LABCODE: 500069-0

FCC PART 15.247

TEST REPORT

For

Binatone Electronics International Ltd.

Floor 23A, 9 Des Voeux Road West, Sheung Wan, Hong Kong, China

FCC ID: VLJ-THEBRICK

Report Type:	Product Type:
Original Report	GSM phone

Test Engineer:	Leon Chen
Report Number:	R2DG130821008-00B
Report Date:	2013-09-24
Reviewed By:	Jerry Zhang EMC Manager
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Dongguan) No.69 Pulongcun, Puxinhu Industrial Zone, Tangxia, Dongguan, Guangdong, China Tel: +86-769-86858888 Fax: +86-769-86858891 www.baclcorp.com.cn

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Binatone Electronics International Ltd.*'s product, model number: *The Brick Power (FCC ID: VLJ-THEBRICK)* (the "EUT") in this report was a *GSM phone,* which was measured approximately: 5.0 cm (L) x 4.4cm (W) x 26.0 cm (H), rated input voltage: DC 3.7V from three kinds of lithium batteries (1000mA only for The Brick, 2000mA and 5200mA for The Brick Power) or DC 5V from adapter.

Adapter Information:
MODEL: A31-501000
INPUT: AC 100-240V, 50/60Hz, 0.2A
OUTPUT: DC 5.0V, 1000mA

Note: *the series product, model The Brick has better electromagnetic compatibility performance, the Brick hasn't the USB connector or power bank related components on PCBA, the Brick Power has the USB connector and power bank related components on PCB. We selected The Brick Power for fully testing, and the difference between them please refers to the attached declaration letter.*

** All measurement and test data in this report was gathered from production sample serial number: 130821008 (Assigned by BACL.Dongguan). The EUT was received on 2013-08-26.*

Objective

This report is prepared on behalf of *Binatone Electronics International Ltd.* in accordance with Part 2, Subpart J, Part 15, Subparts A, B and C of the Federal Communication Commissions rules

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

Related Submittal(s)/Grant(s)

FCC Part 15B JBP submissions with FCC ID: *VLJ-THEBRICK*
FCC Part 22H&24E PCT submissions with FCC ID: *VLJ-THEBRICK*.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2003, 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. (Dongguan). 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. (Dongguan) to collect test data is located on the No.69 Pulongcun, Puxinhu Industrial Zone, Tangxia, Dongguan, Guangdong, China

Test site at Bay Area Compliance Laboratories Corp. (Dongguan) has been fully described in reports submitted to the Federal Communications 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 February 02, 2012. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 273710. 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. (Dongguan) is an ISO/IEC 17025 accredited laboratory, and is accredited by National Voluntary Laboratory Accredited Program (Lab Code 500069-0).

The current scope of accreditations can be found at http://ts.nist.gov/standards/scopes/5000690.htm

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in an engineering mode, which was provided by manufacturer.

EUT Exercise Software

Software “BT 3.0” was used.

Equipment Modifications

No modification was made to the EUT.

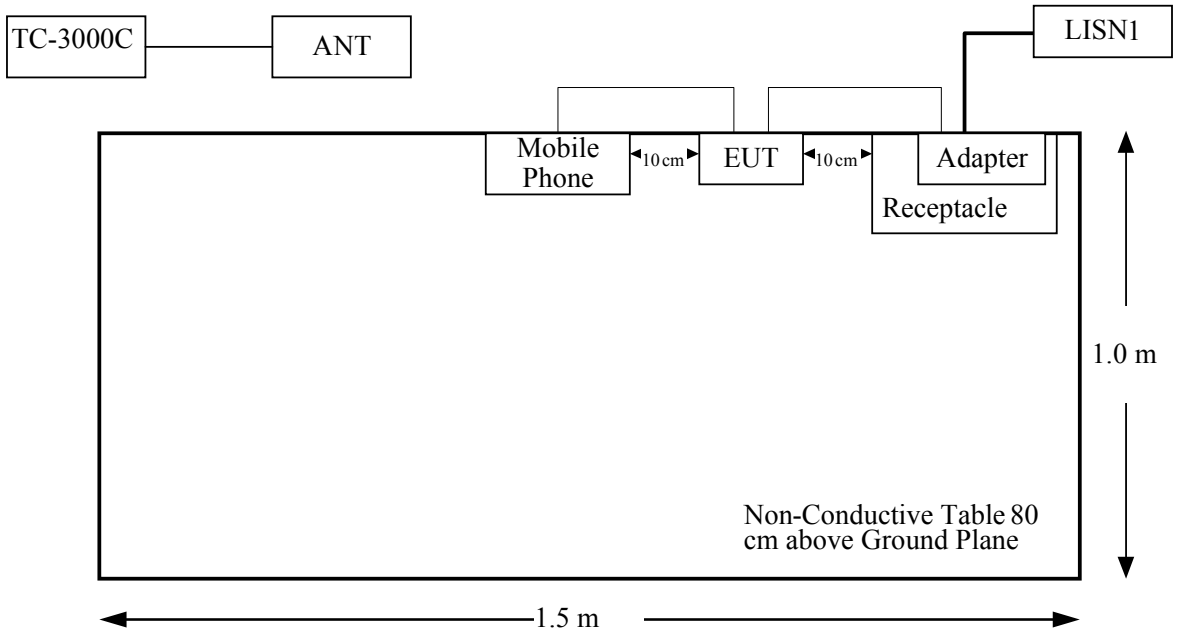
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Bea-fon	mobile phone	SL205	/
N/A	adapter	A31-501000	N/A

External Cable

Shielding Type	Ferrite Core	Length (m)	From Port	To
USB Cable	NO	1.23	Adapter	EUT
USB Cable	NO	1.23	mobile phone	EUT

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
FCC §15.247 (i) & §1.1310 & §2.1093	RF Exposure	Compliace
§15.203	Antenna Requirement	Compliance
§15.207 (a)	Conducted Emissions	Compliace
§15.205, §15.209, §15.247(d)	Radiated Emissions	Compliance
§15.247 (a)(1)	20 dB Bandwidth	Compliance
§15.247(a)(1)	Channel Separation Test	Compliance
§15.247(a)(1)(iii)	Time of Occupancy (Dwell Time)	Compliance
§15.247(a)(1)(iii)	Quantity of hopping channel Test	Compliance
§15.247(b)(1)	Peak Output Power Measurement	Compliance
§15.247(d)	Band Edges	Compliance

FCC §15.247 (i) & §1.1310 & §2.1093- RF EXPOSURE

Applicable Standard

FCC§15.247 (i), §1.1310 and §2.1093.

Test Result

Compliance, please refer to the SAR report: R1DG130821008-20A

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 two internal antennas, which were permanently attached to the EUT. One is GSM antenna, the maximum gain is -2.4dBi for GSM850MHz, and -2.5dBi for GSM1900MHz. The other is BT antenna, the maximum gain is -2dBi. Please refer to the internal photos.

Result: Compliance.

FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC§15.207

Measurement Uncertainty

Compliance or non- compliance with a disturbance limit shall be determined in the following manner：

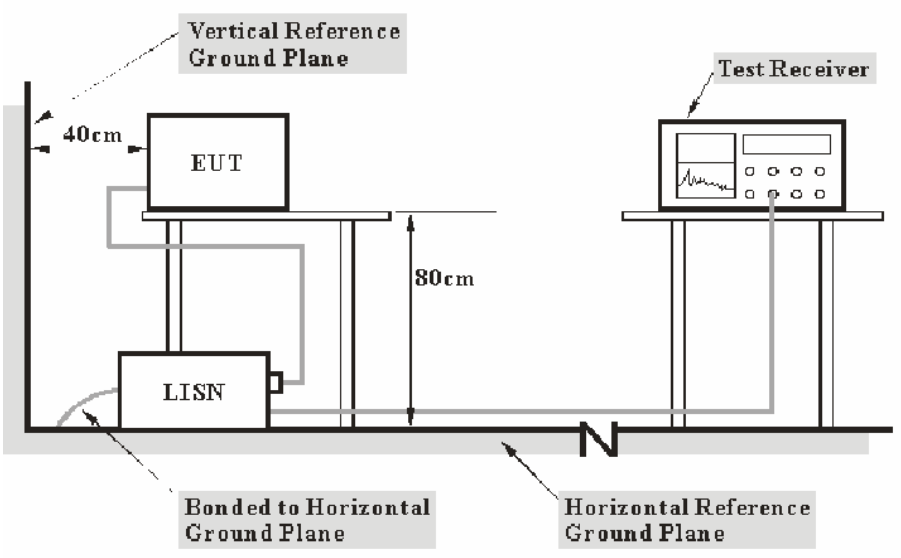
If U_{lab} is less than or equal to U_{cispr} of Table 1, then:
– compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
– non - compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.
If U_{lab} is greater than U_{cispr} of Table 1, then:
– compliance is deemed to occur if no measured disturbance level, increased by ($U_{lab} - U_{cispr}$), exceeds the disturbance limit;
– non - compliance is deemed to occur if any measured disturbance level, increased by ($U_{lab} - U_{cispr}$), exceeds the disturbance limit.

Based on CISPR 16-4-2: 2011, measurement uncertainty of conducted disturbance at mains port using AMN at Bay Area Compliance Laboratories Corp. (Dongguan) is 3.46 dB (150 kHz to 30 MHz).

Table 1 – Values of U_{cispr}

Measurement	U_{cispr}
Conducted disturbance at mains port using AMN (150 kHz to 30 MHz)	3.4 dB

EUT Setup



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

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

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 first LISN.

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

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

Corrected Amplitude & Margin Calculation

The basic equation is as follows:

$V_C = V_R + A_C + VDF$

Herein,
V_C: corrected voltage amplitude
V_R: reading voltage amplitude
A_c: attenuation caused by cable loss
VDF: voltage division factor of AMN or ISN

The "**Margin**" column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of 7dB means the emission is 7dB below the maximum 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
R&S	EMI TEST RECEIVER	ESCS 30	830245/006	2012-11-29	2013-11-28
R&S	L.I.S.N	ESH3-Z5	843331/015	2013-9-17	2014-9-16
R&S	L.I.S.N	ESH3-Z5	100113	2012-11-29	2013-11-28
BACL	Test Software	BACL-EMC	V1.0-2010	N/A	N/A

* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed in accordance to NVLAP requirements, 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 Part 15.207, with the worst margin reading of:

19.11 dB at **0.180 MHz** in the **Line** conducted mode

Test Data

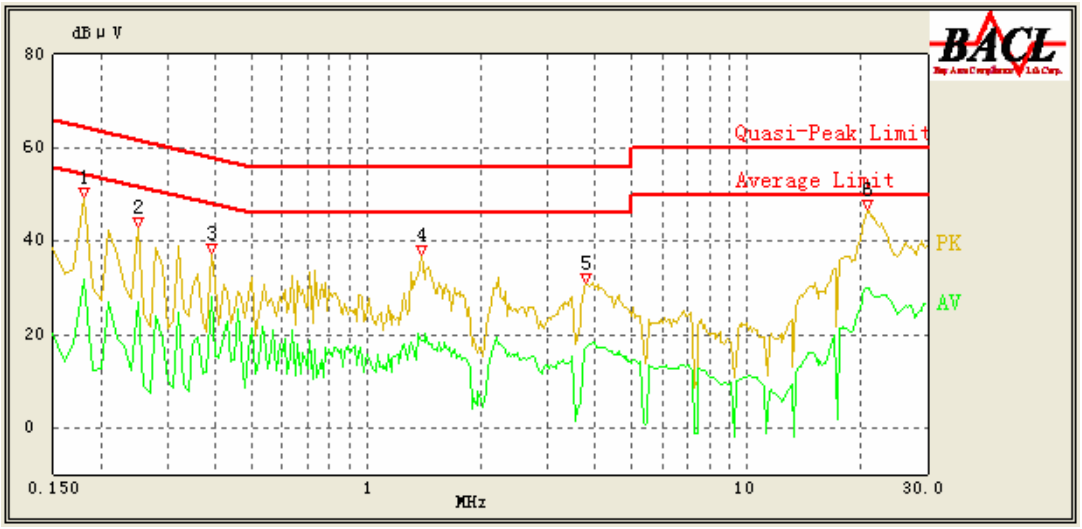
Environmental Conditions

Temperature:	27.4 °C
Relative Humidity:	53 %
ATM Pressure:	99.4 kPa

The testing was performed by Leon Chen on 2013-08-27.

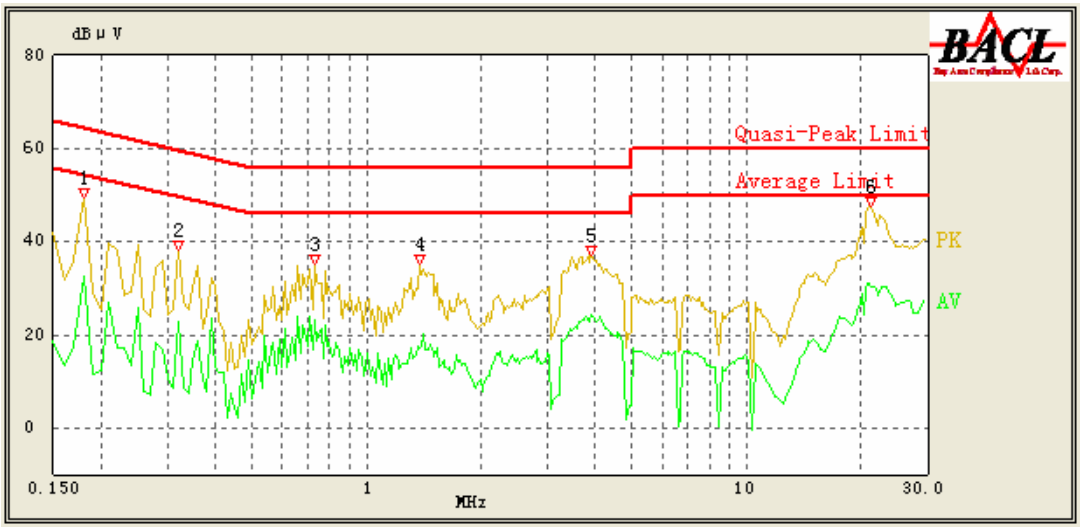
Test Mode: Transmitting

120 V, 60 Hz, Line:



Frequency (MHz)	Cord. Reading (dBµV)	Correction Factor (dB)	Limit (dBµV)	Margin (dB)	Detector (PK/AV/QP)
0.180	45.38	0.44	64.49	19.11	QP
0.180	31.88	0.44	54.49	22.61	AV
0.250	39.08	0.38	61.76	22.68	QP
0.250	27.12	0.38	51.76	24.64	AV
0.390	33.60	0.33	58.06	24.46	QP
0.390	28.15	0.33	48.06	19.91	AV
1.400	28.44	0.33	56.00	27.56	QP
1.390	18.65	0.33	46.00	27.35	AV
3.760	25.54	0.42	56.00	30.46	QP
3.760	17.15	0.42	46.00	28.85	AV
20.760	40.22	2.61	60.00	19.78	QP
20.860	29.87	2.60	50.00	20.13	AV

120 V, 60 Hz, Neutral:



Frequency (MHz)	Cord. Reading (dBµV)	Correction Factor (dB)	Limit (dBµV)	Margin (dB)	Detector (PK/AV/QP)
0.180	45.24	0.25	64.49	19.25	QP
0.180	32.38	0.25	54.49	22.11	AV
0.320	34.64	0.23	59.71	25.07	QP
0.320	22.89	0.23	49.71	26.82	AV
0.730	31.81	0.22	56.00	24.19	QP
0.730	23.05	0.22	46.00	22.95	AV
1.380	27.48	0.25	56.00	28.52	QP
1.380	17.03	0.25	46.00	28.97	AV
3.910	31.60	0.35	56.00	24.40	QP
3.930	23.87	0.35	46.00	22.13	AV
21.360	40.53	1.66	60.00	19.47	QP
21.330	30.49	1.65	50.00	19.51	AV

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

Applicable Standard

FCC §15.247 (d); §15.209; §15.205;

Measurement Uncertainty

Compliance or non- compliance with a disturbance limit shall be determined in the following manner：

If U_{lab} is less than or equal to U_{cispr} of Table 1, then:
- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non - compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

If U_{lab} is greater than U_{cispr} of Table 1, then:
- compliance is deemed to occur if no measured disturbance level, increased by ($U_{lab} - U_{cispr}$), exceeds the disturbance limit;
- non - compliance is deemed to occur if any measured disturbance level, increased by ($U_{lab} - U_{cispr}$), exceeds the disturbance limit.

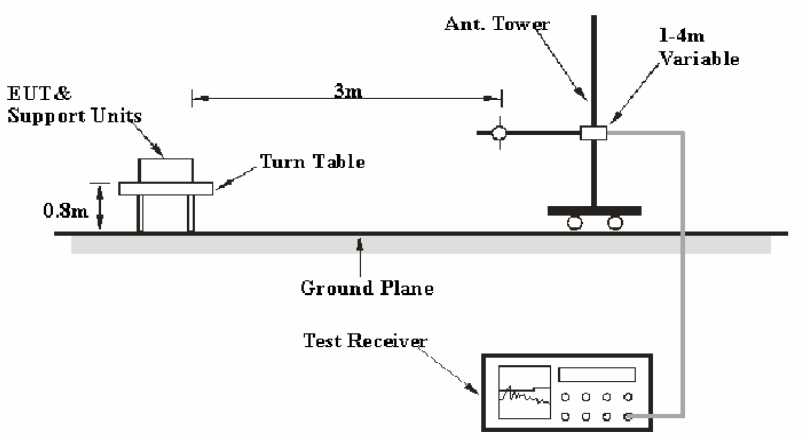
Based on CISPR 16-4-2: 2011, measurement uncertainty of radiated emission at a distance of 3m at Bay Area Compliance Laboratories Corp. (Dongguan) is:
30M~200MHz: 5.0 dB
200M~1GHz: 6.2 dB
1G~6GHz: 4.45 dB
6G~18GHz: 5.23 dB

Table 1 – Values of U_{cispr}

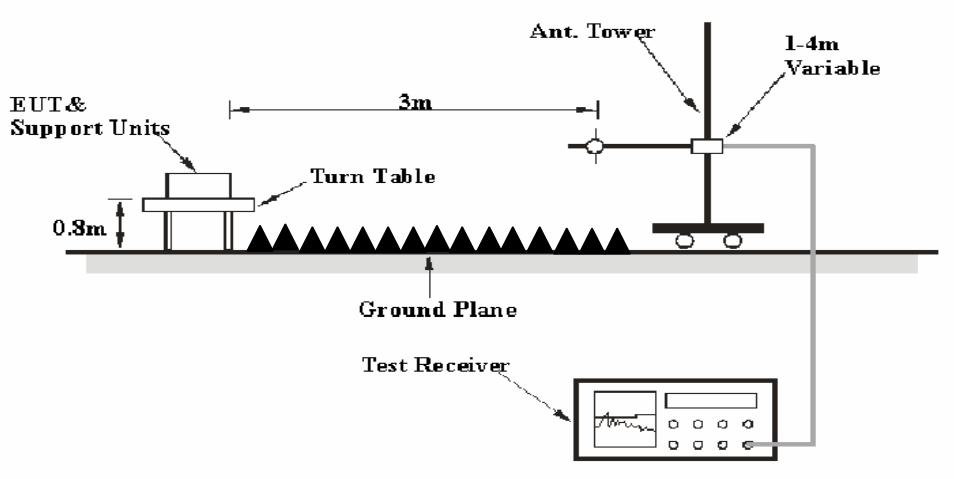
Measurement	U_{cispr}
Radiated disturbance (electric field strength at an OATS or in a SAC) (30 MHz to 1000 MHz)	6.3 dB
Radiated disturbance (electric field strength in a FAR) (1 GHz to 6 GHz)	5.2 dB
Radiated disturbance (electric field strength in a FAR) (6 GHz to 18 GHz)	5.5 dB

EUT Setup

Below 1GHz:



Above 1GHz:



The radiated emission tests were performed in the 3 meters test site, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC 15.209, and FCC 15.247 limits.

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

The spacing between the peripherals was 10 cm.

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
30MHz – 1000 MHz	120 kHz	300 kHz	120kHz	QP
Above 1 GHz	1MHz	3 MHz	/	PK
	1MHz	10 Hz	/	Ave.

Test Procedure

During the radiated emissions, the EUT was connected to the AC floor outlet.#

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

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

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	EMI TEST RECEIVER	ESCI	100224	2013-5-6	2014-5-5
Sunol Sciences	Antenna	JB3	A060611-1	2011-9-6	2014-9-5
HP	HP AMPLIFIER	8447E	2434A02181	N/A	N/A
R&S	Spectrum analyzer	FSEM 30	849016/001	2012-12-7	2013-12-6
ETS LINDGREN	horn antenna	3115	000 527 35	2012-9-6	2015-9-5
Mini-Circuit	Amplifier	ZVA-213-S+	054201245	N/A	N/A
R&S	Spectrum analyzer	FSP 38	100478	2013-6-16	2014-6-15
Ducommun Technolagies	Horn antenna	ARH-4223-02	1007726-02-1304	2013-6-16	2014-6-15
Ducommun Technolagies	horn antenna	ARH-2823-02	1007726-01 1302	2013-6-16	2014-6-15
QUINSTAR	Amplifier	QLW-18045536-J0	15964001001	N/A	N/A

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

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 Results Summary

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

5.17 dB at **2483.5 MHz** in the **Vertical** polarization of BDR Mode (GFSK)

Test Data

Environmental Conditions

Temperature:	23.8 °C
Relative Humidity:	53 %
ATM Pressure:	100 kPa

The testing was performed by Leon Chen on 2013-08-28.

Mode: Transmitting

BDR Mode (GFSK):

Frequency	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	FCC 15.247	
(MHz)	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)				Limit (dBμV/m)	Margin (dB)
Low Channel: 2402(MHz)									
2402	89.81	PK	H	25.65	4.42	27.13	92.75	N/A	N/A
2402	76.11	AV	H	25.65	4.42	27.13	79.05	N/A	N/A
2402	92.37	PK	V	25.65	4.42	27.13	95.31	N/A	N/A
2402	77.79	AV	V	25.65	4.42	27.13	80.73	N/A	N/A
2390	56.35	PK	V	25.61	4.39	27.13	59.22	74.00	14.78
2390	26.21	AV	V	25.61	4.39	27.13	29.08	54.00	24.92
4804	38.88	PK	V	30.59	5.98	27.26	48.19	74.00	25.81
4804	27.67	AV	V	30.59	5.98	27.26	36.98	54.00	17.02
7206	35.21	PK	V	34.09	7.45	26.30	50.45	74.00	23.55
7206	18.54	AV	V	34.09	7.45	26.30	33.78	54.00	20.22
9608	33.15	PK	V	35.96	8.80	26.22	51.69	74.00	22.31
9608	17.68	AV	V	35.96	8.80	26.22	36.22	54.00	17.78
1232.36	36.52	PK	H	22.90	2.83	27.24	35.01	74.00	38.99
1232.36	24.68	AV	H	22.90	2.83	27.24	23.17	54.00	30.83
425.62	36.78	QP	H	16.72	2.49	21.83	34.16	46.00	11.84
Middle Channel: 2441(MHz)									
2441	89.48	PK	H	25.75	4.40	27.18	92.45	N/A	N/A
2441	75.52	AV	H	25.75	4.40	27.18	78.49	N/A	N/A
2441	91.08	PK	V	25.75	4.40	27.18	94.05	N/A	N/A
2441	77.58	AV	V	25.75	4.40	27.18	80.55	N/A	N/A
4882	36.24	PK	V	30.79	6.08	27.26	45.85	74.00	28.15
4882	25.53	AV	V	30.79	6.08	27.26	35.14	54.00	18.86
7323	35.24	PK	V	34.38	7.51	26.53	50.60	74.00	23.40
7323	18.67	AV	V	34.38	7.51	26.53	34.03	54.00	19.97
9764	33.54	PK	V	36.33	8.83	25.62	53.08	74.00	20.92
9764	18.24	AV	V	36.33	8.83	25.62	37.78	54.00	16.22
1236.26	34.26	PK	H	22.91	2.83	27.23	32.77	74.00	41.23
1236.26	23.58	AV	H	22.91	2.83	27.23	22.09	54.00	31.91
1585.31	35.21	PK	V	23.77	3.23	26.91	35.30	74.00	38.70
1585.31	23.98	AV	V	23.77	3.23	26.91	24.07	54.00	29.93
255.58	36.58	QP	H	12.24	1.92	21.49	29.25	46.00	16.75
High Channel: 2480(MHz)									
2480	90.72	PK	H	25.85	4.48	27.22	93.83	N/A	N/A
2480	76.68	AV	H	25.85	4.48	27.22	79.79	N/A	N/A
2480	92.75	PK	V	25.85	4.48	27.22	95.86	N/A	N/A
2480	78.93	AV	V	25.85	4.48	27.22	82.04	N/A	N/A
2483.5	65.71	PK	V	25.86	4.49	27.23	68.83	74.00	5.17
2483.5	37.68	AV	V	25.86	4.49	27.23	40.80	54.00	13.20
4960	41.96	PK	V	31.00	5.90	27.27	51.59	74.00	22.41
4960	31.17	AV	V	31.00	5.90	27.27	40.80	54.00	13.20
7440	35.23	PK	V	34.66	7.58	26.56	50.91	74.00	23.09
7440	18.45	AV	V	34.66	7.58	26.56	34.13	54.00	19.87
9920	33.56	PK	V	36.71	8.87	25.50	53.64	74.00	20.36
9920	18.14	AV	V	36.71	8.87	25.50	38.22	54.00	15.78
1365.26	35.24	PK	H	23.25	3.05	27.16	34.38	74.00	39.62
1365.26	23.69	AV	H	23.25	3.05	27.16	22.83	54.00	31.17
345.62	36.8	QP	H	15.00	2.22	21.63	32.39	46.00	13.61

EDR Mode (π/4-DQPSK):

Frequency	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	FCC 15.247	
(MHz)	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)				Limit (dBμV/m)	Margin (dB)
Low Channel: 2402(MHz)									
2402	90.26	PK	H	25.65	4.42	27.13	93.20	N/A	N/A
2402	75.23	AV	H	25.65	4.42	27.13	78.17	N/A	N/A
2402	92.86	PK	V	25.65	4.42	27.13	95.80	N/A	N/A
2402	76.61	AV	V	25.65	4.42	27.13	79.55	N/A	N/A
2390	57.02	PK	V	25.61	4.39	27.13	59.89	74.00	14.11
2390	26.45	AV	V	25.61	4.39	27.13	29.32	54.00	24.68
4804	39.32	PK	V	30.59	5.98	27.26	48.63	74.00	25.37
4804	28.01	AV	V	30.59	5.98	27.26	37.32	54.00	16.68
7206	25.62	PK	V	34.09	7.45	26.30	40.86	74.00	33.14
7206	18.67	AV	V	34.09	7.45	26.30	33.91	54.00	20.09
9608	34.26	PK	V	35.96	8.80	26.22	52.80	74.00	21.20
9608	18.23	AV	V	35.96	8.80	26.22	36.77	54.00	17.23
1352.57	37.25	PK	H	23.22	3.03	27.16	36.34	74.00	37.66
1352.57	24.67	AV	H	23.22	3.03	27.16	23.76	54.00	30.24
325.87	35.87	QP	H	14.62	2.16	21.58	31.07	46.00	14.93
Middle Channel: 2441(MHz)									
2441	90.54	PK	H	25.75	4.40	27.18	93.51	N/A	N/A
2441	74.71	AV	H	25.75	4.40	27.18	77.68	N/A	N/A
2441	92.63	PK	V	25.75	4.40	27.18	95.60	N/A	N/A
2441	76.87	AV	V	25.75	4.40	27.18	79.84	N/A	N/A
4882	36.63	PK	V	30.79	6.08	27.26	46.24	74.00	27.76
4882	34.85	AV	V	30.79	6.08	27.26	44.46	54.00	9.54
7323	34.52	PK	V	34.38	7.51	26.53	49.88	74.00	24.12
7323	18.63	AV	V	34.38	7.51	26.53	33.99	54.00	20.01
9764	33.74	PK	V	36.33	8.83	25.62	53.28	74.00	20.72
9764	18.34	AV	V	36.33	8.83	25.62	37.88	54.00	16.12
1364.59	36.35	PK	H	23.25	3.05	27.16	35.49	74.00	38.51
1364.59	22.96	AV	H	23.25	3.05	27.16	22.10	54.00	31.90
1628.21	35.28	PK	V	23.86	3.33	26.91	35.56	74.00	38.44
1628.21	22.14	AV	V	23.86	3.33	26.91	22.42	54.00	31.58
365.58	36.48	QP	H	15.70	2.32	21.68	32.82	46.00	13.18
High Channel: 2480(MHz)									
2480	89.63	PK	H	25.85	4.48	27.22	92.74	N/A	N/A
2480	74.52	AV	H	25.85	4.48	27.22	77.63	N/A	N/A
2480	91.37	PK	V	25.85	4.48	27.22	94.48	N/A	N/A
2480	76.31	AV	V	25.85	4.48	27.22	79.42	N/A	N/A
2483.5	63.51	PK	V	25.86	4.49	27.23	66.63	74.00	7.37
2483.5	36.67	AV	V	25.86	4.49	27.23	39.79	54.00	14.21
4960	38.52	PK	V	31.00	5.90	27.27	48.15	74.00	25.85
4960	30.67	AV	V	31.00	5.90	27.27	40.30	54.00	13.70
7440	34.96	PK	V	34.66	7.58	26.56	50.64	74.00	23.36
7440	18.47	AV	V	34.66	7.58	26.56	34.15	54.00	19.85
9920	33.74	PK	V	36.71	8.87	25.50	53.82	74.00	20.18
9920	18.09	AV	V	36.71	8.87	25.50	38.17	54.00	15.83
1426.35	36.57	PK	H	23.41	3.13	27.10	36.01	74.00	37.99
1426.35	22.86	AV	H	23.41	3.13	27.10	22.30	54.00	31.70
384.25	36.4	QP	H	15.81	2.38	21.73	32.86	46.00	13.14

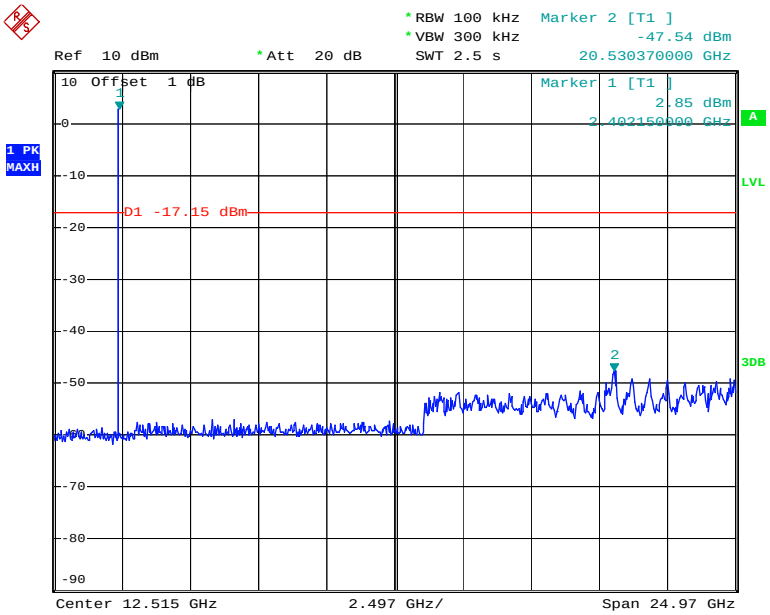
EDR Mode (8-DPSK):

Frequency	Receiver		Rx Antenna		Cable loss (dB)	Amplifier Gain (dB)	Corrected Amplitude (dBμV/m)	FCC 15.247	
(MHz)	Reading (dBμV)	Detector (PK/QP/AV)	Polar (H/V)	Factor (dB)				Limit (dBμV/m)	Margin (dB)
Low Channel: 2402(MHz)									
2402	87.95	PK	H	25.65	4.42	27.13	90.89	N/A	N/A
2402	73.68	AV	H	25.65	4.42	27.13	76.62	N/A	N/A
2402	90.67	PK	V	25.65	4.42	27.13	93.61	N/A	N/A
2402	75.46	AV	V	25.65	4.42	27.13	78.40	N/A	N/A
2390	55.74	PK	V	25.61	4.39	27.13	58.61	74.00	15.39
2390	26.87	AV	V	25.61	4.39	27.13	29.74	54.00	24.26
4804	40.23	PK	V	30.59	5.98	27.26	49.54	74.00	24.46
4804	27.81	AV	V	30.59	5.98	27.26	37.12	54.00	16.88
7206	34.28	PK	V	34.09	7.45	26.30	49.52	74.00	24.48
7206	18.34	AV	V	34.09	7.45	26.30	33.58	54.00	20.42
9608	33.61	PK	V	35.96	8.80	26.22	52.15	74.00	21.85
9608	18.52	AV	V	35.96	8.80	26.22	37.06	54.00	16.94
1426.58	35.47	PK	H	23.41	3.13	27.10	34.91	74.00	39.09
1426.58	20.42	AV	H	23.41	3.13	27.10	19.86	54.00	34.14
368.59	35.9	QP	H	15.68	2.33	21.69	32.22	46.00	13.78
Middle Channel: 2441(MHz)									
2441	90.62	PK	H	25.75	4.40	27.18	93.59	N/A	N/A
2441	74.63	AV	H	25.75	4.40	27.18	77.60	N/A	N/A
2441	92.63	PK	V	25.75	4.40	27.18	95.60	N/A	N/A
2441	76.37	AV	V	25.75	4.40	27.18	79.34	N/A	N/A
4882	35.28	PK	V	30.79	6.08	27.26	44.89	74.00	29.11
4882	23.41	AV	V	30.79	6.08	27.26	33.02	54.00	20.98
7323	34.68	PK	V	34.38	7.51	26.53	50.04	74.00	23.96
7323	18.42	AV	V	34.38	7.51	26.53	33.78	54.00	20.22
9764	33.52	PK	V	36.33	8.83	25.62	53.06	74.00	20.94
9764	18.36	AV	V	36.33	8.83	25.62	37.90	54.00	16.10
1325.84	36.57	PK	H	23.15	2.97	27.18	35.51	74.00	38.49
1325.84	22.42	AV	H	23.15	2.97	27.18	21.36	54.00	32.64
1627.42	35.24	PK	V	23.85	3.33	26.91	35.51	74.00	38.49
1627.42	20.22	AV	V	23.85	3.33	26.91	20.49	54.00	33.51
269.63	35.2	QP	H	13.67	1.99	21.50	29.36	46.00	16.64
High Channel: 2480(MHz)									
2480	89.32	PK	H	25.85	4.48	27.22	92.43	N/A	N/A
2480	74.28	AV	H	25.85	4.48	27.22	77.39	N/A	N/A
2480	91.57	PK	V	25.85	4.48	27.22	94.68	N/A	N/A
2480	76.59	AV	V	25.85	4.48	27.22	79.70	N/A	N/A
2483.5	63.24	PK	V	25.86	4.49	27.23	66.36	74.00	7.64
2483.5	36.87	AV	V	25.86	4.49	27.23	39.99	54.00	14.01
4960	39.63	PK	V	31.00	5.90	27.27	49.26	74.00	24.74
4960	28.87	AV	V	31.00	5.90	27.27	38.50	54.00	15.50
7440	35.22	PK	V	34.66	7.58	26.56	50.90	74.00	23.10
7440	18.47	AV	V	34.66	7.58	26.56	34.15	54.00	19.85
9920	33.36	PK	V	36.71	8.87	25.50	53.44	74.00	20.56
9920	18.09	AV	V	36.71	8.87	25.50	38.17	54.00	15.83
1425.84	34.68	PK	H	23.41	3.13	27.11	34.11	74.00	39.89
1425.84	21.14	AV	H	23.41	3.13	27.11	20.57	54.00	33.43
458.52	35.2	QP	H	17.47	2.60	21.92	33.35	46.00	12.65

Conducted Spurious Emissions at Antenna Port

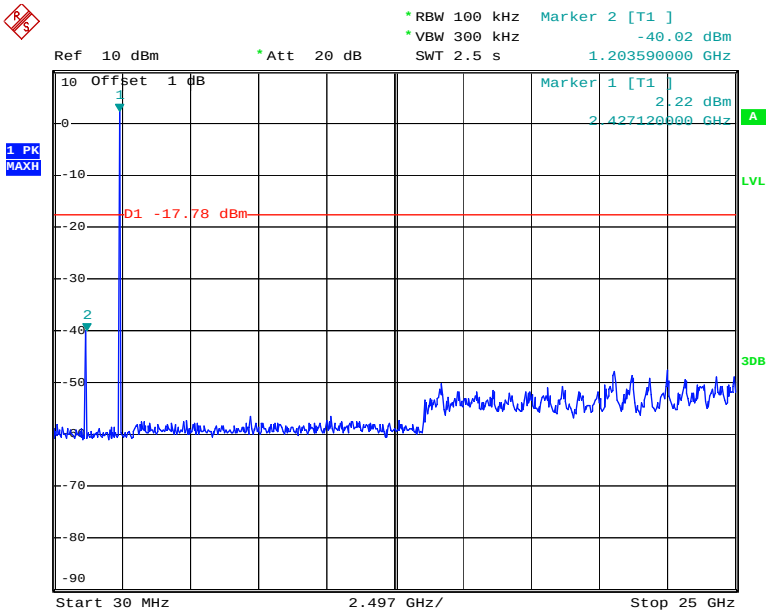
BDR Mode (GFSK):

Low Channel



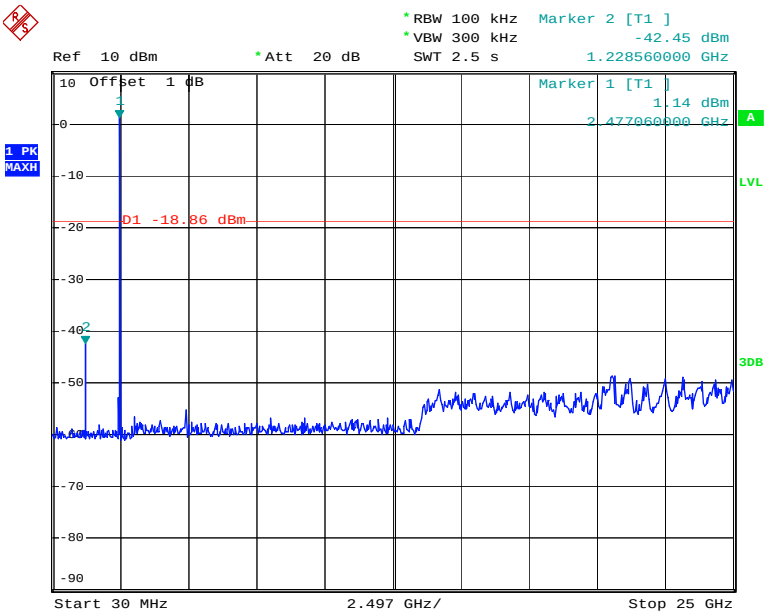
Date: 28.AUG.2013 09:37:03

Middle Channel



Date: 28.AUG.2013 09:45:48

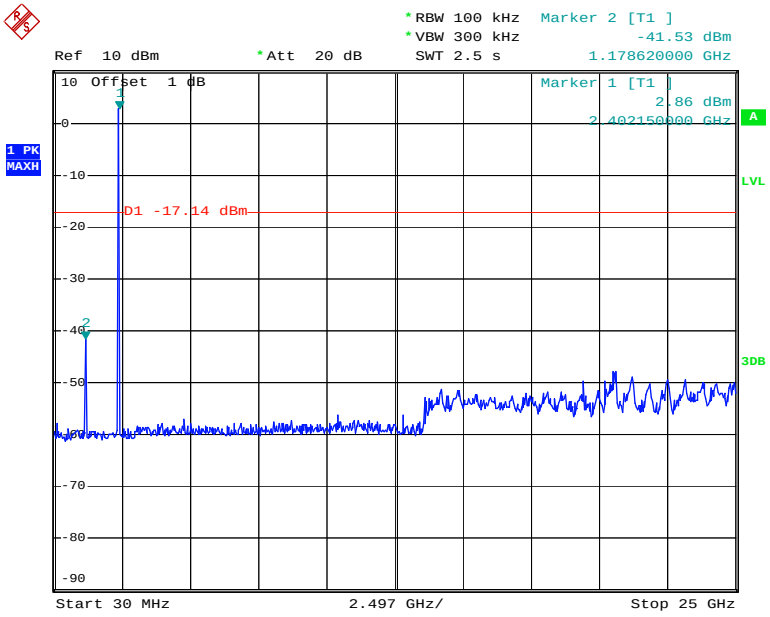
High Channel



Date: 28.AUG.2013 09:50:16

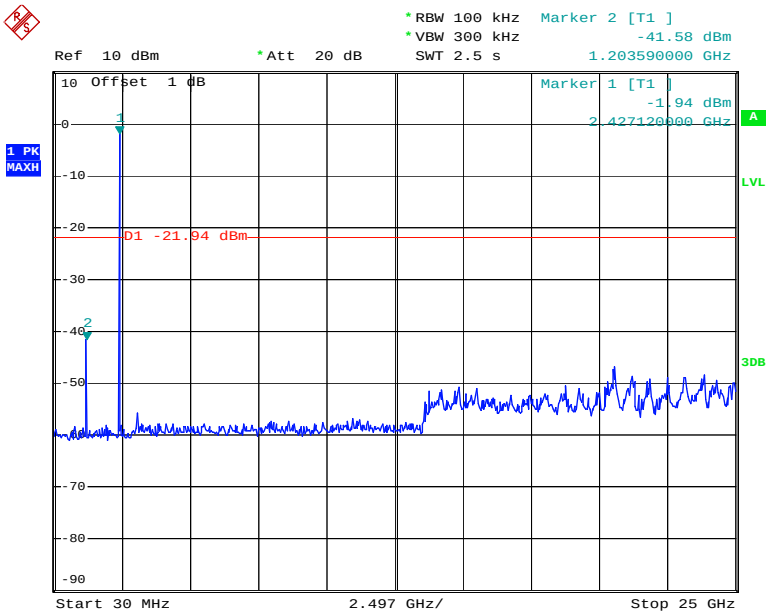
EDR Mode (π/4-DQPSK):

Low Channel



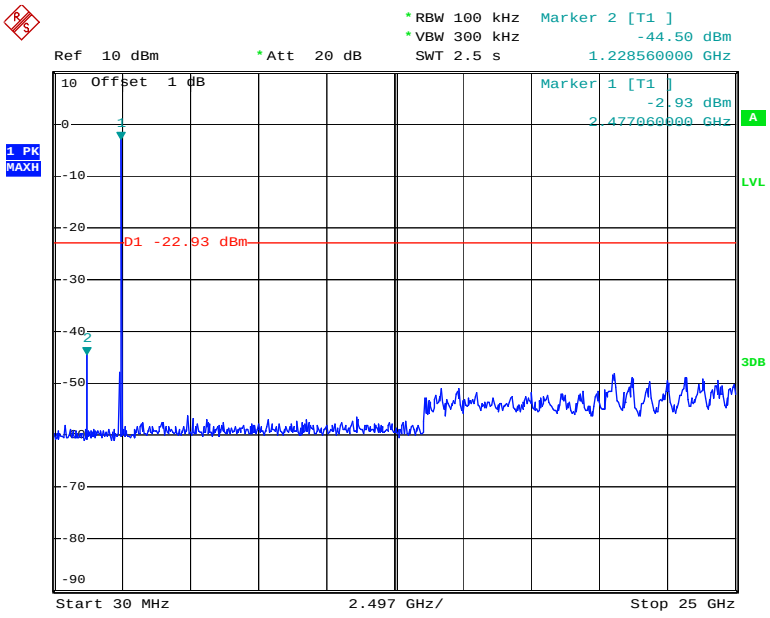
Date: 28.AUG.2013 10:30:47

Middle Channel



Date: 28.AUG.2013 10:35:21

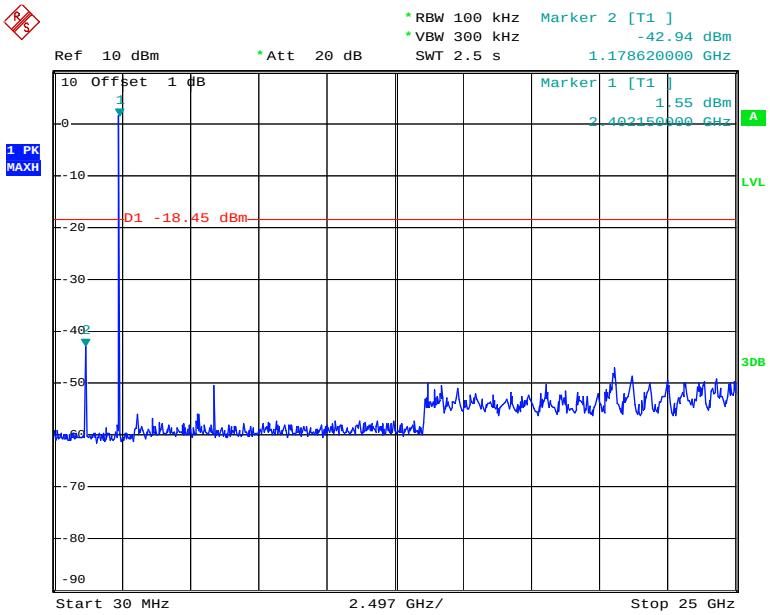
High Channel



Date: 28.AUG.2013 10:36:31

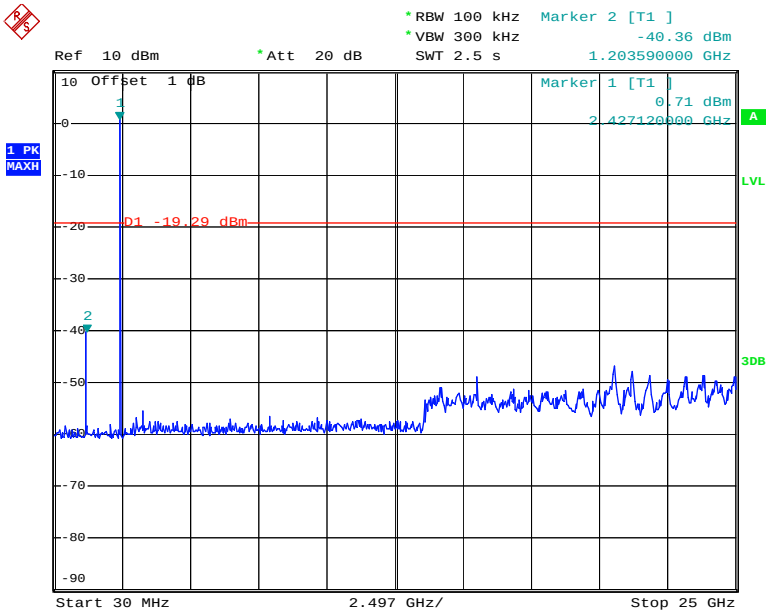
EDR Mode (8-DPSK):

Low Channel



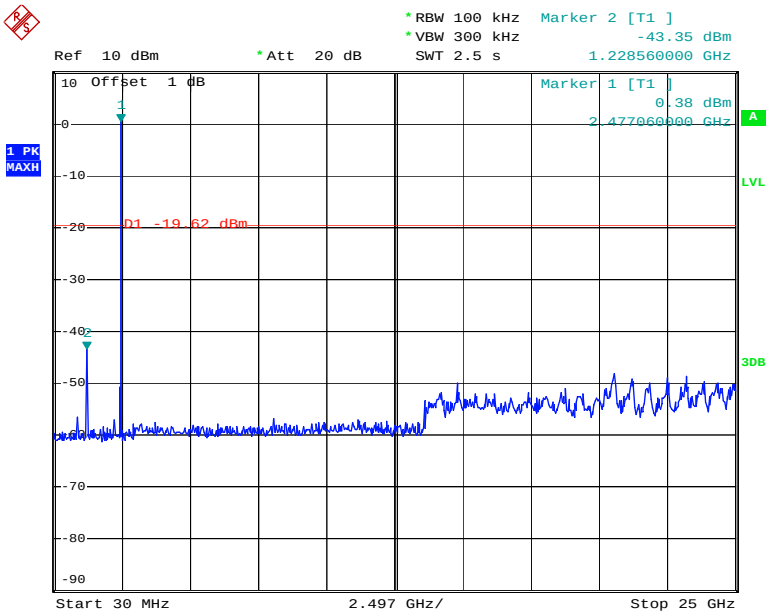
Date: 28.AUG.2013 10:45:43

Middle Channel



Date: 28.AUG.2013 10:47:12

High Channel



Date: 28.AUG.2013 10:48:18

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

Applicable Standard

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

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum analyzer	FSP 38	100478	2013-6-16	2014-6-15

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

Test Procedure

1. Set the EUT in transmitting mode, spectrum Bandwidth was set at 100 kHz, maxhold the channel.
2. Set the adjacent channel of the EUT maxhold another truce
3. Measure the channel separation.

Test Data

Environmental Conditions

Temperature:	27.8°C
Relative Humidity:	54 %
ATM Pressure:	100.4 kPa

** The testing was performed by Leon Chen on 2013-08-28*

Test Result: Compliance.

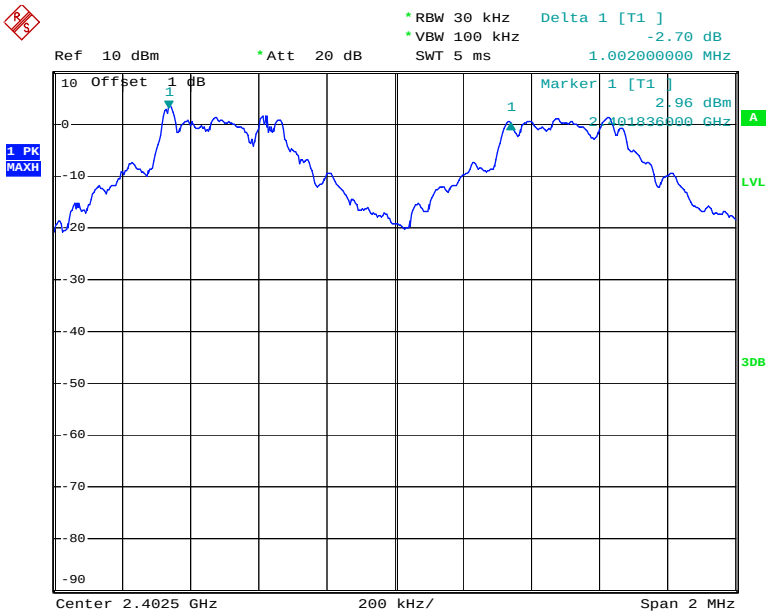
Please refer to following tables and plots

Test Mode: Transmitting

Mode	Channel	Frequency (MHz)	Channel Separation (MHz)	Limit (MHz)	Result
BDR Mode (GFSK)	Low	2402	1.002	0.643	Pass
	Adjacent	2403			
	Middle	2441	1	0.643	Pass
	Adjacent	2442			
	High	2480	1	0.643	Pass
	Adjacent	2479			
EDR Mode (π/4-DQPSK):	Low	2402	1.002	0.867	Pass
	Adjacent	2403			
	Middle	2441	1.006	0.867	Pass
	Adjacent	2442			
	High	2480	1.002	0.867	Pass
	Adjacent	2479			
EDR Mode (8-DPSK):	Low	2402	1.002	0.845	Pass
	Adjacent	2403			
	Middle	2441	1.004	0.845	Pass
	Adjacent	2442			
	High	2480	1.002	0.845	Pass
	Adjacent	2479			

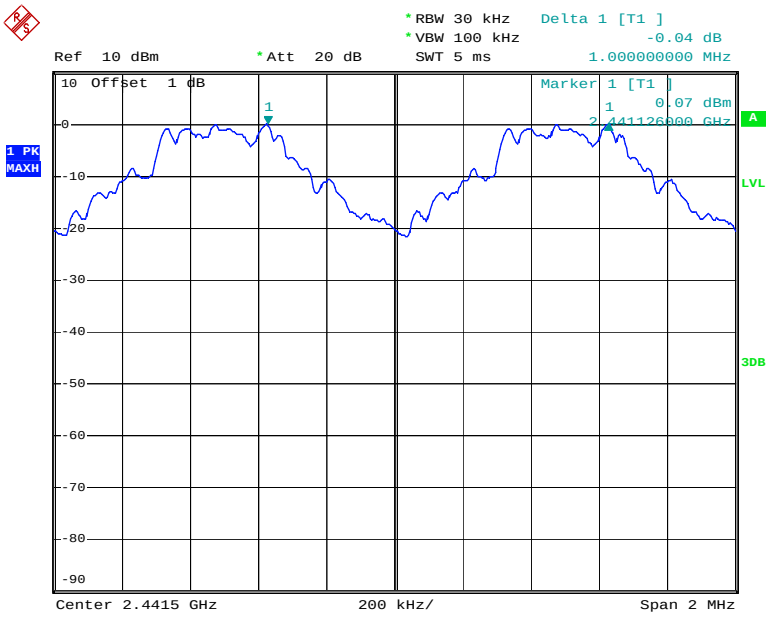
BDR Mode (GFSK):

Low Channel



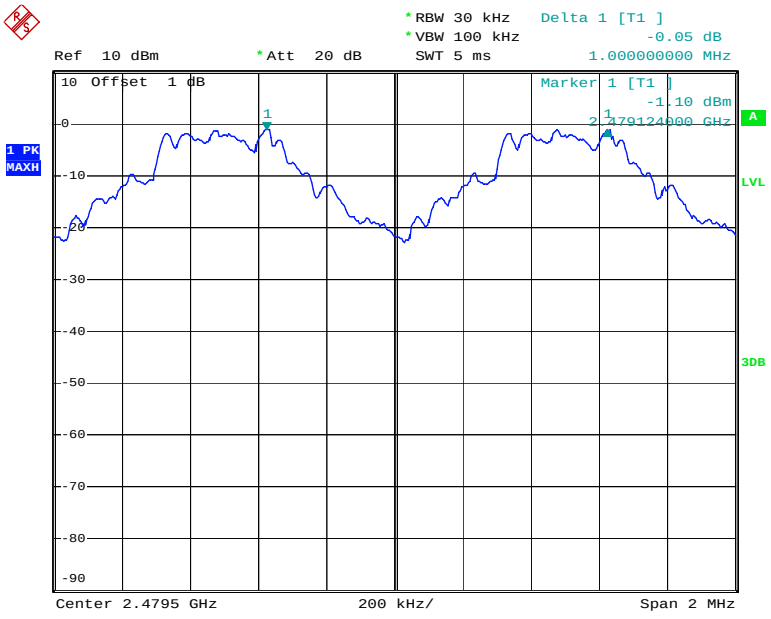
Date: 28.AUG.2013 09:59:41

Middle Channel



Date: 28.AUG.2013 09:57:42

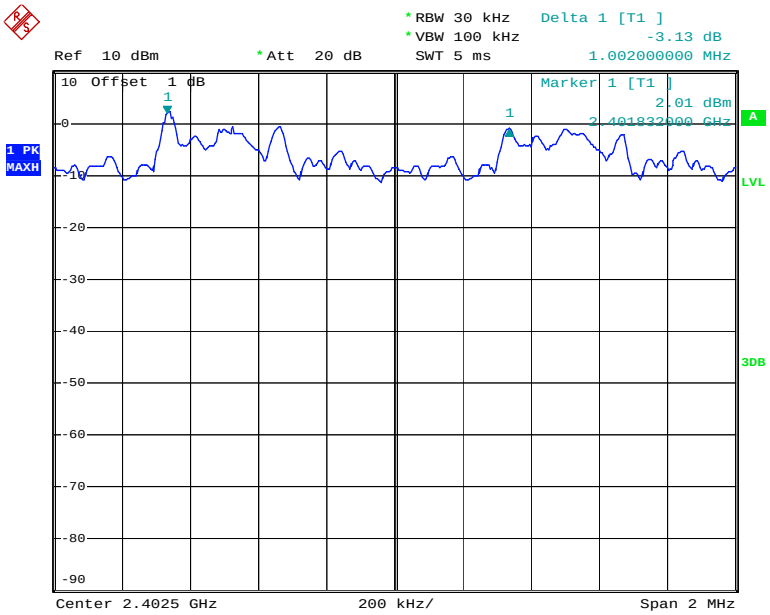
High Channel



Date: 28.AUG.2013 09:55:17

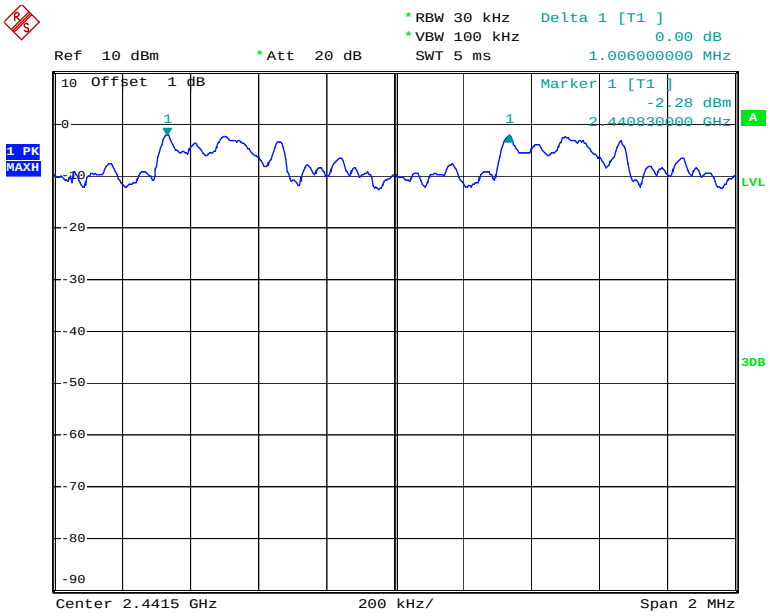
EDR Mode (π/4-DQPSK):

Low Channel



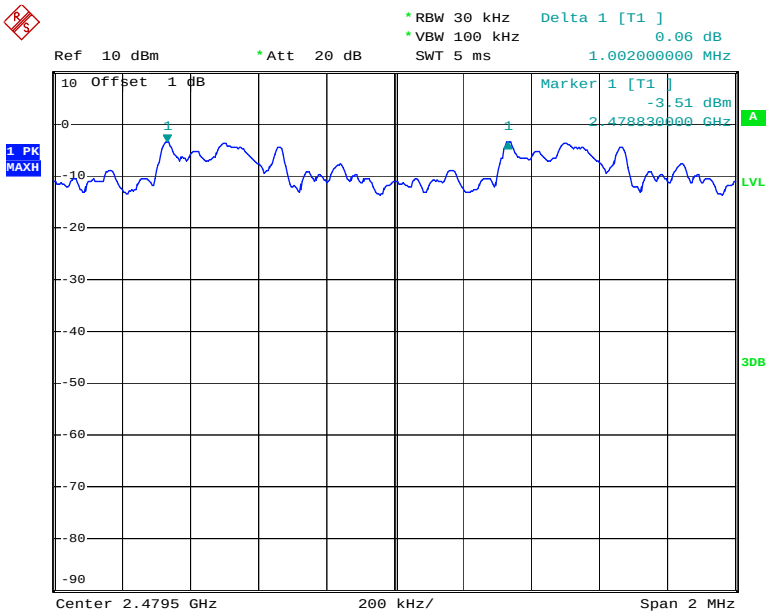
Date: 28.AUG.2013 10:29:20

Middle Channel



Date: 28.AUG.2013 10:27:55

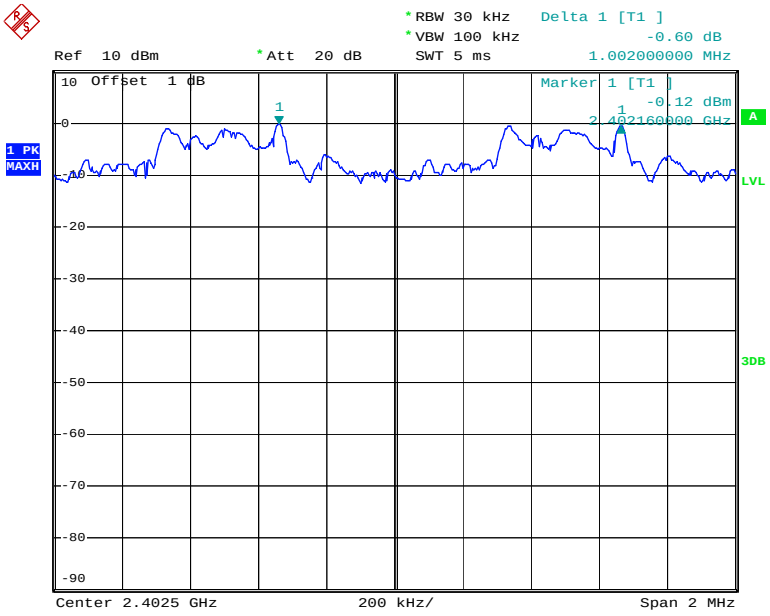
High Channel



Date: 28.AUG.2013 10:26:43

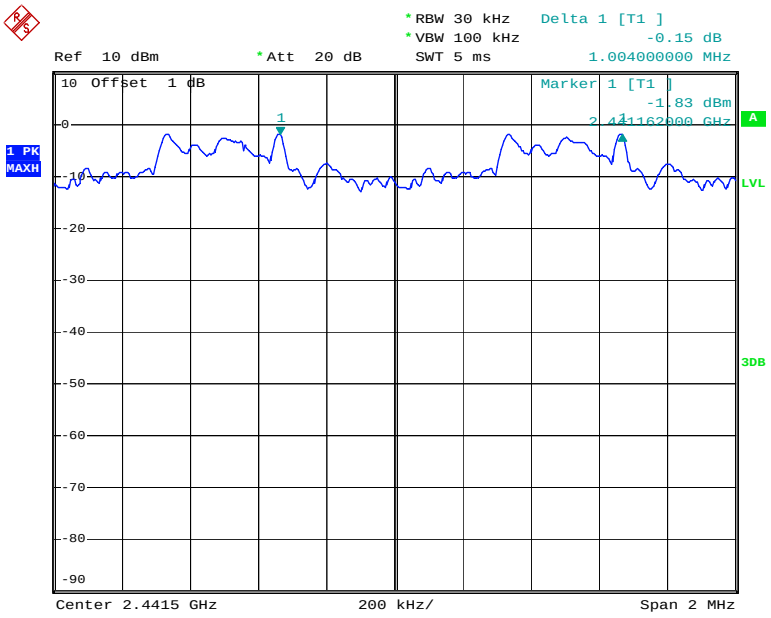
EDR Mode (8-DPSK):

Low Channel



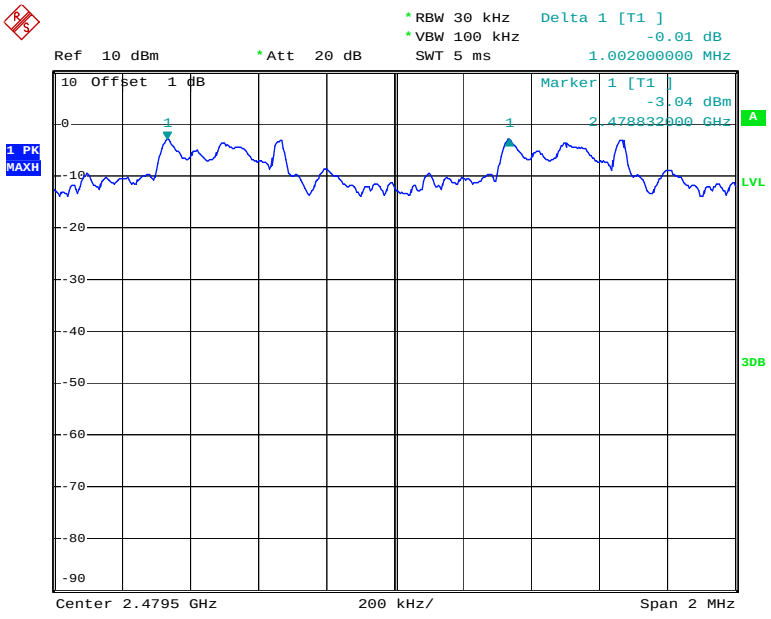
Date: 28.AUG.2013 10:59:02

Middle Channel



Date: 28.AUG.2013 11:00:08

High Channel



Date: 28.AUG.2013 11:01:02

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

Applicable Standard

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

Test Procedure

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

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum analyzer	FSP 38	100478	2013-6-16	2014-6-15

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

Test Data

Environmental Conditions

Temperature:	28.3 °C
Relative Humidity:	64 %
ATM Pressure:	100kPa

The testing was performed by Leon Chen on 2013-08-28.

Test Result: Compliance.

Please refer to following tables and plots

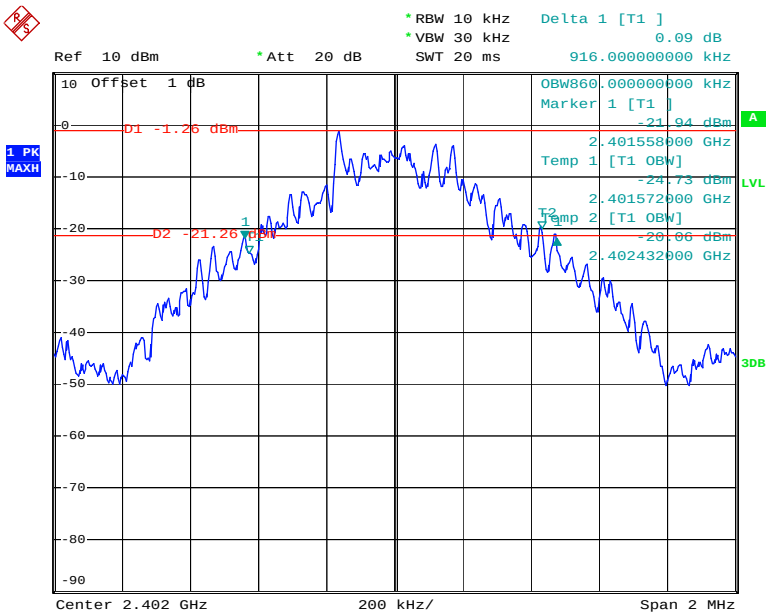
Test Mode: Transmitting

Mode	Channel	Frequency (MHz)	20 dB Bandwidth (MHz)
BDR Mode (GFSK)	Low	2402	0.916
	Middle	2441	0.96
	High	2480	0.964
EDR Mode (π/4-DQPSK):	Low	2402	1.24
	Middle	2441	1.3
	High	2480	1.3
EDR Mode (8-DPSK):	Low	2402	1.26
	Middle	2441	1.266
	High	2480	1.268

Please refer to the following plots.

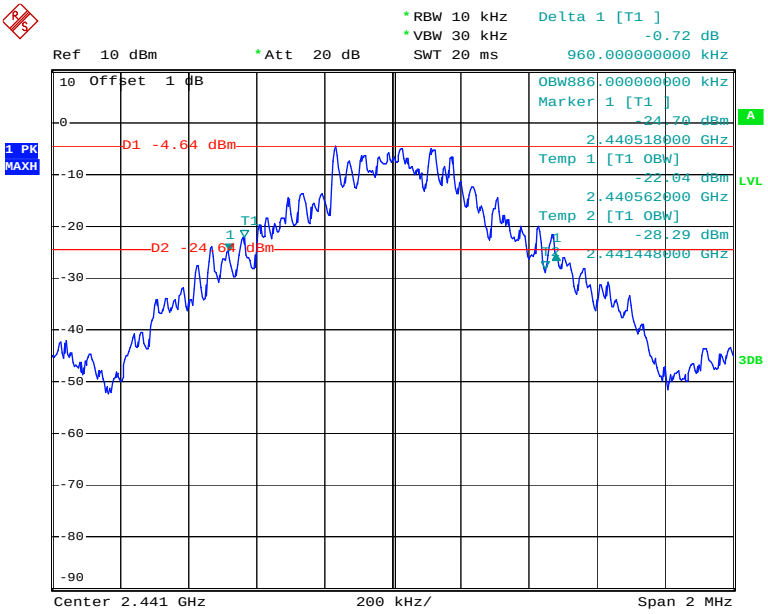
BDR Mode (GFSK):

Low Channel



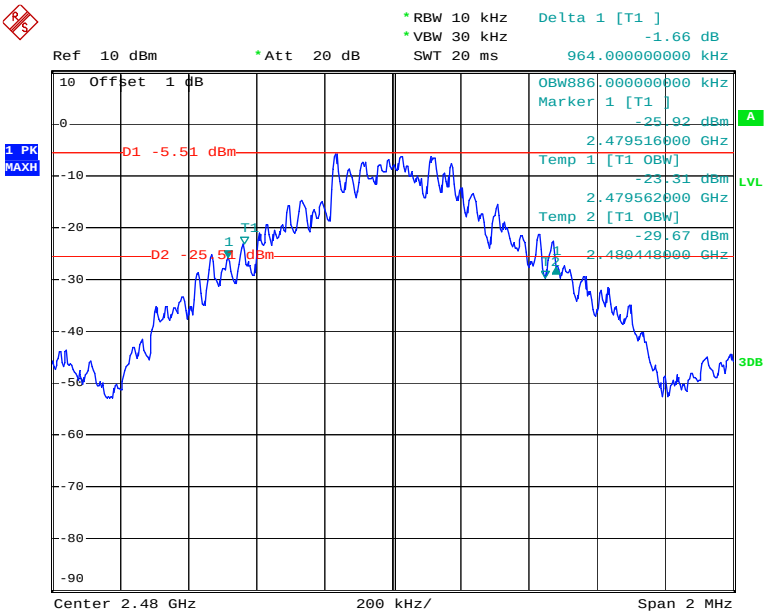
Date: 28.AUG.2013 09:33:58

Middle Channel



Date: 28.AUG.2013 11:37:38

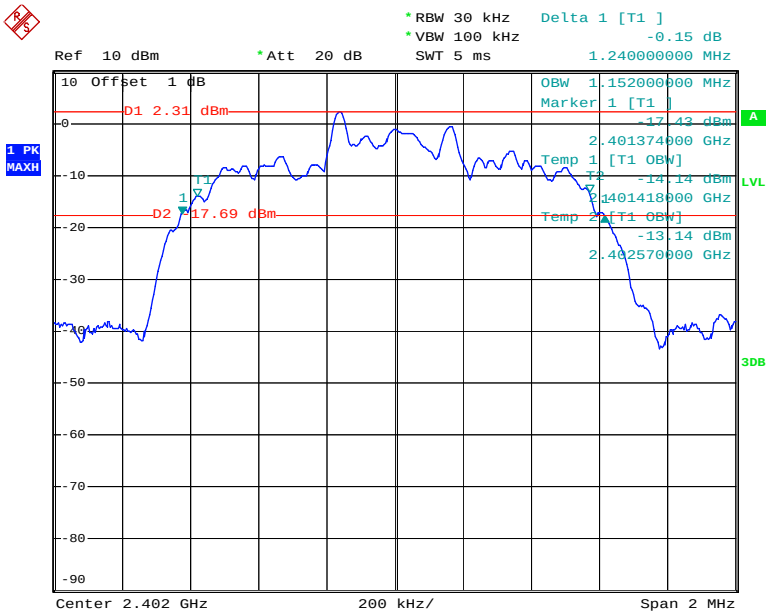
High Channel



Date: 28.AUG.2013 11:36:00

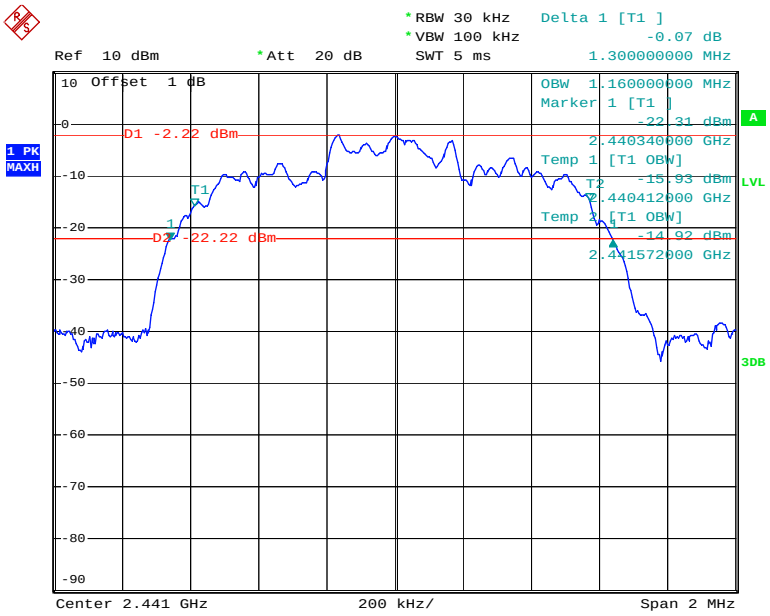
EDR Mode (π/4-DQPSK):

Low Channel



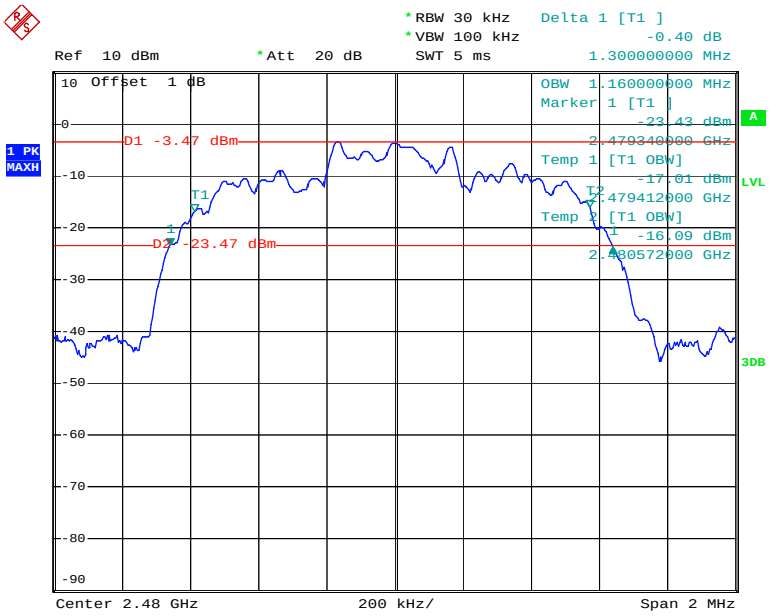
Date: 28.AUG.2013 10:16:42

Middle Channel



Date: 28.AUG.2013 10:18:42

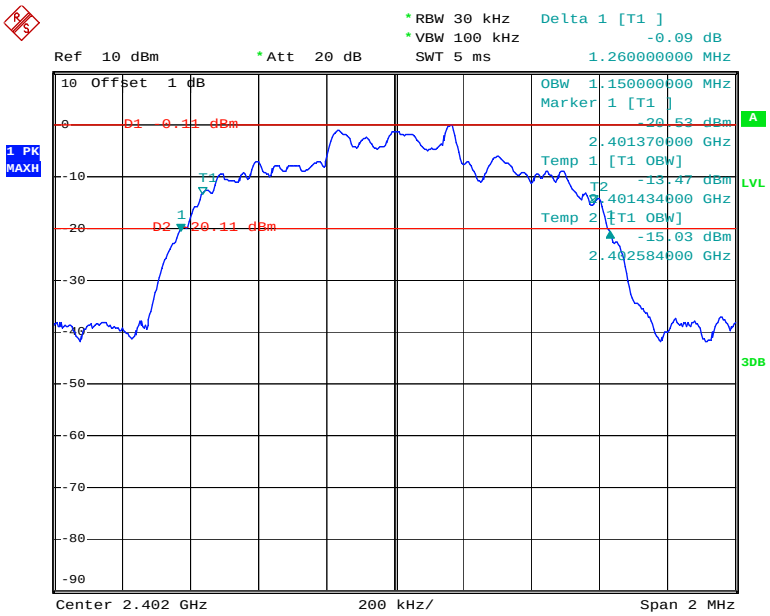
High Channel



Date: 28.AUG.2013 10:24:06

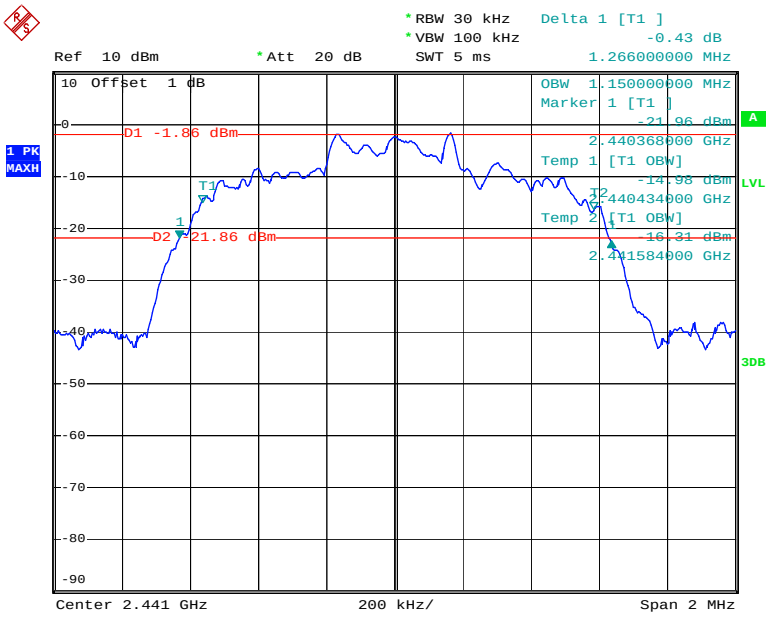
EDR Mode (8-DPSK):

Low Channel



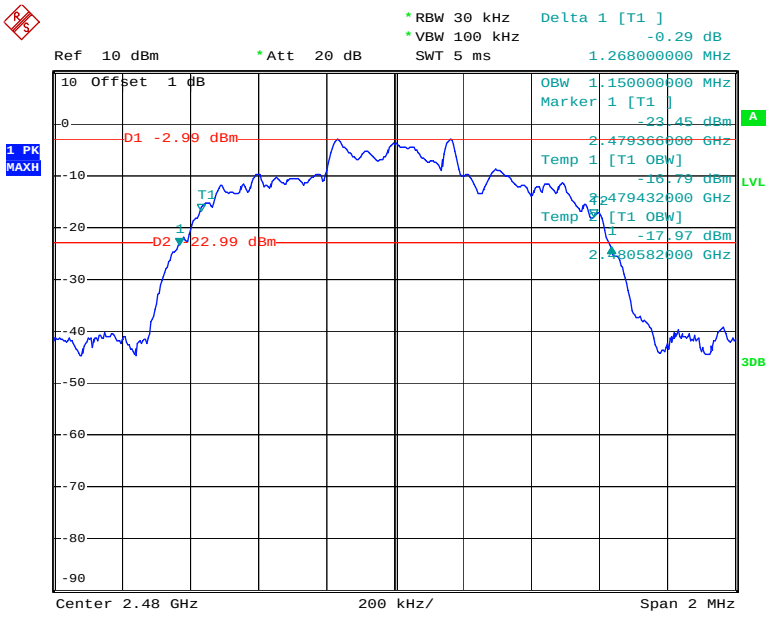
Date: 28.AUG.2013 10:56:55

Middle Channel



Date: 28.AUG.2013 10:55:33

High Channel



Date: 28.AUG.2013 10:54:17

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
R&S	Spectrum analyzer	FSP 38	100478	2013-6-16	2014-6-15

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

Test Data

Environmental Conditions

Temperature:	26.3°C
Relative Humidity:	64 %
ATM Pressure:	100kPa

The testing was performed by Leon Chen on 2013-08-28.

Test Result: Compliance.

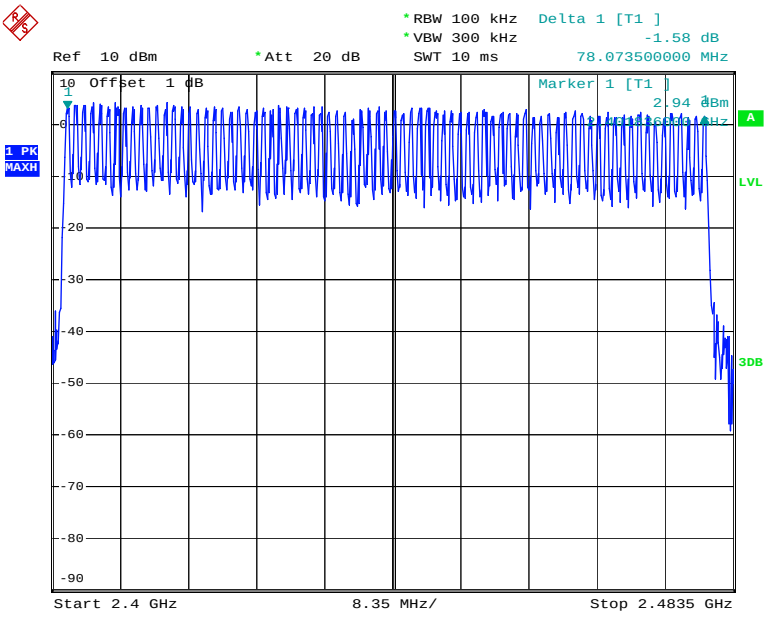
Please refer to following tables and plots

Test Mode: Transmitting

BDR Mode (GFSK):

Frequency Range (MHz)	Number of Hopping Channel	Limit
2400-2483.5	79	⩾15

Number of Hopping Channels

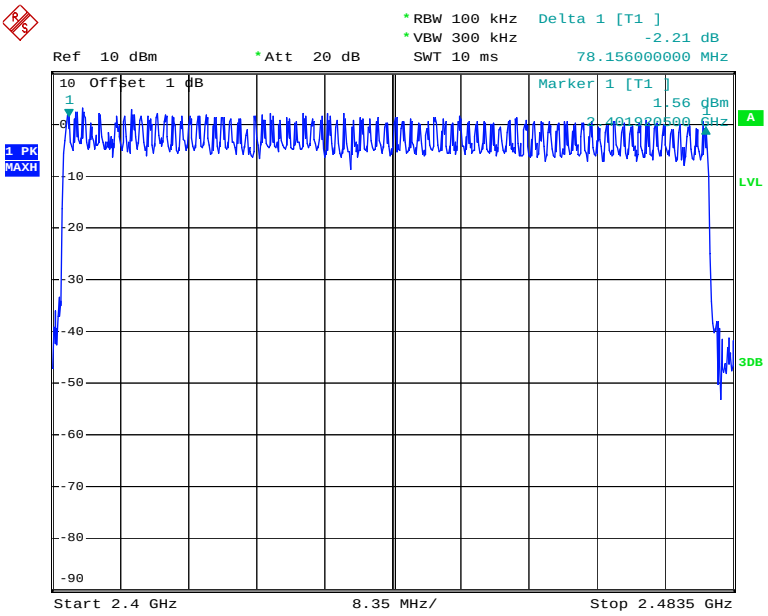


Date: 28.AUG.2013 10:02:21

EDR Mode (π/4-DQPSK):

Frequency Range (MHz)	Number of Hopping Channel	Limit
2400-2483.5	79	≥15

Number of Hopping Channels

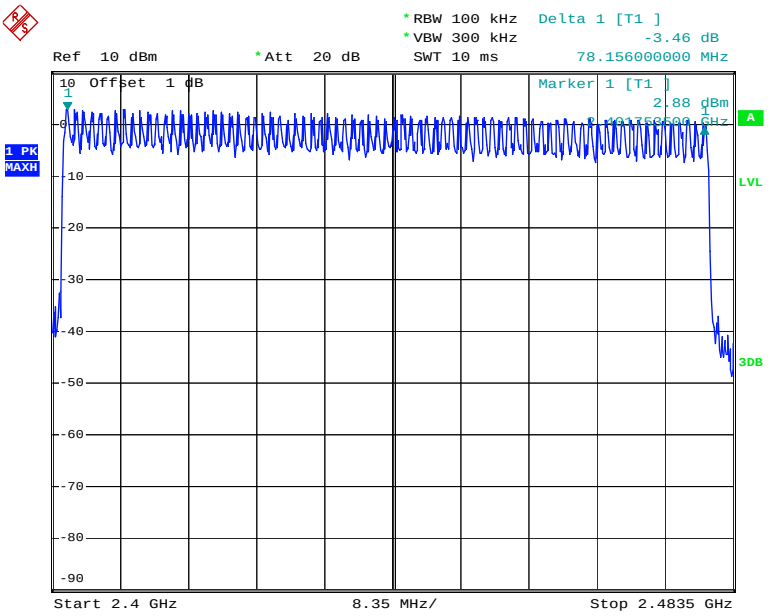


Date: 28.AUG.2013 10:07:14

EDR Mode (8-DPSK):

Frequency Range (MHz)	Number of Hopping Channel	Limit
2400-2483.5	79	≥15

Number of Hopping Channels



Date: 28.AUG.2013 11:08:56

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

Applicable Standard

Frequency hopping systems in the 2400-2483.5 MHz shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

Test Procedure

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

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

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum analyzer	FSP 38	100478	2013-6-16	2014-6-15

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

Test Data

Environmental Conditions

Temperature:	26.3 °C
Relative Humidity:	64 %
ATM Pressure:	100kPa

The testing was performed by Leon Chen on 2013-08-28.

Test Result: Compliance.

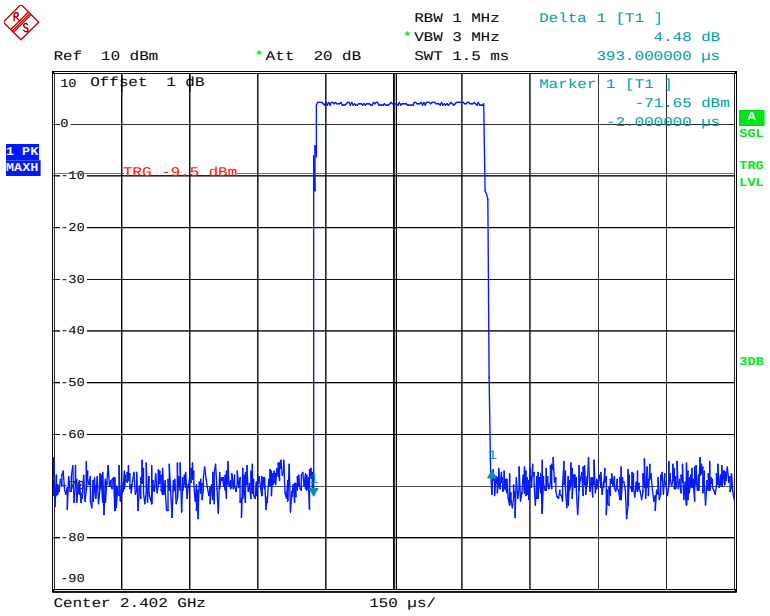
Please refer to following tables and plots

Test Mode: Transmitting

BDR Mode (GFSK):

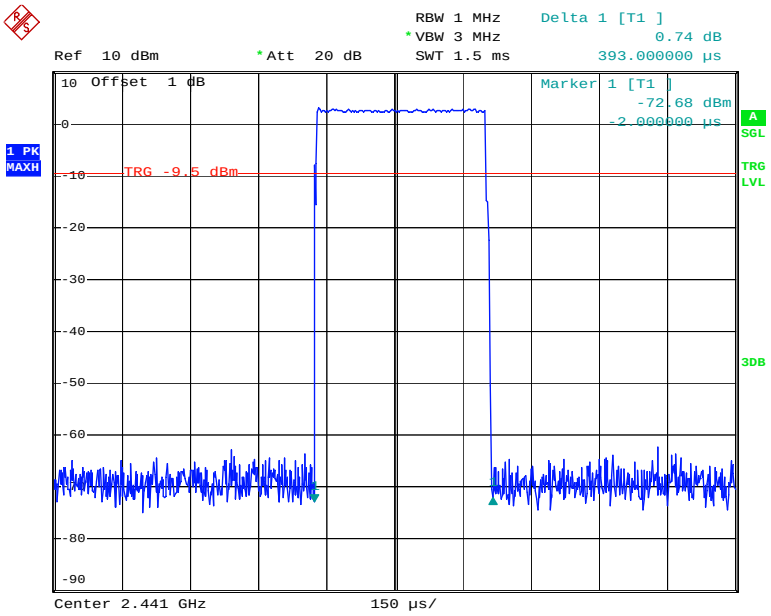
Mode	Channel	Pulse Width (ms)	Dwell Time (s)	Limit (s)	Result
DH1	Low	0.393	0.126	0.4	Pass
	Middle	0.393	0.126	0.4	Pass
	High	0.393	0.126	0.4	Pass
	Note: Dwell time=Pulse time (ms) × (1600/2/79) ×31.6 s				
DH3	Low	1.673	0.268	0.4	Pass
	Middle	1.683	0.269	0.4	Pass
	High	1.683	0.269	0.4	Pass
	Note: Dwell time=Pulse time (ms) × (1600/4/79) ×31.6 s				
DH5	Low	2.937	0.313	0.4	Pass
	Middle	2.921	0.312	0.4	Pass
	High	2.937	0.313	0.4	Pass
	Note: Dwell time=Pulse time (ms) × (1600/6/79) ×31.6 s				

DH1: Low Channel



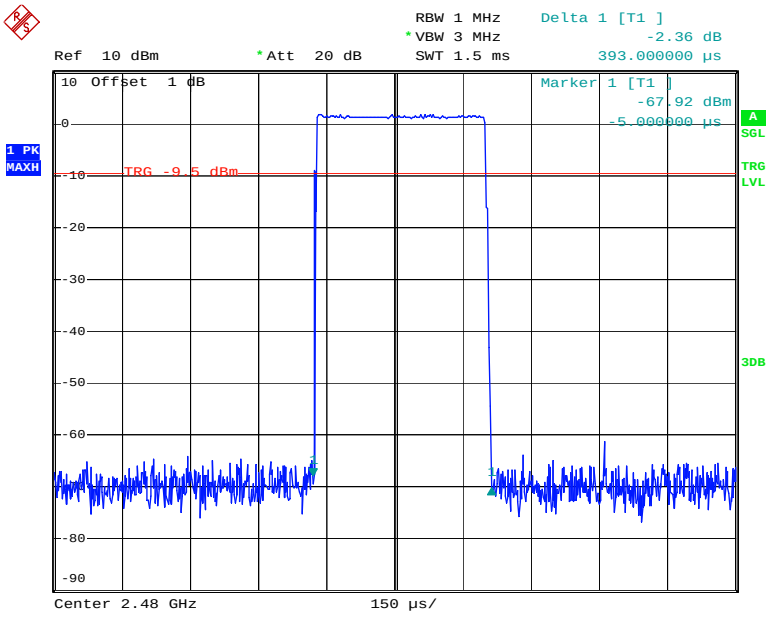
Date: 28.AUG.2013 11:10:33

DH1: Middle Channel



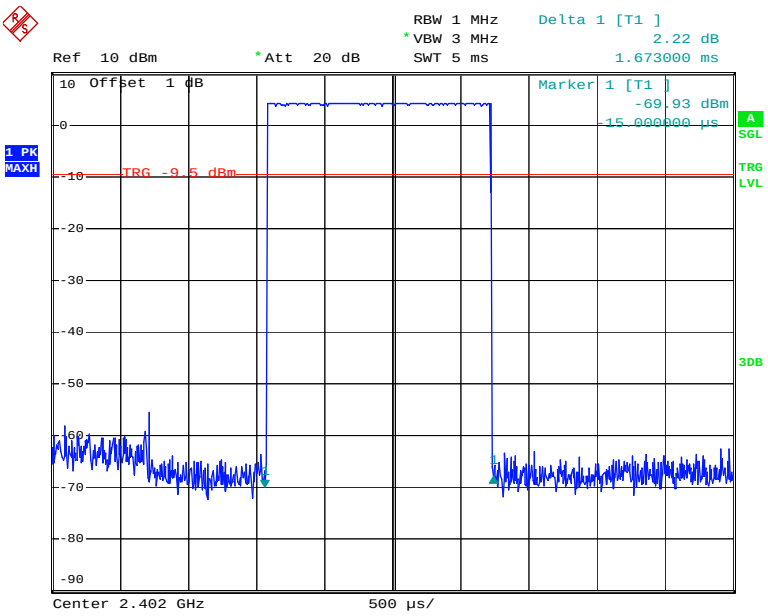
Date: 28.AUG.2013 11:11:07

DH1: High Channel



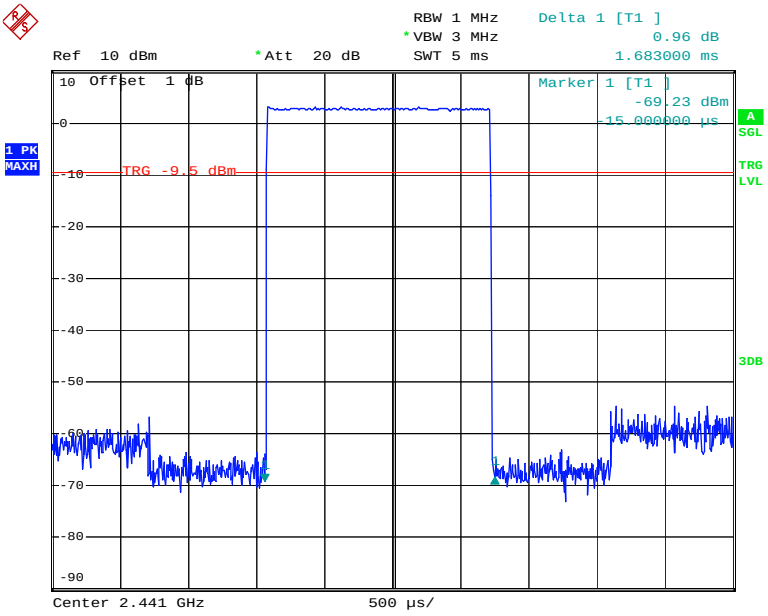
Date: 28.AUG.2013 11:11:26

DH3: Low Channel



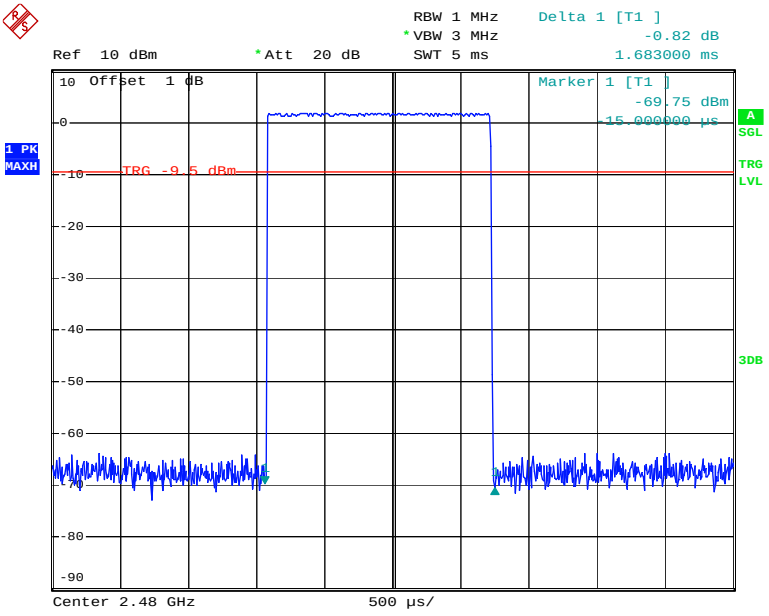
Date: 28.AUG.2013 11:12:52

DH3: Middle Channel



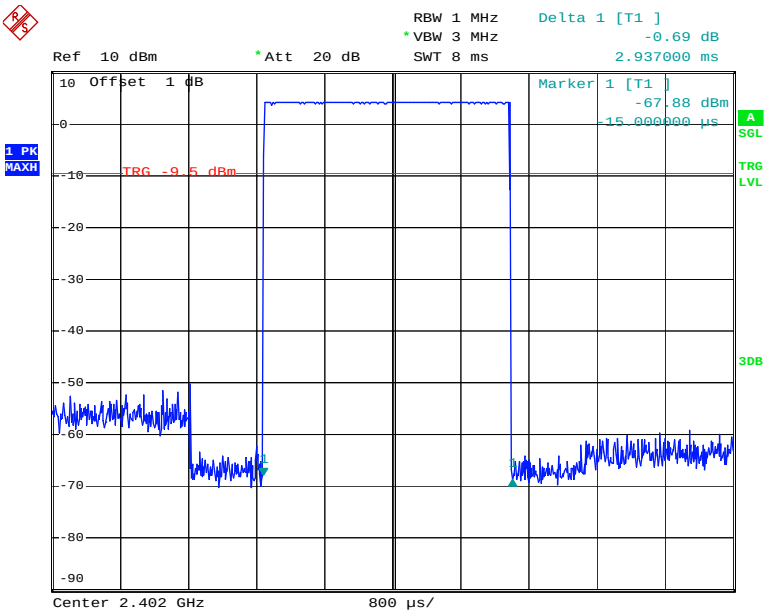
Date: 28.AUG.2013 11:12:29

DH3: High Channel



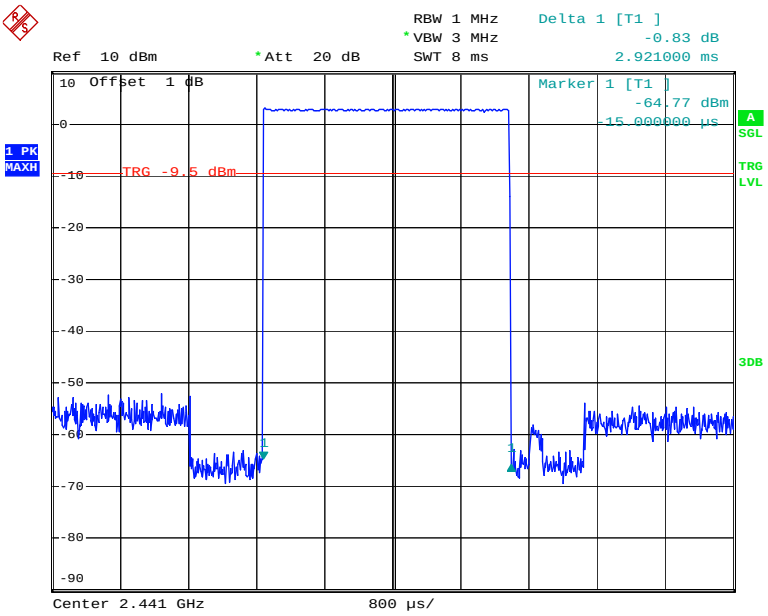
Date: 28.AUG.2013 11:12:05

DH5: Low Channel



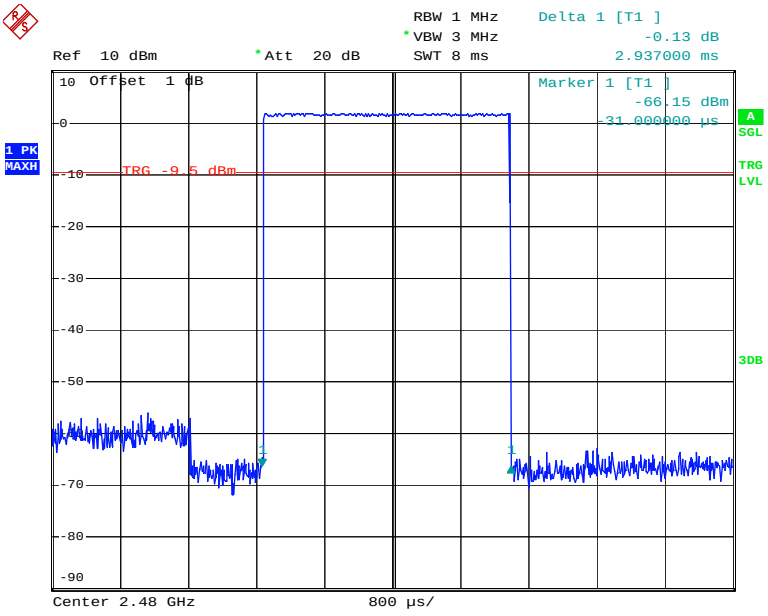
Date: 28.AUG.2013 11:13:38

DH5: Middle Channel



Date: 28.AUG.2013 11:14:05

DH5: High Channel

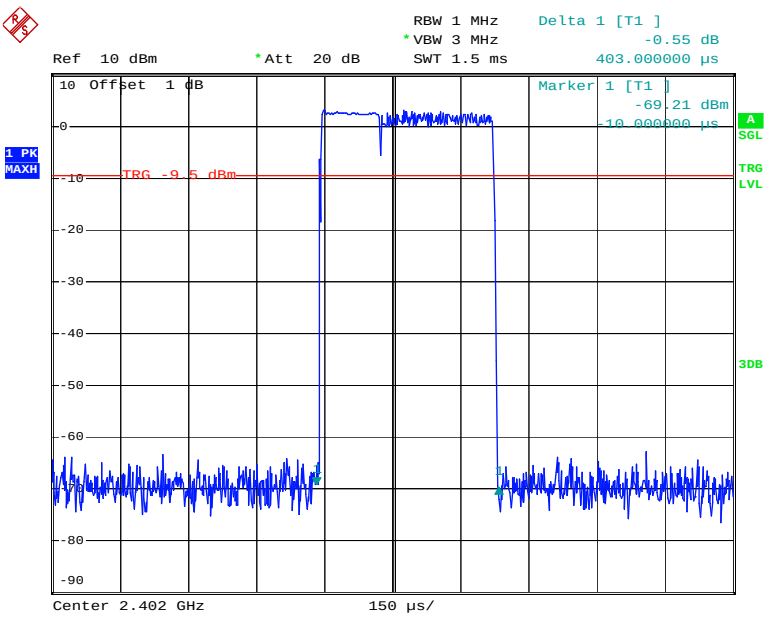


Date: 28.AUG.2013 11:14:20

EDR Mode (π/4-DQPSK):

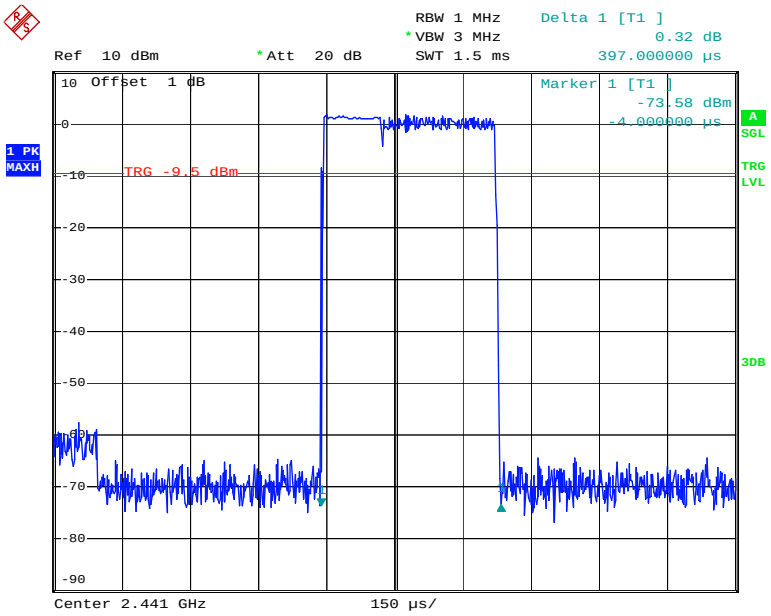
Mode	Channel	Pulse Width (ms)	Dwell Time (s)	Limit (s)	Result
DH1	Low	0.403	0.129	0.4	Pass
	Middle	0.397	0.127	0.4	Pass
	High	0.397	0.127	0.4	Pass
	Note: Dwell time=Pulse time (ms) × (1600/2/79) ×31.6 s				
DH3	Low	1.687	0.270	0.4	Pass
	Middle	1.677	0.268	0.4	Pass
	High	1.677	0.268	0.4	Pass
	Note: Dwell time=Pulse time (ms) × (1600/4/79) ×31.6 s				
DH5	Low	2.925	0.312	0.4	Pass
	Middle	2.941	0.314	0.4	Pass
	High	2.925	0.312	0.4	Pass
	Note: Dwell time=Pulse time (ms) × (1600/6/79) ×31.6 s				

DH1: Low Channel



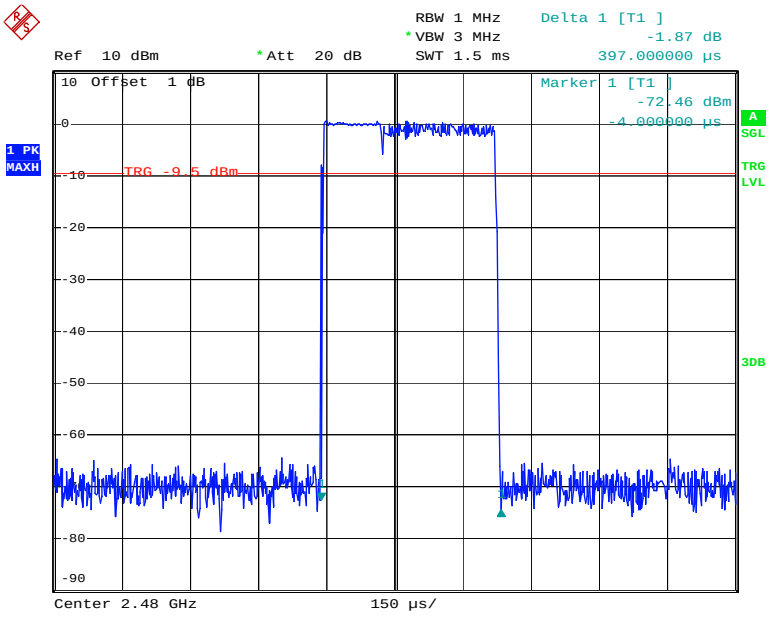
Date: 28.AUG.2013 11:15:48

DH1: Middle Channel



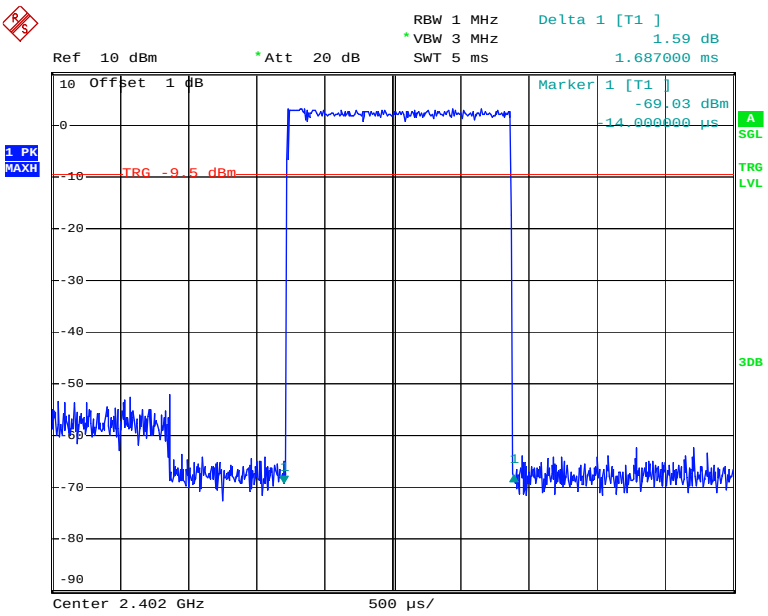
Date: 28.AUG.2013 11:16:17

DH1: High Channel



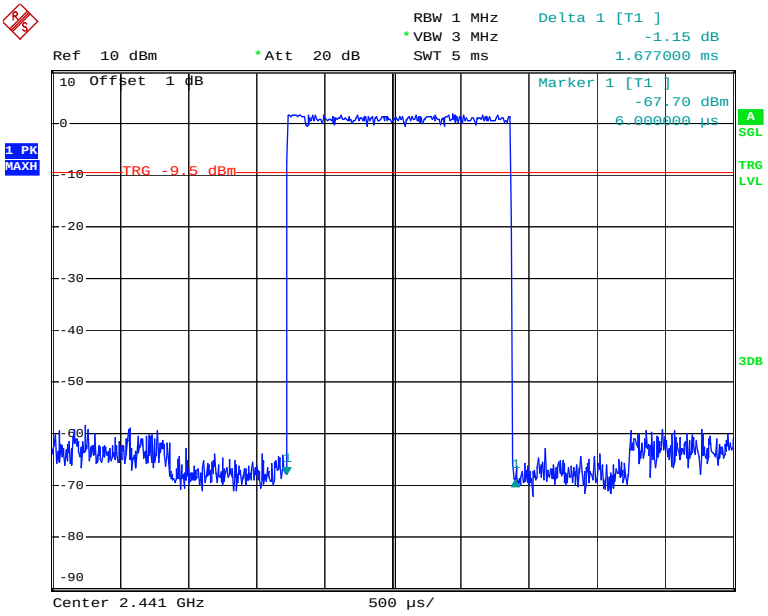
Date: 28.AUG.2013 11:16:52

DH3: Low Channel



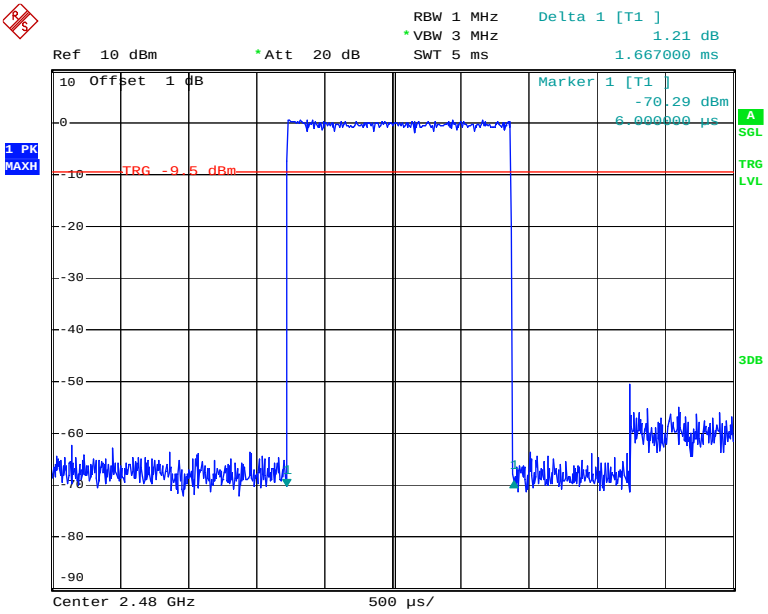
Date: 28.AUG.2013 11:18:02

DH3: Middle Channel



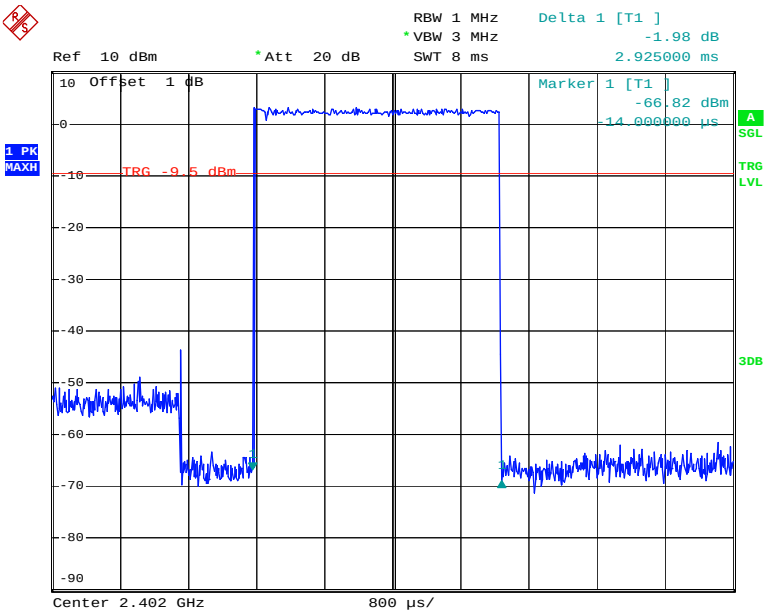
Date: 28.AUG.2013 11:18:45

DH3: High Channel



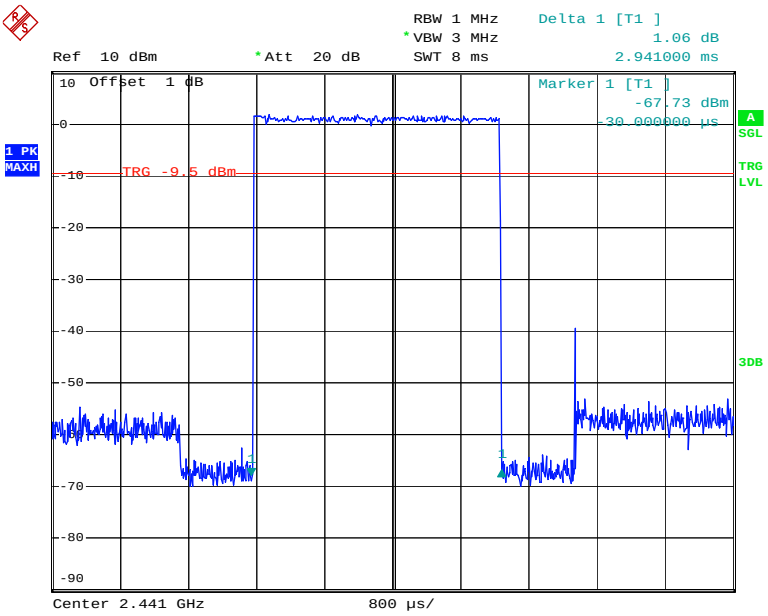
Date: 28.AUG.2013 11:19:36

DH5: Low Channel



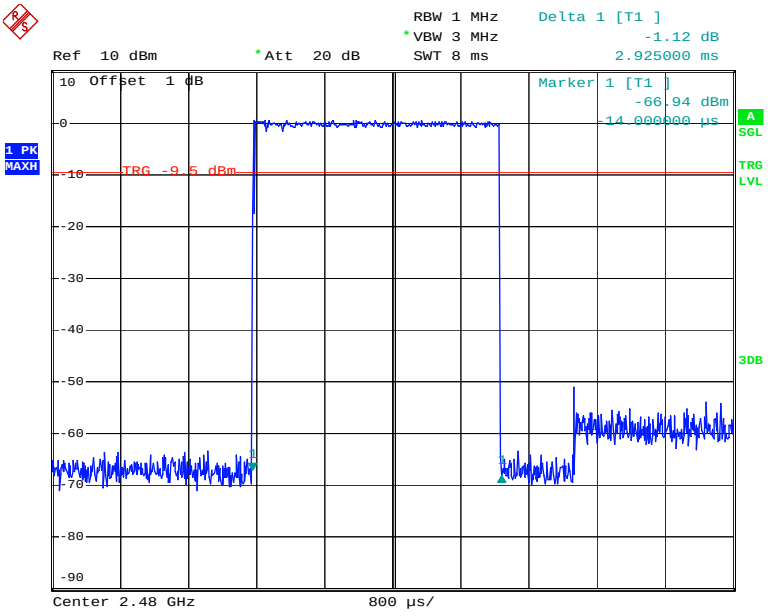
Date: 28.AUG.2013 11:21:13

DH5: Middle Channel



Date: 28.AUG.2013 11:22:17

DH5: High Channel

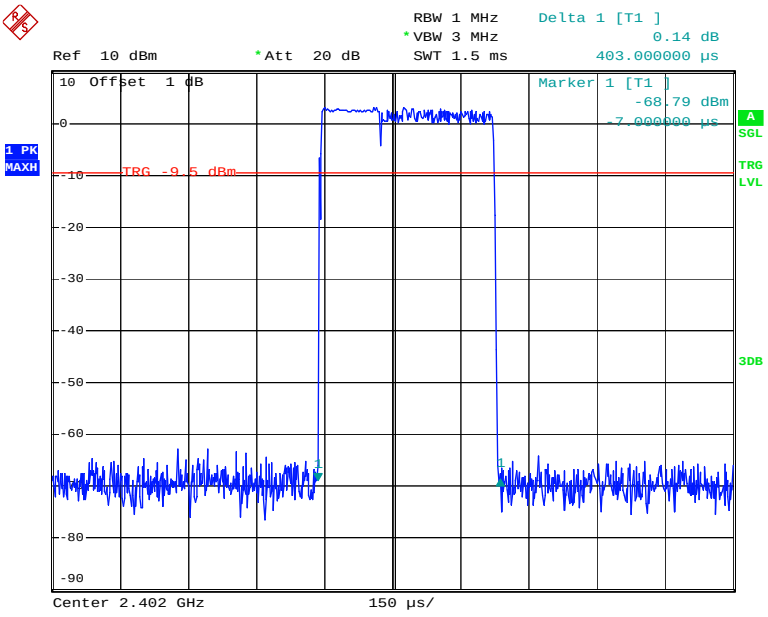


Date: 28.AUG.2013 11:23:12

EDR Mode (8-DPSK):

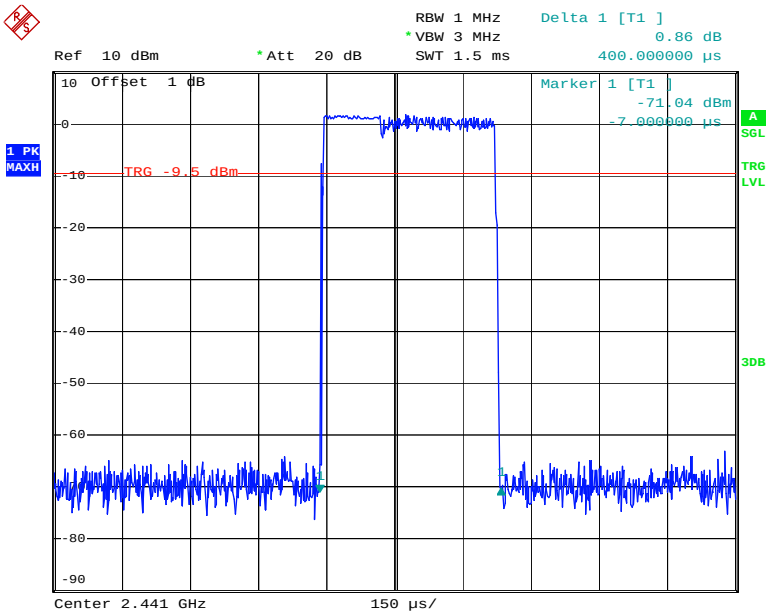
Mode	Channel	Pulse Width (ms)	Dwell Time (s)	Limit (s)	Result
DH1	Low	0.403	0.129	0.4	Pass
	Middle	0.400	0.128	0.4	Pass
	High	0.397	0.127	0.4	Pass
	Note: Dwell time=Pulse time (ms) × (1600/2/79) ×31.6 s				
DH3	Low	1.697	0.272	0.4	Pass
	Middle	1.677	0.268	0.4	Pass
	High	1.677	0.268	0.4	Pass
	Note: Dwell time=Pulse time (ms) × (1600/4/79) ×31.6 s				
DH5	Low	2.925	0.312	0.4	Pass
	Middle	2.941	0.314	0.4	Pass
	High	2.941	0.314	0.4	Pass
	Note: Dwell time=Pulse time (ms) × (1600/6/79) ×31.6 s				

DH1: Low Channel



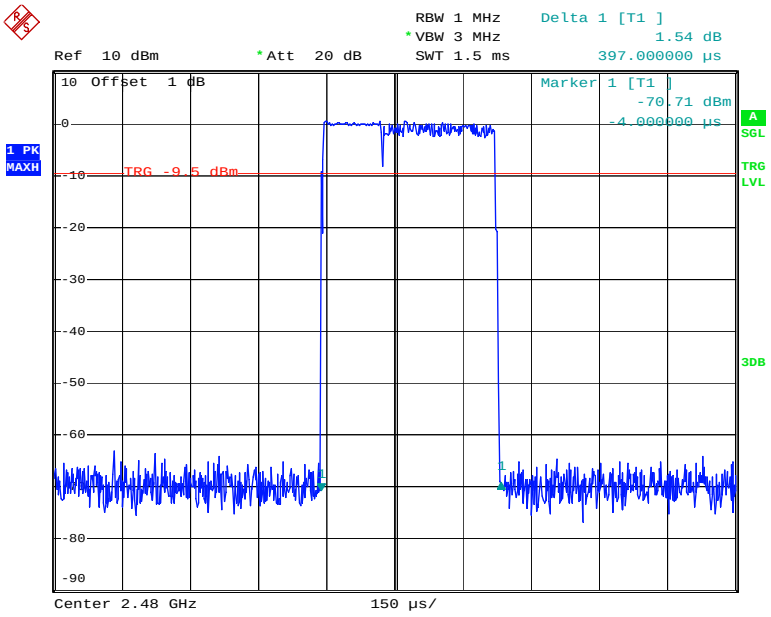
Date: 28.AUG.2013 11:16:02

DH1: Middle Channel



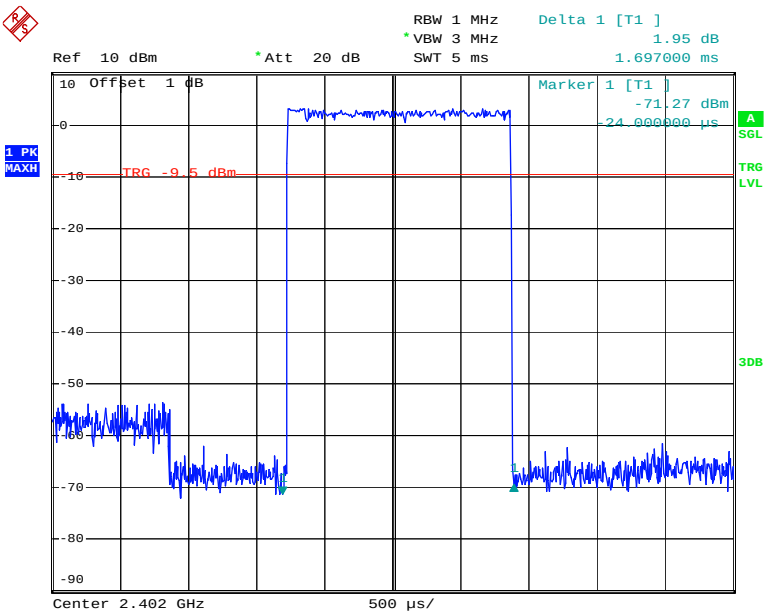
Date: 28.AUG.2013 11:16:29

DH1: High Channel



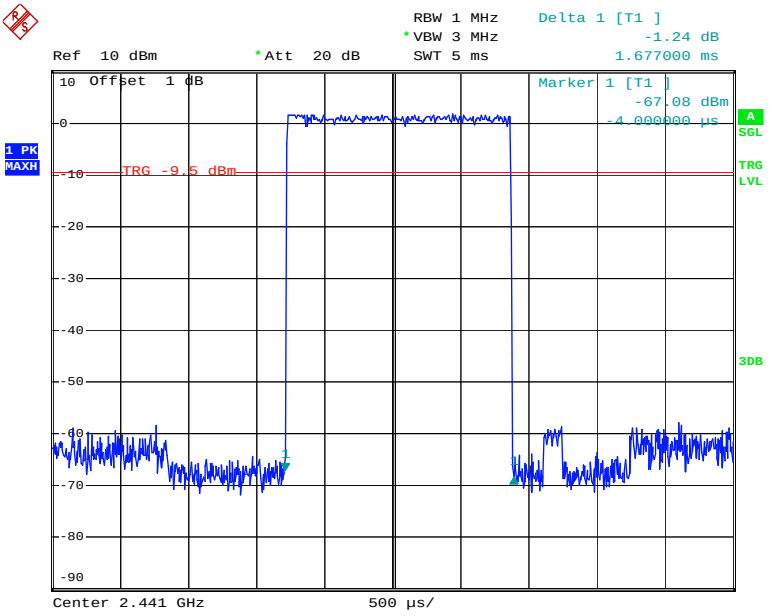
Date: 28.AUG.2013 11:17:08

DH3: Low Channel



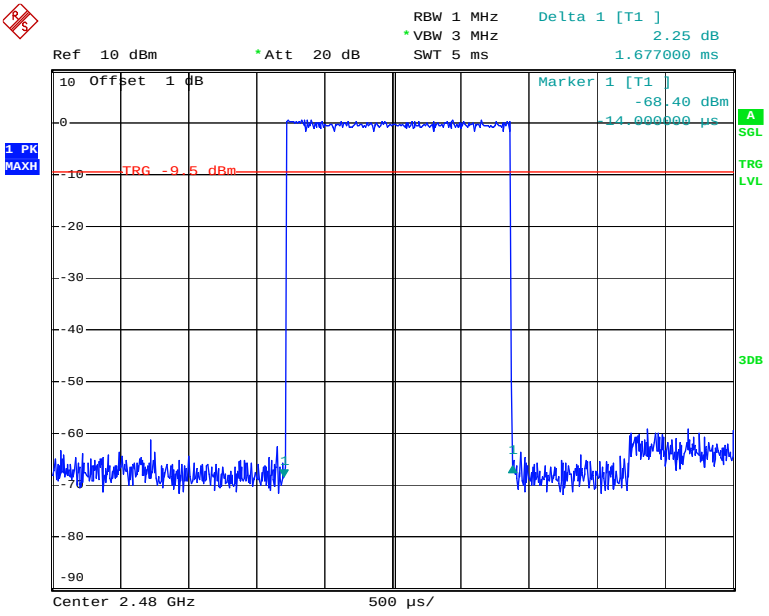
Date: 28.AUG.2013 11:18:15

DH3: Middle Channel



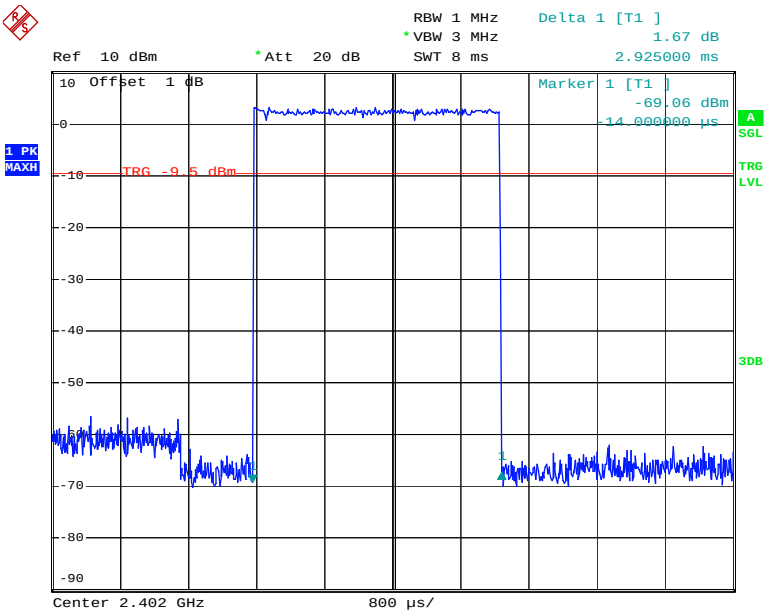
Date: 28.AUG.2013 11:19:11

DH3: High Channel



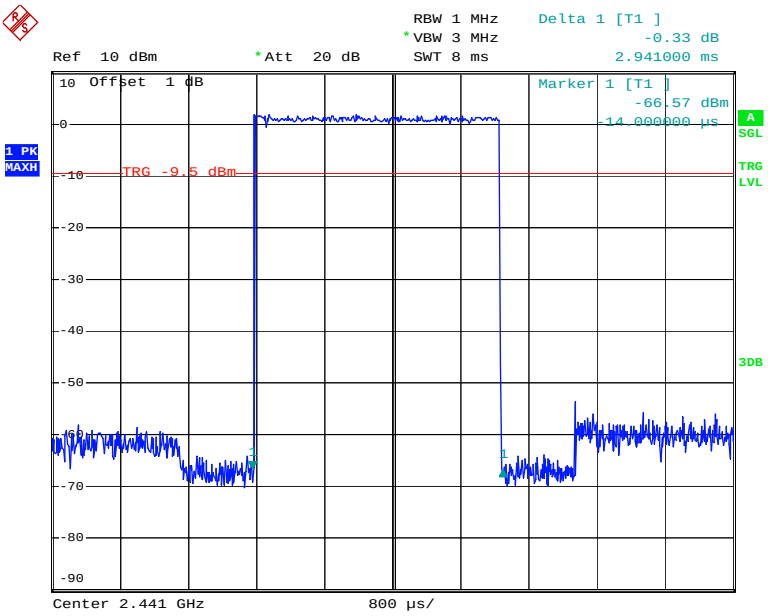
Date: 28.AUG.2013 11:20:05

DH5: Low Channel



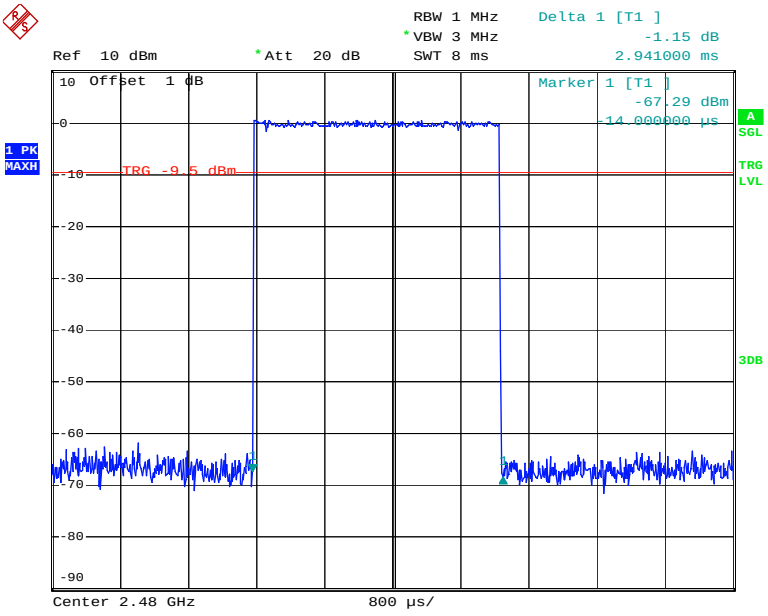
Date: 28.AUG.2013 11:21:34

DH5: Middle Channel



Date: 28.AUG.2013 11:22:52

DH5: High Channel



Date: 28.AUG.2013 11:24:07

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

Applicable Standard

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

Test Procedure

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

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
R&S	Spectrum analyzer	FSP 38	100478	2013-6-16	2014-6-15

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

Test Data

Environmental Conditions

Temperature:	26.3 °C
Relative Humidity:	64 %
ATM Pressure:	100kPa

The testing was performed by Leon Chen on 2013-08-28.

Test Result: Compliance.

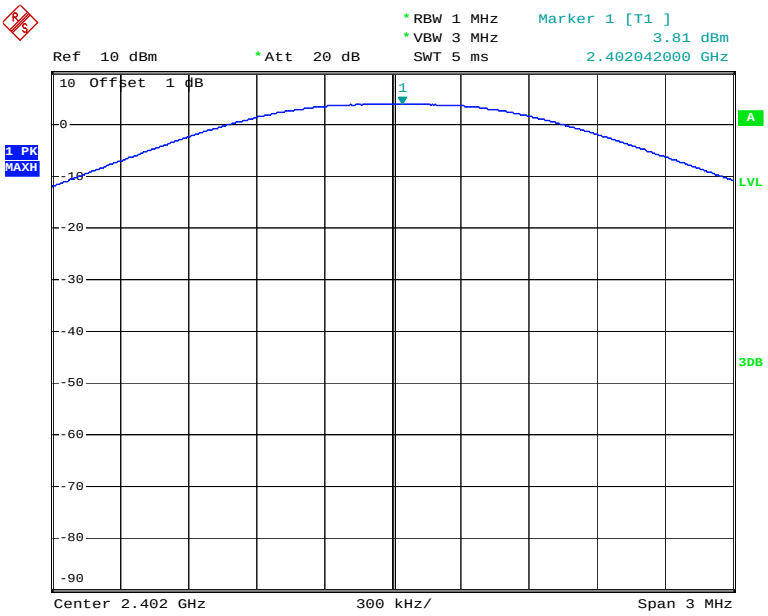
Test Mode: Transmitting

Mode	Channel	Frequency (MHz)	Output power (dBm)	Limit (dBm)
BDR Mode (GFSK)	Low	2402	3.81	30
	Middle	2441	3.14	30
	High	2480	1.89	30
EDR Mode (π/4-DQPSK)	Low	2402	3.83	30
	Middle	2441	2.55	30
	High	2480	1.39	30
EDR Mode (8-DPSK)	Low	2402	4.23	30
	Middle	2441	2.71	30
	High	2480	1.52	30

Note: The data above was tested in conducted mode.

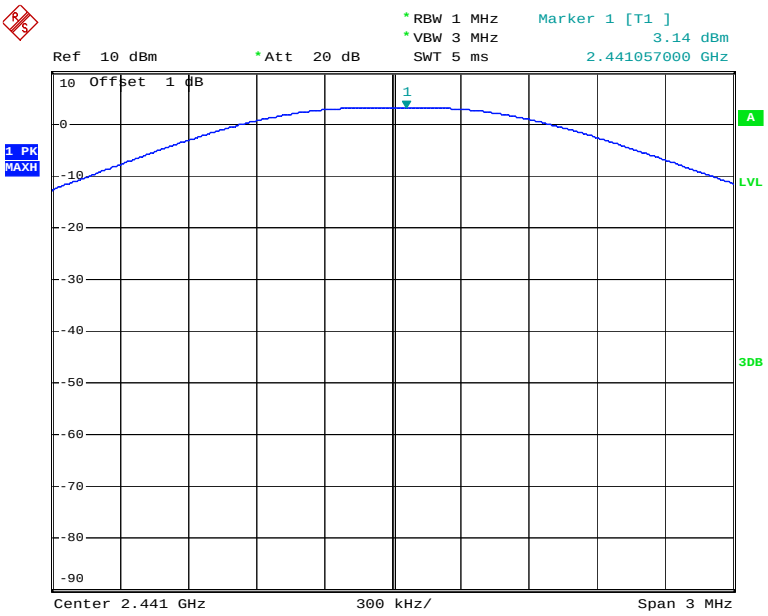
BDR Mode (GFSK):

Output Power, Low



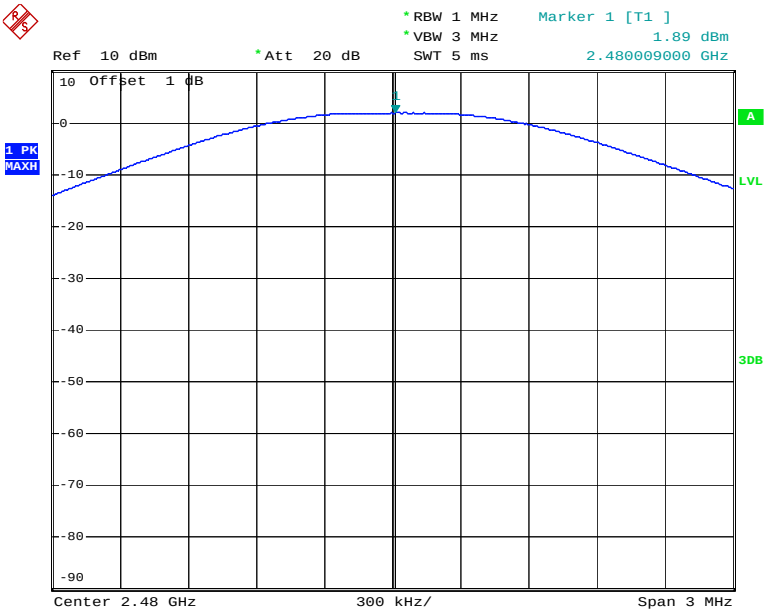
Date: 28.AUG.2013 09:28:01

Output Power, Middle



Date: 28.AUG.2013 09:41:14

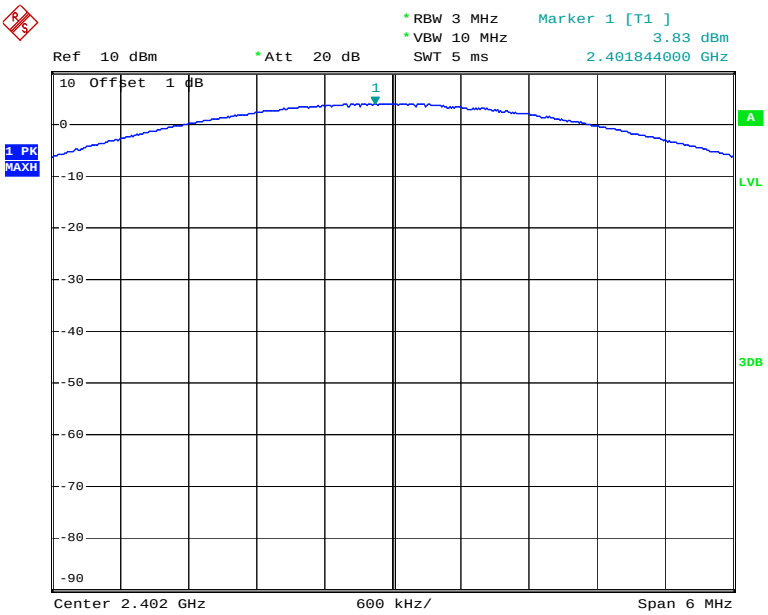
Output Power, High



Date: 28.AUG.2013 09:46:34

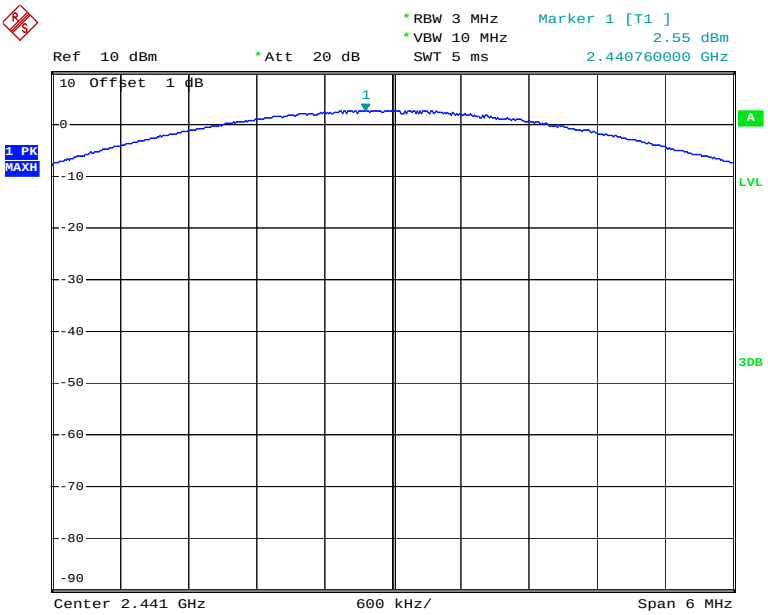
EDR Mode (π/4-DQPSK):

Output Power, Low



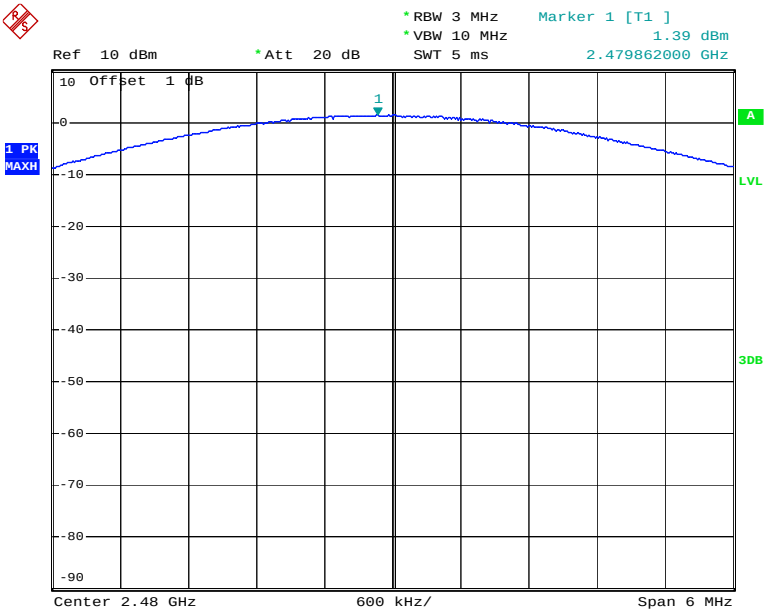
Date: 28.AUG.2013 10:07:53

Output Power, Middle



Date: 28.AUG.2013 10:08:25

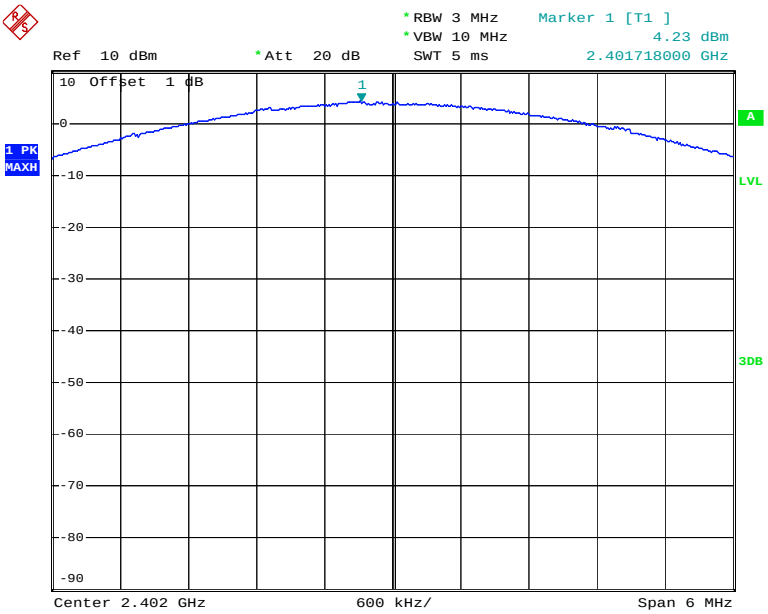
Output Power, High



Date: 28.AUG.2013 10:08:53

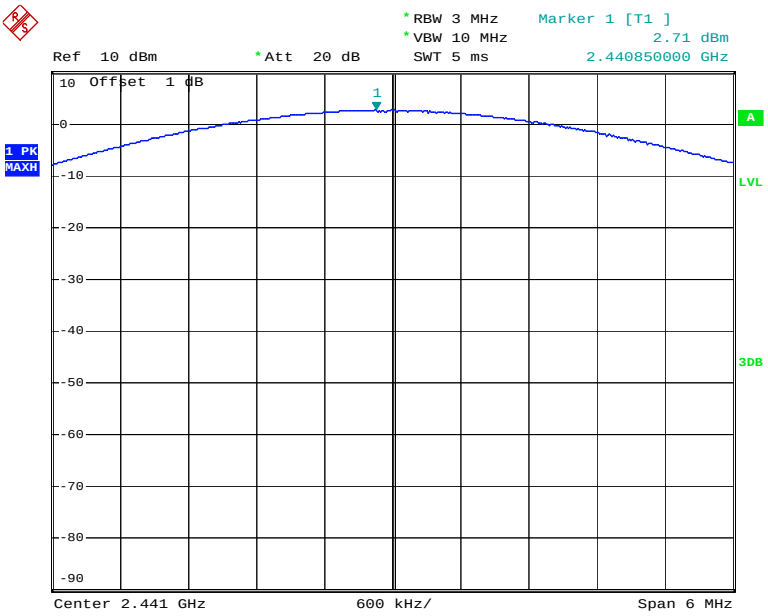
EDR Mode (8-DPSK):

Output Power, Low



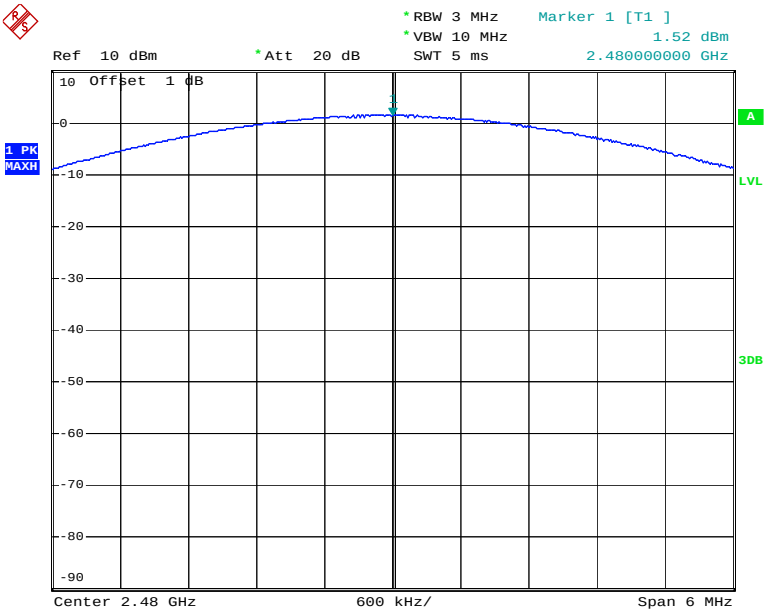
Date: 28.AUG.2013 10:49:46

Output Power, Middle



Date: 28.AUG.2013 10:49:17

Output Power, High



Date: 28.AUG.2013 10:48:46

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 both RBW and VBW 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
R&S	Spectrum analyzer	ESPI	100337	2012-11-10	2013-11-9

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

Test Data

Environmental Conditions

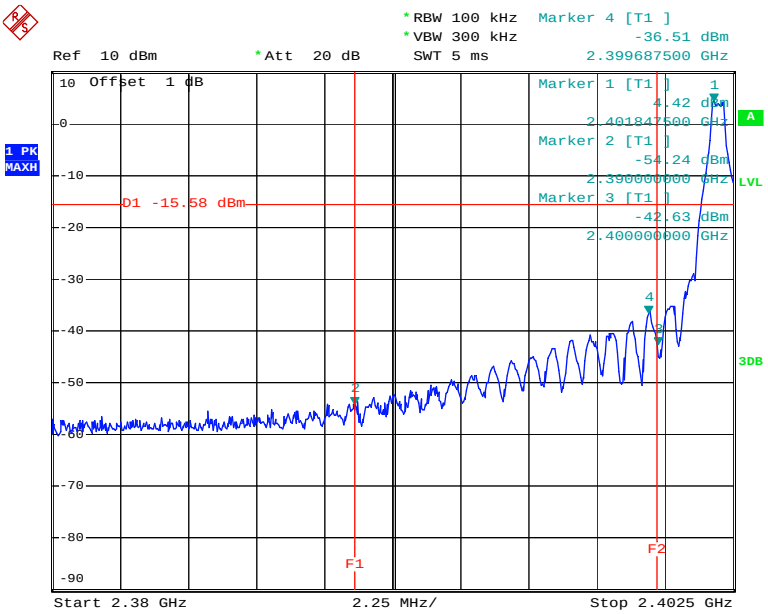
Temperature:	26.3°C
Relative Humidity:	64 %
ATM Pressure:	100kPa

The testing was performed by Leon Chen on 2013-08-28.

Test Result: Compliance

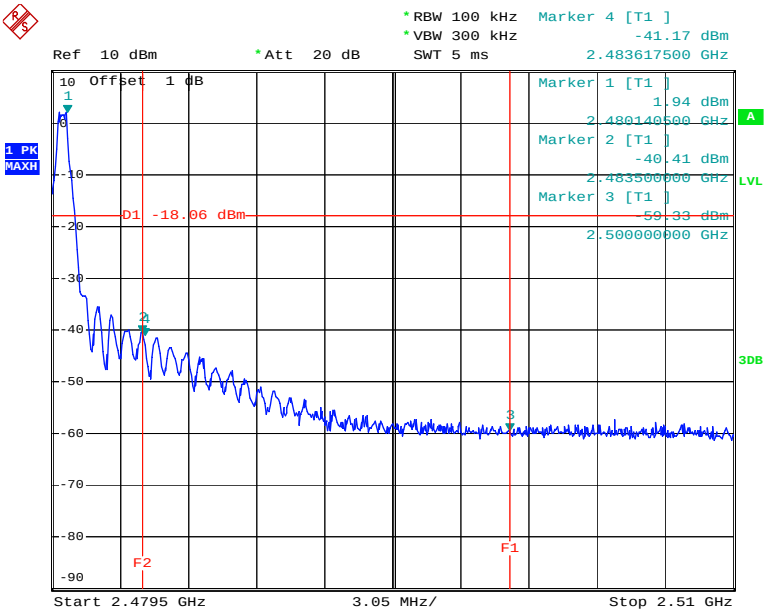
BDR Mode (GFSK):

Band Edge, Left Side



Date: 28.AUG.2013 09:39:46

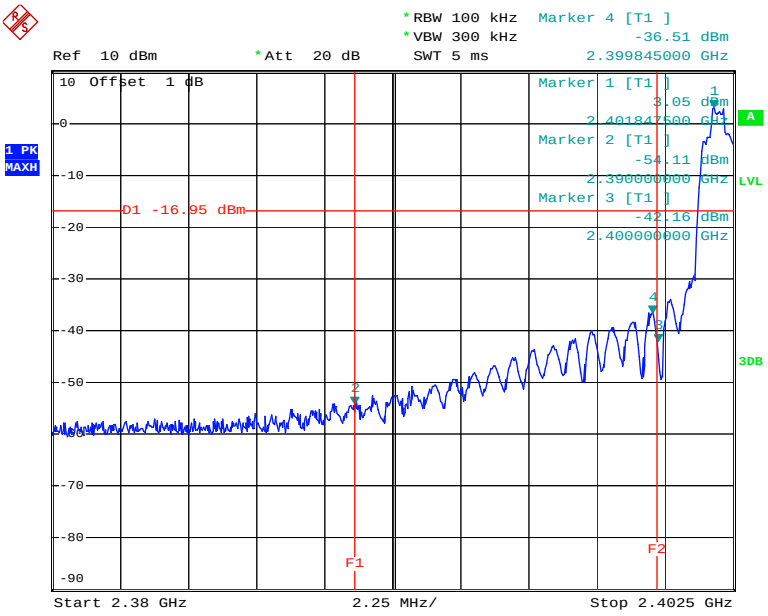
Band Edge, Right Side



Date: 28.AUG.2013 09:53:50

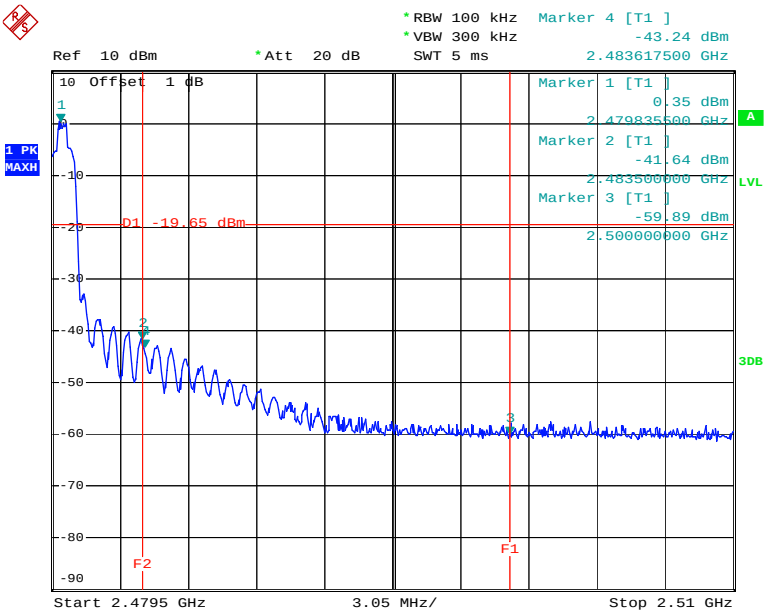
EDR Mode (π/4-DQPSK):

Band Edge, Left Side



Date: 28.AUG.2013 10:40:03

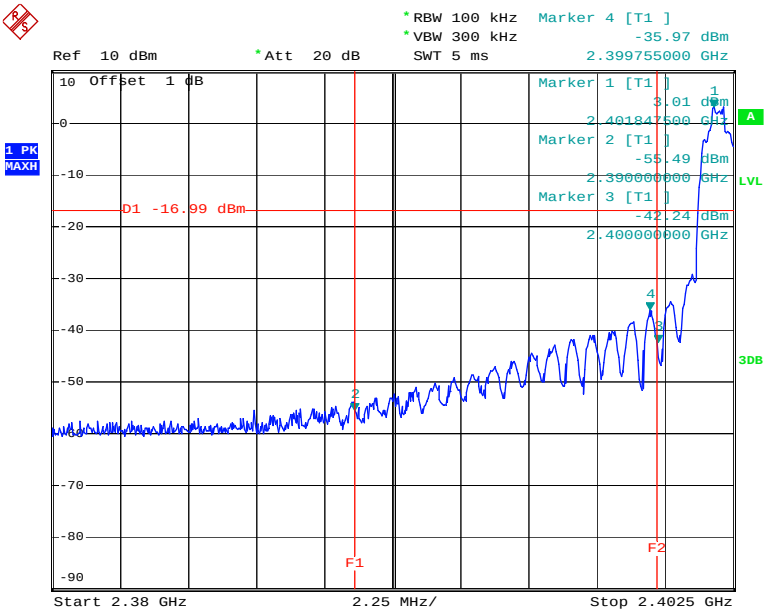
Band Edge, Right Side



Date: 28.AUG.2013 10:38:11

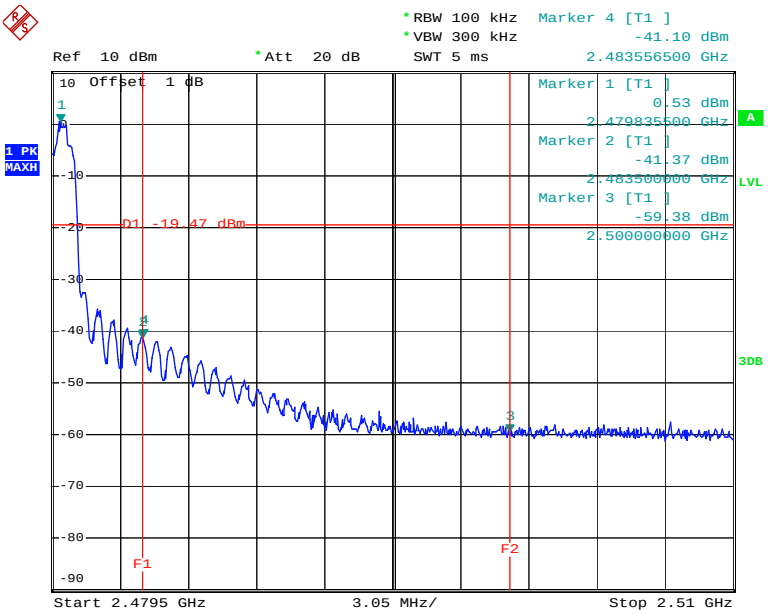
EDR Mode (8-DPSK):

Band Edge, Left Side



Date: 28.AUG.2013 10:42:08

Band Edge, Right Side



Date: 28.AUG.2013 10:44:45

DECLARATION LETTER

Binatone Electronics International Ltd.
Add: Floor 23A, 9 Des Voeux Road West, Sheung Wan, Hong Kong, China
Tel: 00852-28027388 Fax: 00852-28028138

DECLARATION OF SIMILARITY

2013-09-24

Dear Sir or Madam:

We, Binatone Electronics International Ltd., hereby declare that our product: GSM phone, models: The Brick and The Brick Power. Please see the difference between the models as below. Compared with The Brick Power, the model: The Brick has better electromagnetic compatibility performance.

A description of the differences between the tested model and those that are declared similar areas follows:

Models: The Brick hasn't the USB connector or power bank related components on PCBA.
The Brick Power has the USB connector and power bank related components on PCBA.

Please contact me should there be need for any additional clarification or information.

Best Regards,

Signature: 

Patrick Cheung, Senior Product Manager

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