


FCC PART 15.247 TEST REPORT

For

Chengdu Vantron Technology, Ltd.

No.5 GaoPeng Road, Hi-Tech Zone, Chengdu, SiChuan, P.R. China 610045

FCC ID: 2AAGETAB185-SKLU

Report Type: Original Report	Equipment Name: Embedded Computer
Report Number: RSC180208001-0E	
Report Date: 2018-07-30	
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TABLE OF CONTENTS

GENERAL INFORMATION	4
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	4
MECHANICAL DESCRIPTION OF EUT	4
OBJECTIVE	4
RELATED SUBMITTAL(S)/GRANT(S)	4
MEASUREMENT UNCERTAINTY	5
TEST METHODOLOGY	5
TEST FACILITY	5
SYSTEM TEST CONFIGURATION	6
DESCRIPTION OF TEST CONFIGURATION	6
EQUIPMENT MODIFICATIONS	6
EUT EXERCISE SOFTWARE	6
SUPPORT EQUIPMENT LIST AND DETAILS	6
EXTERNAL I/O CABLE	7
BLOCK DIAGRAM OF TEST SETUP	7
SUMMARY OF TEST RESULTS	8
TEST EQUIPMENTS LIST	9
FCC §15.247 & §1.1310 & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE).....	11
APPLICABLE STANDARD	11
FCC §15.203 - ANTENNA REQUIREMENT	14
APPLICABLE STANDARD	14
ANTENNA CONNECTOR CONSTRUCTION	14
FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS.....	15
APPLICABLE STANDARD	15
EUT SETUP.....	15
EMI TEST RECEIVER SETUP	15
TEST PROCEDURE	15
CORRECTED AMPLITUDE & MARGIN CALCULATION	16
TEST DATA	16
FCC §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS.....	25
APPLICABLE STANDARD	25
EUT SETUP.....	25
EMI TEST RECEIVER & SPECTRUM ANALYZER SETUP	26
TEST PROCEDURE	26
CORRECTED AMPLITUDE & MARGIN CALCULATION	26
TEST DATA	26
FCC §15.247(A) (1) - CHANNEL SEPARATION TEST	41
APPLICABLE STANDARD	41
TEST PROCEDURE	41
TEST DATA	41
FCC §15.247(a) (1) – 20 dB BANDWIDTH TESTING	54
APPLICABLE STANDARD	54
TEST PROCEDURE	54
TEST DATA	54

FCC §15.247(a) (1) (iii) - QUANTITY OF HOPPING CHANNEL TEST	65
APPLICABLE STANDARD	65
TEST PROCEDURE	65
TEST DATA	65
FCC §15.247(a) (1) (iii) - TIME OF OCCUPANCY (DWELL TIME)	72
APPLICABLE STANDARD	72
TEST PROCEDURE	72
TEST DATA	72
FCC §15.247(b) (1) - PEAK OUTPUT POWER MEASUREMENT	103
APPLICABLE STANDARD	103
TEST PROCEDURE	103
TEST DATA	103
FCC §15.247(d) - BAND EDGES TESTING	114
APPLICABLE STANDARD	114
TEST PROCEDURE	114
TEST DATA	114

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The **Chengdu Vantron Technology, Ltd.**'s product, model number: **VT-TAB185-SKLU** (FCC ID: 2AAGETAB185-SKLU) or the "EUT" as referred to in this report was the **Embedded Computer**.

Mechanical Description of EUT

The EUT was measured approximately: 471.86 mm (L) x 283.86 mm (W) x 18.01 mm (H).
The EUT has two power input ports, details see EUT external picture.

Rated input voltage: DC 15.2V rechargeable Li-ion battery or DC19V from adapter.

Switching Power Adapter Information

Manufacturer: FSP Group Inc.

Model: FSP065-REBN2

Input: AC 100-240V; 50/60Hz

Output: DC 19V, 3.42A

**All measurement and test data in this report was gathered from final production sample, serial number: 180208001/01 (assigned by the BACL, Chengdu). It may have deviation from any other sample. The EUT supplied by the applicant was received on 2018-02-02, and EUT conformed to test requirement.*

Objective

This report is prepared on behalf of **Chengdu Vantron Technology, Ltd.** in accordance with Part 2, Subpart J, Part 15, Subparts A and C of the Federal Communications Commission's rules.

The tests were performed in order to determine the Bluetooth BDR and EDR mode 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 JBC submissions with FCC ID: 2AAGETAB185-SKLU

FCC Part 15.247 DTS submissions with FCC ID: 2AAGETAB185-SKLU

FCC Part 15.407 NII submissions with FCC ID: 2AAGETAB185-SKLU

Measurement Uncertainty

Item			Uncertainty
AC power line conducted emission			2.71 dB
Radiated Emission(Field Strength)	30MHz-200MHz	H	4.57 dB
		V	4.81 dB
	200MHz-1GHz	H	5.69 dB
		V	6.07 dB
	1GHz-6GHz		5.49 dB
	6GHz-18GHz		5.57 dB
	18GHz-40GHz		5.48 dB
Conducted RF Power			±0.61dB
Power Spectrum Density			±0.61dB
Occupied Bandwidth			±5%
Conducted Emission			±1.5dB
Humidity			±5%
Temperature			±1℃

Test Methodology

All measurements contained in this report were conducted with:

ANSI C63.10-2013 American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

Test Facility

The test site used by Bay Area Compliance Laboratories Corp. (Chengdu) to collect test data is located No.5040, Huilongwan Plaza, No. 1, Shawan Road, Jinniu District, Chengdu, Sichuan, China.

Bay Area Compliance Laboratories Corp. (Chengdu) lab is accredited to ISO/IEC 17025 by A2LA (Lab code: 4324.01) and the FCC designation No. CN1186 under the FCC KDB 974614 D01. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in engineering mode.

Equipment Modifications

No modification was made to the EUT.

EUT Exercise Software

Test software: "DRTU" installed in device was used during test, the setting was configured as below:

For 7265NGW Module

Test Software Version		DRTU		
Test Frequency		2402MHz	2441MHz	2480MHz
GFSK	Power Level	9	9	9
$\pi/4$ -DQPSK	Power Level	5	5	5
8PSK	Power Level	5	5	5

For 8265NGW Module

Test Software Version		DRTU		
Test Frequency		2402MHz	2441MHz	2480MHz
GFSK	Power Level	12	12	12
$\pi/4$ -DQPSK	Power Level	9	9	9
8PSK	Power Level	8	8	8

Support Equipment List and Details

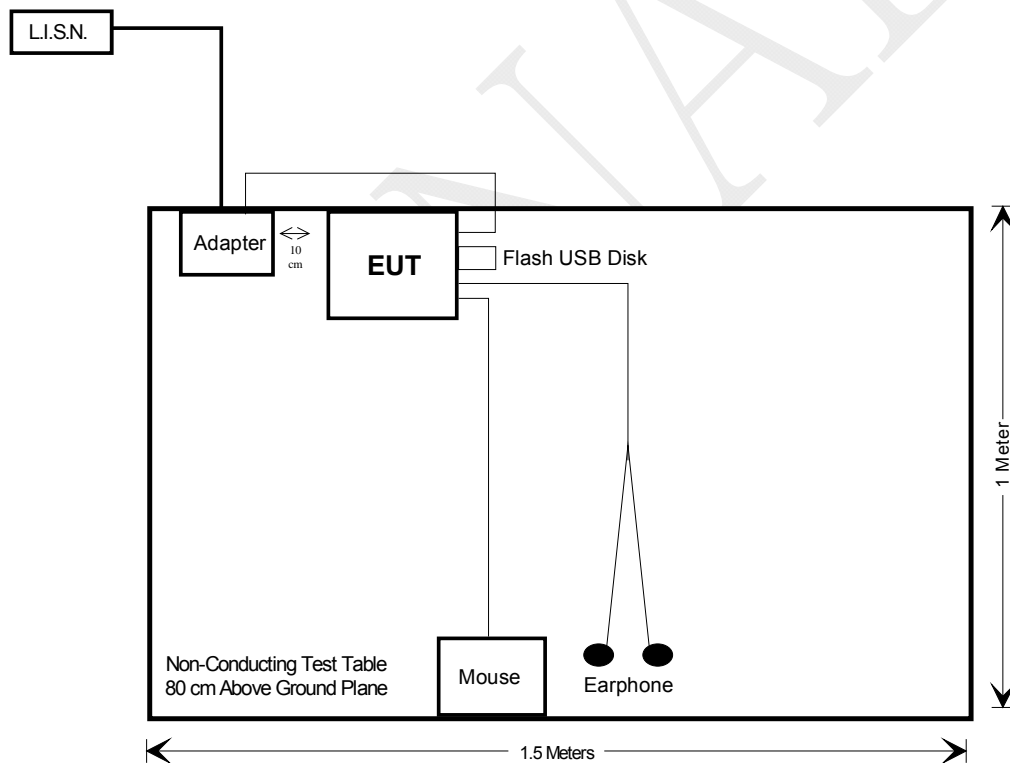
Manufacturer	Description	Model	Serial Number
Kingston	Flash USB Disk	DTSE9	7869951
HUAWEI	Earphone	P9	None
Logitech	Mouse	M-U0004	810-U01808

External I/O Cable

Cable Description	Length (m)	From	To
Unshielded Power Cable	1.2	Adapter	EUT
Unshielded Earphone Cable	1.0	EUT	Earphone
Unshielded USB Cable	1.8	EUT	Mouse

Block Diagram of Test Setup

Conducted Emissions



SUMMARY OF TEST RESULTS

For 7265NGW Module and 8265NGW Module

FCC Rules	Description of Test	Result
FCC §15.247 & §1.1310 & §2.1091	Maximum Permissible Exposure (MPE)	Compliance
§15.203	Antenna Requirement	Compliance
§15.207 (a)	Conducted Emissions	Compliance
§15.205, §15.209, §15.247(d)	Spurious 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

TEST EQUIPMENTS LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted Emission					
Rohde & Schwarz	EMI Test Receiver	ESCS 30	836858/0016	2017-12-02	2018-12-01
Rohde & Schwarz	L.I.S.N.	ENV216	100018	2017-05-20	2018-05-19
Rohde & Schwarz	RF Limiter	ESH3Z2	DE14781	2017-11-10	2018-11-09
Unknown	Conducted Cable	L-E003	000003	2017-11-10	2018-11-09
Rohde & Schwarz	EMC32	EMC32	V 8.52.0	N/A	N/A
Radiated Emission					
EMCT	Semi-Anechoic Chamber	966	001	2017-05-18	2020-05-17
Sonoma	Pre-Amplifier	310N	186684	2017-08-18	2018-08-17
Rohde & Schwarz	EMI Test Receiver	ESIB 40	100215	2017-09-12	2018-09-11
Rohde & Schwarz	EMI Test Receiver	ESCI	100028	2017-05-20	2018-05-19
A.H. Systems, Inc	Amplifier	PAM-0118P	467	2017-08-10	2018-08-09
EM Electronics	RF Pre-Amplifier	EM18G40	060725	2018-03-28	2019-03-27
SUNOL SCIENCES	Broadband Antenna	JB3	A121808	2017-05-19	2020-05-18
ETS	Horn Antenna	3115	003-6076	2017-05-19	2020-05-18
A.H. Systems, Inc	Horn Antenna	SAS-574	510	2017-05-19	2020-05-18
INMET	Attenuator	18N-6dB	64671	2017-11-10	2018-11-09
Sinoscite.,Co Ltd	Reject Band Filter	BSF5150-5850MN	0899V2	2017-11-10	2018-11-09
Unknown	RF Cable (below 1GHz)	L-E005	000005	2017-11-10	2018-11-09
Unknown	RF Cable (below 1GHz)	T-E128	000128	2017-11-10	2018-11-09
Unknown	RF Cable (below 1GHz)	T-E129	000129	2017-11-10	2018-11-09
Unknown	RF Cable (above 1GHz)	T-E069	000069	2017-11-10	2018-11-09
Micro-coax	RF Cable (above 1GHz)	T-E209	MFR 64639 2310	2018-03-14	2019-03-13
Rohde & Schwarz	EMC32	EMC32	V 8.52.0	N/A	N/A

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
RF Conducted Test					
Rohde & Schwarz	Spectrum Analyzer	FSEM30	100018	2017-05-18	2018-05-17
WEINSCHL ENGINEERING	Attenuator	1A10dB	AA4135	2017-11-10	2018-11-09
Agilent	USB Wideband Power Sensor	U2021XA	MY53320008	2018-01-19	2019-01-18
E-Microwave	DC Block	EMDCB-00036	OE01304225	2017-12-09	2018-12-08
Unknown	RF Cable	No	000007	Each Time	/

* **Statement of Traceability:** BACL (Chengdu) attested that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

FCC §15.247 & §1.1310 & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to subpart 15.247 and subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

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

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

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

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

Per 447498 D01 General RF Exposure Guidance v06, simultaneous transmission MPE test exclusion applies when the sum of the MPE for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modeled or measured field strengths or power density, is ≤ 1.0.

Calculated Formulary:

Predication of MPE limit at a given distance

$$S = PG/4\pi R^2$$

Where:

S = power density (in appropriate units, e.g. mW/cm²);

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);

For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

Calculated Data:

MPE evaluation for single transmission:

Mode	Frequency Range (MHz)	Antenna Gain		Tune-up Conducted Power		Evaluation Distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
		(dBi)	(numeric)	(dBm)	(mW)			
7265NGW WLAN Module								
WLAN	2412-2462	3.70	2.34	16.00	39.81	20	0.019	1.00
	5150-5250	3.70	2.34	15.50	35.48	20	0.017	1.00
	5725-5850	3.70	2.34	16.00	39.81	20	0.019	1.00
BT 3.0	2402-2480	3.70	2.34	5.50	3.55	20	0.002	1.00
BLE	2402-2480	3.70	2.34	3.00	2.00	20	0.001	1.00
8265NGW WLAN Module								
WLAN	2412-2462	3.70	2.34	15.00	31.62	20	0.015	1.00
	5150-5250	3.70	2.34	15.00	31.62	20	0.015	1.00
	5725-5850	3.70	2.34	15.50	35.48	20	0.017	1.00
BT 3.0	2402-2480	3.70	2.34	9.0	7.94	20	0.004	1.00
BLE	2402-2480	3.70	2.34	4.50	2.82	20	0.001	1.00
LTE Module (FCC ID: RI7LN940A)								
WCDMA Band 5	824-849	3.0	2.0	24	251.19	20	0.100	0.549
LTE Band 5	824-849	3.0	2.0	24	251.19	20	0.100	0.549
WCDMA Band 2	1850-1910	3.0	2.0	25	316.23	20	0.126	1.00
LTE Band 2	1850-1910	3.0	2.0	25	316.23	20	0.126	1.00
LTE Band 25	1850-1915	3.0	2.0	25	316.23	20	0.126	1.00
WCDMA Band 4	1710-1755	3.0	2.0	25	316.23	20	0.126	1.00
LTE Band 4	1710-1755	3.0	2.0	25	316.23	20	0.126	1.00
LTE Band 7	2500-2570	3.0	2.0	25	316.23	20	0.126	1.00
LTE Band 12	699-716	3.0	2.0	24	251.19	20	0.100	0.466
LTE Band 13	777-787	3.0	2.0	24	251.19	20	0.100	0.518
LTE Band 17	704-716	3.0	2.0	24	251.19	20	0.100	0.469
LTE Band 30	2305-2315	3.0	2.0	25	316.23	20	0.126	1.00
LTE Band 38	2570-2620	3.0	2.0	25	316.23	20	0.126	1.00
LTE Band 41	2496-2690	3.0	2.0	25	316.23	20	0.126	1.00
LTE Band 66	1710-1780	3.0	2.0	25	316.23	20	0.126	1.00
LTE Band 26	814-849	3.0	2.0	24	251.19	20	0.100	0.543

MPE evaluation for simultaneous transmission:

- Note:** 1. Two Wi-Fi module can transmit simultaneously.
2. The Wi-Fi(2.4G) or Wi-Fi(5G) and Bluetooth can not transmit simultaneously.
3. Wi-Fi or Bluetooth and WCDMA/LTE can transmit at the same time, MPE evaluation is as below formula:

$PD1/Limit1 + PD2/Limit2 + \dots < 1$, PD (Power Density)

The worst case is as below:

Max MPE of Wi-Fi(7265NGW) + Max MPE of Wi-Fi(8265NGW) + Max MPE of LTE
= $0.019/1.0 + 0.017/1.0 + 0.10/0.466 = 0.251 < 1.0$

Result: MPE evaluation of single and simultaneous transmission meet the requirement of standard.

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 six built-in antennas (two 2.4G/5G Wi-Fi/Bluetooth antennas, antenna gain is 3.7dBi; two 2.4G/5G Wi-Fi antennas, antenna gain is 3.7dBi; one LTE main antenna and one LTE diversity antenna, antenna gain is 3dBi), which connected to the main board with IPEX socket, fulfill the requirement of this section. Please refer to the EUT internal photo and below table for detail.

Antenna Information:

Module	Antenna	RF	Manufacturer	Model	Antenna Gain(Max)
7265NGW	1	2.4G /5G Wi-Fi/ BT3.0/BLE	Dongguan Fange Electronics	34.WF24581201	3.7dBi
	2	2.4G /5G Wi-Fi			
8265NGW	1	2.4G /5G Wi-Fi	Dongguan Fange Electronics	34.WF24581201	3.7dBi
	2	2.4G /5G Wi-Fi/ BT3.0/BLE			
LTE	Main	4G	Jinchang Electron	JCG142	3dBi
	Diversity	4G			

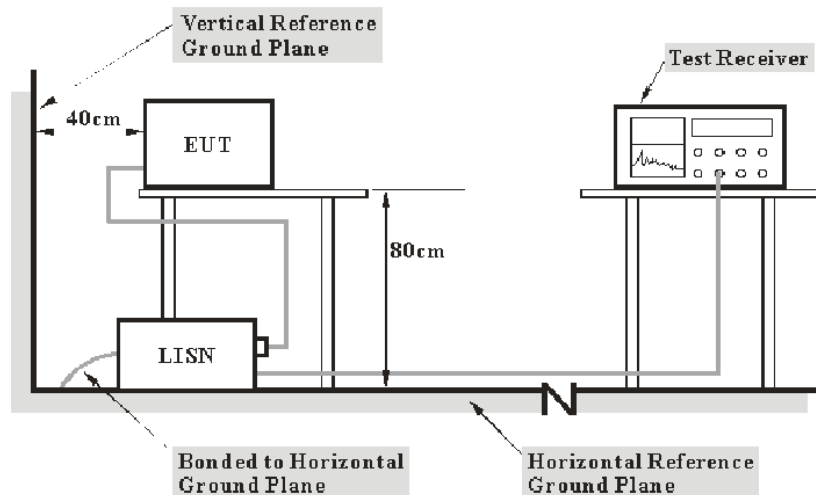
Result: Compliance.

FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC§15.207

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 C63.10-2013 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 an AC 120 V/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 limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

Test Data

Environmental Conditions

Temperature:	23 °C
Relative Humidity:	46 %
ATM Pressure:	95.9 kPa

The testing was performed by Tom Tang on 2018-03-28.

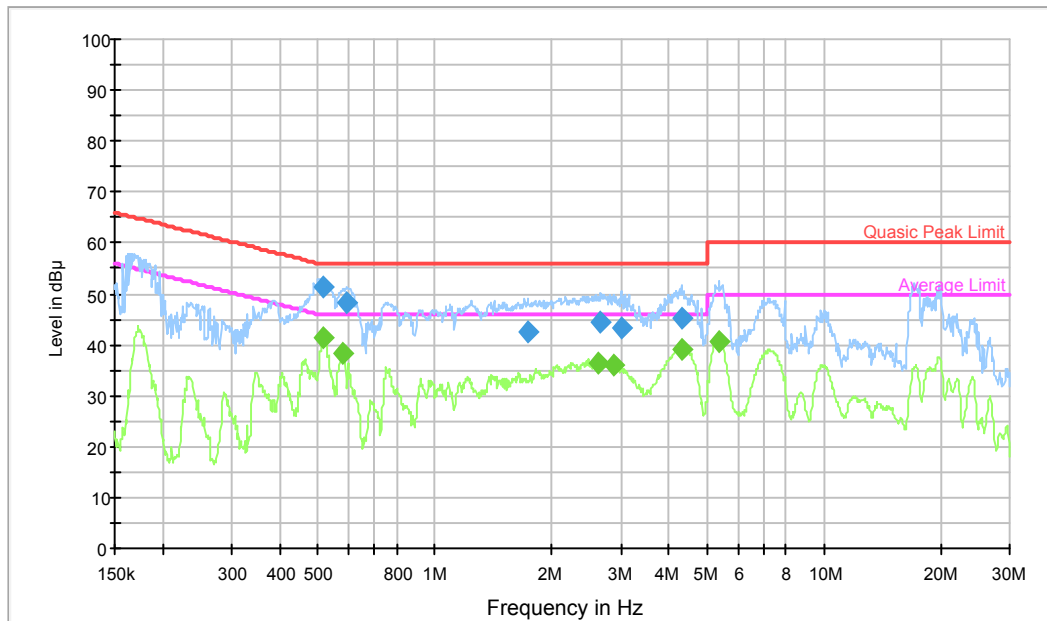
Test Mode: Transmitting

Low channel of EDR (8DPSK) mode - Worst Case

For 7265NGW Module

DC Input 1

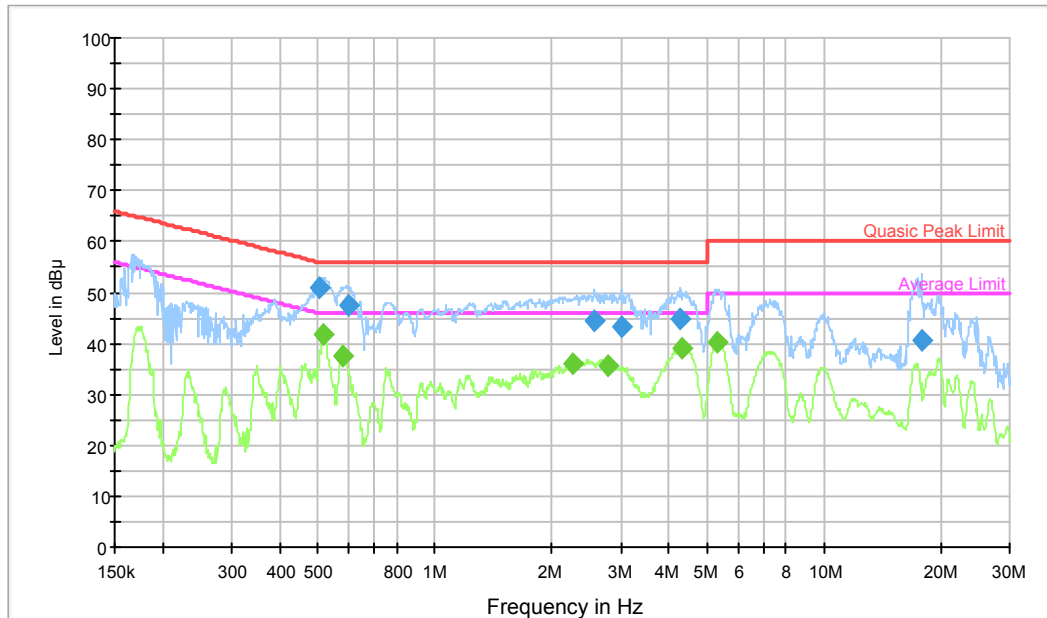
AC120 V, 60 Hz, Line:



Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corrected Factor (dB)	Margin (dB)	Limit (dBμV)
0.512950	51.2	200.0	9.000	L1	19.8	4.8	56.0
0.592228	48.2	200.0	9.000	L1	19.8	7.8	56.0
1.733235	42.6	200.0	9.000	L1	19.8	13.4	56.0
2.667463	44.3	200.0	9.000	L1	19.9	11.7	56.0
3.006837	43.2	200.0	9.000	L1	19.9	12.8	56.0
4.289536	45.0	200.0	9.000	L1	19.9	11.0	56.0

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corrected Factor (dB)	Margin (dB)	Limit (dBμV)
0.512950	41.2	200.0	9.000	L1	19.8	4.8	46.0
0.578211	38.3	200.0	9.000	L1	19.8	7.7	46.0
2.625207	36.3	200.0	9.000	L1	19.9	9.7	46.0
2.866192	36.0	200.0	9.000	L1	19.9	10.0	46.0
4.306694	39.3	200.0	9.000	L1	19.9	6.7	46.0
5.342746	40.7	200.0	9.000	L1	20.0	9.3	50.0

AC120 V, 60 Hz, Neutral:

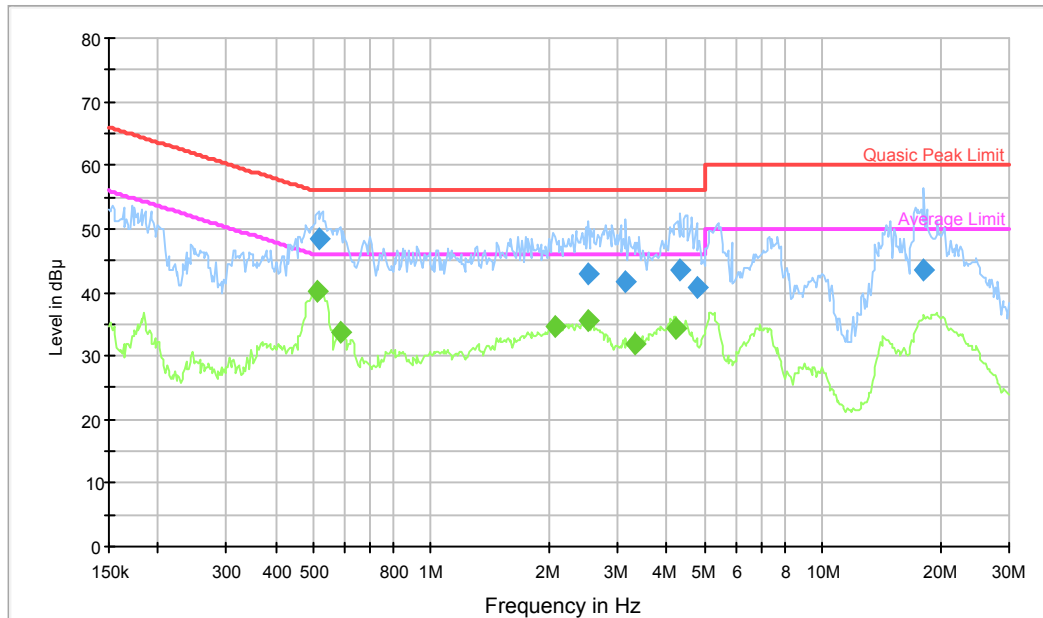


Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corrected Factor (dB)	Margin (dB)	Limit (dBμV)
0.506844	50.9	200.0	9.000	N	19.5	5.1	56.0
0.596975	47.5	200.0	9.000	N	19.5	8.5	56.0
2.563075	44.4	200.0	9.000	N	19.6	11.6	56.0
3.018864	43.2	200.0	9.000	N	19.6	12.8	56.0
4.272446	44.8	200.0	9.000	N	19.7	11.2	56.0
17.837984	40.5	200.0	9.000	N	19.9	19.5	60.0

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corrected Factor (dB)	Margin (dB)	Limit (dBμV)
0.517062	41.7	200.0	9.000	N	19.5	4.3	46.0
0.580524	37.4	200.0	9.000	N	19.5	8.6	46.0
2.264729	36.2	200.0	9.000	N	19.5	9.8	46.0
2.798356	35.5	200.0	9.000	N	19.6	10.5	46.0
4.289536	39.0	200.0	9.000	N	19.7	7.0	46.0
5.321460	40.3	200.0	9.000	N	19.7	9.7	50.0

DC Input 2

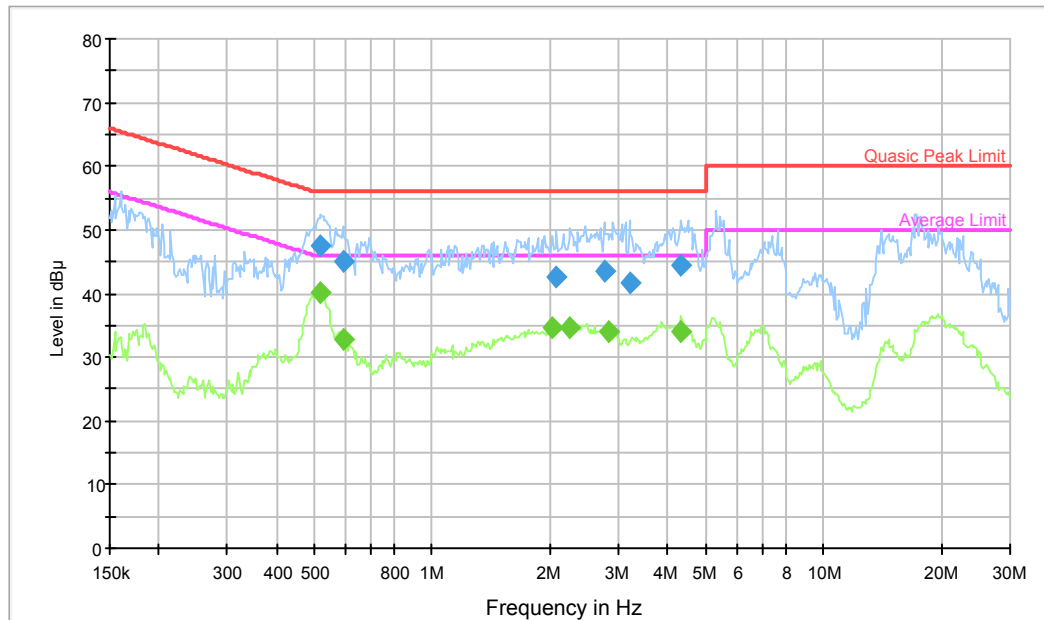
AC120 V, 60 Hz, Line:



Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corrected Factor (dB)	Margin (dB)	Limit (dBμV)
0.515791	48.5	200.0	9.000	L1	19.7	7.5	56.0
2.518372	42.9	200.0	9.000	L1	19.7	13.1	56.0
3.147856	41.7	200.0	9.000	L1	19.7	14.3	56.0
4.329484	43.7	200.0	9.000	L1	19.8	12.3	56.0
4.763898	40.8	200.0	9.000	L1	19.8	15.2	56.0
18.169036	43.4	200.0	9.000	L1	20.1	16.6	60.0

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corrected Factor (dB)	Margin (dB)	Limit (dBμV)
0.511698	40.2	200.0	9.000	L1	19.7	5.8	46.0
0.585926	33.7	200.0	9.000	L1	19.7	12.3	46.0
2.063510	34.6	200.0	9.000	L1	19.7	11.4	46.0
2.518372	35.5	200.0	9.000	L1	19.7	10.5	46.0
3.302007	32.0	200.0	9.000	L1	19.7	14.0	46.0
4.227217	34.3	200.0	9.000	L1	19.8	11.7	46.0

AC120 V, 60 Hz, Neutral:



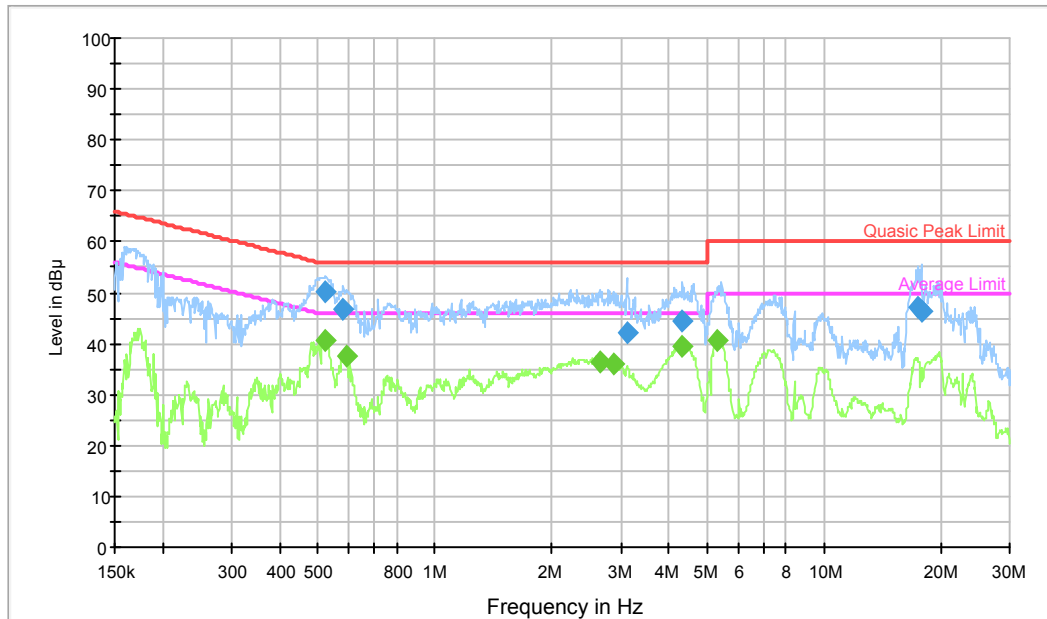
Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corrected Factor (dB)	Margin (dB)	Limit (dBμV)
0.519918	47.6	200.0	9.000	N	19.8	8.4	56.0
0.590613	45.1	200.0	9.000	N	19.8	10.9	56.0
2.080018	42.6	200.0	9.000	N	19.8	13.4	56.0
2.749070	43.6	200.0	9.000	N	19.8	12.4	56.0
3.198423	41.8	200.0	9.000	N	19.9	14.2	56.0
4.329484	44.6	200.0	9.000	N	19.9	11.4	56.0

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corrected Factor (dB)	Margin (dB)	Limit (dBμV)
0.519918	40.1	200.0	9.000	N	19.8	5.9	46.0
0.590613	32.9	200.0	9.000	N	19.8	13.1	46.0
2.030886	34.8	200.0	9.000	N	19.8	11.2	46.0
2.252540	34.8	200.0	9.000	N	19.8	11.2	46.0
2.838101	33.9	200.0	9.000	N	19.9	12.1	46.0
4.295123	34.1	200.0	9.000	N	19.9	11.9	46.0

For 8265NGW Module

DC Input 1

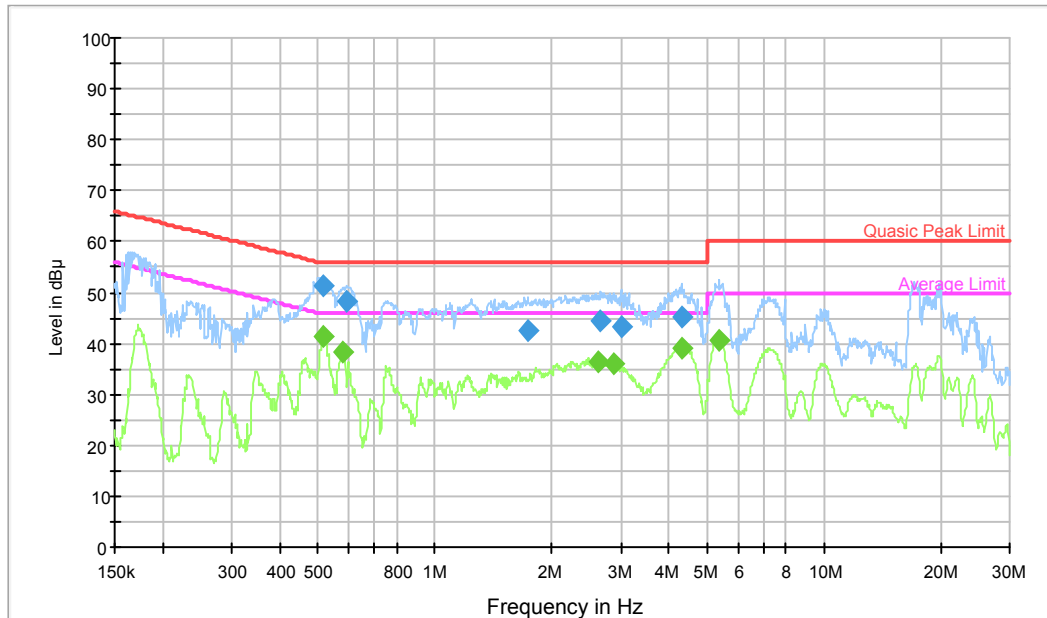
AC120 V, 60 Hz, Line:



Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corrected Factor (dB)	Margin (dB)	Limit (dBμV)
0.523291	50.0	200.0	9.000	L1	19.8	6.0	56.0
0.580524	46.8	200.0	9.000	L1	19.8	9.2	56.0
3.216831	42.3	200.0	9.000	L1	19.9	13.7	56.0
4.323921	44.6	200.0	9.000	L1	19.9	11.4	56.0
17.495463	47.0	200.0	9.000	L1	20.1	13.0	60.0
17.766917	46.4	200.0	9.000	L1	20.1	13.6	60.0

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corrected Factor (dB)	Margin (dB)	Limit (dBμV)
0.531217	40.7	200.0	9.000	L1	19.8	5.3	46.0
0.592228	37.4	200.0	9.000	L1	19.8	8.6	46.0
2.646251	36.5	200.0	9.000	L1	19.9	9.5	46.0
2.866192	36.0	200.0	9.000	L1	19.9	10.0	46.0
4.333921	39.6	200.0	9.000	L1	19.9	6.4	46.0
5.311460	40.8	200.0	9.000	L1	20.0	9.2	50.0

AC120 V, 60 Hz, Neutral:

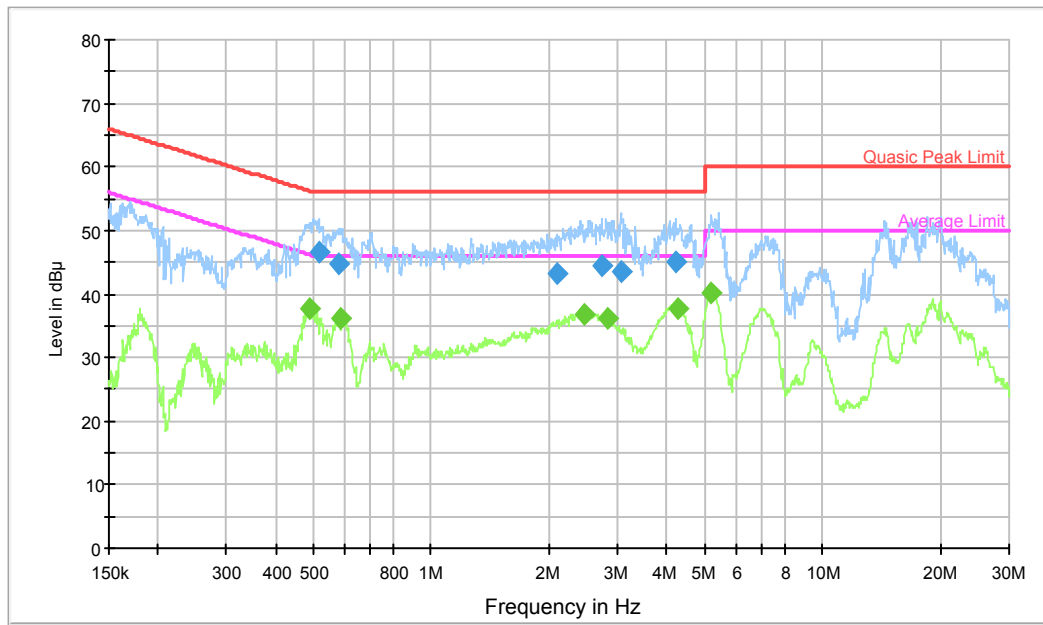


Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corrected Factor (dB)	Margin (dB)	Limit (dBμV)
0.513950	51.4	200.0	9.000	N	19.8	4.6	56.0
0.592228	48.1	200.0	9.000	N	19.8	7.9	56.0
1.733235	42.5	200.0	9.000	N	19.8	13.5	56.0
2.667463	44.3	200.0	9.000	N	19.9	11.7	56.0
3.016847	43.4	200.0	9.000	N	19.9	12.6	56.0
4.289536	45.0	200.0	9.000	N	19.9	11.0	56.0

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corrected Factor (dB)	Margin (dB)	Limit (dBμV)
0.512950	41.0	200.0	9.000	N	19.8	5.0	46.0
0.578211	38.3	200.0	9.000	N	19.8	7.7	46.0
2.625207	36.2	200.0	9.000	N	19.9	9.8	46.0
2.876194	36.0	200.0	9.000	N	19.9	10.0	46.0
4.306694	39.3	200.0	9.000	N	19.9	6.7	46.0
5.352746	40.8	200.0	9.000	N	20.0	9.2	50.0

DC Input 2

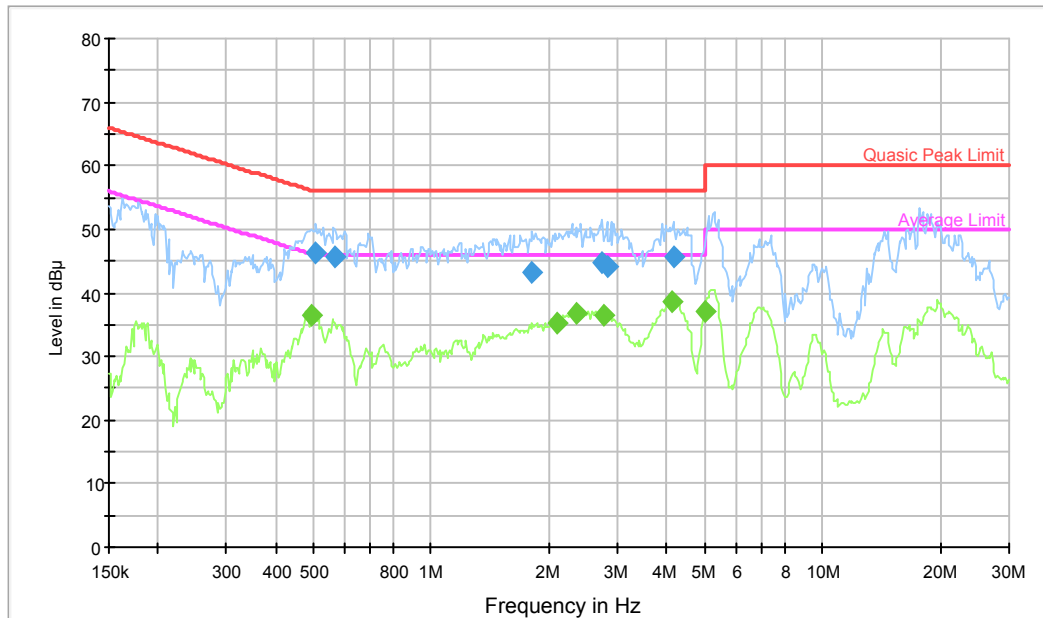
AC120 V, 60 Hz, Line:



Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corrected Factor (dB)	Margin (dB)	Limit (dBμV)
0.515002	46.6	200.0	9.000	L1	19.7	9.4	56.0
0.580524	44.9	200.0	9.000	L1	19.7	11.1	56.0
2.090942	43.4	200.0	9.000	L1	19.7	12.6	56.0
2.732126	44.3	200.0	9.000	L1	19.7	11.7	56.0
3.055236	43.6	200.0	9.000	L1	19.7	12.4	56.0
4.221584	45.2	200.0	9.000	L1	19.8	10.8	56.0

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corrected Factor (dB)	Margin (dB)	Limit (dBμV)
0.490913	37.8	200.0	9.000	L1	19.7	8.3	46.1
0.585177	36.3	200.0	9.000	L1	19.7	9.7	46.0
2.462772	36.7	200.0	9.000	L1	19.7	9.3	46.0
2.820788	36.2	200.0	9.000	L1	19.7	9.8	46.0
4.255424	37.8	200.0	9.000	L1	19.8	8.2	46.0
5.195514	40.1	200.0	9.000	L1	19.8	9.9	50.0

AC120 V, 60 Hz, Neutral:



Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corrected Factor (dB)	Margin (dB)	Limit (dBμV)
0.507637	46.2	200.0	9.000	N	19.7	9.8	56.0
0.567545	45.6	200.0	9.000	N	19.7	10.4	56.0
1.816511	43.1	200.0	9.000	N	19.7	12.9	56.0
2.727252	44.7	200.0	9.000	N	19.7	11.3	56.0
2.815577	44.0	200.0	9.000	N	19.7	12.0	56.0
4.160384	45.6	200.0	9.000	N	19.8	10.4	56.0

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corrected Factor (dB)	Margin (dB)	Limit (dBμV)
0.491712	36.5	200.0	9.000	N	19.7	9.6	46.1
2.096658	35.4	200.0	9.000	N	19.7	10.6	46.0
2.344095	36.7	200.0	9.000	N	19.7	9.3	46.0
2.771062	36.5	200.0	9.000	N	19.7	9.5	46.0
4.127365	38.7	200.0	9.000	N	19.8	7.3	46.0
4.997188	37.0	200.0	9.000	N	19.8	9.0	46.0

Note:

- 1) Corrected Amplitude = Reading + Correction Factor
- 2) Correction Factor = LISN VDF (Voltage Division Factor) + Cable Loss + Transient Limiter
- 3) Margin = Limit – Corrected Amplitude

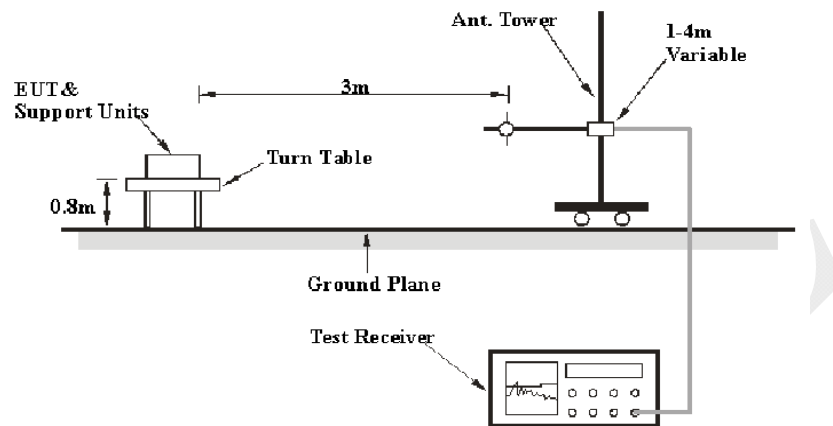
FCC §15.209, §15.205 & §15.247(d) - SPURIOUS EMISSIONS

Applicable Standard

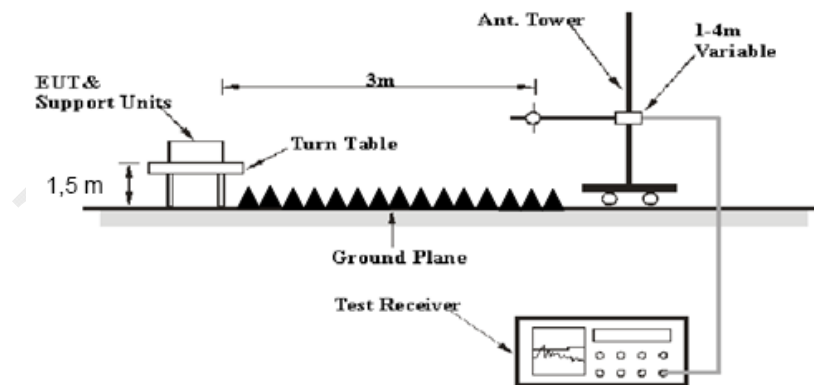
FCC §15.247 (d); §15.209; §15.205;

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 C63.10-2013. 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 one AC 120 V/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 setup was set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
30 MHz – 1000 MHz	120 kHz	300 kHz	120 kHz	QP
Above 1GHz	1MHz	3 MHz	/	PK
	1MHz	10 Hz	/	AV

Test Procedure

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

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

Corrected Amplitude & Margin Calculation

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

$$\text{Corrected Amplitude} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

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:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

Test Data

Environmental Conditions

Temperature:	27 °C
Relative Humidity:	42 %
ATM Pressure:	95.0 kPa

* The testing was performed by Tom Tang on 2018-04-03.

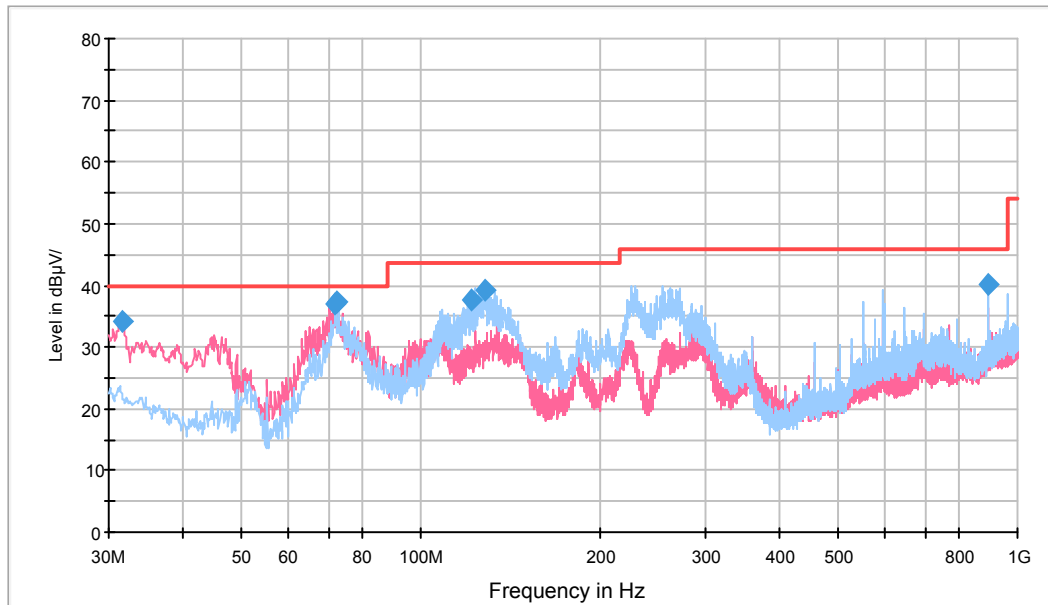
Test Mode: Transmitting

Low channel of EDR mode(8DPSK)-Worst Case

For 7265NGW Module

30 MHz to 1 GHz:

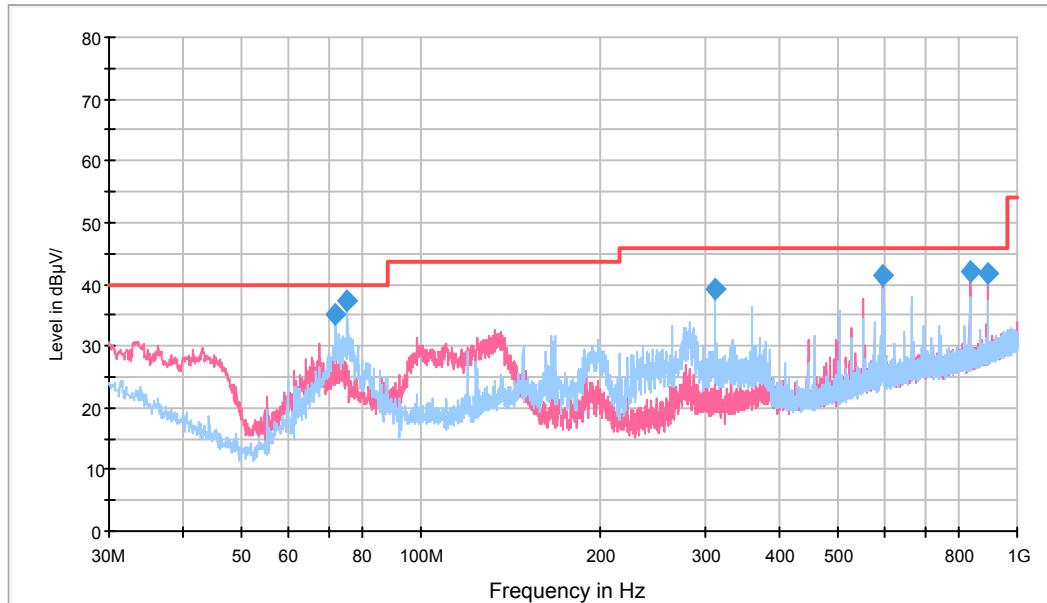
DC Input 1



Frequency (MHz)	QuasicPeak (dBμV/m)	Height (cm)	Polarization	Azimuth (deg)	Corrected Factor (dB/m)	Margin (dB)	Limit (dBμV/m)
31.576250	34.0	100.0	V	98.0	-5.9	6.0	40.0
71.952500	37.1	100.0	V	90.0	-16.6	*2.9	40.0
72.195000	37.4	100.0	V	54.0	-16.6	*2.6	40.0
121.180000	37.6	100.0	H	269.0	-12.0	5.9	43.5
128.212500	39.1	100.0	H	261.0	-10.9	*4.4	43.5
890.996250	40.2	100.0	H	173.0	-0.2	5.8	46.0

*Within measurement uncertainty!

DC Input 2



Frequency (MHz)	QuasicPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corrected Factor (dB/m)	Margin (dB)	Limit (dBµV/m)
72.001000	35.2	100.0	H	337.0	-16.6	4.8	40.0
75.396000	37.4	100.0	H	297.0	-16.6	*2.6	40.0
311.979000	39.3	100.0	H	49.0	-10.4	6.7	46.0
594.055000	41.3	100.0	V	350.0	-4.4	*4.7	46.0
831.996000	42.2	100.0	V	356.0	-1.4	*3.8	46.0
891.069000	41.8	100.0	V	0.0	-0.2	*4.2	46.0

**Within measurement uncertainty!*

1GHz-25GHz:

BDR Mode (GFSK):

Frequency	Receiver		Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Limit	Margin
	Reading	Measurement	Polar	Factor					
MHz	dBμV	PK/AV	H/V	(dB/m)	dB	dB	dBμV/m	dBμV/m	dB
Frequency:2402 MHz									
2402	65.26	PK	H	28.71	3.06	0.00	97.03	N/A	N/A
2402	45.01	AV	H	28.71	3.06	0.00	76.78	N/A	N/A
2402	61.89	PK	V	28.71	3.06	0.00	93.66	N/A	N/A
2402	41.86	AV	V	28.71	3.06	0.00	73.63	N/A	N/A
2390	29.91	PK	H	28.67	3.06	0.00	61.64	74.00	12.36
2390	15.37	AV	H	28.67	3.06	0.00	47.10	54.00	6.90
4804	52.88	PK	H	33.85	4.35	44.73	46.35	74.00	27.65
4804	37.41	AV	H	33.85	4.35	44.73	30.88	54.00	23.12
7206	49.85	PK	H	36.39	5.41	43.92	47.73	74.00	26.27
7206	34.79	AV	H	36.39	5.41	43.92	32.67	54.00	21.33
Frequency: 2441MHz									
2441	65.78	PK	H	28.82	3.09	0.00	97.69	N/A	N/A
2441	45.54	AV	H	28.82	3.09	0.00	77.45	N/A	N/A
2441	62.35	PK	V	28.82	3.09	0.00	94.26	N/A	N/A
2441	41.61	AV	V	28.82	3.09	0.00	73.52	N/A	N/A
4882	52.91	PK	H	34.07	4.40	44.72	46.66	74.00	27.34
4882	37.27	AV	H	34.07	4.40	44.72	31.02	54.00	22.98
7323	50.52	PK	H	36.55	5.44	44.23	48.28	74.00	25.72
7323	35.13	AV	H	36.55	5.44	44.23	32.89	54.00	21.11
Frequency:2480MHz									
2480	66.28	PK	H	28.94	3.12	0.00	98.34	N/A	N/A
2480	45.62	AV	H	28.94	3.12	0.00	77.68	N/A	N/A
2480	62.57	PK	V	28.94	3.12	0.00	94.63	N/A	N/A
2480	41.32	AV	V	28.94	3.12	0.00	73.38	N/A	N/A
2483.5	28.57	PK	H	28.95	3.12	0.00	60.64	74.00	13.36
2483.5	13.48	AV	H	28.95	3.12	0.00	45.55	54.00	8.45
4960	52.79	PK	H	34.29	4.44	44.71	46.81	74.00	27.19
4960	37.07	AV	H	34.29	4.44	44.71	31.09	54.00	22.91
7440	50.58	PK	H	36.72	5.48	44.54	48.24	74.00	25.76
7440	35.15	AV	H	36.72	5.48	44.54	32.81	54.00	21.19

EDR Mode ($\pi/4$ -DQPSK):

Frequency	Receiver		Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Limit	Margin
	Reading	Measurement	Polar	Factor					
MHz	dB μ V	PK/AV	H/V	(dB/m)	dB	dB	dB μ V/m	dB μ V/m	dB
Frequency:2402 MHz									
2402	62.47	PK	H	28.71	3.06	0.00	94.24	N/A	N/A
2402	40.99	AV	H	28.71	3.06	0.00	72.76	N/A	N/A
2402	59.02	PK	V	28.71	3.06	0.00	90.79	N/A	N/A
2402	37.69	AV	V	28.71	3.06	0.00	69.46	N/A	N/A
2390	28.95	PK	H	28.67	3.06	0.00	60.68	74.00	13.32
2390	15.79	AV	H	28.67	3.06	0.00	47.52	54.00	6.48
4804	52.05	PK	H	33.85	4.35	44.73	45.52	74.00	28.48
4804	37.10	AV	H	33.85	4.35	44.73	30.57	54.00	23.43
7206	50.44	PK	H	36.39	5.41	43.92	48.32	74.00	25.68
7206	35.22	AV	H	36.39	5.41	43.92	33.10	54.00	20.90
Frequency:2441 MHz									
2441	62.86	PK	H	28.82	3.09	0.00	94.77	N/A	N/A
2441	41.37	AV	H	28.82	3.09	0.00	73.28	N/A	N/A
2441	59.54	PK	V	28.82	3.09	0.00	91.45	N/A	N/A
2441	38.89	AV	V	28.82	3.09	0.00	70.80	N/A	N/A
4882	52.27	PK	H	34.07	4.40	44.72	46.02	74.00	27.98
4882	37.26	AV	H	34.07	4.40	44.72	31.01	54.00	22.99
7323	50.59	PK	H	36.55	5.44	44.23	48.35	74.00	25.65
7323	35.28	AV	H	36.55	5.44	44.23	33.04	54.00	20.96
Frequency:2480 MHz									
2480	63.15	PK	H	28.94	3.12	0.00	95.21	N/A	N/A
2480	41.69	AV	H	28.94	3.12	0.00	73.75	N/A	N/A
2480	59.97	PK	V	28.94	3.12	0.00	92.03	N/A	N/A
2480	39.85	AV	V	28.94	3.12	0.00	71.91	N/A	N/A
2483.5	28.91	PK	H	28.95	3.12	0.00	60.98	74.00	13.02
2483.5	14.06	AV	H	28.95	3.12	0.00	46.13	54.00	7.87
4960	51.89	PK	H	34.29	4.44	44.71	45.91	74.00	28.09
4960	37.19	AV	H	34.29	4.44	44.71	31.21	54.00	22.79
7440	50.57	PK	H	36.72	5.48	44.54	48.23	74.00	25.77
7440	35.22	AV	H	36.72	5.48	44.54	32.88	54.00	21.12

EDR Mode (8-DPSK):

Frequency	Receiver		Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Limit	Margin
	Reading	Measurement	Polar	Factor					
MHz	dBμV	PK/AV	H/V	(dB/m)	dB	dB	dBμV/m	dBμV/m	dB
Frequency: 2402 MHz									
2402	62.83	PK	H	28.71	3.06	0.00	94.60	N/A	N/A
2402	41.08	AV	H	28.71	3.06	0.00	72.85	N/A	N/A
2402	59.79	PK	V	28.71	3.06	0.00	91.56	N/A	N/A
2402	37.56	AV	V	28.71	3.06	0.00	69.33	N/A	N/A
2390	28.29	PK	H	28.67	3.06	0.00	60.02	74.00	13.98
2390	15.59	AV	H	28.67	3.06	0.00	47.32	54.00	6.68
4804	51.83	PK	H	33.85	4.35	44.73	45.30	74.00	28.70
4804	36.53	AV	H	33.85	4.35	44.73	30.00	54.00	24.00
7206	49.75	PK	H	36.39	5.41	43.92	47.63	74.00	26.37
7206	34.79	AV	H	36.39	5.41	43.92	32.67	54.00	21.33
Frequency: 2441 MHz									
2441	63.09	PK	H	28.82	3.09	0.00	95.00	N/A	N/A
2441	41.22	AV	H	28.82	3.09	0.00	73.13	N/A	N/A
2441	59.82	PK	V	28.82	3.09	0.00	91.73	N/A	N/A
2441	38.08	AV	V	28.82	3.09	0.00	69.99	N/A	N/A
4882	51.68	PK	H	34.07	4.40	44.72	45.43	74.00	28.57
4882	36.56	AV	H	34.07	4.40	44.72	30.31	54.00	23.69
7323	50.13	PK	H	36.55	5.44	44.23	47.89	74.00	26.11
7323	34.88	AV	H	36.55	5.44	44.23	32.64	54.00	21.36
Frequency: 2480 MHz									
2480	63.36	PK	H	28.94	3.12	0.00	95.42	N/A	N/A
2480	41.69	AV	H	28.94	3.12	0.00	73.75	N/A	N/A
2480	60.02	PK	V	28.94	3.12	0.00	92.08	N/A	N/A
2480	38.96	AV	V	28.94	3.12	0.00	71.02	N/A	N/A
2483.5	27.54	PK	H	28.95	3.12	0.00	59.61	74.00	14.39
2483.5	13.51	AV	H	28.95	3.12	0.00	45.58	54.00	8.42
4960	51.86	PK	H	34.29	4.44	44.71	45.88	74.00	28.12
4960	36.96	AV	H	34.29	4.44	44.71	30.98	54.00	23.02
7440	50.13	PK	H	36.72	5.48	44.54	47.79	74.00	26.21
7440	35.35	AV	H	36.72	5.48	44.54	33.01	54.00	20.99

Note:

Corrected Amplitude = Corrected Factor + Reading

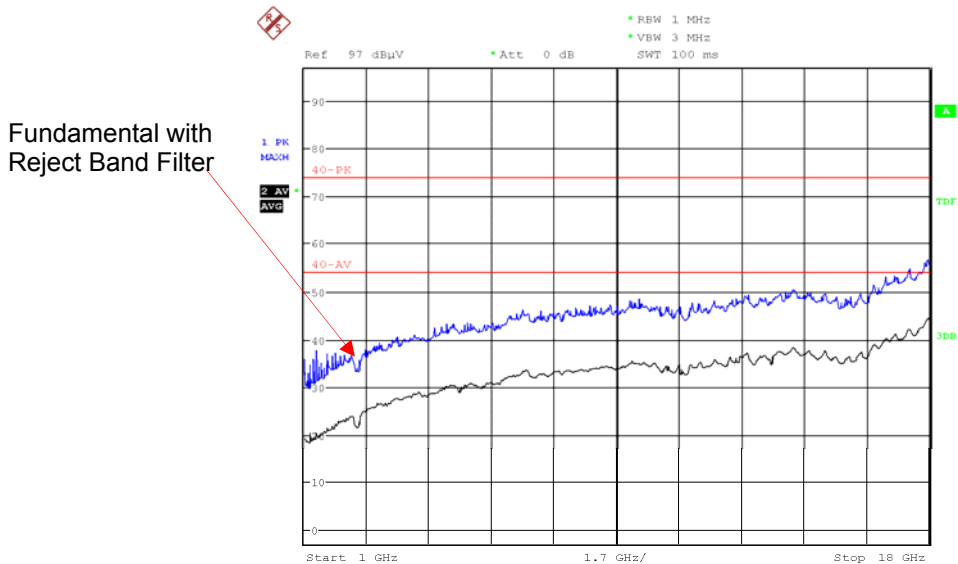
Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor

Margin = Limit - Corr. Amplitude

Spurious emissions more than 20 dB below the limit were not reported.

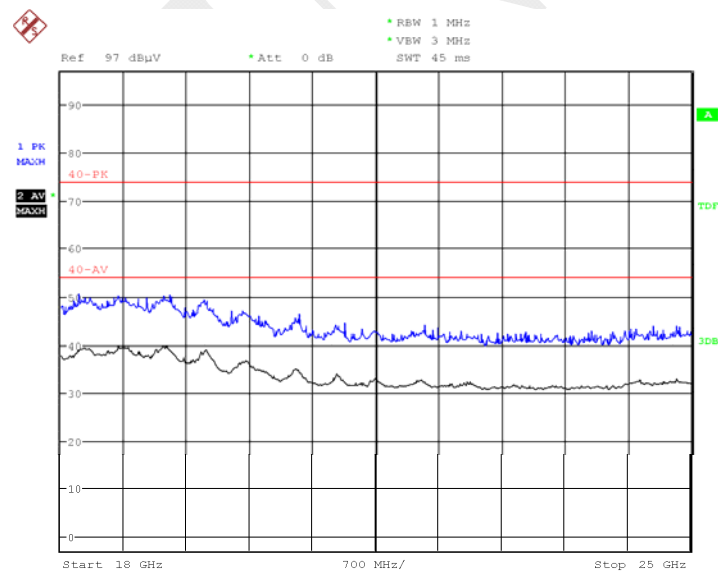
Please refer to the below pre-scan plot of worst case:

EDR Mode ($\pi/4$ -DQPSK): Low Channel_Horizontal_1GHz-18GHz



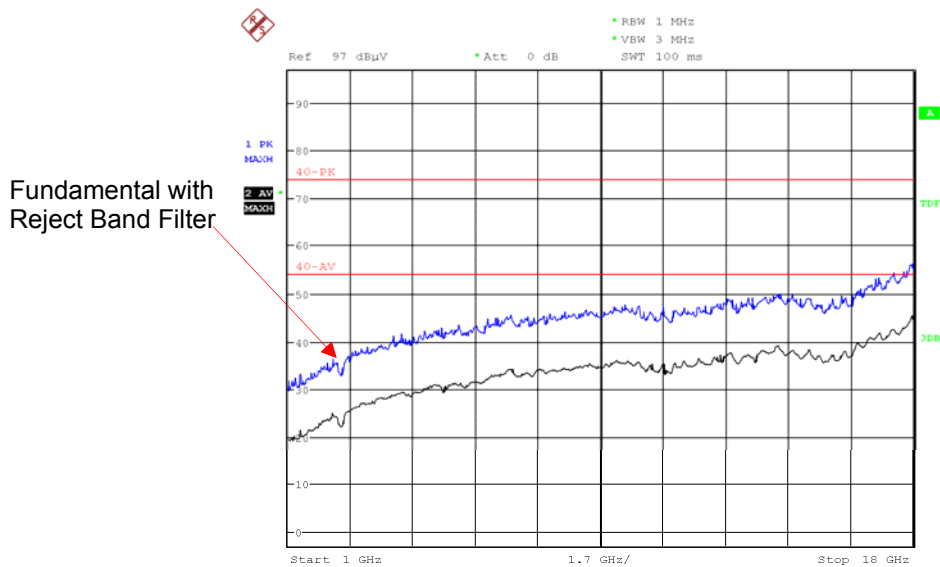
Date: 3.APR.2018 10:28:20

EDR Mode ($\pi/4$ -DQPSK): Low Channel_Horizontal_18GHz-25GHz



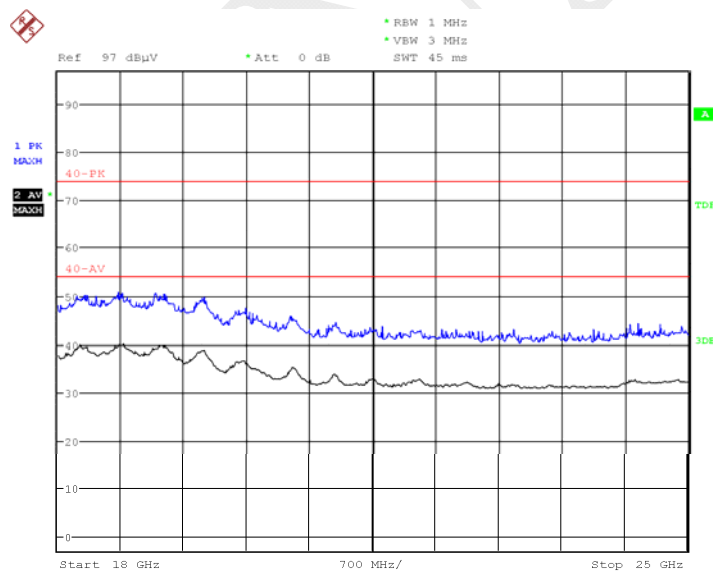
Date: 3.APR.2018 11:17:50

EDR Mode ($\pi/4$ -DQPSK): Low Channel_Vertical_1GHz-18GHz



Date: 3.APR.2018 10:19:49

EDR Mode ($\pi/4$ -DQPSK): Low Channel_Vertical_18GHz-25GHz

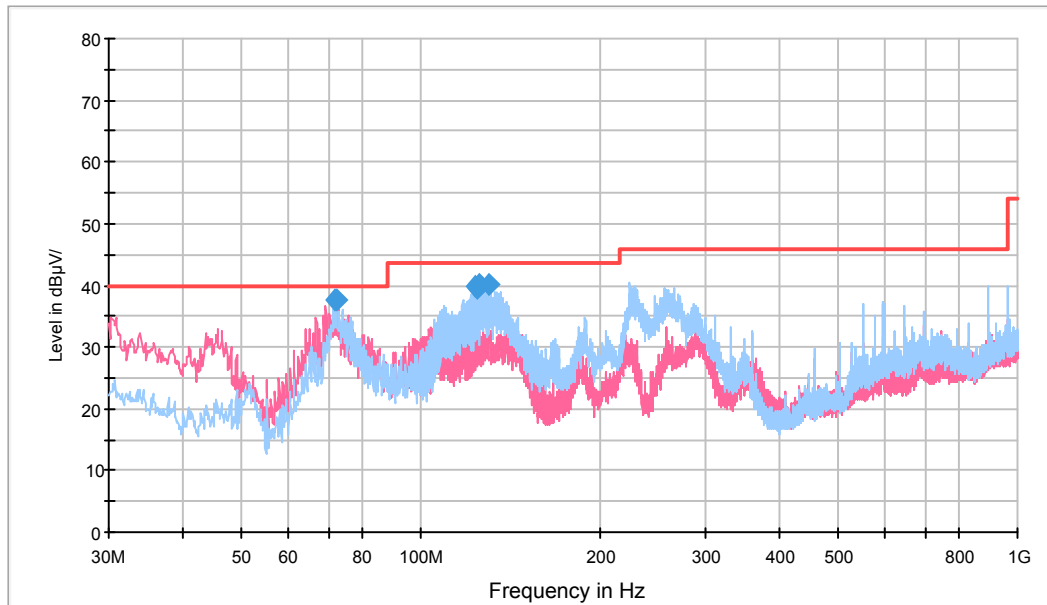


Date: 3.APR.2018 11:16:44

For 8265NGW Module

30 MHz to 1 GHz:

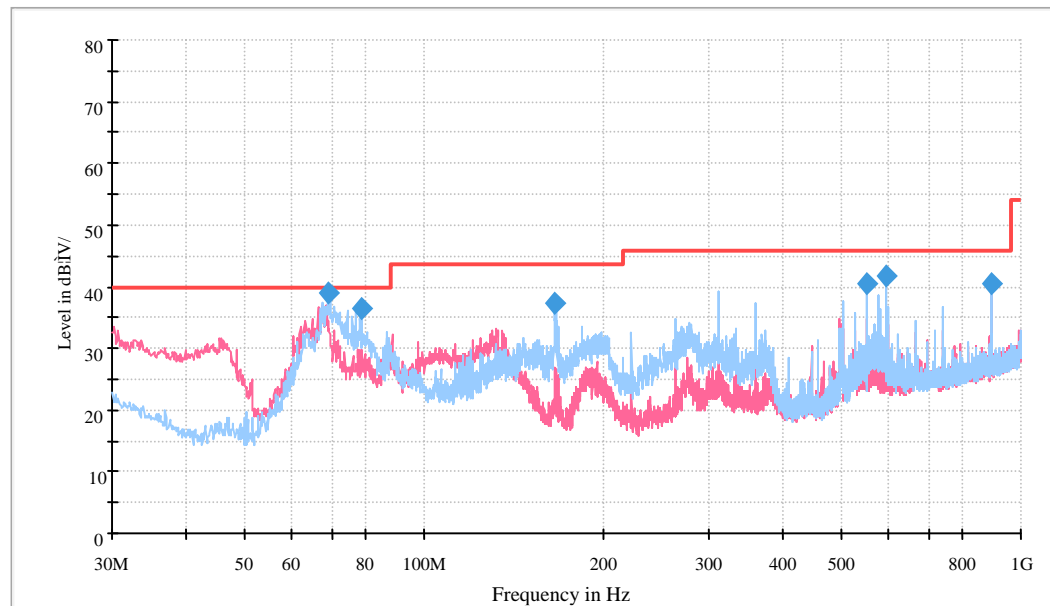
DC Input 1



Frequency (MHz)	MaxPeak-MaxHold (dBμV/m)	Height (cm)	Polarization	Azimuth (deg)	Corrected Factor (dB/m)	Margin (dB)	Limit (dBμV/m)
72.073750	37.7	100.0	V	38.0	-16.6	*2.3	40.0
72.195000	37.5	100.0	H	345.0	-16.6	*2.5	40.0
123.847500	39.9	100.0	H	262.0	-11.6	*3.6	43.5
124.696250	39.7	100.0	H	262.0	-11.4	*3.8	43.5
125.666250	40.1	100.0	H	277.0	-11.3	*3.4	43.5
130.031250	40.2	100.0	H	255.0	-10.7	*3.3	43.5

*Within measurement uncertainty!

DC Input 2



Frequency (MHz)	MaxPeak-MaxHold (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corrected Factor (dB/m)	Margin (dB)	Limit (dBµV/m)
72.163750	38.5	260.0	H	344.0	-16.7	*1.5	40.0
78.500000	35.2	150.0	H	299.0	-16.7	4.8	40.0
165.921250	37.4	150.0	H	76.0	-12.1	6.1	43.5
551.981250	40.6	150.0	H	68.0	-5.2	5.4	46.0
594.055000	41.8	150.0	H	178.0	-4.4	*4.2	46.0
890.996250	40.6	150.0	H	358.0	-0.2	5.4	46.0

*Within measurement uncertainty!

1GHz-25GHz:

BDR Mode (GFSK):

Frequency	Receiver		Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Limit	Margin
	Reading	Measurement	Polar	Factor					
MHz	dBμV	PK/AV	H/V	(dB/m)	dB	dB	dBμV/m	dBμV/m	dB
Frequency:2402 MHz									
2402	64.97	PK	H	28.71	3.06	0.00	96.74	N/A	N/A
2402	44.76	AV	H	28.71	3.06	0.00	76.53	N/A	N/A
2402	61.81	PK	V	28.71	3.06	0.00	93.58	N/A	N/A
2402	41.58	AV	V	28.71	3.06	0.00	73.35	N/A	N/A
2390	29.84	PK	H	28.67	3.06	0.00	61.57	74.00	12.43
2390	15.29	AV	H	28.67	3.06	0.00	47.02	54.00	6.98
4804	52.61	PK	H	33.85	4.35	44.73	46.08	74.00	27.92
4804	37.19	AV	H	33.85	4.35	44.73	30.66	54.00	23.34
7206	49.64	PK	H	36.39	5.41	43.92	47.52	74.00	26.48
7206	34.72	AV	H	36.39	5.41	43.92	32.60	54.00	21.40
Frequency: 2441MHz									
2441	66.04	PK	H	28.82	3.09	0.00	97.95	N/A	N/A
2441	45.82	AV	H	28.82	3.09	0.00	77.73	N/A	N/A
2441	62.45	PK	V	28.82	3.09	0.00	94.36	N/A	N/A
2441	41.74	AV	V	28.82	3.09	0.00	73.65	N/A	N/A
4882	53.14	PK	H	34.07	4.40	44.72	46.89	74.00	27.11
4882	37.62	AV	H	34.07	4.40	44.72	31.37	54.00	22.63
7323	50.72	PK	H	36.55	5.44	44.23	48.48	74.00	25.52
7323	35.48	AV	H	36.55	5.44	44.23	33.24	54.00	20.76
Frequency:2480MHz									
2480	66.28	PK	H	28.94	3.12	0.00	98.34	N/A	N/A
2480	45.62	AV	H	28.94	3.12	0.00	77.68	N/A	N/A
2480	62.57	PK	V	28.94	3.12	0.00	94.63	N/A	N/A
2480	41.32	AV	V	28.94	3.12	0.00	73.38	N/A	N/A
2483.5	28.57	PK	H	28.95	3.12	0.00	60.64	74.00	13.36
2483.5	13.48	AV	H	28.95	3.12	0.00	45.55	54.00	8.45
4960	52.79	PK	H	34.29	4.44	44.71	46.81	74.00	27.19
4960	37.07	AV	H	34.29	4.44	44.71	31.09	54.00	22.91
7440	50.58	PK	H	36.72	5.48	44.54	48.24	74.00	25.76
7440	35.15	AV	H	36.72	5.48	44.54	32.81	54.00	21.19

EDR Mode ($\pi/4$ -DQPSK):

Frequency	Receiver		Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Limit	Margin
	Reading	Measurement	Polar	Factor					
MHz	dB μ V	PK/AV	H/V	(dB/m)	dB	dB	dB μ V/m	dB μ V/m	dB
Frequency:2402 MHz									
2402	62.47	PK	H	28.71	3.06	0.00	94.24	N/A	N/A
2402	40.99	AV	H	28.71	3.06	0.00	72.76	N/A	N/A
2402	59.02	PK	V	28.71	3.06	0.00	90.79	N/A	N/A
2402	37.69	AV	V	28.71	3.06	0.00	69.46	N/A	N/A
2390	28.95	PK	H	28.67	3.06	0.00	60.68	74.00	13.32
2390	15.79	AV	H	28.67	3.06	0.00	47.52	54.00	6.48
4804	52.05	PK	H	33.85	4.35	44.73	45.52	74.00	28.48
4804	37.10	AV	H	33.85	4.35	44.73	30.57	54.00	23.43
7206	50.44	PK	H	36.39	5.41	43.92	48.32	74.00	25.68
7206	35.22	AV	H	36.39	5.41	43.92	33.10	54.00	20.90
Frequency:2441 MHz									
2441	62.86	PK	H	28.82	3.09	0.00	94.77	N/A	N/A
2441	41.37	AV	H	28.82	3.09	0.00	73.28	N/A	N/A
2441	59.54	PK	V	28.82	3.09	0.00	91.45	N/A	N/A
2441	38.89	AV	V	28.82	3.09	0.00	70.80	N/A	N/A
4882	52.27	PK	H	34.07	4.40	44.72	46.02	74.00	27.98
4882	37.26	AV	H	34.07	4.40	44.72	31.01	54.00	22.99
7323	50.59	PK	H	36.55	5.44	44.23	48.35	74.00	25.65
7323	35.28	AV	H	36.55	5.44	44.23	33.04	54.00	20.96
Frequency:2480 MHz									
2480	63.15	PK	H	28.94	3.12	0.00	95.21	N/A	N/A
2480	41.69	AV	H	28.94	3.12	0.00	73.75	N/A	N/A
2480	59.97	PK	V	28.94	3.12	0.00	92.03	N/A	N/A
2480	39.85	AV	V	28.94	3.12	0.00	71.91	N/A	N/A
2483.5	28.91	PK	H	28.95	3.12	0.00	60.98	74.00	13.02
2483.5	14.06	AV	H	28.95	3.12	0.00	46.13	54.00	7.87
4960	51.89	PK	H	34.29	4.44	44.71	45.91	74.00	28.09
4960	37.19	AV	H	34.29	4.44	44.71	31.21	54.00	22.79
7440	50.57	PK	H	36.72	5.48	44.54	48.23	74.00	25.77
7440	35.22	AV	H	36.72	5.48	44.54	32.88	54.00	21.12

EDR Mode (8-DPSK):

Frequency	Receiver		Rx Antenna		Cable loss	Amplifier Gain	Corrected Amplitude	Limit	Margin
	Reading	Measurement	Polar	Factor					
MHz	dBμV	PK/AV	H/V	(dB/m)	dB	dB	dBμV/m	dBμV/m	dB
Frequency: 2402 MHz									
2402	62.83	PK	H	28.71	3.06	0.00	94.60	N/A	N/A
2402	41.08	AV	H	28.71	3.06	0.00	72.85	N/A	N/A
2402	59.79	PK	V	28.71	3.06	0.00	91.56	N/A	N/A
2402	37.56	AV	V	28.71	3.06	0.00	69.33	N/A	N/A
2390	28.29	PK	H	28.67	3.06	0.00	60.02	74.00	13.98
2390	15.59	AV	H	28.67	3.06	0.00	47.32	54.00	6.68
4804	51.83	PK	H	33.85	4.35	44.73	45.30	74.00	28.70
4804	36.53	AV	H	33.85	4.35	44.73	30.00	54.00	24.00
7206	49.75	PK	H	36.39	5.41	43.92	47.63	74.00	26.37
7206	34.79	AV	H	36.39	5.41	43.92	32.67	54.00	21.33
Frequency: 2441 MHz									
2441	62.95	PK	H	28.82	3.09	0.00	94.86	N/A	N/A
2441	41.04	AV	H	28.82	3.09	0.00	72.95	N/A	N/A
2441	59.65	PK	V	28.82	3.09	0.00	91.56	N/A	N/A
2441	38.03	AV	V	28.82	3.09	0.00	69.94	N/A	N/A
4882	51.63	PK	H	34.07	4.40	44.72	45.38	74.00	28.62
4882	36.55	AV	H	34.07	4.40	44.72	30.30	54.00	23.70
7323	50.01	PK	H	36.55	5.44	44.23	47.77	74.00	26.23
7323	34.84	AV	H	36.55	5.44	44.23	32.60	54.00	21.40
Frequency: 2480 MHz									
2480	63.62	PK	H	28.94	3.12	0.00	95.68	N/A	N/A
2480	41.72	AV	H	28.94	3.12	0.00	73.78	N/A	N/A
2480	60.10	PK	V	28.94	3.12	0.00	92.16	N/A	N/A
2480	39.14	AV	V	28.94	3.12	0.00	71.20	N/A	N/A
2483.5	27.67	PK	H	28.95	3.12	0.00	59.74	74.00	14.26
2483.5	13.51	AV	H	28.95	3.12	0.00	45.58	54.00	8.42
4960	51.94	PK	H	34.29	4.44	44.71	45.96	74.00	28.04
4960	37.06	AV	H	34.29	4.44	44.71	31.08	54.00	22.92
7440	50.40	PK	H	36.72	5.48	44.54	48.06	74.00	25.94
7440	35.39	AV	H	36.72	5.48	44.54	33.05	54.00	20.95

Note:

Corrected Amplitude = Corrected Factor + Reading

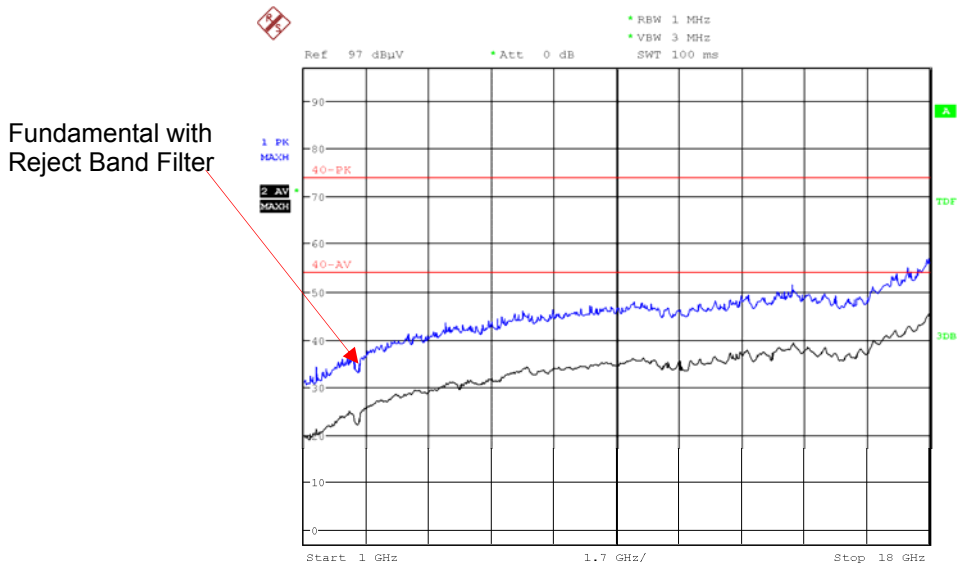
Corrected Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor

Margin = Limit - Corr. Amplitude

Spurious emissions more than 20 dB below the limit were not reported.

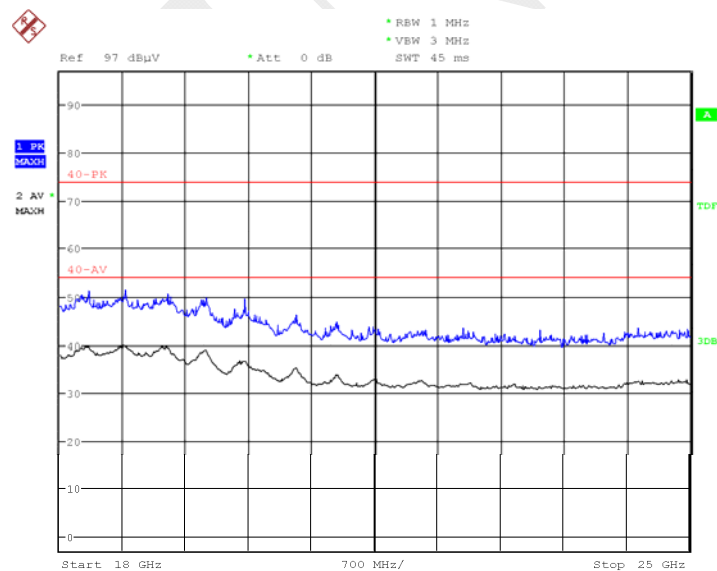
Please refer to the below pre-scan plot of worst case:

EDR Mode ($\pi/4$ -DQPSK): Low Channel_Horizontal_1GHz-18GHz



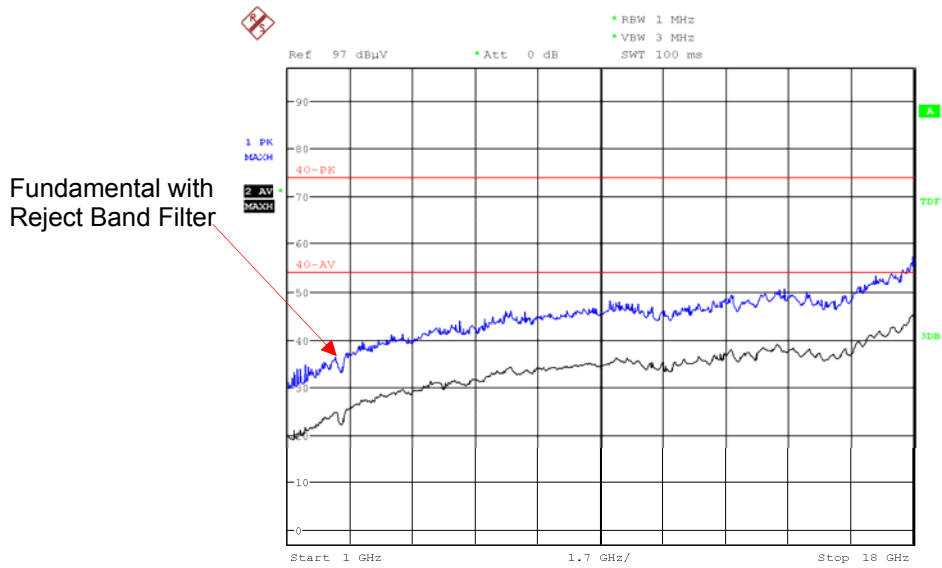
Date: 3.APR.2018 10:25:32

EDR Mode ($\pi/4$ -DQPSK): Low Channel_Horizontal_18GHz-25GHz



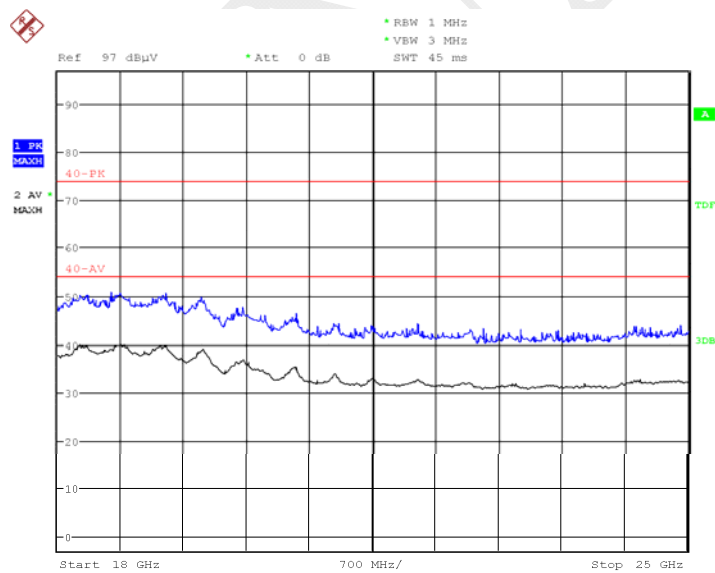
Date: 3.APR.2018 11:54:04

EDR Mode ($\pi/4$ -DQPSK): Low Channel_Vertical_1GHz-18GHz



Date: 3.APR.2018 10:26:48

EDR Mode ($\pi/4$ -DQPSK): Low Channel_Vertical_18GHz-25GHz



Date: 3.APR.2018 11:53:47

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

Applicable Standard

Frequency hopping systems shall have hopping 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 Procedure

1. Set the EUT in transmitting mode, spectrum Bandwidth 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 Data

Environmental Conditions

Temperature:	21 ~ 23 °C
Relative Humidity:	53 ~ 56 %
ATM Pressure:	95.8 ~ 96.0 kPa

** The testing was performed by Tom Tang on 2018-03-30 and 2018-04-01.*

Test Result: Compliance.

Please refer to following tables and plots.

Test Mode: Transmitting

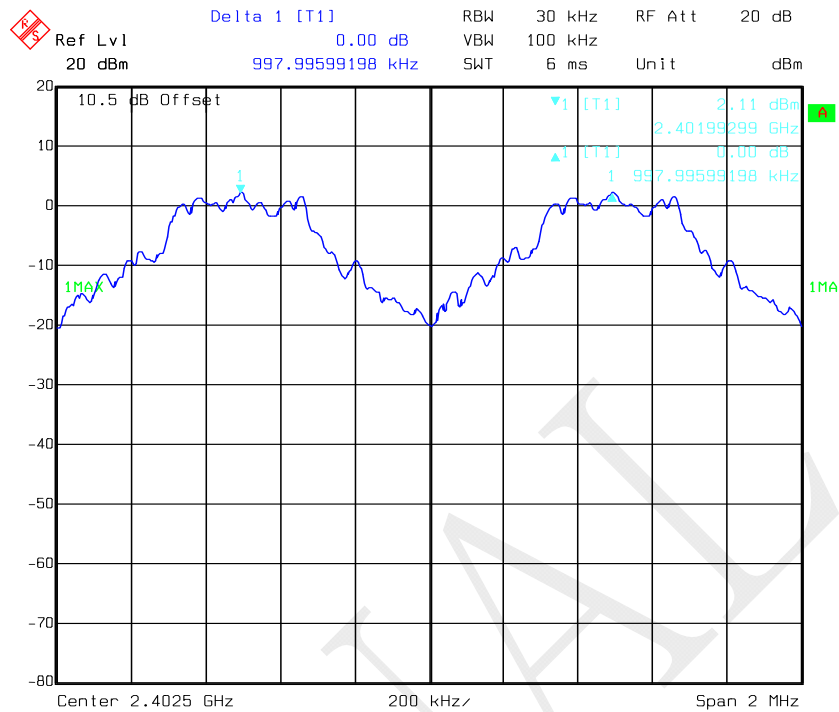
For 7265NGW Module

Mode	Channel	Frequency	Channel Separation	Limit
		MHz	MHz	MHz
BDR (GFSK)	Low	2402	0.998	0.64
	Adjacent	2403		
	Middle	2441	0.998	0.64
	Adjacent	2442		
	High	2480	0.998	0.64
	Adjacent	2479		
EDR ($\pi/4$ -DQPSK)	Low	2402	1.002	0.98
	Adjacent	2403		
	Middle	2441	1.006	0.97
	Adjacent	2442		
	High	2480	1.002	0.97
	Adjacent	2479		
EDR (8DPSK)	Low	2402	1.002	0.99
	Adjacent	2403		
	Middle	2441	0.994	0.98
	Adjacent	2442		
	High	2480	0.998	0.98
	Adjacent	2479		

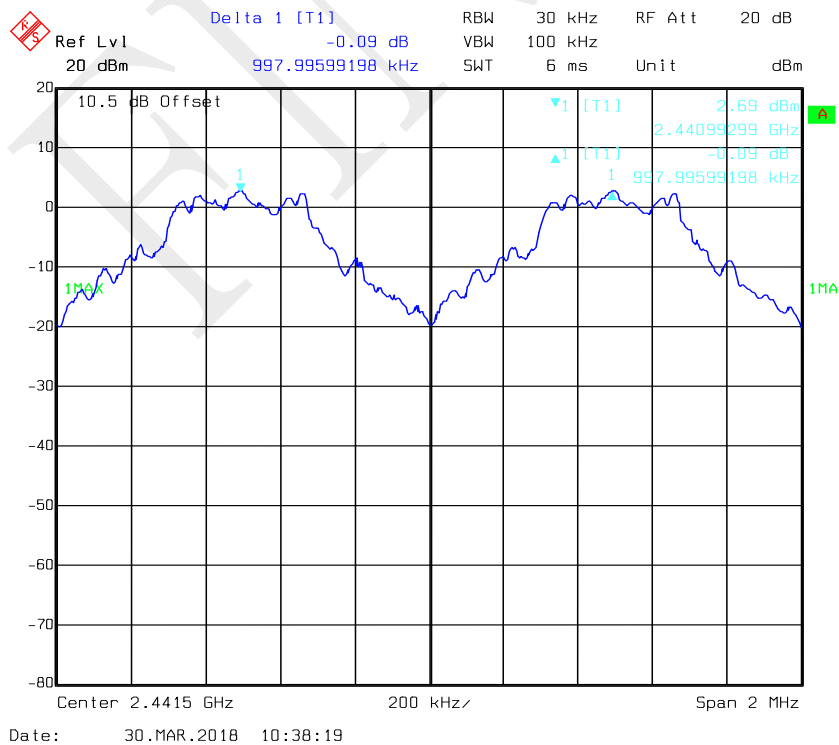
Note: Limit= $(2/3) \times 20\text{dB bandwidth}$

BDR Mode (GFSK):

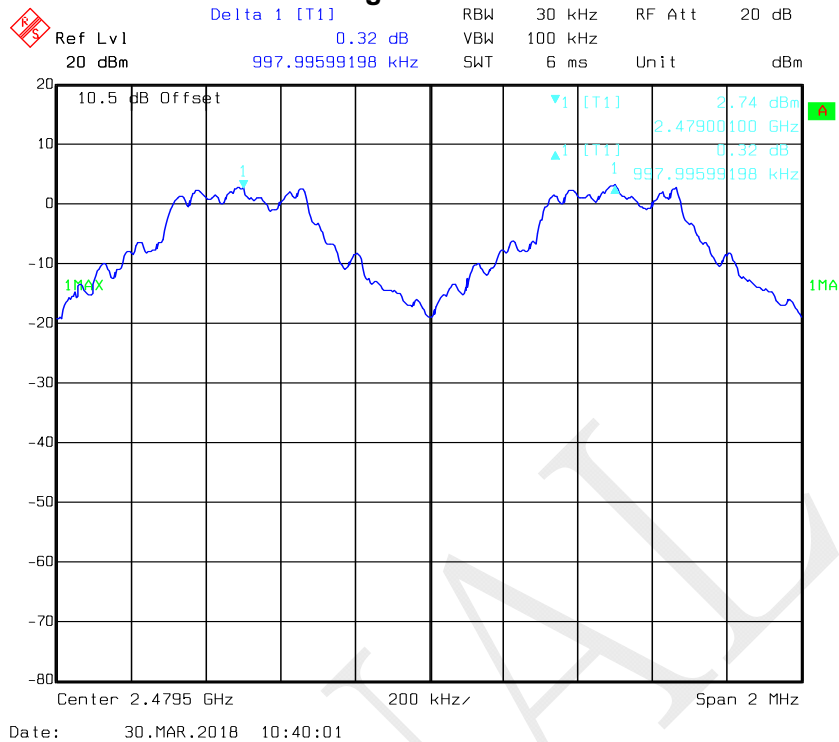
Low Channel



Middle Channel

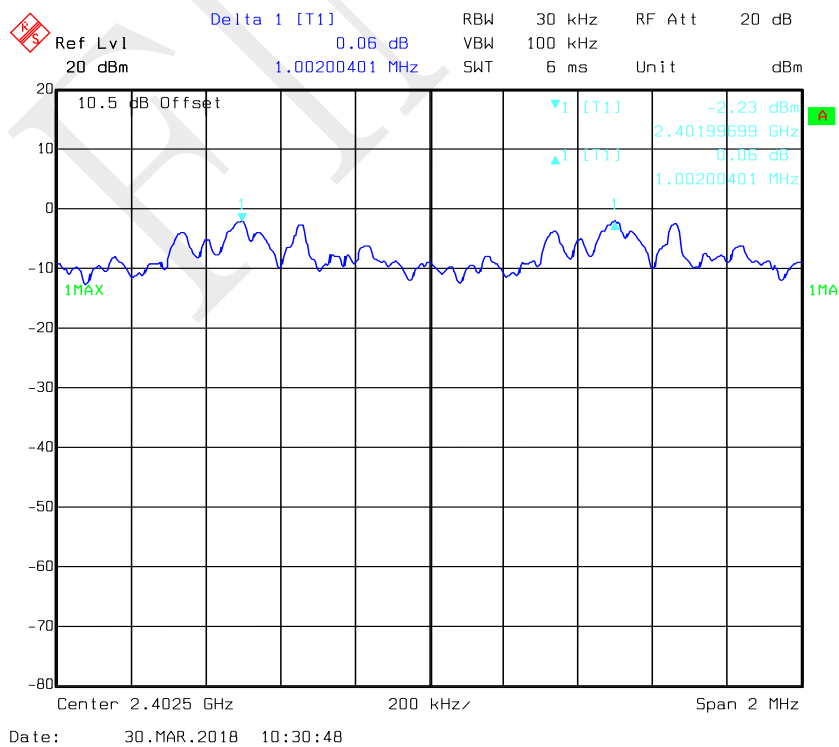


High Channel

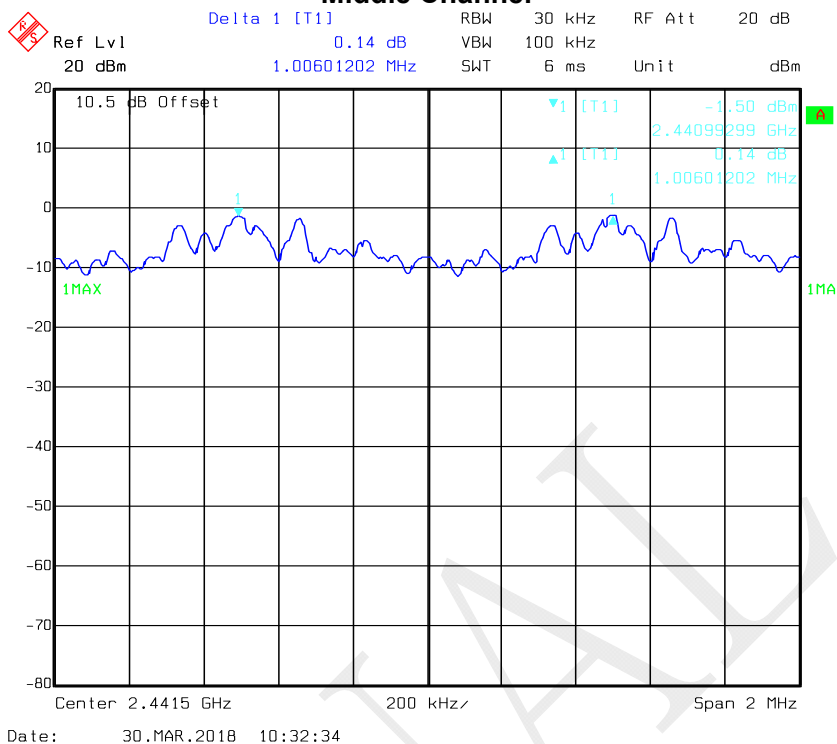


EDR Mode ($\pi/4$ -DQPSK):

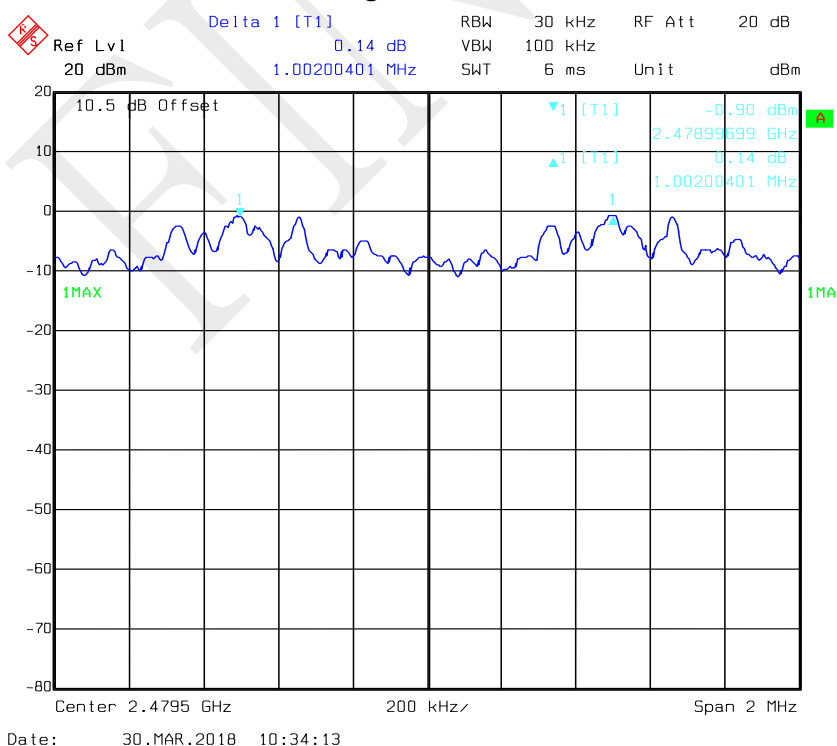
Low Channel



Middle Channel

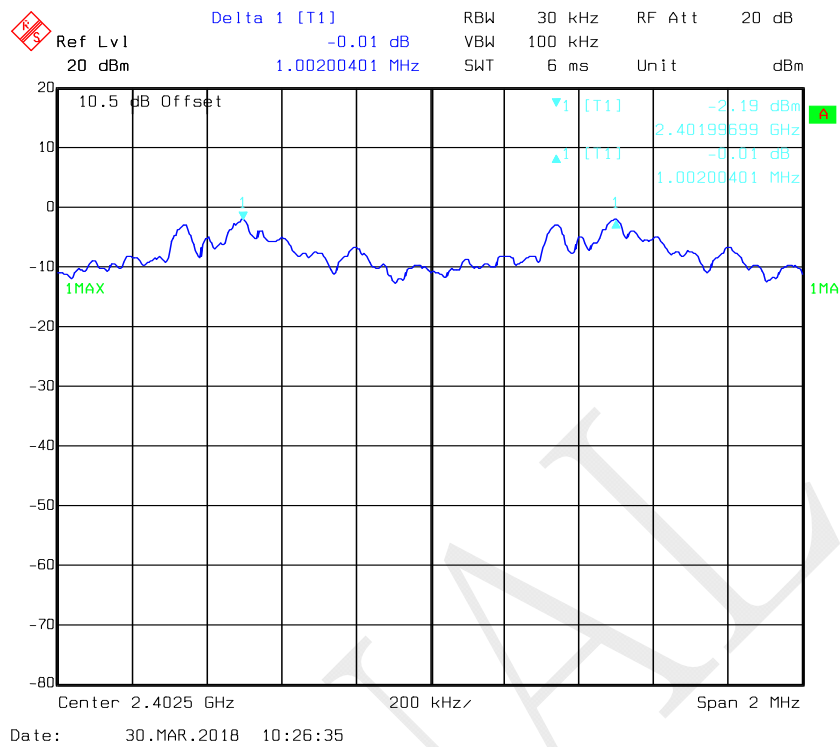


High Channel

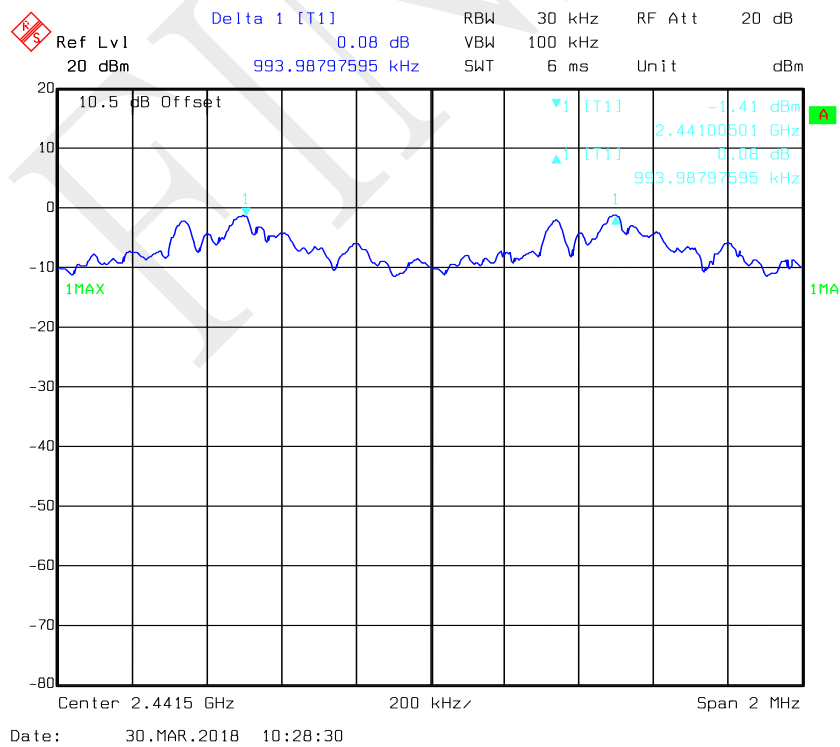


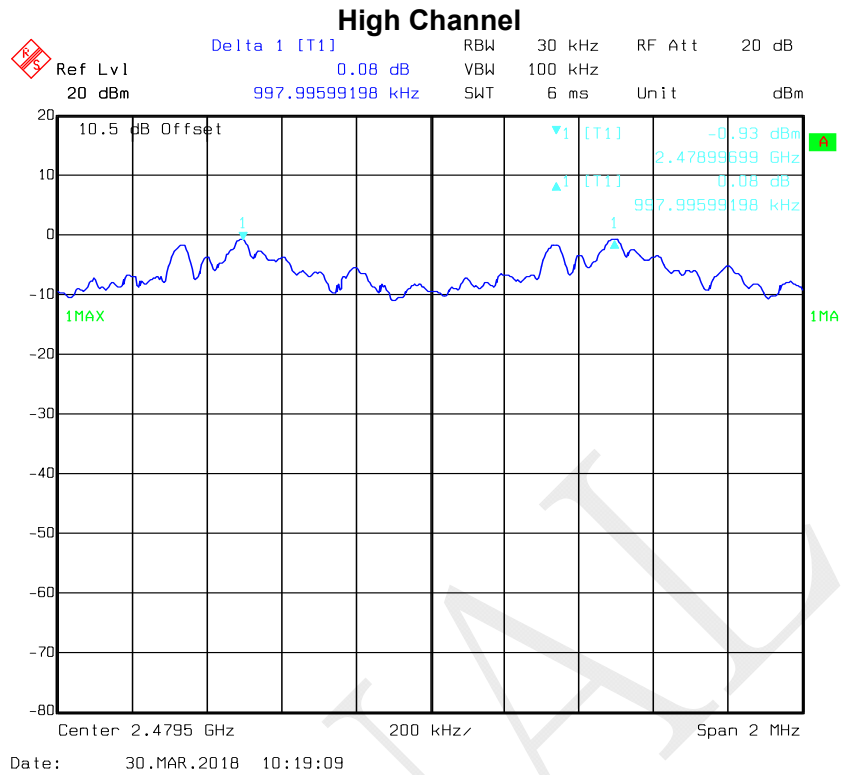
EDR Mode (8-DPSK):

Low Channel



Middle Channel





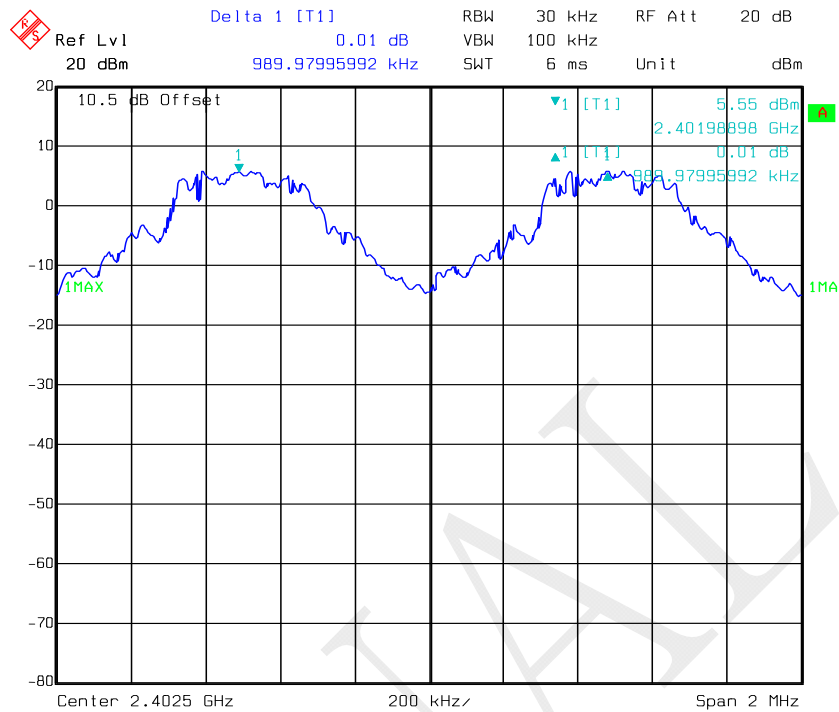
For 8265NGW Module

Mode	Channel	Frequency	Channel Separation	Limit
		MHz	MHz	MHz
BDR (GFSK)	Low	2402	0.990	0.65
	Adjacent	2403		
	Middle	2441	1.014	0.65
	Adjacent	2442		
	High	2480	1.034	0.66
	Adjacent	2479		
EDR ($\pi/4$ -DQPSK)	Low	2402	0.970	0.99
	Adjacent	2403		
	Middle	2441	1.006	0.99
	Adjacent	2442		
	High	2480	1.006	0.99
	Adjacent	2479		
EDR (8DPSK)	Low	2402	0.998	0.98
	Adjacent	2403		
	Middle	2441	1.002	0.98
	Adjacent	2442		
	High	2480	1.002	0.98
	Adjacent	2479		

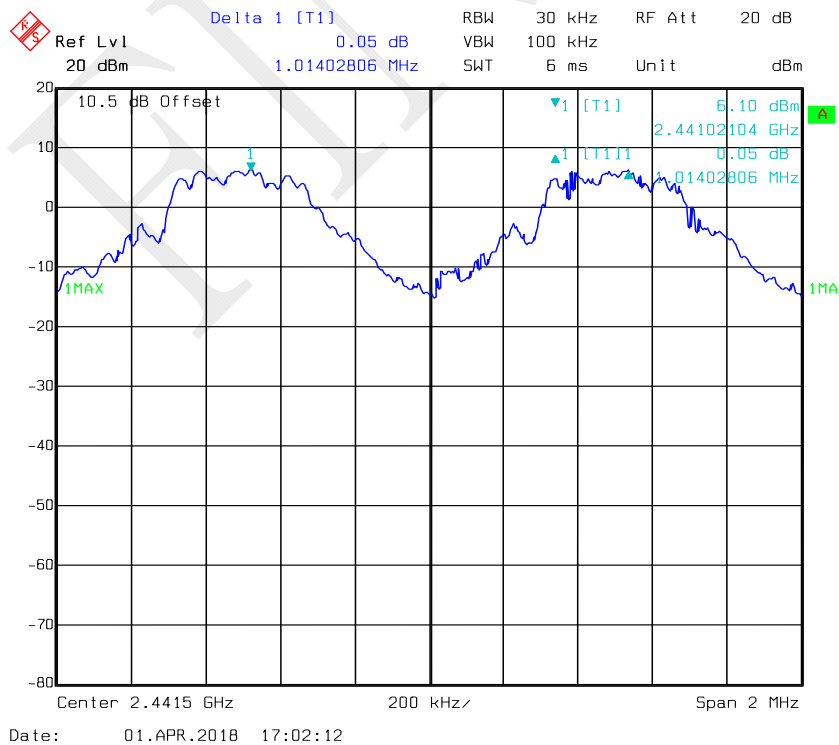
Note: Limit= $(2/3) \times 20\text{dB bandwidth}$

BDR Mode (GFSK):

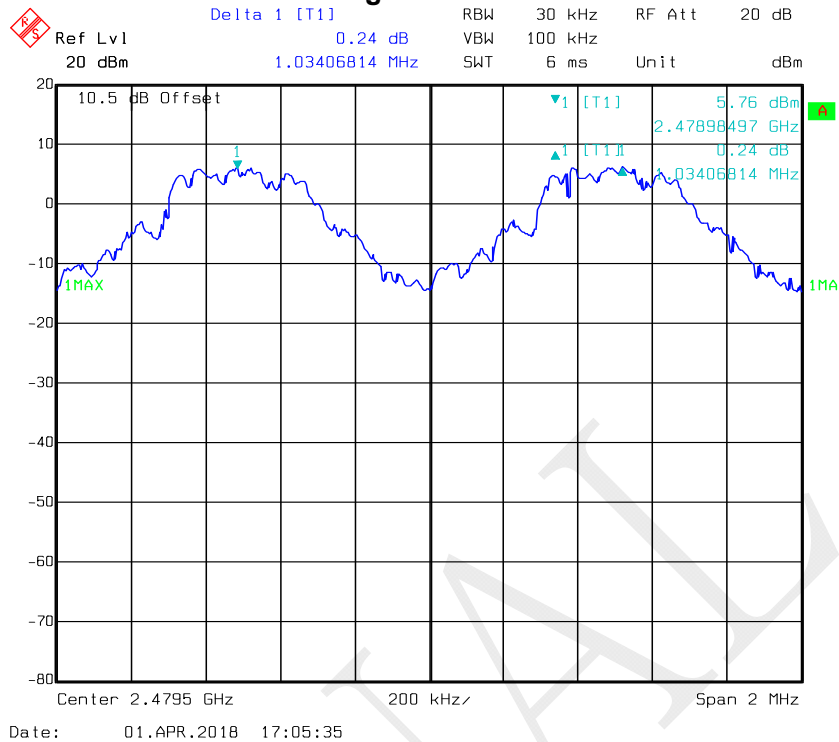
Low Channel



Middle Channel

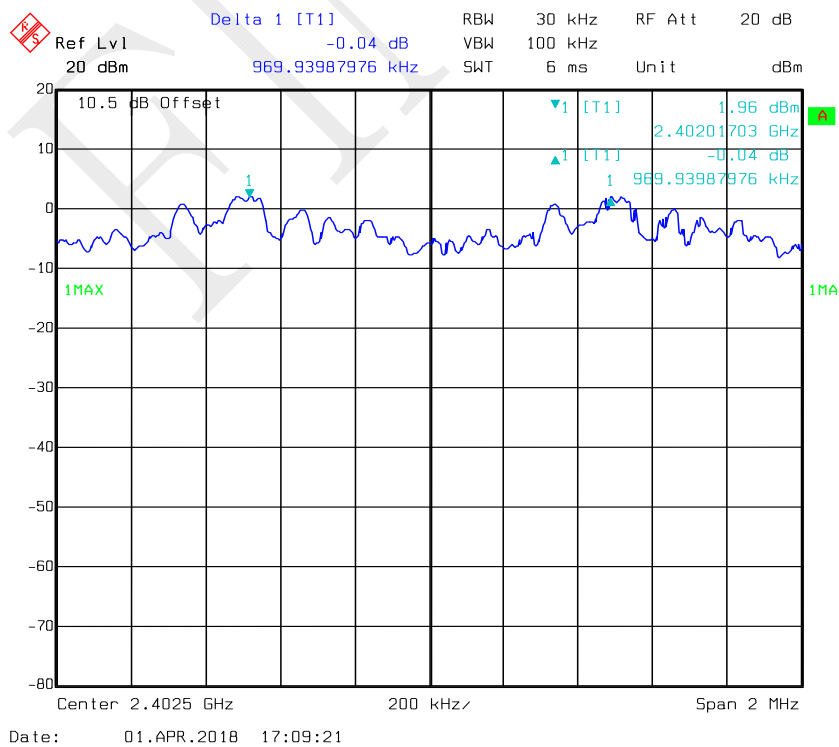


High Channel

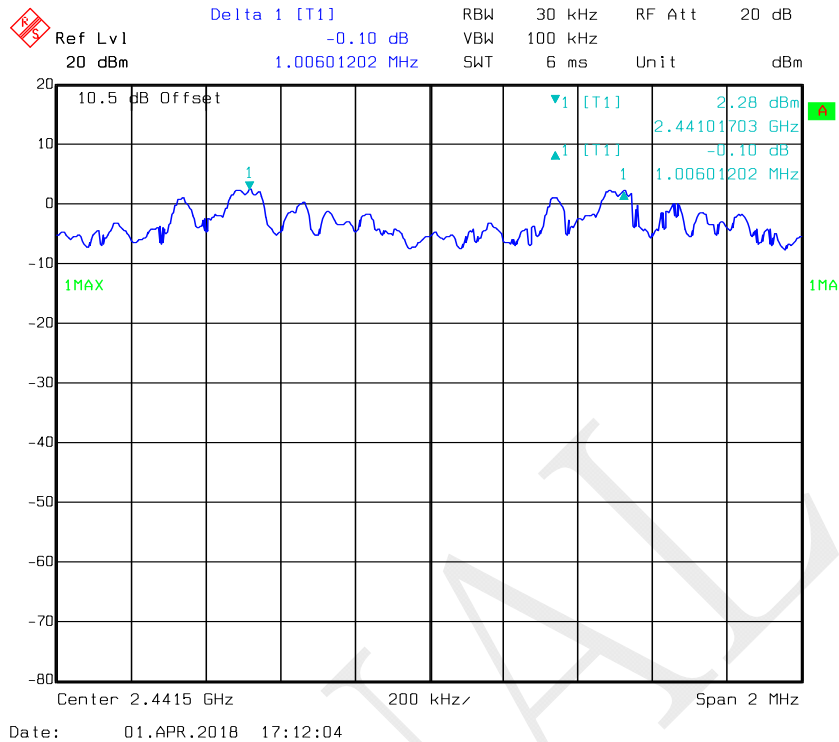


EDR Mode ($\pi/4$ -DQPSK):

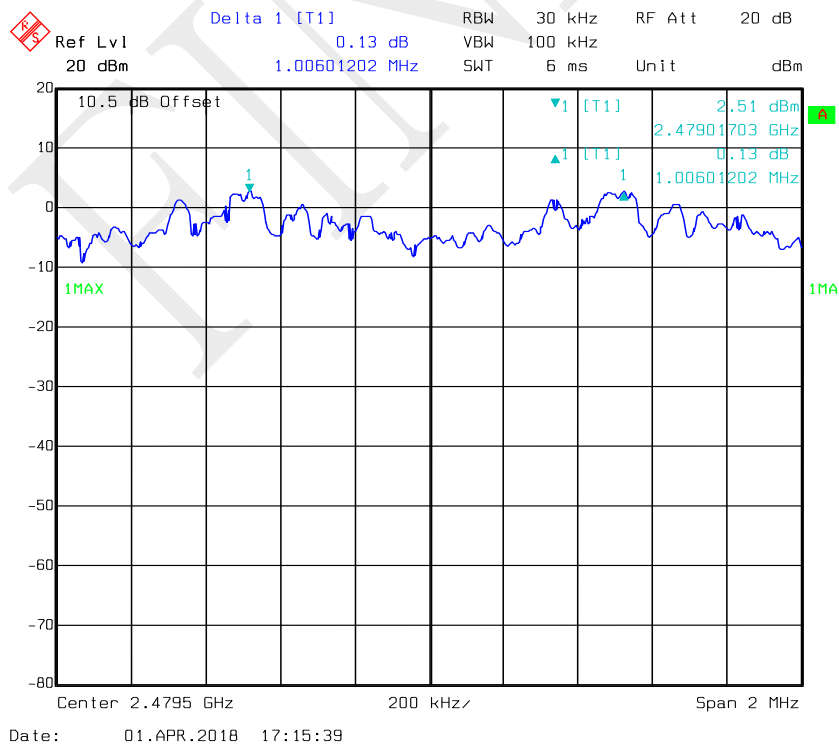
Low Channel



Middle Channel

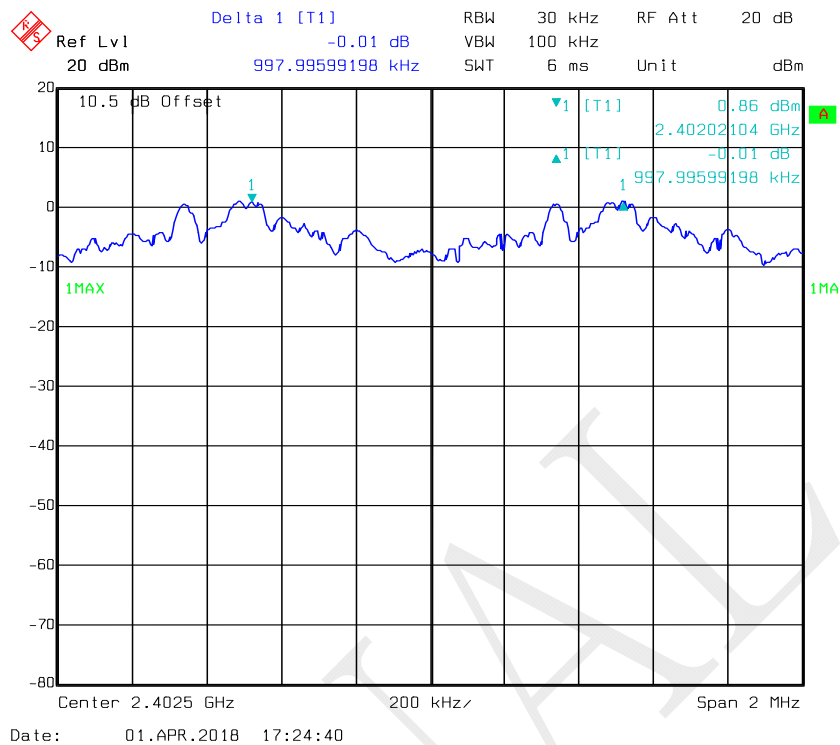


High Channel

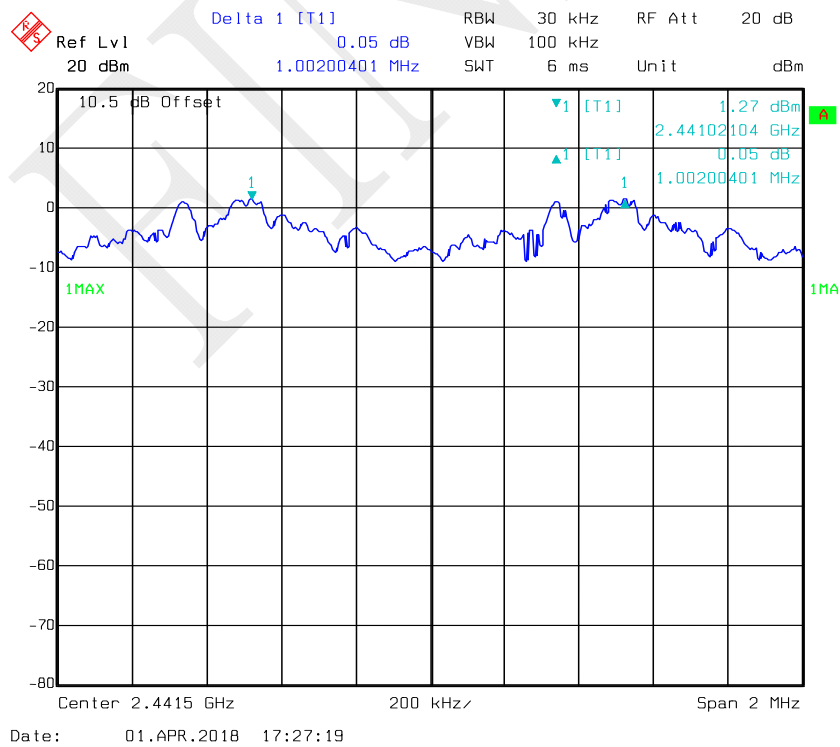


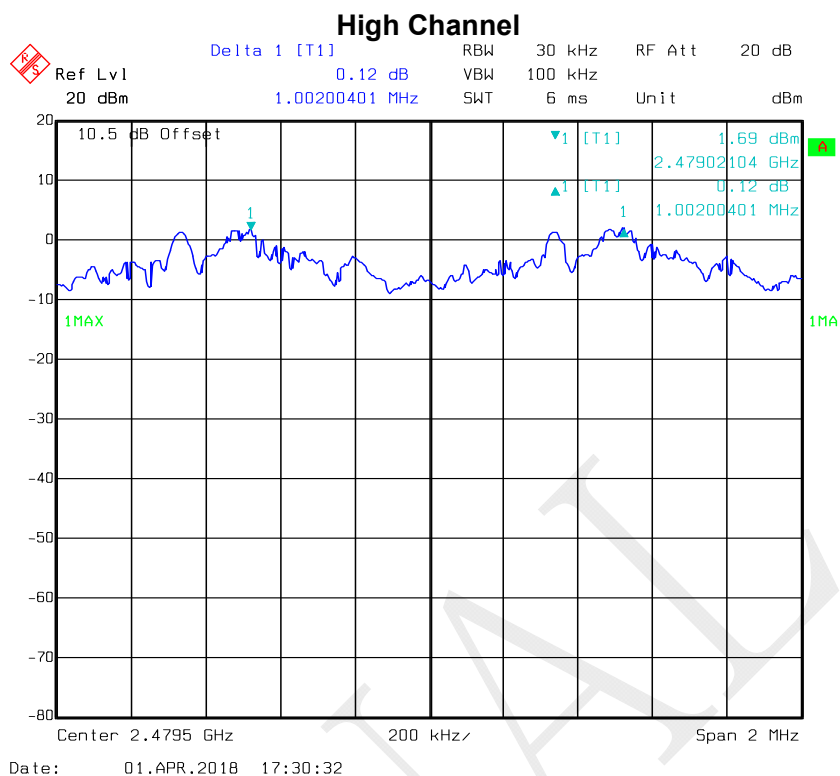
EDR Mode (8-DPSK):

Low Channel



Middle Channel





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

Applicable Standard

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

Test Procedure

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

Test Data

Environmental Conditions

Temperature:	21 ~ 23 °C
Relative Humidity:	53 ~ 56 %
ATM Pressure:	95.8 ~ 96.0 kPa

** The testing was performed by Tom Tang on 2018-03-30 and 2018-04-01.*

Test Result: Compliance.

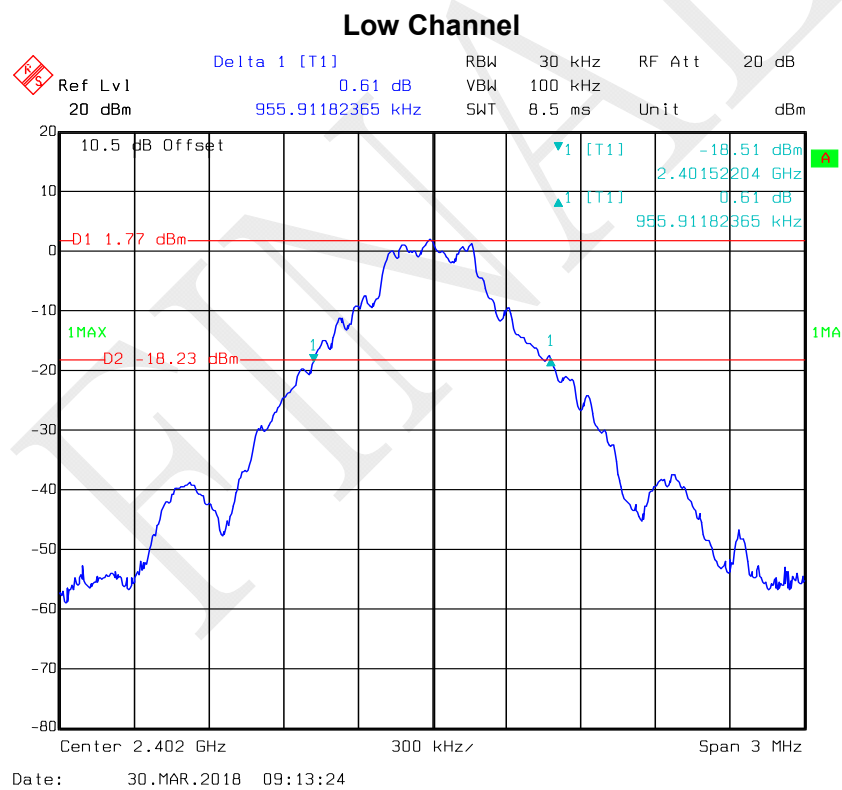
Please refer to following tables and plots

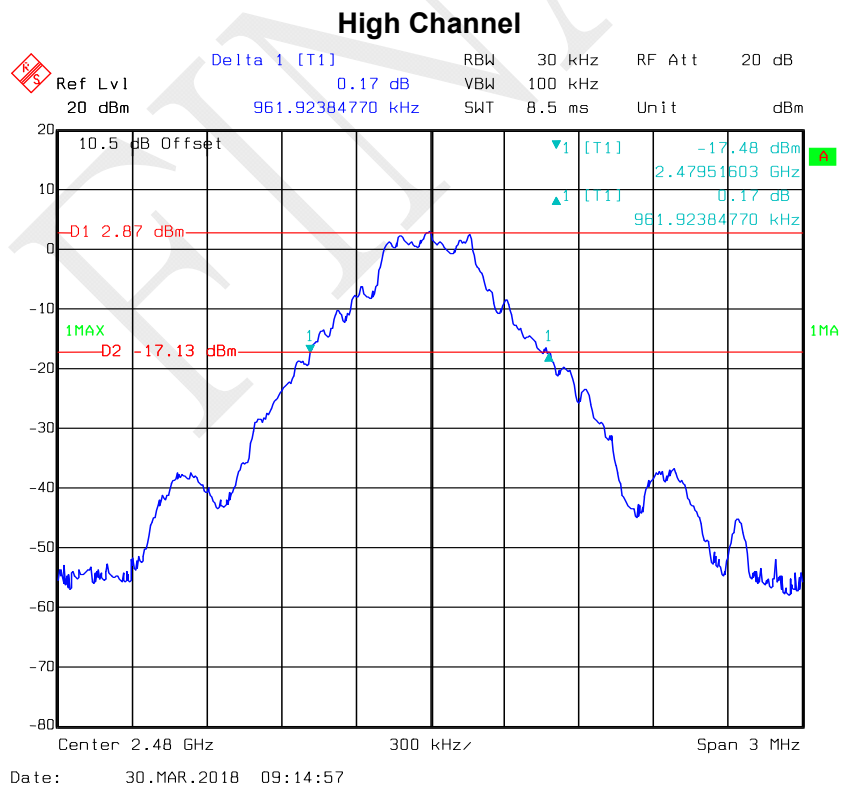
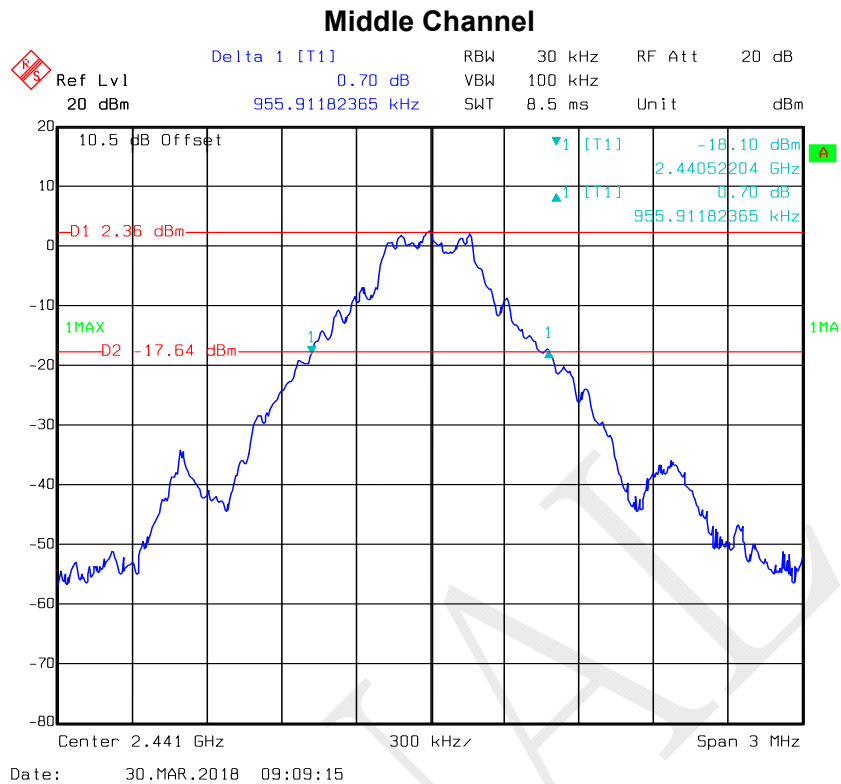
Test Mode: Transmitting

For 7265NGW Module

Mode	Channel	Frequency (MHz)	20 dB Bandwidth (MHz)
BDR Mode (GFSK)	Low	2402	0.96
	Middle	2441	0.96
	High	2480	0.96
EDR Mode ($\pi/4$ -DQPSK)	Low	2402	1.47
	Middle	2441	1.46
	High	2480	1.46
EDR Mode (8-DPSK)	Low	2402	1.48
	Middle	2441	1.47
	High	2480	1.47

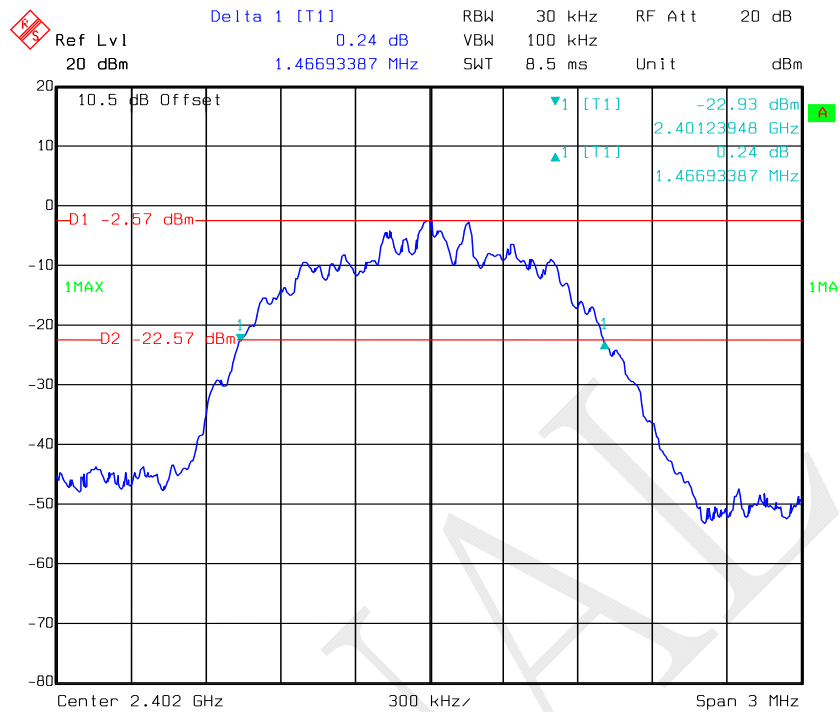
BDR Mode (GFSK):





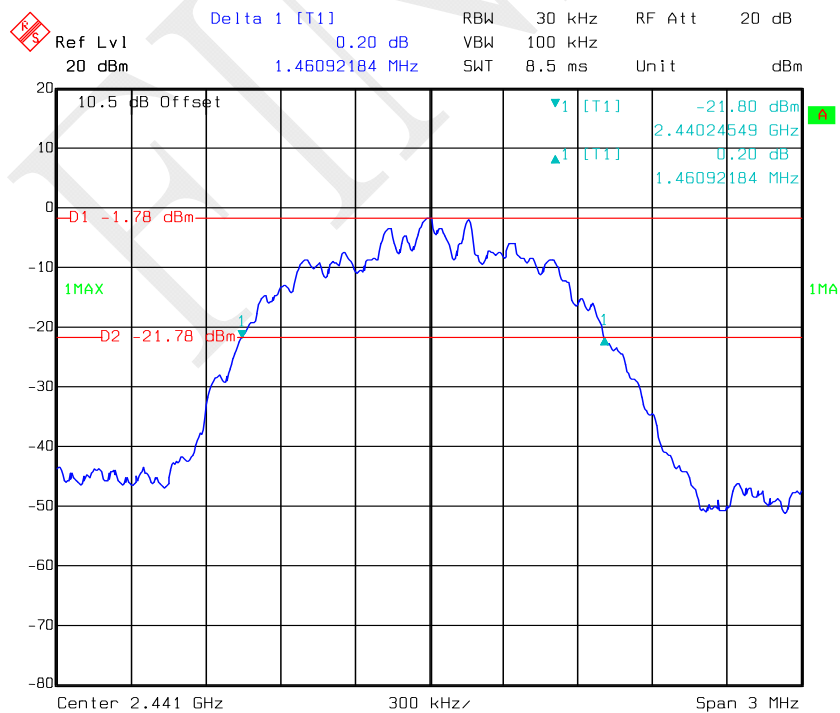
EDR Mode ($\pi/4$ -DQPSK):

Low Channel



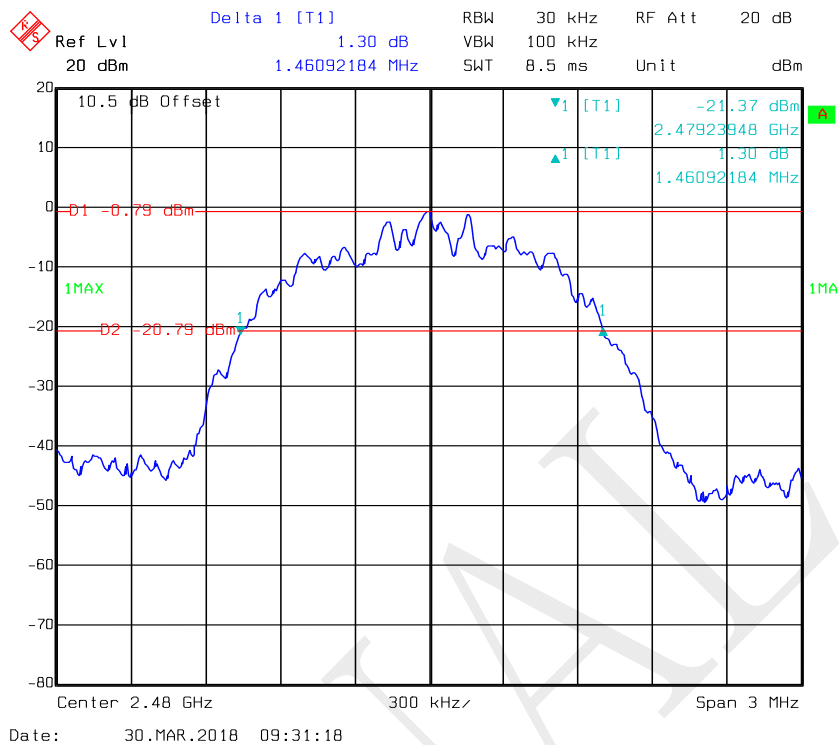
Date: 30.MAR.2018 09:24:54

Middle Channel



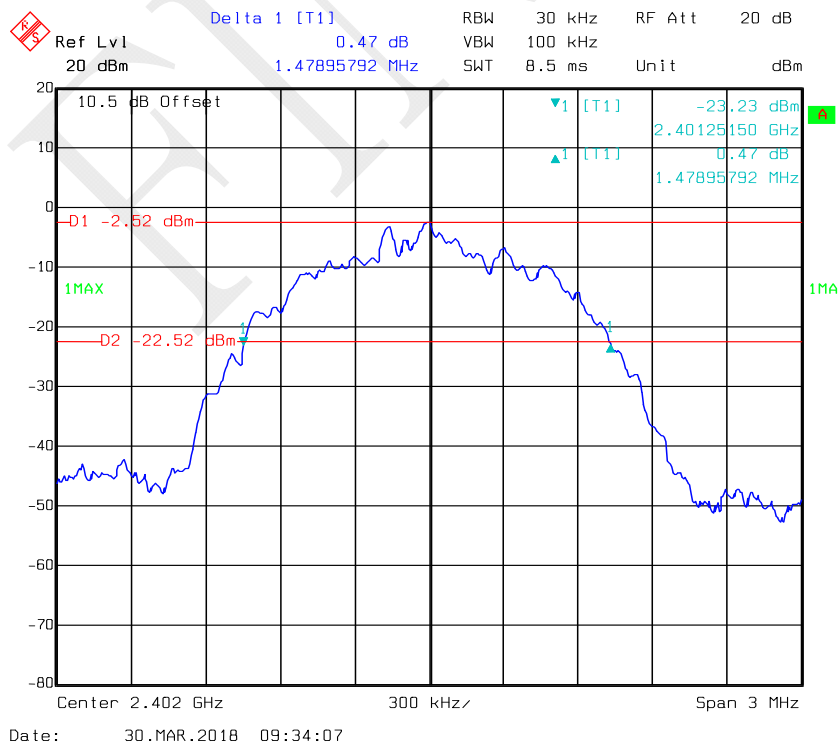
Date: 30.MAR.2018 09:29:43

High Channel

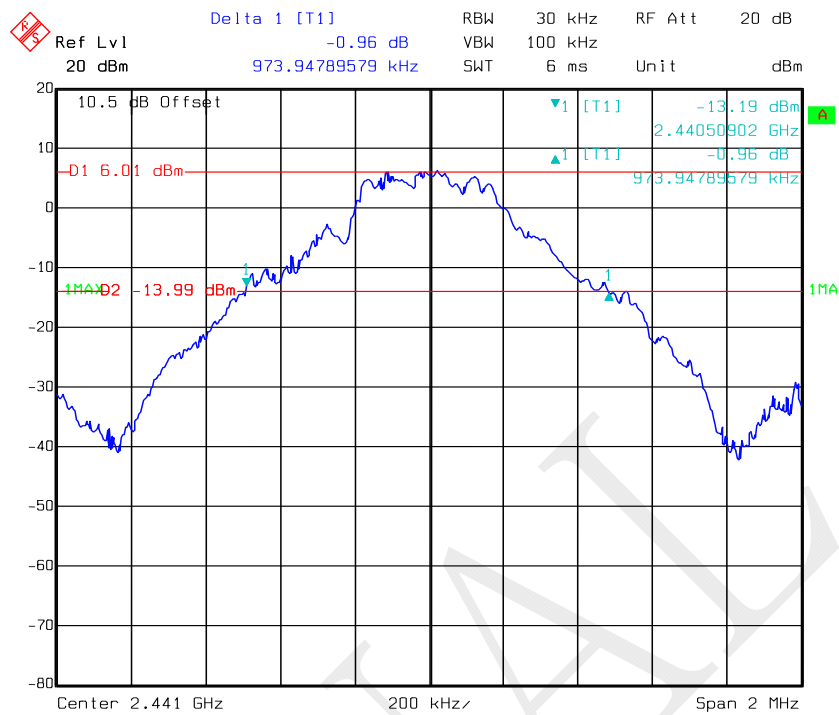


EDR Mode (8-DPSK):

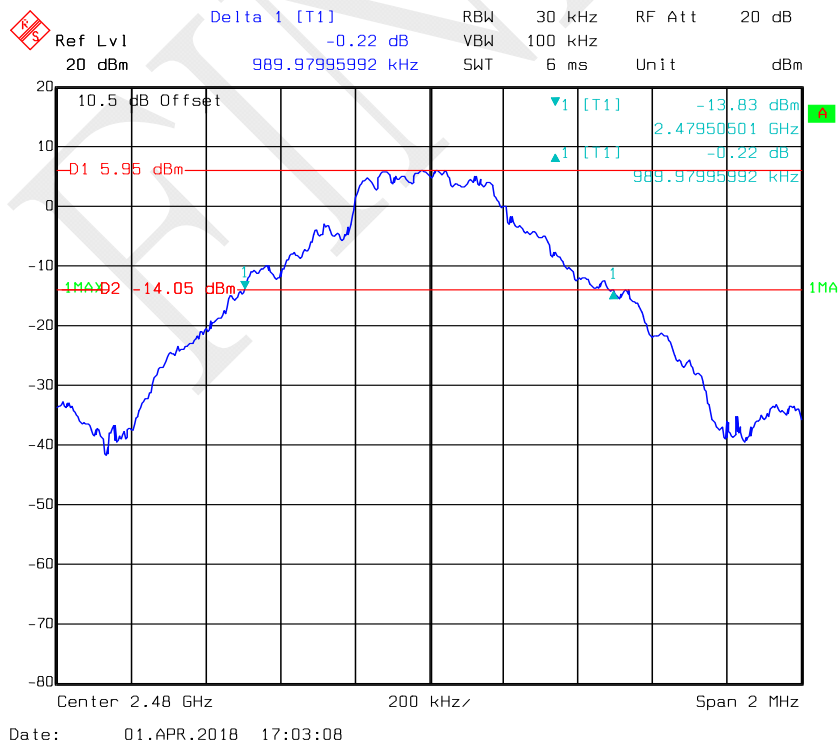
Low Channel



Middle Channel

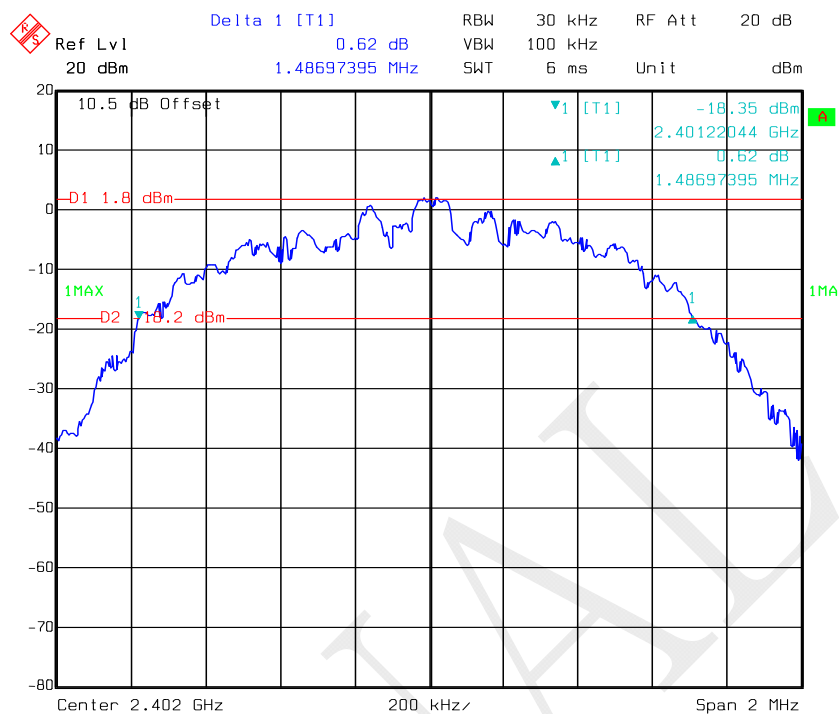


High Channel



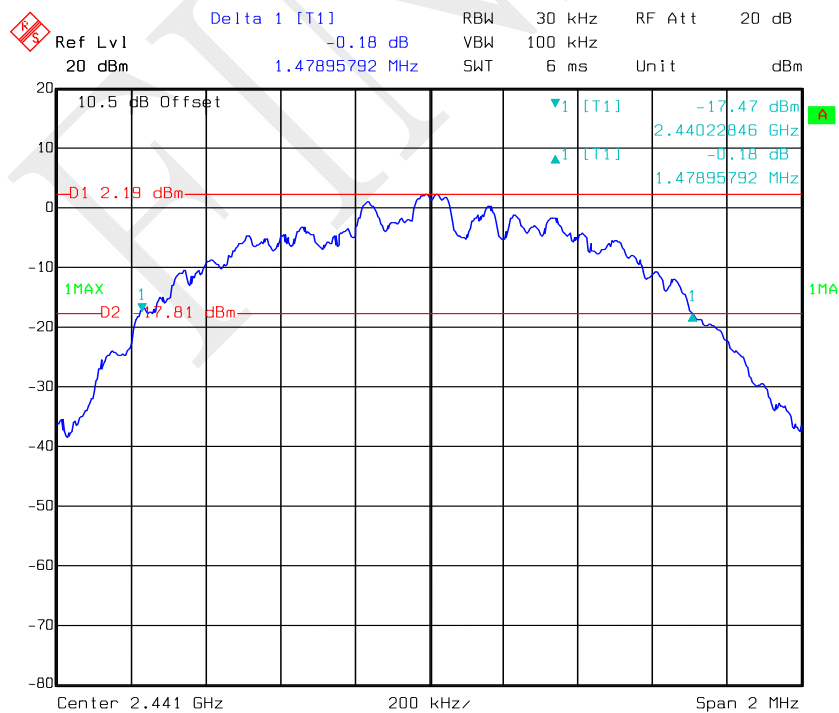
EDR Mode ($\pi/4$ -DQPSK):

Low Channel



Date: 01.APR.2018 17:06:25

Middle Channel



Date: 01.APR.2018 17:10:04

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 Data

Environmental Conditions

Temperature:	21 ~ 23 °C
Relative Humidity:	53 ~ 56 %
ATM Pressure:	95.8 ~ 96.0 kPa

** The testing was performed by Tom Tang on 2018-03-30 and 2018-04-01.*

Test Result: Compliance.

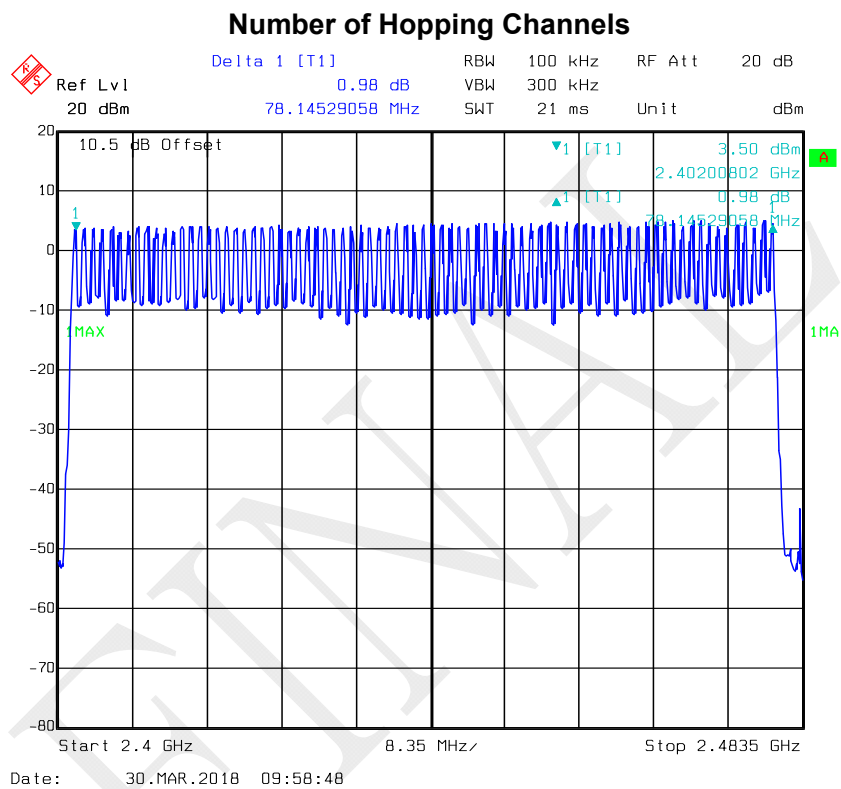
Please refer to following tables and plots.

Test Mode: Transmitting

For 7265NGW Module

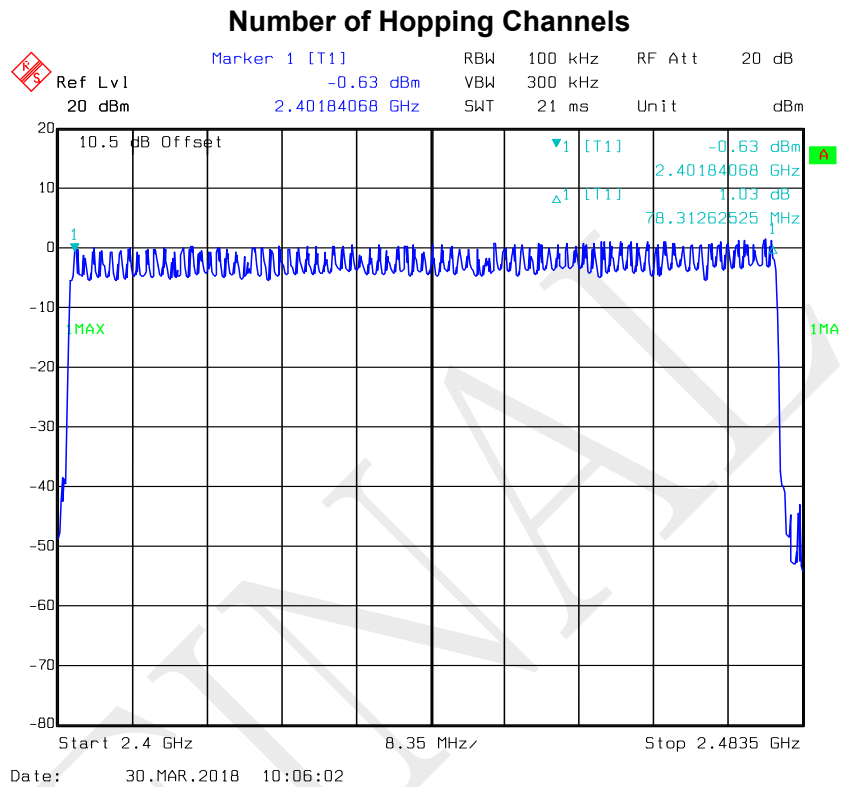
BDR Mode (GFSK):

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



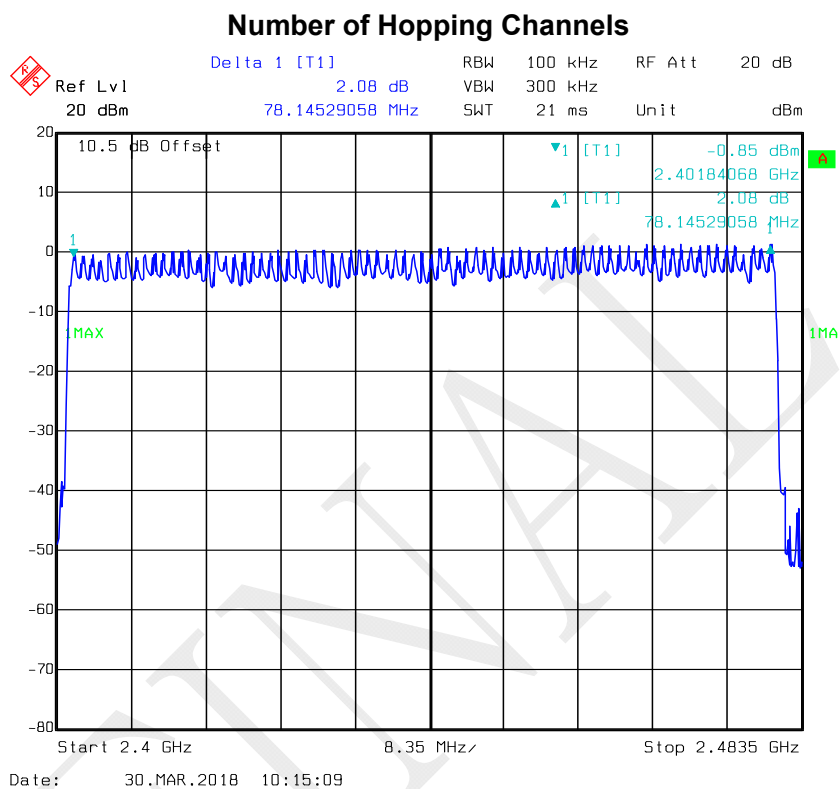
EDR Mode ($\pi/4$ -DQPSK):

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



EDR Mode (8-DPSK):

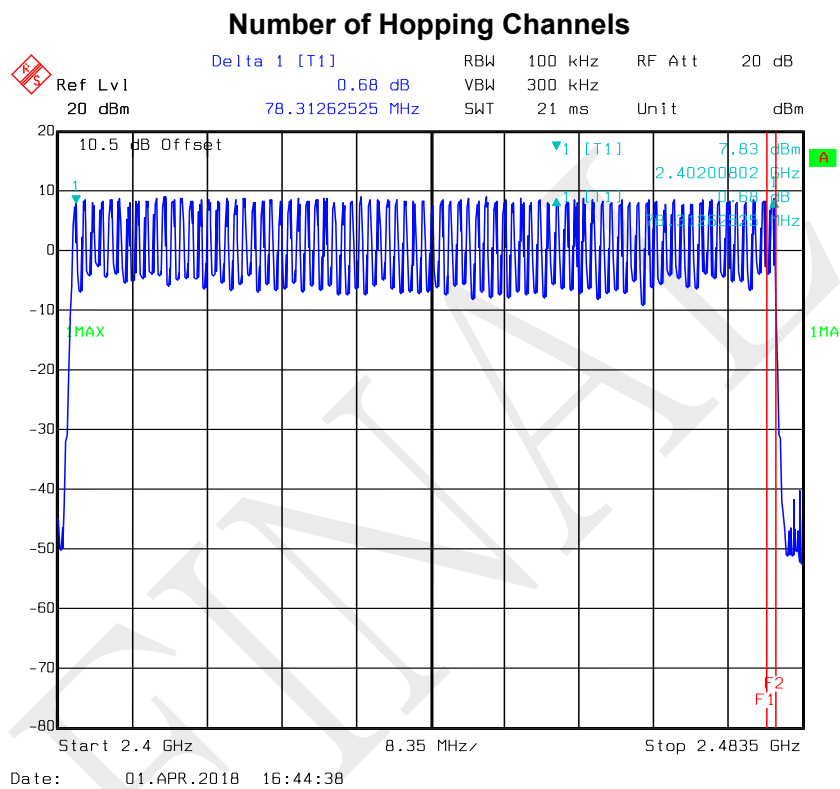
Frequency Range (MHz)	Number of Hopping Channel	Limit
2400-2483.5	79	≥15



For 8265NGW Module

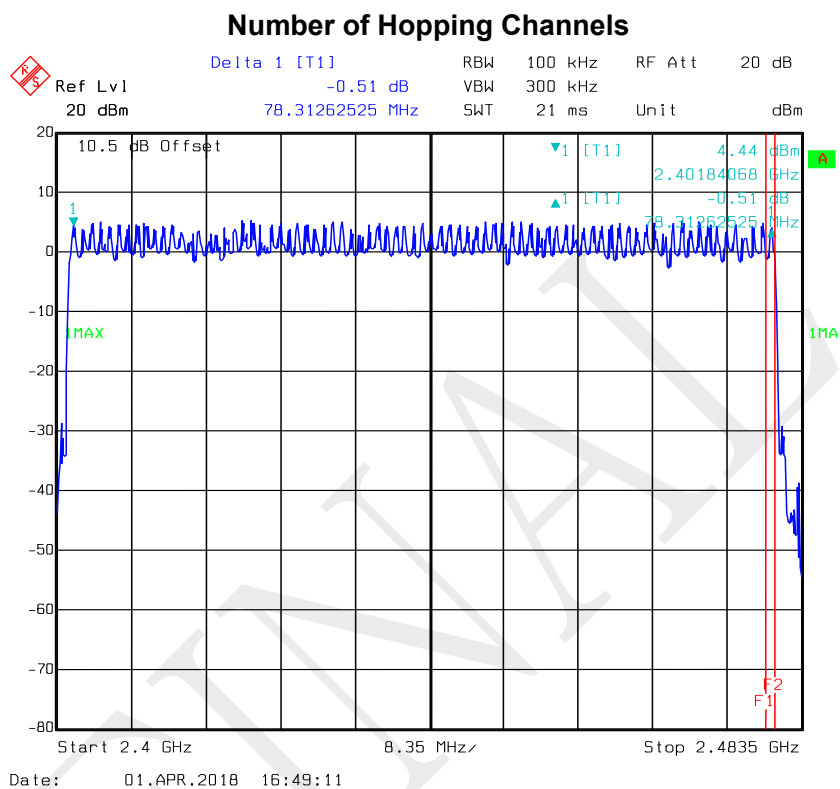
BDR Mode (GFSK):

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



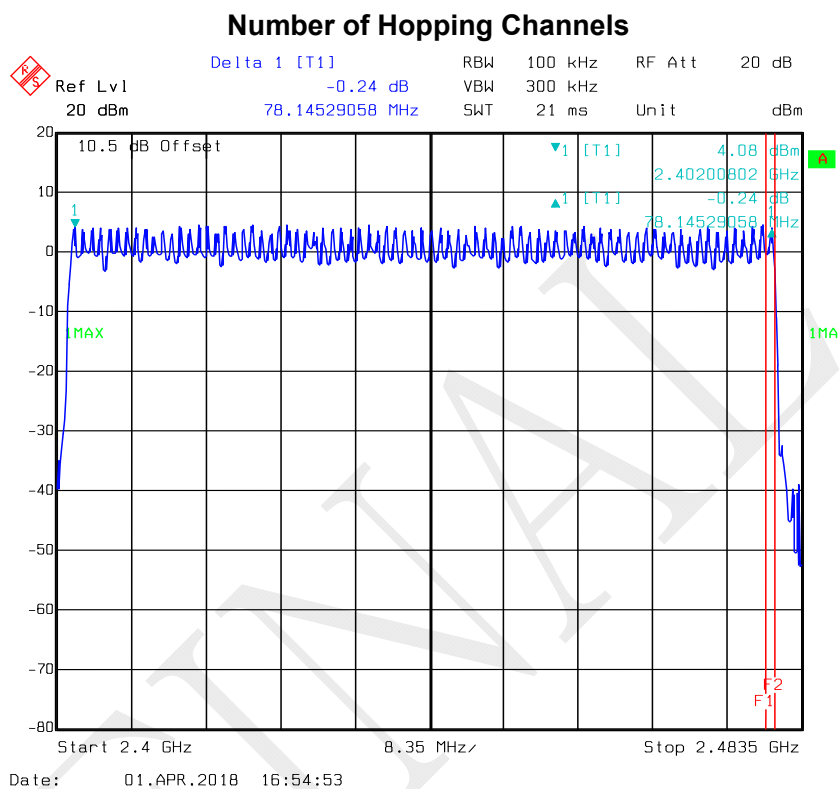
EDR Mode ($\pi/4$ -DQPSK):

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



EDR Mode (8-DPSK):

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



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 hopping mode, Spectrum Analyzer SPAN was set as 0, the time of single pulse was tested.

Test Data

Environmental Conditions

Temperature:	21 ~ 23 °C
Relative Humidity:	53 ~ 56 %
ATM Pressure:	95.8 ~ 96.0 kPa

** The testing was performed by Tom Tang on 2018-03-30 and 2018-04-01.*

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

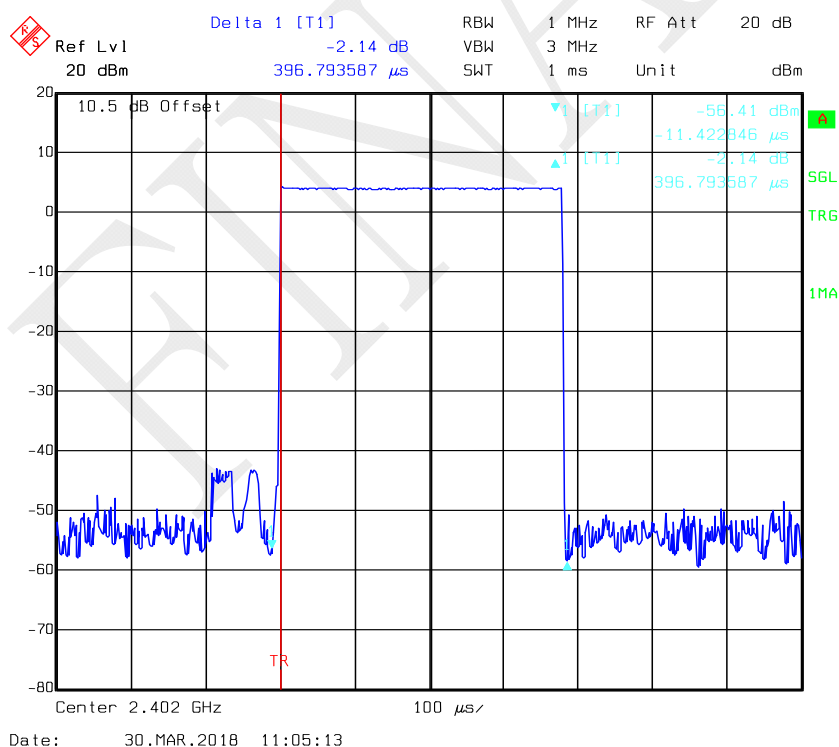
Test Mode: Transmitting

For 7265NGW Module

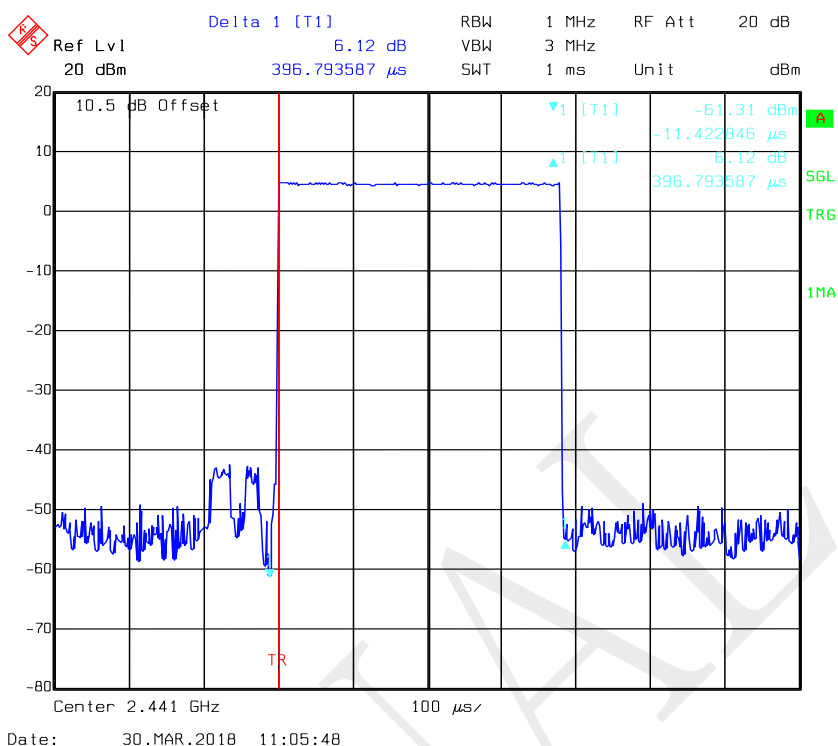
BDR Mode (GFSK):

Mode	Channel	Pulse Width (ms)	Dwell Time (s)	Limit (s)	Result
DH1	Low	0.397	0.127	0.4	Compliance
	Middle	0.397	0.127	0.4	Compliance
	High	0.397	0.127	0.4	Compliance
	Note: Dwell time=Pulse time (ms) × (1600/2/79) ×31.6 s				
DH3	Low	1.659	0.265	0.4	Compliance
	Middle	1.659	0.265	0.4	Compliance
	High	1.659	0.265	0.4	Compliance
	Note: Dwell time=Pulse time (ms) × (1600/4/79) ×31.6 s				
DH5	Low	2.918	0.311	0.4	Compliance
	Middle	2.918	0.311	0.4	Compliance
	High	2.918	0.311	0.4	Compliance
	Note: Dwell time=Pulse time (ms) × (1600/6/79) ×31.6 s				

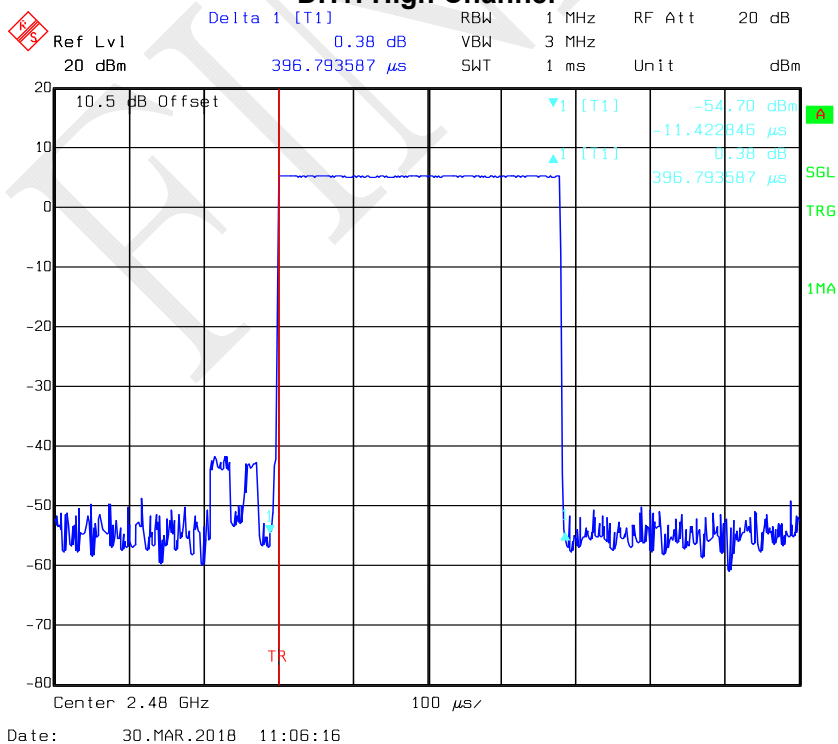
DH1: Low Channel



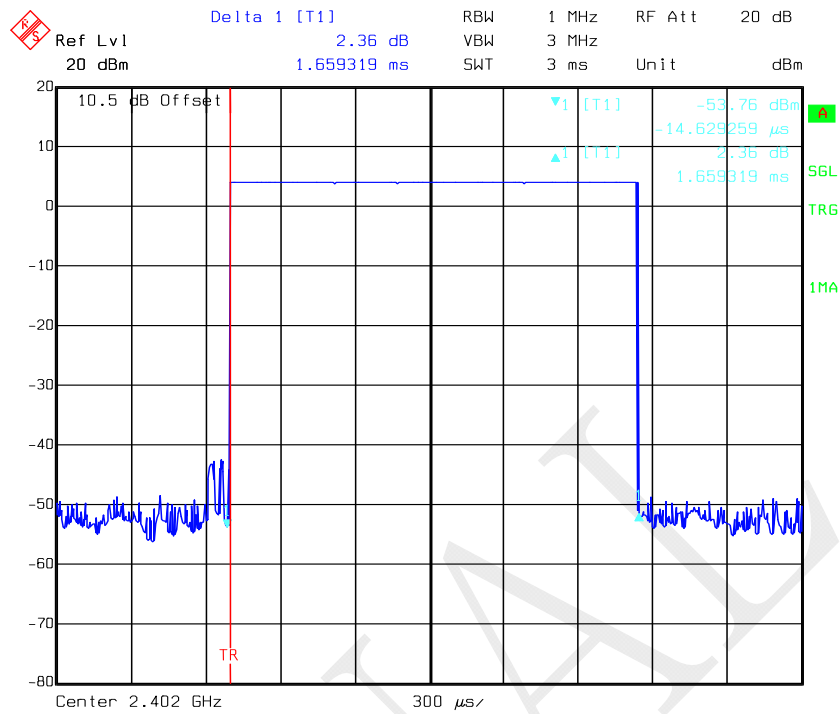
DH1: Middle Channel



DH1: High Channel

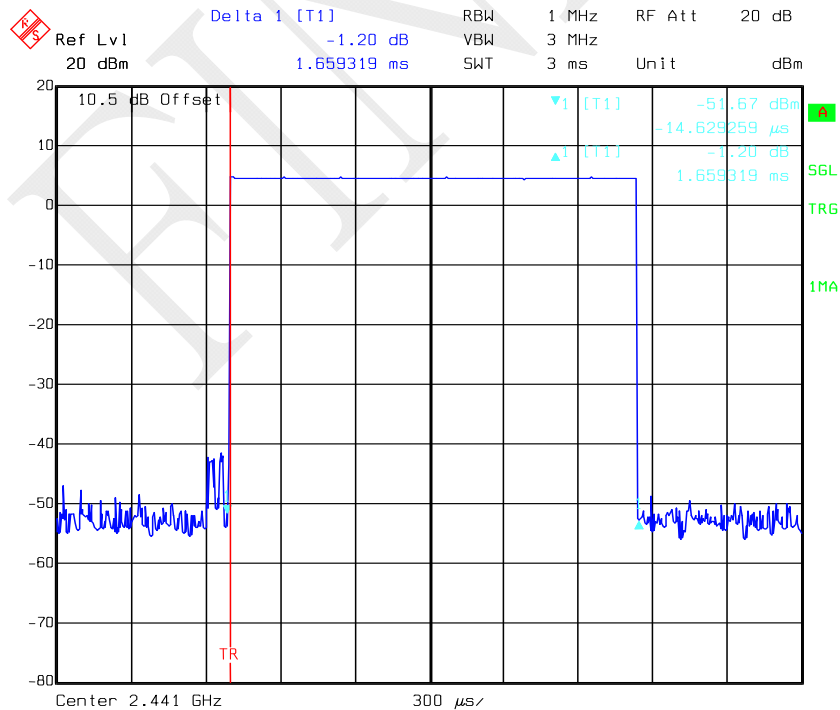


DH3: Low Channel



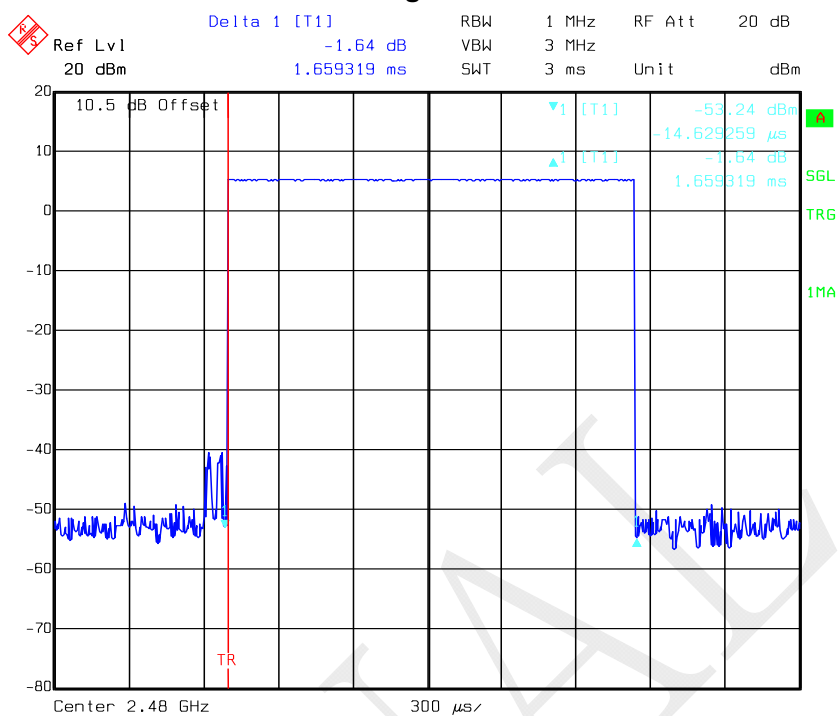
Date: 30.MAR.2018 11:07:47

DH3: Middle Channel

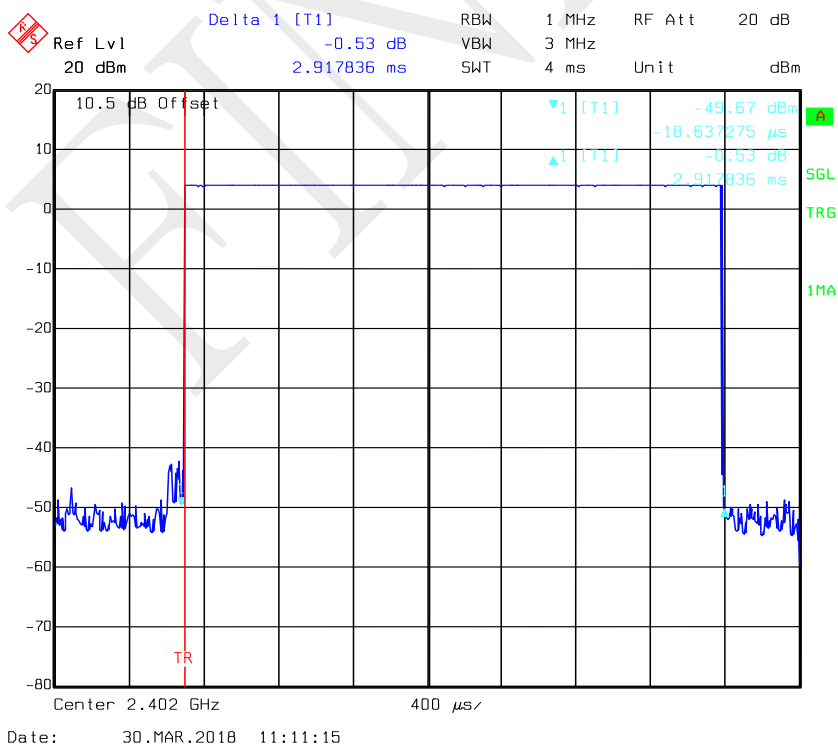


Date: 30.MAR.2018 11:08:09

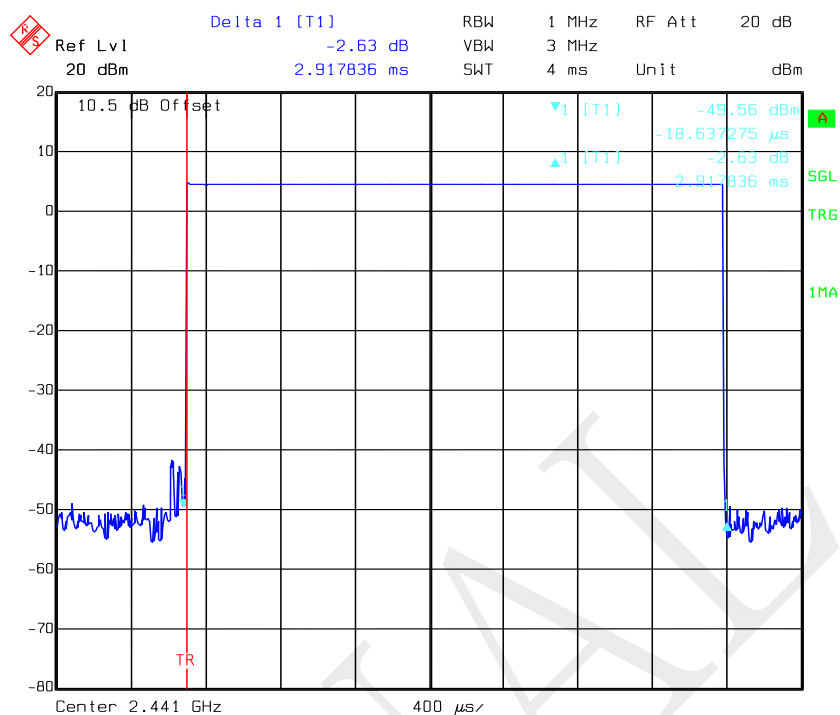
DH3: High Channel



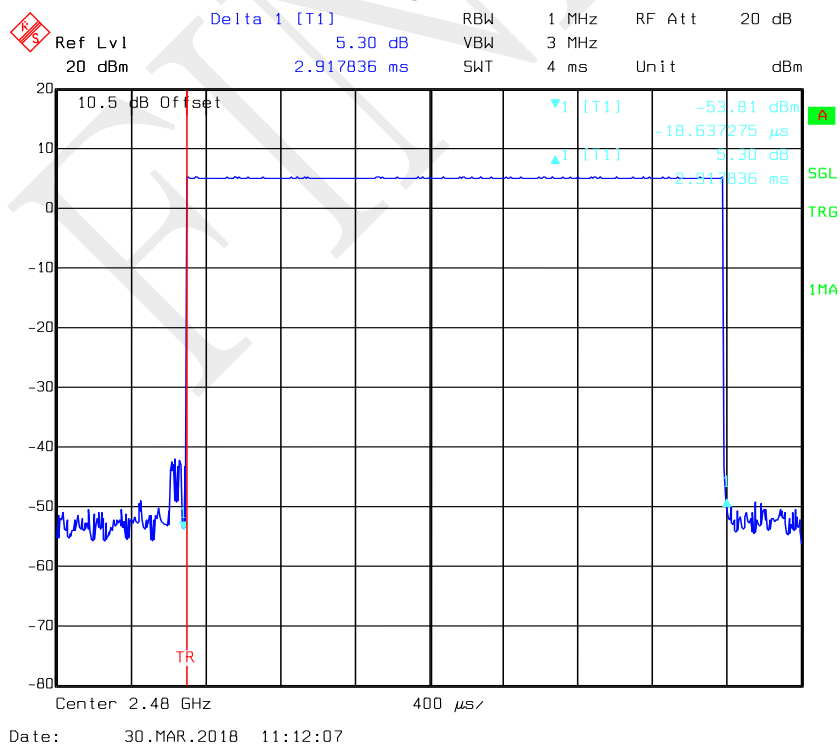
DH5: Low Channel



DH5: Middle Channel



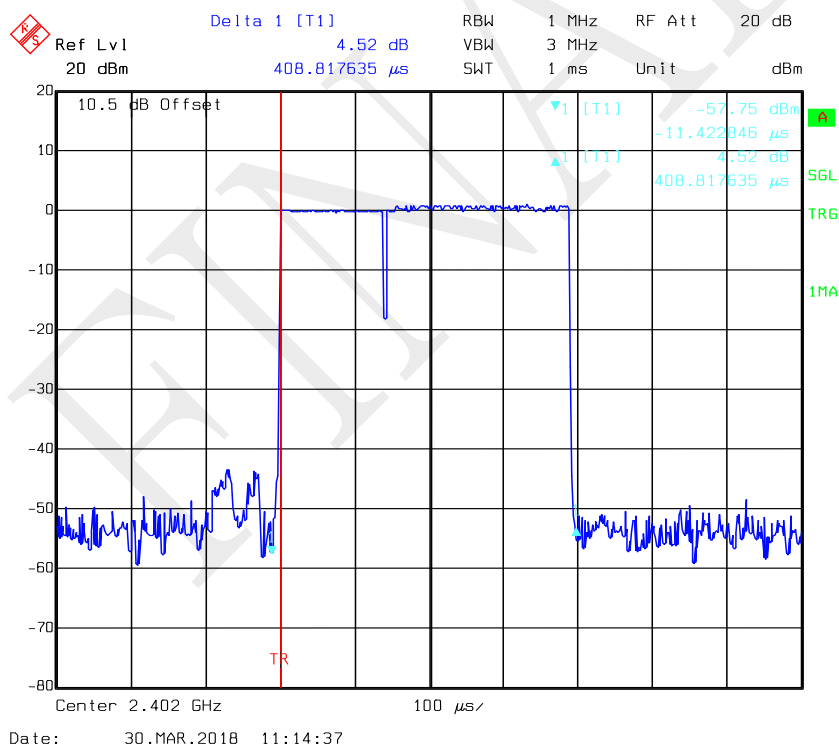
DH5: High Channel



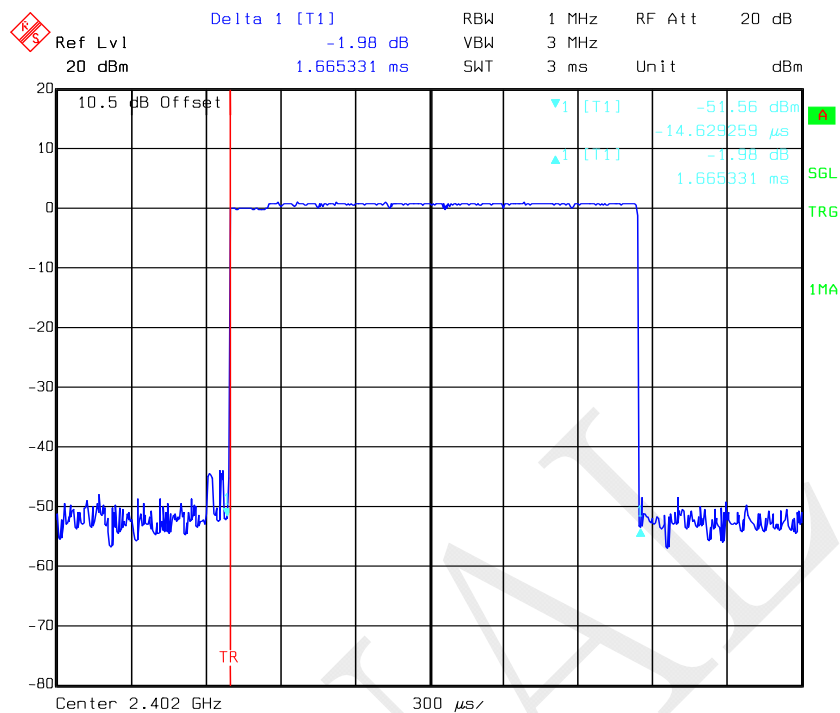
EDR Mode ($\pi/4$ -DQPSK):

Mode	Channel	Pulse Width (ms)	Dwell Time (s)	Limit (s)	Result
2DH1	Low	0.409	0.131	0.4	Compliance
	Middle	0.409	0.131	0.4	Compliance
	High	0.409	0.131	0.4	Compliance
	Note: Dwell time=Pulse time (ms) \times (1600/2/79) \times 31.6 s				
2DH3	Low	1.665	0.266	0.4	Compliance
	Middle	1.665	0.266	0.4	Compliance
	High	1.665	0.266	0.4	Compliance
	Note: Dwell time=Pulse time (ms) \times (1600/4/79) \times 31.6 s				
2DH5	Low	2.918	0.311	0.4	Compliance
	Middle	2.918	0.311	0.4	Compliance
	High	2.918	0.311	0.4	Compliance
	Note: Dwell time=Pulse time (ms) \times (1600/6/79) \times 31.6 s				

2DH1: Low Channel

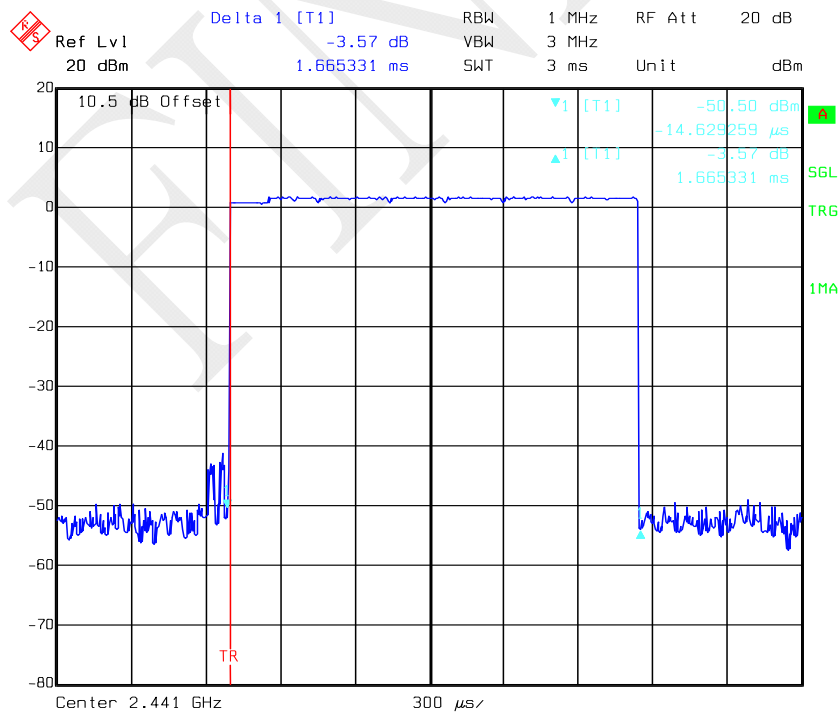


2DH3: Low Channel



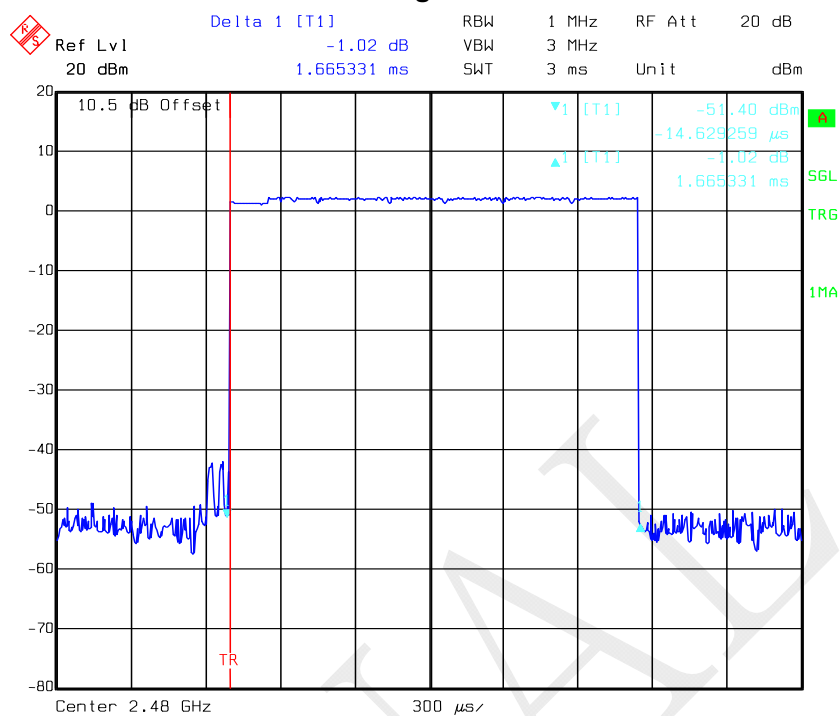
Date: 30.MAR.2018 11:16:43

2DH3: Middle Channel



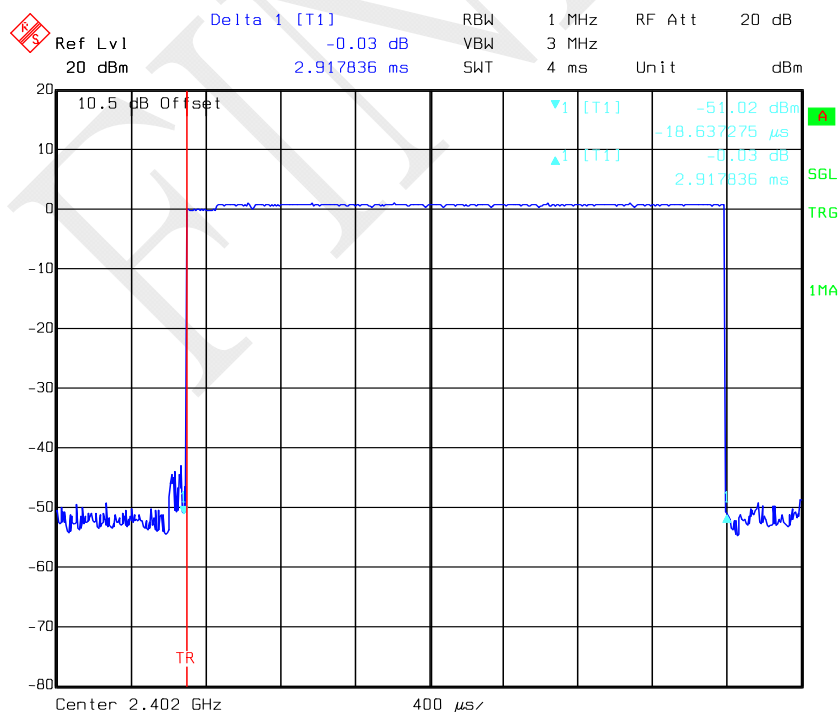
Date: 30.MAR.2018 11:17:11

2DH3: High Channel



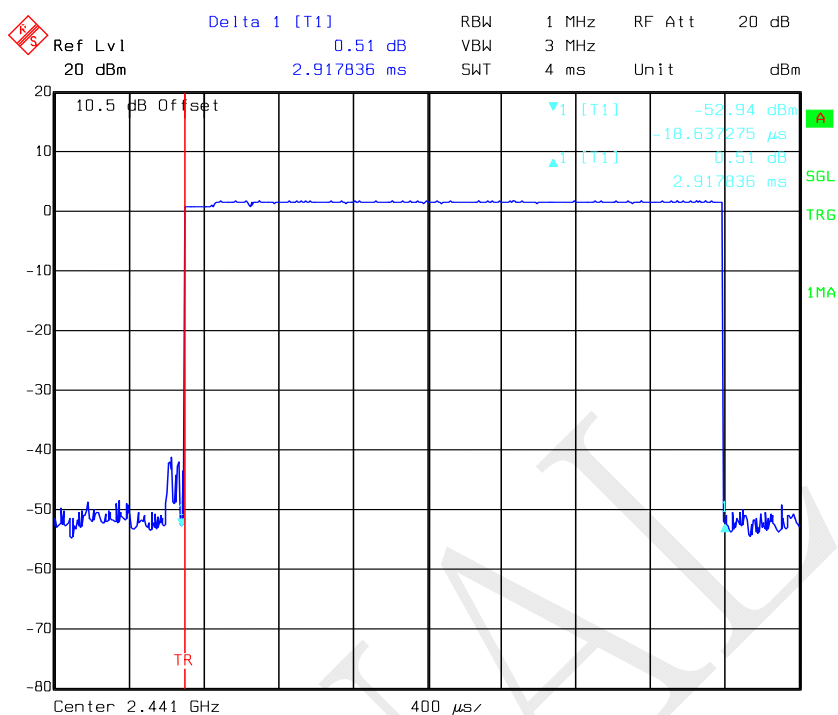
Date: 30.MAR.2018 11:17:39

2DH5: Low Channel

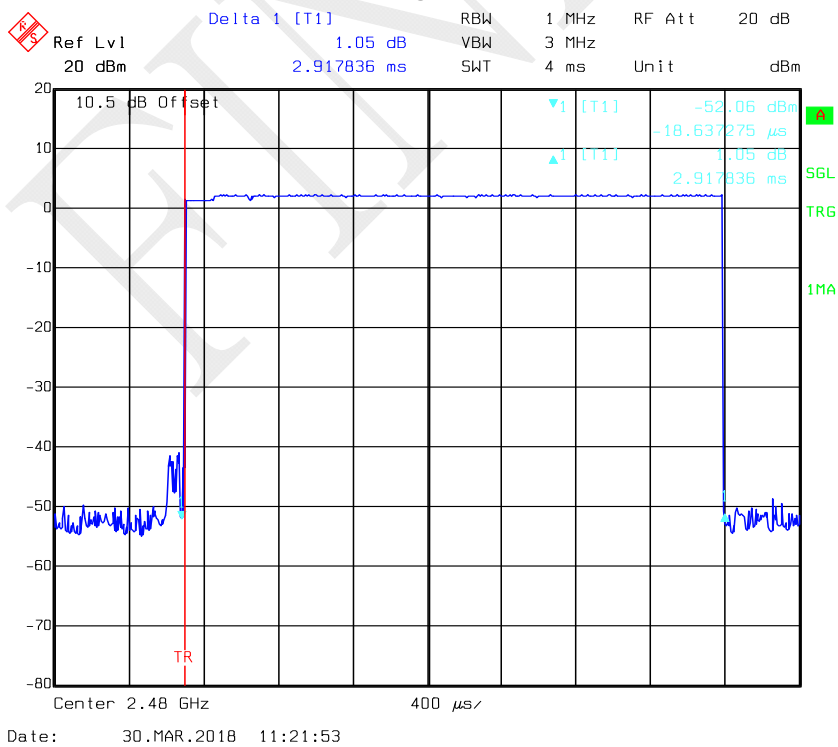


Date: 30.MAR.2018 11:18:53

2DH5: Middle Channel



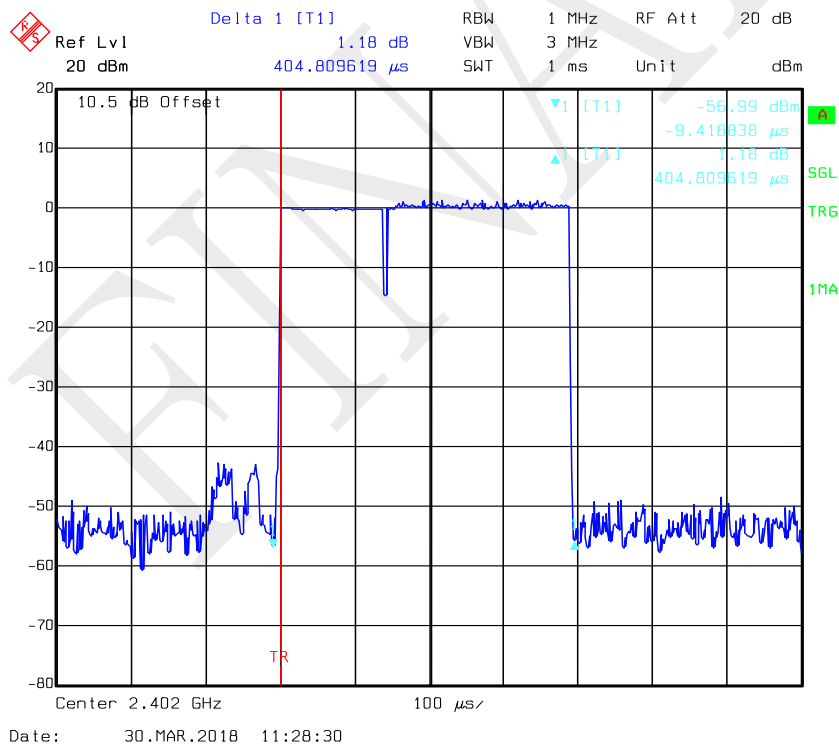
2DH5: High Channel



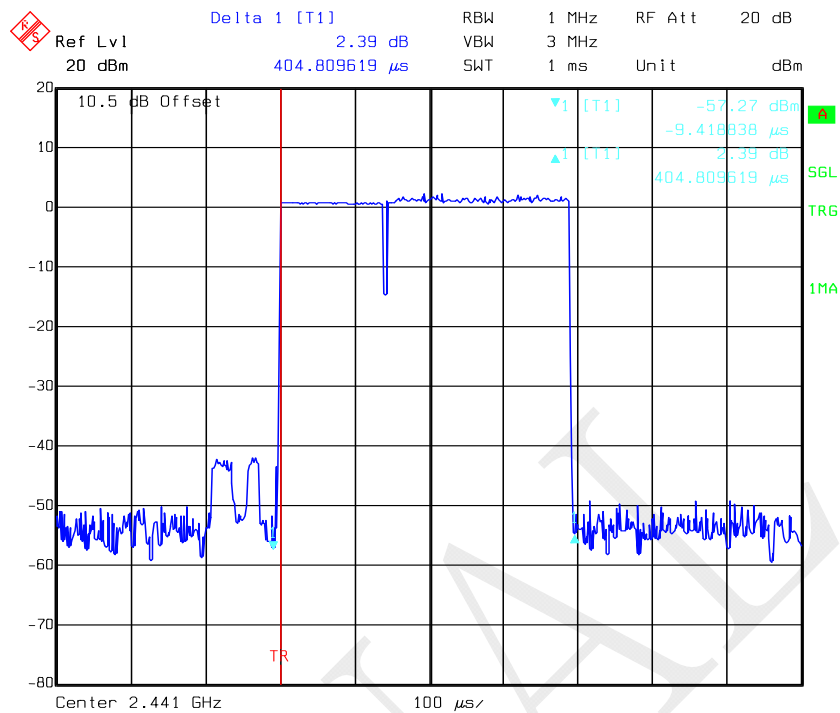
EDR Mode (8-DPSK):

Mode	Channel	Pulse Width (ms)	Dwell Time (s)	Limit (s)	Result
3DH1	Low	0.405	0.130	0.4	Compliance
	Middle	0.405	0.130	0.4	Compliance
	High	0.405	0.130	0.4	Compliance
	Note: Dwell time=Pulse time (ms) × (1600/2/79) ×31.6 s				
3DH3	Low	1.665	0.266	0.4	Compliance
	Middle	1.665	0.266	0.4	Compliance
	High	1.665	0.266	0.4	Compliance
	Note: Dwell time=Pulse time (ms) × (1600/4/79) ×31.6 s				
3DH5	Low	2.926	0.312	0.4	Compliance
	Middle	2.926	0.312	0.4	Compliance
	High	2.926	0.312	0.4	Compliance
	Note: Dwell time=Pulse time (ms) × (1600/6/79) ×31.6 s				

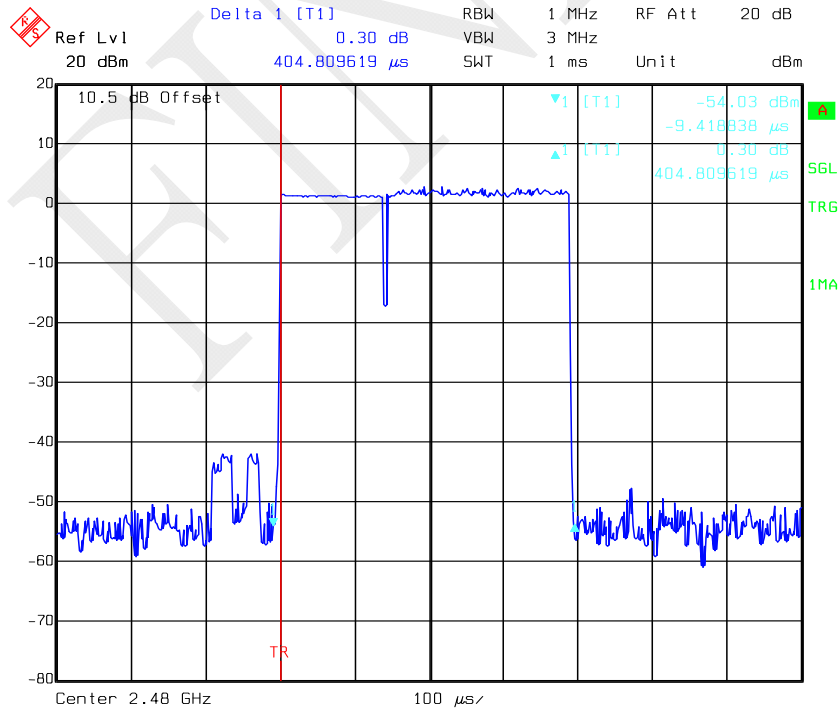
3DH1: Low Channel



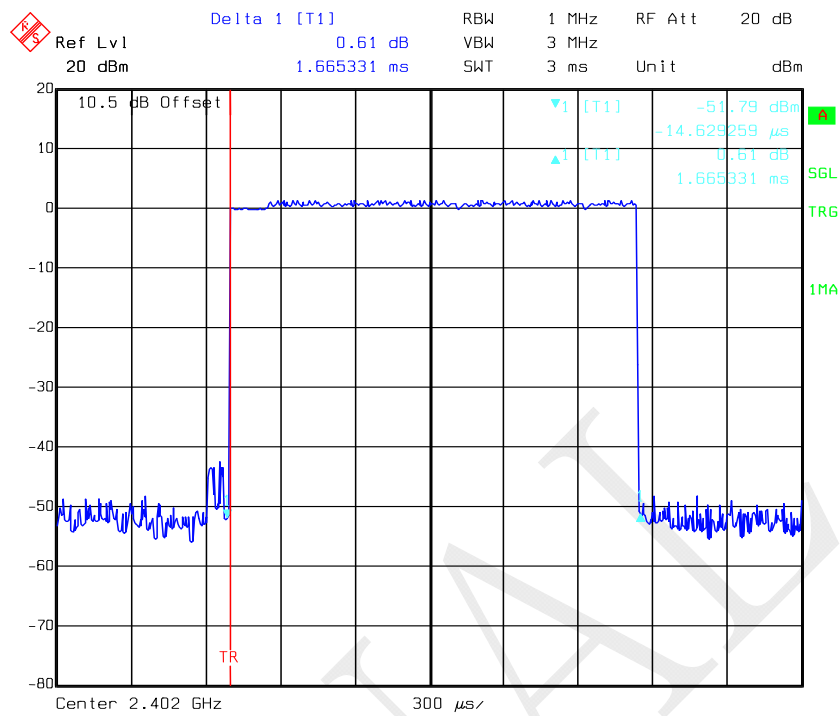
3DH1: Middle Channel



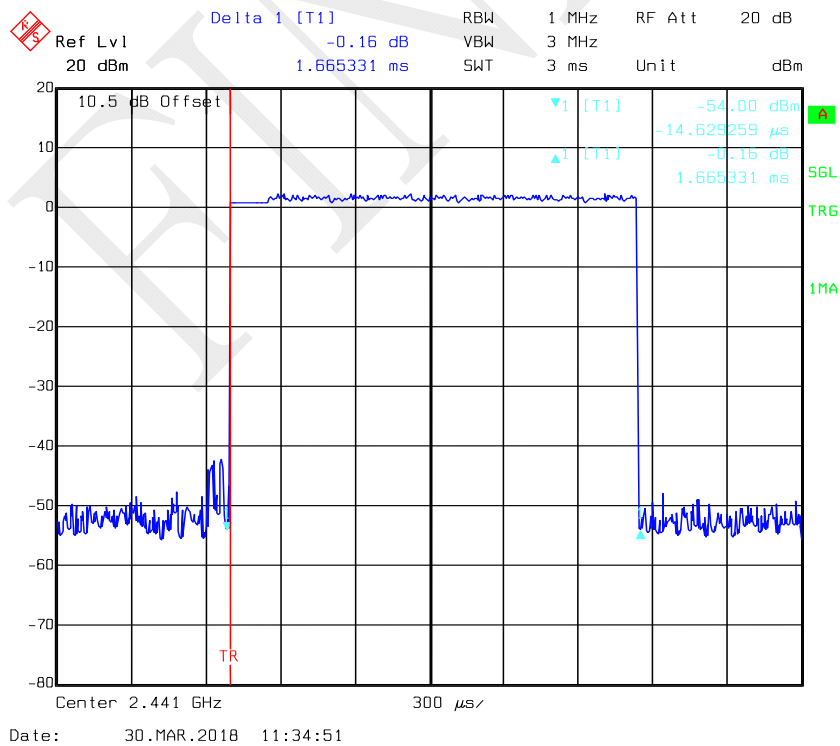
3DH1: High Channel



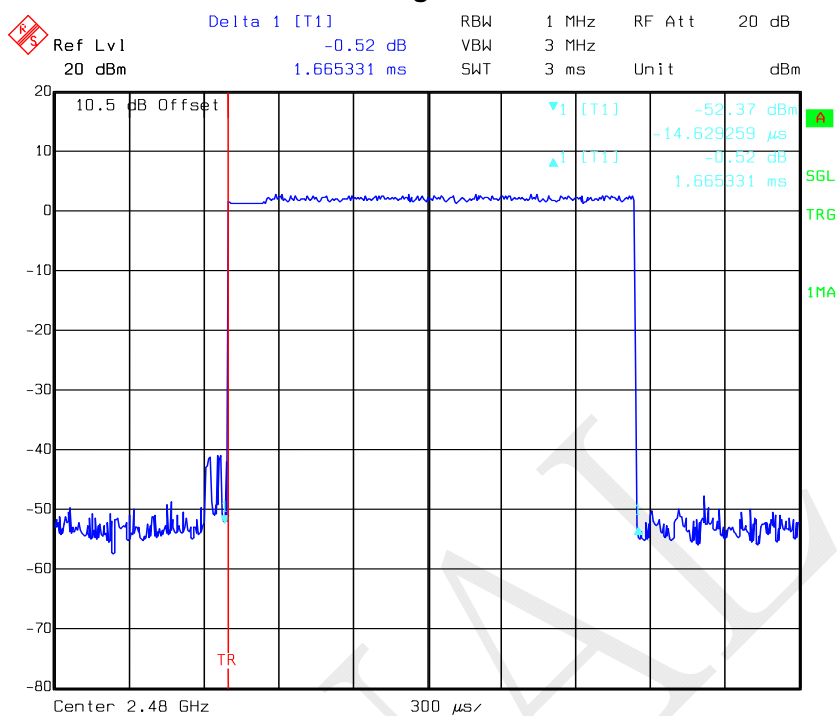
3DH3: Low Channel



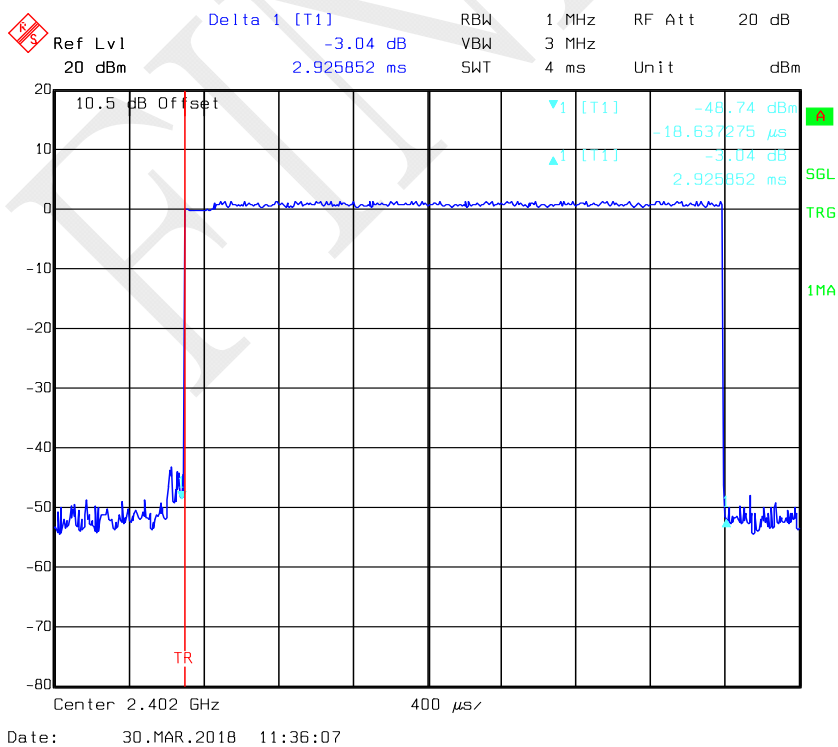
3DH3: Middle Channel



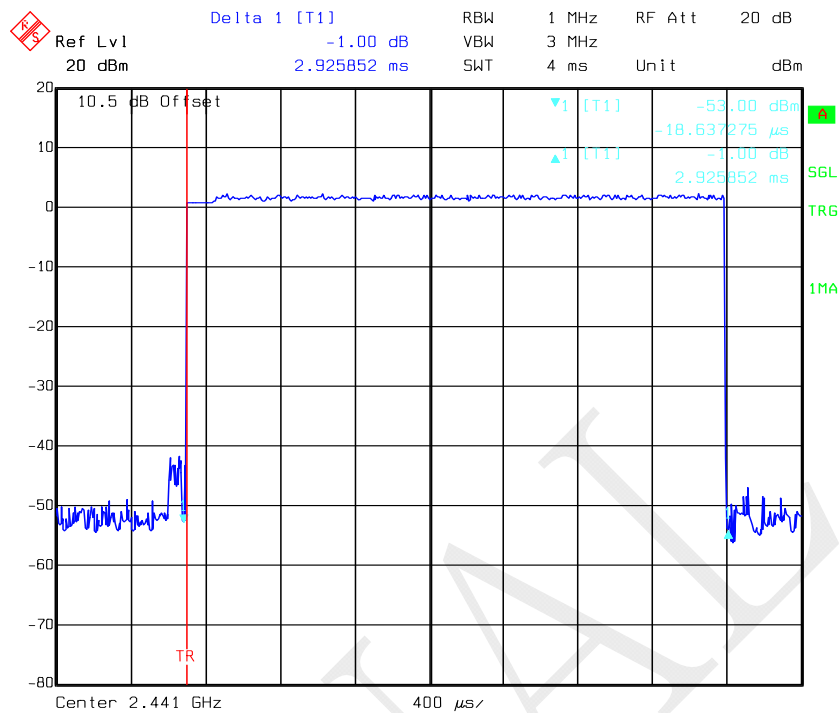
3DH3: High Channel



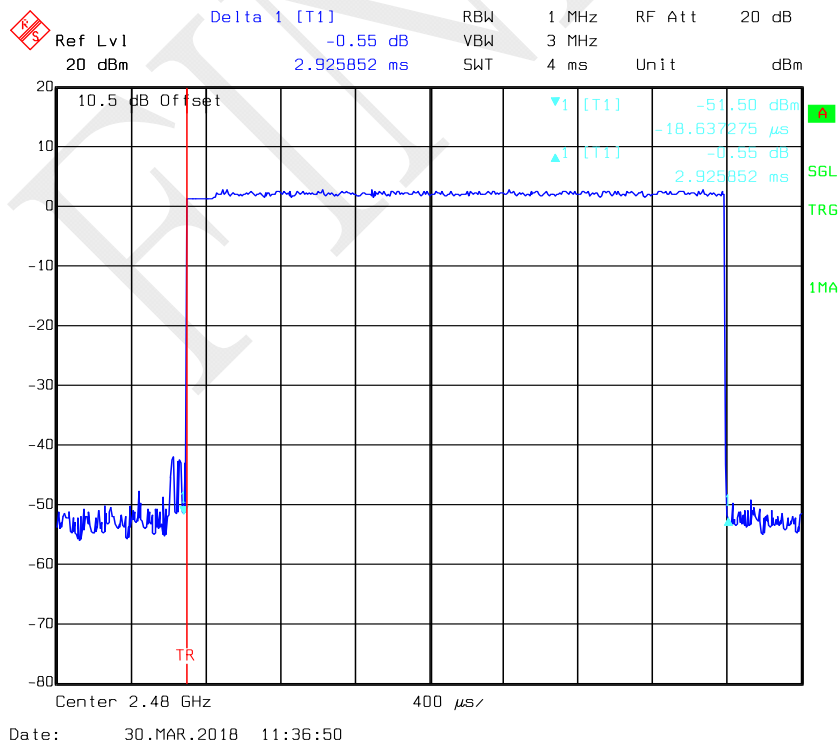
3DH5: Low Channel



3DH5: Middle Channel



3DH5: High Channel

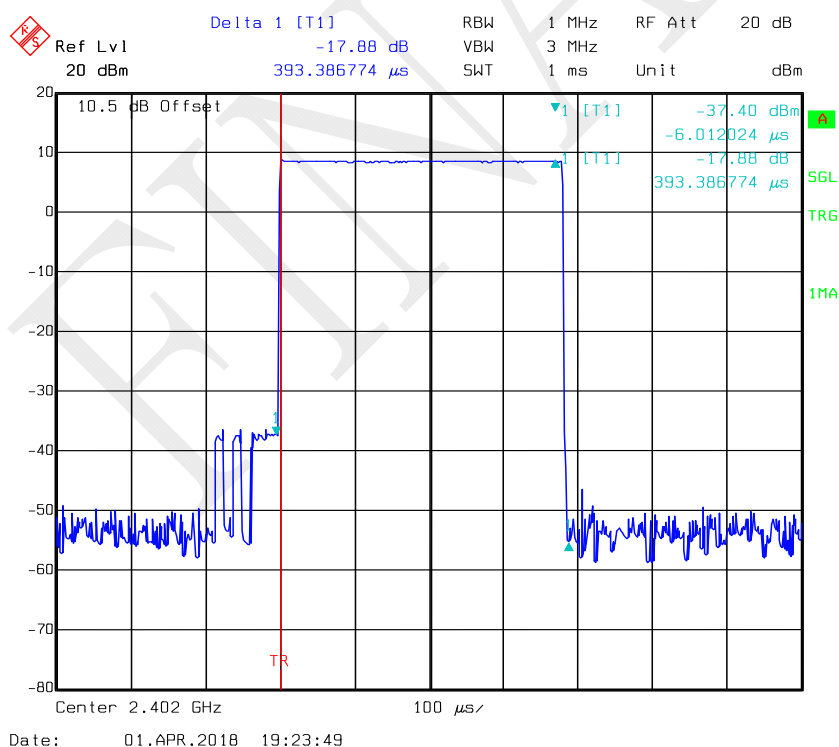


For 8265NGW Module

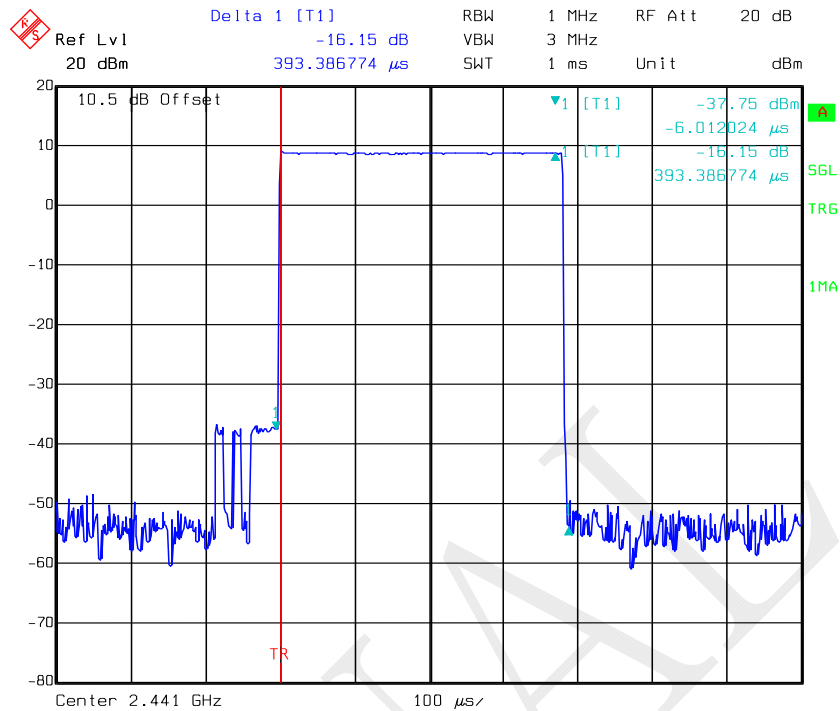
BDR Mode (GFSK):

Mode	Channel	Pulse Width (ms)	Dwell Time (s)	Limit (s)	Result
DH1	Low	0.393	0.126	0.4	Compliance
	Middle	0.393	0.126	0.4	Compliance
	High	0.393	0.126	0.4	Compliance
	Note: Dwell time=Pulse time (ms) × (1600/2/79) ×31.6 s				
DH3	Low	1.665	0.266	0.4	Compliance
	Middle	1.665	0.266	0.4	Compliance
	High	1.665	0.266	0.4	Compliance
	Note: Dwell time=Pulse time (ms) × (1600/4/79) ×31.6 s				
DH5	Low	2.910	0.310	0.4	Compliance
	Middle	2.910	0.310	0.4	Compliance
	High	2.910	0.310	0.4	Compliance
	Note: Dwell time=Pulse time (ms) × (1600/6/79) ×31.6 s				

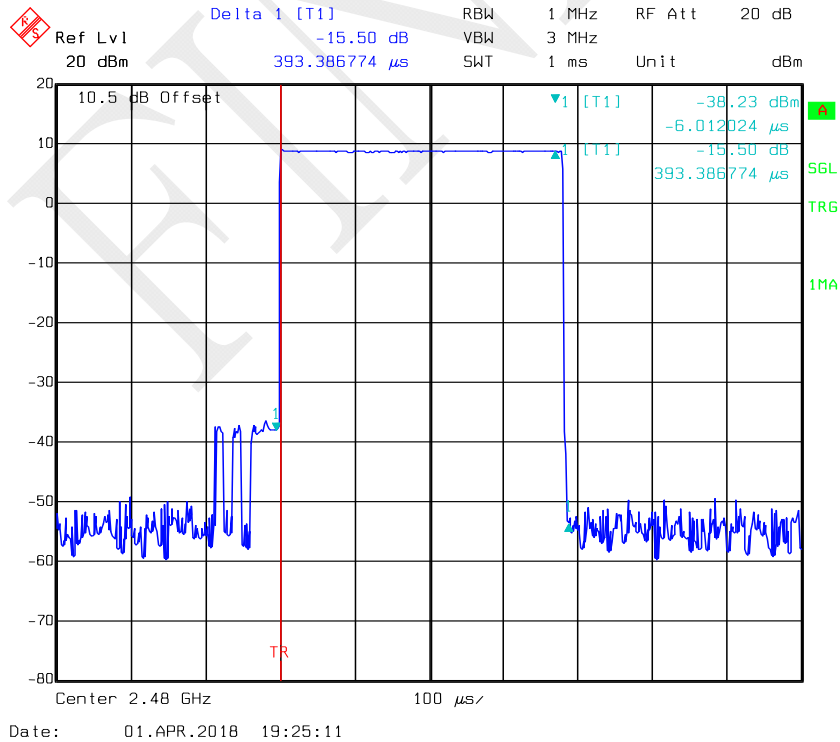
DH1: Low Channel



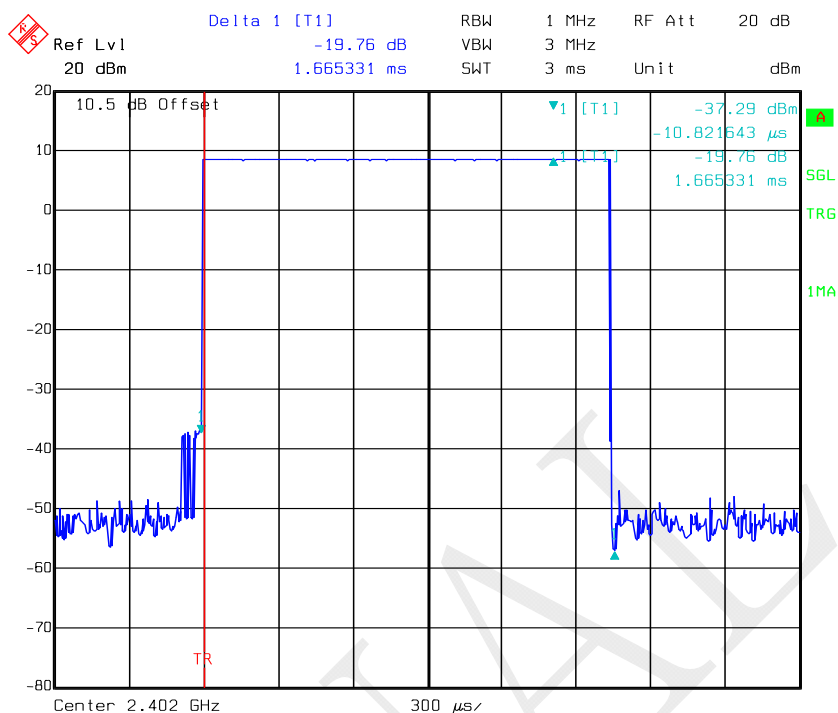
DH1: Middle Channel



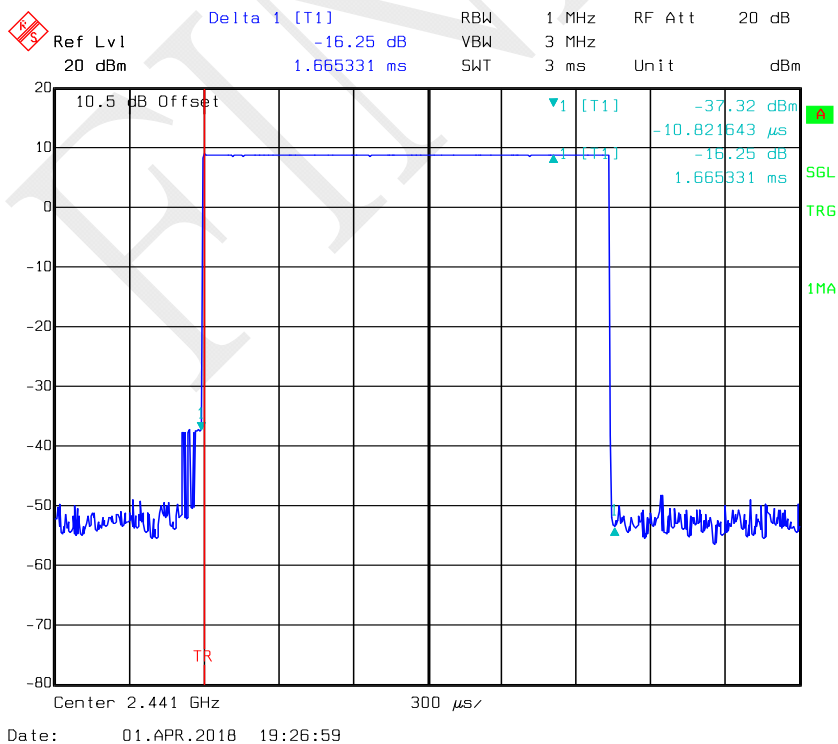
DH1: High Channel



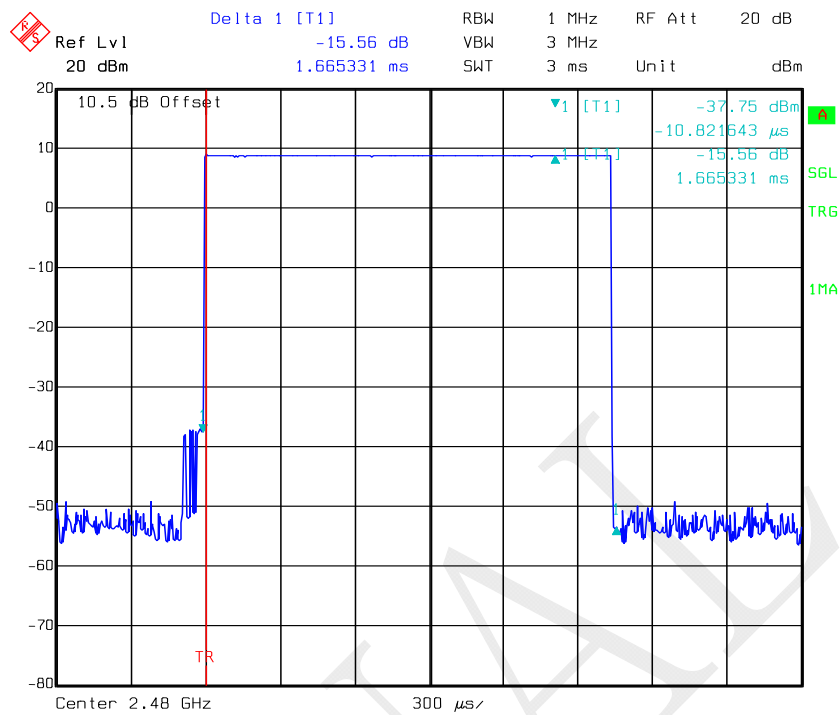
DH3: Low Channel



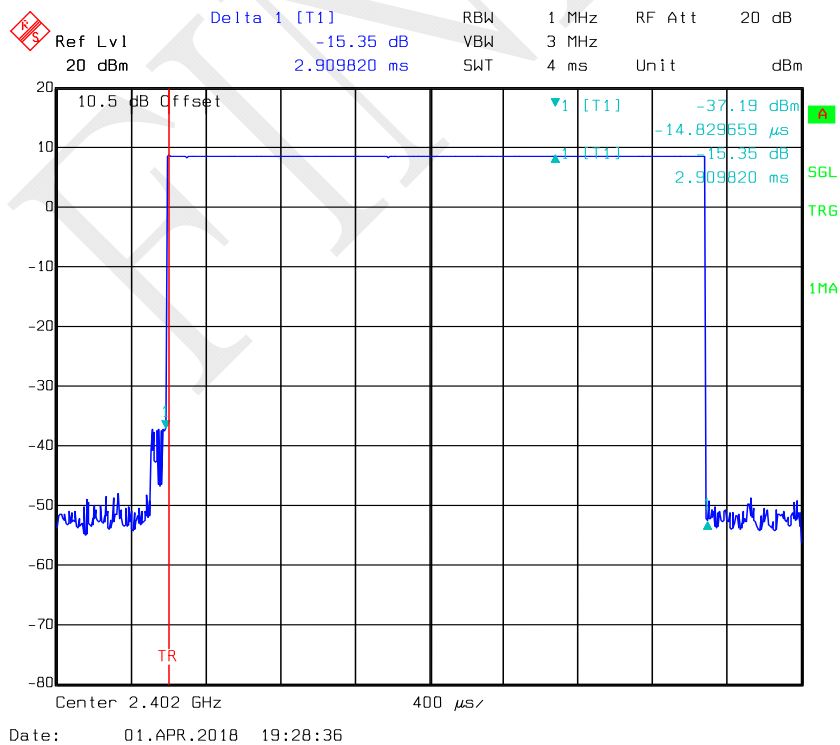
DH3: Middle Channel



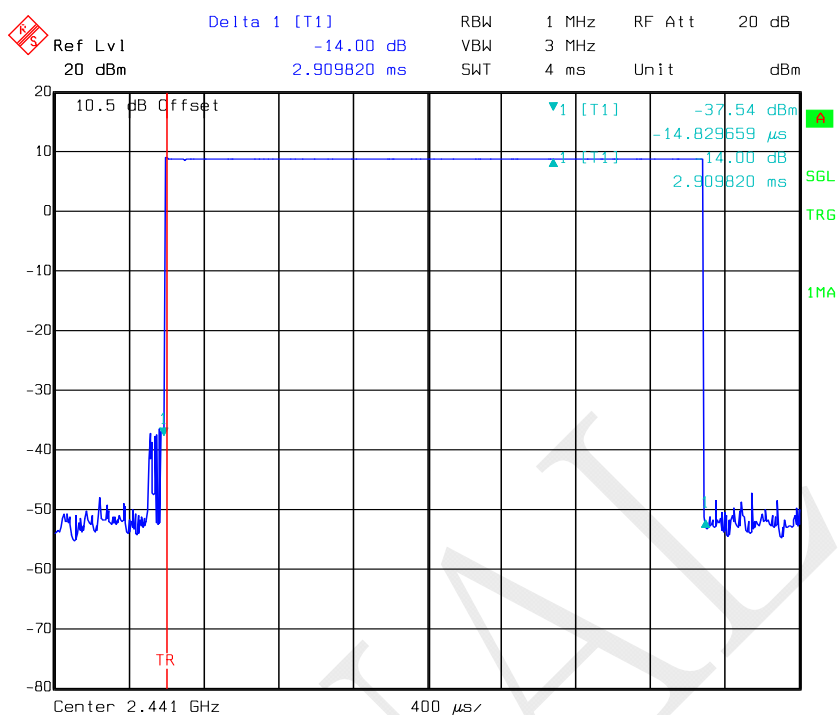
DH3: High Channel



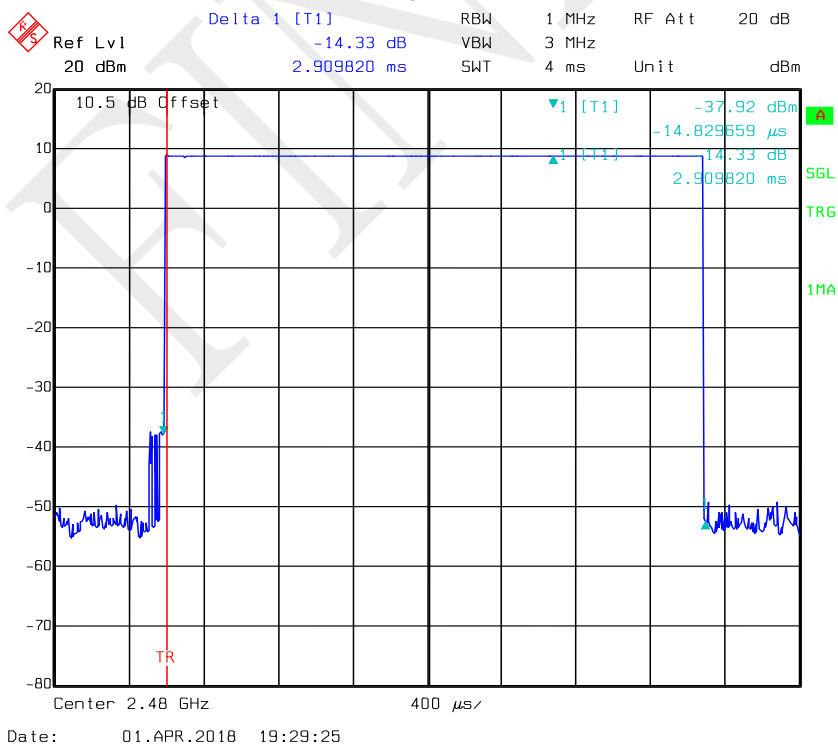
DH5: Low Channel



DH5: Middle Channel



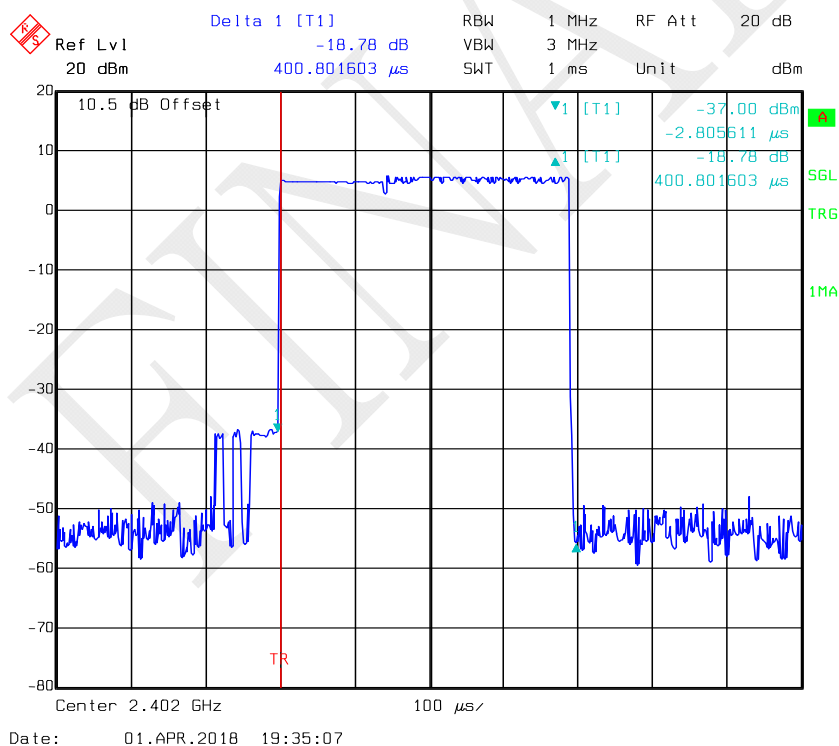
DH5: High Channel



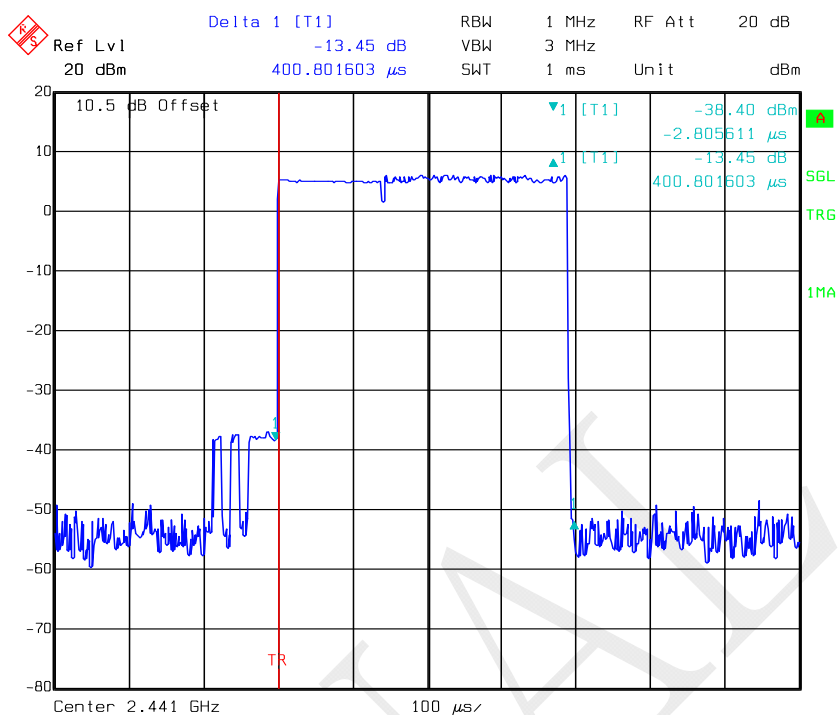
EDR Mode ($\pi/4$ -DQPSK):

Mode	Channel	Pulse Width (ms)	Dwell Time (s)	Limit (s)	Result
2DH1	Low	0.401	0.128	0.4	Compliance
	Middle	0.401	0.128	0.4	Compliance
	High	0.401	0.128	0.4	Compliance
	Note: Dwell time=Pulse time (ms) \times (1600/2/79) \times 31.6 s				
2DH3	Low	1.669	0.267	0.4	Compliance
	Middle	1.669	0.267	0.4	Compliance
	High	1.669	0.267	0.4	Compliance
	Note: Dwell time=Pulse time (ms) \times (1600/4/79) \times 31.6 s				
2DH5	Low	2.926	0.312	0.4	Compliance
	Middle	2.926	0.312	0.4	Compliance
	High	2.926	0.312	0.4	Compliance
	Note: Dwell time=Pulse time (ms) \times (1600/6/79) \times 31.6 s				

2DH1: Low Channel

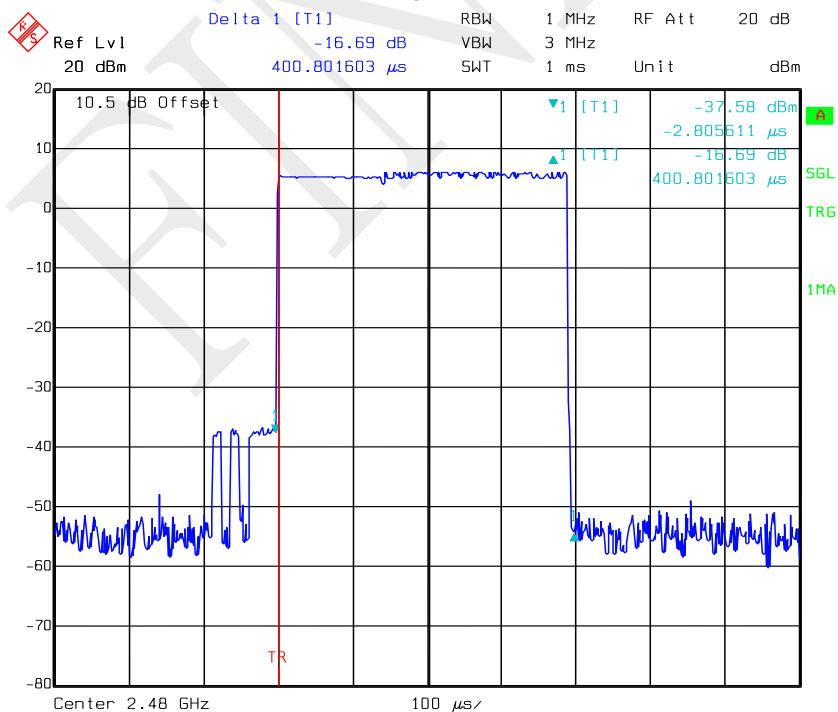


2DH1: Middle Channel



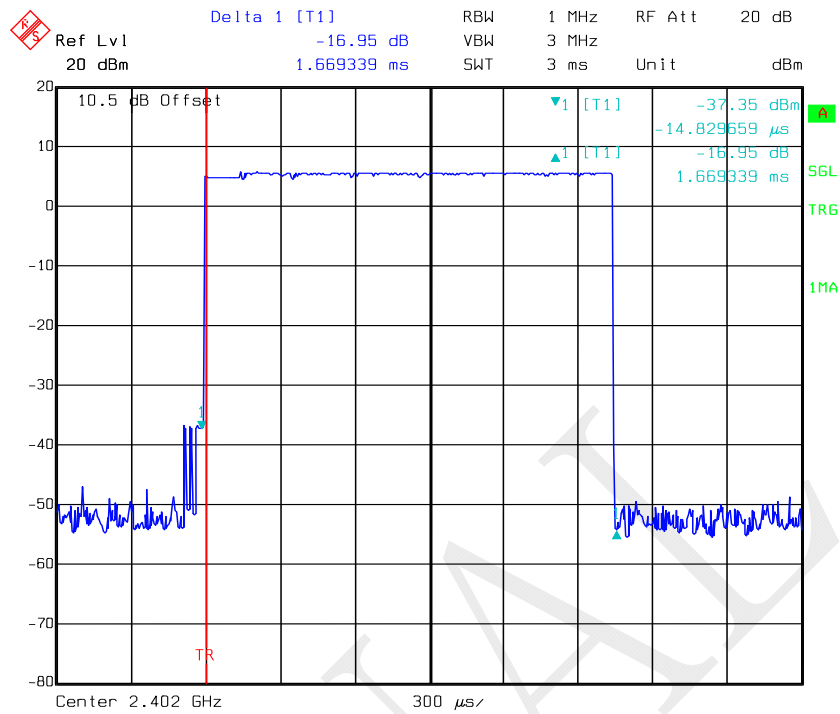
Date: 01.APR.2018 19:35:32

2DH1: High Channel

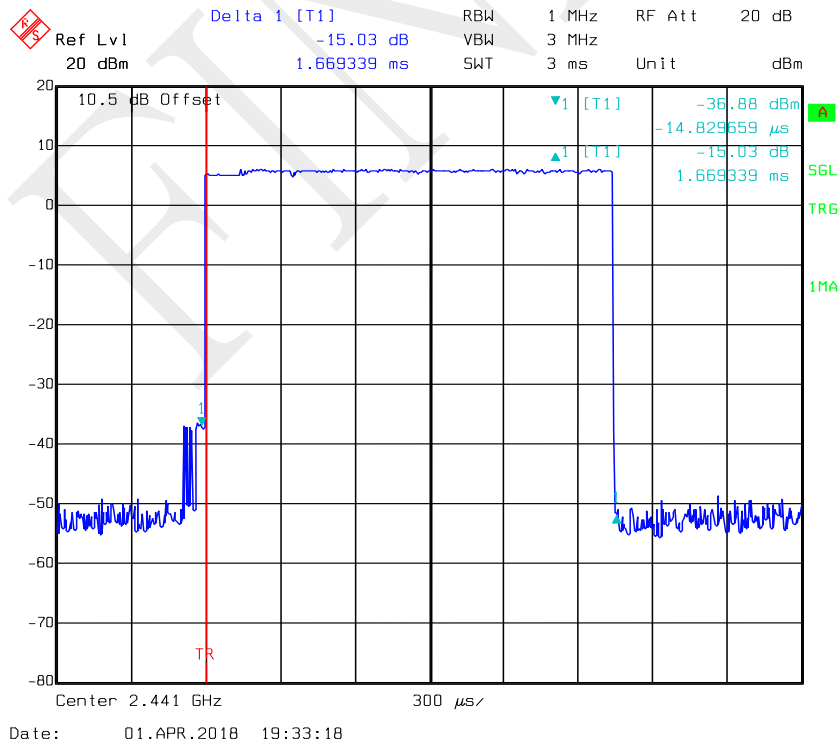


Date: 01.APR.2018 19:36:04

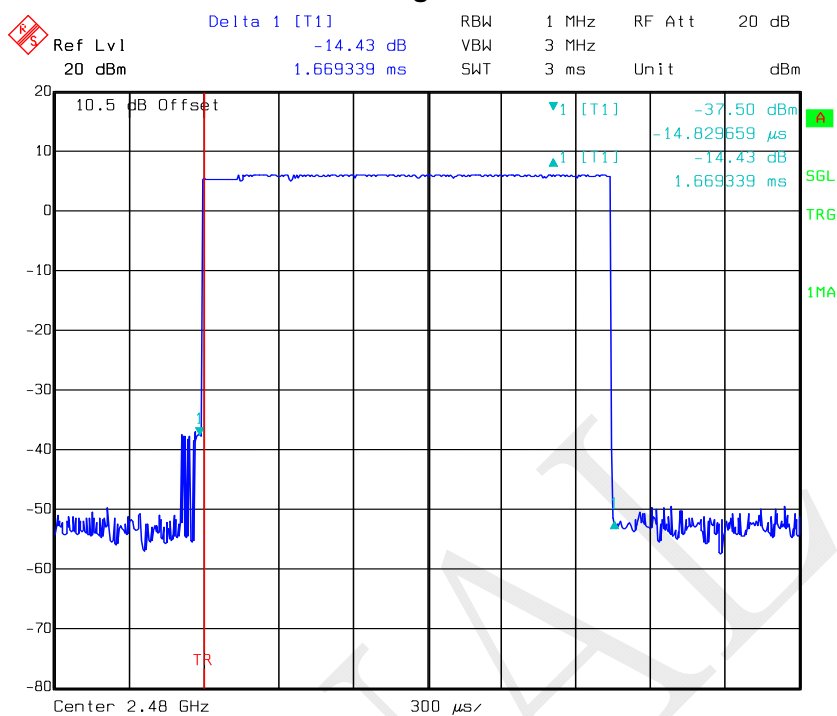
2DH3: Low Channel



2DH3: Middle Channel

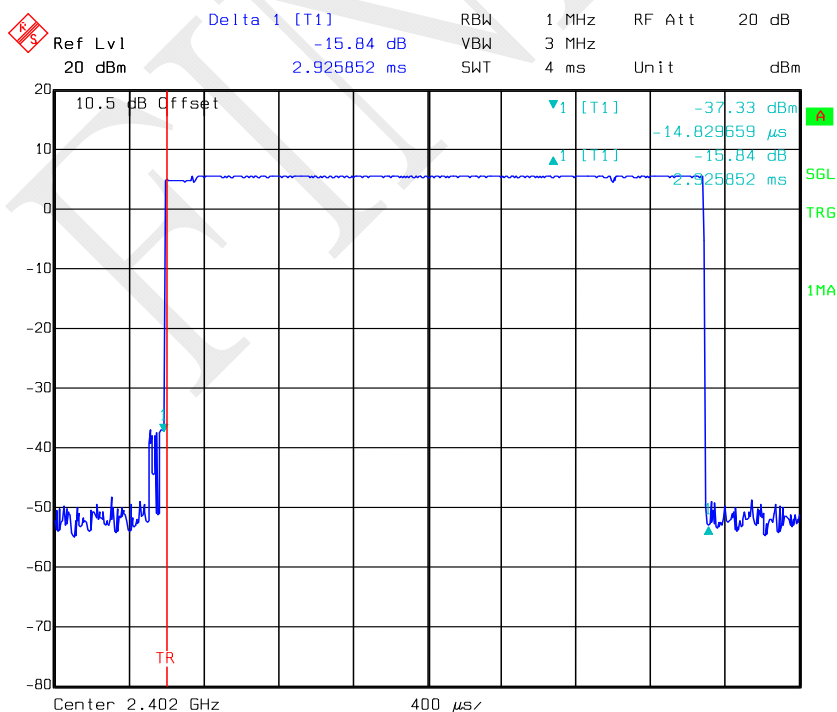


2DH3: High Channel



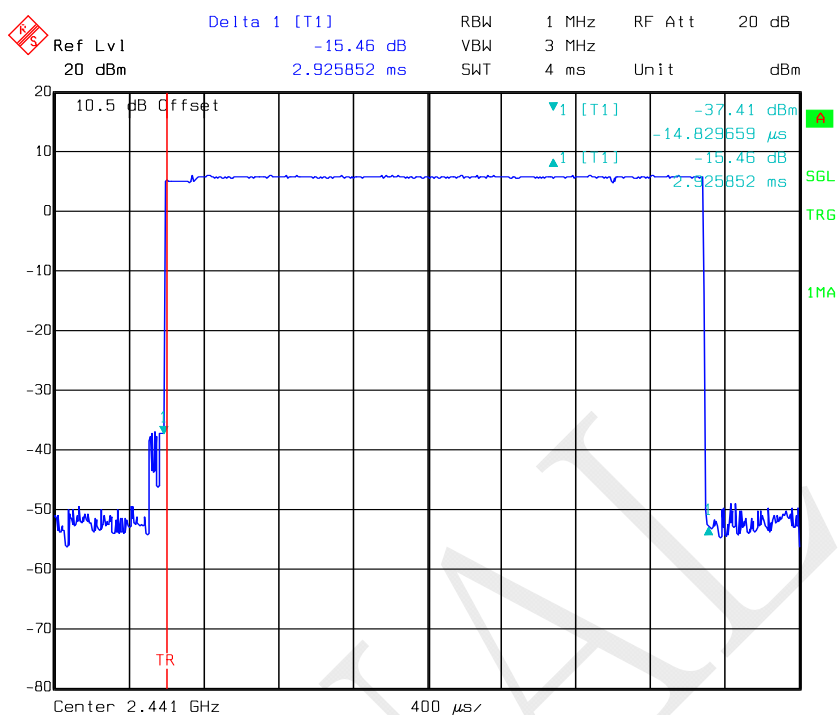
Date: 01.APR.2018 19:33:50

2DH5: Low Channel



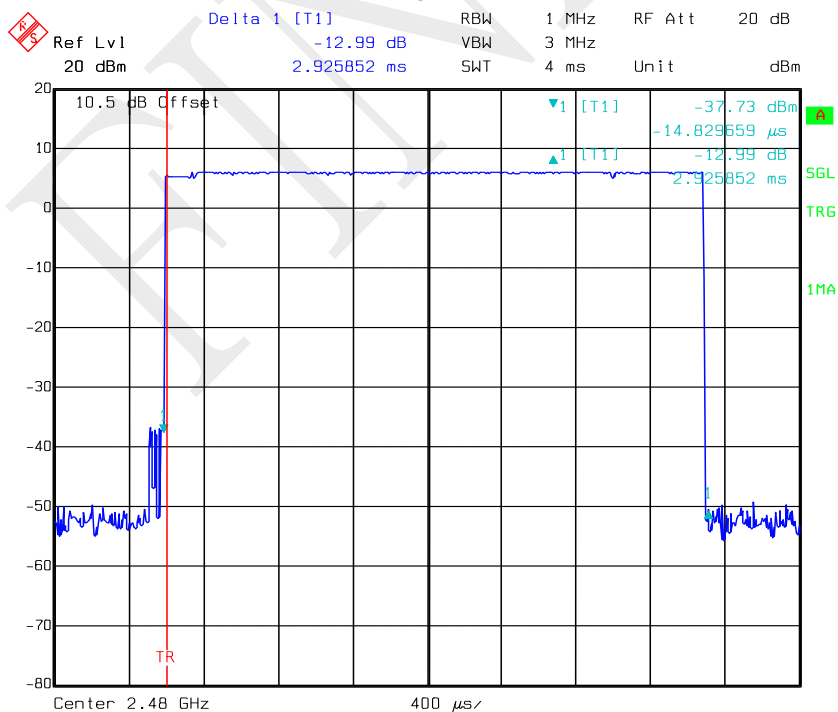
Date: 01.APR.2018 19:30:39

2DH5: Middle Channel



Date: 01.APR.2018 19:31:22

2DH5: High Channel

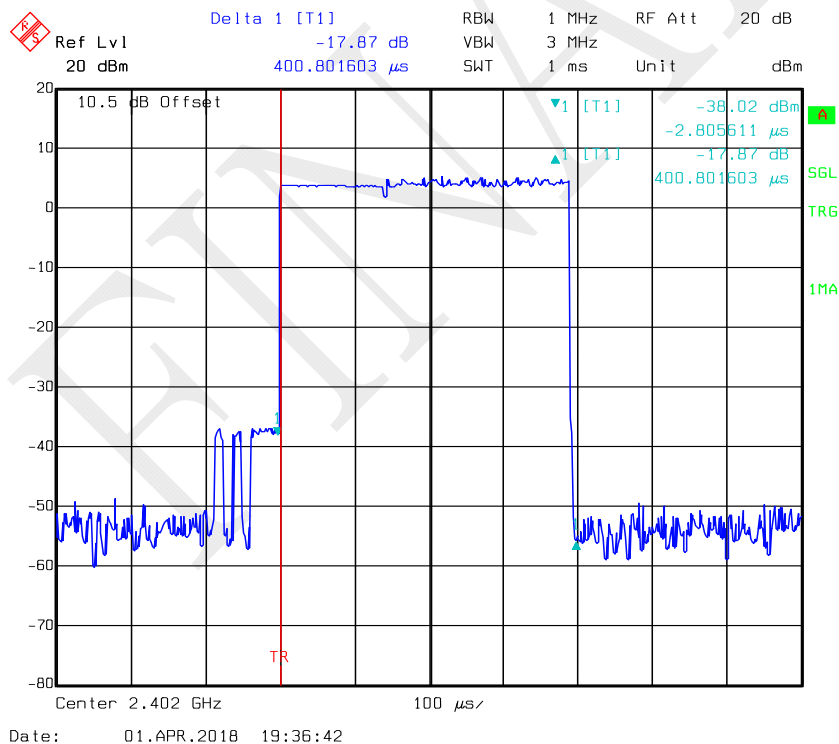


Date: 01.APR.2018 19:31:58

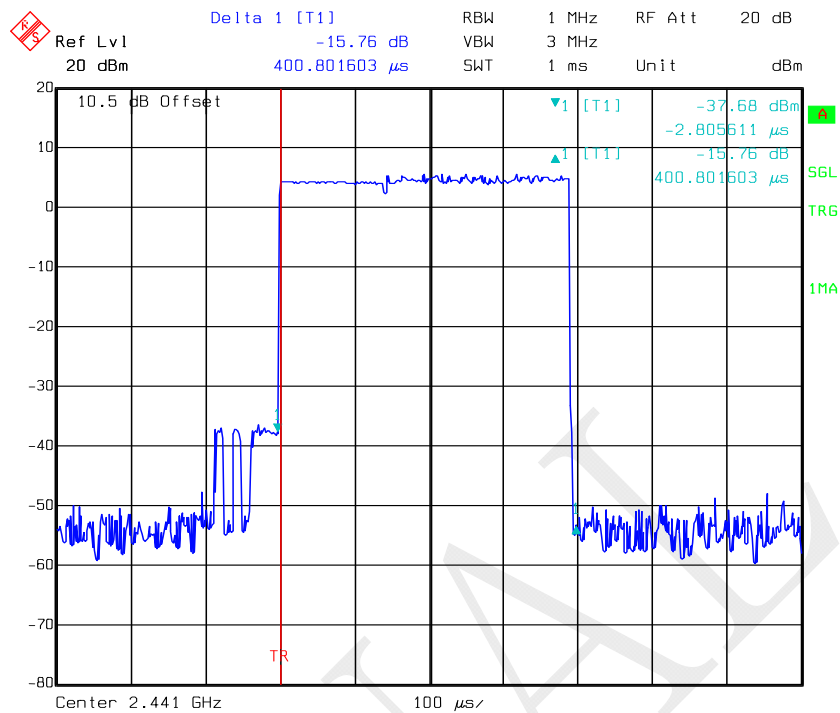
EDR Mode (8-DPSK):

Mode	Channel	Pulse Width (ms)	Dwell Time (s)	Limit (s)	Result
3DH1	Low	0.401	0.128	0.4	Compliance
	Middle	0.401	0.128	0.4	Compliance
	High	0.401	0.128	0.4	Compliance
	Note: Dwell time=Pulse time (ms) × (1600/2/79) ×31.6 s				
3DH3	Low	1.663	0.266	0.4	Compliance
	Middle	1.663	0.266	0.4	Compliance
	High	1.663	0.266	0.4	Compliance
	Note: Dwell time=Pulse time (ms) × (1600/4/79) ×31.6 s				
3DH5	Low	2.922	0.312	0.4	Compliance
	Middle	2.922	0.312	0.4	Compliance
	High	2.922	0.312	0.4	Compliance
	Note: Dwell time=Pulse time (ms) × (1600/6/79) ×31.6 s				

3DH1: Low Channel

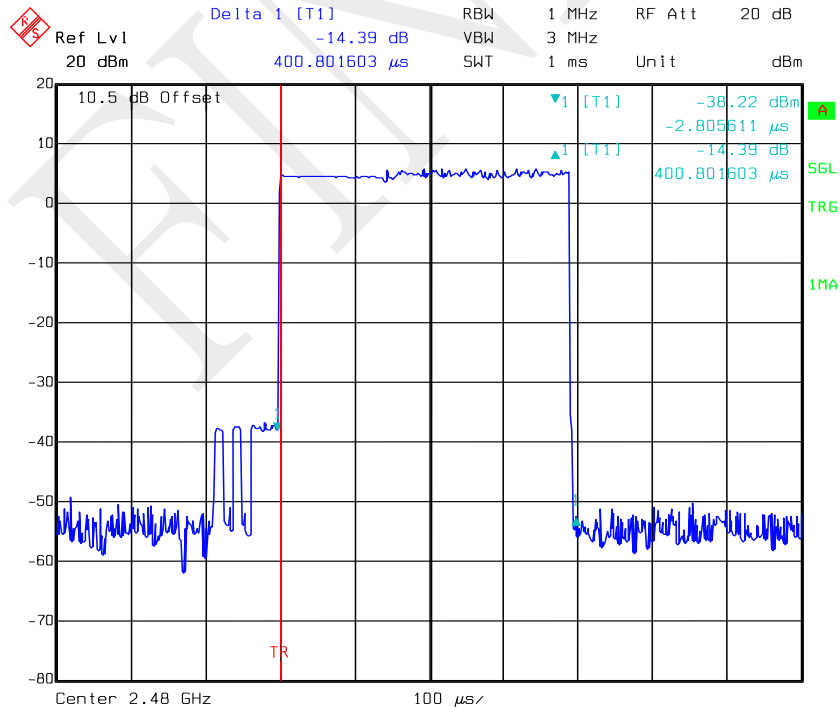


3DH1: Middle Channel



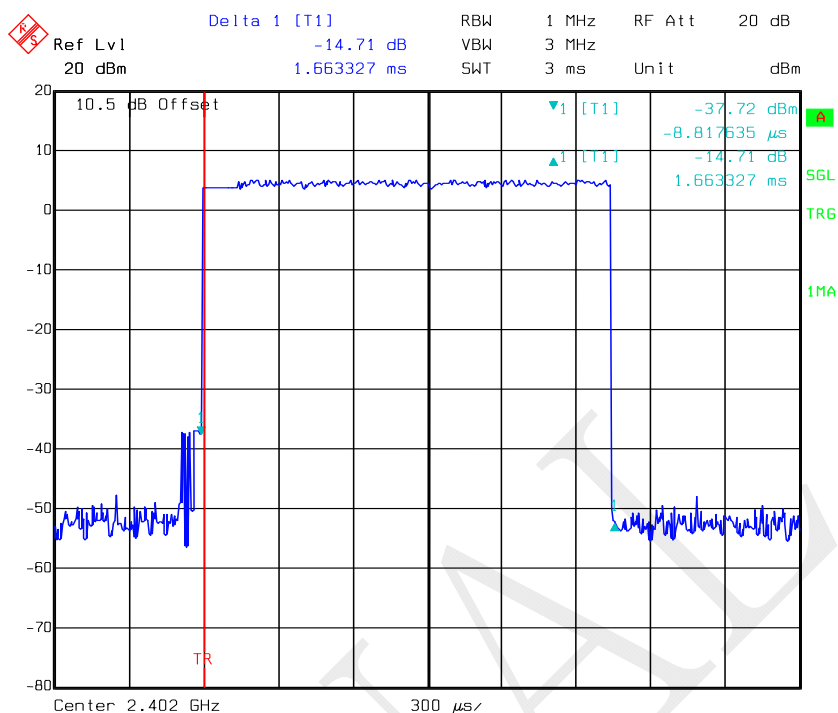
Date: 01.APR.2018 19:37:35

3DH1: High Channel



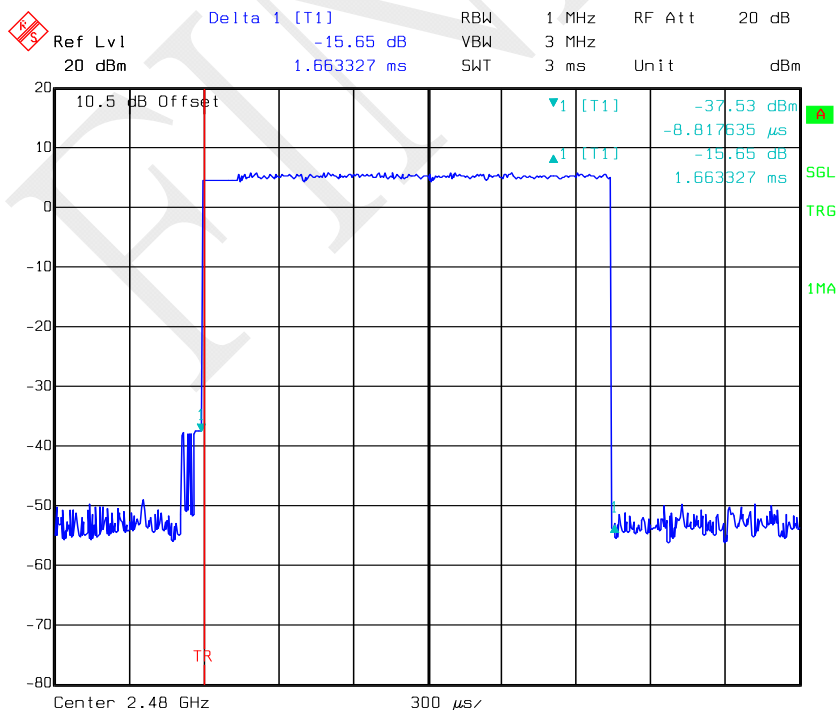
Date: 01.APR.2018 19:38:02

3DH3: Low Channel



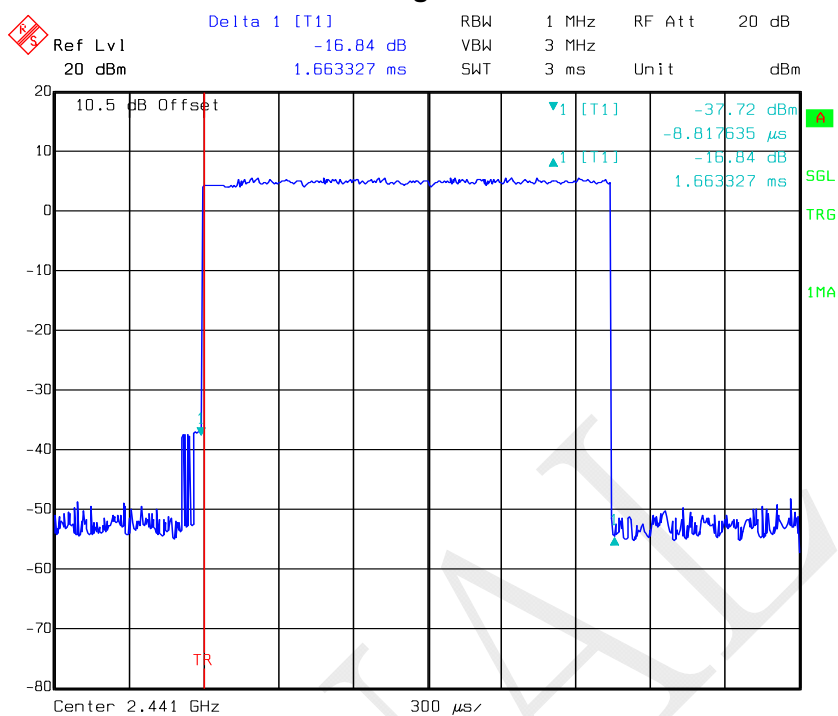
Date: 01.APR.2018 19:38:59

3DH3: Middle Channel

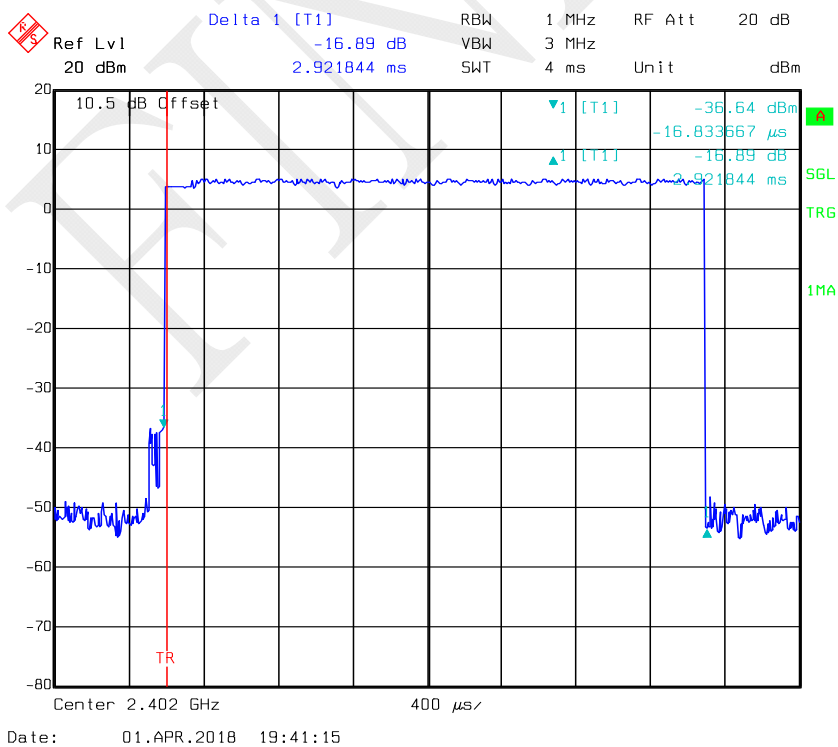


Date: 01.APR.2018 19:39:59

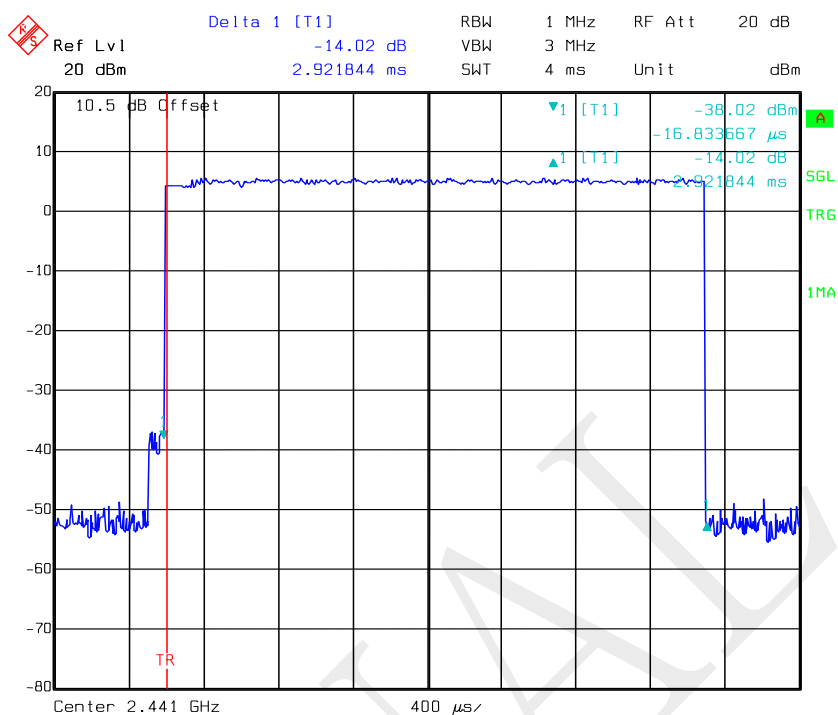
3DH3: High Channel



3DH5: Low Channel

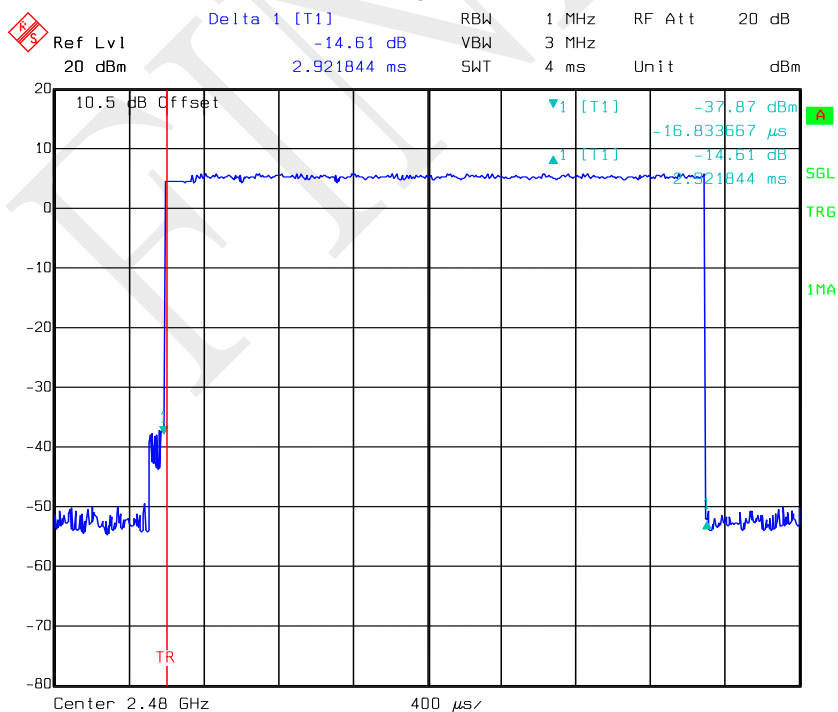


3DH5: Middle Channel



Date: 01.APR.2018 19:41:47

3DH5: High Channel



Date: 01.APR.2018 19:42:15

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 one test equipment.
3. Add a correction factor to the display.

Test Data

Environmental Conditions

Temperature:	21 ~ 23 °C
Relative Humidity:	53 ~ 56 %
ATM Pressure:	95.8 ~ 96.0 kPa

** The testing was performed by Tom Tang on 2018-03-30 and 2018-04-01.*

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

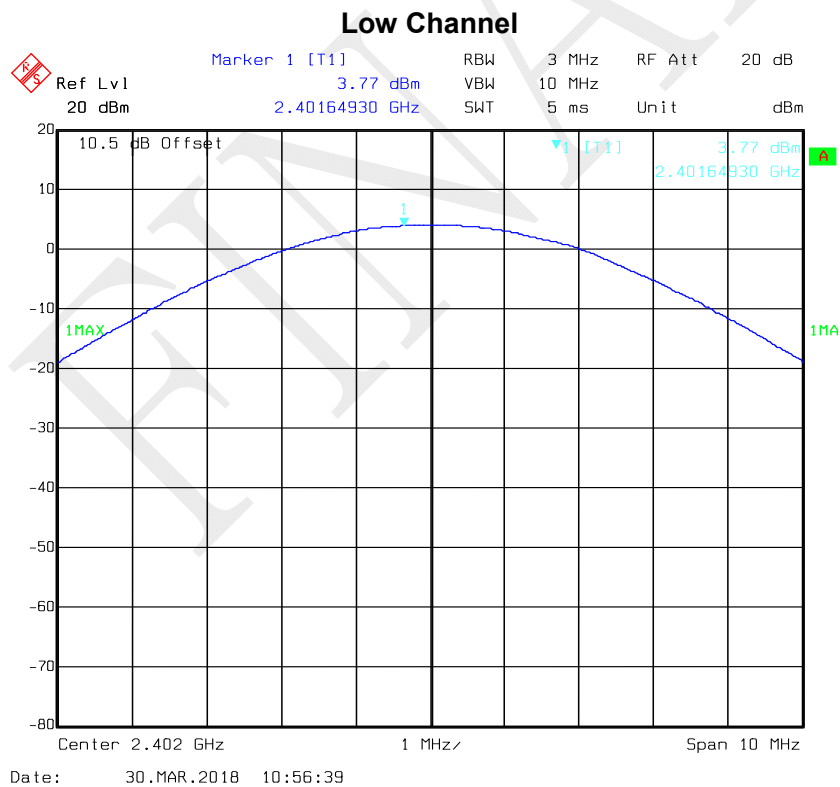
Test Mode: Transmitting

For 7265NGW Module

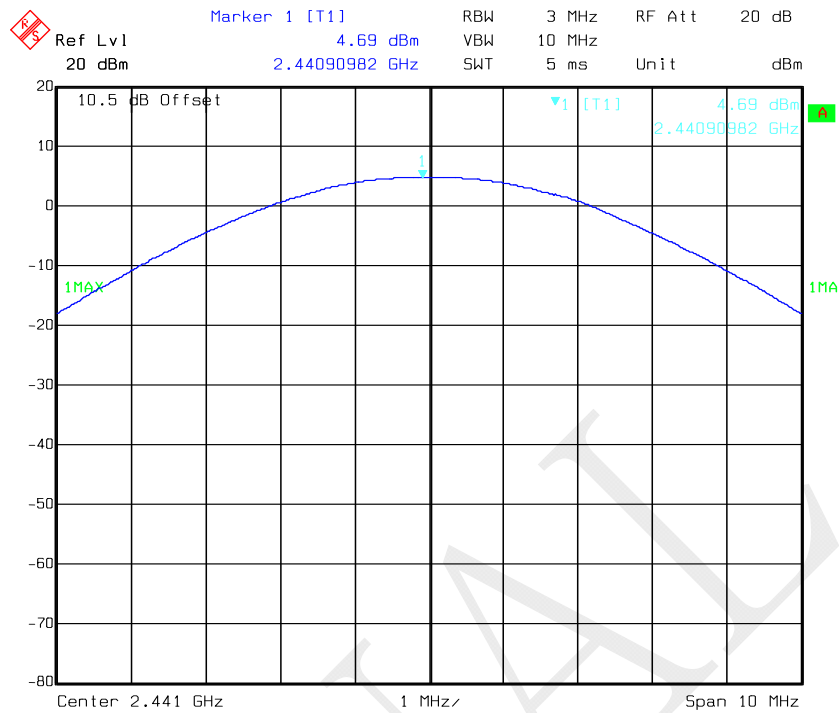
Mode	Channel	Frequency (MHz)	Peak Output power (dBm)	Limit (dBm)
BDR Mode (GFSK)	Low	2402	3.77	21
	Middle	2441	4.69	21
	High	2480	5.18	21
EDR Mode ($\pi/4$ -DQPSK)	Low	2402	2.12	21
	Middle	2441	2.89	21
	High	2480	3.39	21
EDR Mode (8-DPSK)	Low	2402	2.38	21
	Middle	2441	3.14	21
	High	2480	3.52	21

Note: The data above was tested in conducted mode.

BDR Mode (GFSK):

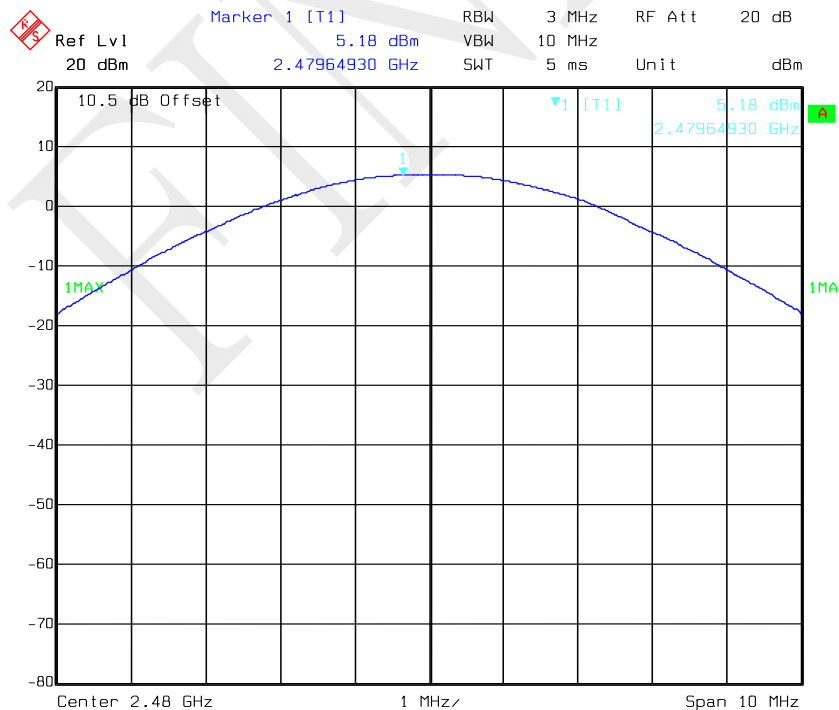


Middle Channel



Date: 30.MAR.2018 10:57:04

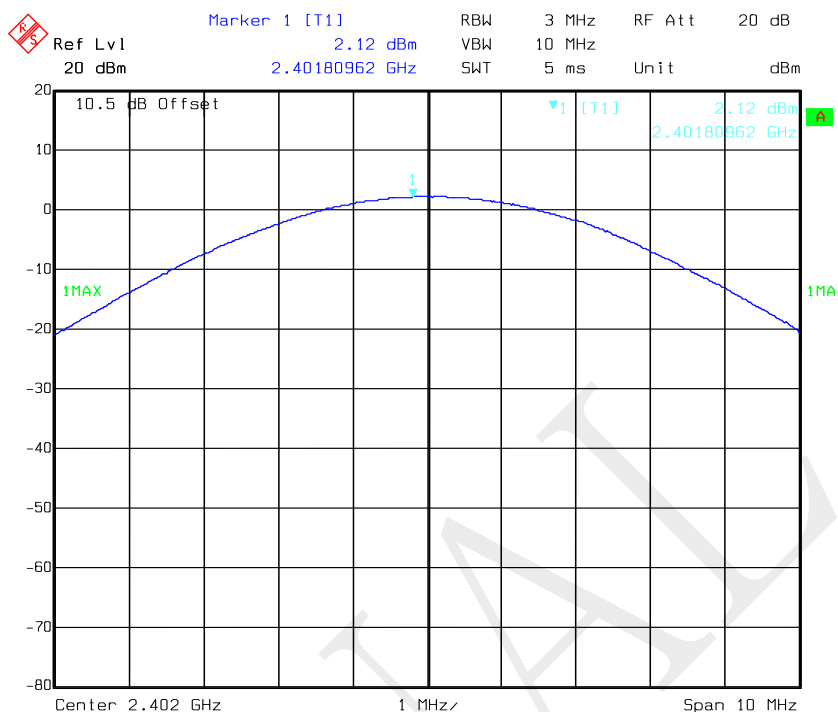
High Channel



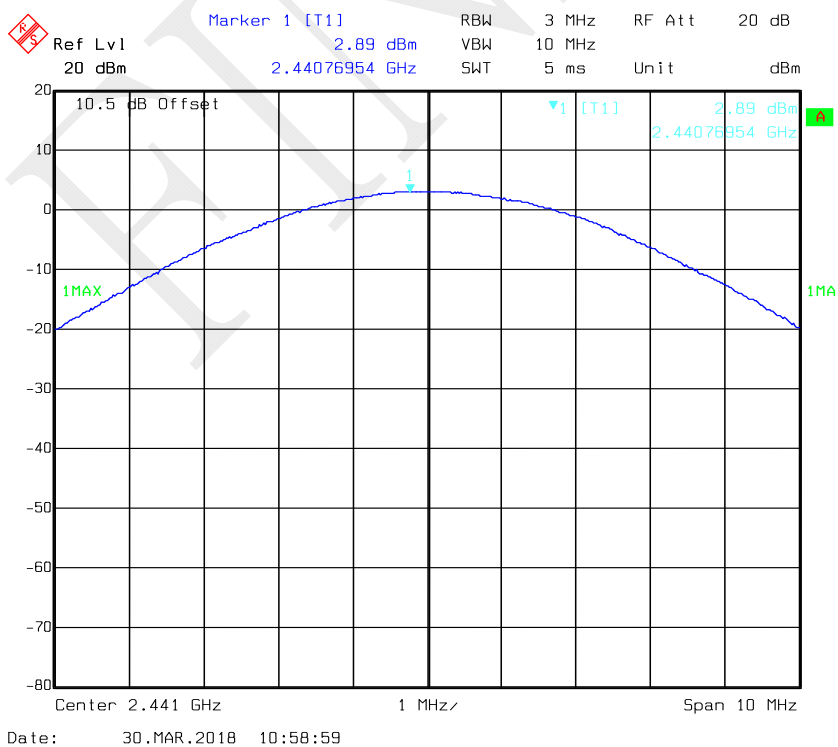
Date: 30.MAR.2018 10:57:28

EDR Mode ($\pi/4$ -DQPSK):

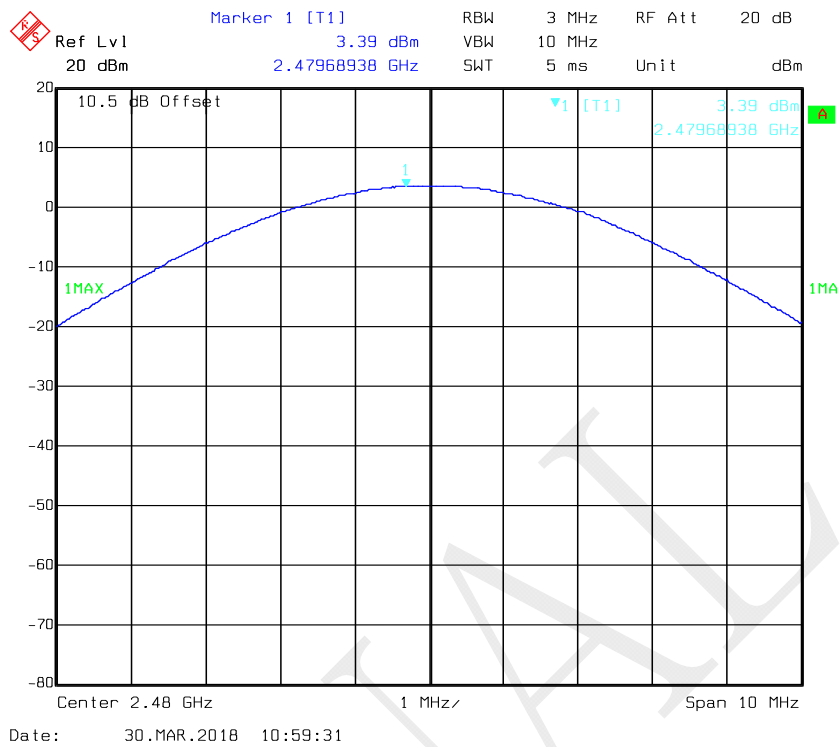
Low Channel



Middle Channel

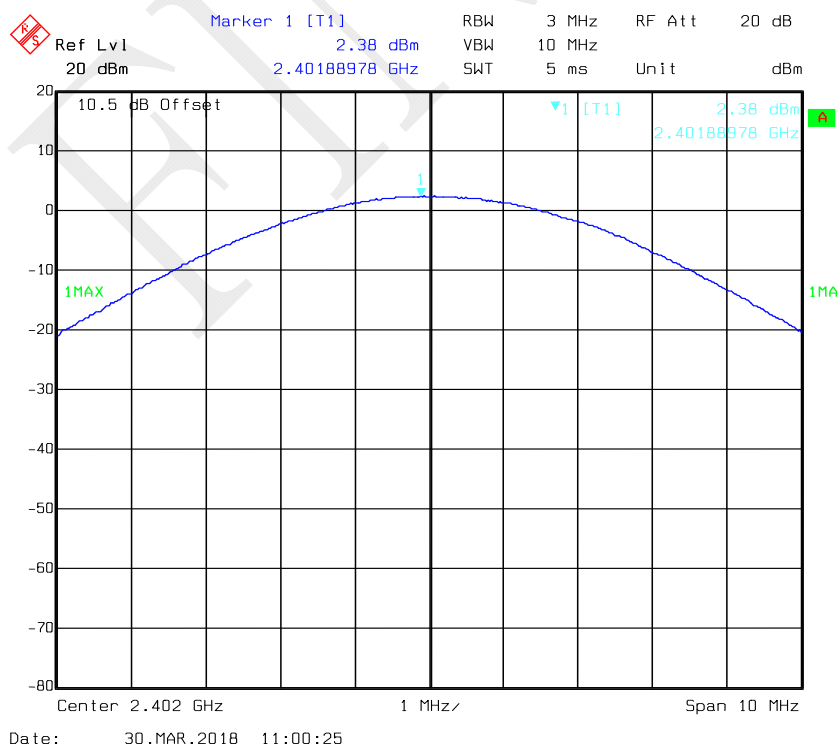


High Channel

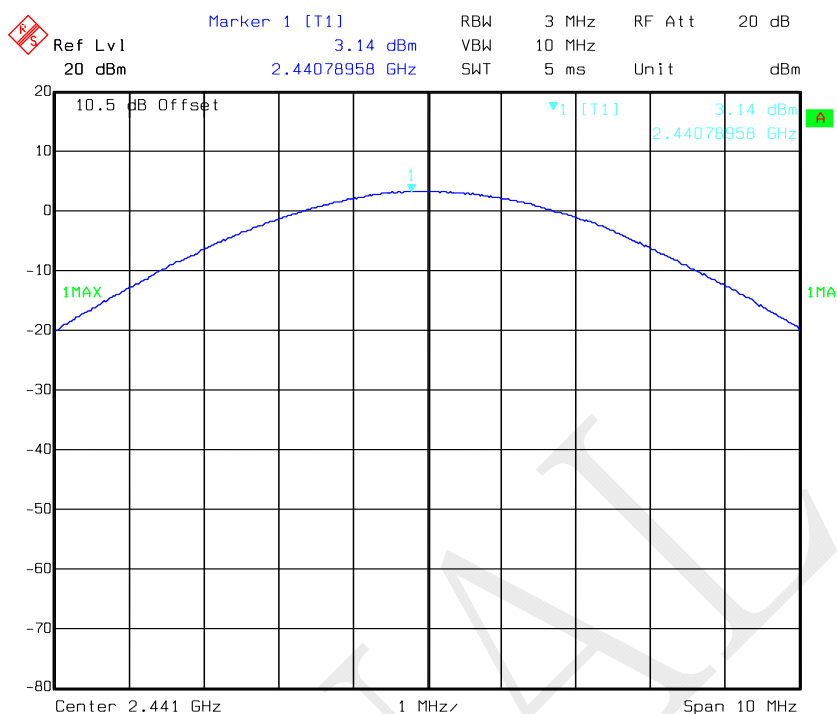


EDR Mode (8-DPSK):

Low Channel

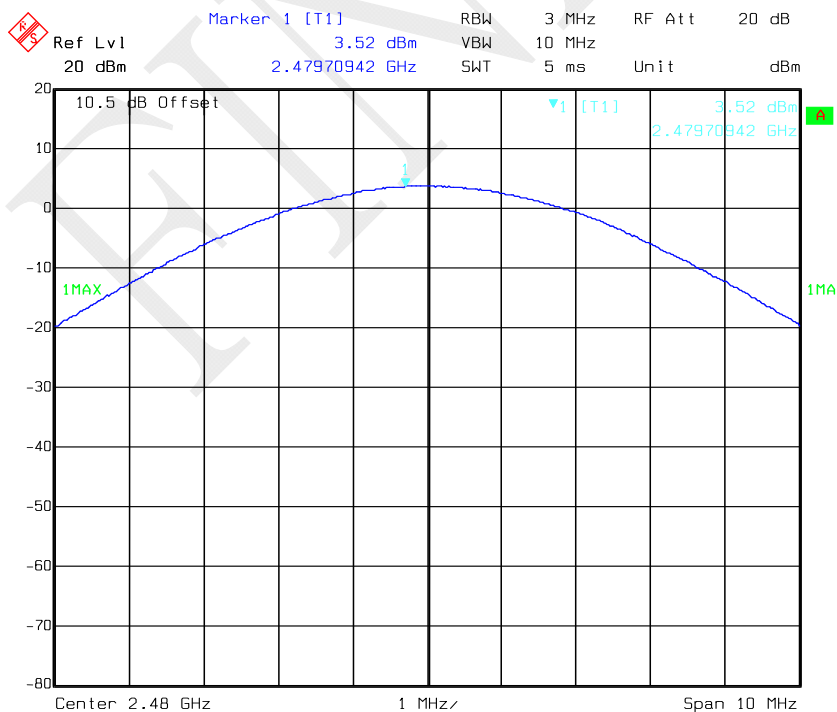


Middle Channel



Date: 30.MAR.2018 11:02:26

High Channel



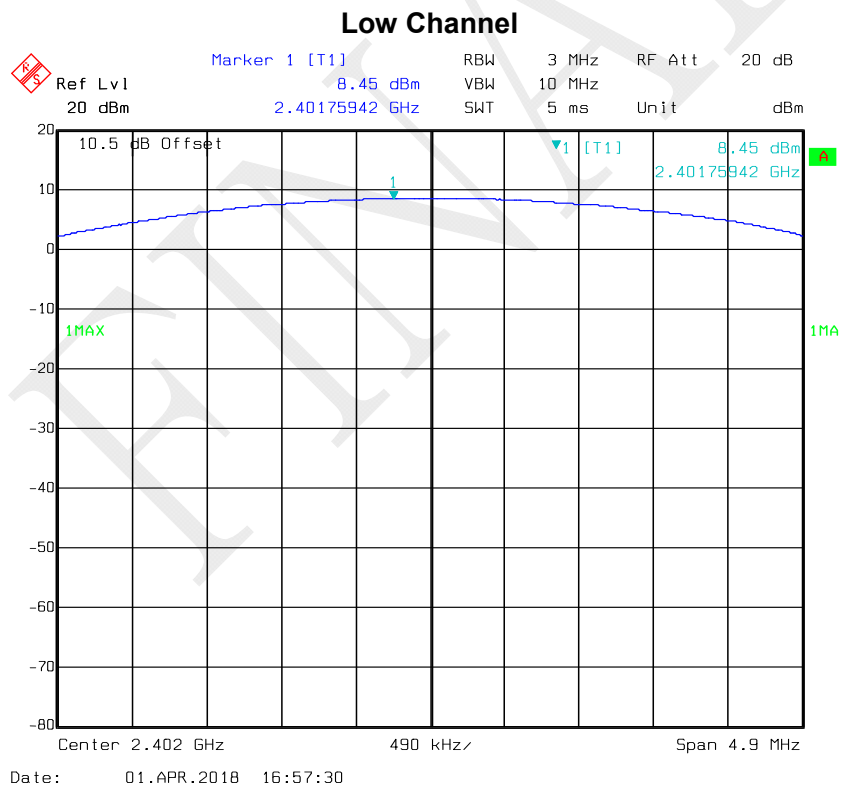
Date: 30.MAR.2018 11:02:54

For 8265NGW Module

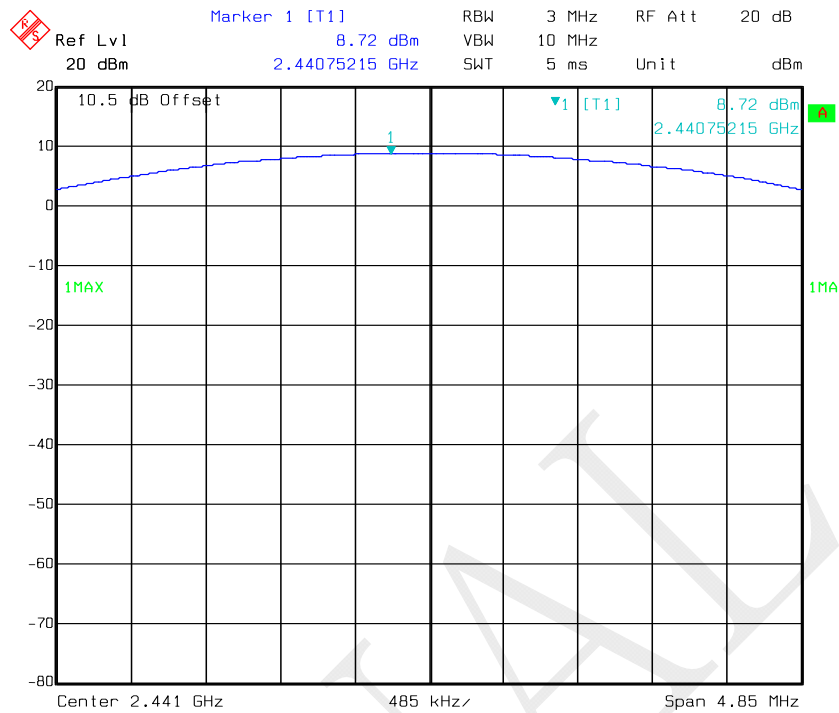
Mode	Channel	Frequency (MHz)	Peak Output power (dBm)	Limit (dBm)
BDR Mode (GFSK)	Low	2402	8.45	21
	Middle	2441	8.72	21
	High	2480	8.72	21
EDR Mode ($\pi/4$ -DQPSK)	Low	2402	6.40	21
	Middle	2441	6.78	21
	High	2480	6.90	21
EDR Mode (8-DPSK)	Low	2402	5.56	21
	Middle	2441	6.04	21
	High	2480	6.28	21

Note: The data above was tested in conducted mode.

BDR Mode (GFSK):

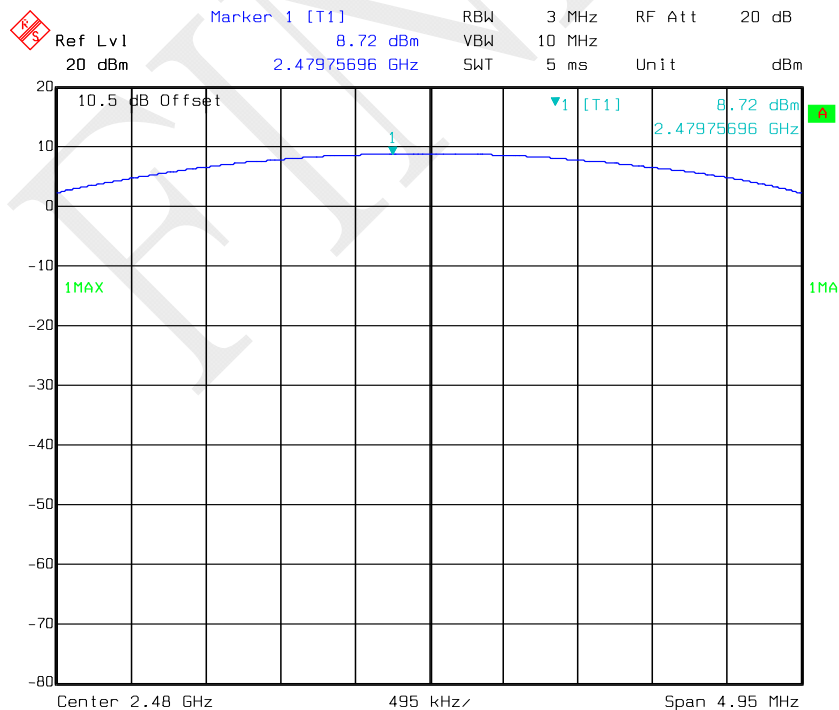


Middle Channel



Date: 01.APR.2018 17:00:56

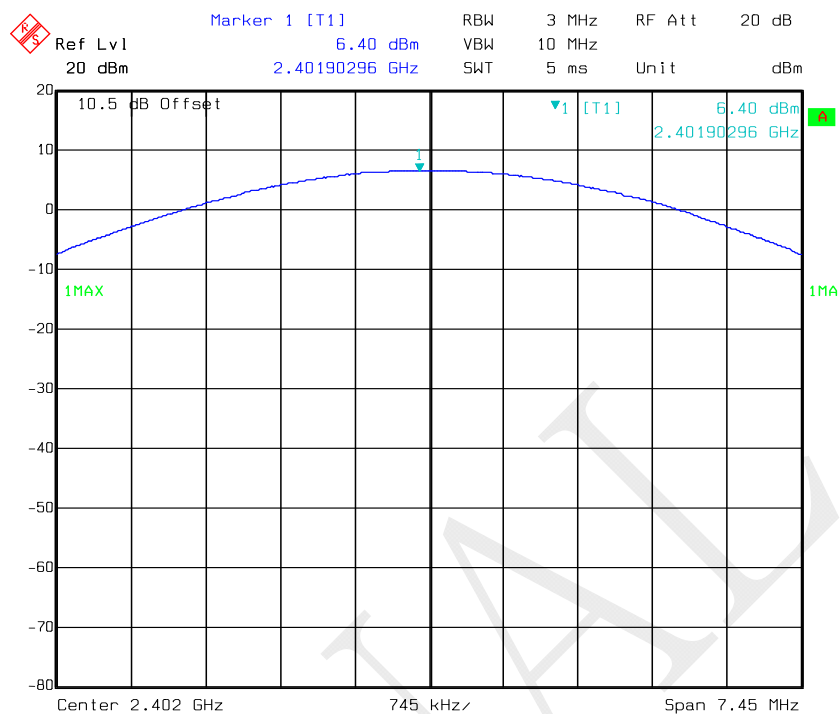
High Channel



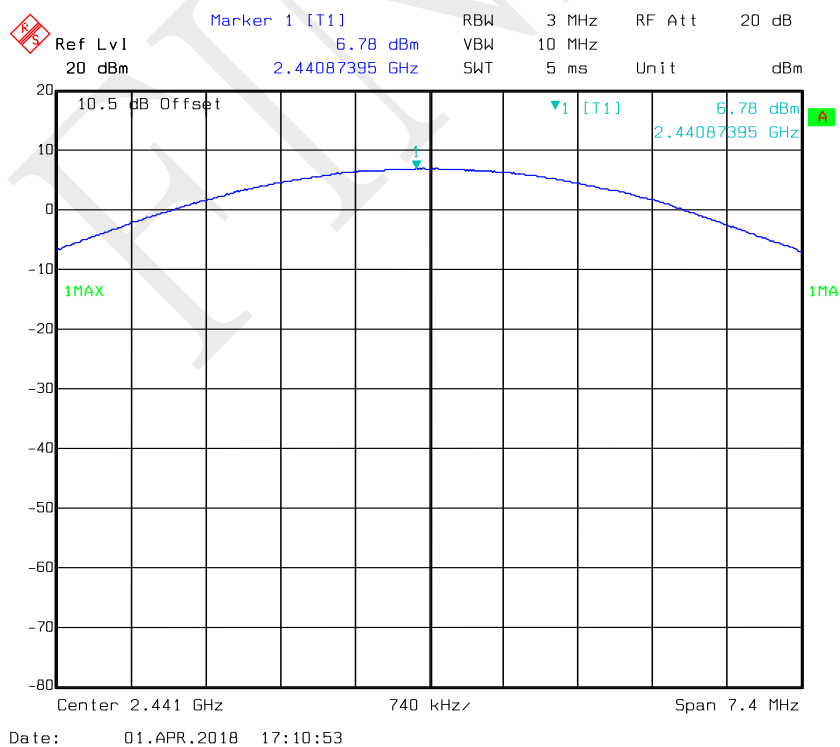
Date: 01.APR.2018 17:04:03

EDR Mode ($\pi/4$ -DQPSK):

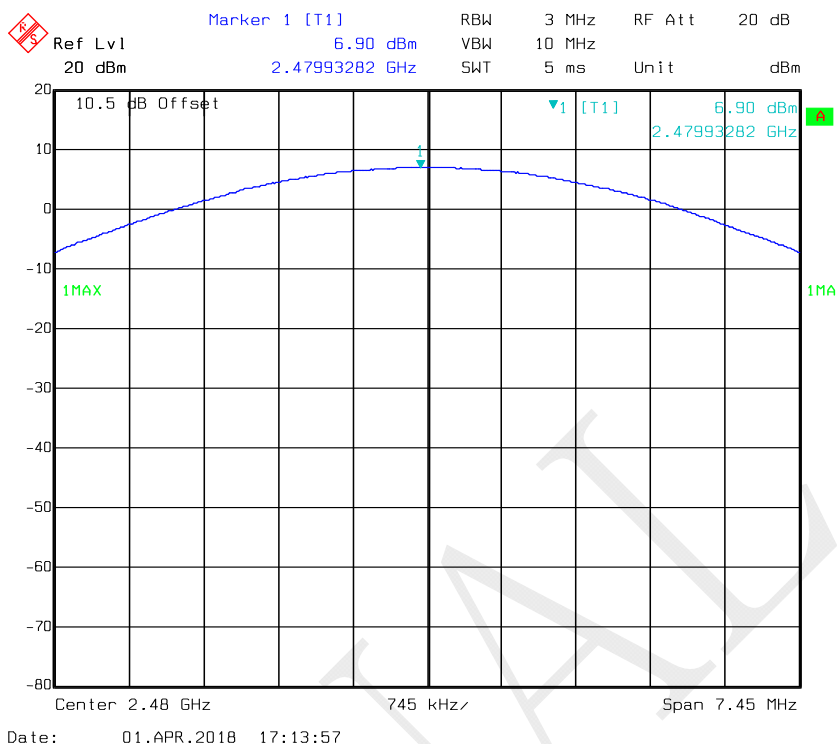
Low Channel



Middle Channel

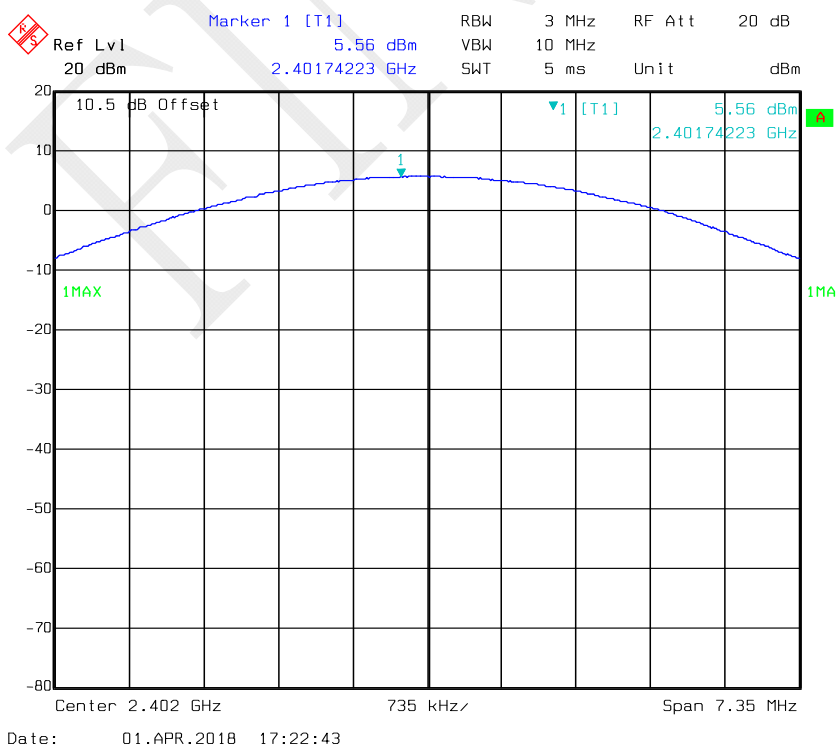


High Channel

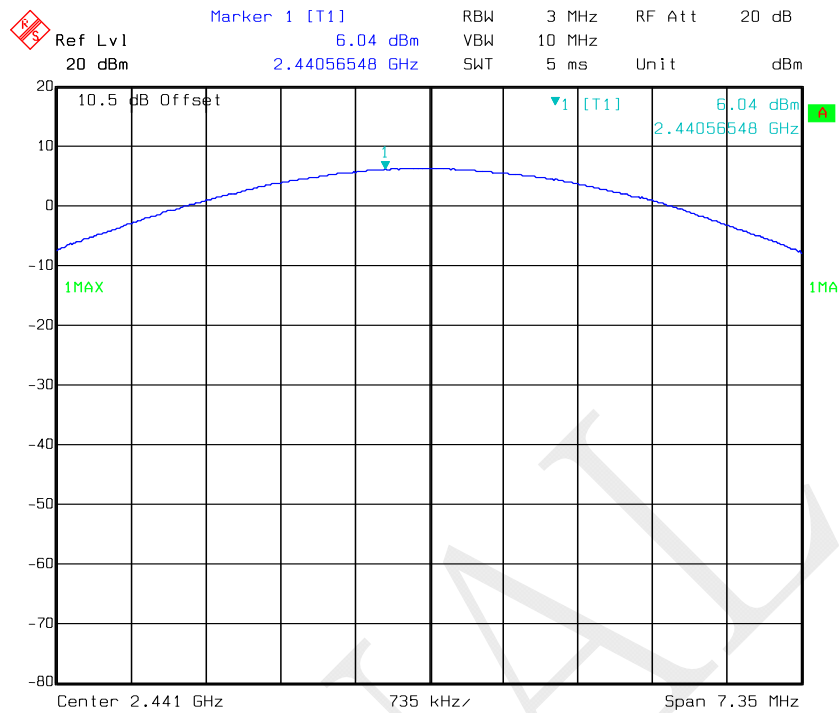


EDR Mode (8-DPSK):

Low Channel

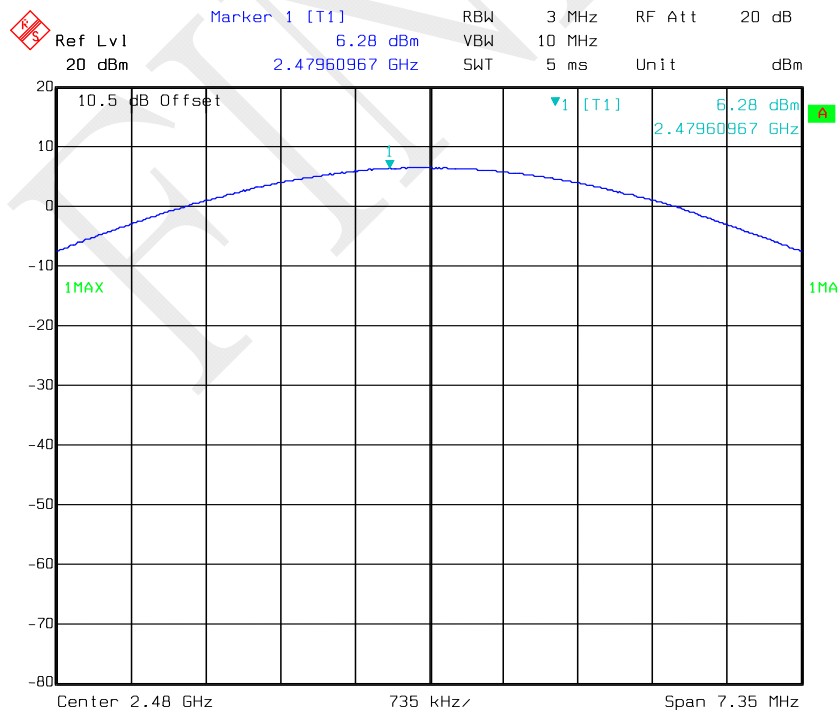


Middle Channel



Date: 01.APR.2018 17:26:14

High Channel



Date: 01.APR.2018 17:28:54

FCC §15.247(d) - BAND EDGES TESTING

Applicable Standard

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Remove the antenna from the EUT and then connect to a low loss RF cable from the antenna port to a EMI test receiver, then turn on the EUT and make it operate in transmitting mode. Then set it to Low Channel and High Channel within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW=100 kHz; VBW=300 kHz.
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 Data

Environmental Conditions

Temperature:	21 ~ 23 °C
Relative Humidity:	53 ~ 56 %
ATM Pressure:	95.8 ~ 96.0 kPa

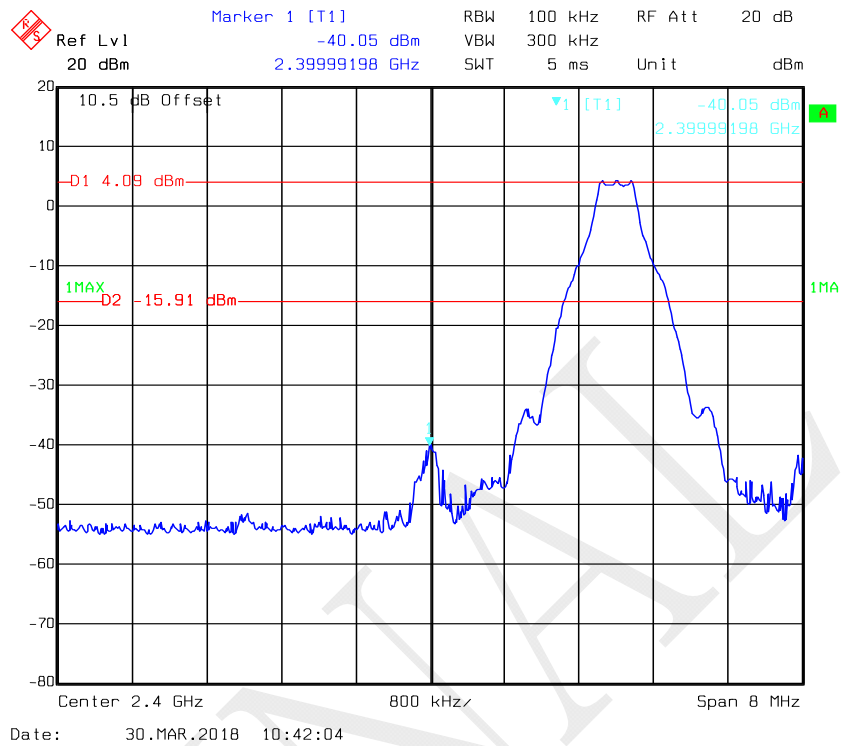
* The testing was performed by Tom Tang on 2018-03-30 and 2018-04-01.

Test Result: Compliance. Please refer to the below plots:

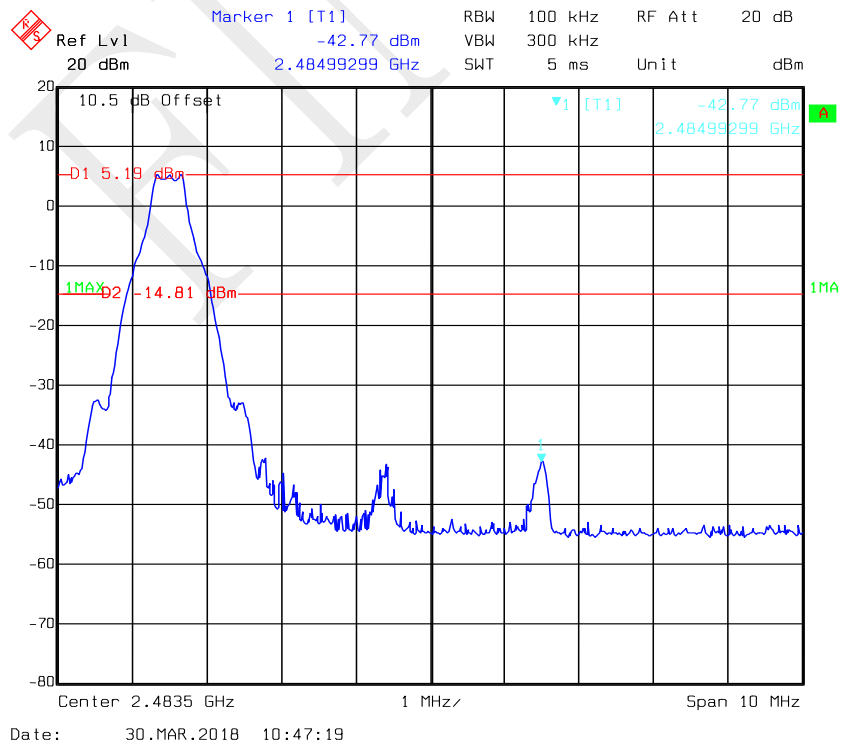
For 7265NGW Module

BDR Mode (GFSK):

Band Edge, Left Side

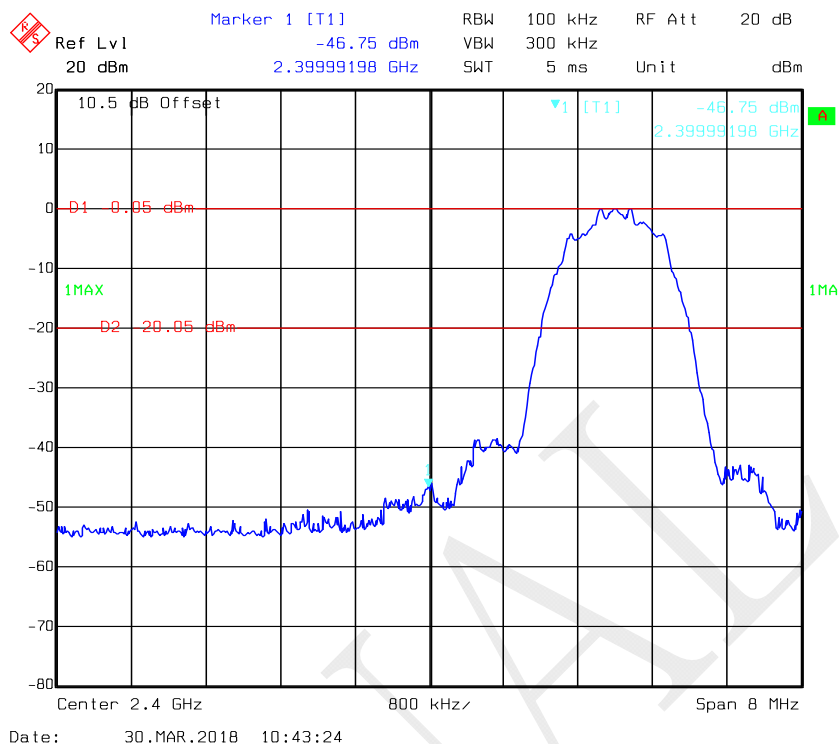


Band Edge, Right Side

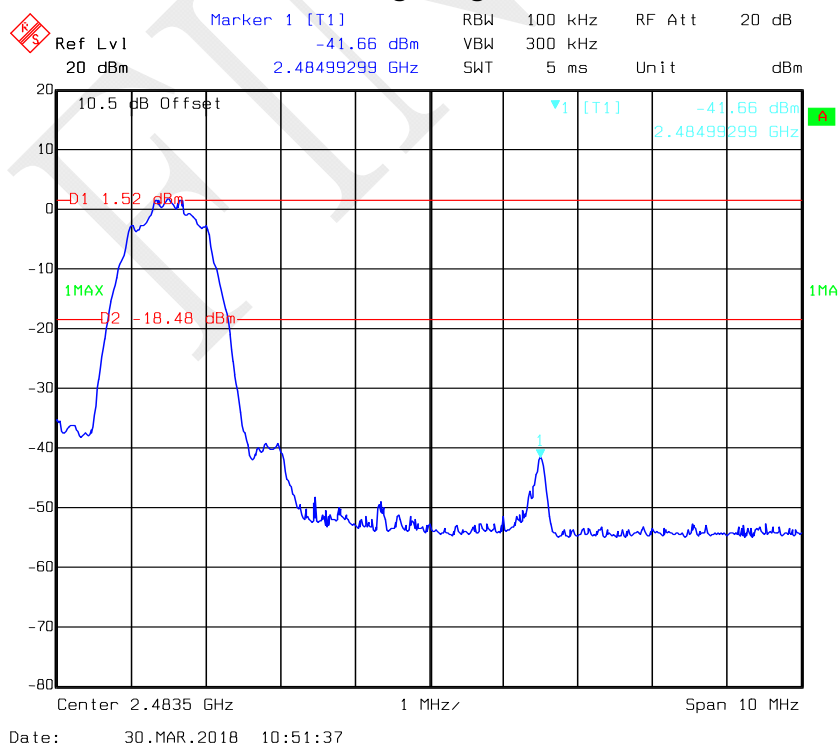


EDR Mode ($\pi/4$ -DQPSK):

Band Edge, Left Side

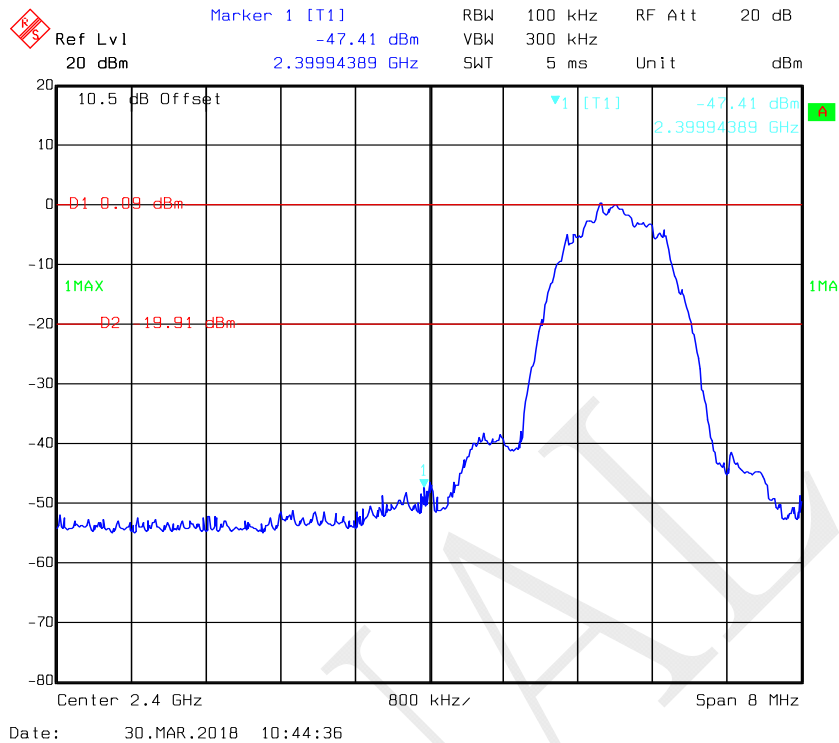


Band Edge, Right Side

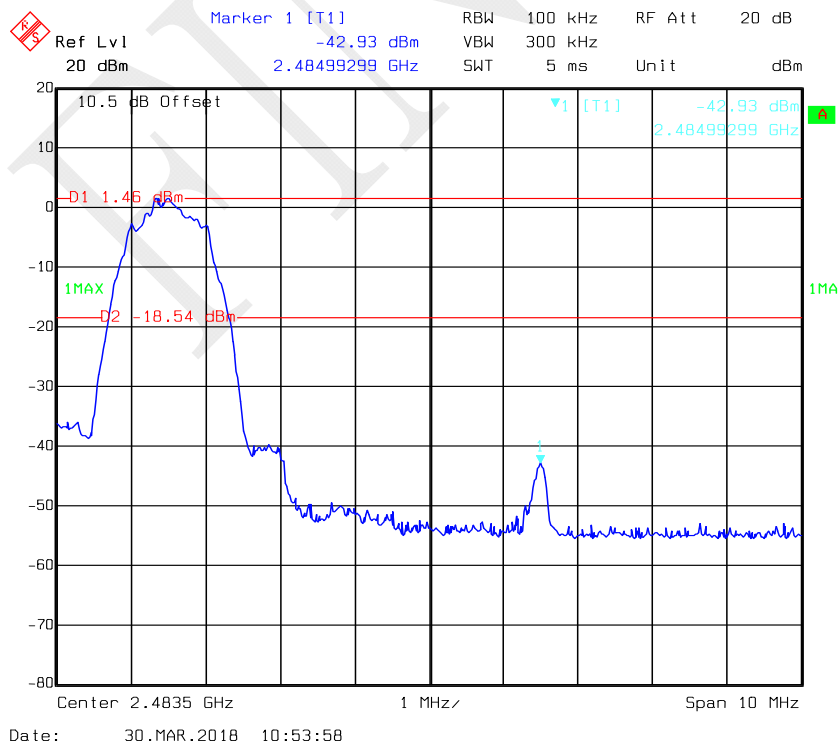


EDR Mode (8-DPSK):

Band Edge, Left Side



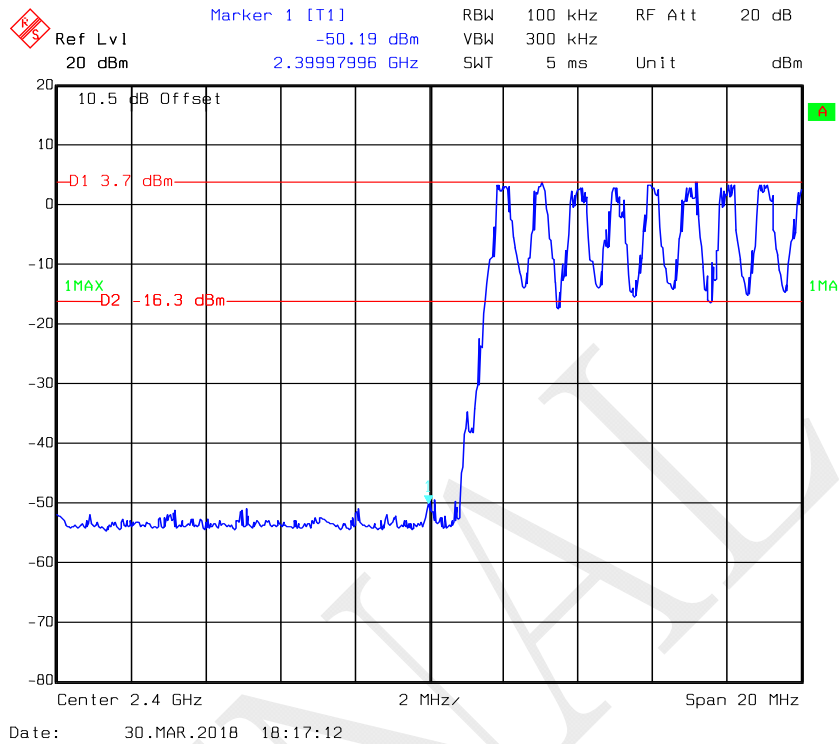
Band Edge, Right Side



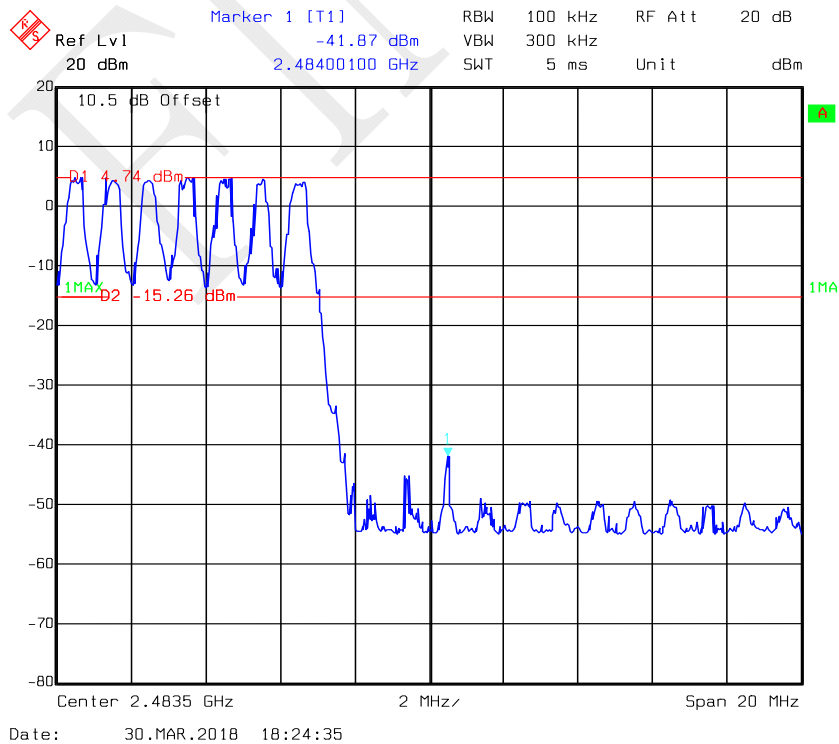
Hopping:

BDR Mode (GFSK):

Band Edge, Left Side

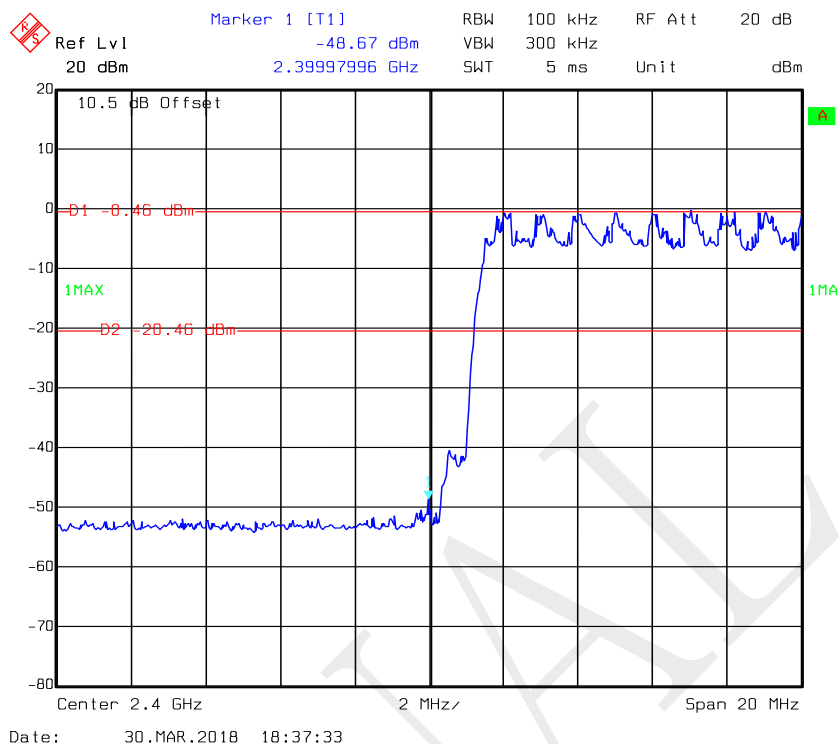


Band Edge, Right Side

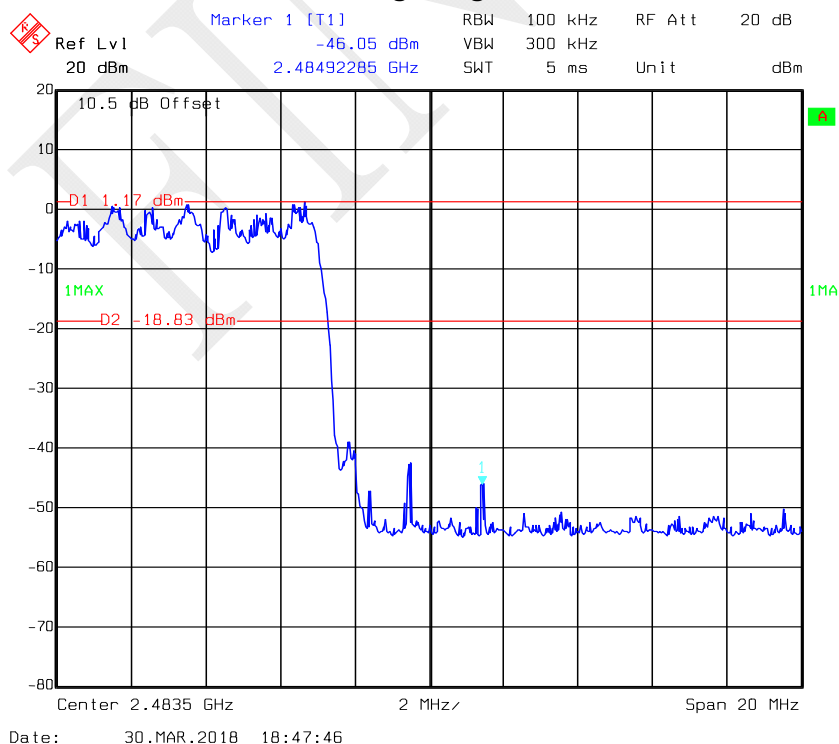


EDR Mode ($\pi/4$ -DQPSK):

Band Edge, Left Side

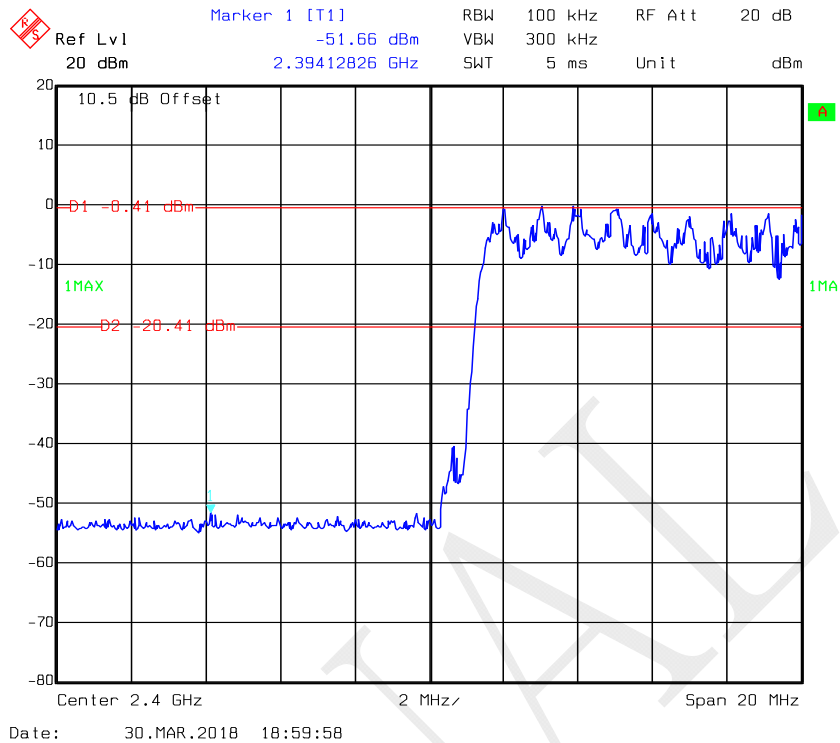


Band Edge, Right Side

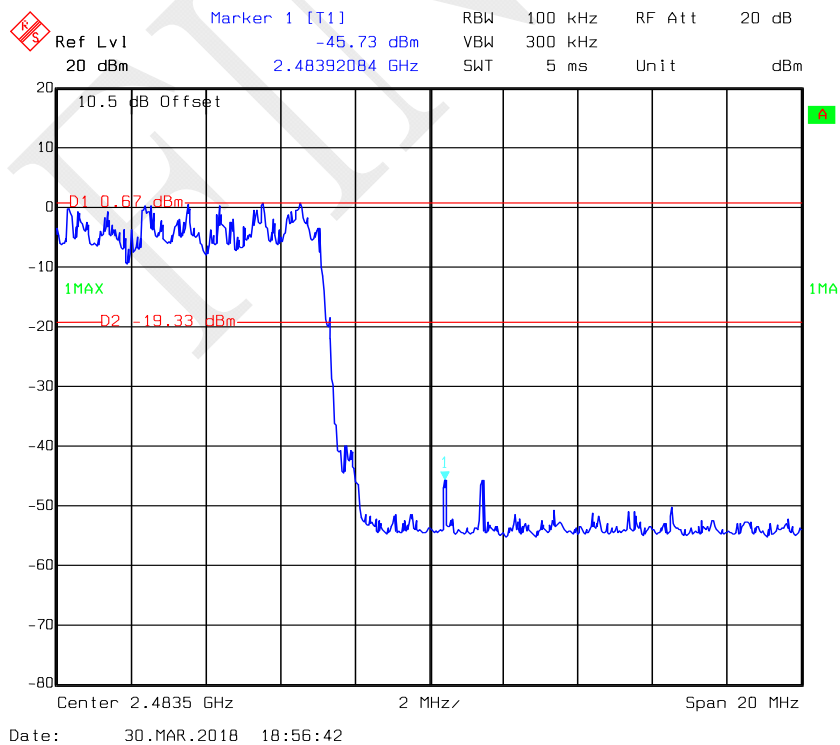


EDR Mode (8-DPSK):

Band Edge, Left Side



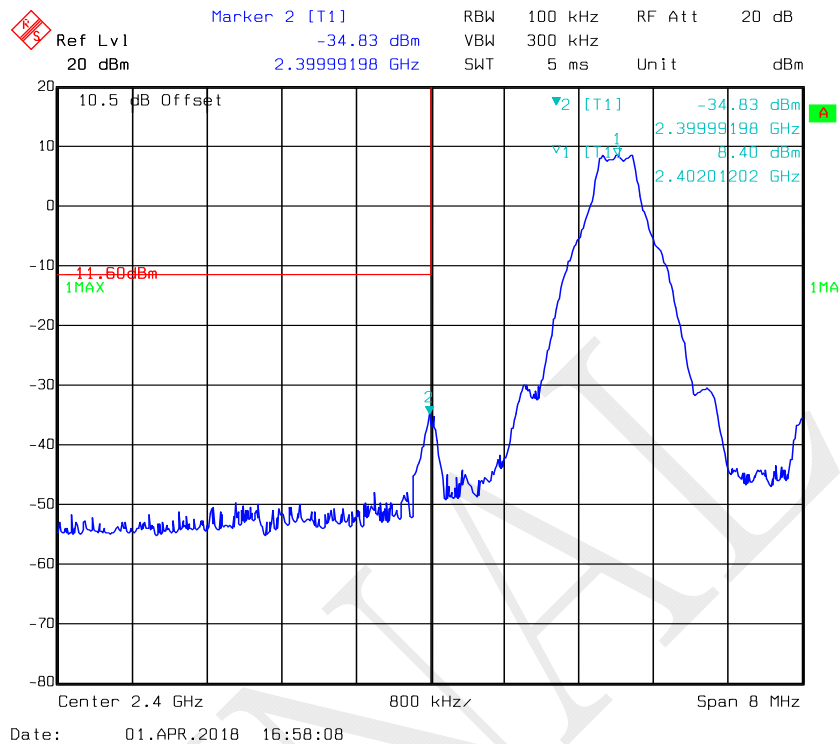
Band Edge, Right Side



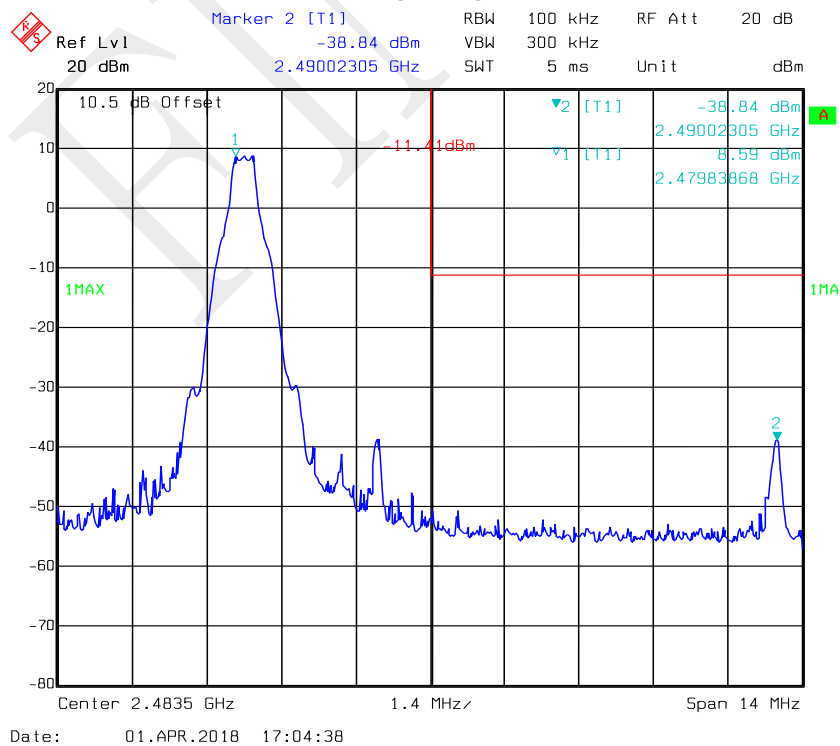
For 8265NGW Module

BDR Mode (GFSK):

Band Edge, Left Side

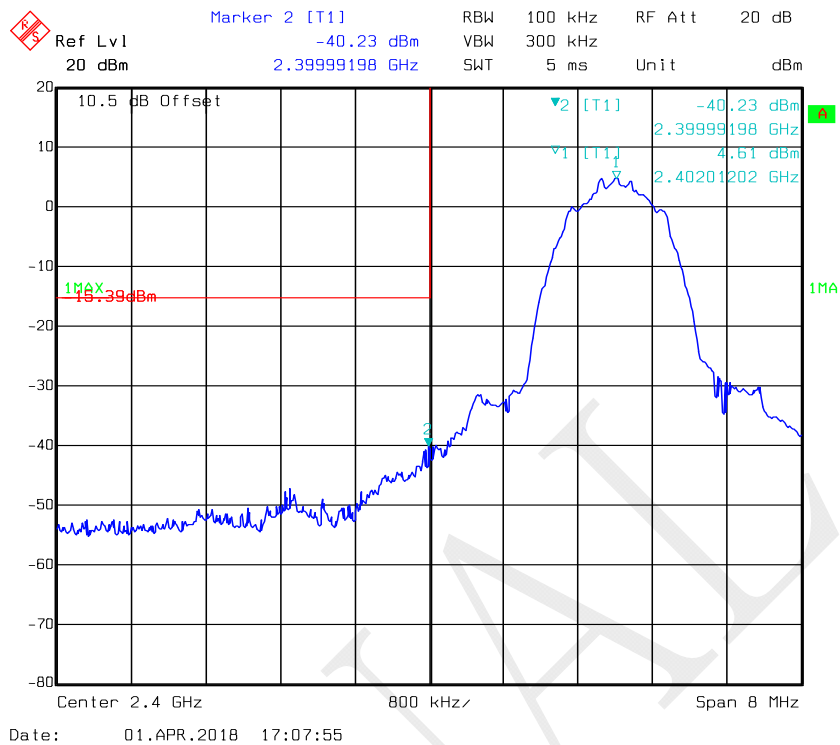


Band Edge, Right Side

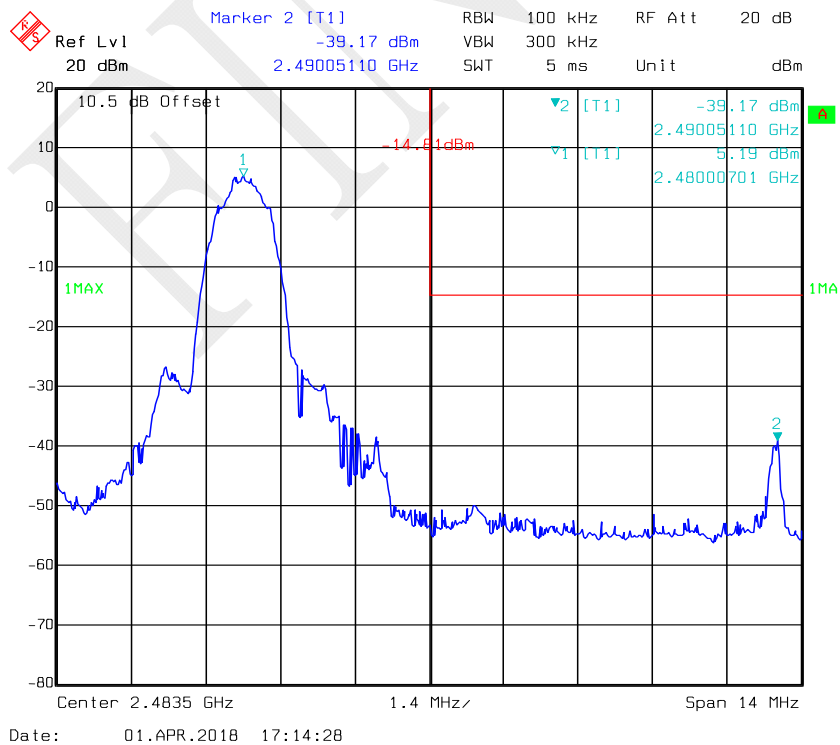


EDR Mode ($\pi/4$ -DQPSK):

Band Edge, Left Side

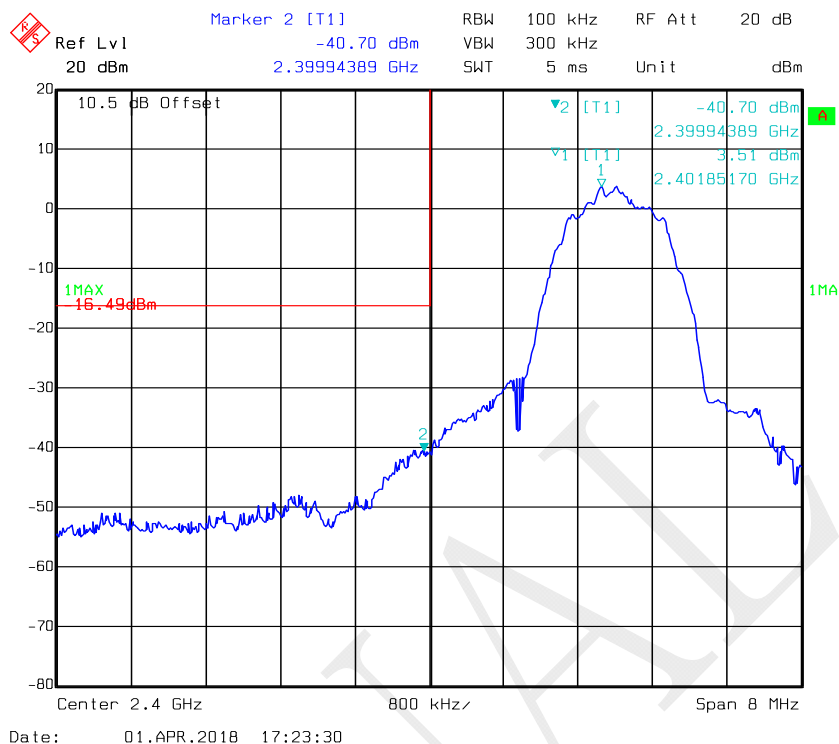


Band Edge, Right Side

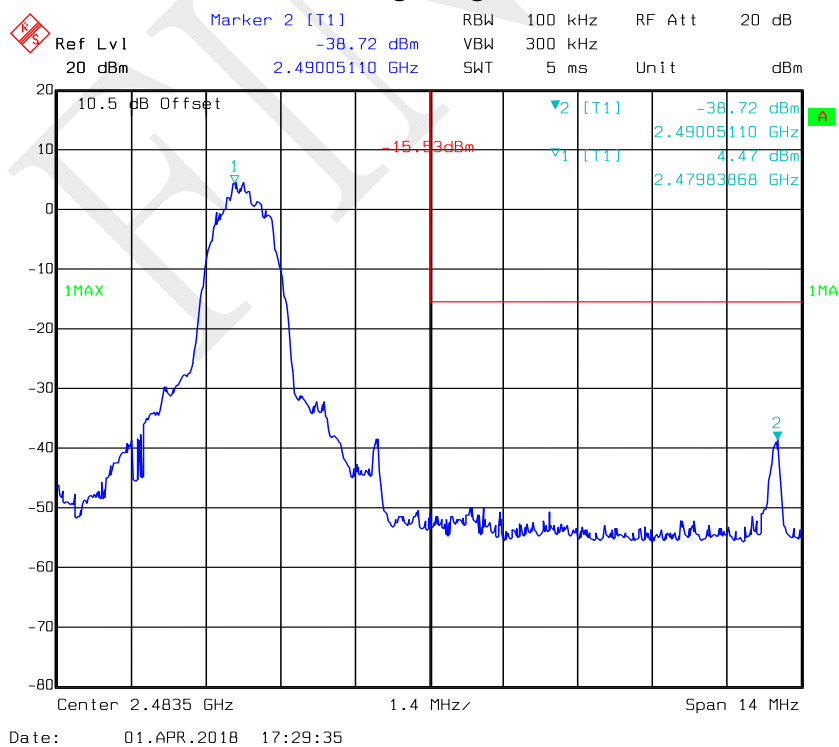


EDR Mode (8-DPSK):

Band Edge, Left Side

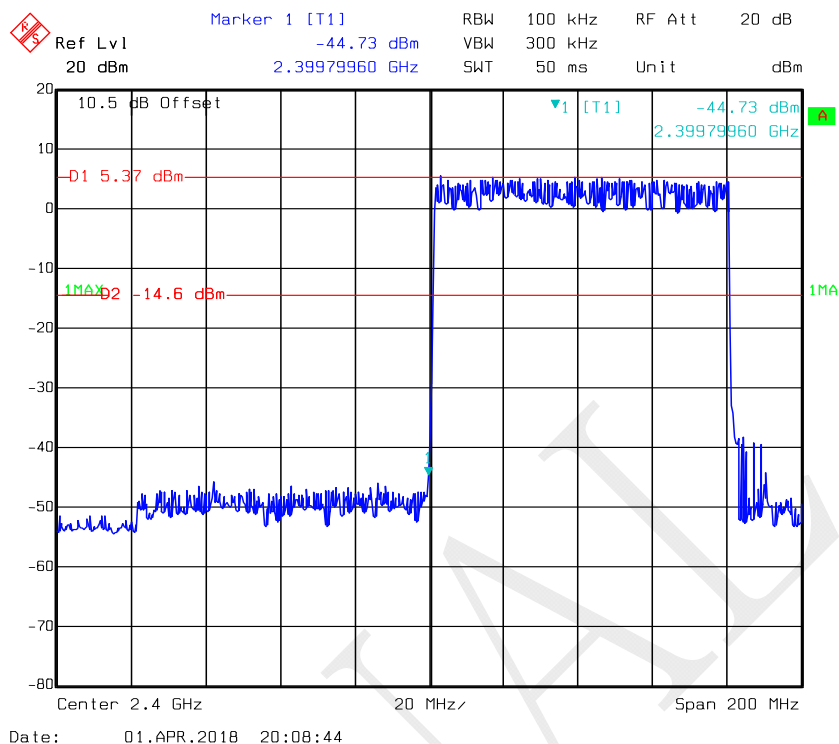


Band Edge, Right Side

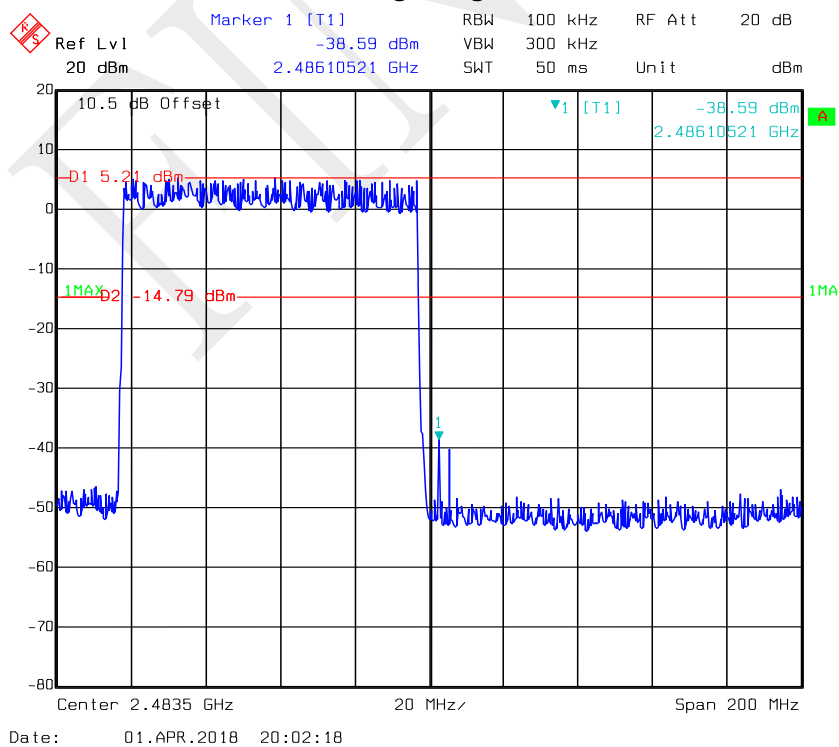


EDR Mode ($\pi/4$ -DQPSK):

Band Edge, Left Side

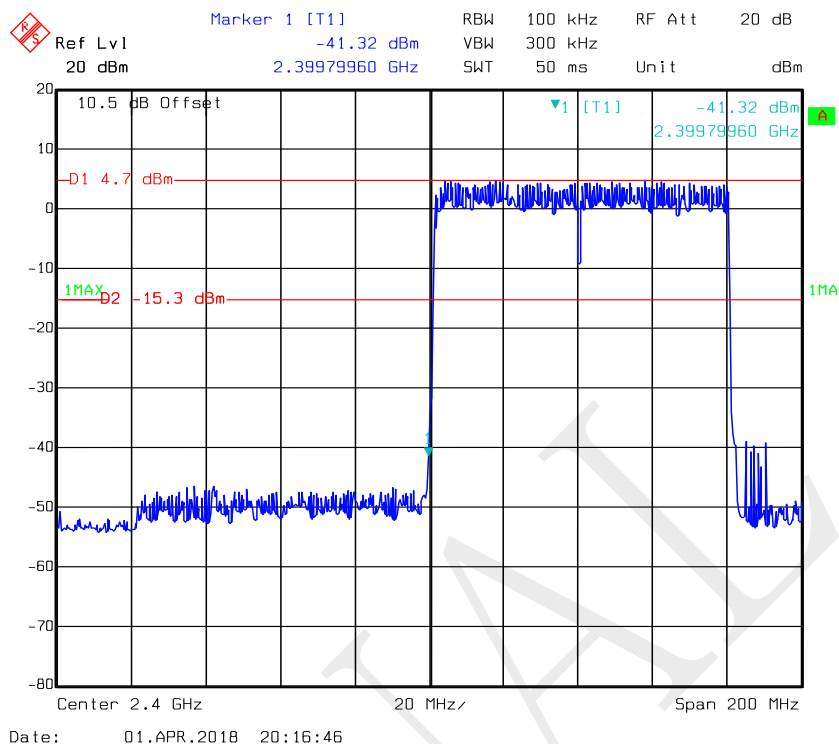


Band Edge, Right Side

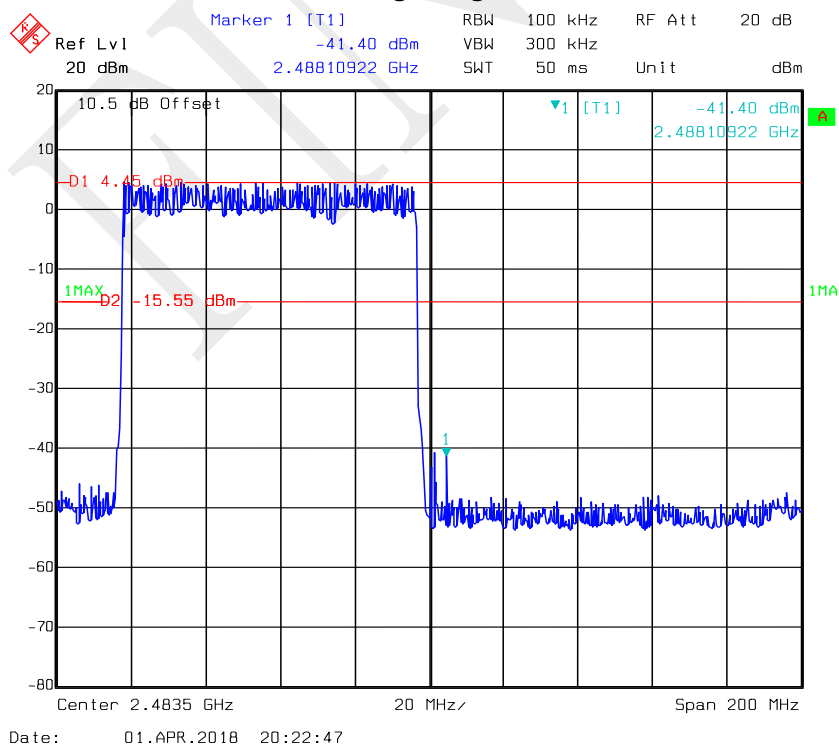


EDR Mode (8-DPSK):

Band Edge, Left Side



Band Edge, Right Side



****END OF REPORT****