Shenzhen General Testing & Inspection Technology Co.,Ltd.

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TEST REPORT

Report No. ·····:	**GTI20181564F-1**
FCC ID·····:	**2AC88-ELTP18A04**
IC ·····:	**24230-ELTP18A04**
Applicant·····:	HONGKONG UCLOUDLINK NETWORK TECHNOLOGY LIMITED
Address·····:	Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung Sha Wan Road, Kowloon, Hong Kong, China
Manufacturer·····:	HONGKONG UCLOUDLINK NETWORK TECHNOLOGY LIMITED
Address·····:	Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung Sha Wan Road, Kowloon, Hong Kong, China
Product Name·····:	**Smart Phone**
Trade Mark·····:	GlocalMe
Model/Type reference·····:	ELTP18A04
Listed Model(s) ·····:	N/A
Standard·····:	**FCC CFR Title 47 Part 15 Subpart C Section 15.247** **RSS 247 Issue 2**
Date of receipt of test sample…:	2018-07-25
Date of testing……..:	2018-07-26 to 2018-08-08
Date of issue……....:	2018-08-09
Result……:	**PASS**

Compiled by: (Printed name+signature)	Terry Su	Terry.Su
Supervised by: (Printed name+signature)	Cary Luo	cary luo
Approved by: (Printed name+signature)	Walter Chen	walter chen

Testing Laboratory Name.....	**Shenzhen General Testing & Inspection Technology Co.,Ltd.**
Address.....	1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

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1. TEST SUMMARY

1.1. Test Standards

The tests were performed according to following standards:

FCC Rules Part 15.247: Operation within the bands of 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz.
RSS 247 Issue 2: Standard Specifications for Frequency Hopping Systems (FHSs) and Digital Transmission Systems (DTSs) Operating in the Bands 902-928MHz, 2400-2483.5MHz and 5725-5850MHz.
ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices.

1.2. Report version

Revised No.	Date of issue	Description
01	2018-08-09	Original

1.3. Test Description

FCC Part 15 Subpart C(15.247)/ RSS 247 Issue 5				
Test Item	Standard Section		Result	Test Engineer
	FCC	IC		
Antenna Requirement	15.203	/	Pass	Terry Su
Conducted Emission	15.207	RSS-GEN 7.2.2	Pass	Terry Su
Restricted Bands	15.205	RSS-Gen 7.2.3	Pass	Terry Su
Hopping Channel Separation	15.247(a)(1)	RSS 247 5.1 (2)	Pass	Terry Su
Dwell Time	15.247(a)(1)	RSS 247 5.1 (4)	Pass	Terry Su
Peak Output Power	15.247(b)(1)	RSS 247 5.4 (2)	Pass	Terry Su
Number of Hopping Frequency	15.247(b)(1)	RSS 247 5.1 (4)	Pass	Terry Su
Band Edge Emissions	15.247(d)	RSS 247 5.5	Pass	Terry Su
Radiated Spurious Emission	15.247(c)&15.209	RSS 247 5.5	Pass	Terry Su
99% Occupied Bandwidth & 20dB Bandwidth	15.247(a)	RSS 247 5.1 (1)	Pass	Terry Su

Note: The measurement uncertainty is not included in the test result.

1.4. Test Facility

Address of the report laboratory

Shenzhen General Testing & Inspection Technology Co., Ltd.

Add: 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Laboratory accreditation

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

CNAS-Lab Code: L5365
Shenzhen General Testing & Inspection Technology Co.,Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA-Lab Cert. No.: 4340.01
Shenzhen General Testing & Inspection Technology Co.,Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

IC Registration No.: 9783A

The 3m alternate test site of Shenzhen General Testing & Inspection Technology Co.,Ltd. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 9783A on Jan, 2016.

FCC-Registration No.: 951311

Shenzhen General Testing & Inspection Technology Co.,Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 951311, Aug 26, 2017

1.5. Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01" Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM);Uncertainties in the measurement of mobile radio equipment characteristics; Part 2 " and is documented in the Shenzhen General Testing & Inspection Technology Co., Ltd. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Below is the best measurement capability for Shenzhen General Testing & Inspection Technology Co., Ltd.

Test Items	Measurement Uncertainty	Notes
Transmitter power conducted	0.42 dB	(1)
Transmitter power Radiated	2.14 dB	(1)
Conducted spurious emissions 9kHz~40GHz	1.60 dB	(1)
Radiated spurious emissions 9kHz~40GHz	2.20 dB	(1)
Conducted Emissions 9kHz~30MHz	3.20 dB	(1)
Radiated Emissions 30~1000MHz	4.70 dB	(1)
Radiated Emissions 1~18GHz	5.00 dB	(1)
Radiated Emissions 18~40GHz	5.54 dB	(1)
Occupied Bandwidth	---------	(1)

Note (1): This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

1.6. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15~35°C
Relative Humidity:	30~60 %
Air Pressure:	950~1050mba

2. GENERAL INFORMATION

2.1. Client Information

Applicant:	HONGKONG UCLOUDLINK NETWORK TECHNOLOGY LIMITED
Address:	Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung Sha Wan Road, Kowloon, Hong Kong, China
Manufacturer:	HONGKONG UCLOUDLINK NETWORK TECHNOLOGY LIMITED
Address:	Suite 603, 6/F, Laws Commercial Plaza, 788 Cheung Sha Wan Road, Kowloon, Hong Kong, China
Factory:	Shenzhen uCloudlink Network Technology Co., Ltd.
Address:	3rd Floor, A part of Building 1, Shenzhen Software Industry Base, Nanshan District Xuefu Road, 518057 Shenzhen City, Guangdong, China

2.2. General Description of EUT

Product Name:	Smart Phone
Model/Type reference:	ELTP18A04
Marketing Name:	GlocalMe
Listed Model(s):	/
Power supply:	3.85Vdc 3400mAh from Li-ion Battery
Adapter 1:	Model:HJ-0502000W2-US Input:100-240V 50/60Hz 0.3A Output:5V/2A
Adapter 2:	Model:PS10J050K2000UU Input:100-240V 50/60Hz 0.35A Output:5V/2A
Hardware version:	P3_MB_PCB_VA
Software version:	P3S18_TSV1.0.000.001.180720
Bluetooth 4.2+EDR	
Modulation:	GFSK, π/4-DQPSK, 8-DPSK
Operation frequency:	2402MHz~2480MHz
Max Peak Output Power:	6.16dBm(π/4-DQPSK)
Channel number:	79
Channel separation:	1MHz
Antenna type:	PIFA Antenna
Antenna gain:	1.44dBi

2.3. Operation state

Operation Frequency List: The EUT has been tested under typical operating condition. The Applicant provides communication tools software to control the EUT for staying in continuous transmitting and receiving mode for testing. BT EDR, 79 channels are provided to the EUT. Channels 00/39/78 were selected for testing.

Operation Frequency List:

Channel	Frequency (MHz)
00	**2402**
01	2403
⋮	⋮
38	2440
39	**2441**
40	2442
⋮	⋮
77	2479
78	**2480**

Note: The display in grey were the channel selected for testing.

Test mode

For RF test items:
The engineering test program was provided and enabled to make EUT continuous transmit
For AC power line conducted emissions:
The EUT was set to connect with the Bluetooth instrument under large package sizes transmission.
For Radiated spurious emissions test item:
The engineering test program was provided and enabled to make EUT continuous transmit. The EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data recorded in the report.

2.4. Measurement Instruments List

Tonscend JS0806-2 Test system						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated until
1	Spectrum Analyzer	Rohde & Schwarz	FSU26	100105	Jan. 07, 2017	Jan. 04 2019
2	Spectrum Analyzer	Rohde & Schwarz	FUV40-N	101331	Jan. 07, 2017	Jan. 04 2019
3	MXG Vector Signal Generator	Agilent	N5182A	MY47420864	Jan. 07, 2017	Jan. 04 2019
4	Signal Generator	Agilent	E8257D	MY46521908	Jan. 07, 2017	Jan. 04 2019
5	Power Sensor	Agilent	U2021XA	MY5365004	Jan. 07, 2017	Jan. 04 2019
6	Power Sensor	Agilent	U2021XA	MY5365006	Jan. 07, 2017	Jan. 04 2019
7	Simultaneous Sampling DAQ	Agilent	U2531A	TW54493510	Jan. 07, 2017	Jan. 04 2019
8	Climate Chamber	TABAI	PR-4G	A8708055	Jan. 07, 2017	Jan. 04 2019
9	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	116410	Jan. 06, 2018	Jan. 04,2019
10	Climate Chamber	ESPEC	MT3065	/	Jan. 04,2019	Jan. 04,2019
11	300328 v2.1.1 test system	TONSCEND	v2.6	/	/	/

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	EMI Test Receiver	Rohde & Schwarz	ESCI	100658	Jan. 04 2019
2	High pass filter	micro-tranics	HPM50111	142	Jan. 04 2019
3	Log-Bicon Antenna	Schwarzbeck	CBL6141A	4180	Jan. 04 2019
4	Ultra-Broadband Antenna	ShwarzBeck	BBHA9170	25841	Jan. 04 2019
5	Loop Antenna	LAPLAC	RF300	9138	Jan. 04 2019
6	Spectrum Analyzer	Rohde & Schwarz	FSU26	100105	Jan. 04 2019
7	Horn Antenna	Schwarzbeck	BBHA 9120D	647	Jan. 04 2019
8	Pre-Amplifier	HP	8447D	1937A03050	Jan. 04 2019
9	Pre-Amplifier	EMCI	EMC051835	980075	Jan. 04 2019
10	Antenna Mast	UC	UC3000	N/A	N/A
11	Turn Table	UC	UC3000	N/A	N/A
12	Cable Below 1GHz	Schwarzbeck	AK9515E	33155	Jan. 04 2019
13	Cable Above 1GHz	Hubersuhner	SUCOFLEX102	DA1580	Jan. 04 2019

Note: 1. The Cal. Interval was one year.
2. The cable loss has calculated in test result which connection between each test instruments.

3. TEST ITEM AND RESULTS

3.1. Conducted Emission

Limit

Conducted Emission Test Limit

Frequency	Maximum RF Line Voltage (dBμV)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

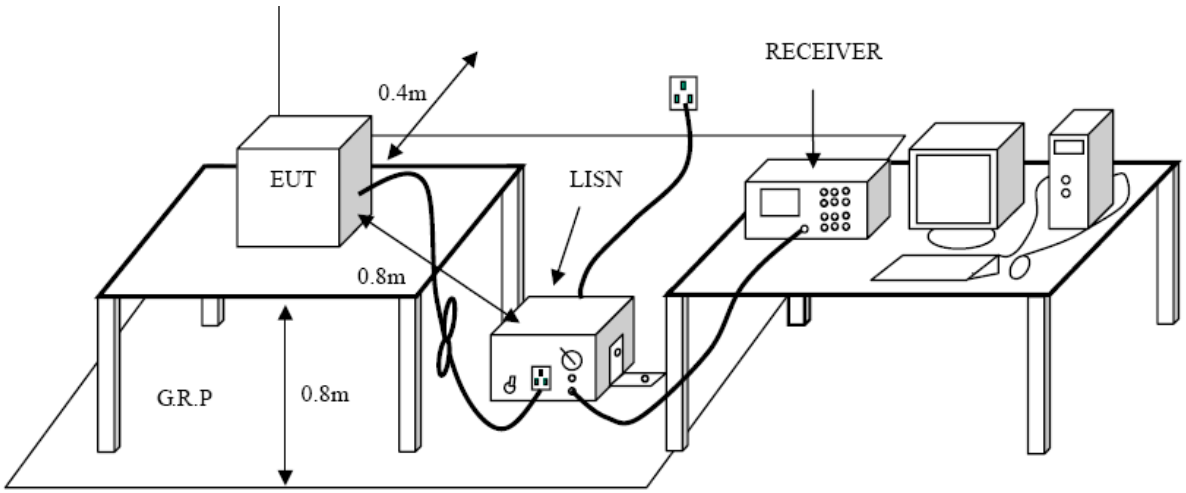
Notes:

(1) *Decreasing linearly with logarithm of the frequency.

(2) The lower limit shall apply at the transition frequencies.

(3) The limit decrease in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

Test Configuration



Test Procedure

1. The EUT was setup according to ANSI C63.10:2013 requirements.
2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface.
3. The EUT and simulators are connected to the main power through a line impedances stabilization network (LISN). The LISN provides a 50ohm /50uH coupling impedance for the measuring equipment.
   The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
4. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
5. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
6. Conducted Emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
7. During the above scans, the emissions were maximized by cable manipulation.

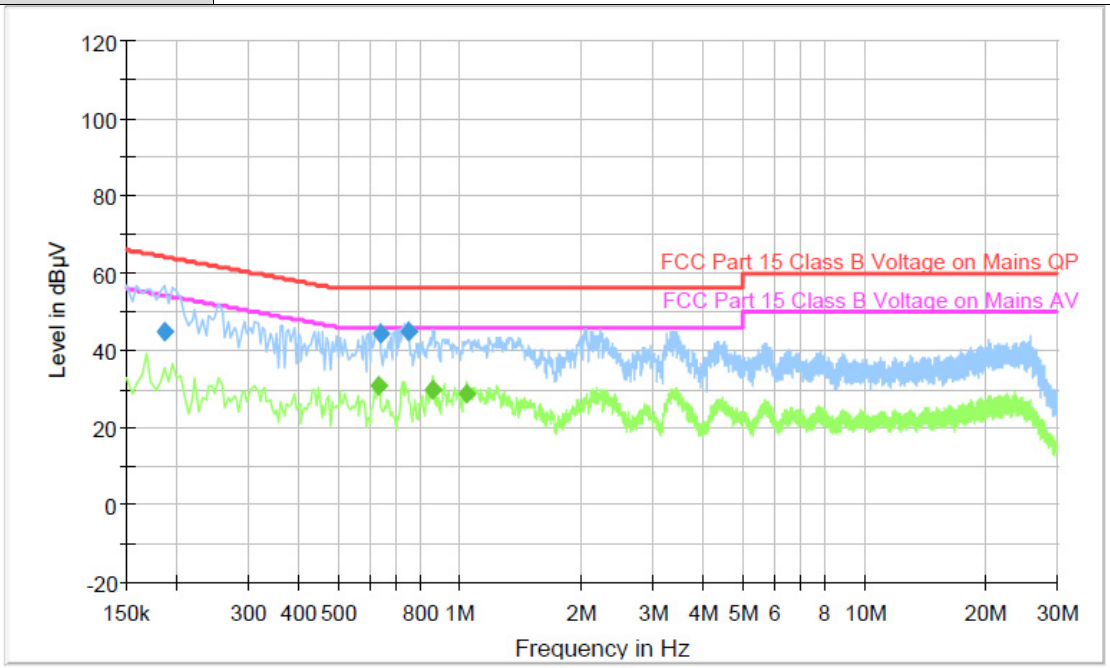
Test Mode:

Please refer to the clause 2.2.

Test Results

Only show worst adapter data.

Test Voltage:	AC 120V/60 Hz
Terminal:	Line



Final Measurement Detector 1

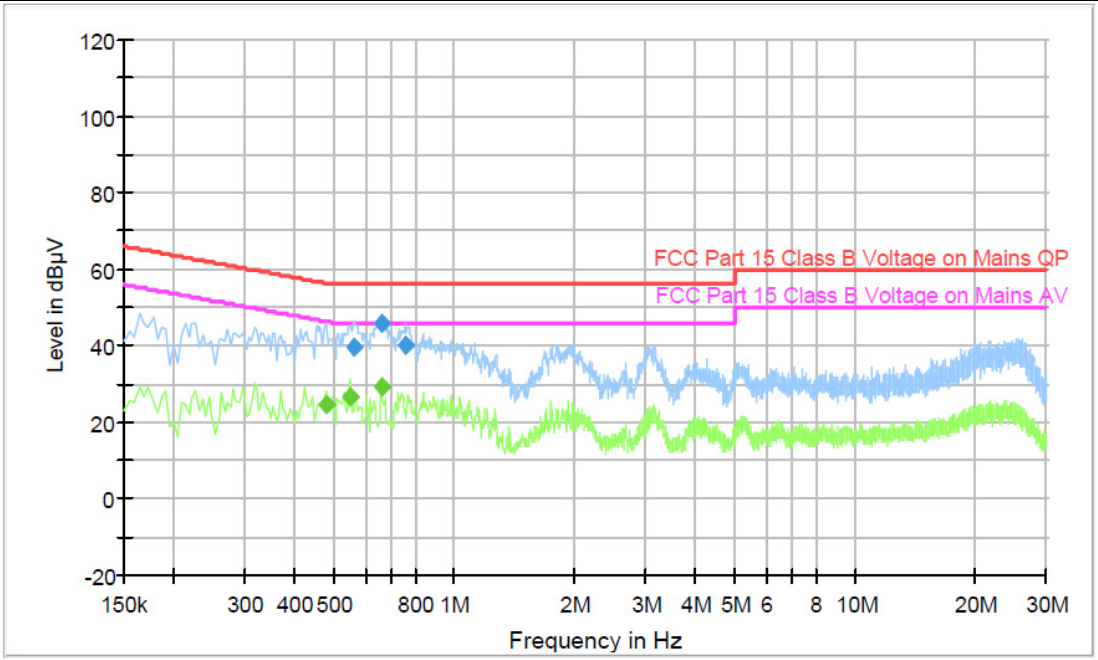
Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.186000	44.9	1000.000	9.000	Off	L1	10.0	19.3	64.2	
0.636000	44.2	1000.000	9.000	Off	L1	9.8	11.8	56.0	
0.744000	45.0	1000.000	9.000	Off	L1	9.8	11.0	56.0	

Final Measurement Detector 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.627000	30.8	1000.000	9.000	Off	L1	9.8	15.2	46.0	
0.861000	29.8	1000.000	9.000	Off	L1	9.9	16.2	46.0	
1.045500	28.7	1000.000	9.000	Off	L1	9.9	17.3	46.0	

Emission Level= Read Level+ Correct Factor

Test Voltage:	AC 120V/60 Hz
Terminal:	Neutral



Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.559500	39.6	1000.000	9.000	Off	N	10.1	16.4	56.0	
0.658500	46.0	1000.000	9.000	Off	N	10.0	10.0	56.0	
0.753000	40.3	1000.000	9.000	Off	N	10.0	15.7	56.0	

Final Measurement Detector 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.478500	24.7	1000.000	9.000	Off	N	10.1	21.7	46.4	
0.550500	26.8	1000.000	9.000	Off	N	10.1	19.2	46.0	
0.658500	29.5	1000.000	9.000	Off	N	10.0	16.5	46.0	

Emission Level= Read Level+ Correct Factor

3.2. Radiated Emission

Limit

Radiated Emission Limits (9 kHz~1000 MHz)

Frequency (MHz)	Field Strength (microvolt/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Radiated Emission Limit (Above 1000MHz)

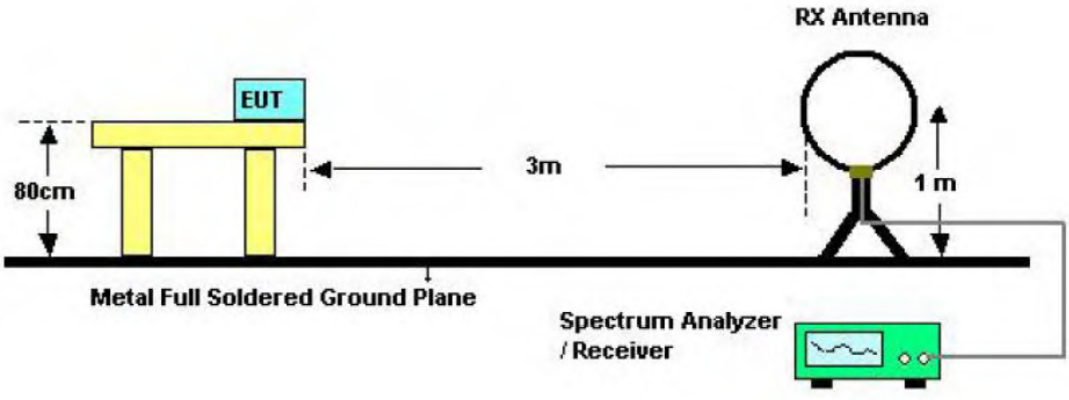
Frequency (MHz)	Distance Meters(at 3m)	
	Peak	Average
Above 1000	74	54

Note:

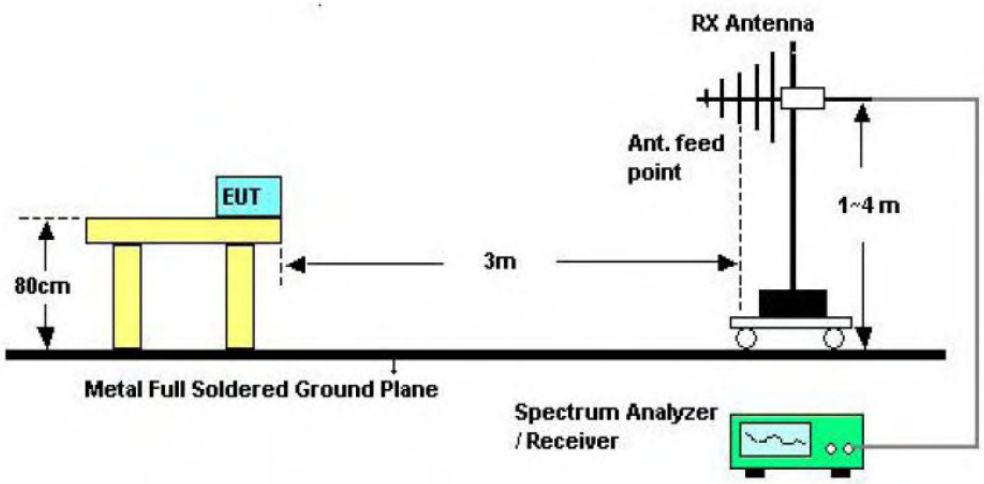
(1) The tighter limit applies at the band edges.

(2) Emission Level (dBuV/m)=20log Emission Level (uV/m).

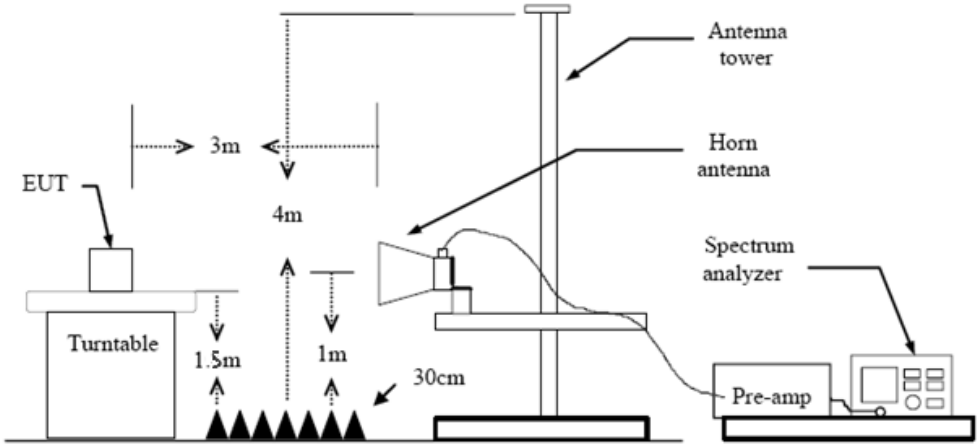
Test Configuration



Below 30MHz Test Setup



Below 1000MHz Test Setup



Above 1GHz Test Setup

Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2013
2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower.
4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
5. Set to the maximum power setting and enable the EUT transmit continuously.
6. Use the following spectrum analyzer settings
   (1) Span shall wide enough to fully capture the emission being measured;
   (2) Below 1 GHz:
   RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;
   If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
   (3) From 1 GHz to 10th harmonic:

RBW=1MHz, VBW=3MHz Peak detector for Peak value.
RBW=1MHz, VBW=3MHz RMS detector for Average value.

Test Mode

Please refer to the clause 2.2.

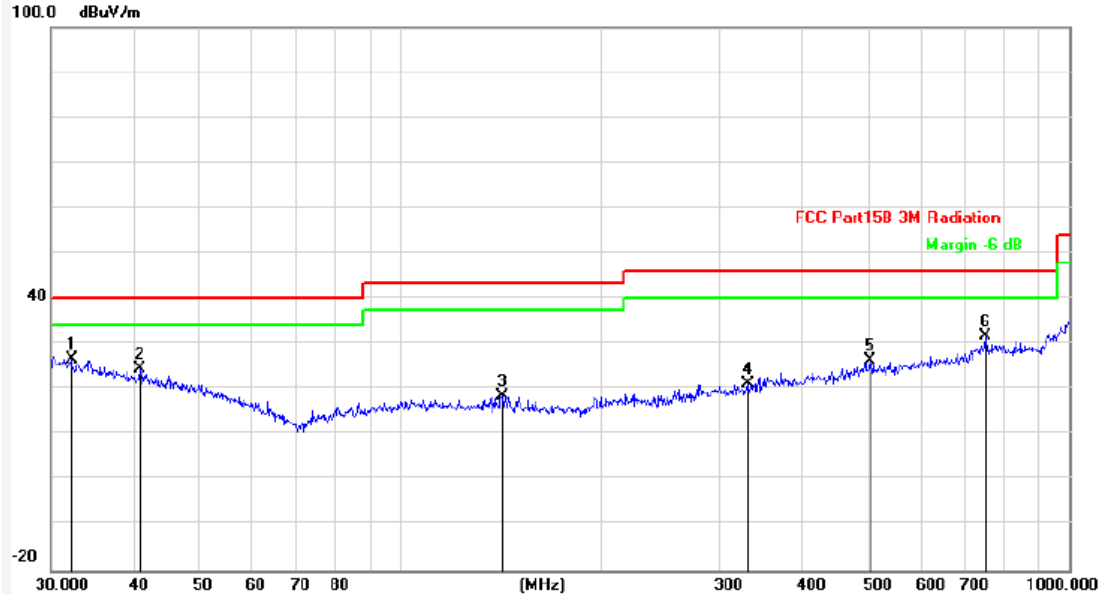
Test Result

9 KHz~30 MHz

From 9 KHz to 30 MHz: Conclusion: PASS
Note: The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Above 18G test data reference to the test report No.: C180811Z01-RP1.

30MHz-1GHz

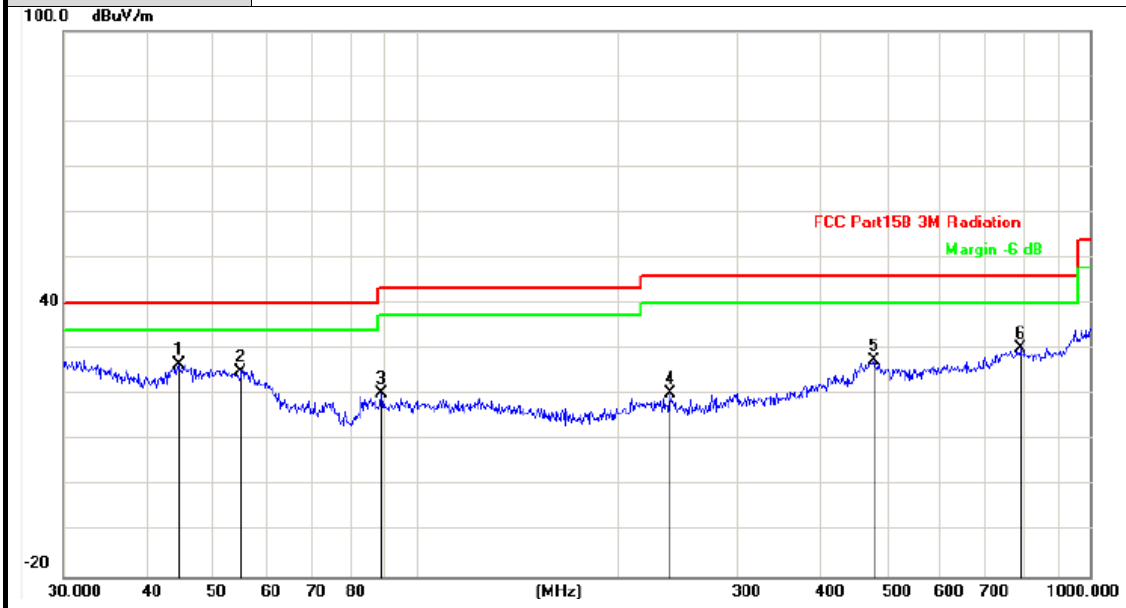
Ant. Pol.	Horizontal



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	32.1795	-4.59	31.13	26.54	40.00	-13.46	QP
2	40.7016	-7.68	32.18	24.50	40.00	-15.50	QP
3	141.8262	-13.97	32.38	18.41	43.50	-25.09	QP
4	330.1949	-10.92	32.25	21.33	46.00	-24.67	QP
5	502.9395	-6.78	33.14	26.36	46.00	-19.64	QP
6	750.1083	-1.85	33.75	31.90	46.00	-14.10	QP

Emission Level= Read Level+ Correct Factor

Ant. Pol.	Vertical

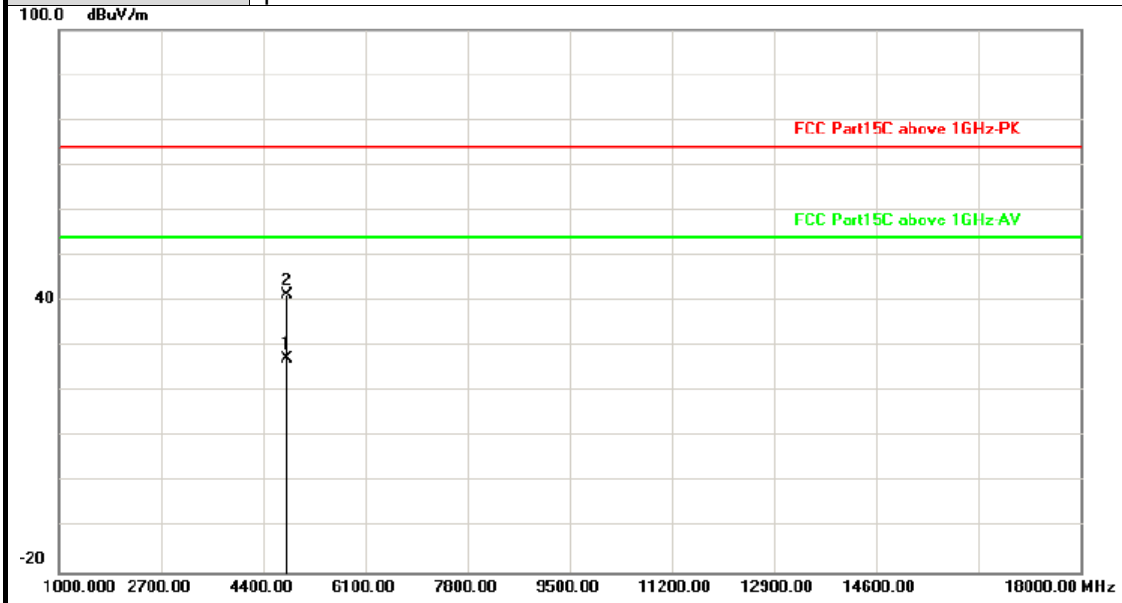


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	44.4308	-8.72	35.52	26.80	40.00	-13.20	QP
2	55.0274	-12.45	37.58	25.13	40.00	-14.87	QP
3	88.9639	-14.99	35.21	20.22	43.50	-23.28	QP
4	238.3102	-13.33	33.74	20.41	46.00	-25.59	QP
5	478.8456	-7.68	35.16	27.48	46.00	-18.52	QP
6	787.8513	-1.82	32.01	30.19	46.00	-15.81	QP

Emission Level= Read Level+ Correct Factor

Adobe 1GHz

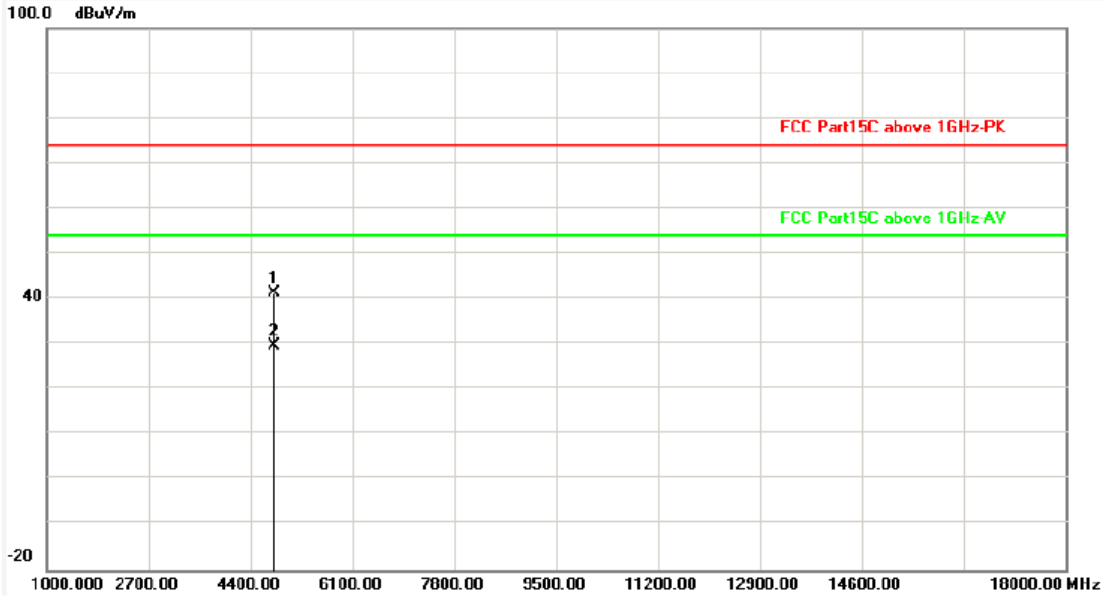
Ant. Pol.	Horizontal
Test Mode:	TX GFSK Mode 2402MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4803.000	2.61	24.78	27.39	54.00	-26.61	AVG
2	4804.860	2.61	38.74	41.35	74.00	-32.65	peak

Emission Level= Read Level+ Correct Factor

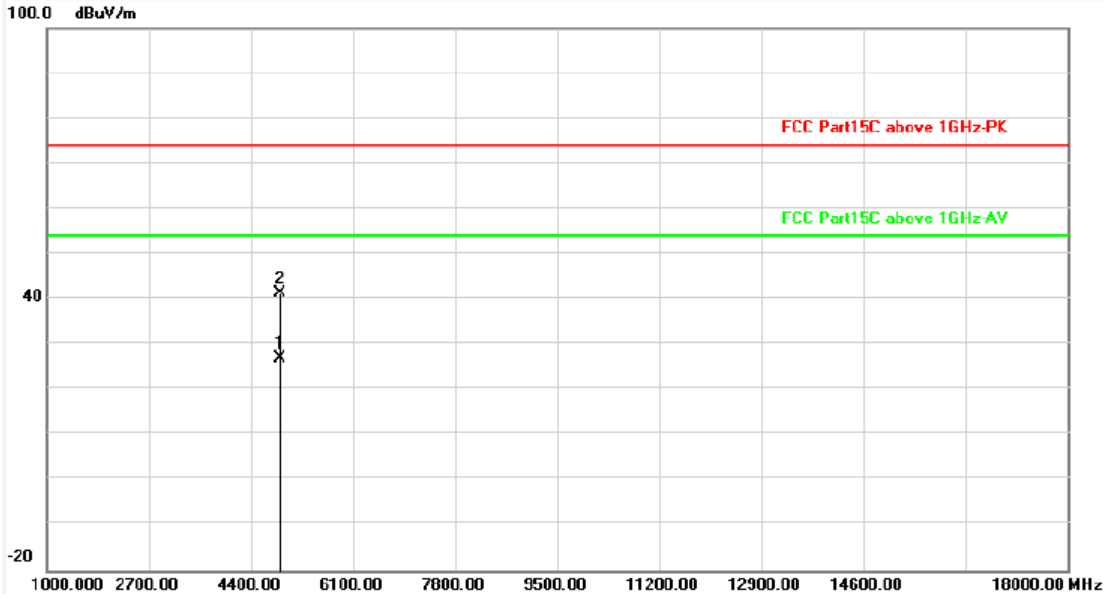
Ant. Pol.	Vertical
Test Mode:	TX GFSK Mode 2402MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4804.584	2.61	38.87	41.48	74.00	-32.52	peak
2	4804.962	2.61	27.03	29.64	54.00	-24.36	AVG

Emission Level= Read Level+ Correct Factor

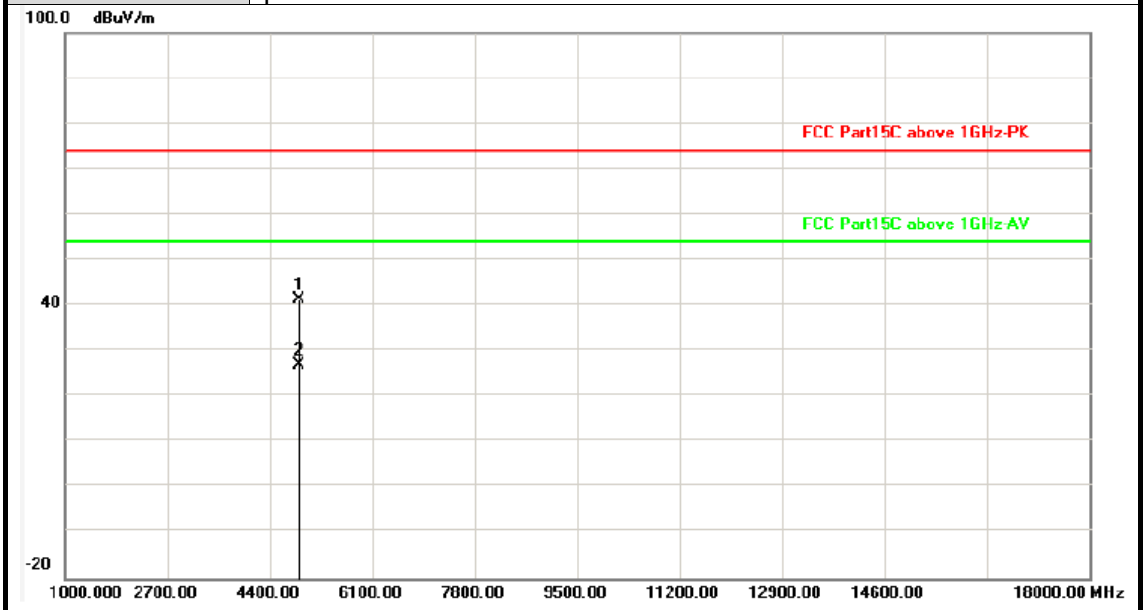
Ant. Pol.	Horizontal
Test Mode:	TX GFSK Mode 2441MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4881.000	2.62	24.46	27.08	54.00	-26.92	AVG
2	4881.002	2.62	38.73	41.35	74.00	-32.65	peak

Emission Level= Read Level+ Correct Factor

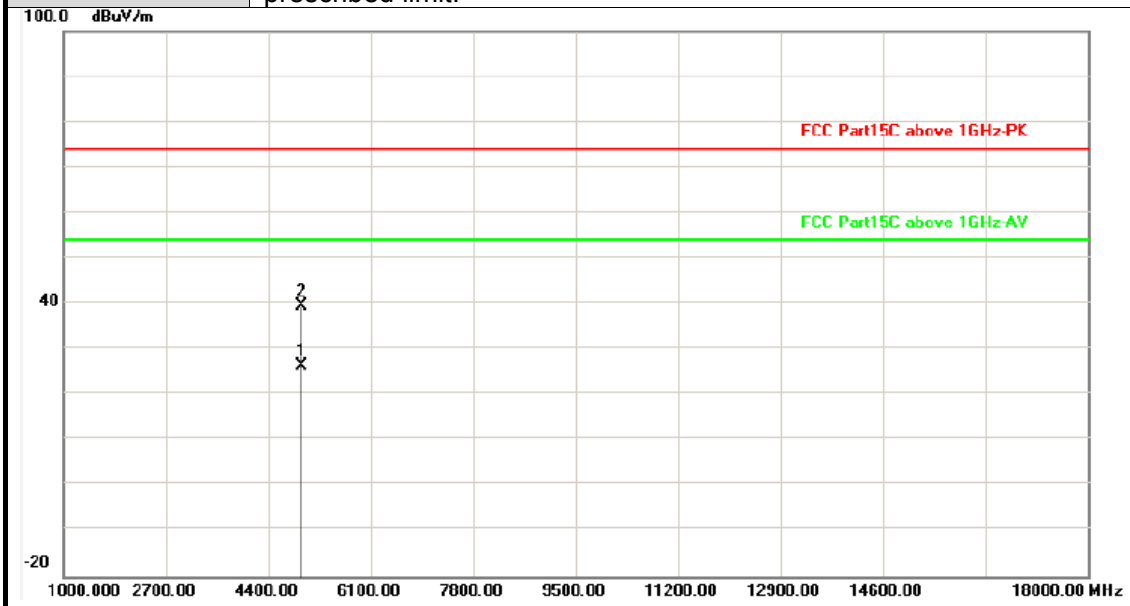
Ant. Pol.	Vertical
Test Mode:	TX GFSK Mode 2441MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4882.598	2.63	38.67	41.30	74.00	-32.70	peak
2	4883.000	2.63	24.44	27.07	54.00	-26.93	AVG

Emission Level= Read Level+ Correct Factor

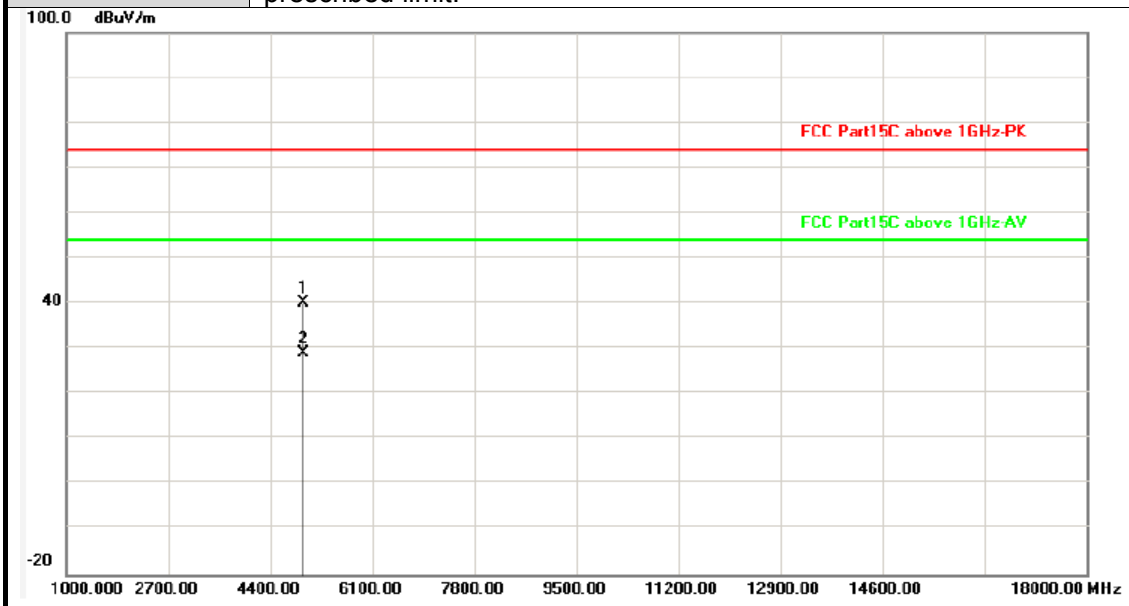
Ant. Pol.	Horizontal
Test Mode:	TX GFSK Mode 2480MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4959.004	2.65	23.64	26.29	54.00	-27.71	AVG
2	4959.522	2.65	37.04	39.69	74.00	-34.31	peak

Emission Level= Read Level+ Correct Factor

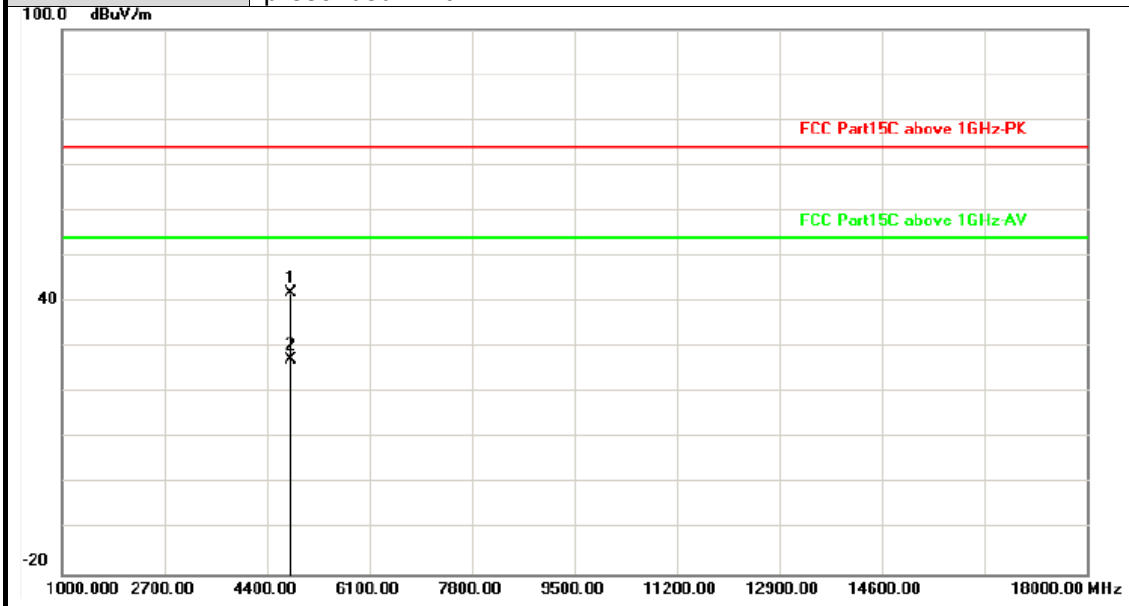
Ant. Pol.	Vertical
Test Mode:	TX GFSK Mode 2480MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4959.382	2.65	37.63	40.28	74.00	-33.72	peak
2	4960.304	2.65	26.46	29.11	54.00	-24.89	AVG

Emission Level= Read Level+ Correct Factor

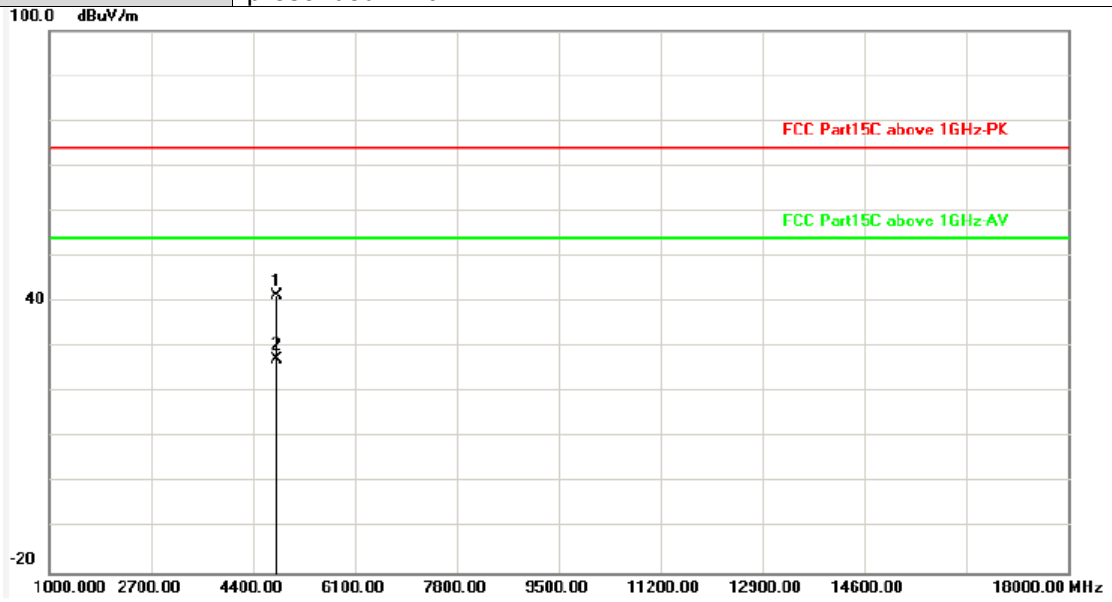
Ant. Pol.	Horizontal
Test Mode:	TXπ/4-DQPSK Mode 2402MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4803.742	2.61	39.41	42.02	74.00	-31.98	peak
2	4803.742	2.61	24.70	27.31	54.00	-26.69	AVG

Emission Level= Read Level+ Correct Factor

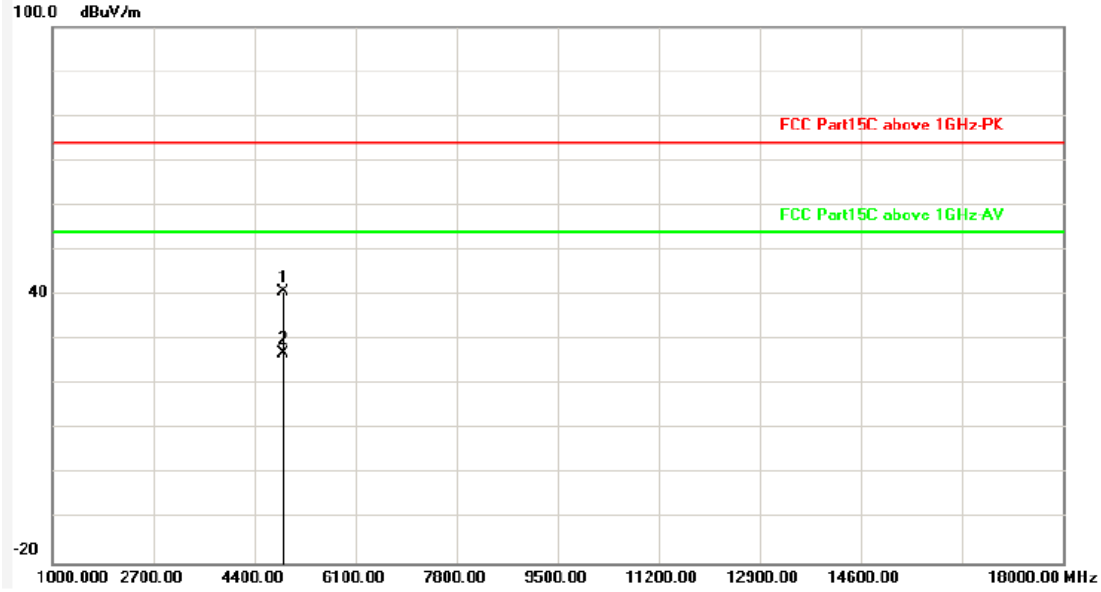
Ant. Pol.	Vertical
Test Mode:	TXπ/4-DQPSK Mode 2402MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4803.648	2.61	38.89	41.50	74.00	-32.50	peak
2	4805.000	2.61	24.66	27.27	54.00	-26.73	AVG

Emission Level= Read Level+ Correct Factor

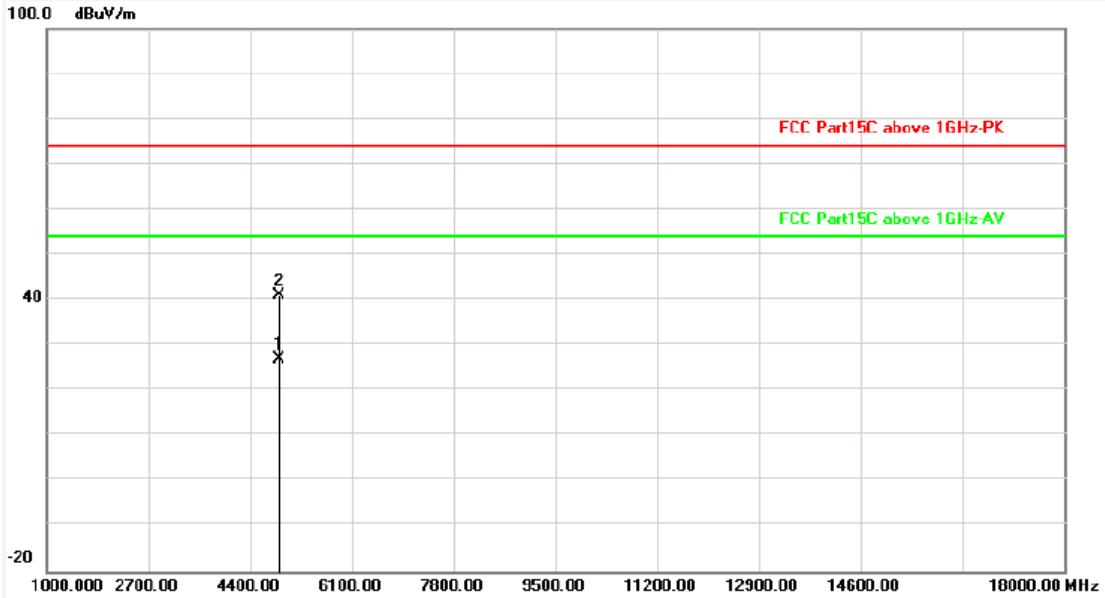
Ant. Pol.	Horizontal
Test Mode:	TXπ/4-DQPSK Mode 2441MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4881.234	2.62	38.11	40.73	74.00	-33.27	peak
2	4883.000	2.63	24.41	27.04	54.00	-26.96	AVG

Emission Level= Read Level+ Correct Factor

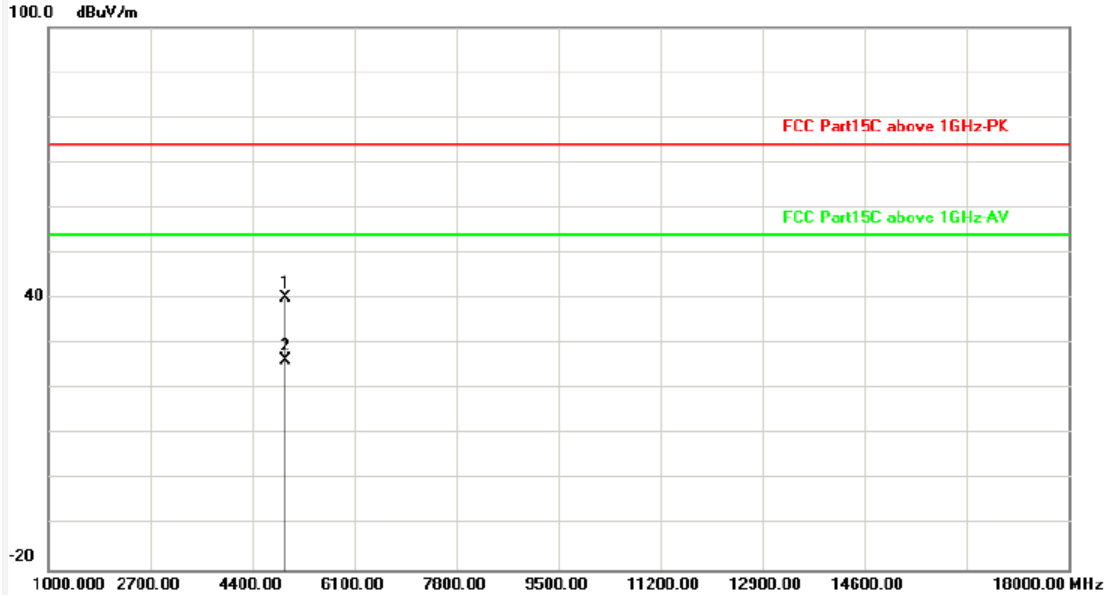
Ant. Pol.	Vertical
Test Mode:	TX π/4-DQPSK Mode 2441MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4881.000	2.62	24.41	27.03	54.00	-26.97	AVG
2	4882.394	2.63	38.44	41.07	74.00	-32.93	peak

Emission Level= Read Level+ Correct Factor

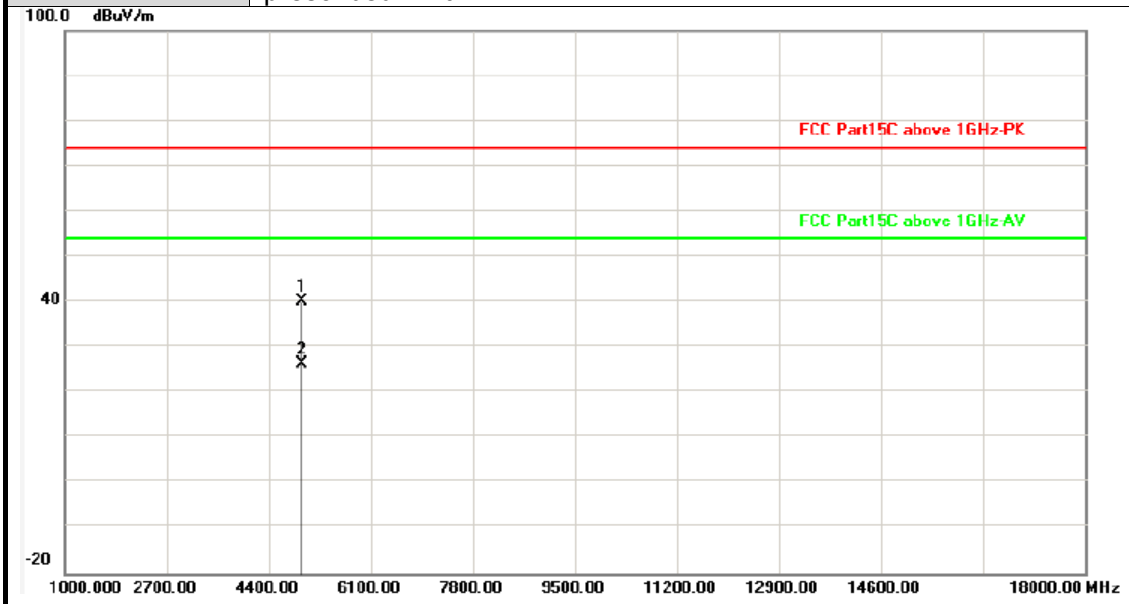
Ant. Pol.	Horizontal
Test Mode:	TX π/4-DQPSK Mode 2480MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4960.530	2.66	37.36	40.02	74.00	-33.98	peak
2	4961.000	2.66	23.59	26.25	54.00	-27.75	AVG

Emission Level= Read Level+ Correct Factor

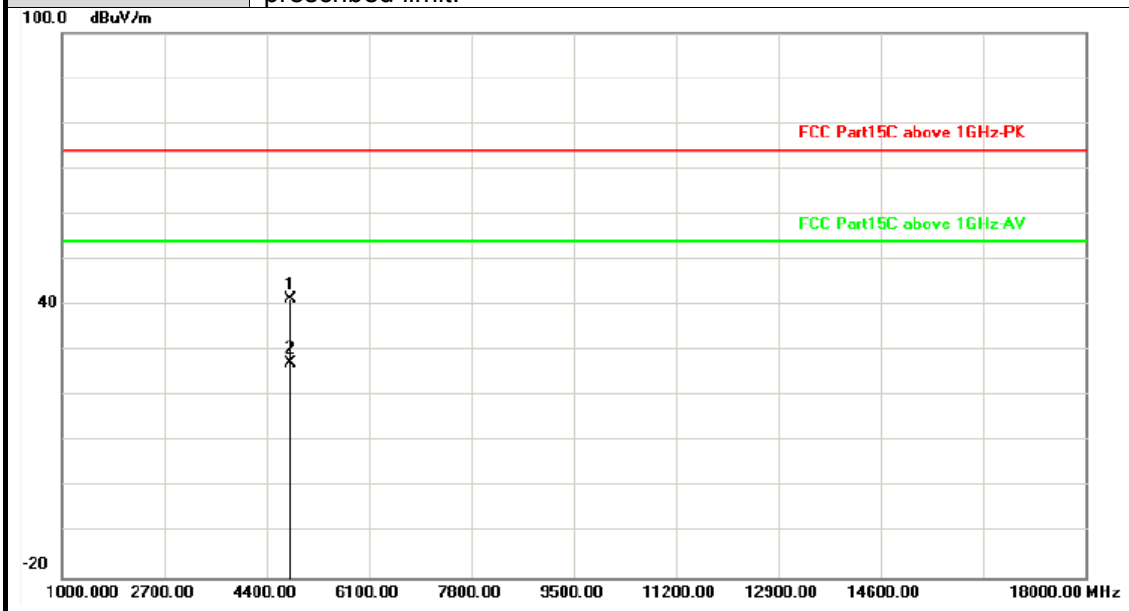
Ant. Pol.	Vertical
Test Mode:	TXπ/4-DQPSK Mode 2480MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4959.878	2.65	37.51	40.16	74.00	-33.84	peak
2	4960.256	2.65	23.64	26.29	54.00	-27.71	AVG

Emission Level= Read Level+ Correct Factor

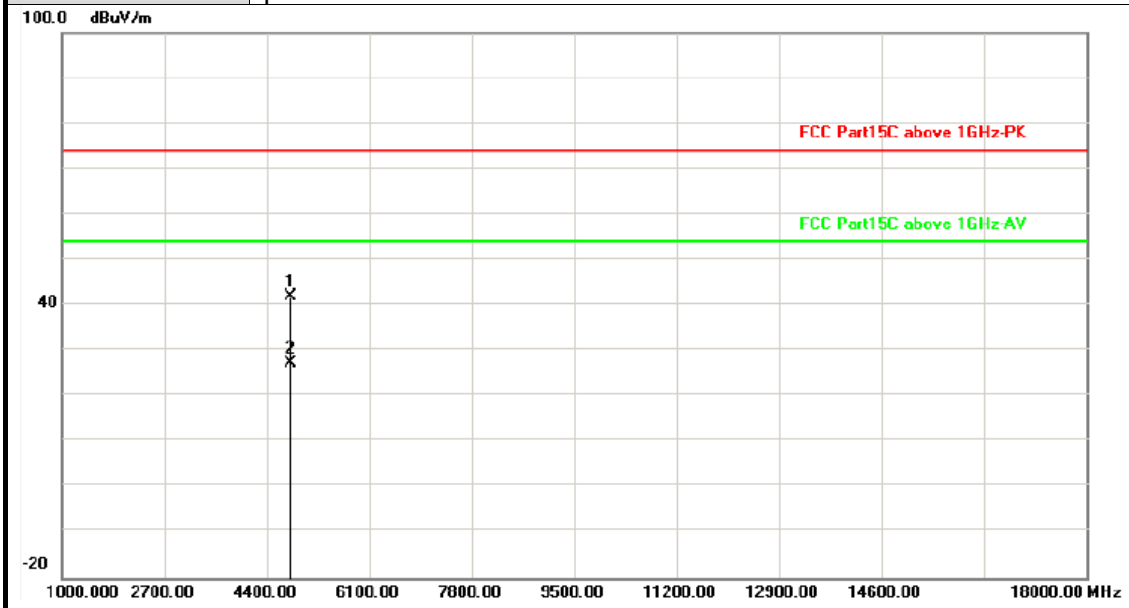
Ant. Pol.	Horizontal
Test Mode:	TX 8-DPSK Mode 2402MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4804.002	2.61	38.82	41.43	74.00	-32.57	peak
2	4804.436	2.61	24.65	27.26	54.00	-26.74	AVG

Emission Level= Read Level+ Correct Factor

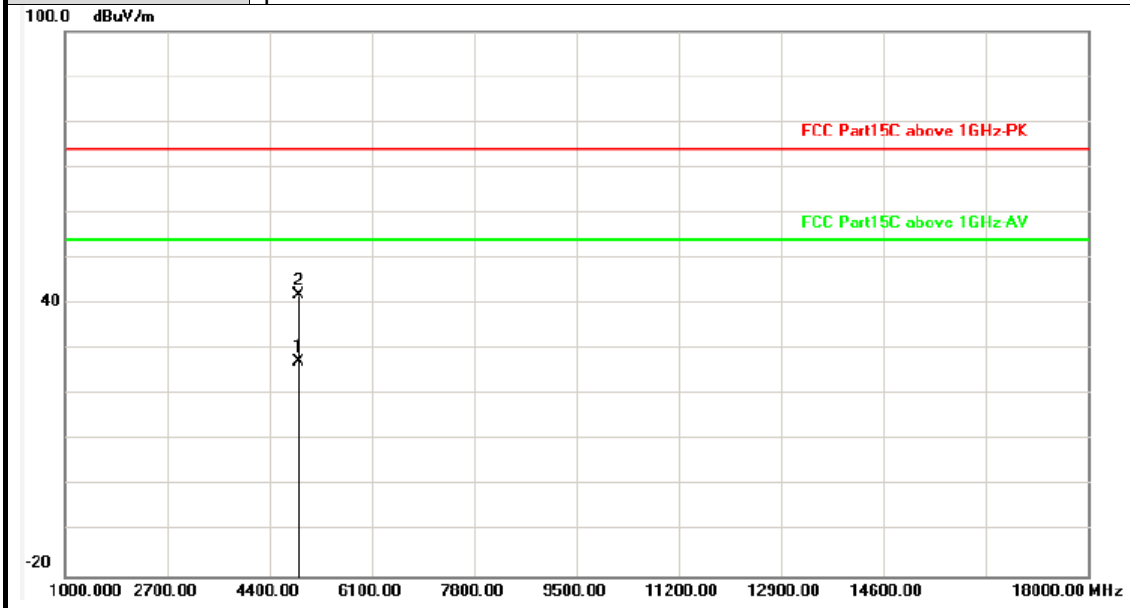
Ant. Pol.	Vertical
Test Mode:	TX 8-DPSK Mode 2402MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4803.370	2.61	39.26	41.87	74.00	-32.13	peak
2	4803.868	2.61	24.63	27.24	54.00	-26.76	AVG

Emission Level= Read Level+ Correct Factor

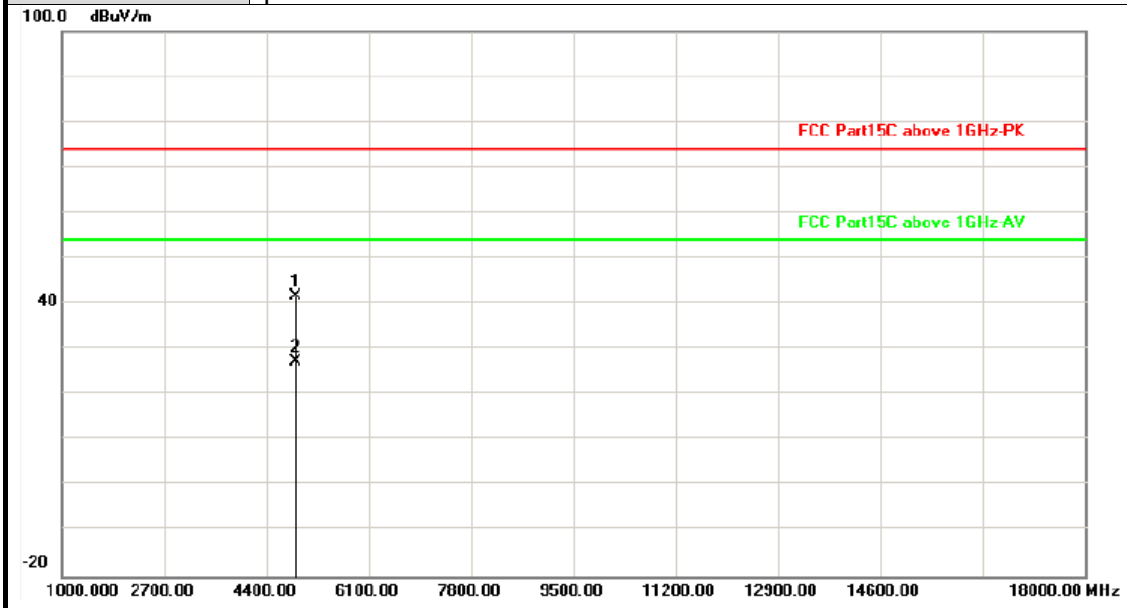
Ant. Pol.	Horizontal
Test Mode:	TX 8-DPSK Mode 2441MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4881.997	2.63	24.63	27.26	54.00	-26.74	AVG
2	4882.004	2.63	39.37	42.00	74.00	-32.00	peak

Emission Level= Read Level+ Correct Factor

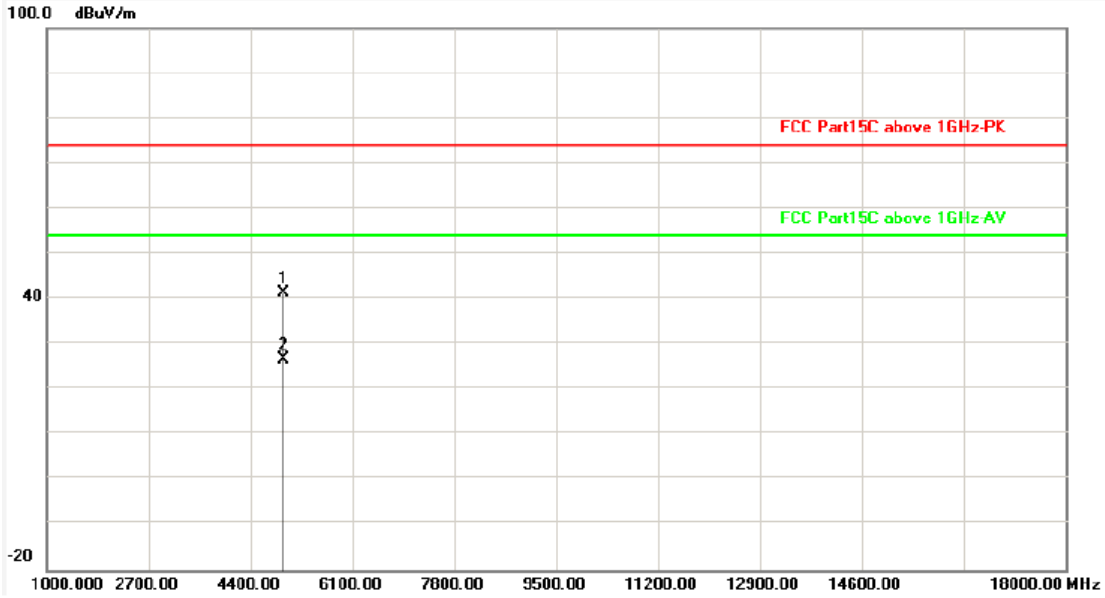
Ant. Pol.	Vertical
Test Mode:	TX 8-DPSK Mode 2441MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4881.997	2.63	39.14	41.77	74.00	-32.23	peak
2	4882.000	2.63	24.62	27.25	54.00	-26.75	AVG

Emission Level= Read Level+ Correct Factor

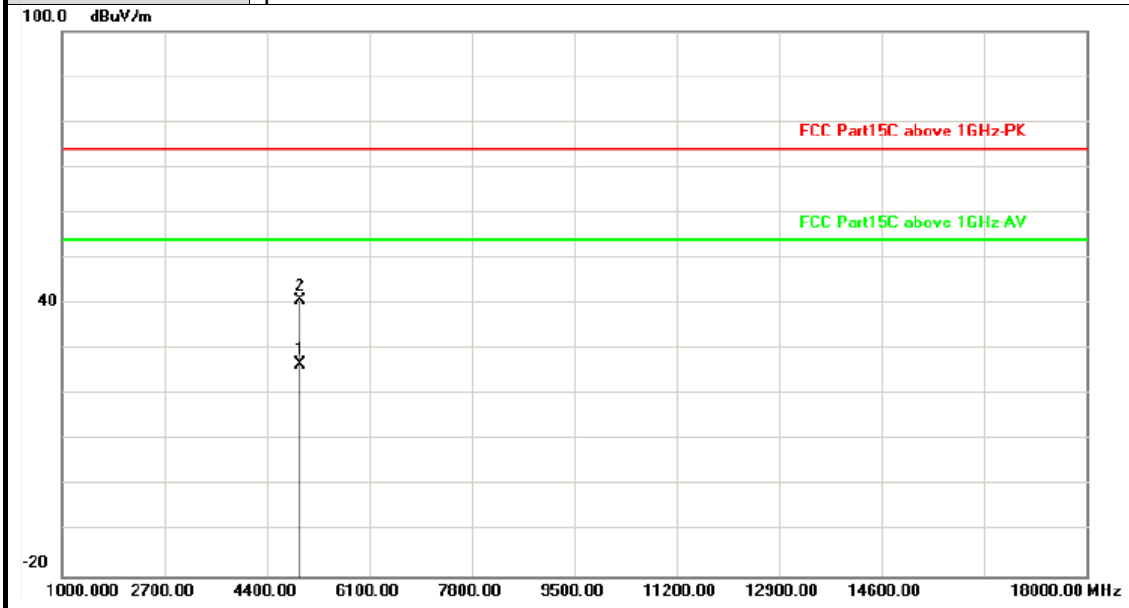
Ant. Pol.	Horizontal
Test Mode:	TX 8-DPSK Mode 2480MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4960.001	2.65	38.76	41.41	74.00	-32.59	peak
2	4960.005	2.65	24.07	26.72	54.00	-27.28	AVG

Emission Level= Read Level+ Correct Factor

Ant. Pol.	Vertical
Test Mode:	TX 8-DPSK Mode 2480MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4959.995	2.65	24.04	26.69	54.00	-27.31	AVG
2	4959.997	2.65	38.06	40.71	74.00	-33.29	peak

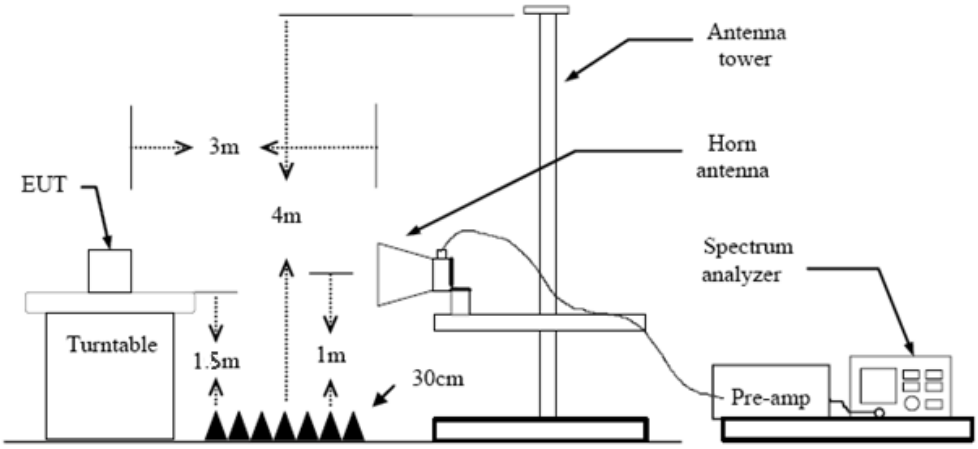
Emission Level= Read Level+ Correct Factor

3.3. Band Edge Emissions

Limit

Restricted Frequency Band (MHz)	(dBuV/m)(at 3m)	
	Peak	Average
2310 ~2390	74	54
2483.5 ~2500	74	54
Note: All restriction bands have been tested, only the worst case is reported.		

Test Configuration



Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2013 requirements.
2. The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT waspositioned such that the distance from antenna to the EUT was 3 meters.
4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. Thisis repeated for both horizontal and vertical polarization of the antenna. In order to find themaximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.
5. The receiver set as follow:
   RBW=1MHz, VBW=3MHz PEAK detector for Peak value.
   RBW=1MHz, VBW=10Hz with PEAK Detector for Average Value.

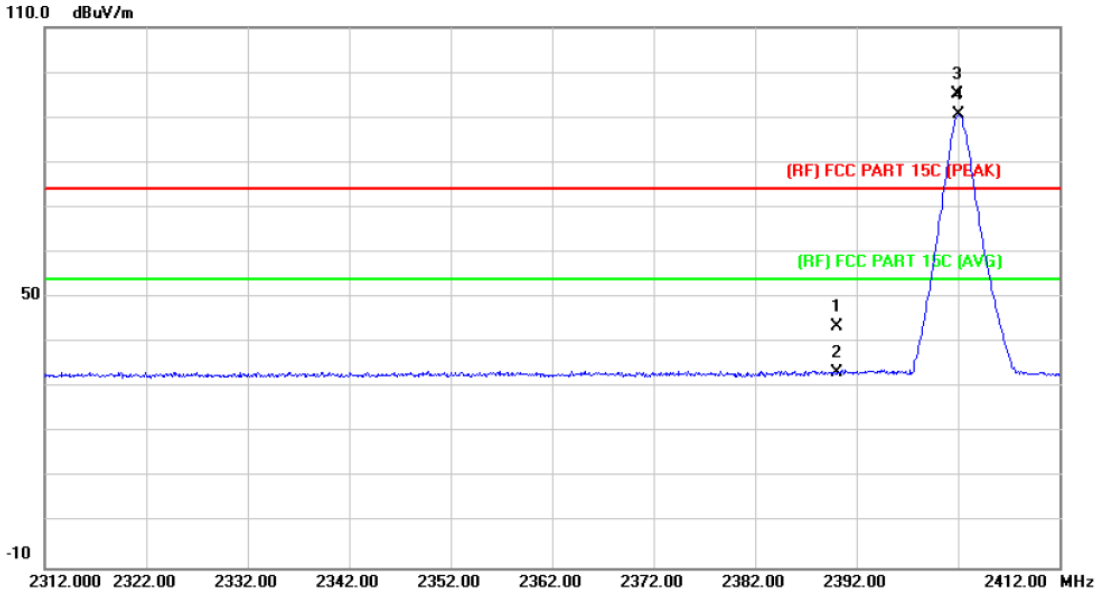
Test Mode

Please refer to the clause 2.2.

Test Results

(1) Radiation Test

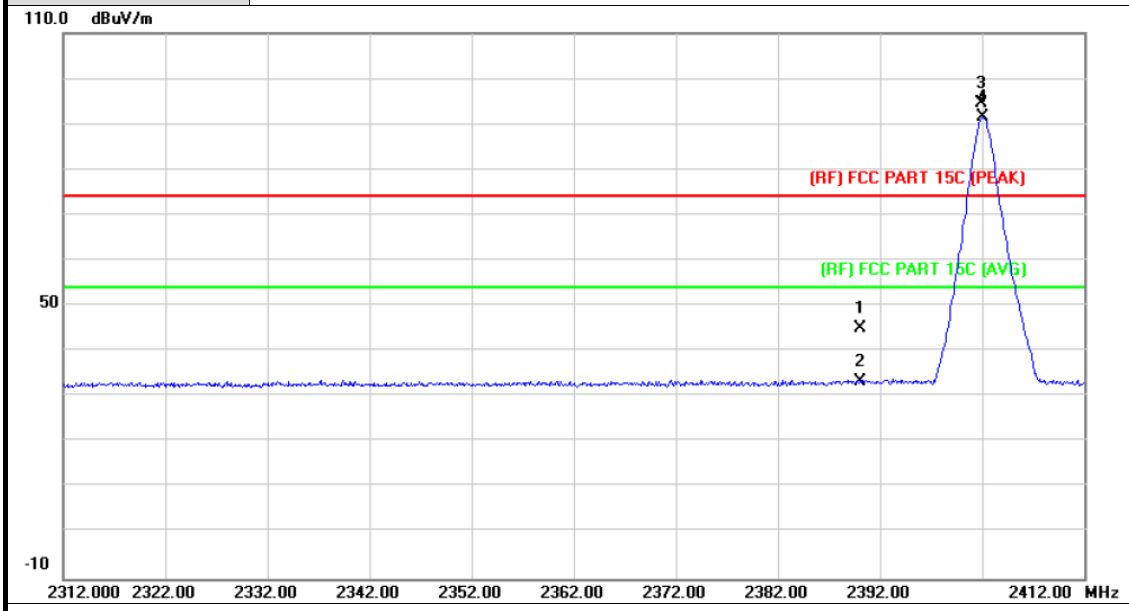
Ant. Pol.	Horizontal
Test Mode:	GFSK Mode 2402MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	42.74	0.77	43.51	74.00	-30.49	peak
2		2390.000	32.65	0.77	33.42	54.00	-20.58	AVG
3	X	2401.900	94.44	0.82	95.26	Fundamental Frequency		peak
4	*	2402.000	89.77	0.82	90.59	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

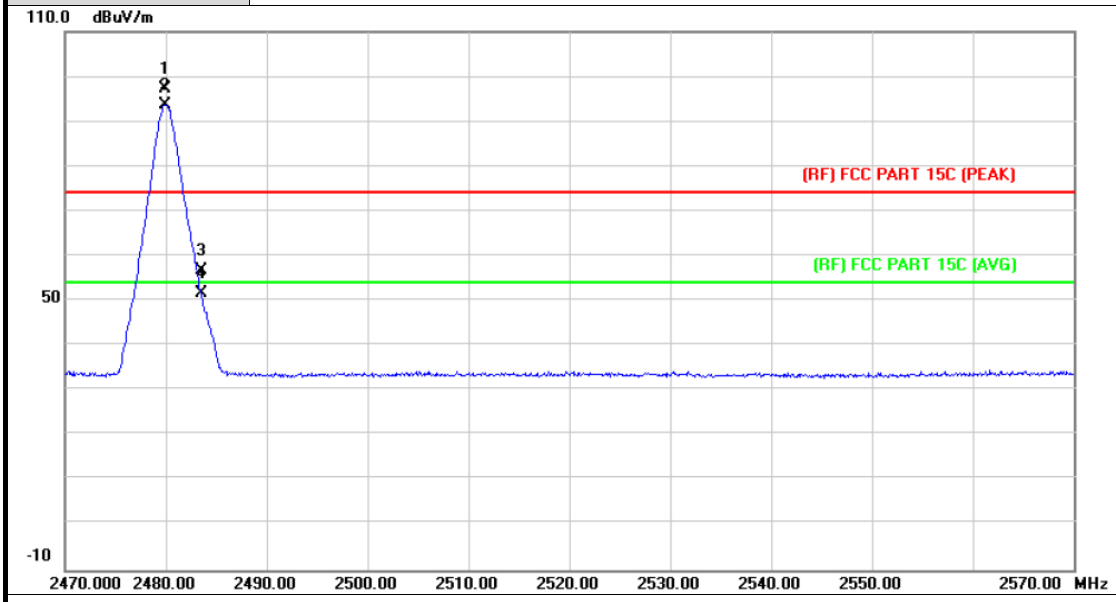
Ant. Pol.	Vertical
Test Mode:	GFSK Mode 2402MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	44.41	0.77	45.18	74.00	-28.82	peak
2		2390.000	32.69	0.77	33.46	54.00	-20.54	AVG
3	X	2401.900	93.76	0.82	94.58	Fundamental Frequency		peak
4	*	2402.100	90.64	0.82	91.46	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

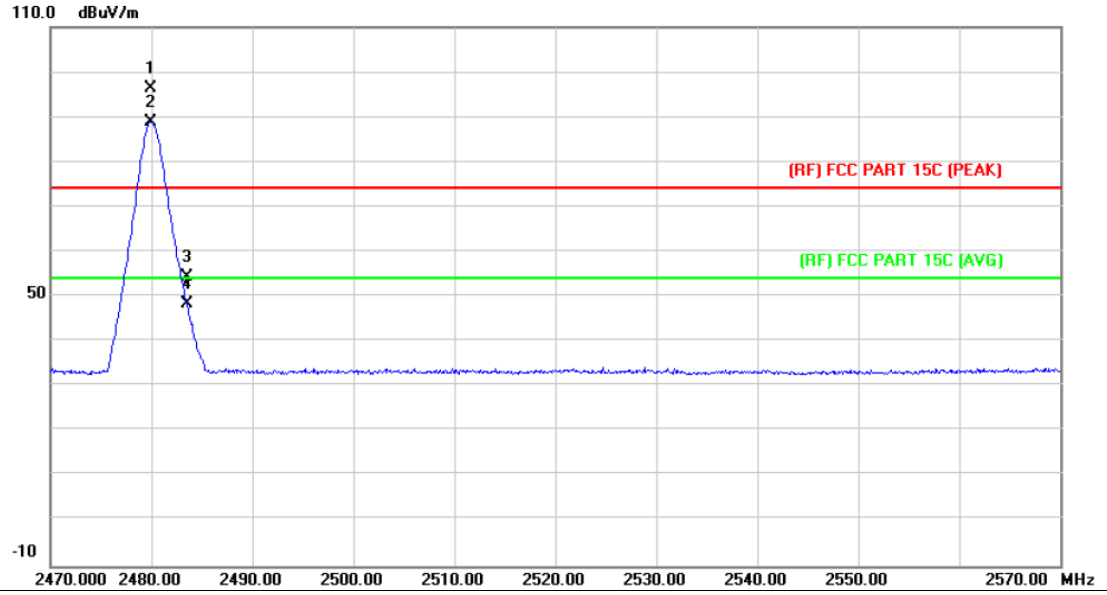
Ant. Pol.	Horizontal
Test Mode:	GFSK Mode 2480 MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	2479.900	96.13	1.15	97.28	74.00	23.28	peak
2	*	2479.900	92.63	1.15	93.78	54.00	39.78	AVG
3		2483.500	55.57	1.17	56.74	Fundamental Frequency		peak
4		2483.500	50.39	1.17	51.56	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

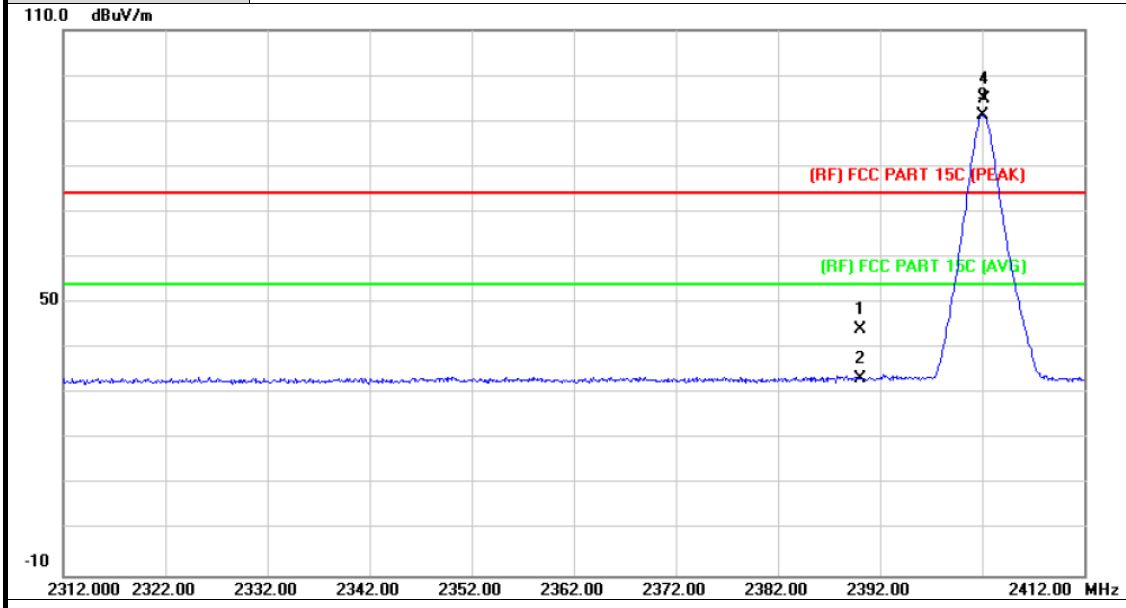
Ant. Pol.	Vertical
Test Mode:	GFSK Mode 2480 MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	2479.900	95.09	1.15	96.24	74.00	22.24	peak
2	*	2479.900	87.70	1.15	88.85	54.00	34.85	AVG
3		2483.500	53.09	1.17	54.26	Fundamental Frequency		peak
4		2483.500	47.05	1.17	48.22	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

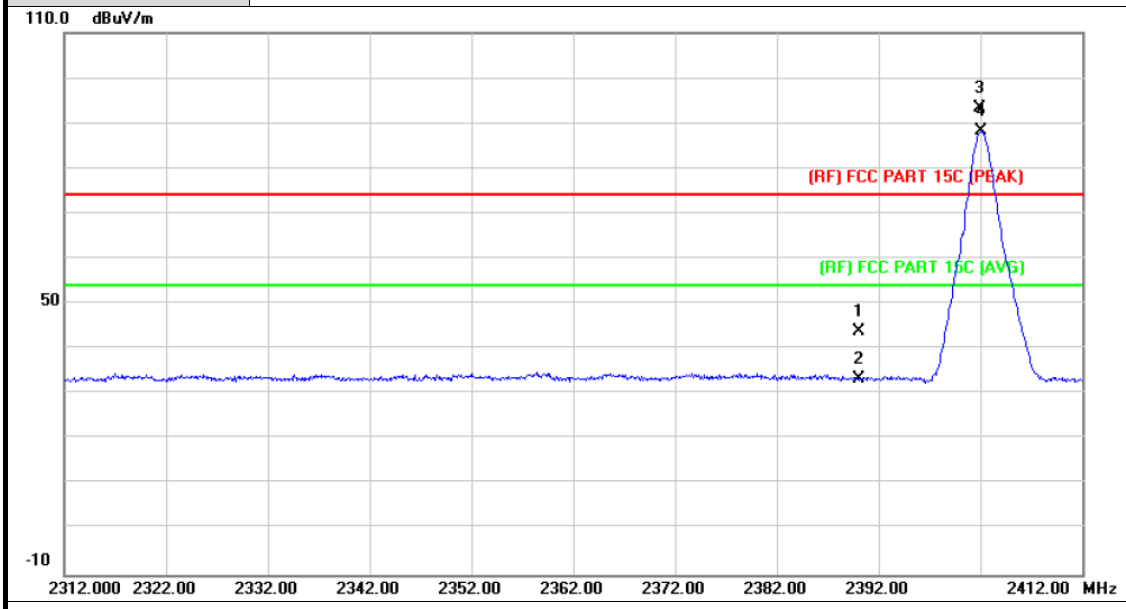
Ant. Pol.	Horizontal
Test Mode:	π/4-DQPSK Mode 2402MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	43.40	0.77	44.17	74.00	-29.83	peak
2		2390.000	32.70	0.77	33.47	54.00	-20.53	AVG
3	*	2402.000	90.46	0.82	91.28	Fundamental Frequency		AVG
4	X	2402.200	94.00	0.82	94.82	Fundamental Frequency		peak

Emission Level= Read Level+ Correct Factor

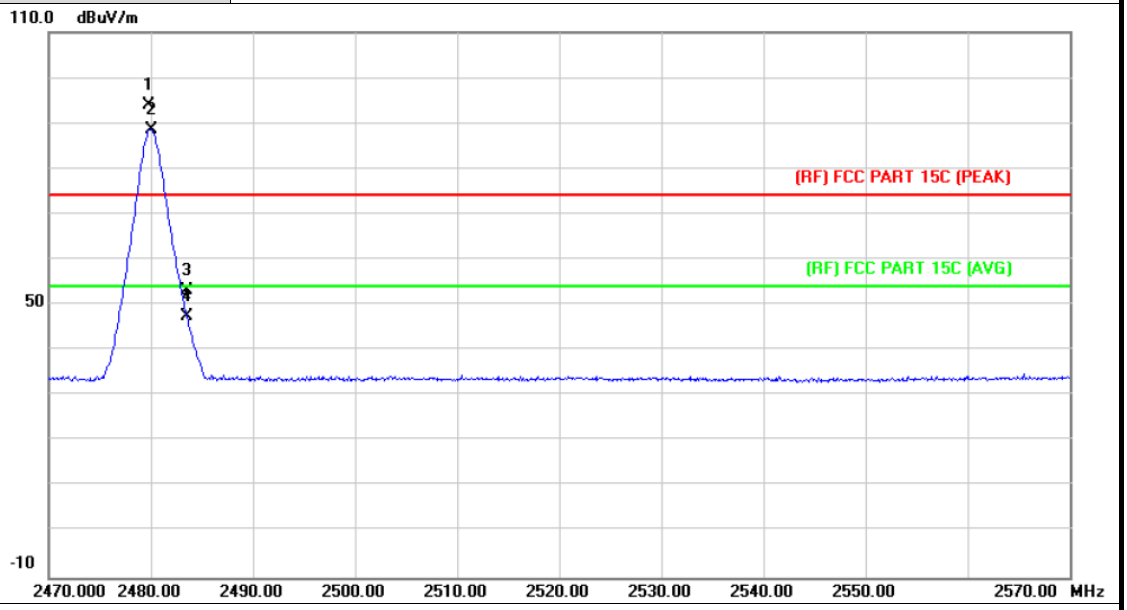
Ant. Pol.	Vertical
Test Mode:	π/4-DQPSK Mode 2402MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	43.18	0.77	43.95	74.00	-30.05	peak
2		2390.000	32.66	0.77	33.43	54.00	-20.57	AVG
3	X	2401.900	92.39	0.82	93.21	Fundamental Frequency		peak
4	*	2402.100	87.49	0.82	88.31	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

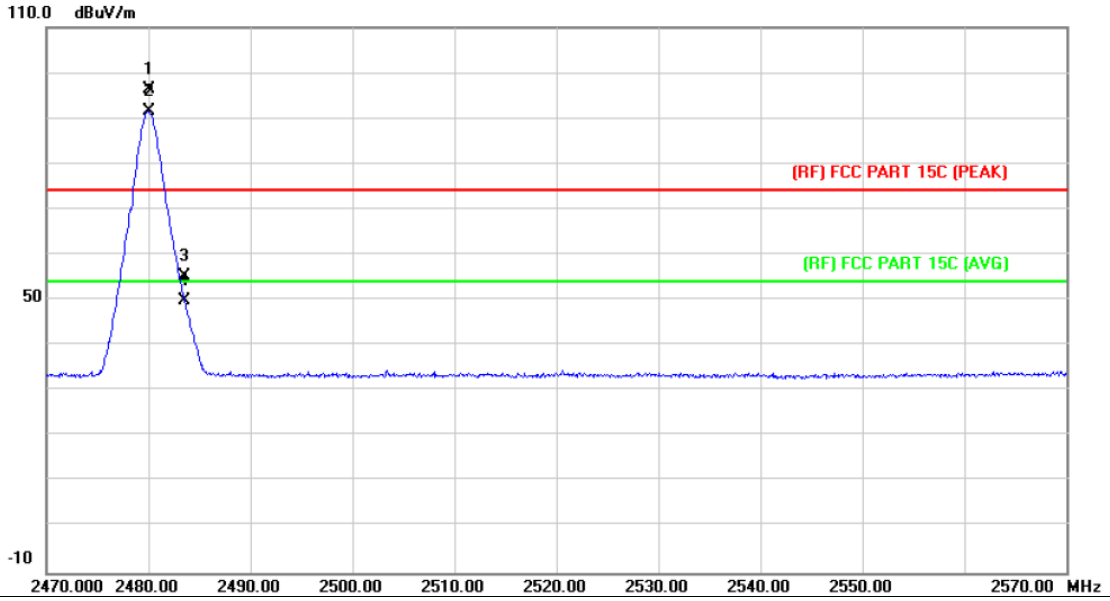
Ant. Pol.	Horizontal
Test Mode:	π/4-DQPSK Mode 2480MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	2479.800	92.71	1.15	93.86	74.00	19.86	peak
2	*	2480.000	87.51	1.15	88.66	54.00	34.66	AVG
3		2483.500	52.09	1.17	53.26	Fundamental Frequency		peak
4		2483.500	46.27	1.17	47.44	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

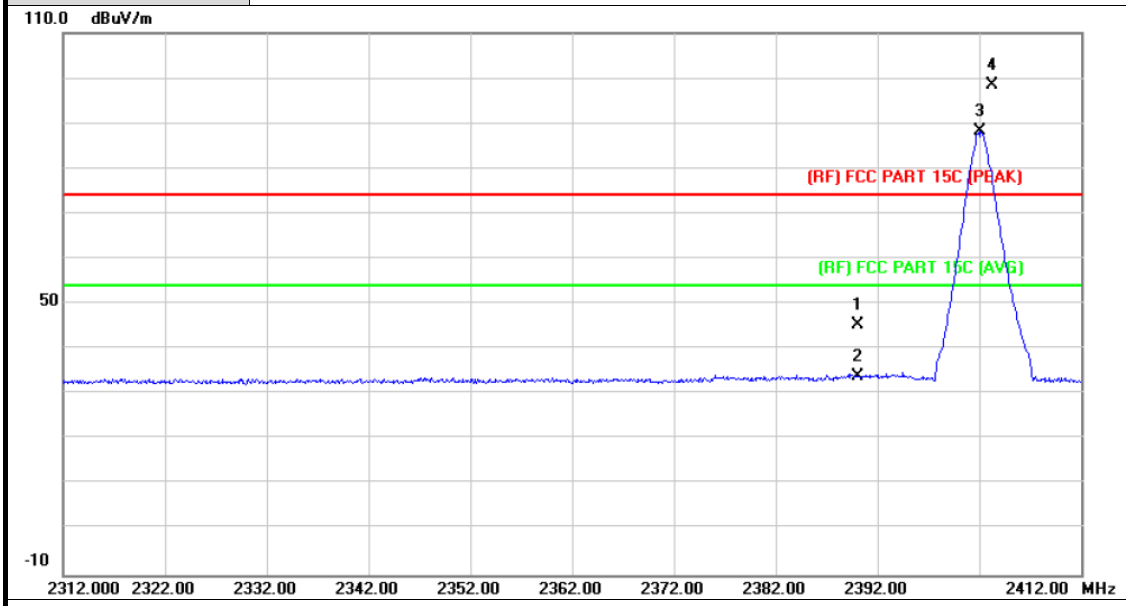
Ant. Pol.	Vertical
Test Mode:	π/4-DQPSK Mode 2480MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	2480.000	95.09	1.15	96.24	74.00	22.24	peak
2	*	2480.100	90.38	1.15	91.53	54.00	37.53	AVG
3		2483.500	54.09	1.17	55.26	Fundamental Frequency		peak
4		2483.500	48.73	1.17	49.90	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

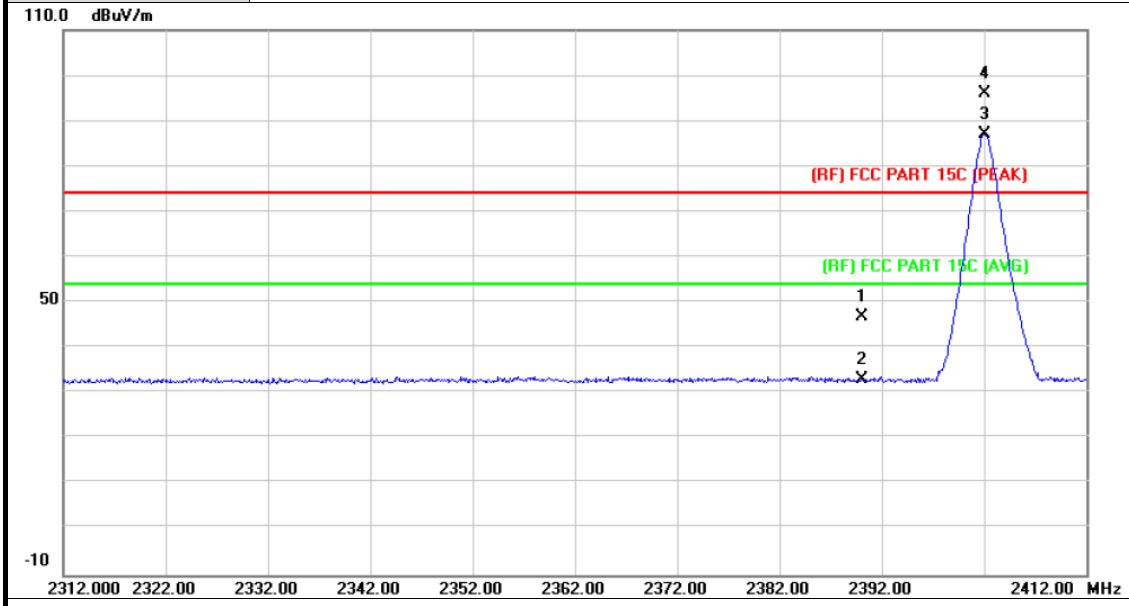
Ant. Pol.	Horizontal
Test Mode:	8-DPSK Mode 2402MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	44.60	0.77	45.37	74.00	-28.63	peak
2		2390.000	33.19	0.77	33.96	54.00	-20.04	AVG
3	*	2402.100	87.30	0.82	88.12	Fundamental Frequency		AVG
4	X	2403.268	97.65	0.82	98.47	Fundamental Frequency		peak

Emission Level= Read Level+ Correct Factor

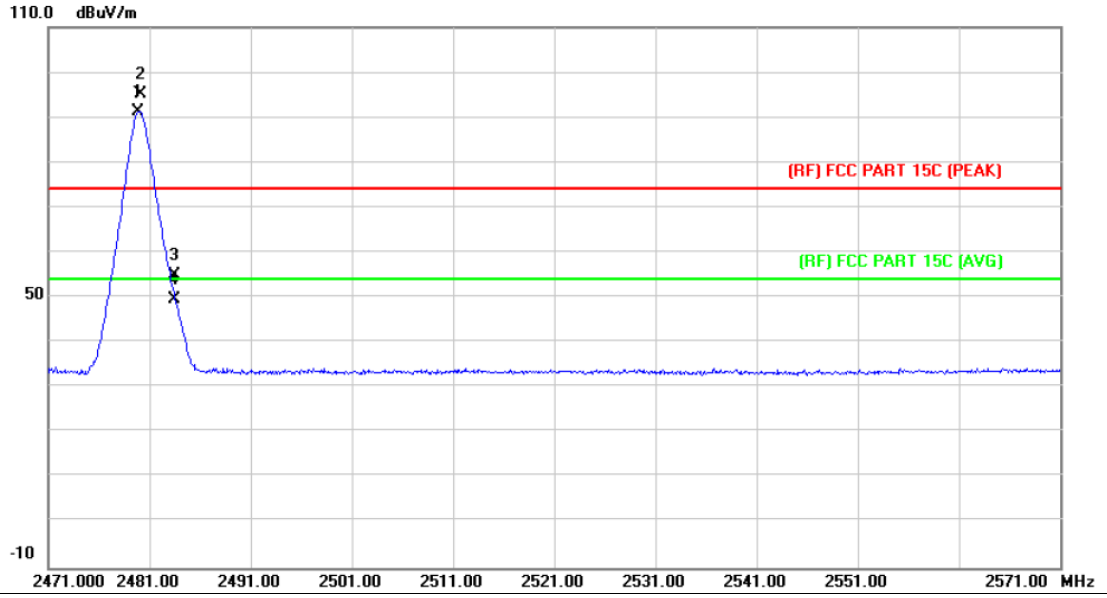
Ant. Pol.	Vertical
Test Mode:	8-DPSK Mode 2402MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	45.96	0.77	46.73	74.00	-27.27	peak
2		2390.000	32.31	0.77	33.08	74.00	-40.92	peak
3	X	2402.100	86.34	0.82	87.16	Fundamental Frequency		peak
4	*	2402.100	95.31	0.82	96.13	Fundamental Frequency		peak

Emission Level= Read Level+ Correct Factor

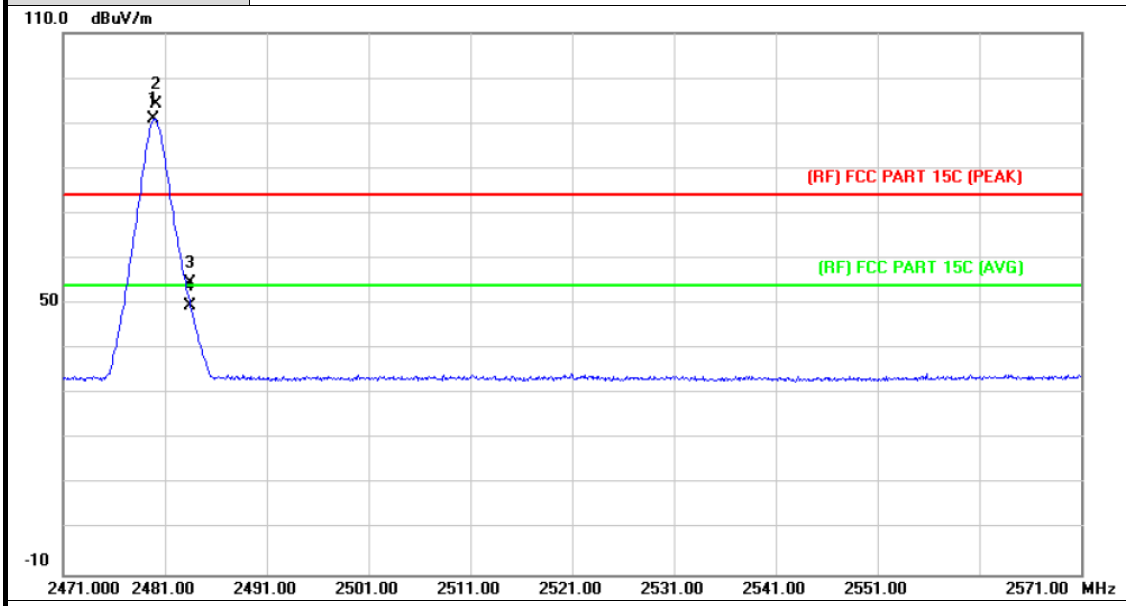
Ant. Pol.	Horizontal
Test Mode:	8-DPSK Mode 2480MHz



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	2479.900	90.22	1.15	91.37	54.00	37.37	AVG
2	X	2480.100	94.09	1.15	95.24	74.00	21.24	peak
3		2483.500	53.77	1.17	54.94	Fundamental Frequency		peak
4		2483.500	48.52	1.17	49.69	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

Ant. Pol.	Vertical
Test Mode:	8-DPSK Mode 2480MHz

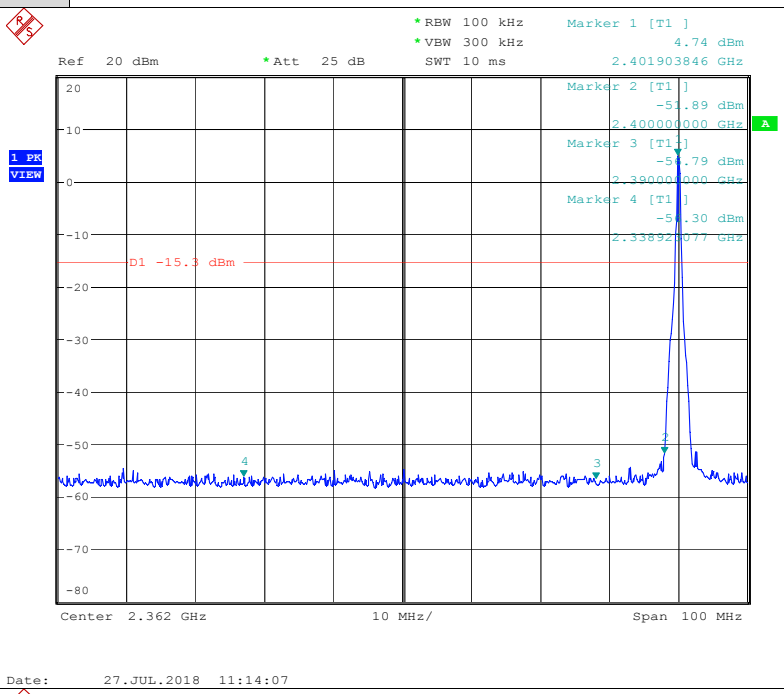


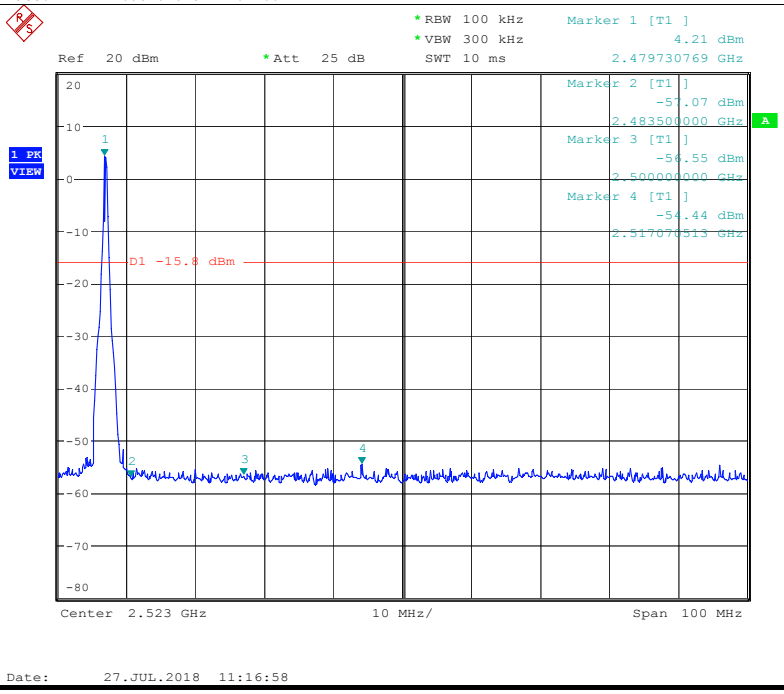
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	2479.900	89.78	1.15	90.93	54.00	36.93	AVG
2	X	2480.100	93.23	1.15	94.38	74.00	20.38	peak
3		2483.500	53.51	1.17	54.68	Fundamental Frequency		peak
4		2483.500	48.25	1.17	49.42	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

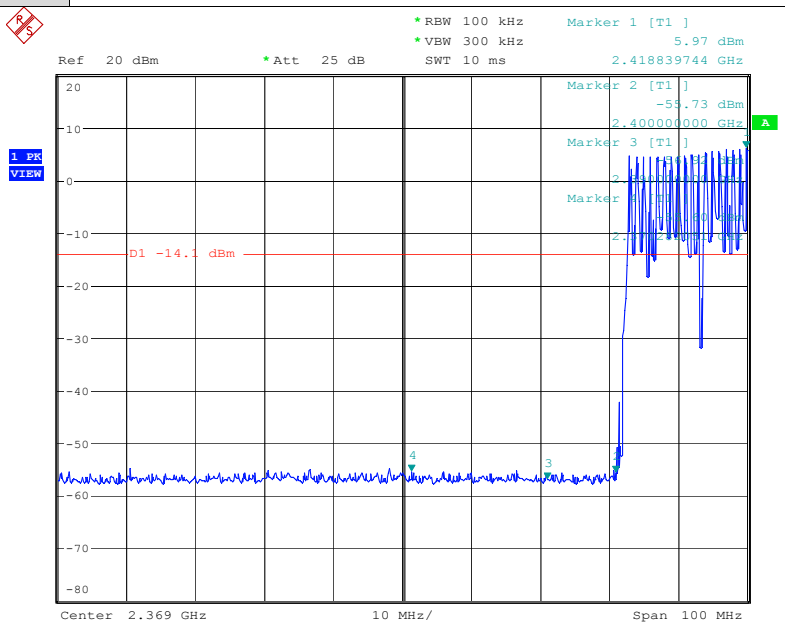
(2) Conducted Test

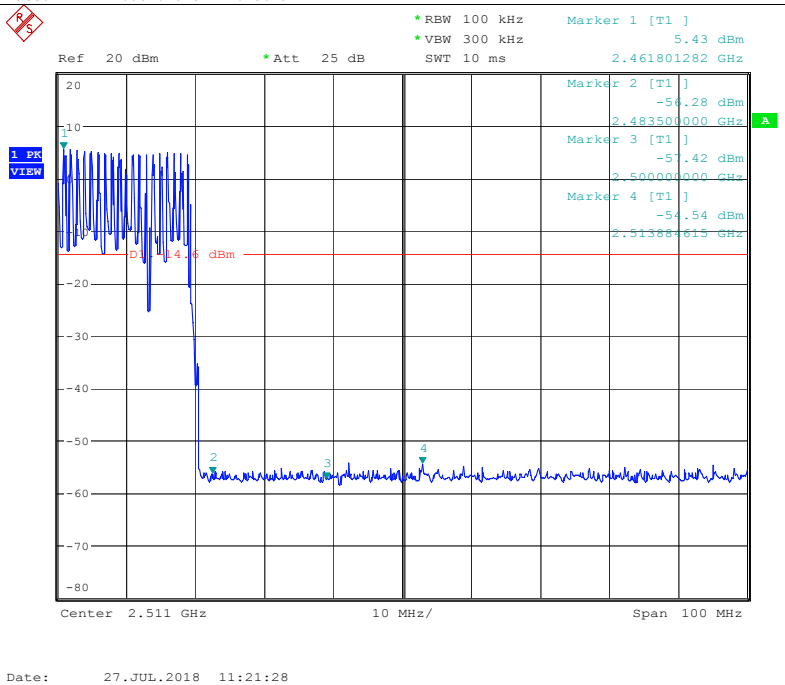
Test Mode:	GFSK Mode 2402MHz/2480 MHz



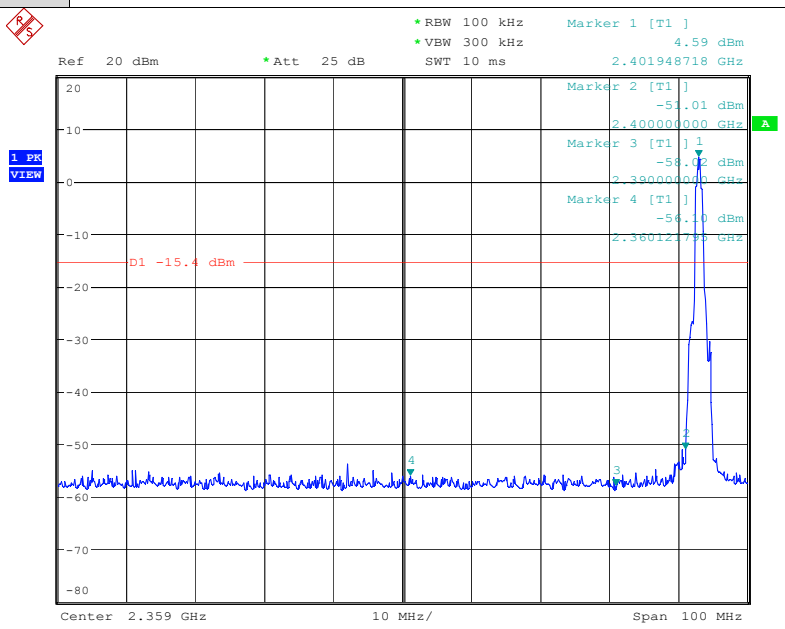


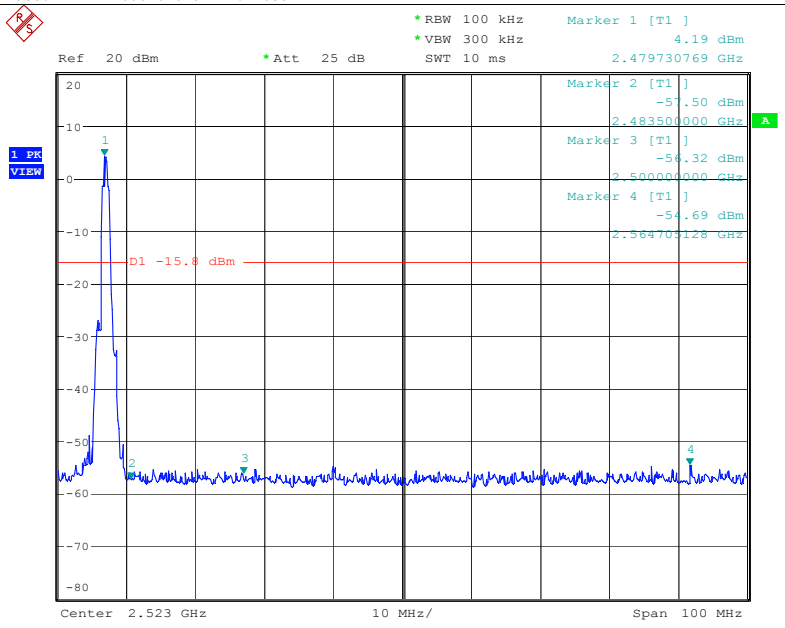
Test Mode:	GFSK Hopping Mode



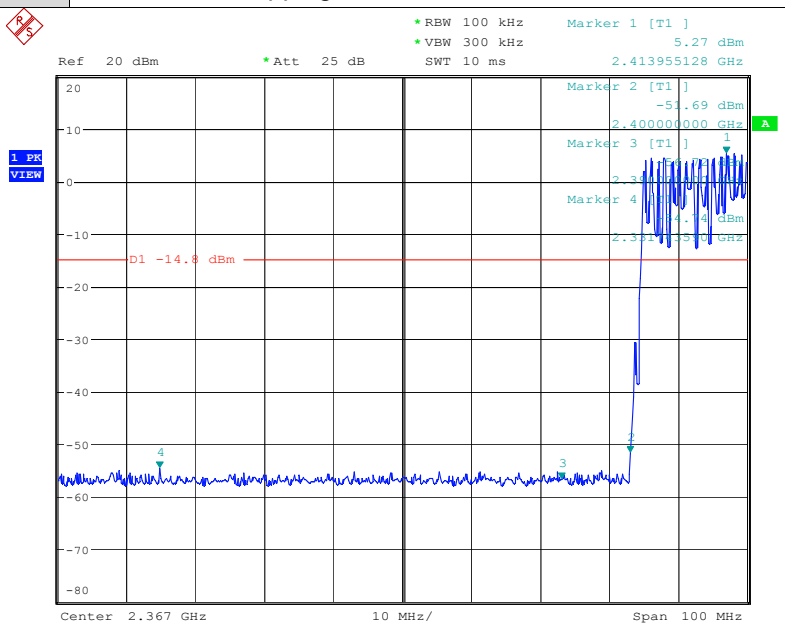


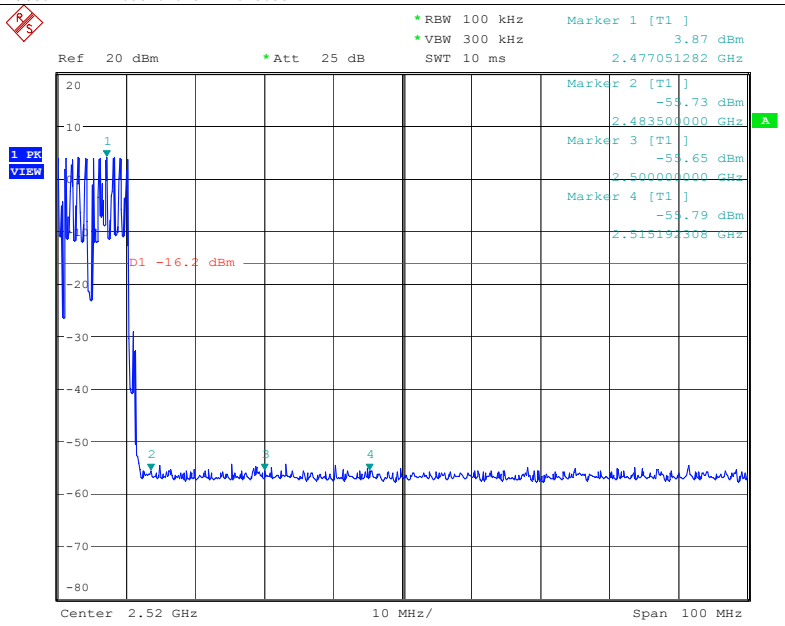
Test Mode:	π/4-DQPSK Mode 2402MHz/2480 MHz



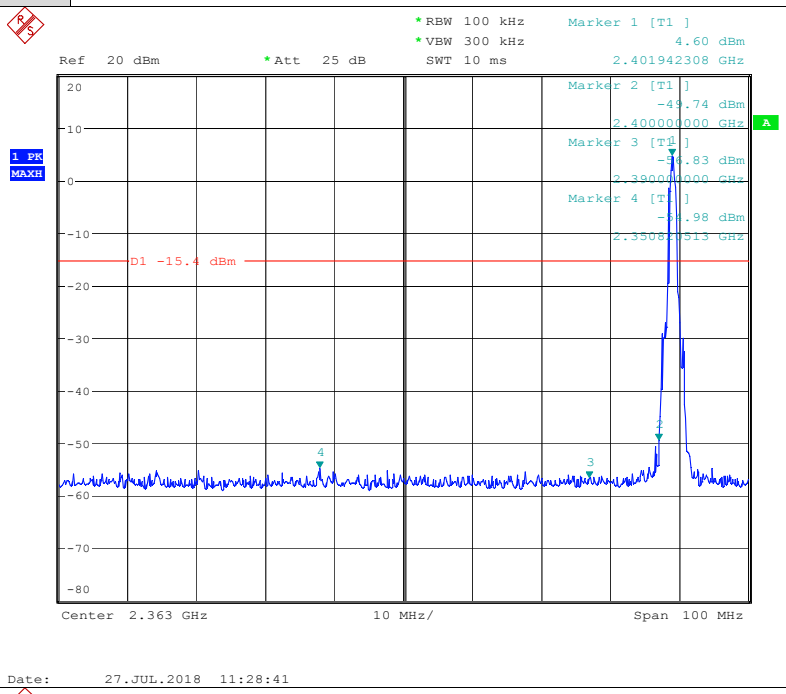


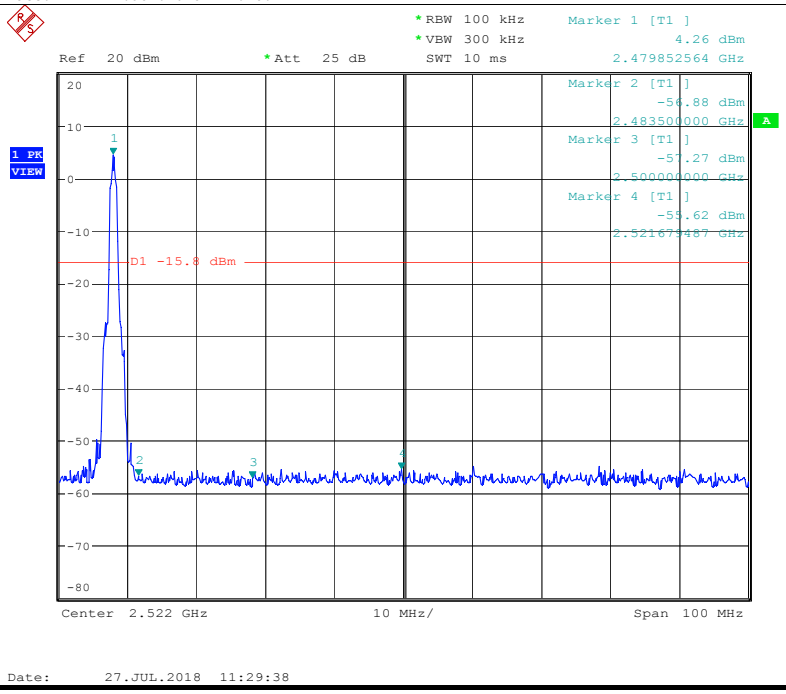
Test Mode:	π/4-DQPSK Hopping Mode



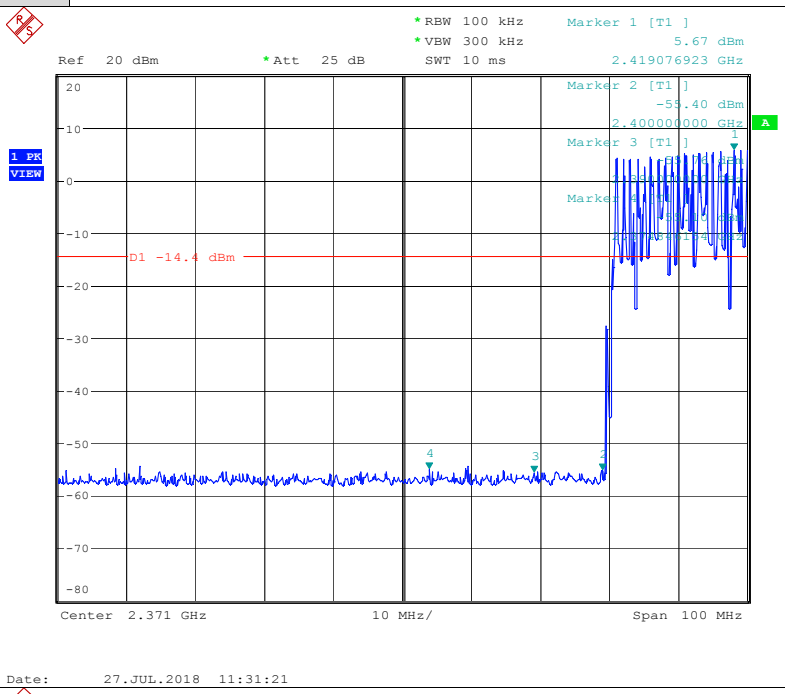


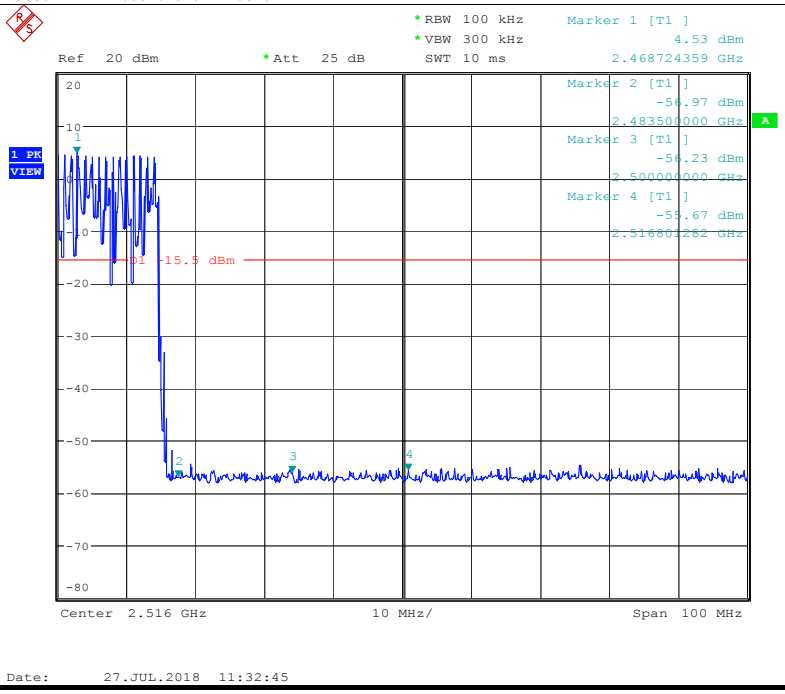
Test Mode:	8-DPSK Mode 2402MHz/2480 MHz





Test Mode:	8-DPSK Hopping Mode



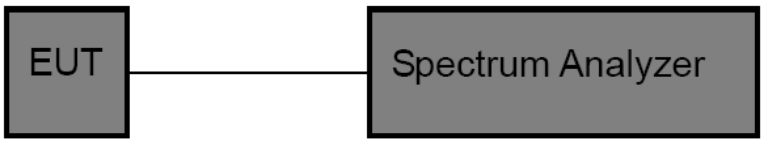


3.4. Channel Separation and Bandwidth

Limit

Test Item	Limit	Frequency Range(MHz)
Bandwidth	<=1 MHz (20dB bandwidth)	2400~2483.5
Channel Separation	>25KHz or >two-thirds of the 20 dB bandwidth Which is greater	2400~2483.5

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. Spectrum Setting:
   (1) Set RBW = 100 kHz.
   (2) Set the video bandwidth (VBW) ≥ 3 RBW.
   (3) Detector = Peak.
   (4) Trace mode = Max hold.
   (5) Sweep = Auto couple.

NOTE: The EUT was set to continuously transmitting in each mode and low, Middle and high channel for the test.

Test Mode

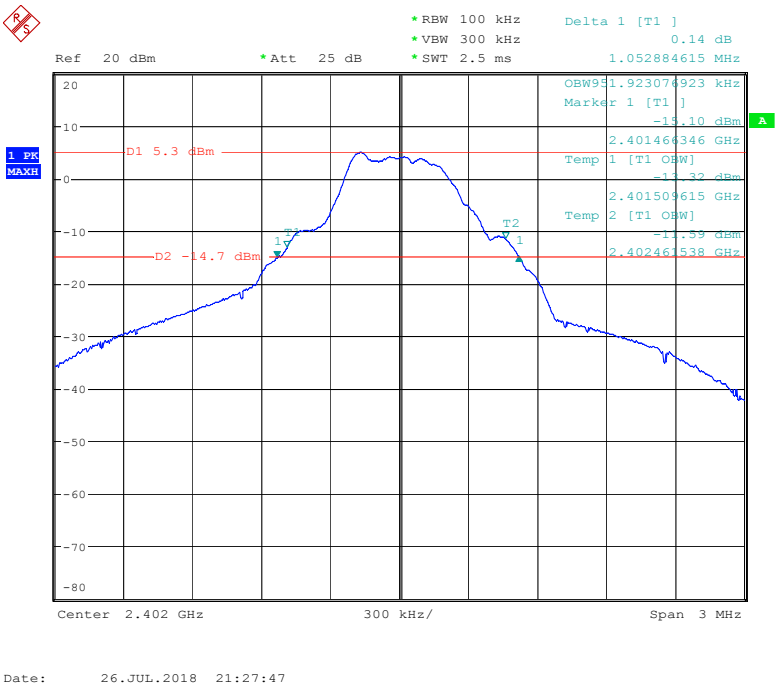
Please refer to the clause 2.2.

Test Results

Test Mode:	GFSK Mode		
Channel frequency (MHz)	**99% OBW (kHz)**	**20dB Bandwidth (kHz)**	**20dB Bandwidth *2/3 (kHz)**
2402	951.923	1052.884	701.92
2441	956.730	1052.884	701.92
2480	951.923	1072.115	714.74

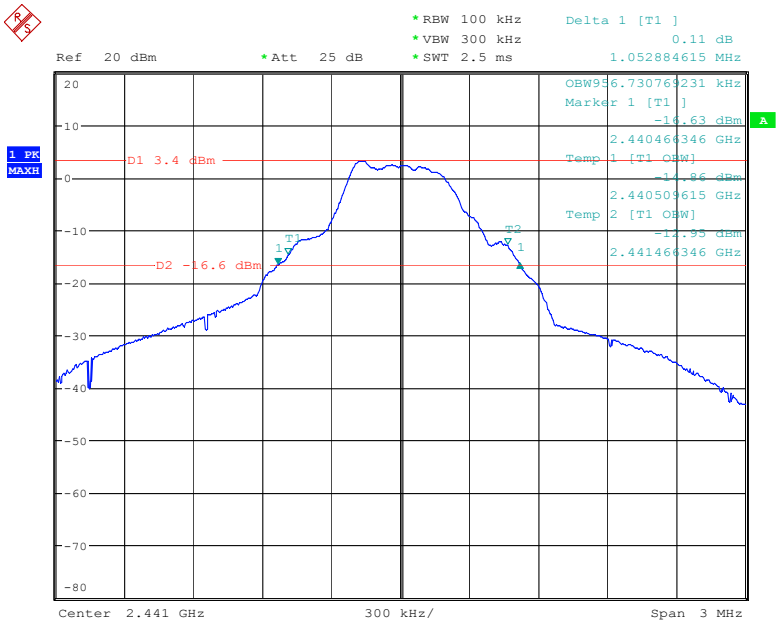
GFSK Mode

2402 MHz



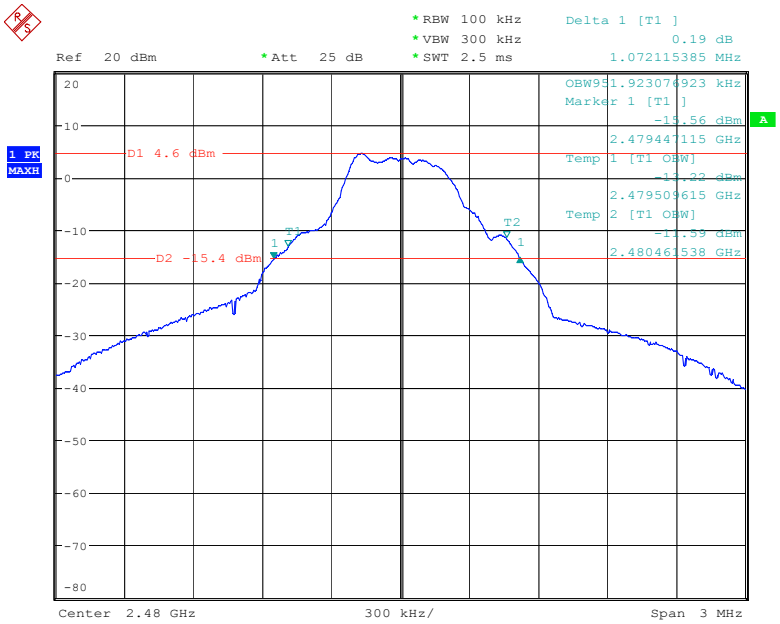
GFSK Mode

2441 MHz

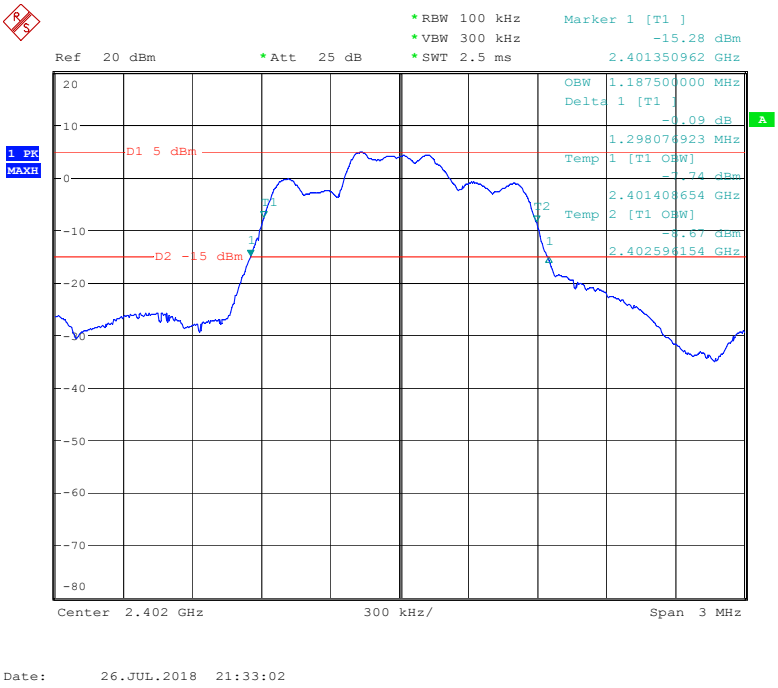


GFSK Mode

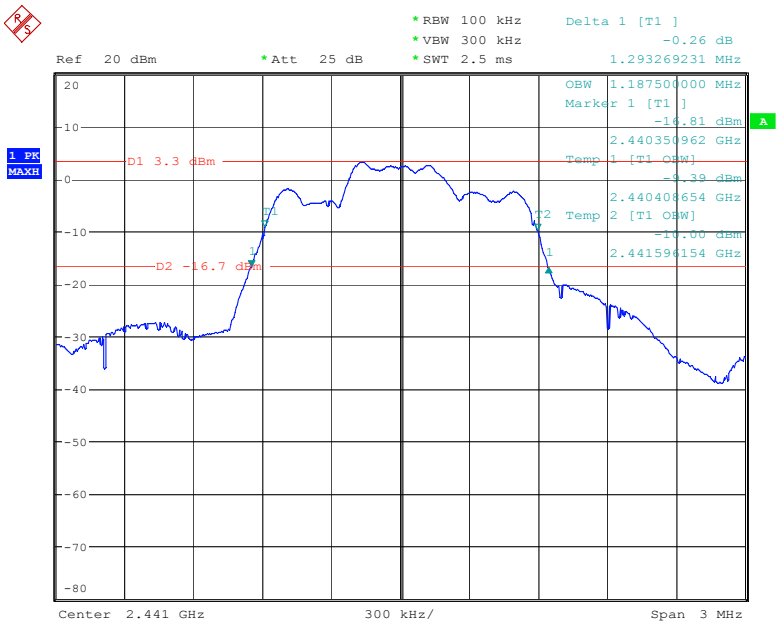
2480 MHz



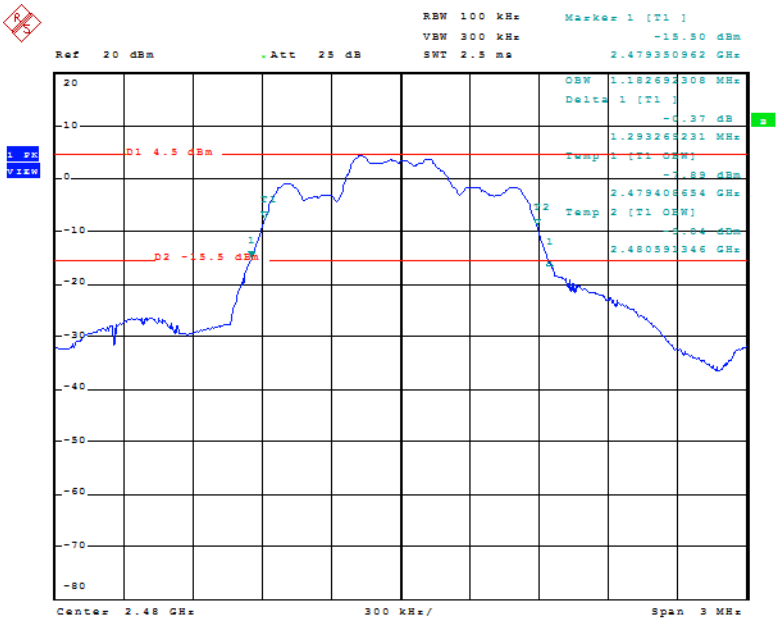
Test Mode:	π/4-DQPSK Mode		
Channel frequency (MHz)	**99% OBW (kHz)**	**20dB Bandwidth (kHz)**	**20dB Bandwidth *2/3 (kHz)**
2402	1187.500	1298.076	865.38
2441	1187.500	1293.269	862.18
2480	1182.692	1293.265	862.18
π/4-DQPSK Mode			
2402 MHz			



π/4-DQPSK Mode
2441 MHz



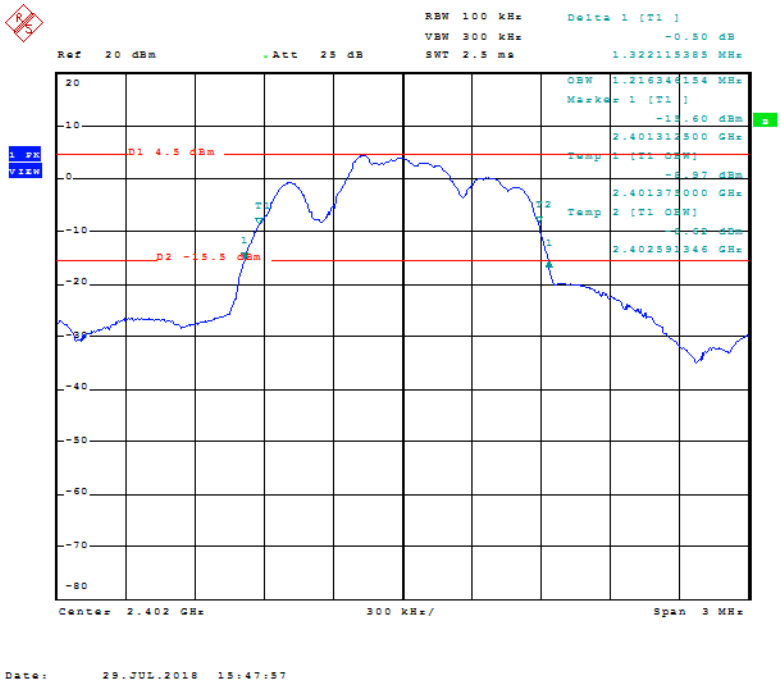
π/4-DQPSK Mode
2480 MHz



Test Mode:	8-DPSK Mode		
Channel frequency (MHz)	**99% OBW (kHz)**	**20dB Bandwidth (kHz)**	**20dB Bandwidth *2/3 (kHz)**
2402	1216.346	1322.115	881.41
2441	1216.346	1322.115	881.41
2480	1206.730	1317.307	878.20

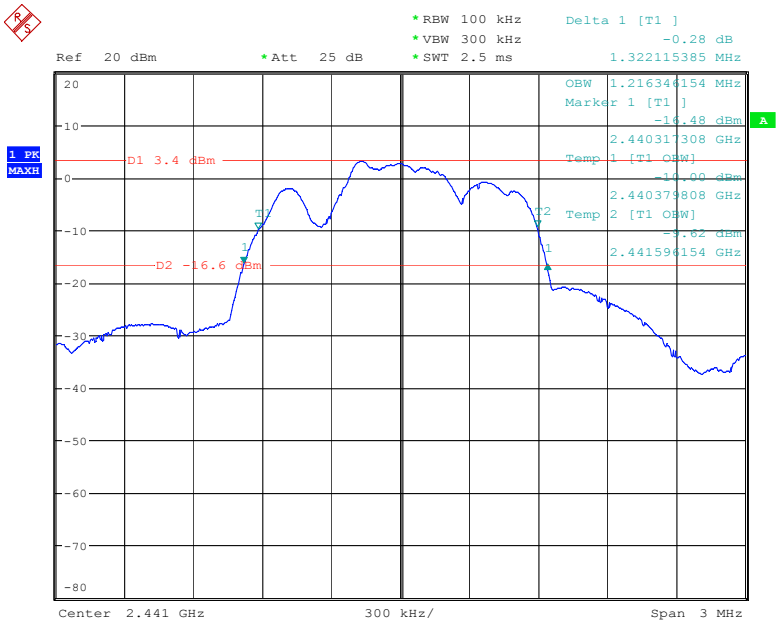
8-DPSK Mode

2402 MHz



8-DPSK Mode

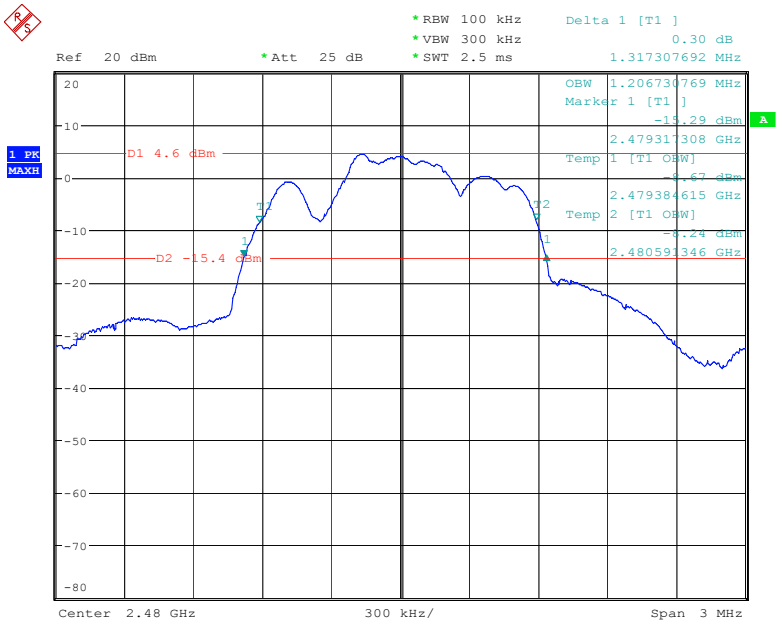
2441 MHz



Date: 26.JUL.2018 21:39:25

8-DPSK Mode

2480 MHz

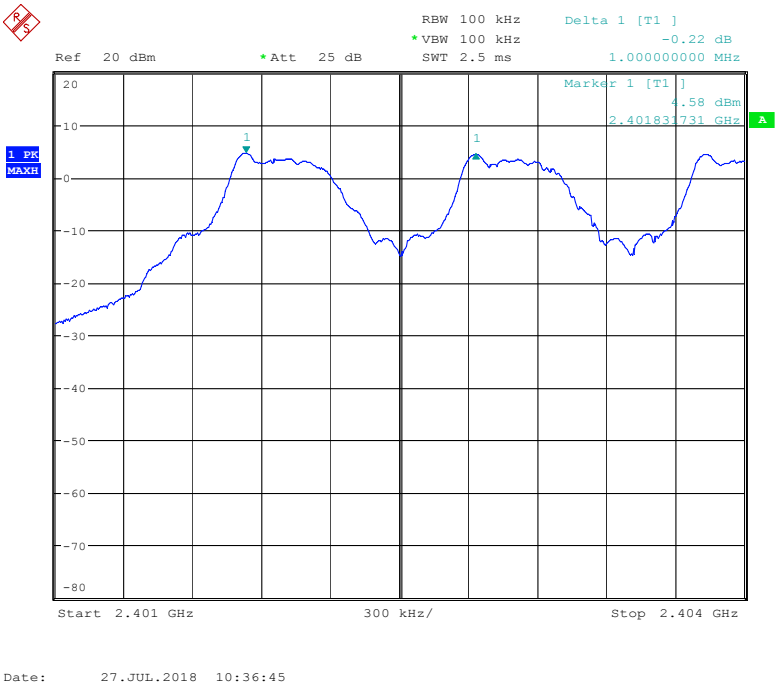


Date: 26.JUL.2018 21:40:55

Test Mode:	GFSK Hopping Mode	
Channel frequency (MHz)	**Separation Read Value (kHz)**	**Separation Limit (kHz)**
2402	1000.00	701.92
2441	1000.00	701.92
2480	1000.00	714.74

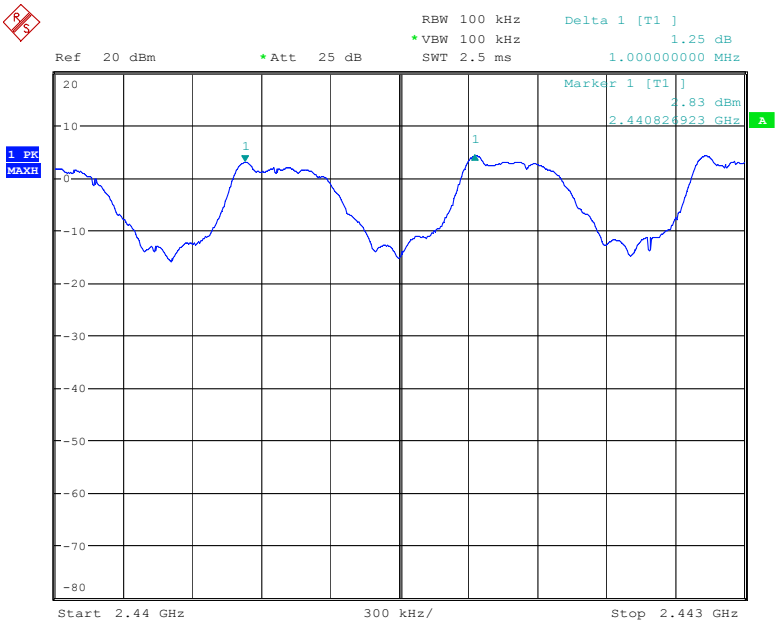
GFSK Hopping Mode

2402 MHz



GFSK Hopping Mode

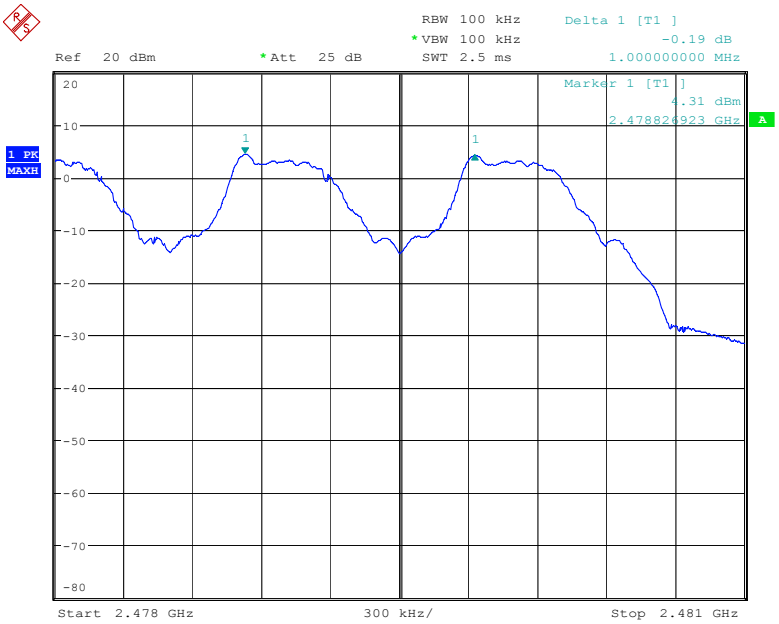
2441 MHz



Date: 27.JUL.2018 10:39:52

GFSK Hopping Mode

2480 MHz

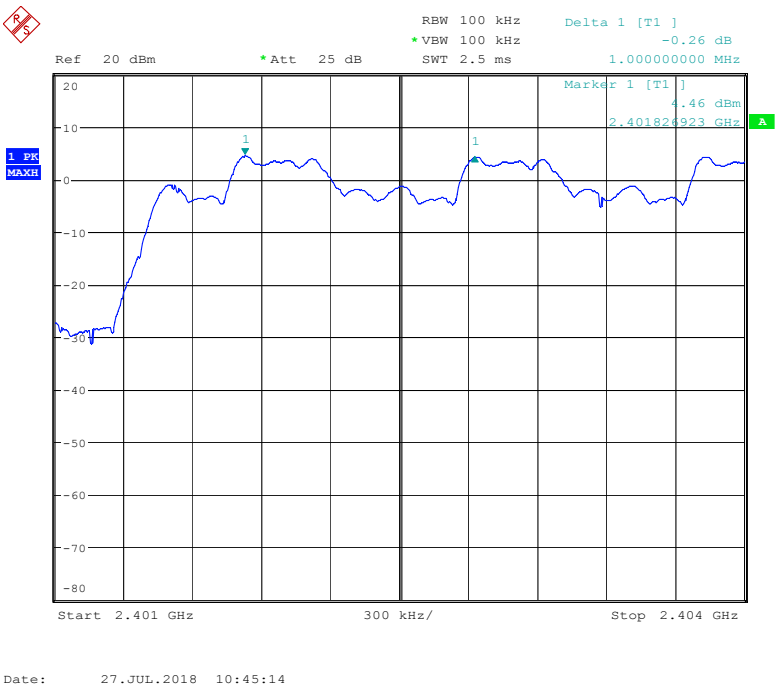


Date: 27.JUL.2018 10:41:59

Test Mode:	π/4-DQPSK Hopping Mode	
Channel frequency (MHz)	**Separation Read Value (kHz)**	**Separation Limit (kHz)**
2402	1000.00	865.38
2441	1004.80	862.18
2480	1000.00	862.18

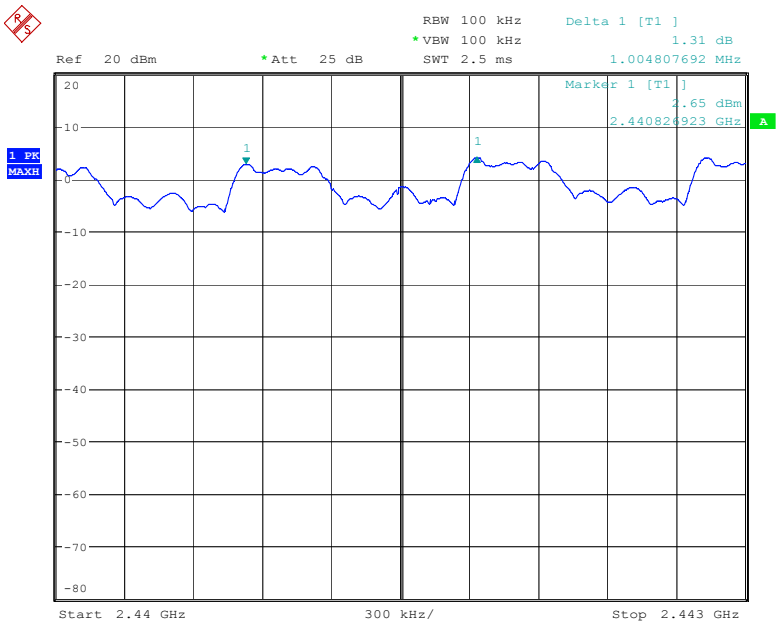
π/4-DQPSK Hopping Mode

2402 MHz



π/4-DQPSK Hopping Mode

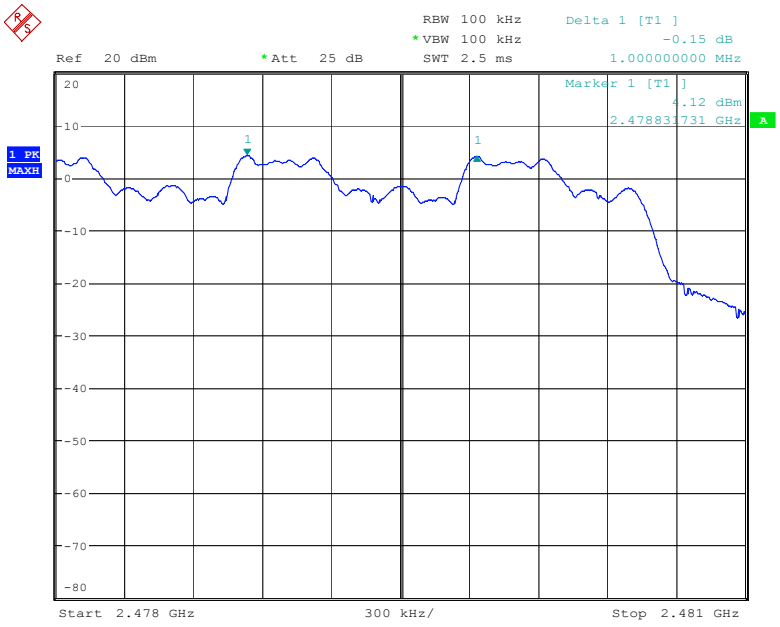
2441 MHz



Date: 27.JUL.2018 10:49:52

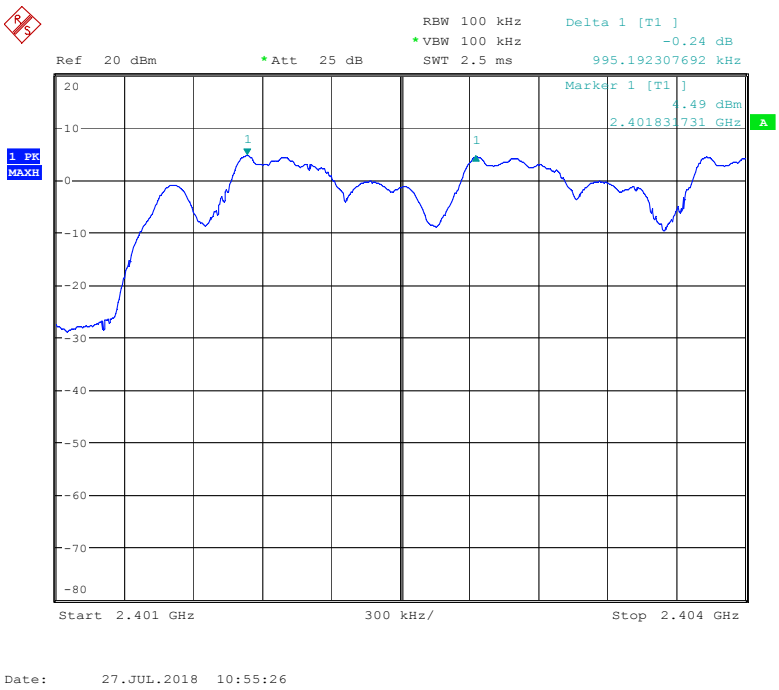
π/4-DQPSK Hopping Mode

2480 MHz



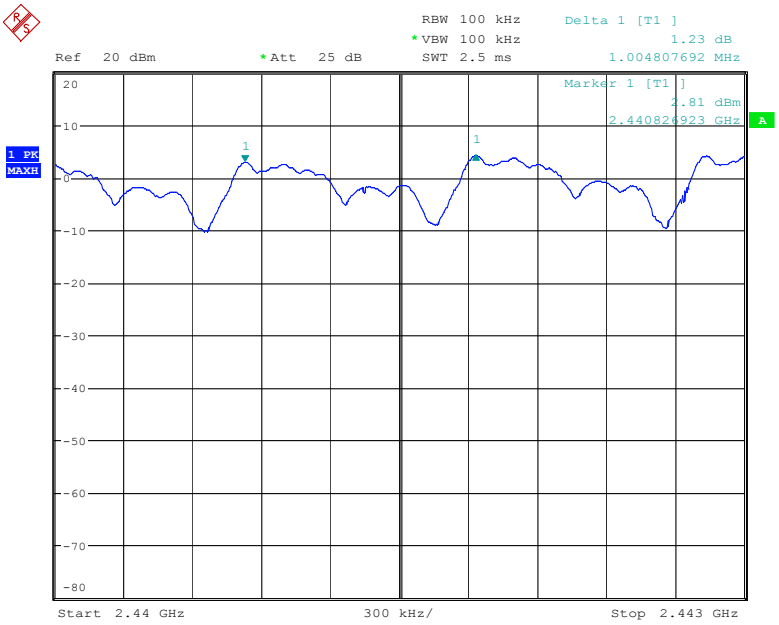
Date: 27.JUL.2018 10:52:40

Test Mode:	8-DPSK Hopping Mode	
Channel frequency (MHz)	**Separation Read Value (kHz)**	**Separation Limit (kHz)**
2402	995.19	881.41
2441	1004.80	881.41
2480	995.19	878.20
8-DPSK Hopping Mode		
2402 MHz		



8-DPSK Hopping Mode

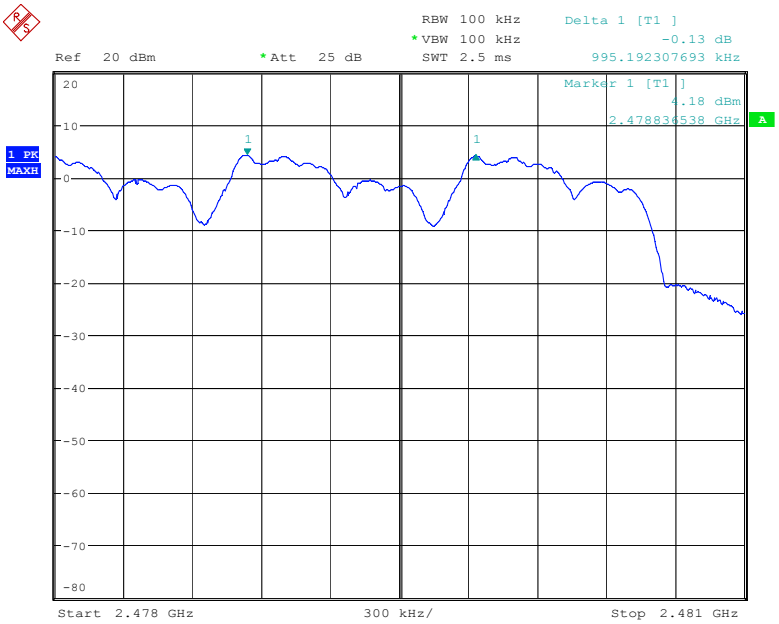
2441 MHz



Date: 27.JUL.2018 10:59:20

8-DPSK Hopping Mode

2480 MHz



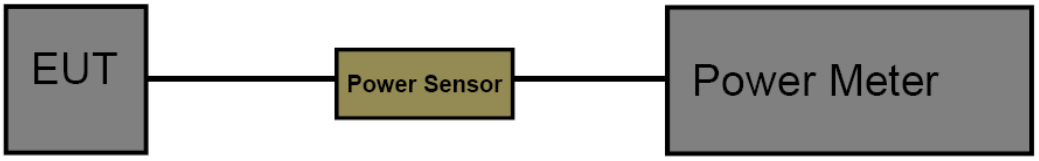
Date: 27.JUL.2018 11:03:07

3.5. Number of Hopping Channel

Limit

Section	Test Item	Limit
15.247	Number of Hopping Channel	>15

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. Spectrum Setting:
   (1) Peak Detector: RBW=100 kHz, VBW≥RBW, Sweep time= Auto.

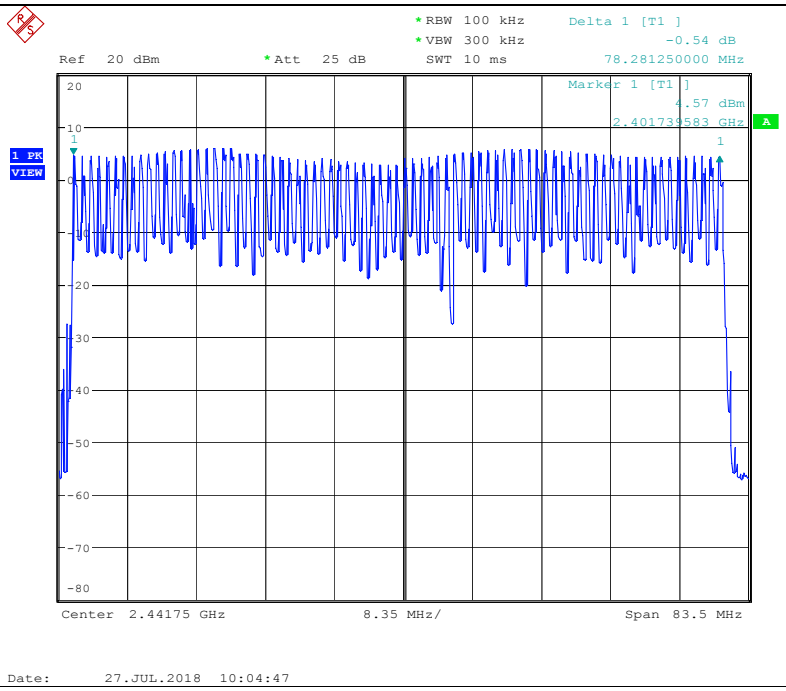
Test Mode

Please refer to the clause 2.2.

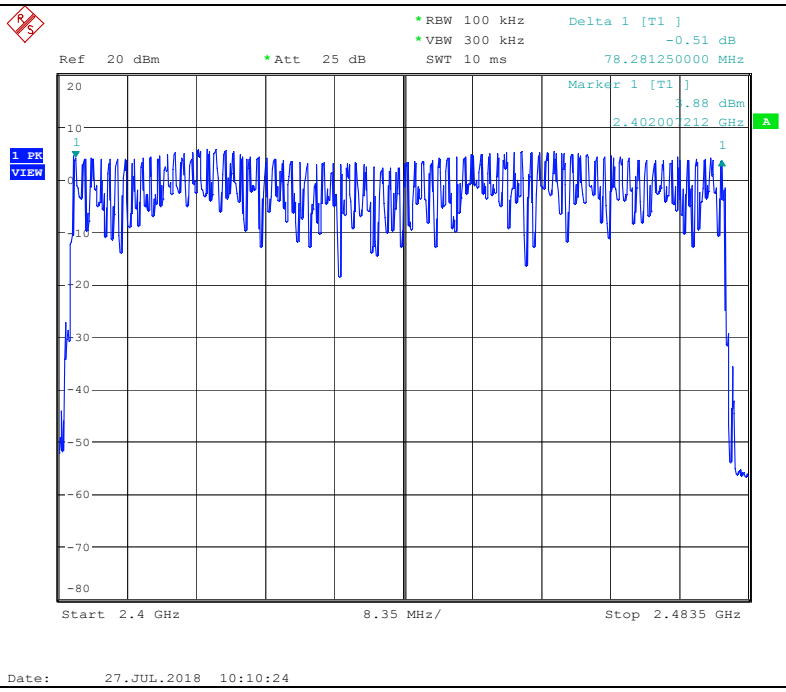
Test Result

Test Mode:	Hopping Mode		
Frequency Range	**Test Mode**	**Quantity of Hopping Channel**	**Limit**
2402MHz~2483.5MHz	GFSK	79	**>15**
	π/4-DQPSK	79	
	8-DPSK	79	

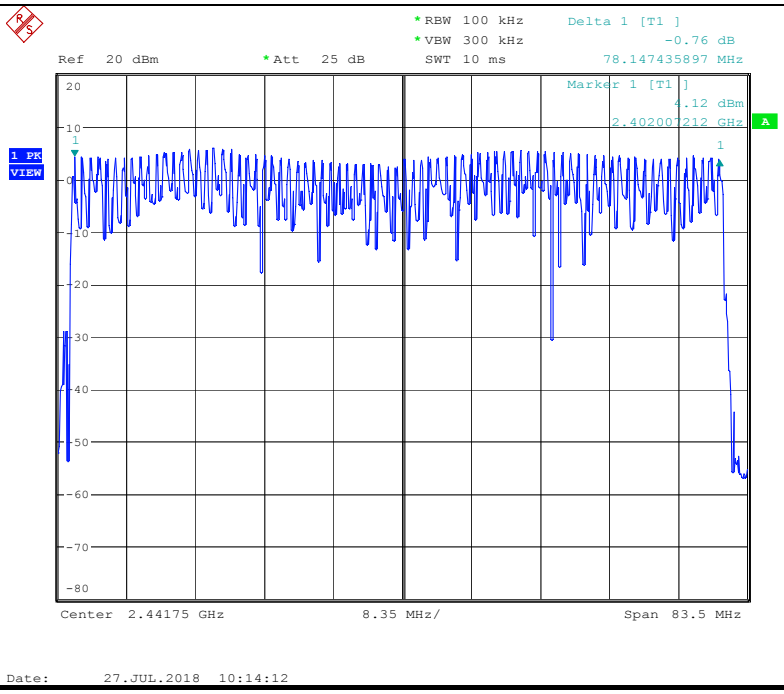
GFSK Mode



π/4-DQPSK Mode



8-DPSK Mode

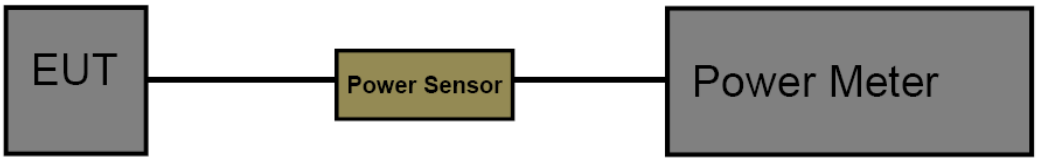

RBW 100 kHz
VBW 300 kHz
SWT 10 ms
Delta 1 [T1]
-0.76 dB
78.147435897 MHz
Ref 20 dBm
Att 25 dB
Marker 1 [T1]
4.12 dBm
2.402007212 GHz
1 PK
VIEW
Center 2.44175 GHz
8.35 MHz/
Span 83.5 MHz
Date: 27.JUL.2018 10:14:12

3.6. Dwell Time

Limit

Section	Test Item	Limit
15.247(a)(1)/ RSS-210 Annex 8(A8.1d)	Average Time of Occupancy	0.4 sec

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. Spectrum Setting:
   (1) Spectrum Setting: RBW=1MHz, VBW≥RBW.
   (2) Use video trigger with the trigger level set to enable triggering only on full pulses.
   (3) Sweep Time is more than once pulse time.
   (4) Set the center frequency on any frequency would be measure and set the frequency span to zero.
   (5) Measure the maximum time duration of one single pulse.
   (6) Set the EUT for packet transmitting.

Test Mode

Please refer to the clause 2.2

Test Result

Test Mode:	Hopping Mode (GFSK)					
Test Mode	Channel (MHz)	Pulse Time (ms)	Total of Dwell (ms)	Period Time (s)	Limit (ms)	Result
1DH1	2441	0.423	135.36	31.60	400	PASS
1DH3	2441	1.678	268.48	31.60	400	PASS
1DH5	2441	2.926	312.11	31.60	400	PASS

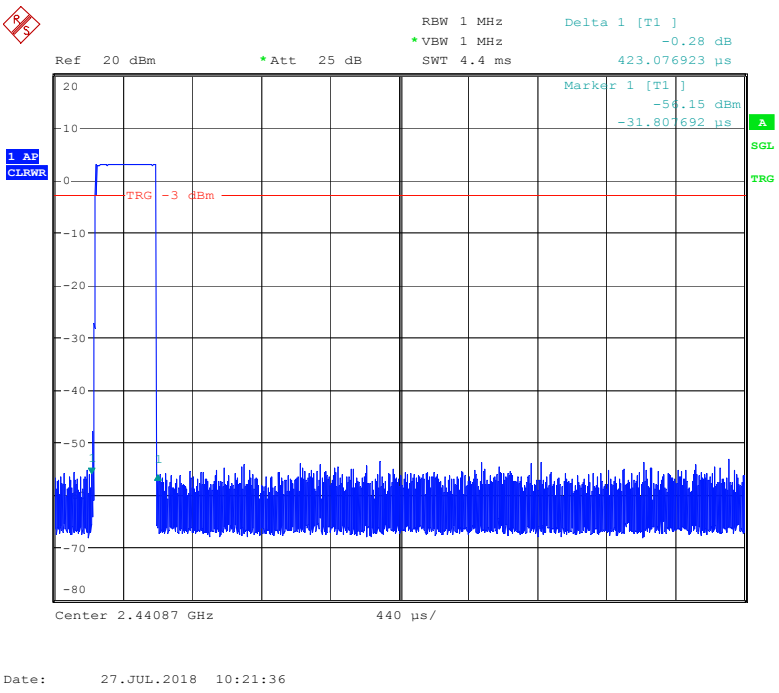
1DH1 Total of Dwell= Pulse Time(1600/2)*31.6/79*

1DH3 Total of Dwell= Pulse Time(1600/4)*31.6/79*

1DH5 Total of Dwell= Pulse Time(1600/6)*31.6/79*

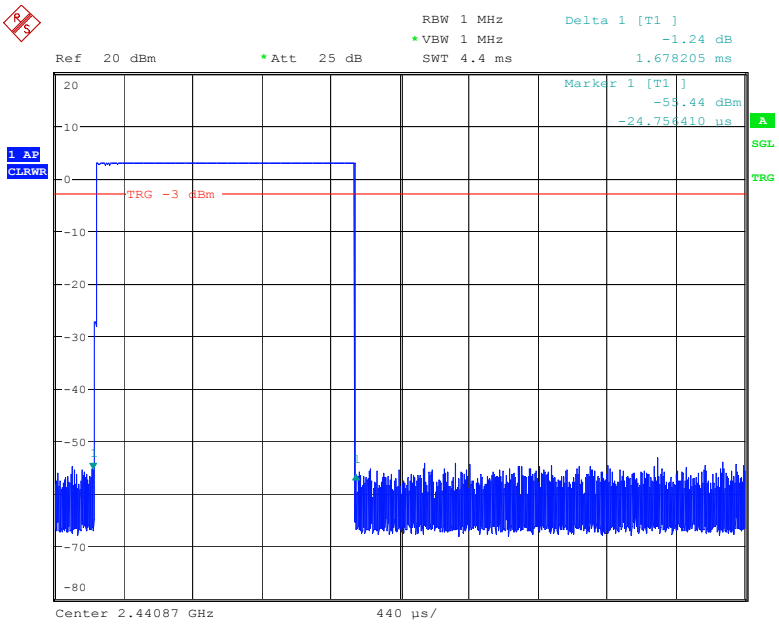
GFSK Hopping Mode 1DH1

2441 MHz



GFSK Hopping Mode 1DH3

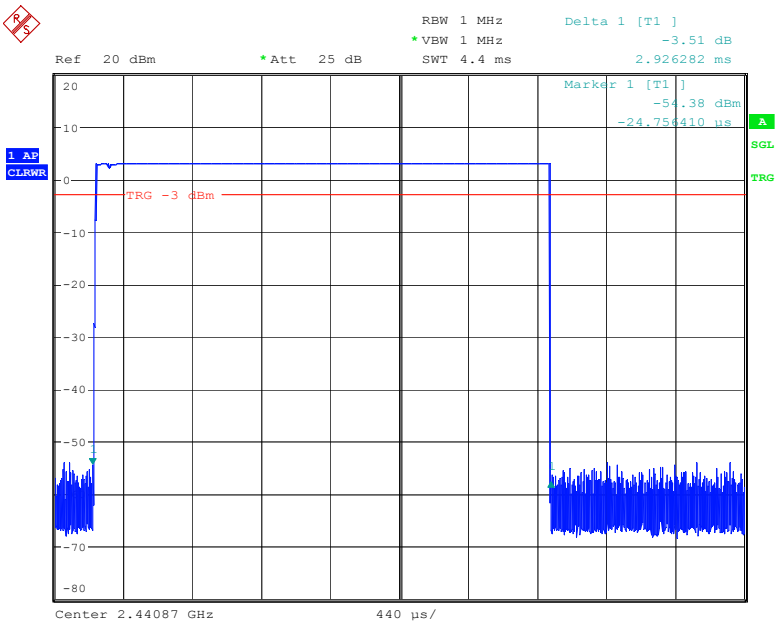
2441 MHz



Date: 27.JUL.2018 10:23:17

GFSK Hopping Mode 1DH5

2441 MHz



Date: 27.JUL.2018 10:24:10

Test Mode:	Hopping Mode (π/4-DQPSK)					
Test Mode	**Channel (MHz)**	**Pulse Time (ms)**	**Total of Dwell (ms)**	**Period Time (s)**	**Limit (ms)**	**Result**
2DH1	2441	0.416	133.12	31.60	**400**	**PASS**
2DH3	2441	1.678	268.48	31.60	**400**	**PASS**
2DH5	2441	2.926	312.11	31.60	**400**	**PASS**

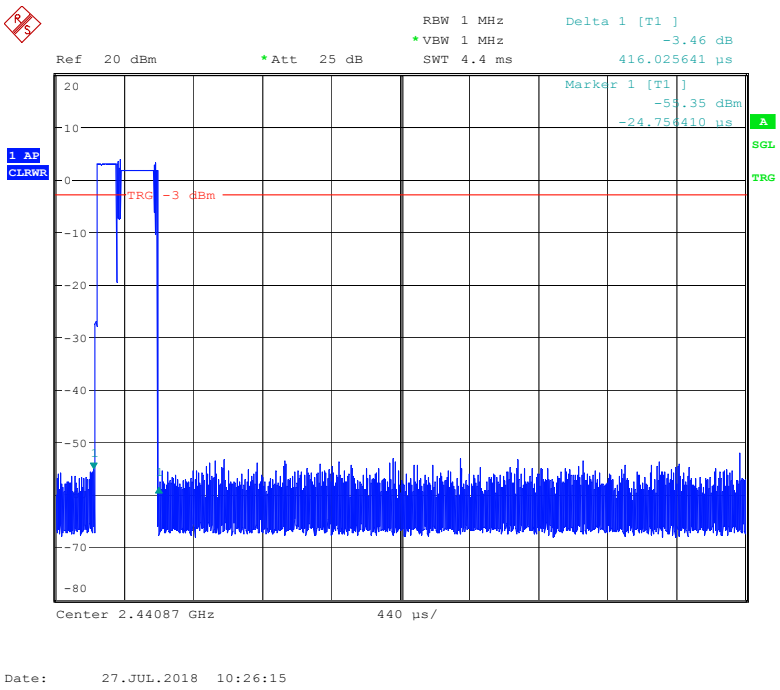
2DH1 Total of Dwell= Pulse Time(1600/2)*31.6/79*

2DH3 Total of Dwell= Pulse Time(1600/4)*31.6/79*

2DH5 Total of Dwell= Pulse Time(1600/6)*31.6/79*

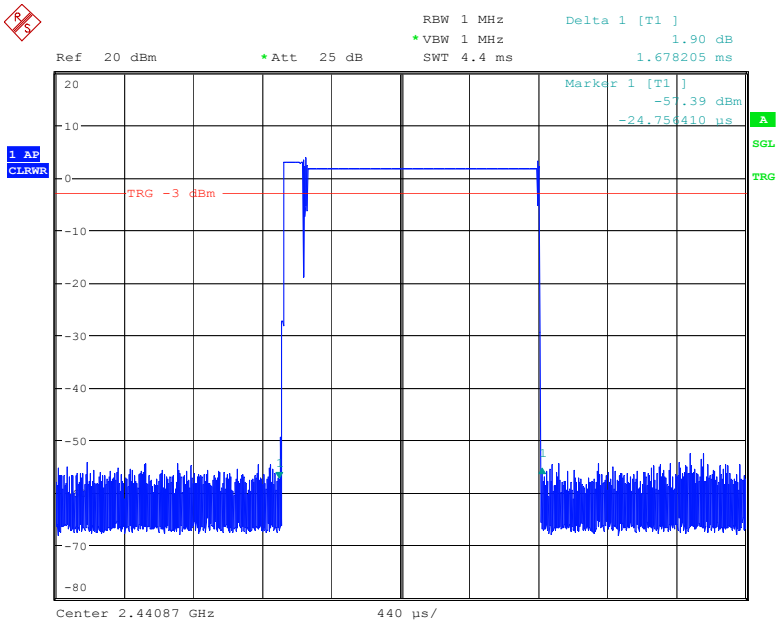
π/4-DQPSK Hopping Mode 2DH1

2441 MHz



π/4-DQPSK Hopping Mode 2DH3

2441 MHz



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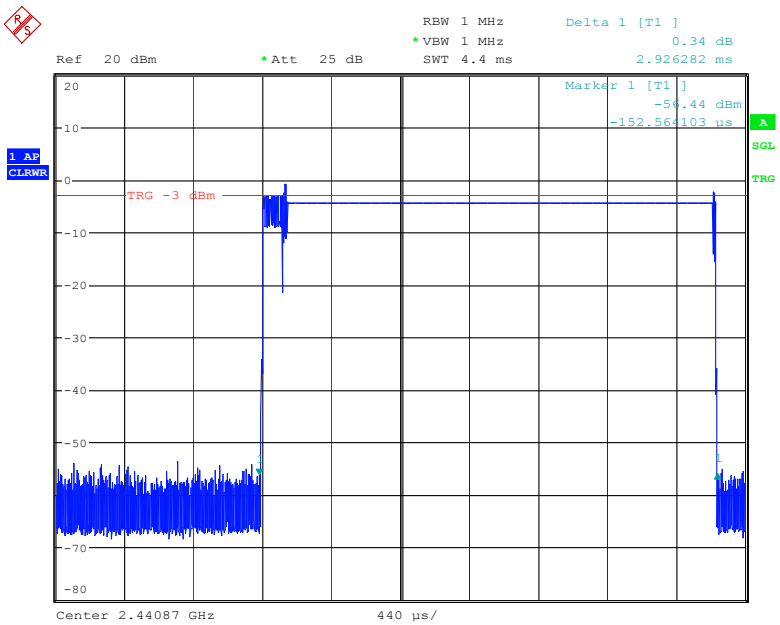
π/4-DQPSK Hopping Mode 2DH5

2441 MHz



Date: 27.JUL.2018 10:29:05

Test Mode:	Hopping Mode (8-DPSK)					
Test Mode	**Channel (MHz)**	**Pulse Time (ms)**	**Total of Dwell (ms)**	**Period Time (s)**	**Limit (ms)**	**Result**
3DH1	2441	0.416	133.12	31.60	**400**	**PASS**
3DH3	2441	1.664	266.24	31.60	**400**	**PASS**
3DH5	2441	2.926	312.11	31.60	**400**	**PASS**

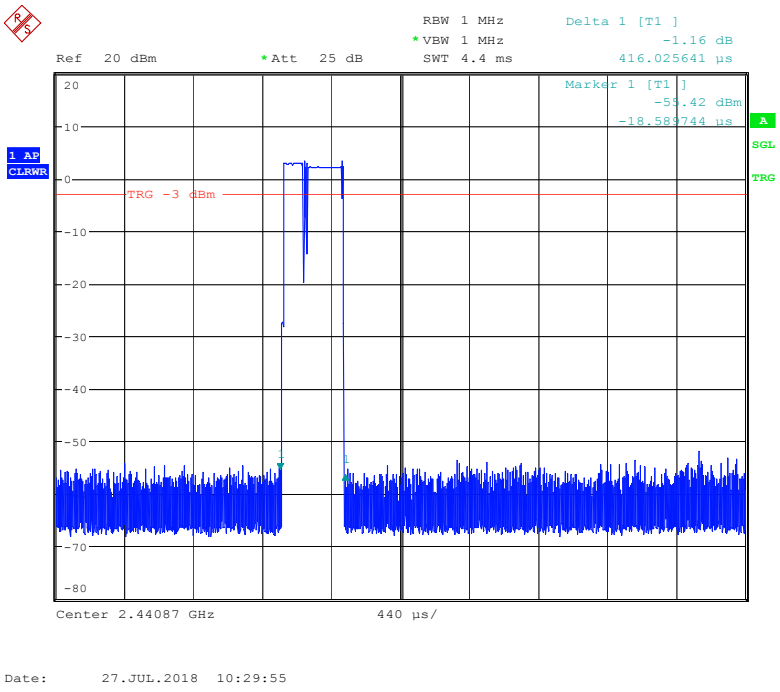
1DH1 Total of Dwell= Pulse Time(1600/2)*31.6/79*

1DH3 Total of Dwell= Pulse Time(1600/4)*31.6/79*

1DH5 Total of Dwell= Pulse Time(1600/6)*31.6/79*

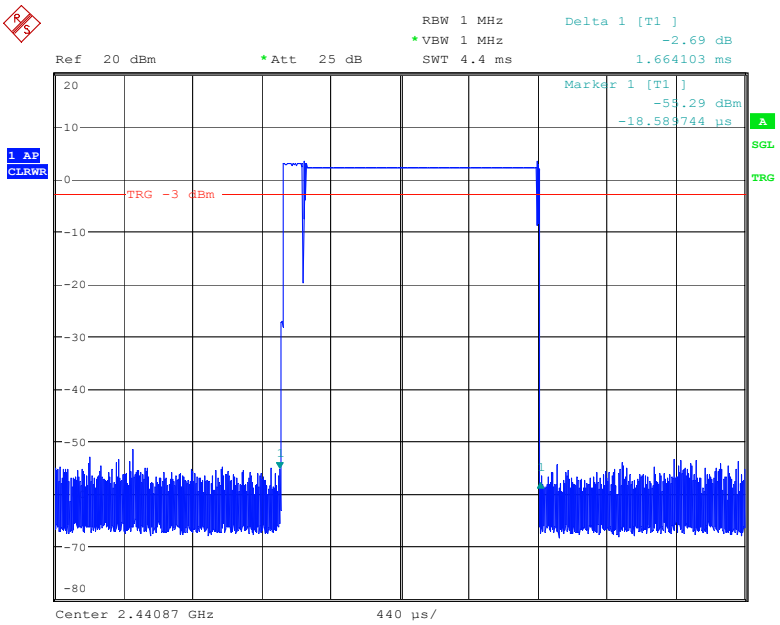
8-DPSK Hopping Mode 3DH1

2441 MHz



8-DPSK Hopping Mode 3DH3

2441 MHz



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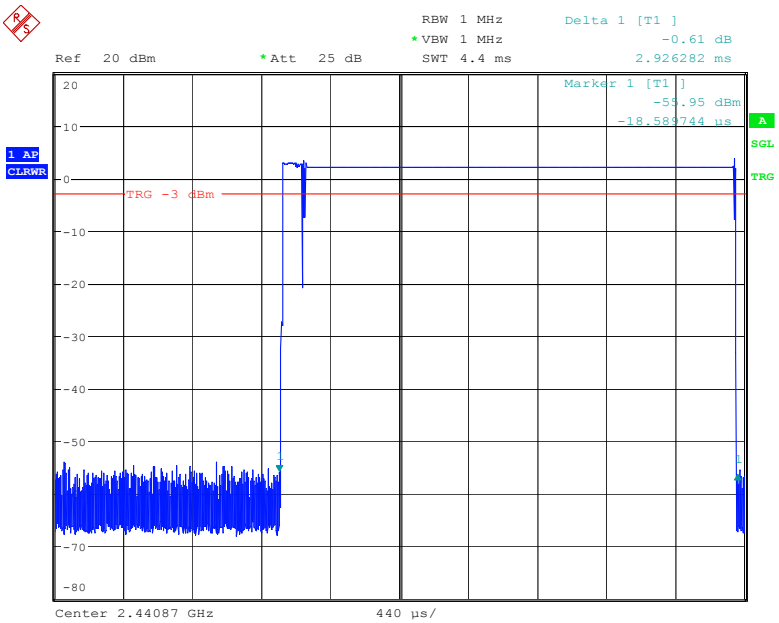
8-DPSK Hopping Mode 3DH5

2441 MHz



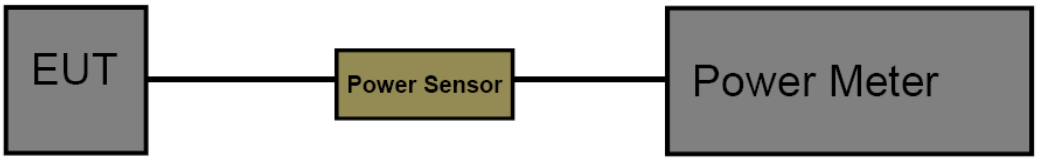
Date: 27.JUL.2018 10:31:36

3.7. Peak Output Power

Limit

Test Item	Limit	Frequency Range(MHz)
Peak Output Power	Hopping Channels>75 Power<1W(30dBm) Other <125mW(21dBm)	2400~2483.5

Test Configuration



Test Procedure

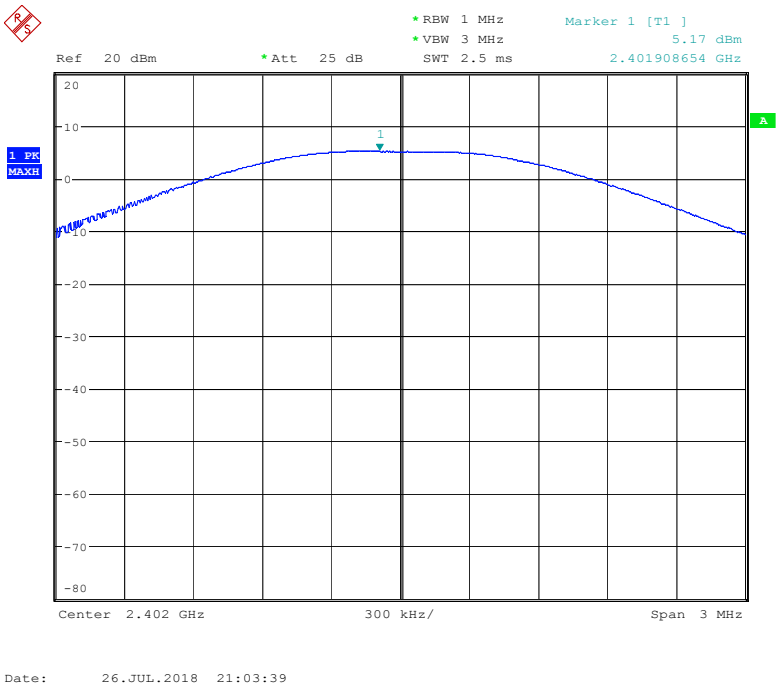
1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. Spectrum Setting:
   Peak Detector: RBW=1 MHz, VBW=3 MHz for bandwidth less than 1MHz.
   RBW=3 MHz, VBW=3 MHz for bandwidth more than 1MHz.

Test Mode

Please refer to the clause 2.2

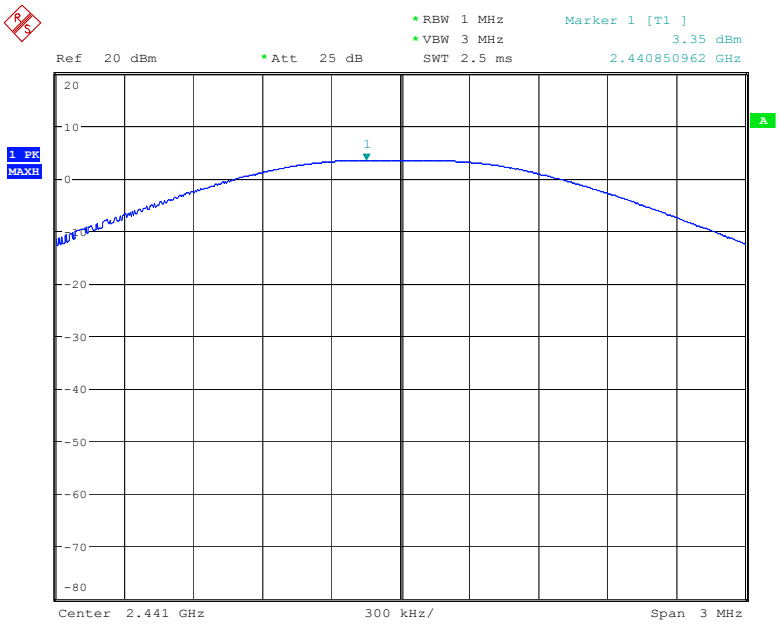
Test Result

Test Mode:	GFSK Mode	
Channel frequency (MHz)	**Test Result (dBm)**	**Limit (dBm)**
2402	5.17	**30**
2441	3.35	
2480	4.70	
GFSK Mode		
2402 MHz		



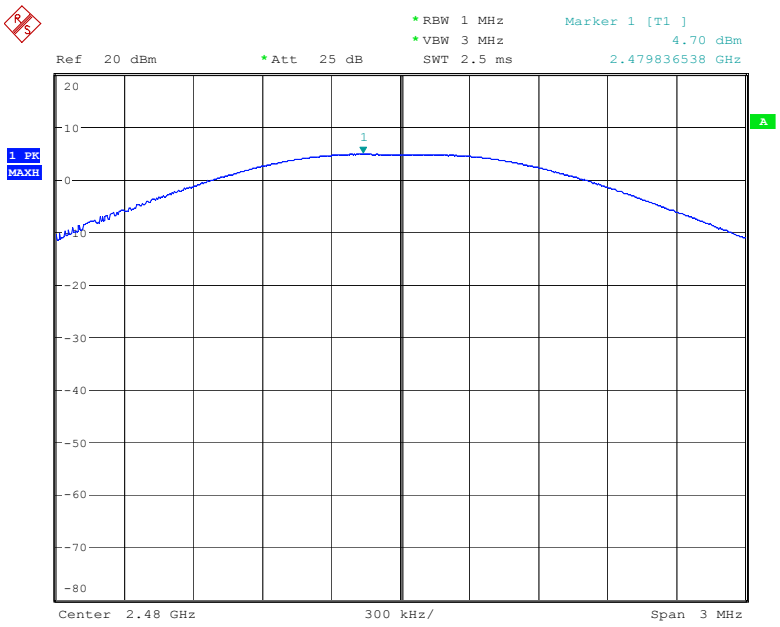
GFSK Mode

2441 MHz

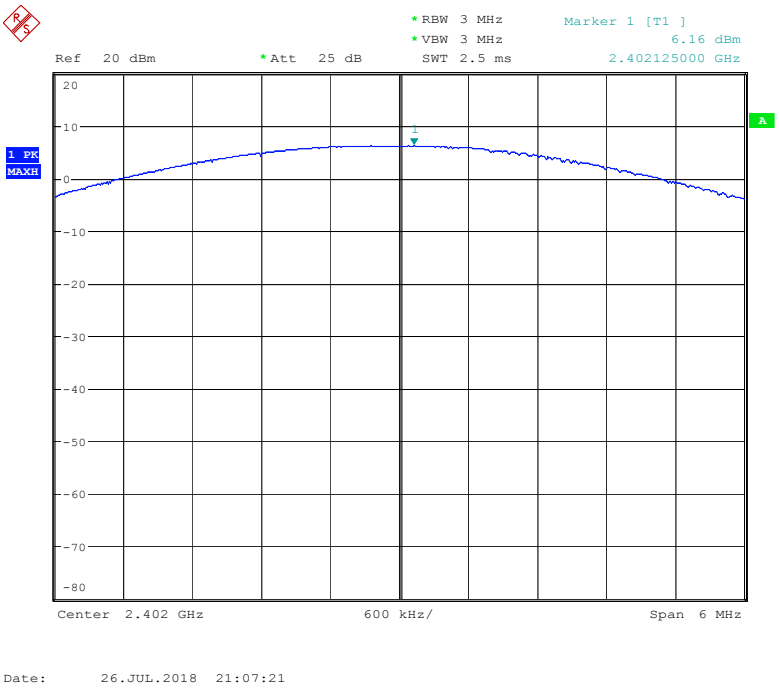


GFSK Mode

2480 MHz

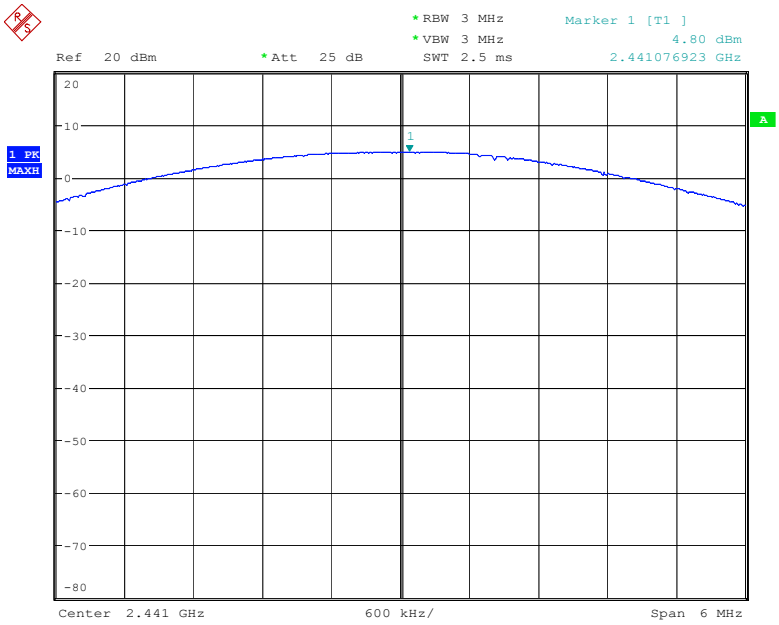


Test Mode:	π/4-DQPSK Mode	
Channel frequency (MHz)	**Test Result (dBm)**	**Limit (dBm)**
2402	6.16	**21**
2441	4.80	
2480	5.75	
π/4-DQPSK Mode		
2402 MHz		



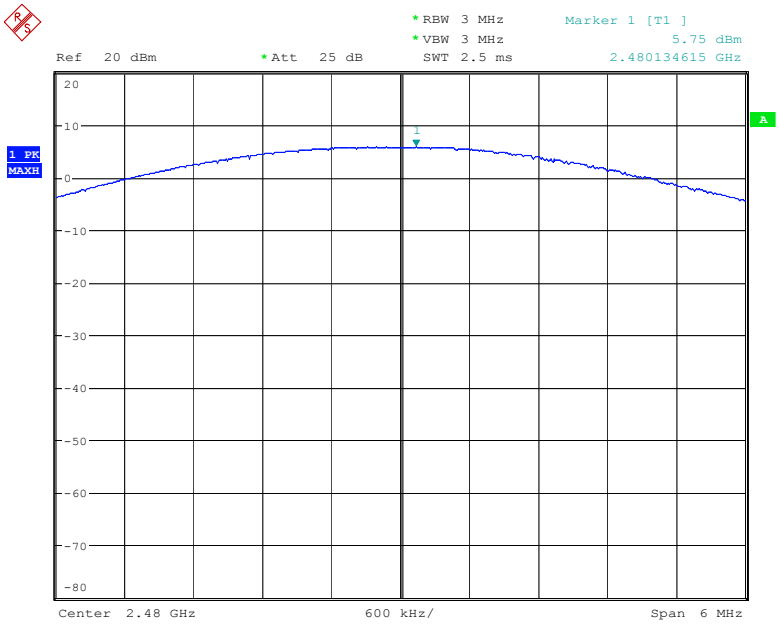
π/4-DQPSK Mode

2441 MHz

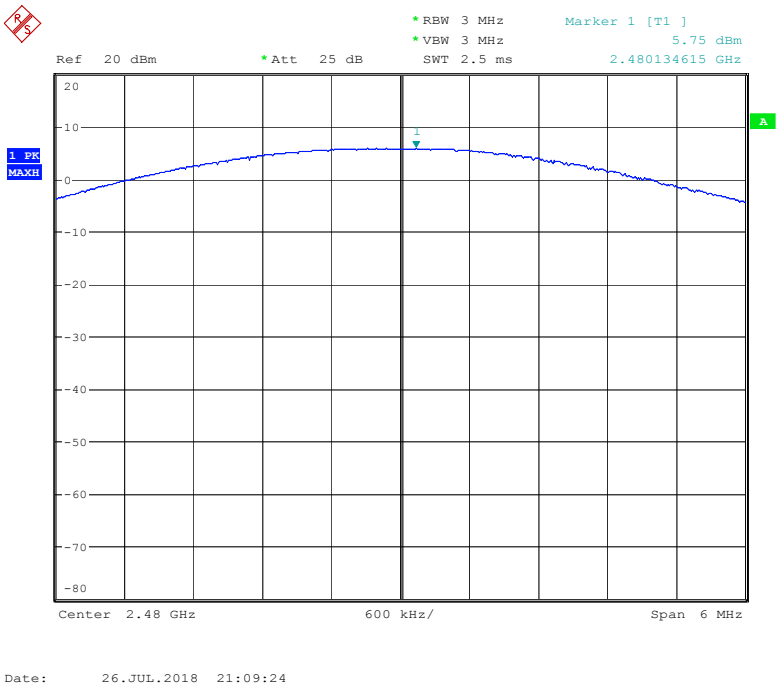


π/4-DQPSK Mode

2480 MHz

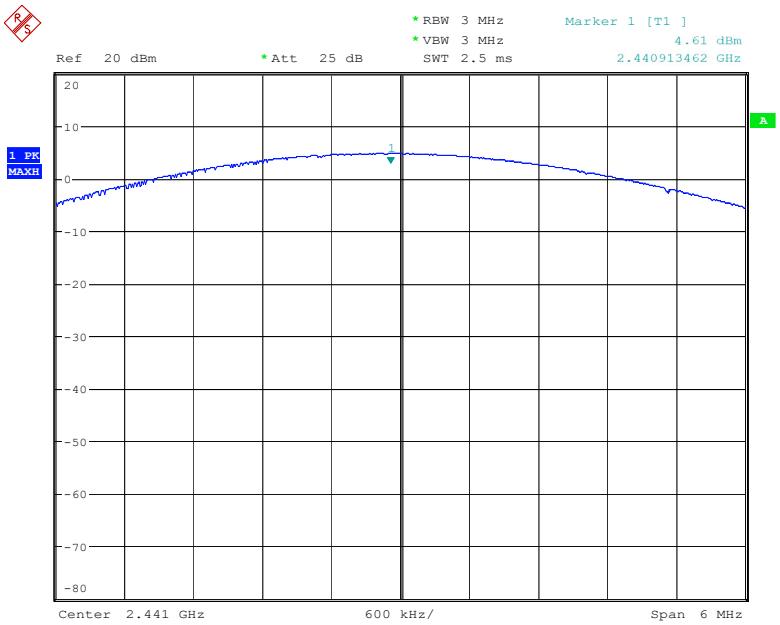


Test Mode:	8-DPSK Mode	
Channel frequency (MHz)	**Test Result (dBm)**	**Limit (dBm)**
2402	5.75	**21**
2441	4.61	
2480	5.75	
8-DPSK Mode		
2402 MHz		



8-DPSK Mode

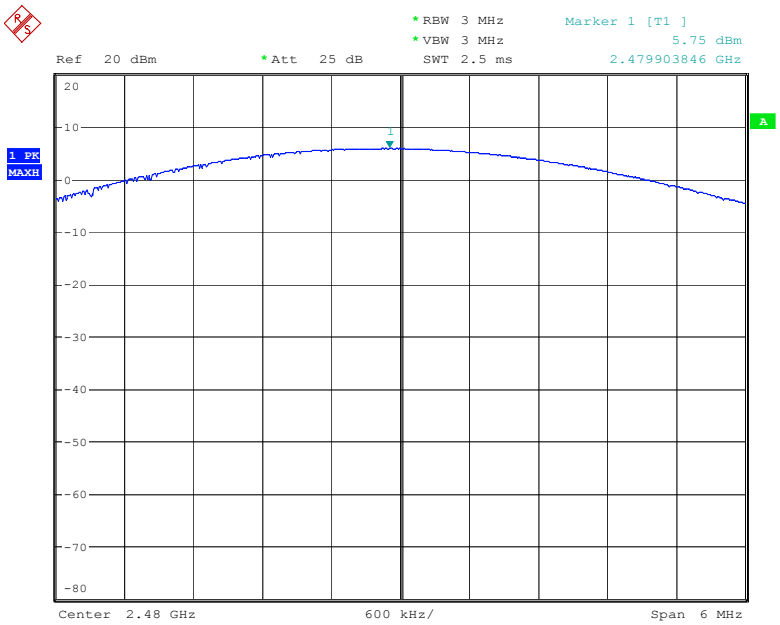
2441 MHz



Date: 26.JUL.2018 21:11:30

8-DPSK Mode

2480 MHz



Date: 26.JUL.2018 21:12:31

3.8. Antenna requirement

Requirement

FCC CFR Title 47 Part 15 Subpart C Section 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 anantenna 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.

FCC CFR Title 47 Part 15 Subpart C Section 15.247(c) (1)(i):

(i) Systems operating in the 2400~2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

Test Result

The directional gain of the antenna less than 6dBi, please refer to the EUT internal photographs antenna photo.

4.EUT TEST PHOTOS

Reference to the document No.: Test Photographs 1.

5.PHOTOGRAPHS OF EUT CONSTRUCTIONAL

Reference to the document No.: External Photographs and Internal Photographs.

**********THE END**********