TEST REPORT

Report No.:	**EM201300541-2**	**Application No.:**	**ZJ00032382**
Applicant:	Beijing Huasun Unicreate Technology Co.,Ltd		
Applicant Address:	Huizhi Plaza,No.9-6,Xueqing Road, Haidian,Beijing ,10085,China		
Sample Description:	Customer Premise Equipment		
Model:	BXM5		
Adding Model:	/		
FCC ID:	2AAEA-BXM5		
Test Specification:	FCC Part 15,Subpart C(Section 15.247)		
Test Date:	2013-08-29 to 2013-09-16		
Issue Date:	2013-09-16		
Test Result:	*PASS*		

Prepared By:	**Reviewed By:**	**Approved By:**
Lynn Xiao/ Test Engineer	Jane Cao / Technical Assistance	Gavin Wu / Manager
Lynn Xiao.	Jane Cao	Gavin Wu
Date:2013-09-16	Date:2013-09-16	Date:2013-09-16

Other Aspects:

/

Abbreviations: *ok / P = passed; fail / F = failed; n.a. / N = not applicable*

The test result in this test report refers exclusively to the presented test sample. This report shall not be reproduced except in full, without the written approval of GRGT.

GRG Metrology and Test Co., Ltd. Address: 163, Pingyun Road, West of Huangpu Avenue, Guangzhou, Guangdong, P.R. China

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DIRECTIONS OF TEST

1. This station carries out test task according to the national regulation of verifications which can be traced to National Primary Standards and BIPM.

2. The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

3. If there is any objection concerning the test, the client should inform the laboratory within 15 days from the date of receiving the test report.

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1. TEST RESULT SUMMARY

FCC Part 15.247:2012			
Standard	**Item**	**Limit / Severity**	**Result**
FCC Part 15,Subpart C (15.247)	Antenna Requirement	§15.203	PASS
	Conducted Emissions	§15.207 (a)	PASS
	Radiated Electromagnetic Disturbance	§15.247(d)	PASS
	6 dB Bandwidth	§15.247 (a)(2)	PASS
	Maximum Peak Output Power	§15.247(b)(3)	PASS
	Power Spectral Density	§15.247(e)	PASS
	Emissions In Non-Restricted Frequency Bands	§15.247(d)	PASS
	Band-Edge Measurements	§15.247(d)	PASS

2. GENERAL DESCRIPTION OF EUT

2.1 APPLICANT

Name:	Beijing Huasun Unicreate Technology Co.,Ltd
Address:	Huizhi Plaza,No.9-6,Xueqing Road, Haidian,Beijing ,10085,China

2.2 MANUFACTURER

Name:	Beijing Huasun Unicreate Technology Co.,Ltd
Address:	Huizhi Plaza,No.9-6,Xueqing Road, Haidian,Beijing ,10085,China

2.3 BASIC DESCRIPTION OF EQUIPMENT UNDER TEST

Equipment:	Customer Premise Equipment
Model No.:	BXM5
Adding Model	/
Trade Name:	/
Power Supply:	Input:100-240V~50/60Hz Output:DC24V-800mA
Operating Frequency Range:	5.8GHz Band:5740MHz-5840MHz
Test Frequency:	5.8GHz Band: 5740MHz-5840MHz
Antenna gain:	16dBi
Type of emission	WIFI
Modulation type	OFDM（802.11a/n20/n40）
Note:	/

3. LABORATORY AND ACCREDITATIONS

3.1 LABORATORY

The tests and measurements refer to this report were performed by Guangzhou GRG Metrology and Test CO., LTD.

Add. : 163 Pingyun Rd, West of Huangpu Ave, Guangzhou, 510656, P. R. China
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Fax : +86-20-38695185

3.2 ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

USA	FCC Listed Lab (No. 688188)
China	CNAS （No.L0446）
China	DILAC (No.DL175)
Canada	Registration No.:8355A-1

3.3 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement		**Frequency**	**Uncertainty**
Radiated Emission	Horizontal	30MHz～1000MHz	4.2dB
		1GHz～26.5GHz	4.2dB
	Vertical	30MHz～1000MHz	4.4dB
		1GHz～26.5GHz	4.4dB
Conducted Emission		9kHz～30MHz	3.1 dB

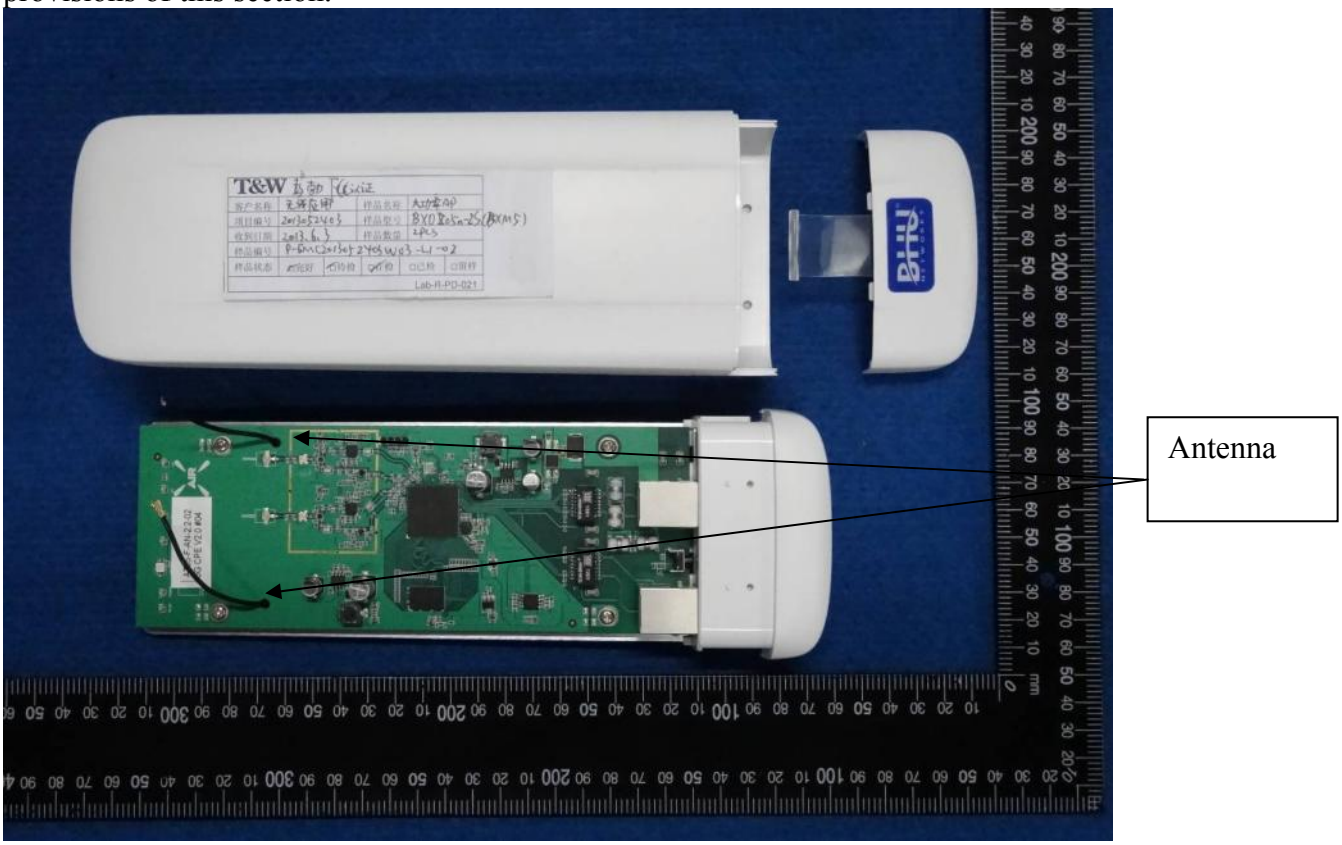
This uncertainty represents an expanded uncertainty factor of *k*=2.

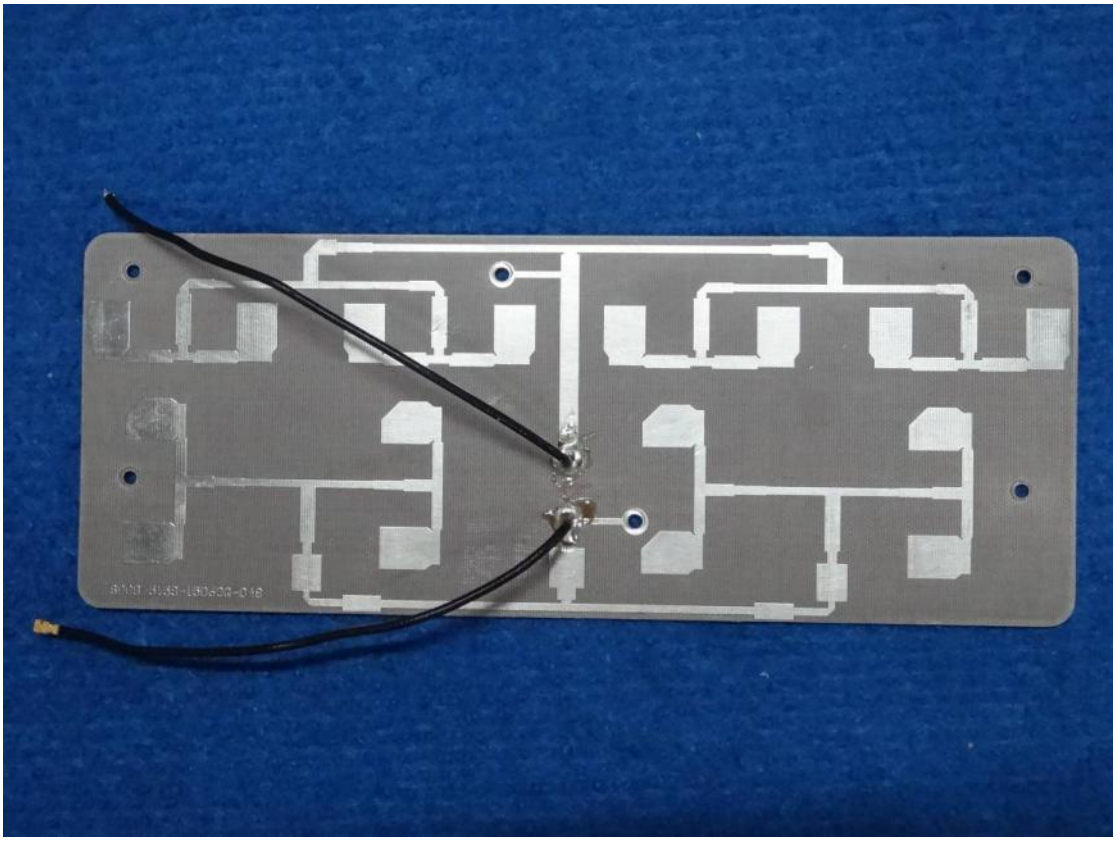
3.4 LIST OF USED TEST EQUIPMENT AT GRGT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Conducted Emissions				
EMI Receiver	R&S	ESU40	100529	2014-01-24
L.I.S.N	SCHWARZBECK	NSLK 8127	8127450	2014-08-21
Spurious Emissions at Antenna Port				
Receiver	R&S	ESU40	100106	2014-01-24
Restricted Bands				
Receiver	R&S	ESU40	100106	2014-01-24
Spurious Emissions				
Receiver	R&S	ESU40	100106	2014-01-24
Signal Generator	R&S	SML03	103002	2013-11-13
Biconical Log-periodic Antenna	ETS.LINDGREN	3142C	00075971	2014-05-26
Horn antenna	SCHWARZBECK	BBHA9120D	D752	2013-10-14
6 dB Bandwidth				
Receiver	R&S	ESU40	100106	2014-01-24
Maximum Peak Output Power				
Receiver	R&S	ESU40	100106	2014-01-24
100kHz Bandwidth of Frequency Band Edge				
Receiver	R&S	ESU40	100106	2014-01-24
Power Spectral Density				
Receiver	R&S	ESU40	100106	2014-01-24

4. ANTENNA REQUIREMENT

The EUT has two antennas. The antenna is PCB antenna.
The gain of antenna 16dBi .which accordance 15.203 is considered sufficient to comply with the provisions of this section.





5. CONDUCTED EMISSION MEASUREMENT

5.1 LIMITS

Frequency range	Limits (dBμV)	
	Quasi-peak	Average
150kHz ～ 0.5MHz	66～56	56～46
0.5 MHz ～ 5 MHz	56	46
5 MHz ～ 30 MHz	60	50

NOTE: (1) The lower limit shall apply at the transition frequencies.
(2) The limit decreases in line with the logarithm of the frequency in the range of 150 kHz to 0.5MHz.

5.2 TEST PROCEDURES

Procedure of Preliminary Test

Test procedures follow ANSI C63.4:2009.
For measurement of the disturbance voltage the equipment under test (EUT) is connected to the power supply mains and any other extended network via one or more artificial network(s). An EUT, whether intended to be grounded or not, and which is to be used on a table is configured as follows:

– Either the bottom or the rear of the EUT shall be at a controlled distance of 40 cm from a reference ground plane. This ground plane is normally the wall or floor of a shielded room. It may also be a grounded metal plane of at least 2 m by 2 m. This is physically accomplished as follows:

1) place the EUT on a table of non-conducting material which is at least 80 cm high. Place the EUT so that it is 40 cm from the wall of the shielded room, or

2) place the EUT on a table of non-conducting material which is 40 cm high so that the bottom of the EUT is 40 cm above the ground plane;

– All other conductive surfaces of the EUT shall be at least 80 cm from the reference ground plane;

– The EUT are placed on the floor that one side of the housings is 40 cm from the vertical reference ground plane and other metallic parts;

– Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth forming a bundle 30 cm to 40 cm long, hanging approximately in the middle between the ground plane and the table.

– I/O cables that are connected to a peripheral shall be bundled in the centre. The end of the cable may be terminated if required using correct terminating impedance. The total length shall not exceed 1 m.

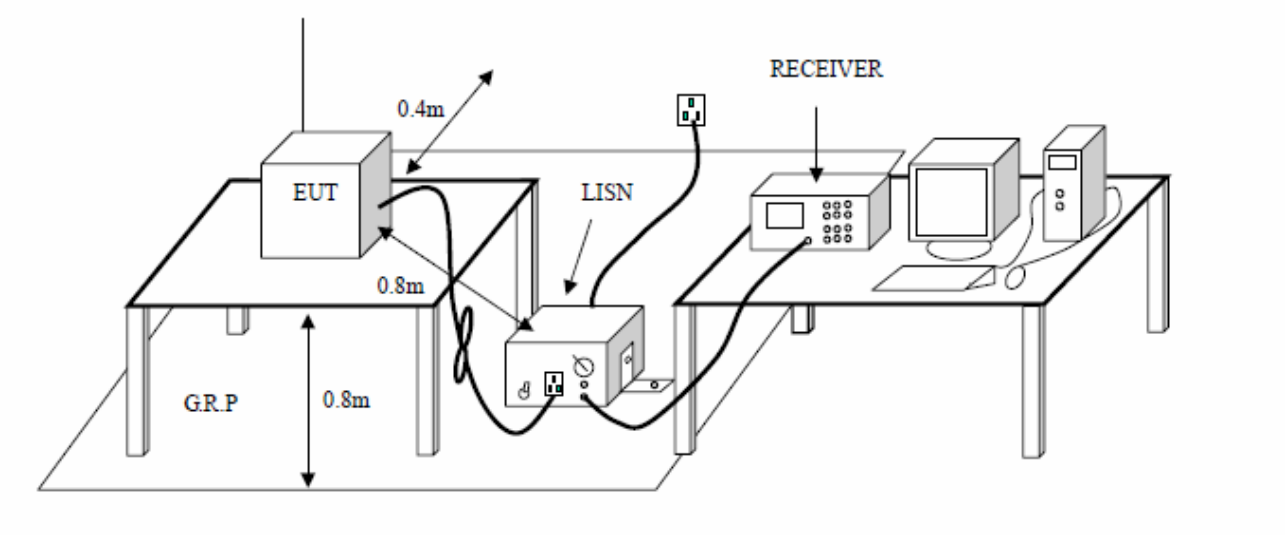
The test mode(s) described in Item 2.4 were scanned during the preliminary test. After the preliminary scan, we found the test mode described in Item 2.4 producing the highest emission level. The EUT configuration and cable configuration of the above highest emission levels were recorded for reference of the final test.

Procedure of Final Test

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test. A scan was taken on both power lines,

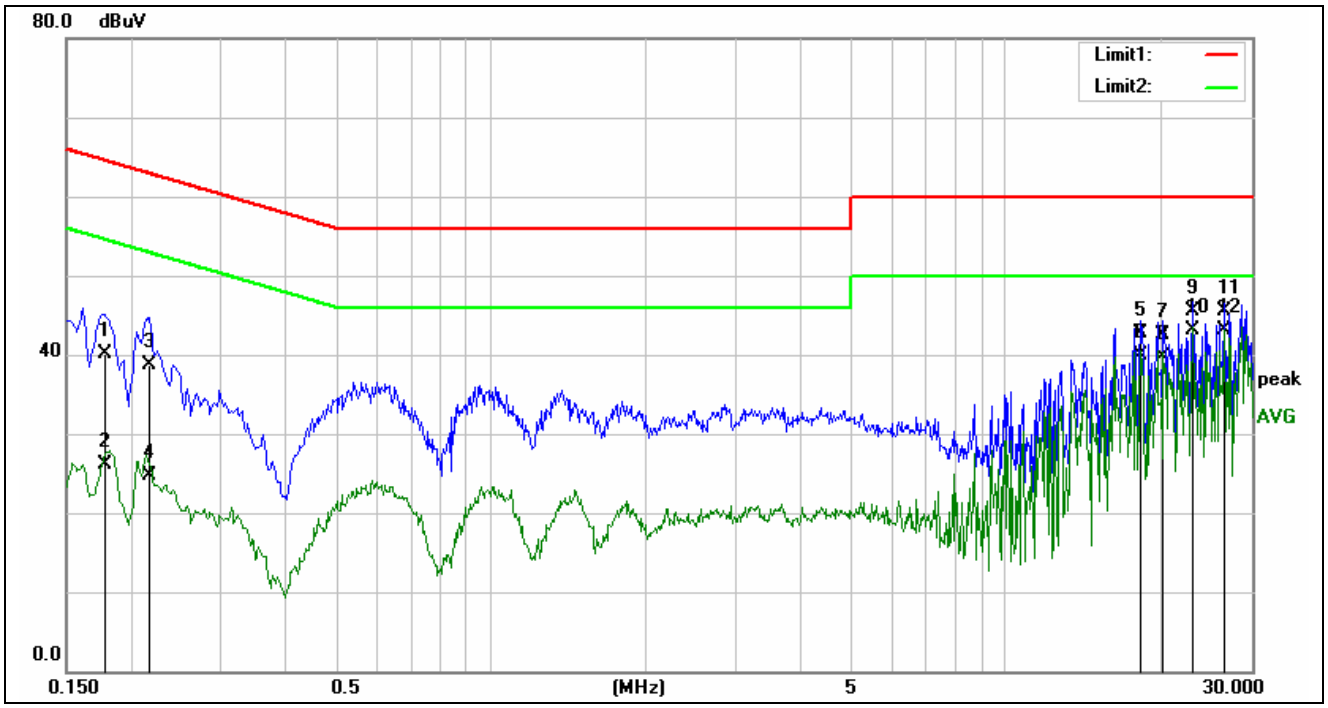
recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. The test data of the worst-case condition(s) was recorded.

5.3 TEST SETUP



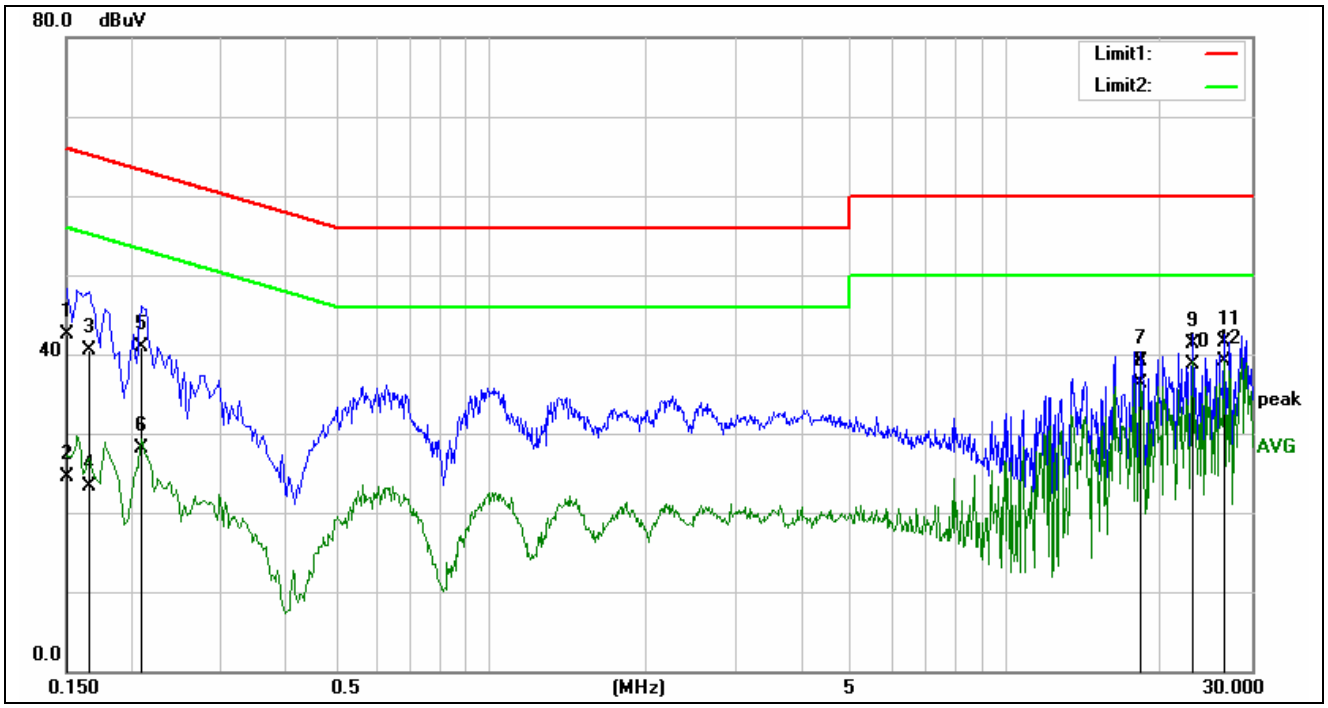
5.4 TEST RESULTS

Project No.:	**ZJ00032382**	**Probe:**	**N**
Standard:	**(CE)FCC PART 15.247**	**Power Source:**	
Test item:	**Conduction Test**	**Date:**	**2013-8-8**
Temp./Hum.(%RH):	**21/56%RH**	**Time:**	**16:13:46**
EUT:	**Customer Premise Equipment**		
Model:	**BXM5**	**Test Result:**	**Pass**
Note:	**WIFI-A-5740**		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1780	39.67	0.53	40.20	64.57	-24.37	QP
2	0.1780	25.57	0.53	26.10	54.57	-28.47	AVG
3	0.2180	38.21	0.49	38.70	62.89	-24.19	QP
4	0.2180	24.31	0.49	24.80	52.89	-28.09	AVG
5	18.2420	41.66	1.04	42.70	60.00	-17.30	QP
6	18.2420	38.96	1.04	40.00	50.00	-10.00	AVG
7	20.2580	41.33	1.17	42.50	60.00	-17.50	QP
8	20.2580	38.63	1.17	39.80	50.00	-10.20	AVG
9	23.1299	44.62	0.98	45.60	60.00	-14.40	QP
10	23.1299	42.12	0.98	43.10	50.00	-6.90	AVG
11	26.6100	44.35	1.15	45.50	60.00	-14.50	QP
12	26.6100	42.05	1.15	43.20	50.00	-6.80	AVG

Project No.:	**ZJ00032382**	**Probe:**	**L1**
Standard:	**(CE)FCC PART 15.247**	**Power Source:**	
Test item:	**Conduction Test**	**Date:**	**2013-8-8**
Temp./Hum.(%RH):	**21/56%RH**	**Time:**	**16:18:04**
EUT:	**Customer Premise Equipment**		
Model:	**BXM5**	**Test Result:**	**Pass**
Note:	**WIFI-A-5740**		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1500	42.02	0.48	42.50	65.99	-23.49	QP
2	0.1500	24.12	0.48	24.60	55.99	-31.39	AVG
3	0.1660	40.05	0.55	40.60	65.15	-24.55	QP
4	0.1660	22.85	0.55	23.40	55.15	-31.75	AVG
5	0.2100	40.59	0.41	41.00	63.20	-22.20	QP
6	0.2100	27.69	0.41	28.10	53.20	-25.10	AVG
7	18.2420	38.06	1.04	39.10	60.00	-20.90	QP
8	18.2420	35.36	1.04	36.40	50.00	-13.60	AVG
9	23.1299	40.42	0.98	41.40	60.00	-18.60	QP
10	23.1299	37.82	0.98	38.80	50.00	-11.20	AVG
11	26.6100	40.35	1.15	41.50	60.00	-18.50	QP
12	26.6100	37.95	1.15	39.10	50.00	-10.90	AVG

6. RADIATED ELECTROMAGNETIC DISTURBANCE

6.1 LIMITS

Frequency (MHz)	Quasi-peak(dBμV/m)
30 ~ 88	40
88~216	43.5
216 ~ 960	46
Above 960	54

NOTE: (1) The lower limit shall apply at the transition frequencies.

Frequency (GHz)	Quasi-peak(dBμV/m)
1 ~ 26.5	74
1~ 26.5	54

6.2 TEST PROCEDURES

Test procedures follow ANSI C63.4:2009.

Procedure of Preliminary Test

Radiated emission tests shall be made with the receive or transmit antenna located at a horizontal distance of 3 m plus half of the maximum width of the EUT being tested, measured from the centre of the EUT. The tests shall be performed with the equipment configured as closely as possible to its typical, practical operation. Unless stated otherwise, cables and wiring shall be as specified by the manufacturer and the equipment shall be in its housing (or cabinet) with all covers and access panels in place. Any deviation from normal EUT operating conditions shall be included in the test report.

The EUT (on a non-conductive support structure, where applicable) shall be placed on a remotely operated turntable, to allow the EUT to be rotated. The height of the EUT above the ground plane shall be according to the following requirements.

• Table-top equipment is placed on a non-conductive set-up table with height 0,8 m ± 0,01 m, ANSI C63.4 specifies the method to determine the impact of the non-conductive set-up table on test results.

• Floor-standing equipment is placed on a non-conductive support, as specified in the applicable product standard. If there are no EUT height placement requirements in the product standard, the EUT shall be placed on a non-conductive support at a height of 5 cm to 15 cm above the ground plane.

Interface cables, loads, and devices should be connected to at least one of each type of the interface ports of the EUT and, where practical, each cable shall be terminated in a device typical for its actual use. Where there are multiple interface ports of the same type, a typical number of these devices shall be connected to devices or loads. It is sufficient to connect only one of the loads, provided that it can be shown, for example by preliminary testing, that the connection of further ports would not significantly increase the level of disturbance (that is, more than 2 dB) or significantly degrade the immunity level.

The test mode(s) described in Item 2.4 were scanned during the preliminary test. After the preliminary scan, we found the test mode described in Item 2.4 producing the highest emission level. The EUT and cable configuration, antenna position, polarization and turntable position of the above highest emission level were recorded for the final test.

Procedure of Final Test

EUT and support equipment were set up on the turntable as per the configuration with highest emission level in the preliminary test. The Analyzer / Receiver scanned from 30MHz to 1000MHz. Emissions were scanned and measured rotating the EUT to 360 degrees, varying cable placement and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level. Record at least six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and only QP reading is presented. The test data of the worst-case condition(s) was recorded.

Procedure of Final Test

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test. A scan was taken on both power lines, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. The test data of the worst-case condition(s) was recorded. Pre-test for EUT in three axes and find the X axe is the worst case.

The worst case emissions were reported.

6.3 TEST SETUP

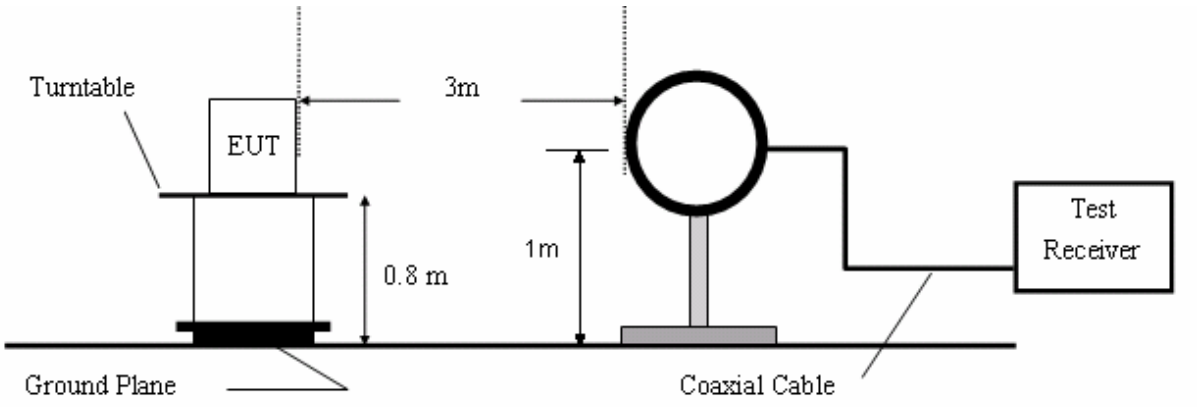


Figure 1. 9KHz to 30MHz radiated emissions test configuration

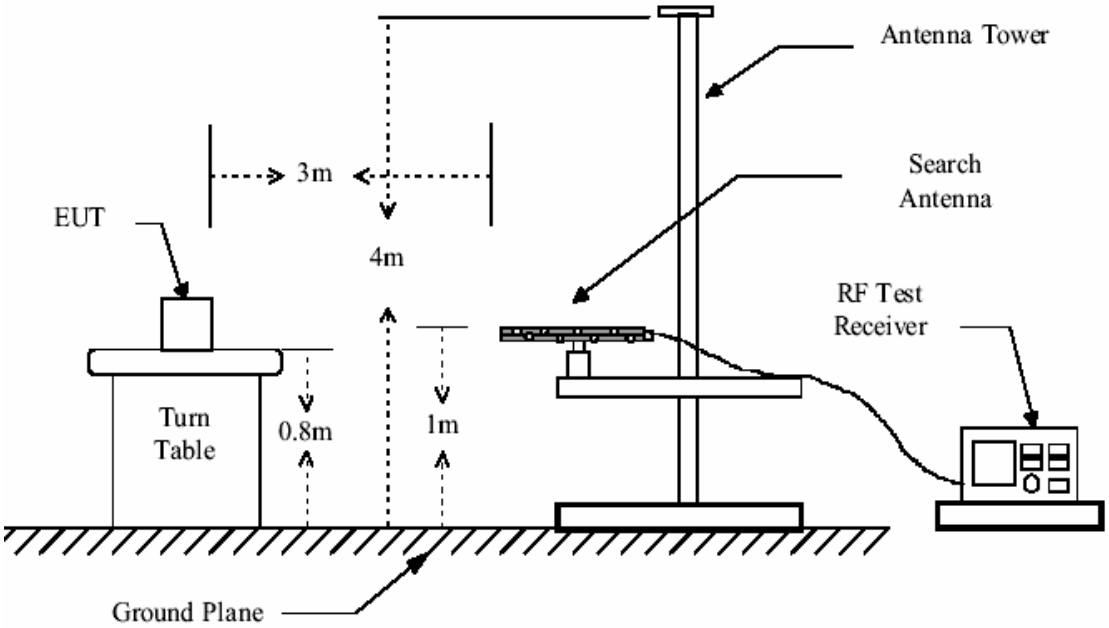


Figure 2. 30MHz to 1GHz radiated emissions test configuration

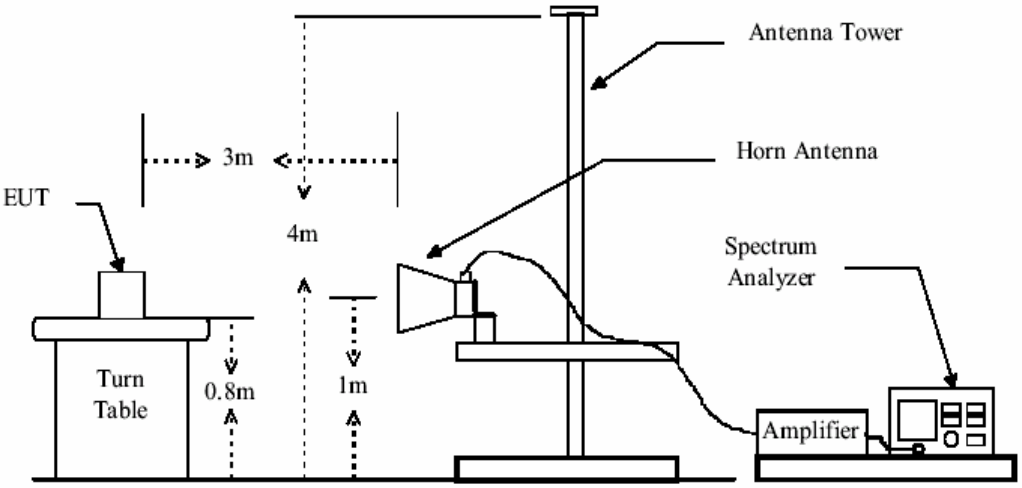
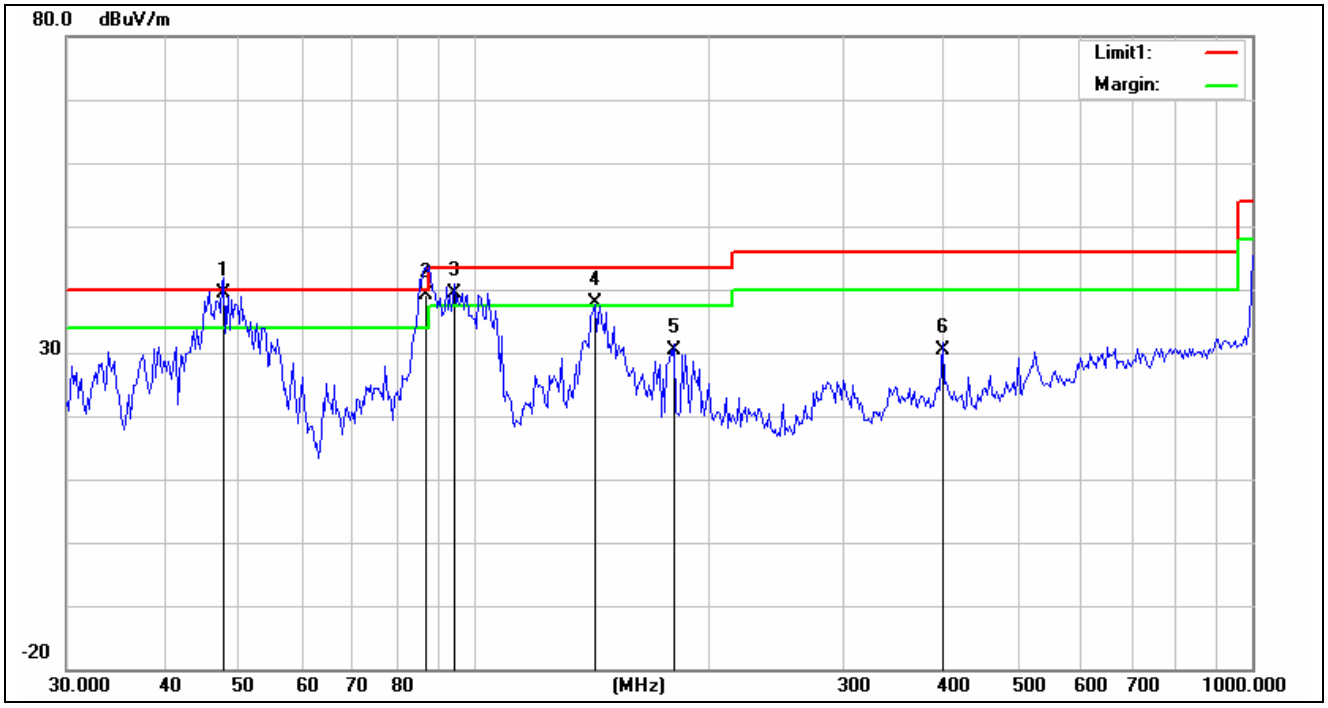


Figure 3. Above 1GHz radiated emissions test configuration

6.4 TEST RESULTS

Project No.:	**ZJ00032382**	**Polarziation:**	**Vertical**
Standard:	**(RE)FCC PART 15.247**	**Power Source:**	
Test item:	**Radiation Test**	**Date:**	**2013-9-13**
Temp./Hum.(%RH):	**22.3/55%RH**	**Time:**	**9:20:55**
EUT:	**Customer Premise Equipment**	**Distance:**	**3m**
Model:	**BXM5**	**Test Result:**	**Pass**
Note:	**A-5740**		

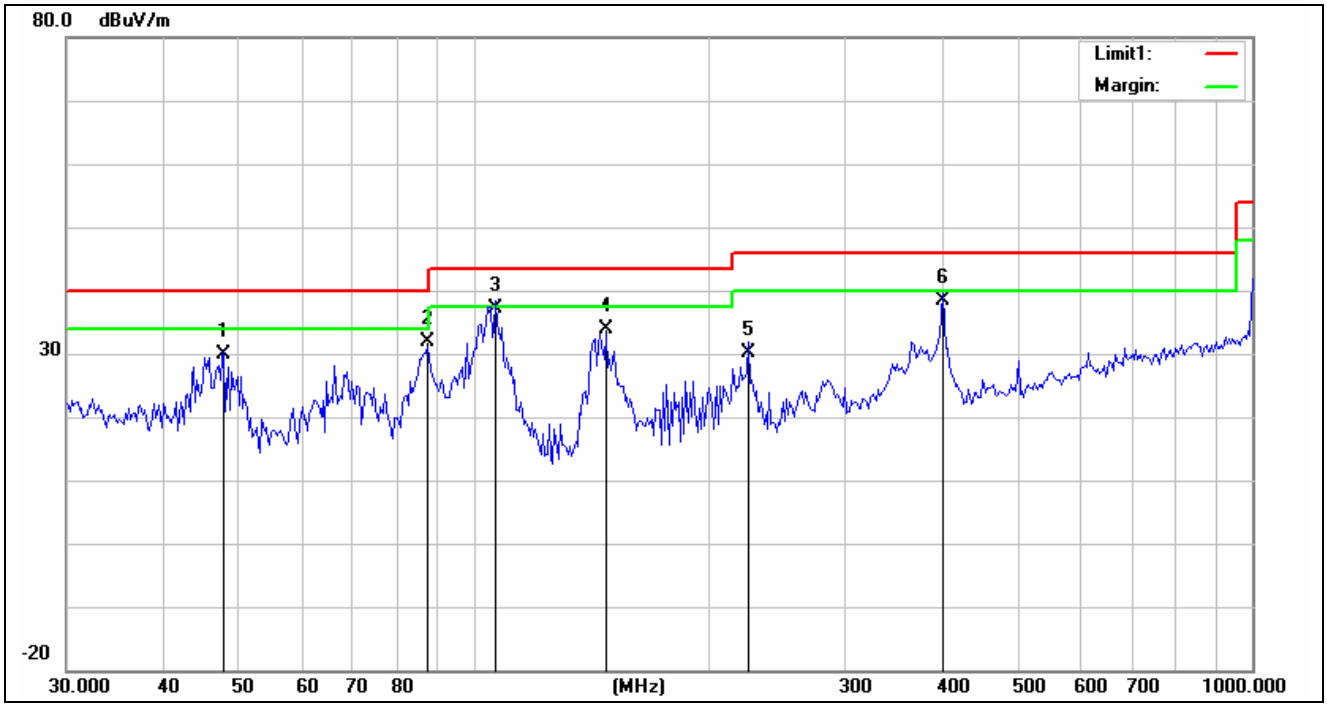


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	47.8282	28.98	10.52	39.50	40.00	-0.50	QP
2	86.7716	29.82	9.28	39.10	40.00	-0.90	QP
3	94.4029	29.51	9.79	39.30	43.50	-4.20	QP
4	143.0814	28.53	9.47	38.00	43.50	-5.50	QP
5	181.1690	19.39	11.11	30.50	43.50	-13.00	QP
6	400.1259	12.21	18.19	30.40	46.00	-15.60	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2911.540	28.54	10.57	39.11	74.00	-34.89	peak
2	2911.540	15.23	10.57	25.80	54.00	-28.20	AVG
3	2958.042	29.73	11.14	40.87	74.00	-33.13	peak
4	2958.042	17.66	11.14	28.80	54.00	-25.20	AVG
5	16232.266	28.62	33.49	62.11	74.00	-11.89	peak
6	16232.266	17.21	33.49	50.70	54.00	-3.30	AVG
7	17794.441	28.14	35.89	64.03	74.00	-9.97	peak
8	17794.441	15.91	35.89	51.80	54.00	-2.20	AVG

Project No.:	**ZJ00032382**	**Polarziation:**	**Horizontal**
Standard:	**(RE)FCC PART 15.247**	**Power Source:**	
Test item:	**Radiation Test**	**Date:**	**2013-9-13**
Temp./Hum.(%RH):	**22.3/55%RH**	**Time:**	**9:26:58**
EUT:	**Customer Premise Equipment**	**Distance:**	**3m**
Model:	**BXM5**	**Test Result:**	**Pass**
Note:	**A-5740**		

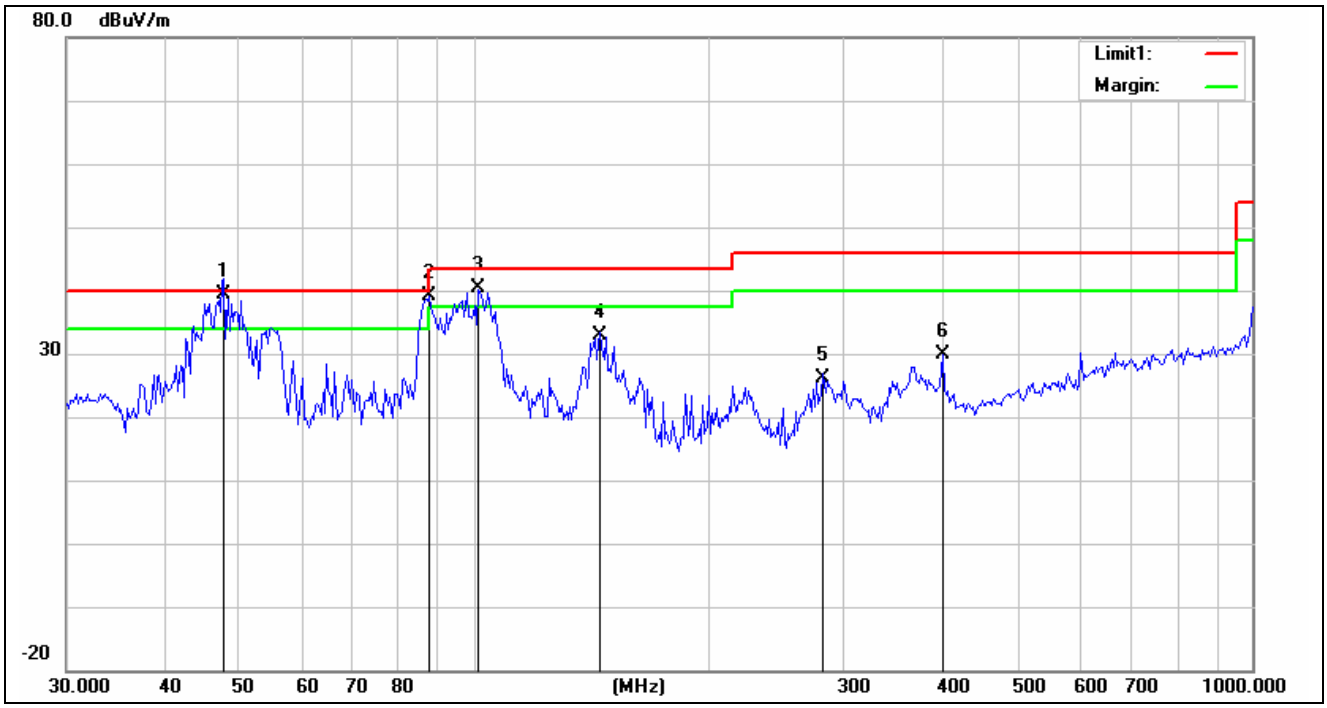


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	47.8282	19.28	10.52	29.80	40.00	-10.20	QP
2	87.2604	22.66	9.34	32.00	40.00	-8.00	QP
3	106.8259	27.54	9.66	37.20	43.50	-6.30	QP
4	147.9877	24.06	9.94	34.00	43.50	-9.50	QP
5	225.5612	17.43	12.77	30.20	46.00	-15.80	QP
6	400.1259	20.11	18.19	38.30	46.00	-7.70	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2932.117	28.80	10.82	39.62	74.00	-34.38	peak
2	2932.117	16.38	10.82	27.20	54.00	-26.80	AVG
3	2978.947	28.53	11.40	39.93	74.00	-34.07	peak
4	2978.947	15.50	11.40	26.90	54.00	-27.10	AVG
5	16278.943	29.93	33.54	63.47	74.00	-10.53	peak
6	16278.943	18.16	33.54	51.70	54.00	-2.30	AVG
7	16995.414	29.16	35.73	64.89	74.00	-9.11	peak
8	16995.414	16.07	35.73	51.80	54.00	-2.20	AVG

Project No.:	**ZJ00032382**	**Polarziation:**	**Vertical**
Standard:	**(RE)FCC PART 15.247**	**Power Source:**	
Test item:	**Radiation Test**	**Date:**	**2013-9-13**
Temp./Hum.(%RH):	**22.3/55%RH**	**Time:**	**9:21:10**
EUT:	**Customer Premise Equipment**	**Distance:**	**3m**
Model:	**BXM5**	**Test Result:**	**Pass**
Note:	**A-5785**		

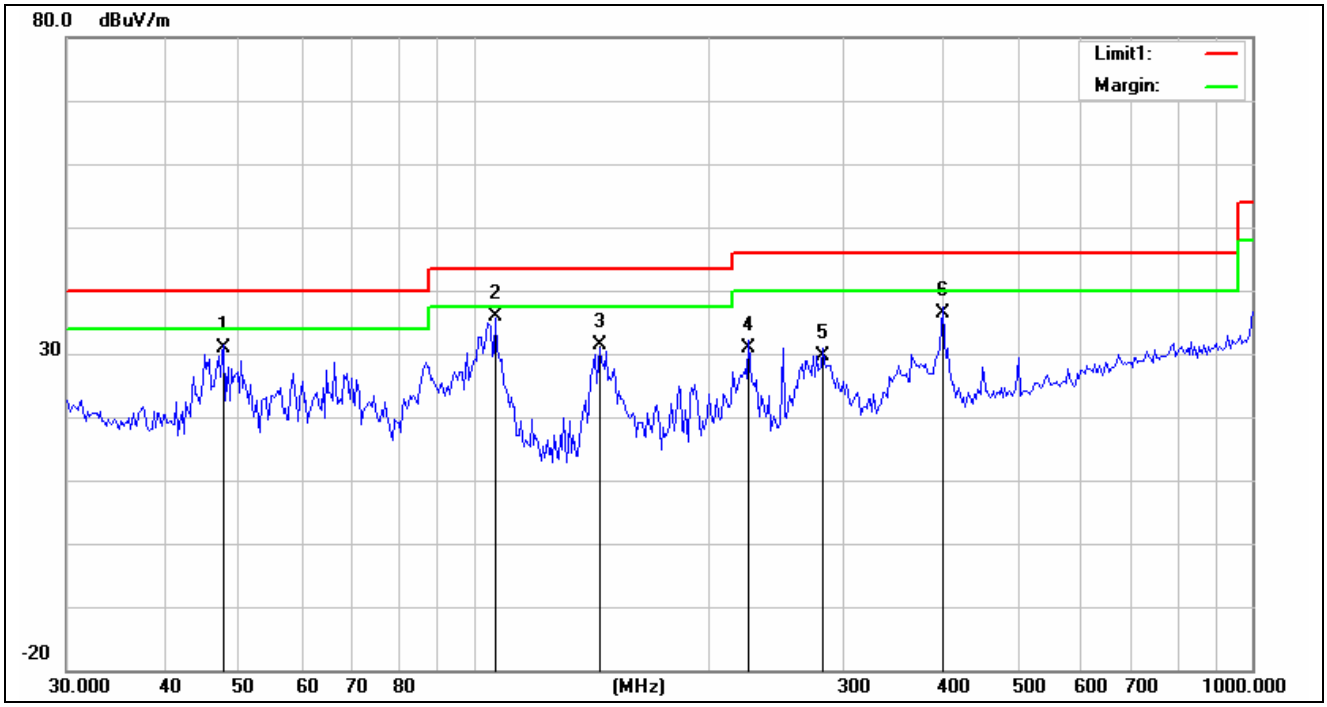


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	47.8282	28.98	10.52	39.50	40.00	-0.50	QP
2	87.7523	29.81	9.39	39.20	40.00	-0.80	QP
3	101.5575	30.39	9.91	40.30	43.50	-3.20	QP
4	145.5140	23.10	9.70	32.80	43.50	-10.70	QP
5	280.8306	11.63	14.47	26.10	46.00	-19.90	QP
6	400.1259	11.81	18.19	30.00	46.00	-16.00	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2865.769	28.54	10.02	38.56	74.00	-35.44	peak
2	2865.769	15.58	10.02	25.60	54.00	-28.40	AVG
3	2947.644	28.84	11.01	39.85	74.00	-34.15	peak
4	2947.644	15.59	11.01	26.60	54.00	-27.40	AVG
5	16325.754	29.34	33.58	62.92	74.00	-11.08	peak
6	16325.754	16.72	33.58	50.30	54.00	-3.70	AVG
7	17692.544	28.80	35.76	64.56	74.00	-9.44	peak
8	17794.441	16.81	35.89	52.70	54.00	-1.30	AVG

Project No.:	**ZJ00032382**	**Polarziation:**	**Horizontal**
Standard:	**(RE)FCC PART 15.247**	**Power Source:**	
Test item:	**Radiation Test**	**Date:**	**2013-9-13**
Temp./Hum.(%RH):	**22.3/55%RH**	**Time:**	**9:27:18**
EUT:	**Customer Premise Equipment**	**Distance:**	**3m**
Model:	**BXM5**	**Test Result:**	**Pass**
Note:	**A-5785**		

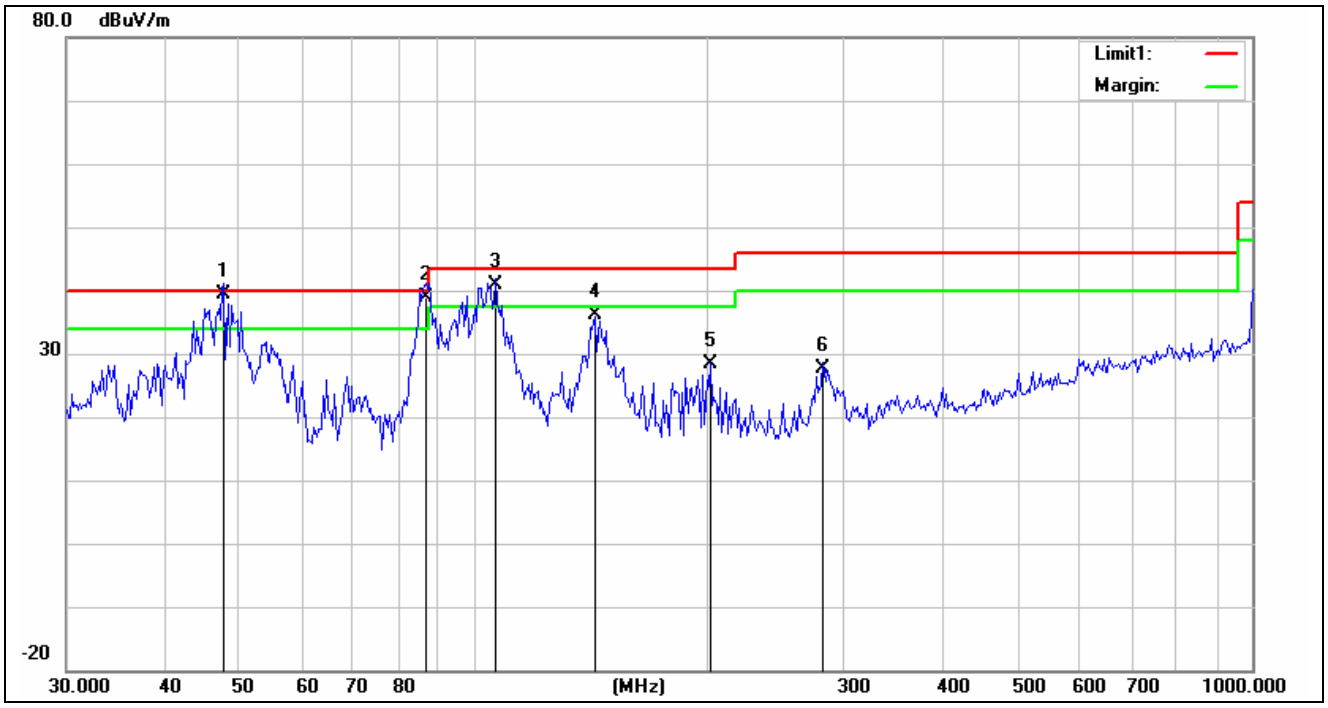


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	47.8282	20.38	10.52	30.90	40.00	-9.10	QP
2	106.8259	26.34	9.66	36.00	43.50	-7.50	QP
3	145.5140	21.60	9.70	31.30	43.50	-12.20	QP
4	225.5612	18.13	12.77	30.90	46.00	-15.10	QP
5	280.8306	15.23	14.47	29.70	46.00	-16.30	QP
6	400.1259	18.31	18.19	36.50	46.00	-9.50	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2896.202	28.10	10.39	38.49	74.00	-35.51	peak
2	2896.202	14.81	10.39	25.20	54.00	-28.80	AVG
3	2947.644	29.07	11.01	40.08	74.00	-33.92	peak
4	2947.644	16.59	11.01	27.60	54.00	-26.40	AVG
5	16372.699	30.19	33.62	63.81	74.00	-10.19	peak
6	16372.699	17.38	33.62	51.00	54.00	-3.00	AVG
7	16849.641	29.63	35.14	64.77	74.00	-9.23	peak
8	16849.641	18.46	35.14	53.60	54.00	-0.40	AVG

Project No.:	**ZJ00032382**	**Polarziation:**	**Vertical**
Standard:	**(RE)FCC PART 15.247**	**Power Source:**	
Test item:	**Radiation Test**	**Date:**	**2013-9-13**
Temp./Hum.(%RH):	**22.3/55%RH**	**Time:**	**9:21:20**
EUT:	**Customer Premise Equipment**	**Distance:**	**3m**
Model:	**BXM5**	**Test Result:**	**Pass**
Note:	**A-5840**		

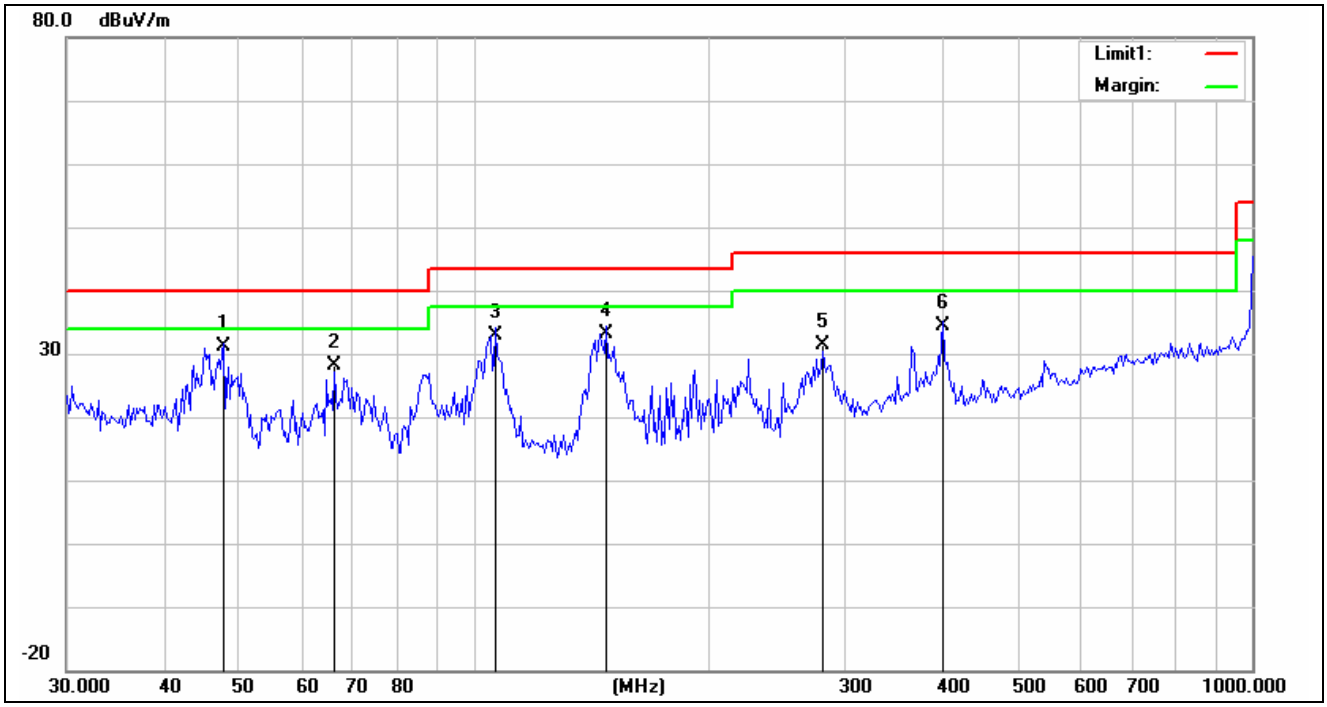


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	47.8282	28.98	10.52	39.50	40.00	-0.50	QP
2	86.7716	29.72	9.28	39.00	40.00	-1.00	QP
3	106.8259	31.14	9.66	40.80	43.50	-2.70	QP
4	143.0814	26.73	9.47	36.20	43.50	-7.30	QP
5	201.5832	16.94	11.46	28.40	43.50	-15.10	QP
6	280.8306	13.23	14.47	27.70	46.00	-18.30	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2937.283	29.48	10.88	40.36	74.00	-33.64	peak
2	2937.283	15.42	10.88	26.30	54.00	-27.70	AVG
3	2994.723	28.94	11.58	40.52	74.00	-33.48	peak
4	2994.723	15.32	11.58	26.90	54.00	-27.10	AVG
5	13391.452	29.50	28.77	58.27	74.00	-15.73	peak
6	13391.452	16.53	28.77	45.30	54.00	-8.70	AVG
7	17440.346	29.76	35.53	65.29	74.00	-8.71	peak
8	17440.346	17.57	35.53	53.10	54.00	-0.90	AVG

Project No.:	**ZJ00032382**	**Polarziation:**	**Horizontal**
Standard:	**(RE)FCC PART 15.247**	**Power Source:**	
Test item:	**Radiation Test**	**Date:**	**2013-9-13**
Temp./Hum.(%RH):	**22.3/55%RH**	**Time:**	**9:27:28**
EUT:	**Customer Premise Equipment**	**Distance:**	**3m**
Model:	**BXM5**	**Test Result:**	**Pass**
Note:	**A-5840**		

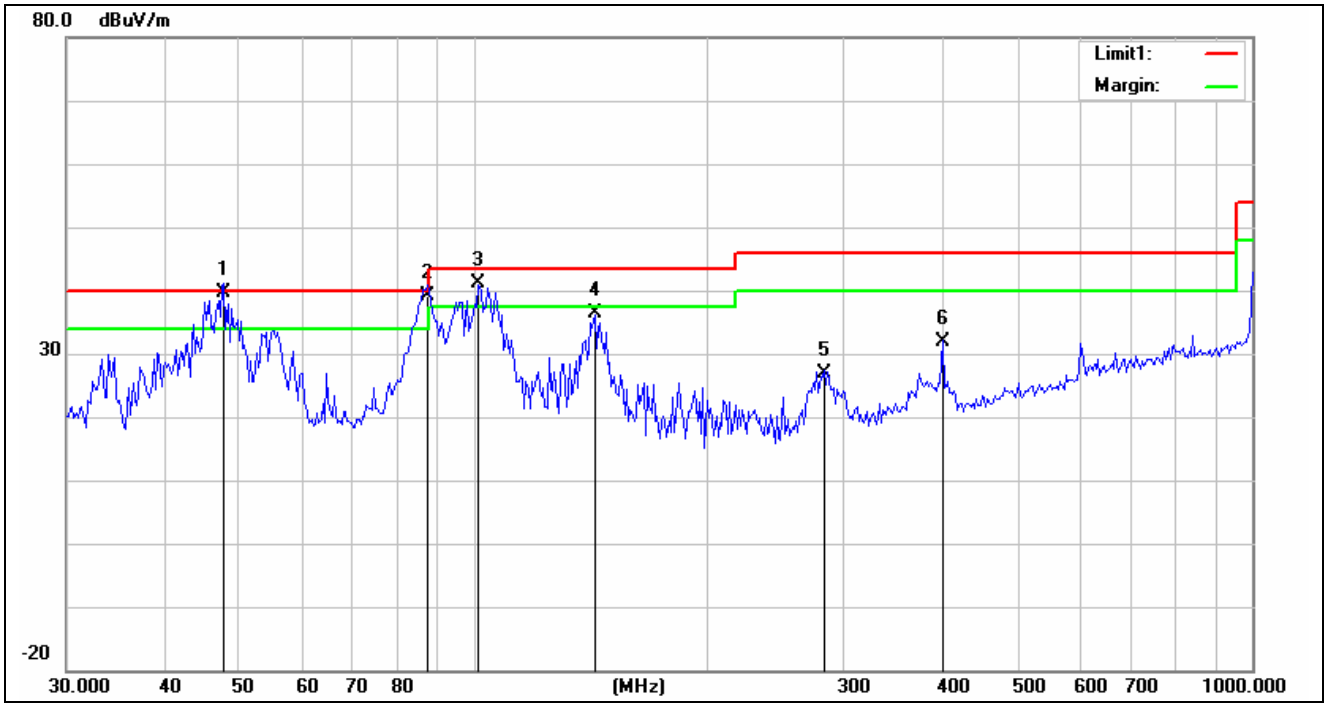


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	47.8282	20.68	10.52	31.20	40.00	-8.80	QP
2	66.2570	20.32	7.78	28.10	40.00	-11.90	QP
3	106.8259	23.14	9.66	32.80	43.50	-10.70	QP
4	147.9877	23.26	9.94	33.20	43.50	-10.30	QP
5	280.8306	17.03	14.47	31.50	46.00	-14.50	QP
6	400.1259	16.11	18.19	34.30	46.00	-11.70	QP

Emission above 1GHz:

o.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2896.202	28.10	10.39	38.49	74.00	-35.51	peak
2	2896.202	14.81	10.39	25.20	54.00	-28.80	AVG
3	2947.644	29.07	11.01	40.08	74.00	-33.92	peak
4	2947.644	16.59	11.01	27.60	54.00	-26.40	AVG
5	13391.452	29.50	28.77	58.27	74.00	-15.73	peak
6	13391.452	16.53	28.77	45.30	54.00	-8.70	AVG
7	16898.092	30.08	35.33	65.41	74.00	-8.59	peak
8	16898.092	17.67	35.33	53.00	54.00	-1.00	AVG

Project No.:	**ZJ00032382**	**Polarziation:**	**Vertical**
Standard:	**(RE)FCC PART 15.247**	**Power Source:**	
Test item:	**Radiation Test**	**Date:**	**2013-9-13**
Temp./Hum.(%RH):	**22.3/55%RH**	**Time:**	**9:21:29**
EUT:	**Customer Premise Equipment**	**Distance:**	**3m**
Model:	**BXM5**	**Test Result:**	**Pass**
Note:	**N20-5740**		

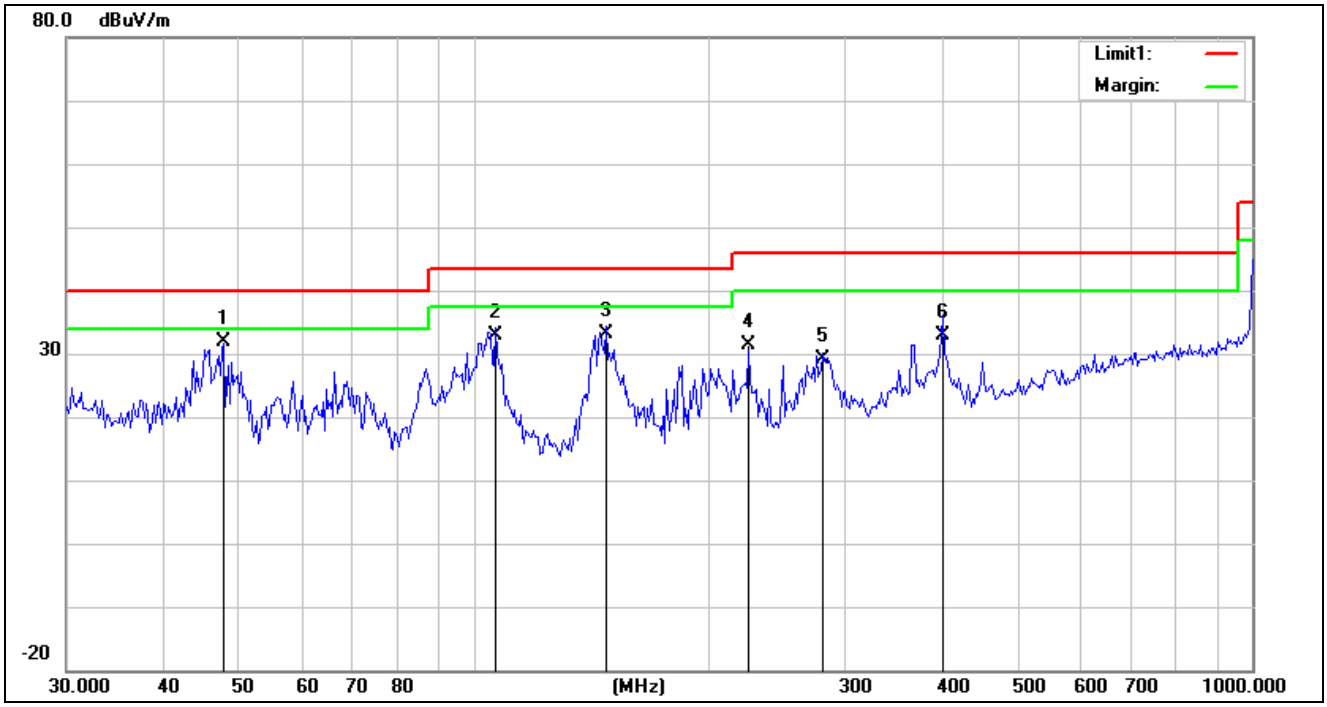


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	47.8282	29.08	10.52	39.60	40.00	-0.40	QP
2	87.2604	29.76	9.34	39.10	40.00	-0.90	QP
3	101.5575	31.19	9.91	41.10	43.50	-2.40	QP
4	143.0814	26.93	9.47	36.40	43.50	-7.10	QP
5	282.4132	12.47	14.53	27.00	46.00	-19.00	QP
6	400.1259	13.71	18.19	31.90	46.00	-14.10	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2937.283	28.83	10.88	39.71	74.00	-34.29	peak
2	2937.283	15.82	10.88	26.70	54.00	-27.30	AVG
3	2994.723	28.93	11.58	40.51	74.00	-33.49	peak
4	2994.723	16.12	11.58	27.70	54.00	-26.30	AVG
5	16325.754	29.36	33.58	62.94	74.00	-11.06	peak
6	16325.754	15.72	33.58	49.30	54.00	-4.70	AVG
7	17641.814	29.20	35.69	64.89	74.00	-9.11	peak
8	17641.814	16.11	35.69	51.80	54.00	-2.20	AVG

Project No.:	**ZJ00032382**	**Polarziation:**	**Horizontal**
Standard:	**(RE)FCC PART 15.247**	**Power Source:**	
Test item:	**Radiation Test**	**Date:**	**2013-9-13**
Temp./Hum.(%RH):	**22.3/55%RH**	**Time:**	**9:27:41**
EUT:	**Customer Premise Equipment**	**Distance:**	**3m**
Model:	**BXM5**	**Test Result:**	**Pass**
Note:	**N20-5740**		

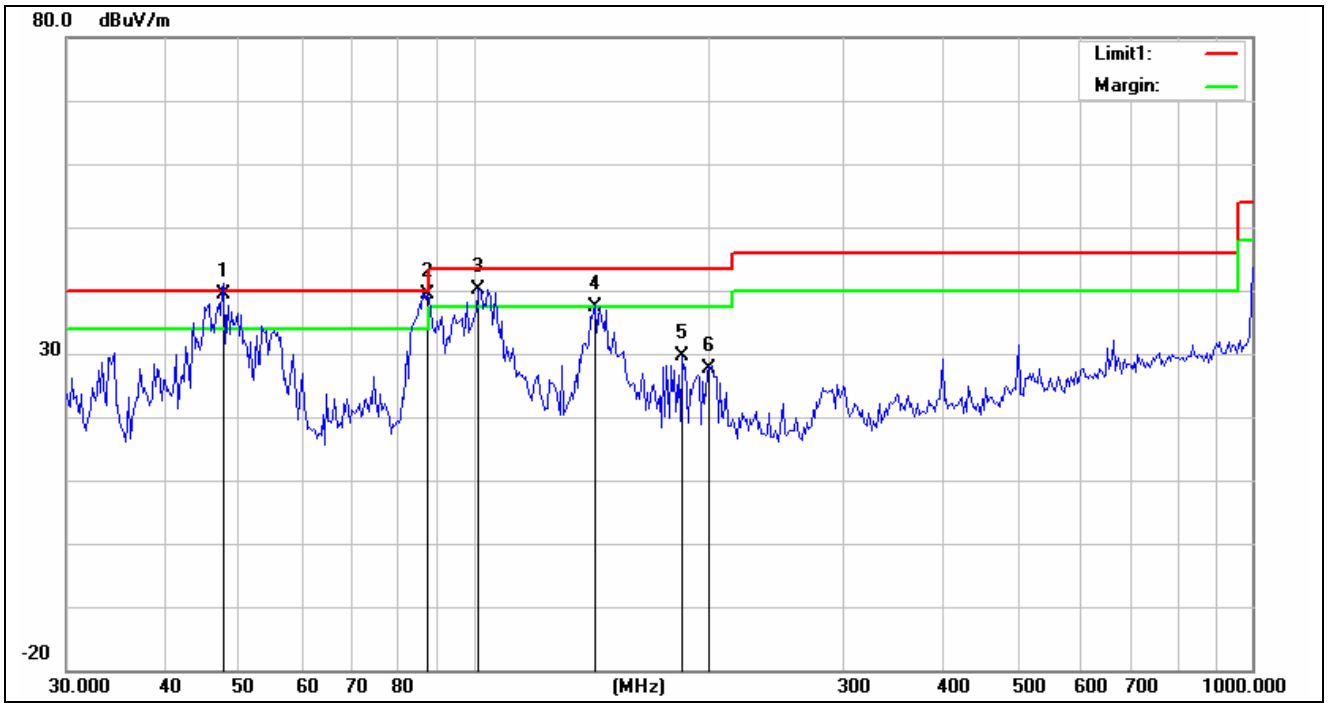


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	47.8282	21.48	10.52	32.00	40.00	-8.00	QP
2	106.8259	23.24	9.66	32.90	43.50	-10.60	QP
3	147.9877	23.16	9.94	33.10	43.50	-10.40	QP
4	225.5612	18.53	12.77	31.30	46.00	-14.70	QP
5	280.8306	14.63	14.47	29.10	46.00	-16.90	QP
6	400.1259	14.71	18.19	32.90	46.00	-13.10	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2870.819	27.87	10.08	37.95	74.00	-36.05	peak
2	2870.819	14.72	10.08	24.80	54.00	-29.20	AVG
3	2952.838	28.24	11.07	39.31	74.00	-34.69	peak
4	2952.838	15.63	11.07	26.70	54.00	-27.30	AVG
5	14061.359	28.41	30.22	58.63	74.00	-15.37	peak
6	14061.359	15.68	30.22	45.90	54.00	-8.10	AVG
7	16753.154	28.89	34.75	63.64	74.00	-10.36	peak
8	16753.154	16.25	34.75	51.00	54.00	-3.00	AVG

Project No.:	**ZJ00032382**	**Polarziation:**	**Vertical**
Standard:	**(RE)FCC PART 15.247**	**Power Source:**	
Test item:	**Radiation Test**	**Date:**	**2013-9-13**
Temp./Hum.(%RH):	**22.3/55%RH**	**Time:**	**9:21:36**
EUT:	**Customer Premise Equipment**	**Distance:**	**3m**
Model:	**BXM5**	**Test Result:**	**Pass**
Note:	**N20-5785**		

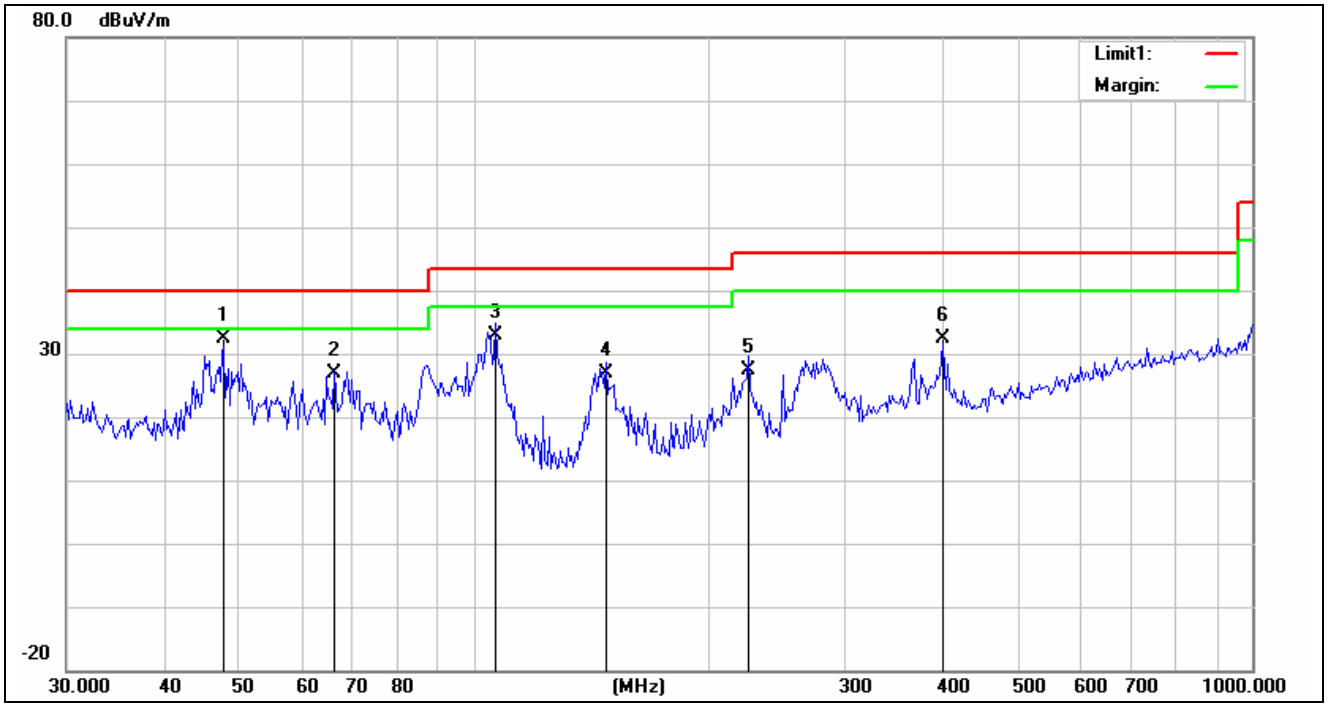


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	47.8282	28.88	10.52	39.40	40.00	-0.60	QP
2	87.2604	29.96	9.34	39.30	40.00	-0.70	QP
3	101.5575	30.19	9.91	40.10	43.50	-3.40	QP
4	143.0814	27.83	9.47	37.30	43.50	-6.20	QP
5	185.2878	18.41	11.29	29.70	43.50	-13.80	QP
6	200.4533	16.20	11.40	27.60	43.50	-15.90	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2947.644	28.78	11.01	39.79	74.00	-34.21	peak
2	2947.644	15.79	11.01	26.80	54.00	-27.20	AVG
3	2994.723	29.13	11.58	40.71	74.00	-33.29	peak
4	2994.723	16.22	11.58	27.80	54.00	-26.20	AVG
5	16325.754	29.15	33.58	62.73	74.00	-11.27	peak
6	16325.754	16.72	33.58	50.30	54.00	-3.70	AVG
7	16946.684	28.95	35.54	64.49	74.00	-9.51	peak
8	16946.684	16.36	35.54	51.90	54.00	-2.10	AVG

Project No.:	**ZJ00032382**	**Polarziation:**	**Horizontal**
Standard:	**(RE)FCC PART 15.247**	**Power Source:**	
Test item:	**Radiation Test**	**Date:**	**2013-9-13**
Temp./Hum.(%RH):	**22.3/55%RH**	**Time:**	**9:27:49**
EUT:	**Customer Premise Equipment**	**Distance:**	**3m**
Model:	**BXM5**	**Test Result:**	**Pass**
Note:	**N20-5785**		

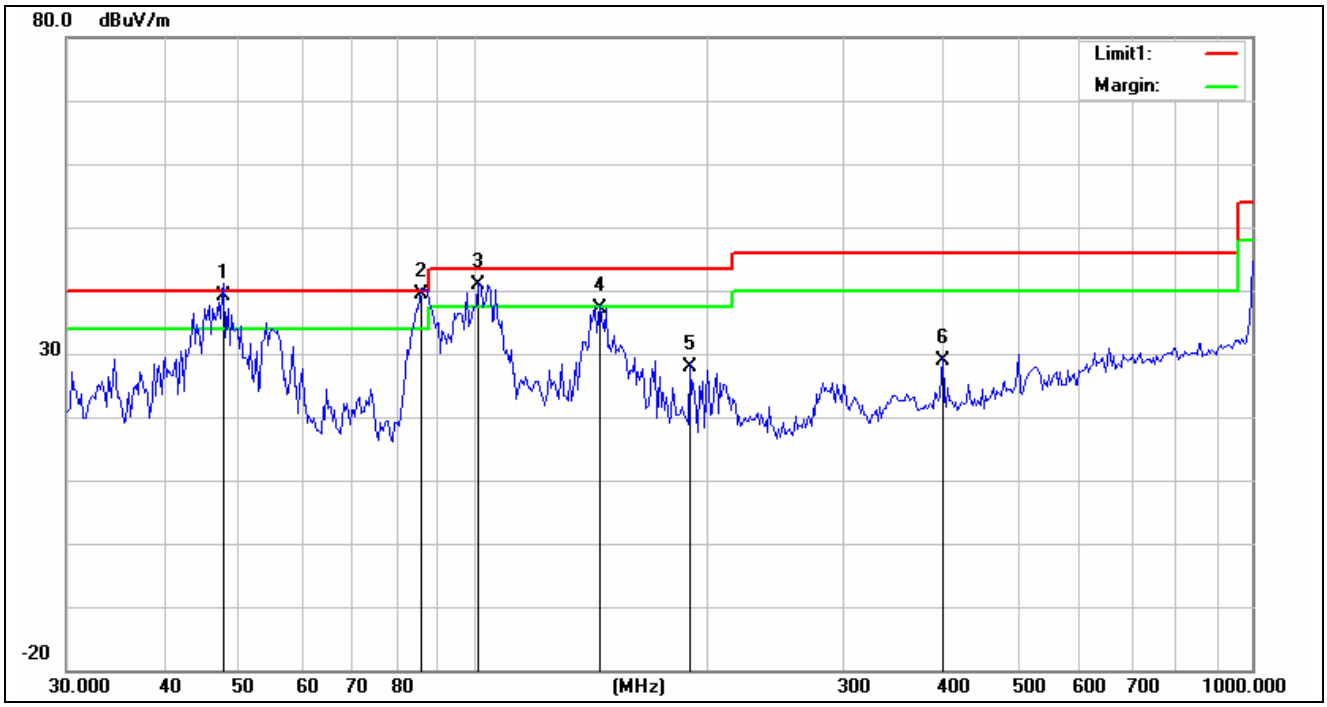


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	47.8282	21.88	10.52	32.40	40.00	-7.60	QP
2	66.2570	19.22	7.78	27.00	40.00	-13.00	QP
3	106.8259	23.34	9.66	33.00	43.50	-10.50	QP
4	147.9877	16.86	9.94	26.80	43.50	-16.70	QP
5	225.5612	14.53	12.77	27.30	46.00	-18.70	QP
6	400.1259	14.11	18.19	32.30	46.00	-13.70	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2835.656	29.04	9.64	38.68	74.00	-35.32	peak
2	2835.656	16.06	9.64	25.70	54.00	-28.30	AVG
3	2958.042	28.75	11.14	39.89	74.00	-34.11	peak
4	2958.042	15.26	11.14	26.40	54.00	-27.60	AVG
5	16232.266	29.14	33.49	62.63	74.00	-11.37	peak
6	16232.266	16.61	33.49	50.10	54.00	-3.90	AVG
7	17290.756	29.69	35.61	65.30	74.00	-8.70	peak
8	17290.756	17.59	35.61	53.20	54.00	-0.80	AVG

Project No.:	**ZJ00032382**	**Polarziation:**	**Vertical**
Standard:	**(RE)FCC PART 15.247**	**Power Source:**	
Test item:	**Radiation Test**	**Date:**	**2013-9-13**
Temp./Hum.(%RH):	**22.3/55%RH**	**Time:**	**9:22:12**
EUT:	**Customer Premise Equipment**	**Distance:**	**3m**
Model:	**BXM5**	**Test Result:**	**Pass**
Note:	**N20-5840**		

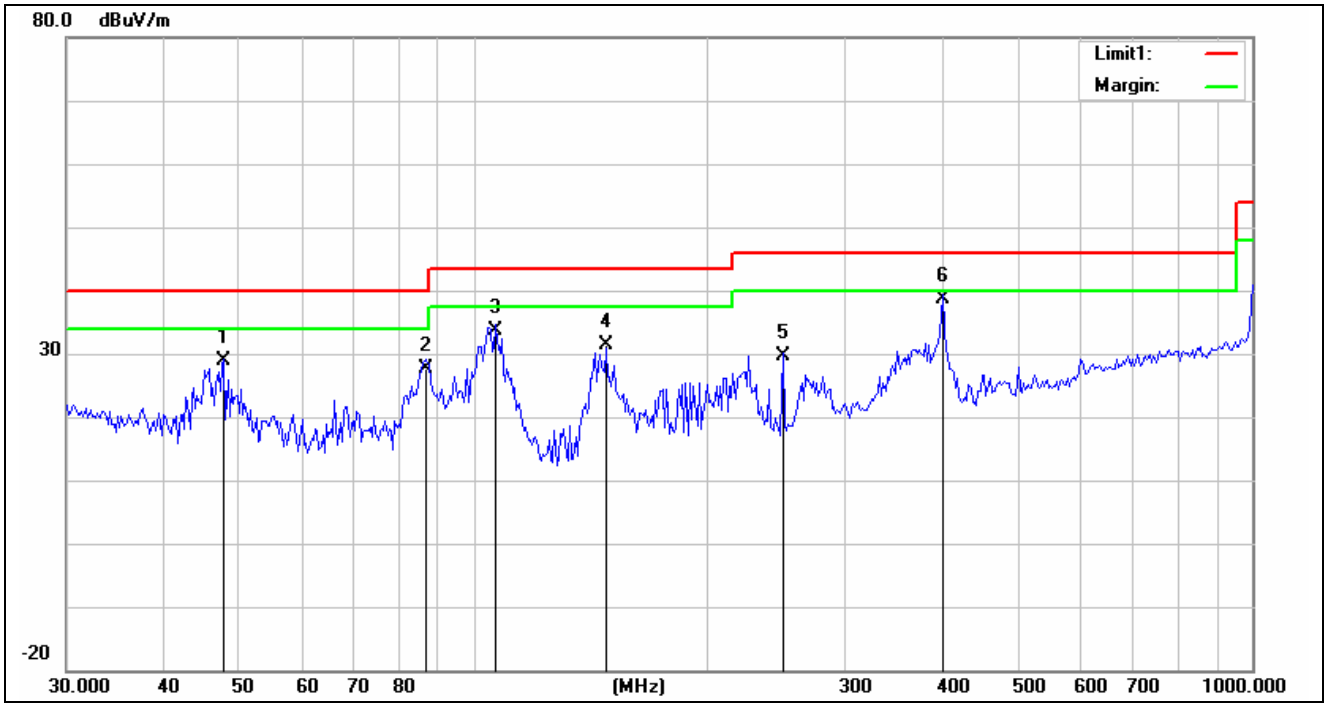


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	47.8282	28.58	10.52	39.10	40.00	-0.90	QP
2	85.8019	30.12	9.18	39.30	40.00	-0.70	QP
3	101.5575	30.99	9.91	40.90	43.50	-2.60	QP
4	145.5140	27.50	9.70	37.20	43.50	-6.30	QP
5	189.4995	16.55	11.45	28.00	43.50	-15.50	QP
6	400.1259	10.61	18.19	28.80	46.00	-17.20	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2937.283	28.70	10.88	39.58	74.00	-34.42	peak
2	2937.283	15.52	10.88	26.40	54.00	-27.60	AVG
3	3000.000	28.42	11.65	40.07	74.00	-33.93	peak
4	3000.000	15.15	11.65	26.80	54.00	-27.20	AVG
5	16278.943	29.09	33.54	62.63	74.00	-11.37	peak
6	16278.943	16.56	33.54	50.10	54.00	-3.90	AVG
7	16946.684	28.60	35.54	64.14	74.00	-9.86	peak
8	16946.684	16.06	35.54	51.60	54.00	-2.40	AVG

Project No.:	**ZJ00032382**	**Polarziation:**	**Horizontal**
Standard:	**(RE)FCC PART 15.247**	**Power Source:**	
Test item:	**Radiation Test**	**Date:**	**2013-9-13**
Temp./Hum.(%RH):	**22.3/55%RH**	**Time:**	**9:28:06**
EUT:	**Customer Premise Equipment**	**Distance:**	**3m**
Model:	**BXM5**	**Test Result:**	**Pass**
Note:	**N20-5840**		

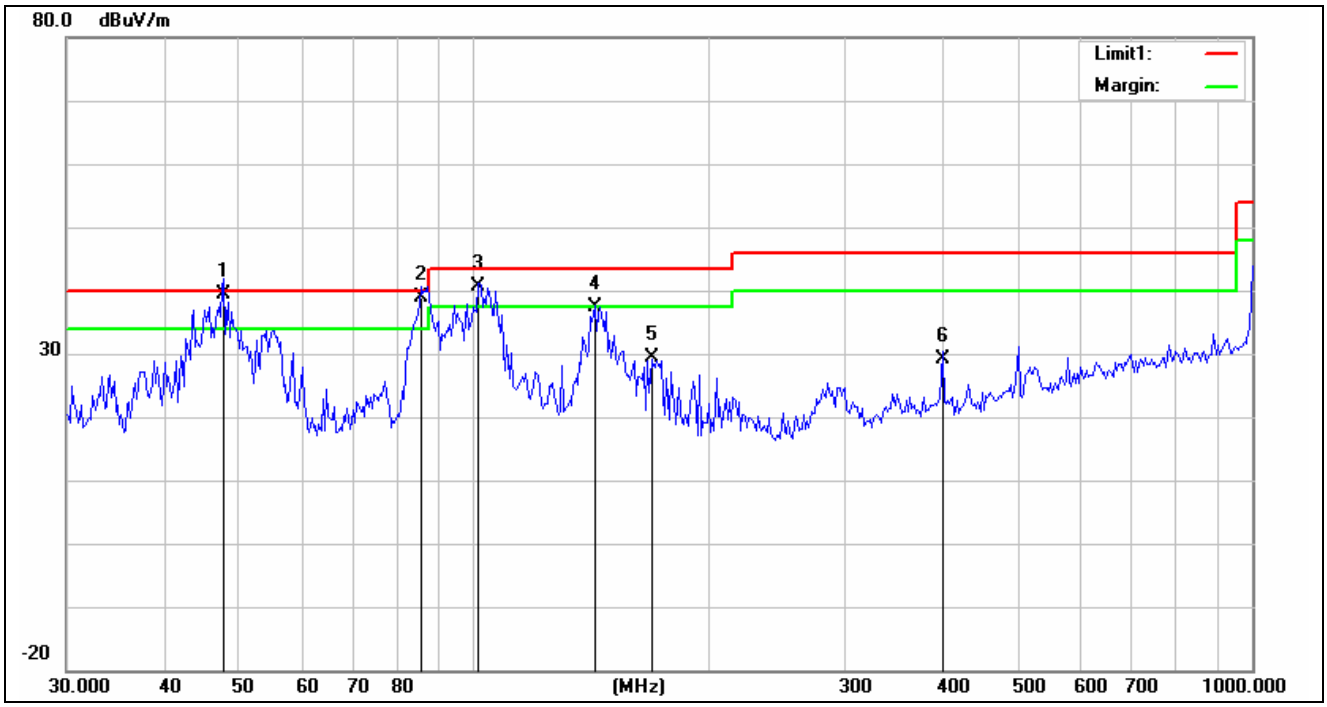


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	47.8282	18.28	10.52	28.80	40.00	-11.20	QP
2	86.7716	18.41	9.29	27.70	40.00	-12.30	QP
3	106.8259	23.94	9.66	33.60	43.50	-9.90	QP
4	147.9877	21.56	9.94	31.50	43.50	-12.00	QP
5	249.5706	16.04	13.66	29.70	46.00	-16.30	QP
6	400.1259	20.51	18.19	38.70	46.00	-7.30	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2820.718	29.69	9.46	39.15	74.00	-34.85	peak
2	2820.718	17.24	9.46	26.70	54.00	-27.30	AVG
3	2947.644	29.36	11.01	40.37	74.00	-33.63	peak
4	2947.644	16.39	11.01	27.40	54.00	-26.60	AVG
5	16946.684	28.13	35.54	63.67	74.00	-10.33	peak
6	16946.684	15.66	35.54	51.20	54.00	-2.80	AVG
7	17440.346	29.39	35.53	64.92	74.00	-9.08	peak
8	17440.346	15.77	35.53	51.30	54.00	-2.70	AVG

Project No.:	**ZJ00032382**	**Polarziation:**	**Vertical**
Standard:	**(RE)FCC PART 15.247**	**Power Source:**	
Test item:	**Radiation Test**	**Date:**	**2013-9-13**
Temp./Hum.(%RH):	**22.3/55%RH**	**Time:**	**9:22:24**
EUT:	**Customer Premise Equipment**	**Distance:**	**3m**
Model:	**BXM5**	**Test Result:**	**Pass**
Note:	**N40-5750**		

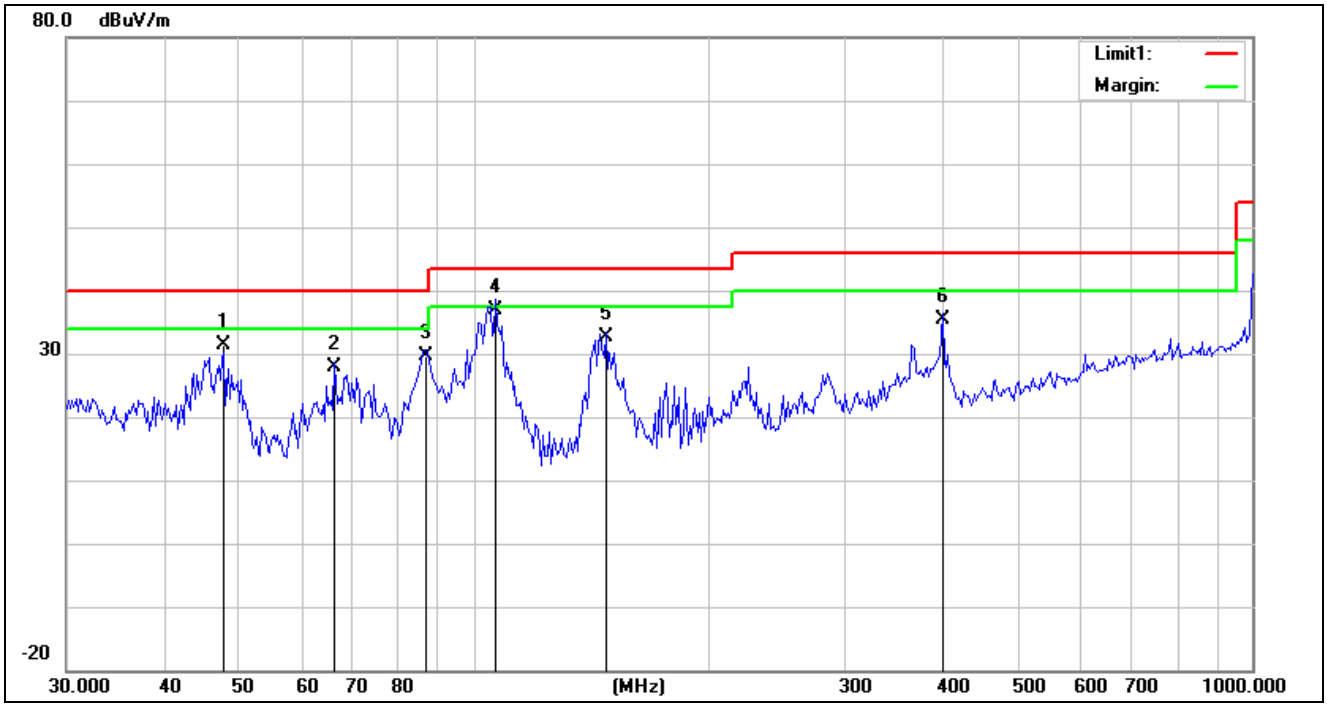


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	47.8282	28.78	10.52	39.30	40.00	-0.70	QP
2	85.8019	29.62	9.18	38.80	40.00	-1.20	QP
3	101.5575	30.69	9.91	40.60	43.50	-2.90	QP
4	143.0814	27.93	9.47	37.40	43.50	-6.10	QP
5	169.3548	18.98	10.52	29.50	43.50	-14.00	QP
6	400.1259	10.91	18.19	29.10	46.00	-16.90	QP

Emission above 1GHz:

1	2737.544	29.10	8.39	37.49	74.00	-36.51	peak
2	2737.544	16.61	8.39	25.00	54.00	-29.00	AVG
3	2947.644	28.94	11.01	39.95	74.00	-34.05	peak
4	2947.644	15.89	11.01	26.90	54.00	-27.10	AVG
5	17044.285	27.97	35.73	63.70	74.00	-10.30	peak
6	17044.285	15.27	35.73	51.00	54.00	-3.00	AVG
7	17540.791	29.14	35.55	64.69	74.00	-9.31	peak
8	17540.791	16.15	35.55	51.70	54.00	-2.30	AVG

Project No.:	**ZJ00032382**	**Polarziation:**	**Horizontal**
Standard:	**(RE)FCC PART 15.247**	**Power Source:**	
Test item:	**Radiation Test**	**Date:**	**2013-9-13**
Temp./Hum.(%RH):	**22.3/55%RH**	**Time:**	**9:28:29**
EUT:	**Customer Premise Equipment**	**Distance:**	**3m**
Model:	**BXM5**	**Test Result:**	**Pass**
Note:	**N40-5750**		



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	47.8282	20.98	10.52	31.50	40.00	-8.50	QP
2	66.2570	20.12	7.78	27.90	40.00	-12.10	QP
3	86.7716	20.31	9.29	29.60	40.00	-10.40	QP
4	106.8259	27.34	9.66	37.00	43.50	-6.50	QP
5	147.9877	22.66	9.94	32.60	43.50	-10.90	QP
6	400.1259	17.21	18.19	35.40	46.00	-10.60	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2840.653	28.20	9.70	37.90	74.00	-36.10	peak
2	2840.653	14.70	9.70	24.40	54.00	-29.60	AVG
3	2947.644	29.69	11.01	40.70	74.00	-33.30	peak
4	2947.644	16.79	11.01	27.80	54.00	-26.20	AVG
5	17044.285	28.87	35.73	64.60	74.00	-9.40	peak
6	17044.285	15.67	35.73	51.40	54.00	-2.60	AVG
7	17591.230	29.08	35.62	64.70	74.00	-9.30	peak
8	17591.230	16.58	35.62	52.20	54.00	-1.80	AVG

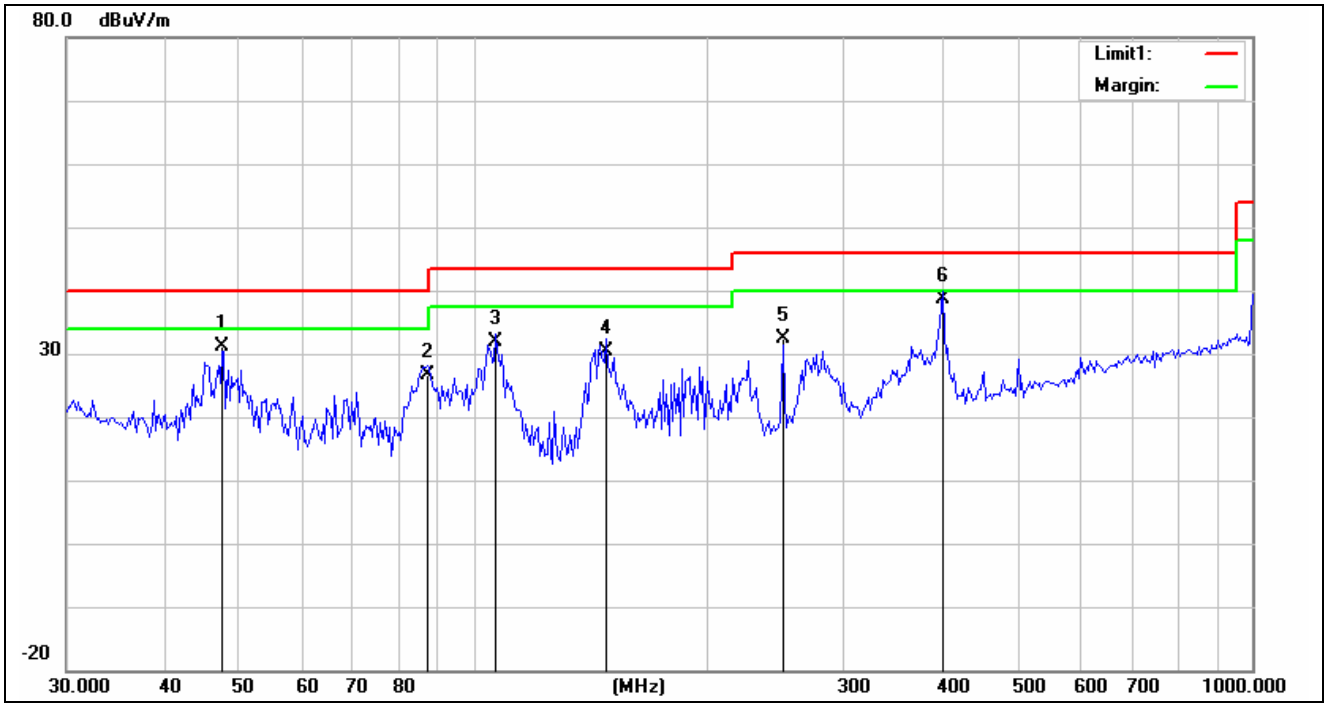
Project No.:	**ZJ00032382**	**Polarziation:**	**Vertical**
Standard:	**(RE)FCC PART 15.247**	**Power Source:**	
Test item:	**Radiation Test**	**Date:**	**2013-9-13**
Temp./Hum.(%RH):	**22.3/55%RH**	**Time:**	**9:22:40**
EUT:	**Customer Premise Equipment**	**Distance:**	**3m**
Model:	**BXM5**	**Test Result:**	**Pass**
Note:	**N40-5790**		

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	47.8282	28.98	10.52	39.50	40.00	-0.50	QP
2	87.2604	29.66	9.34	39.00	40.00	-1.00	QP
3	102.1298	30.52	9.88	40.40	43.50	-3.10	QP
4	143.0814	27.83	9.47	37.30	43.50	-6.20	QP
5	179.1443	18.08	11.02	29.10	43.50	-14.40	QP
6	667.2418	9.58	23.32	32.90	46.00	-13.10	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2891.108	27.75	10.32	38.07	74.00	-35.93	peak
2	2891.108	15.18	10.32	25.50	54.00	-28.50	AVG
3	2947.644	28.19	11.01	39.20	74.00	-34.80	peak
4	2947.644	15.99	11.01	27.00	54.00	-27.00	AVG
5	13781.549	28.28	29.59	57.87	74.00	-16.13	peak
6	13781.549	14.71	29.59	44.30	54.00	-9.70	AVG
7	17794.441	29.03	35.89	64.92	74.00	-9.08	peak
8	17794.441	15.31	35.89	51.20	54.00	-2.80	AVG

Project No.:	**ZJ00032382**	**Polarziation:**	**Horizontal**
Standard:	**(RE)FCC PART 15.247**	**Power Source:**	
Test item:	**Radiation Test**	**Date:**	**2013-9-13**
Temp./Hum.(%RH):	**22.3/55%RH**	**Time:**	**9:28:46**
EUT:	**Customer Premise Equipment**	**Distance:**	**3m**
Model:	**BXM5**	**Test Result:**	**Pass**
Note:	**N40-5790**		

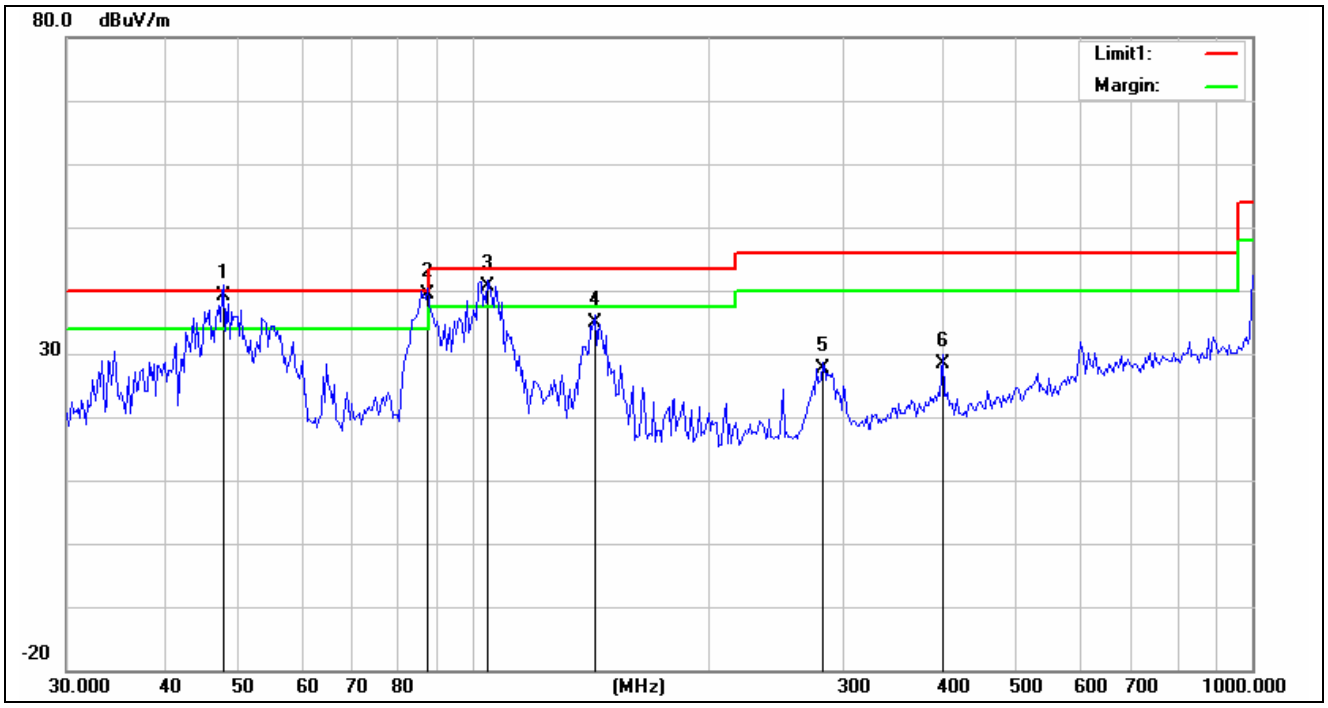


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	47.5600	20.58	10.62	31.20	40.00	-8.80	QP
2	87.2604	17.36	9.34	26.70	40.00	-13.30	QP
3	106.8259	22.24	9.66	31.90	43.50	-11.60	QP
4	147.9877	20.46	9.94	30.40	43.50	-13.10	QP
5	249.5706	18.74	13.66	32.40	46.00	-13.60	QP
6	400.1259	20.51	18.19	38.70	46.00	-7.30	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2886.022	28.06	10.26	38.32	74.00	-35.68	peak
2	2886.022	15.74	10.26	26.00	54.00	-28.00	AVG
3	2937.283	28.46	10.88	39.34	74.00	-34.66	peak
4	2937.283	15.42	10.88	26.30	54.00	-27.70	AVG
5	16325.754	29.18	33.58	62.76	74.00	-11.24	peak
6	16325.754	16.02	33.58	49.60	54.00	-4.40	AVG
7	17241.178	29.04	35.63	64.67	74.00	-9.33	peak
8	17241.178	15.57	35.63	51.20	54.00	-2.80	AVG

Project No.:	**ZJ00032382**	**Polarziation:**	**Vertical**
Standard:	**(RE)FCC PART 15.247**	**Power Source:**	
Test item:	**Radiation Test**	**Date:**	**2013-9-13**
Temp./Hum.(%RH):	**22.3/55%RH**	**Time:**	**9:22:50**
EUT:	**Customer Premise Equipment**	**Distance:**	**3m**
Model:	**BXM5**	**Test Result:**	**Pass**
Note:	**N40-5830**		

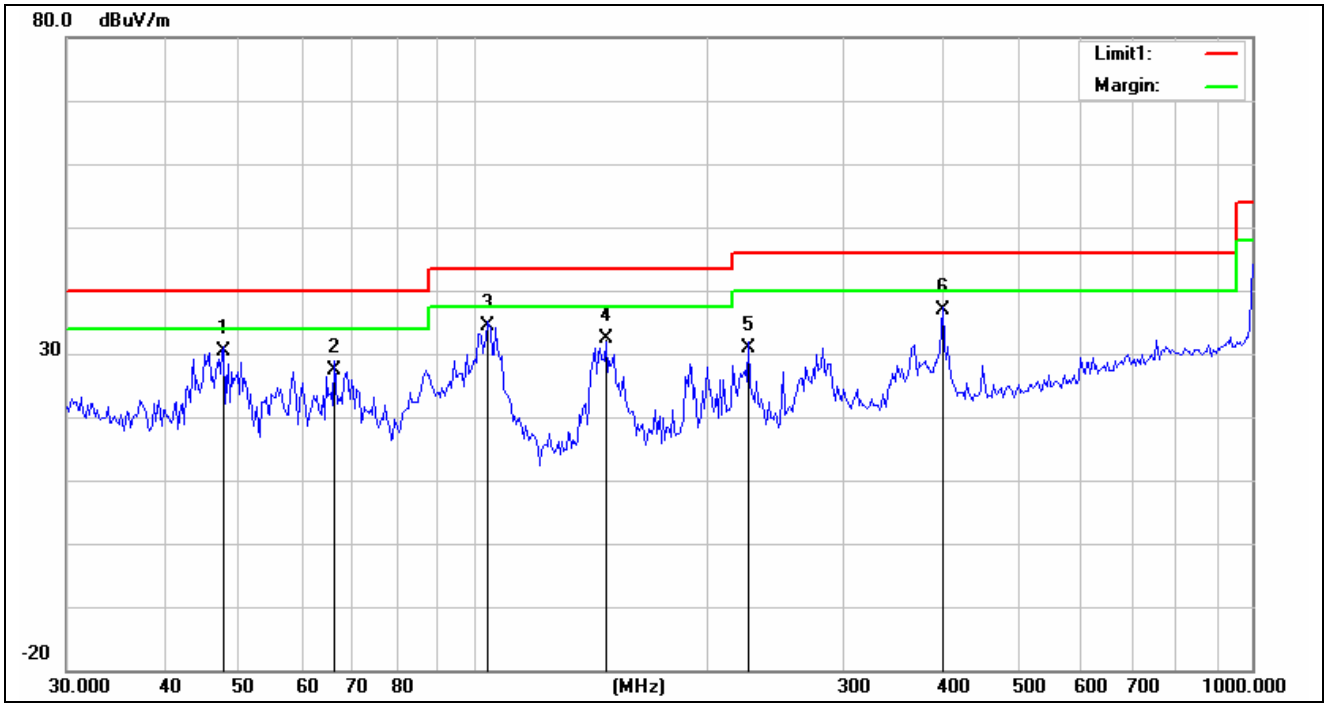


No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	47.8282	28.68	10.52	39.20	40.00	-0.80	QP
2	87.2604	29.96	9.34	39.30	40.00	-0.70	QP
3	104.4514	30.93	9.77	40.70	43.50	-2.80	QP
4	143.0814	25.33	9.47	34.80	43.50	-8.70	QP
5	280.8306	13.13	14.47	27.60	46.00	-18.40	QP
6	400.1259	10.31	18.19	28.50	46.00	-17.50	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2901.306	28.70	10.44	39.14	74.00	-34.86	peak
2	2901.306	16.16	10.44	26.60	54.00	-27.40	AVG
3	2952.838	29.16	11.07	40.23	74.00	-33.77	peak
4	2952.838	16.93	11.07	28.00	54.00	-26.00	AVG
5	16325.754	28.78	33.58	62.36	74.00	-11.64	peak
6	16325.754	15.12	33.58	48.70	54.00	-5.30	AVG
7	17845.610	27.46	35.96	63.42	74.00	-10.58	peak
8	17845.610	15.74	35.96	51.70	54.00	-2.30	AVG

Project No.:	**ZJ00032382**	**Polarziation:**	**Horizontal**
Standard:	**(RE)FCC PART 15.247**	**Power Source:**	
Test item:	**Radiation Test**	**Date:**	**2013-9-13**
Temp./Hum.(%RH):	**22.3/55%RH**	**Time:**	**9:29:00**
EUT:	**Customer Premise Equipment**	**Distance:**	**3m**
Model:	**BXM5**	**Test Result:**	**Pass**
Note:	**N40-5830**		



No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	47.8282	19.78	10.52	30.30	40.00	-9.70	QP
2	66.2570	19.72	7.78	27.50	40.00	-12.50	QP
3	104.4514	24.73	9.77	34.50	43.50	-9.00	QP
4	147.9877	22.46	9.94	32.40	43.50	-11.10	QP
5	225.5612	18.23	12.77	31.00	46.00	-15.00	QP
6	400.1259	18.61	18.19	36.80	46.00	-9.20	QP

Emission above 1GHz:

No.	Frequency (MHz)	Reading (dBuV/m)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2860.728	29.21	9.95	39.16	74.00	-34.84	peak
2	2860.728	17.15	9.95	27.10	54.00	-26.90	AVG
3	2942.459	30.53	10.95	41.48	74.00	-32.52	peak
4	2942.459	17.65	10.95	28.60	54.00	-25.40	AVG
5	16278.943	29.33	33.54	62.87	74.00	-11.13	peak
6	16278.943	15.96	33.54	49.50	54.00	-4.50	AVG
7	16898.092	29.36	35.33	64.69	74.00	-9.31	peak
8	16898.092	15.97	35.33	51.30	54.00	-2.70	AVG

Note: Below 30MHz, since the radiated emission of the EUT is too weak to be detected.

7. 6dB BANDWIDTH TESTING

7.1 LIMITS

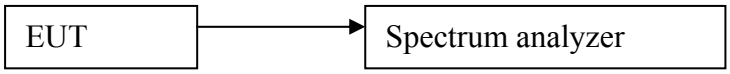
Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

7.2 TEST PROCEDURES

Test procedures follow ANSI C63.4:2009 and KDB 558074 D01 DTS Measurement Guidance v03r01.

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Set resolution bandwidth (RBW) = 100kHz.Set the video bandwidth (VBW) ≥ 3 x RBW. Detector = Peak. Trace mode = max hold. Sweep = auto couple. Allow the trace to stabilize.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission. Compare the resultant bandwidth with the RBW setting of the analyzer.
5. Repeat above procedures until all frequencies measured were complete.

7.3 TEST SETUP

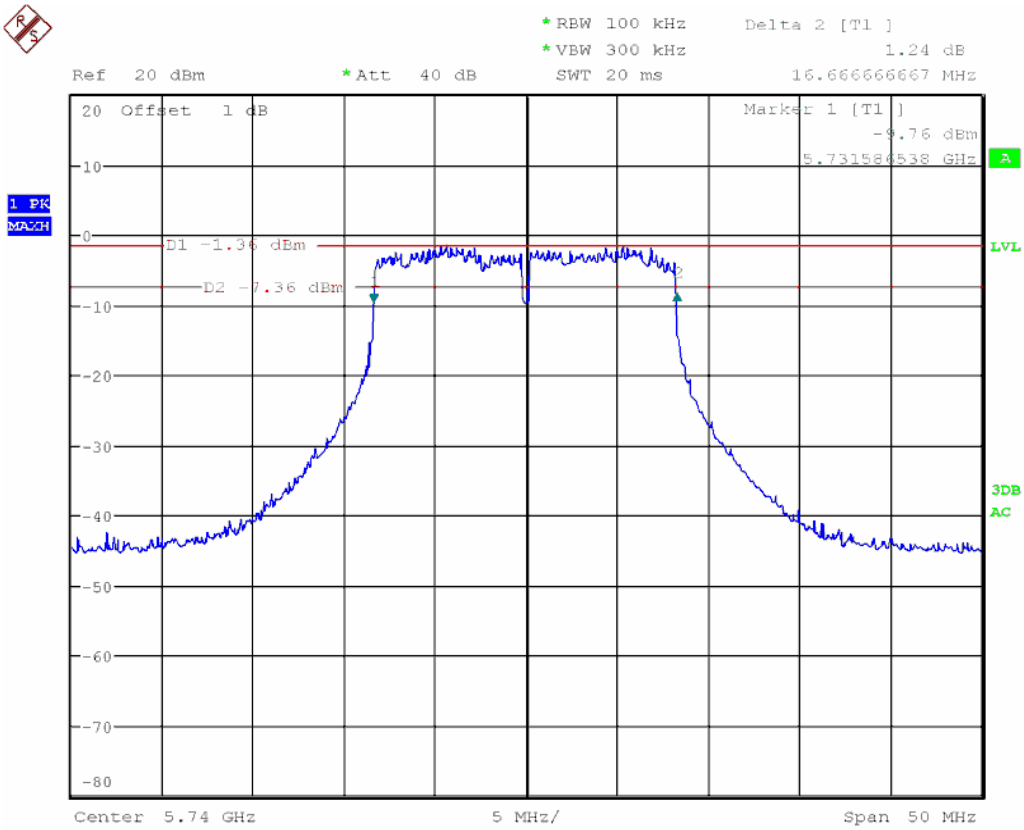


7.4 TEST RESULTS

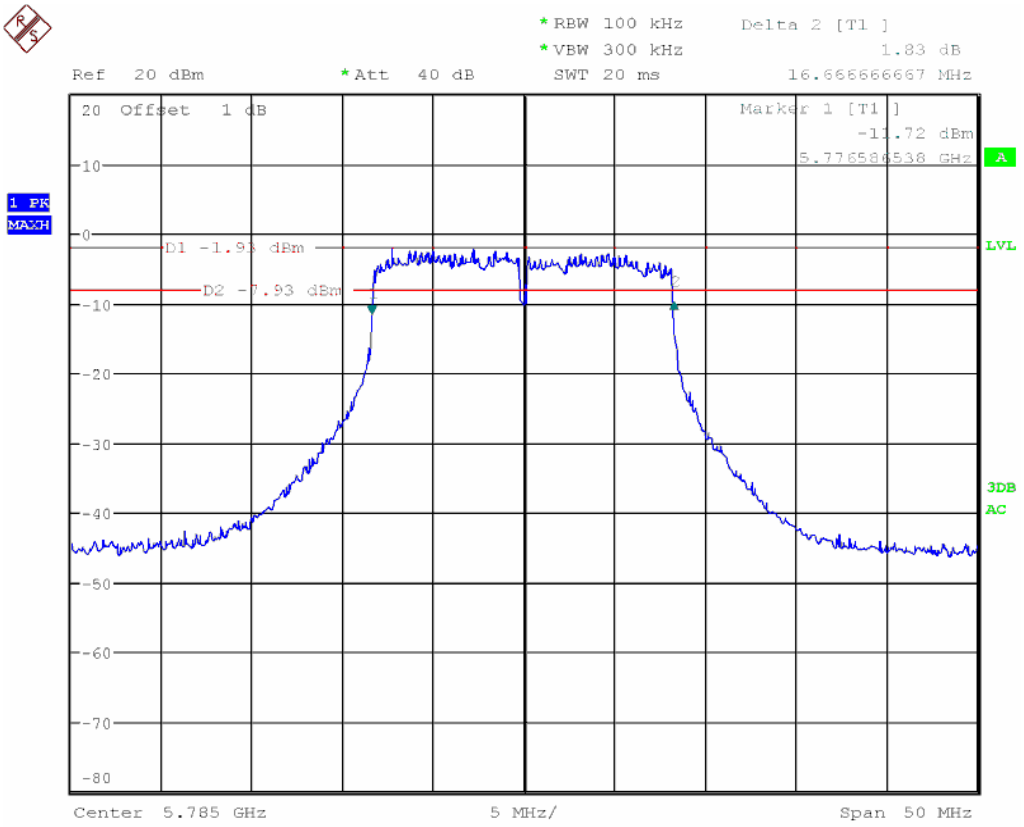
Channel	Channel Frequency (MHz)	Data Rate (Mbps)	6dB Bandwidth (MHz)	Limit (kHz)
802.11a Mode				
Low Channel	5740	54	16.67	＞500
Middle Channel	5785	54	16.67	＞500
High Channel	5840	54	16.67	＞500

802.11a mode:

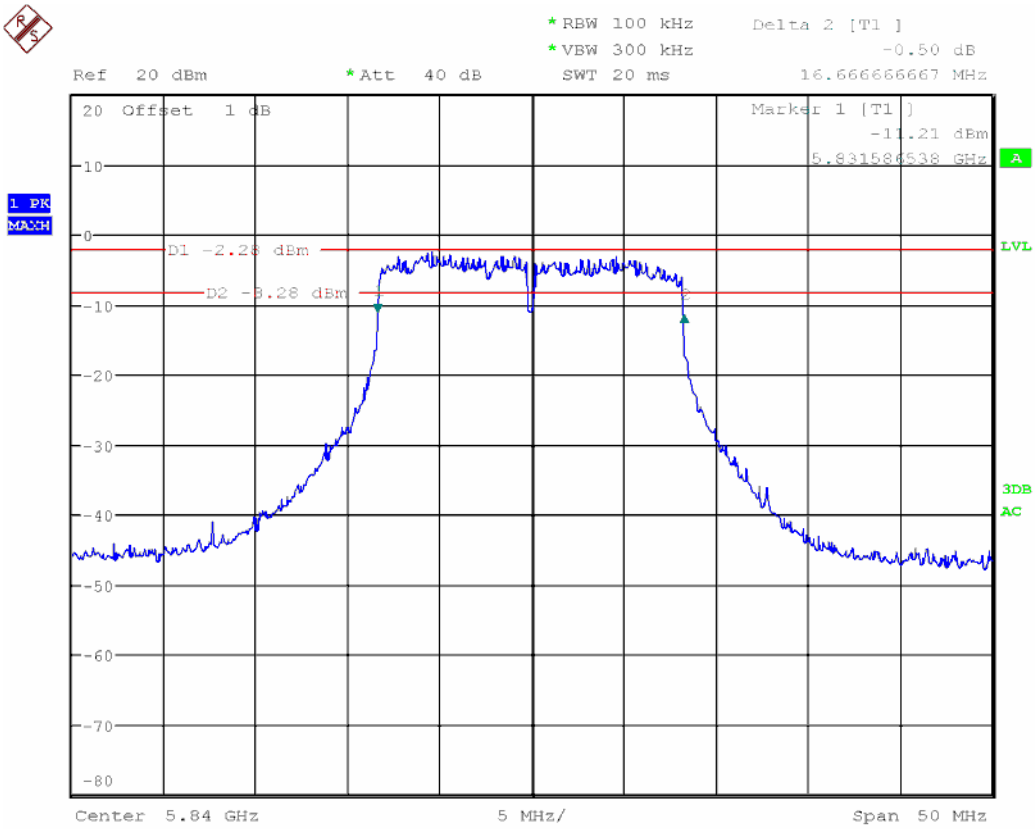
Channel 5740MHz



Channel5785MHz



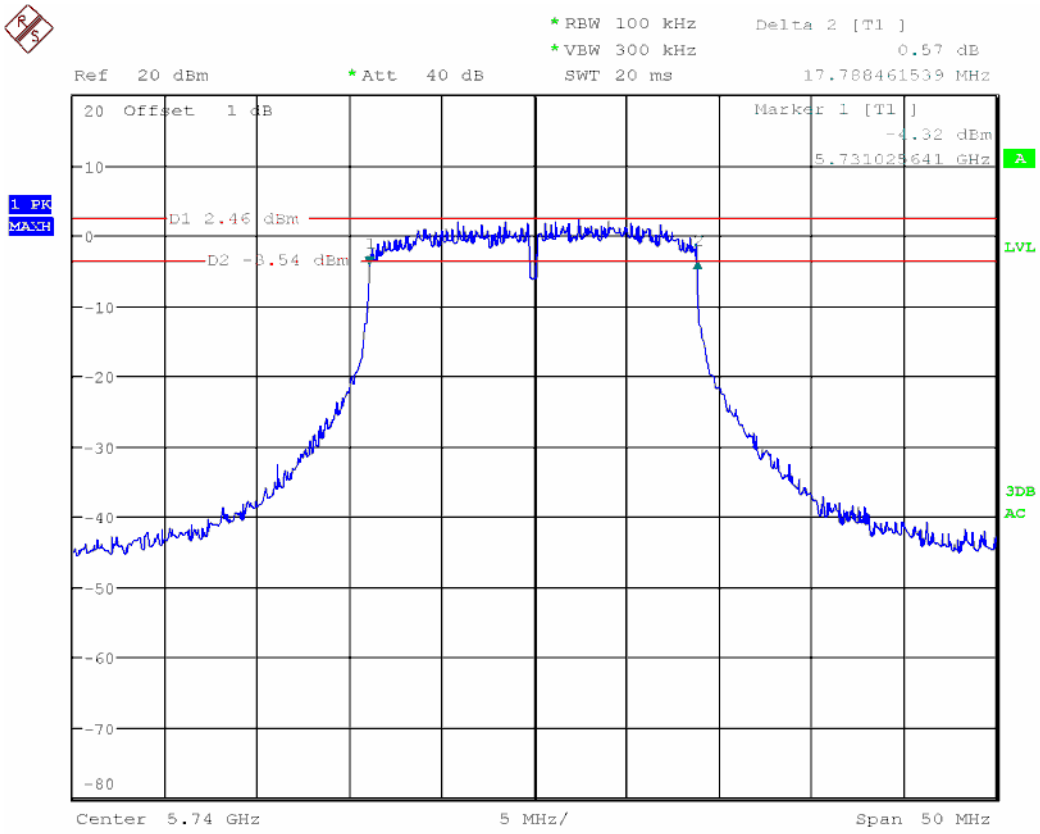
Channel5840MHz



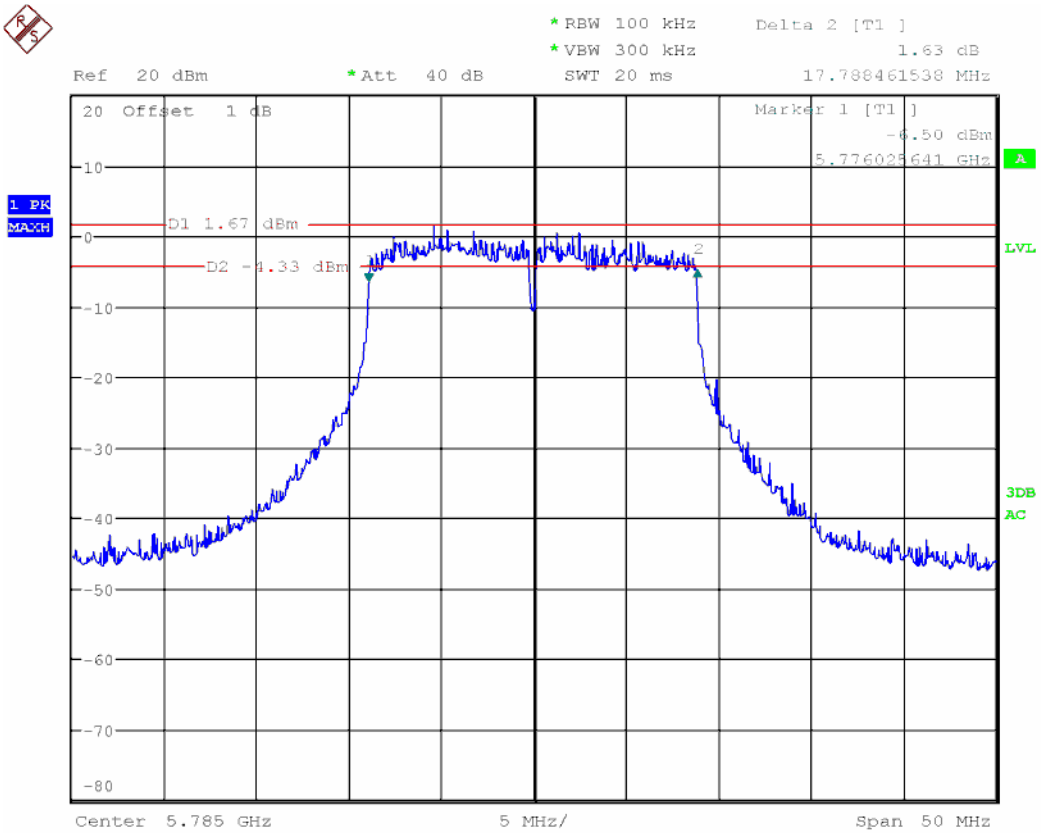
Channel	Channel Frequency (MHz)	Data Rate (Mbps)	6dB Bandwidth (MHz)	Limit (kHz)
802.11n20 Mode				
Low Channel	5740	MCS7	17.79	＞500
Middle Channel	5785	MCS7	17.79	＞500
High Channel	5840	MCS7	17.79	＞500

802.11n20 mode:

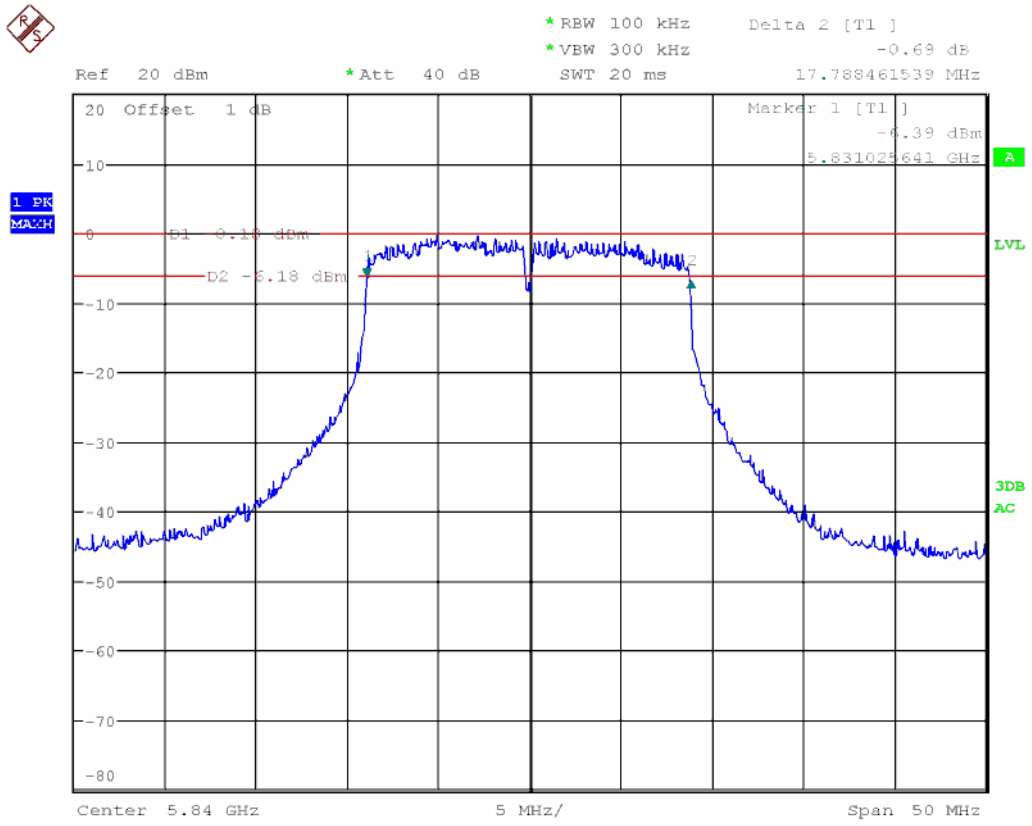
Channel 5740MHz



Channel 5785MHz



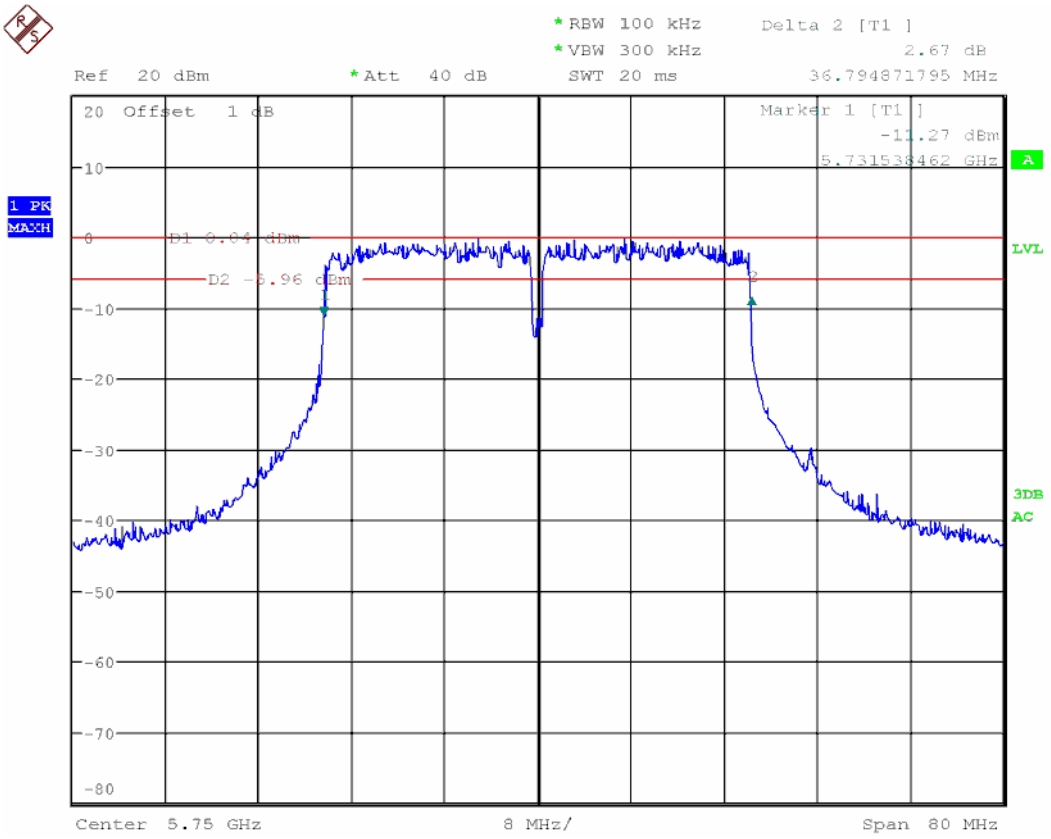
Channel 5840MHz



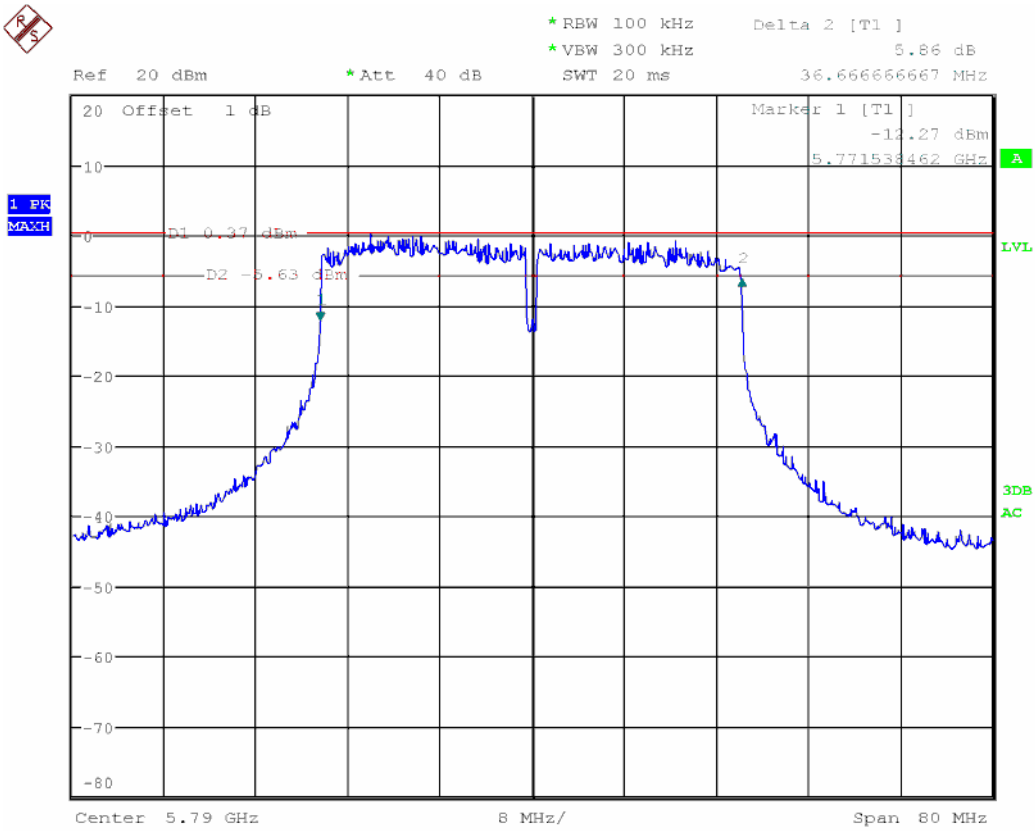
Channel	Channel Frequency (MHz)	Data Rate (Mbps)	6dB Bandwidth (MHz)	Limit (kHz)
802.11n40 Mode				
Low Channel	5750	MCS15	36.79	＞500
Middle Channel	5790	MCS15	36.67	＞500
High Channel	5830	MCS15	36.79	＞500

802.11n40 mode:

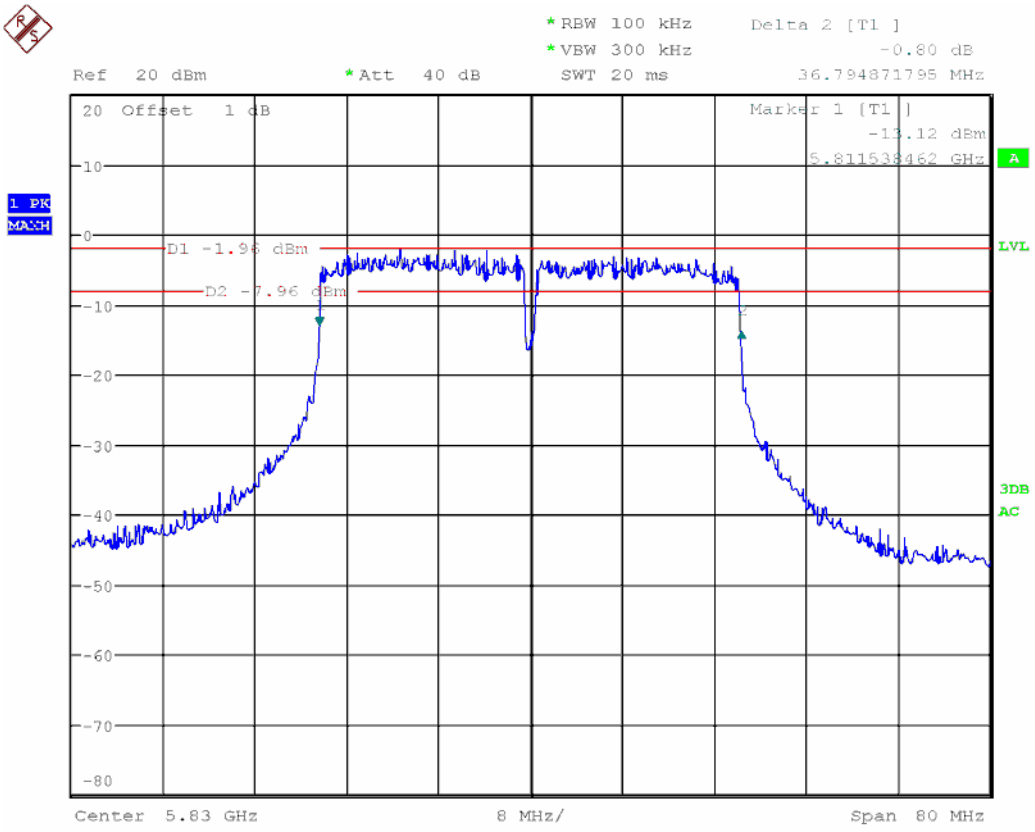
Channel5750MHz



Channel5790MHz



Channel 5830MHz



8. MAXIMUM PEAK OUTPUT POWER

8.1 LIMITS

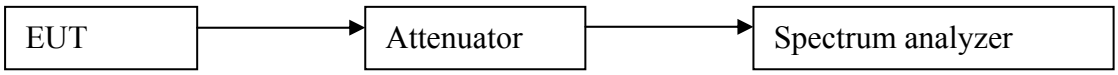
The maximum Peak output power measurement is 1W (30dBm).
Systems operating in the 5725-5850 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter peak output power.

8.2 TEST PROCEDURES

Test procedures follow KDB 558074 D01 DTS Measurement Guidance v03r01.

1. Place the EUT on a bench and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to an EMI Test Receiver.
3. The spectrum analyzer resolution bandwidth that is ≤EBW. So we test the Maximum Conducted Output Power ——Integrated band power method.
4. Set the analyzer span≥ 1.5 x DTS bandwidth. Set the RBW = 1 MHz. Set the VBW ≥ 3 MHz. Sweep time = auto couple. Detector = peak. Allow trace to fully stabilize.

8.3 TEST SETUP



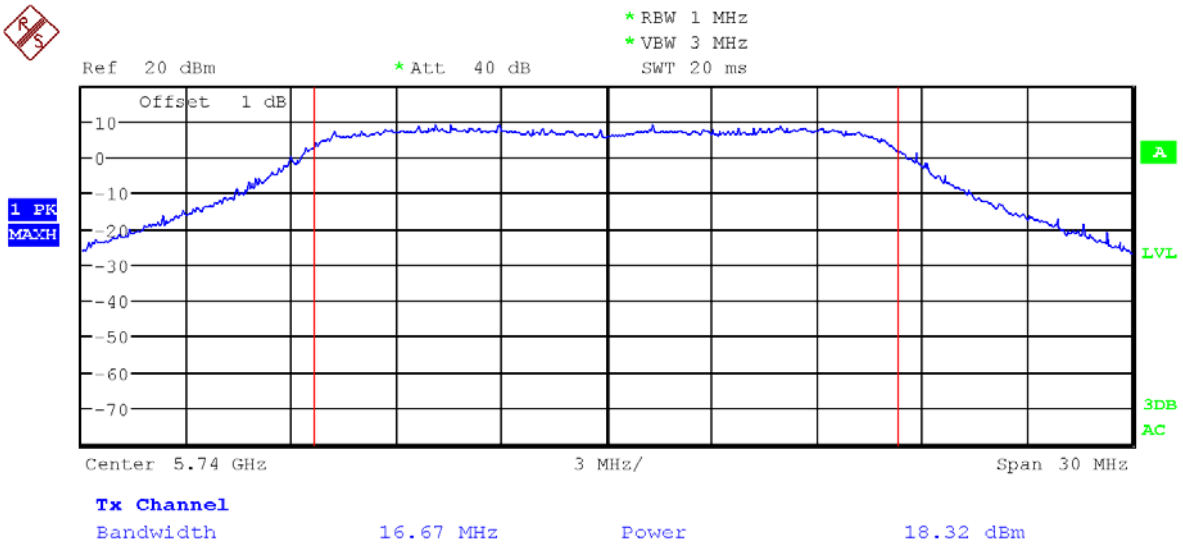
8.4 TEST RESULTS

802.11a Mode:

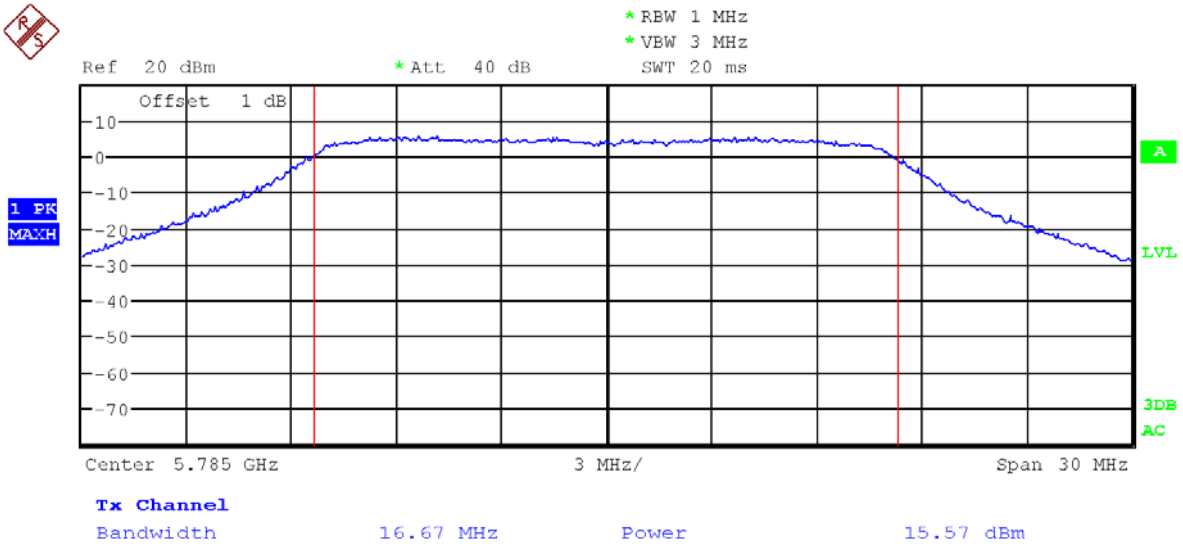
Channel No.	Frequency (MHz)	Mode	Data Rate	Measured Channel Power (dBm)	Limit	Result
148	5740	802.11a	54Mbps	18.32	30dBm	Pass
157	5785			15.57		Pass
168	5840			12.65		Pass
148	5740		48 Mbps	18.30		Pass
157	5785			15.43		Pass
168	5840			12.24		Pass
148	5740		36 Mbps	18.07		Pass
157	5785			15.53		Pass
168	5840			12.11		Pass
148	5740		24 Mbps	18.31		Pass
157	5785			15.52		Pass
168	5840			12.16		Pass
148	5740		18 Mbps	18.24		Pass
157	5785			15.46		Pass
168	5840			12.53		Pass
148	5740		12 Mbps	17.98		Pass
157	5785			15.23		Pass
168	5840			12.33		Pass
148	5740		9 Mbps	18.13		Pass
157	5785			15.44		Pass
168	5840			12.61		Pass
148	5740		6 Mbps	18.02		Pass
157	5785			15.17		Pass
168	5840			12.63		Pass

802.11a mode:

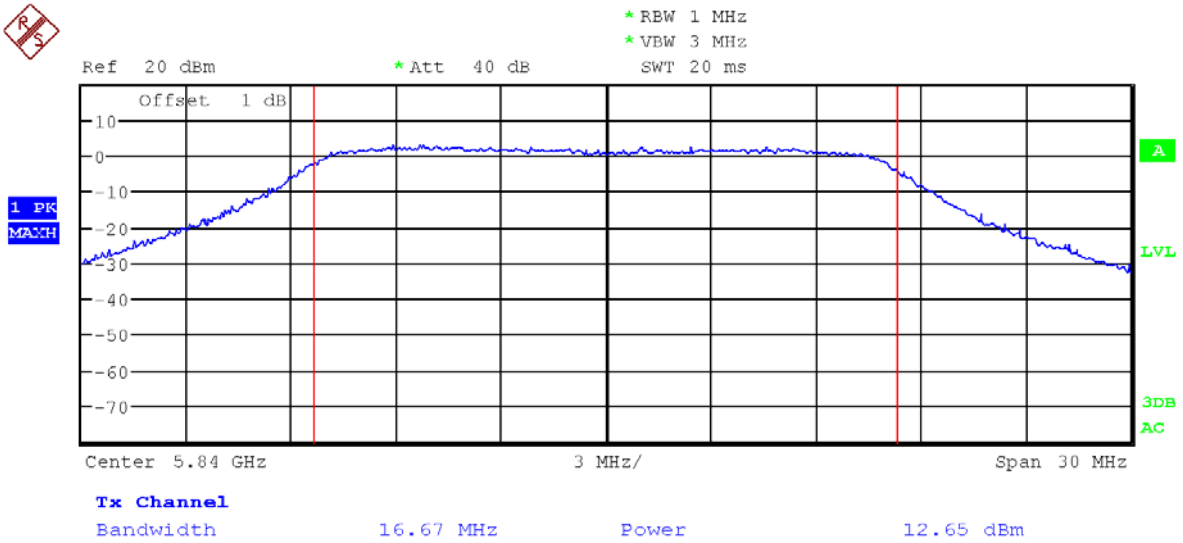
Channel 5740MHz



Channel 5785MHz



Channel 5840MHz



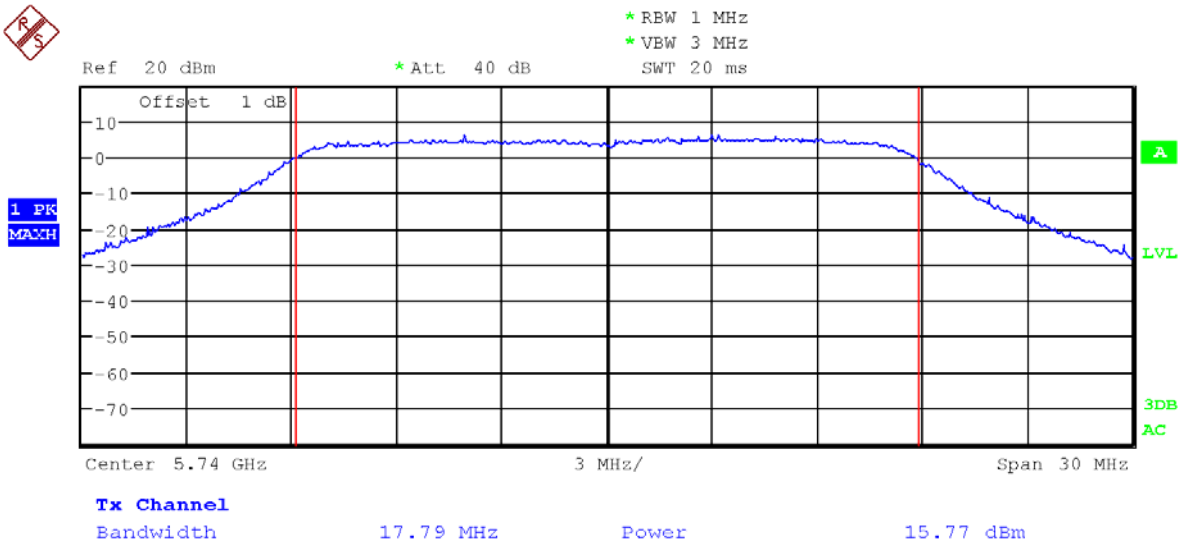
802.11n20 Mode:

Channel No.	Frequency (MHz)	Mode	Data Rate	Measured Power(dBm) (Ant 0)	Measured Power(dBm) (Ant 1)	Output Power (dBm)	Limit	Result
148	5740	802.11n20	MCS7	15.77	8.49	16.51	30dBm	Pass
157	5785			14.80	6.58	15.41		Pass
168	5840			11.96	3.63	12.56		Pass
148	5740		MCS6	15.69	8.42	16.44		Pass
157	5785			14.62	6.46	15.24		Pass
168	5840			11.72	3.52	12.33		Pass
148	5740		MCS5	15.64	8.35	16.38		Pass
157	5785			14.58	6.48	15.21		Pass
168	5840			11.70	3.58	12.32		Pass
148	5740		MCS4	15.49	8.39	16.26		Pass
157	5785			14.58	6.53	15.21		Pass
168	5840			11.83	3.51	12.43		Pass
148	5740		MCS3	15.68	8.46	16.43		Pass
157	5785			14.52	6.43	15.15		Pass
168	5840			11.78	3.49	12.38		Pass
148	5740		MCS2	15.53	8.43	16.30		Pass
157	5785			14.69	6.39	15.29		Pass
168	5840			11.86	3.48	12.45		Pass
148	5740		MCS1	15.51	8.41	16.28		Pass
157	5785			14.76	6.38	15.35		Pass
168	5840			11.92	3.47	12.50		Pass
148	5740		MCS0	15.71	8.44	16.46		Pass
157	5785			14.63	6.40	15.24		Pass
168	5840			11.94	3.50	12.52		Pass

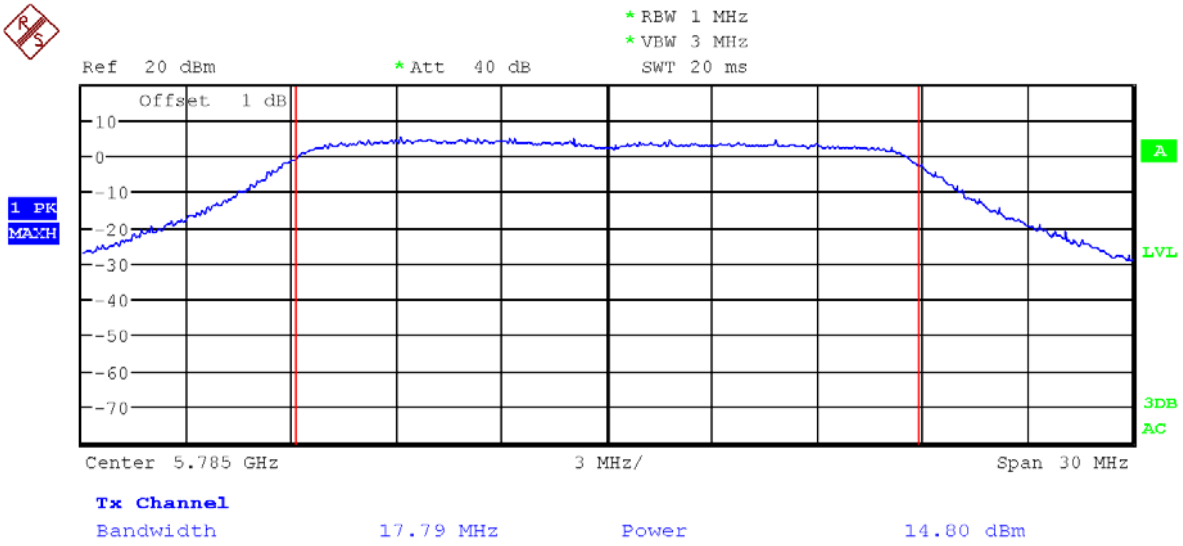
802.11n20 Antenna0 Mode

802.11n mode (HT20):

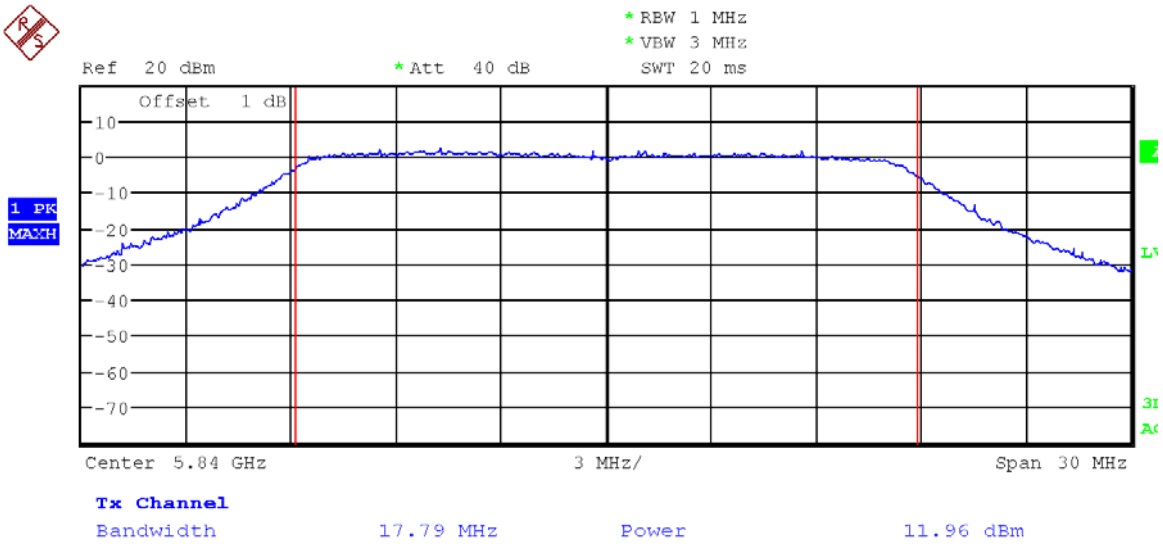
Channel 5740MHz



Channel 5785MHz



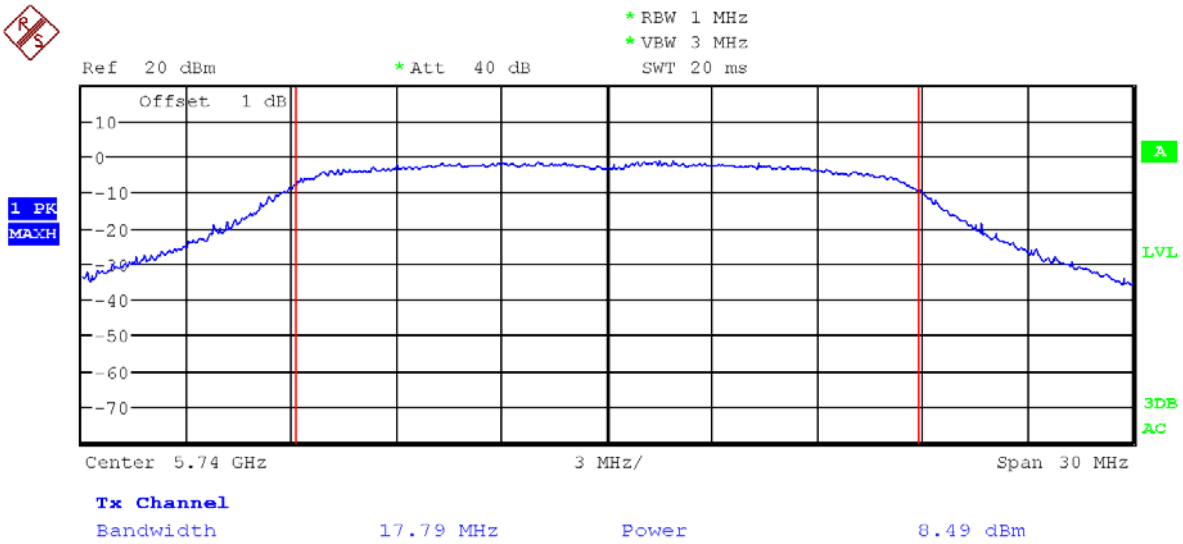
Channel 5840MHz



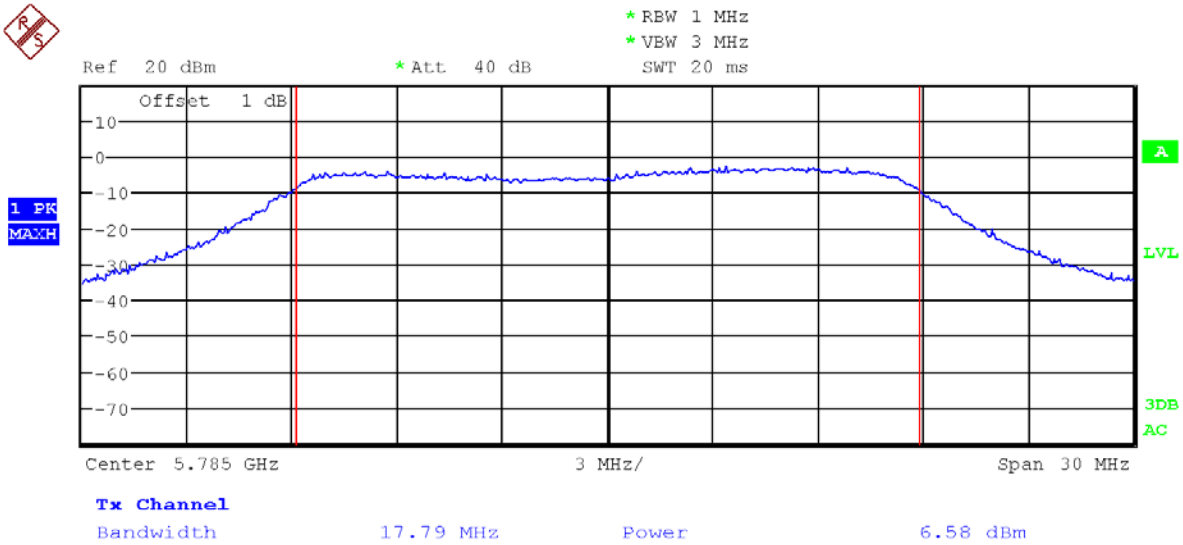
802.11n20 Antenna1 Mode:

802.11n mode (HT20):

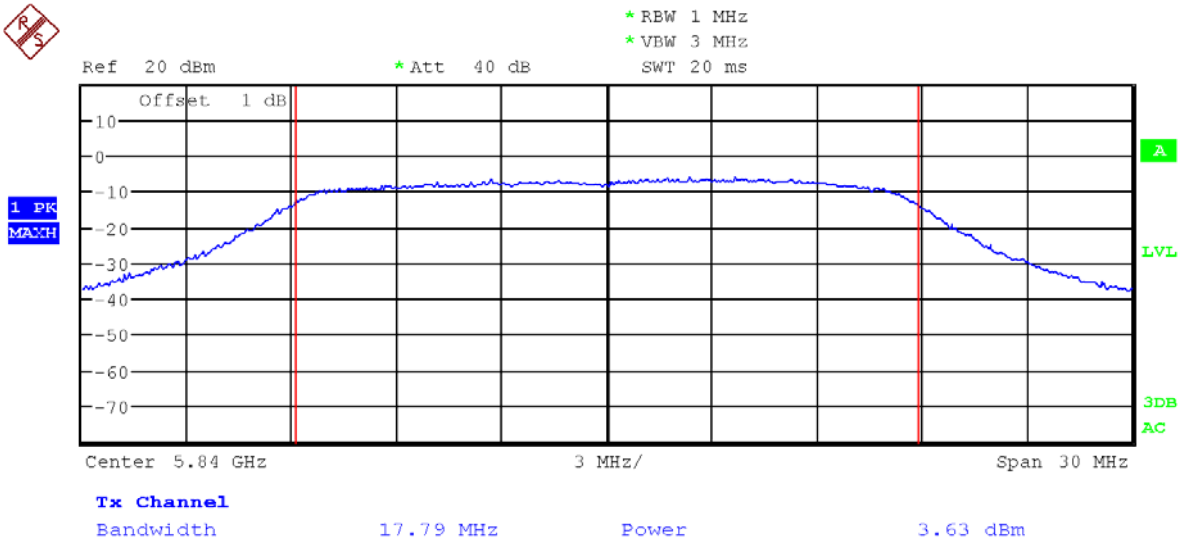
Channel 5740MHz



Channel 5785MHz



Channel 5840MHz



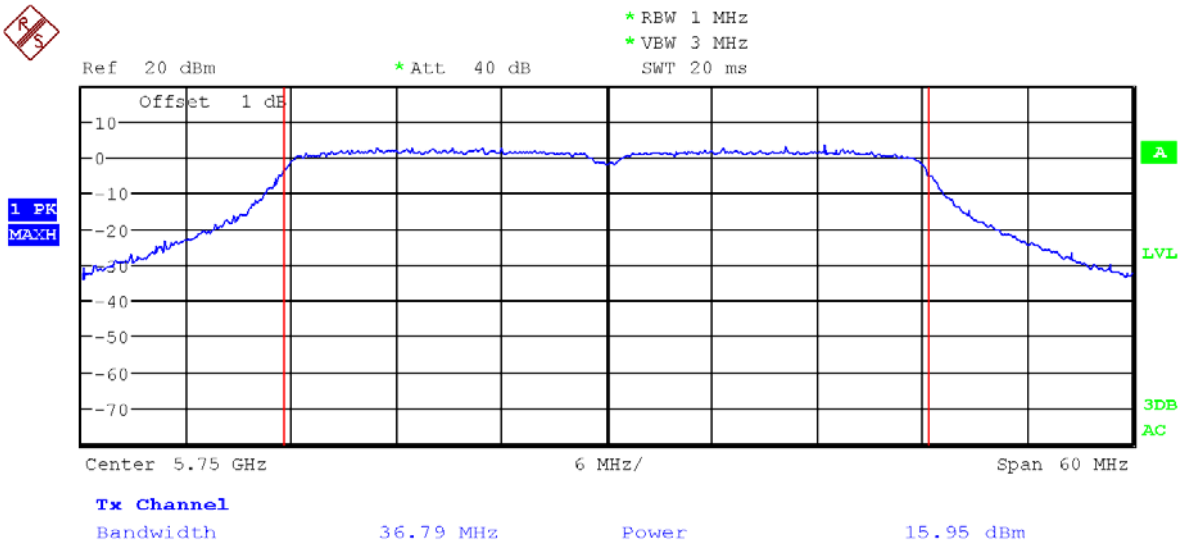
802.11n40 Antenna0 Mode:

Channel No.	Frequency (MHz)	Mode	Data Rate	Measured Power(dBm) (Ant 0)	Measured Power(dBm) (Ant 1)	Output Power (dBm)	Limit	Result
150	5750	802.11n40	MCS15	15.95	8.60	16.68	30dBm	Pass
158	5790			15.10	6.99	15.72		Pass
166	5830			13.34	4.40	13.86		Pass
150	5750		MCS14	15.93	8.58	16.66		Pass
158	5790			15.07	6.87	15.68		Pass
166	5830			13.32	4.34	13.84		Pass
150	5750		MCS13	15.89	8.58	16.63		Pass
158	5790			15.02	6.79	15.63		Pass
166	5830			13.32	4.34	13.84		Pass
150	5750		MCS12	15.91	8.50	16.63		Pass
158	5790			15.03	6.79	15.64		Pass
166	5830			13.29	4.23	13.80		Pass
150	5750		MCS11	15.84	8.40	16.56		Pass
158	5790			15.01	6.78	15.62		Pass
166	5830			12.99	4.35	13.55		Pass
150	5750		MCS10	15.90	8.28	16.59		Pass
158	5790			15.07	6.72	15.66		Pass
166	5830			13.30	4.38	13.82		Pass
150	5750		MCS9	15.83	8.53	16.57		Pass
158	5790			15.00	6.97	15.63		Pass
166	5830			13.22	4.30	13.74		Pass
150	5750		MCS8	15.74	8.49	16.49		Pass
158	5790			14.98	6.80	15.59		Pass
166	5830			13.14	4.27	13.67		Pass

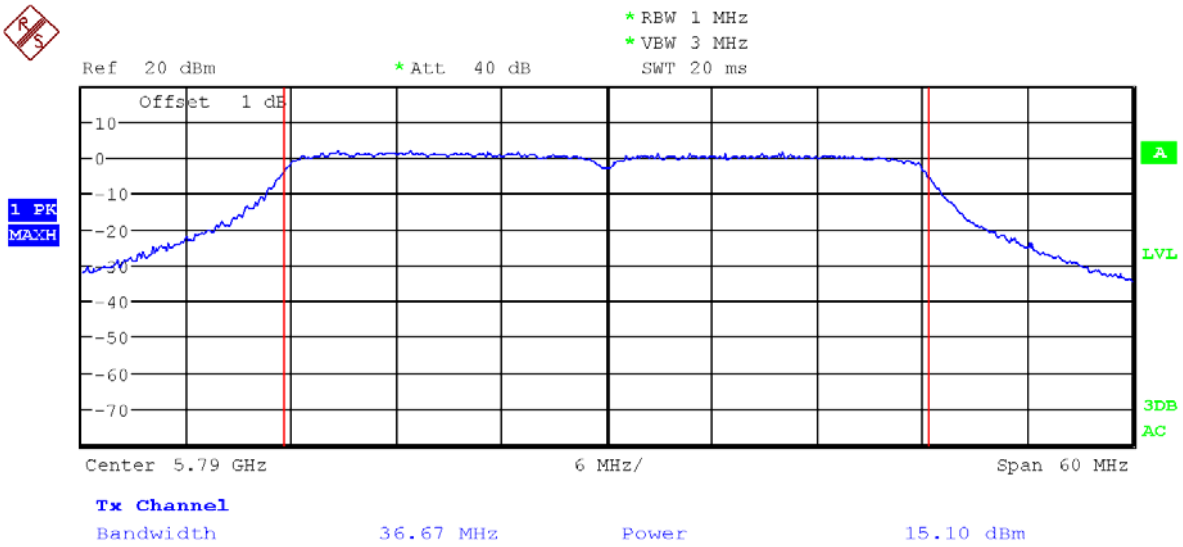
802.11n40 Antenna0 Mode:

802.11n mode (HT40):

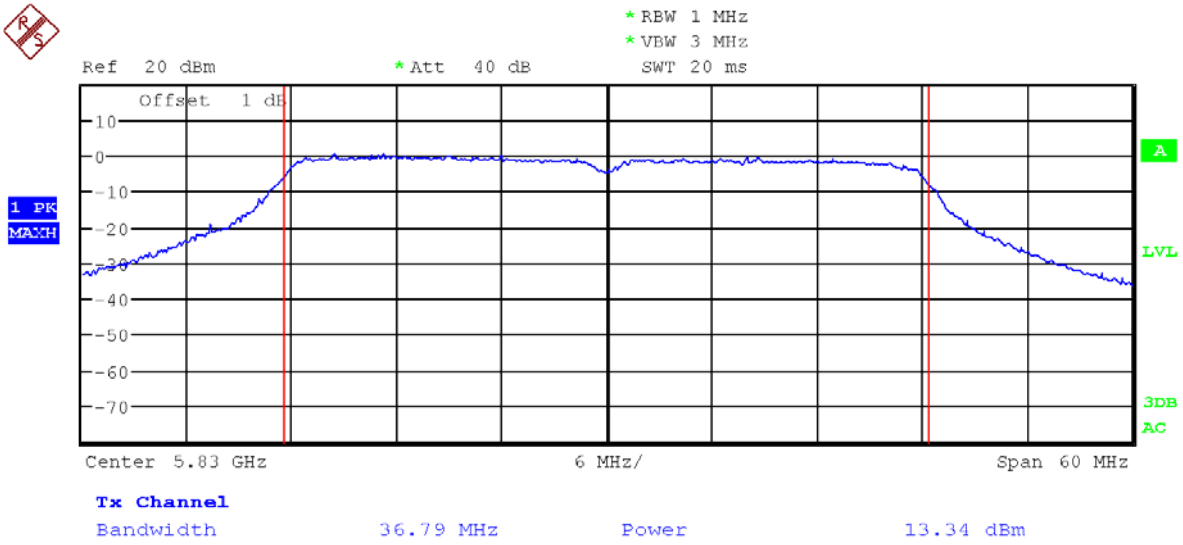
Channel 5750MHz



Channel 5790MHz



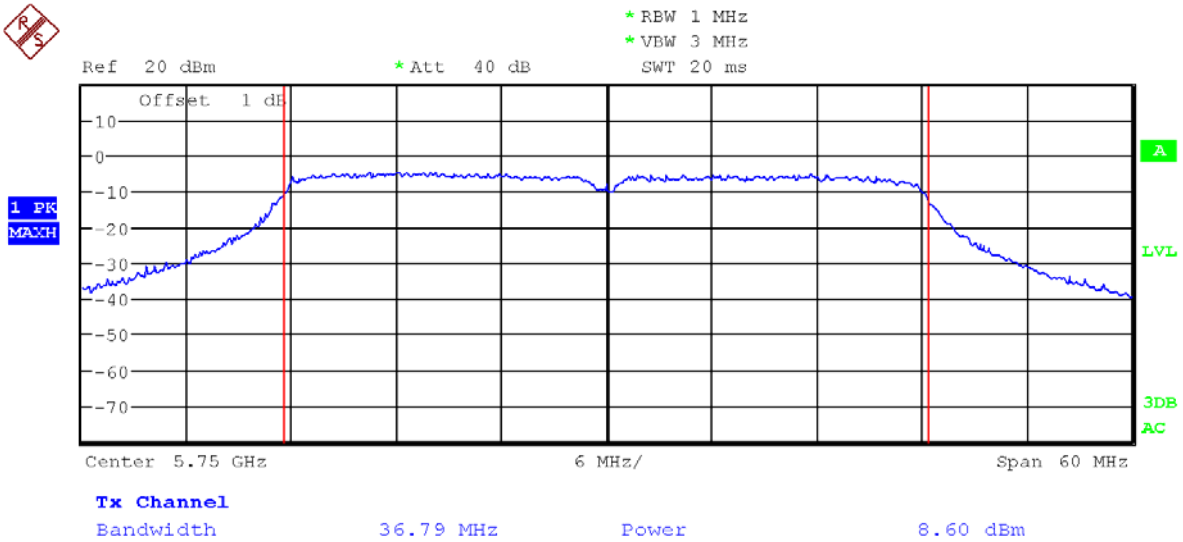
Channel 5830MHz



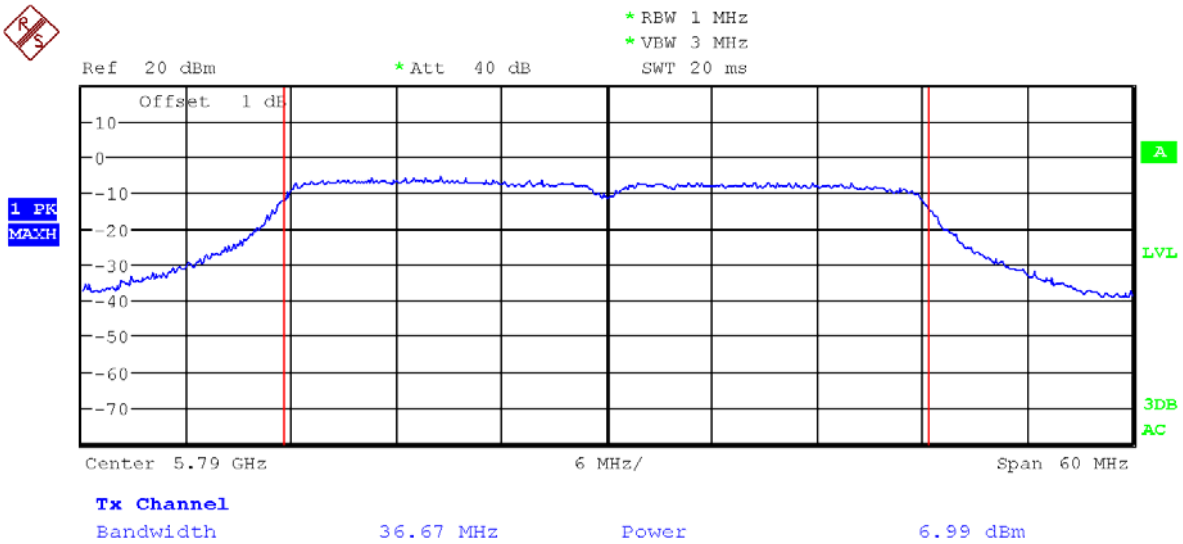
802.11n40 Antenna1 Mode:

802.11n mode (HT40):

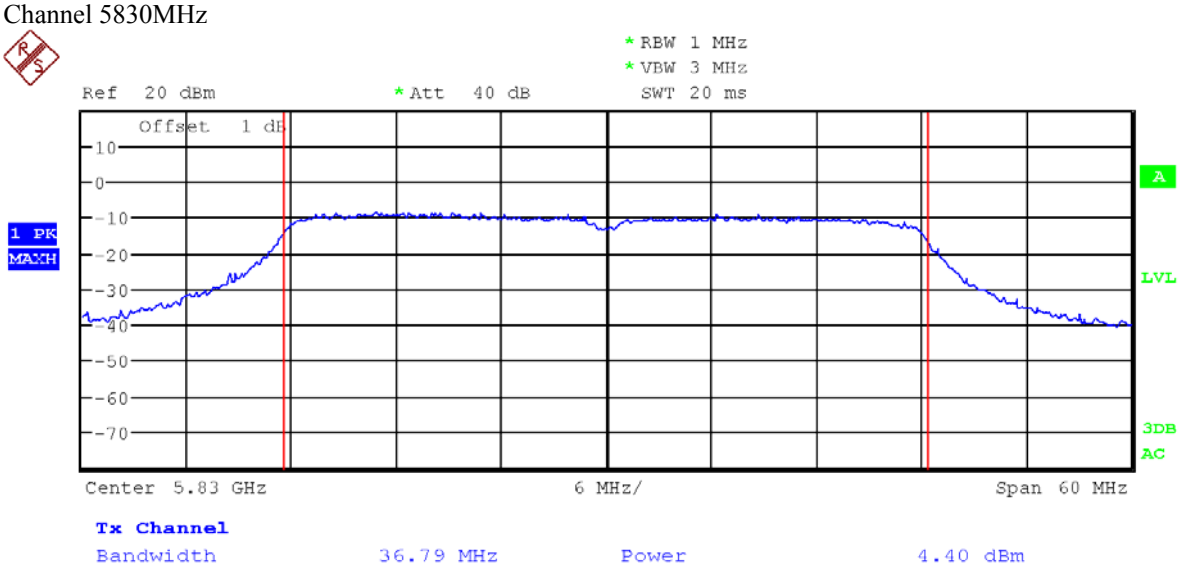
Channel 5750MHz



Channel 5790MHz



Channel 5830MHz



9. POWER SPECTRAL DENSITY

9.1 LIMITS

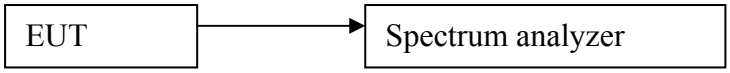
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

9.2 TEST PROCEDURES

Test procedures follow KDB 558074 D01 DTS Measurement Guidance v03r01.

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT was set without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set the analyzer span to 1.5 times the DTS bandwidth. Set the RBW = 3 kHz. Set the VBW ≥3 RBW. Detector = peak. Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW (use of a greater number of measurement points than this minimum requirement is recommended).
4. Repeat above procedures until all frequencies measured were complete.

9.3 TEST SETUP

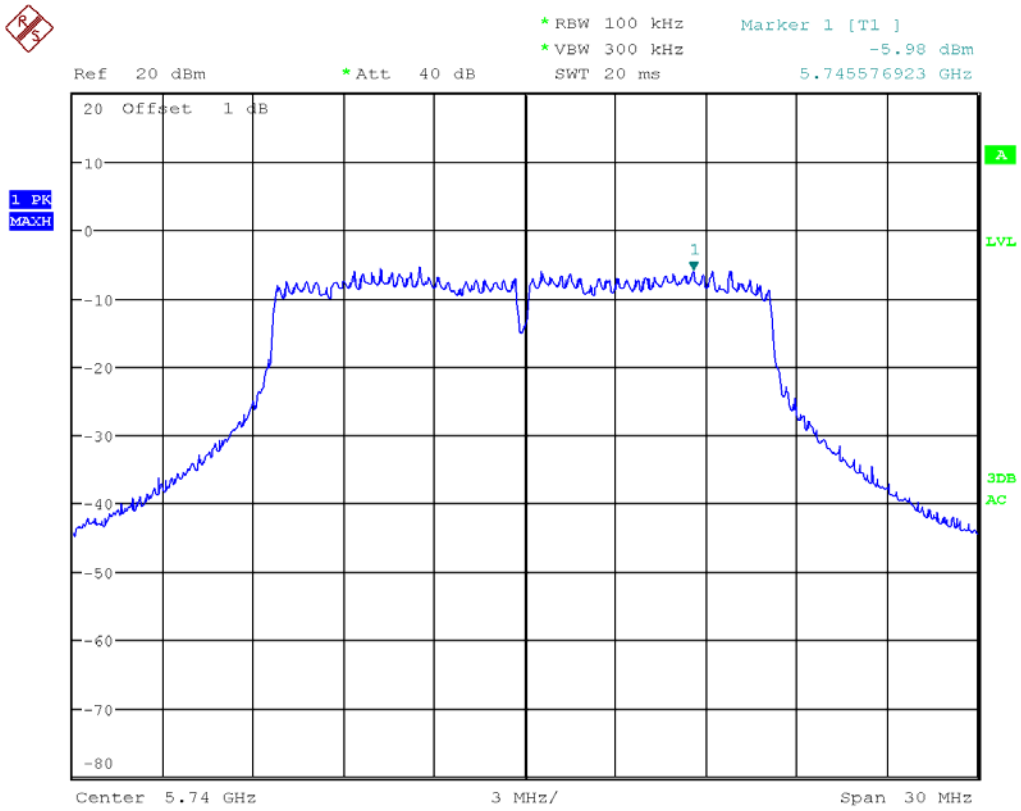


9.4 TEST RESULTS

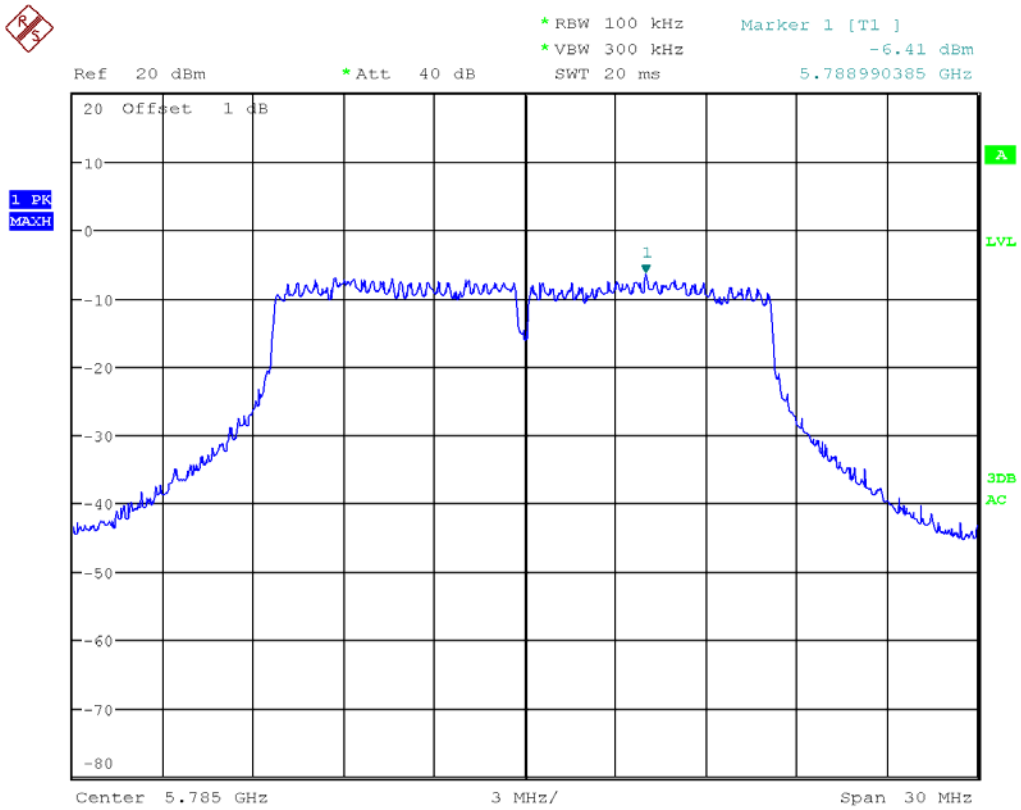
802.11a mode:

Channel No.	Frequency (MHz)	Mode	Data Rate	PSD (dBm/3KHz)	Factor（100kHz/3kHz）(dB)	PSD (dBm/3KHz)	Limit	Result
148	5740	802.11a	54Mbps	-5.98	-15.2	-21.18	8dBm/3KHz	Pass
157	5785			-6.41	-15.2	-21.61		Pass
168	5840			-8.58	-15.2	-23.78		Pass

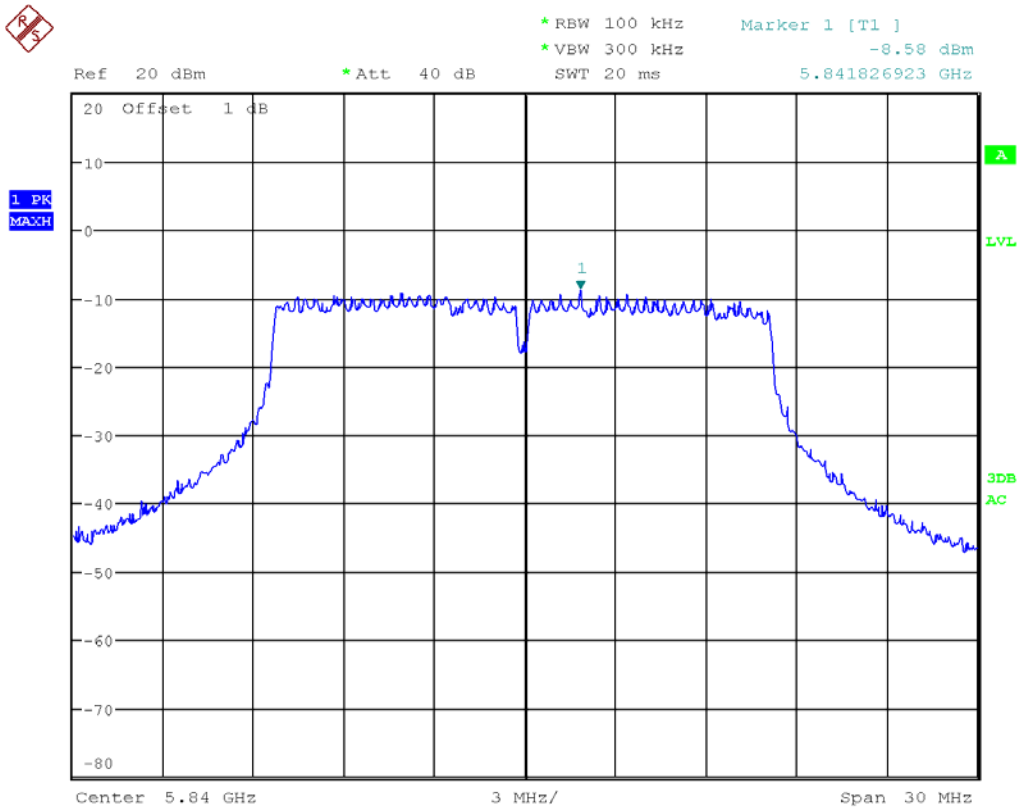
802.11a mode:
Channel 5740MHz



Channel 5785MHz



Channel 5840MHz



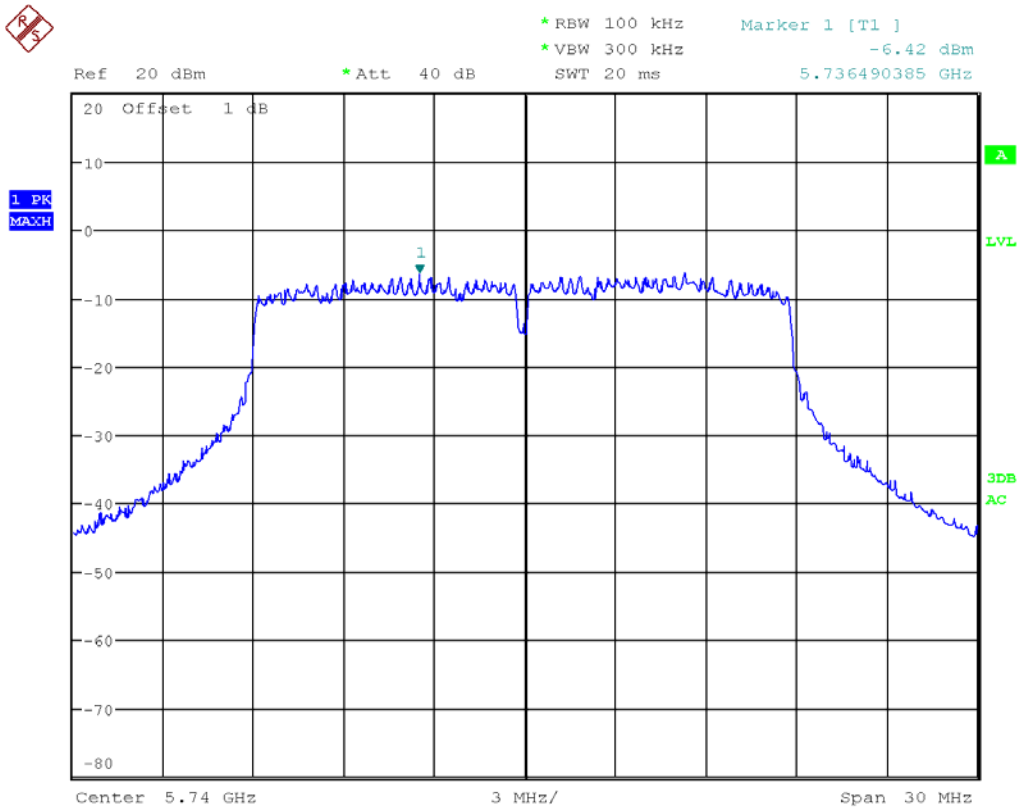
802.11n20 mode:

Channel No.	Frequency (MHz)	Mode	Data Rate	PSD (dBm/100KHz) Antenna0	PSD (dBm/100KHz) Antenna1	PSD (dBm/100KHz)
148	5740	802.11n20	MCS7	-6.42	-13.83	-5.70
157	5785			-6.93	-14.67	-6.25
168	5840			-10.05	-17.72	-9.36

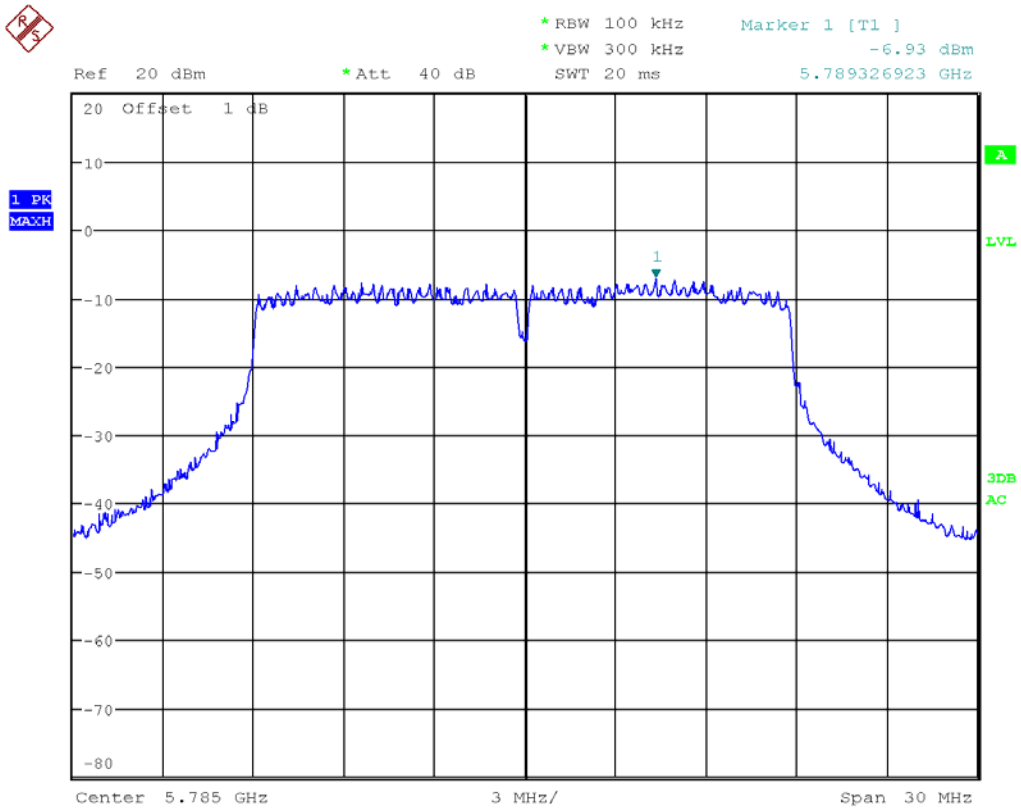
Channel No.	Frequency (MHz)	Mode	Data Rate	PSD (dBm/100KHz)	Factor （100kHz/3kHz）(dB)	PSD (dBm/3KHz)	Limit	Result
148	5740	802.11n20	MCS7	-5.70	-15.2	-20.90	8dBm/3KHz	Pass
157	5785			-6.25	-15.2	-21.45		Pass
168	5840			-9.36	-15.2	-24.56		Pass

802.11n20 antenna0 mode:

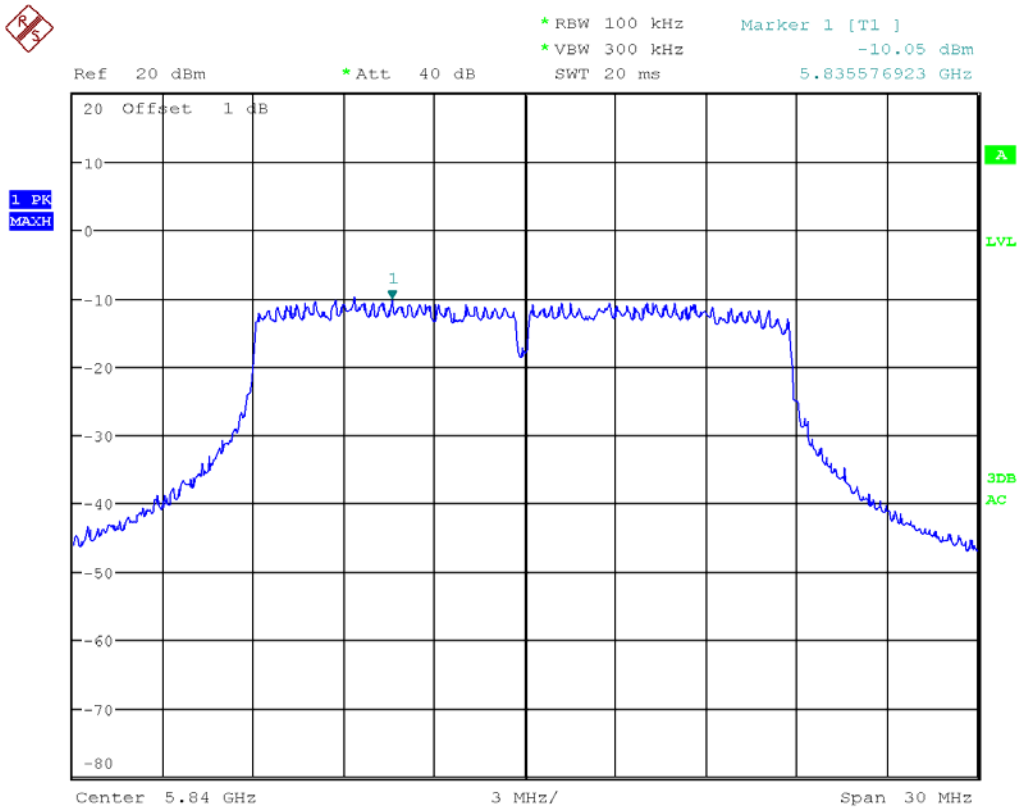
Channel 5740MHz



Channel 5785MHz

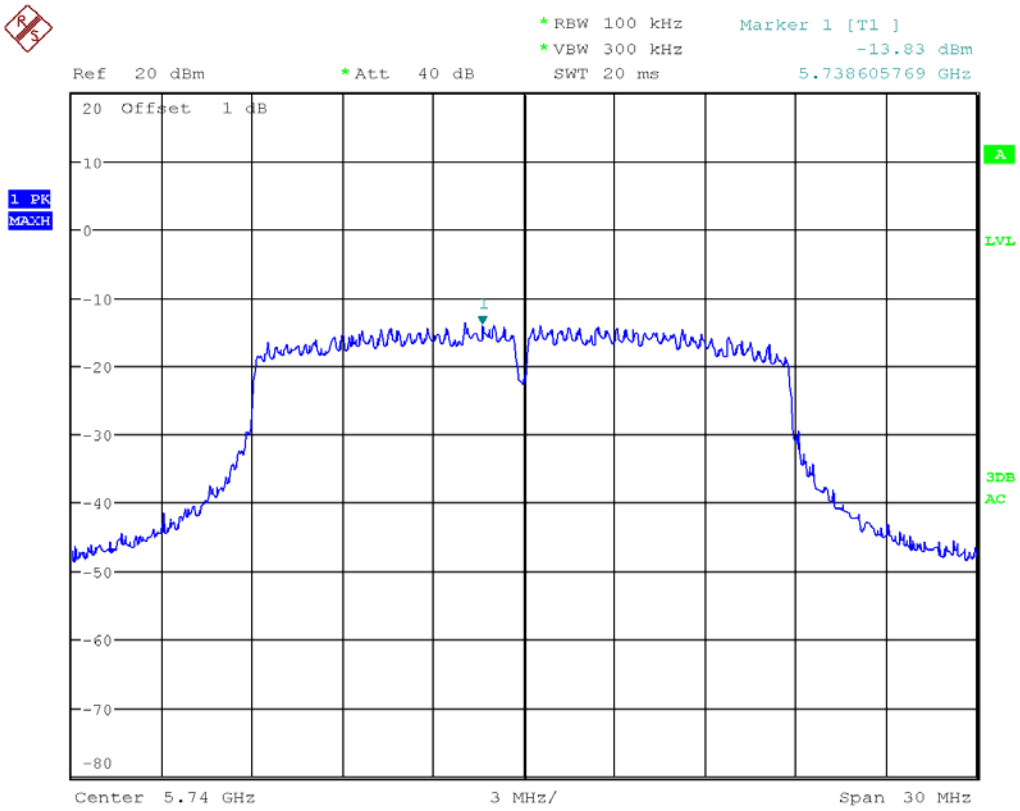


Channel 5840MHz

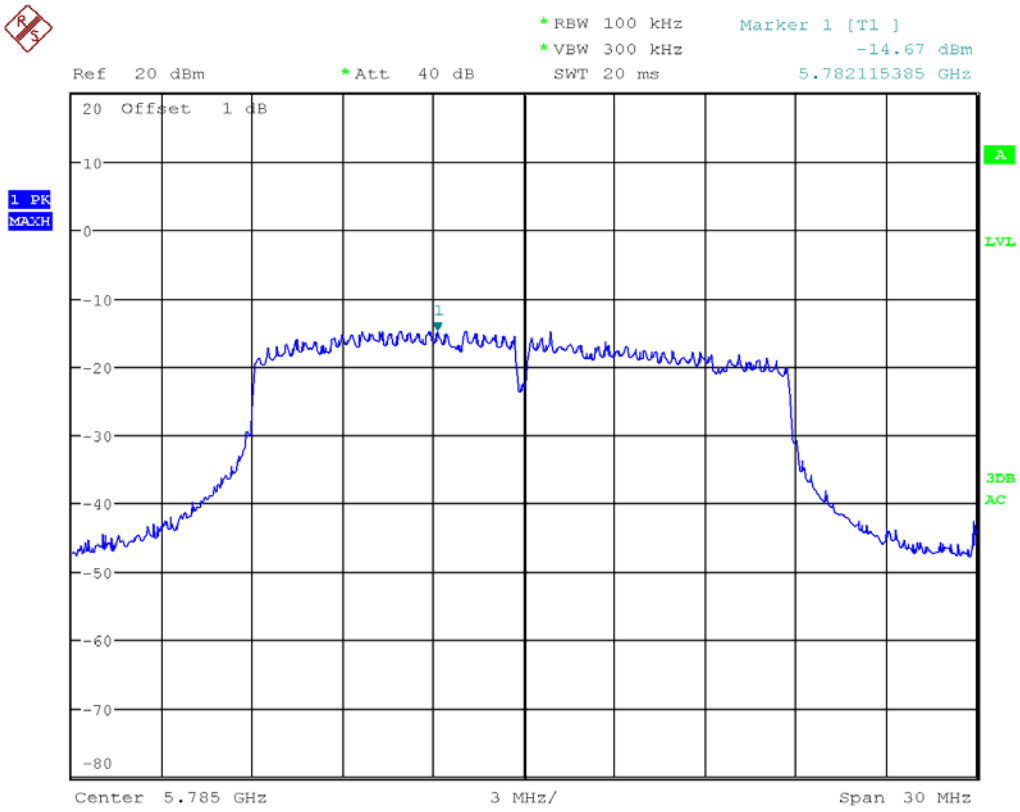


802.11n20 ntenna1 mode:

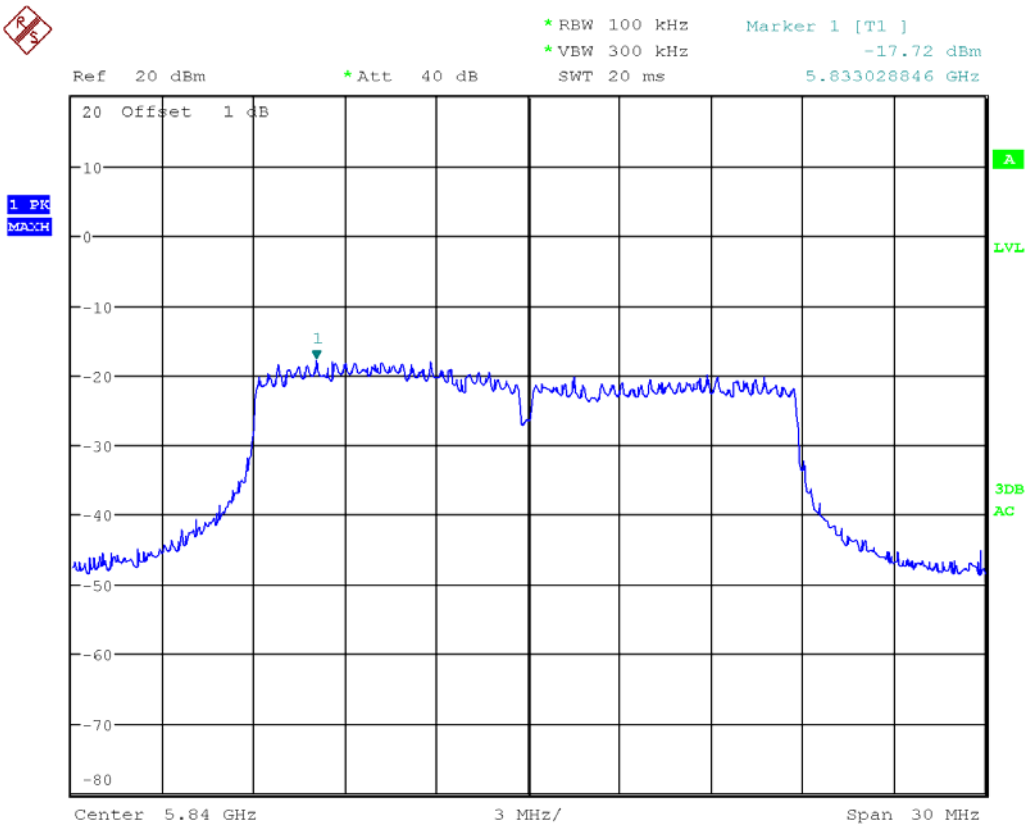
Channel 5740MHz



Channel 5785MHz



Channel 5840MHz


* RBW 100 kHz
* VBW 300 kHz
SWT 20 ms
Marker 1 [T1]
-17.72 dBm
5.833028846 GHz
Ref 20 dBm
* Att 40 dB
20 Offset 1 dB
1 PK
MAXH
A
LVL
3DB
AC
10
0
-10
-20
-30
-40
-50
-60
-70
-80
1
Center 5.84 GHz
3 MHz/
Span 30 MHz

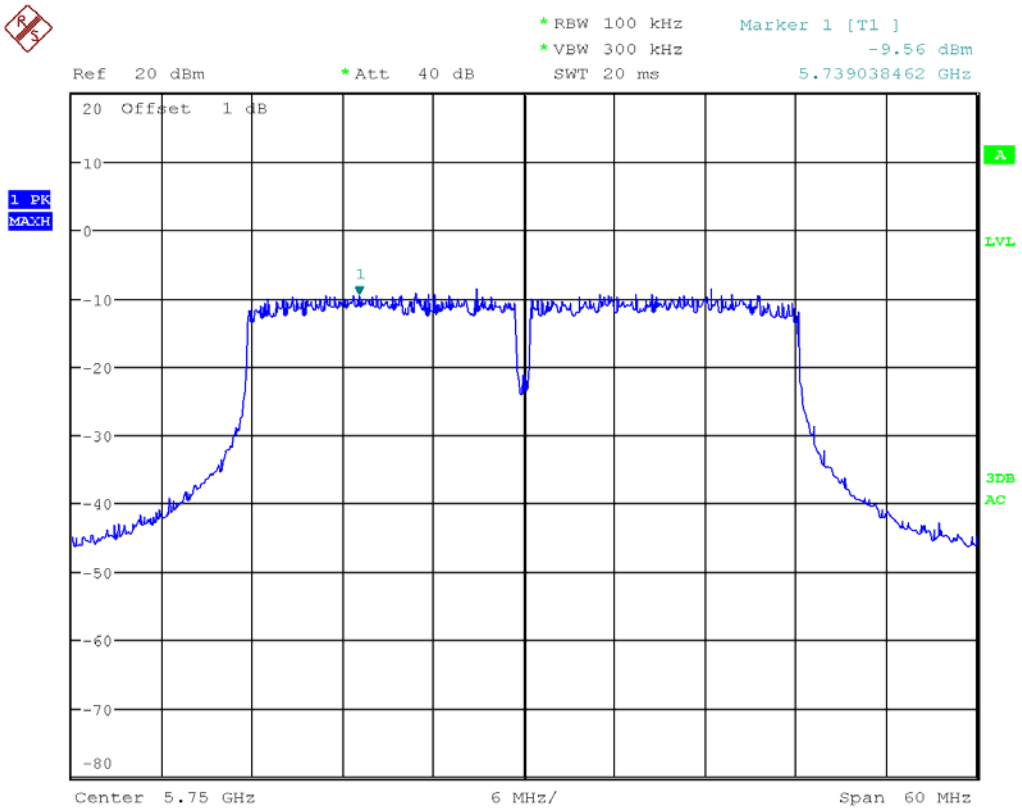
802.11n40 mode:

Channel No.	Frequency (MHz)	Mode	Data Rate	PSD (dBm/100KHz) Antenna0	PSD (dBm/100KHz) Antenna1	PSD (dBm/100KHz)
150	5750	802.11n40	MCS15	-9.56	-15.75	-8.62
158	5790			-9.68	-17.91	-9.07
166	5830			-11.00	-20.85	-10.57

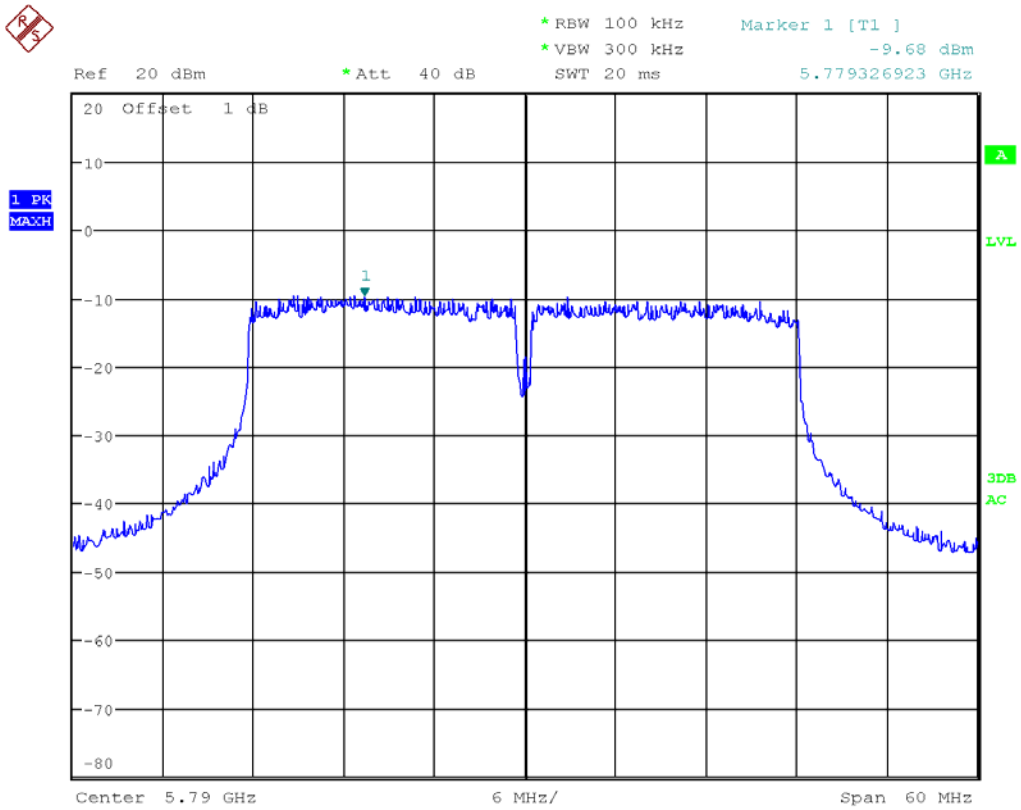
Channel No.	Frequency (MHz)	Mode	Data Rate	PSD (dBm/100KHz)	Factor（100kHz/3kHz）(dB)	PSD (dBm/3KHz)	Limit	Result
150	5750	802.11n40	MCS15	-8.62	-15.2	-23.82	8dBm/3KHz	Pass
158	5790			-9.07	-15.2	-24.27		Pass
166	5830			-10.57	-15.2	-25.77		Pass

802.11n40 antenna0 mode:

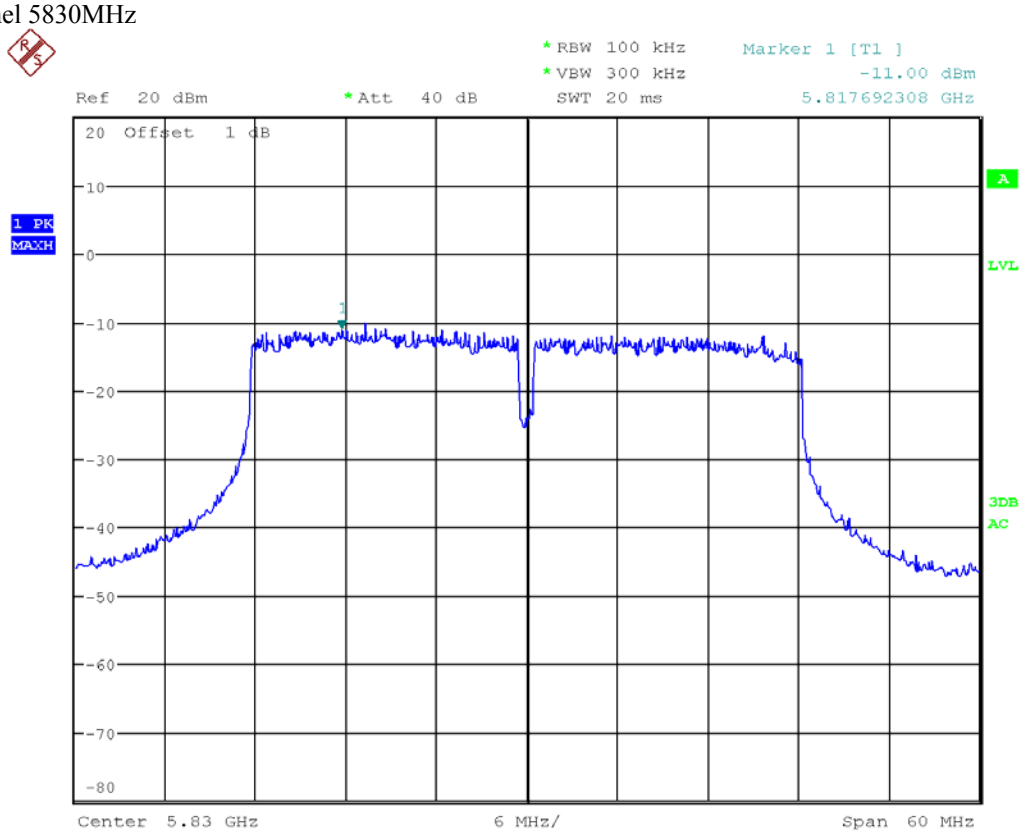
Channel 5750MHz



Channel 5790MHz



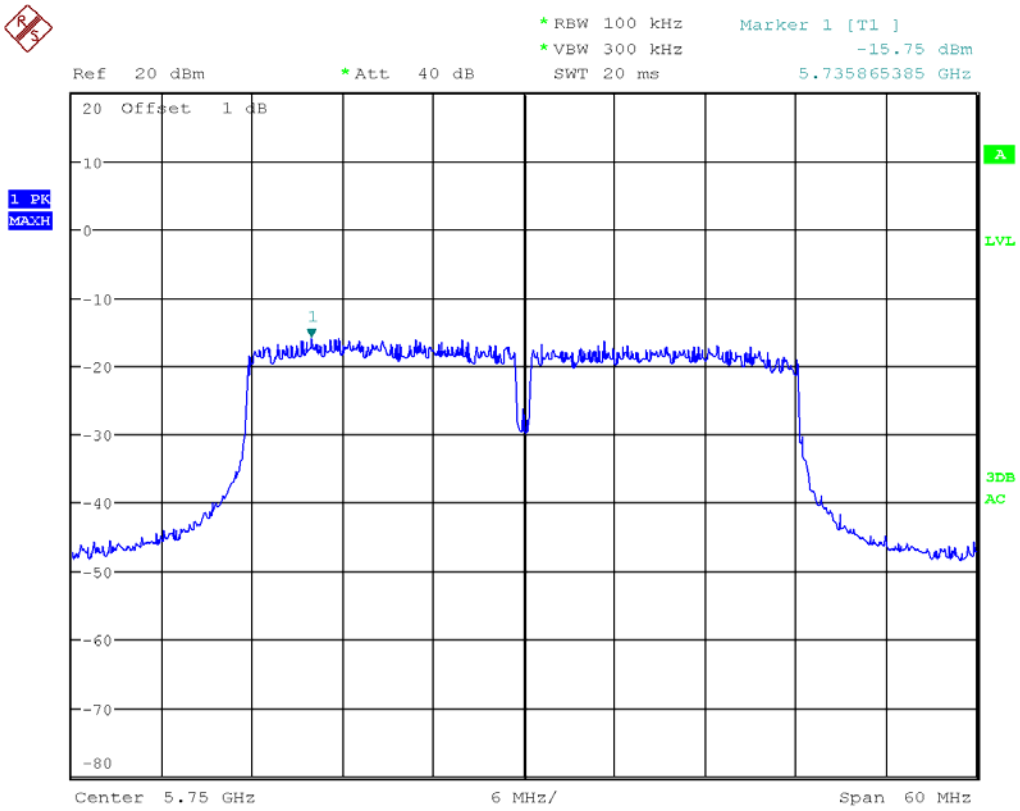
Channel 5830MHz



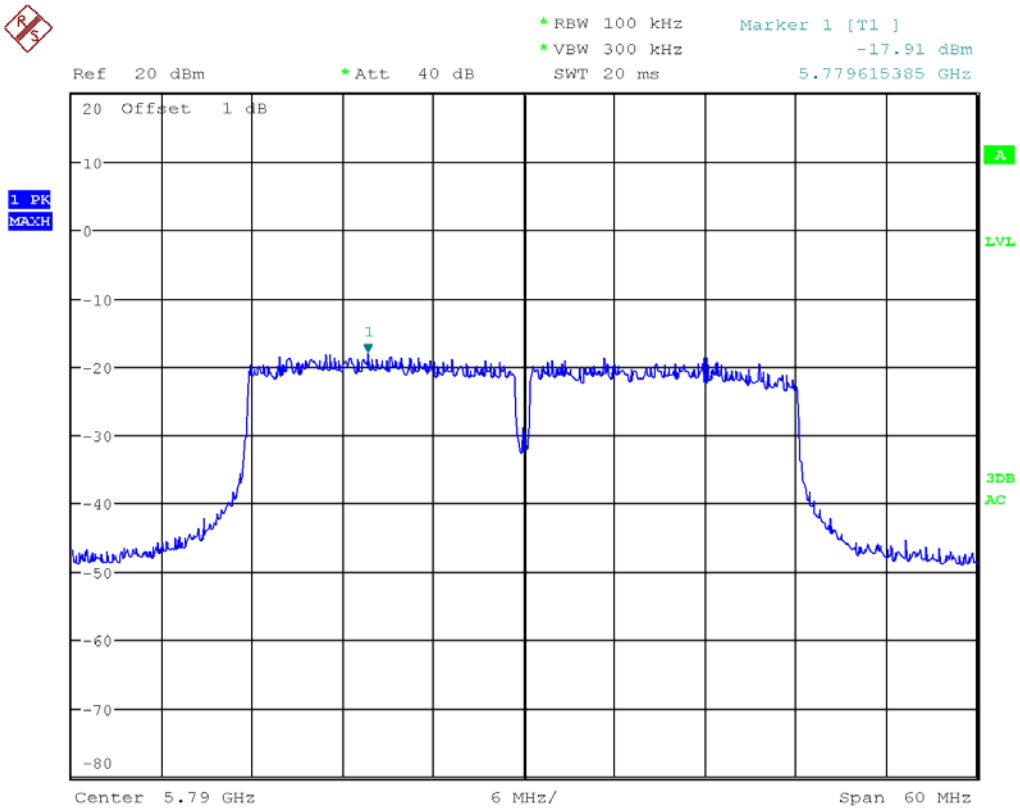
802.11n40 mode:

802.11n40 antenna1 mode:

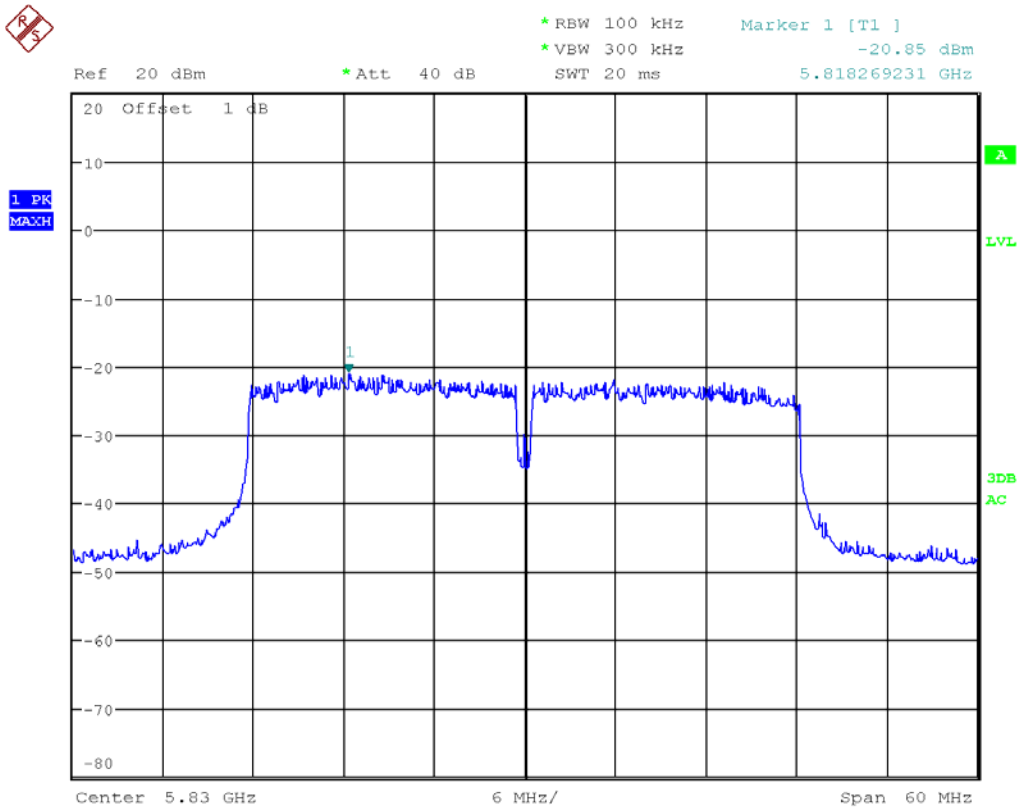
Channel 5750MHz



Channel 5790MHz



Channel 5830MHz



10. EMISSIONS IN NON-REST RICTED FREQUENCY BANDS

10.1 LIMITS

FCC 15.247(d) & 15.209

10.2 TEST PROCEDURES

Test procedures follow KDB 558074 D01 DTS Measurement Guidance v03r01.

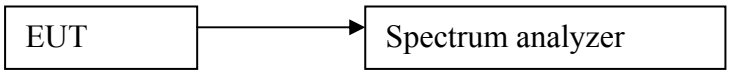
Remove the antenna from the EUT and then connect a low attenuation cable from the antenna port to the spectrum.

1. Reference level measurement

Below 1GHz Set the spectrum analyzer: RBW =100KHz VBW >= 3*RBW, Set the span to ≥ 1.5 times the DTS bandwidth. Sweep = auto; Detector Function = peak. Trace = Max-hold. Allow the trace to stabilize.

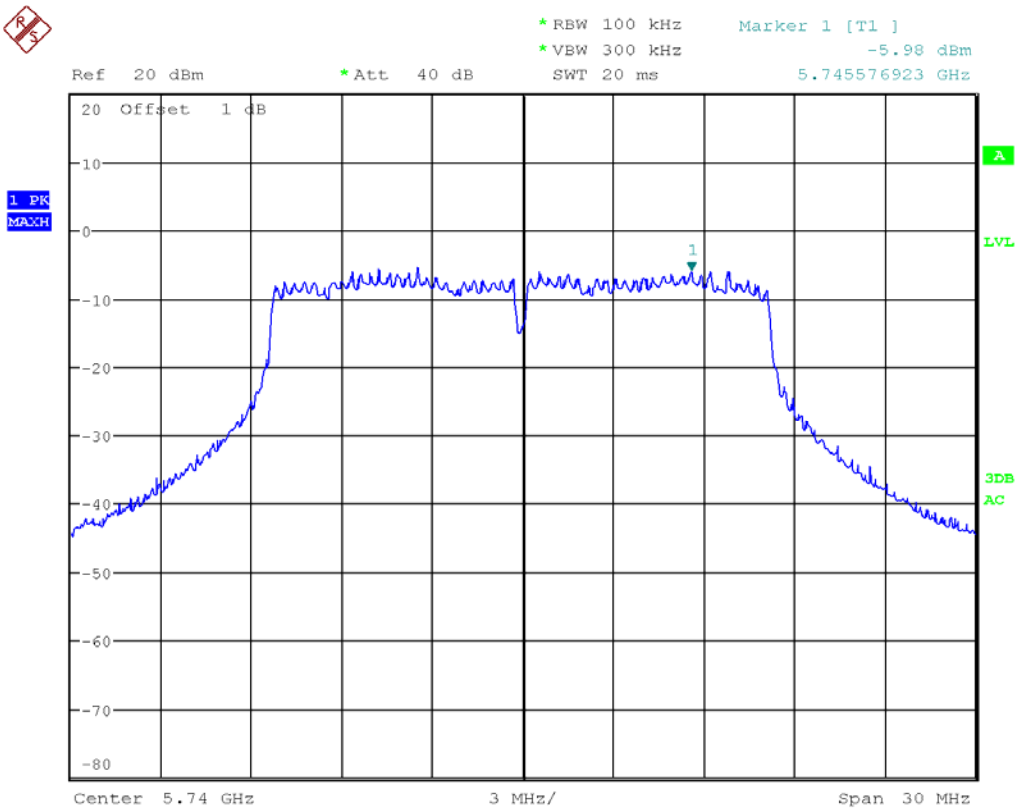
2. Set the spectrum analyzer: RBW =100KHz VBW >= 3*RBW, Set the span to ≥ 1.5 times the DTS bandwidth. Sweep = auto; Detector Function = peak. Trace = Max-hold. Allow the trace to stabilize.

10.3 TEST SETUP

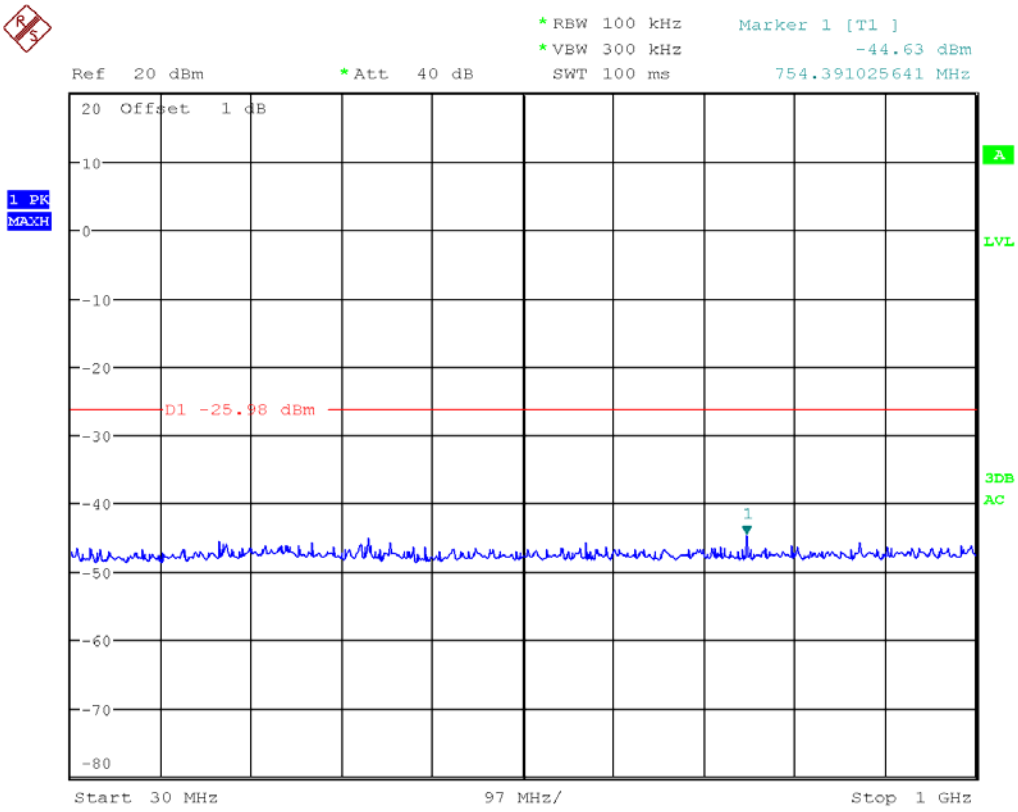


10.4 TEST RESULTS

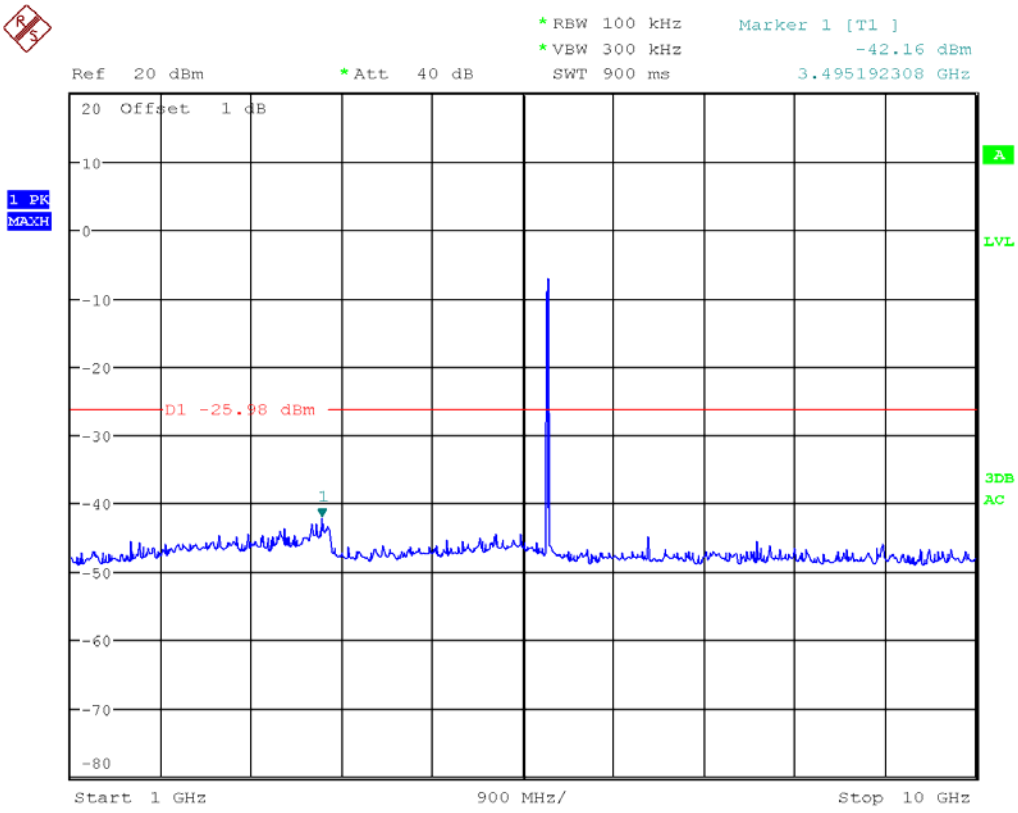
802.11a mode:
Channel 5740MHz
reference level：



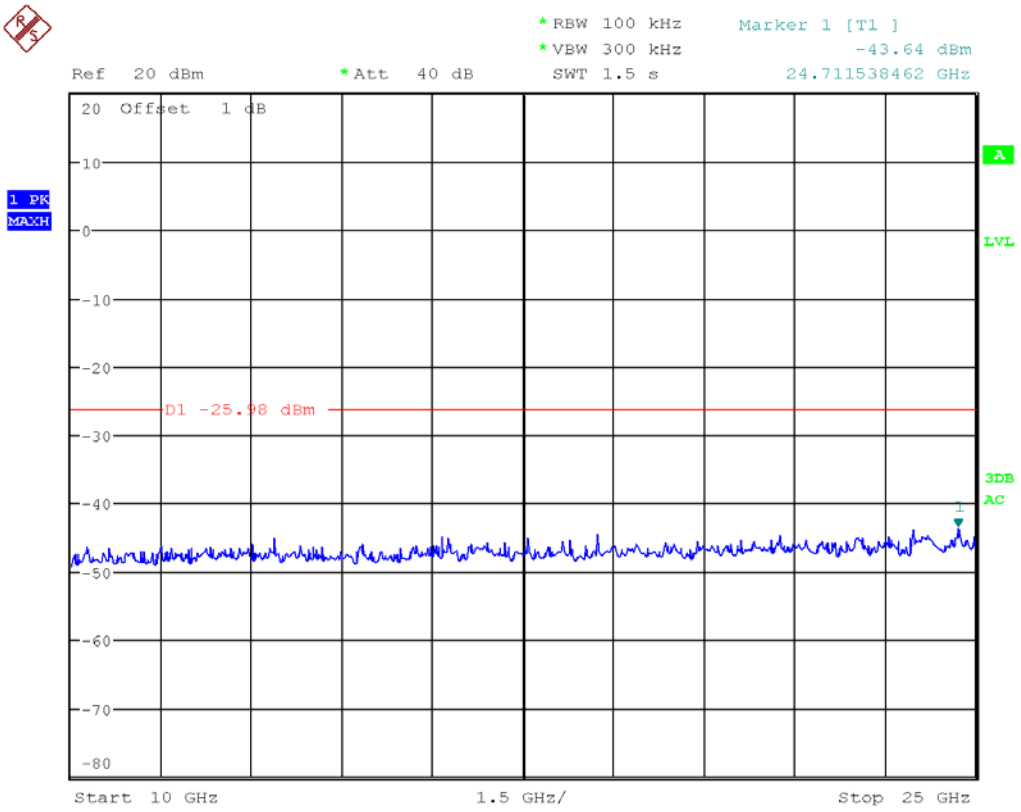
30M-1G


RBW 100 kHz
VBW 300 kHz
SWT 100 ms
Marker 1 [T1]
-44.63 dBm
754.391025641 MHz
Ref 20 dBm
Att 40 dB
20 Offset 1 dB
1 PK
MAXH
A
LVL
3DB
AC
D1 -25.98 dBm
Start 30 MHz
97 MHz/
Stop 1 GHz

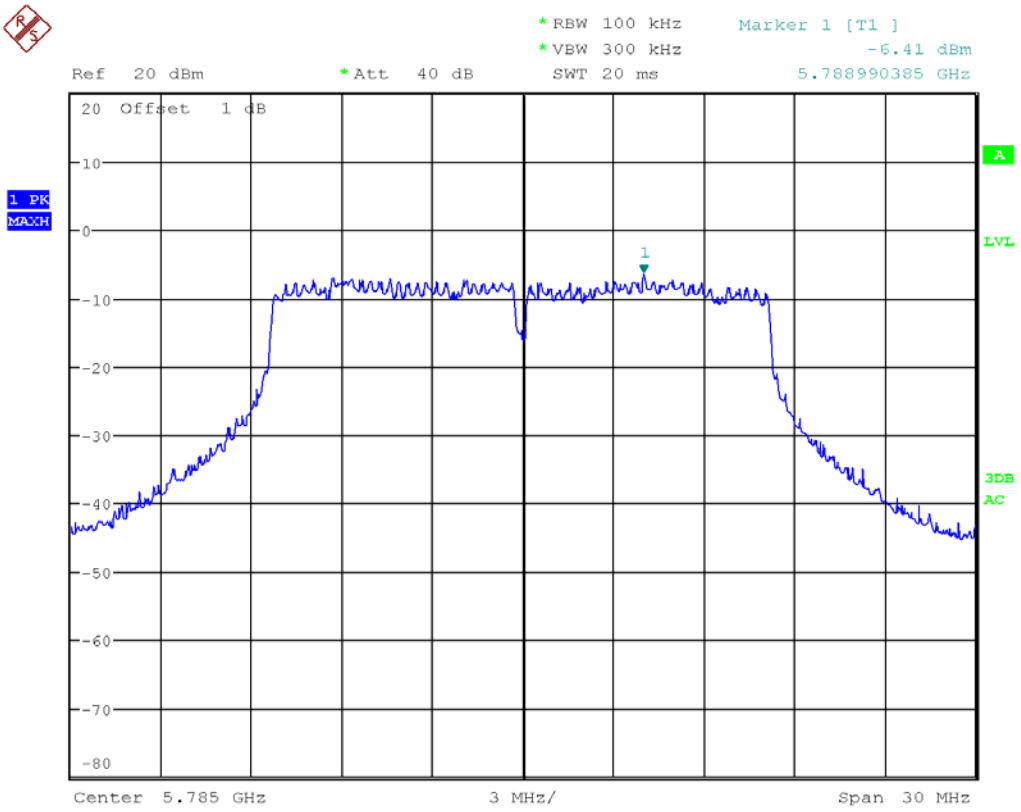
1G-10G


RBW 100 kHz
VBW 300 kHz
SWT 900 ms
Marker 1 [T1]
-42.16 dBm
3.495192308 GHz
Ref 20 dBm
Att 40 dB
20 Offset 1 dB
1 PK
MAXH
A
LVL
3DB
AC
D1 -25.98 dBm
Start 1 GHz
900 MHz/
Stop 10 GHz

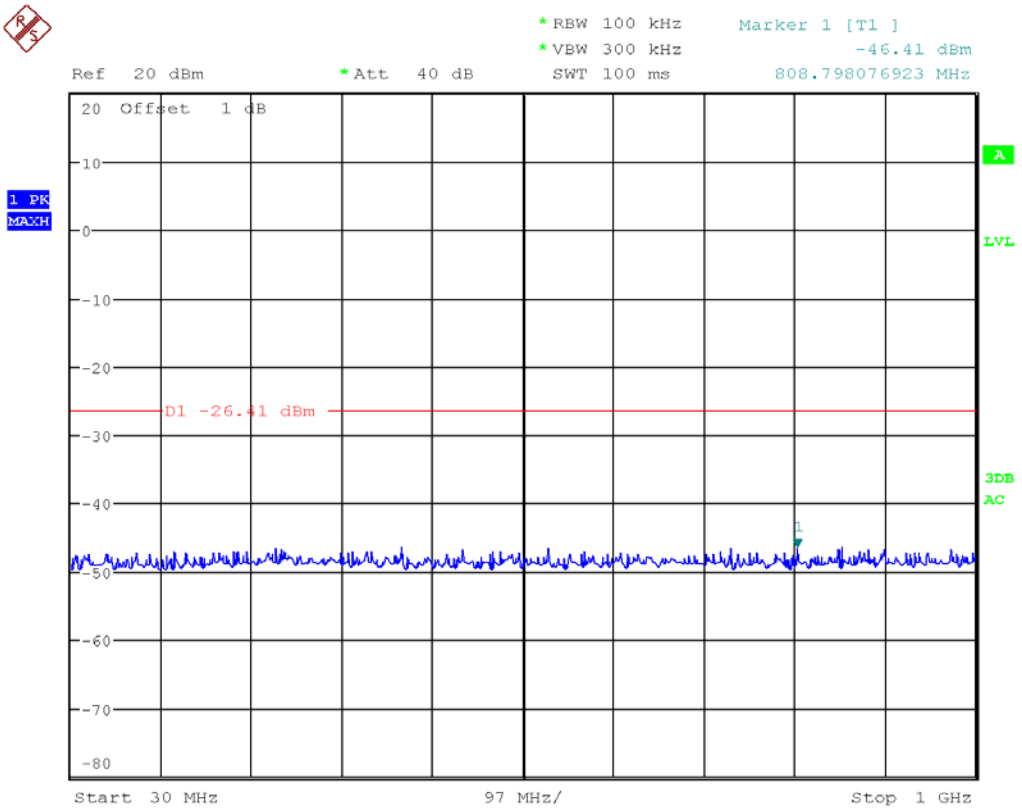
10G-25G



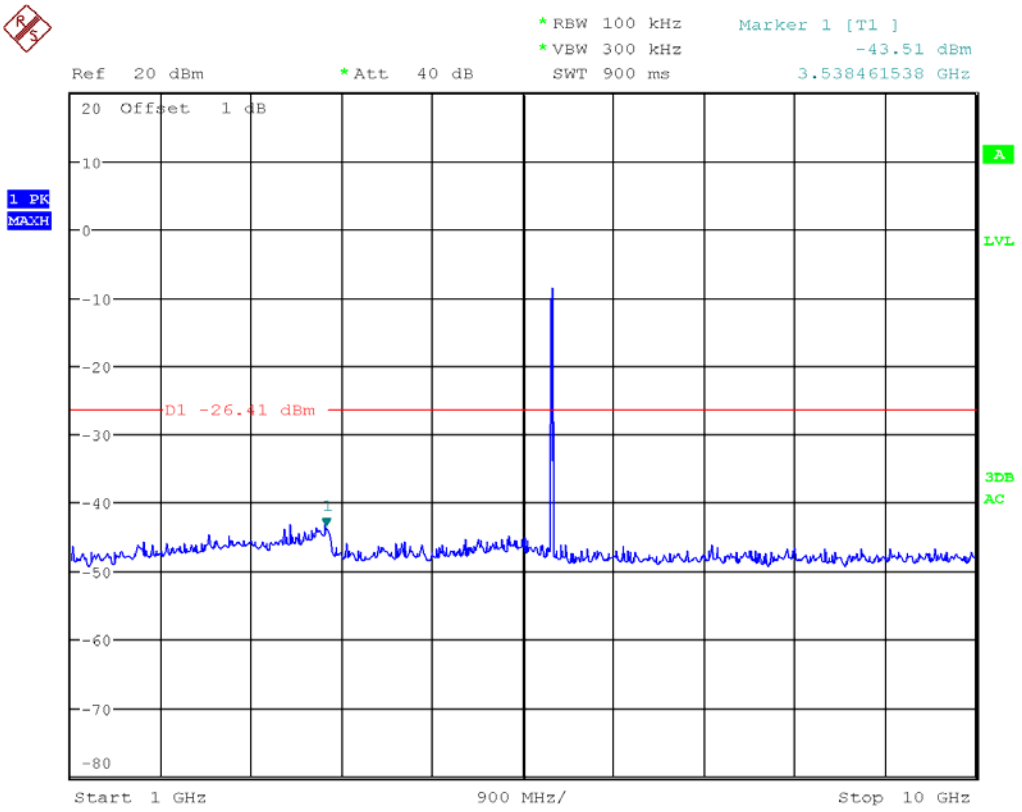
802.11a mode:
Channel 5785MHz
Reference level



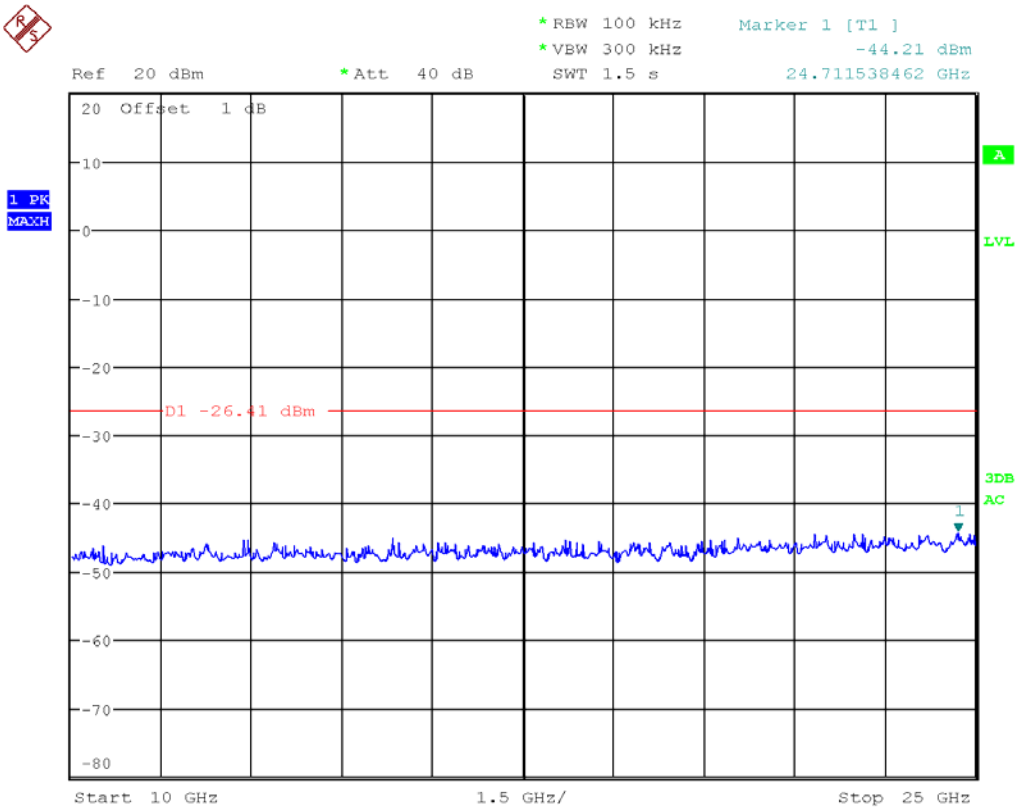
30M-1G


RBW 100 kHz
VBW 300 kHz
SWT 100 ms
Marker 1 [T1]
-46.41 dBm
808.798076923 MHz
Ref 20 dBm
Att 40 dB
20 Offset 1 dB
1 PK
MAXH
A
LVL
3DB
AC
D1 -26.41 dBm
Start 30 MHz
97 MHz/
Stop 1 GHz

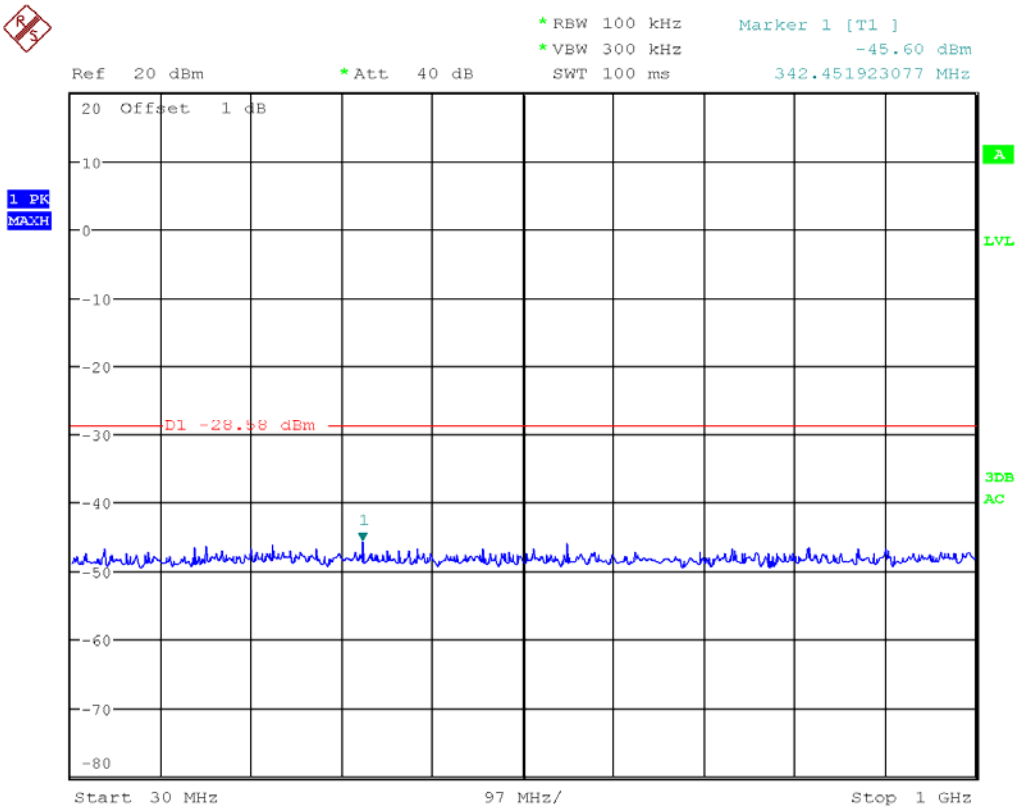
1G-10G


RBW 100 kHz
VBW 300 kHz
SWT 900 ms
Marker 1 [T1]
-43.51 dBm
3.538461538 GHz
Ref 20 dBm
Att 40 dB
20 Offset 1 dB
1 PK
MAXH
A
LVL
3DB
AC
D1 -26.41 dBm
Start 1 GHz
900 MHz/
Stop 10 GHz

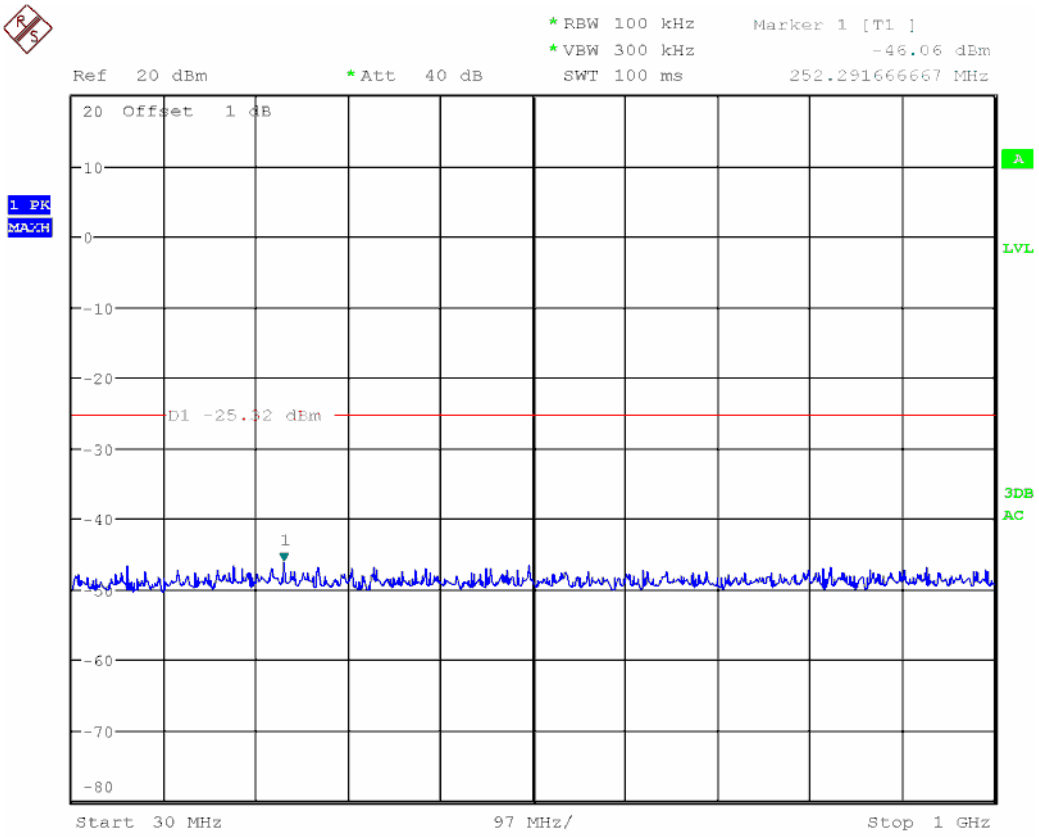
10G-25G



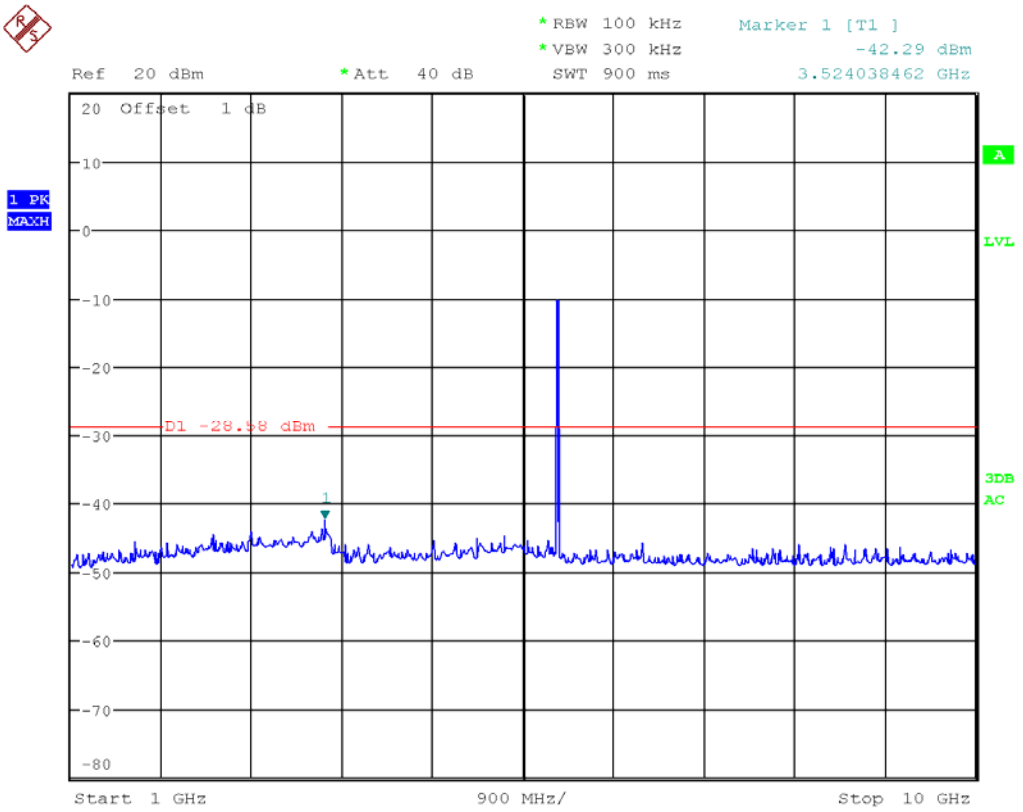
802.11a mode:
Channel 5840MHz
Reference level



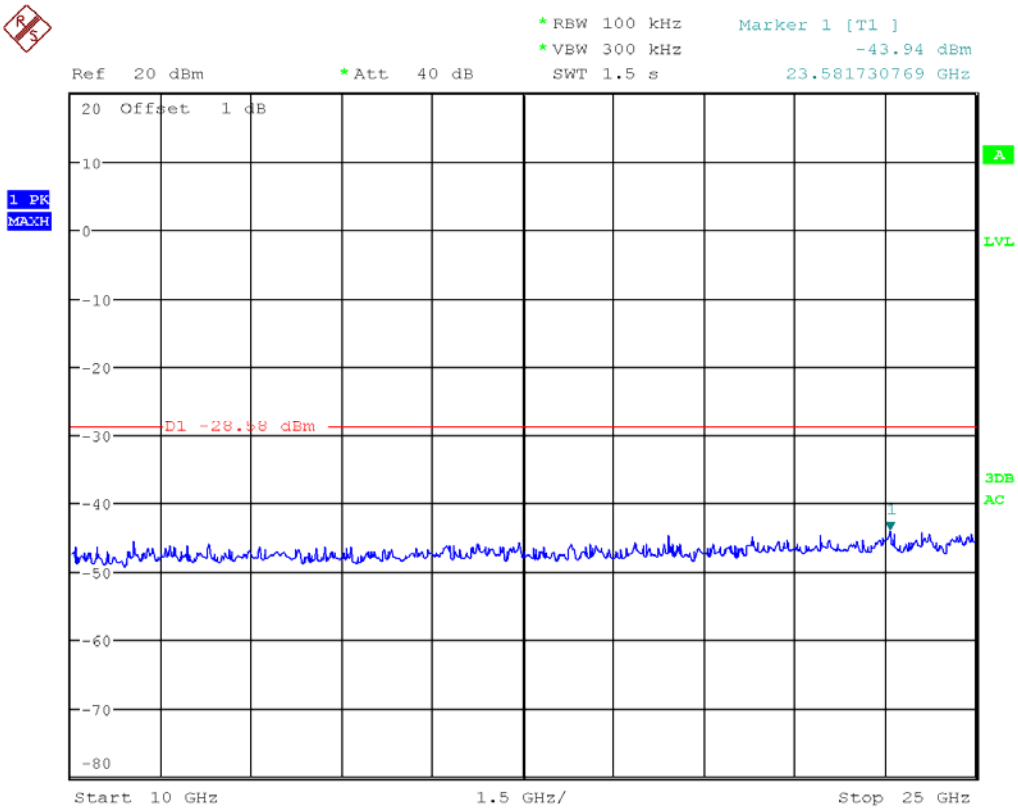
30M-1G


RBW 100 kHz
VBW 300 kHz
SWT 100 ms
Marker 1 [T1]
-46.06 dBm
252.291666667 MHz
Ref 20 dBm
Att 40 dB
20 Offset 1 dB
1 PK
MAXH
A
LVL
3DB
AC
D1 -25.32 dBm
Start 30 MHz
97 MHz/
Stop 1 GHz

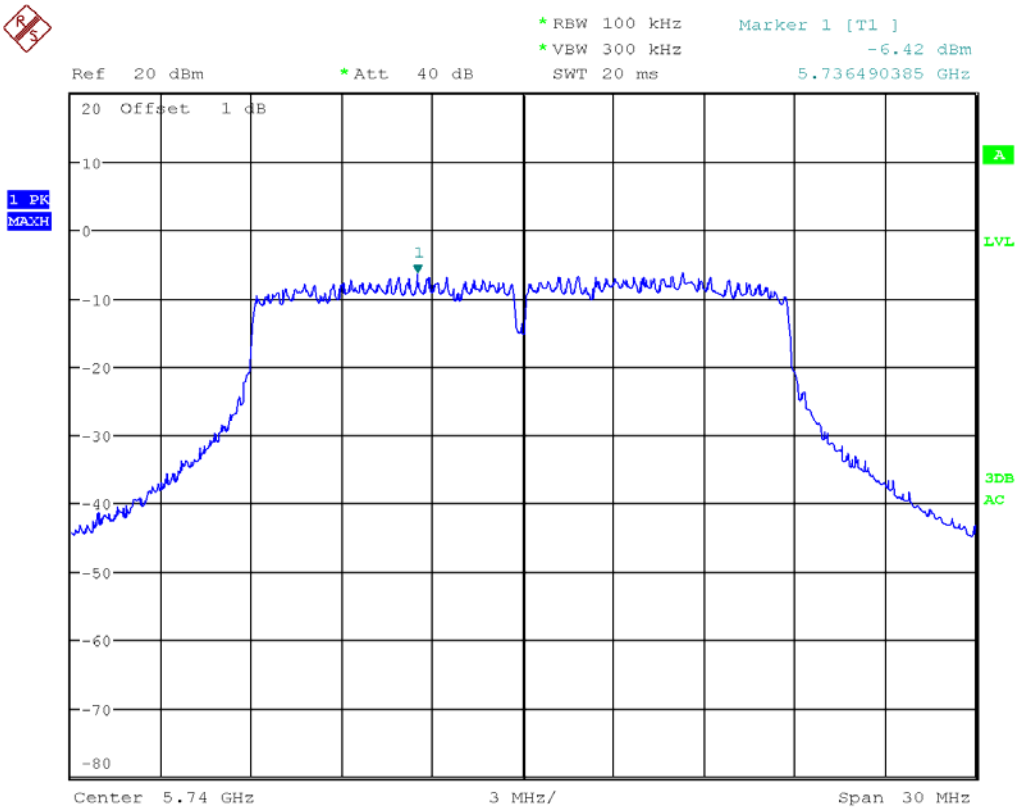
1G-10G


RBW 100 kHz
VBW 300 kHz
SWT 900 ms
Marker 1 [T1]
-42.29 dBm
3.524038462 GHz
Ref 20 dBm
Att 40 dB
20 Offset 1 dB
1 PK
MAXH
A
LVL
3DB
AC
D1 -28.58 dBm
Start 1 GHz
900 MHz/
Stop 10 GHz

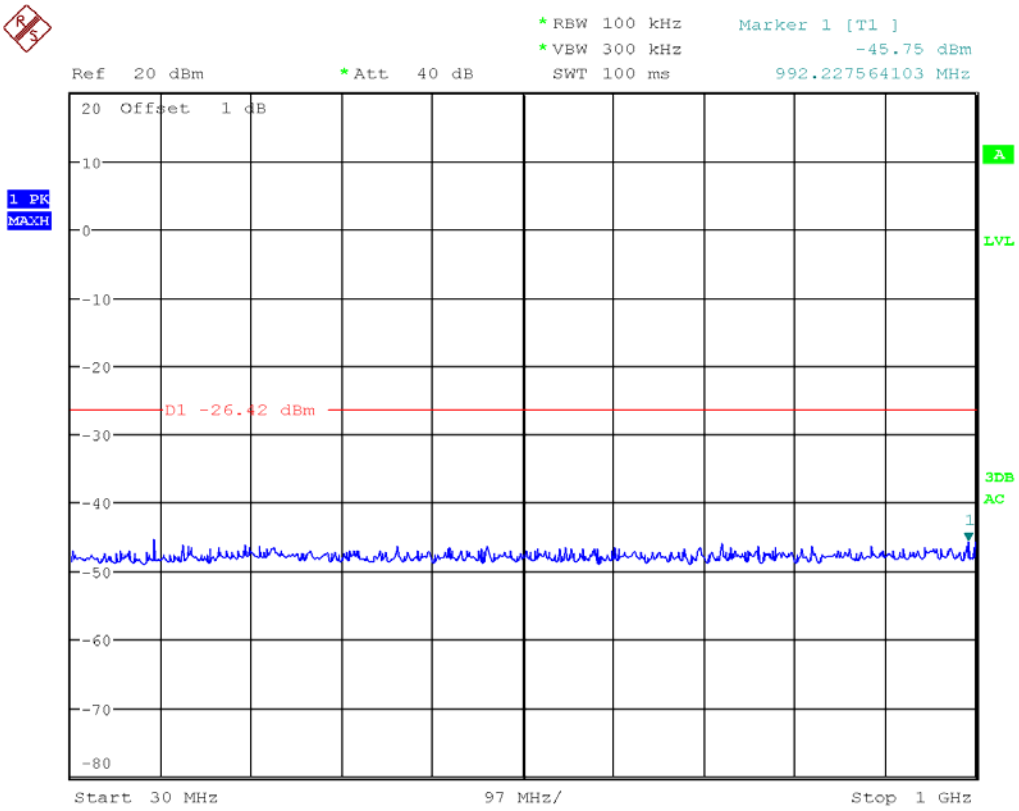
10G-25G



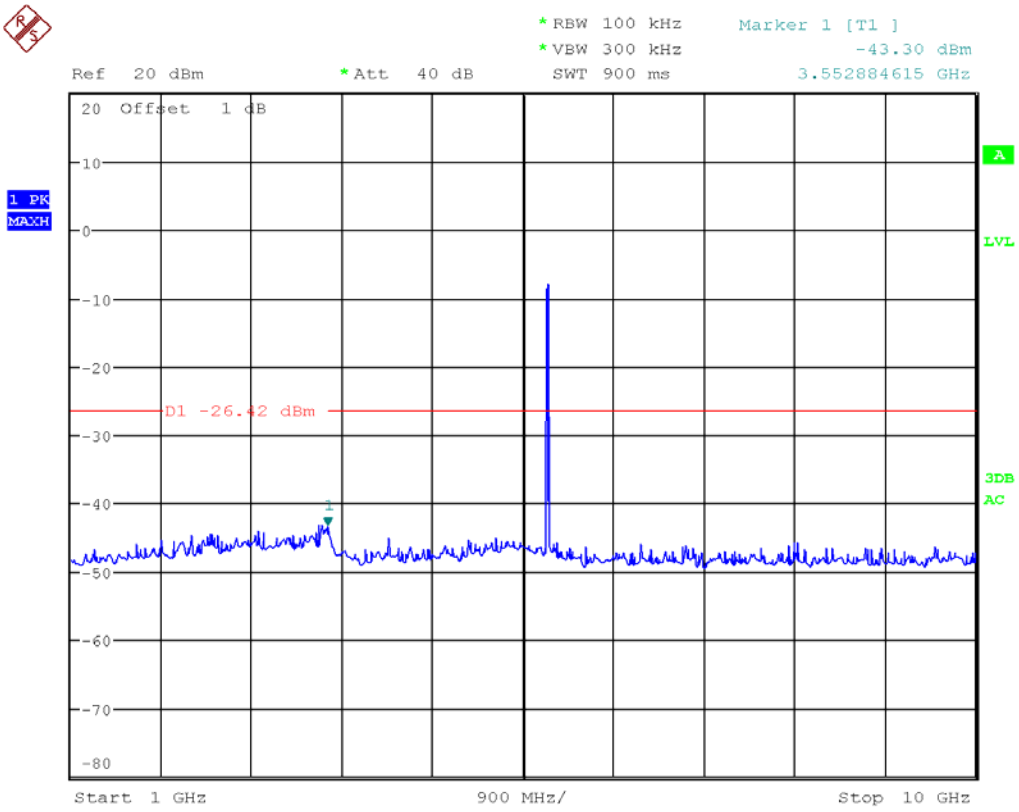
802.11n20 mode:
Channel 5740MHz
Reference level



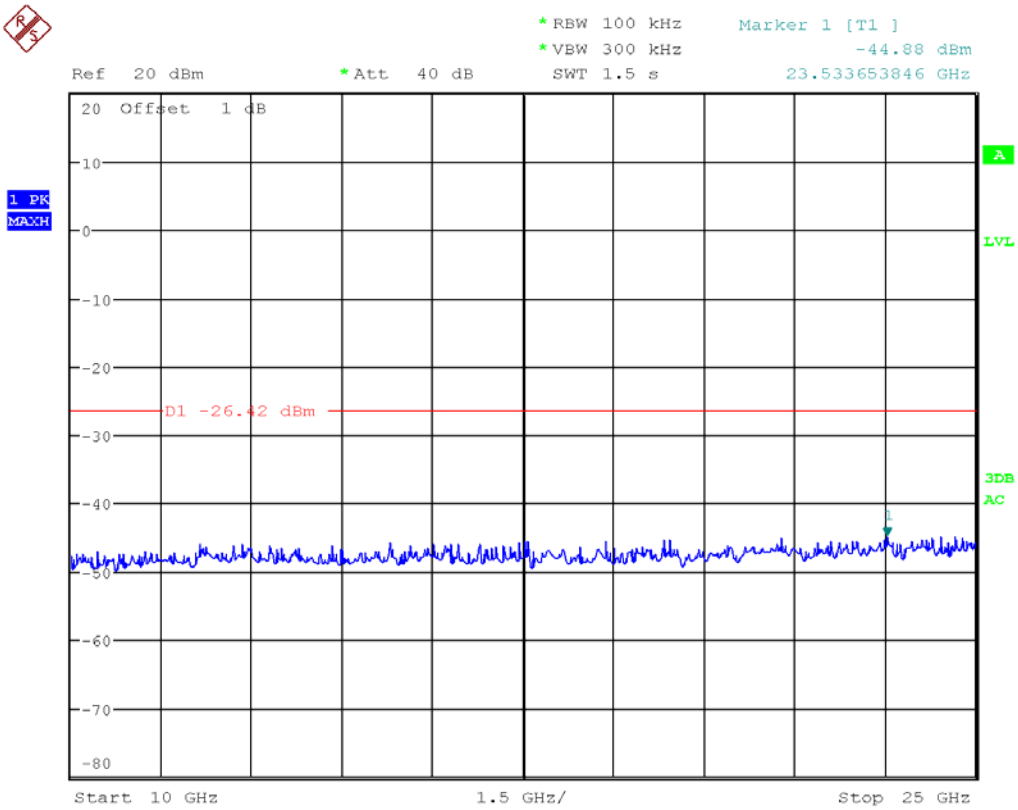
30M-1G


RBW 100 kHz
VBW 300 kHz
SWT 100 ms
Marker 1 [T1]
-45.75 dBm
992.227564103 MHz
Ref 20 dBm
Att 40 dB
20 Offset 1 dB
1 PK
MAXH
A
LVL
3DB
AC
D1 -26.42 dBm
Start 30 MHz
97 MHz/
Stop 1 GHz

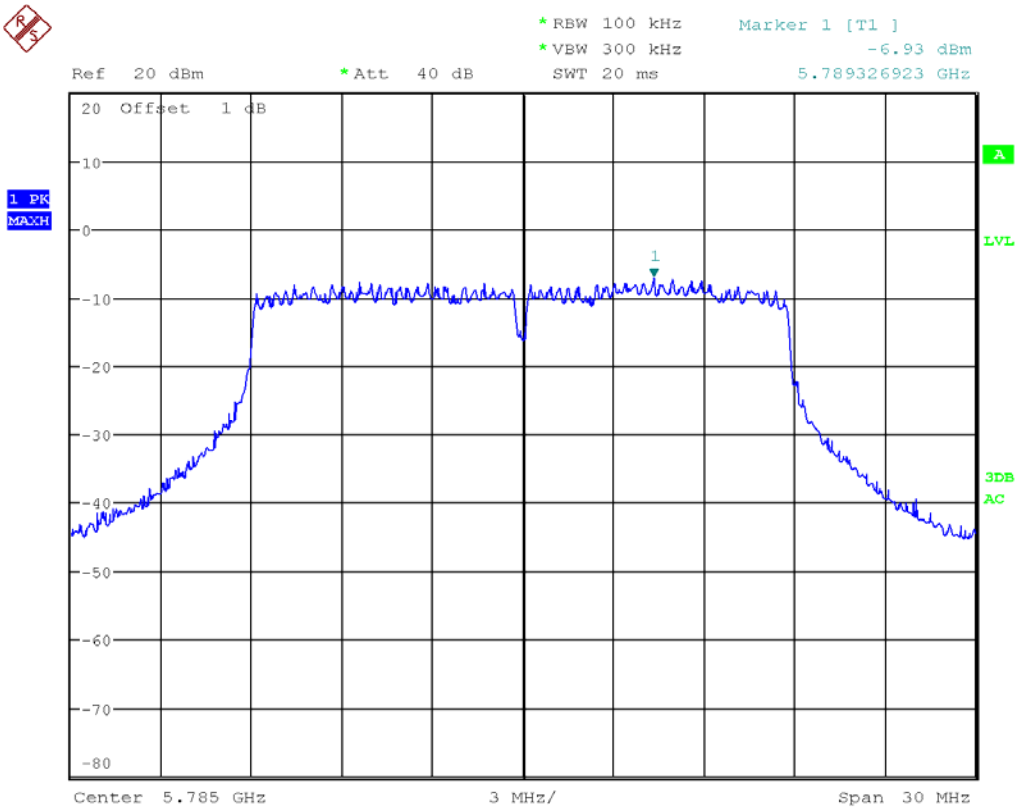
1G-10G


RBW 100 kHz
VBW 300 kHz
SWT 900 ms
Marker 1 [T1]
-43.30 dBm
3.552884615 GHz
Ref 20 dBm
Att 40 dB
20 Offset 1 dB
1 PK
MAXH
A
LVL
3DB
AC
D1 -26.42 dBm
Start 1 GHz
900 MHz/
Stop 10 GHz

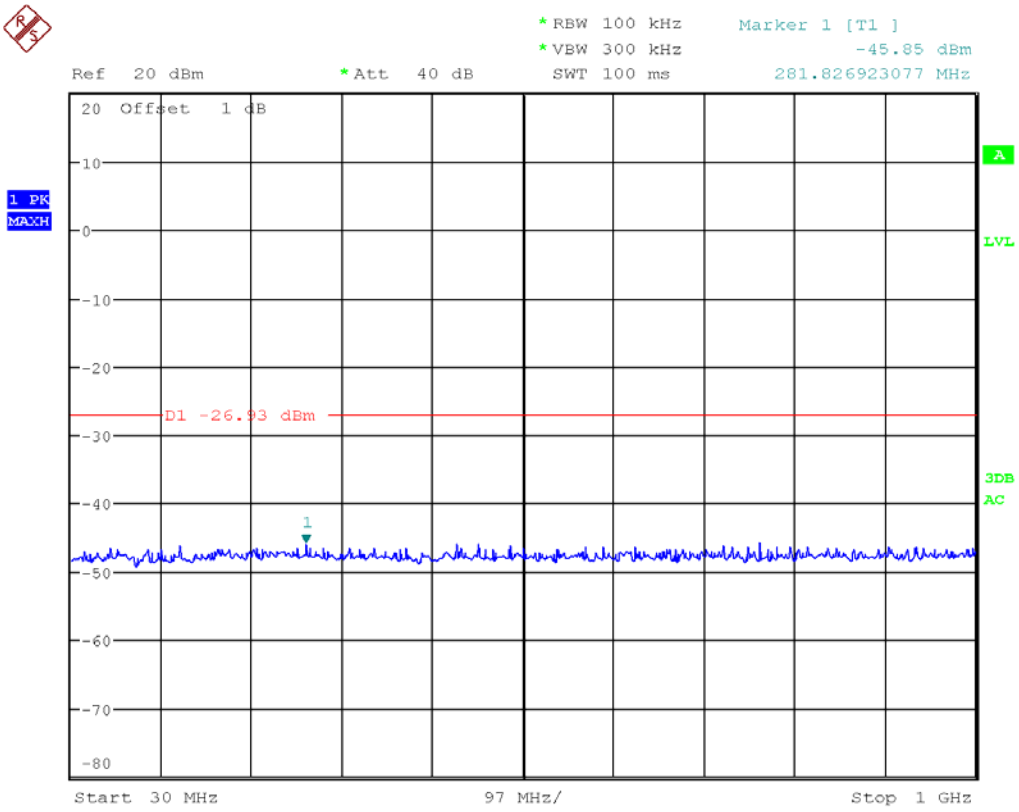
10G-25G



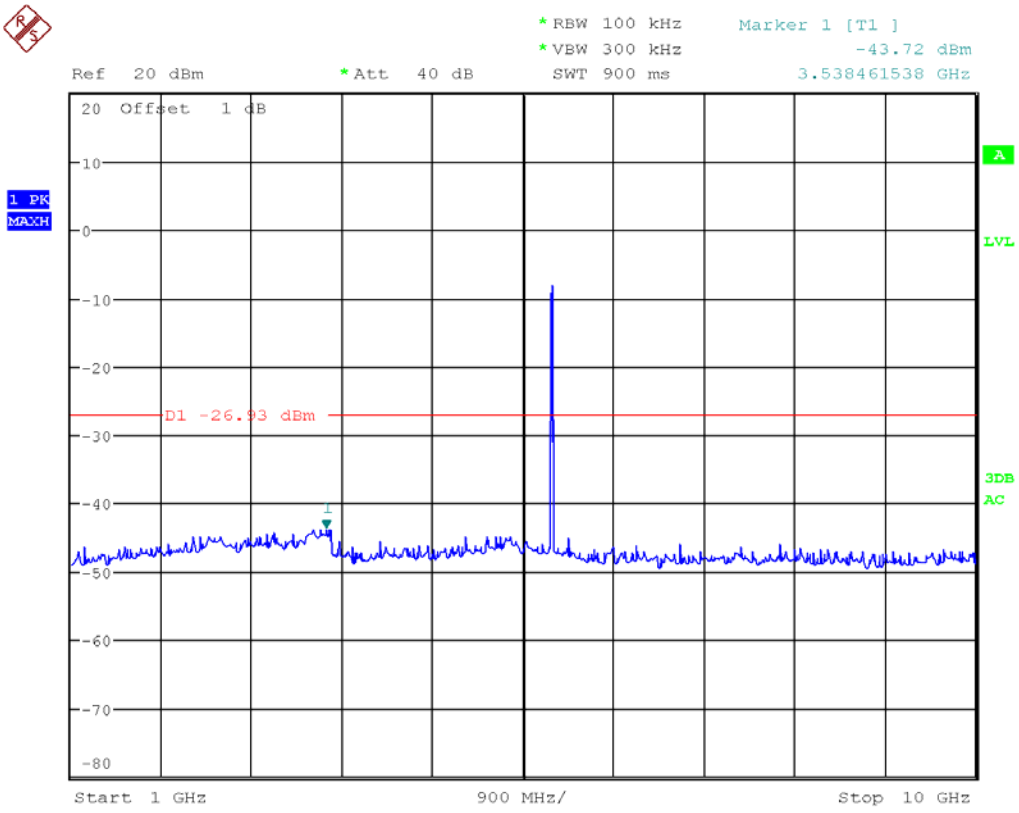
802.11n20 mode:
Channel 5785MHz
Reference level



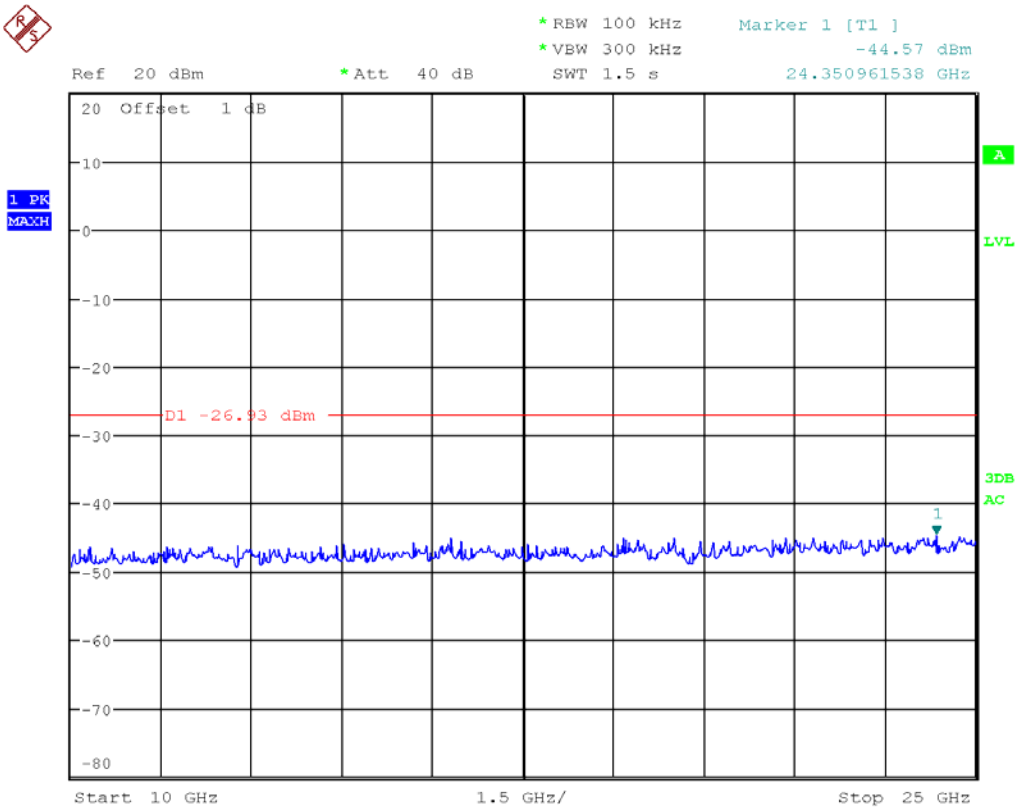
30M-1G


RBW 100 kHz
VBW 300 kHz
SWT 100 ms
Marker 1 [T1]
-45.85 dBm
281.826923077 MHz
Ref 20 dBm
Att 40 dB
20 Offset 1 dB
1 PK
MAXH
A
LVL
3DB
AC
D1 -26.93 dBm
Start 30 MHz
97 MHz/
Stop 1 GHz

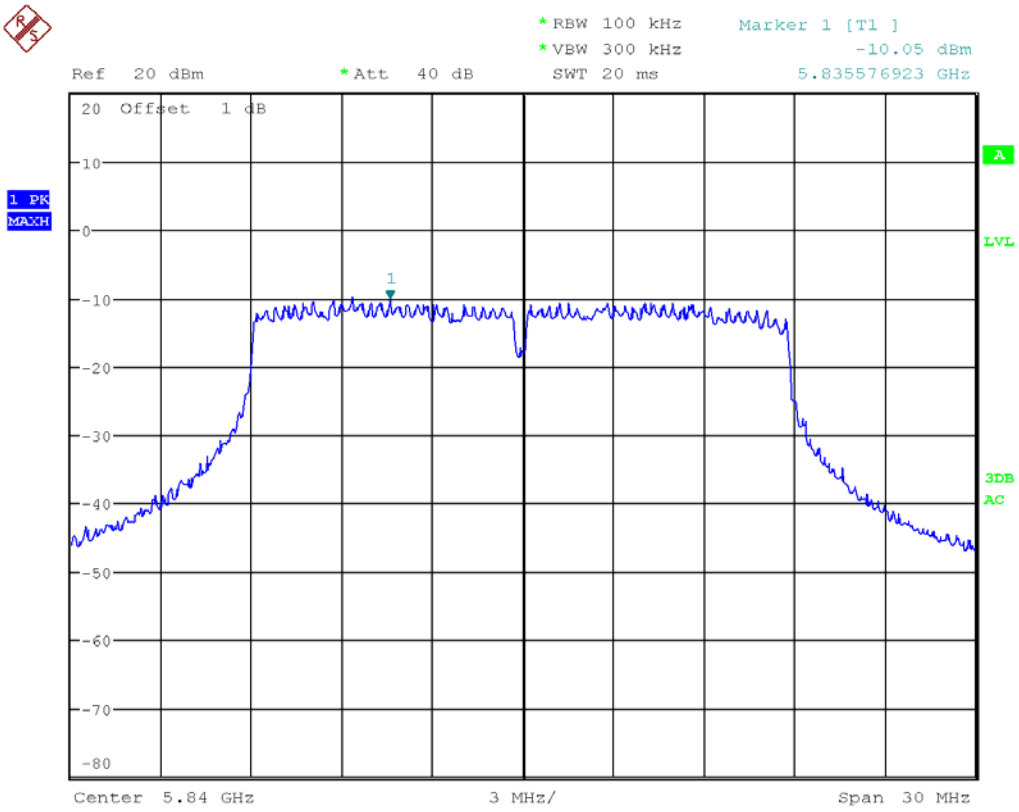
1G-10G


RBW 100 kHz
VBW 300 kHz
SWT 900 ms
Marker 1 [T1]
-43.72 dBm
3.538461538 GHz
Ref 20 dBm
Att 40 dB
20 Offset 1 dB
1 PK
MAXH
A
LVL
3DB
AC
D1 -26.93 dBm
Start 1 GHz
900 MHz/
Stop 10 GHz

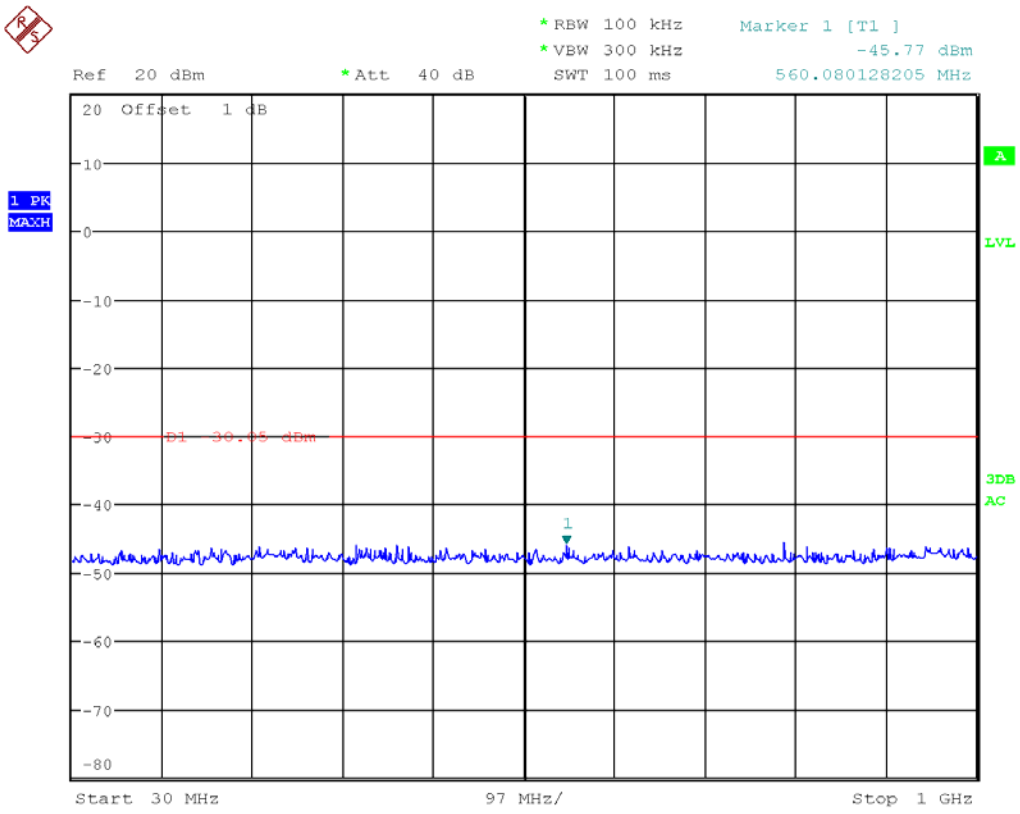
10G-25G



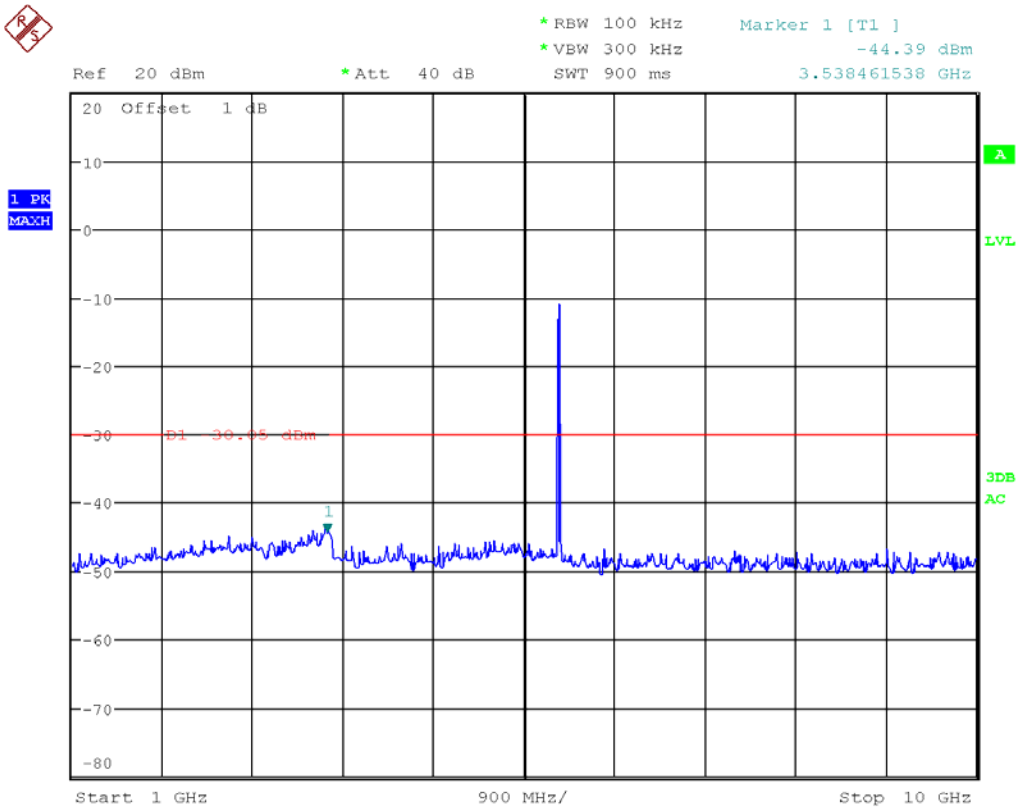
802.11n20 mode:
Channel 5840MHz
Reference level



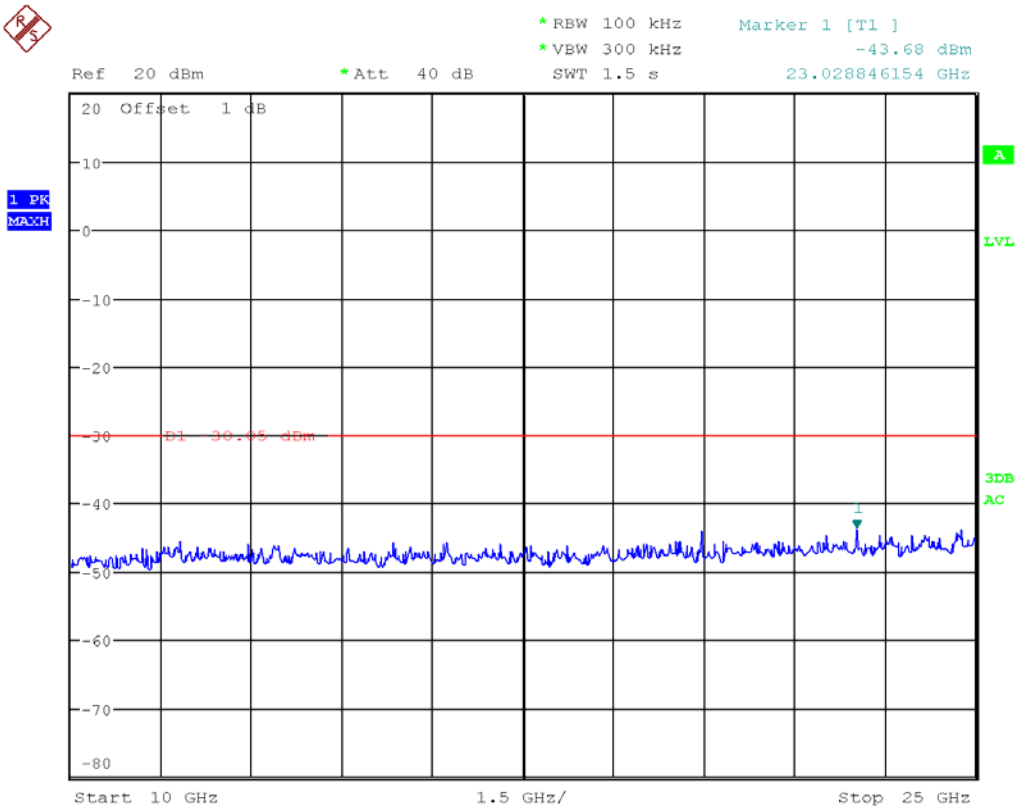
30M-1G


RBW 100 kHz
VBW 300 kHz
SWT 100 ms
Marker 1 [T1]
-45.77 dBm
560.080128205 MHz
Ref 20 dBm
Att 40 dB
20 Offset 1 dB
1 PK
MAXH
A
LVL
3DB
AC
D1 30.05 dBm
Start 30 MHz
97 MHz/
Stop 1 GHz

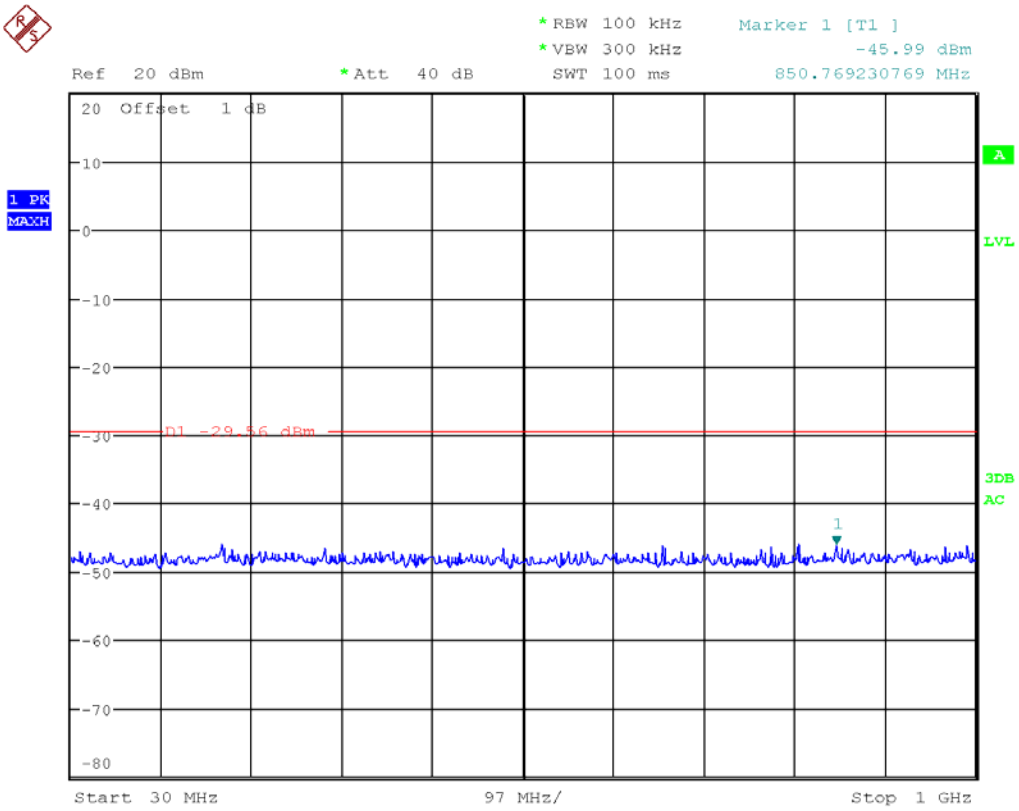
1G-10G


RBW 100 kHz
VBW 300 kHz
SWT 900 ms
Marker 1 [T1]
-44.39 dBm
3.538461538 GHz
Ref 20 dBm
Att 40 dB
20 Offset 1 dB
1 PK
MAXH
A
LVL
3DB
AC
D1 30.05 dBm
Start 1 GHz
900 MHz/
Stop 10 GHz

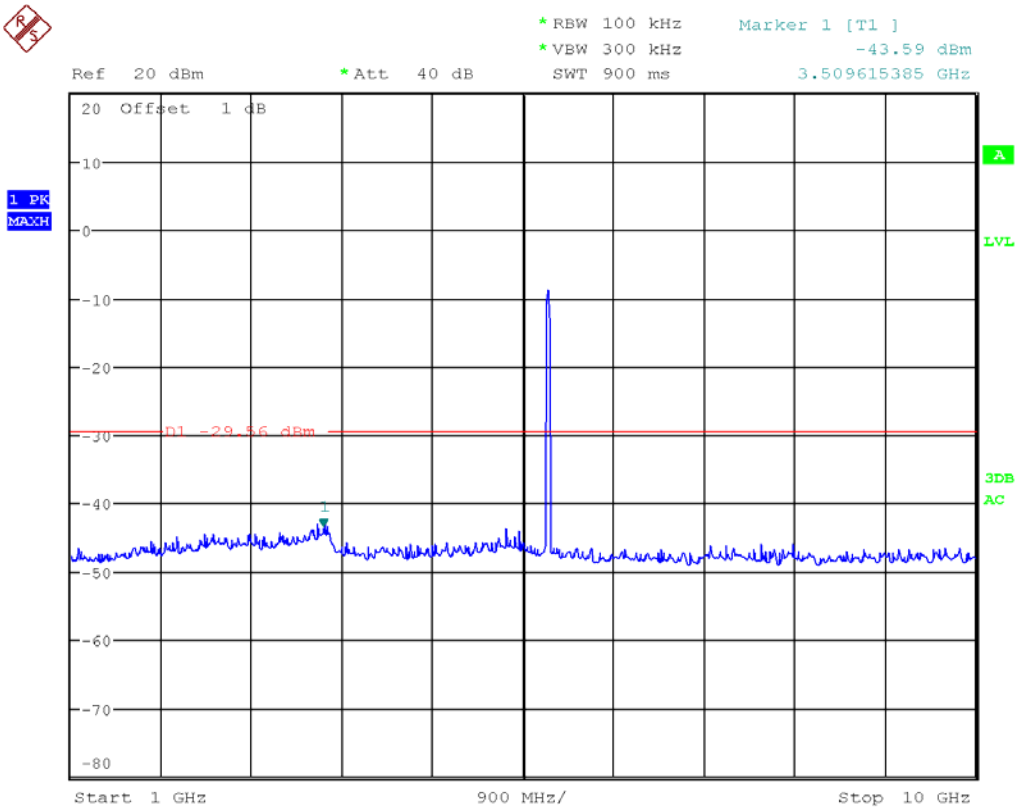
10G-25G



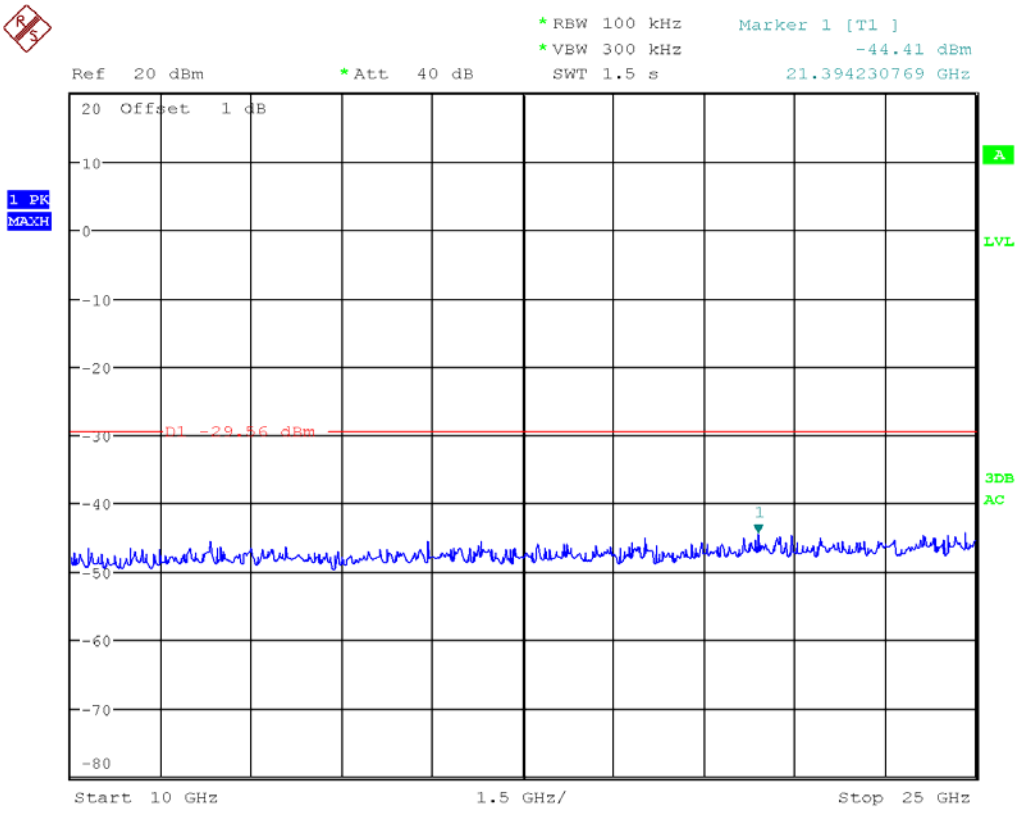
802.11n40 mode:
Channel 5750MHz
Reference level



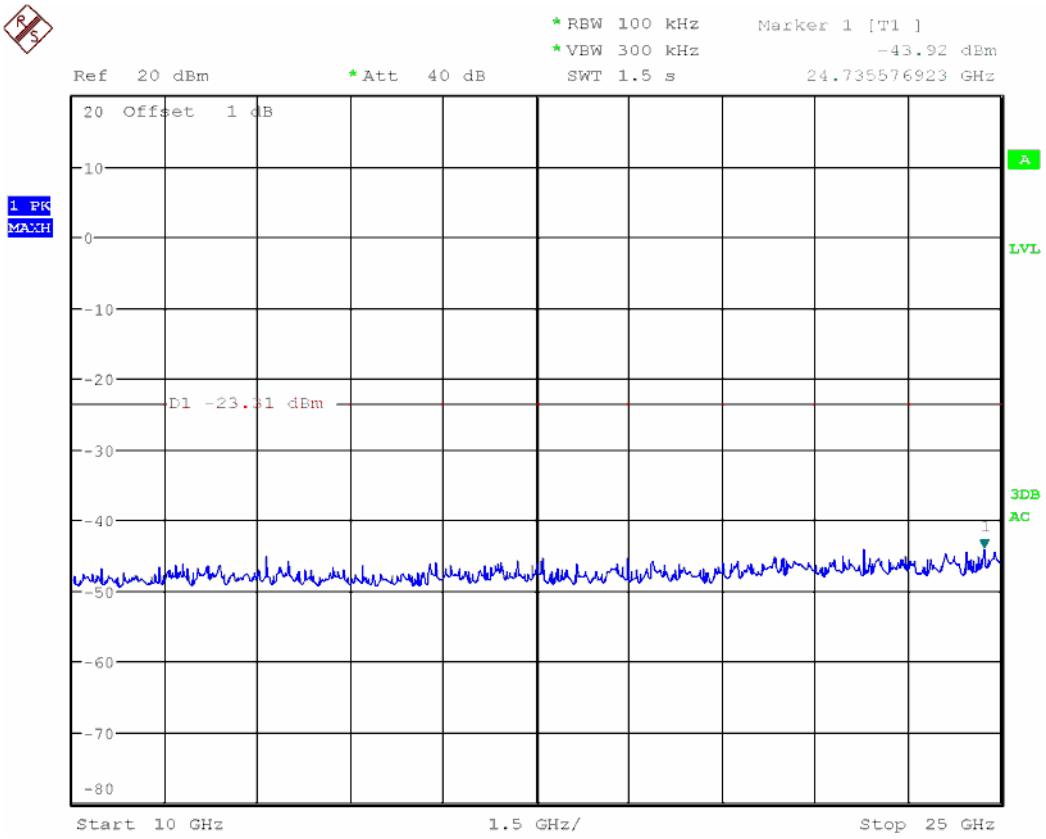
30M-1G


RBW 100 kHz
VBW 300 kHz
SWT 900 ms
Marker 1 [T1]
-43.59 dBm
3.509615385 GHz
Ref 20 dBm
Att 40 dB
20 Offset 1 dB
1 PK
MAXH
A
LVL
3DB
AC
D1 -29.46 dBm
Start 1 GHz
900 MHz/
Stop 10 GHz

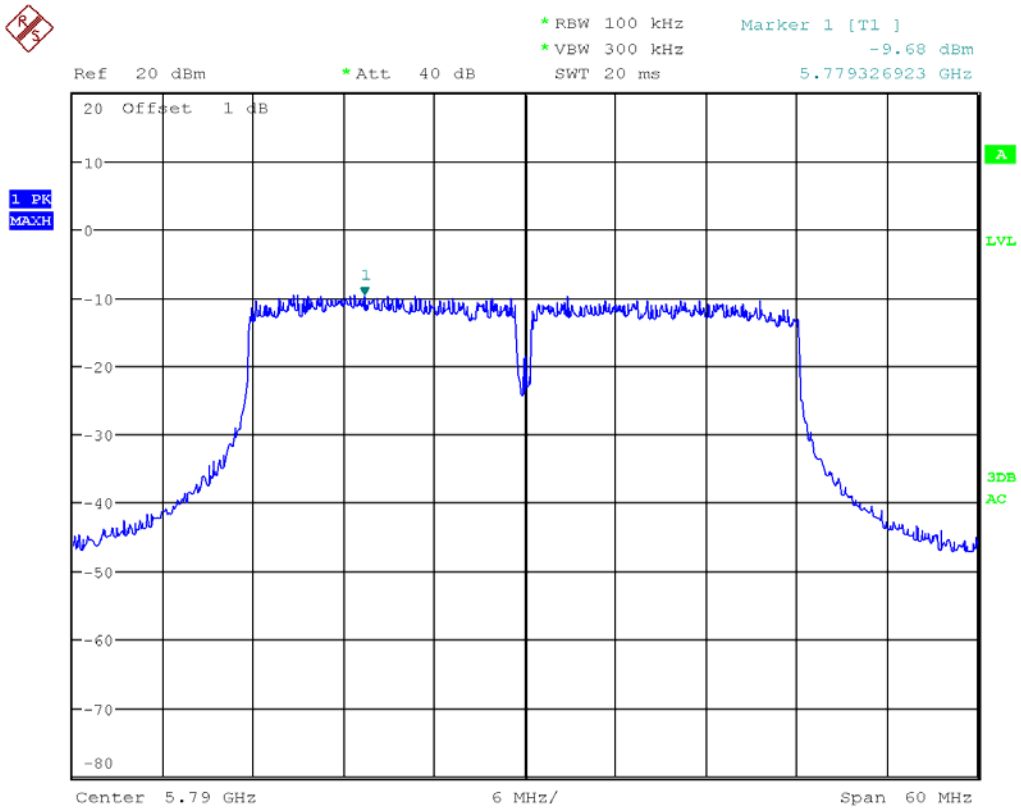
1G-10G


RBW 100 kHz
VBW 300 kHz
SWT 1.5 s
Marker 1 [T1]
-44.41 dBm
21.394230769 GHz
Ref 20 dBm
Att 40 dB
20 Offset 1 dB
1 PK
MAXH
A
LVL
3DB
AC
D1 -29.46 dBm
Start 10 GHz
1.5 GHz/
Stop 25 GHz

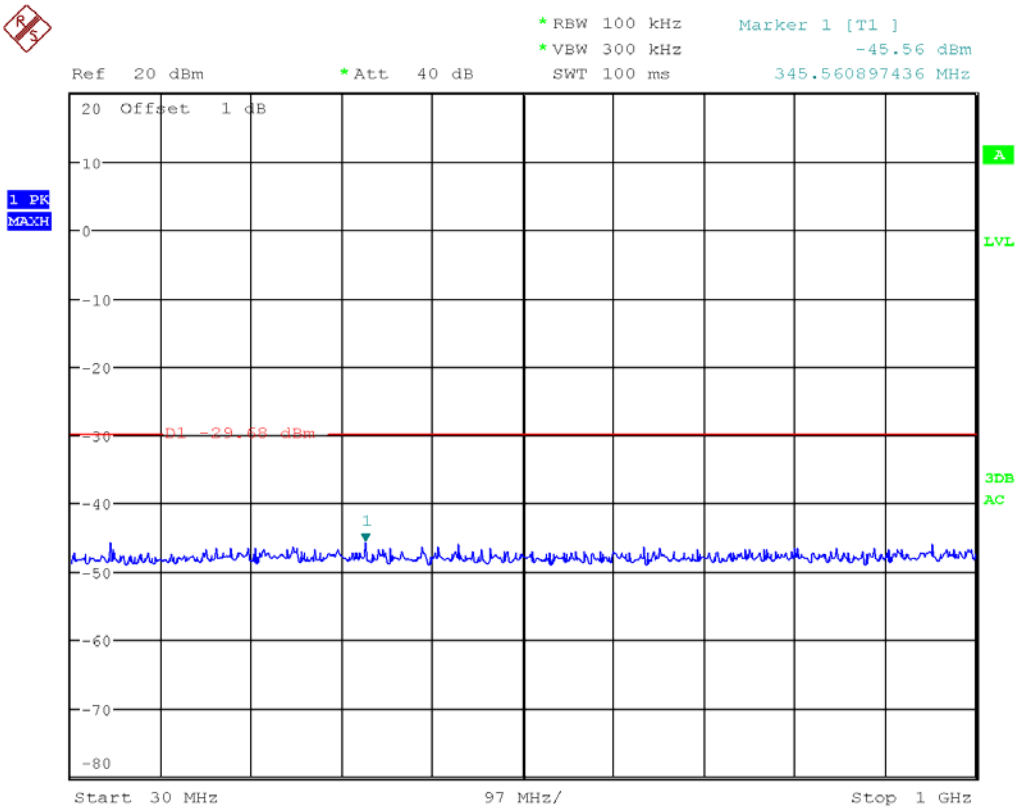
10G-25G



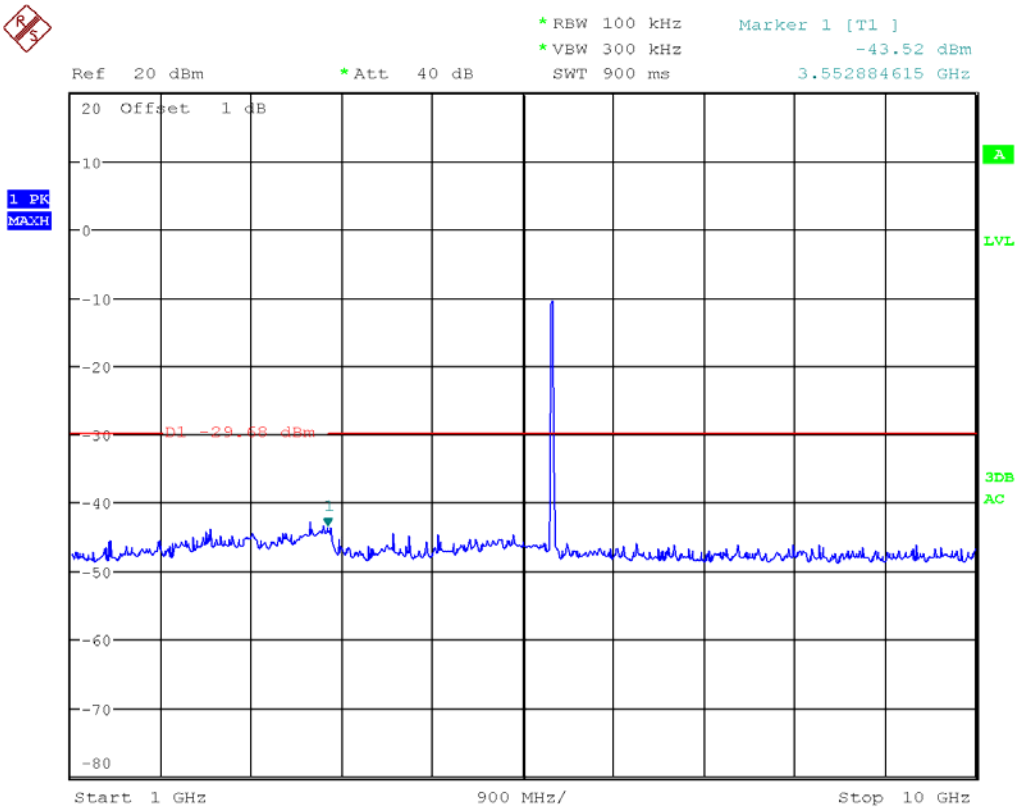
802.11n40 mode:
Channel 5790MHz
Reference level



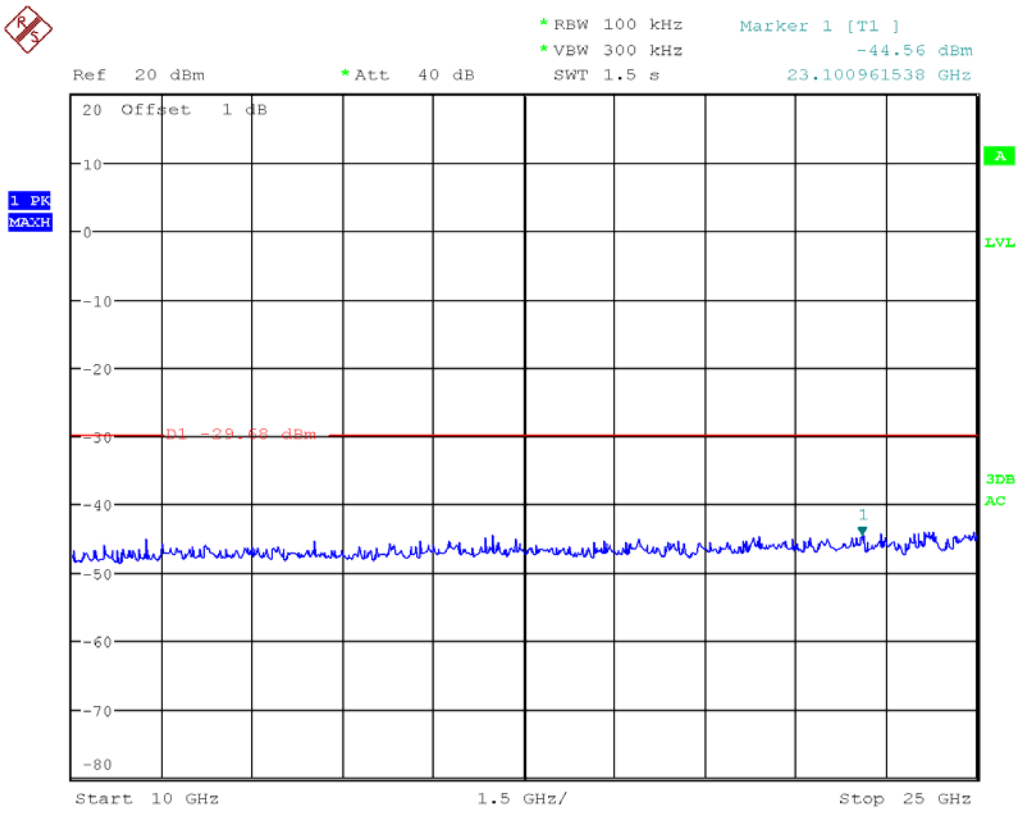
30M-1G



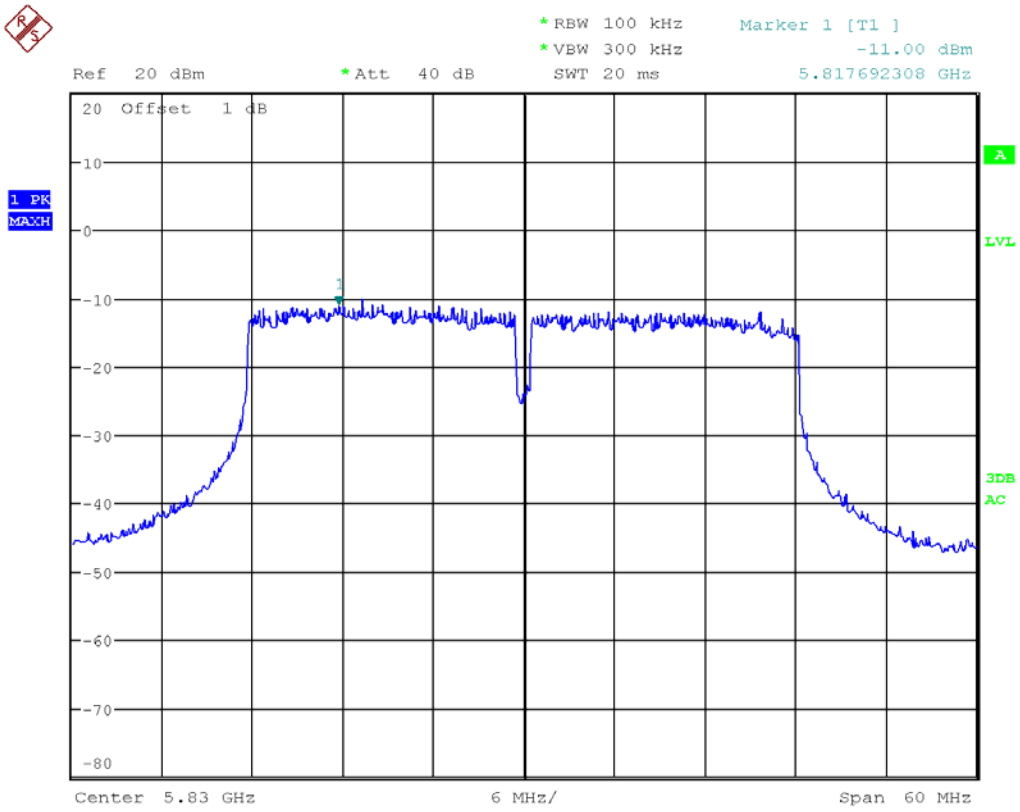
1G-10G



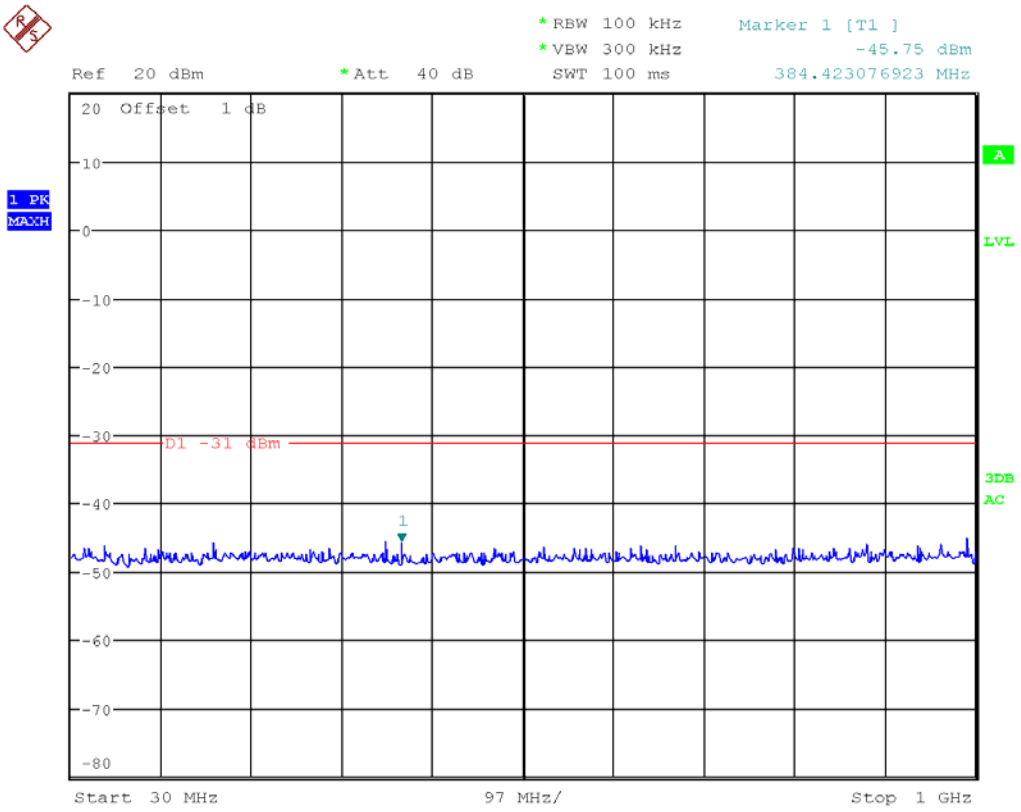
10G-25G



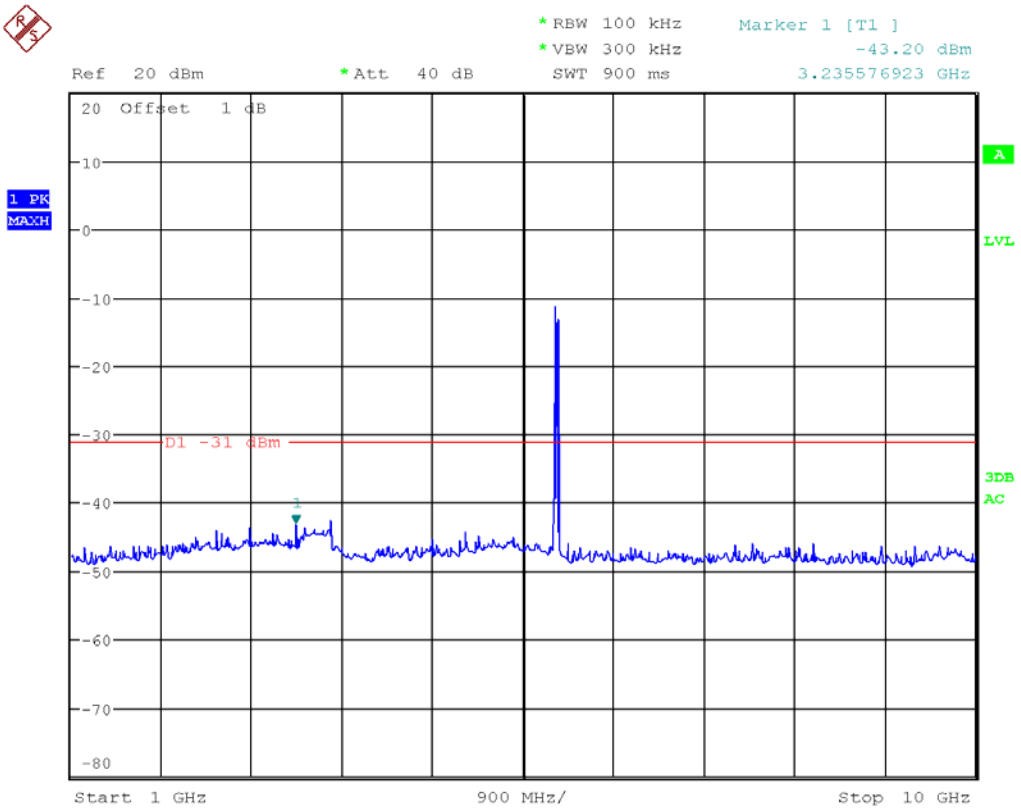
802.11n40 mode:
Channel 5830MHz
Reference level



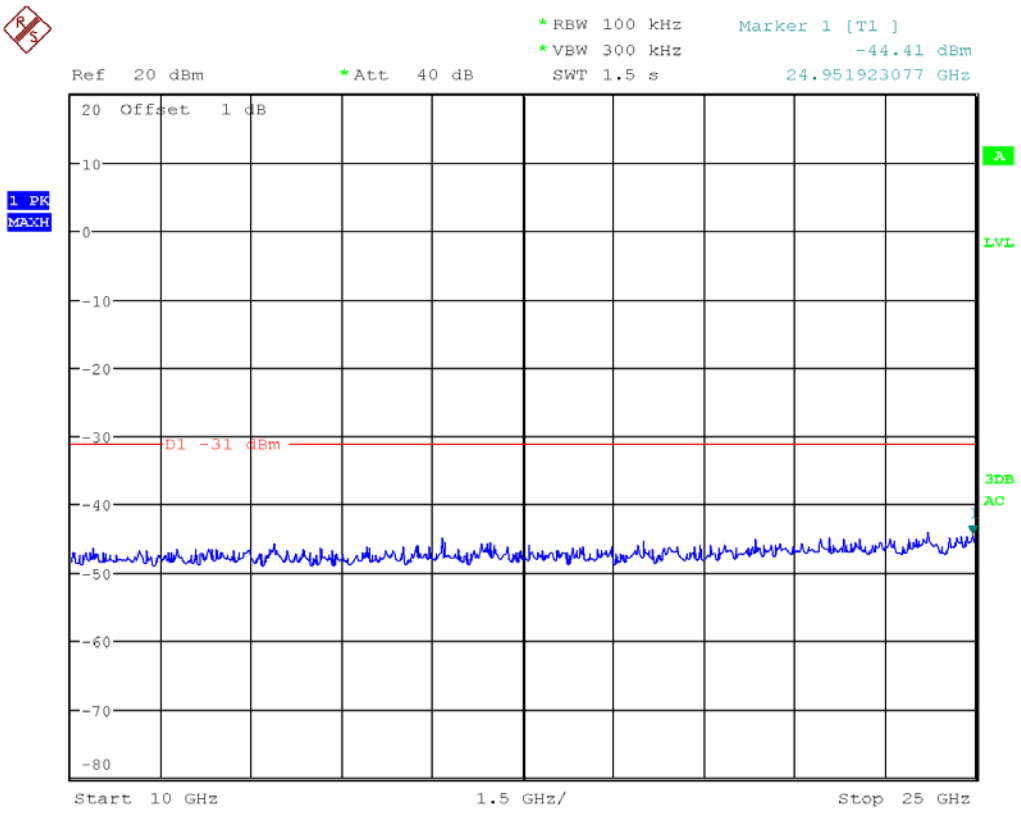
30M-1G



1G-10G



10G-25G


* RBW 100 kHz
* VBW 300 kHz
SWT 1.5 s
Marker 1 [T1]
-44.41 dBm
24.951923077 GHz
Ref 20 dBm
* Att 40 dB
20 Offset 1 dB
1 PK
MAXH
A
LVL
3DB
AC
D1 -31 dBm
10
0
-10
-20
-30
-40
-50
-60
-70
-80
Start 10 GHz
1.5 GHz/
Stop 25 GHz

11. BAND-EDGE MEASUREMENTS

11.1 LIMITS

FCC 15.247(d) & 15.209

11.2 TEST PROCEDURES

Test procedures follow KDB 558074 D01 DTS Measurement Guidance v03r01.

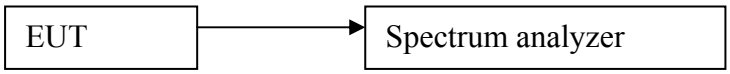
Remove the antenna from the EUT and then connect a low attenuation cable from the antenna port to the spectrum.

1. Reference level measurement

Below 1GHz Set the spectrum analyzer: RBW =100KHz VBW >= 3*RBW, Set the span to ≥ 1.5 times the DTS bandwidth. Sweep = auto; Detector Function = peak. Trace = Max-hold. Allow the trace to stabilize.

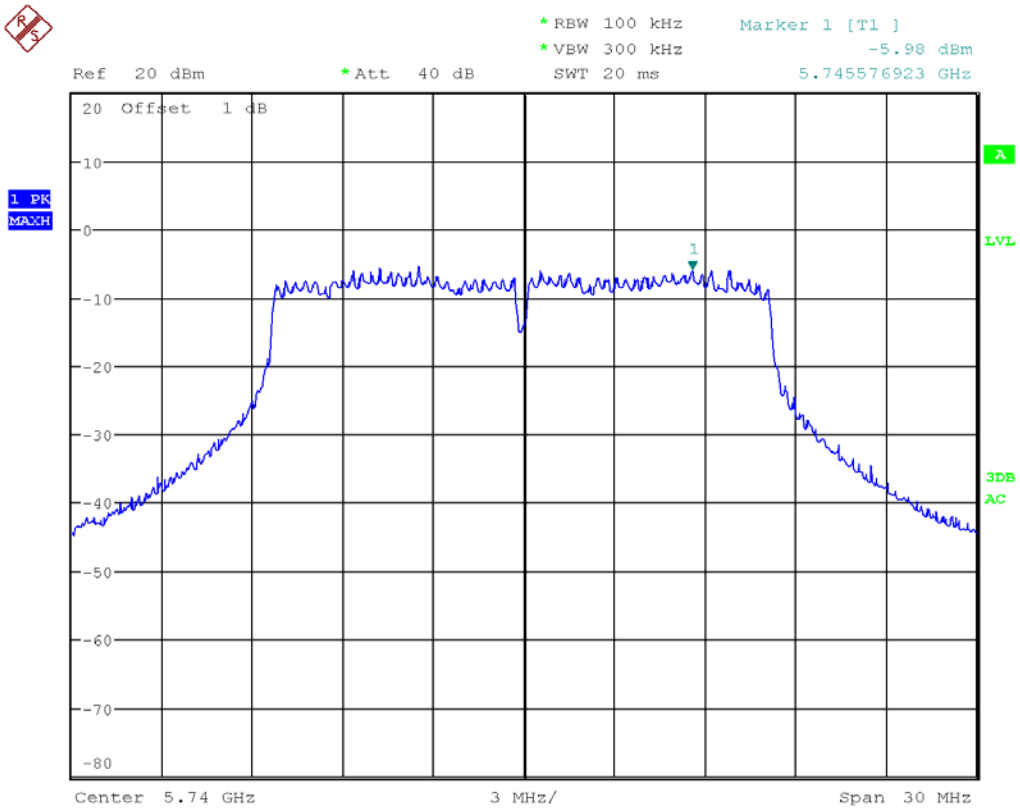
2. Set the spectrum analyzer: RBW =100KHz VBW >= 3*RBW, Set the span to ≥ 1.5 times the DTS bandwidth. Sweep = auto; Detector Function = peak. Trace = Max-hold. Allow the trace to stabilize.

11.3 TEST SETUP

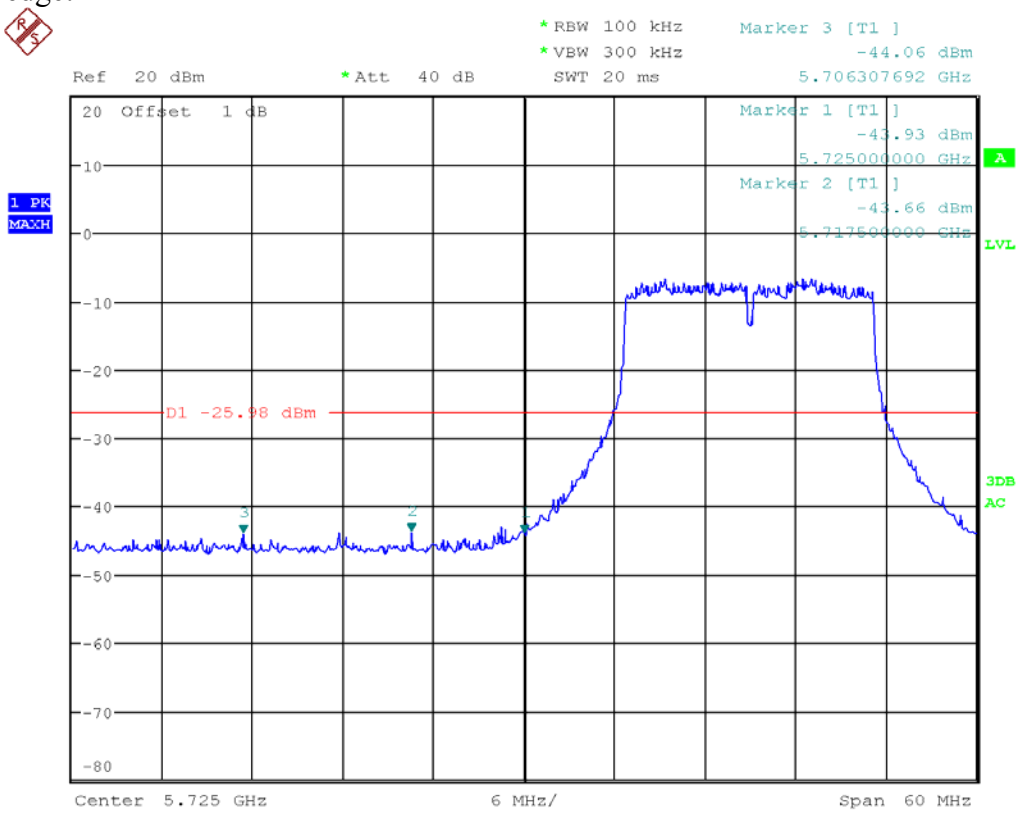


11.4 TEST RESULTS

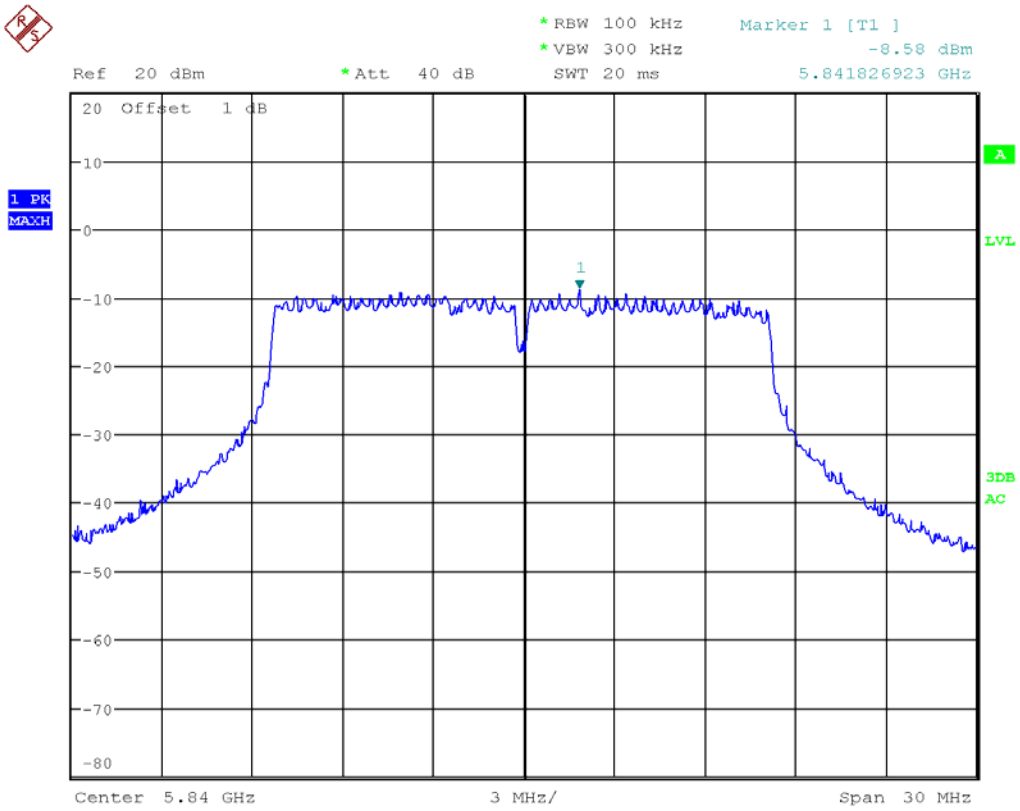
802.11a mode:
Channel 5740MHz
reference level：



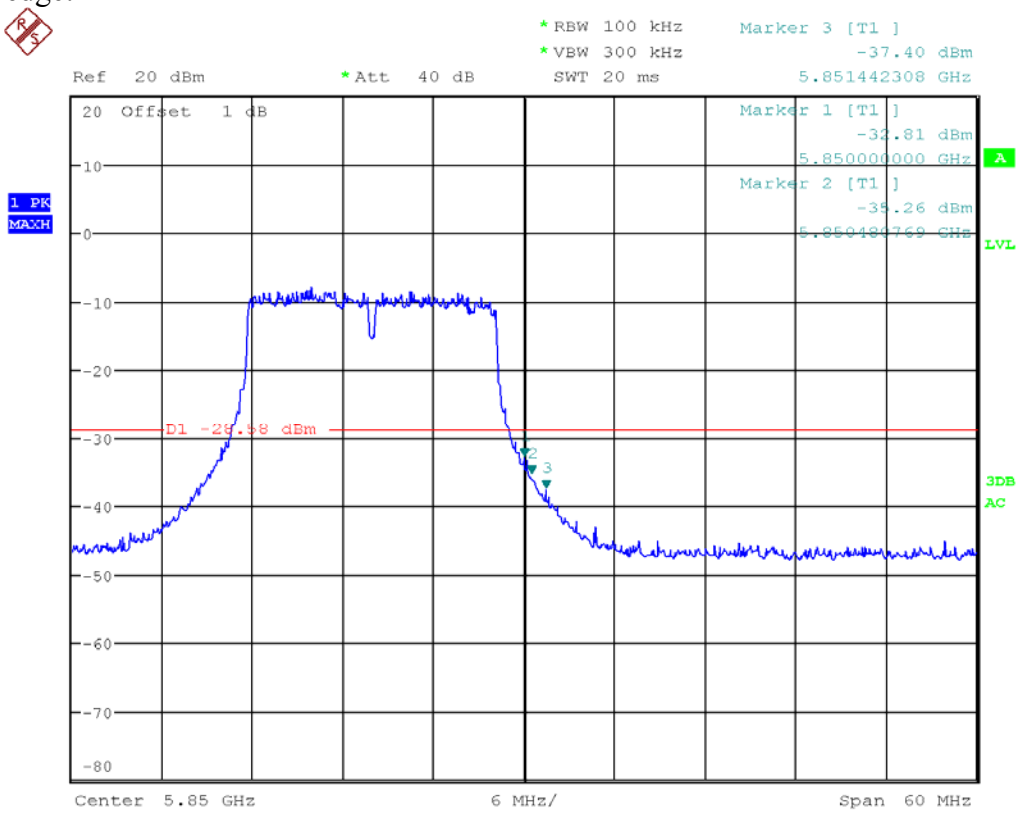
Band edge:

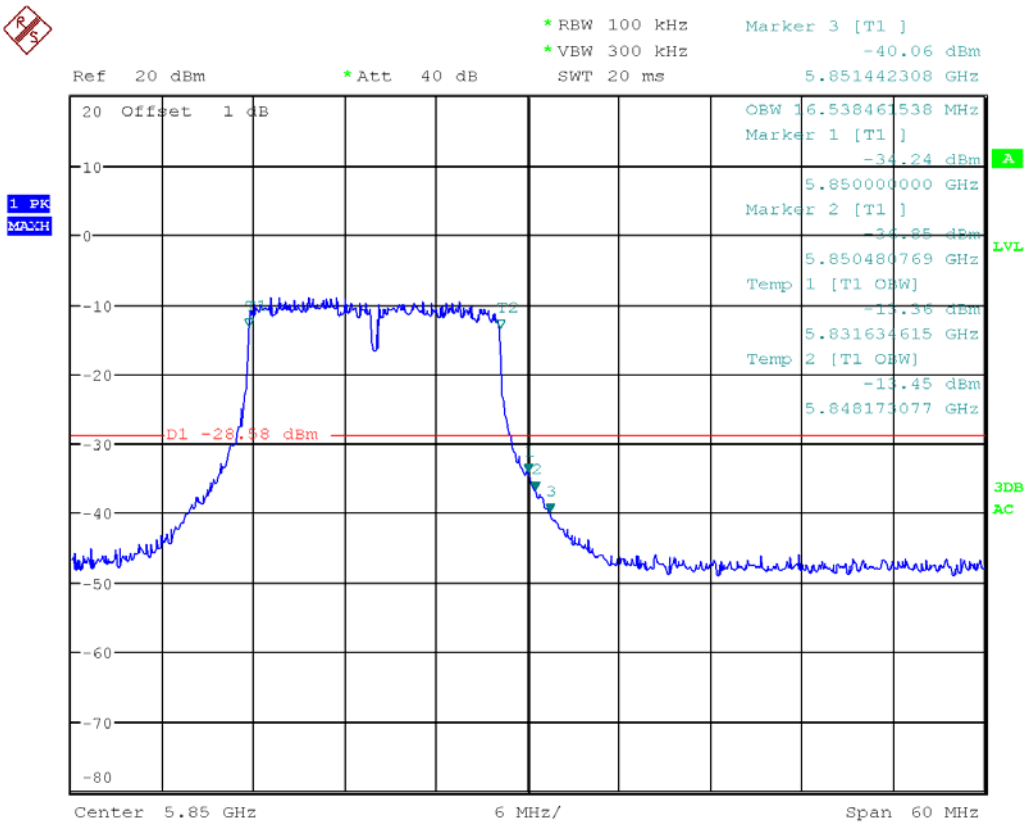


802.11a mode:
Channel 5840MHz
reference level：

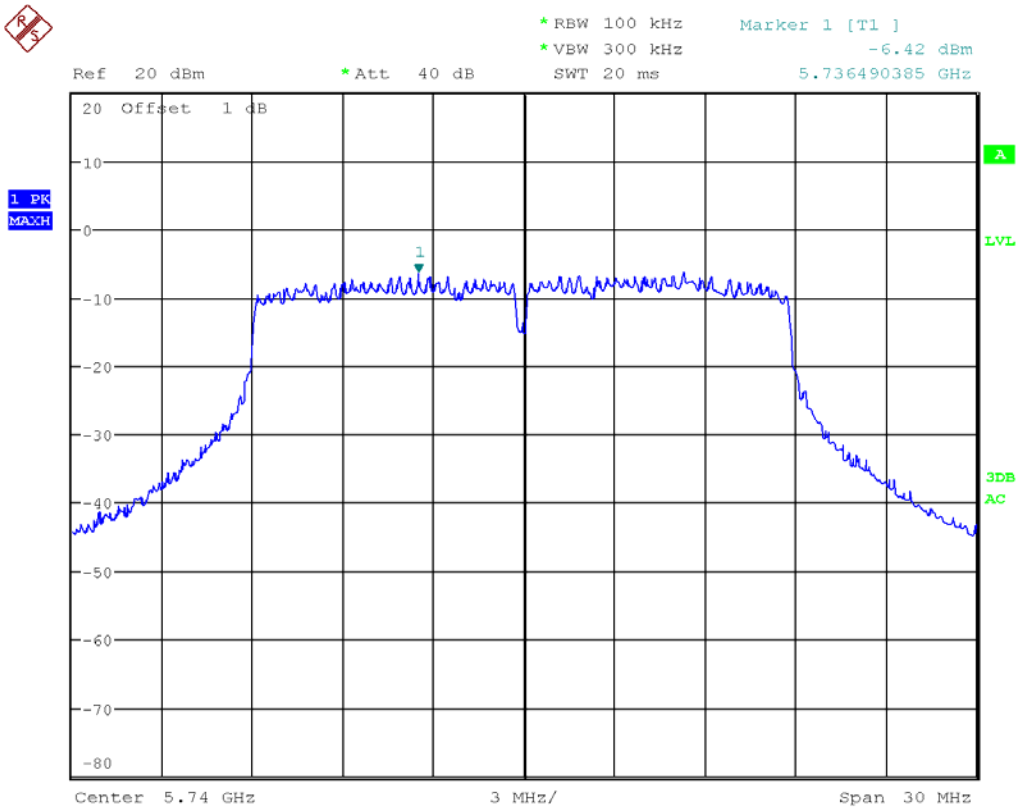


Band edge:

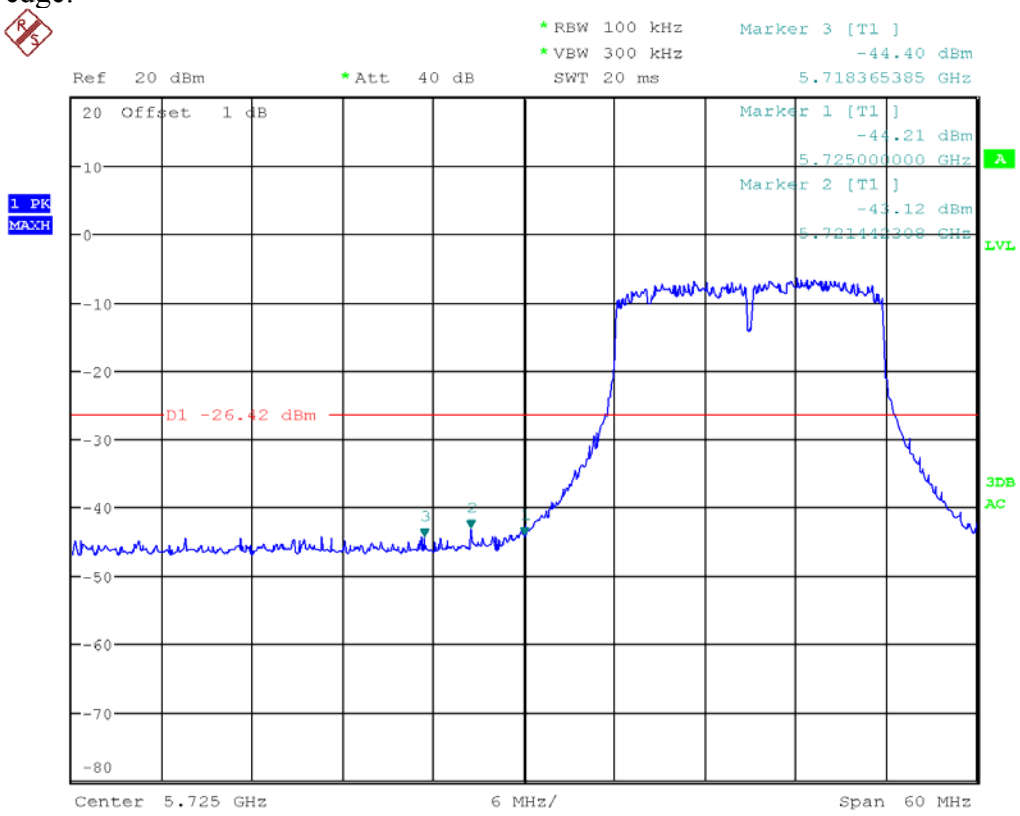

RBW 100 kHz
VBW 300 kHz
SWT 20 ms
Marker 3 [T1]
-37.40 dBm
5.851442308 GHz
Ref 20 dBm
Att 40 dB
20 Offset 1 dB
Marker 1 [T1]
-32.81 dBm
5.850000000 GHz
Marker 2 [T1]
-35.26 dBm
5.850480769 GHz
1 PK
MAXH
A
LVL
3DB
AC
D1 -29.58 dBm
Center 5.85 GHz
6 MHz/
Span 60 MHz


RBW 100 kHz
VBW 300 kHz
SWT 20 ms
Marker 3 [T1]
-40.06 dBm
5.851442308 GHz
Ref 20 dBm
Att 40 dB
20 Offset 1 dB
OBW 16.538461538 MHz
Marker 1 [T1]
-34.24 dBm
5.850000000 GHz
Marker 2 [T1]
-34.85 dBm
5.850480769 GHz
Temp 1 [T1 OBW]
-13.36 dBm
5.831634615 GHz
Temp 2 [T1 OBW]
-13.45 dBm
5.848173077 GHz
1 PK
MAXH
A
LVL
3DB
AC
D1 -28.58 dBm
Center 5.85 GHz
6 MHz/
Span 60 MHz

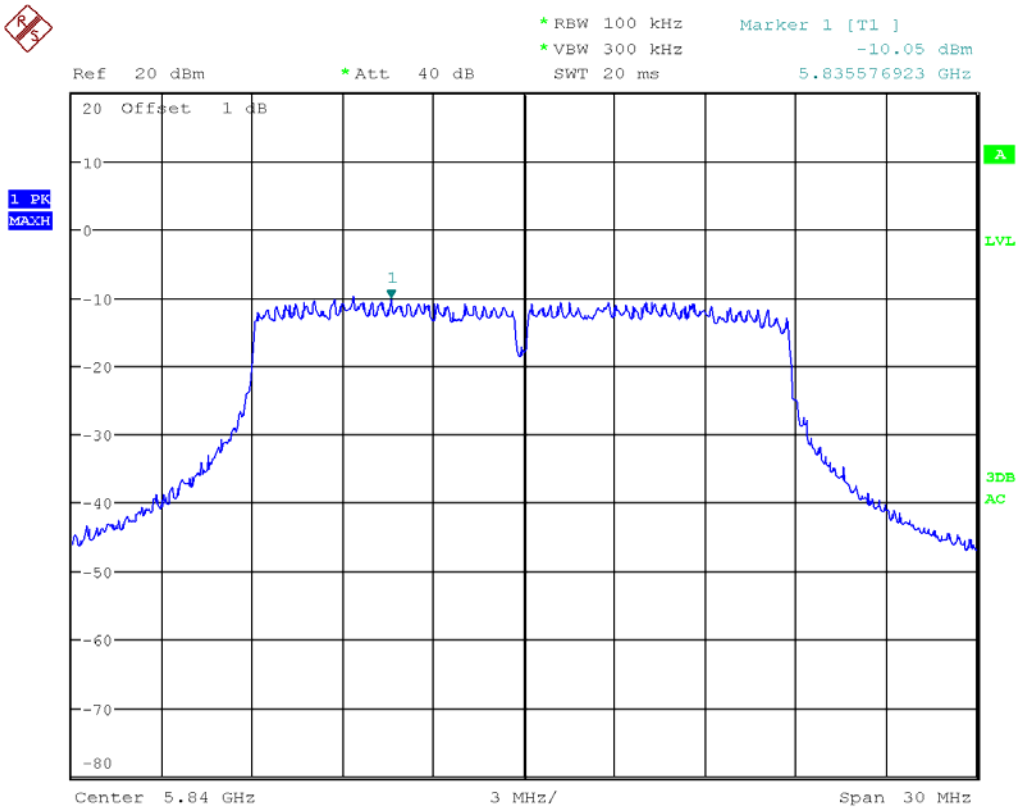
802.11n20 mode:
Channel 5740MHz
reference level：



Band edge:



802.11n20 mode:
Channel 5840MHz
reference level：



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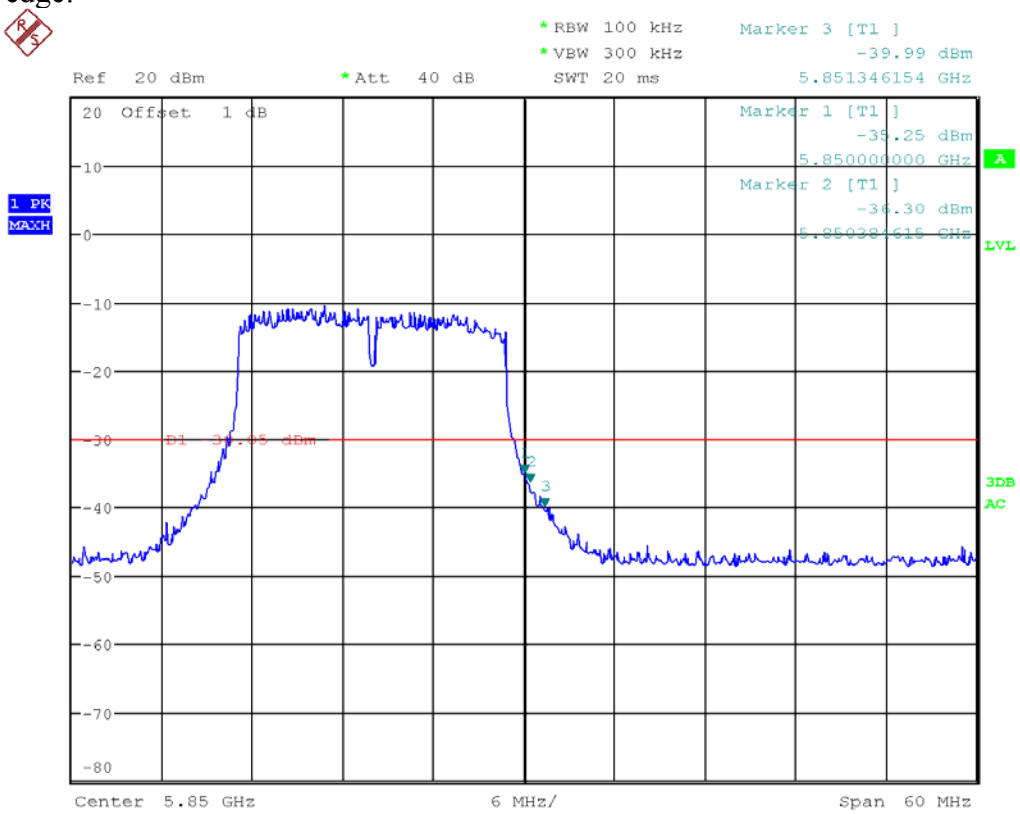
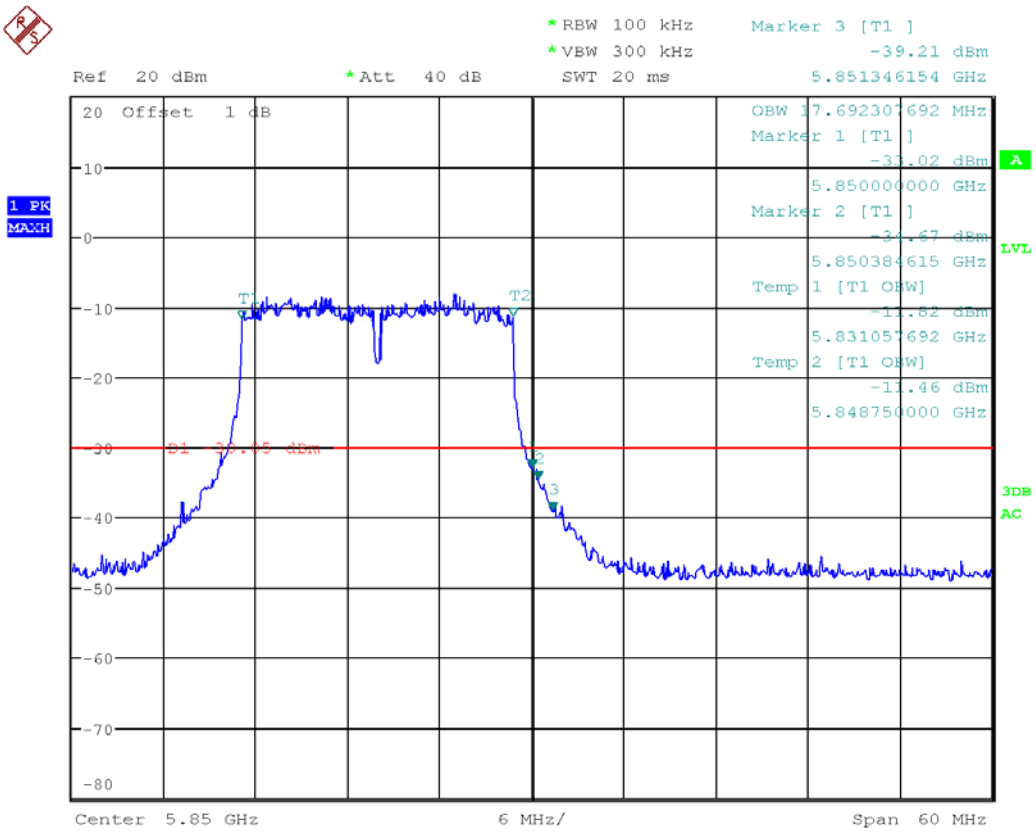
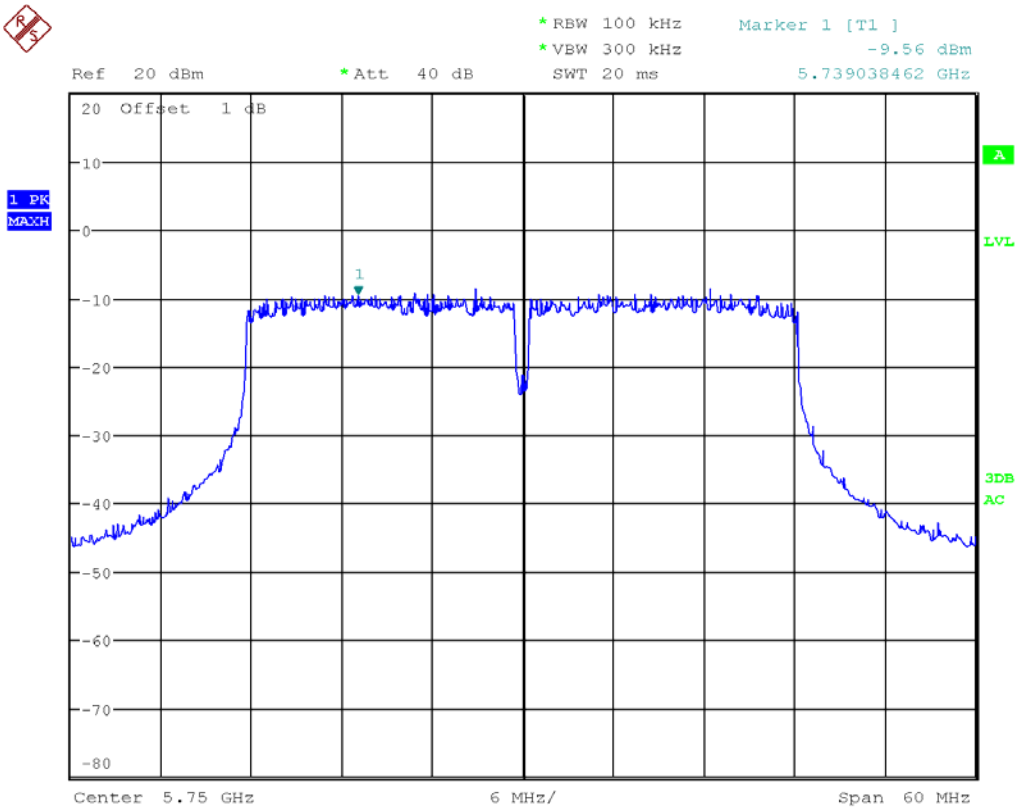
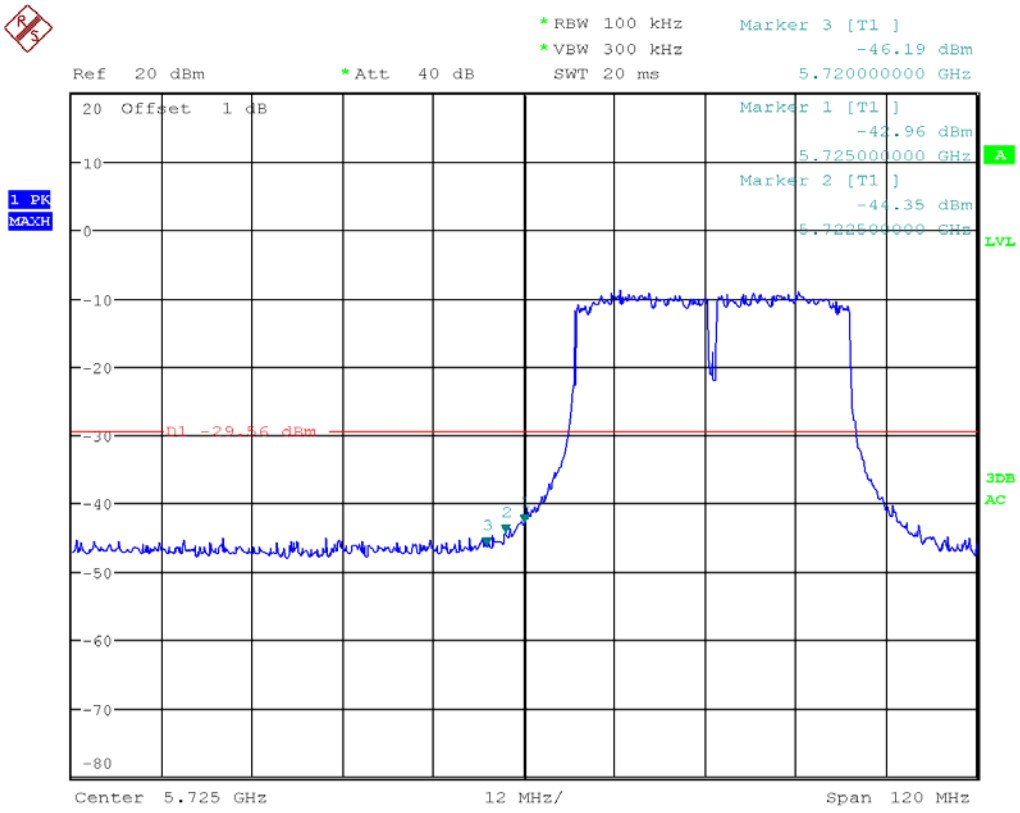




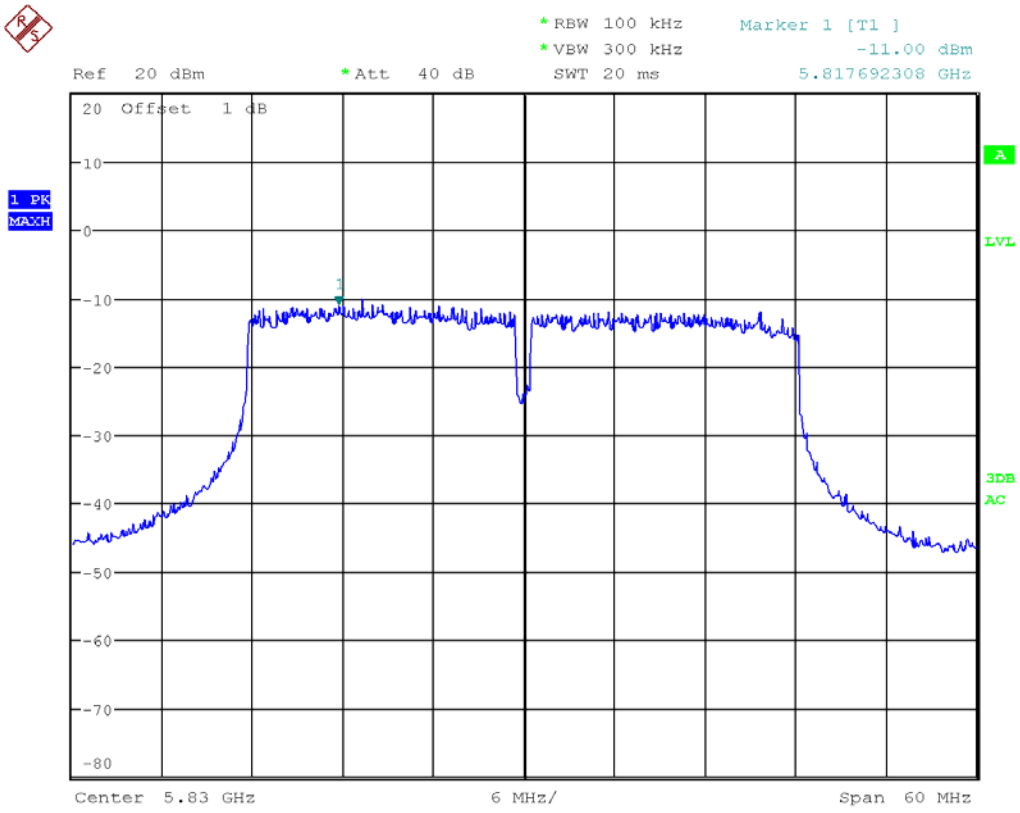
802.11n40 mode:
Channel 5750MHz
reference level：



Band edge:



802.11n40 mode:
Channel 5830MHz
reference level：



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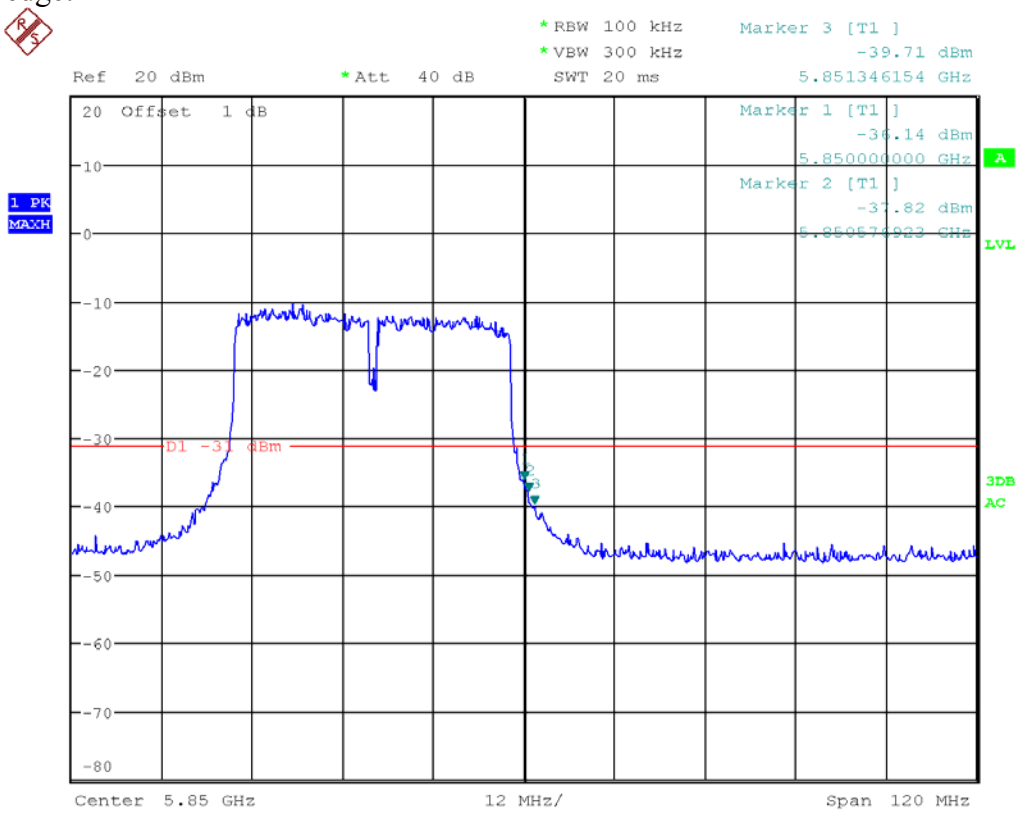

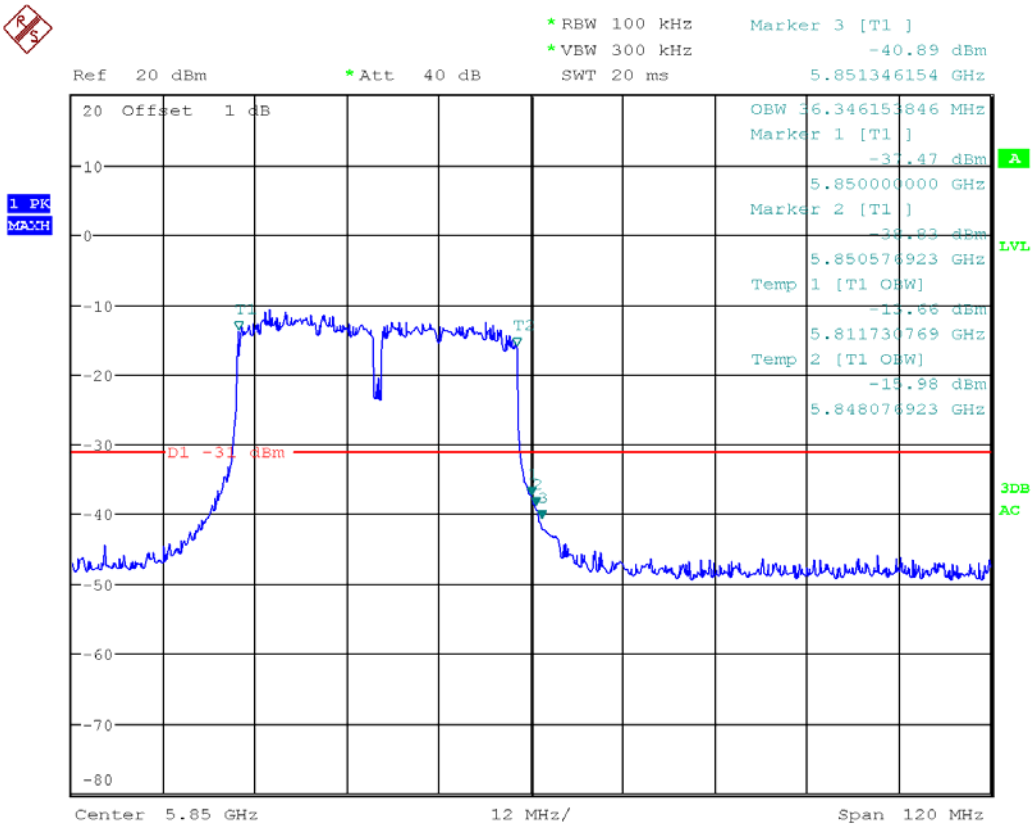

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