FCC PART 15.247
TEST REPORT

For

Alinket Electronic Technology (Shanghai) Co., Ltd.

Room 403, No. 10, Lane 198, Zhangheng Road, Pudong, Shanghai, China

FCC ID: 2AELJ-ALXC1X

Report Type:	**Product Type:**
Original Report	Alinket wireless controller

Test Engineer:	Matt Yao
Report Number:	RKS150925001-00F
Report Date:	2015-10-28
Reviewed By:	Jesse Huang EMC Manager
Prepared By:	Bay Area Compliance Laboratories Corp. (Kunshan) Chenghu Road,Kunshan Development Zone No.248,Kunshan, Jiangsu, China Tel: +86-0512-86175000 Fax: +86-0512-88934268 www.baclcorp.com.cn

TABLE OF CONTENTS

GENERAL INFORMATION **4**
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT) 4
OBJECTIVE 4
RELATED SUBMITTAL(S)/GRANT(S) 4
TEST METHODOLOGY 4
TEST FACILITY 5
SYSTEM TEST CONFIGURATION **6**
DESCRIPTION OF TEST CONFIGURATION 6
EUT EXERCISE SOFTWARE 6
SPECIAL ACCESSORIES 6
EQUIPMENT MODIFICATIONS 6
SUPPORT EQUIPMENT LIST AND DETAILS 6
EXTERNAL I/O CABLE 6
BLOCK DIAGRAM OF TEST SETUP 7
SUMMARY OF TEST RESULTS **8**
FCC§15.247 (i), §1.1310& §2.1091 –MAXIMUM PERMISSIBLE **9**
EXPOSURE (MPE) **9**
APPLICABLE STANDARD 9
MEASUREMENT RESULT 9
FCC §15.203 – ANTENNA REQUIREMENT **10**
APPLICABLE STANDARD 10
ANTENNA CONNECTOR CONSTRUCTION 10
FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS **11**
APPLICABLE STANDARD 11
MEASUREMENT UNCERTAINTY 11
EUT SETUP 11
EMI TEST RECEIVER SETUP 12
TEST PROCEDURE 12
TEST EQUIPMENT LIST AND DETAILS 12
CORRECTED FACTOR & MARGIN CALCULATION 12
TEST RESULTS SUMMARY 13
TEST DATA 13
FCC §15.205, §15.209 & §15.247(d) – RADIATED EMISSIONS **16**
APPLICABLE STANDARD 16
MEASUREMENT UNCERTAINTY 16
EUT SETUP 16
EMI TEST RECEIVER & SPECTRUM ANALYZER SETUP 17
TEST PROCEDURE 17
CORRECTED AMPLITUDE & MARGIN CALCULATION 18
TEST EQUIPMENT LIST AND DETAILS 18
TEST RESULTS SUMMARY 18
TEST DATA 19
FCC §15.247(a) (1)-CHANNEL SEPARATION TEST **26**
APPLICABLE STANDARD 26

TEST PROCEDURE 26
TEST EQUIPMENT LIST AND DETAILS....26
TEST DATA 26

FCC §15.247(a) (1) – 20 dB EMISSION BANDWIDTH....33

APPLICABLE STANDARD 33
TEST PROCEDURE 33
TEST EQUIPMENT LIST AND DETAILS....33
TEST DATA 33

FCC §15.247(a) (1) (iii)-QUANTITY OF HOPPING CHANNEL TEST 39

APPLICABLE STANDARD 39
TEST PROCEDURE 39
TEST EQUIPMENT LIST AND DETAILS....39
TEST DATA 39

FCC §15.247(a) (1) (iii) - TIME OF OCCUPANCY (DWELL TIME)....42

APPLICABLE STANDARD 42
TEST PROCEDURE 42
TEST EQUIPMENT LIST AND DETAILS....42
TEST DATA 42

FCC §15.247(b) (1) - PEAK OUTPUT POWER MEASUREMENT....58

APPLICABLE STANDARD 58
TEST PROCEDURE 58
TEST EQUIPMENT LIST AND DETAILS....58
TEST DATA 58

FCC §15.247(d) - BAND EDGES TESTING 64

APPLICABLE STANDARD 64
TEST PROCEDURE 64
TEST EQUIPMENT LIST AND DETAILS....64
TEST DATA 64

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The Alinket Electronic Technology (Shanghai) Co., Ltd.'s product, model number: ALXC11B (FCC ID: 2AELJ-ALXC1X) or the "EUT" in this report was a Alinket wireless controller, which was measured approximately: 32 mm (L) x16 mm (W) x 3 mm (H), rated input voltage: DC 3.3 V.

** Note: The product's series model number: ALXC1X. ALXC1X. ALXC1X and ALXC11B are the same products, and just have the different model name.*

******All measurement and test data in this report was gathered from production sample serial number: 150925001 (Assigned by the BACL.The EUT supplied by the applicant was received on 2015-09-25)*

Objective

This test report is prepared on behalf of Alinket Electronic Technology (Shanghai) 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 compliance 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 C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices and FCC KDB558074 D01 DTS Meas Guidance v03r03.

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

Measurement uncertainty with radiated emission is 5.87 dB for 30MHz-1GHz, and 4.84 dB for above 1GHz, 1.85dB for conducted measurement.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the Chenghu Road, Kunshan Development Zone No.248, Kunshan, Jiangsu, China.

Test site at Bay Area Compliance Laboratories Corp. (Kunshan) 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, 2014. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 815570. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in an engineering mode which was controlled by the equipment Bluetooth tester.

EUT Exercise Software

Bluetool

GFSK :Power level 7
π/4-DQPSK :Power level 7
8DPSK :Power level 7

Special Accessories

No special accessory.

Equipment Modifications

No modification was made to the EUT tested.

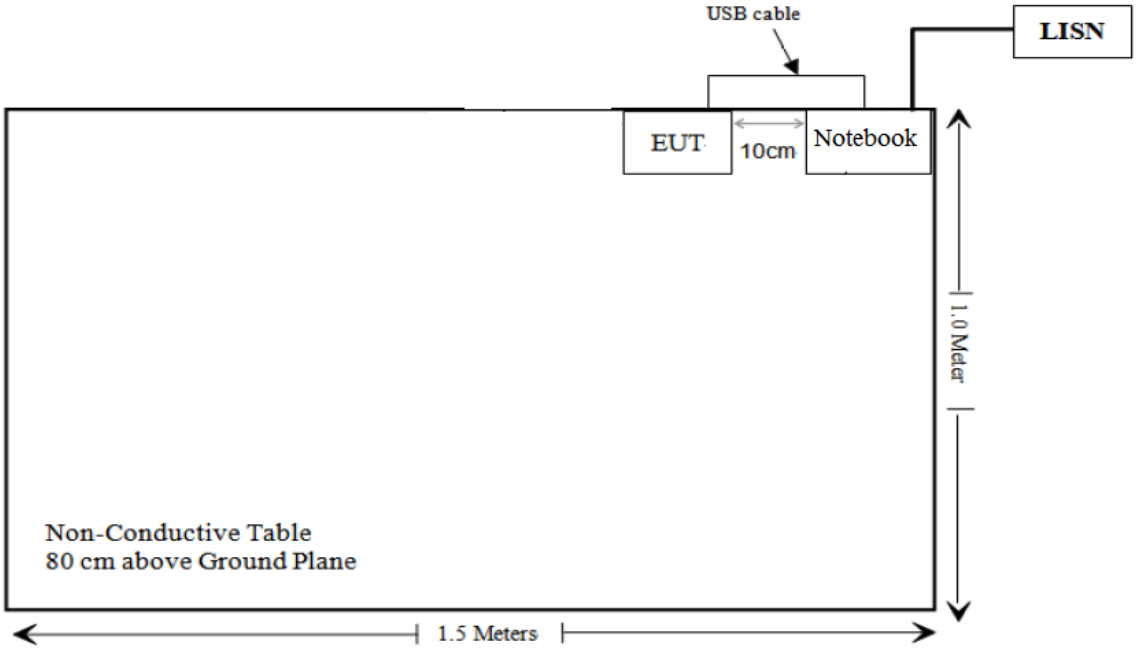
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Lenovo	Notebook	T400	N/A

External I/O Cable

Cable Description	Length (m)	From Port	To
USB Cable	0.9	EUT	PC

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.247 (i), §1.1310 & §2.1091	RF Exposure	Compliance
§15.203	Antenna Requirement	Compliance
§15.207(a)	AC Line Conducted Emissions	Compliance
§15.205, §15.209 & §15.247(d)	Radiated Emissions	Compliance
§15.247(a)(1)	20 dB Emission 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§15.247 (i), §1.1310& §2.1091 –MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to subpart 15.247(i)and subpart §1.1310, 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.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (V/m)**	**Magnetic Field Strength (A/m)**	**Power Density (mW/cm^2)**	**Averaging Time (minutes)**
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f^2)	30
30-300	27.5	0.073	0.2	30
300-1500	/		f/1500	30
1500-100,000	/		1.0	30

f = frequency in MHz; * = Plane-wave equivalent power density;

According to §1.1310 and §2.1091 RF exposure is calculated.

Calculated Formulary:
Predication of MPE limit at a given distance
$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm^2);
P = power input to the antenna (in appropriate units, e.g., mW);
G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

Measurement Result

Mode	Frequency (MHz)	Antenna Gain		Target Power		Target Power	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
		(dBi)	(dBm)	(dBm)	(mW)			
GFSK	2402	2	8.50	8.50	5.64	20	0.002	1.0

Note: The target output power: 8 dBm±0.5dBm，
Please refer to the Technical Specification, which declared by the Manufacturer.

Result: The device meet FCC MPE at 20 cm distance

FCC §15.203 – ANTENNA REQUIREMENT

Applicable Standard

According to FCC § 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 use of a standard antenna jack or electrical connector is prohibited.

Antenna Connector Construction

The EUT has a Dipole antenna and a PCB antenna arrangement for Bluetooth, which the antenna gain are 2 dBi and 0 dBi, fulfill the requirement of this section. Please refer to the EUT photos.

Result: Compliance.

FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207(a)

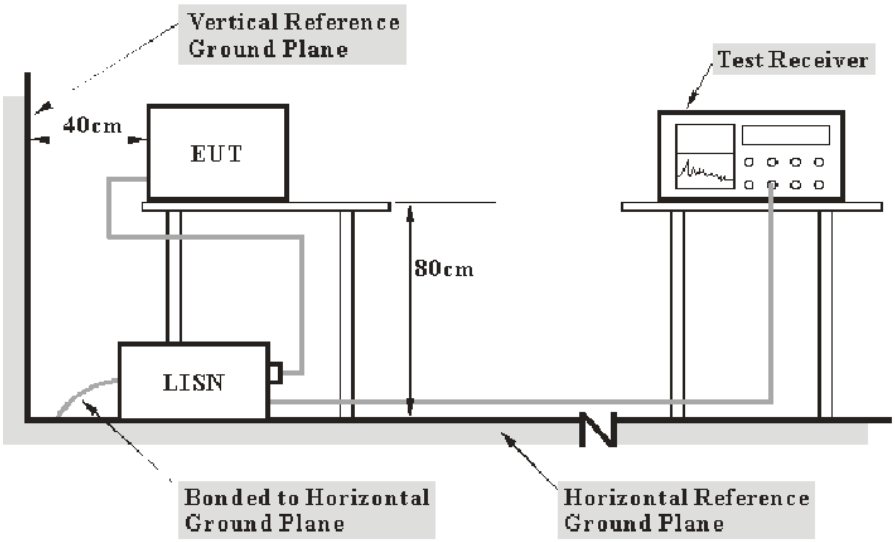
Measurement Uncertainty

Input quantities to be considered for conducted disturbance measurements maybe receiver reading, attenuation of the connection between LISN and receiver, LISN voltage division factor, LISN VDF frequency interpolation and receiver related input quantities, etc.

Based on CISPR 16-4-2, the expended combined standard uncertainty of conducted disturbance test at Bay Area Compliance Laboratories Corp. (Kunshan) is shown as below. And the uncertainty will not be taken into consideration for the test data recorded in the report.

Port	Expanded Measurement uncertainty
AC Mains	3.26 dB (k=2, 95% level of confidence)
CAT 3	3.70 dB (k=2, 95% level of confidence)
CAT 5	3.86 dB (k=2, 95% level of confidence)
CAT 6	4.64 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 measurement procedure of EUT setup is according with ANSI C63.10-2013. The related limit was specified in FCC Part 15.207.

The adapter was connected to a 120 VAC/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 final 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	934115/007	2014-11-4	2015-11-3
Rohde & Schwarz	LISN	ESH3-Z5	862770/011	2014-11-4	2015-11-3
Rohde & Schwarz	LISN	ESH3-Z5	892239/018	2015-6-23	2016-6-22
Rohde & Schwarz	CE Test software	EMC 32	V 09.10.0	--	--

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

Corrected Factor & Margin Calculation

The Corrected factor is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation. The basic equation is as follows:

Correction Factor = LISN VDF + Cable Loss + Transient Limiter Attenuation

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

Margin = Limit – Corrected Amplitude

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.207, the worst margin reading as below:

20.80 dB at **0.48MHz** in the **Neutral** conducted mode Refer

to CISPR16-4-2and CISPR 16-4-1, the measured level complies with the limit if

$$L_m + U_{(Lm)} \leq L_{lim} + U_{cispr}$$

In BACL, $U_{(Lm)}$ is less than U_{cispr}, if L_m is less than L_{lim}, it implies that the EUT complies with the limit.

Test Data

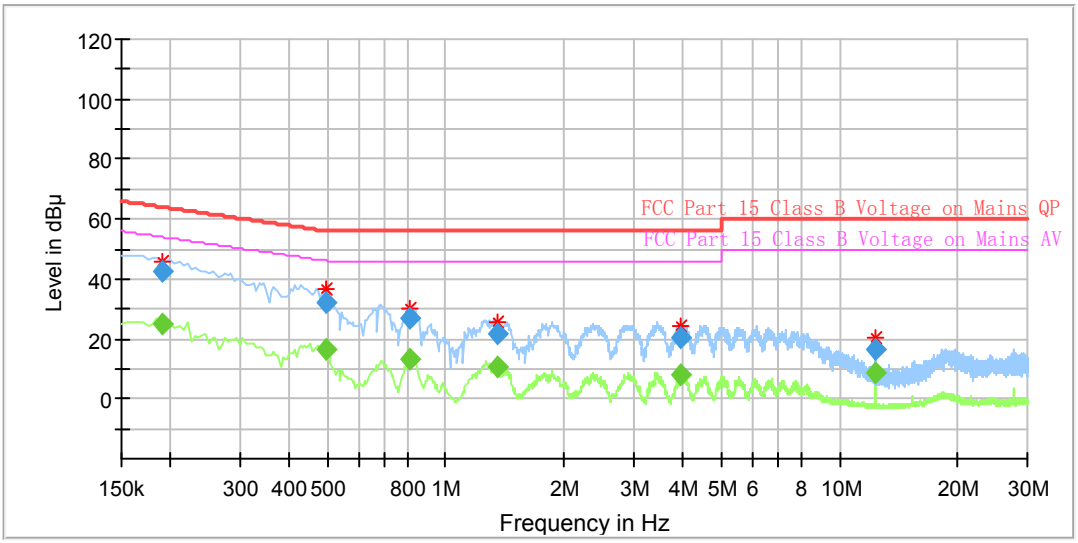
Environmental Conditions

Temperature:	27 ℃
Relative Humidity:	56 %
ATM Pressure:	101.0 kPa

The testing was performed by Matt Yao on 2015-10-21.

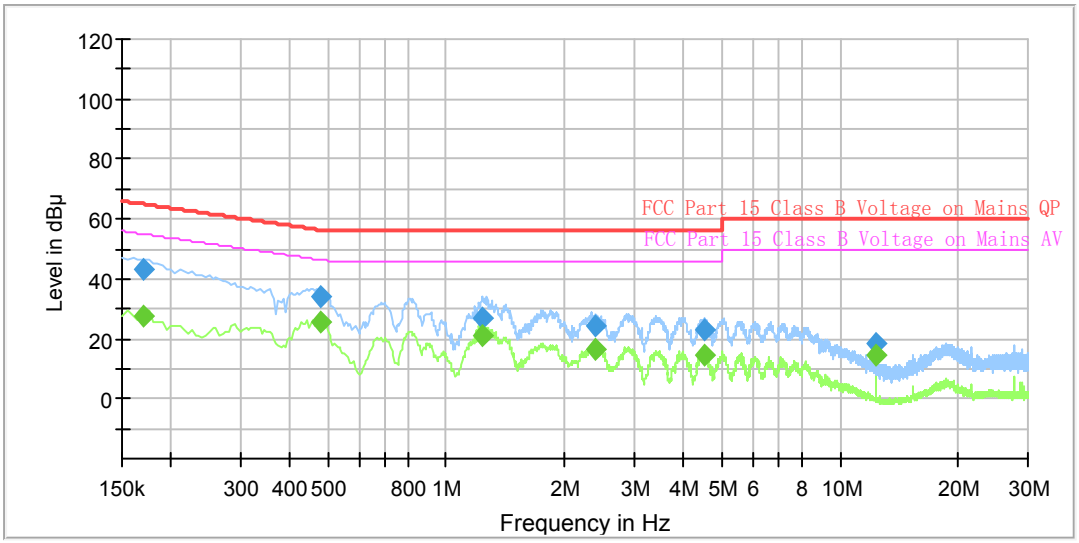
EUT operation mode: Charging & Transmitting

AC 120V/60 Hz, Line



Frequency (MHz)	QuasiPeak (dBµV)	Average (dB µ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.190000	---	24.69	9.000	L1	11.0	29.35	54.04	Compliance
0.190000	42.34	---	9.000	L1	11.0	21.70	64.04	Compliance
0.495000	---	16.39	9.000	L1	11.0	29.69	46.08	Compliance
0.495000	32.11	---	9.000	L1	11.0	23.97	56.08	Compliance
0.810000	---	13.40	9.000	L1	11.1	32.60	46.00	Compliance
0.810000	26.95	---	9.000	L1	11.1	29.05	56.00	Compliance
1.345000	---	10.63	9.000	L1	11.1	35.37	46.00	Compliance
1.345000	21.57	---	9.000	L1	11.1	34.43	56.00	Compliance
3.930000	---	7.84	9.000	L1	11.3	38.16	46.00	Compliance
3.930000	20.16	---	9.000	L1	11.3	35.84	56.00	Compliance
12.285000	---	8.72	9.000	L1	11.3	41.28	50.00	Compliance
12.285000	16.50	---	9.000	L1	11.3	43.50	60.00	Compliance

AC 120V/60 Hz, Neutral



Frequency (MHz)	QuasiPeak (dBµV)	Average (dB µ V)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.170000	---	27.74	9.000	N	11.0	27.22	54.96	Compliance
0.170000	43.28	---	9.000	N	11.0	21.68	64.96	Compliance
0.480000	---	25.54	9.000	N	11.0	20.80	46.34	Compliance
0.480000	33.73	---	9.000	N	11.0	22.61	56.34	Compliance
1.235000	---	20.90	9.000	N	11.1	25.10	46.00	Compliance
1.235000	27.00	---	9.000	N	11.1	29.00	56.00	Compliance
2.400000	---	16.35	9.000	N	11.3	29.65	46.00	Compliance
2.400000	24.35	---	9.000	N	11.3	31.65	56.00	Compliance
4.535000	---	14.78	9.000	N	11.3	31.22	46.00	Compliance
4.535000	22.89	---	9.000	N	11.3	33.11	56.00	Compliance
12.285000	---	14.35	9.000	N	11.4	35.65	50.00	Compliance
12.285000	18.62	---	9.000	N	11.4	41.38	60.00	Compliance

Note:
1) Corr.=LISN VDF (Voltage Division Factor) + Cable Loss
2) Corrected Amplitude = Reading + Corr.
3) Margin = Limit –Corrected Amplitude

FCC §15.205, §15.209 & §15.247(d) – RADIATED EMISSIONS

Applicable Standard

FCC §15.205; §15.209; §15.247(d)

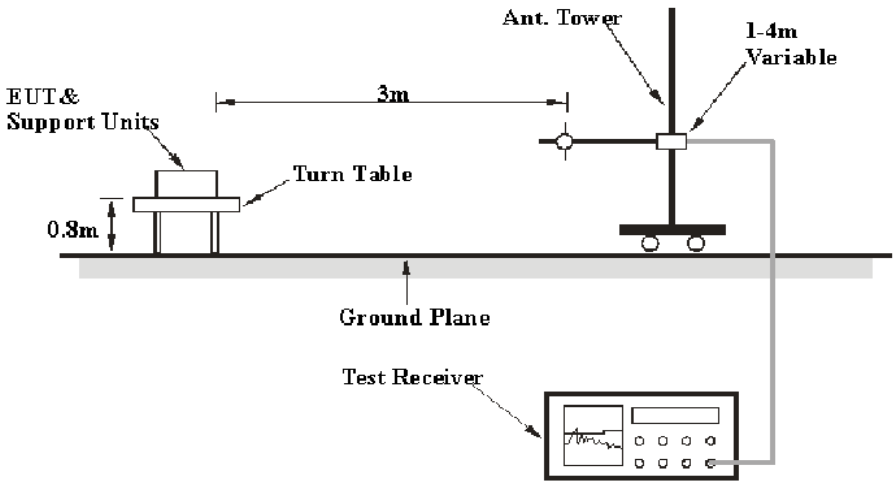
Measurement Uncertainty

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.

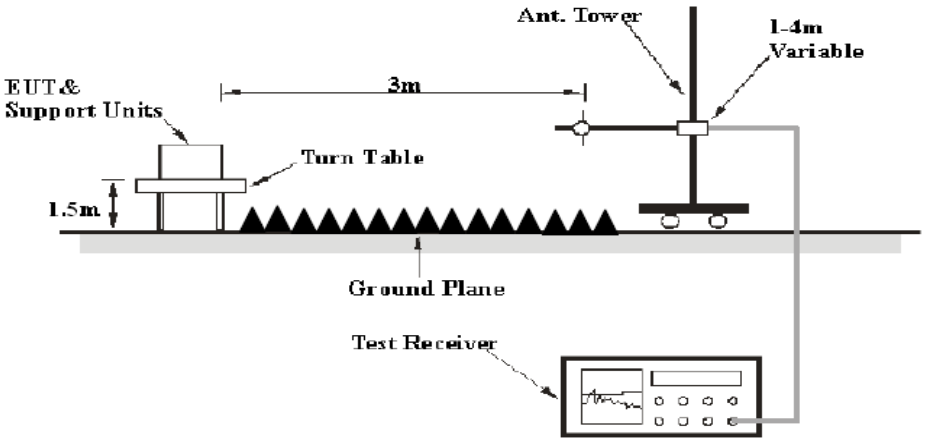
Based on CISPR 16-4-2, the expended combined standard uncertainty of radiation emissions at Bay Area Compliance Laboratories Corp. (Shenzhen) is 5.91 dB for 30MHz-1GHz, and 4.92 dB for above 1GHz. And this uncertainty will not be taken into consideration for the test data recorded in the report.

EUT Setup

Below 1 GHz:



Above 1GHz:



The radiated emission tests were performed in the 3 meters, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209 and FCC 15.247 limits.

The adapter was connected to a 120 VAC/60 Hz power source.

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	IF B/W	Detector
30 MHz – 1000 MHz	100 kHz	300 kHz	120 kHz	QP
Above 1 GHz	1 MHz	3 MHz	/	PK
	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.

All final data was recorded in Quasi-peak detection mode for frequency range of 30 MHz -1 GHz and 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
Sonoma Instrunent	Amplifier	330	171377	2015-9-16	2016-9-16
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2015-5-20	2016-5-19
Sunol Sciences	Broadband Antenna	JB3	A090314-2	2014-11-7	2015-11-6
ETS	Horn Antenna	3115	6229	2014-11-7	2015-11-6
Rohde & Schwarz	Signal Analyzer	FSIQ26	100048	2014-11-4	2015-11-3
Mini	Pre-amplifier	ZVA-183-S+	857001418	2015-9-16	2016-9-16
R&S	Auto test Software	EMC32	V 09.10.0	-	-

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

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.

1.83dB at **240.005000 MHz** in the **Horizontal** polarization

Refer to CISPR16-4-2 and CISPR 16-4-1, the measured level complies with the limit if

$$L_m + + \ U_{(Lm)} \leq \ L_{lim} + + \ U_{cispr}$$

In BACL, $U_{(Lm)}$ is less than + U_{cispr}, if L_m is less than L_{lim}, it implies that the EUT complies with the limit.

Test Data

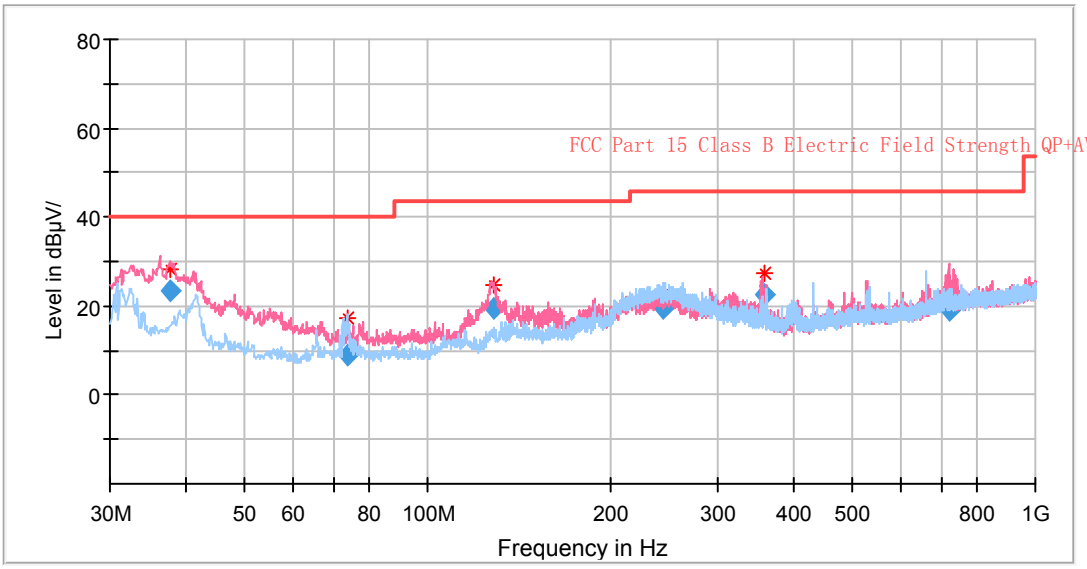
Environmental Conditions

Temperature:	27 ℃
Relative Humidity:	56 %
ATM Pressure:	101.0 kPa

The testing was performed by Matt Yao on 2015-10-22.

EUT operation mode: Normal operation

30MHz-1GHz:



Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBµV/m)	FCC Part 15.247/205/209	
	Reading (dBµV)	Detector (PK/QP/Ave.)		Height (cm)	Polar (H/V)			Limit (dBµV/m)	Margin (dB)
37.760600	33.69	QP	356.0	100.0	V	-10.3	23.39	40.00	16.61
73.592100	25.92	QP	226.0	100.0	H	-17.1	8.82	40.00	31.18
128.874600	33.02	QP	105.0	100.0	V	-13.5	19.52	43.50	23.98
244.260000	31.52	QP	288.0	200.0	H	-11.9	19.62	46.00	26.38
357.540750	31.8	QP	162.0	100.0	V	-9.1	22.70	46.00	23.30
720.828150	21.2	QP	0.0	100.0	V	-2.1	19.10	46.00	26.90

30 MHz -25 GHz: (*Scan with GFSK, π/4-DQPSK, 8-DPSK mode, the worst case is BDR Mode (GFSK)*)

For Dipole Antenna

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247/205/209	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
Low Channel (2402 MHz)									
2402	94.52	PK	54	2.0	H	3.0	97.52	/	/
2402	83.12	Ave.	54	2.0	H	3.0	86.12	/	/
2402	93.51	PK	43	2.0	V	3.0	96.51	/	/
2402	83.52	Ave.	43	2.0	V	3.0	86.52	/	/
2373	35.06	PK	47	2.0	H	4.1	39.16	74	34.84
2373	22.76	Ave.	47	2.0	H	4.1	26.86	54	27.14
2388	37.29	PK	5	3.0	H	4.1	41.39	74	32.61
2388	22.07	Ave.	5	3.0	H	4.1	26.17	54	27.83
3000	36.43	PK	335	1.5	V	8.8	45.23	74	28.77
3000	17.30	Ave.	335	1.5	V	8.8	26.1	54	27.9
4804	35.04	PK	342	2.0	V	14.1	49.14	74	24.86
4804	30.88	Ave.	342	2.0	V	14.1	44.98	54	9.02
6974	29.51	PK	119	1.5	H	19.8	49.31	74	24.69
6974	13.85	Ave.	119	1.5	H	19.8	33.65	54	20.35
7206	31.92	PK	129	1.5	V	21.6	53.52	74	20.48
7206	18.64	Ave.	129	1.5	V	21.6	40.24	54	13.76

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247/205/209	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
Middle Channel (2441 MHz)									
2441	94.19	PK	38	2.0	H	2.6	96.79	/	/
2441	83.07	Ave.	38	2.0	H	2.6	85.67	/	/
2441	92.68	PK	54	2.0	V	2.6	95.28	/	/
2441	81.57	Ave.	54	2.0	V	2.6	84.17	/	/
1201	48.01	PK	6	1.5	V	-2.1	45.91	74	28.09
1201	38.60	Ave.	6	1.5	V	-2.1	36.50	54	17.50
2334	37.64	PK	131	1.5	H	3.0	40.64	74	33.36
2334	23.42	Ave.	131	1.5	H	3.0	26.42	54	27.58
3000	35.9	Ave.	335	1.5	V	8.8	44.70	54	9.30
3000	40.31	PK	335	1.5	V	8.8	49.11	74	24.89
4882	19.57	Ave.	27	1.5	V	14.1	33.67	54	20.33
4882	34.87	PK	27	1.5	V	14.1	48.97	74	25.03
6681	34.53	PK	0	2.0	H	18.9	53.43	74	20.57
6681	20.85	Ave.	0	2.0	H	18.9	39.75	54	14.25
7323	16.68	Ave.	299	2.0	V	21.4	38.08	54	15.92
7323	30.76	PK	299	2.0	V	21.4	52.16	74	21.84
High Channel (2480 MHz)									
2480	92.26	PK	191	1.5	H	3.2	95.46	/	/
2480	82.13	Ave.	191	1.5	H	3.2	85.33	/	/
2480	91.17	PK	306	2.5	V	3.2	94.37	/	/
2480	82.04	Ave.	306	2.5	V	3.2	85.24	/	/
2483	43.08	PK	263	2.0	V	4.2	47.28	74	26.72
2483	34.90	Ave.	263	2.0	V	4.2	39.10	54	14.90
2494	38.93	PK	125	3.0	H	4.2	43.13	74	30.87
2494	23.35	Ave.	125	3.0	H	4.2	27.55	54	26.45
3000	39.03	PK	343	2.0	H	8.8	47.83	74	26.17
3000	33.08	Ave.	343	2.0	H	8.8	41.88	54	12.12
4960	20.04	Ave.	342	2.0	V	14.1	34.14	54	19.86
4960	36.36	PK	342	2.0	V	14.1	50.46	74	23.54
6607	34.84	PK	292	3.0	V	18.6	53.44	74	20.56
6607	20.92	Ave.	292	3.0	V	18.6	39.52	54	14.48
7440	30.77	PK	34	3.0	V	21.4	52.17	74	21.83
7440	17.35	Ave.	34	3.0	V	21.4	38.75	54	15.25

Note:
Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
Corrected Amplitude = Corrected Factor + Reading
Margin = Limit - Corrected. Amplitude

30 MHz -25 GHz: (*Scan with GFSK, π/4-DQPSK, 8-DPSK mode, the worst case is BDR Mode (GFSK)*)

For PCB Antenna

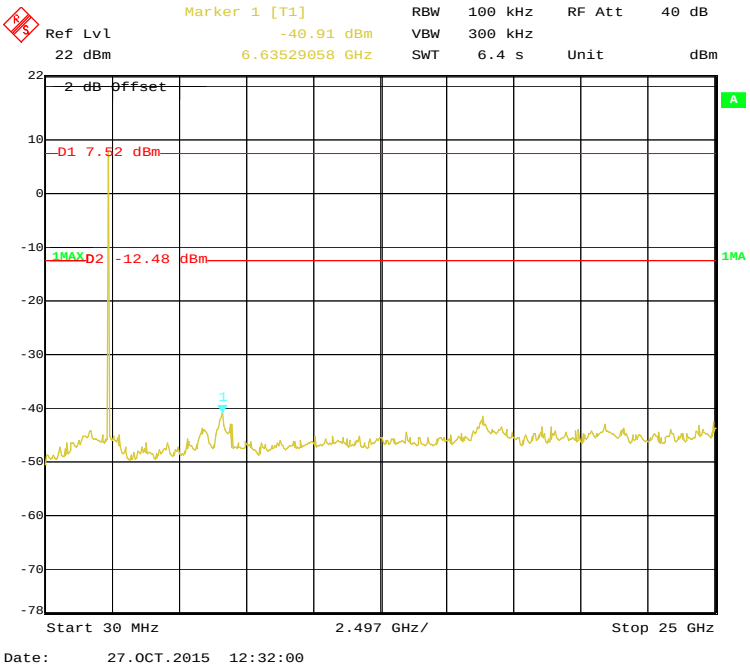
Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247/205/209	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
Low Channel (2402 MHz)									
2402	93.47	PK	60	2.0	H	3	96.47	/	/
2402	82.66	Ave.	60	2.0	H	3	85.66	/	/
2402	93.01	PK	49	2.0	V	3	96.01	/	/
2402	82.47	Ave.	49	2.0	V	3	85.47	/	/
2380	34.37	PK	100	2.0	H	4.1	38.47	74	35.53
2380	21.86	Ave.	100	2.0	H	4.1	25.96	54	28.04
2389	37.44	PK	123	2.0	H	4.1	41.54	74	32.46
2389	21.38	Ave.	123	2.0	H	4.1	25.48	54	28.52
2999	36.05	PK	334	1.5	V	8.8	44.85	74	29.15
2999	17.67	Ave.	334	1.5	V	8.8	26.47	54	27.53
4804	34.21	PK	350	2.0	V	14.1	48.31	74	25.69
4804	30.12	Ave.	350	2.0	V	14.1	44.22	54	9.78
6980	30.59	PK	157	1.5	H	19.8	50.39	74	23.61
6980	16.21	Ave.	157	1.5	H	19.8	36.01	54	17.99
7206	32.62	PK	169	1.5	V	21.6	54.22	74	19.78
7206	20.38	Ave.	169	1.5	V	21.6	41.98	54	12.02

Frequency (MHz)	Receiver		Turntable Degree	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	FCC Part 15.247/205/209	
	Reading (dBμV)	Detector (PK/QP/Ave.)		Height (m)	Polar (H/V)			Limit (dBμV/m)	Margin (dB)
Middle Channel (2441 MHz)									
2441	93.85	PK	51	2.0	H	2.6	96.45	/	/
2441	83.63	Ave.	51	2.0	H	2.6	86.23	/	/
2441	93.11	PK	89	2.0	V	2.6	95.71	/	/
2441	82.51	Ave.	89	2.0	V	2.6	85.11	/	/
1200	48.39	PK	64	1.5	V	-2.1	46.29	74	27.71
1200	37.54	Ave.	64	1.5	V	-2.1	35.44	54	18.56
2350	37.38	PK	150	1.5	H	3.0	40.38	74	33.62
2350	23.45	Ave.	150	1.5	H	3.0	26.45	54	27.55
3000	35.34	Ave.	268	1.5	V	8.8	44.14	54	9.86
3000	41.56	PK	268	1.5	V	8.8	50.36	74	23.64
4882	20.26	Ave.	31	1.5	V	14.1	34.36	54	19.64
4882	33.92	PK	31	1.5	V	14.1	48.02	74	25.98
6680	33.44	PK	47	2.0	H	18.9	52.34	74	21.66
6680	20.64	Ave.	47	2.0	H	18.9	39.54	54	14.46
7323	15.85	Ave.	222	2.0	V	21.4	37.25	54	16.75
7323	30.24	PK	222	2.0	V	21.4	51.64	74	22.36
High Channel (2480 MHz)									
2480	92.94	PK	200	2.0	H	3.2	96.14	/	/
2480	82.27	Ave.	200	2.0	H	3.2	85.47	/	/
2480	90.54	PK	310	2.0	V	3.2	93.74	/	/
2480	81.92	Ave.	310	2.0	V	3.2	85.12	/	/
2484	42.34	PK	254	2.0	V	4.2	46.54	74	27.46
2484	36.02	Ave.	254	2.0	V	4.2	40.22	54	13.78
2495	38.12	PK	150	2.0	H	4.2	42.32	74	31.68
2495	23.45	Ave.	150	2.0	H	4.2	27.65	54	26.35
3000	36.85	PK	340	2.0	H	8.8	45.65	74	28.35
3000	32.07	Ave.	340	2.0	H	8.8	40.87	54	13.13
4960	20.92	Ave.	358	2.0	V	14.1	35.02	54	18.98
4960	34.23	PK	358	2.0	V	14.1	48.33	74	25.67
6610	33.81	PK	250	1.5	V	18.6	52.41	74	21.59
6610	20.06	Ave.	250	1.5	V	18.6	38.66	54	15.34
7440	30.07	PK	46	3.0	V	21.4	51.47	74	22.53
7440	16.15	Ave.	46	3.0	V	21.4	37.55	54	16.45

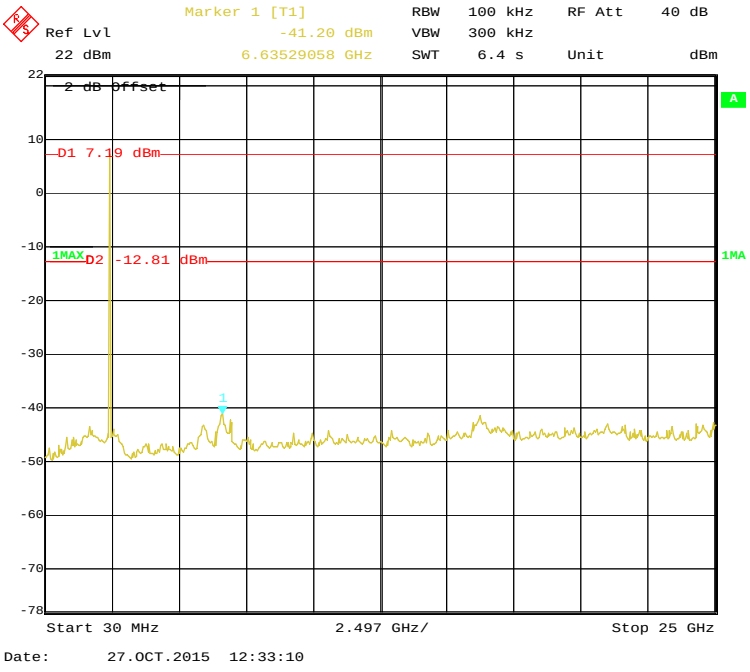
Note:
Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor
Corrected Amplitude = Corrected Factor + Reading
Margin = Limit - Corrected. Amplitude

Conducted Spurious Emissions at Antenna Port

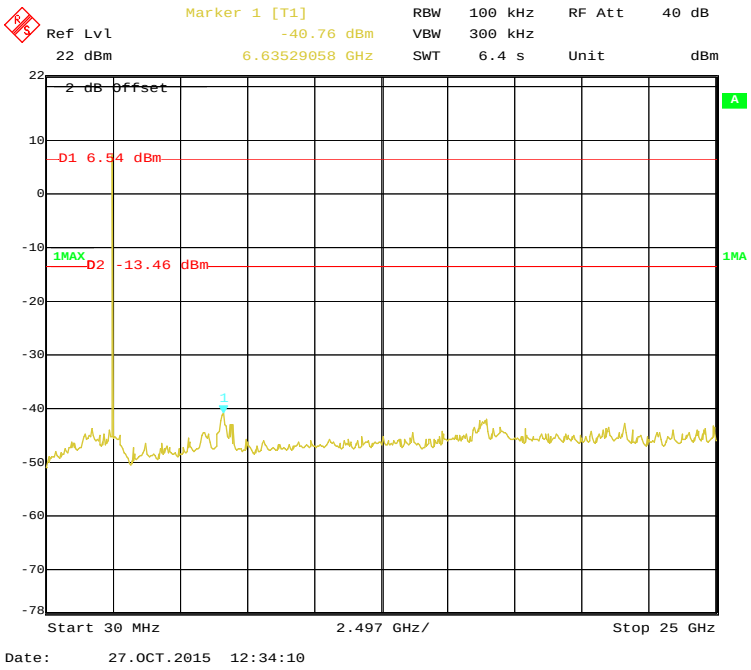
Low Channel



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

Test Procedure

1. Set the EUT in transmitting mode, maxhold the channel.
2. Set the adjacent channel of the EUT and maxhold another trace.
3. Measure the channel separation.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	100048	2014-11-4	2015-11-3

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	26 ℃
Relative Humidity:	55 %
ATM Pressure:	101.0 kPa

The testing was performed by Matt Yao on 2015-10-26.

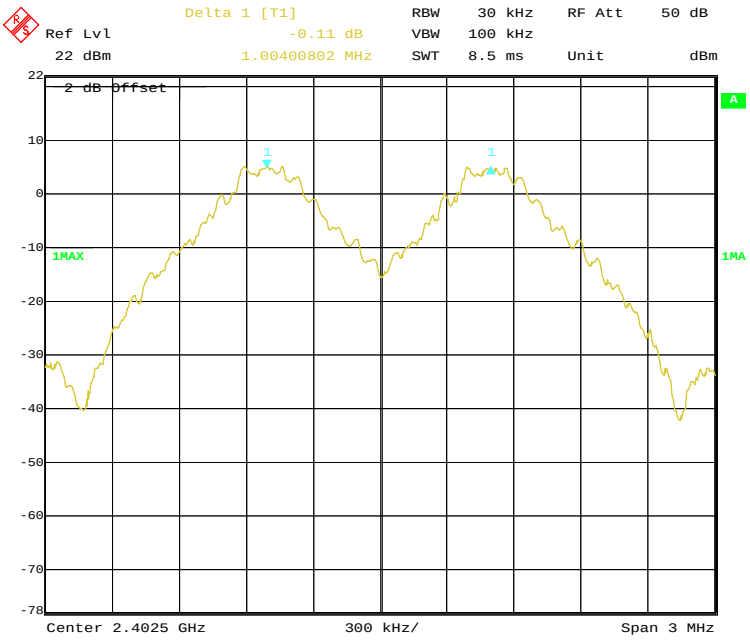
EUT operation mode: Transmitting

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

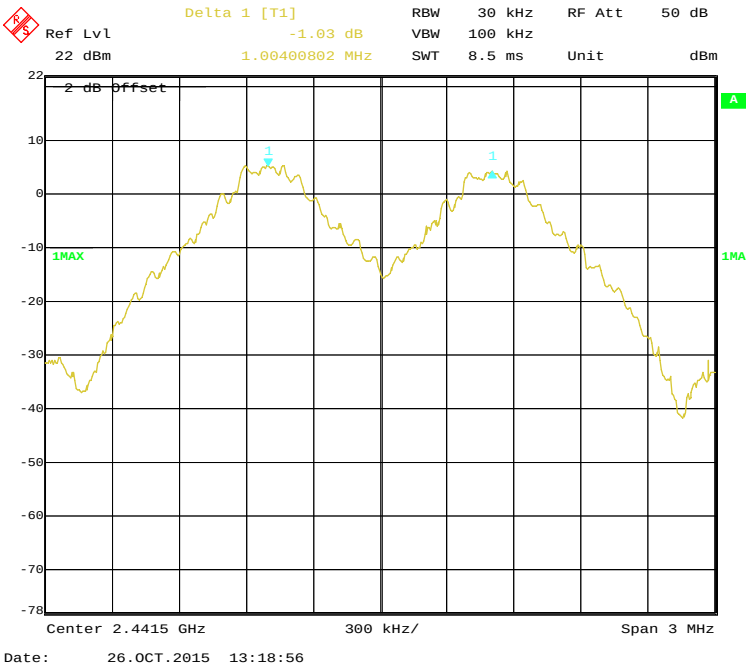
Mode	Channel	Frequency (MHz)	Channel Separation (MHz)	≥Limit (MHz)	Result
BDR (GFSK)	Low	2402	1.004	0.697	Pass
	Adjacent	2403			
	Middle	2441	1.004	0.689	Pass
	Adjacent	2442			
	High	2480	1.004	0.692	Pass
	Adjacent	2479			
EDR (π/4-DQPSK)	Low	2402	1.004	0.930	Pass
	Adjacent	2403			
	Middle	2441	1.004	0.935	Pass
	Adjacent	2442			
	High	2480	1.004	0.946	Pass
	Adjacent	2479			
EDR (8DPSK)	Low	2402	1.004	0.933	Pass
	Adjacent	2403			
	Middle	2441	1.004	0.941	Pass
	Adjacent	2442			
	High	2480	1.004	0.946	Pass
	Adjacent	2479			

Note: Limit = 20 dB bandwidth *2/3

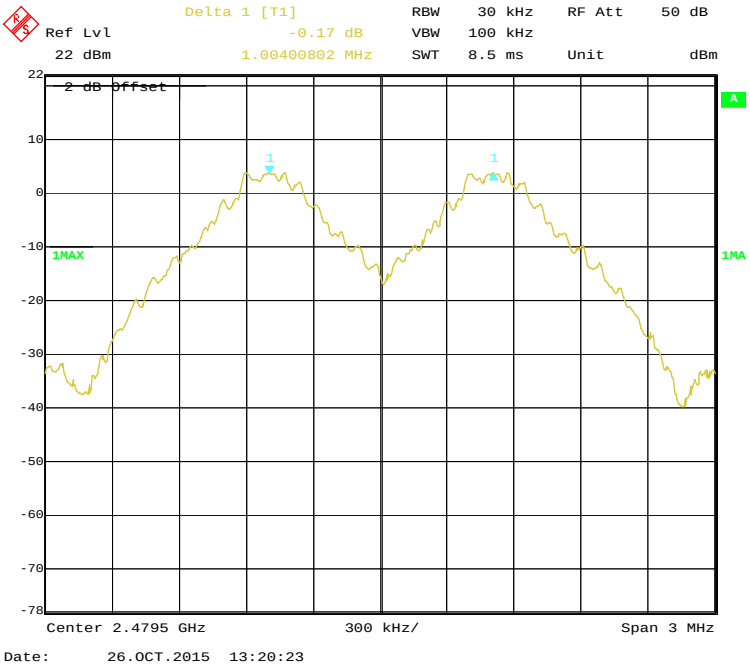
BDR (GFSK): Low Channel



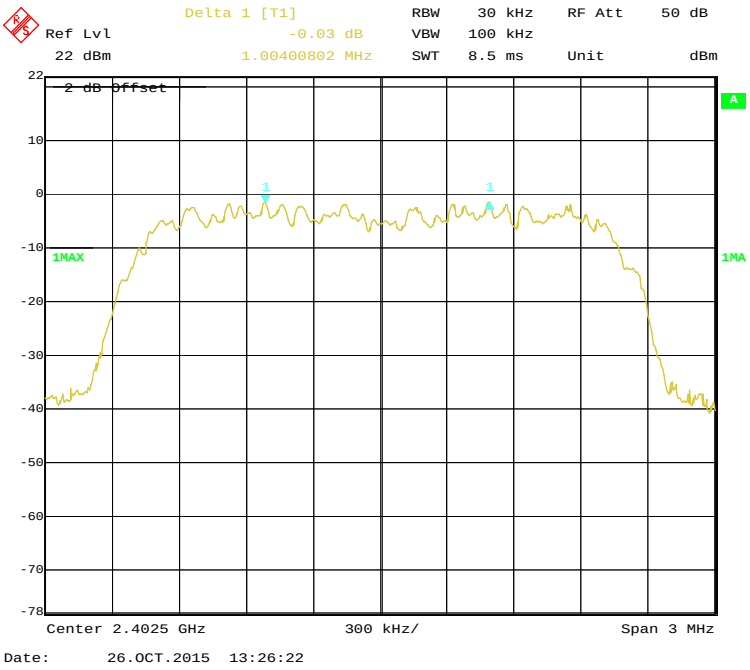
BDR (GFSK): Middle Channel



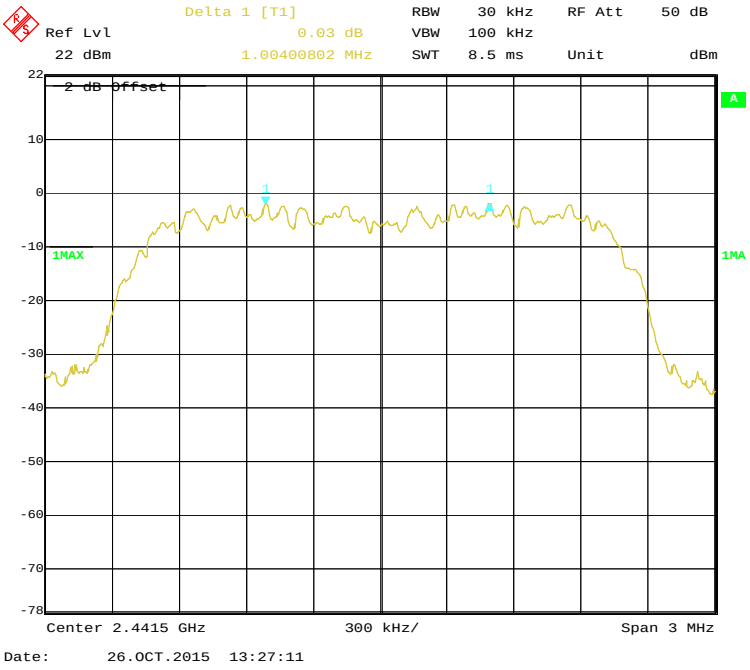
BDR (GFSK): High Channel



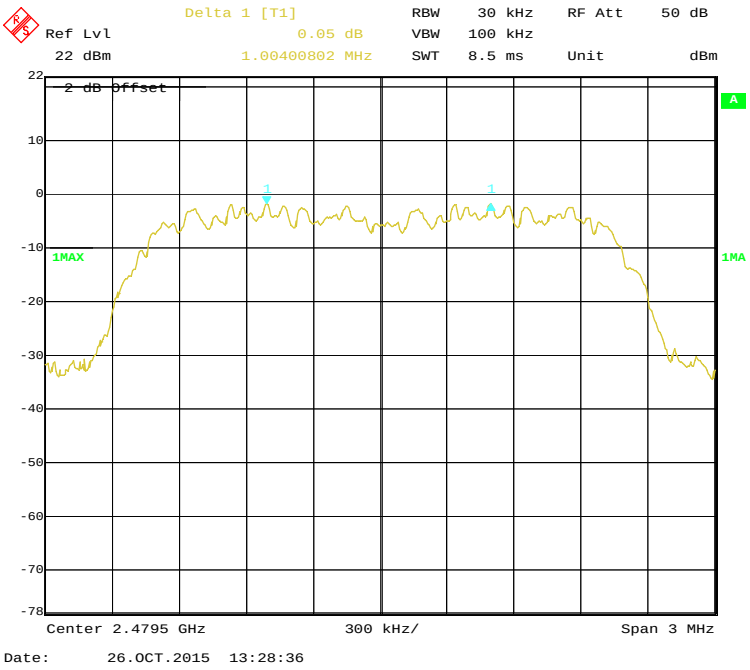
EDR (π/4-DQPSK): Low Channel



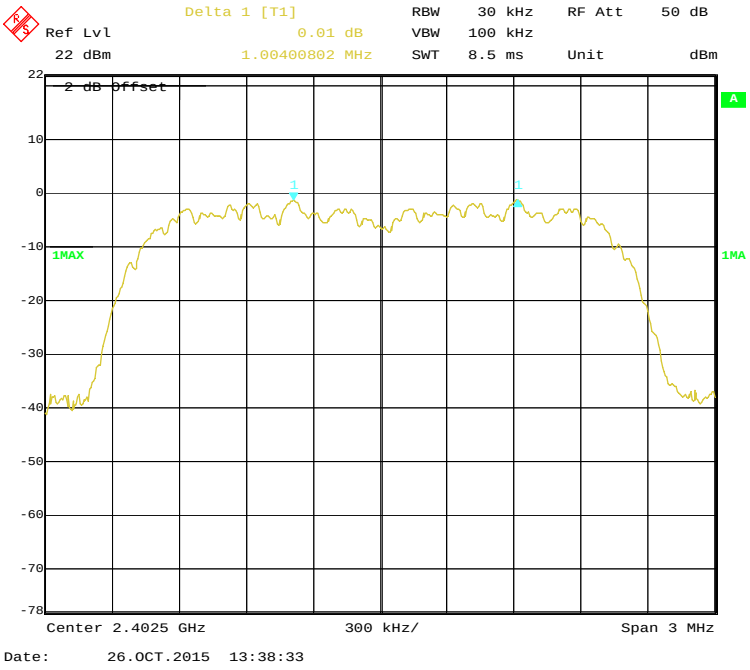
EDR (π/4-DQPSK): Middle Channel



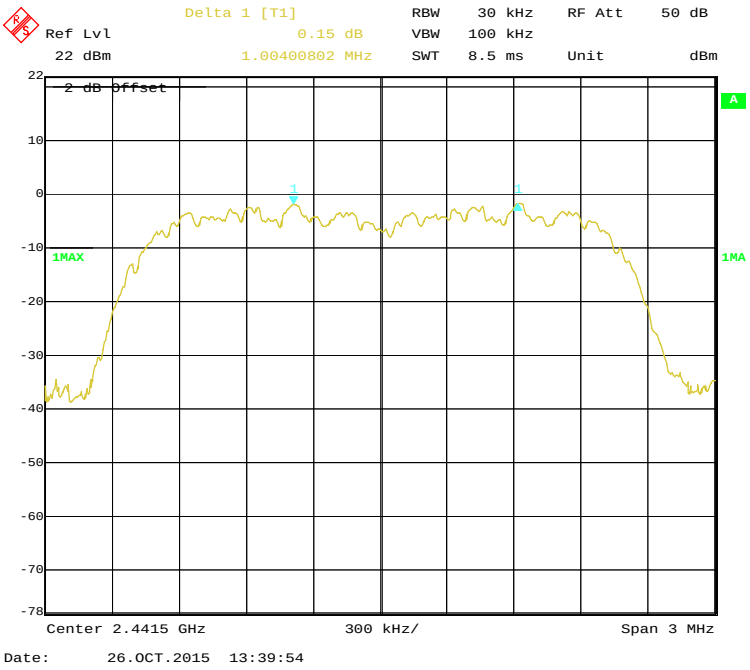
EDR (π/4-DQPSK): High Channel



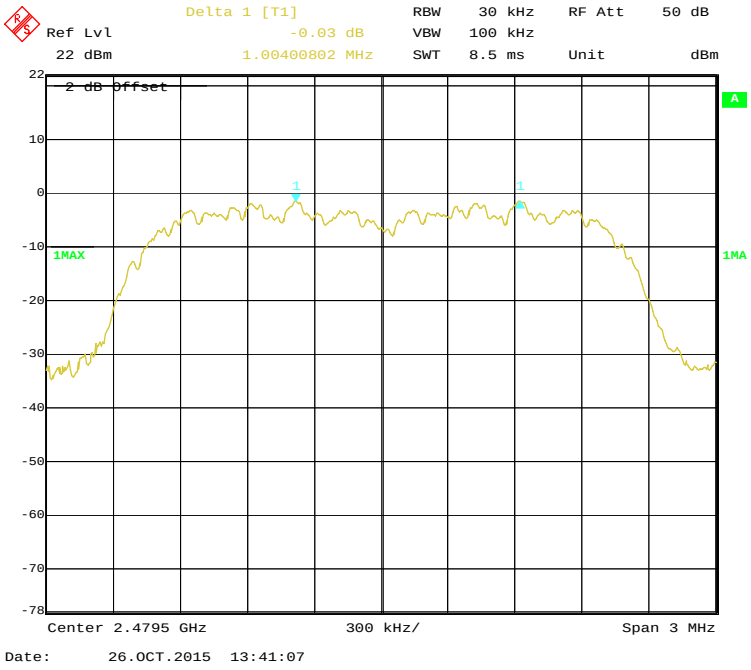
EDR (8DPSK): Low Channel



EDR (8DPSK): Middle Channel



EDR (8DPSK): High Channel



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

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 without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. 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	FSIQ26	100048	2014-11-4	2015-11-3

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	26 ℃
Relative Humidity:	56 %
ATM Pressure:	101.0 kPa

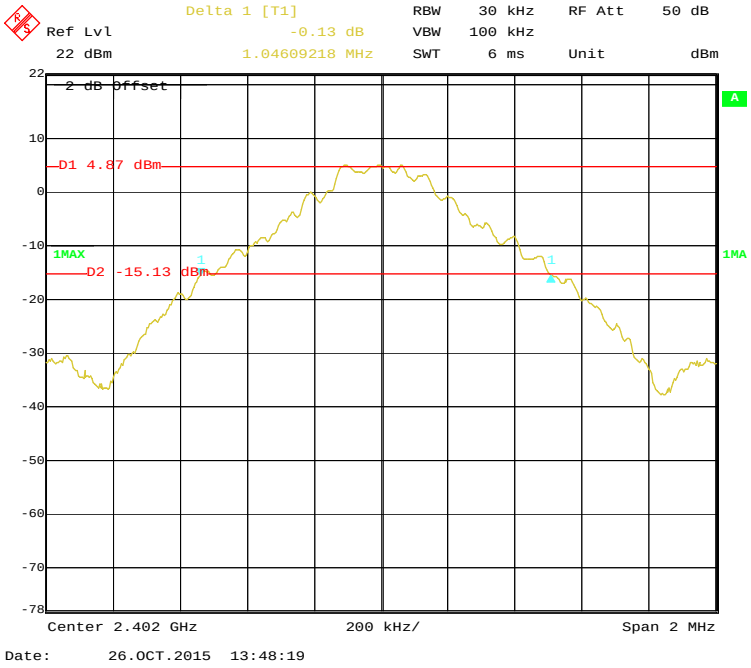
The testing was performed by Matt Yao on 2015-10-26.

EUT operation mode: Transmitting

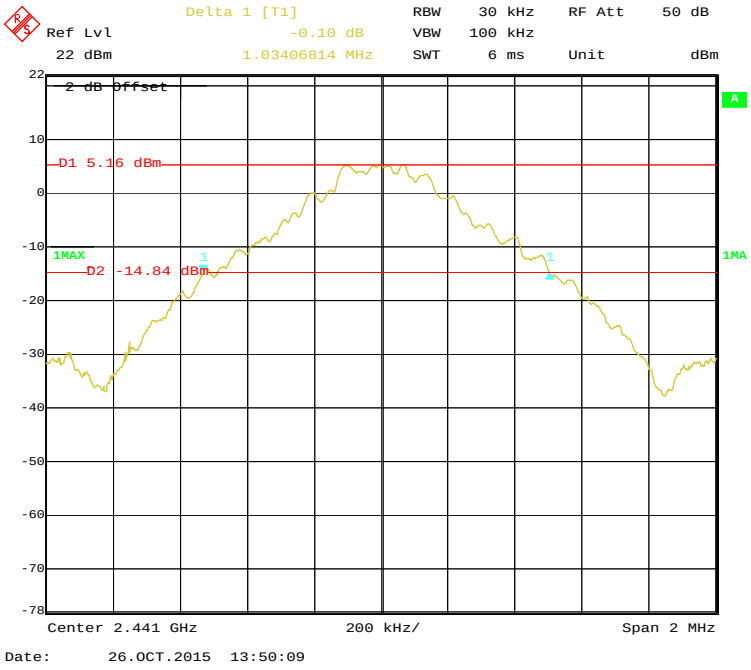
Test Result: Compliance. Please refer to following tables and plots

Mode	Channel	Frequency (MHz)	20 dB Emission Bandwidth (MHz)
BDR (GFSK)	Low	2402	1.046
	Middle	2441	1.034
	High	2480	1.038
EDR (π/4-DQPSK)	Low	2402	1.395
	Middle	2441	1.403
	High	2480	1.419
EDR (8DPSK)	Low	2402	1.399
	Middle	2441	1.411
	High	2480	1.419

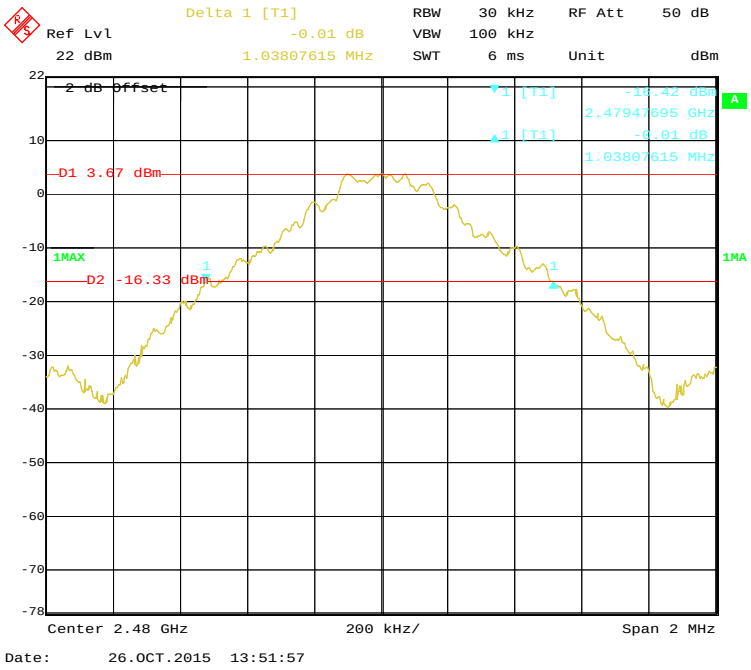
BDR (GFSK): Low Channel



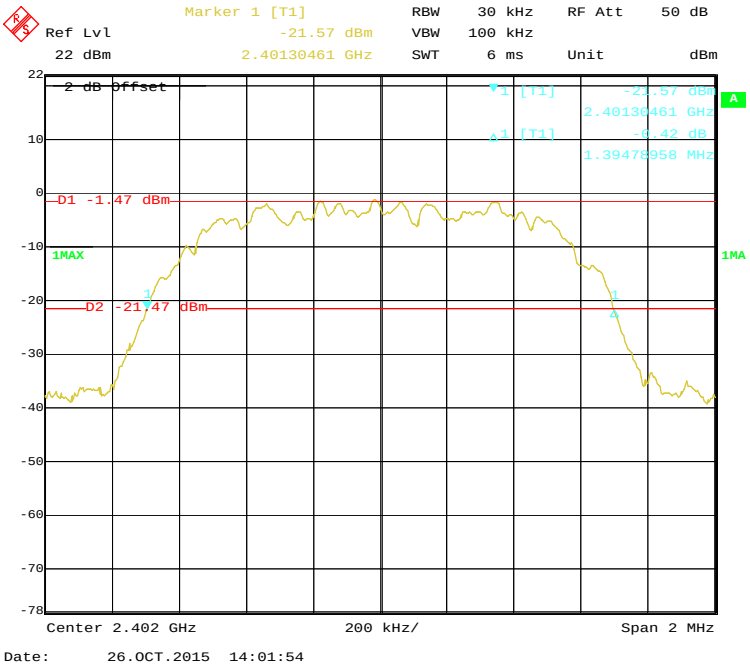
BDR (GFSK): Middle Channel



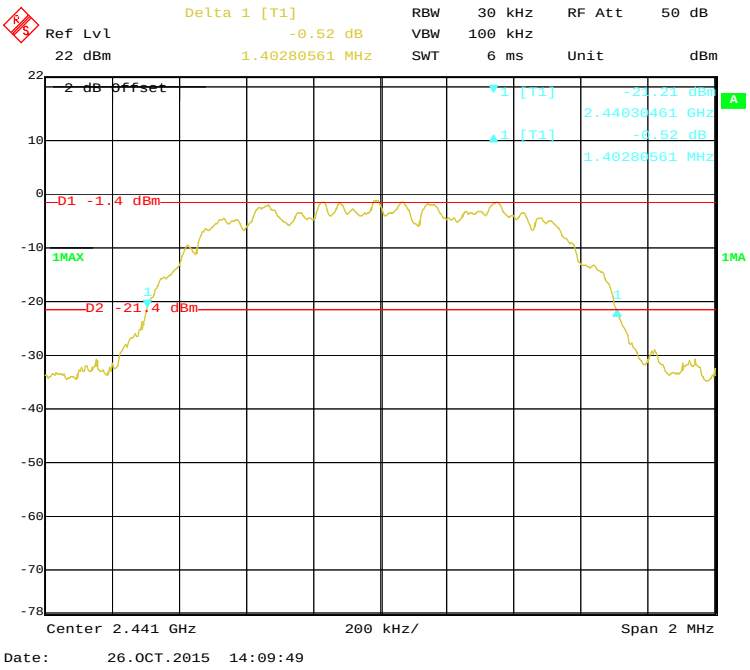
BDR (GFSK): High Channel



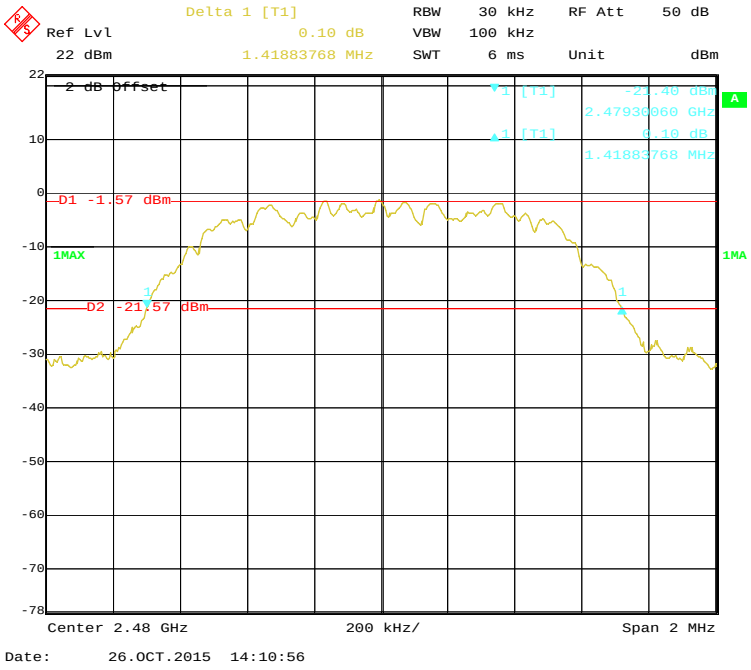
EDR (π/4-DQPSK): Low Channel



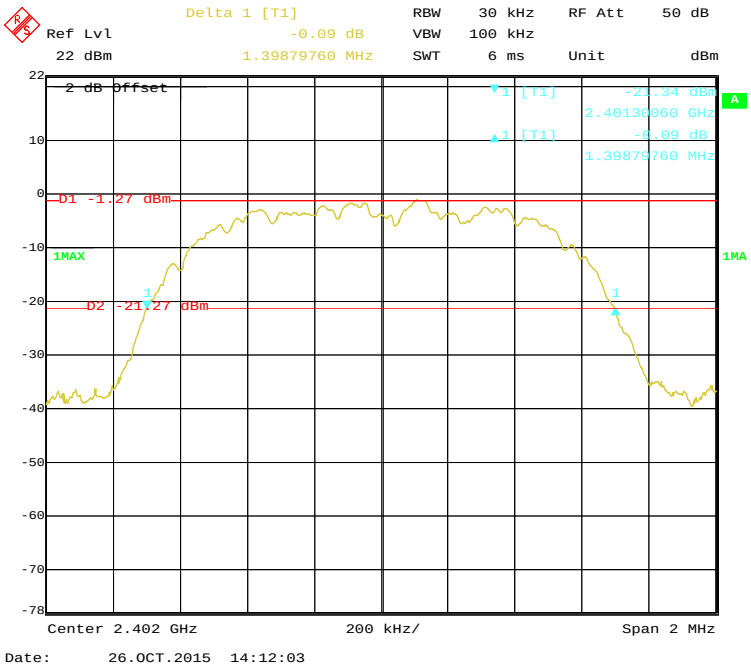
EDR (π/4-DQPSK): Middle Channel



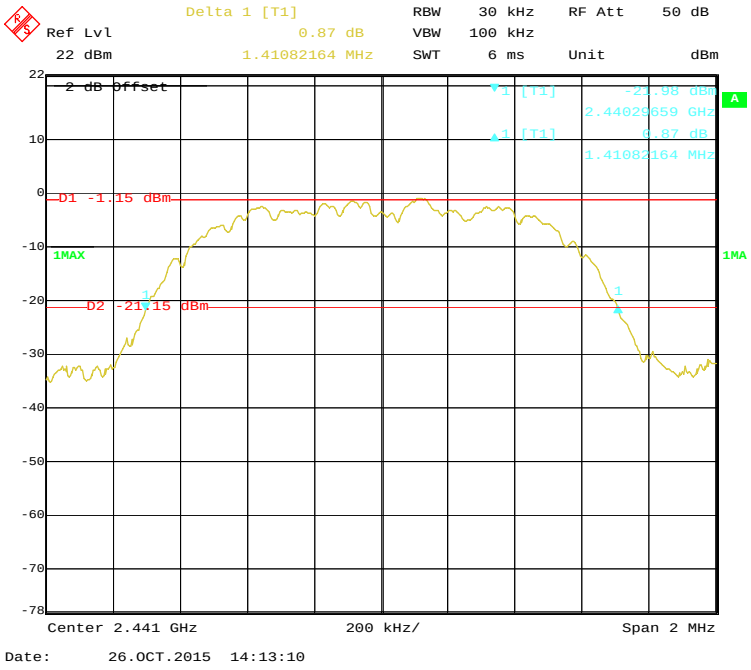
EDR (π/4-DQPSK): High Channel



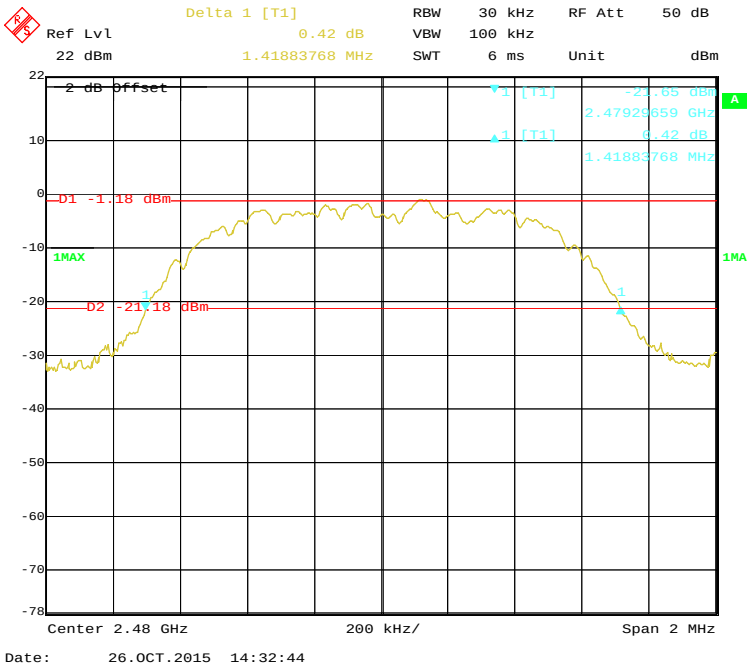
EDR (8DPSK): Low Channel



EDR (8DPSK): Middle Channel



EDR (8DPSK): 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	FSIQ26	100048	2014-11-4	2015-11-3

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	26 ℃
Relative Humidity:	55 %
ATM Pressure:	101.0 kPa

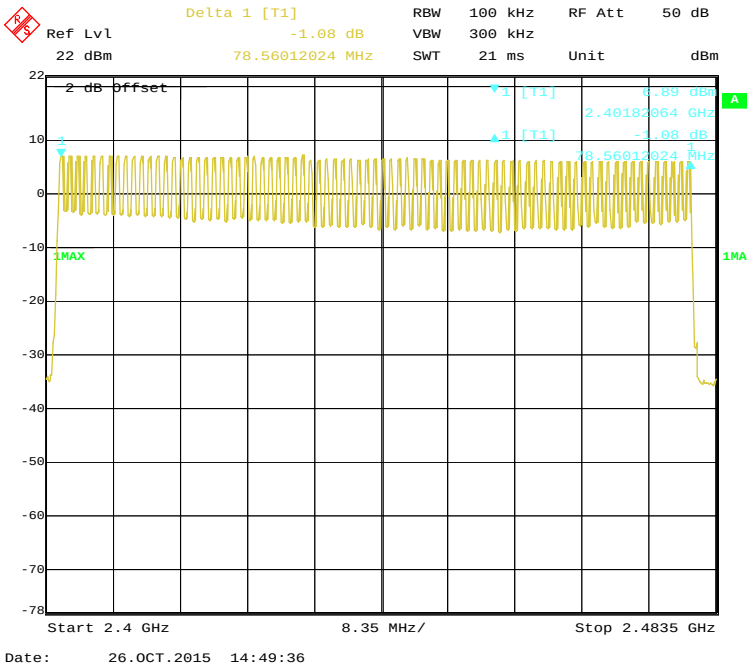
The testing was performed by Matt Yao on 2015-10-26.

EUT operation mode: Transmitting

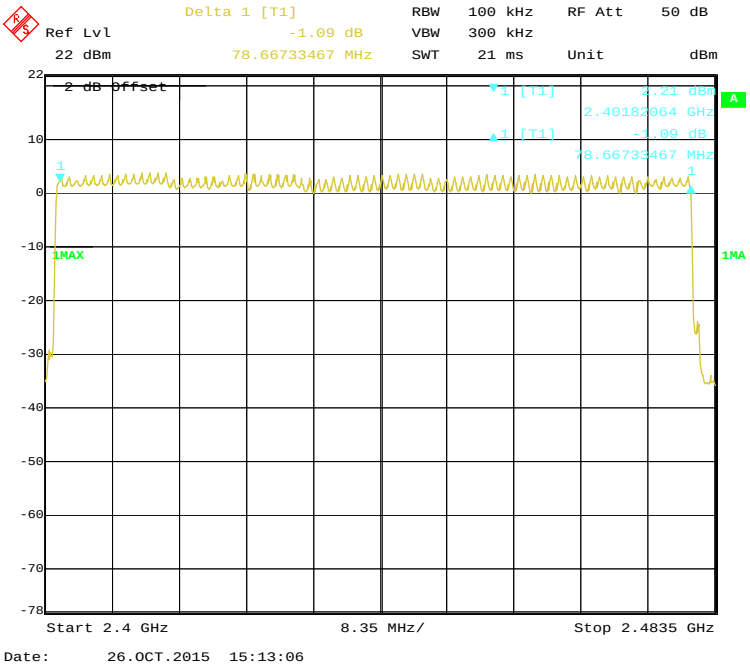
Test Result: Compliance. Please refer to following tables and plots

Mode	Frequency Range (MHz)	Number of Hopping Channel (CH)	Limit (CH)
BDR (GFSK)	2400-2483.5	79	≥15
EDR (π/4-DQPSK)	2400-2483.5	79	≥15
EDR (8DPSK)	2400-2483.5	79	≥15

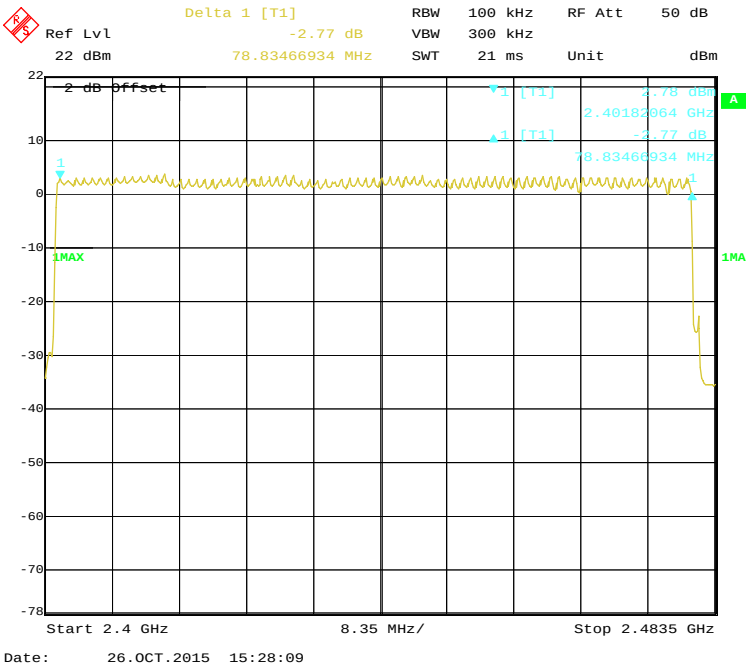
BDR (GFSK): Number of Hopping Channels



EDR (π/4-DQPSK): Number of Hopping Channels



EDR (8DPSK): 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 X channel no. (s), the quantity of pulse was get from single sweep. In addition, the time of single pulses was tested.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	100048	2014-11-4	2015-11-3

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	26 ℃
Relative Humidity:	55 %
ATM Pressure:	101.0 kPa

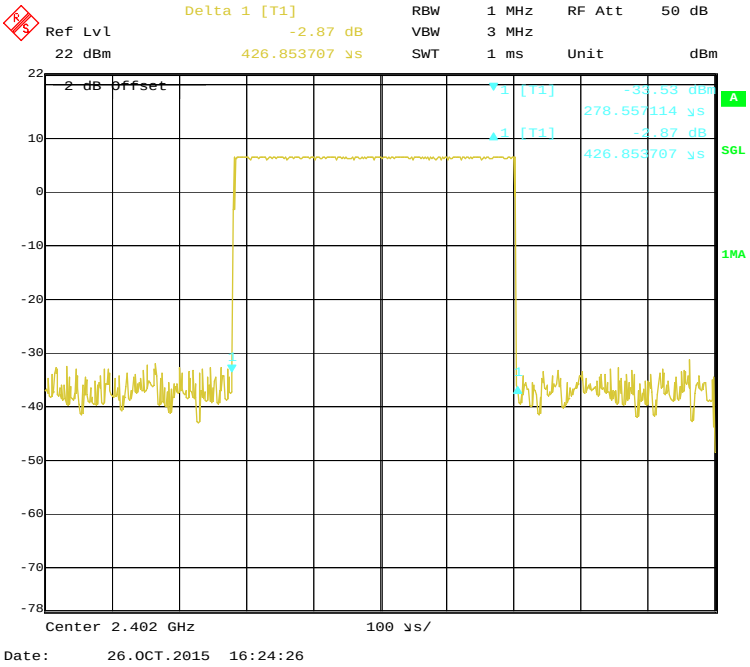
The testing was performed by Matt Yao on 2015-10-26.

EUT operation mode: Transmitting

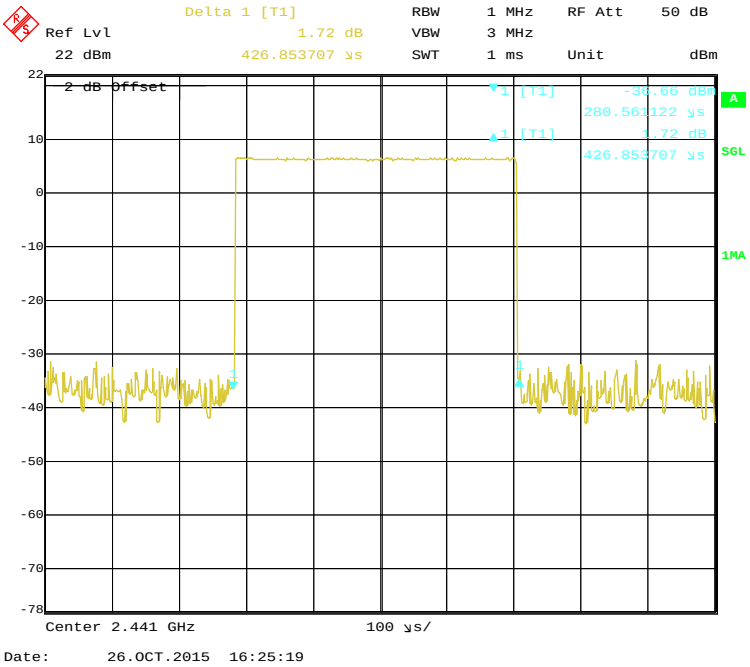
Test Result: Compliance. Please refer to following tables and plots

Mode		Channel	Pulse Width (ms)	Dwell Time (S)	Limit (S)	Result
BDR (GFSK)	DH 1	Low	0.427	0.137	0.4	Pass
		Middle	0.427	0.137	0.4	Pass
		High	0.427	0.137	0.4	Pass
		Note: DH1:Dwell time = Pulse time*(1600/2/79)*31.6S				
	DH 3	Low	1.696	0.271	0.4	Pass
		Middle	1.696	0.271	0.4	Pass
		High	1.696	0.271	0.4	Pass
		Note: DH3:Dwell time = Pulse time*(1600/4/79)*31.6S				
	DH 5	Low	2.954	0.315	0.4	Pass
		Middle	2.944	0.314	0.4	Pass
		High	2.944	0.314	0.4	Pass
		Note: DH5:Dwell time = Pulse time*(1600/6/79)*31.6S				
EDR (π/4-DQPSK)	DH 1	Low	0.427	0.137	0.4	Pass
		Middle	0.425	0.136	0.4	Pass
		High	0.427	0.137	0.4	Pass
		Note: DH1:Dwell time = Pulse time*(1600/2/79)*31.6S				
	DH 3	Low	1.695	0.271	0.4	Pass
		Middle	1.695	0.271	0.4	Pass
		High	1.695	0.271	0.4	Pass
		Note: DH3:Dwell time = Pulse time*(1600/4/79)*31.6S				
	DH 5	Low	2.948	0.314	0.4	Pass
		Middle	2.938	0.313	0.4	Pass
		High	2.948	0.314	0.4	Pass
		Note: DH5:Dwell time = Pulse time*(1600/6/79)*31.6S				
EDR (8DPSK)	DH 1	Low	0.389	0.124	0.4	Pass
		Middle	0.389	0.124	0.4	Pass
		High	0.389	0.124	0.4	Pass
		Note: DH1:Dwell time = Pulse time*(1600/2/79)*31.6S				
	DH 3	Low	1.699	0.272	0.4	Pass
		Middle	1.693	0.271	0.4	Pass
		High	1.699	0.272	0.4	Pass
		Note: DH3:Dwell time = Pulse time*(1600/4/79)*31.6S				
	DH 5	Low	2.962	0.316	0.4	Pass
		Middle	2.942	0.314	0.4	Pass
		High	2.962	0.316	0.4	Pass
		Note: DH5:Dwell time = Pulse time*(1600/6/79)*31.6S				

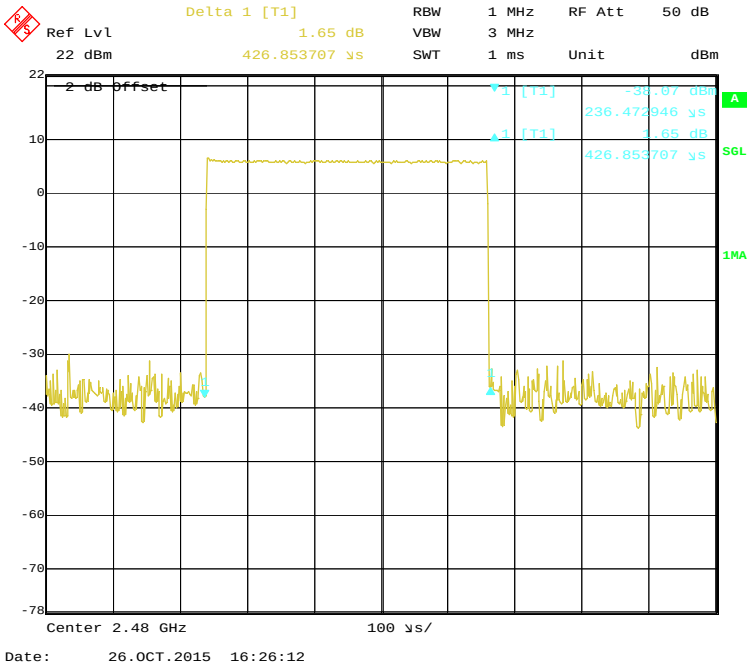
BDR (GFSK):
Pulse time, Low Channel, DH1



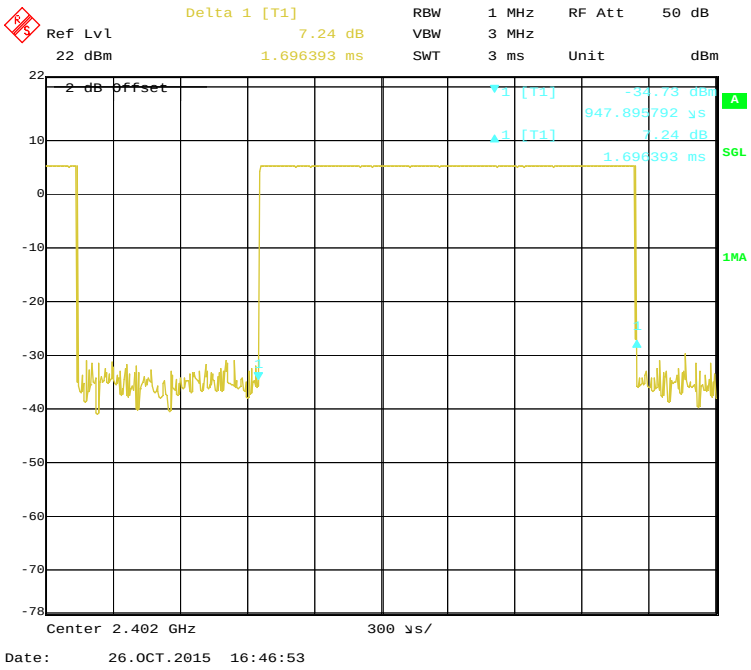
Pulse time, Middle Channel, DH1



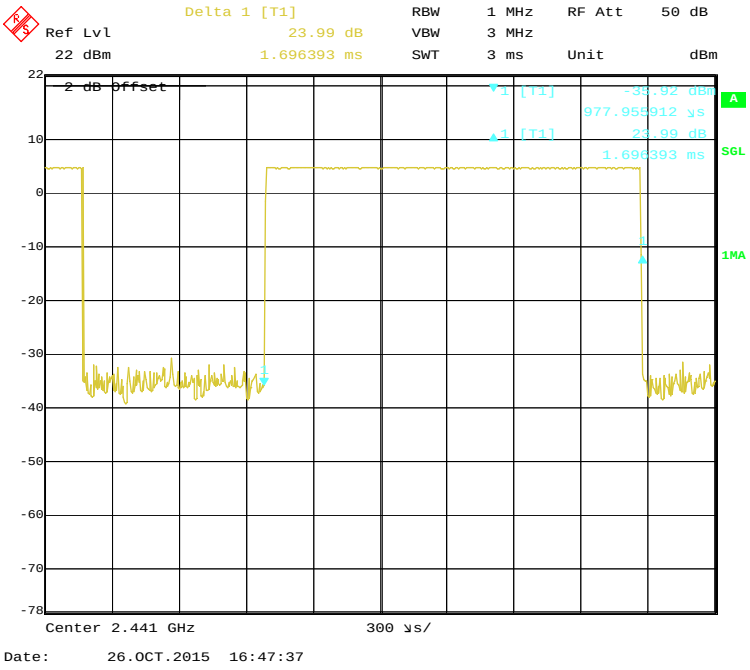
Pulse time, High Channel, DH1



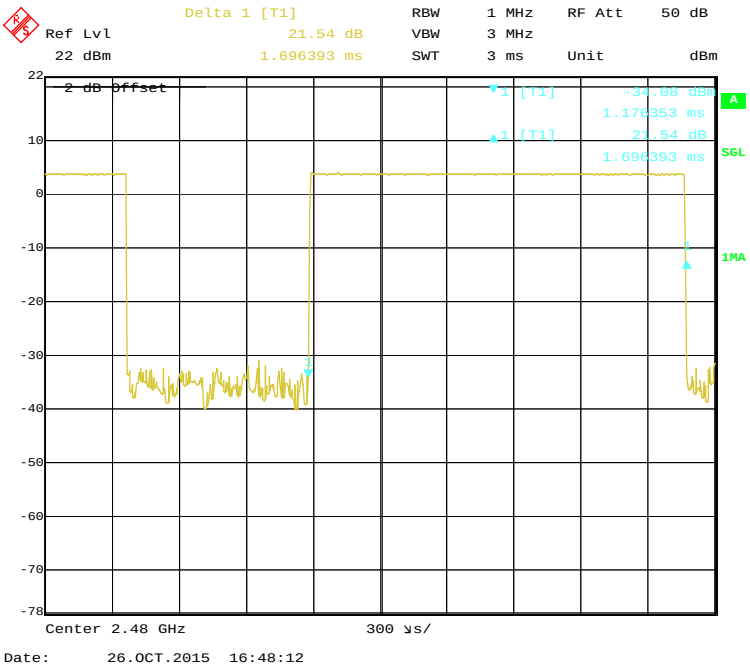
Pulse time, Low Channel, DH3



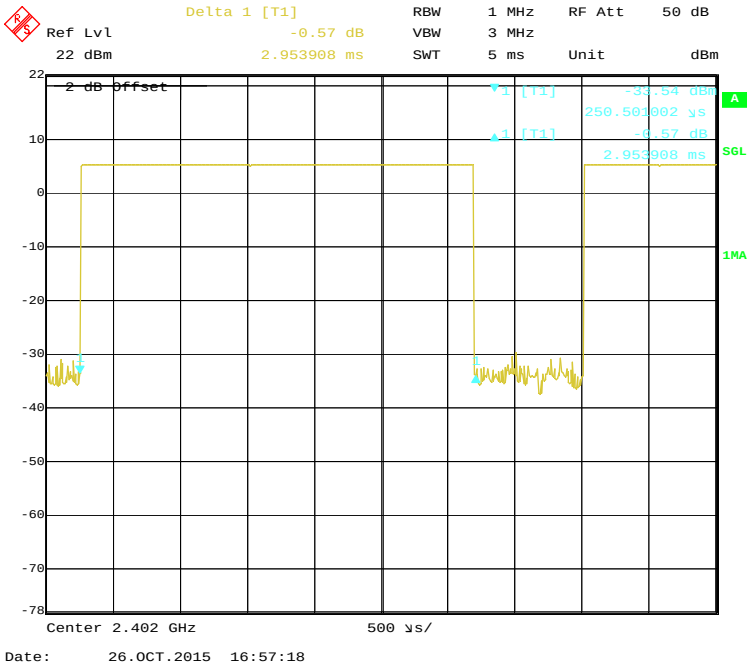
Pulse time, Middle Channel, DH3



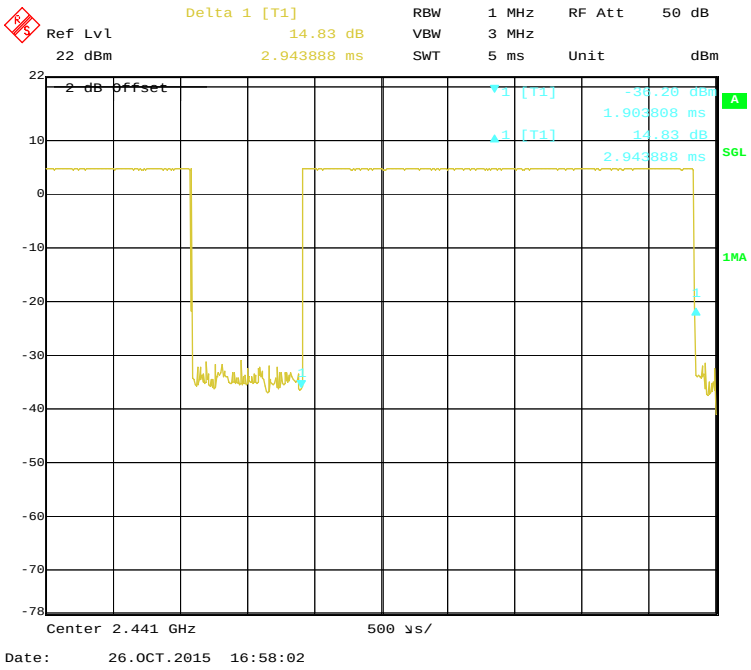
Pulse time, High Channel, DH3



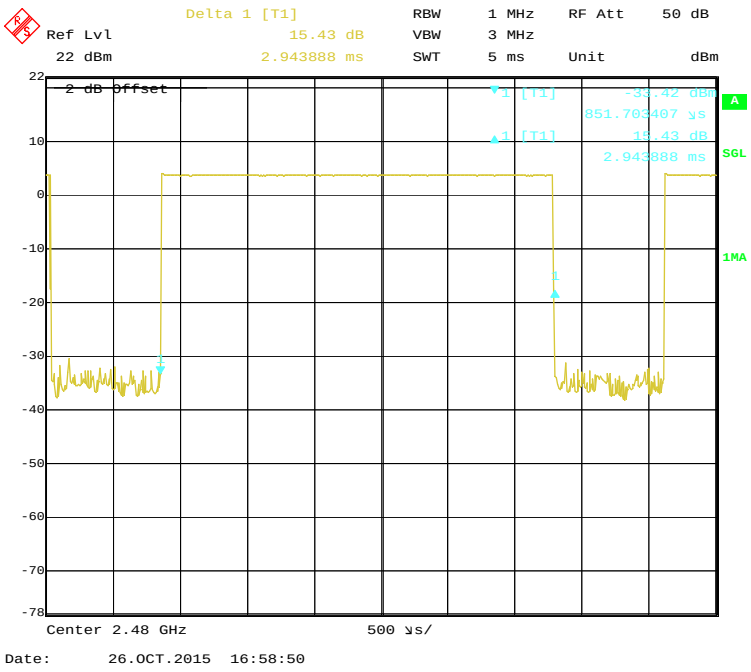
Pulse time, Low Channel, DH5



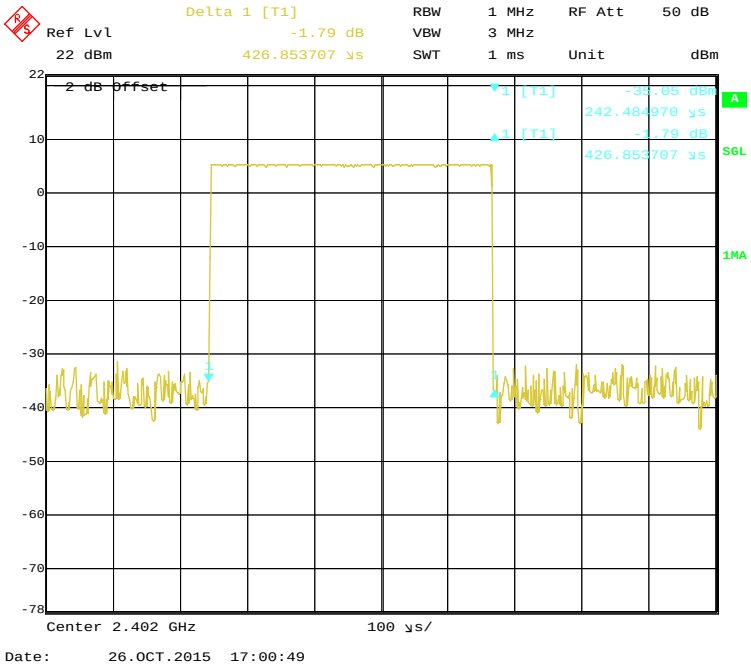
Pulse time, Middle Channel, DH5



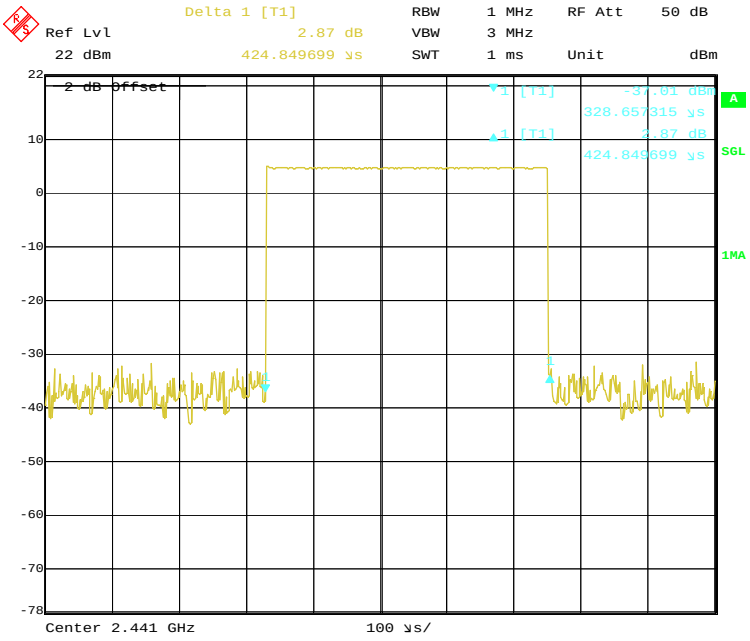
Pulse time, High Channel, DH5



EDR (π/4-DQPSK):
Pulse time, Low Channel, DH1

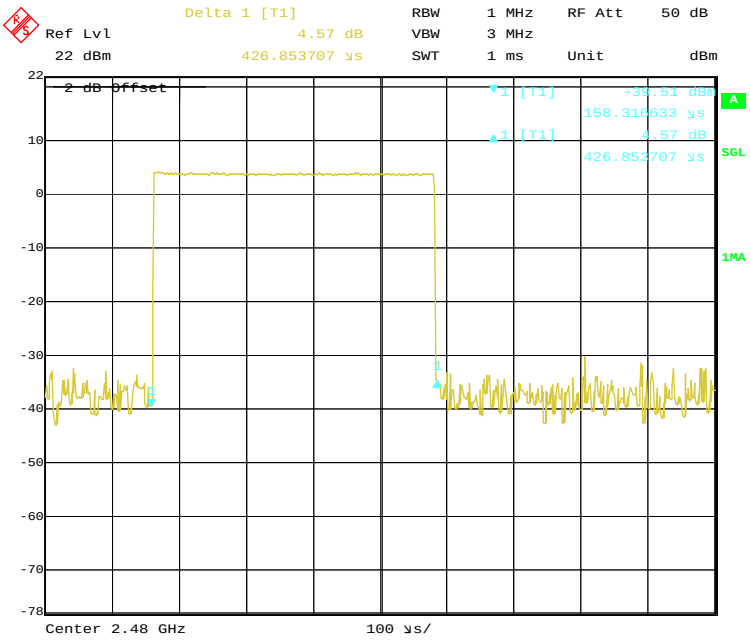


Pulse time, Middle Channel, DH1



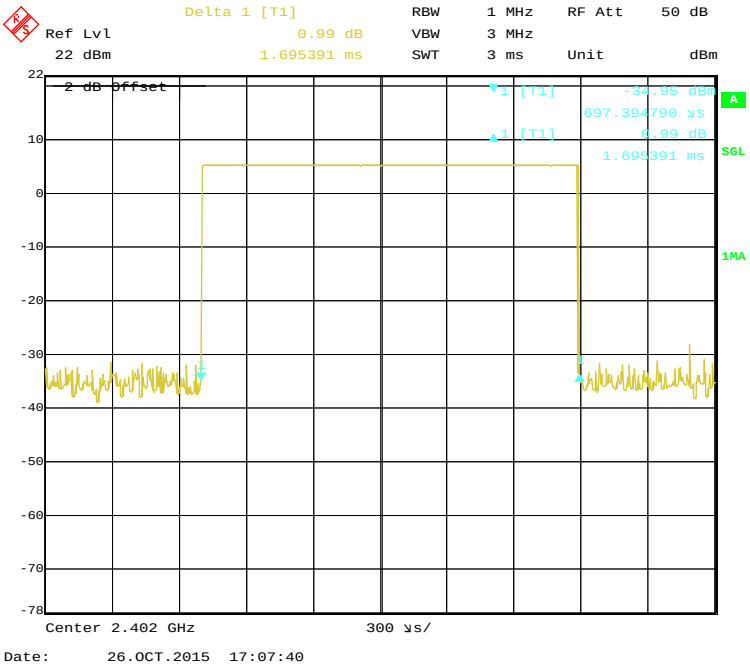
Date: 26.OCT.2015 17:01:31

Pulse time, High Channel, DH1



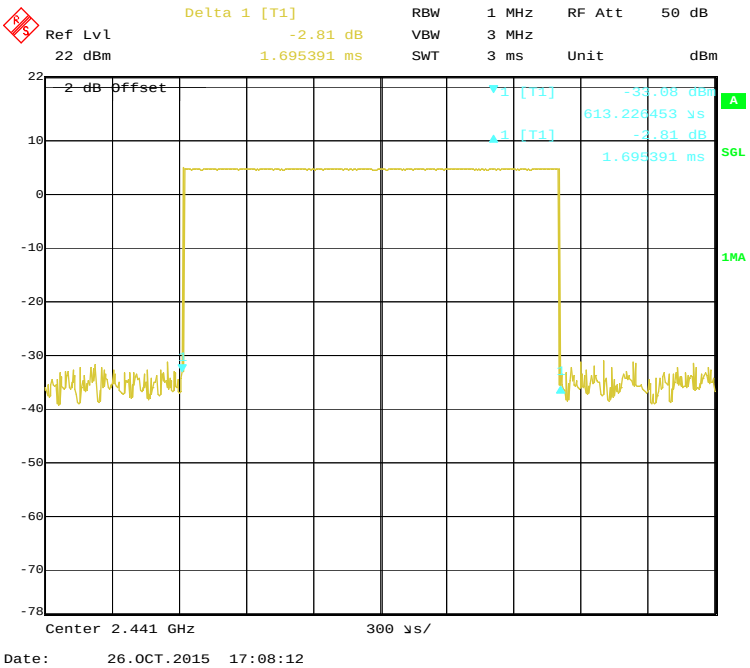
Date: 26.OCT.2015 17:02:14

Pulse time, Low Channel, DH3



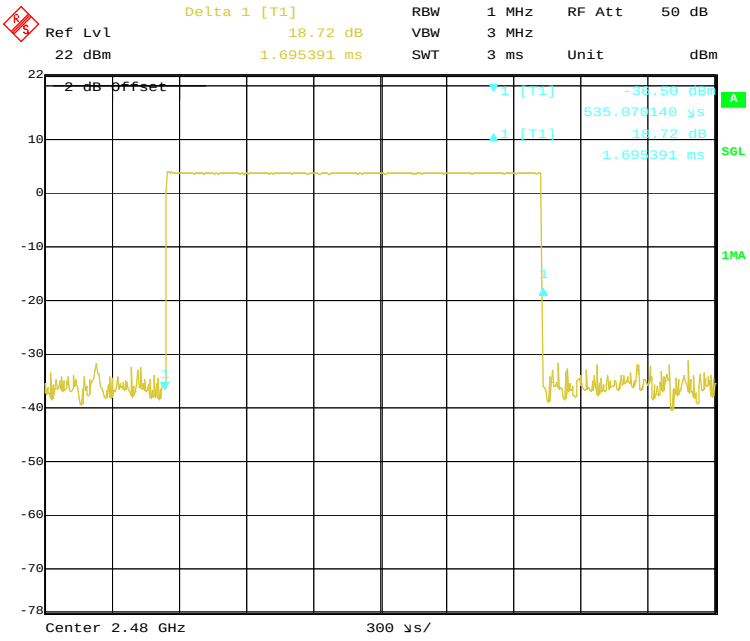
Date: 26.OCT.2015 17:07:40

Pulse time, Middle Channel, DH3

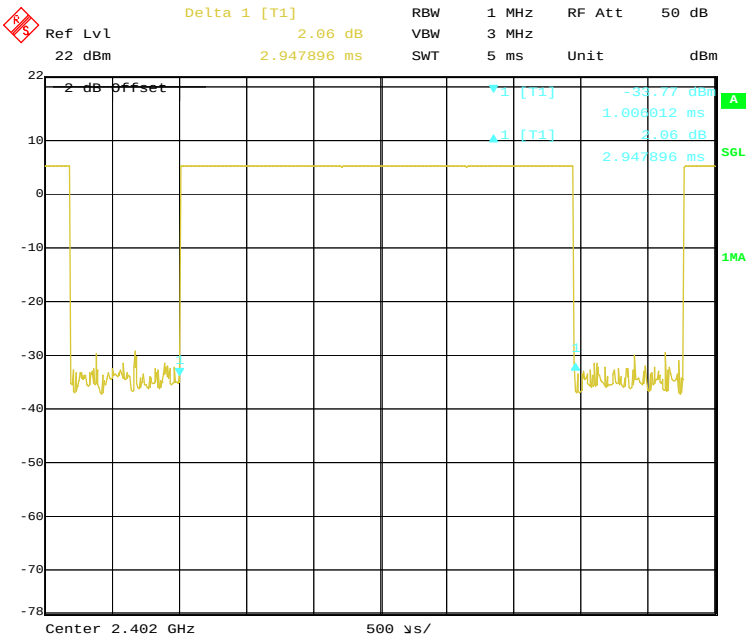


Date: 26.OCT.2015 17:08:12

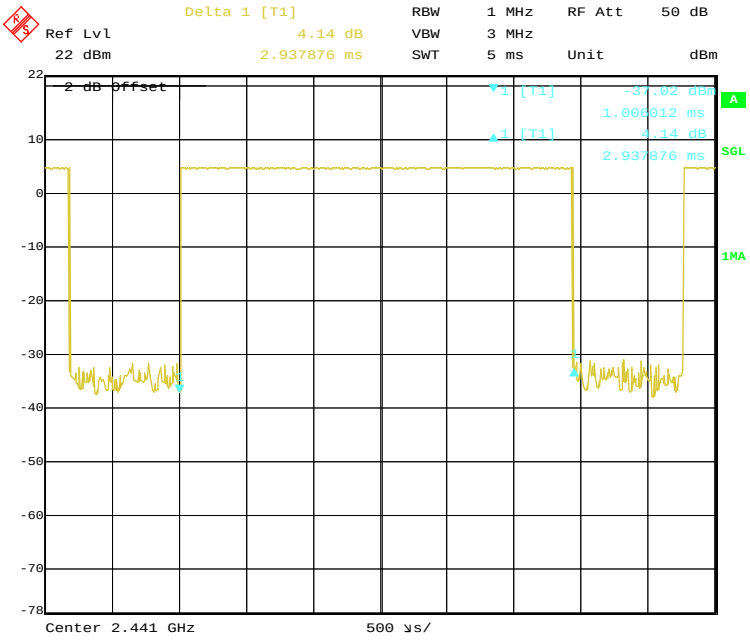
Pulse time, High Channel, DH3



Pulse time, Low Channel, DH5

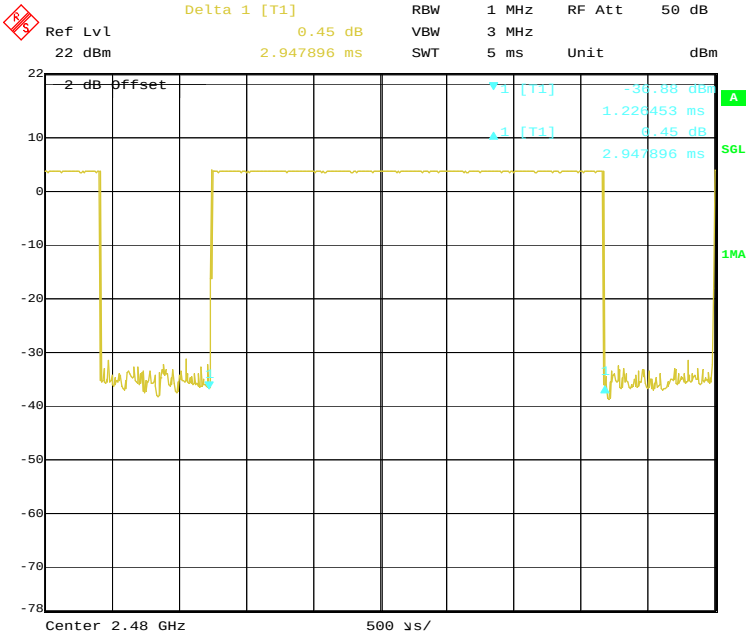


Pulse time, Middle Channel, DH5



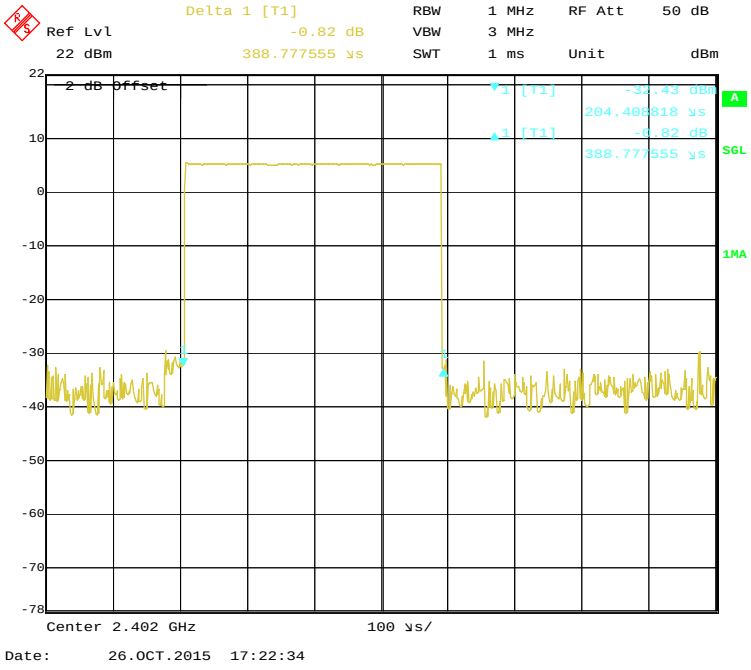
Date: 26.OCT.2015 17:13:25

Pulse time, High Channel, DH5

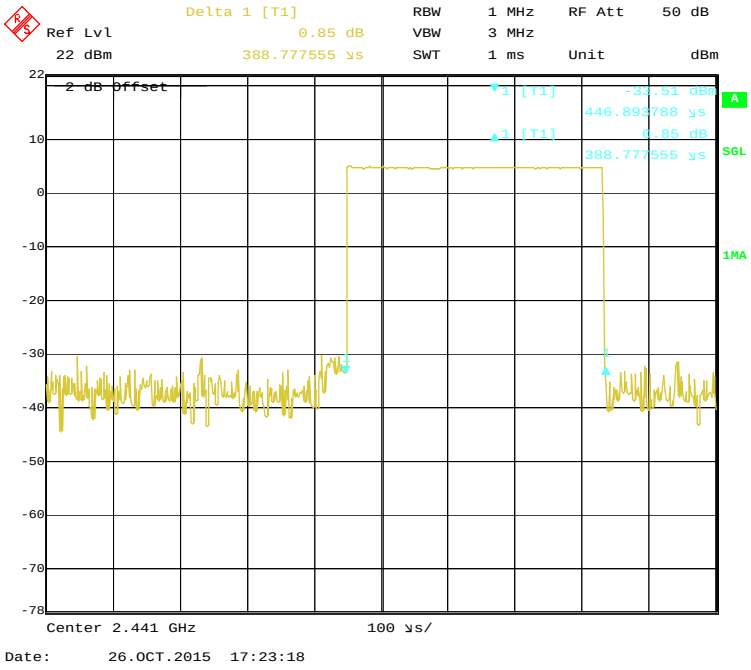


Date: 26.OCT.2015 17:15:10

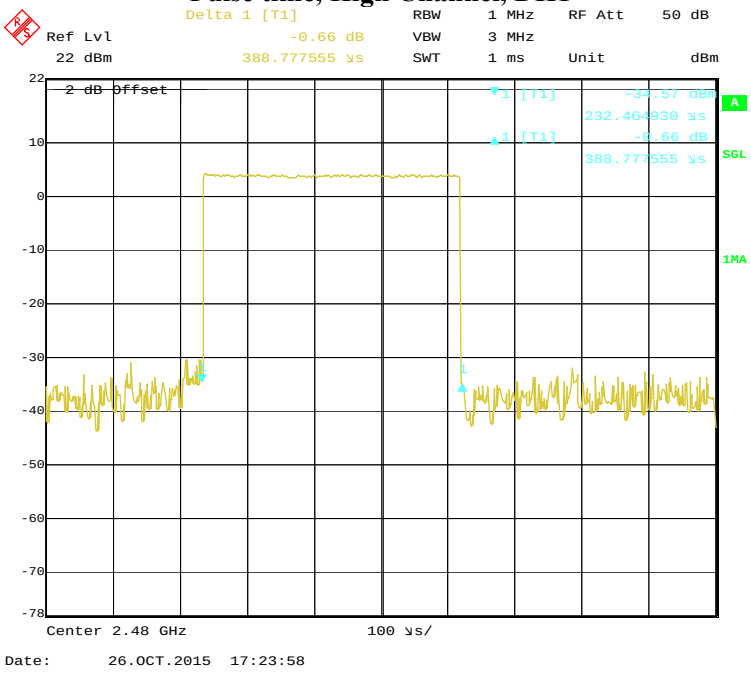
EDR (8DPSK):
Pulse time, Low Channel, DH1



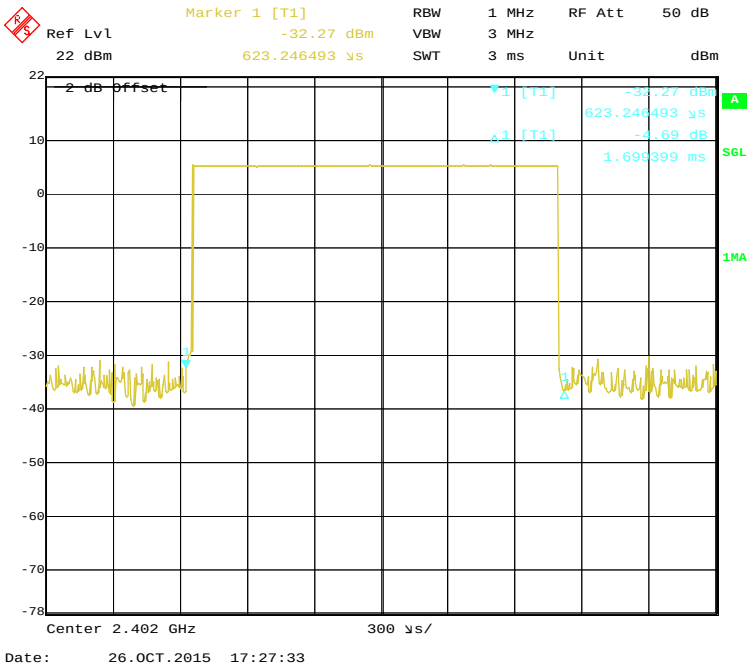
Pulse time, Middle Channel, DH1



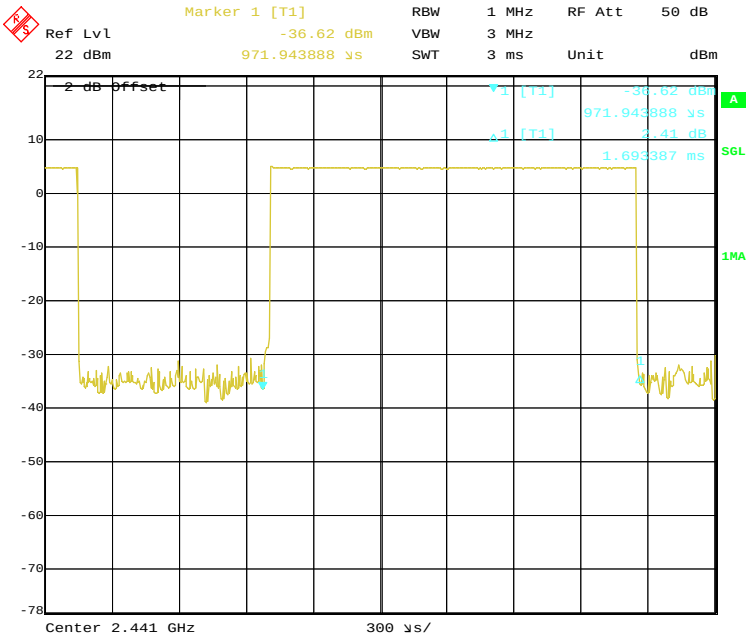
Pulse time, High Channel, DH1



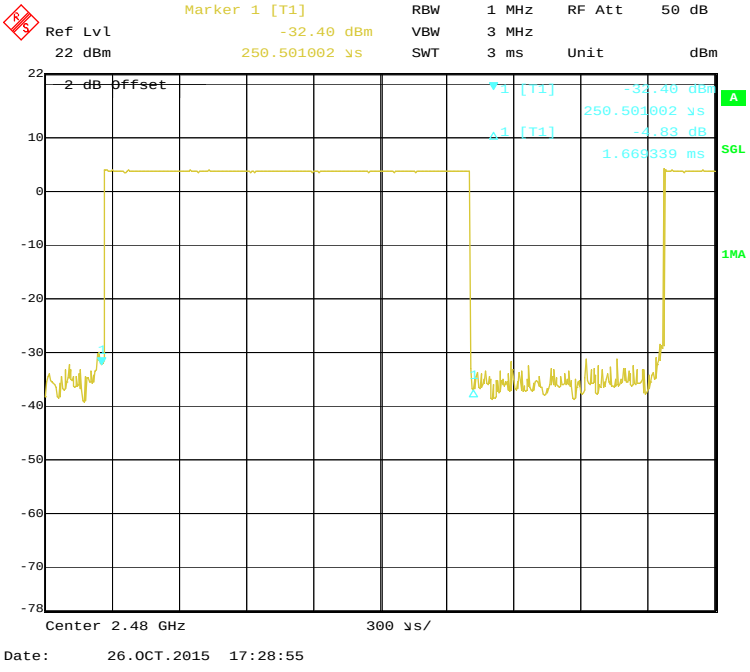
Pulse time, Low Channel, DH3



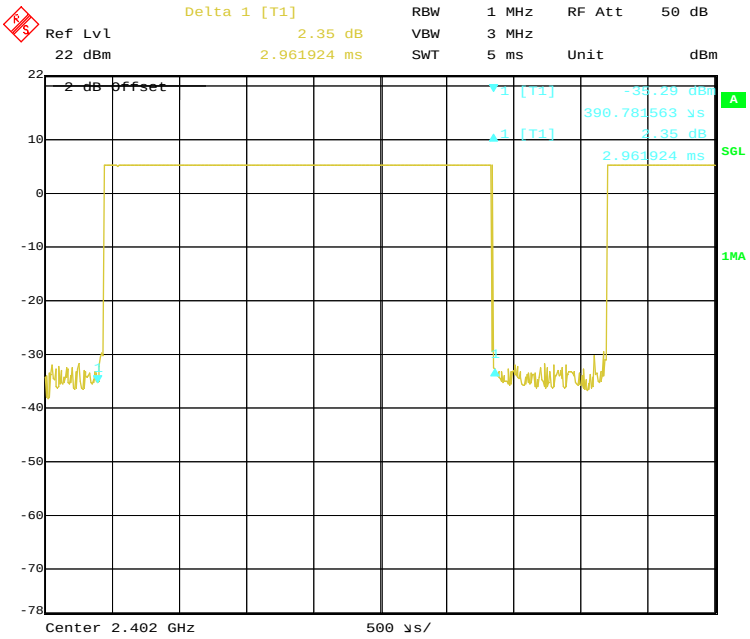
Pulse time, Middle Channel, DH3



Pulse time, High Channel, DH3

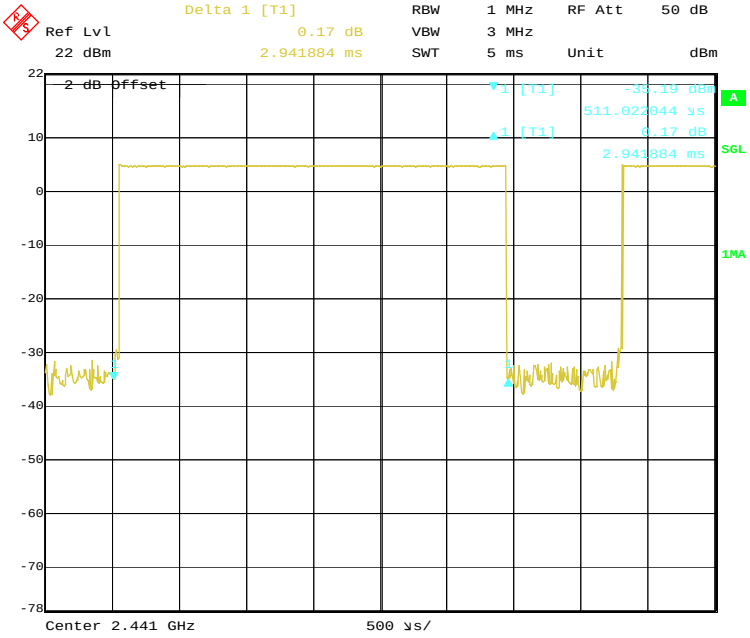


Pulse time, Low Channel, DH5



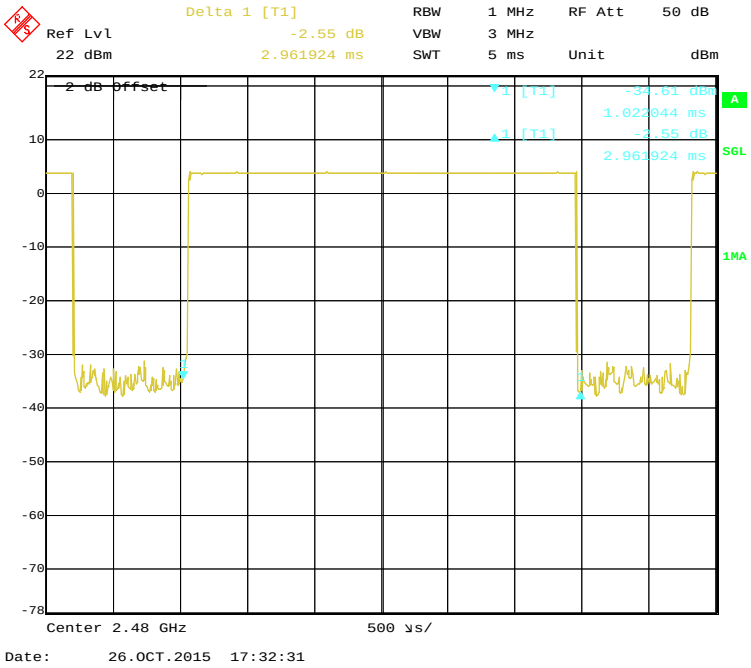
Date: 26.OCT.2015 17:31:19

Pulse time, Middle Channel, DH5



Date: 26.OCT.2015 17:31:52

Pulse time, High Channel, 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. And 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 one test equipment.
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	FSIQ26	100048	2014-11-4	2015-11-3

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	26 ℃
Relative Humidity:	55 %
ATM Pressure:	101.0 kPa

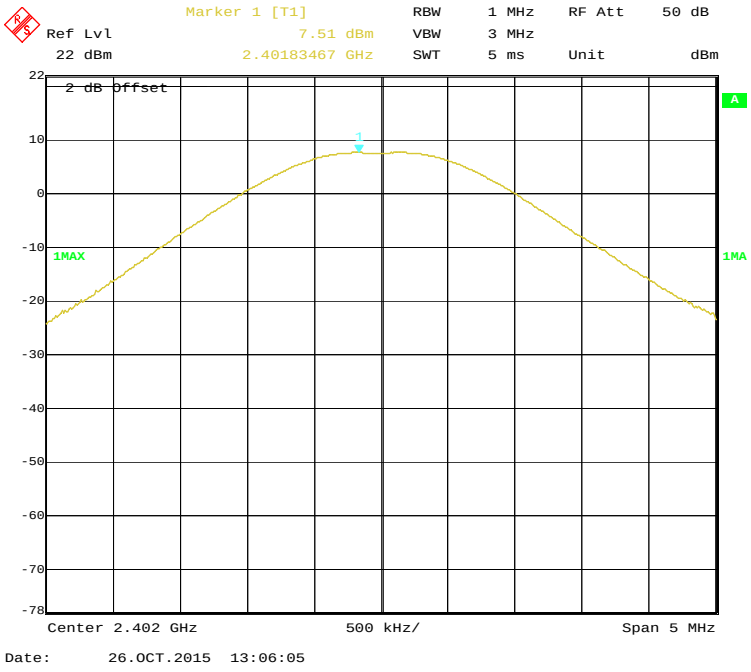
The testing was performed by Matt Yao on 2015-10-26.

EUT operation mode: Transmitting

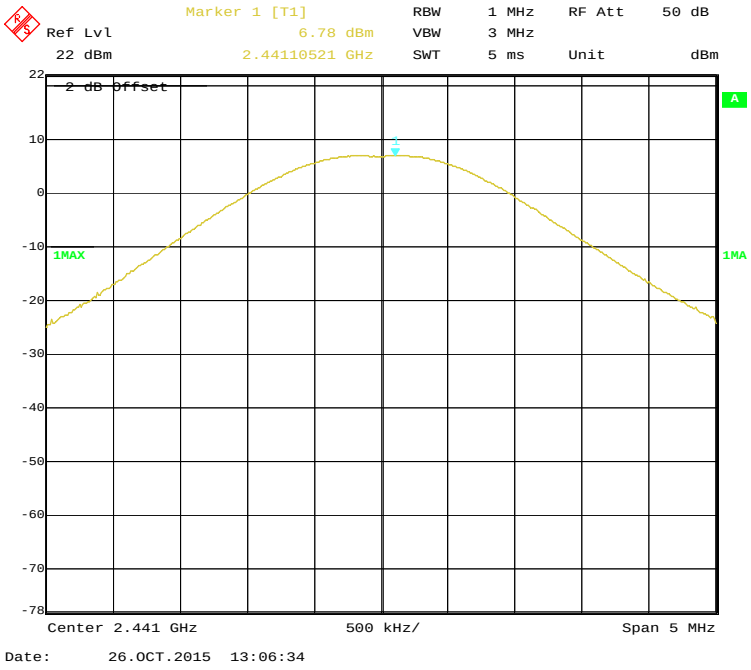
Test Result: Compliance. Please refer to following tables and plots

Mode	Channel	Frequency (MHz)	Peak Output Power		Limit (mW)
			(dBm)	(mW)	
BDR (GFSK)	Low	2402	7.51	5.64	1000
	Middle	2441	6.78	4.76	1000
	High	2480	6.32	4.29	1000
EDR (π/4-DQPSK)	Low	2402	6.18	4.15	1000
	Middle	2441	5.72	3.73	1000
	High	2480	5.54	3.58	1000
EDR (8DPSK)	Low	2402	6.51	4.48	1000
	Middle	2441	5.85	3.85	1000
	High	2480	5.74	3.75	1000

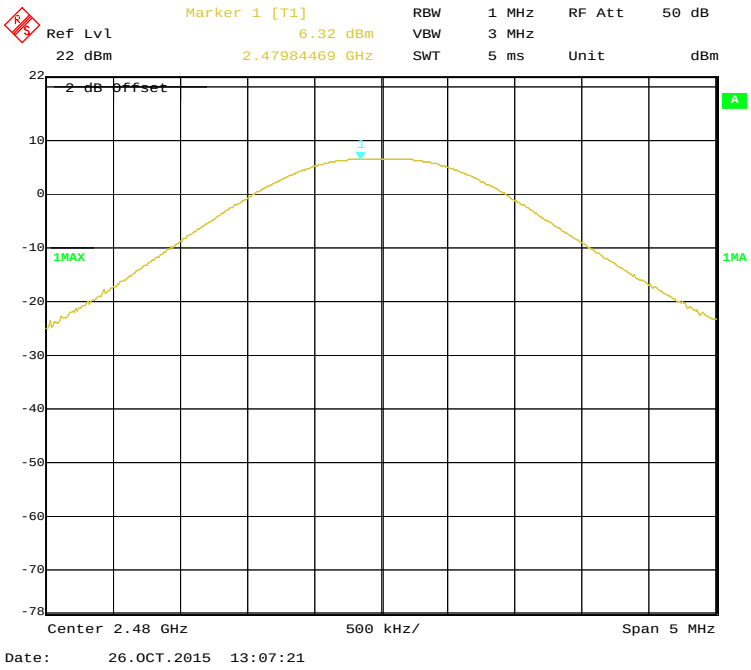
BDR (GFSK): Low Channel



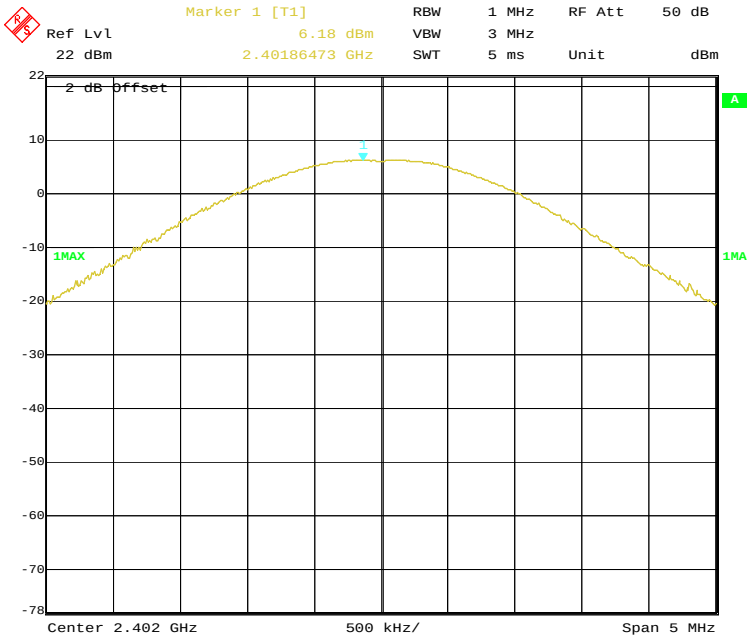
BDR (GFSK): Middle Channel



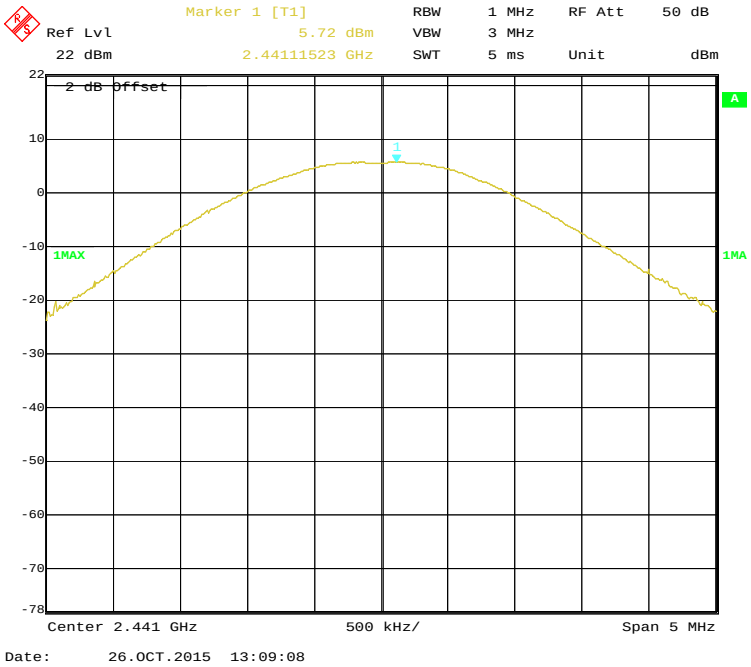
BDR (GFSK): High Channel



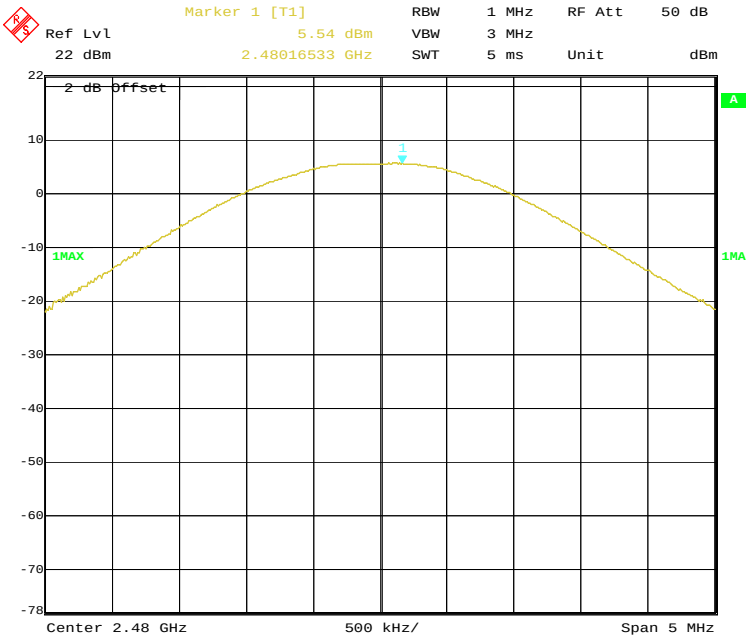
EDR(π/4-DQPSK): Low Channel



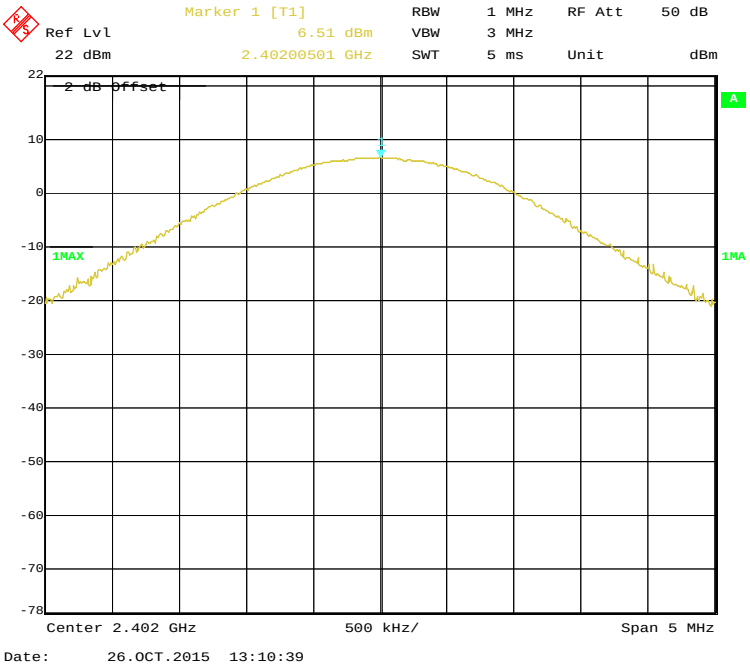
EDR(π/4-DQPSK): Middle Channel



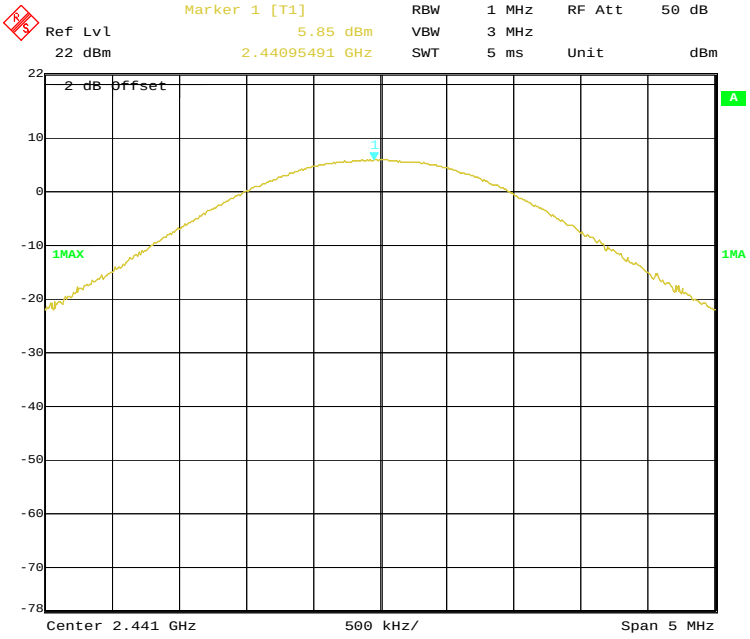
EDR(π/4-DQPSK): High Channel



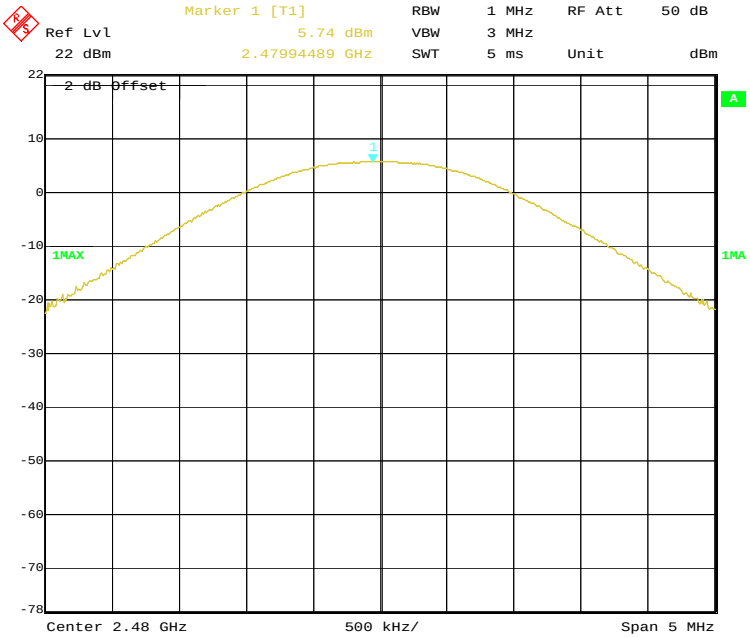
EDR(8DPSK): Low Channel



EDR(8DPSK): Middle Channel



EDR(8DPSK): 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 a 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	FSIQ26	100048	2014-11-4	2015-11-3

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

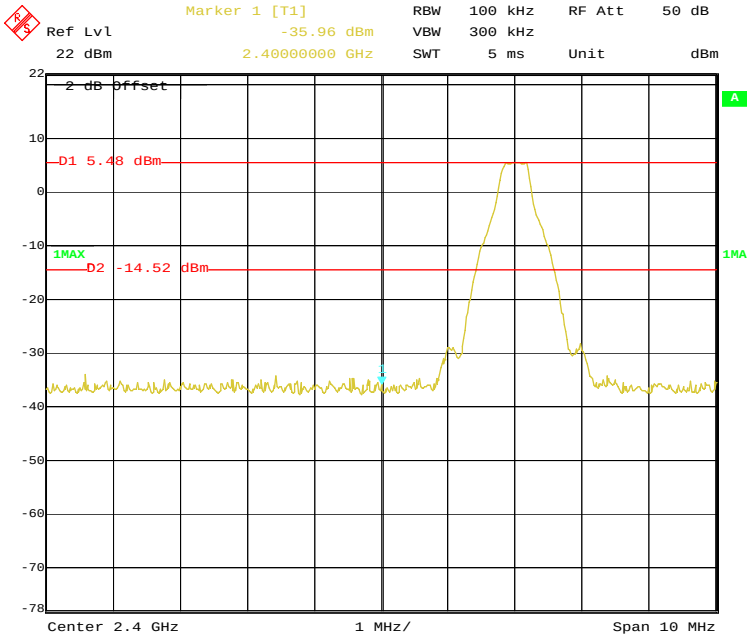
Temperature:	26 ℃
Relative Humidity:	55 %
ATM Pressure:	101.0 kPa

The testing was performed by Matt Yao on 2015-10-27

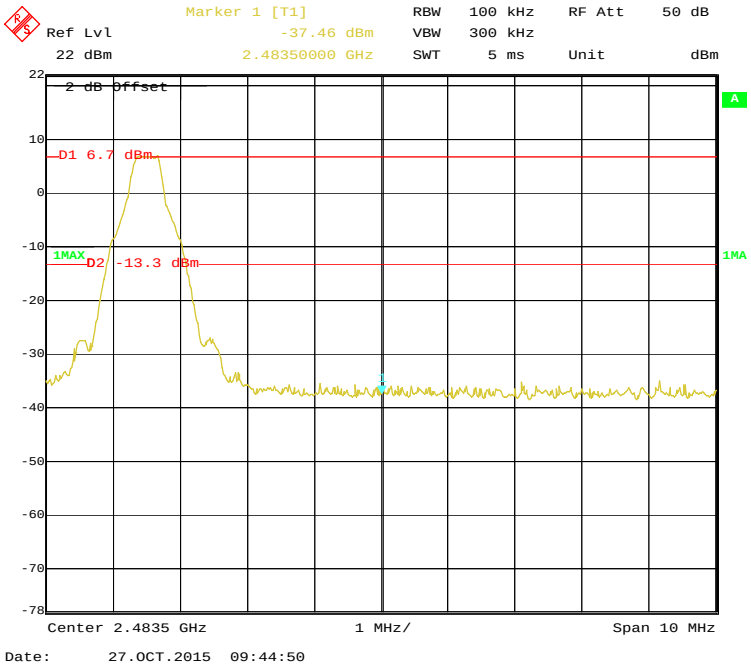
EUT operation mode: Transmitting

Test Result: Compliance. Please refer to following plots.

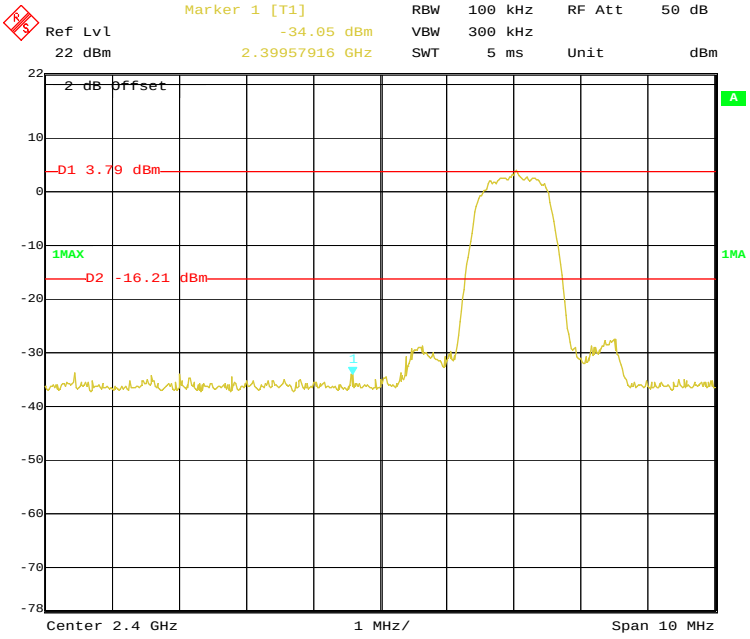
BDR (GFSK): Band Edge-Left Side



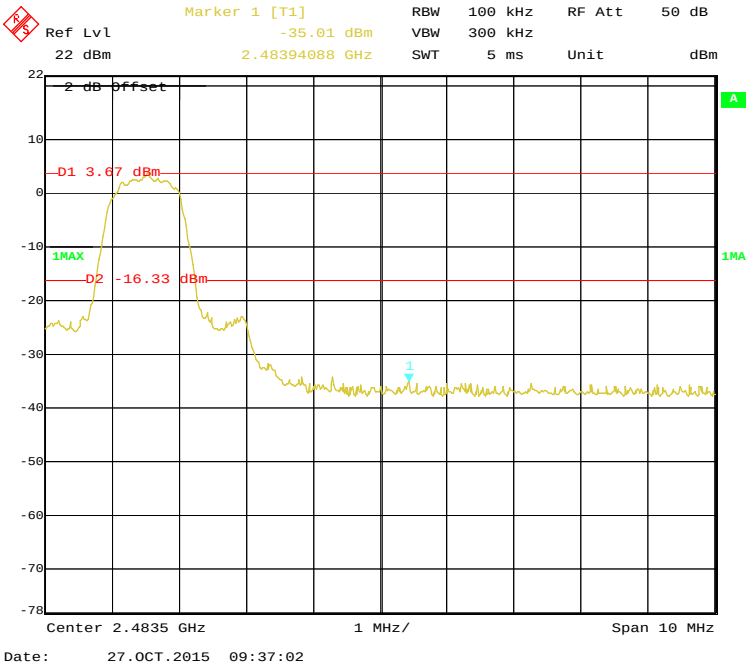
BDR (GFSK): Band Edge-Right Side



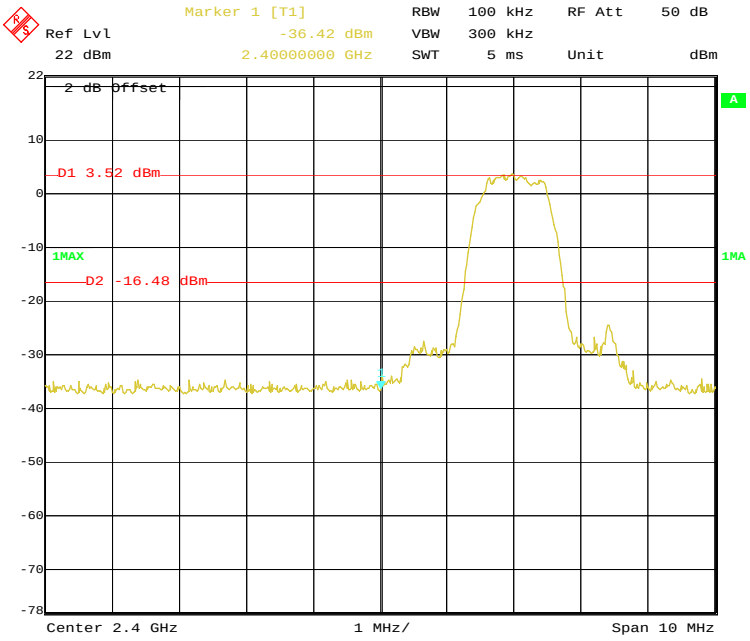
EDR (π/4-DQPSK): Band Edge-Left Side



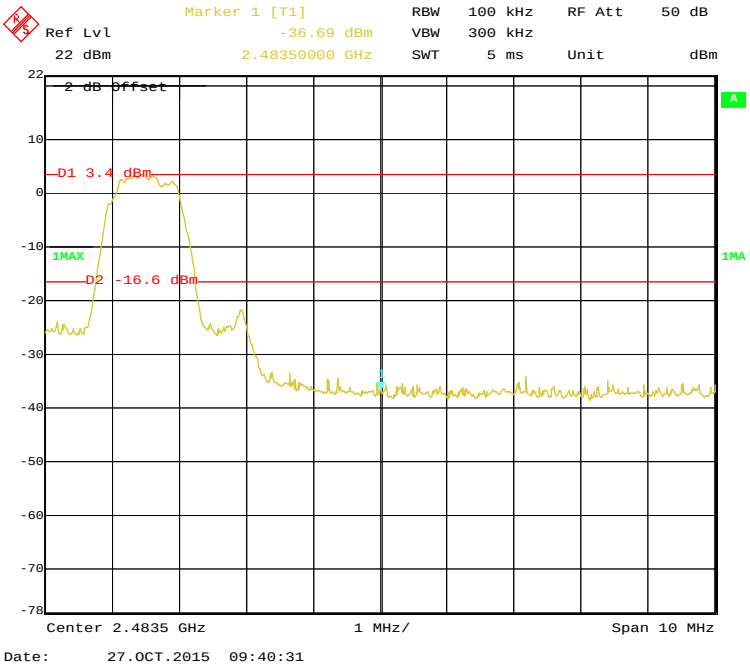
EDR (π/4-DQPSK): Band Edge-Right Side



EDR (8DPSK): Band Edge-Left Side



BDR (8DPSK): Band Edge-Right Side



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