FCC Test Report

Product Name ： GMX Dolby Transmitter
Model No. ： SMPRFZ-003
FCC ID. ： Y22-SK20130005

Applicant ： Skullcandy
Address ： 1441 W. Ute Blvd Suite 250, Park City, UT 84098,United States

Date of Receipt ： 2013/02/20
Issued Date ： 2013/03/14
Report No. ： 132251R-RFUSP42V01
Report Version ： V1.0

Test Report Certification

Issued Date : 2013/03/14
Report No. : 132251R-RFUSP42V01

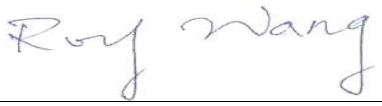
QuieTek

Product Name	:	GMX Dolby Transmitter
Applicant	:	Skullcandy
Address	:	1441 W. Ute Blvd Suite 250, Park City, UT 84098,United States
Manufacturer	:	Merry Electronics (Shenzhen) Co., Ltd.
Model No.	:	SMPRFZ-003
FCC ID.	:	Y22-SK20130005
EUT Voltage	:	DC 5V (Power by PC)
Trade Name	:	SKULLCANDY
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart C Section 15.247: 2011
Test Result	:	Complied

The test results relate only to the samples tested.
The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.

Documented By : 
(Carol Tsai / Engineering Adm. Specialist)

Reviewed By : 
(Quale Tang / Engineer)

Approved By : 
(Roy Wang / Manager)

Laboratory Information

We, **QuieTek Corporation**, are an independent RF consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025 specified testing scopes:

Taiwan R.O.C.	**:**	**TAF, Accreditation Number: 1313**
Germany	**:**	**TUV Rheinland, Certificate No.: 10011438-2-2010**
USA	**:**	**FCC, Registration Number: 365520**
Canada	**:**	**IC, Submission No: 150981**

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site:http://www.quietek.com/tw/ctg/cts/accreditations.htm
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/
If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

HsinChu Testing Laboratory:
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TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail : service@quietek.com

LinKou Testing Laboratory:
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TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789 E-Mail : service@quietek.com

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TEL : +86-512-6251-5088 / FAX : +86-512-6251-5098 E-Mail : service@quietek.com

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1. General Information

1.1. EUT Description

Product Name	GMX Dolby Transmitter
Model No.	SMPRFZ-003
Trade Name	SKULLCANDY
Frequency Range	2403.35-2477.35MHz
Type of Modulation	pi/4 - DQPSK
Antenna Type	PCB Antenna
Antenna Gain	0dBi
Number of Channels	38
Channel Control	Full Duplex, Bi-directional

Component	
USB Power Cable	Shielded, 1m
USB Charging Cable	Shielded, 0.5m
XBox Live Cable	Non-Shielded, 1.5m
Optical Cable	1m

Working Frequency of Each Channel					
Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 01	2403.35 MHz	Channel 14	2429.35 MHz	Channel 27	2455.35 MHz
Channel 02	2405.35 MHz	Channel 15	2431.35 MHz	Channel 28	2457.35 MHz
Channel 03	2407.35 MHz	Channel 16	2433.35 MHz	Channel 29	2459.35 MHz
Channel 04	2409.35 MHz	Channel 17	2435.35 MHz	Channel 30	2461.35 MHz
Channel 05	2411.35 MHz	Channel 18	2437.35 MHz	Channel 31	2463.35 MHz
Channel 06	2413.35 MHz	Channel 19	2439.35 MHz	Channel 32	2465.35 MHz
Channel 07	2415.35 MHz	Channel 20	2441.35 MHz	Channel 33	2467.35 MHz
Channel 08	2417.35 MHz	Channel 21	2443.35 MHz	Channel 34	2469.35 MHz
Channel 09	2419.35 MHz	Channel 22	2445.35 MHz	Channel 35	2471.35 MHz
Channel 10	2421.35 MHz	Channel 23	2447.35 MHz	Channel 36	2473.35 MHz
Channel 11	2423.35 MHz	Channel 24	2449.35 MHz	Channel 37	2475.35 MHz
Channel 12	2425.35 MHz	Channel 25	2451.35 MHz	Channel 38	2477.35 MHz
Channel 13	2427.35 MHz	Channel 26	2453.35 MHz		

Note:

1. This device is a GMX Dolby Transmitter included a 2.4GHz transmitting function, and 2.4GHz receiving function.
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with Part 15 Subpart C Paragraph 15.247.
3. Regards to the frequency band operation; the lowest、middle and highest frequency of channel were selected to perform the test, and then shown on this report.
4. This device is a composite device in accordance with Part 15 regulations. The receiving function receiving was tested and its test report number is 132251R-RFUSP37V02 under Declaration of Conformity.

1.3. Test Mode

QuieTek has verified the construction and function in typical operation. The preliminary tests were performed in different data rate, and to find the worst condition, which was shown in this test report. The following table is the final test mode.

TX	Mode 1: Transmit (Ant 301) Mode 2: Transmit (Ant 302)

Test Items	Channel	Result
Conducted Emission	1/ 20/ 38	Complies
Peak Power Output	1/ 20/ 38	Complies
Radiated Emission (Under 1GHz)	20	Complies
Radiated Emission (Above 1GHz)	1/ 20/ 38	Complies
RF antenna conducted test	1/ 38	Complies
Radiated Emission Band Edge	1/ 38	Complies
Occupied Bandwidth	1/ 20/ 38	Complies
Power Density	1/ 20/ 38	Complies

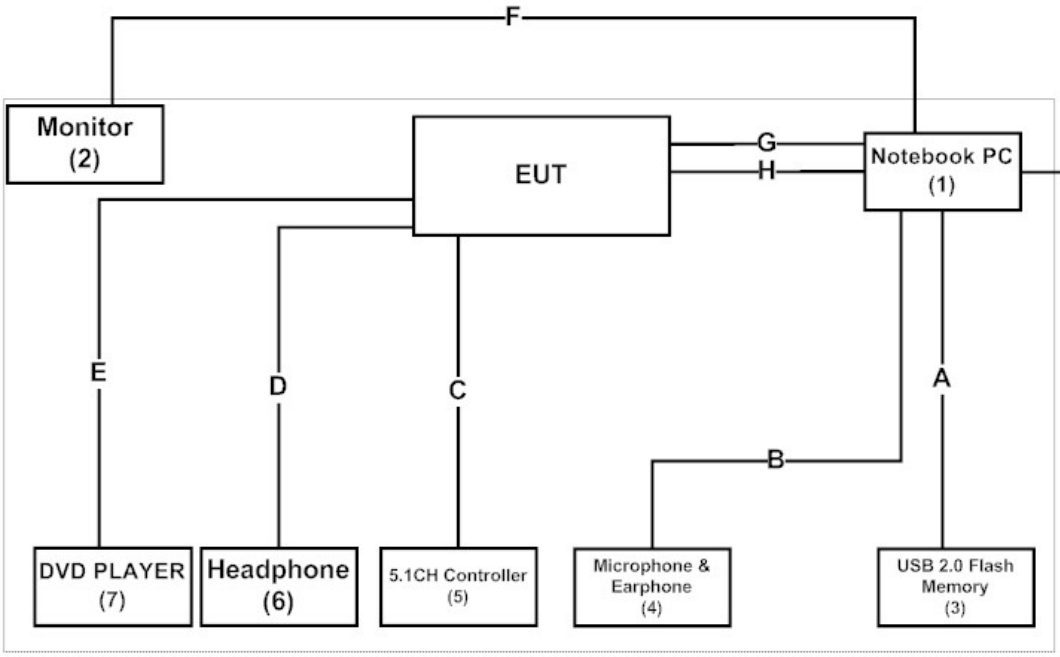
1.4. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1	Notebook PC	HP	HSTNN-146C	CNU8253S1X	DoC	Non-Shielded, 1.8m
2	Monitor	CHI MEI	A170E1-09	3UC120955RA0033	DoC	Non-Shielded, 1.8m
3	USB 2.0 Flash Memory	Apacer	AH223	N/A	DoC	--
4	Microphone & Earphone	Fujiei	SBZ-38	N/A	DoC	--
5	5.1CH Controller	Logitech	Z-5500	N/A	DoC	--
6	Headphone	Merry Electronics	SMPLFY	N/A	DoC	--
7	DVD PLAYER	Pioneer	DV-600AV	GFKD002112LS	DoC	Non-Shielded, 1.8m

1.5. Configuration of tested System

Connection Diagram



Signal Cable Type		Signal cable Description
A	USB 2.0 Flash Memory Cable	Shielded, 1m
B	Microphone & Earphone Cable	Non-Shielded, 1.2m
C	Optical Fiber Cable	1m
D	USB Cable	Shielded, 1m
E	Optical Fiber Cable	1m
F	VGA Cable	Shielded, 1.5m
G	USB Charging Cable	Shielded, 0.5m
H	USB Power Cable	Shielded, 1m
I	LAN Cable	Non-Shielded, 3m

1.6. EUT Exercise Software

1	Setup the EUT as shown in Section 1.5.
2	Execute the VMI Dev V1.1.6.38 on the EUT.
3	Configure the test mode, and the test channel
4	Press “Start TX” to start the continuous transmitting.
5	Verify that the EUT works properly.

1.7. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Required (IEC 68-1)	Actual
Temperature (°C)	FCC PART 15 C 15.207 Conducted Emission	15 - 35	20
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Peak Power Output	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Radiated Emission	15 - 35	25
Humidity (%RH)		25 - 75	65
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 RF antenna conducted test (DSSS)	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Band Edge (DSSS)	15 - 35	25
Humidity (%RH)		25 - 75	48
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Occupied Bandwidth (DSSS)	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Power Density (DSSS)	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000

2. Conducted Emission

2.1. Test Equipment

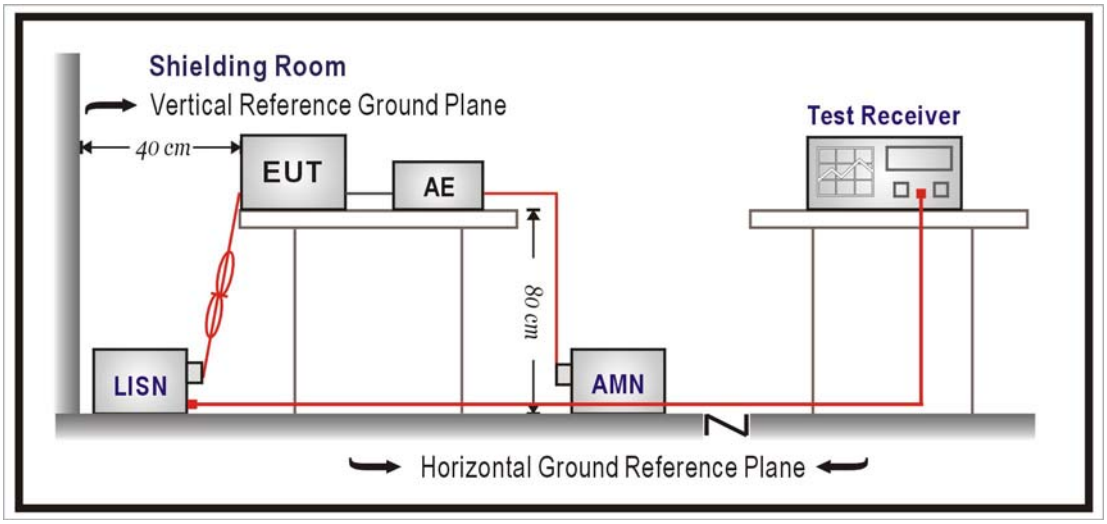
The following test equipments are used during the test:

Conducted Emission / SR3

Instrument	Manufacturer	Model No.	Serial No	Next Cal.
LISN	R&S	ENV216	100096	2013/08/12
LISN	R&S	ESH3-Z5	836679/022	2014/01/20
Test Receiver	R&S	ESCS 30	825442/017	2014/01/01

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 Limits (dBuV)		
Frequency MHz	QP	AV
0.15 - 0.50	66-56	56-46
0.50 - 5.0	56	46
5.0 - 30	60	50

Remarks: In the above table, the tighter limit applies at the band edges.

2.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs.)
Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

2.5. Test Specification

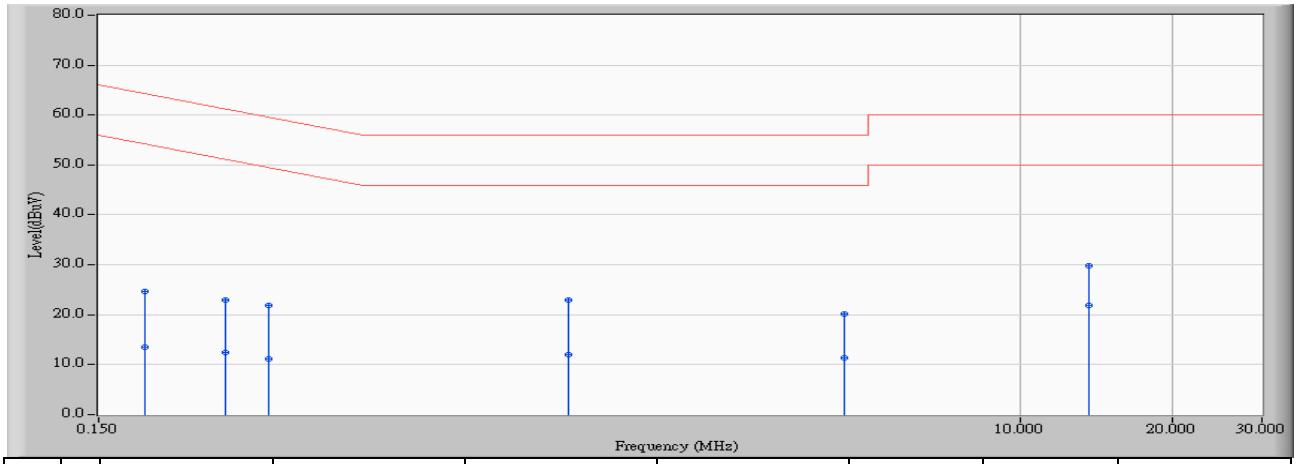
According to FCC Part 15 Subpart C Paragraph 15.207: 2011

2.6. Uncertainty

The measurement uncertainty is defined as ± 2.26 dB.

2.7. Test Result

Site : SR3	Time : 2013/03/12 - 19:02
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR3_LISN(16A)-2_0813 - Line1	Power : DC 5V (Power by PC)
Power : GMX Dolby Transmitter	Note : Mode 1: Transmit (Ant 301)

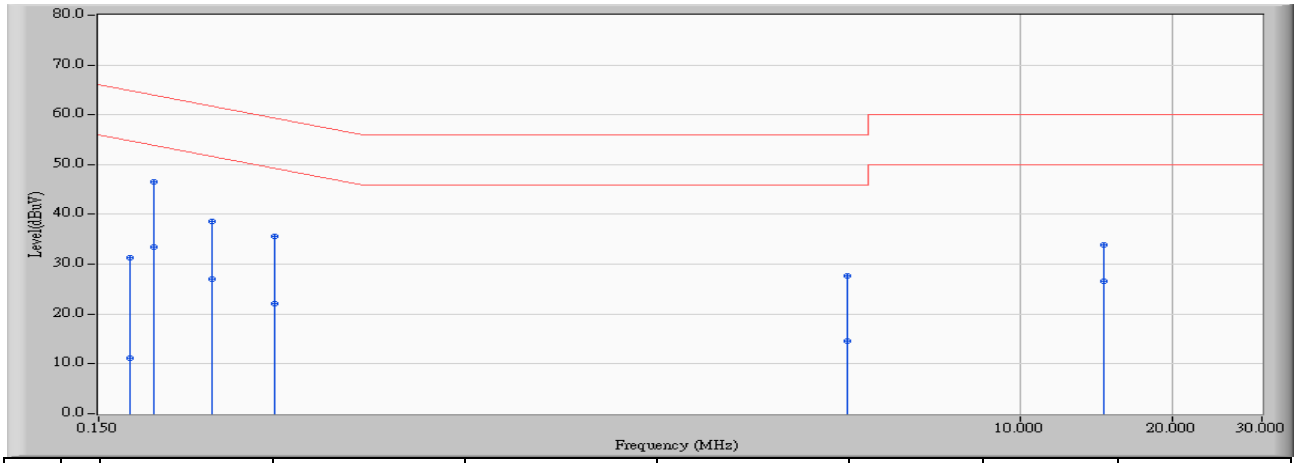


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.185	9.710	14.980	24.690	-39.561	64.251	QUASIPEAK
2		0.185	9.710	3.780	13.490	-40.761	54.251	AVERAGE
3		0.267	9.696	13.210	22.906	-38.298	61.205	QUASIPEAK
4		0.267	9.696	2.850	12.546	-38.658	51.205	AVERAGE
5		0.326	9.730	12.250	21.980	-37.578	59.558	QUASIPEAK
6		0.326	9.730	1.380	11.110	-38.448	49.558	AVERAGE
7		1.271	9.945	12.900	22.845	-33.155	56.000	QUASIPEAK
8		1.271	9.945	2.140	12.085	-33.915	46.000	AVERAGE
9		4.490	10.093	10.060	20.153	-35.847	56.000	QUASIPEAK
10		4.490	10.093	1.300	11.393	-34.607	46.000	AVERAGE
11		13.689	10.125	19.680	29.805	-30.195	60.000	QUASIPEAK
12	*	13.689	10.125	11.740	21.865	-28.135	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR3	**Time : 2013/03/12 - 19:06**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR3_LISN(16A)-2_0813 - Line2	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 1: Transmit (Ant 301)**

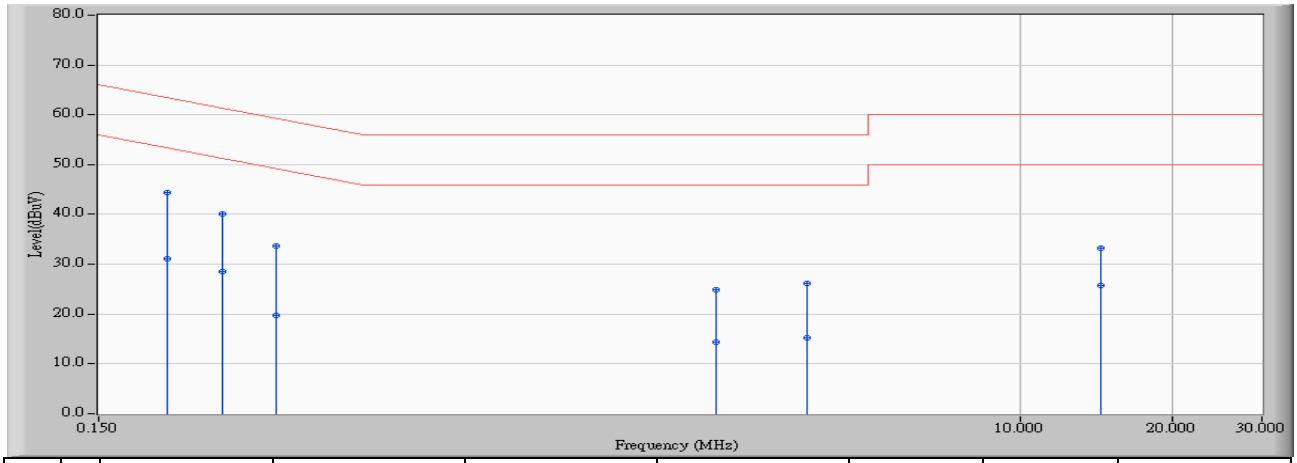


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.173	9.646	21.610	31.256	-33.539	64.794	QUASIPEAK
2		0.173	9.646	1.440	11.086	-43.709	54.794	AVERAGE
3	*	0.193	9.655	36.860	46.515	-17.393	63.908	QUASIPEAK
4		0.193	9.655	23.710	33.365	-20.543	53.908	AVERAGE
5		0.252	9.685	29.010	38.695	-23.010	61.705	QUASIPEAK
6		0.252	9.685	17.440	27.125	-24.580	51.705	AVERAGE
7		0.334	9.727	25.810	35.538	-23.824	59.361	QUASIPEAK
8		0.334	9.727	12.430	22.158	-27.204	49.361	AVERAGE
9		4.529	10.052	17.610	27.662	-28.338	56.000	QUASIPEAK
10		4.529	10.052	4.490	14.542	-31.458	46.000	AVERAGE
11		14.588	10.205	23.630	33.835	-26.165	60.000	QUASIPEAK
12		14.588	10.205	16.410	26.615	-23.385	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR3	**Time : 2013/03/12 - 19:11**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR3_LISN(16A)-2_0813 - Line1	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 2: Transmit (Ant 302)**

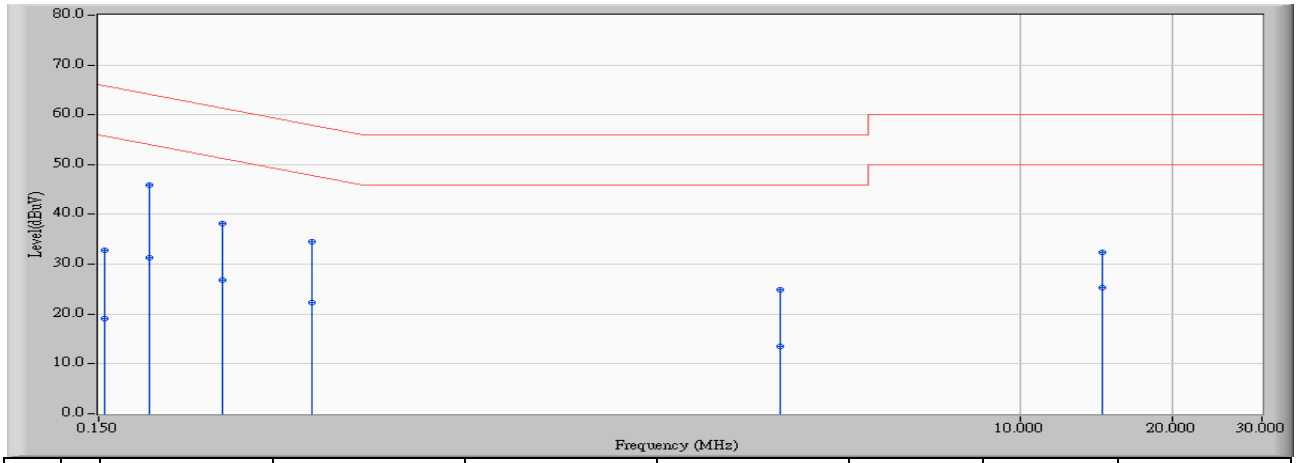


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.205	9.682	34.800	44.482	-18.936	63.418	QUASIPEAK
2		0.205	9.682	21.510	31.192	-22.226	53.418	AVERAGE
3		0.263	9.694	30.470	40.164	-21.163	61.327	QUASIPEAK
4		0.263	9.694	18.770	28.464	-22.863	51.327	AVERAGE
5		0.338	9.737	23.870	33.607	-25.658	59.265	QUASIPEAK
6		0.338	9.737	9.920	19.657	-29.608	49.265	AVERAGE
7		2.490	9.988	14.840	24.829	-31.171	56.000	QUASIPEAK
8		2.490	9.988	4.340	14.329	-31.671	46.000	AVERAGE
9		3.771	10.063	16.040	26.103	-29.897	56.000	QUASIPEAK
10		3.771	10.063	5.210	15.273	-30.727	46.000	AVERAGE
11		14.365	10.127	23.100	33.227	-26.773	60.000	QUASIPEAK
12		14.365	10.127	15.610	25.737	-24.263	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR3	**Time : 2013/03/12 - 19:15**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR3_LISN(16A)-2_0813 - Line2	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 2: Transmit (Ant 302)**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.154	9.639	23.140	32.779	-33.008	65.786	QUASIPEAK
2		0.154	9.639	9.490	19.129	-36.658	55.786	AVERAGE
3	*	0.189	9.653	36.280	45.933	-18.145	64.078	QUASIPEAK
4		0.189	9.653	21.620	31.273	-22.805	54.078	AVERAGE
5		0.263	9.691	28.470	38.161	-23.166	61.327	QUASIPEAK
6		0.263	9.691	17.060	26.751	-24.576	51.327	AVERAGE
7		0.396	9.760	24.700	34.460	-23.475	57.935	QUASIPEAK
8		0.396	9.760	12.630	22.390	-25.545	47.935	AVERAGE
9		3.349	9.999	14.810	24.808	-31.192	56.000	QUASIPEAK
10		3.349	9.999	3.610	13.608	-32.392	46.000	AVERAGE
11		14.525	10.204	22.110	32.314	-27.686	60.000	QUASIPEAK
12		14.525	10.204	15.180	25.384	-24.616	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

3. Peak Power Output

3.1. Test Equipment

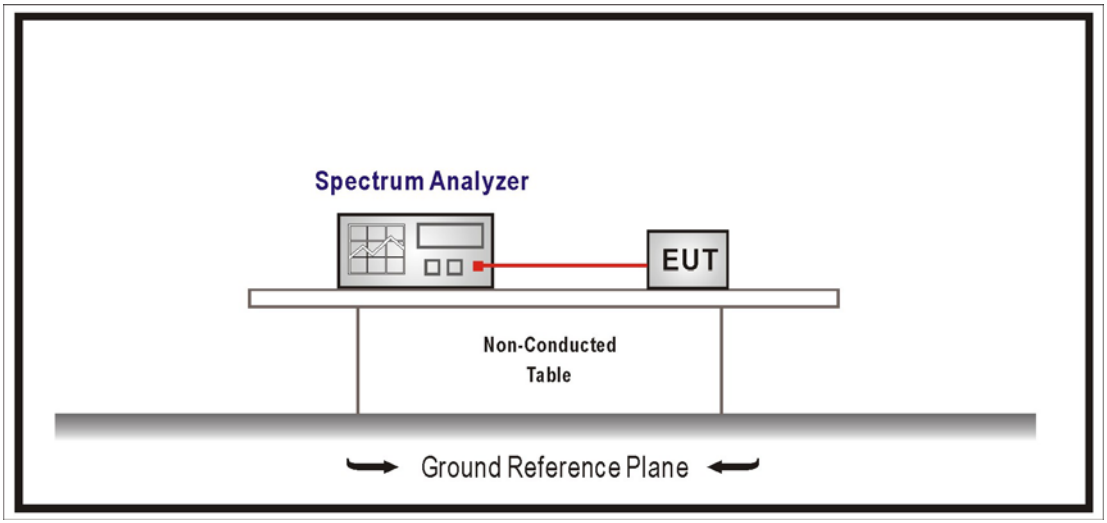
The following test equipments are used during the test:

Peak Power Output / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
EXA Signal Analyzer	Agilent	N9010A-EXA	US47140172	2013/07/31

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

3.2. Test Setup



3.3. Test procedures

The EUT was tested according to DTS test procedure of Jan. 2012 KDB558074, Section 5.2.1.2 Measurement Procedure PK2 for compliance to FCC 47CFR 15.247 requirements.

3.4. Limits

The maximum peak power shall be less 1 Watt.

3.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2011

3.6. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB.

3.7. Test Result

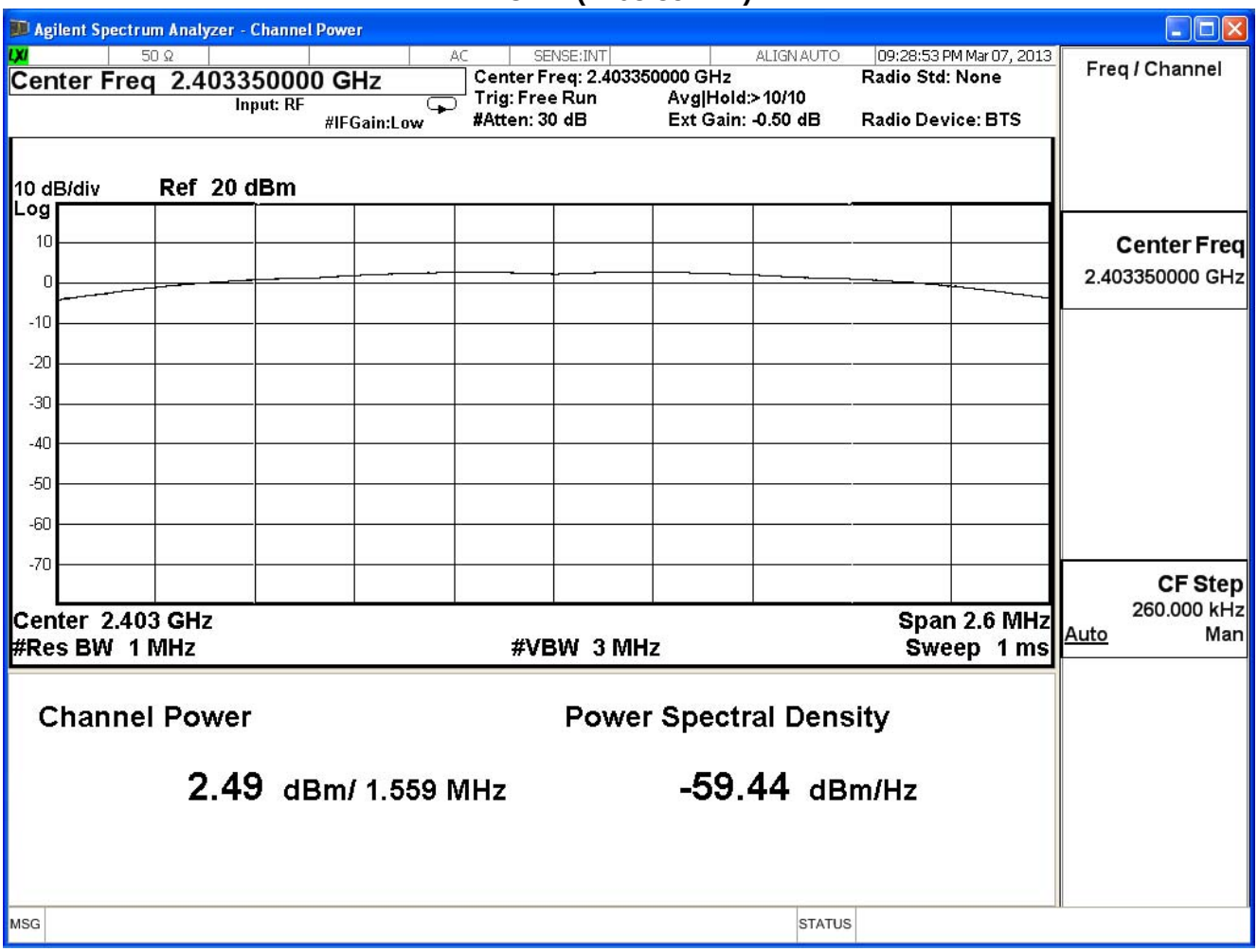
Product	GMX Dolby Transmitter		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit (Ant 301)		
Date of Test	2013/03/07	Test Site	SR7

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2403.35	2.490	1Watt= 30 dBm	Pass
20	2441.35	2.580	1Watt= 30 dBm	Pass
38	2477.35	2.290	1Watt= 30 dBm	Pass

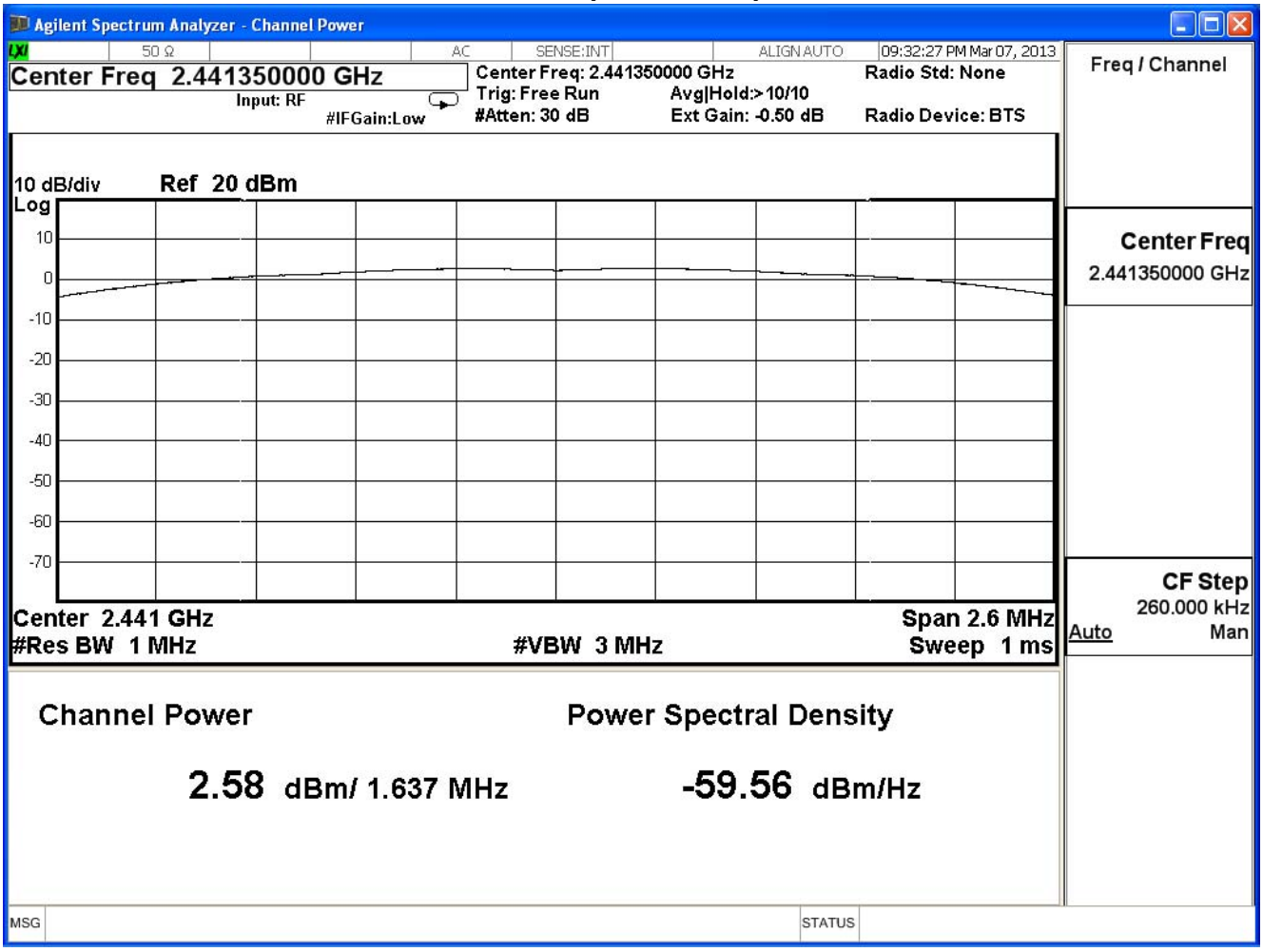
The worst emission of data rate is 6Mbps.

Peak Power Output Value (dBm)									
Channel No.	Frequency (MHz)	Data Rate							Required Limit
		6	12	18	24	36	48	54	
1	2412	2.49	--	--	--	--	--	--	30
6	2437	2.58	2.57	2.56	2.54	2.53	2.51	2.50	30
11	2462	2.29	--	--	--	--	--	--	30

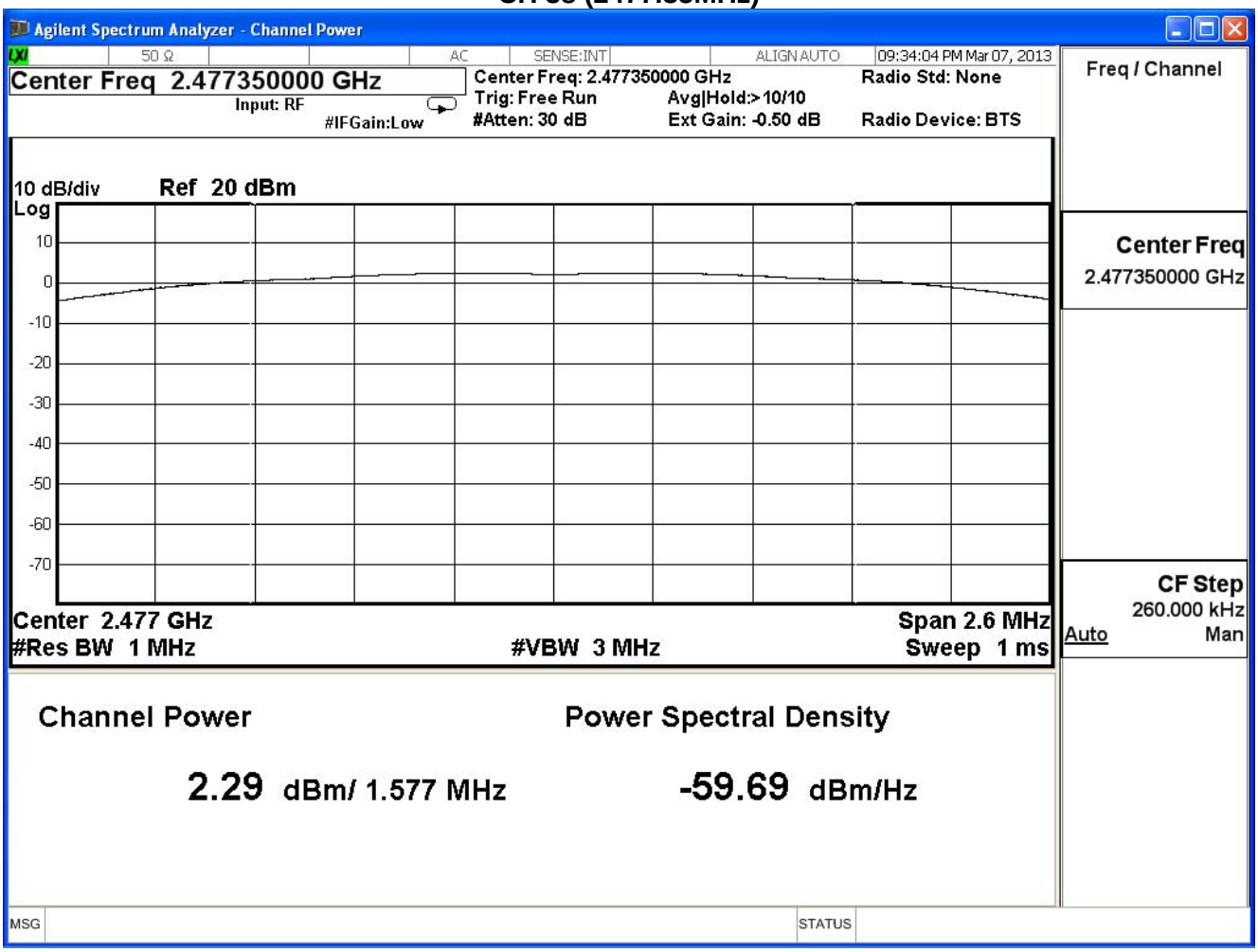
CH 1 (2403.35MHz)



CH 20 (2441.35MHz)



CH 38 (2477.35MHz)



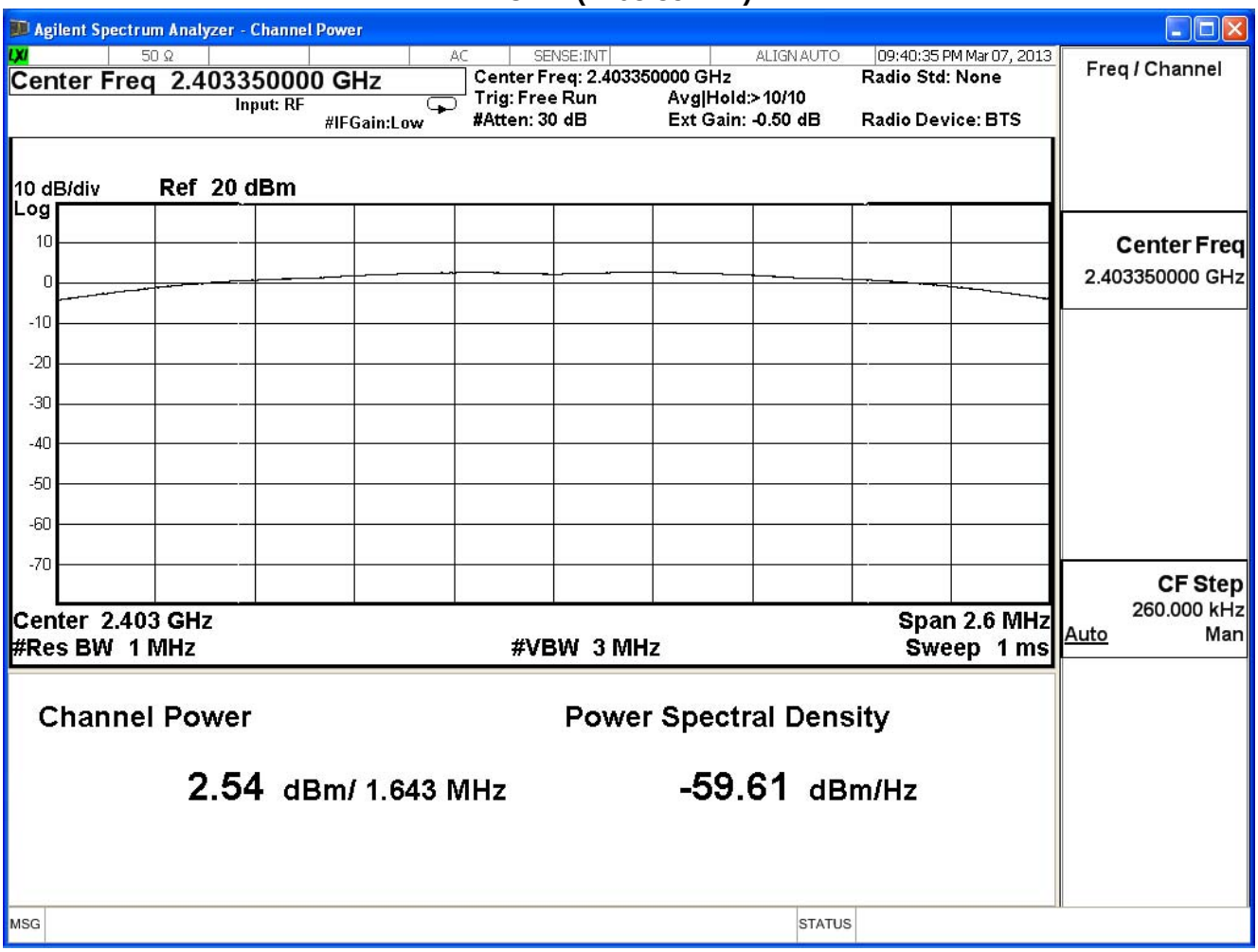
Product	GMX Dolby Transmitter		
Test Item	Peak Power Output		
Test Mode	Mode 2: Transmit (Ant 302)		
Date of Test	2013/03/07	Test Site	SR7

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2403.35	2.540	1Watt= 30 dBm	Pass
20	2441.35	2.700	1Watt= 30 dBm	Pass
38	2477.35	2.740	1Watt= 30 dBm	Pass

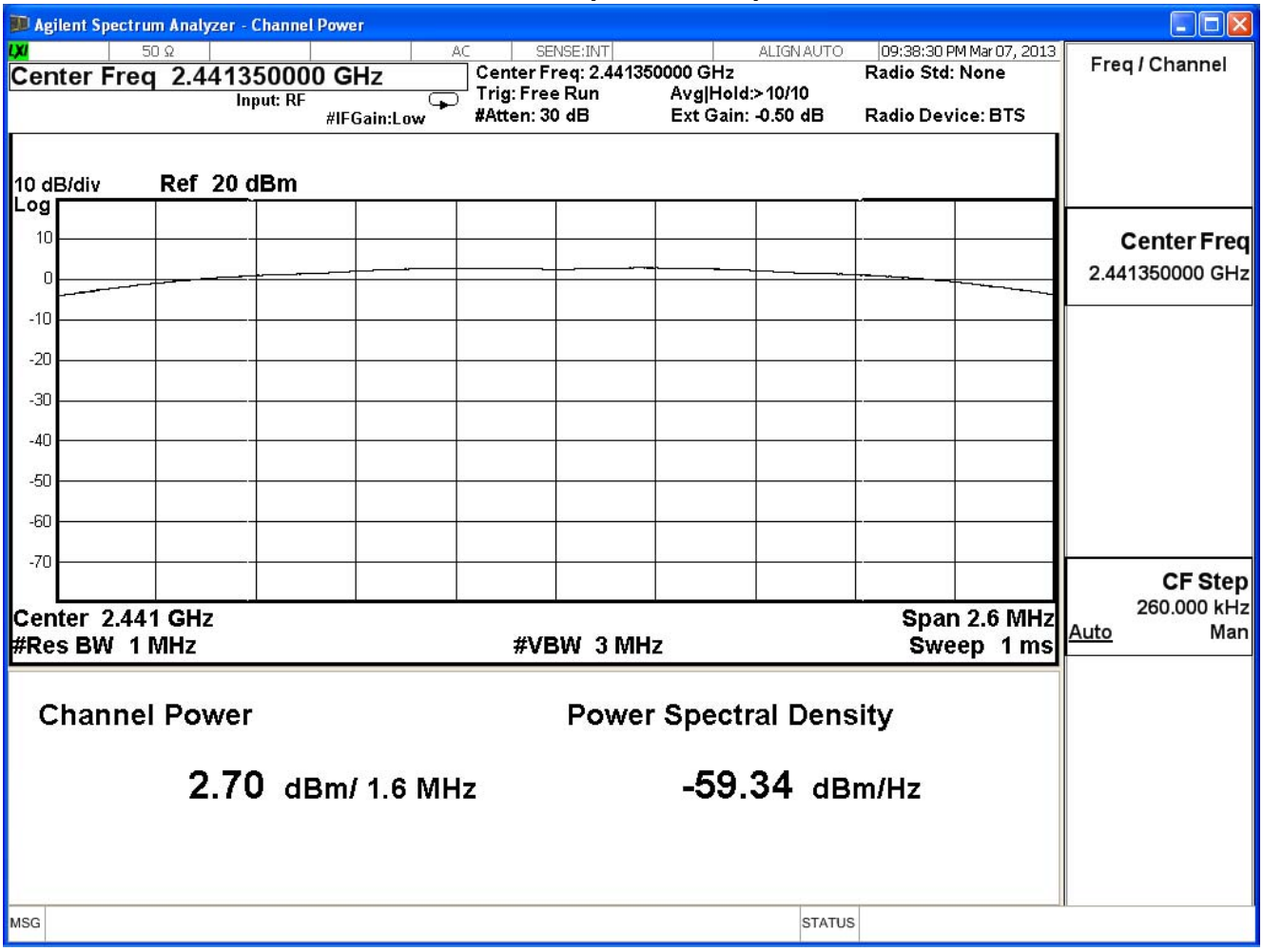
The worst emission of data rate is 6Mbps.

Peak Power Output Value (dBm)									
Channel No.	Frequency (MHz)	Data Rate							Required Limit
		6	12	18	24	36	48	54	
1	2412	2.54	--	--	--	--	--	--	30
6	2437	2.70	2.69	2.68	2.67	2.66	2.64	2.65	30
11	2462	2.74	--	--	--	--	--	--	30

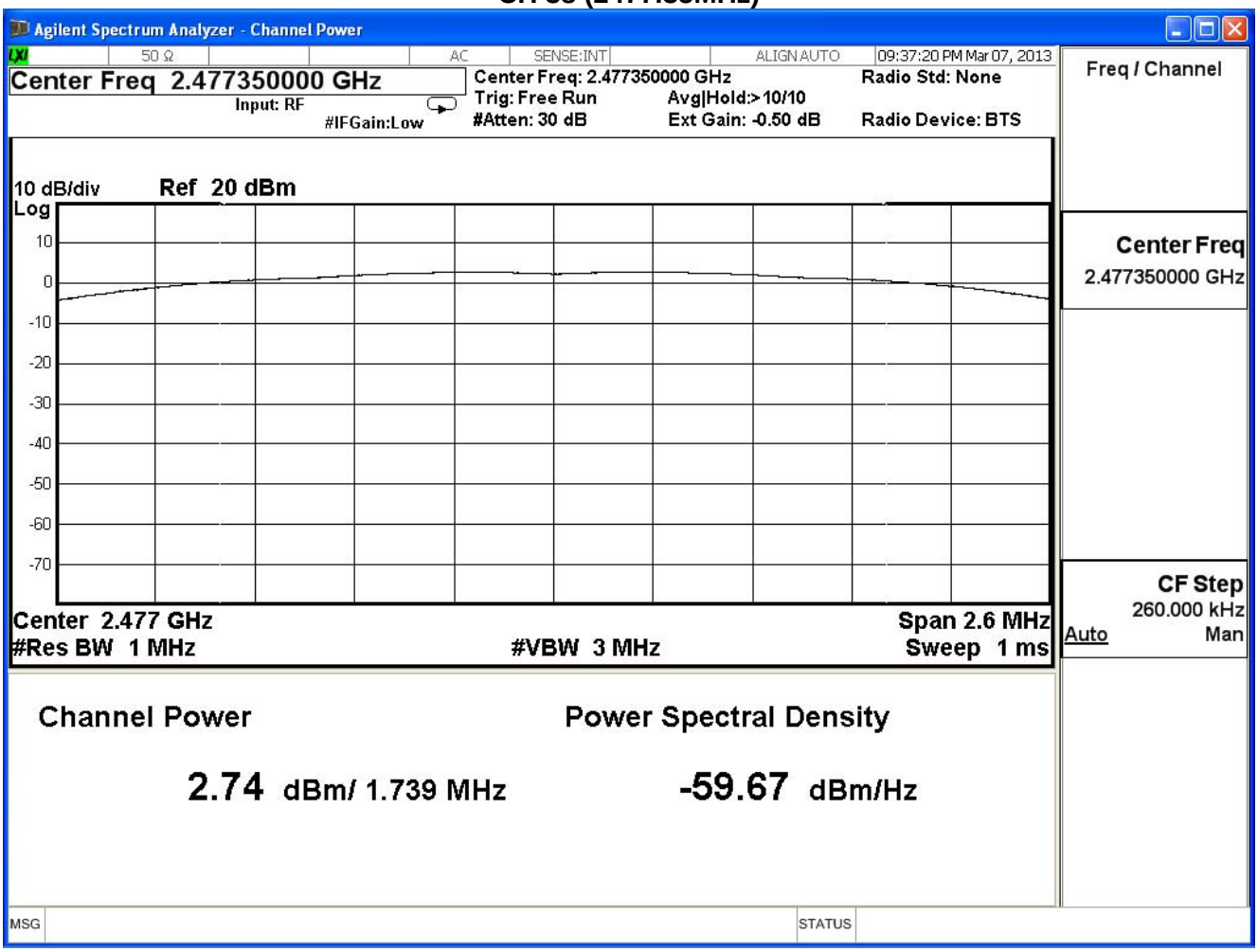
CH 1 (2403.35MHz)



CH 20 (2441.35MHz)



CH 38 (2477.35MHz)



4. Radiated Emission

4.1. Test Equipment

The following test equipments are used during the test:

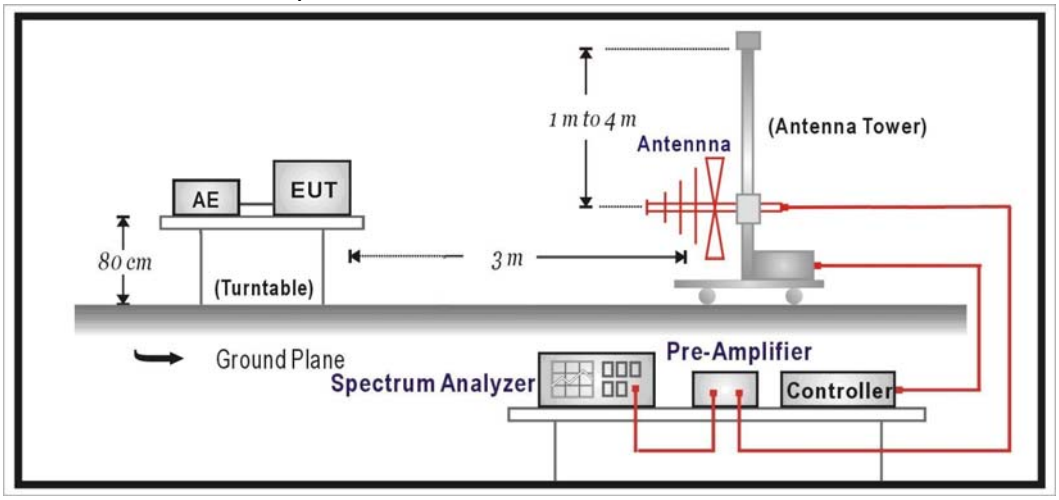
Radiated Emission / CB1

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Bilog Antenna	SCHAFFNER	CBL6112B	2895	2013/08/14
Double Ridged Guide Horn Antenna	Schwarzback	BBHA 9120	D743	2014/02/17
Pre-Amplifier	MITEQ	AMF-4D-005180-24-10P	888003	2013/12/02
Pre-Amplifier	QuieTek	AP-025C	CHM-0706049	2014/02/19
Spectrum Analyzer	Agilent	E4440A	MY46187335	2014/01/27
k Type Cable	Huber Suhner	Sucoflex 102	25623/2	2014/02/21

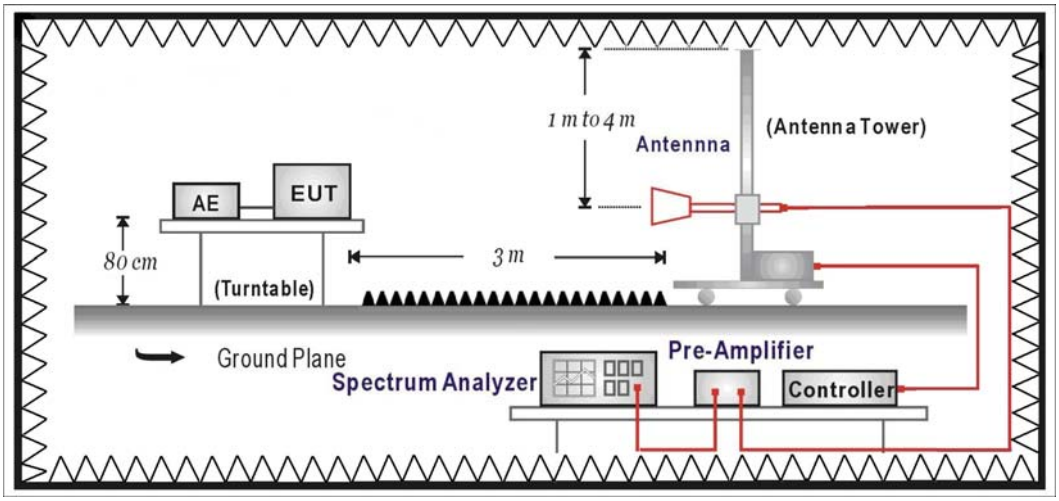
Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

4.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits		
Frequency MHz	dBuV/m	dBuV/m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Remarks: E field strength (dBuV/m) = 20 log E field strength (uV/m)

4.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level.
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4: 2009 on radiated measurement.
On any frequency or frequencies below or equal to 1000 MHz, the limits shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.
The bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

4.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2011

4.6. Uncertainty

The measurement uncertainty

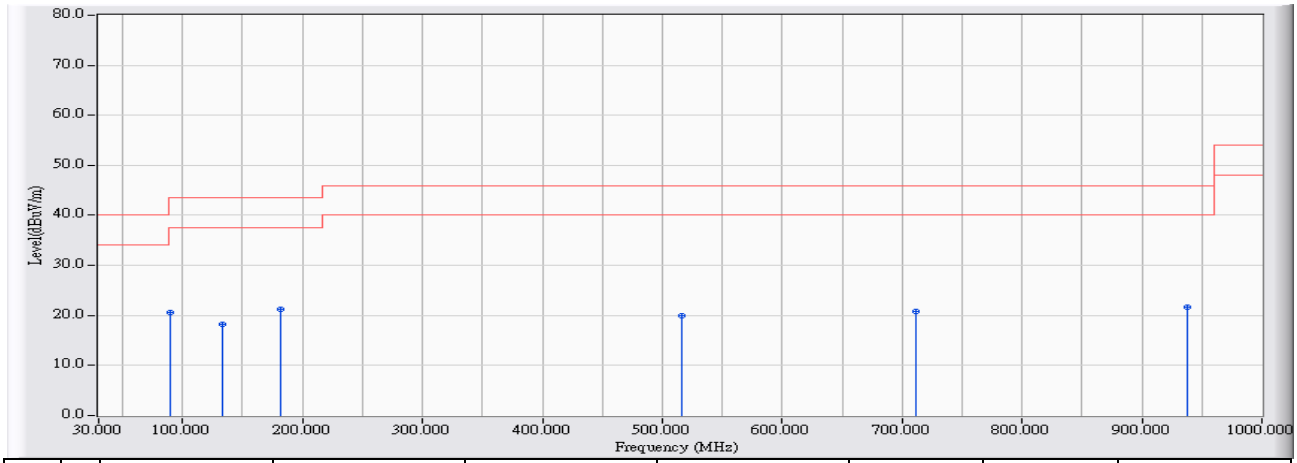
30MHz～1GHz as ±3.43dB

1GHz～26.5Ghz as ±3.65dB

4.7. Test Result

30MHz-1GHz Spurious

Site : CB1	**Time : 2013/03/04 - 11:41**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 1: Transmit (Ant 301)** **2441.35MHz**

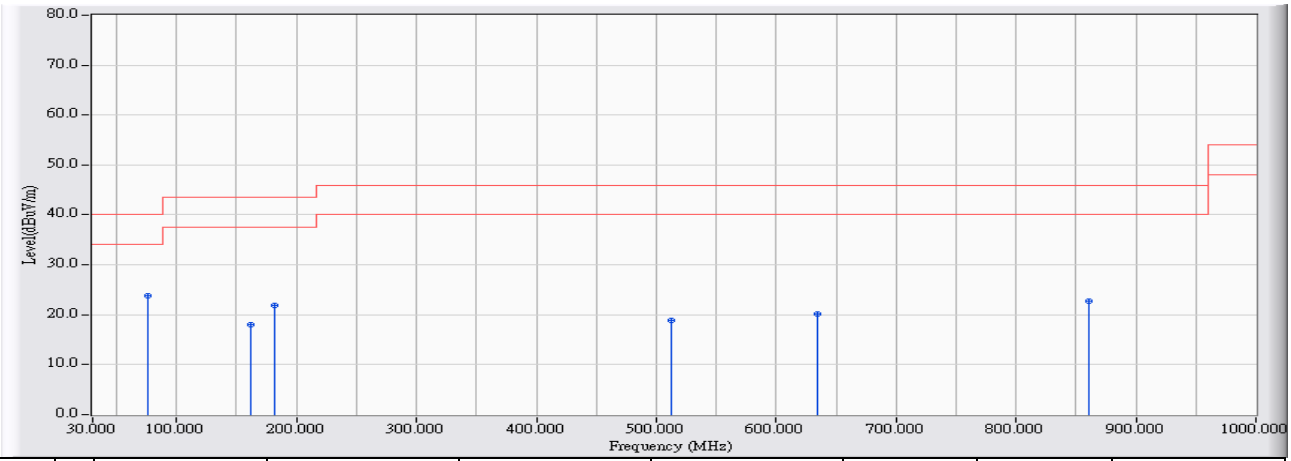


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		90.140	-15.067	35.640	20.573	-22.927	43.500	QUASIPEAK
2		133.790	-12.323	30.454	18.131	-25.369	43.500	QUASIPEAK
3	*	181.320	-14.530	35.827	21.298	-22.202	43.500	QUASIPEAK
4		515.970	-5.050	25.008	19.958	-26.042	46.000	QUASIPEAK
5		711.910	-4.075	24.967	20.893	-25.107	46.000	QUASIPEAK
6		937.920	-2.021	23.669	21.648	-24.352	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/03/04 - 11:47**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 1: Transmit (Ant 301)** **2441.35MHz**

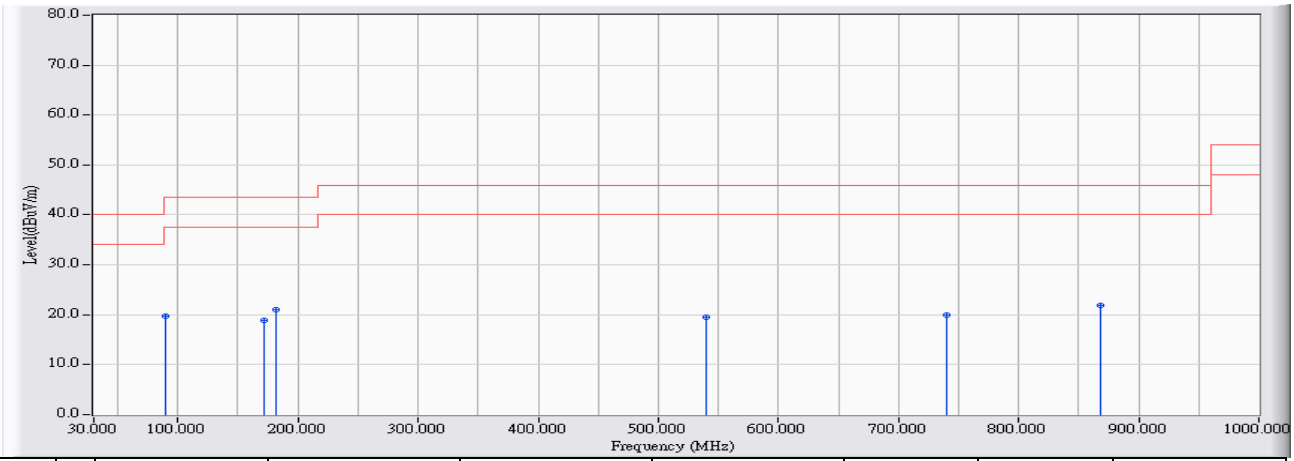


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	75.590	-16.597	40.339	23.742	-16.258	40.000	QUASIPEAK
2		161.920	-13.680	31.732	18.052	-25.448	43.500	QUASIPEAK
3		181.320	-14.530	36.421	21.892	-21.608	43.500	QUASIPEAK
4		512.090	-5.060	23.932	18.872	-27.128	46.000	QUASIPEAK
5		634.310	-4.657	24.847	20.190	-25.810	46.000	QUASIPEAK
6		860.320	-2.664	25.293	22.629	-23.371	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. “ * ”, means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/03/12 - 14:14**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 2: Transmit (Ant 302)** **2441.35MHz**

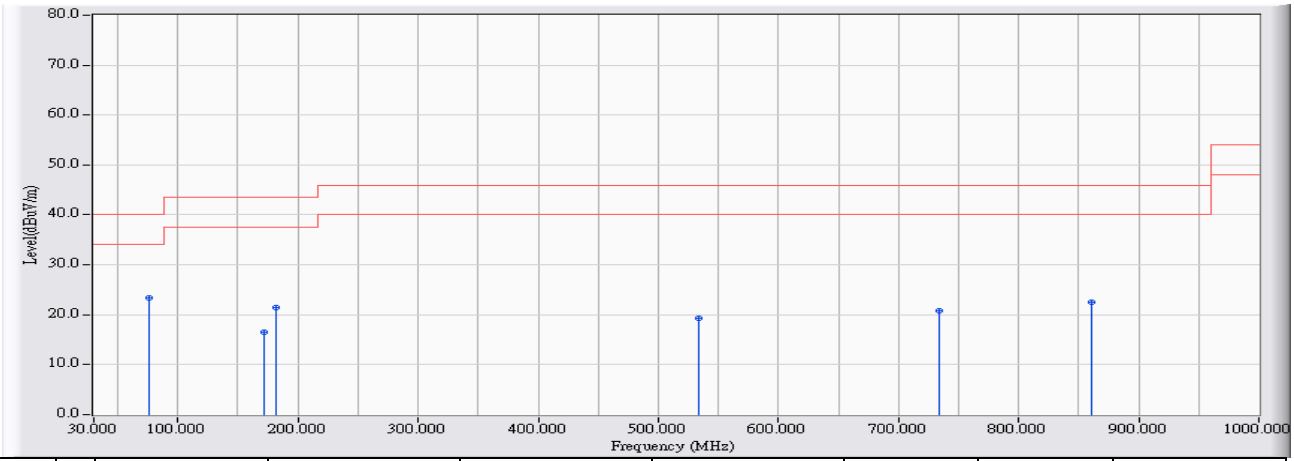


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		90.132	-15.067	34.808	19.741	-23.759	43.500	QUASIPEAK
2		171.620	-14.131	32.922	18.791	-24.709	43.500	QUASIPEAK
3	*	181.323	-14.530	35.644	21.114	-22.386	43.500	QUASIPEAK
4		540.220	-4.990	24.538	19.548	-26.452	46.000	QUASIPEAK
5		740.040	-3.717	23.693	19.977	-26.023	46.000	QUASIPEAK
6		868.080	-2.624	24.592	21.968	-24.032	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/03/12 - 14:15**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 2: Transmit (Ant 302)** **2441.35MHz**



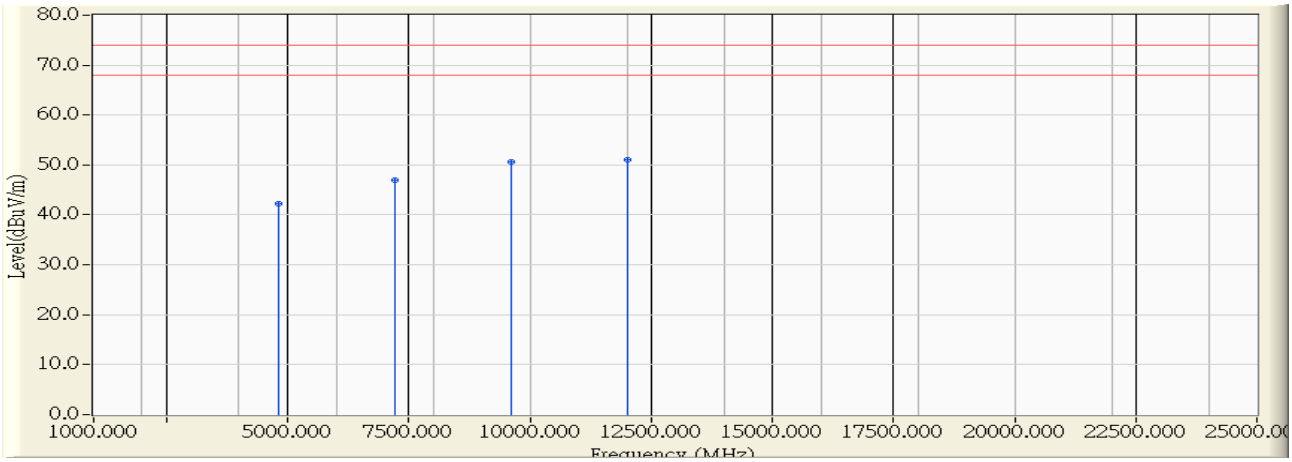
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	75.592	-16.597	39.969	23.372	-16.628	40.000	QUASIPEAK
2		171.620	-14.131	30.712	16.581	-26.919	43.500	QUASIPEAK
3		181.323	-14.530	36.039	21.509	-21.991	43.500	QUASIPEAK
4		533.430	-5.006	24.388	19.381	-26.619	46.000	QUASIPEAK
5		734.220	-3.791	24.588	20.798	-25.202	46.000	QUASIPEAK
6		860.321	-2.664	25.087	22.423	-23.577	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Harmonic & Spurious:

Site : CB1	**Time : 2013/03/01 - 16:42**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 1: Transmit (Ant 301)** **2477.35MHz**

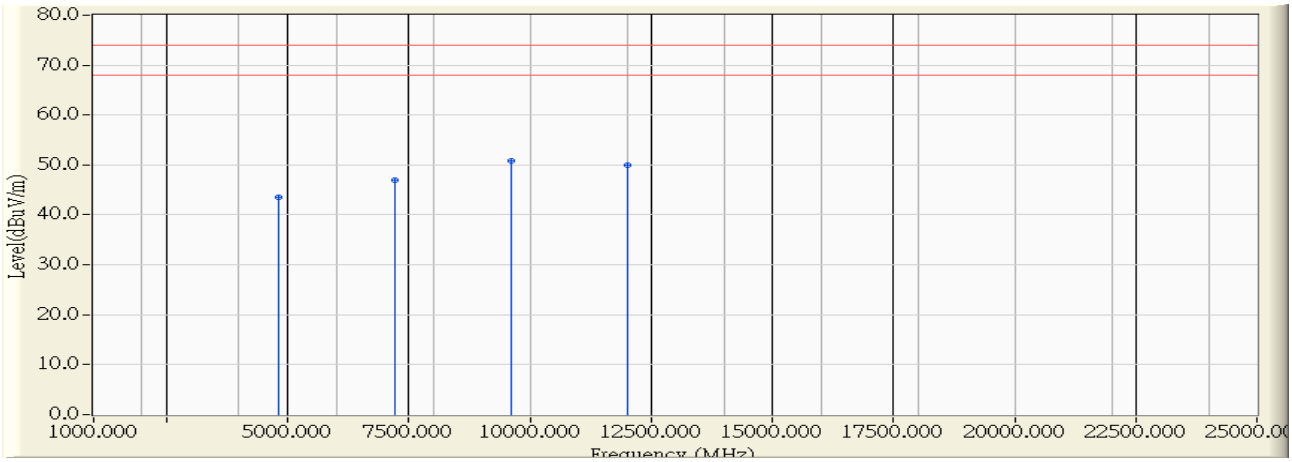


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		4804.060	-0.856	43.110	42.255	-31.745	54.000	74.000	PEAK
2		7209.210	5.431	41.630	47.062	-26.938	54.000	74.000	PEAK
3		9616.080	8.998	41.620	50.619	-23.381	54.000	74.000	PEAK
4	*	12018.590	11.540	39.540	51.080	-22.920	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/03/01 - 16:51**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 1: Transmit (Ant 301)** **2403.35MHz**

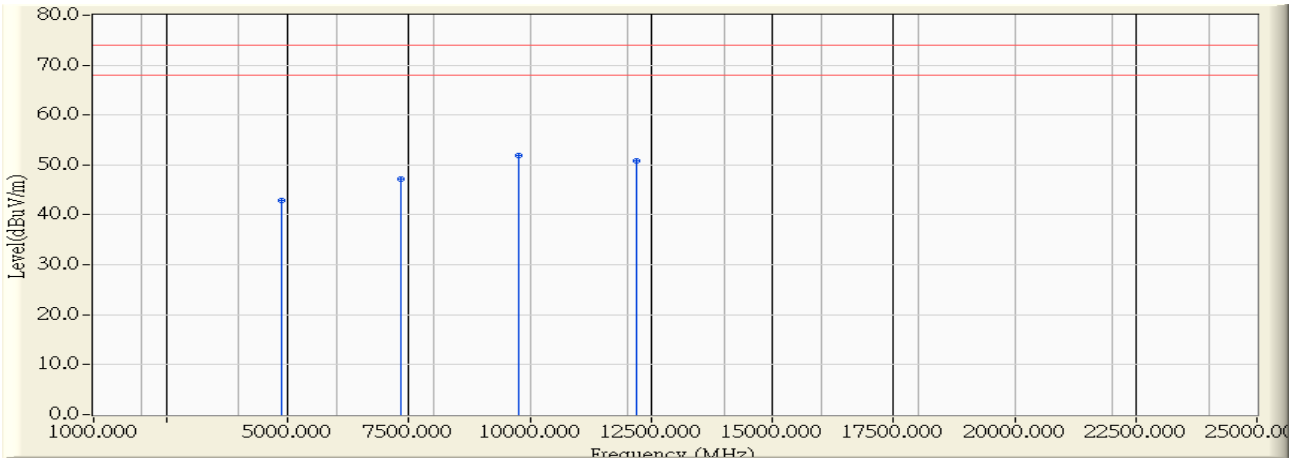


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		4807.260	-0.848	44.420	43.573	-30.427	54.000	74.000	PEAK
2		7210.210	5.434	41.610	47.044	-26.956	54.000	74.000	PEAK
3	*	9614.080	8.985	41.930	50.915	-23.085	54.000	74.000	PEAK
4		12017.670	11.540	38.420	49.960	-24.040	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/03/01 - 17:02**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 1: Transmit (Ant 301)** **2441.35MHz**

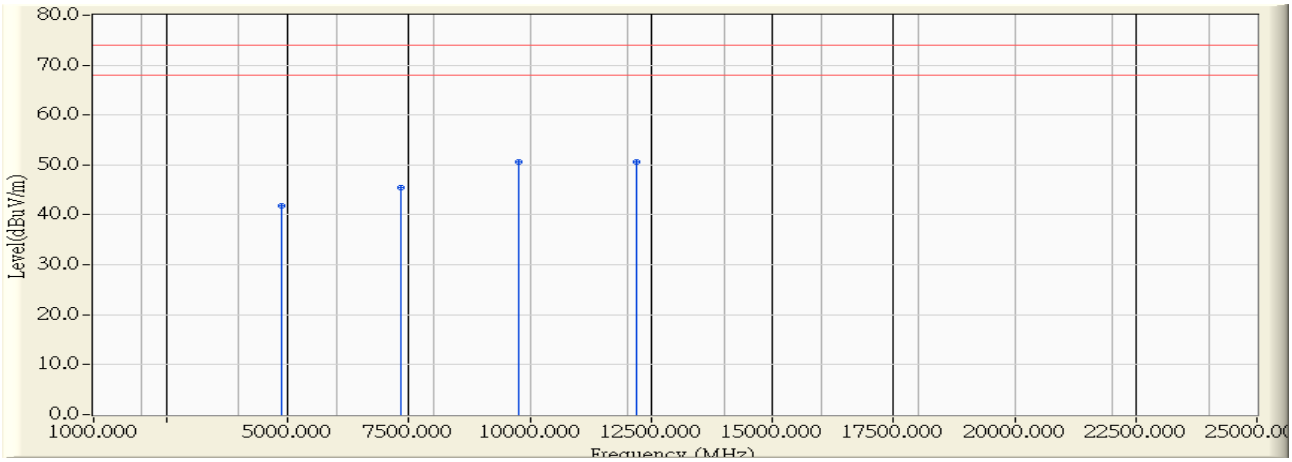


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		4880.020	-0.656	43.510	42.854	-31.146	54.000	74.000	PEAK
2		7324.290	5.710	41.400	47.109	-26.891	54.000	74.000	PEAK
3	*	9766.040	10.086	41.850	51.936	-22.064	54.000	74.000	PEAK
4		12207.070	11.474	39.310	50.783	-23.217	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/03/01 - 17:06**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 1: Transmit (Ant 301)** **2441.35MHz**

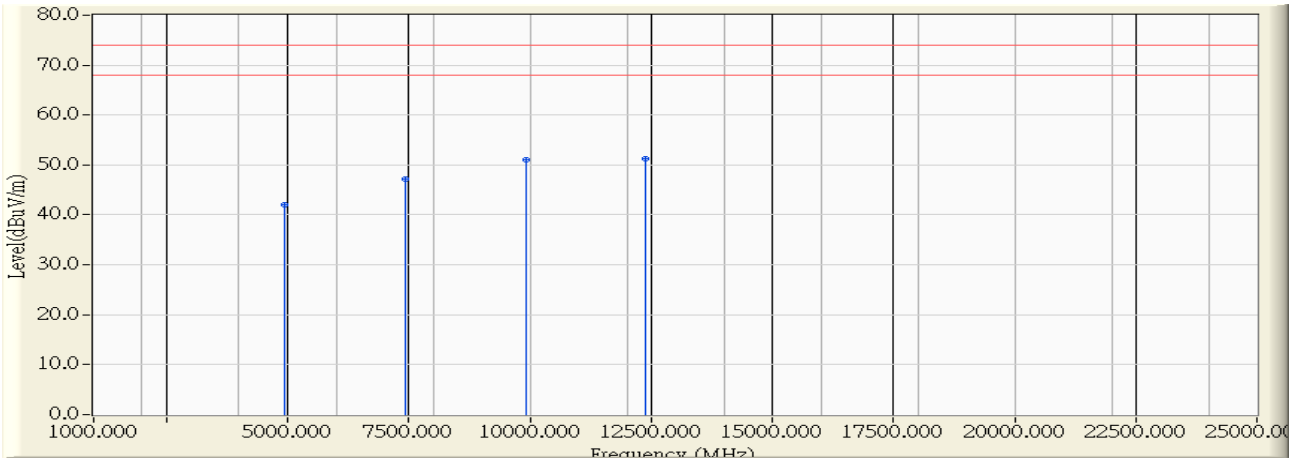


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		4880.420	-0.655	42.560	41.905	-32.095	54.000	74.000	PEAK
2		7323.170	5.706	39.710	45.417	-28.583	54.000	74.000	PEAK
3	*	9767.080	10.093	40.620	50.714	-23.286	54.000	74.000	PEAK
4		12208.150	11.474	39.110	50.583	-23.417	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/03/01 - 17:23**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 1: Transmit (Ant 301)** **2477.35MHz**

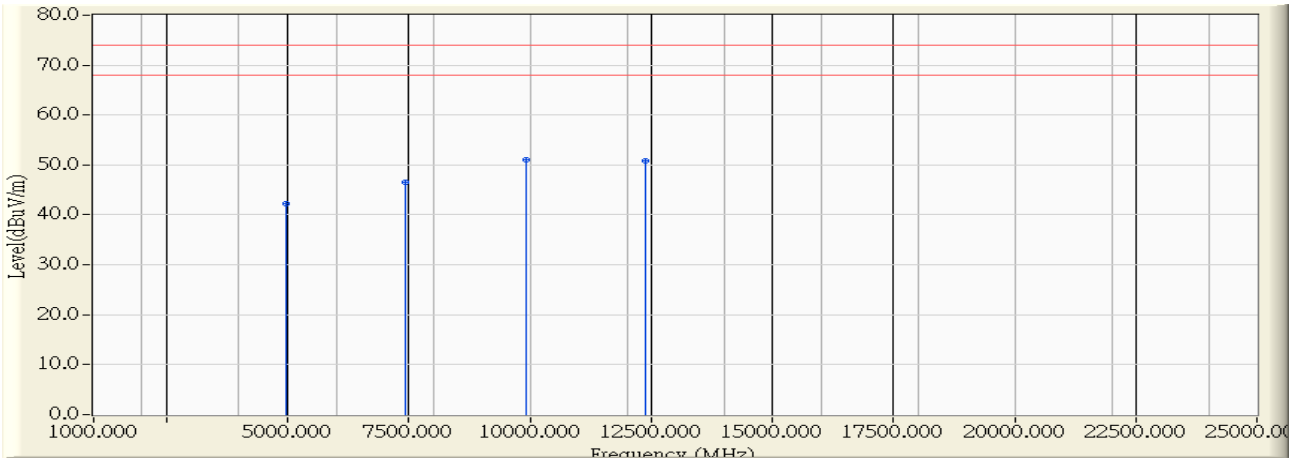


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		4952.140	-0.467	42.540	42.073	-31.927	54.000	74.000	PEAK
2		7432.970	5.971	41.150	47.122	-26.878	54.000	74.000	PEAK
3		9909.840	11.128	40.020	51.148	-22.852	54.000	74.000	PEAK
4	*	12387.230	11.410	39.810	51.220	-22.780	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/03/01 - 17:28**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 1: Transmit (Ant 301)** **2477.35MHz**

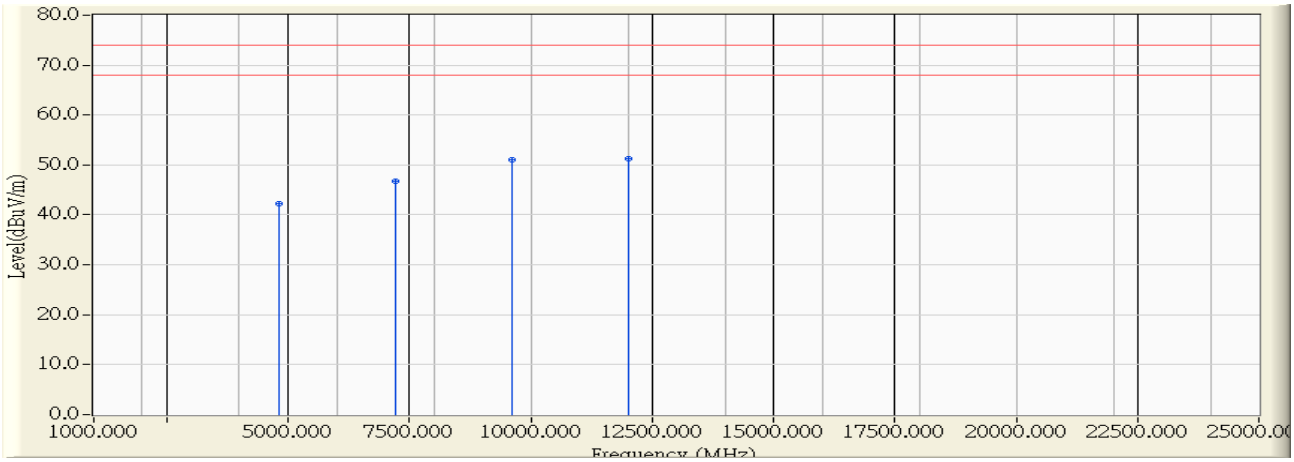


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		4955.300	-0.458	42.760	42.301	-31.699	54.000	74.000	PEAK
2		7431.250	5.967	40.590	46.557	-27.443	54.000	74.000	PEAK
3	*	9909.920	11.130	39.900	51.029	-22.971	54.000	74.000	PEAK
4		12388.670	11.409	39.410	50.819	-23.181	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/03/06 - 11:37**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 230V/50Hz**
Power : GMX Dolby Transmitter	**Note : Mode 2: Transmit (Ant 302)** **2403.35MHz**

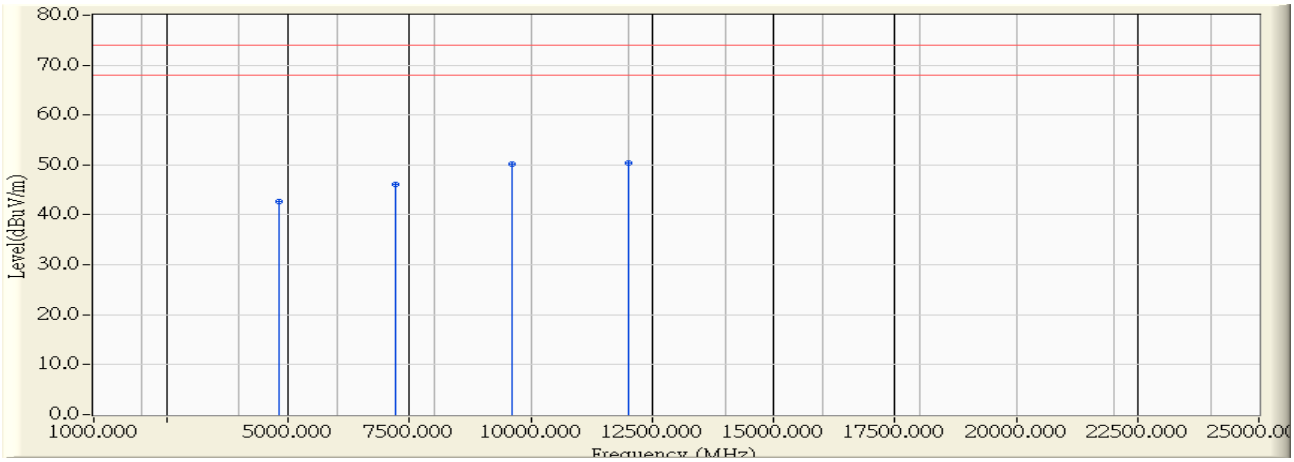


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		4803.920	-0.856	43.200	42.344	-31.656	54.000	74.000	PEAK
2		7211.590	5.438	41.380	46.818	-27.182	54.000	74.000	PEAK
3		9612.760	8.976	42.120	51.095	-22.905	54.000	74.000	PEAK
4	*	12017.850	11.540	39.800	51.340	-22.660	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/03/06 - 11:47**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 2: Transmit (Ant 302)** **2403.35MHz**

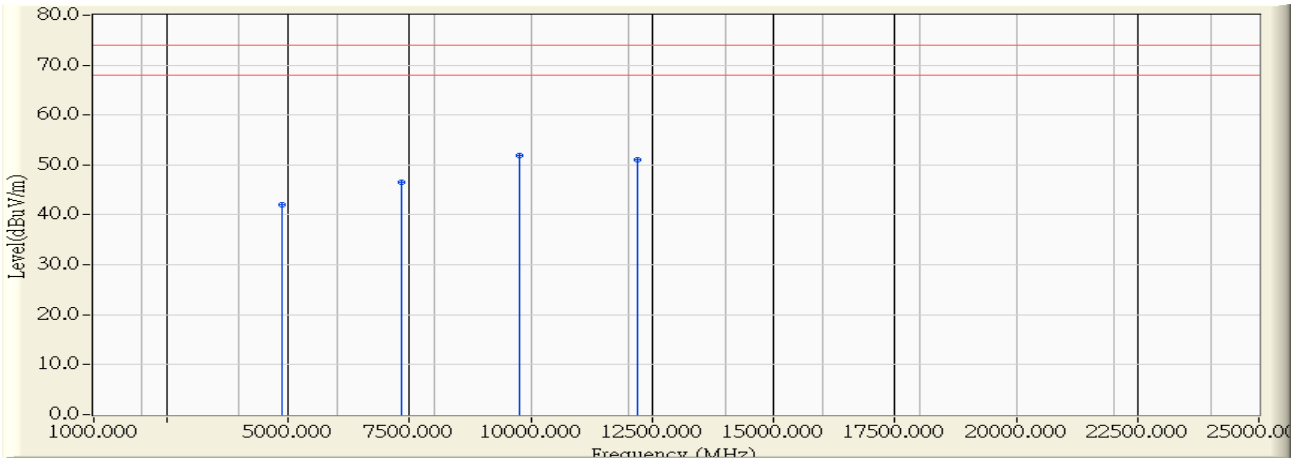


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		4807.120	-0.848	43.590	42.743	-31.257	54.000	74.000	PEAK
2		7209.570	5.432	40.680	46.113	-27.887	54.000	74.000	PEAK
3		9613.720	8.981	41.110	50.092	-23.908	54.000	74.000	PEAK
4	*	12016.610	11.540	38.880	50.420	-23.580	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/03/06 - 13:14**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 2: Transmit (Ant 302)** **2441.35MHz**

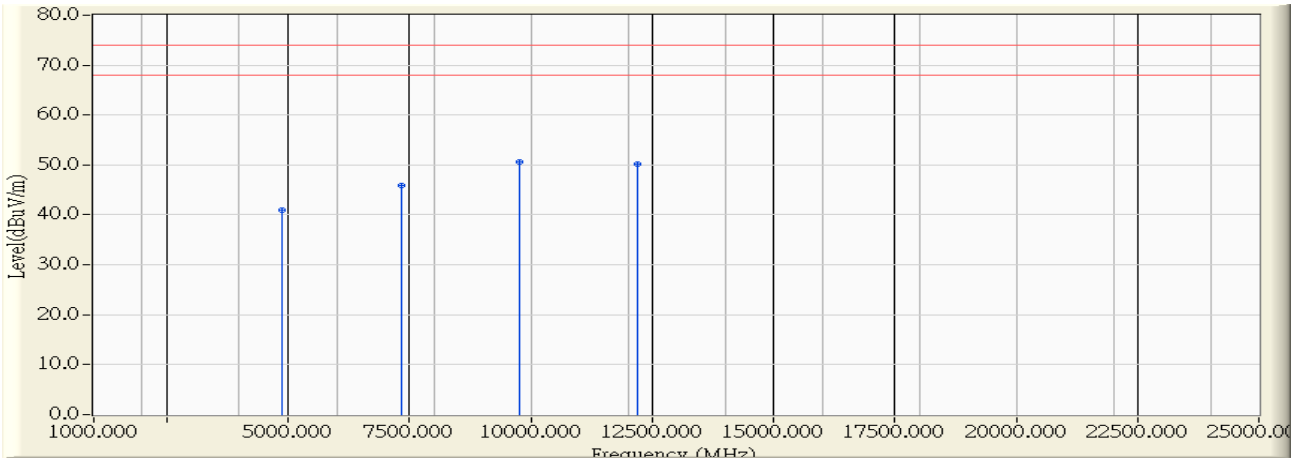


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		4880.280	-0.655	42.630	41.975	-32.025	54.000	74.000	PEAK
2		7324.250	5.709	40.760	46.469	-27.531	54.000	74.000	PEAK
3	*	9765.220	10.080	41.760	51.840	-22.160	54.000	74.000	PEAK
4		12206.450	11.473	39.640	51.114	-22.886	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/03/06 - 13:19**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 2: Transmit (Ant 302)** **2441.35MHz**

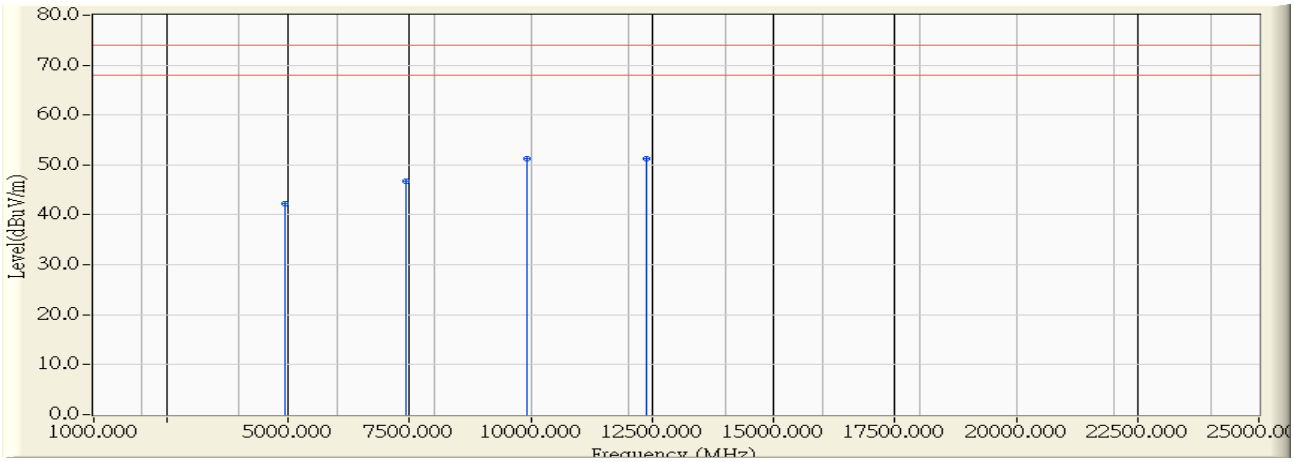


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		4880.000	-0.656	41.610	40.954	-33.046	54.000	74.000	PEAK
2		7326.630	5.715	40.210	45.925	-28.075	54.000	74.000	PEAK
3	*	9765.040	10.079	40.600	50.679	-23.321	54.000	74.000	PEAK
4		12207.510	11.473	38.720	50.193	-23.807	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/03/06 - 13:24**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 2: Transmit (Ant 302)** **2477.35MHz**

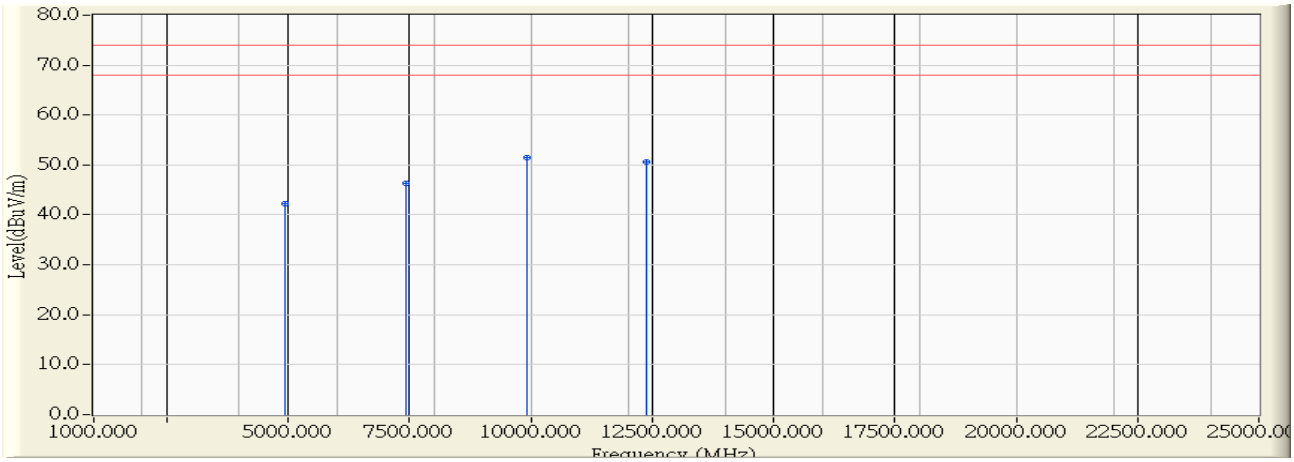


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		4952.000	-0.467	42.750	42.283	-31.717	54.000	74.000	PEAK
2		7431.910	5.970	40.790	46.759	-27.241	54.000	74.000	PEAK
3	*	9909.120	11.124	40.150	51.273	-22.727	54.000	74.000	PEAK
4		12387.470	11.410	39.760	51.170	-22.830	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/03/06 - 13:27**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 2: Transmit (Ant 302)** **2477.35MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		4951.980	-0.467	42.810	42.343	-31.657	54.000	74.000	PEAK
2		7433.130	5.971	40.300	46.272	-27.728	54.000	74.000	PEAK
3	*	9908.960	11.123	40.400	51.522	-22.478	54.000	74.000	PEAK
4		12387.000	11.410	39.210	50.620	-23.380	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 13GHz were not included is because their levels are too low.

5. RF antenna conducted test

5.1. Test Equipment

The following test equipments are used during the test:

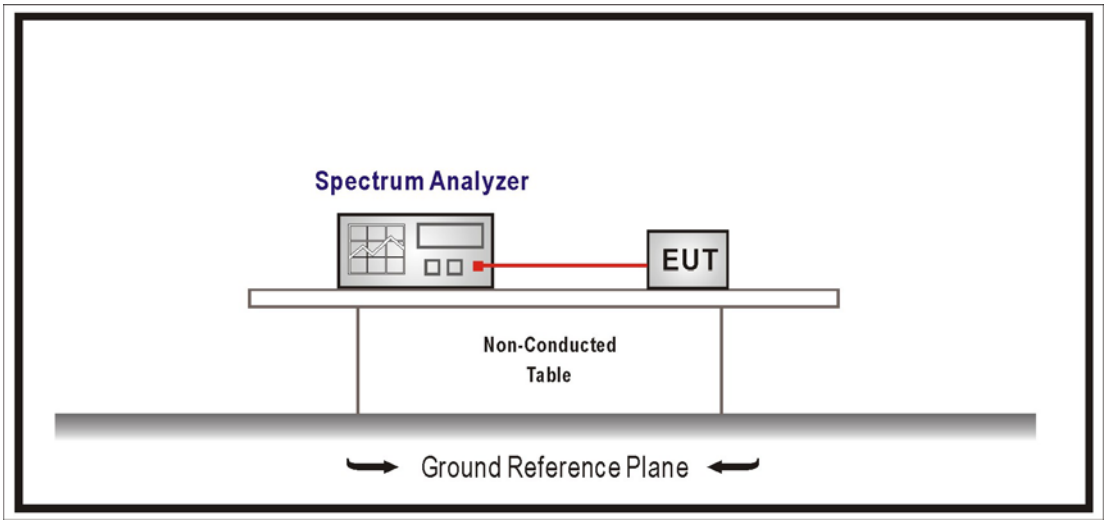
RF antenna conducted test / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
EXA Signal Analyzer	Agilent	N9010A-EXA	US47140172	2013/07/31

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

5.2. Test Setup

RF Antenna Conducted Measurement:



5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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 an RF conducted or radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the 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)).

5.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.

5.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2011

5.6. Uncertainty

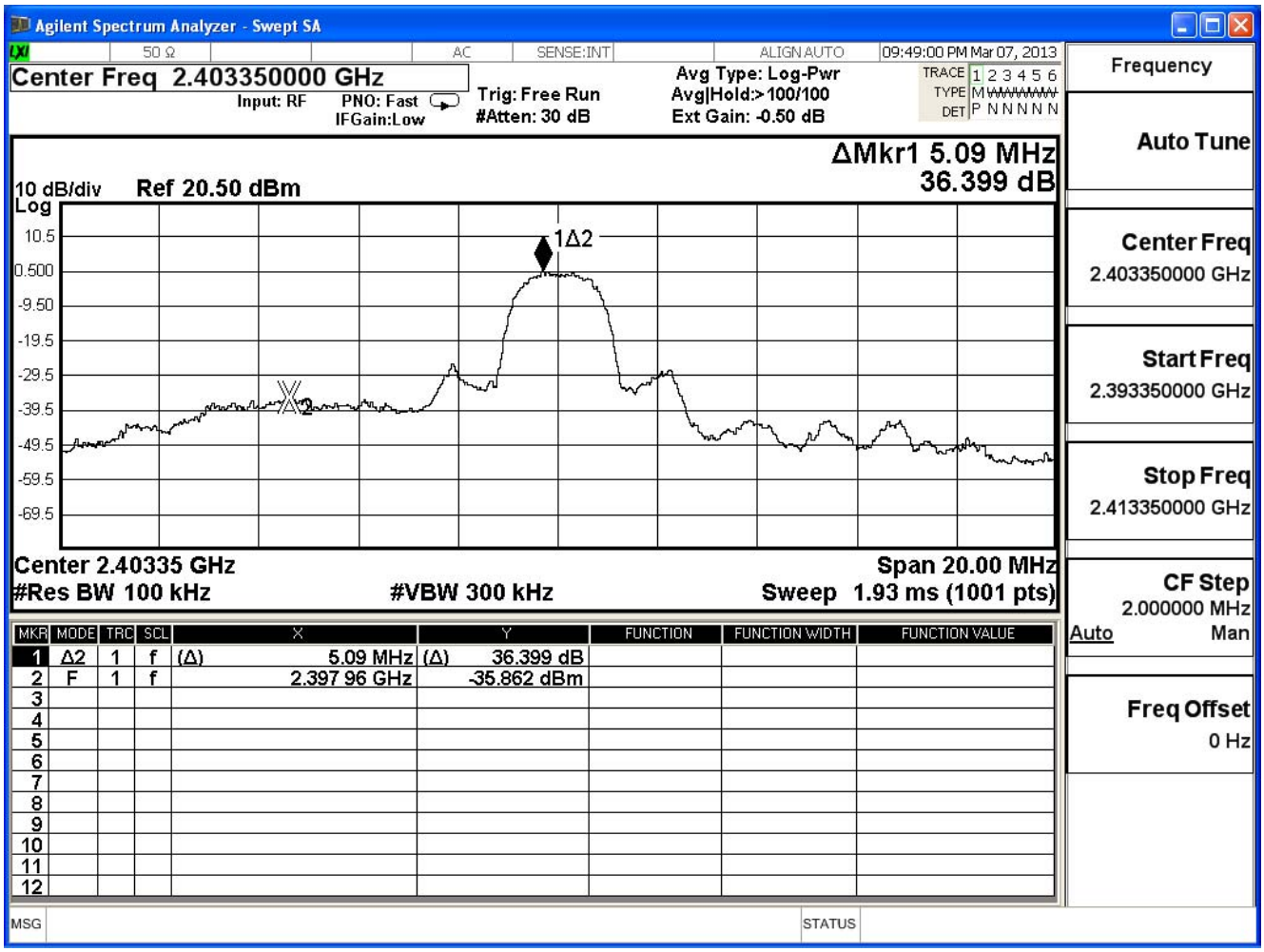
Conducted is defined as ± 1.27dB

5.7. Test Result

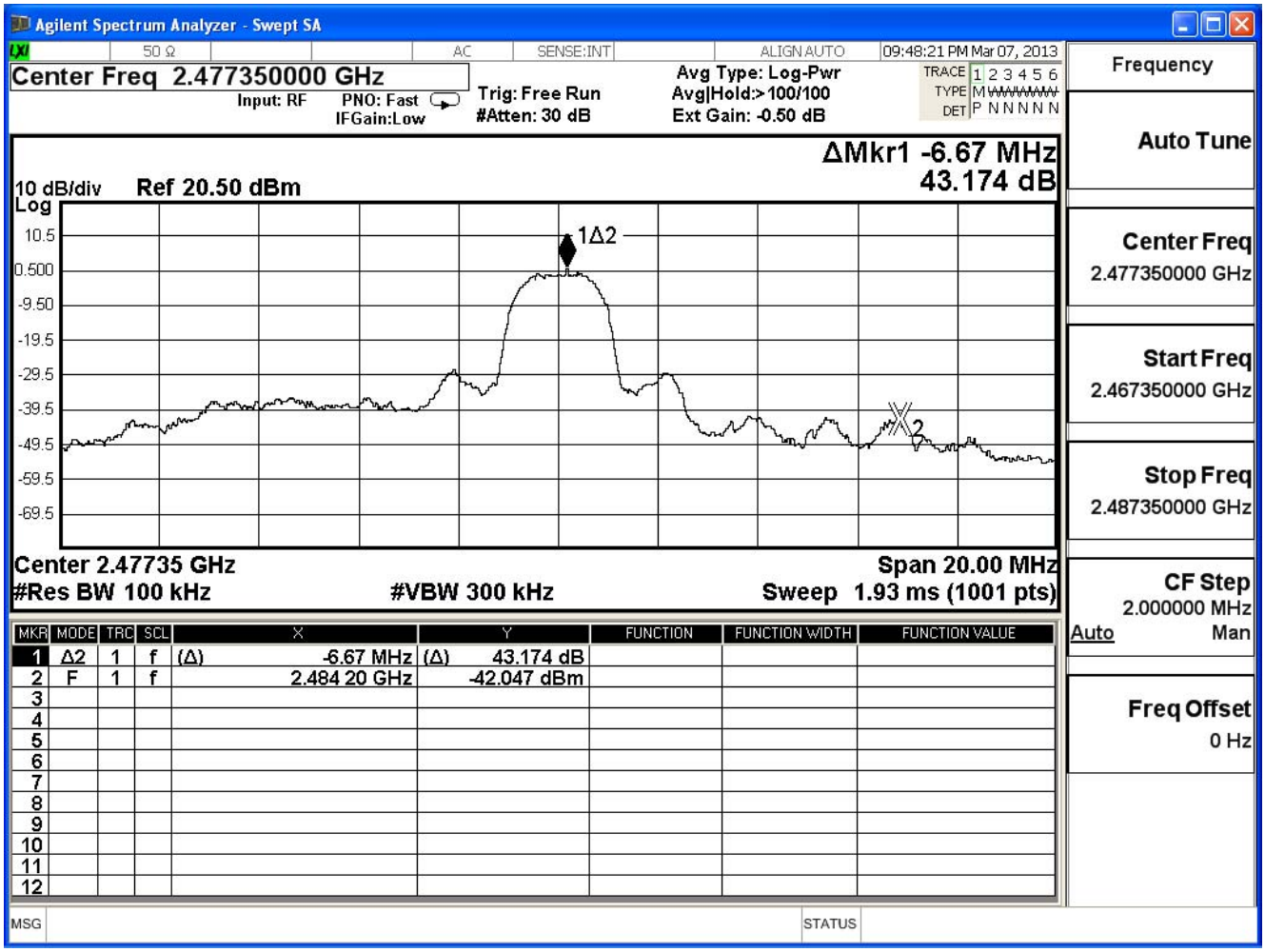
Product	GMX Dolby Transmitter		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit (Ant 301)		
Date of Test	2013/03/07	Test Site	SR7

Antenna Gain: 0dBi				
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2403.35	36.399	≧20	Pass
38	2477.35	43.174	≧20	Pass

Channel 01 (2403.35MHz)

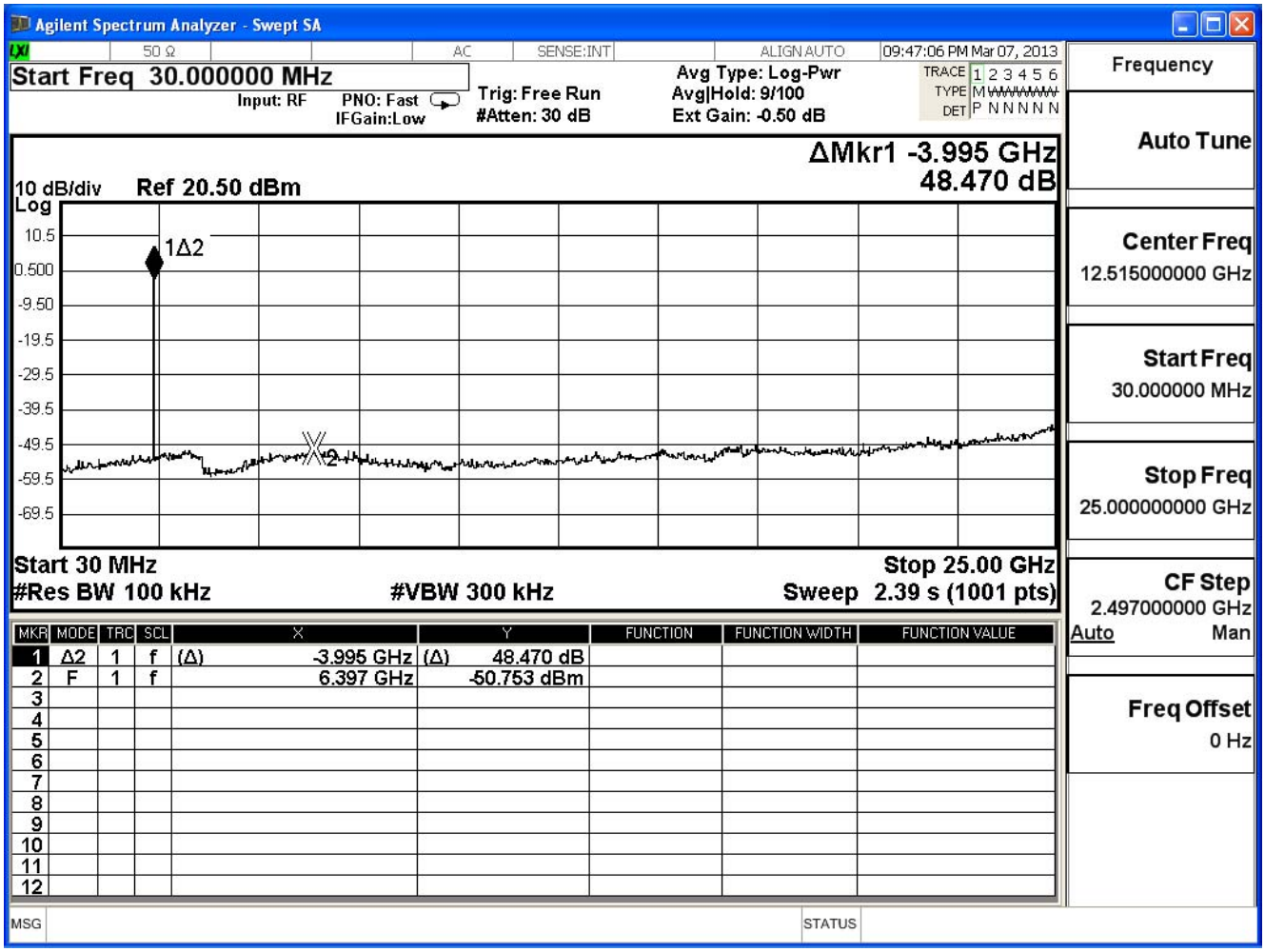


Channel 38 (2477.35MHz)

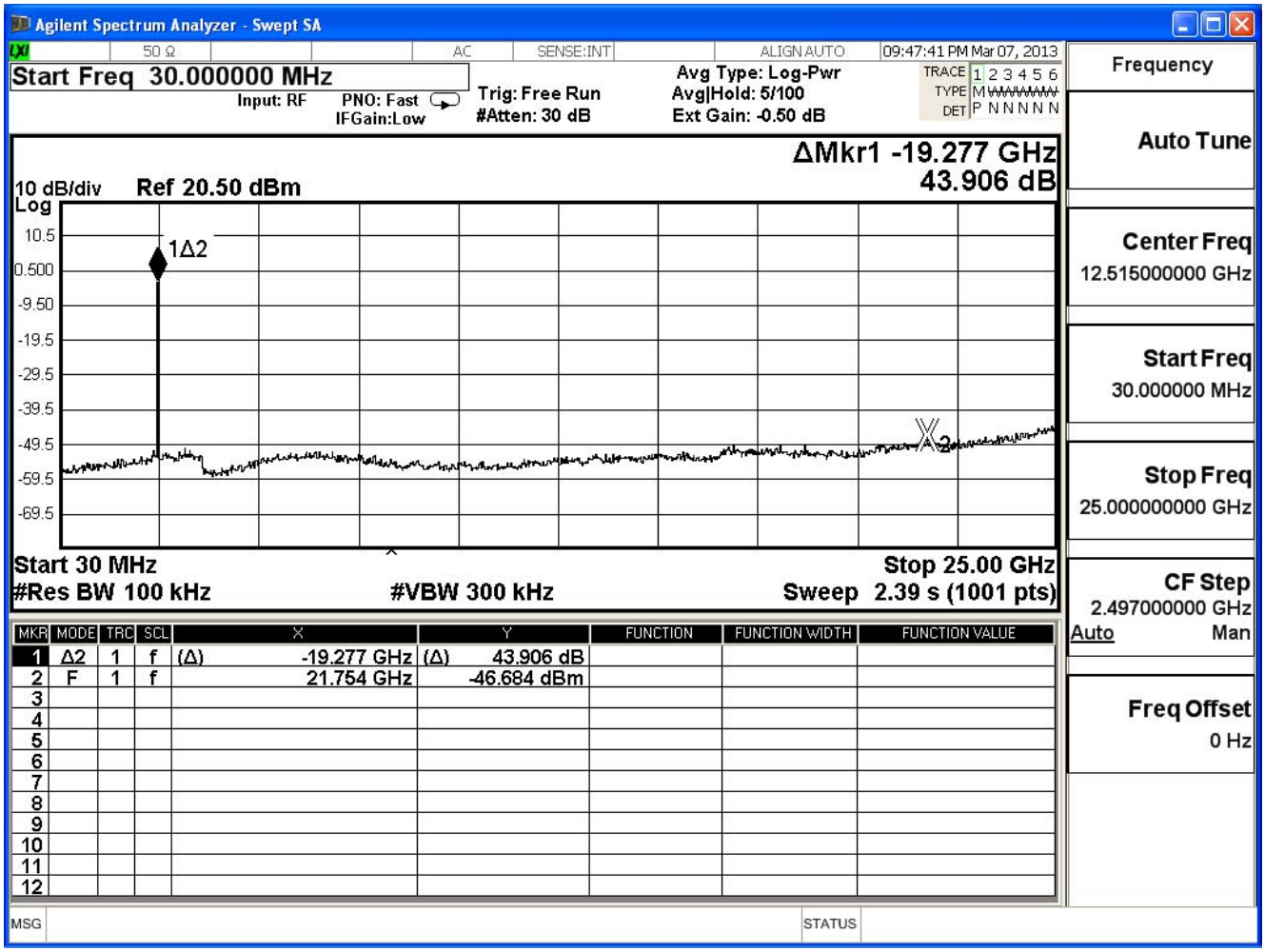


Product	GMX Dolby Transmitter		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit (Ant 301)		
Date of Test	2013/03/07	Test Site	SR7

2403.35MHz (30MHz-25GHz)



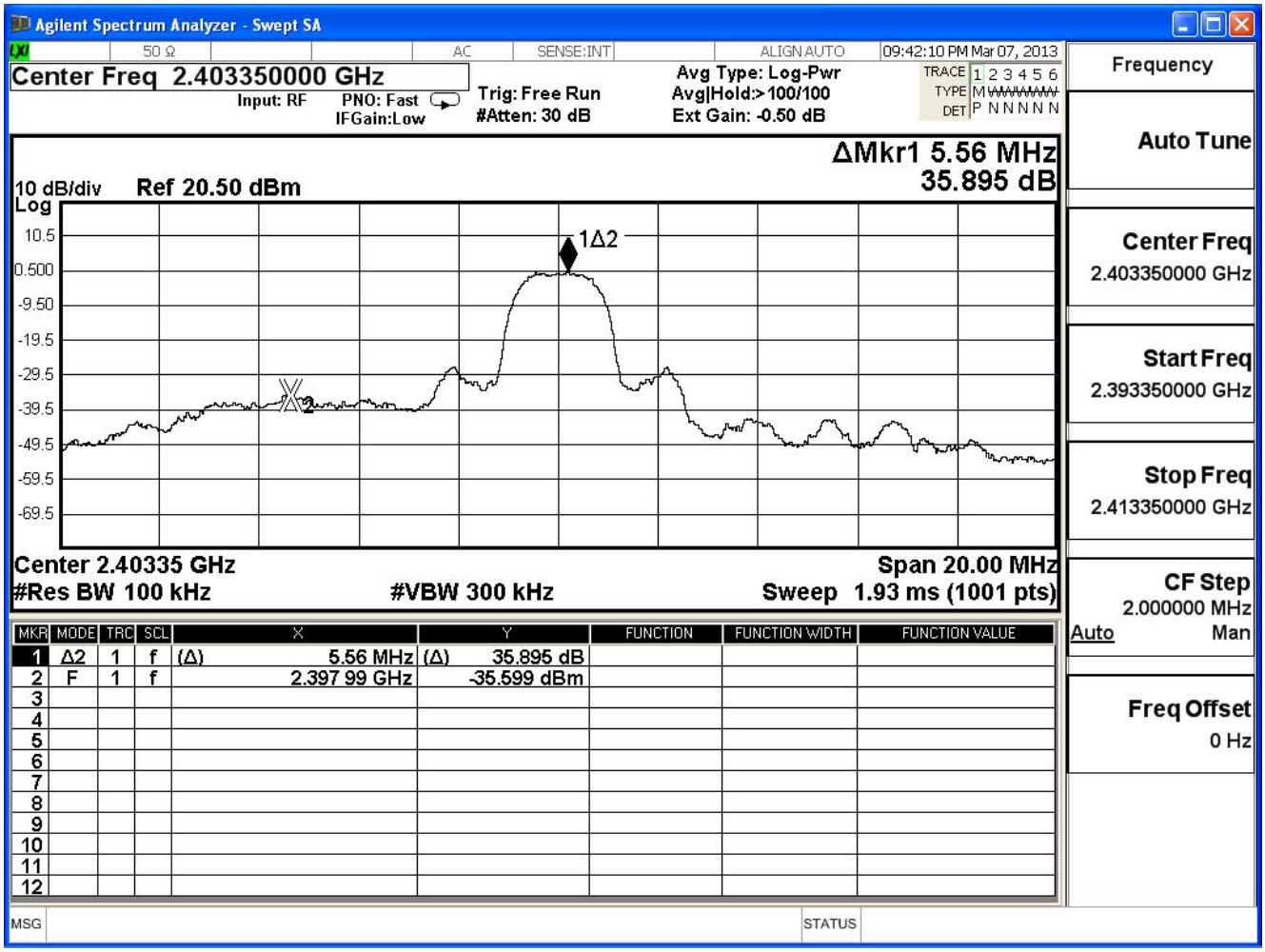
2477.35MHz (30MHz-25GHz)



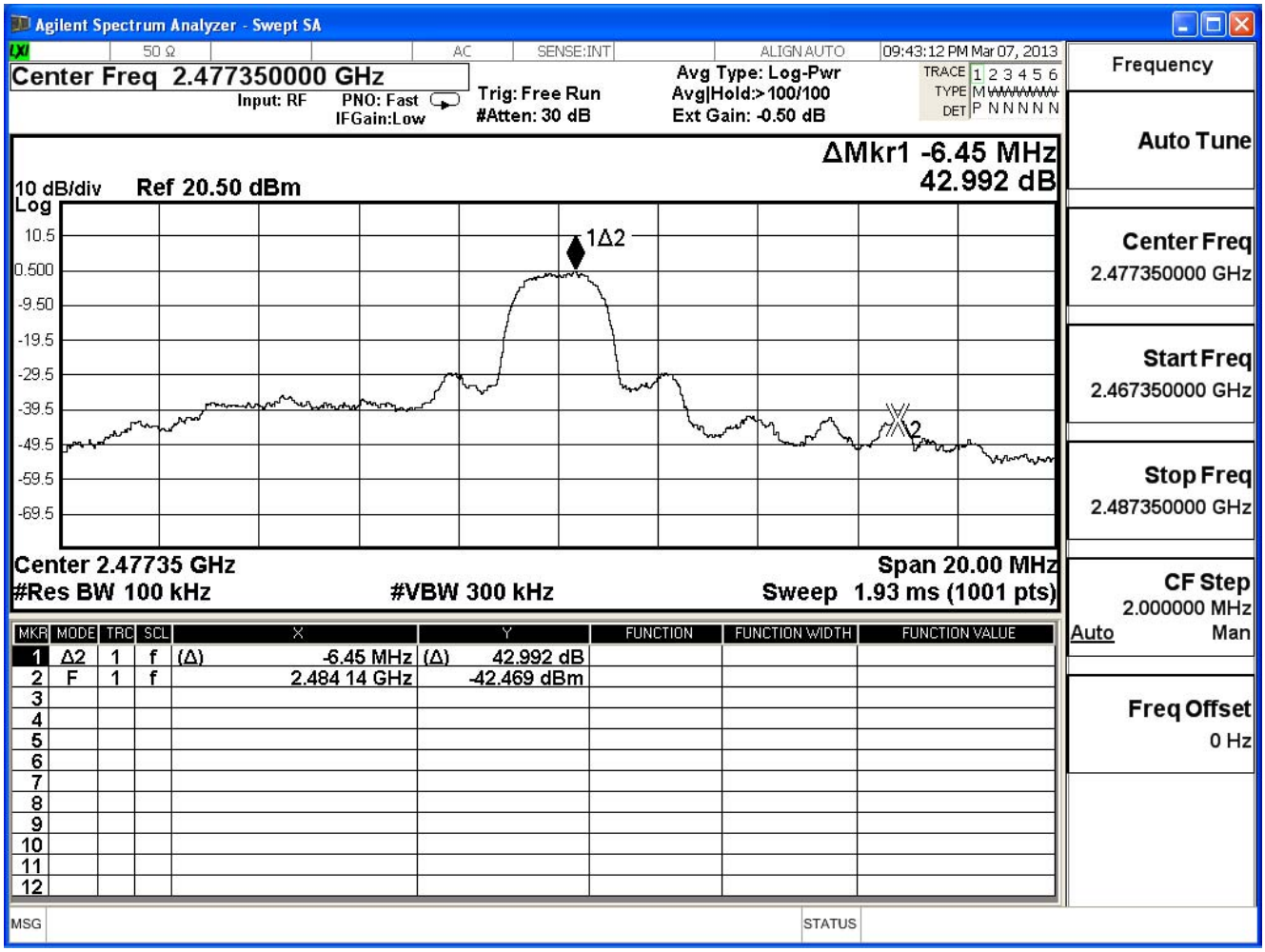
Product	GMX Dolby Transmitter		
Test Item	RF antenna conducted test		
Test Mode	Mode 2: Transmit (Ant 302)		
Date of Test	2013/03/07	Test Site	SR7

Antenna Gain: 0dBi				
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2403.35	35.895	≧20	Pass
38	2477.35	42.992	≧20	Pass

Channel 01 (2403.35MHz)

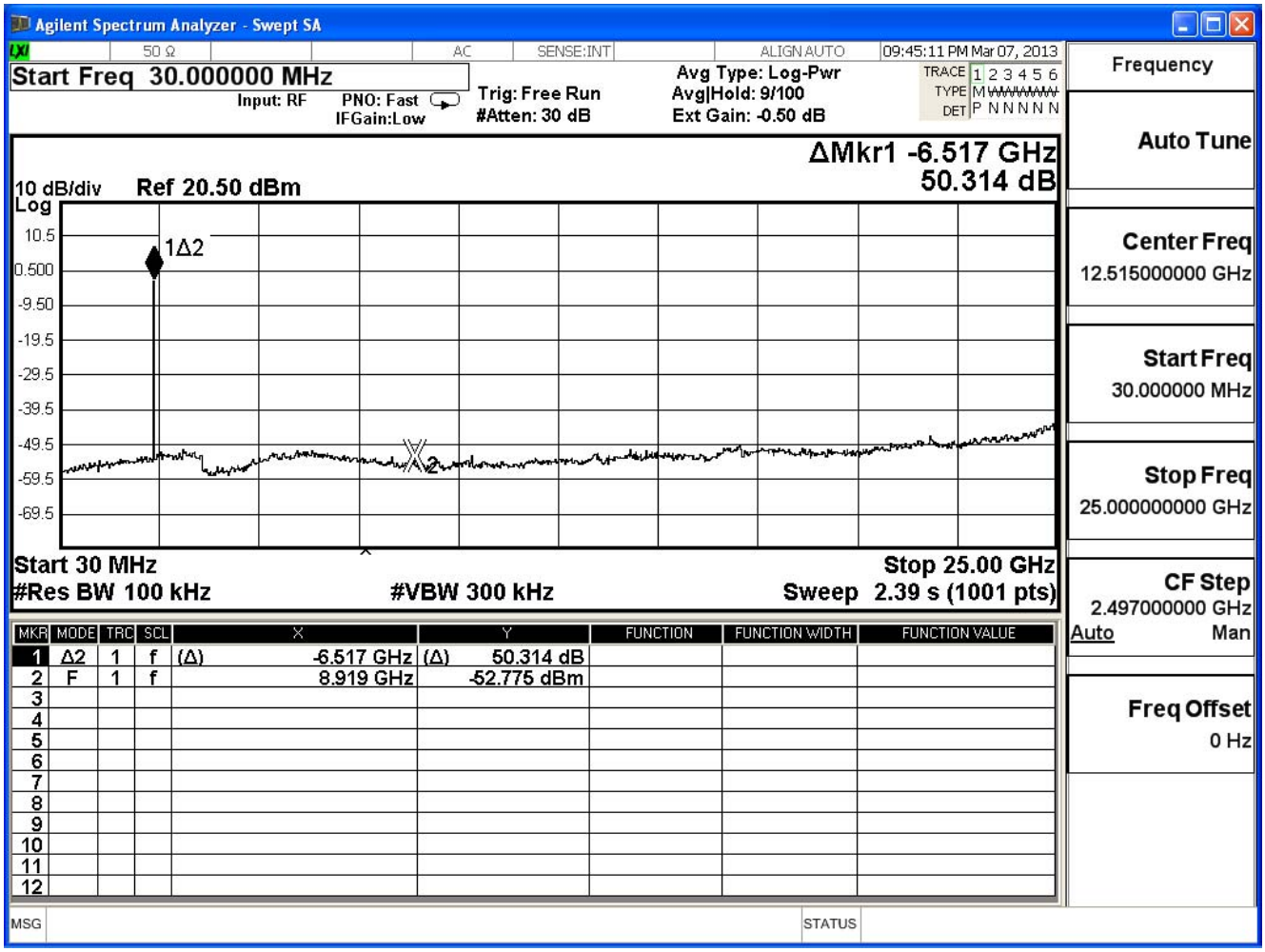


Channel 38 (2477.35MHz)

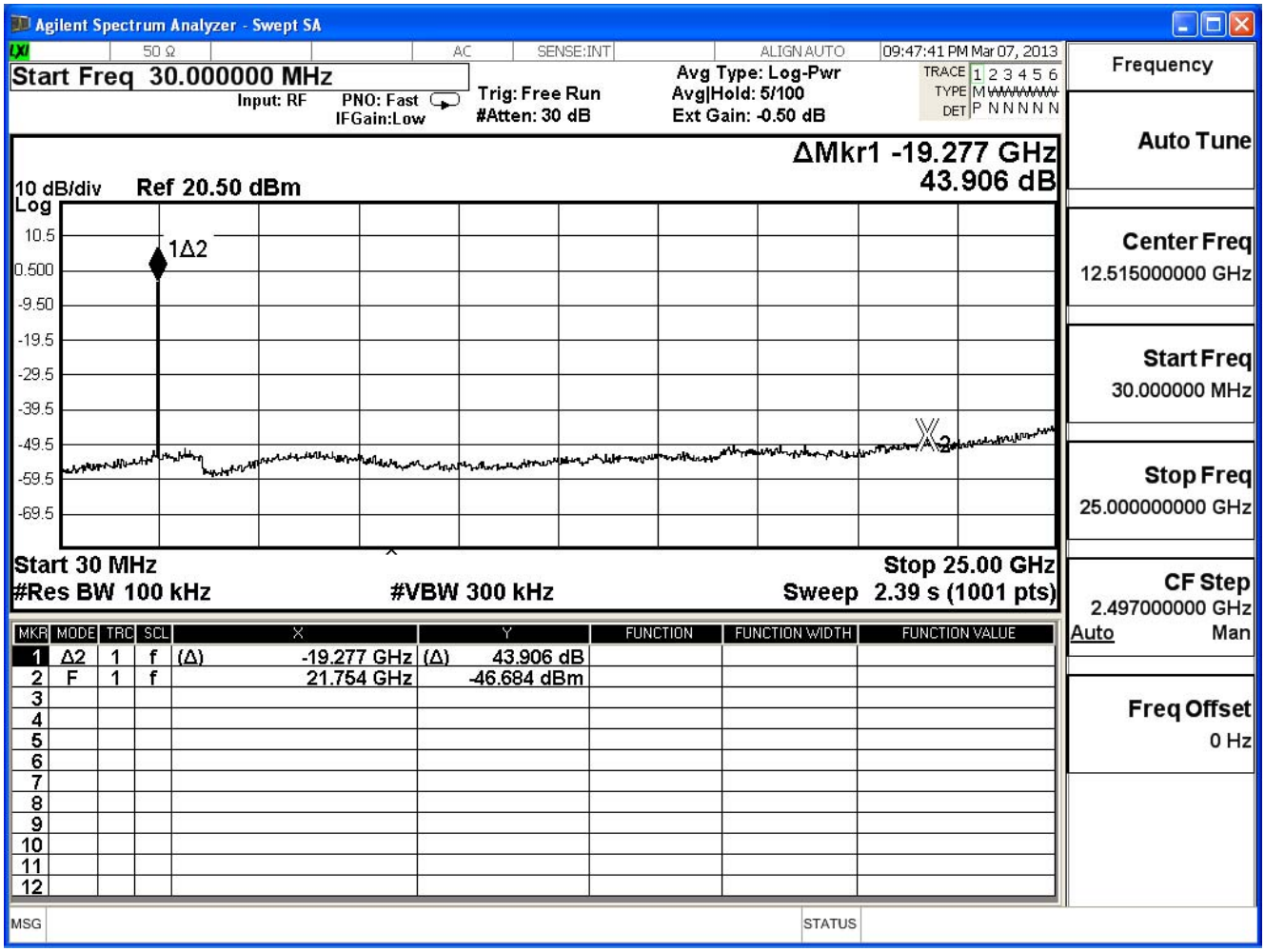


Product	GMX Dolby Transmitter		
Test Item	RF antenna conducted test		
Test Mode	Mode 2: Transmit (Ant 302)		
Date of Test	2013/03/07	Test Site	SR7

2403.35MHz (30MHz-25GHz)



2477.35MHz (30MHz-25GHz)



6. Radiated Emission Band Edge

6.1. Test Equipment

The following test equipments are used during the test:

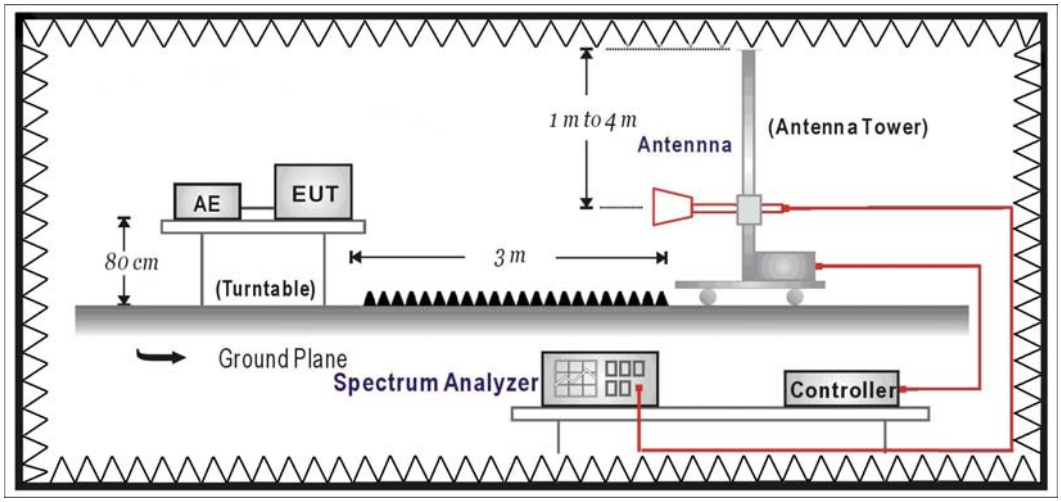
Radiated Emission Band Edge / CB1

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Double Ridged Guide Horn Antenna	Schwarzback	BBHA 9120	D743	2014/02/17
Spectrum Analyzer	Agilent	E4440A	MY46187335	2014/01/27
k Type Cable	Huber Suhner	Sucoflex 102	25623/2	2014/02/21

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

6.2. Test Setup

RF Radiated Measurement:



6.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

6.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
The EUT and its simulators are placed on a turn table which is 0.8 meter above ground.
The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4: 2009 on radiated measurement.

6.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2011

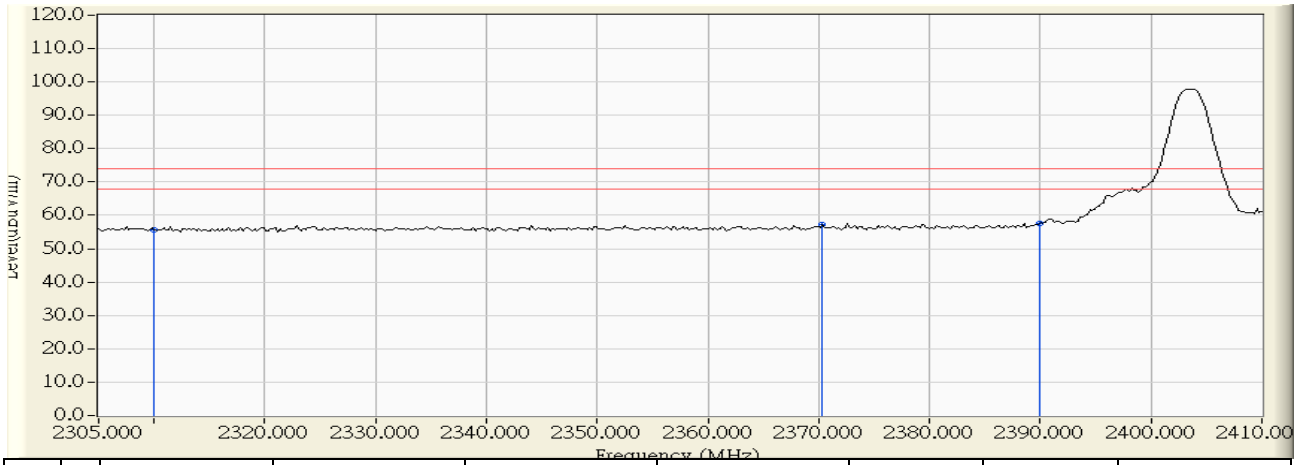
6.6. Uncertainty

The measurement uncertainty
± 3.9 dB above 1GHz

6.7. Test Result

Radiated is defined as

Site : CB1	**Time : 2013/03/01 - 16:16**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 1: Transmit (Ant 301)** **2403.35MHz**

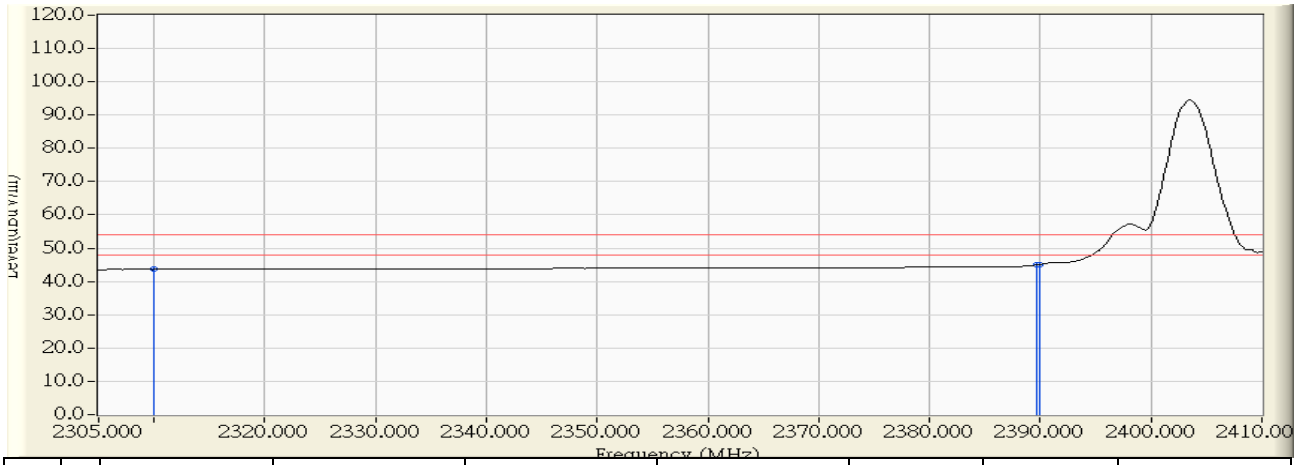


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	29.779	26.027	55.806	-18.194	74.000	PEAK
2		2370.310	30.381	27.011	57.392	-16.608	74.000	PEAK
3	*	2390.000	30.578	27.053	57.631	-16.369	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/03/01 - 16:17**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 1: Transmit (Ant 301)** **2403.35MHz**

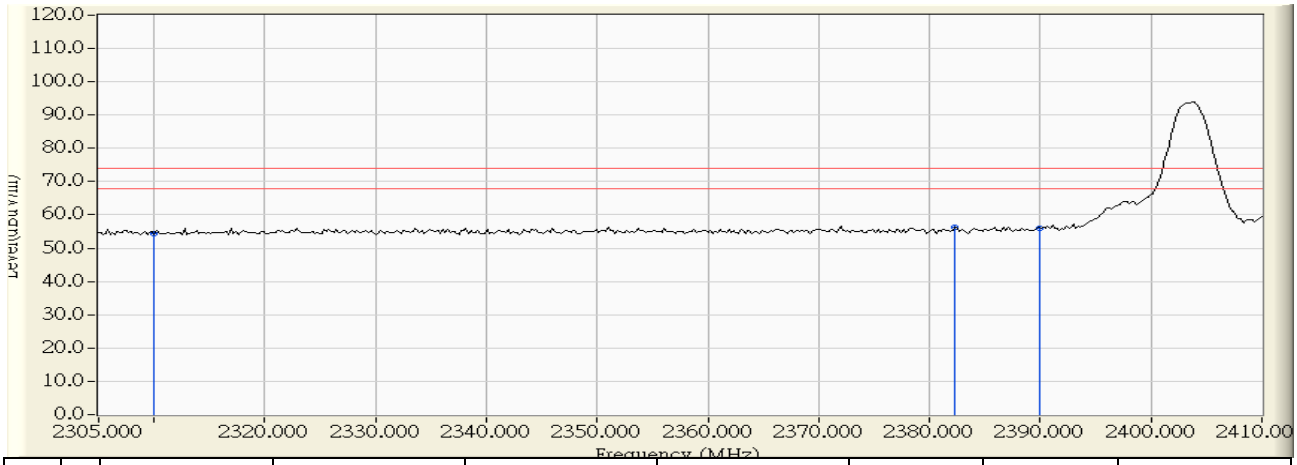


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	29.779	13.821	43.600	-10.400	54.000	AVERAGE
2		2389.630	30.575	14.348	44.922	-9.078	54.000	AVERAGE
3	*	2390.000	30.578	14.583	45.161	-8.839	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/03/01 - 16:22**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 1: Transmit (Ant 301)** **2403.35MHz**

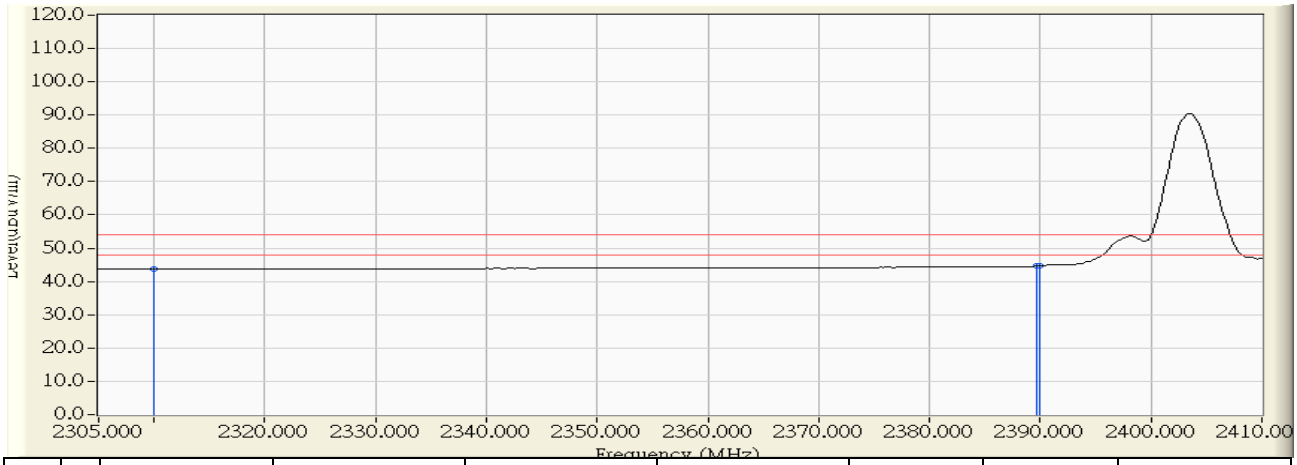


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	29.779	24.509	54.288	-19.712	74.000	PEAK
2	*	2382.280	30.501	25.915	56.416	-17.584	74.000	PEAK
3		2390.000	30.578	25.424	56.002	-17.998	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/03/01 - 16:23**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 1: Transmit (Ant 301)** **2403.35MHz**

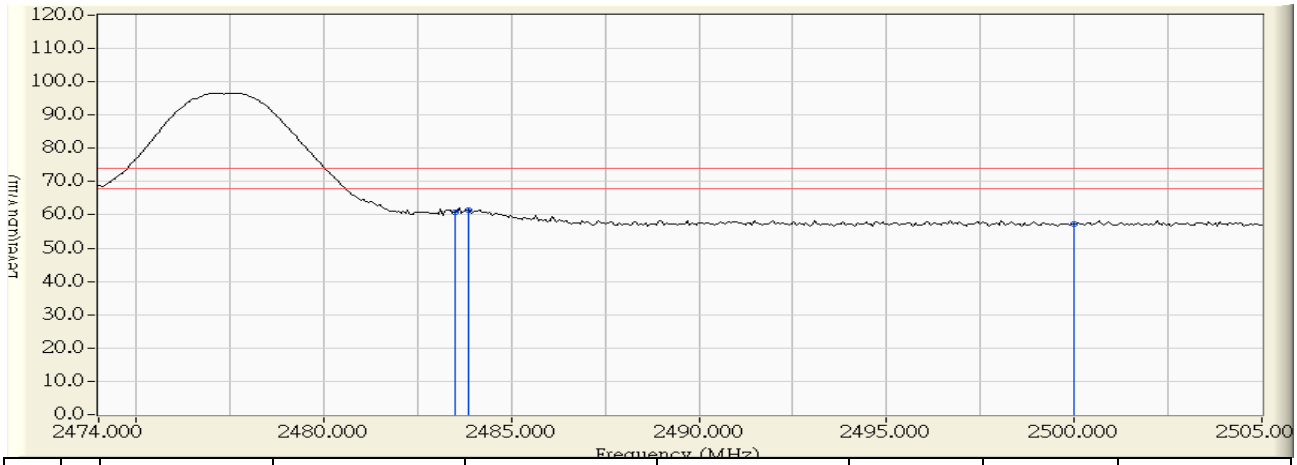


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	29.779	13.873	43.652	-10.348	54.000	AVERAGE
2		2389.630	30.575	14.039	44.613	-9.387	54.000	AVERAGE
3	*	2390.000	30.578	14.134	44.712	-9.288	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/03/01 - 16:28**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 1: Transmit (Ant 301)** **2477.35MHz**

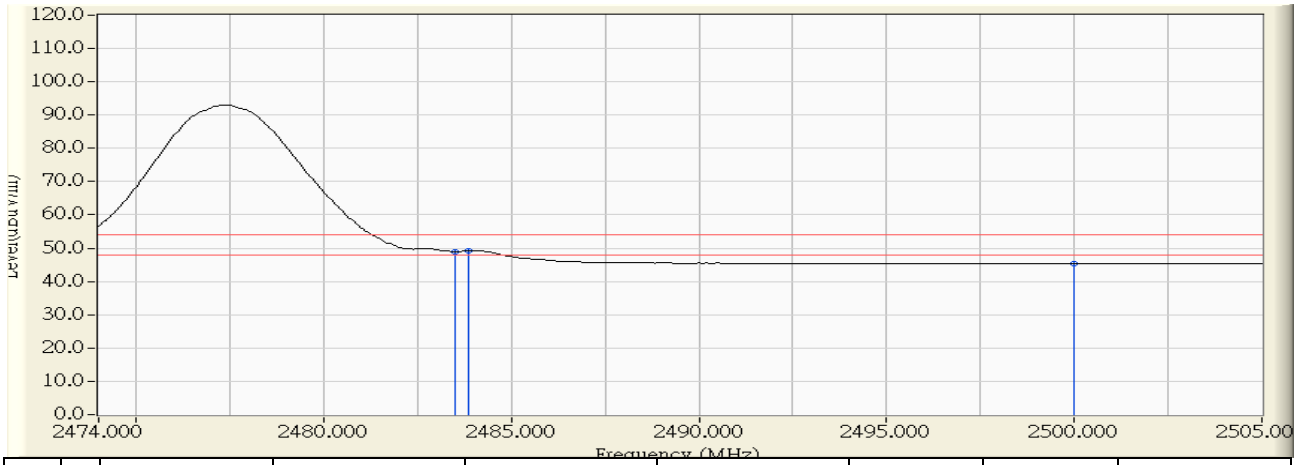


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2483.500	31.512	29.366	60.878	-13.122	74.000	PEAK
2	*	2483.858	31.515	29.971	61.486	-12.514	74.000	PEAK
3		2500.000	31.638	25.742	57.381	-16.619	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/03/01 - 16:29**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 1: Transmit (Ant 301)** **2477.35MHz**

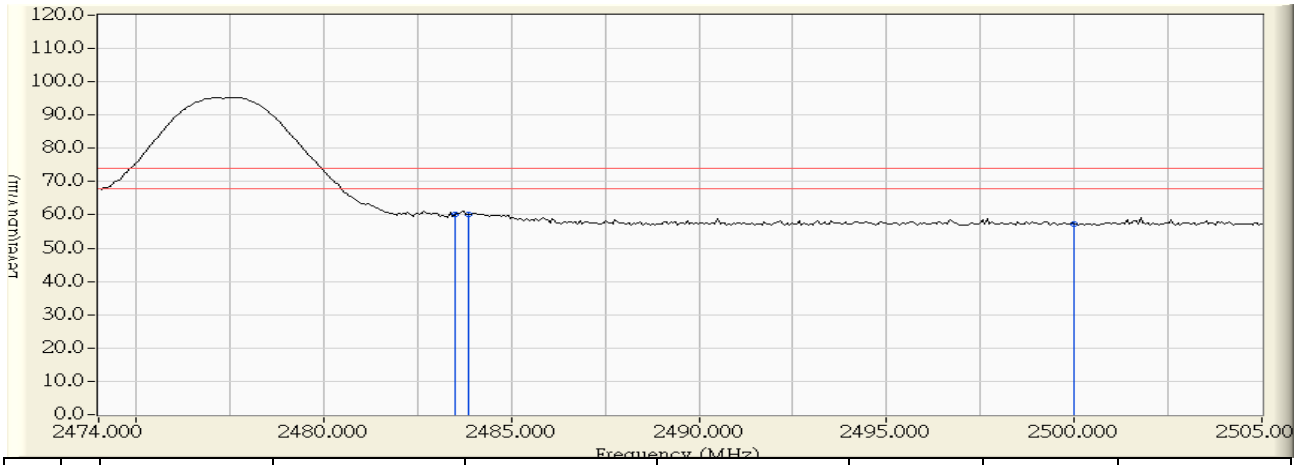


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2483.500	31.512	17.405	48.917	-5.083	54.000	AVERAGE
2	*	2483.858	31.515	17.740	49.255	-4.745	54.000	AVERAGE
3		2500.000	31.638	13.819	45.458	-8.542	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/03/01 - 16:35**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 1: Transmit (Ant 301)** **2477.35MHz**

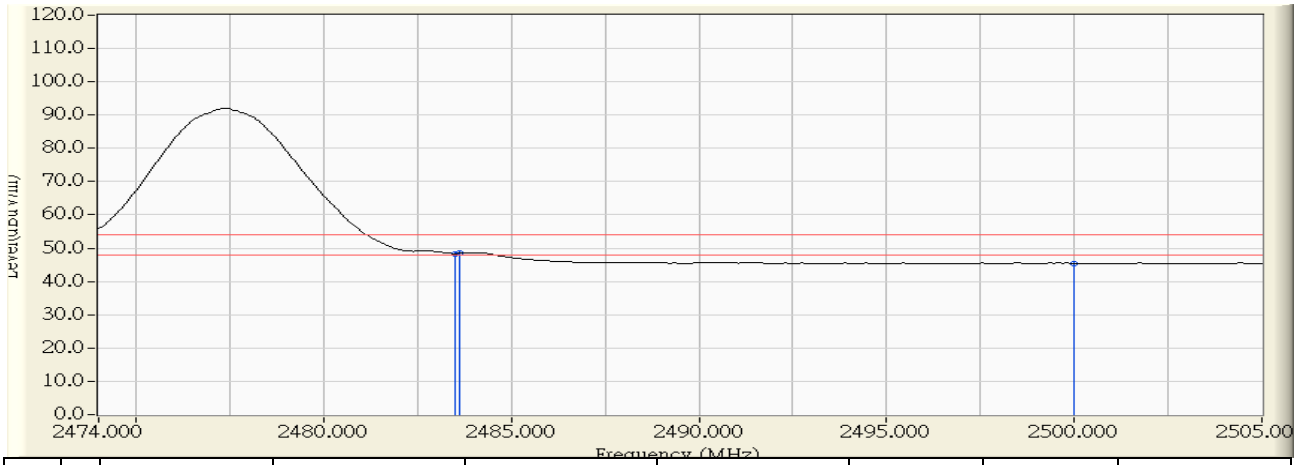


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2483.500	31.512	28.601	60.113	-13.887	74.000	PEAK
2	*	2483.858	31.515	28.764	60.279	-13.721	74.000	PEAK
3		2500.000	31.638	25.616	57.255	-16.745	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/03/01 - 16:36**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 1: Transmit (Ant 301)** **2477.35MHz**

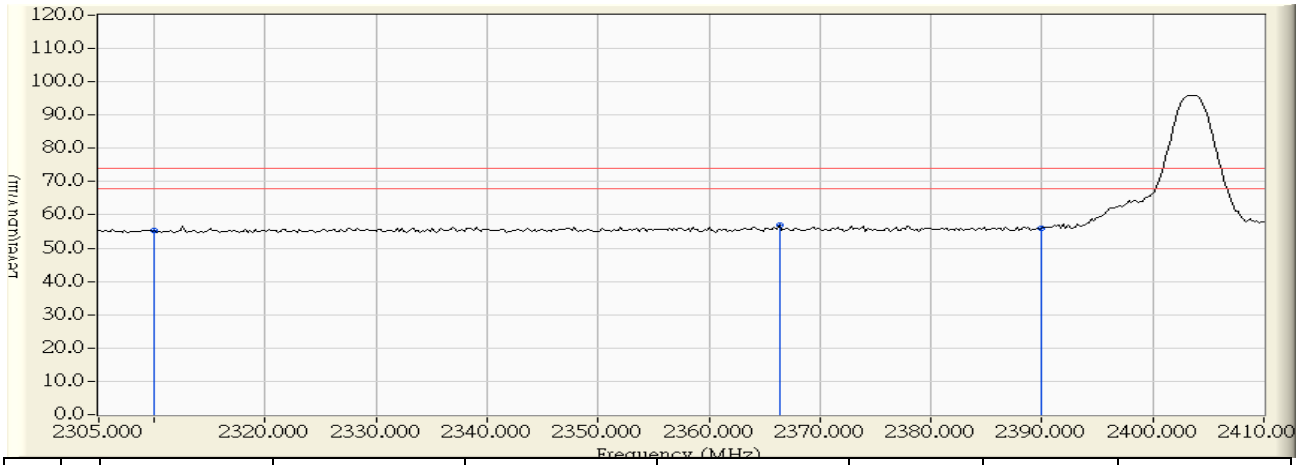


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2483.500	31.512	16.892	48.404	-5.596	54.000	AVERAGE
2	*	2483.610	31.513	16.922	48.435	-5.565	54.000	AVERAGE
3		2500.000	31.638	13.855	45.494	-8.506	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/03/06 - 13:36**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 2: Transmit (Ant 302)** **2403.35MHz**

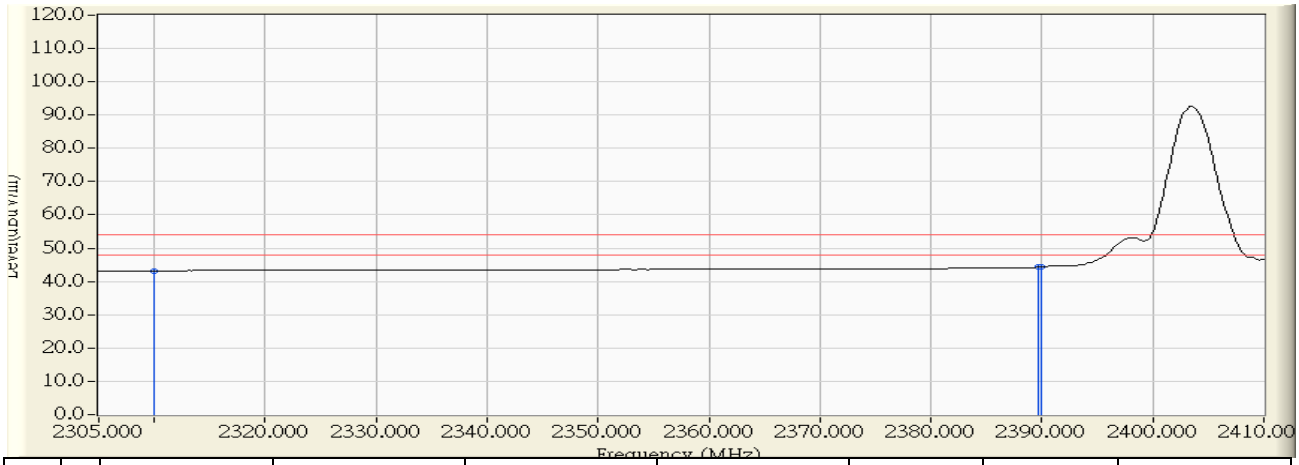


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	29.779	25.522	55.301	-18.699	74.000	PEAK
2	*	2366.320	30.341	26.487	56.828	-17.172	74.000	PEAK
3		2390.000	30.578	25.501	56.079	-17.921	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/03/06 - 13:37**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 2: Transmit (Ant 302)** **2403.35MHz**

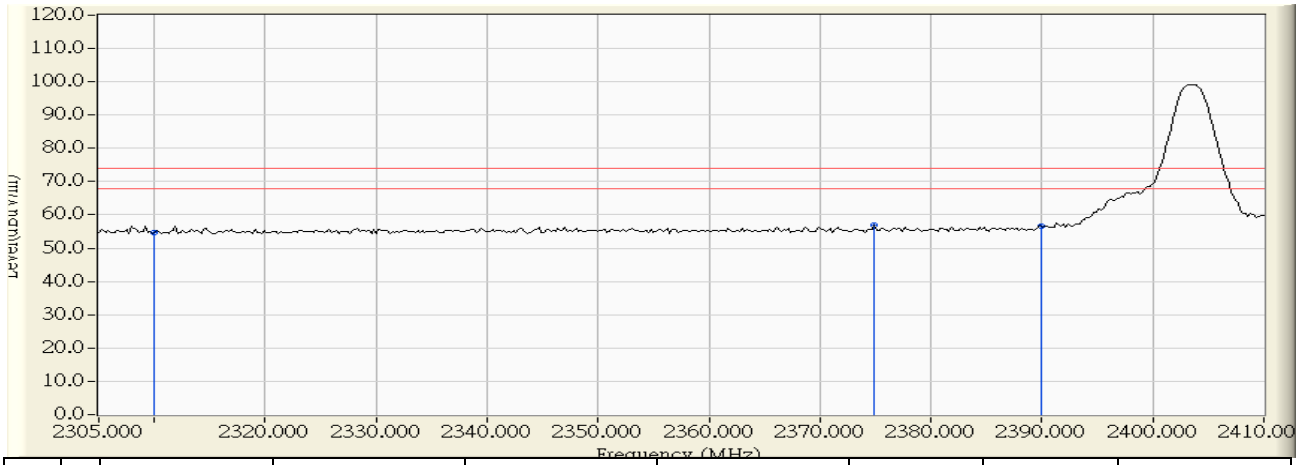


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	29.779	13.457	43.236	-10.764	54.000	AVERAGE
2		2389.630	30.575	13.704	44.278	-9.722	54.000	AVERAGE
3	*	2390.000	30.578	13.809	44.387	-9.613	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/03/06 - 13:41**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 2: Transmit (Ant 302)** **2403.35MHz**

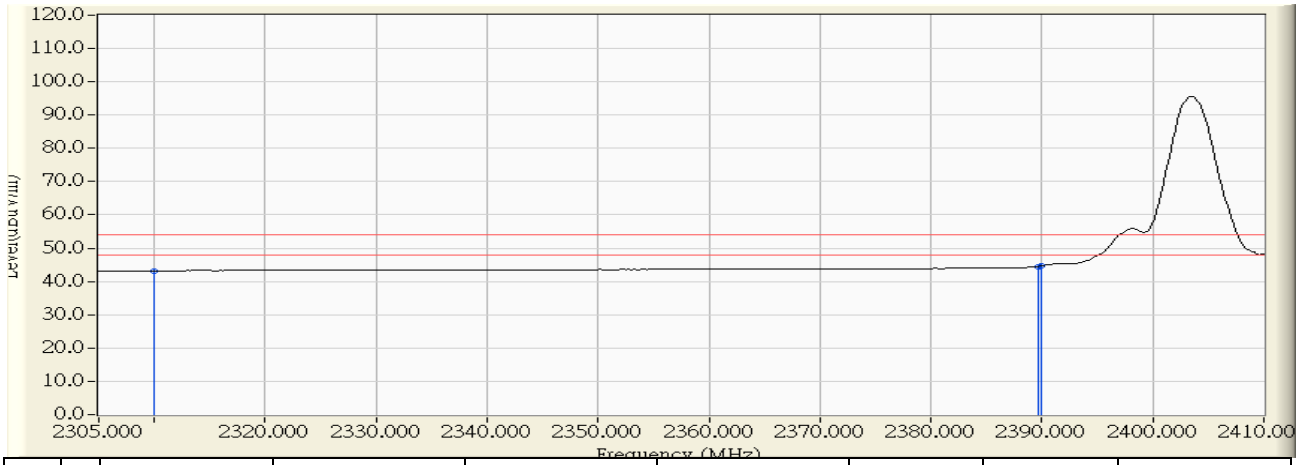


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	29.779	24.754	54.533	-19.467	74.000	PEAK
2	*	2374.930	30.427	26.488	56.915	-17.085	74.000	PEAK
3		2390.000	30.578	25.901	56.479	-17.521	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/03/06 - 13:41**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 2: Transmit (Ant 302)** **2403.35MHz**

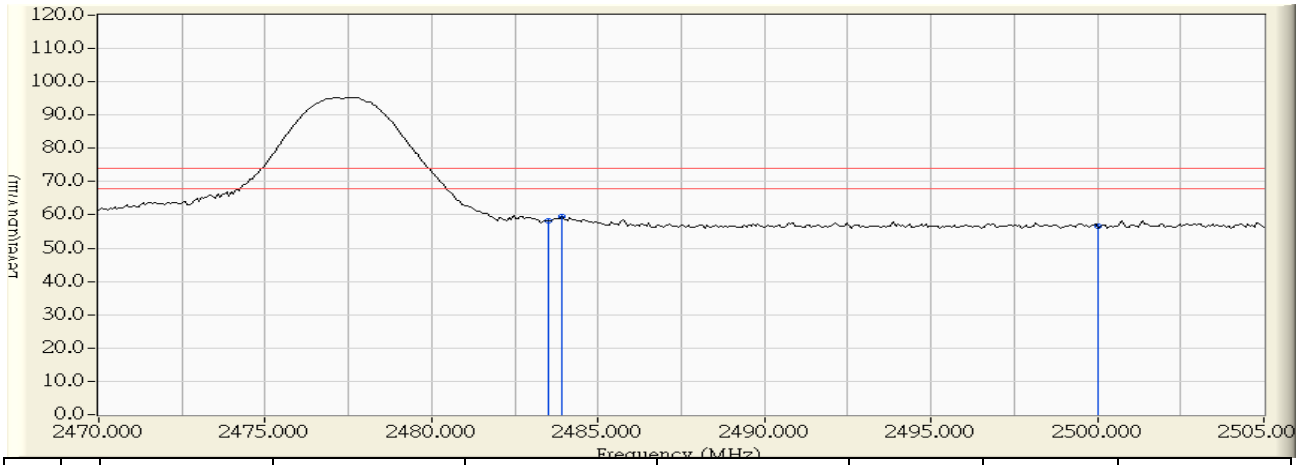


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2310.000	29.779	13.453	43.232	-10.768	54.000	AVERAGE
2		2389.630	30.575	13.968	44.542	-9.458	54.000	AVERAGE
3	*	2390.000	30.578	14.159	44.737	-9.263	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/03/06 - 13:44**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 2: Transmit (Ant 302)** **2477.35MHz**

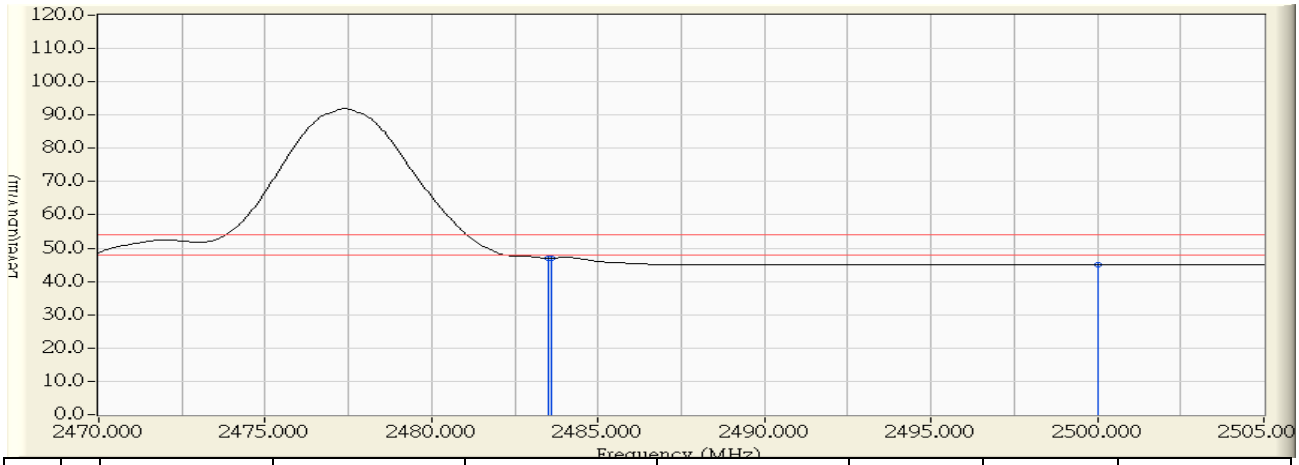


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2483.500	31.512	26.657	58.169	-15.831	74.000	PEAK
2	*	2483.930	31.516	28.160	59.676	-14.324	74.000	PEAK
3		2500.000	31.638	24.861	56.500	-17.500	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/03/06 - 13:45**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 2: Transmit (Ant 302)** **2477.35MHz**

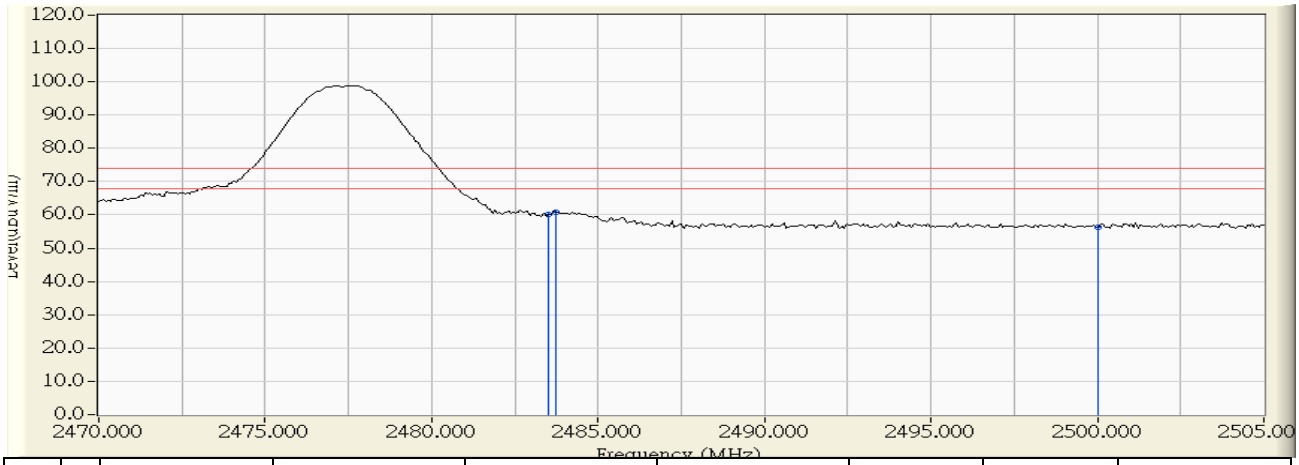


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2483.500	31.512	15.406	46.918	-7.082	54.000	AVERAGE
2	*	2483.580	31.513	15.425	46.938	-7.062	54.000	AVERAGE
3		2500.000	31.638	13.350	44.989	-9.011	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/03/06 - 13:48**
Limit : FCC_SpartC_15.209_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 2: Transmit (Ant 302)** **2477.35MHz**

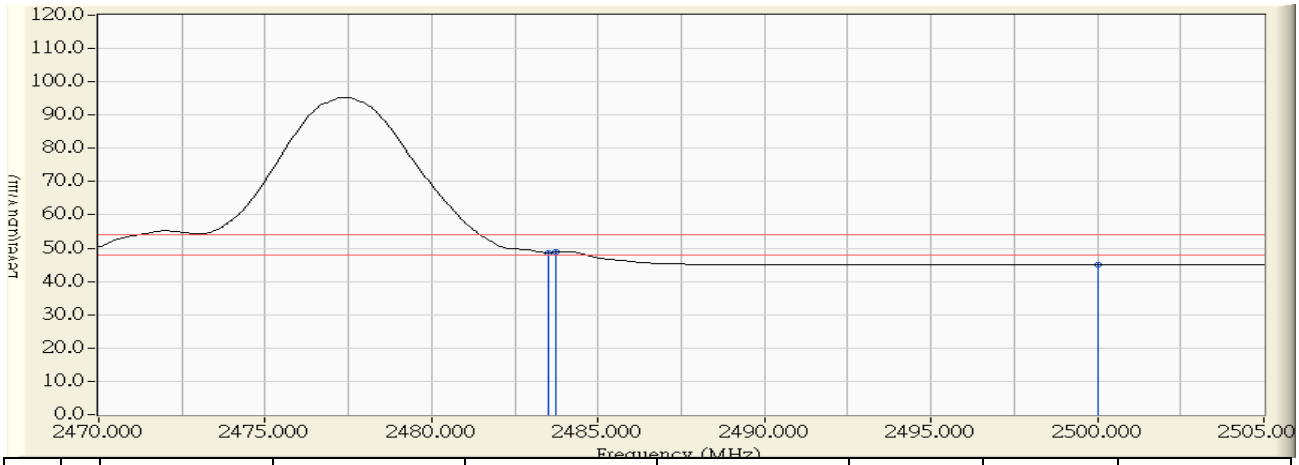


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2483.500	31.512	28.659	60.171	-13.829	74.000	PEAK
2	*	2483.720	31.514	29.333	60.847	-13.153	74.000	PEAK
3		2500.000	31.638	24.728	56.367	-17.633	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Site : CB1	**Time : 2013/03/06 - 13:48**
Limit : FCC_SpartC_15.209_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : DC 5V (Power by PC)**
Power : GMX Dolby Transmitter	**Note : Mode 2: Transmit (Ant 302)** **2477.35MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		2483.500	31.512	17.124	48.636	-5.364	54.000	AVERAGE
2	*	2483.720	31.514	17.285	48.799	-5.201	54.000	AVERAGE
3		2500.000	31.638	13.383	45.022	-8.978	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

7. Occupied Bandwidth

7.1. Test Equipment

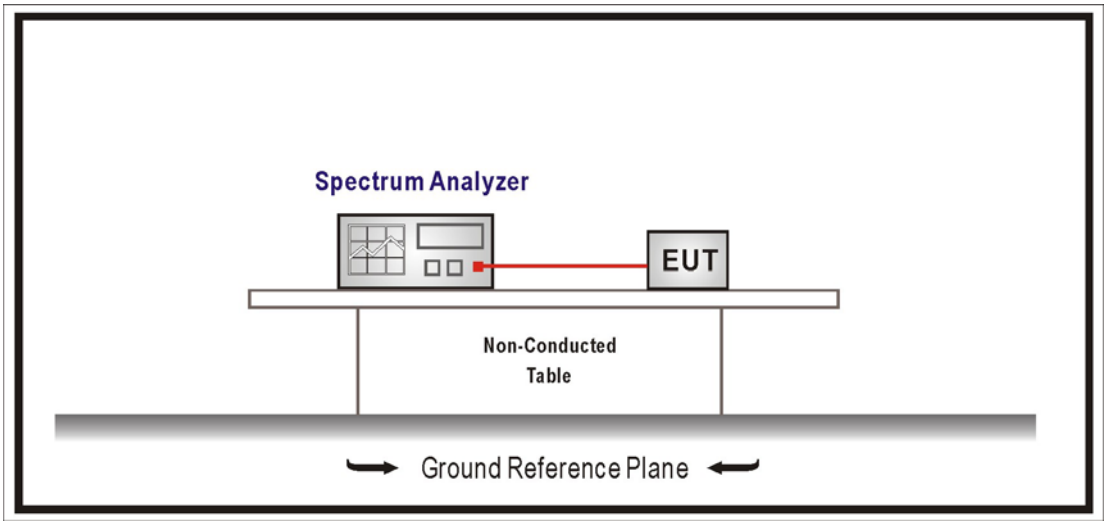
The following test equipments are used during the test:

Occupied Bandwidth / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
EXA Signal Analyzer	Agilent	N9010A-EXA	US47140172	2013/07/31

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

7.2. Test Setup



7.3. Test Procedures

The EUT was setup according to ANSI C63.4: 2009; tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
Set RBW = 1% of EBW, Span greater than RBW.

7.4. Limits

The 6 dB bandwidth must be greater than 500 kHz.

7.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2011

7.6. Uncertainty

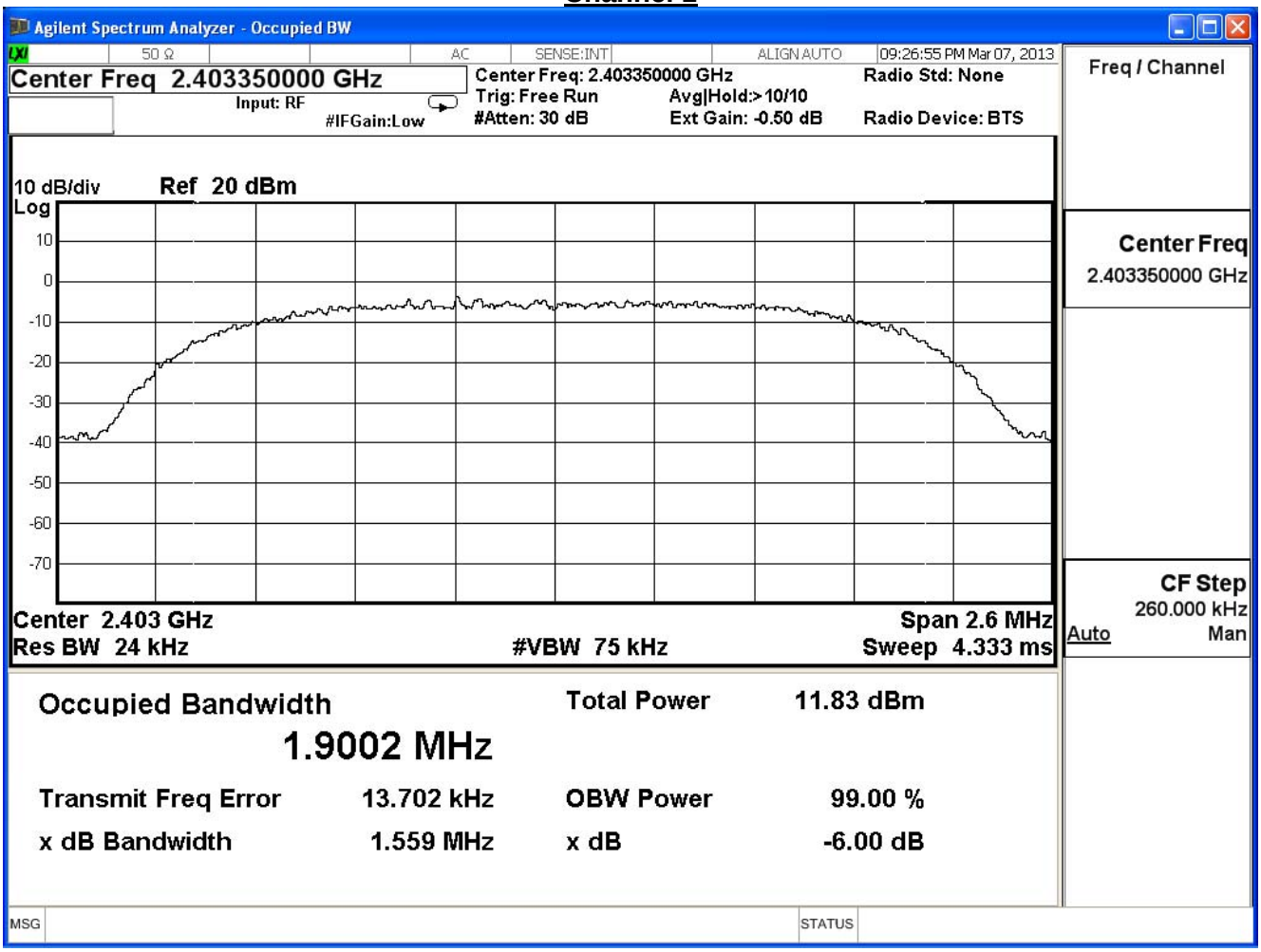
The measurement uncertainty is defined as ±150Hz

7.7. Test Result

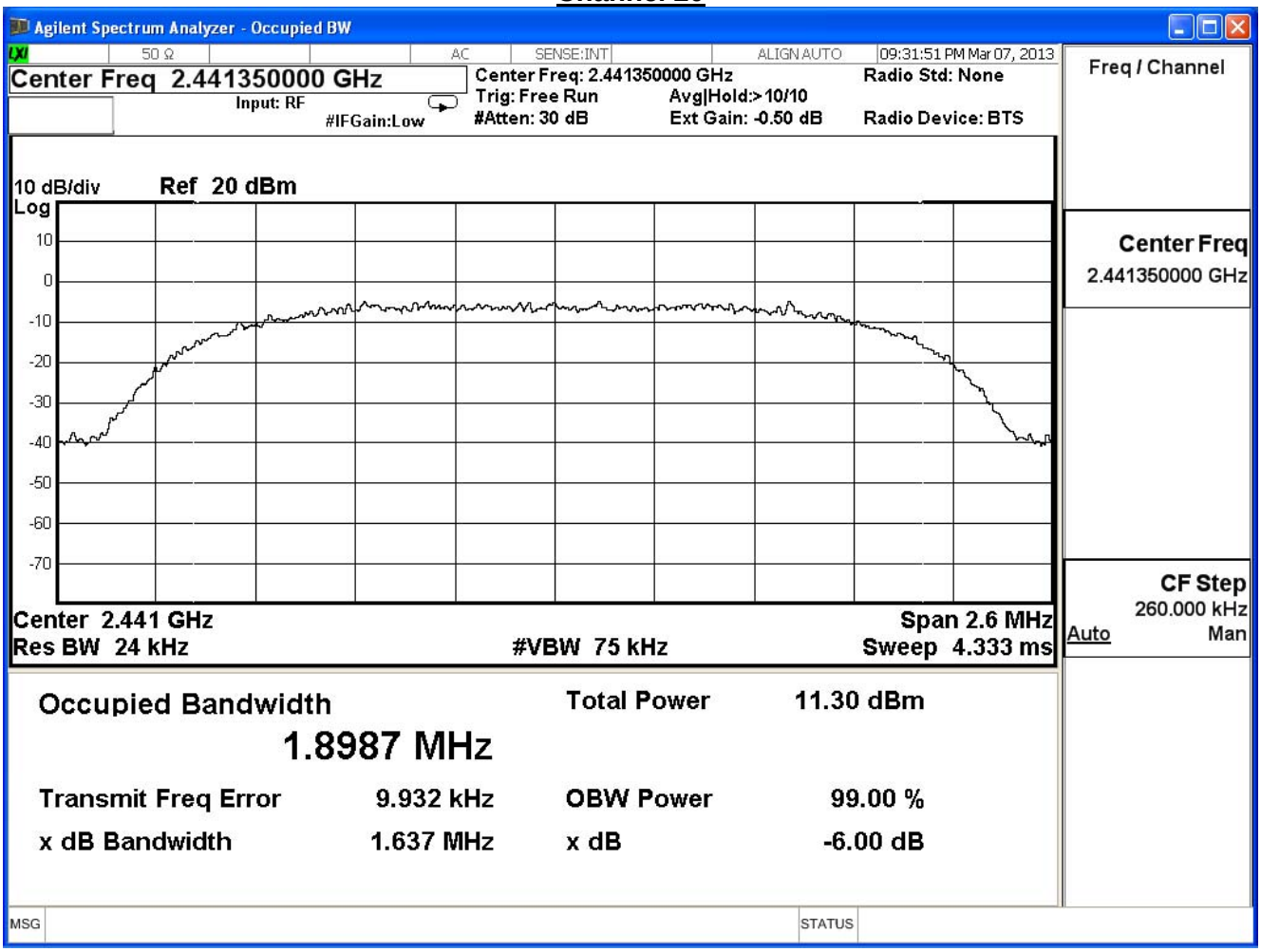
Product	GMX Dolby Transmitter		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: Mode 1: Transmit (Ant 301)		
Date of Test	2013/03/07	Test Site	SR7

Channel No.	Frequency (MHz)	Measurement Level (MHz)	Required Limit (MHz)	Result
1	2403.35	1.559	≧0.5	Pass
20	2441.35	1.637	≧0.5	Pass
38	2477.35	1.577	≧0.5	Pass

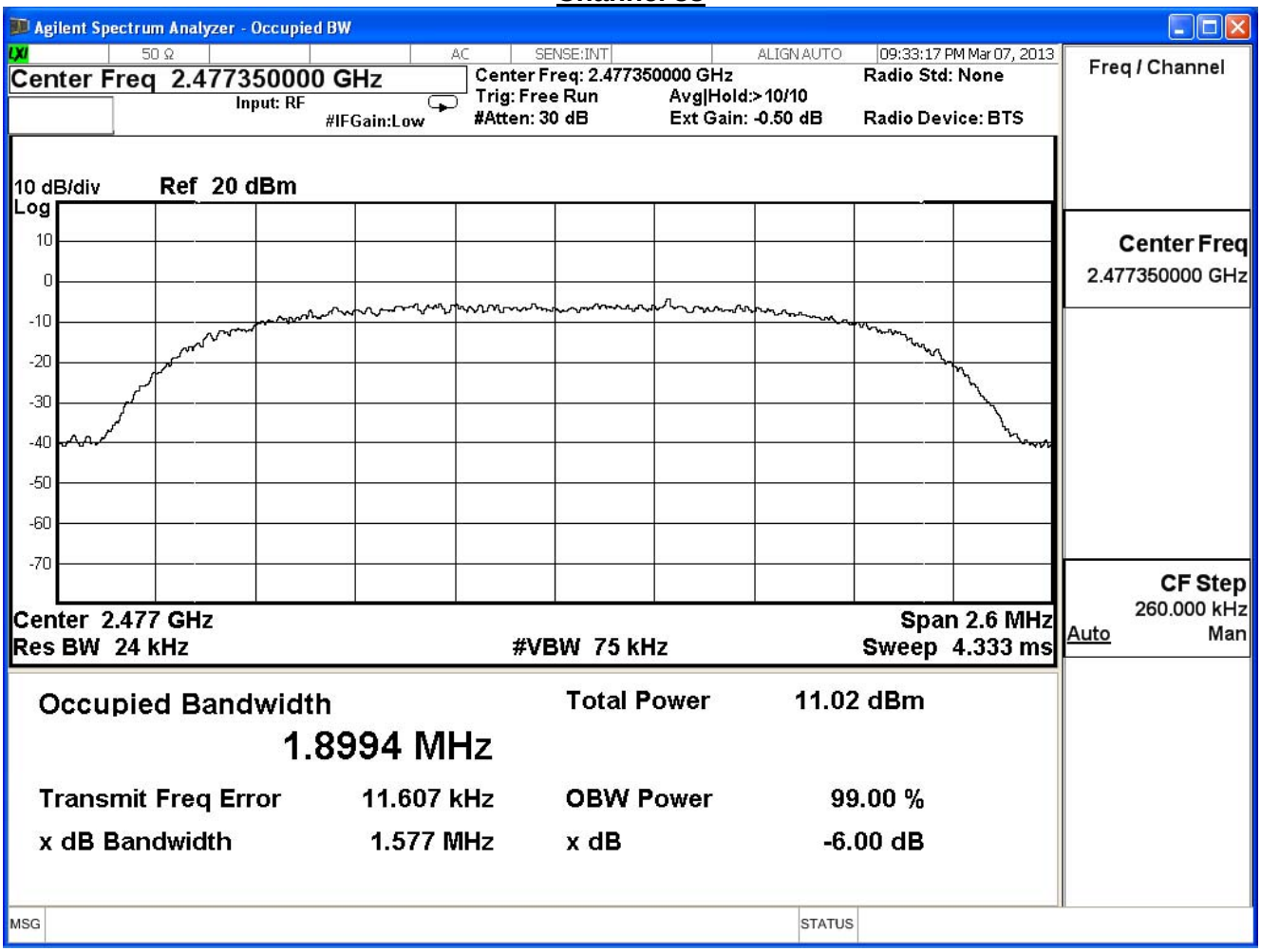
Channel 1



Channel 20


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:31:51 PM Mar 07, 2013
Center Freq 2.441350000 GHz
Input: RF
#IFGain:Low
Center Freq: 2.441350000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 30 dB
Ext Gain: -0.50 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Log
Ref 20 dBm
10
0
-10
-20
-30
-40
-50
-60
-70
Center Freq
2.441350000 GHz
CF Step
260.000 kHz
Auto
Man
Center 2.441 GHz
Res BW 24 kHz
#VBW 75 kHz
Span 2.6 MHz
Sweep 4.333 ms
Occupied Bandwidth
1.8987 MHz
Total Power 11.30 dBm
Transmit Freq Error 9.932 kHz
OBW Power 99.00 %
x dB Bandwidth 1.637 MHz
x dB -6.00 dB
MSG
STATUS

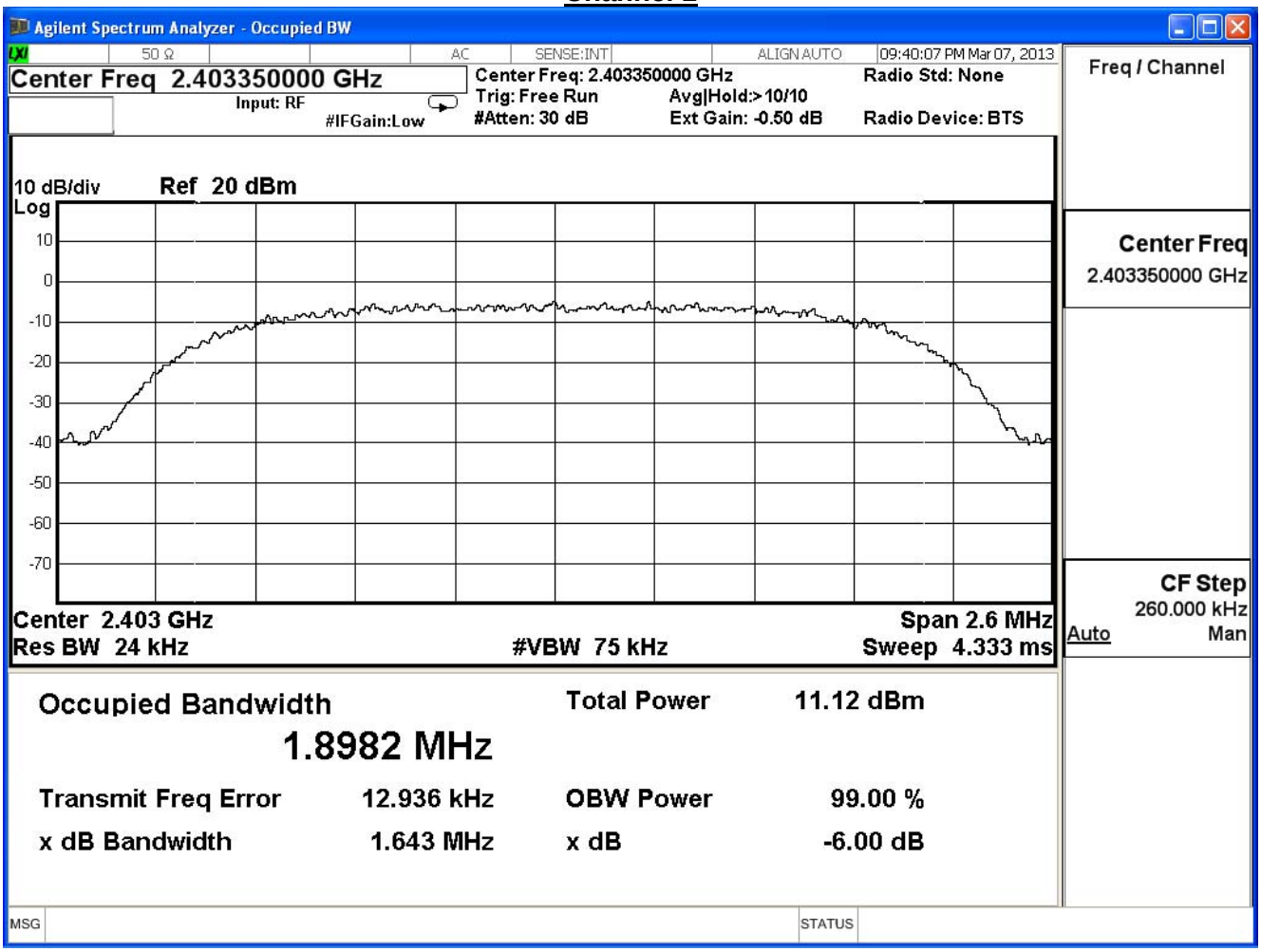
Channel 38


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:33:17 PM Mar 07, 2013
Center Freq 2.477350000 GHz
Input: RF
#IFGain:Low
Center Freq: 2.477350000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 30 dB
Ext Gain: -0.50 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Log
Ref 20 dBm
10
0
-10
-20
-30
-40
-50
-60
-70
Center Freq
2.477350000 GHz
Center 2.477 GHz
Res BW 24 kHz
#VBW 75 kHz
Span 2.6 MHz
Sweep 4.333 ms
CF Step
260.000 kHz
Auto
Man
Occupied Bandwidth
1.8994 MHz
Total Power
11.02 dBm
Transmit Freq Error
11.607 kHz
OBW Power
99.00 %
x dB Bandwidth
1.577 MHz
x dB
-6.00 dB
MSG
STATUS

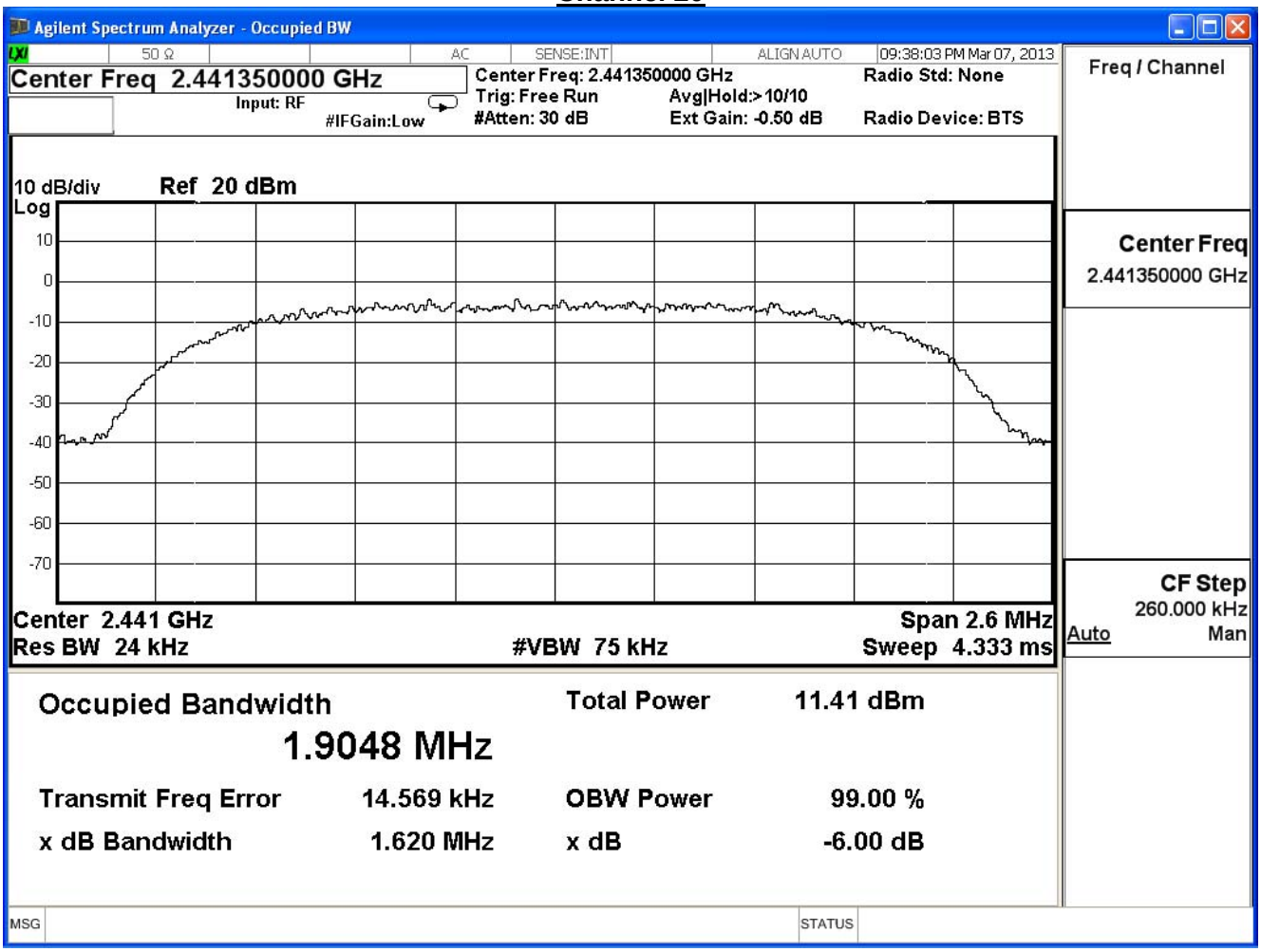
Product	GMX Dolby Transmitter		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: Transmit (Ant 302)		
Date of Test	2013/03/07	Test Site	SR7

Channel No.	Frequency (MHz)	Measurement Level (MHz)	Required Limit (MHz)	Result
1	2403.35	1.643	≧0.5	Pass
20	2441.35	1.620	≧0.5	Pass
38	2477.35	1.739	≧0.5	Pass

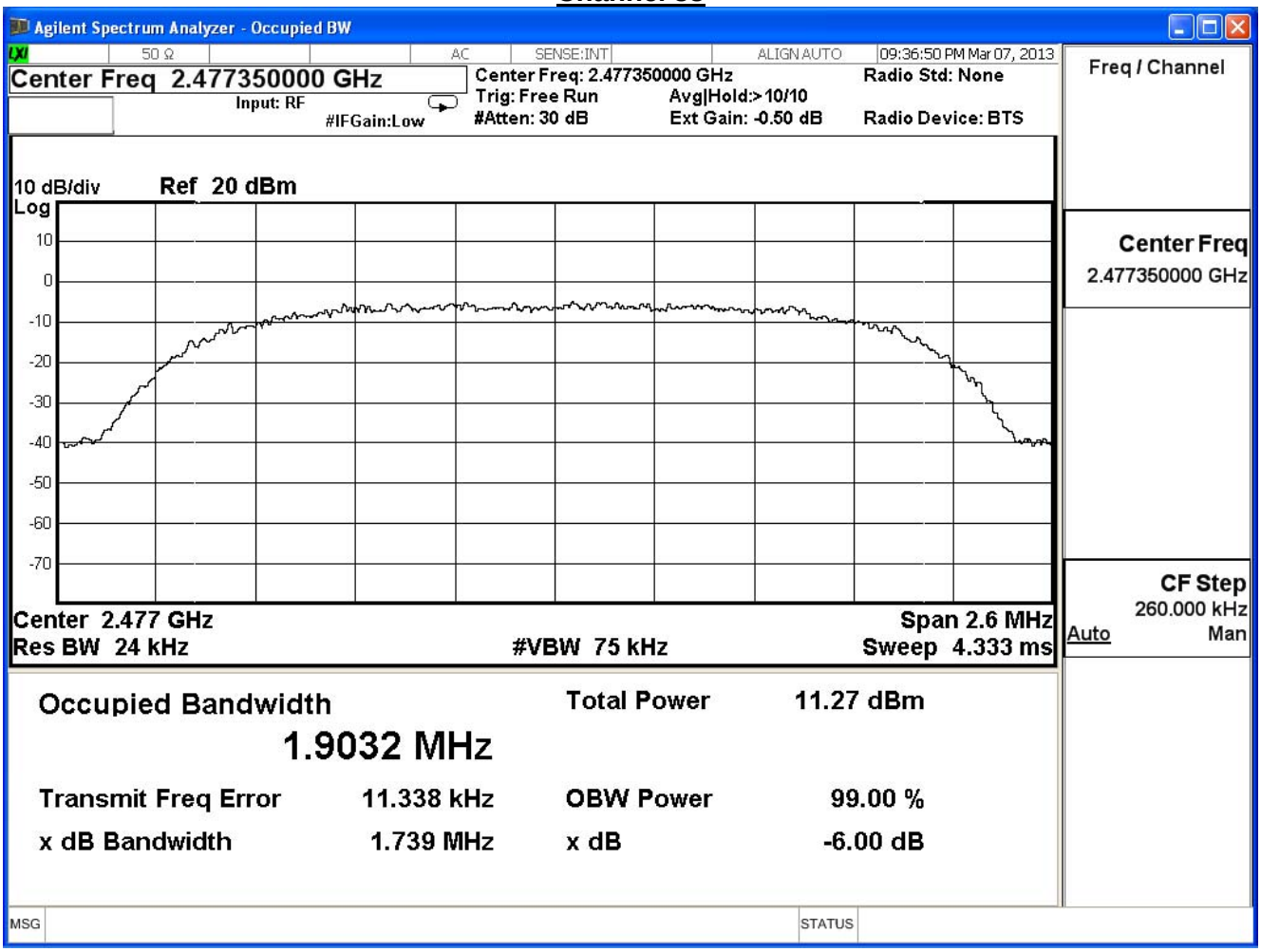
Channel 1



Channel 20


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:38:03 PM Mar 07, 2013
Center Freq 2.441350000 GHz
Input: RF
#IFGain:Low
Center Freq: 2.441350000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>10/10
Ext Gain: -0.50 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Ref 20 dBm
Log
10
0
-10
-20
-30
-40
-50
-60
-70
Center Freq
2.441350000 GHz
Center 2.441 GHz
Res BW 24 kHz
#VBW 75 kHz
Span 2.6 MHz
Sweep 4.333 ms
CF Step
260.000 kHz
Auto
Man
Occupied Bandwidth
1.9048 MHz
Total Power
11.41 dBm
Transmit Freq Error
14.569 kHz
OBW Power
99.00 %
x dB Bandwidth
1.620 MHz
x dB
-6.00 dB
MSG
STATUS

Channel 38


Agilent Spectrum Analyzer - Occupied BW
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:36:50 PM Mar 07, 2013
Center Freq 2.477350000 GHz
Input: RF
#IFGain:Low
Center Freq: 2.477350000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 30 dB
Ext Gain: -0.50 dB
Radio Std: None
Radio Device: BTS
Freq / Channel
10 dB/div
Log
Ref 20 dBm
10
0
-10
-20
-30
-40
-50
-60
-70
Center Freq
2.477350000 GHz
Center 2.477 GHz
Res BW 24 kHz
#VBW 75 kHz
Span 2.6 MHz
Sweep 4.333 ms
CF Step
260.000 kHz
Auto
Man
Occupied Bandwidth
1.9032 MHz
Total Power
11.27 dBm
Transmit Freq Error
11.338 kHz
OBW Power
99.00 %
x dB Bandwidth
1.739 MHz
x dB
-6.00 dB
MSG
STATUS

8. Power Density

8.1. Test Equipment

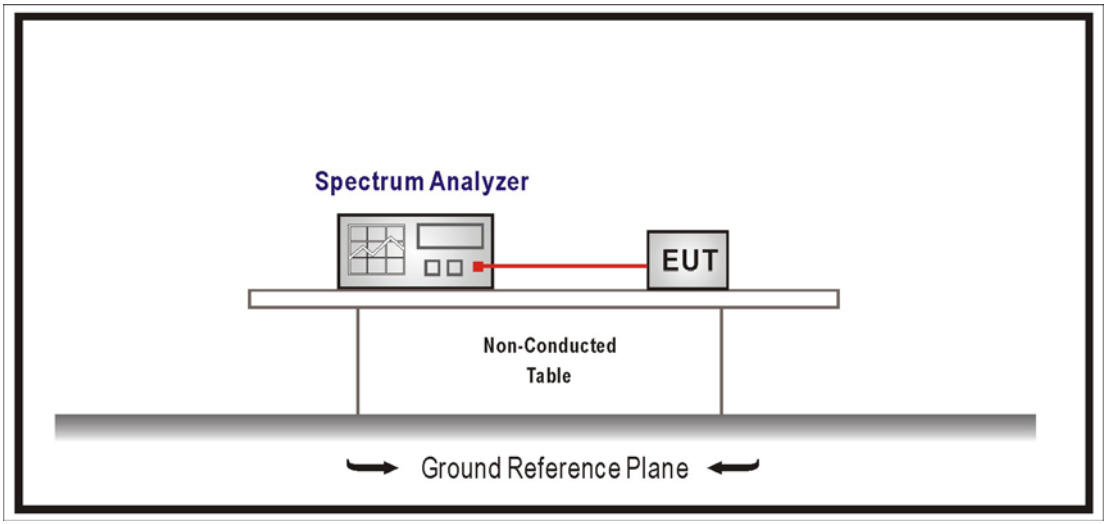
The following test equipment are used during the test:

Power Density / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
EXA Signal Analyzer	Agilent	N9010A-EXA	US47140172	2013/07/31

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

8.2. Test Setup



8.3. Limits

The peak power spectral density conducted from the intentional radiated to the antenna shall not be greater than +8dBm in any 3kHz band during any time interval of continuous transmission.

8.4. Test Procedures

The EUT was setup according to ANSI C63.4: 2009; tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
Set RBW= 100 kHz, Set VBW= 300 kHz, Sweep time=Auto, Set detector=Peak detector.
Scale the observed power level to an equivalent value in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log (3 kHz/100 kHz = -15.2 dB).

8.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2011

8.6. Uncertainty

The measurement uncertainty is defined as ±1.27dB.

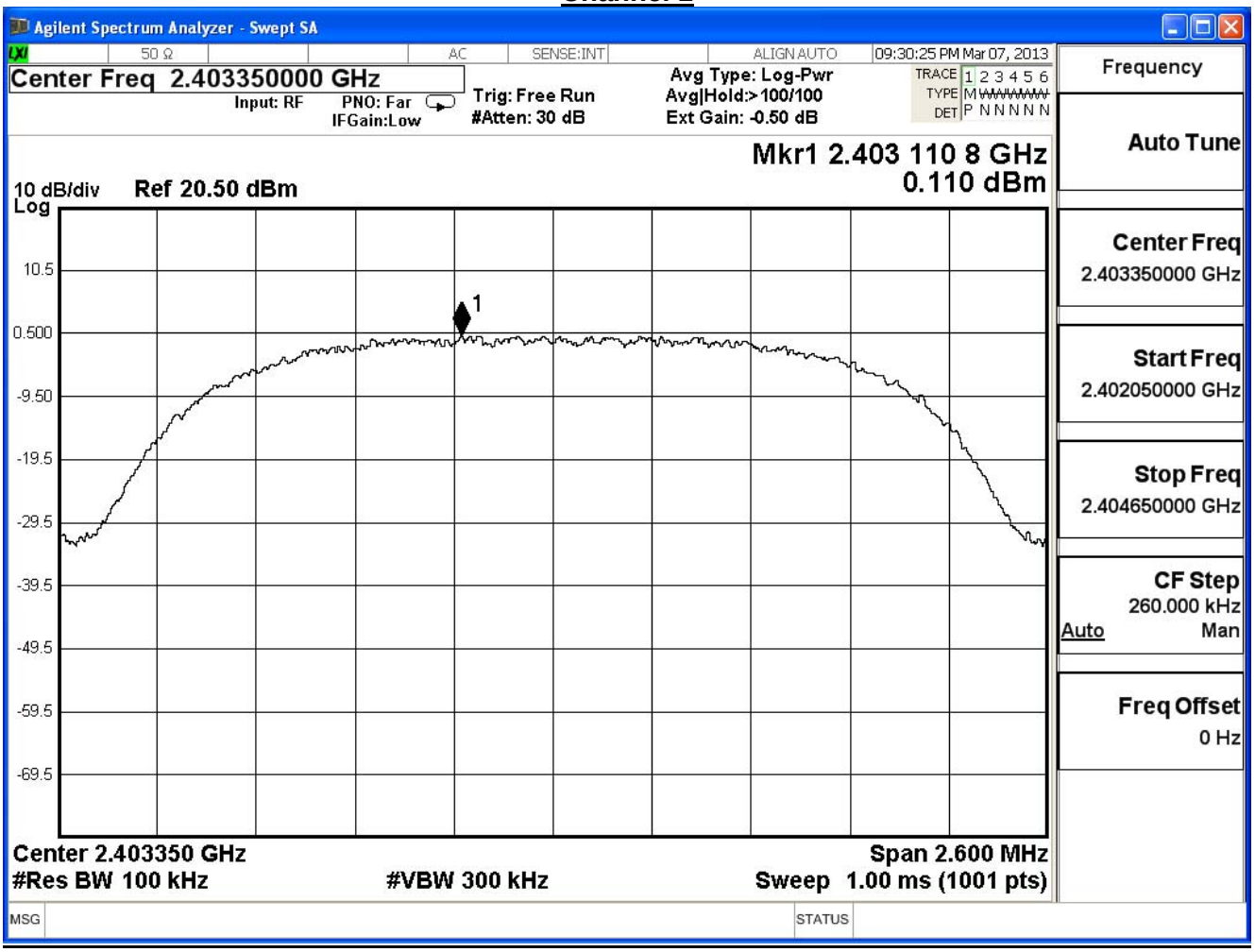
8.7. Test Result

Product	GMX Dolby Transmitter		
Test Item	Power Density		
Test Mode	Mode 1: Transmit (Ant 301)		
Date of Test	2013/03/07	Test Site	SR7

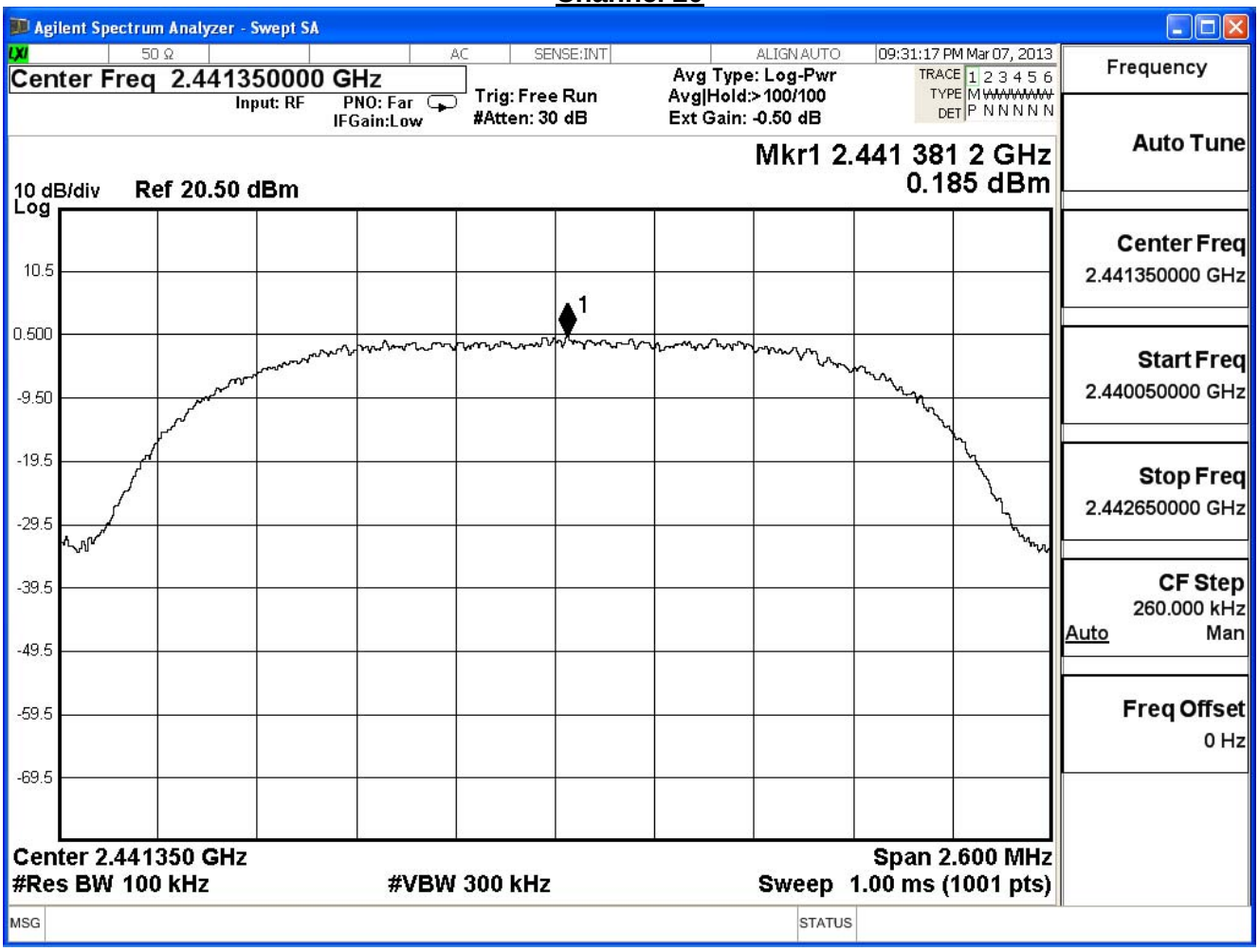
Channel No.	Frequency (MHz)	Reading Level(dBm)	Measure Level (dBm)	Limit (dBm)	Result
1	2403.35	0.110	-15.090	≤8	Pass
20	2441.35	0.185	-15.015	≤8	Pass
38	2477.35	0.064	-15.136	≤8	Pass

Note: Measure Level (dBm) = Reading Level (dBm) + BWCF = Reading Level (dBm) -15.2 (dB)
Bandwidth correction factor (BWCF) = 10log (3kHz.100kHz)

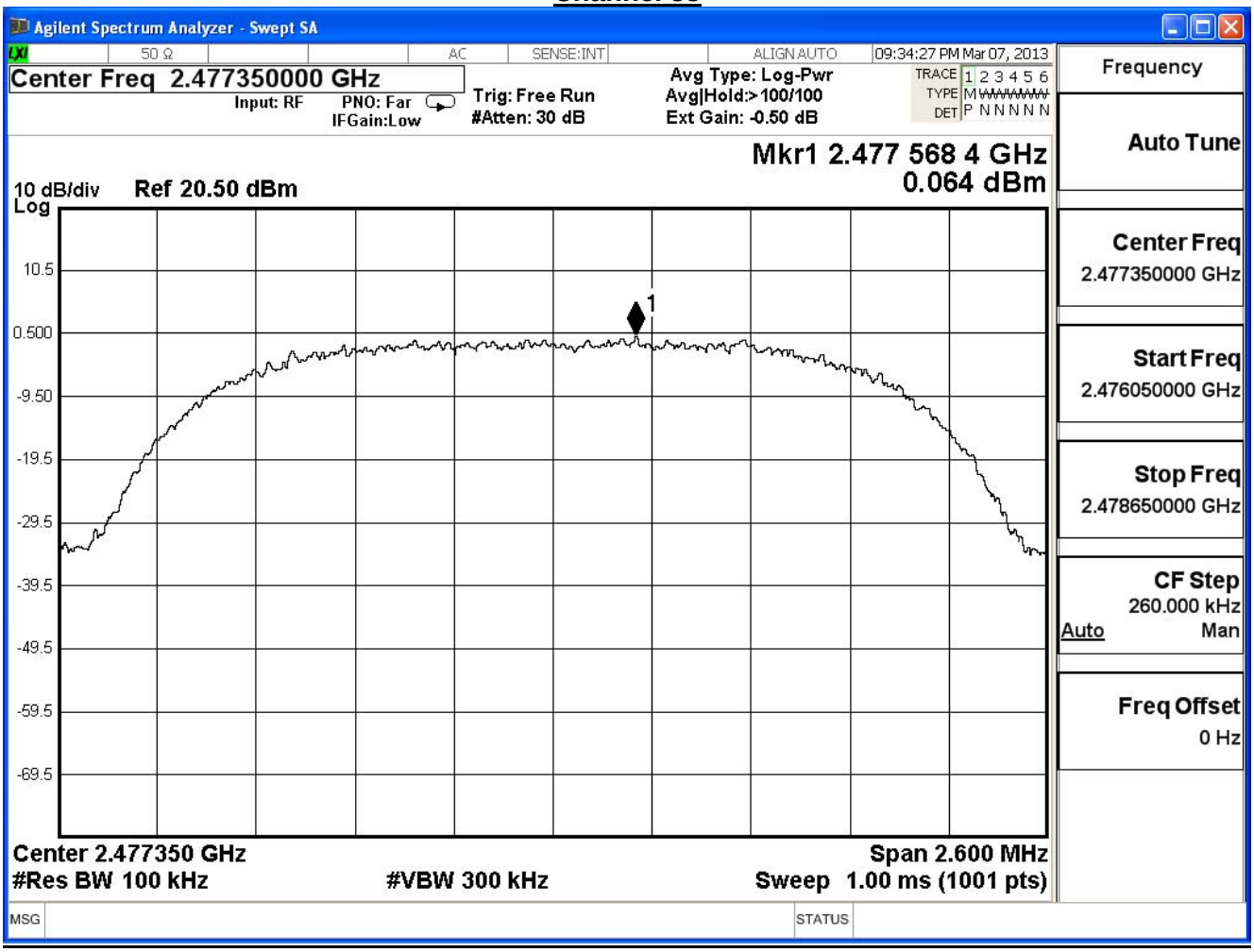
Channel 1



Channel 20


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:31:17 PM Mar 07, 2013
Center Freq 2.441350000 GHz
Input: RF
PNO: Far
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -0.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 2.441 381 2 GHz
0.185 dBm
10 dB/div
Log
Ref 20.50 dBm
10.5
0.500
-9.50
-19.5
-29.5
-39.5
-49.5
-59.5
-69.5
1
Center 2.441350 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 2.600 MHz
Sweep 1.00 ms (1001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.441350000 GHz
Start Freq
2.440050000 GHz
Stop Freq
2.442650000 GHz
CF Step
260.000 kHz
Auto
Man
Freq Offset
0 Hz

Channel 38

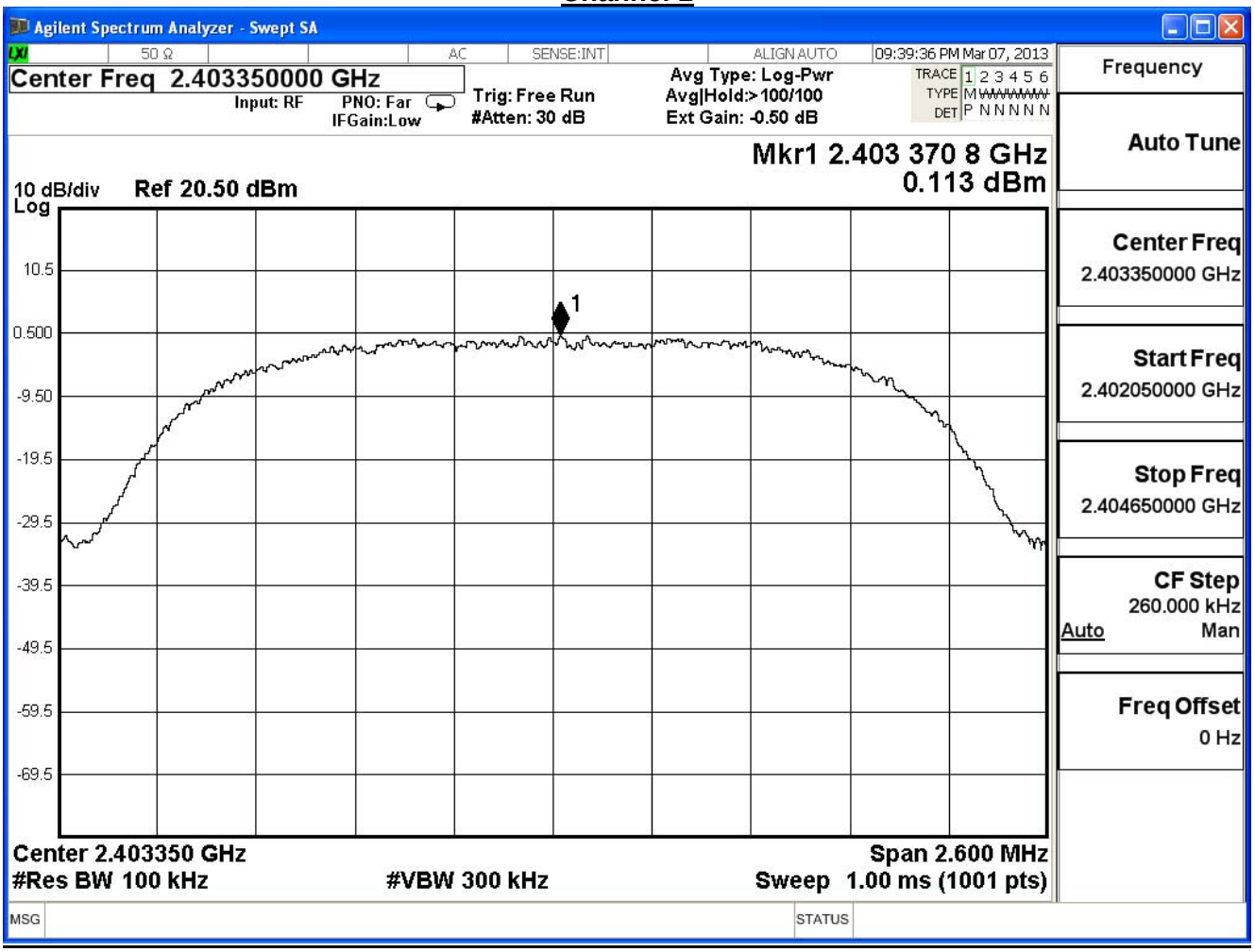

Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:34:27 PM Mar 07, 2013
Center Freq 2.477350000 GHz
Input: RF
PNO: Far
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -0.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 2.477 568 4 GHz
0.064 dBm
10 dB/div
Log
Ref 20.50 dBm
10.5
0.500
-9.50
-19.5
-29.5
-39.5
-49.5
-59.5
-69.5
Center 2.477350 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 2.600 MHz
Sweep 1.00 ms (1001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.477350000 GHz
Start Freq
2.476050000 GHz
Stop Freq
2.478650000 GHz
CF Step
260.000 kHz
Auto
Man
Freq Offset
0 Hz

Product	GMX Dolby Transmitter		
Test Item	Power Density		
Test Mode	Mode 2: Transmit (Ant 302)		
Date of Test	2013/03/07	Test Site	SR7

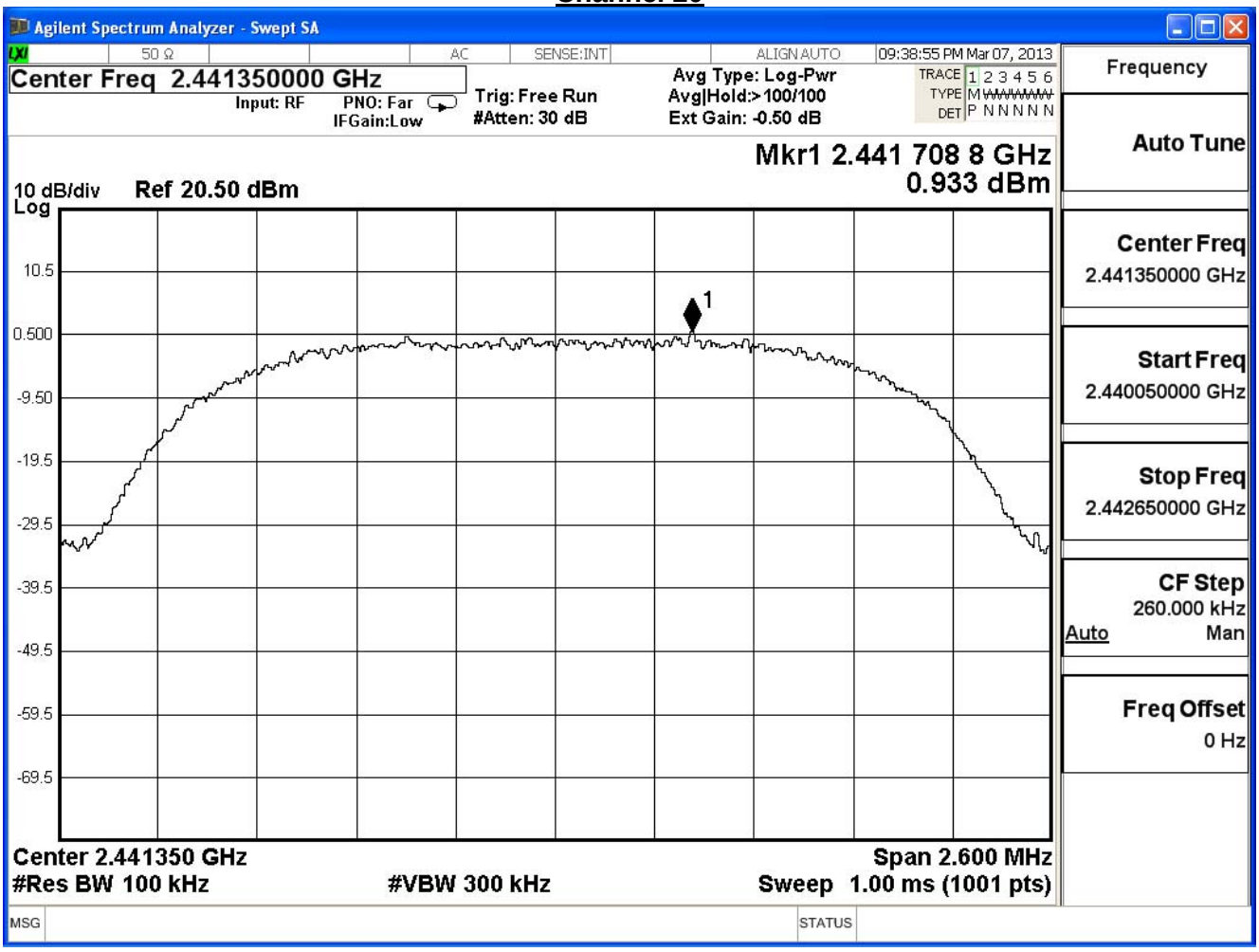
Channel No.	Frequency (MHz)	Reading Level(dBm)	Measure Level (dBm)	Limit (dBm)	Result
1	2403.35	0.113	-15.087	≤8	Pass
20	2441.35	0.933	-14.267	≤8	Pass
38	2477.35	0.108	-15.092	≤8	Pass

Note: Measure Level (dBm) = Reading Level (dBm) + BWCF = Reading Level (dBm) -15.2 (dB)
Bandwidth correction factor (BWCF) = 10log (3kHz.100kHz)

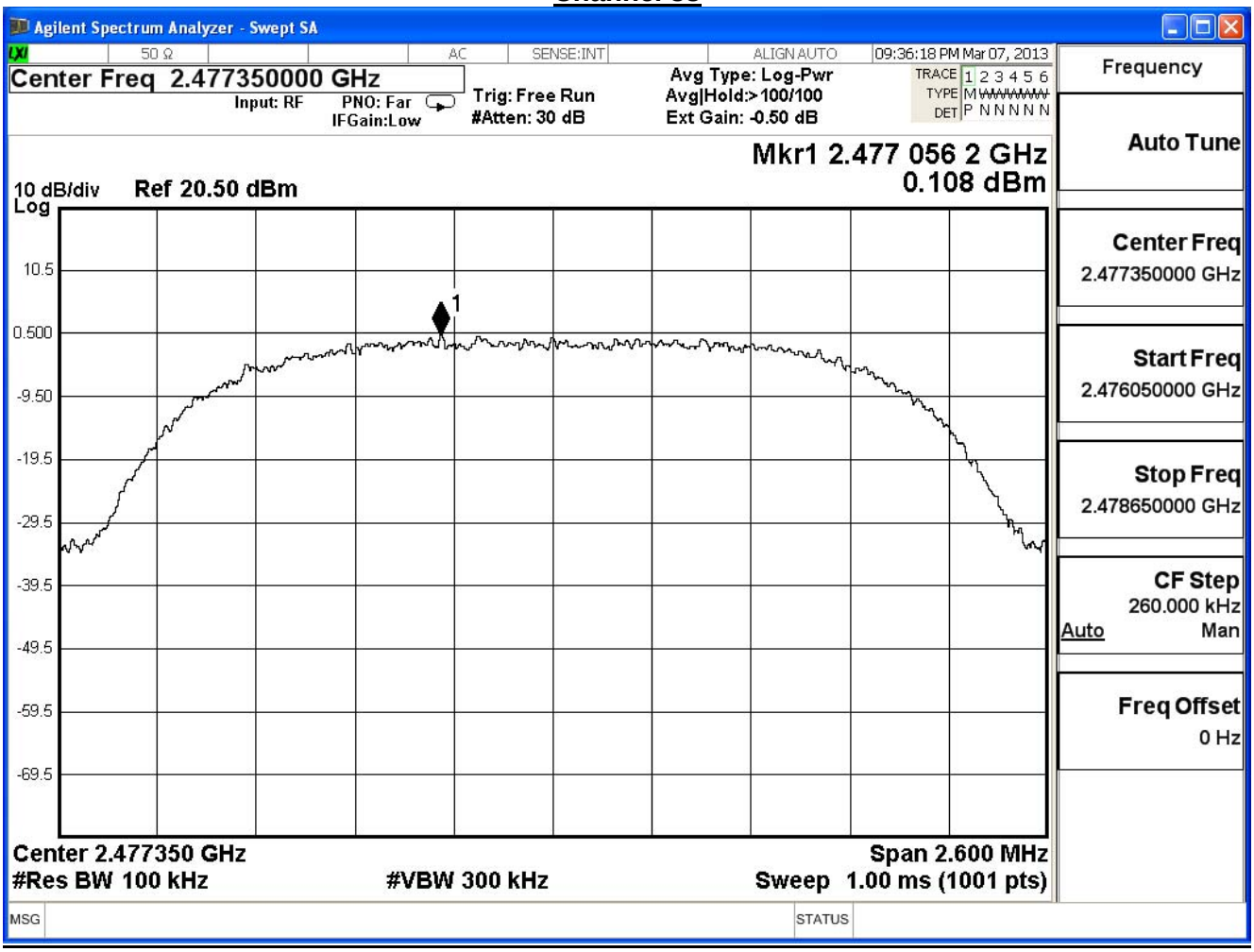
Channel 1



Channel 20


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:38:55 PM Mar 07, 2013
Center Freq 2.441350000 GHz
Input: RF
PNO: Far
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -0.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 2.441 708 8 GHz
0.933 dBm
10 dB/div
Log
Ref 20.50 dBm
10.5
0.500
-9.50
-19.5
-29.5
-39.5
-49.5
-59.5
-69.5
1
Center 2.441350 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 2.600 MHz
Sweep 1.00 ms (1001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.441350000 GHz
Start Freq
2.440050000 GHz
Stop Freq
2.442650000 GHz
CF Step
260.000 kHz
Auto
Man
Freq Offset
0 Hz

Channel 38


Agilent Spectrum Analyzer - Swept SA
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:36:18 PM Mar 07, 2013
Center Freq 2.477350000 GHz
Input: RF
PNO: Far
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
Ext Gain: -0.50 dB
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Mkr1 2.477 056 2 GHz
0.108 dBm
10 dB/div
Log
Ref 20.50 dBm
10.5
0.500
-9.50
-19.5
-29.5
-39.5
-49.5
-59.5
-69.5
1
Center 2.477350 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 2.600 MHz
Sweep 1.00 ms (1001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.477350000 GHz
Start Freq
2.476050000 GHz
Stop Freq
2.478650000 GHz
CF Step
260.000 kHz
Auto
Man
Freq Offset
0 Hz