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Report No.: SHEM121200187203
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FCC Part 15C TEST REPORT

Application No. :	SHEM1212001872RF
Applicant:	Signeo International Limited
FCC ID:	N5J-SOULP910B
IC:	10303A-SOULP910B
Product Name:	Portable Wireless Entertainment System
Brand Name:	Not supplied by the client
Model:	P910B
Added Model:	N/A
Test Frequency:	Bluetooth 2.4GHz
Standards:	FCC PART 15 SUBPART C, Section 15.247:2012 RSS-210 Issue 8 (December 2010) RSS-Gen Issue 3 (December 2010)
Date of Receipt:	Dec.31, 2012
Date of Test:	Feb.22, 2013 to Mar.13, 2013
Date of Issue:	Apr.22, 2013
Test Result :	PASS *

*In the configuration tested, the EUT detailed in this report complied with the standards specified above.

Tony Wu

E&E Section Manager

SGS-CSTC (Shanghai) Co., Ltd.

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.



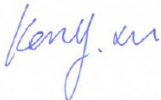
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2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
00	/	Apr.22, 2013	/	Original

Authorized for issue by:				
Engineer		Zenger Zhang _____ Print Name		 _____
Clerk		Amy Wang _____ Print Name		 _____
Reviewer		Keny Xu _____ Print Name		 _____



3 Test Summary

Test Item	FCC Test Requirement	IC Test Requirement	Test method	Result
Antenna Requirement	FCC Part 15, Subpart C Section 15.203/15.247 (c)	RSS-Gen 7.1.2	---	PASS
AC Power Line Conducted Emission	FCC Part 15, Subpart C Section 15.207	RSS-Gen Section 7.2.4	ANSI C63.10 (2009) Section 6.2	PASS
20dB Occupied Bandwidth	FCC Part 15, Subpart C Section 15.247 (a)(1)	RSS 210 A 8.1(a)	ANSI C63.10 (2009) Section 6.9.1	PASS
Conducted Peak Output Power	FCC Part 15, Subpart C Section 15.247 (b)(1)	RSS 210 A 8.4(2)	ANSI C63.10 (2009) Section 6.10.1	PASS
Carrier Frequencies Separation	FCC Part 15, Subpart C Section 15.247 (a)(1)	RSS 210 A 8.1(b)	ANSI C63.10 (2009) Section 7.7.2	PASS
Hopping Channel Number	FCC Part 15, Subpart C Section 15.247 (b)	RSS 210 A 8.1(d)	ANSI C63.10 (2009) Section 7.7.3	PASS
Dwell Time	FCC Part 15, Subpart C Section 15.247 (a)(1)	RSS 210 A 8.1(d)	ANSI C63.10 (2009) Section 7.7.4	PASS
RF Conducted Spurious Emissions	FCC Part 15, Subpart C Section 15.247(d)	RSS 210 A 8.5	ANSI C63.10 (2009) Section 7.7.10	PASS
Radiated Spurious emissions	FCC Part 15, Subpart C Section 15.209 and Section 15.205	RSS-Gen section 4.9	ANSI C63.10 (2009) Section 6.12	PASS
Radiated Band-edge	FCC Part 15, Subpart C Section 15.205	RSS-Gen section 4.9	ANSI C63.10 (2009) Section 6.5	PASS
99% Occupied Bandwidth	---	RSS-Gen section 4.6.1	RSS-Gen section 4.6.1	Test



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5 General Information

5.1 Client Information

Applicant:	Signeo International Limited
Address of Applicant:	6/F, Enterprise Square Three, 39 Wang Chiu Road, Kowloon Bay, Hong Kong
Manufacturer:	Not supplied by the client
Address of Manufacturer:	Not supplied by the client
Factory:	Not supplied by the client

5.2 General Description of E.U.T.

Product Name	Portable Wireless Entertainment System
Brand Name:	Not supplied by the client
Model No:	P910B
Added Model:	N/A
Power Supply:	AC 100V-240V

5.3 Technical Specifications:

Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	3.0
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
Modulation Type:	GFSK, $\pi/4$ DQPSK, 8DPSK
Number of Channel:	79
Antenna Type	Integral antenna
Antenna Gain	0dBi

5.4 Accessories of Product:

Adapter:	Manufacturer:	N/A	
	Model No.:	GM150-2400600	
	Rated Input:	AC 100V-240V 50-60Hz 2.5A	
	Rated Output:	DC24.0V 6A	
	Cable length:	AC port:	180cm (3 wires)
		DC port:	150 cm

5.5 Support equipments for Testing

Description	Manufacturer	Model No.	Serial No.	Supplied by
iPhone	Apple	A1332	N/A	SGS
Speaker	Guangdong Shantou Zhongwang Electronics Co., Ltd.	CT-338	N/A	SGS
USB memory	Kingston	8G	N/A	SGS

5.6 Details of Test Mode

Test Mode	Description of Test Mode
BT Transmitting Mode	Keep the EUT continue transmitting.
Hopping Mode	Keep the EUT hopping transmitting.

5.7 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.
No.588 West Jindu Road, Songjiang District, Shanghai, China.201612.

Tel: +86 21 6191 5666 Fax: +86 21 6191 5678

5.8 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing. Date of expiry: 2014-07-26.

- **FCC – Registration No.: 402683**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered and fully described in a report filed with the Federal Communications Commission (FCC). The acceptance letter from the FCC is maintained in our files. Registration No.: 402683, Expiry Date: 2015-02-22.

- **Industry Canada (IC) – IC Assigned Code: 8617A**

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A. Expiry Date: 2014-09-20.

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-3868 and C-4336 respectively. Date of Registration: 2012-05-29. Date of Expiry: 2015-05-28.



6 Equipments Used during Test

☒ Conducted Emission

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due date
1	EMI test receiver	Rohde & Schwarz	ESCS30	100086	2012-04-13	2013-04-12
2	Line impedance stabilization network (LISN)	SCHWARZBECK	NSLK8127	8127-490	2012-11-15	2013-11-14
3	Line impedance stabilization network (LISN)	ETS	3816/2	00034161	2012-11-15	2013-11-14

☒ Radiated Spurious Emission

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due date
1	EMI test receiver	Rohde & Schwarz	ESU40	100109	2012-06-02	2013-06-01
2	Antenna	SCHWARZBECK	VULB9168	9168-313	2012-11-15	2013-11-14
3	CONTROLLER	INNCO	CO200	474	2012-11-15	2013-11-14
4	Antenna	SCHWARZBECK	BBHA9120D	9120D-679	2012-11-15	2013-11-14
5	Antenna	SCHWARZBECK	BBHA9170	9170-373	2012-11-15	2013-11-14
6	Low noise amplifier	LNA6900	TESEQ	71033	2012-11-15	2013-11-14

☒ RF Conducted Test

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due date
1	EMI test receiver	Rohde & Schwarz	ESU40	100109	2012-06-03	2013-06-01
2	Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-679	2012-06-03	2013-06-01
3	Horn Antenna	Rohde & Schwarz	HF906	100284	2012-06-03	2013-06-01
4	ANTENNA	SCHWARZBECK	VULB9168	9168-313	2012-06-03	2013-06-01
5	Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA91703 73	2012-11-15	2013-11-14
6	Ultra broadband antenna	Rohde & Schwarz	HL562	100227	2012-10-09	2013-10-08
7	Atmosphere pressure meter	Shanghai ZhongXuan Electronic Co.,Ltd	BY—2009P	--	2012-10-09	2013-10-08
8	CLAMP METER	FLUKE	316	86080010	2012-06-03	2013-06-01
9	Thermo-Hygrometer	ZHICHEN	ZC1-2	01050033	2012-10-09	2013-10-08

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11	High-low temperature cabinet	Shanghai YuanZhen	GW2050	--	2012-06-03	2013-06-01
12	Tunable Notch Filter	Wainwright instruments Gmbh	WRCT1800. 0/ 2000.0- 0.2/40-5SSK	11	2012-06-03	2013-06-01
13	Tunable Notch Filter	Wainwright instruments Gmbh	WRCT800.0/ 880.0- 0.2/40-5SSK	9	2012-06-03	2013-06-01
14	High pass Filter	FSCW	HP 12/2800- 5AA2	19A45-02	2012-06-03	2013-06-01
15	Low nosie amplifier	TESEQ	LNA6900	70133	2012-06-03	2013-06-01
16	EMI test receiver	Rohde & Schwarz	ESCS30	100086	2012-06-03	2013-06-01
17	Line impedance stabilization network	SCHWARZBECK	NSLK8127	8127-490	2012-06-03	2013-06-01

7 Test Results

7.1 E.U.T. test conditions

Test Power: AC 120V

Requirements: 15.31(e) For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. For battery operated equipment, the equipment tests shall be performed using a new battery.

Operating Environment:

Temperature: 20.0 -25.0 °C

Humidity: 35-75 % RH

Atmospheric Pressure: 992 -1020 mbar

Test frequencies: According to the 15.31(m) Measurements on intentional radiators or receivers, other than TV broadcast receivers, shall be performed and. if required. reported for each band in which the device can be operated with the device operating at the number of frequencies in each band specified in the following table:

Frequency range over which device operates	Number of frequencies	Location in the range of operation
1 MHz or less	1	Middle
1 to 10 MHz	2	1 near top and 1 near bottom
More than 10 MHz	3	1 near top. 1 near middle and 1 near bottom

Pursuant to Part 15.31(c) For swept frequency equipment, measurements shall be made with the frequency sweep stopped at those frequencies chosen for the measurements to be reported.

Test frequency is the lowest channel: 0 channel (2402MHz), middle channel: 39 channel (2441MHz) and highest channel: 78 channel (2480MHz) with fixed at channel.

7.2 Antenna Requirement

Standard requirement

15.203 requirement:

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, 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.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna

The antenna is Dedicated antenna on the main PCB and no consideration of replacement. The gain of the antenna is 0 dBi.

7.3 Conducted Emissions on Mains Terminals

Test Requirement: FCC Part 15C, Section 15.207

Test Method: ANSI C63.10:2009 Section 6.2

Test Result: Pass

Test Voltage: AC 120V 60Hz

Frequency Range: 150 KHz to 30 MHz

Class/Severity: Class B

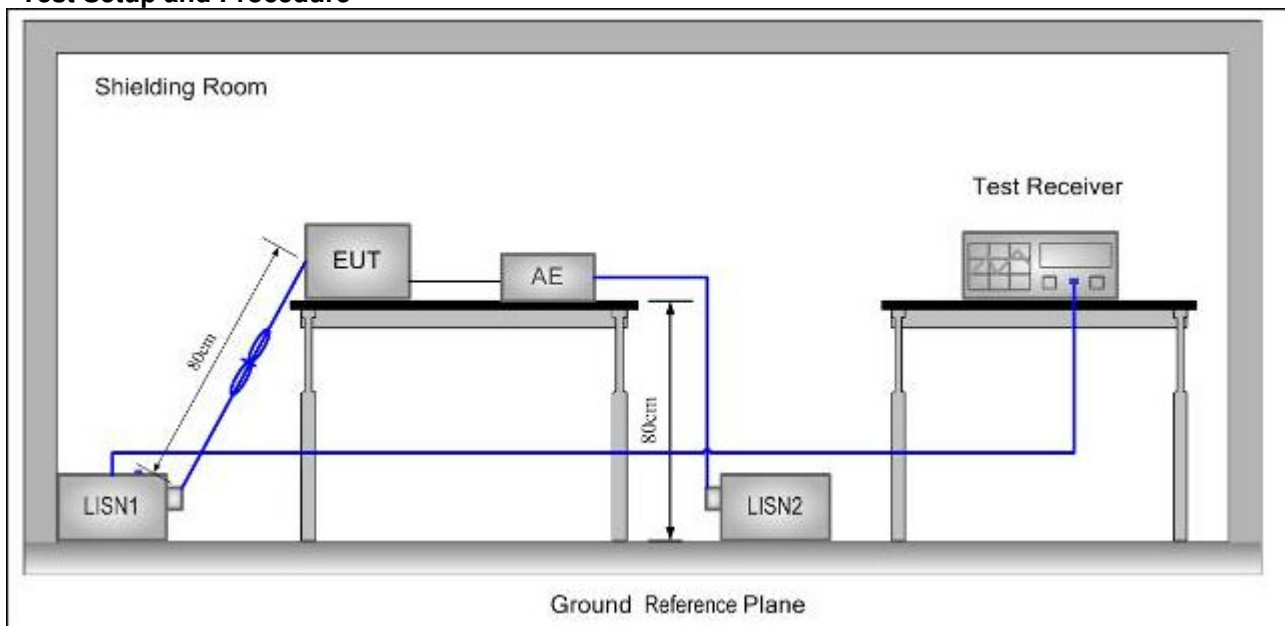
Test mode: BT Transmitting mode

Limit:

Frequency range MHz	Class B Limits dB (μV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

Note1: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50MHz.
Note2: The lower limit is applicable at the transition frequency.

Test Setup and Procedure



1. The mains terminal disturbance voltage was measured with the EUT in a shielded room.
2. The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ linear impedance. The power cables of all other units of the EUT was connected to a second LISN, which was bonded to the ground reference plane in the same way as the LISN for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded
3. The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation.
4. The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISN mounted on top of the ground reference plane. This distance was between the closest points of the LISN and the EUT. The mains lead of EUT excess 0.8m was folded back and forth parallel to the lead so as to form a horizontal bundle with a length between 0.3m and 0.4m. All other units of the EUT and associated equipment was at least 0,8 m from the LISN.

Measurement Data

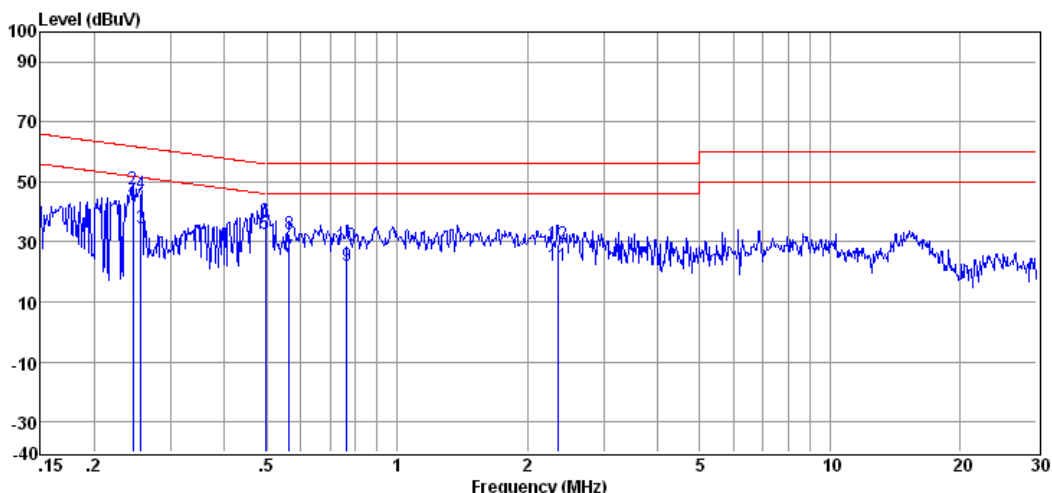
Pre-scan was performed with peak detected on all ports, Quasi-peak & average measurements were performed at the frequencies at which maximum peak emission level were detected.

Please see the attached Quasi-peak and Average test results.

Level = Read Level + LISN/ISN Factor + Cable Loss.

Test Mode: BT Transmitting mode

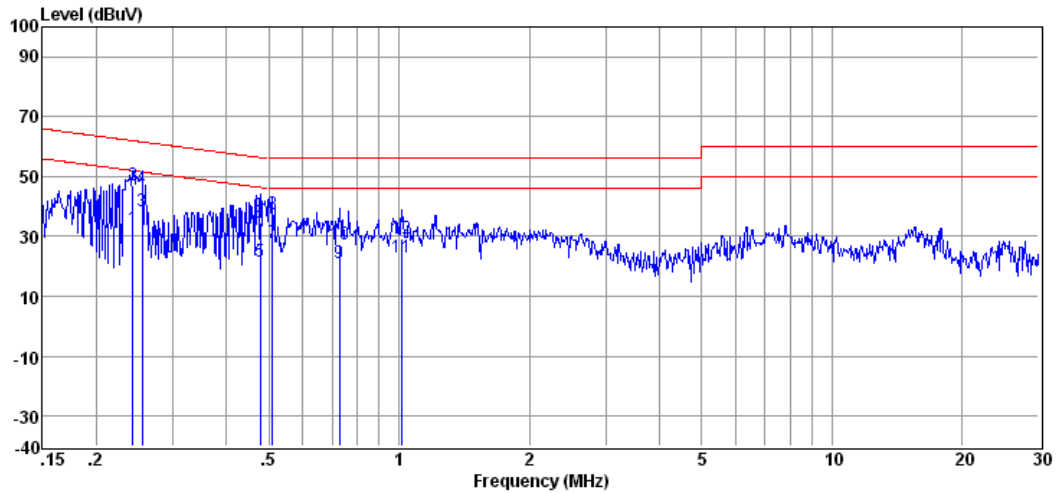
Test Port: AC Live Line



Freq (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
0.246	42.20	0.12	0.10	42.42	51.91	-9.49	Average	LINE
0.246	47.54	0.12	0.10	47.76	61.91	-14.15	QP	LINE
0.256	34.35	0.12	0.10	34.57	51.56	-16.99	Average	LINE
0.256	45.89	0.12	0.10	46.11	61.56	-15.45	QP	LINE
0.497	32.46	0.20	0.10	32.76	46.05	-13.29	Average	LINE
0.497	36.65	0.20	0.10	36.95	56.05	-19.10	QP	LINE
0.564	24.54	0.20	0.10	24.84	46.00	-21.16	Average	LINE
0.564	32.30	0.20	0.10	32.60	56.00	-23.40	QP	LINE
0.767	21.81	0.20	0.10	22.11	46.00	-23.89	Average	LINE
0.767	28.63	0.20	0.10	28.93	56.00	-27.07	QP	LINE
2.358	21.77	0.30	0.11	22.18	46.00	-23.82	Average	LINE
2.358	28.64	0.30	0.11	29.05	56.00	-26.95	QP	LINE

Test Mode: BT Transmitting mode

Test Port: AC Neutral Line



Freq (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
0.243	32.64	0.11	0.10	32.85	52.00	-19.15	Average	NEUTRAL
0.243	46.64	0.11	0.10	46.85	62.00	-15.15	QP	NEUTRAL
0.255	38.07	0.12	0.10	38.29	51.60	-13.31	Average	NEUTRAL
0.255	45.97	0.12	0.10	46.19	61.60	-15.41	QP	NEUTRAL
0.479	21.45	0.19	0.10	21.74	46.36	-24.62	Average	NEUTRAL
0.479	34.31	0.19	0.10	34.60	56.36	-21.76	QP	NEUTRAL
0.510	27.67	0.20	0.10	27.97	46.00	-18.03	Average	NEUTRAL
0.510	37.08	0.20	0.10	37.38	56.00	-18.62	QP	NEUTRAL
0.727	20.97	0.20	0.10	21.27	46.00	-24.73	Average	NEUTRAL
0.727	27.14	0.20	0.10	27.44	56.00	-28.56	QP	NEUTRAL
1.016	22.52	0.20	0.10	22.82	46.00	-23.18	Average	NEUTRAL
1.016	28.94	0.20	0.10	29.24	56.00	-26.76	QP	NEUTRAL

7.4 20dB Occupied Bandwidth

Test Requirement: FCC Part 15 C Section 15.247 (a)(1)
Test Method: ANSI C63.10:2009 Clause 6.9.1
Exploratory Test Mode: Non-hopping transmitting with all kind of modulation and all kind of data type
Final Test Mode: Through Pre-scan, find the DH1 of date type is the worse case of GFSK modulation type, 2-DH1 of date type is worse case of $\pi/4$ DQPSK modulation type, 3-DH1 of date type is worse case of 8DPSK modulation type.

Test Procedure:

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer: Span = approximately 2 to 3 times the 20dB bandwidth, centered on the hopping channel;
3. Set the spectrum analyzer: RBW \geq 1% of the 20dB bandwidth (set 100kHz). VBW \geq RBW. Sweep = auto; Detector Function = Peak. Trace = Max Hold.
4. Mark the peak frequency and -20dB points.

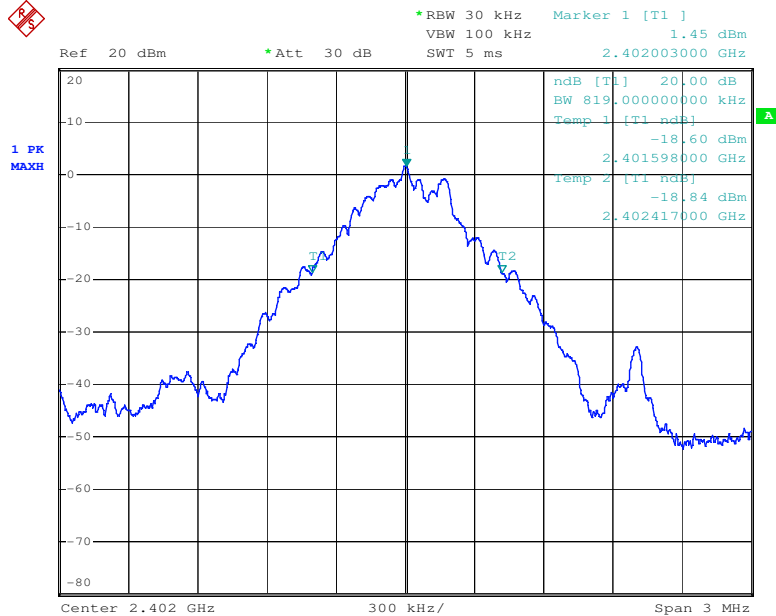
Test date

Test Channel	Channel Frequency (MHz)	Modulation	Bandwidth(KHz)
Low	2402	GFSK	819
Middle	2441	GFSK	816
High	2480	GFSK	819
Low	2402	$\pi/4$ DQPSK	1236
Middle	2441	$\pi/4$ DQPSK	1266
High	2480	$\pi/4$ DQPSK	1257
Low	2402	8DPSK	1212
Middle	2441	8DPSK	1212
High	2480	8DPSK	1212

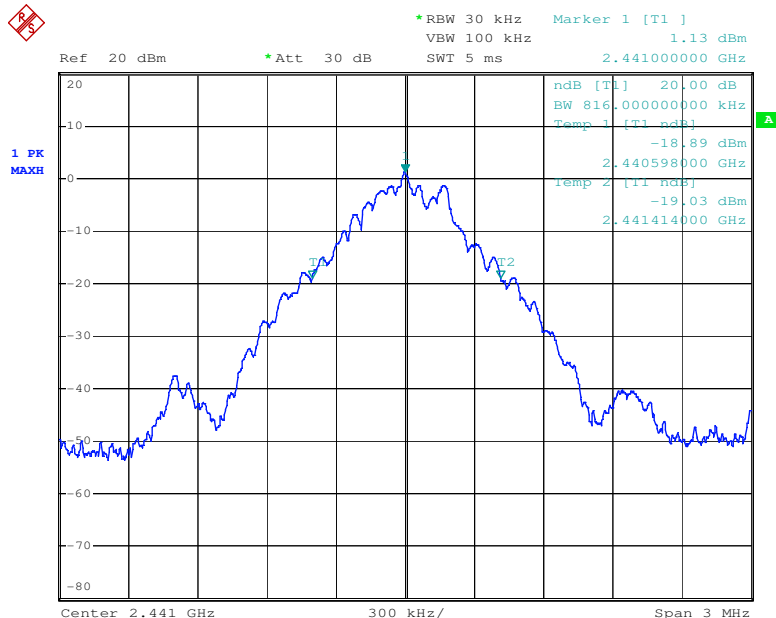


Test plot as follows:

Test mode:	GFSK	Test channel:	Lowest
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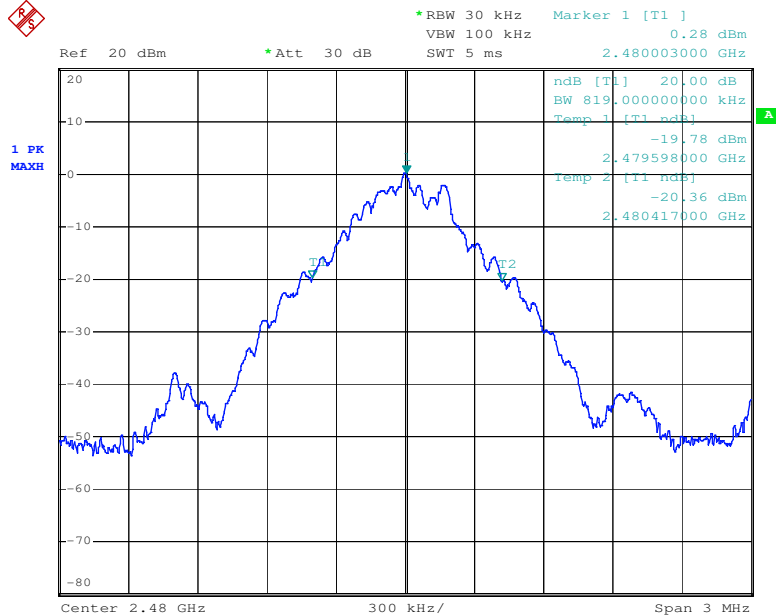


Test mode:	GFSK	Test channel:	Middle
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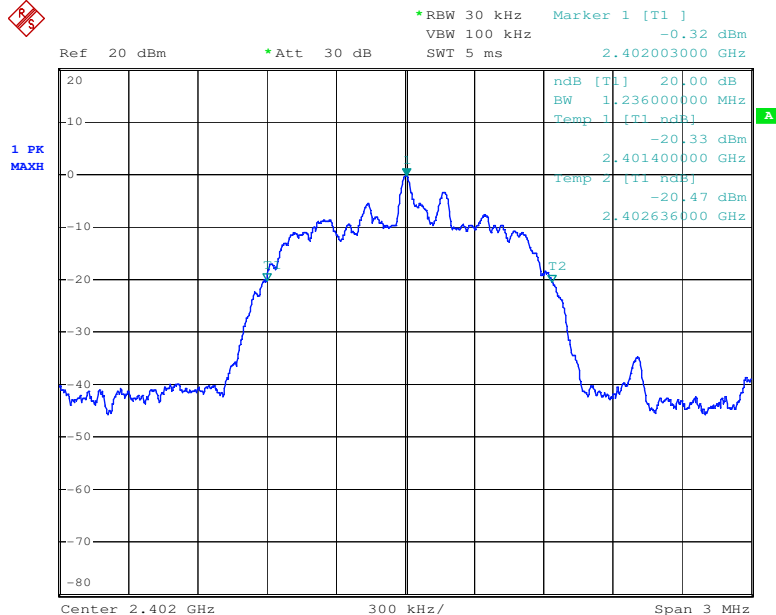




Test mode:	GFSK	Test channel:	Highest
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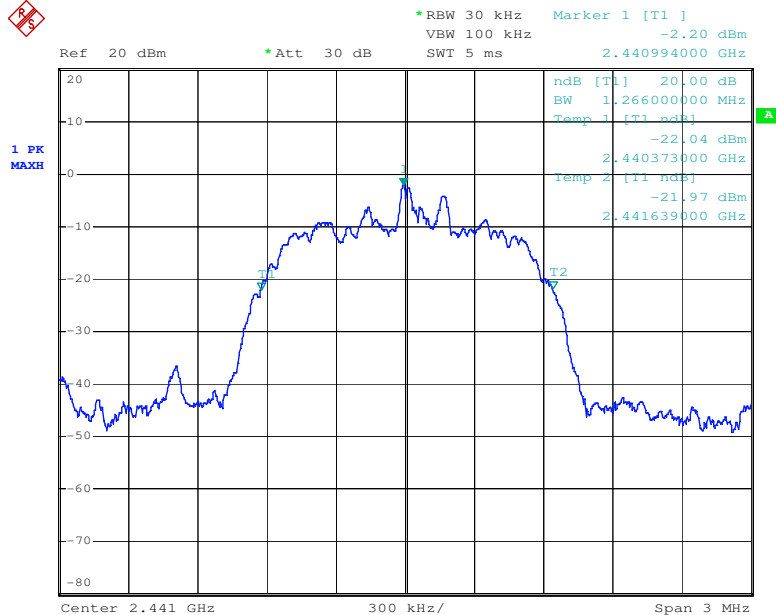


Test mode:	$\pi/4$ DQPSK	Test channel:	Lowest
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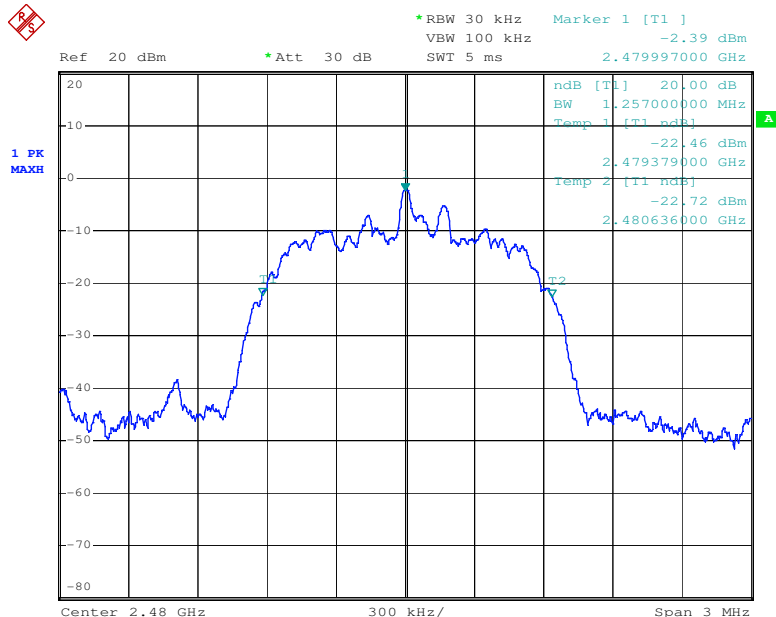




Test mode:	$\pi/4$ DQPSK	Test channel:	Middle
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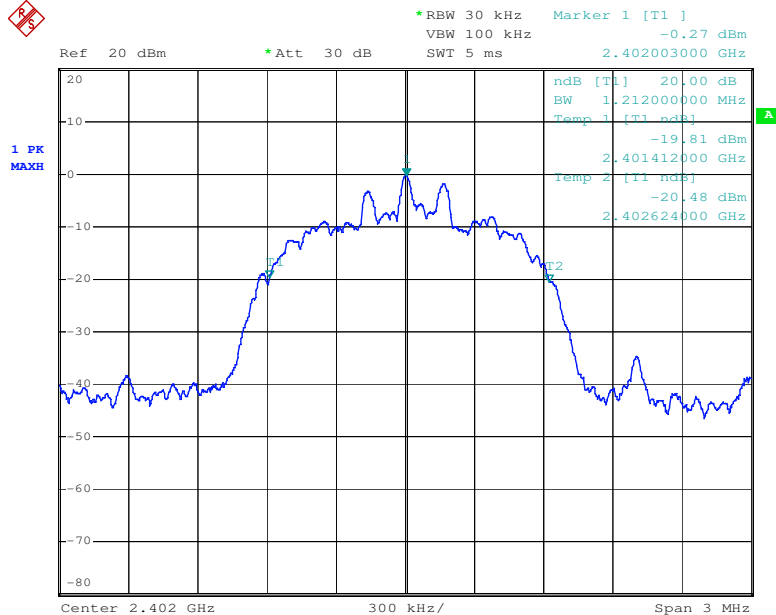


Test mode:	$\pi/4$ DQPSK	Test channel:	Highest
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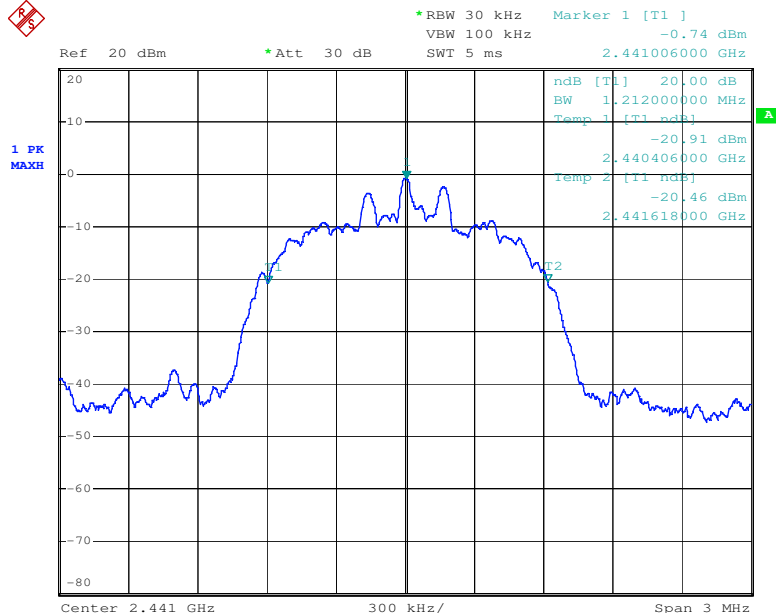




Test mode:	8DPSK	Test channel:	Lowest
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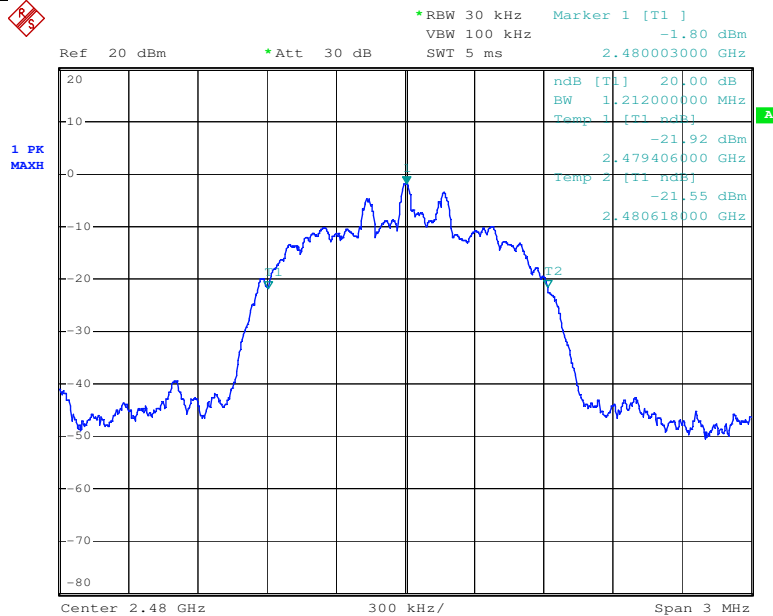


Test mode:	8DPSK	Test channel:	Middle
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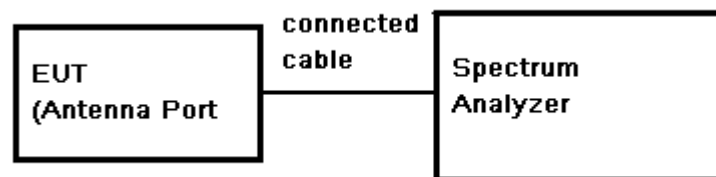
Test mode:	8DPSK	Test channel:	Highest
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7.5 Conducted Peak Output Power

Test Requirement:	FCC Part 15.247 Section 15.247(b)(1)
Test Method:	ANSI C64.10:2009 Section 6.10.1
Test Result:	Pass
Test Limit:	Regulation 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. Refer to the result "Hopping channel number" of this document. The 0.125 watt (20.0dBm) limit applies.
Exploratory Test Mode:	Non-hopping transmitting with all kind of modulation and all kind of data type
Final Test Mode:	Through Pre-scan, find the 1-DH1 of date type is the worse case of GFSK modulation type, 2-DH1 of date type is worse case of $\pi/4$ DQPSK modulation type, 3-DH1 of date type is worse case of 8DPSK modulation type.

Test Configuration:



Test Procedure:

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 1 MHz. VBW = 3 MHz. Sweep = auto; Detector Function = Peak.
3. Keep the EUT in transmitting at lowest, middle and highest channel individually. Record the max value



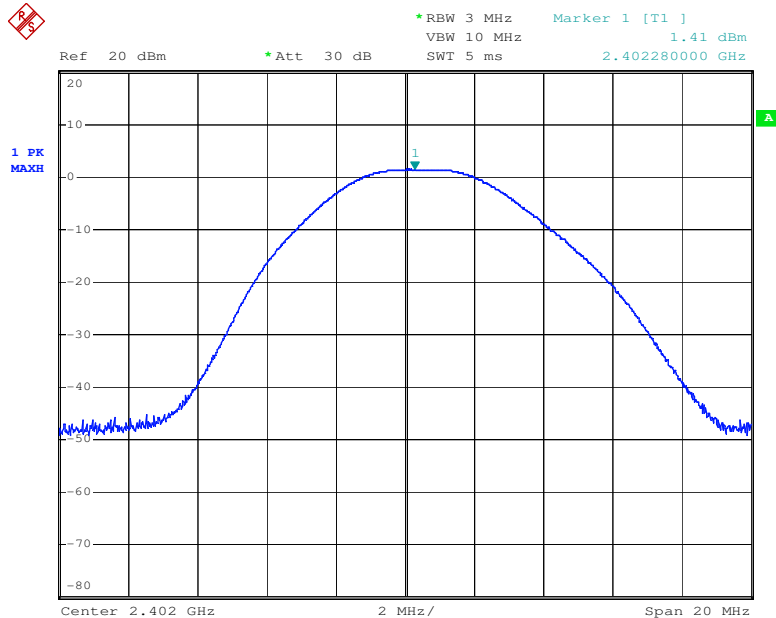
Test Results record:

Test Channel	Modulation	Fundamental Frequency (MHz)	Reading Power (dBm)	Cable Loss (dB)	Output Power		Limit (dBm)	Margin (dB)
					(dBm)	(mW)		
Lowest	GFSK	2402	1.41	0.5	1.91	1.55	20	18.09
Middle	GFSK	2441	1.17	0.5	1.67	1.47	20	18.33
Highest	GFSK	2480	0.28	0.5	0.78	1.20	20	19.22
Lowest	$\pi/4$ DQPSK	2402	0.35	0.5	0.85	1.22	20	19.15
Middle	$\pi/4$ DQPSK	2441	-0.05	0.5	0.45	1.11	20	19.55
Highest	$\pi/4$ DQPSK	2480	-1.00	0.5	-0.5	0.89	20	20.50
Lowest	8DPSK	2402	0.56	0.5	1.06	1.28	20	18.94
Middle	8DPSK	2441	0.28	0.5	0.78	1.20	20	19.22
Highest	8DPSK	2480	-0.72	0.5	-0.22	0.95	20	20.22

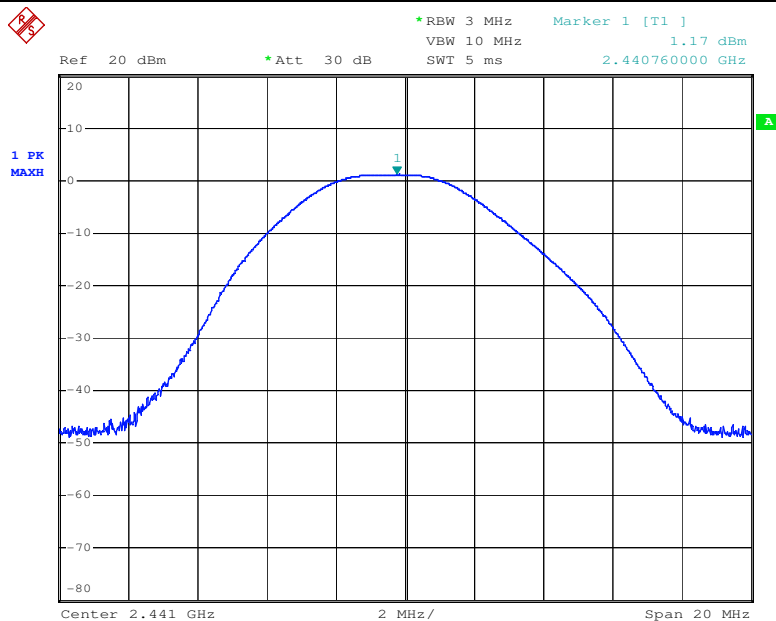


Test result plot as follows:

Test mode:	GFSK	Test channel:	Lowest
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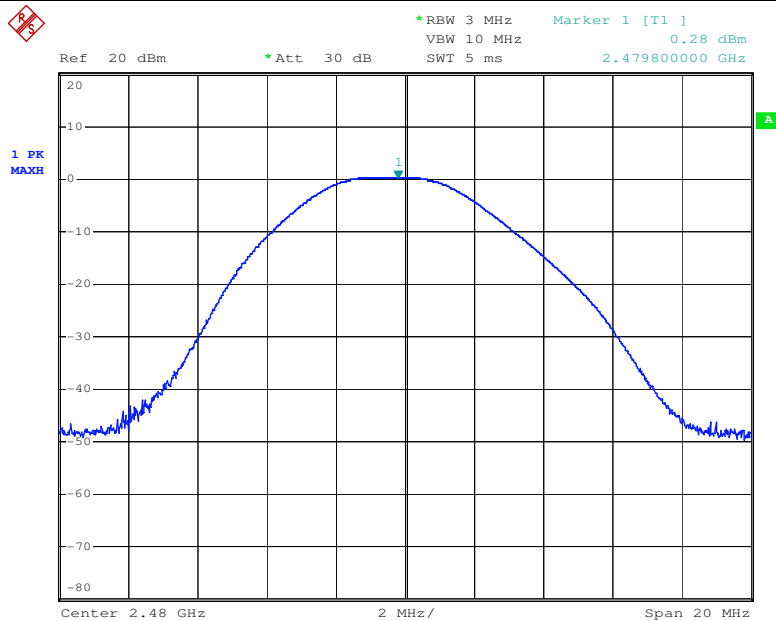


Test mode:	GFSK	Test channel:	Middle
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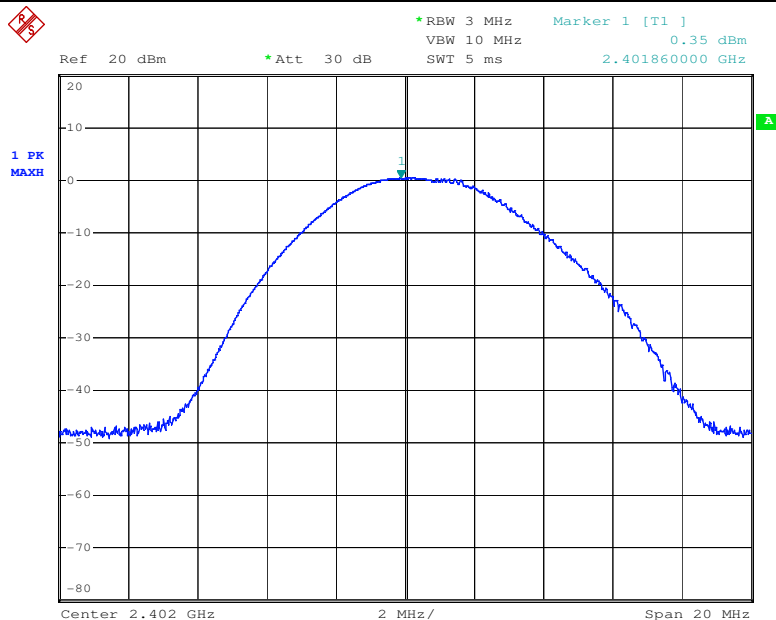




Test mode:	GFSK	Test channel:	Highest
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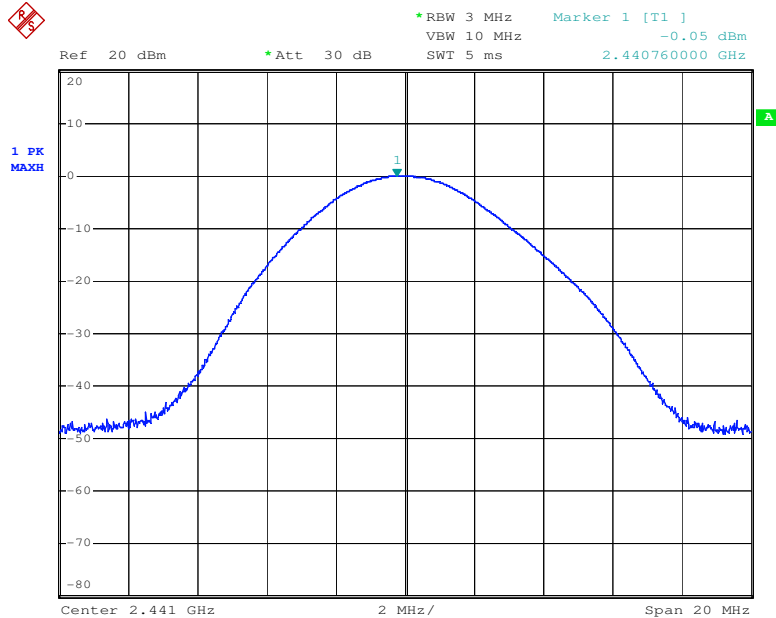


Test mode:	$\pi/4$ DQPSK	Test channel:	Lowest
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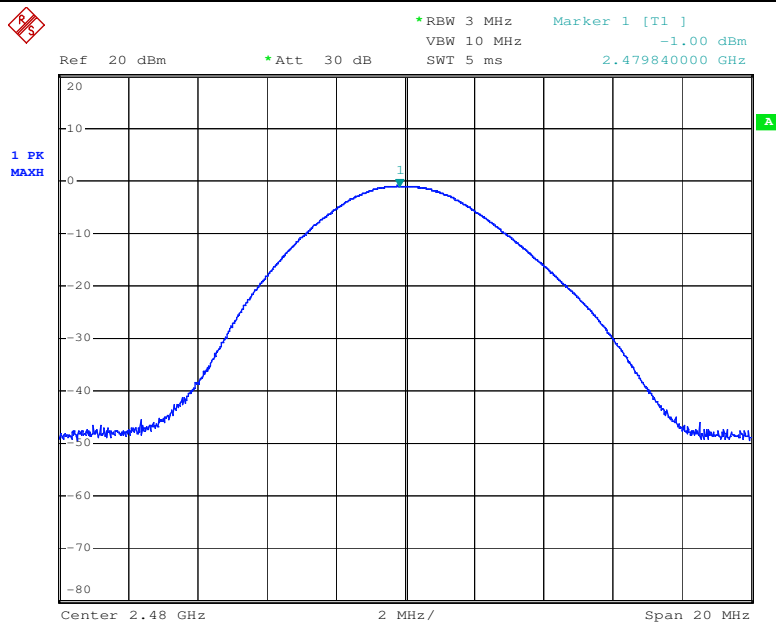




Test mode:	$\pi/4$ DQPSK	Test channel:	Middle
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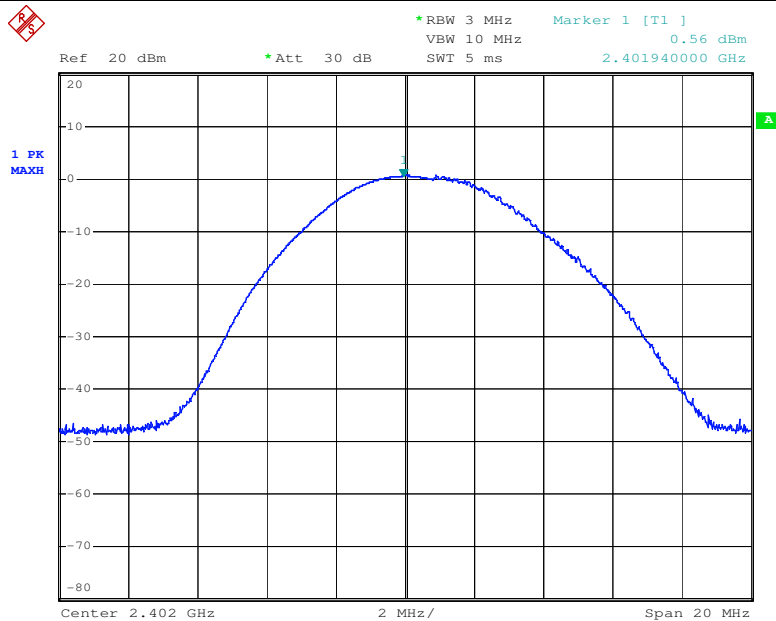


Test mode:	$\pi/4$ DQPSK	Test channel:	Highest
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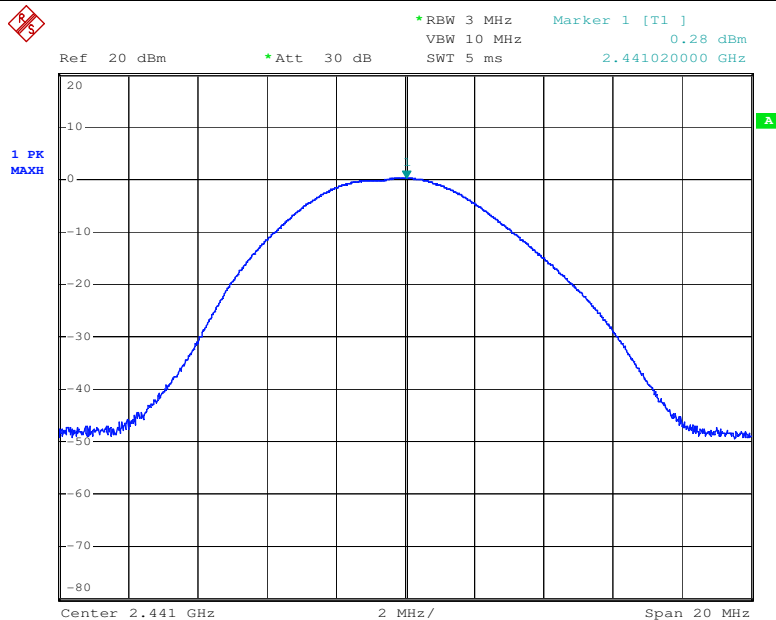




Test mode:	8DPSK	Test channel:	Lowest
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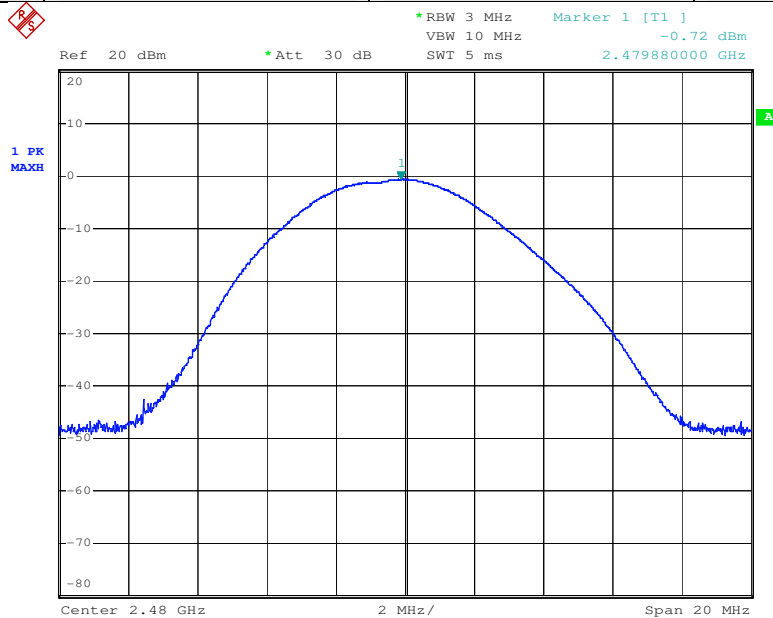


Test mode:	8DPSK	Test channel:	Middle
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Test mode:	8DPSK	Test channel:	Highest
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7.6 Carrier Frequencies Separated

Test Requirement: FCC Part 15 C Section 15.247 (a)(1)
Test Method: ANSI C63.10:2009 Clause 7.7.2
Limit: 0.025MHz or 2/3 of the 20dB bandwidth (whichever is greater)
Test result: Pass
Exploratory Test Mode: Hopping transmitting with all kind of modulation and all kind of data type
Final Test Mode: Through Pre-scan, find the DH1 of date type is the worse case of GFSK modulation type, 2-DH1 of date type is worse case of $\pi/4$ DQPSK modulation type, 3-DH1 of date type is worse case of 8DPSK modulation type.

Test Procedure:

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW \geq 1% of the span (set 100 kHz). VBW \geq RBW , Span = 3MHz. Sweep = auto; Detector Function = Peak. Trace = Max,hold.
3. Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section. Submit this plot.

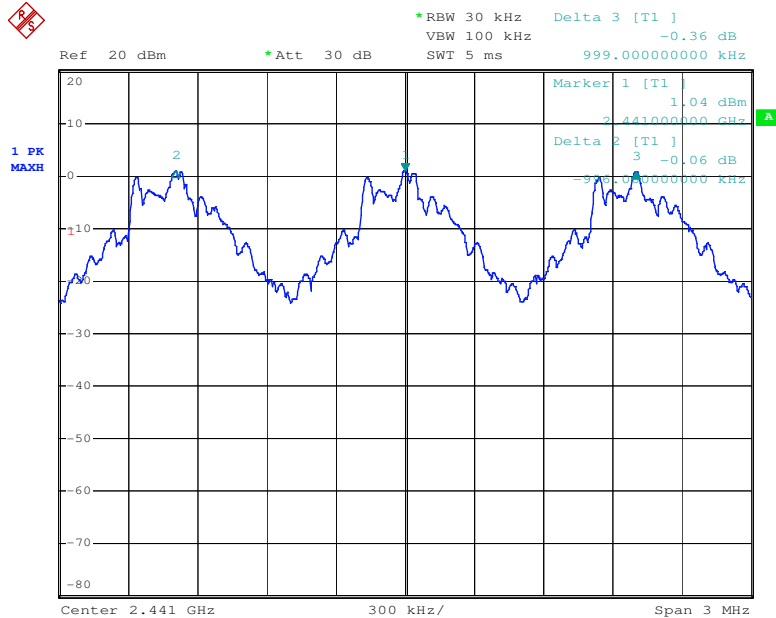
Test Channel	Modulation	Carrier Frequencies Separated	Limit (25kHz or two-thirds of the 20 dB bandwidth)	Results
Middle Channels (channel 39 and channel 40)	GFSK	999 kHz	546kHz	PASS
Middle Channels (channel 39 and channel 40)	$\pi/4$ DQPSK	999 kHz	844kHz	PASS
Middle Channels (channel 39 and channel 40)	8DPSK	1002 kHz	808kHz	PASS

Note: 20dB bandwidth reference Section 7.4

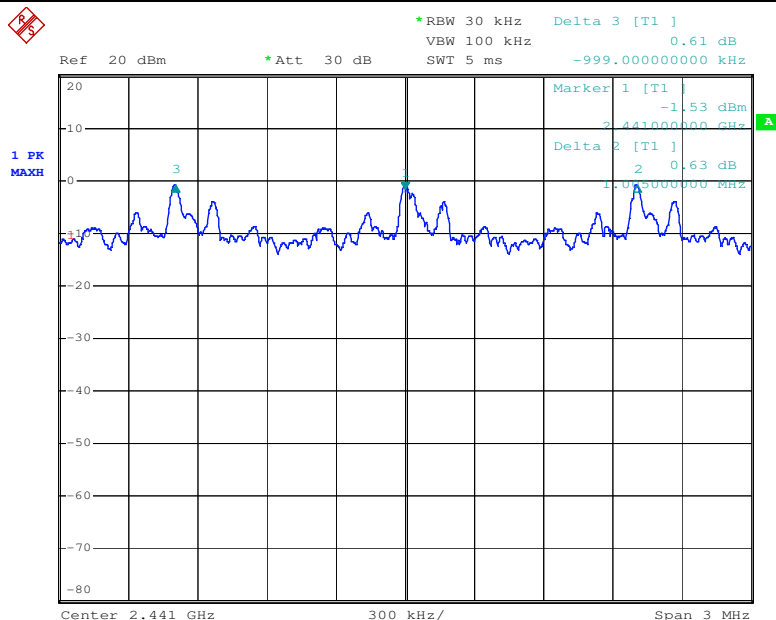


Test plot as follows:

Test mode:	GFSK	Test channel:	Middle
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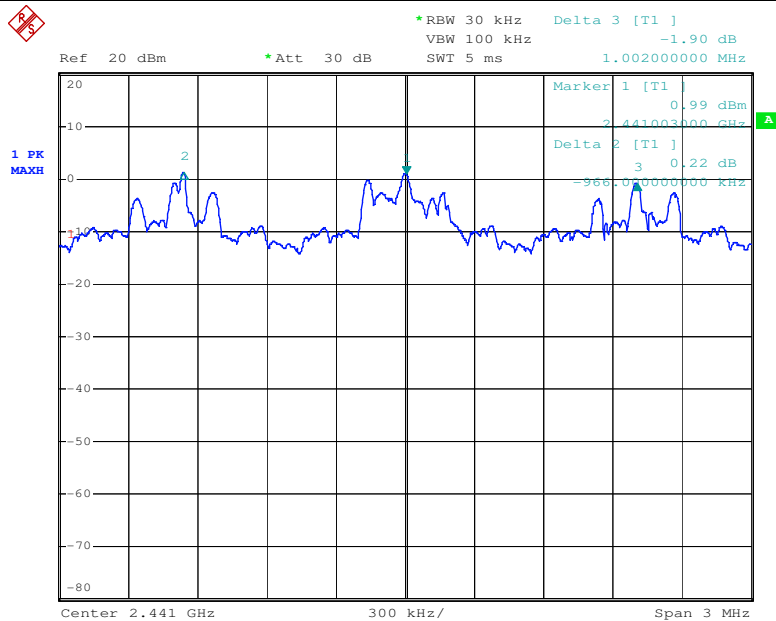


Test mode:	$\pi/4$ DQPSK	Test channel:	Middle
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Test mode:	8DPSK	Test channel:	Middle
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7.7 Hopping Channel Number

Test Requirement: FCC Part15 C Section 15.247(b)
Test Method: ANSI C63.10:2009 Clause 7.7.3
Limit: At least 15 channels
Test Result: Pass
Test Mode: Hopping transmitting with all kind of modulation

Test Procedure:

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 100 kHz. VBW = 300 kHz. Sweep = auto; Detector Function = Peak. Trace = Max hold.
3. Allow the trace to stabilize. It may prove necessary to break the span up to sections. in order to clearly show all of the hopping frequencies. The limit is specified in one of the subparagraphs of this Section.
4. Set the spectrum analyzer: start frequency = 2400MHz. stop frequency = 2483.5MHz. Submit the test result graph.

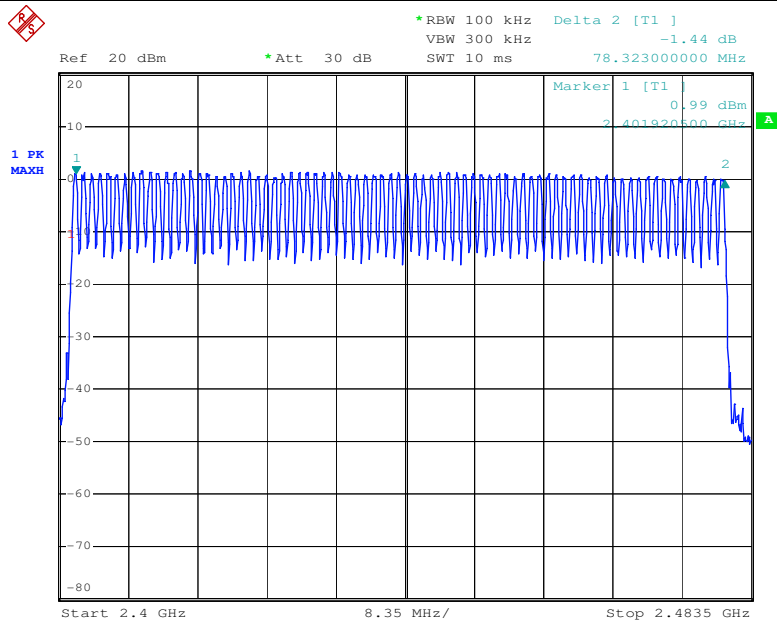
Measurement Data

Mode	Hopping channel numbers	Limit	Results
GFSK	79	≥15	Pass
π/4DQPSK	79	≥15	Pass
8DPSK	79	≥15	Pass

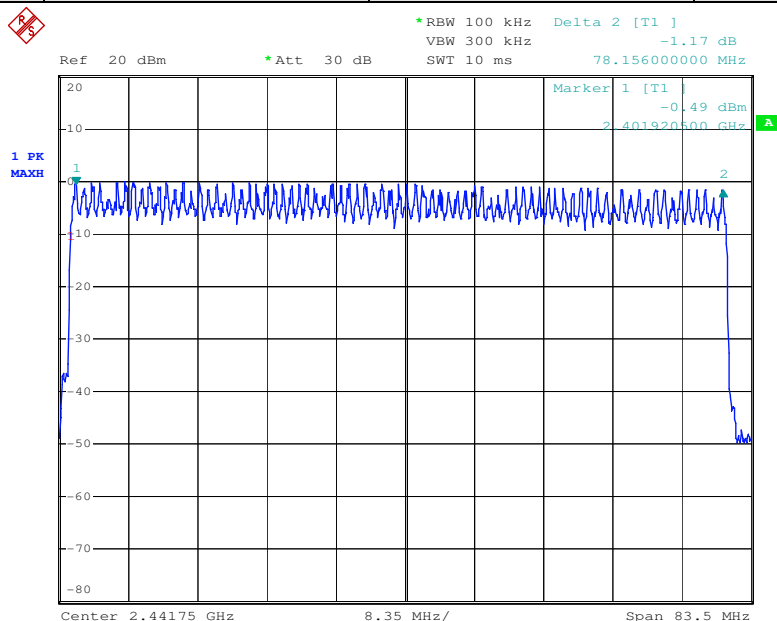


Test plot as follows:

Test mode:	GFSK		
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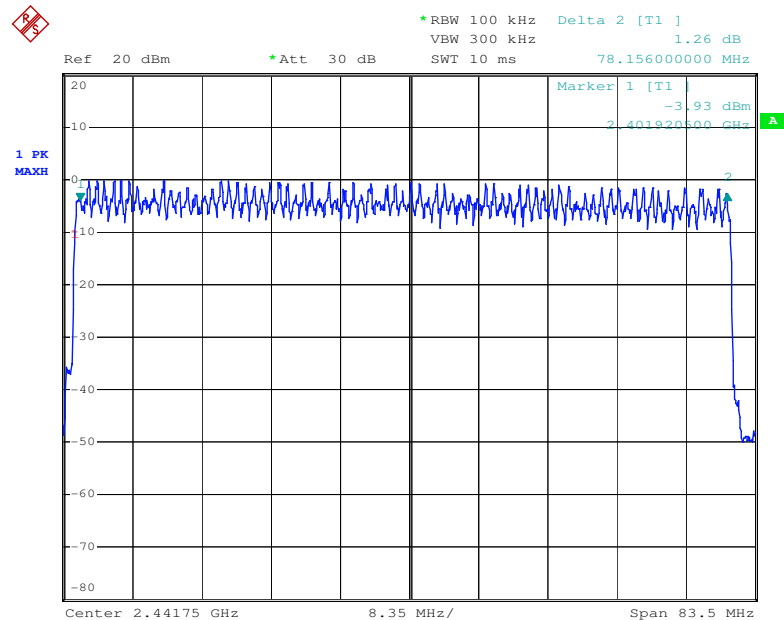


Test mode:	$\pi/4$ DQPSK		
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Test mode:	8DPSK		
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7.8 Dwell Time

Test Requirement:

FCC Part 15 C Section 15.247(a)(1)

Test Method:

ANSI C63.10:2009 Clause 7.7.4

Limit:

Regulation 15.247(a)(1)(iii) 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 Status:

Hopping transmitting with all kind of modulation.

Test Result:

Pass

Test Procedure:

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set spectrum analyzer span = 0. centered on a hopping channel;
3. Use Emission width / No. of Hopping Channels in 31.6s to determine the dwell time.

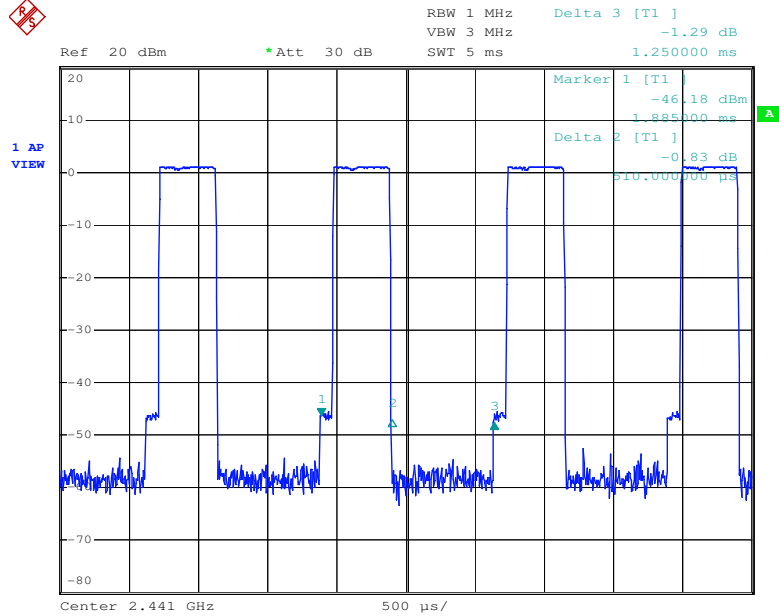
Frequency (MHz)	Modulation	Packet	Emission Width (ms)	Number of Hopping Channel in 31.6s	Average Time of Occupancy(s)	Limit(s)	Result
2441	GFSK	DH1	0.51	201	0.10	0.4	Pass
		DH3	1.76	125	0.22	0.4	Pass
		DH5	3.02	90	0.27	0.4	Pass
2441	$\pi/4$ DQPSK	2DH1	0.53	211	0.11	0.4	Pass
		2DH3	1.78	140	0.25	0.4	Pass
		2DH5	3.02	88	0.27	0.4	Pass
2441	8DPSK	3DH1	0.52	164	0.09	0.4	Pass
		3DH3	1.78	123	0.22	0.4	Pass
		3DH5	3.02	102	0.31	0.4	Pass



Test plot as follows::

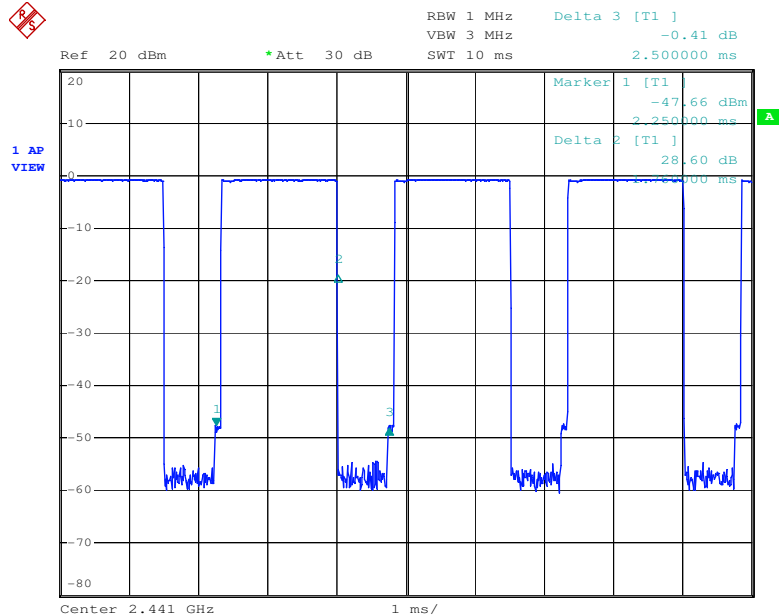
Frequency 2441MHz:

Modulation: GFSK-DH1



Frequency 2441MHz:

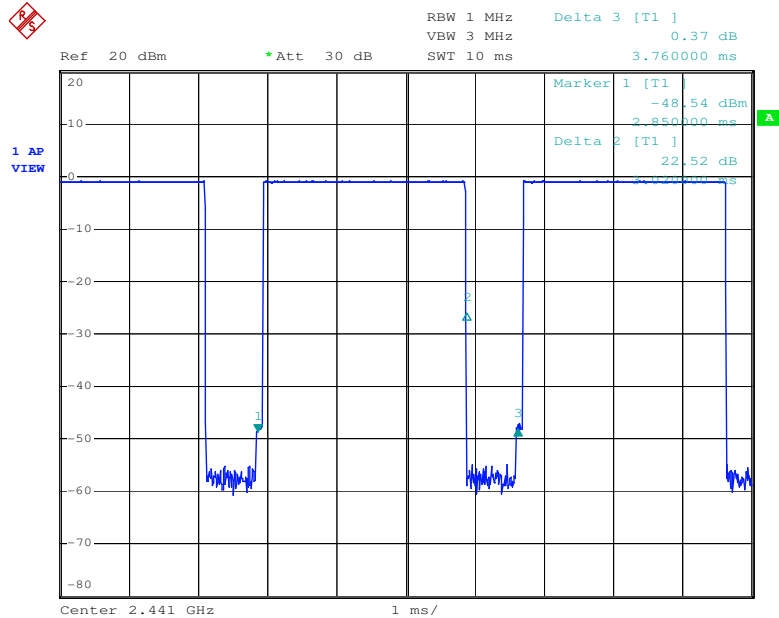
Modulation: GFSK- DH3





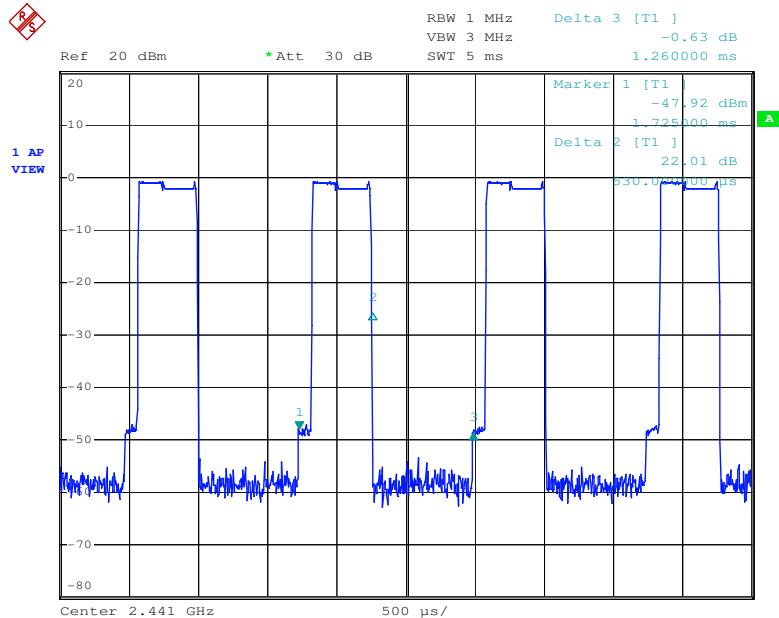
Frequency 2441MHz:

Modulation: GFSK- DH5



Frequency 2441MHz:

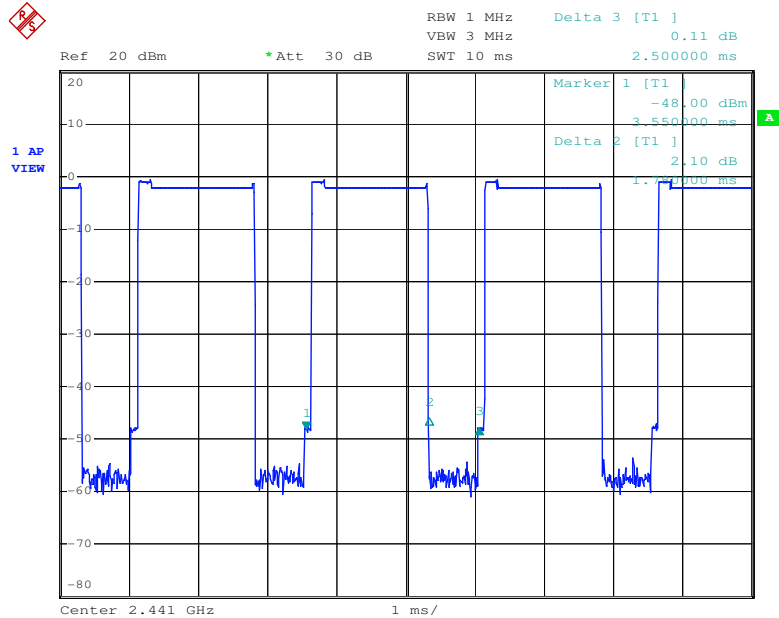
Modulation: $\pi/4$ DQPSK-2DH1





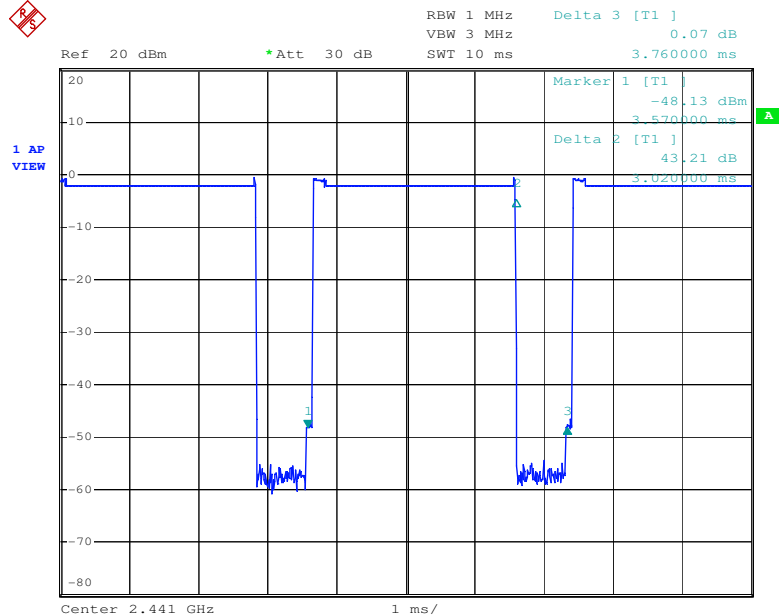
Frequency 2441MHz:

Modulation: $\pi/4$ DQPSK-2DH3



Frequency 2441MHz:

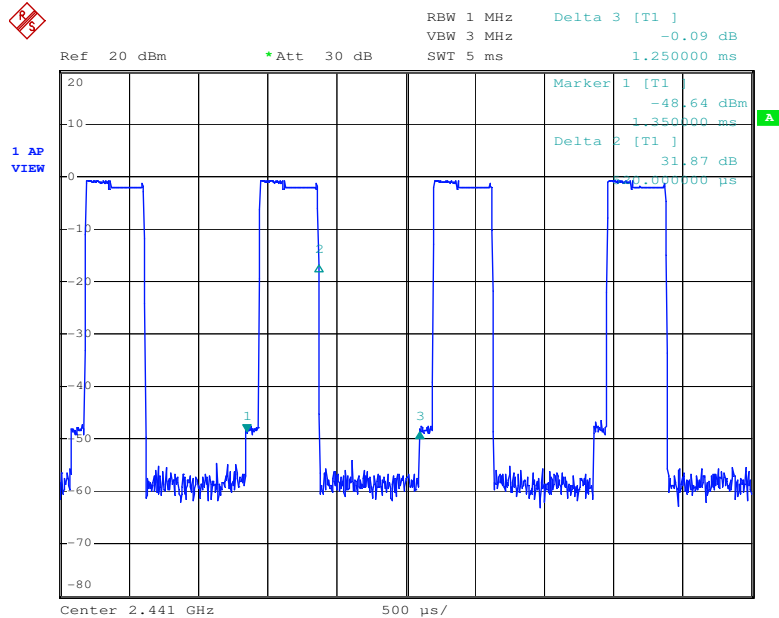
Modulation: $\pi/4$ DQPSK-2DH5





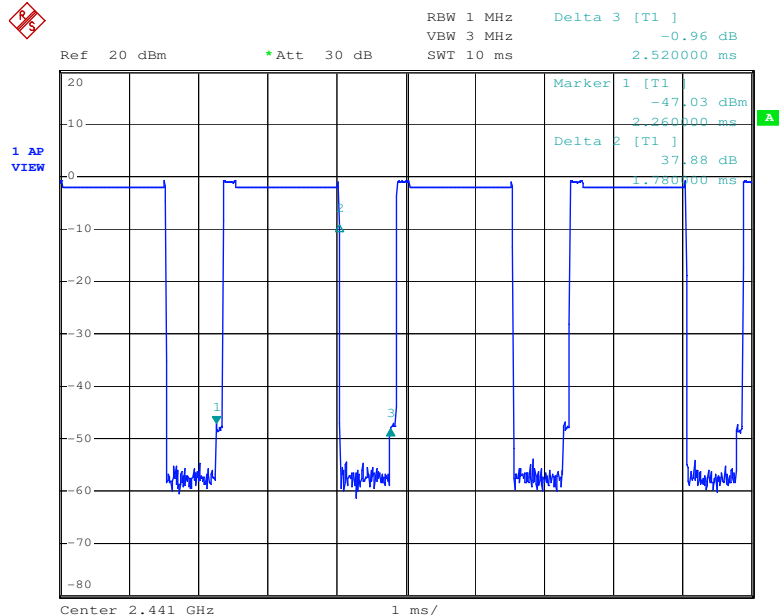
Frequency 2441MHz:

Modulation: 8DPSK-3DH1



Frequency 2441MHz:

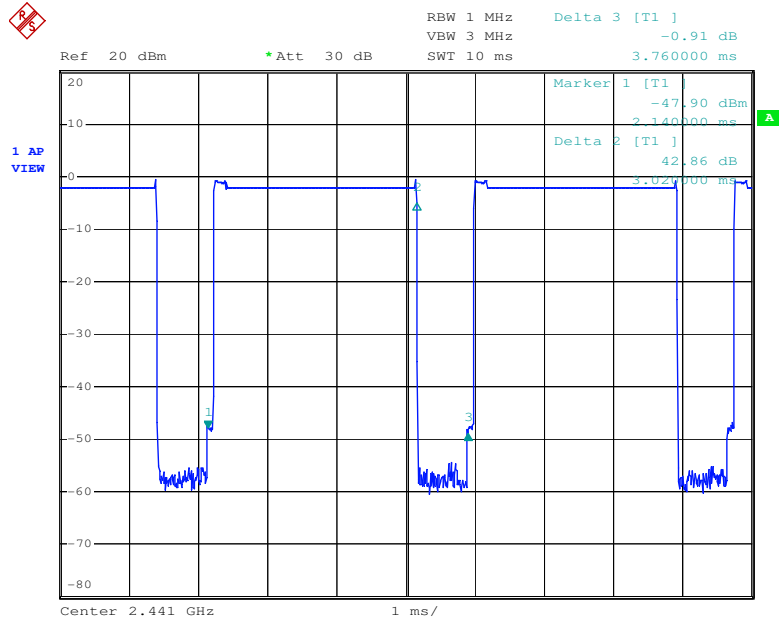
Modulation: 8DPSK-3DH3





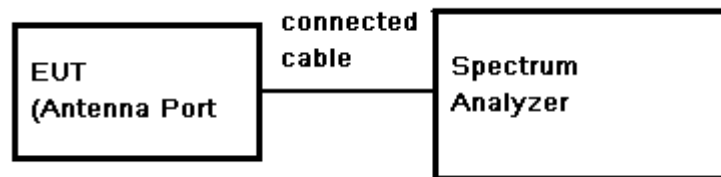
Frequency 2441MHz:

Modulation: 8DPSK-3DH5



7.9 Conducted Spurious Emissions

Test Requirement:	FCC Part 15 Section 15.247(d)
Test Method:	ANSI C63.10:2009 Clause 7.7.10
Limit:	(d) 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.
Exploratory Test Mode:	Hopping transmitting with all kind of modulation and all kind of data type
Final Test Mode:	Through Pre-scan, find the DH1 of date type is the worse case of GFSK modulation type, 2-DH1 of date type is worse case of $\pi/4$ DQPSK modulation type, 3-DH1 of date type is worse case of 8DPSK modulation type.
Test Result:	Pass
Test Configuration:	

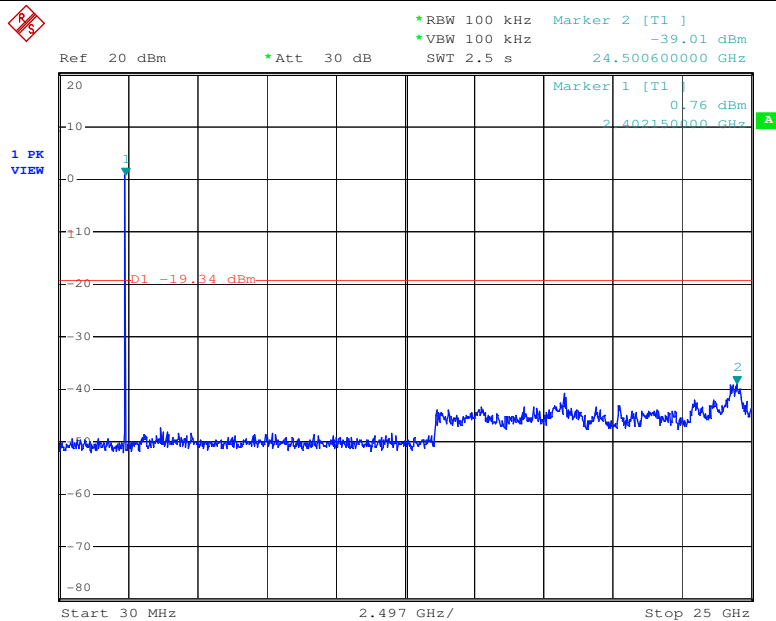


Test Procedure:	<ol style="list-style-type: none"> 1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum. 2. Set the spectrum analyzer: RBW = 100KHz. VBW \geq RBW. Sweep = auto; Detector Function = Peak (Max. hold).
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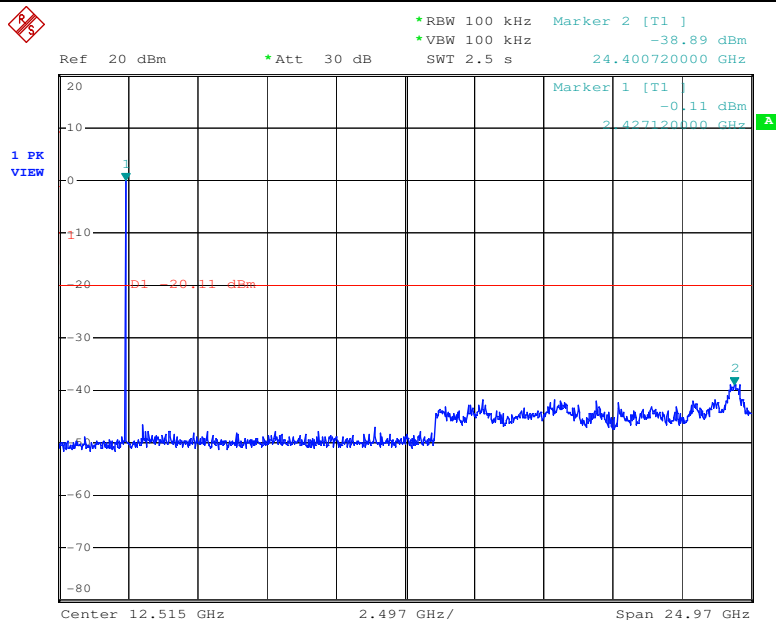


Test plot as follows:

Test mode:	GFSK	Test channel:	Lowest
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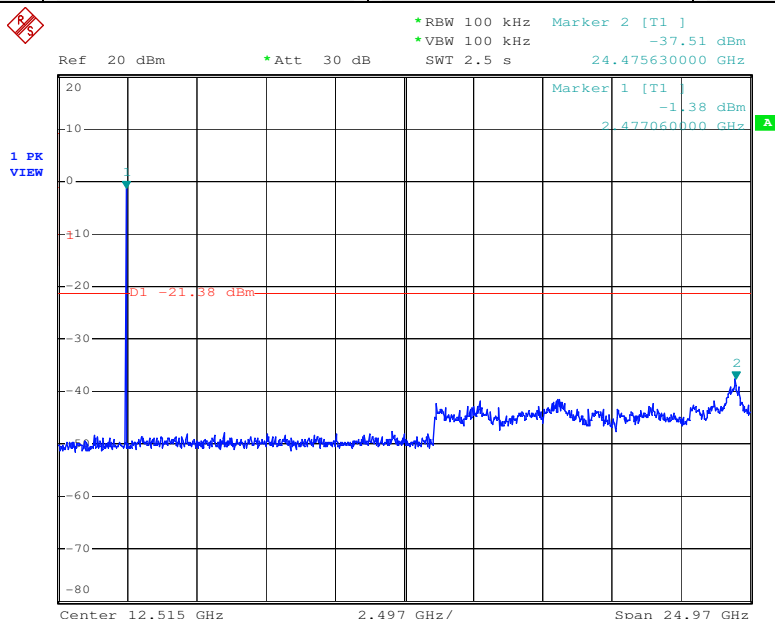


Test mode:	GFSK	Test channel:	Middle
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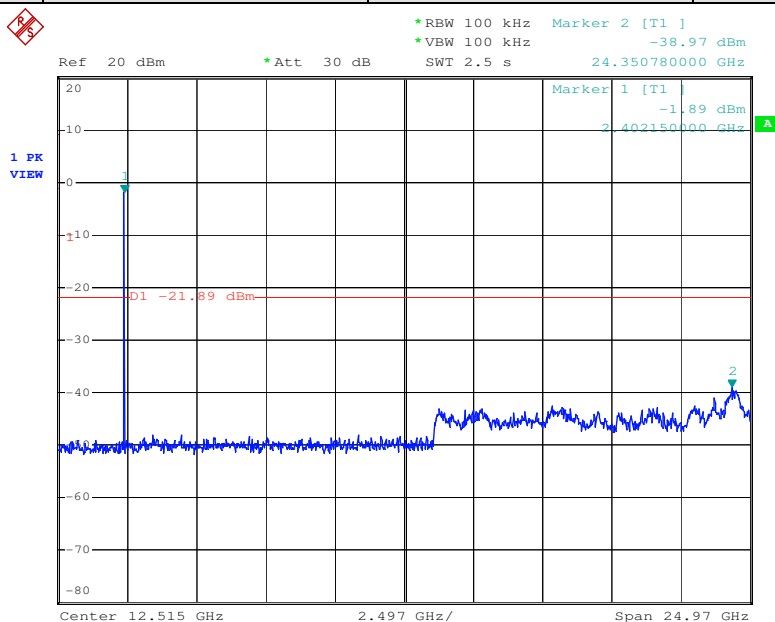




Test mode:	GFSK	Test channel:	Highest
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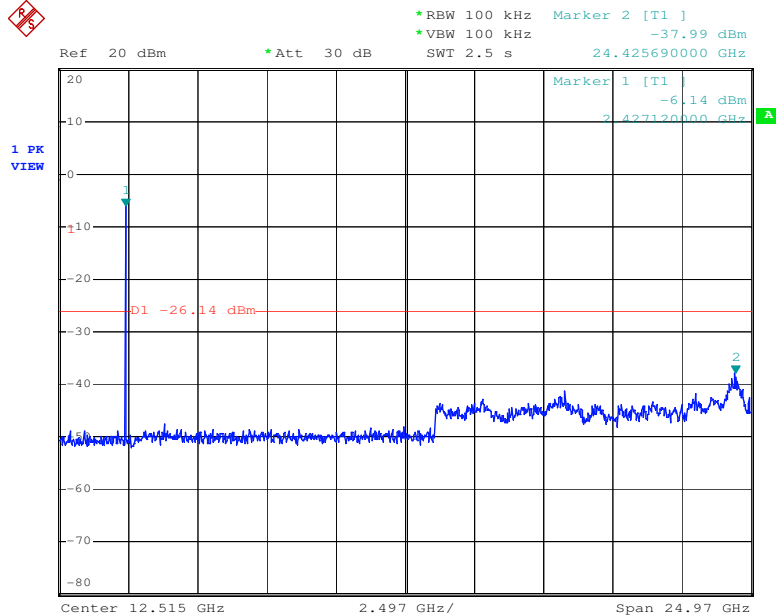


Test mode:	$\pi/4$ DQPSK	Test channel:	Lowest
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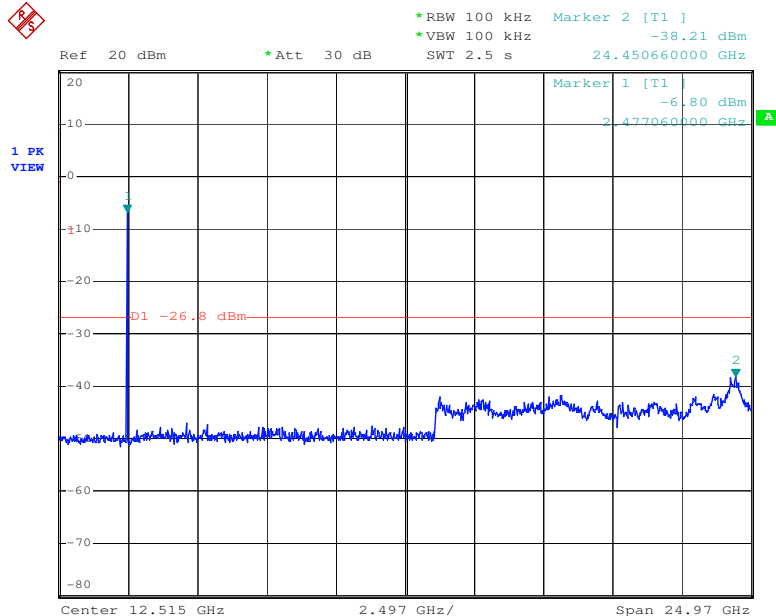




Test mode:	$\pi/4$ DQPSK	Test channel:	Middle
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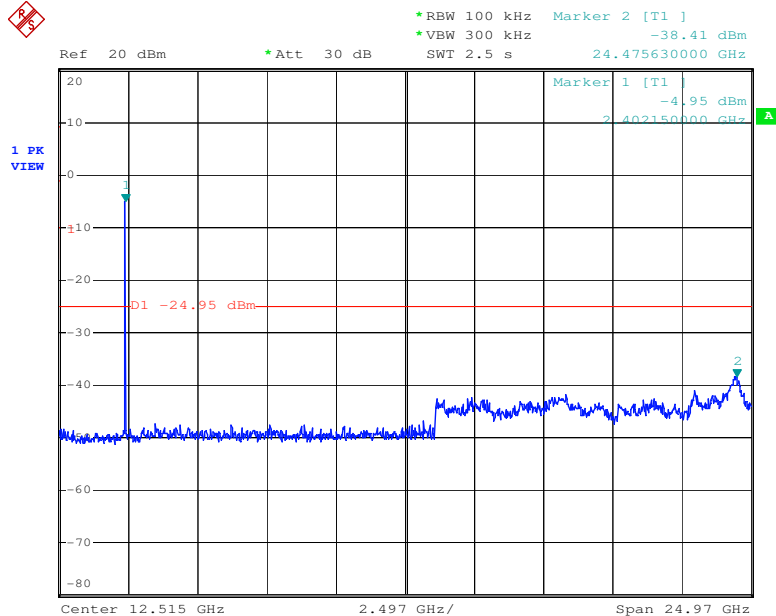


Test mode:	$\pi/4$ DQPSK	Test channel:	Highest
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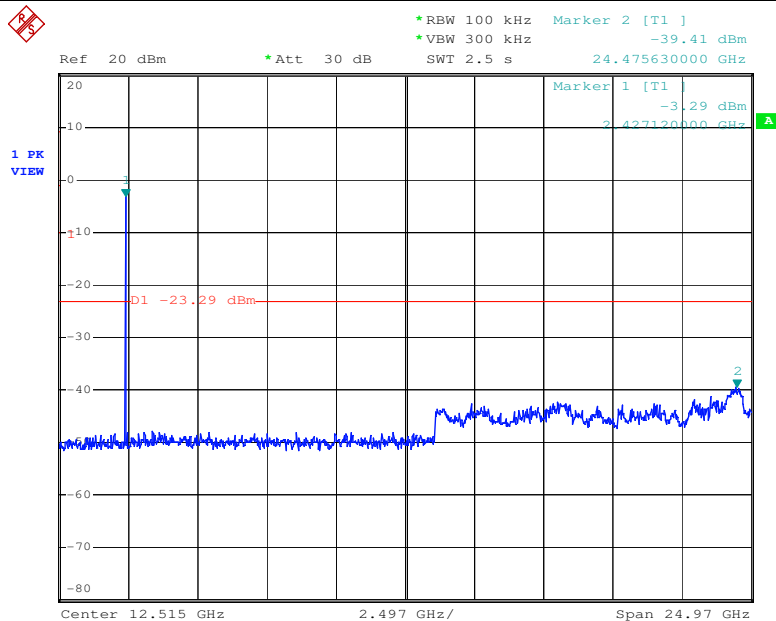




Test mode:	8DPSK	Test channel:	Lowest
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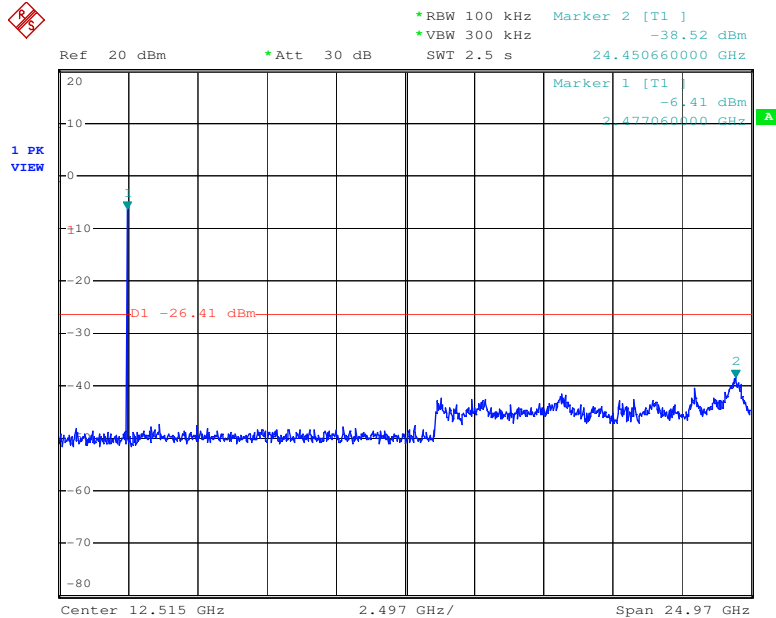


Test mode:	8DPSK	Test channel:	Middle
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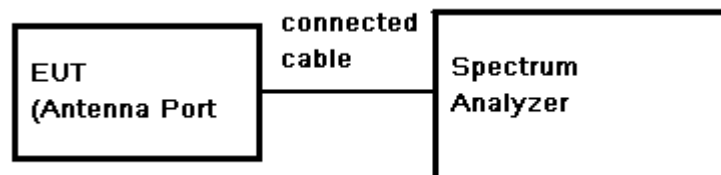


Test mode:	8DPSK	Test channel:	Highest
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7.10 Conducted Band-edge

Test Requirement:	FCC Part 15 Section 15.247(d)
Test Method:	ANSI C63.10:2009 Clause 7.7.10
Test Date:	Mar.11, 2013
Limit:	(d) 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.
Exploratory Test Mode:	Hopping transmitting with all kind of modulation and all kind of data type
Final Test Mode:	Through Pre-scan, find the DH1 of date type is the worse case of GFSK modulation type, 2-DH1 of date type is worse case of $\pi/4$ DQPSK modulation type, 3-DH1 of date type is worse case of 8DPSK modulation type.
Test Result:	Pass
Test Configuration:	



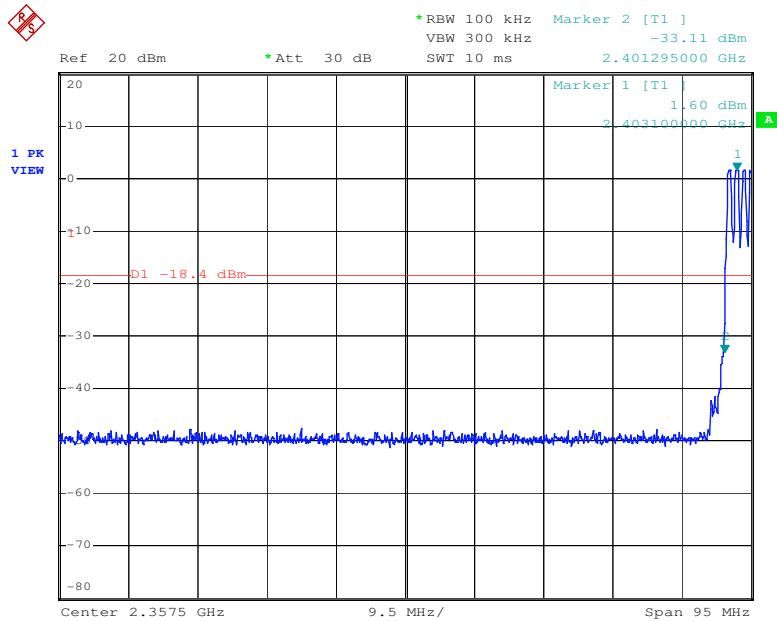
Test Procedure:	<ol style="list-style-type: none"> 1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum. 2. Set the spectrum analyzer: RBW = 100KHz. VBW \geq RBW. Sweep = auto; Detector Function = Peak (Max. hold).
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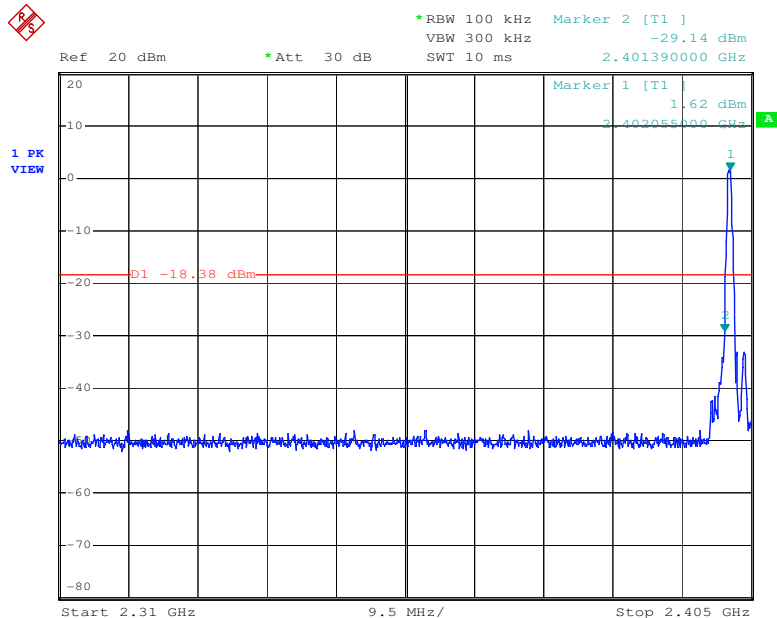
Test plot as follows:

Test mode:	GFSK	Test channel:	Lowest
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Hopping:



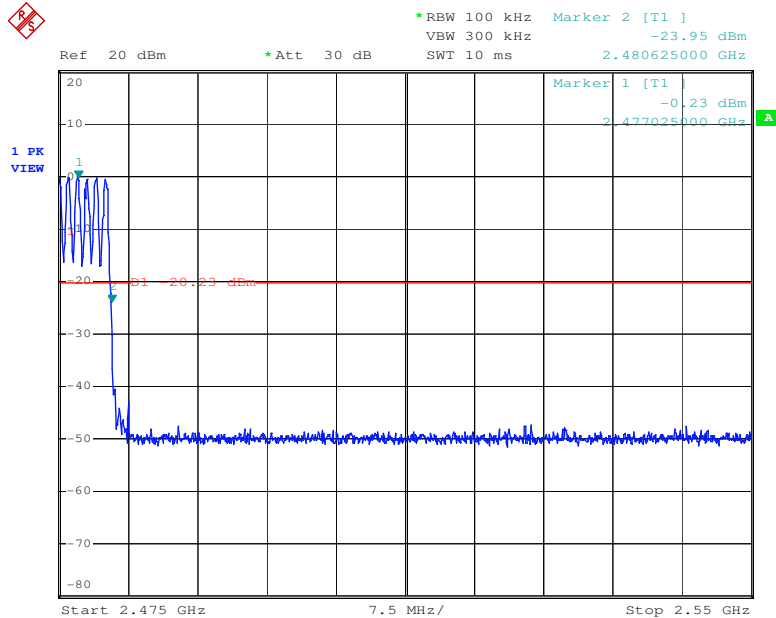
Static:



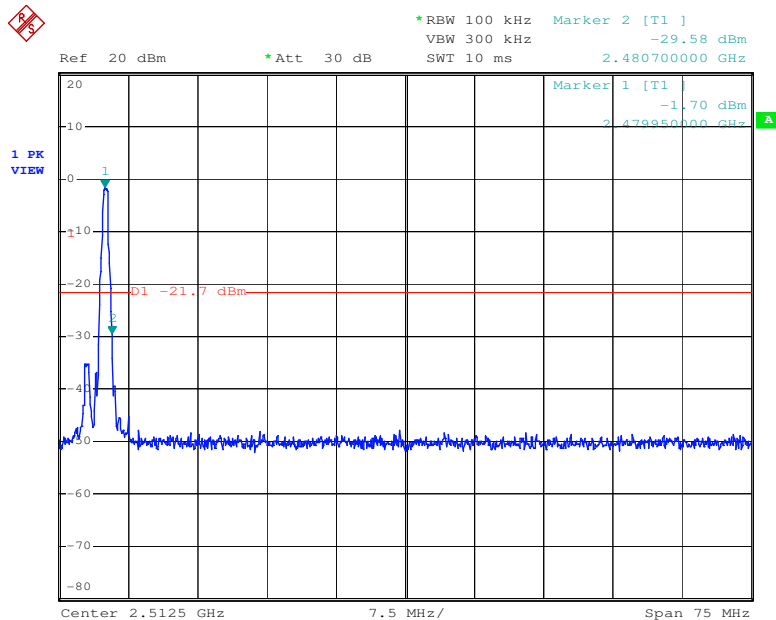


Test mode:	GFSK	Test channel:	Highest
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Hopping:



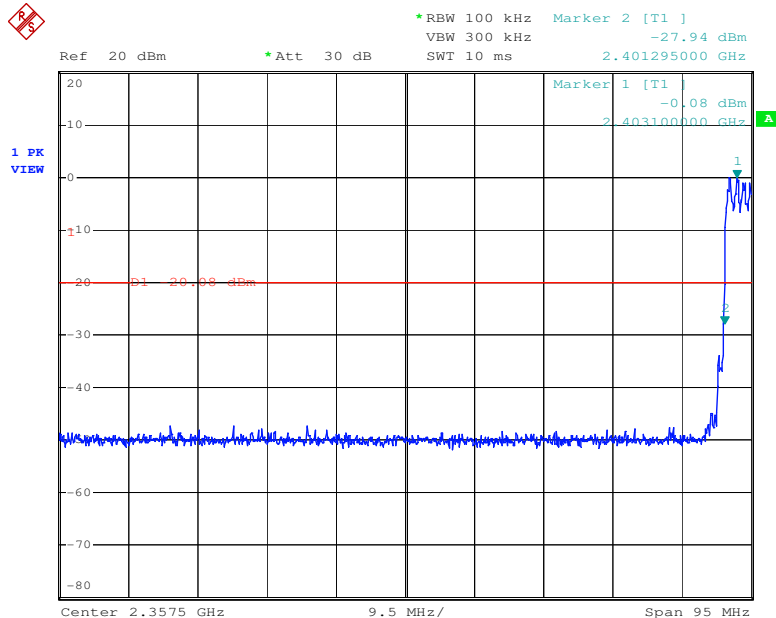
Statics:



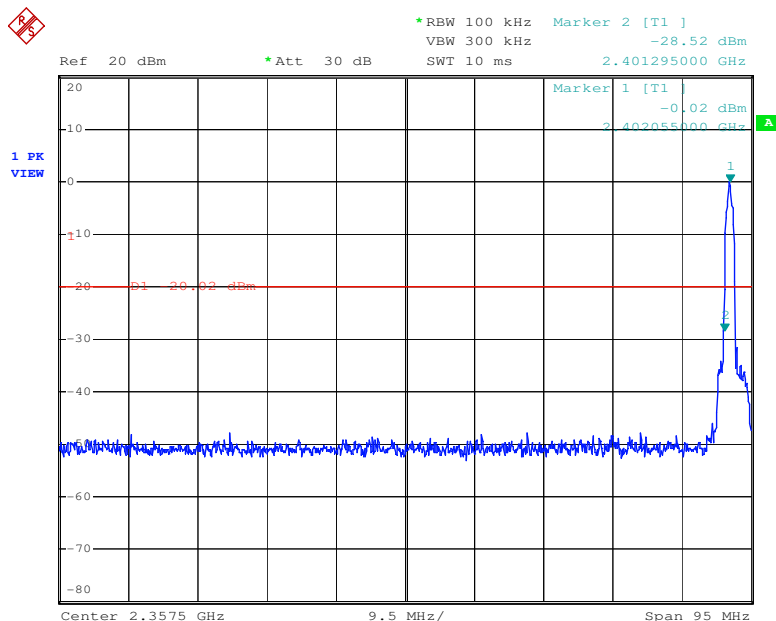


Test mode:	$\pi/4$ DQPSK	Test channel:	Lowest
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Hopping :



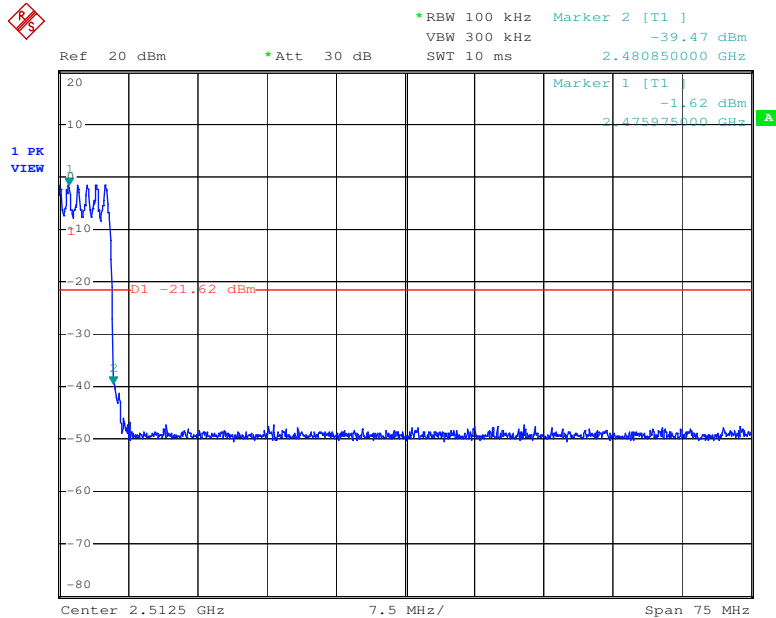
Static :



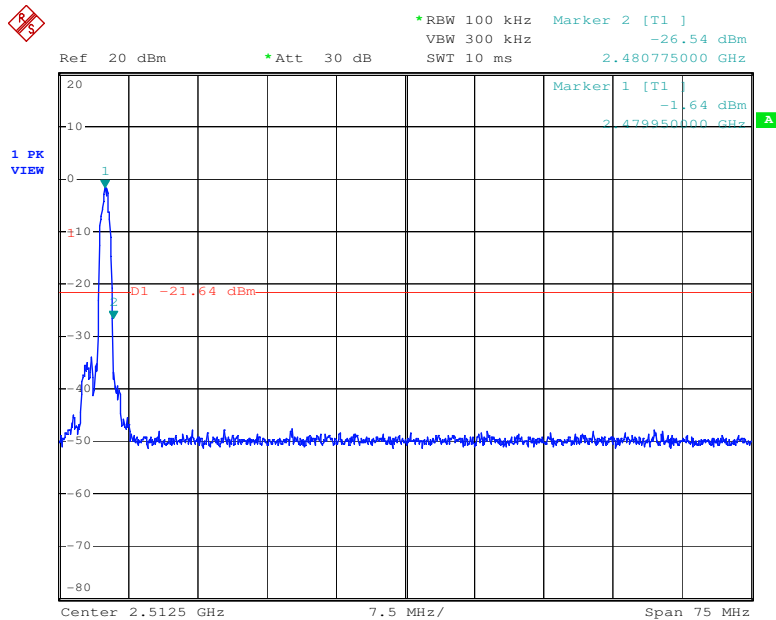


Test mode:	$\pi/4$ DQPSK	Test channel:	Highest
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Hopping :



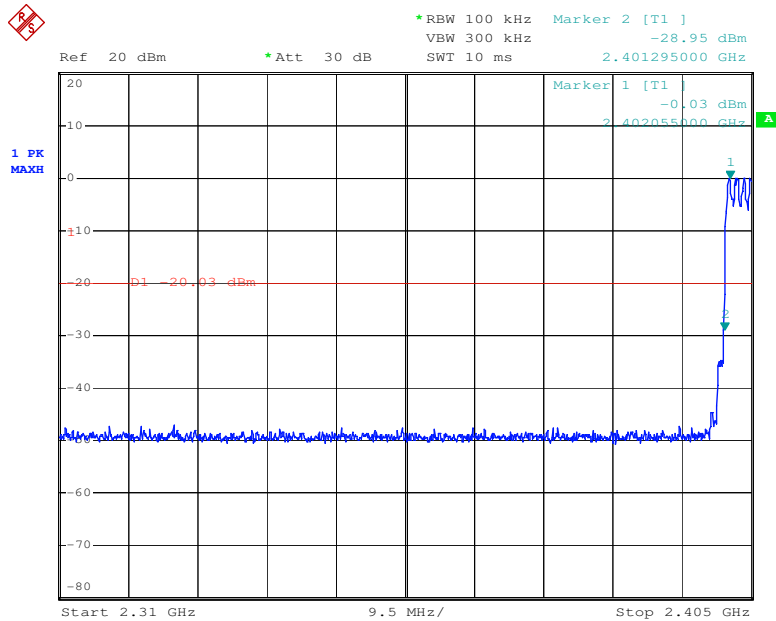
Static :



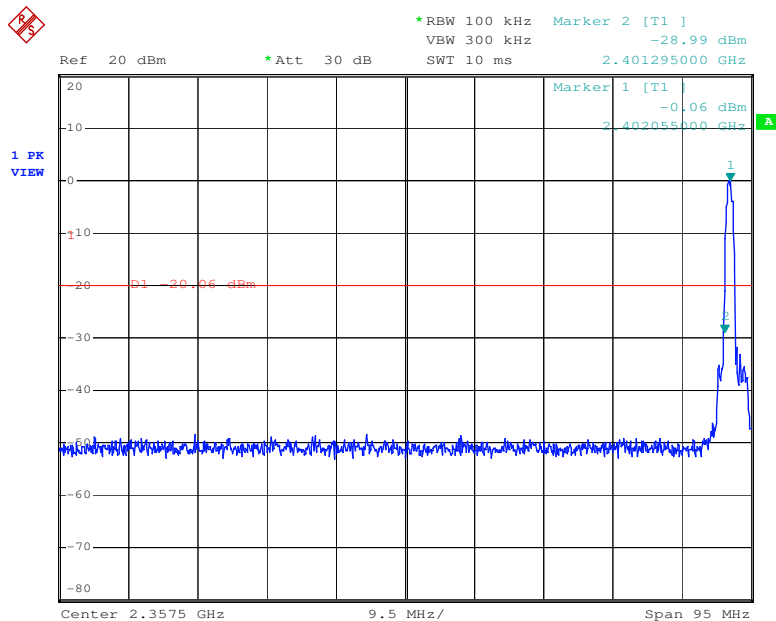


Test mode:	8DPSK	Test channel:	Lowest
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Hopping :



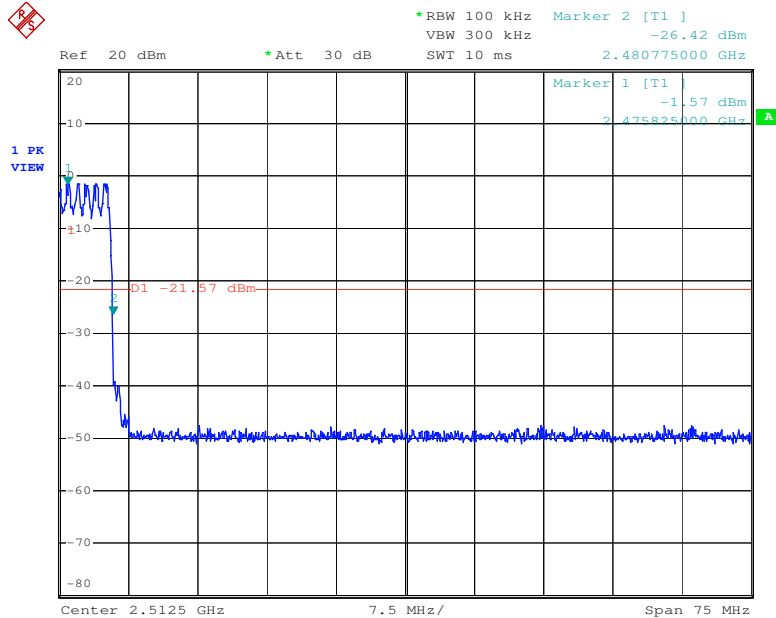
Static :



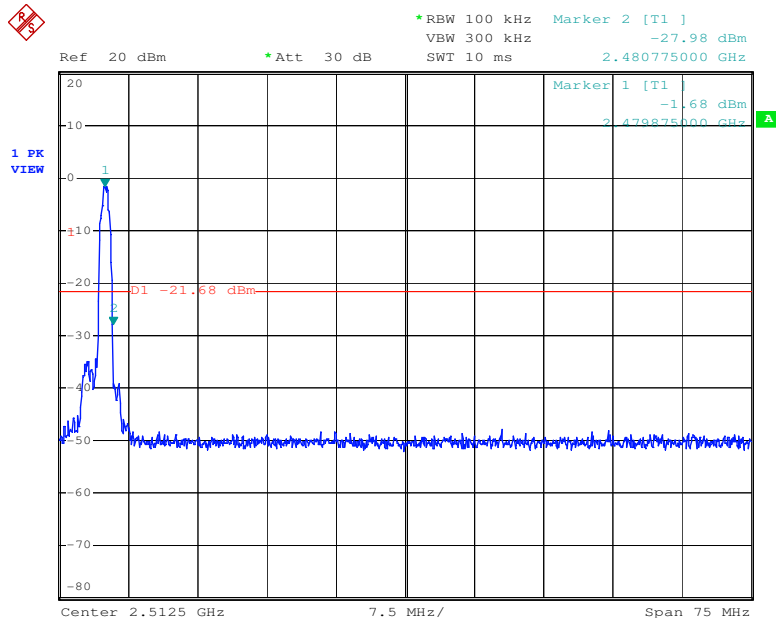


Test mode:	8DPSK	Test channel:	Highest
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Hopping :



Static :



7.11 Radiated Spurious Emissions

Test Requirement:	FCC Part 15 Section 15.209 and Section 15.205
Test Method:	ANSI C63.10:2009 Clause 6.12
Exploratory Test Mode:	Non-hopping transmitting mode with all kind of modulation and all kind of data type
Final Test Mode:	Through Pre-scan, find the DH1 of date type is the worse case of GFSK modulation type
Test site/setup:	<p>Measurement Distance: 3m (Semi-Anechoic Chamber)</p> <p>Test instrumentation resolution bandwidth 120 kHz and Quasi-Peak detector applies (30 MHz - 1000 MHz).</p> <p>For PK value: RBW = 1 MHz for $f \geq 1$ GHz VBW \geq RBW; Sweep = auto Detector function = peak Trace = max hold</p> <p>For AV value: RBW = 1 MHz for $f \geq 1$ GHz VBW = 10Hz; Sweep = auto Detector function = peak Trace = max hold</p> <p>Receive antenna scan height 1 m - 4 m. polarization Vertical / Horizontal</p>
15.209 Limit:	<p>40.0 dBμV/m between 30MHz & 88MHz</p> <p>43.5 dBμV/m between 88MHz & 216MHz</p> <p>46.0 dBμV/m between 216MHz & 960MHz</p> <p>54.0 dBμV/m above 960MHz</p>

Test Configuration:

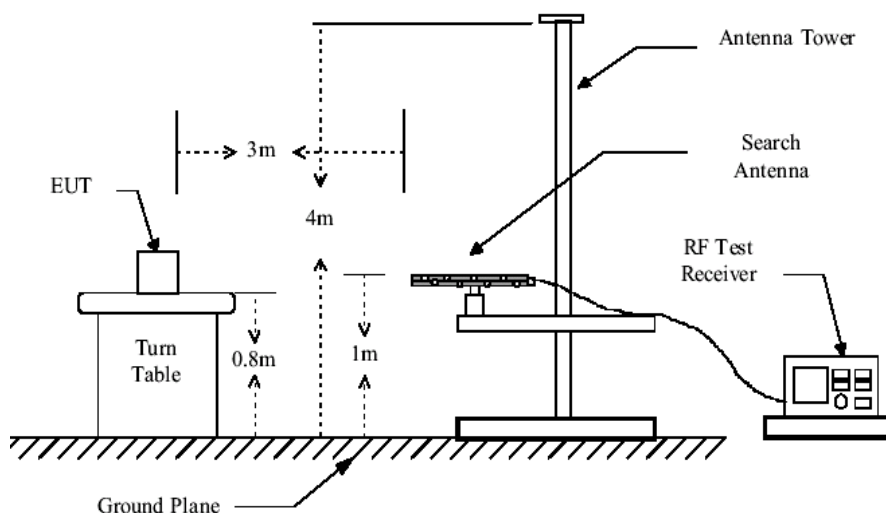


Figure 1. 30MHz to 1GHz radiated emissions test configuration

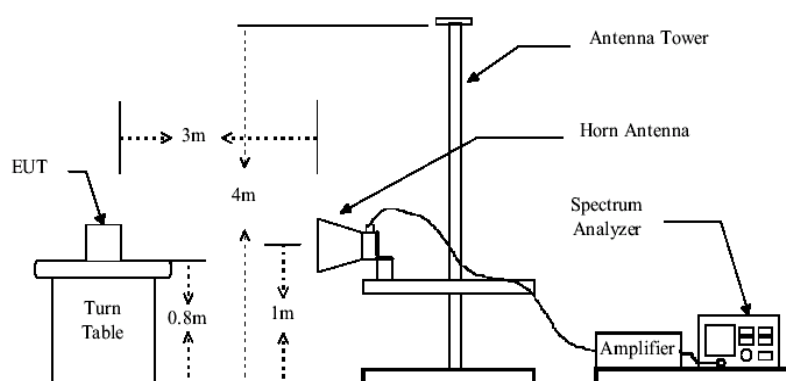


Figure 2. Above 1GHz radiated emissions test configuration

Test Procedure:

The procedure used was ANSI Standard C63.10:2009. The receiver was scanned from 30MHz to 25GHz. When an emission was found, the table was rotated to produce the maximum signal strength. An initial pre-scan was performed for in peak detection mode using the receiver. The EUT was measured for both the Horizontal and Vertical polarities and performed a pre-test three orthogonal planes. For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. The worst case emissions were reported.

Low noise amplifier was used below 1GHz, High pass Filter was used above 3GHz.

Between 1G and 3GHz, we did not use any amplifier or filter.

Pre-test was performed on GFSK and EDR mode with charging mode and only battery power mode, Compliance test was performed on worst case (GFSK mode with charging).

Test were performed for there spatial orthogonal(X, Y, Z), the worst test data (X orthogonal) was submitted.

1) For this intentional radiator operates below 25 GHz. the spectrum shall be investigated to the tenth harmonic of the highest fundamental frequency. And above the third harmonic of this intentional radiator, the disturbance is very low. So the test result only displays to 5rd harmonic.

As shown in Section, for frequencies above 1000 MHz. the above field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

The test only perform the EUT in transmitting status since the test frequencies were over 1GHz only required transmitting status.

GFSK with charging mode test data as follows:

Transmitter:

Test Antenna: Horizontal				Test Channel: Low			
Mark	Frequency (MHz)	Reading (dBUV)	Factor (dB)	Emission (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector
1	4802.26	46.87	-0.18	46.69	54	7.31	AVG
2	4807.00	62.81	-0.16	62.65	74	11.35	peak
3	7650.22	40.44	7.73	48.17	54	5.83	AVG
4	7650.50	54.17	7.73	61.90	74	12.10	peak
5	9353.45	39.33	11.34	50.67	54	3.33	AVG
6	9354.25	51.9	11.34	63.24	74	10.76	peak
7	11413.66	39.56	9.31	48.87	54	5.13	AVG
8	11416.28	48.80	9.30	58.10	74	15.90	peak



Test Antenna: Vertical					Test Channel: Low		
Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4802.26	46.52	-0.18	46.34	54	7.66	AVG
2	4807.00	62.33	-0.16	62.17	74	11.83	peak
3	7884.90	40.27	7.73	48.00	54	6.00	AVG
4	7885.50	53.01	7.73	60.74	74	13.26	peak
5	9341.58	39.18	11.30	50.48	54	3.52	AVG
6	9342.50	53.15	11.30	64.45	74	9.55	peak
7	11010.54	38.91	9.97	48.88	54	5.12	AVG
8	11011.00	52.02	9.96	61.98	74	12.02	peak

Test Antenna: Horizontal					Test Channel: Middle		
Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4877.50	67.57	0.12	67.69	74	6.31	peak
2	4881.76	49.01	0.13	49.14	54	4.86	AVG
3	7625.72	40.79	7.73	48.52	54	5.48	AVG
4	7627.00	53.97	7.73	61.70	74	12.30	peak
5	9330.75	52.75	11.25	64.00	74	10.00	peak
6	9332.01	39.39	11.25	50.64	54	3.36	AVG
7	11410.50	53.81	9.32	63.13	74	10.87	peak
8	11416.28	39.59	9.3	48.89	54	5.11	AVG

Test Antenna: Vertical					Test Channel: Middle		
Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4877.50	56.01	0.12	56.13	74	17.87	peak
2	4881.18	42.85	0.13	42.98	54	11.02	AVG
3	7896.89	40.28	7.74	48.02	54	5.98	AVG
4	7897.25	54.17	7.74	61.91	74	12.09	peak
5	9554.00	51.45	11.83	63.28	74	10.72	peak
6	9554.48	37.81	11.83	49.64	54	4.36	AVG
7	11186.79	39.08	9.68	48.76	54	5.24	AVG
8	11187.25	52.82	9.68	62.50	74	11.5	peak
Test Antenna: Horizontal					Test Channel: High		
Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4959.23	50.07	0.44	50.51	54	3.49	AVG
2	4959.75	72.19	0.45	72.64	74	1.36	peak
3	7439.00	60.19	7.42	67.61	74	6.39	peak
4	7439.52	45.10	7.42	52.52	54	1.48	AVG
5	11409.40	39.52	9.32	48.84	54	5.16	AVG
6	11410.50	53.28	9.32	62.60	74	11.4	peak

Test Antenna: Vertical					Test Channel: High		
Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4959.21	45.22	0.44	45.66	54	8.34	AVG
2	4959.75	61.57	0.45	62.02	74	11.98	peak
3	7615.25	53.52	7.74	61.26	74	12.74	peak
4	7615.79	40.68	7.74	48.42	54	5.58	AVG
5	9376.39	38.74	11.43	50.17	54	3.83	AVG
6	9377.75	52.28	11.43	63.71	74	10.29	peak
7	11139.73	39.12	9.75	48.87	54	5.13	AVG
8	11140.25	52.79	9.75	62.54	74	11.46	peak

Remark: No other radiation has been found.

Test Level = Receiver Reading + Antenna Factor + Cable Loss – Preamplifier Factor.

Remark: No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part. Hence there no other emissions have been reported.

7.12 Band edge (Radiated Emission)

Test Requirement:	Section 15.247(d) In addition, radiated emissions which fall in the restricted bands. as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c).
Test Method:	ANSI 63.10:2009 Clause 6.12
Measurement Distance:	3m (Semi-Anechoic Chamber)
Limit:	40.0 dBμV/m between 30MHz & 88MHz; 43.5 dBμV/m between 88MHz & 216MHz; 46.0 dBμV/m between 216MHz & 960MHz; 54.0 dBμV/m above 960MHz.
Detector:	For PK value: RBW = 1 MHz for $f \geq 1$ GHz VBW \geq RBW; Sweep = auto Detector function = peak Trace = max hold For AV value: RBW = 1 MHz for $f \geq 1$ GHz VBW =10Hz; Sweep = auto Detector function = peak Trace = max hold

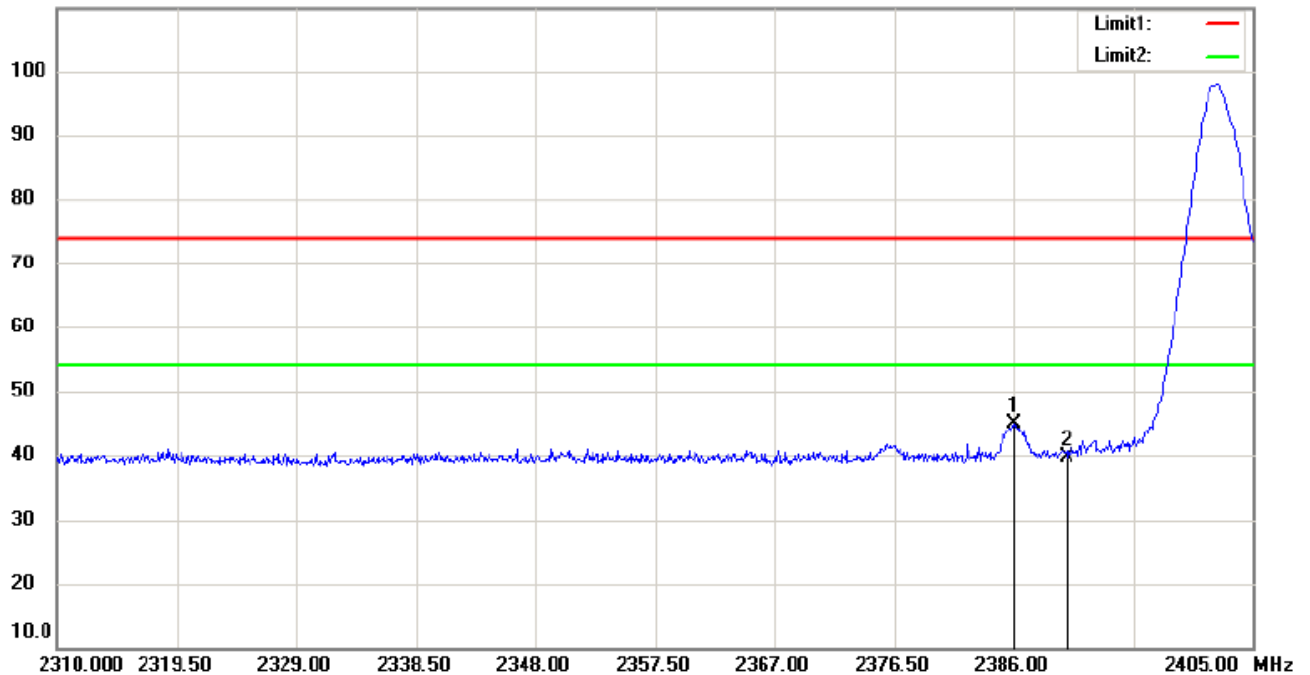
According to section,15.35(b) for frequencies above 1000 MHz. the above field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

Pre-test were performed for there spatial orthogonal(X, Y, Z), the worst test data (X orthogonal) was submitted.

Test Result: The EUT does meet the FCC requirements.

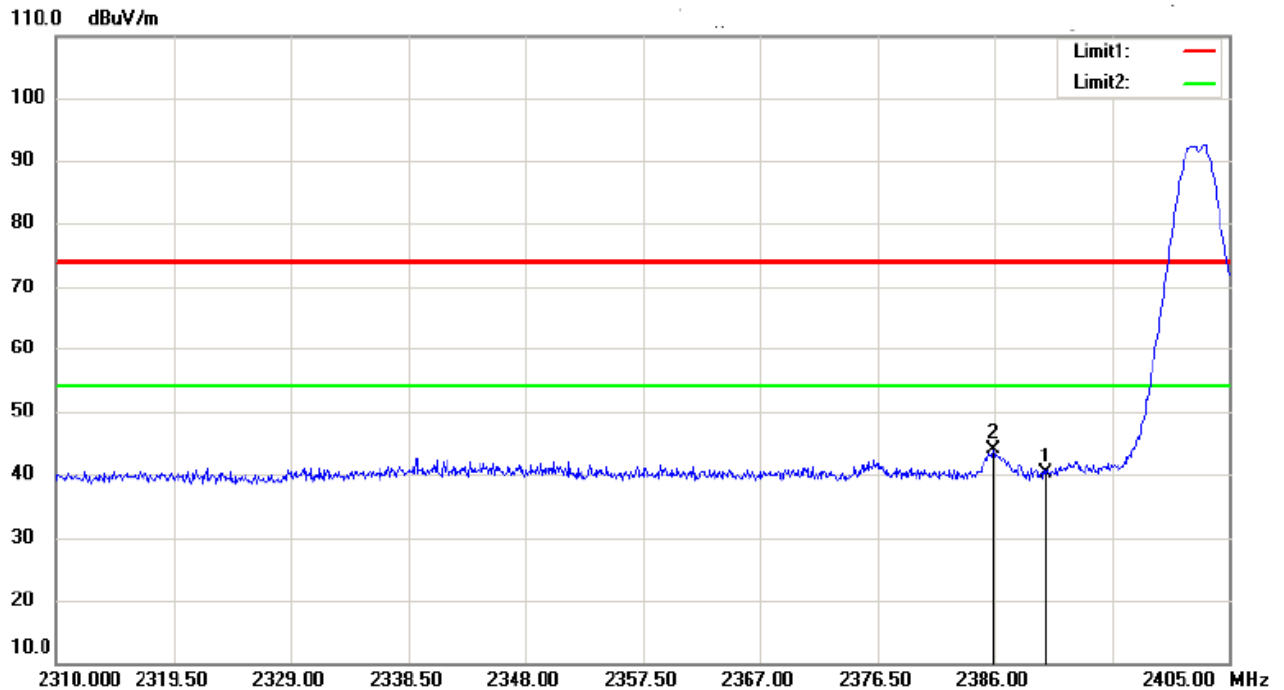
Measurement Result:**CH Low 2402MHz Radiated Bandedge****Modulation: GFSK(DH5)****Horizontal:**

110.0 dBuV/m



Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.35	47.68	-6.55	41.13	54	12.87	peak
2	2385.62	51.57	-6.55	45.02	54	8.98	peak

Vertical:



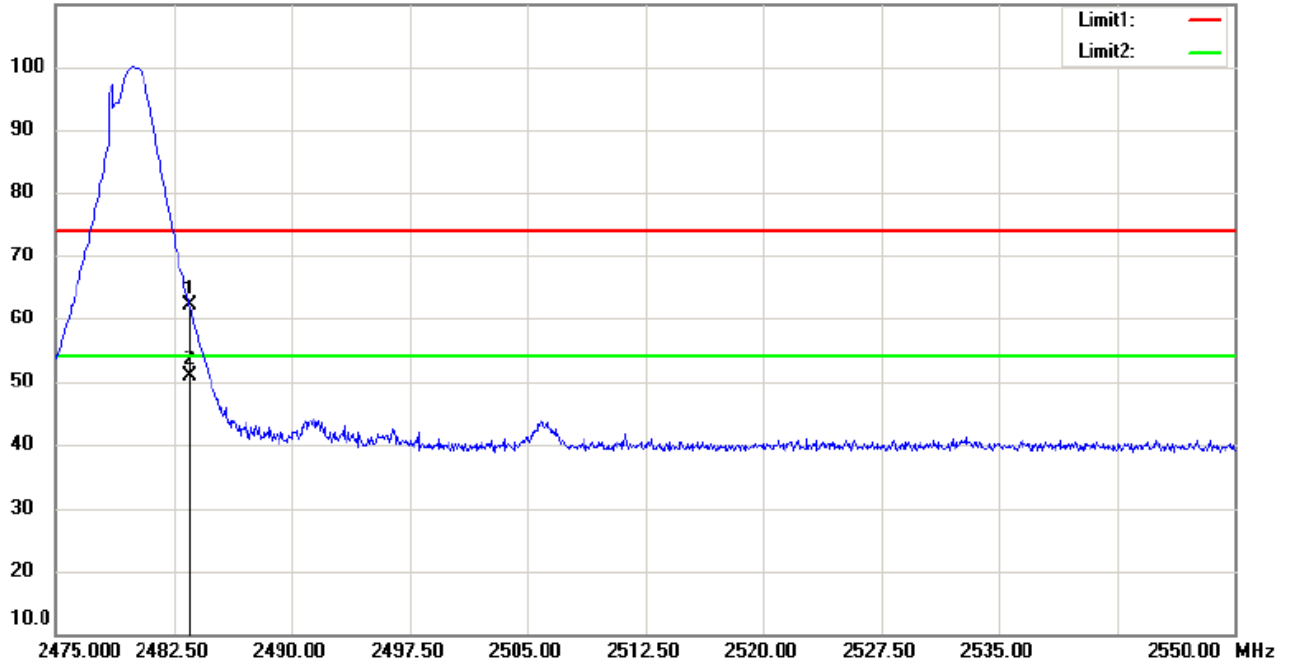
Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.08	46.68	-6.55	40.13	54	13.87	peak
2	2385.91	50.34	-6.55	43.79	54	10.21	peak

CH Low 2480MHz Radiated Bandedge

Modulation: GFSK(DH5)

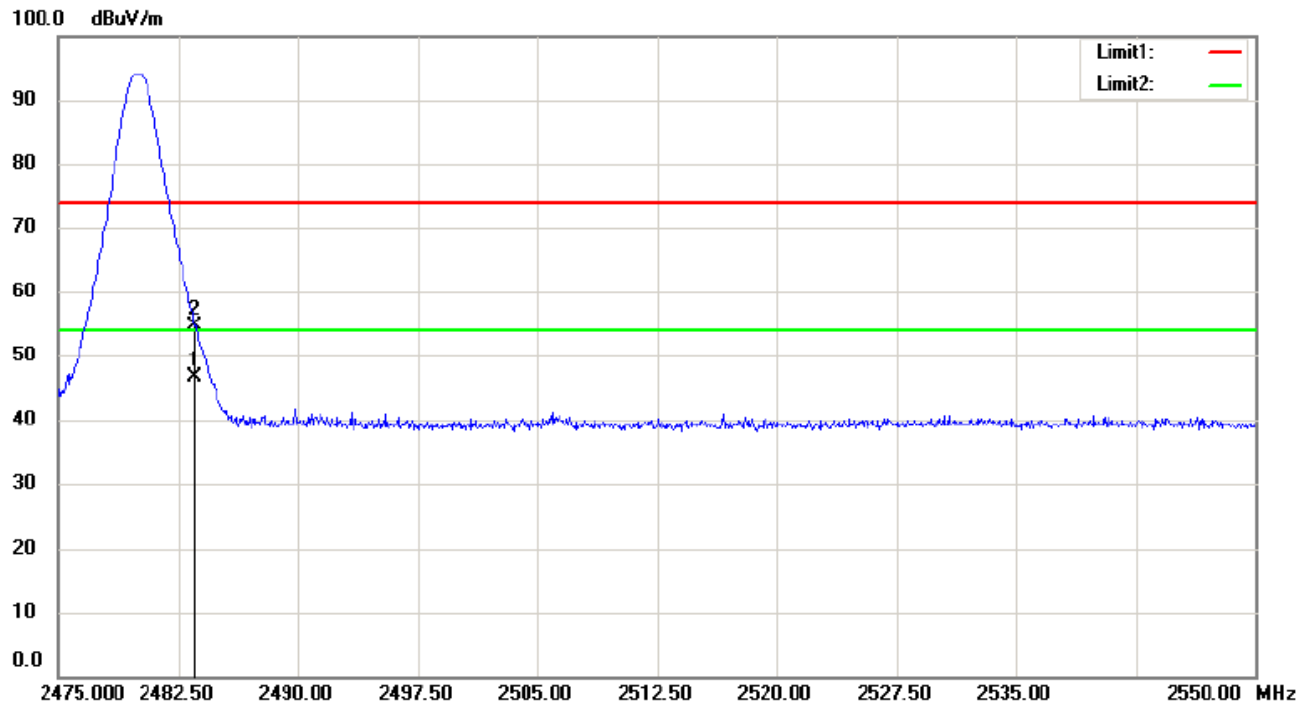
Horizontal:

110.0 dBuV/m



Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.50	68.42	-6.41	62.01	74	11.99	peak
2	2483.50	57.37	-6.41	50.96	54	3.04	AVG

Vertical:



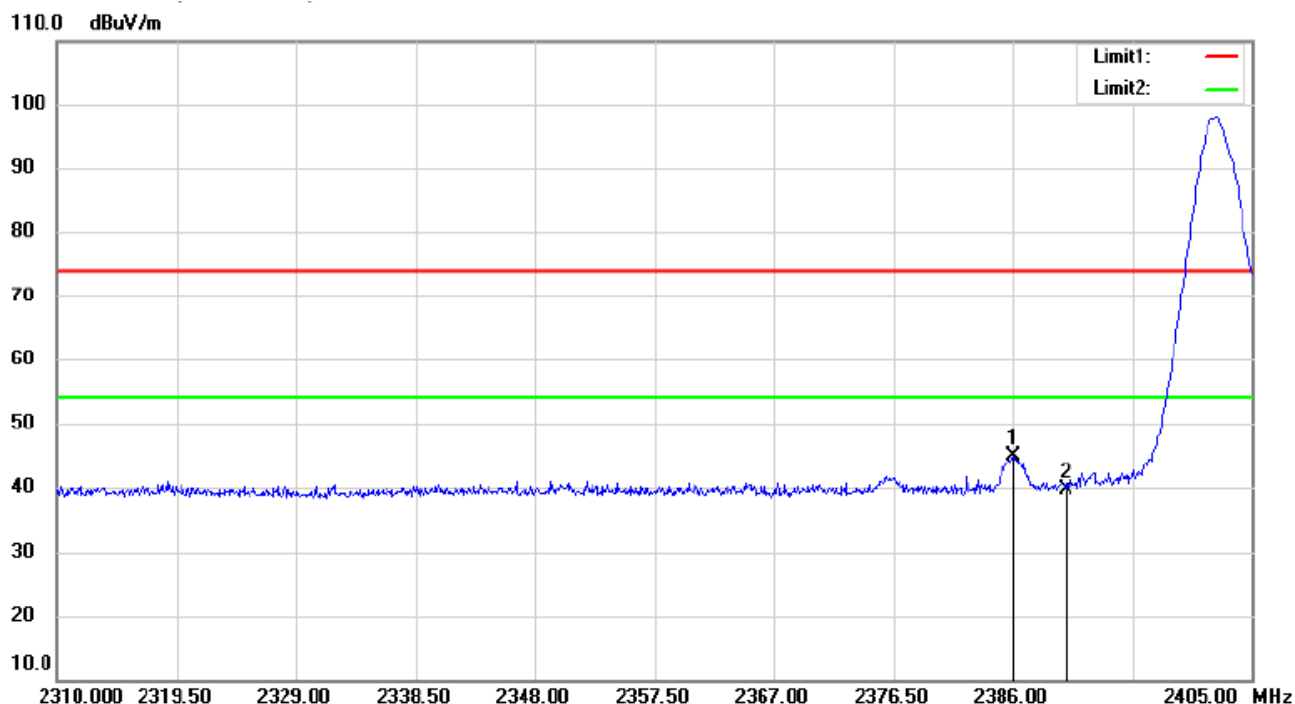
Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.50	60.93	-6.41	54.52	74	19.48	peak
2	2483.50	53.01	-6.41	46.60	54	7.40	AVG



CH Low 2402MHz Radiated Bandedge

Modulation: $\pi/4$ DQPSK (DH5)

Horizontal:

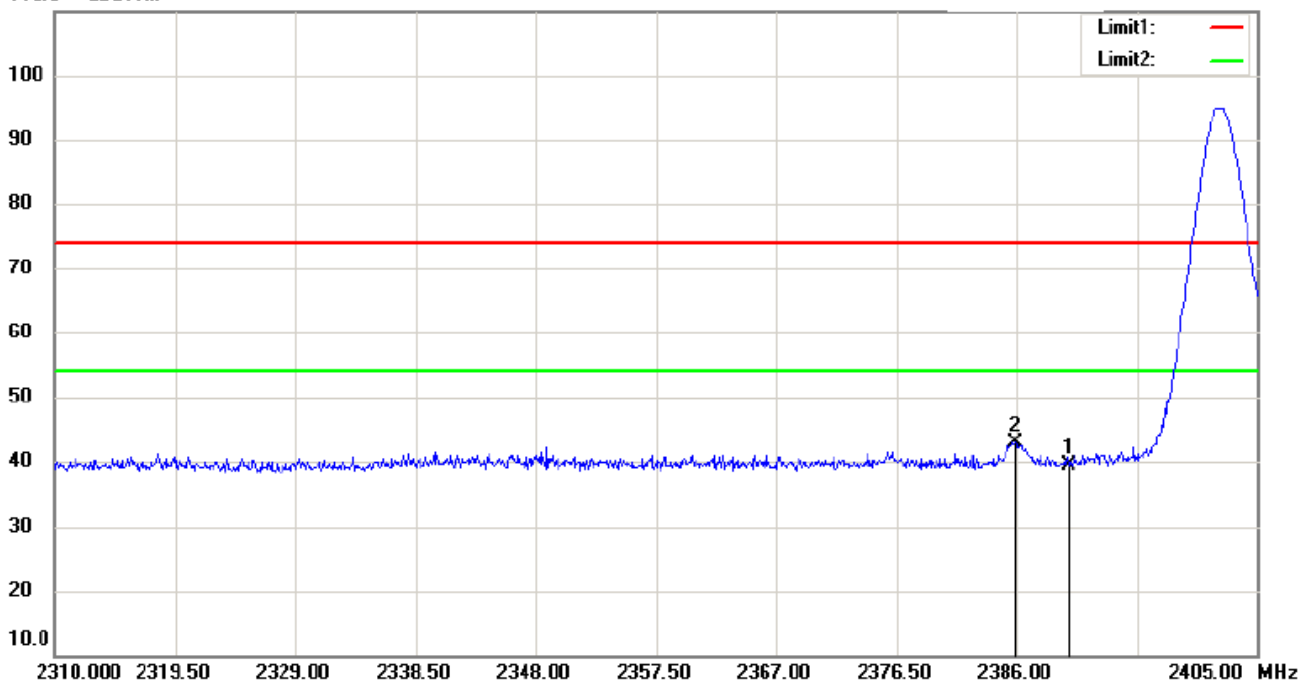


Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2386.00	51.47	-6.55	44.92	54	9.08	peak
2	2390.28	46.09	-6.55	39.54	54	14.46	peak



Vertical:

110.0 dBuV/m



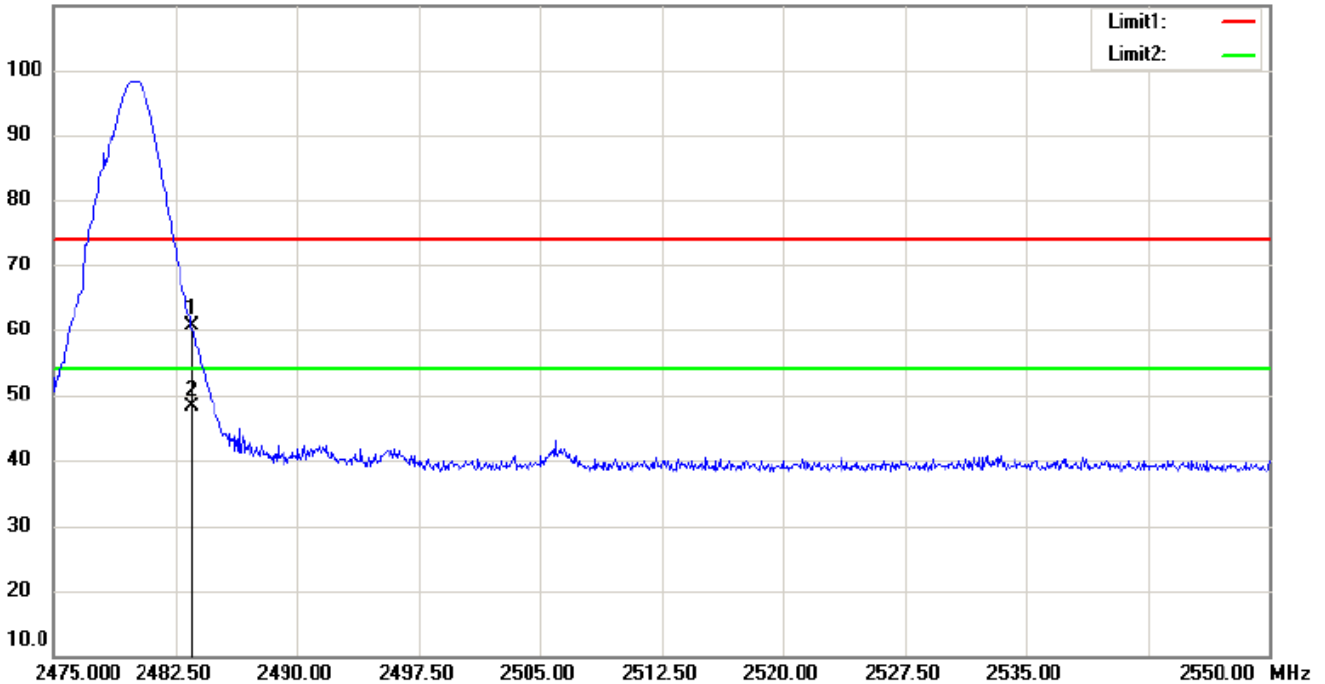
Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.09	45.90	-6.55	39.35	54	14.65	peak
2	2385.91	49.41	-6.55	42.86	54	11.14	peak

CH Low 2480MHz Radiated Bandedge

Modulation: $\pi/4$ DQPSK (DH5)

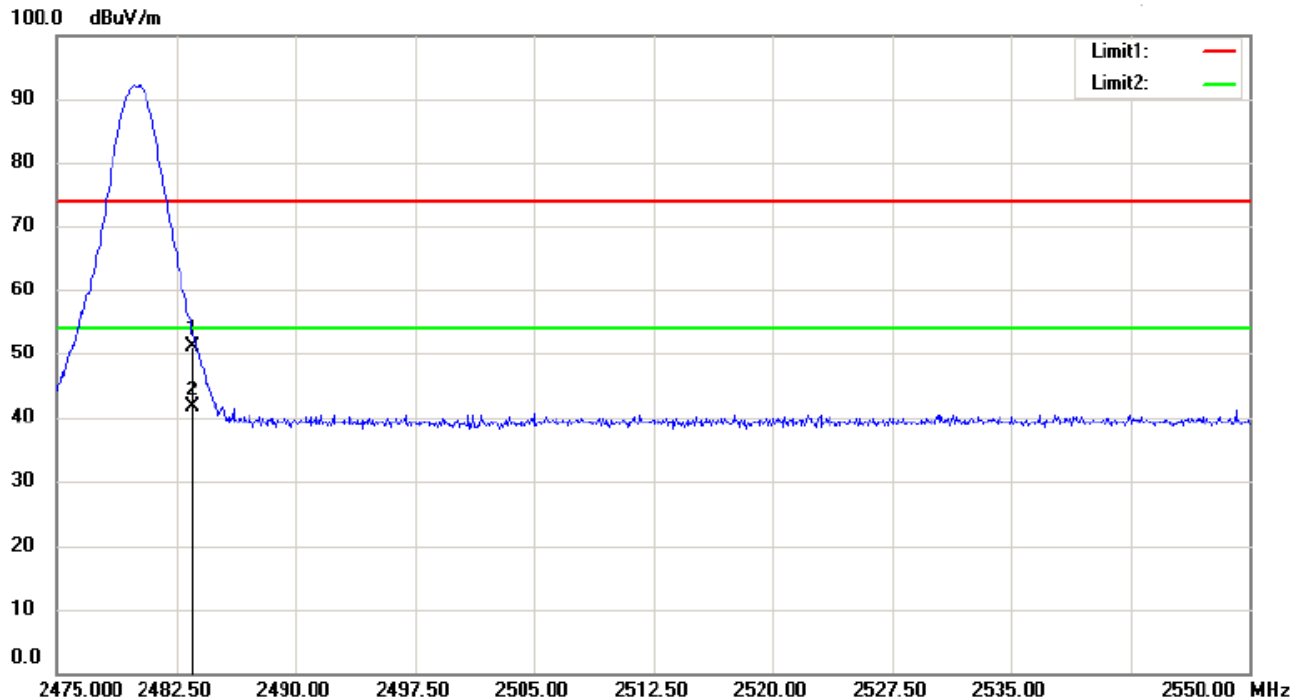
Horizontal:

110.0 dBuV/m



Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.50	67.00	-6.41	60.59	74	13.41	peak
2	2483.50	54.58	-6.41	48.17	54	5.83	AVG

Vertical:



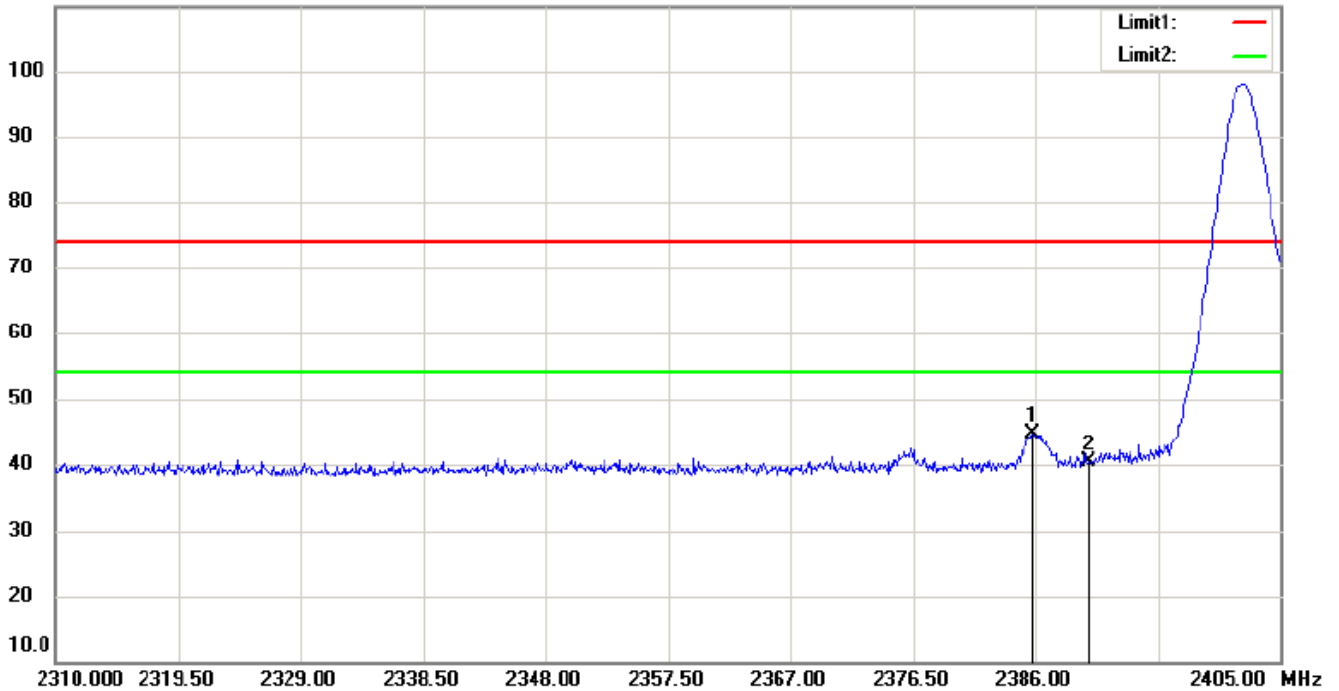
Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.50	57.49	-6.41	51.08	74	22.92	peak
2	2483.50	48.01	-6.41	41.60	54	12.40	AVG

CH Low 2402MHz Radiated Bandedge

Modulation: 8KPSK (DH5)

Horizontal:

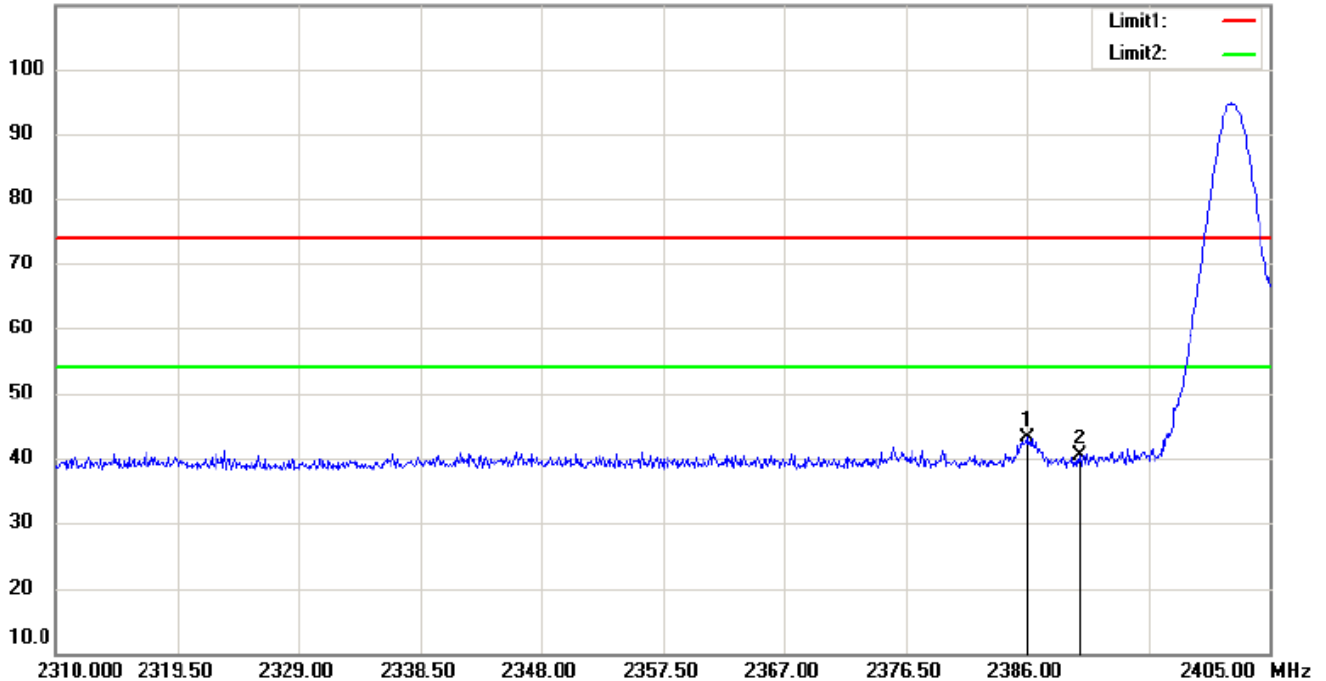
110.0 dBuV/m



Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2385.81	51.17	-6.55	44.62	54	9.38	peak
2	2390.90	46.99	-6.55	40.44	54	13.56	peak

Vertical:

110.0 dBuV/m

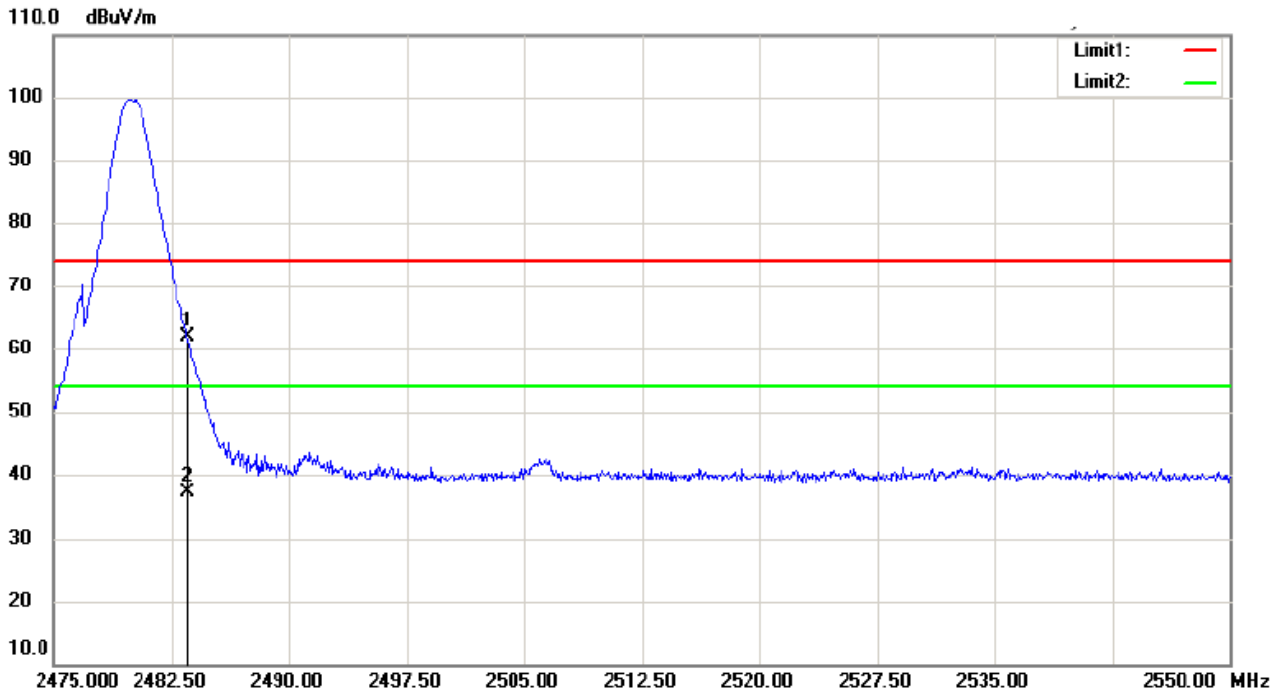


Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2386.00	49.65	-6.55	43.10	54	10.90	peak
2	2390.09	47.03	-6.55	40.48	54	13.52	peak

CH Low 2480MHz Radiated Bandedge

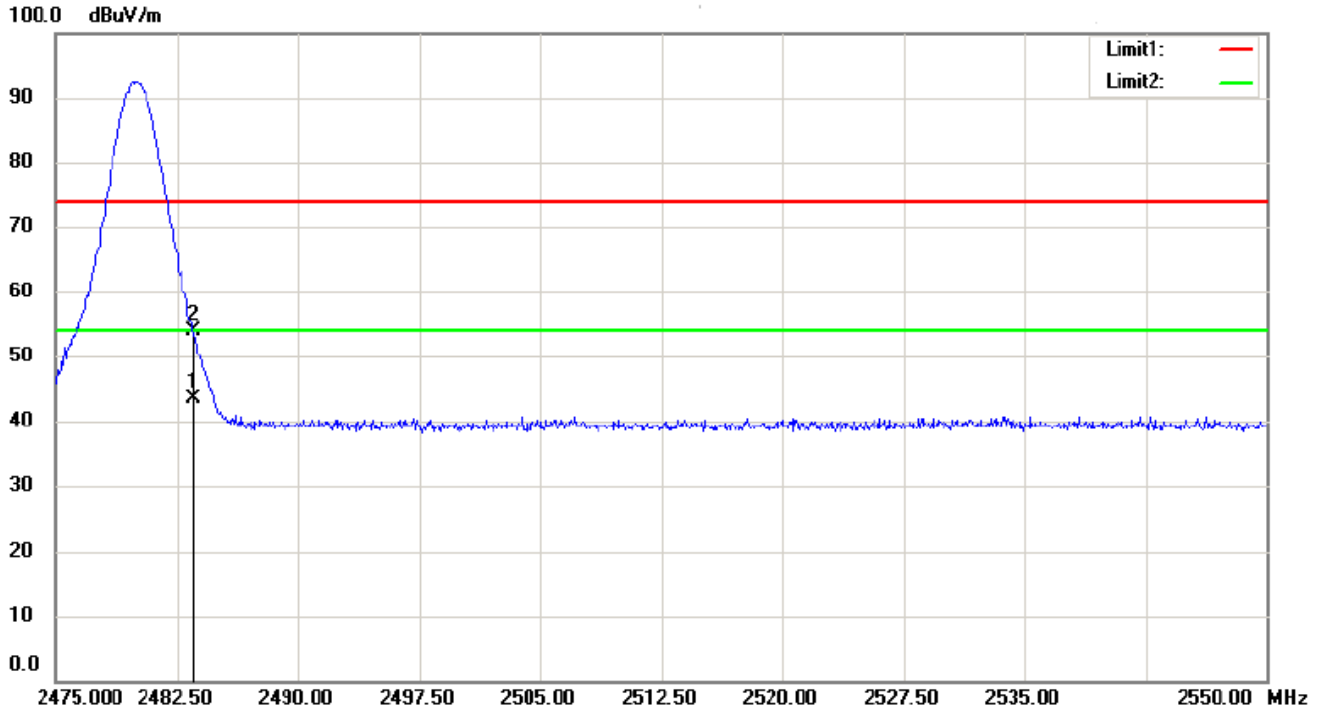
Modulation: 8KPSK (DH5)

Horizontal:



Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.50	68.40	-6.41	61.99	74	12.01	peak
2	2483.50	43.61	-6.41	37.20	54	16.80	AVG

Vertical:



Mark	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Emission (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2483.50	49.90	-6.41	43.49	54	10.51	peak
2	2483.50	60.33	-6.41	53.92	74	20.08	peak

Remark: No any other emission which fall in restricted bands can be detected and be reported.

Test Level = Receiver Reading + Antenna Factor + Cable Loss- Preamplifier Factor

All frequencies within the “Restricted bands” have been evaluated to compliance. Section 15.205 Restricted bands of operation.

Except as shown in paragraph of this section. only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 -	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.52525	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	156.7 - 156.9	3260 - 3267	23.6 - 24.0
12.29 - 12.293	162.0125 - 167.17	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	167.72 - 173.2	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	240 - 285	3600 - 4400	
13.36 - 13.41	322 - 335.4		

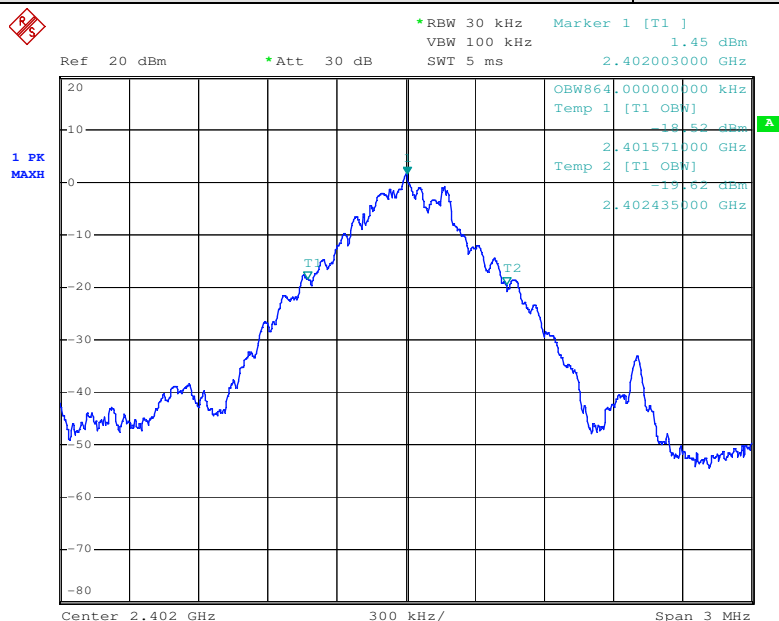
7.13 Occupied Bandwidth Test

Test Requirement:	RSS-Gen Issue 3 Clause 4.6.1
Standard Applicable	According to the section RSS-Gen Issue 3 Clause 4.6.1
EUT Setup	The occupied bandwidth per RSS-Gen Issue 3 Clause 4.6.1 was measured using the Spectrum Analyzer with the resolutions set at 100kHz, the video bandwidth set at 300kHz.

Measurement Result:

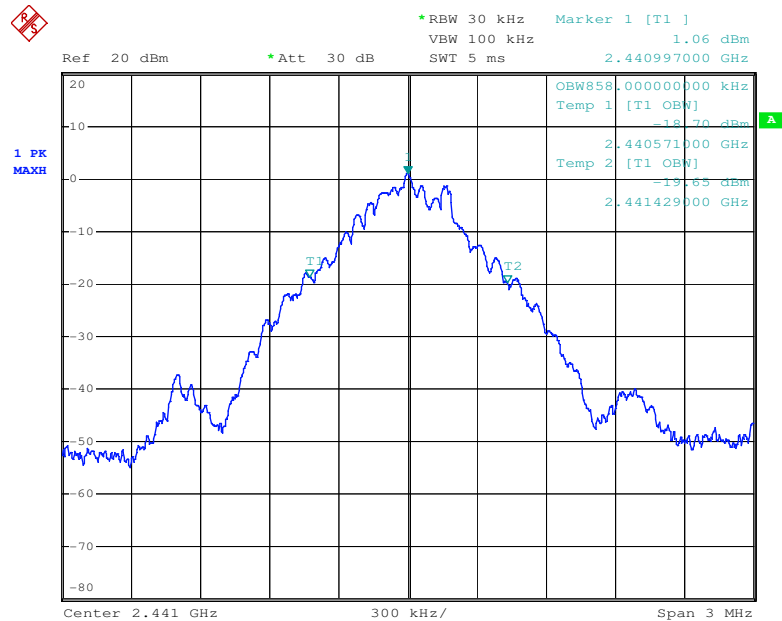
Test Mode	Channel	Frequency (MHz)	Bandwidth (MHz)
GFSK	LOW	2402	0.864
	MID	2441	0.858
	HIGH	2480	0.852
π /4DQPSK	LOW	2402	1.182
	MID	2441	1.176
	HIGH	2480	1.176
8DPSK	LOW	2402	1.173
	MID	2441	1.167
	HIGH	2480	1.167

Test mode:	GFSK	Test channel:	Low
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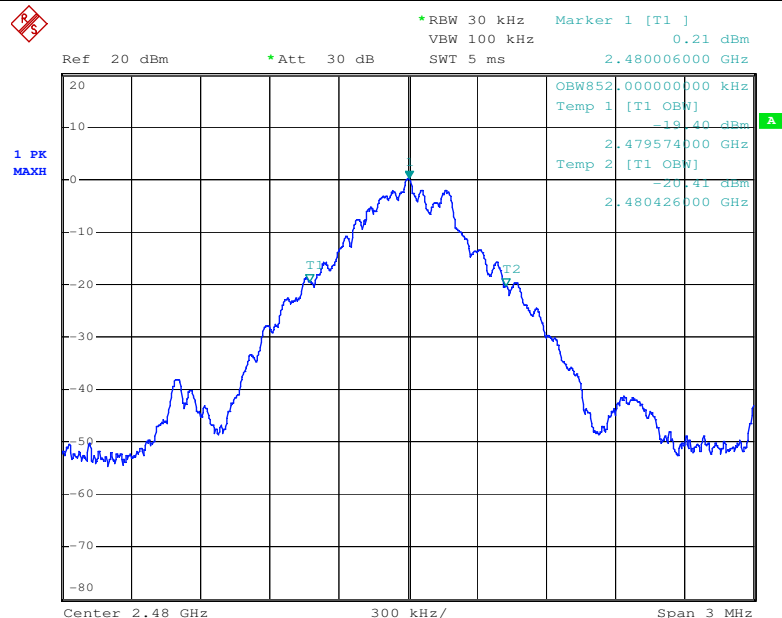




Test mode:	GFSK	Test channel:	Middle
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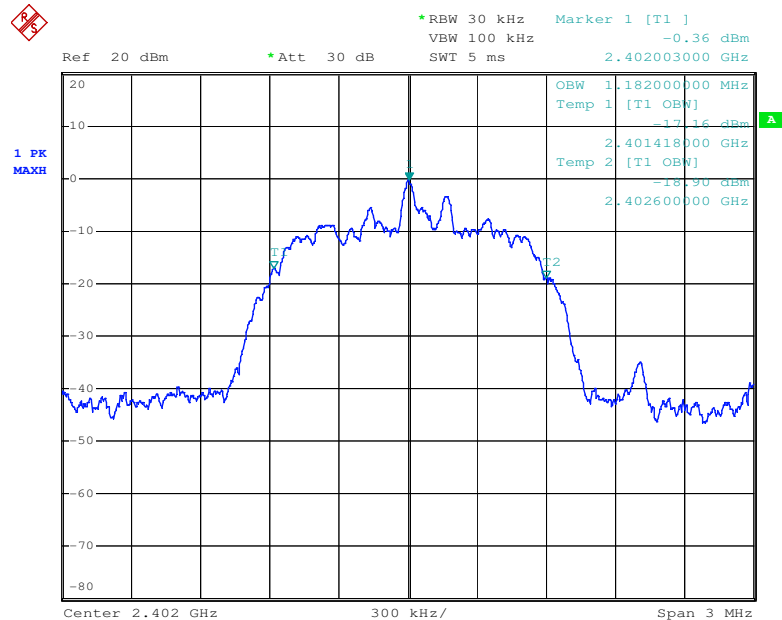


Test mode:	GFSK	Test channel:	High
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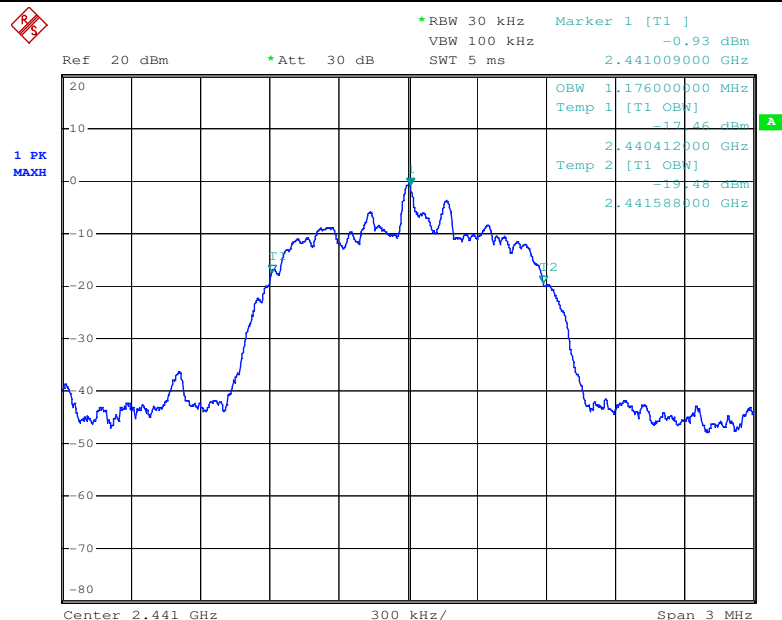




Test mode:	π /4DQPSK	Test channel:	Low
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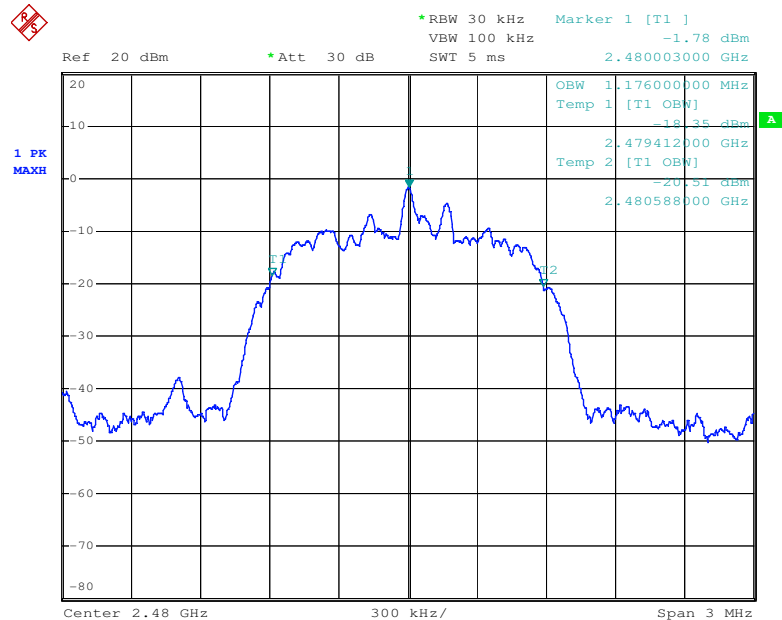


Test mode:	π /4DQPSK	Test channel:	Middle
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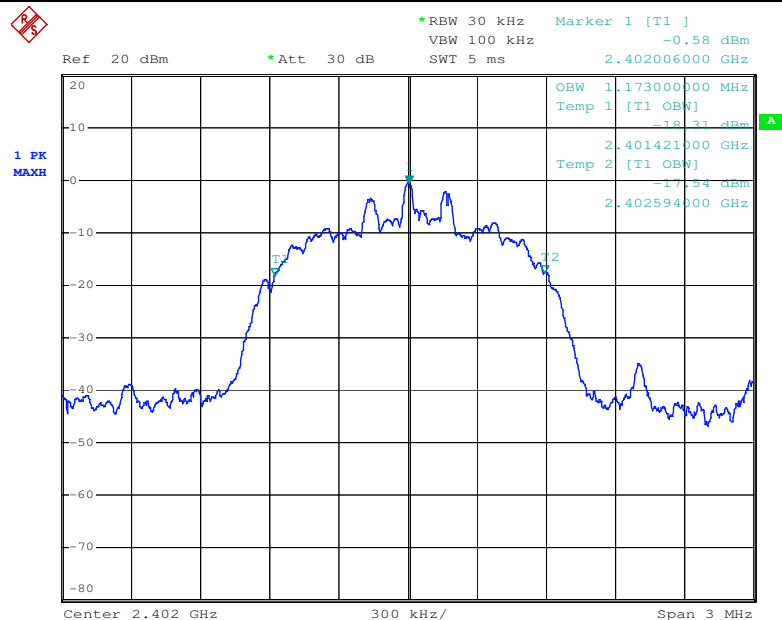




Test mode:	π /4DQPSK	Test channel:	High
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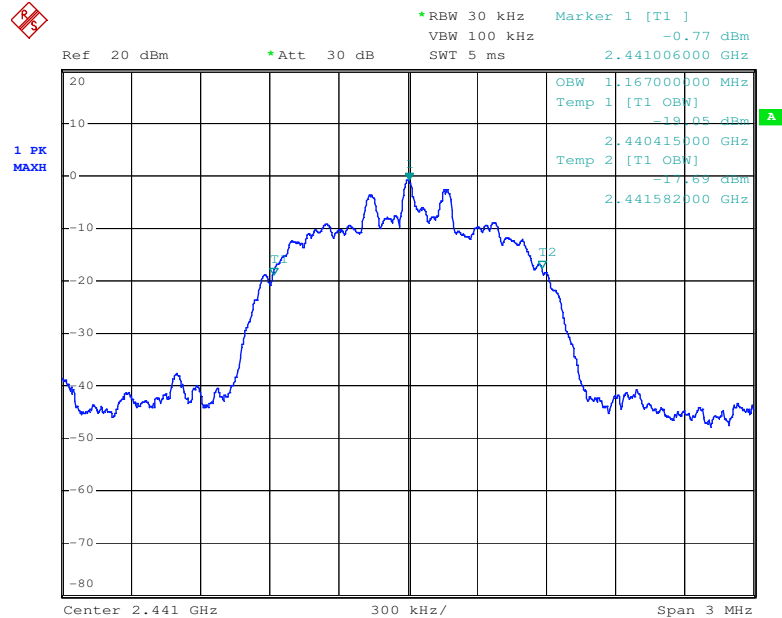


Test mode:	8DPSK	Test channel:	Low
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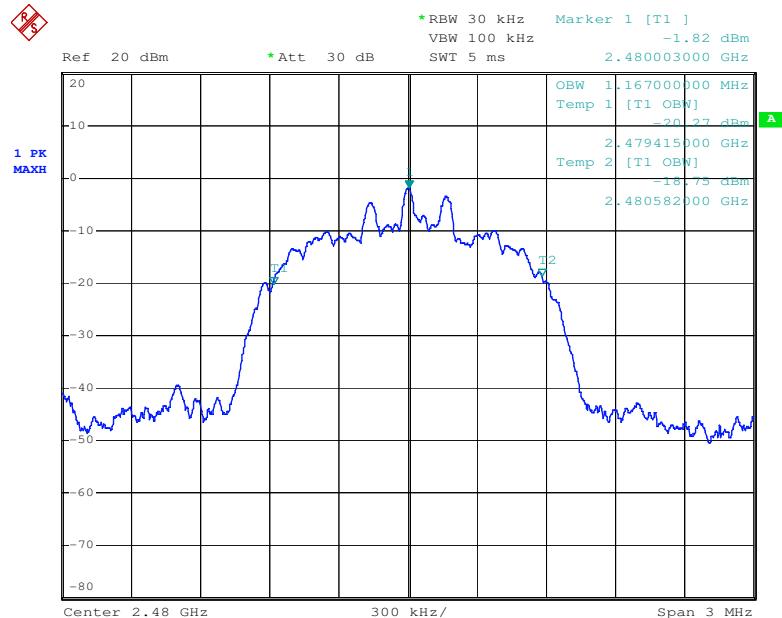




Test mode:	8DPSK	Test channel:	Middle
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Test mode:	8DPSK	Test channel:	High
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8 Test Setup Photographs

Refer to the < P910B-- Test Setup photos>.

9 EUT Constructional Details

Refer to the < P910B--External Photos > & < P910B--Internal Photos >.

End of Report