Lab Code: 200707-0

FCC PART 15.247

TEST REPORT

For

Xingtel Xiamen Group Co., Ltd.

Xingtel Building, Chuangxin Road, Torch Hi-Tech Industrial District,
Xiamen 361006, PR China

FCC ID: QMHI500

Report Type:	Product Type:
Original Report	iPhone Complimate

Test Engineer:	Brown Lu
Report Number:	RSZ120301004-00
Report Date:	2012-04-17
Reviewed By:	Merry Zhao EMC Engineer
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Shenzhen) 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008 www.baclcorp.com.cn

TABLE OF CONTENTS

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Xingtel Xiamen Group Co., Ltd.*'s product, model number: *i-500 (FCC ID: QMHI500)* ("EUT") in this report was an *iPhone Complimate,* which was measured approximately: 17.2 cm (L) x 9.3 cm (W) x 4.4 cm (H) for base, 14.0 cm (L) x 4.1 cm (W) x 1.4 cm (H) for handset, rated input voltage: Base: DC 7.5V from adapter; Handset: DC 3.7 V Rechargeable Li-polymer Battery.

Adapter information
Model: P12-075150 US
Input: 100-240V~50/60 Hz 0.3A
Output: DC 7.5V 1.5A

Note: the series product, model i-500, i-450, i-400 and i-350 are electrically identical, and the differences among them please refer to the attached declaration. Model i-500 was selected for fully testing.

** All measurement and test data in this report was gathered from production sample serial number: 1203003 (Assigned by BACL, Shenzhen). The EUT was received on 2012-03-01.*

Objective

This report is prepared on behalf of *Xingtel Xiamen Group Co., Ltd.* in accordance with Part 2-Subpart J, Part 15-Subparts A, B and C of the Federal Communication Commissions rules.

The tests were performed in order to determine the compliance of the EUT with FCC Part 15-Subpart C, section 15.203, 15.205, 15.207, 15.209 and 15.247 rules.

Related Submittal(s)/Grant(s)

No Related Submittal(s).

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2009, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All emissions measurement was performed and Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

The uncertainty of any RF tests which use conducted method measurement is ±0.96 dB, the uncertainty of any radiation on emissions measurement is ±4.0 dB

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China.

Test site at Bay Area Compliance Laboratories Corp. (Shenzhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on December 06, 2010.
The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2009.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratories Corp. (Shenzhen) is an ISO/IEC 17025 accredited laboratory, and is accredited by National Voluntary Laboratory Accredited Program (Lab Code 200707-0).

The current scope of accreditations can be found at http://ts.nist.gov/Standards/scopes/2007070.htm

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The software (Bluetooth software (CSR)) provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

EUT Exercise Software

(Bluetooth software (CSR))

Equipment Modifications

No modification was made to the EUT tested.

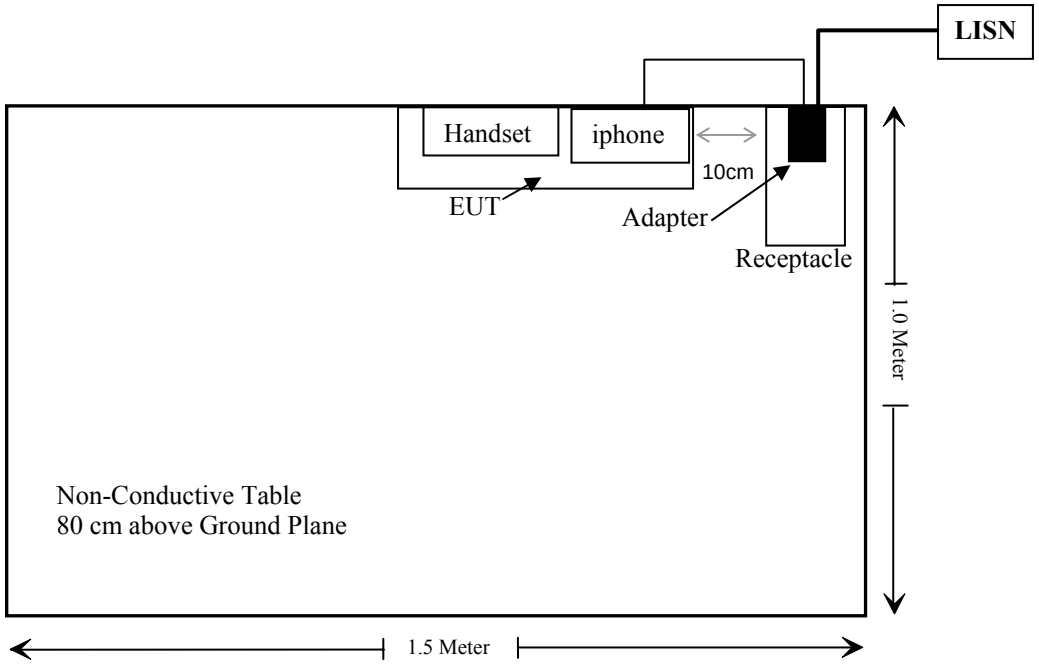
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Apple	Mobile phone	Iphone 3GS	86952FSV3NQ

External I/O Cable

Cable Description	Length (m)	From/Port	To
Unshielded Detachable DC Power Cable	1.5	Adapter	LISN

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.247 (i), §2.1093	RF Exposure	Compliance
§15.203	Antenna Requirement	Compliance
§15.207 (a)	Conducted Emissions	Compliance
§15.205, §15.209, §15.247(d)	Radiated Emissions	Compliance
§15.247 (a)(1)	20 dB Bandwidth	Compliance
§15.247(a)(1)	Channel Separation Test	Compliance
§15.247(a)(1)(iii)	Time of Occupancy (Dwell Time)	Compliance
§15.247(a)(1)(iii)	Quantity of hopping channel Test	Compliance
§15.247(b)(1)	Peak Output Power Measurement	Compliance
§15.247(d)	Band Edges	Compliance

FCC §1.1307 (b) (1) & §2.1093 - RF EXPOSURE

Applicable Standard

According to subpart 15.247(i)and subpart §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to KDB 447498 D01 Mobile Portable RF Exposure v03r03, no SAR required if power is lower than the flowing threshold:

When routine evaluation is required for SAR and the output power is ≤ 60/f(GHz) mW, the test reduction and test exclusion procedures given herein, or in KDB 616217 or KDB 648474, are applicable.

A device may be used in portable exposure conditions with no restrictions on host platforms when either the source-based time-averaged output power is ≤ 60/f(GHz) mW or all measured 1-g SAR are < 0.4 W/kg.10 When SAR evaluation is required, the most conservative exposure conditions for all expected operating configurations must be tested.

Measurement Result:

Max Peak output power:
Frequency at 2402 MHz is -1.82 dBm
EIRP=-1.82 dBm=0.658 mW
60/ f_{GHz} = 60/2402 =24.98 mW
Max Peak output power< 60/ f_{GHz}
This is a portable device and the Max Peak output power of EUT is less than 24.98mW.

So the SAR measurement is not necessary.

FCC §15.203 - ANTENNA REQUIREMENT

Applicable Standard

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

a. Antenna must be permanently attached to the unit.
b. Antenna must use a unique type of connector to attach to the EUT.

Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.247 (i), Systems operating in the 2400–2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum peak output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi

Antenna Connector Construction

The EUT has an integrated antenna arrangement, which was permanently attached and the gain was 0 dBi, fulfill the requirement of this section. Please refer to the internal photos.

Result: Compliance.

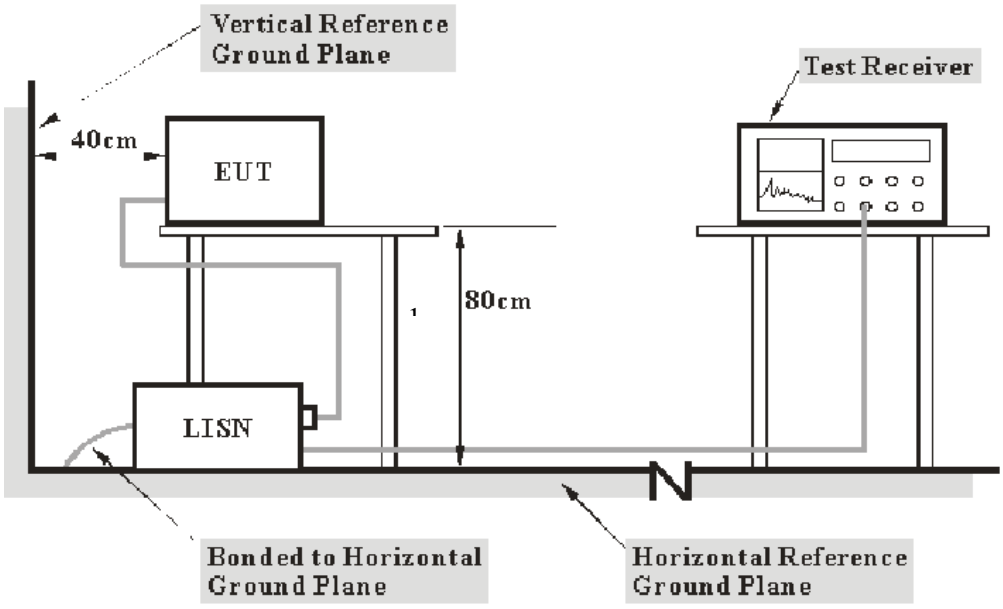
FCC§15.207 - CONDUCTED EMISSIONS

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

Based on CISPR 16-4-4, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at Bay Area Compliance Laboratories Corp. (Shenzhen) is 2.4 dB (k=2, 95% level of confidence).

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.4-2009 measurement procedure. The specification used was with the FCC 15.207 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

The adapter was connected to an AC 120V/60 Hz power source

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	***IF B/W***
150 kHz – 30 MHz	9 kHz

Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCS30	830245/006	2012-03-03	2013-03-02
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2012-03-09	2013-03-08
Rohde & Schwarz	Pulse limiter	ESH3Z2	DE25985	2011-07-08	2012-07-07

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15 .207, with the worst margin reading of:

23.38 dB at **0.395 MHz** in the **Line** conducted mode.

Test Data

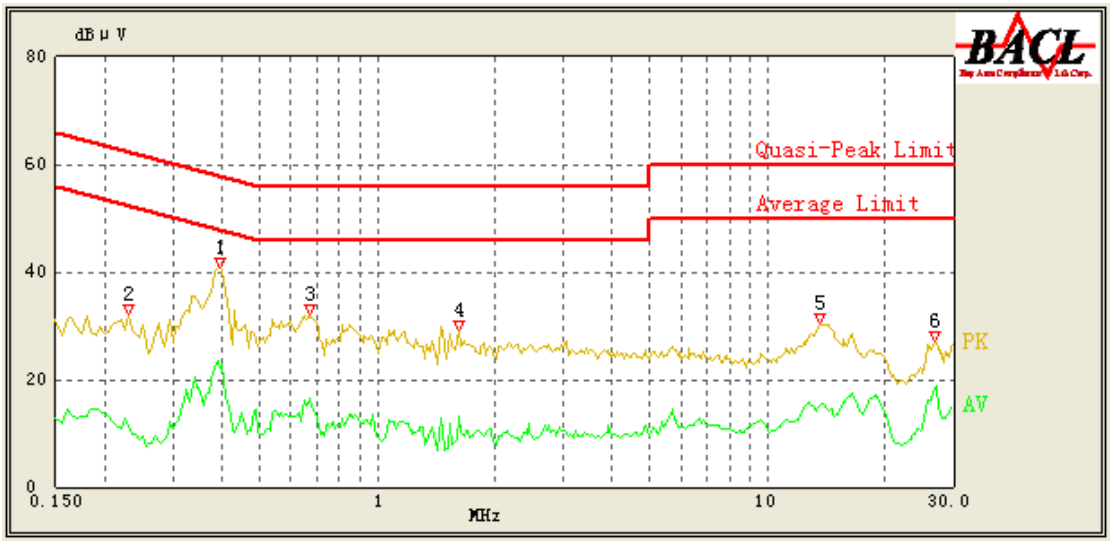
Environmental Conditions

Temperature:	20 ° C
Relative Humidity:	48 %
ATM Pressure:	100.0 kPa

The testing was performed by Brown Lu on 2012-03-14.

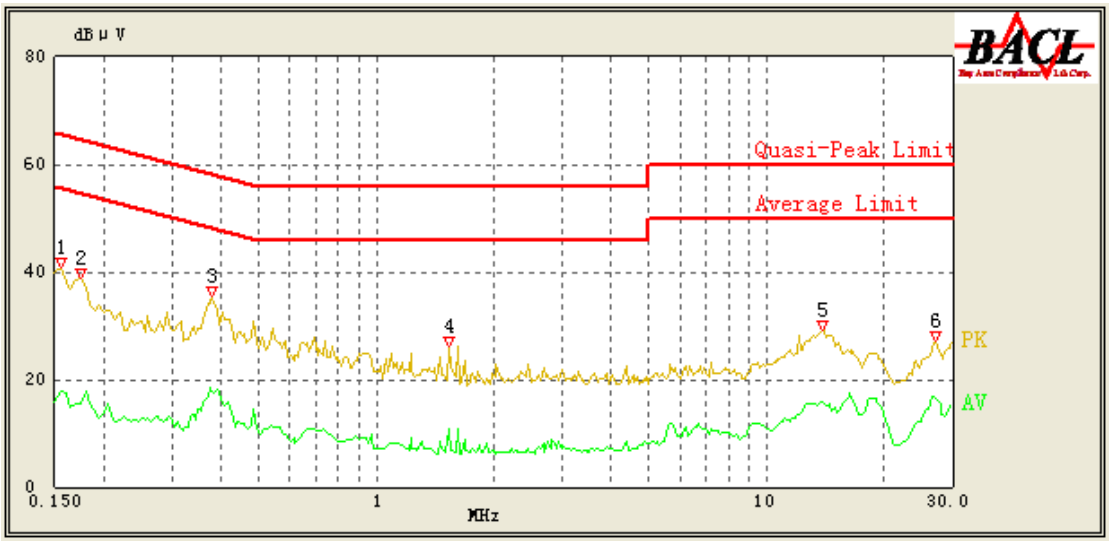
EUT Operation Mode: Charging & BT Communication

AC 120V/60 Hz, Line:



Frequency (MHz)	Corrected Amplitude (dBµV)	Correction Factor (dB)	Limit (dBµV)	Margin (dB)	Detector (PK/ QP/Ave.)
0.395	35.62	10.23	59.00	23.38	QP
0.395	22.11	10.23	49.00	26.89	Ave.
0.670	16.18	10.24	46.00	29.82	Ave.
0.670	25.26	10.24	56.00	30.74	QP
26.895	18.06	12.62	50.00	31.94	Ave.
1.615	23.50	10.30	56.00	32.50	QP
26.845	27.45	12.61	60.00	32.55	QP
1.615	13.08	10.30	46.00	32.92	Ave.
13.695	15.06	11.31	50.00	34.94	Ave.
0.230	26.04	10.23	63.71	37.67	QP
13.570	21.48	11.30	60.00	38.52	QP
0.230	11.41	10.23	53.71	42.30	Ave.

AC 120V/60 Hz, Neutral:



Frequency (MHz)	Corrected Amplitude (dBµV)	Correction Factor (dB)	Limit (dBµV)	Margin (dB)	Detector (PK/ QP/Ave.)
0.380	29.65	10.23	59.43	29.78	QP
0.380	17.97	10.23	49.43	31.46	Ave.
26.990	16.51	12.64	50.00	33.49	Ave.
13.865	16.00	11.33	50.00	34.00	Ave.
1.540	21.74	10.29	56.00	34.26	QP
1.535	10.75	10.29	46.00	35.25	Ave.
0.155	17.78	10.23	55.86	38.08	Ave.
0.175	27.02	10.23	65.29	38.27	QP
0.155	26.82	10.23	65.86	39.04	QP
27.060	20.57	12.65	60.00	39.43	QP
0.175	15.54	10.23	55.29	39.75	Ave.
13.845	19.72	11.33	60.00	40.28	QP

FCC §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS

Applicable Standard

FCC §15.247 (d); §15.209; §15.205;

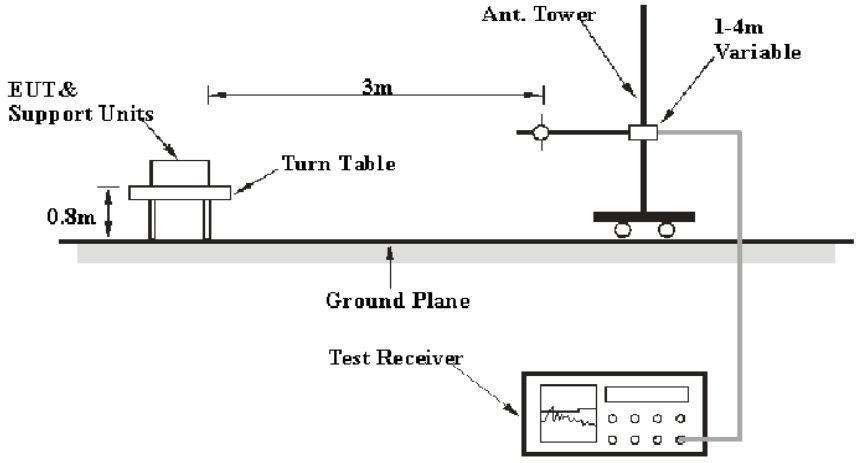
Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

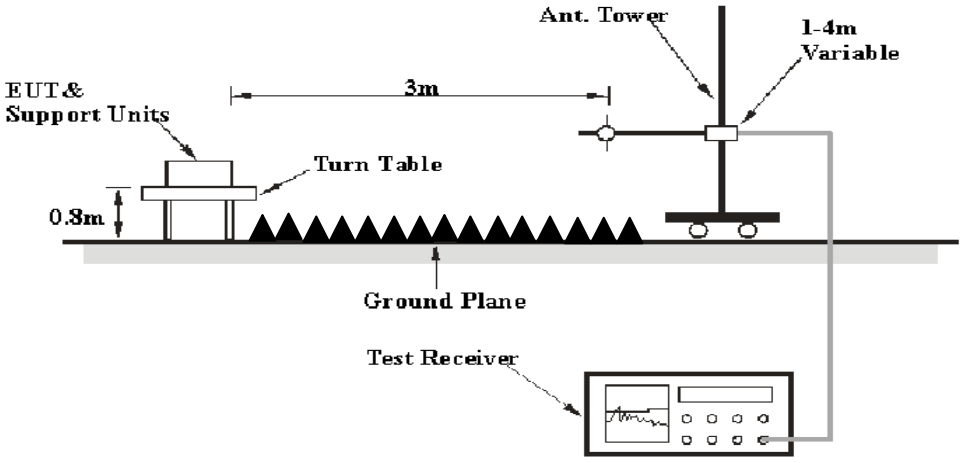
Based on CISPR 16-4-4, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at Bay Area Compliance Laboratories Corp. (Shenzhen) is 4.0 dB(k=2, 95% level of confidence) .

EUT Setup

Below 1GHz:



Above 1GHz:



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.4-2009. The specification used was the FCC 15.209, and FCC 15.247 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 25 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

Frequency Range	***RBW***	***Video B/W***	***Detector***
30 MHz – 1000 MHz	100 kHz	300 kHz	QP
1000 MHz – 25 GHz	1 MHz	3 MHz	PK
1000 MHz – 25 GHz	1 MHz	10 Hz	Ave.

Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

Data was recorded in Quasi-peak detection mode for frequency range of 30 MHz-1 GHz, peak and Average detection modes for frequencies above 1 GHz.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

Corrected Amplitude = Meter Reading + Antenna Factor + Cable Loss - Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin = Limit – Corrected Amplitude

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	HP8447D	2944A09795	2011-08-02	2012-08-01
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2011-11-11	2012-11-10
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2011-07-05	2012-07-04
Mini-circuits	Amplifier	ZVA-213+	T-E27H	2012-03-08	2013-03-07
Sunol Sciences	Horn Antenna	DRH-118	A052604	2011-05-05	2012-05-04
Rohde & Schwarz	Signal Analyzer	FSIQ 26	609358	2011-07-08	2012-07-07
Electro-Mechanics	Horn antenna	3116	9510-2270	2011-10-11	2012-11-10

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Title 47, Part 15, Subpart C, section 15.205, 15.209 and 15.247, with the worst margin reading of:

8.03 dB at **5527.1 MHz** in the **Horizontal** polarization in low channel

Test Data

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

The testing was performed by Brown Lu on 2012-03-08.

Test Mode: Transmitting

30 MHz-25 GHz (BDR mode was the worst case and the worst data as below)

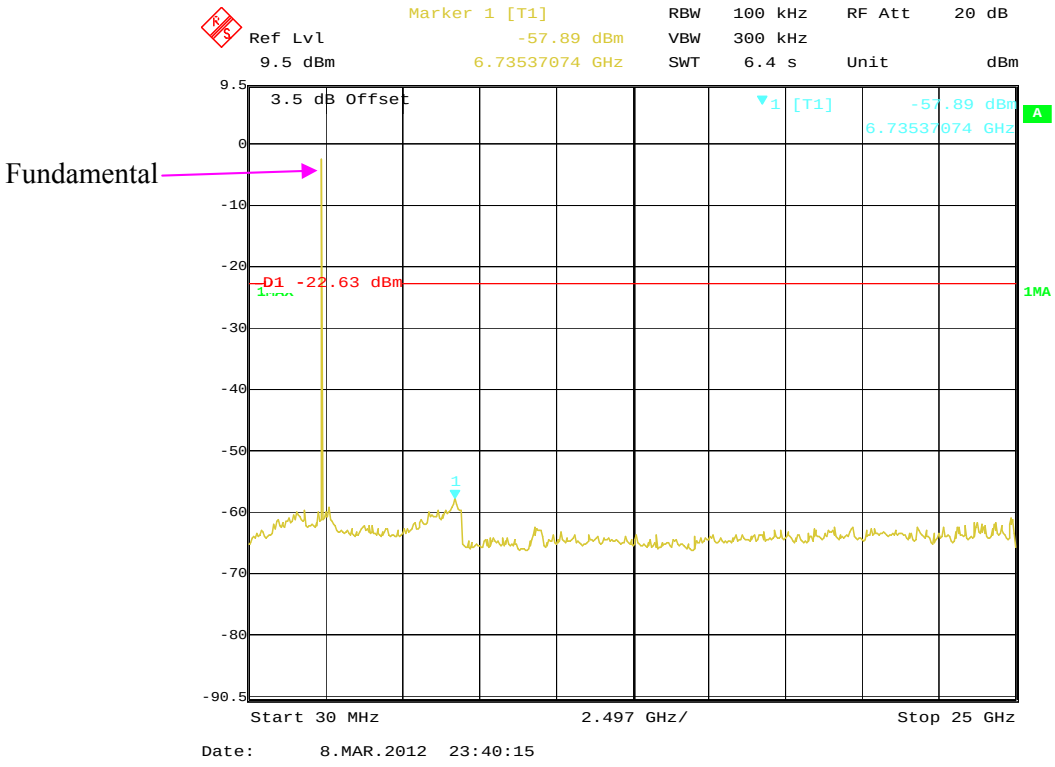
Indicated		Detector (PK/QP/Ave.)	Table Angle Degree	Antenna		Correction Factor			FCC Part 15.247/15.205/15.209			
Frequency (MHz)	S.A. Reading (dBμV)			Height (m)	Polar (H/V)	Ant. Factor (dB/m)	Cable Loss (dB)	Pre-Amp. Gain (dB)	Cord. Amp. (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Comment
Low Channel (2402 MHz)												
2402	70.75	PK	120	1.3	H	27.4	3.03	10.29	90.89	/	/	Fund.
2402	34.45	Ave.	120	1.3	H	27.4	3.03	10.29	54.59	/	/	Fund.
2402	71.72	PK	320	2.1	V	27.4	3.03	10.29	91.86	/	/	Fund.
2402	35.17	Ave.	320	2.1	V	27.4	3.03	10.29	55.31	/	/	Fund.
5527.1	16.85	Ave.	210	1.8	H	33.5	4.61	8.99	45.97	54	8.03	Spurious
4804	17.55	Ave.	350	1.2	H	31.3	4.30	9.96	43.19	54	10.81	Harmonic
4116.2	16.54	Ave.	160	1.6	V	32.0	3.98	9.81	42.71	54	11.29	Spurious
5527.1	30.62	PK	210	1.8	H	33.5	4.61	8.99	59.74	74	14.26	Spurious
4804	32.97	PK	350	1.2	H	31.3	4.30	9.96	58.61	74	15.39	Harmonic
4804	32.53	PK	140	1.9	V	31.3	4.30	9.96	58.17	74	15.83	Harmonic
2383.9	16.34	Ave.	150	1.9	H	27.4	2.98	10.12	36.60	54	17.40	Spurious
4116.2	30.33	PK	160	1.6	V	32.0	3.98	9.81	56.50	74	17.50	Spurious
2387.8	16.04	Ave.	190	2.1	H	27.4	2.98	10.12	36.30	54	17.70	Spurious
2388.4	15.98	Ave.	280	1.0	V	27.4	2.98	10.12	36.24	54	17.76	Spurious
2383.9	29.13	PK	150	1.9	H	27.4	2.98	10.12	49.39	74	24.61	Spurious
2387.8	29.12	PK	190	2.1	H	27.4	2.98	10.12	49.38	74	24.62	Spurious
2388.4	28.82	PK	280	1.0	V	27.4	2.98	10.12	49.08	74	24.92	Spurious
4804	17.68	Ave.	140	1.9	V	31.3	4.30	9.96	43.32	54	10.68	Harmonic
Middle Channel (2441 MHz)												
2441	72.38	PK	220	1.3	H	27.5	3.11	10.32	92.67	/	/	Fund.
2441	35.01	Ave.	220	1.3	H	27.5	3.11	10.32	55.30	/	/	Fund.
2441	71.53	PK	160	1.2	V	27.5	3.11	10.32	91.82	/	/	Fund.
2441	35.29	Ave.	160	1.2	V	27.5	3.11	10.32	55.58	/	/	Fund.
4882	17.92	Ave.	160	1.7	V	31.5	4.36	10.01	43.77	54	10.23	Harmonic
4882	17.88	Ave.	20	1.3	H	31.5	4.36	10.01	43.73	54	10.27	Harmonic
4116.2	16.83	Ave.	120	2.1	H	32.0	3.94	9.71	43.06	54	10.94	Spurious
4356.7	15.62	Ave.	150	1.5	V	31.8	4.11	10.17	41.36	54	12.64	Spurious
4882	33.19	PK	20	1.3	H	31.5	4.36	10.01	59.04	74	14.96	Harmonic
4882	32.91	PK	160	1.7	V	31.5	4.36	10.01	58.76	74	15.24	Harmonic
4116.2	30.55	PK	120	2.1	H	32.0	3.94	9.71	56.78	74	17.22	Spurious
4356.7	30.47	PK	150	1.5	V	31.8	4.11	10.17	56.21	74	17.79	Spurious
High Channel (2480 MHz)												
2480	73.52	PK	250	1.6	H	27.5	3.11	10.32	93.81	/	/	Fund.
2480	35.28	Ave.	250	1.6	H	27.5	3.11	10.32	55.57	/	/	Fund.
2480	71.14	PK	130	2.1	V	27.5	3.11	10.32	91.43	/	/	Fund.
2480	35.99	Ave.	130	2.1	V	27.5	3.11	10.32	56.28	/	/	Fund.
4960	18.66	Ave.	190	1.1	V	31.5	4.40	9.82	44.74	54	9.26	Harmonic
4960	18.29	Ave.	250	1.8	H	31.5	4.40	9.82	44.37	54	9.63	Harmonic
3939.9	16.38	Ave.	160	1.3	H	31.6	3.90	9.99	41.89	54	12.11	Spurious
4960	35.21	PK	250	1.8	H	31.5	4.40	9.82	61.29	74	12.71	Harmonic
4960	34.86	PK	190	1.1	V	31.5	4.40	9.82	60.94	74	13.06	Harmonic

2483.7	15.94	Ave.	160	1.5	V	27.5	3.11	10.32	36.23	54	17.77	Spurious
3939.9	30.49	PK	160	1.3	H	31.6	3.90	9.99	56.00	74	18.00	Spurious
2490.4	15.62	Ave.	180	1.3	H	27.5	3.11	10.32	35.91	54	18.09	Spurious
2487.9	15.31	Ave.	240	1.9	H	27.5	3.11	10.32	35.60	54	18.40	Spurious
2483.7	30.84	PK	160	1.5	V	27.5	3.11	10.32	51.13	74	22.87	Spurious
2487.9	30.56	PK	240	1.9	H	27.5	3.11	10.32	50.85	74	23.15	Spurious
2490.4	29.54	PK	180	1.3	H	27.5	3.11	10.32	49.83	74	24.17	Spurious

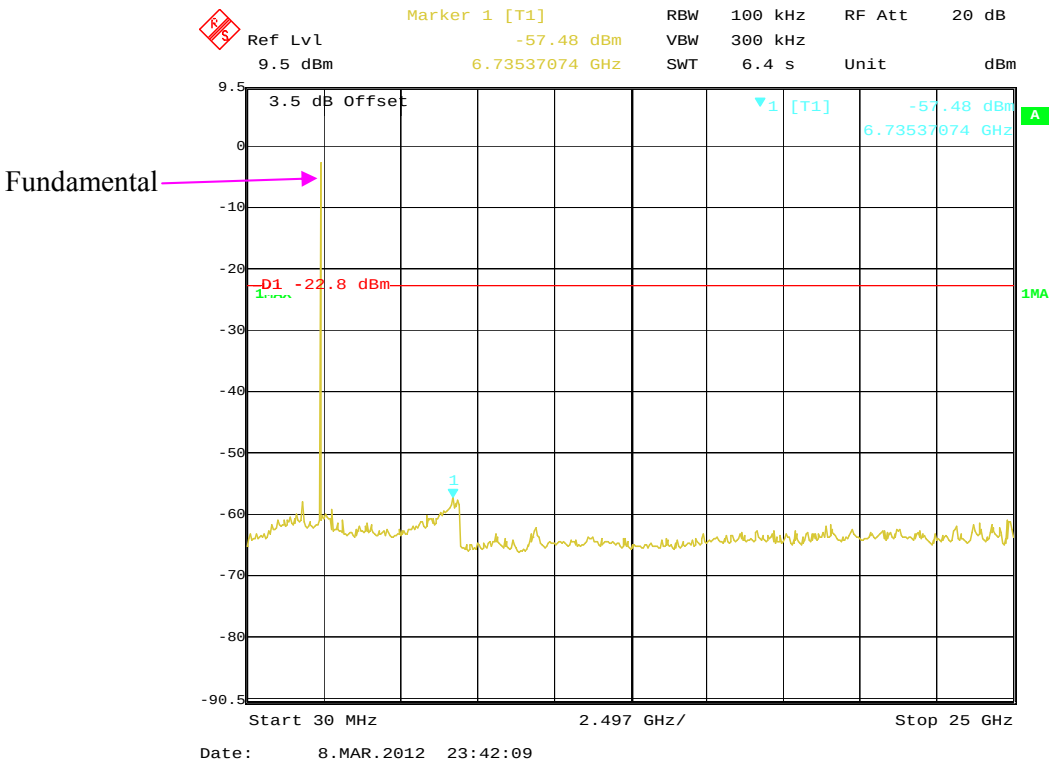
Spurious Emission at Antenna Terminals

Please refer to the following plots:

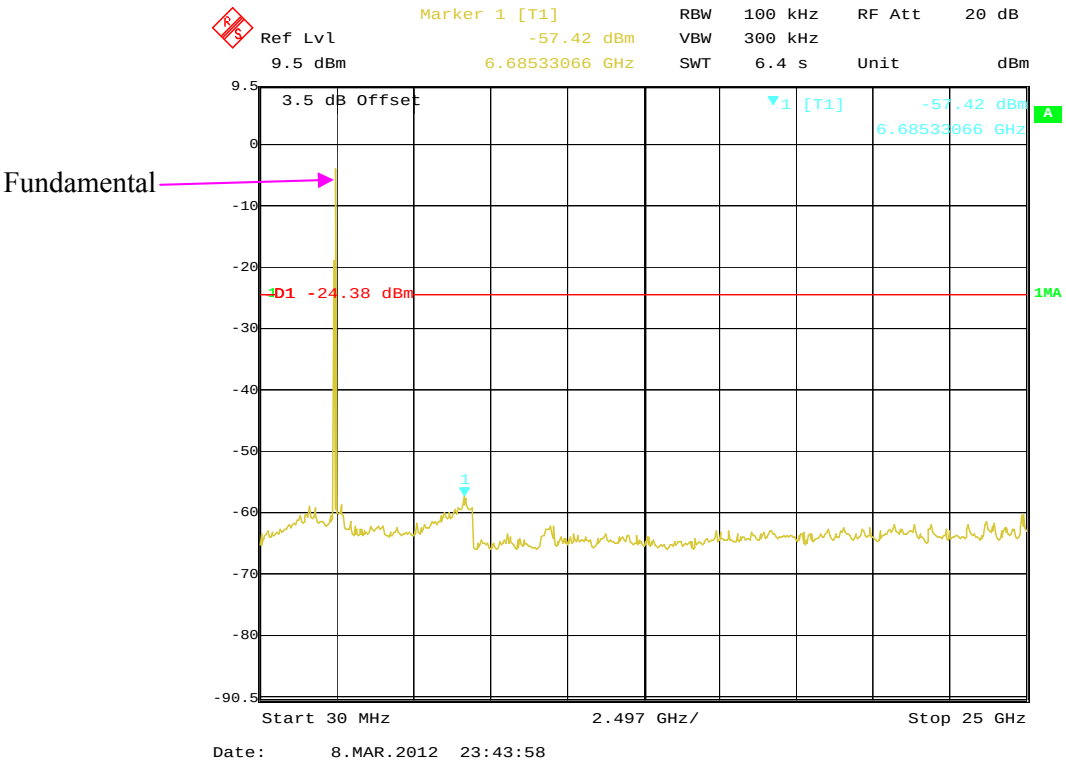
Low Channel



Middle Channel



High Channel



FCC §15.247(a) (1) - CHANNEL SEPARATION TEST

Applicable Standard

Frequency hopping systems shall have hoping channel carrier frequencies separated by a minimum of 25 kHz or the 20dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.50 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20dB bandwidth of the hopping channel, whichever is greater provided the systems operate with an output power no greater than 125 mW.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ 26	609358	2011-07-08	2012-07-07

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

1. Set the EUT in transmitting mode, RBW was set at 30 kHz; VBW was set at 100 kHz max hold the channel.
2. Set the adjacent channel of the EUT max hold another trace
3. Measure the channel separation.

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	56 %
ATM Pressure:	100.9kPa

** The testing was performed by Brown Lu 2012-03-08.*

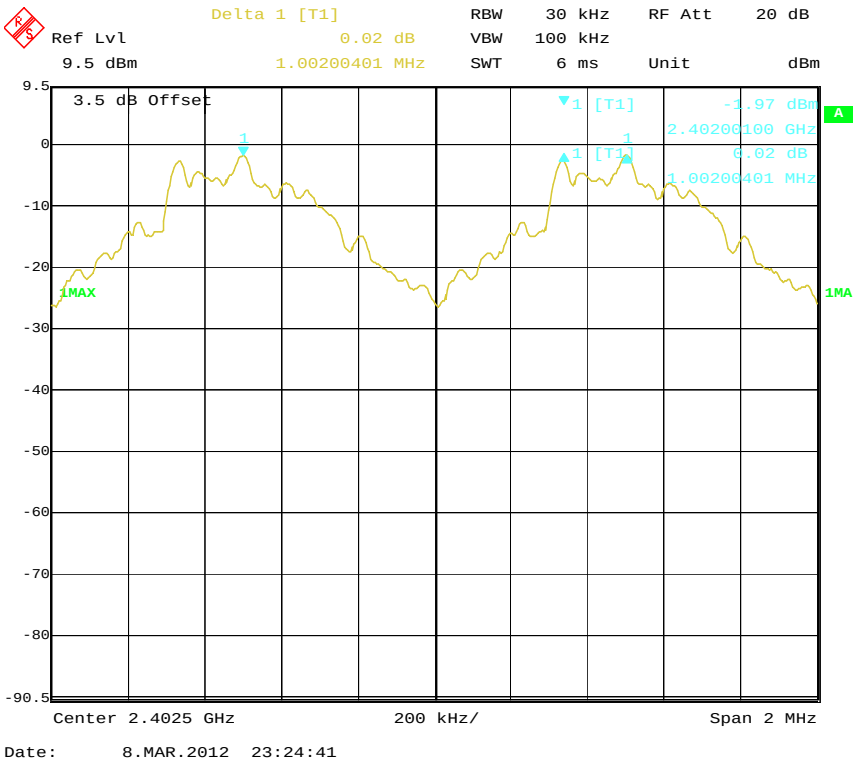
Test Result: Compliance. Please refer to following tables and plots.

Test Mode: Transmitting

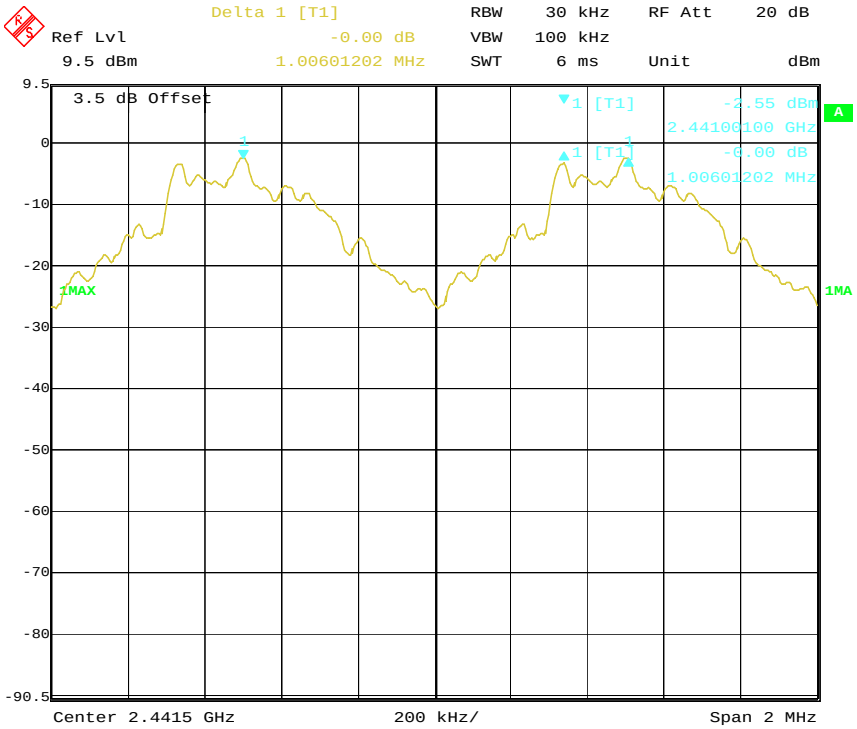
BDR Mode (GFSK):

Channel	Frequency (MHz)	Channel Separation (MHz)	Limit (MHz)	Result
Low	2402	1.002	0.611	Pass
Adjacent	2403			
Middle	2441	1.006	0.611	Pass
Adjacent	2442			
High	2480	1.002	0.611	Pass
Adjacent	2479			

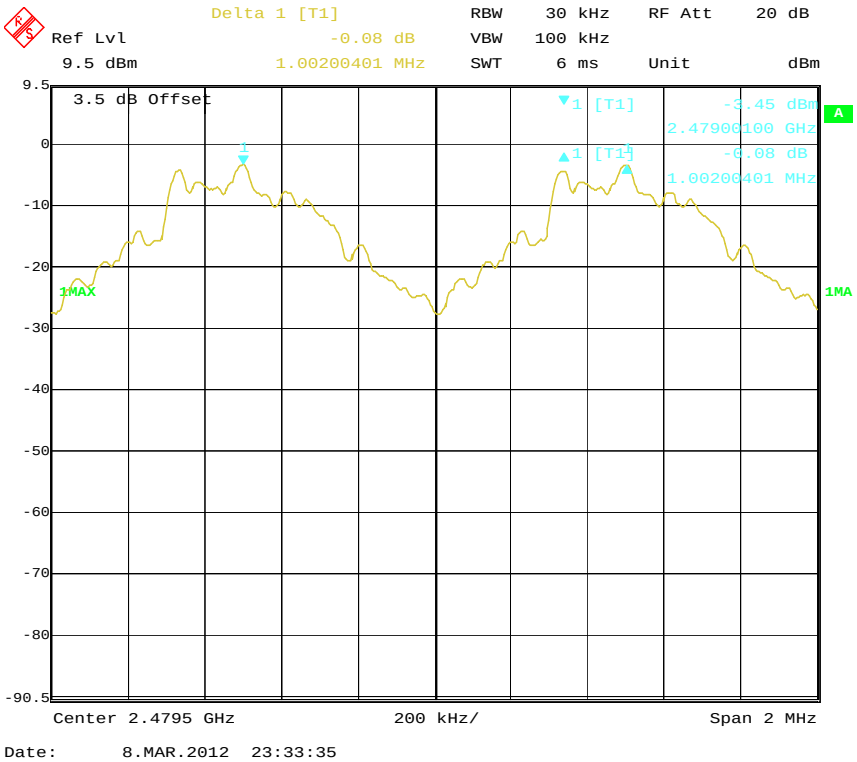
Low Channel



Middle Channel



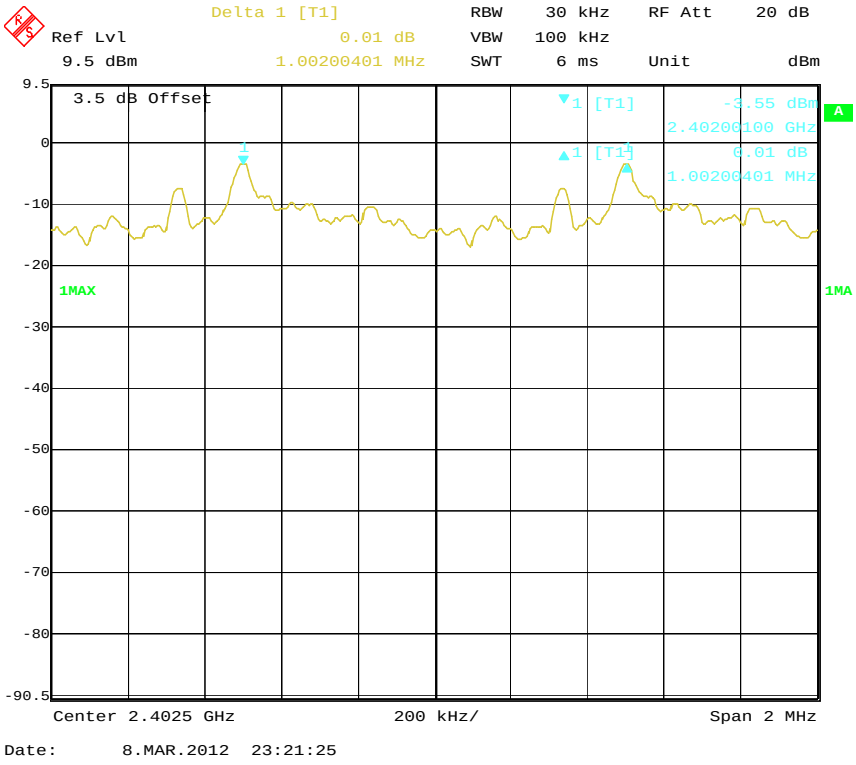
High Channel



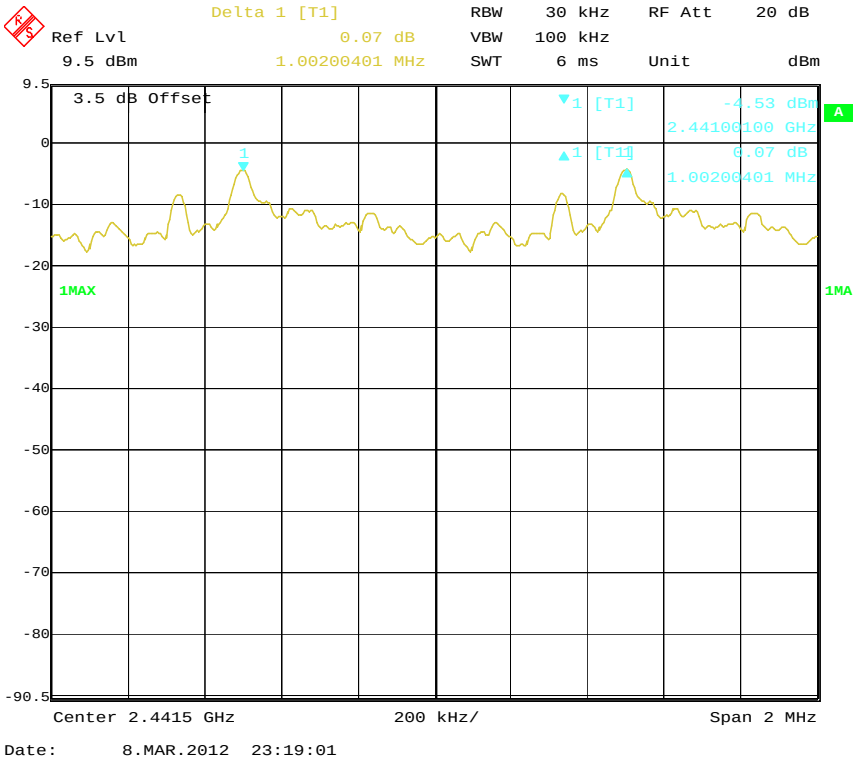
EDR Mode (π /4-DQPSK):

Channel	Frequency (MHz)	Channel Separation (MHz)	Limit (MHz)	Result
Low	2402	1.002	0.812	Pass
Adjacent	2403			
Middle	2441	1.002	0.812	Pass
Adjacent	2442			
High	2480	1.002	0.815	Pass
Adjacent	2479			

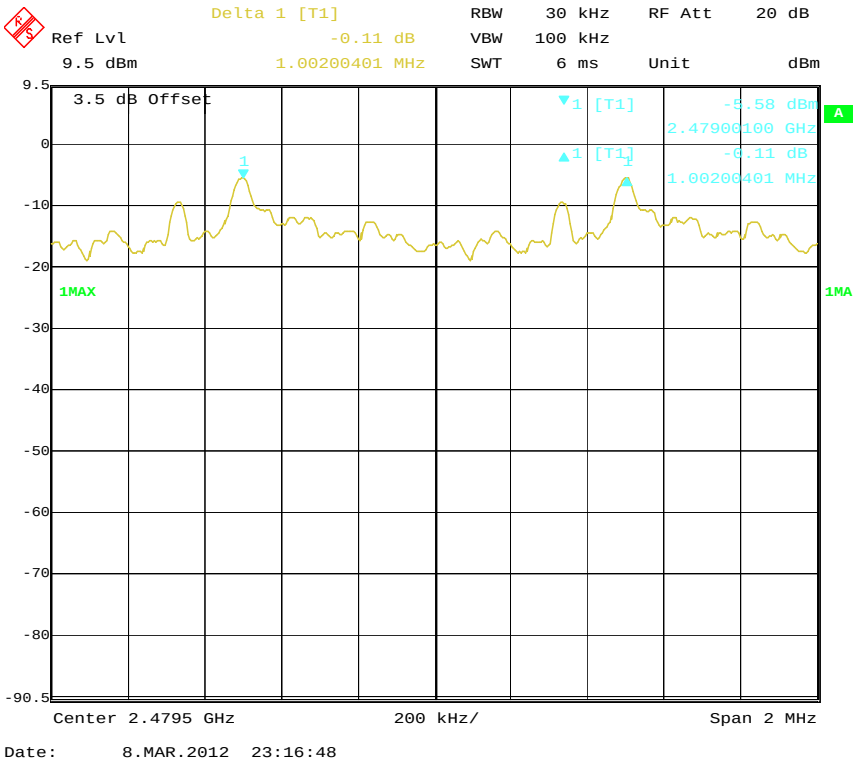
Low Channel



Middle Channel



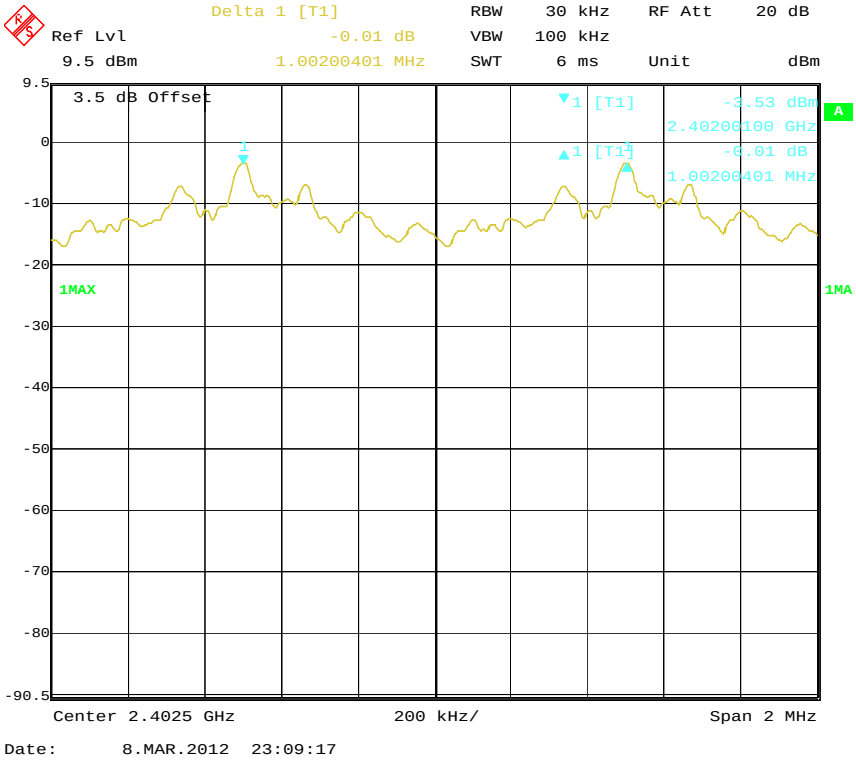
High Channel



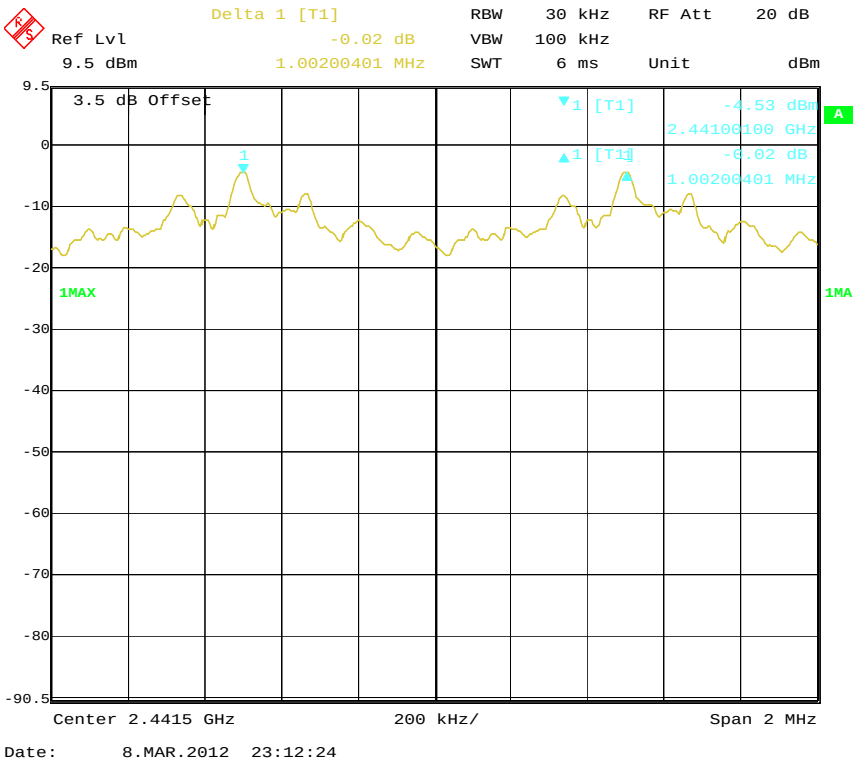
EDR Mode (8DPSK):

Channel	Frequency (MHz)	Channel Separation (MHz)	Limit (MHz)	Result
Low	2402	1.002	0.809	Pass
Adjacent	2403			
Middle	2441	1.002	0.809	Pass
Adjacent	2442			
High	2480	1.002	0.807	Pass
Adjacent	2479			

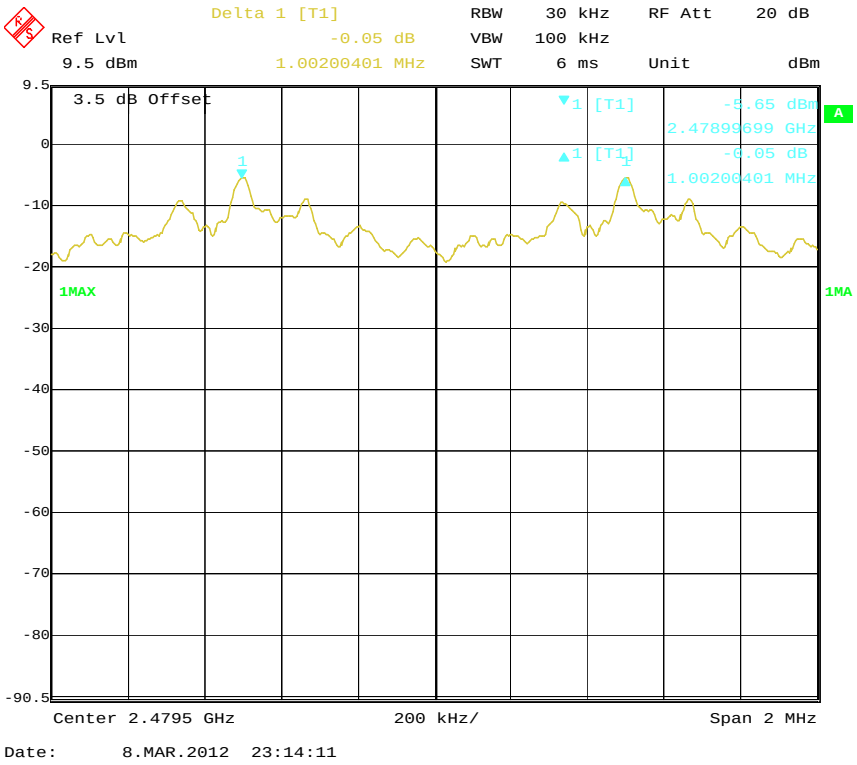
Low Channel



Middle Channel



High Channel



FCC §15.247(a) (1) – 20 dB BANDWIDTH TESTING

Applicable Standard

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.

Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT on the test table without connection to measurement instrument. Turn on the EUT. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.
4. Repeat above procedures until all frequencies measured were complete.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ 26	609358	2011-07-08	2012-07-07

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	56 %
ATM Pressure:	100.9kPa

** The testing was performed by Brown Lu on 2012-03-08.*

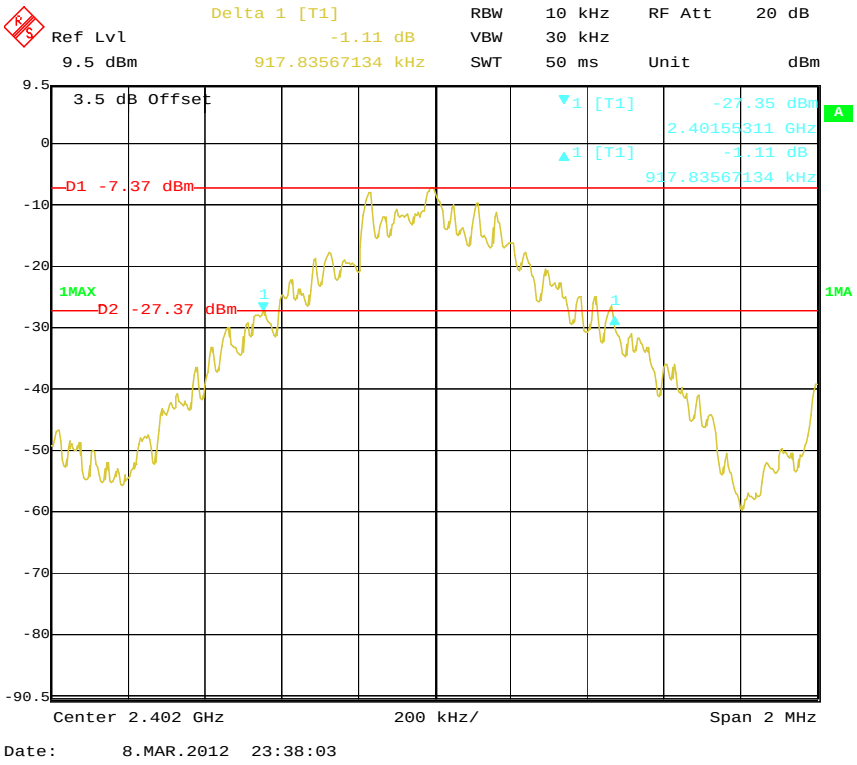
Test Result: Compliance. Please refer to following tables and plots.

Test Mode: Transmitting

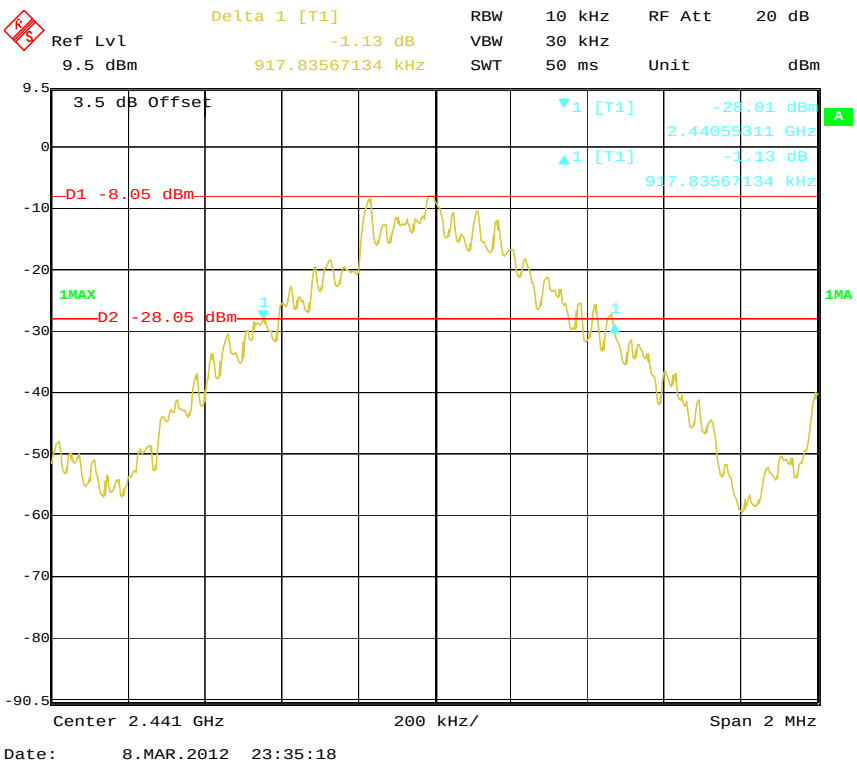
BDR Mode (GFSK):

Channel	Frequency (MHz)	20 dB Bandwidth (MHz)
Low	2402	0.917
Middle	2441	0.917
High	2480	0.917

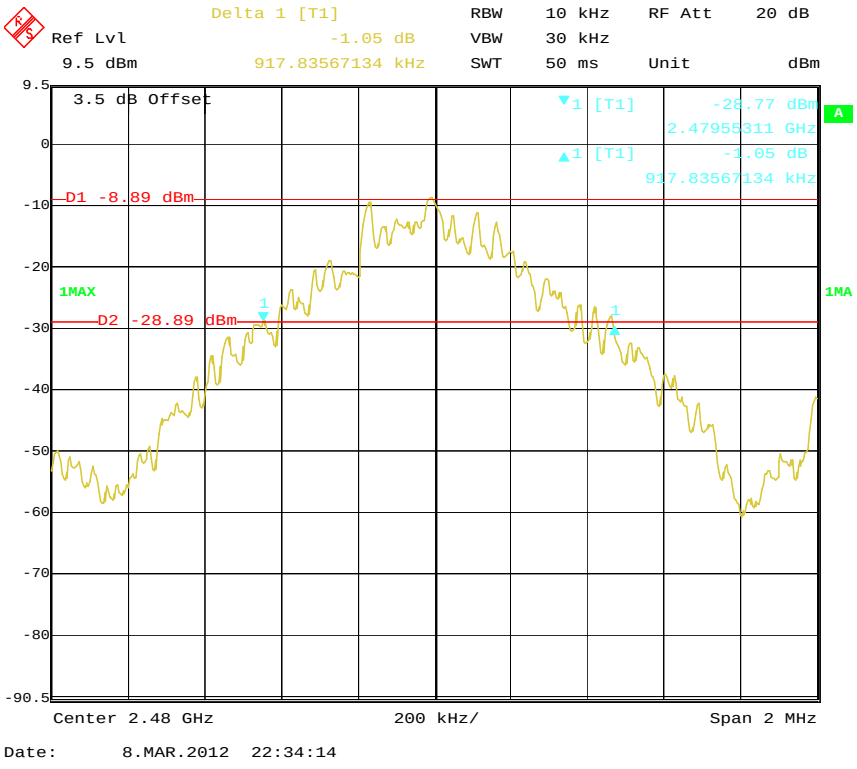
Low Channel



Middle Channel



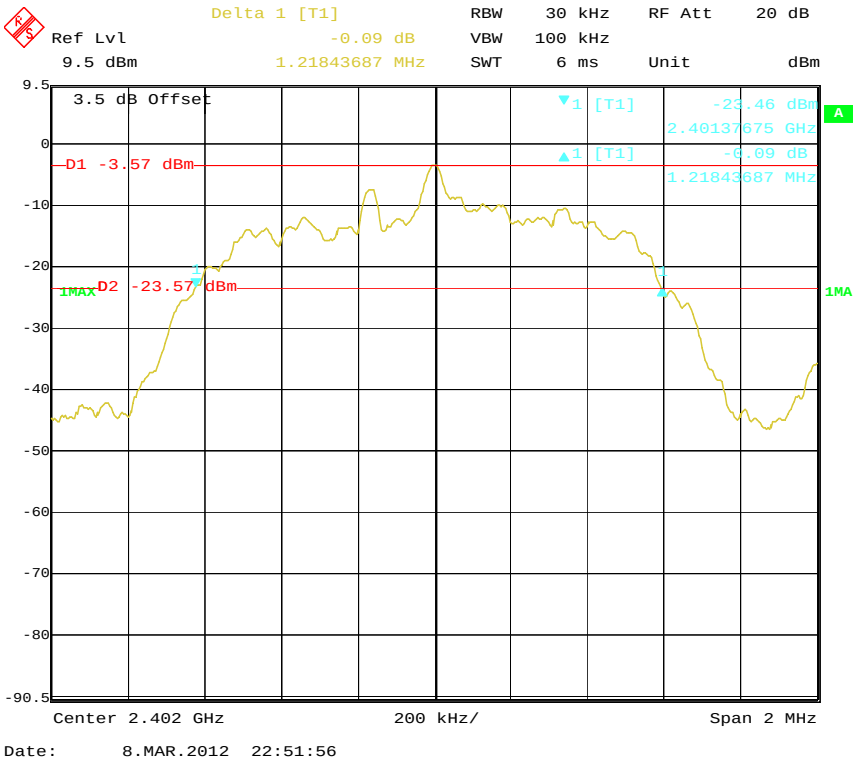
High Channel



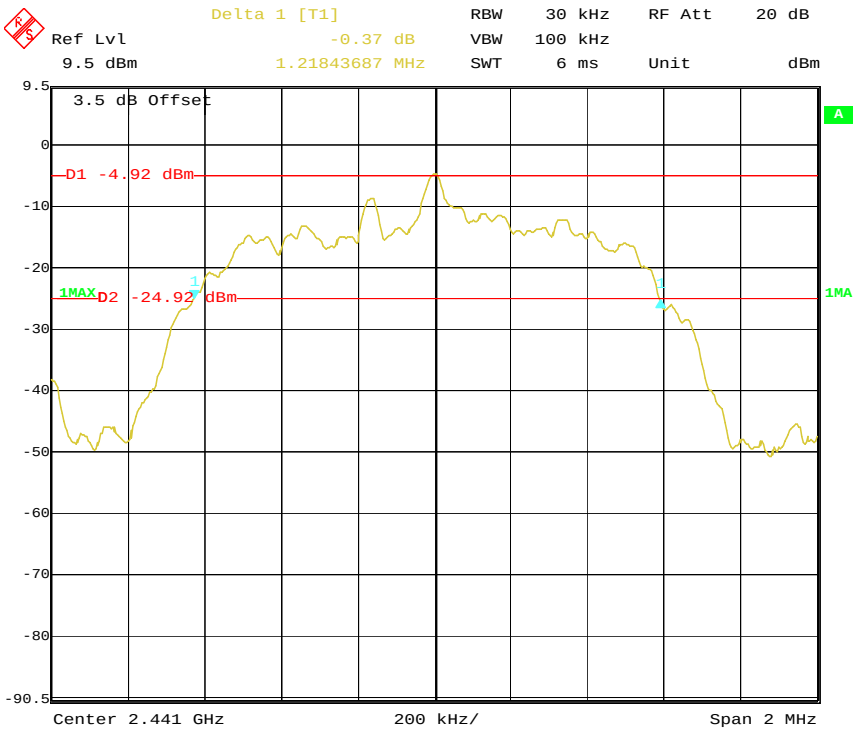
EDR Mode(π /4-DQPSK):

Channel	Frequency (MHz)	20 dB Bandwidth (MHz)
Low	2402	1.218
Middle	2441	1.218
High	2480	1.222

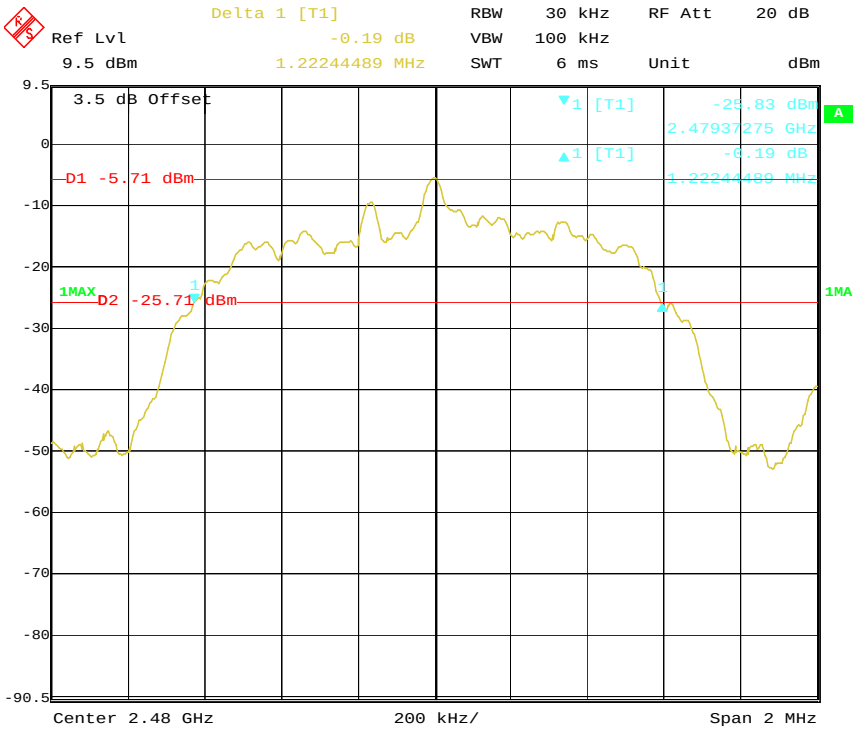
Low Channel



Middle Channel



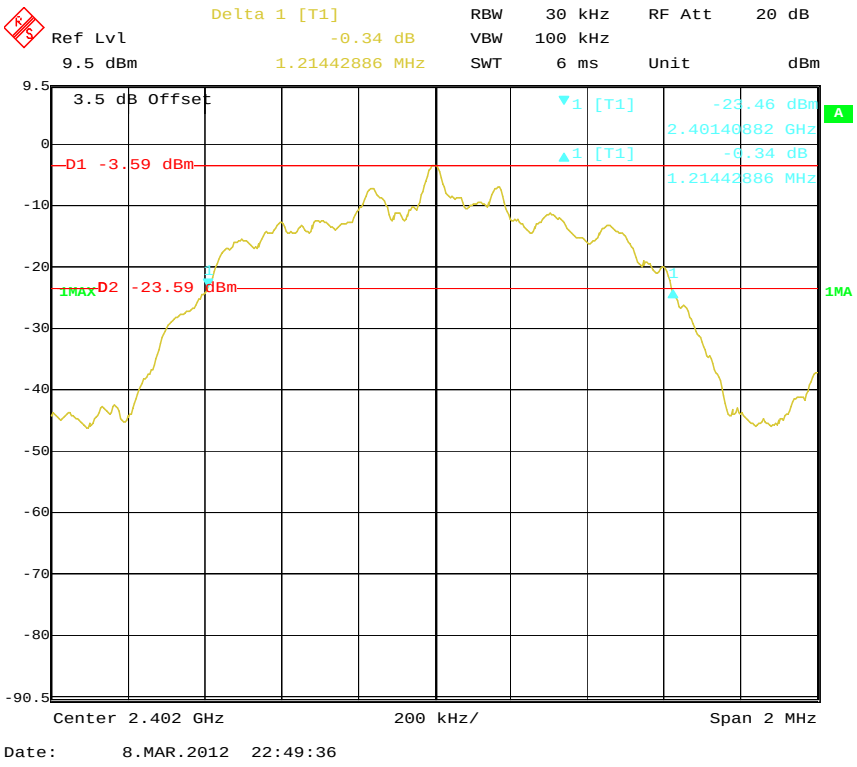
High Channel



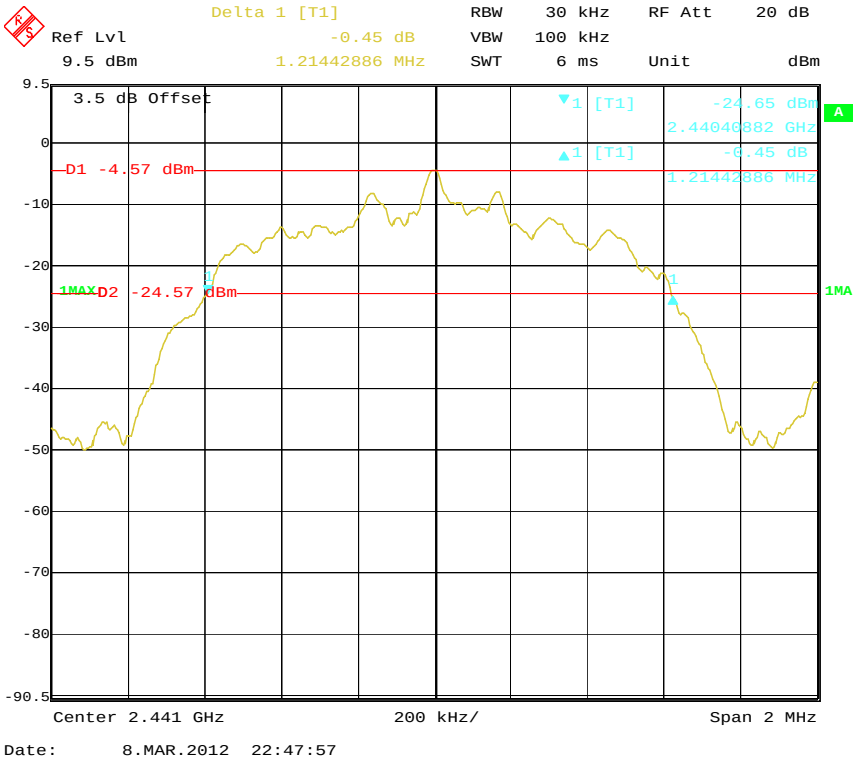
EDR Mode(8DPSK):

Channel	Frequency (MHz)	20 dB Bandwidth (MHz)
Low	2402	1.214
Middle	2441	1.214
High	2480	1.210

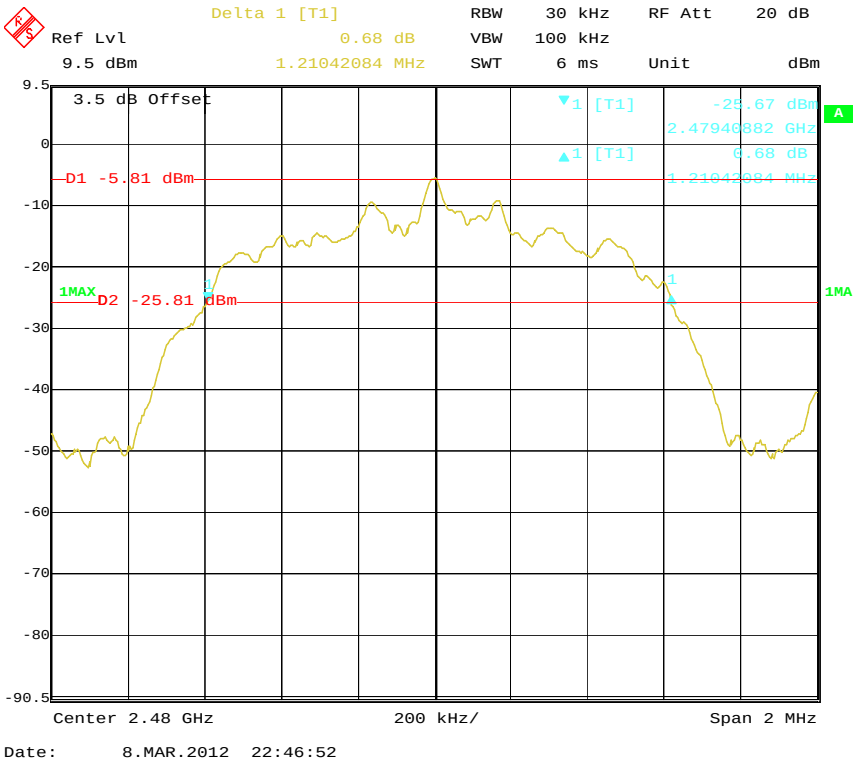
Low Channel



Middle Channel



High Channel



FCC §15.247(a) (1) (iii) - QUANTITY OF HOPPING CHANNEL TEST

Applicable Standard

Frequency hopping systems in the 2400–2483.5 MHz band shall use at least 15 channels. 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. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

Test Procedure

1. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.

2. Set the EUT in hopping mode from first channel to last.

3. By using the Max-Hold function record the Quantity of the channel.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ 26	609358	2011-07-08	2012-07-07

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	56 %
ATM Pressure:	100.9kPa

** The testing was performed by Brown Lu on 2012-03-08.*

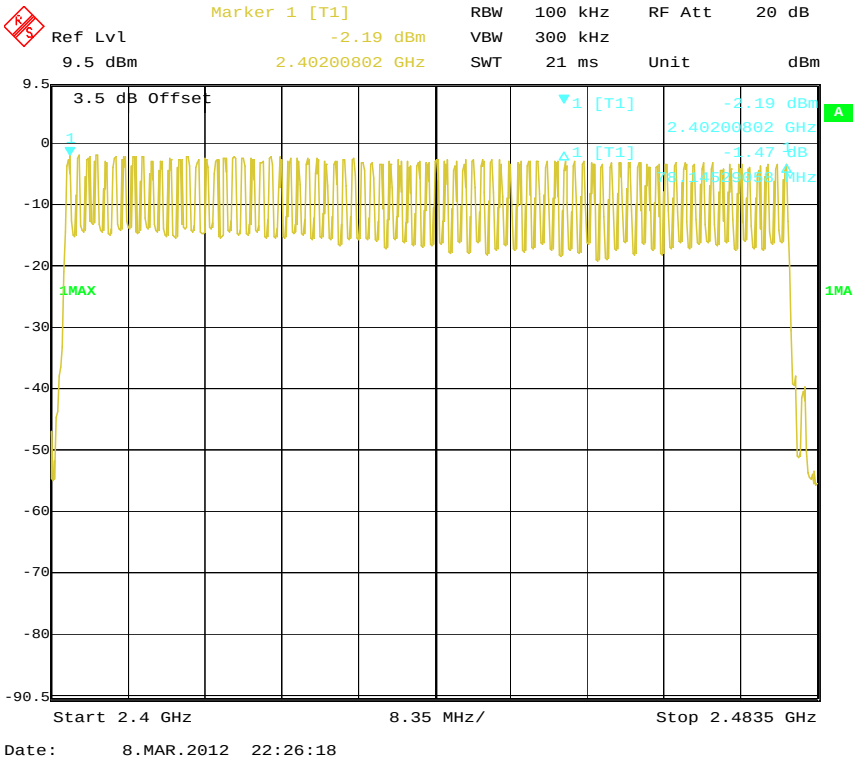
Test Result: Compliance. Please refer to following tables and plots.

Test Mode: Transmitting

BDR Mode (GFSK):

Frequency Range (MHz)	Number of Hopping Channel	Limit
2400-2483.50	79	⩾15

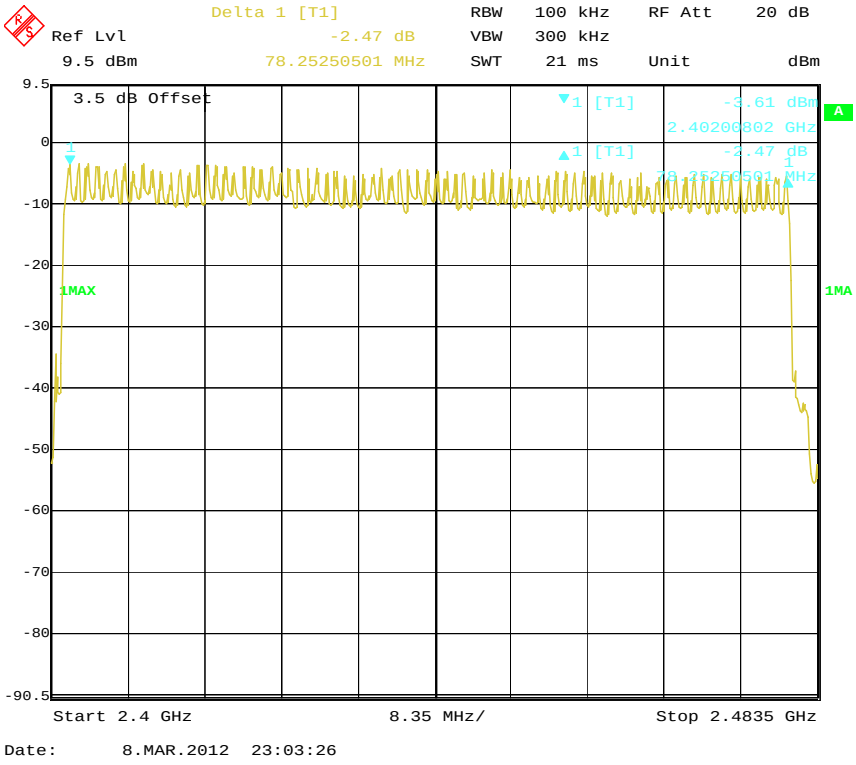
Number of Hopping Channels



EDR Mode(π /4-DQPSK):

Frequency Range (MHz)	Number of Hopping Channel	Limit
2400-2483.50	79	≥15

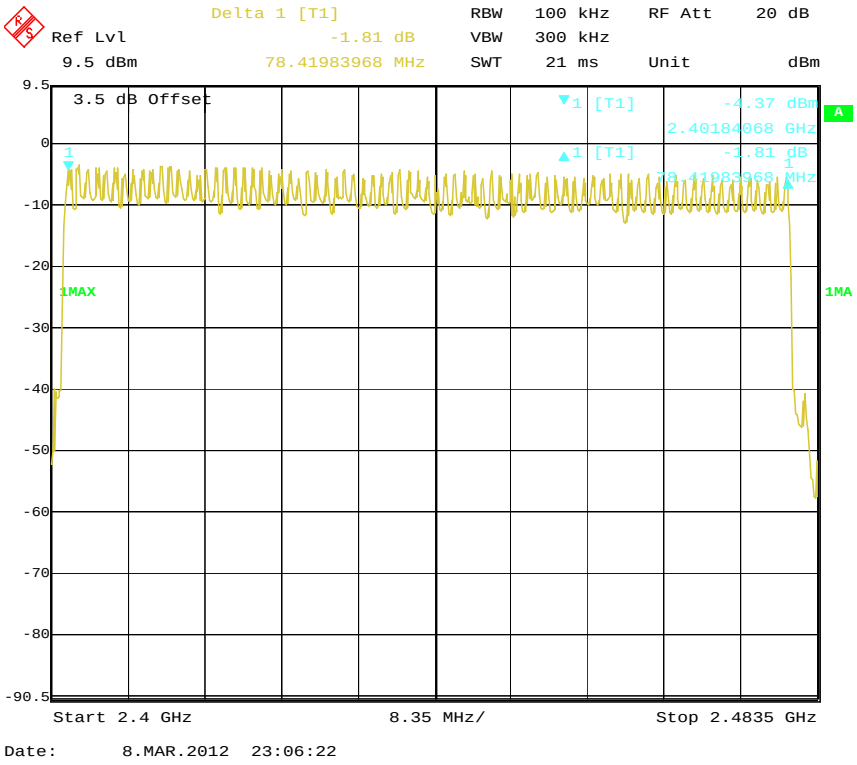
Number of Hopping Channels



EDR Mode(8DPSK):

Frequency Range (MHz)	Number of Hopping Channel	Limit
2400-2483.50	79	⩾15

Number of Hopping Channels



FCC §15.247(a) (1) (iii) - TIME OF OCCUPANCY (DWELL TIME)

Applicable Standard

Frequency hopping systems in the 2400-2483.5 MHz shall use at least 15 channels. 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. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

Test Procedure

The EUT was worked in channel hopping; Spectrum SPAN was set as 0. Sweep was set as 0.4 * channel no. (s), the quantity of pulse was get from single sweep. In addition, the time of single pulses was tested.

Dwell Time= time slot length * hope rate/ number of hopping channels * 31.6s
Hop rate=1600/s

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ 26	609358	2011-07-08	2012-07-07

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	56 %
ATM Pressure:	100.0kPa

** The testing was performed by Brown Lu on 2012-03-09.*

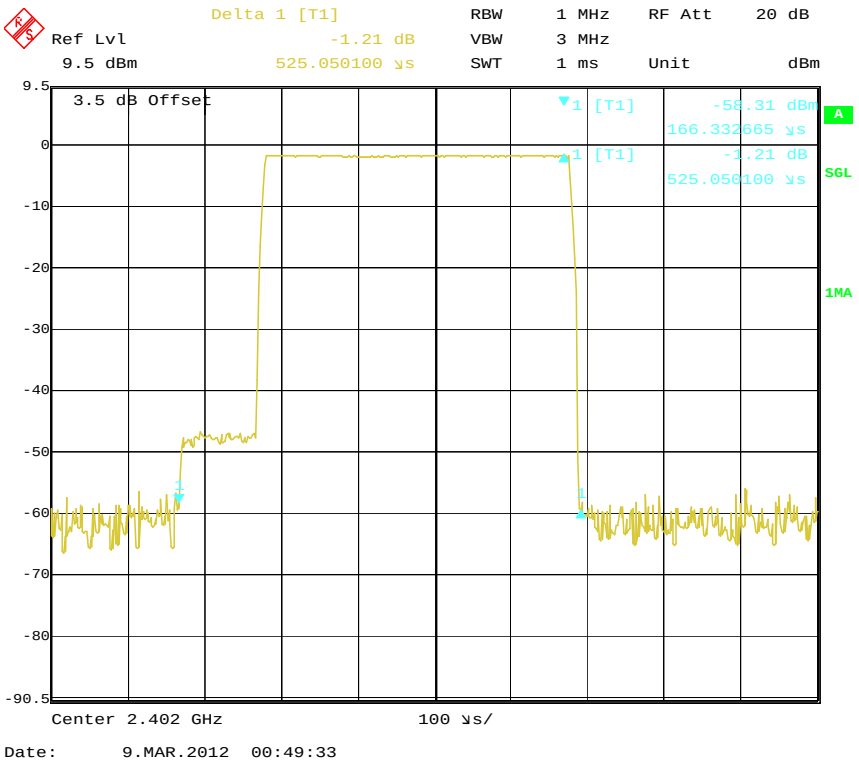
Test Result: Compliance. Please refer to following tables and plots.

Test Mode: Transmitting

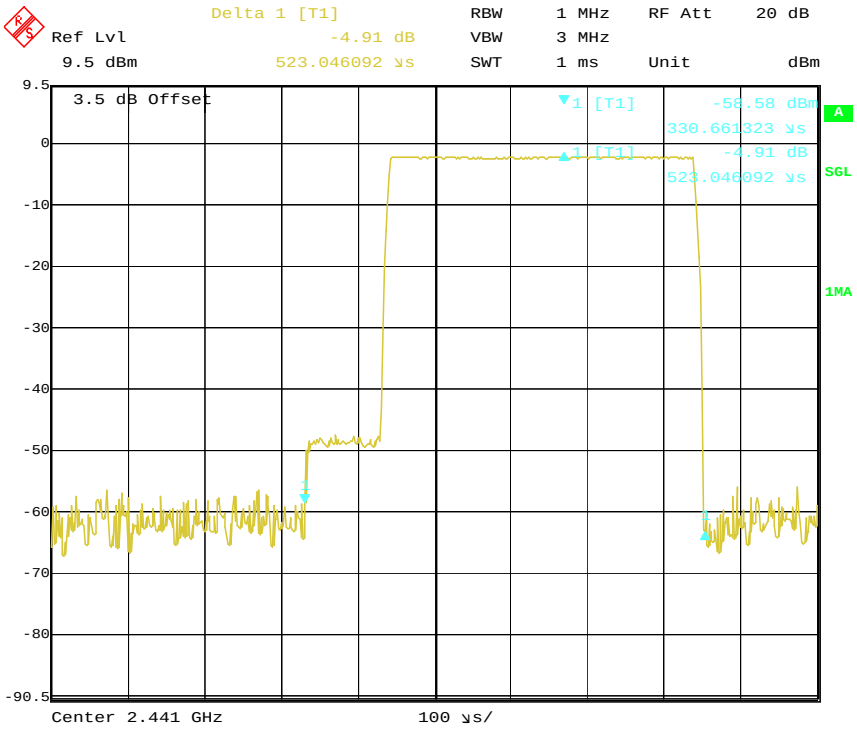
BDR Mode (GFSK):

Mode	Channel	Pulse Width (ms)	Dwell Time (s)	Limit (s)	Result
DH 1	Low	0.525	0.168	0.4	Pass
	Middle	0.523	0.167	0.4	Pass
	High	0.523	0.167	0.4	Pass
	Note: DH1:Dwell time = Pulse time*(1600/2/79)*31.6s				
DH 3	Low	0.982	0.157	0.4	Pass
	Middle	0.982	0.157	0.4	Pass
	High	0.982	0.157	0.4	Pass
	Note: DH3:Dwell time = Pulse time*(1600/4/79)*31.6s				
DH 5	Low	3.043	0.325	0.4	Pass
	Middle	3.043	0.325	0.4	Pass
	High	3.043	0.325	0.4	Pass
	Note: DH5:Dwell time = Pulse time*(1600/6/79)*31.6s				

Low Channel for DH1

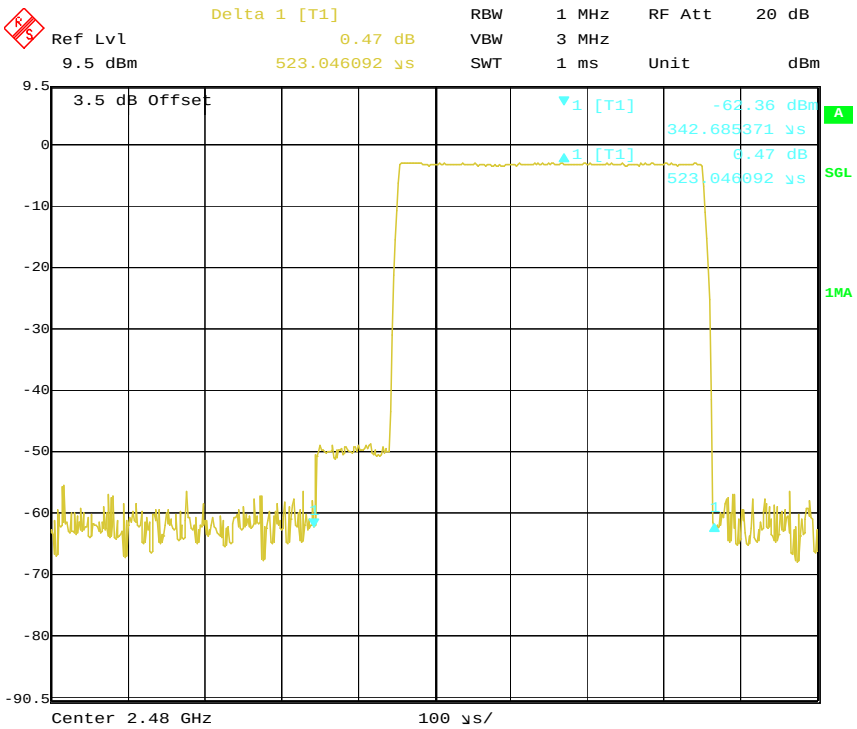


Middle Channel for DH1



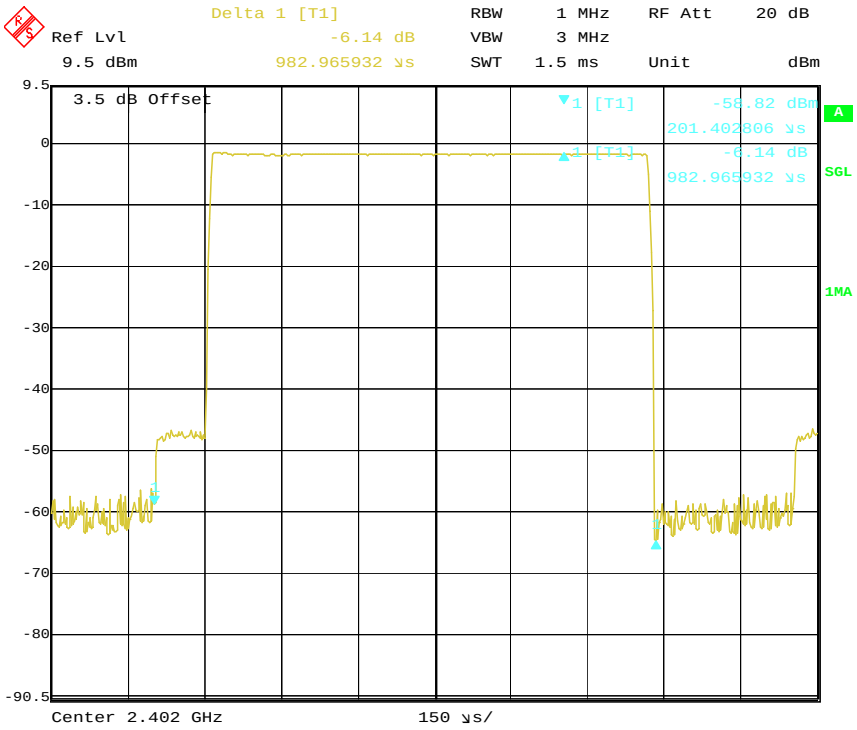
Date: 9.MAR.2012 00:50:12

High Channel for DH1



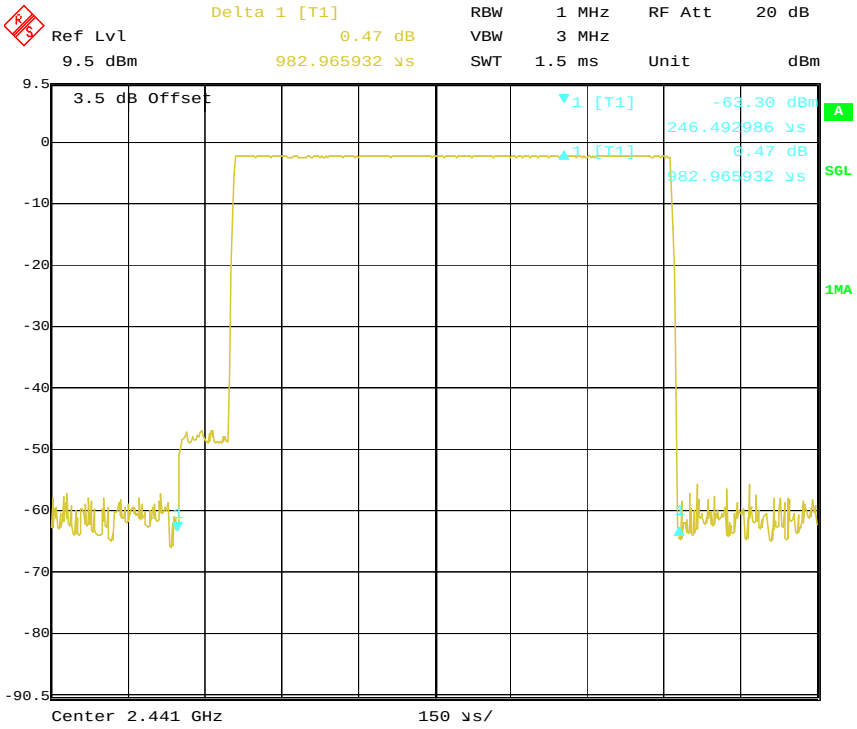
Date: 9.MAR.2012 00:50:40

Low Channel for DH3



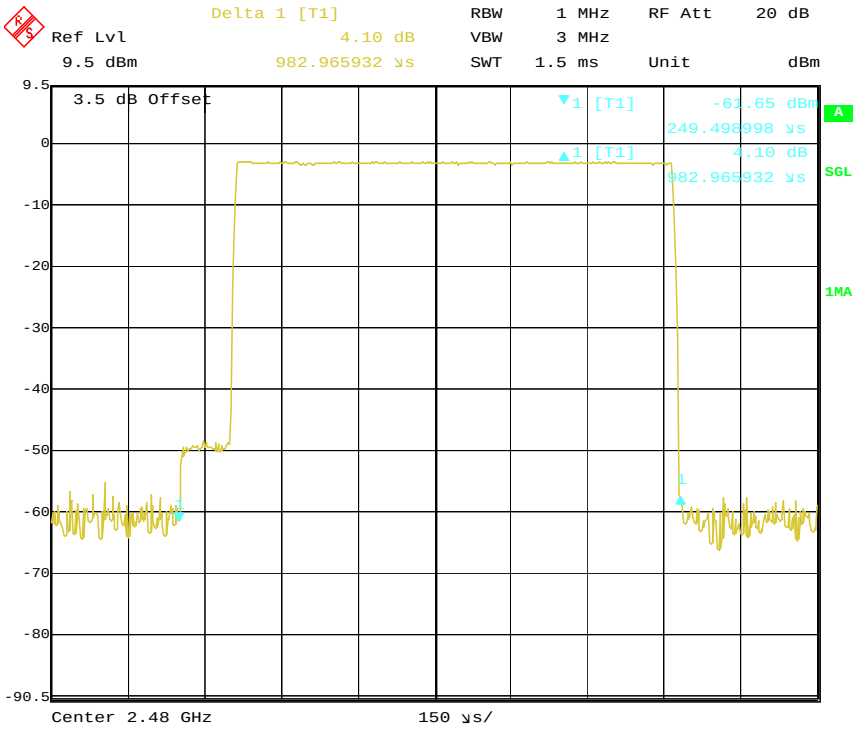
Date: 9.MAR.2012 00:55:59

Middle Channel for DH3



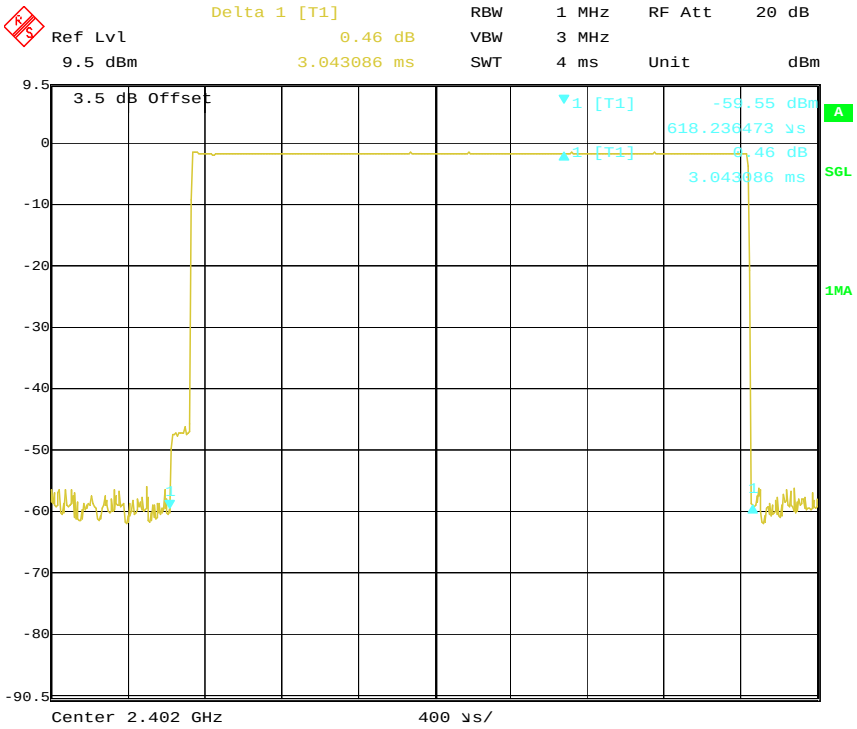
Date: 9.MAR.2012 00:55:09

High Channel for DH3



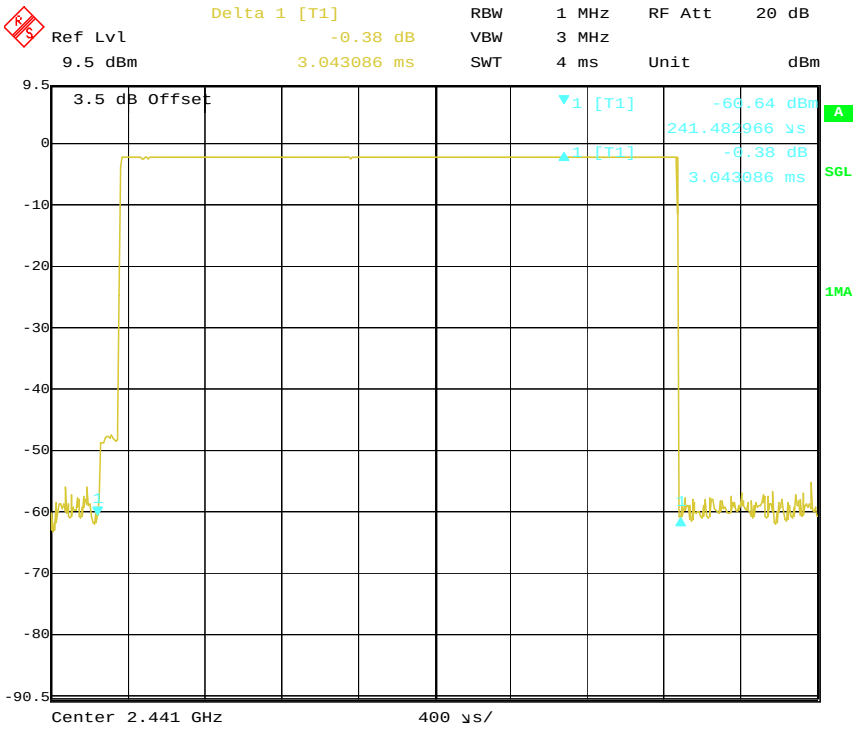
Date: 9.MAR.2012 00:54:32

Low Channel for DH5

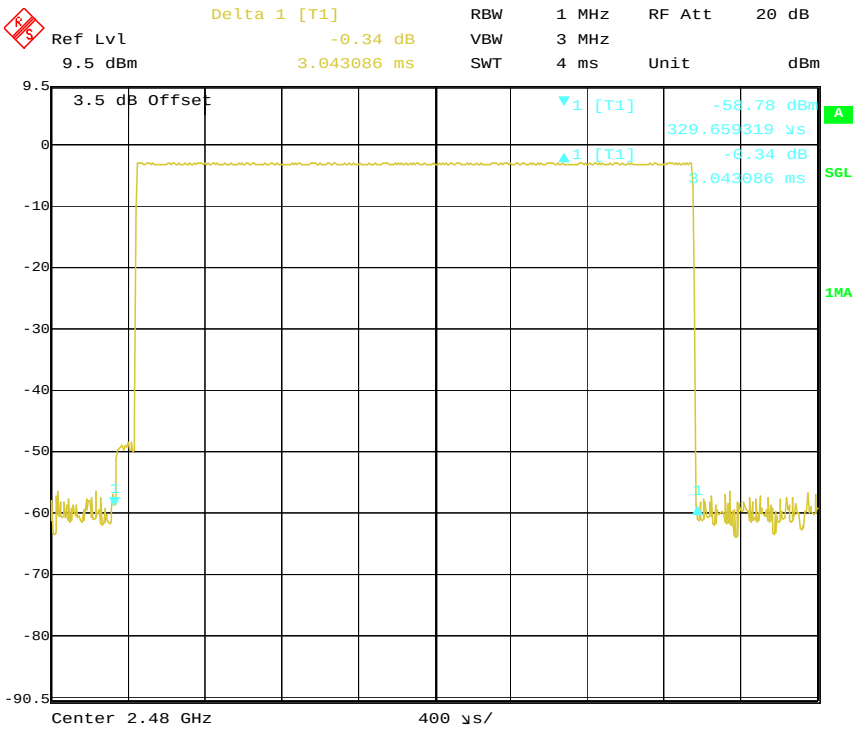


Date: 9.MAR.2012 00:57:08

Middle Channel for DH5



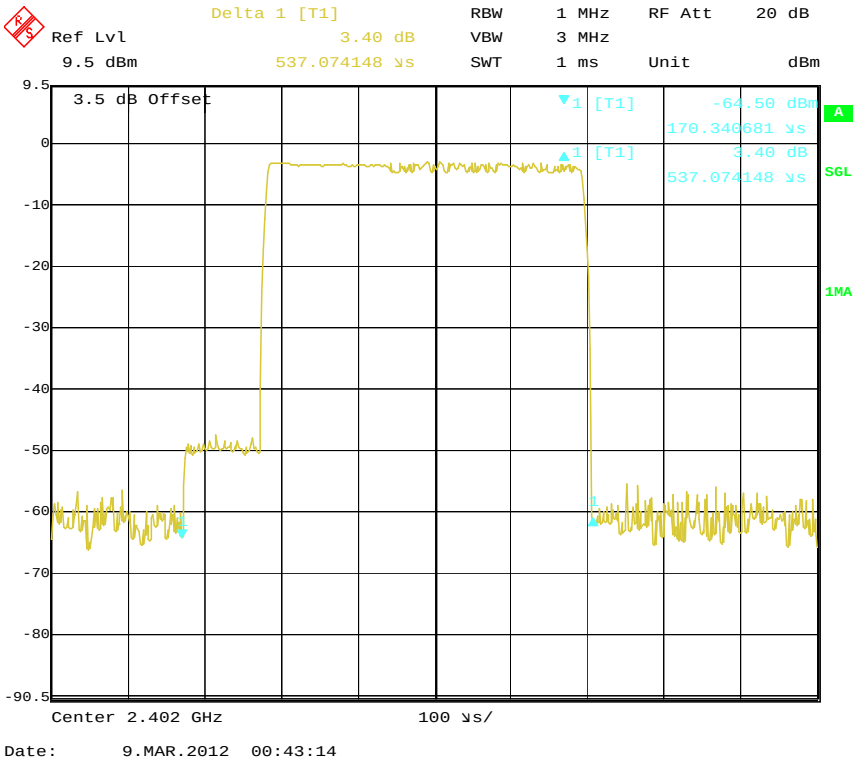
High Channel for DH5



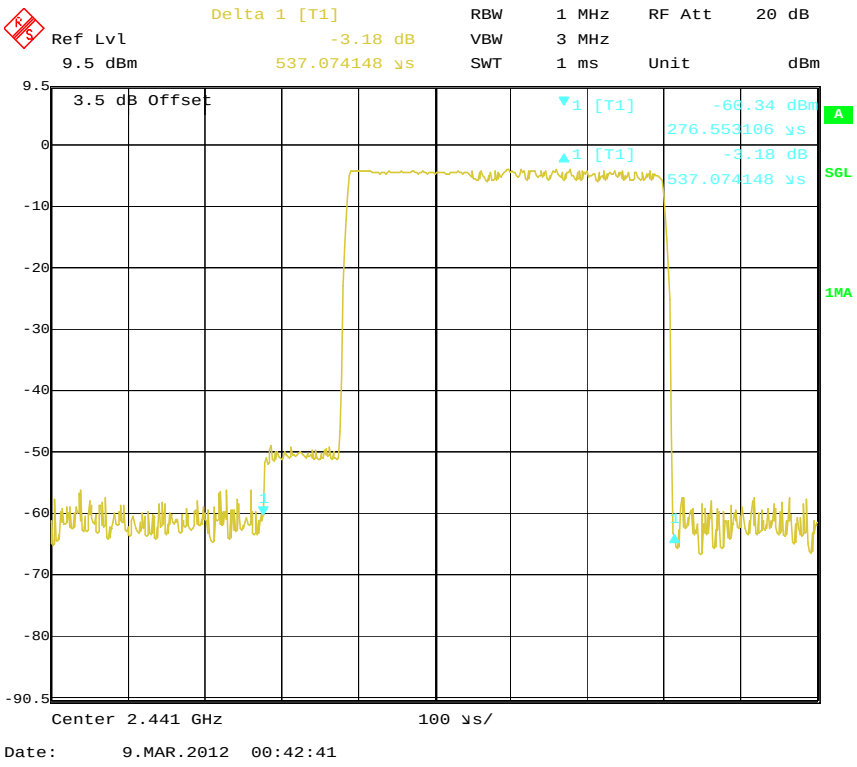
EDR Mode (π/4-DQPSK):

Mode	Channel	Pulse Width (ms)	Dwell Time (s)	Limit (s)	Result
DH 1	Low	0.537	0.172	0.4	Pass
	Middle	0.537	0.172	0.4	Pass
	High	0.535	0.171	0.4	Pass
	Note: DH1:Dwell time = Pulse time*(1600/2/79)*31.6s				
DH 3	Low	1.794	0.287	0.4	Pass
	Middle	1.800	0.288	0.4	Pass
	High	1.794	0.287	0.4	Pass
	Note: DH3:Dwell time = Pulse time*(1600/4/79)*31.6s				
DH 5	Low	3.052	0.326	0.4	Pass
	Middle	3.044	0.325	0.4	Pass
	High	3.052	0.326	0.4	Pass
	Note: DH5:Dwell time = Pulse time*(1600/6/79)*31.6s				

Low Channel for DH1

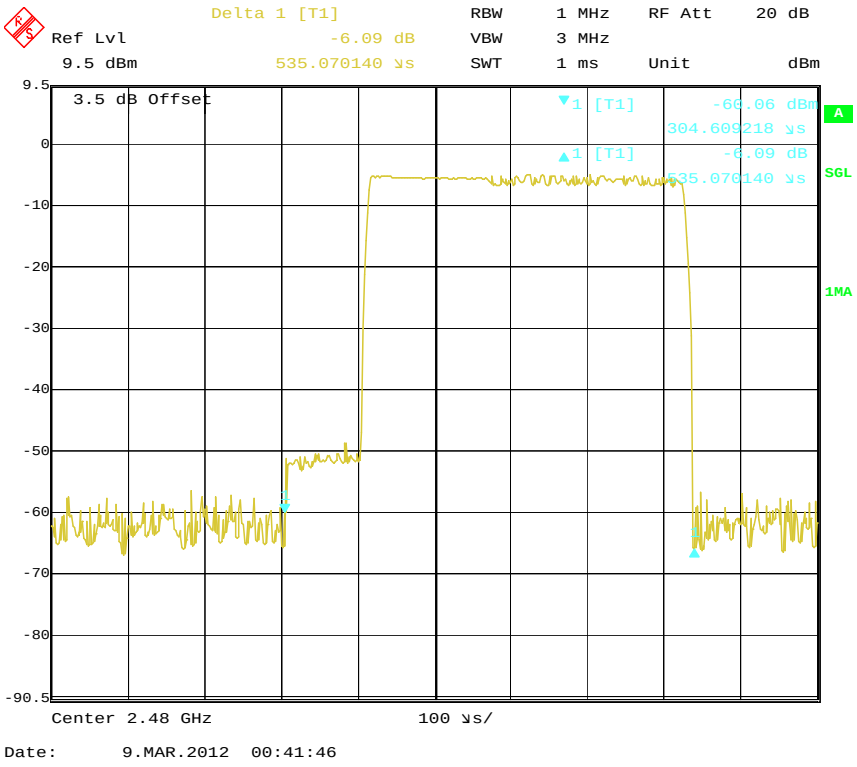


Middle Channel for DH1



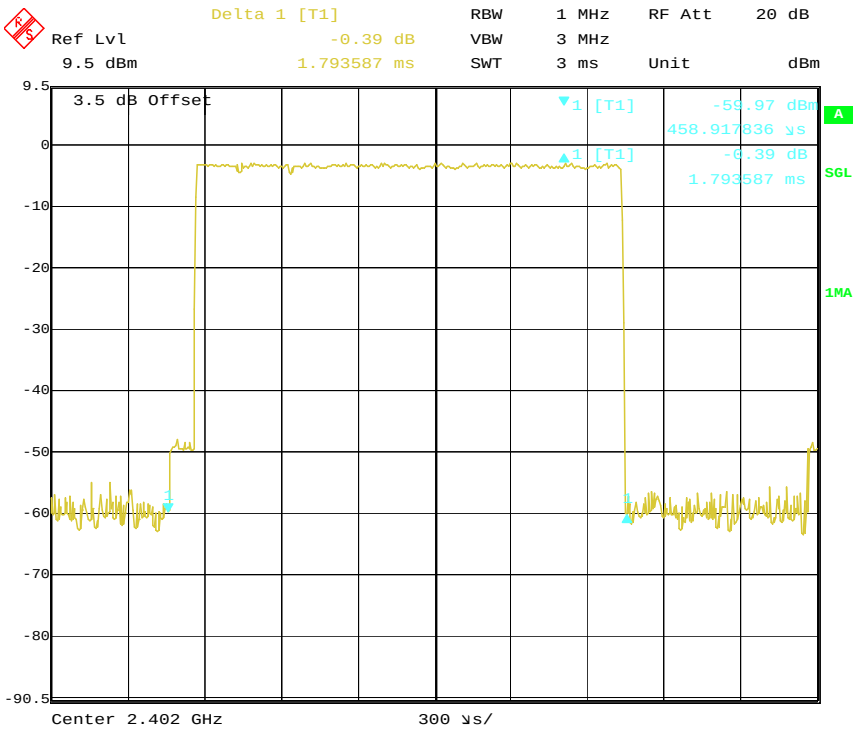
Date: 9.MAR.2012 00:42:41

High Channel for DH1



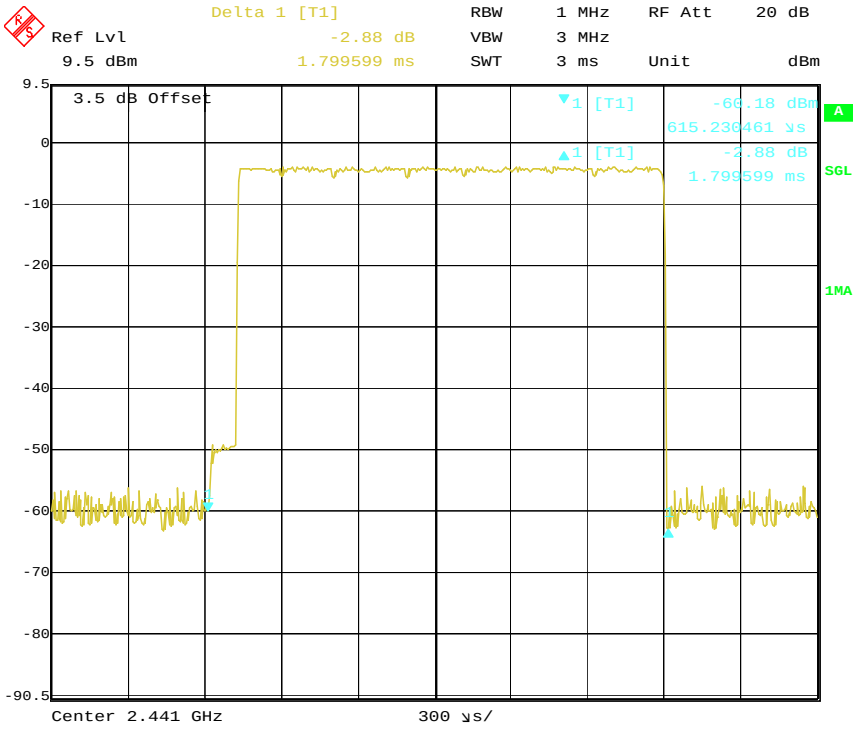
Date: 9.MAR.2012 00:41:46

Low Channel for DH3



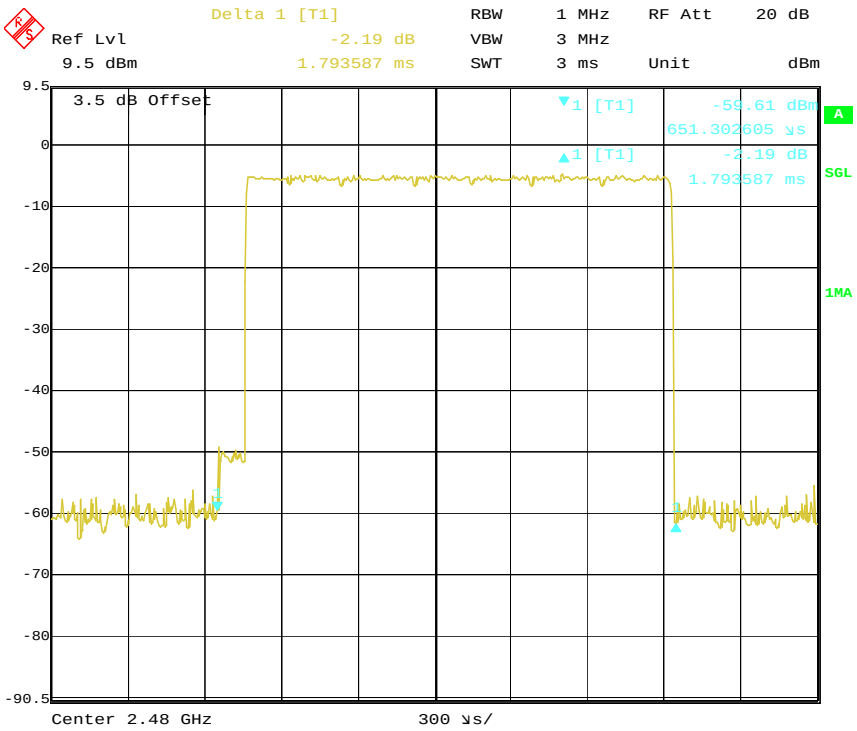
Date: 9.MAR.2012 00:43:59

Middle Channel for DH3

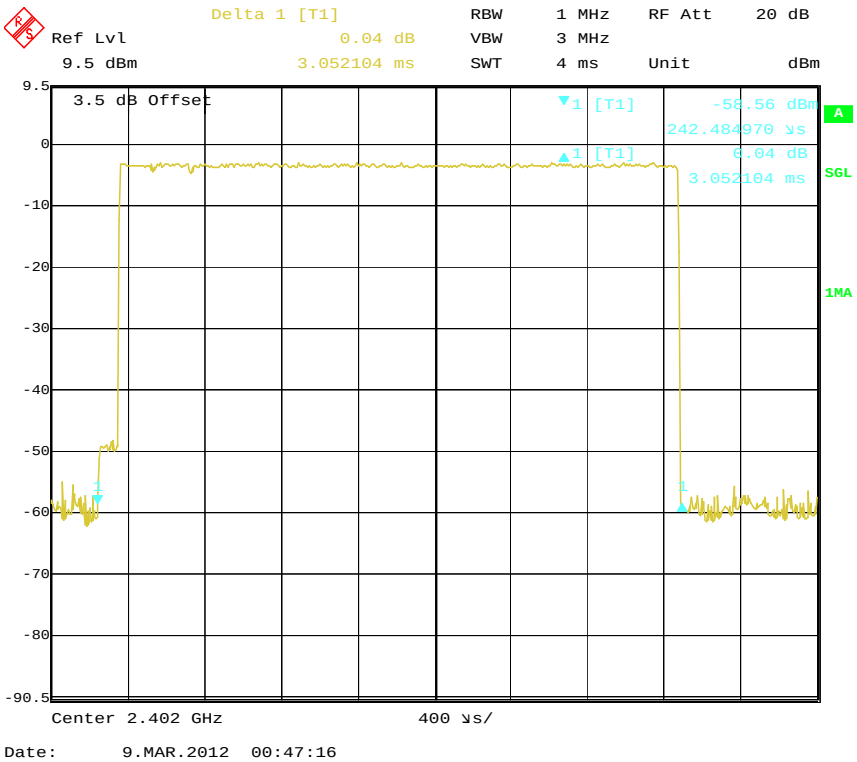


Date: 9.MAR.2012 00:44:41

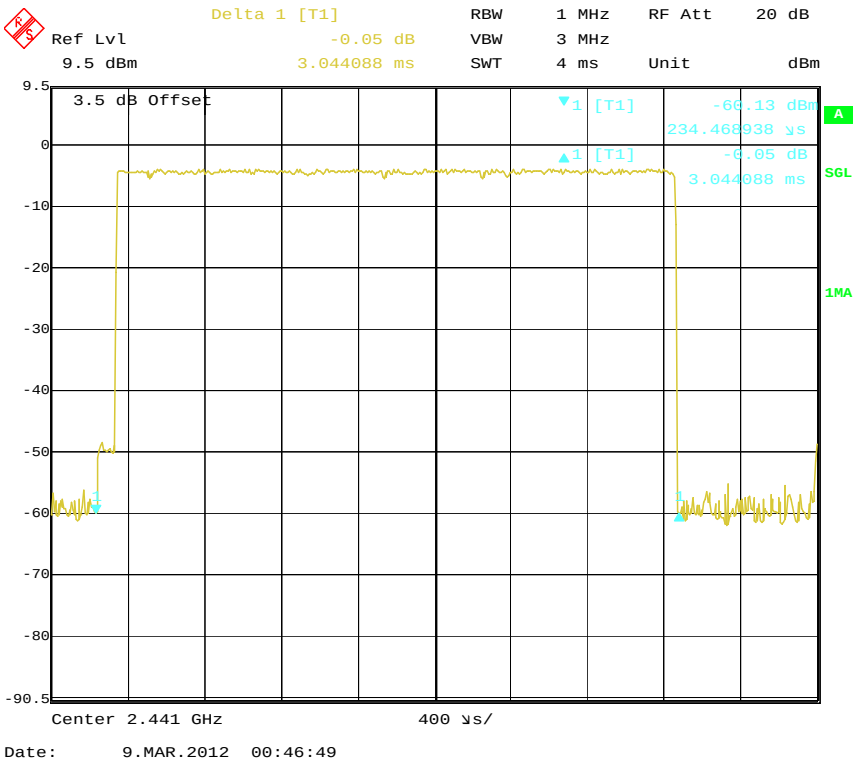
High Channel for DH3



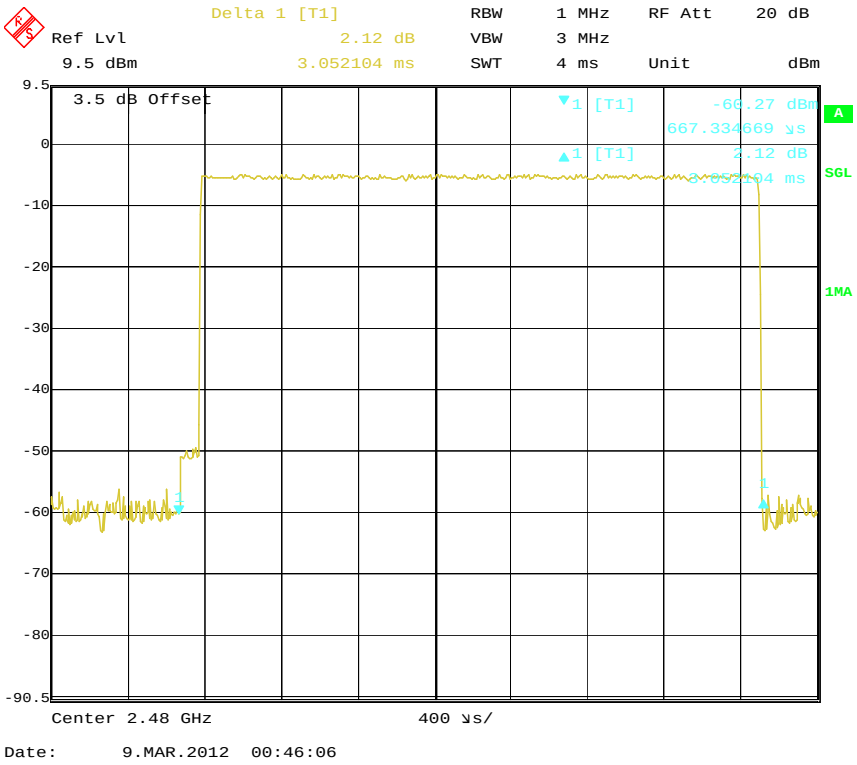
Low Channel for DH5



Middle Channel for DH5



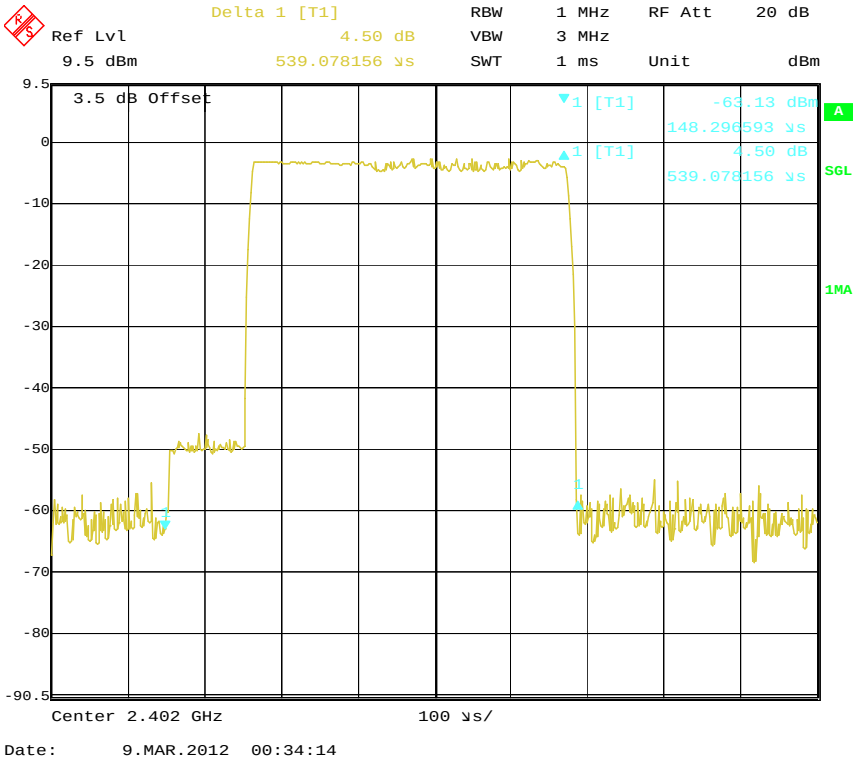
High Channel for DH5



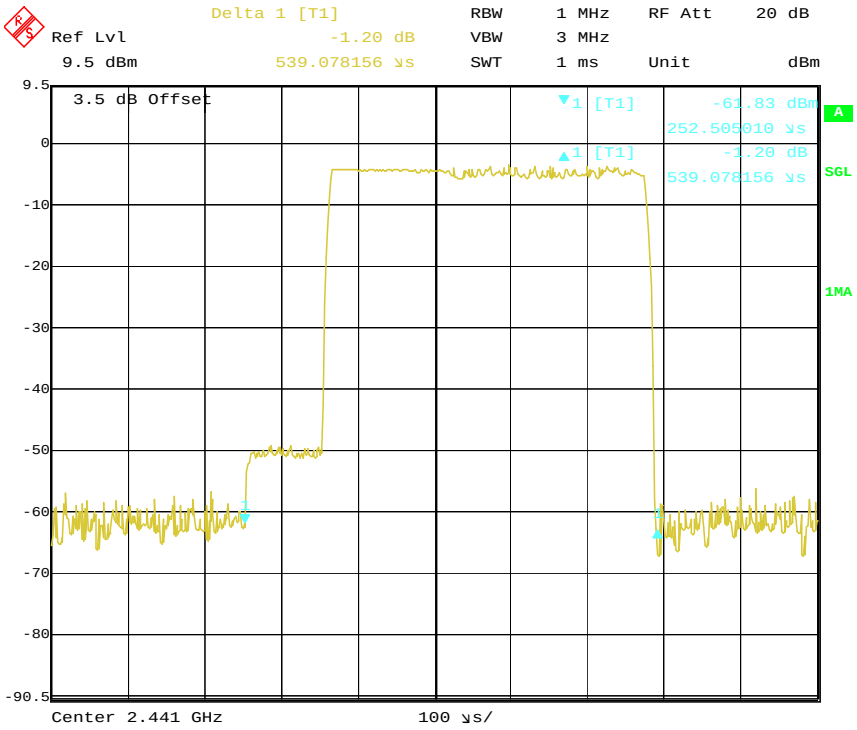
EDR Mode (8DPSK):

Mode	Channel	Pulse Width (ms)	Dwell Time (s)	Limit (s)	Result
DH 1	Low	0.539	0.172	0.4	Pass
	Middle	0.539	0.172	0.4	Pass
	High	0.539	0.172	0.4	Pass
	Note: DH1:Dwell time = Pulse time*(1600/2/79)*31.6s				
DH 3	Low	1.796	0.287	0.4	Pass
	Middle	1.796	0287	0.4	Pass
	High	1.802	0.288	0.4	Pass
	Note: DH3:Dwell time = Pulse time*(1600/4/79)*31.6s				
DH 5	Low	3.054	0.326	0.4	Pass
	Middle	3.054	0.326	0.4	Pass
	High	3.054	0.326	0.4	Pass
	Note: DH5:Dwell time = Pulse time*(1600/6/79)*31.6s				

Low Channel for DH1

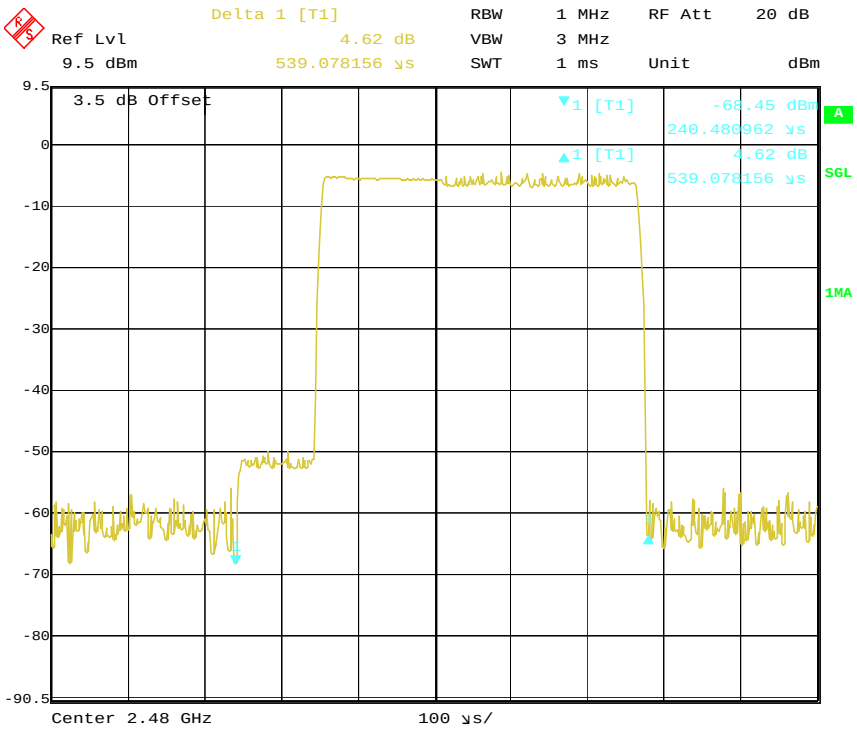


Middle Channel for DH1



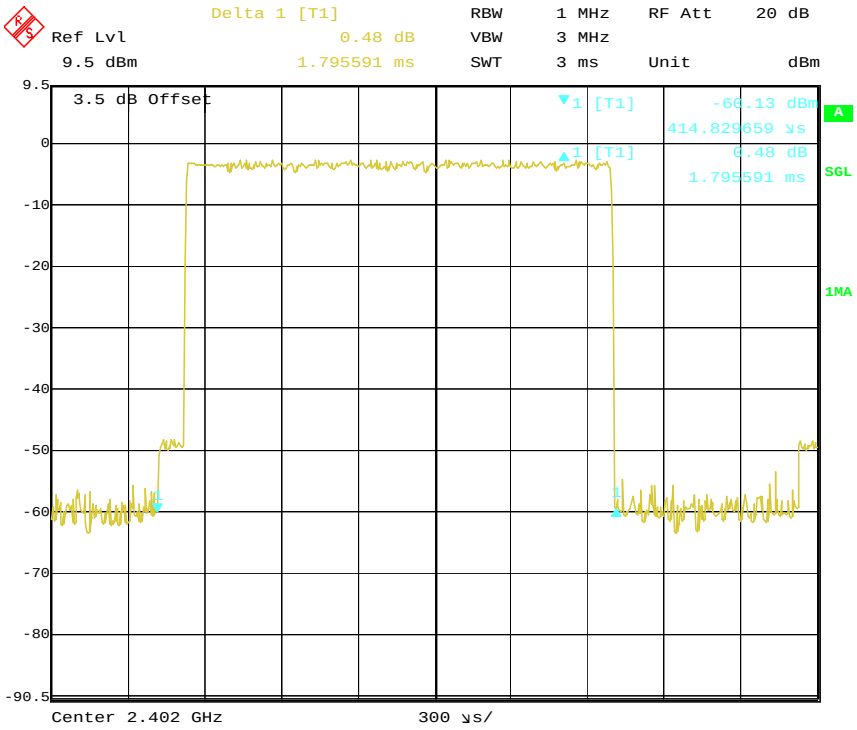
Date: 9.MAR.2012 00:34:53

High Channel for DH1



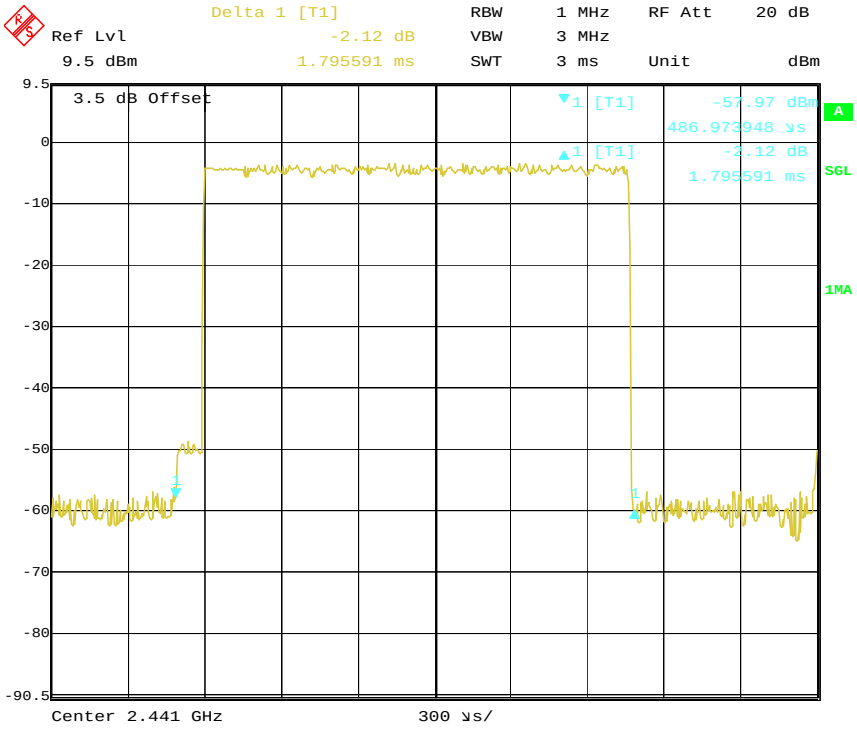
Date: 9.MAR.2012 00:35:23

Low Channel for DH3



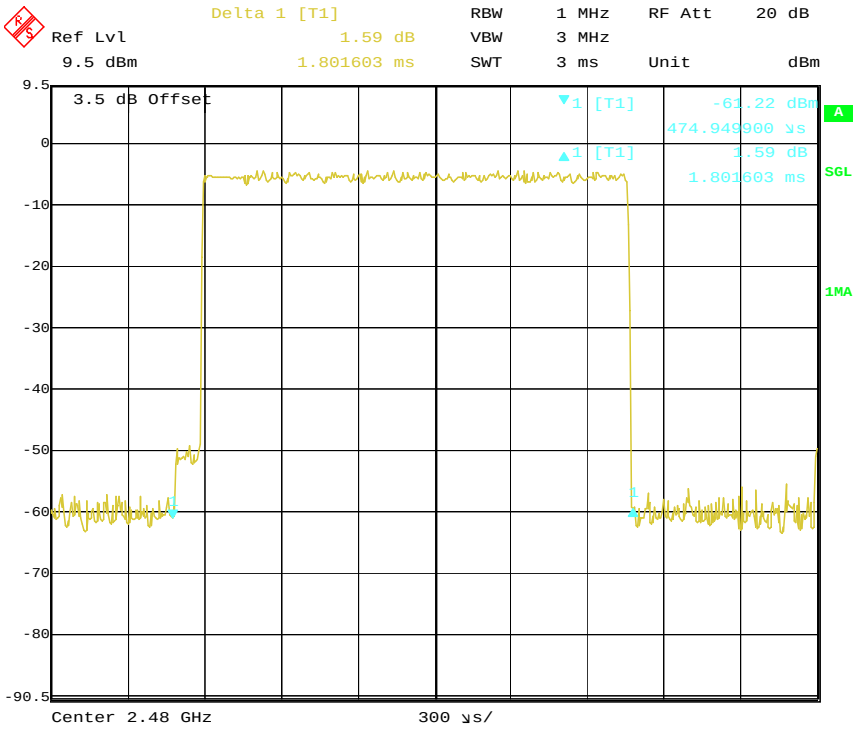
Date: 9.MAR.2012 00:37:43

Middle Channel for DH3



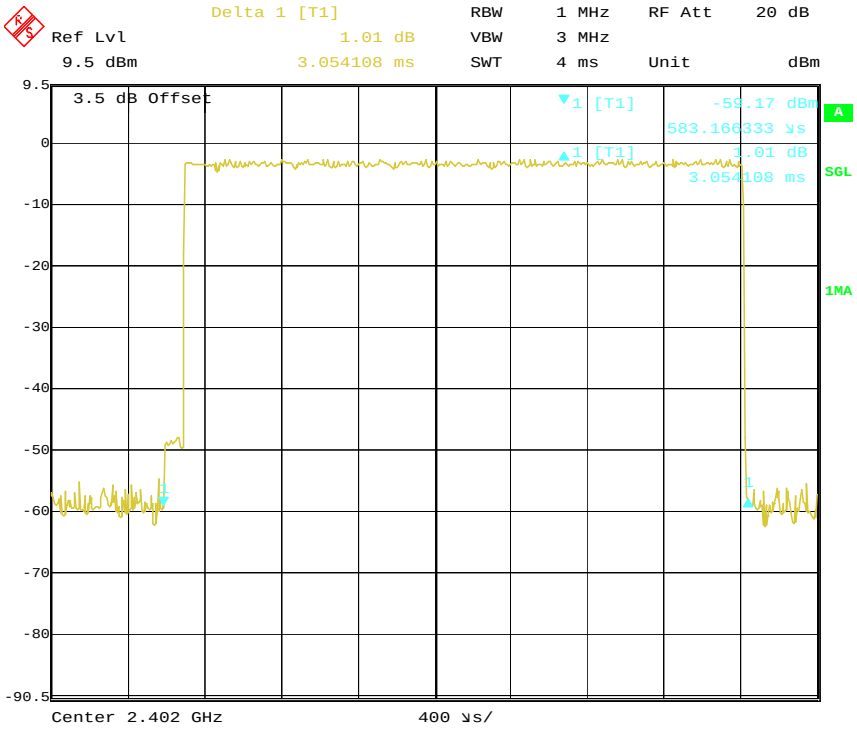
Date: 9.MAR.2012 00:37:10

High Channel for DH3



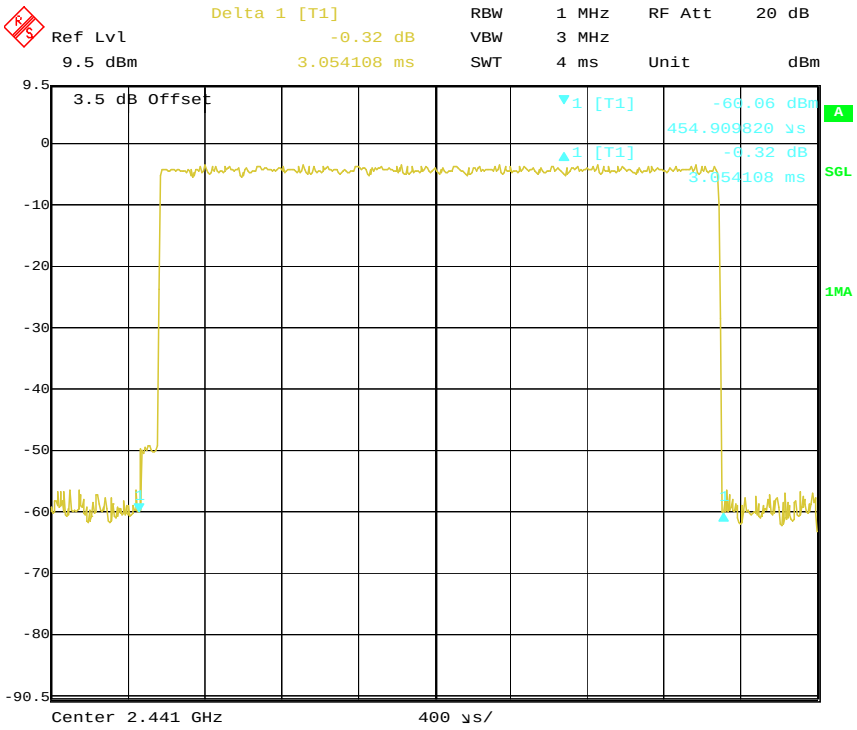
Date: 9.MAR.2012 00:36:30

Low Channel for DH5

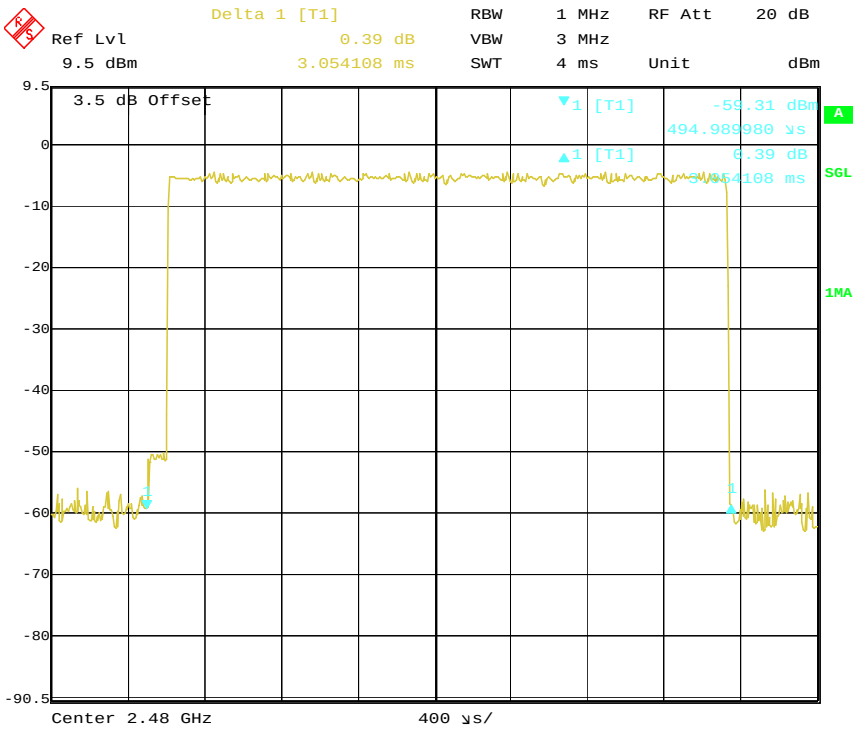


Date: 9.MAR.2012 00:39:18

Middle Channel for DH5



High Channel for DH5



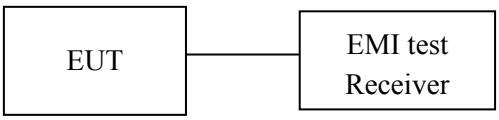
FCC §15.247(b) (1) - PEAK OUTPUT POWER MEASUREMENT

Applicable Standard

According to §15.247(b) (1), for frequency hopping systems operating in the 2400–2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400–2483.5 MHz band: 0.125 watts.

Test Procedure

1. Place the EUT on a bench and set in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to an EMI test receiver.
3. Add a correction factor to the display.



Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ 26	609358	2011-07-08	2012-07-07

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	56 %
ATM Pressure:	100.9kPa

** The testing was performed by Brown Lu from 2012-03-08 to 2012-03-09.*

Test Result: Compliance. Please refer to following tables and plots.

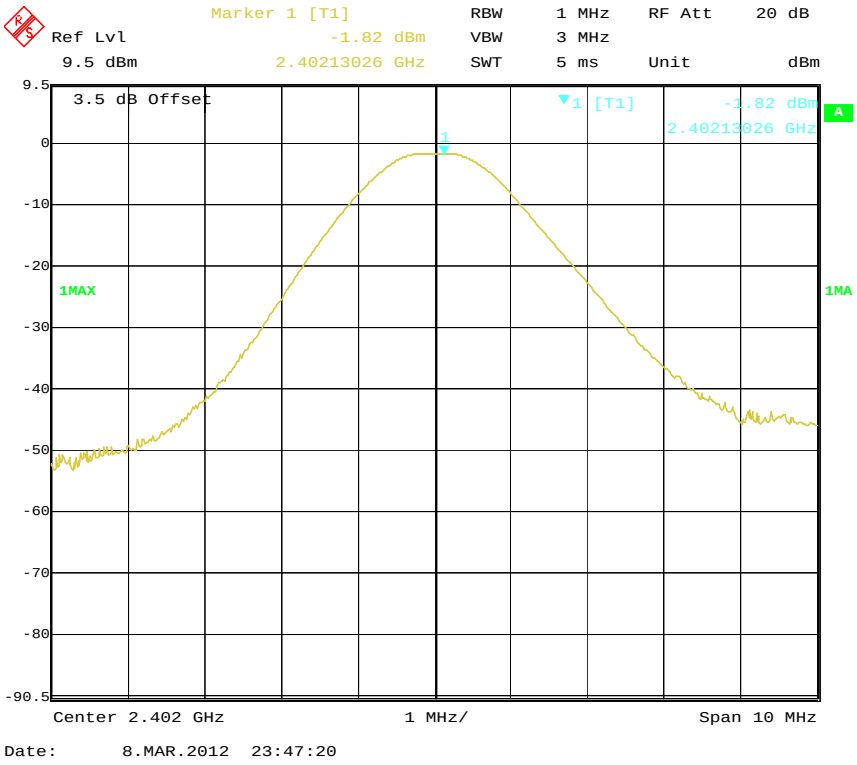
Test Mode: Transmitting

BDR Mode (GFSK):

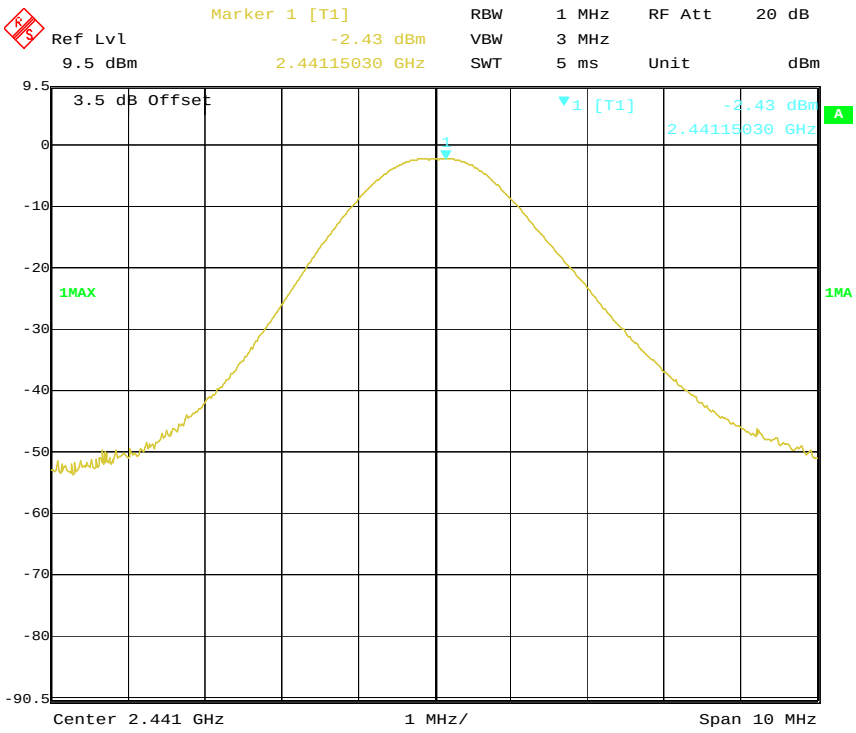
channel	Channel frequency (MHz)	Reading Output Power (dBm)	Output Power (mW)	Limit (mW)
Low channel	2402	-1. 82	0.66	1000
Middle channel	2441	-2.43	0.57	1000
High channel	2480	-3.27	0.47	1000

Note: The data above was tested in conducted mode.

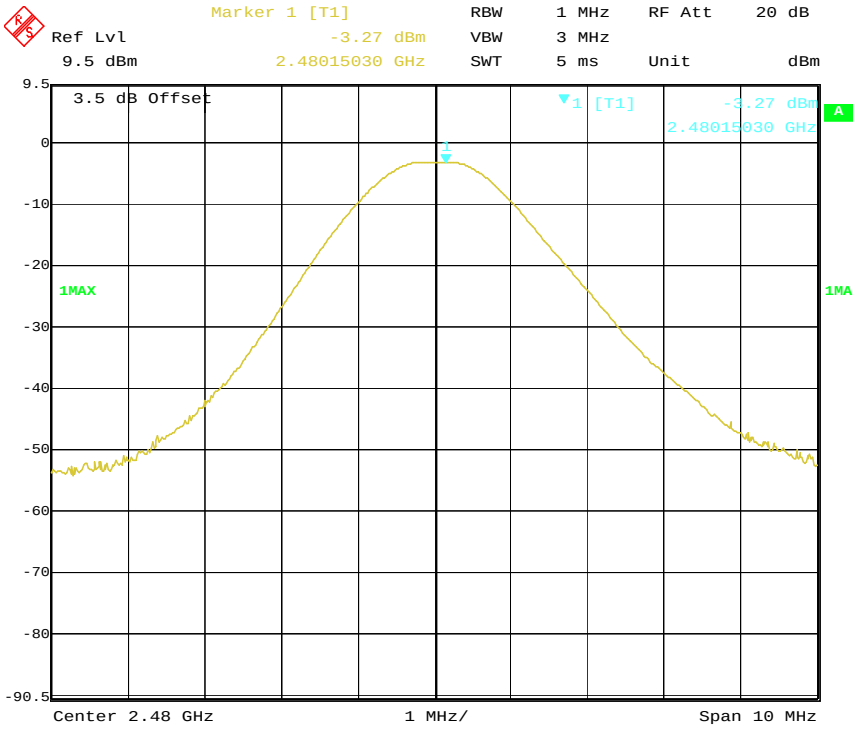
Low Channel



Middle Channel



High Channel

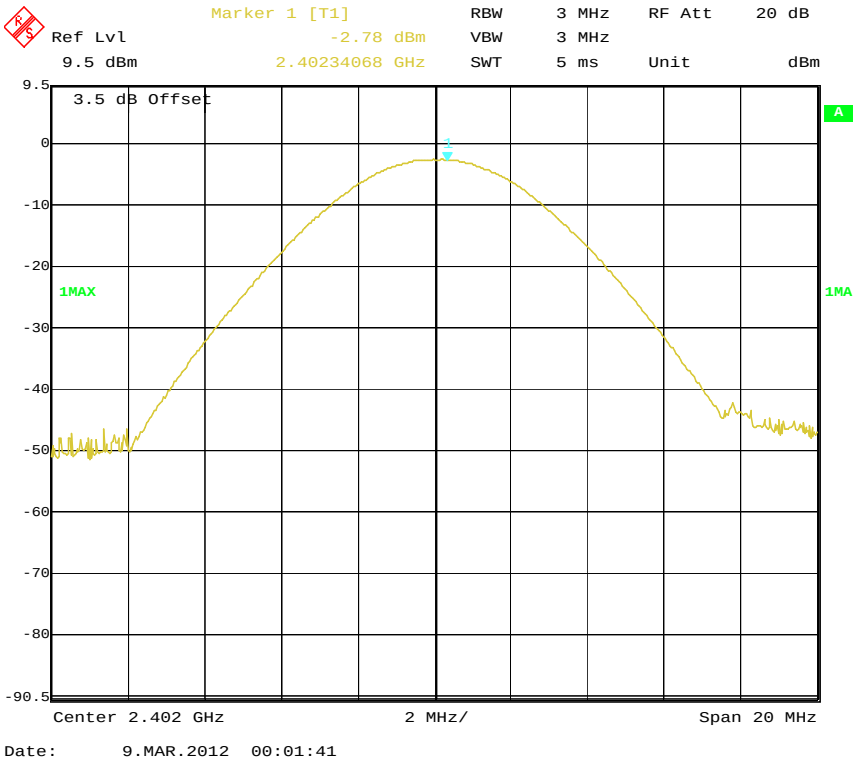


EDR Mode (π /4-DQPSK):

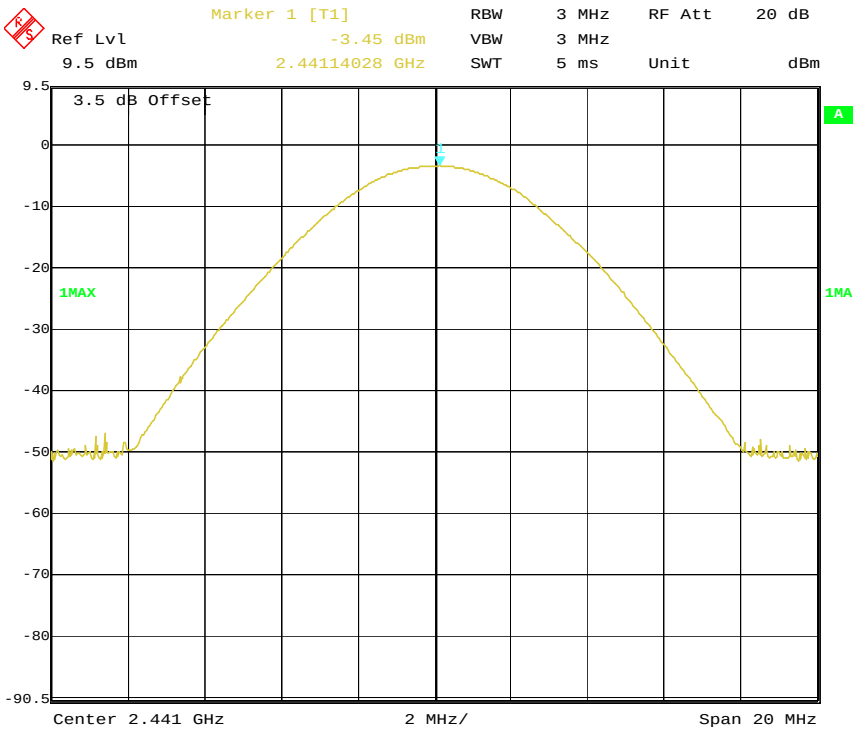
channel	Channel frequency (MHz)	Reading Output Power (dBm)	Output Power (mW)	Limit (mW)
Low channel	2402	-2.78	0.53	1000
Middle channel	2441	-3.45	0.45	1000
High channel	2480	-4.53	0.35	1000

Note: The data above was tested in conducted mode.

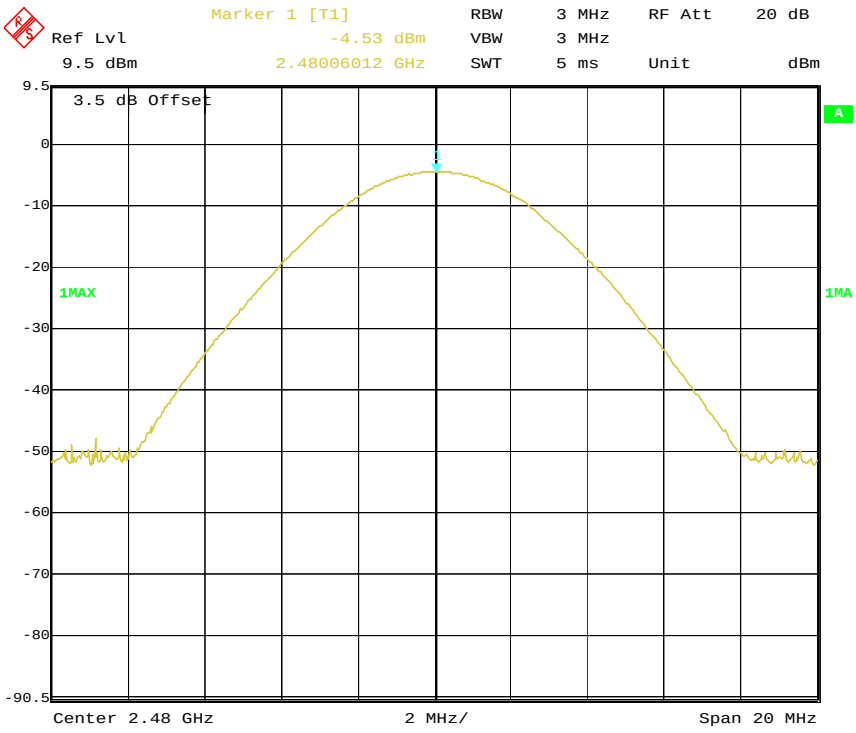
Low Channel



Middle Channel



High Channel

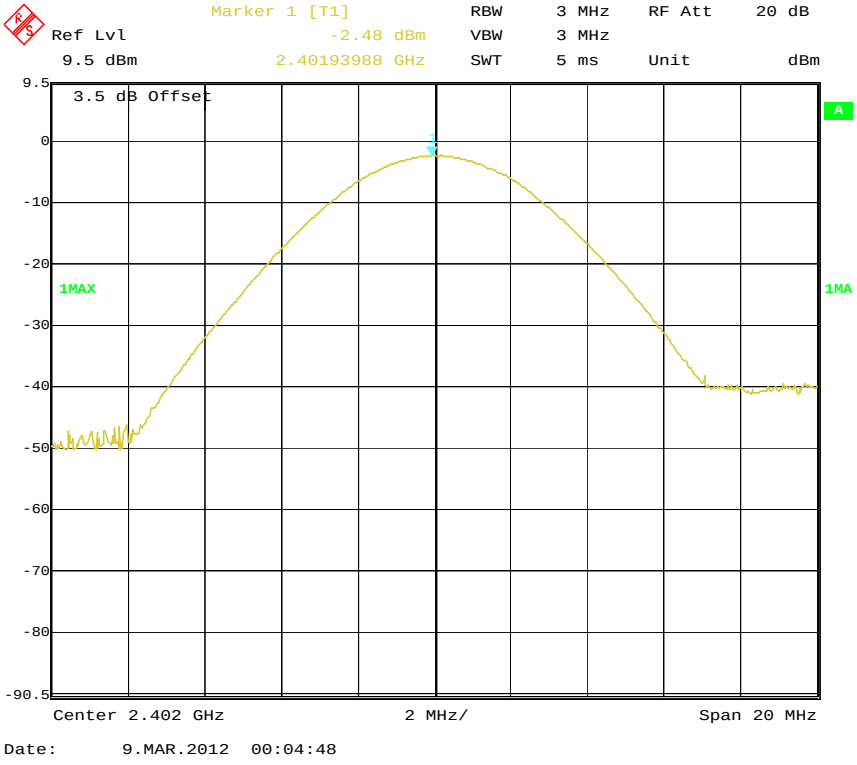


EDR Mode (8DPSK):

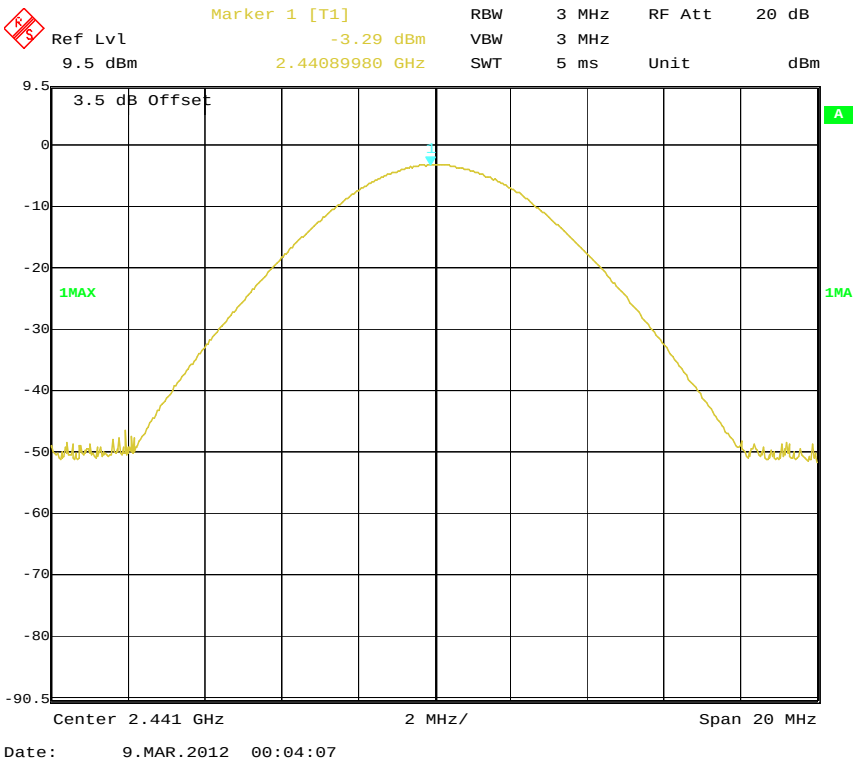
channel	Channel Frequency (MHz)	Reading Output Power (dBm)	Output Power (mW)	Limit (mW)
Low channel	2402	-2.48	0.57	1000
Middle channel	2441	-3.29	0.47	1000
High channel	2480	-4.23	0.38	1000

Note: The data above was tested in conducted mode.

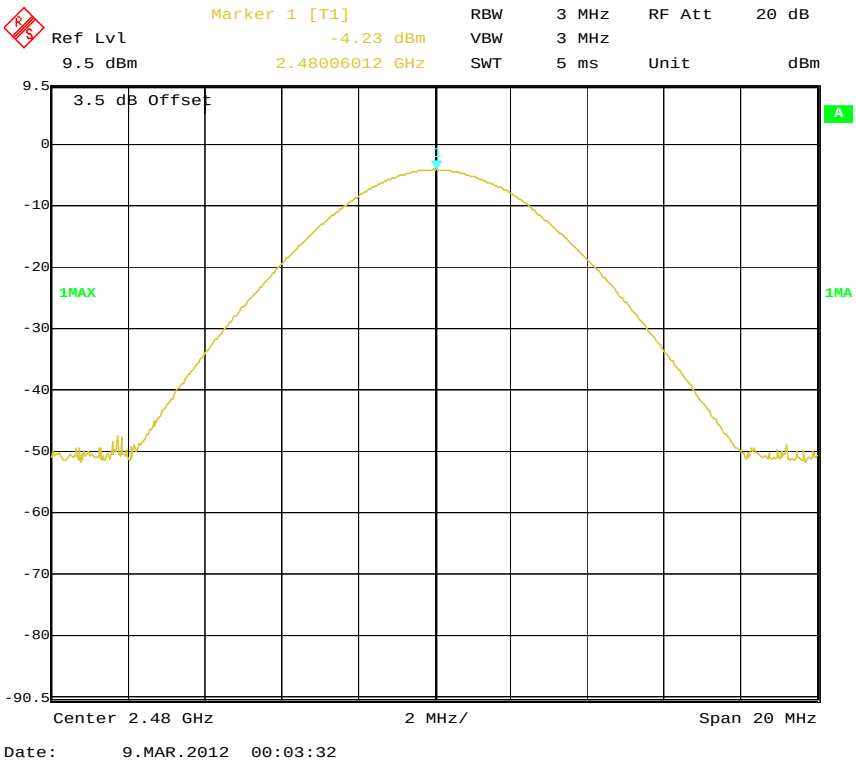
Low Channel



Middle Channel



High Channel



FCC §15.247(d) - BAND EDGES TESTING

Applicable Standard

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. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Remove the antenna from the EUT and then connect to a low loss RF cable from the antenna port to an EMI test receiver, then turn on the EUT and make it operate in transmitting mode. Then set it to Low Channel and High Channel within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 100 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ 26	609358	2011-07-08	2012-07-07

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Data

Environmental Conditions

Temperature:	26 °C
Relative Humidity:	56 %
ATM Pressure:	100.9 kPa

**The testing was performed by Brown Lu on 2012-03-09.*

Test Result: Compliant. Please refer to the following table and plots.

Test Mode: Transmitting

BDR Mode (GFSK):

Frequency (MHz)	Delta Peak to Band Emission (dBc)	Delta Limit (dBc)
2399.567	51.07	20
2484.040	52.32	20

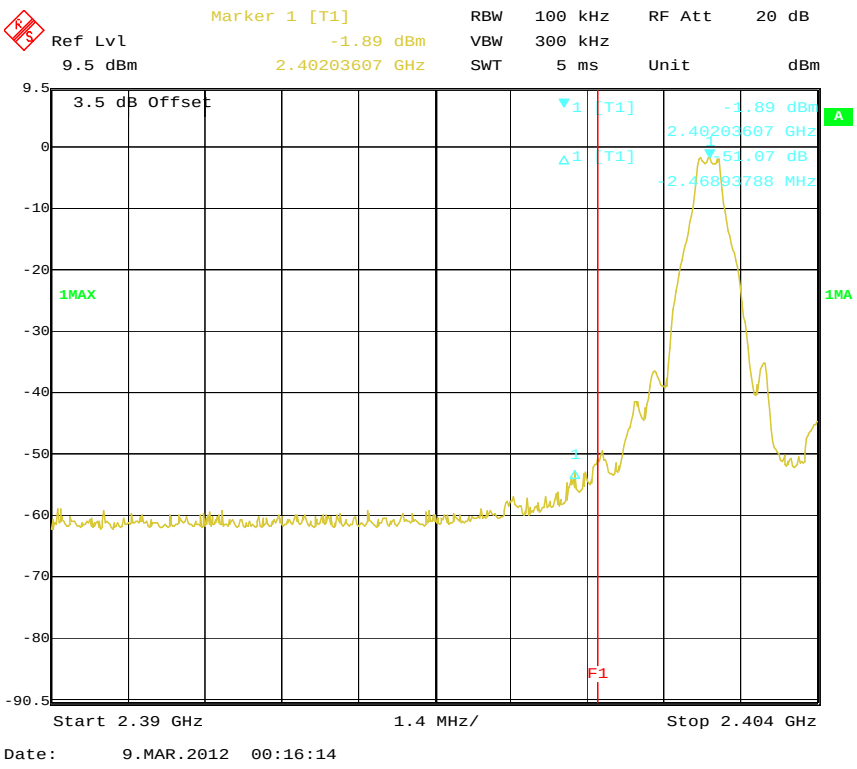
EDR Mode (π/4-DQPSK):

Frequency (MHz)	Delta Peak to Band Emission (dBc)	Delta Limit (dBc)
2399.623	-46.43	20
2483.599	-45.77	20

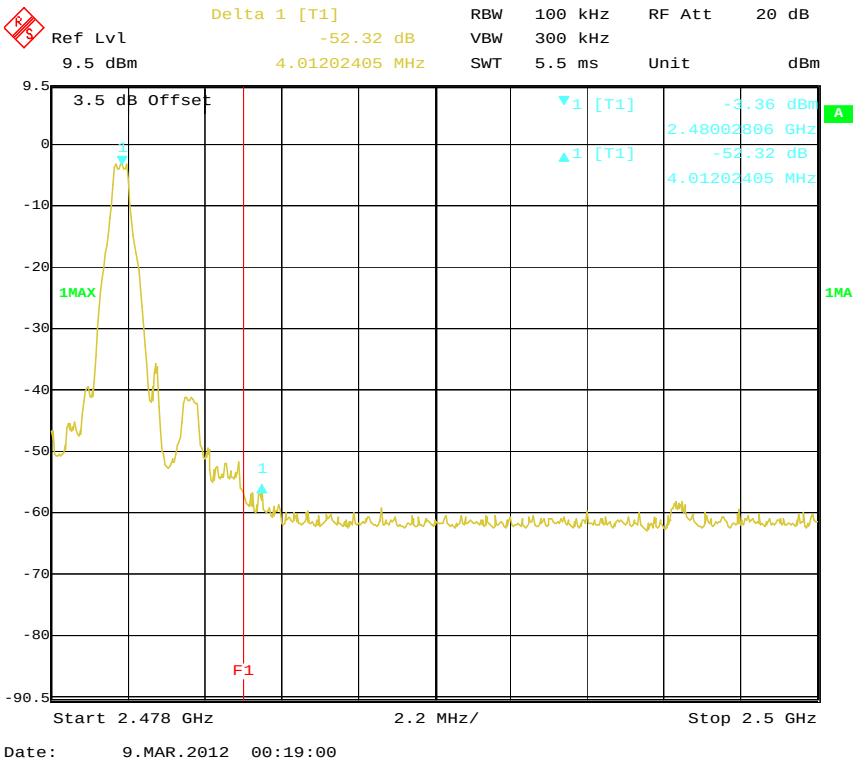
EDR Mode (8DPSK):

Frequency (MHz)	Delta Peak to Band Emission (dBc)	Delta Limit (dBc)
2399.672	47.36	20
2484.040	45.65	20

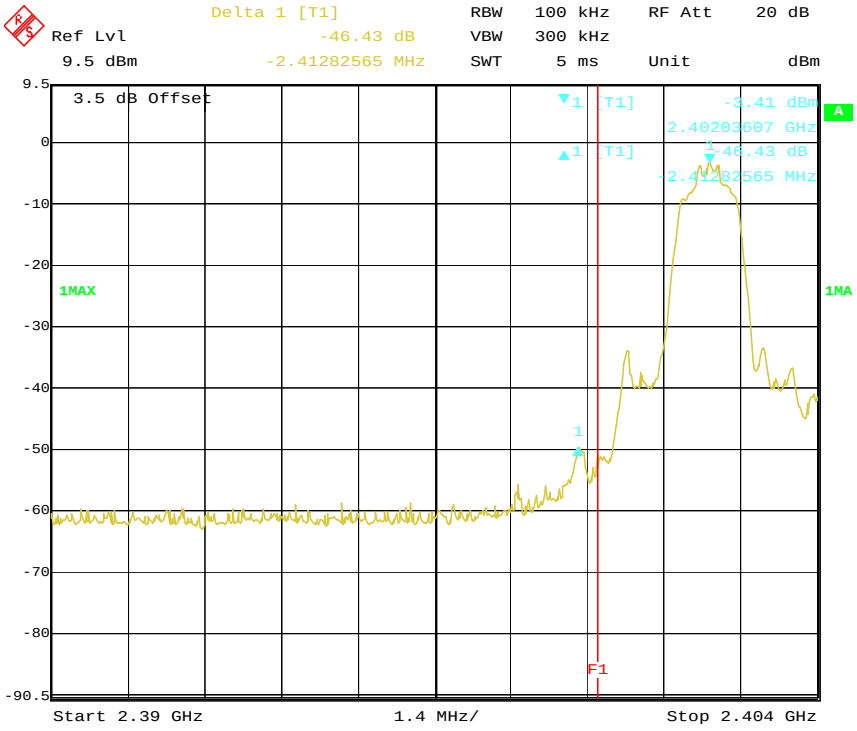
GFSK - Band Edge: Left Side



GFSK - Band Edge: Right Side

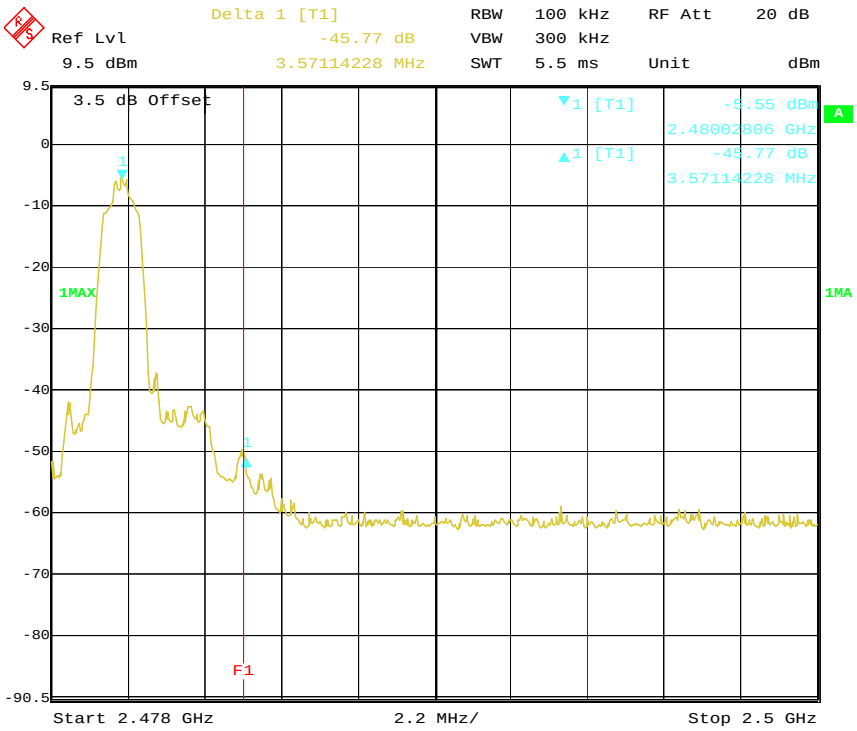


π/4-DQPSK - Band Edge: Left Side



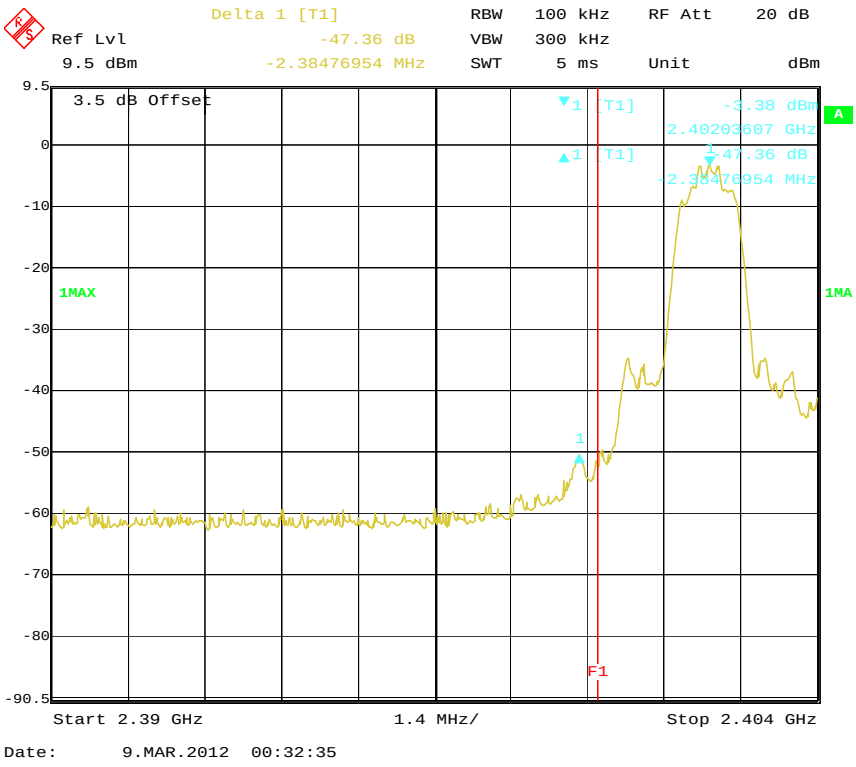
Date: 9.MAR.2012 00:28:40

π/4-DQPSK - Band Edge: Right Side

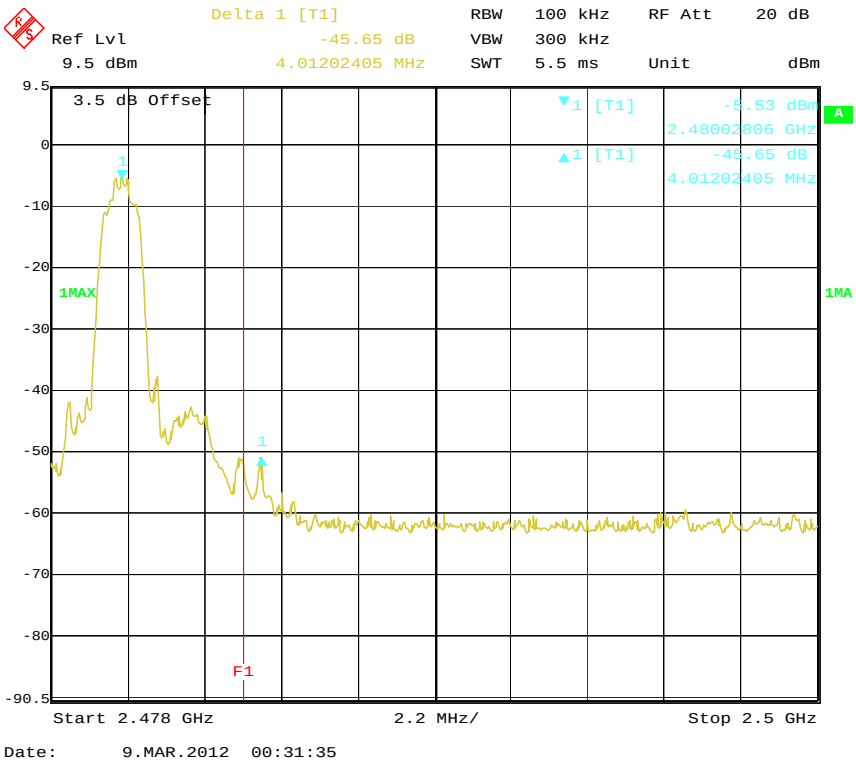


Date: 9.MAR.2012 00:30:30

8DPSK - Band Edge: Left Side



8DPSK - Band Edge: Right Side



DECLARATION LETTER

xingtel
Created for Lifestyle
XINGTEL XIAMEN GROUP CO., LTD.
Xingtel Building, Chuangxin Road,Torch Hi-Tech Industrial District, Xiamen 361006, P R China
E-mail:info@xingtel.com Website://www.xingtel.com
Tel: +86-592-562-5929
+86-592-603-6442(6 lines)
Fax: +86-592-603-7860

To: Bay Area Compliance Laboratories Corp

Declaration of Similarity

To whom it may concern,

We,
Xingtel Xiamen Group Co., Ltd.
Address: Xingtel Building, Chuangxin Road, Torch Hi-tech Industrial District, Xiamen, 361006, China

Hereby declare that
Product Name: **iPhone Complimate**
Model No. **i-500 with trade name iCreation**
i-450 with trade name iCreation
i-400 with trade name iCreation
i-350 with trade name iCreation

i-500 & i-450 are electrically and mechanically identical, the only difference between them is the model number.
i-500 & i-400 is electrically identical, the difference between them are mechanical design and model number.
i-400 & i-350 are electrically and mechanically identical, the only difference between them is the model number.
i-500 was tested by BACL.

Regards,
Xingtel Xiamen Group Co., Ltd.

Simon Liu
Director
February 28, 2012

*******END OF REPORT*******