

**Application for FCC Certification
On behalf of**

Hisense Electric Co., Ltd.

Product Name: NETWORK MEDIA PLAYER

Model No.: GX1200V

FCC ID: W9HLCDX0006

**Prepared For : Hisense Electric Co., Ltd.
No.218 Qianwangang Road, Economy & Technology
Development Zone, Qingdao, China**

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**Report No. : ACI-F12174
Date of Test : Nov. 02 – 05, 2012
Date of Report : Nov. 06, 2012**

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TEST REPORT FOR FCC CERTIFICATE

Applicant : Hisense Electric Co., Ltd.

Manufacturer : Hisense Electric Co., Ltd.

EUT Description : NETWORK MEDIA PLAYER

(A) Model No. : GX1200V

(B) Test Voltage : AC 120V/60Hz

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART C OCTOBER 2011
AND ANSI C63.4-2003*

The device described above is tested by Audix Technology (Shanghai) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits.

The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report also shows that the EUT (M/N: GX1200V), which was tested on Nov. 02 – 05, 2012 is technically compliant with the FCC limits.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Date of Test : Nov. 02 – 05, 2012 Date of Report : Nov. 06, 2012

Producer : Kathy Wang
KATHY WANG / Assistant

Review : D. Yang
DIO YANG / Assistant Manager

 For and on behalf of
Audix Technology (Shanghai) Co., Ltd.

Signatory : S. Chen
Authorized Signature EMC SAMMY CHEN / Deputy Manager

1 SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Description / Test Item	Test Standard	Results	Meets Limit
EMISSION			
Conducted Emission Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C October 2011 AND ANSI C63.4:2003	Pass	15.207
Spurious Radiated Emissions Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C October 2011 AND ANSI C63.4:2003 AND DA 00-705	Pass	15.209(a) 15.205(a)(c)
20 dB Bandwidth Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C October 2011 AND DA 00-705	Pass	15.247(a)(1)
Peak Output Power Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C October 2011 AND DA 00-705	Pass	15.247(b)(1)
Spurious RF Conducted Emissions Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C October 2011 AND DA 00-705	Pass	15.247(d)
Band-edge Compliance of RF Conducted Emissions Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C October 2011 AND DA 00-705	Pass	15.247(d)
Number of Hopping Frequencies Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C October 2011 AND DA 00-705	Pass	15.247(a)(1)
Carrier Frequency Separation Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C October 2011 AND DA 00-705	Pass	15.247(a)(1)
Dwell Time Measurement	FCC RULES AND REGULATIONS PART 15 SUBPART C October 2011 AND DA 00-705	Pass	15.247(a)(1)

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description : NETWORK MEDIA PLAYER

Type of EUT : Production Pre-product Pro-type

Model Number : GX1200V

Radio Tech : Bluetooth

Standard : BTv2.1+EDR

Data Rate : 1Mbps/2Mbps/3Mbps
We evaluated and selected 1Mbps (GFSK) and 3Mbps (8DPSK) to test and recorded in the report.

Freq. Band : 2402 MHz ~ 2480 MHz
Total 79 Channels

Tested Freq. : 2402 MHz (Channel 00)
2441 MHz (Channel 39)
2480 MHz (Channel 78)

Antenna Gain : 1.77 dBi

Adapter : Manufacturer : HGPOWER
Model Number : AD63C
Input : 100-240V~, 50/60Hz 0.8A
Output : 12V— 2.0A
Output Cable : Unshielded, Undetachable, 1.8m

Applicant : Hisense Electric Co., Ltd.
No.218 Qianwangang Road, Economy & Technology
Development Zone, Qingdao, China

Manufacturer : Hisense Electric Co., Ltd.
No.218 Qianwangang Road, Economy & Technology
Development Zone, Qingdao, China

2.2 Description of Test Facility

Site Description : Sept. 17, 1998 file on
(Semi-Anechoic Chamber) Mar 16, 2012 Renewed
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046, USA

Name of Firm : Audix Technology (Shanghai) Co., Ltd.

Site Location : 3 F 34 Bldg 680 Guiping Rd.,
Caohejing Hi-Tech Park,
Shanghai 200233, China

FCC registration Number : 91789

Accredited by NVLAP, Lab Code : 200371-0

2.3 Measurement Uncertainty

Conducted Emission Expanded Uncertainty : $U = 3.42 \text{ dB}$

Radiated Emission Expanded Uncertainty (30-200MHz):

$U = 4.14\text{dB}$ (Horizontal)

$U = 4.28\text{dB}$ (Vertical)

Radiated Emission Expanded Uncertainty (200M-1GHz):

$U = 4.18\text{dB}$ (Horizontal)

$U = 4.26\text{dB}$ (Vertical)

Radiated Emission Expanded Uncertainty (Above 1GHz):

$U = 4.50 \text{ dB}$ (Horizontal)

$U = 4.16 \text{ dB}$ (Vertical)

20 dB Bandwidth Expanded Uncertainty : $U = 0.05 \text{ kHz}$

Peak Output Power Expanded Uncertainty : $U = 0.30 \text{ dB}$

Spurious RF Conducted Emissions Expanded Uncertainty : $U = 0.15 \text{ dB}$

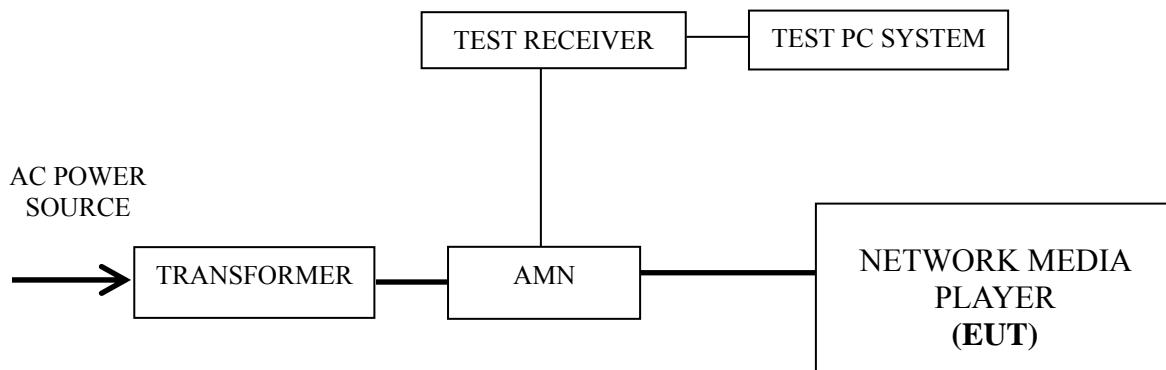
3 CONDUCTED EMISSION TEST

3.1 Test Equipment

The following test equipments are used during the conducted emission test in a shielded room:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	100841	Mar 22, 2012	Mar 22, 2013
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	Feb 13, 2012	Feb 13, 2013
3.	50Ω Coaxial Switch	Anritsu	MP59B	6200426389	Sep 18, 2012	Mar 18, 2013
4.	Software	Audix	E3	SET00200 9804M592	--	--

3.2 Block Diagram of Test Setup



— : Signal Line

— : Power Line

3.3 Conducted Emission Limits [FCC Part 15 Subpart C 15.207]

Frequency Range (MHz)	Conducted Limit (dB μ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66~56*	56~46*
0.5 ~ 5	56	46
5 ~ 30	60	50

NOTE – *Decreases with the logarithm of the frequency.

3.4 Test Configuration

The EUT (listed in Sec.2.1) was installed as shown on Sec.3.2 to meet FCC requirement and operating in a manner that tends to maximize its emission level in a normal application.

3.5 Operating Condition of EUT

- 3.5.1 Setup the EUT as shown in Sec. 3.2.
- 3.5.2 Turn on the power of all equipments and the EUT.
- 3.5.3 Set the EUT on the test mode (Transmitting), and then test.

3.6 Test Procedures

The EUT was connected to the power mains through an Artificial Mains Network (AMN). This provided a 50 ohm coupling impedance for the measuring equipment.

Both sides of AC line (Line & Neutral) were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed or manipulated according to ANSI C63.4:2003 during conducted emission test.

The bandwidth of R&S Test Receiver ESCI was set at 9 kHz.

The frequency range from 150 kHz to 30 MHz was checked.

The test modes were done on conducted disturbance test and all the test results are listed in Sec. 3.7.

3.7 Test Results

< PASS >

The frequency and amplitude of the highest conducted emission relative to the limit is reported. All emissions not reported below are too low against the prescribed limits.

NOTE 1 – Factor = Cable Loss + AMN Factor.

NOTE 2 – Emission Level = Meter Reading + Factor.

NOTE 3 – “QP” means “Quasi-Peak” values, “AV” means “Average” values.

NOTE 4 – The worst emission is detected at 23.880 MHz (Average Value) with corrected signal level of 41.35 dB (μ V) (limit is 50.00 dB (μ V)), when the Line of the EUT is connected to AMN.

EUT	:	NETWORK MEDIA PLAYER	Temperature :	25°C
Model No.	:	GX1200V	Humidity :	44%RH
Test Mode	:	Transmitting	Date of Test :	Nov. 05, 2012

Test Line	Frequency (MHz)	Meter Reading dB(μV)	Factor (dB)	Emission Level dB(μV)	Limits dB(μV)	Margin (dB)	Remark
Line	0.152	42.99	0.23	43.22	65.90	22.68	QP
	0.179	47.49	0.25	47.74	64.54	16.80	
	0.580	38.03	0.30	38.33	56.00	17.67	
	2.267	27.95	0.40	28.35	56.00	27.65	
	6.955	29.12	0.66	29.78	60.00	30.22	
	23.880	41.88	1.15	43.03	60.00	16.97	
	0.152	20.40	0.23	20.63	55.90	35.27	
	0.179	31.79	0.25	32.04	54.54	22.50	
	0.580	25.30	0.30	25.60	46.00	20.40	
	2.267	19.20	0.40	19.60	46.00	26.40	
Neutral	6.955	22.40	0.66	23.06	50.00	26.94	AV
	23.880	40.20	1.15	41.35	50.00	8.65	
	0.150	46.76	0.13	46.89	66.00	19.11	
	0.177	47.53	0.12	47.65	64.62	16.97	
	0.579	38.12	0.18	38.30	56.00	17.70	
	2.289	27.88	0.19	28.07	56.00	27.93	
	9.209	30.03	0.50	30.53	60.00	29.47	
	27.740	39.65	1.11	40.76	60.00	19.24	
	0.150	20.70	0.13	20.83	56.00	35.17	
	0.177	30.80	0.12	30.92	54.62	23.70	
Neutral	0.579	25.40	0.18	25.58	46.00	20.42	AV
	2.289	18.30	0.19	18.49	46.00	27.51	
	9.209	23.70	0.50	24.20	50.00	25.80	
	27.740	34.10	1.11	35.21	50.00	14.79	

TEST ENGINEER: JOE YE

4 RADIATED EMISSION TEST

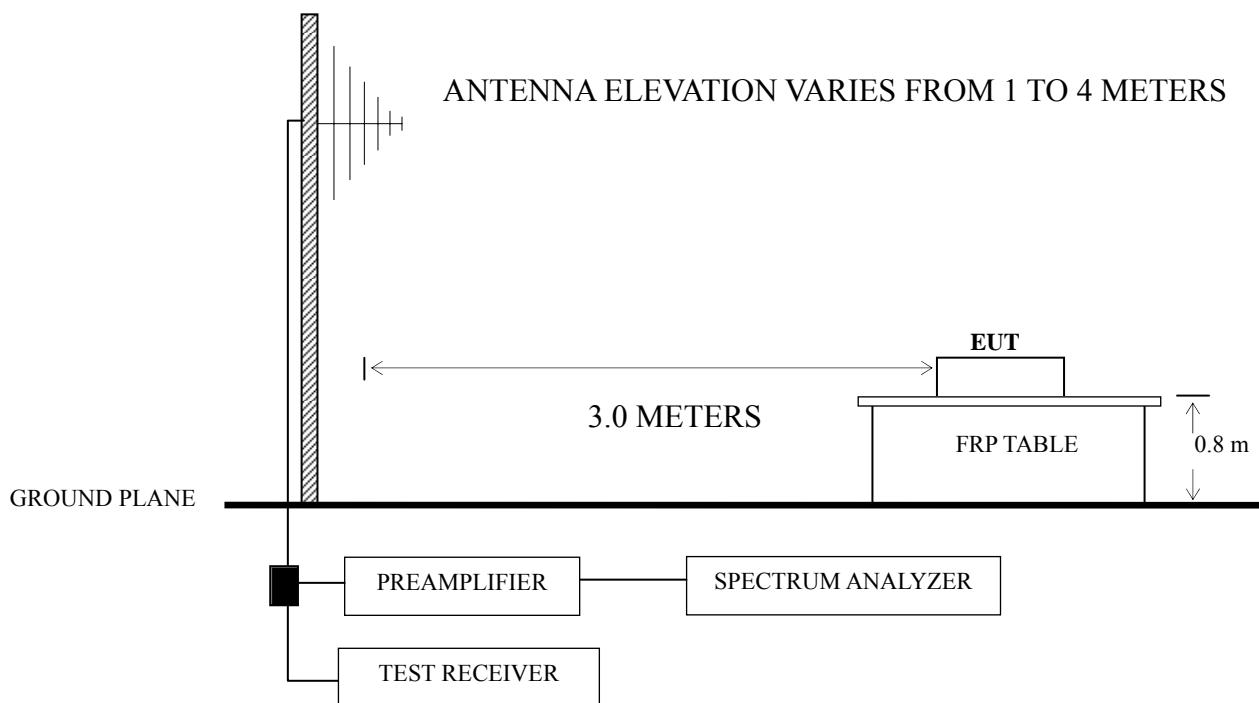
4.1 Test Equipment

The following test equipment are used during the radiated emission test in a semi-anechoic chamber:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Preamplifier	Agilent	8447D	2944A10548	Sep 18, 2012	Mar 18, 2013
2.	Preamplifier	HP	8449B	3008A00864	Apr 29, 2012	Apr 29, 2013
3.	Spectrum Analyzer	Agilent	E7405A	MY45106600	Mar 22, 2012	Mar 22, 2013
4.	Test Receiver	R&S	ESVS10	844594/001	Mar 22, 2012	Mar 22, 2013
5.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 03, 2012	May 03, 2013
6.	Horn Antenna	EMCO	3115	9607-4878	May 03, 2012	May 03, 2013
7.	Horn Antenna	EMCO	3116	00062643	Jul 21, 2012	Jul 21, 2013
8.	50Ω Coaxial Switch	Anritsu	MP59B	6200426390	Sep 18, 2012	Mar 18, 2013
9.	Software	Audix	E3	SET00200 9912M295-2	-	-

4.2 Block Diagram of Test Setup

4.2.1 Test Setup



4.3 Radiated Emission Limit [FCC Part 15 Subpart C 15.209]

Frequency (MHz)	Distance (m)	Field strength limits ($\mu\text{V}/\text{m}$)	
		($\mu\text{V}/\text{m}$)	dB($\mu\text{V}/\text{m}$)
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0

NOTE 1 - Emission Level dB ($\mu\text{V}/\text{m}$) = 20 log Emission Level ($\mu\text{V}/\text{m}$)
 NOTE 2 - The tighter limit applies at the band edges.
 NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
 NOTE 4 - The limits shown are based on Quasi-peak value detector below or equal to 1GHz and Average value detector above 1GHz.
 NOTE 5 - Above 1 GHz, the limit on peak emission is 20 dB above the maximum permitted average emission limit applicable to the EUT

4.4 Test Configuration

The EUT (listed in Sec.2.1) and the simulators (listed in Sec.2.2) were installed as shown on Sec.4.2 to meet FCC requirements and operating in a manner that tends to maximize its emission level in a normal application.

4.5 Operating Condition of EUT

4.5.1 Setup the EUT as shown in Sec. 4.2.

4.5.2 Turn on the power of all equipment.

4.5.3 Turn the EUT on the test mode, and then test.

4.6 Test Procedures

Radiated emission test applies to harmonics/spurs that fall in the restricted bands listed in Section 15.205. The maximum permitted average field strength is listed in Section 15.209. A pre-amp is necessary for this measurement. For measurement above 1 GHz, set RBW = 1MHz, VBW = 10 Hz, Sweep: Auto. If the emission is pulsed, modify the unit for continuous operation; use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation.

The EUT was placed on a turntable that is 0.8 meter above ground. The turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (Calibrated Bilog Antenna) or Horn antenna was used as receiving antenna. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.4:2003 requirements during radiated emission test.

The bandwidth of Test Receiver R&S ESVS10 was set at 120 kHz from 30MHz to 1000MHz.

The bandwidth of the VBW was set at 1MHz and RBW was set at 1MHz for peak emission measurement above 1GHz for Spectrum Agilent E7405A.

The frequency range from 30 MHz to 25 GHz (Up to 10th harmonics from fundamental frequency) was checked.

The EUT was tested under the following test modes:

Mode	Operation	Channel	Frequency
1.	Transmitting	00	2402 MHz
2.		39	2441 MHz
3.		78	2480 MHz
4.	Receiving	--	--
5.	Transmitting	00	2402 MHz
6.	Band-Edge	78	2480 MHz

All the test results are listed in Sec.4.7.

4.7 Test Results

<PASS>

The frequency and amplitude of the highest radiated emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

No.	Operation	Channel	Frequency	Data Page
1.	Transmitting (NON-EDR)	00	2402 MHz	P15
2.		39	2441 MHz	P16
3.		78	2480 MHz	P17
4.	Transmitting (EDR)	00	2402 MHz	P18
5.		39	2441 MHz	P19
6.		78	2480 MHz	P20
7.	Receiving	--	--	P21
8.	Transmitting	Band Edge		P22

NOTE 1 – Level = Read Level + Antenna Factor + Cable Loss (<1GHz)

NOTE 2 – Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor (>1GHz)

NOTE 3 – For WiFi and BT simultaneous condition, refer to WiFi test report (No. F12173).

NOTE 4 – All reading are Quasi-Peak values below or equal to 1GHz, Peak and Average values above 1GHz.

For above 1GHz test, if the peak measured value complies with the average limit, it is unnecessary to perform an average measurement.

EUT : NETWORK MEDIA PLAYER Temperature : 25°C

Model No. : GX1200V Humidity : 45%RH

Test Mode : Transmitting Ch00
(NON-EDR) Date of Test : Nov 03, 2012

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	32.91	1.16	16.79	0.82	--	18.77	40.00	21.23	QP
	153.19	10.58	10.36	2.24	--	23.18	43.50	20.32	
	337.49	10.23	14.74	2.85	--	27.82	46.00	18.18	
	499.48	8.34	17.60	3.27	--	29.21	46.00	16.79	
	619.76	8.40	18.46	3.51	--	30.37	46.00	15.63	
	783.69	8.71	20.44	3.86	--	33.01	46.00	12.99	
	1545.00	58.77	26.11	5.86	36.79	53.95	74.00	20.05	
	2010.00	48.05	30.94	6.44	36.10	49.33	74.00	24.67	
	3095.00	50.73	29.28	6.58	35.63	50.96	74.00	23.04	
Vertical	5525.00	43.49	33.47	9.46	34.74	51.68	74.00	22.32	PK
	33.88	9.96	16.26	0.83	--	27.05	40.00	12.95	
	88.20	11.24	10.93	1.70	--	23.87	43.50	19.63	
	281.23	14.78	13.17	2.70	--	30.65	46.00	15.35	
	499.48	4.36	17.60	3.27	--	25.23	46.00	20.77	
	669.23	9.21	19.12	3.62	--	31.95	46.00	14.05	
	746.83	5.76	20.01	3.80	--	29.57	46.00	16.43	
	1125.00	57.13	24.19	5.30	37.92	48.70	74.00	25.30	
	2165.00	51.05	30.09	6.63	36.04	51.73	74.00	22.27	
Vertical	3400.00	48.36	30.47	6.99	35.53	50.29	74.00	23.71	PK
	5530.00	43.77	33.44	9.46	34.74	51.93	74.00	22.07	

TEST ENGINEER: RAVEN JIN

EUT : NETWORK MEDIA PLAYER Temperature : 25°C

Model No. : GX1200V Humidity : 45%RH

Test Mode : Transmitting Ch39
(NON-EDR) Date of Test : Nov 03, 2012

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	40.67	10.10	12.33	0.87	--	23.30	40.00	16.70	QP
	90.14	10.65	11.00	1.73	--	23.38	43.50	20.12	
	316.15	9.22	14.15	2.79	--	26.16	46.00	19.84	
	397.63	9.57	16.24	2.98	--	28.79	46.00	17.21	
	669.23	9.28	19.12	3.62	--	32.02	46.00	13.98	
	934.04	7.28	20.48	5.07	--	32.83	46.00	13.17	
	1500.00	59.38	25.60	5.79	36.91	53.86	74.00	20.14	PK
	2010.00	50.90	30.94	6.44	36.10	52.18	74.00	21.82	
	3095.00	47.93	29.28	6.58	35.63	48.16	74.00	25.84	
Vertical	5495.00	43.98	33.39	9.55	34.75	52.17	74.00	21.83	
	34.85	9.11	15.70	0.84	--	25.65	40.00	14.35	QP
	158.04	10.09	10.28	2.27	--	22.64	43.50	20.86	
	337.49	11.43	14.74	2.85	--	29.02	46.00	16.98	
	376.29	12.24	15.79	2.93	--	30.96	46.00	15.04	
	746.83	7.05	20.01	3.80	--	30.86	46.00	15.14	
	953.44	9.72	20.59	5.10	--	35.41	46.00	10.59	
	1500.00	59.05	25.60	5.79	36.91	53.53	74.00	20.47	PK
	2010.00	50.46	30.94	6.44	36.10	51.74	74.00	22.26	
	3235.00	45.62	29.85	6.78	35.58	46.67	74.00	27.33	
	5255.00	44.26	31.55	9.40	34.84	50.37	74.00	23.63	

TEST ENGINEER: RAVEN JIN

EUT : NETWORK MEDIA PLAYER Temperature : 25°C

Model No. : GX1200V Humidity : 45%RH

Test Mode : Transmitting Ch78
(NON-EDR) Date of Test : Nov 03, 2012

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	34.85	10.97	15.70	0.84	--	27.51	40.00	12.49	QP
	107.60	8.34	11.22	1.92	--	21.48	43.50	22.02	
	162.89	12.92	10.21	2.29	--	25.42	43.50	18.08	
	332.64	11.54	14.62	2.84	--	29.00	46.00	17.00	
	478.14	10.20	17.34	3.21	--	30.75	46.00	15.25	
	851.59	11.62	20.44	4.45	--	36.51	46.00	9.49	
	1135.00	55.83	24.24	5.32	37.90	47.49	74.00	26.51	PK
	1955.00	51.22	30.64	6.38	36.15	52.09	74.00	21.91	
	4010.00	44.03	32.70	8.21	35.39	49.55	74.00	24.45	
Vertical	5550.00	43.57	33.41	9.46	34.73	51.71	74.00	22.29	QP
	41.64	12.64	11.78	0.88	--	25.30	40.00	14.70	
	91.11	13.23	11.05	1.75	--	26.03	43.50	17.47	
	109.54	10.92	11.19	1.93	--	24.04	43.50	19.46	
	252.13	10.81	12.09	2.62	--	25.52	46.00	20.48	
	337.49	11.97	14.74	2.85	--	29.56	46.00	16.44	
	853.53	11.68	20.44	4.45	--	36.57	46.00	9.43	PK
	1080.00	58.90	24.01	5.27	38.02	50.16	74.00	23.84	
	1545.00	58.04	26.11	5.86	36.79	53.22	74.00	20.78	
	2425.00	51.19	28.64	6.92	35.94	50.81	74.00	23.19	
	5475.00	43.62	33.27	9.55	34.76	51.68	74.00	22.32	

TEST ENGINEER: RAVEN JIN

EUT : NETWORK MEDIA PLAYER Temperature : 25°C

Model No. : GX1200V Humidity : 45%RH

Test Mode : Transmitting Ch00 (EDR) Date of Test : Nov 03, 2012

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	105.66	10.83	11.26	1.90	--	23.99	43.50	19.51	QP
	250.19	19.41	11.99	2.61	--	34.01	46.00	11.99	
	375.32	12.69	15.79	2.93	--	31.41	46.00	14.59	
	500.45	10.56	17.60	3.27	--	31.43	46.00	14.57	
	624.61	10.11	18.53	3.51	--	32.15	46.00	13.85	
	874.87	8.13	20.37	4.75	--	33.25	46.00	12.75	
	1240.00	45.68	26.03	5.42	37.67	39.46	74.00	34.54	
	2140.00	45.65	28.02	6.59	36.16	44.10	74.00	29.90	
	2788.00	45.53	31.03	6.68	35.96	47.28	74.00	26.72	
Vertical	4384.00	43.43	33.69	8.73	35.52	50.33	74.00	23.67	PK
	61.04	13.70	9.21	1.21	--	24.12	40.00	15.88	
	250.19	13.94	11.99	2.61	--	28.54	46.00	17.46	
	375.32	13.89	15.79	2.93	--	32.61	46.00	13.39	
	431.58	10.95	16.72	3.08	--	30.75	46.00	15.25	
	624.61	6.11	18.53	3.51	--	28.15	46.00	17.85	
	749.74	8.27	20.05	3.80	--	32.12	46.00	13.88	
	1288.00	45.43	26.28	5.47	37.54	39.64	74.00	34.36	
	1852.00	45.40	27.30	6.26	36.37	42.59	74.00	31.41	
Vertical	2884.00	45.46	31.44	6.56	35.93	47.53	74.00	26.47	PK
	3640.00	44.27	32.45	7.42	35.75	48.39	74.00	25.61	

TEST ENGINEER: RAVEN JIN

EUT : NETWORK MEDIA PLAYER Temperature : 25°C

Model No. : GX1200V Humidity : 45%RH

Test Mode : Transmitting Ch39 (EDR) Date of Test : Nov 03, 2012

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	125.06	15.73	10.91	2.05	--	28.69	43.50	14.81	QP
	250.19	15.54	11.99	2.61	--	30.14	46.00	15.86	
	375.32	8.97	15.79	2.93	--	27.69	46.00	18.31	
	500.45	12.64	17.60	3.27	--	33.51	46.00	12.49	
	624.61	11.83	18.53	3.51	--	33.87	46.00	12.13	
	749.74	8.68	20.05	3.80	--	32.53	46.00	13.47	
	1252.00	45.52	26.10	5.42	37.64	39.40	74.00	34.60	
	1972.00	44.78	27.38	6.41	36.23	42.34	74.00	31.66	
	2764.00	45.66	30.91	6.68	35.97	47.28	74.00	26.72	
Vertical	3952.00	43.69	33.19	8.13	35.71	49.30	74.00	24.70	PK
	60.07	18.18	9.14	1.19	--	28.51	40.00	11.49	
	104.69	15.91	11.27	1.89	--	29.07	43.50	14.43	
	250.19	14.66	11.99	2.61	--	29.26	46.00	16.74	
	431.58	14.16	16.72	3.08	--	33.96	46.00	12.04	
	500.45	13.19	17.60	3.27	--	34.06	46.00	11.94	
	624.61	10.92	18.53	3.51	--	32.96	46.00	13.04	
	1276.00	45.40	26.21	5.47	37.57	39.51	74.00	34.49	
	2224.00	45.57	28.47	6.72	36.14	44.62	74.00	29.38	
	2992.00	45.68	31.87	6.49	35.90	48.14	74.00	25.86	
	4144.00	43.06	33.44	8.38	35.64	49.24	74.00	24.76	

TEST ENGINEER: RAVEN JIN

EUT : NETWORK MEDIA PLAYER Temperature : 25°C

Model No. : GX1200V Humidity : 45%RH

Test Mode : Transmitting Ch78 (EDR) Date of Test : Nov 03, 2012

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	232.73	16.08	11.19	2.55	--	29.82	46.00	16.18	QP
	250.19	19.27	11.99	2.61	--	33.87	46.00	12.13	
	375.32	16.25	15.79	2.93	--	34.97	46.00	11.03	
	500.45	14.22	17.60	3.27	--	35.09	46.00	10.91	
	624.61	12.88	18.53	3.51	--	34.92	46.00	11.08	
	749.74	7.26	20.05	3.80	--	31.11	46.00	14.89	
	1312.00	45.76	26.38	5.49	37.49	40.14	74.00	33.86	
	1900.00	44.88	27.34	6.32	36.31	42.23	74.00	31.77	
	2968.00	45.40	31.77	6.49	35.90	47.76	74.00	26.24	
Vertical	4336.00	43.11	33.66	8.64	35.55	49.86	74.00	24.14	PK
	61.04	17.39	9.21	1.21	--	27.81	40.00	12.19	
	105.66	18.19	11.26	1.90	--	31.35	43.50	12.15	
	250.19	16.55	11.99	2.61	--	31.15	46.00	14.85	
	375.32	15.01	15.79	2.93	--	33.73	46.00	12.27	
	500.45	15.00	17.60	3.27	--	35.87	46.00	10.13	
	624.61	14.20	18.53	3.51	--	36.24	46.00	9.76	
	1264.00	45.55	26.16	5.45	37.60	39.56	74.00	34.44	
	1900.00	44.91	27.34	6.32	36.31	42.26	74.00	31.74	
Vertical	2776.00	45.50	30.95	6.68	35.97	47.16	74.00	26.84	PK
	3664.00	44.30	32.50	7.42	35.75	48.47	74.00	25.53	

TEST ENGINEER: RAVEN JIN

EUT : NETWORK MEDIA PLAYER Temperature : 25°C

Model No. : GX1200V Humidity : 45%RH

Test Mode : Receiving Date of Test : Nov 03, 2012

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	36.79	12.98	14.57	0.85	--	28.40	40.00	11.60	QP
	87.23	13.87	10.88	1.70	--	26.45	40.00	13.55	
	158.04	14.33	10.28	2.27	--	26.88	43.50	16.62	
	227.88	12.03	10.97	2.53	--	25.53	46.00	20.47	
	398.60	8.73	16.27	2.98	--	27.98	46.00	18.02	
	807.94	6.83	20.58	3.99	--	31.40	46.00	14.60	
	1390.00	55.64	25.30	5.57	37.22	49.29	74.00	24.71	
	2165.00	51.40	30.09	6.63	36.04	52.08	74.00	21.92	
	3095.00	47.48	29.28	6.58	35.63	47.71	74.00	26.29	
	5430.00	43.91	32.92	9.50	34.78	51.55	74.00	22.45	
Vertical	38.73	5.05	13.40	0.86	--	19.31	40.00	20.69	QP
	158.04	11.50	10.28	2.27	--	24.05	43.50	19.45	
	281.23	10.04	13.17	2.70	--	25.91	46.00	20.09	
	376.29	12.48	15.79	2.93	--	31.20	46.00	14.80	
	865.17	10.38	20.41	4.60	--	35.39	46.00	10.61	
	987.39	9.06	20.74	5.18	--	34.98	54.00	19.02	
	1200.00	55.39	24.53	5.35	37.74	47.53	74.00	26.47	
	1680.00	51.67	27.61	6.06	36.54	48.80	74.00	25.20	
	2805.00	46.36	28.69	6.64	35.76	45.93	74.00	28.07	
	4320.00	44.68	31.51	8.64	35.27	49.56	74.00	24.44	

TEST ENGINEER: RAVEN JIN

Radiated Band Edge measurement:

For NON-EDR mode:

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	2390.00	47.86	28.80	6.89	35.95	47.60	74.00	26.40	PK
	2483.50	60.95	28.36	6.96	35.91	60.36	74.00	13.64	
	2390.00	34.61	28.80	6.89	35.95	34.35	54.00	19.65	AV
	2483.50	47.04	28.36	6.96	35.91	46.45	54.00	7.55	
Vertical	2390.00	47.02	28.80	6.89	35.95	46.76	74.00	27.24	PK
	2483.50	62.76	28.36	6.96	35.91	62.17	74.00	11.83	
	2390.00	34.49	28.80	6.89	35.95	34.23	54.00	19.77	AV
	2483.50	47.17	28.36	6.96	35.91	46.58	54.00	7.42	

For EDR mode:

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	2390.00	47.92	28.80	6.89	35.95	47.66	74.00	26.34	PK
	2483.50	61.13	28.36	6.96	35.91	60.54	74.00	13.46	
	2390.00	34.59	28.80	6.89	35.95	34.33	54.00	19.67	AV
	2483.50	47.33	28.36	6.96	35.91	46.74	54.00	7.26	
Vertical	2390.00	47.16	28.80	6.89	35.95	46.90	74.00	27.10	PK
	2483.50	63.18	28.36	6.96	35.91	62.59	74.00	11.41	
	2390.00	34.50	28.80	6.89	35.95	34.24	54.00	19.76	AV
	2483.50	47.64	28.36	6.96	35.91	47.05	54.00	6.95	

For EDR mode + 802.11b:

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)	Remark
Horizontal	2390.00	49.81	28.80	6.89	35.95	49.55	74.00	24.45	PK
	2483.50	62.64	28.36	6.96	35.91	62.05	74.00	11.95	
	2390.00	36.93	28.80	6.89	35.95	36.67	54.00	17.33	AV
	2483.50	49.52	28.36	6.96	35.91	48.93	54.00	5.07	
Vertical	2390.00	47.88	28.80	6.89	35.95	47.62	74.00	26.38	PK
	2483.50	63.77	28.36	6.96	35.91	63.18	74.00	10.82	
	2390.00	36.05	28.80	6.89	35.95	35.79	54.00	18.21	AV
	2483.50	48.46	28.36	6.96	35.91	47.87	54.00	6.13	

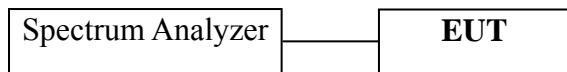
5 20 dB BANDWIDTH MEASUREMENT

5.1 Test Equipment

The following test equipment was used during the Emission Bandwidth measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101303	Sep 11, 2012	Sep 11, 2013

5.2 Block Diagram of Test Setup



5.3 Specification Limits (§15.247(a)(1))

For frequency hopping systems, hopping channel carrier frequencies separated by a minimum of 25kHz or the 20dB bandwidth of hopping channel, whichever is greater.

5.4 Operating Condition of EUT

The test program “Hyper-Terminal” was used to enable the EUT to transmit data at different channel frequency individually.

5.5 Test Procedure

The transmitter output was connected to the spectrum analyzer. The bandwidth of the fundamental frequency was measured by spectrum analyzer.

Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.

The test procedure is defined in DA 00-705.

5.6 Test Results

PASSED.

All the test results are attached in next pages.

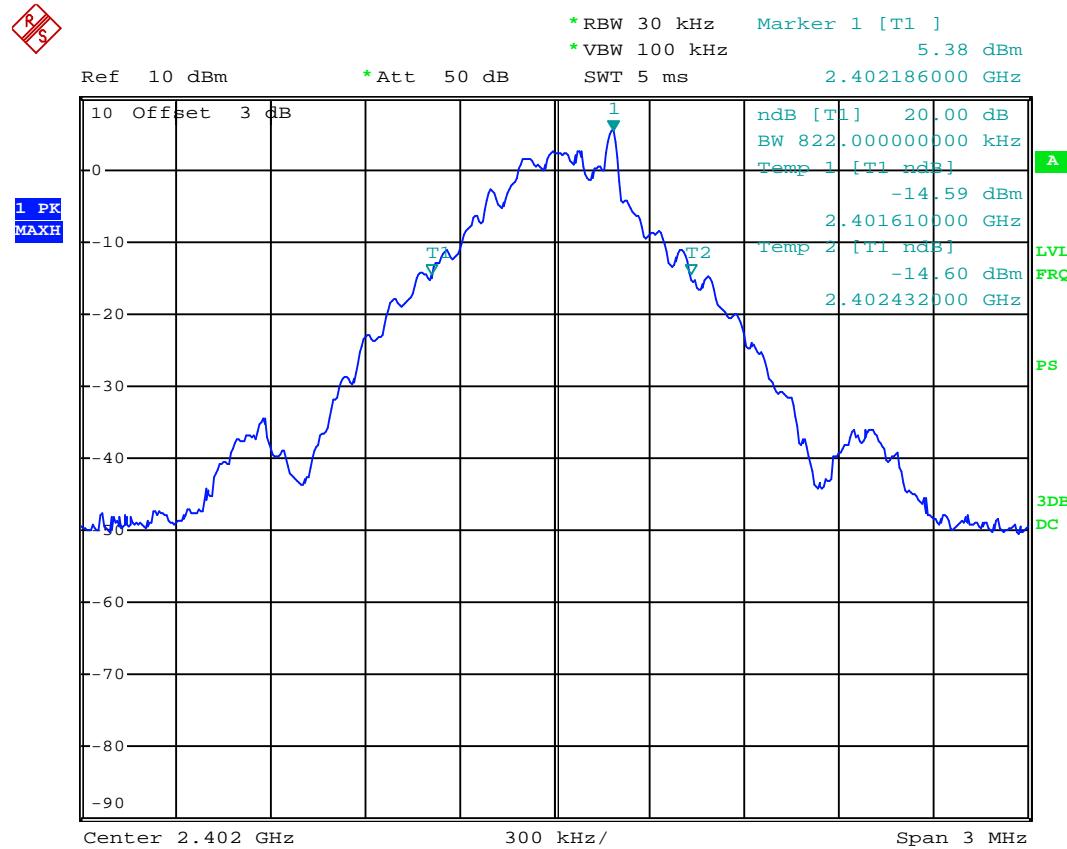
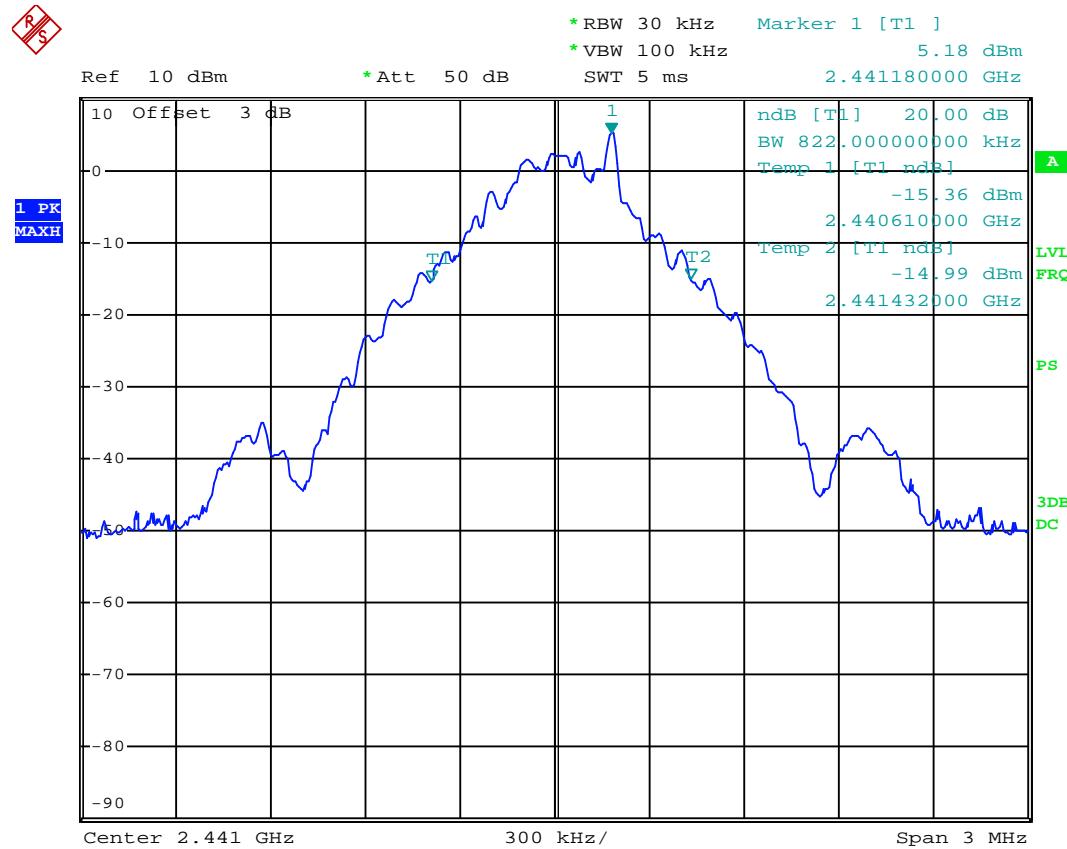
(Test Date: Nov. 02, 2012 Temperature: 25°C Humidity: 48 %)

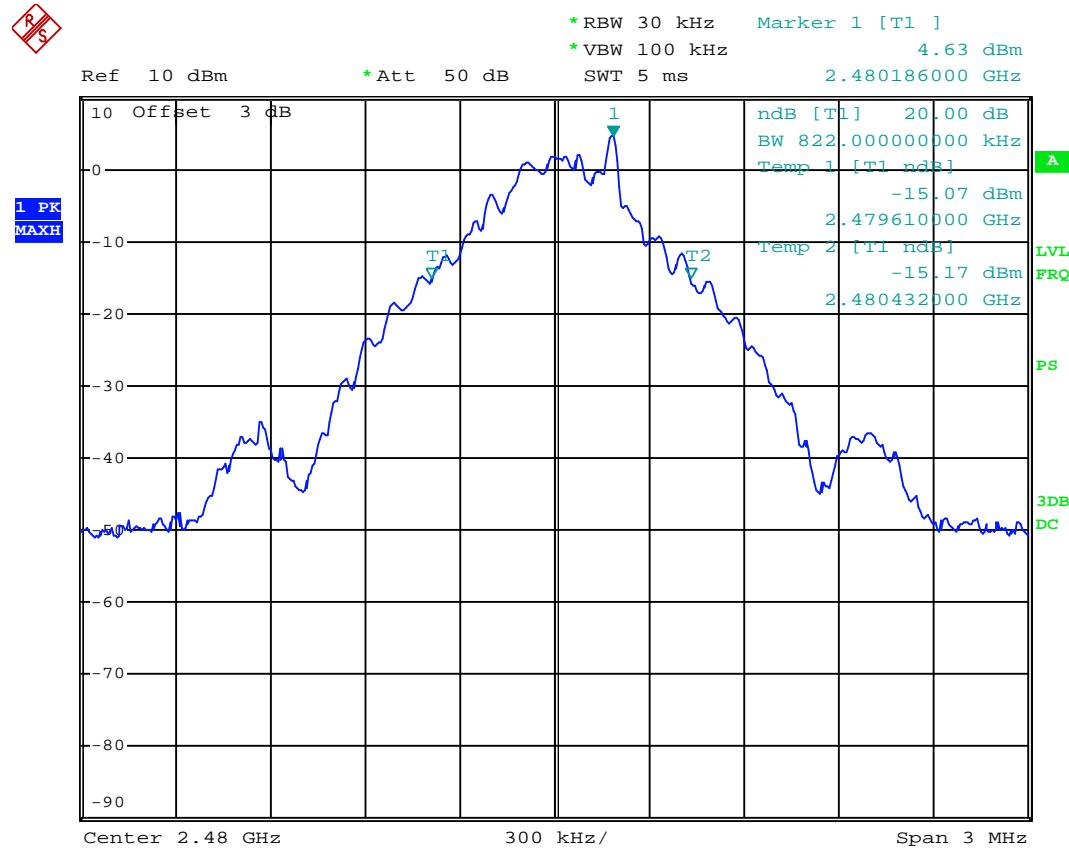
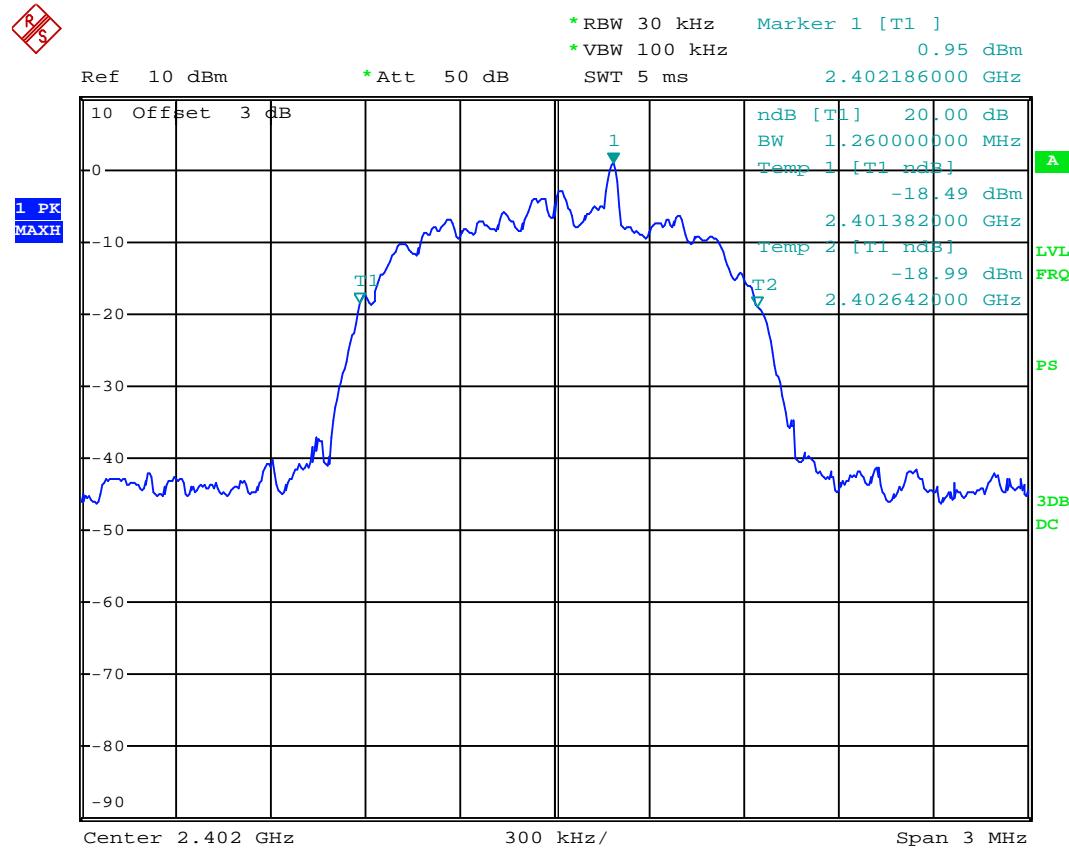
For Non-EDR

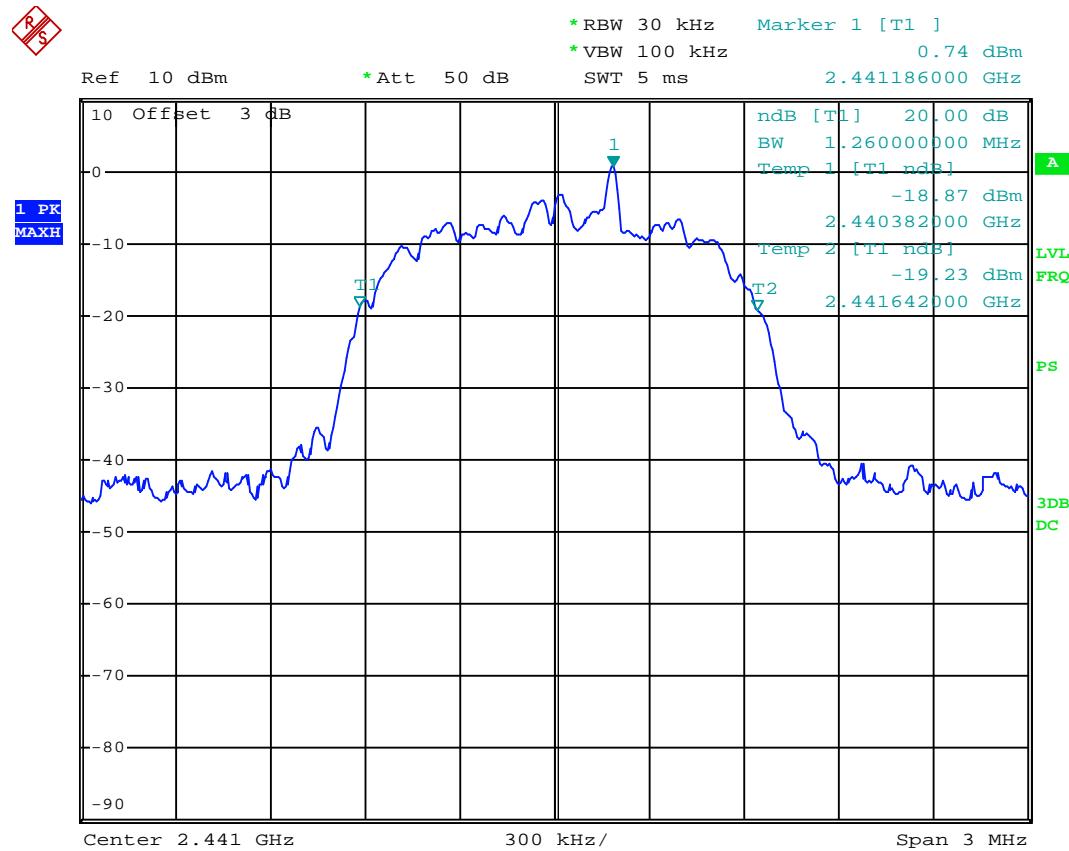
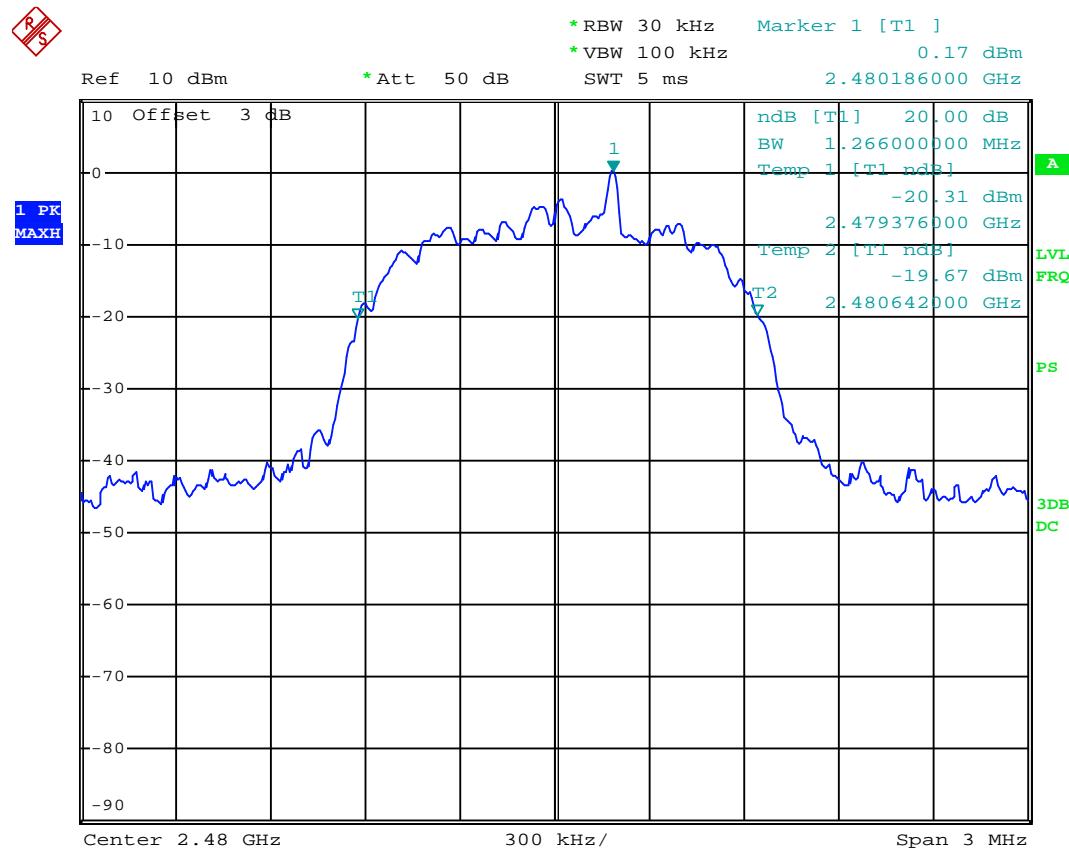
Channel	Frequency	20dB Bandwidth
00	2402 MHz	0.822 MHz
39	2441 MHz	0.822 MHz
78	2480 MHz	0.822 MHz

For EDR

Channel	Frequency	20dB Bandwidth
00	2402 MHz	1.260 MHz
39	2441 MHz	1.260 MHz
78	2480 MHz	1.266 MHz

Ch 00 (2402 MHz) NON-EDR**Ch 39 (2441 MHz) NON-EDR**

Ch 78 (2480 MHz) NON-EDR**Ch 00 (2402 MHz) EDR**

Ch 39 (2441 MHz) EDR**Ch 78 (2480 MHz) EDR**

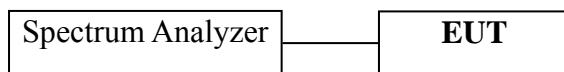
6 PEAK OUTPUT POWER MEASUREMENT

6.1 Test Equipment

The following test equipment was used during the maximum peak output power measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101303	Sep 11, 2012	Sep 11, 2013

6.2 Block Diagram of Test Setup



6.3 Specification Limits ((§15.247(b)(1))

For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels: 1 watt. (30 dBm)

6.4 Operating Condition of EUT

The test program “Hyper-Terminal” was used to enable the EUT to transmit data at different channel frequency individually.

6.5 Test Procedure

The transmitter output was connected to the spectrum analyzer.

The spectrum analyzer was set as $\text{RBW} \geq$ the 20 dB bandwidth of the emission being measured, $\text{VBW} \geq \text{RBW}$, span to approximately 5 times the 20 dB bandwidth, centered on a hopping channel. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power.

The test procedure is defined in DA 00-705.

6.6 Test Results

PASSED.

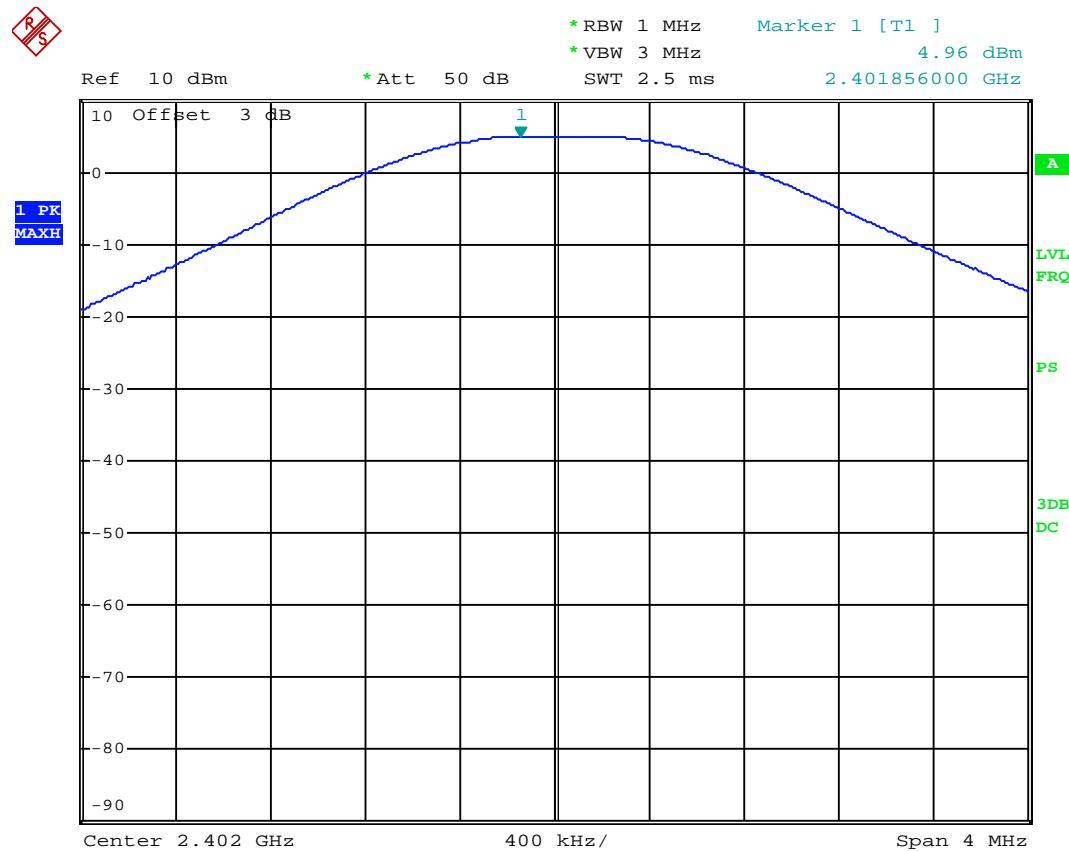
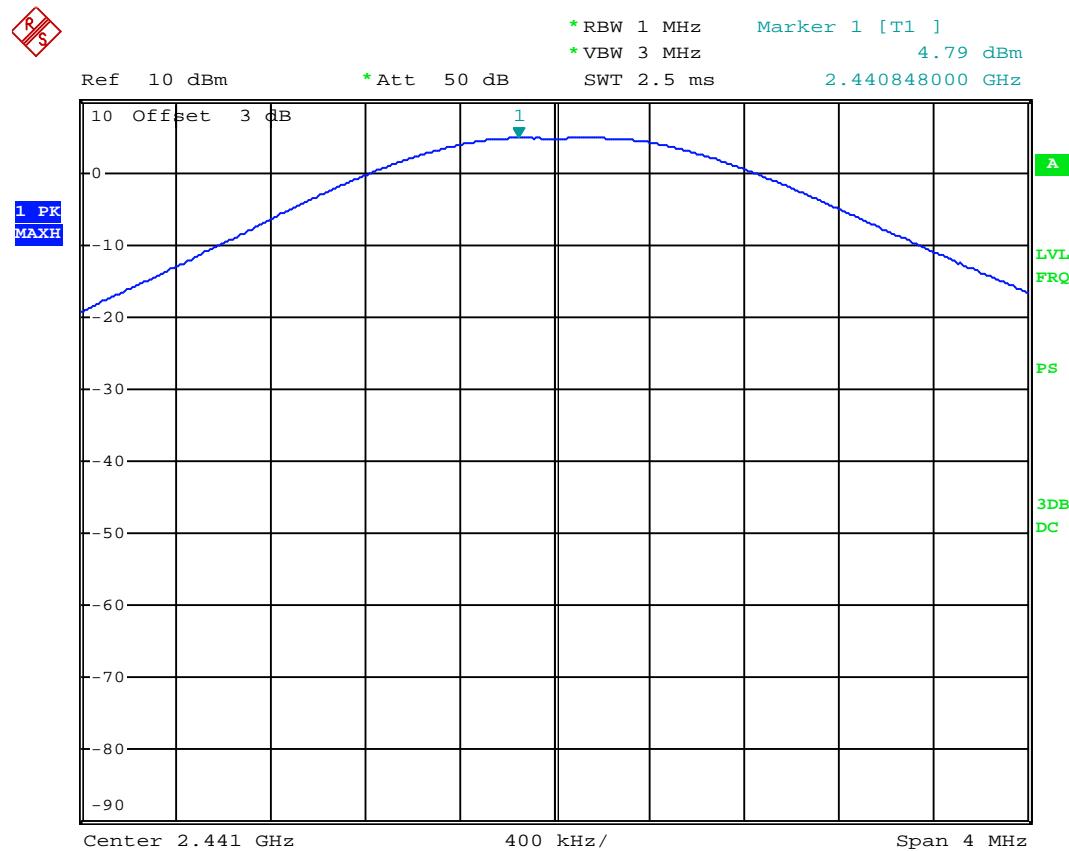
(Test Date: Nov. 02, 2012 Temperature: 25°C Humidity: 48 %)

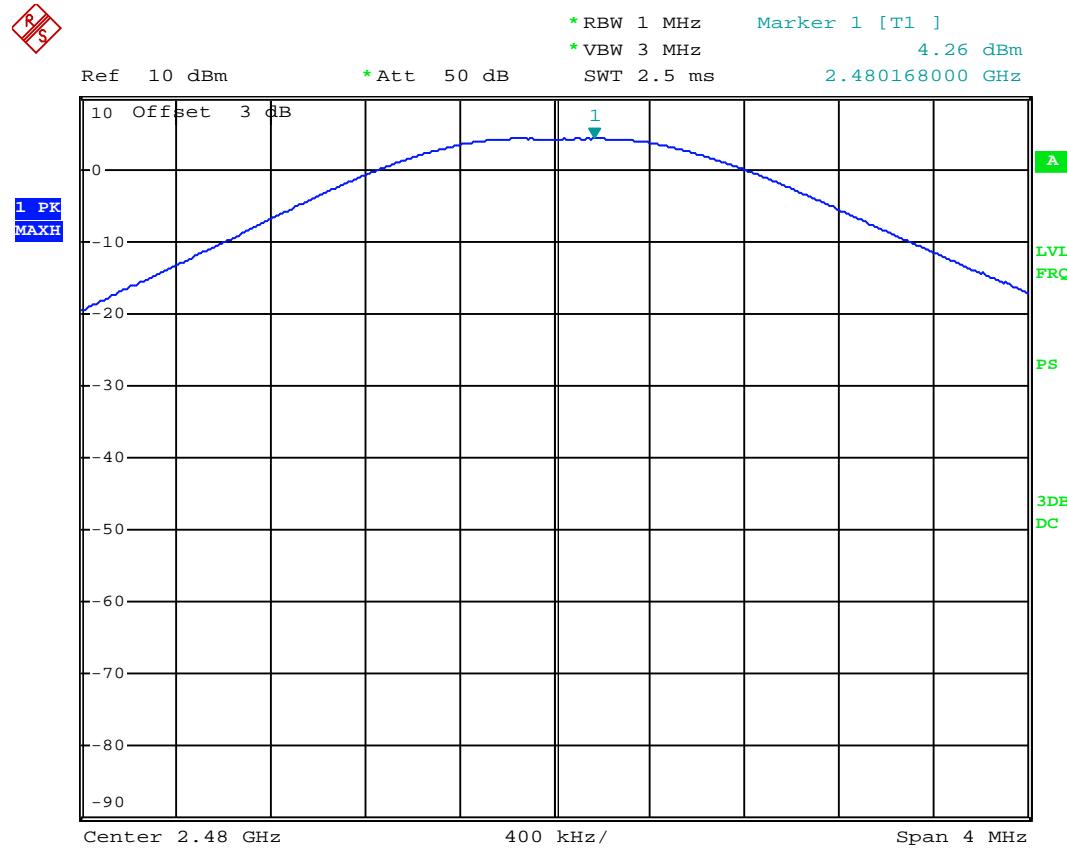
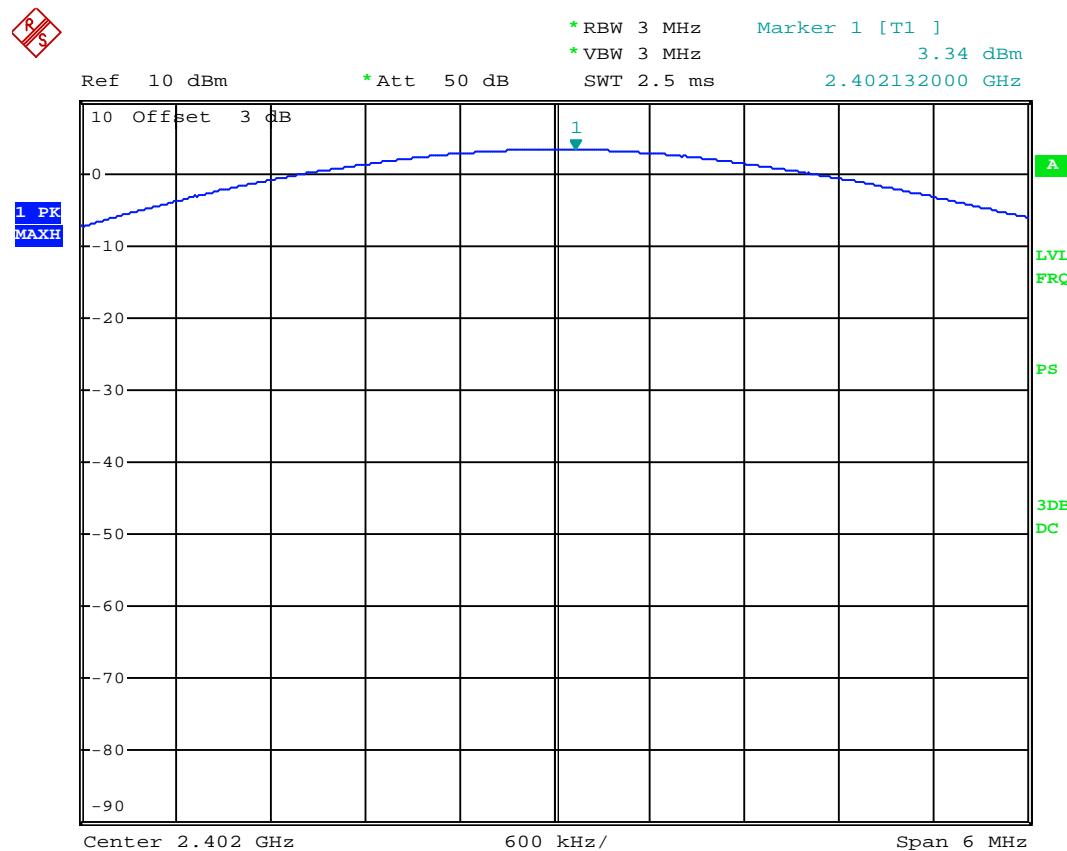
For Non-EDR

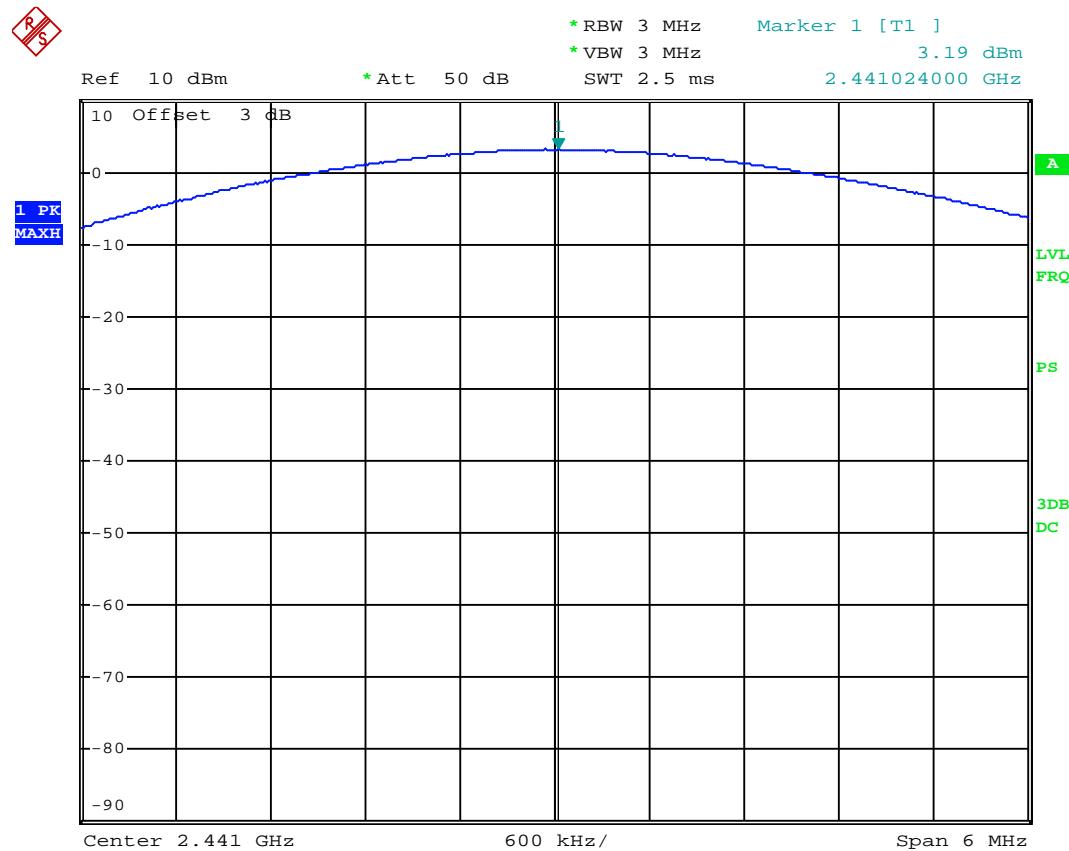
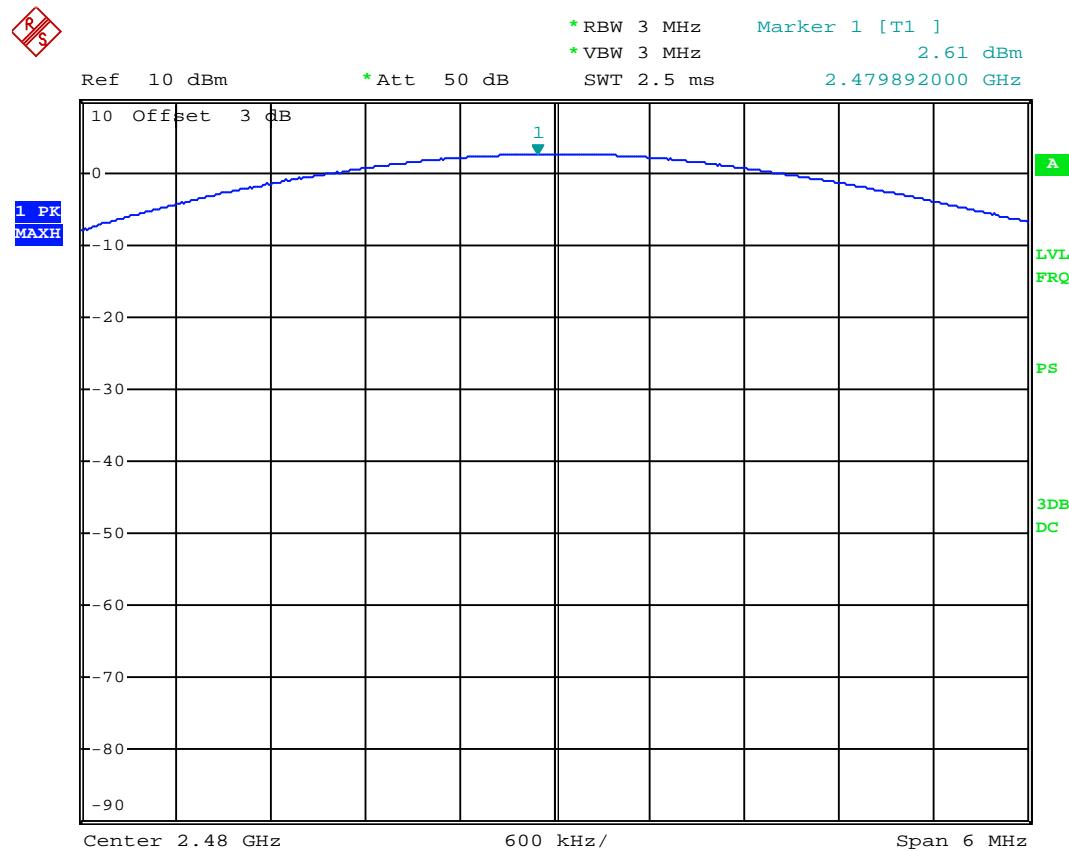
Channel	Frequency	Peak Output Power	Limit
00	2402 MHz	4.96 dBm	30 dBm
39	2441 MHz	4.79 dBm	30 dBm
78	2480 MHz	4.26 dBm	30 dBm

For EDR

Channel	Frequency	Peak Output Power	Limit
00	2402 MHz	3.34 dBm	30 dBm
39	2441 MHz	3.19 dBm	30 dBm
78	2480 MHz	2.61 dBm	30 dBm

Ch 00 (2402 MHz) NON-EDR**Ch 39 (2441 MHz) NON-EDR**

Ch 78 (2480 MHz) NON-EDR**Ch 00 (2402 MHz) EDR**

Ch 39 (2441 MHz) EDR**Ch 78 (2480 MHz) EDR**

7 SPURIOUS RF CONDUCTED EMISSIONS MEASUREMENT

7.1 Test Equipment

The following test equipment was used during the emission limitations test :

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E7405A	MY45106600	Mar 22, 2012	Mar 22, 2013

7.2 Block Diagram of Test Setup

The same as Section. 5.2.

7.3 Specification Limits (§15.247(d))

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required.

In addition, radiated emissions which fall in restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (See Section 15.205(c)).(※This test result attaching to Section. 4.7)

7.4 Operating Condition of EUT

The test program “Hyper-Terminal” was used to enable the EUT to transmit data at different channel frequency individually.

7.5 Test Procedure

The transmitter output was connected to the spectrum analyzer. Set RBW = 100 kHz, VBW = 300 kHz, scan up through 10th harmonic. All harmonics/spurs must be at least 20 dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW.

The test procedure is defined in DA 00-705.

7.6 Test Results

PASSED.

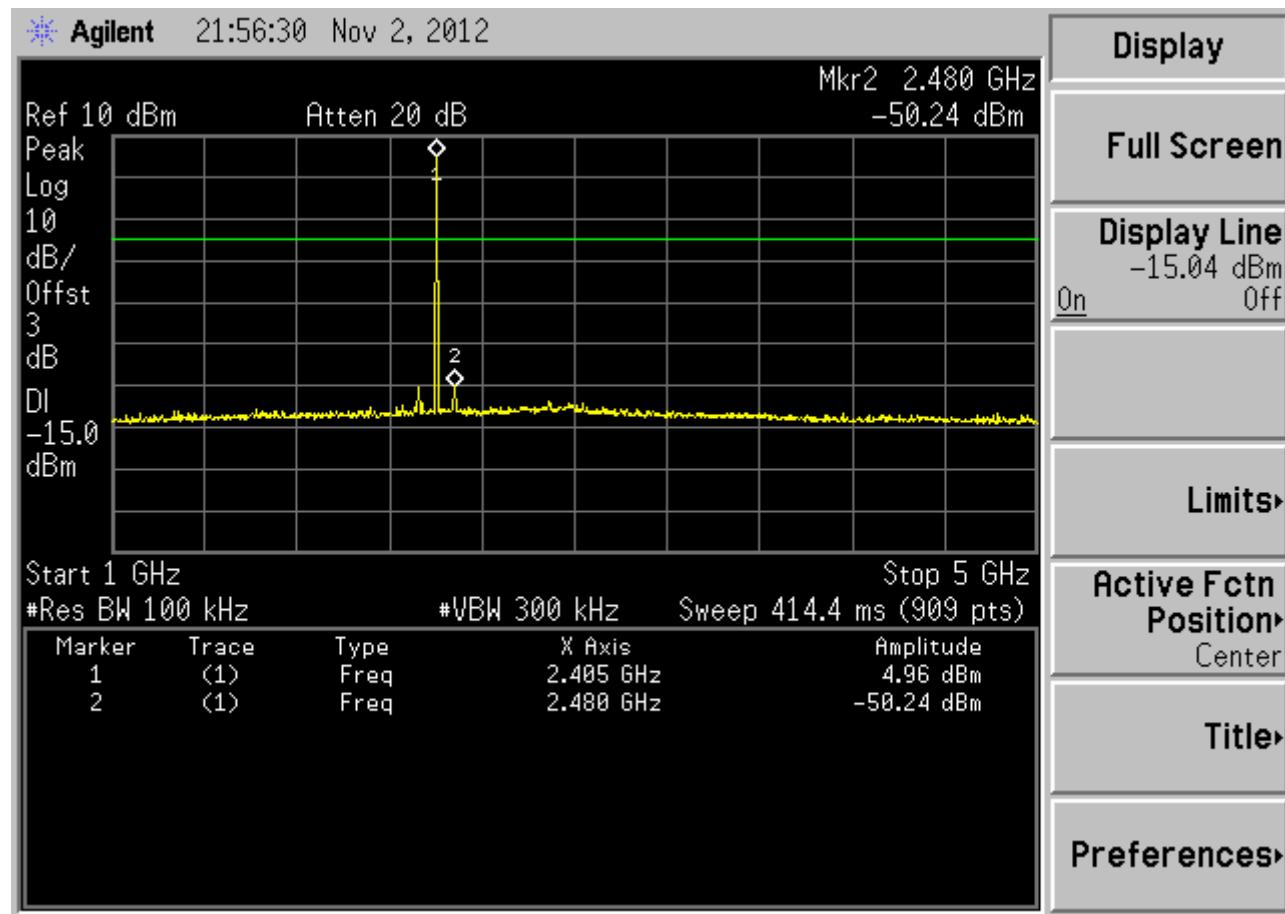
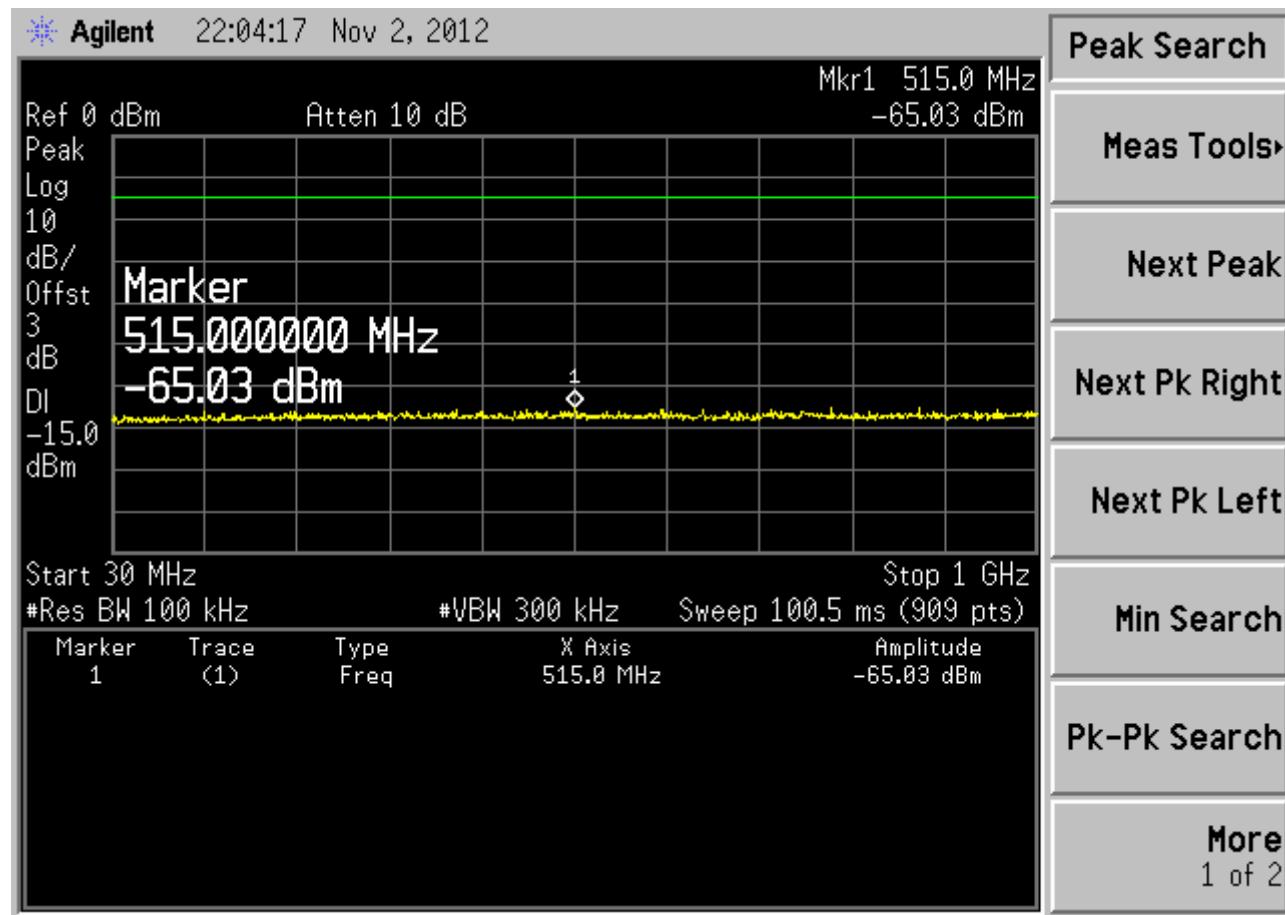
The test data was attached in the next pages.

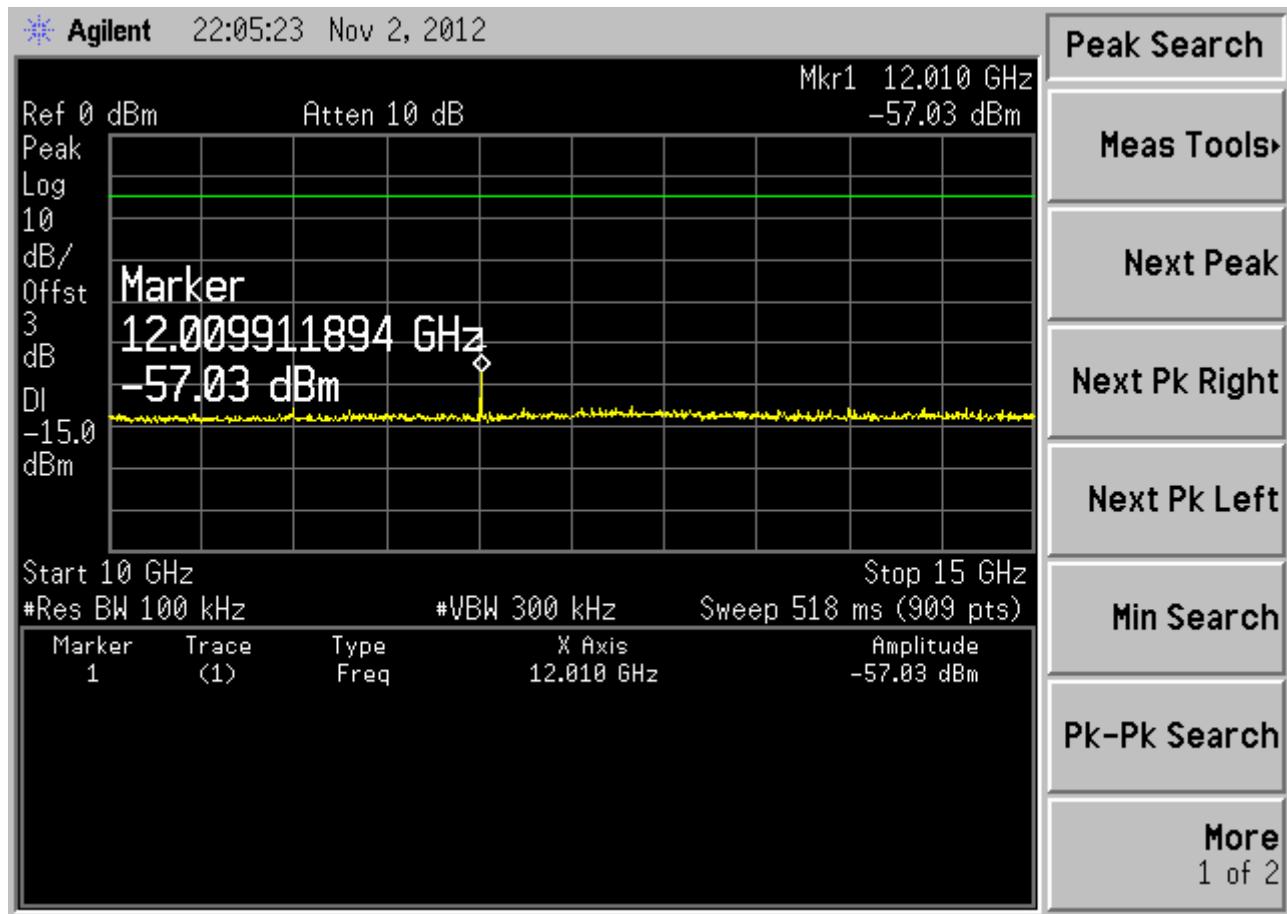
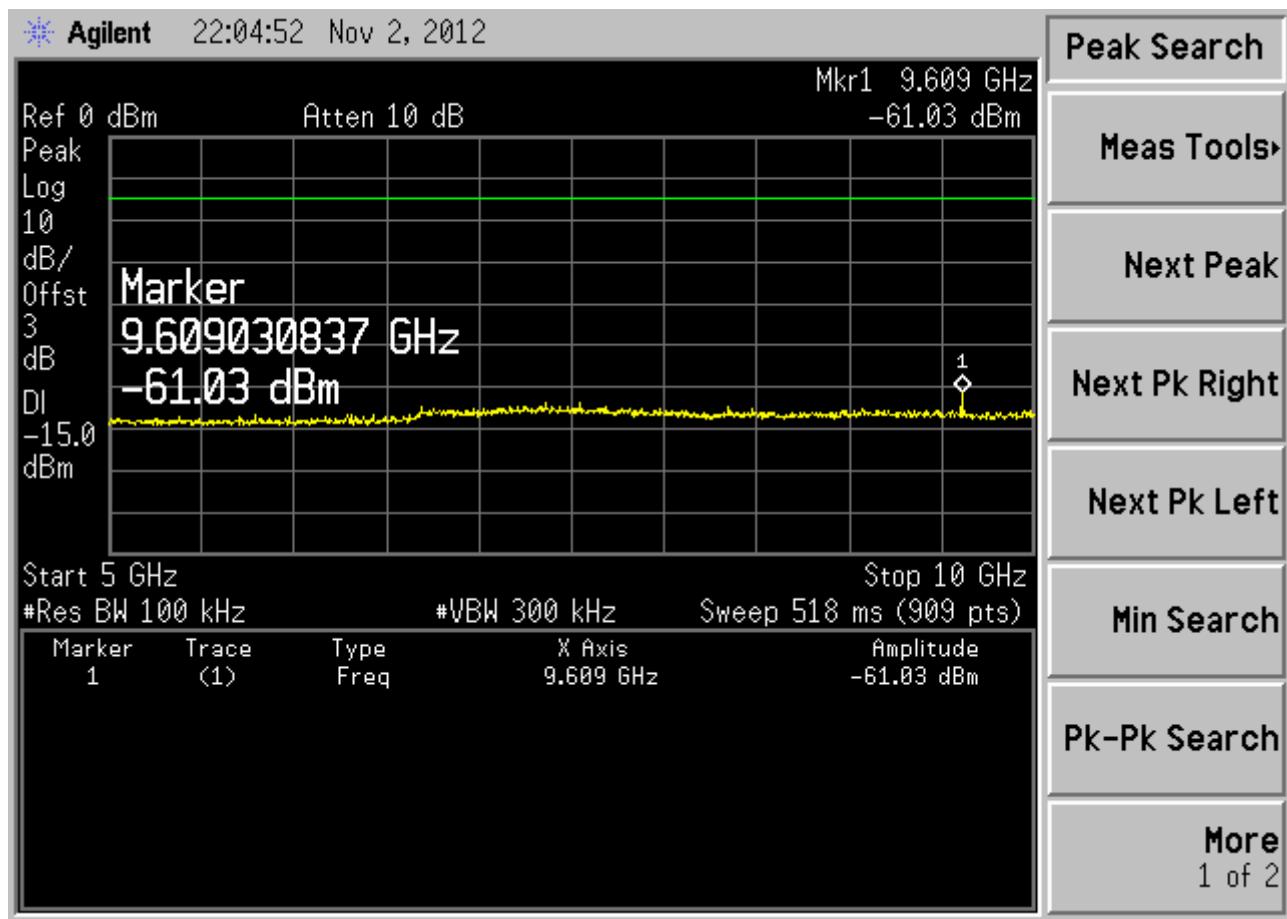
(Test Date: Nov. 02 - 05, 2012 Temperature: 25°C Humidity: 48 %)

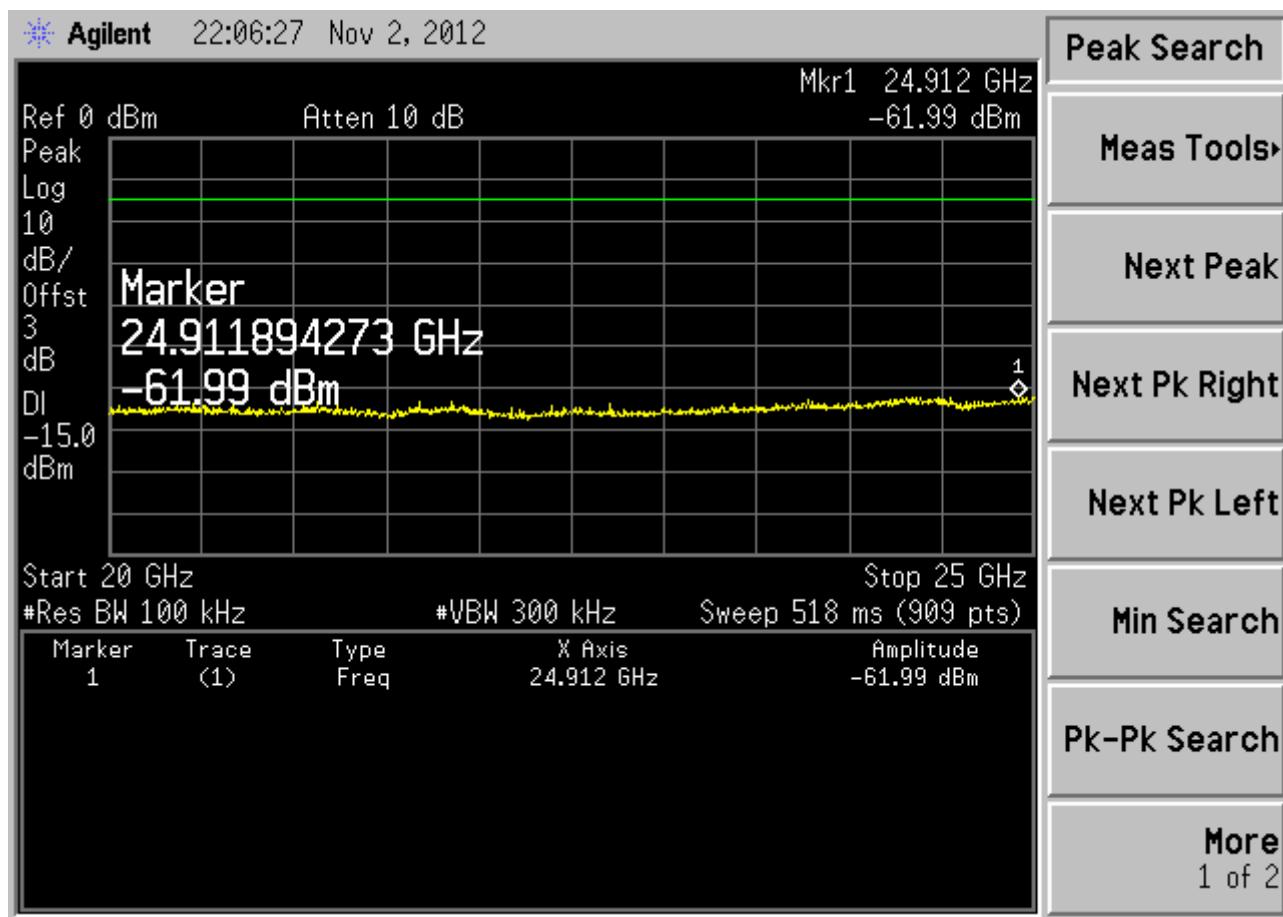
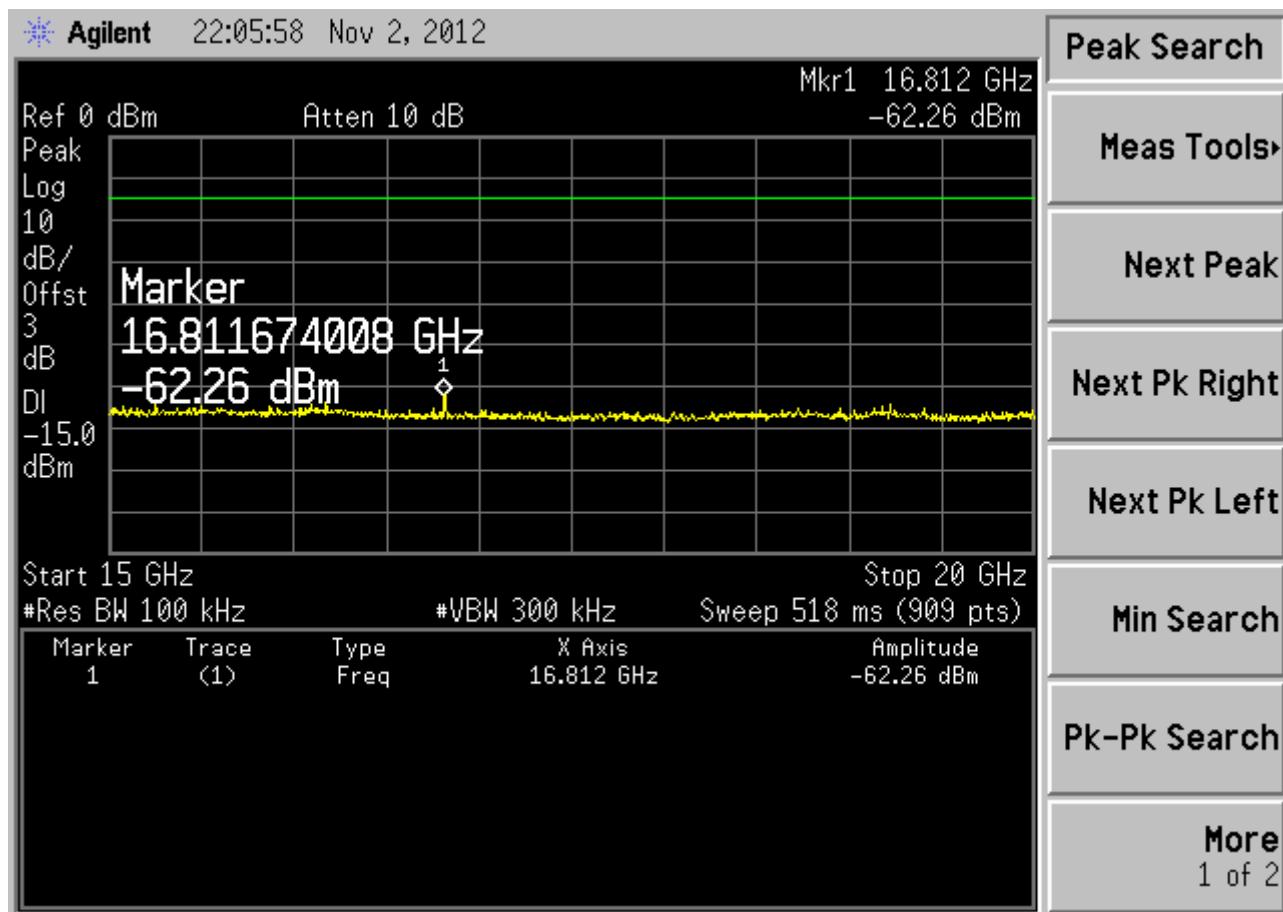
Modulation	Data Page
NON-EDR	P35-43
EDR	P44-52
EDR + 802.11b	P53-61

Note – For WiFi and BT simultaneous condition, we evaluated all the combination of WiFi and BT mode, and selected the worst emission mode: 802.11b + BT EDR to record in the report.

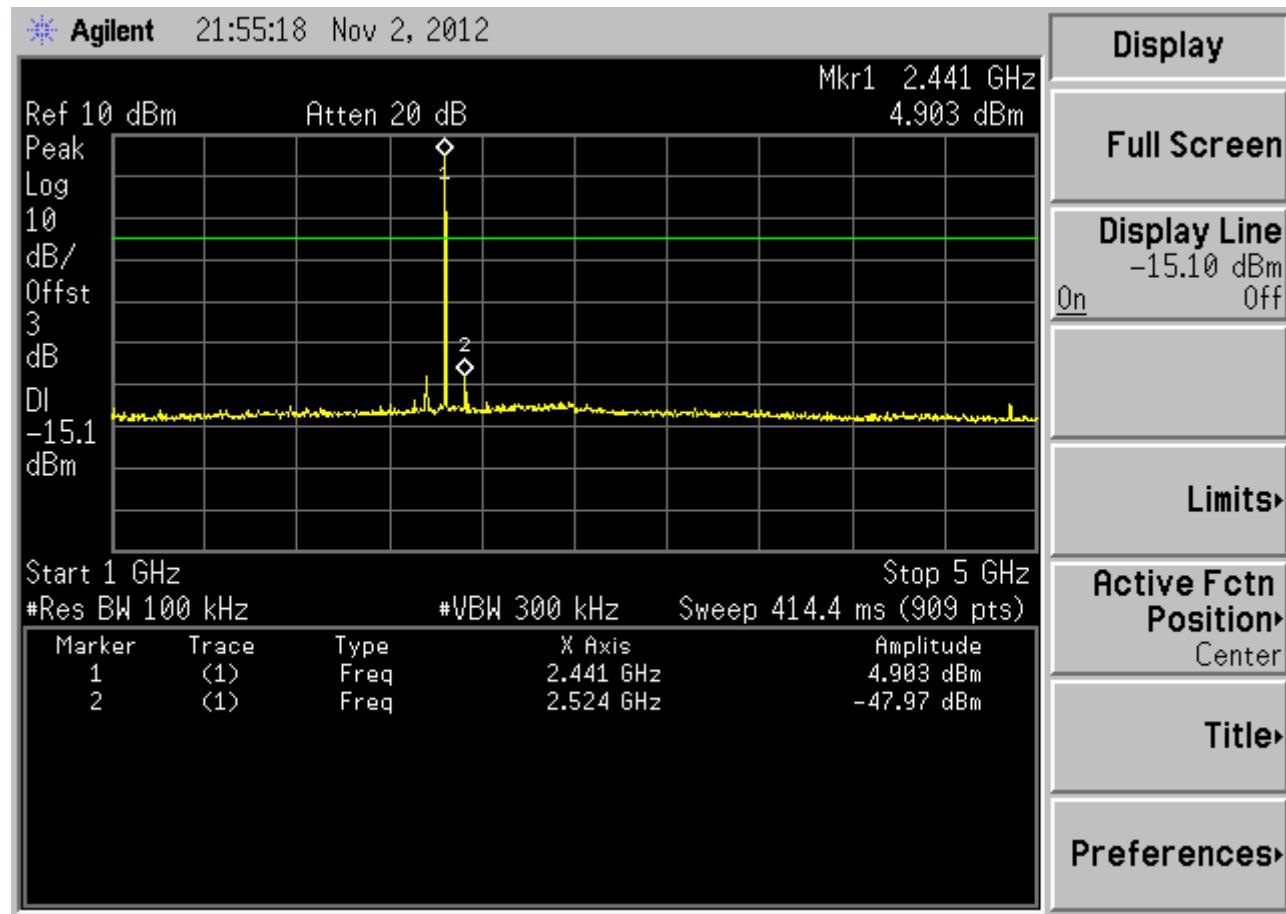
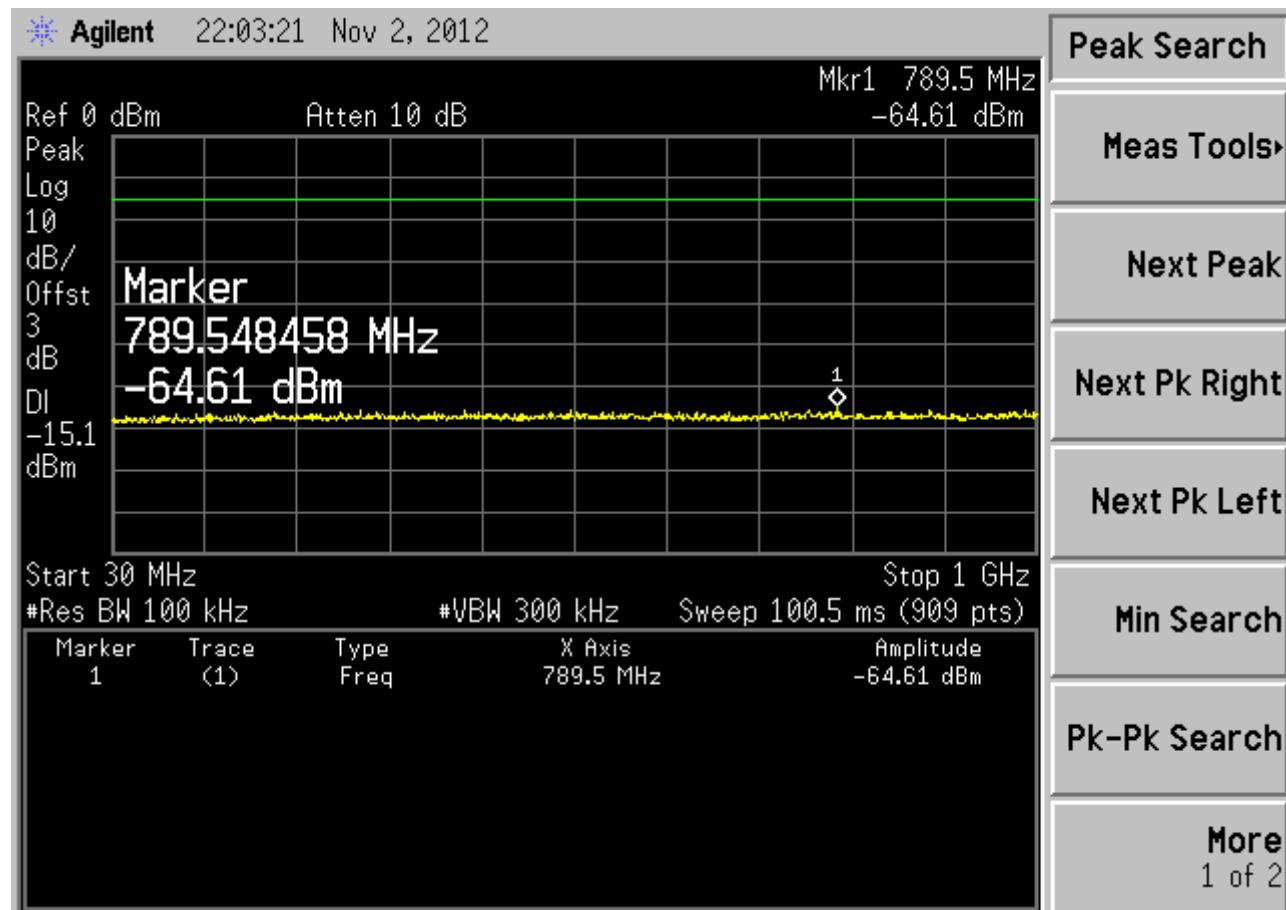
NON-EDR Ch 00 (2402 MHz)

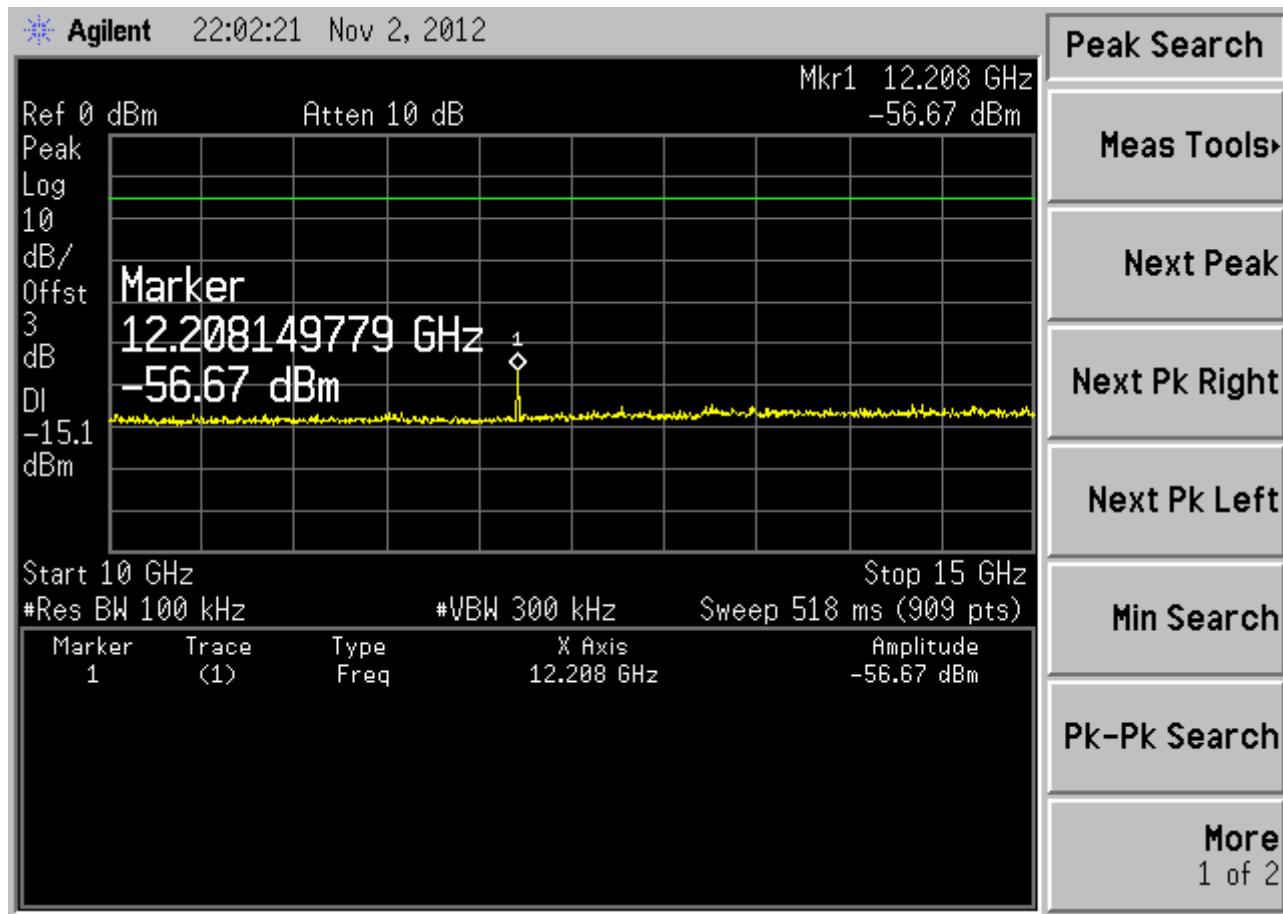
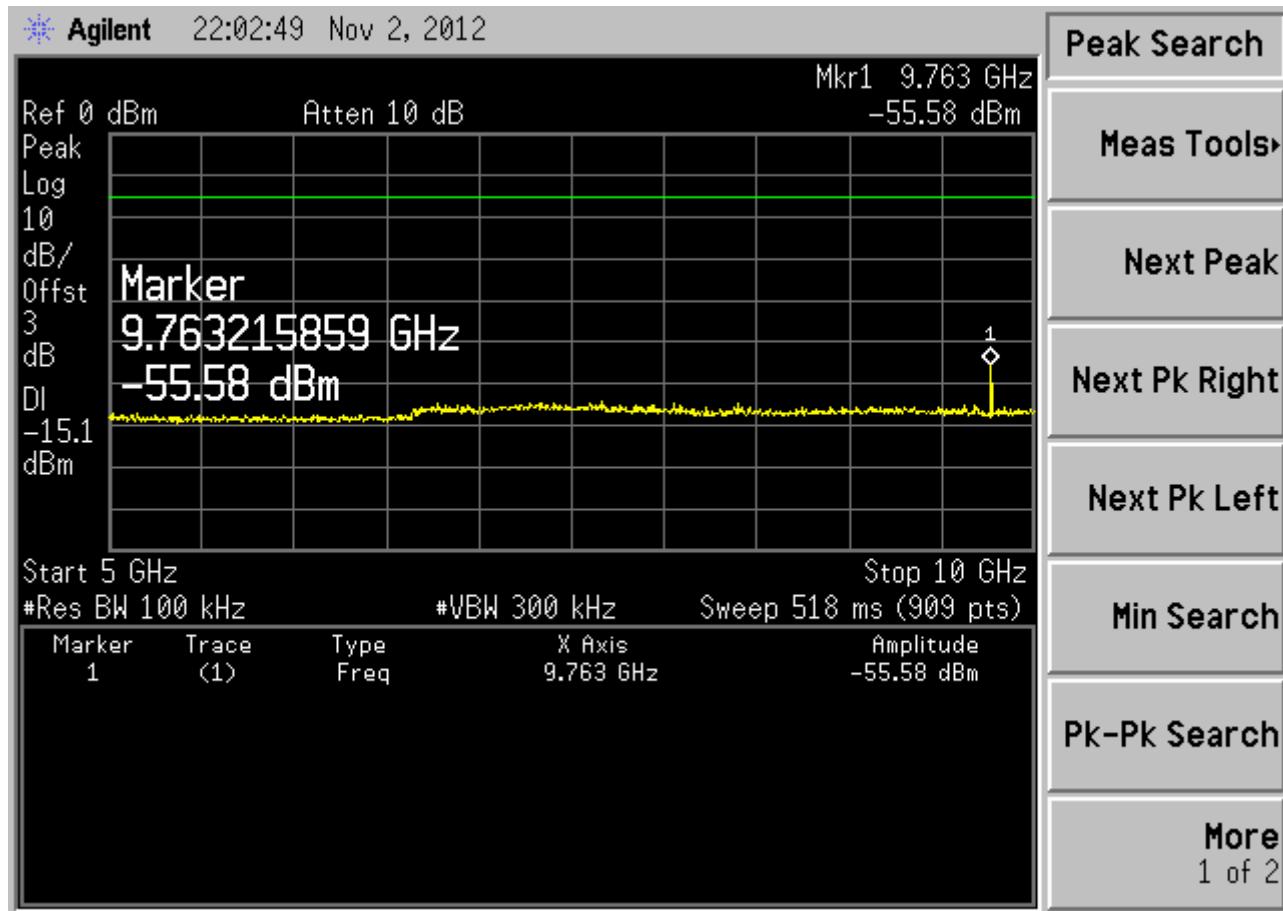


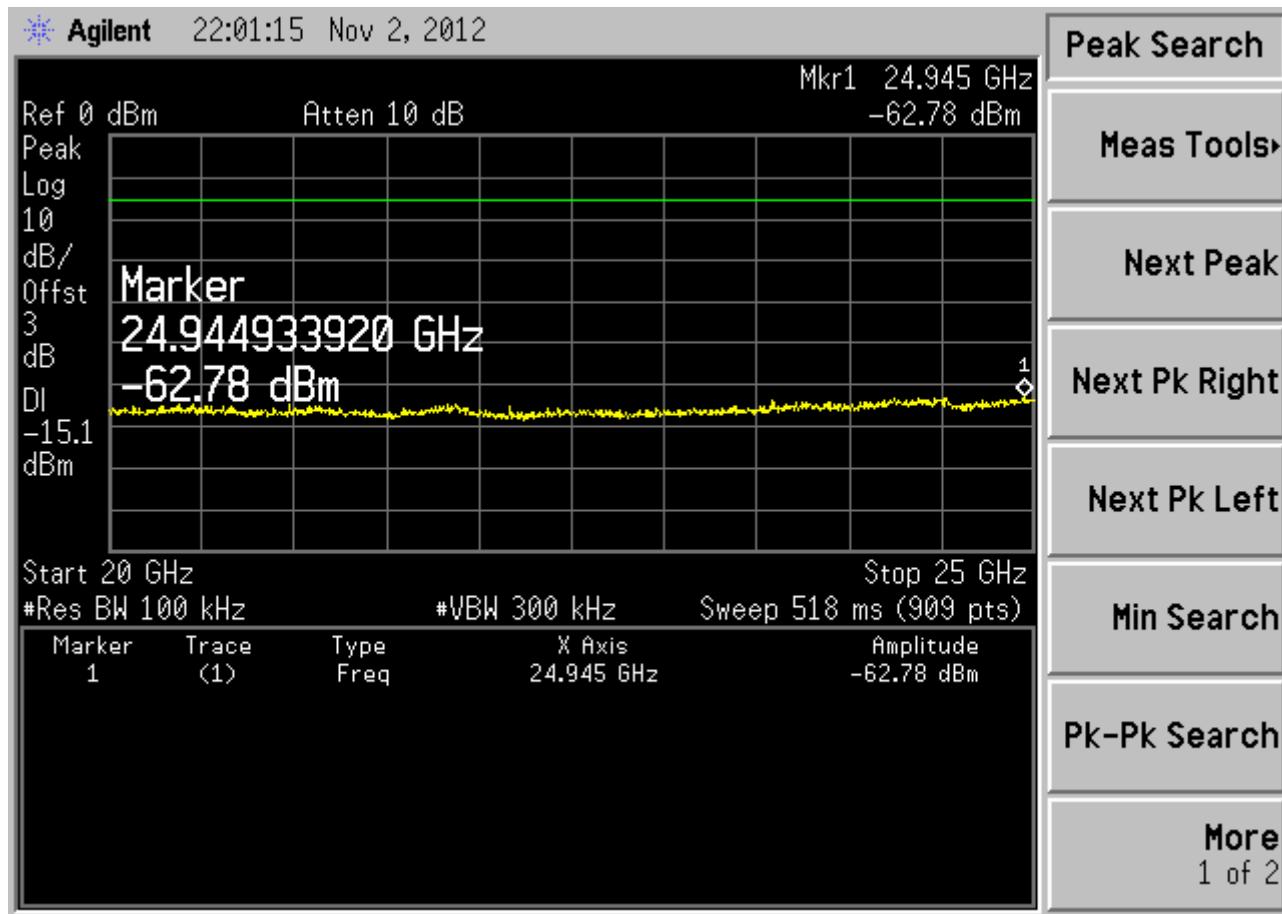
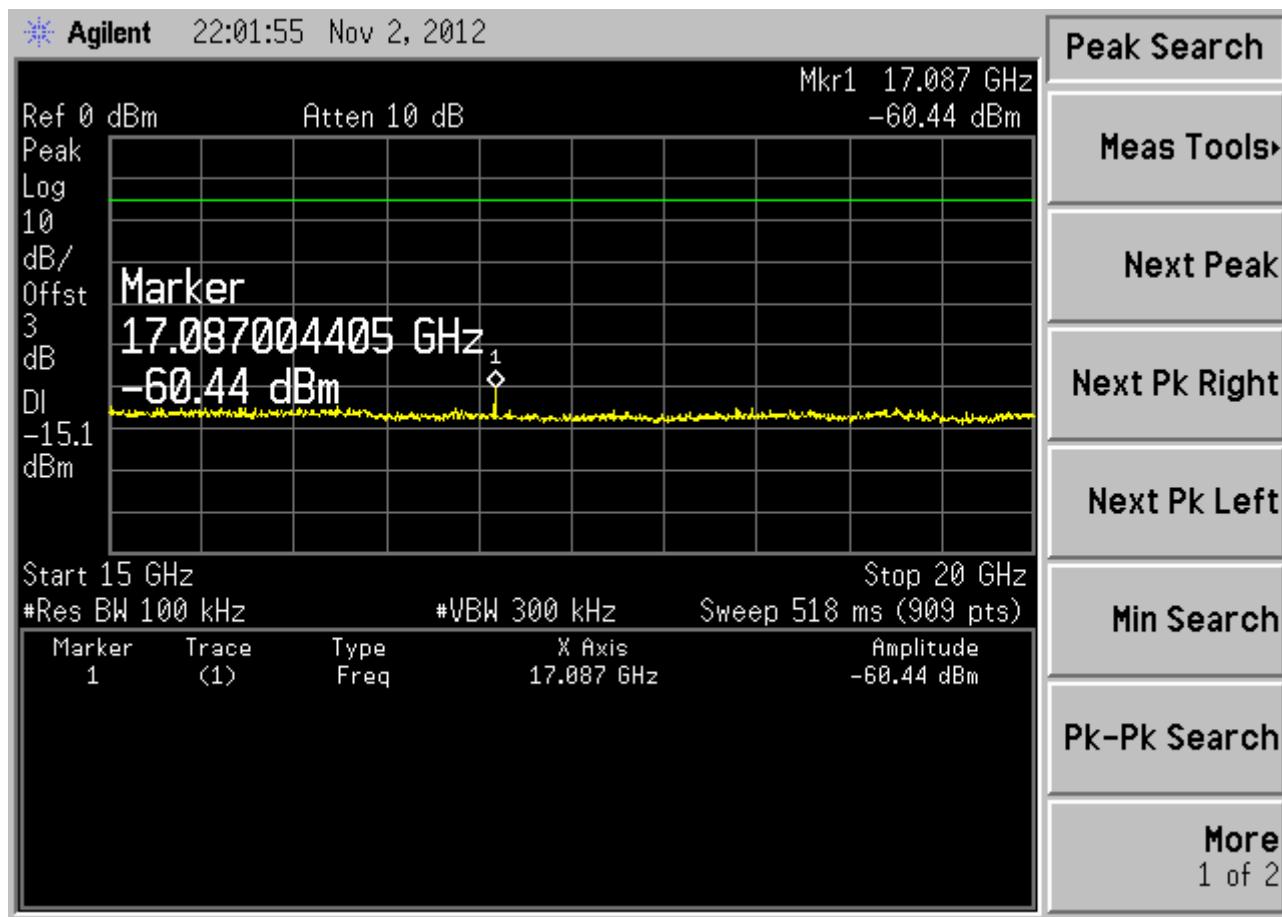




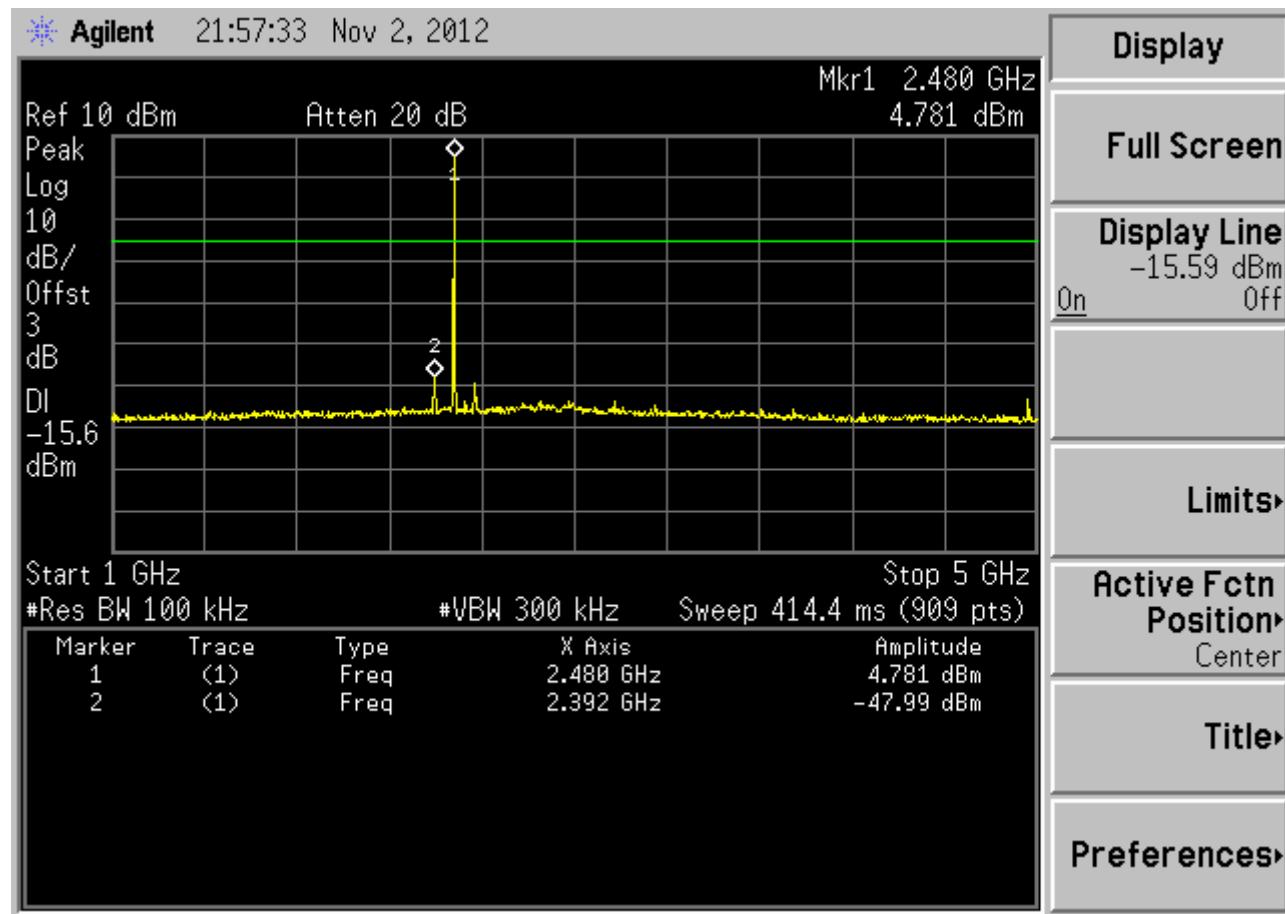
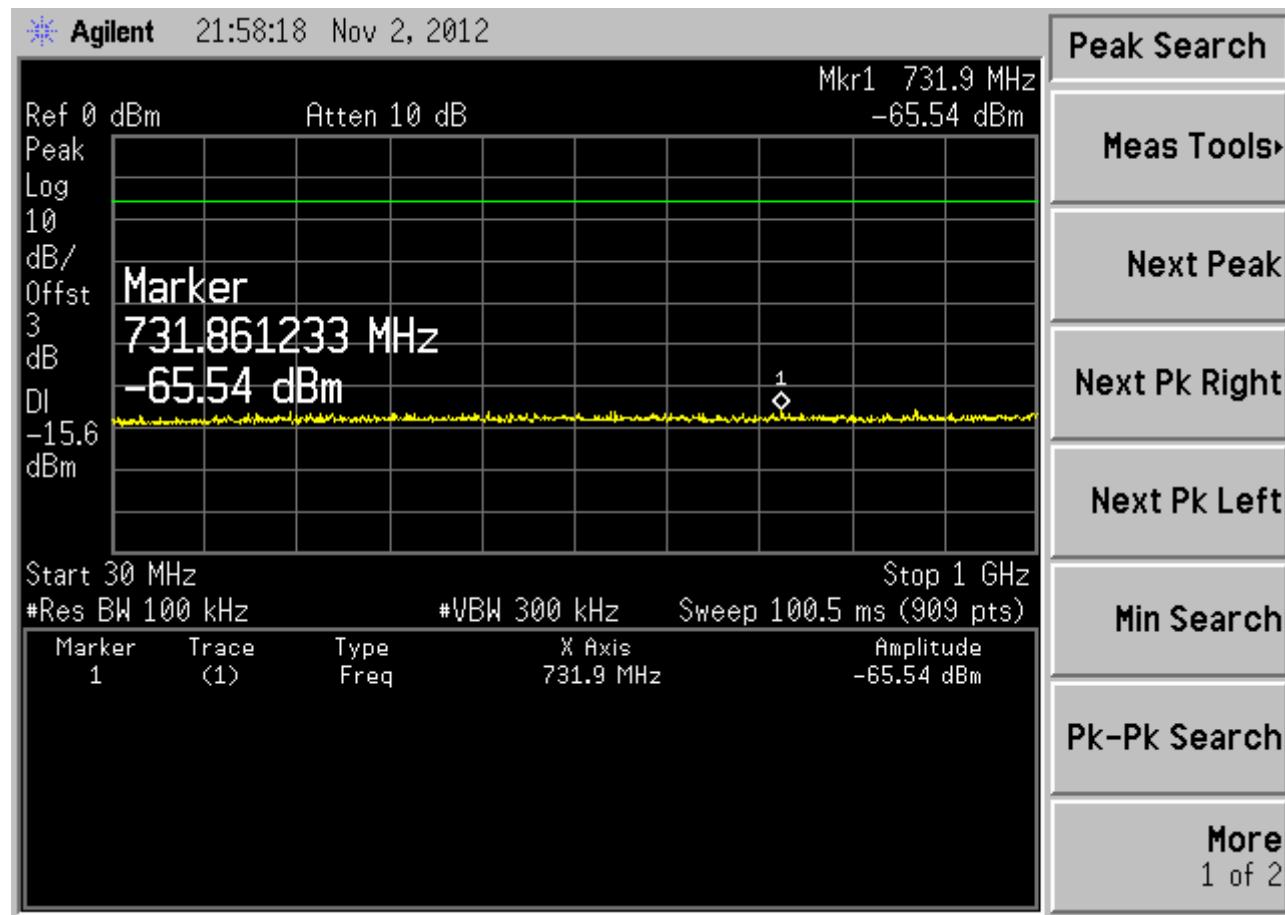
NON-EDR Ch 39 (2441 MHz)

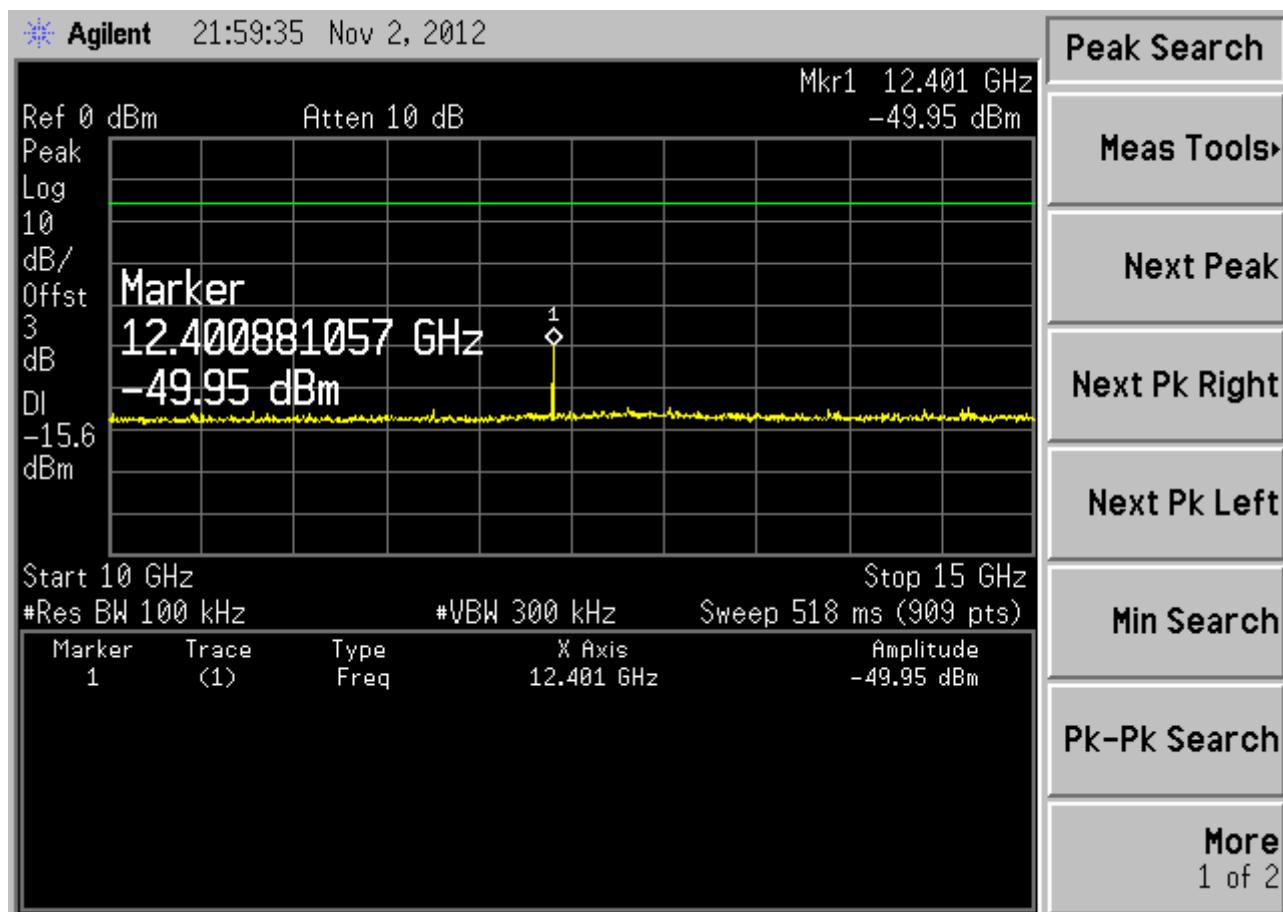
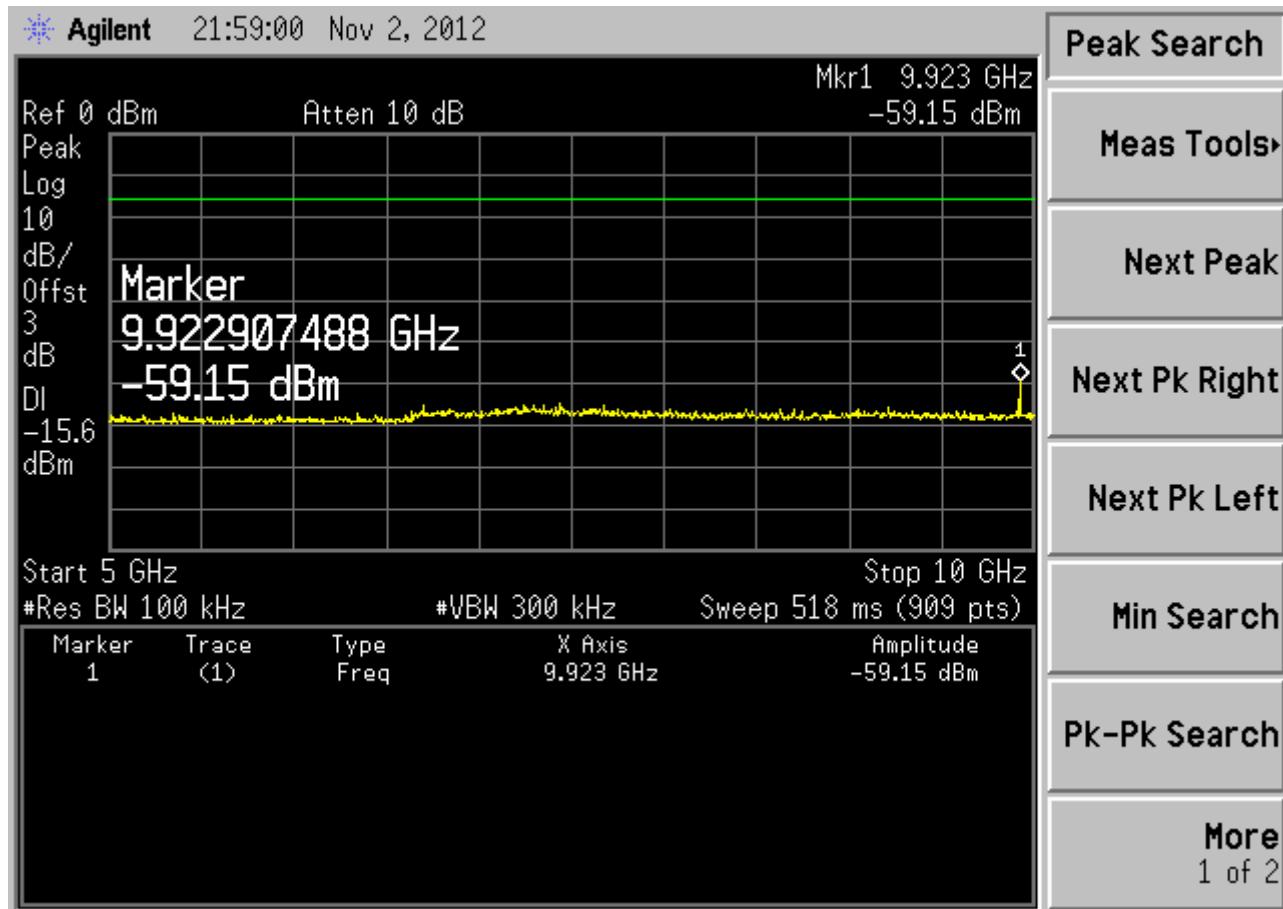


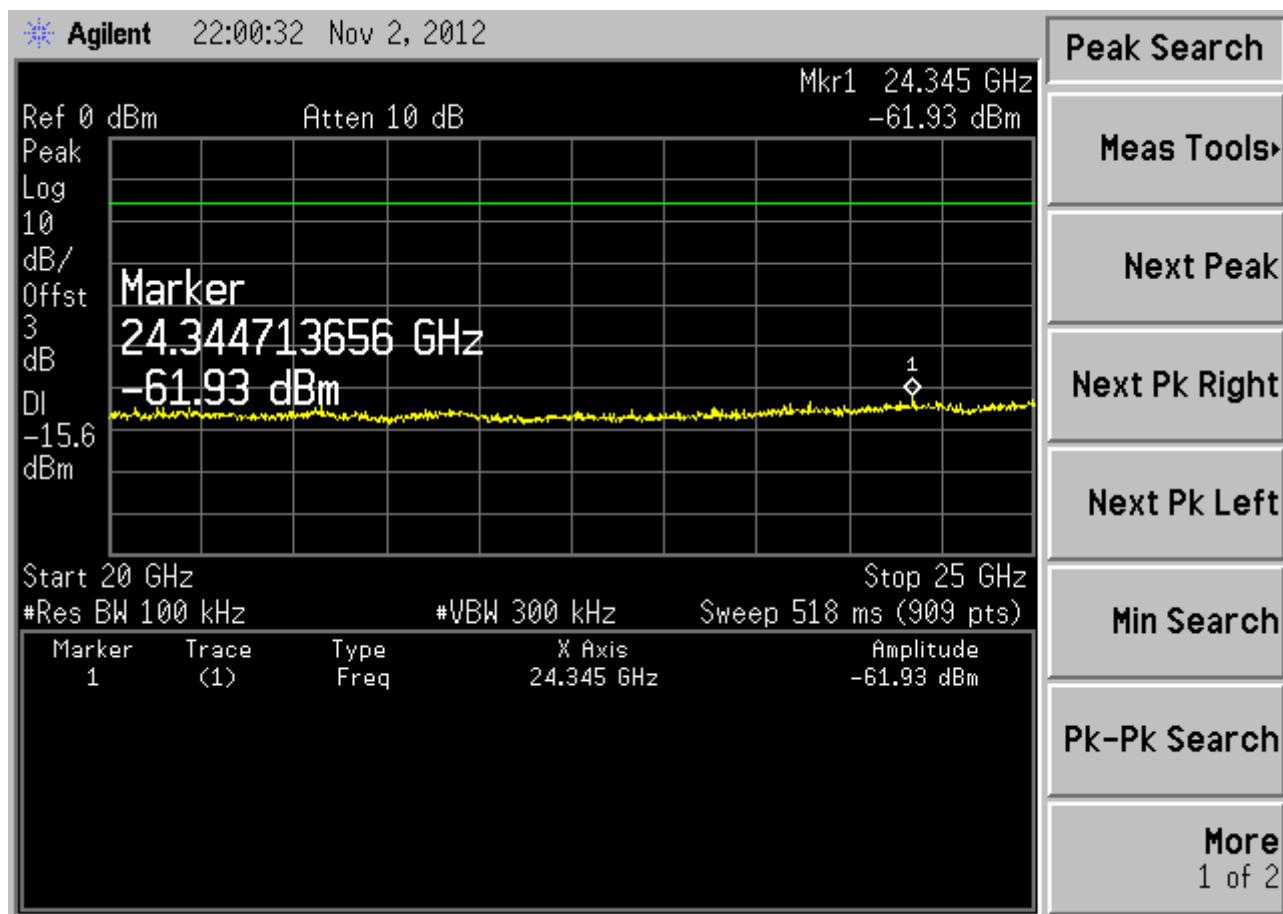
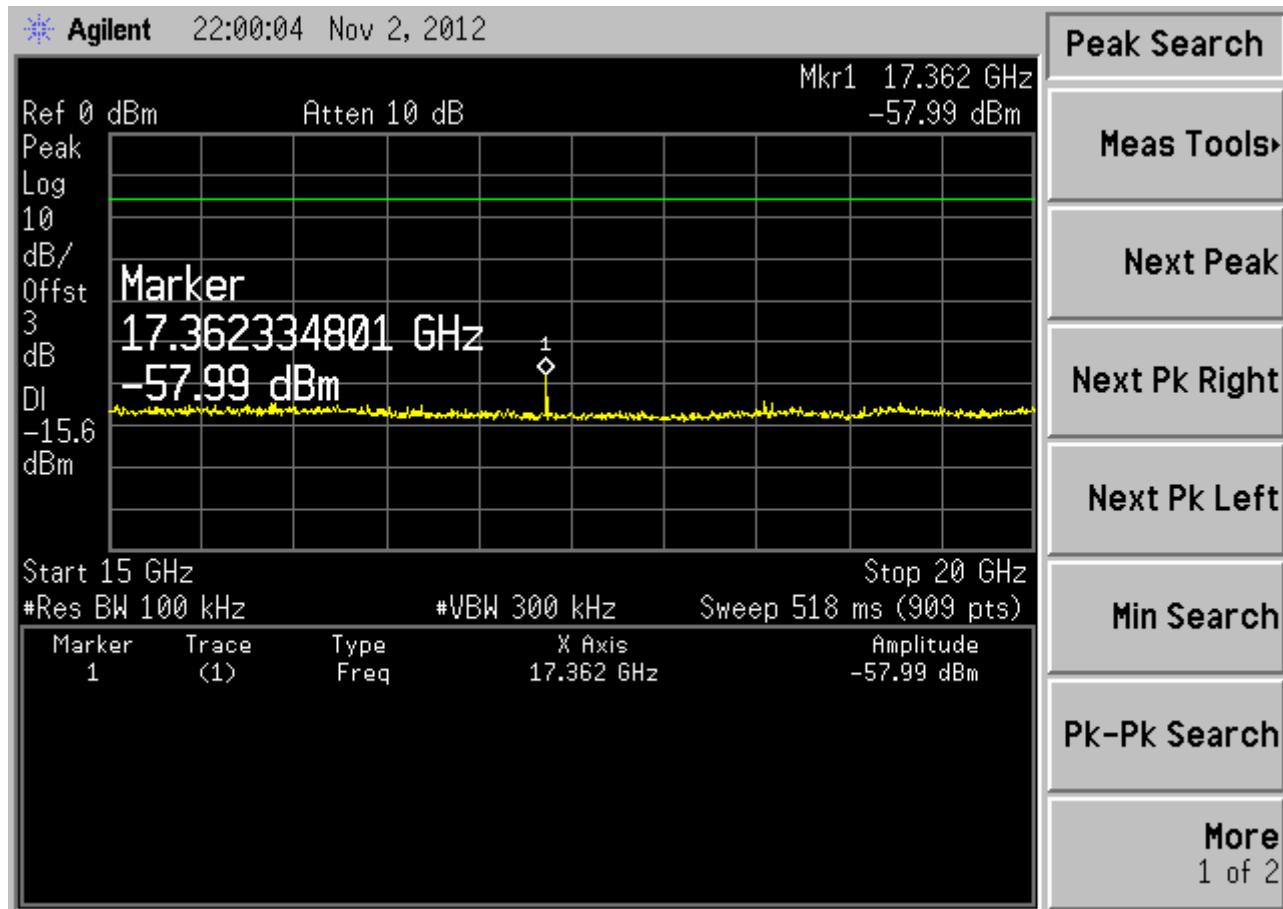




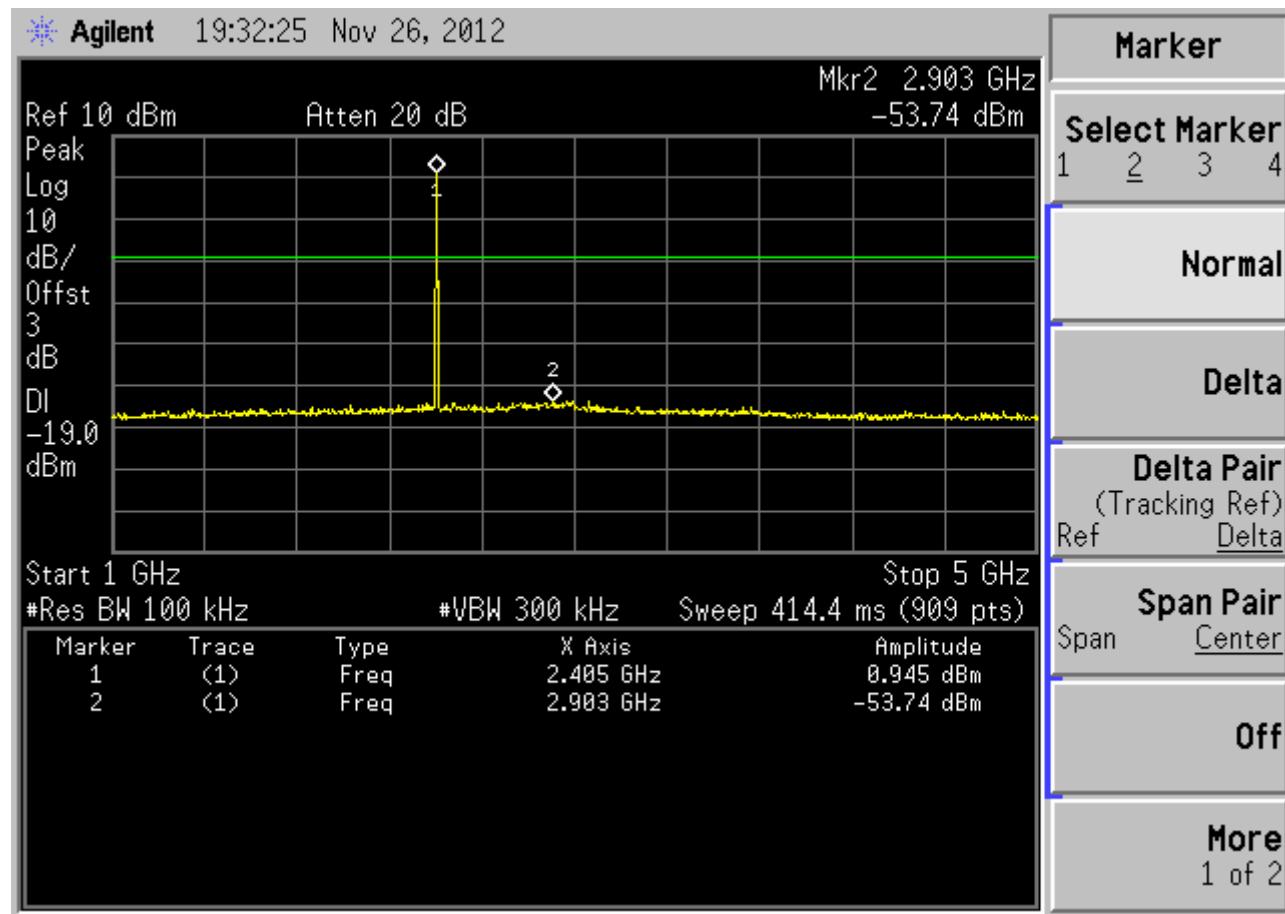
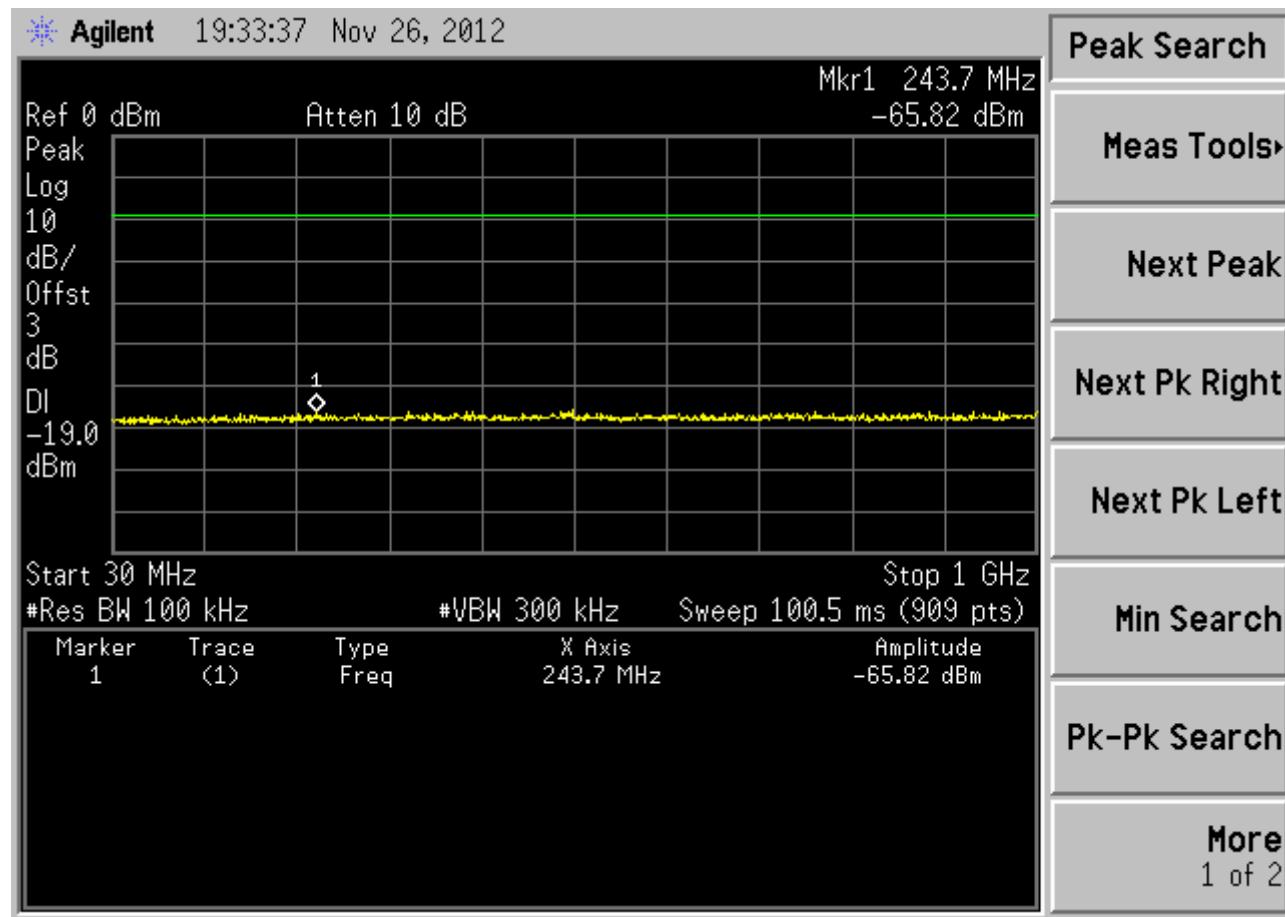
NON-EDR Ch 78 (2480 MHz)

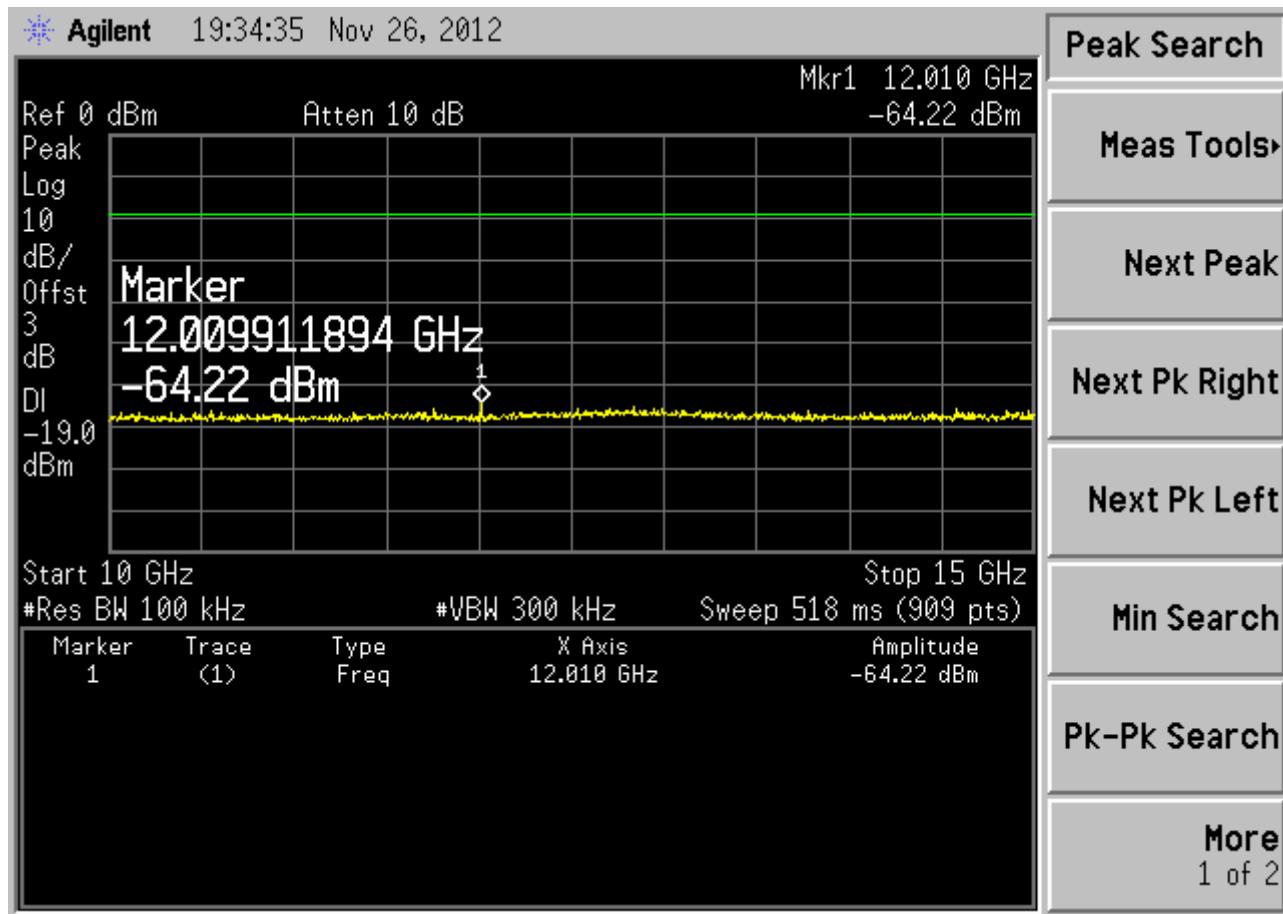
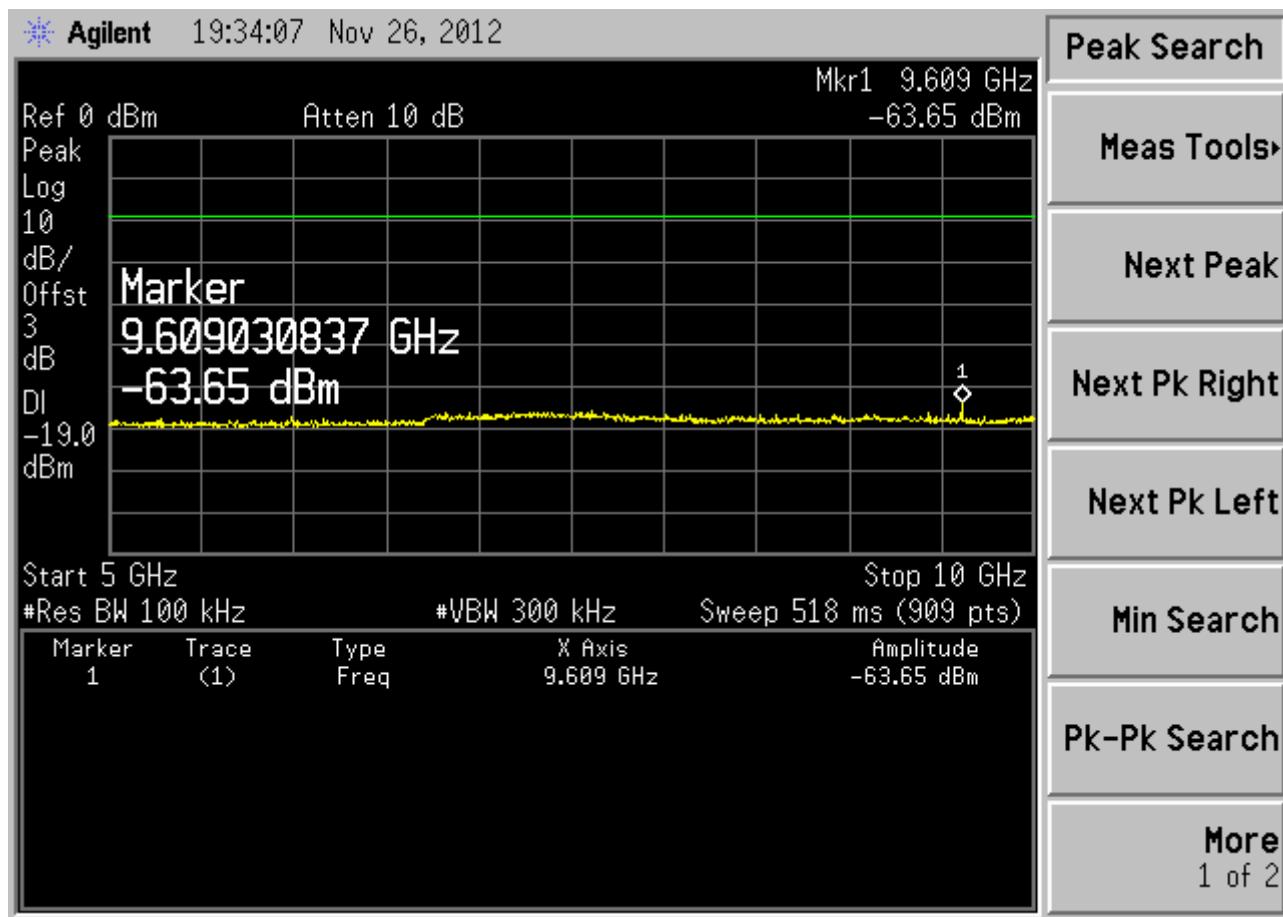


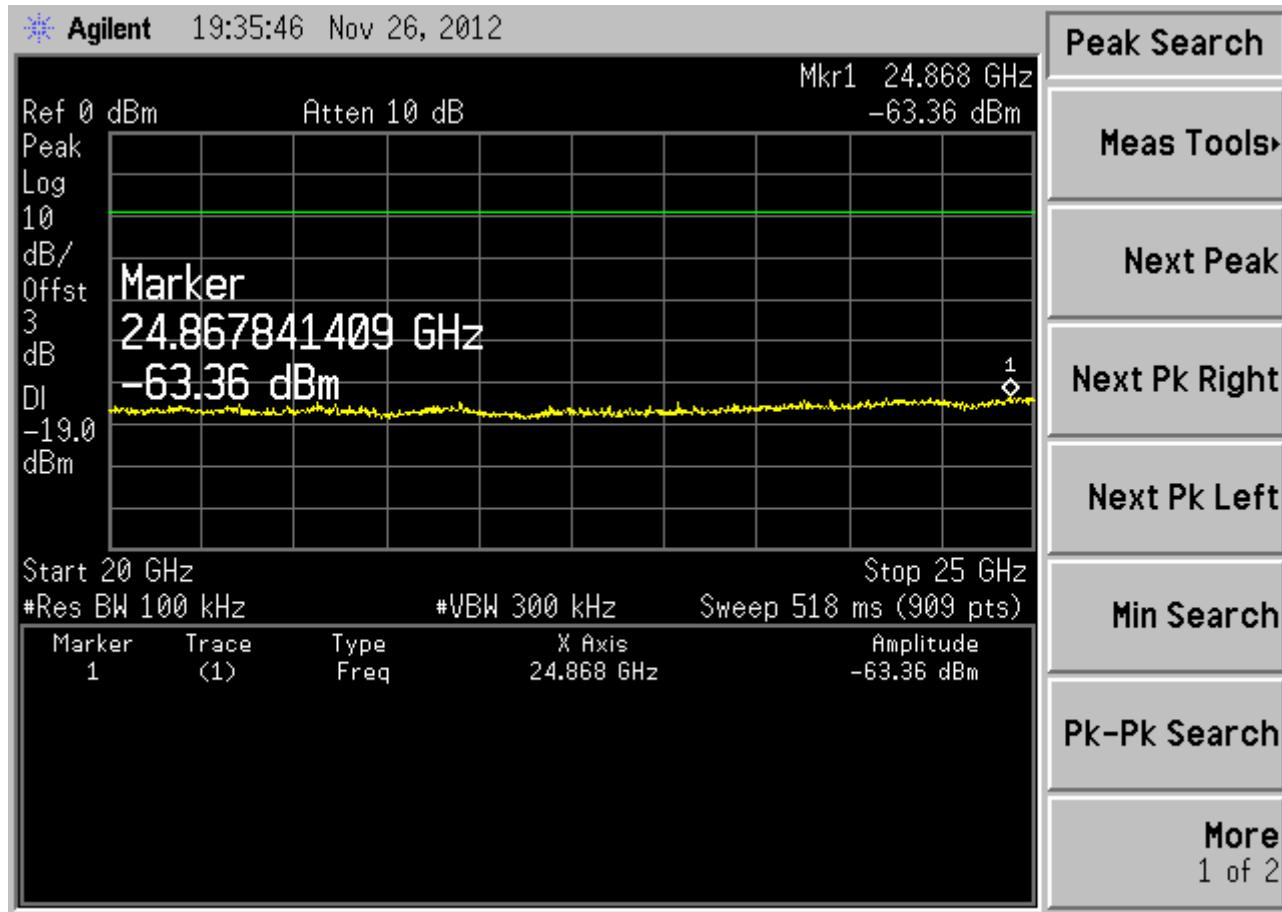
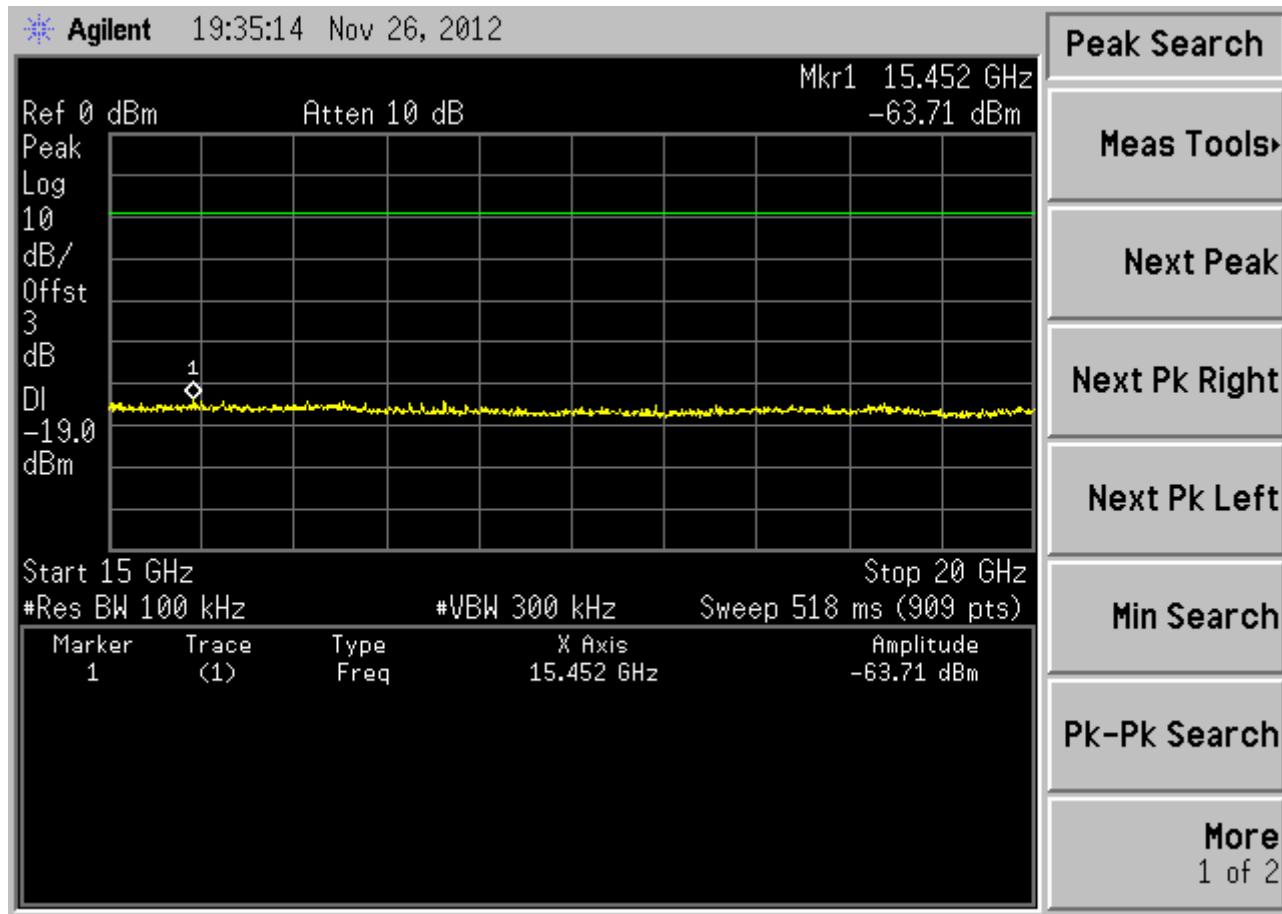




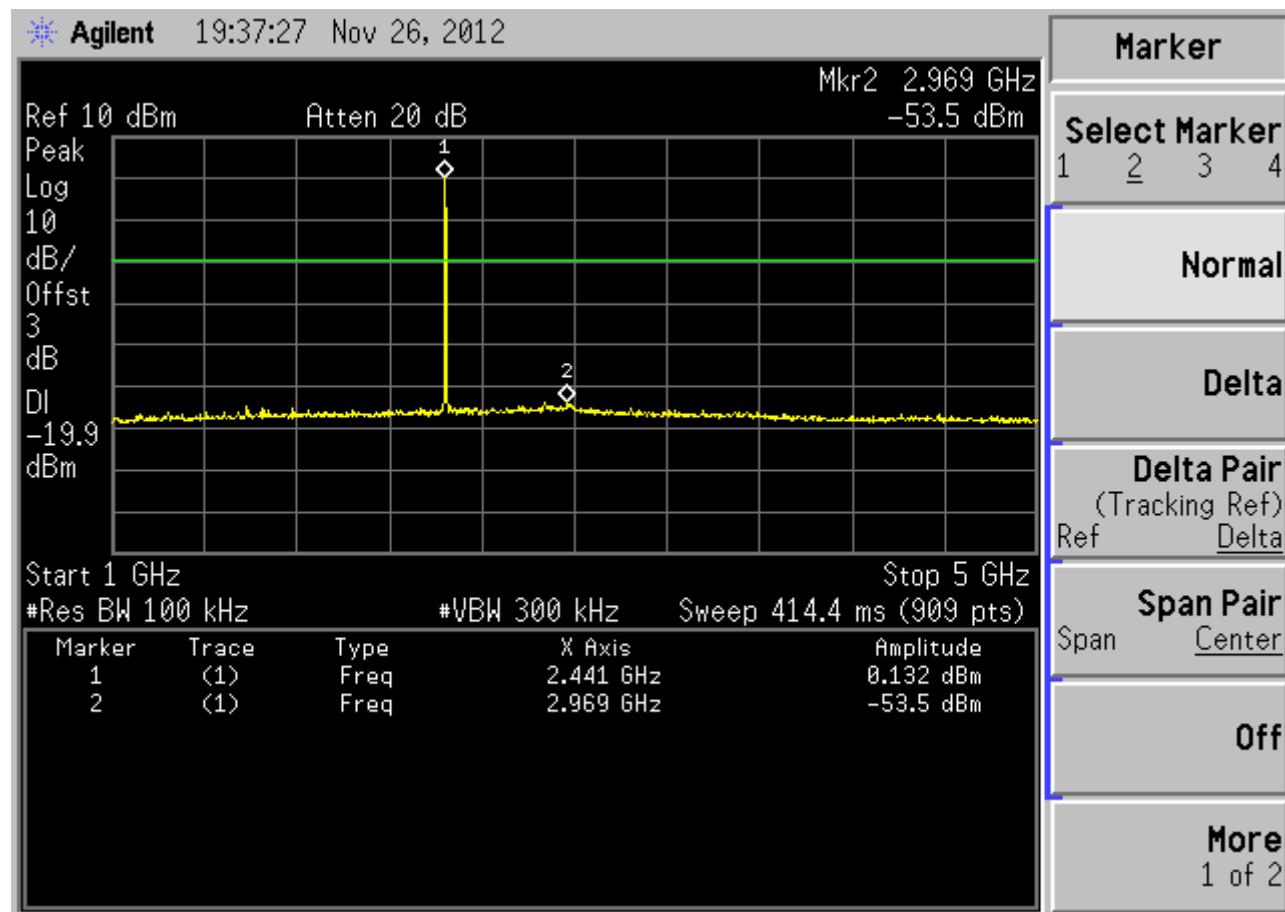
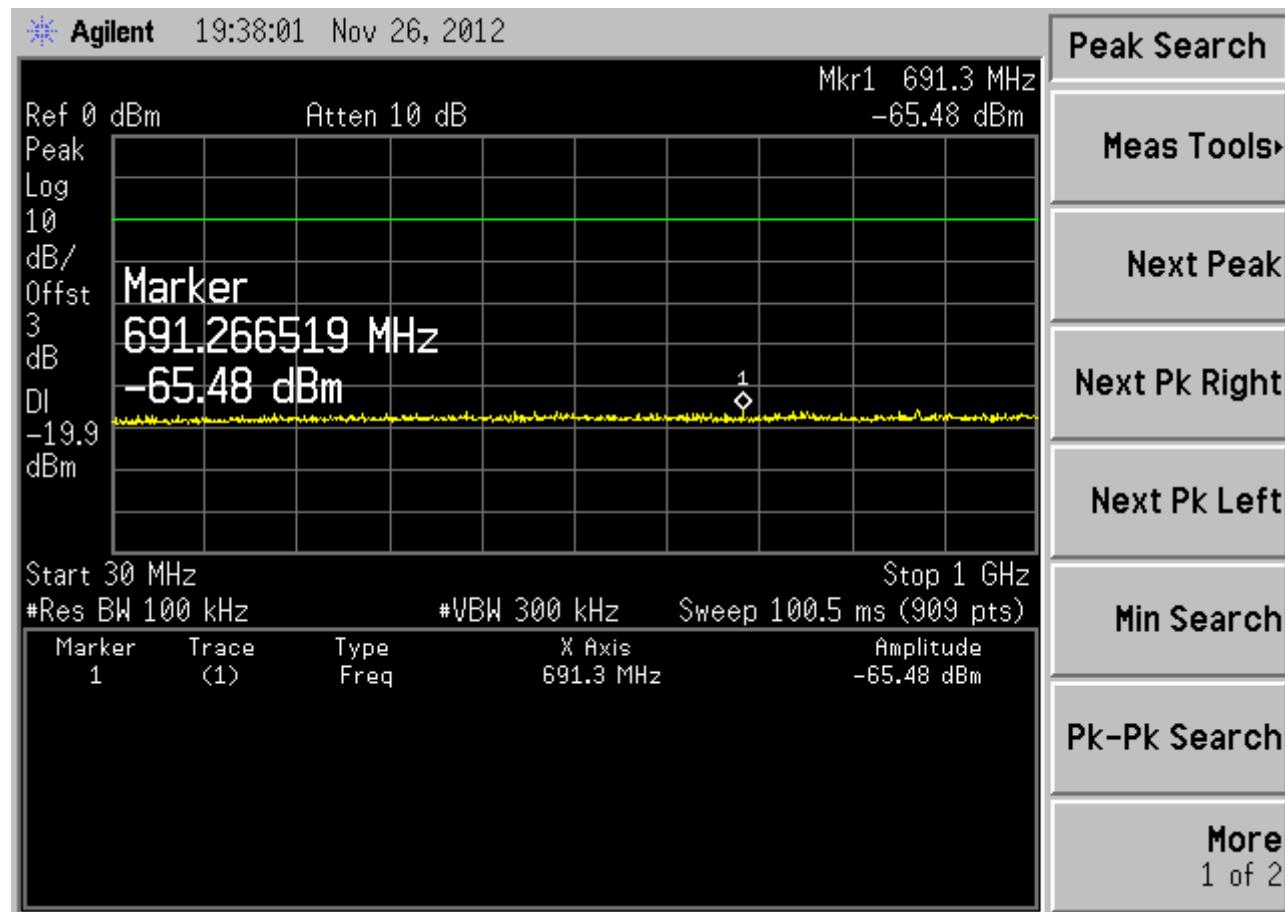
EDR Ch 00 (2402 MHz)

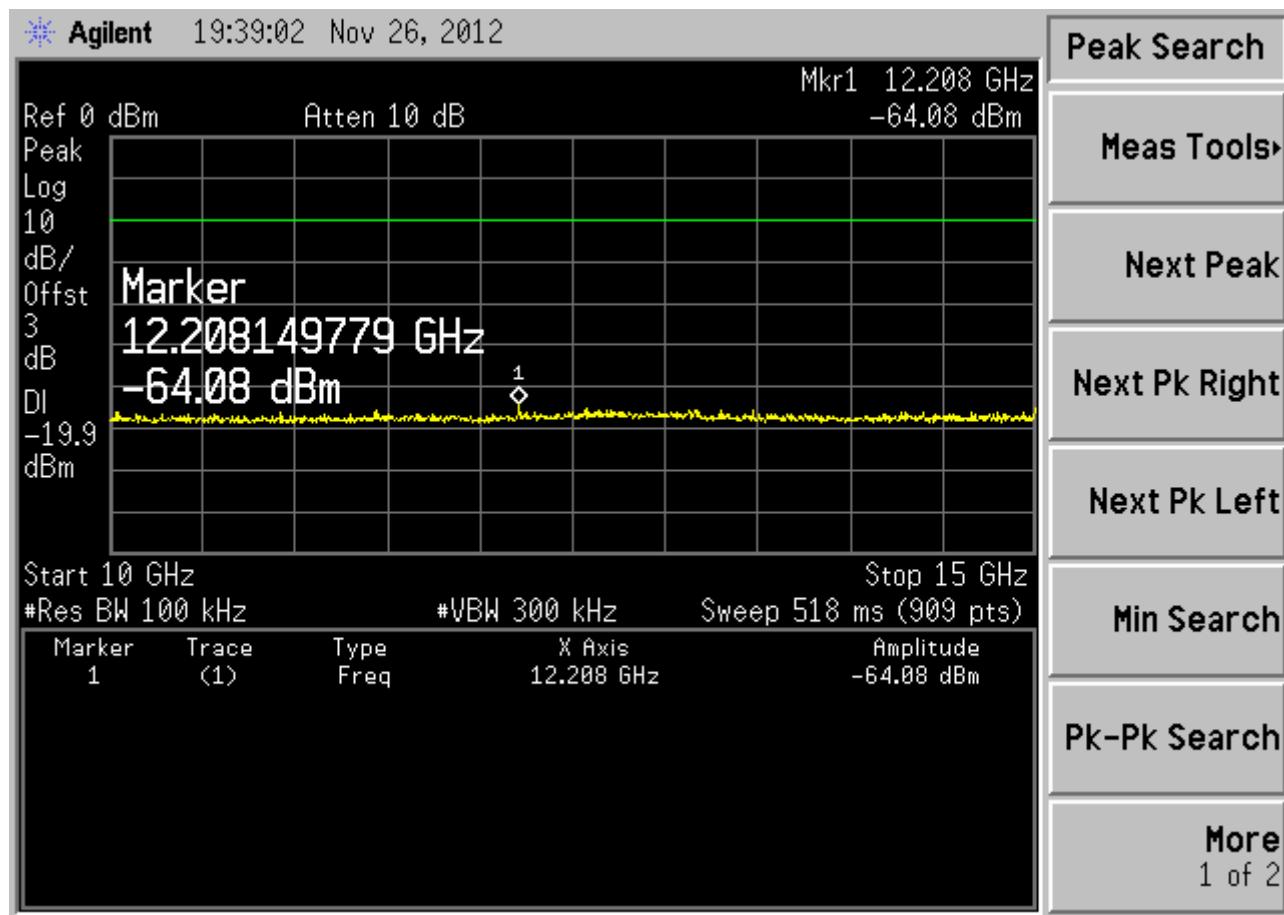
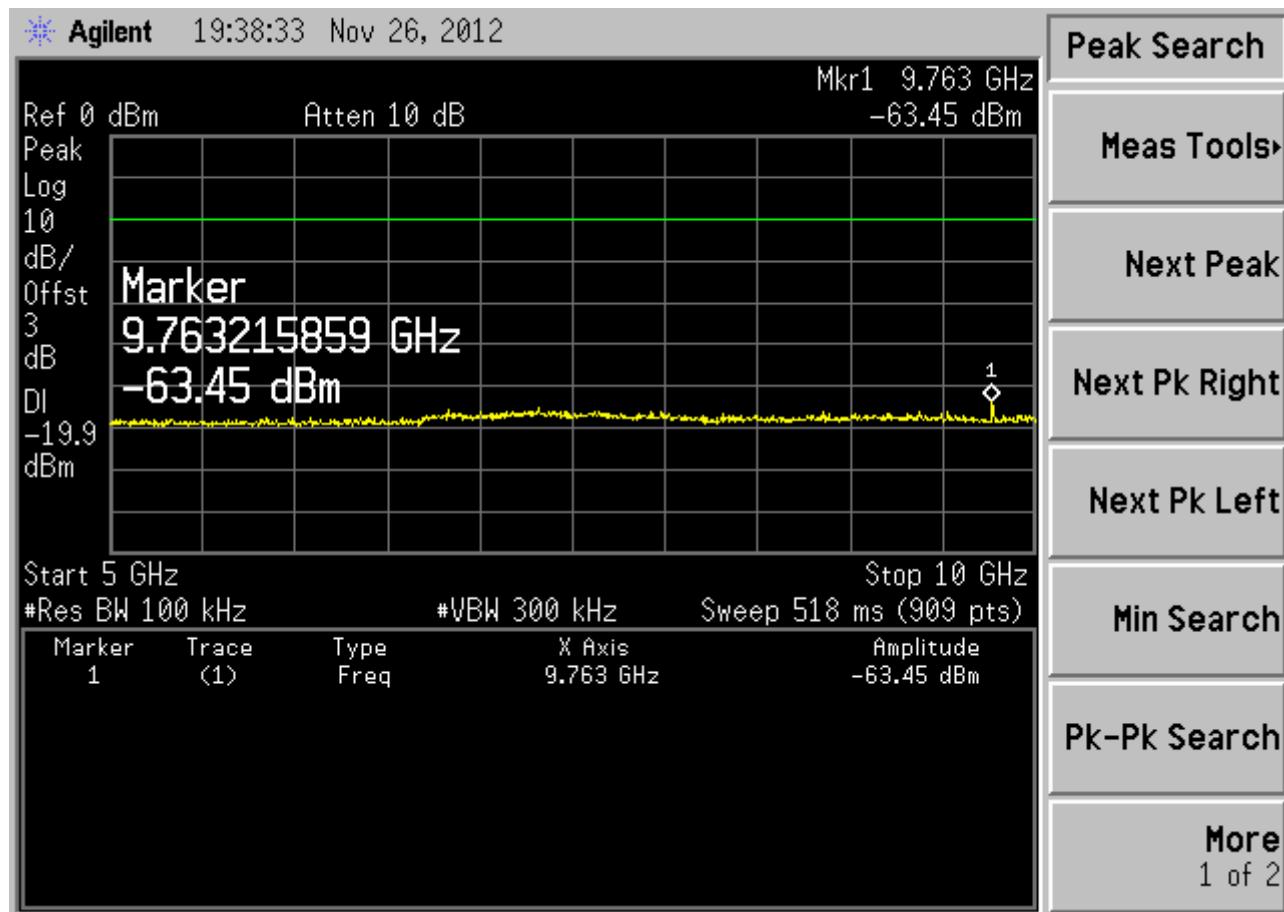


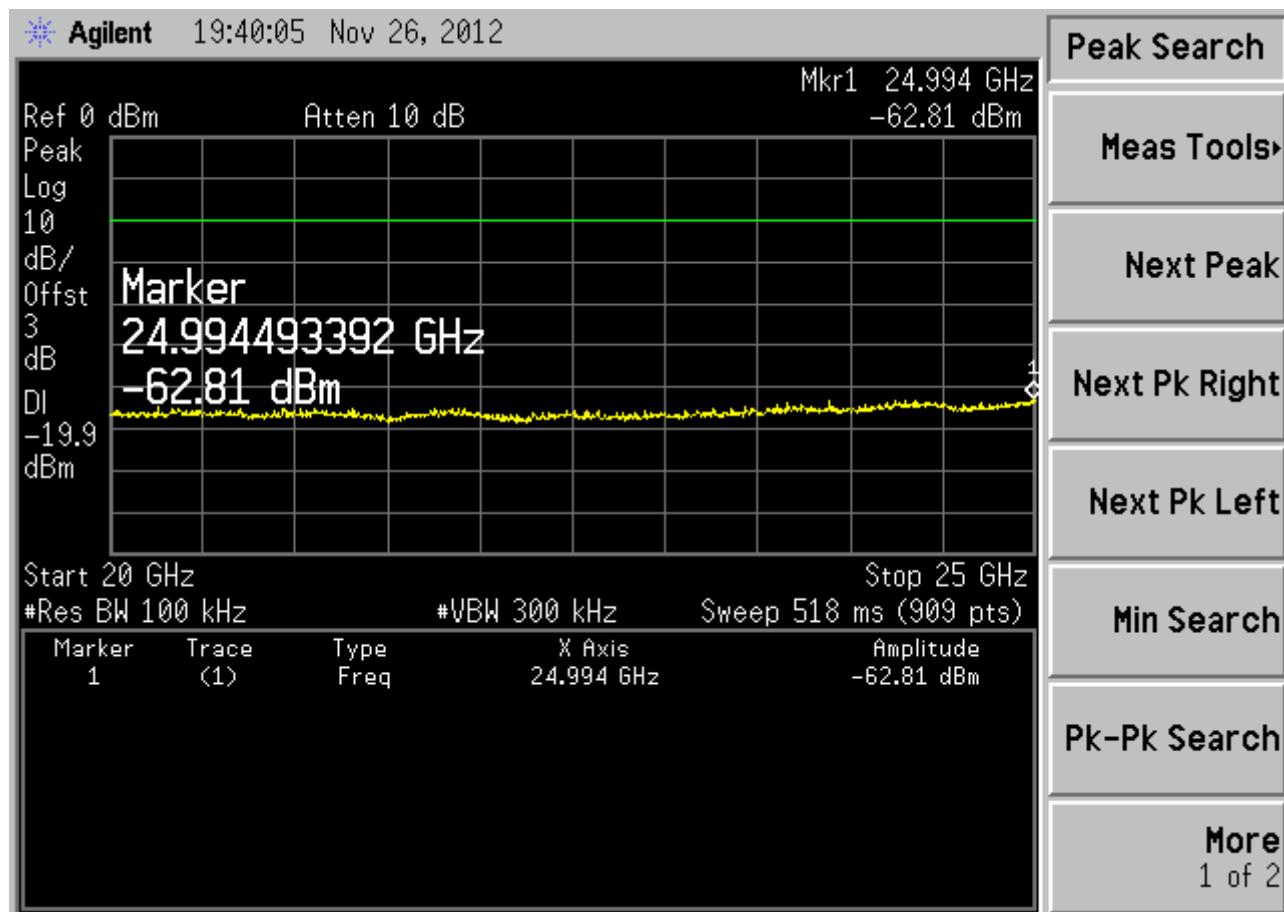
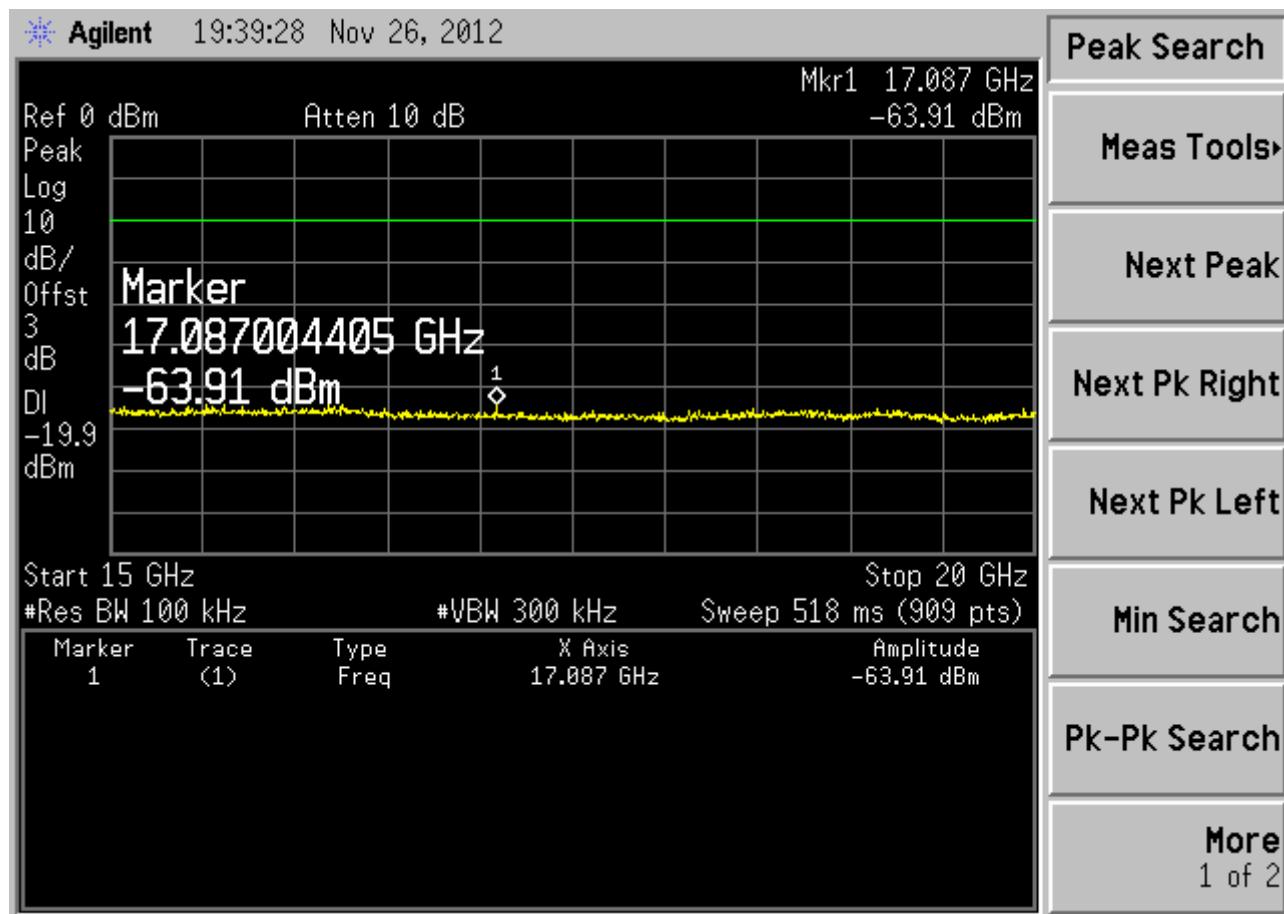




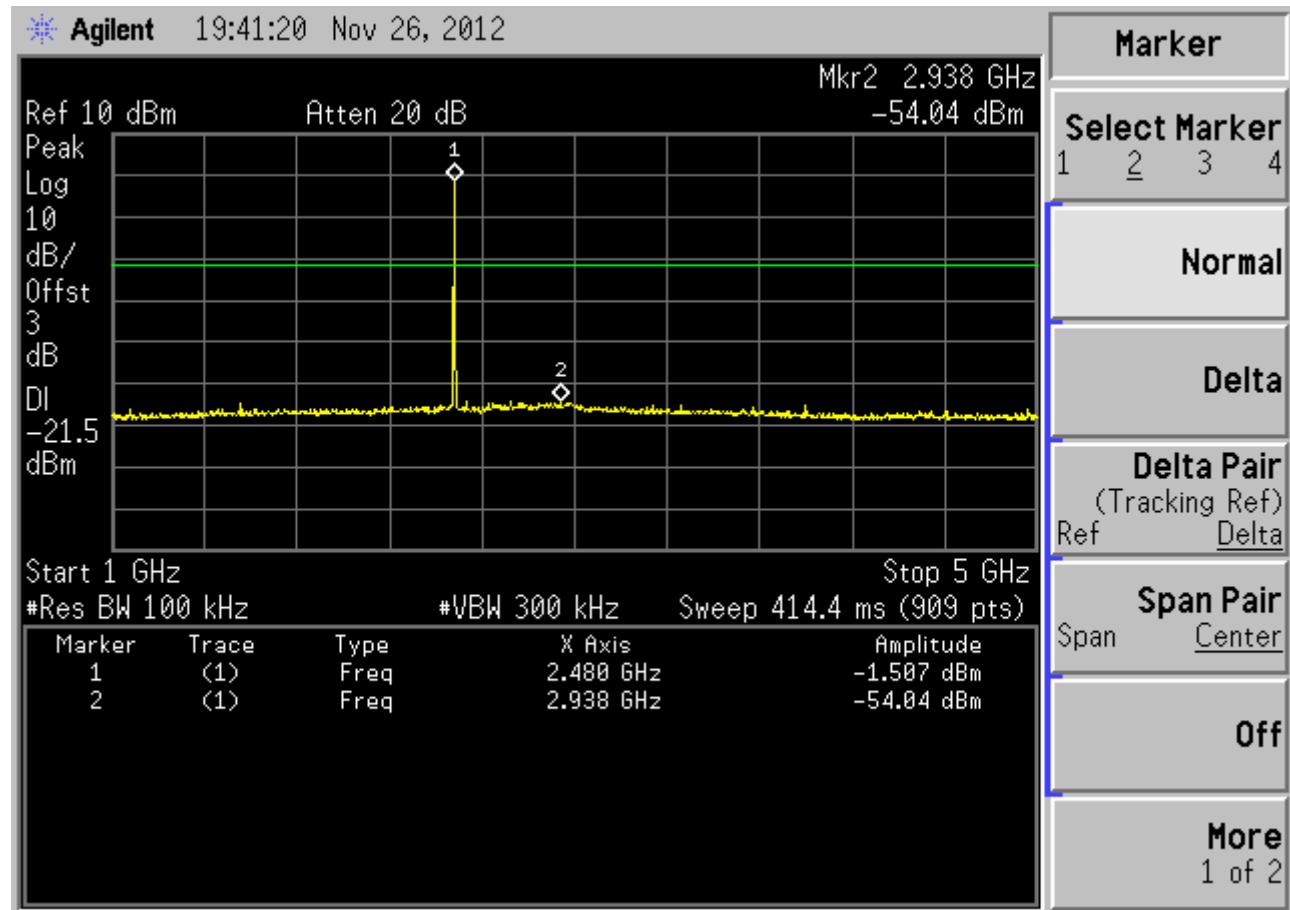
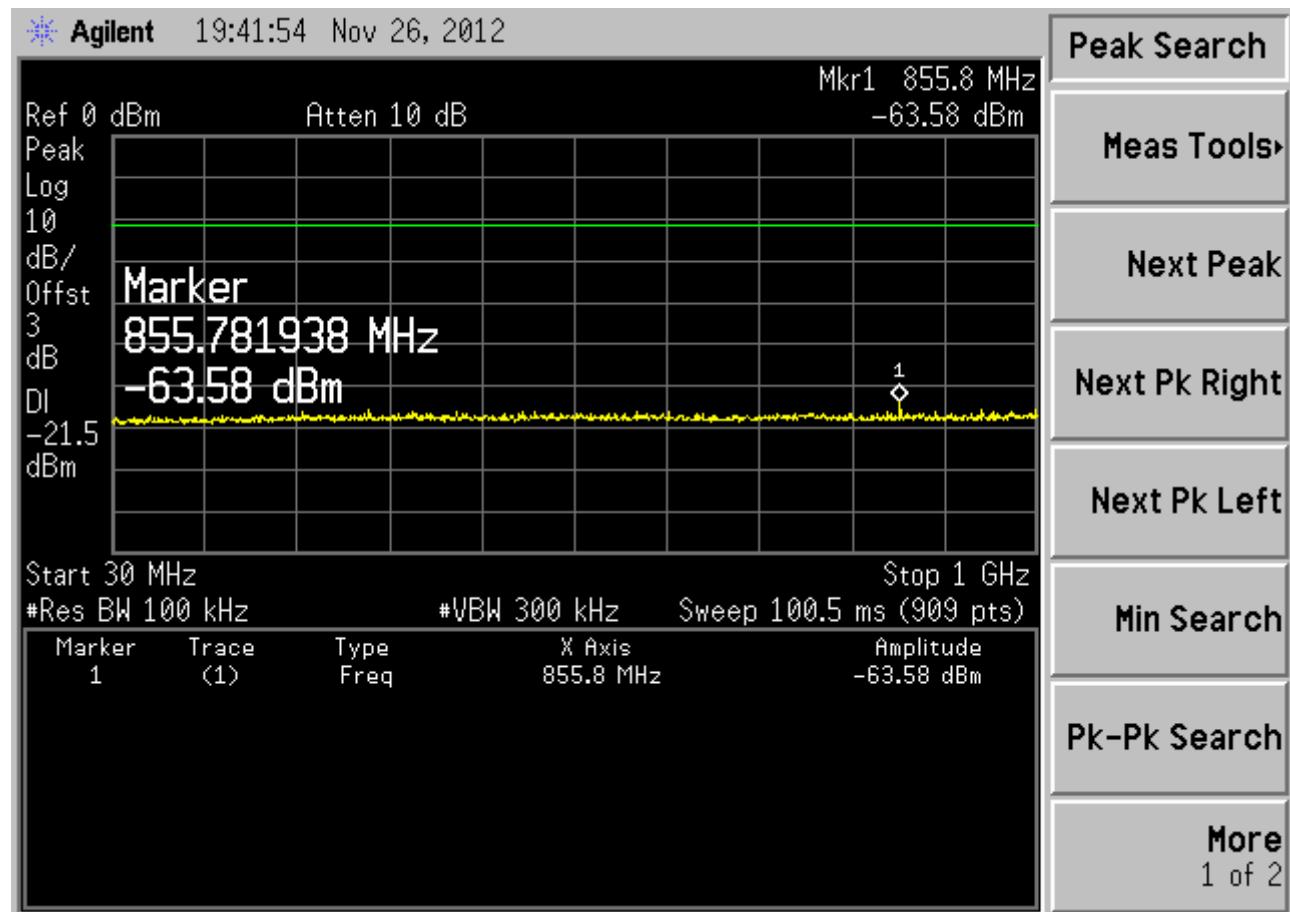
EDR Ch 39 (2441 MHz)

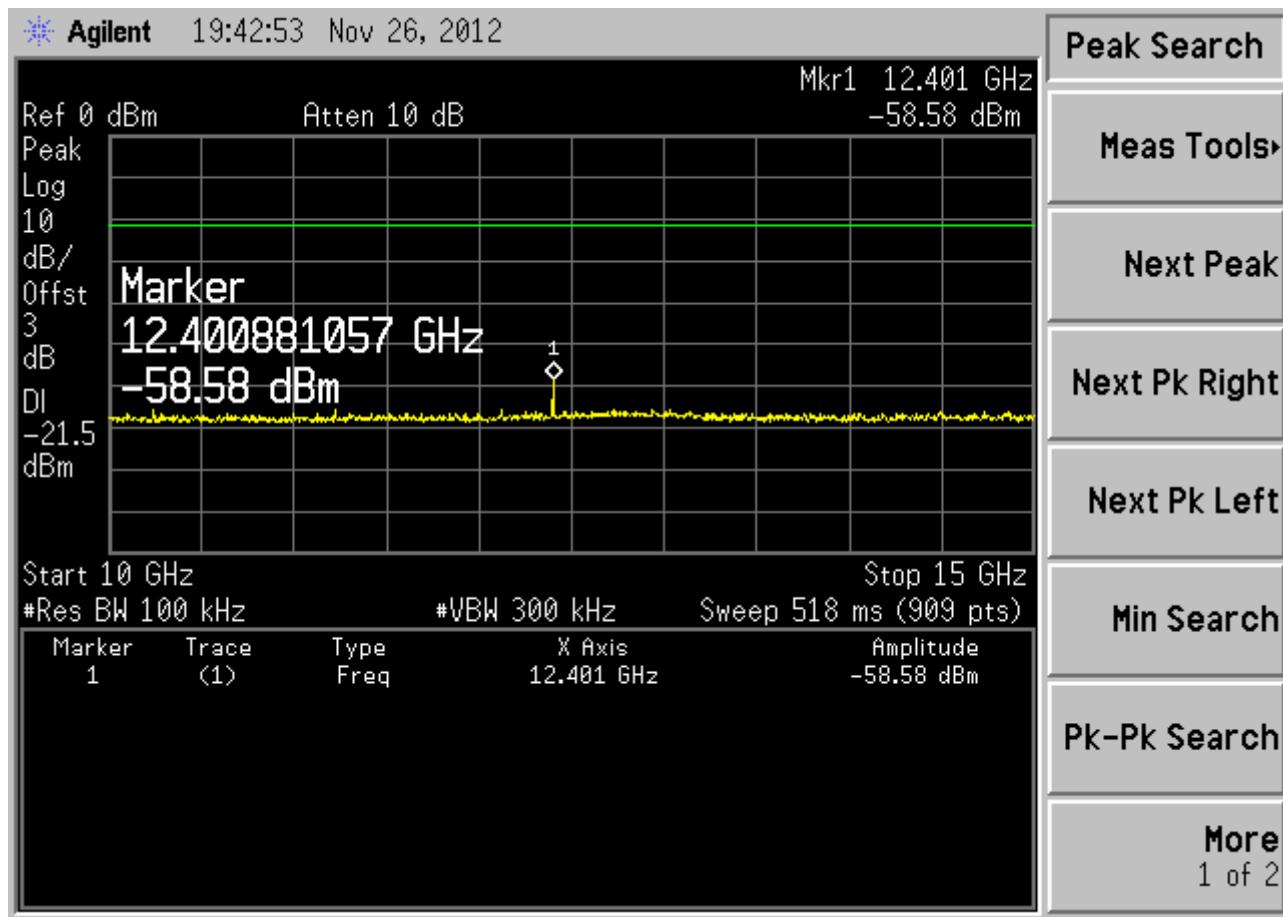
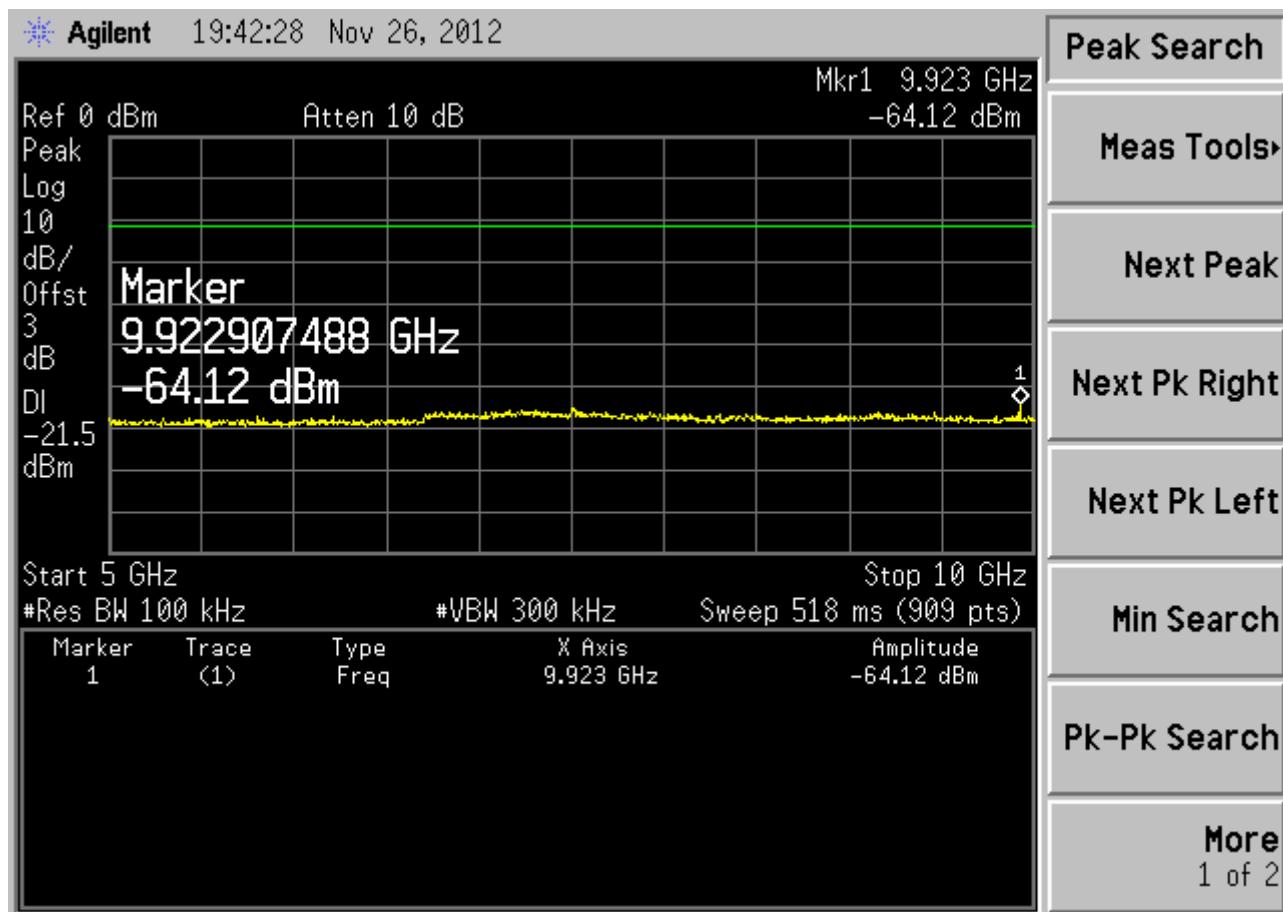


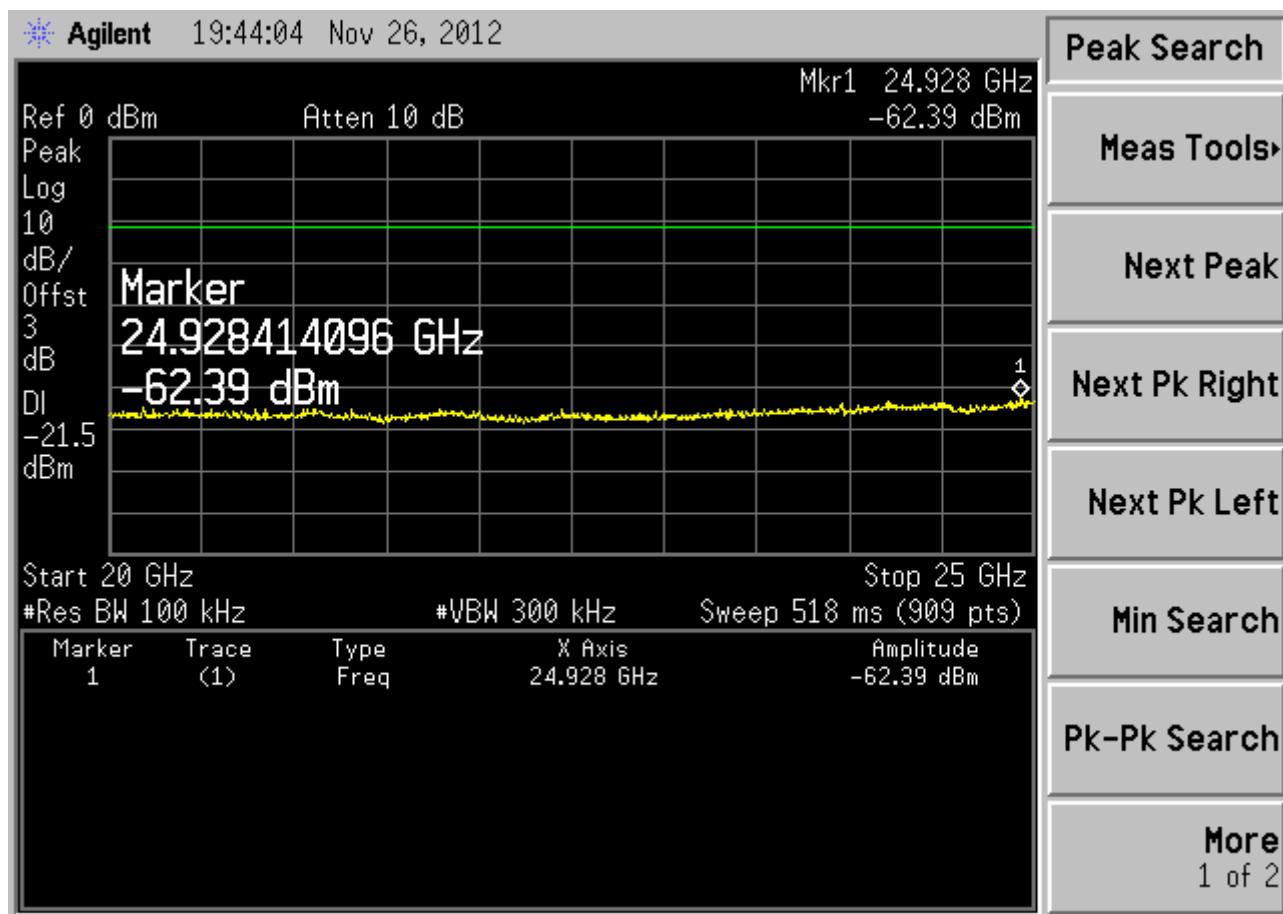
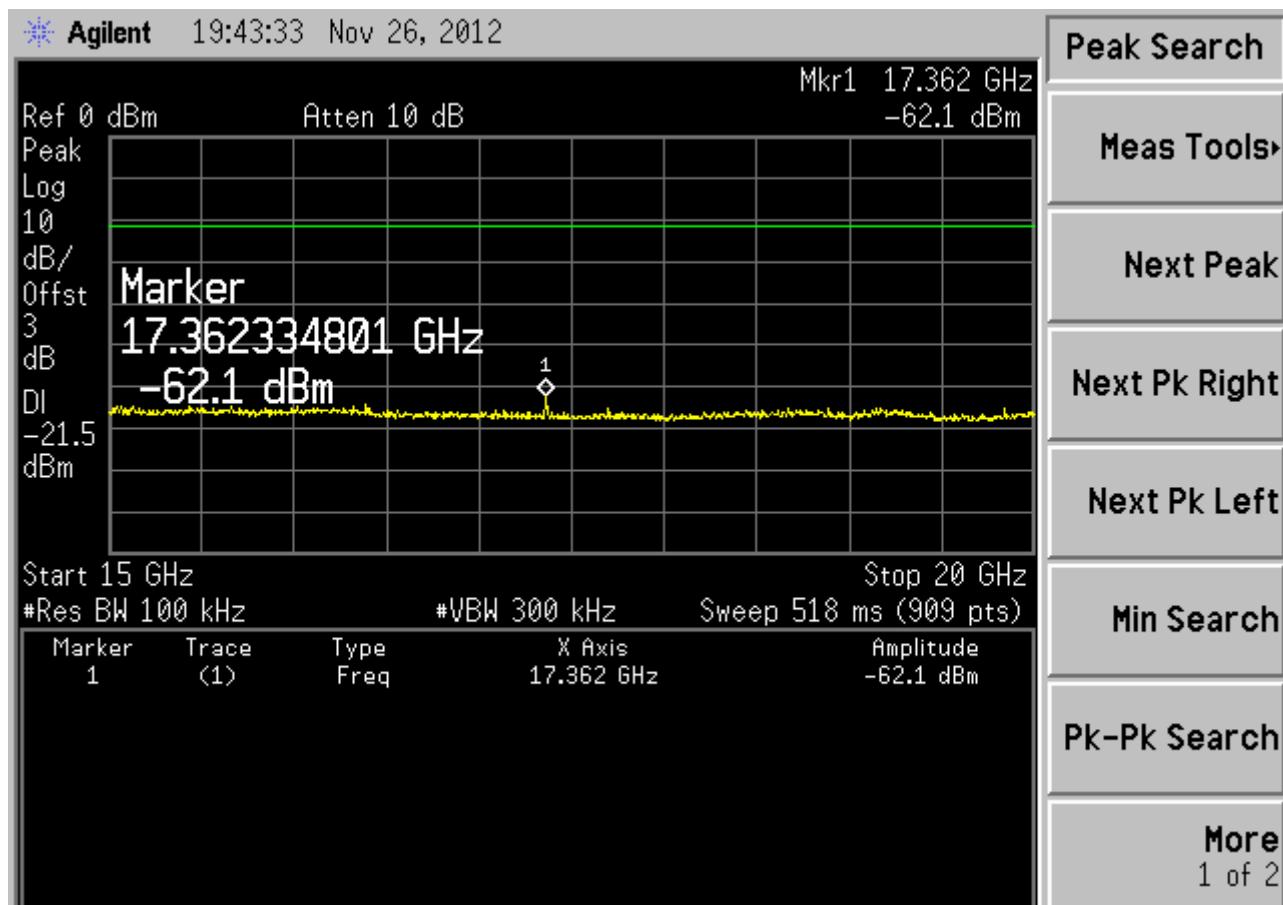




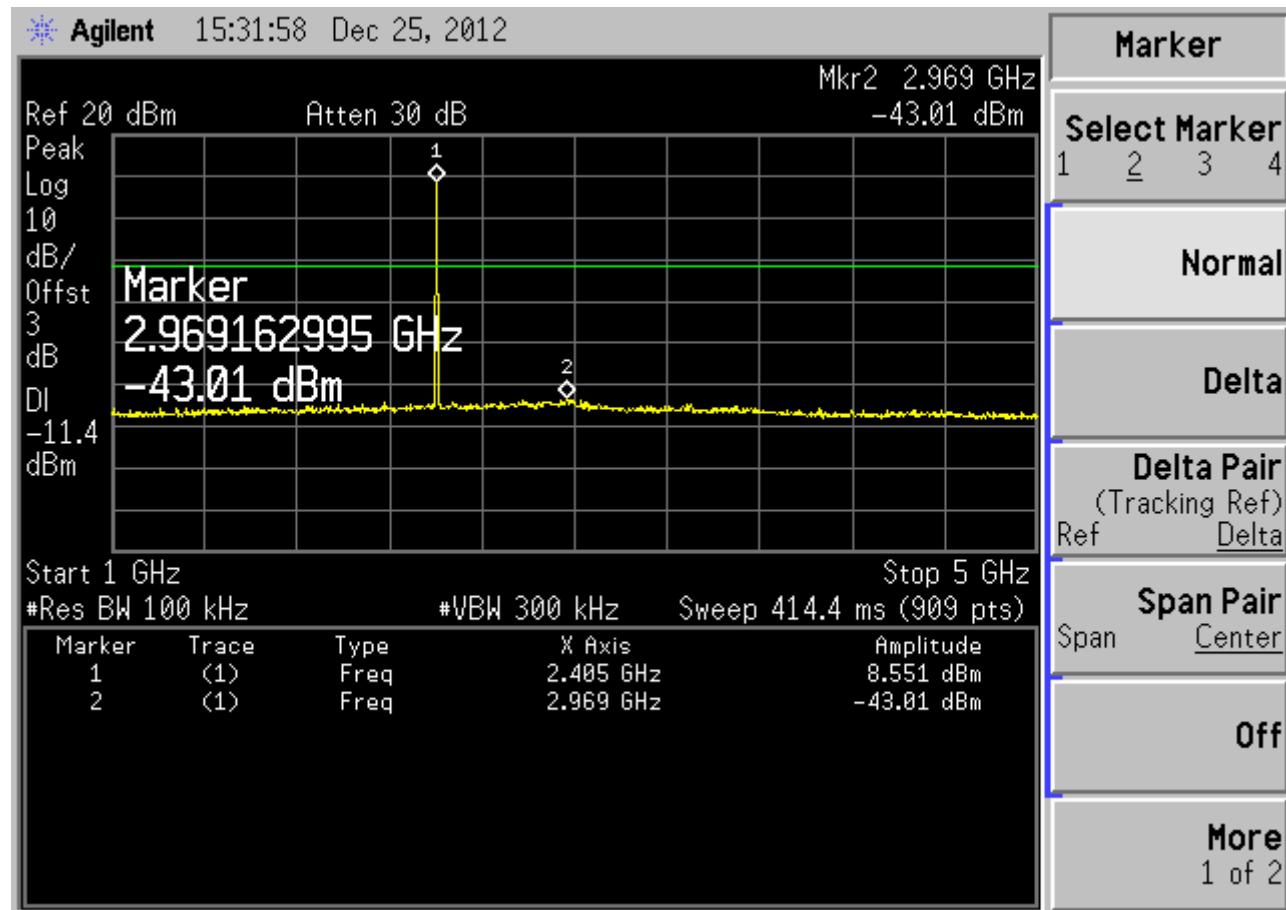
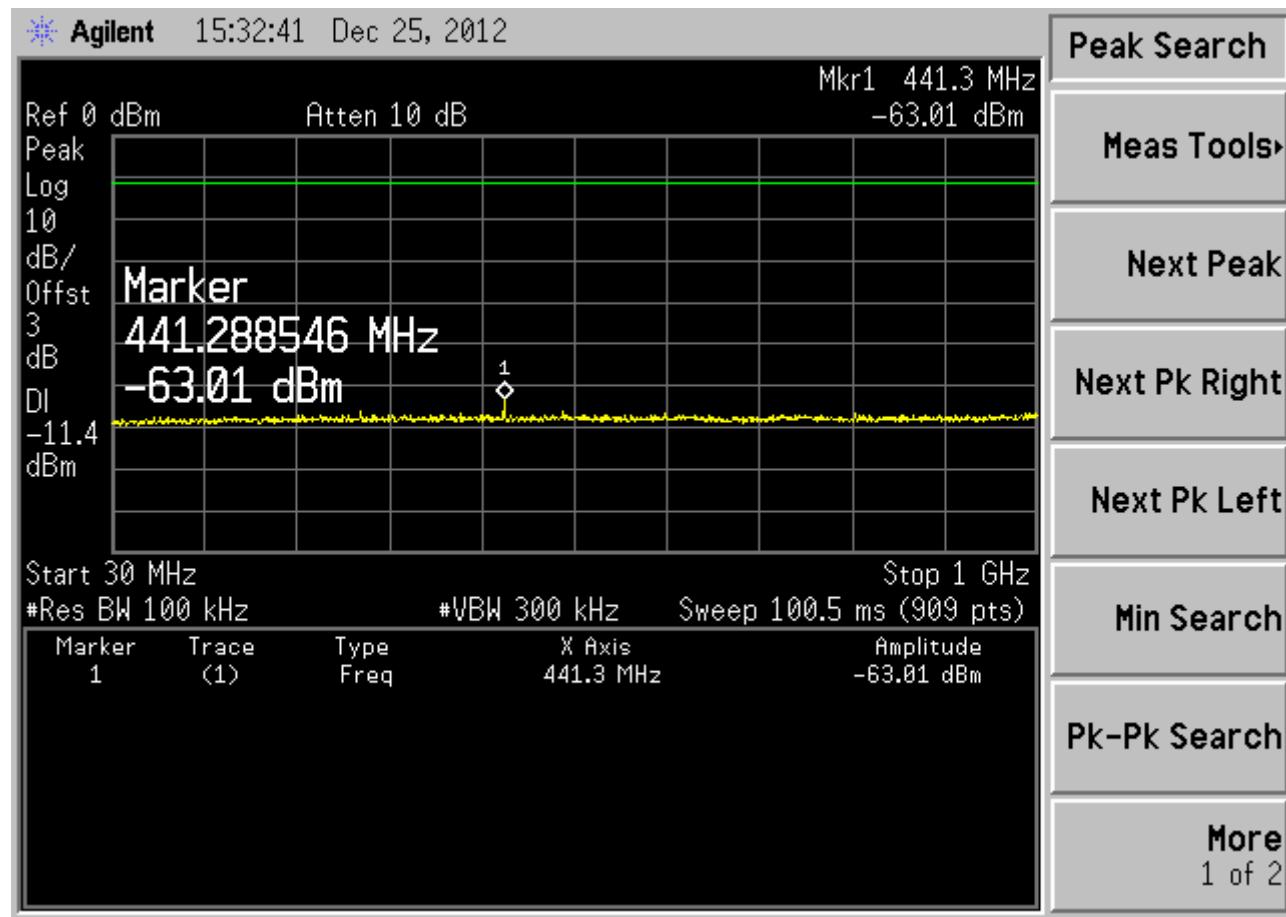
EDR Ch 78 (2480 MHz)

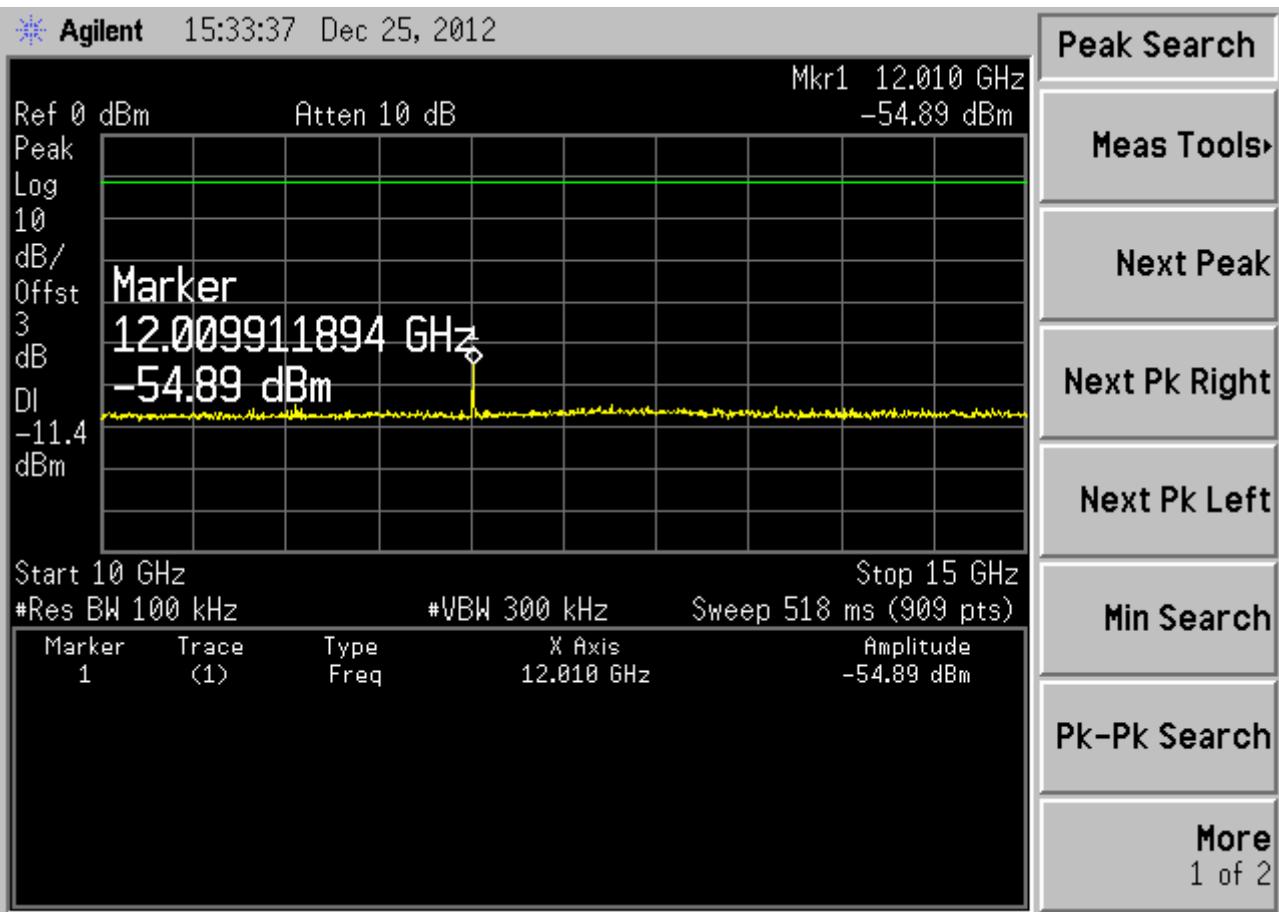
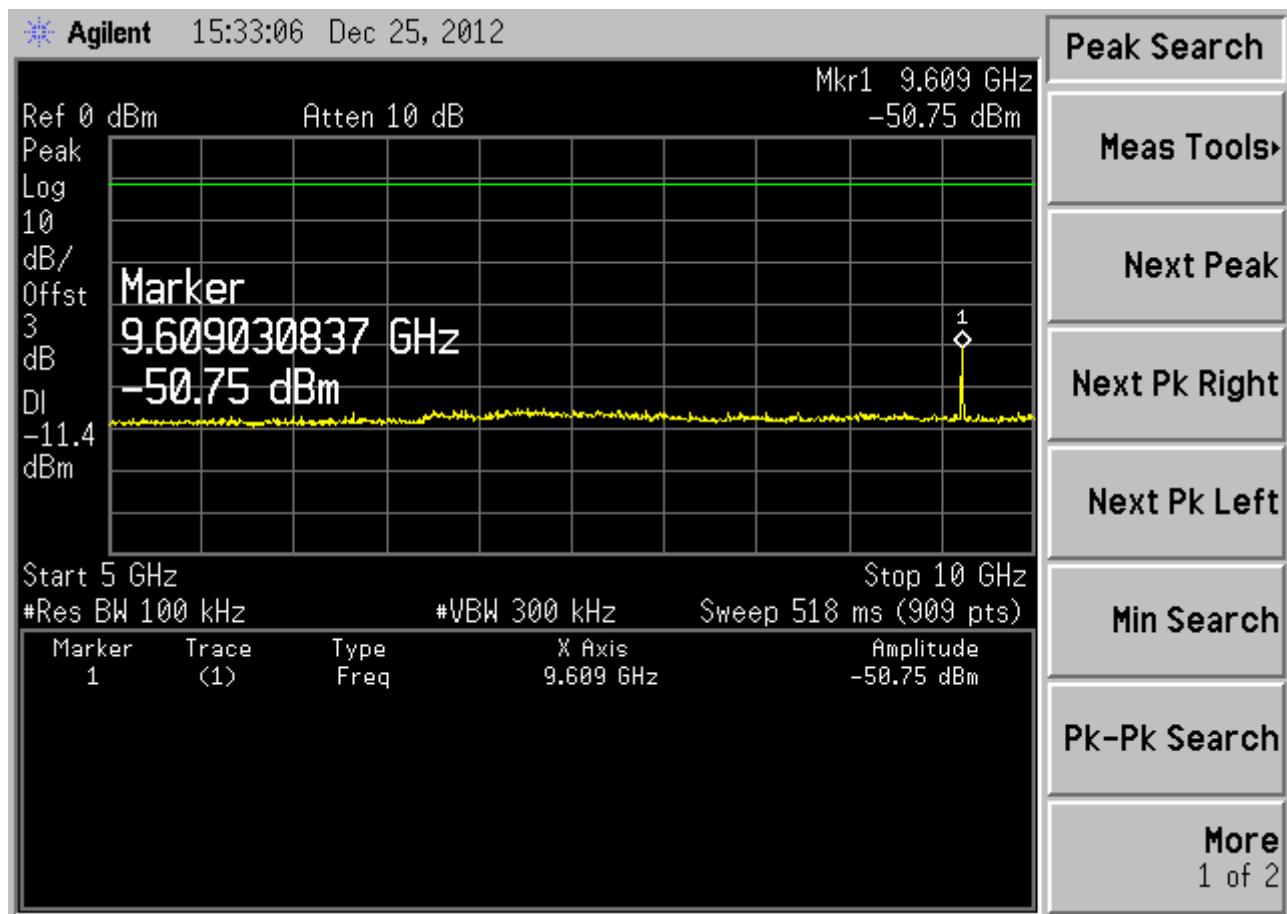


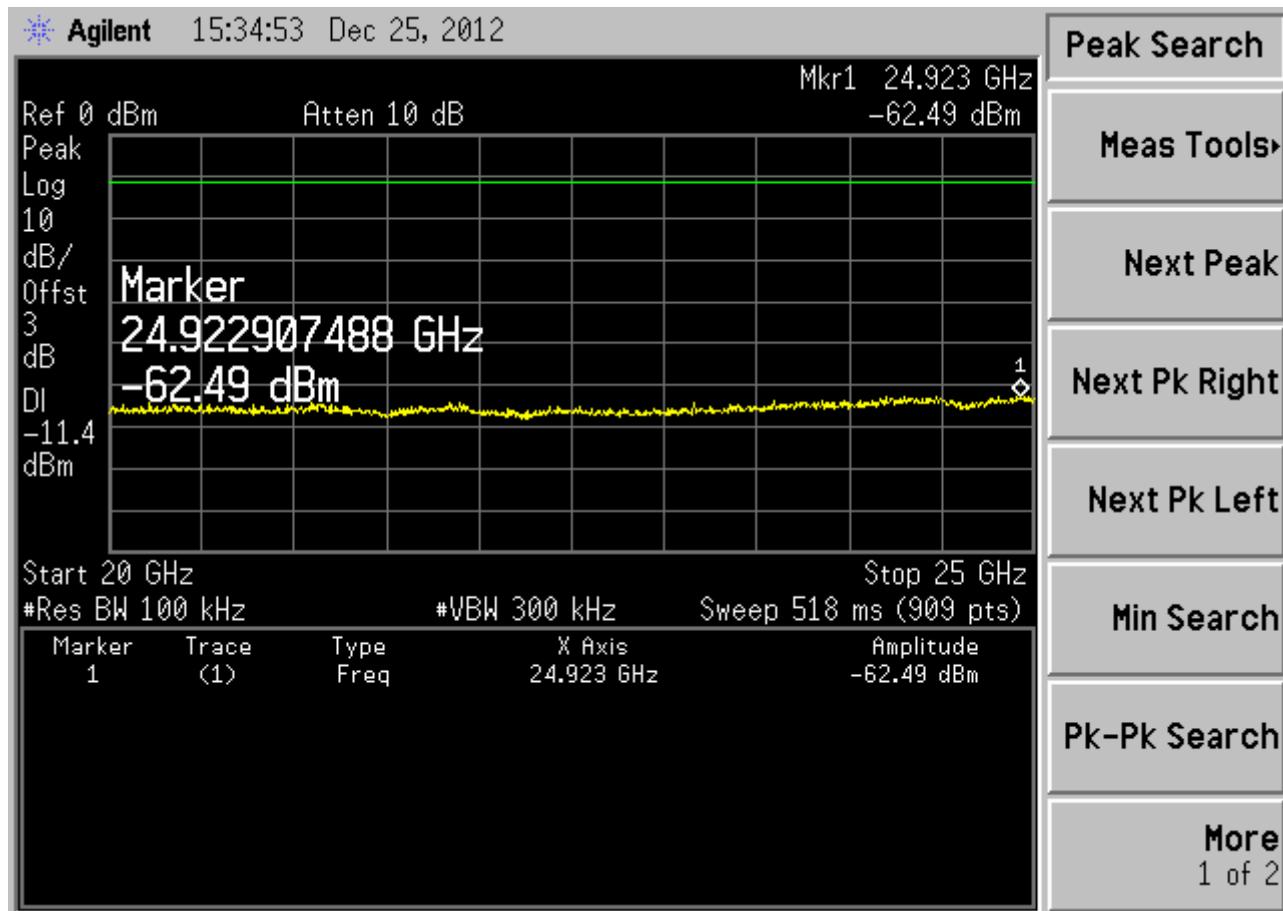
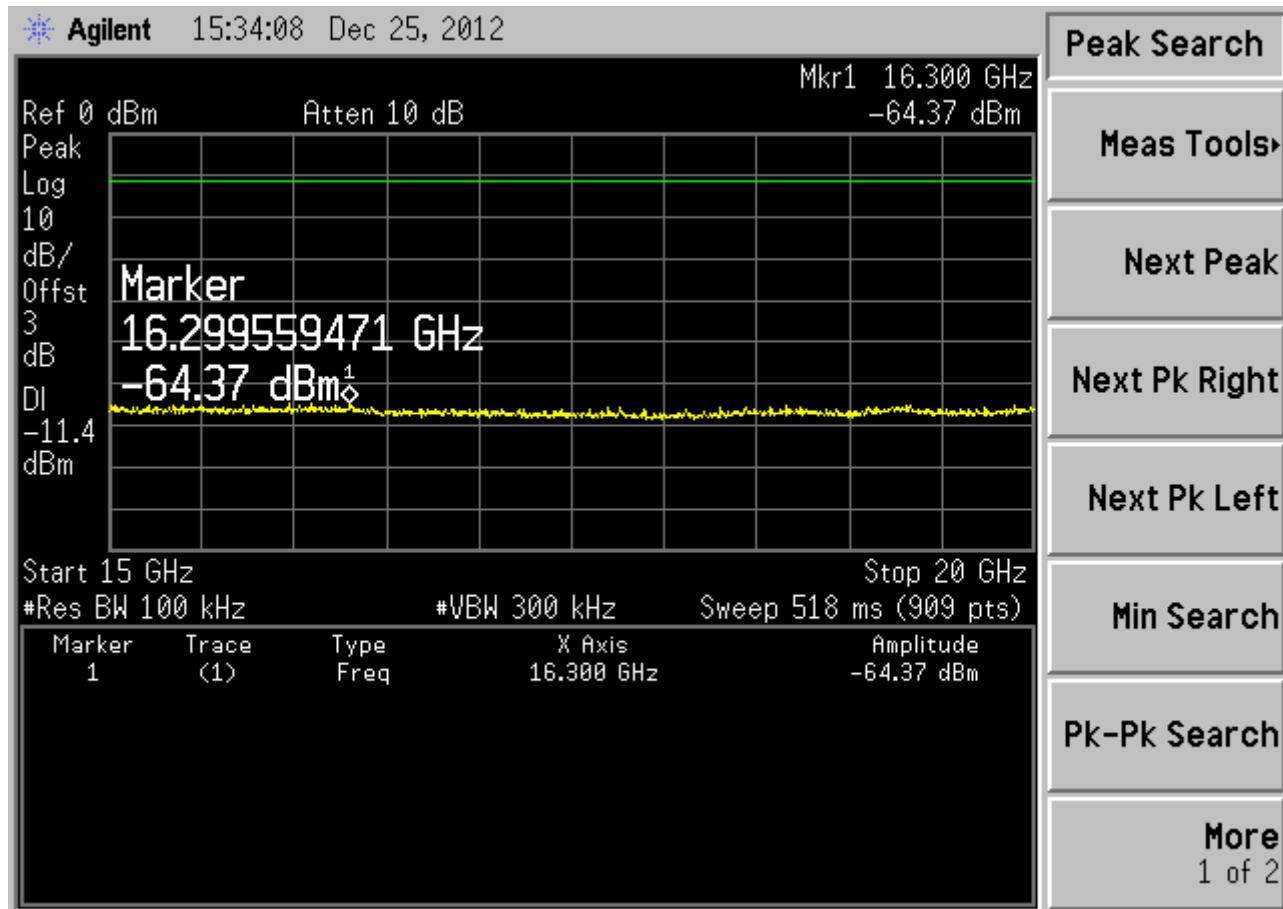




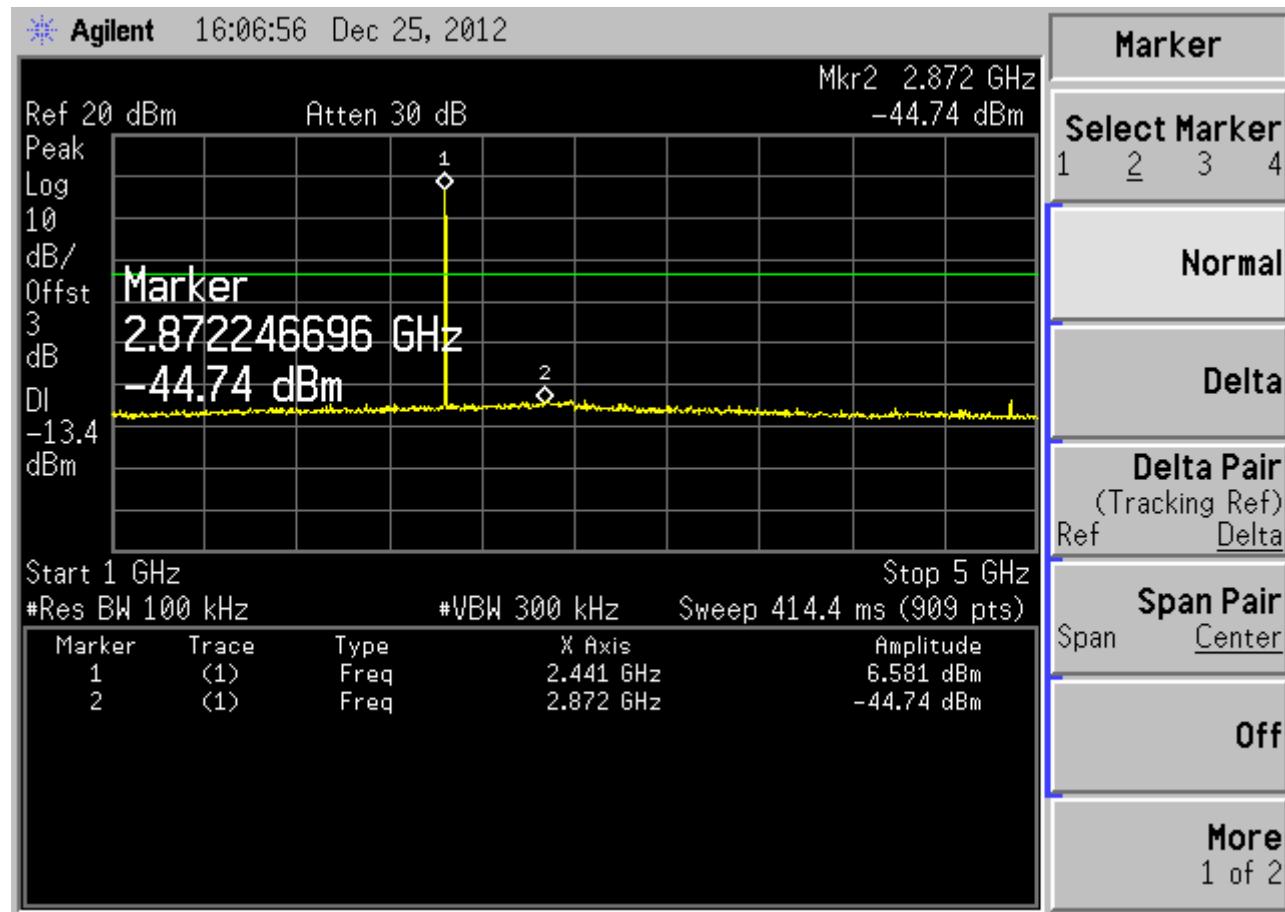
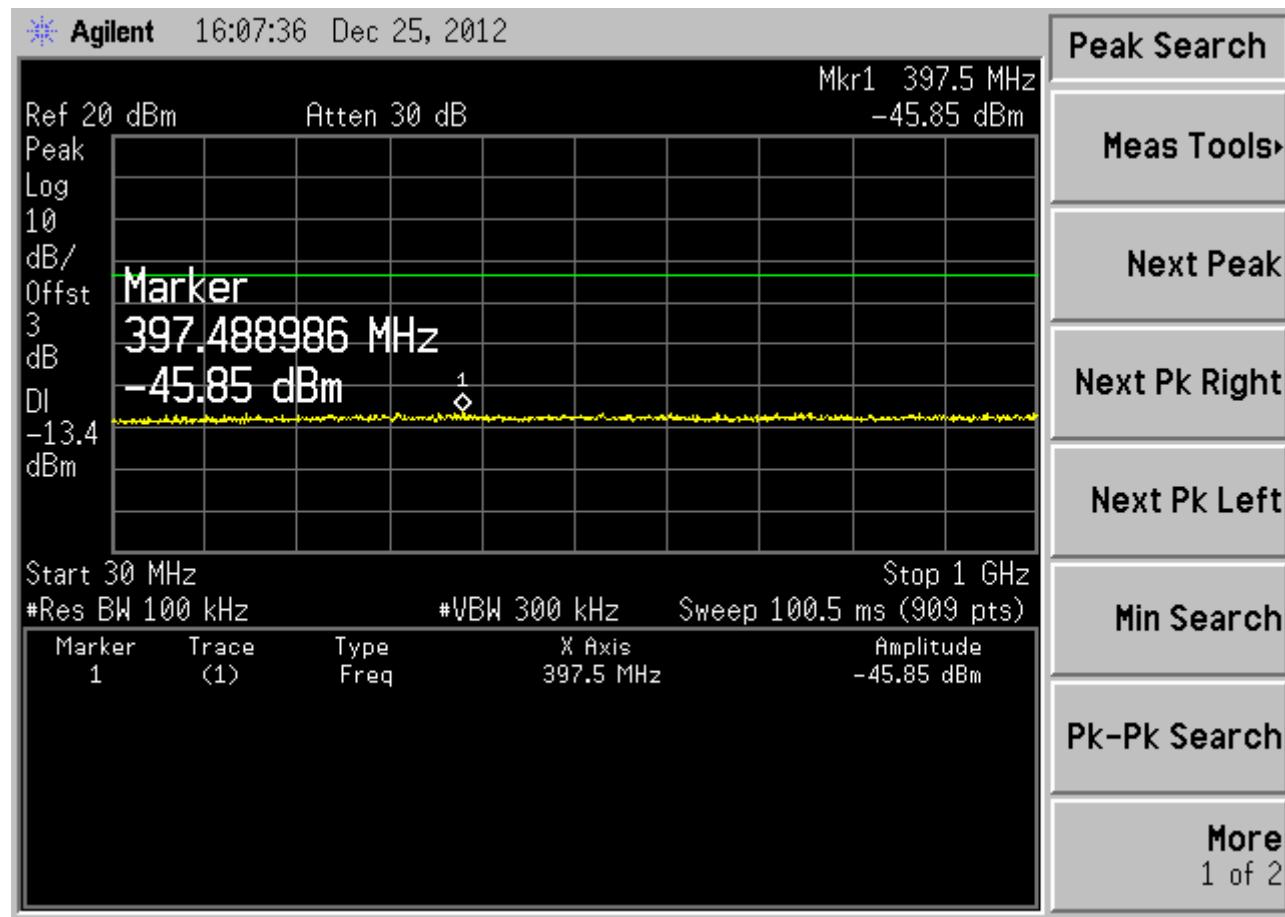
EDR Ch 00 (2402 MHz) + WIFI 802.11b Ch01 (2412MHz)

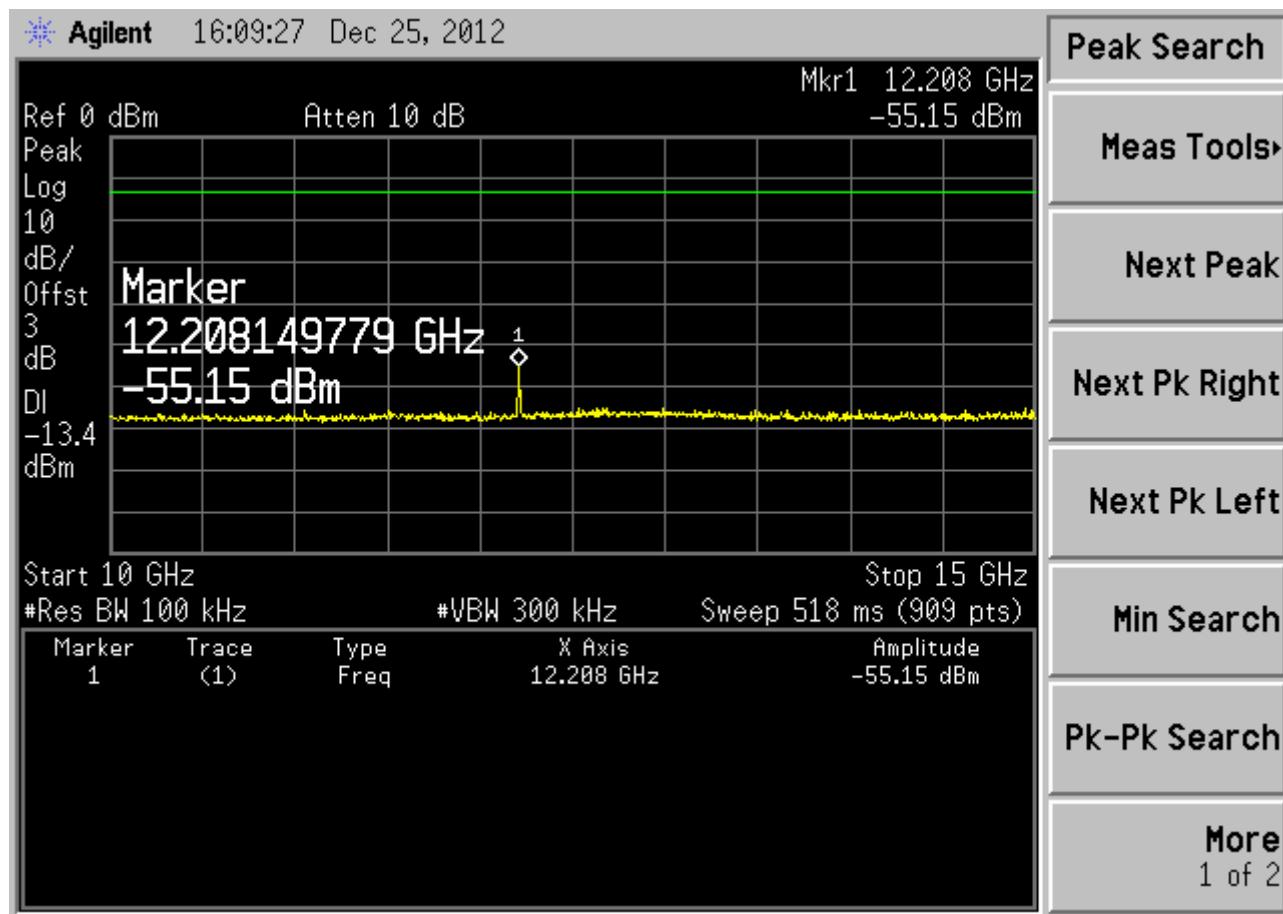
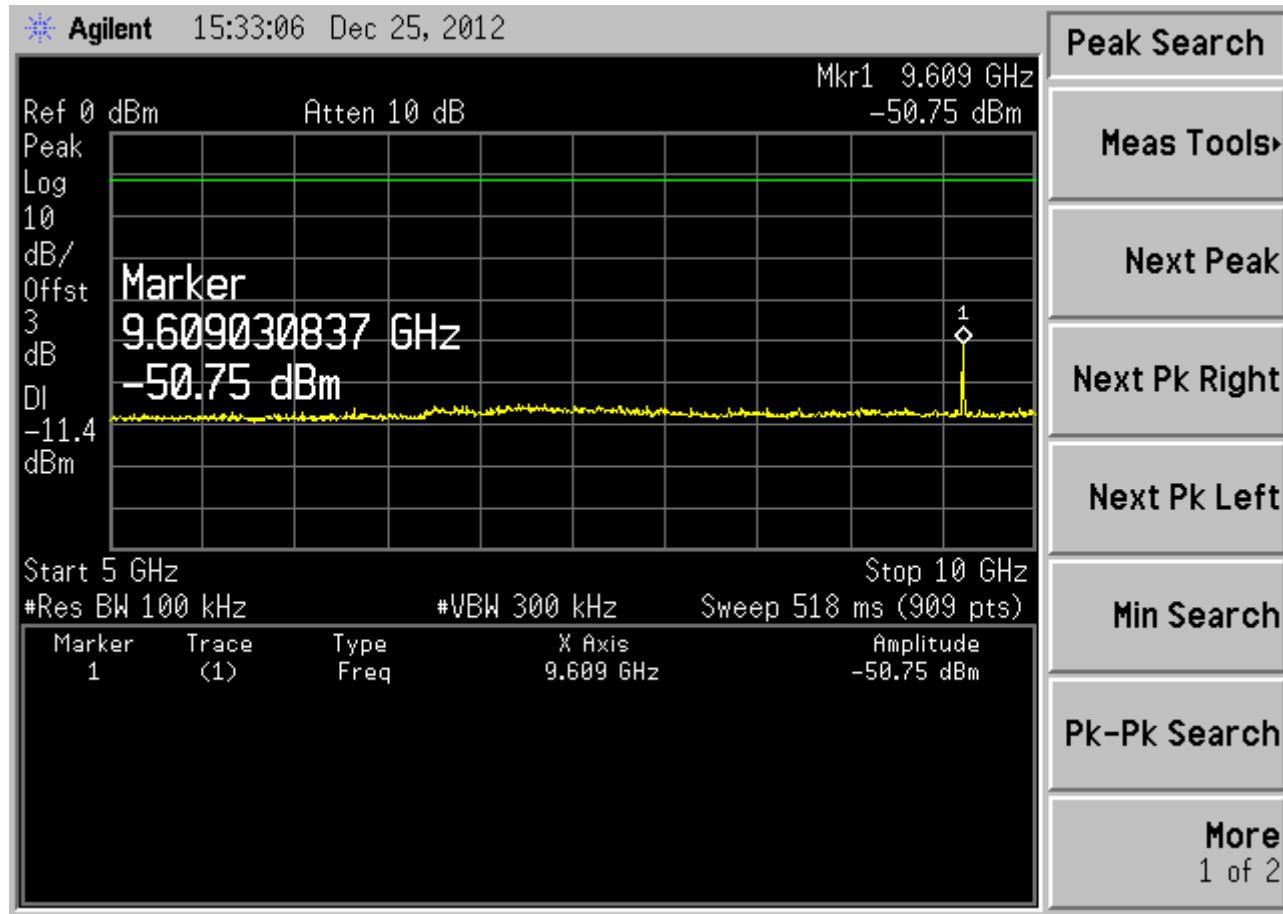


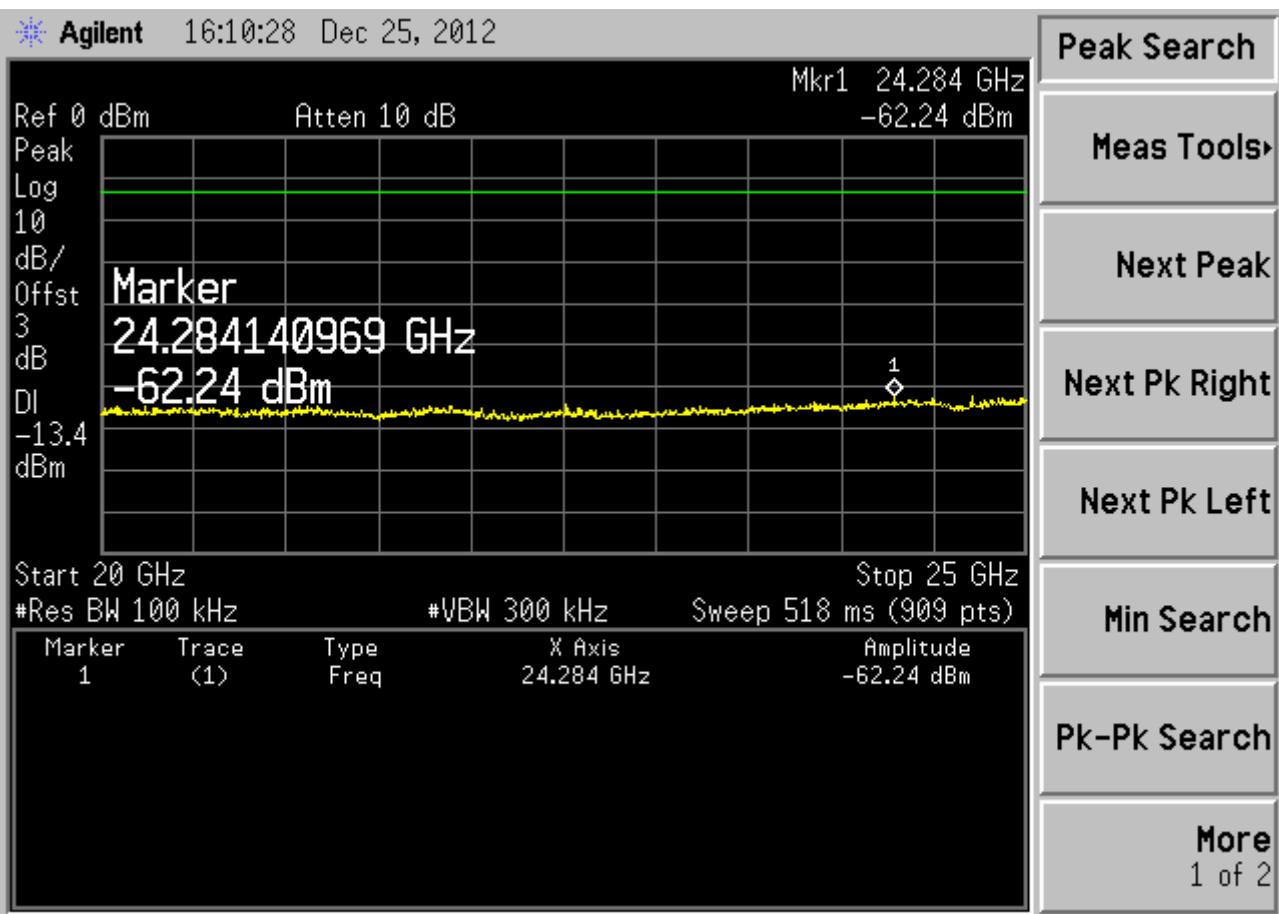
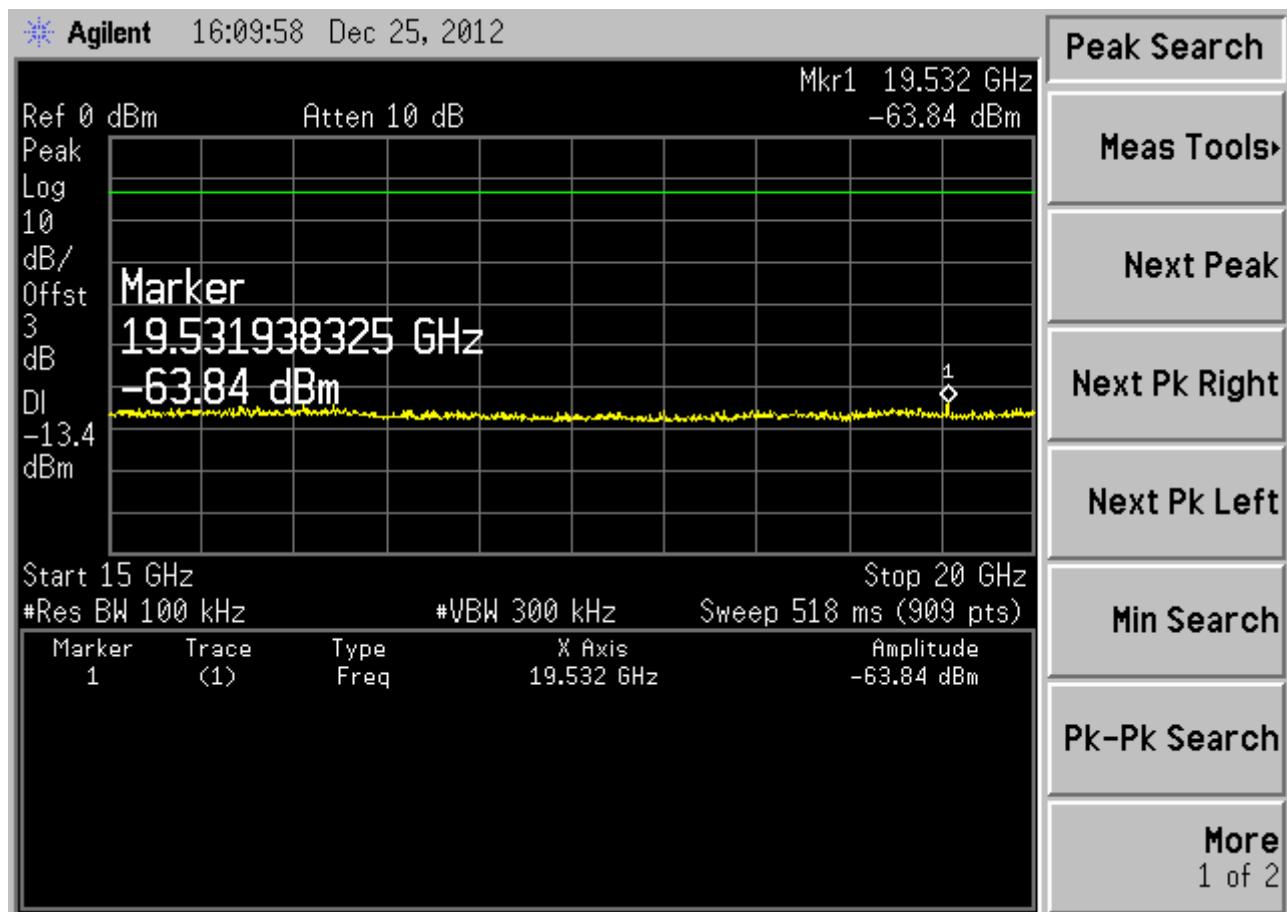




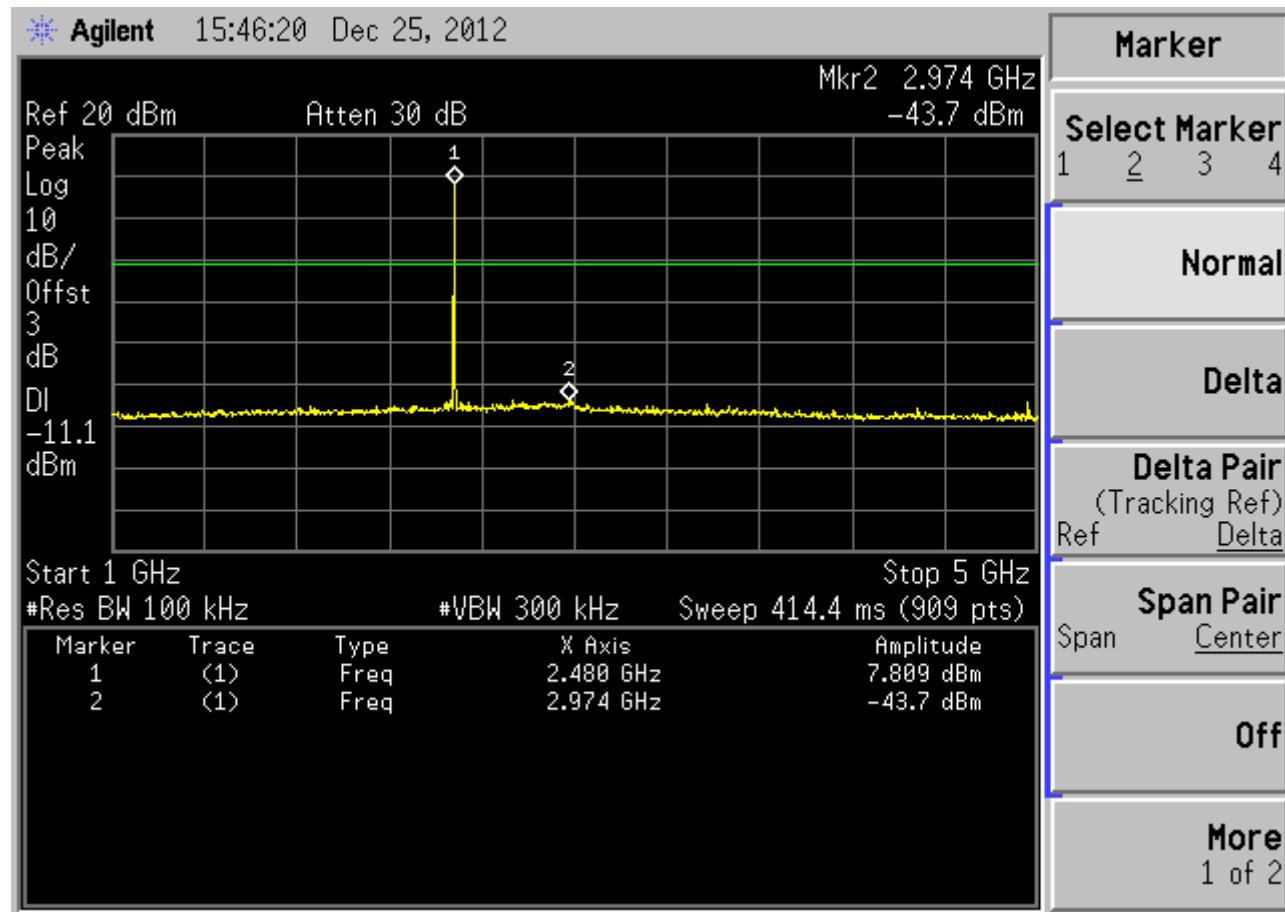
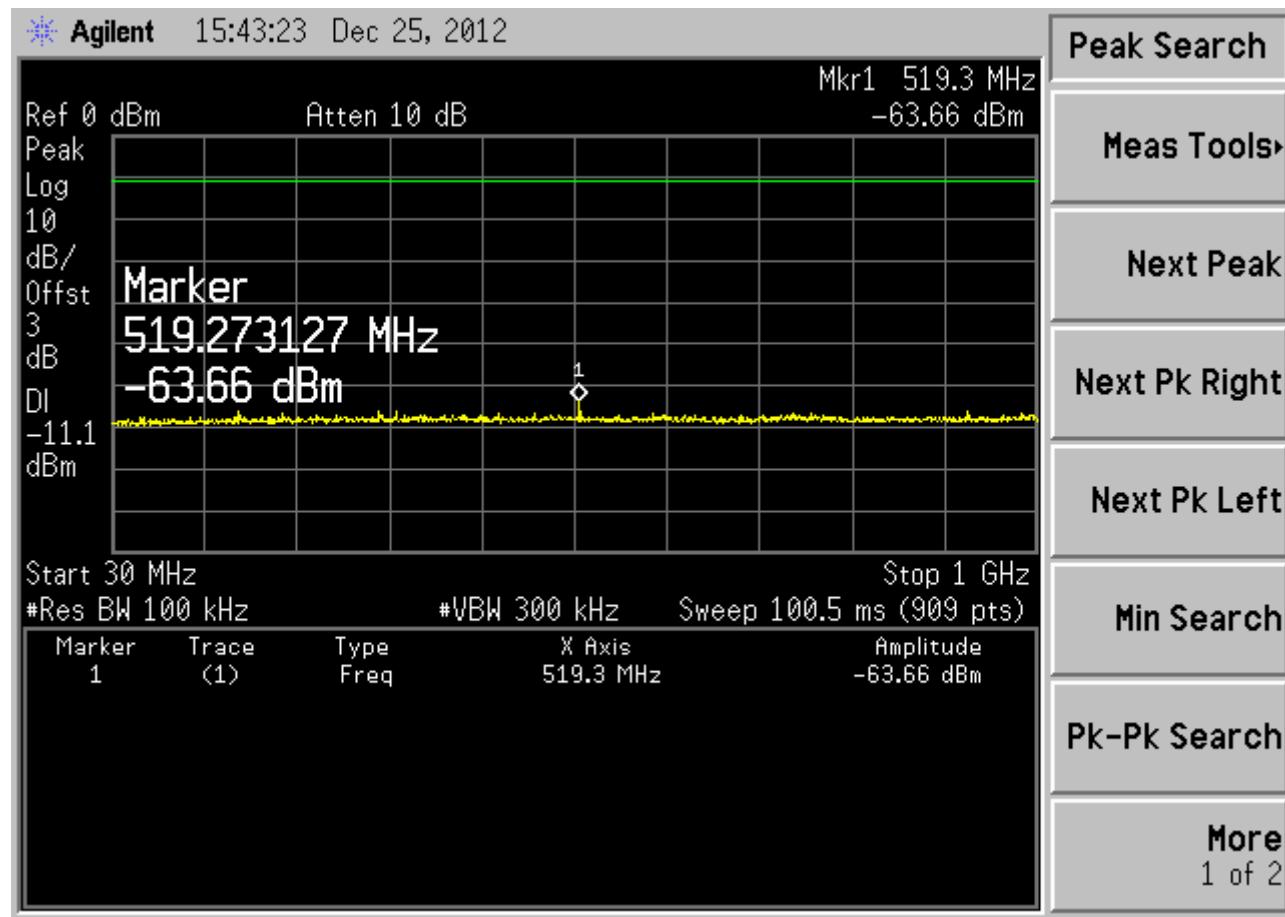
EDR Ch 39 (2441 MHz) + WIFI 802.11b Ch06 (2437MHz)

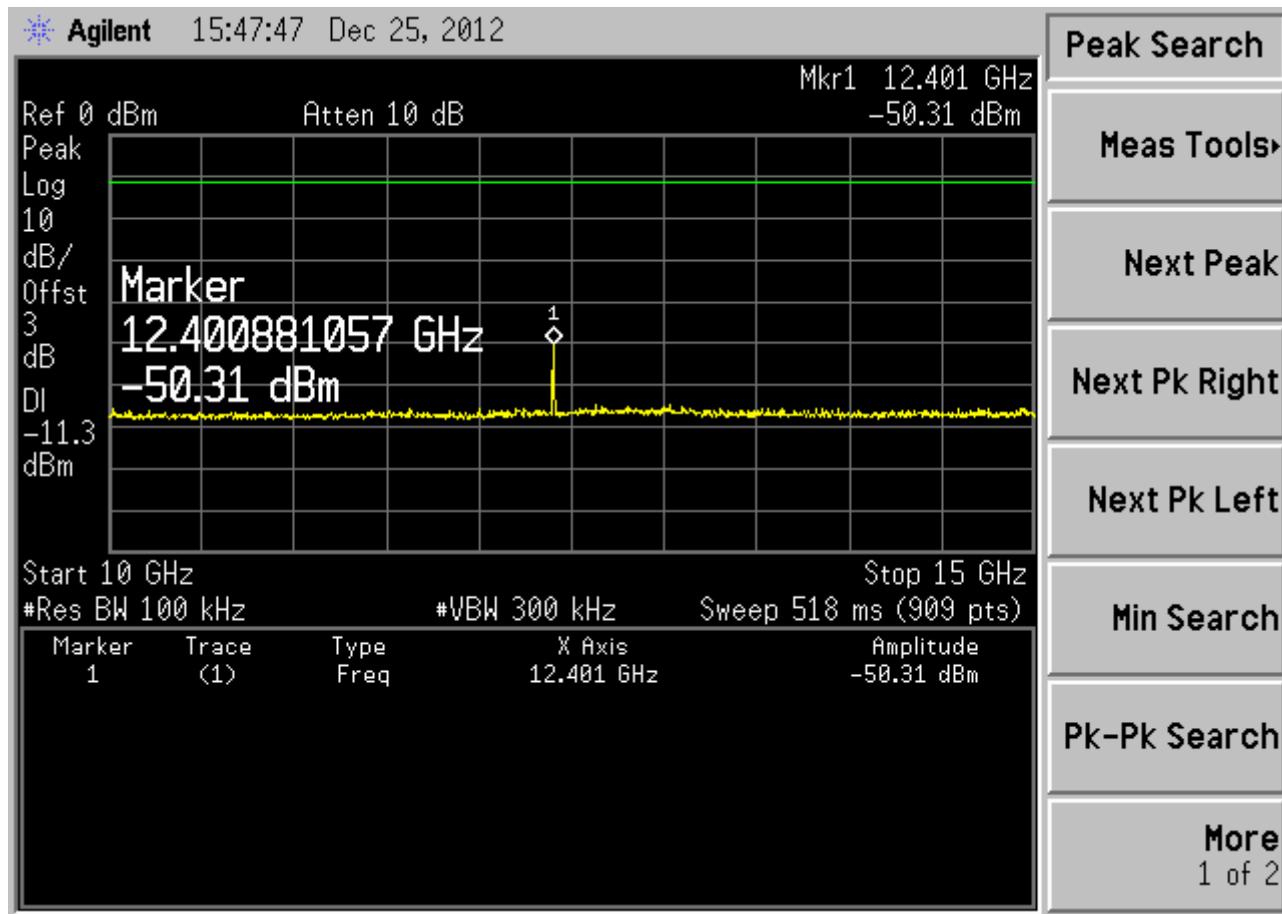
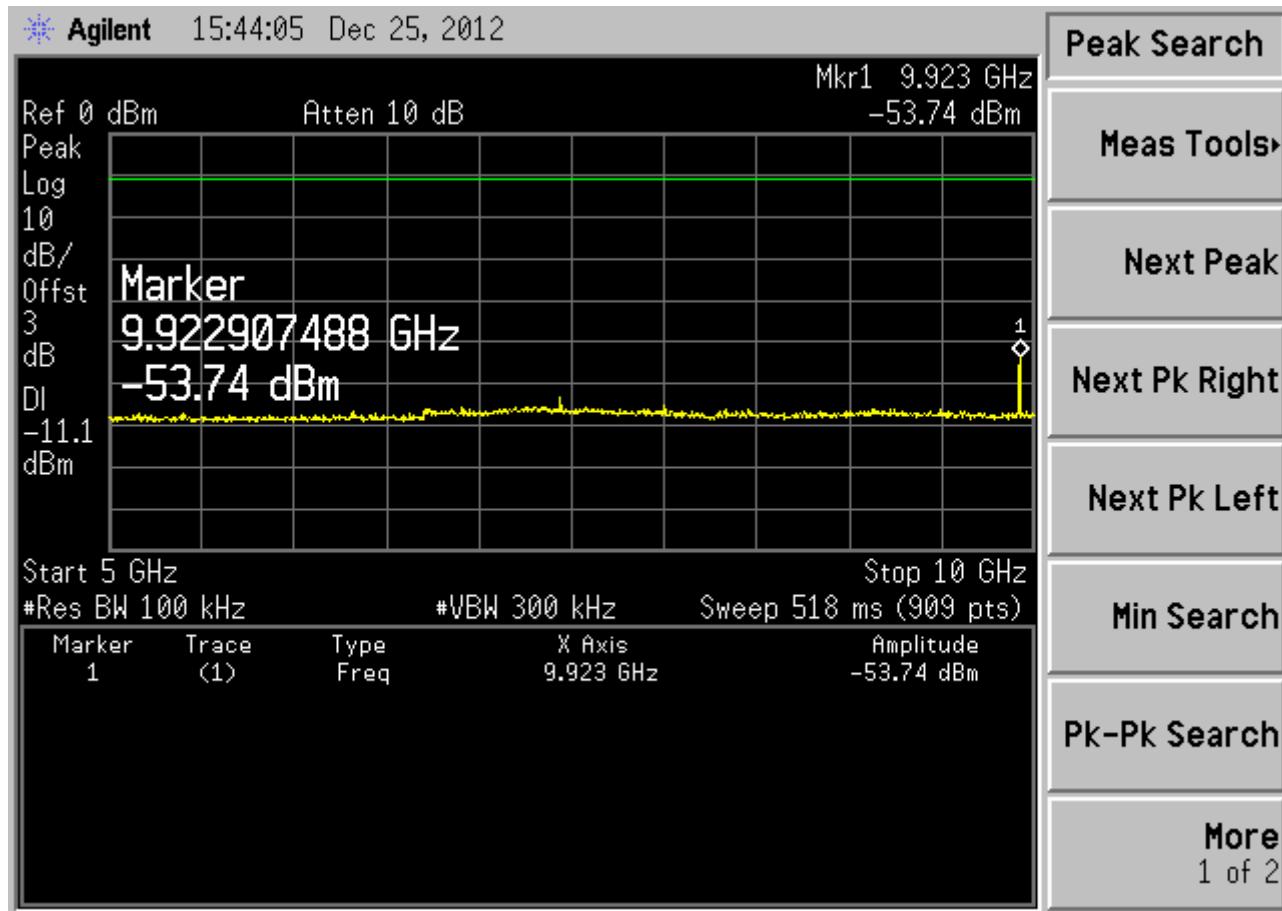


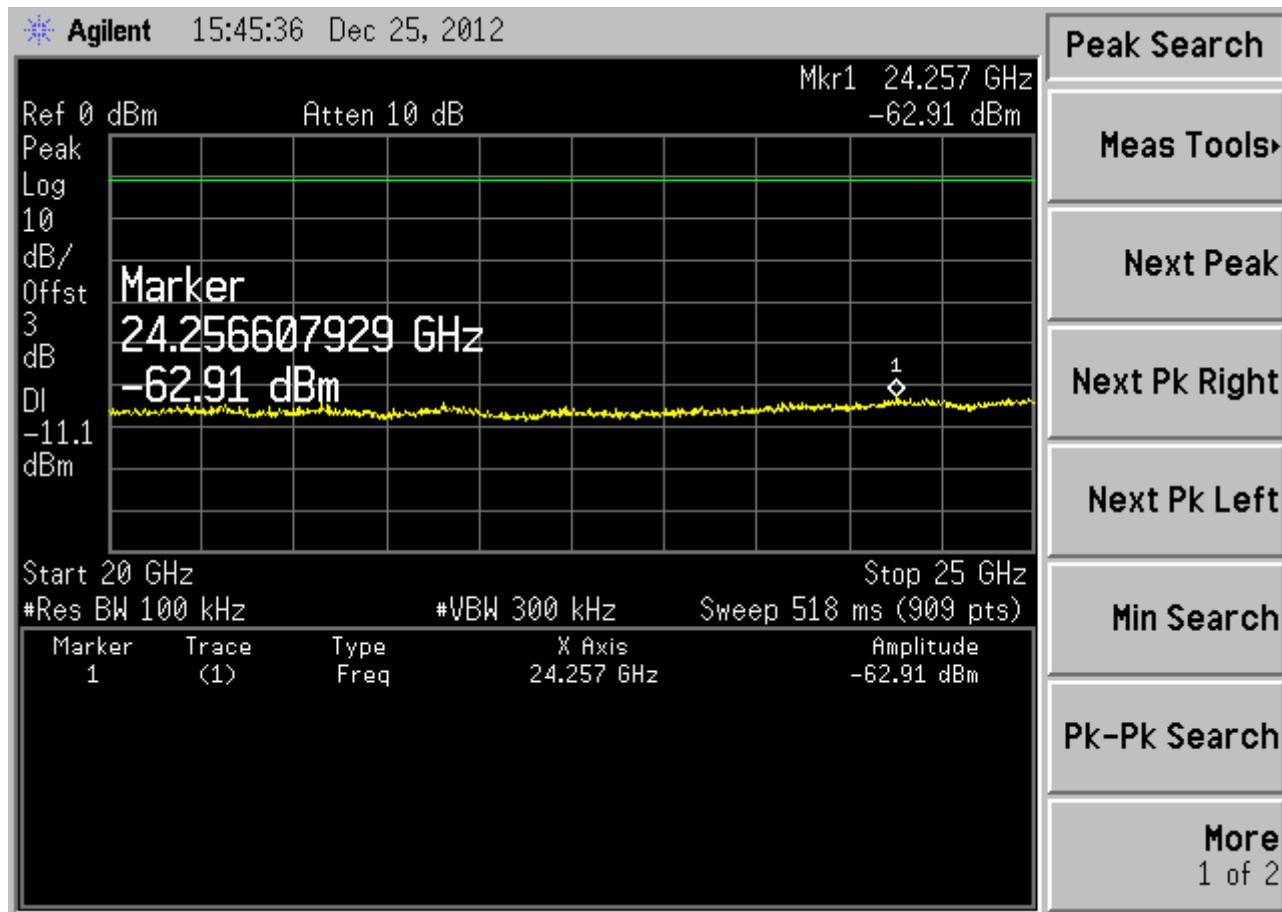
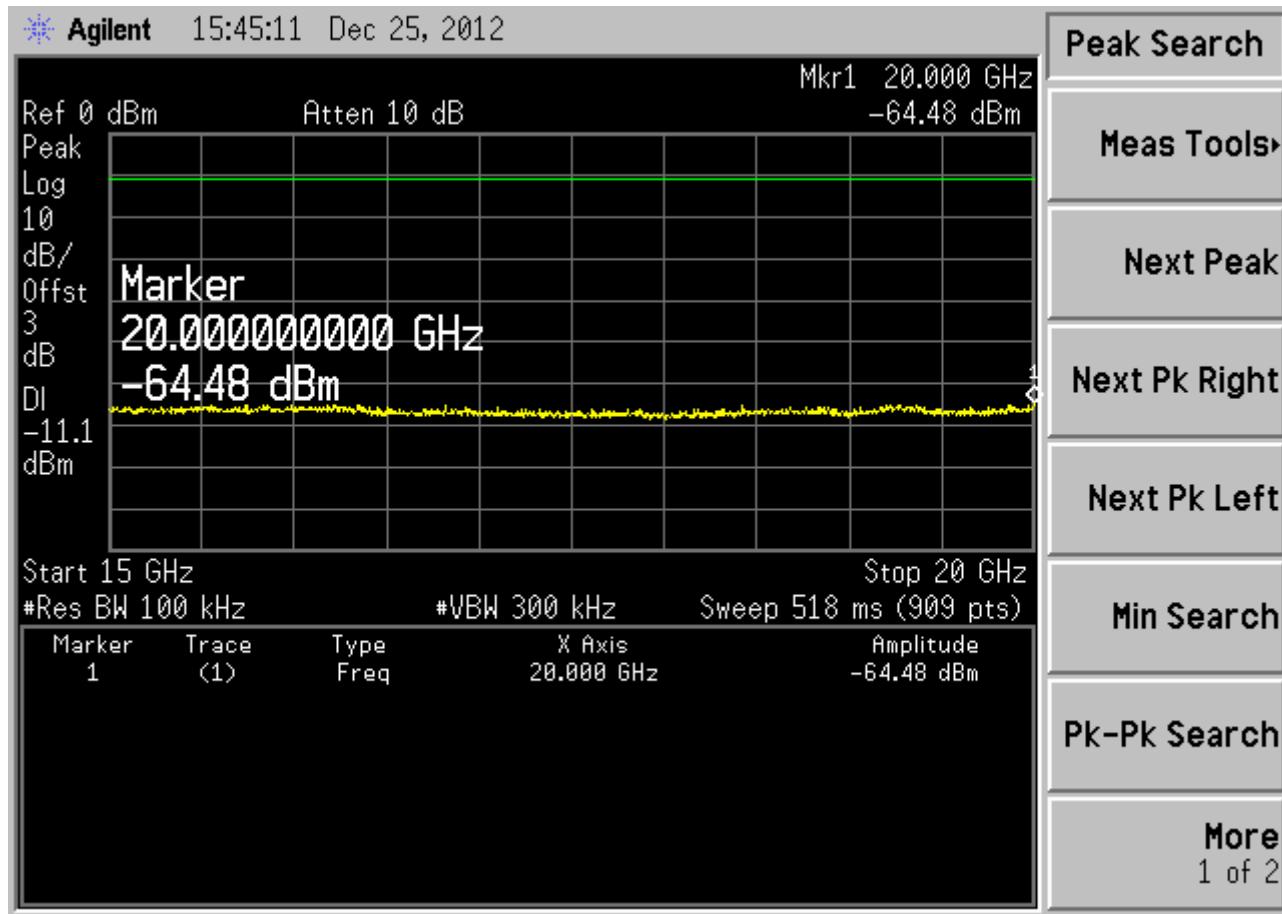




EDR Ch 78 (2480 MHz) + WIFI 802.11b Ch11 (2462MHz)







8 BAND-EDGE COMPLIANCE OF RF CONDUCTED EMISSIONS MEASUREMENT

8.1 Test Equipment

The following test equipment was used during the band edges measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101303	Sep 11, 2012	Sep 11, 2013

8.2 Block Diagram of Test Setup

The same as section 5.2.

8.3 Specification Limits (§15.247(d))

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

8.4 Operating Condition of EUT

The test program “Hyper-Terminal” was used to enable the EUT to transmit data at different channel frequency individually.

8.5 Test Procedure

The transmitter output was connected to the spectrum analyzer. Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz with span wide enough to fully capture the emission being measured.

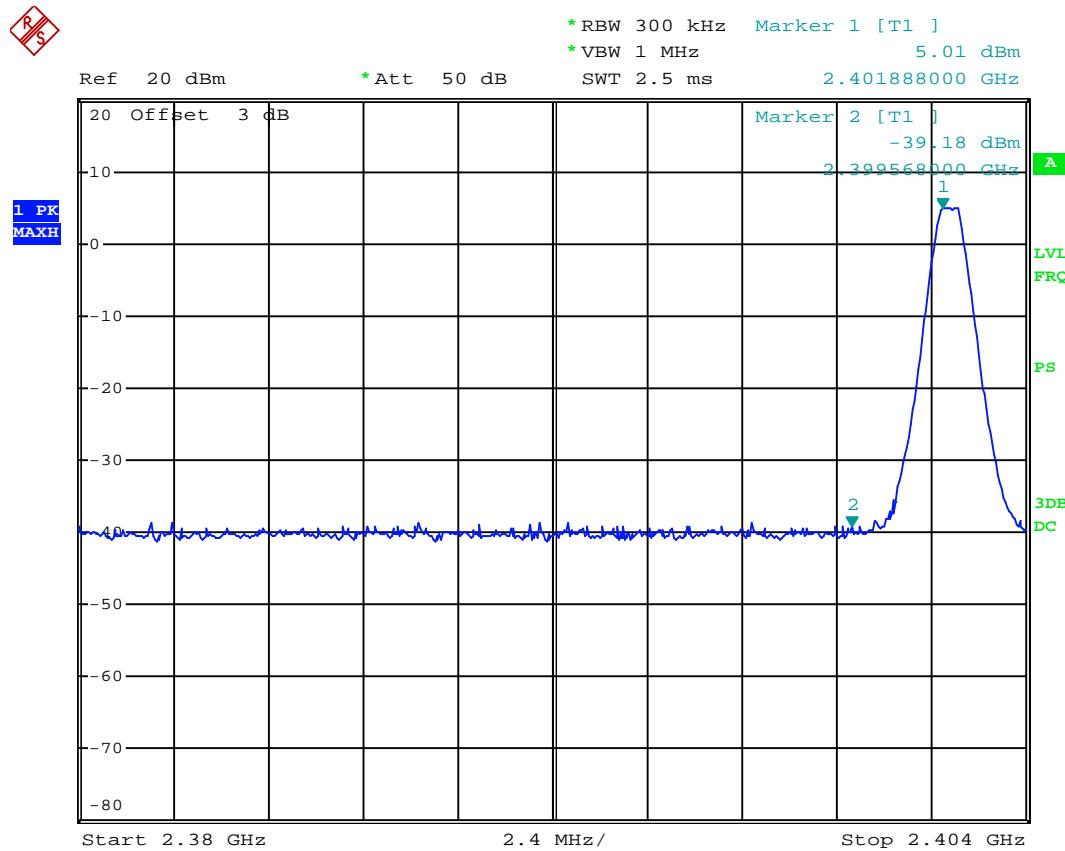
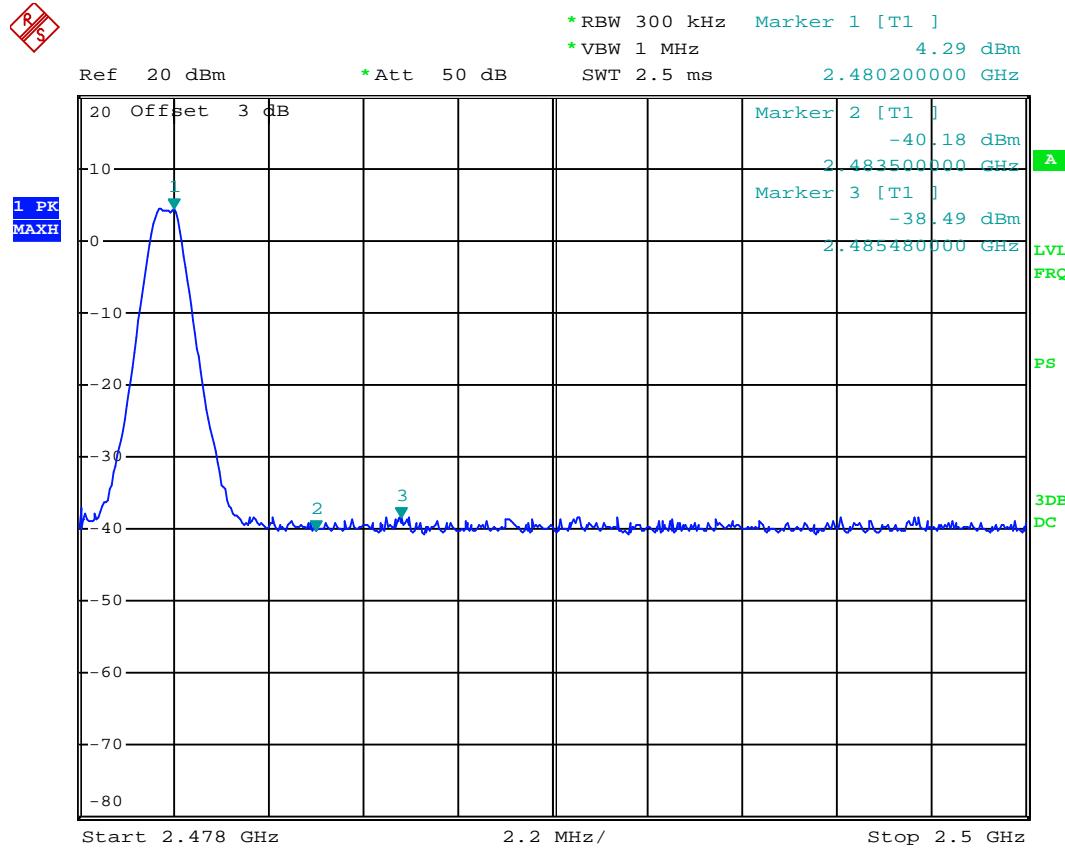
The test procedure is defined in DA 00-705.

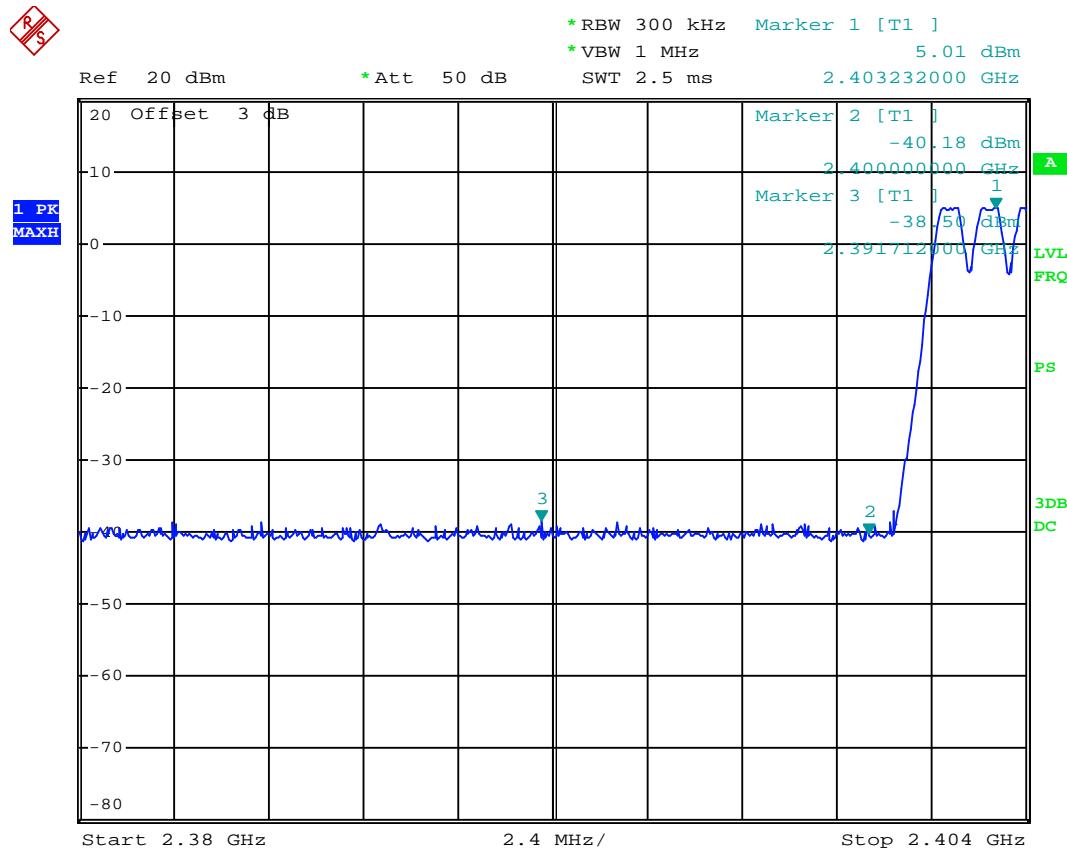
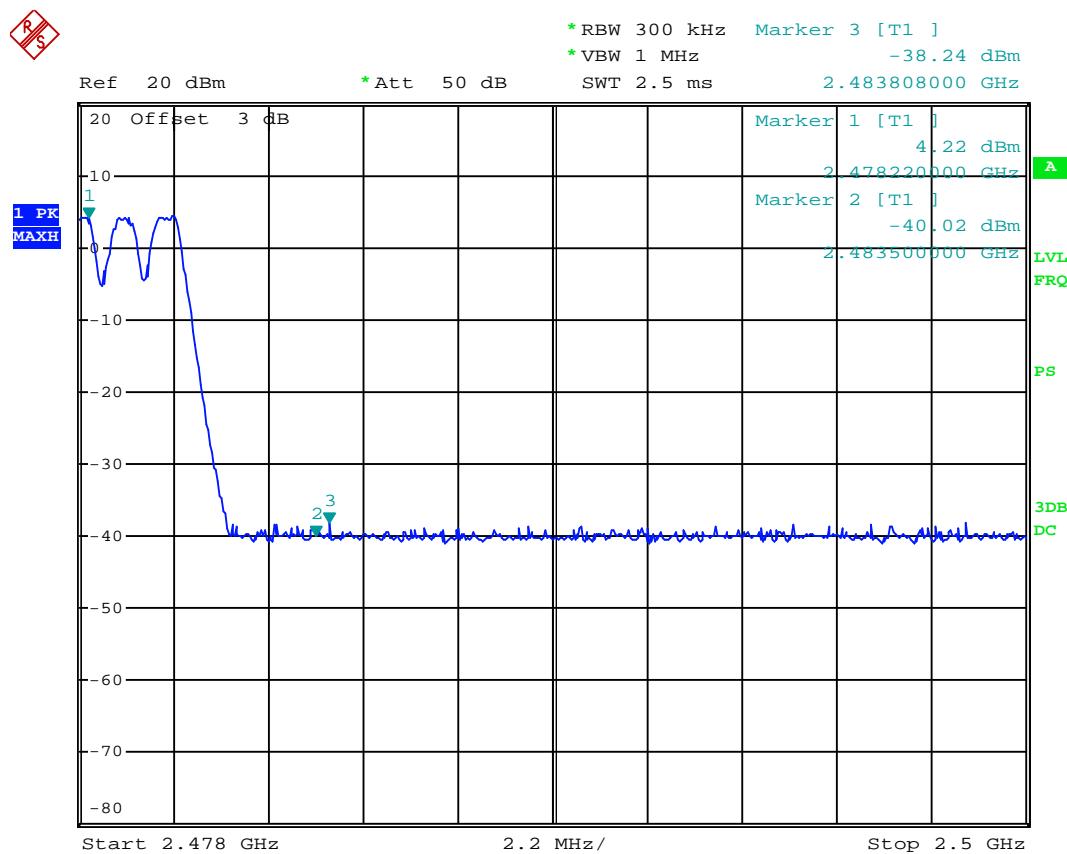
8.6 Test Results

PASSED. All the test results are attached in next pages.

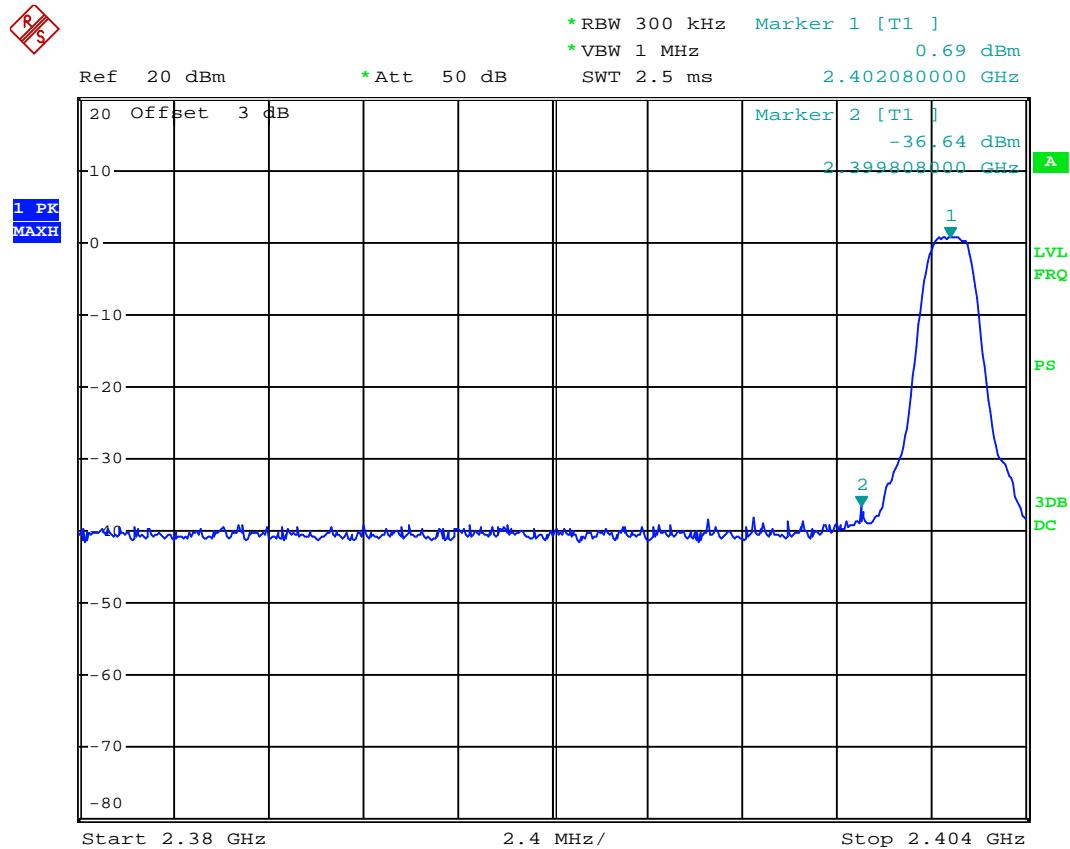
(Test Date: Nov. 02, 2012 Temperature: 25°C Humidity: 48 %)

Location	Channel	Frequency	Delta Marker (worst)	Data Page	Result
Below Band Edge	00	2402 MHz	37.33 dB	P63-64	More than 20 dB below the highest level of the desired power
Upper Band Edge	78	2480 MHz	38.79 dB	P65-66	

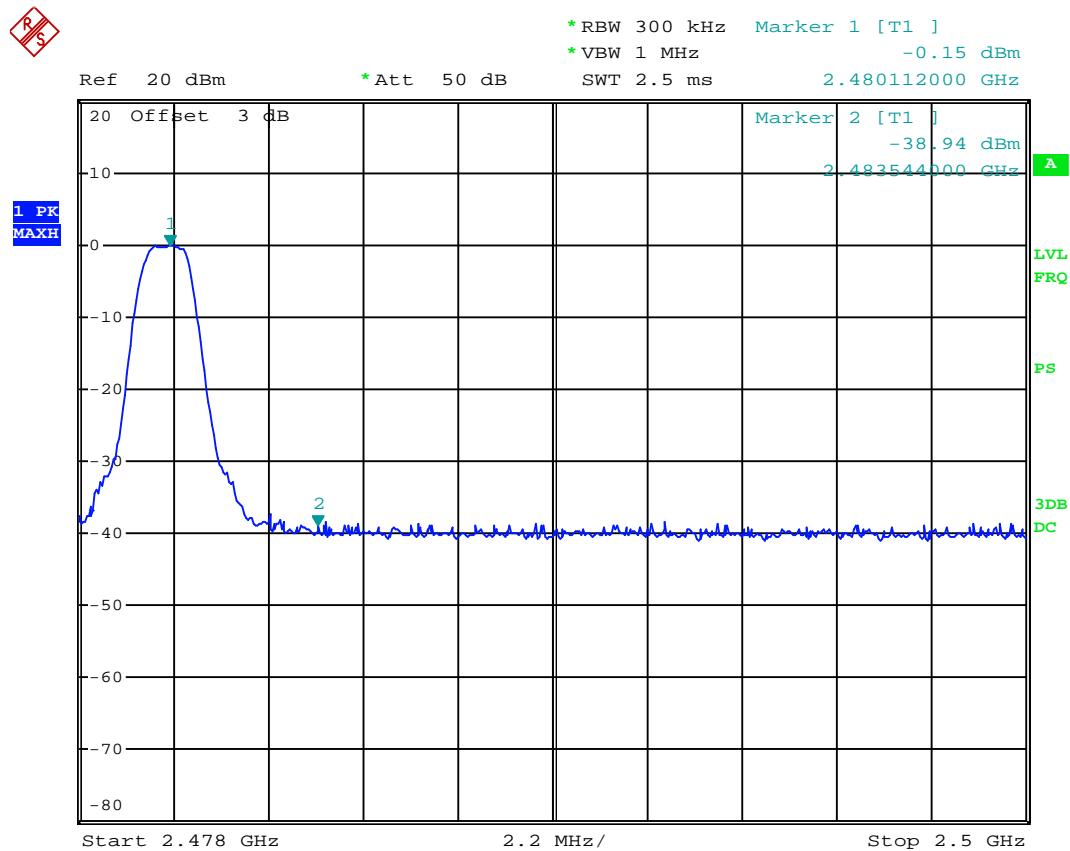
Ch00 2402MHz (Below Edge 2400 MHz) NON-EDR**Ch78 2480MHz (Upper Edge 2483.5 MHz) NON-EDR**

Ch00 2402MHz (Below Edge 2400 MHz) NON-EDR HOPPING**Ch78 2480MHz (Upper Edge 2483.5 MHz) NON-EDR HOPPING**

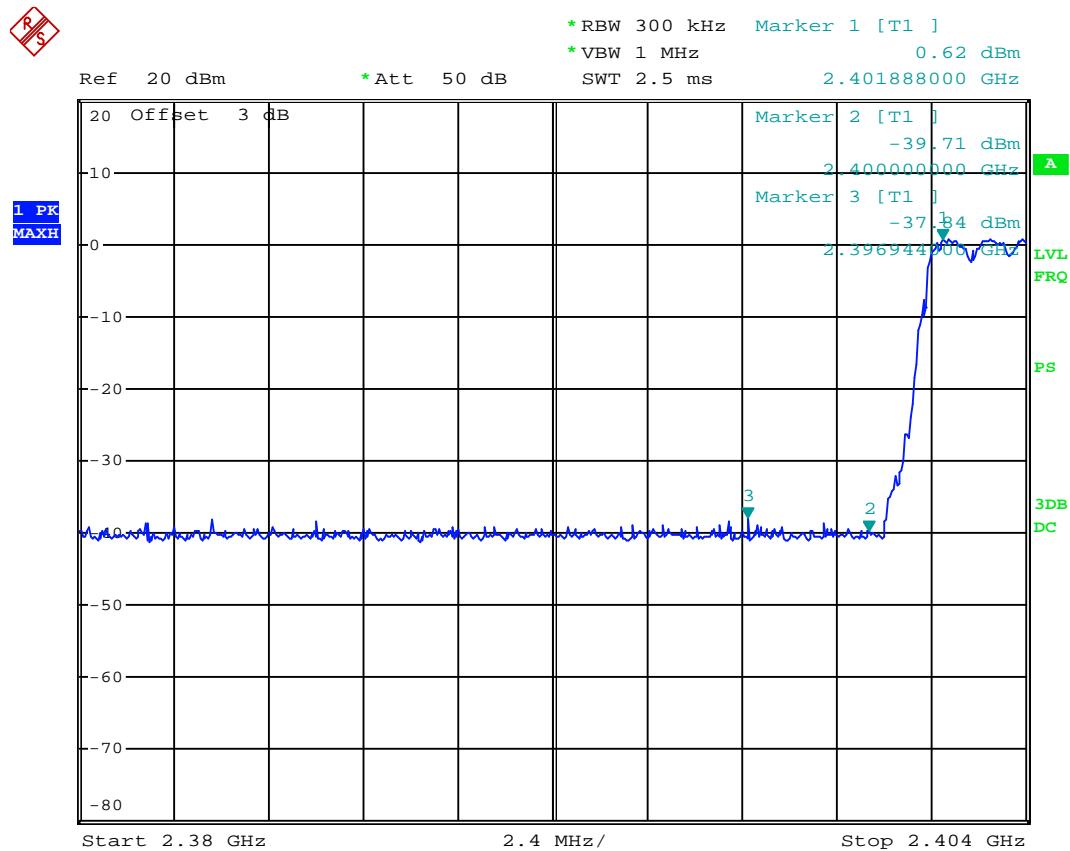
Ch00 2402MHz (Below Edge 2400 MHz) EDR



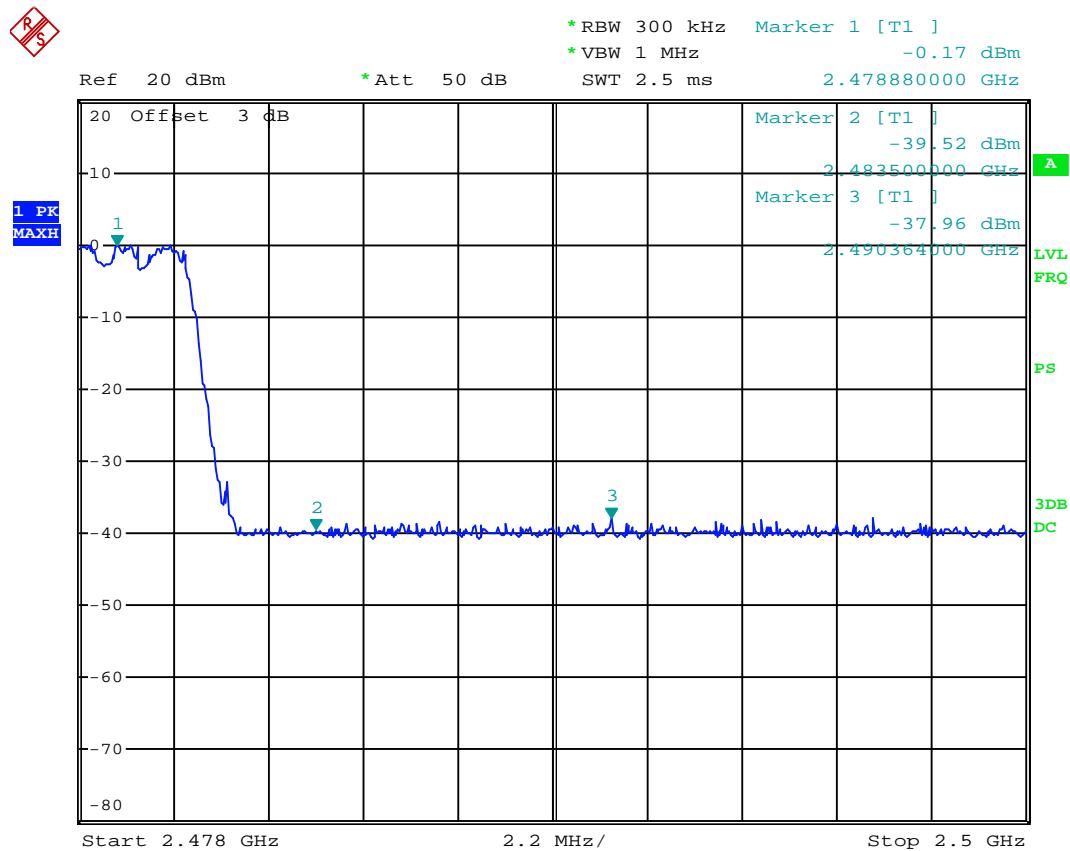
Ch78 2480MHz (Upper Edge 2483.5 MHz) EDR



Ch00 2402MHz (Below Edge 2400 MHz) EDR HOPPING



Ch78 2480MHz (Upper Edge 2483.5 MHz) EDR HOPPING



9 NUMBER OF HOPPING FREQUENCIES

MEASUREMENT

9.1 Test Equipment

The following test equipment was used during the power spectral density measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101303	Sep 11, 2012	Sep 11, 2013

9.2 Block Diagram of Test Setup

The same as section 5.2.

9.3 Specification Limits (§15.247(a)(1)(iii))

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.

9.4 Operating Condition of EUT

The test program “Hyper-Terminal” was used to enable the EUT hopping function.

9.5 Test Procedure

The transmitter output was connected to the spectrum analyzer. The spectrum analyzer was set as RBW = 300kHz, VBW = 300kHz, count the number of hopping frequencies used and recorded.

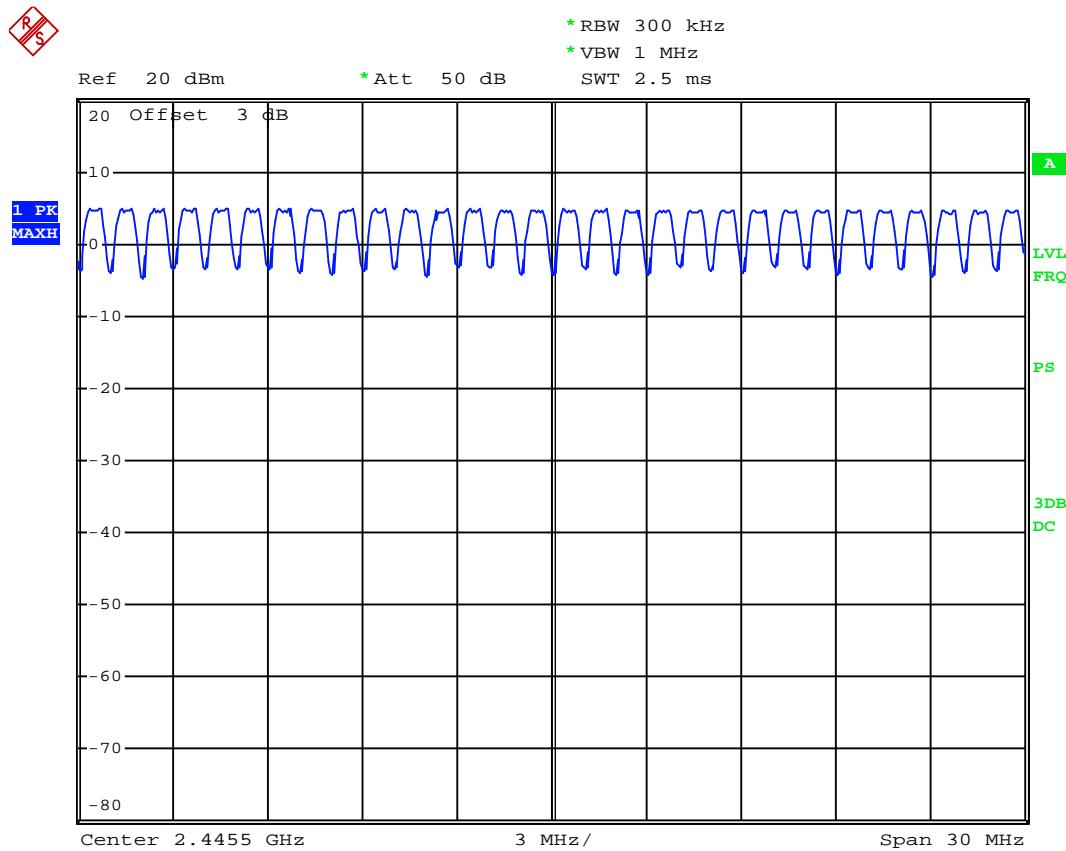
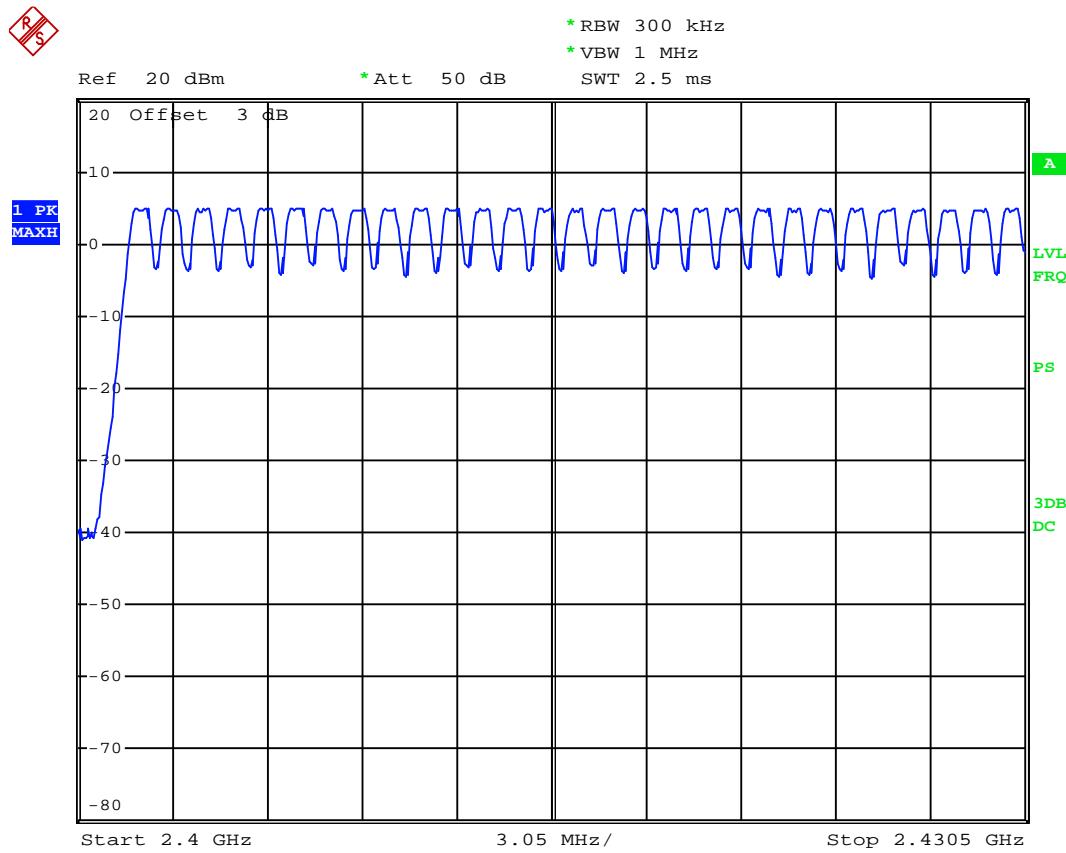
The test procedure is defined in DA 00-705.

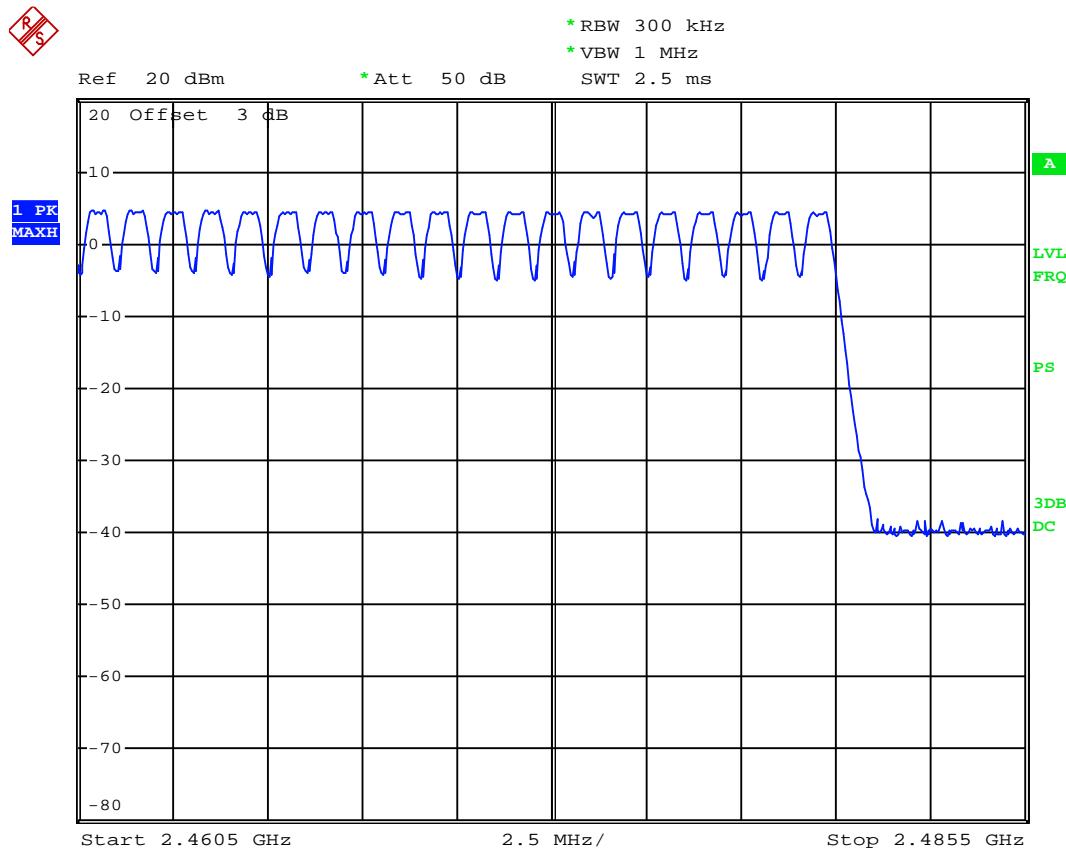
9.6 Test Results

PASSED. All the test results are attached in next pages.

(Test Date: Nov. 02, 2012 Temperature: 25°C Humidity: 48 %)

Result	Limit	Conclusion
79	> 15	Pass





10 CARRIER FREQUENCY SEPARATION

MEASUREMENT

10.1 Test Equipment

The following test equipment was used during the power spectral density measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101303	Sep 11, 2012	Sep 11, 2013

10.2 Block Diagram of Test Setup

The same as section 5.2.

10.3 Specification Limits (§15.247(a)(1))

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

10.4 Operating Condition of EUT

The test program “Hyper-Terminal” was used to enable the EUT hopping function.

10.5 Test Procedure

The transmitter output was connected to the spectrum analyzer. The spectrum analyzer was set as RBW = 100kHz, VBW = 300kHz, span = wide enough to capture the peaks of two adjacent channels. Use the marker-delta function to determine the separation between the peaks of the adjacent channels.

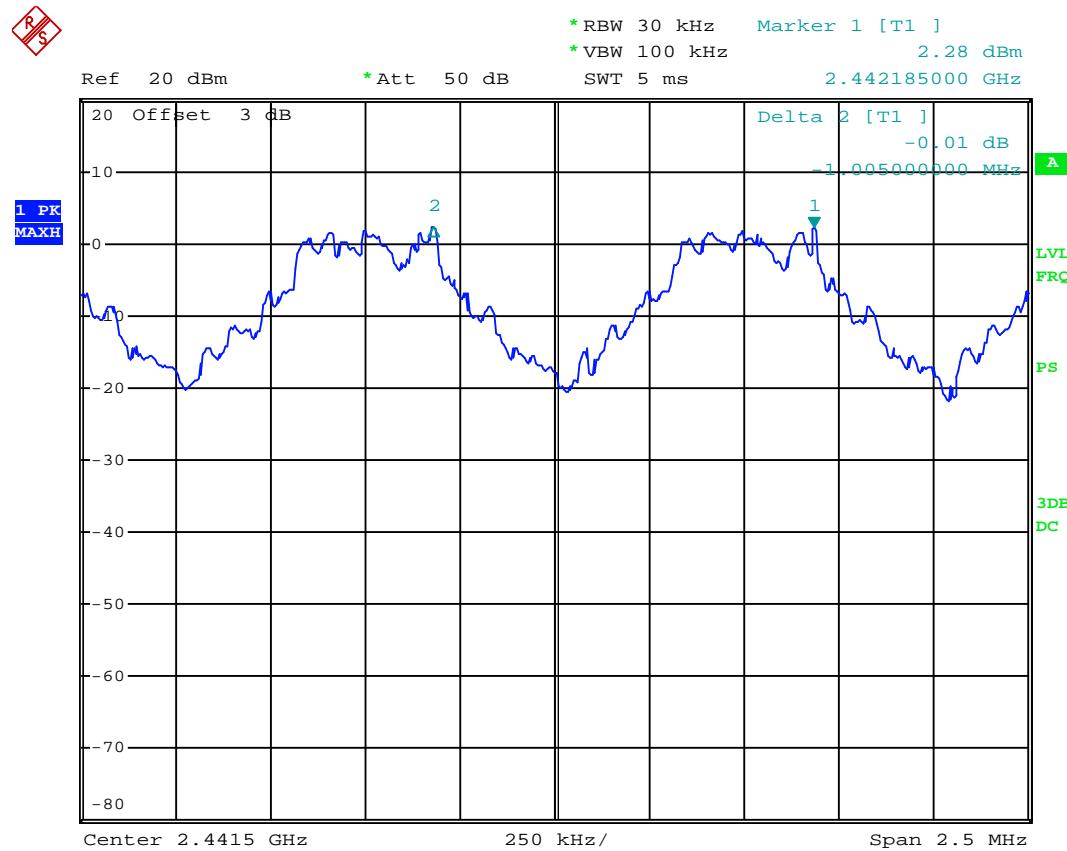
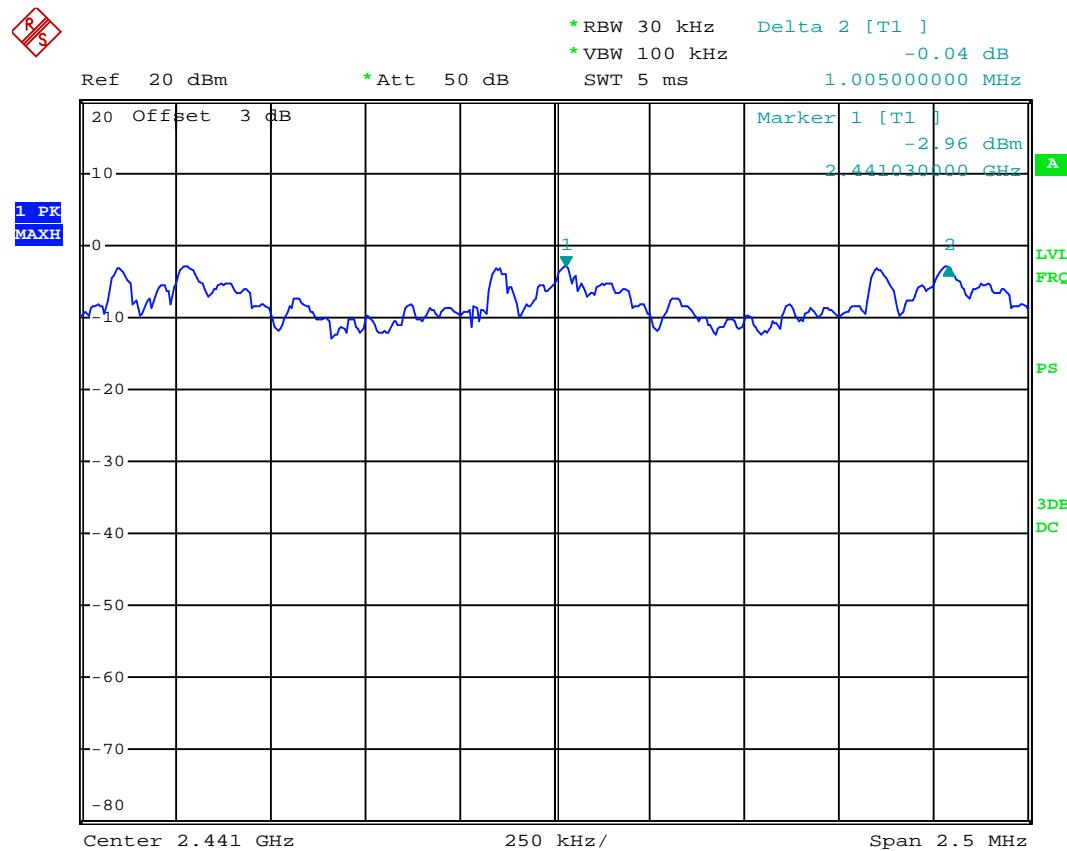
The test procedure is defined in DA 00-705.

10.6 Test Results

PASSED. All the test results are attached in next pages.

(Test Date: Nov. 02, 2012 Temperature: 25°C Humidity: 48 %)

Mode	Result	Limit (2/3 of the 20dB Bandwidth)	Conclusion
NON-EDR	1.005 MHz	> 0.548 MHz	Pass
EDR	1.005 MHz	> 0.840 MHz	Pass

NON-EDR**EDR**

11 DEWLL TIME MEASUREMENT

11.1 Test Equipment

The following test equipment was used during the power spectral density measurement:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	101303	Sep 11, 2012	Sep 11, 2013

11.2 Block Diagram of Test Setup

The same as section 5.2.

11.3 Specification Limits (§15.247(a)(1)(iii))

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

11.4 Operating Condition of EUT

The test program “Hyper-Terminal” was used to enable the EUT hopping function.

11.5 Test Procedure

The transmitter output was connected to the spectrum analyzer. The spectrum analyzer was set as RBW = 1MHz, VBW = 1MHz, span = zero span, centered on a hopping channel. Use the marker-delta function to calculate the dwell time.

The test procedure is defined in DA 00-705.

11.6 Test Results

PASSED. All the test results are attached in next pages.

(Test Date: Nov. 02, 2012 Temperature: 25°C Humidity: 48 %)

No.	Channel	Frequency	Data Page
1.	00	2402 MHz	P73-79
2.	39	2441 MHz	P80-86
3.	78	2480 MHz	P87-93

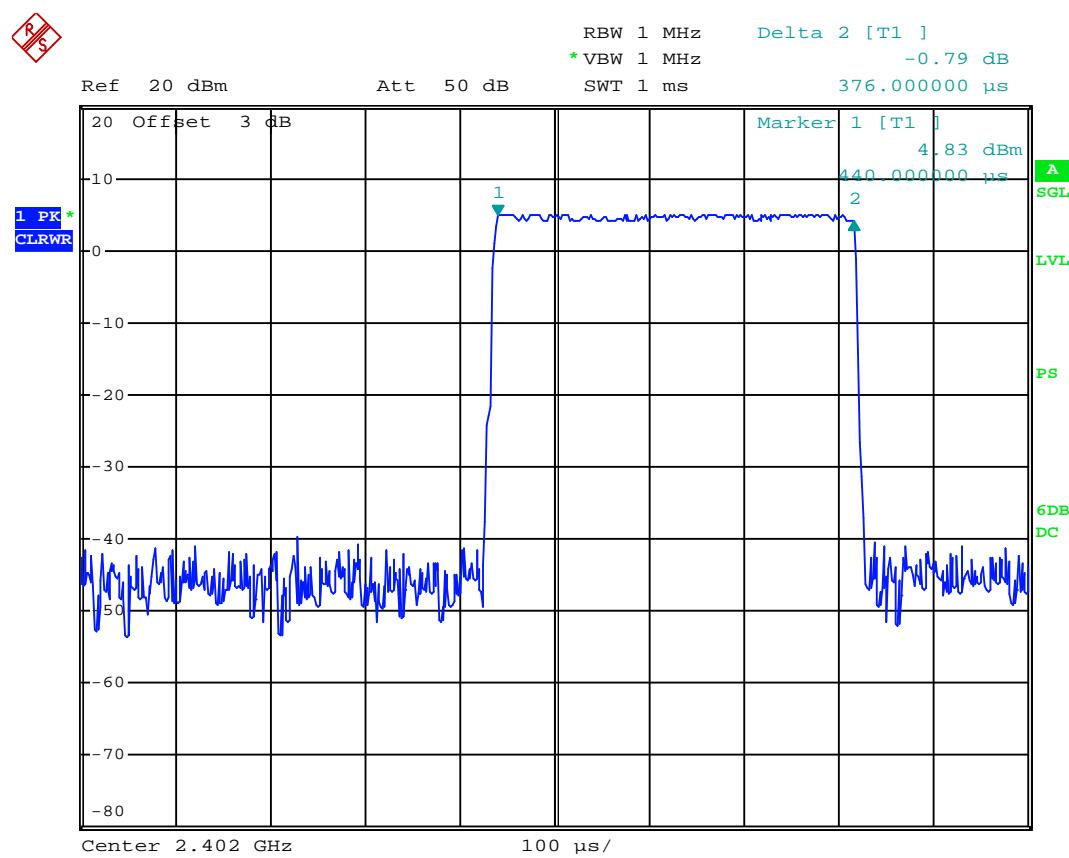
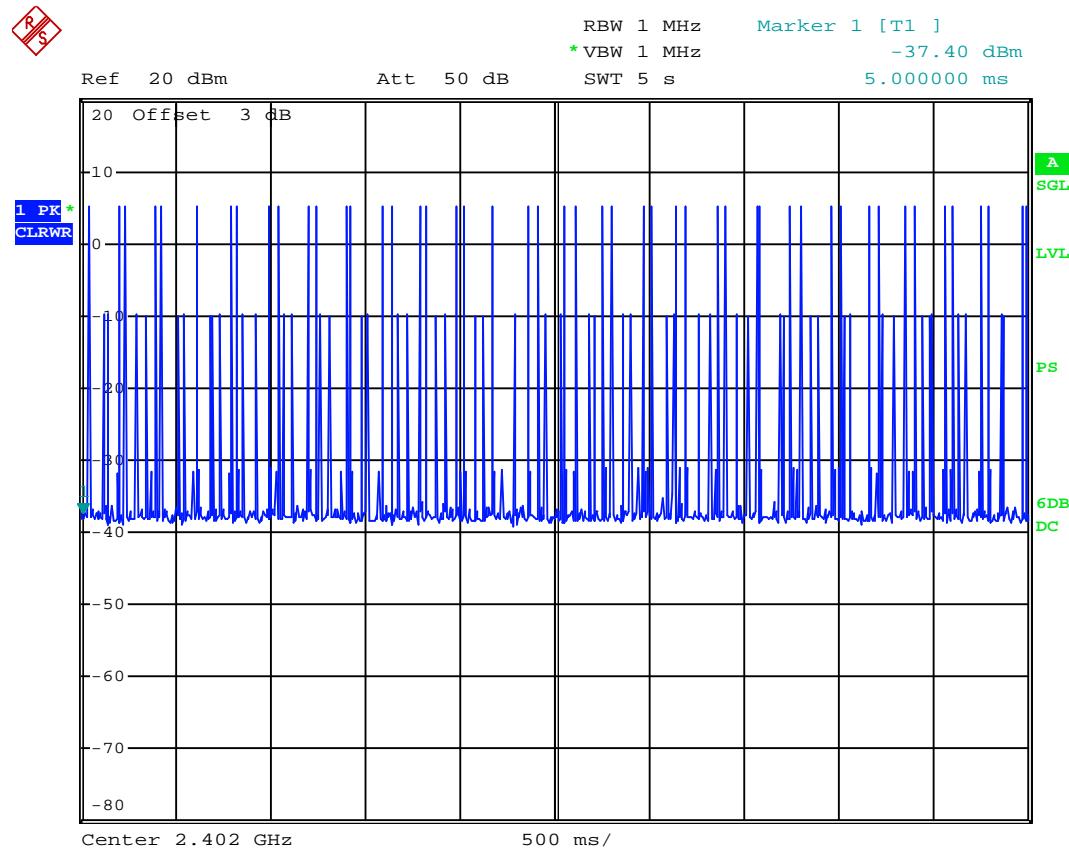
Ch 00 2402MHz NON-EDR

Mode	Number of transmission in a 31.6 (79 hopping*0.4) second period	Length of transmission time (msec)	Result (msec)	Limit (msec)	Conclusion
DH1	48 times/5 sec * 31.6=303 times	0.376	303*0.376 = 113.9	< 400	Pass
DH3	27 times/5 sec * 31.6=170 times	1.616	170*1.616 = 274.7	< 400	Pass
DH5	17 times/5 sec * 31.6=107 times	2.876	107*2.876 = 307.7	< 400	Pass

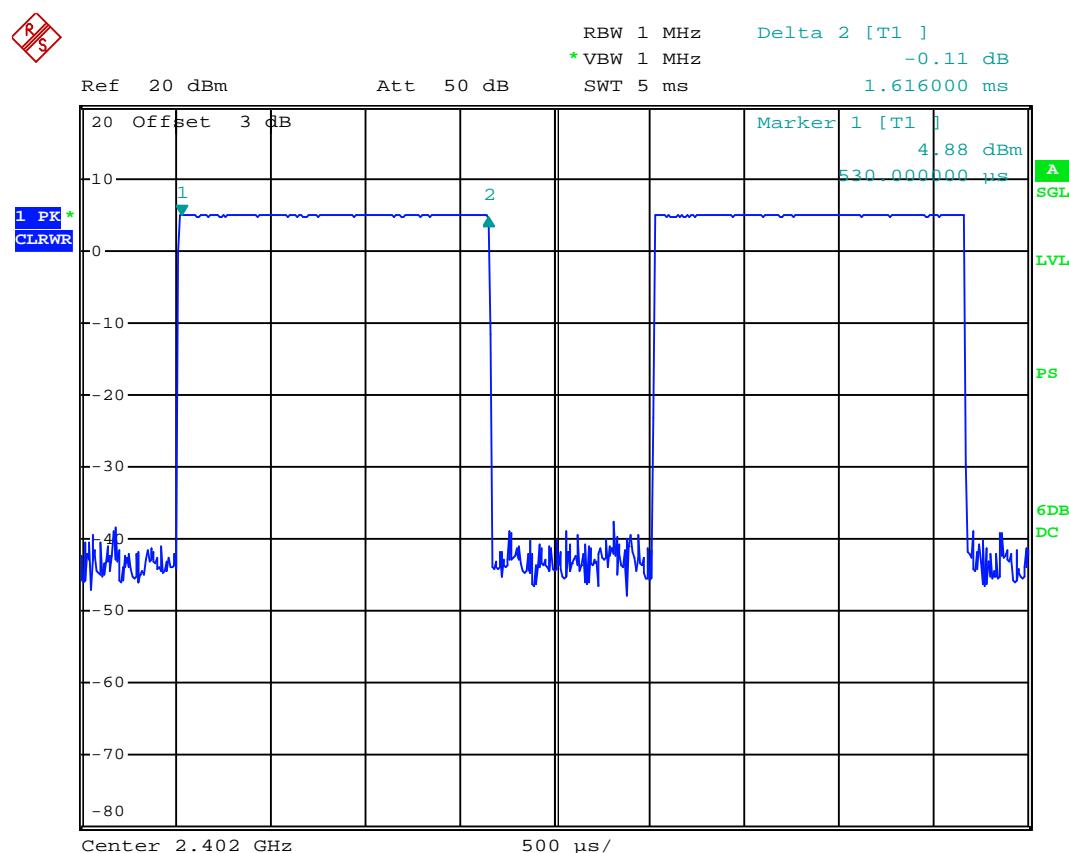
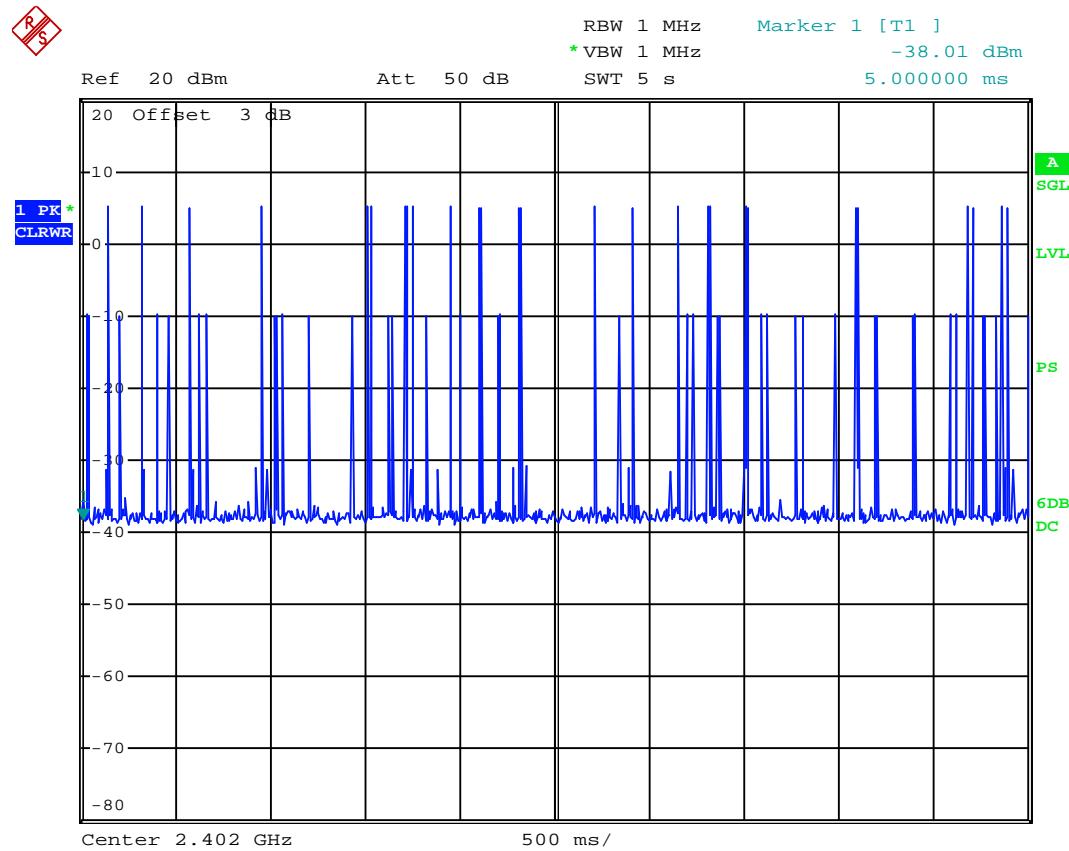
Ch 00 2402MHz EDR

Mode	Number of transmission in a 31.6 (79 hopping*0.4) second period	Length of transmission time (msec)	Result (msec)	Limit (msec)	Conclusion
DH1	48 times/5 sec * 31.6=303 times	0.380	303*0.380 = 115.1	< 400	Pass
DH3	22 times/5 sec * 31.6=139 times	1.630	139*1.630 = 226.6	< 400	Pass
DH5	17 times/5 sec * 31.6=107 times	2.880	107*2.880 = 308.2	< 400	Pass

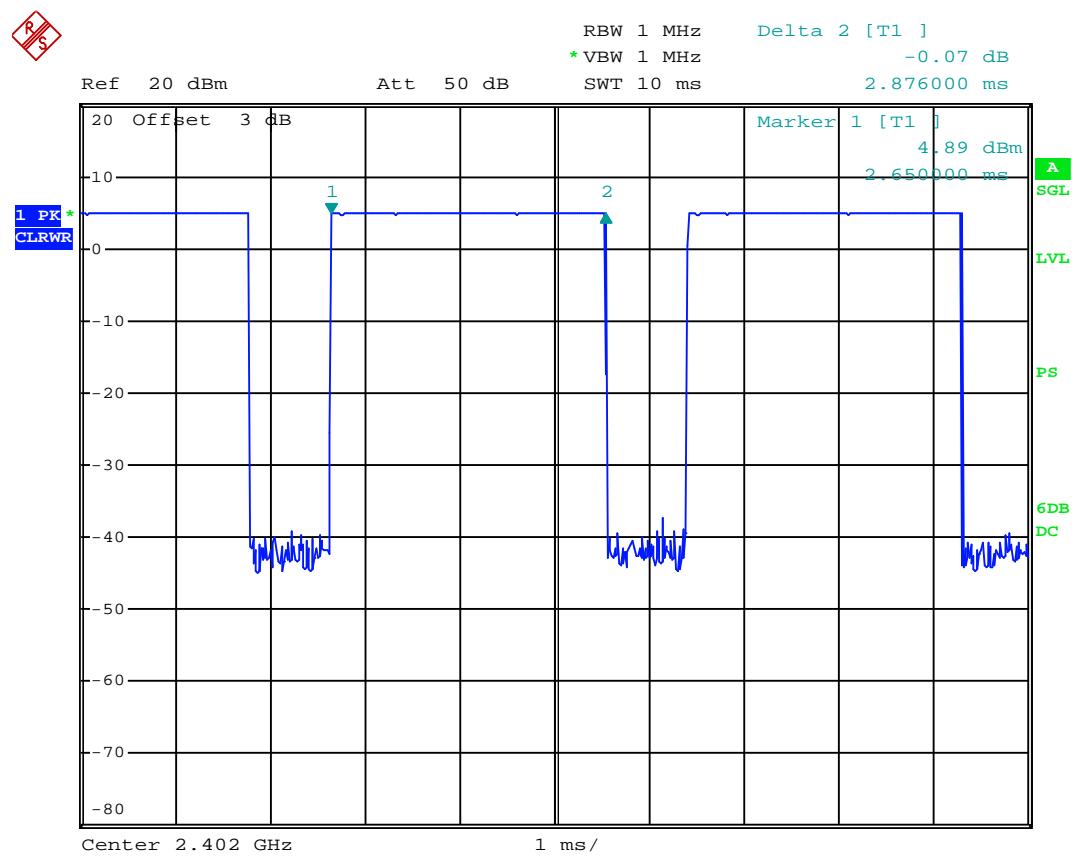
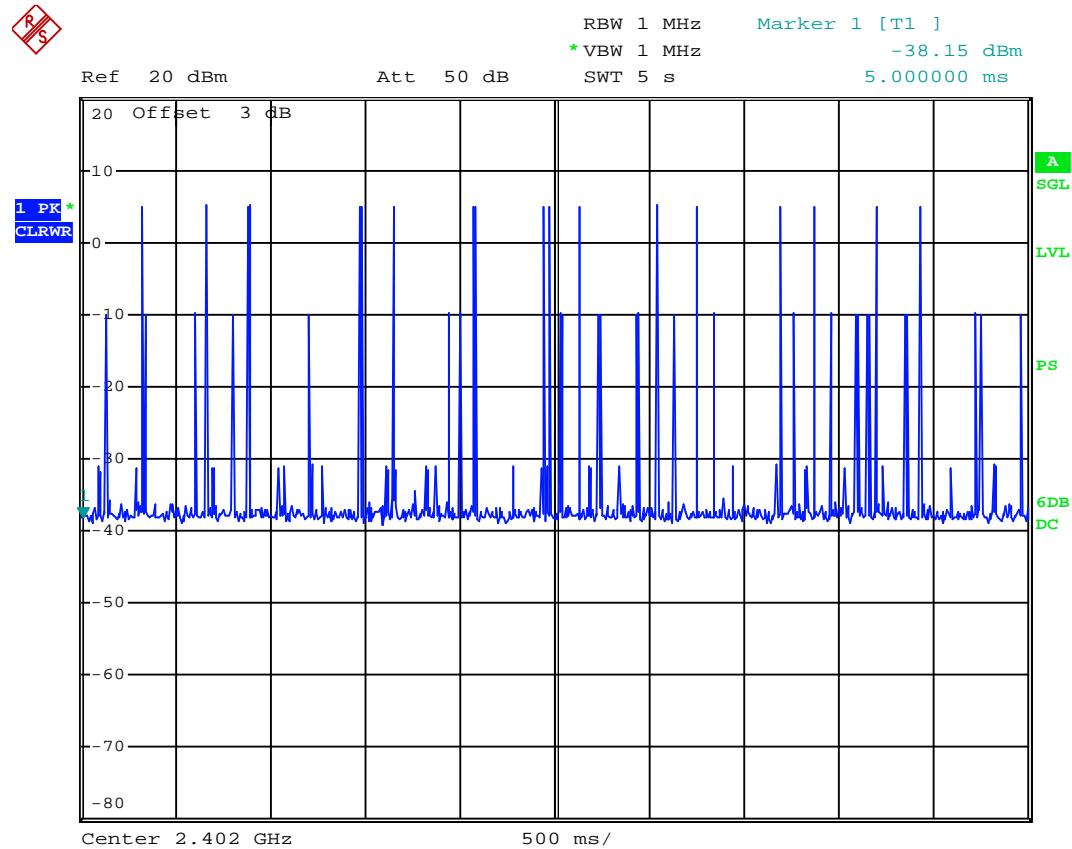
For Ch 00 2402MHz NON-EDR DH1



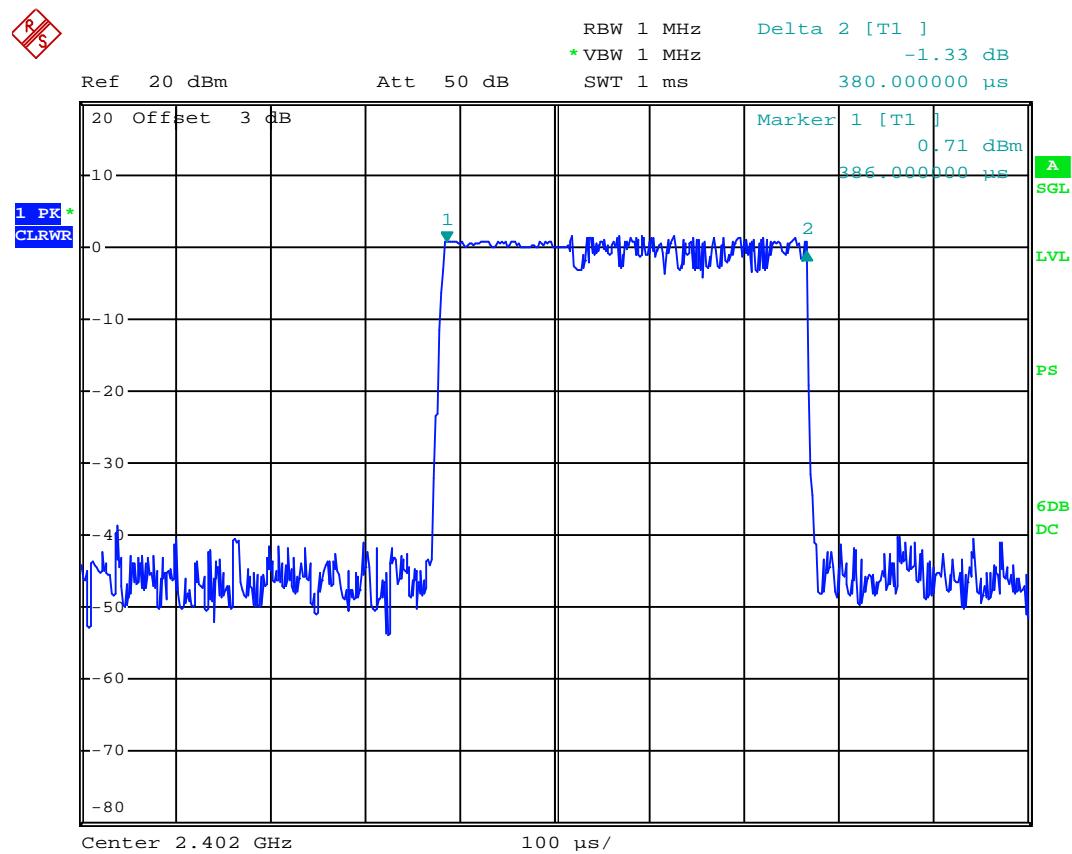
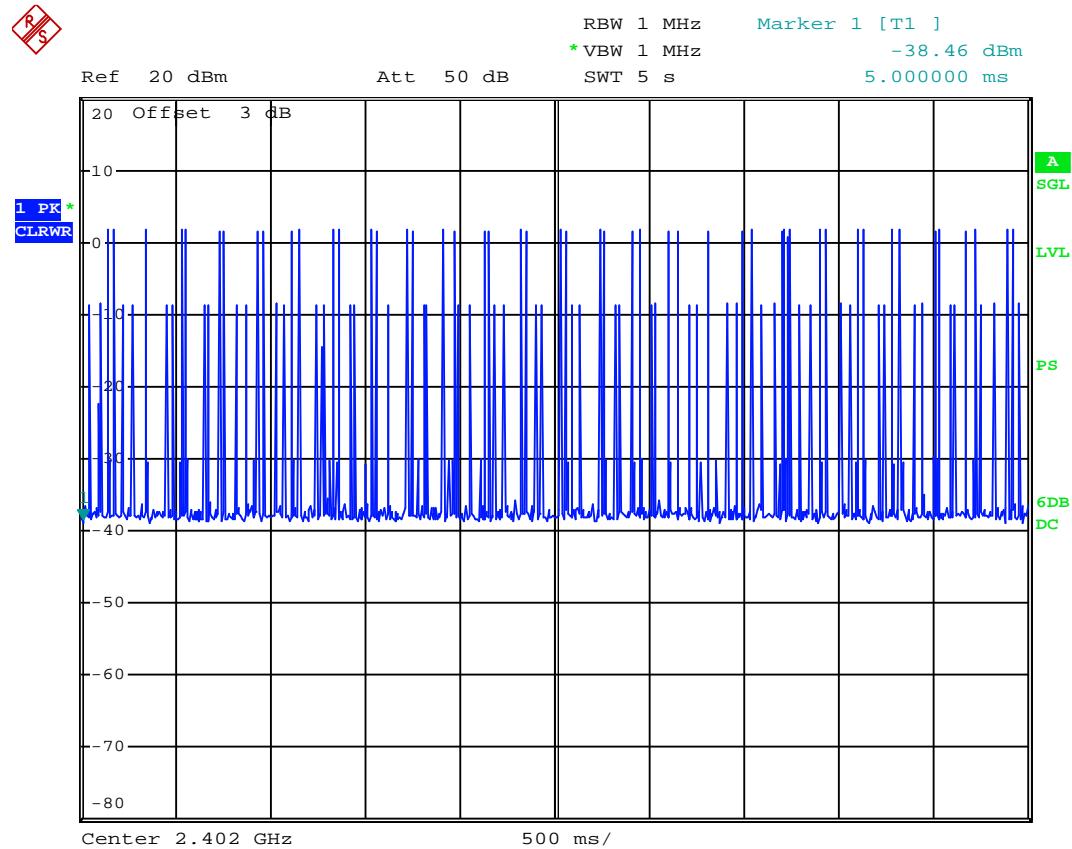
For Ch 00 2402MHz NON-EDR DH3



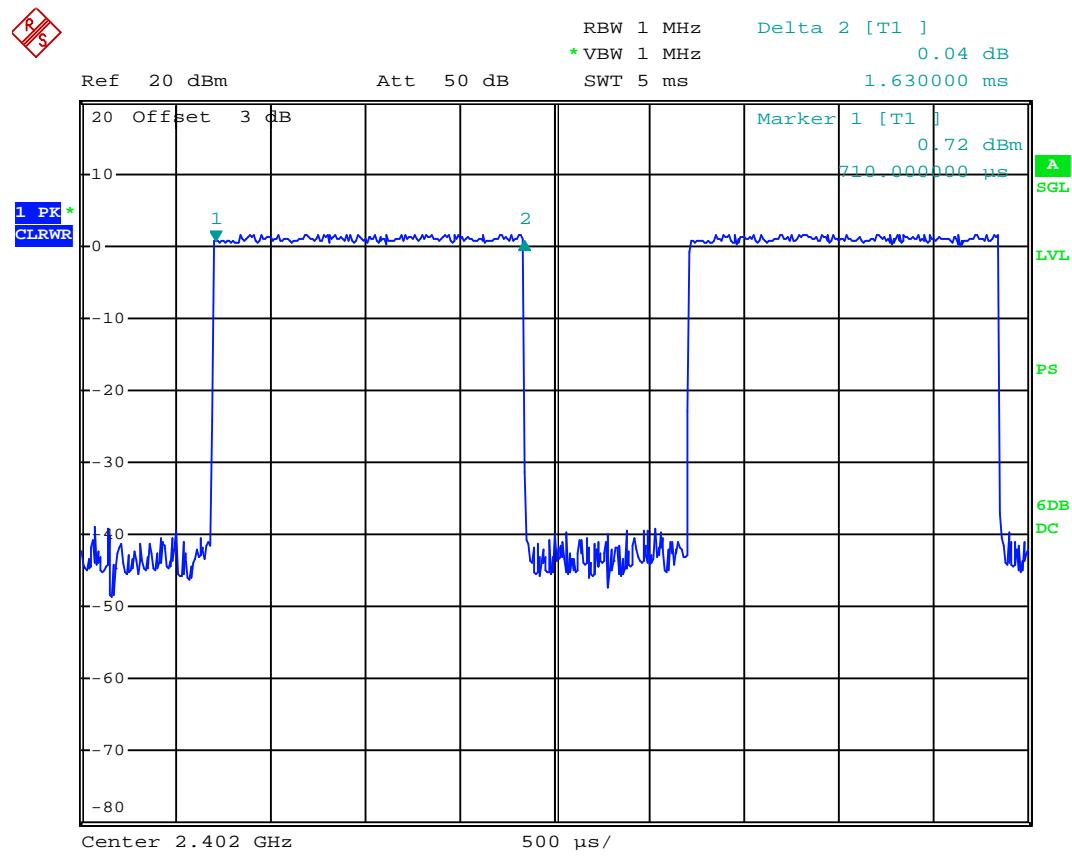
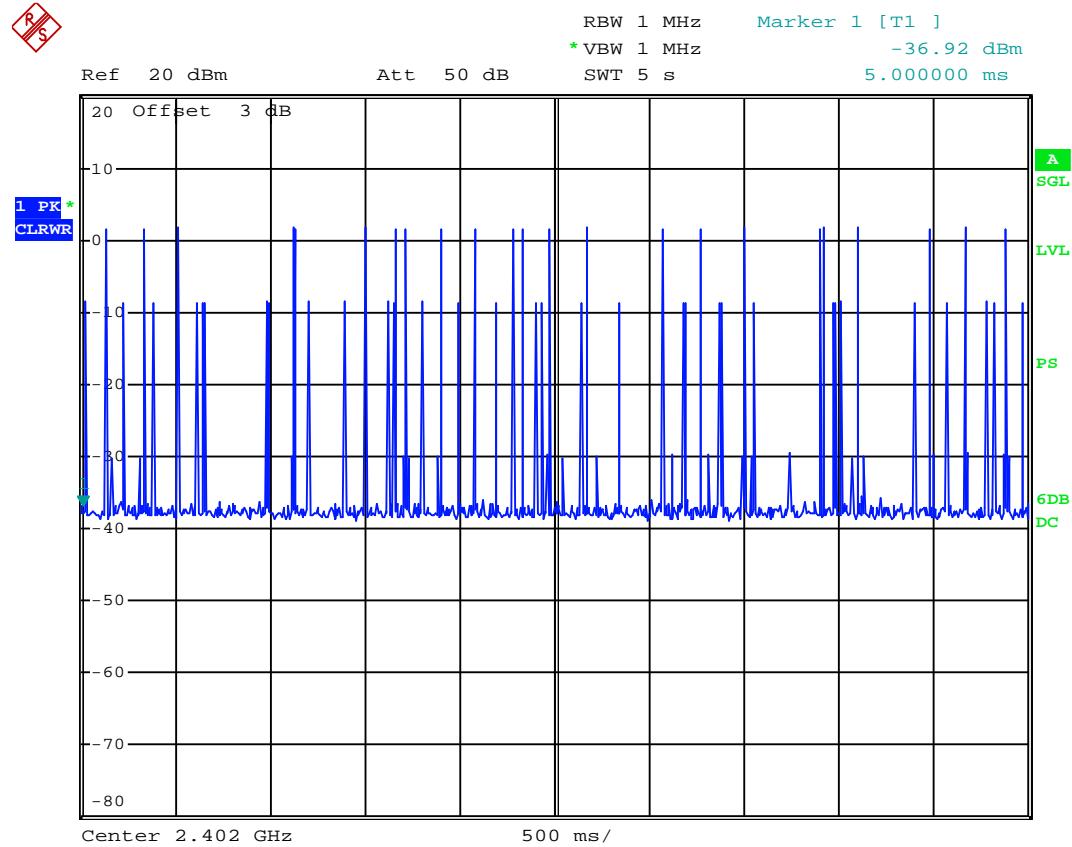
For Ch 00 2402MHz NON-EDR DH5



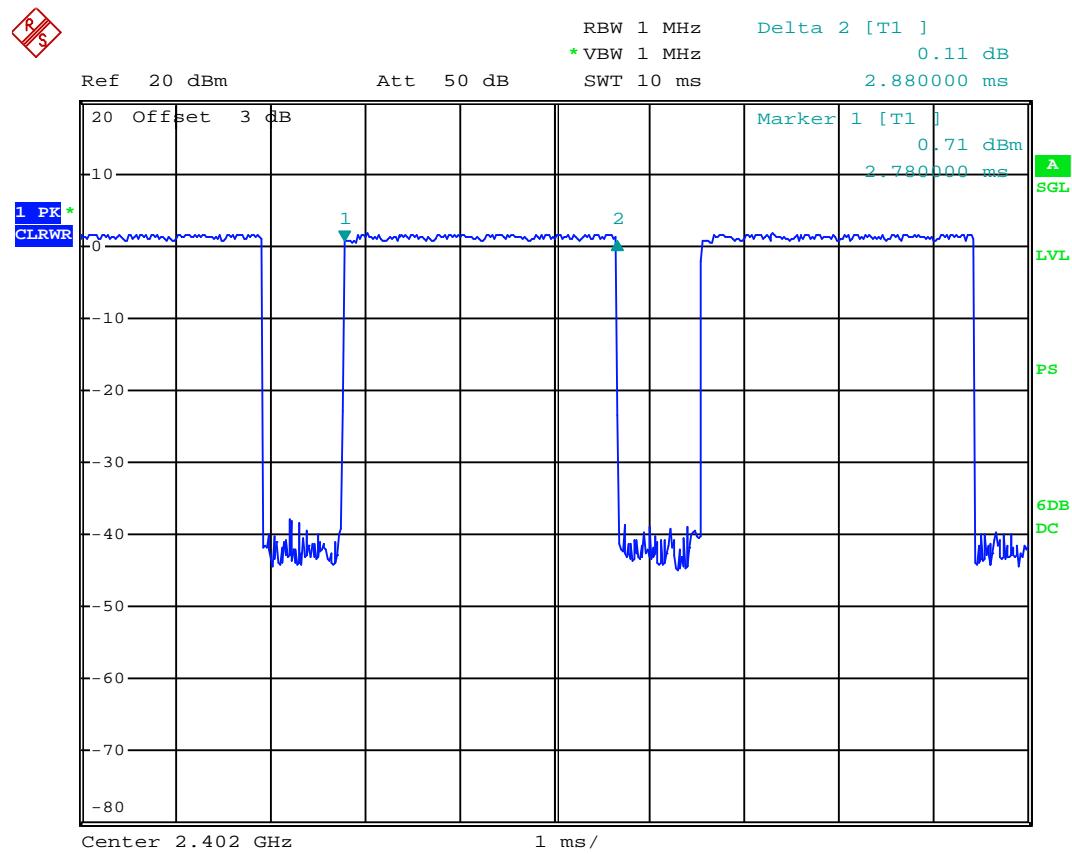
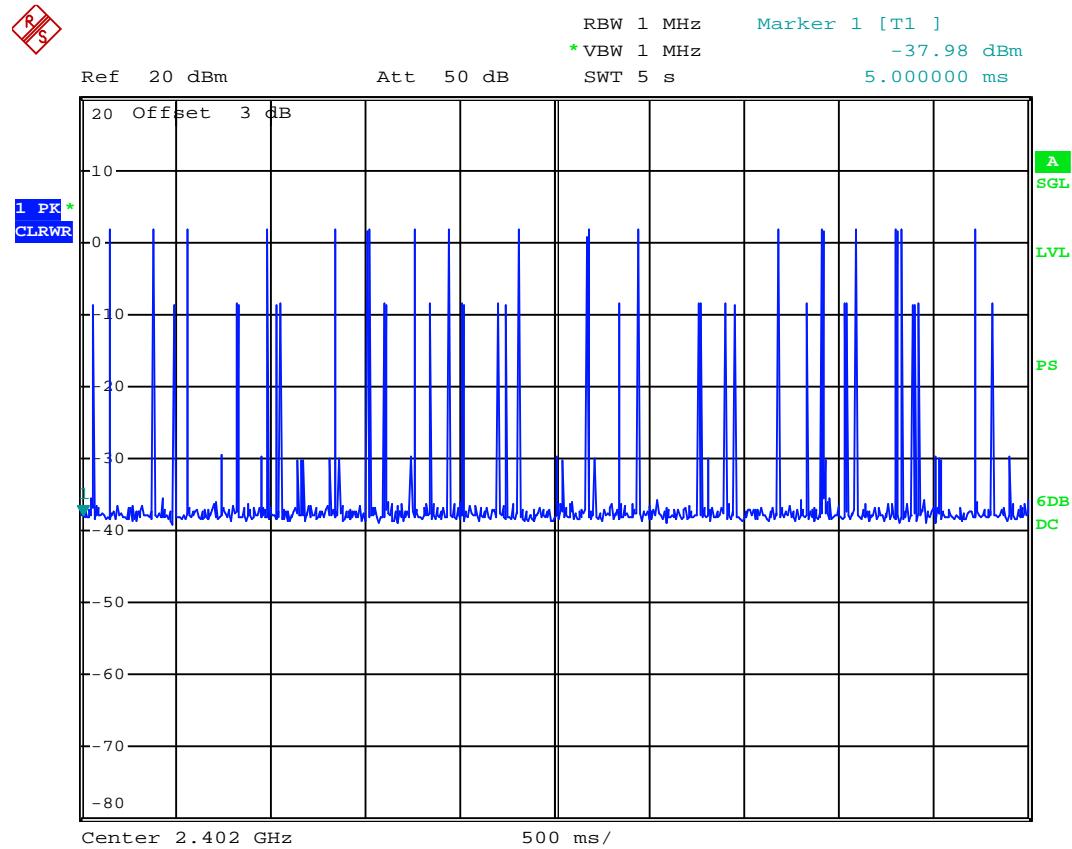
For Ch 00 2402MHz EDR DH1



For Ch 00 2402MHz EDR DH3



For Ch 00 2402MHz EDR DH5



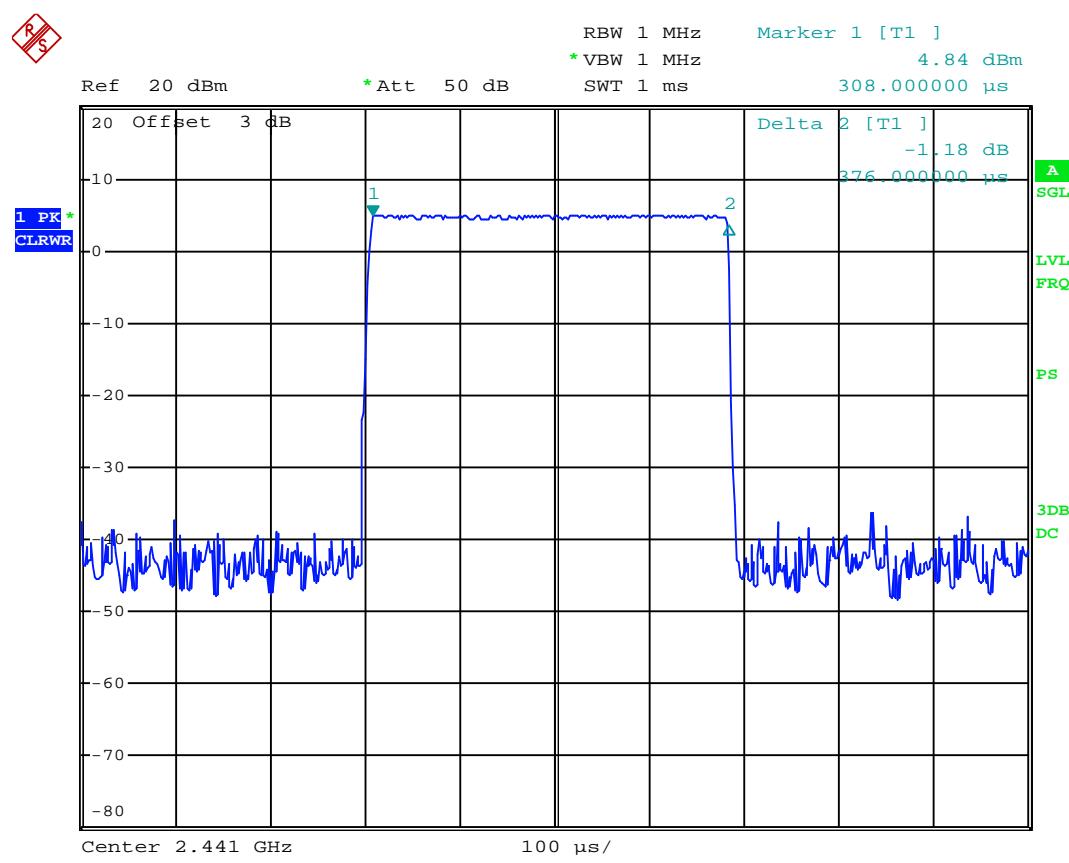
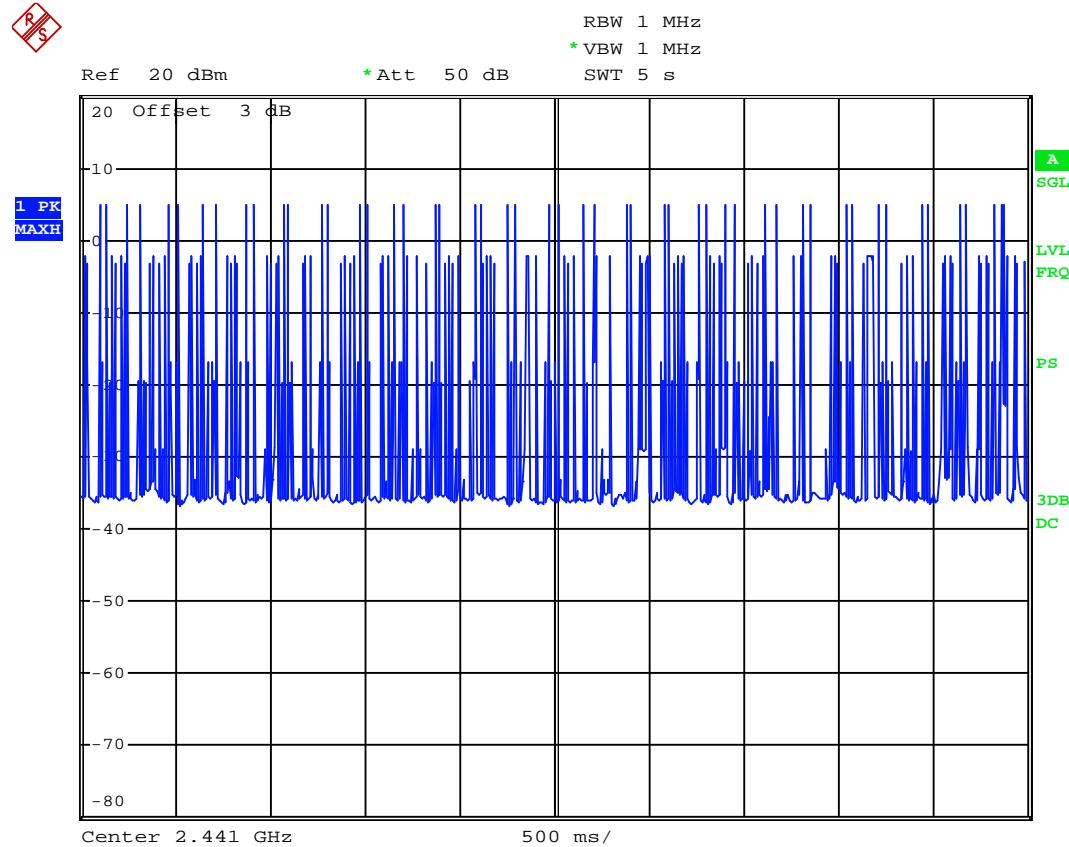
Ch 39 2441MHz NON-EDR

Mode	Number of transmission in a 31.6 (79 hopping*0.4) second period	Length of transmission time (msec)	Result (msec)	Limit (msec)	Conclusion
DH1	50 times/5 sec * 31.6=316 times	0.376	316*0.376 = 118.8	< 400	Pass
DH3	25 times/5 sec * 31.6=158 times	1.630	158*1.630 = 257.5	< 400	Pass
DH5	17 times/5 sec * 31.6=107 times	2.880	107*2.880 = 308.2	< 400	Pass

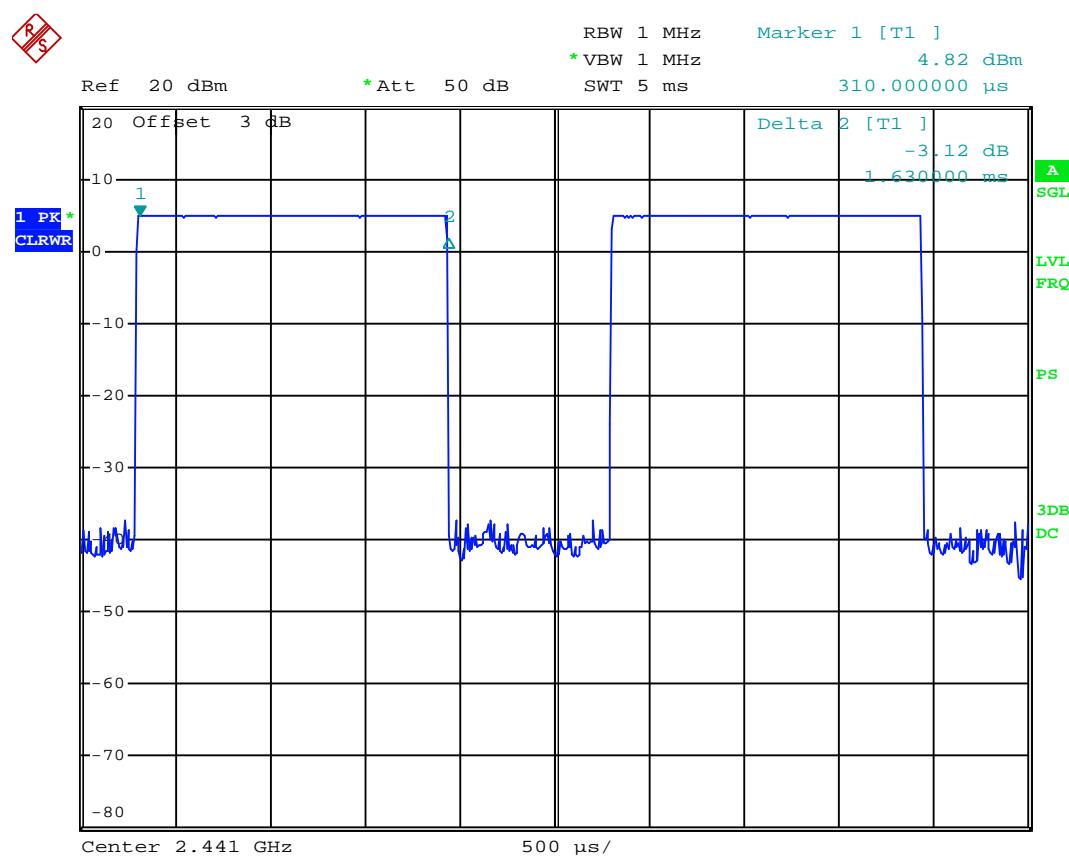
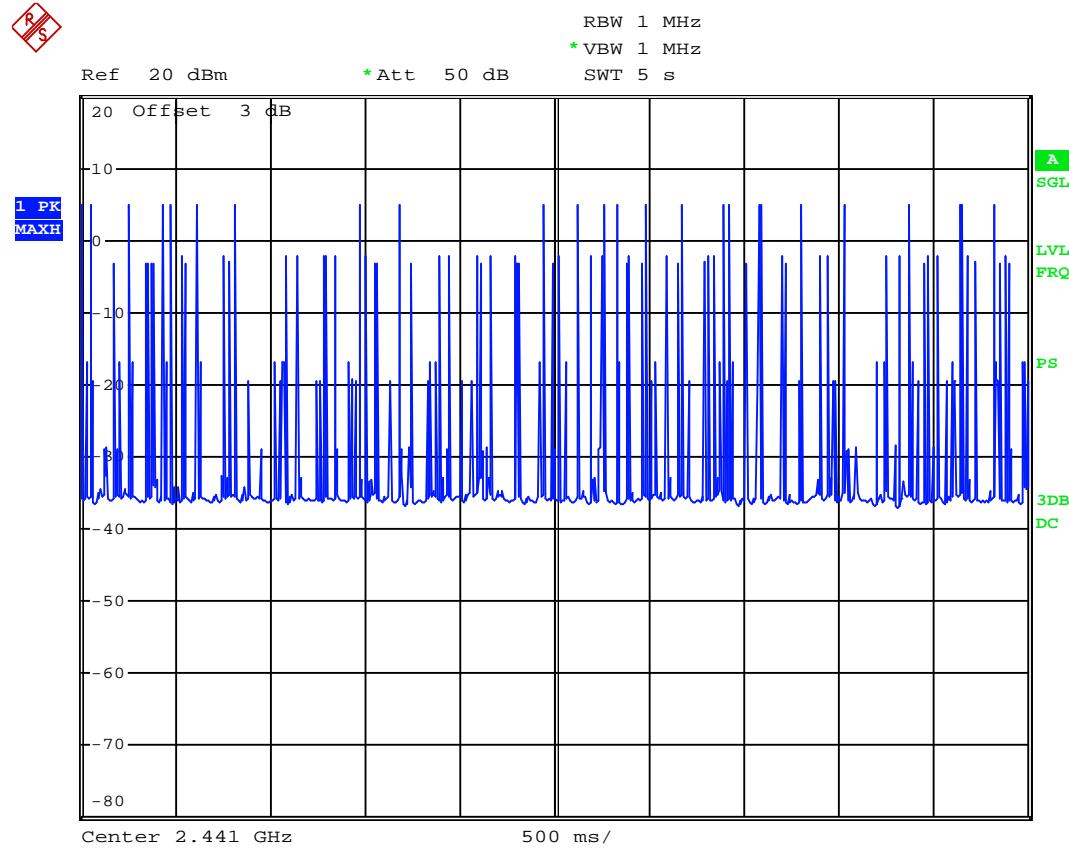
Ch 39 2441MHz EDR

Mode	Number of transmission in a 31.6 (79 hopping*0.4) second period	Length of transmission time (msec)	Result (msec)	Limit (msec)	Conclusion
DH1	50 times/5 sec * 31.6=316 times	0.380	316*0.380 = 120.1	< 400	Pass
DH3	25 times/5 sec * 31.6=158 times	1.640	158*1.640 = 259.1	< 400	Pass
DH5	17 times/5 sec * 31.6=107 times	2.880	107*2.880 = 308.2	< 400	Pass

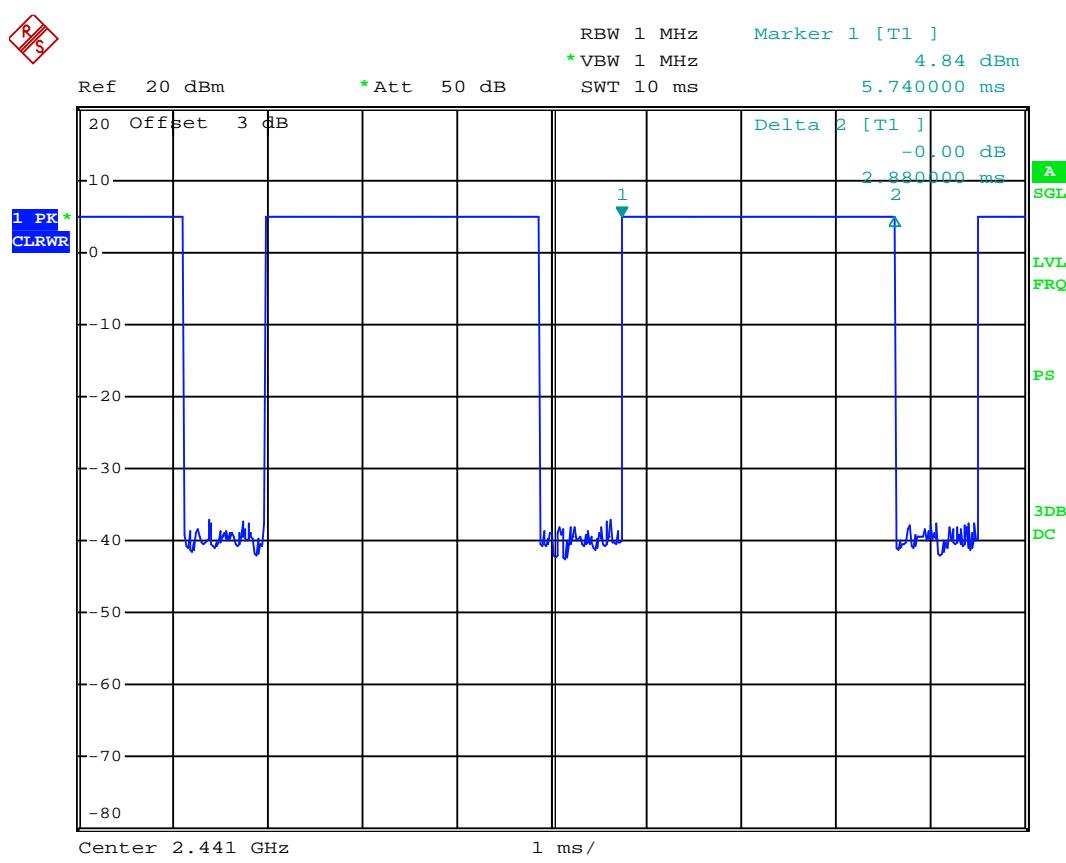
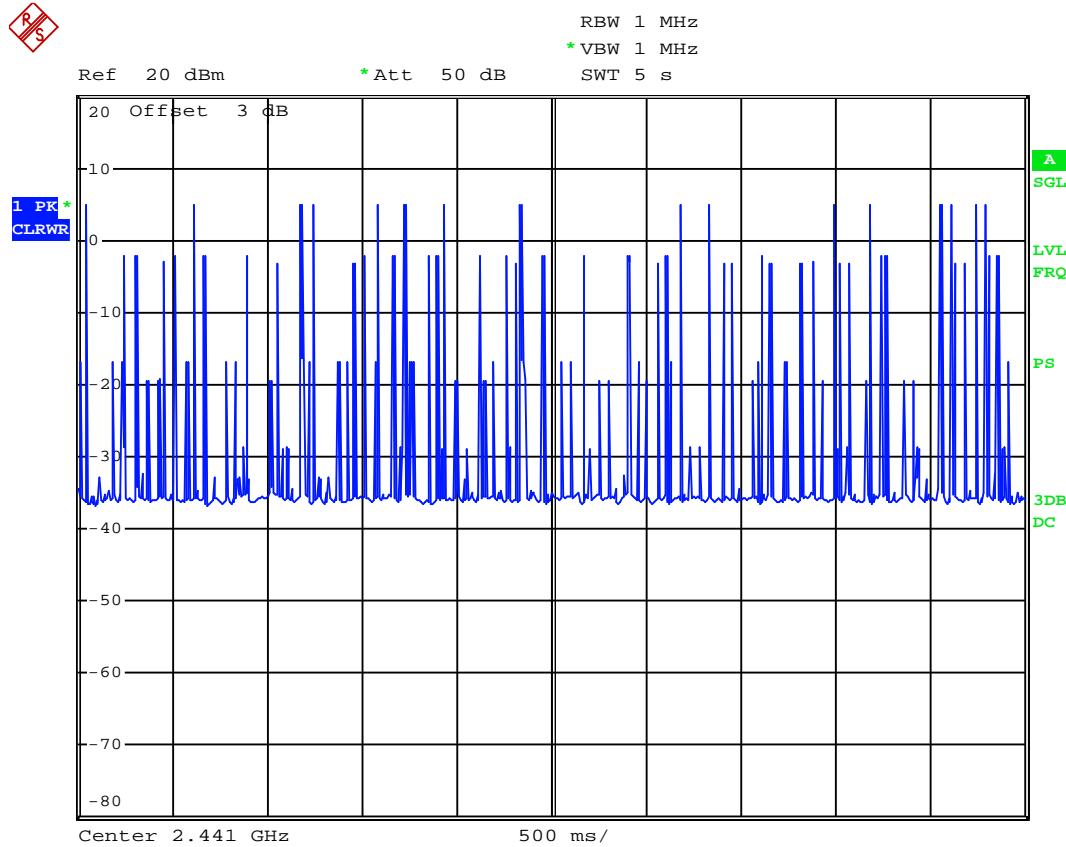
For Ch 39 2441MHz NON-EDR DH1



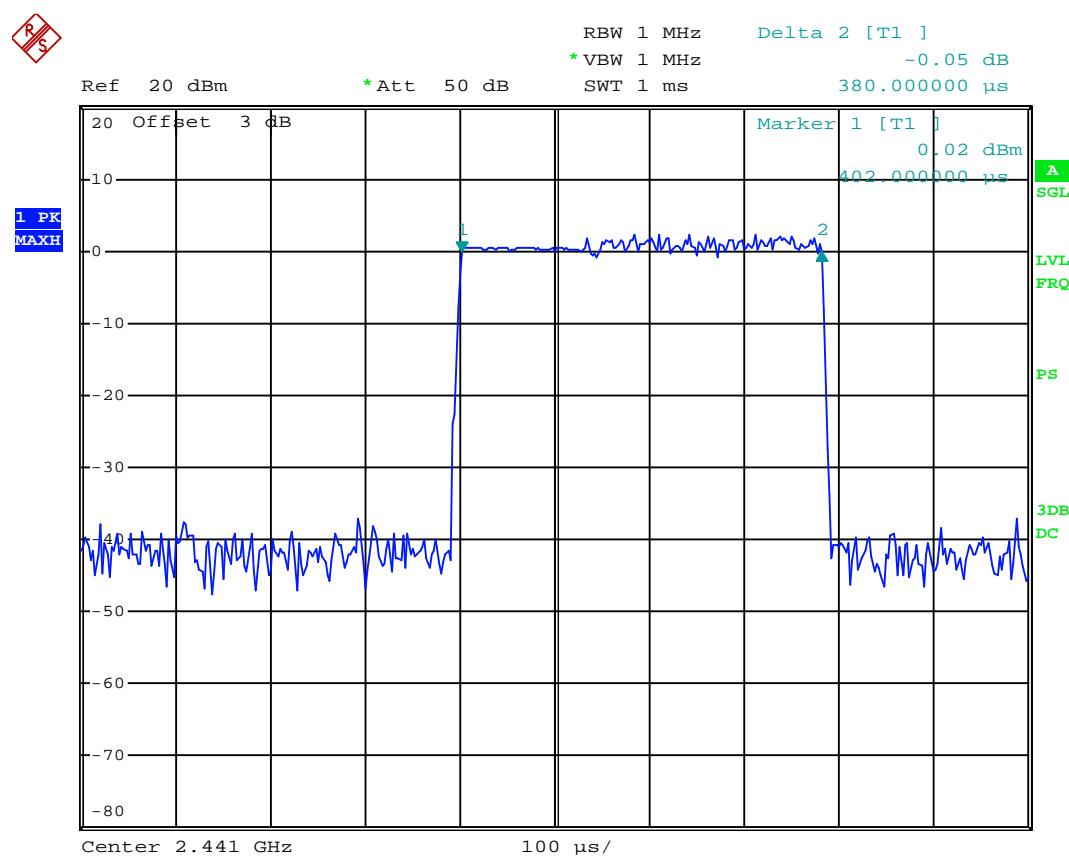
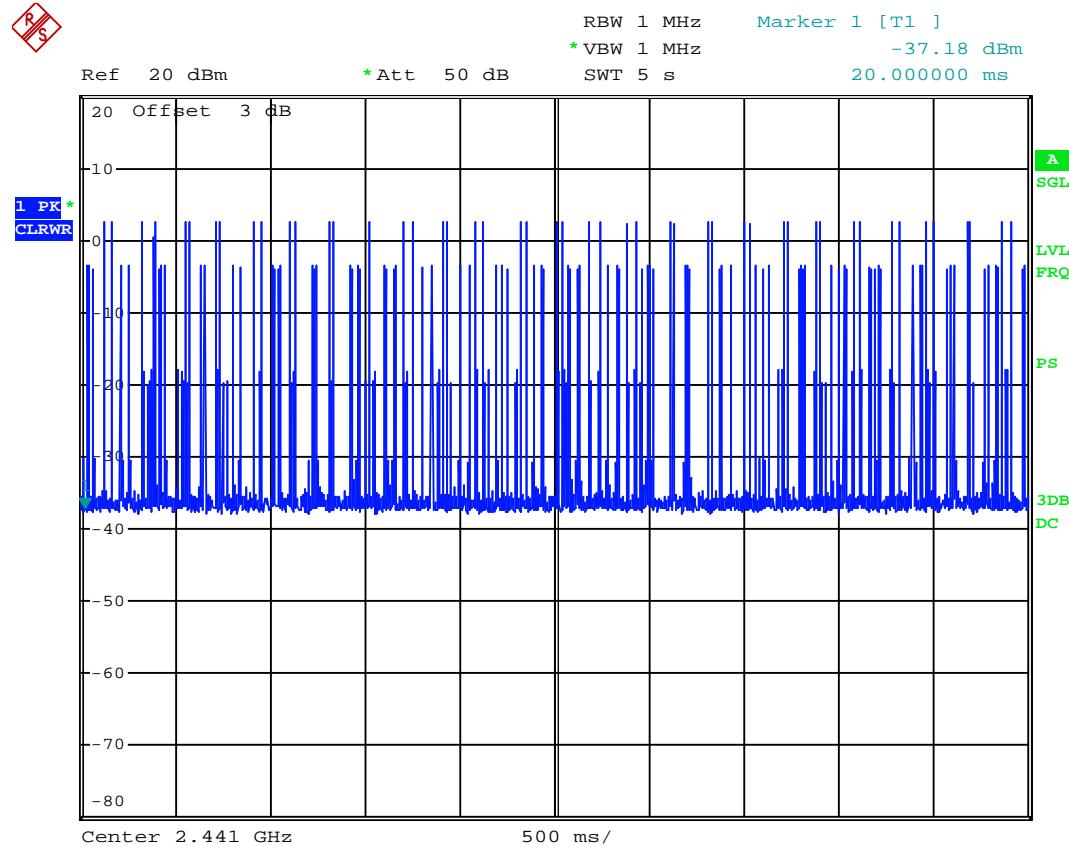
For Ch 39 2441MHz NON-EDR DH3



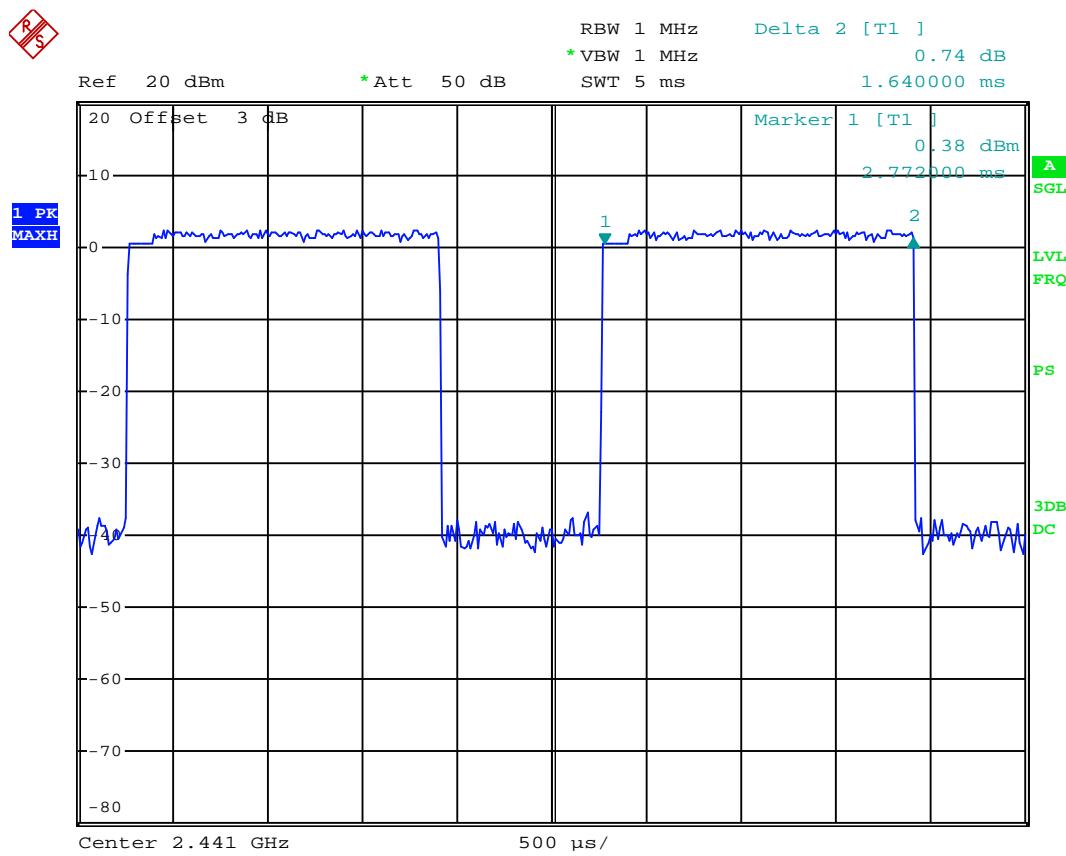
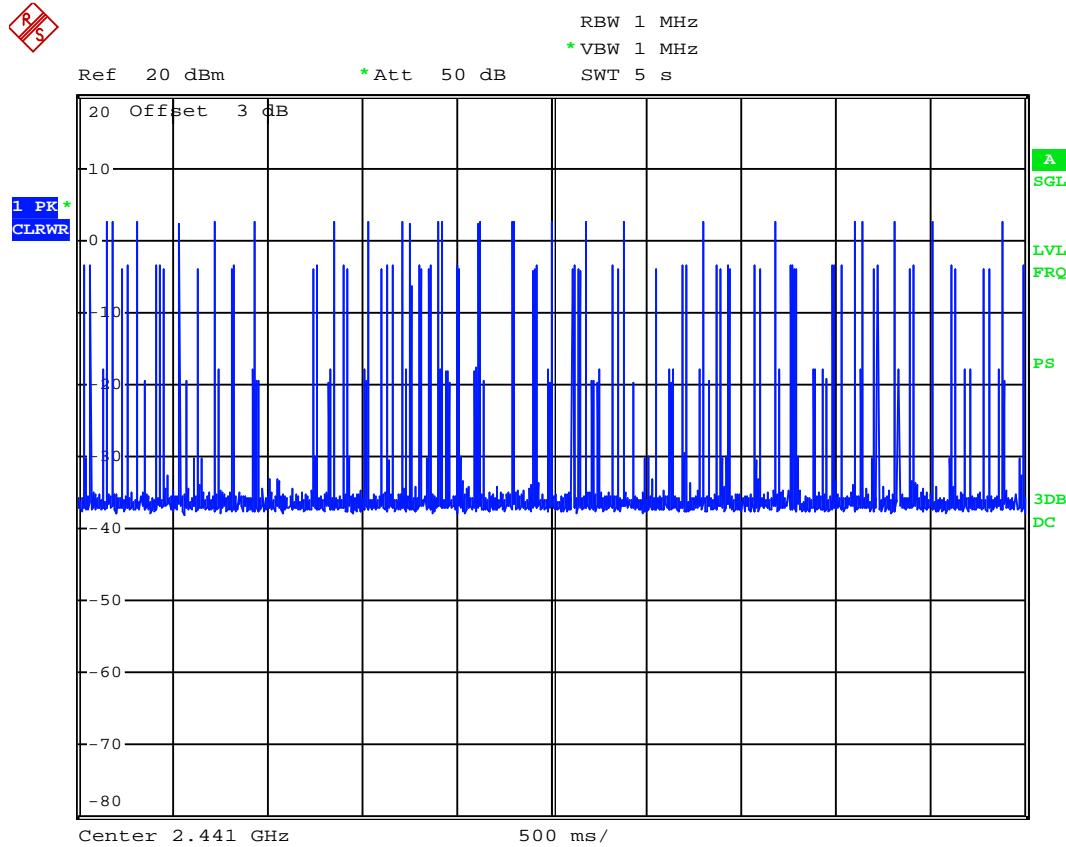
For Ch 39 2441MHz NON-EDR DH5



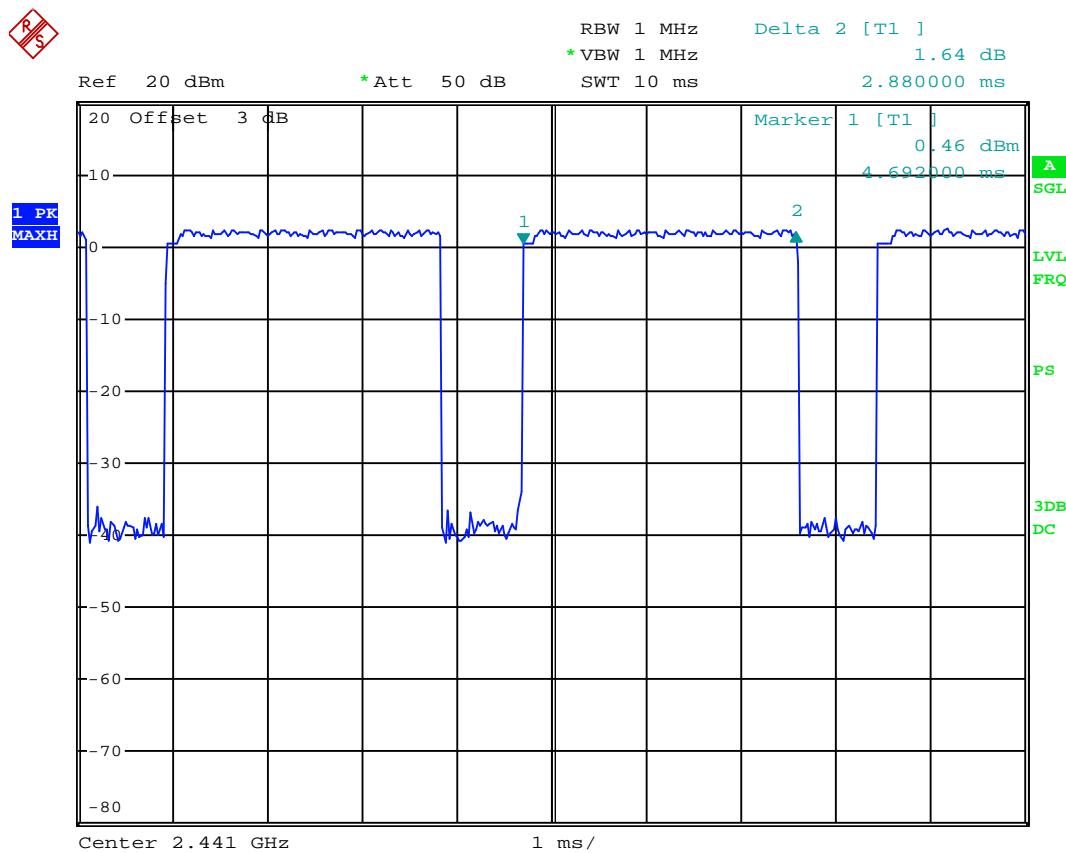
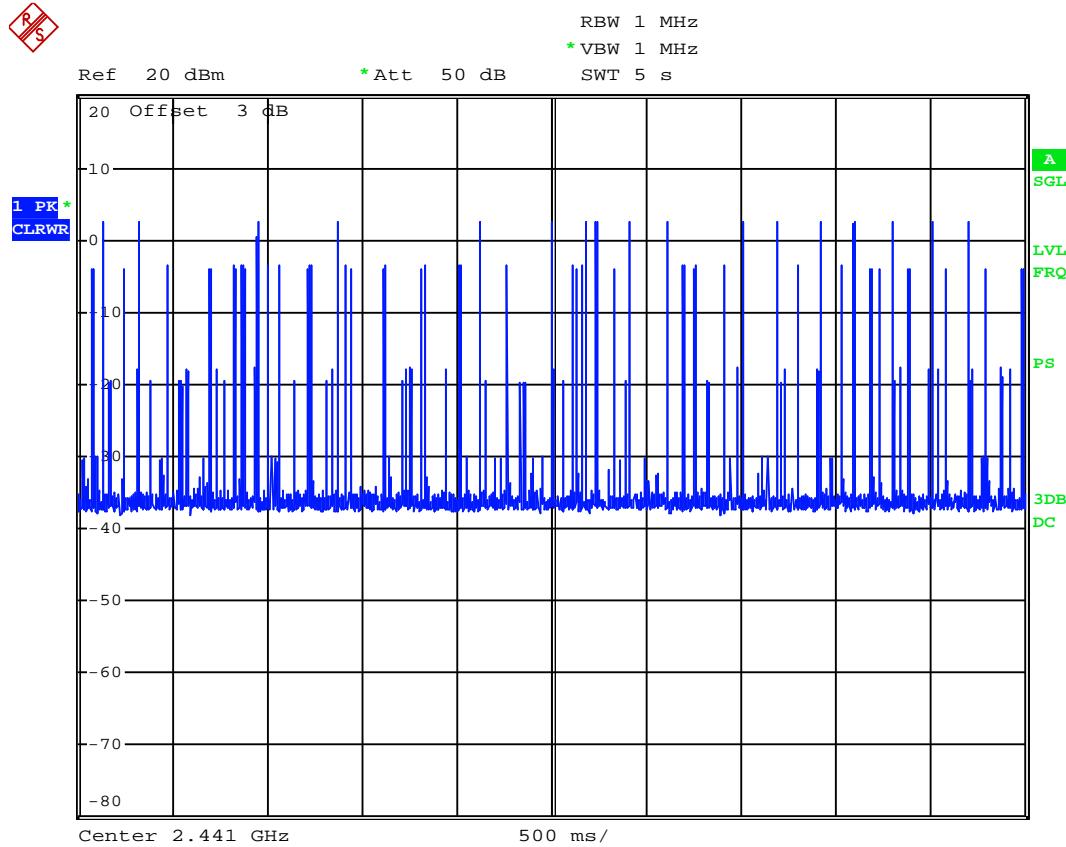
For Ch 39 2441MHz EDR DH1



For Ch 39 2441MHz EDR DH3



For Ch 39 2441MHz EDR DH5



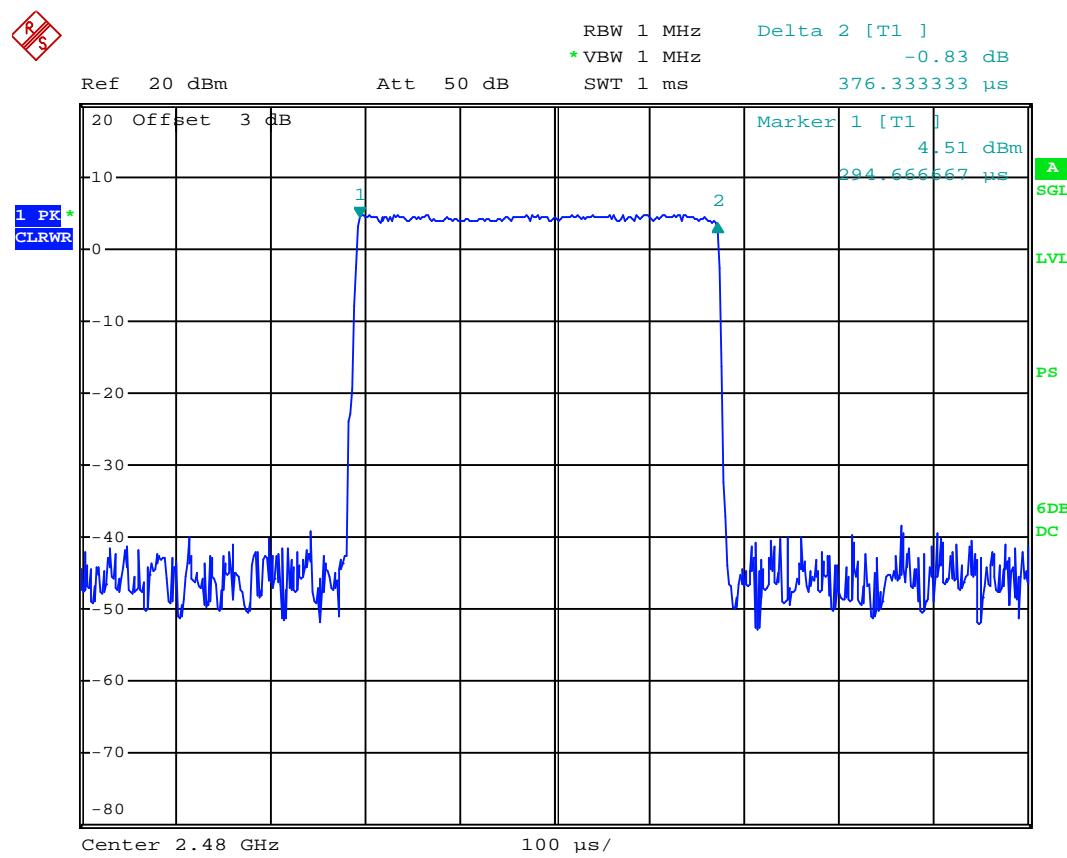
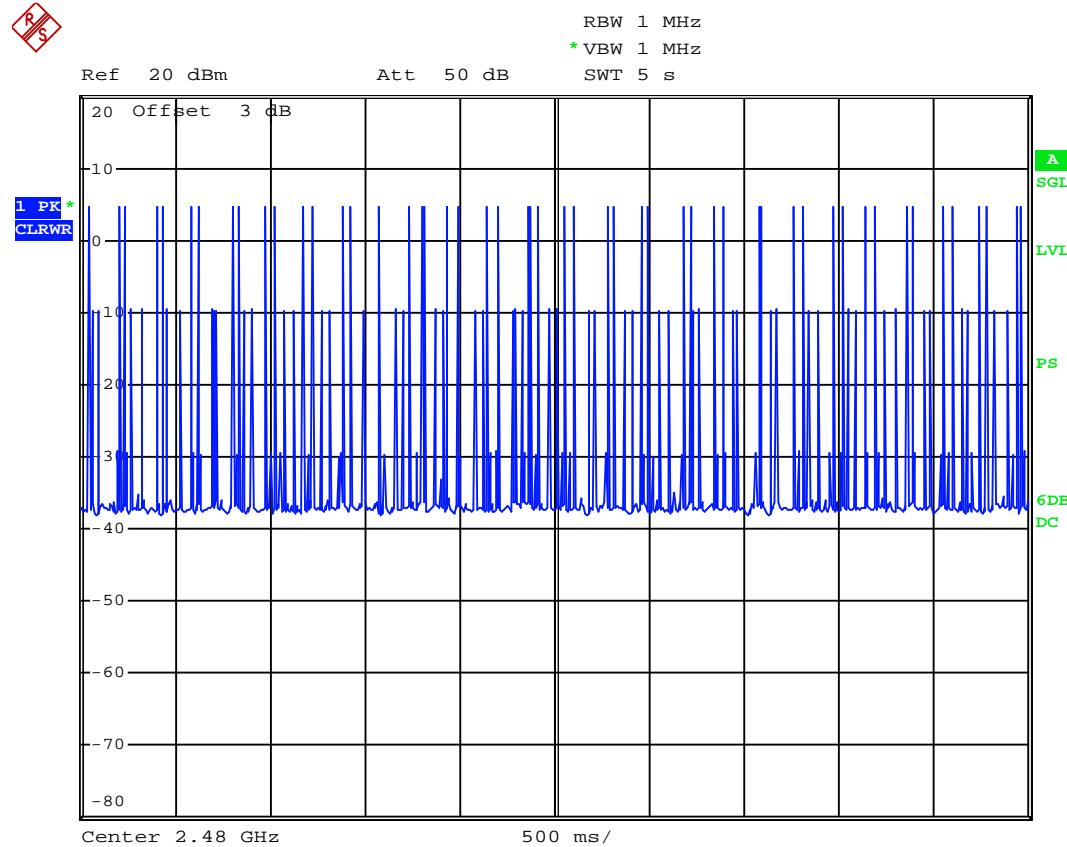
Ch 78 2480MHz NON-EDR

Mode	Number of transmission in a 31.6 (79 hopping*0.4) second period	Length of transmission time (msec)	Result (msec)	Limit (msec)	Conclusion
DH1	49 times/5 sec * 31.6=310 times	0.376	310*0.376 = 116.6	< 400	Pass
DH3	24 times/5 sec * 31.6=152 times	1.626	152*1.626 = 247.2	< 400	Pass
DH5	17 times/5 sec * 31.6=107 times	2.870	107*2.870 = 307.1	< 400	Pass

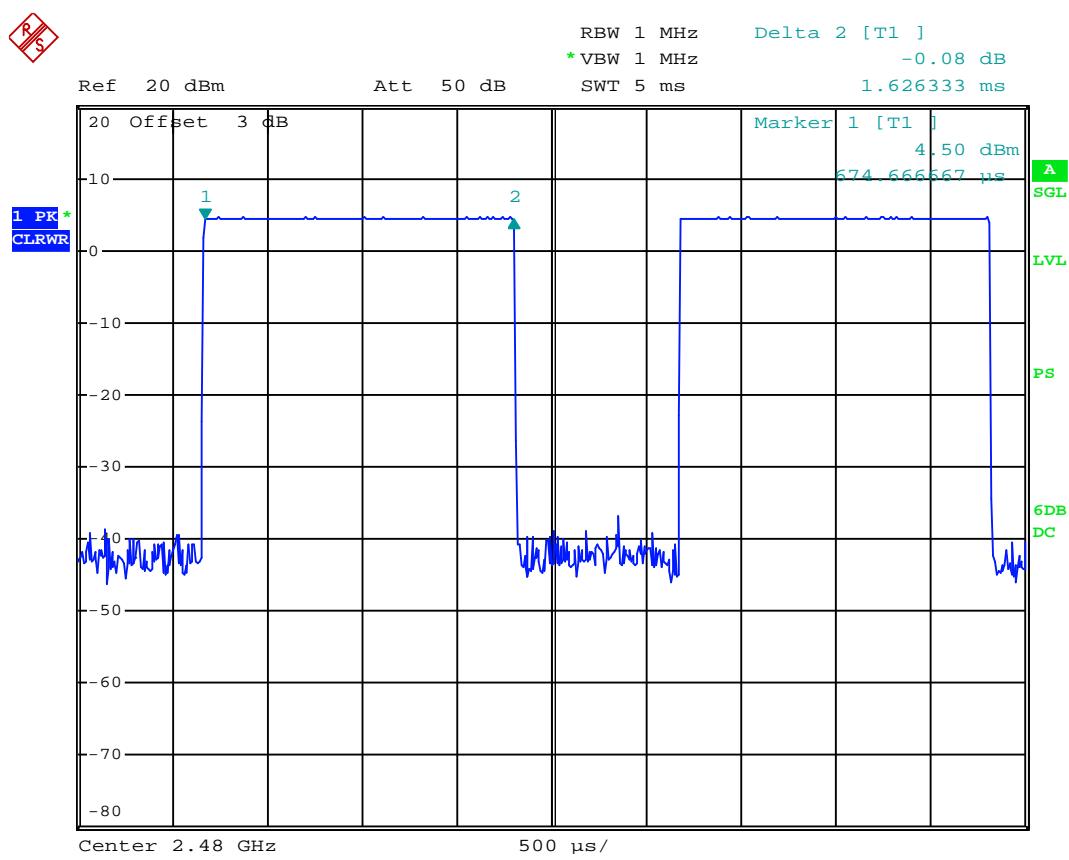
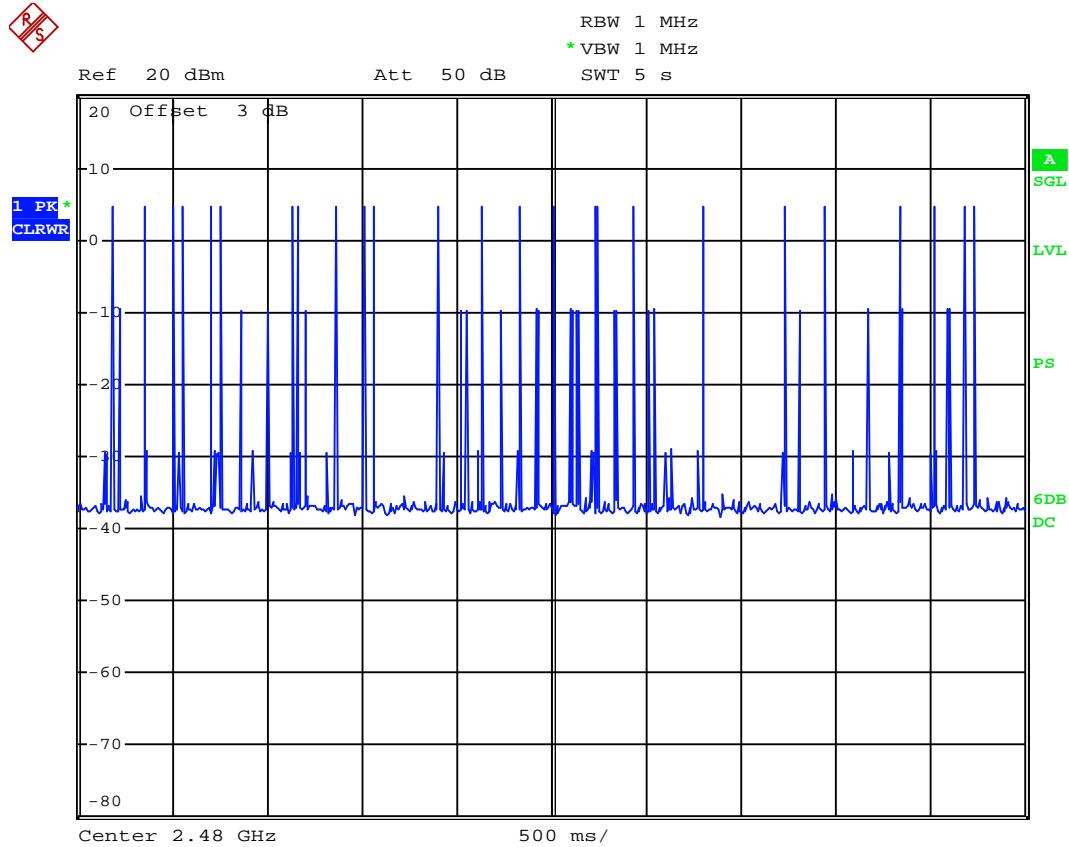
Ch 78 2480MHz EDR

Mode	Number of transmission in a 31.6 (79 hopping*0.4) second period	Length of transmission time (msec)	Result (msec)	Limit (msec)	Conclusion
DH1	45 times/5 sec * 31.6=284 times	0.381	384*0.381 = 146.3	< 400	Pass
DH3	24 times/5 sec * 31.6=152 times	1.625	152*1.625 = 247.0	< 400	Pass
DH5	17 times/5 sec * 31.6=107 times	2.866	107*2.866 = 306.7	< 400	Pass

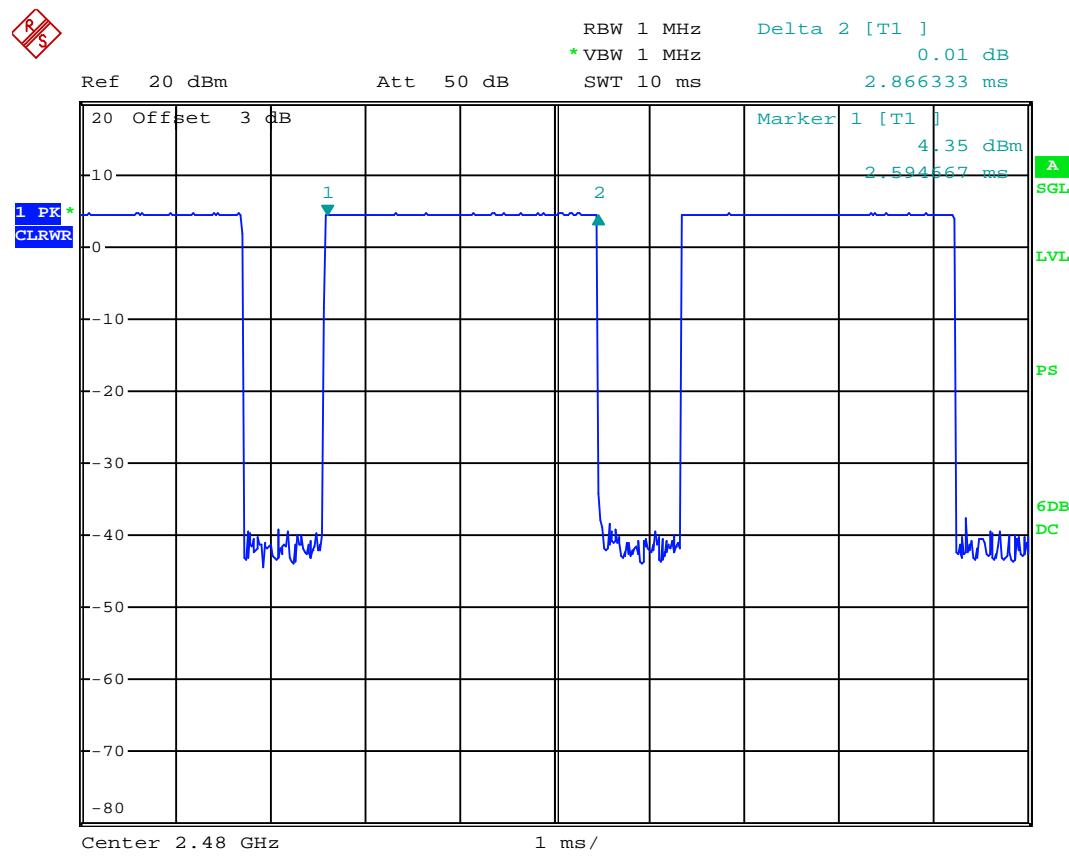
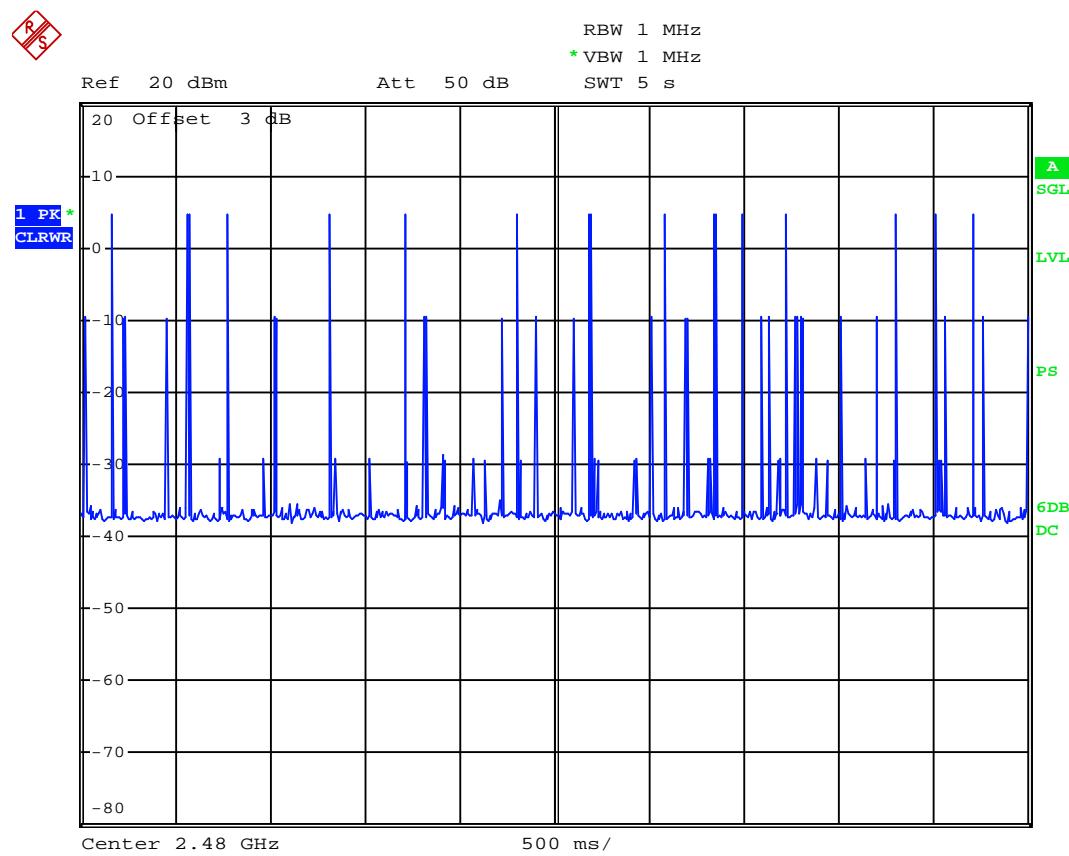
For Ch 78 2480MHz NON-EDR DH1



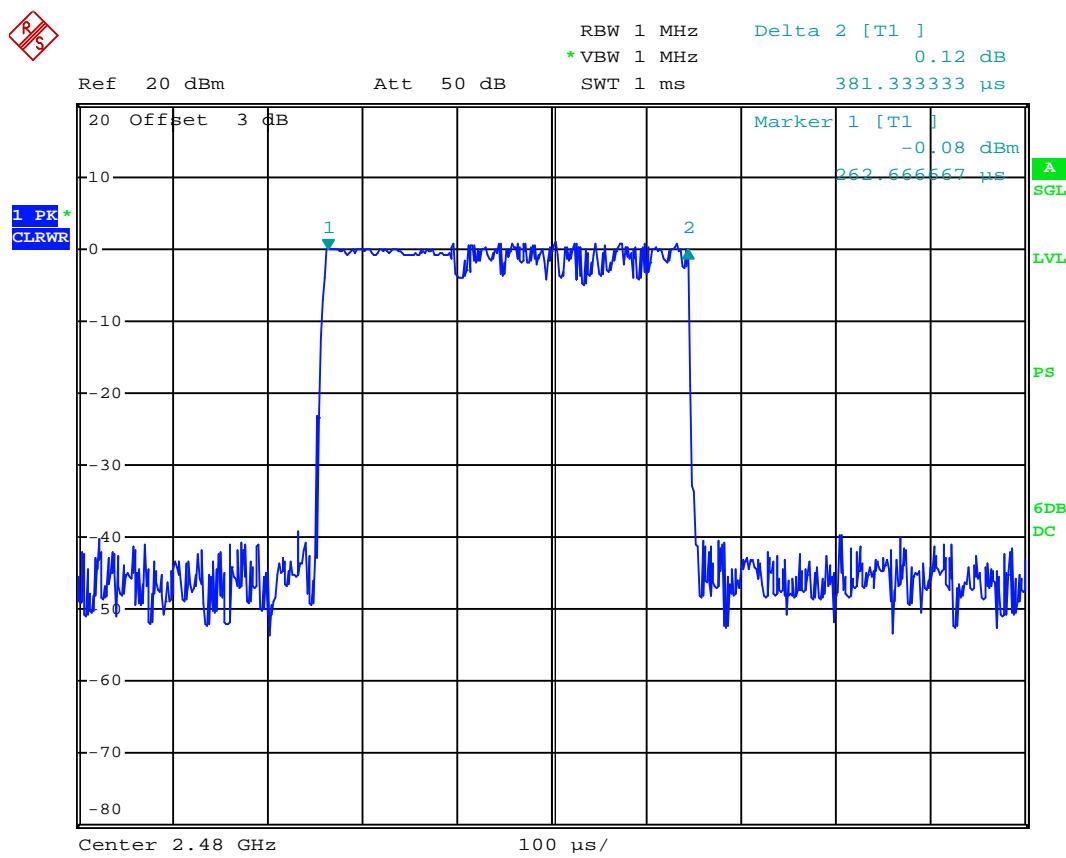
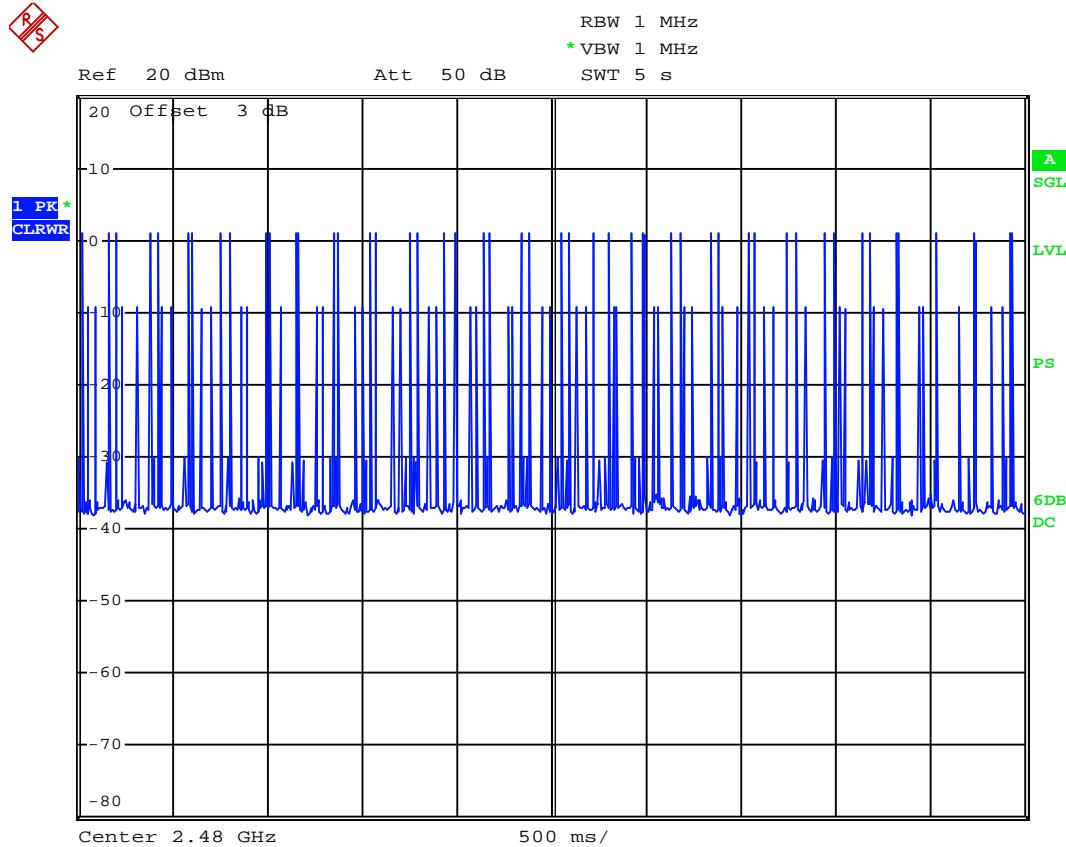
For Ch 78 2480MHz NON-EDR DH3



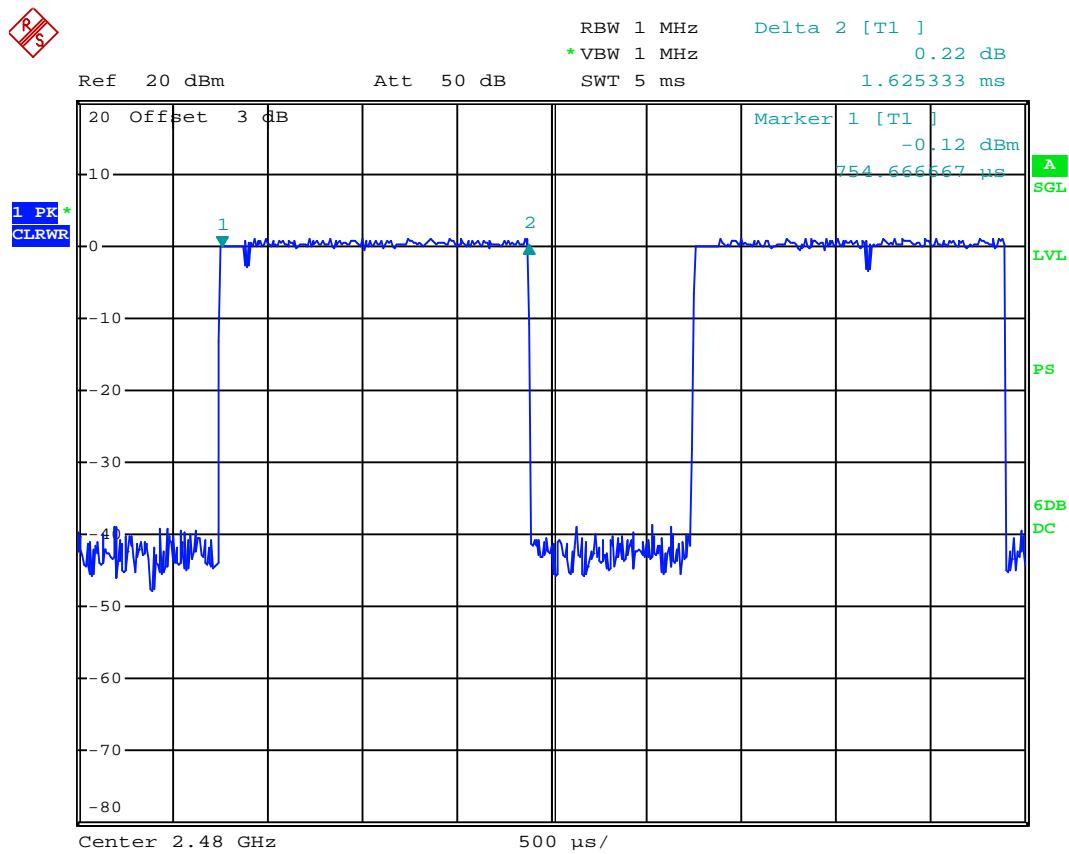
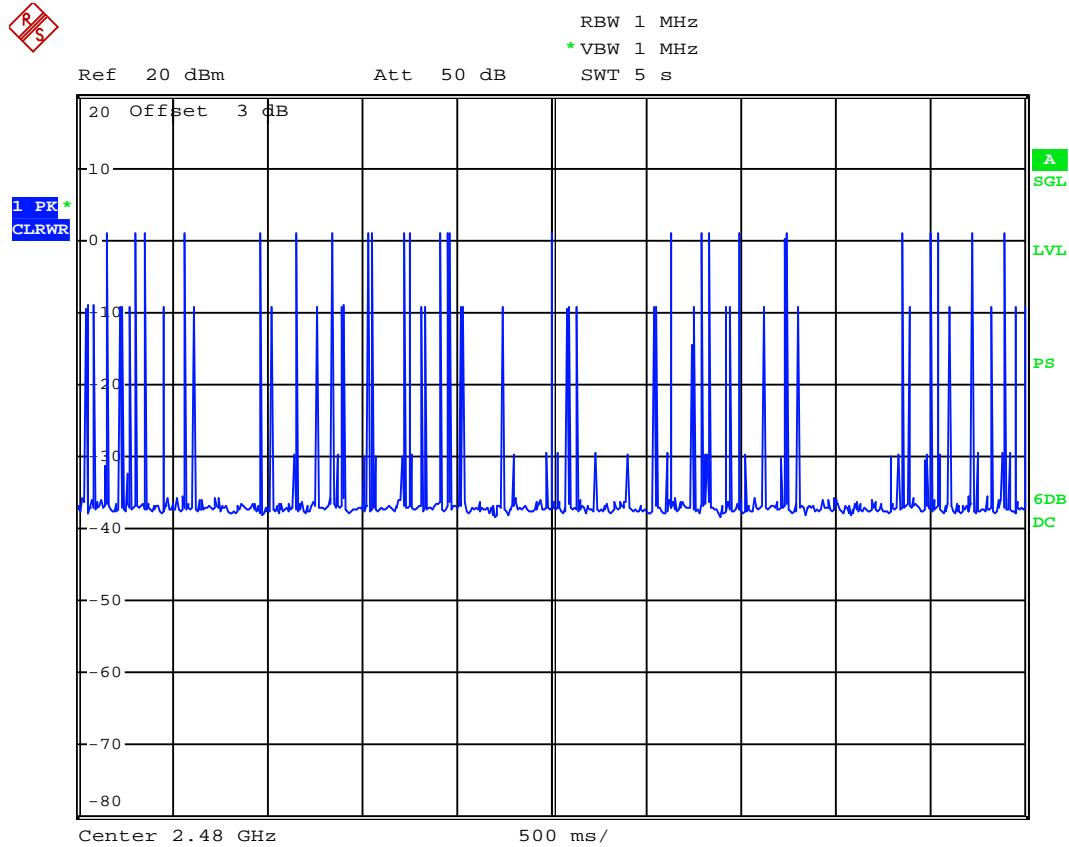
For Ch 78 2480MHz NON-EDR DH5



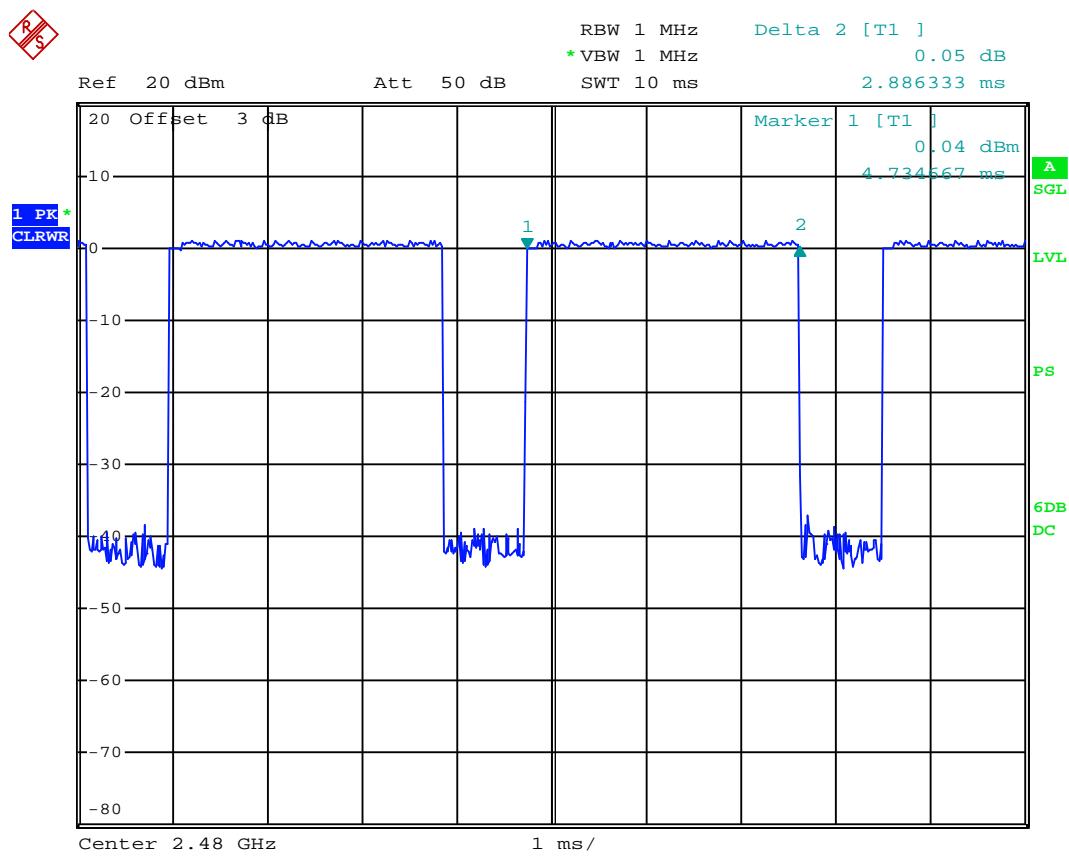
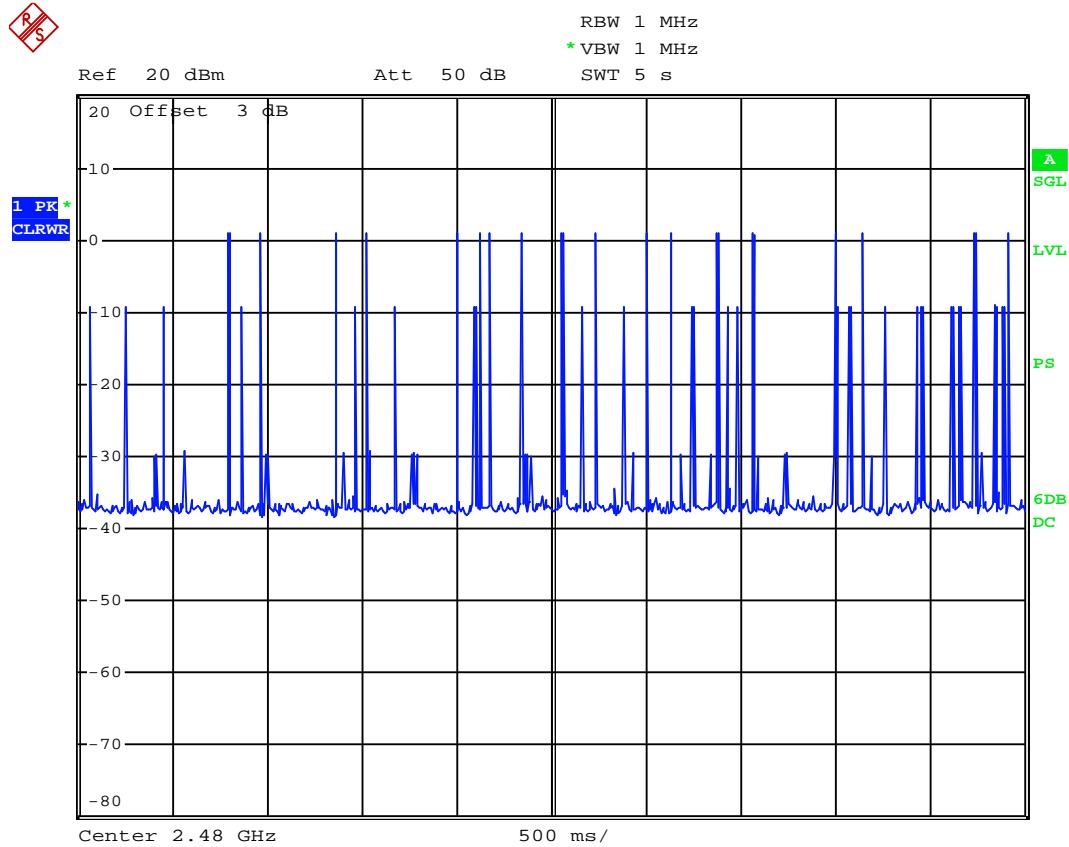
For Ch 78 2480MHz EDR DH1



For Ch 78 2480MHz EDR DH3



For Ch 78 2480MHz EDR DH5



12 DEVIATION TO TEST SPECIFICATIONS

None.

APPENDIX I

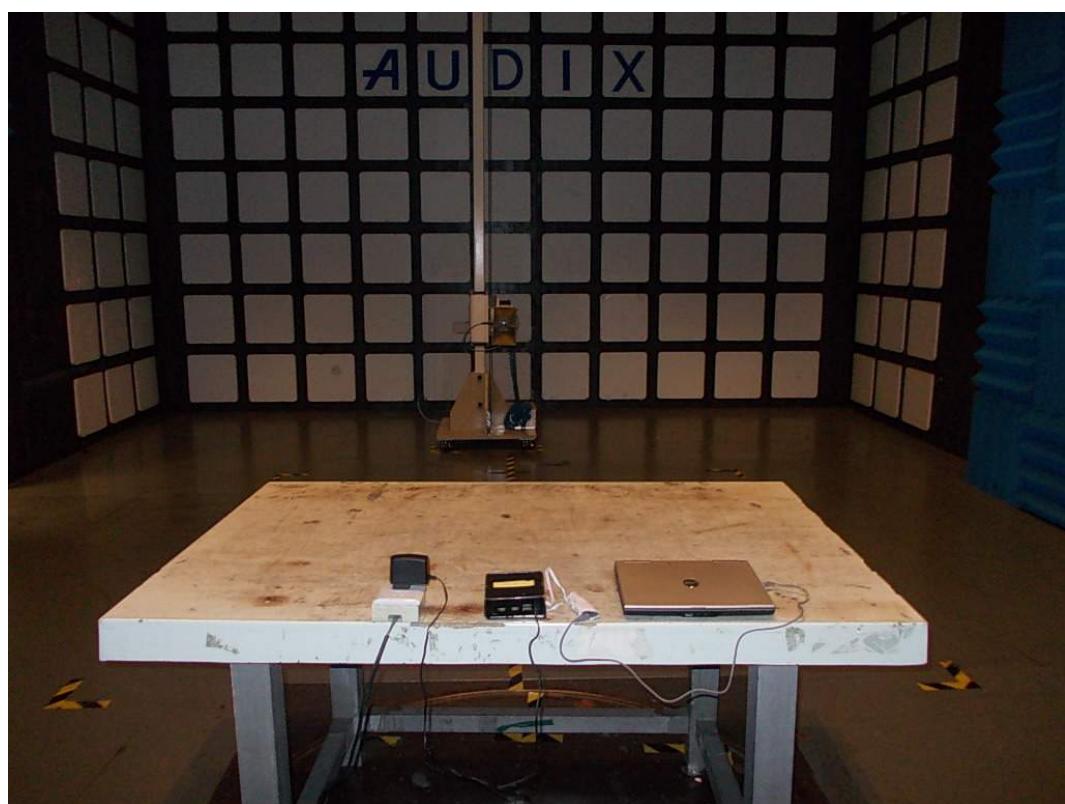
PHOTOGRAPHS OF TEST

Test Set-Up Photos

1. Radiated Electromagnetic Emission Test



BELOW 1GHz



ABOVE 1GHz

2. RF Test



APPENDIX II

PHOTOGRAPHS OF EUT

FIGURE 1
NETWORK MEDIA PLAYER (M/N: GX1200V)
GENERAL APPEARANCE (FRONT VIEW)



FIGURE 2
NETWORK MEDIA PLAYER (M/N: GX1200V)
GENERAL APPEARANCE (BACK VIEW)



FIGURE 3
NETWORK MEDIA PLAYER (M/N: GX1200V)
PORTS #1



FIGURE 4
NETWORK MEDIA PLAYER (M/N: GX1200V)
PORTS #2



FIGURE 5
NETWORK MEDIA PLAYER (M/N: GX1200V)
COVER REMOVED

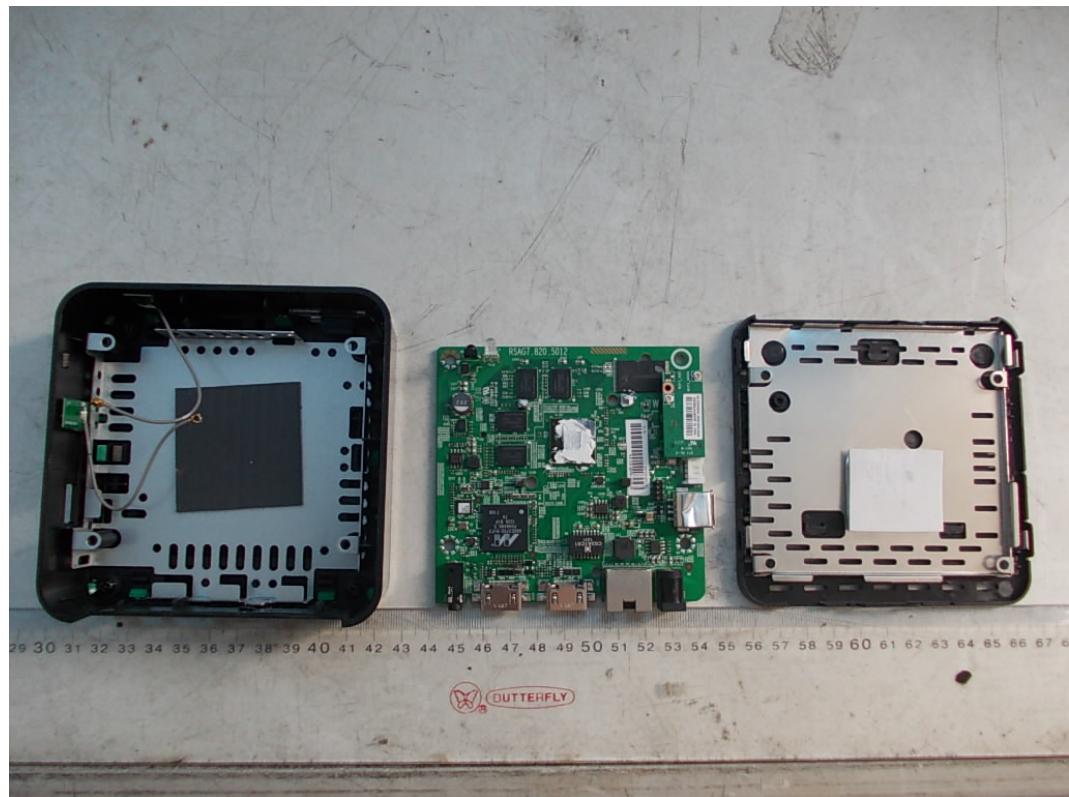


FIGURE 6
NETWORK MEDIA PLAYER (M/N: GX1200V)
MAIN BOARD (COMPONENT SIDE)

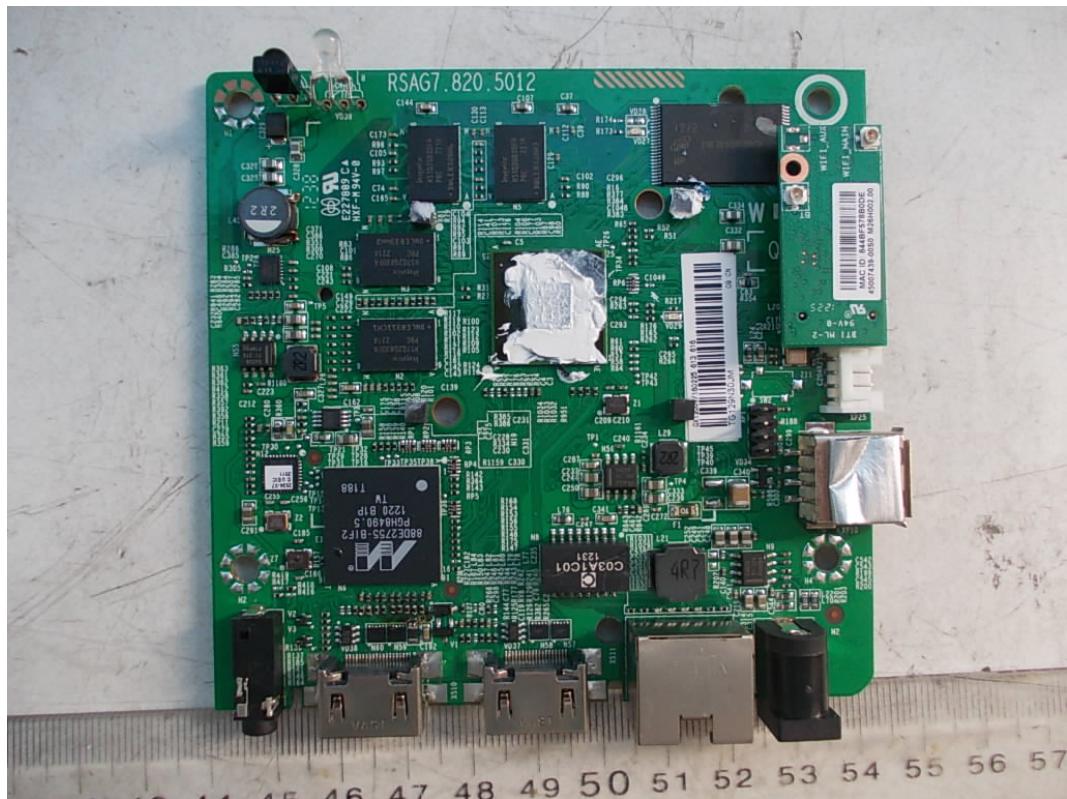


FIGURE 7
NETWORK MEDIA PLAYER (M/N: GX1200V)
MAIN BOARD (SOLDERED SIDE)

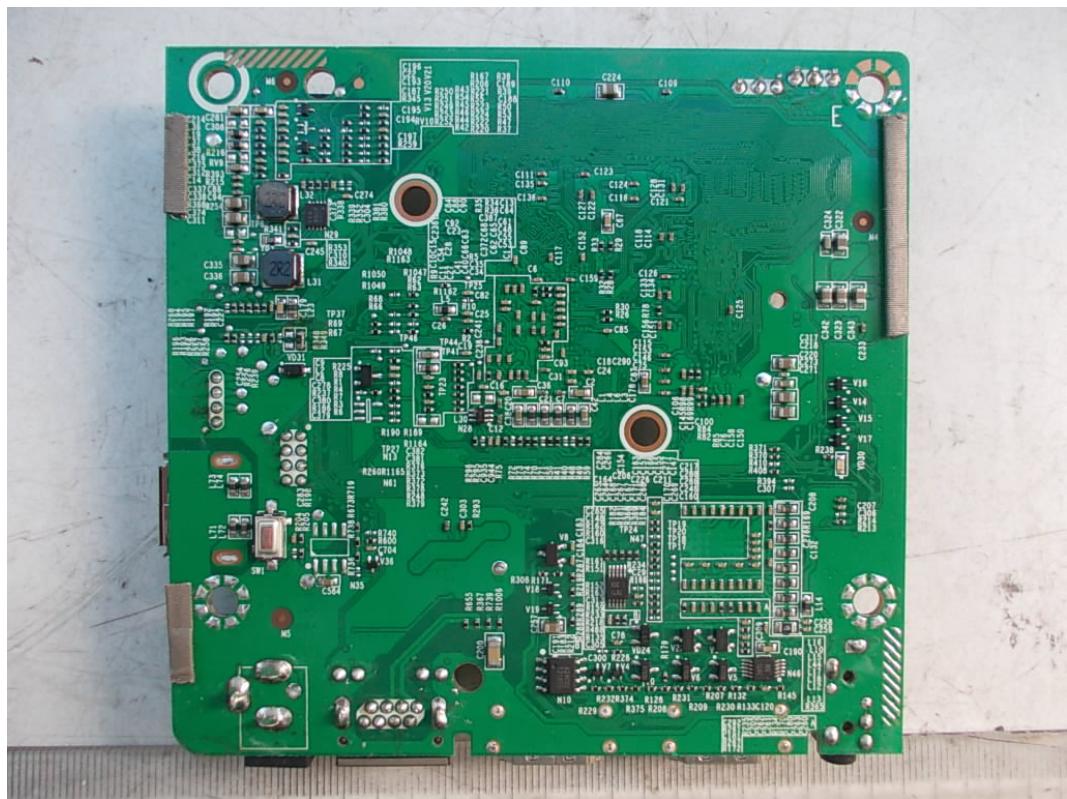


FIGURE 8
NETWORK MEDIA PLAYER (M/N: GX1200V)
CHIP & CRYSTAL #1 ON MAIN BOARD

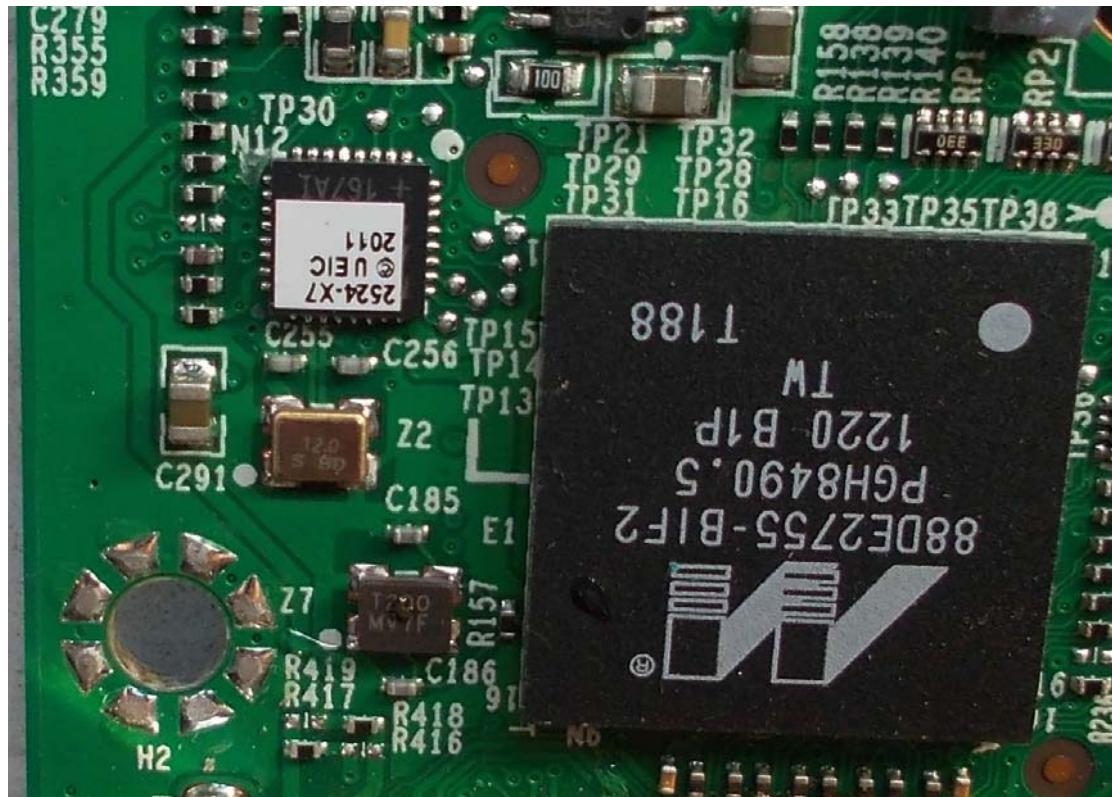


FIGURE 9
NETWORK MEDIA PLAYER (M/N: GX1200V)
CRYSTAL #2 ON MAIN BOARD



FIGURE 10
NETWORK MEDIA PLAYER (M/N: GX1200V)
ANTENNA POSITION

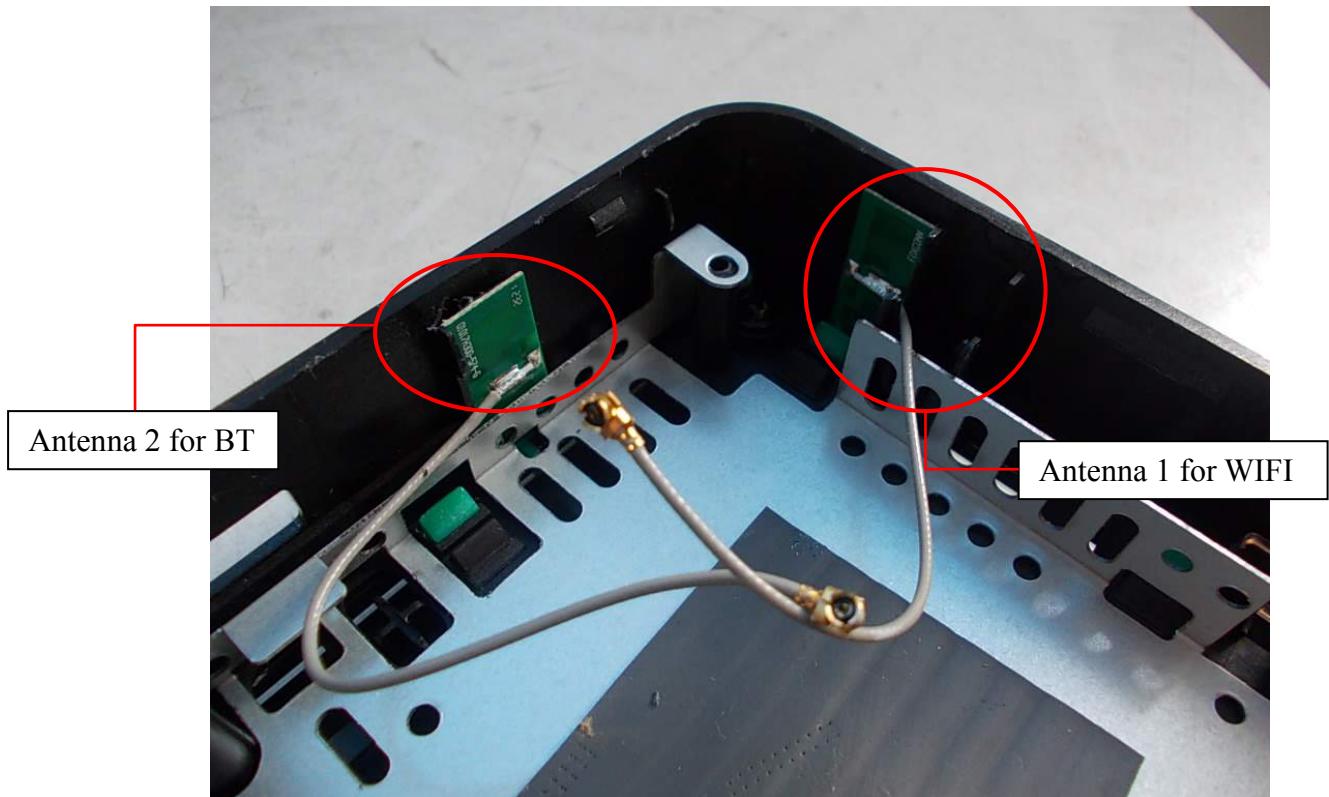


FIGURE 11
NETWORK MEDIA PLAYER (M/N: GX1200V)
ANTENNA (FRONT VIEW)

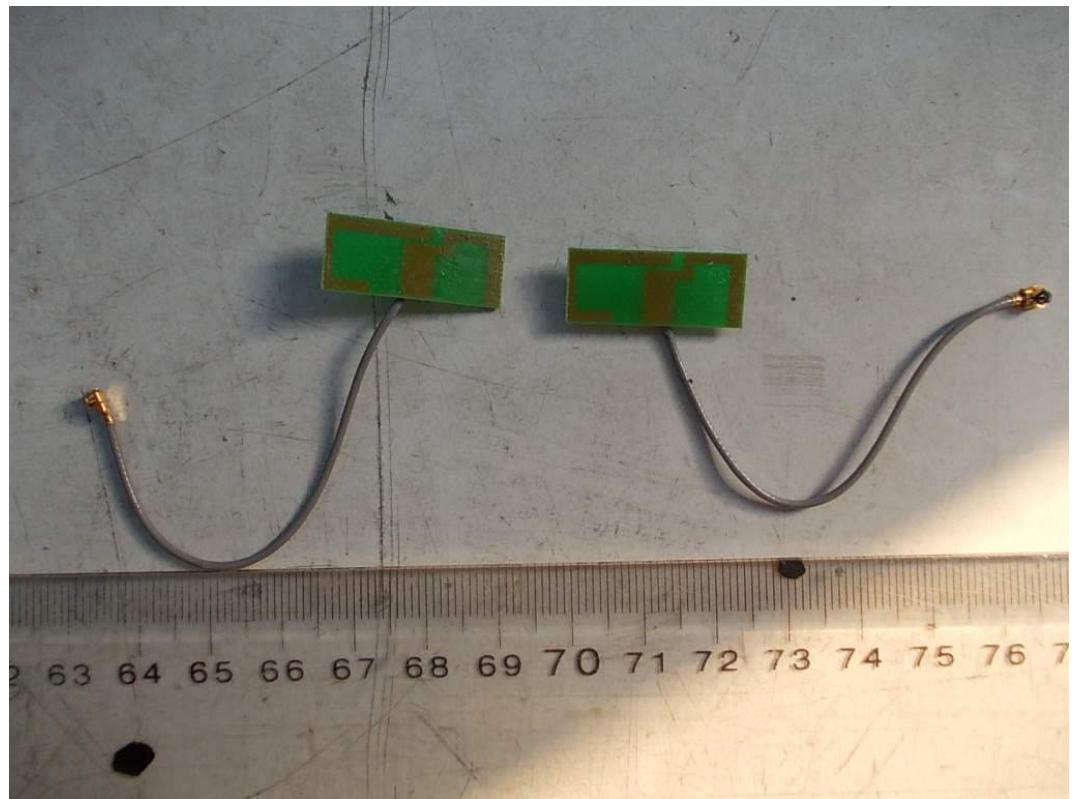


FIGURE 12
NETWORK MEDIA PLAYER (M/N: GX1200V)
ANTENNA (BACK VIEW)

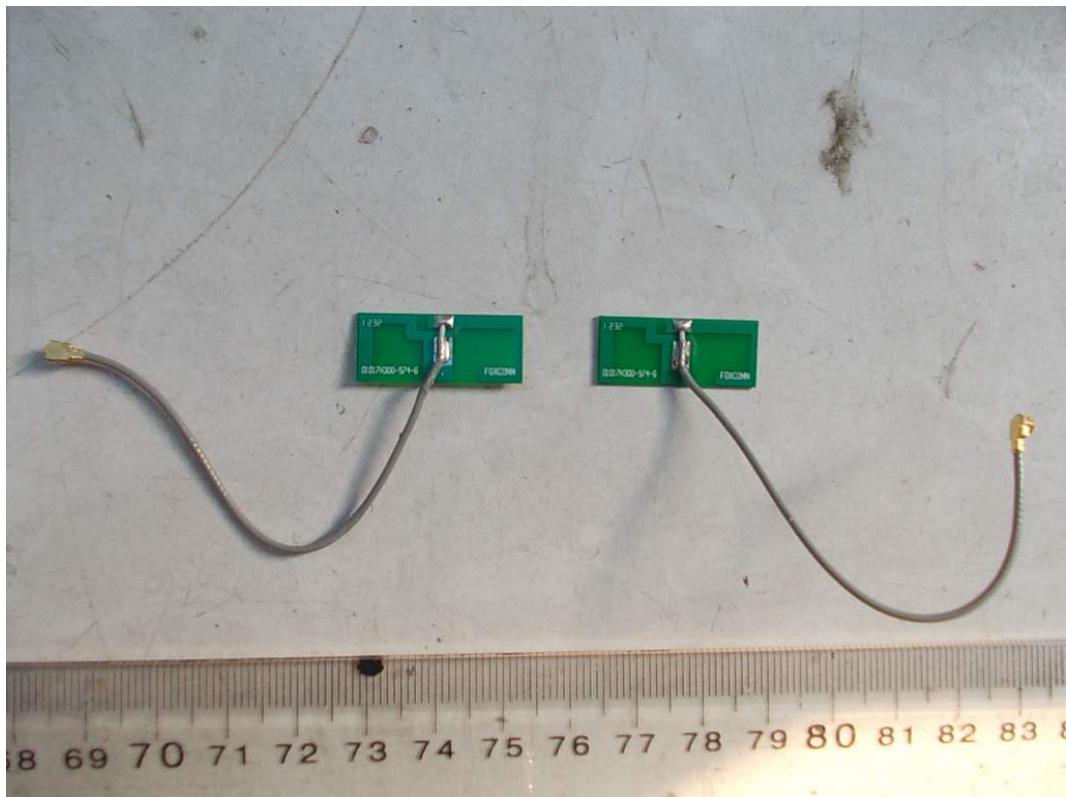


FIGURE 13
NETWORK MEDIA PLAYER (M/N: GX1200V)
RF BOARD (FRONT VIEW)

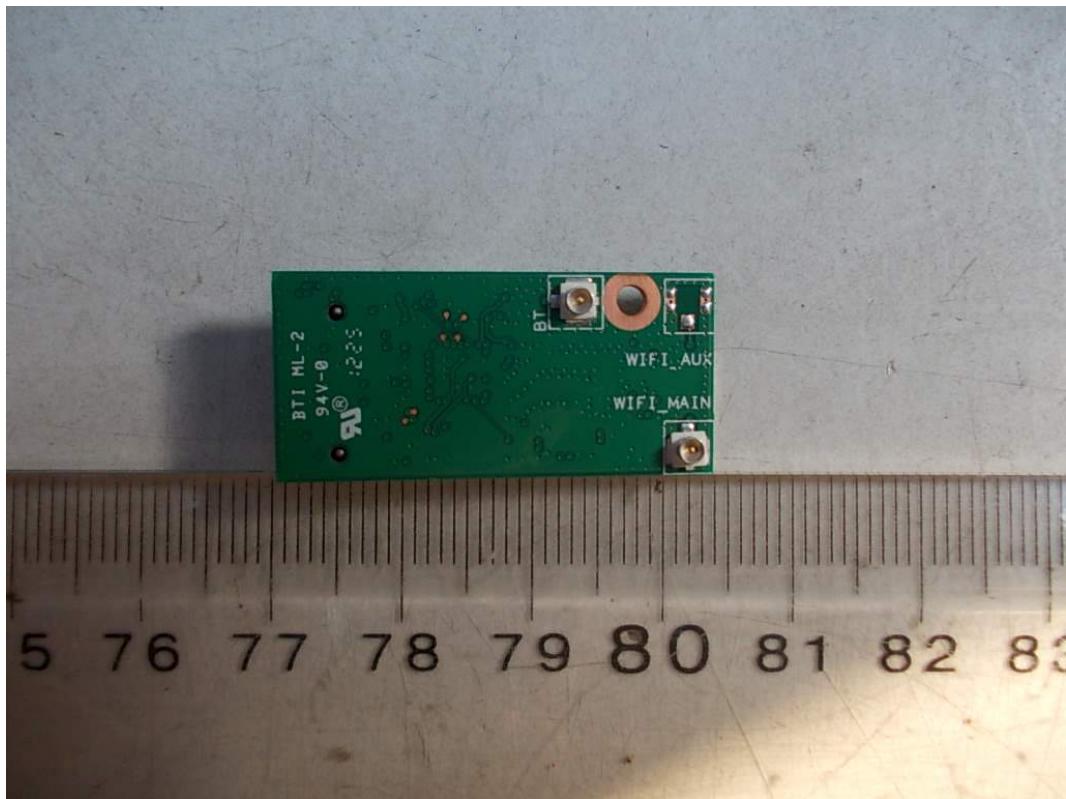


FIGURE 14
NETWORK MEDIA PLAYER (M/N: GX1200V)
RF BOARD (BACK VIEW)

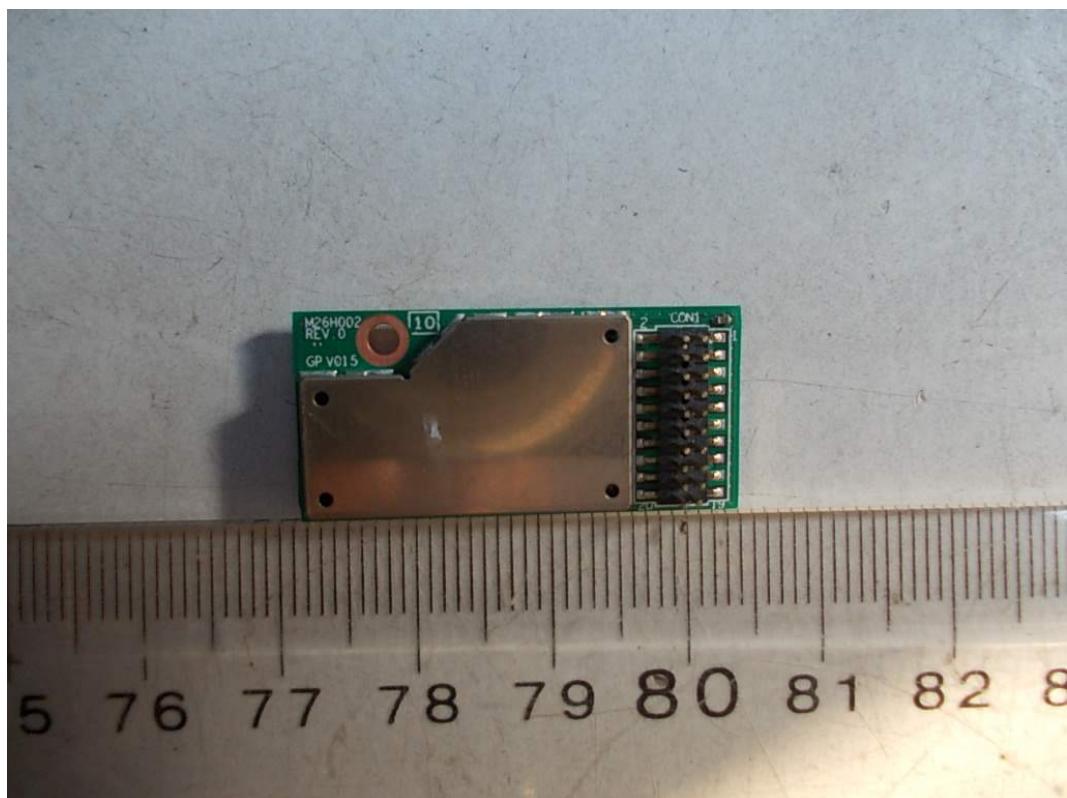


FIGURE 15
NETWORK MEDIA PLAYER (M/N: GX1200V)
RF BOARD (SHIELDED COVER REMOVED)

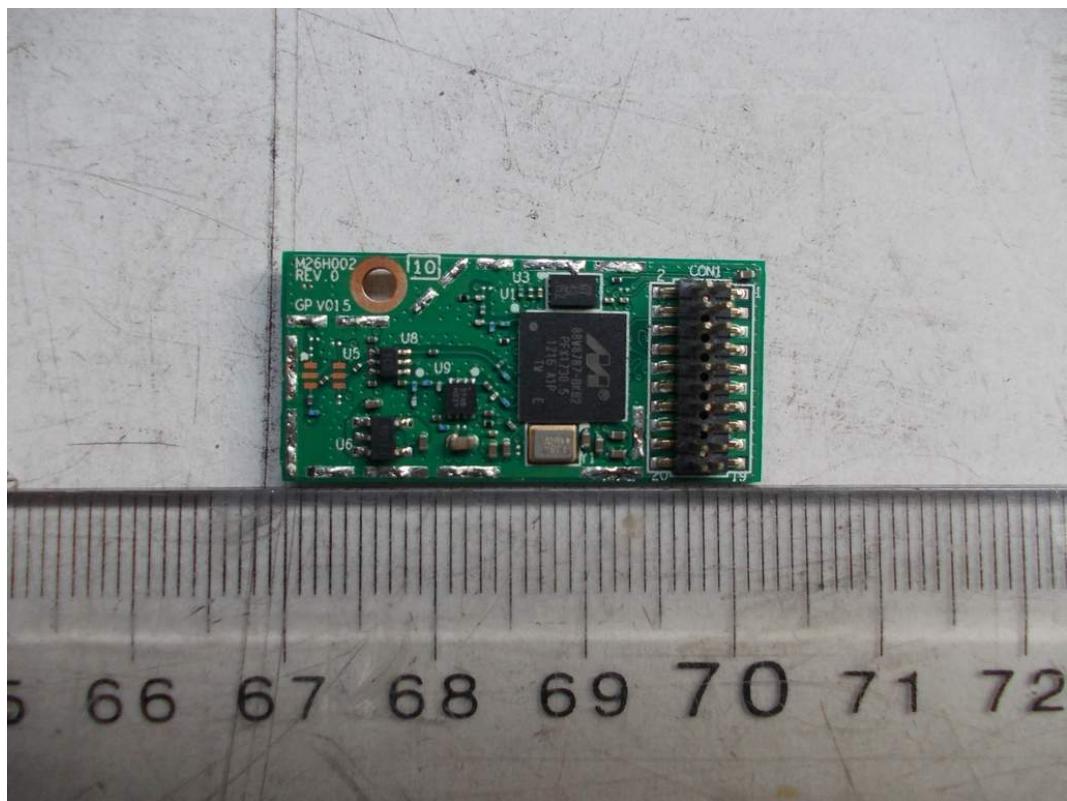


FIGURE 16
NETWORK MEDIA PLAYER (M/N: GX1200V)
CHIP & CRYSTAL ON RF BOARD

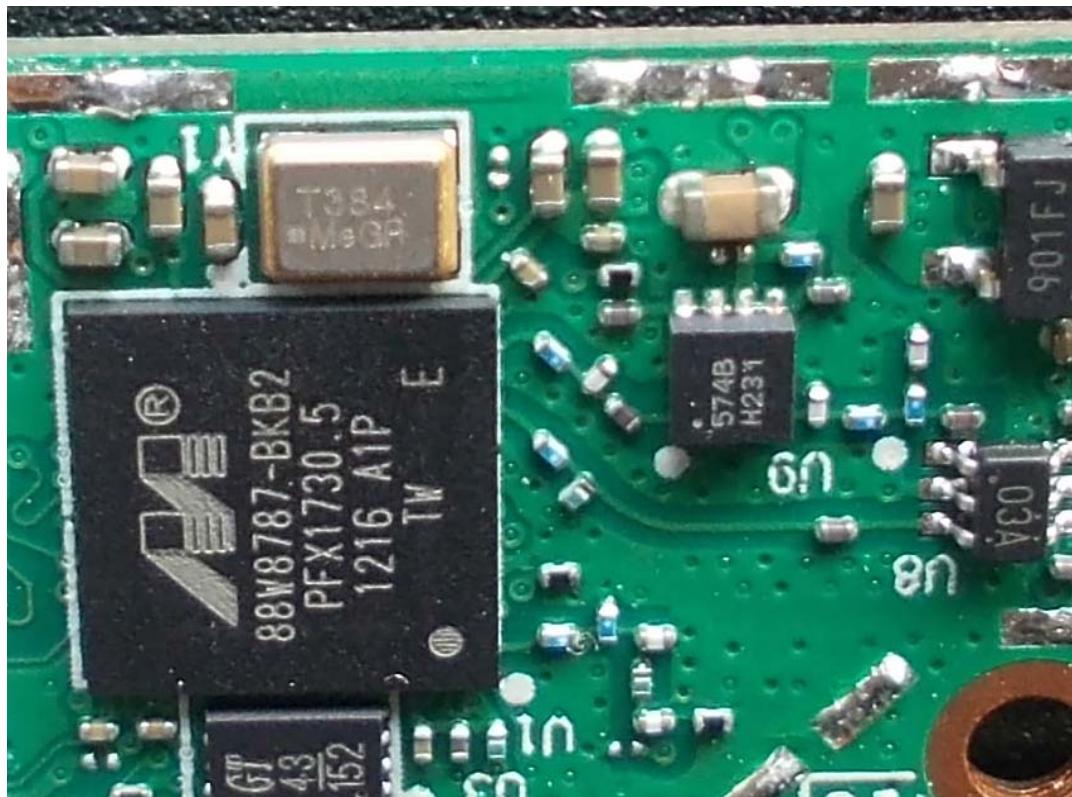


FIGURE 17
LCD MONITOR (M/N: E1948TX)
ADAPTER (GENERAL APPEARANCE)



FIGURE 18
LCD MONITOR (M/N: E1948TX)
ADAPTER (GENERAL APPEARANCE – LABEL)

