5 TEST TYPES AND RESULTS (FOR PART 802.11a)

5.1. CONDUCTED EMISSION MEASUREMENT

5.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

NOTE:

1. The lower limit shall apply at the transition frequencies.
6. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
7. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

5.1.2 TEST INSTRUMENTS

Device	Model No.	Serial No.	Last Cal.	Next Cal
Cable 1	RG-214/U	CBL-001	02/19/05	02/19/06
Analyzer	HP85462A	3325A00120	03/05/05	03/05/06
Preselector	HP85460A	3330A00117	03/05/05	03/05/06
QPeak Adapter	HP85462 Internal	Internal	03/05/05	03/05/06
Pre-Amplifier	None			
LISN	3825/2 LISN	9406-2232	12/03/04	12/03/05
Switch 1	N/A	N/A	N/A	N/A
Attenuator 1	33-10-34	BA9146	02/19/05	02/19/06
Temperature and Humidity Recorder	Dickson TH8-24C	5097755	09/16/03	09/16/05

5.1.3 TEST PROCEDURES

The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150kHz to 30MHz was searched. Emission levels
over 10dB under the prescribed limits could not be reported

5.1.4 DEVIATION FROM TEST STANDARD

No deviation

5.1.5 TEST SETUP

Conducted Emission Test
(Front View)

5.1.6 EUT OPERATING CONDITIONS

AC Adaptor was placed on the testing table.

The EUT is under transmission/receiving condition continuously at specific channel frequency for both 801.11 A/B/G by external antenna. Two Ethernet ports are backlooping.
This program was repeated continuously for the duration of the testing. The above mentioned set-up allowed the article to perform sufficiently for the test purposes and required time, i.e. produce conducted emissions.

5.1.7 TEST RESULTS

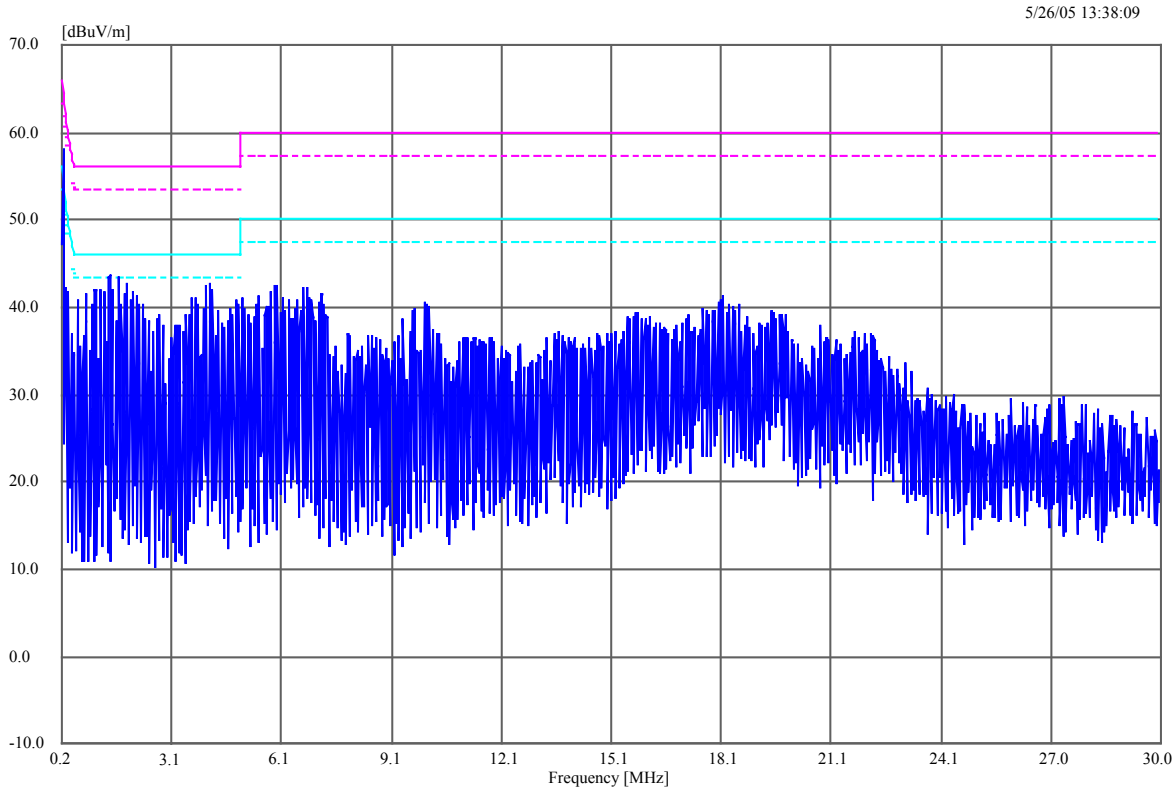
EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	**TESTED BY**: Sandra Sohn	

No	Freq.	Emission Level	Emission Level	Limit	Limit	Margin	Margin
		[dB (uV)]	[dB (uV)]	[dB (uV)]	[dB (uV)]	(dB)	(dB)
	[MHz]	QP	AV	QP	AV	QP	AV
1	0.1592	55.03	39.24	65.50	55.50	-10.47	-16.26
2	0.2393	40.45	31.96	62.12	52.12	-21.67	-20.16
3	0.3191	40.83	37.69	59.73	49.73	-18.90	-12.04
4	1.4376	42.29	34.86	56.00	46.00	-13.71	-11.14
5	1.5176	41.84	34.57	56.00	46.00	-14.16	-11.43
6	1.6776	42.67	35.83	56.00	46.00	-13.33	-10.17
7	1.9172	41.92	36.08	56.00	46.00	-14.08	-9.92
8	1.9972	39.58	34.31	56.00	46.00	-16.42	-11.69
9	4.1548	41.78	34.94	56.00	46.00	-14.22	-11.06
10	5.8334	40.25	36.91	60.00	50.00	-19.75	-13.09
11	6.7928	40.16	36.11	60.00	50.00	-19.84	-13.89
12	7.1927	39.37	34.12	60.00	50.00	-20.63	-15.88
13	18.142	39.09	37.22	60.00	50.00	-20.91	-12.78

REMARKS:

1. QP and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value

Peak traces were recorded



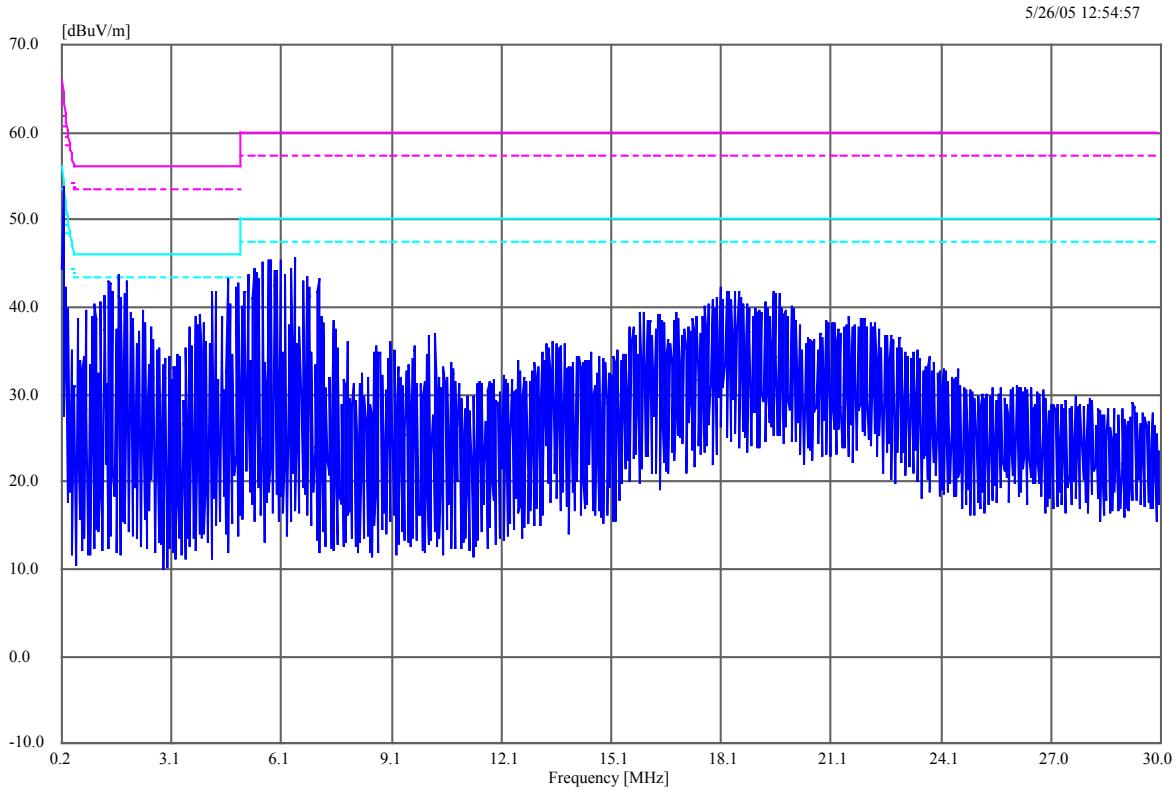
EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
		6dB BANDWIDTH	9 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	26deg. C, 65%RH, 991hPa	**TESTED BY**: Sandra Sohn	

No	Freq.	Emission Level	Emission Level	Limit	Limit	Margin	Margin
		[dB (uV)]	[dB (uV)]	[dB (uV)]	[dB (uV)]	(dB)	(dB)
	[MHz]	QP	AV	QP	AV	QP	AV
1	0.1592	55.50	43.37	65.50	55.50	-10.00	-12.13
2	0.2392	40.56	30.68	62.12	52.12	-21.56	-21.44
3	0.3191	40.90	37.21	59.73	49.73	-18.83	-12.52
4	1.4361	41.91	34.27	56.00	46.00	-14.09	-11.73
5	1.6756	42.64	35.10	56.00	46.00	-13.36	-10.90
6	1.9152	41.90	35.13	56.00	46.00	-14.10	-10.87
7	4.6296	40.25	30.34	56.00	46.00	-15.75	-15.66
8	5.9075	42.78	31.57	60.00	50.00	-17.22	-18.43
9	6.4666	42.02	30.64	60.00	50.00	-17.98	-19.36
10	7.1054	40.29	30.25	60.00	50.00	-19.71	-19.75
11	18.044	40.27	38.57	60.00	50.00	-19.73	-11.43
12	19.482	39.32	36.15	60.00	50.00	-20.68	-13.85

REMARKS:

1. QP and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value

Peak traces were recorded



5.2. RADIATED EMISSION MEASUREMENT

5.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

Frequencies (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

5.2.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

Frequencies (MHz)	EIRP Limit (dBm)	Equivalent Field Strength at 3m (dBμV/m)
5150-5250	-27	68.3
5250-5350	-27	68.3

5.2.3 TEST INSTRUMENTS

Device	Model No.	Serial No.	Last Cal.	Next Cal
Cable 1	8214	CBL-006	02/19/05	02/19/06
Analyzer	HP85462A	3325A00120	03/05/05	03/05/06
Cable 2	8268	CBL-002	02/19/05	02/19/06
Preselector	HP85460A	3330A00117	03/05/05	03/05/06
Qpeak Adapter	HP85462 Internal	Internal	03/05/05	03/05/06
Cable 10	K316MM	CBL-010	9/14/04	9/14/05
Cable 11	K086MM	CBL-011	9/14/04	9/14/05
ROHDE & SCHWARZ EMI Test Receiver	ESIB 40	100201	01/23/05	01/23/06
Pre-Amplifier	HP83051	1065194A	10/11/04	10/11/05
Tower 1	EMCO 1050	9310-1786	N/A	N/A
Turntable 1	EMCO 1060	9409-1753	N/A	N/A
Bilog Antenna	CBL6112B	2604	09/03/04	09/03/05
Horn Antenna	SAS-200	175	03/04/05	03/04/06
Double Ridged Guide Antenna	ETS3116	0026390	05/23/05	05/24/06
Shielded Semi-Anechoic Chamber	RANTEC	N/A	02/11/05	02/11/06
Temperature and Humidity Recorder	Dickson TH8-24C	5097755	09/16/03	09/16/05

NOTE:

1. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.

5.2.4 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter Semi-Anechoic Chamber test site. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

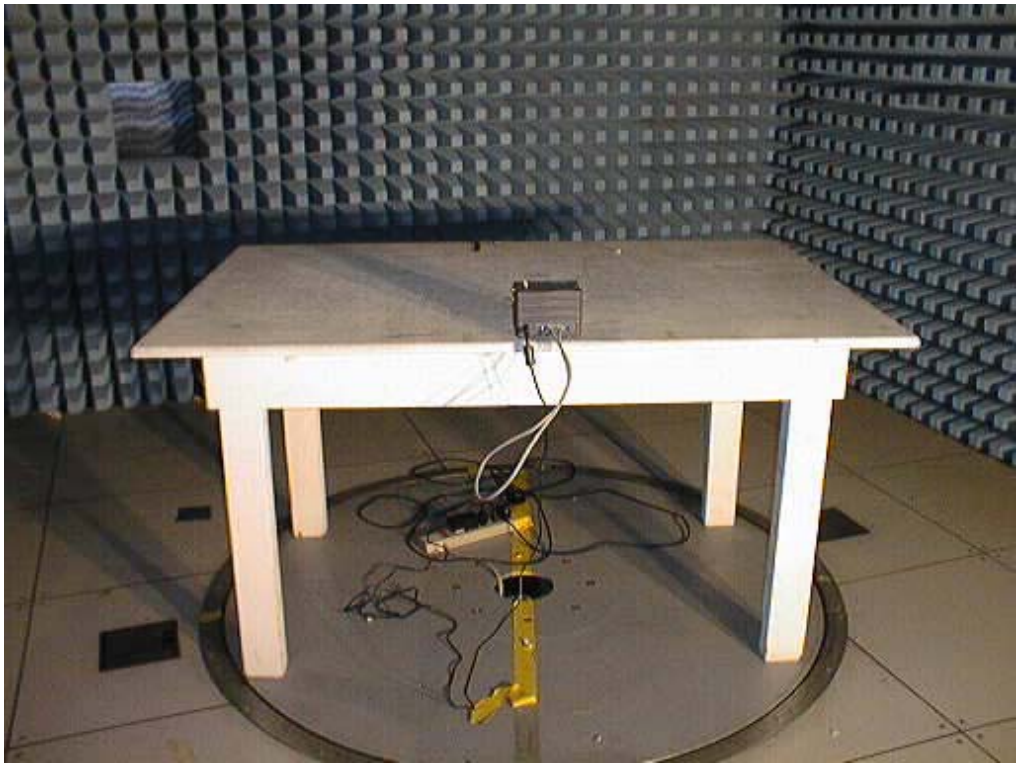
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 300 Hz for Average detection (AV) at frequency above 1GHz.

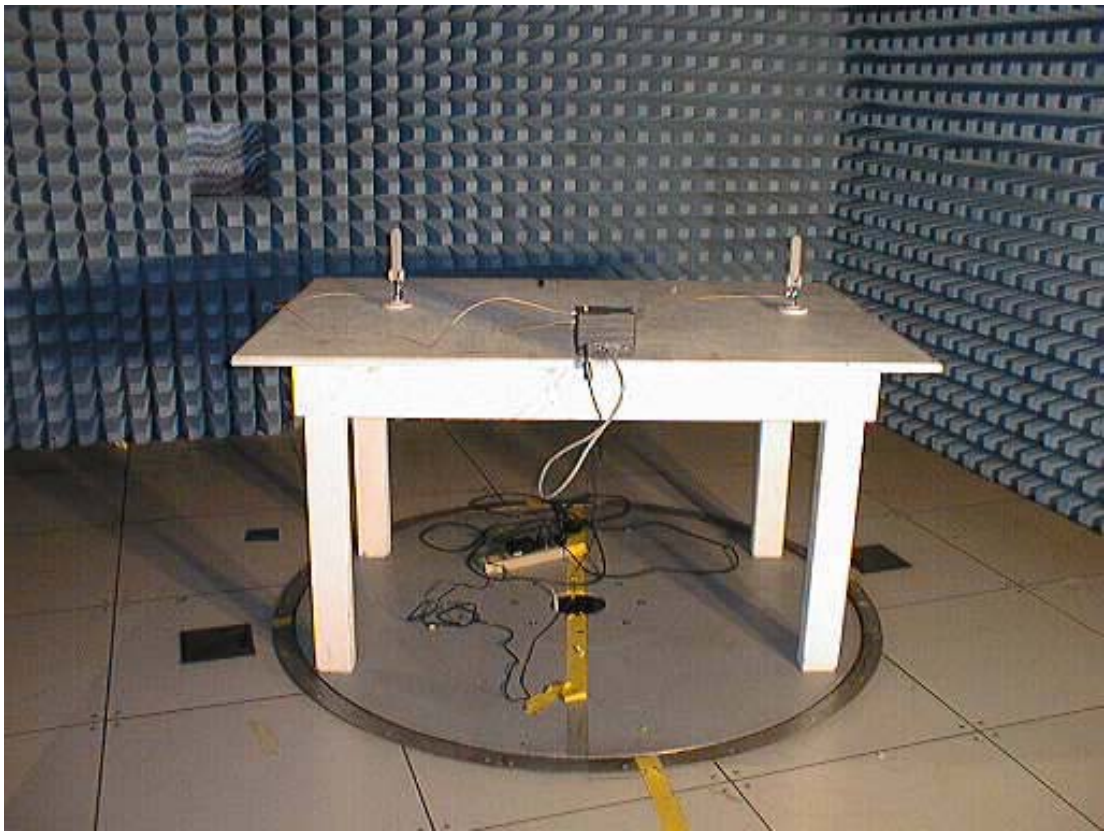
5.2.5 DEVIATION FROM TEST STANDARD

No deviation

5.2.6 TEST SETUP



Radiated Emission Test with Antenna Module



Radiated Emission Test with External Antenna

5.2.7 EUT OPERATING CONDITIONS

The EUT is under transmission/receiving condition continuously at specific channel frequency for both 801.11 A/B/G by antenna module & external antenna. 2 Ethernet port are looping each other.

This program was repeated continuously for the duration of the testing. The above mentioned set-up allowed the article to perform sufficiently for the test purposes and required time, i.e. produce radiated emissions.

5.2.8 TEST RESULTS

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Channel 11, w/antenna module	**FREQUENCY RANGE**	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**TESTED BY**: Sandra Sohn	

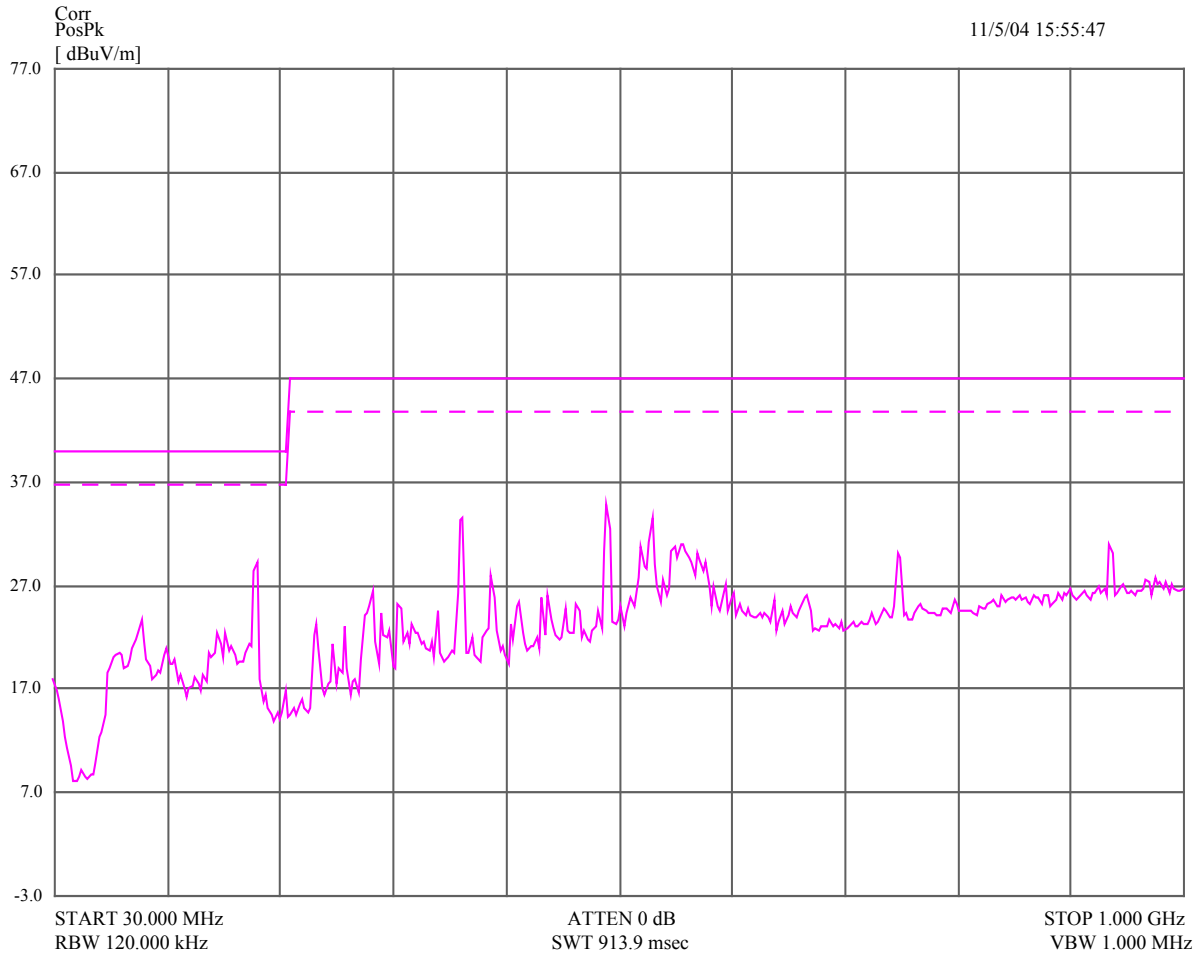
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)
1	200.002	36.74	43.5	-6.76	1.88	282
2	375.004	43.11	46.5	-3.39	1.47	62
3	500.003	38.00	46.5	-8.50	1.14	343
4	539.393	31.17	46.5	-15.33	1.00	242

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)
1	103.071	40.39	43.50	-3.11	1.03	254
2	374.993	46.42	46.50	-0.08	1.64	162
3	499.993	45.96	46.50	-0.54	.97	180
4	539.030	35.55	46.50	-10.95	.97	224
5	562.161	36.13	46.50	-10.37	.97	162
6	577.612	38.55	46.50	-7.95	.97	162

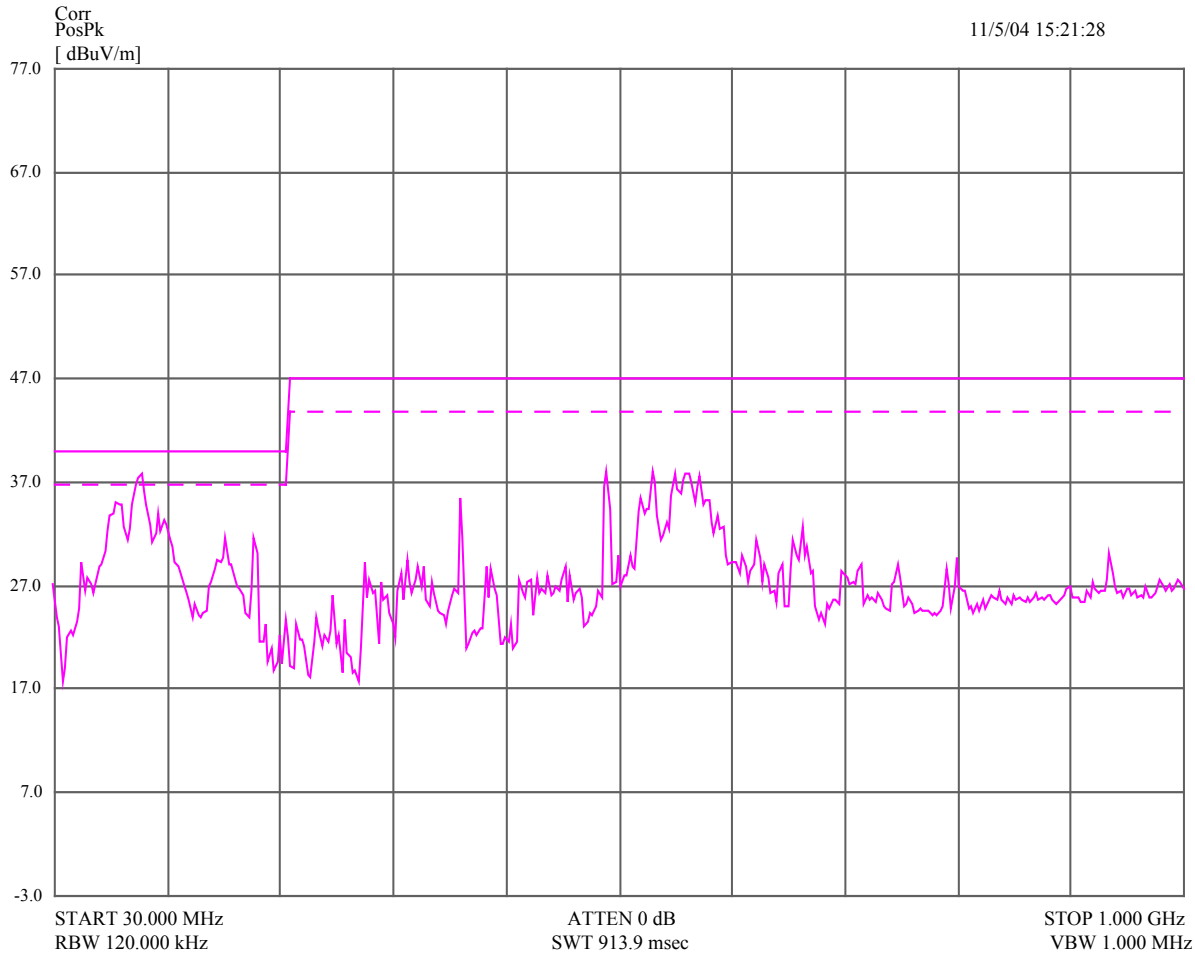
REMARKS:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

Horizontal
Peak traces were recorded



Vertical
Peak traces were recorded



EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Channel 11, w/external antenna	**FREQUENCY RANGE**	Below 1000MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**TESTED BY**: Sandra Sohn	

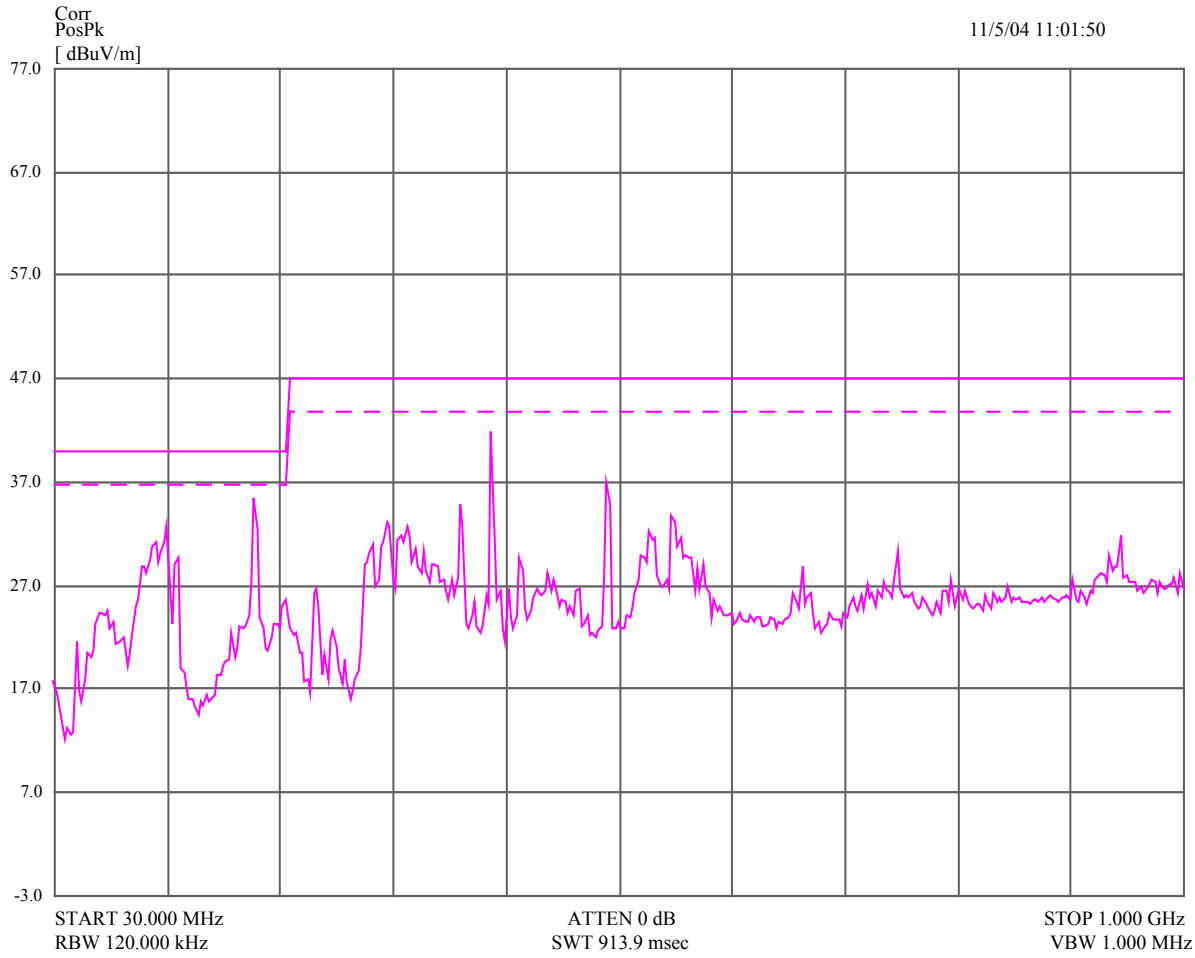
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)
1	133.329	43.45	43.50	-0.05	1.66	222
2	199.995	43.21	43.50	-0.29	1.87	137
3	293.734	31.01	46.50	-15.49	1.40	138
4	324.992	39.35	46.50	-7.15	1.40	138
5	333.323	37.11	46.50	-9.39	1.40	138
6	374.996	44.65	46.50	-1.85	.97	228
7	399.969	41.34	46.50	-5.16	.97	90
8	499.991	43.62	46.50	-2.88	.97	247

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)
1	103.320	40.27	43.5	-3.23	.97	156
2	375.006	42.29	46.5	-4.21	.97	180
3	499.993	46.46	46.5	-0.04	.97	175

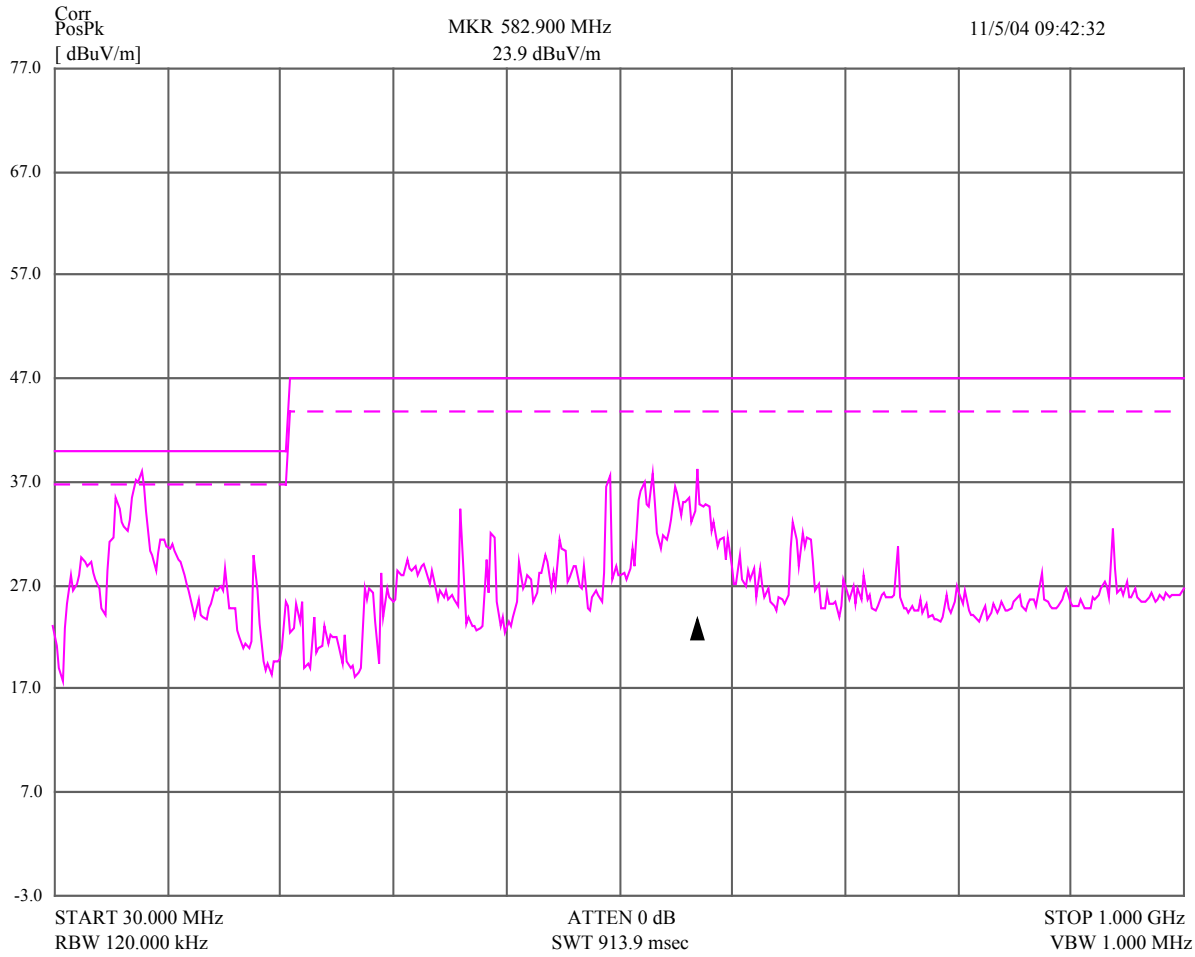
REMARKS:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

Horizontal
Peak traces were recorded



Vertical
Peak traces were recorded



5.2.9 Harmonics & Spurious emissions (A) 1-18GHz

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal Mode External Dual-Band Vertically Polarized Omni-Directional Antenna Gain: 5 dBi at 5.15-5.35 GHz Gain: 4.5dBi at 5.725 – 5.8 GHz	**CHANNEL**	Channel 36 (Data rate: 6Mbps)
FREQUENCY RANGE	1000 ~ 18000MHz	**DETECTOR FUNCTION**	Peak (P) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY:	Sandra Sohn		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1_R	1170 (P)	48.0 (P)	74.0 (P)	-20.3	1	5	51.0 (P)	-3.0
2	4406 (P)	44.65 (P)	68.3 (P)	-23.6	1	2	43.7 (P)	0.9

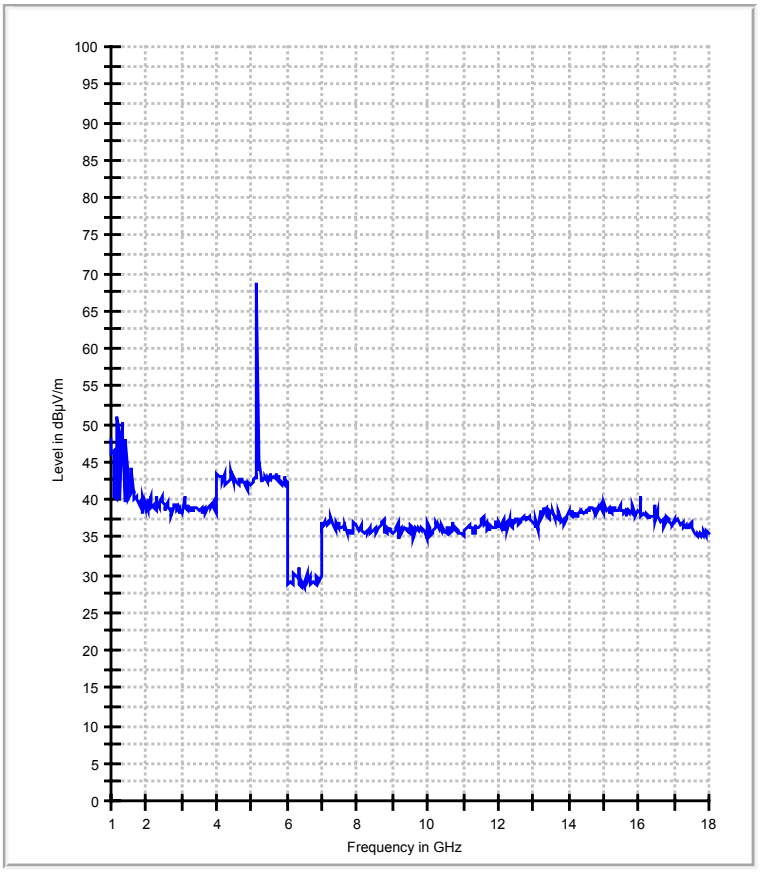
NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier (dB)
3. Margin value = Emission level – Limit value
4. The other emission levels were very low against the limit.
5. The limit value is defined as per 15.407 and per 15.205.
6. $_R$ is for restricted band.

Vertical MaxPeak before correction (without filter)

Ch36 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 1 MHz



Harmonics & Spurious emissions 1-18GHz

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal Mode External Dual-Band Vertically Polarized Omni-Directional Antenna Gain: 5 dBi at 5.15-5.35 GHz Gain: 4.5dBi at 5.725 – 5.8 GHz	**CHANNEL**	Channel 40 (Data rate: 6Mbps)
FREQUENCY RANGE	1000 ~ 18000MHz	**DETECTOR FUNCTION**	Peak (P) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY:	Sandra Sohn		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1_R	1170 (P)	47.3 (P)	74 (P)	-26.7	1	5	50.3 (P)	-3.0
2_R	4032 (P)	45.2 (P)	74 (P)	-28.7	1	2	44.3 (P)	0.9

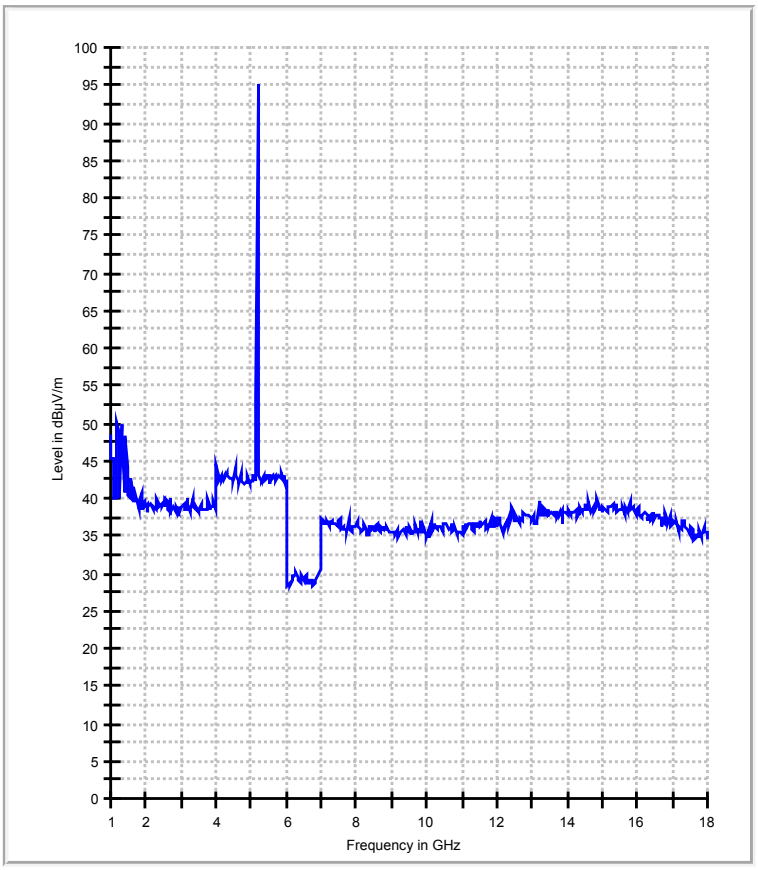
NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier (dB)
3. Margin value = Emission level – Limit value
4. The other emission levels were very low against the limit.
5. The limit value is defined as per 15.407 and per 15.205.
6. $_R$ is for restricted band.

Vertical MaxPeak before correction (without filter)

Ch40 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 1 MHz



Harmonics & Spurious emissions 1-18GHz

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal Mode External Dual-Band Vertically Polarized Omni-Directional Antenna Gain: 5 dBi at 5.15-5.35 GHz Gain: 4.5dBi at 5.725 – 5.8 GHz	**CHANNEL**	Channel 48 (Data rate: 6Mbps)
FREQUENCY RANGE	1000 ~ 18000MHz	**DETECTOR FUNCTION**	Peak (P) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY:	Sandra Sohn		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1_R	1170 (P)	47.8 (P)	74 (P)	-26.2	1	8	50.8 (P)	-3.0
2_R	4883.7 (P)	44.6 (P)	74 (P)	-29.3	1	5	43.7 (P)	0.9

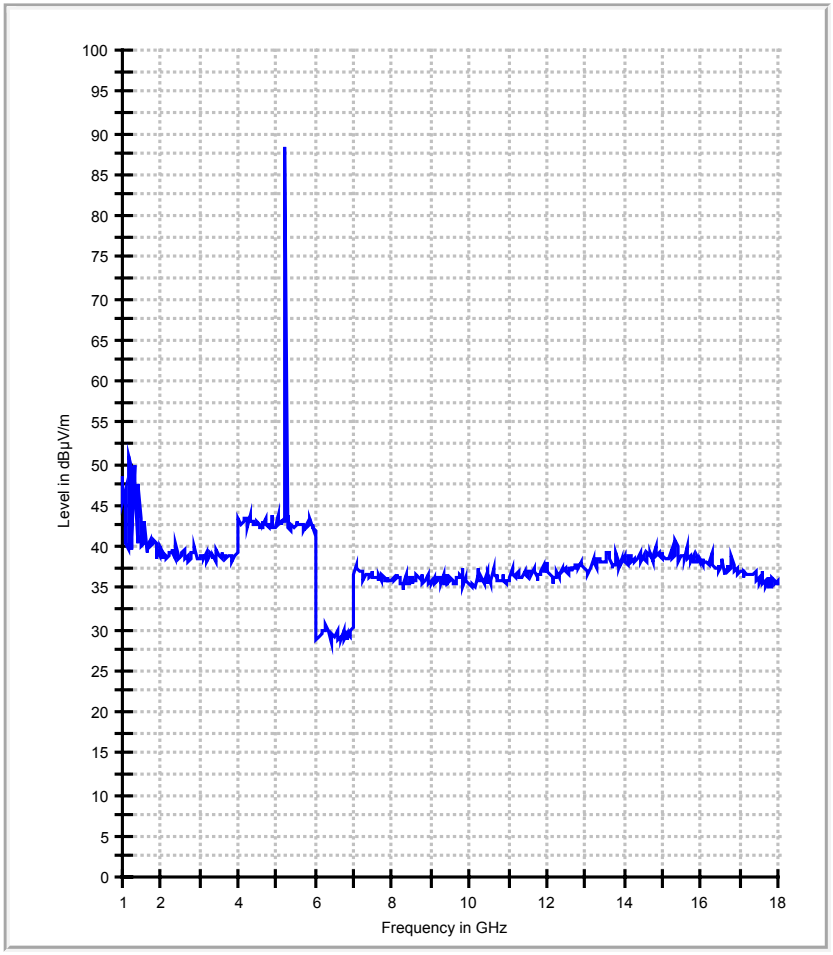
NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier (dB)
3. Margin value = Emission level – Limit value
4. The other emission levels were very low against the limit.
5. The limit value is defined as per 15.407 and per 15.205.
6. $_R$ is for restricted band.

Vertical MaxPeak before correction (without filter)

Ch48 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 1 MHz



Harmonics & Spurious emissions 1-18GHz

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal Mode External Dual-Band Vertically Polarized Omni-Directional Antenna Gain: 5 dBi at 5.15-5.35 GHz Gain: 4.5dBi at 5.725 – 5.8 GHz	**CHANNEL**	Channel 52 (Data rate: 6 Mbps)
FREQUENCY RANGE	1000 ~ 18000 MHz	**DETECTOR FUNCTION**	Peak (P) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY:	Sandra Sohn		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1 R	1170 (P)	47.8 (P)	74 (P)	-26.2	1	5	50.8 (P)	-3.0
2R	4679 (P)	45.15 (P)	74 (P)	-28.8	1	9	44.2 (P)	0.9

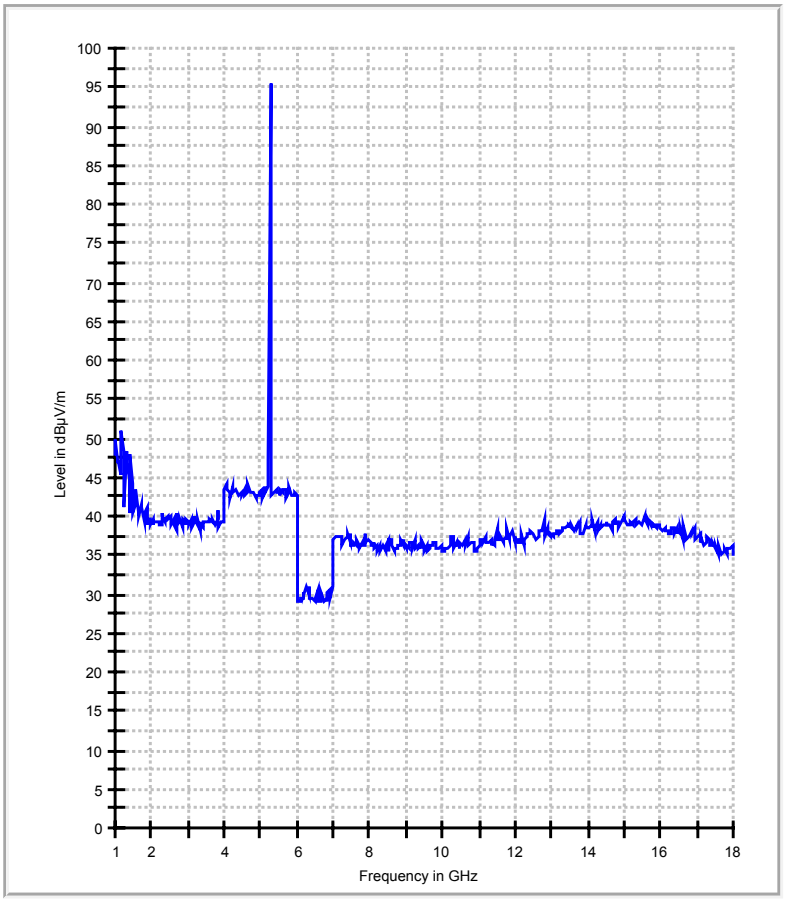
NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier (dBm)
3. Margin value = Emission level – Limit value
4. The other emission levels were very low against the limit.
5. The limit value is defined as per 15.407 and per 15.205.

6 R is for restricted band.

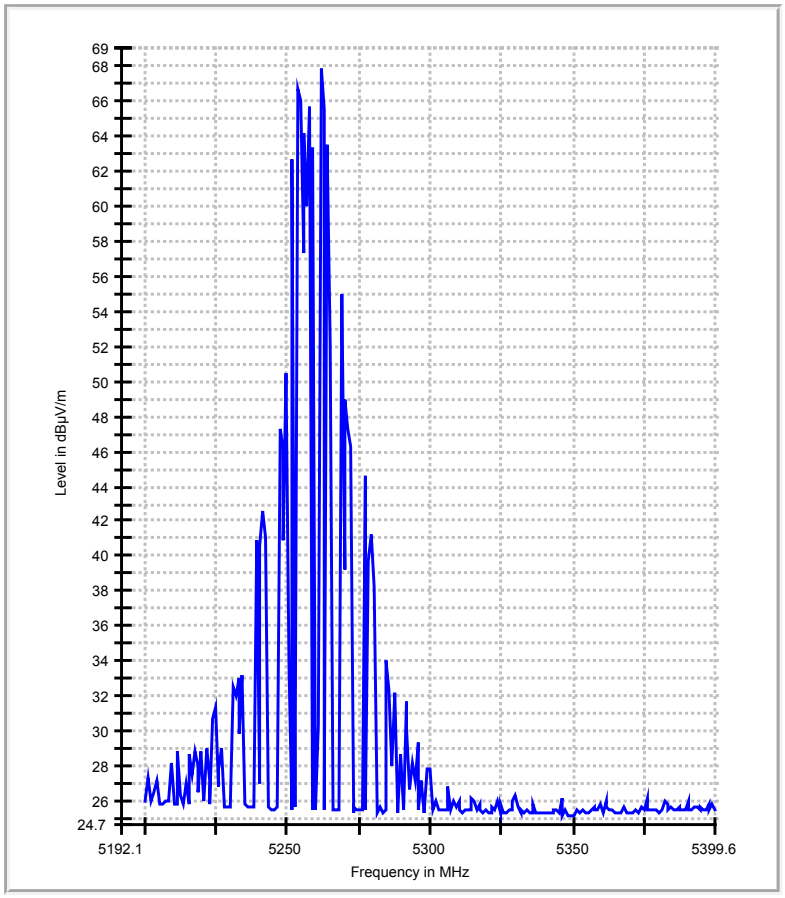
Vertical MaxPeak before correction (without filter)
Ch52 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 1 MHz



Vertical Average before correction (without filter)
Ch52 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 300 Hz



Harmonics & Spurious emissions 1-18GHz

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal Mode External Dual-Band Vertically Polarized Omni-Directional Antenna Gain: 5 dBi at 5.15-5.35 GHz Gain: 4.5dBi at 5.725 – 5.8 GHz	**CHANNEL**	Channel 60 (Data rate: 6 Mbps)
FREQUENCY RANGE	1000 ~ 18000 MHz	**DETECTOR FUNCTION**	Peak (P) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY:	Sandra Sohn		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1 R	1068 (P)	48.2 (P)	74 (P)	-25.8	1	6	51.2 (P)	-3.0
2R	4032 (P)	44.9 (P)	74 (P)	-29.05	1	8	44.0 (P)	0.9
3 R	10607 (P)	50.4 (P)	74 (P)	-23.6	1	7	42.5 (P)	7.9
3 R	10605 (AV)	38.8 (AV)	54 (AV)	-15.2	1	7	30.9 (AV)	7.9

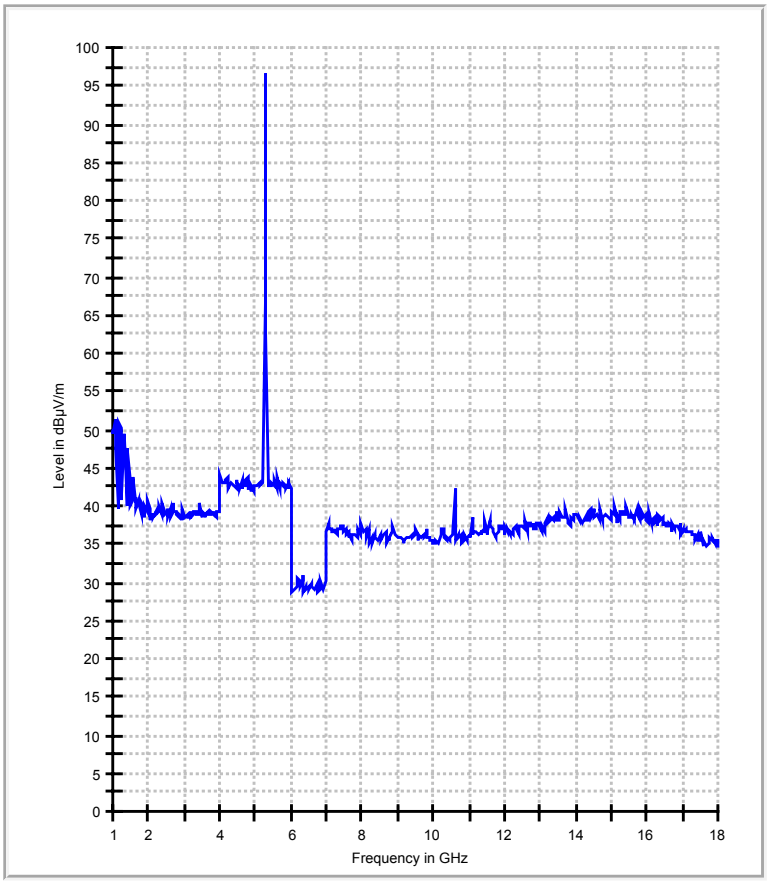
NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier (dBm)
3. Margin value = Emission level – Limit value
4. The other emission levels were very low against the limit.
5. The limit value is defined as per 15.407 and per 15.205.

6 R is for restricted band.

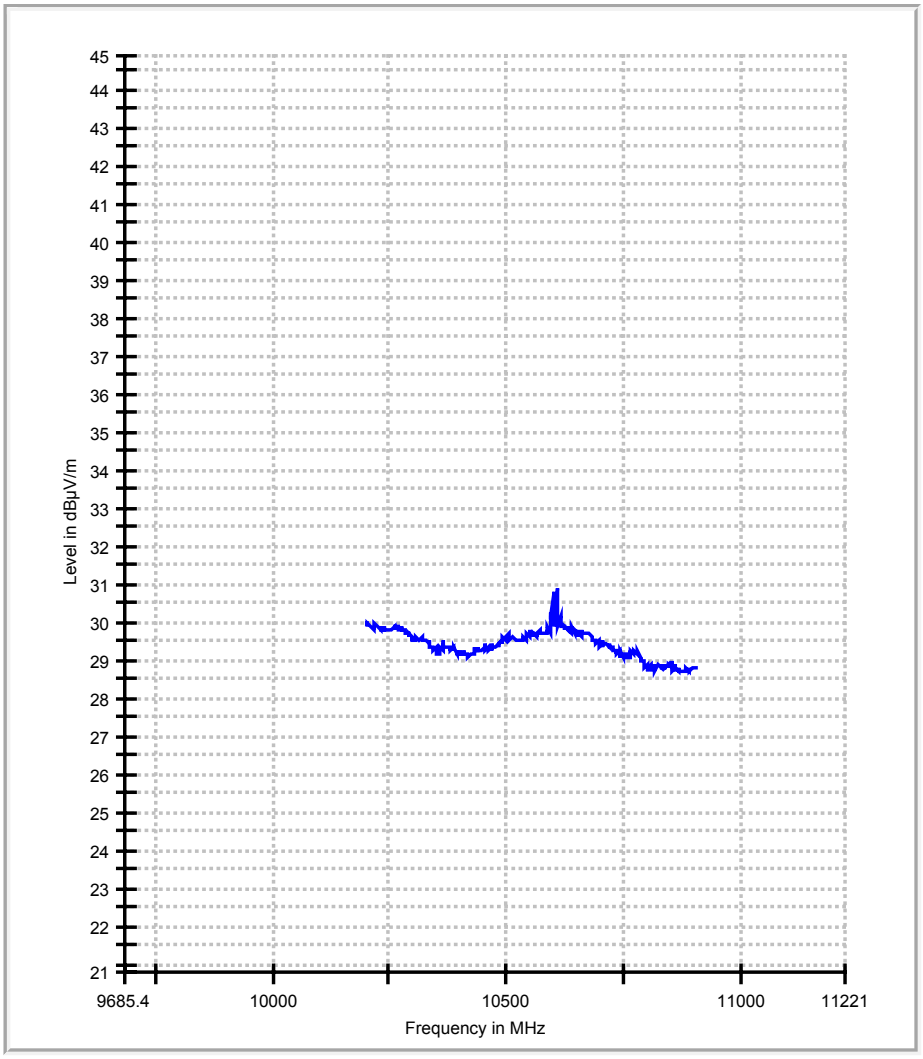
Vertical MaxPeak before correction (without filter)
Ch60 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 1 MHz



Vertical Average before correction (without filter)
Ch60 (Data rate: 6Mbps)

Resolution Bandwidth:	1MHz
Video Bandwidth:	300 Hz



Harmonics & Spurious emissions: 1-18GHz

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal Mode External Dual-Band Vertically Polarized Omni-Directional Antenna Gain: 5 dBi at 5.15-5.35 GHz Gain: 4.5dBi at 5.725 – 5.8 GHz	**CHANNEL**	Channel 64 (Data rate: 6Mbps)
FREQUENCY RANGE	1000 ~ 18000 MHz	**DETECTOR FUNCTION**	Peak (P) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY:	Sandra Sohn		

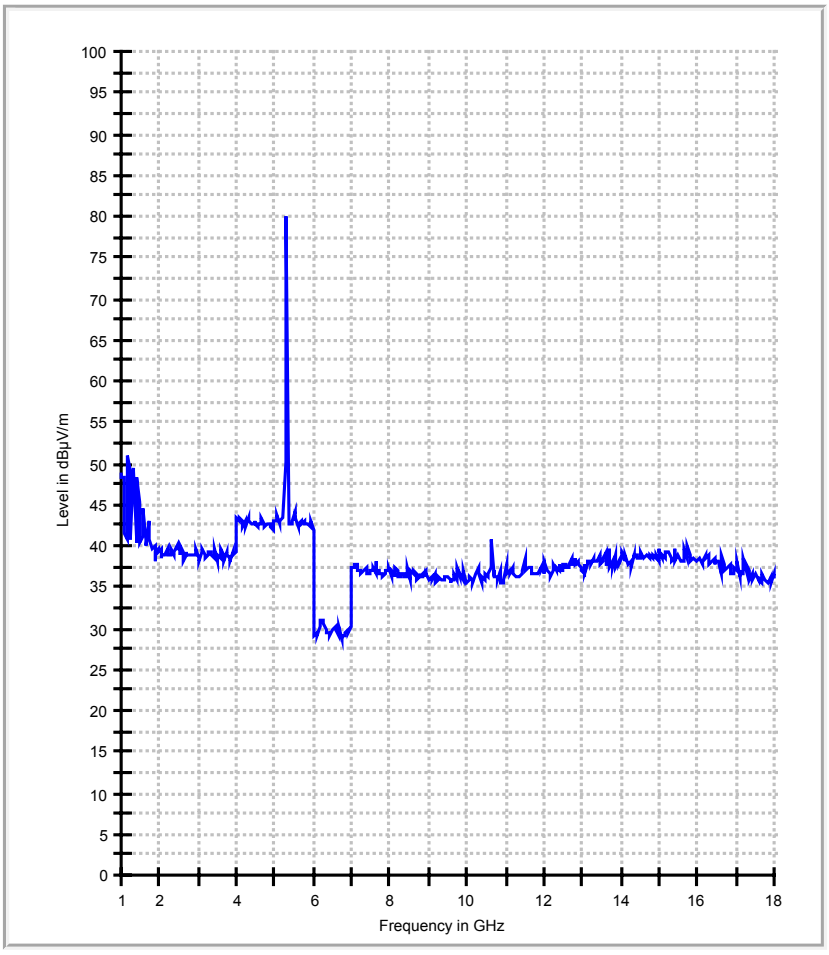
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1 R	1170 (P)	48.0 (P)	74 (P)	-26.0	1	6	51.0 (P)	-3.0
2R	4032 (P)	44.5 (P)	74 (P)	-29.4	1	8	43.6 (P)	0.9
3 R	10641 (P)	48.5 (P)	74 (P)	-25.5	1	5	40.6 (P)	7.9
3 R	10641 (AV)	38.2 (AV)	54 (AV)	-15.8	1	5	30.3 (AV)	7.9

NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier (dBm)
3. Margin value = Emission level – Limit value
4. The other emission levels were very low against the limit.
5. The limit value is defined as per 15.407 and 15.205.
6. R is for restricted band.

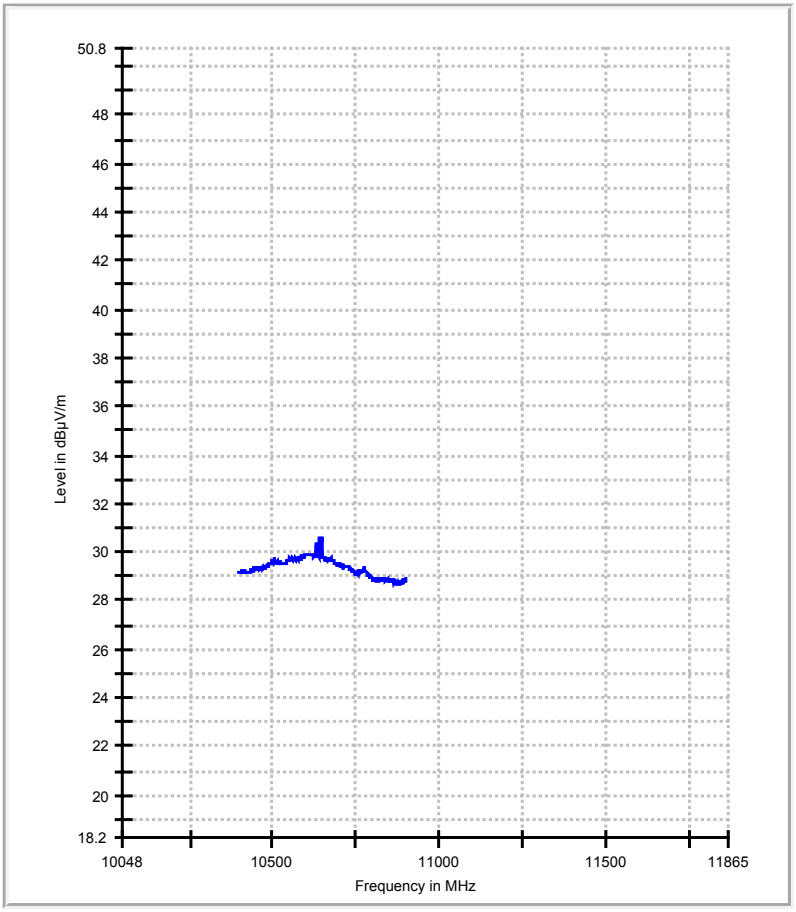
Vertical MaxPeak before correction
Ch64 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 1 MHz



Vertical Average before correction
Ch64 (Data rate: 6Mbps)

Resolution Bandwidth:	1MHz
Video Bandwidth:	300 Hz



Harmonics & Spurious emissions: 1-18GHz

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal Mode External Dual-Band Vertically Polarized Omni-Directional Antenna Gain: 5 dBi at 5.15-5.35 GHz Gain: 4.5dBi at 5.725 – 5.8 GHz	**CHANNEL**	Channel 149 (Data rate: 6Mbps)
FREQUENCY RANGE	1000 ~ 18000 MHz	**DETECTOR FUNCTION**	Peak (P) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY:	Sandra Sohn		

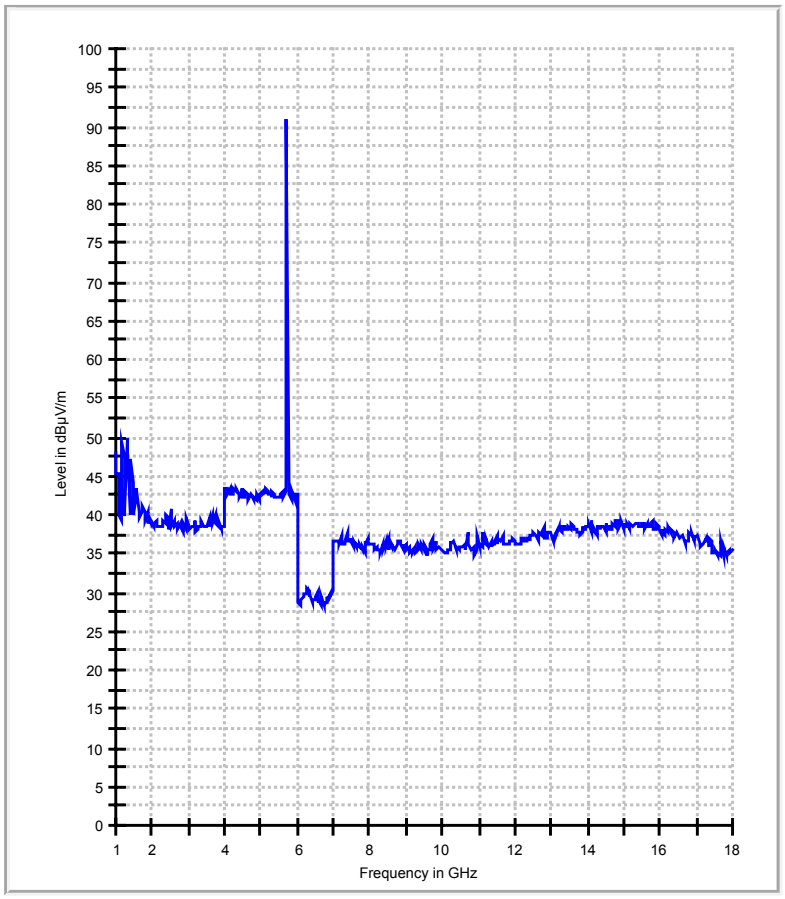
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1 R	1306 (P)	46.9 (P)	74 (P)	-27.1	1	4	49.9 (P)	-3.0
2R	4066 (P)	44.4 (P)	74 (P)	-29.5	1	6	43.5 (P)	0.9

NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier (dBm)
3. Margin value = Emission level – Limit value
4. The other emission levels were very low against the limit.
5. The limit value is defined as per 15.407 & per 15.205.
6. R is for restricted band.

Vertical MaxPeak before correction
Ch149 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 1 MHz



Harmonics & Spurious emissions: 1-18GHz

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal Mode External Dual-Band Vertically Polarized Omni-Directional Antenna Gain: 5 dBi at 5.15-5.35 GHz Gain: 4.5dBi at 5.725 – 5.8 GHz	**CHANNEL**	Channel 153 (Data rate: 6Mbps)
FREQUENCY RANGE	1000 ~ 18000 MHz	**DETECTOR FUNCTION**	Peak (P) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY:	Sandra Sohn		

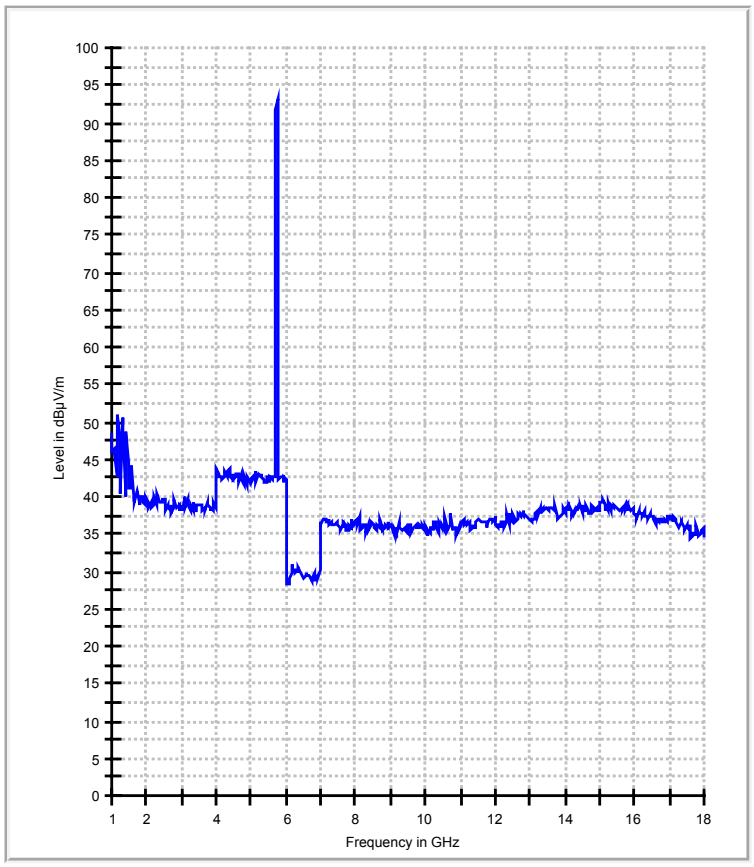
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1 R	1170 (P)	47.9 (P)	74 (P)	-26.1	1	5	50.9 (P)	-3.0
2R	4032 (P)	44.7 (P)	74 (P)	-29.2	1	7	43.8 (P)	0.9

NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier (dBm)
3. Margin value = Emission level – Limit value
4. The other emission levels were very low against the limit.
5. The limit value is defined as per 15.407 & per 15.205.
6. R is for restricted band.

Vertical MaxPeak before correction
Ch153 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 1 MHz



Harmonics & Spurious emissions: 1-18GHz

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal Mode External Dual-Band Vertically Polarized Omni-Directional Antenna Gain: 5 dBi at 5.15-5.35 GHz Gain: 4.5dBi at 5.725 – 5.8 GHz	**CHANNEL**	Channel 161 (Data rage: 6Mbps)
FREQUENCY RANGE	1000 ~ 18000 MHz	**DETECTOR FUNCTION**	Peak (P) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY:	Sandra Sohn		

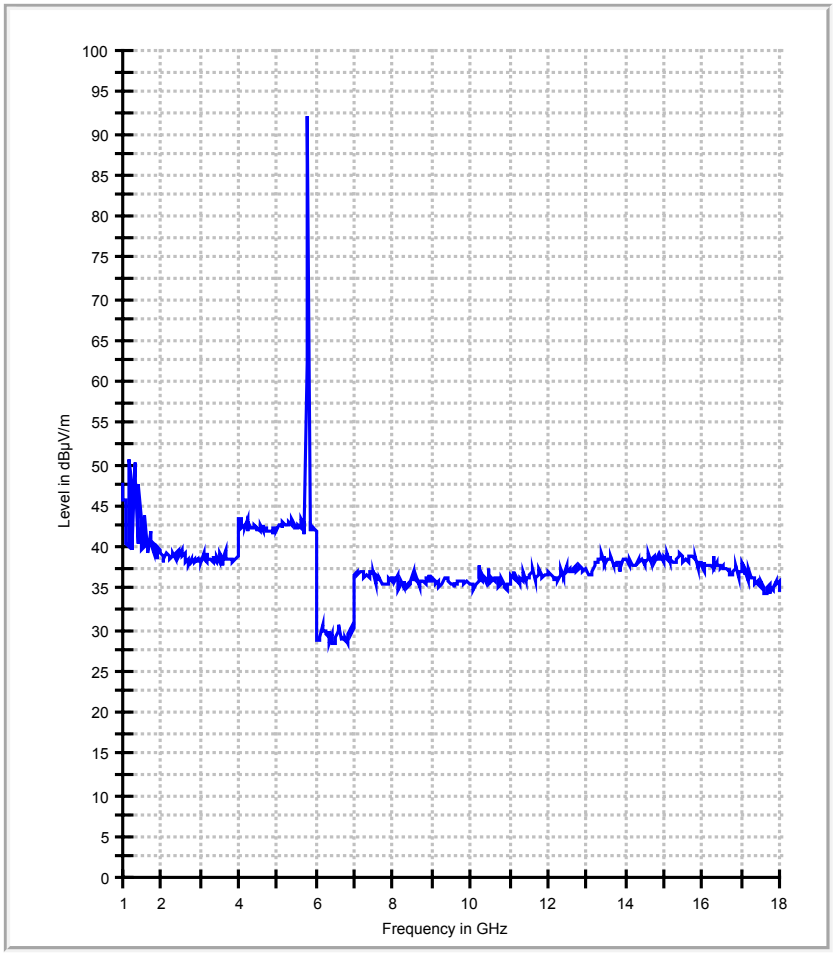
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1_R	1170 (P)	47.4 (P)	74 (P)	-26.6	1	6	50.4 (P)	-3.0
1_R	1170 (AV)	26.3 (AV)	54 (AV)	-27.7	1	6	29.3	-3.0
2_R	4032 (P)	44.2 (P)	74 (P)	-29.7	1	8	43.3 (P)	0.9

NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier (dBm)
3. Margin value = Emission level – Limit value
4. The other emission levels were very low against the limit.
5. The limit value is defined as per 15.407 & per 15.205.
6. $_R$ is for restricted band.

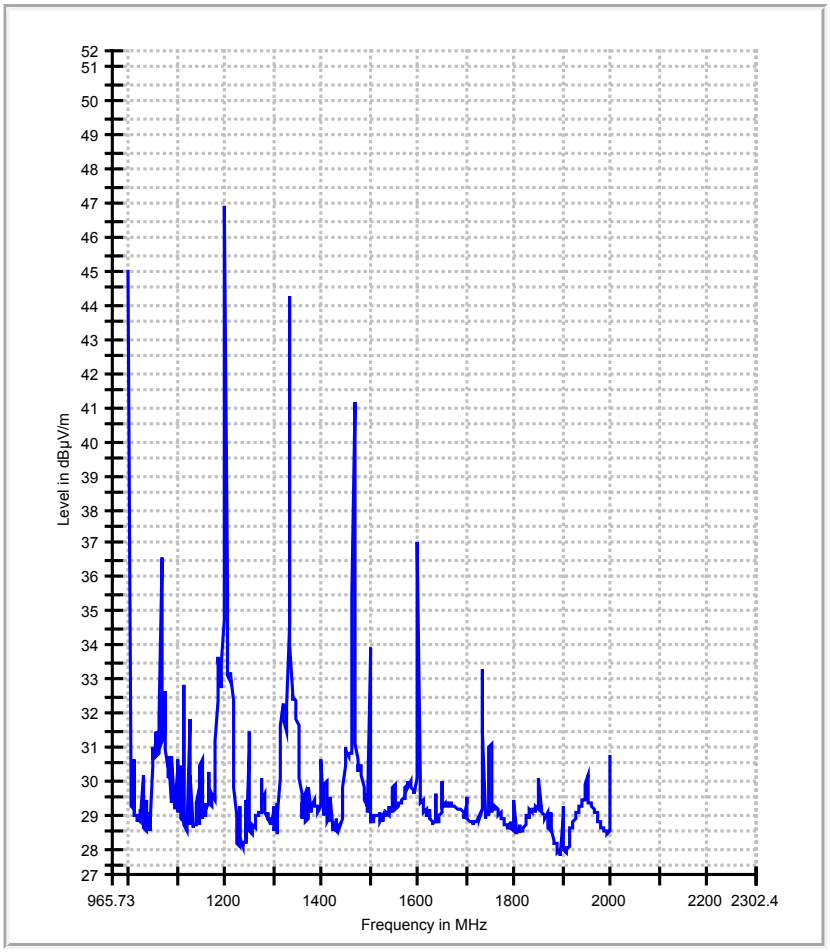
Vertical MaxPeak before correction
Ch161 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 1 MHz



Vertical Average before correction
Ch161 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 300 Hz



Harmonics & Spurious emissions: 1-18GHz

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Turbo Mode External Dual-Band Vertically Polarized Omni-Directional Antenna Gain: 5 dBi at 5.15-5.35 GHz Gain: 4.5dBi at 5.725 – 5.8 GHz	**CHANNEL**	Channel 42 (Turbo mode)
FREQUENCY RANGE	1000 ~ 18000 MHz	**DETECTOR FUNCTION**	Peak (P) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY:	Sandra Sohn		

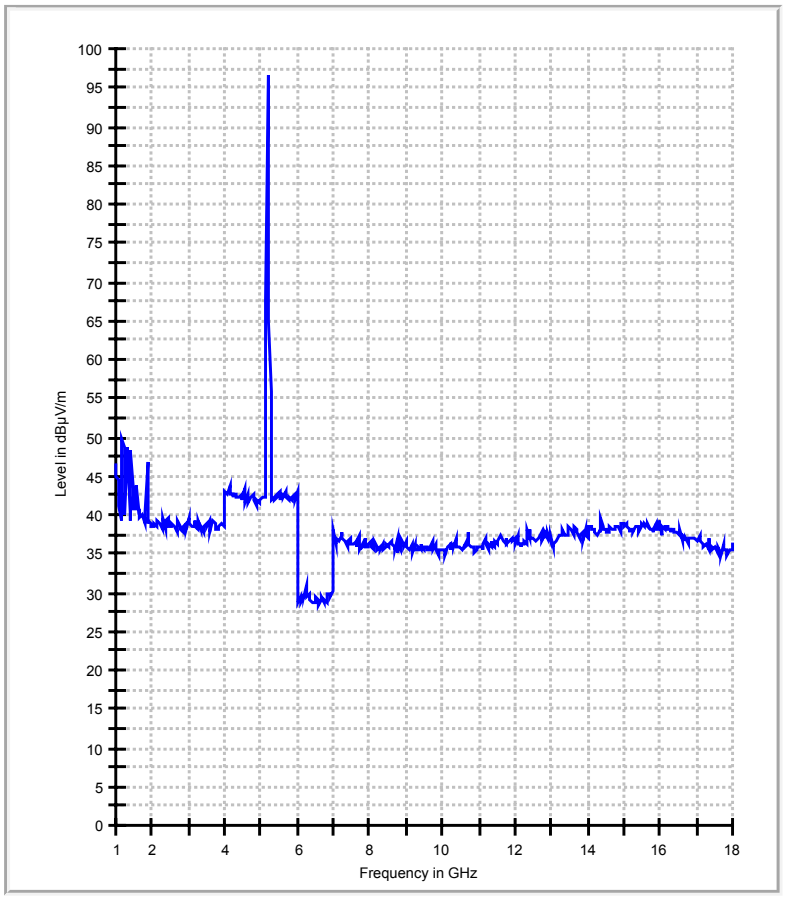
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1_R	1170 (P)	46.8 (P)	74 (P)	-27.2	1	7	49.8 (P)	-3.0
1_R	1170 (AV)	26.1 (AV)	54 (AV)	-27.9	1	6	29.1	-3.0
2	1749 (P)	42.6 (P)	68.3 (P)	-25.7	1	9	39.8	-2.8
2	1750 (AV)	28.1 (AV)	48.3 (AV)	-29.2	1	9	30.9	-2.8
3_R	4134 (P)	44.6 (P)	74 (P)	-29.3	1	8	43.7 (P)	0.9

NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier (dBm)
3. Margin value = Emission level – Limit value
4. The other emission levels were very low against the limit.
5. The limit value is defined as per 15.407 and per 15.205.
6. $_R$ is for restricted band.

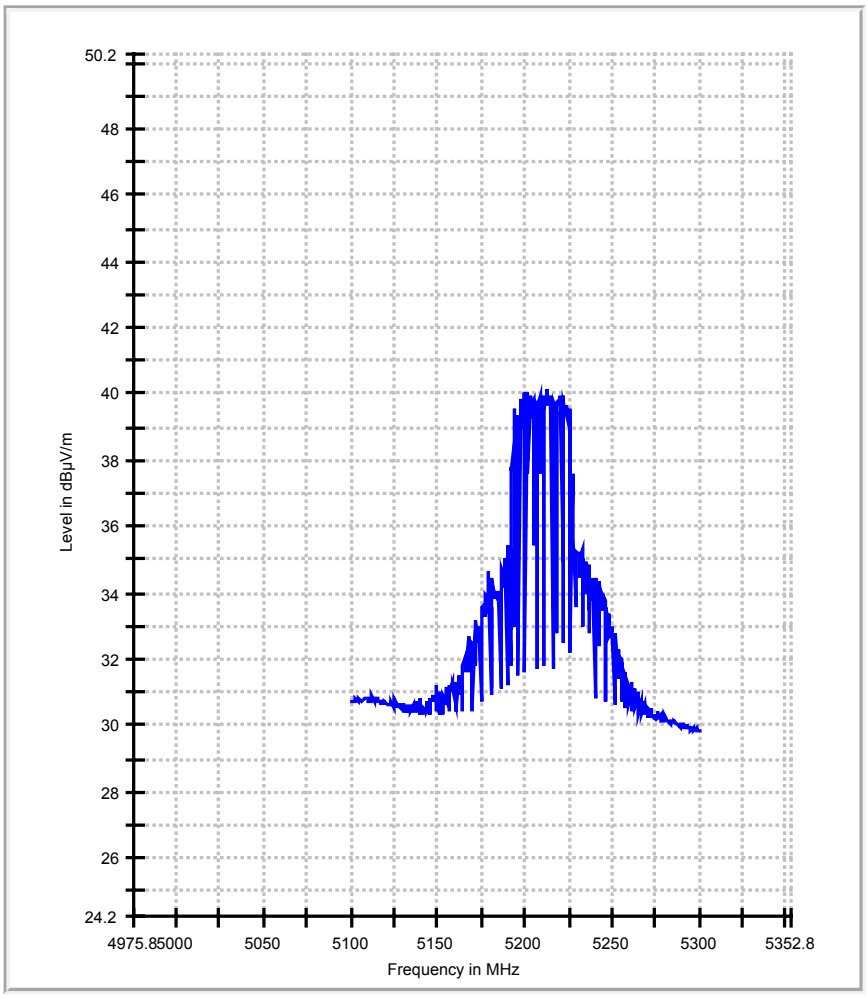
Vertical MaxPeak before correction
Ch42 (Turbo mode)

Resolution Bandwidth: 1MHz
Video Bandwidth: 1 MHz



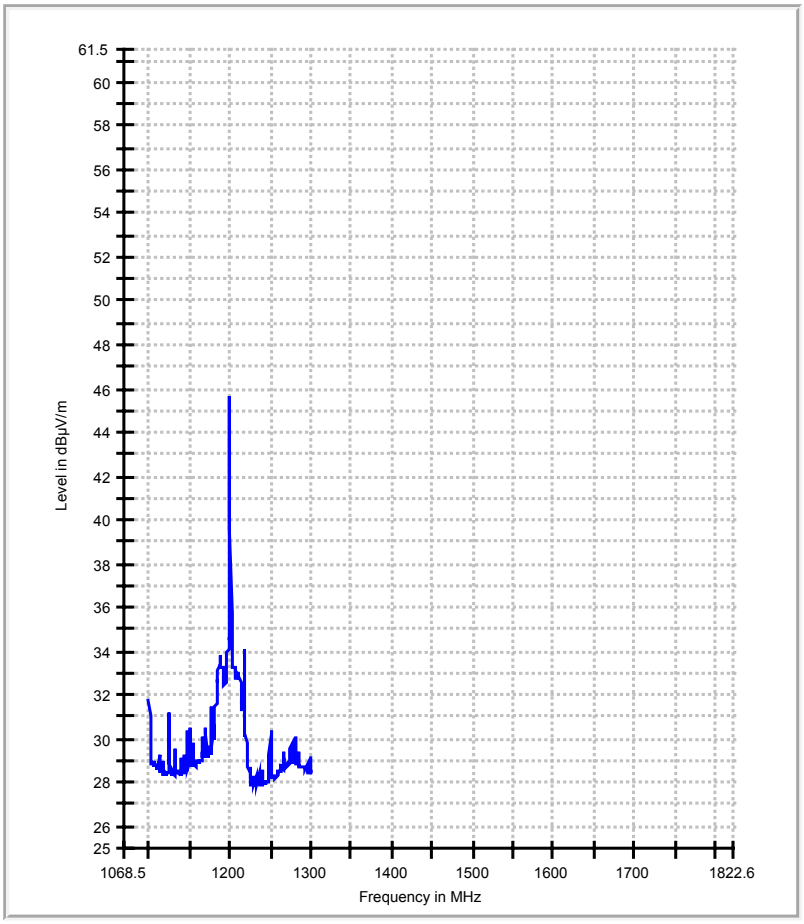
Vertical Average before correction
Ch42 (Turbo mode)

Resolution Bandwidth: 1MHz
Video Bandwidth: 300 Hz



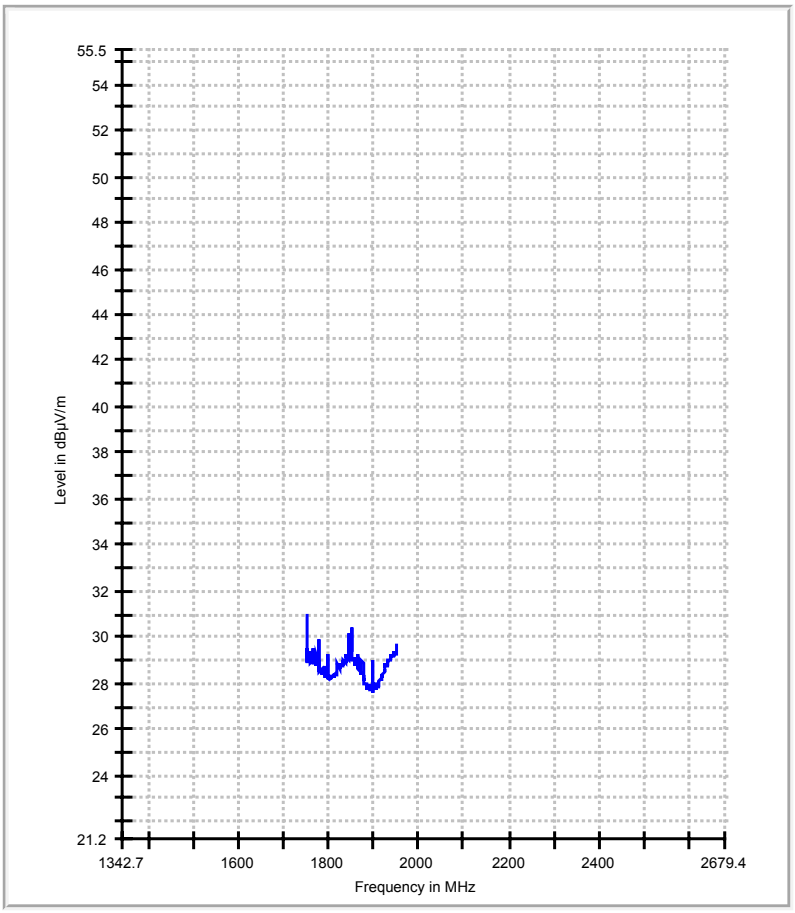
Vertical Average before correction
Ch42 (Turbo mode)

Resolution Bandwidth: 1MHz
Video Bandwidth: 300 Hz



Vertical Average before correction
Ch42 (Turbo mode)

Resolution Bandwidth: 1MHz
Video Bandwidth: 300 Hz



Harmonics & Spurious emissions: 1-18GHz

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Turbo Mode External Dual-Band Vertically Polarized Omni-Directional Antenna Gain: 5 dBi at 5.15-5.35 GHz Gain: 4.5dBi at 5.725 – 5.8 GHz	**CHANNEL**	Channel 58 (Turbo mode)
FREQUENCY RANGE	1000 ~ 18000 MHz	**DETECTOR FUNCTION**	Peak (P) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY:	Sandra Sohn		

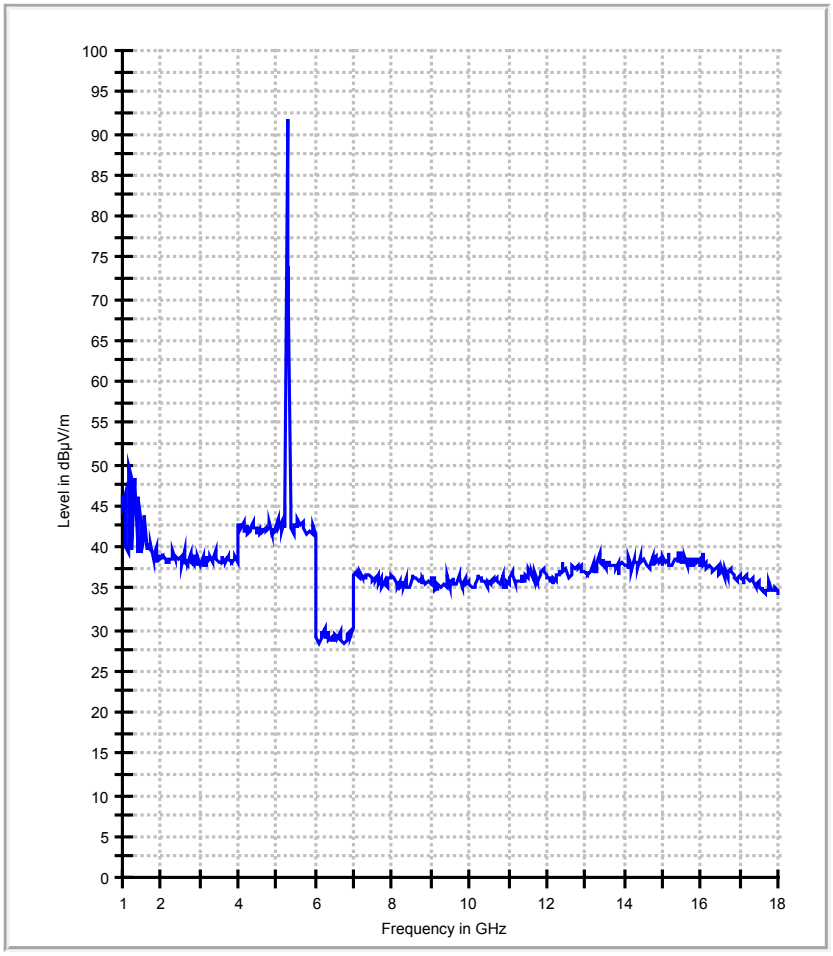
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1_R	1204 (P)	45.4 (P)	74 (P)	-28.6	1	5	48.4 (P)	-3.0
1_R	1200 (AV)	41.7 (AV)	54 (AV)	-12.3	1	5	44.7	-3.0
2	1579 (P)	41.0 (P)	68.3 (P)	-27.3	1	6	43.8	-2.8
3_R	4815 (P)	44.1 (P)	74 (P)	-29.8	1	9	43.2 (P)	0.9

NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier (dBm)
3. Margin value = Emission level – Limit value
4. The other emission levels were very low against the limit.
5. The limit value is defined as per 15.407 and per 15.205.
6. $_R$ is for restricted band.

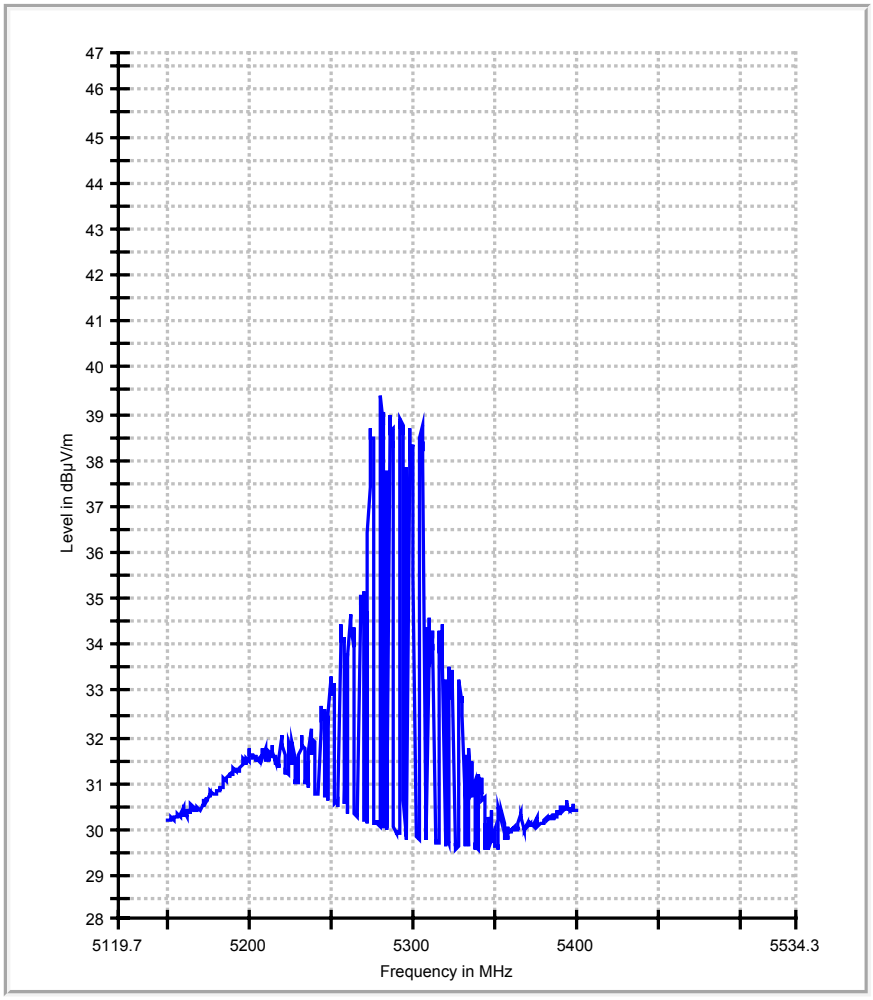
Vertical MaxPeak before correction
Ch58 (Turbo mode)

Resolution Bandwidth: 1MHz
Video Bandwidth: 1 MHz



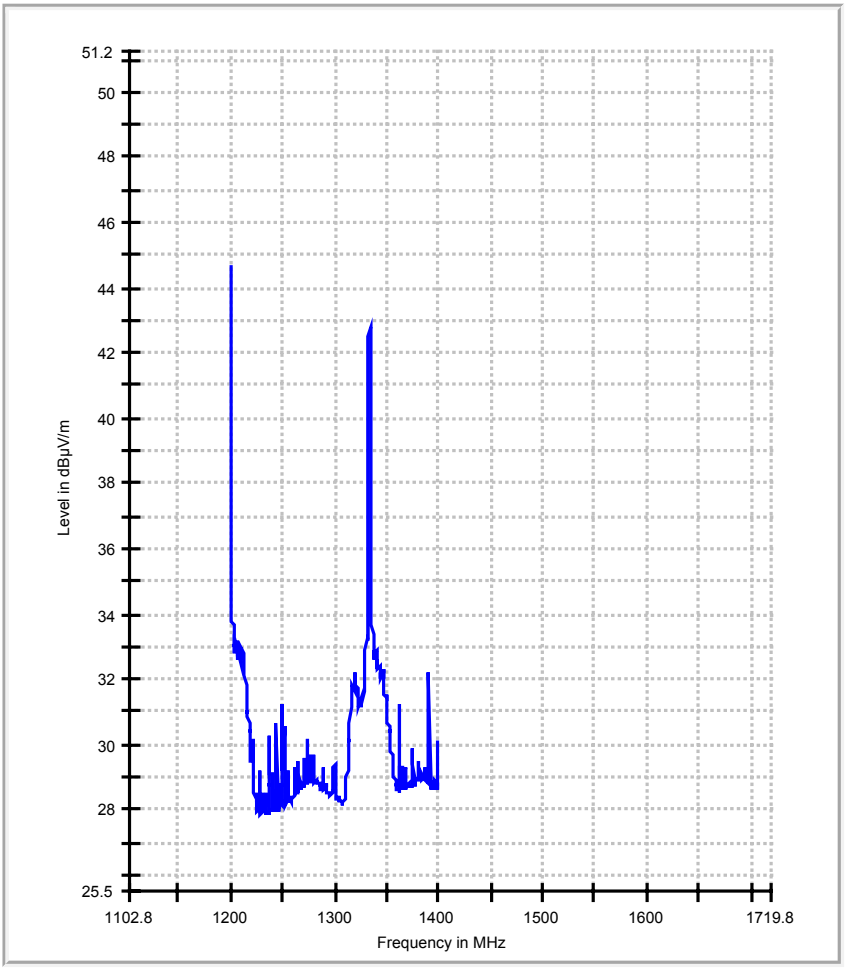
Vertical Average before correction
Ch58 (Turbo mode)

Resolution Bandwidth: 1MHz
Video Bandwidth: 300 Hz



Vertical Average before correction
Ch58 (Turbo mode)

Resolution Bandwidth: 1MHz
Video Bandwidth: 300 Hz



5.2.10 Harmonics & Spurious emissions (B): 18-40GHz

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal Mode External Dual-Band Vertically Polarized Omni-Directional Antenna Gain: 5 dBi at 5.15-5.35 GHz Gain: 4.5dBi at 5.725 – 5.8 GHz	**CHANNEL**	Channel 36 (Data rate: 6Mbps)
FREQUENCY RANGE	18 ~ 40 GHz	**DETECTOR FUNCTION**	Peak (P) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY:	Sandra Sohn		

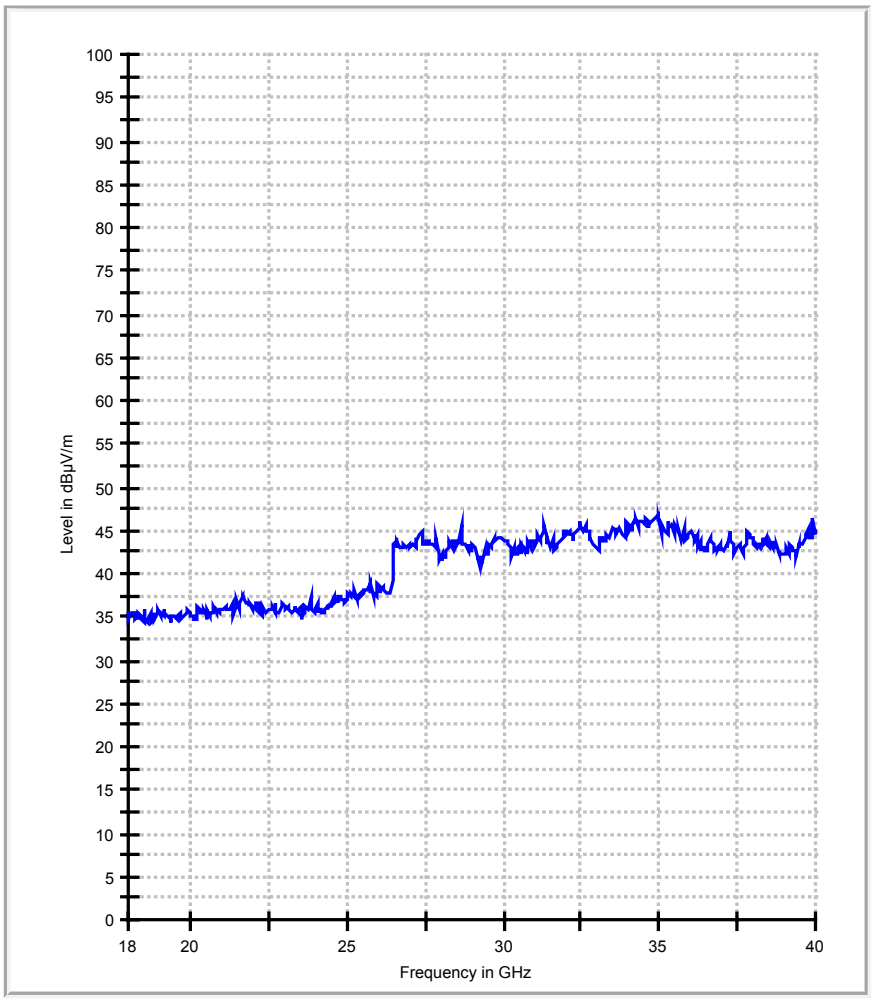
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1*	34797 (P)	67.7 (P)	68.3 (P)	-0.6	1	8	47.5 (P)	20.2
1*^	34802 (AV)	44.2 (AV)	48.3 (AV)	-3.9	1	8	34.2 (AV)	10.2

NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier (dBm) - + Filter (dB) - ^Distance factor (dB)
3. Margin value = Emission level – Limit value
4. The other emission levels were very low against the limit.
5. The limit value is defined as per 15.407
6. ^ is measured at 1m.
7. * Filter is used.

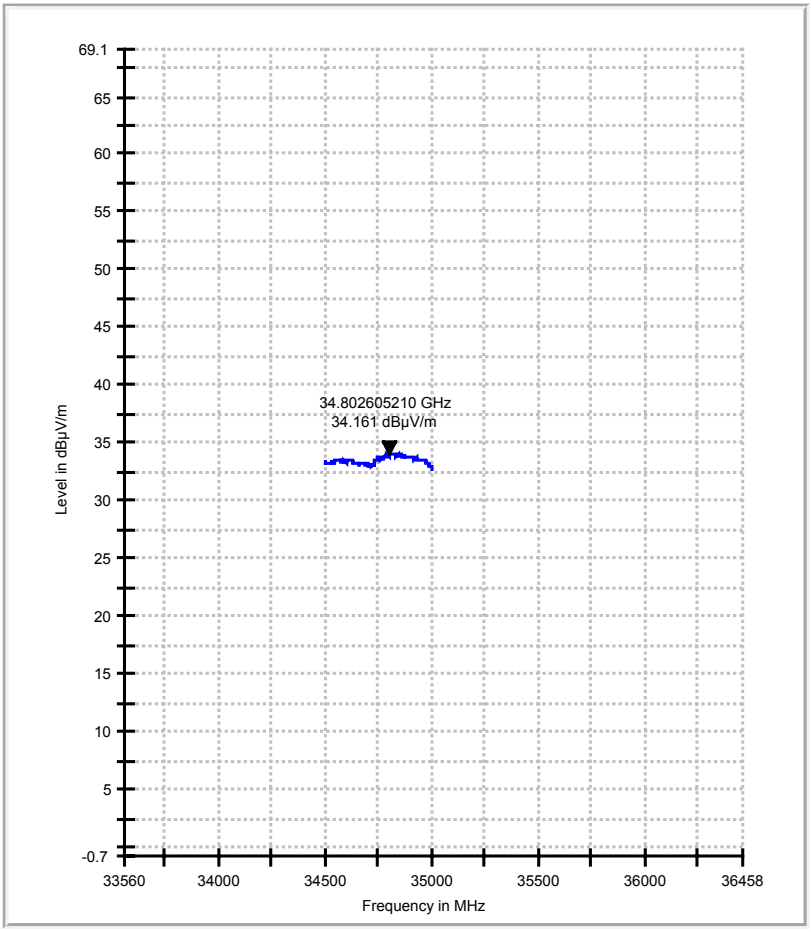
Vertical MaxPeak before correction (with filter)
Ch36 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 1 MHz



Vertical Average before correction (with filter and at 1m distance)
Ch36 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 300 Hz



Harmonics & Spurious emissions: 18-40GHz

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal Mode External Dual-Band Vertically Polarized Omni-Directional Antenna Gain: 5 dBi at 5.15-5.35 GHz Gain: 4.5dBi at 5.725 – 5.8 GHz	**CHANNEL**	Channel 48 (Data rate: 6Mbps)
FREQUENCY RANGE	18 ~ 40 GHz	**DETECTOR FUNCTION**	Peak (P) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY:	Sandra Sohn		

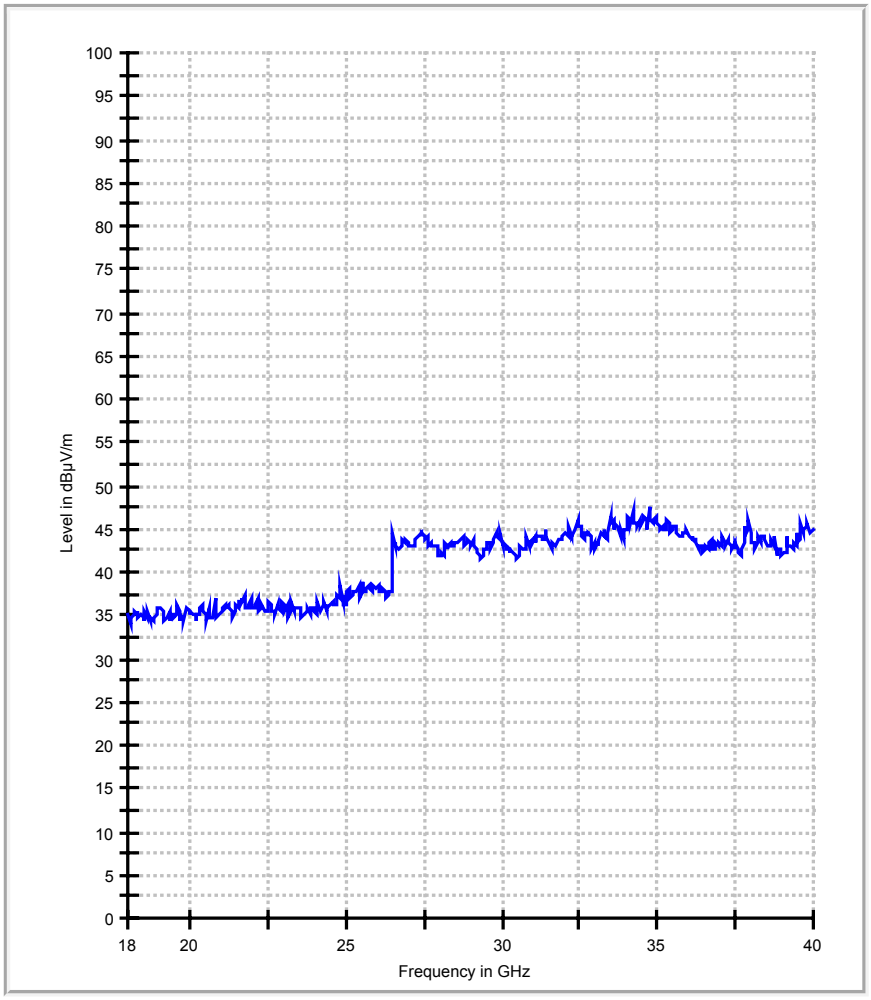
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1*	34885 (P)	67.9 (P)	68.3 (P)	-0.4	1	8	47.7 (P)	20.2
1*^	34879 (AV)	43.942	48.3	-4.3	1	8	33.7 (AV)	10.2

NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier (dBm) + *Filter (dB) - ^ Distance factor (dB)
3. Margin value = Emission level – Limit value
4. The other emission levels were very low against the limit.
5. The limit value is defined as per 15.407.
6. ^ is measured at 1m.
7. * Filter is used.

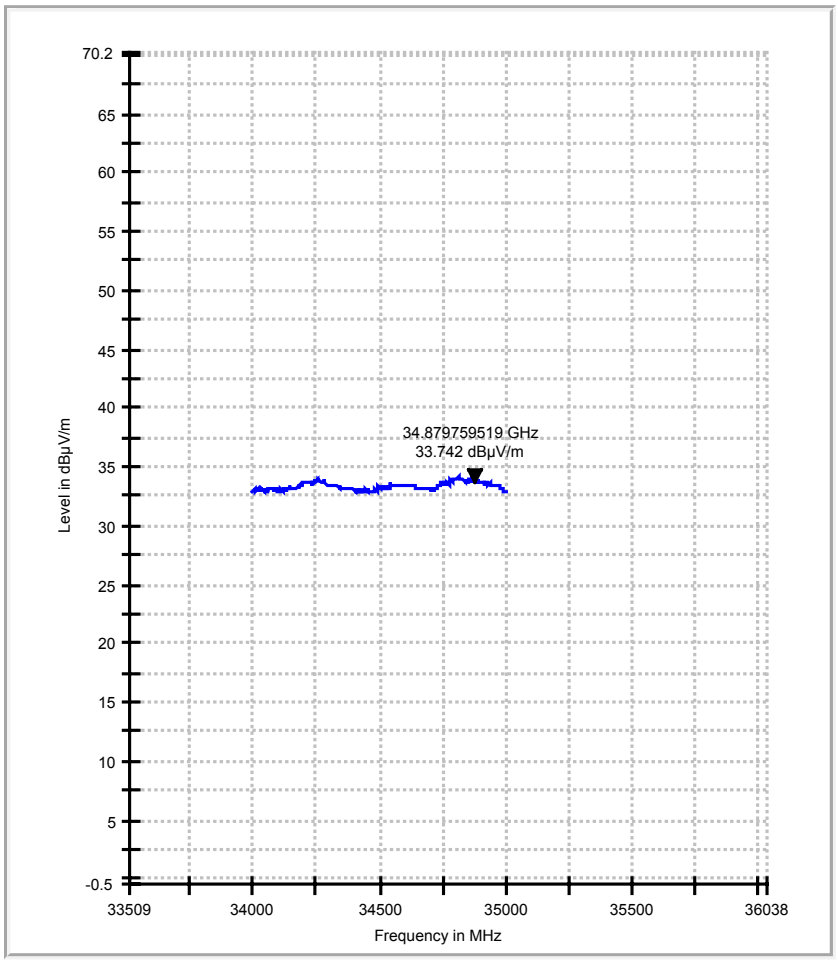
Vertical MaxPeak before correction (with filter)
Ch48 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 1 MHz



Vertical Average before correction (with filter and at 1m distance)
Ch48 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 300 Hz



Harmonics & Spurious emissions: 18-40GHz

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal Mode External Dual-Band Vertically Polarized Omni-Directional Antenna Gain: 5 dBi at 5.15-5.35 GHz Gain: 4.5dBi at 5.725 – 5.8 GHz	**CHANNEL**	Channel 52 (Data rate: 6Mbps)
FREQUENCY RANGE	18 ~ 40 GHz	**DETECTOR FUNCTION**	Peak (P) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY:	Sandra Sohn		

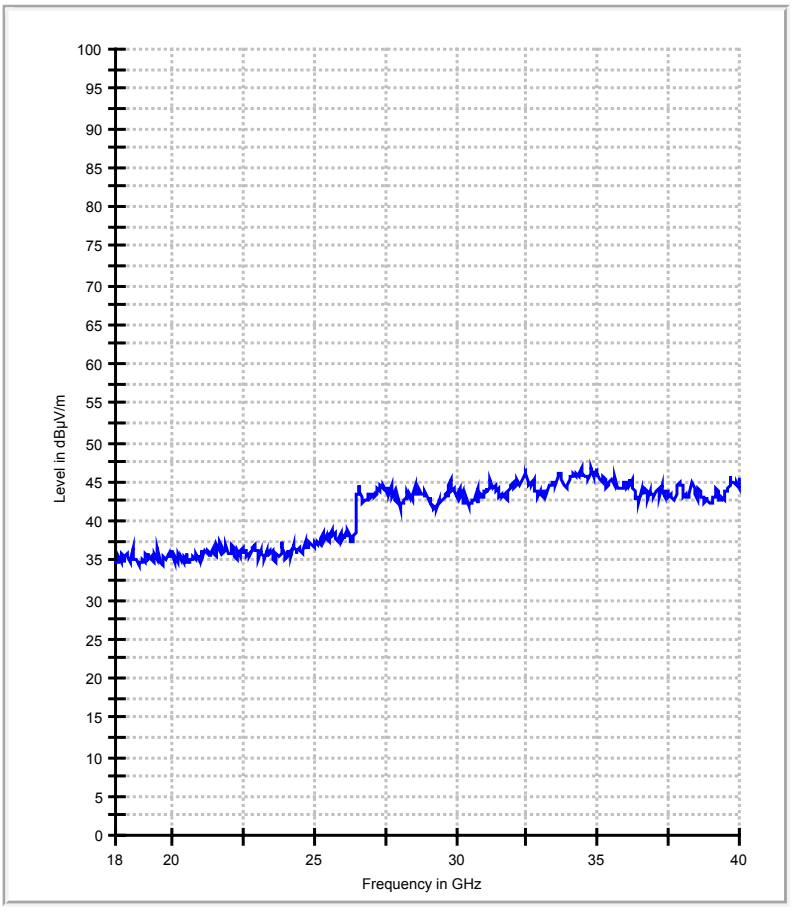
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1*	34400 (P)	67.1 (P)	68.3 (P)	-1.2	1	7	46.9 (P)	20.2
1*^	34414 (AV)	43.3 (AV)	48.3 (AV)	-5.0	1	7	33.1 (AV)	10.2

NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier (dBm) + *Filter (dB) – ^Distance factor (dB)
3. Margin value = Emission level – Limit value
4. The other emission levels were very low against the limit.
5. The limit value is defined as per 15.407
6. ^ is measured at 1m.
7. * Filter is used.

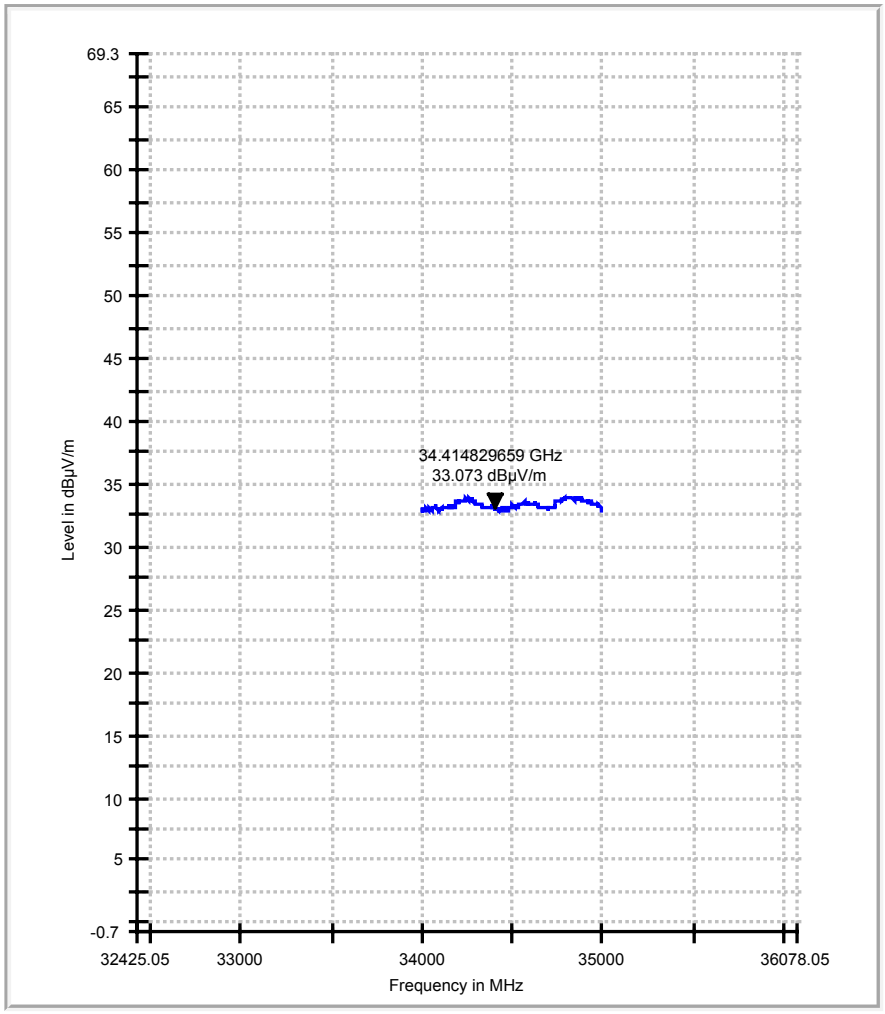
Vertical MaxPeak before correction (with filter)
Ch52 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 1 MHz



Vertical Average before correction (with filter and at 1m distance)
Ch52 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 300 Hz



Harmonics & Spurious emissions: 18-40GHz

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal Mode External Dual-Band Vertically Polarized Omni-Directional Antenna Gain: 5 dBi at 5.15-5.35 GHz Gain: 4.5dBi at 5.725 – 5.8 GHz	**CHANNEL**	Channel 64 (Data rate: 6Mbps)
FREQUENCY RANGE	18 ~ 40 GHz	**DETECTOR FUNCTION**	Peak (P) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY:	Sandra Sohn		

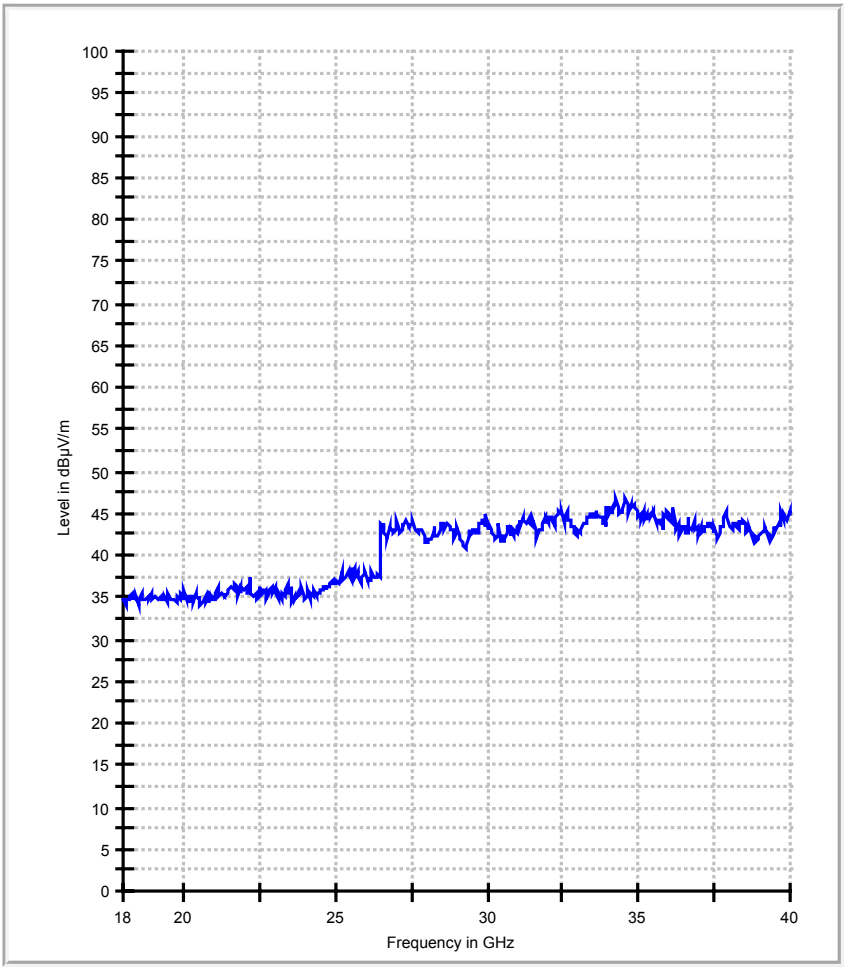
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1*	34577 (P)	67.0 (P)	68.3 (P)	-1.3	1	7	46.8 (P)	20.2
1*^	34575 (AV)	43.6 (AV)	48.3 (AV)	-4.7	1	7	33.4 (AV)	10.2

NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier (dBm) + *Filter (dB) - ^Distance factor (dB)
3. Margin value = Emission level – Limit value
4. The other emission levels were very low against the limit.
5. The limit value is defined as per 15.407
6. ^ is measured at 1m.
7. * Filter is used.

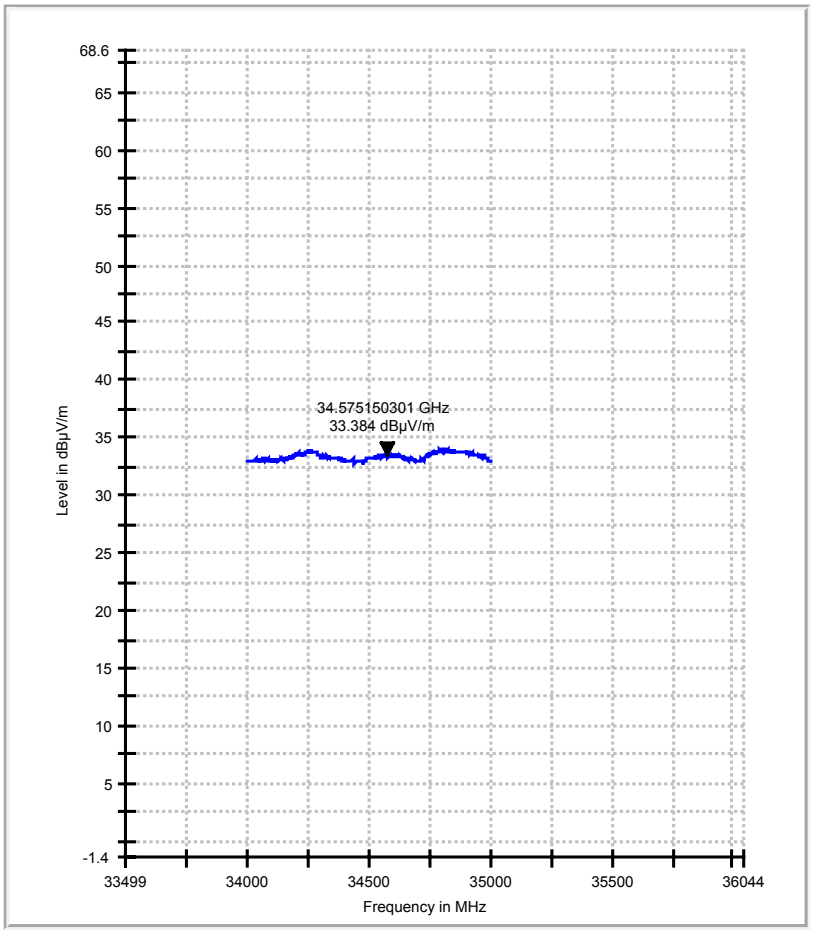
Vertical MaxPeak before correction (with filter)
Ch64 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 1 MHz



Vertical Average before correction (with filter and at 1m distance)
Ch64 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 300 Hz



Harmonics & Spurious emissions: 18-40GHz

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal Mode External Dual-Band Vertically Polarized Omni-Directional Antenna Gain: 5 dBi at 5.15-5.35 GHz Gain: 4.5dBi at 5.725 – 5.8 GHz	**CHANNEL**	Channel 149 (Data rate: 6Mbps)
FREQUENCY RANGE	18 ~ 40 GHz	**DETECTOR FUNCTION**	Peak (P) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY:	Sandra Sohn		

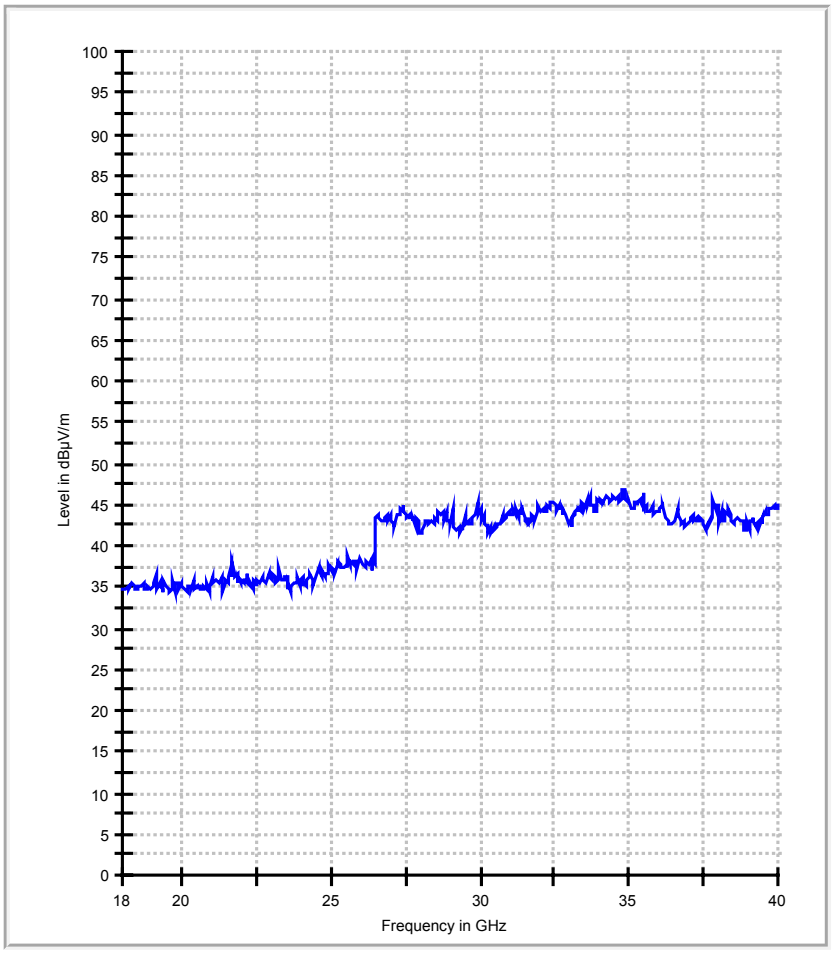
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1*	34797 (P)	66.9 (P)	68.3 (P)	-1.4	1	9	46.7 (P)	20.2
1*^	34799 (AV)	44.2 (AV)	48.3 (AV)	-4.1	1	9	34.0 (AV)	10.2

NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier (dBm) + *Filter (dB) - ^Distance factor (dB)
3. Margin value = Emission level – Limit value
4. The other emission levels were very low against the limit.
5. The limit value is defined as per 15.407
6. ^ is measured at 1m.
7. * Filter is used.

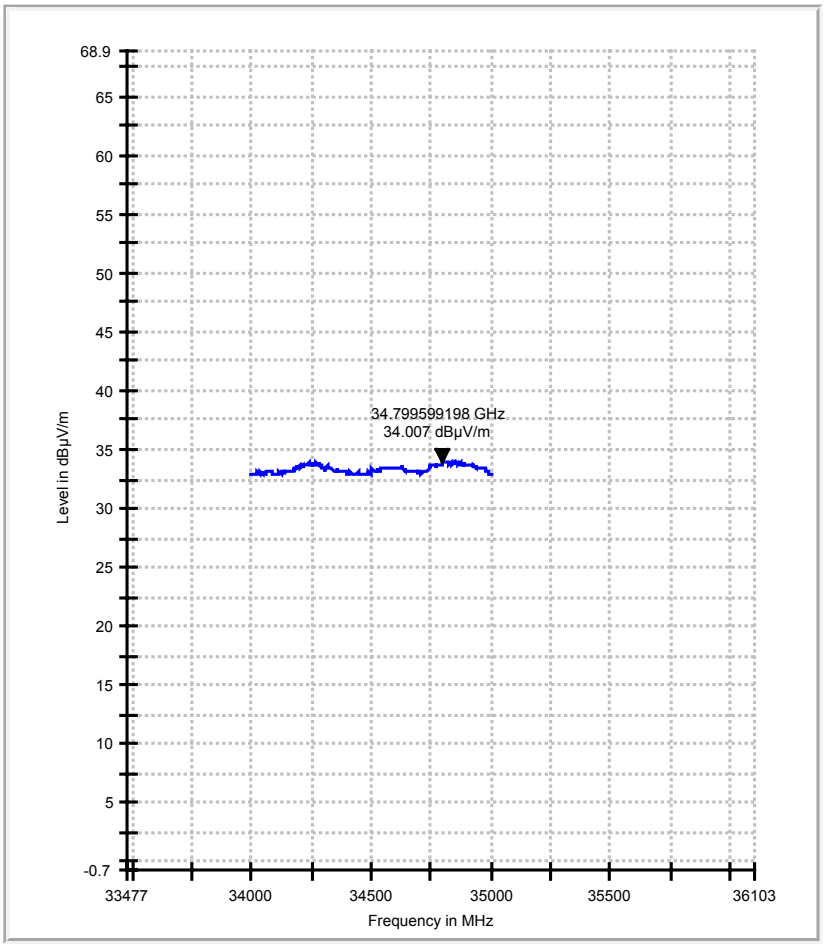
Vertical MaxPeak before correction (with filter)
Ch149 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 1 MHz



Vertical Average before correction (with filter and at 1m distance)
Ch149 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 300 Hz



Harmonics & Spurious emissions: 18-40GHz

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal Mode External Dual-Band Vertically Polarized Omni-Directional Antenna Gain: 5 dBi at 5.15-5.35 GHz Gain: 4.5dBi at 5.725 – 5.8 GHz	**CHANNEL**	Channel 161 (Data rate: 6Mbps)
FREQUENCY RANGE	18 ~ 40 GHz	**DETECTOR FUNCTION**	Peak (P) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY:	Sandra Sohn		

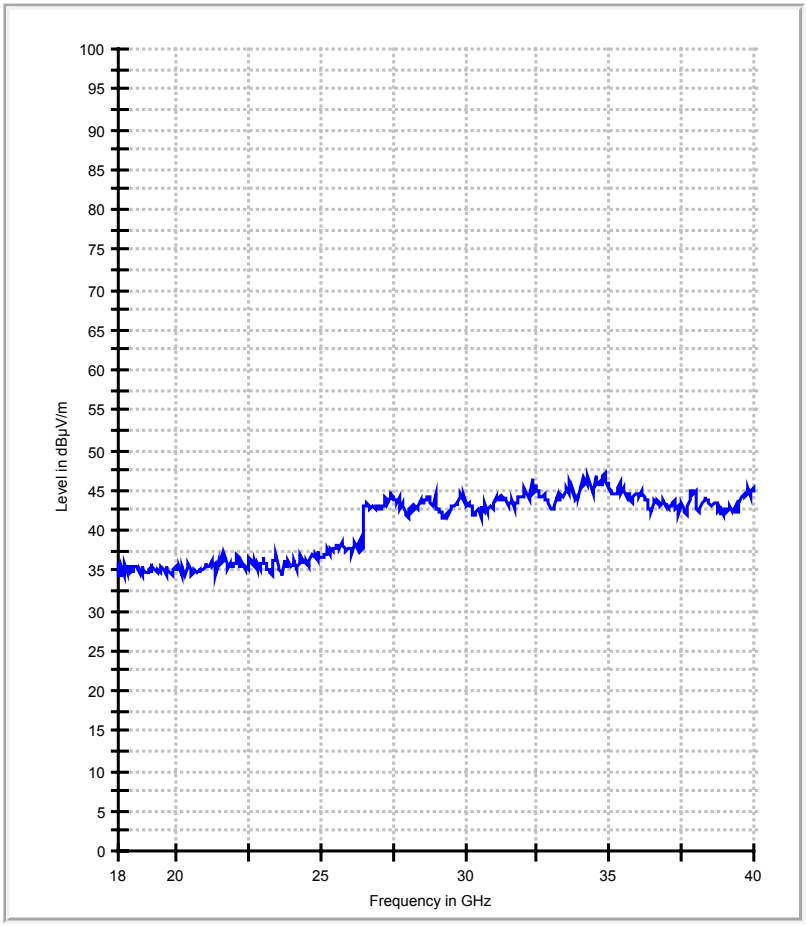
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1*	34841 (P)	67.2 (P)	68.3 (P)	-1.1	1	9	47.0 (P)	20.2
1*^	34845 (AV)	44.0	48.3 (AV)	-4.3	1	9	33.8 (AV)	10.2

NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier (dBm) + *Filter (dB) - ^Distance factor (dB)
3. Margin value = Emission level – Limit value
4. The other emission levels were very low against the limit.
5. The limit value is defined as per 15.407
6. ^ is measured at 1m.
7. * Filter is used.

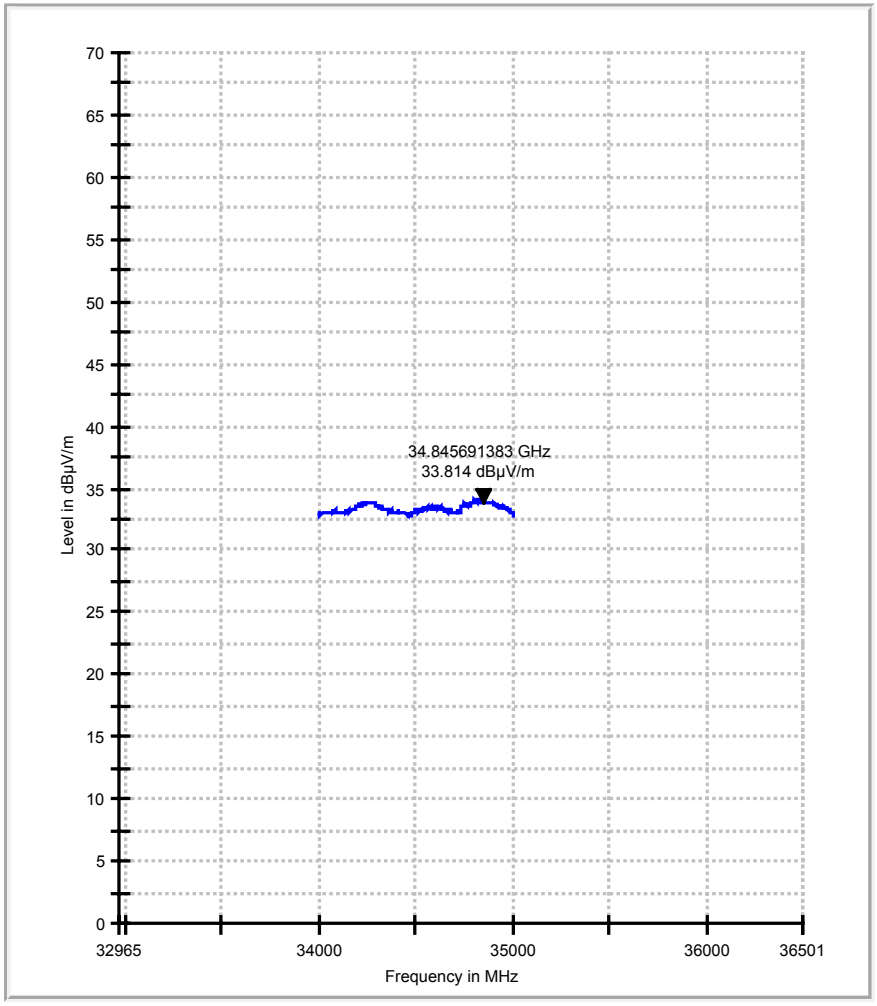
Vertical MaxPeak before correction (with filter)
Ch161 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 1 MHz



Vertical Average before correction (with filter and at 1m distance)
Ch161 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 300 Hz



Harmonics & Spurious emissions: 18-40GHz

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal Mode External Dual-Band Vertically Polarized Omni-Directional Antenna Gain: 5 dBi at 5.15-5.35 GHz Gain: 4.5dBi at 5.725 – 5.8 GHz	**CHANNEL**	Channel 165 (Data rate: 6Mbps)
FREQUENCY RANGE	18 ~ 40 GHz	**DETECTOR FUNCTION**	Peak (P) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY:	Sandra Sohn		

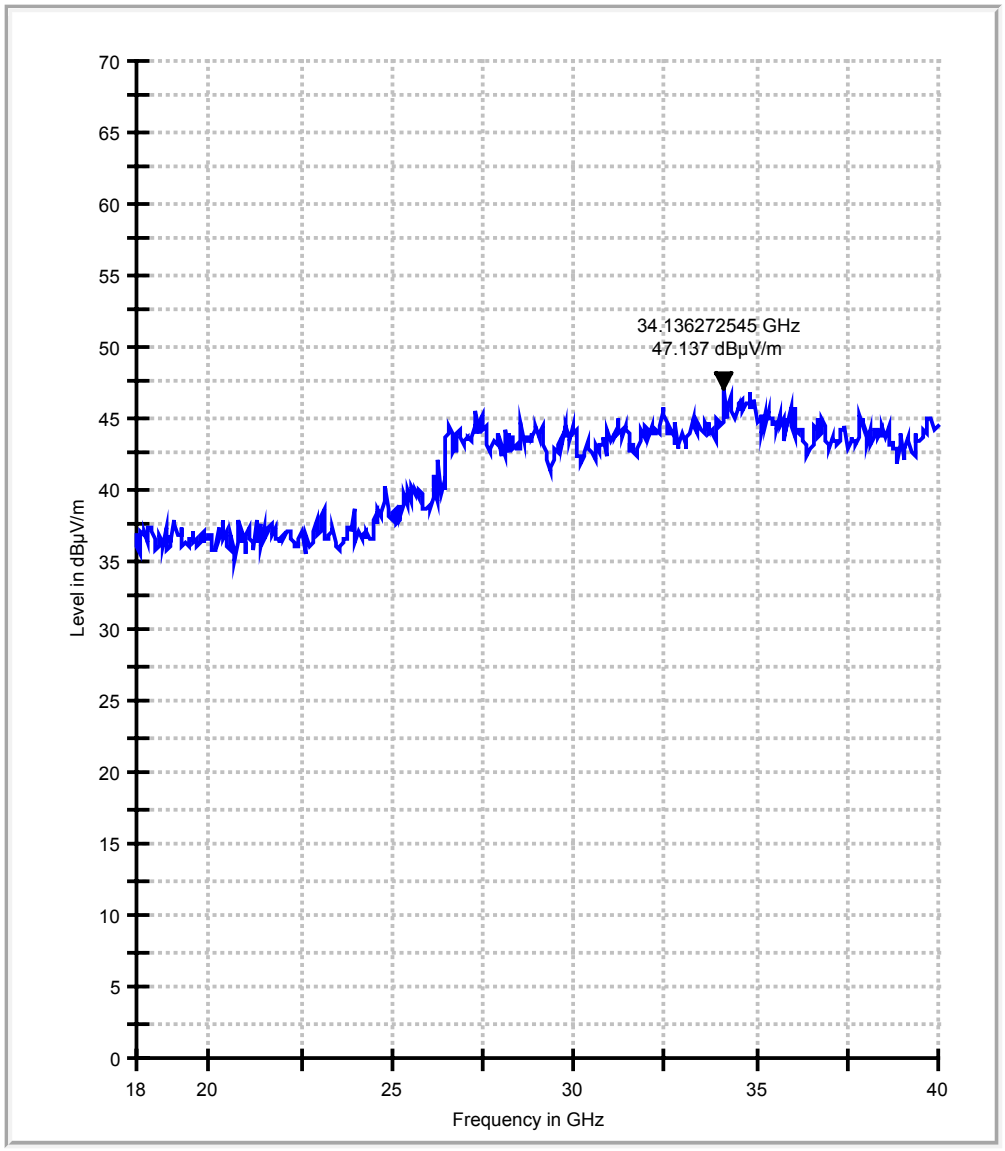
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1*	34136 (P)	67.3 (P)	68.3 (P)	-1.0	1	9	47.1 (P)	20.2
1*^	34138 (AV)	43.3	48.3 (AV)	-5.0	1	9	33.1 (AV)	10.2

NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier (dBm) + *Filter (dB) - ^Distance factor (dB)
3. Margin value = Emission level – Limit value
4. The other emission levels were very low against the limit.
5. The limit value is defined as per 15.407
6. ^ is measured at 1m.
7. * Filter is used.

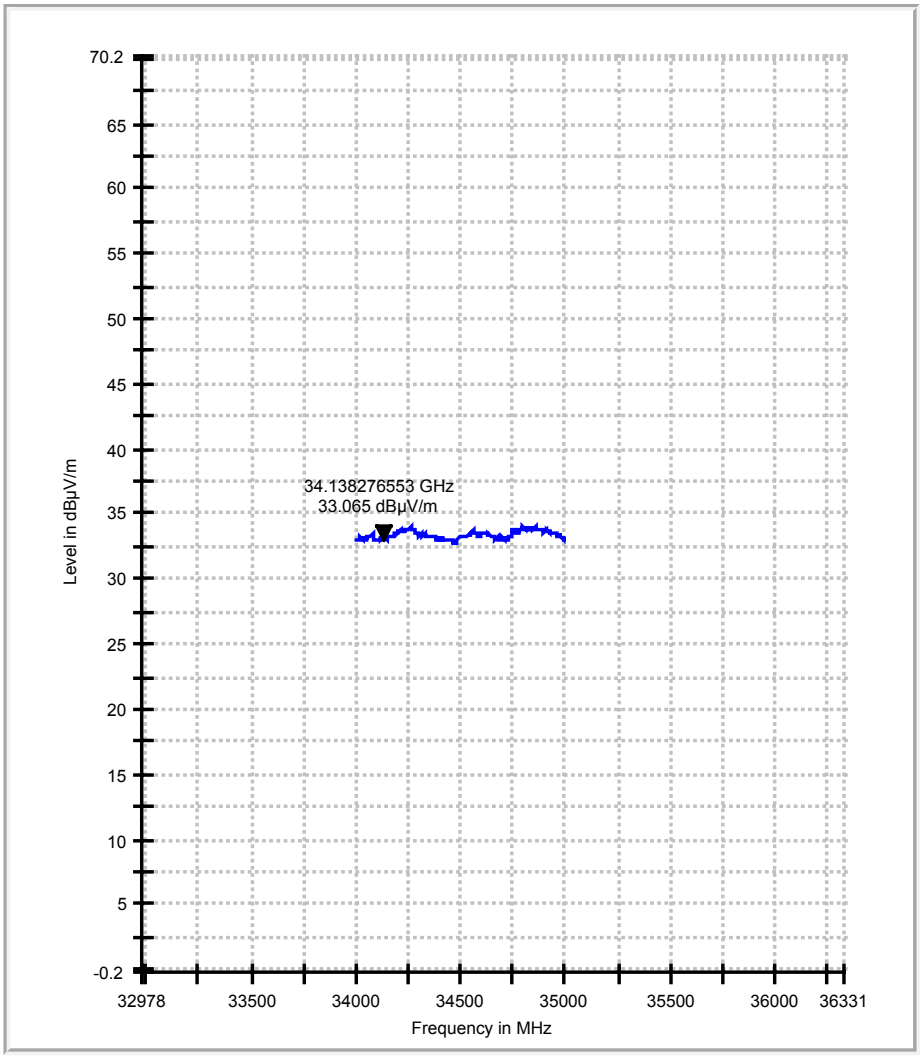
Vertical MaxPeak before correction (with filter)
Ch165 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 1 MHz



Vertical Average before correction (with filter and at 1m distance)
Ch165 (Data rate: 6Mbps)

Resolution Bandwidth: 1MHz
Video Bandwidth: 300 Hz



Harmonics & Spurious emissions: 18-40GHz

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal Mode External Dual-Band Vertically Polarized Omni-Directional Antenna Gain: 5 dBi at 5.15-5.35 GHz Gain: 4.5dBi at 5.725 – 5.8 GHz	**CHANNEL**	Channel 58 (Turbo mode)
FREQUENCY RANGE	18 ~ 40 GHz	**DETECTOR FUNCTION**	Peak (P) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY:	Sandra Sohn		

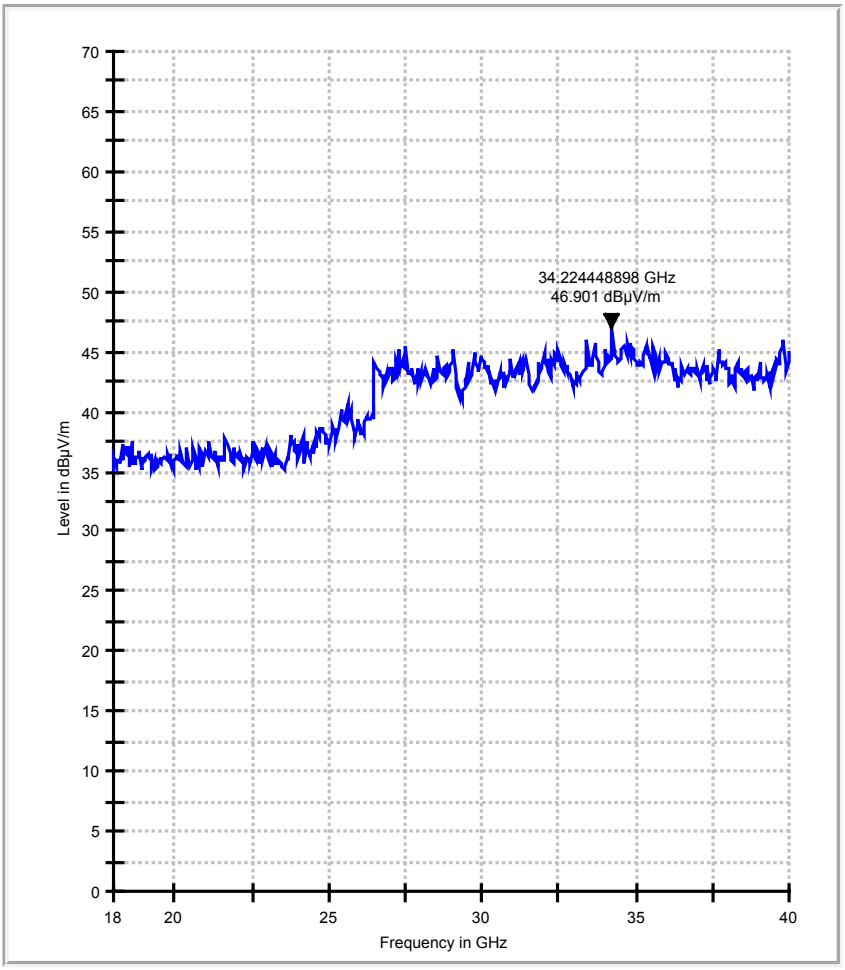
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1*	34224 (P)	67.1 (P)	68.3 (P)	-1.2	1	9	46.9 (P)	20.2
1*^	34250 (AV)	43.2	48.3 (AV)	-5.1	1	9	33.0 (AV)	10.2

NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier (dBm) + *Filter (dB) - ^Distance factor (dB)
3. Margin value = Emission level – Limit value
4. The other emission levels were very low against the limit.
5. The limit value is defined as per 15.407
6. ^ is measured at 1m.
7. * Filter is used.

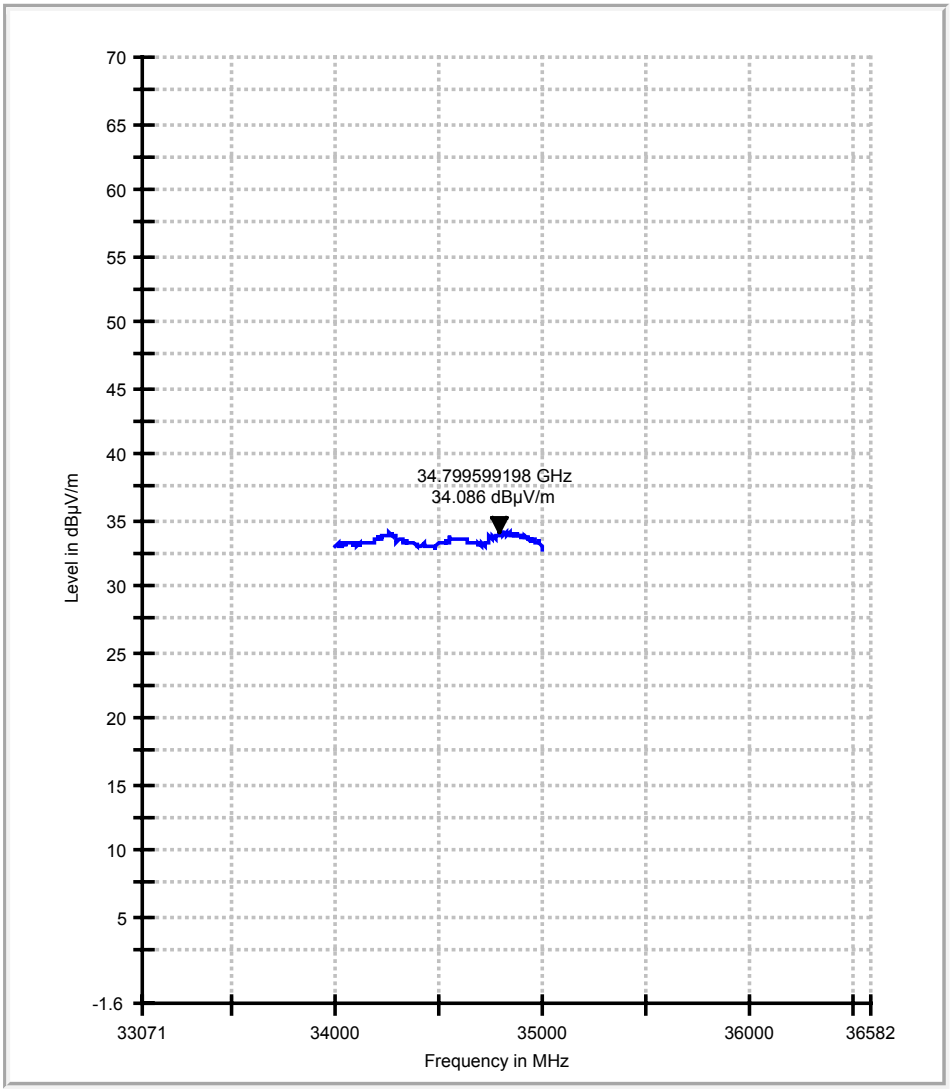
Vertical MaxPeak before correction (with filter)
Ch58 (Turbo mode)

Resolution Bandwidth: 1MHz
Video Bandwidth: 1 MHz



Vertical Average before correction (with filter and at 1m distance)
Ch58 (Turbo mode)

Resolution Bandwidth: 1MHz
Video Bandwidth: 300 Hz



Harmonics & Spurious emissions: 18-40GHz

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal Mode External Dual-Band Vertically Polarized Omni-Directional Antenna Gain: 5 dBi at 5.15-5.35 GHz Gain: 4.5dBi at 5.725 – 5.8 GHz	**CHANNEL**	Channel 160 (Turbo mode)
FREQUENCY RANGE	18 ~ 40 GHz	**DETECTOR FUNCTION**	Peak (P) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 40%RH	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
TESTED BY:	Sandra Sohn		

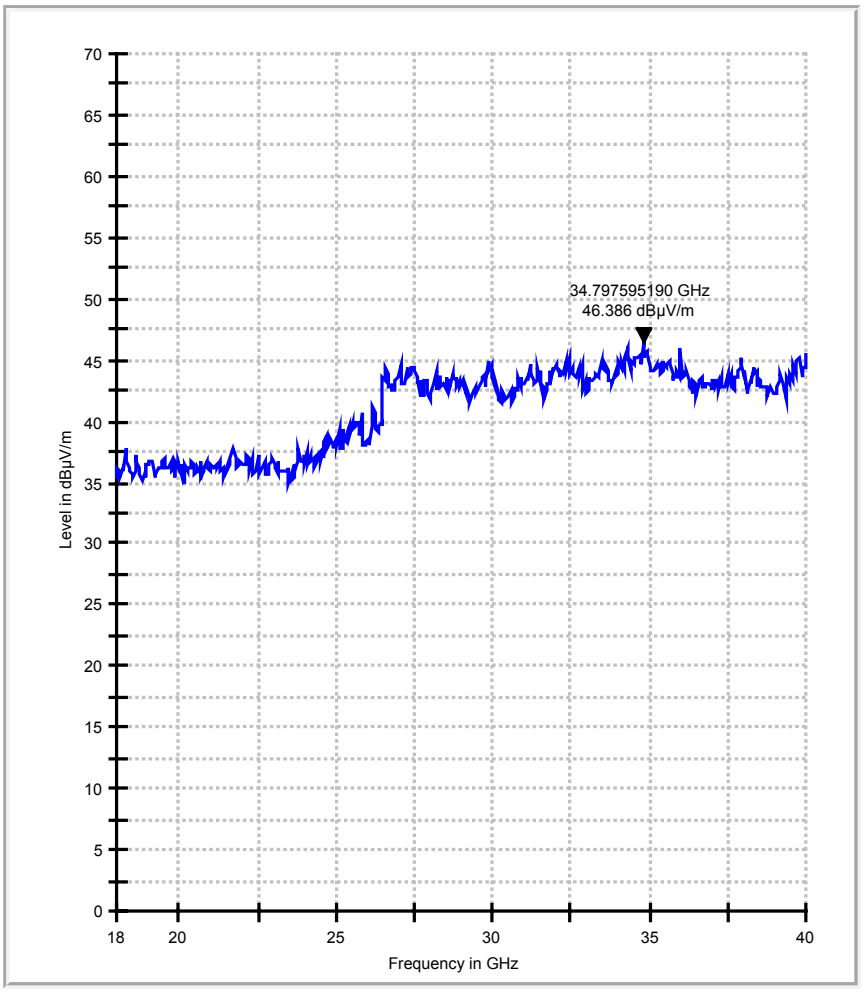
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB)
1*	34797 (P)	66.6 (P)	68.3 (P)	-1.7	1	9	46.4 (P)	20.2
1*^	34809 (AV)	44.3 (AV)	48.3 (AV)	-4.1	1	9	34.0 (AV)	10.2

NOTE:

1. Emission level(dBuV/m)=Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) – Pre-Amplifier (dBm) + *Filter (dB) - ^Distance factor (dB)
3. Margin value = Emission level – Limit value
4. The other emission levels were very low against the limit.
5. The limit value is defined as per 15.407
6. ^ is measured at 1m.
7. * Filter is used.

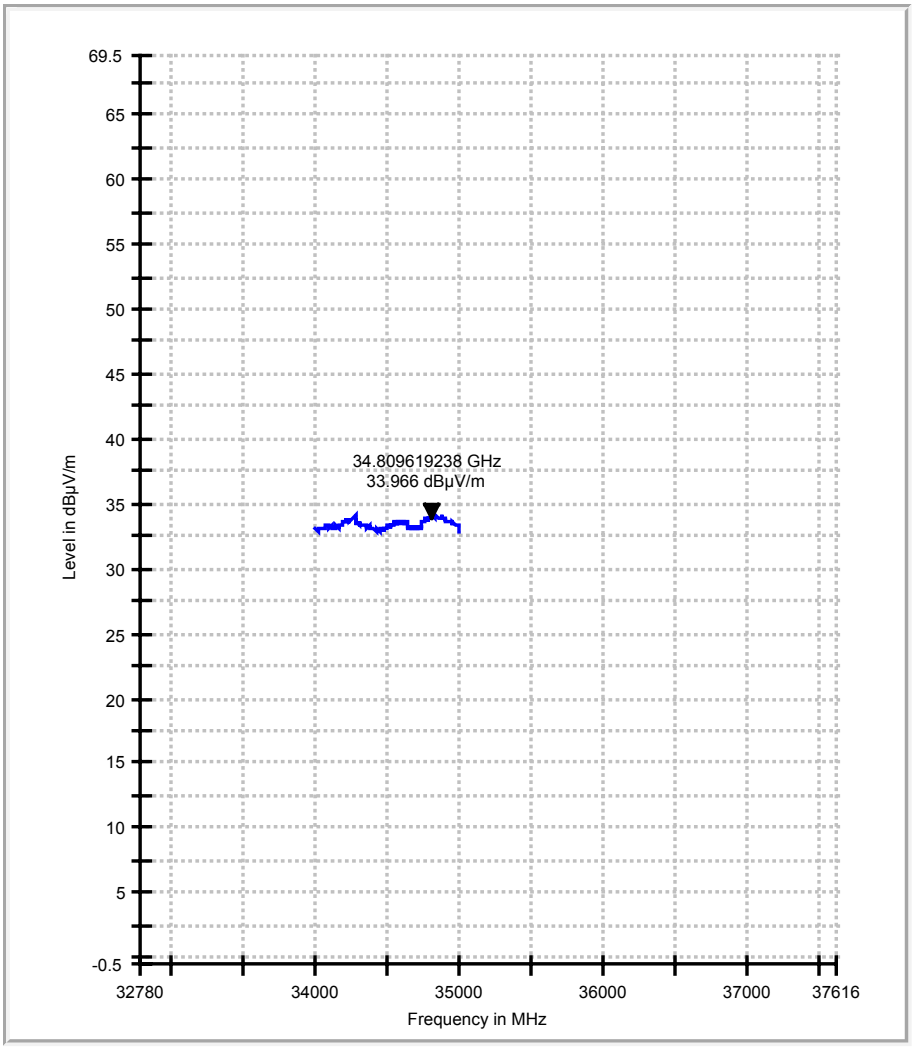
Vertical MaxPeak before correction (with filter)
Ch160 (Turbo mode)

Resolution Bandwidth: 1MHz
Video Bandwidth: 1 MHz



Vertical Average before correction (with filter and at 1m distance)
Ch160 (Turbo mode)

Resolution Bandwidth: 1MHz
Video Bandwidth: 300 Hz



FOR FREQUENCY 5.15~5.35GHz

5.3. PEAK TRANSMIT POWER MEASUREMENT

5.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

Frequency	Band Limit
5.15 – 5.25GHz	The lesser of 50mW (17dBm) or 4dBm + 10logB
5.25 – 5.35GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB

NOTE: Where B is the 26dB emission bandwidth in MHz.

5.3.2 TEST INSTRUMENTS

Device	Model No.	Serial No.	Last Cal.	Next Cal
ROHDE & SCHWARZ EMI Test Receiver	ESIB 40	100201	01/23/05	01/23/06

5.3.3 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.

2. Set span to encompass the entire emission bandwidth of the signal.

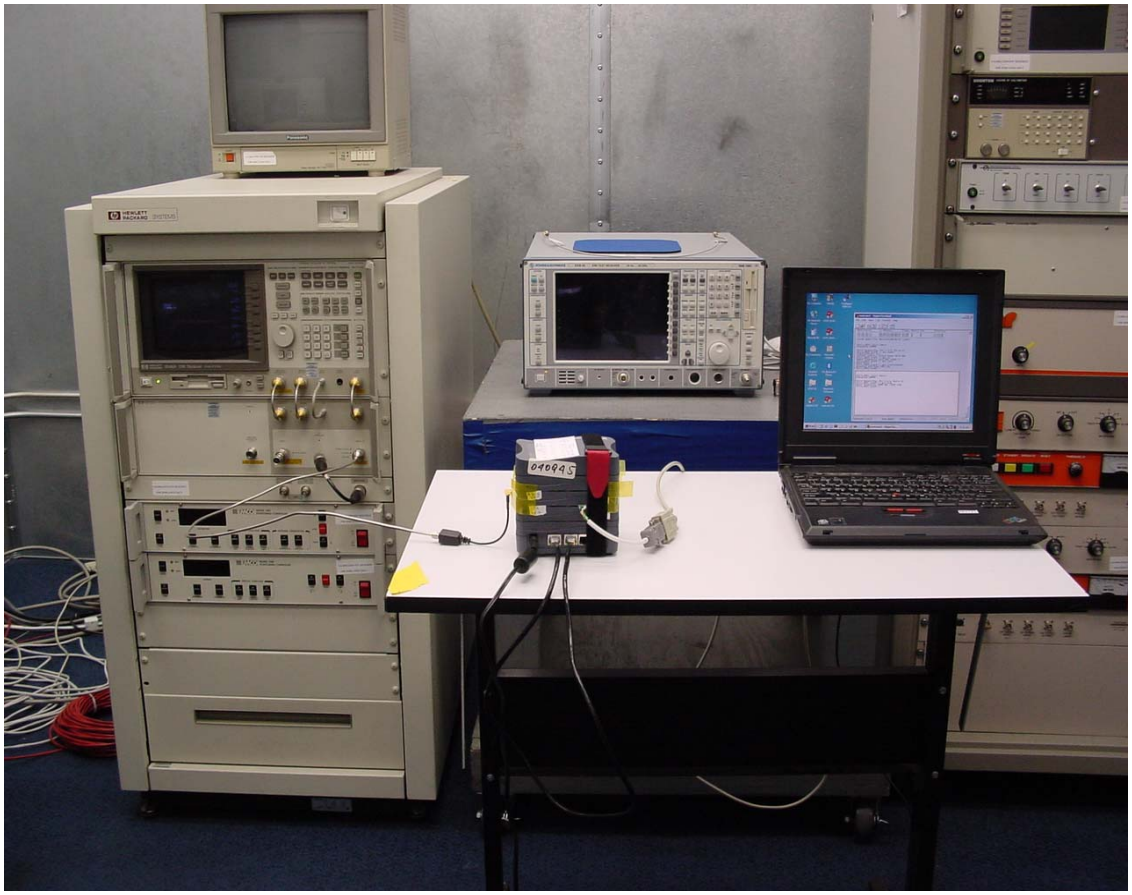
3. Set RBW to 1MHz, VBW to 3 MHz

4. Using the spectrum analyzer's channel power measurement function to measure the output power.

5.3.4 DEVIATION FROM TEST STANDARD

No deviation

5.3.5 TEST SETUP



5.3.6 EUT OPERATING CONDITIONS

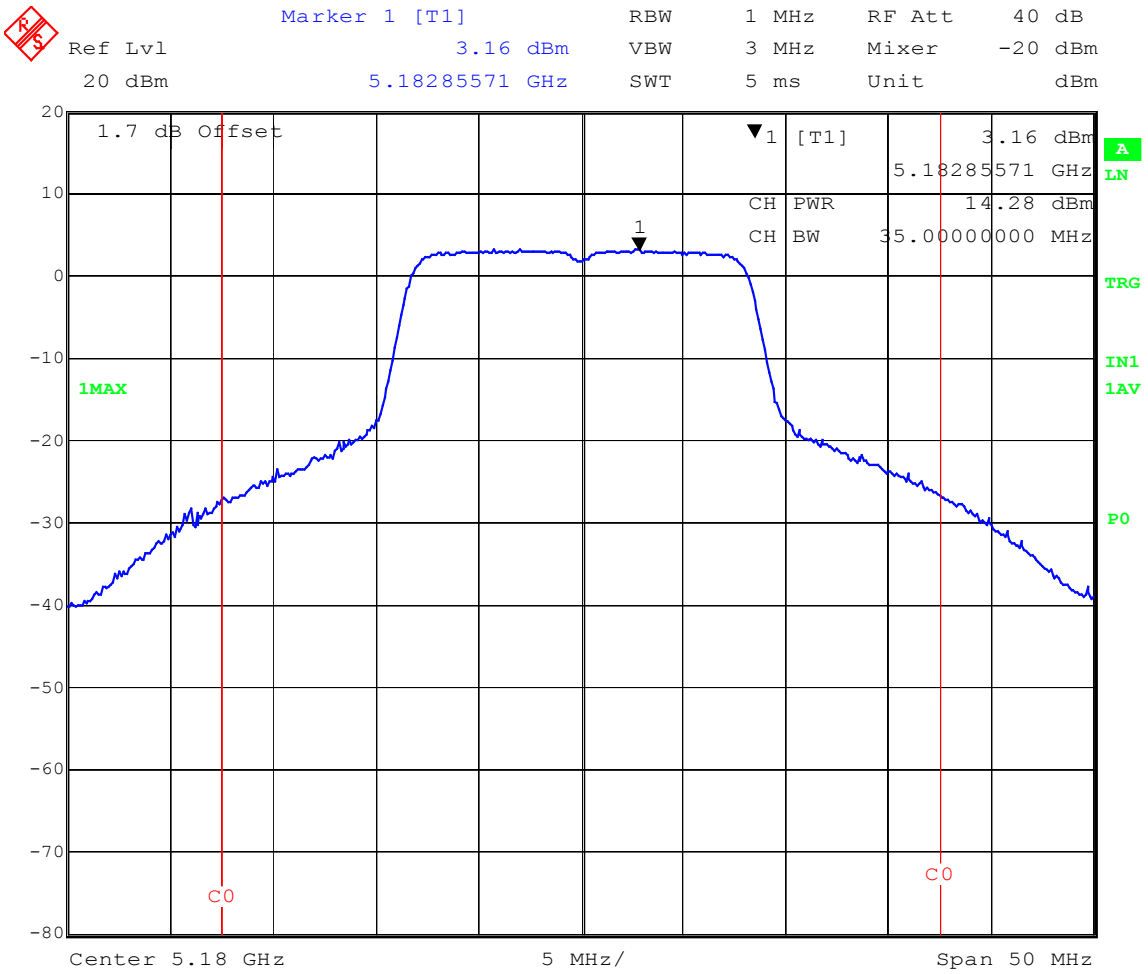
The software provided by client to enable the EUT under transmission condition continuously at low, middle and high channel frequencies individually.

5.3.7 TEST RESULTS

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal, 6Mbps	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 40%RH	**TESTED BY**:	Sandra Sohn

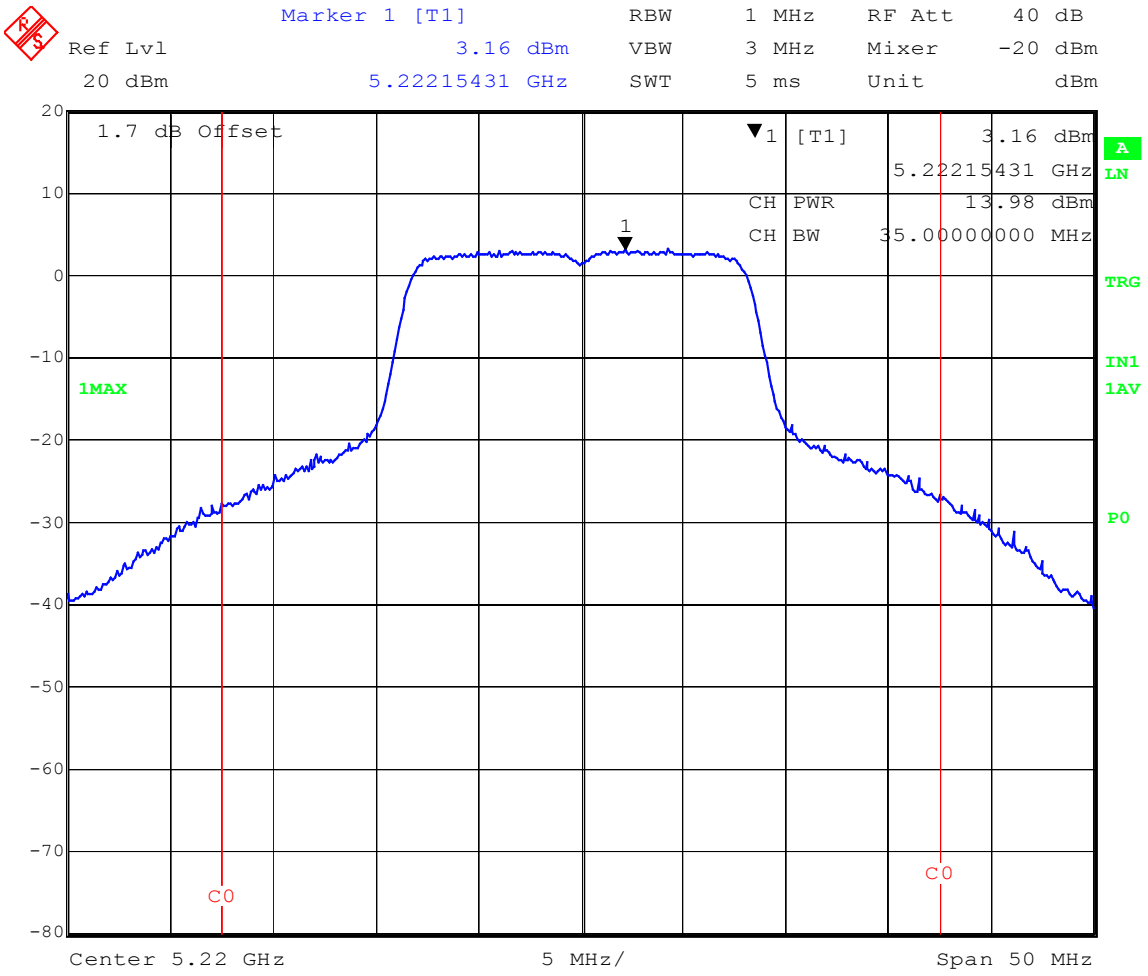
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
36	5180	14.28	17	PASS
44	5220	13.98	17	PASS
48	5240	13.85	17	PASS
52	5260	14.92	24	PASS
60	5300	14.55	24	PASS
64	5320	14.47	24	PASS

Peak Power
Channel 36
Data rate: 6Mbps



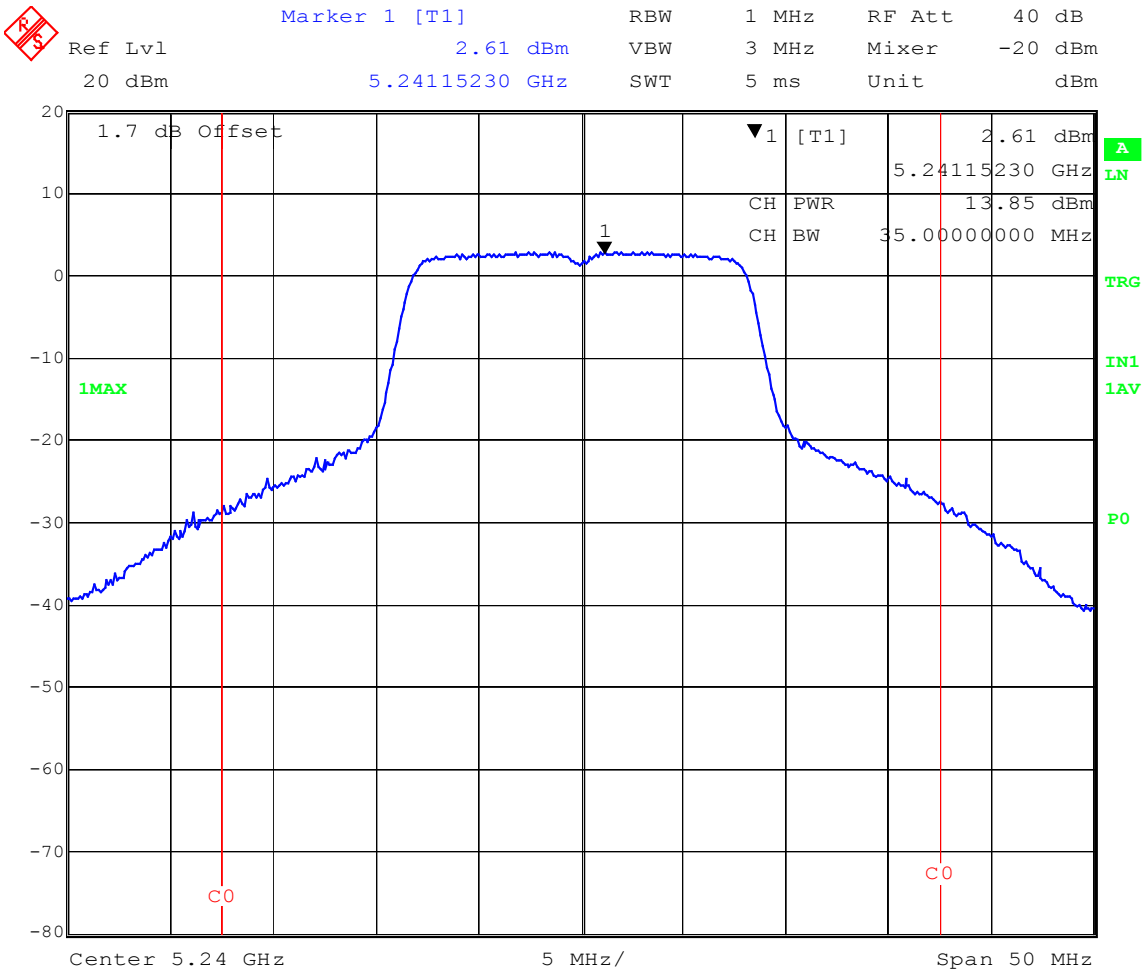
Title: Ch36 rate 6 max power and ppsd
Date: 11.MAY.2005 16:38:54

Peak Power
Channel 44
Data rate: 6Mbps



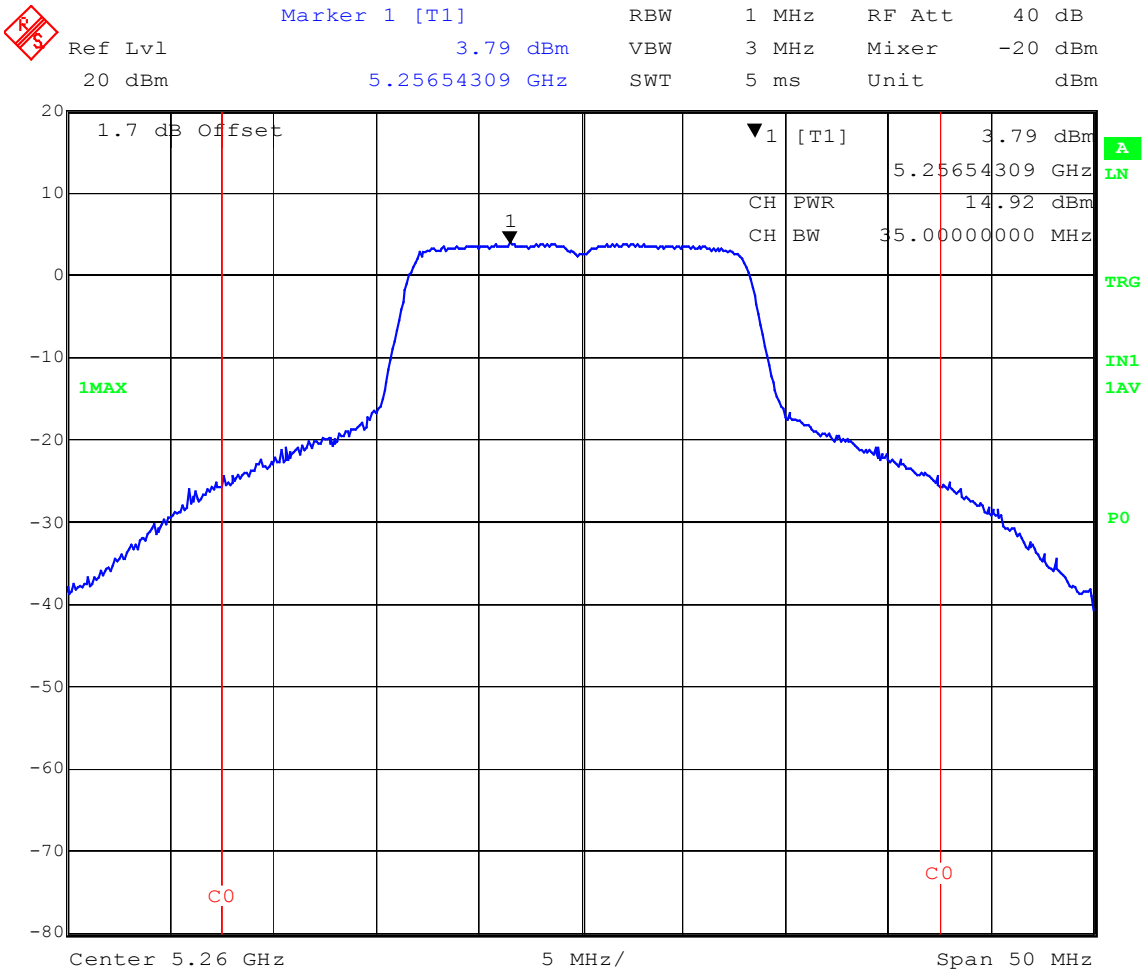
Title: Ch44 rate 6 max power and ppsd
Date: 11.MAY.2005 16:41:47

Peak Power
Channel 48
Data rate: 6Mbps



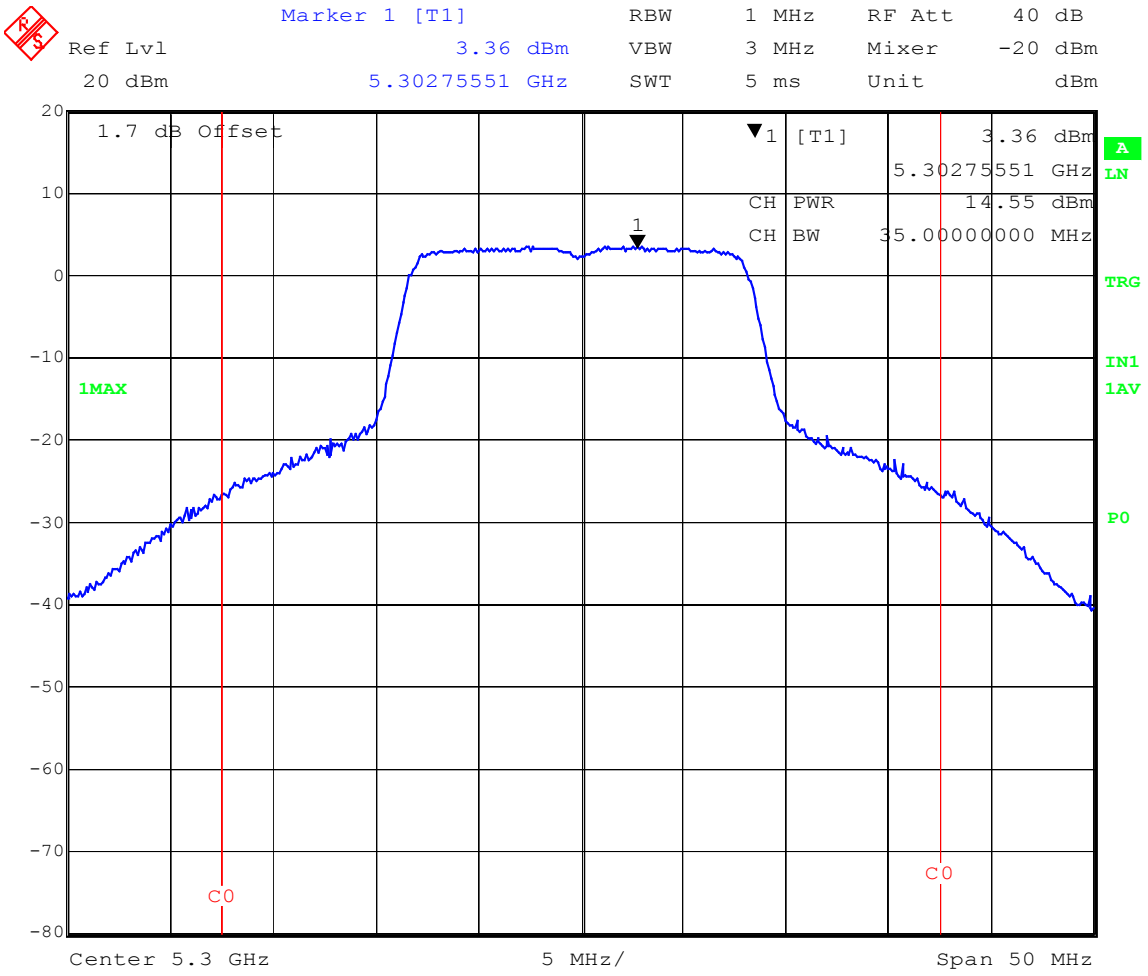
Title: Ch48 rate 6 max power and ppsd
Date: 11.MAY.2005 16:43:20

Peak Power
Channel 52
Data rate: 6Mpbs



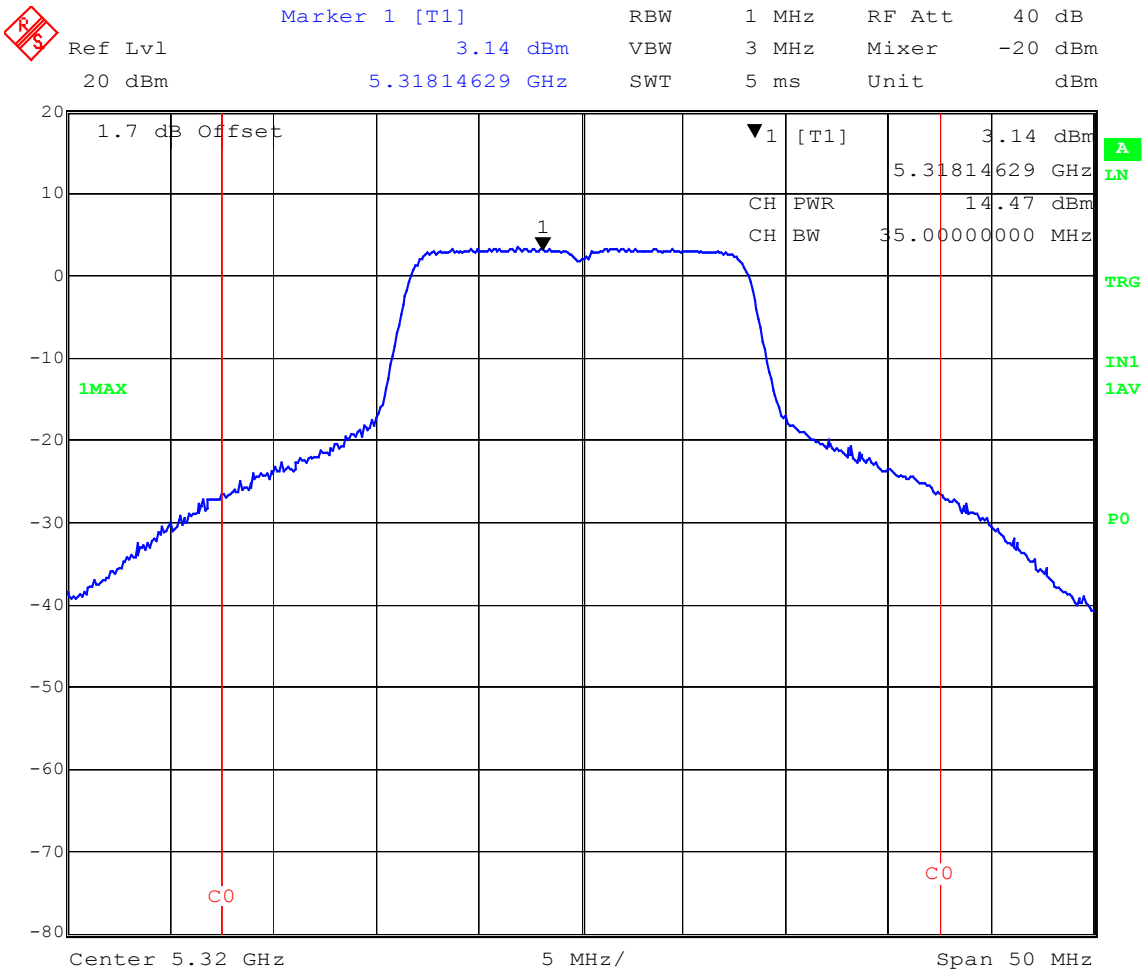
Title: Ch52 rate 6 max power and ppsd
Date: 11.MAY.2005 16:44:40

Peak Power
Channel 60
Data rate: 6Mpbs



Title: Ch60 rate 6 max power and ppsd
Date: 11.MAY.2005 16:46:01

Peak Power
Channel 64
Data rate: 6Mpbs

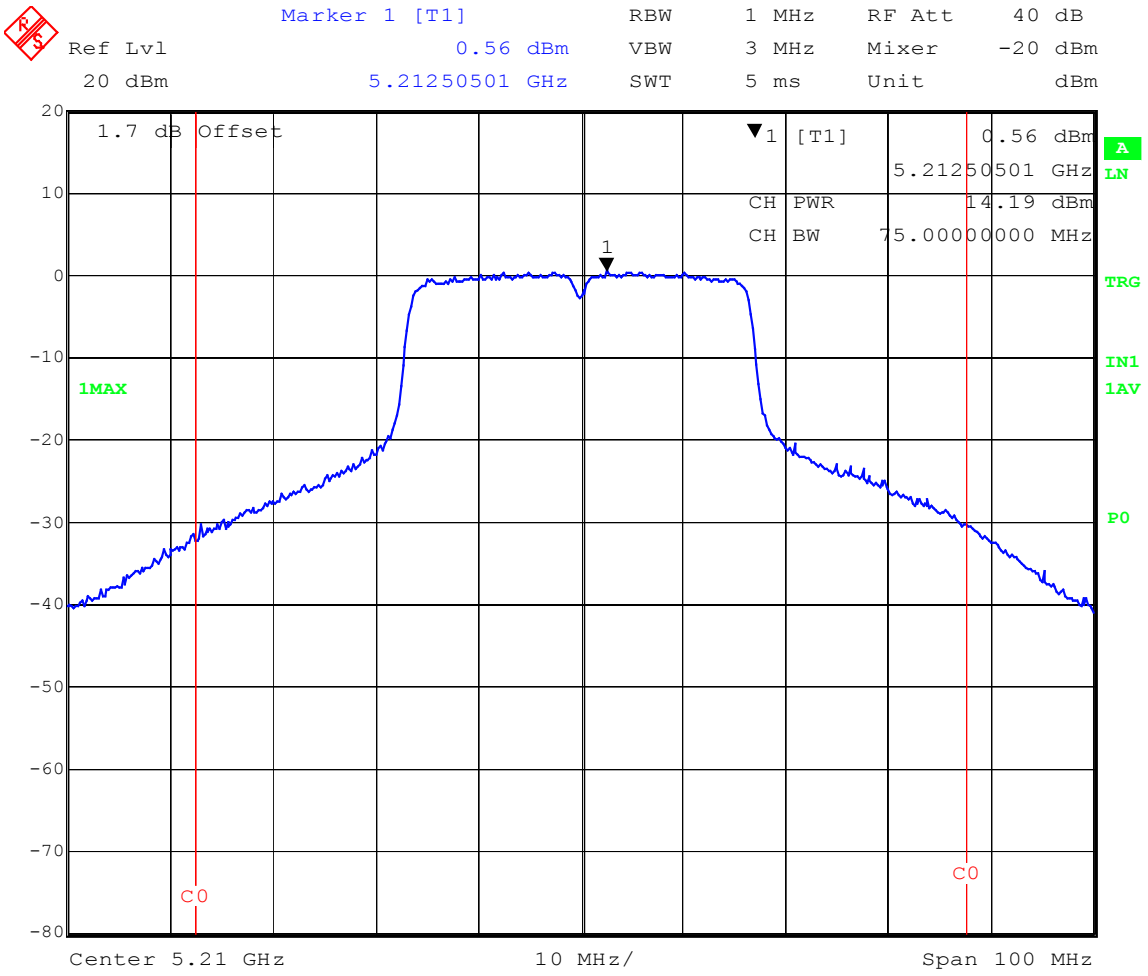


Title: Ch64 rate 6 max power and ppsd
Date: 11.MAY.2005 16:48:13

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Turbo	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	22deg. C, 48%RH	**TESTED BY**:	Sandra Sohn

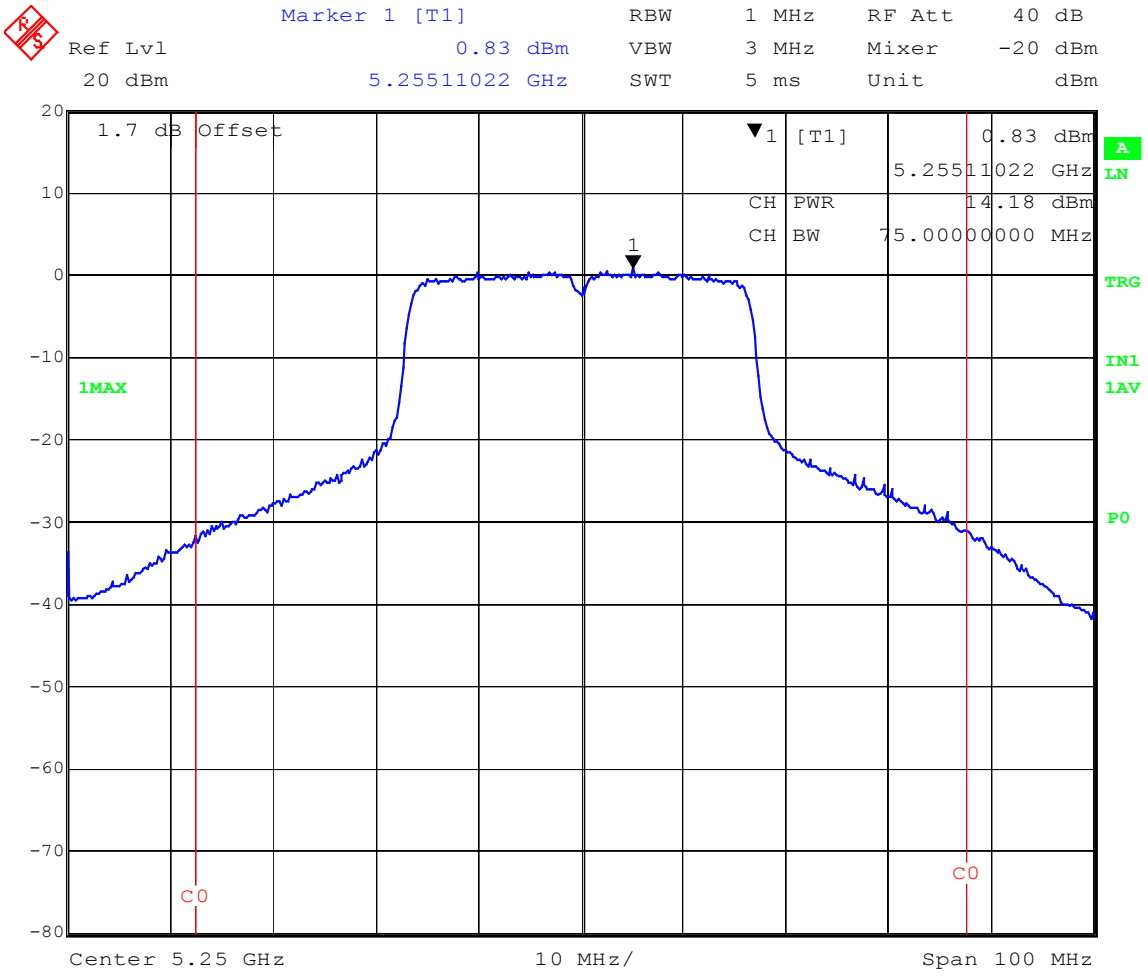
CHANNEL	FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	PASS/FAIL
42	5210	14.19	17	PASS
50	5250	14.18	17	PASS
58	5290	15.70	24	PASS

Peak Power
Low Turbo channel 42



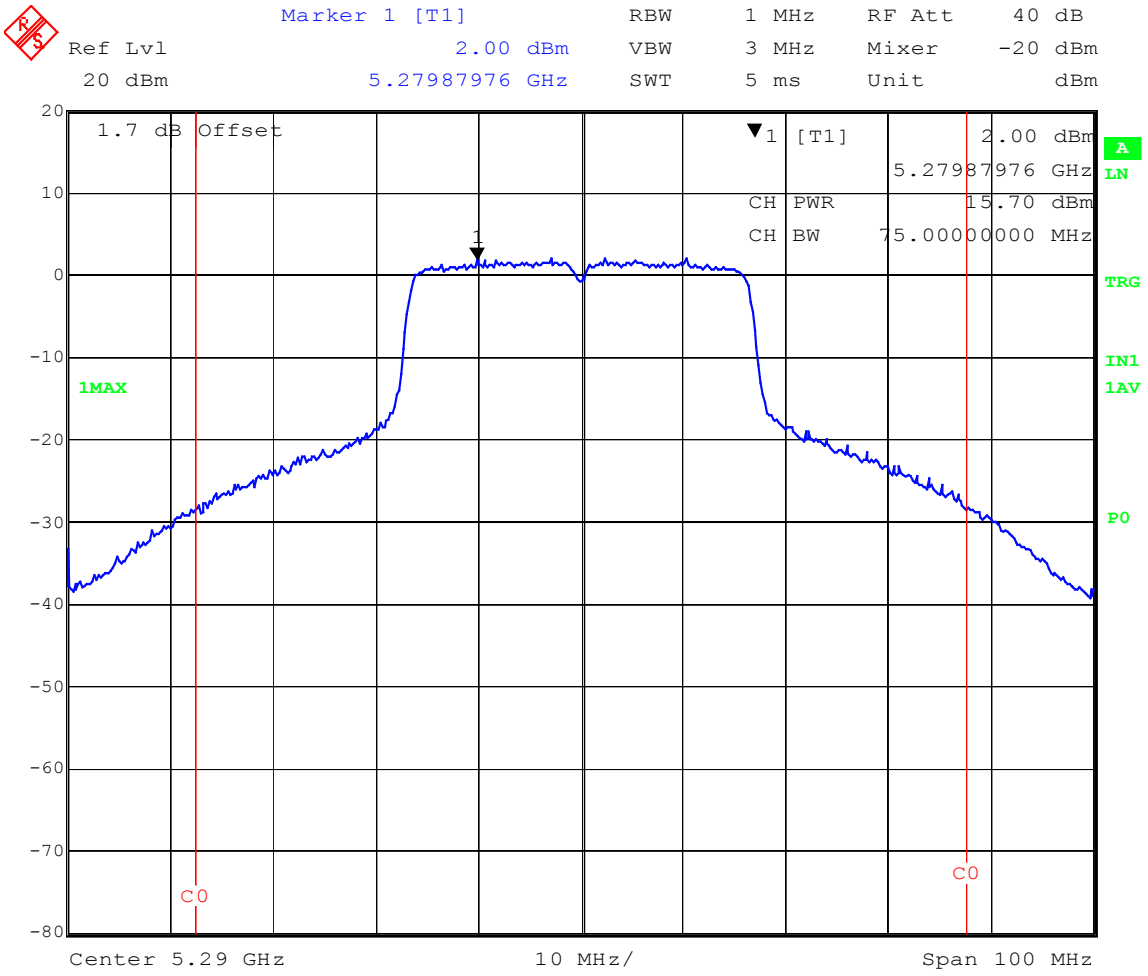
Title: Ch42 rate turbo max power and ppsd
Date: 11.MAY.2005 16:53:53

Peak Power
Low Turbo channel 50



Title: Ch50 rate turbo max power and ppsd
Date: 11.MAY.2005 16:55:26

Peak Power
Middle Turbo channel 58



Title: Ch58 rate turbo max power and ppsd
Date: 11.MAY.2005 16:56:49

5.4. PEAK POWER EXCURSION MEASUREMENT

5.4.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

Frequency Band	Limit
5.15 – 5.25 GHz	13dB
5.25 – 5.35 GHz	13dB

5.4.2 TEST INSTRUMENTS

Device	Model No.	Serial No.	Last Cal.	Next Cal
ROHDE & SCHWARZ EMI Test Receiver	ESIB 40	100201	01/23/05	01/23/06

5.4.3 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.

2. Set the spectrum bandwidth span to view the entire spectrum.

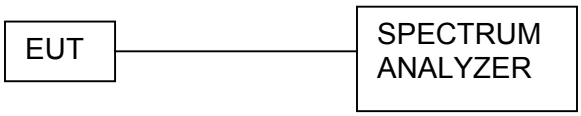
3. Using peak detector and Max-hold function for Trace 1 Peak Detector (RB=1MHz, VB=10MHz) and 2 Average Detector (RB=1MHz, VB=10MHz).

4. The largest difference between Trace 1 and Trace 2 in any 1MHz band on any frequency was recorded.

5.4.4 DEVIATION FROM TEST STANDARD

No deviation

5.4.5 TEST SETUP



5.4.6 EUT OPERATING CONDITIONS

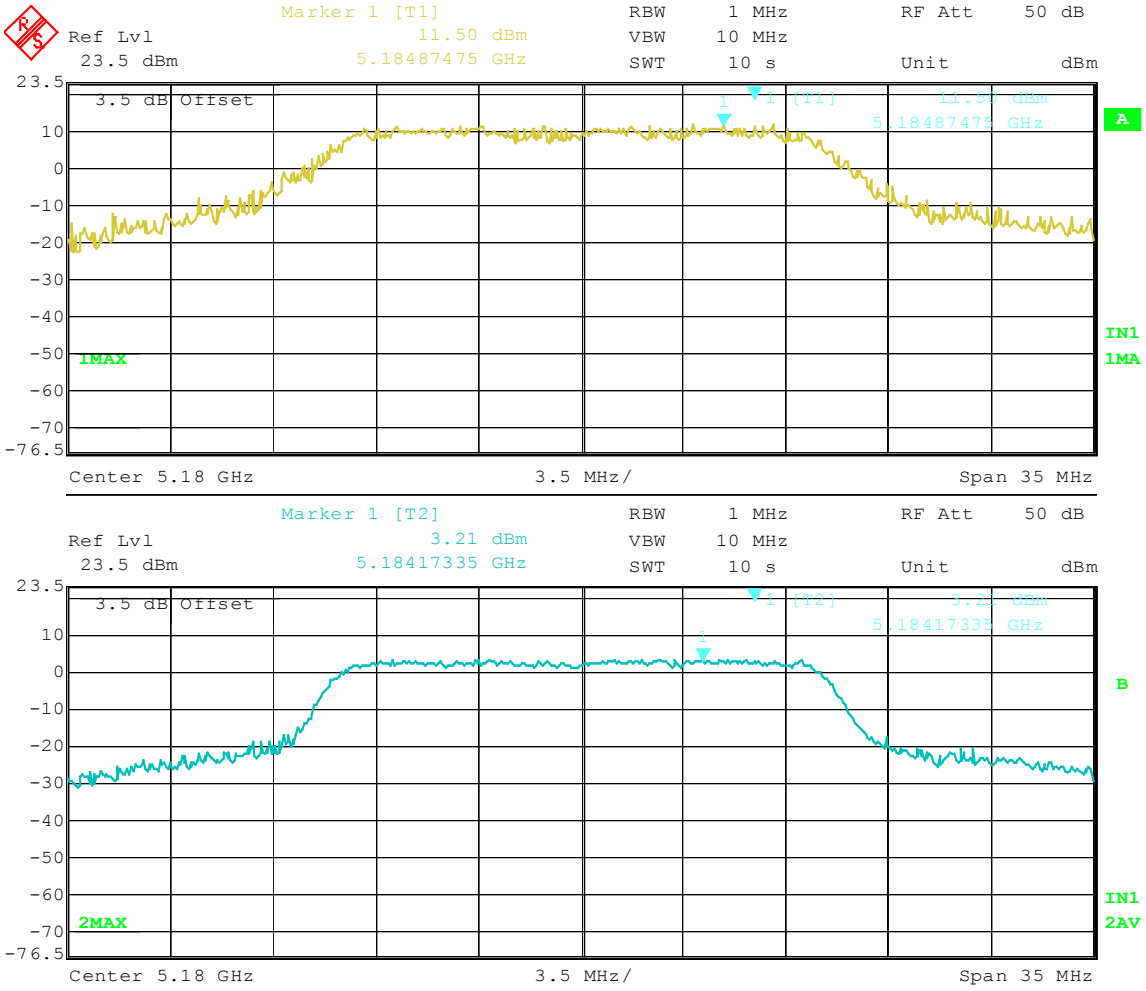
The software provided by client to enable the EUT under transmission condition continuously at middle, high channel frequency individually.

5.4.7 TEST RESULTS

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal, Data rate: 6Mbps	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 40%RH	**TESTED BY**:	Sandra Sohn

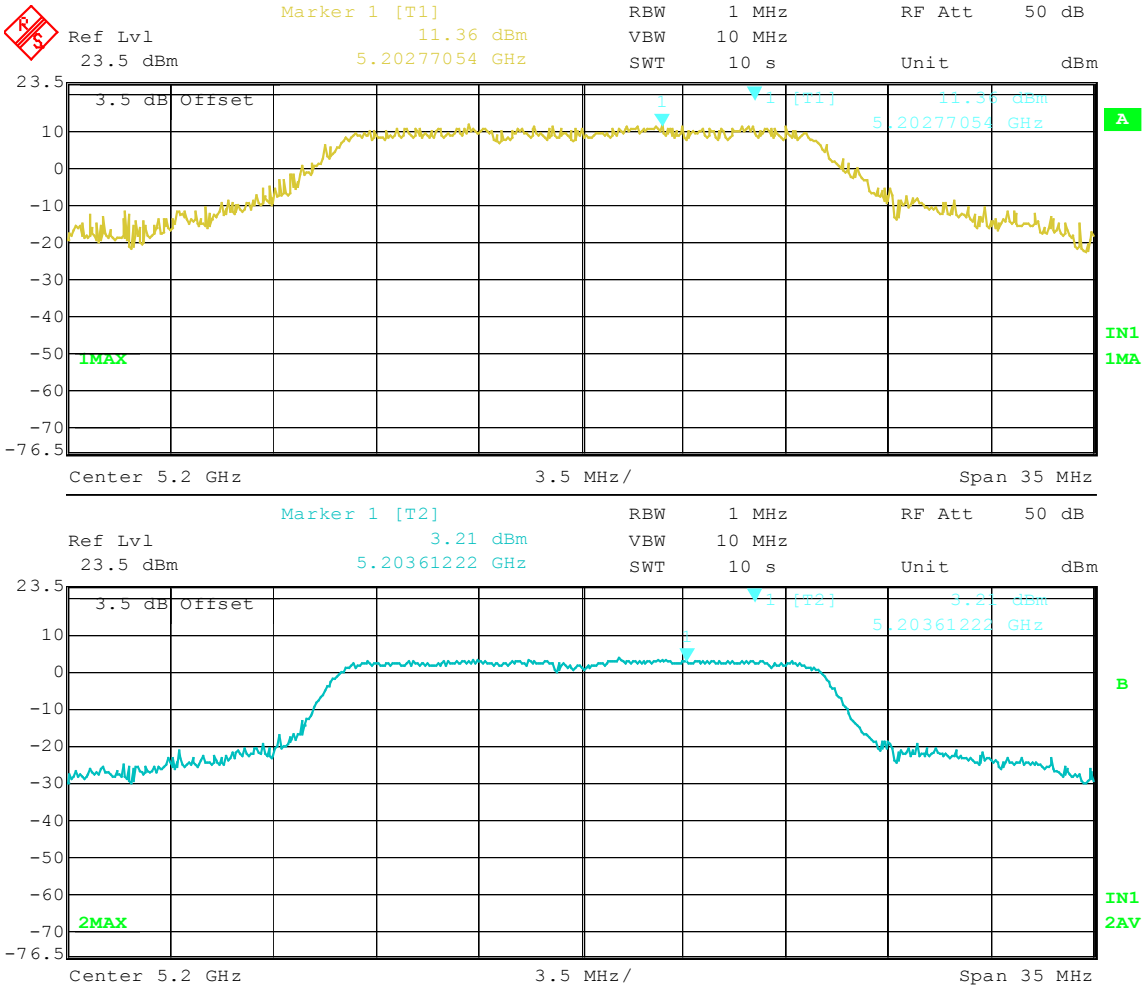
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK TO AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
36	5180	8.29	13	PASS
40	5200	8.15	13	PASS
48	5240	8.24	13	PASS
52	5260	7.50	13	PASS
60	5300	7.86	13	PASS
64	5320	7.84	13	PASS

PPE
Channel 36
Data rate: 6Mbps



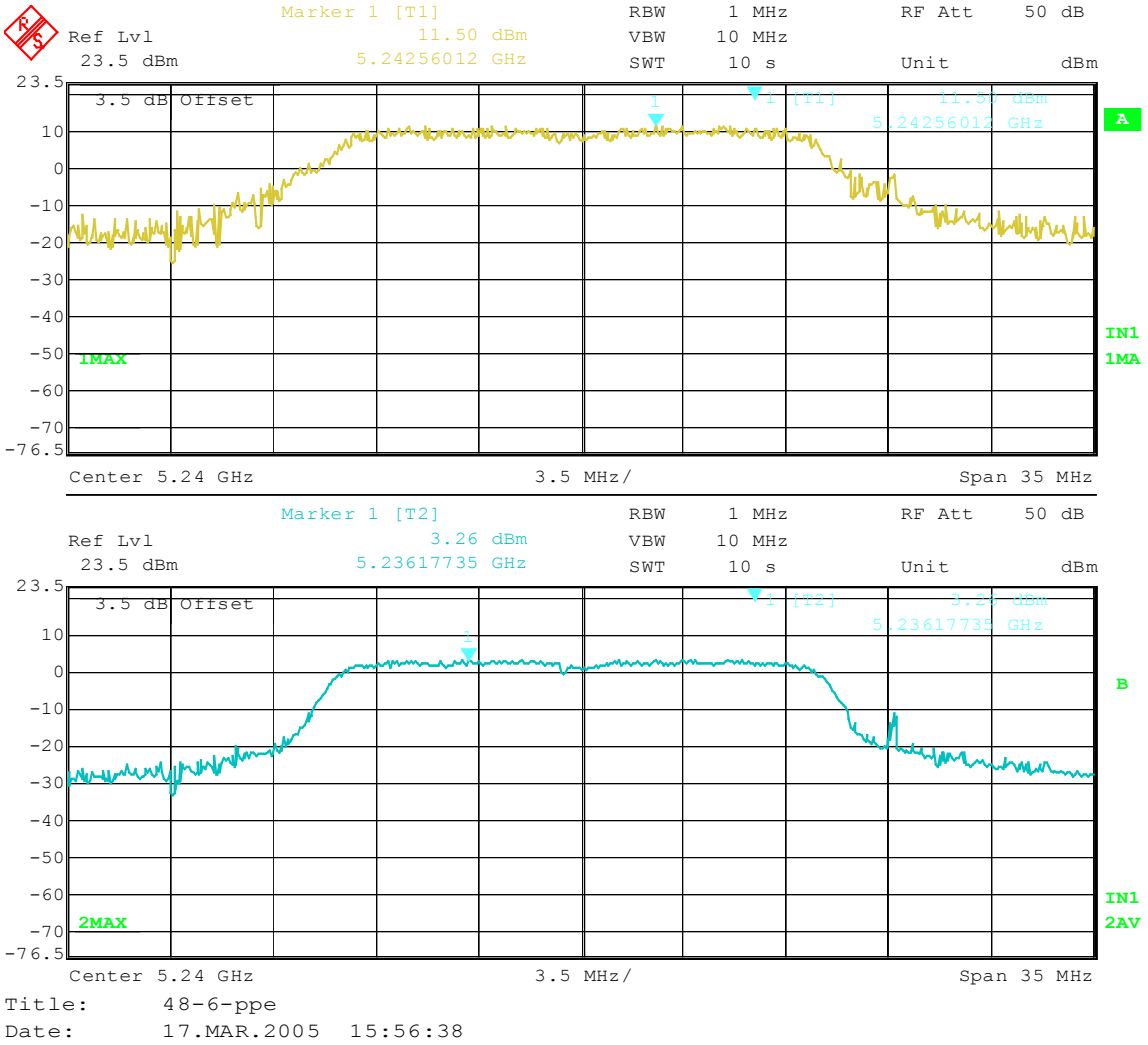
Title: 36-6-ppe
Date: 17.MAR.2005 16:17:57

PPE
Channel 40
Data rate: 6Mbps

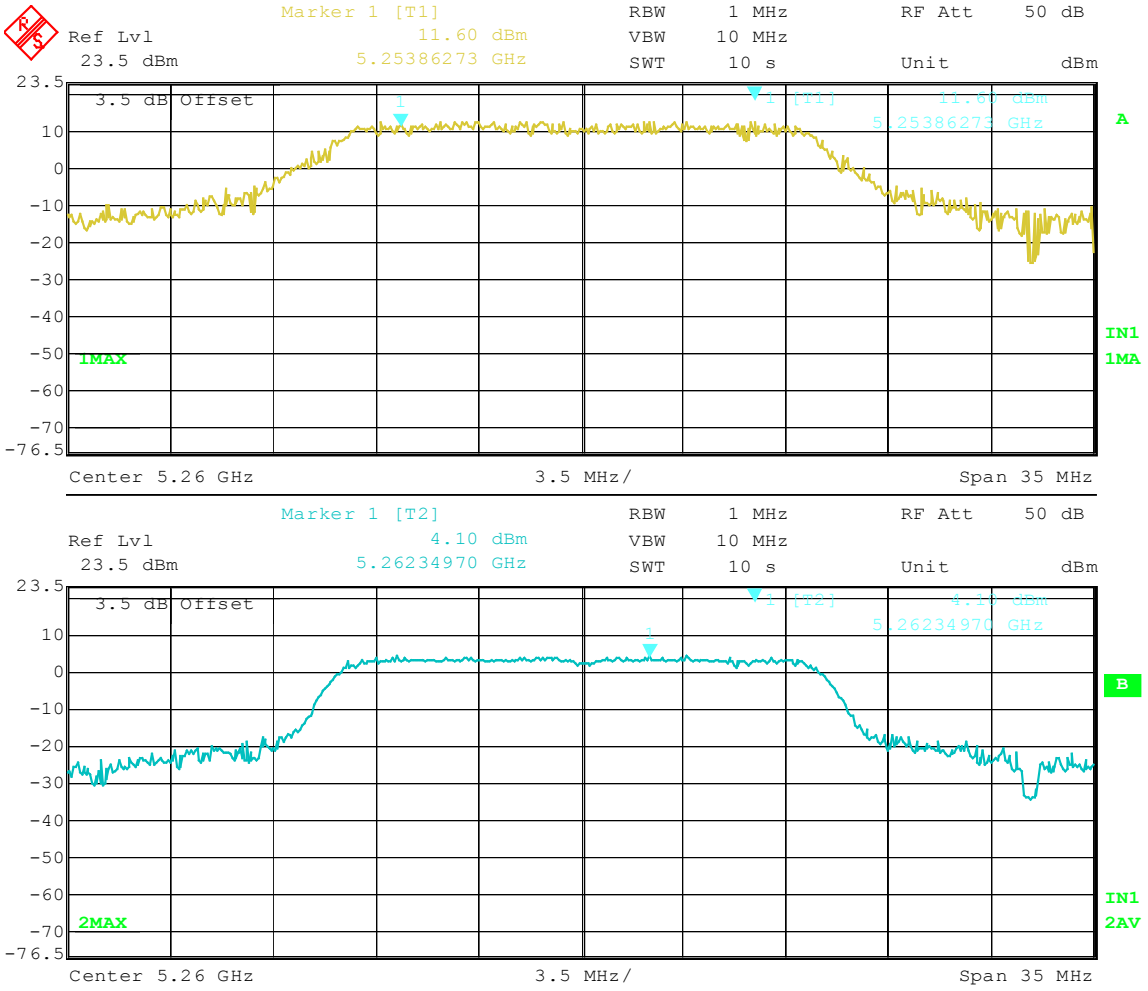


Title: 40-6-ppe
Date: 17.MAR.2005 16:07:01

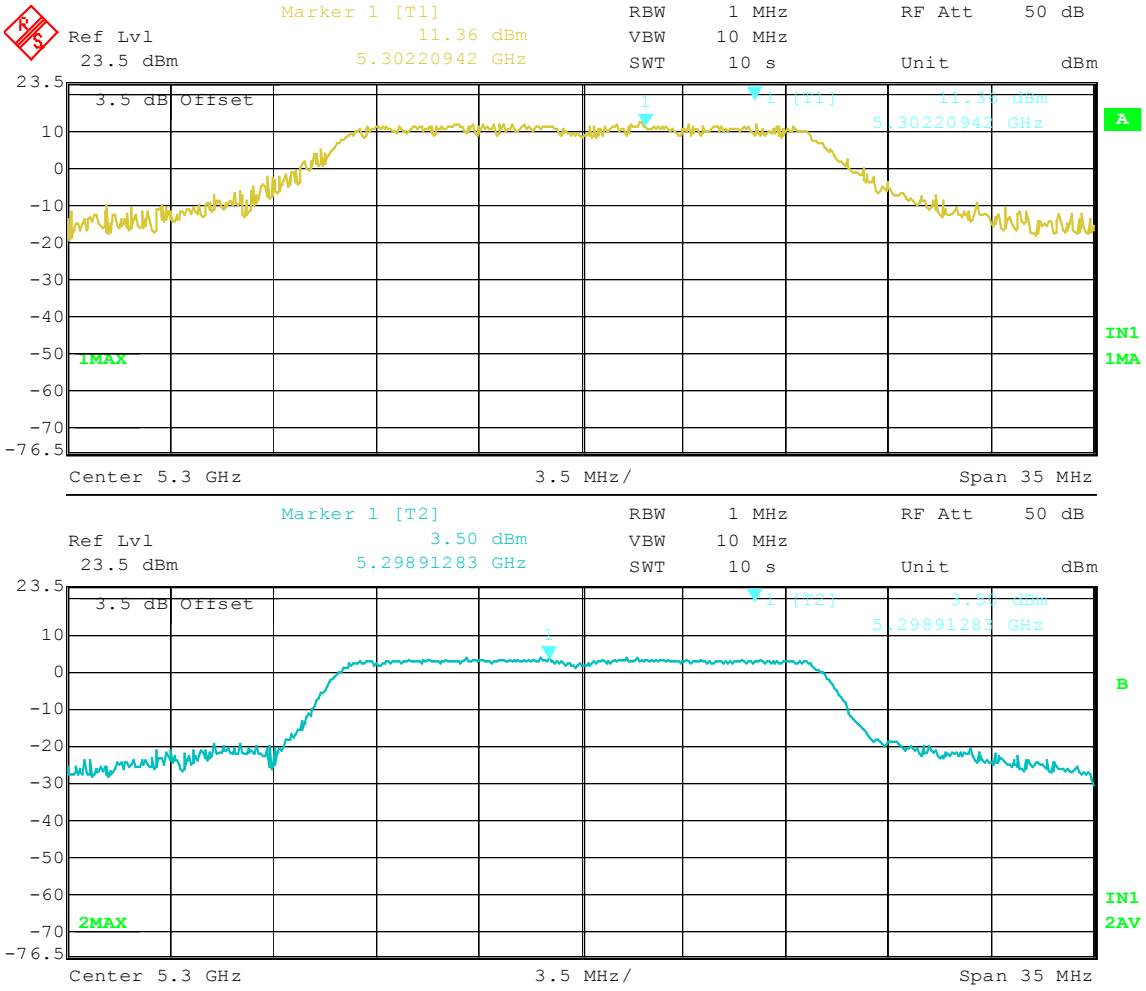
PPE
Channel 48
Data rate: 6Mbps



PPE
Channel 52
Data rate: 6Mbps

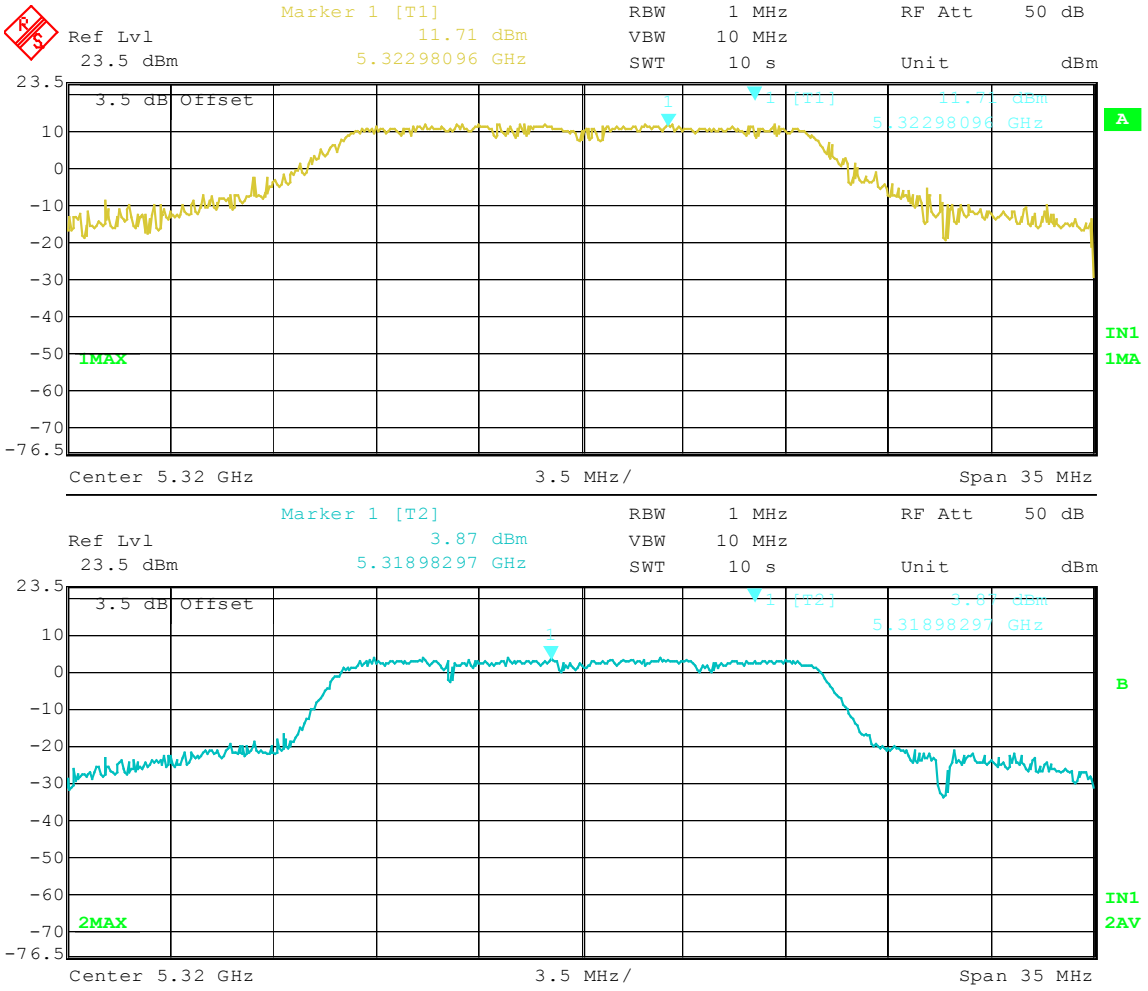


PPE
Channel 60
Data rate: 6Mbps



Title: 64-6-ppe
Date: 17.MAR.2005 15:39:45

PPE
Channel 64
Data rate: 6Mbps



5.5. PEAK POWER SPECTRAL DENSITY MEASUREMENT

5.5.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

Frequency Band	Limit
5.15 – 5.25 GHz	4dBm
5.25 – 5.35 GHz	11dBm

5.5.2 TEST INSTRUMENTS

	Model No.	Serial No.	Last Cal.	Next Cal
ROHDE & SCHWARZ EMI Test Receiver	ESIB 40	100201	01/23/05	01/23/06

5.5.3 TEST PROCEDURES

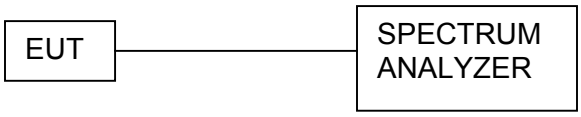
1. The transmitter output was connected to the spectrum analyzer.

2. Set RBW=1MHz, VBW=3MHz. The PPSD is the highest level found across the emission in any 1MHz band.

5.5.4 DEVIATION FROM TEST STANDARD

No deviation

5.5.5 TEST SETUP



5.5.6 EUT OPERATING CONDITIONS

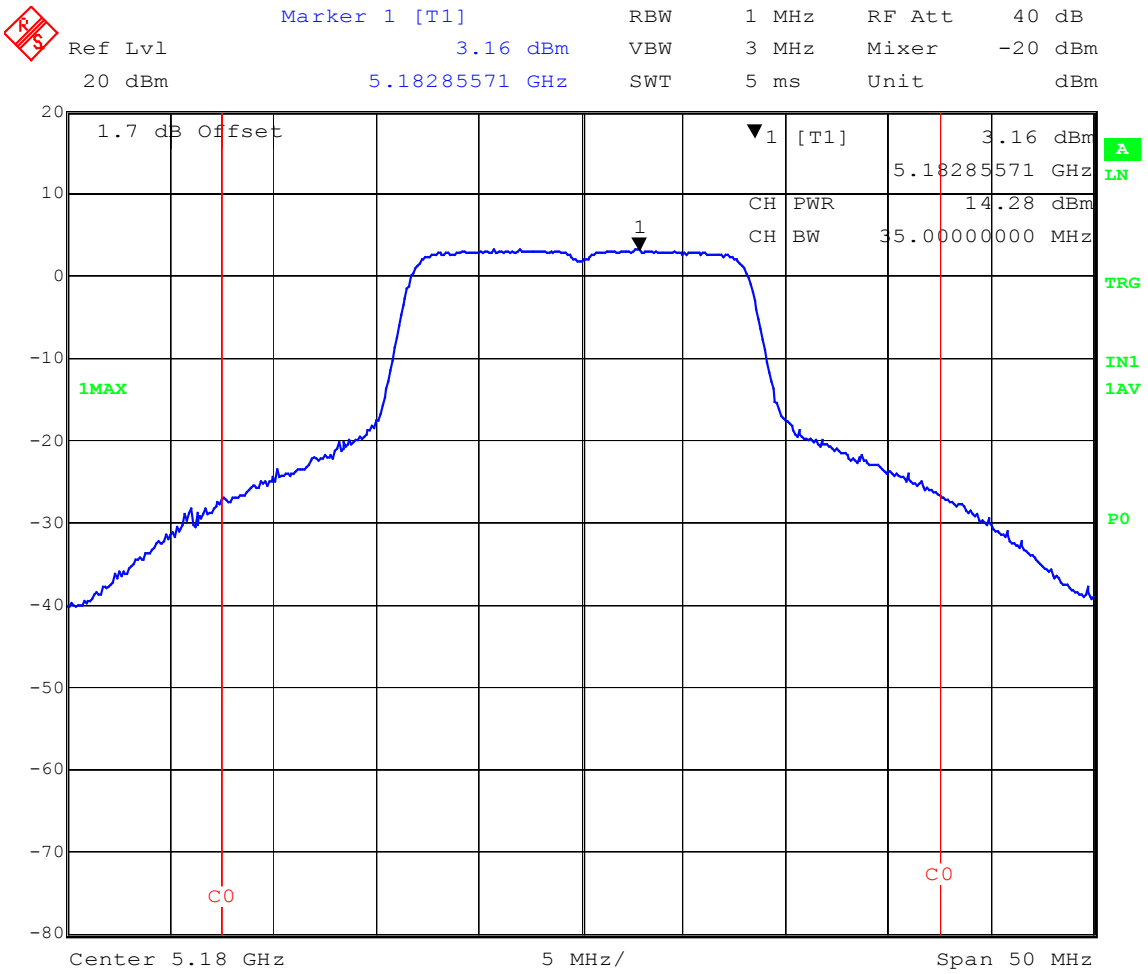
The software provided by client to enable the EUT under transmission condition continuously at Low, Middle, and High channel frequency individually.

5.5.7 TEST RESULTS

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Normal, Data rate: 6Mbps	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 40%RH	**TESTED BY**:	Sandra Sohn

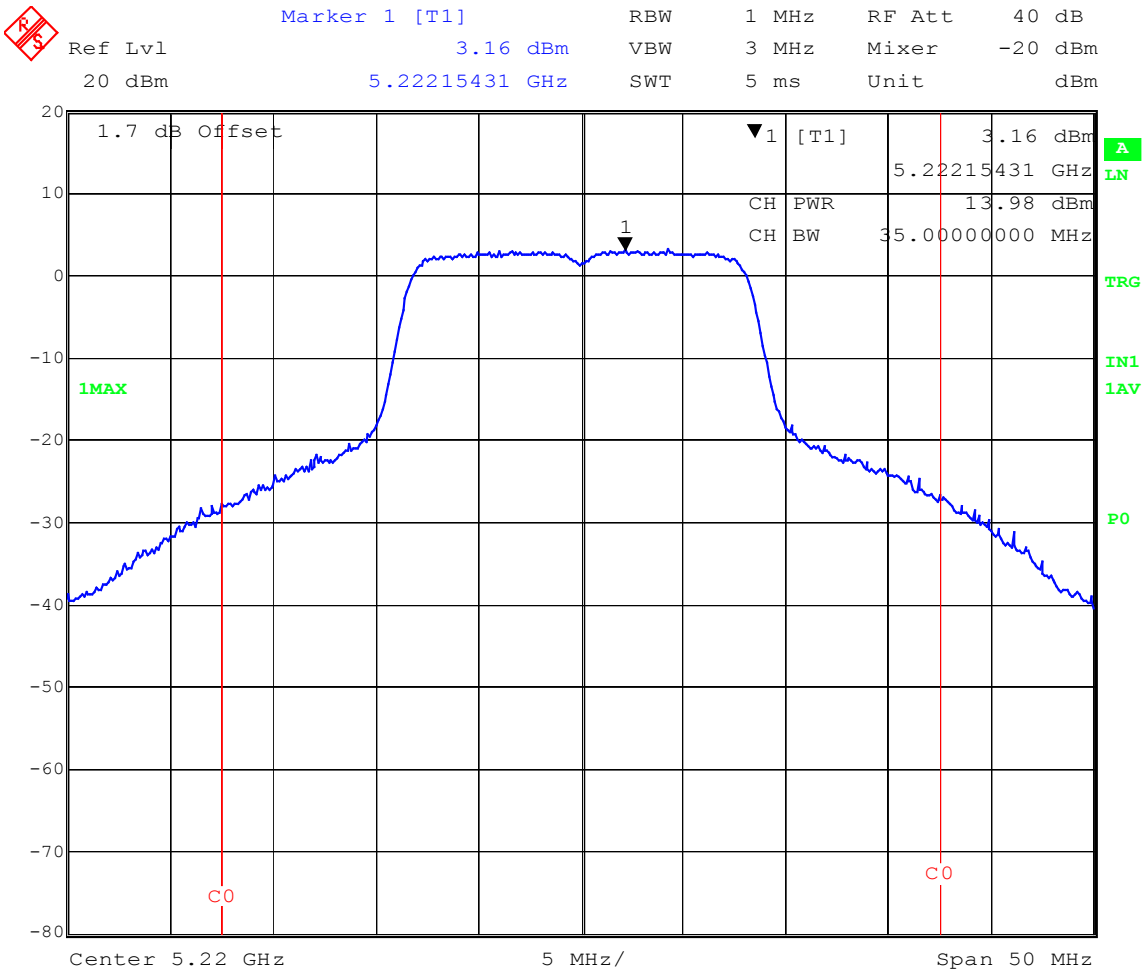
CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
36	5180	3.16	4	PASS
44	5220	3.16	4	PASS
48	5240	2.61	4	PASS
52	5260	3.79	11	PASS
60	5300	3.36	11	PASS
64	5320	3.14	11	PASS

PPSD
Channel 36
Data rate: 6Mbps



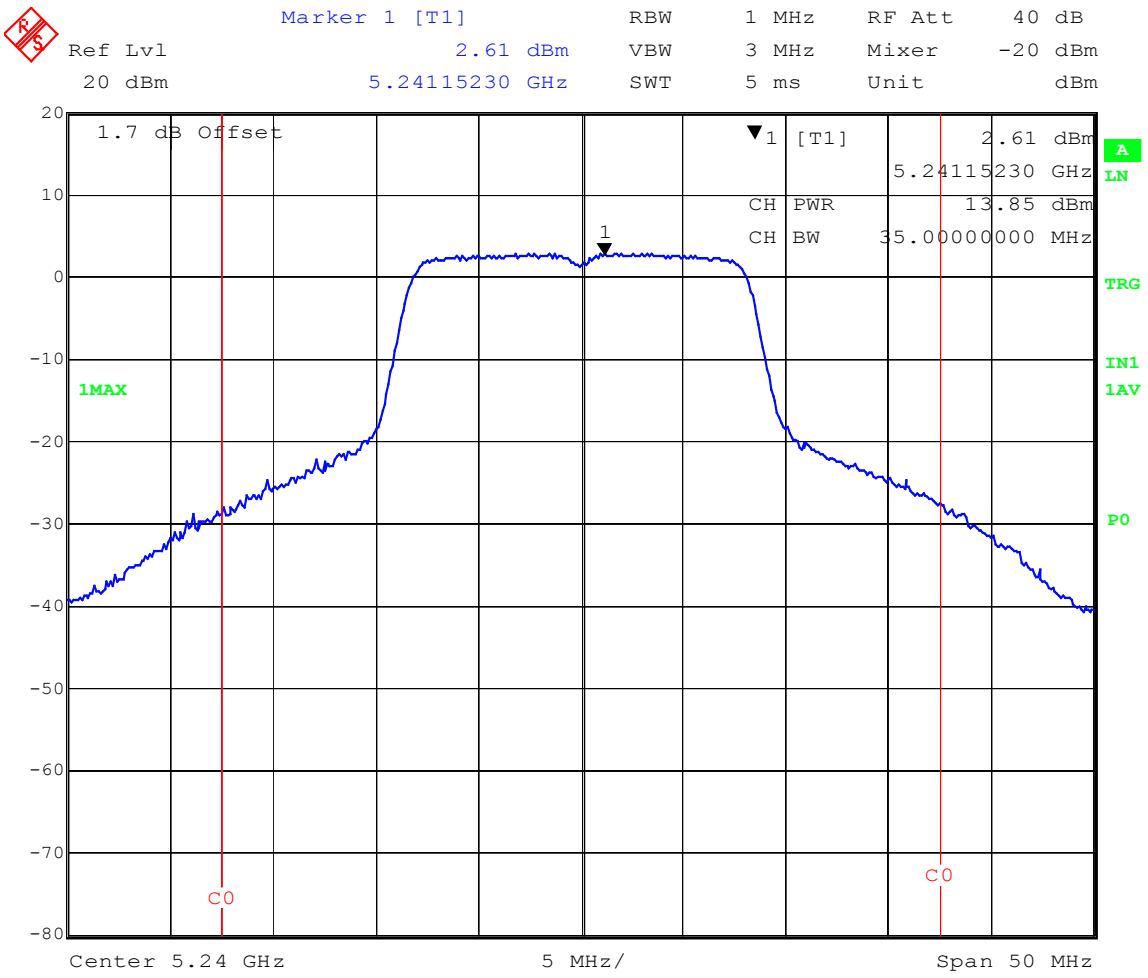
Title: Ch36 rate 6 max power and ppsd
Date: 11.MAY.2005 16:38:54

PPSD
Channel 44
Data rate: 6Mbps



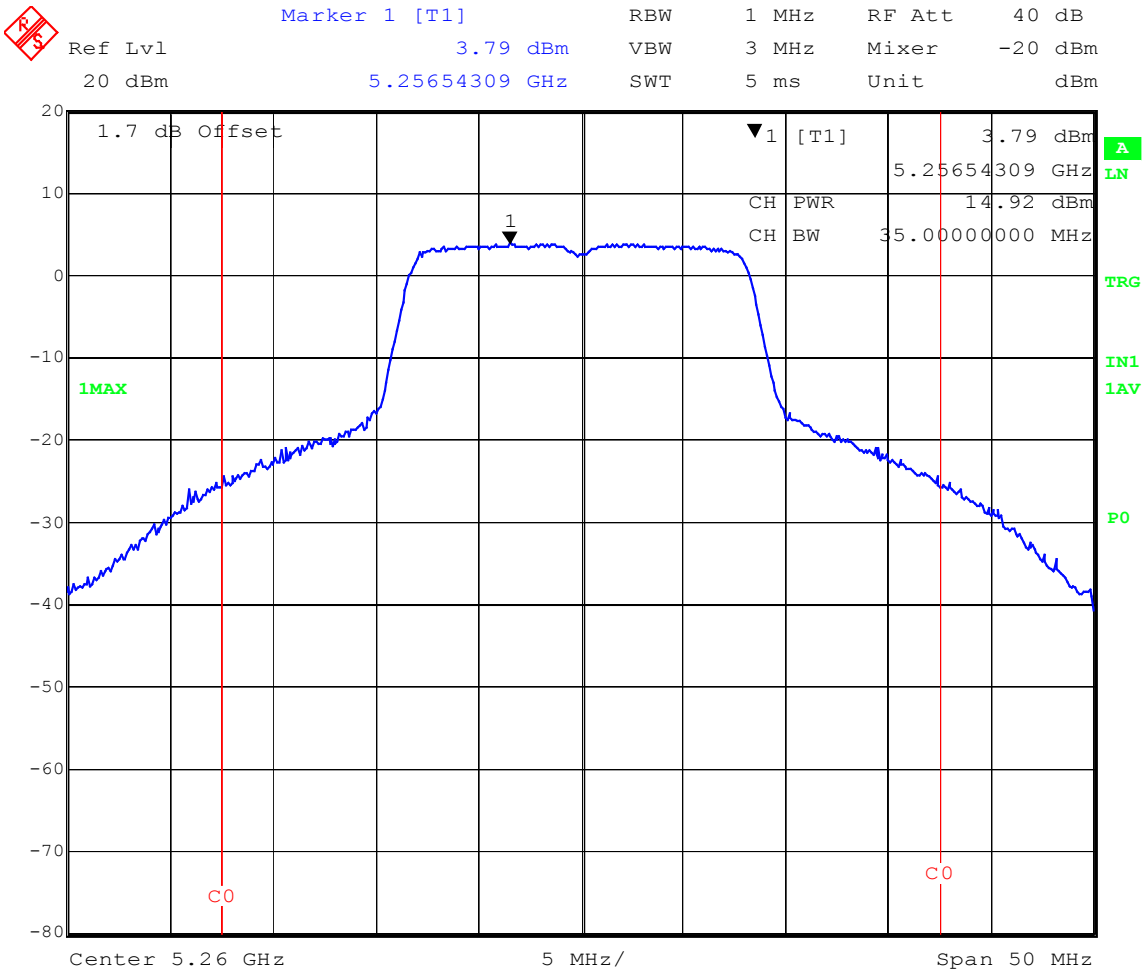
Title: Ch44 rate 6 max power and ppsd
Date: 11.MAY.2005 16:41:47

PPSD
Channel 48
Data rate: 6Mbps



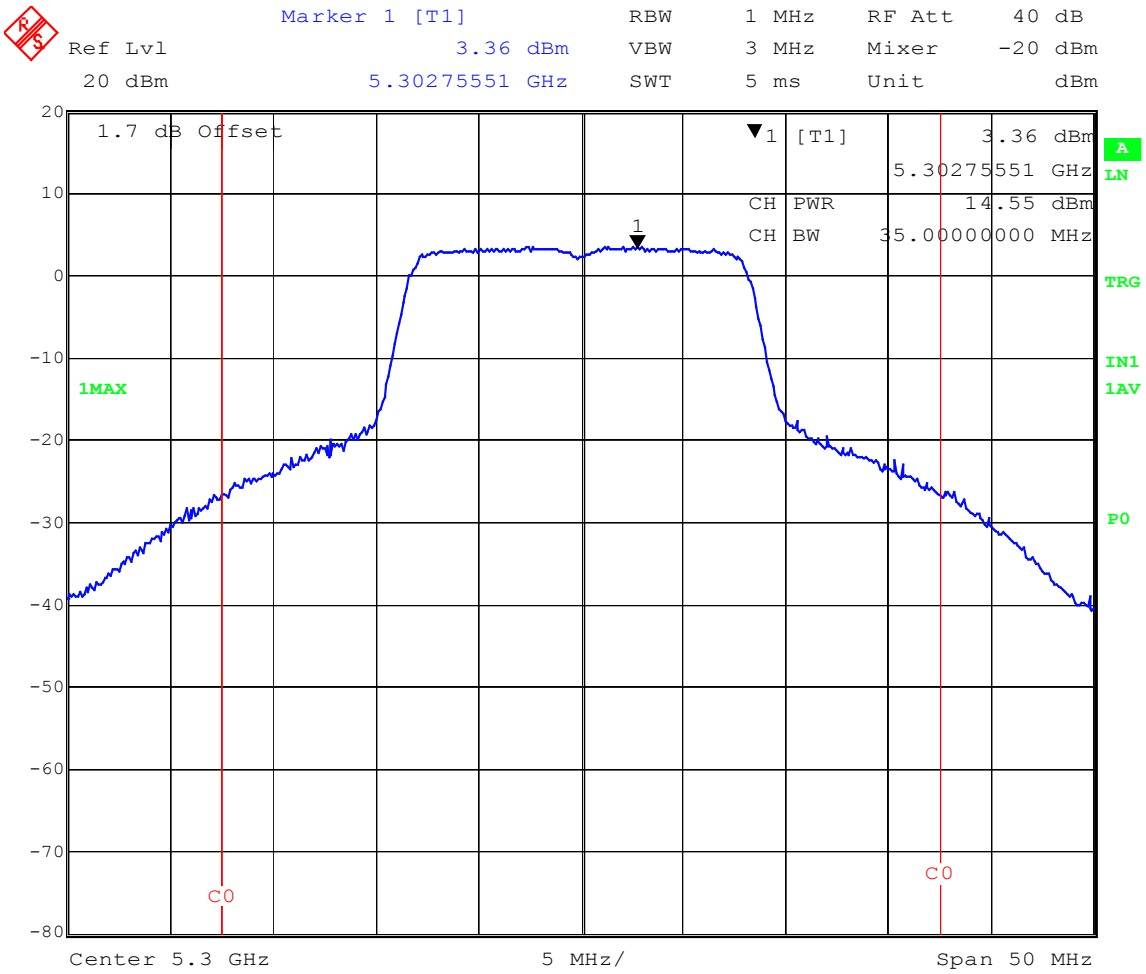
Title: Ch48 rate 6 max power and ppsd
Date: 11.MAY.2005 16:43:20

PPSD
Channel 52
Data rate: 6Mbps



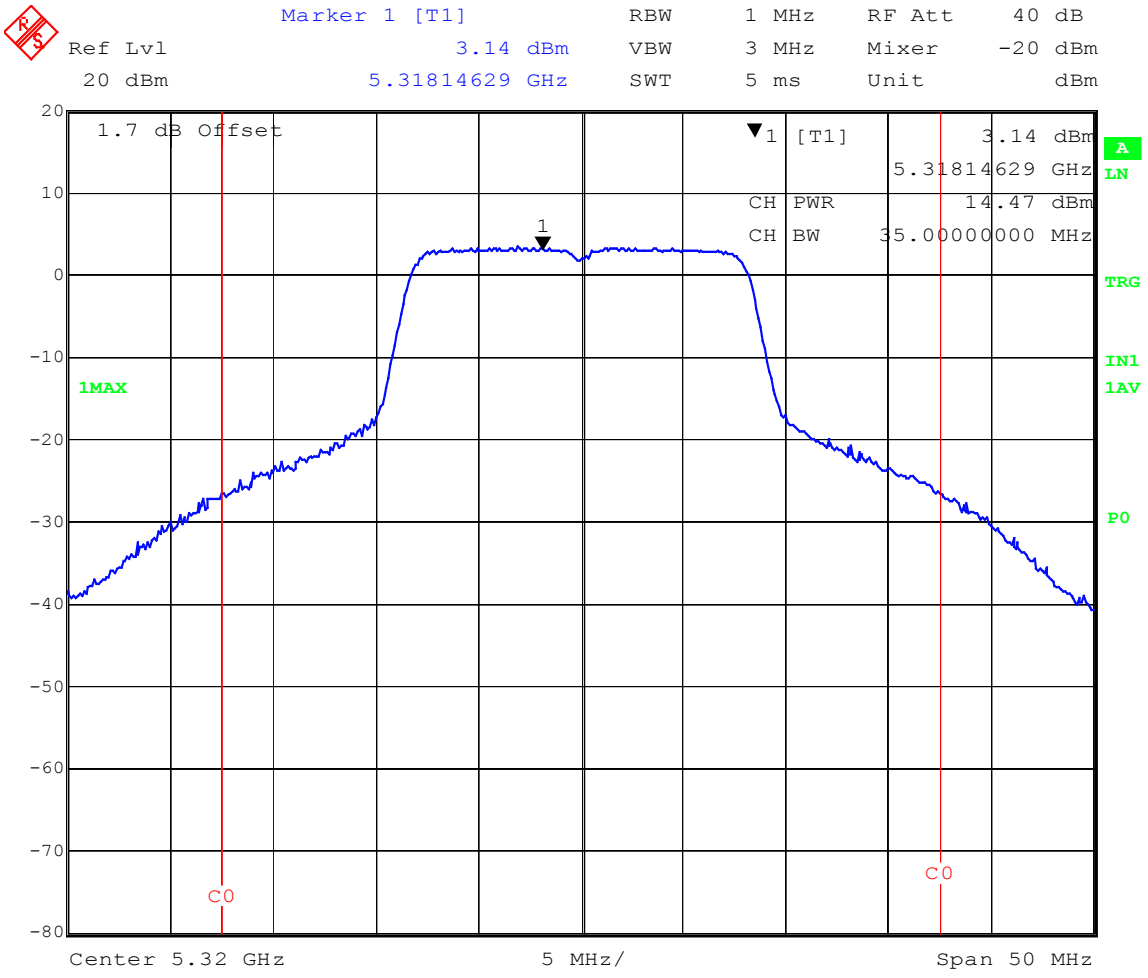
Title: Ch52 rate 6 max power and ppsd
Date: 11.MAY.2005 16:44:40

PPSD
Channel 60
Data rate: 6Mbps



Title: Ch60 rate 6 max power and ppsd
Date: 11.MAY.2005 16:46:01

PPSD
Channel 64
Data rate: 6Mbps

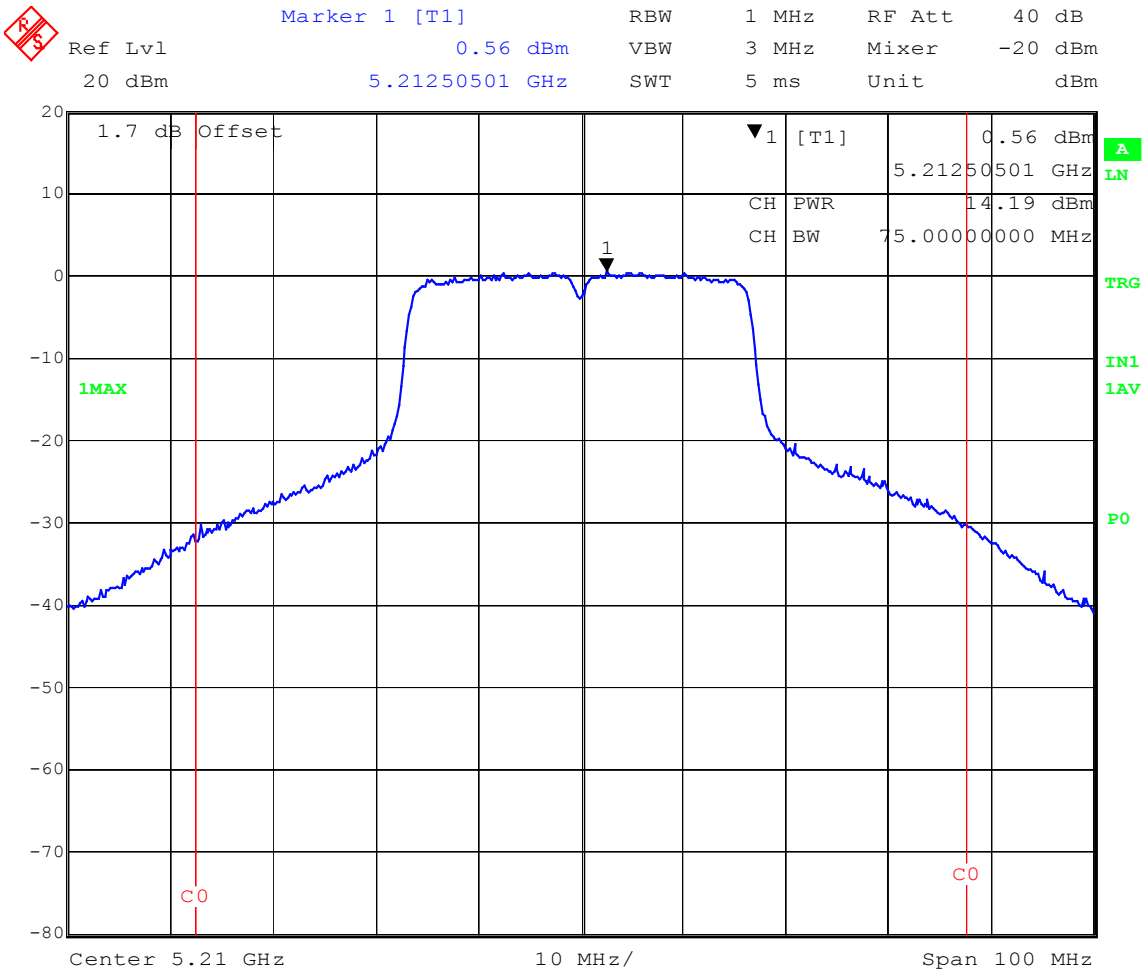


Title: Ch64 rate 6 max power and ppsd
Date: 11.MAY.2005 16:48:13

EUT	IEEE 802.11 A/B/G WIRELESS ACCESS POINT	**MODEL**	ACCESS / ONE NETWORK: WM11Ae, WM11Ge
MODE	Turbo mode	**INPUT POWER (SYSTEM)**	120Vac, 60Hz
ENVIRONMENTAL CONDITIONS	24deg. C, 40%RH	**TESTED BY**:	Sandra Sohn

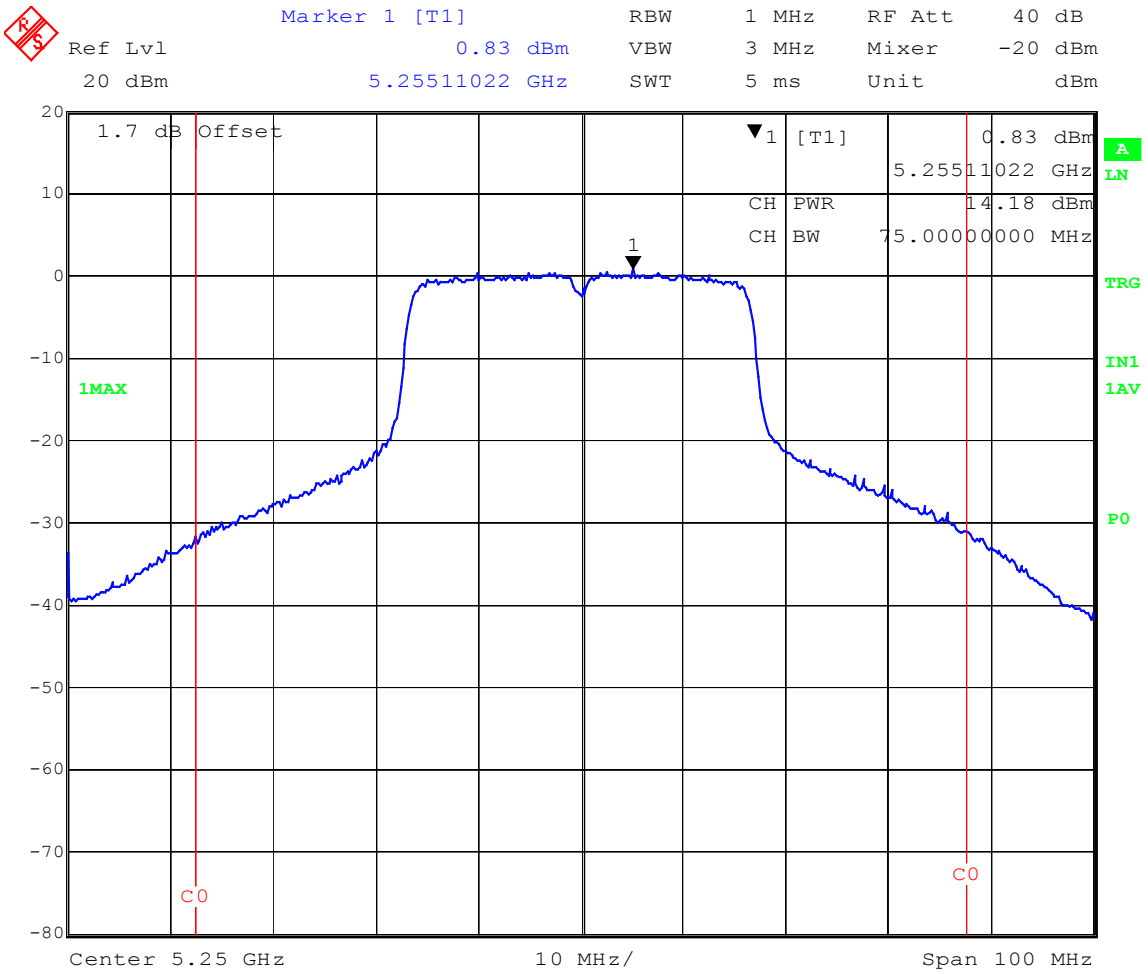
CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
42	5210	0.56	4	PASS
50	5250	0.83	4	PASS
58	5290	2.00	11	PASS

PPSD
Channel 42
Turbo mode



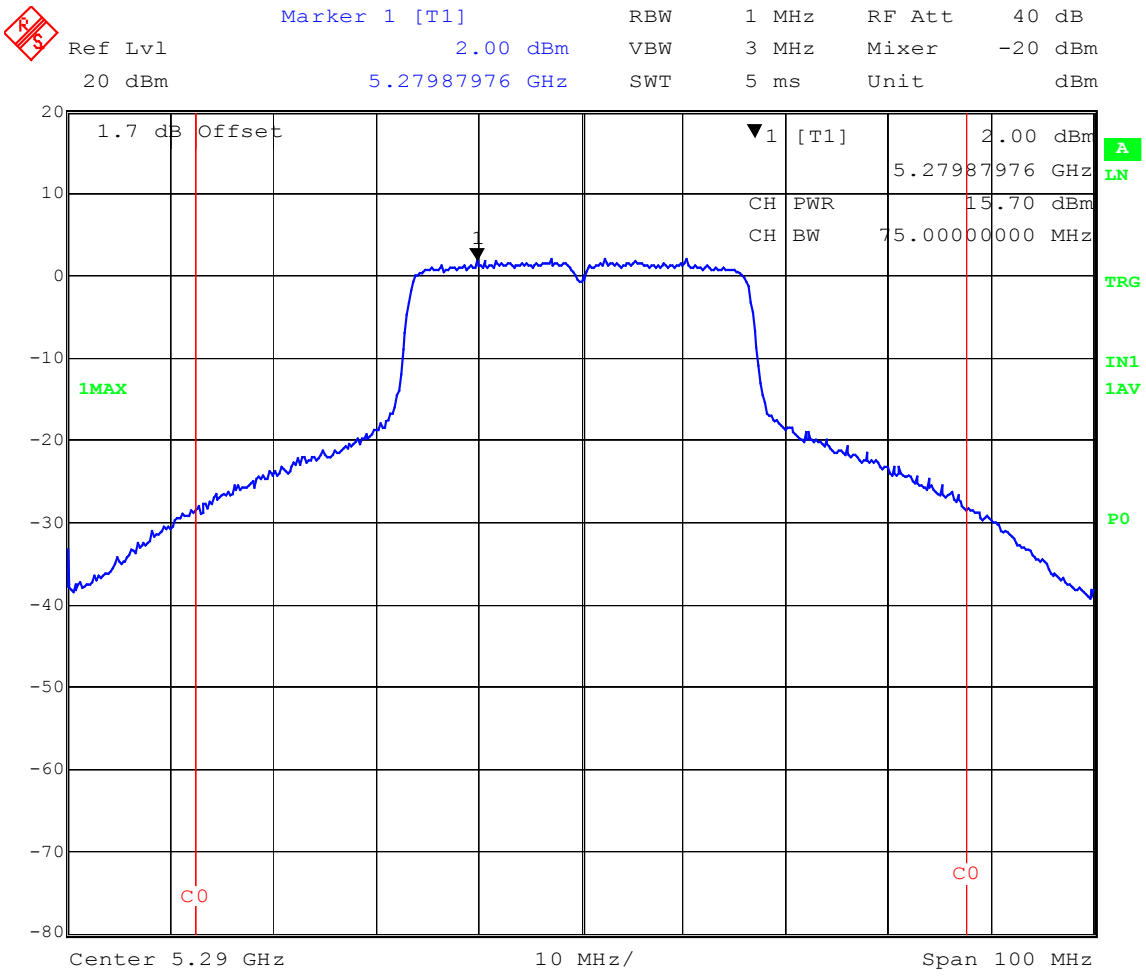
Title: Ch42 rate turbo max power and ppsd
Date: 11.MAY.2005 16:53:53

PPSD
Channel 50
Turbo mode



Title: Ch50 rate turbo max power and ppsd
Date: 11.MAY.2005 16:55:26

PPSD
Channel 58
Turbo mode



Title: Ch58 rate turbo max power and ppsd
Date: 11.MAY.2005 16:56:49