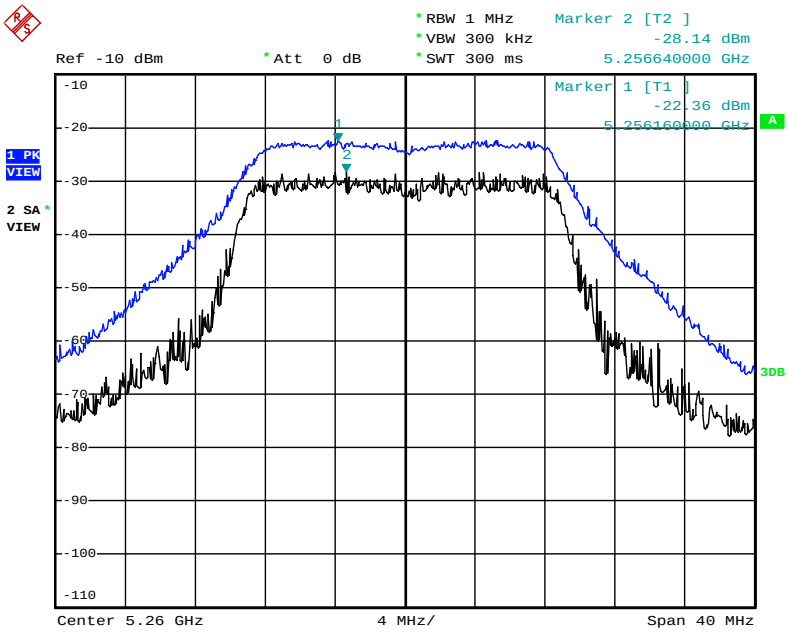
Date: 9.JUN.2012 14:56:58

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 / 5580 MHz (2TX)



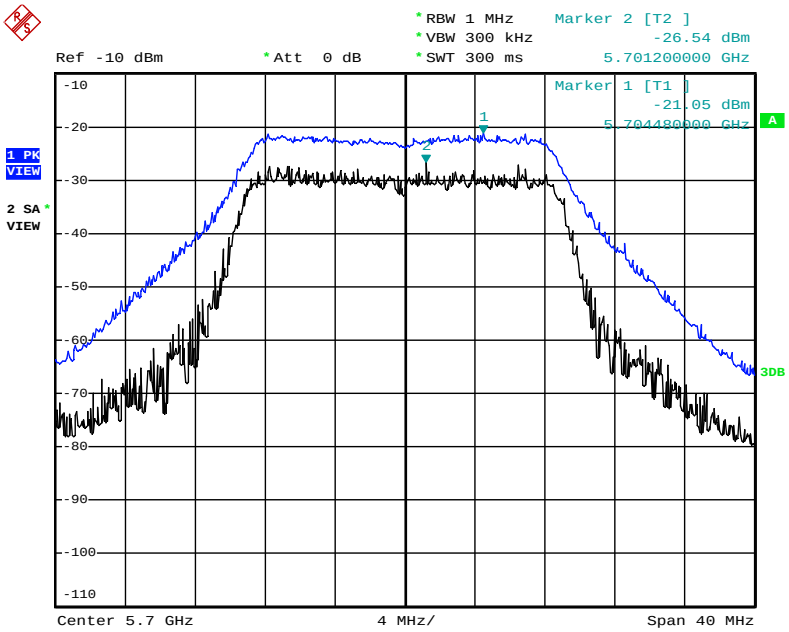
Date: 9.JUN.2012 14:58:26

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 / 5260 MHz (2TX)



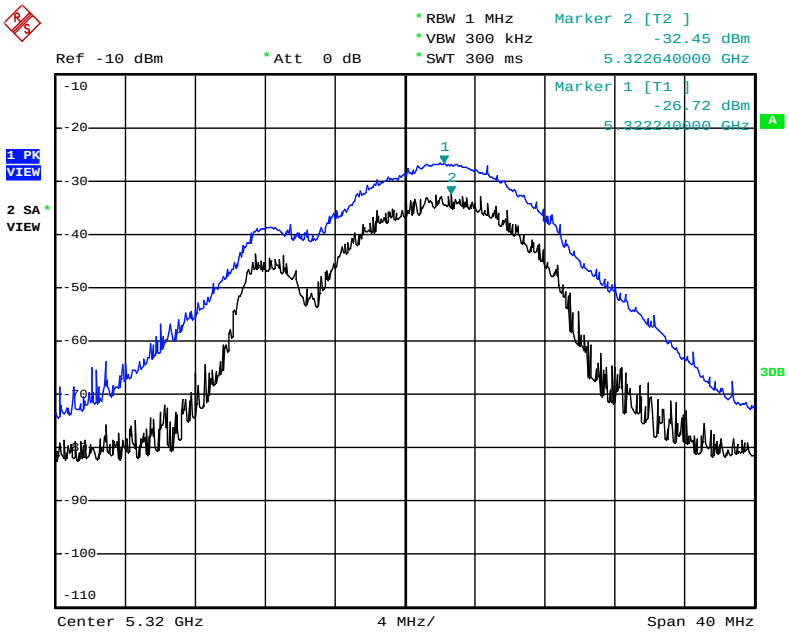
Date: 9.JUN.2012 15:02:39

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 / 5700 MHz (2TX)



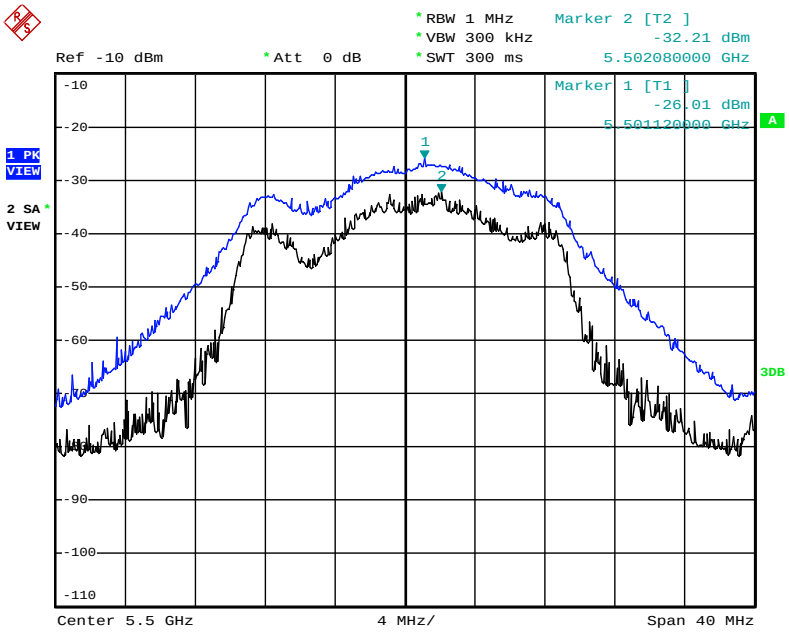
Date: 9.JUN.2012 14:59:52

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3 / 5320 MHz (3TX)



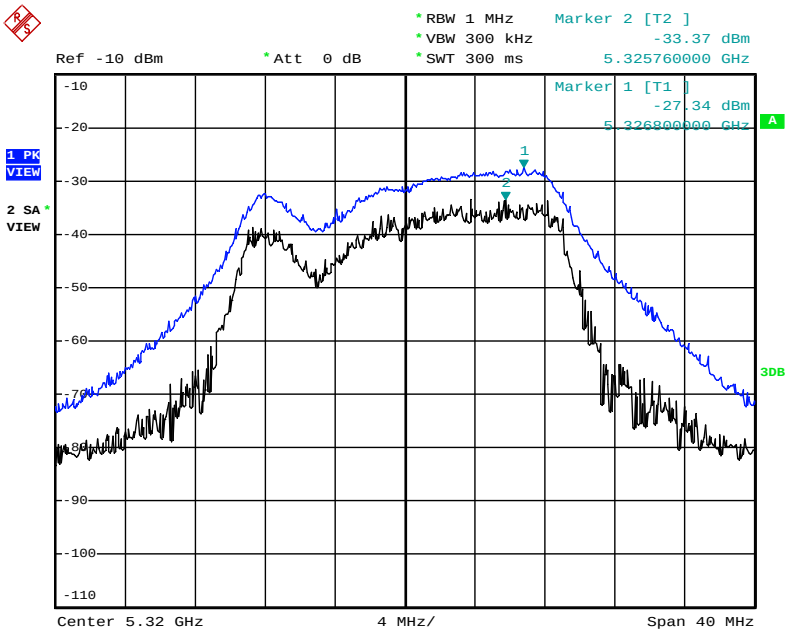
Date: 9.JUN.2012 14:54:45

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3 / 5500 MHz (3TX)



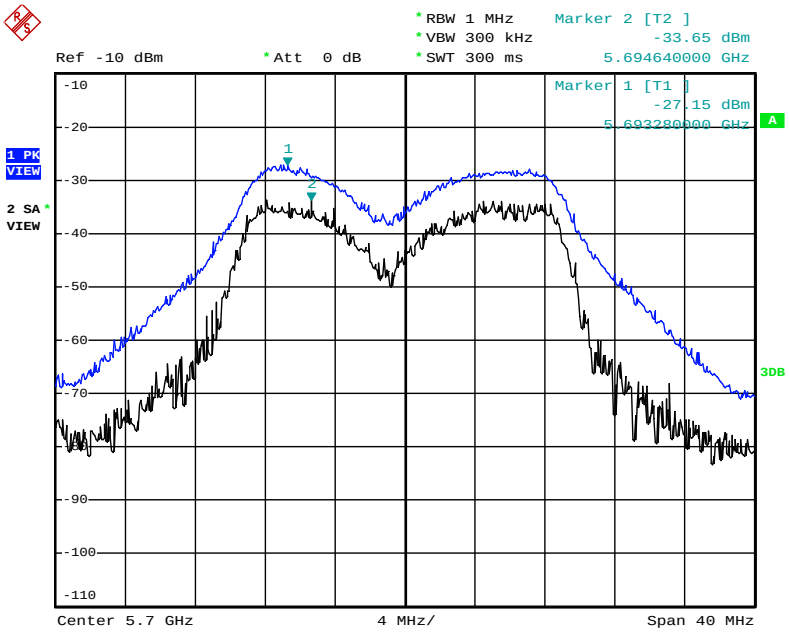
Date: 9.JUN.2012 14:54:13

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3 / 5320 MHz (3TX)



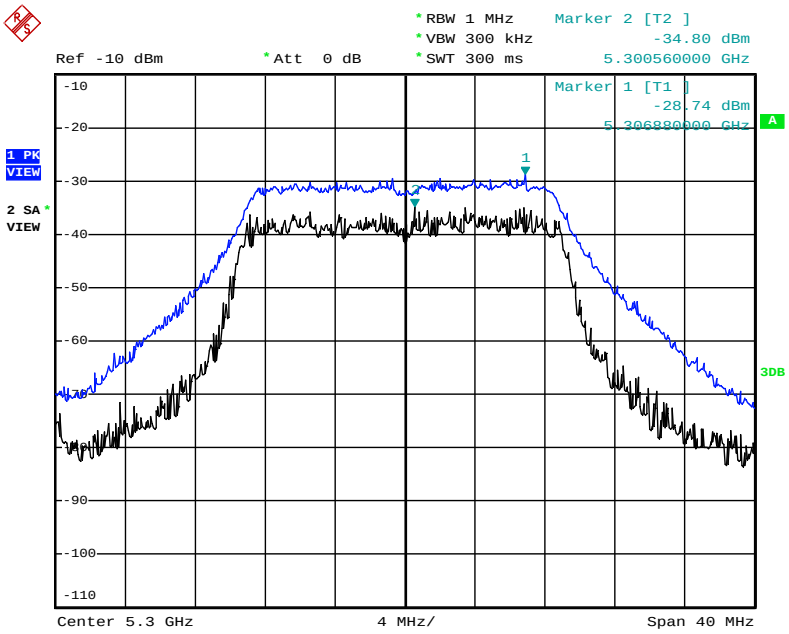
Date: 9.JUN.2012 14:50:58

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3 / 5700 MHz (3TX)



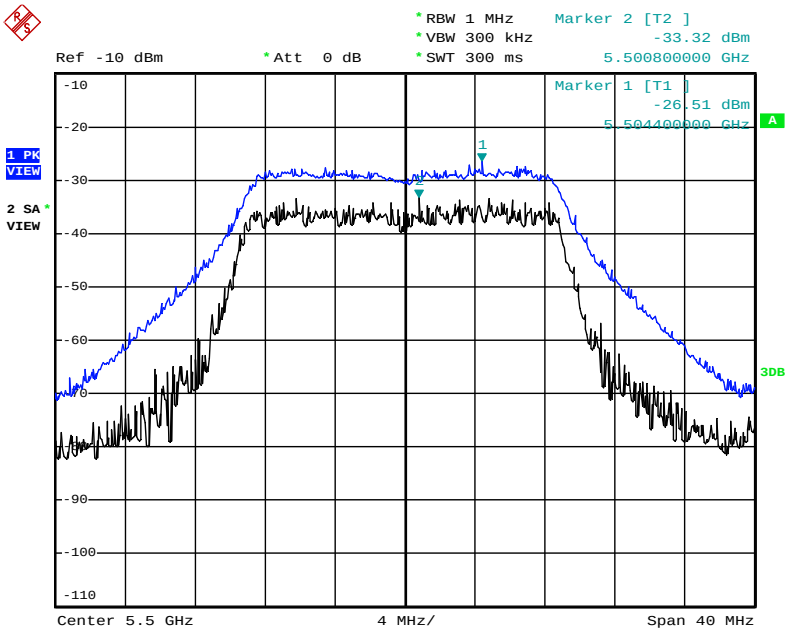
Date: 9.JUN.2012 14:52:26

Peak Excursion Plot on Configuration IEEE 802.11n MCS16 20MHz / Chain 1 + Chain 2 + Chain 3 / 5300 MHz (3TX)



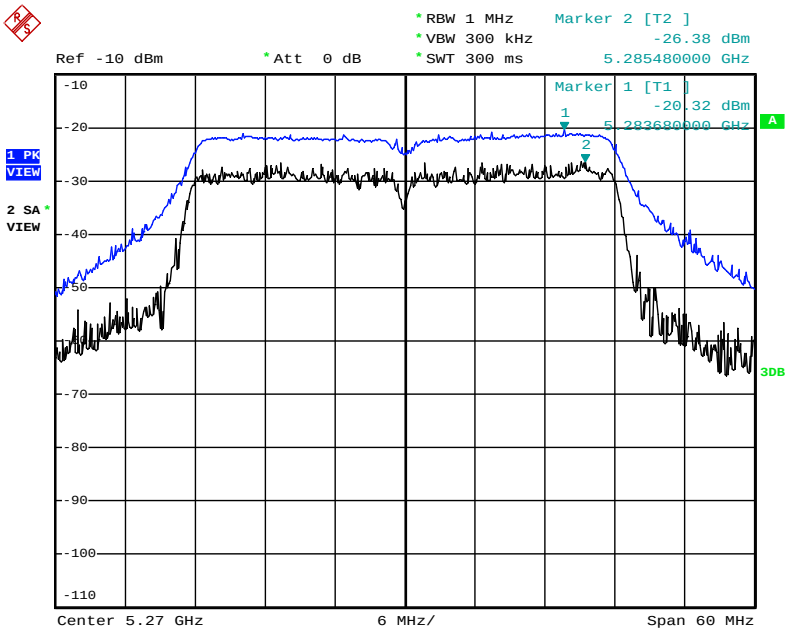
Date: 9.JUN.2012 14:47:37

Peak Excursion Plot on Configuration IEEE 802.11n MCS16 20MHz / Chain 1 + Chain 2 + Chain 3 / 5500 MHz (3TX)



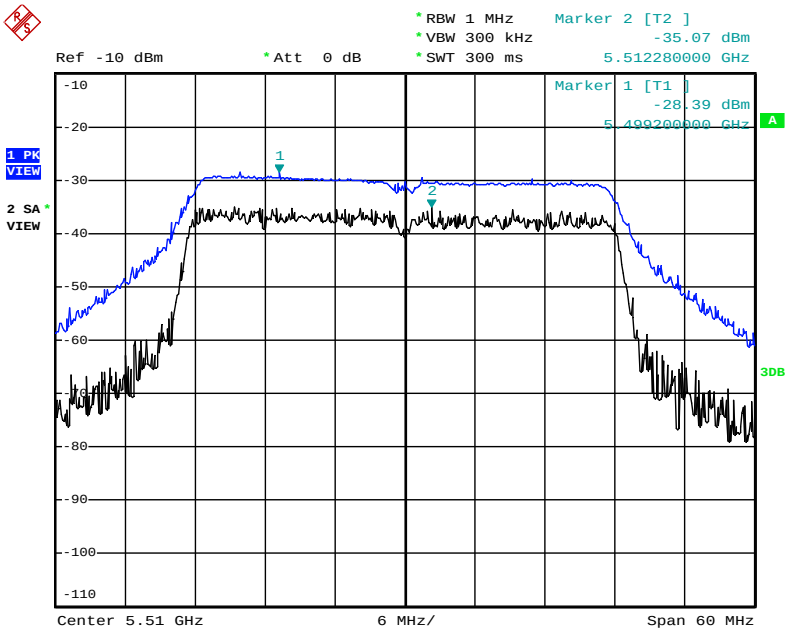
Date: 9.JUN.2012 14:46:32

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 / 5270 MHz (1TX)



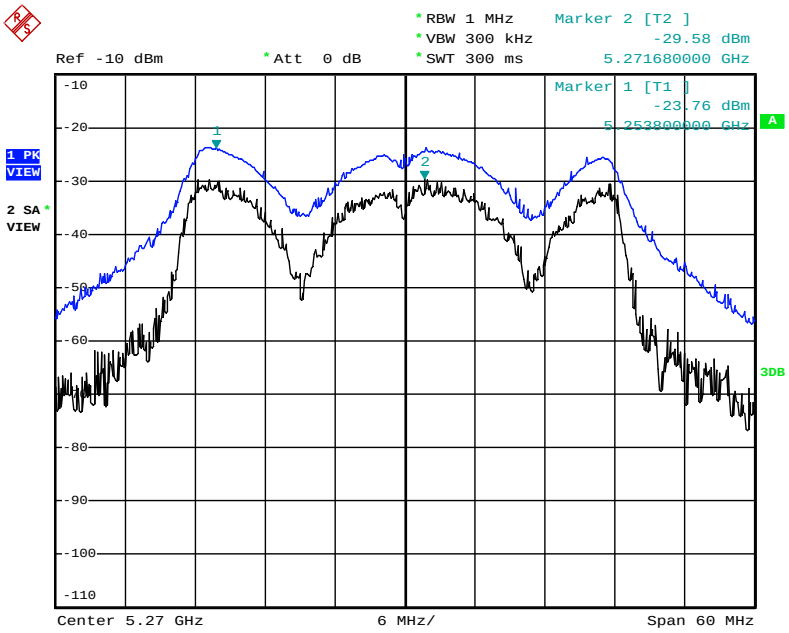
Date: 9.JUN.2012 15:09:22

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 / 5510 MHz (1TX)



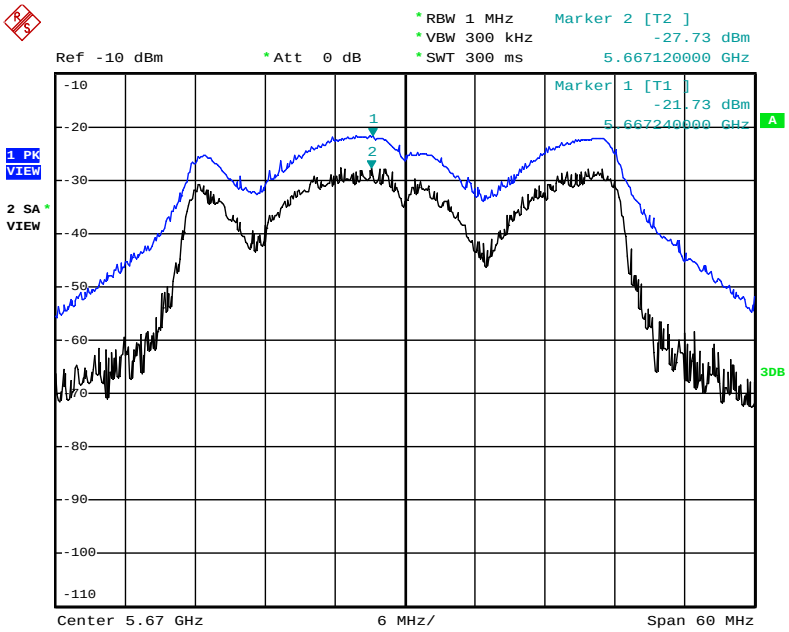
Date: 9.JUN.2012 15:10:44

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 / 5270 MHz (2TX)



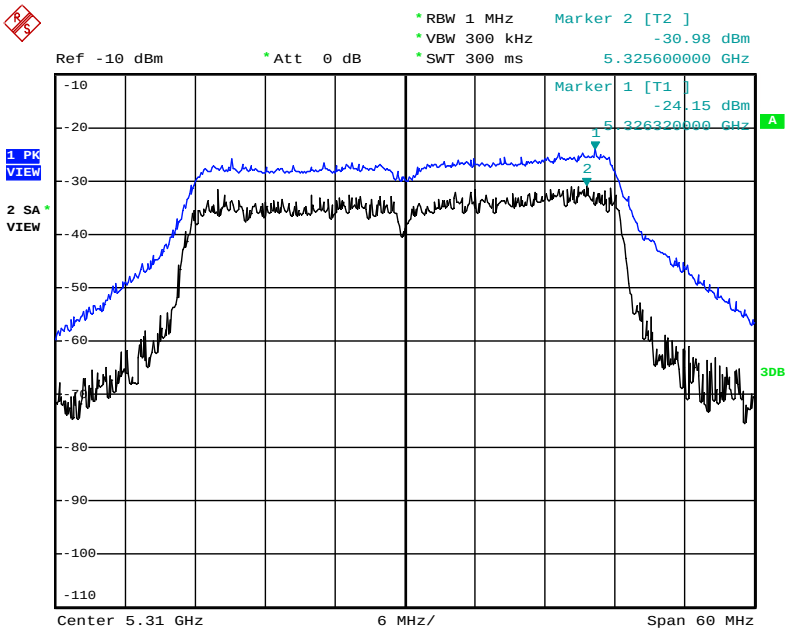
Date: 9.JUN.2012 15:07:46

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 / 5670 MHz (2TX)



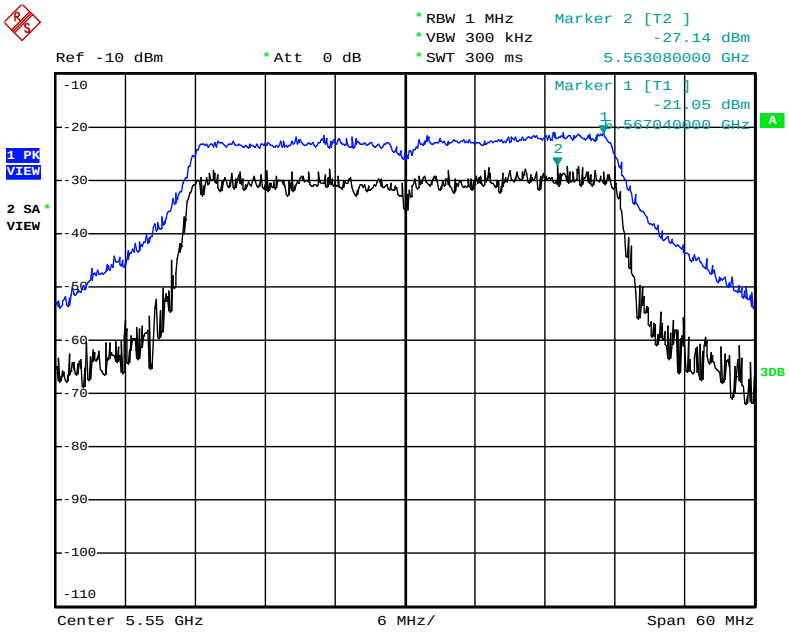
Date: 9.JUN.2012 15:06:06

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 / 5310 MHz (2TX)



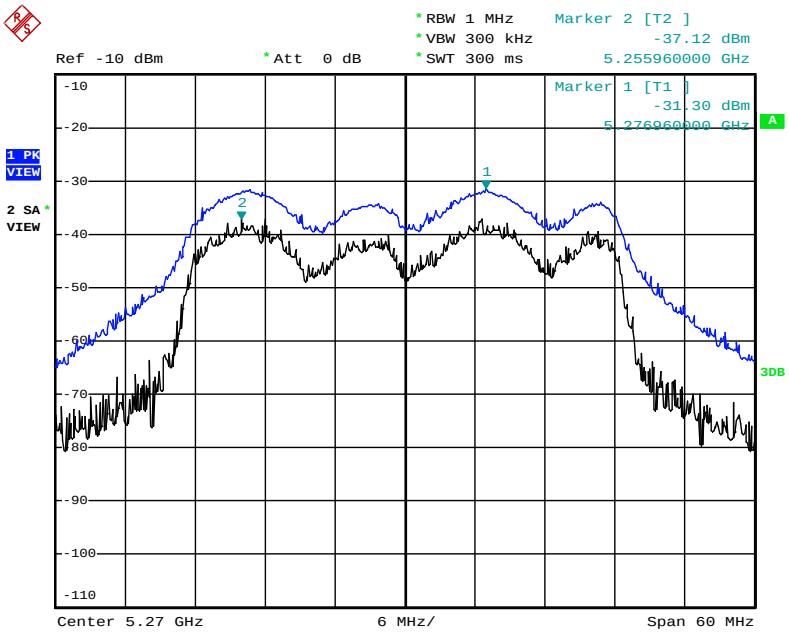
Date: 9.JUN.2012 15:03:53

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 / 5550 MHz (2TX)



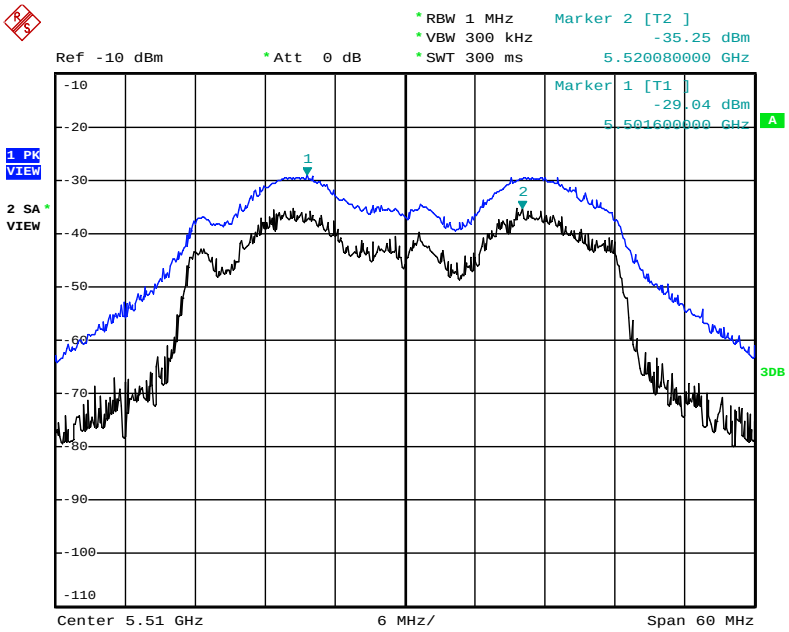
Date: 9.JUN.2012 15:04:58

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3 / 5270 MHz (3TX)



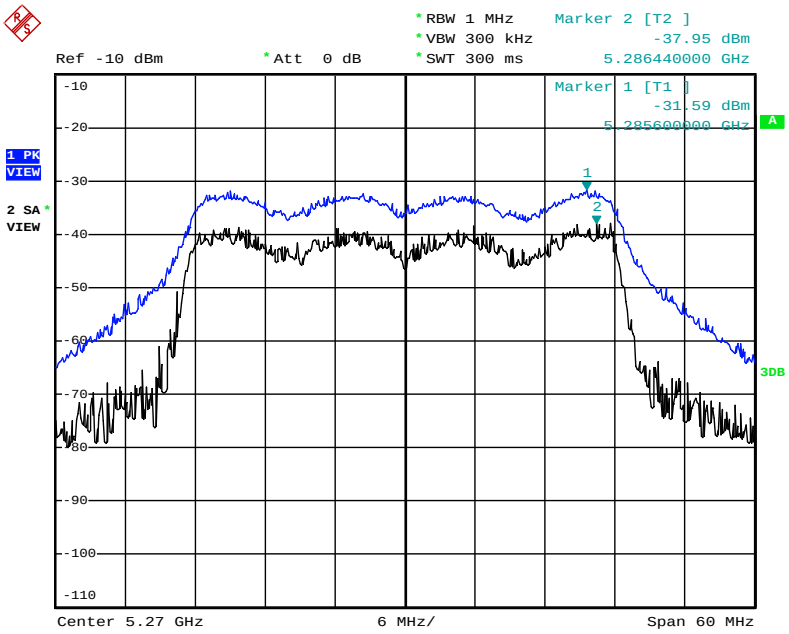
Date: 9.JUN.2012 14:27:17

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3 / 5510 MHz (3TX)



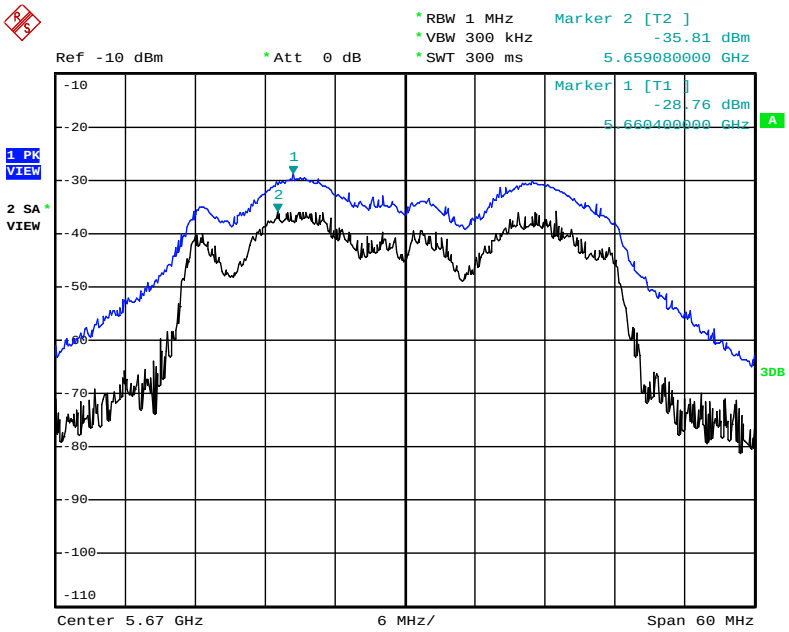
Date: 9.JUN.2012 14:28:24

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3 / 5270 MHz (3TX)



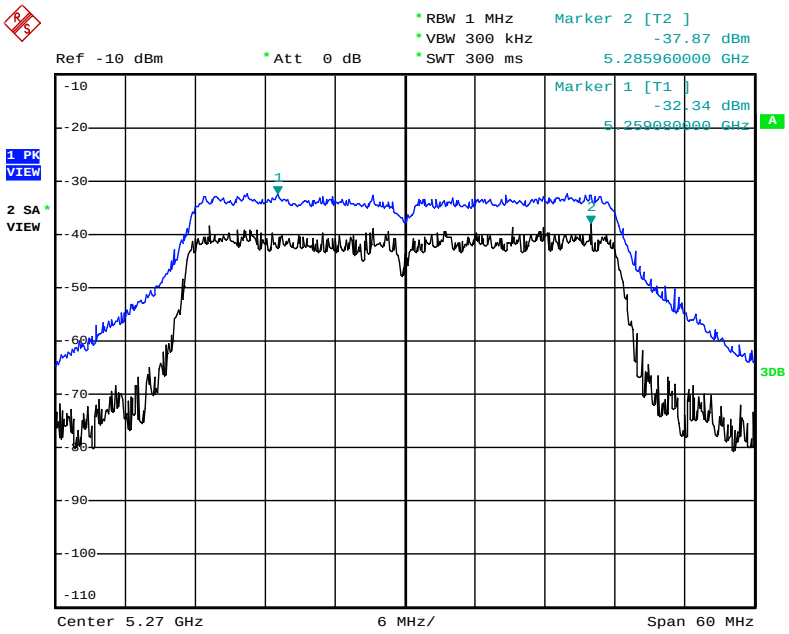
Date: 9.JUN.2012 14:40:45

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3 / 5670 MHz (3TX)



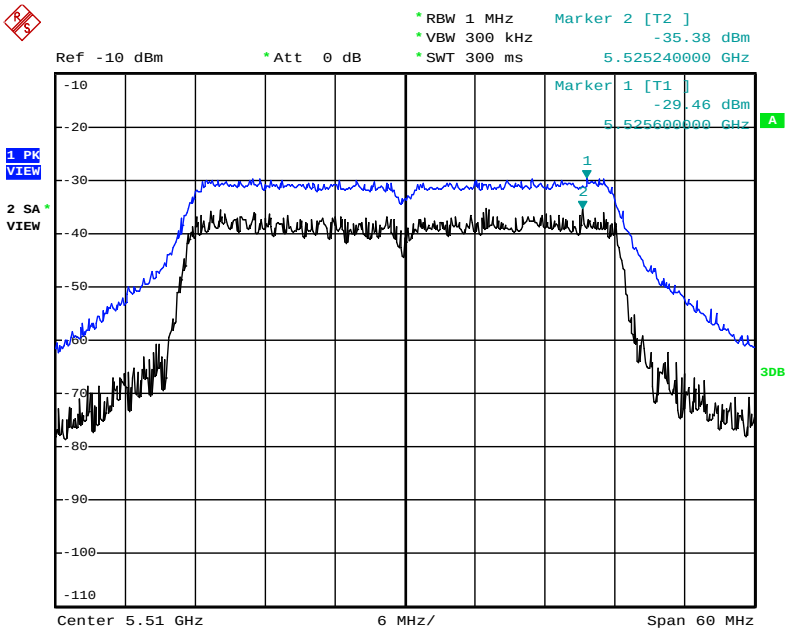
Date: 9.JUN.2012 14:30:54

Peak Excursion Plot on Configuration IEEE 802.11n MCS16 40MHz / Chain 1 + Chain 2 + Chain 3 / 5270 MHz (3TX)



Date: 9.JUN.2012 14:43:00

Peak Excursion Plot on Configuration IEEE 802.11n MCS16 40MHz / Chain 1 + Chain 2 + Chain 3 / 5510 MHz (3TX)



Date: 9.JUN.2012 14:43:38

Temperature	25°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	IEEE 802.11n
Test Mode	Mode 4 (Ant. 9 Yagi antenna / 8dBi)		

1TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.32	13	Complies
60	5300 MHz	6.58	13	Complies
64	5320 MHz	4.78	13	Complies
100	5500 MHz	6.17	13	Complies
116	5580 MHz	5.29	13	Complies
140	5700 MHz	5.50	13	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	5.01	13	Complies
62	5310 MHz	5.61	13	Complies
102	5510MHz	4.82	13	Complies
110	5550 MHz	5.36	13	Complies
134	5670 MHz	5.48	13	Complies

2TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	6.06	13	Complies
60	5300 MHz	4.14	13	Complies
64	5320 MHz	5.43	13	Complies
100	5500 MHz	5.73	13	Complies
116	5580 MHz	5.25	13	Complies
140	5700 MHz	5.68	13	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	5.43	13	Complies
62	5310 MHz	5.88	13	Complies
102	5510MHz	5.44	13	Complies
110	5550 MHz	5.70	13	Complies
134	5670 MHz	5.53	13	Complies

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.13	13	Complies
60	5300 MHz	6.34	13	Complies
64	5320 MHz	4.73	13	Complies
100	5500 MHz	4.22	13	Complies
116	5580 MHz	4.86	13	Complies
140	5700 MHz	6.14	13	Complies

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	6.71	13	Complies
62	5310 MHz	5.32	13	Complies
102	5510MHz	5.59	13	Complies
110	5550 MHz	5.19	13	Complies
134	5670 MHz	4.20	13	Complies

3TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	6.02	13	Complies
60	5300 MHz	5.13	13	Complies
64	5320 MHz	5.12	13	Complies
100	5500 MHz	4.57	13	Complies
116	5580 MHz	6.29	13	Complies
140	5700 MHz	5.43	13	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	4.33	13	Complies
62	5310 MHz	4.80	13	Complies
102	5510MHz	5.07	13	Complies
110	5550 MHz	5.74	13	Complies
134	5670 MHz	6.42	13	Complies

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	6.30	13	Complies
60	5300 MHz	7.01	13	Complies
64	5320 MHz	5.34	13	Complies
100	5500 MHz	6.25	13	Complies
116	5580 MHz	5.83	13	Complies
140	5700 MHz	6.53	13	Complies

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	6.88	13	Complies
62	5310 MHz	6.14	13	Complies
102	5510MHz	6.33	13	Complies
110	5550 MHz	6.06	13	Complies
134	5670 MHz	6.62	13	Complies

Configuration IEEE 802.11n MCS16 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	4.86	13	Complies
60	5300 MHz	6.25	13	Complies
64	5320 MHz	6.13	13	Complies
100	5500 MHz	5.72	13	Complies
116	5580 MHz	5.12	13	Complies
140	5700 MHz	5.57	13	Complies

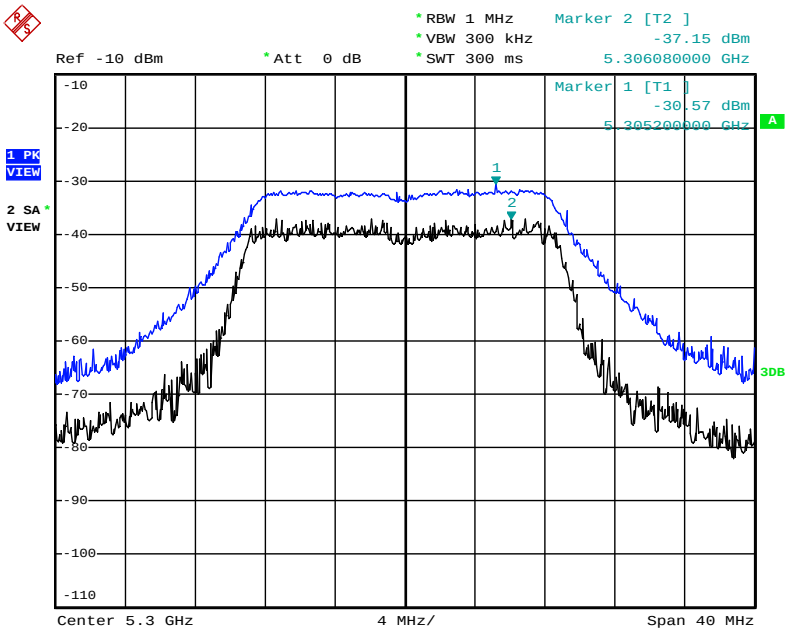
Configuration IEEE 802.11n MCS16 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	5.58	13	Complies
62	5310 MHz	5.93	13	Complies
102	5510MHz	6.05	13	Complies
110	5550 MHz	6.20	13	Complies
134	5670 MHz	6.33	13	Complies

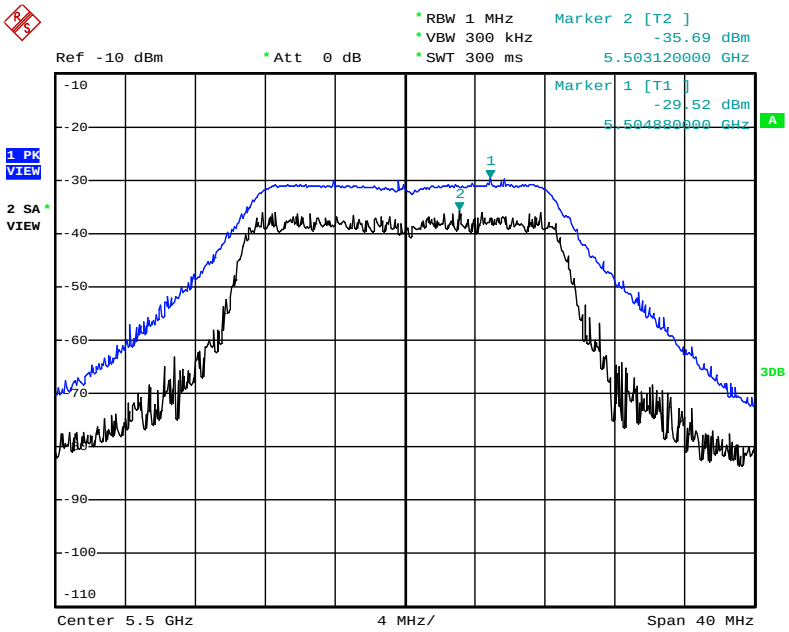
Note: All the test values were listed in the report.

For plots, only the channel with maximum results was shown.

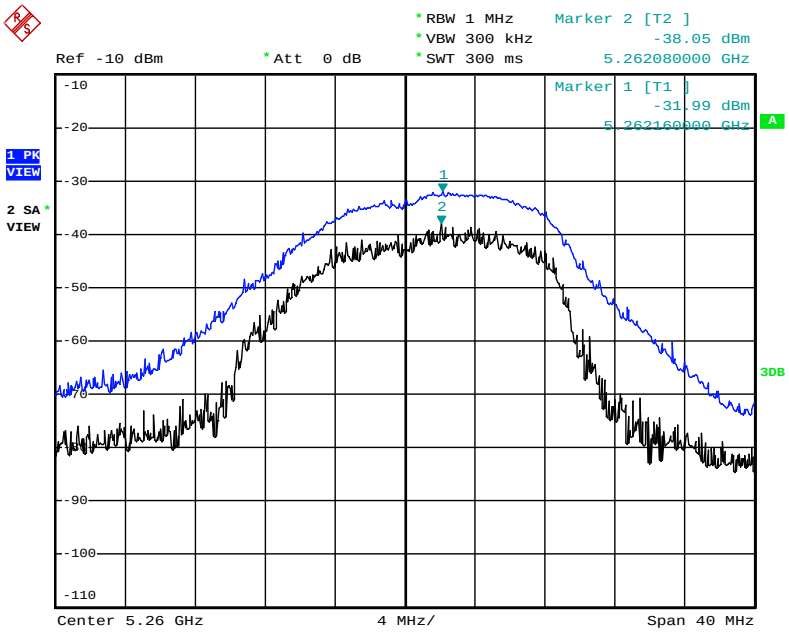
Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 / 5300 MHz (1TX)



Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 / 5500 MHz (1TX)

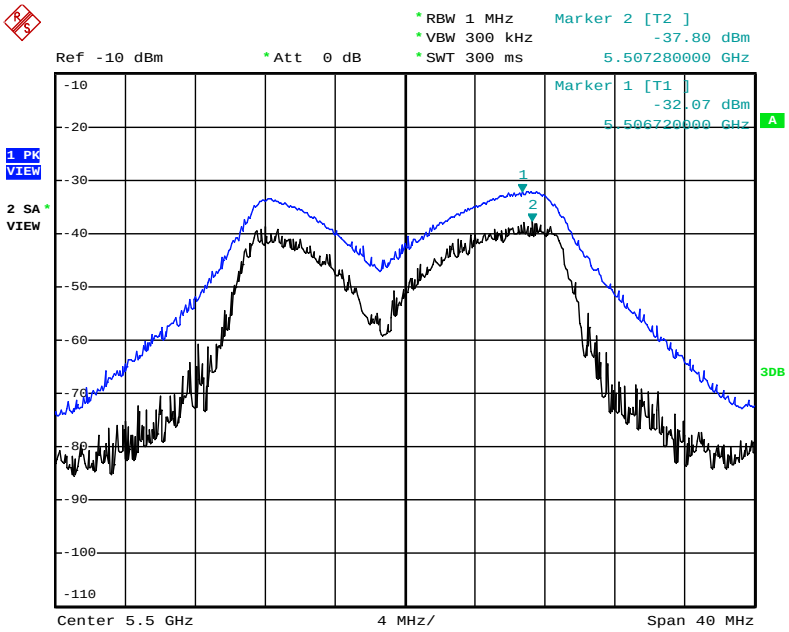


Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 / 5260 MHz (2TX)



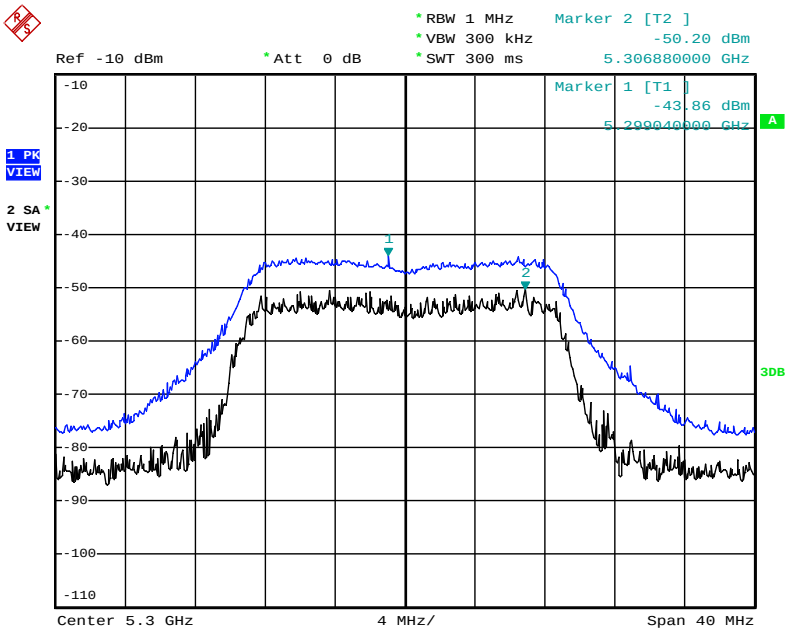
Date: 4.JUN.2012 20:34:17

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 / 5500 MHz (2TX)



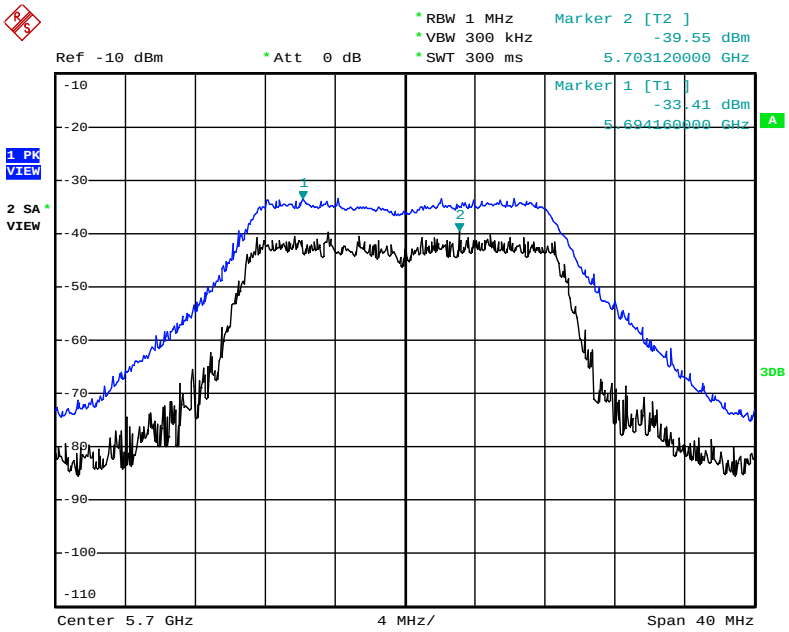
Date: 4.JUN.2012 20:32:44

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 / 5300 MHz (2TX)



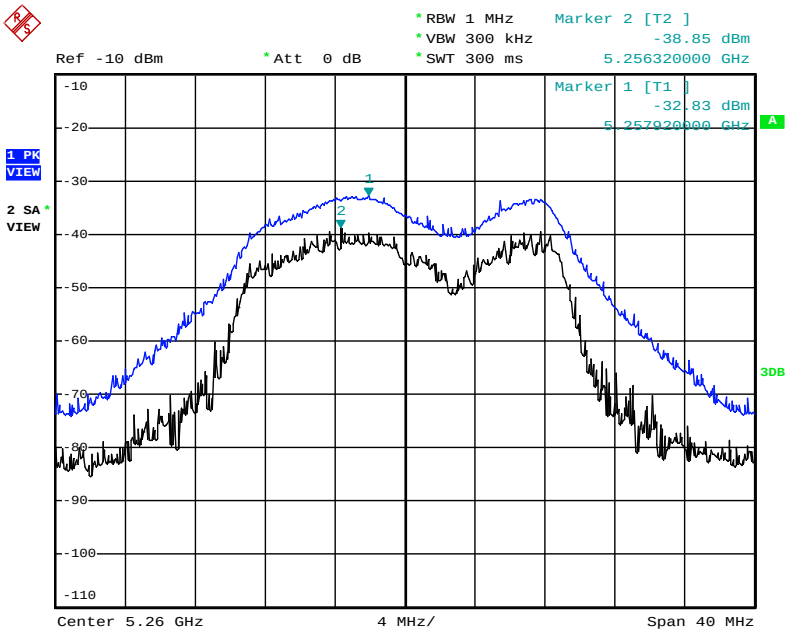
Date: 4.JUN.2012 20:35:10

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 / 5700 MHz (2TX)



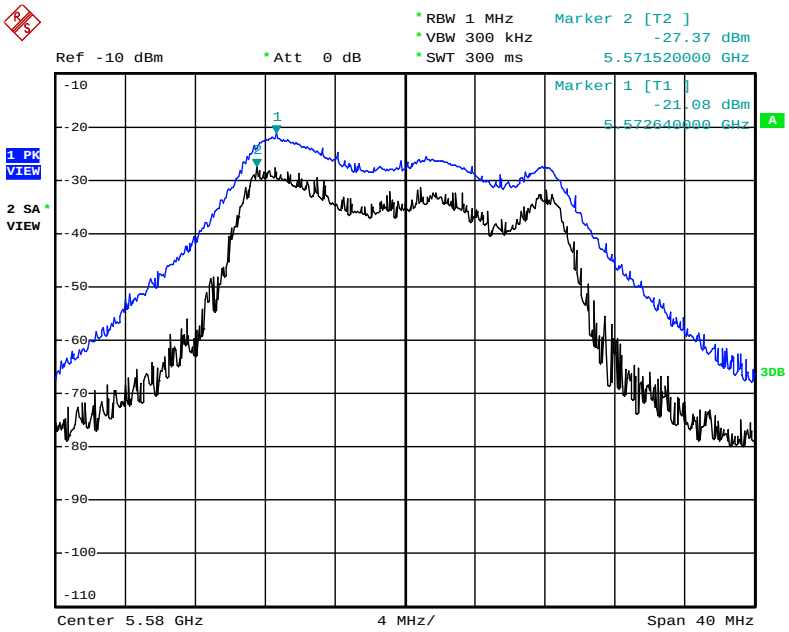
Date: 4.JUN.2012 20:37:22

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3 / 5260 MHz (3TX)



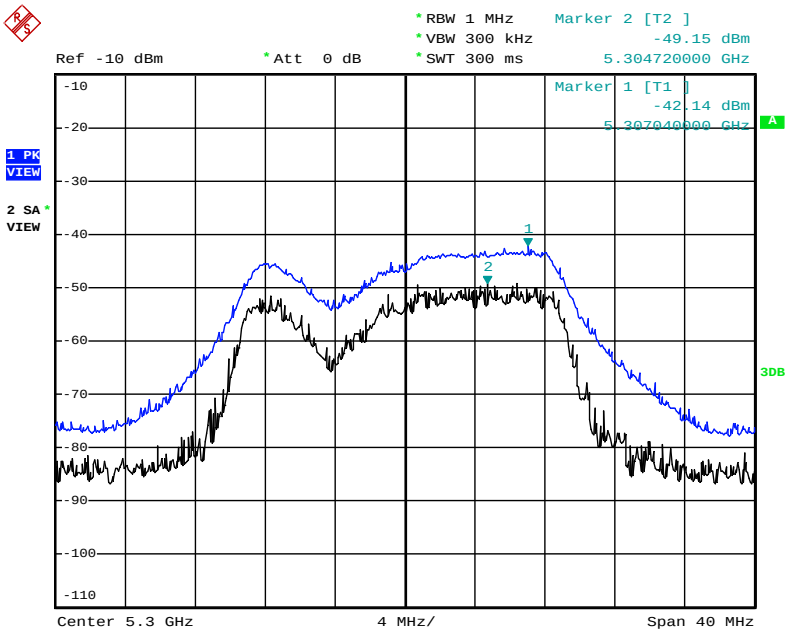
Date: 4.JUN.2012 20:28:51

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3 / 5580 MHz (3TX)



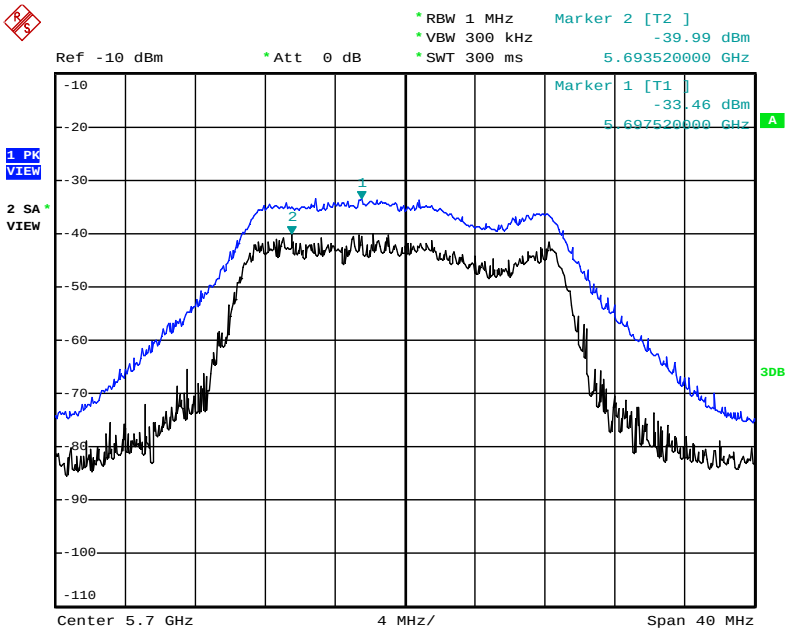
Date: 4.JUN.2012 20:30:35

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3 / 5300 MHz (3TX)



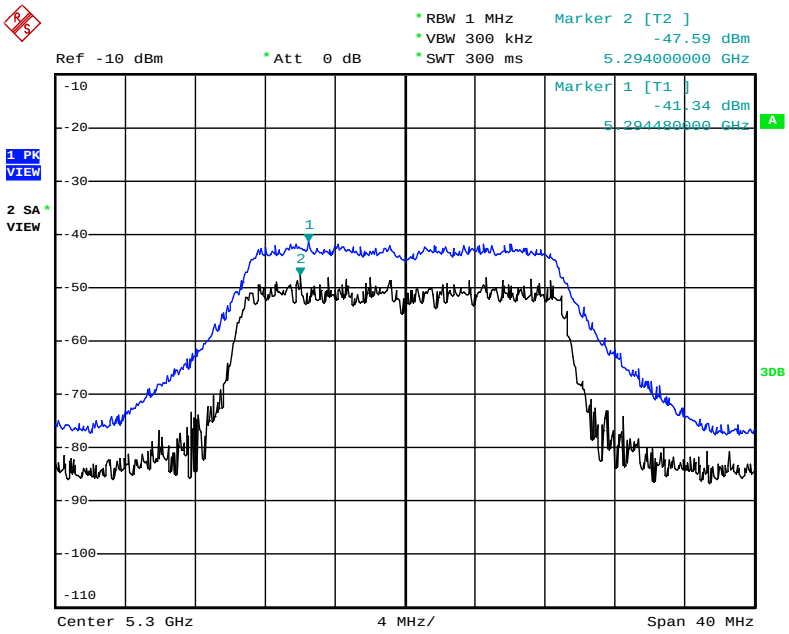
Date: 4.JUN.2012 20:27:47

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3 / 5700 MHz (3TX)



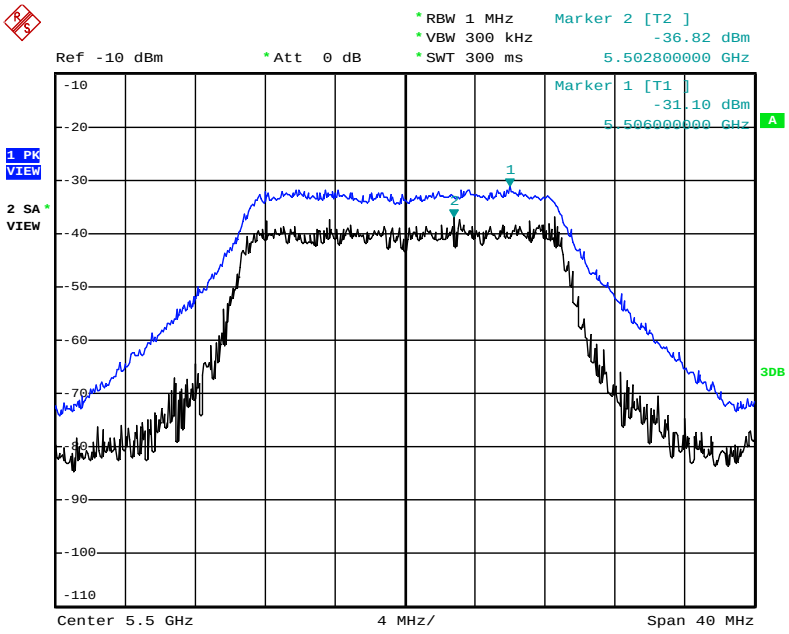
Date: 4.JUN.2012 20:26:03

Peak Excursion Plot on Configuration IEEE 802.11n MCS16 20MHz / Chain 1 + Chain 2 + Chain 3 / 5300 MHz (3TX)



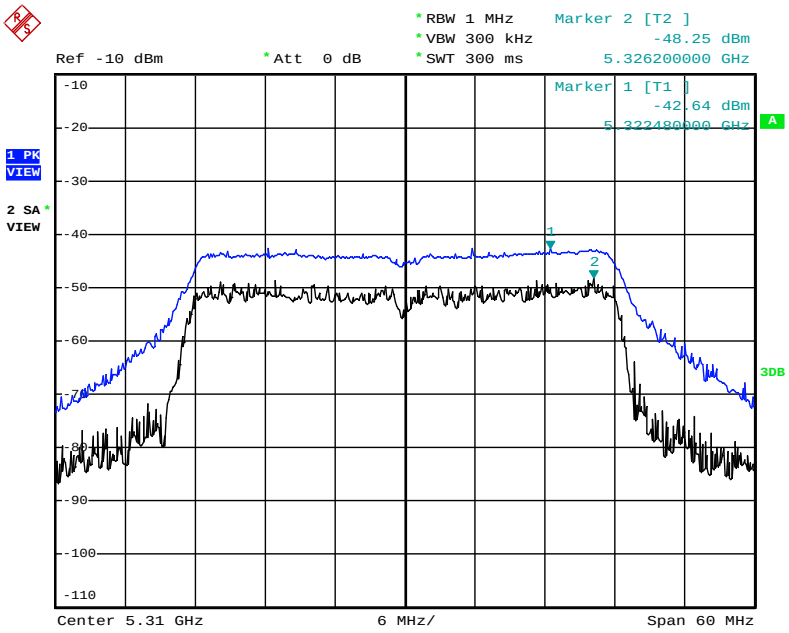
Date: 4.JUN.2012 20:23:51

Peak Excursion Plot on Configuration IEEE 802.11n MCS16 20MHz / Chain 1 + Chain 2 + Chain 3 / 5500 MHz (3TX)



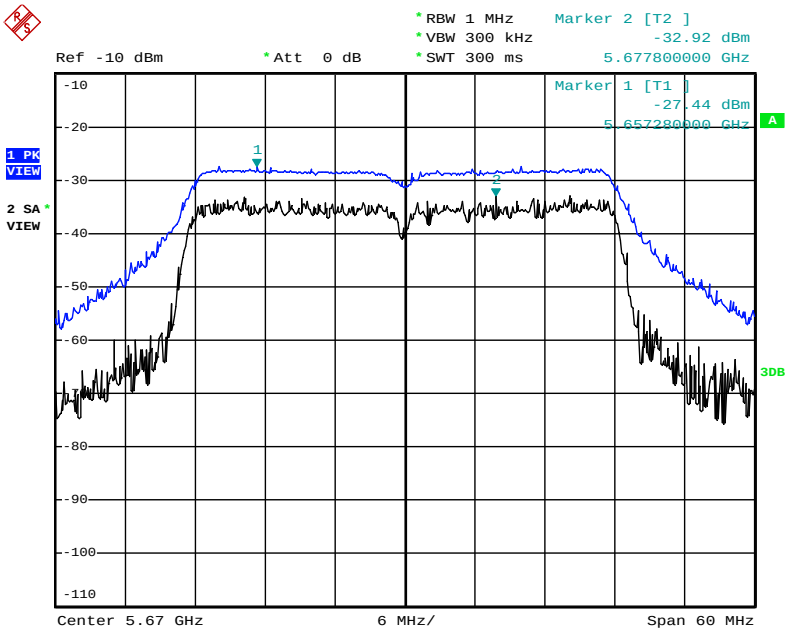
Date: 4.JUN.2012 20:24:38

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 / 5310 MHz (1TX)



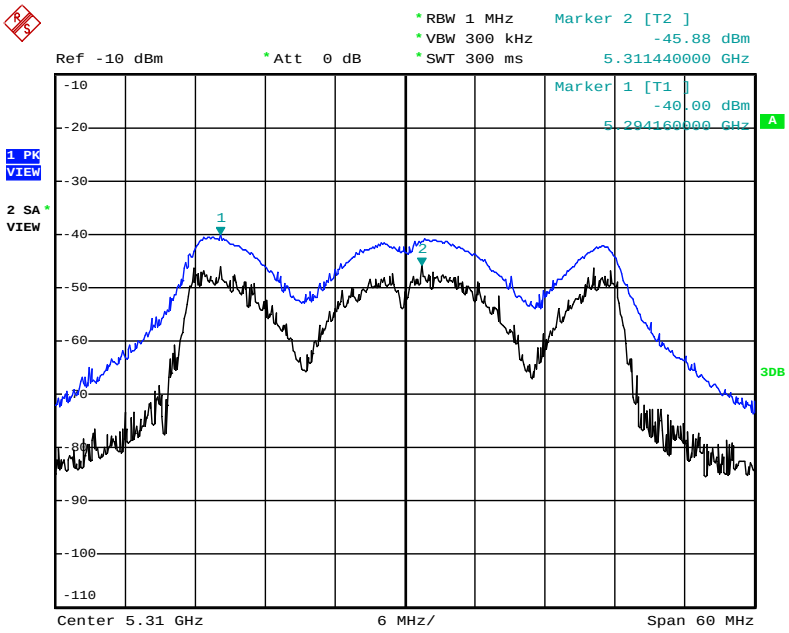
Date: 4.JUN.2012 20:45:14

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 / 5670 MHz (1TX)

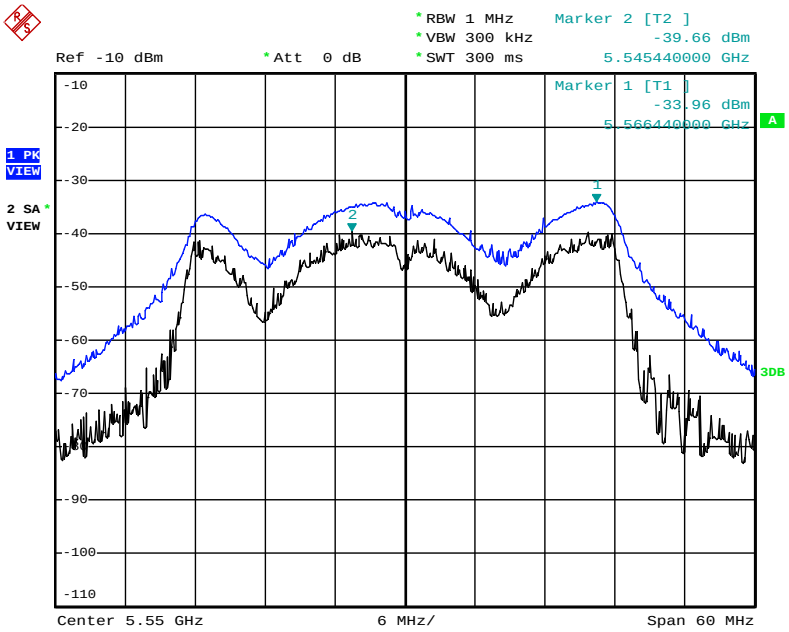


Date: 4.JUN.2012 20:43:50

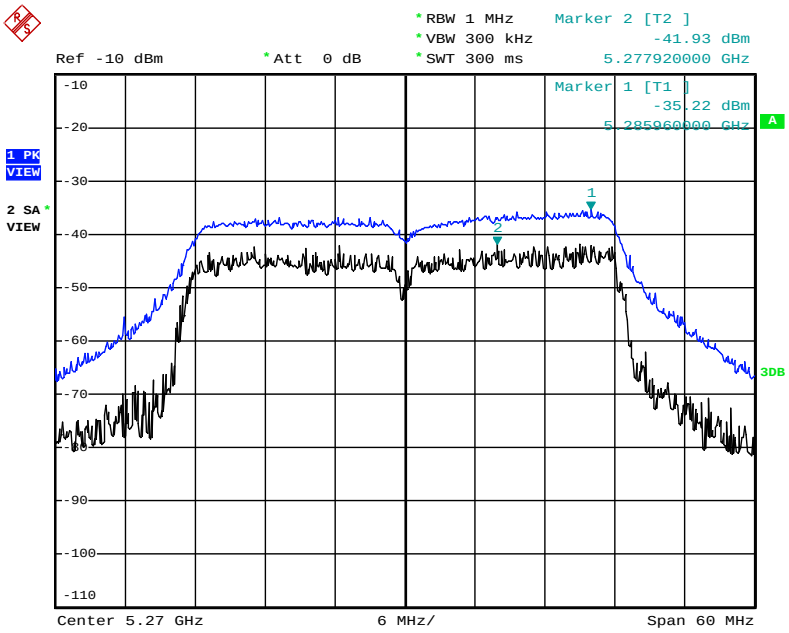
Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 / 5310 MHz (2TX)



Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 / 5550 MHz (2TX)

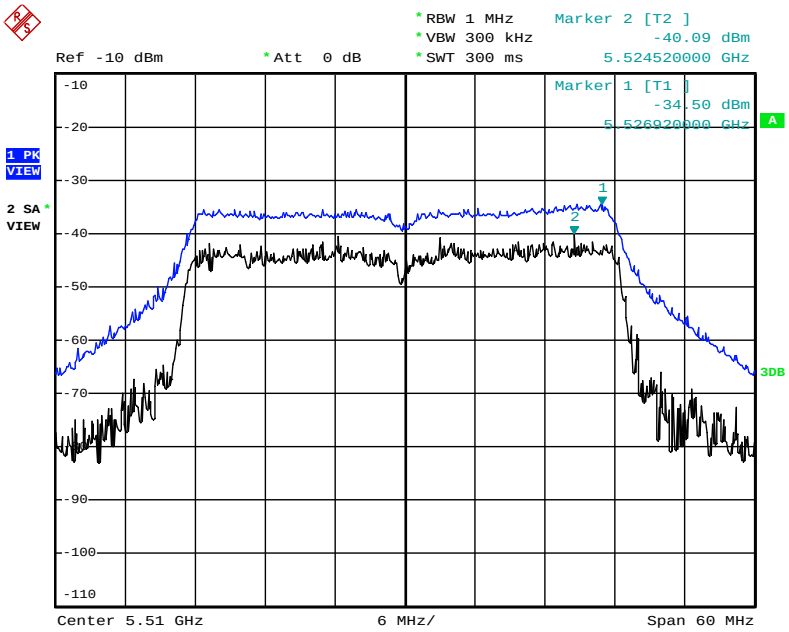


Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 / 5270 MHz (2TX)



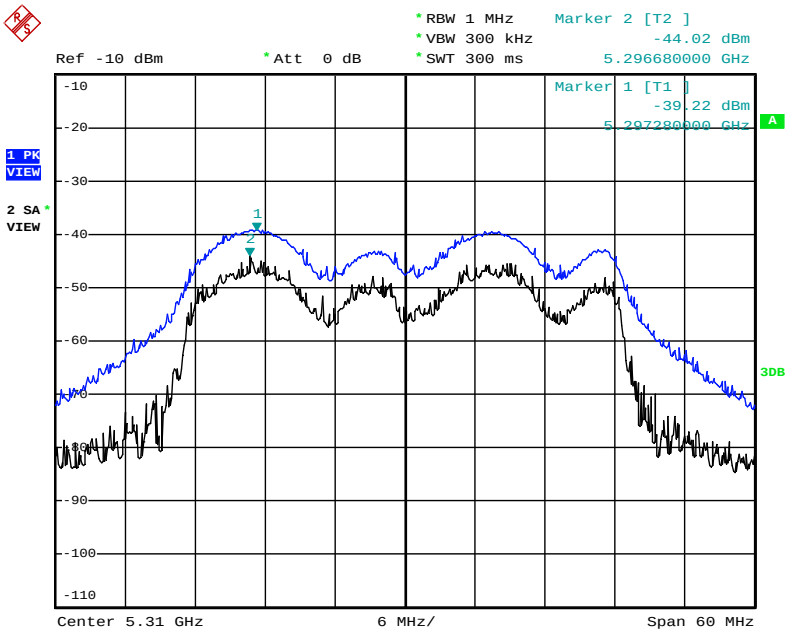
Date: 4.JUN.2012 20:40:38

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 / 5510 MHz (2TX)



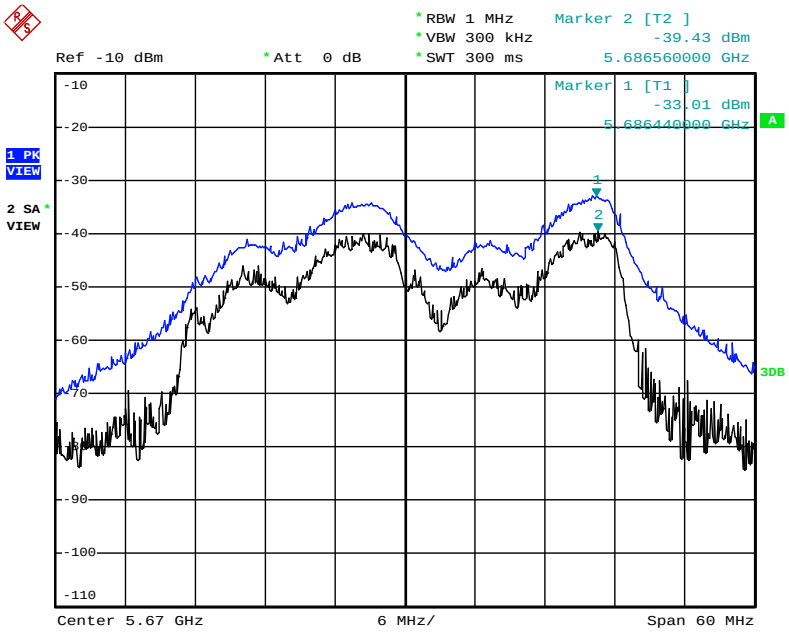
Date: 4.JUN.2012 20:39:46

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3 / 5310 MHz (3TX)



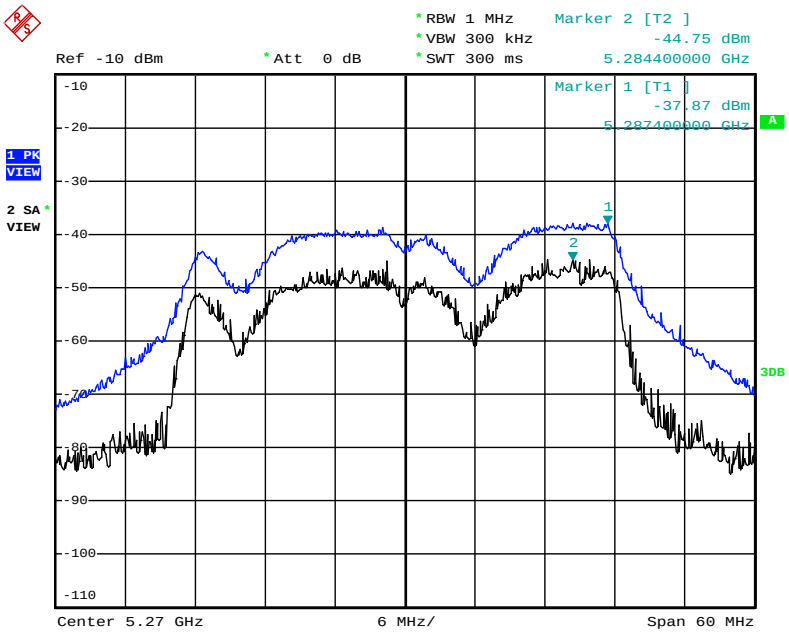
Date: 4.JUN.2012 20:18:20

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3 / 5670 MHz (3TX)



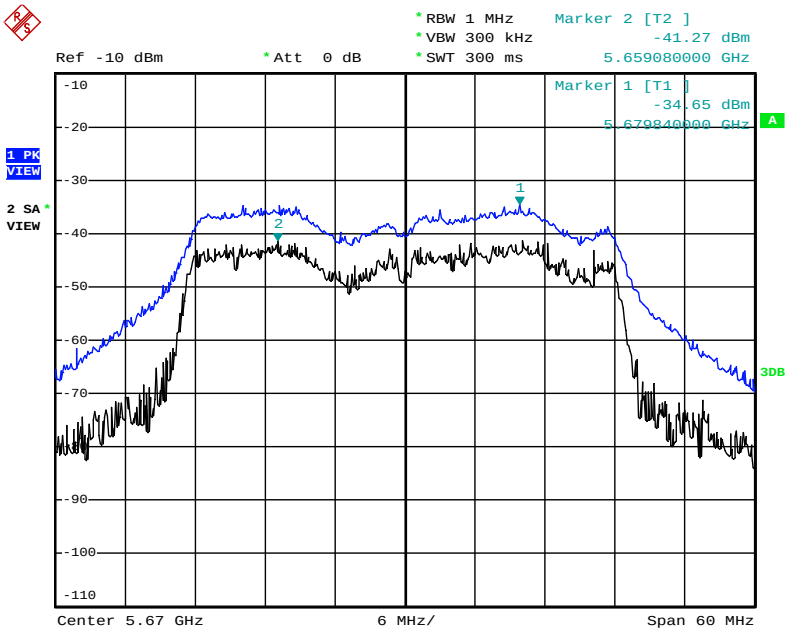
Date: 4.JUN.2012 20:16:45

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3 / 5270 MHz (3TX)



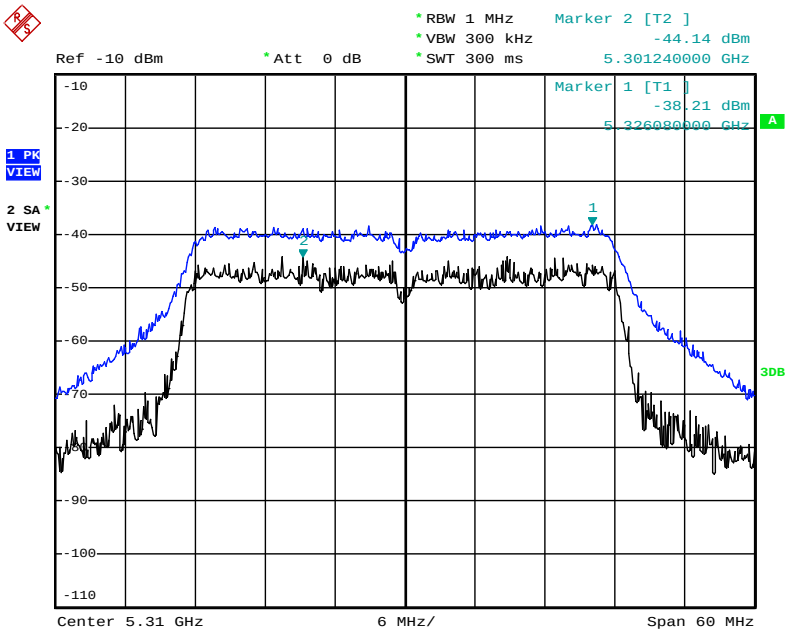
Date: 4.JUN.2012 20:19:18

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3 / 5670 MHz (3TX)



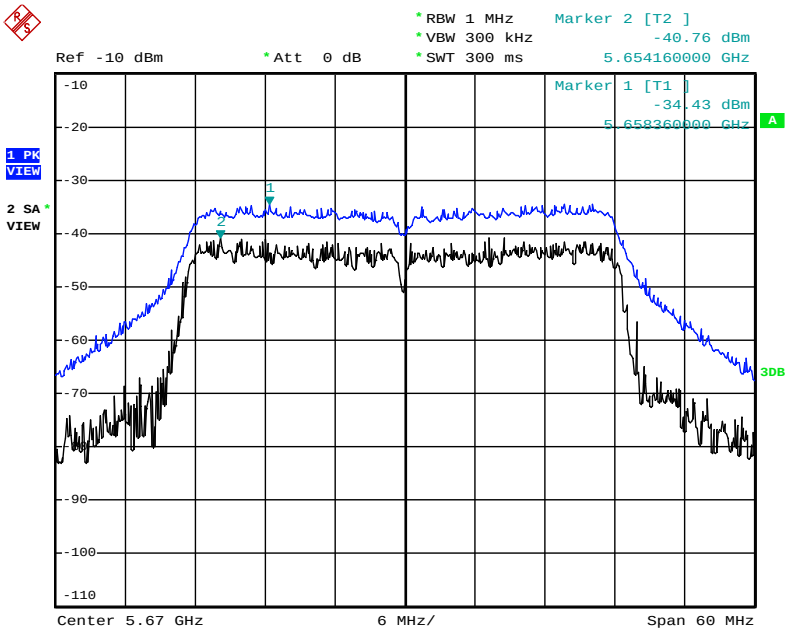
Date: 4.JUN.2012 20:20:54

Peak Excursion Plot on Configuration IEEE 802.11n MCS16 40MHz / Chain 1 + Chain 2 + Chain 3 / 5310 MHz (3TX)



Date: 4.JUN.2012 20:22:29

Peak Excursion Plot on Configuration IEEE 802.11n MCS16 40MHz / Chain 1 + Chain 2 + Chain 3 / 5670 MHz (3TX)



Date: 4.JUN.2012 20:21:25

Temperature	25°C	Humidity	56%
Test Engineer	Allen Liu	Configurations	IEEE 802.11n
Test Mode	Mode 5 (Ant. 5 Facade antenna / 2.5dBi)		

1TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.70	13	Complies
60	5300 MHz	4.17	13	Complies
64	5320 MHz	5.50	13	Complies
100	5500 MHz	5.64	13	Complies
116	5580 MHz	5.45	13	Complies
140	5700 MHz	5.04	13	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	4.43	13	Complies
62	5310 MHz	7.34	13	Complies
102	5510MHz	4.85	13	Complies
110	5550 MHz	5.18	13	Complies
134	5670 MHz	5.58	13	Complies

2TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.19	13	Complies
60	5300 MHz	5.08	13	Complies
64	5320 MHz	5.37	13	Complies
100	5500 MHz	5.36	13	Complies
116	5580 MHz	3.47	13	Complies
140	5700 MHz	5.54	13	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	6.65	13	Complies
62	5310 MHz	4.85	13	Complies
102	5510MHz	5.08	13	Complies
110	5550 MHz	5.64	13	Complies
134	5670 MHz	5.93	13	Complies

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.75	13	Complies
60	5300 MHz	7.46	13	Complies
64	5320 MHz	5.50	13	Complies
100	5500 MHz	5.61	13	Complies
116	5580 MHz	5.48	13	Complies
140	5700 MHz	6.17	13	Complies

Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	5.94	13	Complies
62	5310 MHz	5.22	13	Complies
102	5510MHz	4.72	13	Complies
110	5550 MHz	6.05	13	Complies
134	5670 MHz	5.99	13	Complies

3TX

Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	4.85	13	Complies
60	5300 MHz	6.32	13	Complies
64	5320 MHz	5.81	13	Complies
100	5500 MHz	4.47	13	Complies
116	5580 MHz	5.27	13	Complies
140	5700 MHz	6.08	13	Complies

Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	5.28	13	Complies
62	5310 MHz	6.23	13	Complies
102	5510MHz	5.31	13	Complies
110	5550 MHz	6.89	13	Complies
134	5670 MHz	5.45	13	Complies

Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.83	13	Complies
60	5300 MHz	5.85	13	Complies
64	5320 MHz	4.82	13	Complies
100	5500 MHz	6.72	13	Complies
116	5580 MHz	4.04	13	Complies
140	5700 MHz	5.23	13	Complies

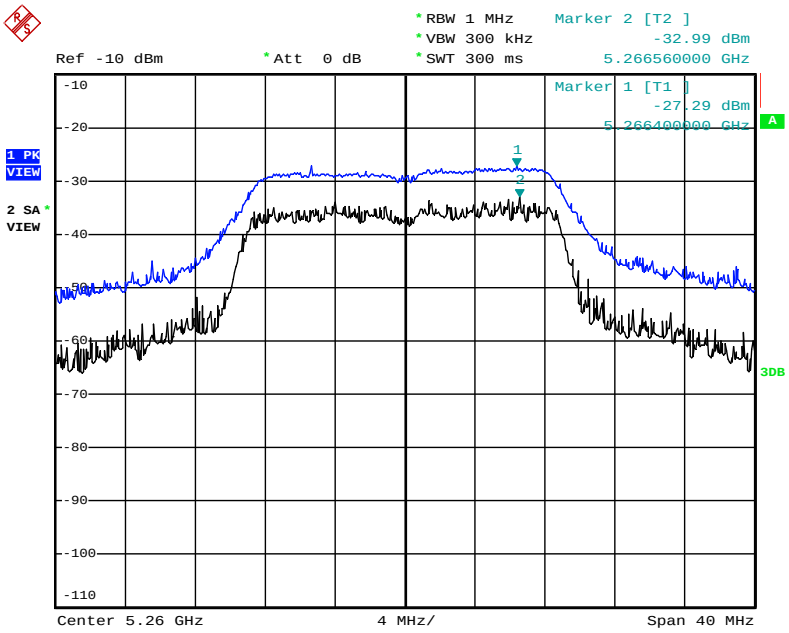
Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	6.12	13	Complies
62	5310 MHz	5.33	13	Complies
102	5510MHz	6.96	13	Complies
110	5550 MHz	7.19	13	Complies
134	5670 MHz	6.55	13	Complies

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

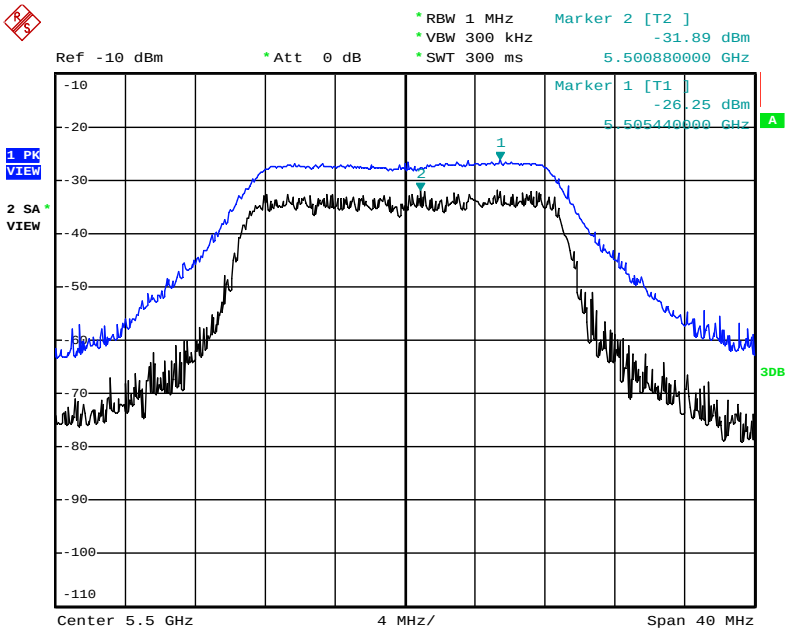
For plots, only the channel with maximum results was shown.

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 / 5260 MHz (1TX)



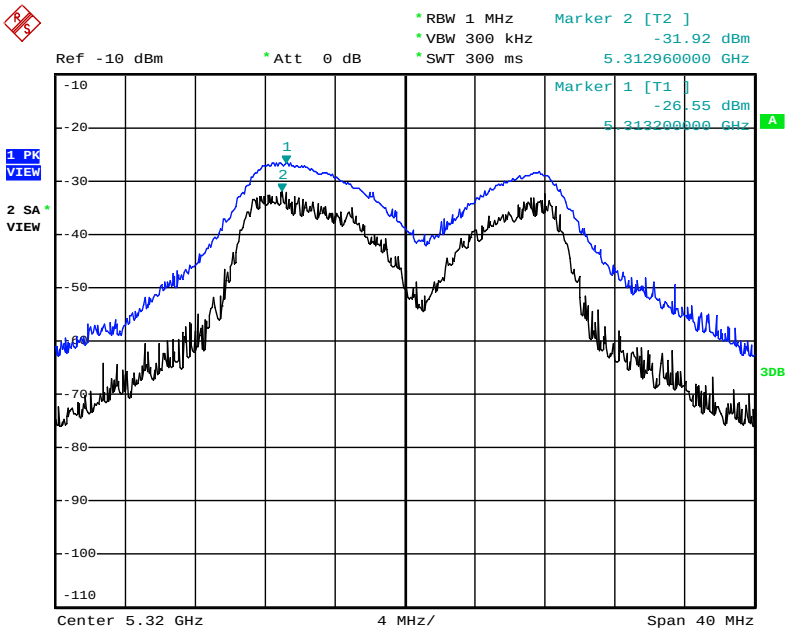
Date: 4.JUN.2012 19:13:41

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 / 5500 MHz (1TX)



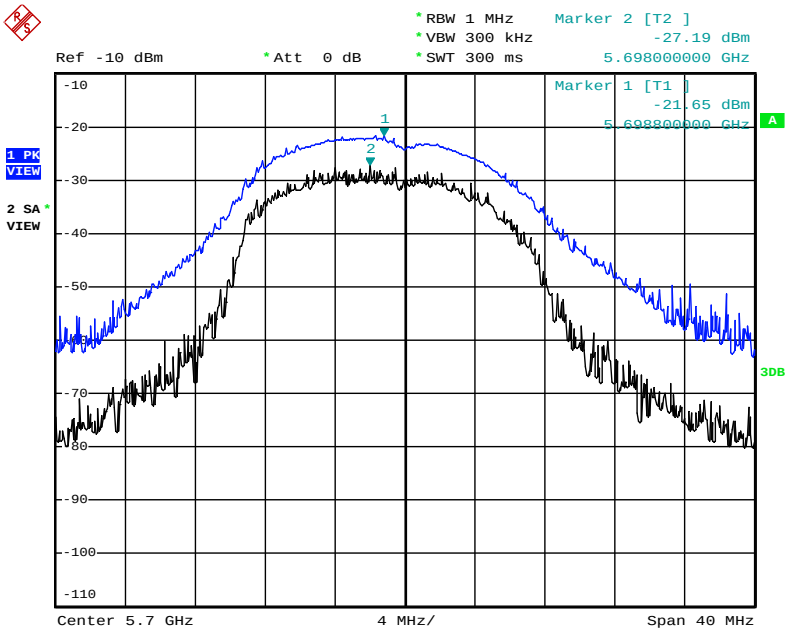
Date: 4.JUN.2012 19:19:00

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 / 5320 MHz (2TX)



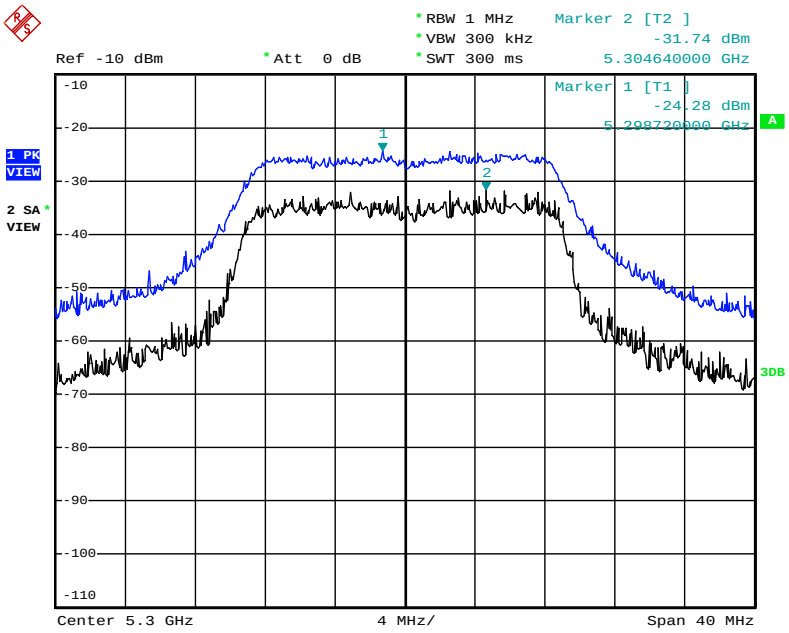
Date: 4.JUN.2012 19:00:05

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 / 5700 MHz (2TX)



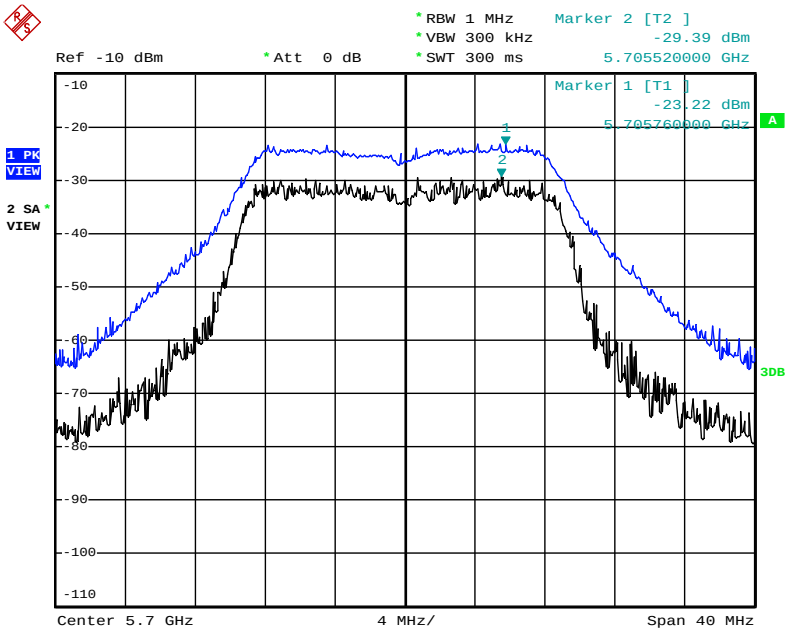
Date: 4.JUN.2012 18:58:28

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 / 5300 MHz (2TX)



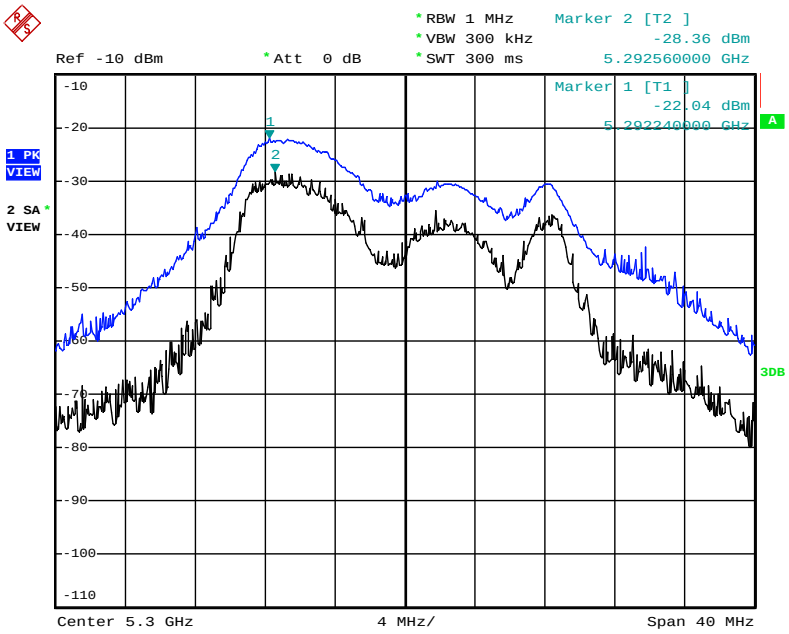
Date: 4.JUN.2012 19:02:05

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 / 5700 MHz (2TX)



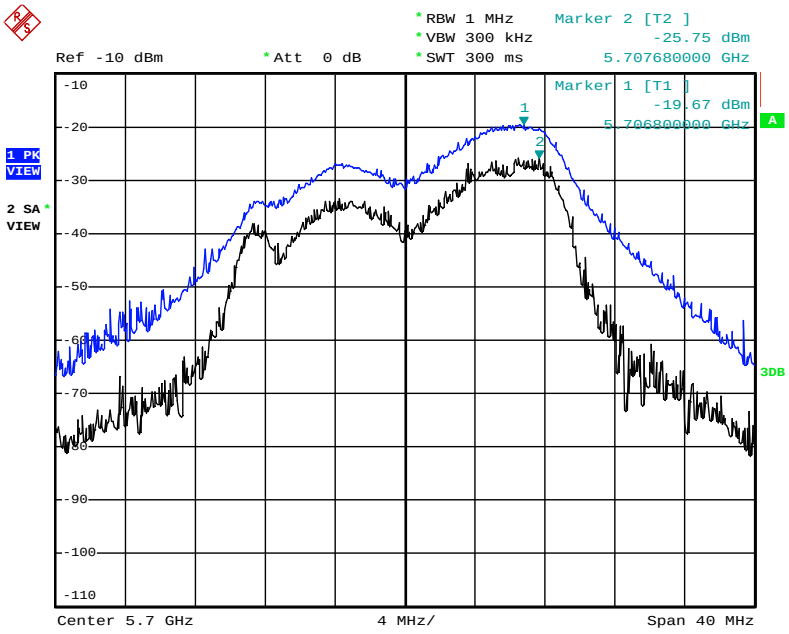
Date: 4.JUN.2012 19:04:22

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3 / 5300 MHz (3TX)



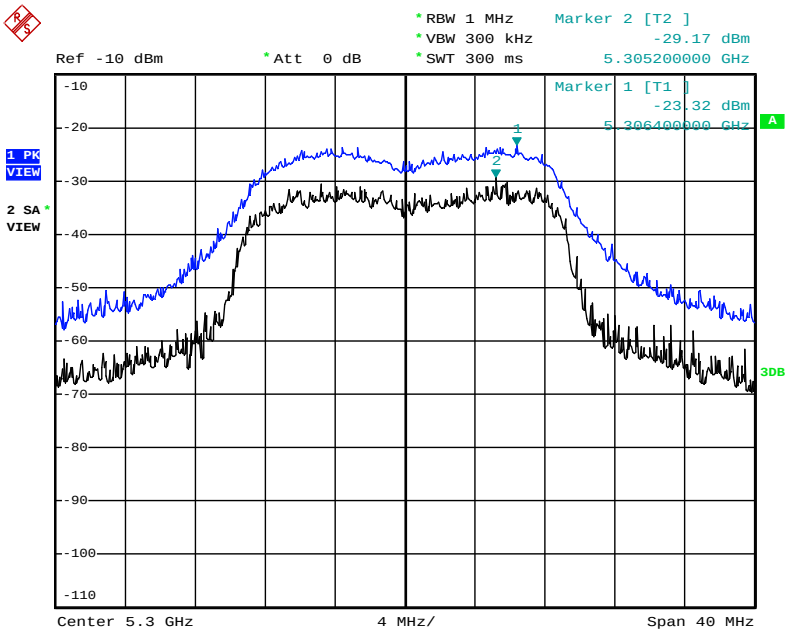
Date: 4.JUN.2012 18:55:51

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 20MHz / Chain 1 + Chain 2 + Chain 3 / 5700 MHz (3TX)



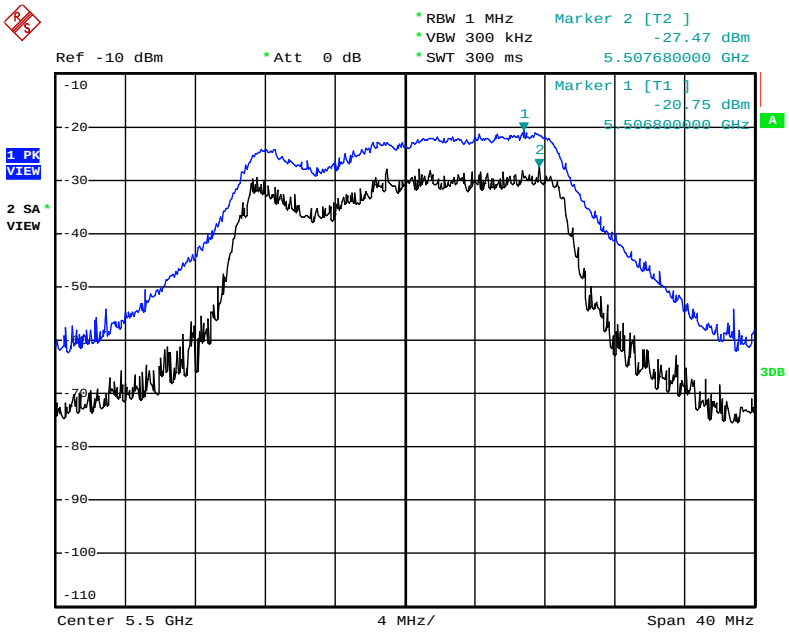
Date: 4.JUN.2012 18:57:40

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3 / 5300 MHz (3TX)



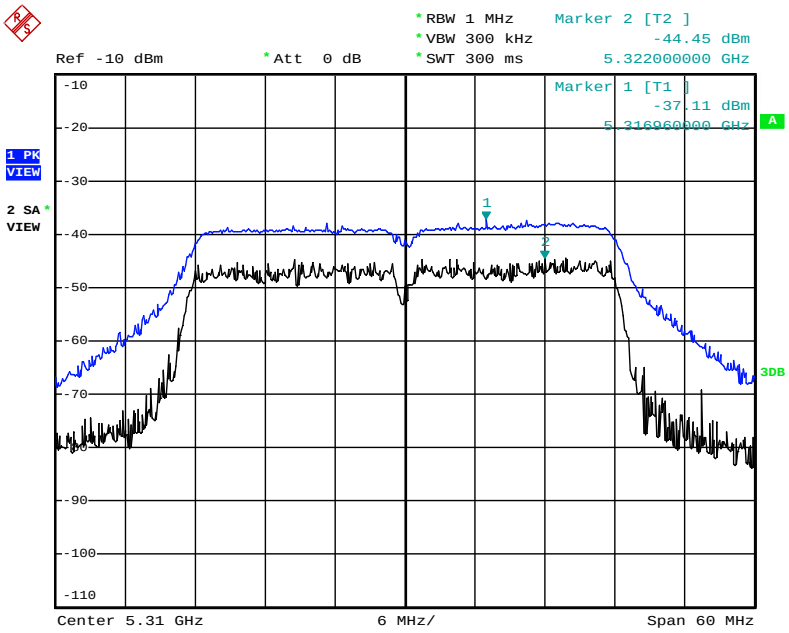
Date: 4.JUN.2012 18:54:14

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 20MHz / Chain 1 + Chain 2 + Chain 3 / 5500 MHz (3TX)



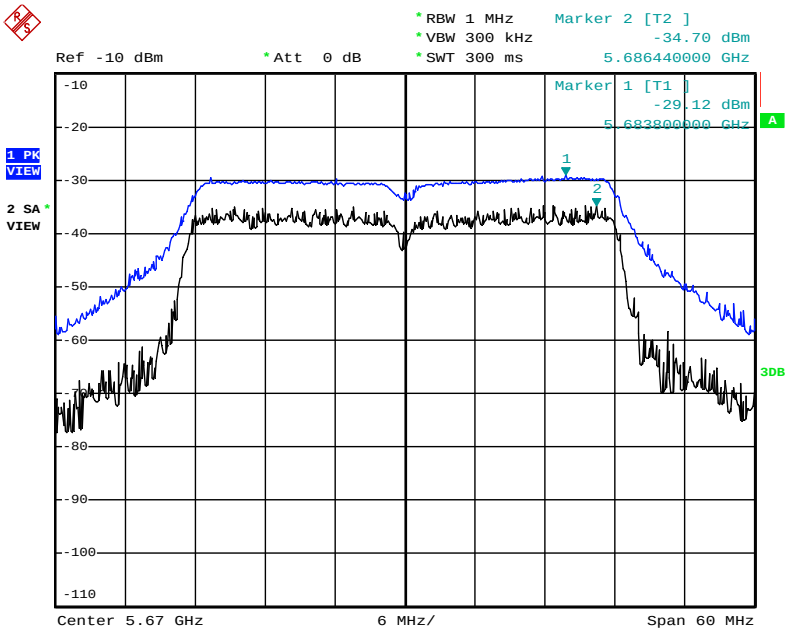
Date: 4.JUN.2012 18:53:09

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 / 5310 MHz (1TX)



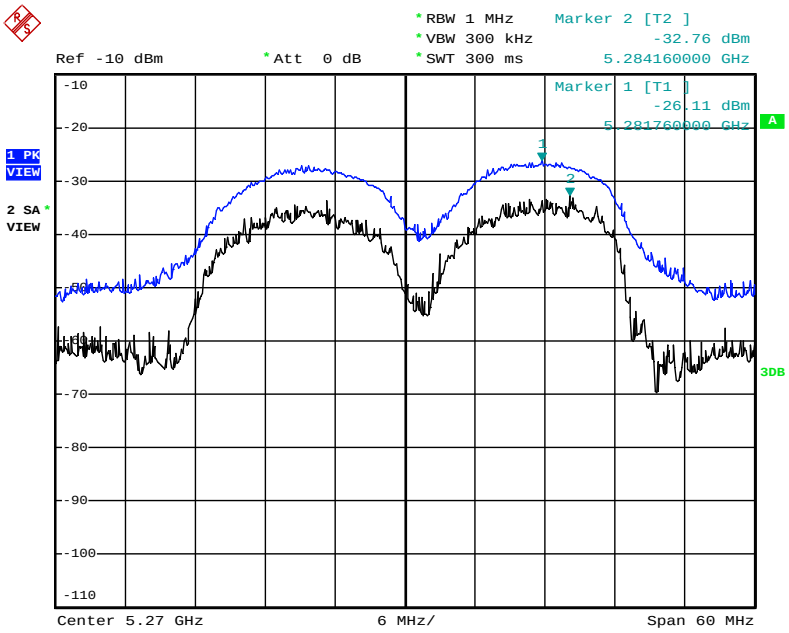
Date: 4.JUN.2012 19:12:29

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 / 5670 MHz (1TX)



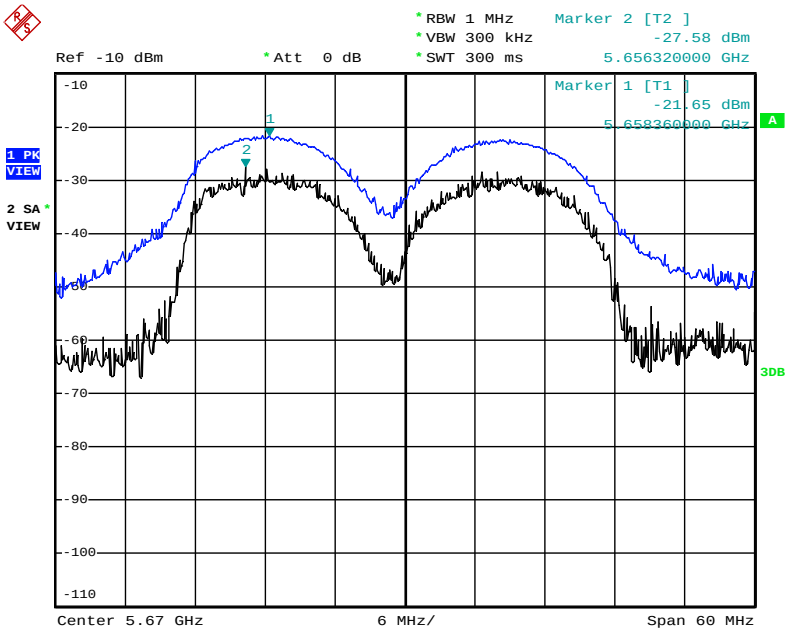
Date: 4.JUN.2012 19:11:00

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 / 5270 MHz (2TX)



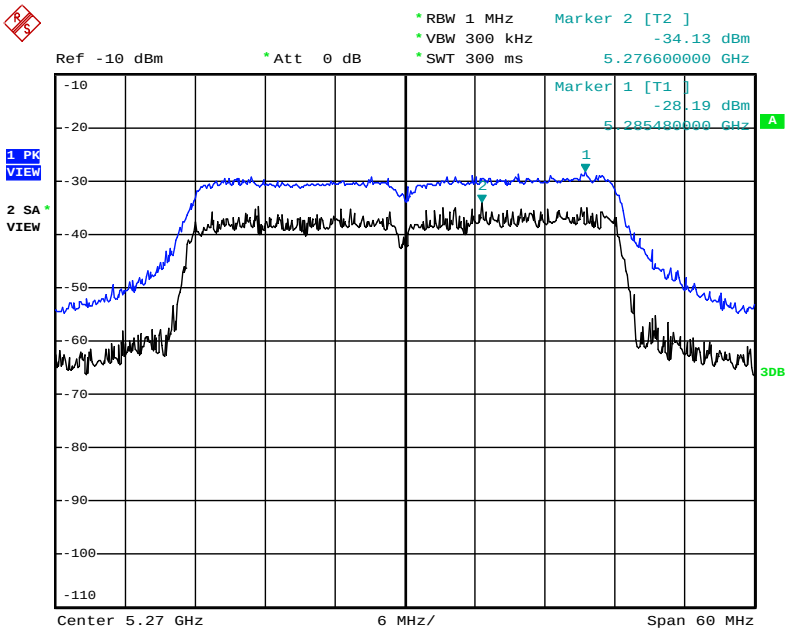
Date: 4.JUN.2012 19:08:09

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 / 5670 MHz (2TX)



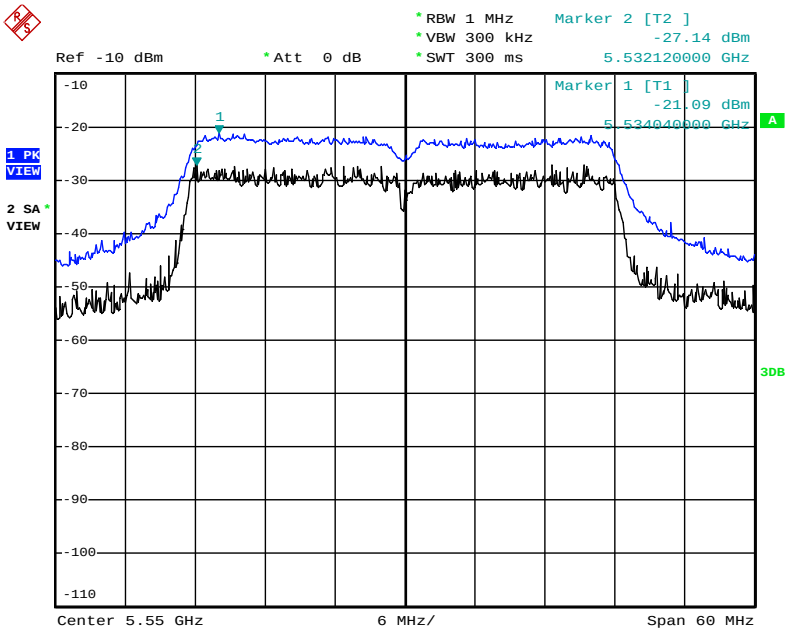
Date: 4.JUN.2012 19:10:13

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 / 5270 MHz (2TX)



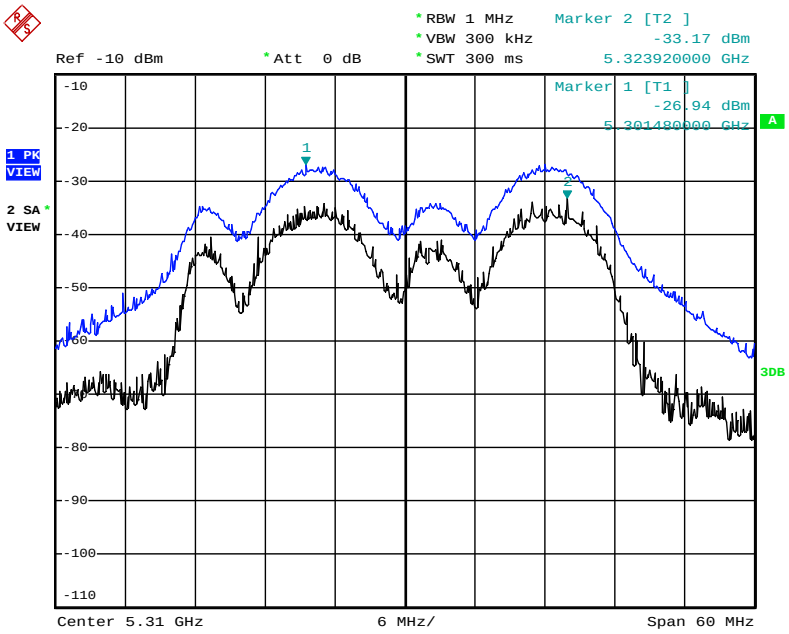
Date: 4.JUN.2012 19:07:07

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 / 5550 MHz (2TX)



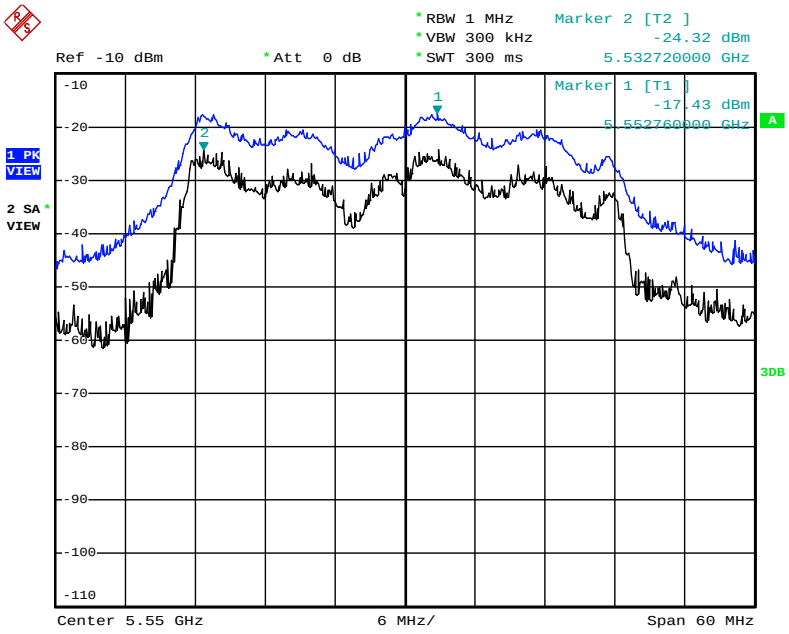
Date: 4.JUN.2012 19:05:47

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3 / 5310 MHz (3TX)



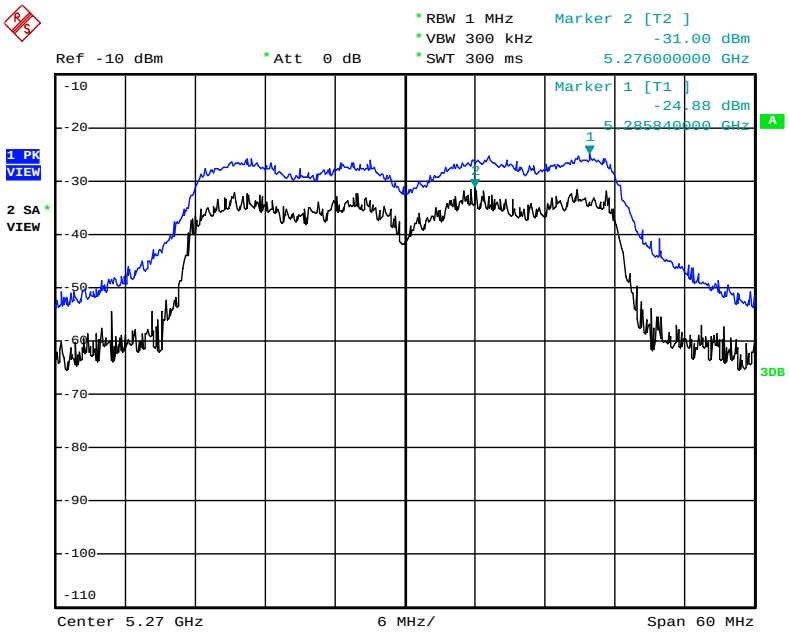
Date: 4.JUN.2012 18:47:05

Peak Excursion Plot on Configuration IEEE 802.11n MCS0 40MHz / Chain 1 + Chain 2 + Chain 3 / 5550 MHz (3TX)



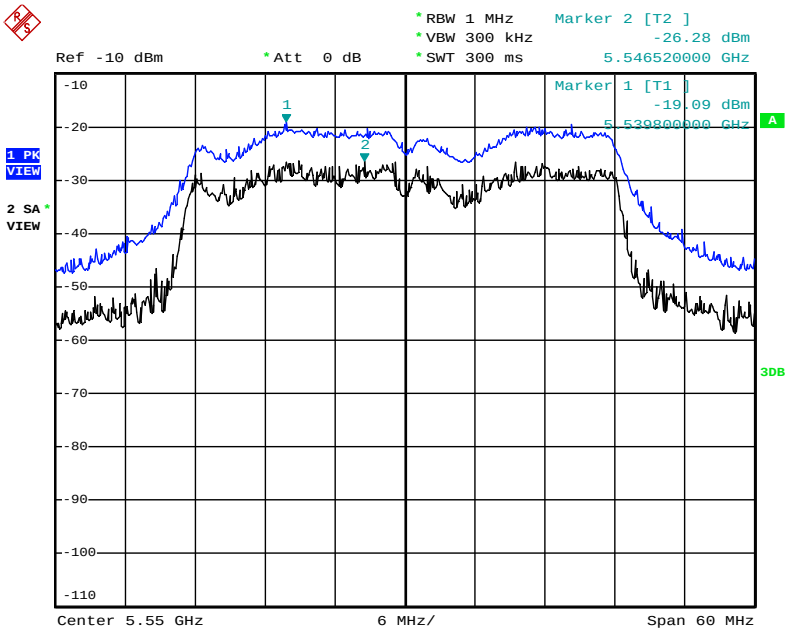
Date: 4.JUN.2012 18:45:01

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3 / 5270 MHz (3TX)



Date: 4.JUN.2012 18:48:46

Peak Excursion Plot on Configuration IEEE 802.11n MCS8 40MHz / Chain 1 + Chain 2 + Chain 3 / 5550 MHz (3TX)



Date: 4.JUN.2012 18:51:06

4.6. Radiated Emissions Measurement

4.6.1. Limit

For transmitters operating in the 5.15-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m). For transmitters operating in the 5.470-5.725 GHz band: all emissions outside of the 5.470-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m). For transmitters operating in the 5.725-5.825 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an EIRP of -17 dBm/MHz (78.3dBuV/m at 3m); for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an EIRP of -27 dBm/MHz (68.3dBuV/m at 3m). In addition, In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.6.2. Measuring Instruments and Setting

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

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	40 GHz
RB / VB (Emission in restricted band)	1MHz / 3MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	1MHz / 3MHz for peak

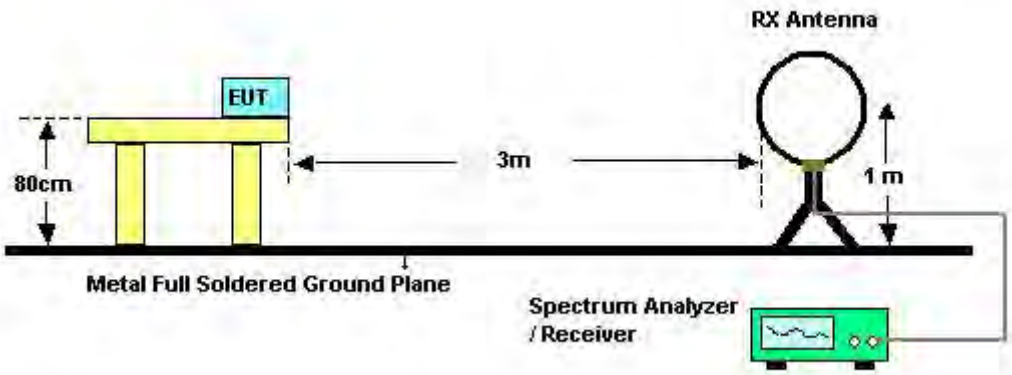
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.6.3. Test Procedures

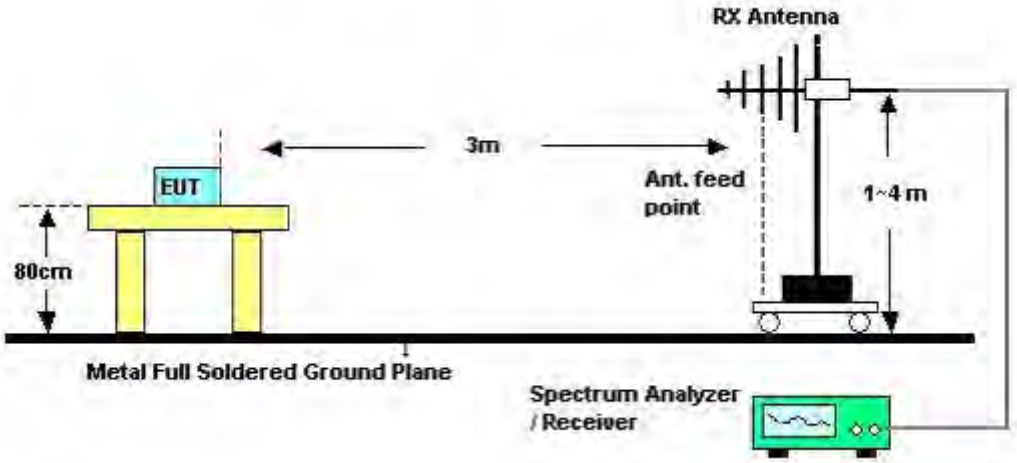
1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High – Low scan is not required in this case.

4.6.4. Test Setup Layout

For radiated emissions below 1GHz



For radiated emissions above 1GHz



4.6.5. Test Deviation

There is no deviation with the original standard.

4.6.6. EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

4.6.7. Results of Radiated Emissions (9kHz~30MHz)

Temperature	25°C	Humidity	65%
Test Engineer	Serway Lee	Configurations	Normal Link
Test Date	Apr. 26, 2012		

Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

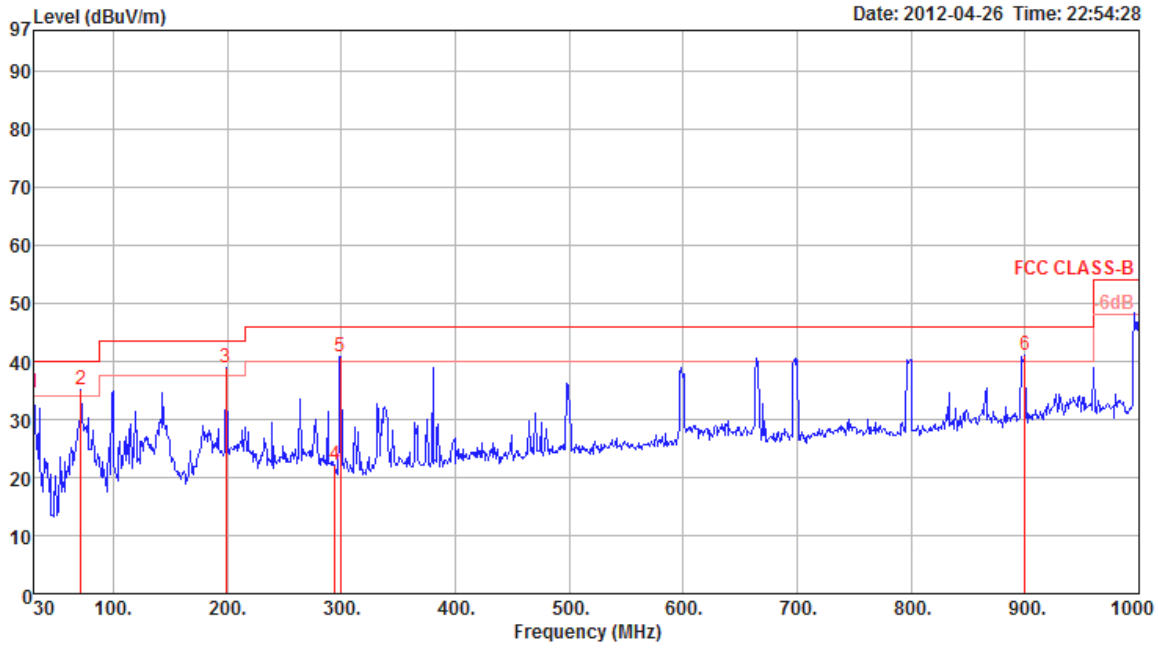
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

4.6.8. Results of Radiated Emissions (30MHz~1GHz)

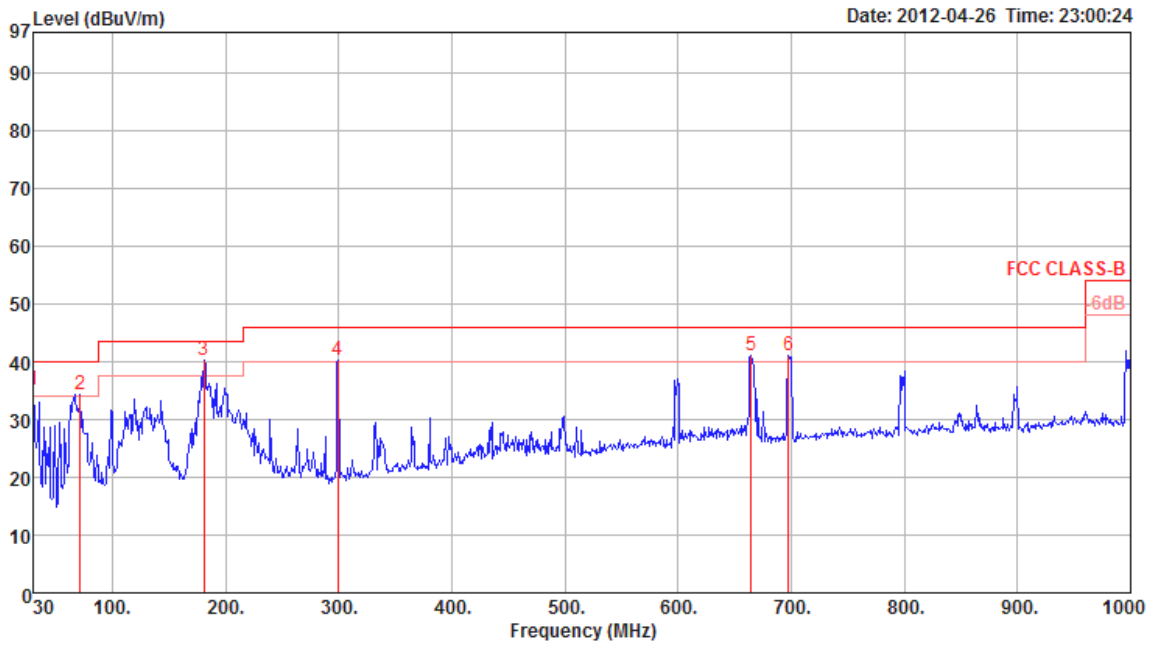
Temperature	25°C	Humidity	65%
Test Engineer	Serway Lee	Configurations	Normal Link / Mode 1 (Module + Ant. 3 Panel antenna / 14dBi)

Horizontal



		Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	!	30.00	34.49	40.00	-5.51	44.21	0.83	27.80	17.25	0	400	Peak	HORIZONTAL
2	!	71.71	35.04	40.00	-4.96	55.34	1.28	27.71	6.13	0	400	Peak	HORIZONTAL
3	p	198.78	38.96	43.50	-4.54	54.33	2.09	27.11	9.65	0	400	Peak	HORIZONTAL
4		294.81	22.24	46.00	-23.76	33.18	2.52	26.91	13.45	0	400	Peak	HORIZONTAL
5	!	299.66	40.79	46.00	-5.21	51.60	2.51	26.90	13.58	0	400	Peak	HORIZONTAL
6	!	900.09	40.97	46.00	-5.03	42.74	4.60	27.40	21.03	0	400	Peak	HORIZONTAL

Vertical



		Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	T/Pos	A/Pos	Remark	Pol/Phase
		MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	!	30.00	35.04	40.00	-4.96	44.76	0.83	27.80	17.25	0	100	Peak	VERTICAL
2	!	71.71	34.38	40.00	-5.62	54.68	1.28	27.71	6.13	0	100	Peak	VERTICAL
3	p	181.32	40.19	43.50	-3.31	56.35	2.01	27.19	9.02	0	100	Peak	VERTICAL
4	!	299.66	40.30	46.00	-5.70	51.11	2.51	26.90	13.58	0	100	Peak	VERTICAL
5	!	664.38	41.08	46.00	-4.92	45.78	3.98	28.04	19.36	0	100	Peak	VERTICAL
6	!	697.36	41.17	46.00	-4.83	45.10	4.15	28.00	19.92	0	100	Peak	VERTICAL

Note:

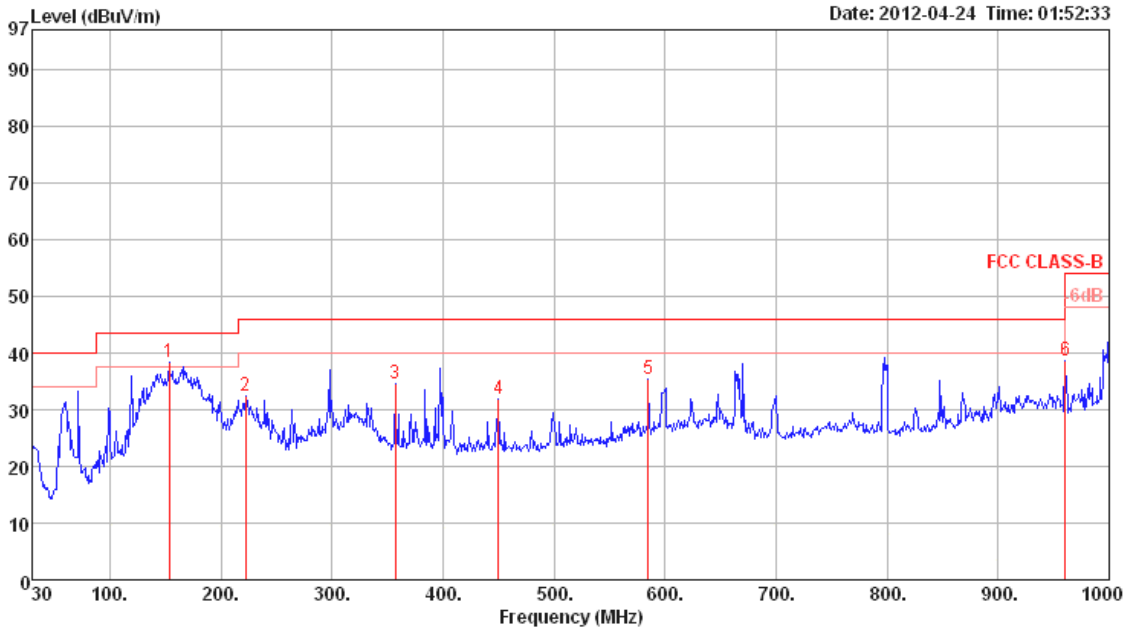
The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

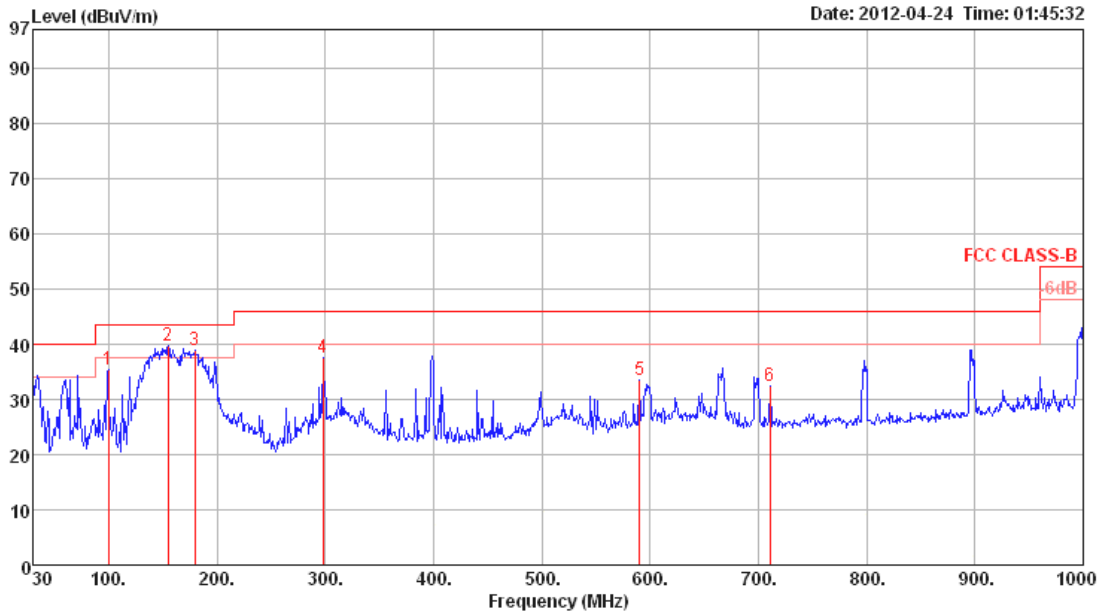
Temperature	25℃	Humidity	65%
Test Engineer	Serway Lee	Configurations	Normal Link / Mode 2 (Module + Ant. 8 Panel antenna / 10.5dBi)

Horizontal



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	153.19	38.34	43.50	-5.16	52.30	1.47	11.90	27.33	Peak	100	0	HORIZONTAL
2	222.06	32.45	46.00	-13.55	47.01	1.79	10.70	27.05	Peak	100	0	HORIZONTAL
3	356.89	34.45	46.00	-11.55	44.62	2.21	14.91	27.29	Peak	100	0	HORIZONTAL
4	450.01	31.93	46.00	-14.07	40.34	2.60	16.84	27.85	Peak	100	0	HORIZONTAL
5	584.84	35.37	46.00	-10.63	42.01	2.87	18.59	28.10	Peak	100	0	HORIZONTAL
6	960.23	38.52	54.00	-15.48	41.07	3.62	20.99	27.16	Peak	100	0	HORIZONTAL

Vertical



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	99.84	35.32	43.50	-8.18	50.73	1.20	10.99	27.60	Peak	400	0	VERTICAL
2	155.13	39.59	43.50	-3.91	53.49	1.48	11.94	27.32	Peak	400	0	VERTICAL
3	179.38	38.85	43.50	-4.65	51.31	1.60	13.14	27.20	Peak	400	0	VERTICAL
4	297.72	37.63	46.00	-8.37	49.11	2.09	13.34	26.91	Peak	400	0	VERTICAL
5	590.66	33.43	46.00	-12.57	39.99	2.88	18.66	28.10	Peak	400	0	VERTICAL
6	710.94	32.29	46.00	-13.71	37.74	3.34	19.16	27.95	Peak	400	0	VERTICAL

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

4.6.9. Results for Radiated Emissions (1GHz~40GHz)

Temperature	25°C	Humidity	65%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 20MHz Ch 52 / Chain 1
Test Date	Apr. 27, 2012	Test Mode	Mode 1 (Ant. 6 Dipole antenna / 8dBi) (1TX)

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10522.02	49.89	68.30	-18.41	41.96	5.01	38.40	35.48	Peak	100	36	HORIZONTAL
2	15765.36	70.07	74.00	-3.93	61.92	6.14	37.42	35.41	Peak	150	148	HORIZONTAL
3	15775.04	52.12	54.00	-1.88	43.98	6.14	37.42	35.42	Average	150	148	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10522.40	49.25	68.30	-19.05	41.33	5.01	38.39	35.48	Peak	100	76	VERTICAL
2	15776.48	48.96	54.00	-5.04	40.83	6.14	37.41	35.42	Average	132	74	VERTICAL
3	15778.48	64.47	74.00	-9.53	56.34	6.14	37.41	35.42	Peak	132	74	VERTICAL

Temperature	25°C	Humidity	65%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 20MHz Ch 60 / Chain 1
Test Date	Apr. 27, 2012	Test Mode	Mode 1 (Ant. 6 Dipole antenna / 8dBi) (1TX)

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10600.06	35.47	54.00	-18.53	27.50	5.01	38.38	35.42	Average	100	161	HORIZONTAL
2	10602.58	49.41	74.00	-24.59	41.44	5.01	38.38	35.42	Peak	100	161	HORIZONTAL
3	15900.10	50.75	54.00	-3.25	42.75	6.15	37.29	35.44	Average	155	156	HORIZONTAL
4	15902.32	66.30	74.00	-7.70	58.30	6.15	37.29	35.44	Peak	155	156	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10602.96	35.57	54.00	-18.43	27.60	5.01	38.38	35.42	Average	100	31	VERTICAL
2	10603.42	49.65	74.00	-24.35	41.68	5.01	38.38	35.42	Peak	100	31	VERTICAL
3	15897.28	49.33	54.00	-4.67	41.33	6.15	37.29	35.44	Average	133	68	VERTICAL
4	15898.24	64.49	74.00	-9.51	56.49	6.15	37.29	35.44	Peak	133	68	VERTICAL

Temperature	25°C	Humidity	65%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 20MHz Ch 64 / Chain 1
Test Date	Apr. 27, 2012	Test Mode	Mode 1 (Ant. 6 Dipole antenna / 8dBi) (1TX)

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10638.06	35.60	54.00	-18.40	27.61	5.01	38.37	35.39	Average	100	97	HORIZONTAL
2	10642.32	49.51	74.00	-24.49	41.52	5.01	38.37	35.39	Peak	100	97	HORIZONTAL
3	15960.20	55.78	74.00	-18.22	47.84	6.15	37.23	35.44	Peak	130	56	HORIZONTAL
4	15964.06	40.44	54.00	-13.56	32.51	6.15	37.22	35.44	Average	130	56	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10636.20	49.88	74.00	-24.12	41.89	5.01	38.37	35.39	Peak	100	84	VERTICAL
2	10636.94	35.52	54.00	-18.48	27.53	5.01	38.37	35.39	Average	100	84	VERTICAL
3	15961.44	41.90	54.00	-12.10	33.96	6.15	37.23	35.44	Average	132	157	VERTICAL
4	15962.16	58.14	74.00	-15.86	50.20	6.15	37.23	35.44	Peak	132	157	VERTICAL

Temperature	25°C	Humidity	65%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 20MHz Ch 100 / Chain 1
Test Date	Apr. 27, 2012	Test Mode	Mode 1 (Ant. 6 Dipole antenna / 8dBi) (1TX)

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10997.62	35.58	54.00	-18.42	27.35	5.01	38.32	35.10	Average	100	76	HORIZONTAL
2	11000.78	48.70	74.00	-25.30	40.47	5.01	38.32	35.10	Peak	100	76	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10997.10	35.37	54.00	-18.63	27.16	5.01	38.30	35.10	Average	100	98	VERTICAL
2	11001.22	49.16	74.00	-24.84	40.95	5.01	38.30	35.10	Peak	100	98	VERTICAL

Temperature	25°C	Humidity	65%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 20MHz Ch 116 / Chain 1
Test Date	Apr. 27, 2012	Test Mode	Mode 1 (Ant. 6 Dipole antenna / 8dBi) (1TX)

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11156.88	50.03	74.00	-23.97	41.70	5.04	38.45	35.16	Peak	100	51	HORIZONTAL
2	11160.14	36.03	54.00	-17.97	27.69	5.04	38.47	35.17	Average	100	51	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11162.80	49.66	74.00	-24.34	41.31	5.05	38.47	35.17	Peak	100	96	VERTICAL
2	11164.98	36.47	54.00	-17.53	28.12	5.05	38.47	35.17	Average	100	96	VERTICAL

Temperature	25°C	Humidity	65%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 20MHz Ch 140 / Chain 1
Test Date	Apr. 27, 2012	Test Mode	Mode 1 (Ant. 6 Dipole antenna / 8dBi) (1TX)

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11399.46	36.20	54.00	-17.80	27.65	5.10	38.70	35.25	Average	100	79	HORIZONTAL
2	11402.74	49.80	74.00	-24.20	41.25	5.10	38.70	35.25	Peak	100	79	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11399.80	36.13	54.00	-17.87	27.58	5.10	38.70	35.25	Average	100	79	VERTICAL
2	11403.62	50.79	74.00	-23.21	42.24	5.10	38.70	35.25	Peak	100	79	VERTICAL

Temperature	25°C	Humidity	65%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 20MHz Ch 52 / Chain 1 + Chain 2
Test Date	Apr. 27, 2012	Test Mode	Mode 1 (Ant. 6 Dipole antenna / 8dBi) (2TX)

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10523.62	49.74	68.30	-18.56	41.81	5.01	38.40	35.48	Average	100	205	HORIZONTAL
2	15777.92	63.73	74.00	-10.27	55.60	6.14	37.41	35.42	Peak	148	147	HORIZONTAL
3	15778.08	49.91	54.00	-4.09	41.78	6.14	37.41	35.42	Average	148	147	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10515.02	51.02	68.30	-17.28	43.12	5.01	38.39	35.50	Peak	100	80	VERTICAL
2	15770.72	61.68	74.00	-12.32	53.54	6.14	37.42	35.42	Peak	134	75	VERTICAL
3	15772.08	46.10	54.00	-7.90	37.96	6.14	37.42	35.42	Average	134	75	VERTICAL

Temperature	25°C	Humidity	65%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 20MHz Ch 60 / Chain 1 + Chain 2
Test Date	Apr. 27, 2012	Test Mode	Mode 1 (Ant. 6 Dipole antenna / 8dBi) (2TX)

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10607.36	36.14	54.00	-17.86	28.17	5.01	38.38	35.42	Average	100	253	HORIZONTAL
2	10608.48	49.36	74.00	-24.64	41.39	5.01	38.38	35.42	Peak	100	253	HORIZONTAL
3	15906.24	47.74	54.00	-6.26	39.74	6.15	37.29	35.44	Average	140	197	HORIZONTAL
4	15906.88	63.37	74.00	-10.63	55.37	6.15	37.29	35.44	Peak	140	197	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10601.38	35.44	68.30	-32.86	27.47	5.01	38.38	35.42	Average	100	218	VERTICAL
2	10603.60	49.44	74.00	-24.56	41.47	5.01	38.38	35.42	Peak	100	218	VERTICAL
3	15900.24	49.68	54.00	-4.32	41.68	6.15	37.29	35.44	Average	132	77	VERTICAL
4	15900.48	65.72	74.00	-8.28	57.72	6.15	37.29	35.44	Peak	132	77	VERTICAL

Temperature	25°C	Humidity	65%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 20MHz Ch 64 / Chain 1 + Chain 2
Test Date	Apr. 27, 2012	Test Mode	Mode 1 (Ant. 6 Dipole antenna / 8dBi) (2TX)

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10636.48	49.14	74.00	-24.86	41.15	5.01	38.37	35.39	Peak	100	152	HORIZONTAL
2	10637.82	35.41	54.00	-18.59	27.42	5.01	38.37	35.39	Average	100	152	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10636.20	49.09	74.00	-24.91	41.10	5.01	38.37	35.39	Peak	100	216	VERTICAL
2	10644.18	36.18	54.00	-17.82	28.19	5.01	38.37	35.39	Average	100	216	VERTICAL

Temperature	25°C	Humidity	65%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 20MHz Ch 100 / Chain 1 + Chain 2
Test Date	Apr. 27, 2012	Test Mode	Mode 1 (Ant. 6 Dipole antenna / 8dBi) (2TX)

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10996.16	35.36	54.00	-18.64	27.13	5.01	38.32	35.10	Average	100	48	HORIZONTAL
2	10999.92	49.74	74.00	-24.26	41.51	5.01	38.32	35.10	Peak	100	48	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	10997.74	35.36	54.00	-18.64	27.15	5.01	38.30	35.10	Average	100	155	VERTICAL
2	11003.04	49.91	74.00	-24.09	41.70	5.01	38.30	35.10	Peak	100	155	VERTICAL

Temperature	25°C	Humidity	65%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 20MHz Ch 116 / Chain 1 + Chain 2
Test Date	Apr. 27, 2012	Test Mode	Mode 1 (Ant. 6 Dipole antenna / 8dBi) (2TX)

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11159.22	49.52	74.00	-24.48	41.18	5.04	38.47	35.17	Peak	100	272	HORIZONTAL
2	11160.16	35.88	54.00	-18.12	27.54	5.04	38.47	35.17	Average	100	272	HORIZONTAL
3	16741.50	65.37	68.30	-2.93	54.24	6.26	39.61	34.74	Peak	153	200	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11162.02	49.74	74.00	-24.26	41.39	5.05	38.47	35.17	Peak	100	243	VERTICAL
2	11164.70	36.33	54.00	-17.67	27.98	5.05	38.47	35.17	Average	100	243	VERTICAL
3	16741.60	56.74	68.30	-11.56	45.61	6.26	39.61	34.74	Peak	122	56	VERTICAL

Temperature	25°C	Humidity	65%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS0 20MHz Ch 140 / Chain 1 + Chain 2
Test Date	Apr. 27, 2012	Test Mode	Mode 1 (Ant. 6 Dipole antenna / 8dBi) (2TX)

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11398.20	36.11	54.00	-17.89	27.56	5.10	38.70	35.25	Average	100	258	HORIZONTAL
2	11402.25	50.57	74.00	-23.43	42.02	5.10	38.70	35.25	Peak	100	258	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	11400.28	49.79	74.00	-24.21	41.24	5.10	38.70	35.25	Peak	100	92	VERTICAL
2	11402.34	36.07	54.00	-17.93	27.52	5.10	38.70	35.25	Average	100	92	VERTICAL

Temperature	25°C	Humidity	65%
Test Engineer	Satoshi Yang	Configurations	IEEE 802.11n MCS8 20MHz Ch 52 / Chain 1 + Chain 2
Test Date	Apr. 27, 2012	Test Mode	Mode 1 (Ant. 6 Dipole antenna / 8dBi) (2TX)

Horizontal

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15766.20	56.14	74.00	-17.86	47.99	6.14	37.42	35.41	Peak	100	216	HORIZONTAL
2	15775.60	42.47	54.00	-11.53	34.33	6.14	37.42	35.42	Average	100	216	HORIZONTAL

Vertical

	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Antenna Factor	Preamp Factor	Remark	A/Pos	T/Pos	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB/m	dB		cm	deg	
1	15769.40	57.02	74.00	-16.98	48.88	6.14	37.42	35.42	Peak	134	83	VERTICAL
2	15775.80	43.77	54.00	-10.23	35.63	6.14	37.42	35.42	Average	134	83	VERTICAL