Lab Code: 200707-0

FCC PART 15.247
TEST REPORT

For

Weccan Industrial Limited

30/F, Building C1, Xinghe Century, Caitian South Road, Futian District,
Shenzhen, Guangdong Province, P.R.C

FCC ID: Z3CWECCANBTCAR

Report Type:	**Product Type:**
Original Report	iOS and Android Bluetooth Car

Test Engineer:	Gardon Zhang
Report Number:	RSZ120808802-00
Report Date:	2012-08-23
Reviewed By:	Alvin Huang RF Leader
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

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Weccan Industrial Limited*'s product, model number: *iS650 (FCC ID: Z3CWECCANBTCAR)* or the "EUT" in this report was a *iOS and Android Bluetooth Car,* which was measured approximately: 35.0 cm (L) x 25.0 cm (W) x 12.0 cm (H), rated input voltage: DC 7.5 V battery.

Note: The product iOS and Android Bluetooth Car, models iS600, iS605, iS610, iS615, iS620, iS625, iS630, iS635, iS655, iS660, iS665, iS670, iS675, iS680, iS685, iS690 and iS695 are electrically identical with the model iS650, which was selected to test; the differences among them is just model number due to marketing purposes, which was explained in the attached declaration letter.

** All measurement and test data in this report was gathered from production sample serial number: 1208002 (Assigned by Shenzhen BACL). The EUT was received on 2012-08-08.*

Objective

This test report is prepared on behalf of *Weccan Industrial Limited* 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 C63.4-2009, 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.

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 system was configured for testing in a testing mode.

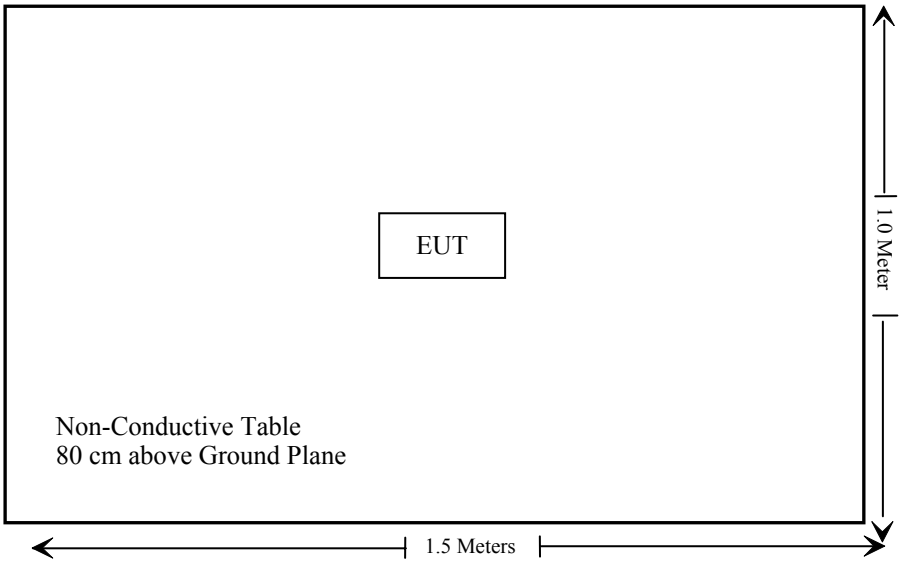
EUT Exercise Software

RF Control Kit v1.0

Equipment Modifications

No modification was made to the EUT tested.

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.247 (i), §1.1307 (b)(1), §2.1091	Maximum Permissible exposure (MPE)	Compliance
§15.203	Antenna Requirement	Compliance
§15.207(a)	AC Line Conducted Emissions	N/A*
§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

Note: N/A* - The EUT was powered by battery only!

FCC §15.247 (i) & §1.1307 (b) (1) & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)

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.

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);

Calculated Data:

Mode	Frequency (MHz)	Antenna Gain		Conducted Power		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
		(dBi)	(numeric)	(dBm)	(mW)			
BDR (GFSK)	2441	0	1.00	-1.55	0.700	20	0.00014	1
EDR (π/4-DQPSK)	2441	0	1.00	-1.48	0.711	20	0.00014	1
EDR (8DPSK)	2441	0	1.00	-1.34	0.735	20	0.00015	1

Result: Compliance

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 used one fixed PCB antenna, which in accordance to section 15.203, the maximum gain is 0 dBi; please refer to the internal photos.

Result: Compliance.

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

Applicable Standard

FCC §15.205; §15.209; §15.247(d)

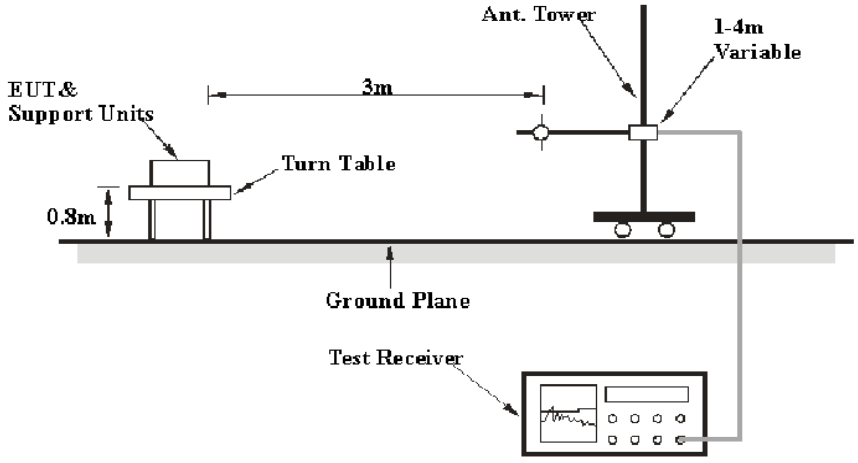
Measurement Uncertainty

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.

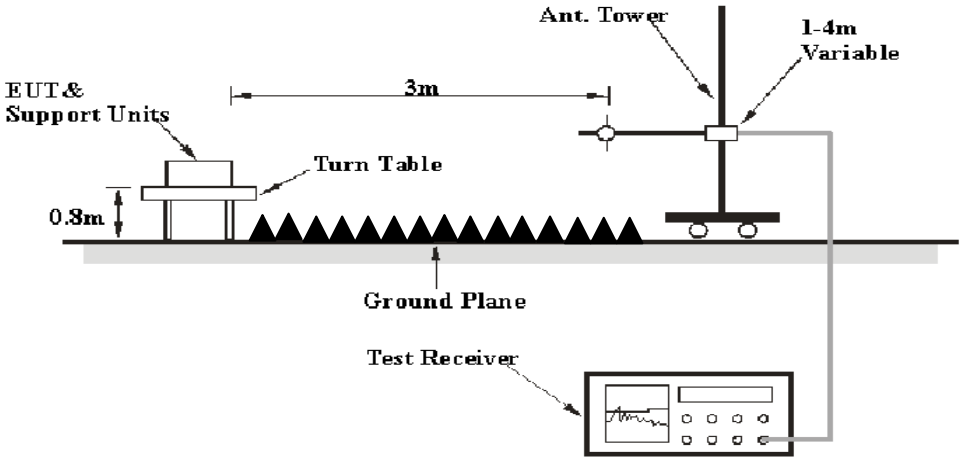
Based on CISPR 16-4-4, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at Bay Area Compliance Laboratories Corp. (Shenzhen) is 4.0 dB. (k=2, 95% level of confidence).

EUT Setup

Below 1 GHz:



Above 1 GHz:



The radiated emission tests were performed in the 3 meters, 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.

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	120 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 and peak and Average detection modes for frequencies above 1 GHz.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	8447E	1937A01057	2011-11-24	2012-11-23
Rohde & Schwarz	EMI Test Receiver	ESCI	101122	2011-11-17	2012-11-16
Sunol Sciences	Broadband Antenna	JB1	A040904-2	2011-11-28	2012-11-27
Mini-Circuits	Amplifier	ZVA-213+	N/A	2011-11-24	2012-11-23
Sunol Sciences	Horn Antenna	DRH-118	A052304	2011-12-01	2012-11-30
Rohde & Schwarz	Signal Analyzer	FSIQ26	8386001028	2011-11-24	2012-11-23
Agilent	Spectrum Analyzer	8564E	3943A01781	2012-05-17	2013-05-16
the electro-Mechanics Co.	Horn Antenna	3116	9510-2270	2011-10-14	2012-10-13
R&S	Auto test Software	EMC32	V6.30	N/A	N/A

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

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:

16.06 dB at **422.6 MHz** in the **Horizontal** polarization

Test Data

Environmental Conditions

Temperature:	25 ℃
Relative Humidity:	56 %
ATM Pressure:	100 kPa

The testing was performed by Gardon Zhang on 2012-08-14.

Test mode: Transmitting (Scan with GFSK, π/4-DQPSK, 8-DPSK, the worst case is BDR Mode (GFSK))

30 MHz ~25 GHz:

Frequency	Receiver		Turntable	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBuV/m)	FCC PART 15.247	
(MHz)	Reading (dBμV/m)	Detector (PK/QP/Ave.)	Degree	Height (m)	Polar (H/V)			Limit (dBuV/m)	Margin (dB)
Low Channel(2402 MHz)									
2402.0	88.54	PK	46	1.2	H	6.13	94.67	/	/
2402.0	78.39	Ave.	46	1.2	H	6.13	84.52	/	/
2402.0	89.32	PK	77	1.3	V	6.13	95.45	/	/
2402.0	78.67	Ave.	77	1.3	V	6.13	84.80	/	/
9608.0	18.02	Ave.	75	1.3	H	19.28	37.30	54	16.70
337.7	40.23	QP	202	1.1	H	-11.39	28.84	46	17.16
7206.0	17.55	Ave.	113	1.2	V	17.06	34.61	54	19.39
4804.0	21.98	Ave.	63	1.2	V	12.40	34.38	54	19.62
9608.0	33.92	PK	75	1.3	H	19.28	53.20	74	20.80
7206.0	33.65	PK	113	1.2	V	17.06	50.71	74	23.29
2362.5	25.19	Ave.	92	1.1	V	5.48	30.67	54	23.33
2485.2	23.61	Ave.	71	1.1	V	6.81	30.42	54	23.58
2334.1	24.26	Ave.	33	1.2	H	5.48	29.74	54	24.26
4804.0	36.37	PK	63	1.2	V	12.40	48.77	74	25.23
2362.5	39.66	PK	92	1.1	V	5.48	45.14	74	28.86
2485.2	36.79	PK	71	1.1	V	6.81	43.60	74	30.40
2334.1	37.83	PK	33	1.2	H	5.48	43.31	74	30.69

Frequency	Receiver		Turntable	Rx Antenna		Corrected Factor (dB)	Corrected Amplitude (dBuV/m)	FCC PART 15.247	
(MHz)	Reading (dBμV/m)	Detector (PK/QP/Ave.)	Degree	Height (m)	Polar (H/V)			Limit (dBuV/m)	Margin (dB)
Middle Channel(2441 MHz)									
2441.0	87.39	PK	33	1.2	H	7.21	94.60	/	/
2441.0	77.65	Ave.	33	1.2	H	7.21	84.86	/	/
2441.0	89.15	PK	75	1.2	V	6.81	95.96	/	/
2441.0	78.19	Ave.	75	1.2	V	6.81	85.00	/	/
413.3	38.44	QP	136	1.1	H	-9.72	28.72	46	17.28
9764.0	17.15	Ave.	34	1.2	H	19.40	36.55	54	17.45
4882.0	22.03	Ave.	6	1.1	V	12.46	34.49	54	19.51
7323.0	17.83	Ave.	22	1.2	V	16.49	34.32	54	19.68
9764.0	33.67	PK	34	1.2	H	19.40	53.07	74	20.93
2485.4	24.81	Ave.	1	1.2	V	6.81	31.62	54	22.38
7323.0	33.95	PK	22	1.2	V	16.49	50.44	74	23.56
4882.0	37.53	PK	6	1.1	V	12.46	49.99	74	24.01
2361.3	24.29	Ave.	201	1.1	V	5.48	29.77	54	24.23
2334.3	24.11	Ave.	17	1.1	H	5.48	29.59	54	24.41
2485.4	36.91	PK	1	1.2	V	6.81	43.72	74	30.28
2334.3	37.15	PK	17	1.1	H	5.48	42.63	74	31.37
2361.3	36.29	PK	201	1.1	V	5.48	41.77	74	32.23
High Channel(2480 MHz)									
2480.0	87.76	PK	37	1.2	H	7.21	94.97	/	/
2480.0	77.39	Ave.	37	1.2	H	7.21	84.60	/	/
2480.0	88.28	PK	13	1.3	V	6.81	95.09	/	/
2480.0	77.86	Ave.	13	1.3	V	6.81	84.67	/	/
422.6	39.55	QP	48	1.0	H	-9.61	29.94	46	16.06
9920.0	17.01	Ave.	37	1.2	H	19.38	36.39	54	17.61
7440.0	18.02	Ave.	61	1.2	V	15.90	33.92	54	20.08
4960.0	20.88	Ave.	88	1.1	V	12.50	33.38	54	20.62
2486.1	25.99	Ave.	34	1.2	V	6.81	32.80	54	21.20
9920.0	32.96	PK	37	1.2	H	19.38	52.34	74	21.66
2331.6	24.16	Ave.	88	1.3	H	5.48	29.64	54	24.36
7440.0	33.67	PK	61	1.2	V	15.90	49.57	74	24.43
2365.5	24.03	Ave.	93	1.2	V	5.48	29.51	54	24.49
4960.0	36.13	PK	88	1.1	V	12.50	48.63	74	25.37
2486.1	39.67	PK	34	1.2	V	6.81	46.48	74	27.52
2331.6	36.95	PK	88	1.3	H	5.48	42.43	74	31.57
2365.5	35.68	PK	93	1.2	V	5.48	41.16	74	32.84

Note:
1) Corrected Amplitude = Corrected Factor + Reading
2) Corrected Factor=Antenna factor (RX) + cable loss – amplifier factor
3) Margin = Limit - Corrected Amplitude

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, RBW of spectrum was set at 30 kHz, maxhold the channel.
2. Set the adjacent channel of the EUT 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	EMI Test Receiver	ESCI	101122	2011-11-17	2012-11-16

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

Test Data

Environmental Conditions

Temperature:	25 ℃
Relative Humidity:	56 %
ATM Pressure:	100 kPa

** The testing was performed by Gardon Zhang on 2012-08-10 and 2012-08-11.*

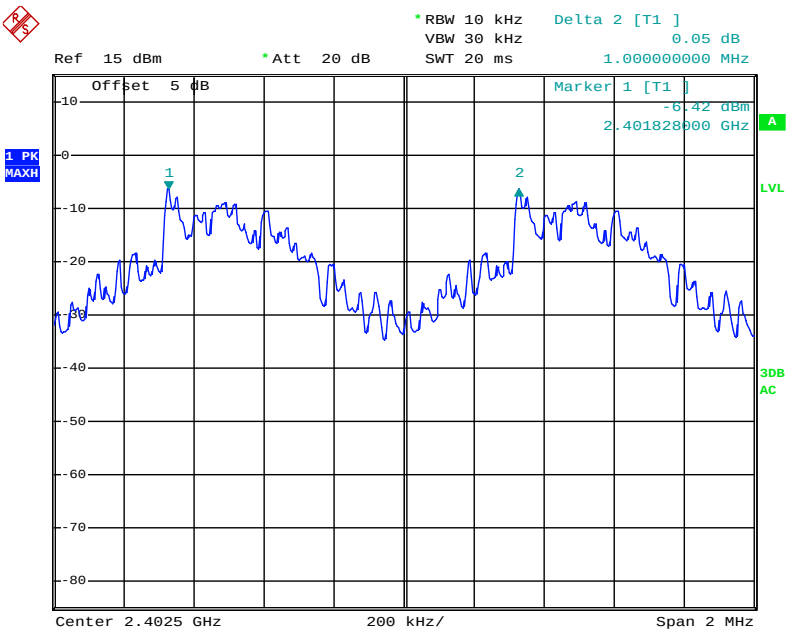
Test Mode: Transmitting

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

Mode	Channel	Frequency (MHz)	Channel Separation (MHz)	≥Limit (MHz)	Result
BDR (GFSK)	Low	2402	1.000	0.555	Pass
	Adjacent	2403			
	Middle	2441	1.000	0.555	Pass
	Adjacent	2440			
	High	2480	1.000	0.555	Pass
	Adjacent	2479			
EDR (π/4-DQPSK)	Low	2402	1.002	0.832	Pass
	Adjacent	2403			
	Middle	2441	1.002	0.832	Pass
	Adjacent	2440			
	High	2480	1.002	0.832	Pass
	Adjacent	2479			
EDR (8DPSK)	Low	2402	1.002	0.813	Pass
	Adjacent	2403			
	Middle	2441	1.002	0.813	Pass
	Adjacent	2440			
	High	2480	1.002	0.813	Pass
	Adjacent	2479			

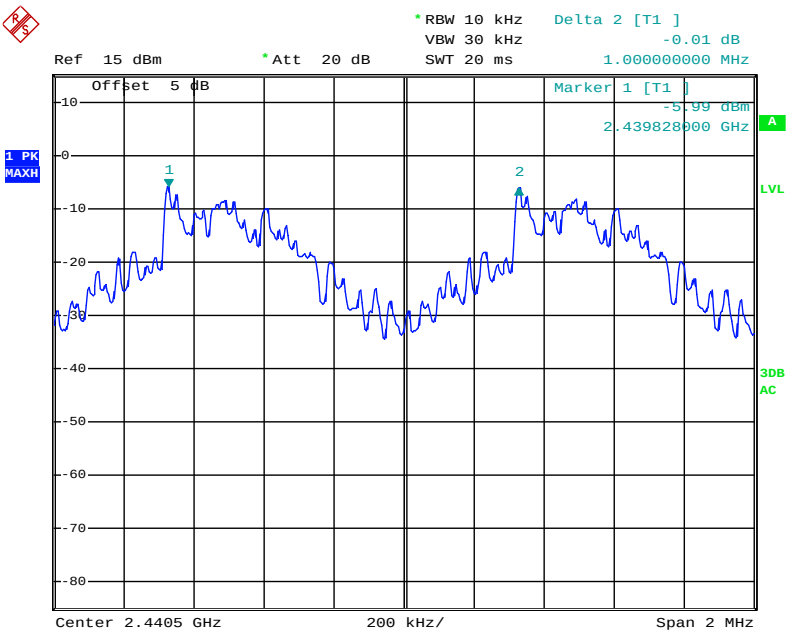
Note: Limit = 20 dB bandwidth *2/3

BDR (GFSK): Low Channel



Date: 10.AUG.2012 20:40:29

BDR (GFSK): Middle Channel



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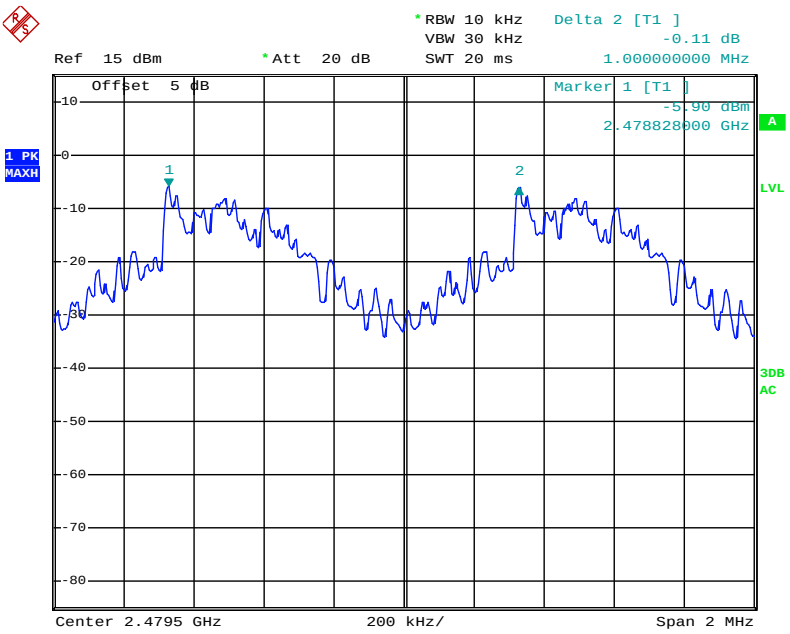
BDR (GFSK): High Channel



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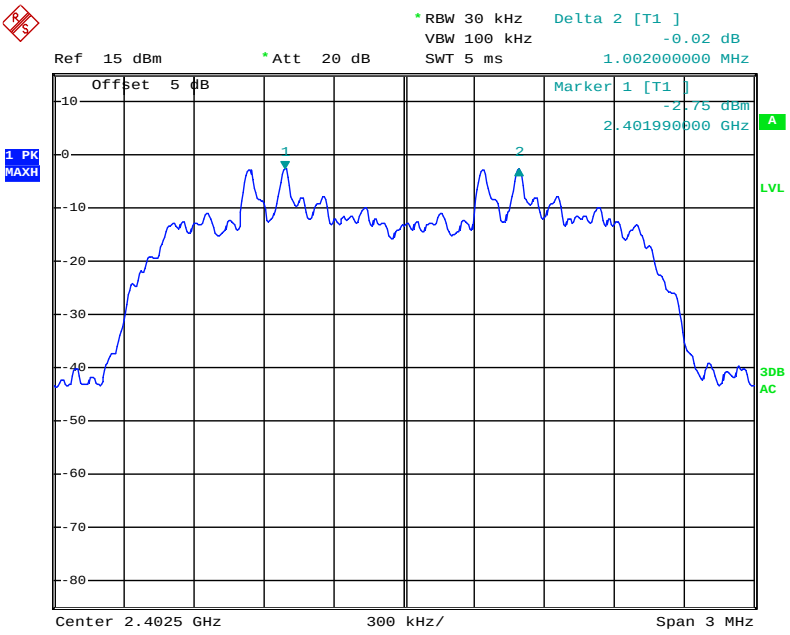
EDR (π/4-DQPSK): Low Channel



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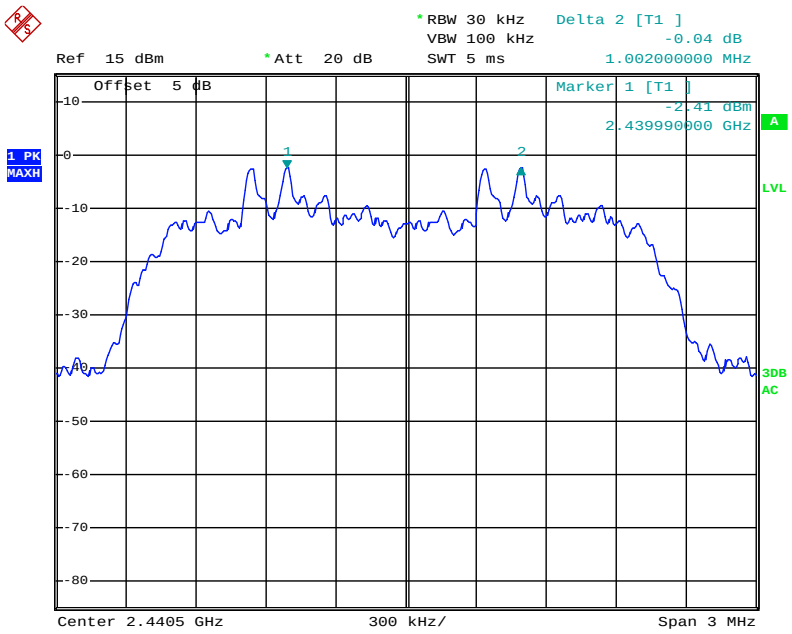
EDR (π/4-DQPSK): Middle Channel



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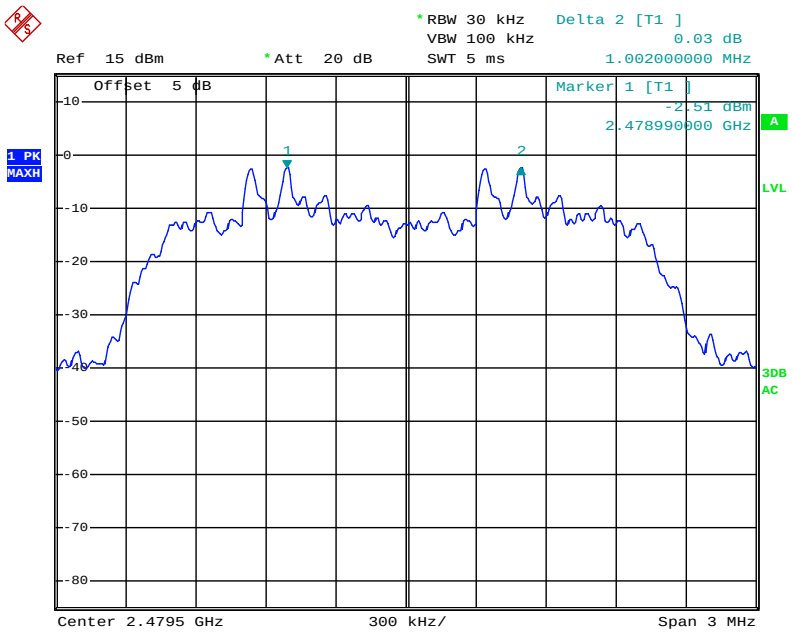
EDR (π/4-DQPSK): High Channel



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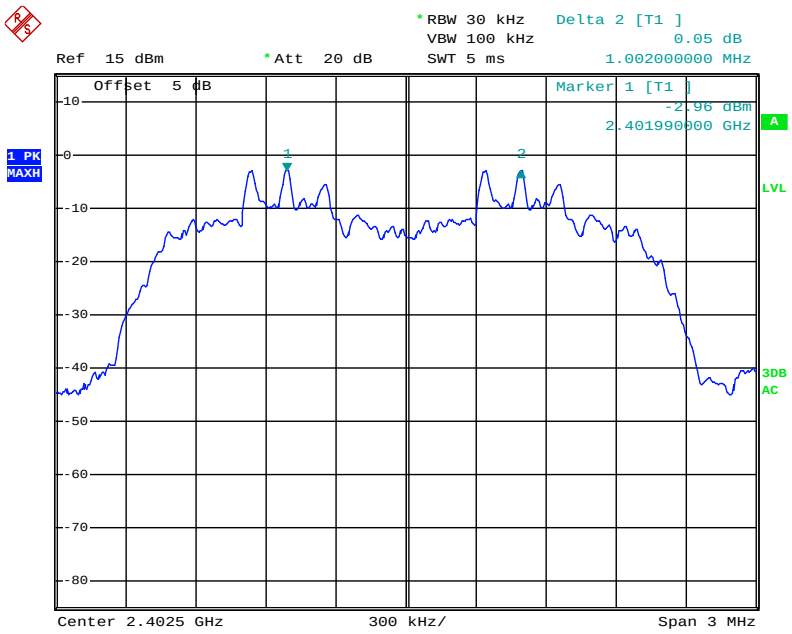
EDR (8DPSK): Low Channel



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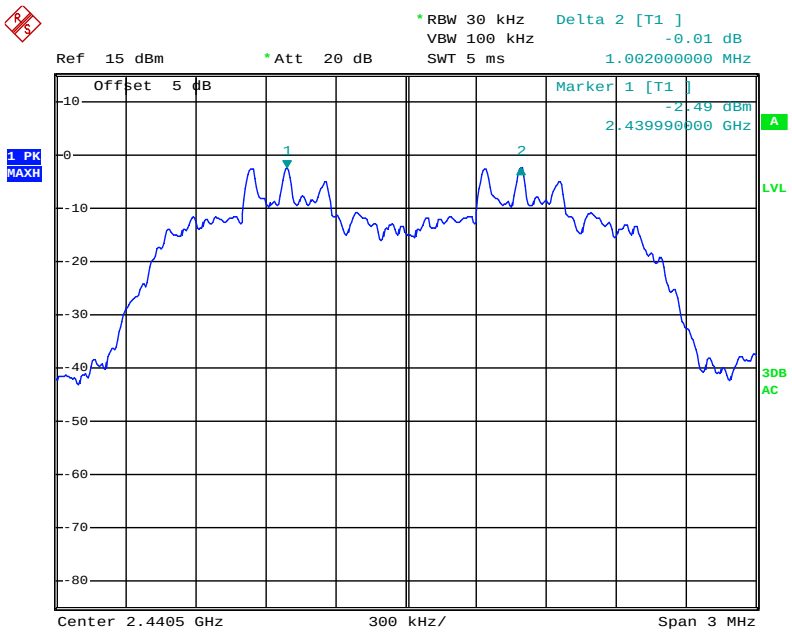
EDR (8DPSK): Middle Channel



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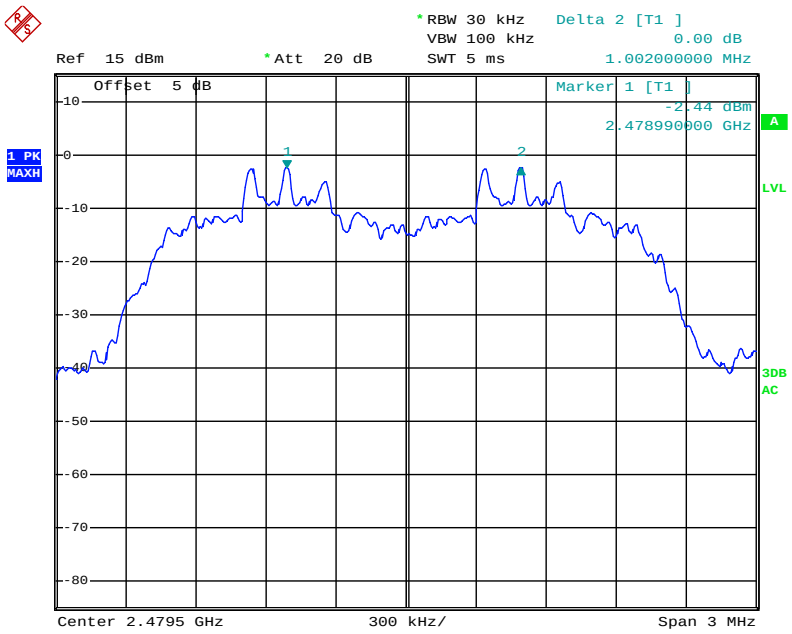
EDR (8DPSK): High Channel



Date: 11.AUG.2012 14:57:57

FCC §15.247(a) (1) – 20 dB EMISSION 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 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	EMI Test Receiver	ESCI	101122	2011-11-17	2012-11-16

*** 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℃
Relative Humidity:	56 %
ATM Pressure:	100 kPa

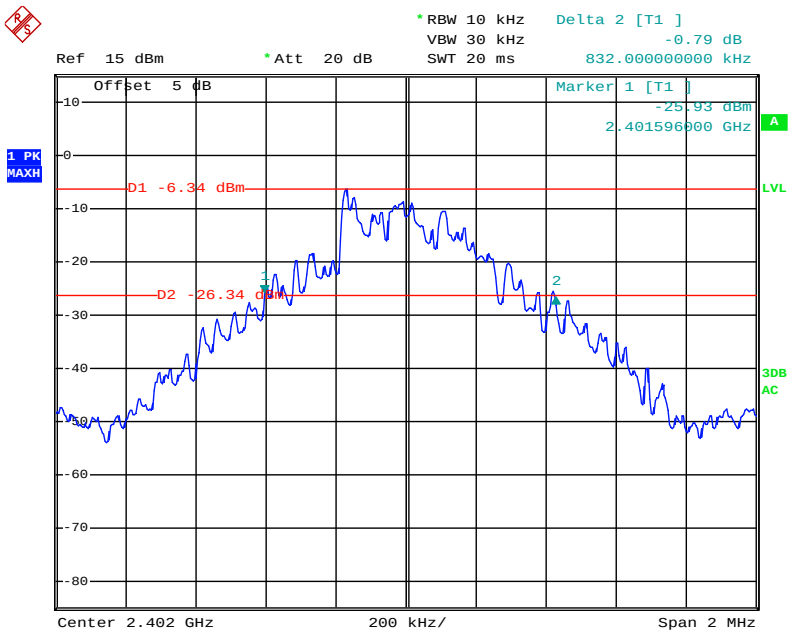
** The testing was performed by Gardon Zhang on 2012-08-10 and 2012-08-11.*

Test Mode: Transmitting

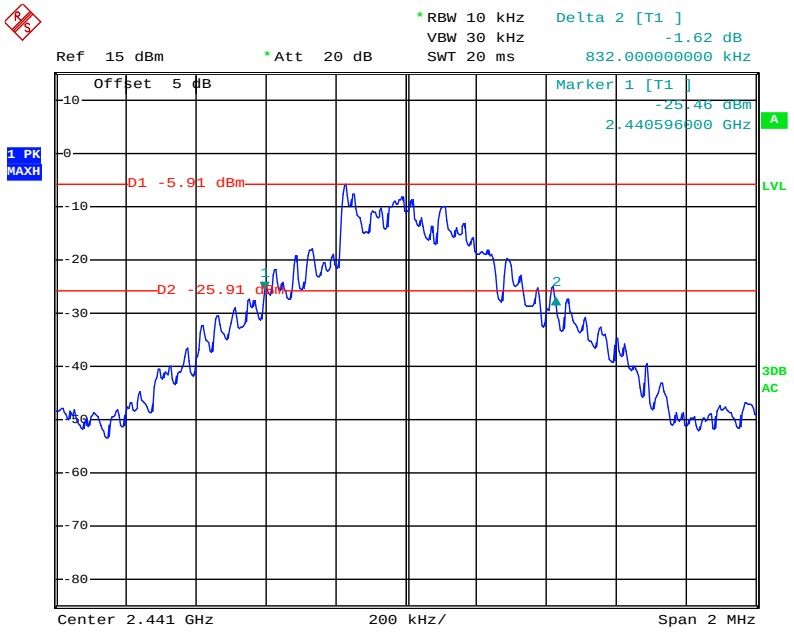
Test Result: Compliance. Please refer to following tables and plots

Mode	Channel	Frequency (MHz)	20 dB Bandwidth (MHz)
BDR (GFSK)	Low	2402	0.832
	Middle	2441	0.832
	High	2480	0.832
EDR (π/4-DQPSK)	Low	2402	1.248
	Middle	2441	1.248
	High	2480	1.248
EDR (8DPSK)	Low	2402	1.220
	Middle	2441	1.220
	High	2480	1.220

BDR (GFSK): Low Channel

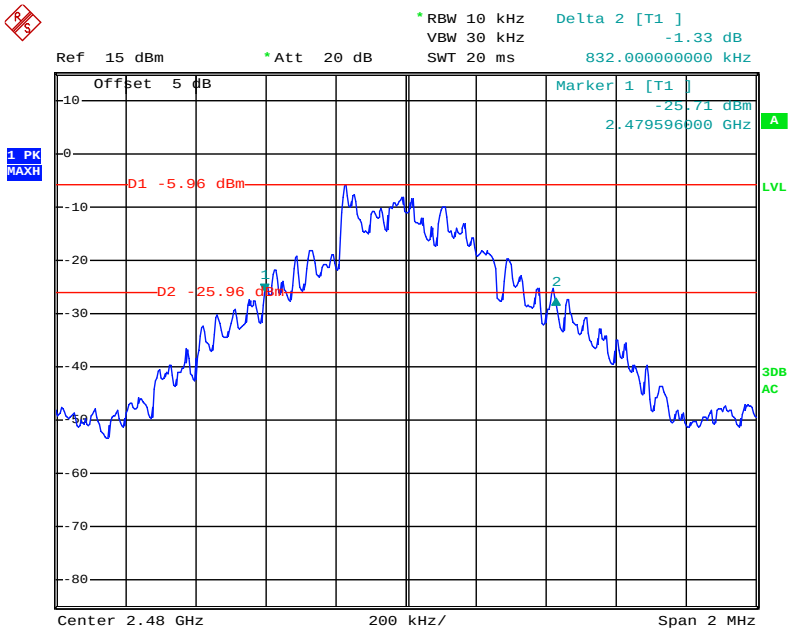


BDR (GFSK): Middle Channel



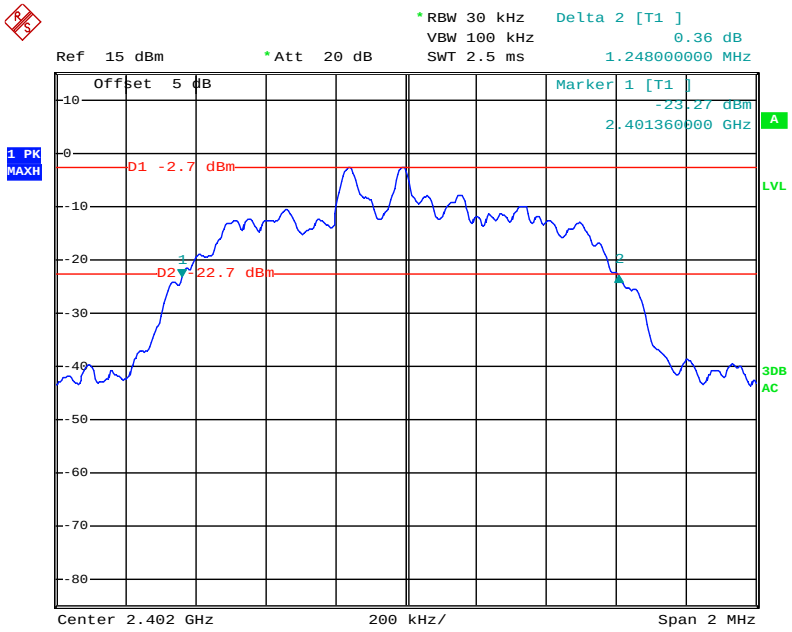
Date: 10.AUG.2012 20:29:25

BDR (GFSK): High Channel



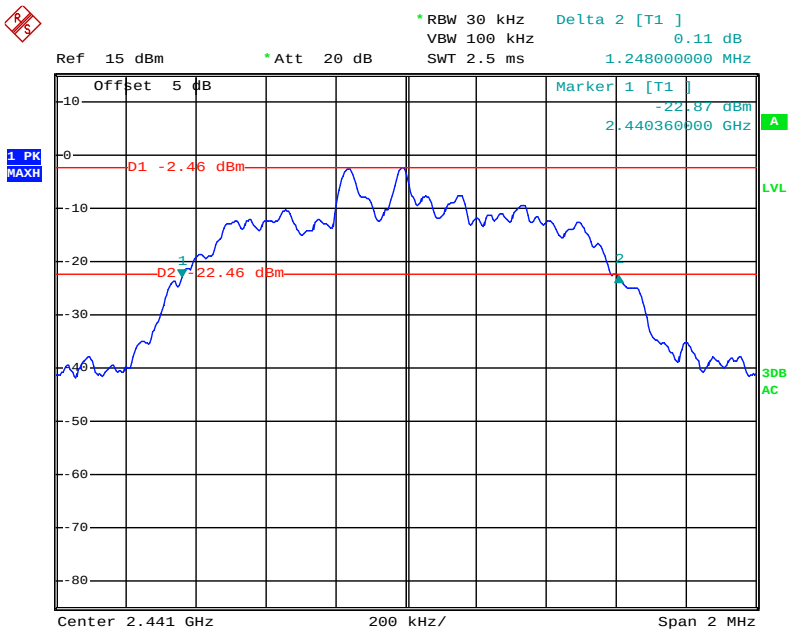
Date: 10.AUG.2012 20:33:06

EDR (π/4-DQPSK): Low Channel



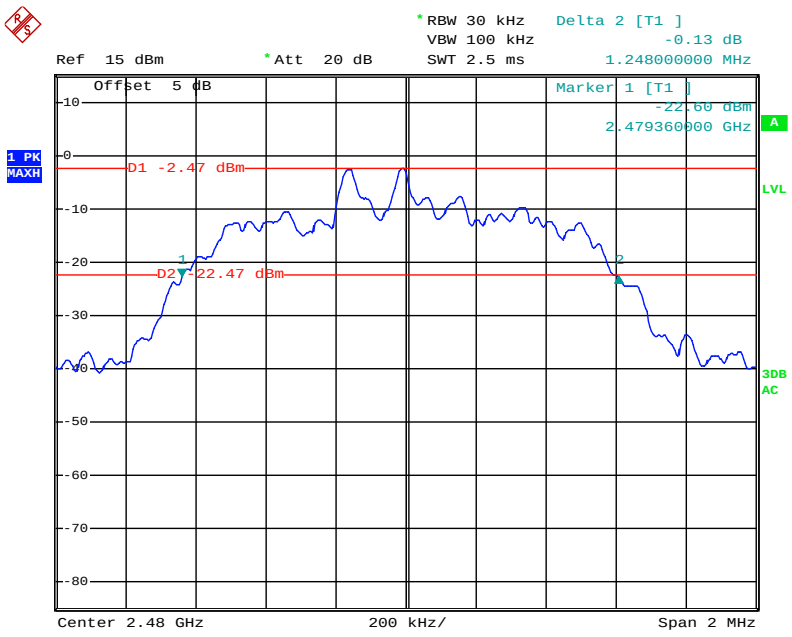
Date: 11.AUG.2012 13:12:41

EDR (π/4-DQPSK): Middle Channel



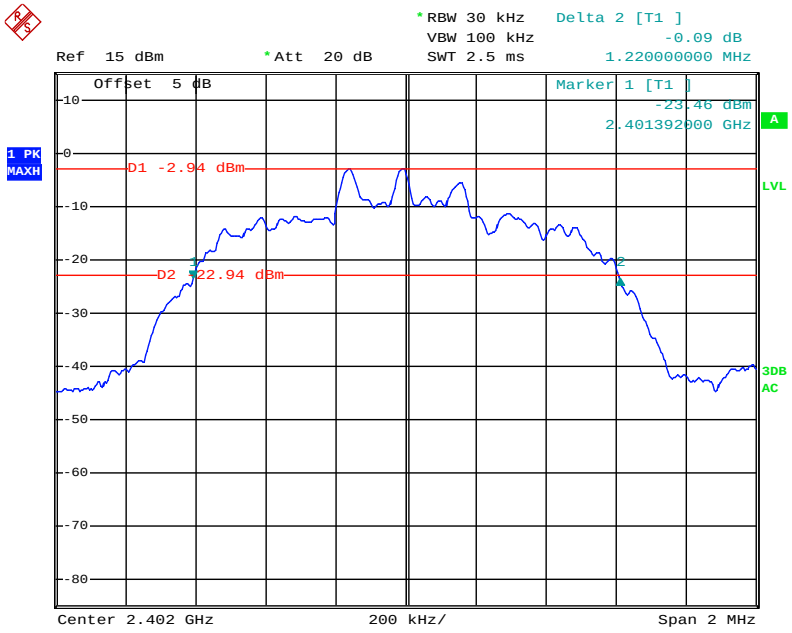
Date: 11.AUG.2012 13:15:00

EDR (π/4-DQPSK): High Channel



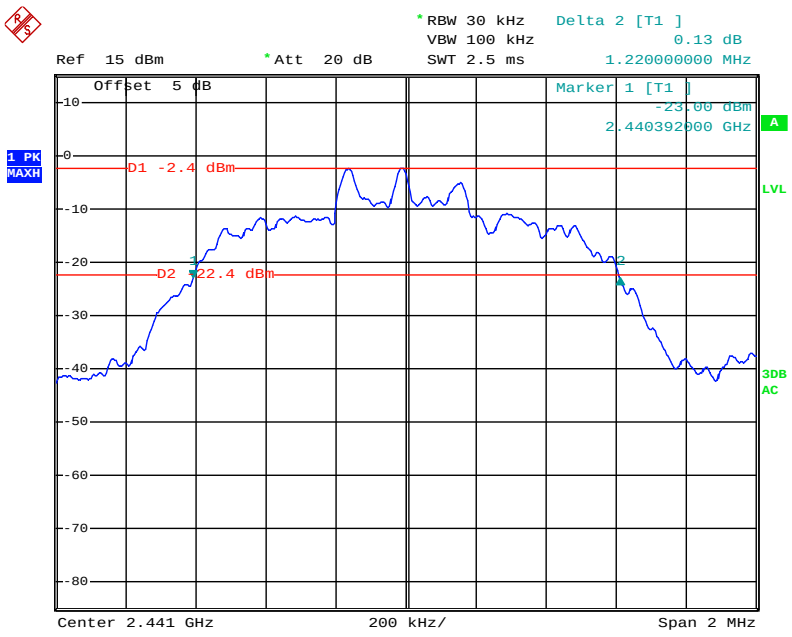
Date: 11.AUG.2012 13:16:55

EDR (8DPSK): Low Channel



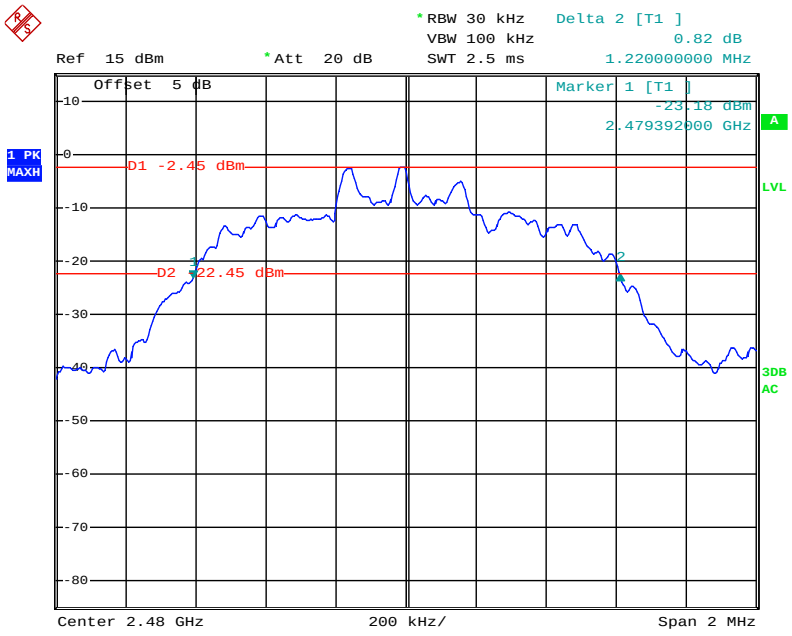
Date: 11.AUG.2012 14:52:44

EDR (8DPSK): Middle Channel



Date: 11.AUG.2012 14:54:53

EDR (8DPSK): High Channel



Date: 11.AUG.2012 14:56:28

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	EMI Test Receiver	ESCI	101122	2011-11-17	2012-11-16

*** 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℃
Relative Humidity:	56 %
ATM Pressure:	100 kPa

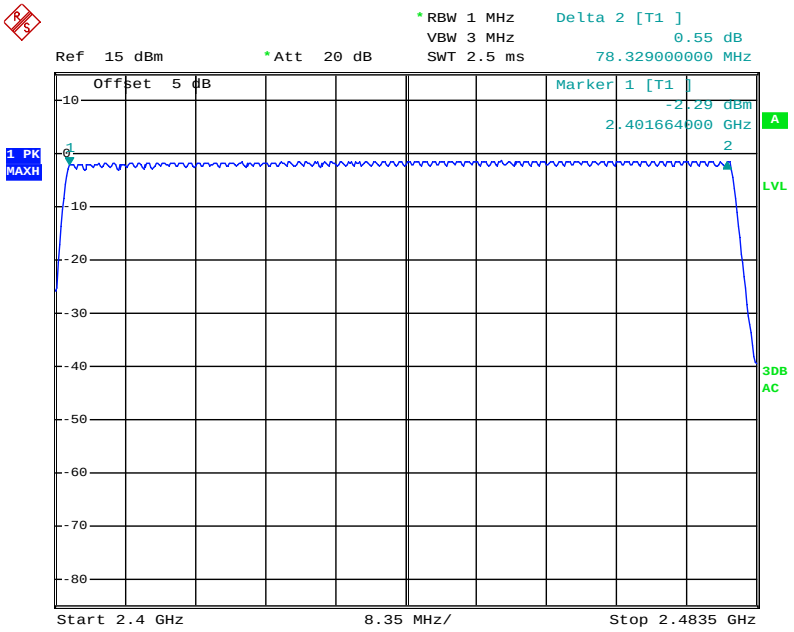
The testing was performed by Gardon Zhang on 2012-08-10 and 2012-08-11.

Test Mode: Transmitting

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

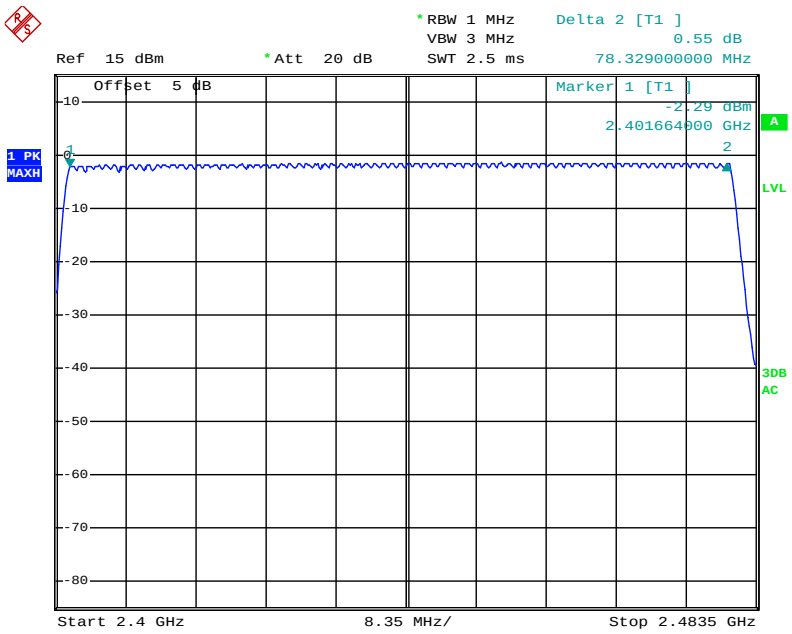
Mode	Frequency Range (MHz)	Number of Hopping Channel (CH)	Limit (CH)
BDR (GFSK)	2402-2480	79	≥15
EDR (π/4-DQPSK)	2402-2480	79	≥15
EDR (8DPSK)	2402-2480	79	≥15

BDR (GFSK): Number of Hopping Channels



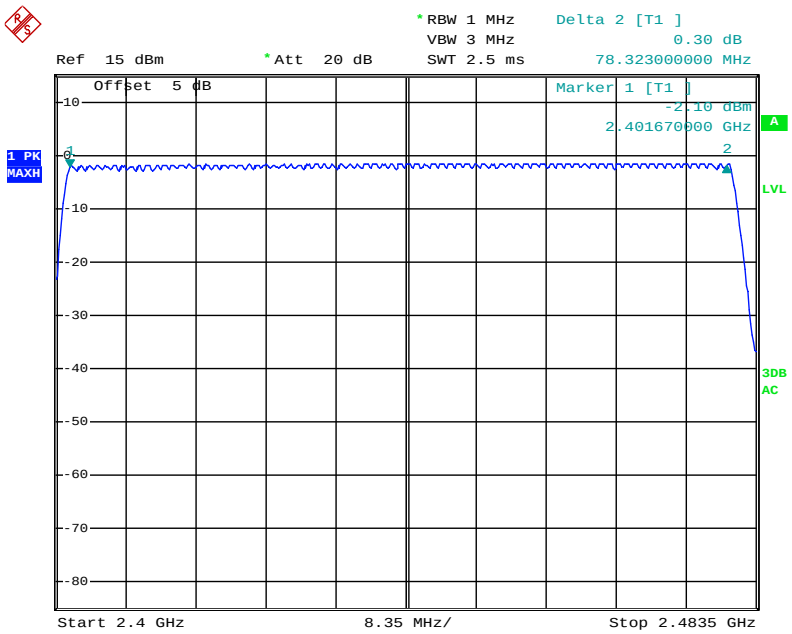
Date: 10.AUG.2012 21:13:20

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



Date: 10.AUG.2012 21:13:20

(8DPSK): Number of Hopping Channels



Date: 11.AUG.2012 15:34:08

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.

Dwell time = Pulse time*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	EMI Test Receiver	ESCI	101122	2011-11-17	2012-11-16

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

Test Data

Environmental Conditions

Temperature:	25-26 ℃
Relative Humidity:	50-56 %
ATM Pressure:	100 kPa

The testing was performed by Gardon Zhang from 2012-08-10 to 2012-08-12.

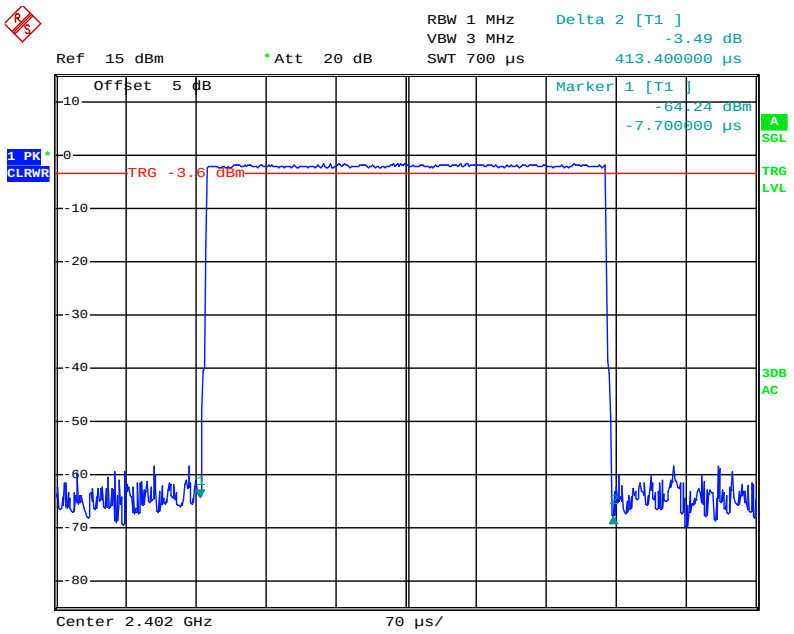
Test Mode: Transmitting

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	0.4134	0.1323	0.4	Pass
		Middle	0.4134	0.1323	0.4	Pass
		High	0.4134	0.1323	0.4	Pass
		Note: DH1:Dwell time = Pulse time*(1600/2/79)*31.6S				
	DH 3	Low	1.6846	0.2695	0.4	Pass
		Middle	1.6846	0.2695	0.4	Pass
		High	1.6846	0.2695	0.4	Pass
		Note: DH3:Dwell time = Pulse time*(1600/4/79)*31.6S				
	DH 5	Low	2.9360	0.3132	0.4	Pass
		Middle	2.9360	0.3132	0.4	Pass
		High	2.9360	0.3132	0.4	Pass
		Note: DH5:Dwell time = Pulse time*(1600/6/79)*31.6S				
EDR (π/4-DQPSK)	DH 1	Low	0.4228	0.1353	0.4	Pass
		Middle	0.4228	0.1353	0.4	Pass
		High	0.4228	0.1353	0.4	Pass
		Note: DH1:Dwell time = Pulse time*(1600/2/79)*31.6S				
	DH 3	Low	1.6884	0.2701	0.4	Pass
		Middle	1.6884	0.2701	0.4	Pass
		High	1.6884	0.2701	0.4	Pass
		Note: DH3:Dwell time = Pulse time*(1600/4/79)*31.6S				
	DH 5	Low	2.9484	0.3145	0.4	Pass
		Middle	2.9484	0.3145	0.4	Pass
		High	2.9484	0.3145	0.4	Pass
		Note: DH5:Dwell time = Pulse time*(1600/6/79)*31.6S				
EDR (8DPSK)	DH 1	Low	0.4228	0.1353	0.4	Pass
		Middle	0.4228	0.1353	0.4	Pass
		High	0.4228	0.1353	0.4	Pass
		Note: DH1:Dwell time = Pulse time*(1600/2/79)*31.6S				
	DH 3	Low	1.6884	0.2701	0.4	Pass
		Middle	1.6884	0.2701	0.4	Pass
		High	1.6884	0.2701	0.4	Pass
		Note: DH3:Dwell time = Pulse time*(1600/4/79)*31.6S				
	DH 5	Low	2.9484	0.3145	0.4	Pass
		Middle	2.9484	0.3145	0.4	Pass
		High	2.9484	0.3145	0.4	Pass
		Note: DH5:Dwell time = Pulse time*(1600/6/79)*31.6S				

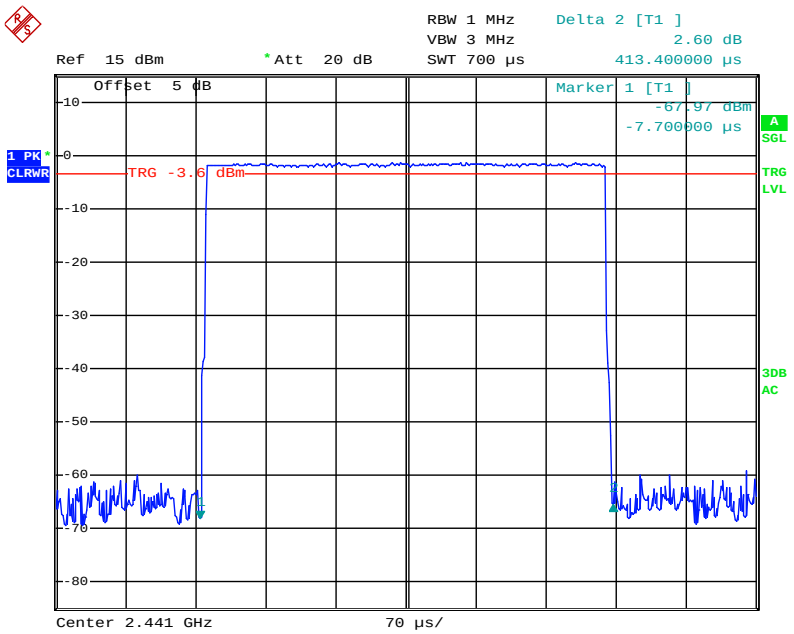
BDR (GFSK):

Pulse time, Low Channel, DH1



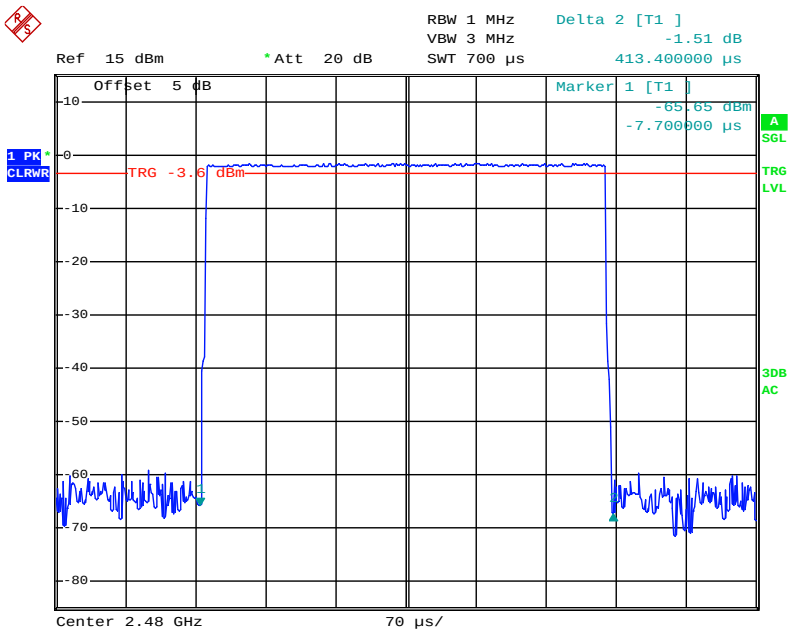
Date: 12.AUG.2012 14:10:22

Pulse time, Middle Channel, DH1



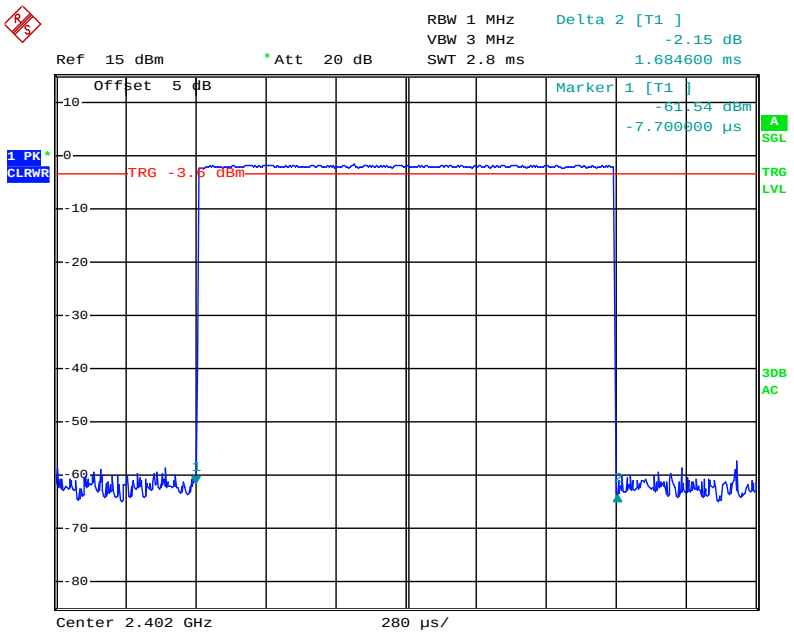
Date: 12.AUG.2012 14:11:28

Pulse time, High Channel, DH1



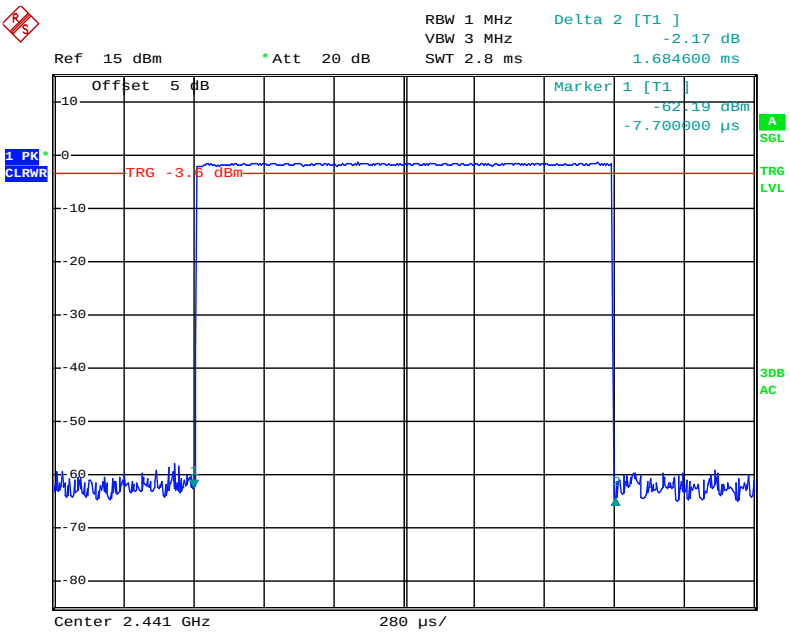
Date: 12.AUG.2012 14:12:18

Pulse time, Low Channel, DH3



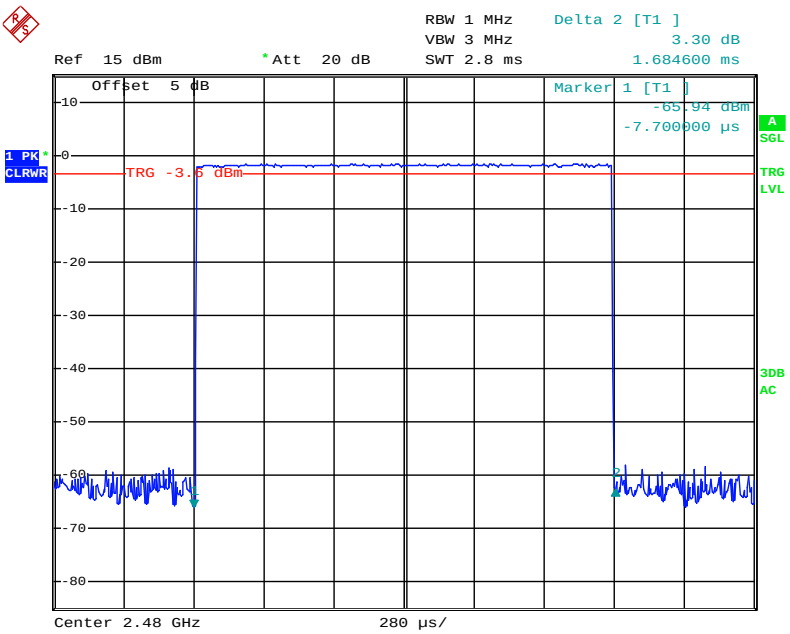
Date: 12.AUG.2012 14:15:37

Pulse time, Middle Channel, DH3



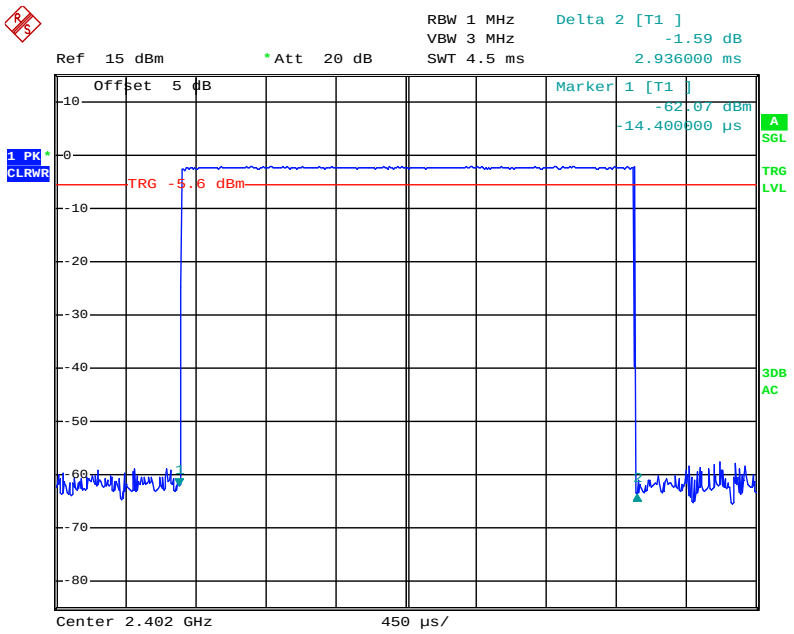
Date: 12.AUG.2012 14:15:03

Pulse time, High Channel, DH3



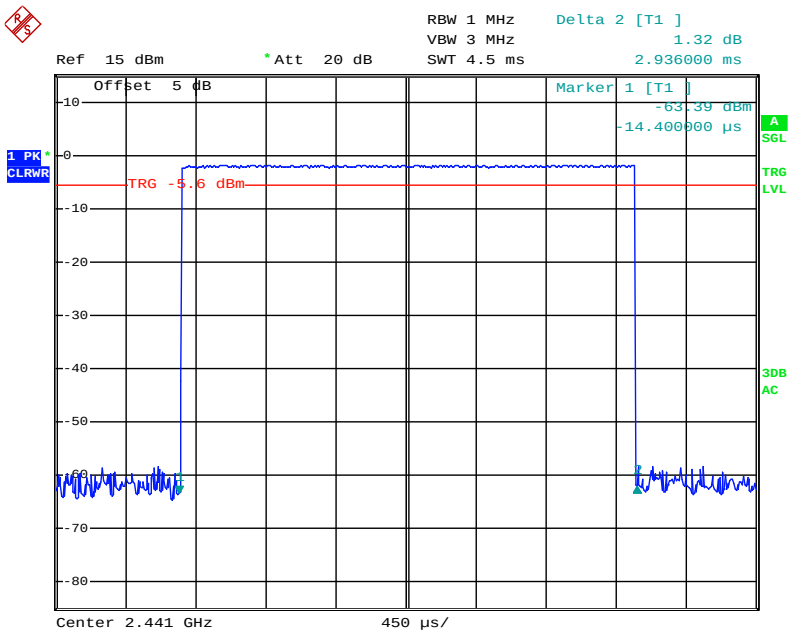
Date: 12.AUG.2012 14:14:29

Pulse time, Low Channel, DH5



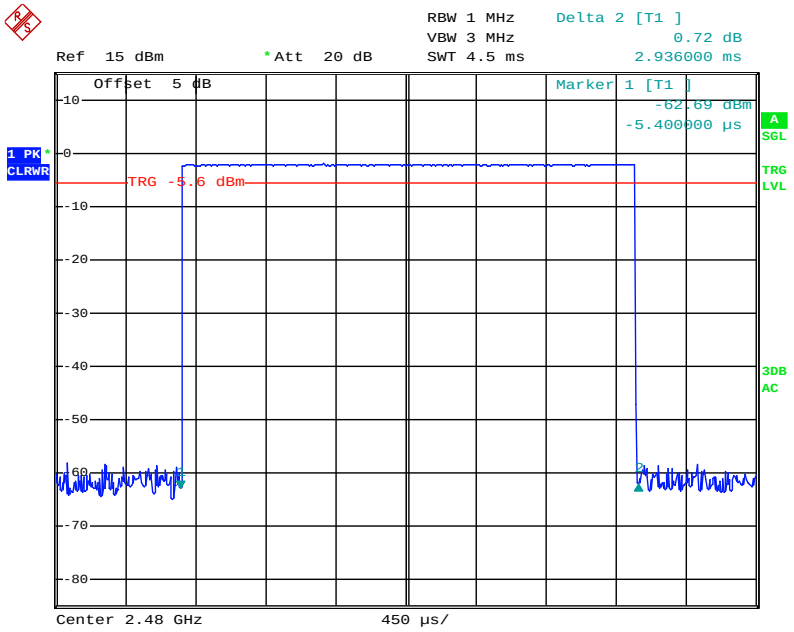
Date: 10.AUG.2012 21:29:27

Pulse time, Middle Channel, DH5



Date: 10.AUG.2012 21:28:44

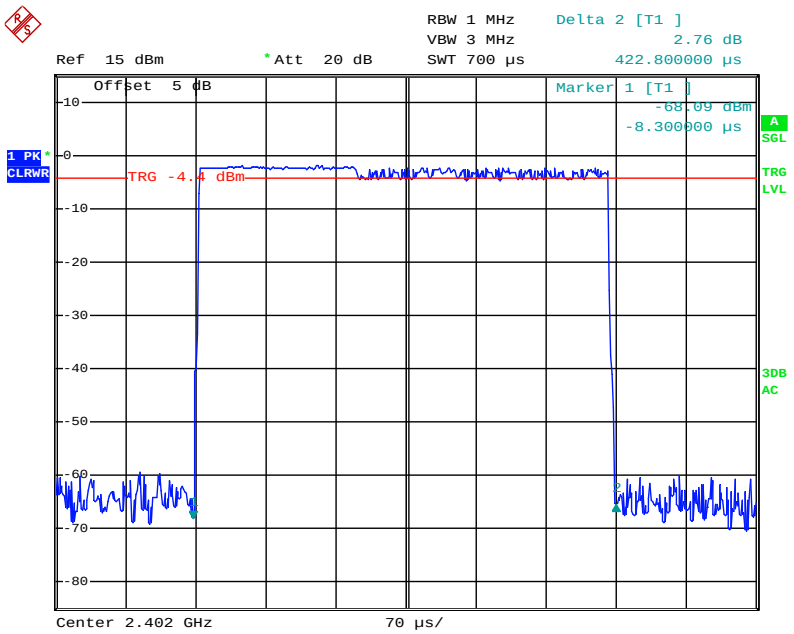
Pulse time, High Channel, DH5



Date: 10.AUG.2012 21:29:59

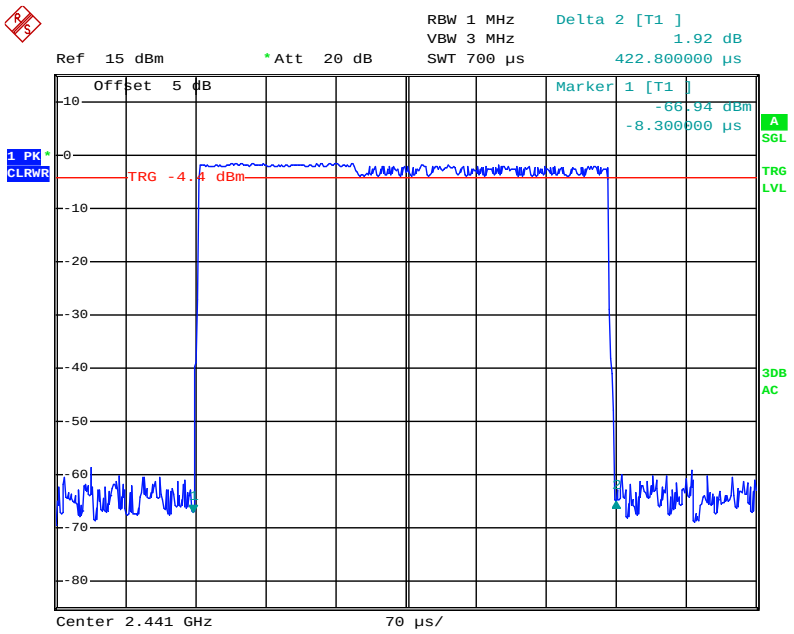
EDR (π/4-DQPSK):

Pulse time, Low Channel, DH1



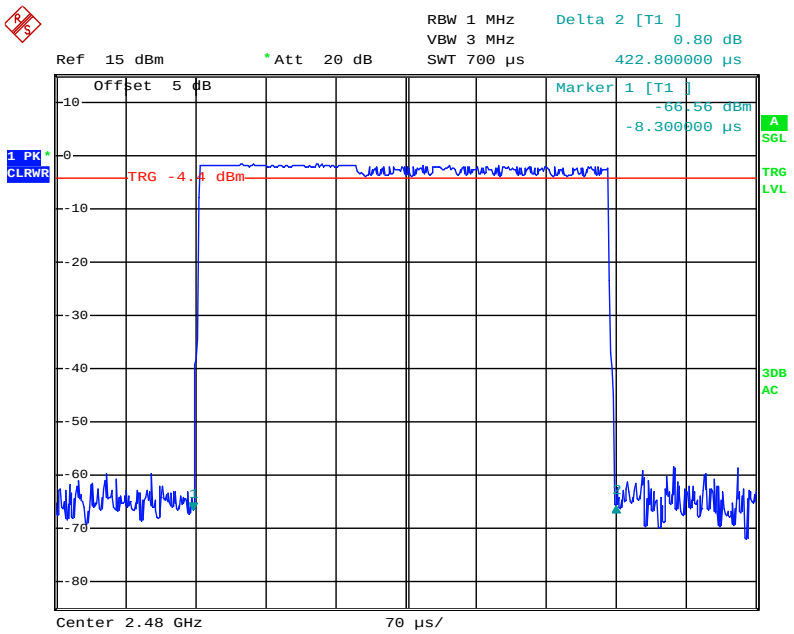
Date: 11.AUG.2012 14:06:42

Pulse time, Middle Channel, DH1



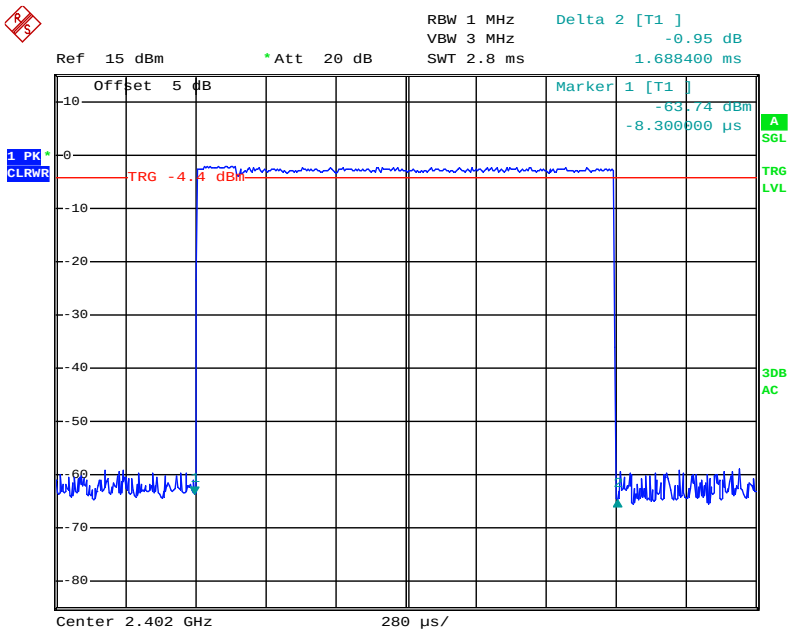
Date: 11.AUG.2012 14:09:57

Pulse time, High Channel, DH1



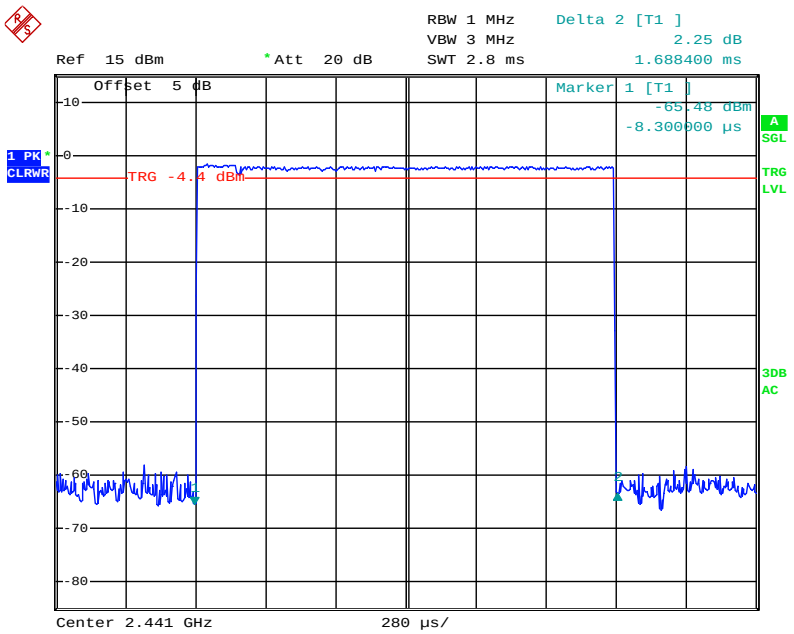
Date: 11.AUG.2012 14:11:03

Pulse time, Low Channel, DH3



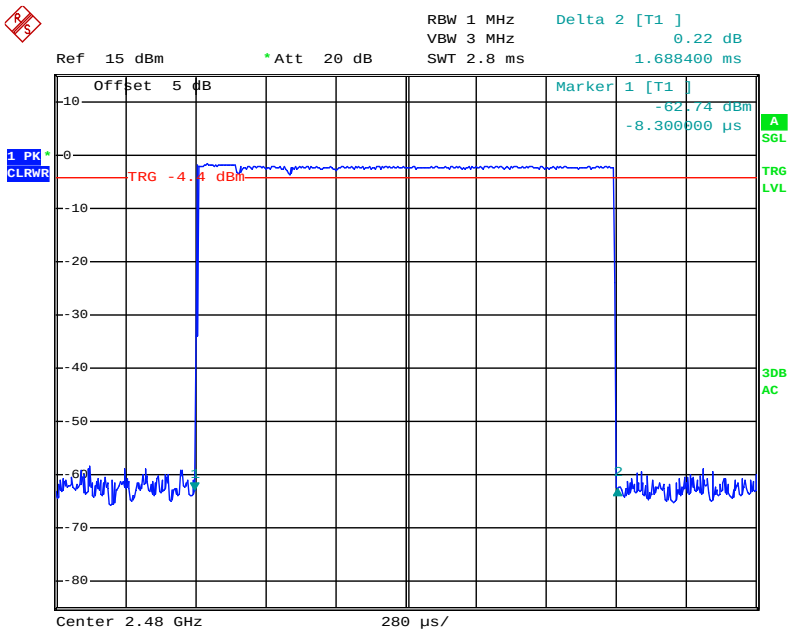
Date: 11.AUG.2012 14:14:35

Pulse time, Middle Channel, DH3



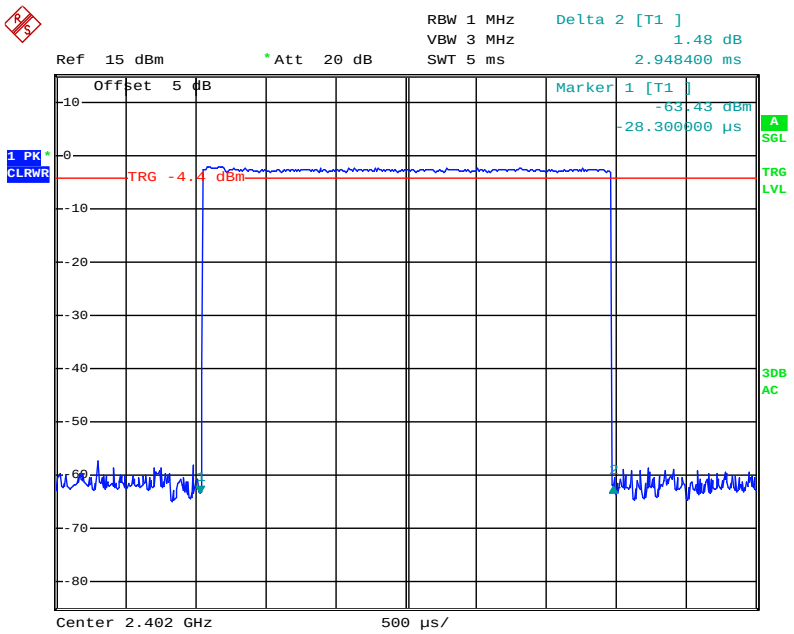
Date: 11.AUG.2012 14:14:08

Pulse time, High Channel, DH3



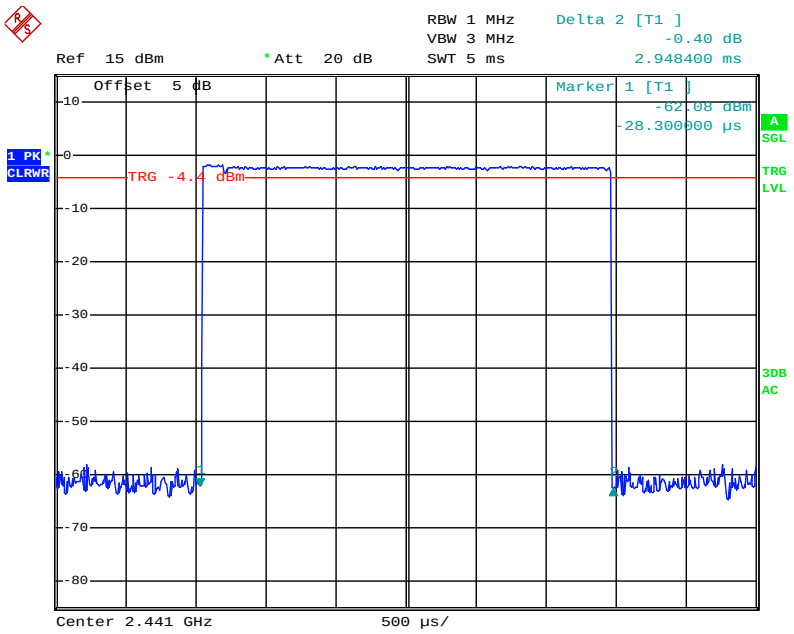
Date: 11.AUG.2012 14:13:07

Pulse time, Low Channel, DH5



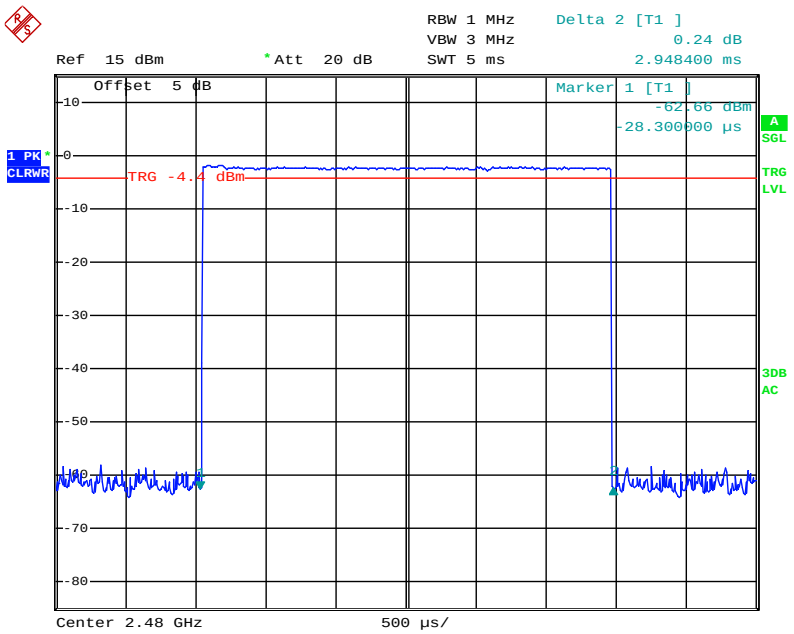
Date: 11.AUG.2012 14:19:13

Pulse time, Middle Channel, DH5



Date: 11.AUG.2012 14:21:44

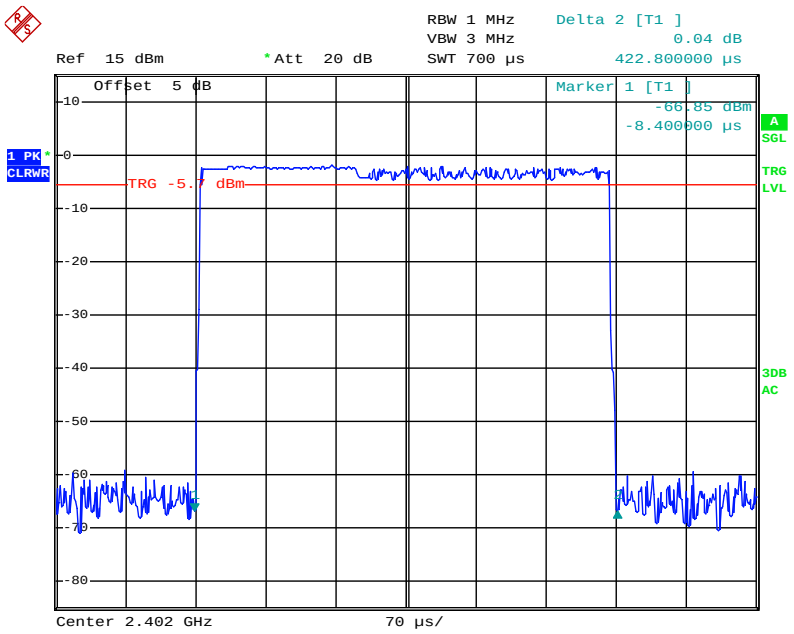
Pulse time, High Channel, DH5



Date: 11.AUG.2012 14:22:18

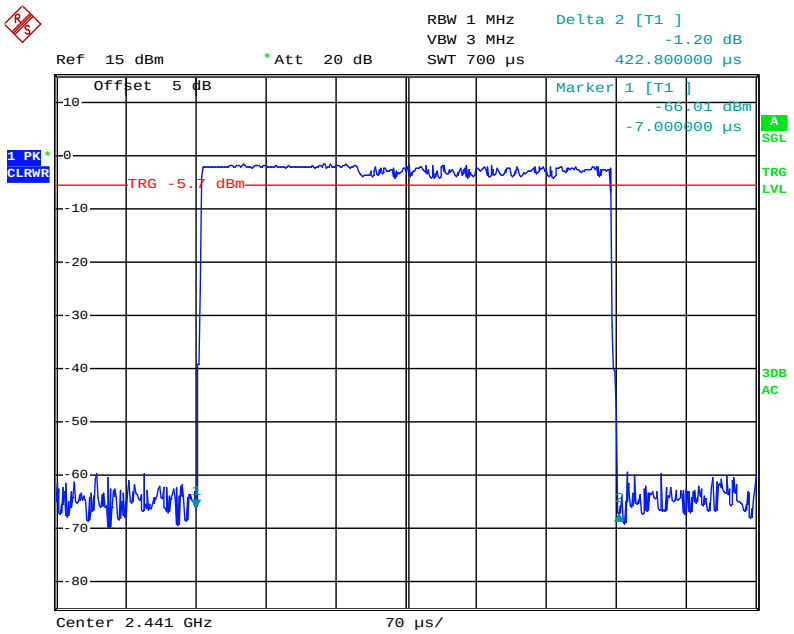
EDR (8DPSK):

Pulse time, Low Channel, DH1



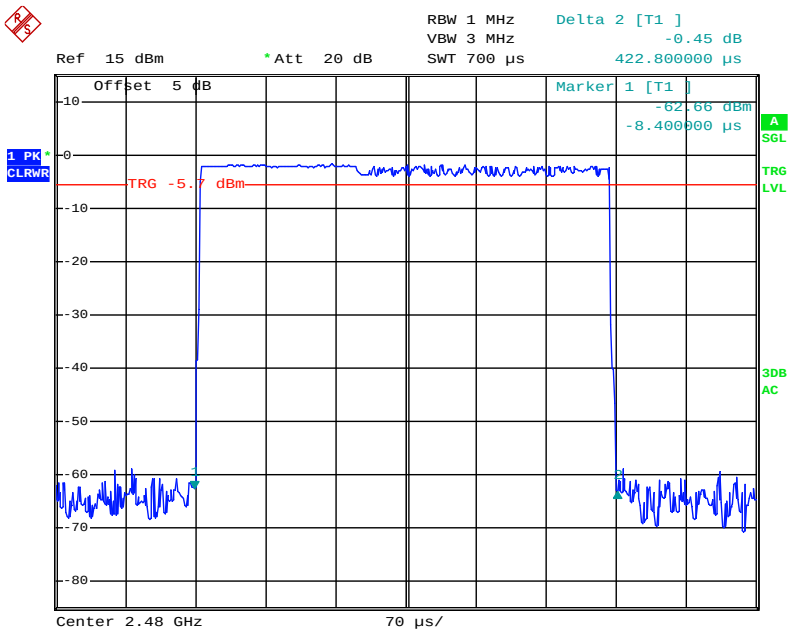
Date: 11.AUG.2012 15:42:44

Pulse time, Middle Channel, DH1



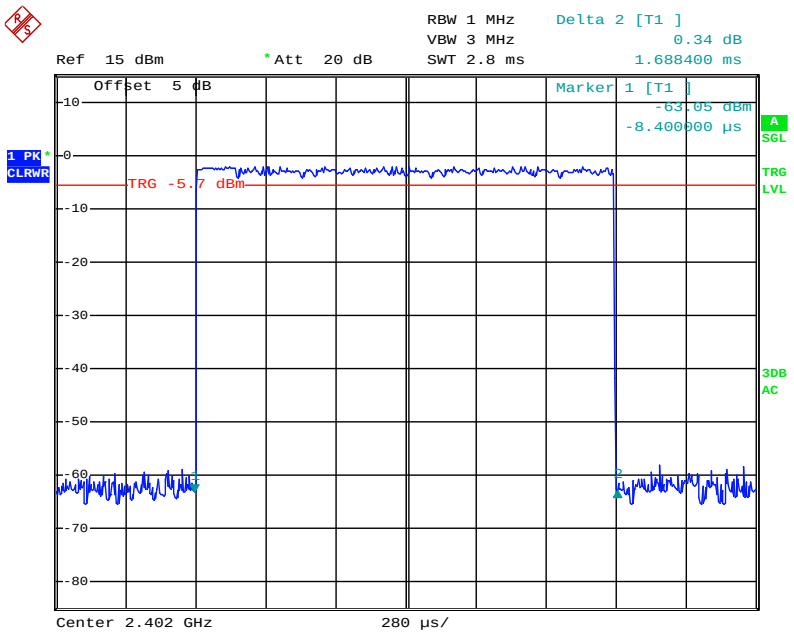
Date: 11.AUG.2012 15:43:11

Pulse time, High Channel, DH1



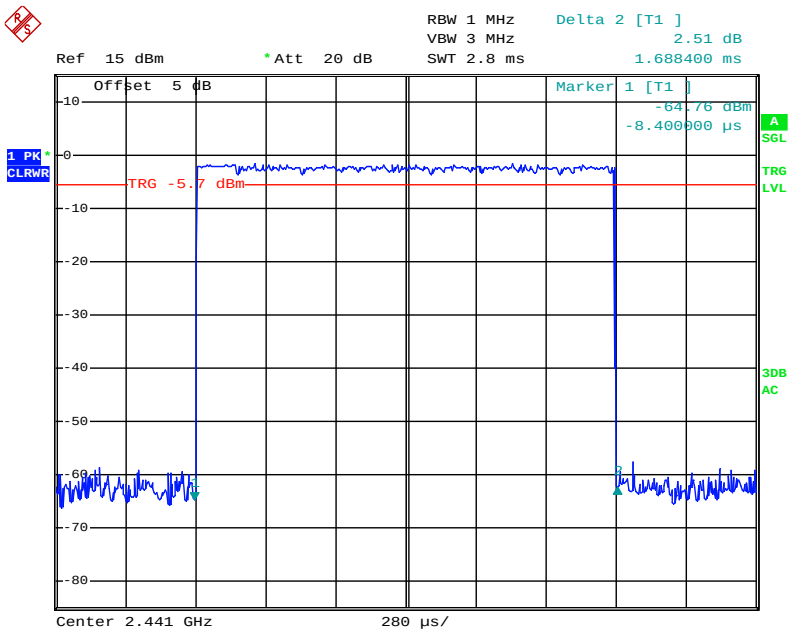
Date: 11.AUG.2012 15:46:50

Pulse time, Low Channel, DH3



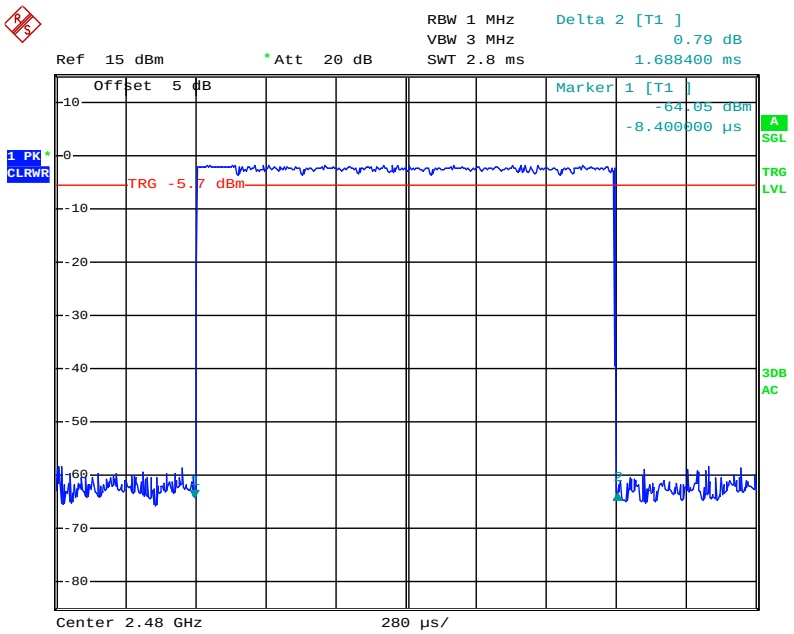
Date: 11.AUG.2012 15:49:46

Pulse time, Middle Channel, DH3



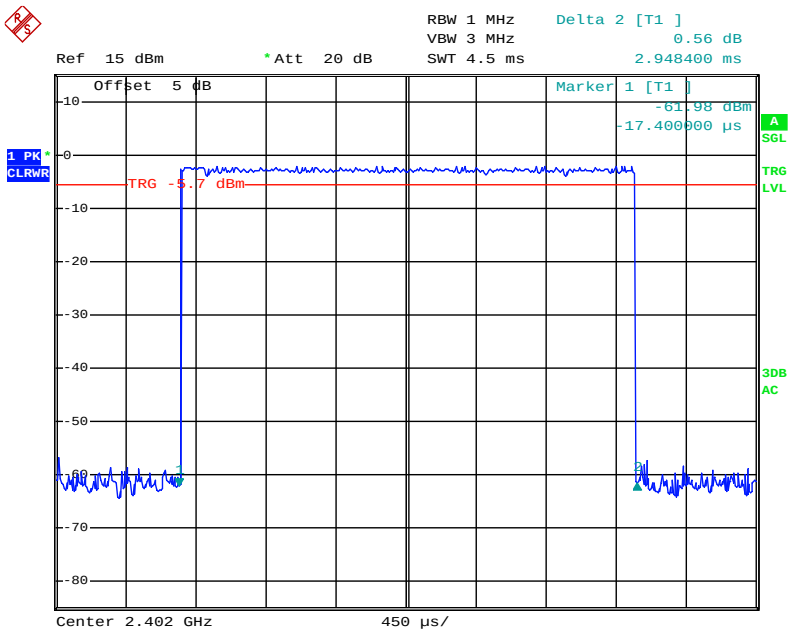
Date: 11.AUG.2012 15:49:02

Pulse time, High Channel, DH3



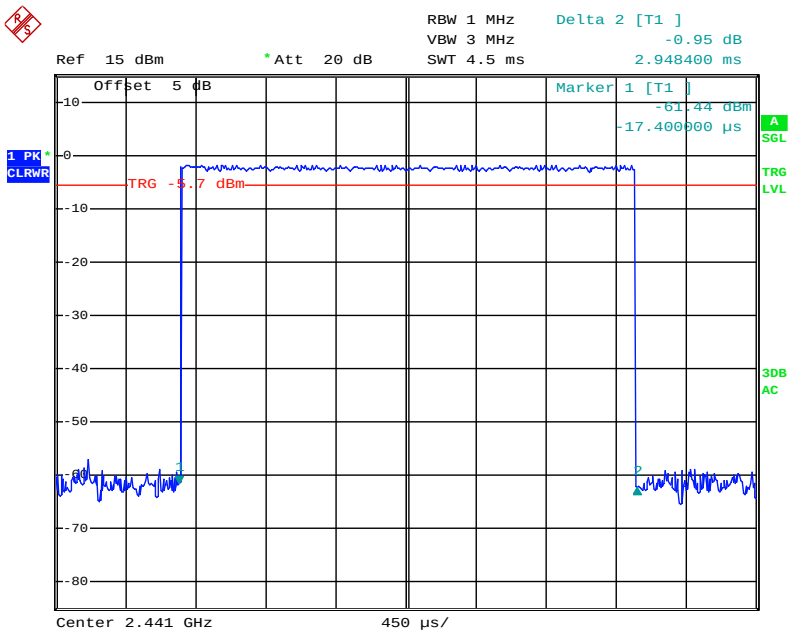
Date: 11.AUG.2012 15:48:26

Pulse time, Low Channel, DH5



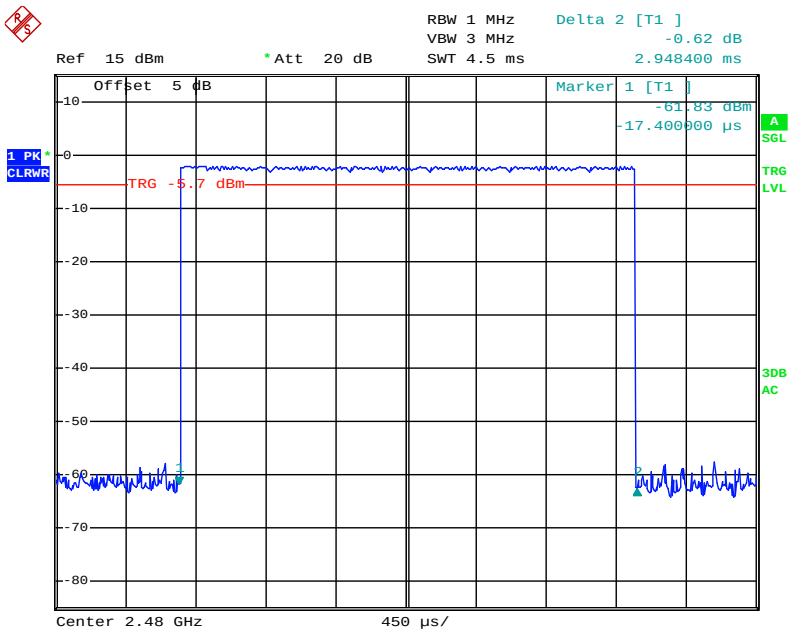
Date: 11.AUG.2012 15:50:53

Pulse time, Middle Channel, DH5



Date: 11.AUG.2012 15:51:55

Pulse time, High Channel, DH5



Date: 11.AUG.2012 15:52:30

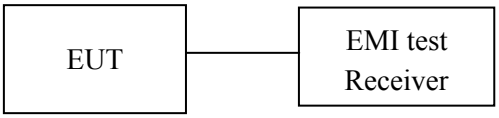
FCC §15.247(b) (1) - PEAK OUTPUT POWER MEASUREMENT

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 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	EMI Test Receiver	ESCI	101122	2011-11-17	2012-11-16

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

Test Data

Environmental Conditions

Temperature:	25℃
Relative Humidity:	56 %
ATM Pressure:	100 kPa

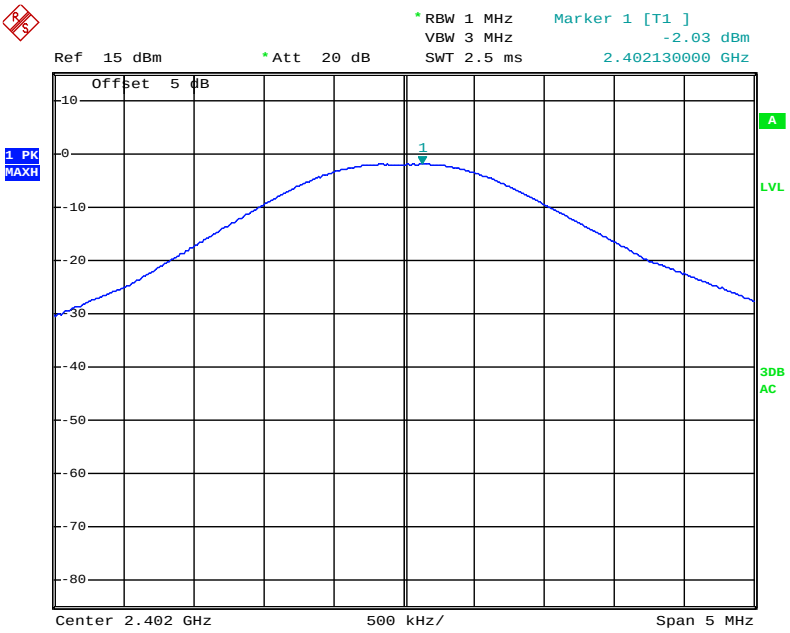
The testing was performed by Gardon Zhang on 2012-08-10 and 2012-08-11.

Test Mode: Transmitting

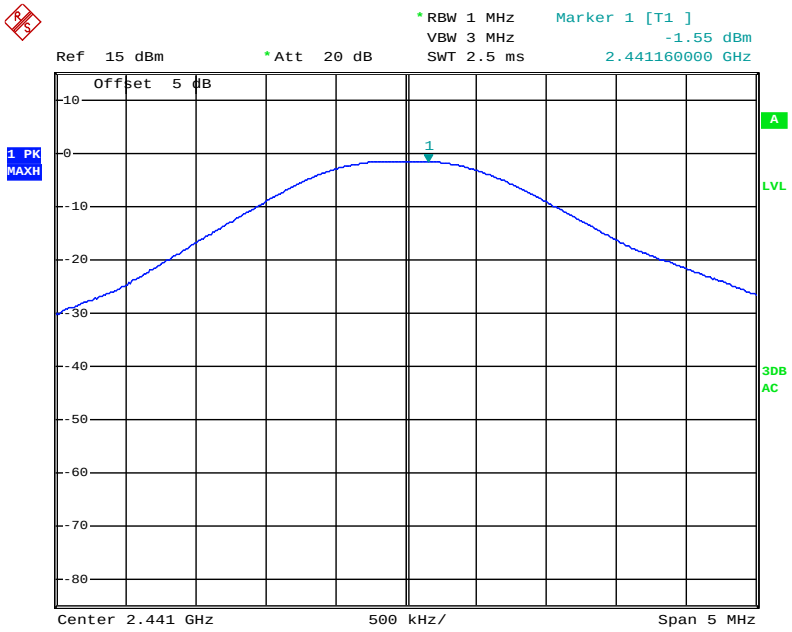
Test Result: Compliance. Please refer to following tables and plots

Mode	Channel	Frequency (MHz)	Conducted Output Power		Limit (mW)
			(dBm)	(mW)	
BDR (GFSK)	Low	2402	4.29	2.685	1000
	Middle	2441	4.35	2.723	1000
	High	2480	3.98	2.500	1000
EDR (π/4-DQPSK)	Low	2402	3.64	2.312	1000
	Middle	2441	3.72	2.355	1000
	High	2480	3.66	2.323	1000
EDR (8DPSK)	Low	2402	3.78	2.388	1000
	Middle	2441	3.83	2.415	1000
	High	2480	3.66	2.323	1000

BDR (GFSK): Low Channel

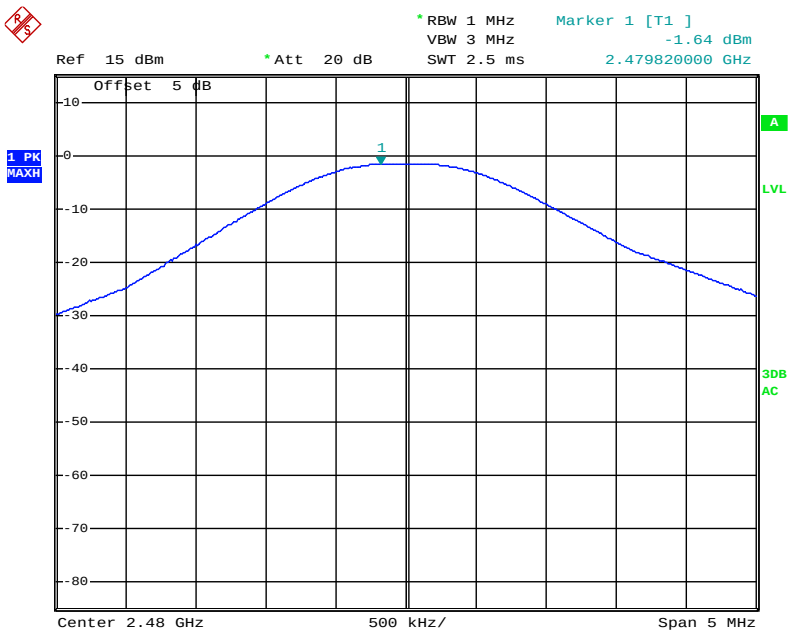


BDR (GFSK): Middle Channel



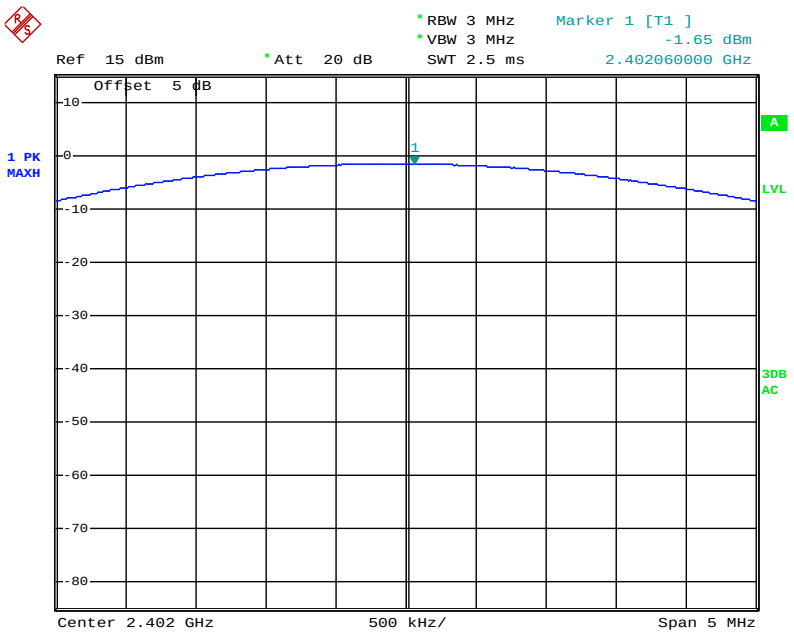
Date: 10.AUG.2012 21:06:55

BDR (GFSK): High Chanel



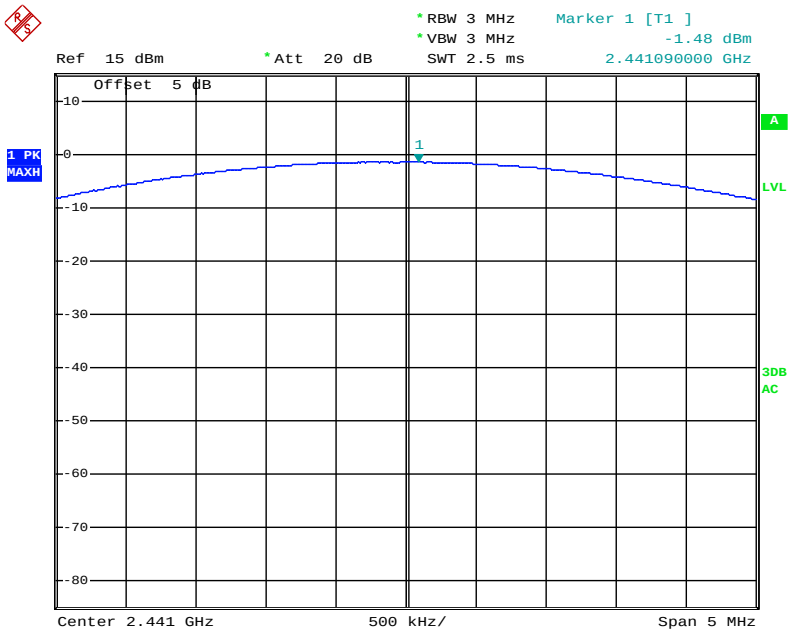
Date: 10.AUG.2012 21:07:53

EDR(π/4-DQPSK): Low Channel



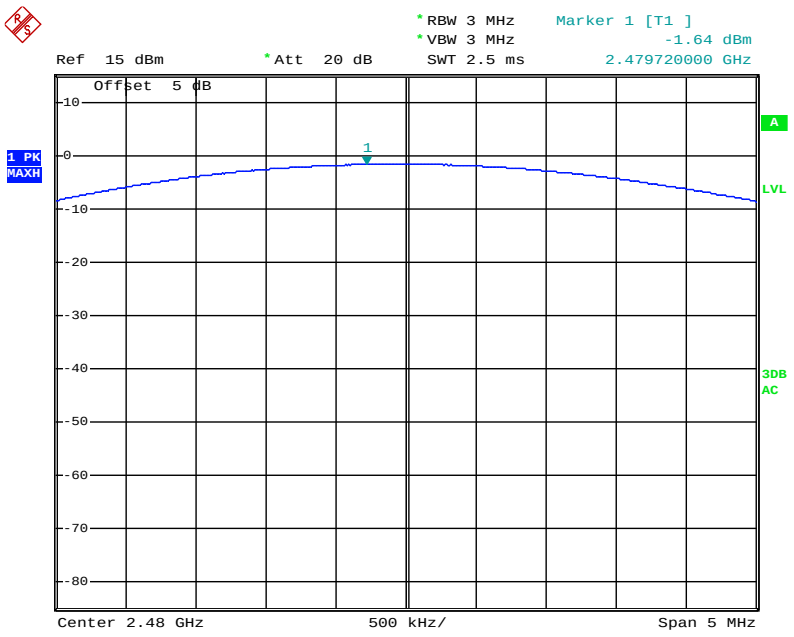
Date: 11.AUG.2012 13:25:57

EDR(π/4-DQPSK): Middle Channel



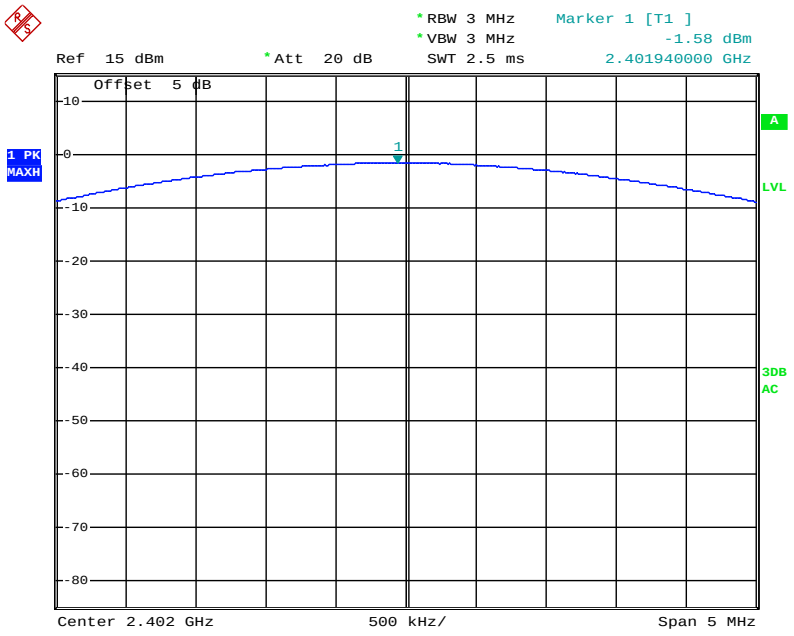
Date: 11.AUG.2012 13:31:43

EDR(π/4-DQPSK): High Chanel



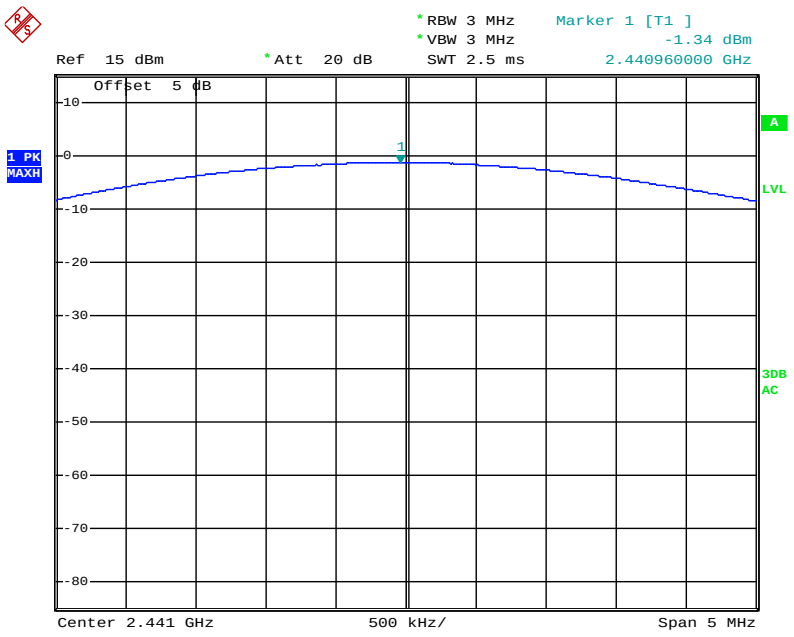
Date: 11.AUG.2012 13:32:58

EDR(8DPSK): Low Channel



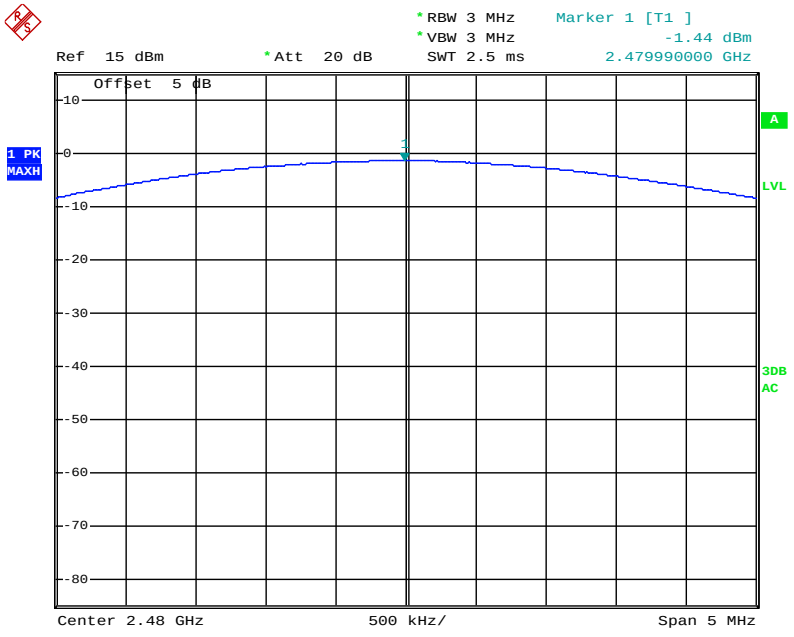
Date: 11.AUG.2012 15:01:21

EDR(8DPSK): Middle Channel



Date: 11.AUG.2012 15:04:37

EDR(8DPSK): High Chanel



Date: 11.AUG.2012 15:05:33

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. 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.
4. 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	EMI Test Receiver	ESCI	101122	2011-11-17	2012-11-16

*** 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℃
Relative Humidity:	56 %
ATM Pressure:	100 kPa

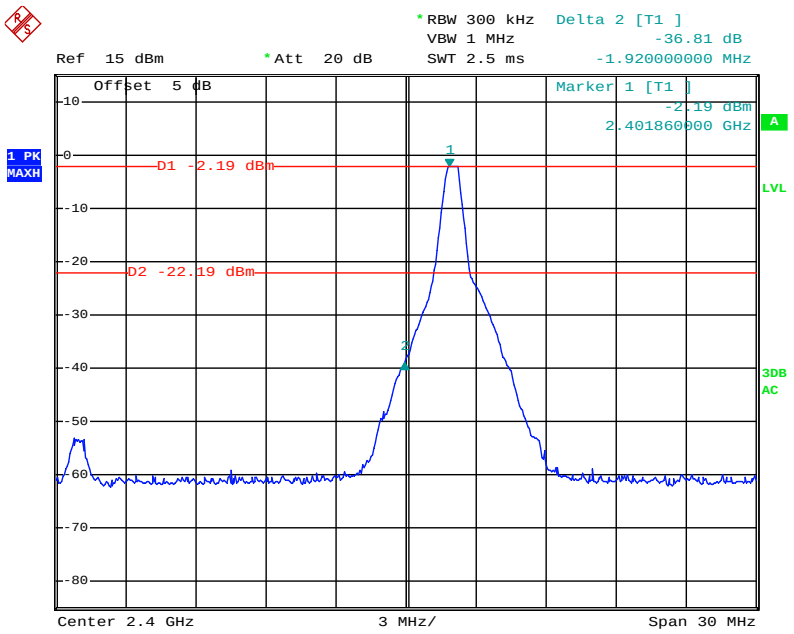
The testing was performed by Gardon Zhang on 2012-08-11.

Test Mode: Transmitting

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

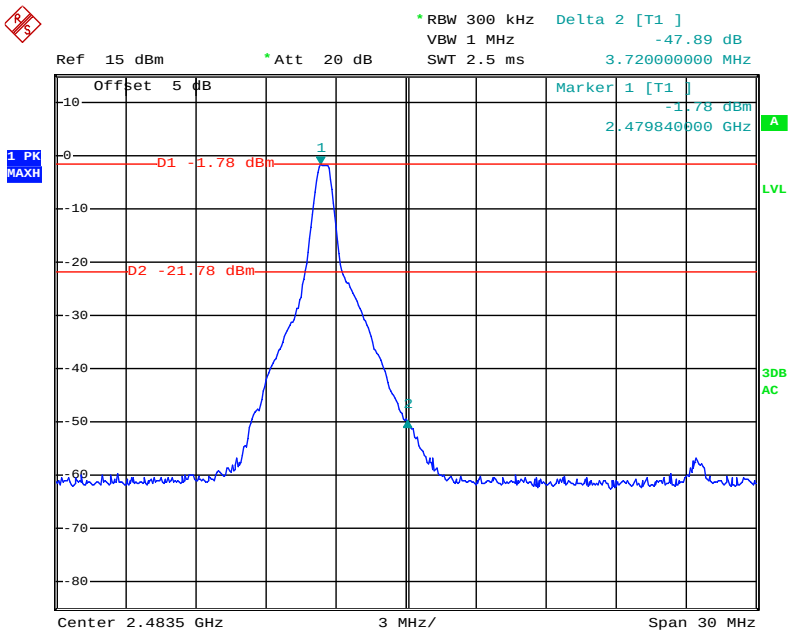
Mode	Band	Delta Peak to Band Emission (dBc)	Limit (dBc)
BDR (GFSK)	Left band	36.81	＞20
	Right band	47.89	＞20
EDR (π/4-DQPSK)	Left band	42.60	＞20
	Right band	53.29	＞20
EDR (8DPSK)	Left band	43.44	＞20
	Right band	52.06	＞20

BDR (GFSK): Band Edge-Left Side



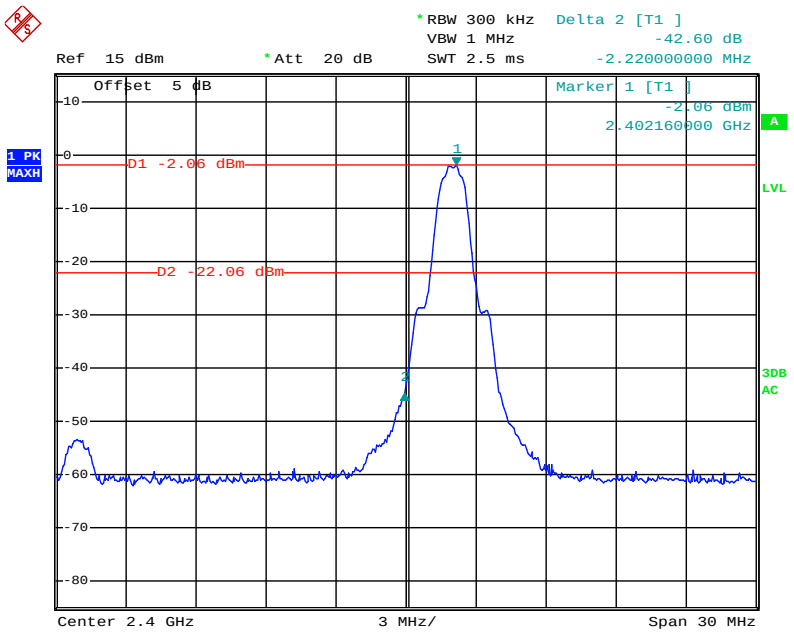
Date: 11.AUG.2012 15:37:10

BDR (GFSK): Band Edge-Right Side



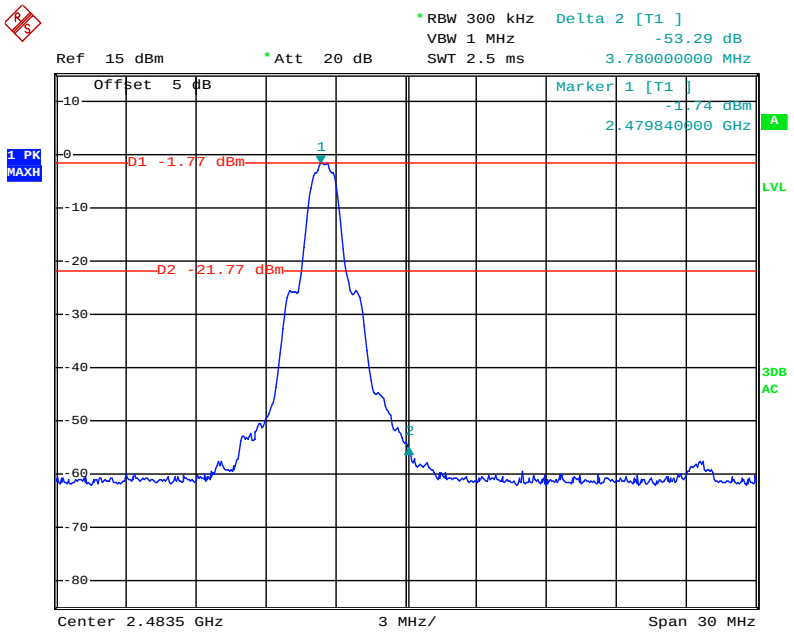
Date: 11.AUG.2012 15:39:14

EDR (π/4-DQPSK): Band Edge-Left Side



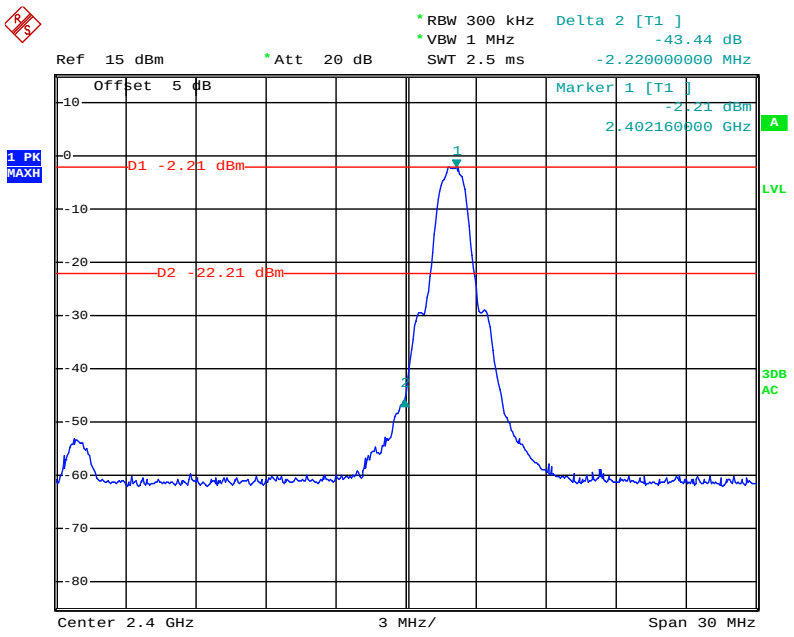
Date: 11.AUG.2012 13:47:35

EDR (π/4-DQPSK): Band Edge-Right Side



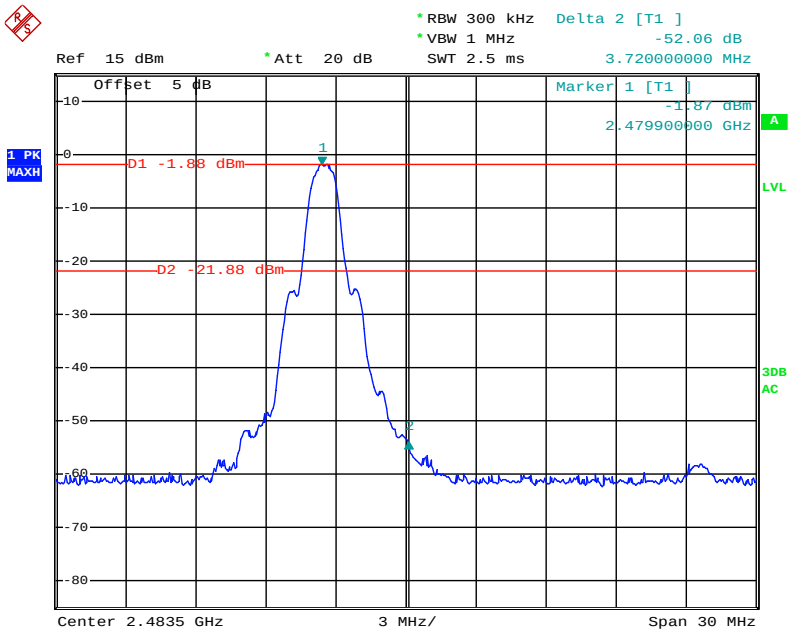
Date: 11.AUG.2012 13:41:26

EDR (8DPSK): Band Edge-Left Side



Date: 11.AUG.2012 15:11:00

EDR (8DPSK): Band Edge-Right Side



Date: 11.AUG.2012 15:13:08

PRODUCT SIMILARITY DECLARATION LETTER

Product Similarity Declaration

To Whom It May Concern,

We WECCAN INDUSTRIAL LIMITED, Hereby declare that our iOS and Android Bluetooth Car Model Number iS600, iS605, iS610, iS615, iS620, iS625, iS630, iS635, iS655, iS660, iS665, iS670, iS675, iS680, iS685, iS690, iS695 Electrically identical with the Model Number iS650 that was certified by BACL. The differences between iS600, iS605, iS610, iS615, iS620, iS625, iS630, iS635, iS655, iS660, iS665, iS670, iS675, iS680, iS685, iS690, iS695 and iS650 are their Model Number. Due to marketing purposes.

Please contact me if you have any question.

Signature:

For and on behalf of
WECCAN INDUSTRIAL LIMITED
威尼康實業有限公司

Amanda Gu

Authorized Signature(s)

Vice President

2012-08-14

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