FCC RADIO TEST REPORT

FCC ID: OKUSB75WUJ1

Product Name：	37"Bluetooth Soundbar with Wireless Subwoofer
Trade Mark：	SYLVANIA, PROSCAN
Main Model：	PSB378W
Additional Model：	SBB-55391, SB-75WUJ1, PSB378X, SBXXXXXXX (X means unit color and Buyer different, it can A to Z or N/A，the number of "X" can vary according to actual demand）
Report No.：	UNIA21052422ER-01

Prepared for

SHENZHEN JUNLAN ELECTRONIC LTD

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Prepared by

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TEST RESULT CERTIFICATION

Applicant	SHENZHEN JUNLAN ELECTRONIC LTD
Address	No.277 PingKui Road, Shijing Community, Pingshan Street, Pingshan New District, Shenzhen, China
Manufacturer	SHENZHEN JUNLAN ELECTRONIC LTD
Address	No.277 PingKui Road, Shijing Community, Pingshan Street, Pingshan New District, Shenzhen, China

Product description

Product Name	37"Bluetooth Soundbar with Wireless Subwoofer
Trade Mark	SYLVANIA, PROSCAN
Model Name	PSB378W, SBB-55391, SB-75WUJ1, PSB378X, SBXXXXXXX (X means unit color and Buyer different, it can A to Z or N/A，the number of "X" can vary according to actual demand）
Test Methods	FCC Rules and Regulations Part 15 Subpart C Section 15.247, ANSI C63.10: 2013

This device described above has been tested by Shenzhen United Testing Technology Co., Ltd., and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.
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Date of Test:	
Date (s) of performance of tests:	April 19 ~ May 20, 2021
Date of Issue:	May 20, 2021
Test Result:	Pass

Prepared by: Bob liao

Bob liao/Editor

Reviewer: kahn.yang

Kahn yang/Supervisor

Approved & Authorized Signer: liuze

Liuze/Manager

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Revision History of This Test Report

Report Number	Description	Issued Date
UNIA21052422ER-01	Initial Issue	2021-5-20

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test

Product Name:	37"Bluetooth Soundbar with Wireless Subwoofer
Trade Mark:	SYLVANIA, PROSCAN
Main Model:	PSB378W
Additional Model:	SBB-55391, SB-75WUJ1, PSB378X, SBXXXXXXX (X means unit color and Buyer different, it can A to Z or N/A, the number of "X" can vary according to actual demand）
Model Difference:	All models are identical in interior structure, electrical circuits and components, only different in model name, Therefore, only model PSB378W is for tests.
FCC ID:	OKUSB75WUJ1
Operation Frequency:	2402MHz~2480MHz
Number of Channels:	79CH
Modulation Type:	GFSK, π/4 DQPSK, 8DPSK
Antenna Type:	PCB Antenna
Antenna Gain:	0dBi
Hardware Version:	V1.0
Software Version:	V1.0
Adapter:	Adapter 1: Model: GKYZD0150160US Input: AC100-240V 50/60Hz 0.8A Max Output: DC 16V/1.5A Adapter 2: Model: JY024160150AA-UL Input: 100-240V 50/60Hz 1.0A Max Output: DC 16V/1.5A
Bluetooth Version:	5.0 BR+EDR

Bluetooth Channel List

Channel	Frequency MHz	Channel	Frequency MHz	Channel	Frequency MHz	Channel	Frequency MHz
1	2402	21	2422	41	2442	61	2462
2	2403	22	2423	42	2443	62	2463
3	2404	23	2424	43	2444	63	2464
4	2405	24	2425	44	2445	64	2465
5	2406	25	2426	45	2446	65	2466
6	2407	26	2427	46	2447	66	2467
7	2408	27	2428	47	2448	67	2468
8	2409	28	2429	48	2449	68	2469
9	2410	29	2430	49	2450	69	2470
10	2411	30	2431	50	2451	70	2471
11	2412	31	2432	51	2452	71	2472
12	2413	32	2433	52	2453	72	2473
13	2414	33	2434	53	2454	73	2474
14	2415	34	2435	54	2455	74	2475
15	2416	35	2436	55	2456	75	2476
16	2417	36	2437	56	2457	76	2477
17	2418	37	2438	57	2458	77	2478
18	2419	38	2439	58	2459	78	2479
19	2420	39	2440	59	2460	79	2480
20	2421	40	2441	60	2461		

Note: According to section 15.31(m), regards to the operating frequency range over 10MHz, the Lowest, middle, and the Highest frequency of channel were selected to perform the test. The selected frequency and test software see below:

Channel	Frequency (MHz)
1	2402
40	2441
79	2480

1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: OKUSB75WUJ1 filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rule.

1.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.10 (2013). Radiated emission measurement was performed in semi-anechoic chamber and conducted emission measurement was performed in shield room. For radiated emission measurement, preliminary scans were performed in the semi-anechoic chamber only to determine the worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters.

1.4 Equipment Modifications

Not available for this EUT intended for grant.

1.5 Support Device

Description	Manufacturer	Model	S/N
Mobile phone	Xiaomi	M1906G7E	25838/09WA04445
DVD Player	GIEC	BDP-G4350	BD43504KXM20121400050
USB Flash Disk	Kingston	USB 3.2 Gen DTKN	N/A

1.6 Test Facility and Location

Test Firm : Shenzhen United Testing Technology Co., Ltd.

Address : 2F, Annex Bldg, Jiahuangyuan Tech Park, #365 Baotian 1 Rd, Tiegang Community, Xixiang Str, Bao'an District, Shenzhen, China

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.The testing quality system of our laboratory meets with ISO/IEC-17025 requirements. This approval result is accepted by MRA of APLAC.

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

A2LA Certificate Number: 4747.01
The EMC Laboratory has been accredited by A2LA, and in compliance with ISO/IEC 17025:2017 General Requirements for testing Laboratories.

The Designation Number is CN1227
FCC Registration Number: 674885
The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission.

IC Registration Number: 21947
The EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada.

1.7 Summary of Test Results

FCC Rules	Description Of Test	Uncertainty	Result
§15.207 (a)	AC Power Line Conducted Emission	±1.06dB	Compliant
§15.247(d),§15.209, §15.205	Radiated Emission	±3.70dB	Compliant
§15.247(a)(1)	Channel Separation	±1.42 x10^{-4}%	Compliant
§15.247(a)(1)	20dB Bandwidth	±1.42 x10^{-4}%	Compliant
§15.247(a)(1)(iii)	Hopping Channel Number	±1.42 x10^{-4}%	Compliant
§15.247(a)(1)(iii)	Time of Occupancy (Dwell Time)	±5%	Compliant
§15.247(b)	Max Peak Output Power	±1.06dB	Compliant
§15.247(d)	Band Edge	±1.70dB	Compliant
§15.203	Antenna Requirement	N/A	Compliant
§15.247(d)	Conducted Spurious Emission	±1.70dB	Compliant

2. SYSTEM TEST CONFIGURATION

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 Special Accessories

Not available for this EUT intended for grant.

2.3 Description of test modes

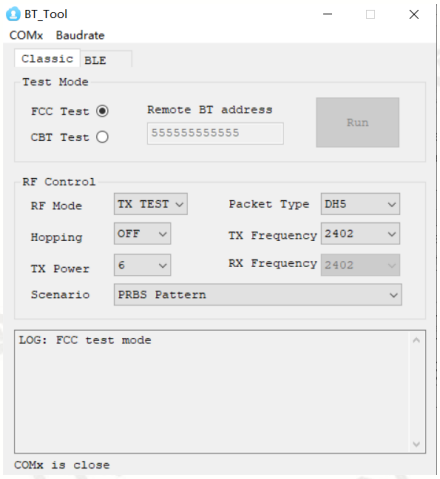
The EUT has been tested under operating condition. Test program used to control the EUT for staying in continuous transmitting and normal mode is programmed. The Lowest, middle and highest channel were chosen for testing, and all packets DH1, DH3, DH5, 2-DH1, 2-DH3, 2-DH5, 3-DH1, 3-DH3, 3-DH5 mode in all modulation type GFSK, π/4-DQPSK and 8DPSK were tested.

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements.

Test Item	Software	Description
Conducted RF Testing and Radiated testing	BT_Tool	Set the EUT to different modulation and channel

Output power setting table:

Test Mode	Set Tx Output Power	Data rate
GFSK	7dBm	DH1
π/4-DQPSK	7dBm	2-DH1
8DPSK	7dBm	3-DH1



3. FREQUENCY HOPPING SYSTEM REQUIREMENTS

3.1 Standard and Limit

According to FCC Part 15.247(a)(1), The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

(g) Frequency hopping spread spectrum systems are not required to employ all available hopping channels during each transmission. However, the system, consisting of both the transmitter and the receiver, must be designed to comply with all of the regulations in this section should the transmitter be presented with a continuous data (or information) stream. In addition, a system employing short transmission bursts must comply with the definition of a frequency hopping system and must distribute its transmissions over the minimum number of hopping channels specified in this section.

(h) The incorporation of intelligence within a frequency hopping spread spectrum system that permits the system to recognize other users within the spectrum band so that it individually and independently chooses and adapts its hop sets to avoid hopping on occupied channels is permitted. The coordination of frequency hopping systems in any other manner for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters is not permitted.

3.2 EUT Pseudorandom Frequency Hopping Sequence

Pseudorandom Frequency Hopping Sequence Table as below:
Channel: 08, 24, 40, 56, 34, 51, 72, 09, 01, 64, 22, 33, 41, 32, 47, 65, 73, 53, 69, 06, 17, 04, 20, 36, 52, 38, 66, 70, 78, 68, 76, 21, 29, 10, 26, 49, 00, 58, 44, 59, 75, 13, 03, 14, 11, 35, 43, 37, 50, 61, 77, 55, 71, 02, 23, 07, 27, 39, 54, 46, 48, 15, 63, 62, 67, 25, 31, 12, 28, 19, 60, 42, 57, 74, 16, 05, 18, 30, 45, etc.

The system receiving have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals.

3.3 Frequency Hopping System

This transmitter device is frequency hopping device, and complies with FCC part 15.247 rule.

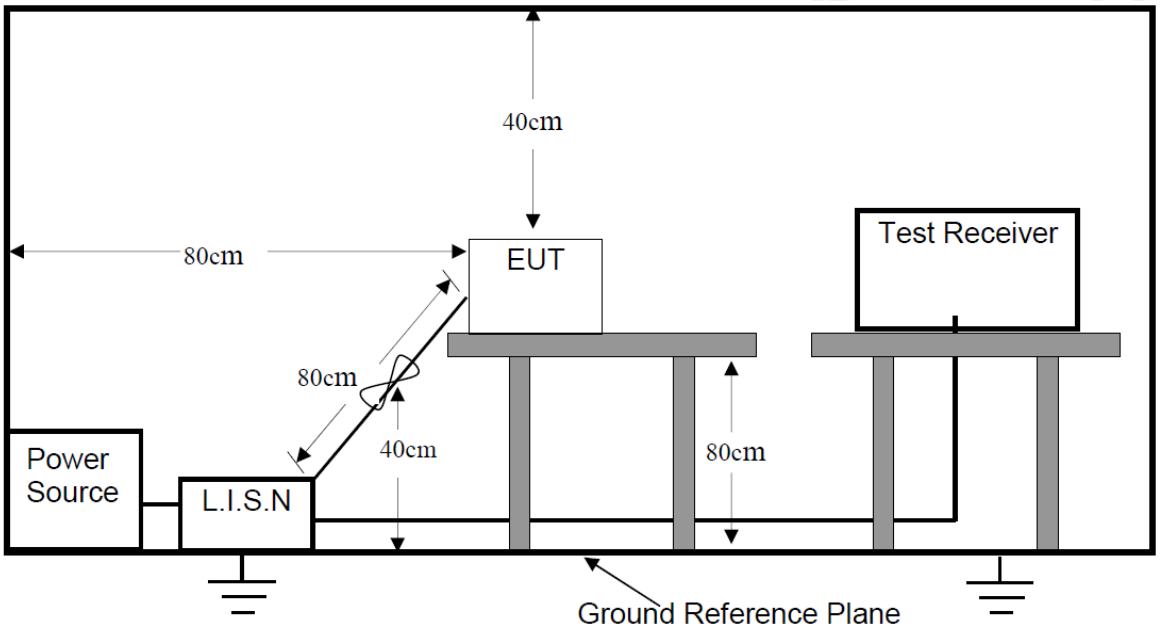
This device uses Bluetooth radio which operates in 2400-2483.5 MHz band. Bluetooth uses a radio technology called frequency-hopping spread spectrum, which chops up the data being sent and transmits chunks of it on up to 79 bands (1 MHz each; centred from 2402 to 2480 MHz) in the range 2,400-2,483.5MHz. The transmitter switches hop frequencies 1,600 times per second to assure a high degree of data security. All Bluetooth devices participating in a given piconet are synchronized to the frequency-hopping channel for the piconet. The frequency hopping sequence is determined by the master's device address and the phase of the hopping sequence (the frequency to hop at a specific time) is determined by the master's internal clock. Therefore, all slaves in a piconet must know the master's device address and must synchronize their clocks with the master's clock.

Adaptive Frequency Hopping (AFH) was introduced in the Bluetooth specification to provide an effective way for a Bluetooth radio to counteract normal interference. AFH identifies "bad" channels, where either other wireless devices are interfering with the Bluetooth signal or the Bluetooth signal is interfering with another device. The AFH-enabled Bluetooth device will then communicate with other devices within its piconet to share details of any identified bad channels. The devices will then switch to alternative available "good" channels, away from the areas of interference, thus having no impact on the bandwidth used.

This device was tested with a bluetooth system receiver to check that the device maintained hopping synchronization, and the device complied with these requirements FCC Part 15.247 rule.

4. AC POWER LINE CONDUCTED EMISSIONS

4.1 Test SET-UP (Block Diagram of Configuration)



4.2 Test Condition

Test Requirement: FCC Part 15.207

Frequency Range: 150kHz ~ 30MHz

Detector: QP, AVG

Operation Mode: BT Communication

4.3 Measurement Results

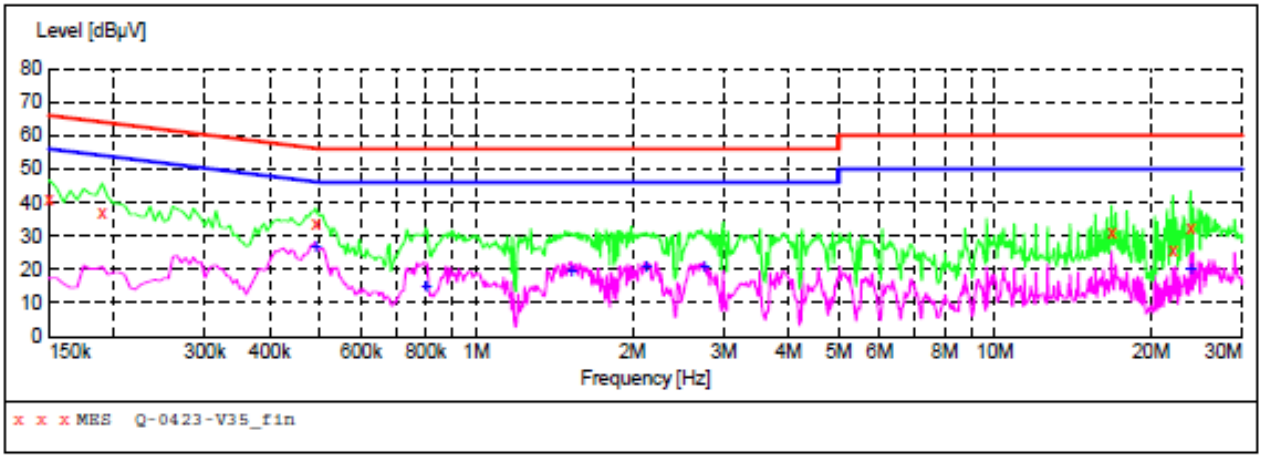
PASS

Please refer to the following pages of the worst case

We have be tested for all avaiable U.S. Voltage and frequencies (For 120V, 50/60Hz and 240V, 50/60Hz) for which the device is capable of operation, and the worst case of 120V/ 60Hz is shown in the report.

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Phase:	Line
Model No.:	PSB378W	Temperature:	25 ℃
Test Mode:	On with Bluetooth	Humidity:	50 %
Test Voltage:	AC 120V/60Hz	Test By:	PEI
Test Results:	PASS		
Adapter:	GKYZD0150160US		

SCAN TABLE: "Voltage (9K-30M) FIN"
Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "Q-0423-V35_fin"

2021-4-23 16:50

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	41.00	8.1	66	25.0	QP	L1	GND
0.190000	37.20	8.1	64	26.8	QP	L1	GND
0.490000	33.80	8.6	56	22.4	QP	L1	GND
16.791865	30.90	10.1	60	29.1	QP	L1	GND
22.028828	26.10	10.5	60	33.9	QP	L1	GND
23.859737	32.20	10.6	60	27.8	QP	L1	GND

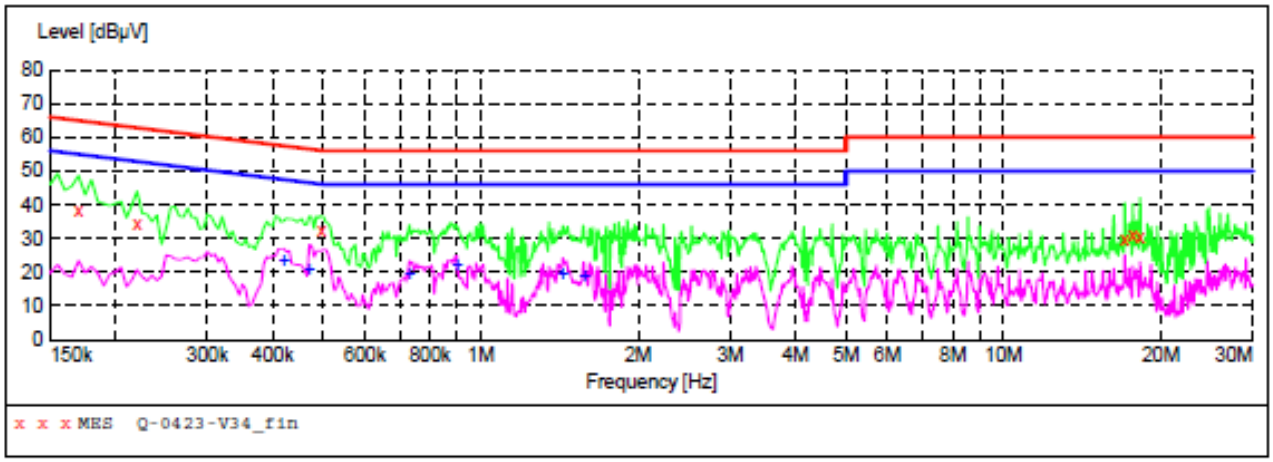
MEASUREMENT RESULT: "Q-0423-V35_fin2"

2021-4-23 16:50

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.490000	27.10	8.6	46	19.1	AV	L1	GND
0.800000	15.40	8.6	46	30.6	AV	L1	GND
1.525000	19.60	8.8	46	26.4	AV	L1	GND
2.123419	21.20	8.8	46	24.8	AV	L1	GND
2.752498	21.10	8.9	46	24.9	AV	L1	GND
23.859737	20.70	10.6	50	29.3	AV	L1	GND

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Phase:	Neutral
Model No.:	PSB378W	Temperature:	25 ℃
Test Mode:	On with Bluetooth	Humidity:	50 %
Test Voltage:	AC 120V/60Hz	Test By:	PEI
Test Results:	PASS		
Adapter:	GKYZD0150160US		

SCAN TABLE: "Voltage (9K-30M) FIN"
Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "Q-0423-V34_fin"

2021-4-23 16:46

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.170000	38.30	8.1	65	26.7	QP	N	GND
0.220000	34.70	8.2	63	28.1	QP	N	GND
0.495000	32.60	8.6	56	23.5	QP	N	GND
17.062151	30.10	10.1	60	29.9	QP	N	GND
17.686308	30.80	10.1	60	29.2	QP	N	GND
18.260257	30.30	10.2	60	29.7	QP	N	GND

MEASUREMENT RESULT: "Q-0423-V34_fin2"

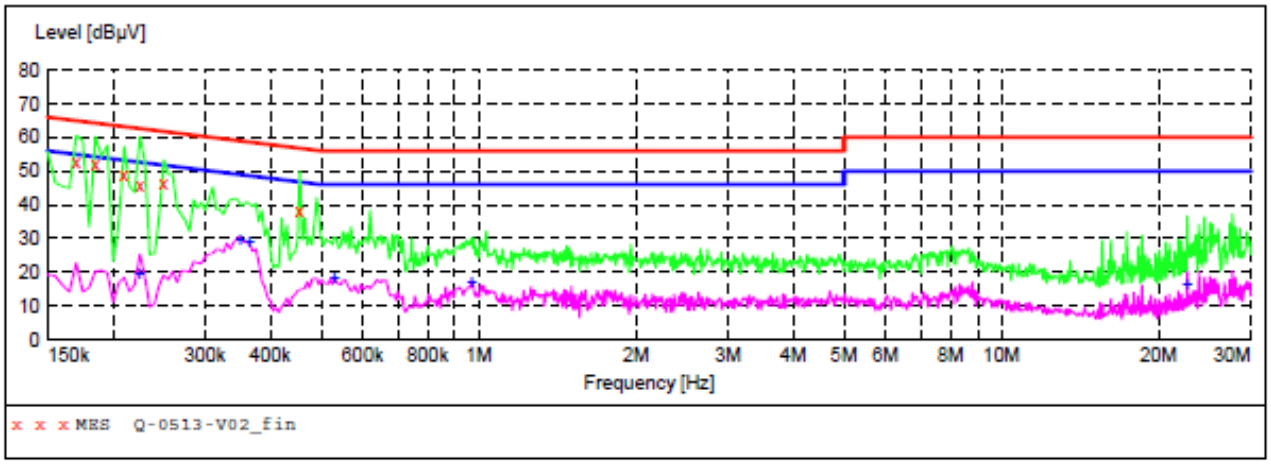
2021-4-23 16:46

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.420000	24.00	8.5	47	23.4	AV	N	GND
0.470000	21.40	8.6	47	25.1	AV	N	GND
0.730000	19.90	8.6	46	26.1	AV	N	GND
0.900000	22.30	8.7	46	23.7	AV	N	GND
1.435000	19.90	8.8	46	26.1	AV	N	GND
1.575000	19.20	8.8	46	26.8	AV	N	GND

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Phase:	Line
Model No.:	PSB378W	Temperature:	25 ℃
Test Mode:	On with Bluetooth	Humidity:	50 %
Test Voltage:	AC 120V/60Hz	Test By:	PEI
Test Results:	PASS		
Adapter:	JY024160150AA-UL		

SCAN TABLE: "Voltage (9K-30M) FIN"

Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "Q-0513-V02_fin"

2021-5-14 14:45

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.170000	52.80	8.1	65	12.2	QP	L1	GND
0.185000	51.90	8.1	64	12.4	QP	L1	GND
0.210000	48.90	8.2	63	14.3	QP	L1	GND
0.225000	45.90	8.2	63	16.7	QP	L1	GND
0.250000	46.30	8.3	62	15.5	QP	L1	GND
0.455000	38.20	8.6	57	18.6	QP	L1	GND

MEASUREMENT RESULT: "Q-0513-V02_fin2"

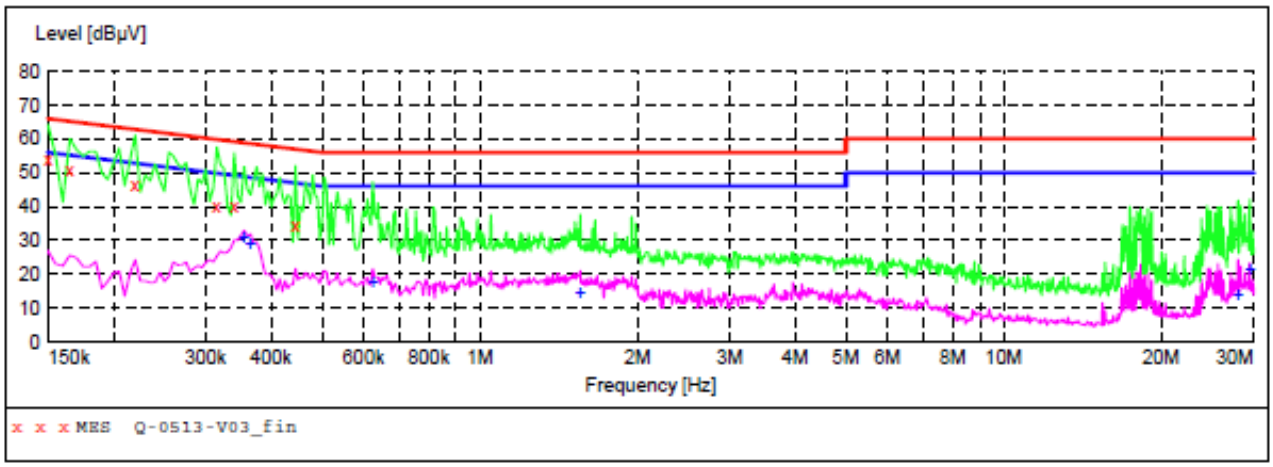
2021-5-14 14:45

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.225000	20.00	8.2	53	32.6	AV	L1	GND
0.350000	30.30	8.4	49	18.7	AV	L1	GND
0.365000	29.30	8.5	49	19.3	AV	L1	GND
0.530000	18.50	8.6	46	27.5	AV	L1	GND
0.970000	17.30	8.7	46	28.7	AV	L1	GND
22.653087	17.00	10.5	50	33.0	AV	L1	GND

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Phase:	Neutral
Model No.:	PSB378W	Temperature:	25 ℃
Test Mode:	On with Bluetooth	Humidity:	50 %
Test Voltage:	AC 120V/60Hz	Test By:	PEI
Test Results:	PASS		
Adapter:	JY024160150AA-UL		

SCAN TABLE: "Voltage (9K-30M) FIN"

Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "Q-0513-V03_fin"

2021-5-14 14:48

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	54.10	8.1	66	11.9	QP	N	GND
0.165000	51.00	8.1	65	14.2	QP	N	GND
0.220000	46.40	8.2	63	16.4	QP	N	GND
0.315000	40.40	8.4	60	19.4	QP	N	GND
0.340000	40.30	8.4	59	18.9	QP	N	GND
0.445000	34.50	8.6	57	22.5	QP	N	GND

MEASUREMENT RESULT: "Q-0513-V03_fin2"

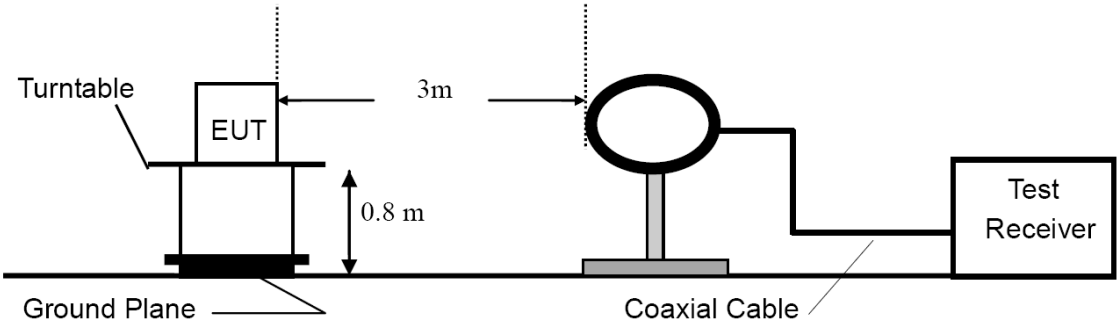
2021-5-14 14:48

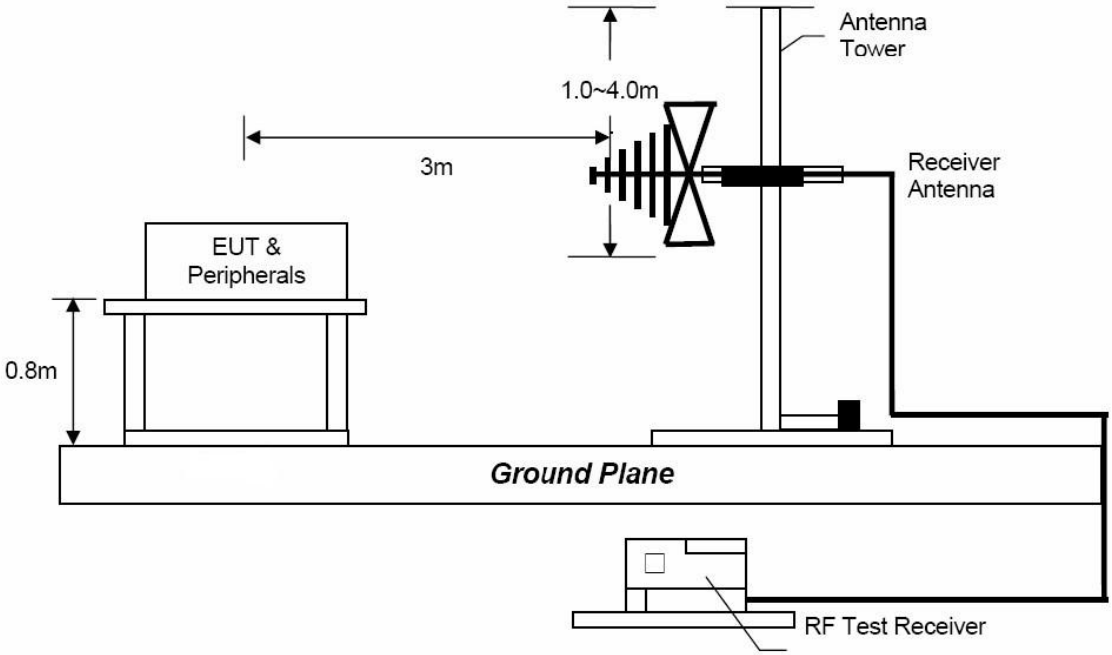
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.355000	31.30	8.4	49	17.5	AV	N	GND
0.365000	29.40	8.5	49	19.2	AV	N	GND
0.625000	18.10	8.6	46	27.9	AV	N	GND
1.555000	15.10	8.8	46	30.9	AV	N	GND
27.990726	14.30	11.0	50	35.7	AV	N	GND
29.481694	21.80	11.1	50	28.2	AV	N	GND

5. RADIATED EMISSION

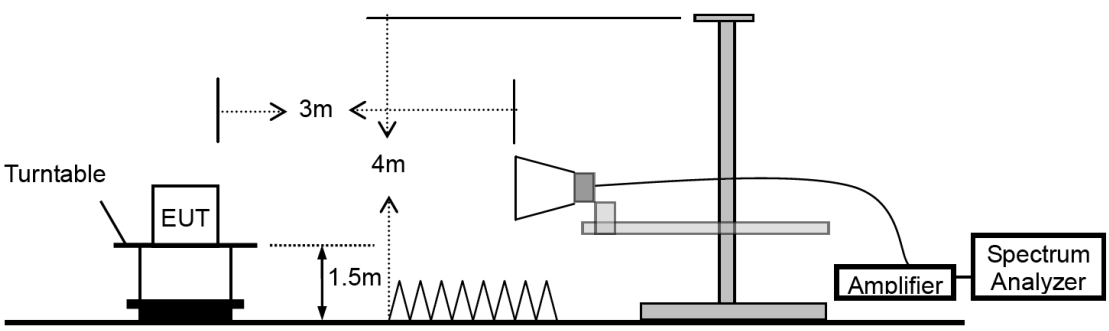
5.1 Test SET-UP (Block Diagram of Configuration)

5.1.1 Radiated Emission Test Set-Up, Frequency below 30MHz





5.1.2 Radiated Emission Test Set-Up, Frequency above 1GHz



5.2 Measurement Procedure

a. Blow 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi- anechoic chamber room.

b. For the radiated emission test above 1GHz:
The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter full anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

c. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

d. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to peak detect function and specified bandwidth with maximum hold mode.

f. A Quasi-peak measurement was then made for that frequency point for below 1GHz test. PK and AV for above 1GHz emission test.

g. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis which it is worse case.

During the radiated emission test, the spectrum analyzer was set with the following configurations:

Frequency Band (MHz)	Level	Resolution Bandwidth	Video Bandwidth
30 to 1000	QP	120 kHz	300 kHz
Above 1000	Peak	1 MHz	3 MHz
	Average	1 MHz	If D≥98 then VBW ≥ 3*RBW, If D≤98 then VBW ≥1/T

5.3 Limit

Frequency range MHz	Distance Meters	Field Strengths Limit (15.209) μV/m
0.009 ~ 0.490	300	2400/F(kHz)
0.490 ~ 1.705	30	24000/F(kHz)
1.705 ~ 30	30	30
30 ~ 88	3	100
88 ~ 216	3	150
216 ~ 960	3	200
Above 960	3	500

Remark：(1) Emission level (dB)μV = 20 log Emission level μV/m

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

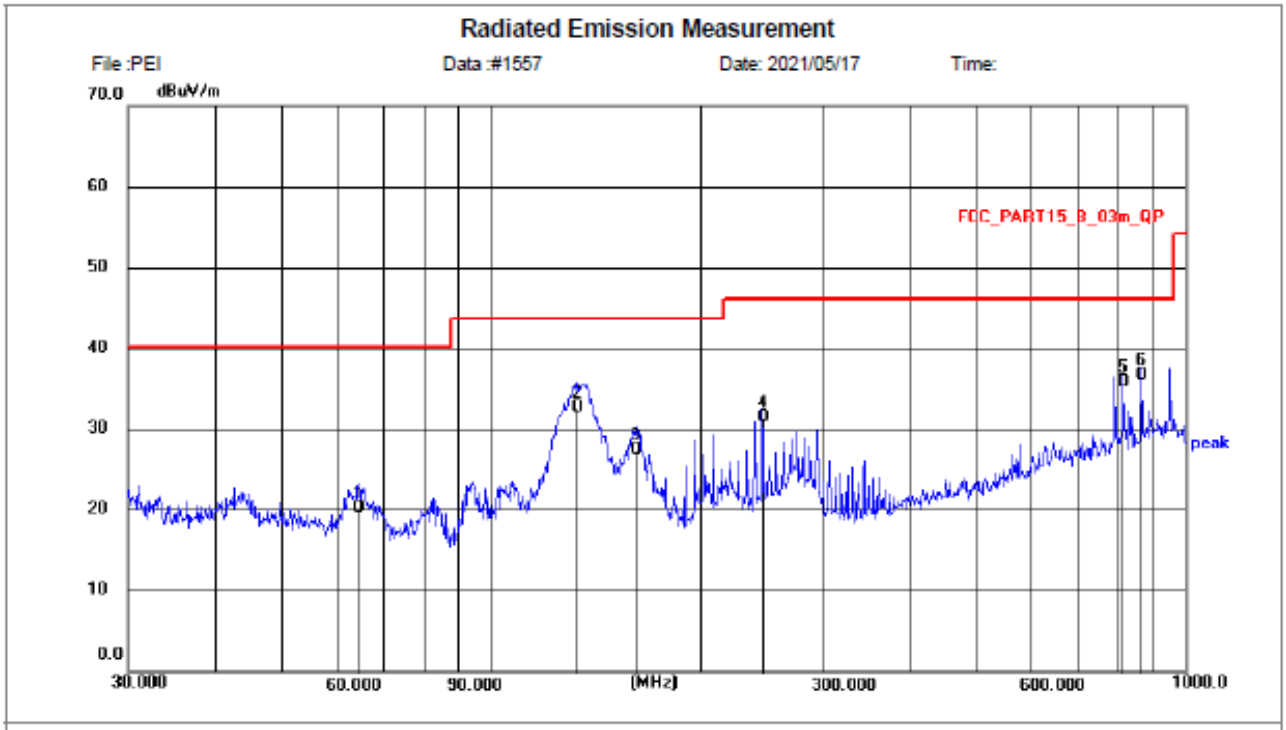
(4) The frequency range scanned is from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or 40 GHz, whichever is lower.

5.4 Measurement Results

Please refer to following plots of the worst case: 8DPSK mode.

Note: Below 30MHz, the emissions are lower than 20dB below the allowable limit. Therefore, 9kHz-30MHz data were not recorded.

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Horizontal
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2402MHz (8DPSK)	Humidity:	54 %
Frequency Range:	30MHz-1GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	GKYZD0150160US		



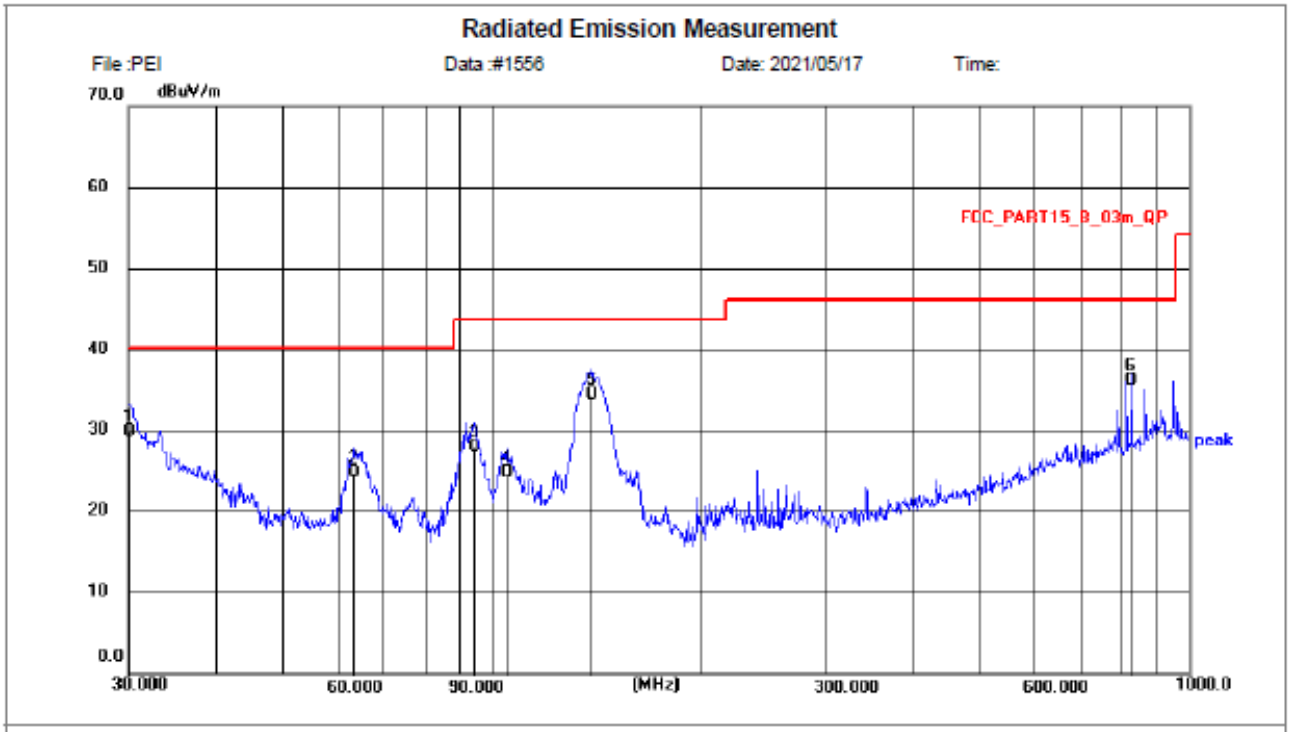
Site 966 Chamber
Limit: FCC_PART15_B
EUT:
M/N: PSB378W
Mode: TX 2402MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Horizontal*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	64.4330	6.83	13.37	20.20	40.00	19.80	QP	220	236	P	
2	133.1510	18.34	14.37	32.71	43.50	10.79	QP	200	254	P	
3	162.1833	11.57	15.78	27.35	43.50	16.15	QP	200	163	P	
4	245.7353	17.99	13.45	31.44	46.00	14.56	QP	150	57	P	
5	815.2527	12.54	23.16	35.70	46.00	10.30	QP	150	68	P	
6 *	864.5706	13.11	23.60	36.71	46.00	9.29	QP	175	265	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Vertical
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2402MHz (8DPSK)	Humidity:	54 %
Frequency Range:	30MHz-1GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	GKYZD0150160US		



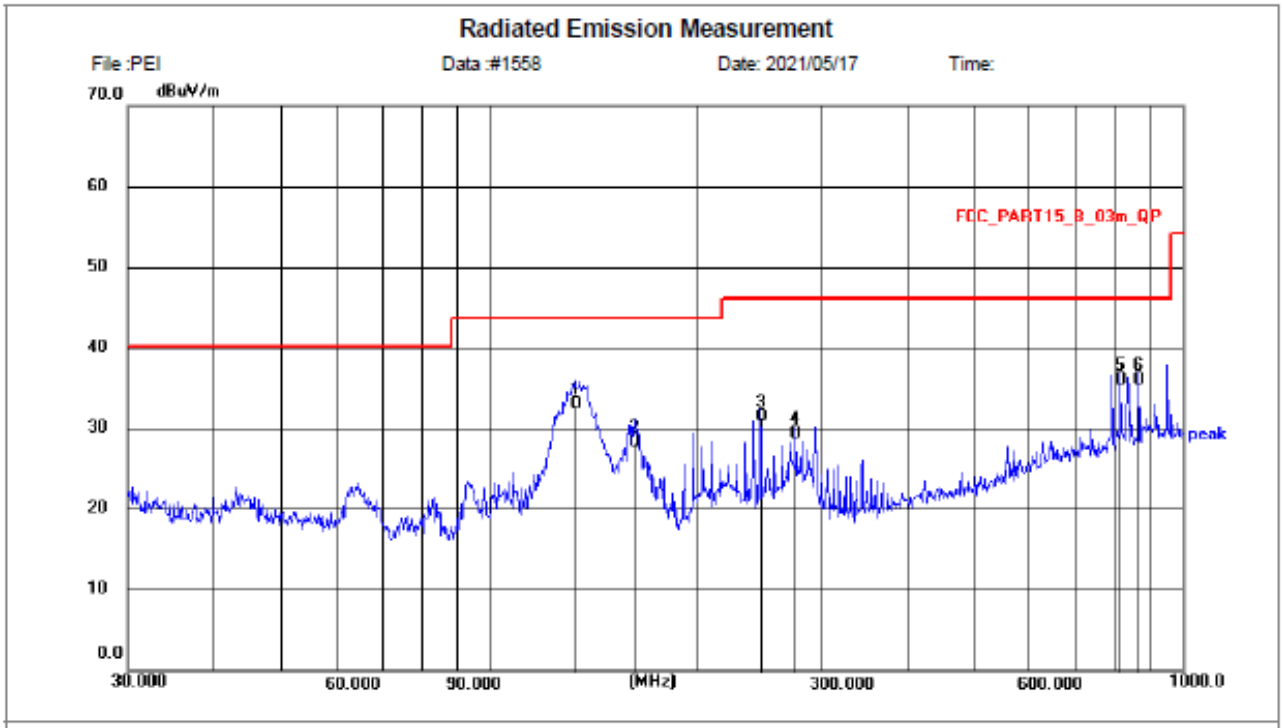
Site 966 Chamber
Limit: FCC_PART15_B
EUT:
M/N: PSB378W
Mode: TX 2402MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Vertical*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	30.0526	15.41	14.40	29.81	40.00	10.19	QP	100	256	P	
2	63.3132	11.12	13.58	24.70	40.00	15.30	QP	100	63	P	
3	94.0978	16.39	11.48	27.87	43.50	15.63	QP	105	44	P	
4	104.6277	12.30	12.40	24.70	43.50	18.80	QP	105	250	P	
5 *	138.9952	20.53	13.92	34.45	43.50	9.05	QP	100	257	P	
6	825.3200	12.86	23.23	36.09	46.00	9.91	QP	110	269	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Horizontal
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2441MHz (8DPSK)	Humidity:	54 %
Frequency Range:	30MHz-1GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	GKYZD0150160US		



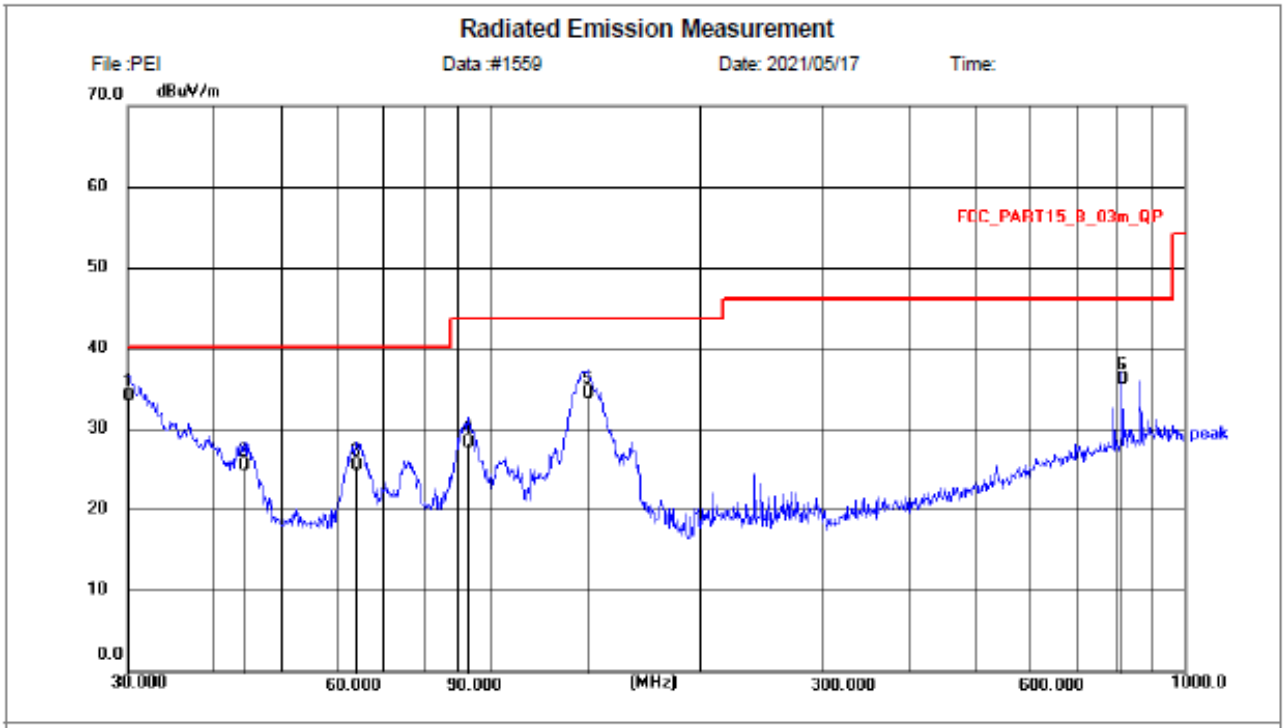
Site 966 Chamber
Limit: FCC_PART15_B
EUT:
M/N: PSB378W
Mode: TX 2441MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Horizontal*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	133.0344	18.64	14.38	33.02	43.50	10.48	QP	200	245	P	
2	161.8993	12.41	15.81	28.22	43.50	15.28	QP	185	39	P	
3	245.7352	18.02	13.45	31.47	46.00	14.53	QP	185	175	P	
4	276.6080	15.05	14.21	29.26	46.00	16.74	QP	185	268	P	
5	815.2527	12.75	23.16	35.91	46.00	10.09	QP	200	146	P	
6 *	864.5706	12.35	23.60	35.95	46.00	10.05	QP	205	206	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Vertical
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2441MHz (8DPSK)	Humidity:	54 %
Frequency Range:	30MHz-1GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	GKYZD0150160US		



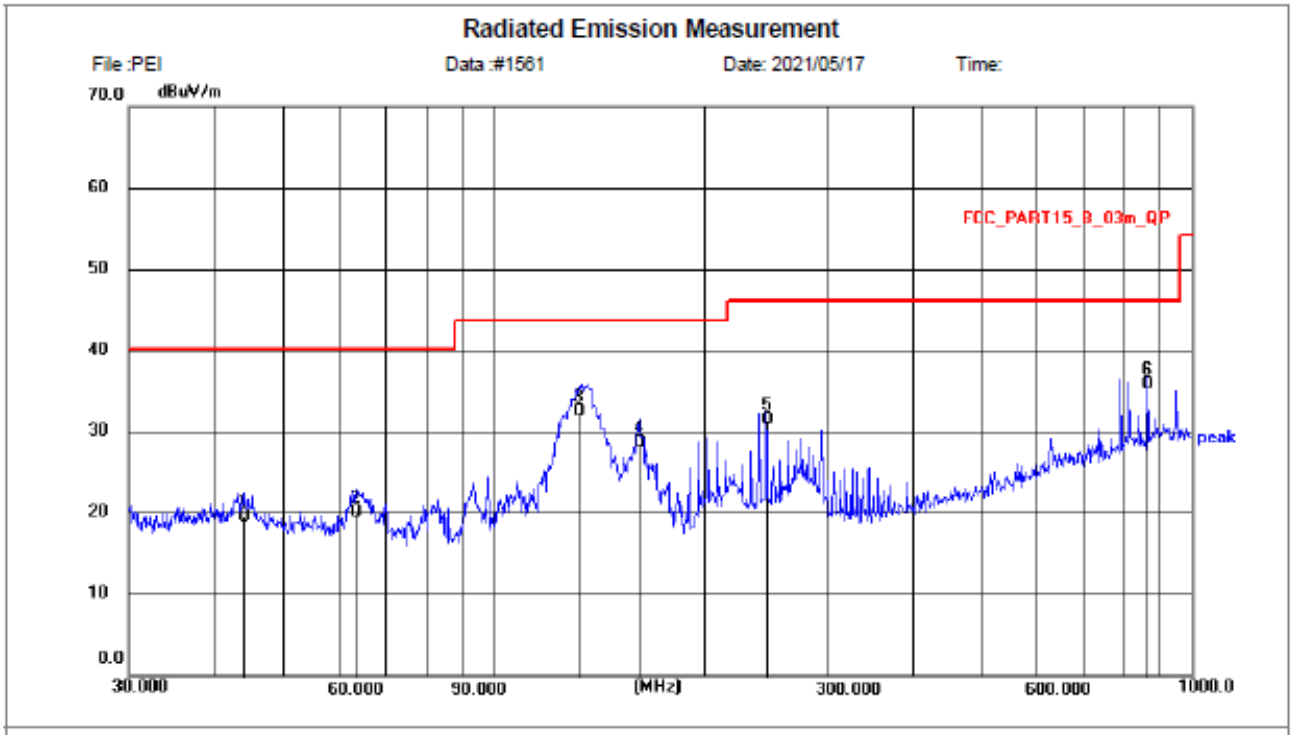
Site 966 Chamber
Limit: FCC_PART15_B
EUT:
M/N: PSB378W
Mode: TX 2441MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Vertical*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	30.0000	19.66	14.40	34.06	40.00	5.94	QP	185	224	P	
2	44.1200	10.44	15.02	25.46	40.00	14.54	QP	185	162	P	
3	64.0948	11.94	13.44	25.38	40.00	14.62	QP	105	228	P	
4	92.8685	16.96	11.38	28.34	43.50	15.16	QP	105	85	P	
5	138.0234	20.39	13.99	34.38	43.50	9.12	QP	100	74	P	
6	815.2527	13.00	23.16	36.16	46.00	9.84	QP	100	152	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Horizontal
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2480MHz (8DPSK)	Humidity:	54 %
Frequency Range:	30MHz-1GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	GKYZD0150160US		



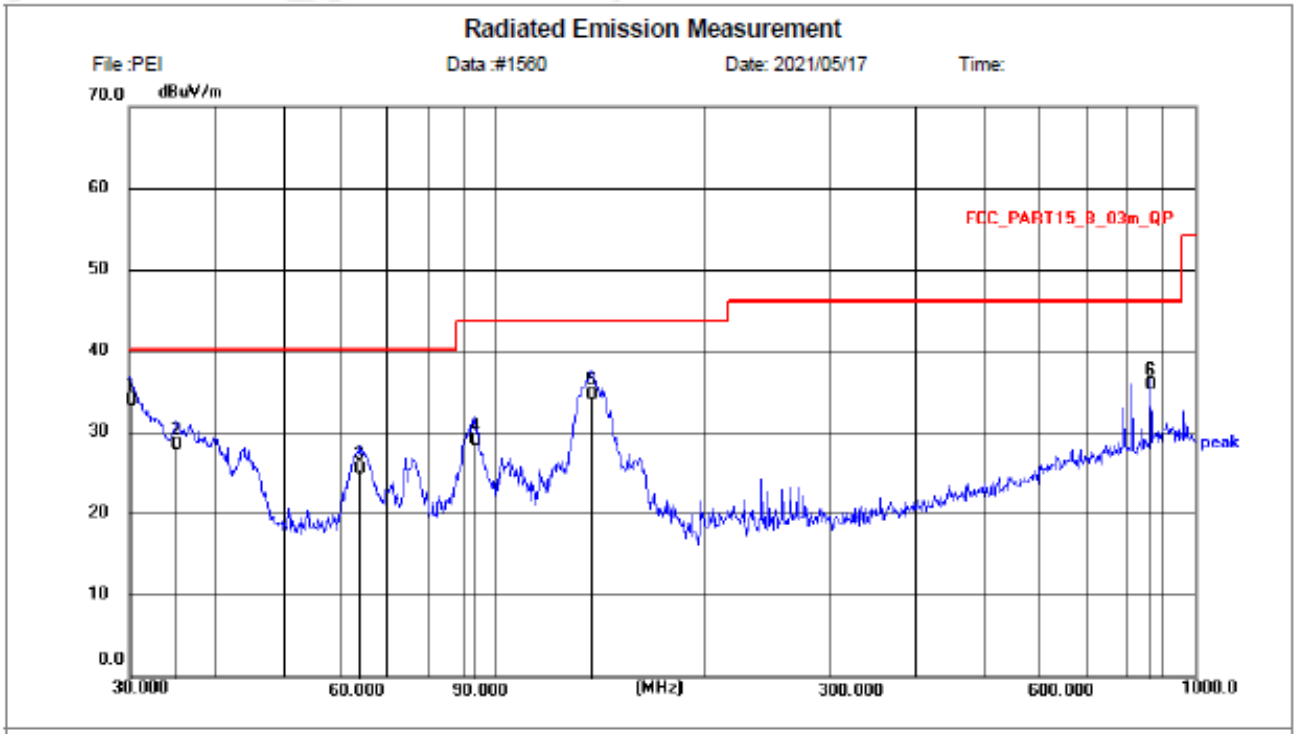
Site 966 Chamber
Limit: FCC_PART15_B
EUT:
M/N: PSB378W
Mode: TX 2480MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Horizontal*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	44.0042	4.49	15.03	19.52	40.00	20.48	QP	205	182	P	
2	63.5356	6.48	13.55	20.03	40.00	19.97	QP	205	145	P	
3	132.5687	18.12	14.42	32.54	43.50	10.96	QP	200	323	P	
4	161.6157	12.70	15.83	28.53	43.50	14.97	QP	200	333	P	
5	245.7352	17.93	13.45	31.38	46.00	14.62	QP	208	47	P	
6 *	864.5706	12.24	23.60	35.84	46.00	10.16	QP	210	195	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Vertical
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2480MHz (8DPSK)	Humidity:	54 %
Frequency Range:	30MHz-1GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	GKYZD0150160US		



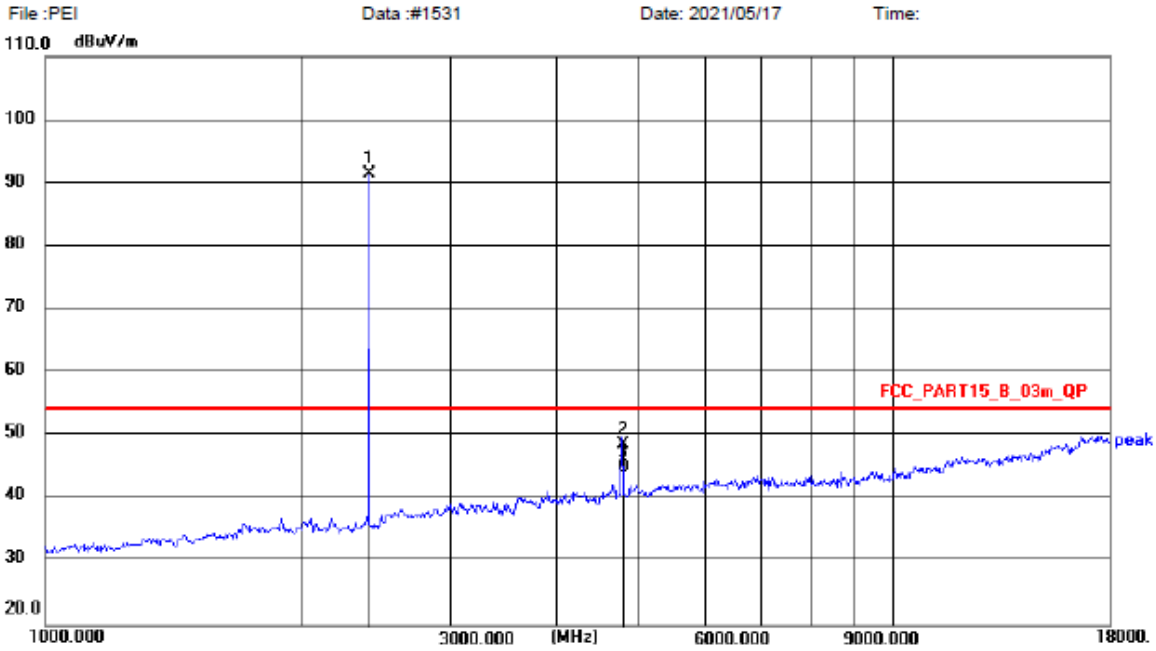
Site 966 Chamber
Limit: FCC_PART15_B
EUT:
M/N: PSB378W
Mode: TX 2480MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Vertical*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	30.1314	19.41	14.40	33.81	40.00	6.19	QP	100	225	P	
2	35.2201	13.73	14.64	28.37	40.00	11.63	QP	105	74	P	
3	64.3200	11.99	13.40	25.39	40.00	14.61	QP	105	63	P	
4	93.5220	17.50	11.43	28.93	43.50	14.57	QP	100	89	P	
5	137.4200	20.48	14.04	34.52	43.50	8.98	QP	100	147	P	
6	864.5706	12.13	23.60	35.73	46.00	10.27	QP	100	358	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Horizontal
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2402MHz (8DPSK)	Humidity:	54 %
Frequency Range:	1GHz-18GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	GKYZD0150160US		



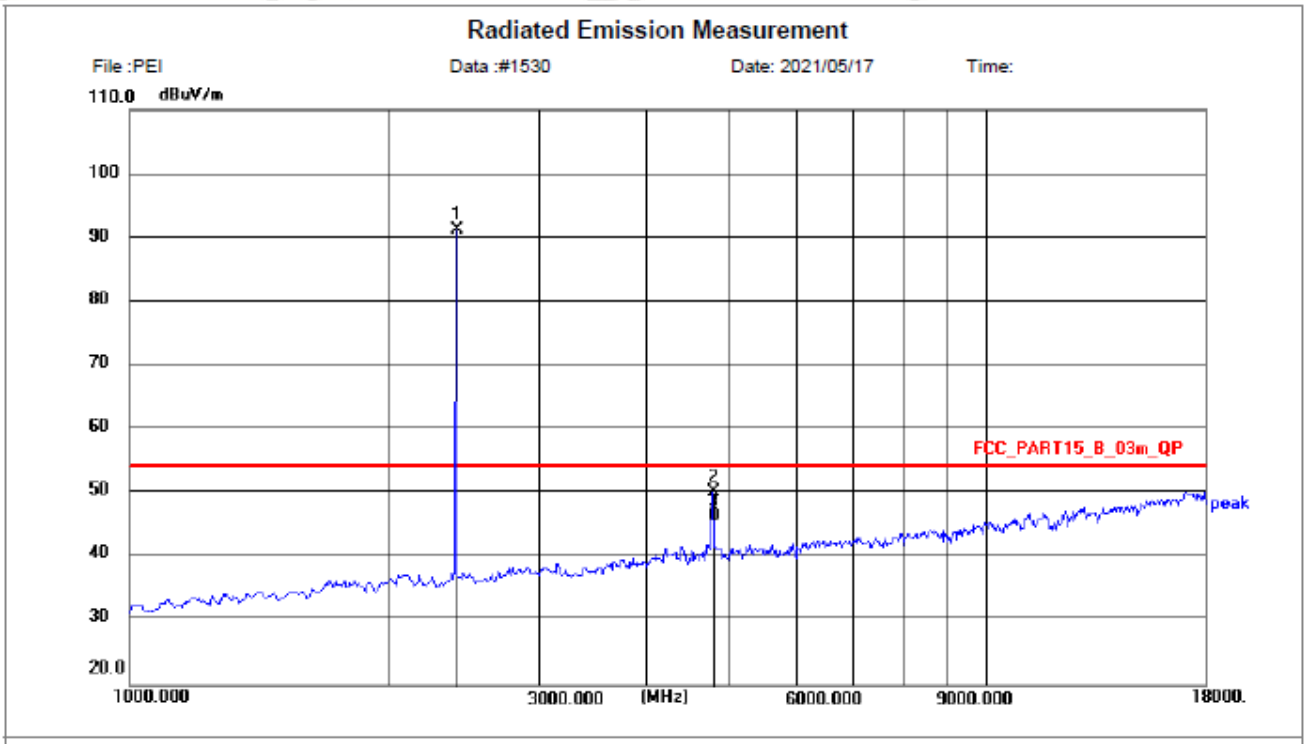
Site 966 Chamber
Limit: FCC_PART15_B_03m_QP
EUT:
M/N: PSB378W
Mode: TX 2402MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Horizontal*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	2402.000	87.48	3.94	91.42	/	/	peak	205	163	/	
2	4804.026	38.97	9.77	48.74	74.00	25.26	peak	210	185	P	
3	4804.026	35.21	9.77	44.98	54.00	9.02	AVG	210	185	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Vertical
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2402MHz (8DPSK)	Humidity:	54 %
Frequency Range:	1GHz-18GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	GKYZD0150160US		



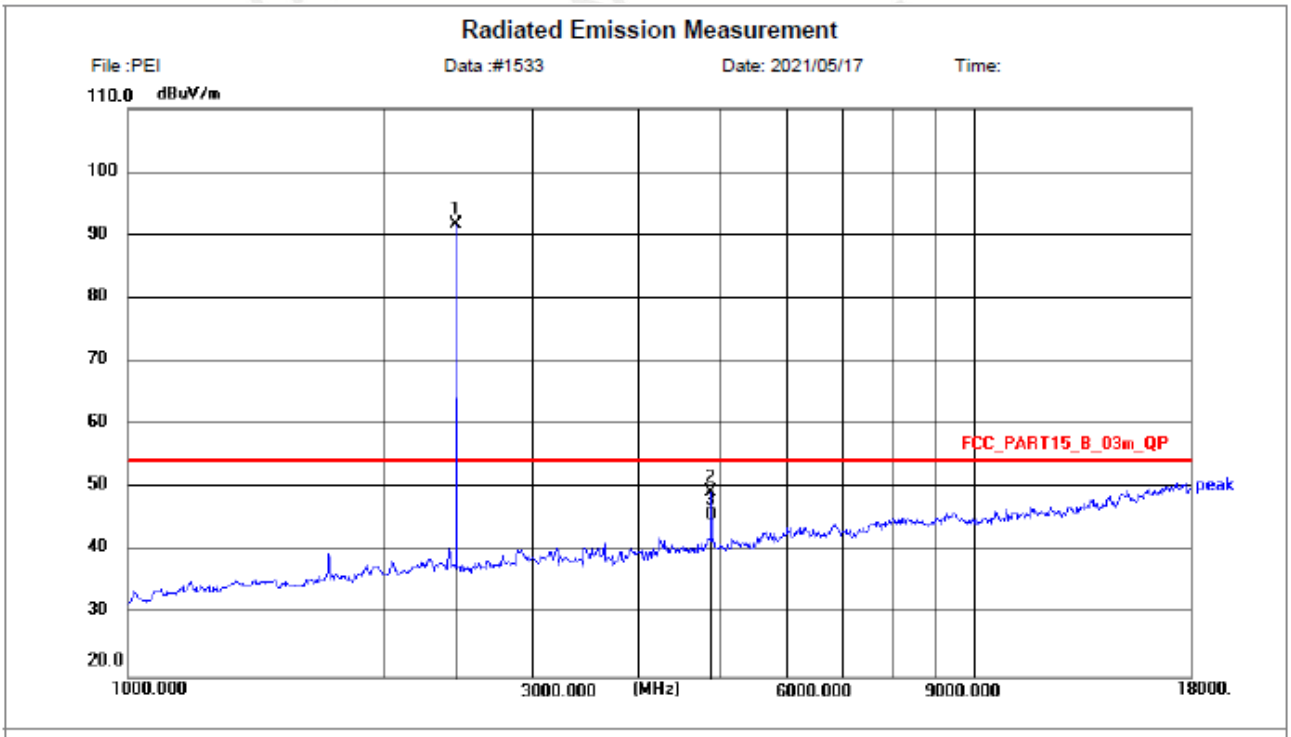
Site 966 Chamber
Limit: FCC_PART15_B_03m_QP
EUT:
M/N: PSB378W
Mode: TX 2402MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Vertical*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	2402.000	87.17	3.94	91.11	/	/	peak	105	256	/	
2	4804.025	40.45	9.77	50.22	74.00	3.78	peak	105	158	P	
3	4804.025	36.58	9.77	46.35	54.00	7.65	AVG	105	158	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Horizontal
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2441MHz (8DPSK)	Humidity:	54 %
Frequency Range:	1GHz-18GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	GKYZD0150160US		



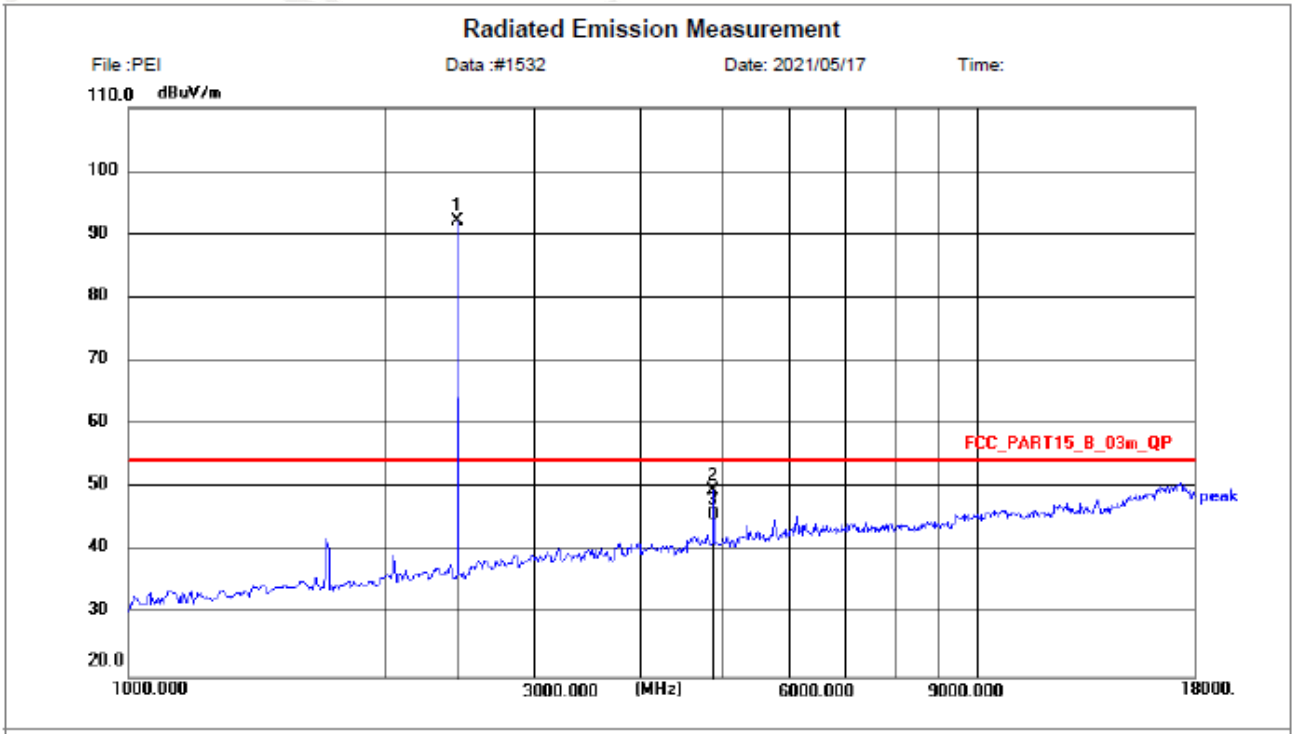
Site 966 Chamber
Limit: FCC_PART15_B_03m_QP
EUT:
M/N: PSB378W
Mode: TX 2441MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Horizontal*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	2441.000	87.45	4.11	91.56	/	/	peak	185	67	/	
2	4882.024	39.36	10.06	49.42	74.00	24.58	peak	205	145	P	
3	4882.024	35.79	10.06	45.85	54.00	8.15	AVG	205	145	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Vertical
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2441MHz (8DPSK)	Humidity:	54 %
Frequency Range:	1GHz-18GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	GKYZD0150160US		



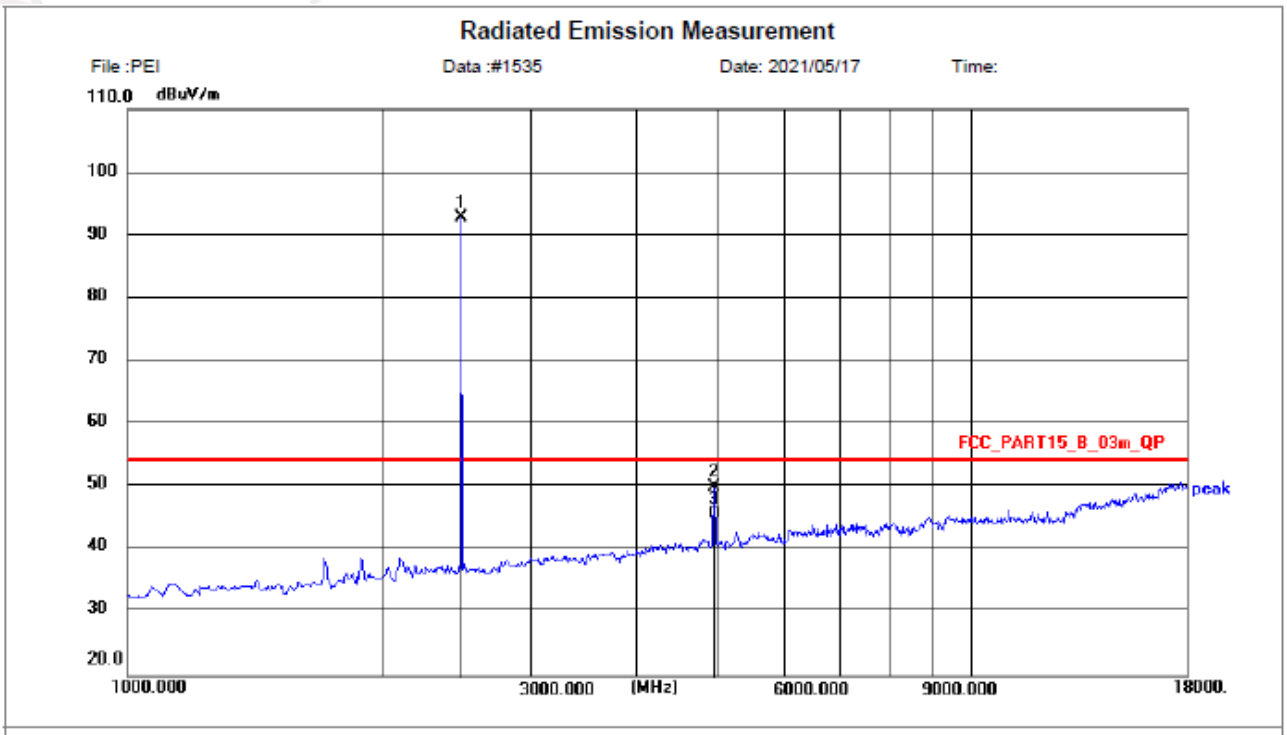
Site 966 Chamber
Limit: FCC_PART15_B_03m_QP
EUT:
M/N: PSB378W
Mode: TX 2441MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Vertical*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	2441.000	87.94	4.11	92.05	/	/	peak	100	247	/	
2	4882.027	39.42	10.06	49.48	74.00	24.52	peak	100	36	P	
3	4882.027	35.64	10.06	45.70	54.00	8.30	AVG	100	36	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Horizontal
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2480MHz (8DPSK)	Humidity:	54 %
Frequency Range:	1GHz-18GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	GKYZD0150160US		



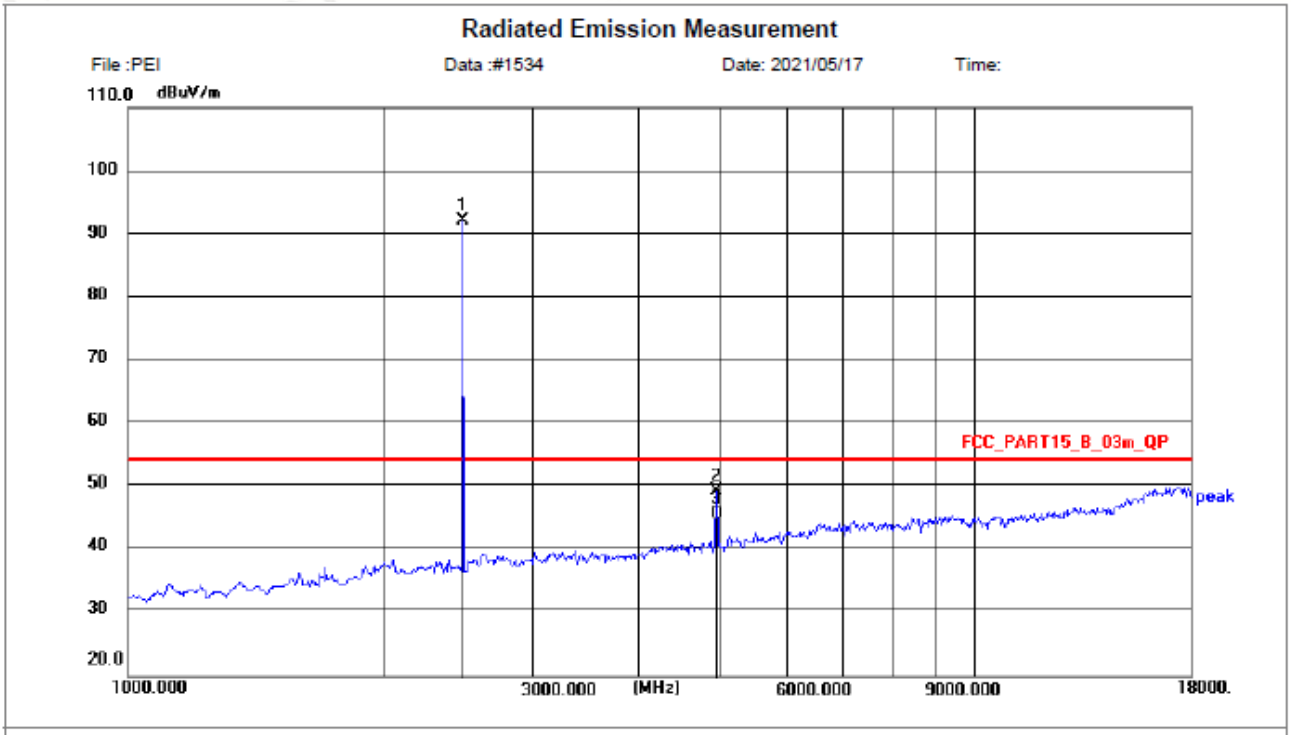
Site 966 Chamber
Limit: FCC_PART15_B_03m_QP
EUT:
M/N: PSB378W
Mode: TX 2480MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Horizontal*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	2480.000	88.50	4.27	92.77	/	/	peak	210	58	/	
2	4960.028	39.71	10.35	50.06	74.00	23.94	peak	215	169	P	
3	4960.028	35.42	10.35	45.77	54.00	8.23	AVG	215	169	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Vertical
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2480MHz (8DPSK)	Humidity:	54 %
Frequency Range:	1GHz-18GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	GKYZD0150160US		



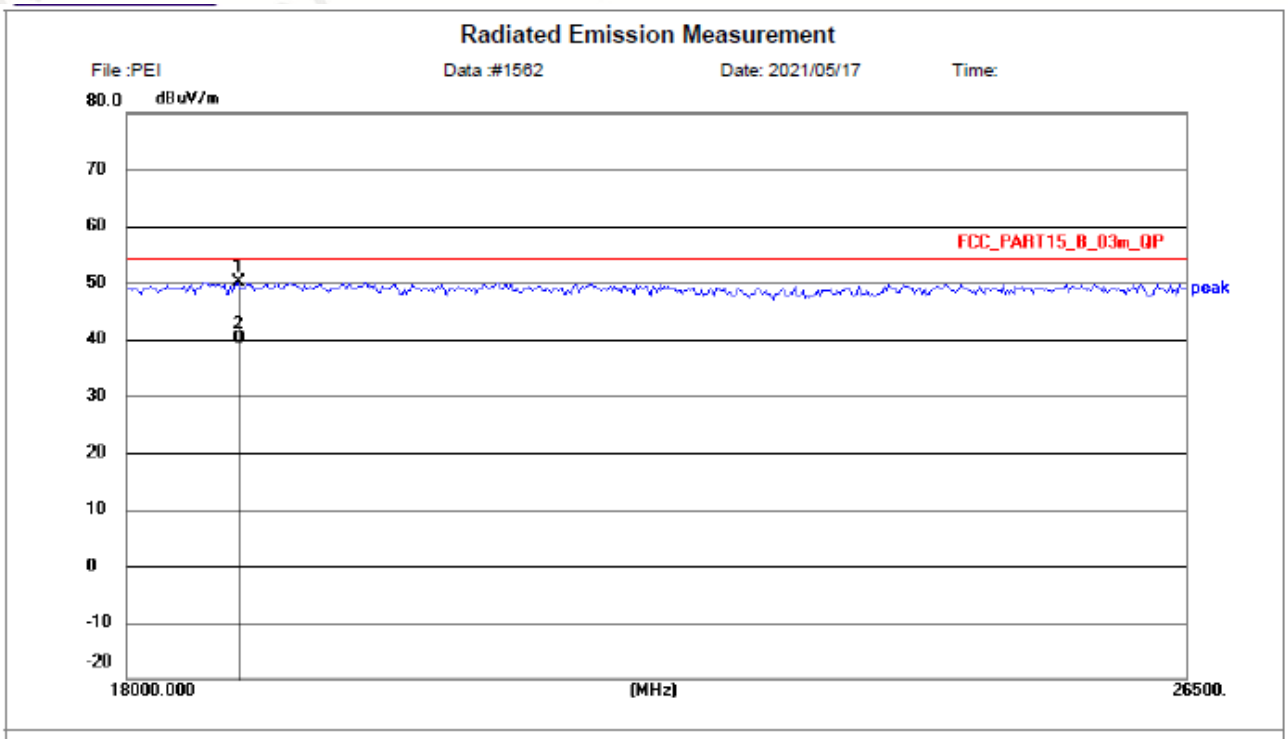
Site 966 Chamber
Limit: FCC_PART15_B_03m_QP
EUT:
M/N: PSB378W
Mode: TX 2480MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Vertical*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	2480.000	87.74	4.27	92.01	/	/	peak	105	263	/	
2	4960.030	39.11	10.35	49.46	74.00	24.54	peak	110	150	P	
3	4960.030	35.32	10.35	45.67	54.00	8.33	AVG	100	150	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Horizontal
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2402MHz (8DPSK)	Humidity:	54 %
Frequency Range:	18GHz-26.5GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	GKYZD0150160US		



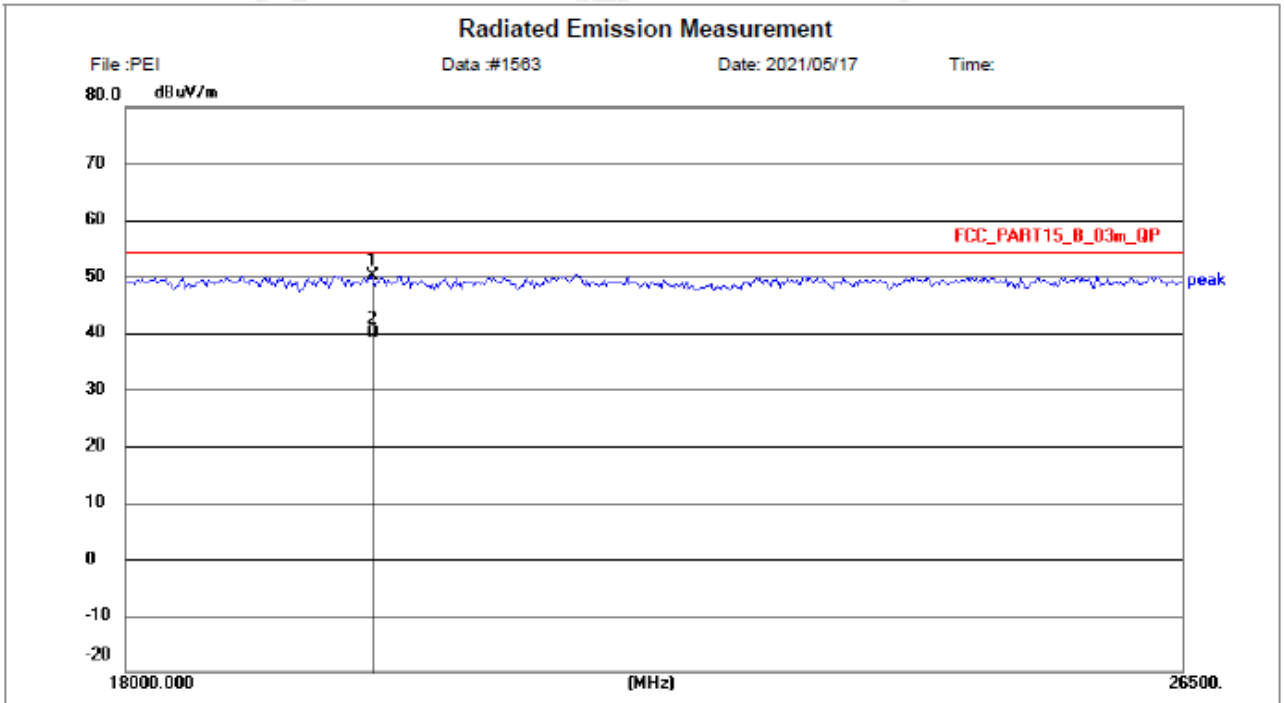
Site 966 Chamber
Limit: FCC_PART15_B_03m_QP
EUT:
M/N: PSB378W
Mode: TX 2402MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Horizontal*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	18749.499	40.69	9.50	50.19	74.00	23.81	peak	205	354	P	
2	18749.499	30.52	9.50	40.02	54.00	13.98	AVG	205	354	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Vertical
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2402MHz (8DPSK)	Humidity:	54 %
Frequency Range:	18GHz-26.5GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	GKYZD0150160US		



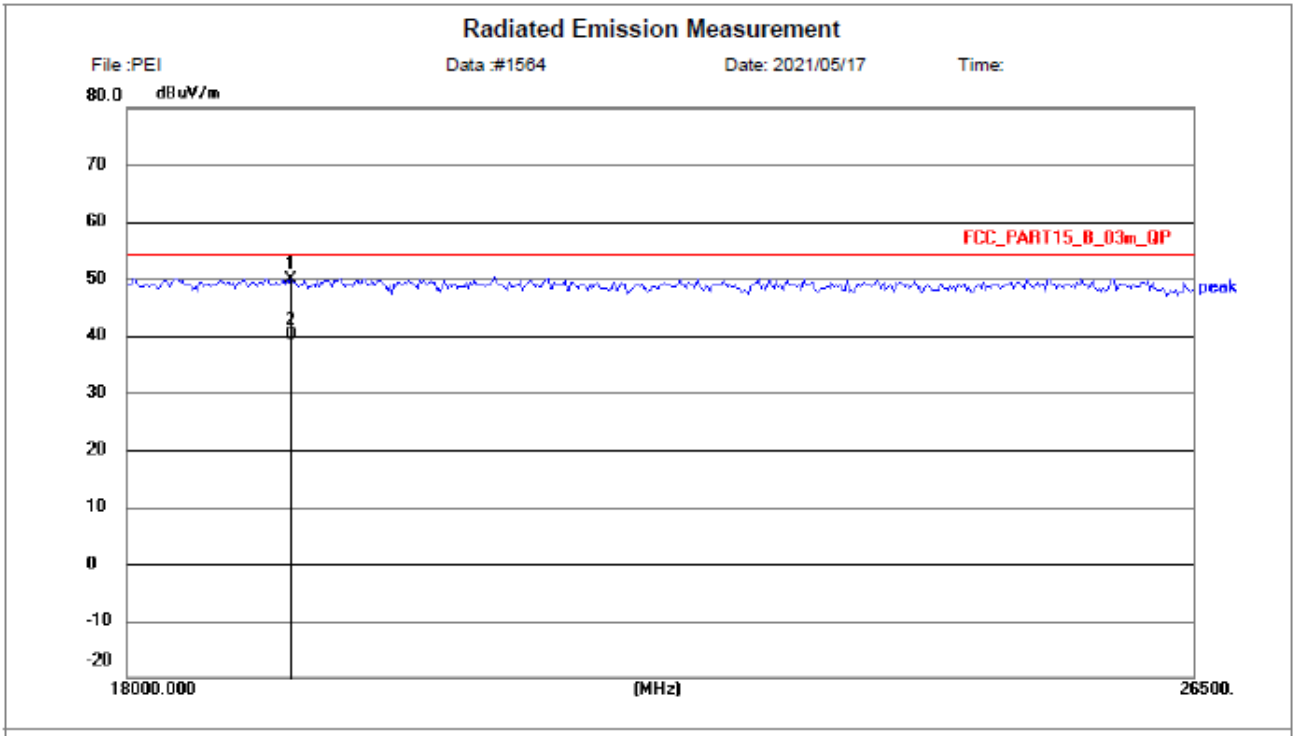
Site 966 Chamber
Limit: FCC_PART15_B_03m_QP
EUT:
M/N: PSB378W
Mode: TX 2402MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Vertical*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	19703.407	37.74	12.44	50.18	74.00	23.82	peak	110	157	P	
2	19703.407	27.56	12.44	40.00	54.00	14.00	AVG	110	157	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Horizontal
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2441MHz (8DPSK)	Humidity:	54 %
Frequency Range:	18GHz-26.5GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	GKYZD0150160US		



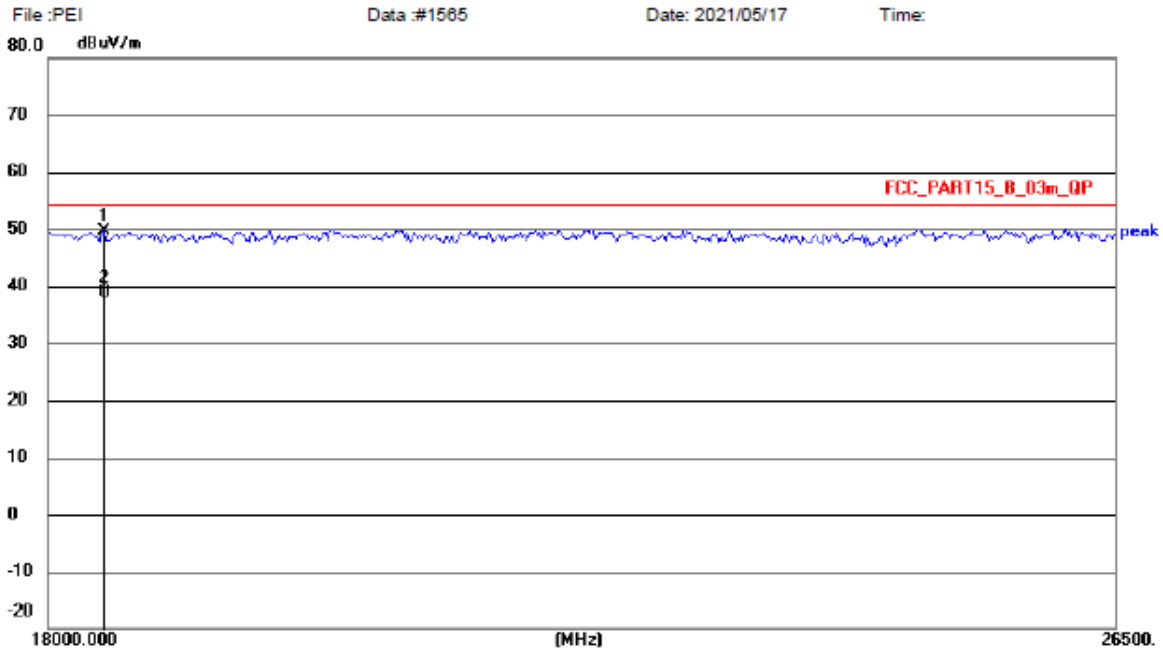
Site 966 Chamber
Limit: FCC_PART15_B_03m_QP
EUT:
M/N: PSB378W
Mode: TX 2441MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Horizontal*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	19107.214	39.20	10.70	49.90	74.00	24.10	peak	210	218	P	
2	19107.214	29.35	10.70	40.05	54.00	13.95	AVG	210	218	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Vertical
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2441MHz (8DPSK)	Humidity:	54 %
Frequency Range:	18GHz-26.5GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	GKYZD0150160US		



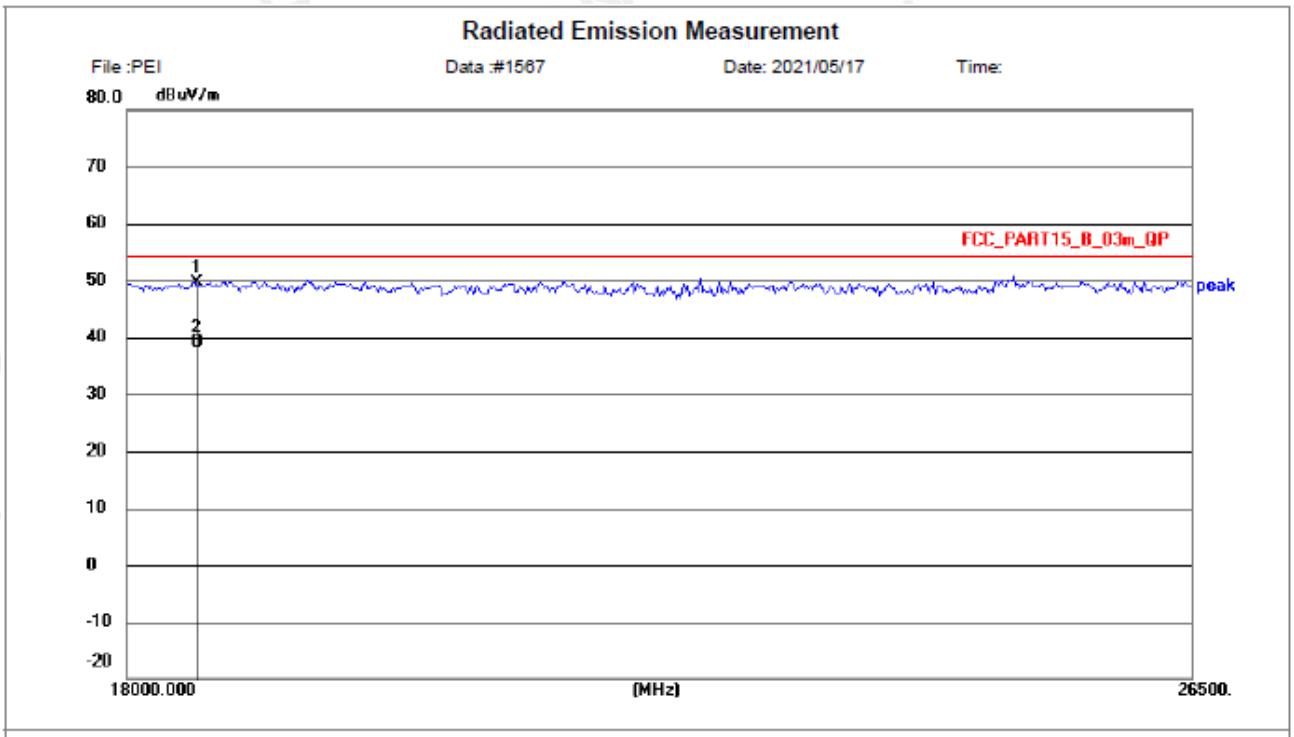
Site 966 Chamber
Limit: FCC_PART15_B_03m_QP
EUT:
M/N: PSB378W
Mode: TX 2441MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Vertical*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	18374.749	41.37	8.14	49.51	74.00	24.49	peak	100	158	P	
2	18374.749	30.85	8.14	38.99	54.00	15.01	AVG	100	158	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Horizontal
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2480MHz (8DPSK)	Humidity:	54 %
Frequency Range:	18GHz-26.5GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	GKYZD0150160US		



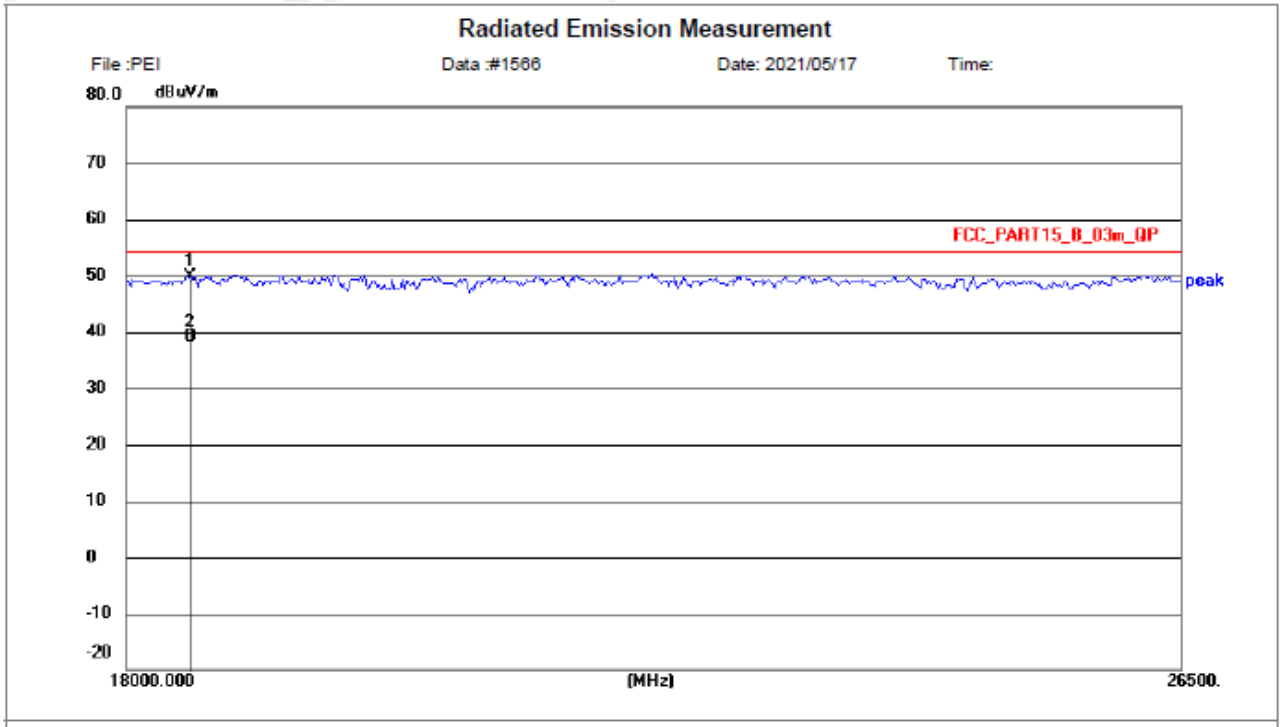
Site 966 Chamber
Limit: FCC_PART15_B_03m_QP
EUT:
M/N: PSB378W
Mode: TX 2480MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Horizontal*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	18459.920	41.29	8.46	49.75	74.00	24.25	peak	200	163	P	
2	18459.920	30.65	8.46	39.11	54.00	14.89	AVG	200	163	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Vertical
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2480MHz (8DPSK)	Humidity:	54 %
Frequency Range:	18GHz-26.5GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	GKYZD0150160US		



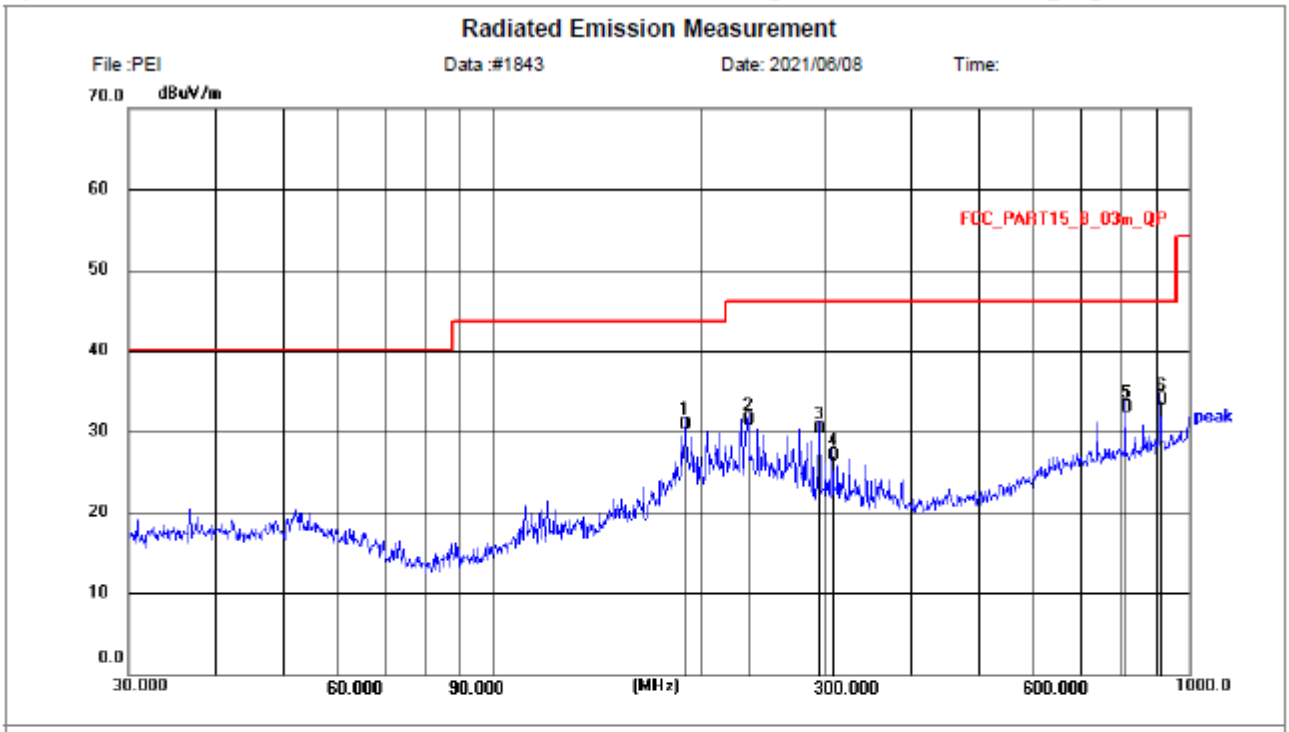
Site 966 Chamber
Limit: FCC_PART15_B_03m_QP
EUT:
M/N: PSB378W
Mode: TX 2480MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Vertical*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	18409.182	41.61	8.27	49.88	74.00	24.12	peak	105	226	P	
2	18409.182	30.74	8.27	39.01	54.00	14.99	AVG	105	226	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Horizontal
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2402MHz (8DPSK)	Humidity:	54 %
Frequency Range:	30MHz-1GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	JY024160150AA-UL		



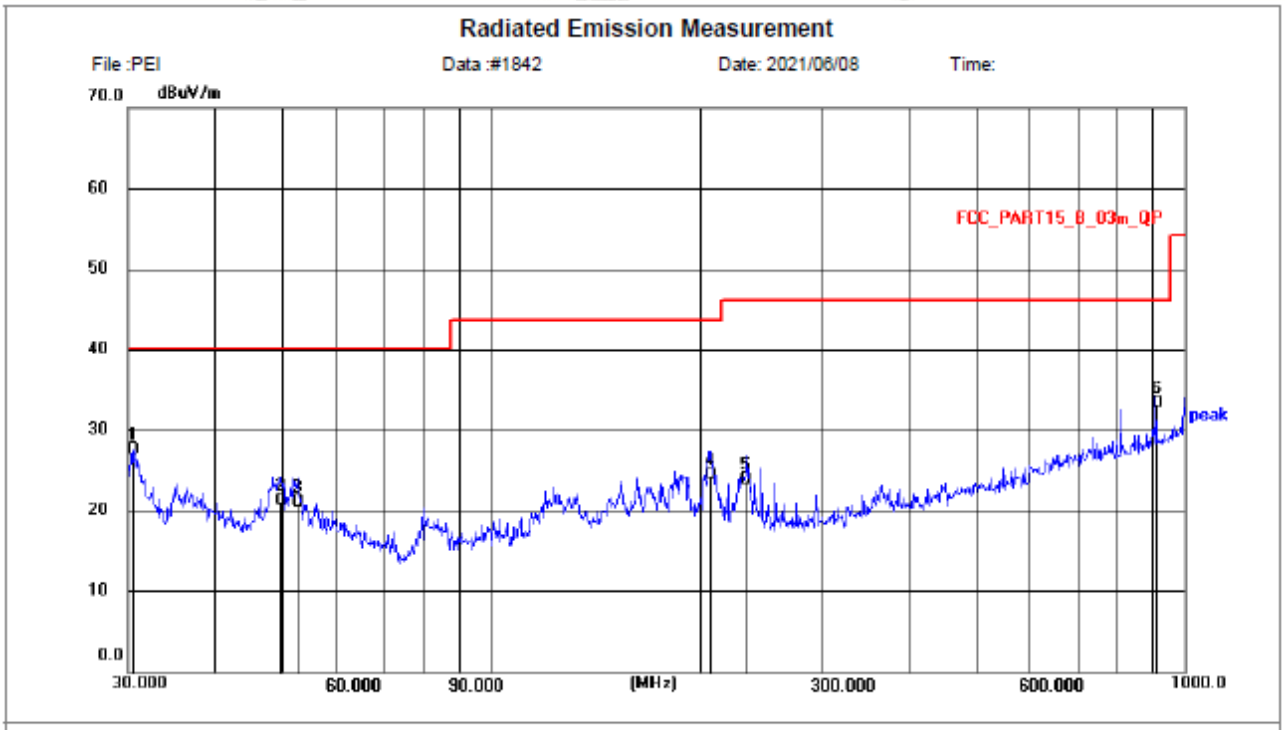
Site 966 Chamber
Limit: FCC_PART15_B
EUT:
M/N: PSB378W
Mode: TX 2402MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Horizontal*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	189.4061	18.56	12.41	30.97	43.50	12.53	QP	200	145	P	
2	232.5318	18.28	13.05	31.33	46.00	14.67	QP	200	39	P	
3	294.8881	15.70	14.64	30.34	46.00	15.66	QP	205	254	P	
4	307.2919	12.02	14.94	26.96	46.00	19.04	QP	205	179	P	
5	812.3990	9.86	23.13	32.99	46.00	13.01	QP	200	358	P	
6 *	910.4643	9.61	24.17	33.78	46.00	12.22	QP	200	109	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Vertical
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2402MHz (8DPSK)	Humidity:	54 %
Frequency Range:	30MHz-1GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	JY024160150AA-UL		



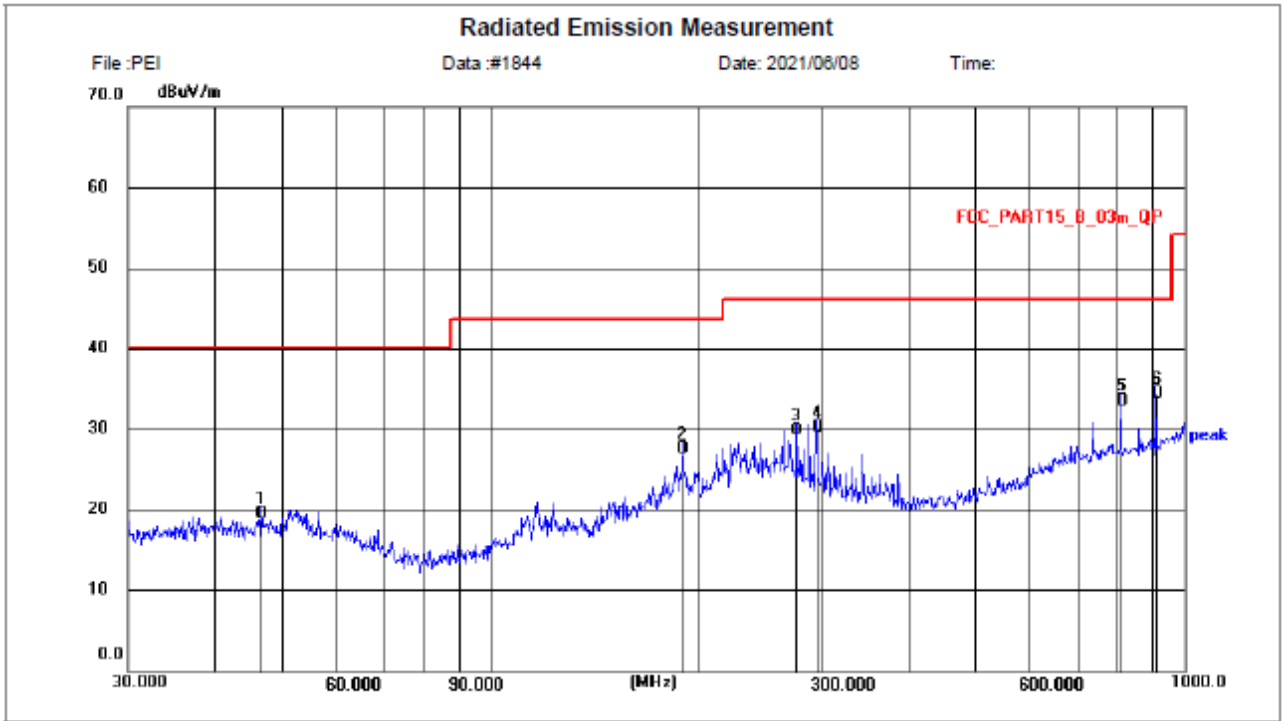
Site 966 Chamber
Limit: FCC_PART15_B
EUT:
M/N: PSB378W
Mode: TX 2402MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Vertical*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	30.4771	13.17	14.42	27.59	40.00	12.41	QP	100	208	P	
2	49.8813	6.41	14.89	21.30	40.00	18.70	QP	100	39	P	
3	52.6674	6.30	14.71	21.01	40.00	18.99	QP	110	247	P	
4	207.3042	12.42	12.05	24.47	43.50	19.03	QP	110	195	P	
5	233.5533	10.83	13.09	23.92	46.00	22.08	QP	100	58	P	
6	910.4643	9.11	24.17	33.28	46.00	12.72	QP	105	195	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Horizontal
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2441MHz (8DPSK)	Humidity:	54 %
Frequency Range:	30MHz-1GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	JY024160150AA-UL		



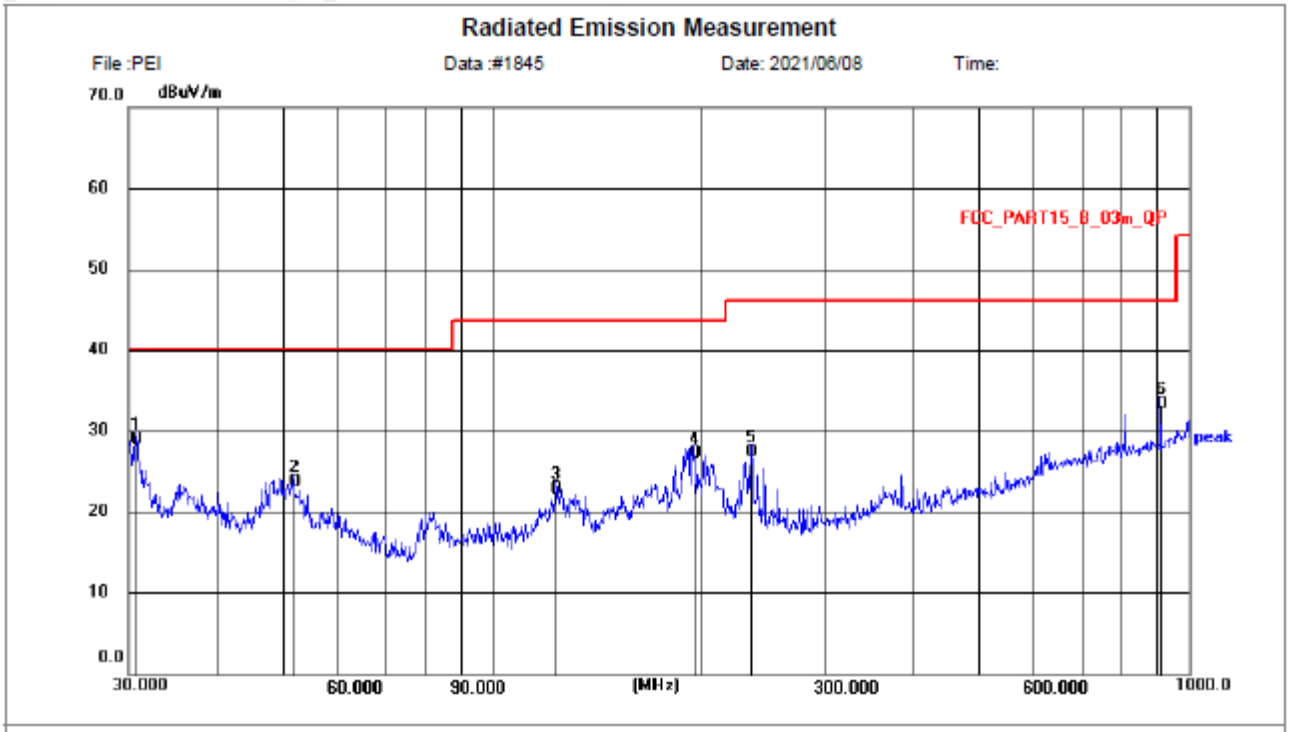
Site 966 Chamber
Limit: FCC_PART15_B
EUT:
M/N: PSB378W
Mode: TX 2441MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Horizontal*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	46.7072	4.62	14.94	19.56	40.00	20.44	QP	205	144	P	
2	189.5722	15.11	12.39	27.50	43.50	16.00	QP	205	164	P	
3	276.3657	15.61	14.20	29.81	46.00	16.19	QP	200	122	P	
4	294.8882	15.52	14.64	30.16	46.00	15.84	QP	200	168	P	
5	812.3991	10.38	23.13	33.51	46.00	12.49	QP	205	68	P	
6 *	910.4644	10.30	24.17	34.47	46.00	11.53	QP	200	185	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Vertical
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2441MHz (8DPSK)	Humidity:	54 %
Frequency Range:	30MHz-1GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	JY024160150AA-UL		



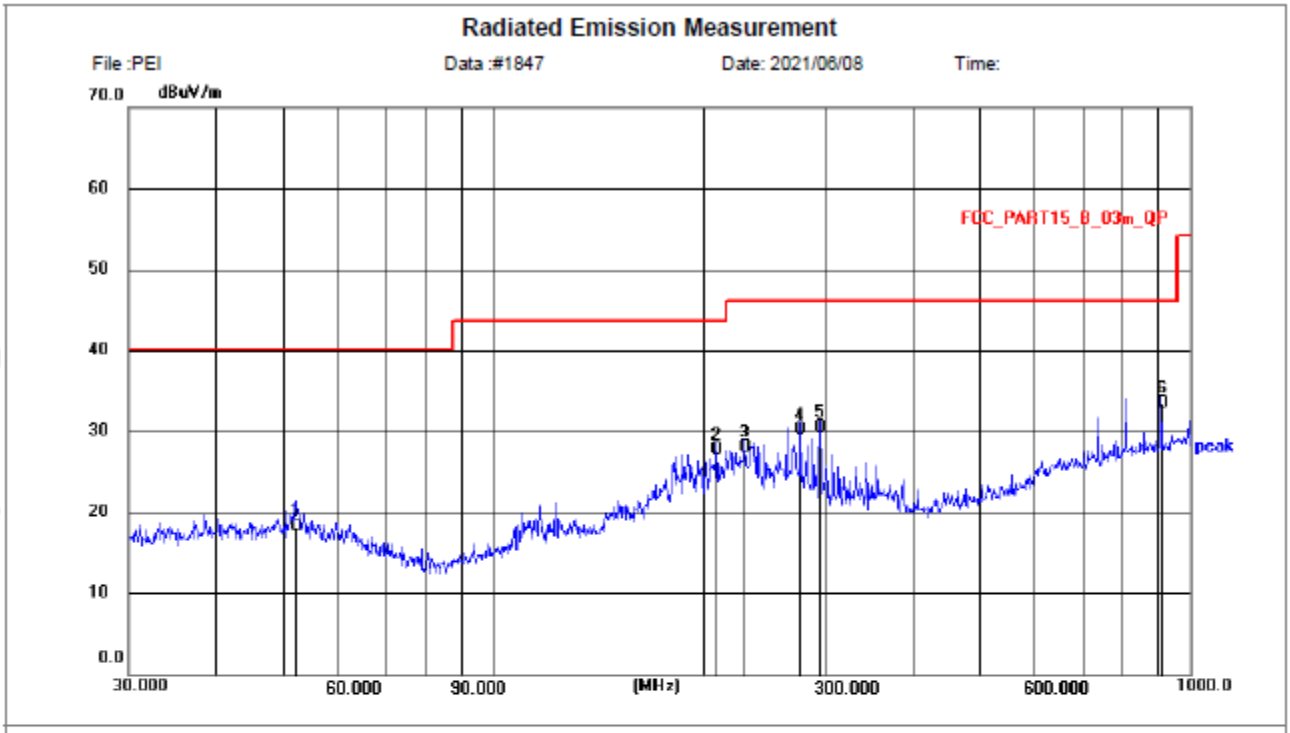
Site 966 Chamber
Limit: FCC_PART15_B
EUT:
M/N: PSB378W
Mode: TX 2441MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Vertical*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1 *	30.7724	14.58	14.43	29.01	40.00	10.99	QP	100	211	P	
2	51.9795	9.04	14.75	23.79	40.00	16.21	QP	100	153	P	
3	123.5900	8.55	14.26	22.81	43.50	20.69	QP	100	250	P	
4	194.4534	15.14	12.09	27.23	43.50	16.27	QP	105	285	P	
5	235.1970	14.28	13.17	27.45	46.00	18.55	QP	105	139	P	
6	910.4644	9.16	24.17	33.33	46.00	12.67	QP	100	252	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Horizontal
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2480MHz (8DPSK)	Humidity:	54 %
Frequency Range:	30MHz-1GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	JY024160150AA-UL		



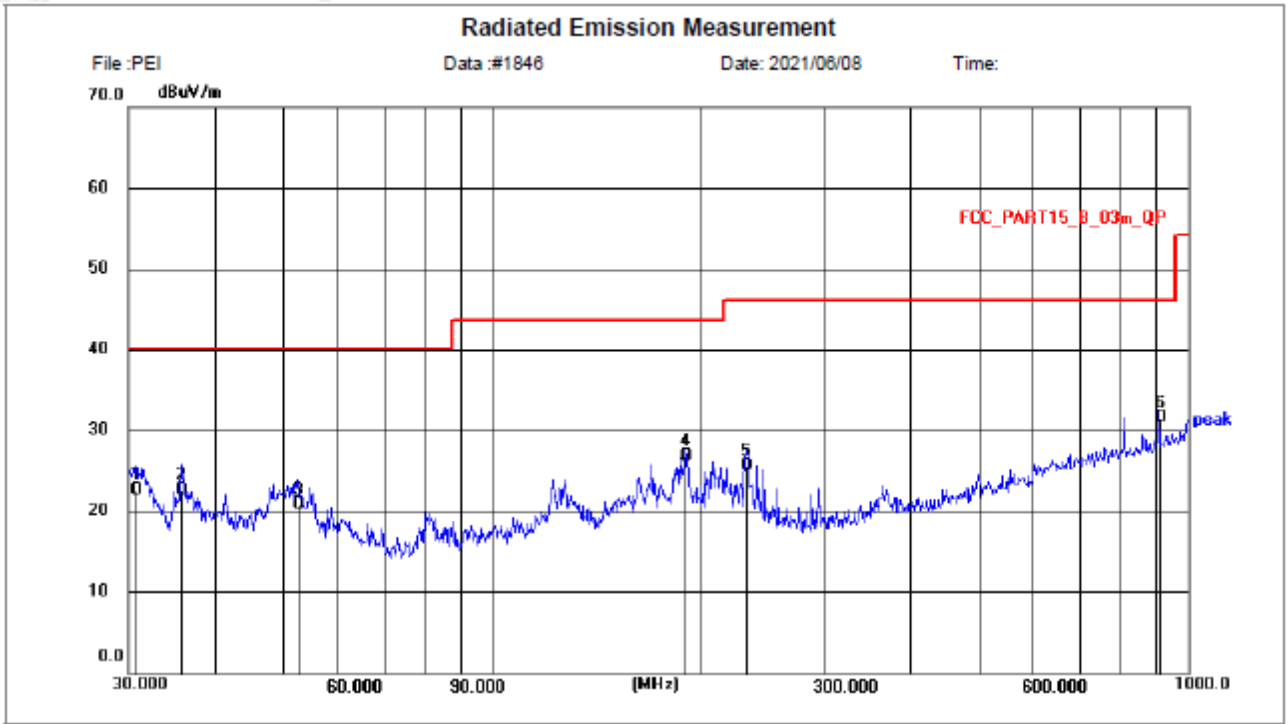
Site 966 Chamber
Limit: FCC_PART15_B
EUT:
M/N: PSB378W
Mode: TX 2480MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Horizontal*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	52.2993	3.61	14.74	18.35	40.00	21.65	QP	205	116	P	
2	209.3129	15.68	12.13	27.81	43.50	15.69	QP	205	217	P	
3	229.2930	15.15	12.92	28.07	46.00	17.93	QP	210	236	P	
4	276.3657	16.07	14.20	30.27	46.00	15.73	QP	210	285	P	
5	294.8881	15.82	14.64	30.46	46.00	15.54	QP	200	185	P	
6 *	910.4643	9.26	24.17	33.43	46.00	12.57	QP	200	59	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Vertical
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2480MHz (8DPSK)	Humidity:	54 %
Frequency Range:	30MHz-1GHz	Test By:	PEI
Test Distance:	3m	Test Voltage:	AC 120V/60Hz
Test Results:	PASS		
Adapter:	JY024160150AA-UL		



Site 966 Chamber
Limit: FCC_PART15_B
EUT:
M/N: PSB378W
Mode: TX 2480MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Vertical*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	30.7185	8.24	14.42	22.66	40.00	17.34	QP	110	185	P	
2	35.7804	8.01	14.73	22.74	40.00	17.26	QP	105	263	P	
3	52.4372	6.14	14.73	20.87	40.00	19.13	QP	105	285	P	
4	190.2381	14.62	12.33	26.95	43.50	16.55	QP	105	95	P	
5	232.1245	12.65	13.03	25.68	46.00	20.32	QP	110	136	P	
6 *	910.4644	7.49	24.17	31.66	46.00	14.34	QP	110	227	P	

Note: (1) All Readings are Peak Value and AV.

(2) Emission Level= Reading Level + Factor

(3) Factor= Antenna Gain + Cable Loss – Amplifier Gain

(4) Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits, therefore, than 20 dB below the limit do no reported.

(5) Measurement uncertainty: ±3.7dB.

(6) Horn antenna used for the emission over 1000MHz.

6. CHANNEL SEPARATION

6.1 Measurement Procedure

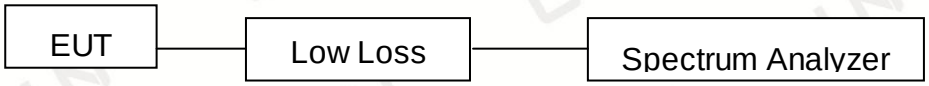
Minimum Hopping Channel Carrier Frequency Separation, FCC Rule 15.247(a)(1):

Connect EUT antenna terminal to the spectrum analyzer with a low loss cable, and using the Marker and Max-Hold function to record the separation of two adjacent channels.

6.2 Limit

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater.

6.3 Test SET-UP (Block Diagram of Configuration)



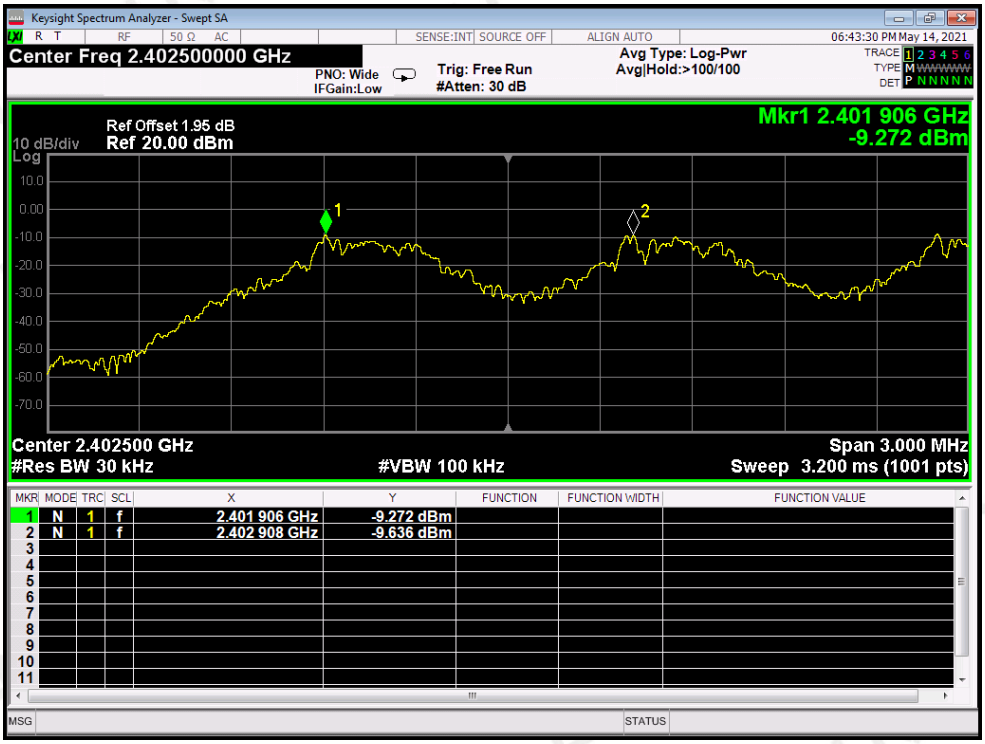
6.4 Measurement Results

Refer to attached data chart.

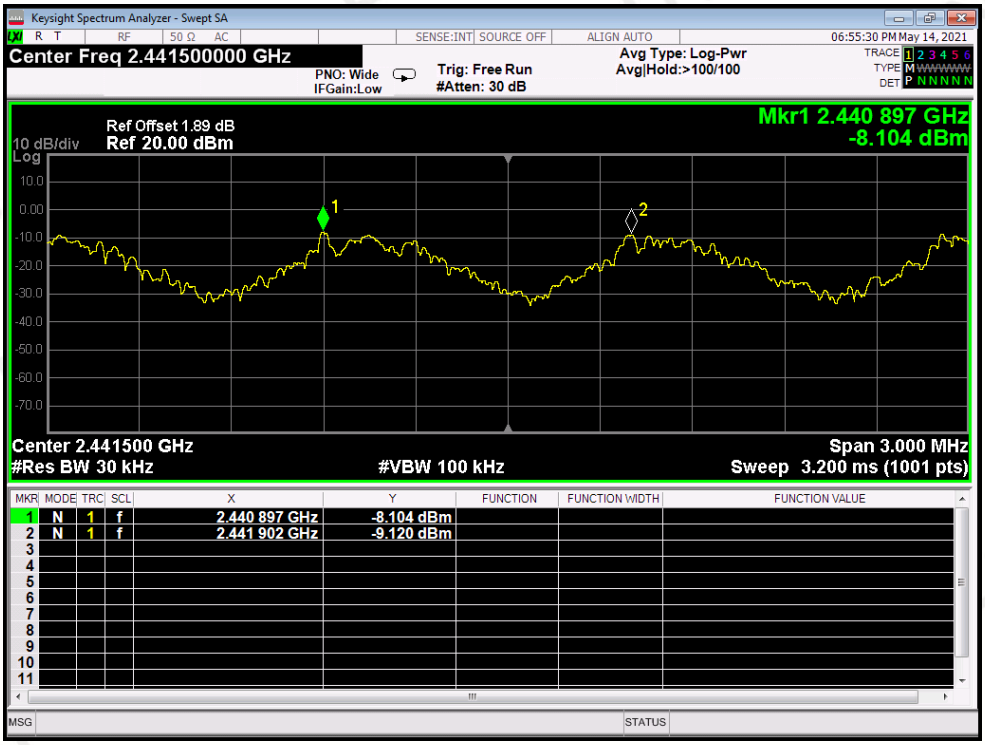
RBW:	30kHz	Temperature:	24 ℃
VBW:	100kHz	Humidity:	50 %
Spectrum Detector:	PK	Test By:	PEI
Packet:	DH1, 2DH1, 3DH1(Worst case)	Test Date:	May 14, 2021
Test Result:	PASS		

Channel	Test Frequency (MHz)	Separation Read Value (kHz)	Separation Limit 2/3 20dB Bandwidth (kHz)
GFSK			
Lowest	2402	1.002	>612.7
Middle	2441	1.005	>578.7
Highest	2480	0.993	>584.7
π/4-DQPSK			
Lowest	2402	0.993	>861.3
Middle	2441	1.134	>832.0
Highest	2480	0.999	>862.7
8DPSK			
Lowest	2402	1.002	>811.3
Middle	2441	1.002	>806.7
Highest	2480	0.999	>806.0

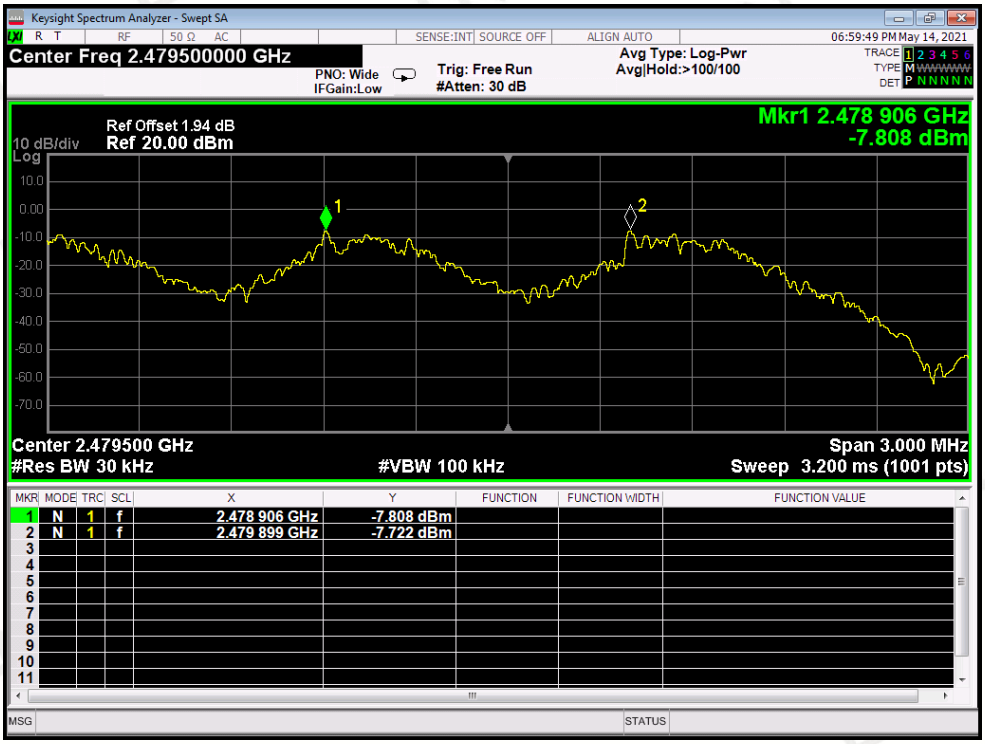
GFSK Lowest Channel



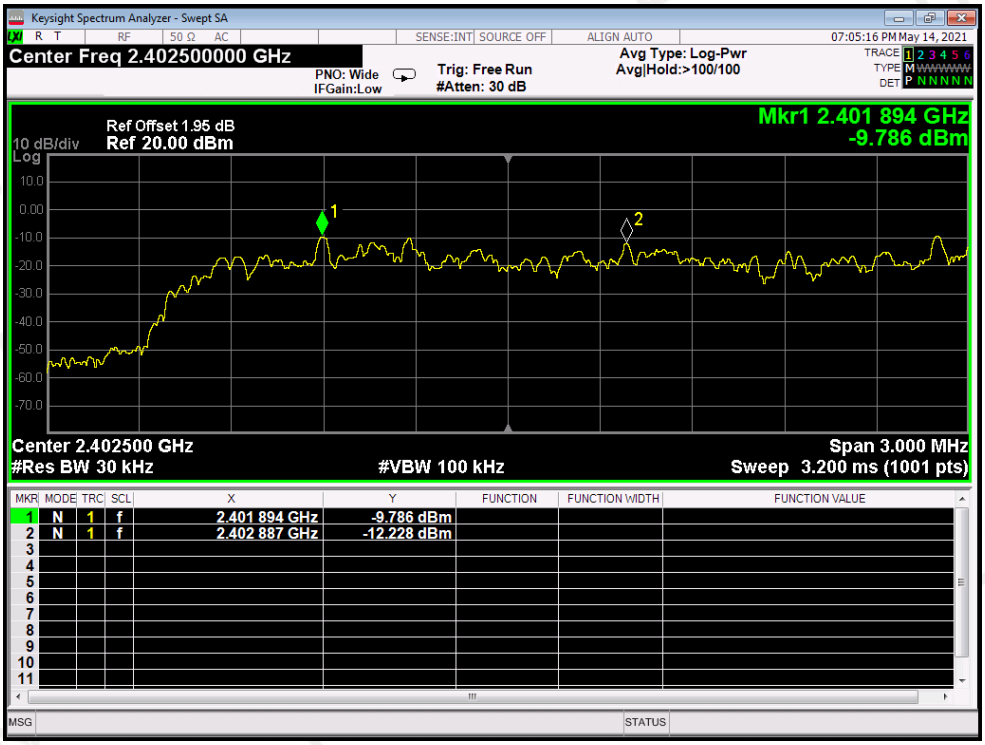
GFSK Middle Channel



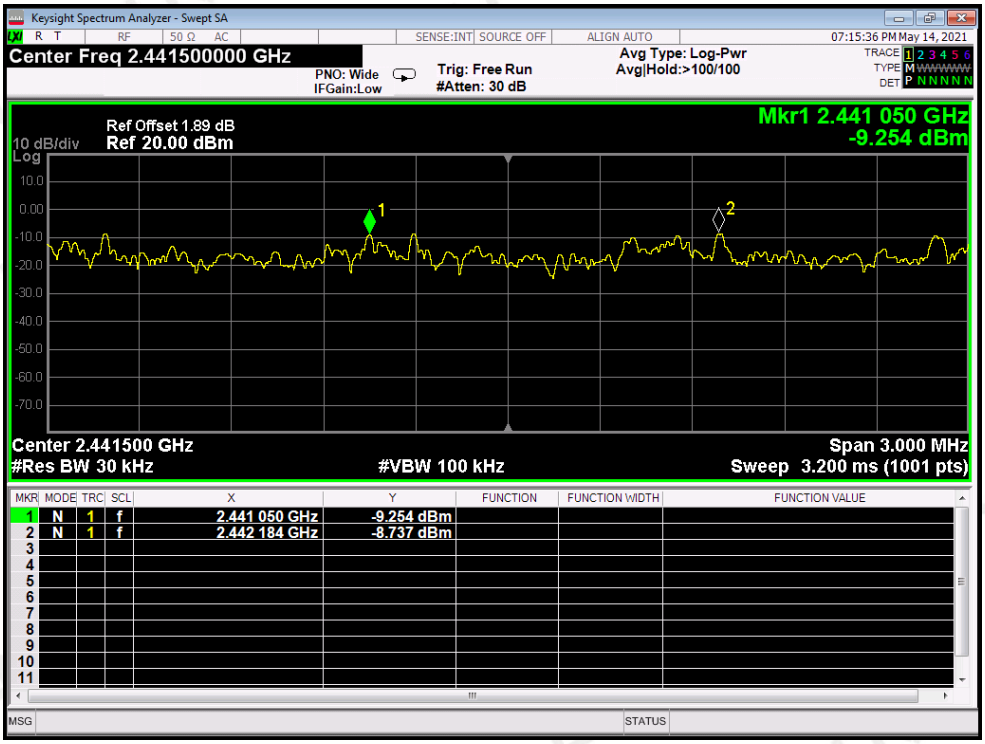
GFSK Highest Channel



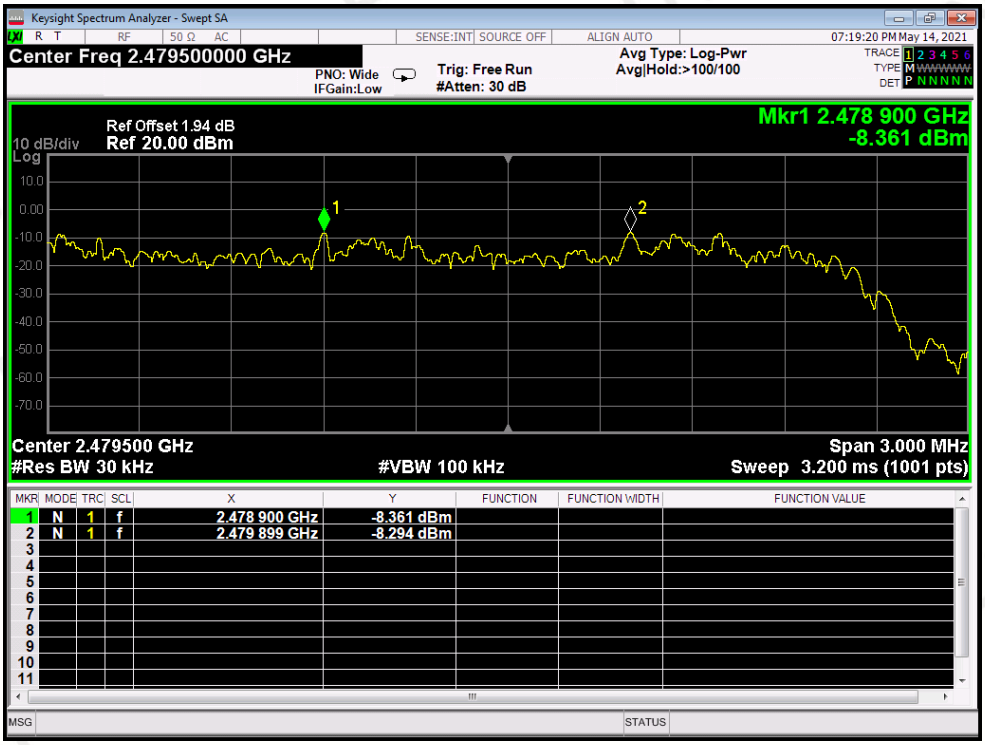
π/4-DQPSK Lowest Channel



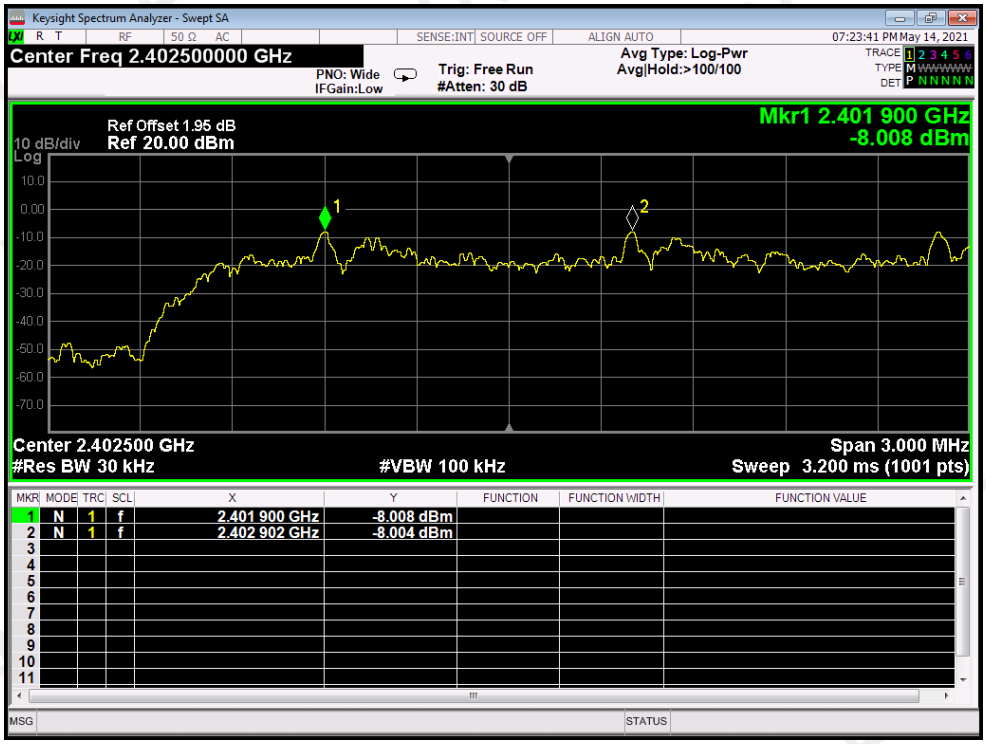
π/4-DQPSK Middle Channel



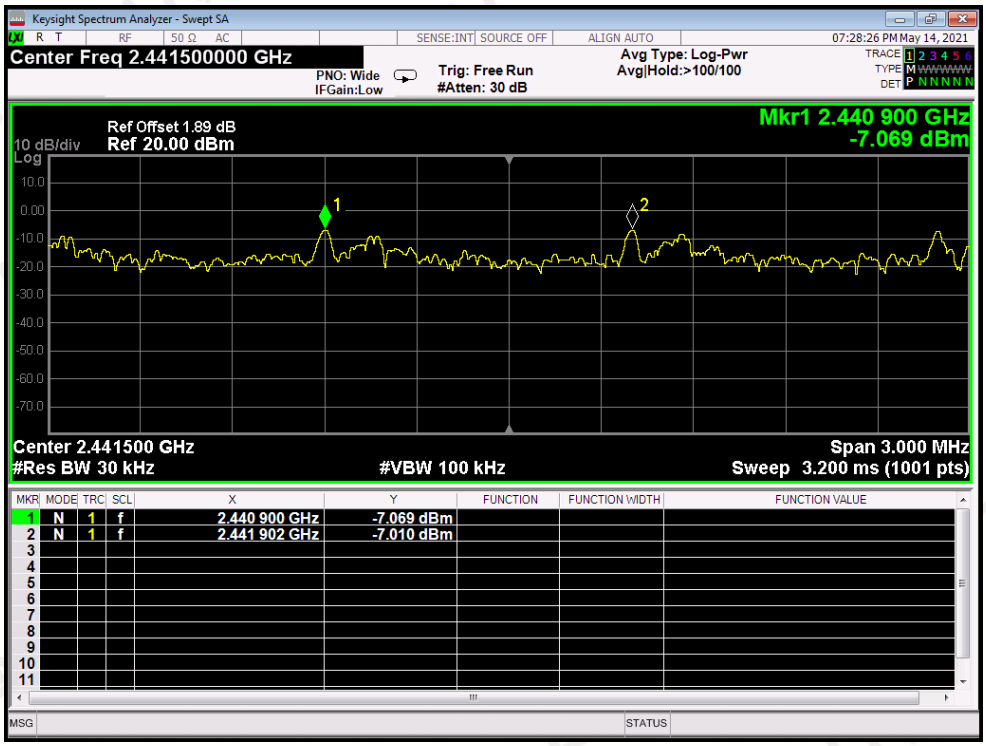
π/4-DQPSK Highest Channel



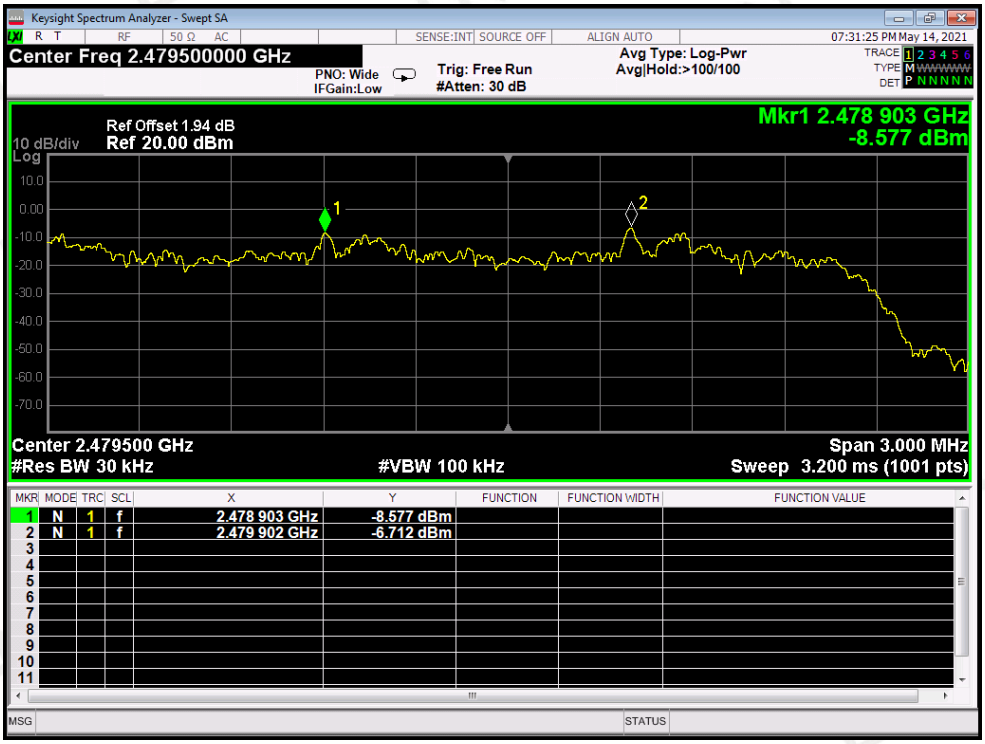
8DPSK Lowest Channel



8DPSK Middle Channel



8DPSK Highest Channel



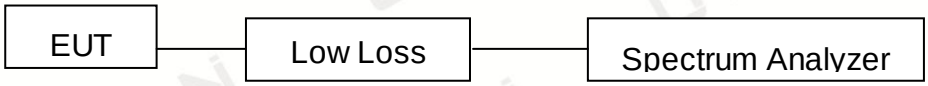
7. 20DB BANDWIDTH

7.1 Measurement Procedure

Maximum 20dB RF Bandwidth, FCC Rule 15.247(a)(1):

The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RBW was chosen so that the display was a result of the hopping channel modulation. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. Use the spectrum 20dB down delta function to measure the bandwidth.

7.2 Test SET-UP (Block Diagram of Configuration)



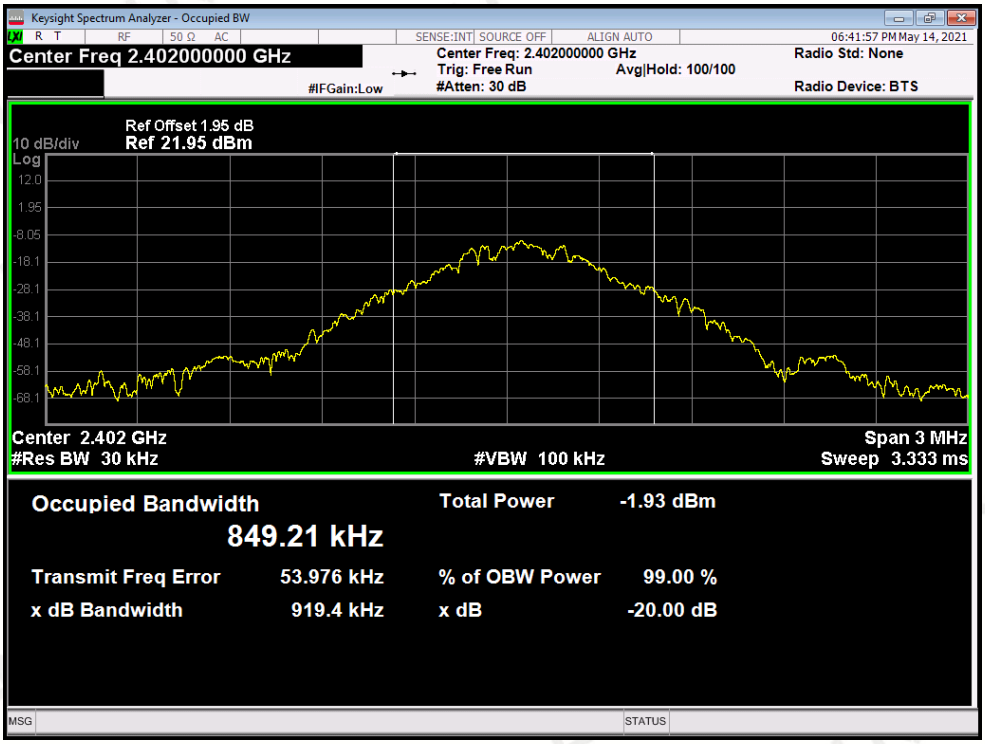
7.3 Measurement Results

Refer to attached data chart.

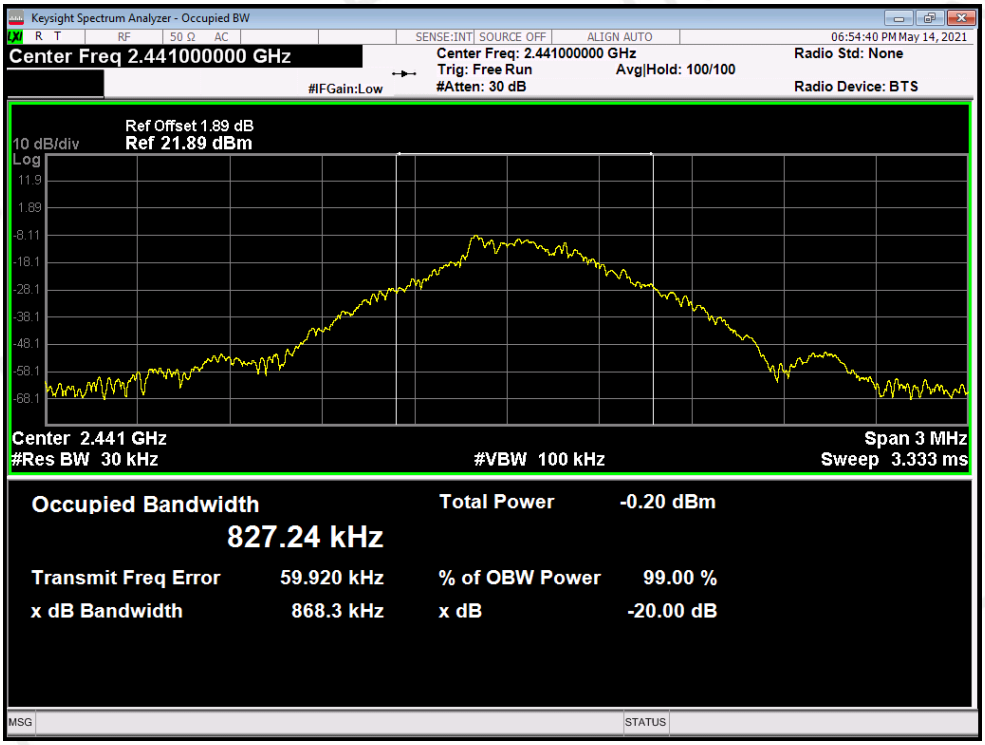
RBW:	30kHz	Temperature:	24 ℃
VBW:	100kHz	Humidity:	50 %
Spectrum Detector:	PK	Test By:	PEI
Packet:	DH1, 2DH1, 3DH1(Worst case)	Test Date:	May 14, 2021
Test Result:	PASS		

Channel	Test Frequency (MHz)	20dB Down BW (MHz)
GFSK		
Lowest	2402	0.919
Middle	2441	0.868
Highest	2480	0.877
π/4-DQPSK		
Lowest	2402	1.292
Middle	2441	1.248
Highest	2480	1.294
8DPSK		
Lowest	2402	1.217
Middle	2441	1.210
Highest	2480	1.209

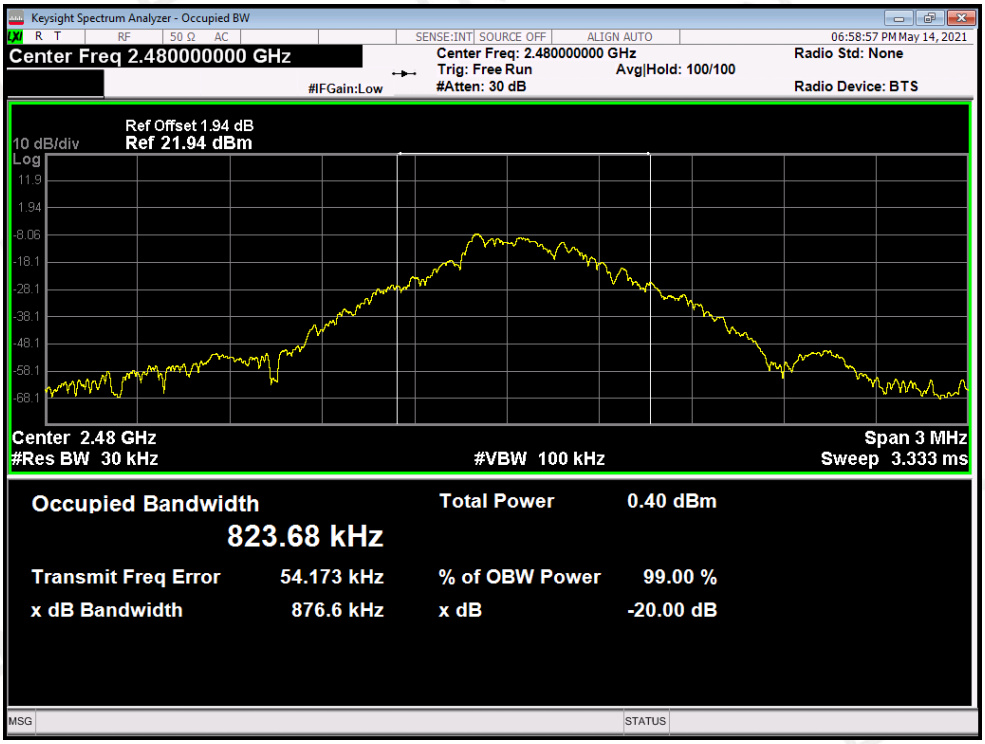
GFSK Lowest Channel



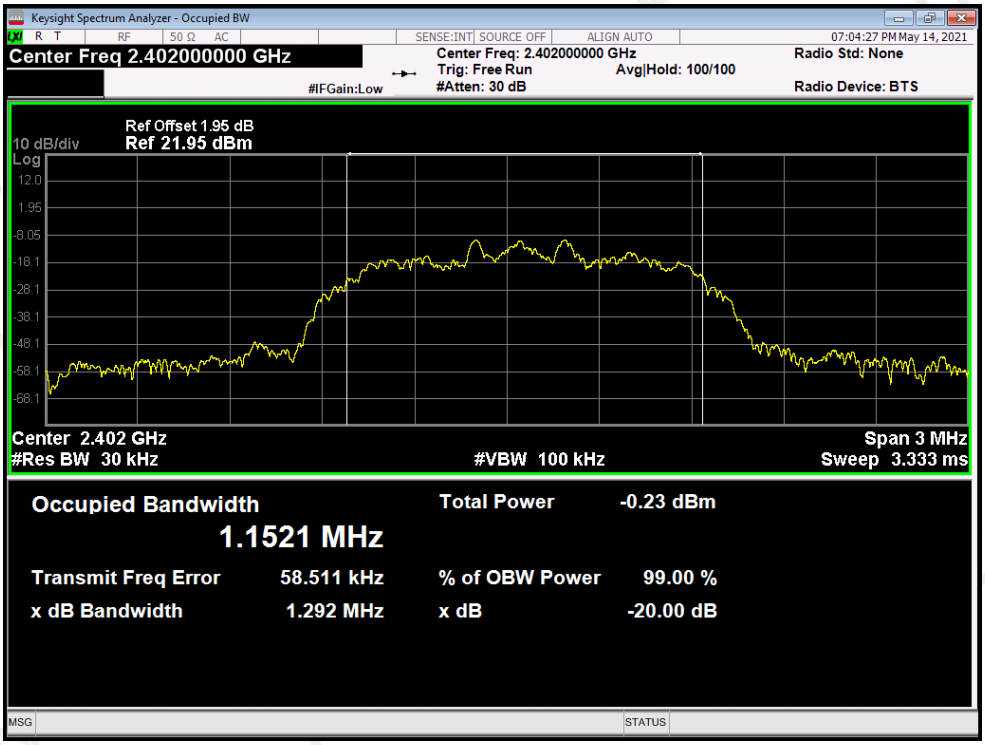
GFSK Middle Channel



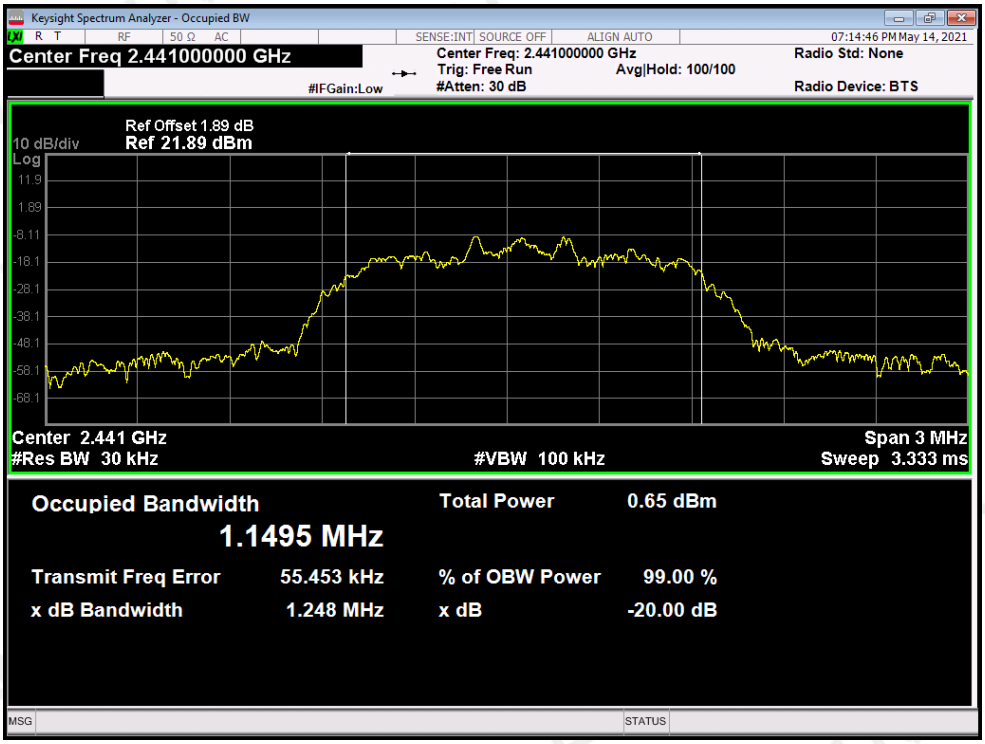
GFSK Highest Channel



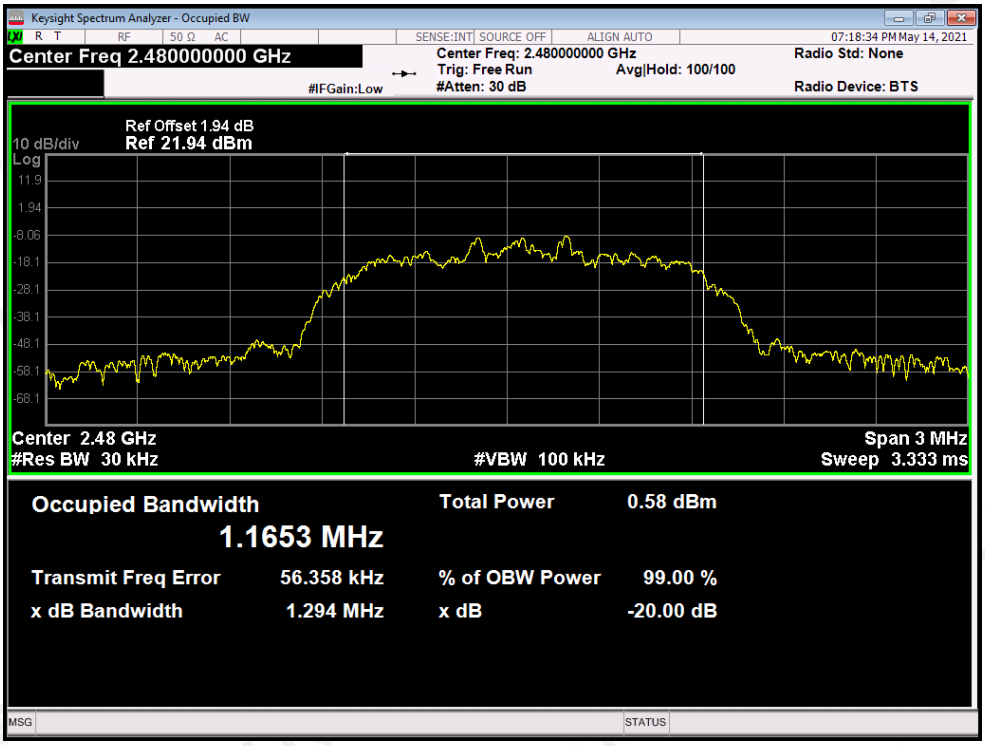
π/4-DQPSK Lowest Channel



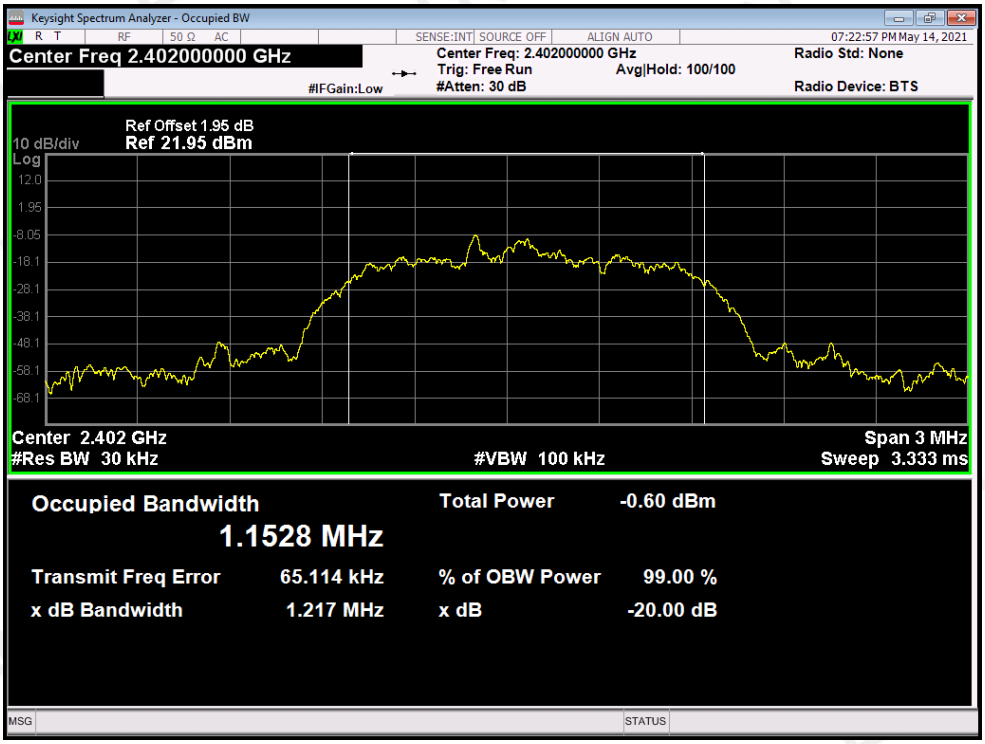
π/4-DQPSK Middle Channel



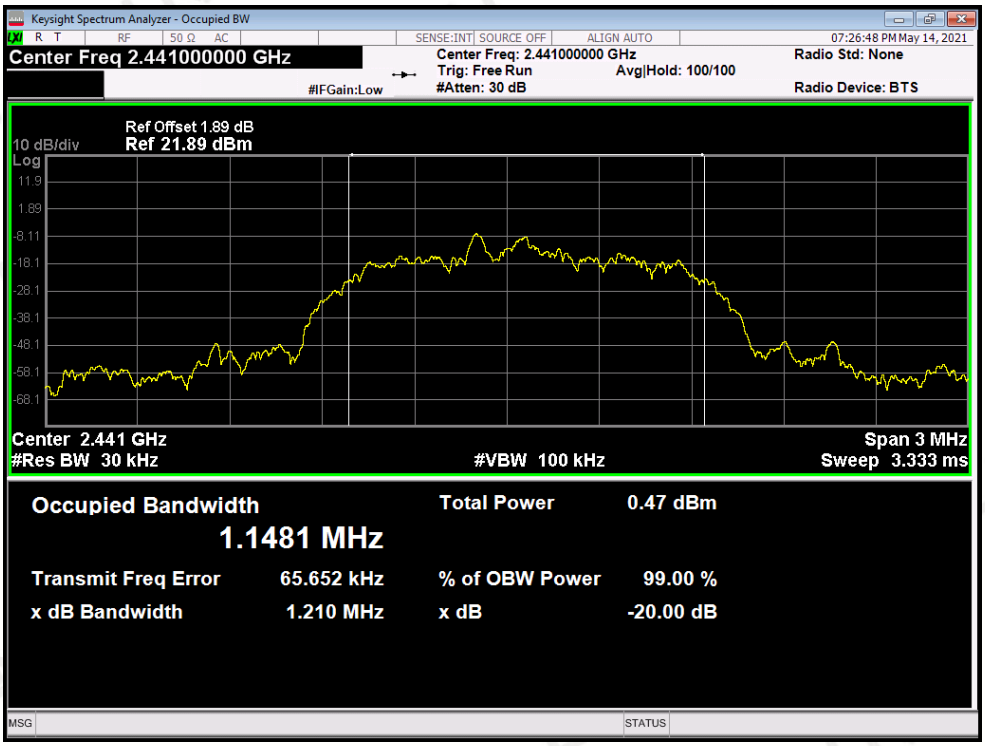
π/4-DQPSK Highest Channel



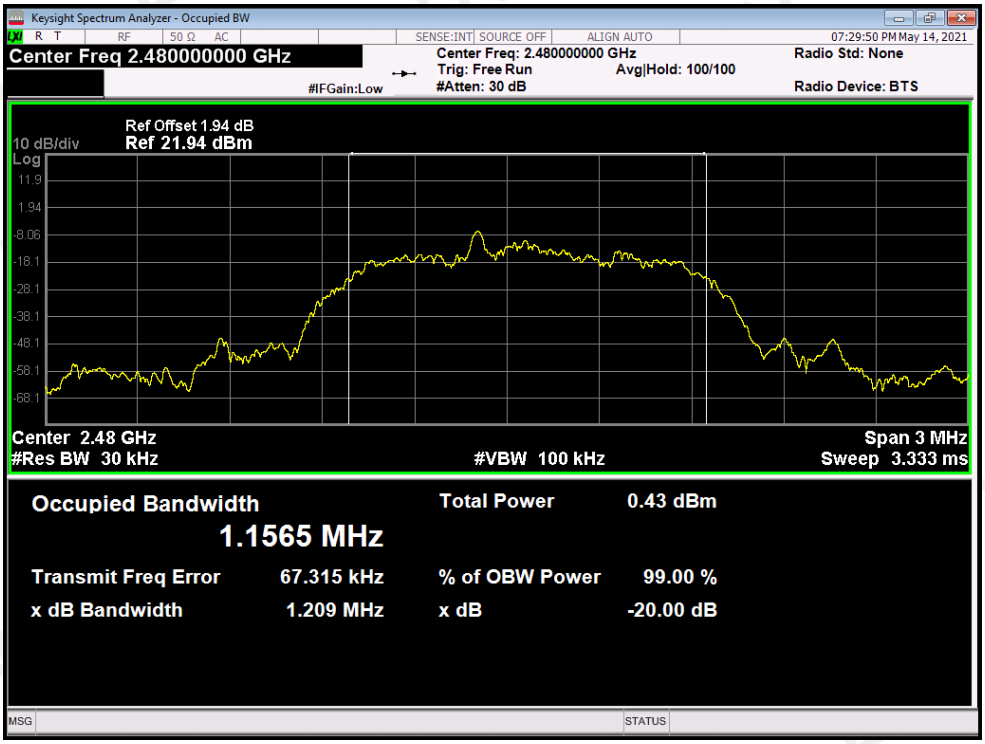
8DPSK Lowest Channel



8DPSK Middle Channel



8DPSK Highest Channel



8. HOPPING CHANNEL NUMBER

8.1 Measurement Procedure

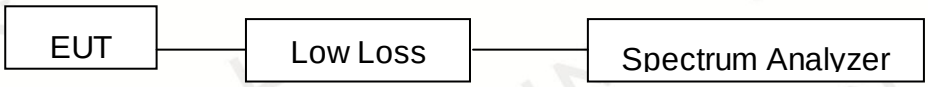
Minimum Number of Hopping Frequencies, FCC Rule 15.247(a)(1)(iii):

Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum, and the spectrum analyzer set to MAX HOLD readings were taken for 3-5 minutes. The channel peaks so recorded were added together, and the total number compared to the minimum number of channels required in the regulation.

8.2 Limit

Frequency hopping systems in the 2400-2483.5MHz band shall use at least 15 channels.

8.3 Test SET-UP (Block Diagram of Configuration)

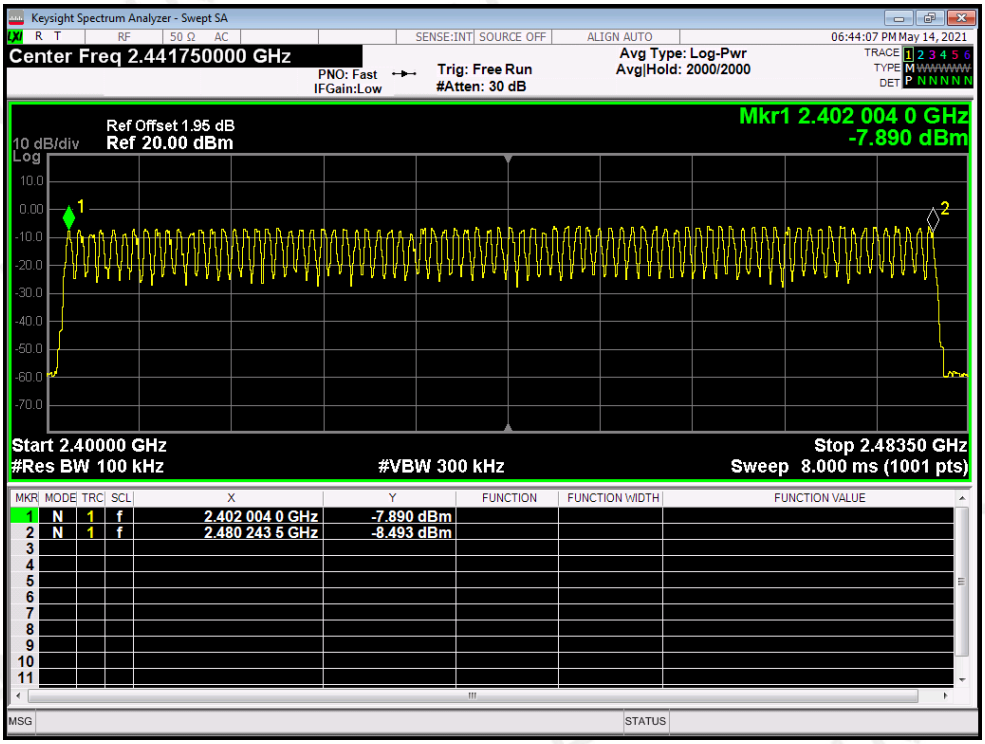


8.4 Measurement Results

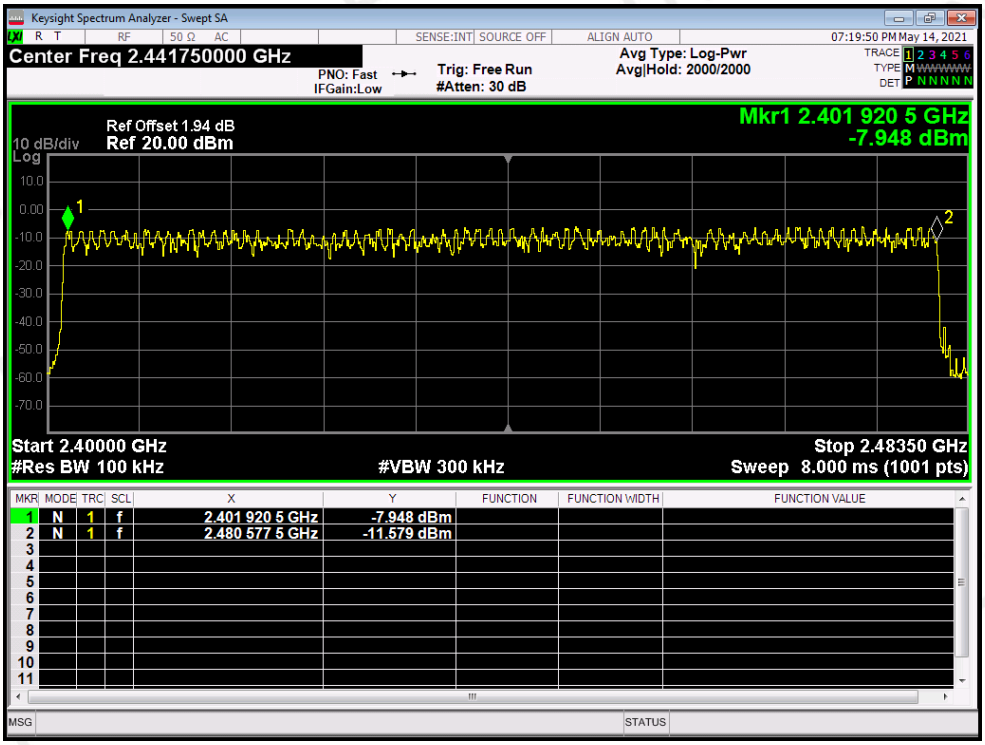
RBW:	100kHz	Temperature:	24 ℃
VBW:	300kHz	Humidity:	50 %
Spectrum Detector:	PK	Test By:	PEI
Packet:	DH1, 2DH1, 3DH1(Worst case)	Test Date:	May 14, 2021
Test Result:	PASS		

Hopping Channel Frequency Range	Number of Hopping Channels	Limit
2400-2483.5	79	≥15

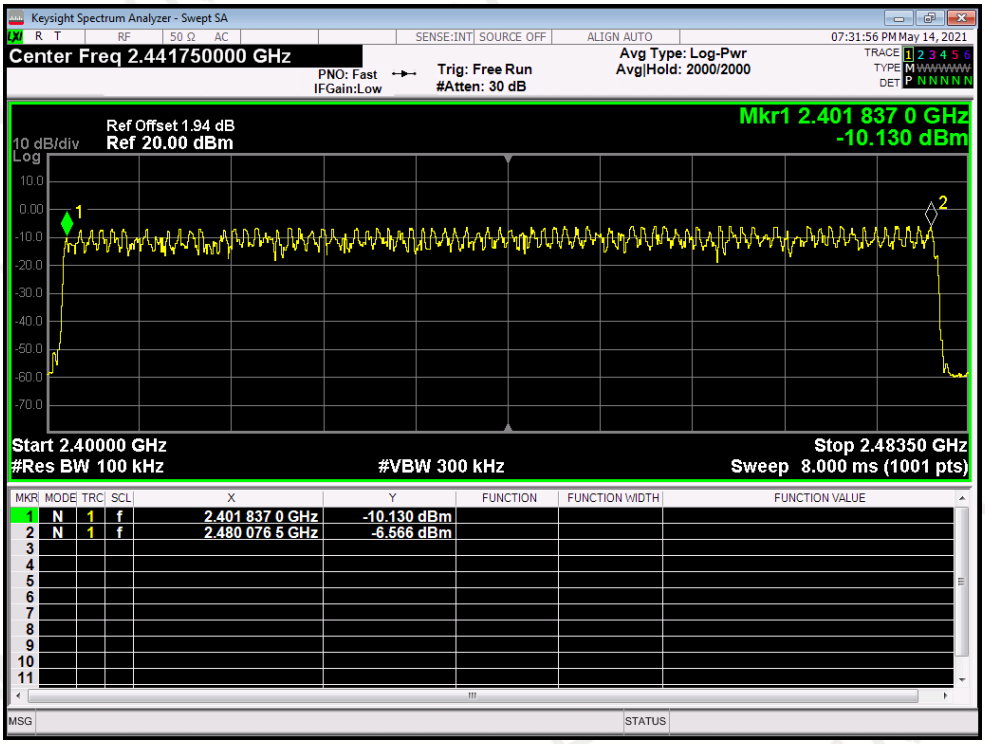
GFSK



π/4-DQPSK



8DPSK


Keysight Spectrum Analyzer - Swept SA
Center Freq 2.441750000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 2000/2000
07:31:56 PM May 14, 2021
Ref Offset 1.94 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 2.401 837 0 GHz
-10.130 dBm
Start 2.40000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.48350 GHz
Sweep 8.000 ms (1001 pts)
1 N 1 f 2.401 837 0 GHz -10.130 dBm
2 N 1 f 2.480 076 5 GHz -6.566 dBm

9. TIME OF OCCUPANCY (DWELL TIME)

9.1 Measurement Procedure

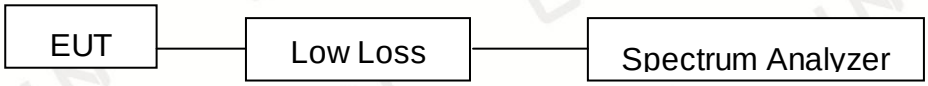
Average Channel Occupancy Time, FCC Ref:15.247(a)(1)(iii):

Connect EUT antenna terminal to the spectrum analyzer with a low loss cable. The spectrum analyzer center frequency was set to one of the known hopping channels. The Sweep was set to 10 ms, the SPAN was set to Zero SPAN. The time duration of the transmissions so captured was measured with the Marker Delta function

9.2 Limit

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.

9.3 Test SET-UP (Block Diagram of Configuration)



9.4 Measurement Results

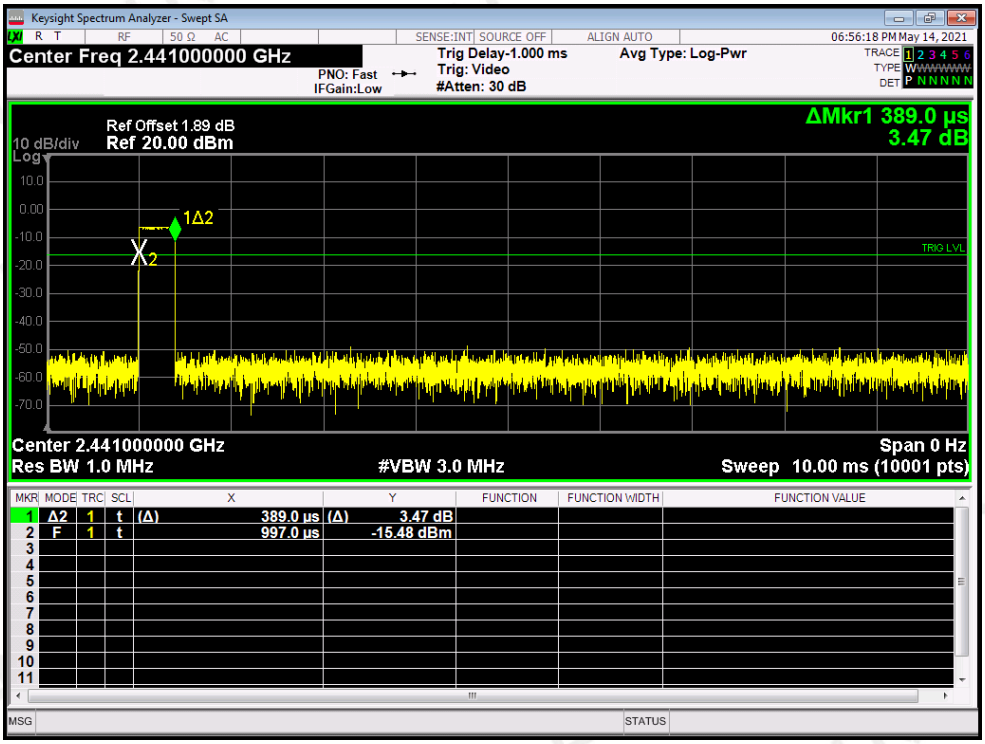
Refer to attached data chart.

The maximum number of hopping channels in 31.6s (0.4s/Channel x 79 Channel)

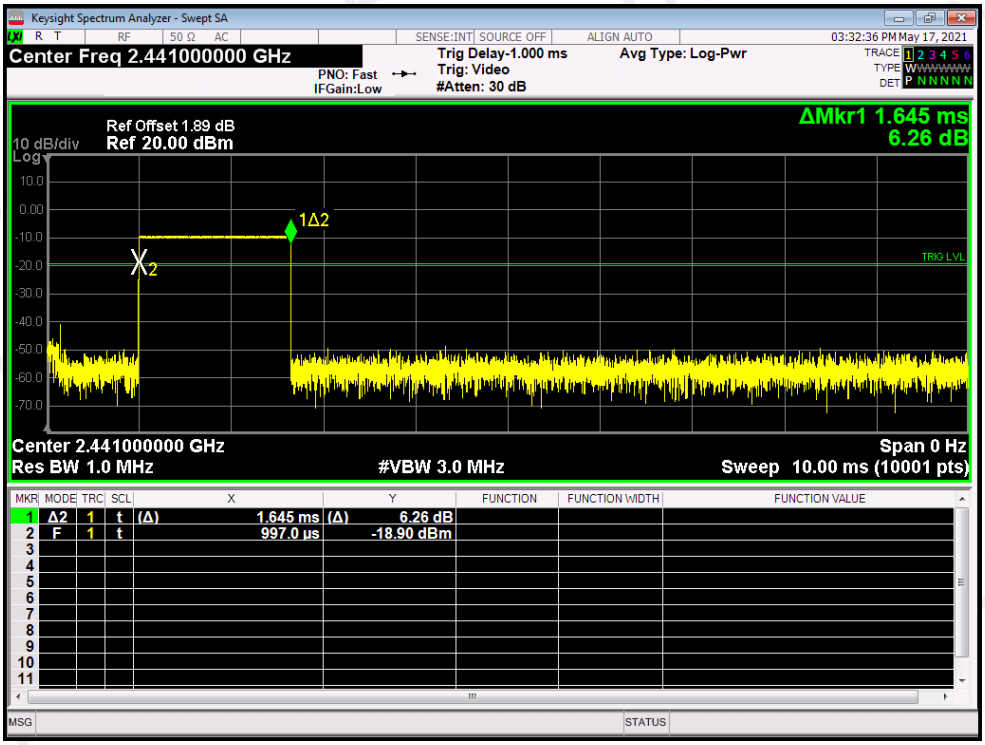
RBW:	1MHz	Temperature:	24 ℃
VBW:	3MHz	Humidity:	50 %
Spectrum Detector:	PK	Test By:	PEI
Test Result:	PASS	Test Date:	May 14, 2021

Packet	Frequency (MHz)	Result (msec)			Limit (msec)
GFSK					
DH1	2441	0.389	(ms)*(1600/(2*79))*31.6=	124.48	400
DH3	2441	1.645	(ms)*(1600/(4*79))*31.6=	263.20	400
DH5	2441	2.893	(ms)*(1600/(6*79))*31.6=	308.59	400
π/4-DQPSK					
2-DH1	2441	0.397	(ms)*(1600/(2*79))*31.6=	127.04	400
2-DH3	2441	1.650	(ms)*(1600/(4*79))*31.6=	264.00	400
2-DH5	2441	2.897	(ms)*(1600/(6*79))*31.6=	309.01	400
8DPSK					
3-DH1	2441	0.399	(ms)*(1600/(2*79))*31.6=	127.68	400
3-DH3	2441	1.649	(ms)*(1600/(4*79))*31.6=	263.84	400
3-DH5	2441	2.900	(ms)*(1600/(6*79))*31.6=	309.33	400

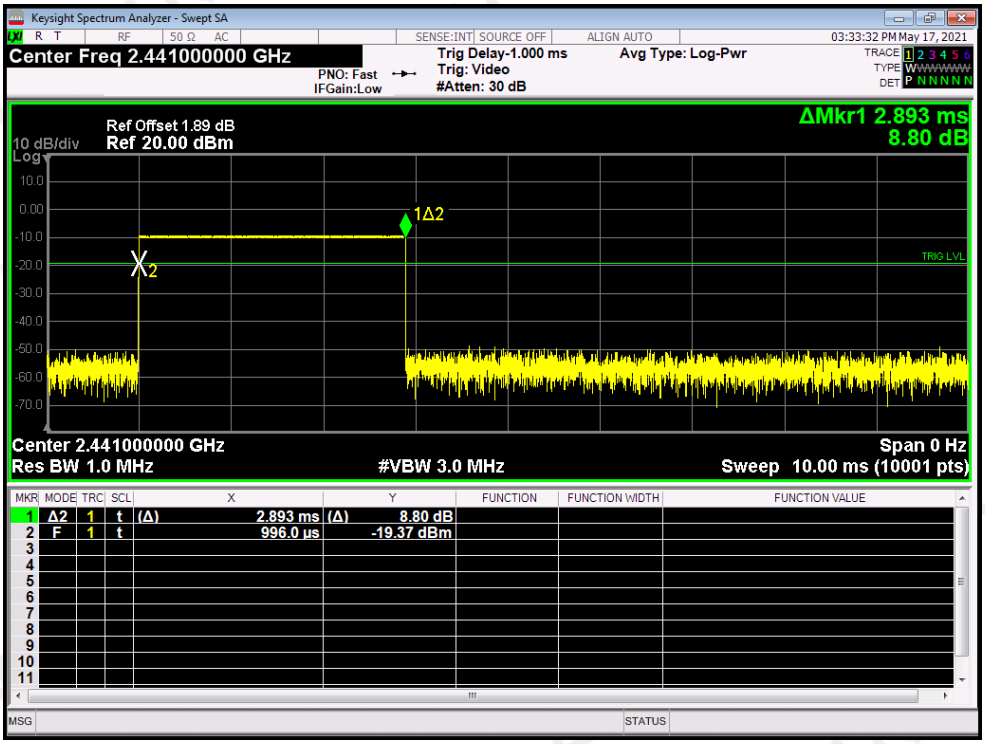
GFSK (DH1)



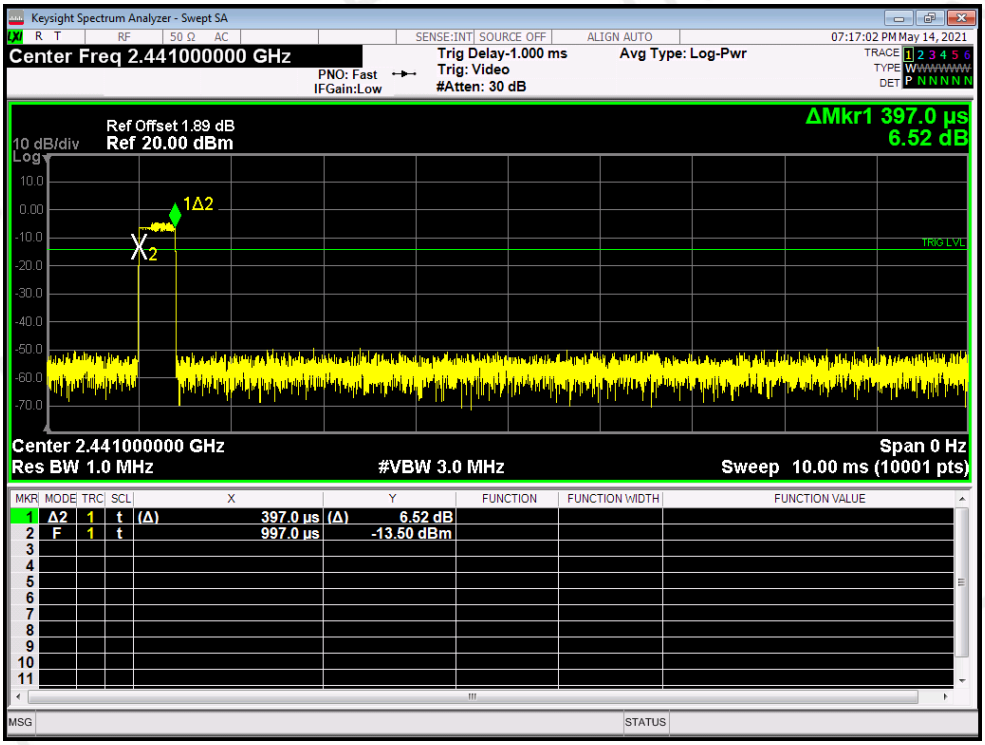
GFSK (DH3)



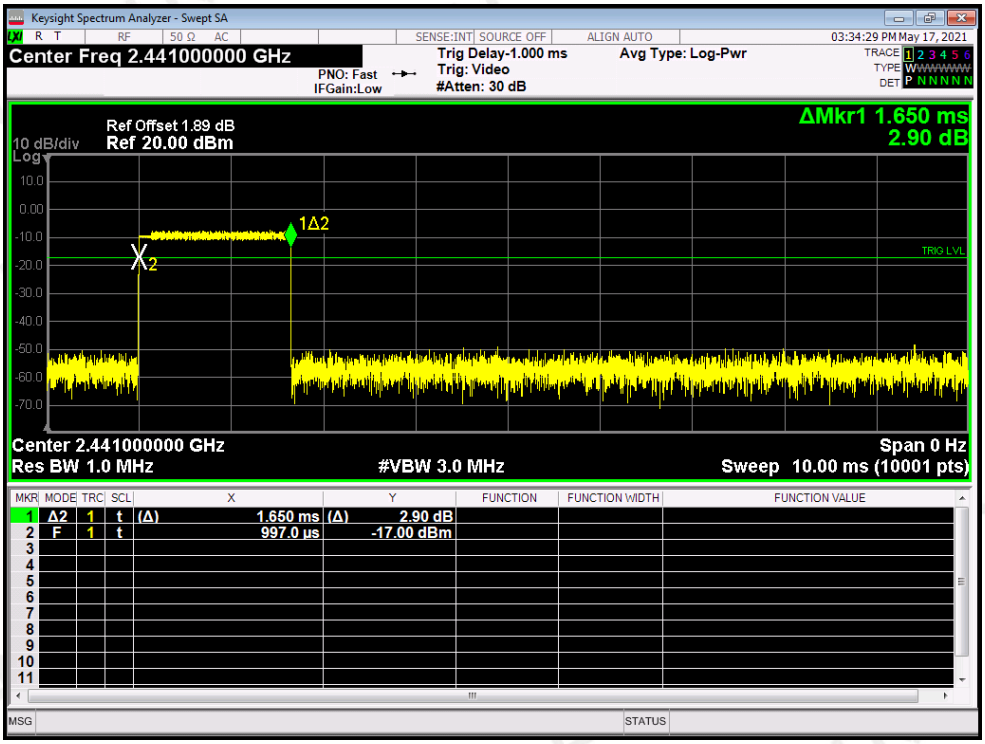
GFSK (DH5)



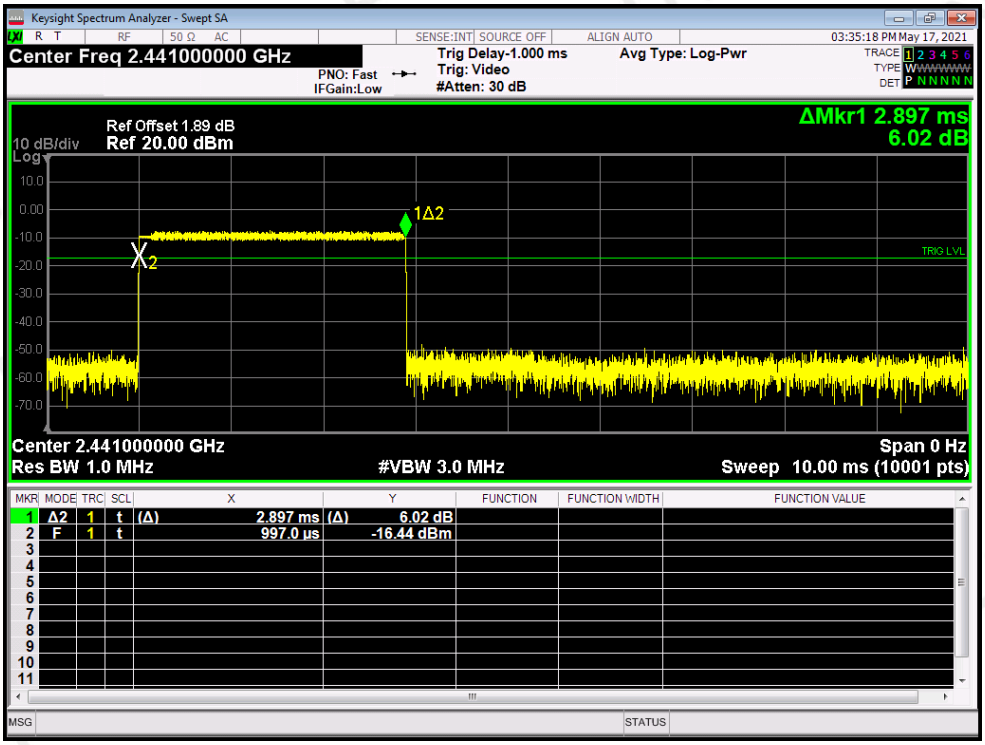
π/4-DQPSK (2-DH1)



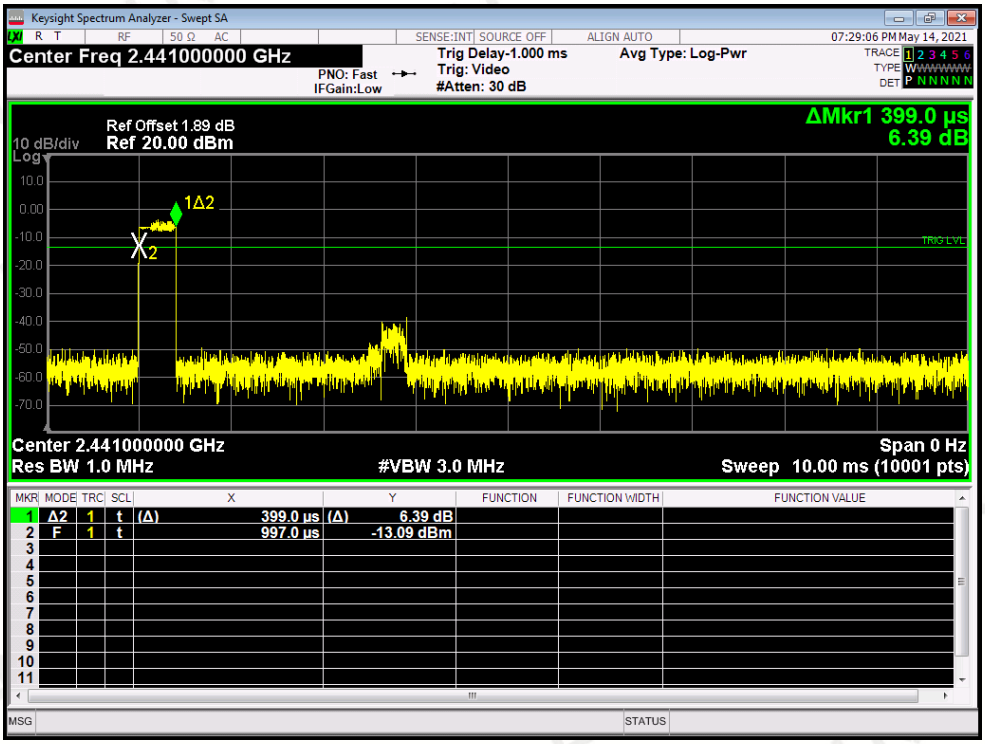
π/4-DQPSK (2-DH3)



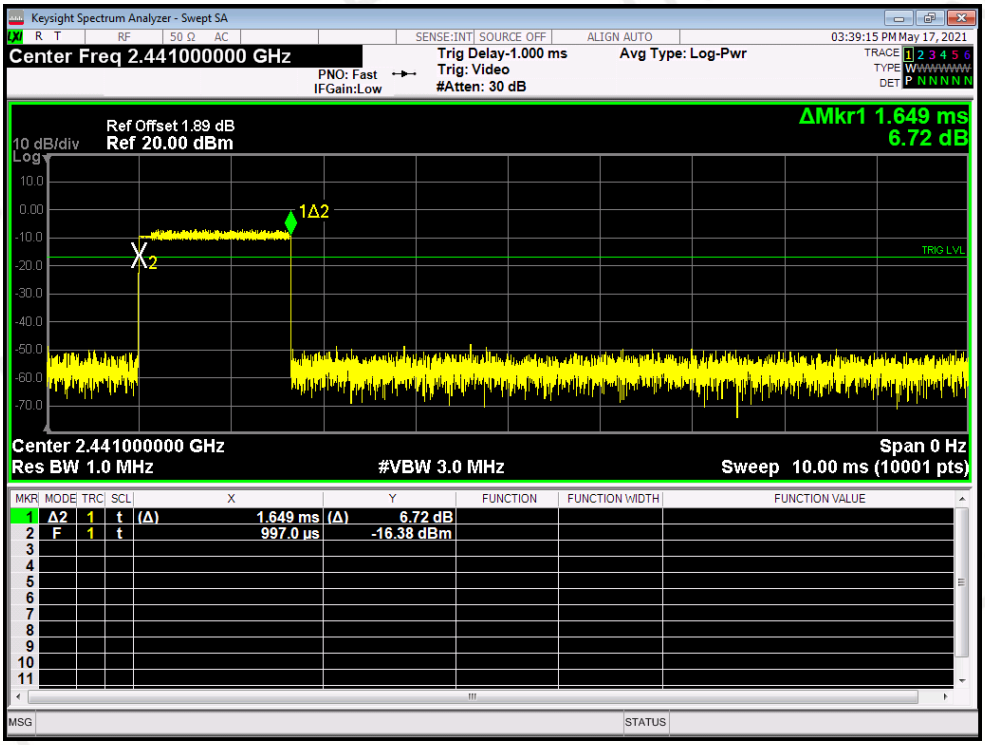
π/4-DQPSK (2-DH5)



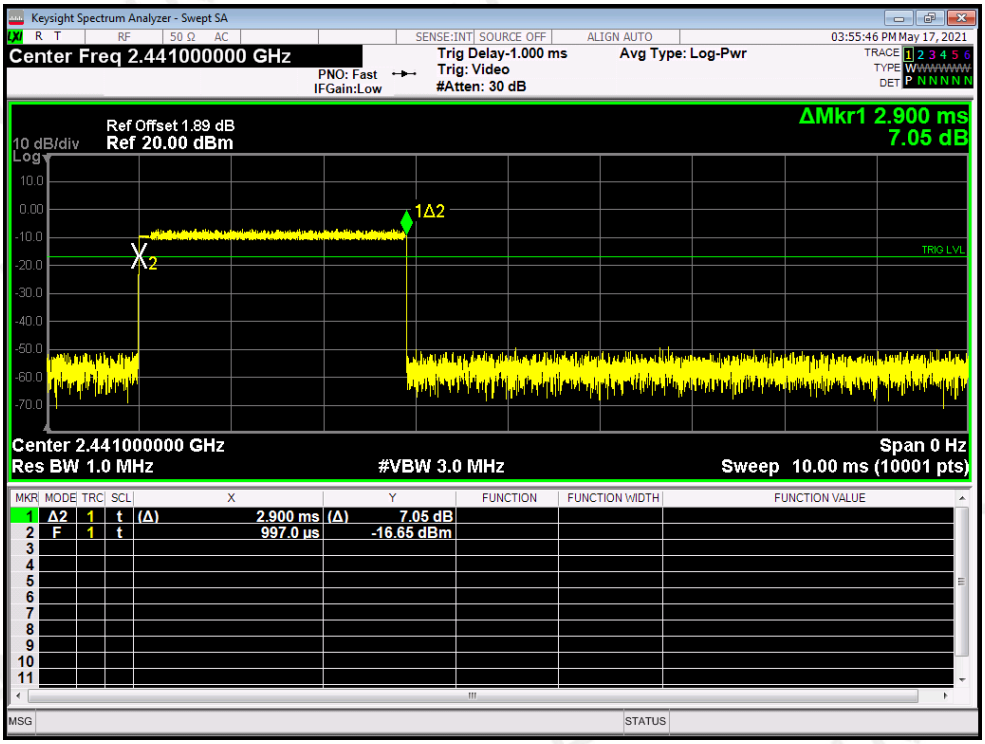
8DPSK (3-DH1)



8DPSK (3-DH3)



8DPSK (3-DH5)


Keysight Spectrum Analyzer - Swept SA
Center Freq 2.441000000 GHz
PNO: Fast
IFGain:Low
Trig Delay-1.000 ms
Trig: Video
#Atten: 30 dB
Avg Type: Log-Pwr
03:55:46 PM May 17, 2021
Ref Offset 1.89 dB
10 dB/div
Ref 20.00 dBm
ΔMkr1 2.900 ms
7.05 dB
1Δ2
TRIG LVL
Center 2.441000000 GHz
Res BW 1.0 MHz
#VBW 3.0 MHz
Span 0 Hz
Sweep 10.00 ms (10001 pts)
1 Δ2 1 t (Δ) 2.900 ms (Δ) 7.05 dB
2 F 1 t 997.0 µs -16.65 dBm
MSG
STATUS

10. MAXIMUM PEAK OUTPUT POWER

10.1 Measurement Procedure

Maximum Conducted Output Power at Antenna Terminals, FCC Rules 15.247(b)(1):

Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum. The analyzer was set for RBW > 20dB bandwidth and power was read directly in dBm. Cable loss was considered during this measurement.

10.2 Limit

For all other frequency hopping systems in the 2400-2483.5MHz band: 0.125 watts.

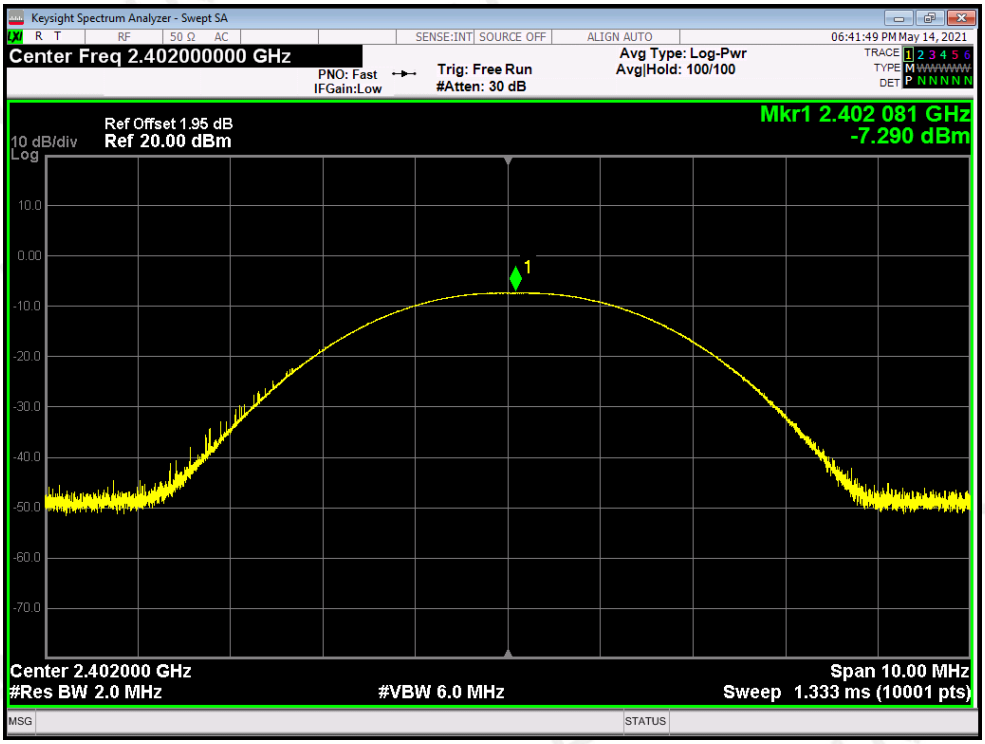
10.3 Test SET-UP (Block Diagram of Configuration)

10.4 Measurement Results

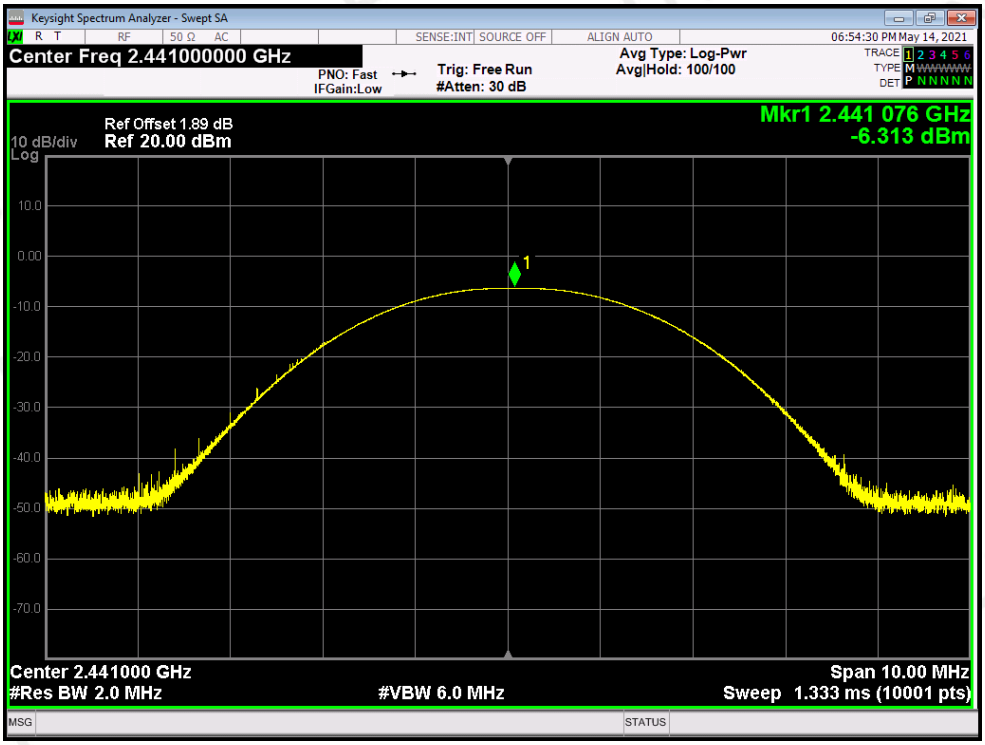
RBW:	2MHz	Temperature:	24 ℃
VBW:	6MHz	Humidity:	50 %
Spectrum Detector:	PK	Test By:	PEI
Packet:	DH1, 2DH1, 3DH1(Worst case)	Test Date:	May 14, 2021

Channel Frequency (MHz)	Peak Power output (dBm)	Peak Power output (W)	Peak Power Limit (dBm/W)	Results
GFSK				
2402.00	-7.290	0.000187	21 / 0.125	PASS
2441.00	-6.313	0.000243	21 / 0.125	PASS
2480.00	-5.951	0.000254	21 / 0.125	PASS
π/4-DQPSK				
2402.00	-5.082	0.000310	21 / 0.125	PASS
2441.00	-4.030	0.000395	21 / 0.125	PASS
2480.00	-3.663	0.000430	21 / 0.125	PASS
8DPSK				
2402.00	-4.311	0.000371	21 / 0.125	PASS
2441.00	-3.326	0.000465	21 / 0.125	PASS
2480.00	-2.898	0.000513	21 / 0.125	PASS

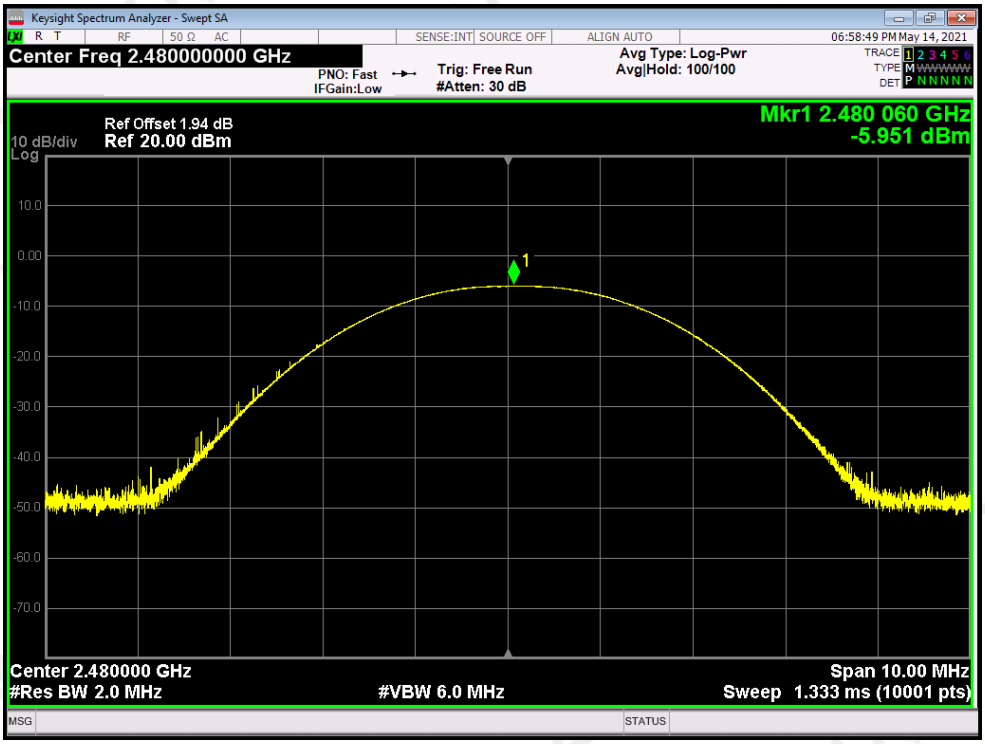
GFSK Lowest Channel



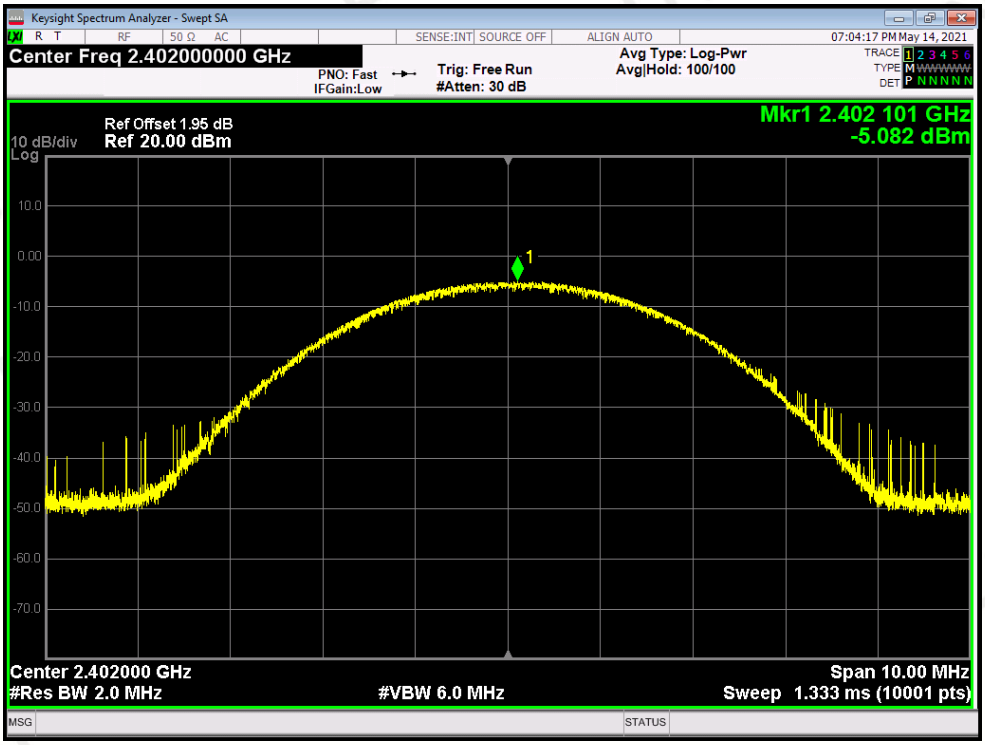
GFSK Middle Channel



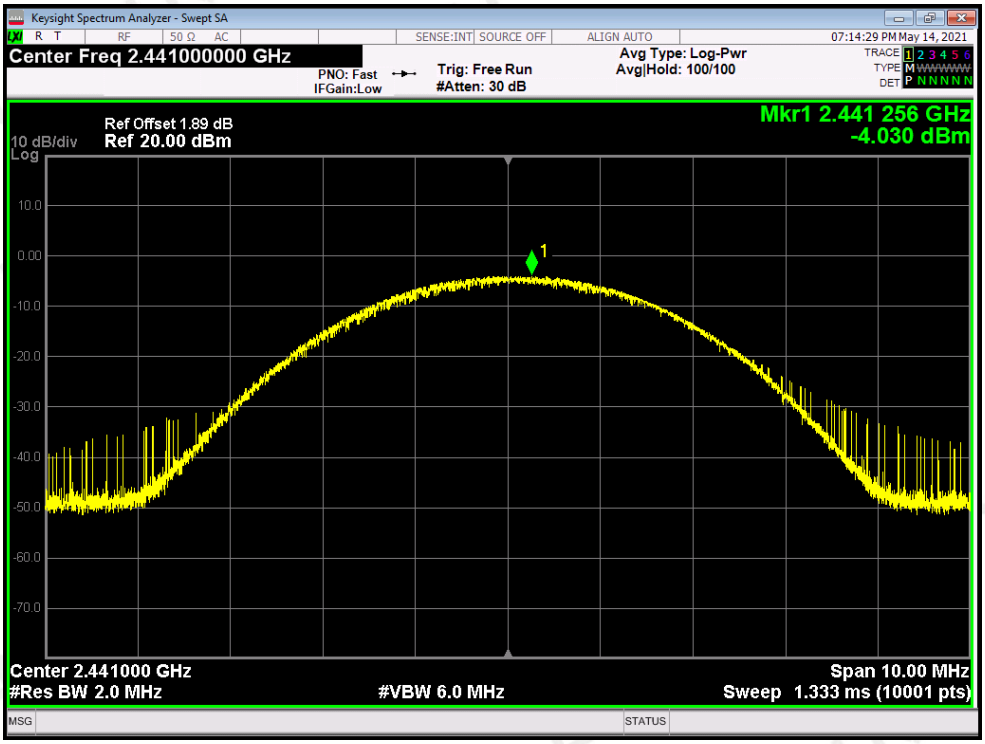
GFSK Highest Channel



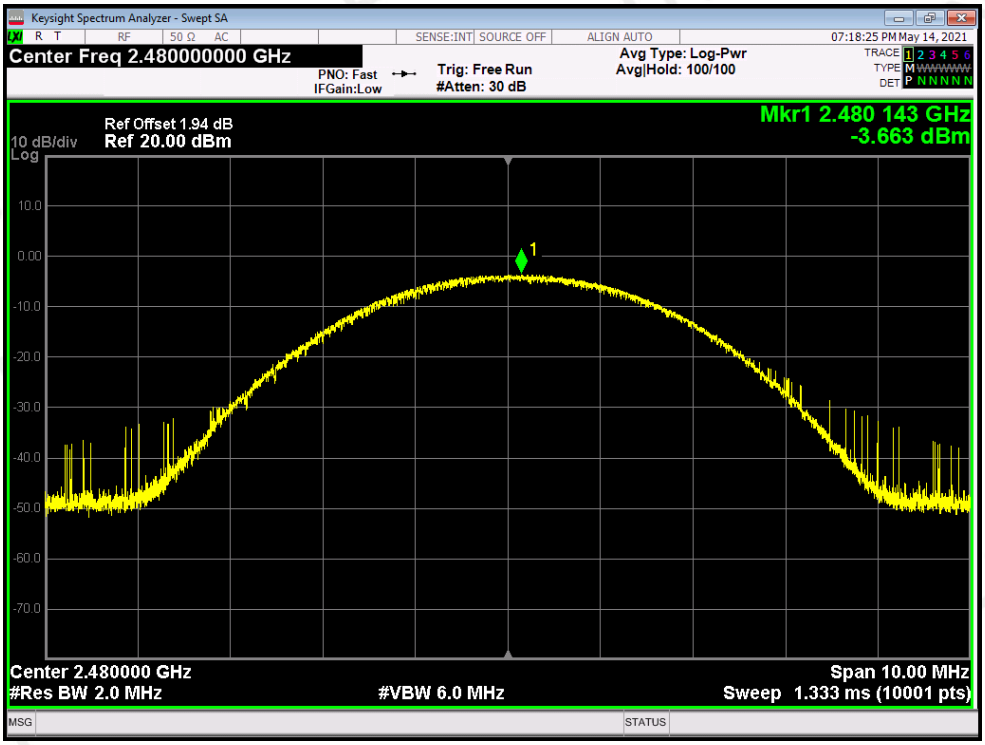
π/4-DQPSK Lowest Channel



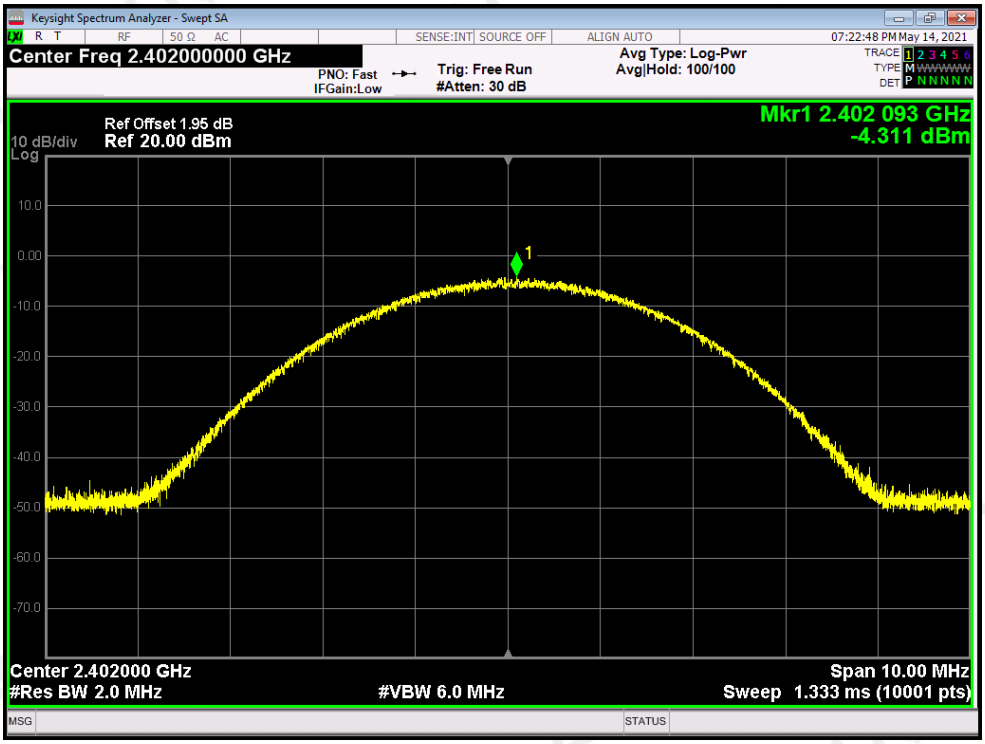
π/4-DQPSK Middle Channel



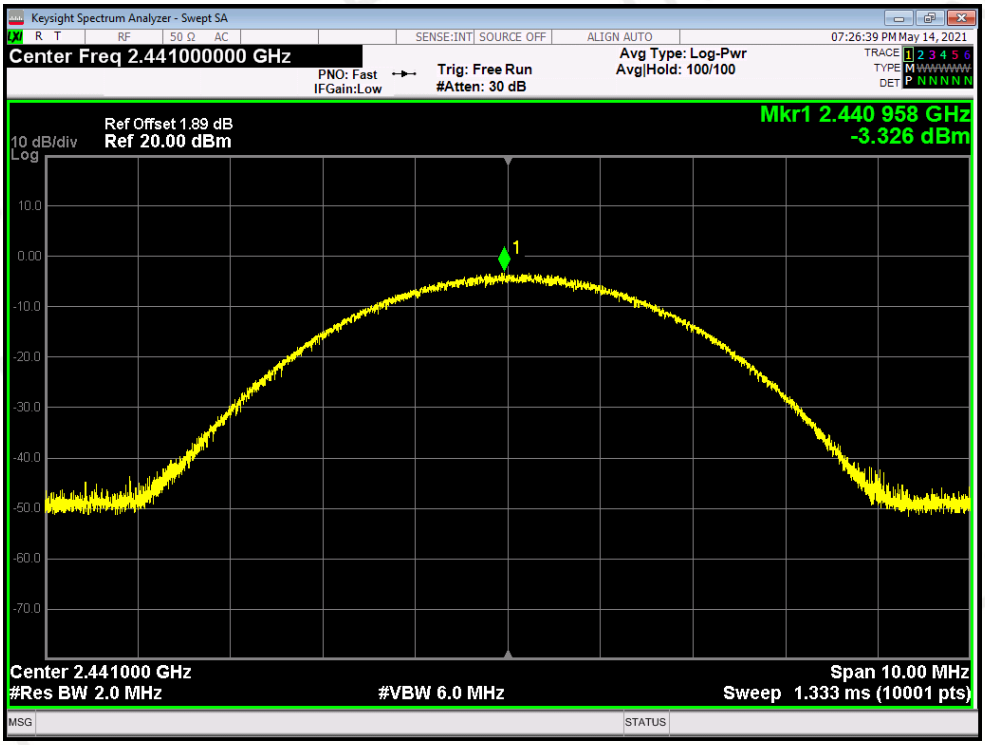
π/4-DQPSK Highest Channel



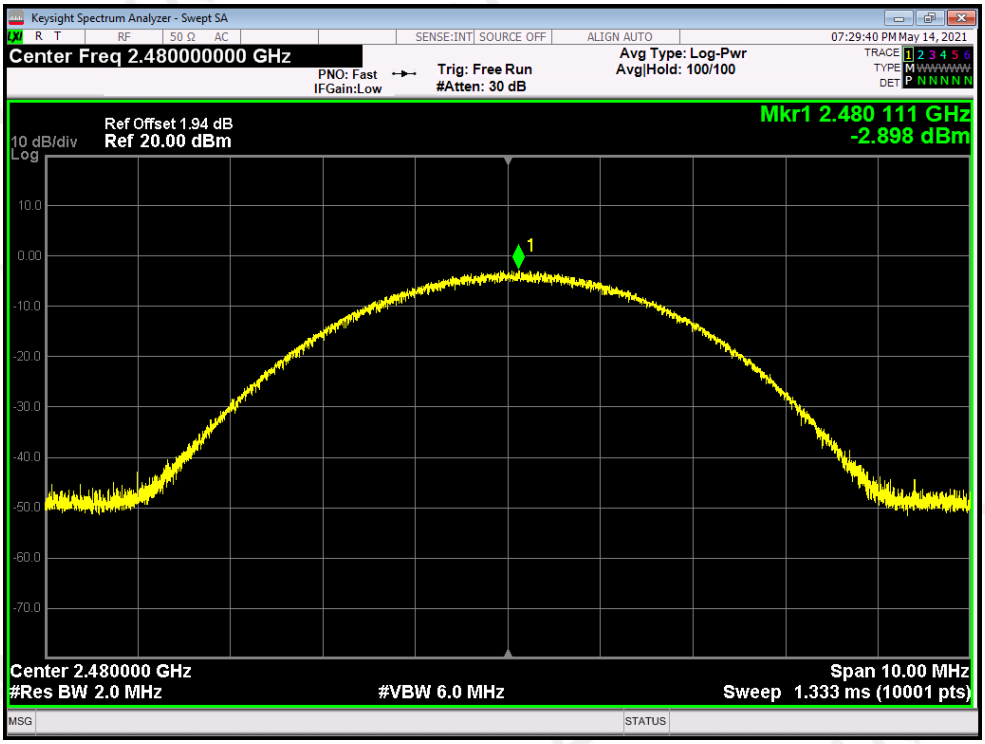
8DPSK Lowest Channel



8DPSK Middle Channel



8DPSK Highest Channel



11. BAND EDGE

11.1 Measurement Procedure

Out of Band Emissions, FCC Rule 15.247(d):

During the radiated emission test, the spectrum analyzer was set with the following configurations:
1.The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz.
2.The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak detection at frequency above 1GHz.

During the conducted emission test, the spectrum analyzer was set with the following configurations:
The transmitter output is connected to spectrum analyzer. The resolution bandwidth is set to100KHz, and the video bandwidth set to 300kHz.

11.2 Limit

15.247(d)In any 100KHz 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 20dB below that in the 100KHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

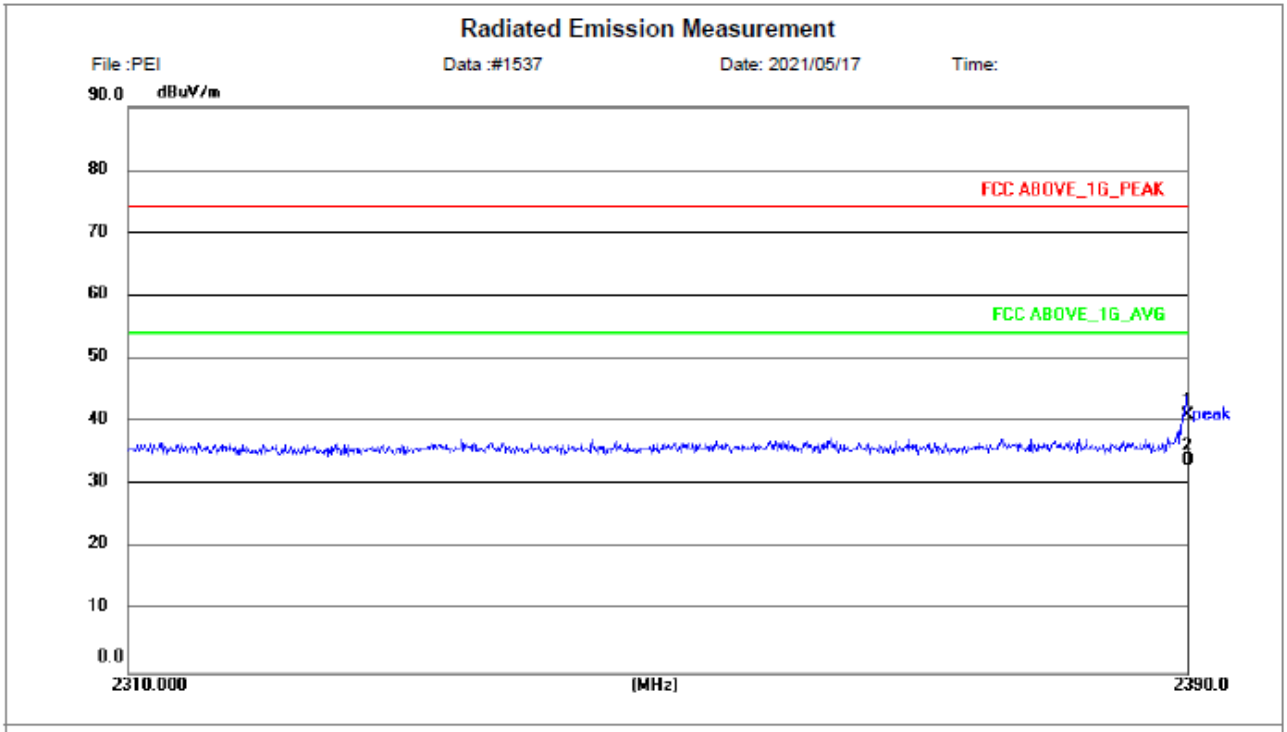
11.3 Measurement Results

Please see below test table and plots.

Note: All modes of operation were investigated and the worst case (8DPSK Mode) emissions are reported.

For Radiated restricted band:

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Horizontal
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2402MHz (8DPSK)	Humidity:	54 %
Test Distance:	3m	Test By:	PEI
Test Results:	PASS	Test Voltage	AC 120V/60Hz



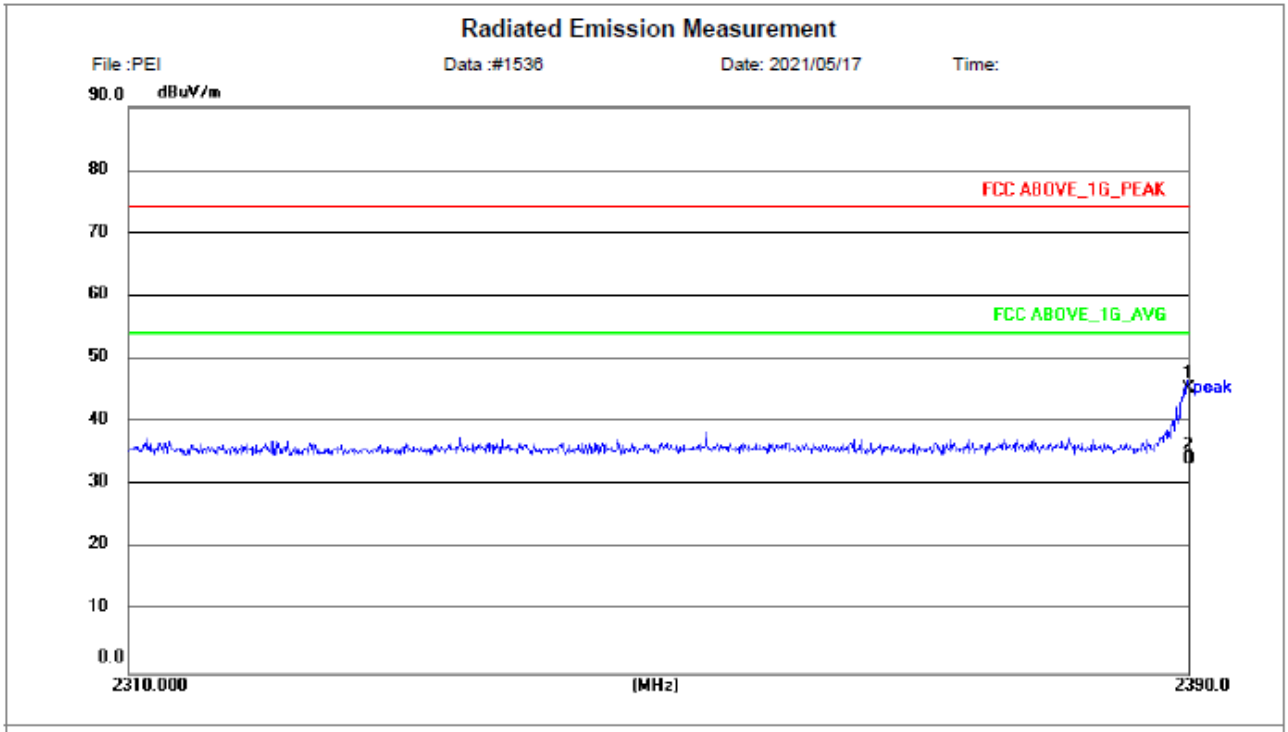
Site 966 Chamber
Limit: FCC ABOVE_1G_PEAK
EUT:
M/N: PSB378W
Mode: TX 2402MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Horizontal*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2390.000	37.17	3.90	41.07	74.00	32.93	peak	210	195	P	
2 *	2390.000	29.86	3.90	33.76	54.00	20.24	AVG	210	195	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Vertical
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2402MHz (8DPSK)	Humidity:	54 %
Test Distance:	3m	Test By:	PEI
Test Results:	PASS	Test Voltage	AC 120V/60Hz



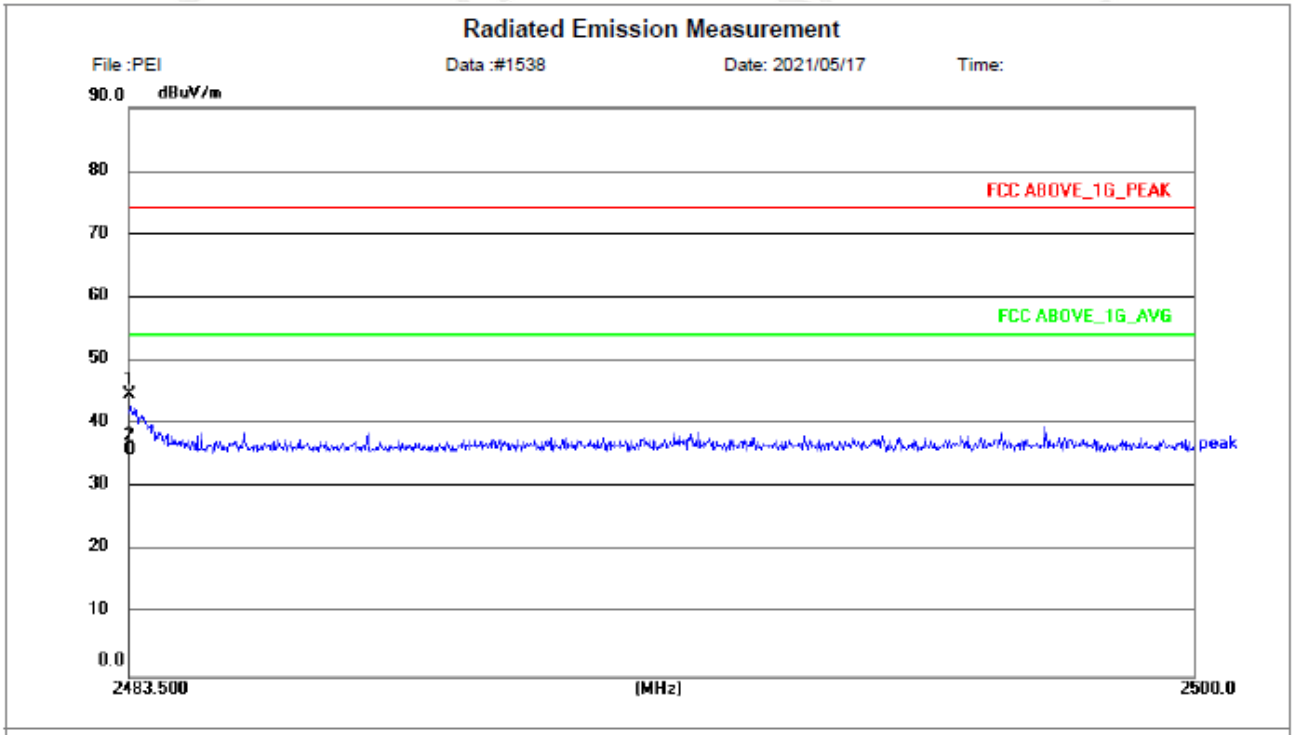
Site 966 Chamber
Limit: FCC ABOVE_1G_PEAK
EUT:
M/N: PSB378W
Mode: TX 2402MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Vertical*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2390.000	41.35	3.90	45.25	74.00	28.75	peak	110	278	P	
2 *	2390.000	30.28	3.90	34.18	54.00	19.82	AVG	110	278	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Horizontal
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2480MHz (8DPSK)	Humidity:	54 %
Test Distance:	3m	Test By:	PEI
Test Results:	PASS	Test Voltage	AC 120V/60Hz



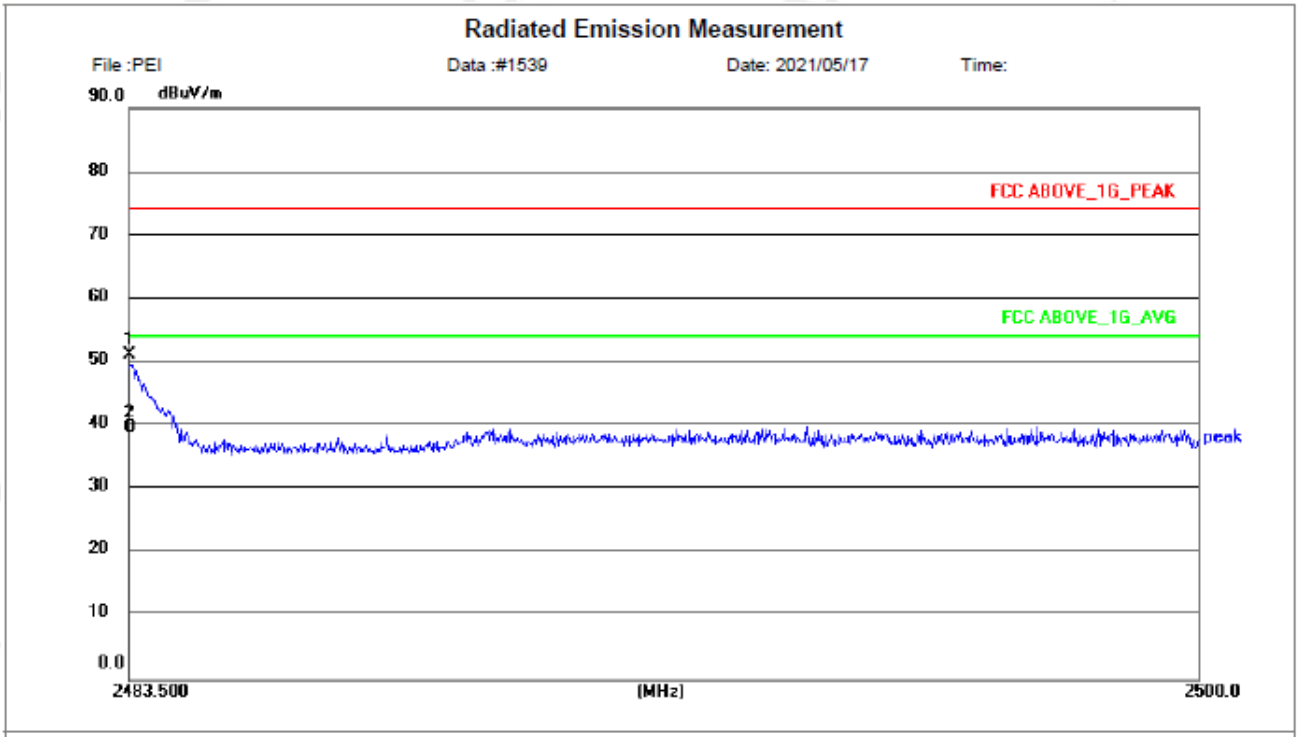
Site 966 Chamber
Limit: FCC ABOVE_1G_PEAK
EUT:
M/N: PSB378W
Mode: TX 2480MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Horizontal*
Power: AC120/60Hz
Distance: 3m

Temperature: 26(C)
Humidity: 54 %

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2483.500	40.46	4.28	44.74	74.00	29.26	peak	200	142	P	
2 *	2483.500	31.65	4.28	35.93	54.00	18.07	AVG	200	142	P	

E.U.T:	37"Bluetooth Soundbar with Wireless Subwoofer	Polarization:	Vertical
Model No.:	PSB378W	Temperature:	26 ℃
Test Mode:	TX 2480MHz (8DPSK)	Humidity:	54 %
Test Distance:	3m	Test By:	PEI
Test Results:	PASS	Test Voltage	AC 120V/60Hz



Site 966 Chamber
Limit: FCC ABOVE_1G_PEAK
EUT:
M/N: PSB378W
Mode: TX 2480MHz
Note: 37"Bluetooth Soundbar with Wireless Subwoofer

Polarization: *Vertical*
Power: AC120/60Hz
Distance: 3m

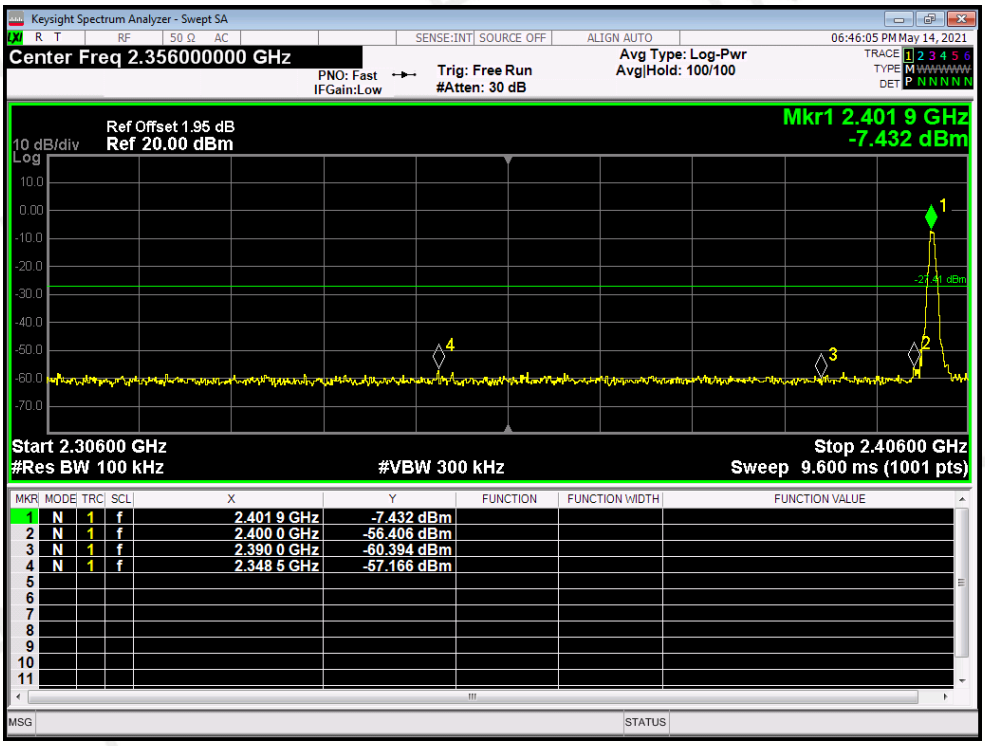
Temperature: 26(C)
Humidity: 54 %

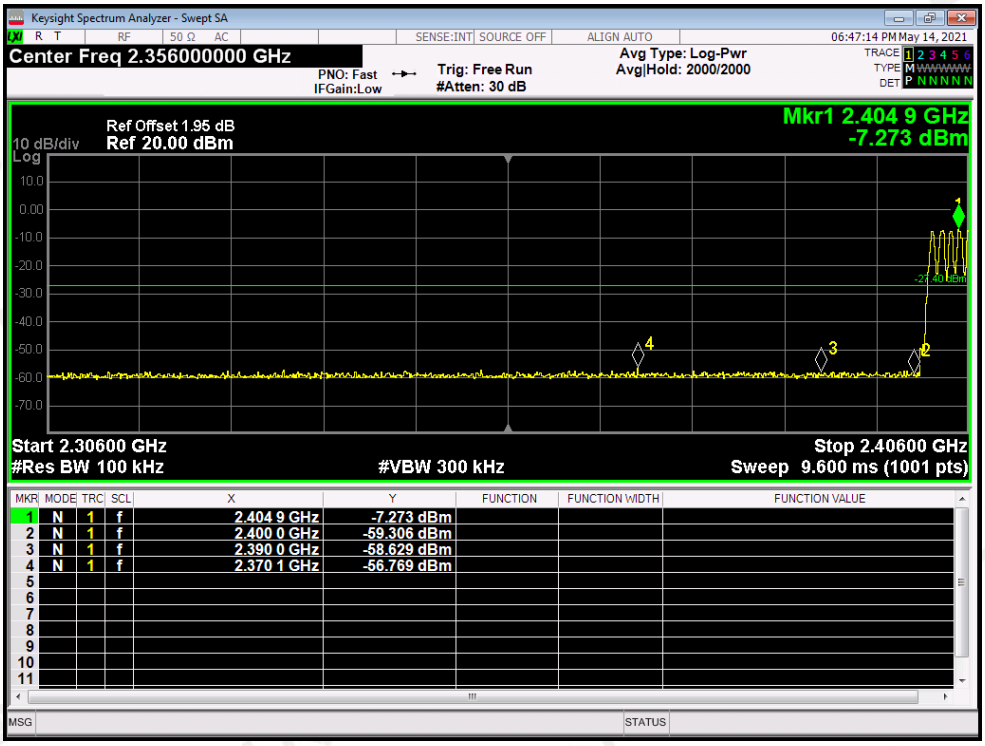
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	2483.500	46.81	4.28	51.09	74.00	22.91	peak	105	257	P	
2 *	2483.500	35.51	4.28	39.79	54.00	14.21	AVG	105	257	P	

Note: (1) Result= Reading + Factor
(2) Factor= Antenna Gain + Cable Loss – Amplifier Gain
(3) Horn antenna used for the emission over 1000MHz.

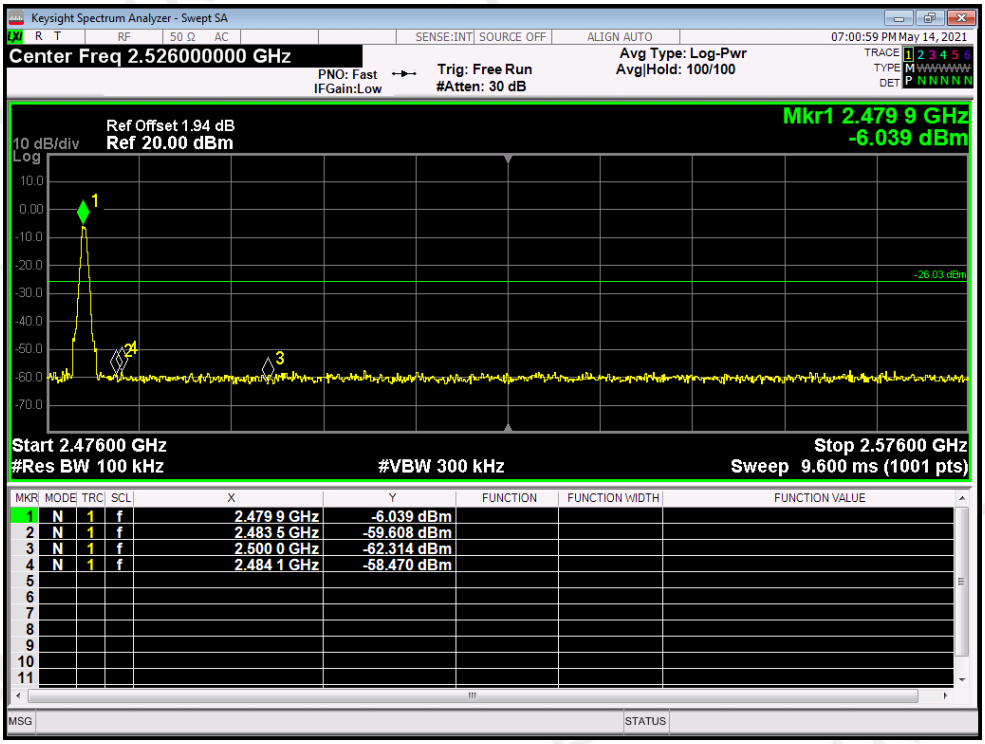
For RF Conducted restricted band:

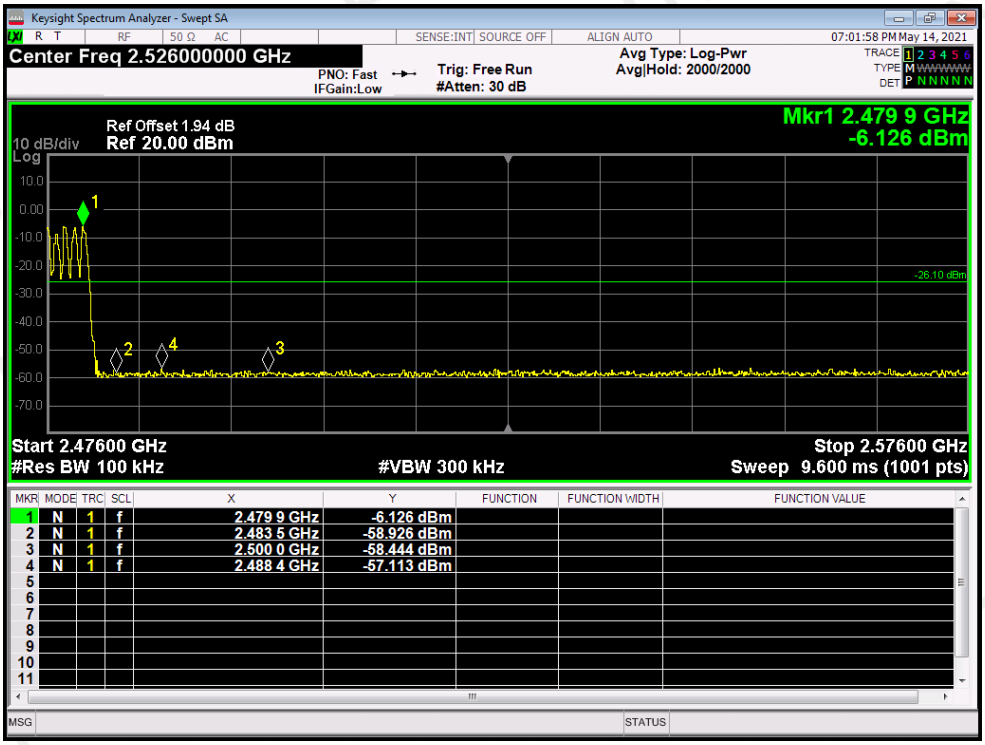
GFSK Lowest Channel



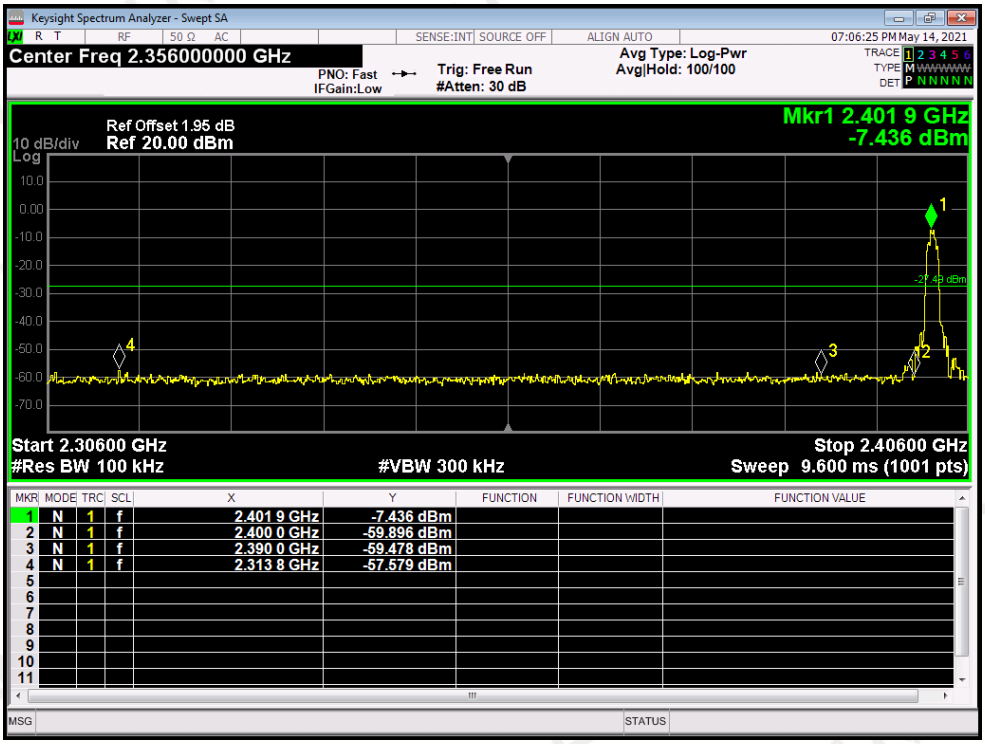


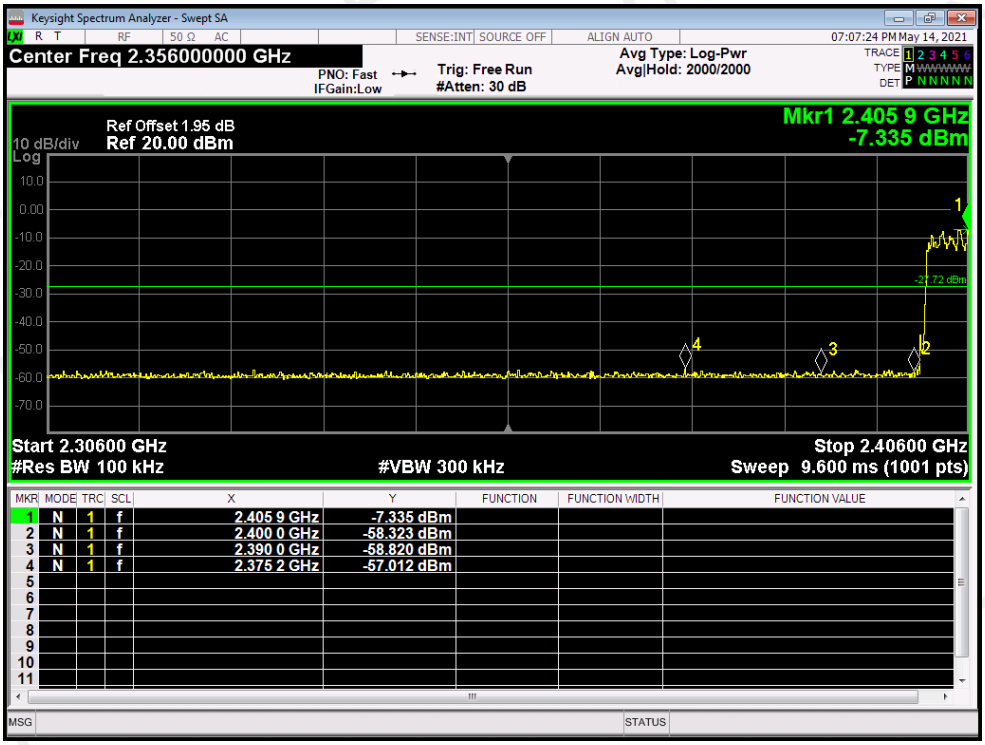
GFSK Highest Channel



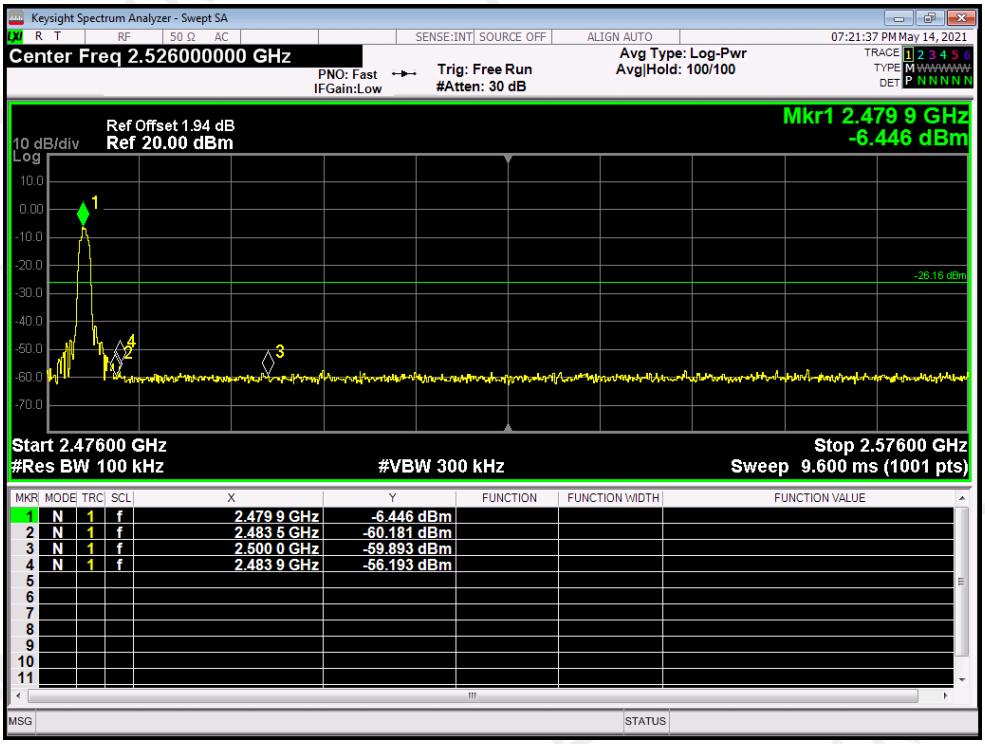


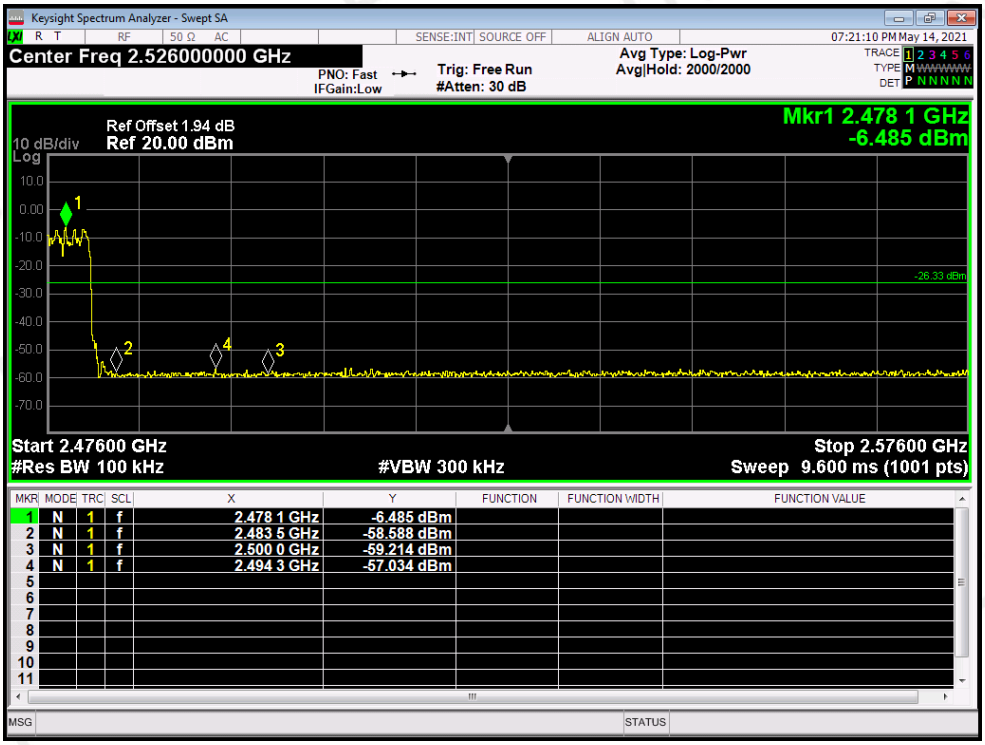
π/4-DQPSK Lowest Channel



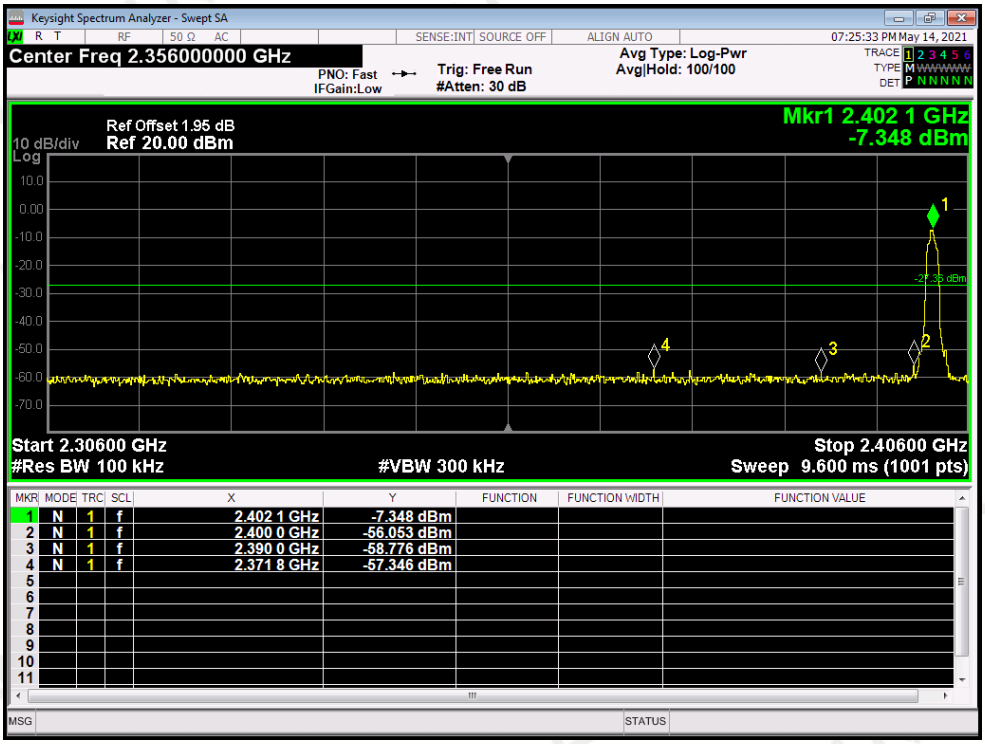


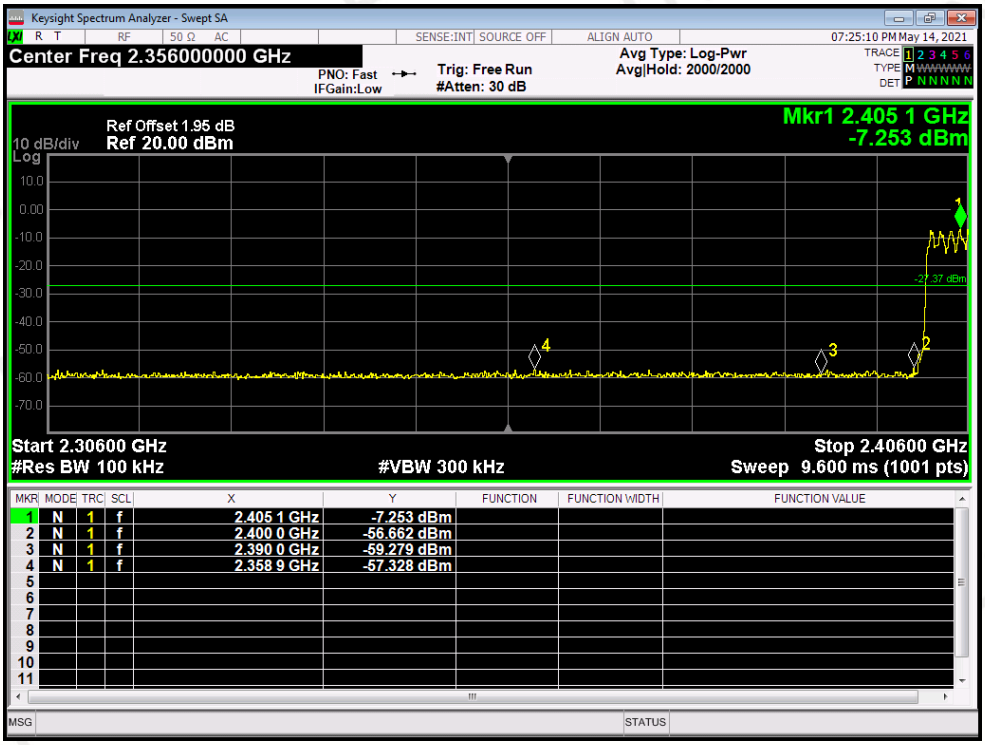
π/4-DQPSK Highest Channel



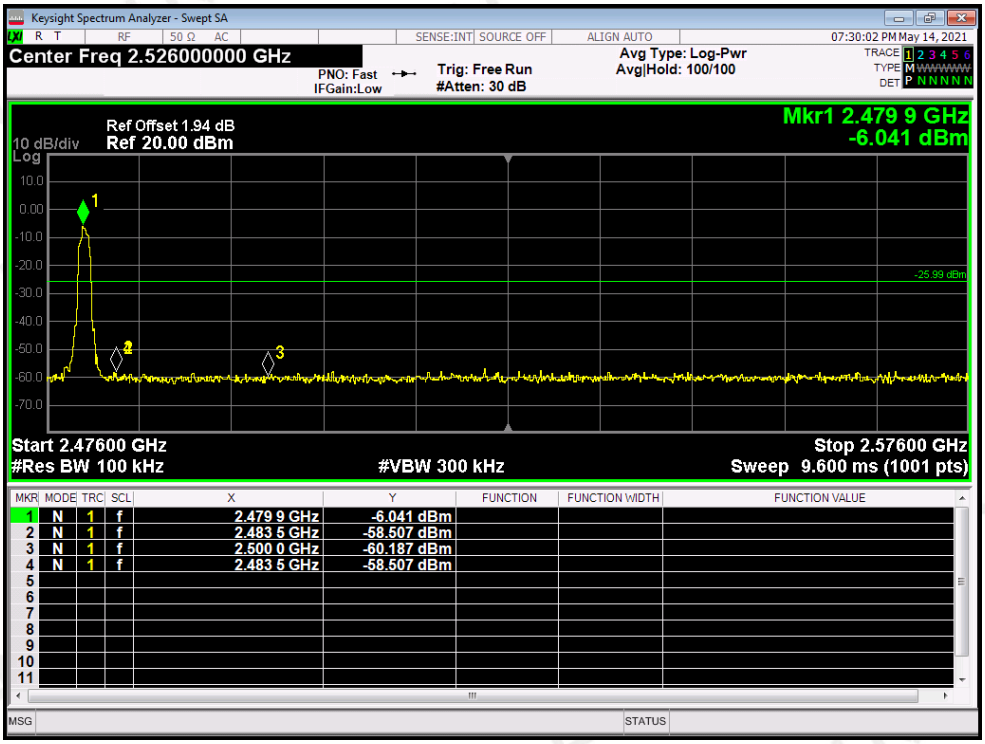


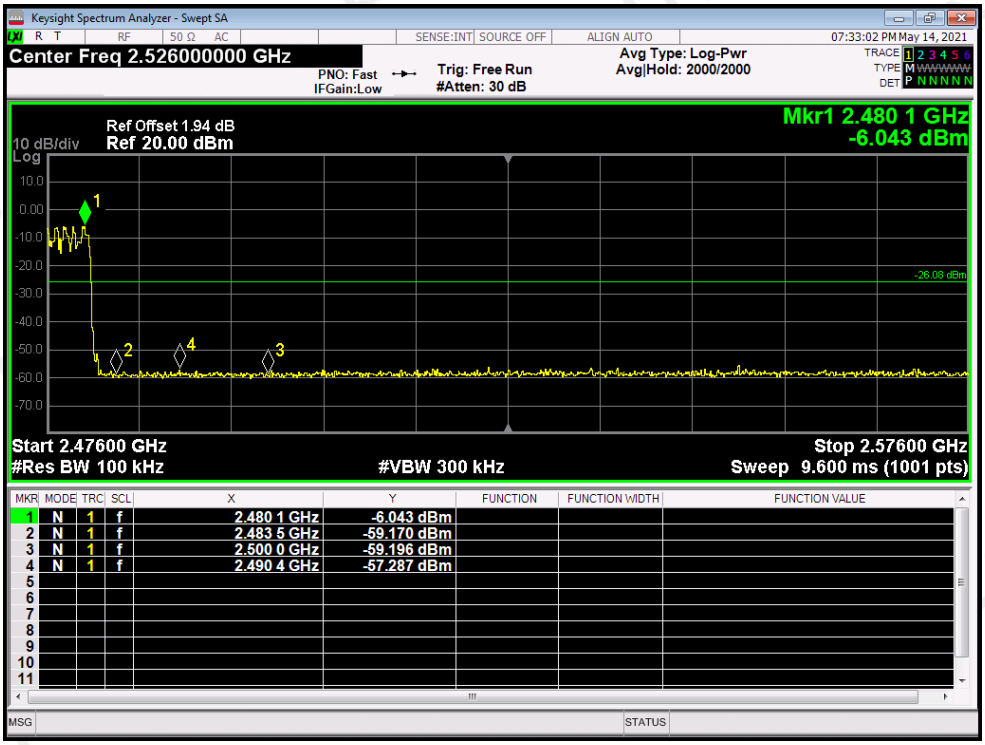
8DPSK Lowest Channel





8DPSK Highest Channel





12. ANTENNA APPLICATION

12.1 Antenna requirement

According to of FCC part 15C section 15.203 and 15.240:

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

12.2 Measurement Results

The EUT antenna is PCB antenna. It comply with the standard requirement.

13. CONDUCTED SPURIOUS EMISSIONS

13.1 Measurement Procedure

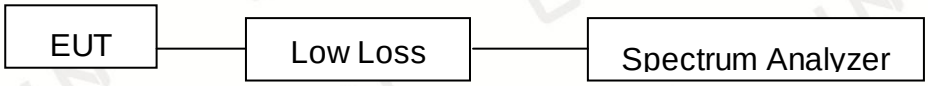
Out of Band Conducted Spurious Emissions, FCC Rule 15.247(d):

The transmitter output is connected to spectrum analyzer. All spurious emission and up tp the tenth harmonic was measured and they were found to be at least 20dB below the highest level of the desired power in the passband.

13.2 Limit

In any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

13.3 Test SET-UP (Block Diagram of Configuration)

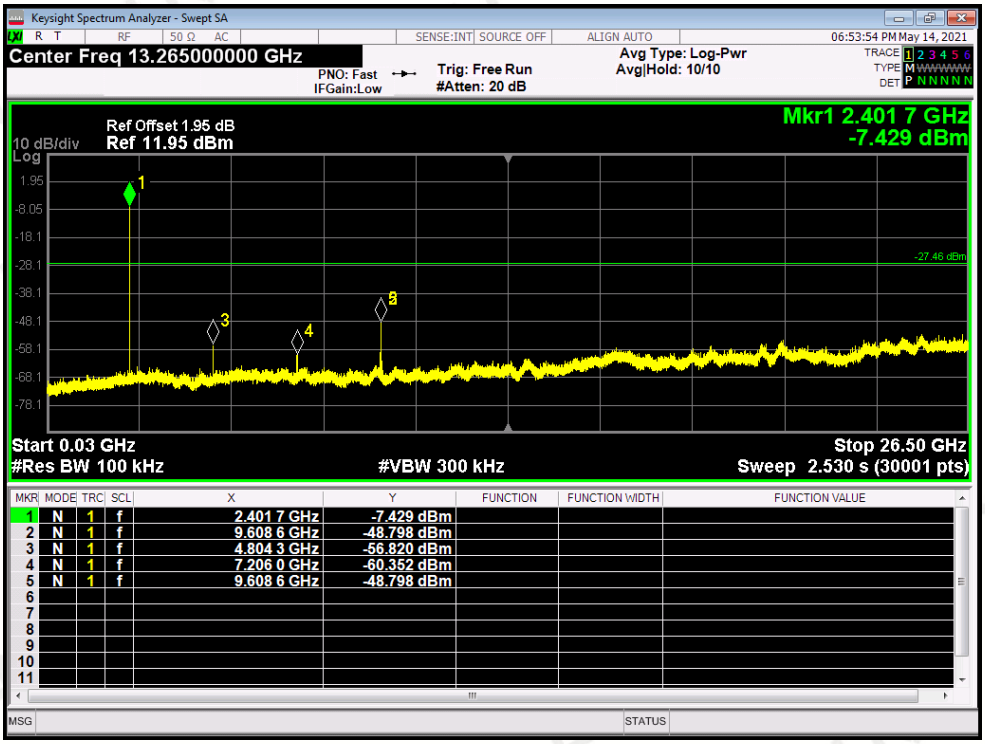


13.4 Measurement Results

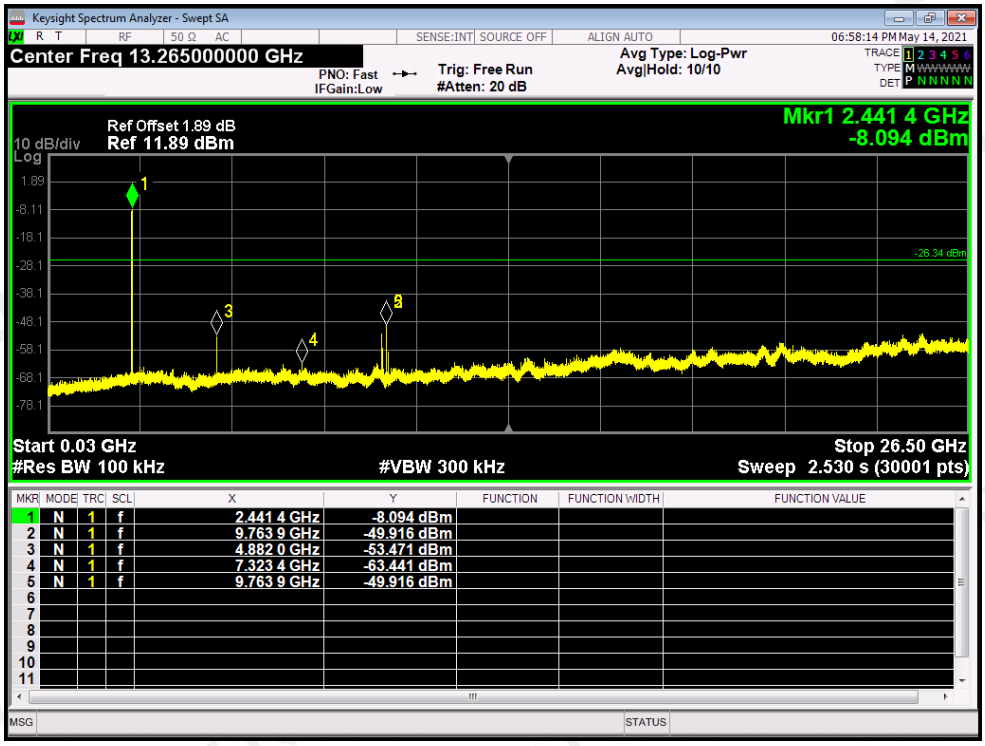
Pass

Please refer to following plots.

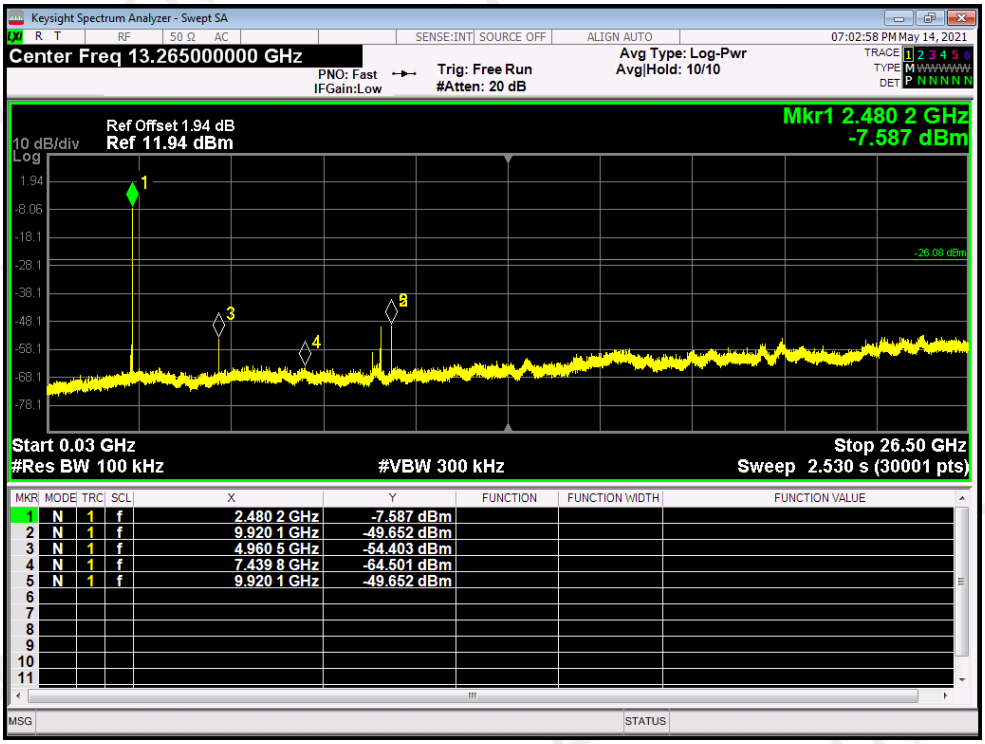
GFSK Lowest Channel



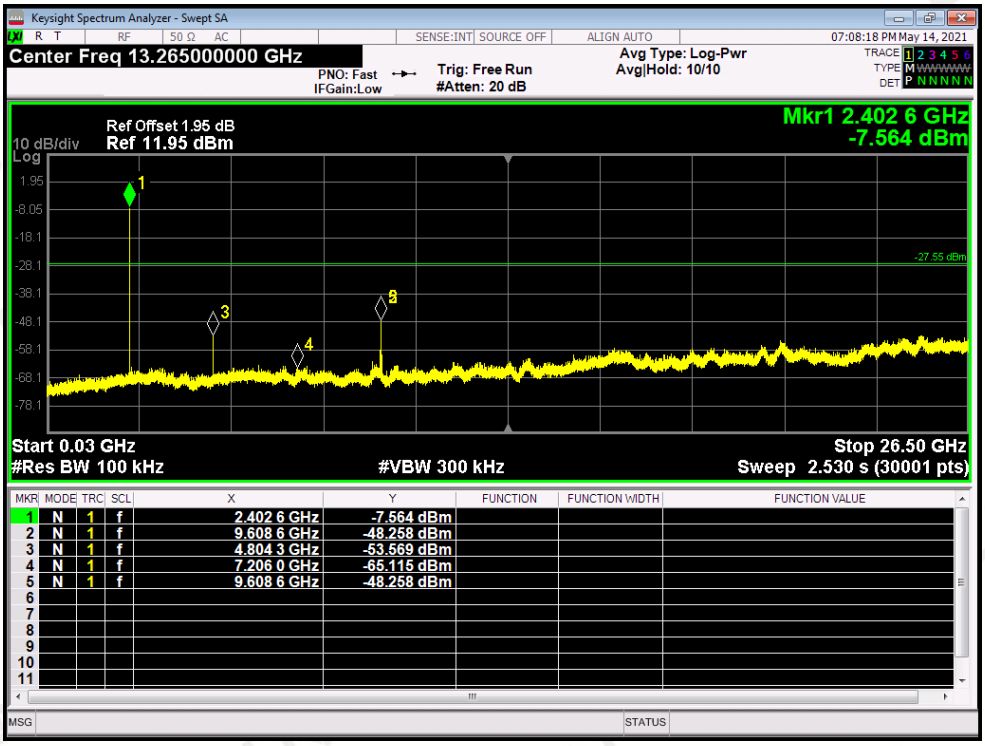
GFSK Middle Channel



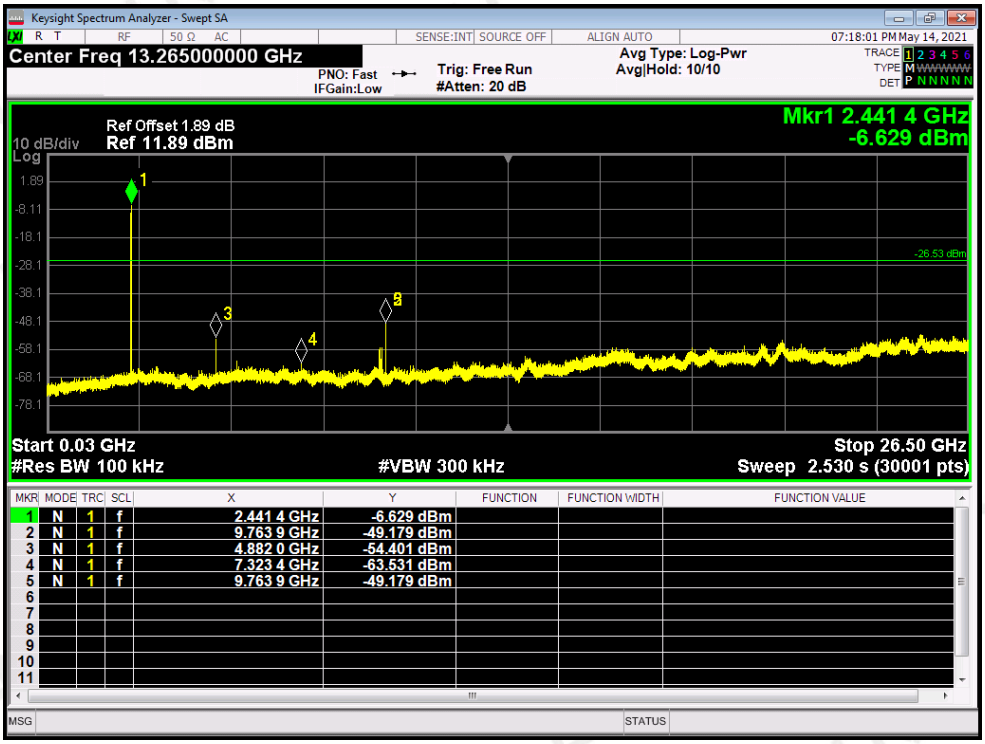
GFSK Highest Channel



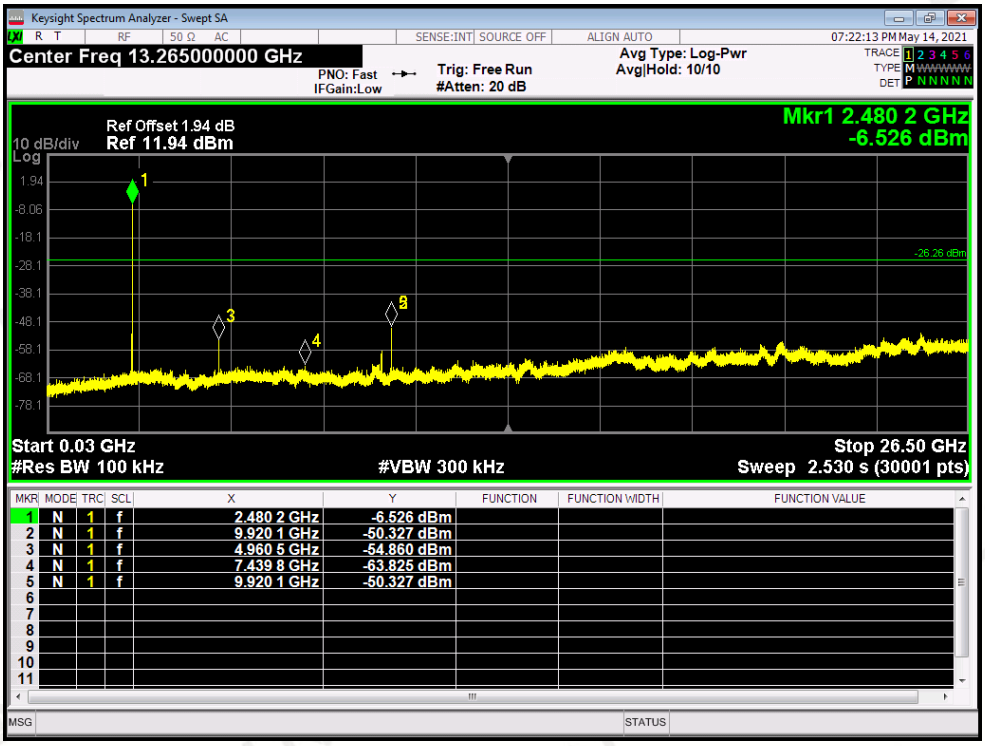
π/4-DQPSK Lowest Channel



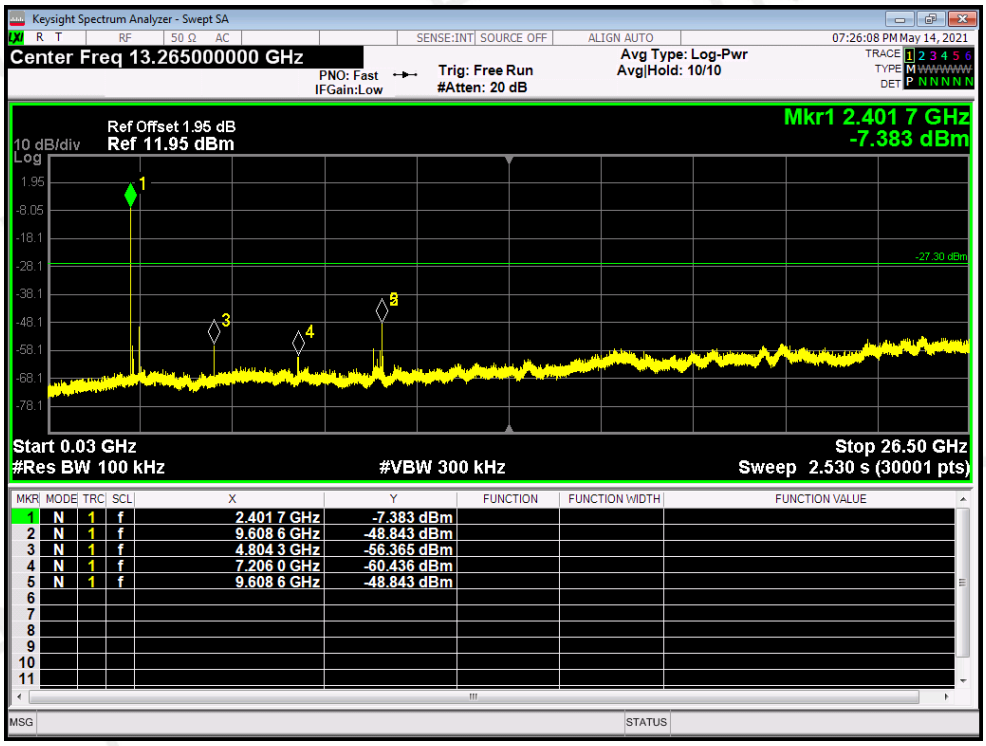
π/4-DQPSK Middle Channel



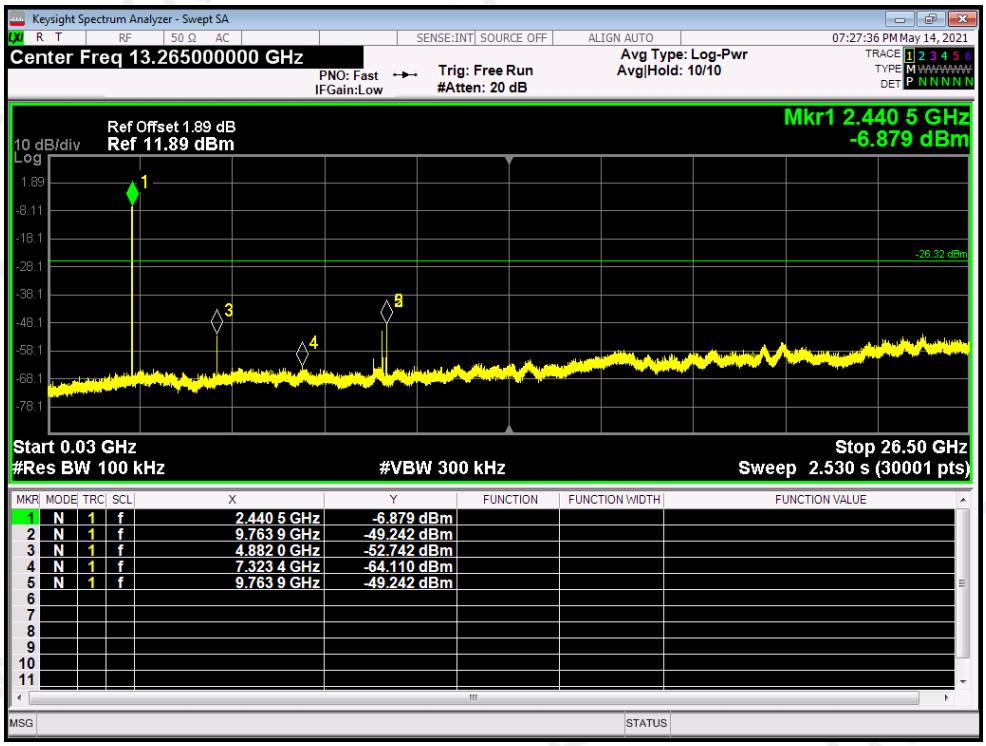
π/4-DQPSK Highest Channel



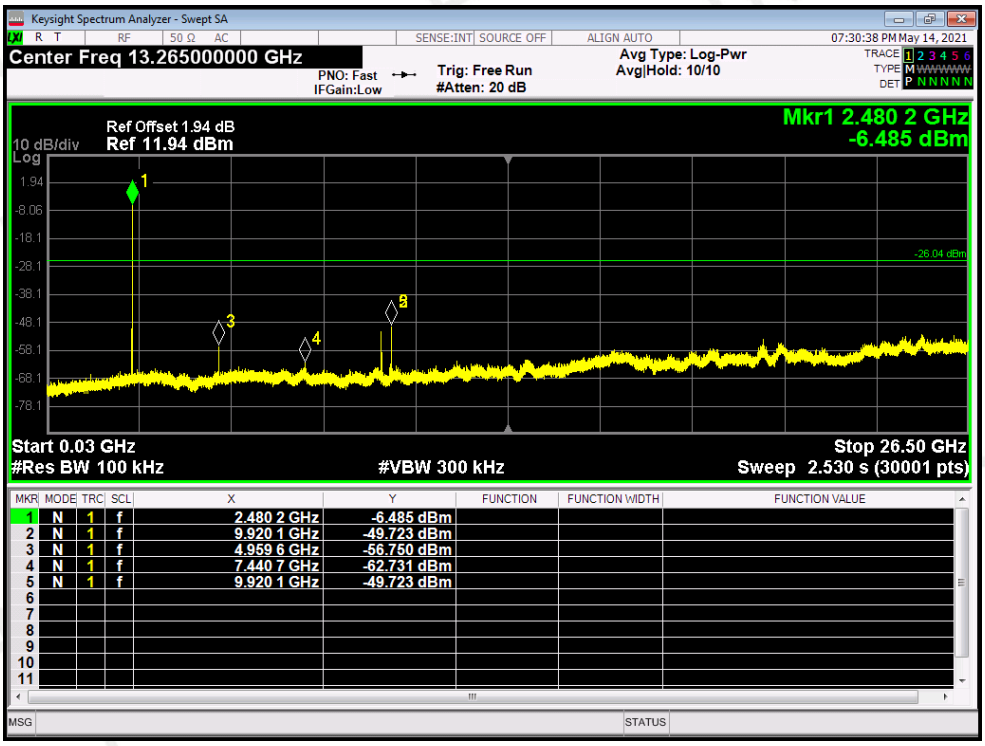
8DPSK Lowest Channel



8DPSK Middle Channel



8DPSK Highest Channel



14. TEST EQUIPMENT LIST

Item	Equipment	Manufacturer	Model No.	Serial No.	Calibrated dates	Cal. Interval
1	Conducted Emission Test Software	EZ-EMC	Ver.CCS-3A1-CE	N/A	N/A	N/A
2	AMN	Schwarzbeck	NNLK8121	8121370	2020.10.13	1 Year
3	AMN	ETS	3810/2	00020199	2020.10.13	1 Year
4	AAN	TESEQ	T8-Cat6	38888	2020.10.13	1 Year
5	Pulse Limiter	CYBRTEK	EM5010	E115010056	2021.05.19	1 Year
6	EMI Test Receiver	Rohde&Schwarz	ESCI	101210	2020.10.13	1 Year
1	Radiated Emission Test Software	EZ-EMC	Ver.CCS-03A1	N/A	N/A	N/A
2	Horn Antenna	Sunol	DRH-118	A101415	2020.10.19	1 Year
3	Broadband Hybrid Antenna	Sunol	JB1	A090215	2021.03.02	1 Year
4	PREAMP	HP	8449B	3008A00160	2020.10.13	1 Year
5	PREAMP	HP	8447D	2944A07999	2021.05.19	1 Year
6	EMI TEST RECEIVER	Rohde&Schwarz	ESR3	101891	2020.10.13	1 Year
7	VECTOR Signal Generator	Rohde&Schwarz	SMU200A	101521	2020.10.13	1 Year
8	Signal Generator	Agilent	E4421B	MY4335105	2020.11.12	1 Year
9	MXA Signal Analyzer	Agilent	N9020A	MY50510140	2020.10.13	1 Year
10	MXA Signal Analyzer	Keysight	N9020A	MY51110104	2020.10.13	1 Year
11	RF Power sensor	DARE	RPR3006W	15I00041SNO88	2021.05.19	1 Year
12	RF Power sensor	DARE	RPR3006W	15I00041SNO89	2021.05.19	1 Year
13	RF power divider	Anritsu	K241B	992289	2020.10.13	1 Year
14	Wideband radio communication tester	Rohde&Schwarz	CMW500	154987	2020.10.13	1 Year
15	Active Loop Antenna	Com-Power	AL-130R	10160009	2021.05.19	1 Year
16	Broadband Hybrid Antennas	Schwarzbeck	VULB9163	VULB9163#958	2021.05.19	1 Year
17	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1680	2021.05.19	1 Year
18	Horn Antenna	A-INFOMW	LB-180400-KF	J211060660	2020.11.05	1 Year
19	Microwave Broadband Preamplifier	Schwarzbeck	BBV 9721	100472	2020.10.13	1 Year
20	Signal Generator	Agilent	N5183A	MY47420153	2020.10.13	1 Year
21	Spctrum Analyzer	Rohde&Schwarz	FSP 40	100501	2020.10.13	1 Year
22	Power Meter	KEYSIGHT	N1911A	MY50520168	2020.10.13	1 Year
23	Frequency Meter	VICTOR	VC2000	997406086	2020.10.13	1 Year
24	DC Power Source	HYELEC	HY5020E	055161818	2020.10.13	1 Year

APPENDIX-PHOTOS OF TEST SETUP

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

---END---