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.

<For Antenna 1 and Antenna 6>:

Frequency Range	Power Spectral Density limit (dBm/MHz)
5.25-5.35 GHz	10
5470-5725	10

<For Antenna 2~Antenna 5>:

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

4.4.2. Measuring Instruments and Setting

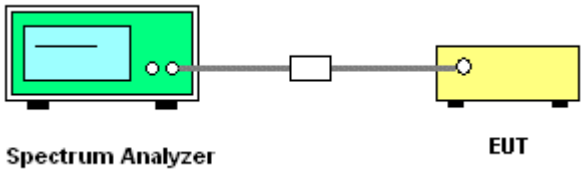
Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

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

4.4.3. Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. Set RBW of spectrum analyzer to 1000kHz and VBW to 3000kHz. Set Detector to Peak, Trace to Max Hold. Mark the frequency with maximum peak power as the center of the display of the spectrum.
3. Measuring multiple antennas, the connector is required to link with spectrum analyzer through a combiner.

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

<For Antenna 1>:

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11n / Antenna 1

Configuration 802.11n MCS8 20MHz Ant. 1-1 + Ant. 1-3

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	7.46	10.00	Complies
60	5300 MHz	7.40	10.00	Complies
64	5320 MHz	6.41	10.00	Complies
100	5500 MHz	3.73	10.00	Complies
116	5580 MHz	8.15	10.00	Complies
140	5700 MHz	2.12	10.00	Complies

Configuration 802.11n MCS8 40MHz Ant. 1-1 + Ant. 1-3

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
54	5270 MHz	3.66	10.00	Complies
62	5310 MHz	3.87	10.00	Complies
102	5510MHz	-2.03	10.00	Complies
110	5550 MHz	4.16	10.00	Complies
134	5670 MHz	0.18	10.00	Complies

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11a / Antenna 1

Configuration IEEE 802.11a Ant. 1-1 + Ant. 1-3

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	9.73	10.00	Complies
60	5300 MHz	9.82	10.00	Complies
64	5320 MHz	8.47	10.00	Complies
100	5500 MHz	5.71	10.00	Complies
116	5580 MHz	9.69	10.00	Complies
140	5700 MHz	4.50	10.00	Complies

<For Antenna 2>:

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11n / Antenna 2

Configuration 802.11n MCS8 20MHz Ant. 2-1 + Ant. 2-3

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	8.41	11.00	Complies
60	5300 MHz	6.49	11.00	Complies
64	5320 MHz	7.20	11.00	Complies
100	5500 MHz	9.61	11.00	Complies
116	5580 MHz	9.25	11.00	Complies
140	5700 MHz	6.51	11.00	Complies

Configuration 802.11n MCS8 40MHz Ant. 2-1 + Ant. 2-3

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
54	5270 MHz	5.74	11.00	Complies
62	5310 MHz	0.56	11.00	Complies
102	5510MHz	3.18	11.00	Complies
110	5550 MHz	6.05	11.00	Complies
134	5670 MHz	4.62	11.00	Complies

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11a / Antenna 2

Configuration IEEE 802.11a Ant. 2-1 + Ant. 2-3

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	10.51	11.00	Complies
60	5300 MHz	8.19	11.00	Complies
64	5320 MHz	8.47	11.00	Complies
100	5500 MHz	10.80	11.00	Complies
116	5580 MHz	10.68	11.00	Complies
140	5700 MHz	8.39	11.00	Complies

<For Antenna 3>:

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11n / Antenna 3

Configuration 802.11n MCS8 20MHz Ant. 3-1 + Ant. 3-3

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	8.41	11.00	Complies
60	5300 MHz	9.41	11.00	Complies
64	5320 MHz	7.20	11.00	Complies
100	5500 MHz	6.55	11.00	Complies
116	5580 MHz	9.25	11.00	Complies
140	5700 MHz	3.60	11.00	Complies

Configuration 802.11n MCS8 40MHz Ant. 3-1 + Ant. 3-3

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
54	5270 MHz	5.74	11.00	Complies
62	5310 MHz	0.68	11.00	Complies
102	5510MHz	-0.81	11.00	Complies
110	5550 MHz	6.05	11.00	Complies
134	5670 MHz	1.06	11.00	Complies

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11a / Antenna 3

Configuration IEEE 802.11a Ant. 3-1 + Ant. 3-3

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	10.51	11.00	Complies
60	5300 MHz	10.78	11.00	Complies
64	5320 MHz	9.47	11.00	Complies
100	5500 MHz	9.34	11.00	Complies
116	5580 MHz	10.68	11.00	Complies
140	5700 MHz	6.57	11.00	Complies

<For Antenna 4>:

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11n / Antenna 4

Configuration 802.11n MCS8 20MHz Ant. 4-1 + Ant. 4-3

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	8.41	11.00	Complies
60	5300 MHz	9.41	11.00	Complies
64	5320 MHz	7.20	11.00	Complies
100	5500 MHz	5.84	11.00	Complies
116	5580 MHz	9.25	11.00	Complies
140	5700 MHz	2.12	11.00	Complies

Configuration 802.11n MCS8 40MHz Ant. 4-1 + Ant. 4-3

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
54	5270 MHz	5.22	11.00	Complies
62	5310 MHz	-0.79	11.00	Complies
102	5510MHz	-3.92	11.00	Complies
110	5550 MHz	4.57	11.00	Complies
134	5670 MHz	0.18	11.00	Complies

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11a / Antenna 4

Configuration IEEE 802.11a Ant. 4-1 + Ant. 4-3

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	10.51	11.00	Complies
60	5300 MHz	10.78	11.00	Complies
64	5320 MHz	9.31	11.00	Complies
100	5500 MHz	8.22	11.00	Complies
116	5580 MHz	10.68	11.00	Complies
140	5700 MHz	6.97	11.00	Complies

<For Antenna 5>:

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11n / Antenna 5

Configuration 802.11n MCS8 20MHz Ant. 5-1 + Ant. 5-3

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	8.41	11.00	Complies
60	5300 MHz	9.41	11.00	Complies
64	5320 MHz	6.41	11.00	Complies
100	5500 MHz	5.25	11.00	Complies
116	5580 MHz	9.25	11.00	Complies
140	5700 MHz	1.12	11.00	Complies

Configuration 802.11n MCS8 40MHz Ant. 5-1 + Ant. 5-3

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
54	5270 MHz	5.74	11.00	Complies
62	5310 MHz	0.07	11.00	Complies
102	5510MHz	-2.03	11.00	Complies
110	5550 MHz	4.57	11.00	Complies
134	5670 MHz	0.40	11.00	Complies

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11a / Antenna 5

Configuration IEEE 802.11a Ant. 5-1 + Ant. 5-3

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	10.51	11.00	Complies
60	5300 MHz	10.78	11.00	Complies
64	5320 MHz	9.31	11.00	Complies
100	5500 MHz	6.94	11.00	Complies
116	5580 MHz	10.68	11.00	Complies
140	5700 MHz	2.32	11.00	Complies

<For Antenna 6>:

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11n / Antenna 6

Configuration 802.11n MCS8 20MHz Ant. 6-1 + Ant. 6-3

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	7.46	10.00	Complies
60	5300 MHz	7.63	10.00	Complies
64	5320 MHz	5.56	10.00	Complies
100	5500 MHz	5.25	10.00	Complies
116	5580 MHz	8.15	10.00	Complies
140	5700 MHz	2.12	10.00	Complies

Configuration 802.11n MCS8 40MHz Ant. 6-1 + Ant. 6-3

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
54	5270 MHz	5.22	10.00	Complies
62	5310 MHz	-2.45	10.00	Complies
102	5510MHz	-4.18	10.00	Complies
110	5550 MHz	3.31	10.00	Complies
134	5670 MHz	-0.55	10.00	Complies

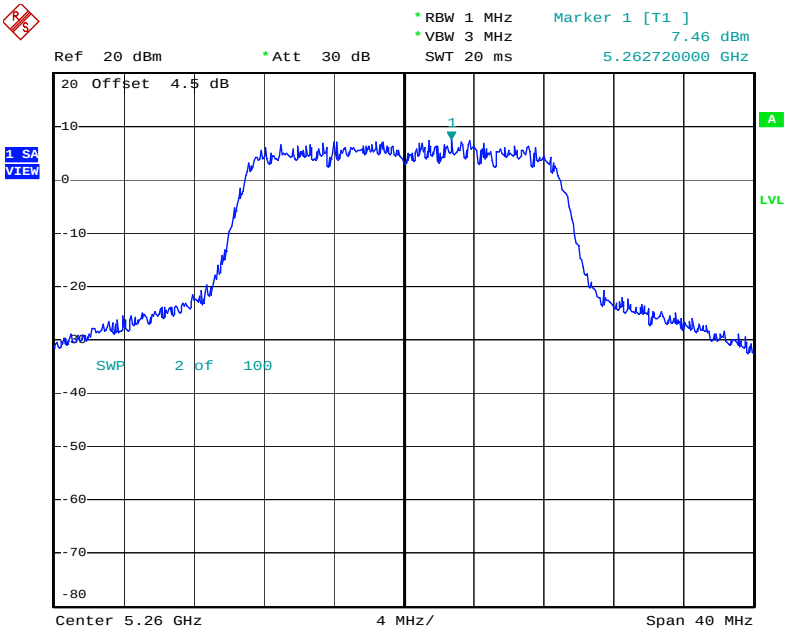
Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11a / Antenna 6

Configuration IEEE 802.11a Ant. 6-1 + Ant. 6-3

Channel	Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
52	5260 MHz	9.73	10.00	Complies
60	5300 MHz	9.82	10.00	Complies
64	5320 MHz	8.15	10.00	Complies
100	5500 MHz	6.94	10.00	Complies
116	5580 MHz	9.69	10.00	Complies
140	5700 MHz	2.32	10.00	Complies

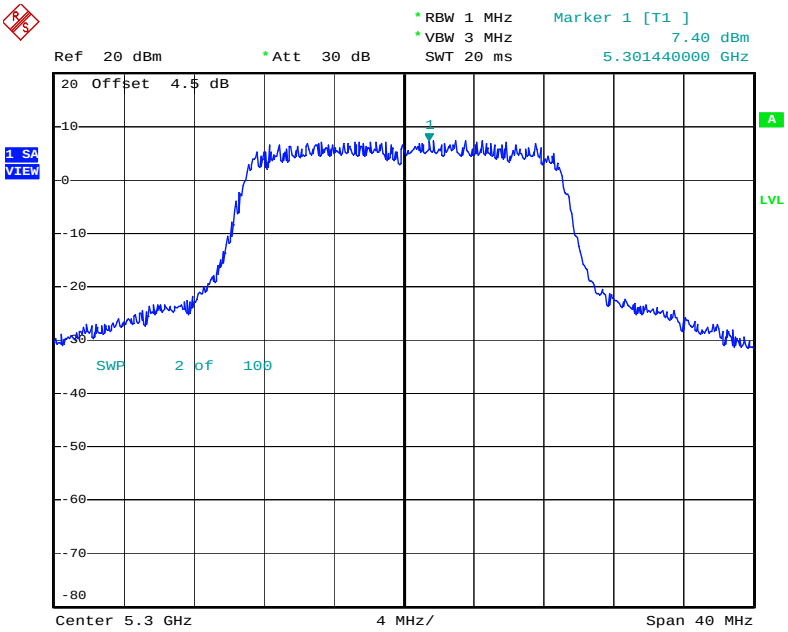
<For Antenna 1>:

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 1-1 + Ant. 1-3 / 5260 MHz



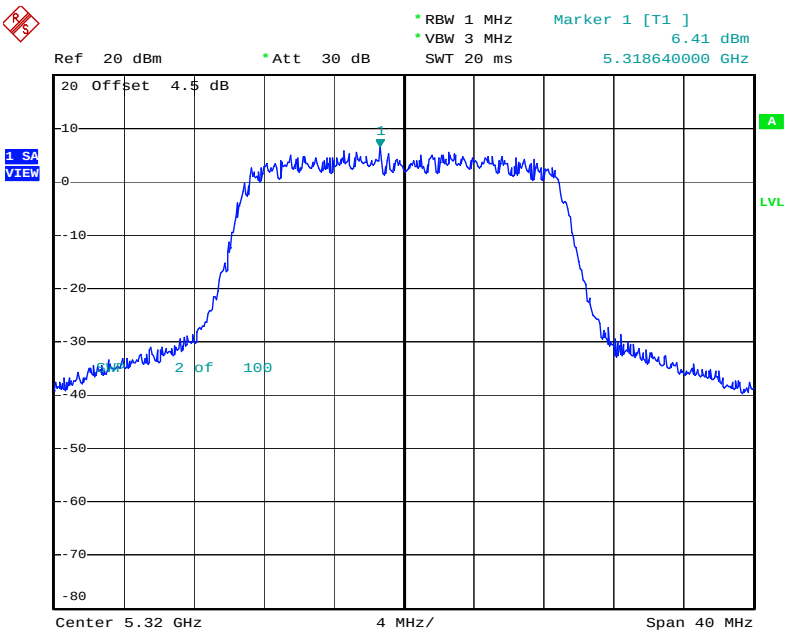
Date: 16.SEP.2009 18:23:43

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 1-1 + Ant. 1-3 / 5300 MHz



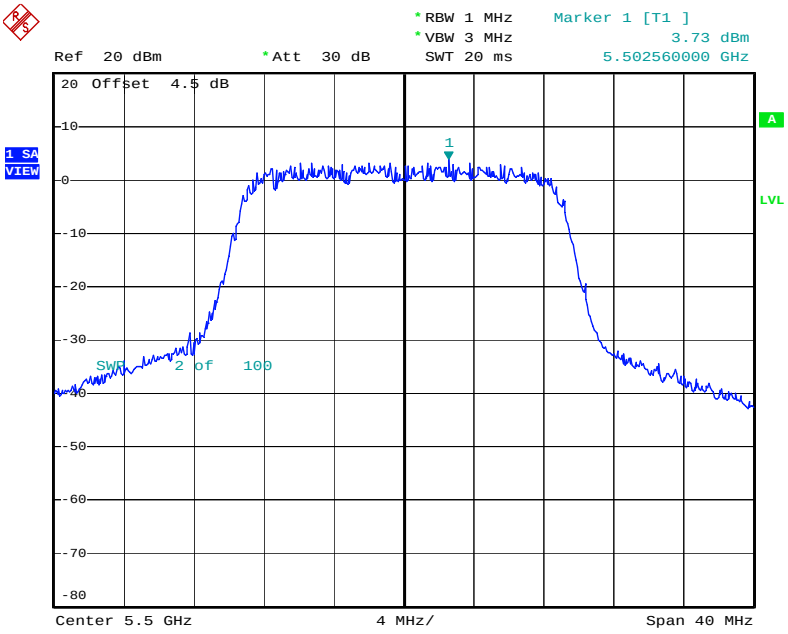
Date: 16.SEP.2009 18:26:09

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 1-1 + Ant. 1-3 / 5320 MHz



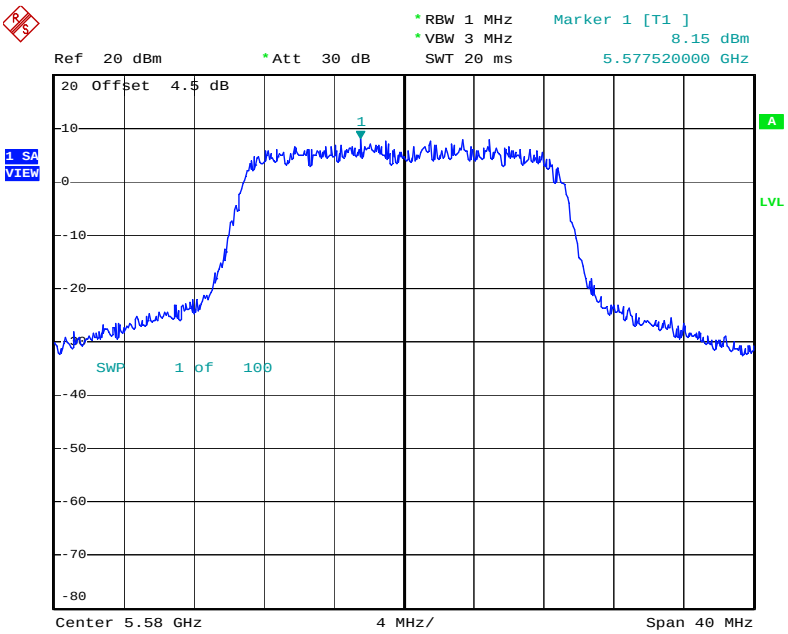
Date: 16.SEP.2009 18:29:52

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 1-1 + Ant. 1-3 / 5500 MHz



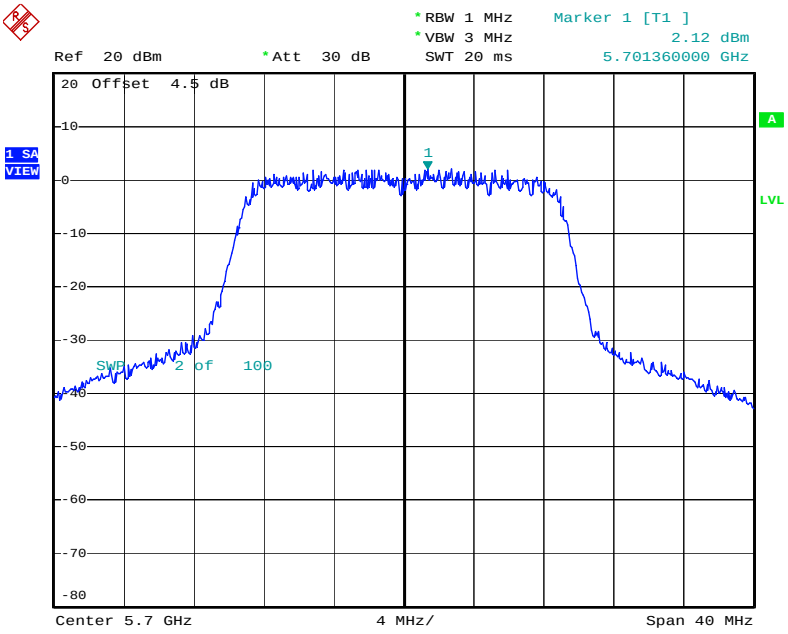
Date: 16.SEP.2009 18:33:36

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 1-1 + Ant. 1-3 / 5580 MHz



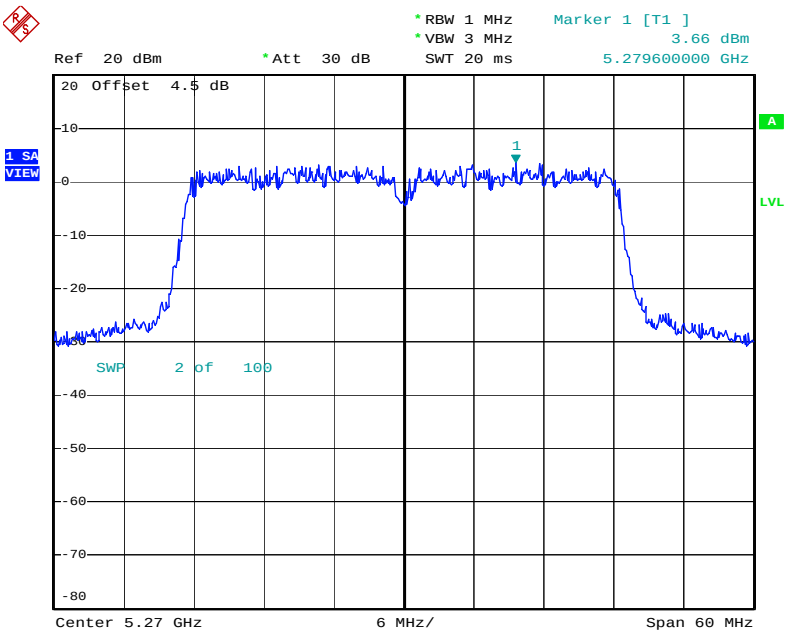
Date: 9.OCT.2009 17:29:29

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 1-1 + Ant. 1-3 / 5700 MHz



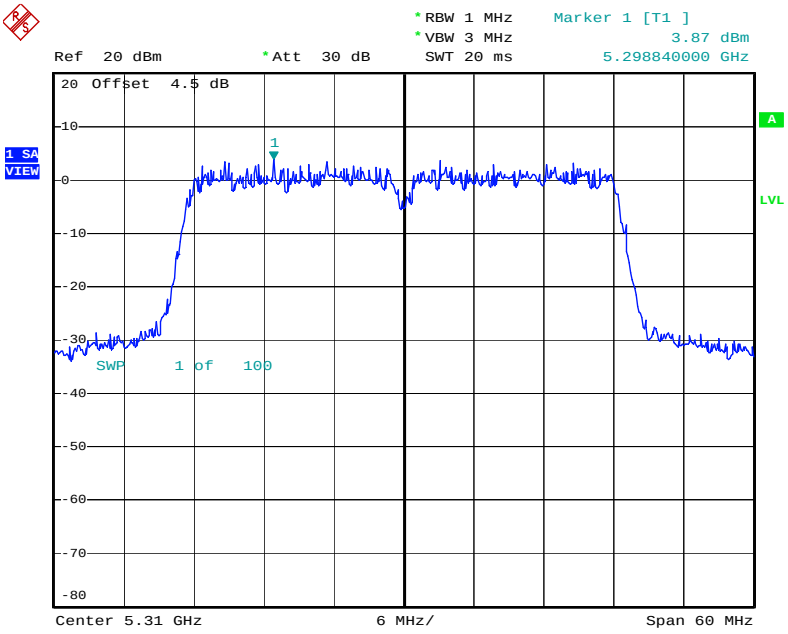
Date: 16.SEP.2009 18:43:17

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 1-1 + Ant. 1-3 / 5270 MHz



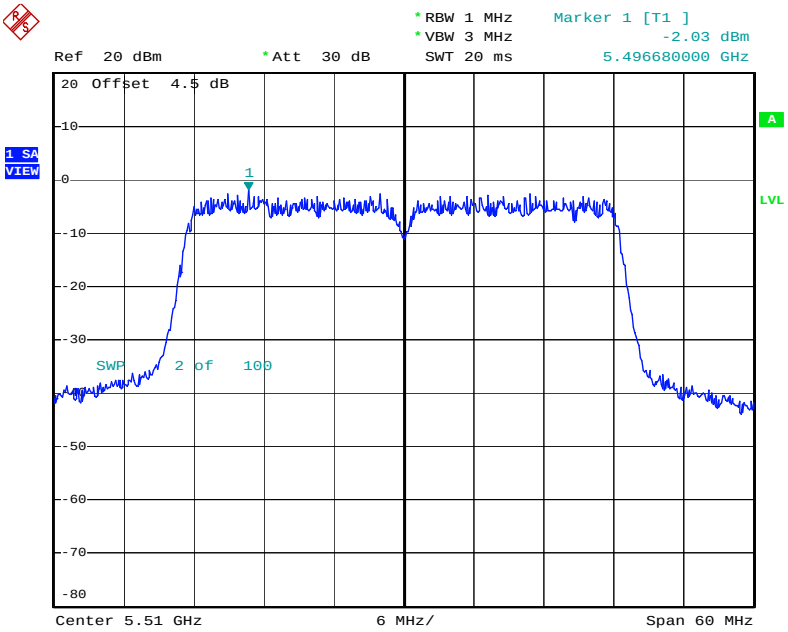
Date: 16.SEP.2009 18:51:07

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 1-1 + Ant. 1-3 / 5310 MHz



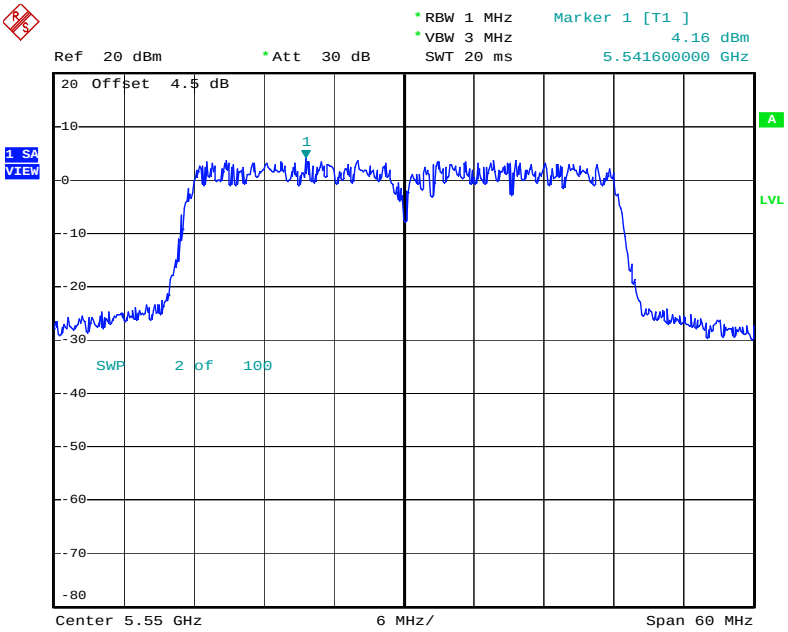
Date: 16.SEP.2009 18:55:09

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 1-1 + Ant. 1-3 / 5510MHz



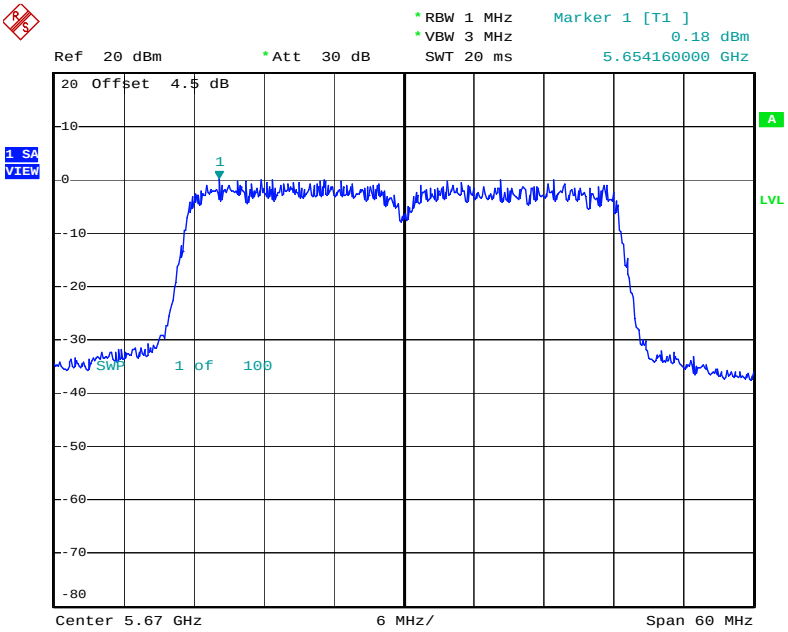
Date: 16.SEP.2009 19:03:39

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 1-1 + Ant. 1-3 / 5550 MHz



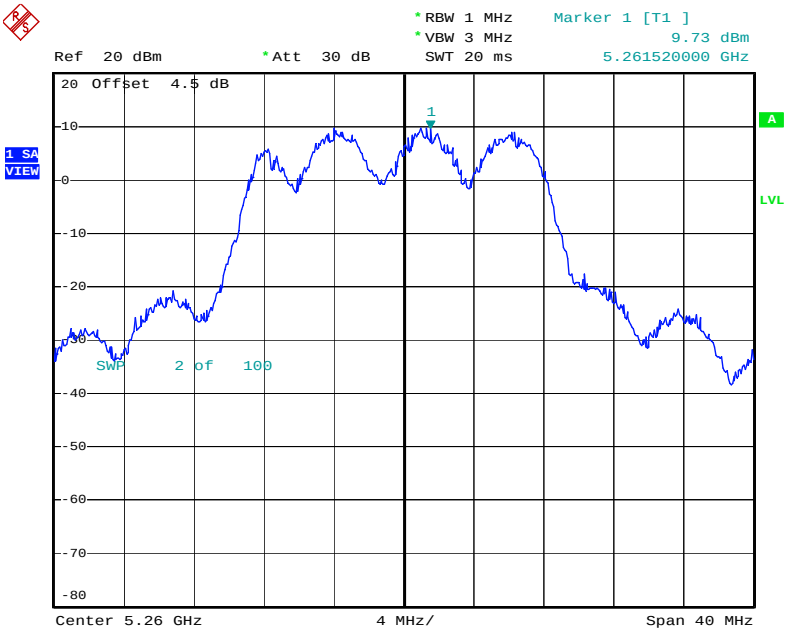
Date: 9.OCT.2009 17:35:30

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 1-1 + Ant. 1-3 / 5670 MHz



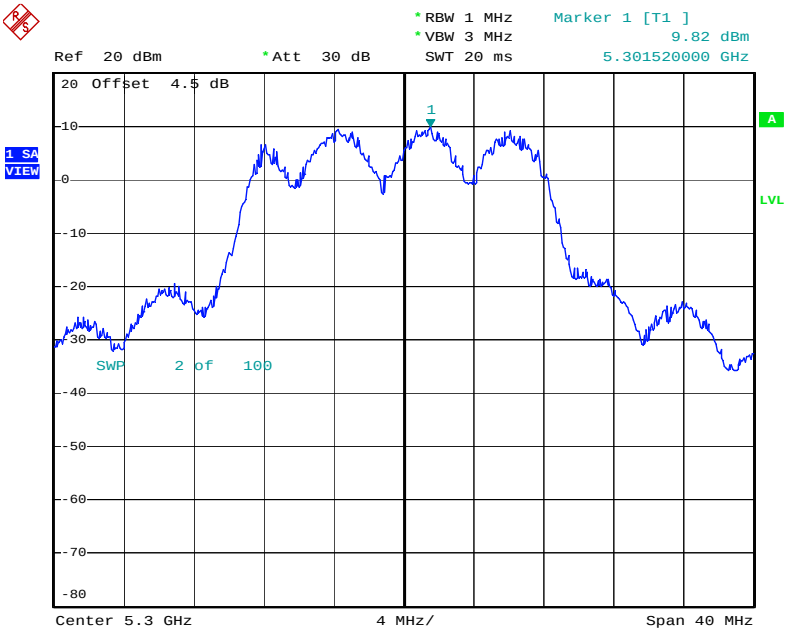
Date: 16.SEP.2009 19:14:01

Power Density Plot on Configuration IEEE 802.11a Ant. 1-1 + Ant. 1-3 / 5260 MHz



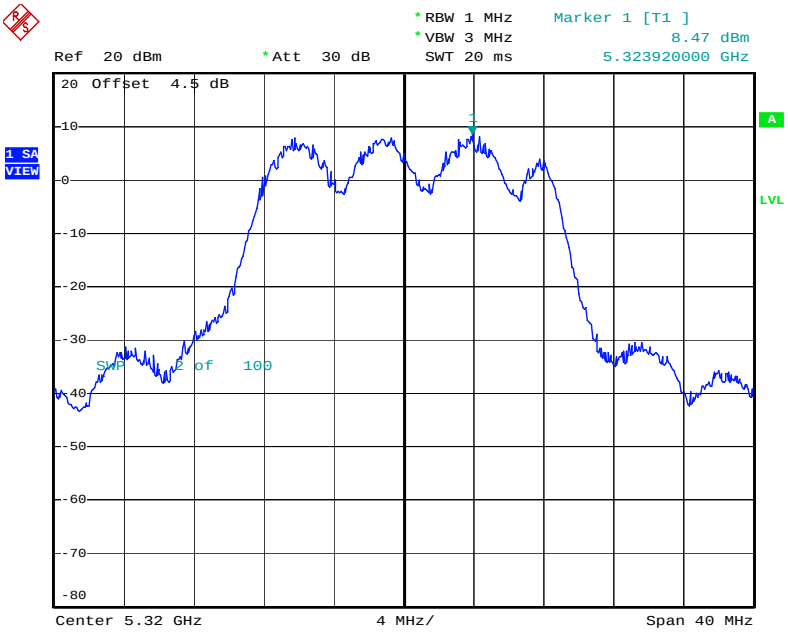
Date: 9.OCT.2009 17:16:53

Power Density Plot on Configuration IEEE 802.11a Ant. 1-1 + Ant. 1-3 / 5300 MHz



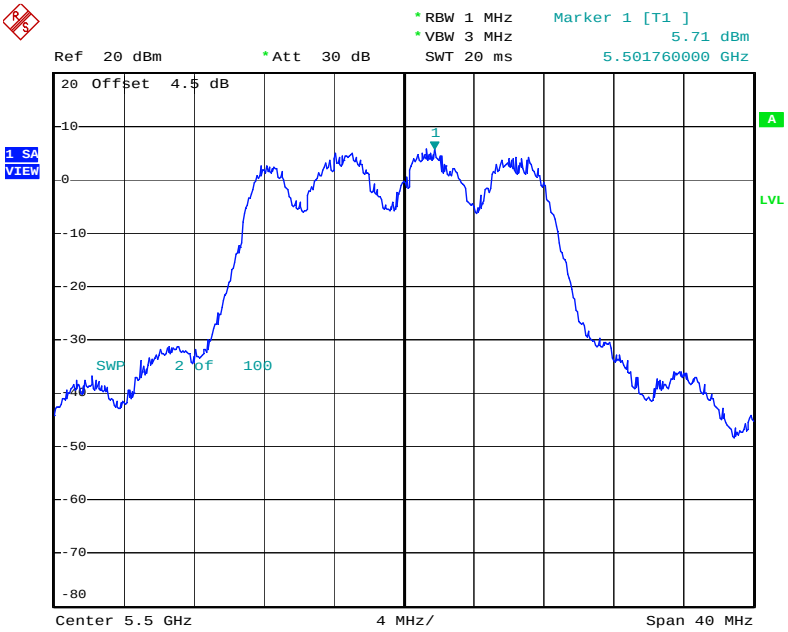
Date: 9.OCT.2009 17:20:22

Power Density Plot on Configuration IEEE 802.11a Ant. 1-1 + Ant. 1-3 / 5320 MHz



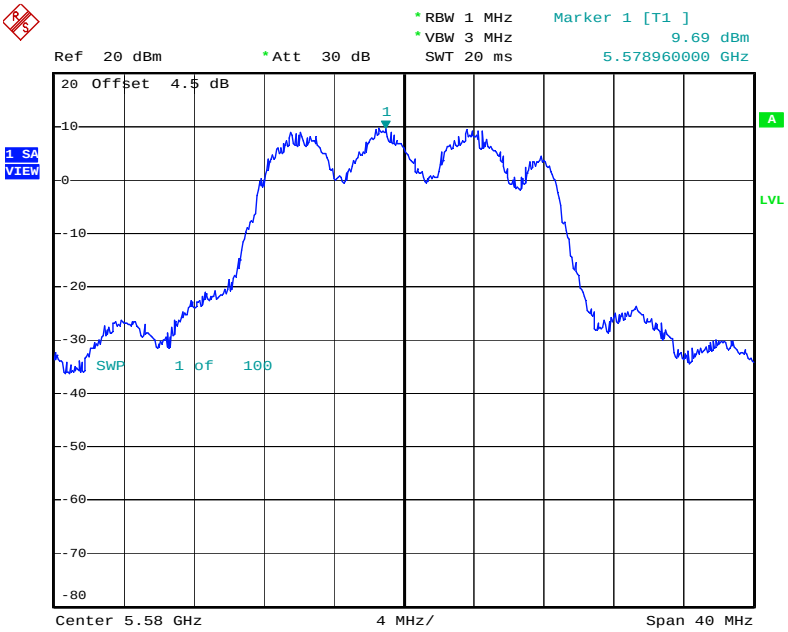
Date: 16.SEP.2009 17:46:46

Power Density Plot on Configuration IEEE 802.11a Ant. 1-1 + Ant. 1-3 / 5500 MHz



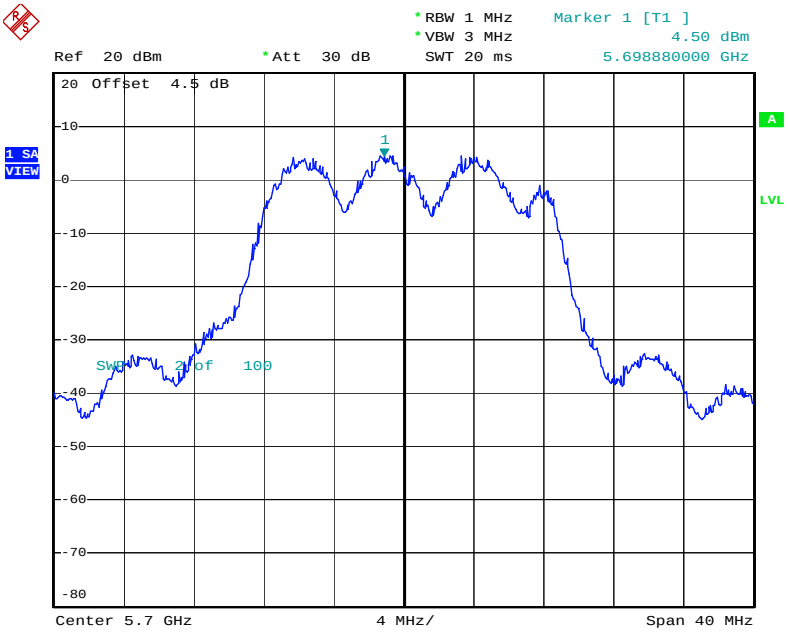
Date: 16.SEP.2009 17:51:33

Power Density Plot on Configuration IEEE 802.11a Ant. 1-1 + Ant. 1-3 / 5580 MHz



Date: 9.OCT.2009 17:23:21

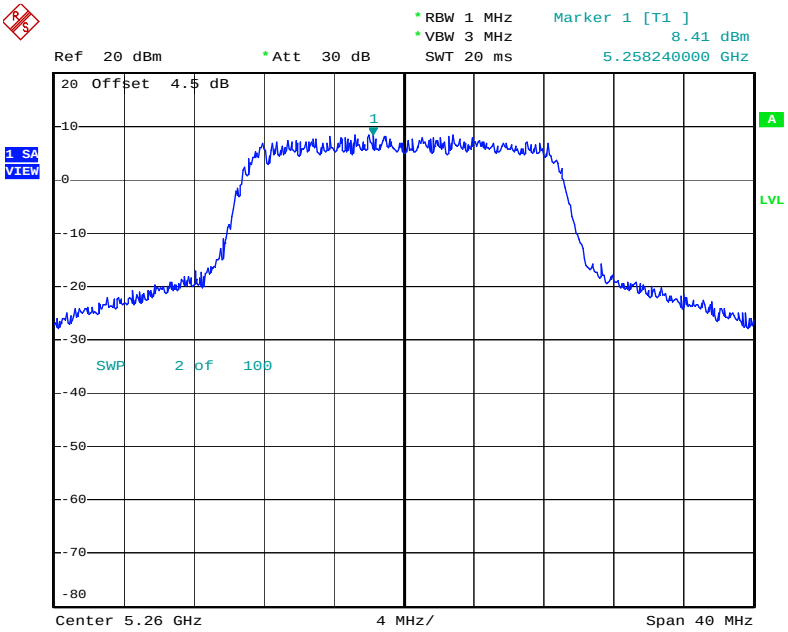
Power Density Plot on Configuration IEEE 802.11a Ant. 1-1 + Ant. 1-3 / 5700 MHz



Date: 16.SEP.2009 17:58:39

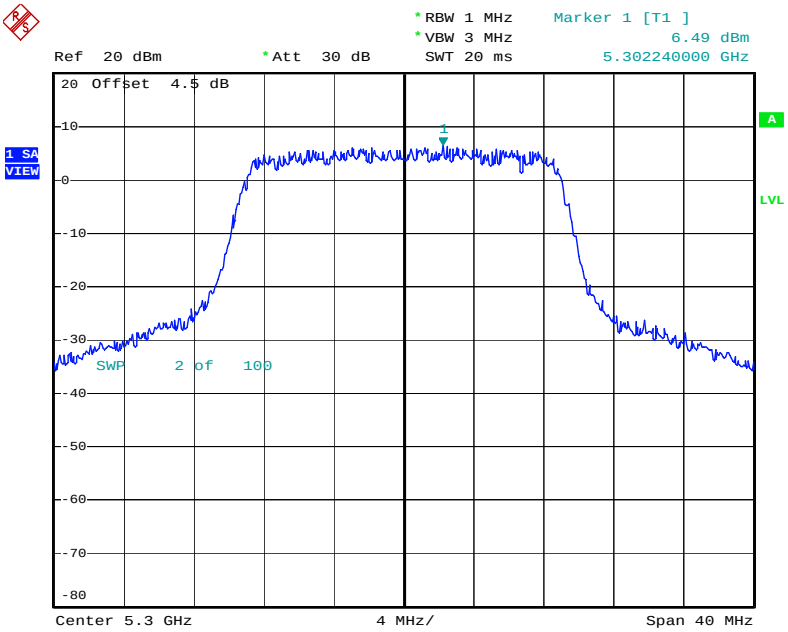
<For Antenna 2>:

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 2-1 + Ant. 2-3 / 5260 MHz



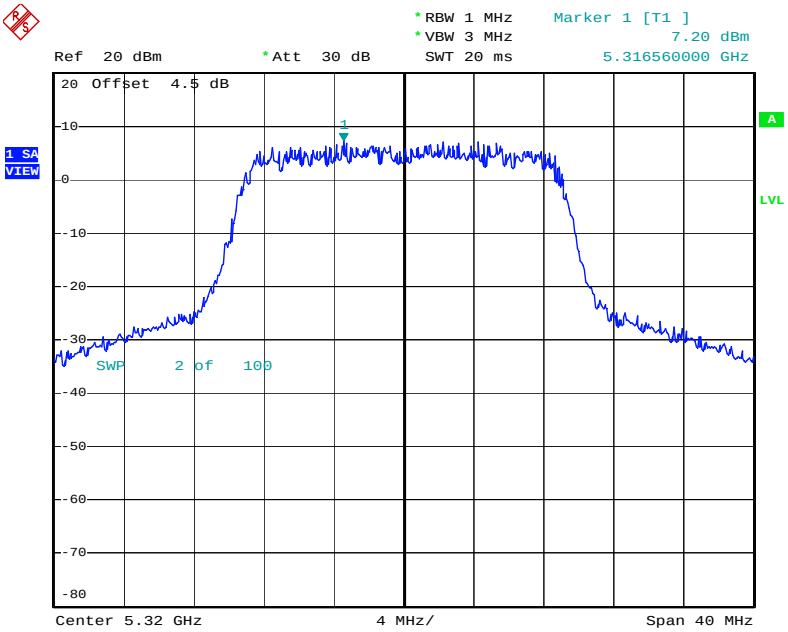
Date: 16.SEP.2009 18:24:56

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 2-1 + Ant. 2-3 / 5300 MHz



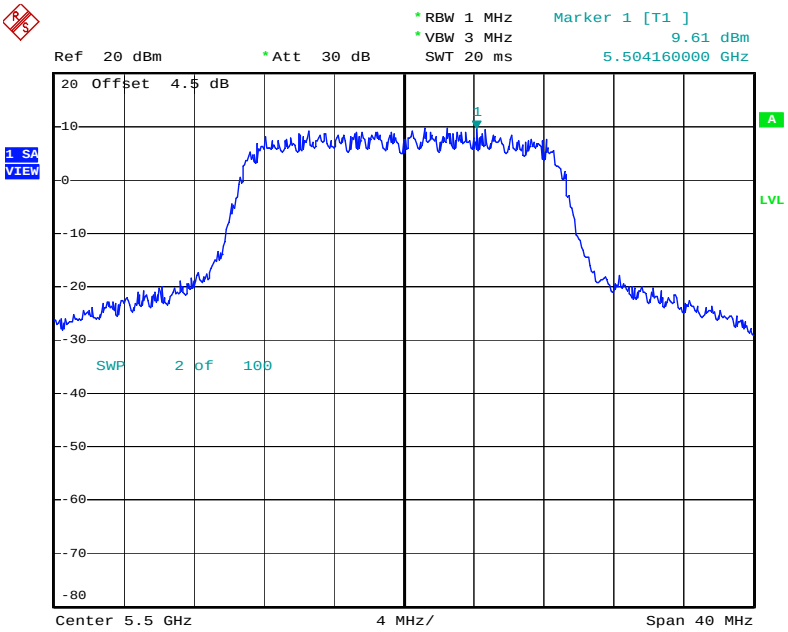
Date: 16.SEP.2009 18:27:01

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 2-1 + Ant. 2-3 / 5320 MHz



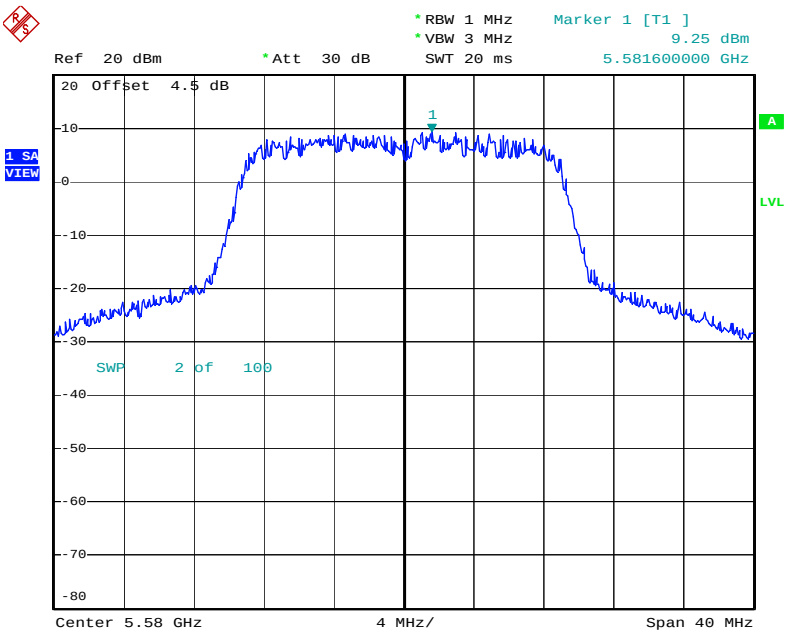
Date: 16.SEP.2009 18:30:52

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 2-1 + Ant. 2-3 / 5500 MHz



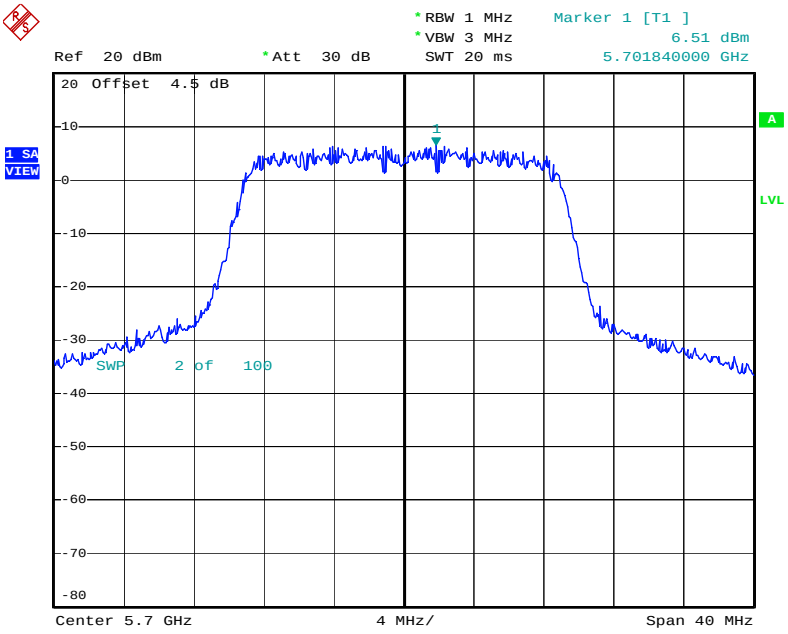
Date: 16.SEP.2009 18:34:32

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 2-1 + Ant. 2-3 / 5580 MHz



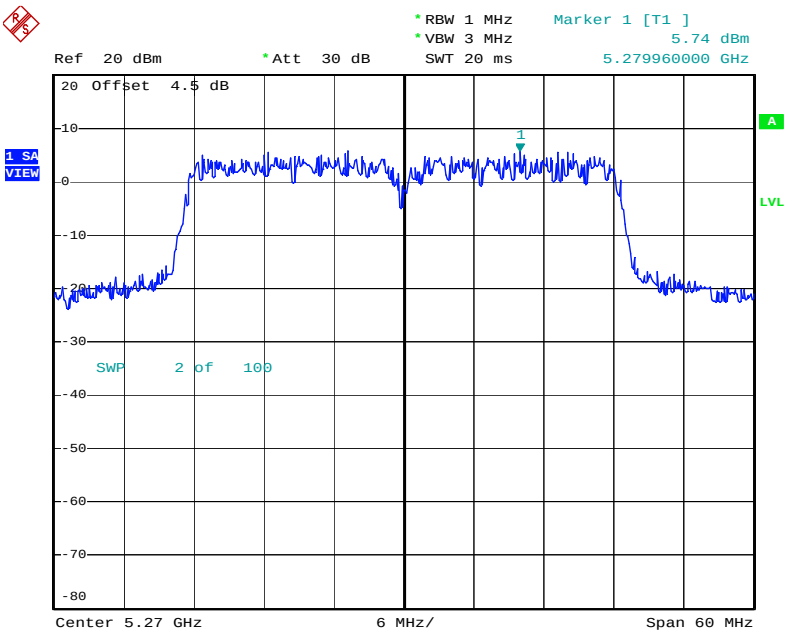
Date: 16.SEP.2009 18:38:53

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 2-1 + Ant. 2-3 / 5700 MHz



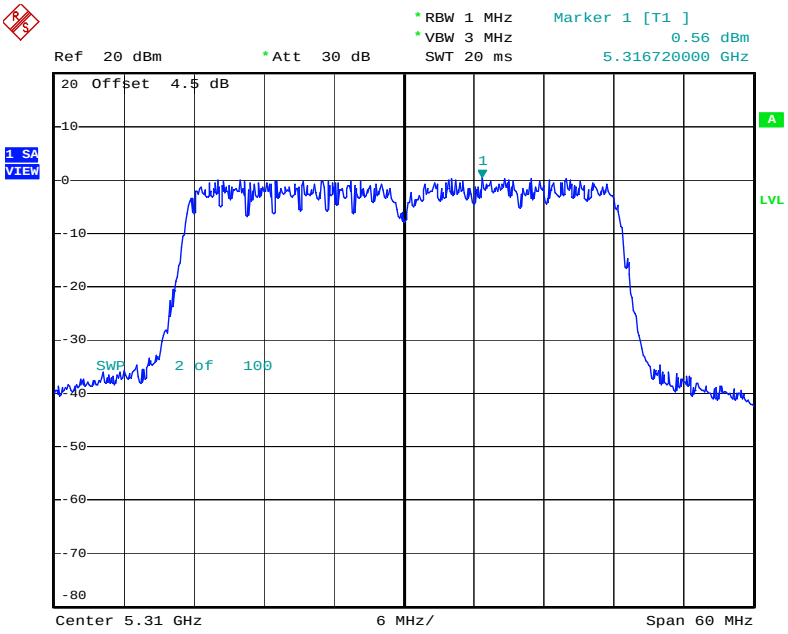
Date: 16.SEP.2009 18:44:17

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 2-1 + Ant. 2-3 / 5270 MHz



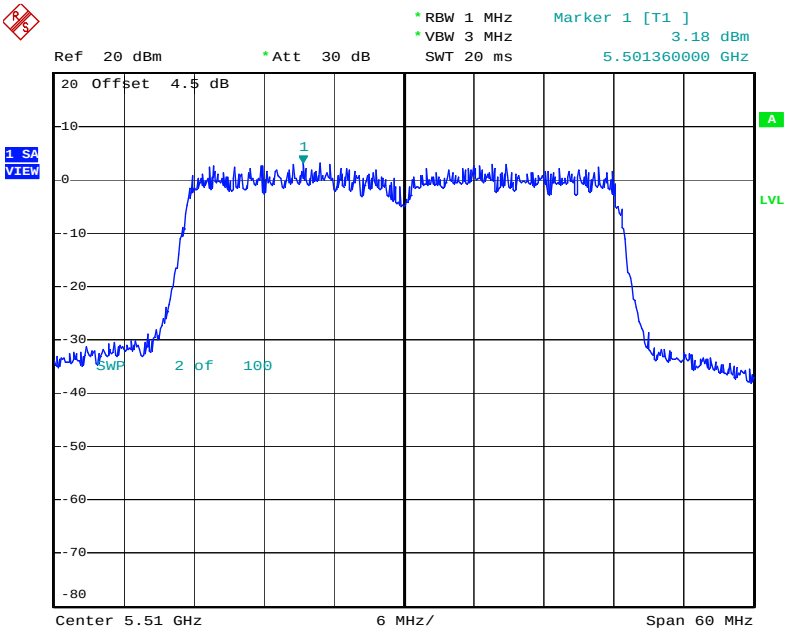
Date: 16.SEP.2009 18:52:33

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 2-1 + Ant. 2-3 / 5310 MHz



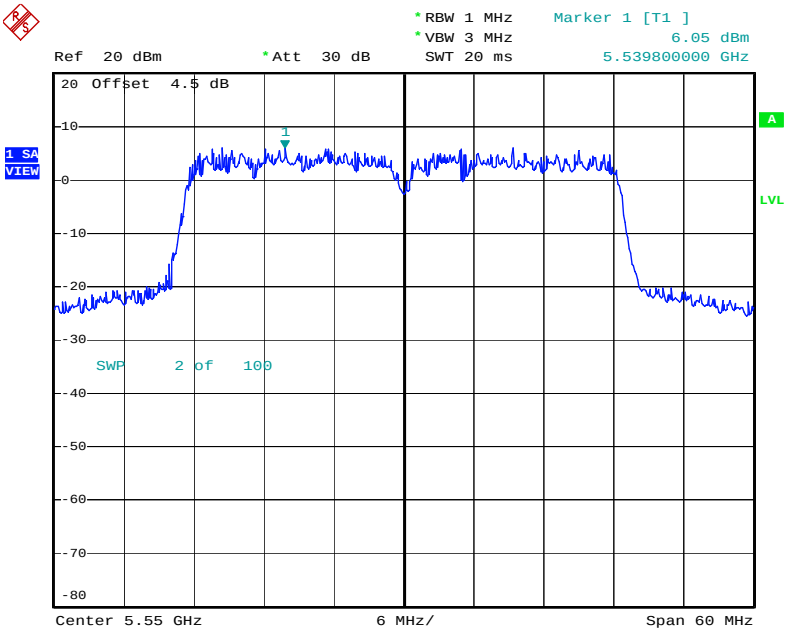
Date: 16.SEP.2009 18:57:36

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 2-1 + Ant. 2-3 / 5510MHz



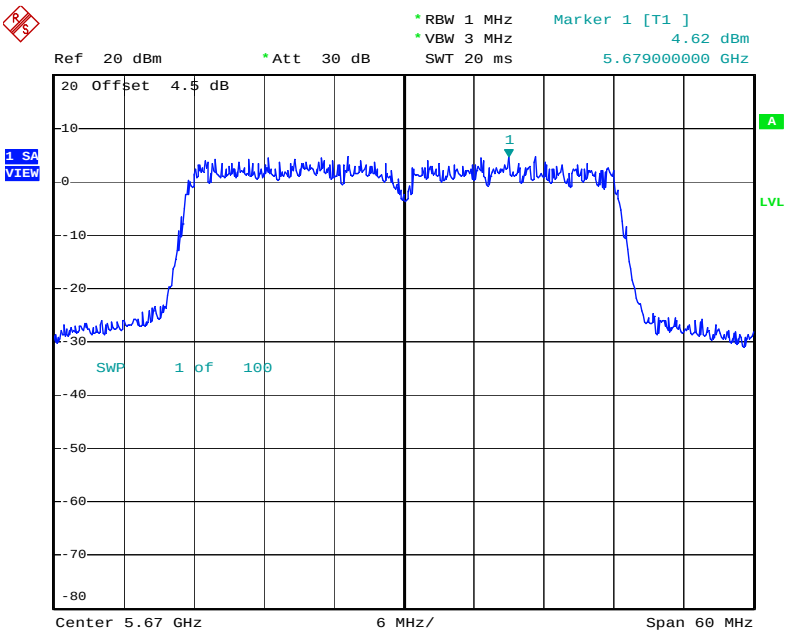
Date: 16.SEP.2009 19:04:46

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 2-1 + Ant. 2-3 / 5550 MHz



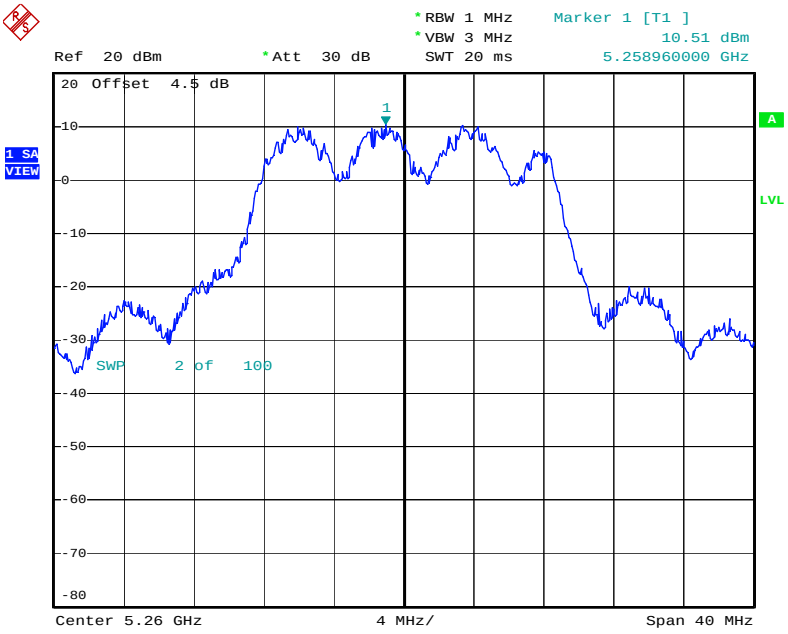
Date: 16.SEP.2009 19:10:53

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 2-1 + Ant. 2-3 / 5670 MHz



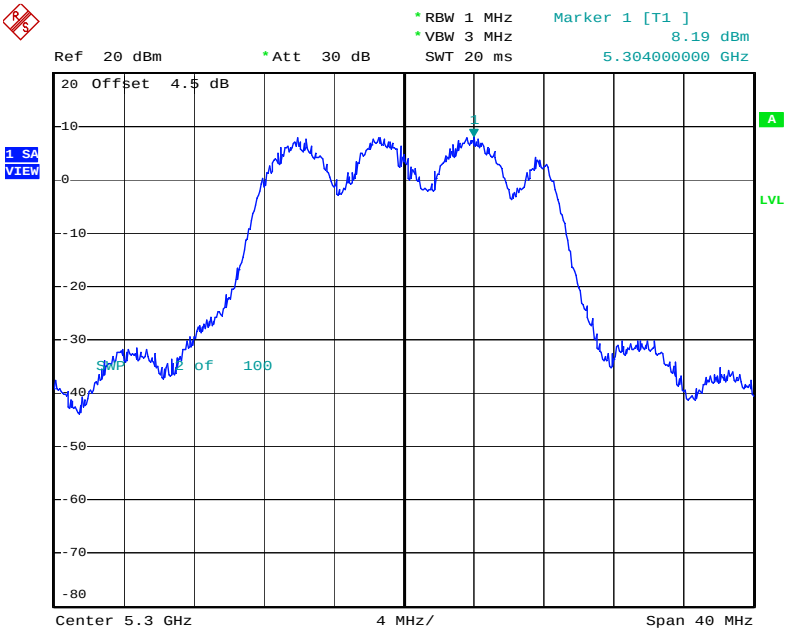
Date: 16.SEP.2009 19:14:52

Power Density Plot on Configuration IEEE 802.11a Ant. 2-1 + Ant. 2-3 / 5260 MHz



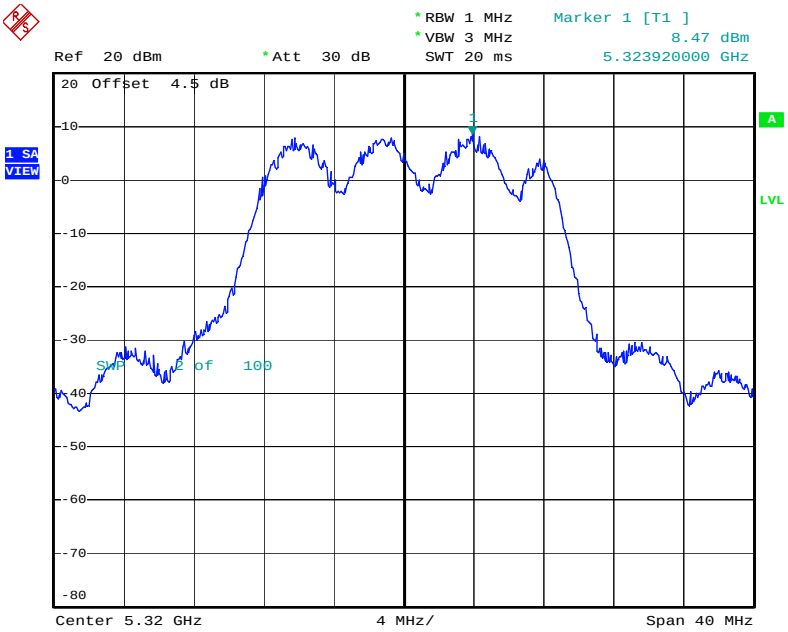
Date: 16.SEP.2009 17:42:00

Power Density Plot on Configuration IEEE 802.11a Ant. 2-1 + Ant. 2-3 / 5300 MHz



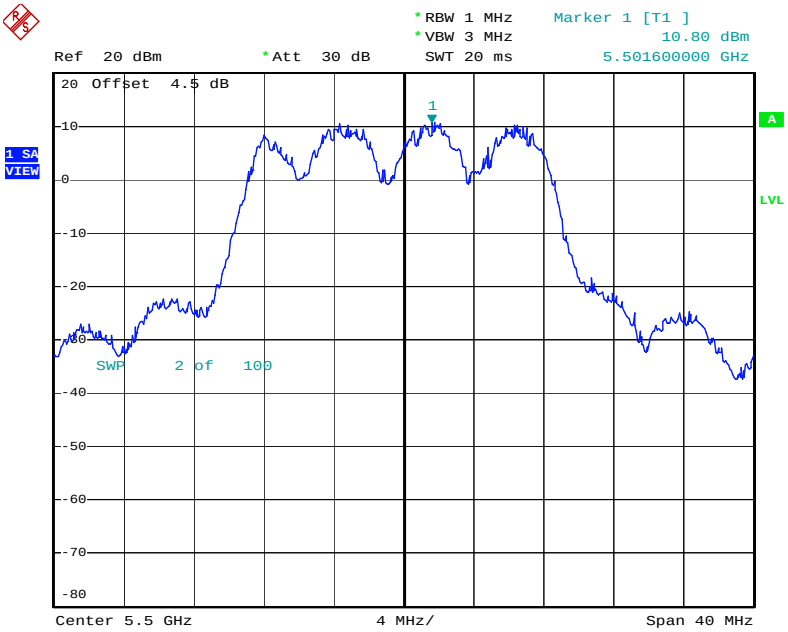
Date: 16.SEP.2009 17:44:06

Power Density Plot on Configuration IEEE 802.11a Ant. 2-1 + Ant. 2-3 / 5320 MHz



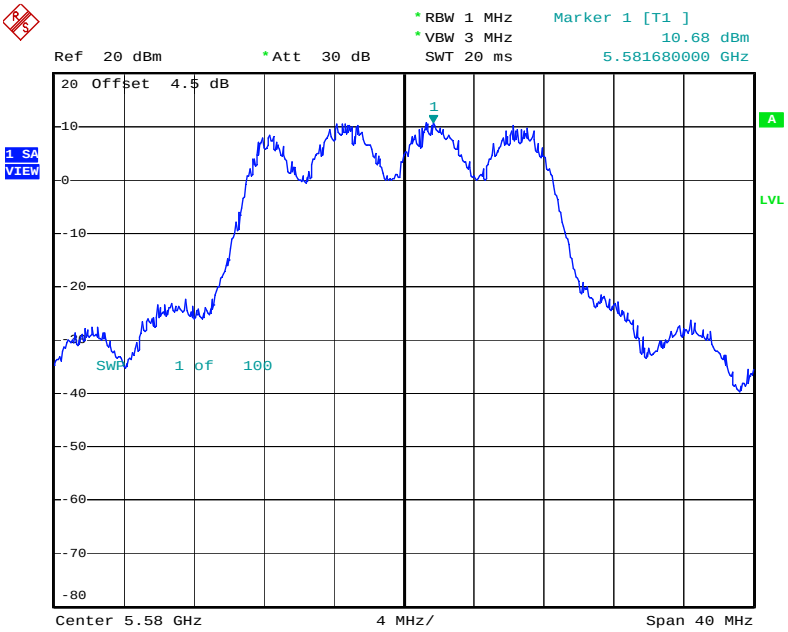
Date: 16.SEP.2009 17:46:46

Power Density Plot on Configuration IEEE 802.11a Ant. 2-1 + Ant. 2-3 / 5500 MHz



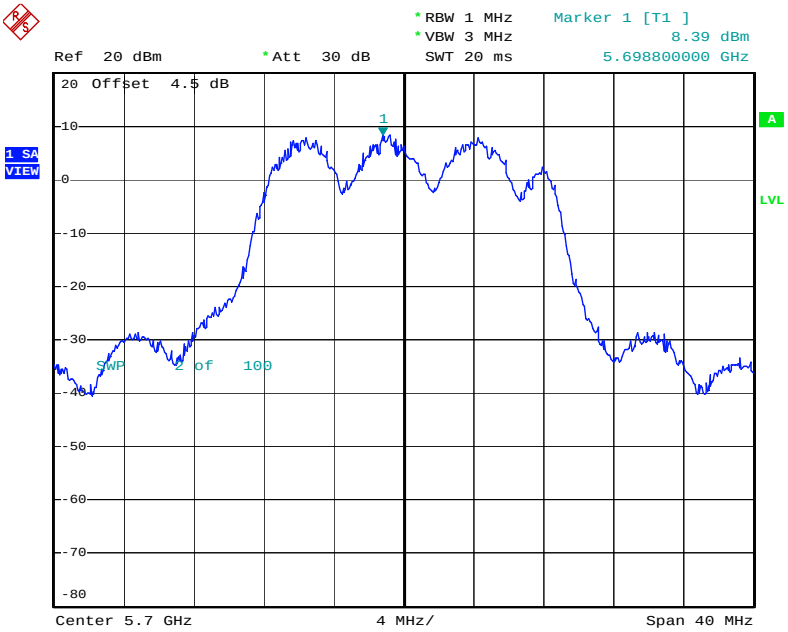
Date: 16.SEP.2009 17:52:25

Power Density Plot on Configuration IEEE 802.11a Ant. 2-1 + Ant. 2-3 / 5580 MHz



Date: 16.SEP.2009 17:57:27

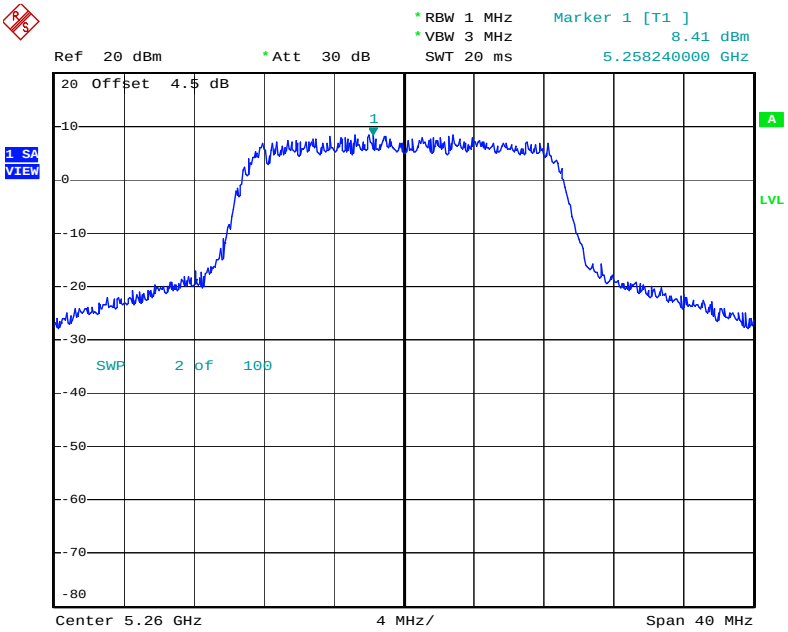
Power Density Plot on Configuration IEEE 802.11a Ant. 2-1 + Ant. 2-3 / 5700 MHz



Date: 16.SEP.2009 17:59:41

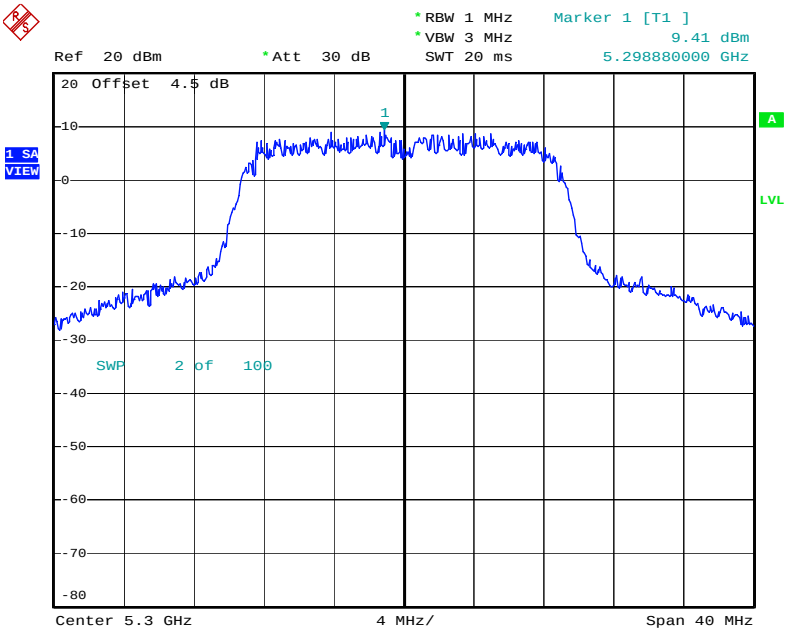
<For Antenna 3>:

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 3-1 + Ant. 3-3 / 5260 MHz



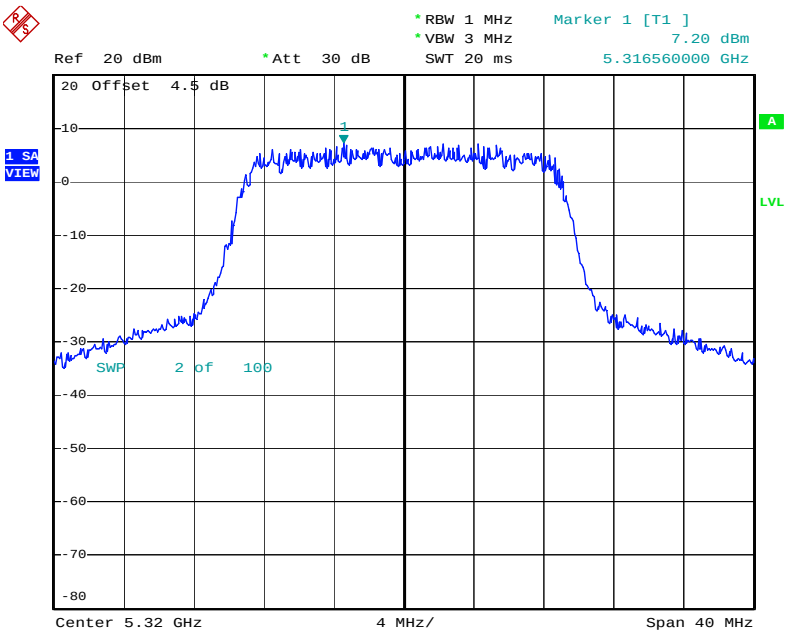
Date: 16.SEP.2009 18:24:56

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 3-1 + Ant. 3-3 / 5300 MHz



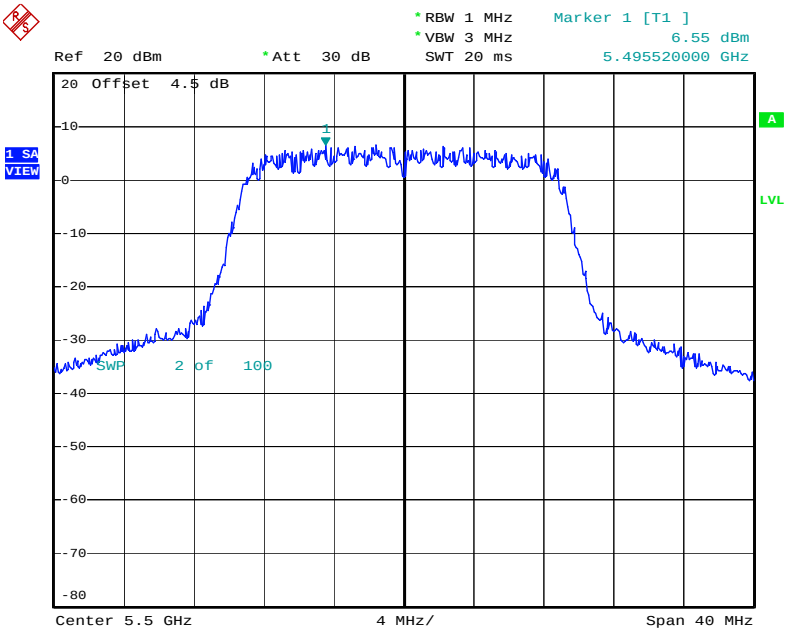
Date: 16.SEP.2009 18:27:58

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 3-1 + Ant. 3-3 / 5320 MHz



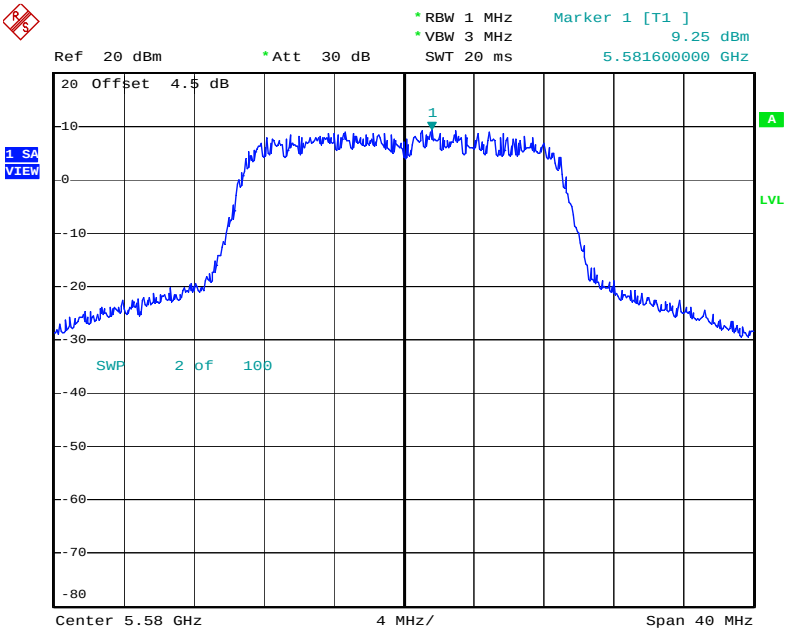
Date: 16.SEP.2009 18:30:52

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 3-1 + Ant. 3-3 / 5500 MHz



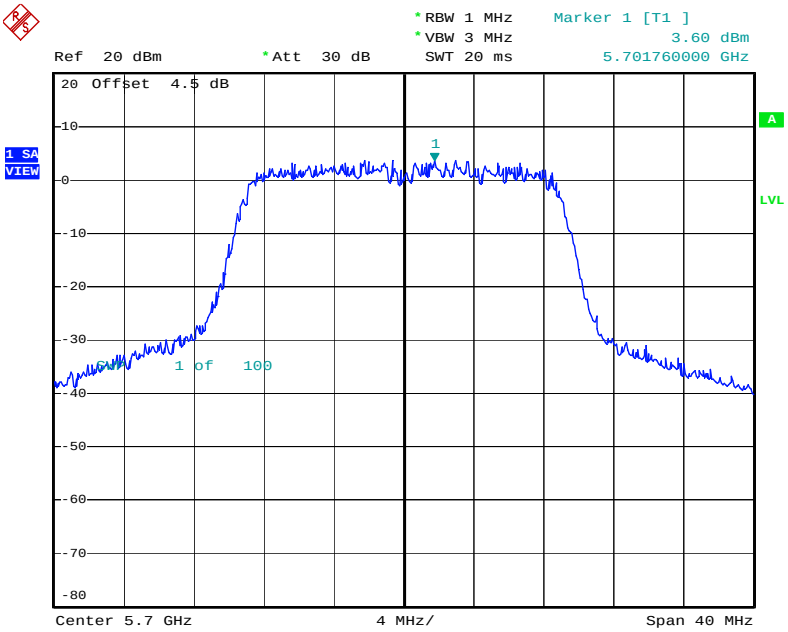
Date: 16.SEP.2009 18:35:33

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 3-1 + Ant. 3-3 / 5580 MHz



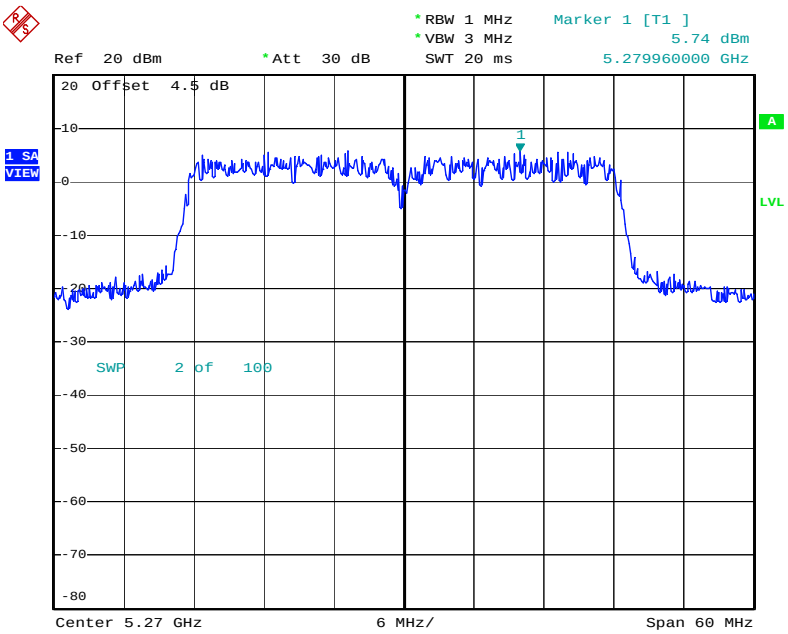
Date: 16.SEP.2009 18:38:53

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 3-1 + Ant. 3-3 / 5700 MHz



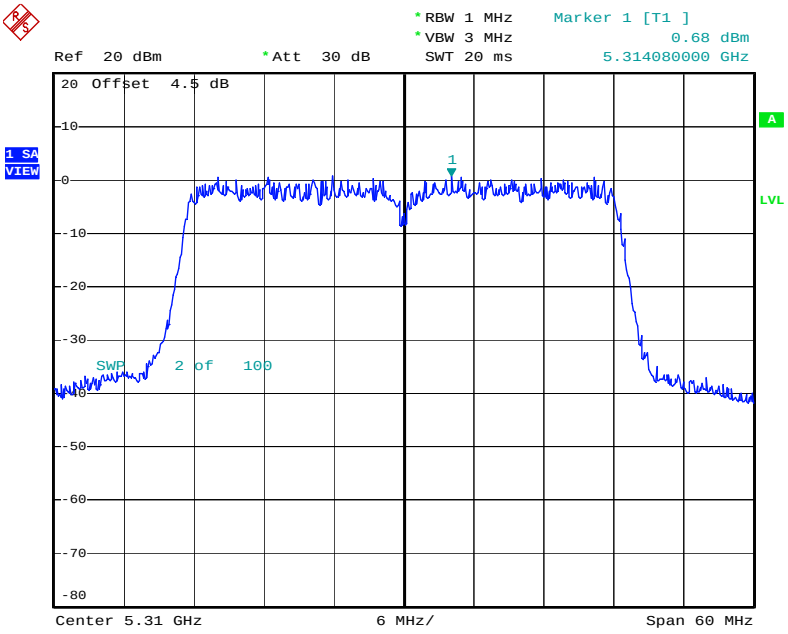
Date: 16.SEP.2009 18:45:10

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 3-1 + Ant. 3-3 / 5270 MHz



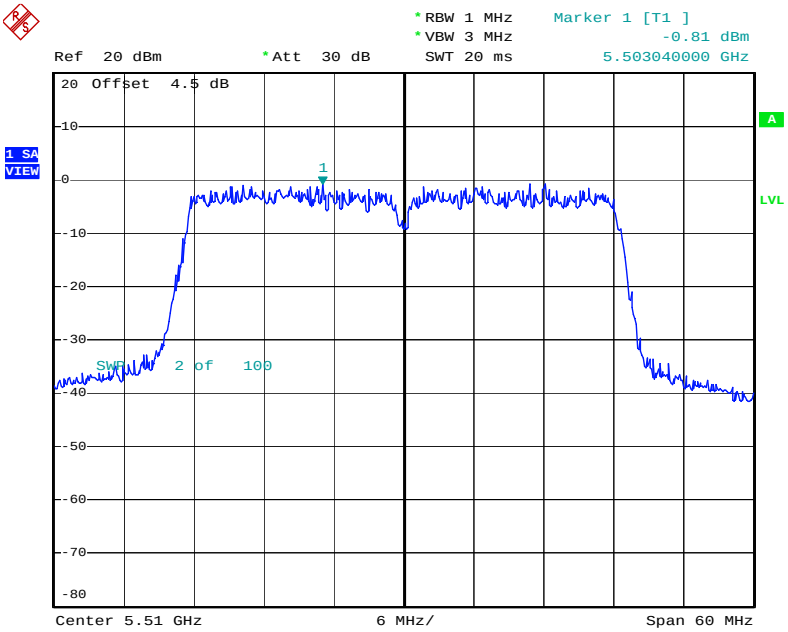
Date: 16.SEP.2009 18:52:33

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 3-1 + Ant. 3-3 / 5310 MHz



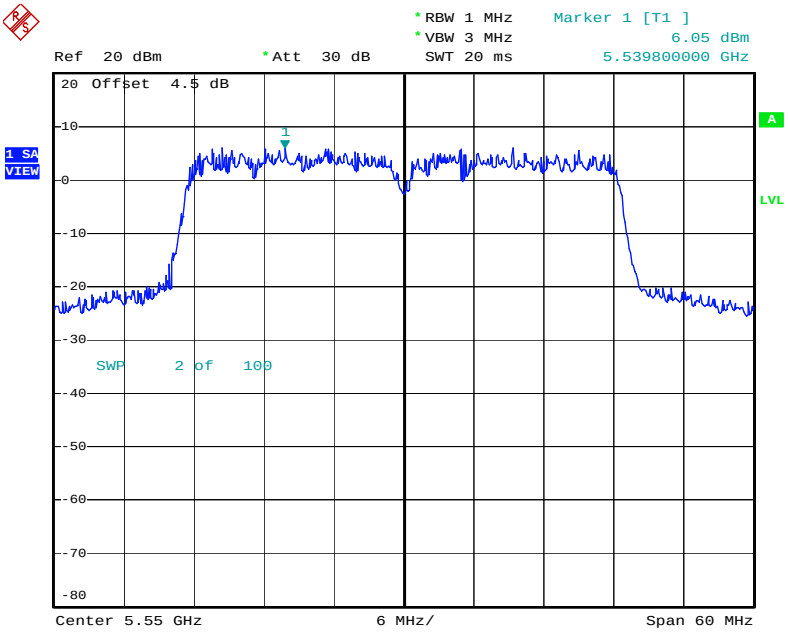
Date: 16.SEP.2009 19:01:53

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 3-1 + Ant. 3-3 / 5510MHz



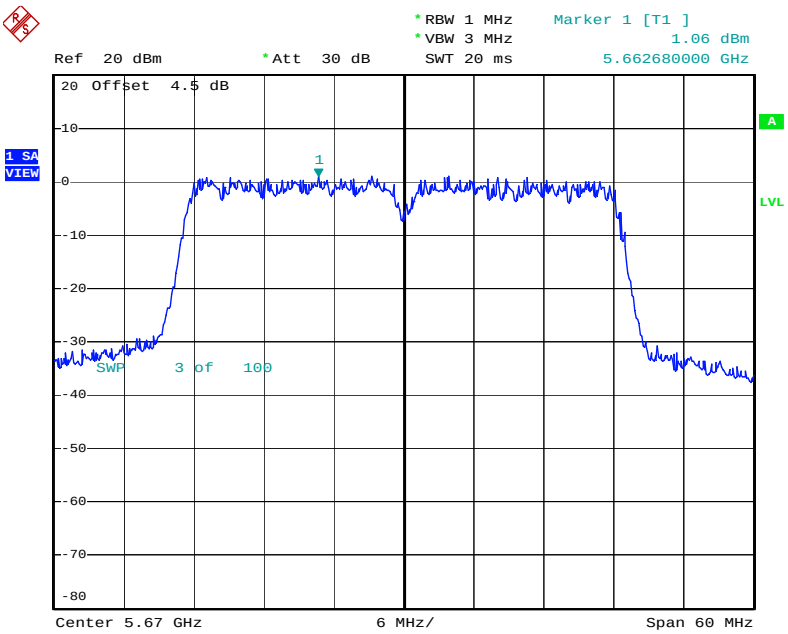
Date: 16.SEP.2009 19:05:53

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 3-1 + Ant. 3-3 / 5550 MHz



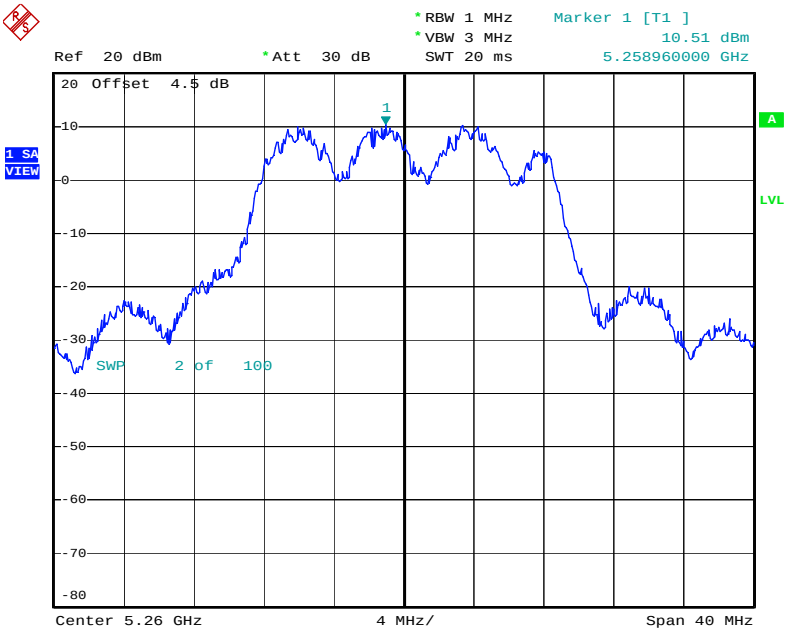
Date: 16.SEP.2009 19:10:53

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 3-1 + Ant. 3-3 / 5670 MHz



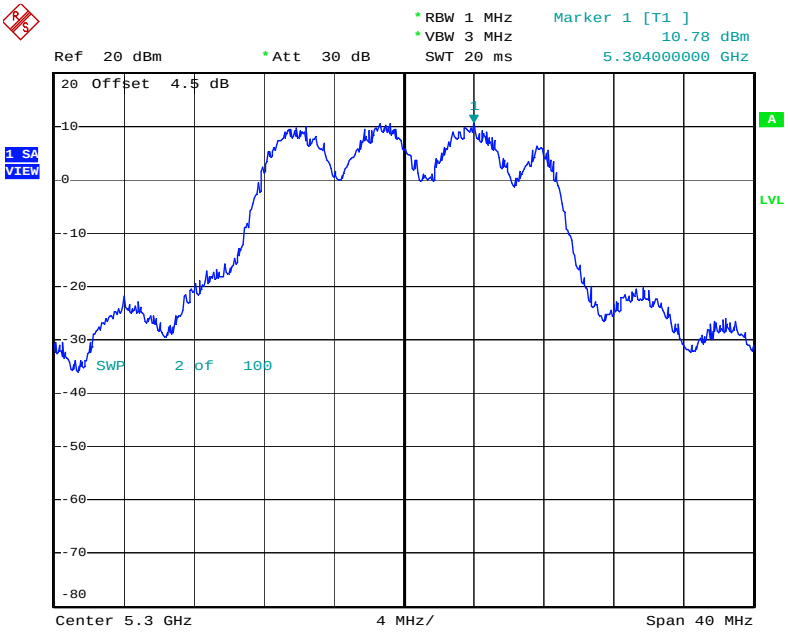
Date: 16.SEP.2009 19:15:37

Power Density Plot on Configuration IEEE 802.11a Ant. 3-1 + Ant. 3-3 / 5260 MHz



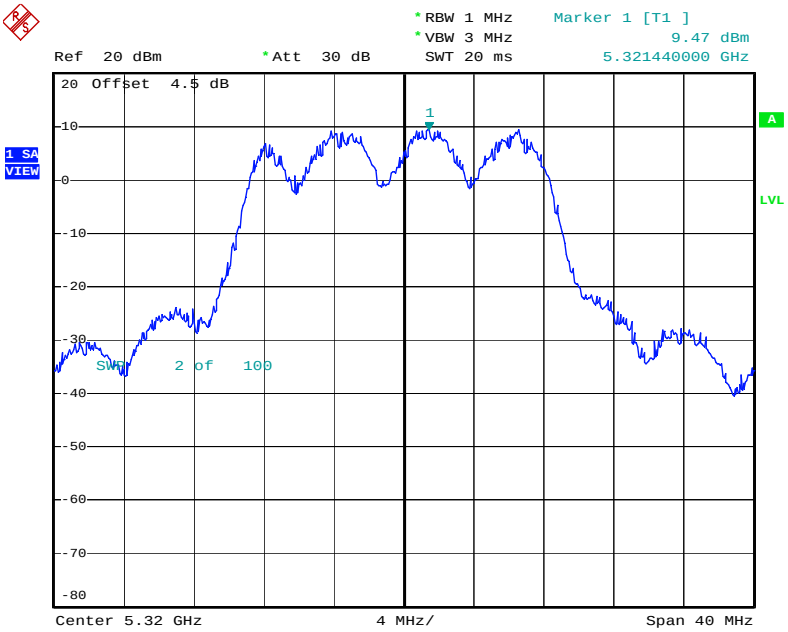
Date: 16.SEP.2009 17:42:00

Power Density Plot on Configuration IEEE 802.11a Ant. 3-1 + Ant. 3-3 / 5300 MHz



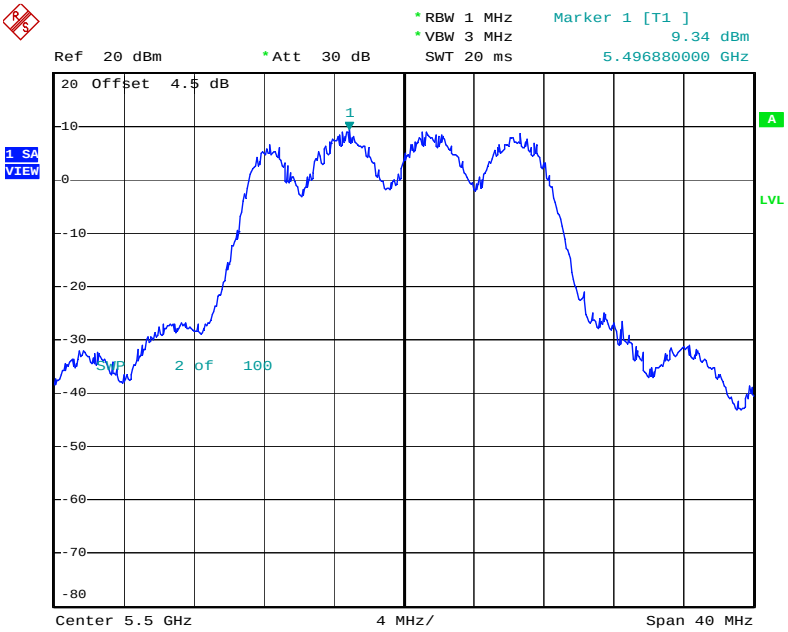
Date: 16.SEP.2009 17:45:29

Power Density Plot on Configuration IEEE 802.11a Ant. 3-1 + Ant. 3-3 / 5320 MHz



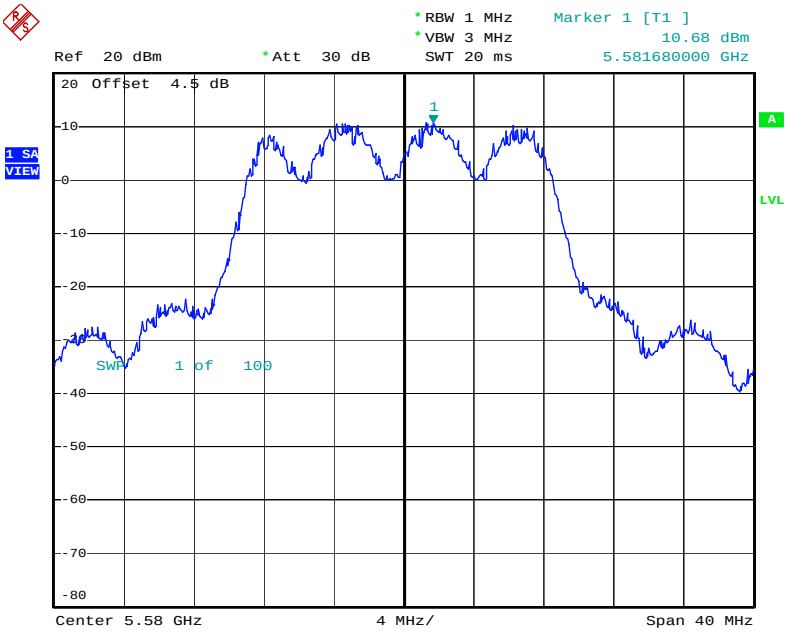
Date: 16.SEP.2009 17:48:10

Power Density Plot on Configuration IEEE 802.11a Ant. 3-1 + Ant. 3-3 / 5500 MHz



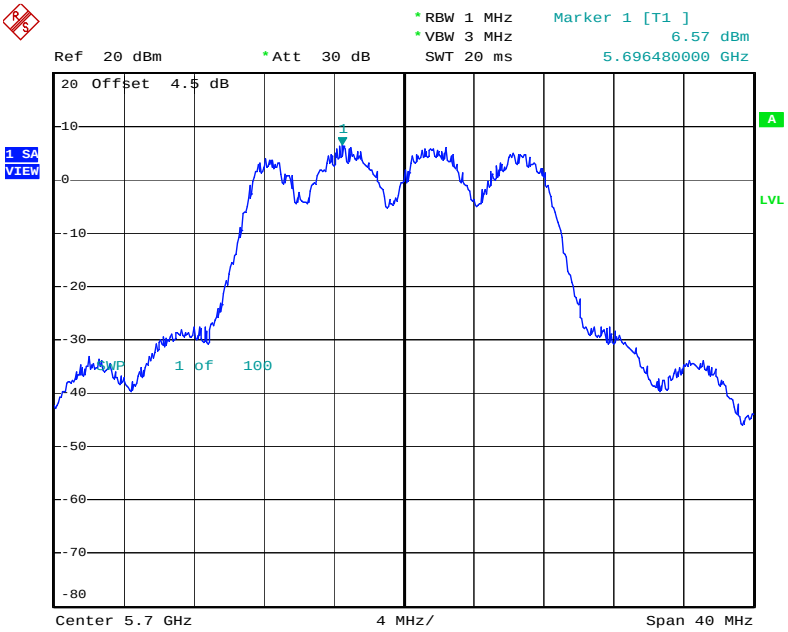
Date: 16.SEP.2009 17:53:19

Power Density Plot on Configuration IEEE 802.11a Ant. 3-1 + Ant. 3-3 / 5580 MHz



Date: 16.SEP.2009 17:57:27

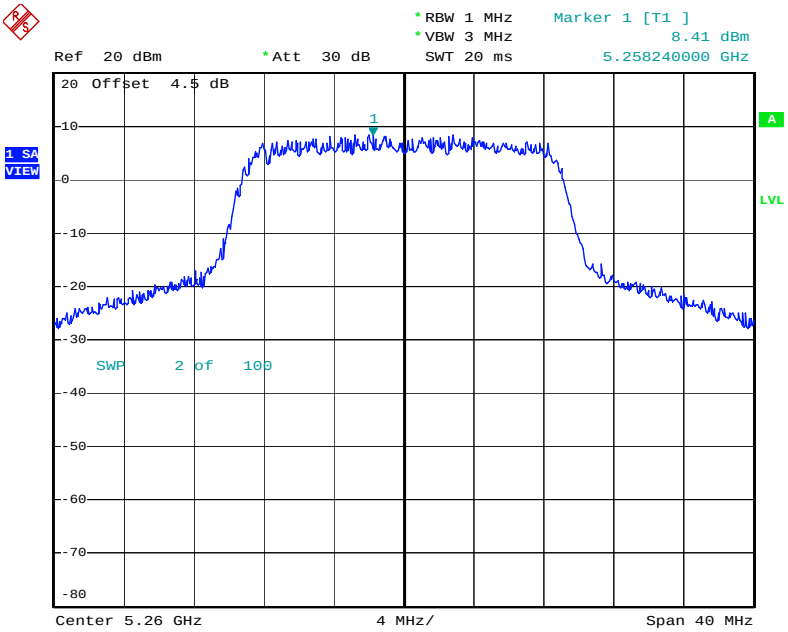
Power Density Plot on Configuration IEEE 802.11a Ant. 3-1 + Ant. 3-3 / 5700 MHz



Date: 16.SEP.2009 18:01:15

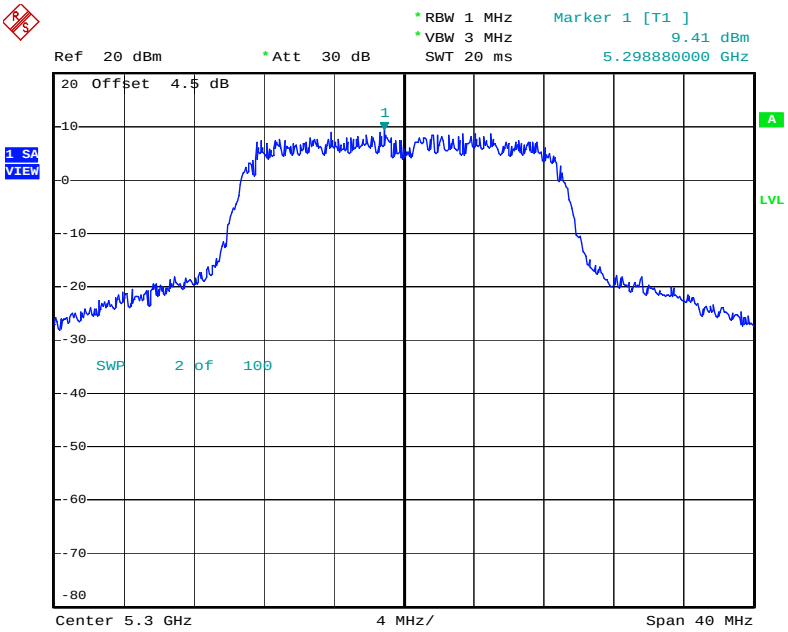
<For Antenna 4>:

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 4-1 + Ant. 4-3 / 5260 MHz



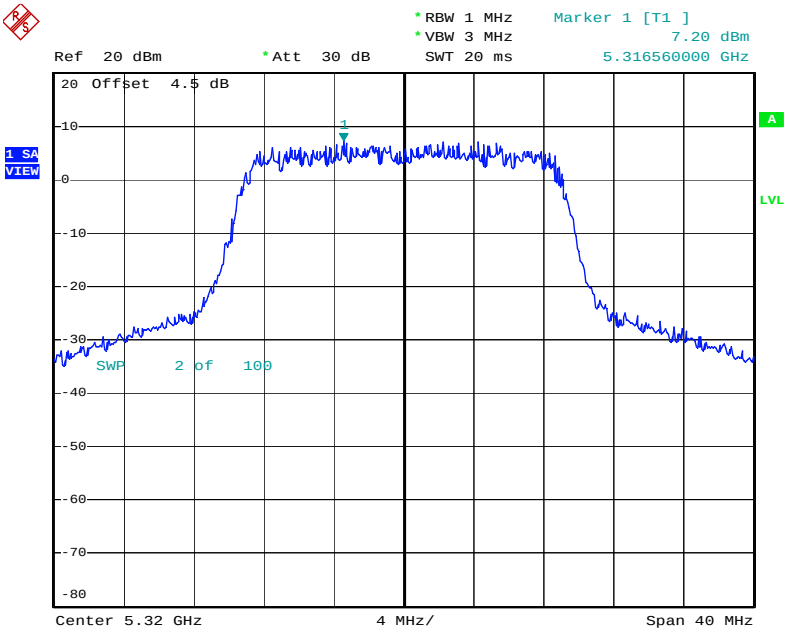
Date: 16.SEP.2009 18:24:56

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 4-1 + Ant. 4-3 / 5300 MHz



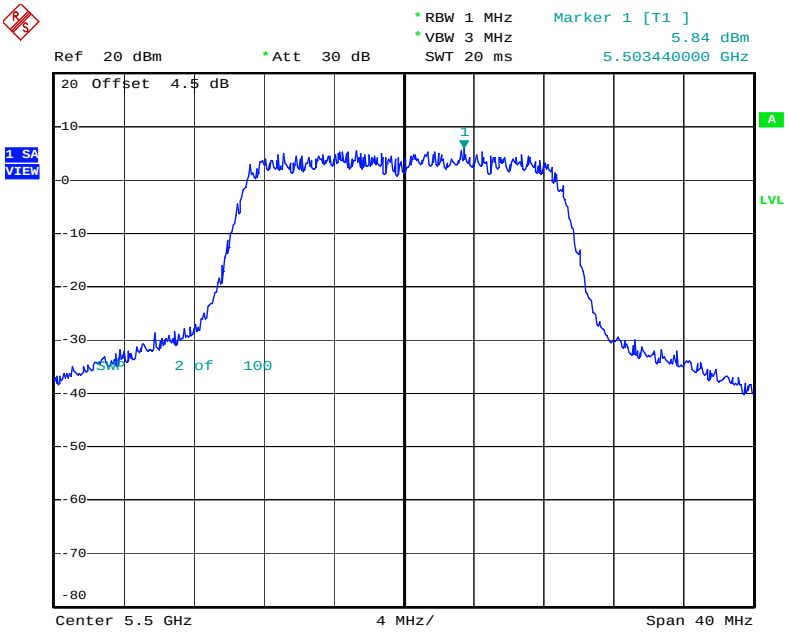
Date: 16.SEP.2009 18:27:58

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 4-1 + Ant. 4-3 / 5320 MHz



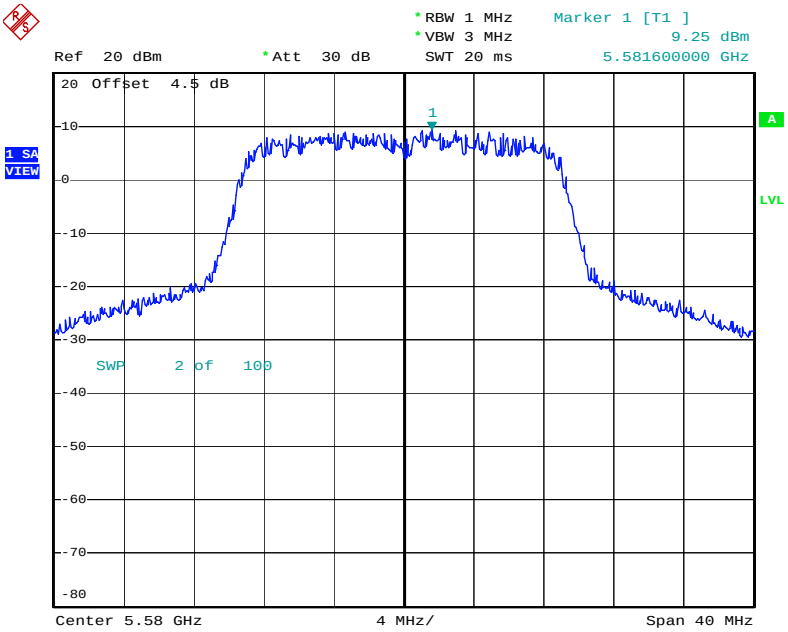
Date: 16.SEP.2009 18:30:52

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 4-1 + Ant. 4-3 / 5500 MHz



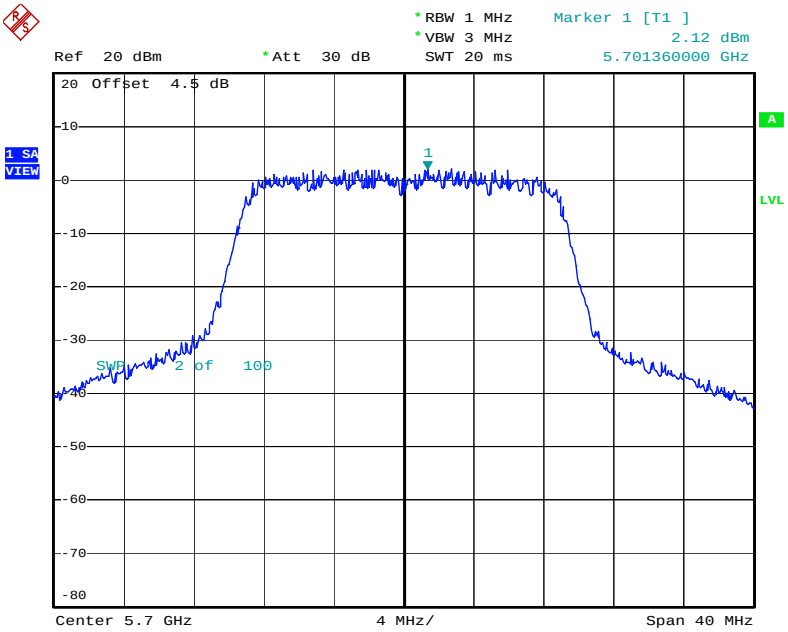
Date: 16.SEP.2009 18:36:29

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 4-1 + Ant. 4-3 / 5580 MHz



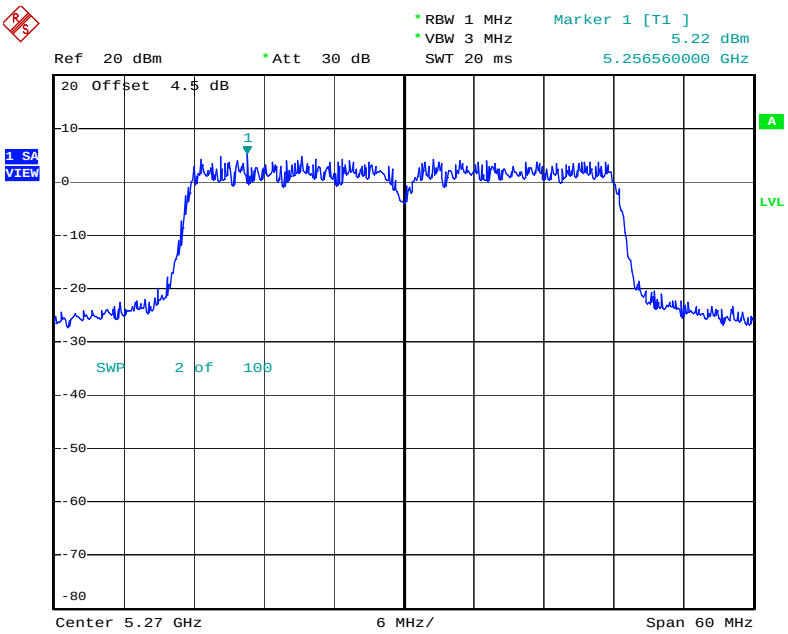
Date: 16.SEP.2009 18:38:53

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 4-1 + Ant. 4-3 / 5700 MHz



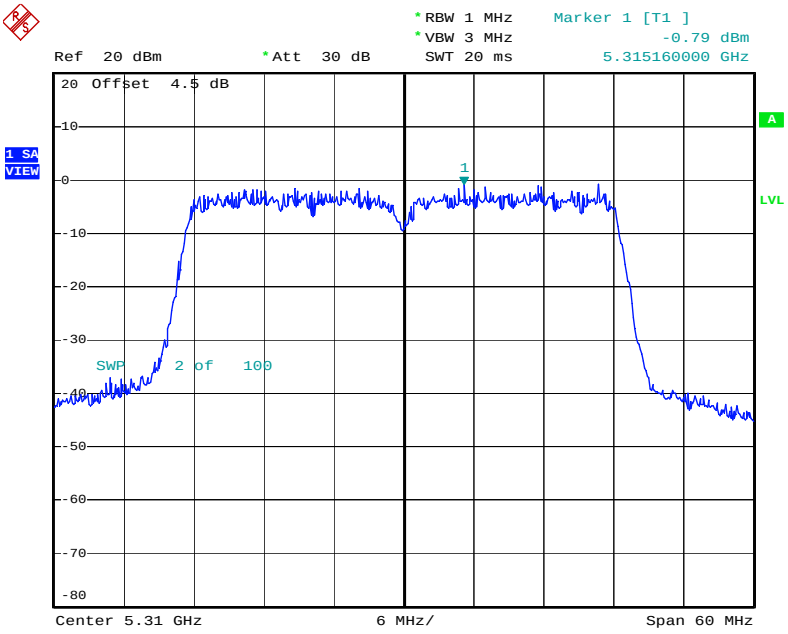
Date: 16.SEP.2009 18:43:17

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 4-1 + Ant. 4-3 / 5270 MHz



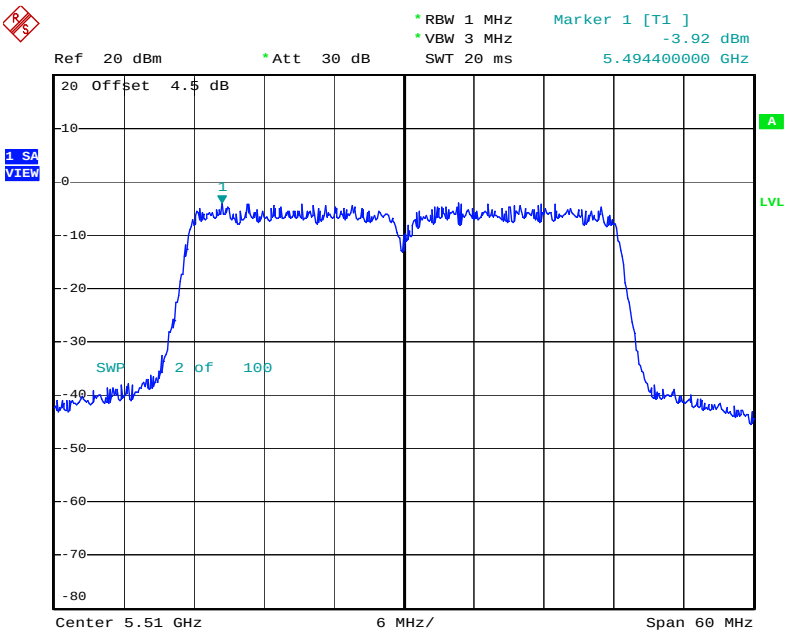
Date: 16.SEP.2009 18:53:47

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 4-1 + Ant. 4-3 / 5310 MHz



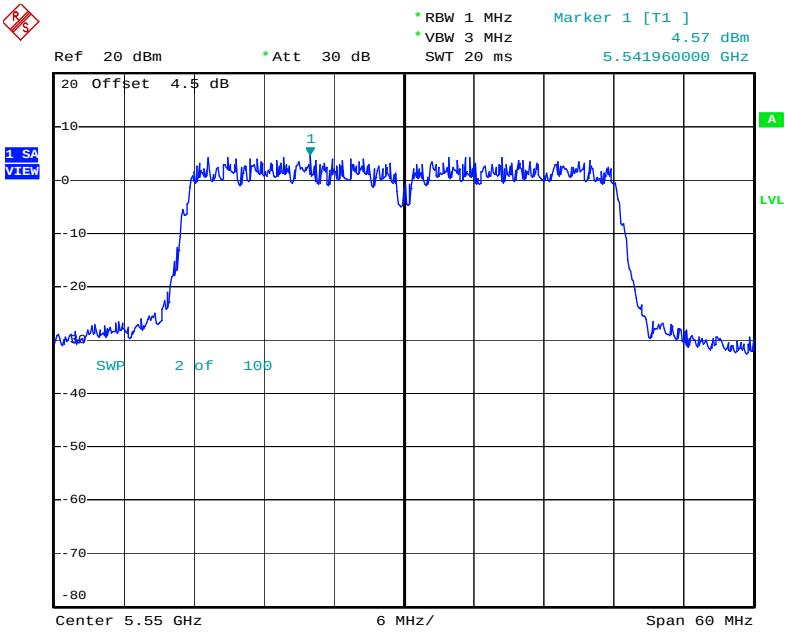
Date: 16.SEP.2009 18:58:25

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 4-1 + Ant. 4-3 / 5510MHz



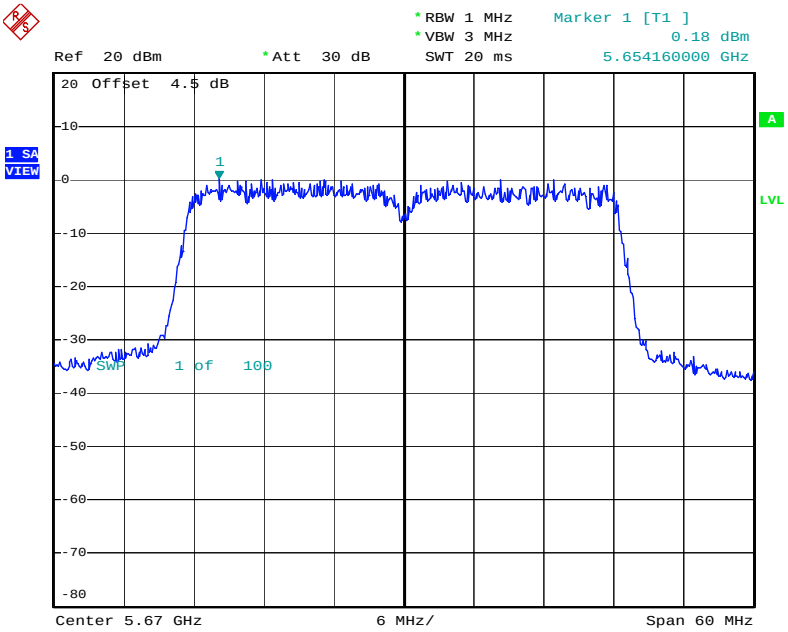
Date: 16.SEP.2009 19:08:20

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 4-1 + Ant. 4-3 / 5550 MHz



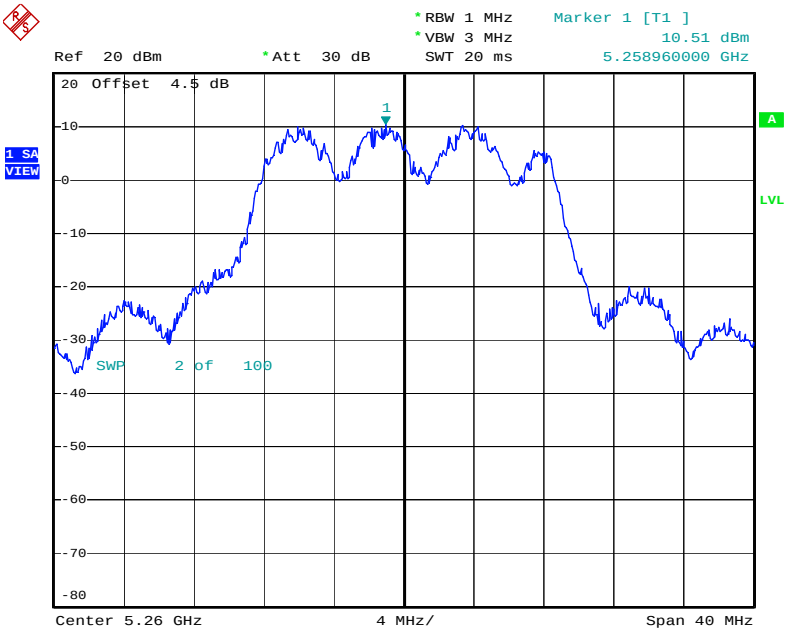
Date: 16.SEP.2009 19:11:45

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 4-1 + Ant. 4-3 / 5670 MHz



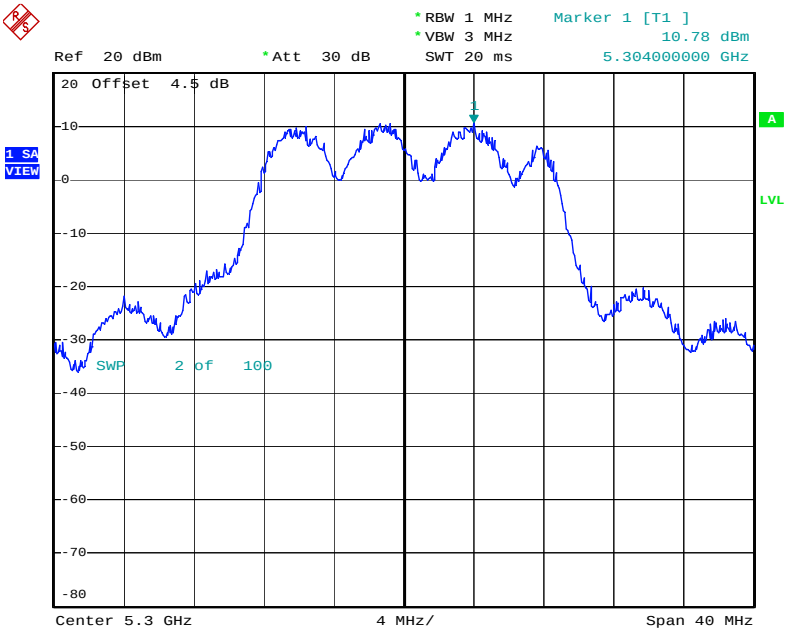
Date: 16.SEP.2009 19:14:01

Power Density Plot on Configuration IEEE 802.11a Ant. 4-1 + Ant. 4-3 / 5260 MHz



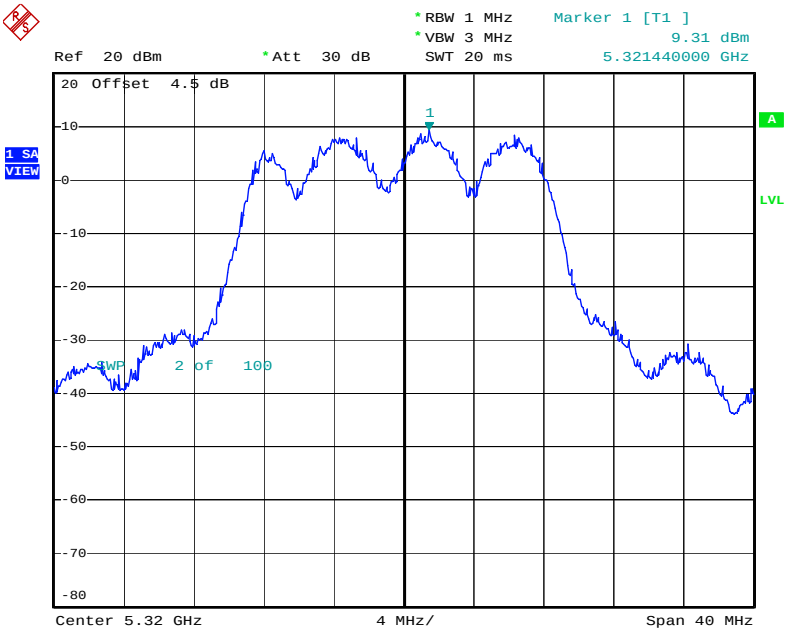
Date: 16.SEP.2009 17:42:00

Power Density Plot on Configuration IEEE 802.11a Ant. 4-1 + Ant. 4-3 / 5300 MHz



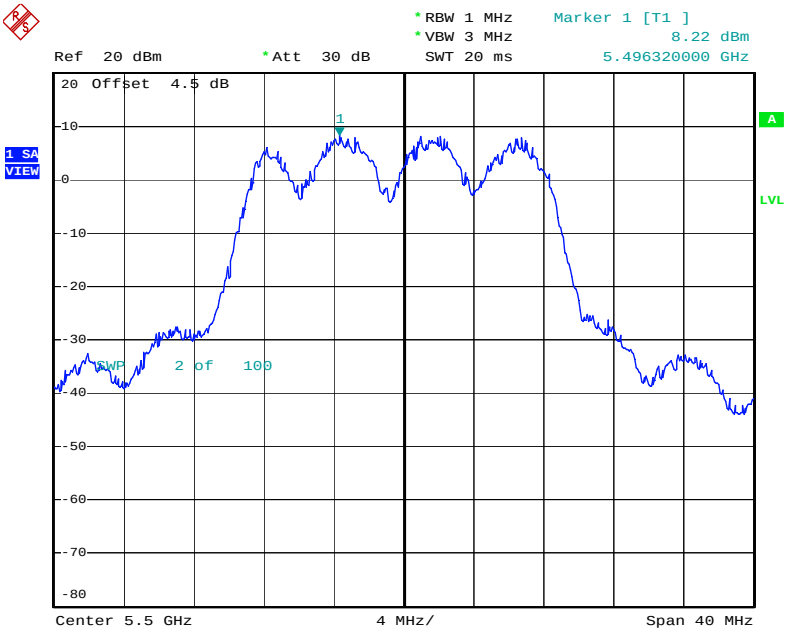
Date: 16.SEP.2009 17:45:29

Power Density Plot on Configuration IEEE 802.11a Ant. 4-1 + Ant. 4-3 / 5320 MHz



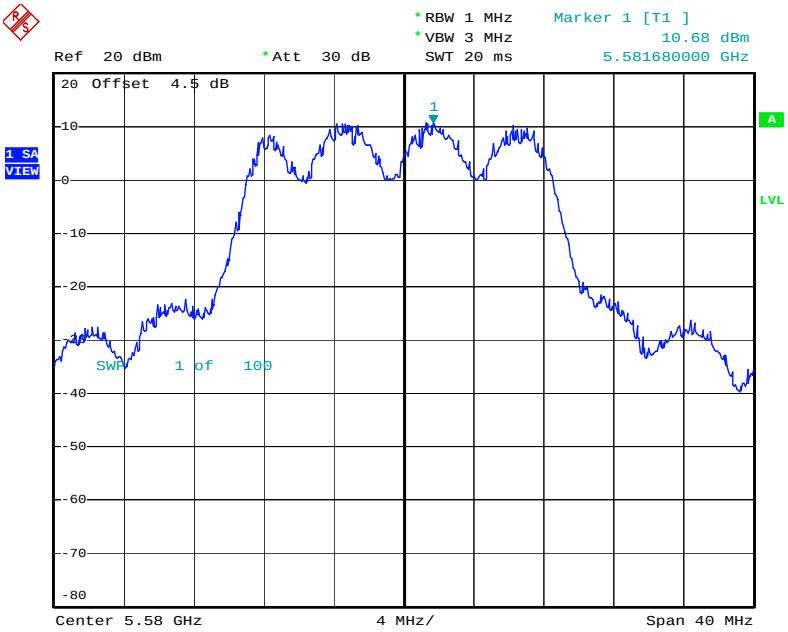
Date: 16.SEP.2009 17:49:10

Power Density Plot on Configuration IEEE 802.11a Ant. 4-1 + Ant. 4-3 / 5500 MHz



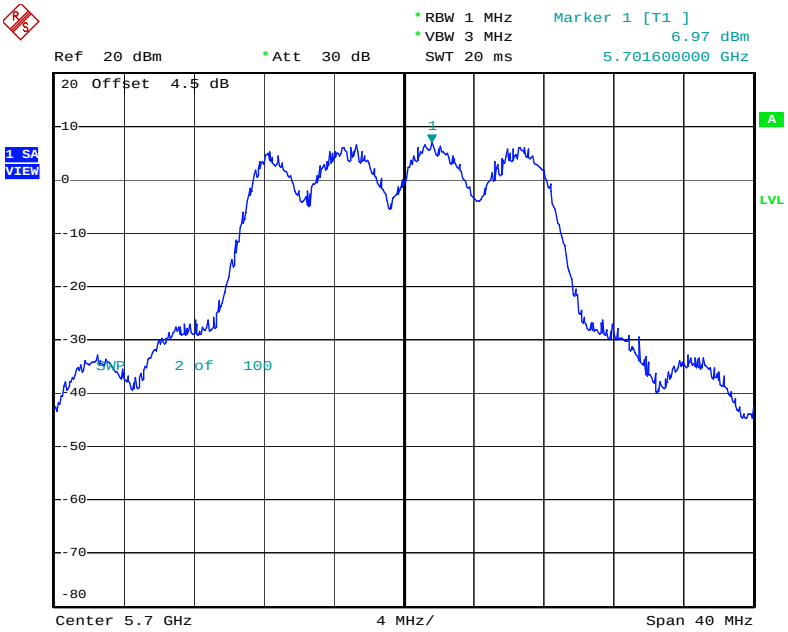
Date: 16.SEP.2009 17:54:21

Power Density Plot on Configuration IEEE 802.11a Ant. 4-1 + Ant. 4-3 / 5580 MHz



Date: 16.SEP.2009 17:57:27

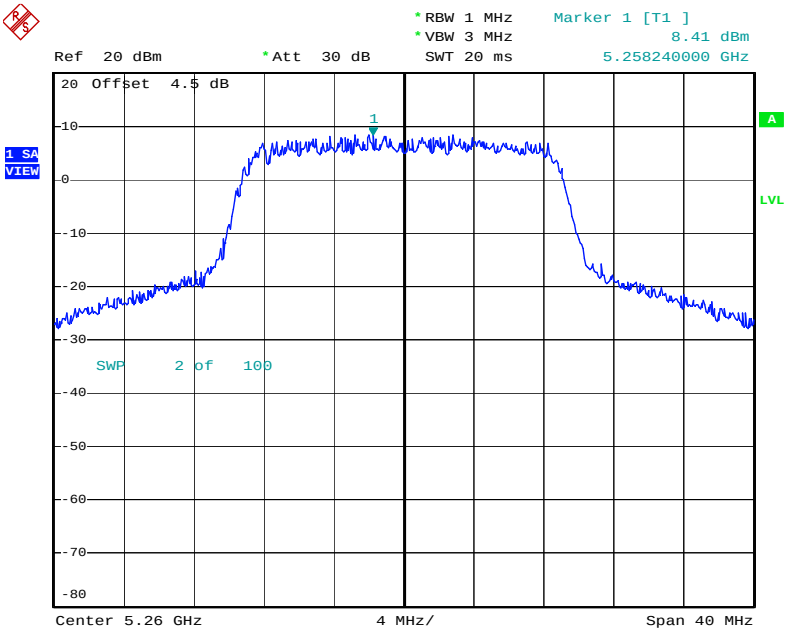
Power Density Plot on Configuration IEEE 802.11a Ant. 4-1 + Ant. 4-3 / 5700 MHz



Date: 16.SEP.2009 18:02:06

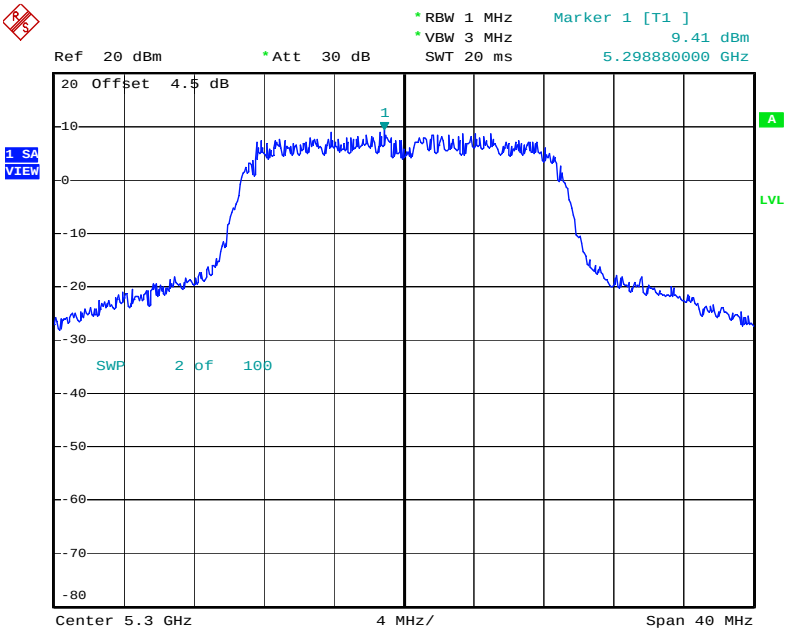
<For Antenna 5>:

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 5-1 + Ant. 5-3 / 5260 MHz



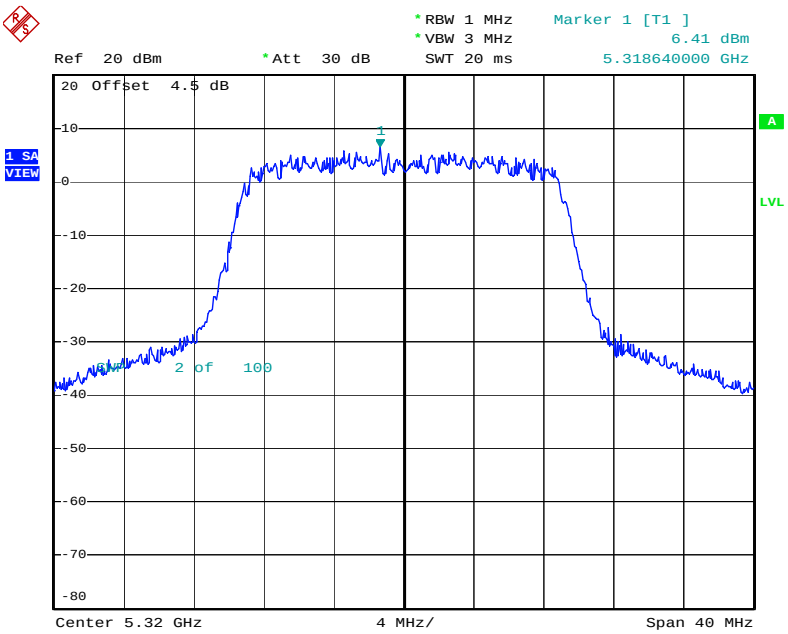
Date: 16.SEP.2009 18:24:56

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 5-1 + Ant. 5-3 / 5300 MHz



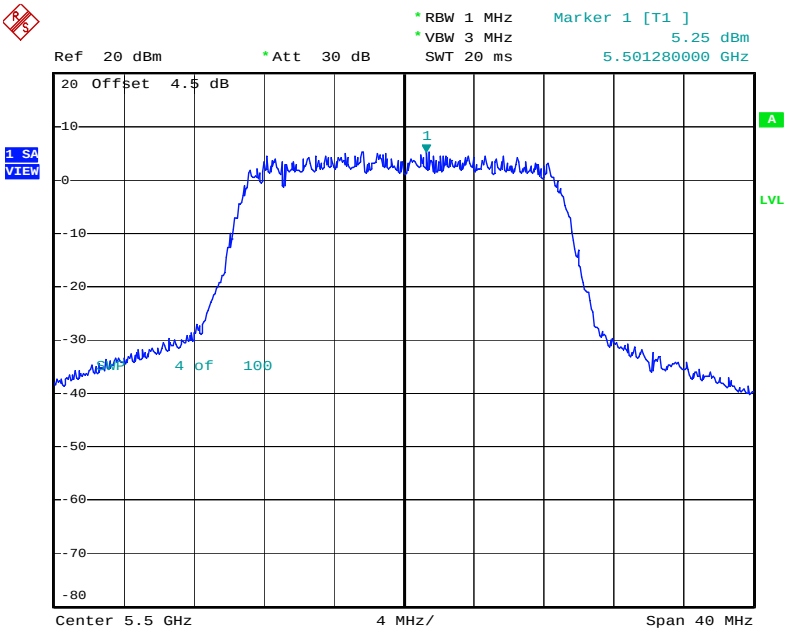
Date: 16.SEP.2009 18:27:58

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 5-1 + Ant. 5-3 / 5320 MHz



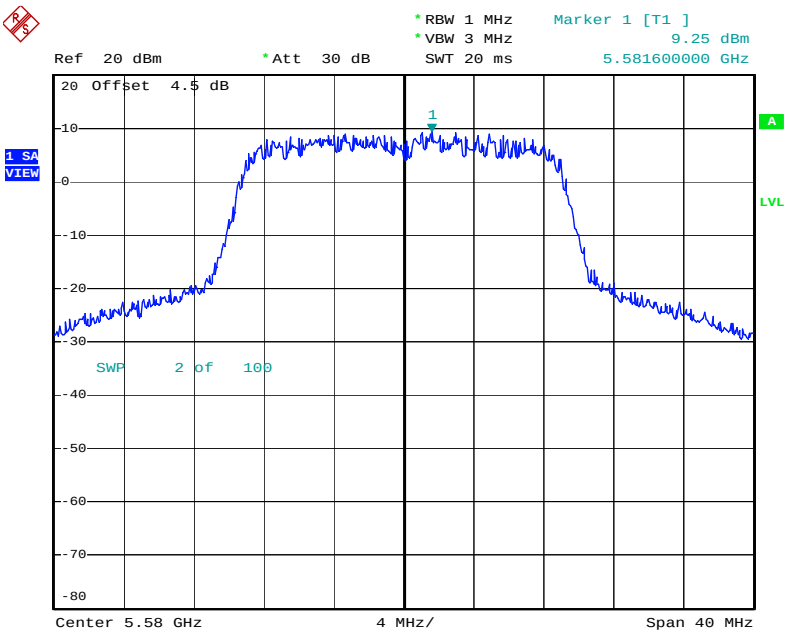
Date: 16.SEP.2009 18:29:52

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 5-1 + Ant. 5-3 / 5500 MHz



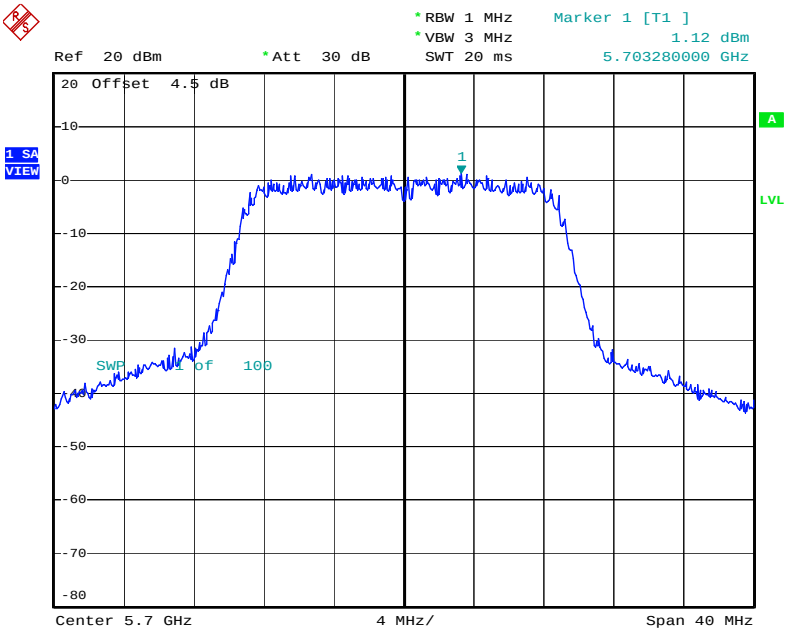
Date: 16.SEP.2009 18:37:21

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 5-1 + Ant. 5-3 / 5580 MHz



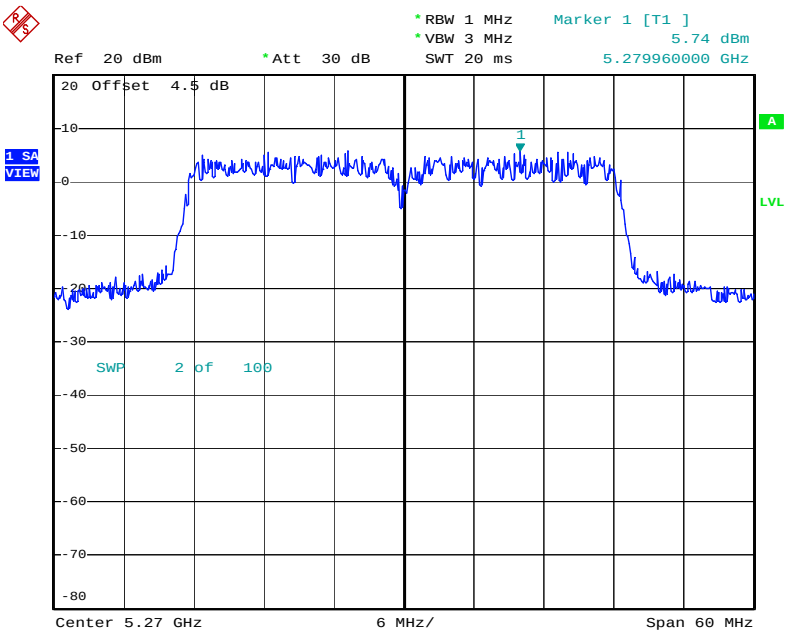
Date: 16.SEP.2009 18:38:53

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 5-1 + Ant. 5-3 / 5700 MHz



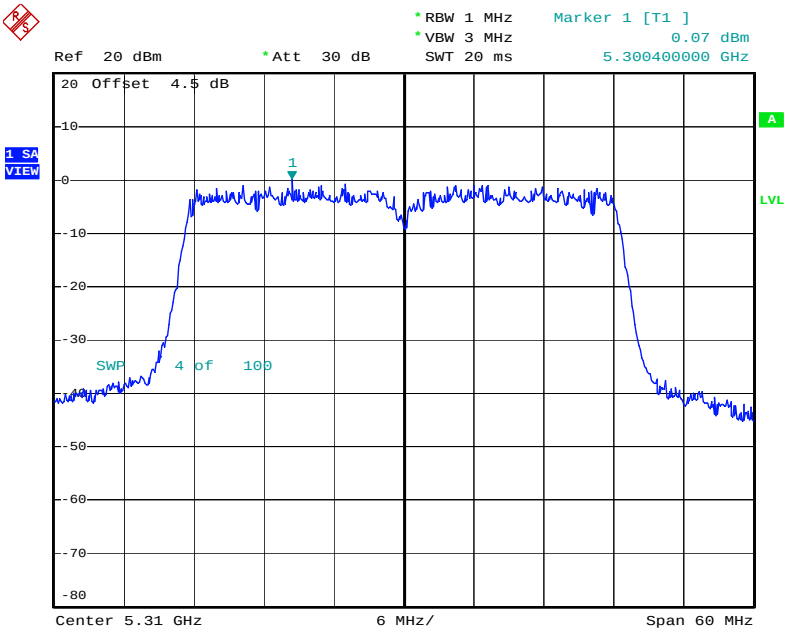
Date: 16.SEP.2009 18:46:01

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 5-1 + Ant. 5-3 / 5270 MHz



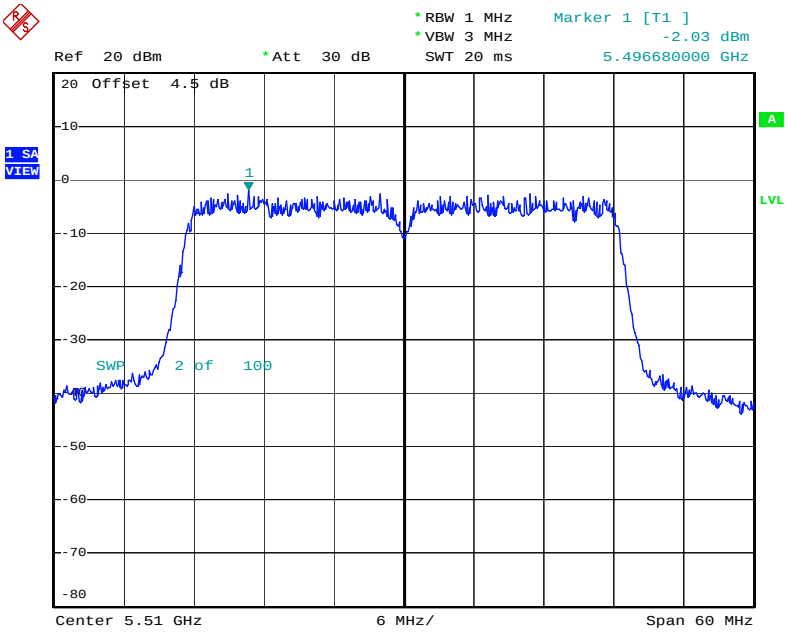
Date: 16.SEP.2009 18:52:33

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 5-1 + Ant. 5-3 / 5310 MHz



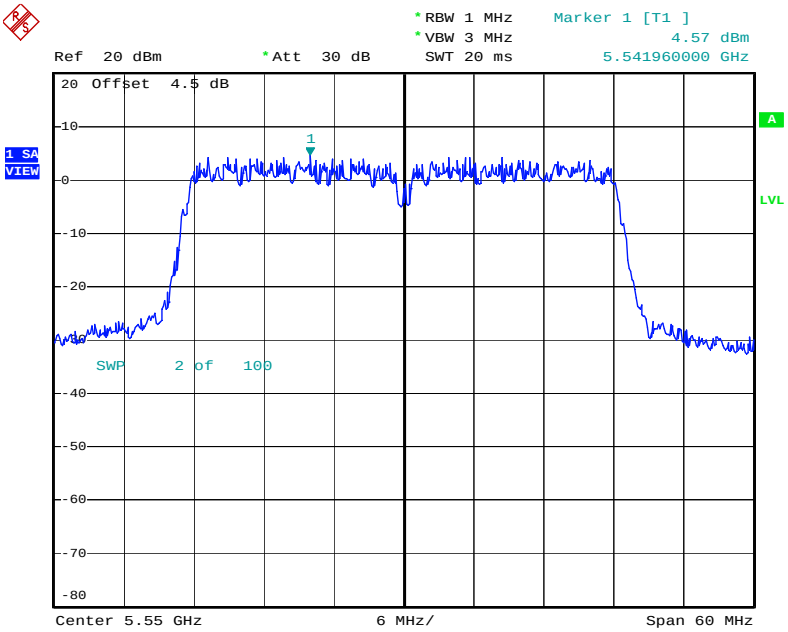
Date: 16.SEP.2009 18:59:17

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 5-1 + Ant. 5-3 / 5510MHz



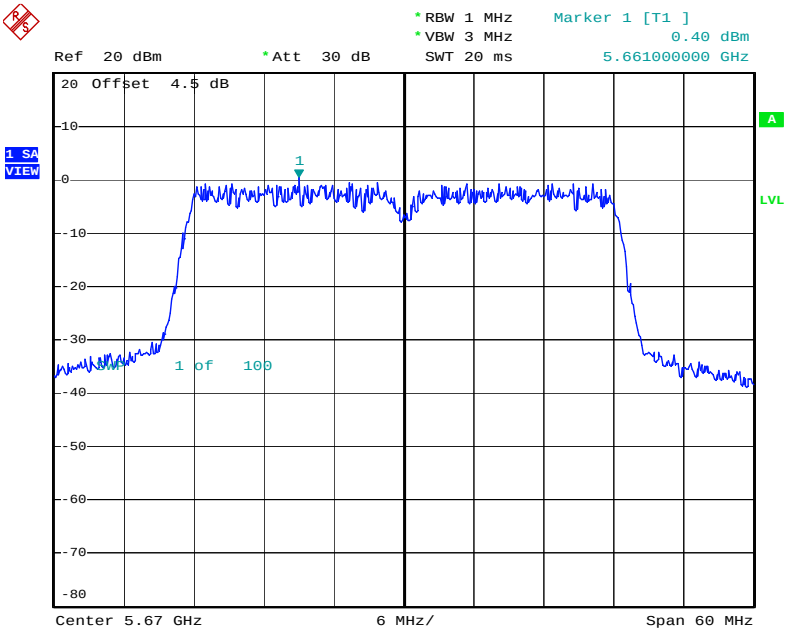
Date: 16.SEP.2009 19:03:39

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 5-1 + Ant. 5-3 / 5550 MHz



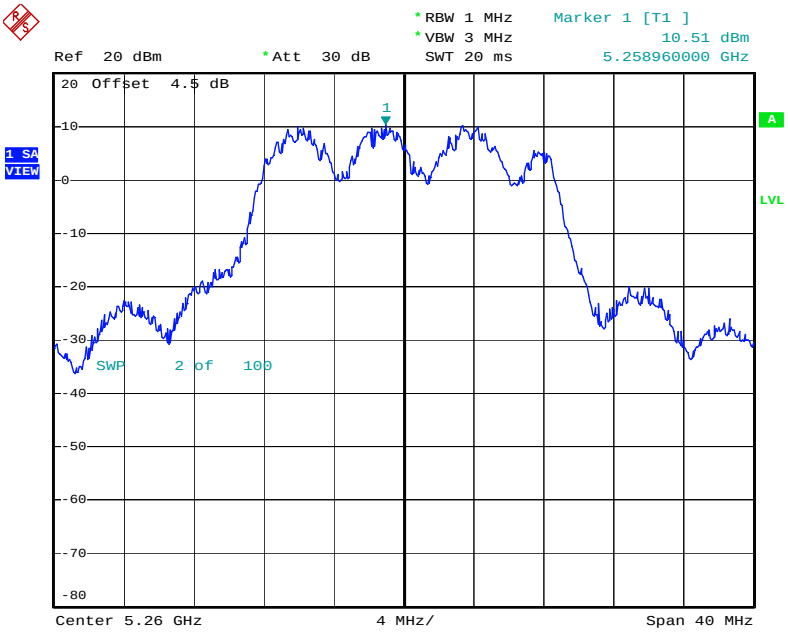
Date: 16.SEP.2009 19:11:45

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 5-1 + Ant. 5-3 / 5670 MHz



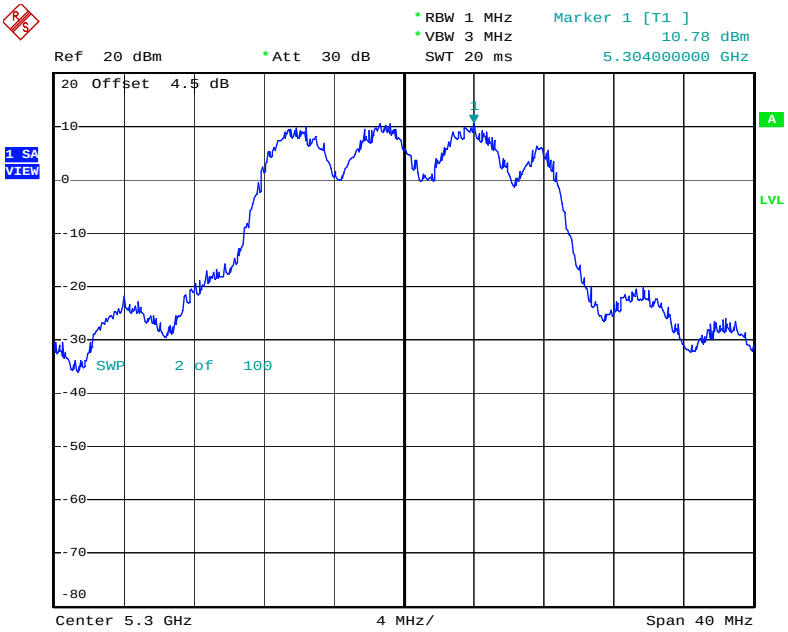
Date: 16.SEP.2009 19:16:21

Power Density Plot on Configuration IEEE 802.11a Ant. 5-1 + Ant. 5-3 / 5260 MHz



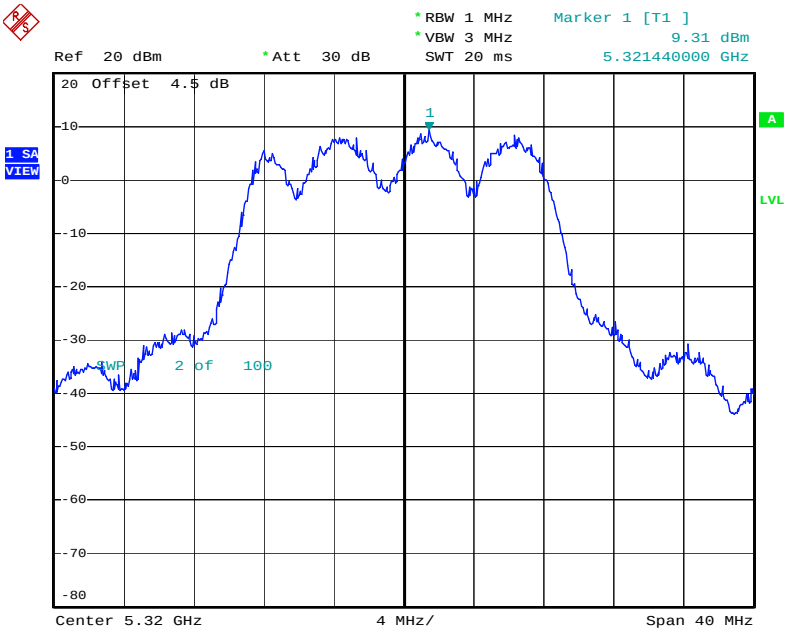
Date: 16.SEP.2009 17:42:00

Power Density Plot on Configuration IEEE 802.11a Ant. 5-1 + Ant. 5-3 / 5300 MHz



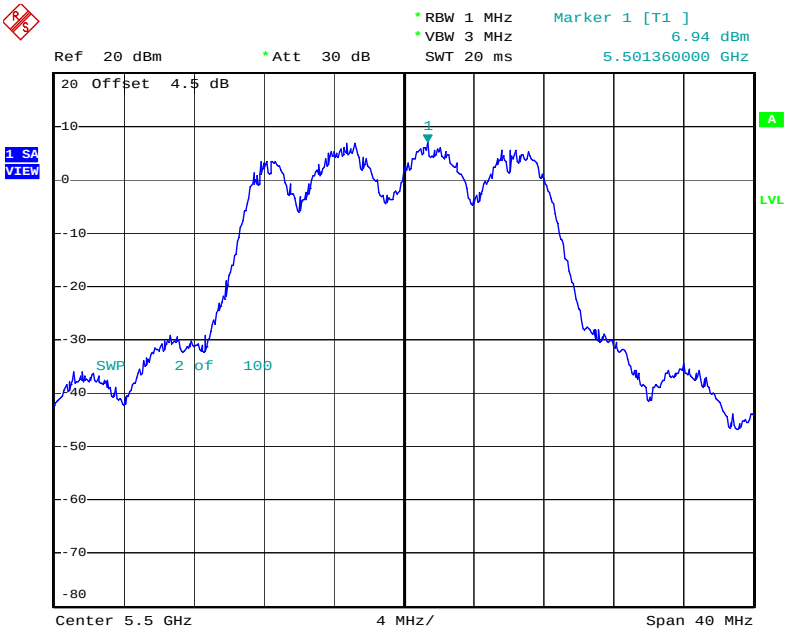
Date: 16.SEP.2009 17:45:29

Power Density Plot on Configuration IEEE 802.11a Ant. 5-1 + Ant. 5-3 / 5320 MHz



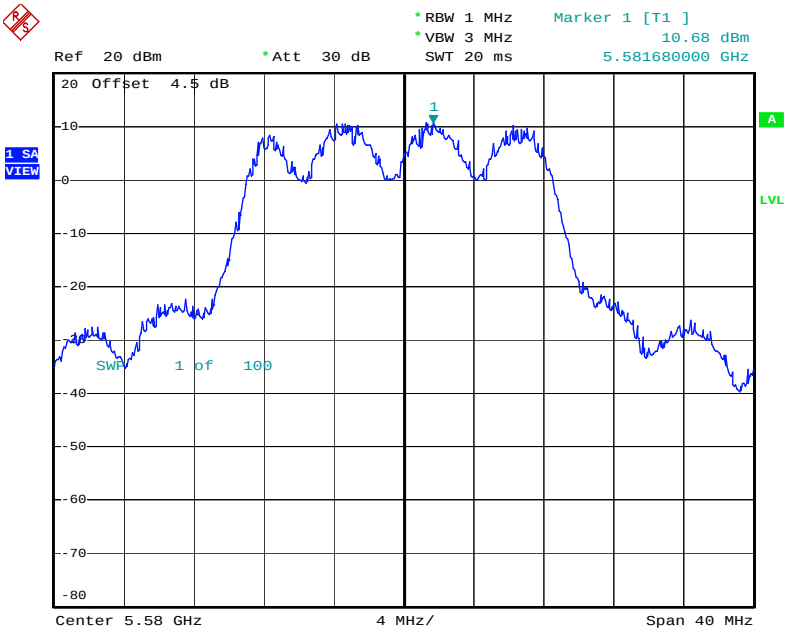
Date: 16.SEP.2009 17:49:10

Power Density Plot on Configuration IEEE 802.11a Ant. 5-1 + Ant. 5-3 / 5500 MHz



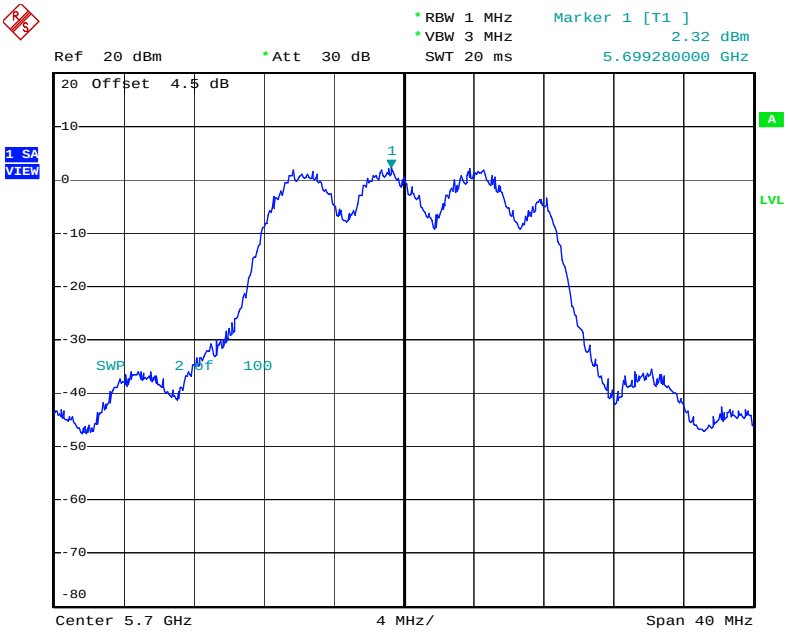
Date: 16.SEP.2009 17:55:13

Power Density Plot on Configuration IEEE 802.11a Ant. 5-1 + Ant. 5-3 / 5580 MHz



Date: 16.SEP.2009 17:57:27

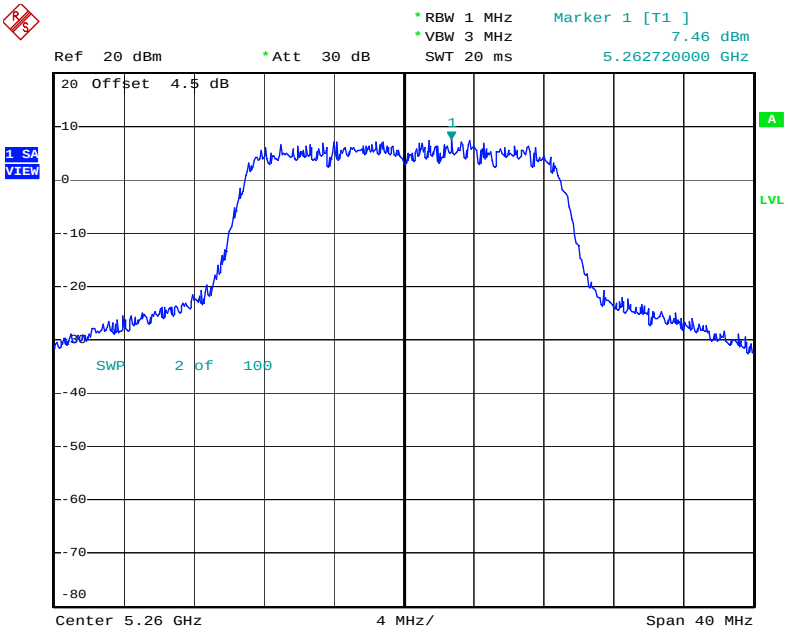
Power Density Plot on Configuration IEEE 802.11a Ant. 5-1 + Ant. 5-3 / 5700 MHz



Date: 16.SEP.2009 18:03:03

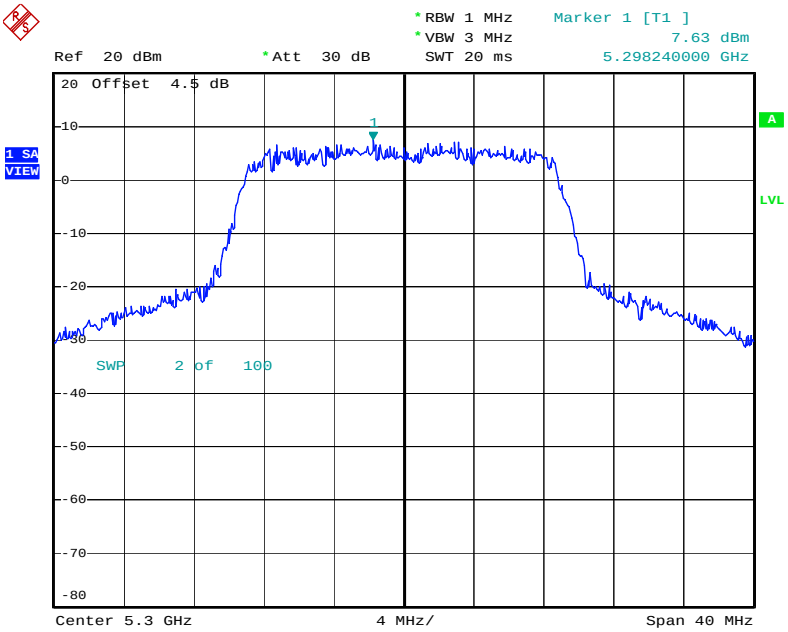
<For Antenna 6>:

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 6-1 + Ant. 6-3 / 5260 MHz



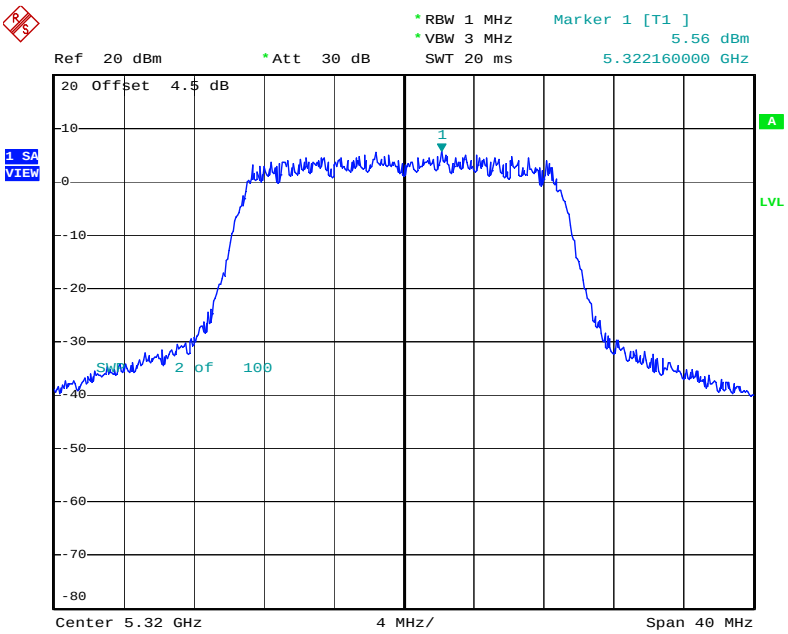
Date: 16.SEP.2009 18:23:43

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 6-1 + Ant. 6-3 / 5300 MHz



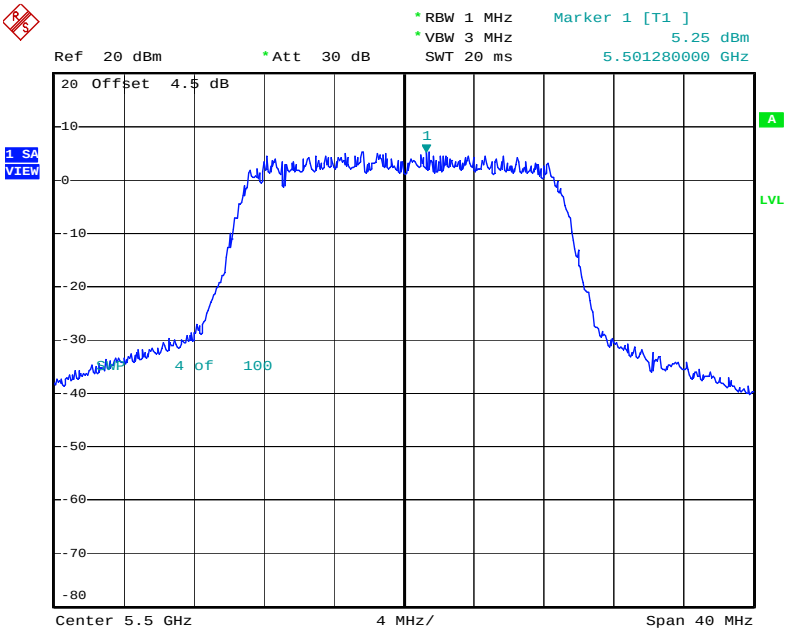
Date: 9.OCT.2009 18:36:52

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 6-1 + Ant. 6-3 / 5320 MHz



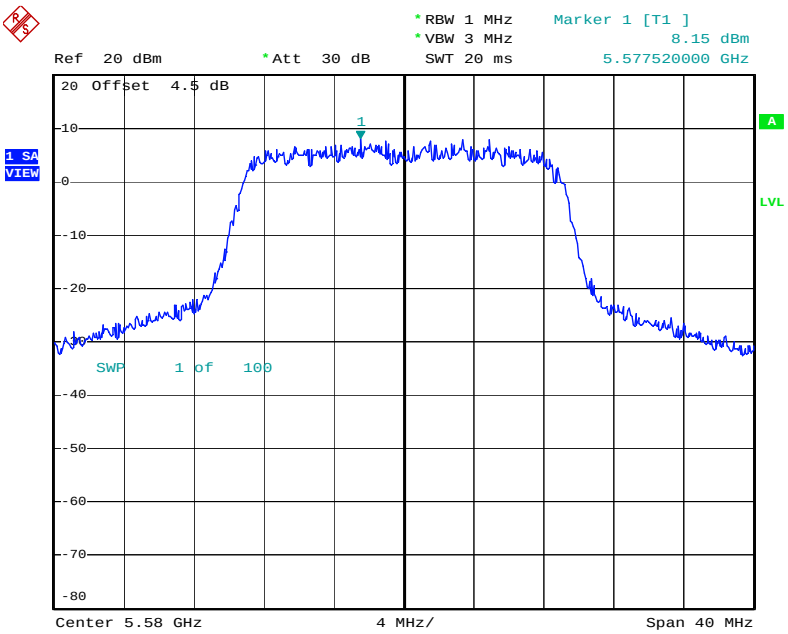
Date: 16.SEP.2009 18:31:45

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 6-1 + Ant. 6-3 / 5500 MHz



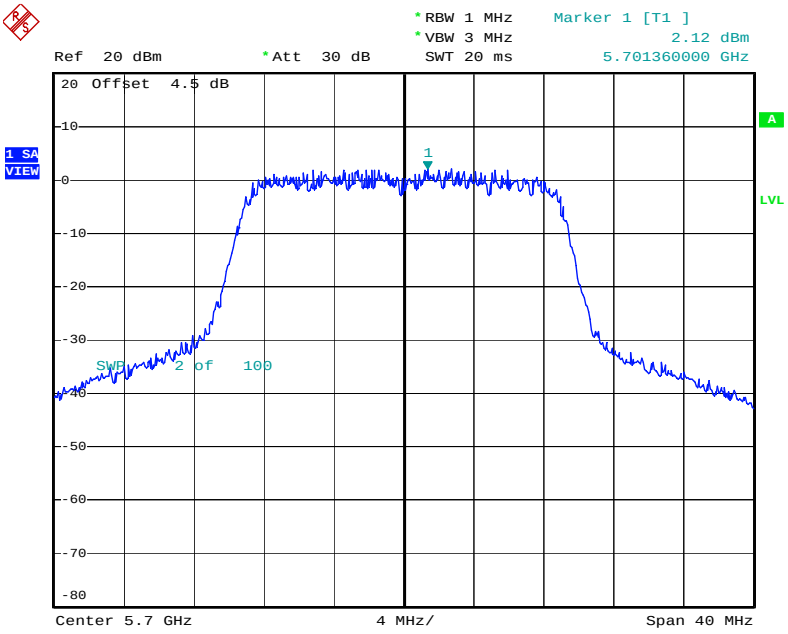
Date: 16.SEP.2009 18:37:21

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 6-1 + Ant. 6-3 / 5580 MHz



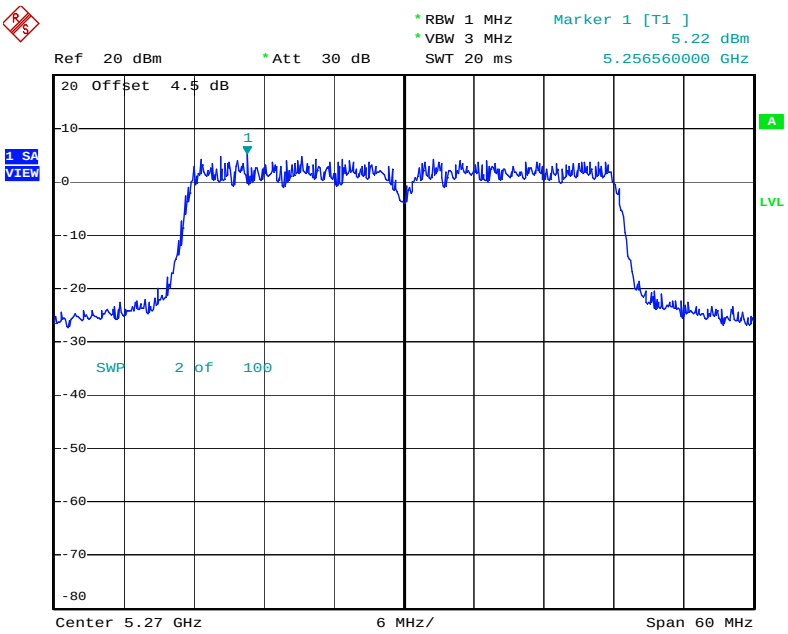
Date: 9.OCT.2009 17:29:29

Power Density Plot on Configuration 802.11n MCS8 20MHz Ant. 6-1 + Ant. 6-3 / 5700 MHz



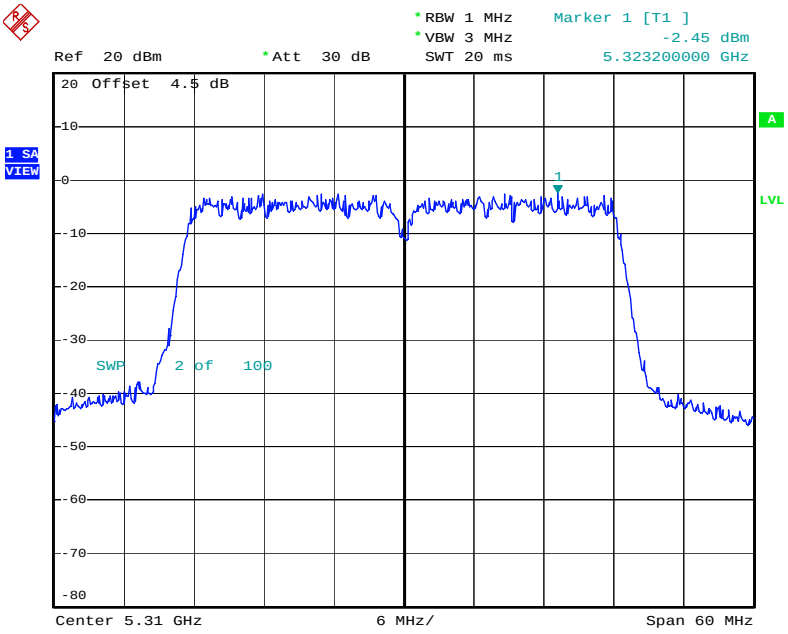
Date: 16.SEP.2009 18:43:17

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 6-1 + Ant. 6-3 / 5270 MHz



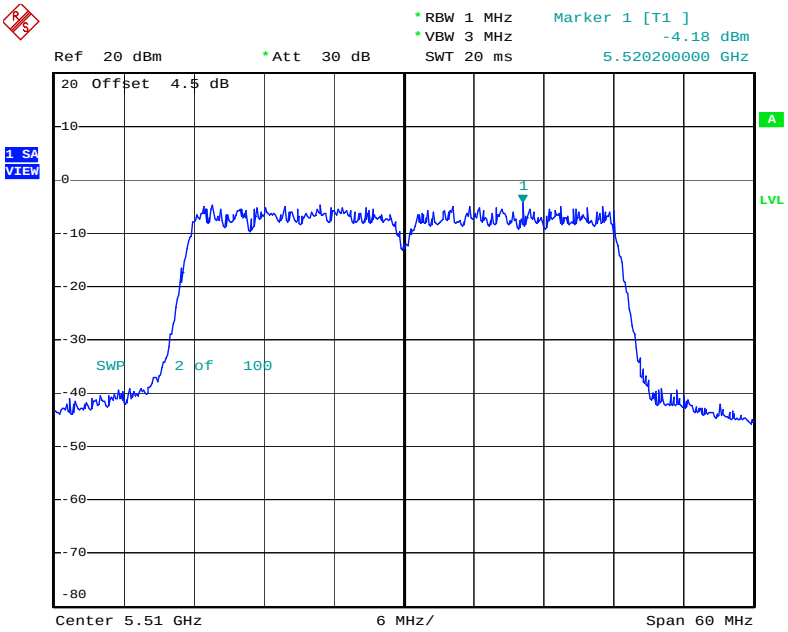
Date: 16.SEP.2009 18:53:47

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 6-1 + Ant. 6-3 / 5310 MHz



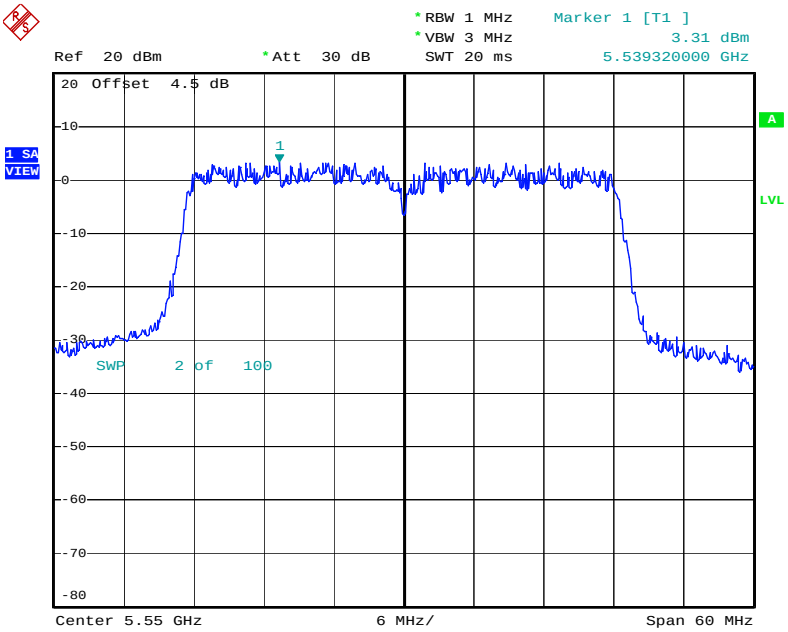
Date: 16.SEP.2009 19:00:09

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 6-1 + Ant. 6-3 / 5510MHz



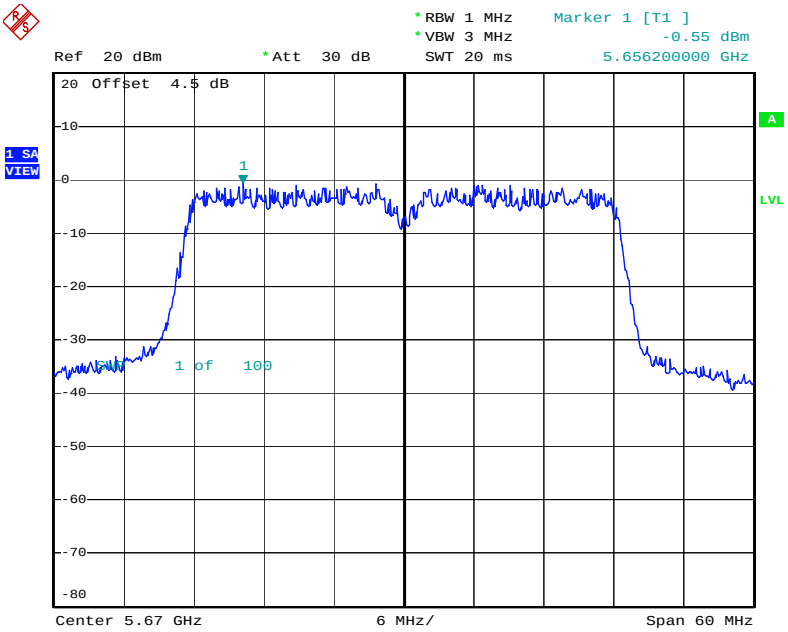
Date: 16.SEP.2009 19:09:11

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 6-1 + Ant. 6-3 / 5550 MHz



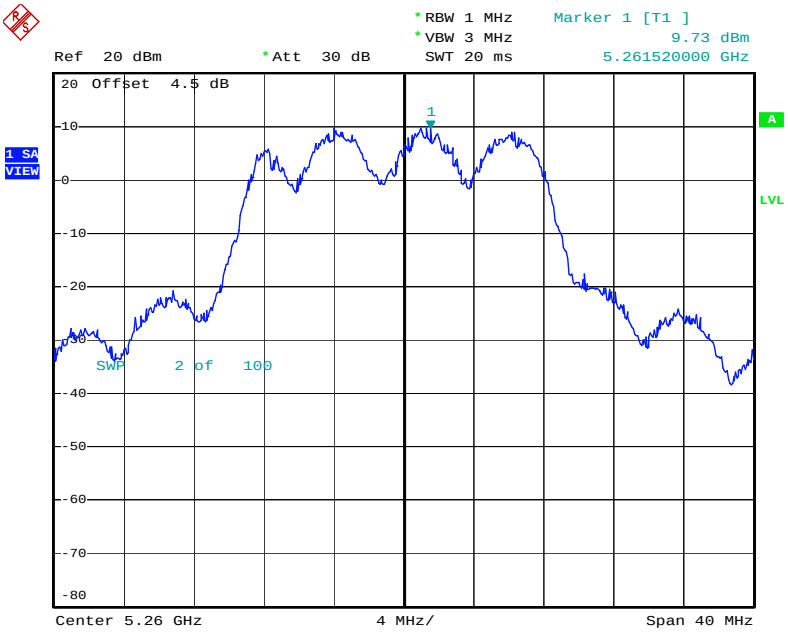
Date: 16.SEP.2009 19:12:32

Power Density Plot on Configuration 802.11n MCS8 40MHz Ant. 6-1 + Ant. 6-3 / 5670 MHz



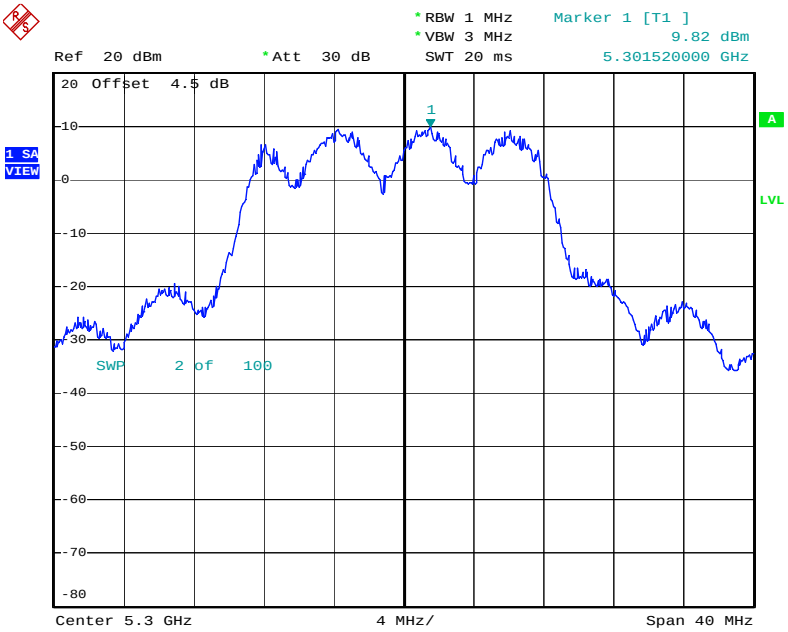
Date: 16.SEP.2009 19:17:05

Power Density Plot on Configuration IEEE 802.11a Ant. 6-1 + Ant. 6-3 / 5260 MHz



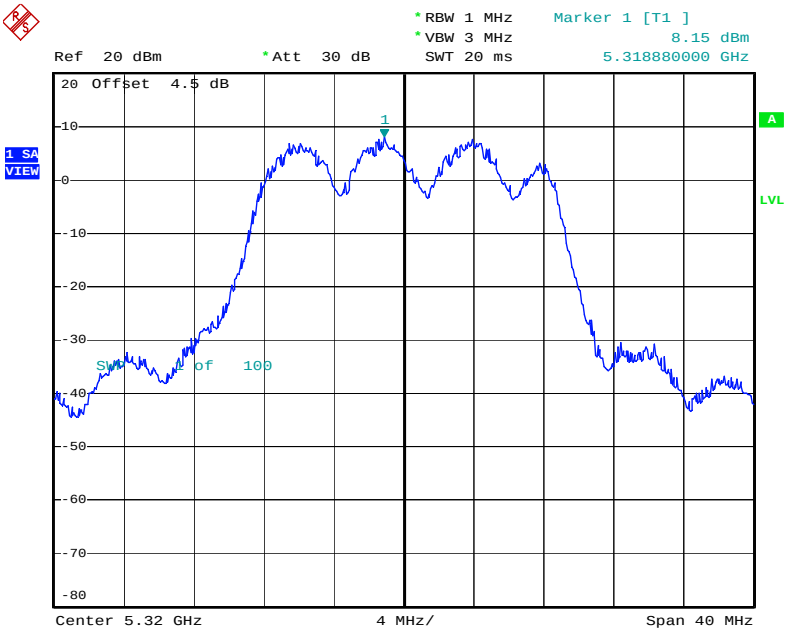
Date: 9.OCT.2009 17:16:53

Power Density Plot on Configuration IEEE 802.11a Ant. 6-1 + Ant. 6-3 / 5300 MHz



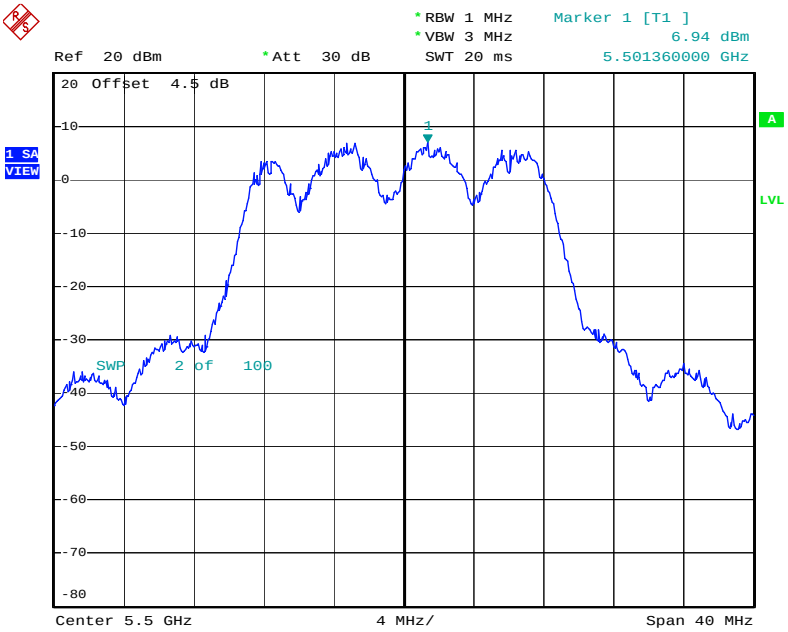
Date: 9.OCT.2009 17:20:22

Power Density Plot on Configuration IEEE 802.11a Ant. 6-1 + Ant. 6-3 / 5320 MHz



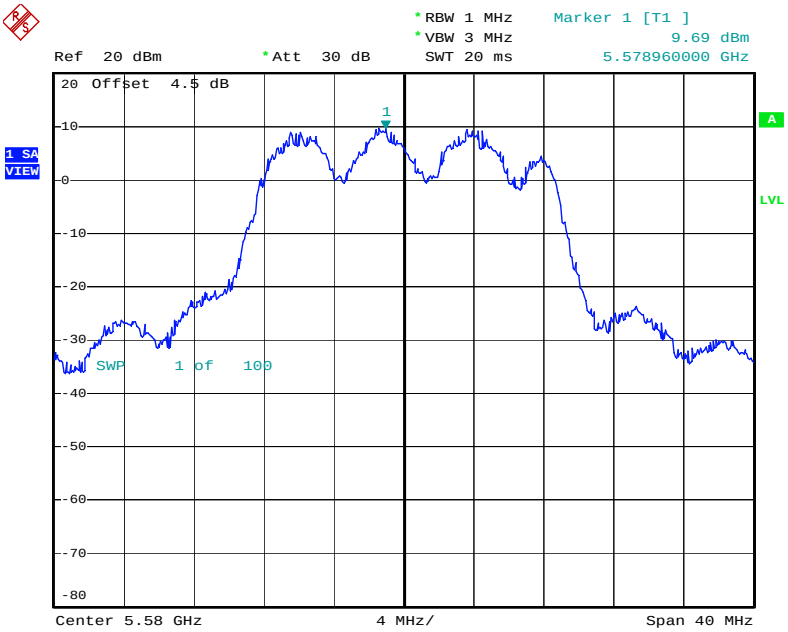
Date: 16.SEP.2009 17:50:16

Power Density Plot on Configuration IEEE 802.11a Ant. 6-1 + Ant. 6-3 / 5500 MHz



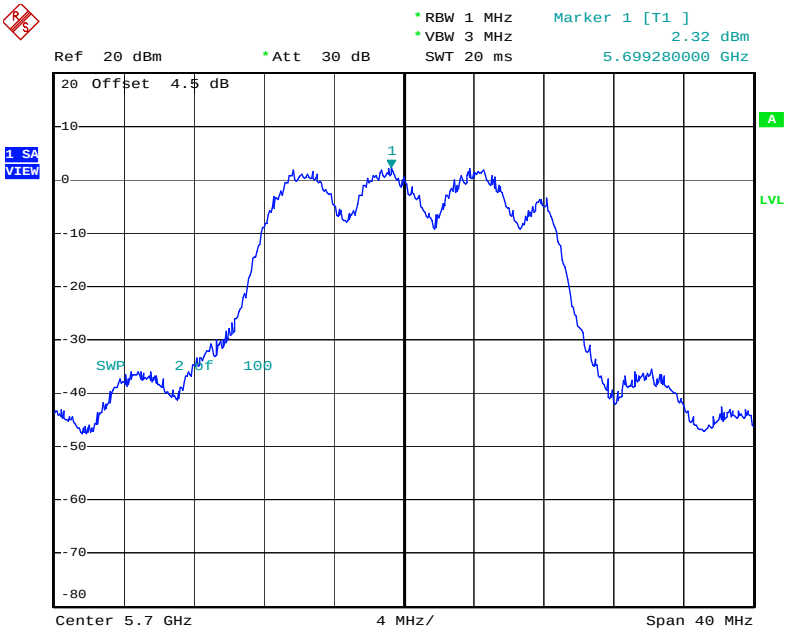
Date: 16.SEP.2009 17:55:13

Power Density Plot on Configuration IEEE 802.11a Ant. 6-1 + Ant. 6-3 / 5580 MHz



Date: 9.OCT.2009 17:23:21

Power Density Plot on Configuration IEEE 802.11a Ant. 6-1 + Ant. 6-3 / 5700 MHz



Date: 16.SEP.2009 18:03:03

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

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. Set the spectrum analyzer span to view the entire emissions bandwidth. The largest difference between the following two traces (Peak Trace and Average Trace) must be ≤ 13 dB for all frequencies across the emissions bandwidth. Submit a plot.
3. Peak Trace: Set RBW = 1 MHz, VBW ≥ 3 MHz with peak detector and max-hold settings.
4. Average Trace: Method #3—video averaging with max hold--and sum power across the band. Set span to encompass the entire emissions bandwidth (EBW) of the signal. Set sweep trigger to “free run”. Set RBW = 1 MHz. Set VBW ≥ 1/T (802.11n VBW = 300kHz ≥ 1/4μs). Use sample detector mode if bin width (i.e., span/number of points in spectrum) < 0.5 RBW. Otherwise use peak detector mode. Set max hold. Allow max hold to run for 60 seconds.
5. Measuring multiple antennas, the connector is required to link with spectrum analyzer through a combiner.

4.5.4. Test Setup Layout

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

<For Antenna 1>:

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11n / Antenna 1

Configuration 802.11n MCS8 20MHz Ant. 1-1 + Ant. 1-3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.30	13	Complies
60	5300 MHz	5.55	13	Complies
64	5320 MHz	5.81	13	Complies
100	5500 MHz	4.82	13	Complies
116	5580 MHz	5.09	13	Complies
140	5700 MHz	5.61	13	Complies

Configuration 802.11n MCS8 40MHz Ant. 1-1 + Ant. 1-3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	5.04	13	Complies
62	5310 MHz	5.58	13	Complies
102	5510MHz	5.16	13	Complies
110	5550 MHz	5.26	13	Complies
134	5670 MHz	6.12	13	Complies

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11a / Antenna 1

Configuration IEEE 802.11a Ant. 1-1 + Ant. 1-3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.22	13	Complies
60	5300 MHz	4.81	13	Complies
64	5320 MHz	4.79	13	Complies
100	5500 MHz	4.71	13	Complies
116	5580 MHz	5.03	13	Complies
140	5700 MHz	5.06	13	Complies

<For Antenna 2>:

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11n / Antenna 2

Configuration 802.11n MCS8 20MHz Ant. 2-1 + Ant. 2-3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	8.41	13	Complies
60	5300 MHz	6.49	13	Complies
64	5320 MHz	7.20	13	Complies
100	5500 MHz	5.27	13	Complies
116	5580 MHz	4.42	13	Complies
140	5700 MHz	5.88	13	Complies

Configuration 802.11n MCS8 40MHz Ant. 2-1 + Ant. 2-3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	4.39	13	Complies
62	5310 MHz	5.28	13	Complies
102	5510MHz	4.21	13	Complies
110	5550 MHz	4.44	13	Complies
134	5670 MHz	3.80	13	Complies

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11a / Antenna 2

Configuration IEEE 802.11a Ant. 2-1 + Ant. 2-3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	4.78	13	Complies
60	5300 MHz	4.43	13	Complies
64	5320 MHz	4.79	13	Complies
100	5500 MHz	5.69	13	Complies
116	5580 MHz	5.03	13	Complies
140	5700 MHz	4.37	13	Complies

<For Antenna 3>:

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11n / Antenna 3

Configuration 802.11n MCS8 20MHz Ant. 3-1 + Ant. 3-3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.63	13	Complies
60	5300 MHz	4.94	13	Complies
64	5320 MHz	5.31	13	Complies
100	5500 MHz	4.85	13	Complies
116	5580 MHz	4.42	13	Complies
140	5700 MHz	5.98	13	Complies

Configuration 802.11n MCS8 40MHz Ant. 3-1 + Ant. 3-3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	4.39	13	Complies
62	5310 MHz	5.28	13	Complies
102	5510MHz	4.42	13	Complies
110	5550 MHz	4.44	13	Complies
134	5670 MHz	5.14	13	Complies

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11a / Antenna 3

Configuration IEEE 802.11a Ant. 3-1 + Ant. 3-3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	4.78	13	Complies
60	5300 MHz	5.07	13	Complies
64	5320 MHz	4.57	13	Complies
100	5500 MHz	4.82	13	Complies
116	5580 MHz	5.03	13	Complies
140	5700 MHz	5.03	13	Complies

<For Antenna 4>:

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11n / Antenna 4

Configuration 802.11n MCS8 20MHz Ant. 4-1 + Ant. 4-3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.63	13	Complies
60	5300 MHz	4.94	13	Complies
64	5320 MHz	5.31	13	Complies
100	5500 MHz	4.14	13	Complies
116	5580 MHz	4.42	13	Complies
140	5700 MHz	5.61	13	Complies

Configuration 802.11n MCS8 40MHz Ant. 4-1 + Ant. 4-3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	4.62	13	Complies
62	5310 MHz	4.77	13	Complies
102	5510MHz	-5.16	13	Complies
110	5550 MHz	4.90	13	Complies
134	5670 MHz	6.12	13	Complies

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11a / Antenna 4

Configuration IEEE 802.11a Ant. 4-1 + Ant. 4-3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	4.78	13	Complies
60	5300 MHz	5.07	13	Complies
64	5320 MHz	4.85	13	Complies
100	5500 MHz	4.75	13	Complies
116	5580 MHz	5.03	13	Complies
140	5700 MHz	5.79	13	Complies

<For Antenna 5>:

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11n / Antenna 5

Configuration 802.11n MCS8 20MHz Ant. 5-1 + Ant. 5-3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.63	13	Complies
60	5300 MHz	4.94	13	Complies
64	5320 MHz	5.81	13	Complies
100	5500 MHz	5.11	13	Complies
116	5580 MHz	4.42	13	Complies
140	5700 MHz	5.90	13	Complies

Configuration 802.11n MCS8 40MHz Ant. 5-1 + Ant. 5-3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	4.39	13	Complies
62	5310 MHz	4.92	13	Complies
102	5510MHz	5.16	13	Complies
110	5550 MHz	4.90	13	Complies
134	5670 MHz	4.02	13	Complies

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11a / Antenna 5

Configuration IEEE 802.11a Ant. 5-1 + Ant. 5-3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	4.78	13	Complies
60	5300 MHz	9.92	13	Complies
64	5320 MHz	4.85	13	Complies
100	5500 MHz	5.51	13	Complies
116	5580 MHz	5.03	13	Complies
140	5700 MHz	5.78	13	Complies

<For Antenna 6>:

Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11n / Antenna 6

Configuration 802.11n MCS8 20MHz Ant. 6-1 + Ant. 6-3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.30	13	Complies
60	5300 MHz	4.97	13	Complies
64	5320 MHz	5.16	13	Complies
100	5500 MHz	5.25	13	Complies
116	5580 MHz	8.15	13	Complies
140	5700 MHz	2.12	13	Complies

Configuration 802.11n MCS8 40MHz Ant. 6-1 + Ant. 6-3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
54	5270 MHz	4.62	13	Complies
62	5310 MHz	4.91	13	Complies
102	5510MHz	-4.18	13	Complies
110	5550 MHz	3.31	13	Complies
134	5670 MHz	-0.55	13	Complies

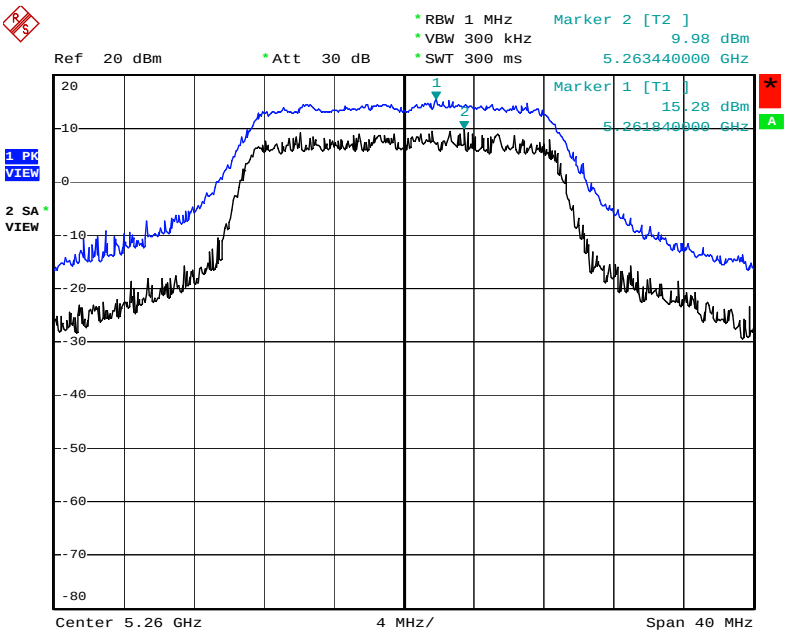
Temperature	21°C	Humidity	56%
Test Engineer	Johnson Chang	Configurations	802.11a / Antenna 6

Configuration IEEE 802.11a Ant. 6-1 + Ant. 6-3

Channel	Frequency	Peak Excursion (dB)	Max. Limit (dB)	Result
52	5260 MHz	5.22	13	Complies
60	5300 MHz	4.81	13	Complies
64	5320 MHz	4.92	13	Complies
100	5500 MHz	5.51	13	Complies
116	5580 MHz	5.03	13	Complies
140	5700 MHz	5.78	13	Complies

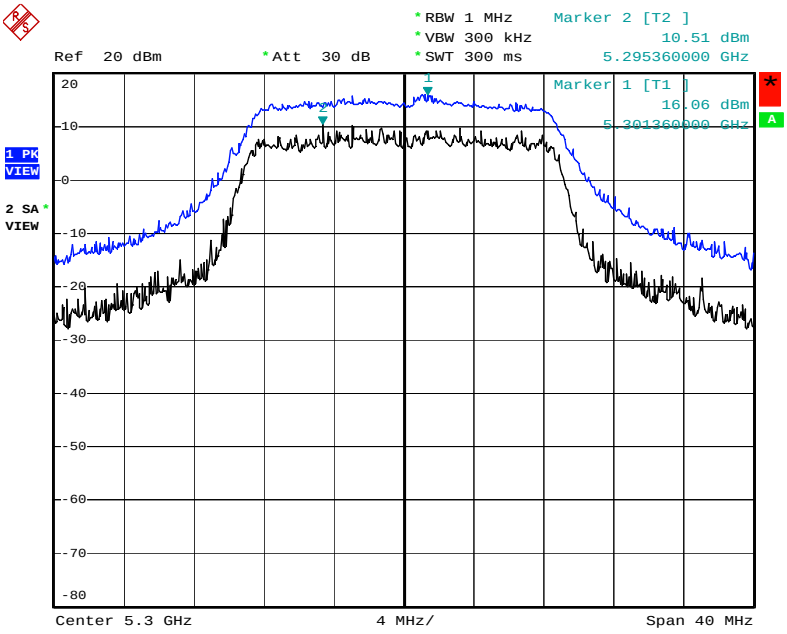
<For Antenna 1>:

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 1-1 + Ant. 1-3 / 5260 MHz



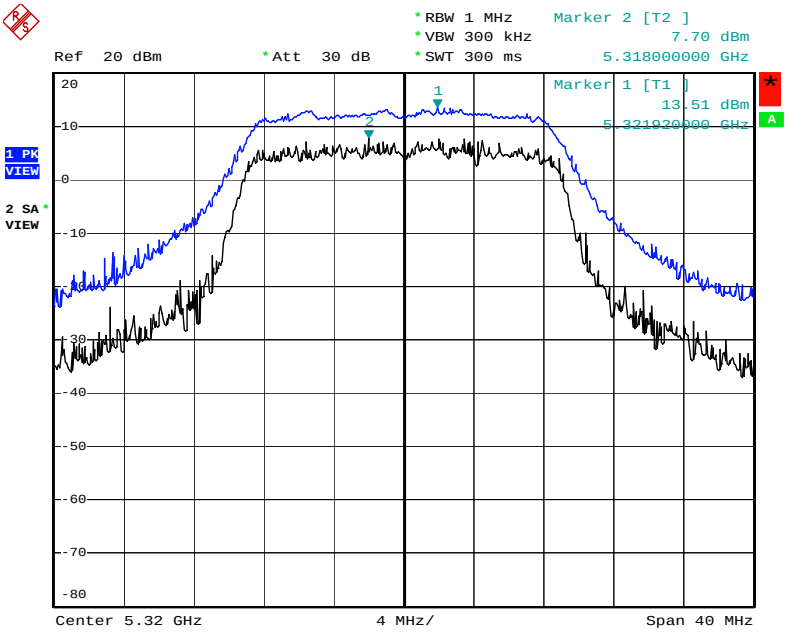
Date: 16.SEP.2009 18:24:10

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 1-1 + Ant. 1-3 / 5300 MHz



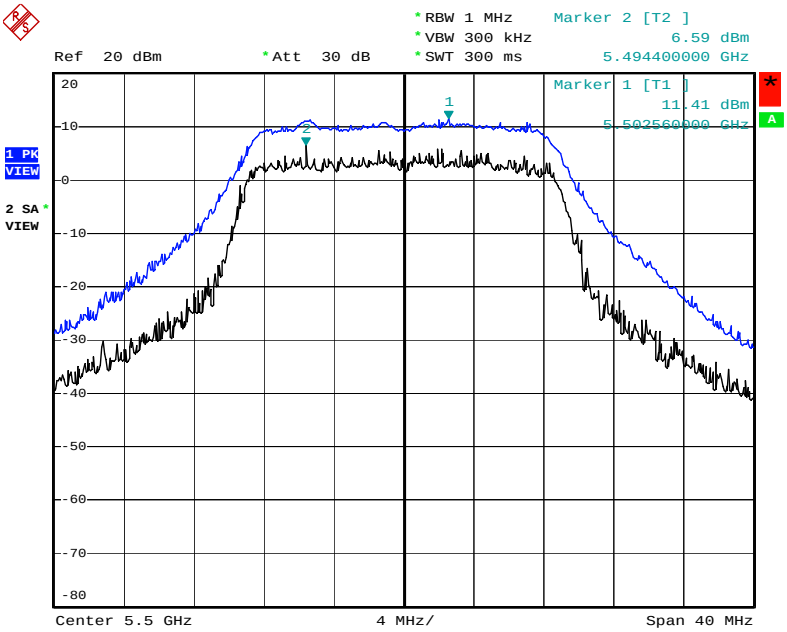
Date: 16.SEP.2009 18:26:36

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 1-1 + Ant. 1-3 / 5320 MHz



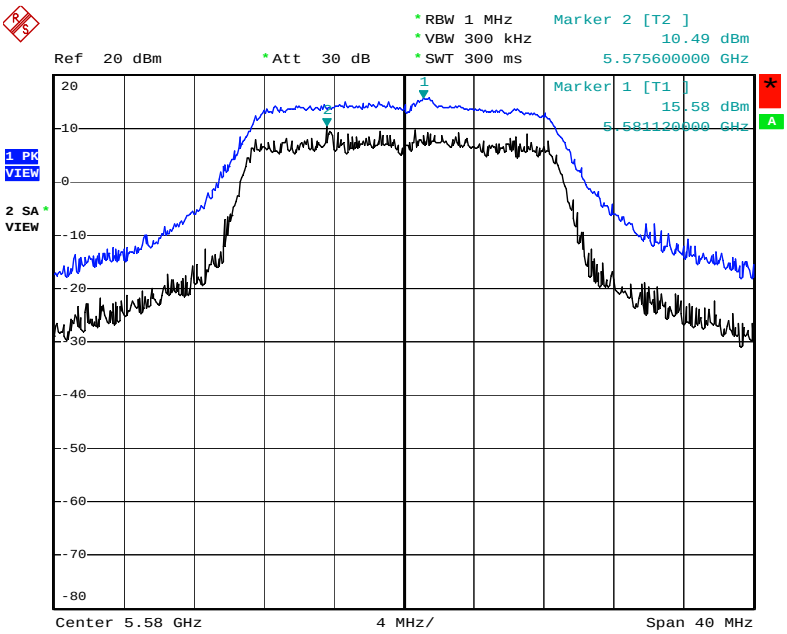
Date: 16.SEP.2009 18:30:19

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 1-1 + Ant. 1-3 / 5500 MHz



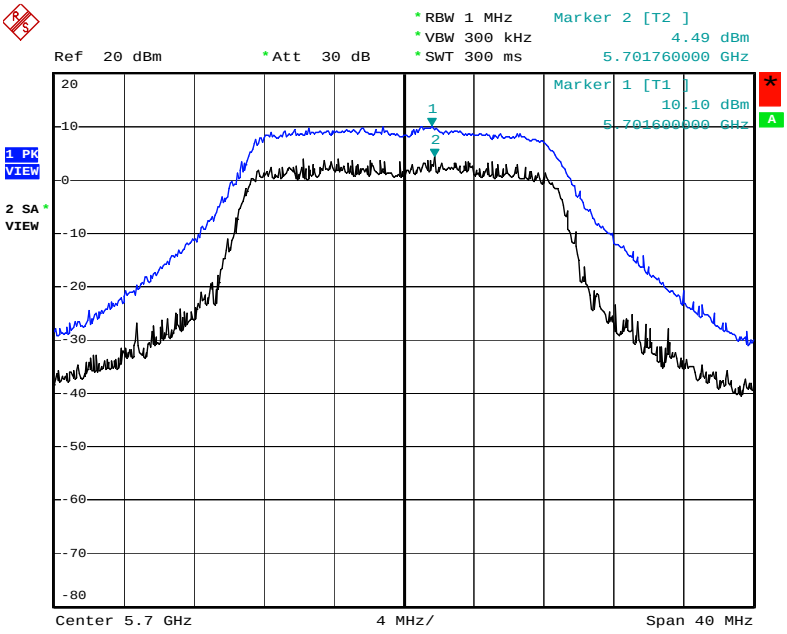
Date: 16.SEP.2009 18:34:04

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 1-1 + Ant. 1-3 / 5580 MHz



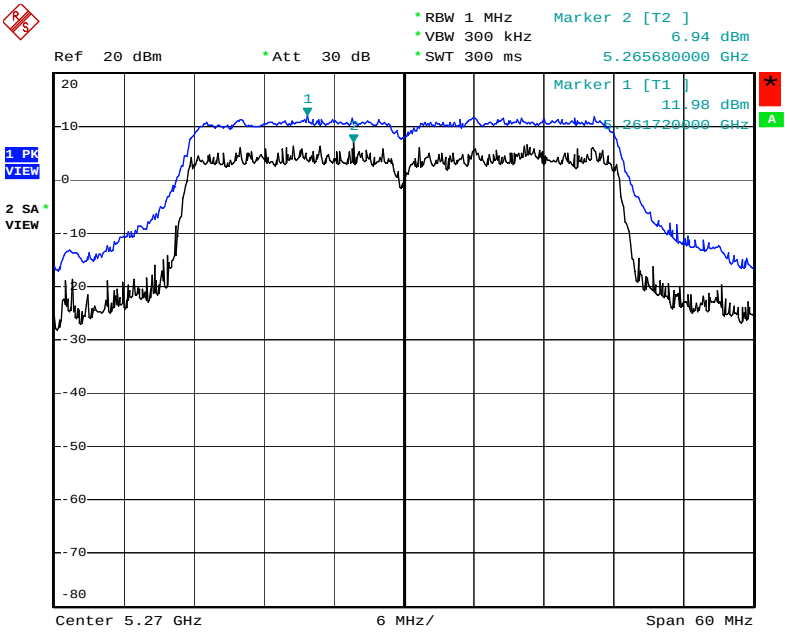
Date: 9.OCT.2009 17:29:50

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 1-1 + Ant. 1-3 / 5700 MHz



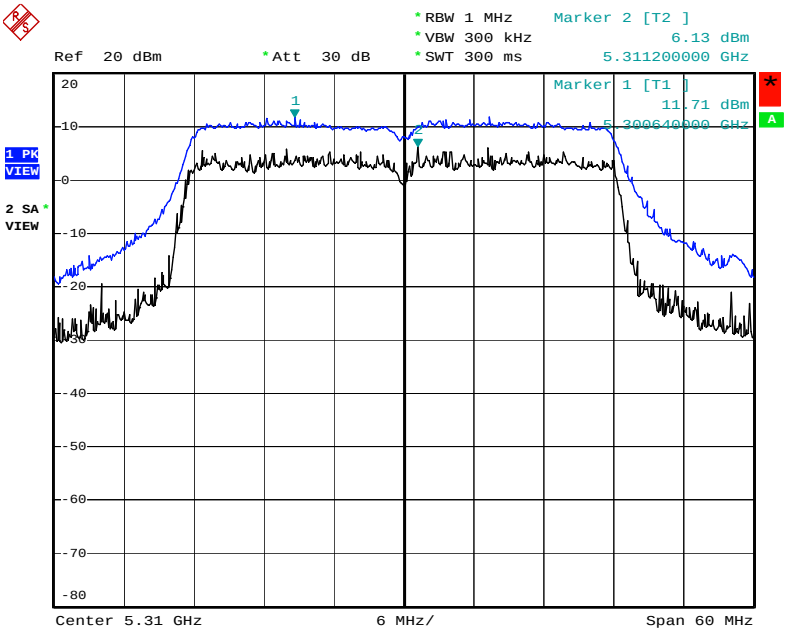
Date: 16.SEP.2009 18:43:45

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 1-1 + Ant. 1-3 / 5270 MHz



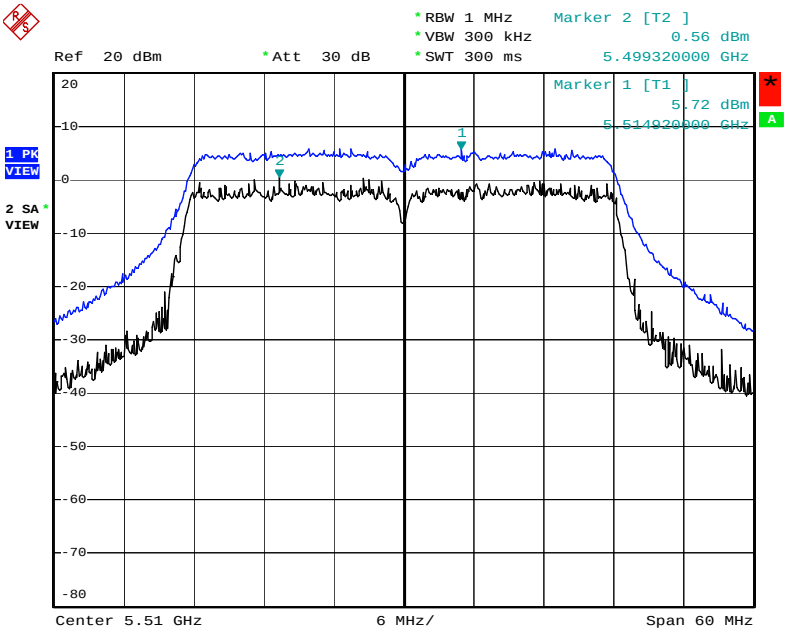
Date: 16.SEP.2009 18:51:34

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 1-1 + Ant. 1-3 / 5310 MHz



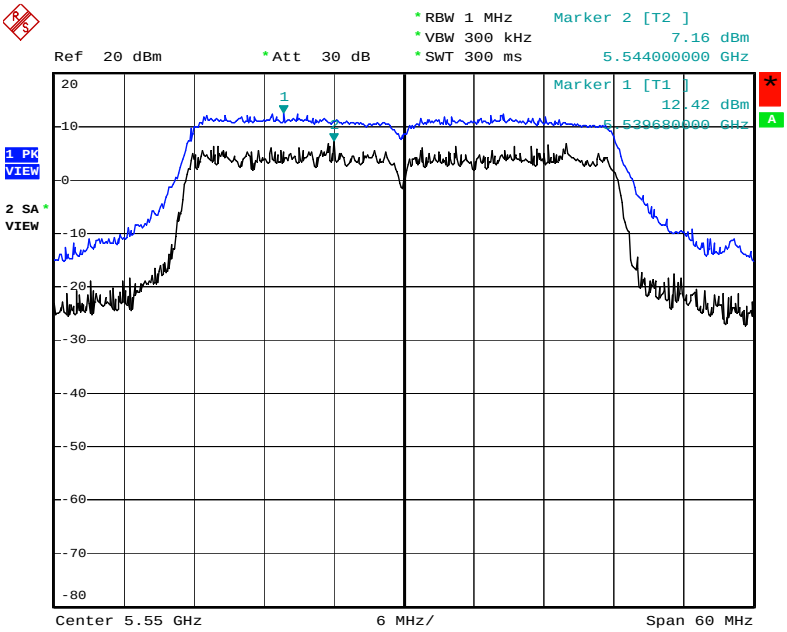
Date: 16.SEP.2009 18:55:36

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 1-1 + Ant. 1-3 / 5510MHz



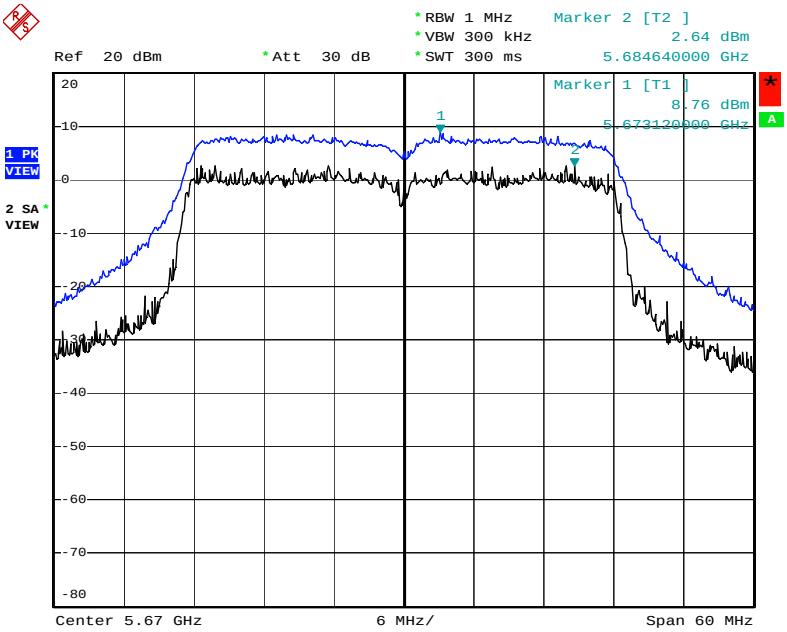
Date: 16.SEP.2009 19:04:06

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 1-1 + Ant. 1-3 / 5550 MHz



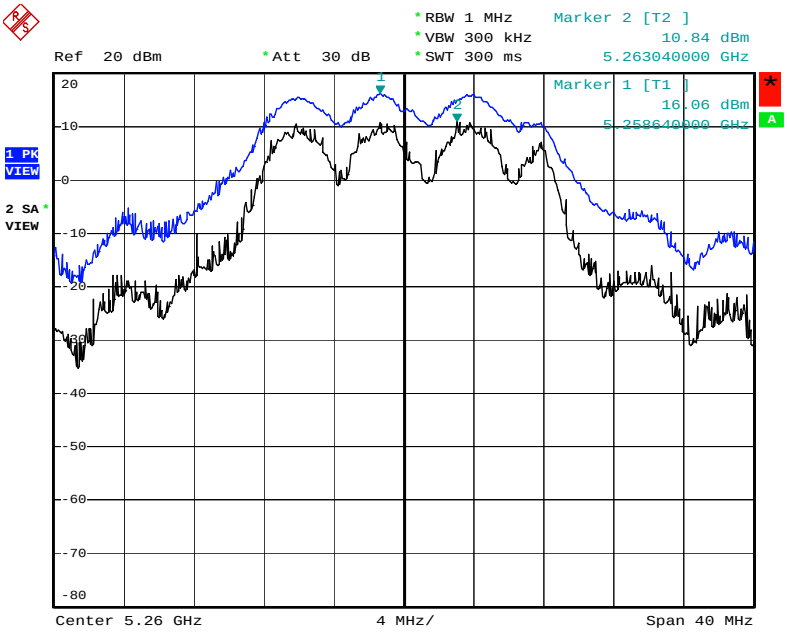
Date: 9.OCT.2009 17:35:51

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 1-1 + Ant. 1-3 / 5670 MHz



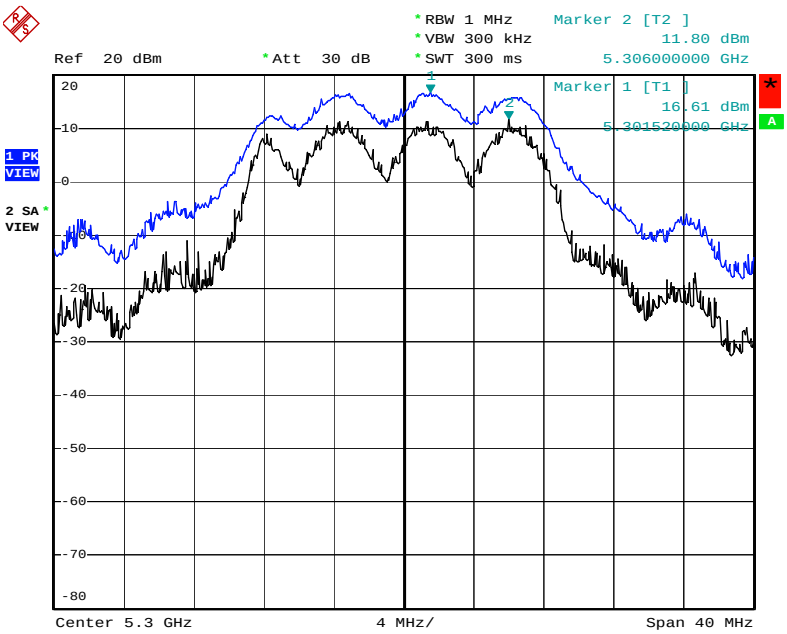
Date: 16.SEP.2009 19:14:22

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 1-1 + Ant. 1-3 / 5260 MHz



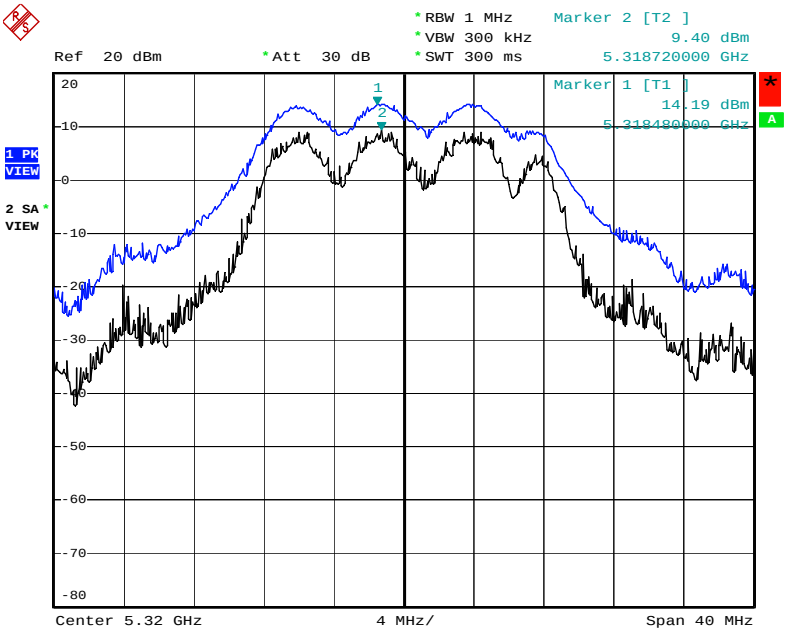
Date: 16.SEP.2009 17:40:19

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 1-1 + Ant. 1-3 / 5300 MHz



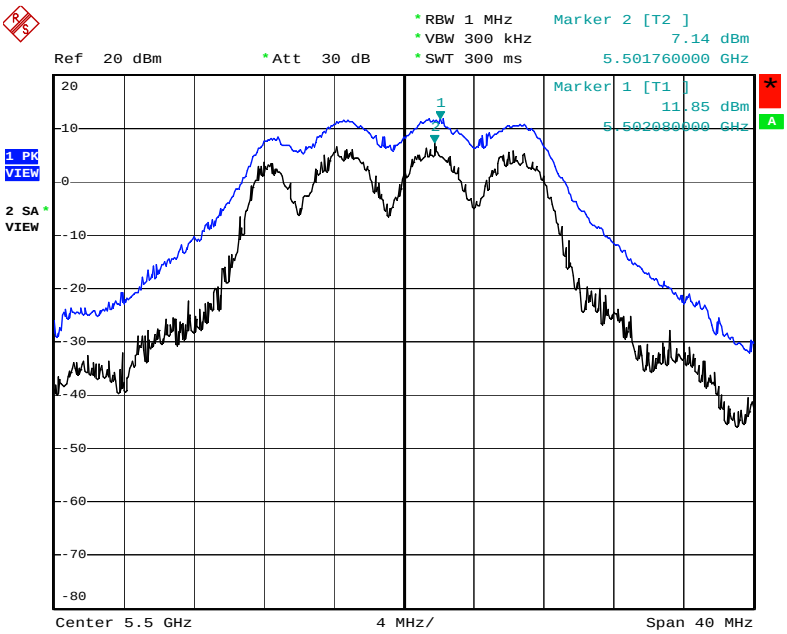
Date: 16.SEP.2009 17:43:20

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 1-1 + Ant. 1-3 / 5320 MHz



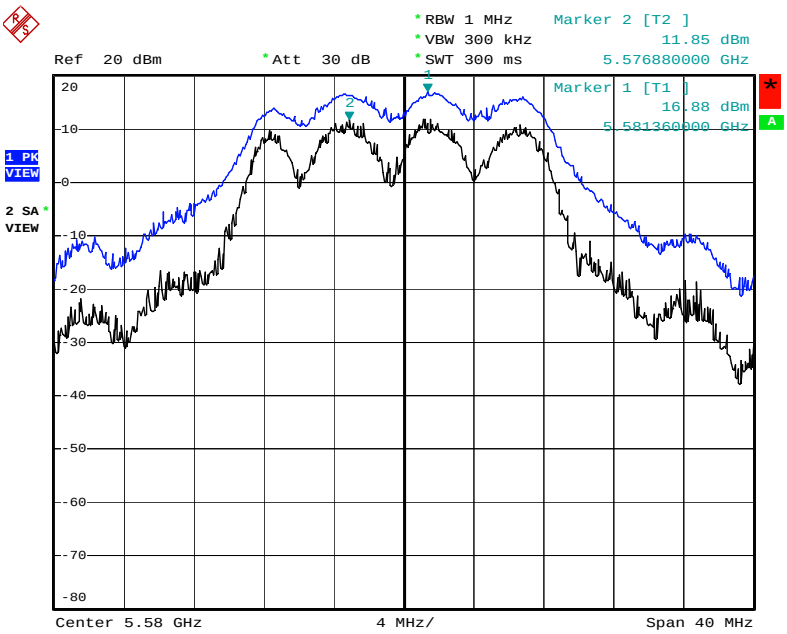
Date: 16.SEP.2009 17:47:13

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 1-1 + Ant. 1-3 / 5500 MHz



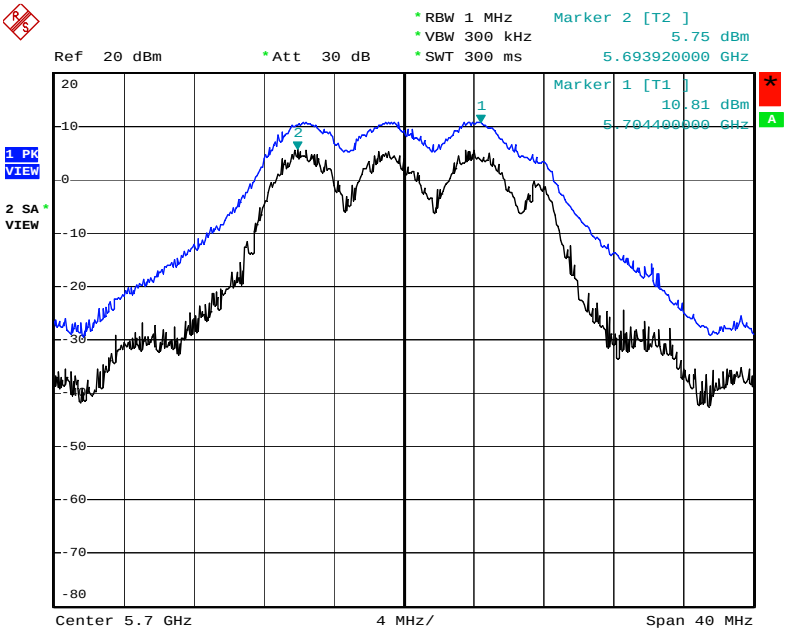
Date: 16.SEP.2009 17:52:01

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 1-1 + Ant. 1-3 / 5580 MHz



Date: 16.SEP.2009 17:57:55

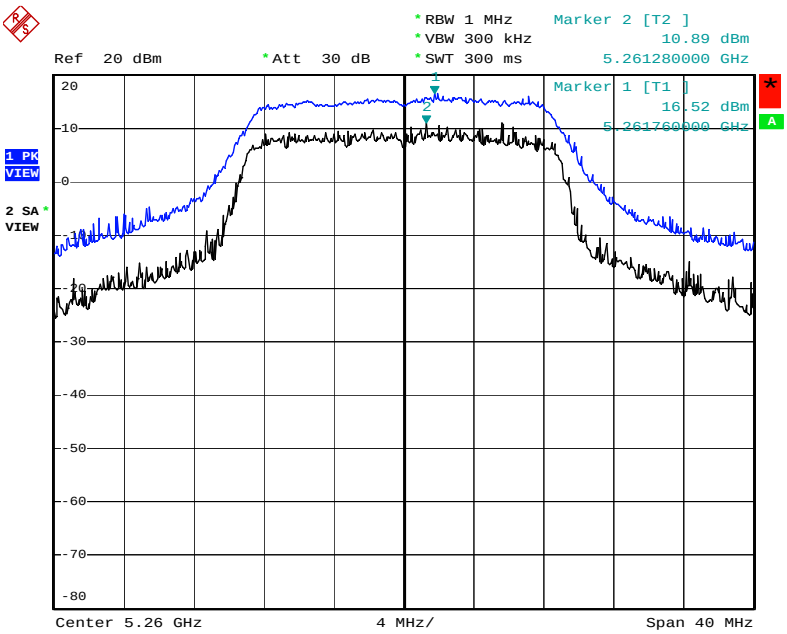
Peak Excursion Plot on Configuration IEEE 802.11a Ant. 1-1 + Ant. 1-3 / 5700 MHz



Date: 16.SEP.2009 17:59:07

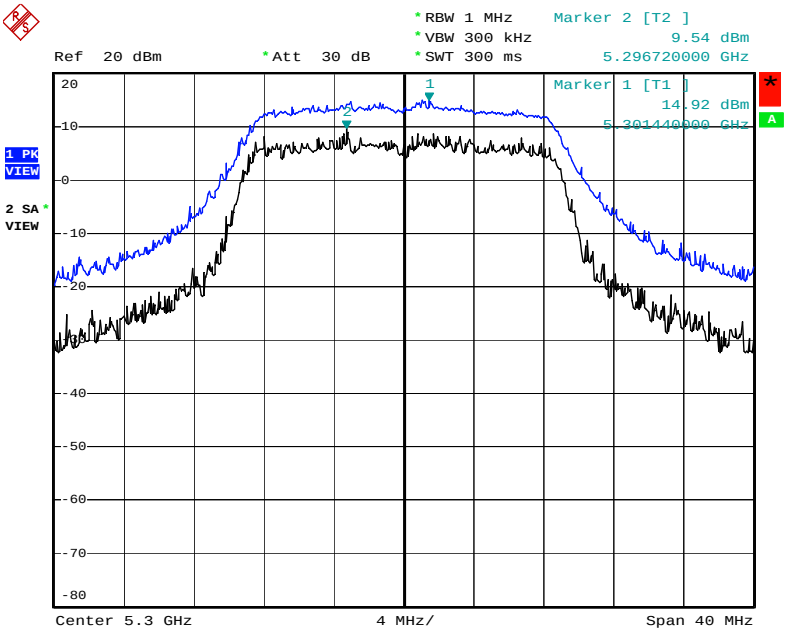
<For Antenna 2>:

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 2-1 + Ant. 2-3 / 5260 MHz



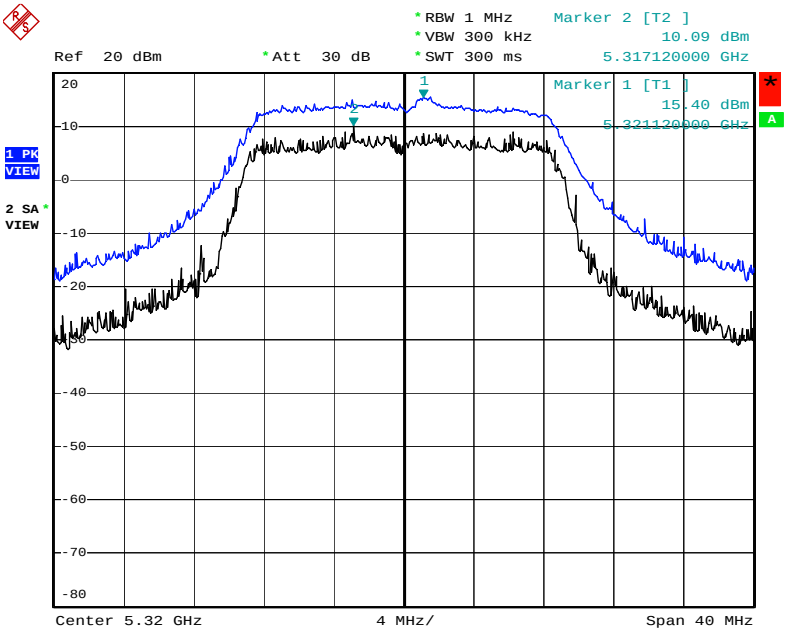
Date: 16.SEP.2009 18:25:23

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 2-1 + Ant. 2-3 / 5300 MHz



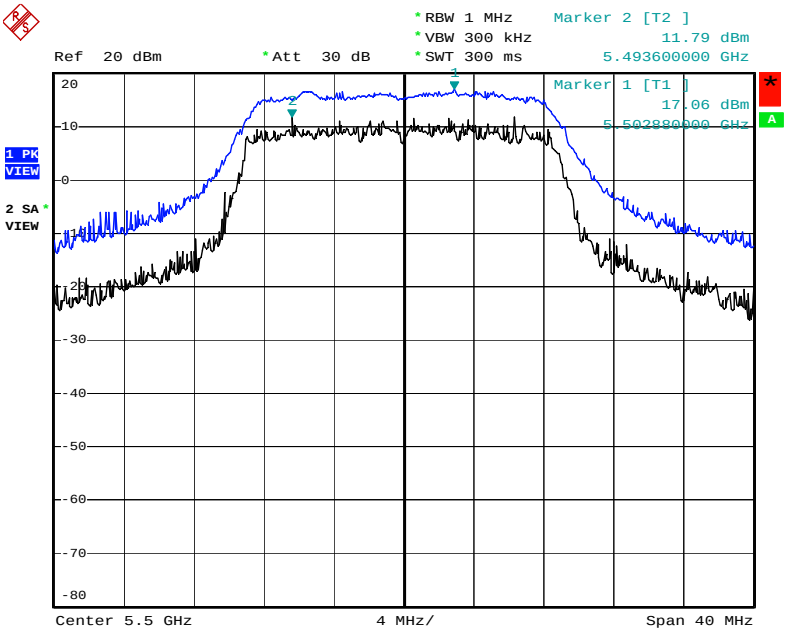
Date: 16.SEP.2009 18:27:28

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 2-1 + Ant. 2-3 / 5320 MHz



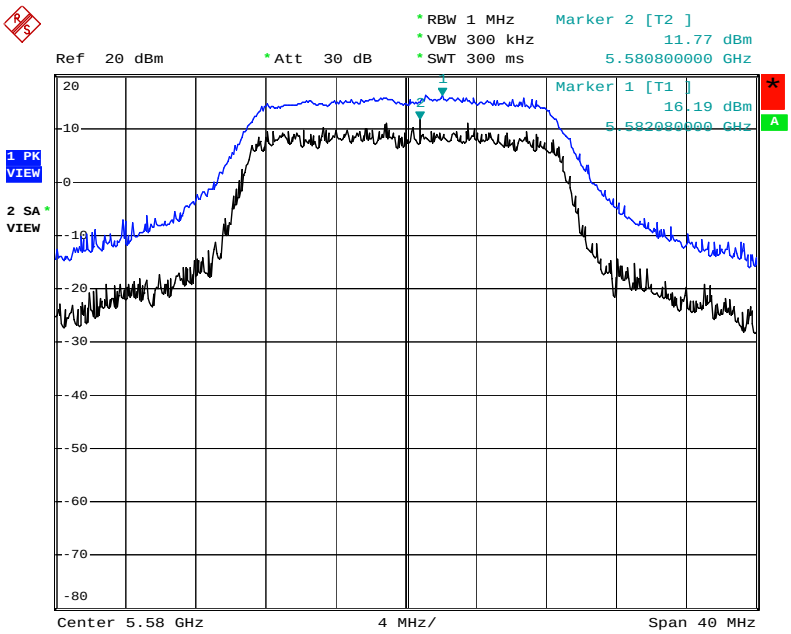
Date: 16.SEP.2009 18:31:18

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 2-1 + Ant. 2-3 / 5500 MHz



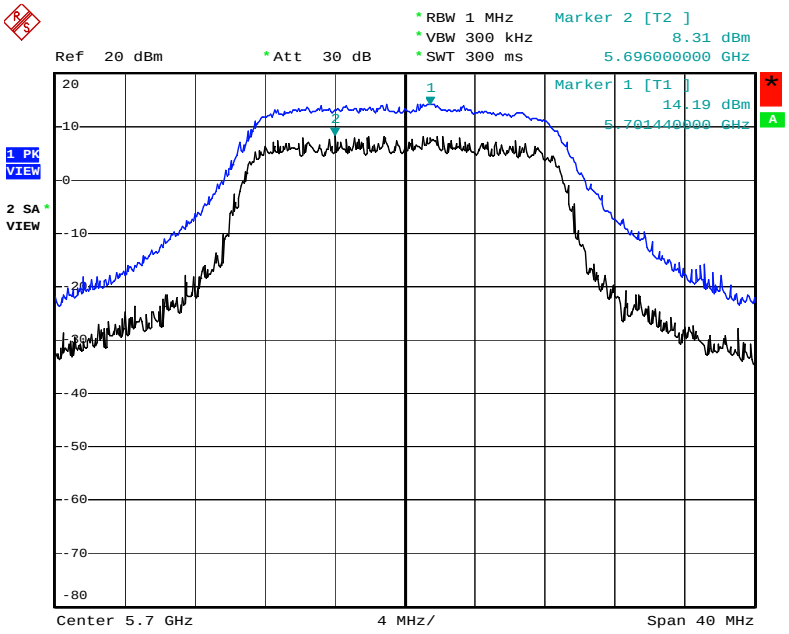
Date: 16.SEP.2009 18:35:01

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 2-1 + Ant. 2-3 / 5580 MHz



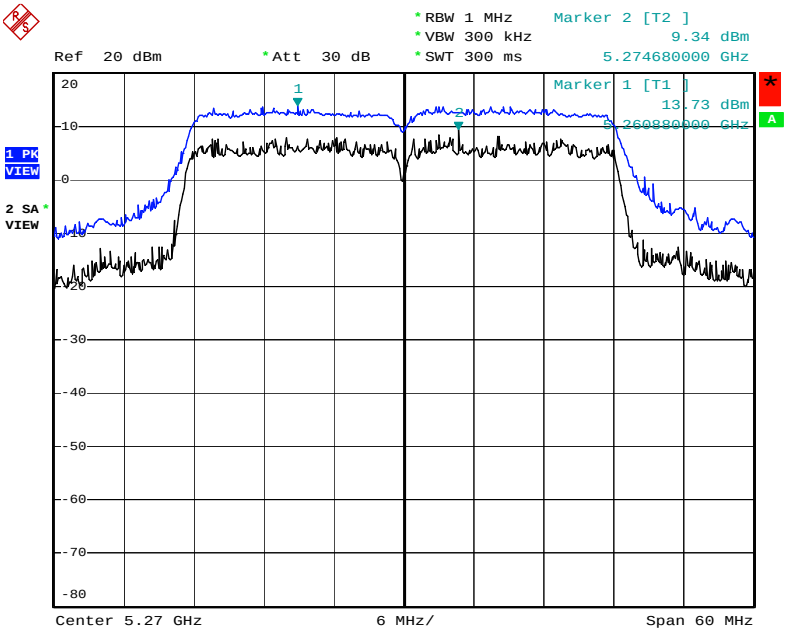
Date: 16.SEP.2009 23:16:21

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 2-1 + Ant. 2-3 / 5700 MHz



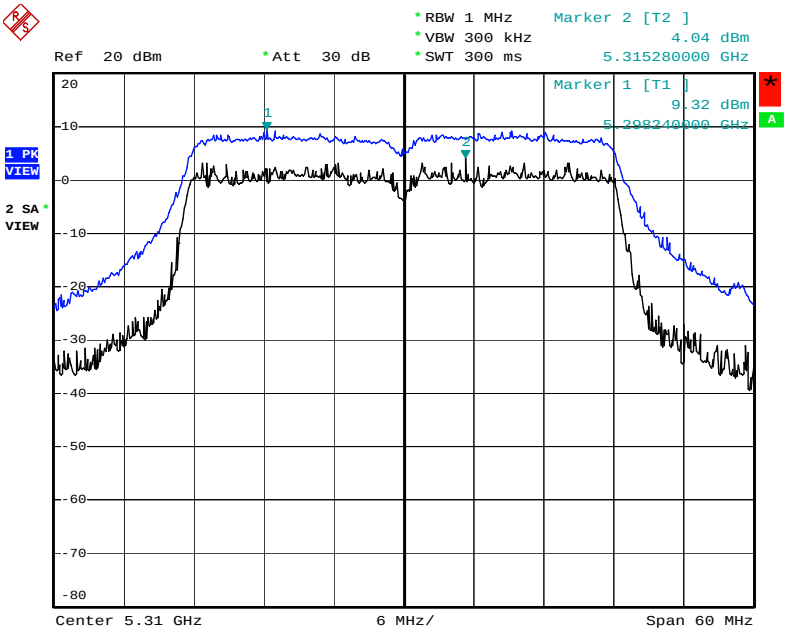
Date: 16.SEP.2009 18:44:46

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 2-1 + Ant. 2-3 / 5270 MHz



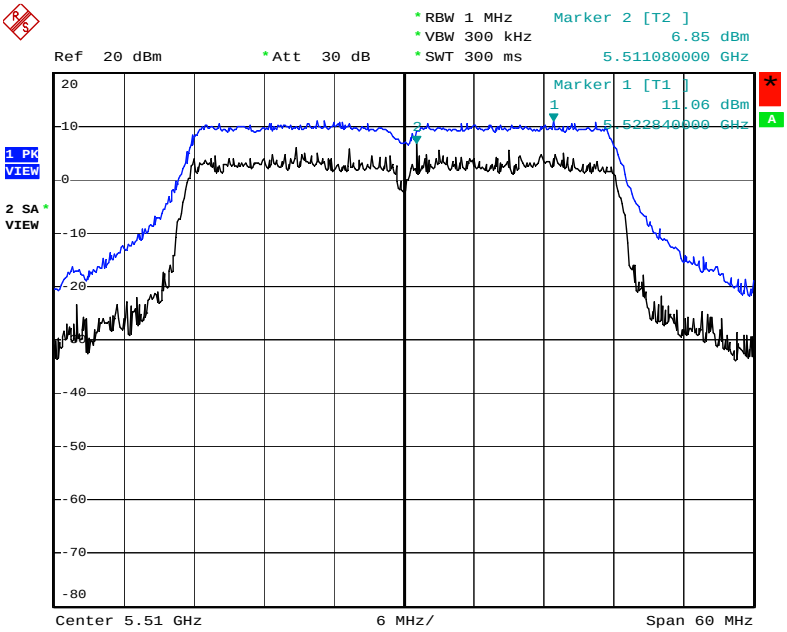
Date: 16.SEP.2009 18:53:00

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 2-1 + Ant. 2-3 / 5310 MHz



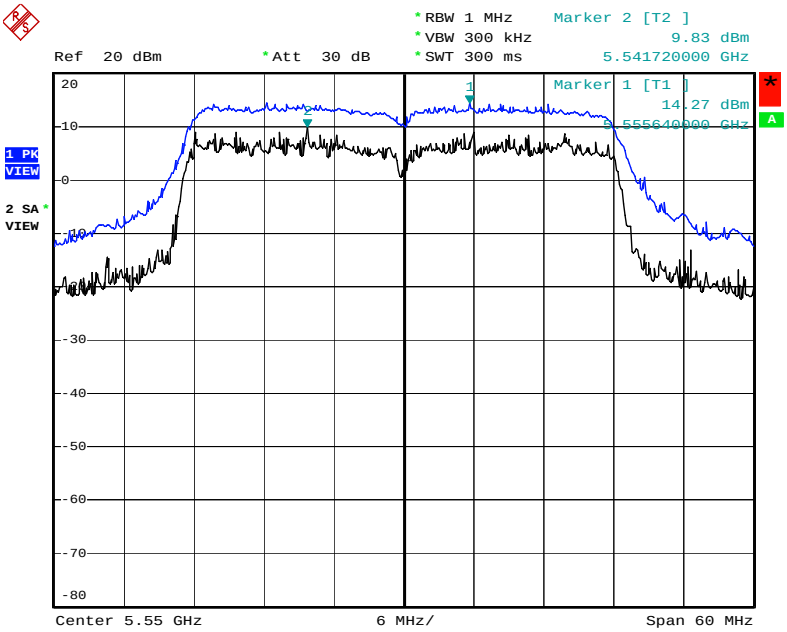
Date: 16.SEP.2009 18:58:03

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 2-1 + Ant. 2-3 / 5510MHz



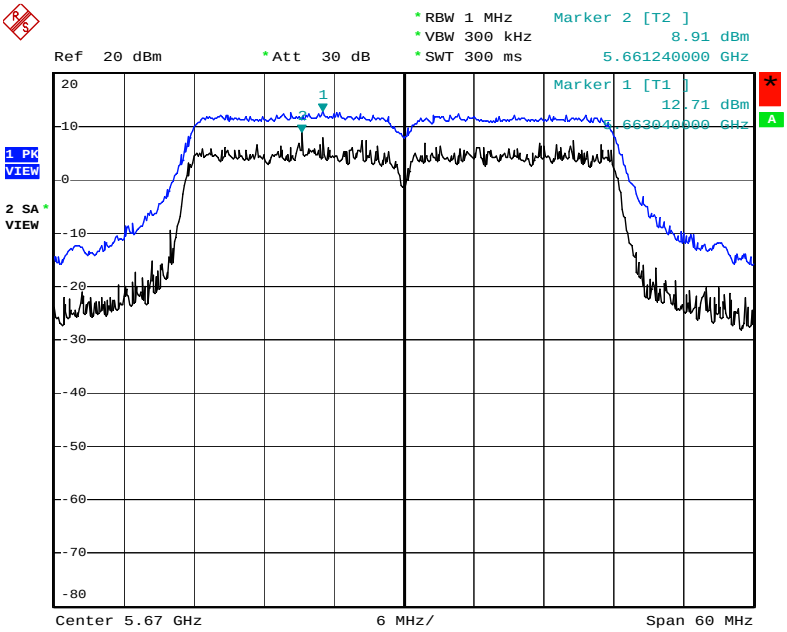
Date: 16.SEP.2009 19:05:13

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 2-1 + Ant. 2-3 / 5550 MHz



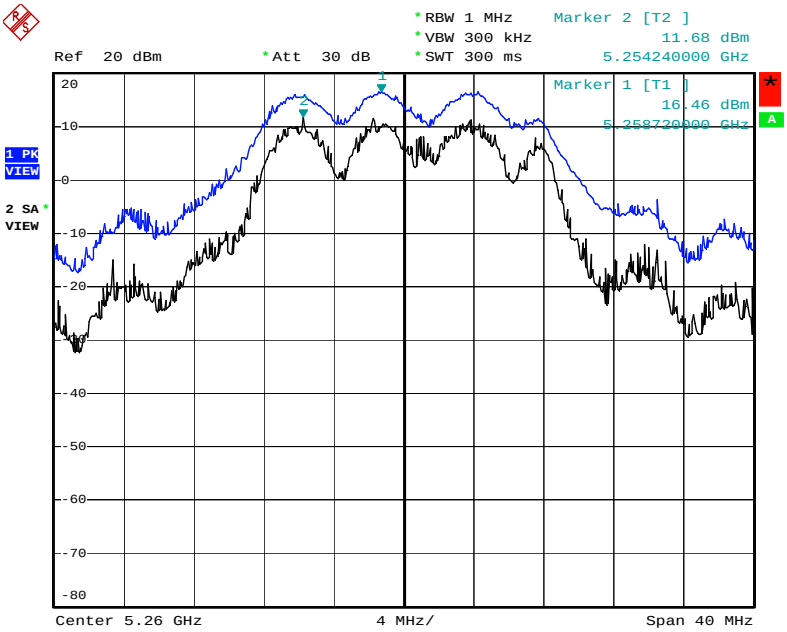
Date: 16.SEP.2009 19:11:14

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 2-1 + Ant. 2-3 / 5670 MHz



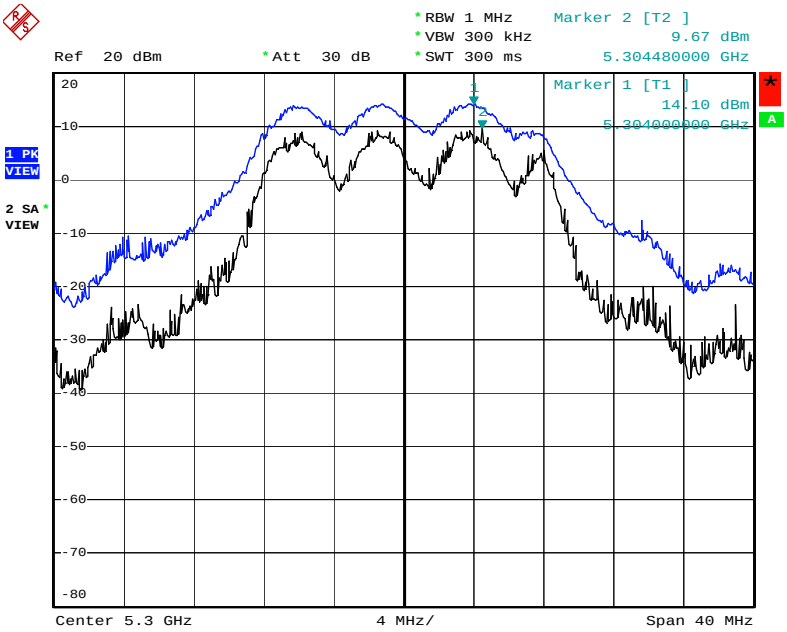
Date: 16.SEP.2009 19:15:13

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 2-1 + Ant. 2-3 / 5260 MHz



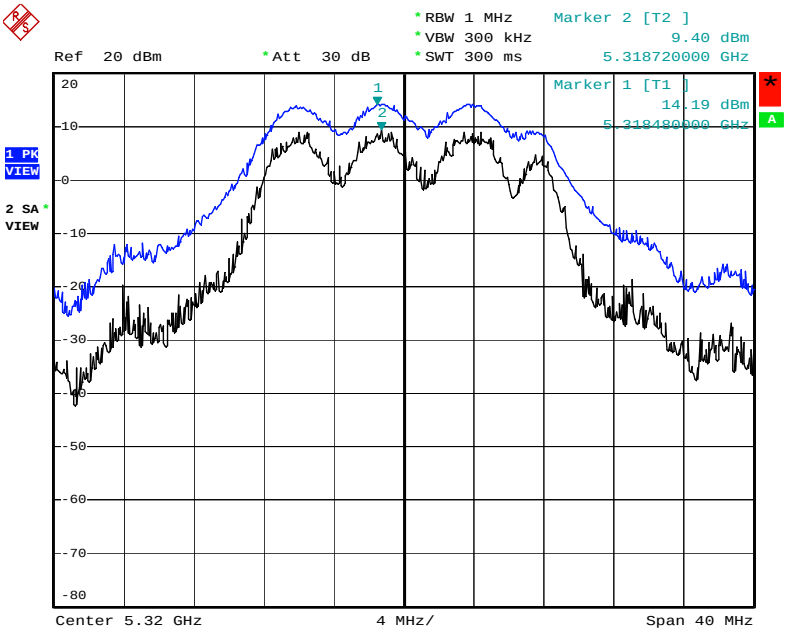
Date: 16.SEP.2009 17:42:27

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 2-1 + Ant. 2-3 / 5300 MHz



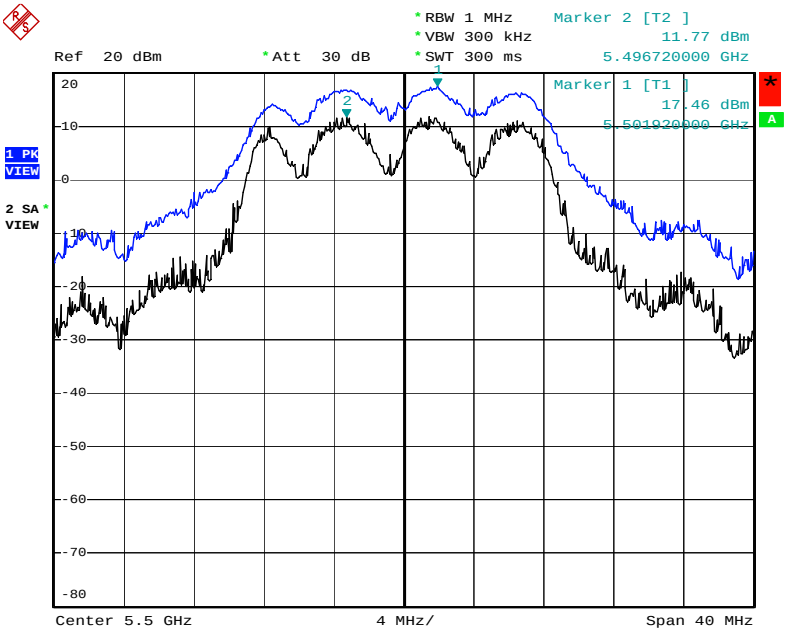
Date: 16.SEP.2009 17:44:33

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 2-1 + Ant. 2-3 / 5320 MHz



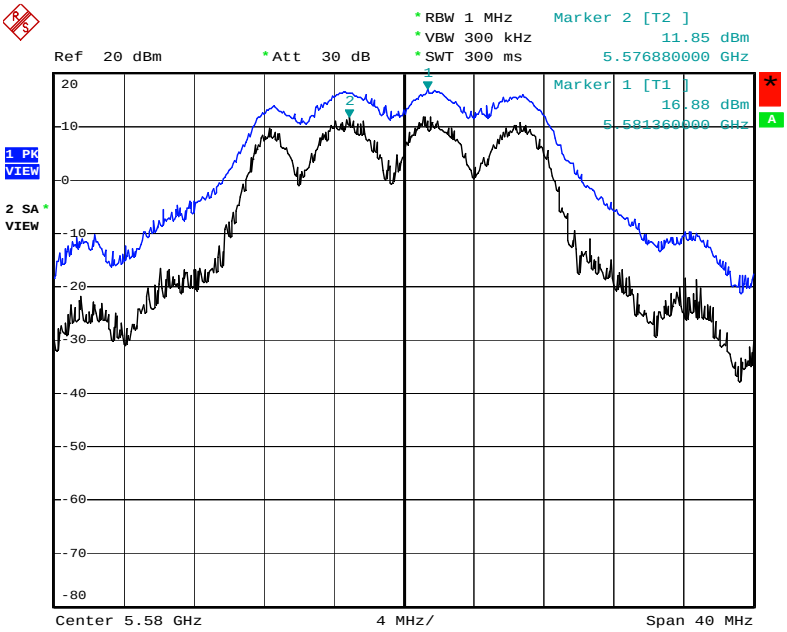
Date: 16.SEP.2009 17:47:13

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 2-1 + Ant. 2-3 / 5500 MHz



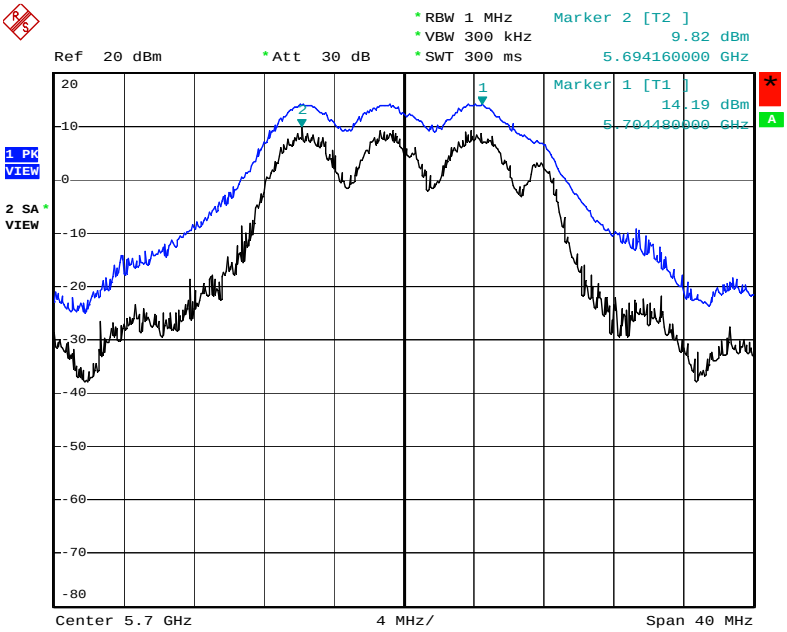
Date: 16.SEP.2009 17:52:52

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 2-1 + Ant. 2-3 / 5580 MHz



Date: 16.SEP.2009 17:57:55

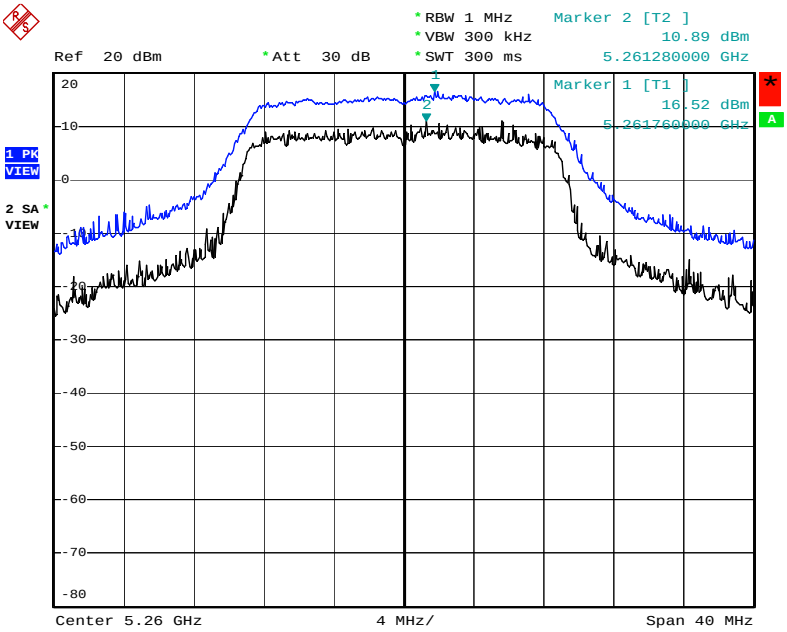
Peak Excursion Plot on Configuration IEEE 802.11a Ant. 2-1 + Ant. 2-3 / 5700 MHz



Date: 16.SEP.2009 18:00:09

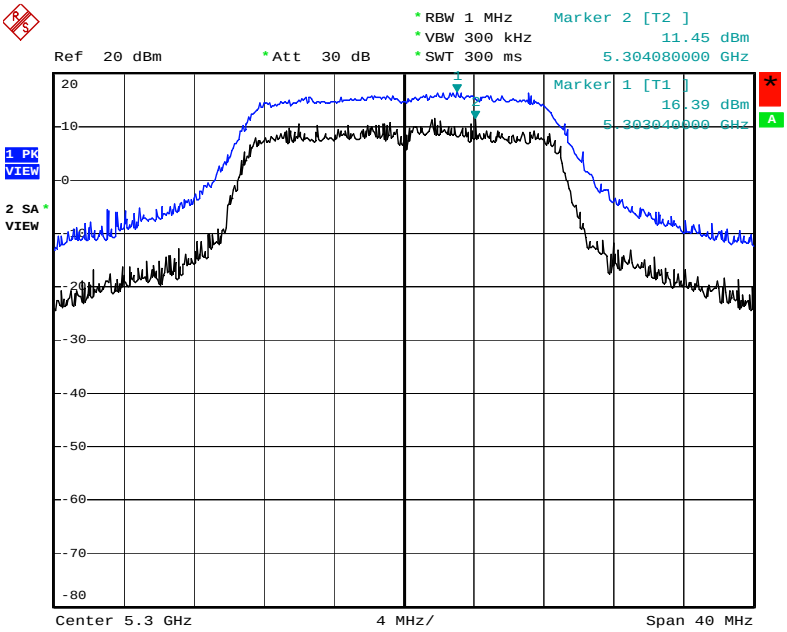
<For Antenna 3>:

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 3-1 + Ant. 3-3 / 5260 MHz



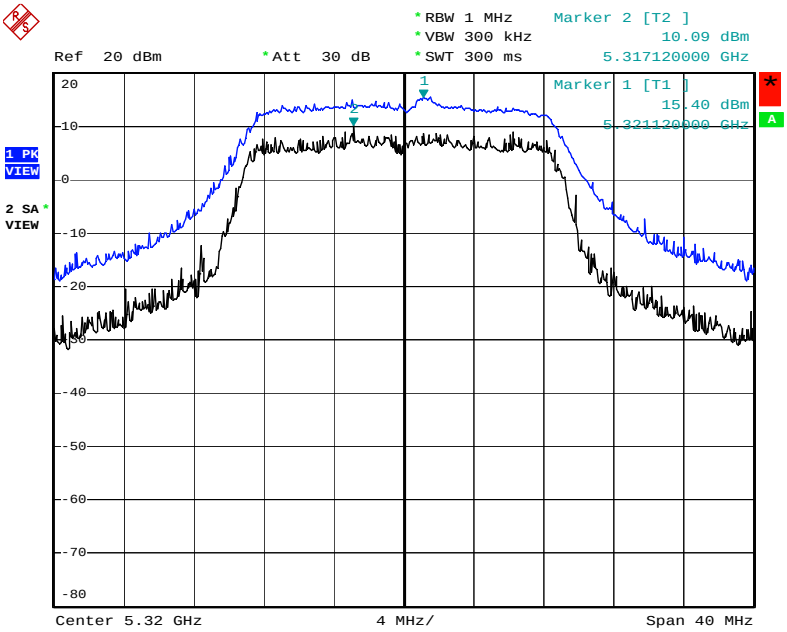
Date: 16.SEP.2009 18:25:23

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 3-1 + Ant. 3-3 / 5300 MHz



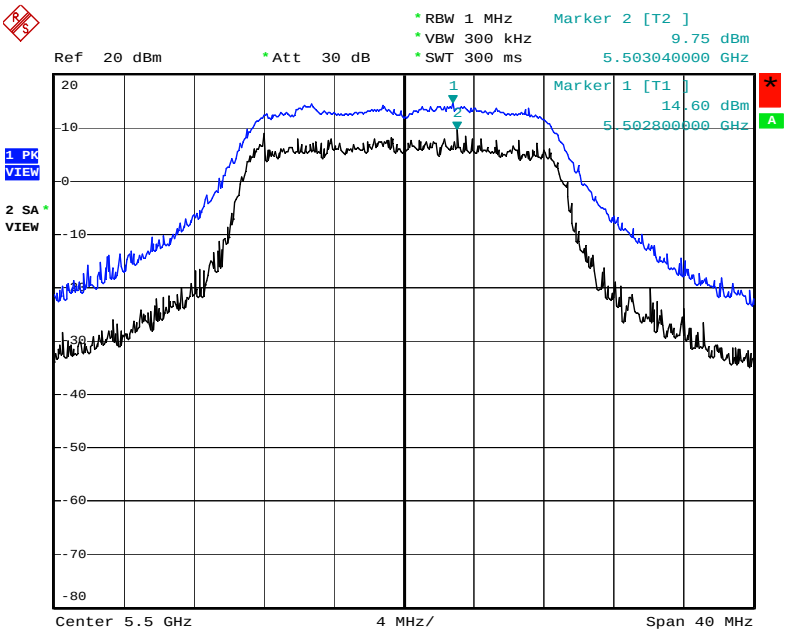
Date: 16.SEP.2009 18:28:25

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 3-1 + Ant. 3-3 / 5320 MHz



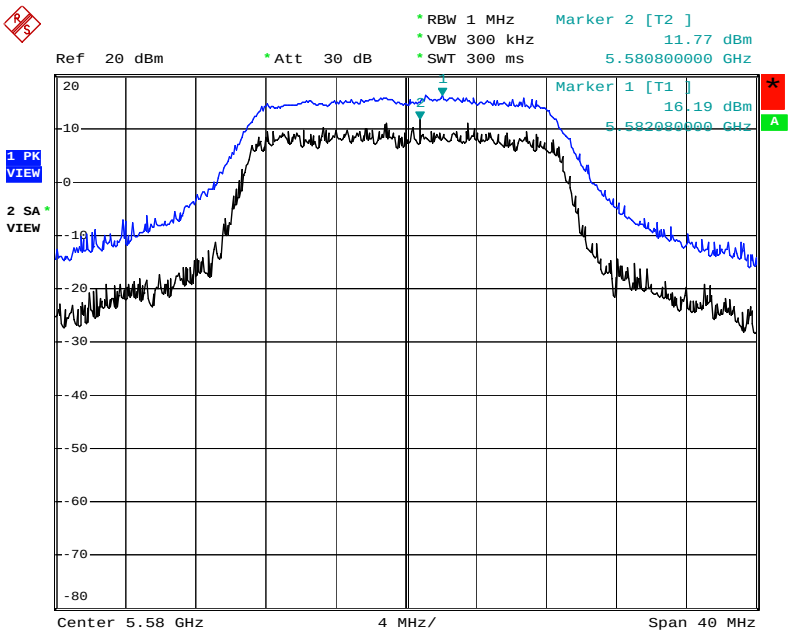
Date: 16.SEP.2009 18:31:18

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 3-1 + Ant. 3-3 / 5500 MHz



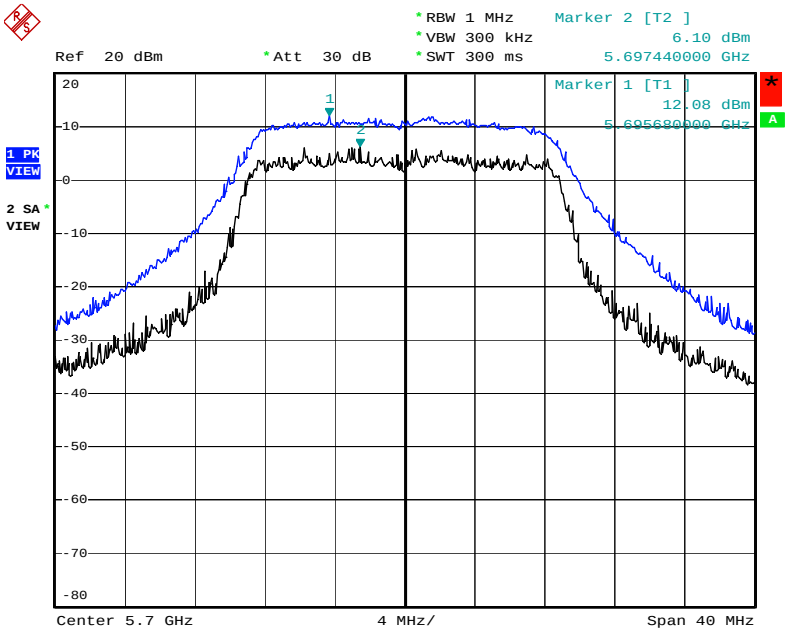
Date: 16.SEP.2009 18:36:01

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 3-1 + Ant. 3-3 / 5580 MHz



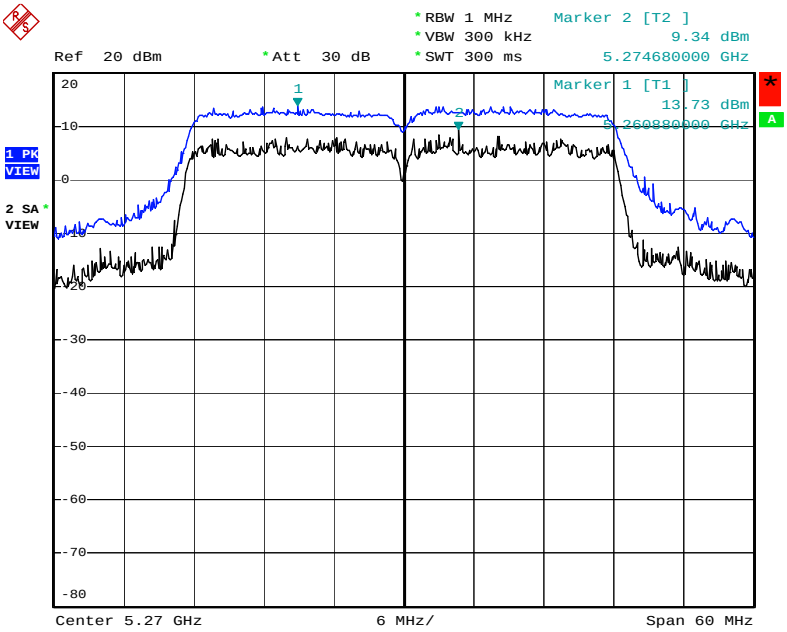
Date: 16.SEP.2009 23:16:21

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 3-1 + Ant. 3-3 / 5700 MHz



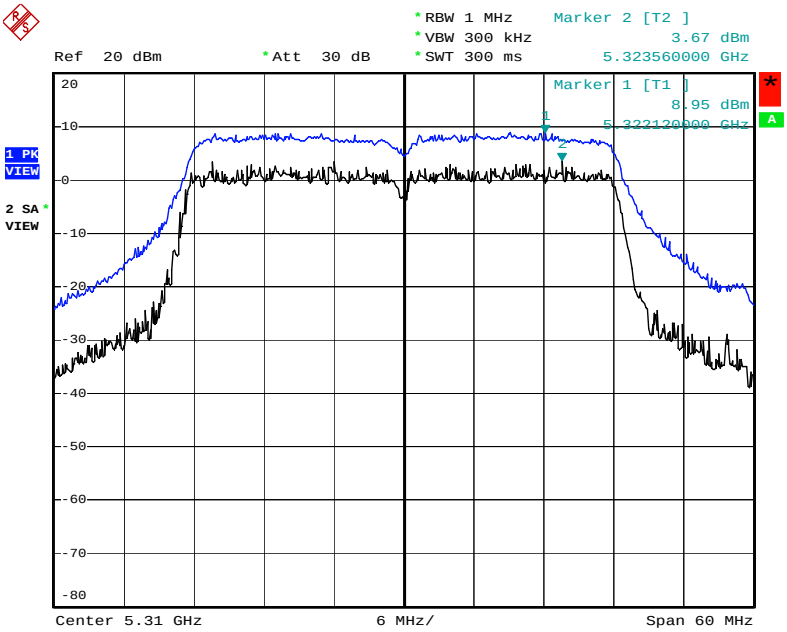
Date: 16.SEP.2009 18:45:37

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 3-1 + Ant. 3-3 / 5270 MHz



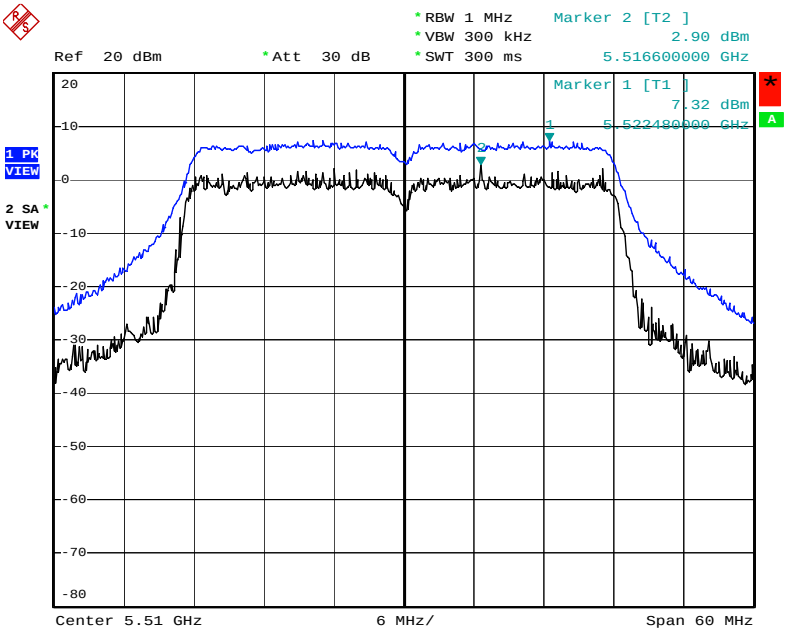
Date: 16.SEP.2009 18:53:00

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 3-1 + Ant. 3-3 / 5310 MHz



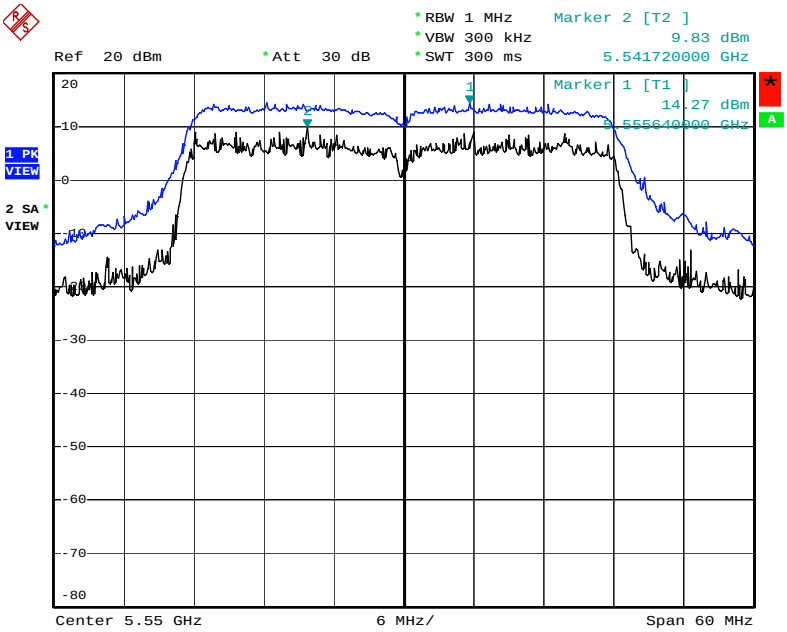
Date: 16.SEP.2009 19:02:20

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 3-1 + Ant. 3-3 / 5510MHz



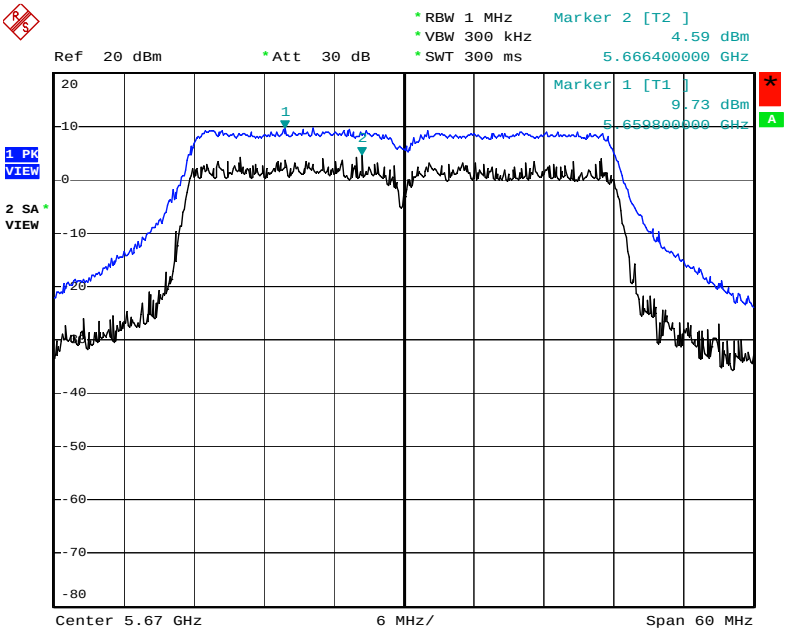
Date: 16.SEP.2009 19:06:20

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 3-1 + Ant. 3-3 / 5550 MHz



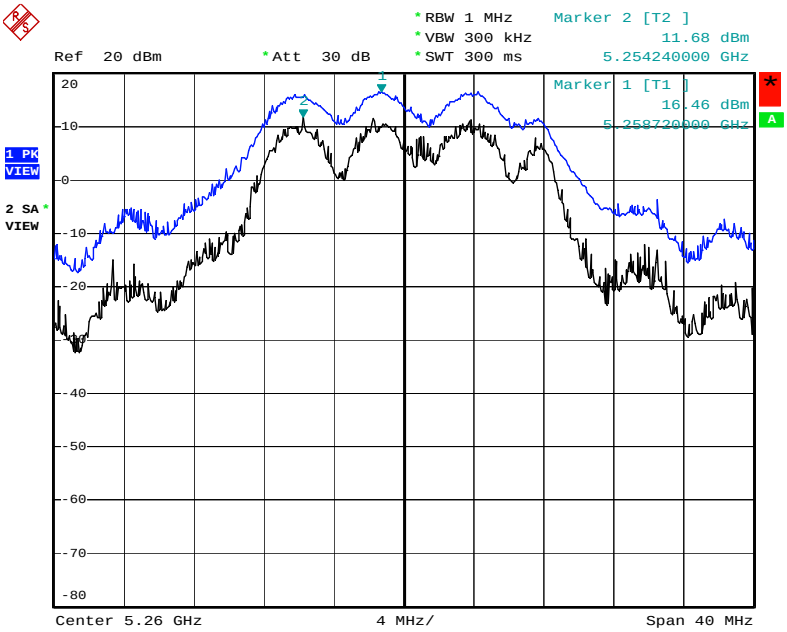
Date: 16.SEP.2009 19:11:14

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 3-1 + Ant. 3-3 / 5670 MHz



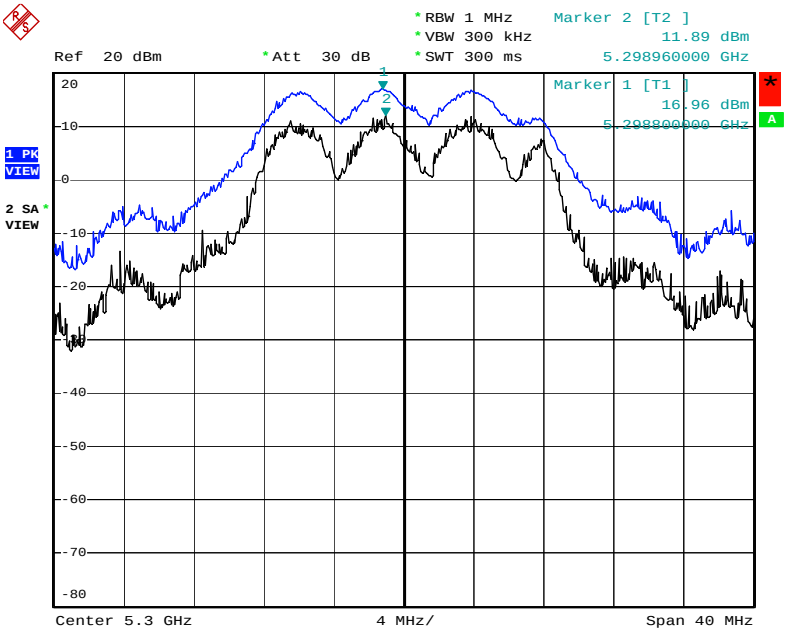
Date: 16.SEP.2009 19:15:58

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 3-1 + Ant. 3-3 / 5260 MHz



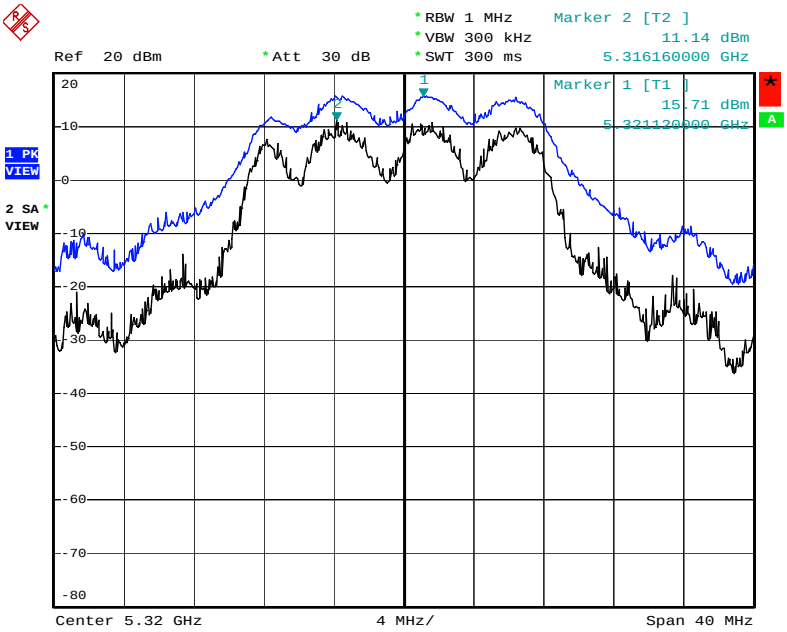
Date: 16.SEP.2009 17:42:27

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 3-1 + Ant. 3-3 / 5300 MHz



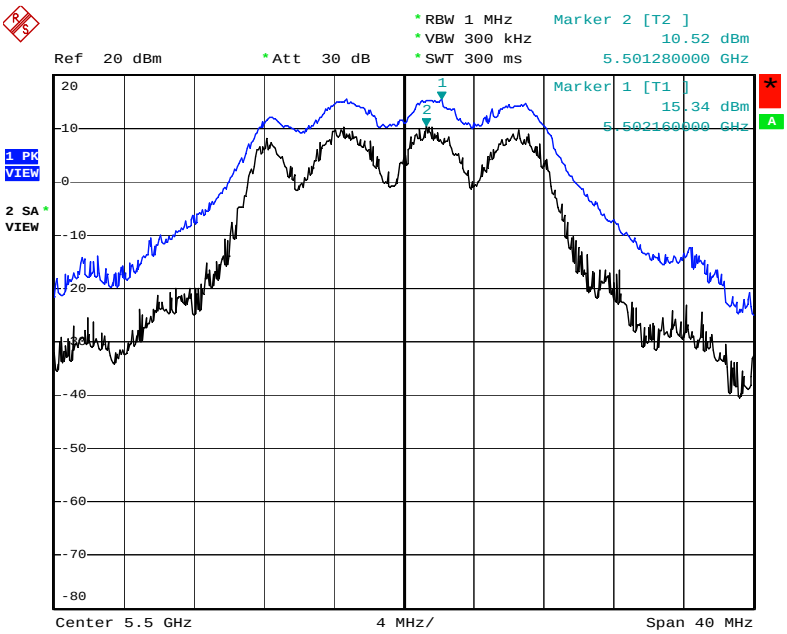
Date: 16.SEP.2009 17:45:56

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 3-1 + Ant. 3-3 / 5320 MHz



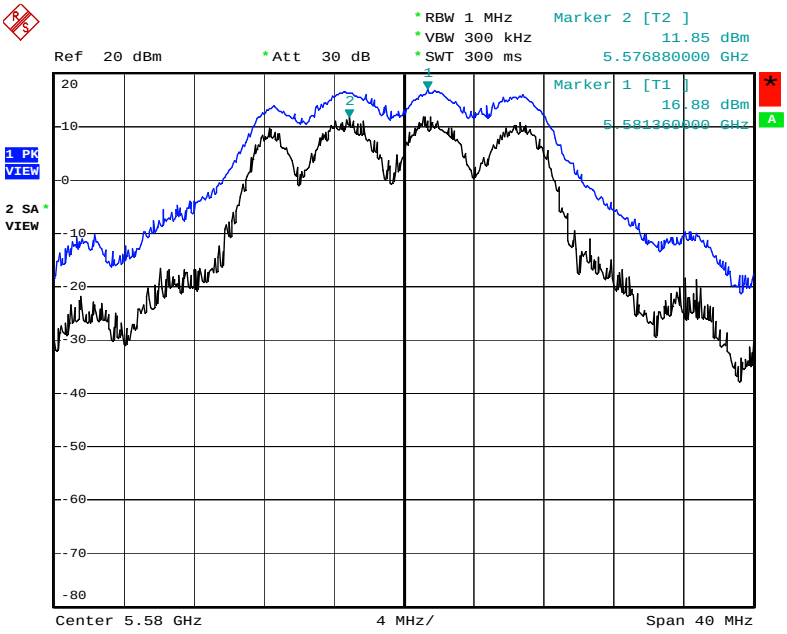
Date: 16.SEP.2009 17:48:37

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 3-1 + Ant. 3-3 / 5500 MHz



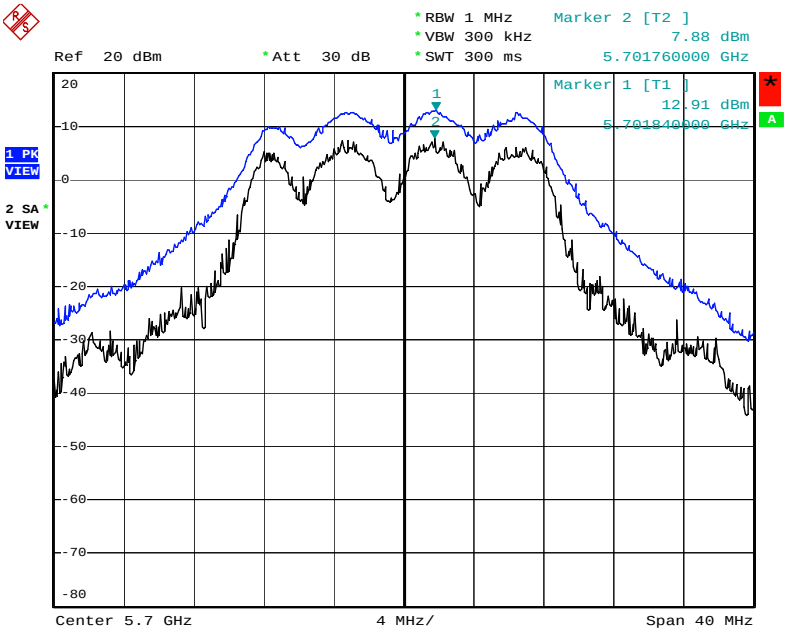
Date: 16.SEP.2009 17:53:47

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 3-1 + Ant. 3-3 / 5580 MHz



Date: 16.SEP.2009 17:57:55

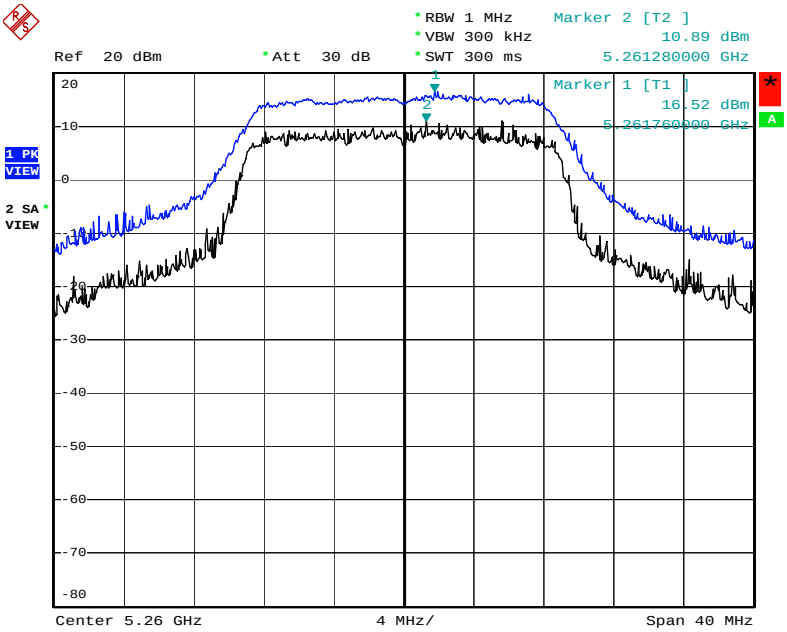
Peak Excursion Plot on Configuration IEEE 802.11a Ant. 3-1 + Ant. 3-3 / 5700 MHz



Date: 16.SEP.2009 18:01:43

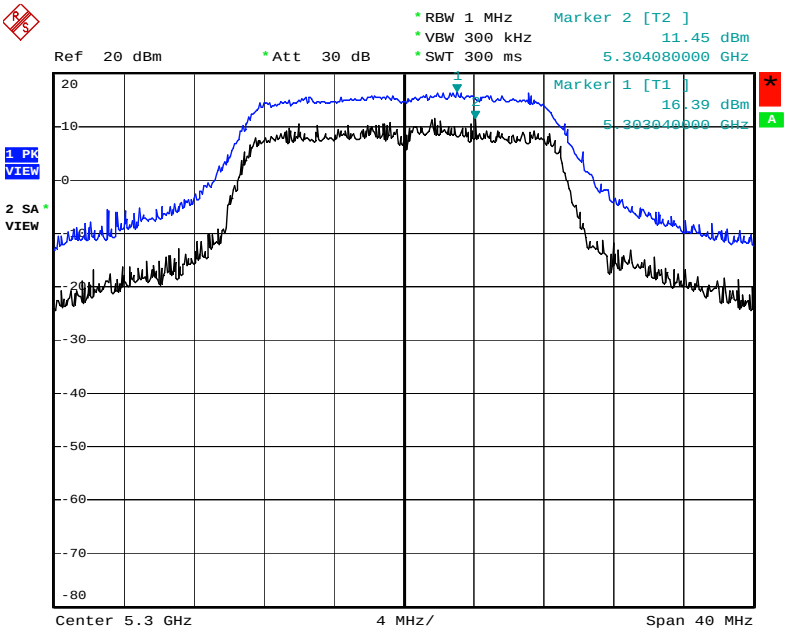
<For Antenna 4>:

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 4-1 + Ant. 4-3 / 5260 MHz



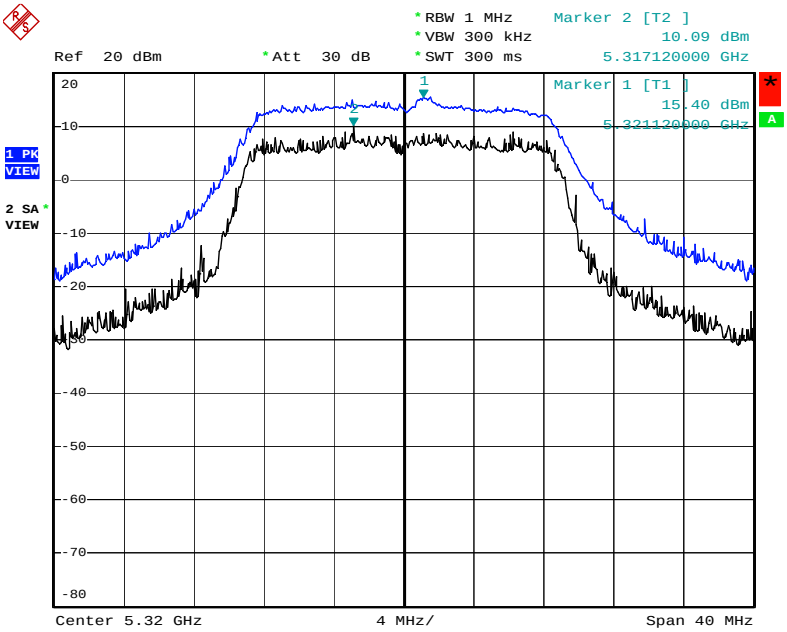
Date: 16.SEP.2009 18:25:23

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 4-1 + Ant. 4-3 / 5300 MHz



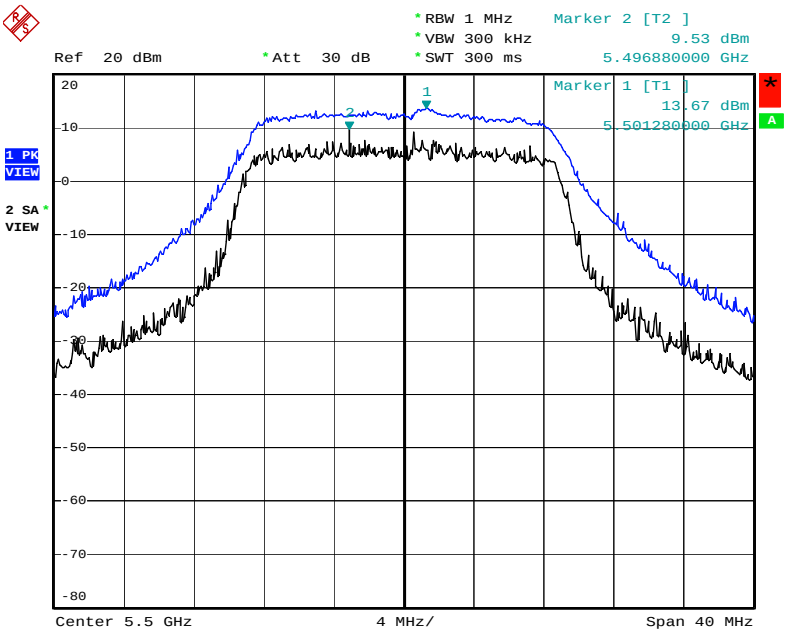
Date: 16.SEP.2009 18:28:25

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 4-1 + Ant. 4-3 / 5320 MHz



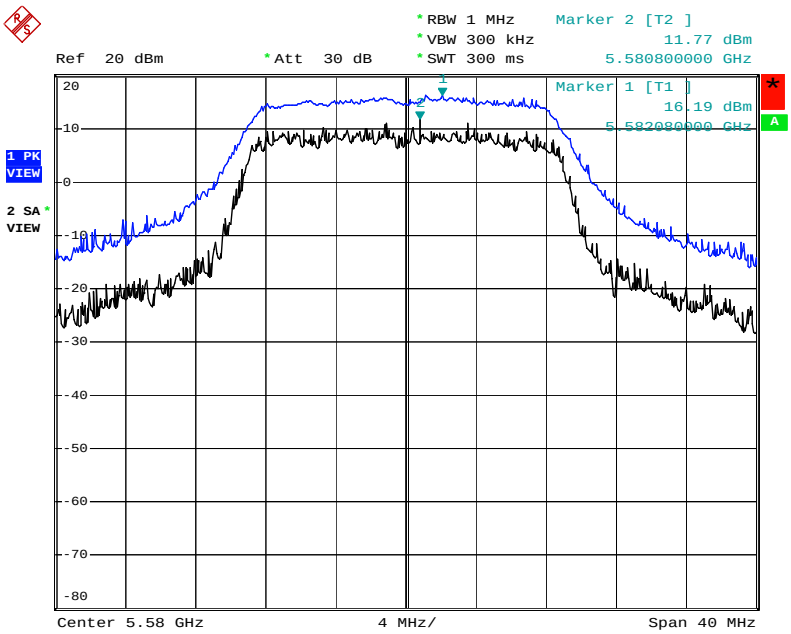
Date: 16.SEP.2009 18:31:18

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 4-1 + Ant. 4-3 / 5500 MHz



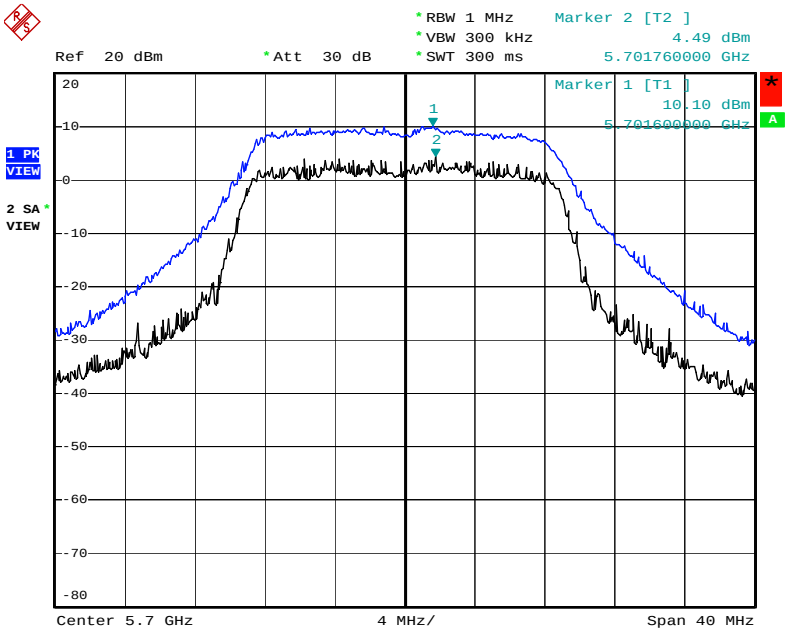
Date: 16.SEP.2009 18:36:57

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 4-1 + Ant. 4-3 / 5580 MHz



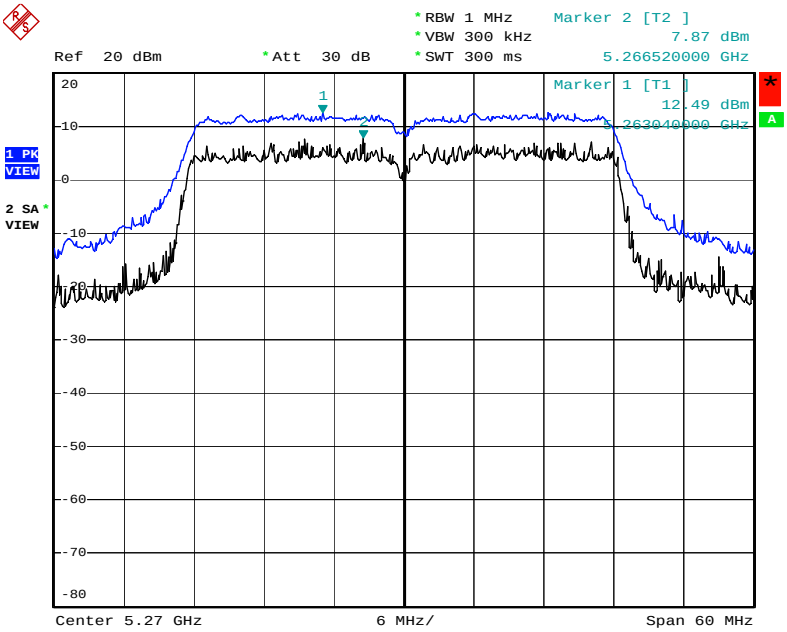
Date: 16.SEP.2009 23:16:21

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 4-1 + Ant. 4-3 / 5700 MHz



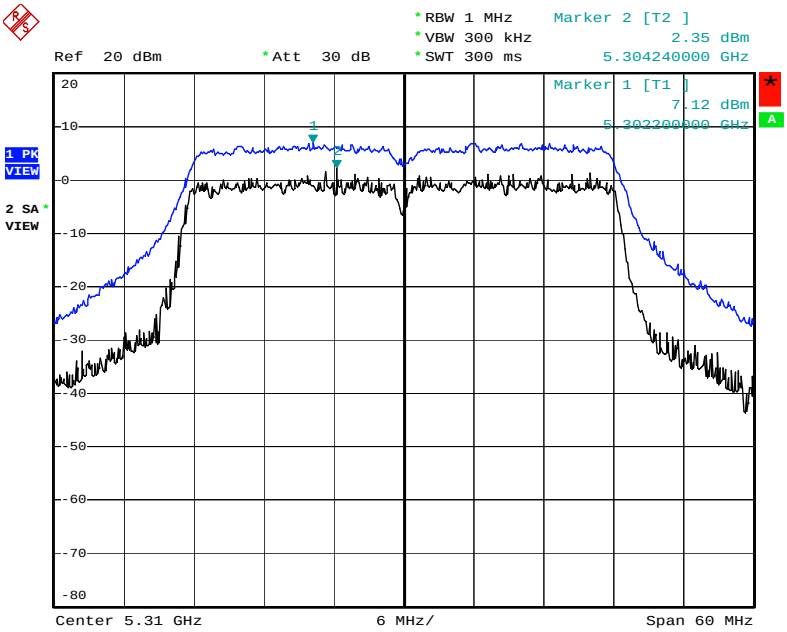
Date: 16.SEP.2009 18:43:45

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 4-1 + Ant. 4-3 / 5270 MHz



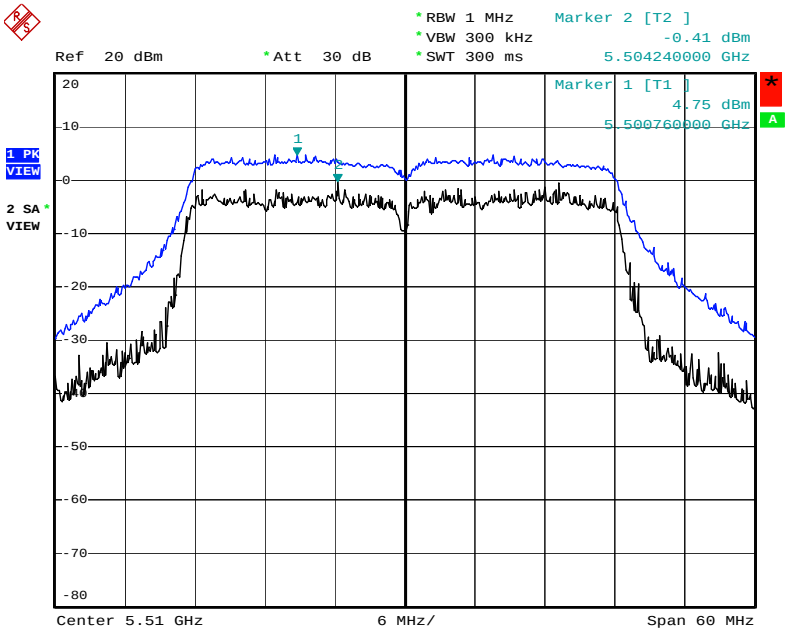
Date: 16.SEP.2009 18:54:13

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 4-1 + Ant. 4-3 / 5310 MHz



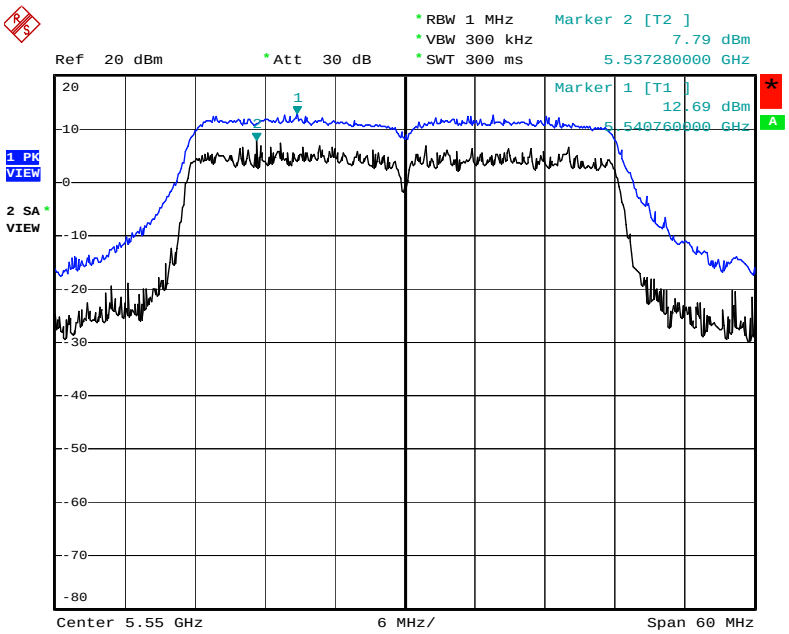
Date: 16.SEP.2009 18:58:52

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 4-1 + Ant. 4-3 / 5510MHz



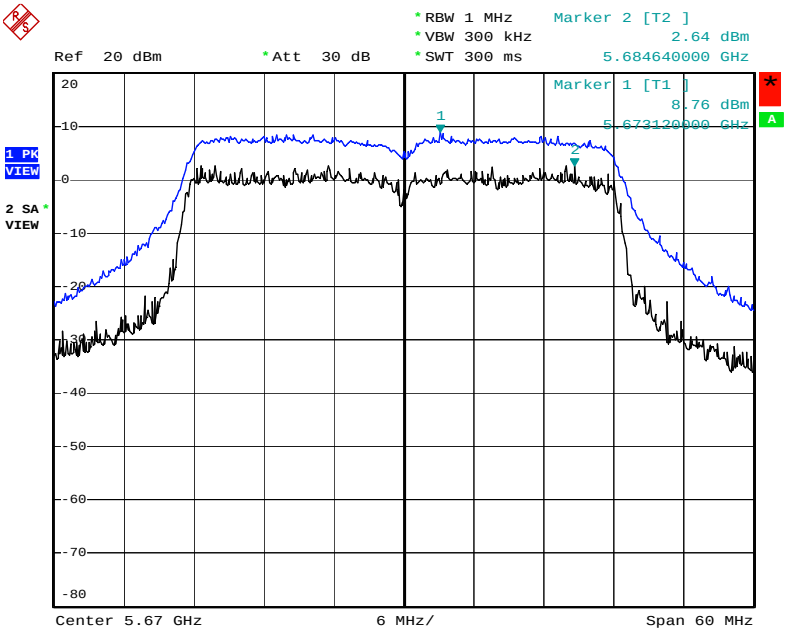
Date: 16.SEP.2009 19:08:41

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 4-1 + Ant. 4-3 / 5550 MHz



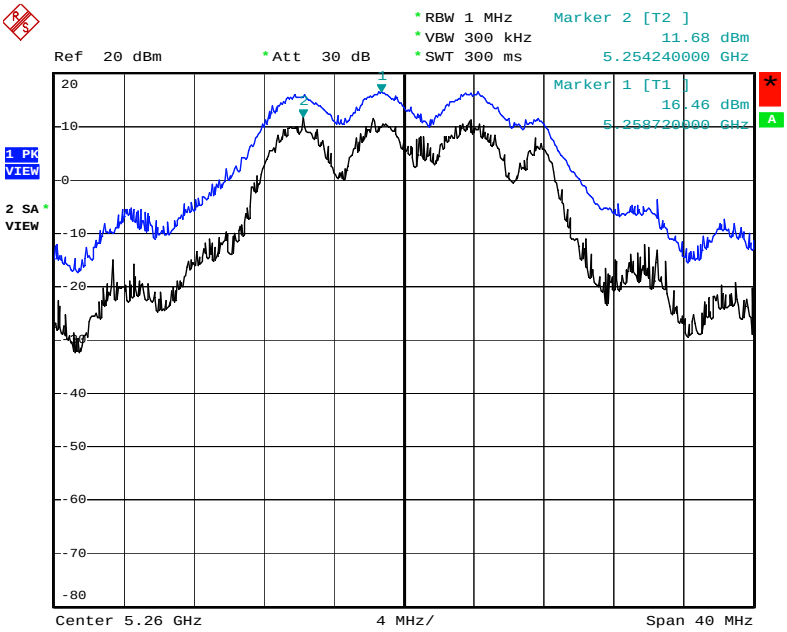
Date: 16.SEP.2009 19:12:06

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 4-1 + Ant. 4-3 / 5670 MHz



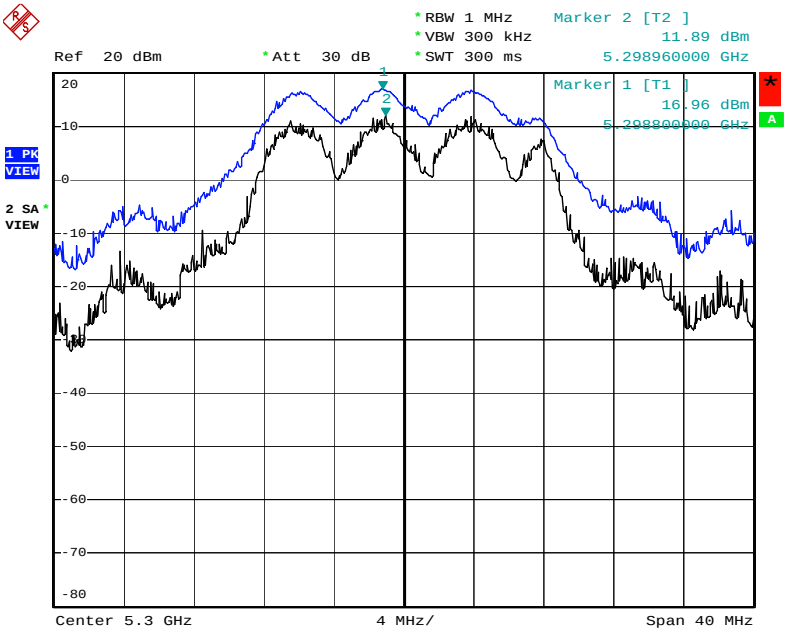
Date: 16.SEP.2009 19:14:22

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 4-1 + Ant. 4-3 / 5260 MHz



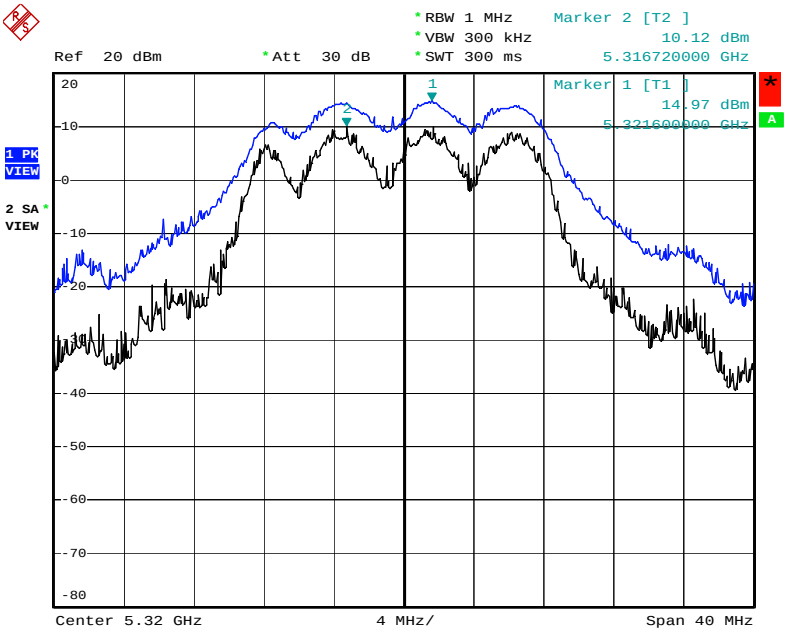
Date: 16.SEP.2009 17:42:27

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 4-1 + Ant. 4-3 / 5300 MHz



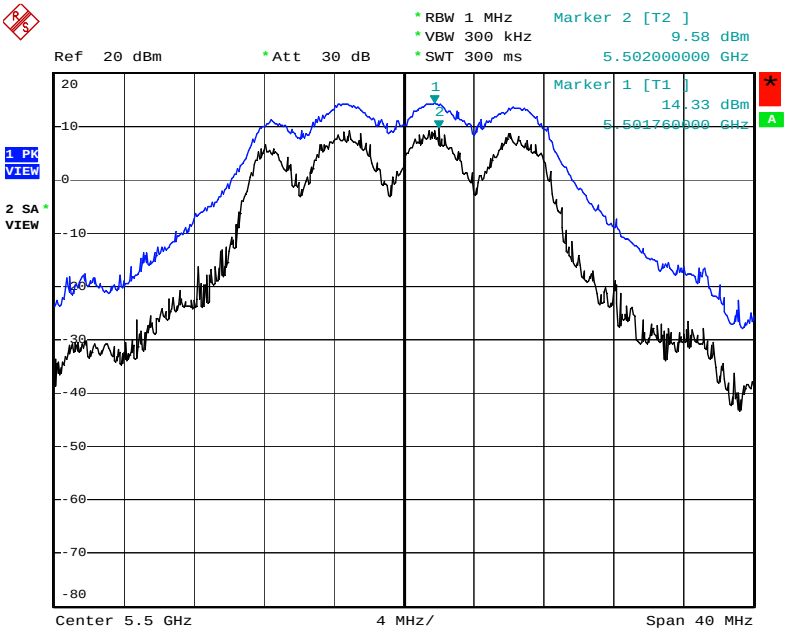
Date: 16.SEP.2009 17:45:56

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 4-1 + Ant. 4-3 / 5320 MHz



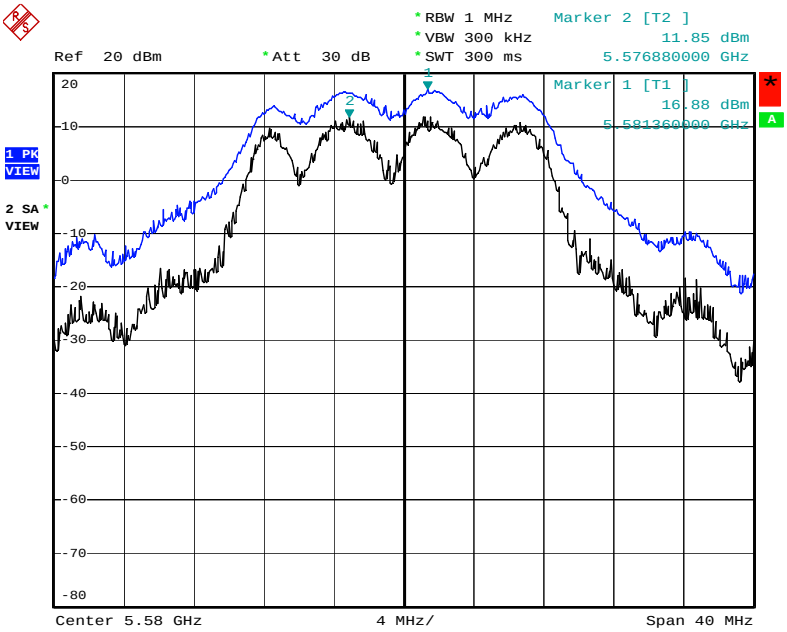
Date: 16.SEP.2009 17:49:37

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 4-1 + Ant. 4-3 / 5500 MHz



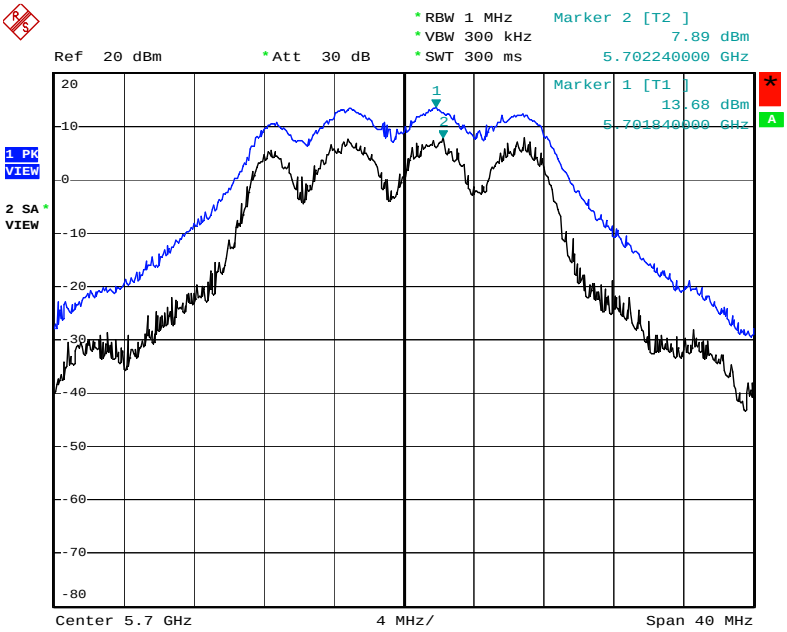
Date: 16.SEP.2009 17:54:49

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 4-1 + Ant. 4-3 / 5580 MHz



Date: 16.SEP.2009 17:57:55

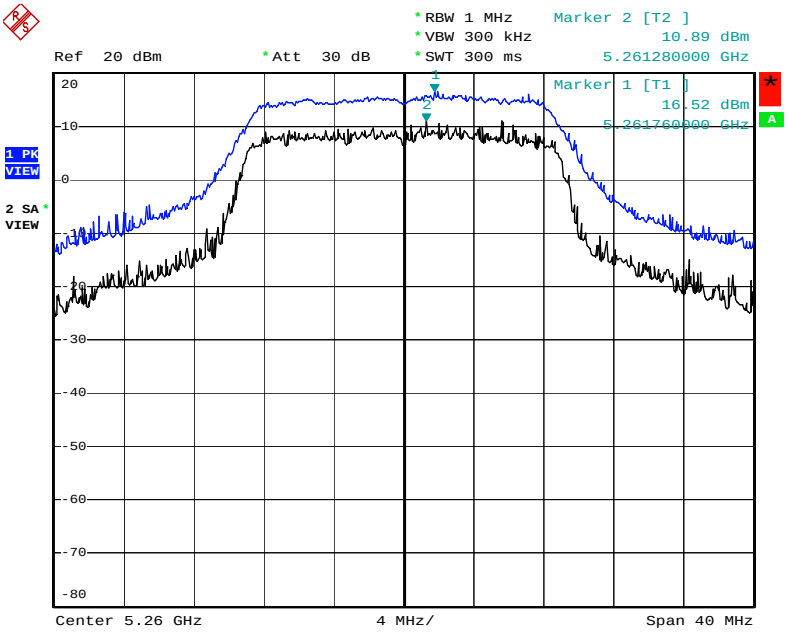
Peak Excursion Plot on Configuration IEEE 802.11a Ant. 4-1 + Ant. 4-3 / 5700 MHz



Date: 16.SEP.2009 18:02:34

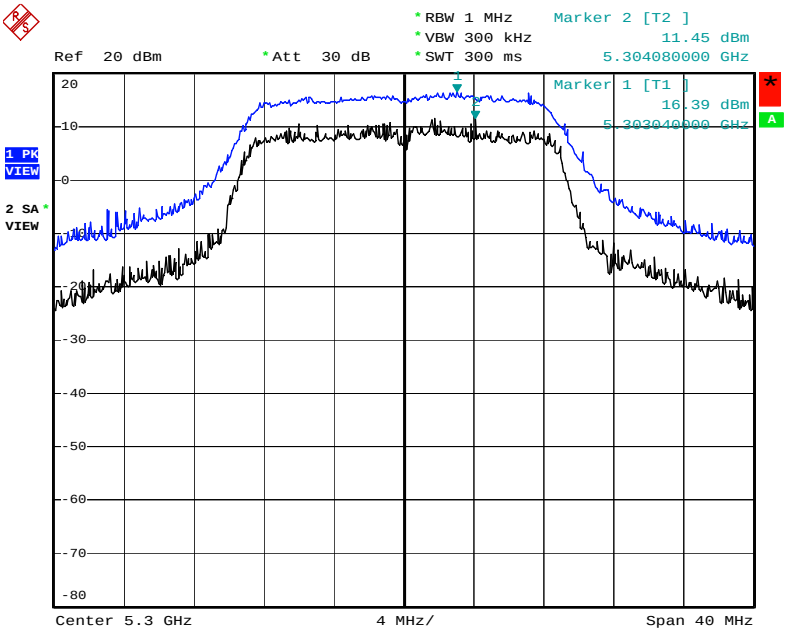
<For Antenna 5>:

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 5-1 + Ant. 5-3 / 5260 MHz



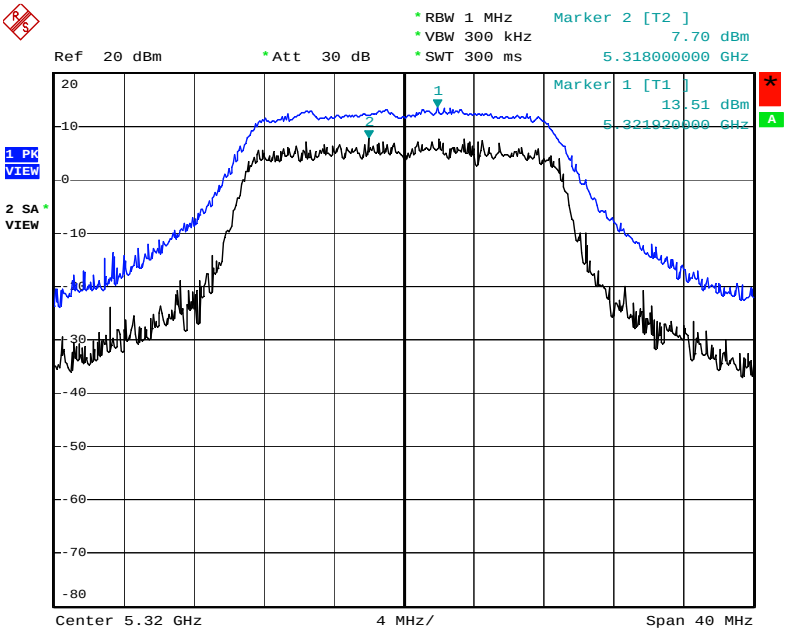
Date: 16.SEP.2009 18:25:23

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 5-1 + Ant. 5-3 / 5300 MHz



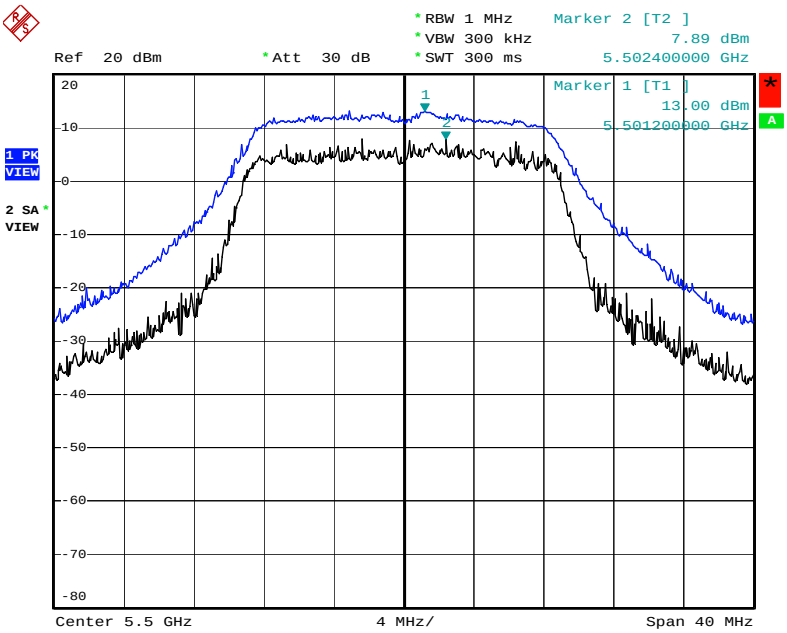
Date: 16.SEP.2009 18:28:25

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 5-1 + Ant. 5-3 / 5320 MHz



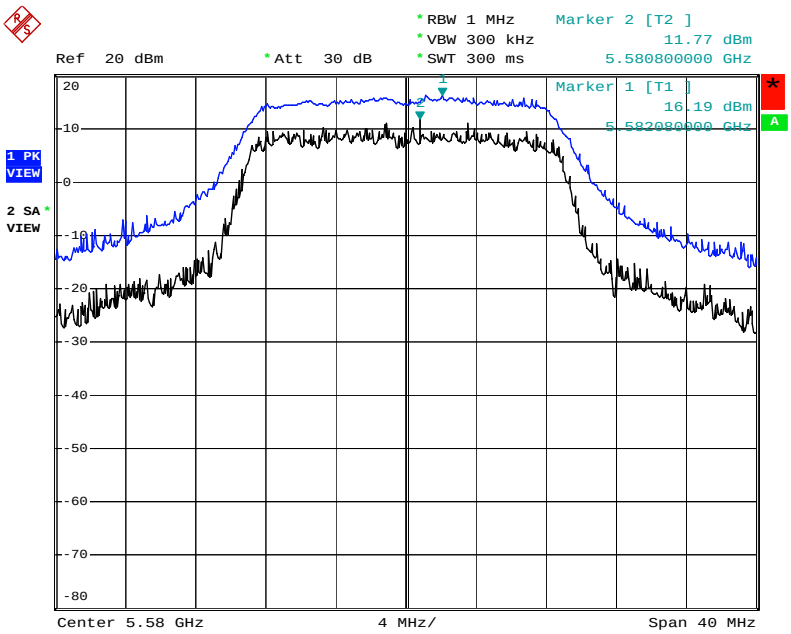
Date: 16.SEP.2009 18:30:19

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 5-1 + Ant. 5-3 / 5500 MHz



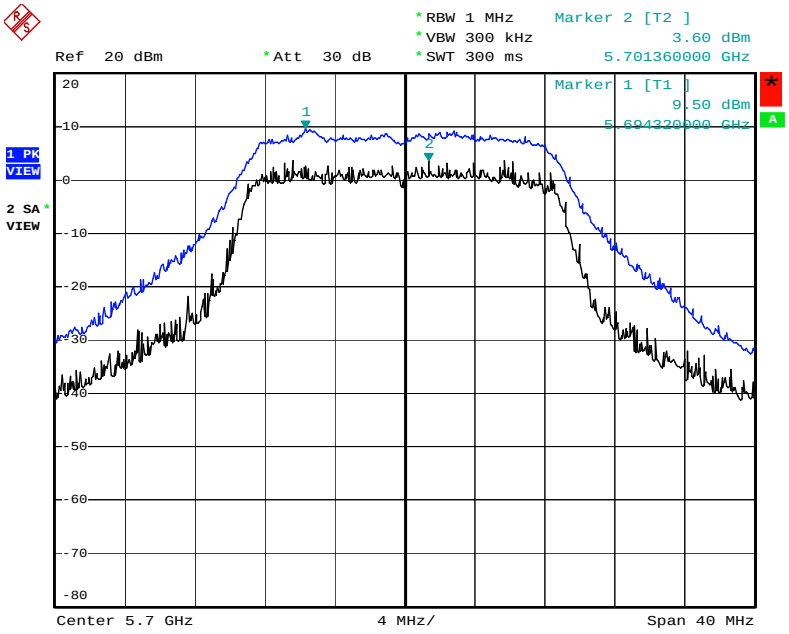
Date: 16.SEP.2009 18:37:49

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 5-1 + Ant. 5-3 / 5580 MHz



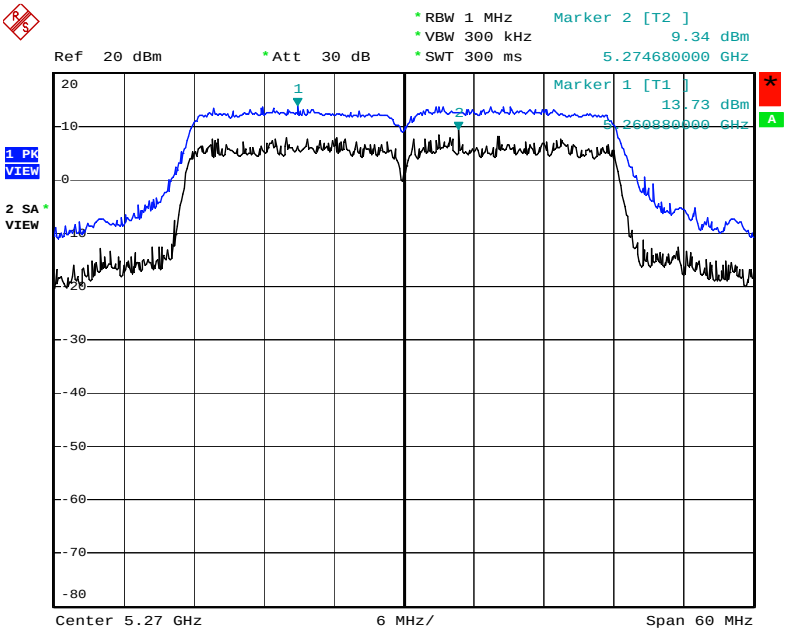
Date: 16.SEP.2009 23:16:21

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 5-1 + Ant. 5-3 / 5700 MHz



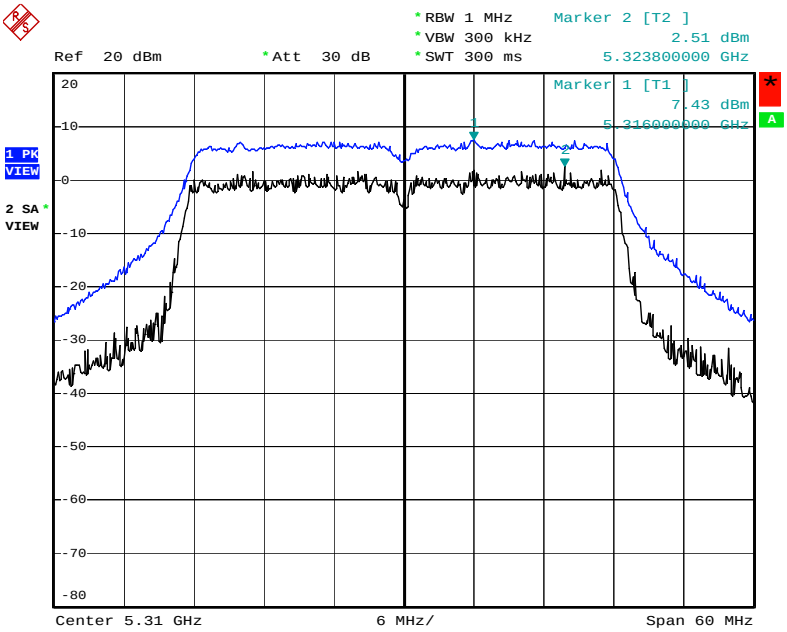
Date: 16.SEP.2009 18:46:29

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 5-1 + Ant. 5-3 / 5270 MHz



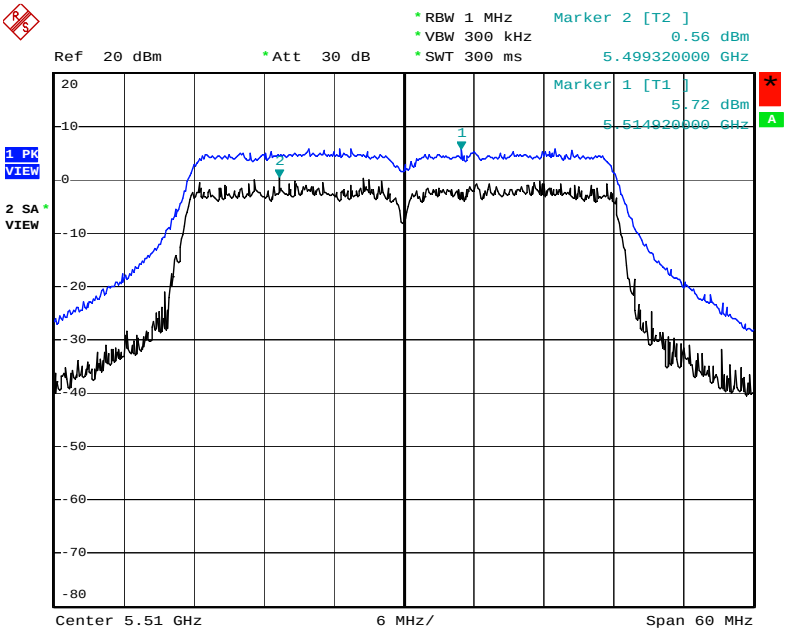
Date: 16.SEP.2009 18:53:00

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 5-1 + Ant. 5-3 / 5310 MHz



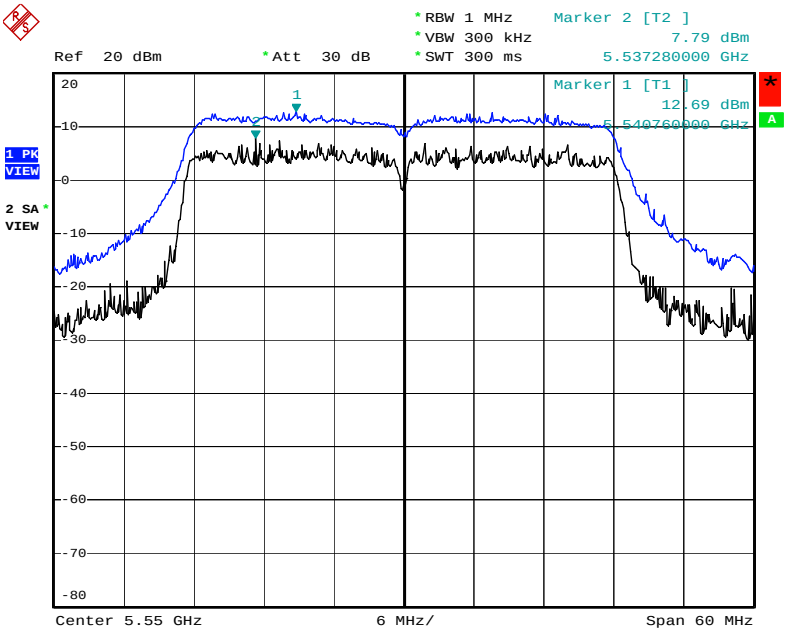
Date: 16.SEP.2009 18:59:44

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 5-1 + Ant. 5-3 / 5510MHz



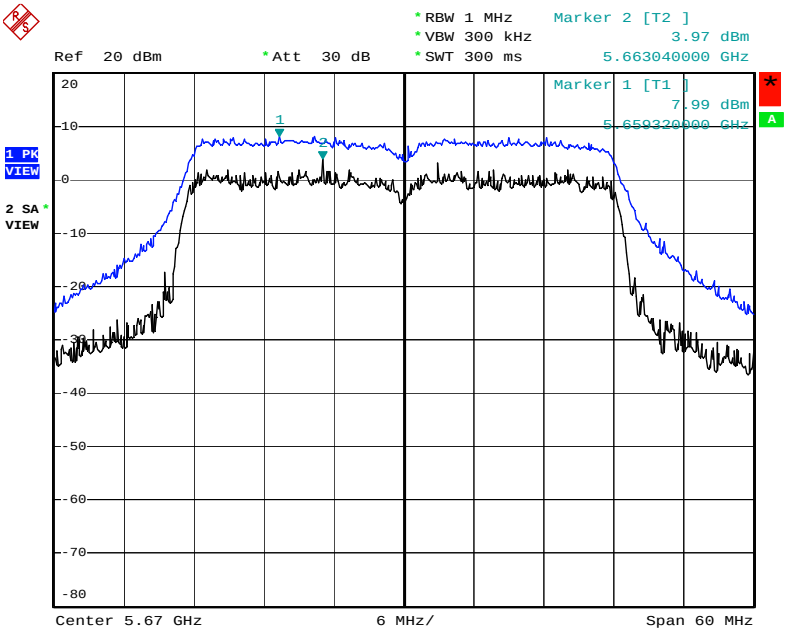
Date: 16.SEP.2009 19:04:06

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 5-1 + Ant. 5-3 / 5550 MHz



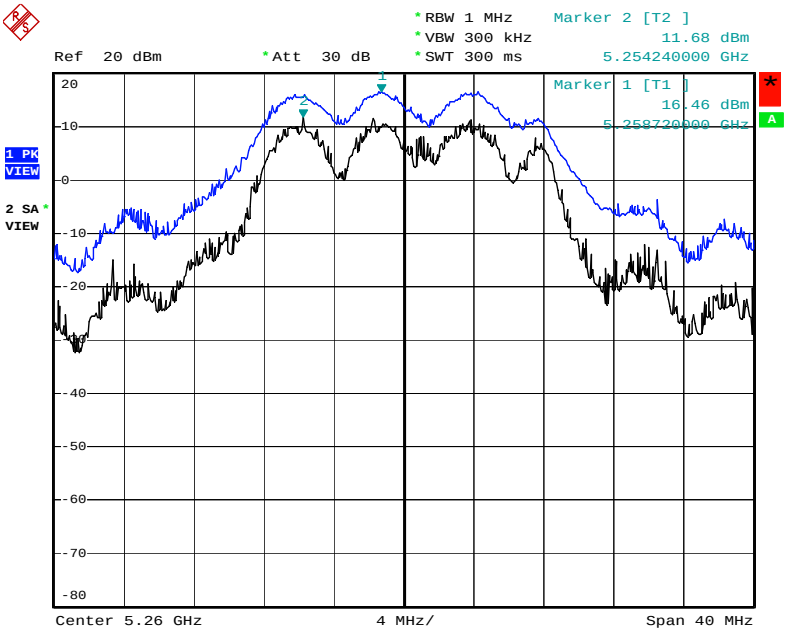
Date: 16.SEP.2009 19:12:06

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 5-1 + Ant. 5-3 / 5670 MHz



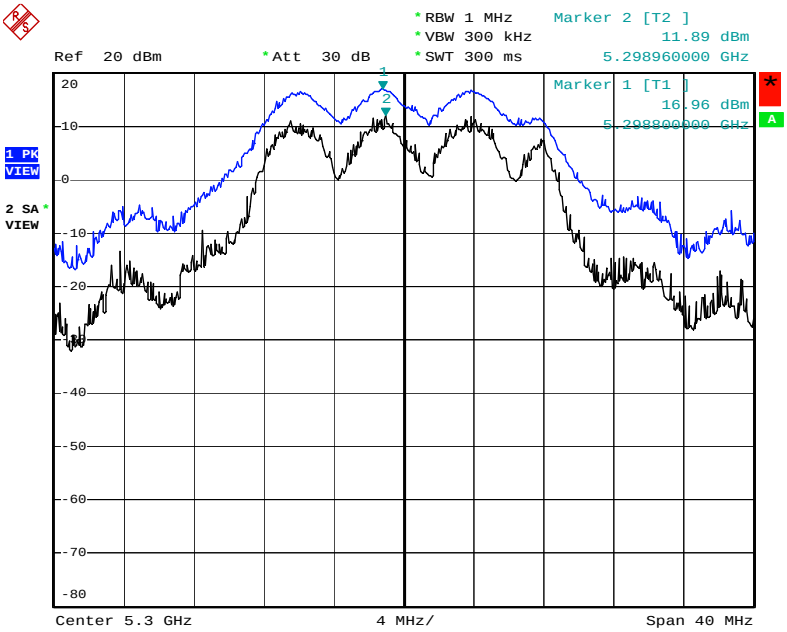
Date: 16.SEP.2009 19:16:42

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 5-1 + Ant. 5-3 / 5260 MHz



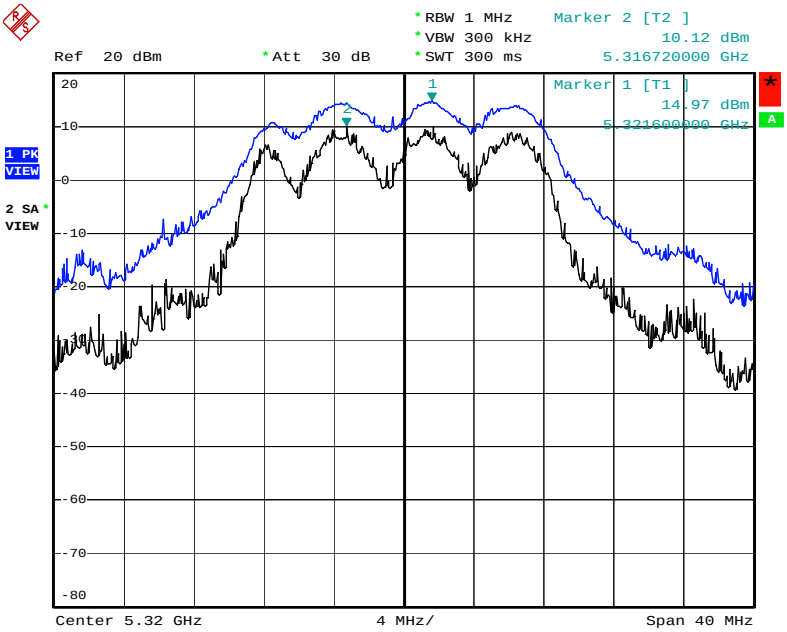
Date: 16.SEP.2009 17:42:27

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 5-1 + Ant. 5-3 / 5300 MHz



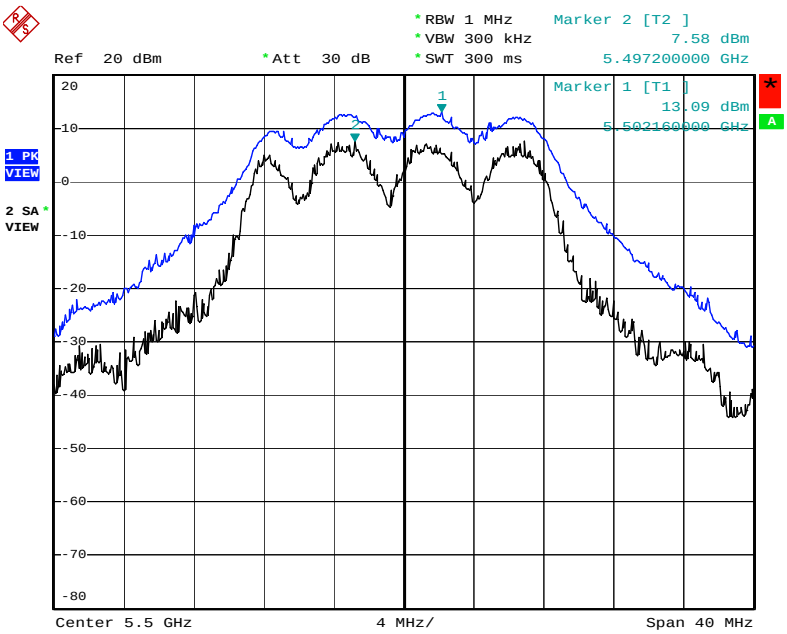
Date: 16.SEP.2009 17:45:56

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 5-1 + Ant. 5-3 / 5320 MHz



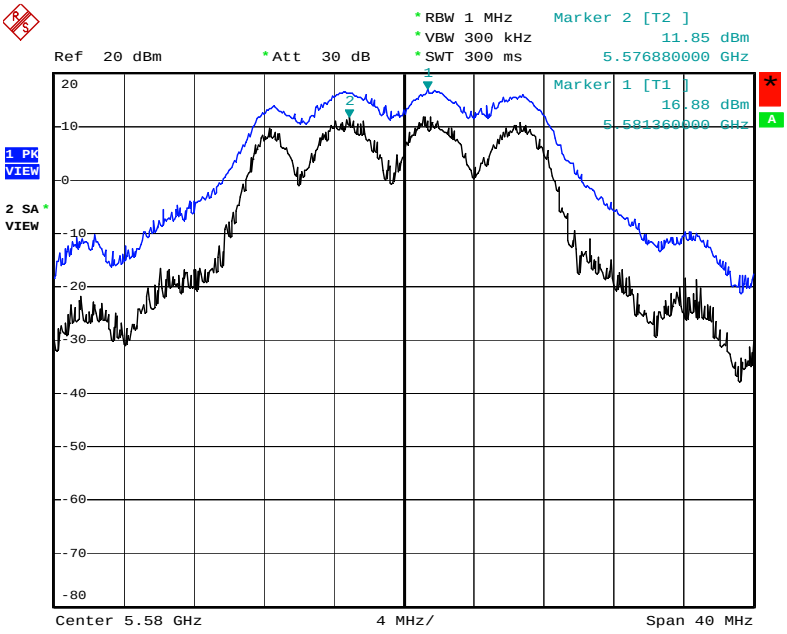
Date: 16.SEP.2009 17:49:37

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 5-1 + Ant. 5-3 / 5500 MHz



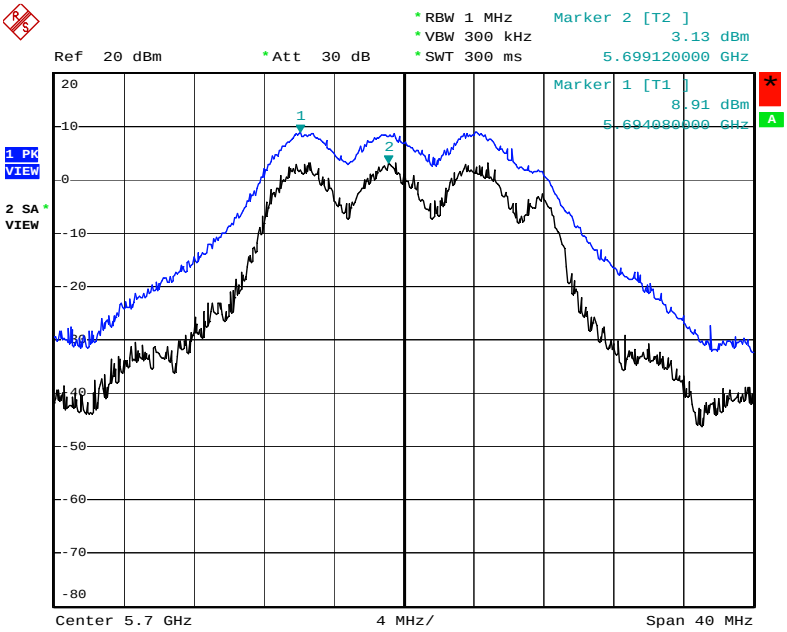
Date: 16.SEP.2009 17:55:41

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 5-1 + Ant. 5-3 / 5580 MHz



Date: 16.SEP.2009 17:57:55

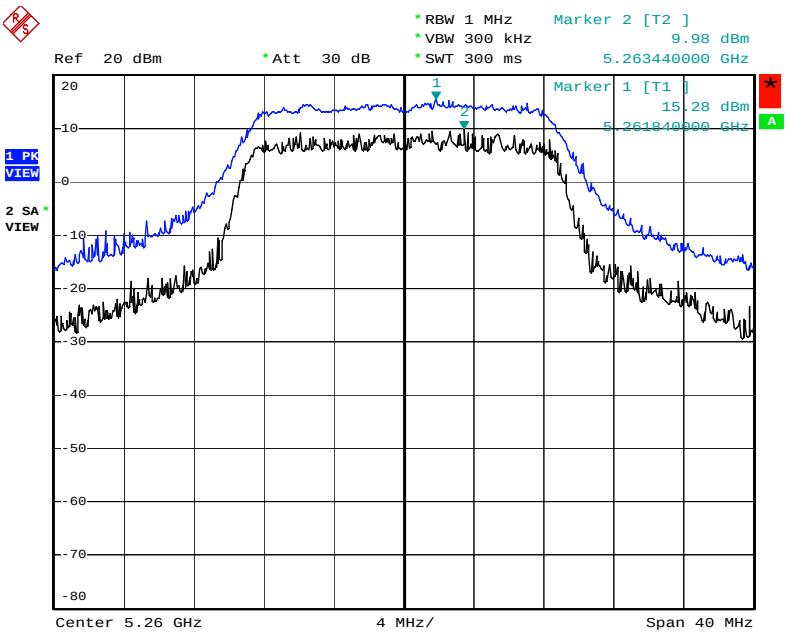
Peak Excursion Plot on Configuration IEEE 802.11a Ant. 5-1 + Ant. 5-3 / 5700 MHz



Date: 16.SEP.2009 18:03:31

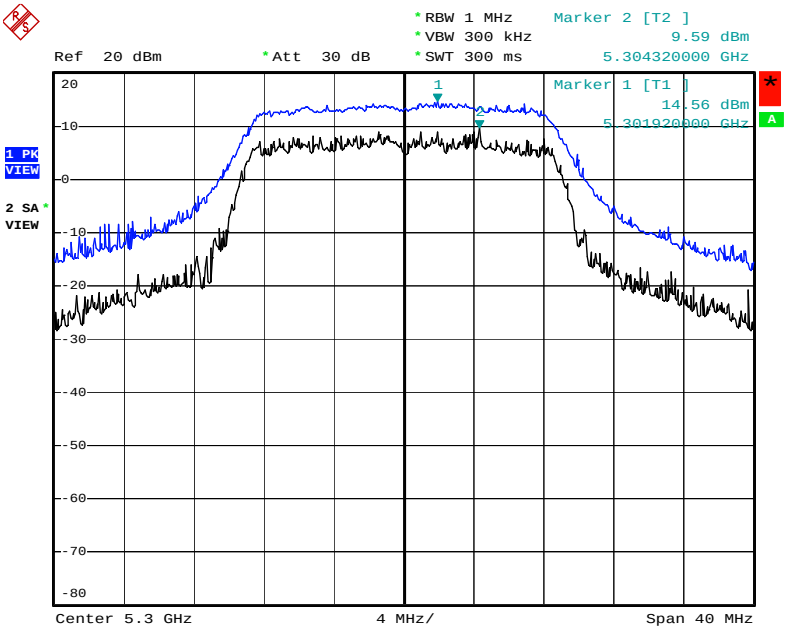
<For Antenna 6>:

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 6-1 + Ant. 6-3 / 5260 MHz



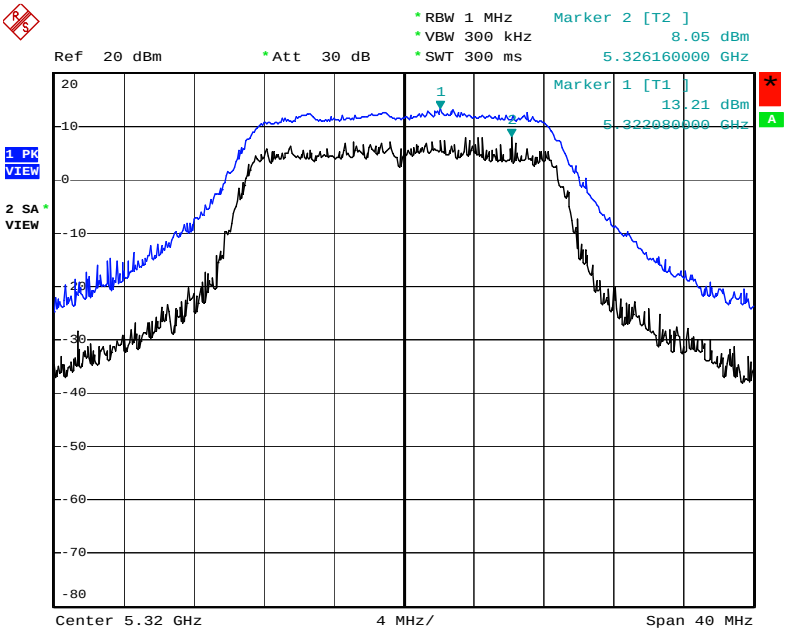
Date: 16.SEP.2009 18:24:10

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 6-1 + Ant. 6-3 / 5300 MHz



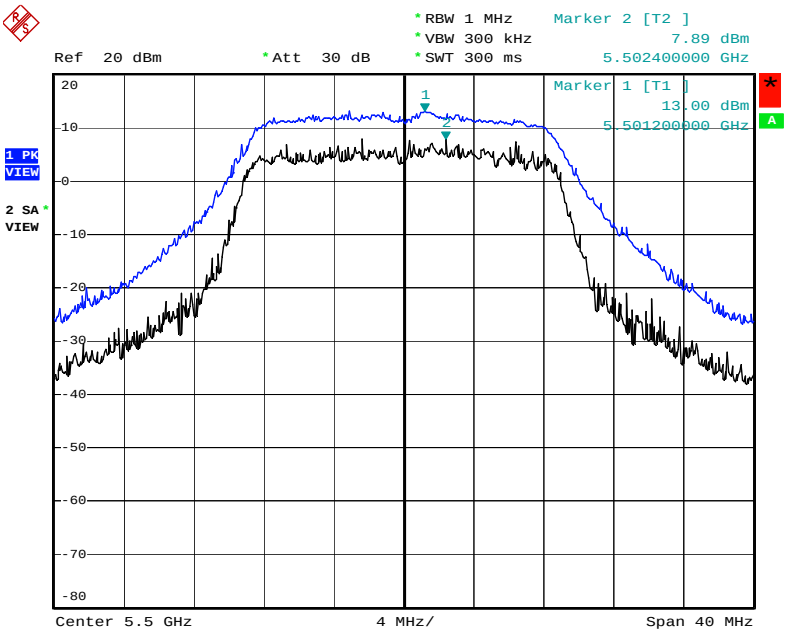
Date: 9.OCT.2009 18:37:13

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 6-1 + Ant. 6-3 / 5320 MHz



Date: 16.SEP.2009 18:32:12

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 6-1 + Ant. 6-3 / 5500 MHz



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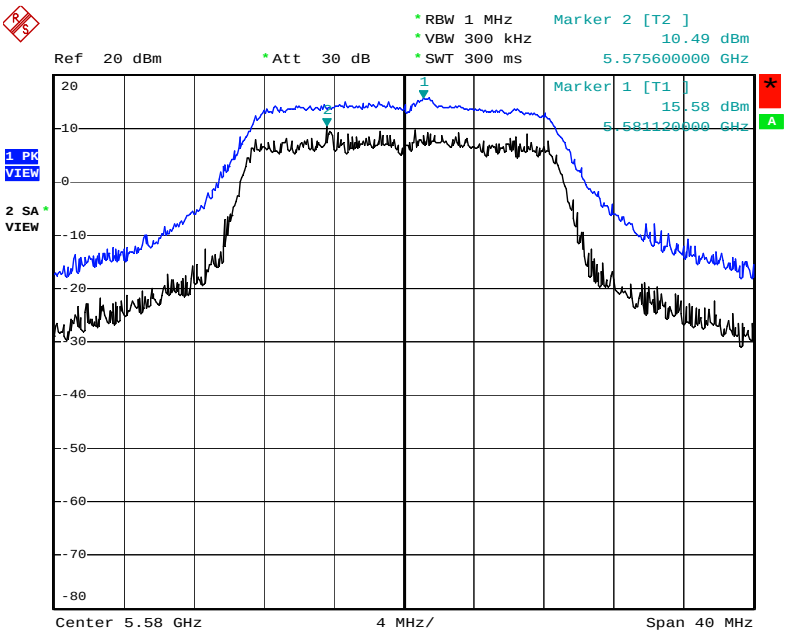
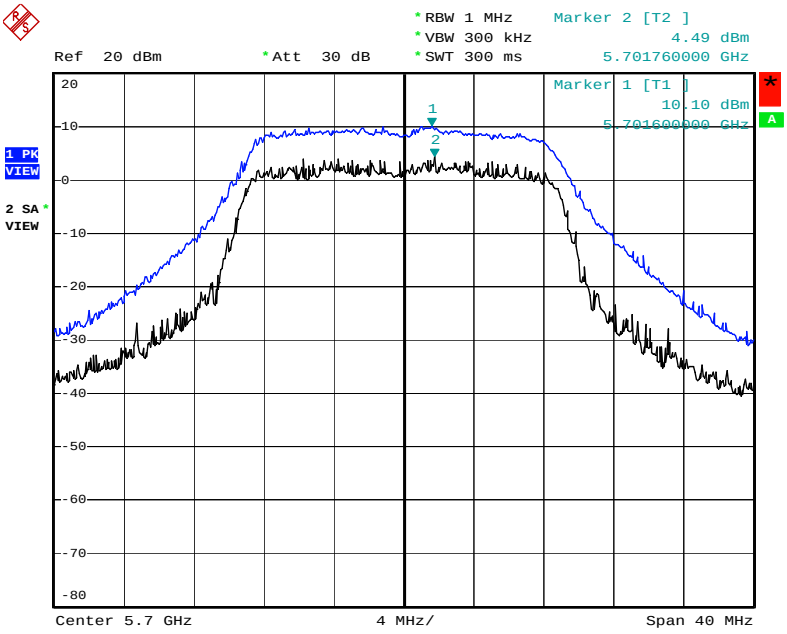
Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 6-1 + Ant. 6-3 / 5580 MHz



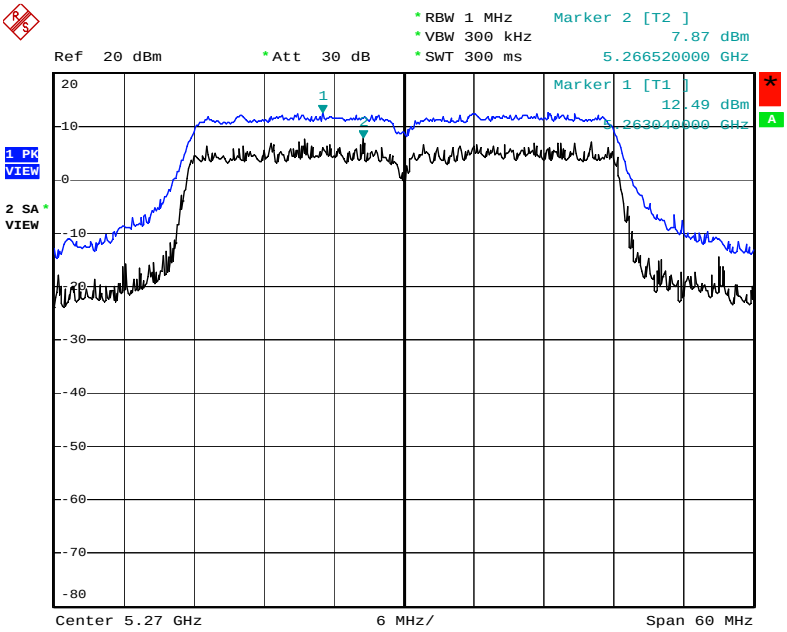
Date: 9.OCT.2009 17:29:50

Peak Excursion Plot on Configuration 802.11n MCS8 20MHz Ant. 6-1 + Ant. 6-3 / 5700 MHz



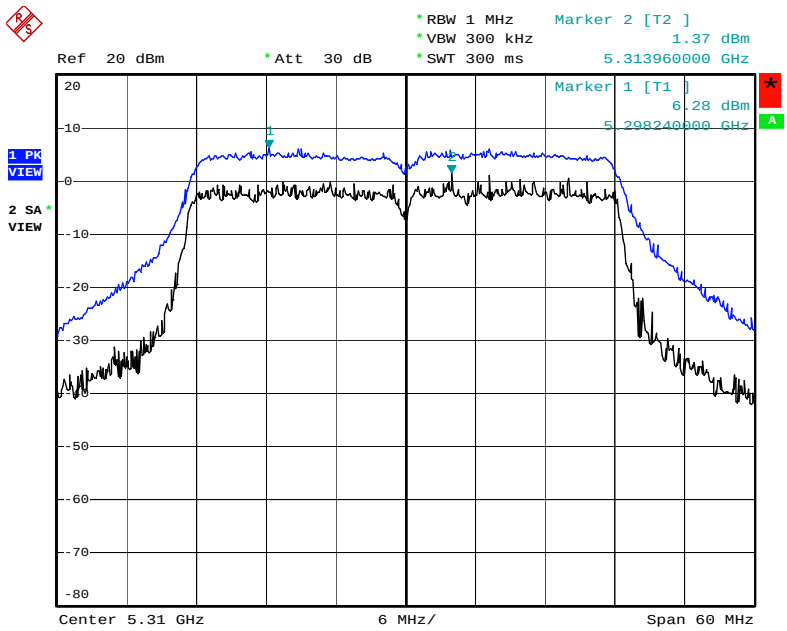
Date: 16.SEP.2009 18:43:45

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 6-1 + Ant. 6-3 / 5270 MHz



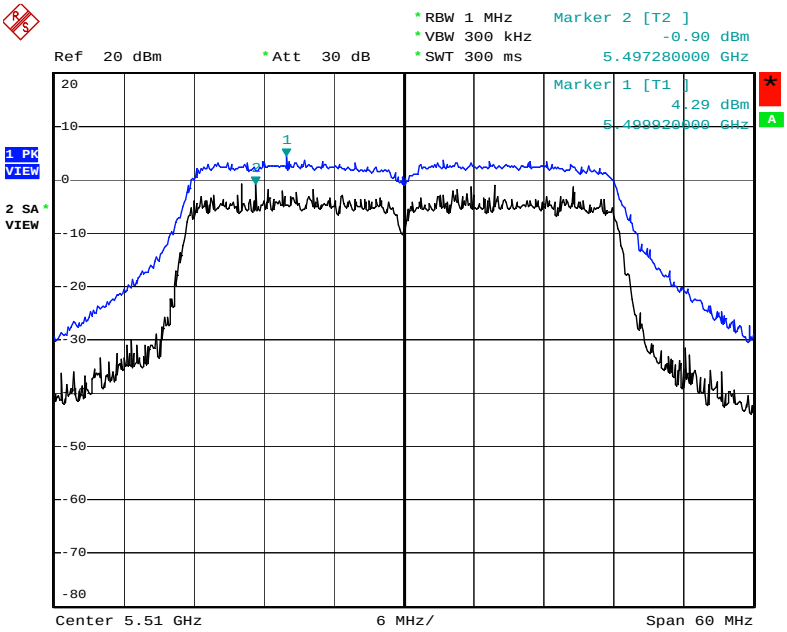
Date: 16.SEP.2009 18:54:13

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 6-1 + Ant. 6-3 / 5310 MHz



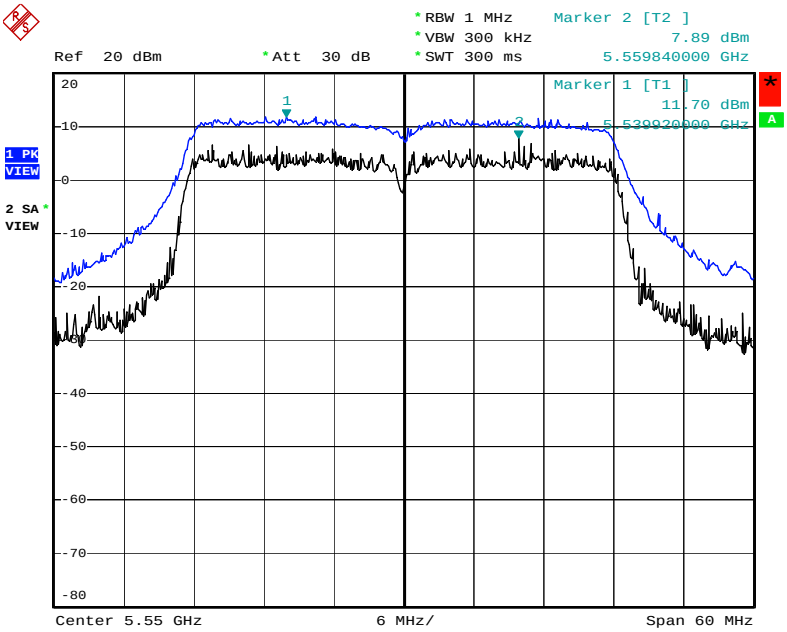
Date: 16.SEP.2009 19:00:36

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 6-1 + Ant. 6-3 / 5510MHz



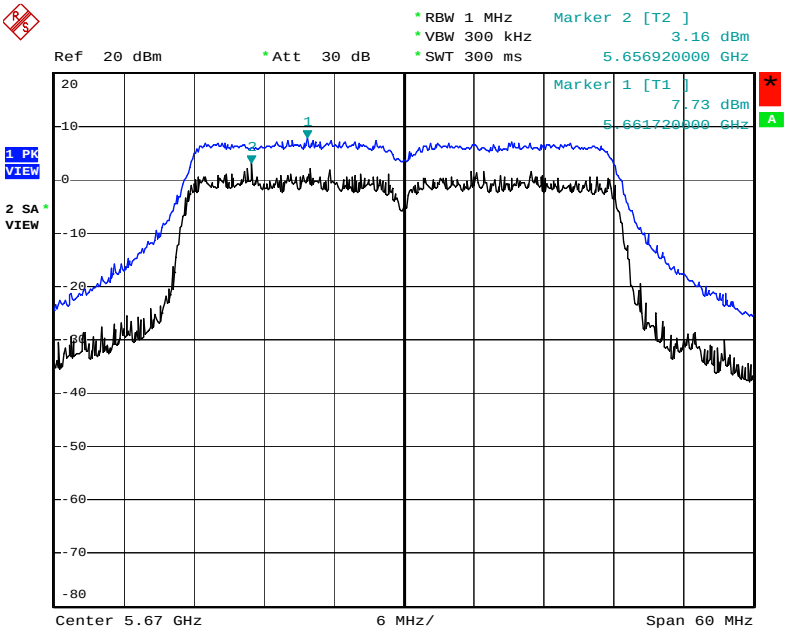
Date: 16.SEP.2009 19:09:32

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 6-1 + Ant. 6-3 / 5550 MHz



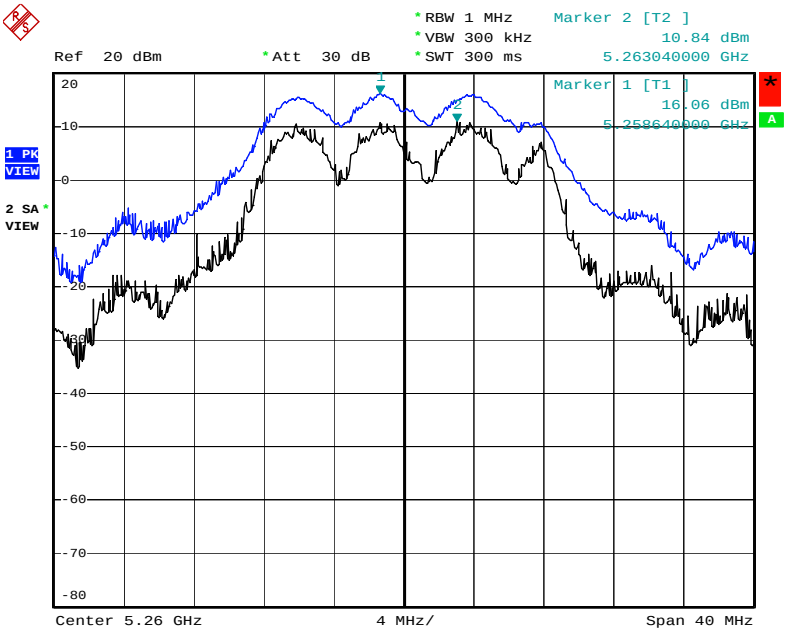
Date: 16.SEP.2009 19:12:53

Peak Excursion Plot on Configuration 802.11n MCS8 40MHz Ant. 6-1 + Ant. 6-3 / 5670 MHz



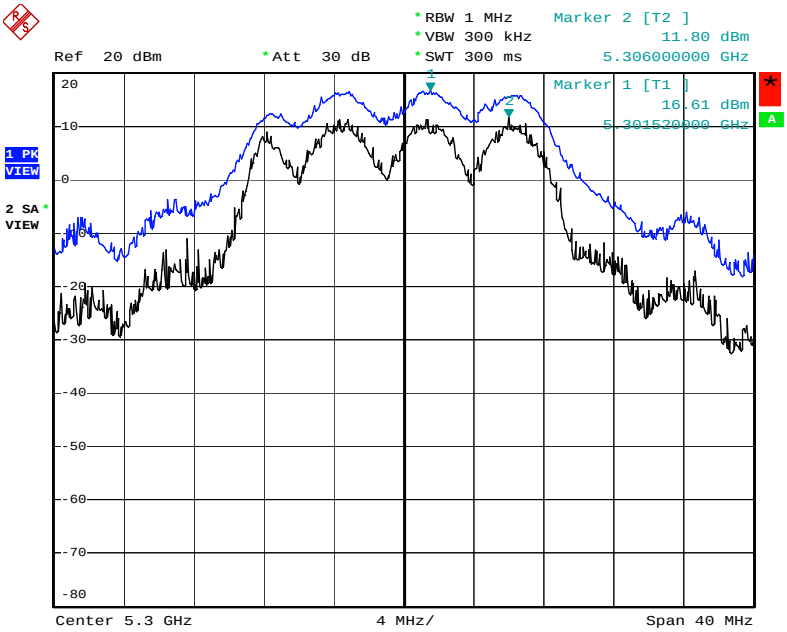
Date: 16.SEP.2009 19:17:26

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 6-1 + Ant. 6-3 / 5260 MHz



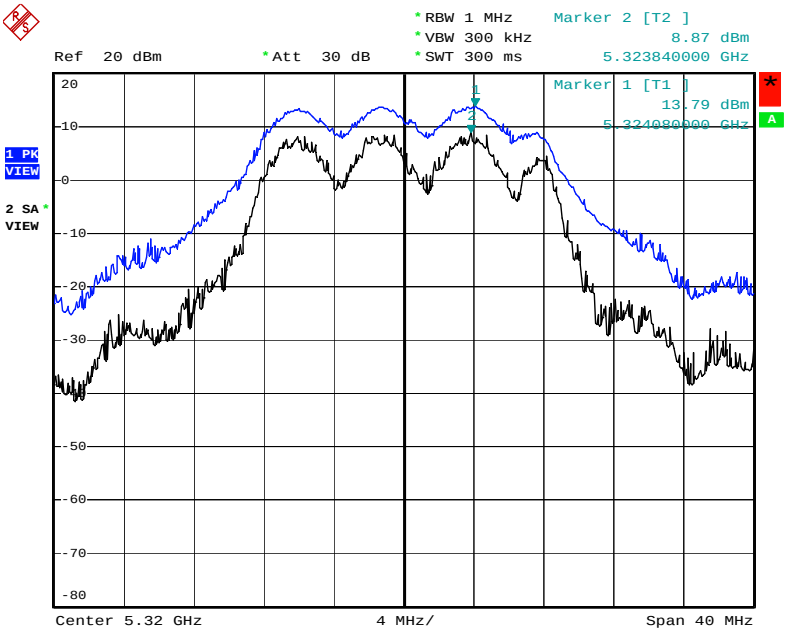
Date: 16.SEP.2009 17:40:19

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 6-1 + Ant. 6-3 / 5300 MHz



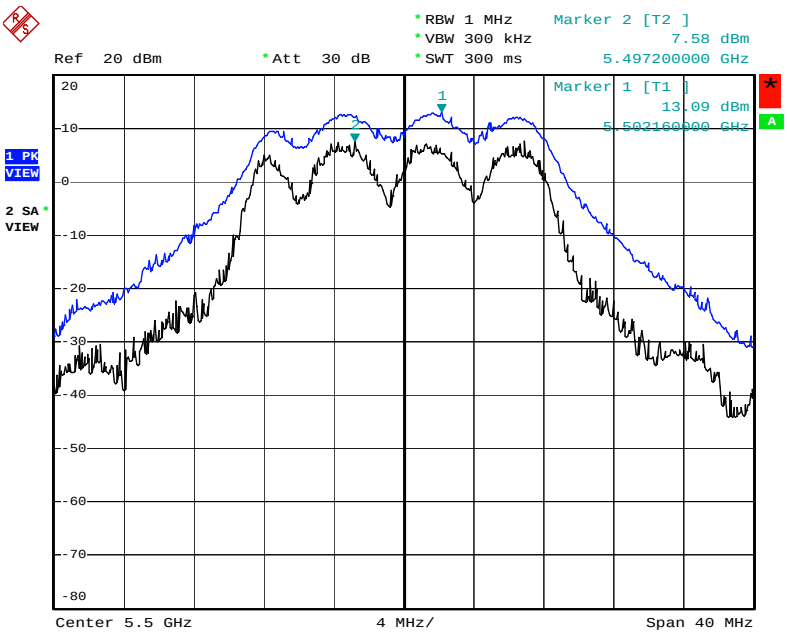
Date: 16.SEP.2009 17:43:20

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 6-1 + Ant. 6-3 / 5320 MHz



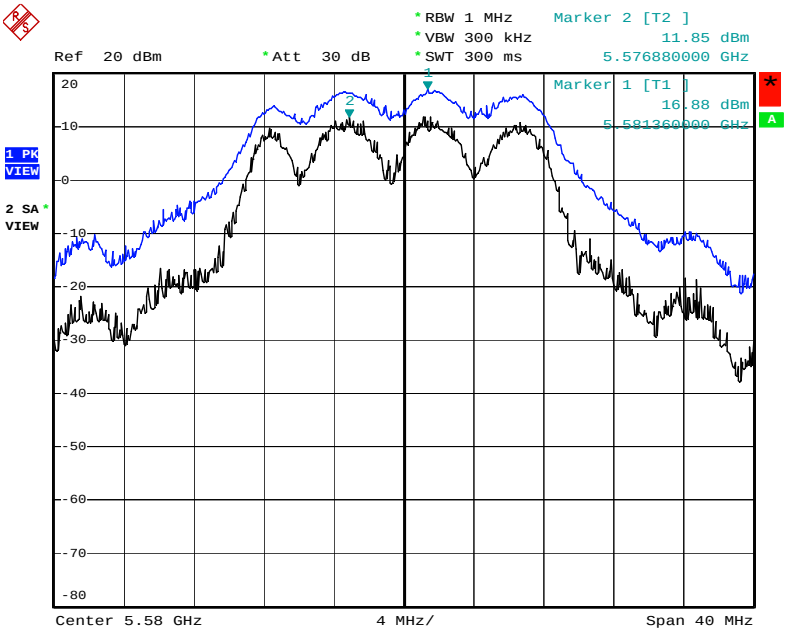
Date: 16.SEP.2009 17:50:43

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 6-1 + Ant. 6-3 / 5500 MHz



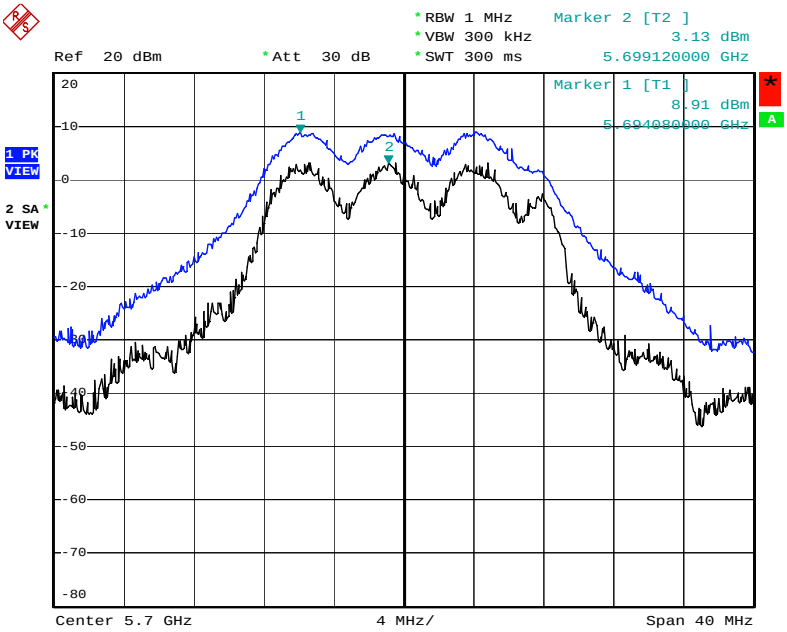
Date: 16.SEP.2009 17:55:41

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 6-1 + Ant. 6-3 / 5580 MHz



Date: 16.SEP.2009 17:57:55

Peak Excursion Plot on Configuration IEEE 802.11a Ant. 6-1 + Ant. 6-3 / 5700 MHz



Date: 16.SEP.2009 18:03:31

4.6. Radiated Emissions Measurement

4.6.1. Limit

For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.25-5.35 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 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 / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	1000KHz / 1000KHz for peak

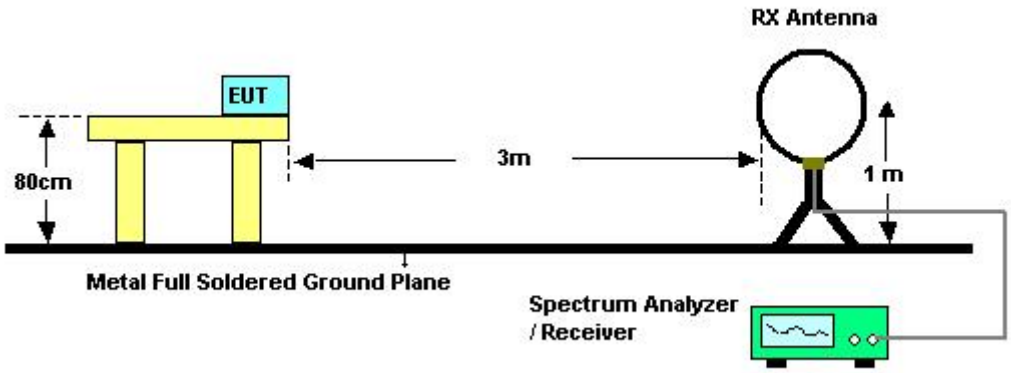
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

4.6.3. Test Procedures

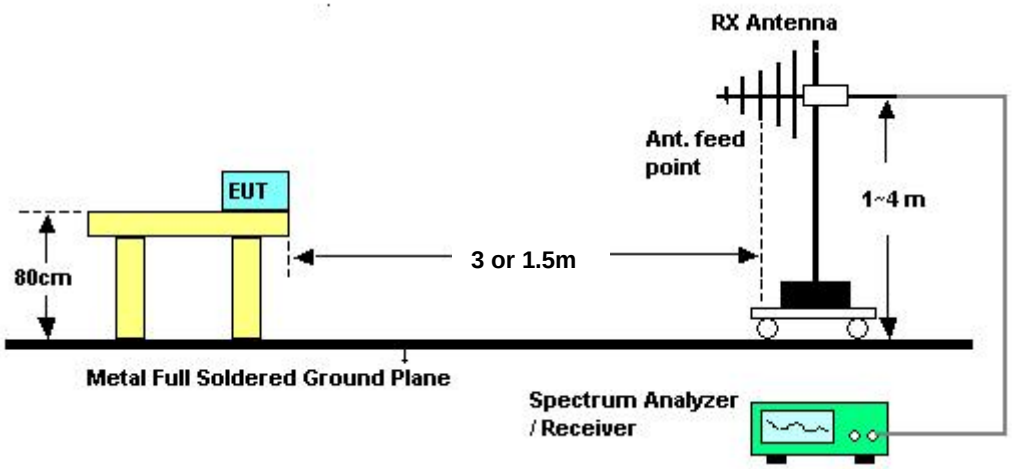
1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting 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 30MHz



For radiated emissions above 30MHz



Above 5GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade form 3m to 1.5m.

Distance extrapolation factor = 20 log (specific distance [3m] / test distance [1.5m]) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor [6 dB].

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	26.8°C	Humidity	56%
Test Engineer	Beck Wu	Configurations	Normal Link
Test Date	Sep. 12, 2009		

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);

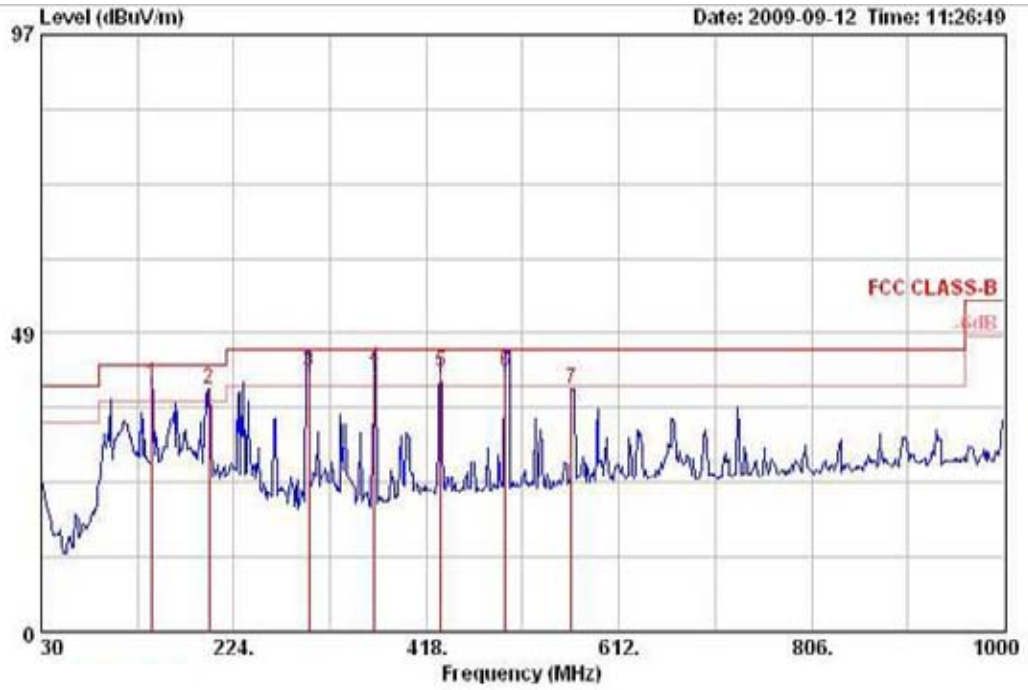
Limit line = specific limits (dBuV) + distance extrapolation factor.

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

<For Antenna 1>:

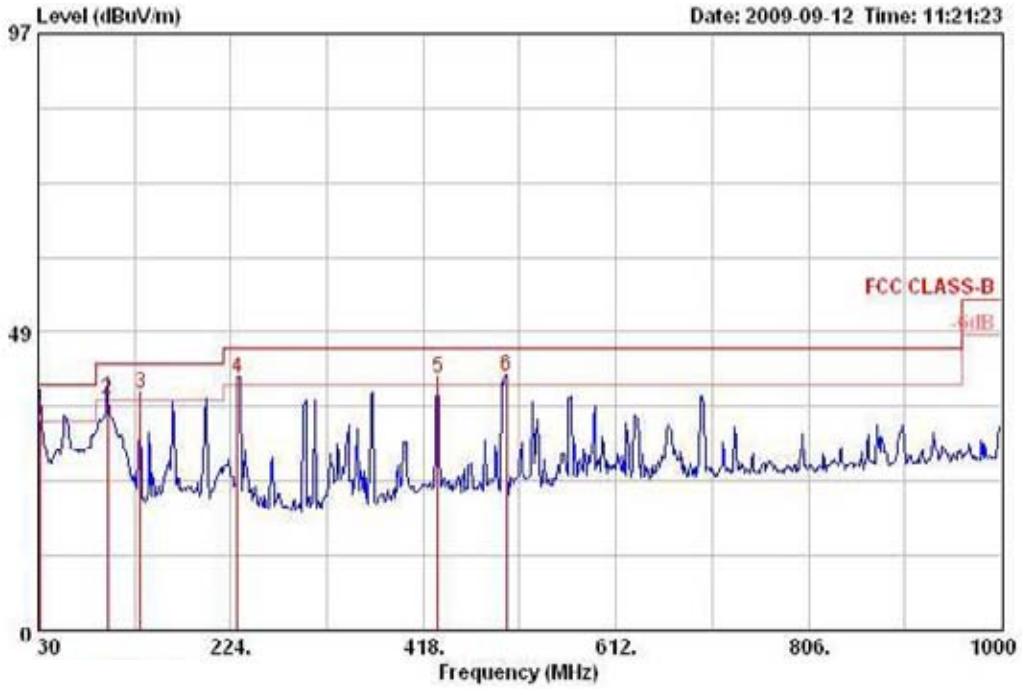
Temperature	26.8°C	Humidity	56%
Test Engineer	Beck Wu	Configurations	Normal Link / Antenna 1

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	141.550	40.37	-3.13	43.50	54.10	12.26	27.39	1.41	QP	HORIZONTAL	195	100
2 !	198.780	39.61	-3.89	43.50	55.77	9.25	27.11	1.70	Peak	HORIZONTAL	0	100
3 !	299.660	42.26	-3.74	46.00	53.70	13.36	26.90	2.10	QP	HORIZONTAL	0	100
4 !	365.620	42.80	-3.20	46.00	52.78	15.14	27.36	2.23	QP	HORIZONTAL	177	100
5 !	432.550	42.30	-3.70	46.00	51.00	16.57	27.76	2.50	QP	HORIZONTAL	192	100
6 !	497.540	42.39	-3.61	46.00	50.20	17.58	28.09	2.69	QP	HORIZONTAL	188	100
7	564.470	39.46	-6.54	46.00	46.37	18.36	28.10	2.83	Peak	HORIZONTAL	0	100

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 !	31.940	34.21	-5.79	40.00	43.02	17.69	27.00	0.50	QP	VERTICAL	20	100
2 !	99.840	37.70	-5.80	43.50	53.11	10.99	27.60	1.20	QP	VERTICAL	186	100
3 !	132.820	38.58	-4.92	43.50	52.39	12.28	27.43	1.33	Peak	VERTICAL	0	400
4 !	230.790	41.17	-4.83	46.00	55.04	11.34	27.04	1.82	Peak	VERTICAL	0	400
5 !	432.550	41.28	-4.72	46.00	49.97	16.57	27.76	2.50	Peak	VERTICAL	0	400
6 !	501.420	41.46	-4.54	46.00	49.22	17.64	28.10	2.70	Peak	VERTICAL	0	400

Note:

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

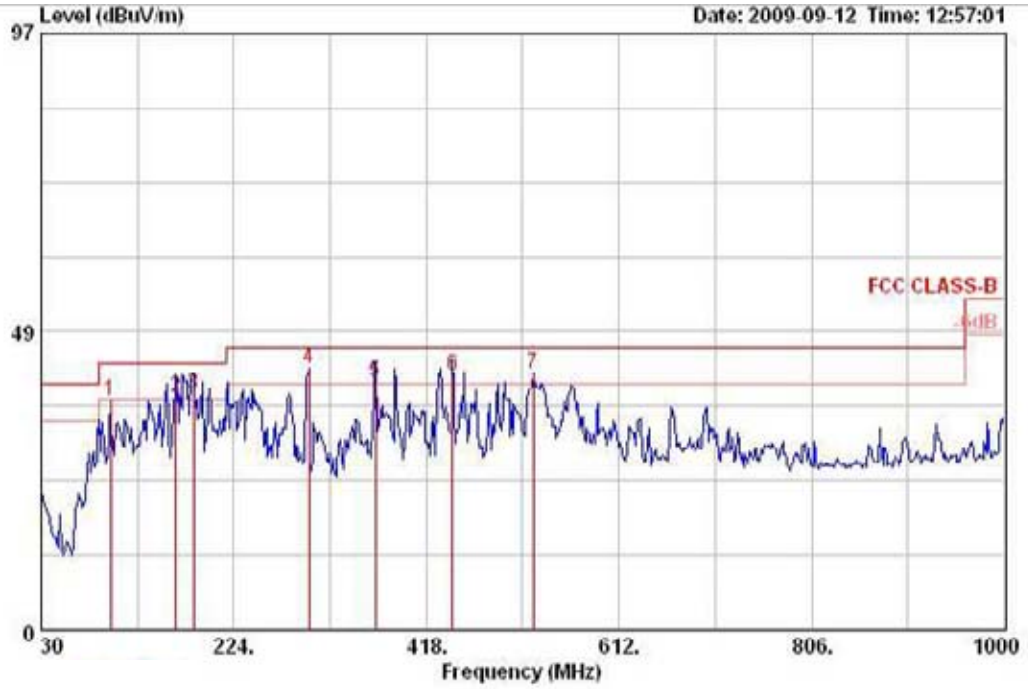
Emission level (dBuV/m) = 20 log Emission level (uV/m).

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

<For Antenna 2>:

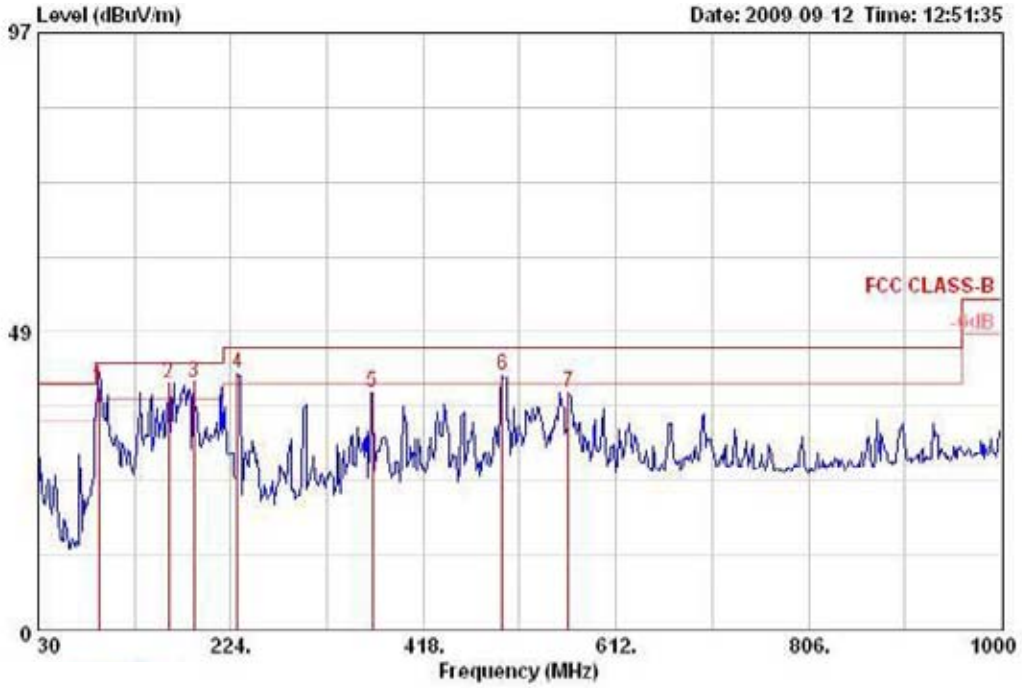
Temperature	26.8℃	Humidity	56%
Test Engineer	Beck Wu	Configurations	Normal Link / Antenna 2

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1	99.840	37.21	-6.29	43.50	52.62	10.99	27.60	1.20	Peak	HORIZONTAL	0	100
2 !	165.800	37.89	-5.61	43.50	51.17	12.47	27.27	1.53	QP	HORIZONTAL	36	100
3 !	181.260	38.40	-5.10	43.50	51.44	12.53	27.18	1.62	QP	HORIZONTAL	178	100
4 @	299.660	42.60	-3.40	46.00	54.05	13.36	26.90	2.10	Peak	HORIZONTAL	0	100
5 !	366.590	40.33	-5.67	46.00	50.29	15.17	27.37	2.23	QP	HORIZONTAL	193	100
6 !	444.190	41.37	-4.63	46.00	49.87	16.75	27.82	2.57	QP	HORIZONTAL	166	100
7 !	525.670	41.75	-4.25	46.00	49.18	17.92	28.10	2.75	Peak	HORIZONTAL	0	100

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 !	91.110	39.63	-3.87	43.50	56.98	9.18	27.64	1.10	QP	VERTICAL	23	100
2 !	160.950	40.05	-3.45	43.50	53.73	12.10	27.29	1.50	Peak	VERTICAL	0	400
3 @	187.140	40.35	-3.15	43.50	54.17	11.71	27.16	1.63	Peak	VERTICAL	0	400
4 !	230.790	41.74	-4.26	46.00	55.62	11.34	27.04	1.82	Peak	VERTICAL	0	400
5	366.590	38.66	-7.34	46.00	48.63	15.17	27.37	2.23	Peak	VERTICAL	0	400
6 !	497.540	41.47	-4.53	46.00	49.28	17.58	28.09	2.69	Peak	VERTICAL	0	400
7	564.470	30.79	-7.21	46.00	45.70	18.36	28.10	2.03	Peak	VERTICAL	0	400

Note:

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

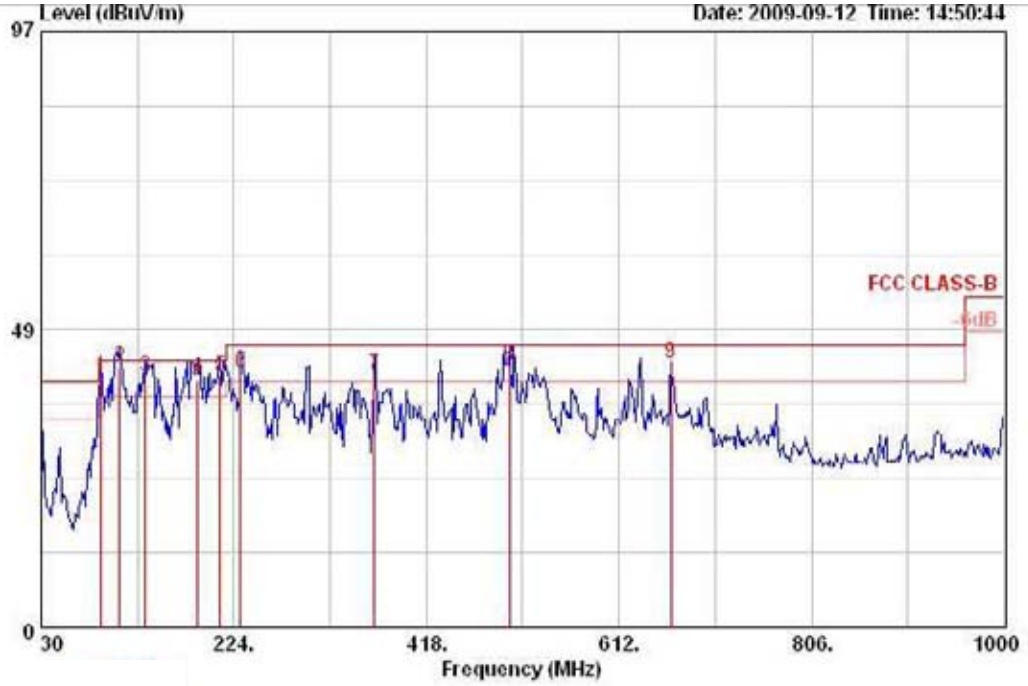
Emission level (dBuV/m) = 20 log Emission level (uV/m).

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

<For Antenna 3>:

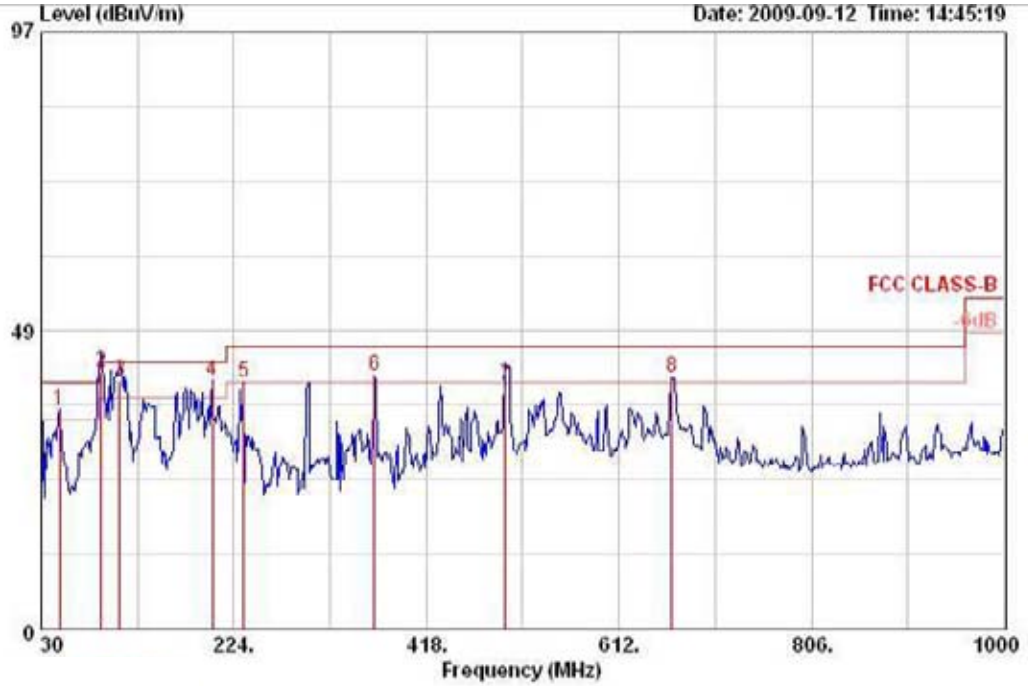
Temperature	26.8℃	Humidity	56%
Test Engineer	Beck Wu	Configurations	Normal Link / Antenna 3

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 !	90.140	40.90	-2.60	43.50	50.46	0.90	27.64	1.10	QP	HORIZONTAL	100	210
2 @	109.540	42.18	-1.32	43.50	56.81	11.72	27.56	1.20	QP	HORIZONTAL	178	189
3 !	134.760	41.00	-2.50	43.50	54.77	12.30	27.43	1.35	QP	HORIZONTAL	182	100
4 !	188.110	40.25	-3.25	43.50	54.26	11.50	27.16	1.64	QP	HORIZONTAL	192	100
5 !	210.420	40.81	-2.69	43.50	56.31	9.84	27.08	1.74	QP	HORIZONTAL	169	100
6 !	230.790	41.54	-4.46	46.00	55.42	11.34	27.04	1.02	QP	HORIZONTAL	160	100
7 !	365.620	41.10	-4.90	46.00	51.08	15.14	27.36	2.23	QP	HORIZONTAL	184	100
8 !	501.420	42.46	-3.54	46.00	50.22	17.64	28.10	2.70	QP	HORIZONTAL	190	100
9 !	664.380	43.00	-3.00	46.00	48.62	18.98	28.04	3.44	Peak	HORIZONTAL	0	100

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 !	48.430	35.52	-4.48	40.00	53.50	9.13	27.80	0.70	Peak	VERTICAL	0	400
2 !	90.140	41.66	-1.84	43.50	59.22	8.98	27.64	1.10	QP	VERTICAL	169	100
3 !	109.540	40.40	-3.02	43.50	55.11	11.72	27.56	1.20	QP	VERTICAL	100	100
4 !	202.660	40.30	-3.20	43.50	56.42	9.26	27.09	1.71	Peak	VERTICAL	0	400
5 !	233.700	40.16	-5.84	46.00	53.80	11.55	27.03	1.83	Peak	VERTICAL	0	400
6 !	365.620	41.17	-4.83	46.00	51.15	15.14	27.36	2.23	Peak	VERTICAL	0	400
7	497.540	39.50	-6.50	46.00	47.31	17.58	28.09	2.69	QP	VERTICAL	183	100
8 !	665.350	40.88	-5.12	46.00	46.50	18.98	28.03	3.44	Peak	VERTICAL	0	400

Note:

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

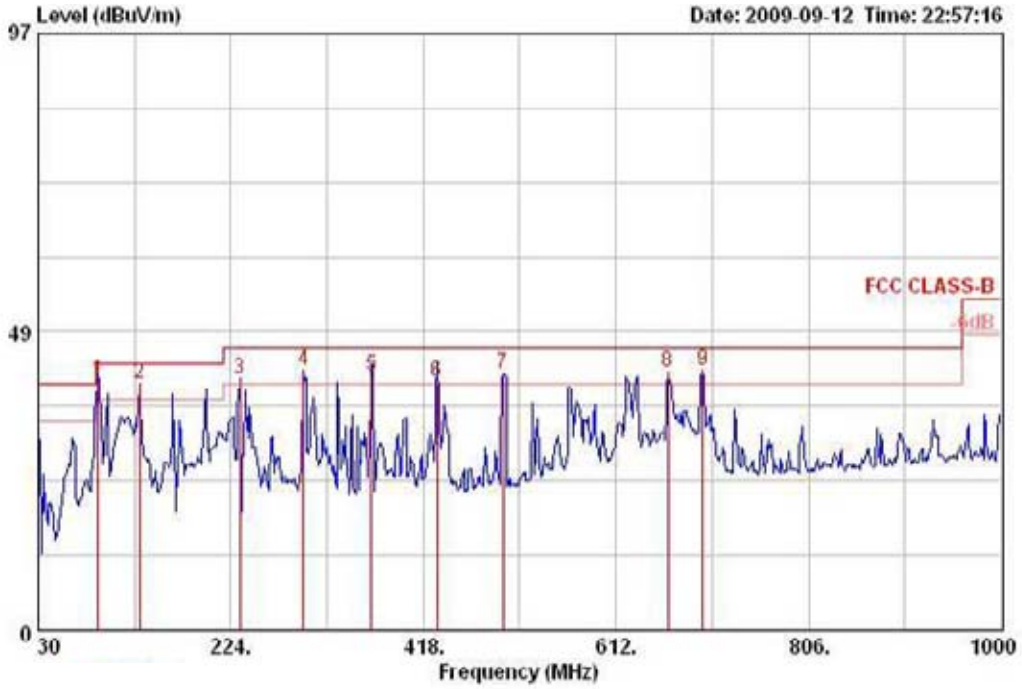
Emission level (dBuV/m) = 20 log Emission level (uV/m).

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

<For Antenna 4>:

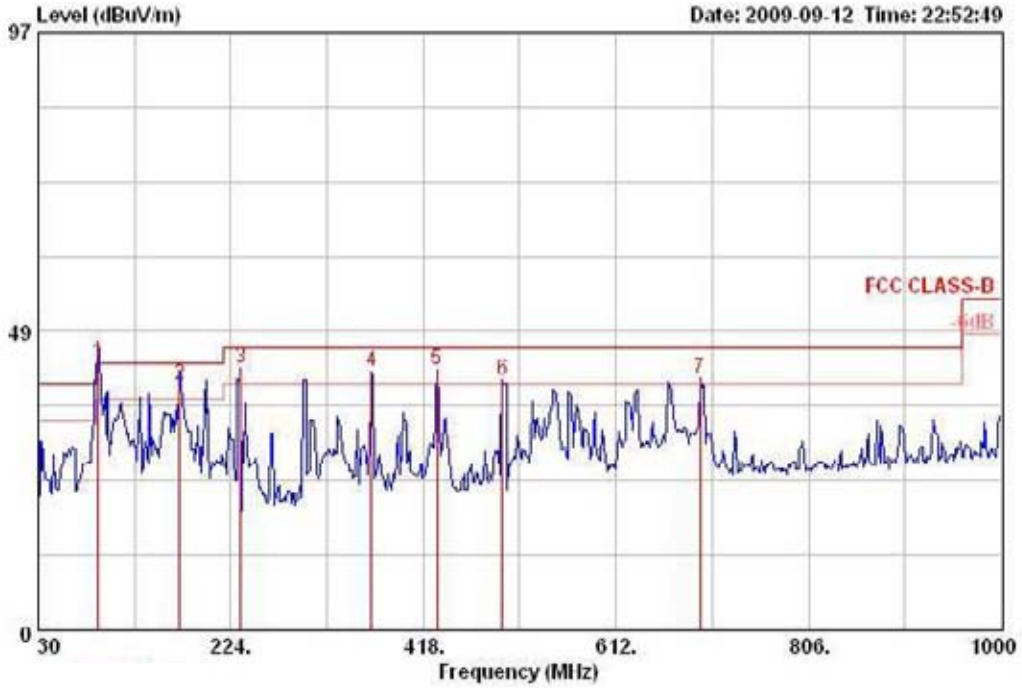
Temperature	26.8℃	Humidity	56%
Test Engineer	Beck Wu	Configurations	Normal Link / Antenna 4

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	90.140	40.67	-2.83	43.50	58.23	8.98	27.64	1.10	QP	HORIZONTAL	183	200
2 @	131.850	39.97	-3.53	43.50	53.81	12.28	27.44	1.32	Peak	HORIZONTAL	0	100
3 @	232.730	40.80	-5.20	46.00	54.52	11.48	27.03	1.83	Peak	HORIZONTAL	0	100
4 @	297.720	42.16	-3.84	46.00	53.63	13.34	26.91	2.09	Peak	HORIZONTAL	0	100
5 @	365.620	41.49	-4.51	46.00	51.47	15.14	27.36	2.23	QP	HORIZONTAL	185	198
6 @	431.580	40.40	-5.60	46.00	49.11	16.56	27.76	2.49	QP	HORIZONTAL	169	200
7 @	498.510	41.73	-4.27	46.00	49.52	17.60	28.09	2.70	Peak	HORIZONTAL	0	100
8 @	664.380	42.03	-3.97	46.00	47.65	18.98	28.04	3.44	Peak	HORIZONTAL	0	100
9 @	699.300	42.27	-3.73	46.00	47.88	19.09	28.00	3.30	Peak	HORIZONTAL	0	100

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	90.140	43.30	-0.20	43.50	60.06	8.90	27.64	1.10	QP	VERTICAL	107	100
2 @	172.590	39.79	-3.71	43.50	52.49	12.97	27.23	1.56	QP	VERTICAL	178	100
3 @	233.700	42.50	-3.50	46.00	56.14	11.55	27.03	1.83	Peak	VERTICAL	0	400
4 @	365.620	41.88	-4.12	46.00	51.86	15.14	27.36	2.23	Peak	VERTICAL	0	400
5 @	431.580	42.39	-3.61	46.00	51.10	16.56	27.76	2.49	Peak	VERTICAL	0	400
6 @	497.540	40.72	-5.28	46.00	48.53	17.58	28.09	2.69	Peak	VERTICAL	0	400
7 @	696.390	40.94	-5.06	46.00	46.54	19.08	28.00	3.32	Peak	VERTICAL	0	400

Note:

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

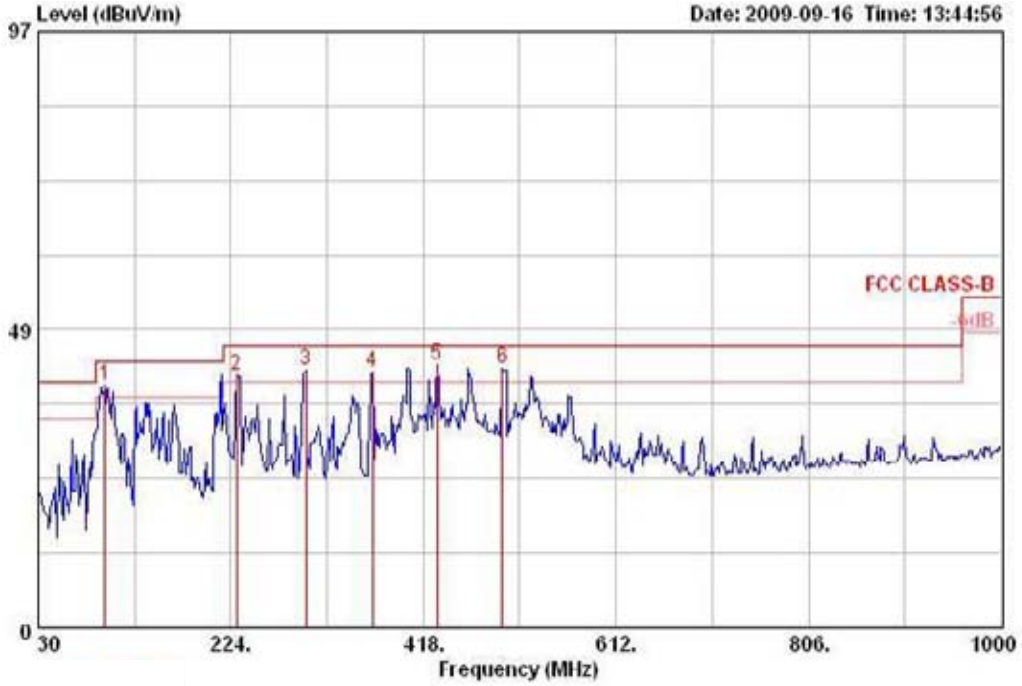
Emission level (dBuV/m) = 20 log Emission level (uV/m).

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

<For Antenna 5>:

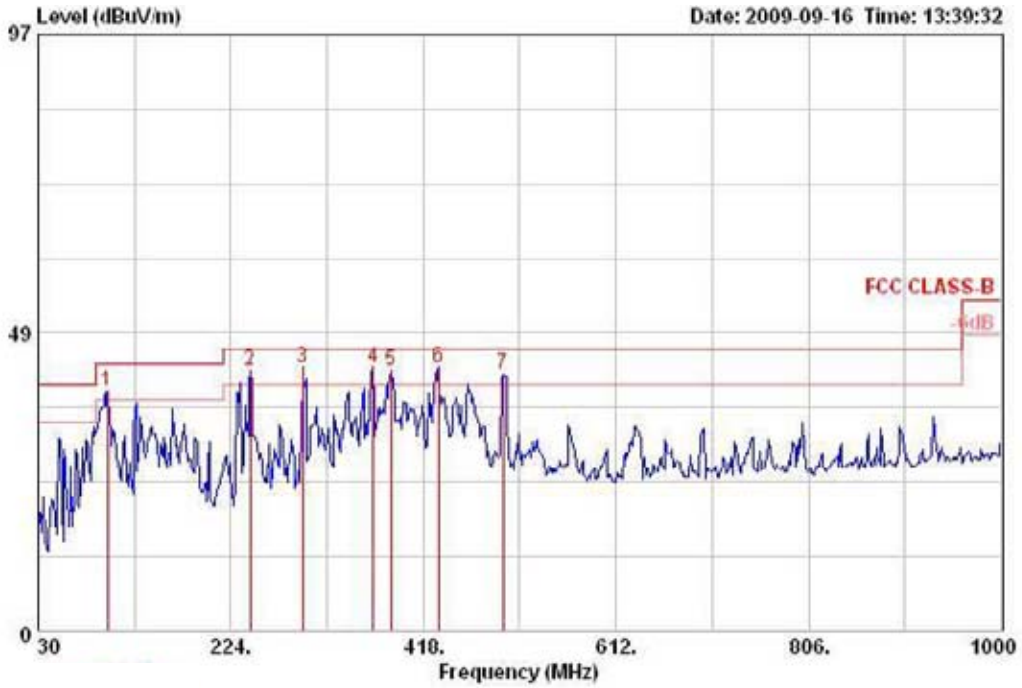
Temperature	26.8℃	Humidity	56%
Test Engineer	Beck Wu	Configurations	Normal Link / Antenna 5

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 !	96.930	39.51	-3.99	43.50	55.60	10.39	27.62	1.14	Peak	HORIZONTAL	0	100
2 !	229.820	41.23	-4.77	46.00	55.19	11.27	27.04	1.82	Peak	HORIZONTAL	0	100
3 !	299.660	42.10	-3.90	46.00	53.54	13.36	26.90	2.10	Peak	HORIZONTAL	0	100
4 !	366.590	41.80	-4.20	46.00	51.76	15.17	27.37	2.23	Peak	HORIZONTAL	0	100
5 !	431.580	42.71	-3.29	46.00	51.42	16.56	27.76	2.49	Peak	HORIZONTAL	315	100
6 !	497.540	42.35	-3.65	46.00	50.16	17.50	28.09	2.69	Peak	HORIZONTAL	0	100

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 !	99.840	39.04	-4.46	43.50	54.45	10.99	27.60	1.20	Peak	VERTICAL	0	400
2 !	243.400	42.22	-3.78	46.00	55.09	12.27	27.01	1.87	Peak	VERTICAL	0	400
3 @	296.750	42.96	-3.04	46.00	54.45	13.33	26.91	2.09	Peak	VERTICAL	213	100
4 @	367.560	42.79	-3.21	46.00	52.74	15.19	27.38	2.24	Peak	VERTICAL	0	400
5 !	385.020	42.22	-3.78	46.00	51.77	15.67	27.49	2.27	Peak	VERTICAL	0	400
6 !	433.520	42.70	-3.30	46.00	51.37	16.59	27.76	2.50	Peak	VERTICAL	0	400
7 !	498.510	41.69	-4.31	46.00	49.48	17.60	28.09	2.70	Peak	VERTICAL	0	400

Note:

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

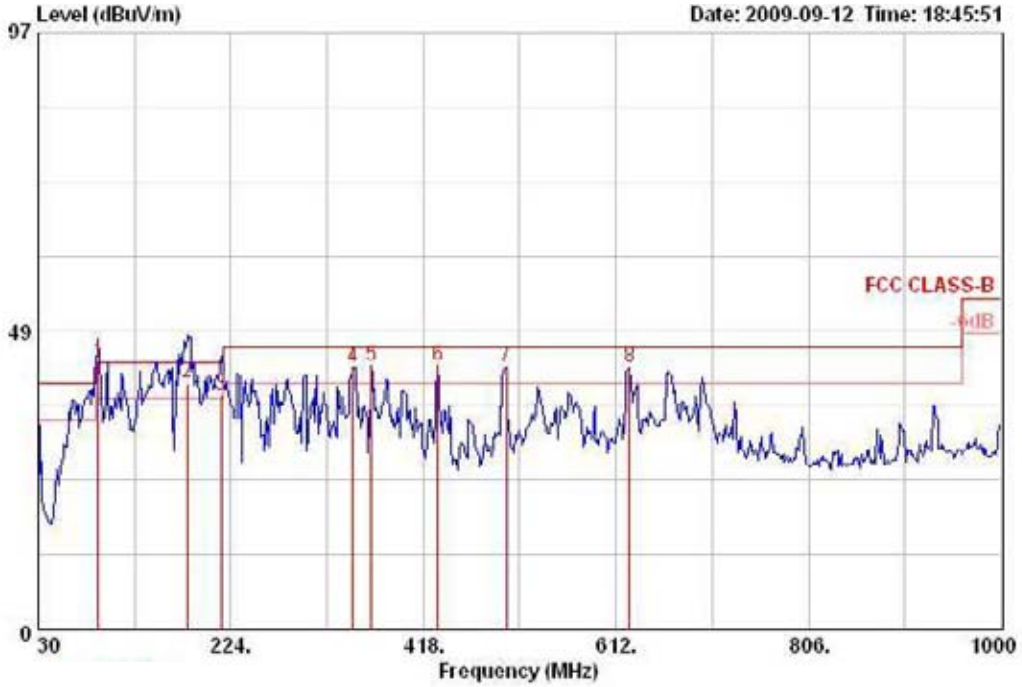
Emission level (dBuV/m) = 20 log Emission level (uV/m).

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

<For Antenna 6>:

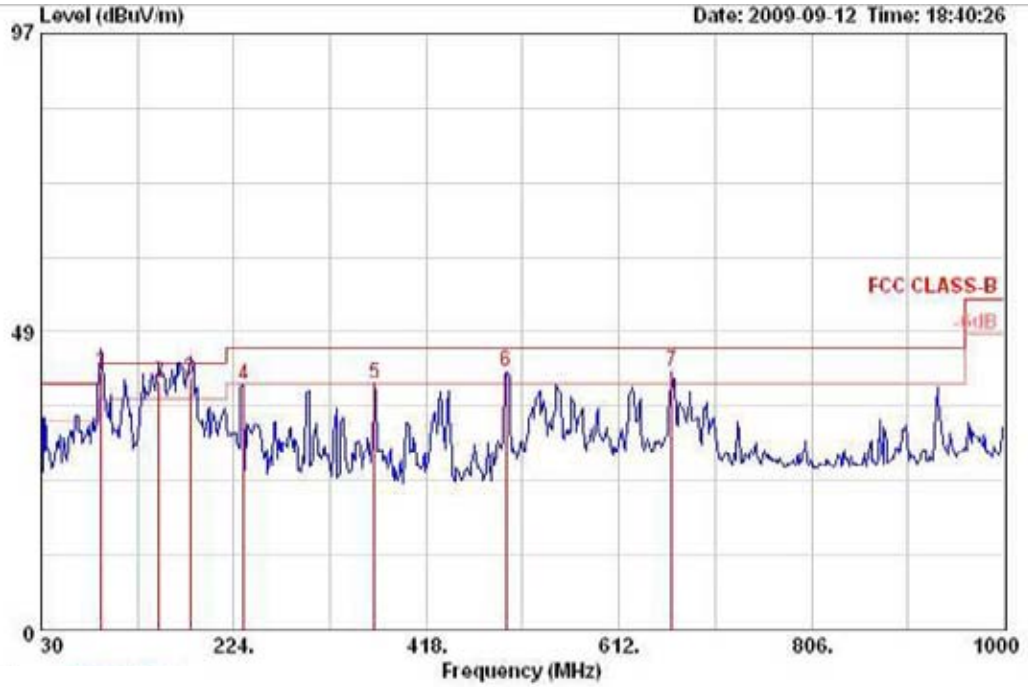
Temperature	26.8°C	Humidity	56%
Test Engineer	Beck Wu	Configurations	Normal Link / Antenna 6

Horizontal



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 @	90.140	43.44	-0.06	43.50	61.00	8.90	27.64	1.10	QP	HORIZONTAL	190	224
2 !	180.350	40.20	-3.30	43.50	52.66	13.14	27.20	1.60	QP	HORIZONTAL	182	200
3 !	214.300	38.01	-5.49	43.50	53.20	10.12	27.07	1.76	QP	HORIZONTAL	182	100
4 !	347.190	42.65	-3.35	46.00	53.04	14.64	27.23	2.19	Peak	HORIZONTAL	0	100
5 !	365.620	42.85	-3.15	46.00	52.84	15.14	27.36	2.23	Peak	HORIZONTAL	0	100
6 !	432.550	42.78	-3.22	46.00	51.47	16.57	27.76	2.50	Peak	HORIZONTAL	0	100
7 !	501.420	42.61	-3.39	46.00	50.37	17.64	28.10	2.70	Peak	HORIZONTAL	0	100
8 !	625.580	42.55	-3.45	46.00	48.72	18.85	28.07	3.05	Peak	HORIZONTAL	0	100

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Pol/Phase	Table Pos	Ant Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB			deg	cm
1 !	90.140	42.14	-1.36	43.50	59.70	8.98	27.64	1.10	QP	VERTICAL	176	100
2 !	148.340	40.29	-3.21	43.50	54.26	11.94	27.36	1.45	QP	VERTICAL	199	100
3 !	180.350	40.76	-2.74	43.50	53.22	13.14	27.20	1.60	QP	VERTICAL	169	100
4	233.700	39.82	-6.18	46.00	53.47	11.55	27.03	1.83	Peak	VERTICAL	0	400
5 !	365.620	40.16	-5.84	46.00	50.14	15.14	27.36	2.23	Peak	VERTICAL	0	400
6 !	498.510	41.93	-4.07	46.00	49.72	17.60	28.09	2.70	Peak	VERTICAL	0	400
7 !	665.350	41.95	-4.05	46.00	47.56	18.98	28.03	3.44	Peak	VERTICAL	0	400

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).

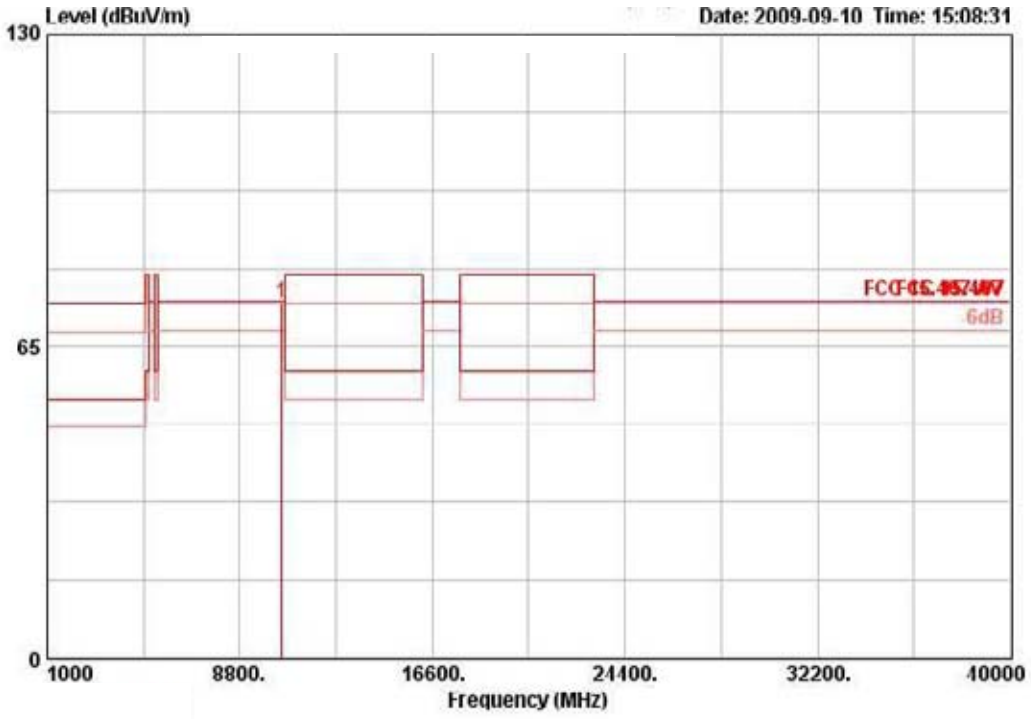
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

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

<For Antenna 1>:

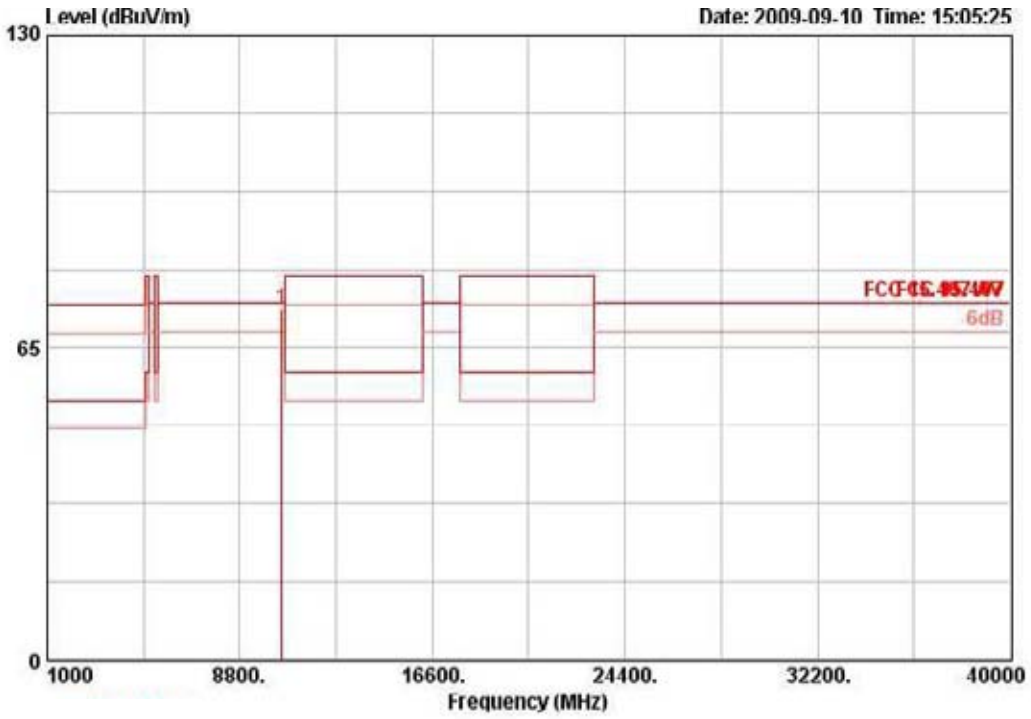
Temperature	26.8°C	Humidity	56%
Test Engineer	Beck Wu	Configurations	802.11n MCS8 20MHz Ch 52 / Ant. 1

Horizontal



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	Table Pos	Ant Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 @	10520.040	74.04	74.30	-0.26	64.56	6.58	35.50	38.40	308	112	PEAK	HORIZONTAL

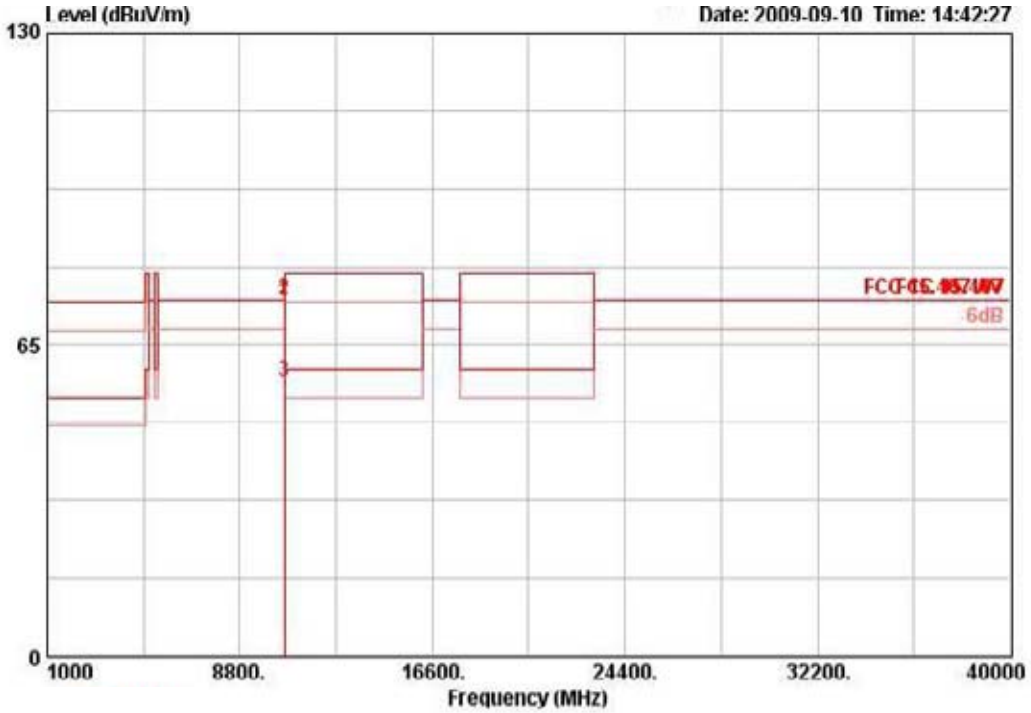
Vertical



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	Table Pos	Ant Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 @	10519.920	72.79	74.30	-1.51	63.32	6.58	35.50	38.39	217	111	PEAK	VERTICAL

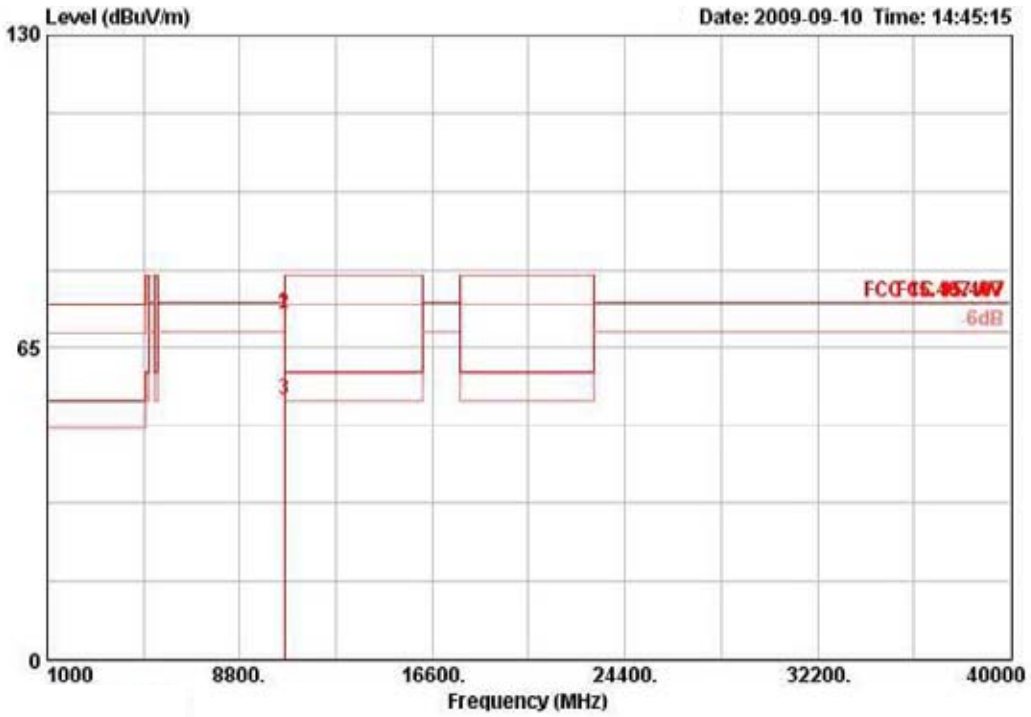
Temperature	26.8°C	Humidity	56%
Test Engineer	Beck Wu	Configurations	802.11n MCS8 20MHz Ch 60 / Ant. 1

Horizontal



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	Table Pos	Ant Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 @	10599.980	74.04	74.30	-0.26	64.48	6.61	35.42	38.38	338	107	PEAK	HORIZONTAL
2 @	10600.020	74.29	80.00	-5.71	64.73	6.61	35.42	38.38	338	107	PEAK	HORIZONTAL
3 @	10600.020	57.25	60.00	-2.75	47.68	6.61	35.42	38.38	338	107	AVERAGE	HORIZONTAL

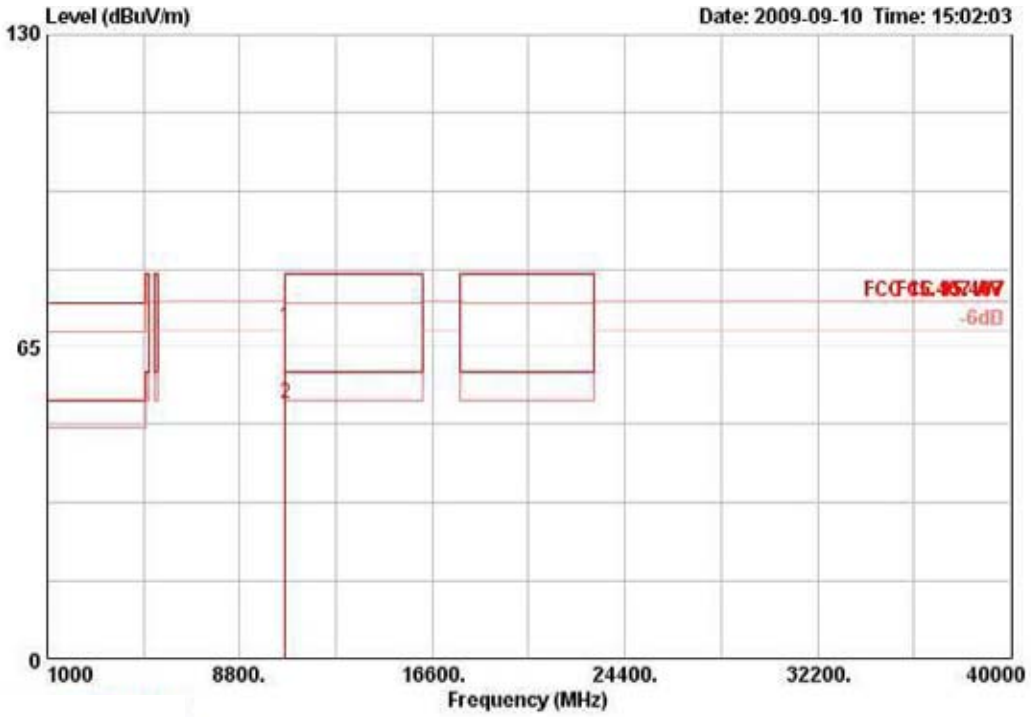
Vertical



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	Table Pos	Ant Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 @	10599.980	71.91	74.30	-2.39	62.34	6.61	35.42	38.38	213	108	PEAK	VERTICAL
2 @	10600.020	71.87	80.00	-8.13	62.30	6.61	35.42	38.38	213	108	PEAK	VERTICAL
3 @	10600.020	54.16	60.00	-5.84	44.59	6.61	35.42	38.38	213	108	AVERAGE	VERTICAL

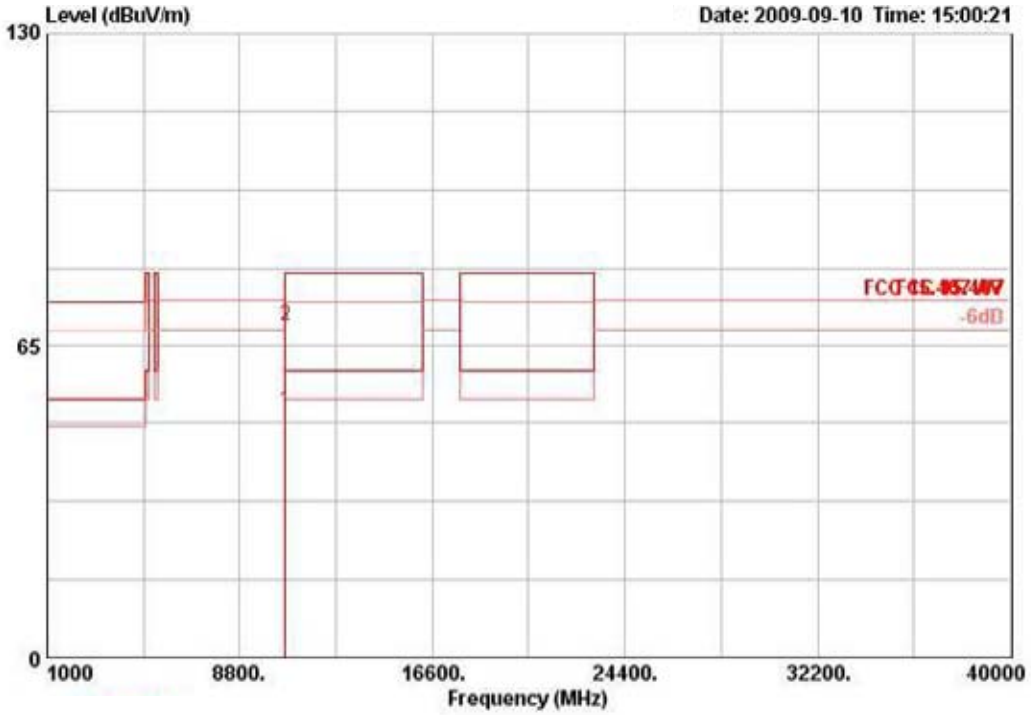
Temperature	26.8°C	Humidity	56%
Test Engineer	Beck Wu	Configurations	802.11n MCS8 20MHz Ch 64 / Ant. 1

Horizontal



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	Table Pos	Ant Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	10639.920	69.19	80.00	-10.81	59.59	6.62	35.39	38.37	0	113	PEAK	HORIZONTAL
2	10640.000	53.12	60.00	-6.88	43.52	6.62	35.39	38.37	0	113	AVERAGE	HORIZONTAL

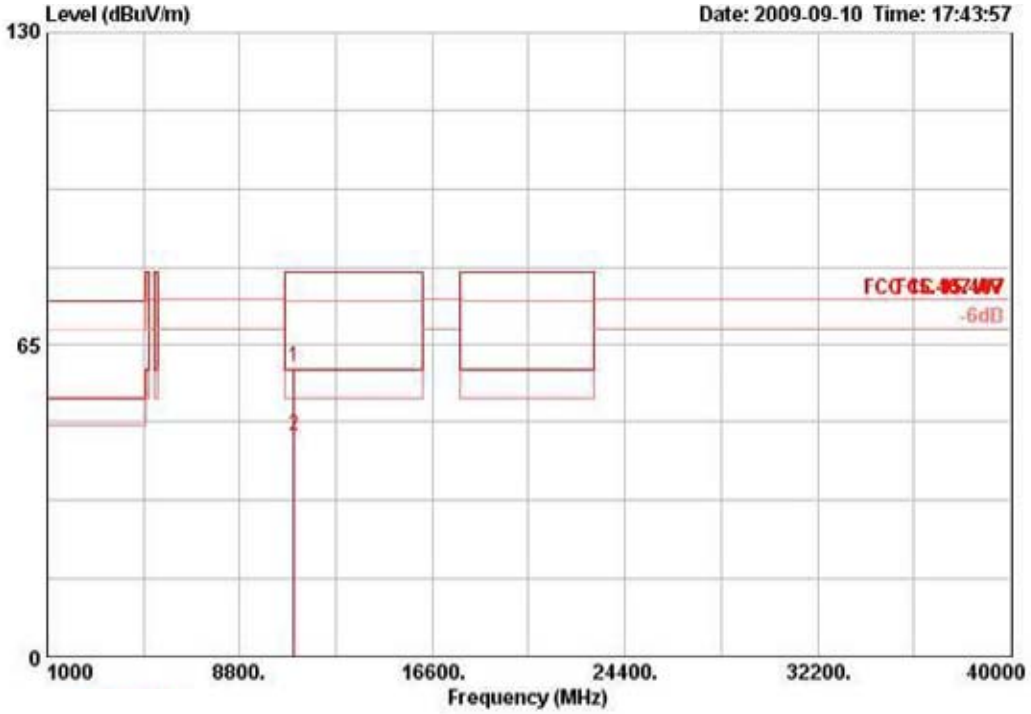
Vertical



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	Table Pos	Ant Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1 @	10638.560	51.35	60.00	-8.65	41.75	6.62	35.39	38.37	214	109	AVERAGE	VERTICAL
2	10640.000	69.10	80.00	-10.90	59.50	6.62	35.39	38.37	214	109	PEAK	VERTICAL

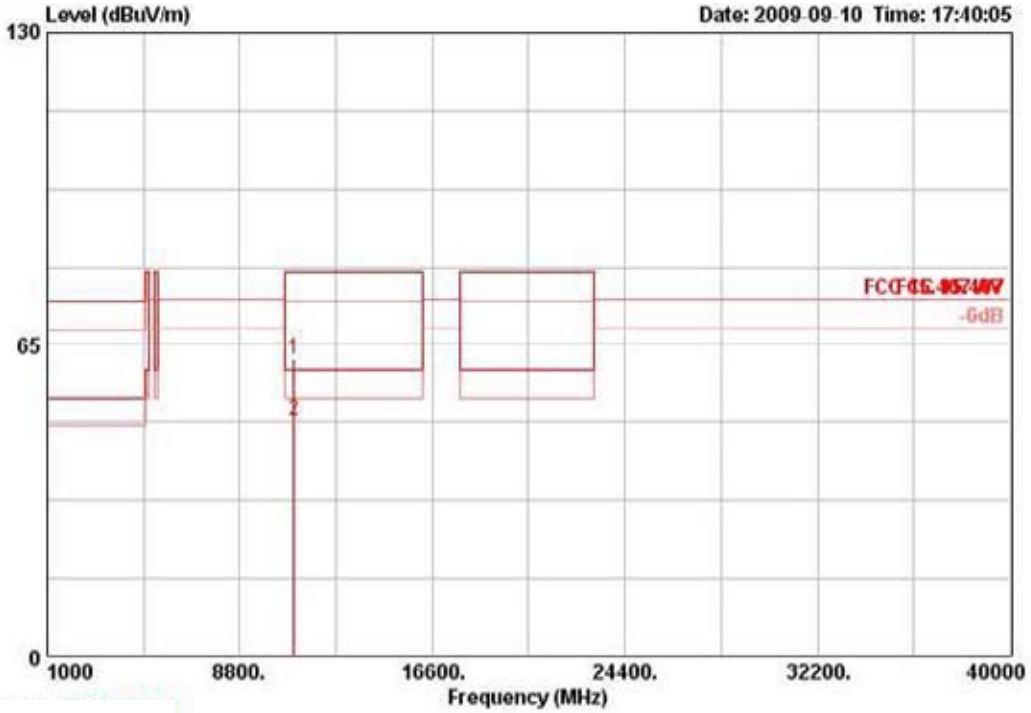
Temperature	26.8°C	Humidity	56%
Test Engineer	Beck Wu	Configurations	802.11n MCS8 20MHz Ch 100 / Ant. 1

Horizontal



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	Table Pos	Ant Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	11000.000	60.25	80.00	-19.75	50.30	6.74	35.10	38.32	239	100	PEAK	HORIZONTAL
2	11000.080	45.93	60.00	-14.07	35.98	6.74	35.10	38.32	239	100	AVERAGE	HORIZONTAL

Vertical



	Freq	Level	Limit Line	Over Limit	Read Level	Cable Loss	Preamp Factor	Antenna Factor	Table Pos	Ant Pos	Remark	Pol/Phase
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	dB	dB/m	deg	cm		
1	11000.080	62.05	90.00	-17.95	52.11	6.74	35.10	38.30	301	100	PEAK	VERTICAL
2	11000.480	49.35	60.00	-10.65	39.41	6.74	35.10	38.30	301	100	AVERAGE	VERTICAL