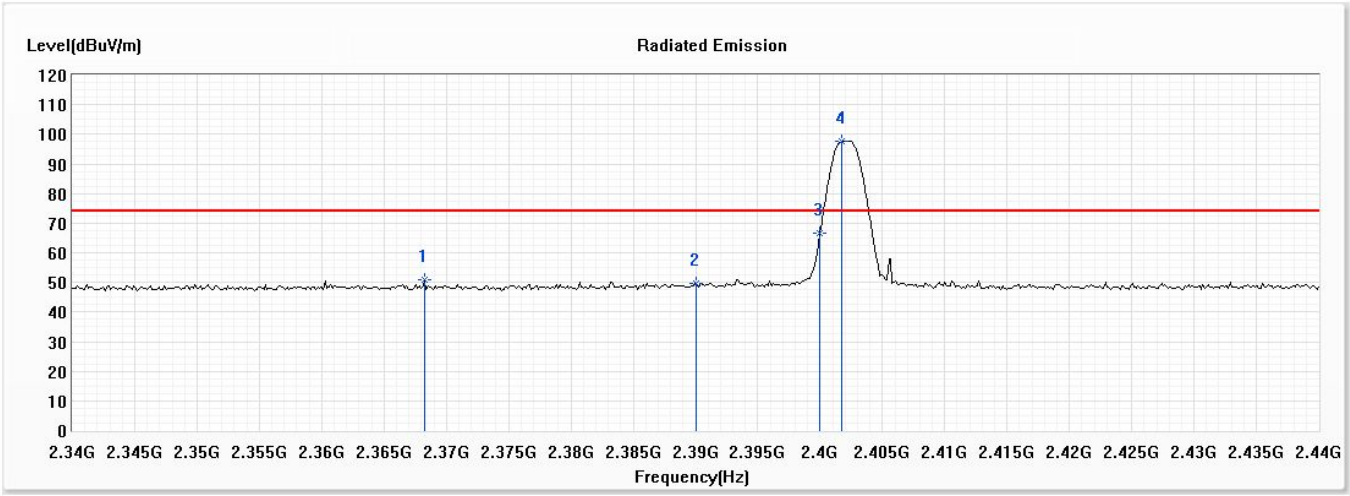
Product	:	Gaming headset
Test Item	:	Band Edge
Test Mode	:	Mode 4: Transmit - 1Mbps-BLE (2402MHz)
Test Date	:	2020/11/02

Vertical



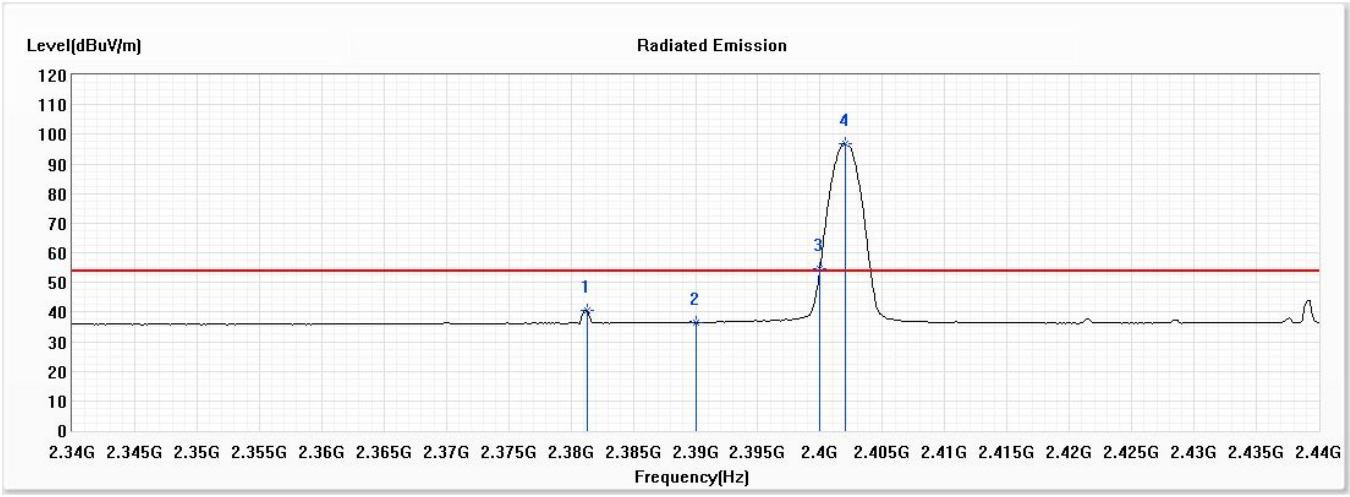
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2368.261	50.85	74.00	-23.15	40.00	10.85	PK
2	2390.000	49.52	74.00	-24.48	38.53	10.99	PK
3	2400.000	66.52	--	--	55.48	11.04	PK
! 4	2401.739	97.63	--	--	86.58	11.05	PK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Gaming headset
Test Item : Band Edge
Test Mode : Mode 4: Transmit - 1Mbps-BLE (2402MHz)
Test Date : 2020/11/02

Vertical



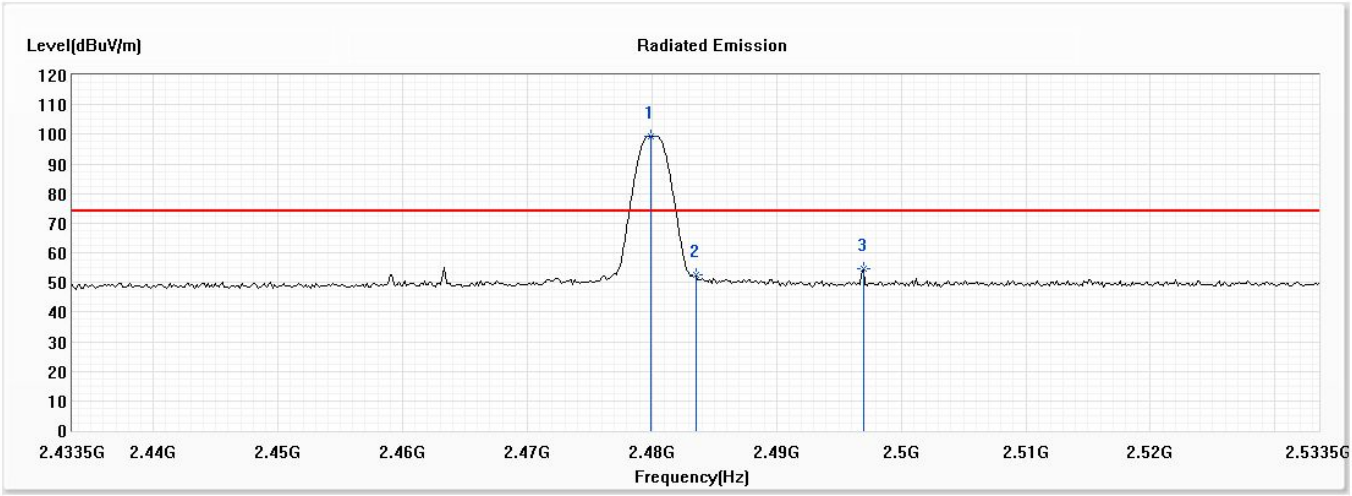
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2381.304	40.74	54.00	-13.26	29.79	10.95	AV
2	2390.000	36.60	54.00	-17.40	25.61	10.99	AV
! 3	2400.000	54.49	--	--	43.45	11.04	AV
! 4	2402.029	96.93	--	--	85.87	11.06	AV

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	Gaming headset
Test Item	:	Band Edge
Test Mode	:	Mode 4: Transmit - 1Mbps-BLE (2480MHz)
Test Date	:	2020/11/02

Horizontal



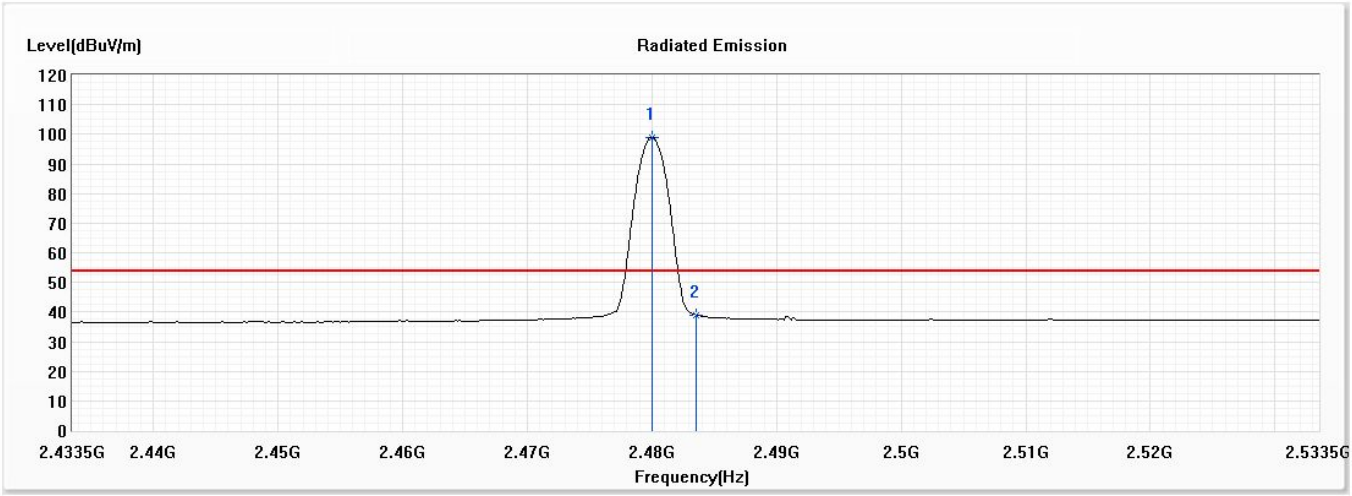
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
! 1	2479.877	99.51	--	--	87.82	11.69	PK
2	2483.500	52.73	74.00	-21.27	41.02	11.71	PK
3	2496.978	54.60	74.00	-19.40	42.81	11.79	PK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	Gaming headset
Test Item	:	Band Edge
Test Mode	:	Mode 4: Transmit - 1Mbps-BLE (2480MHz)
Test Date	:	2020/11/02

Horizontal



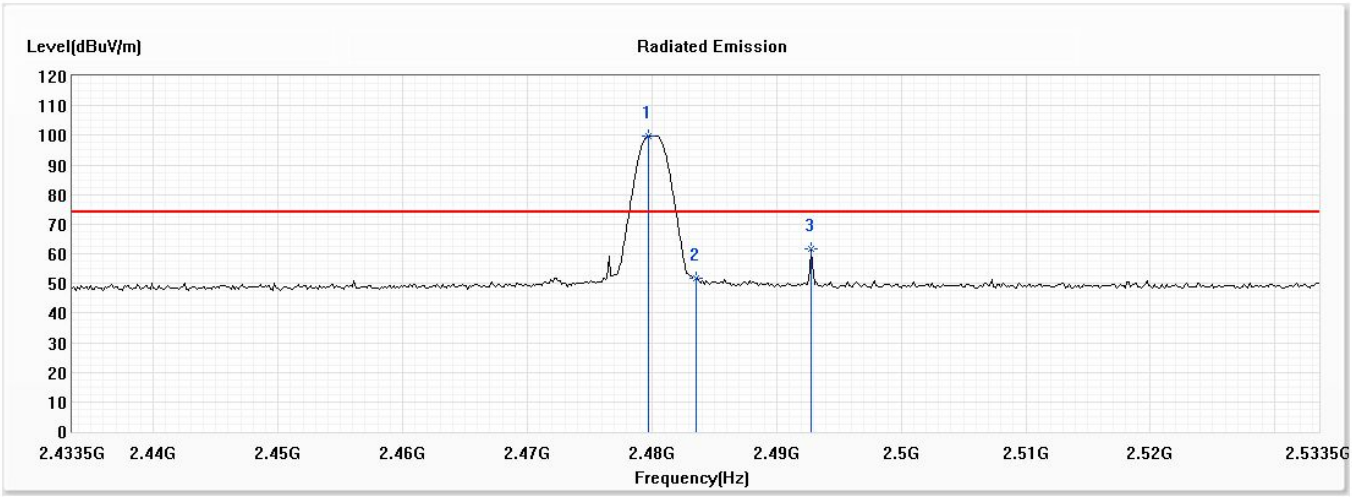
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
! 1	2480.022	98.81	--	--	87.12	11.69	AV
2	2483.500	38.90	54.00	-15.10	27.19	11.71	AV

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Gaming headset
Test Item : Band Edge
Test Mode : Mode 4: Transmit - 1Mbps-BLE (2480MHz)
Test Date : 2020/11/02

Vertical



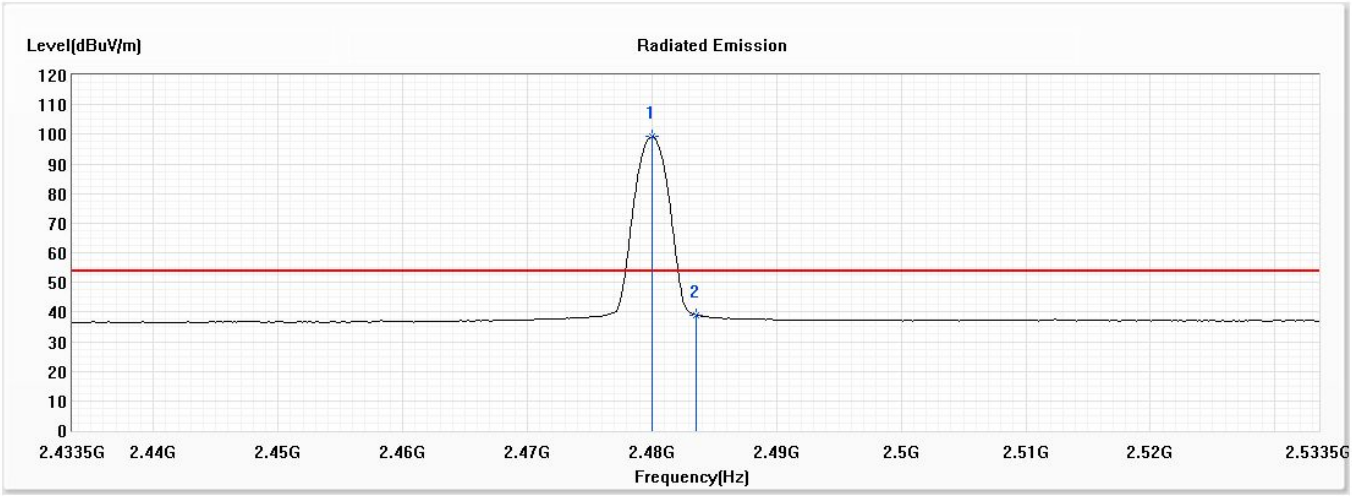
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
! 1	2479.732	99.84	--	--	88.15	11.69	PK
2	2483.500	51.67	74.00	-22.33	39.96	11.71	PK
3	2492.775	61.79	74.00	-12.21	50.02	11.77	PK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Gaming headset
Test Item : Band Edge
Test Mode : Mode 4: Transmit - 1Mbps-BLE (2480MHz)
Test Date : 2020/11/02

Vertical



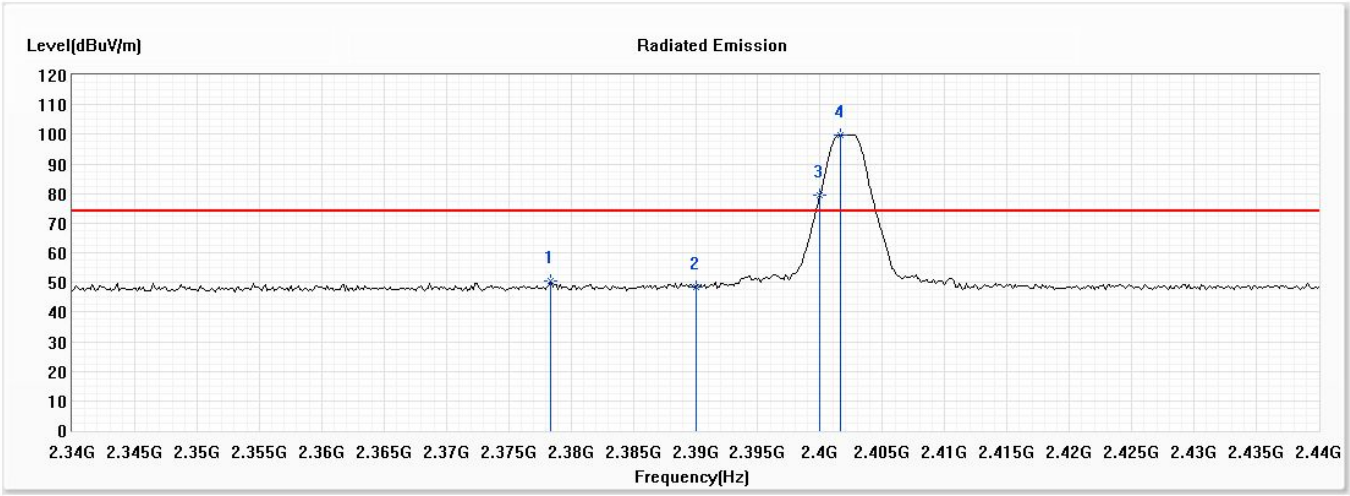
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
! 1	2480.022	99.14	--	--	87.45	11.69	AV
2	2483.500	38.92	54.00	-15.08	27.21	11.71	AV

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	Gaming headset
Test Item	:	Band Edge
Test Mode	:	Mode 5: Transmit - 2Mbps-BLE (2402MHz)
Test Date	:	2020/11/02

Horizontal



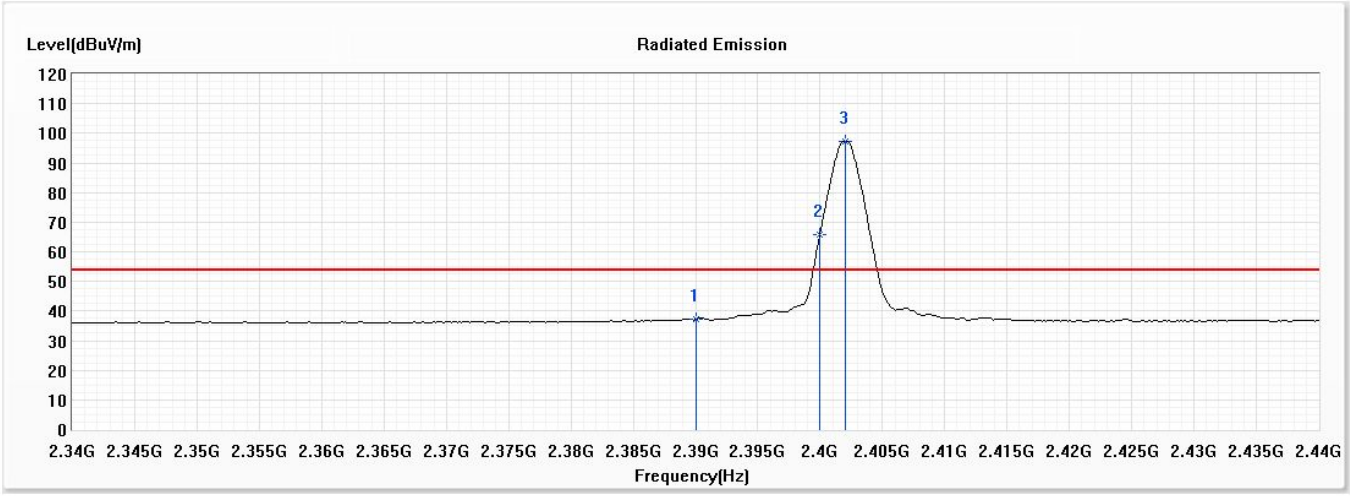
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2378.406	50.46	74.00	-23.54	39.53	10.93	PK
2	2390.000	48.29	74.00	-25.71	37.30	10.99	PK
! 3	2400.000	79.26	--	--	68.22	11.04	PK
! 4	2401.594	99.82	--	--	88.77	11.05	PK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	Gaming headset
Test Item	:	Band Edge
Test Mode	:	Mode 5: Transmit - 2Mbps-BLE (2402MHz)
Test Date	:	2020/11/02

Horizontal



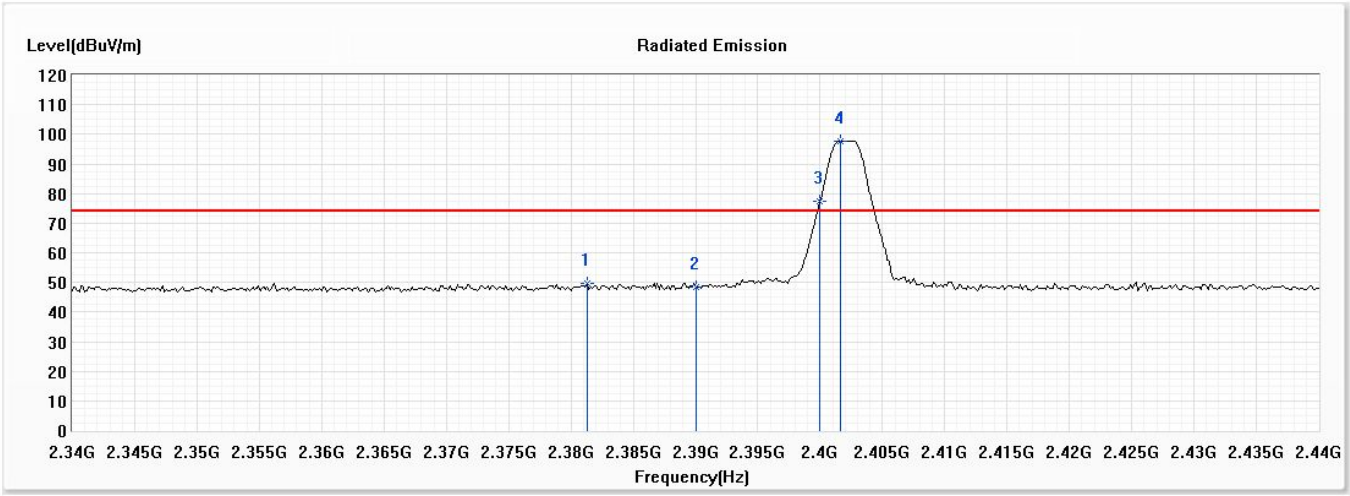
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2390.000	37.19	54.00	-16.81	26.20	10.99	AV
! 2	2400.000	65.68	--	--	54.64	11.04	AV
! 3	2402.029	97.40	--	--	86.34	11.06	AV

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	Gaming headset
Test Item	:	Band Edge
Test Mode	:	Mode 5: Transmit - 2Mbps-BLE (2402MHz)
Test Date	:	2020/11/02

Vertical



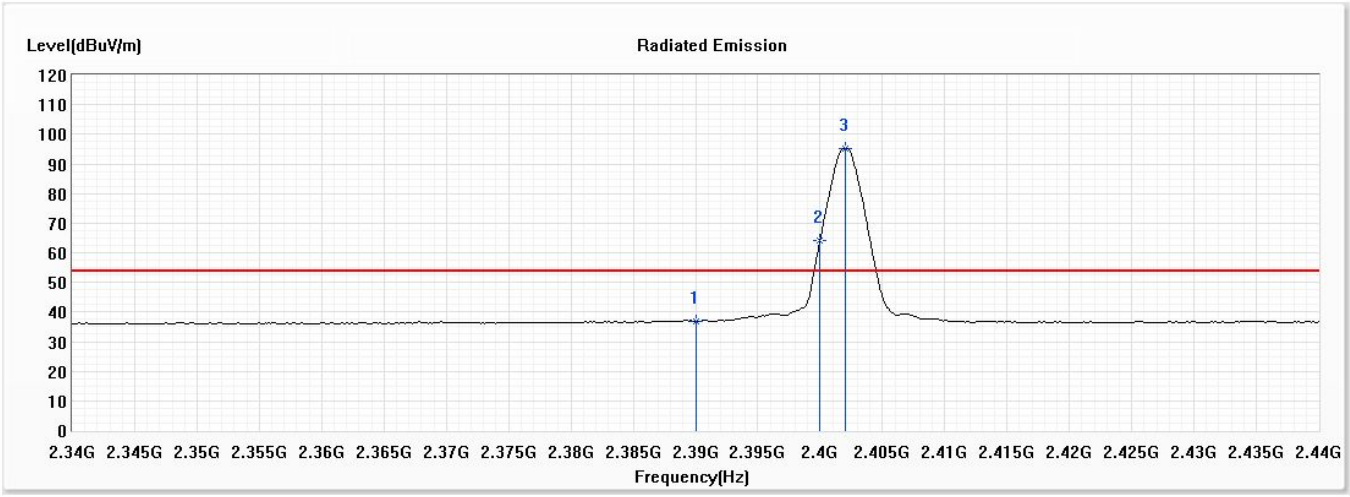
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2381.304	49.69	74.00	-24.31	38.74	10.95	PK
2	2390.000	48.32	74.00	-25.68	37.33	10.99	PK
! 3	2400.000	77.30	--	--	66.26	11.04	PK
! 4	2401.594	97.77	--	--	86.72	11.05	PK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	Gaming headset
Test Item	:	Band Edge
Test Mode	:	Mode 5: Transmit - 2Mbps-BLE (2402MHz)
Test Date	:	2020/11/02

Vertical



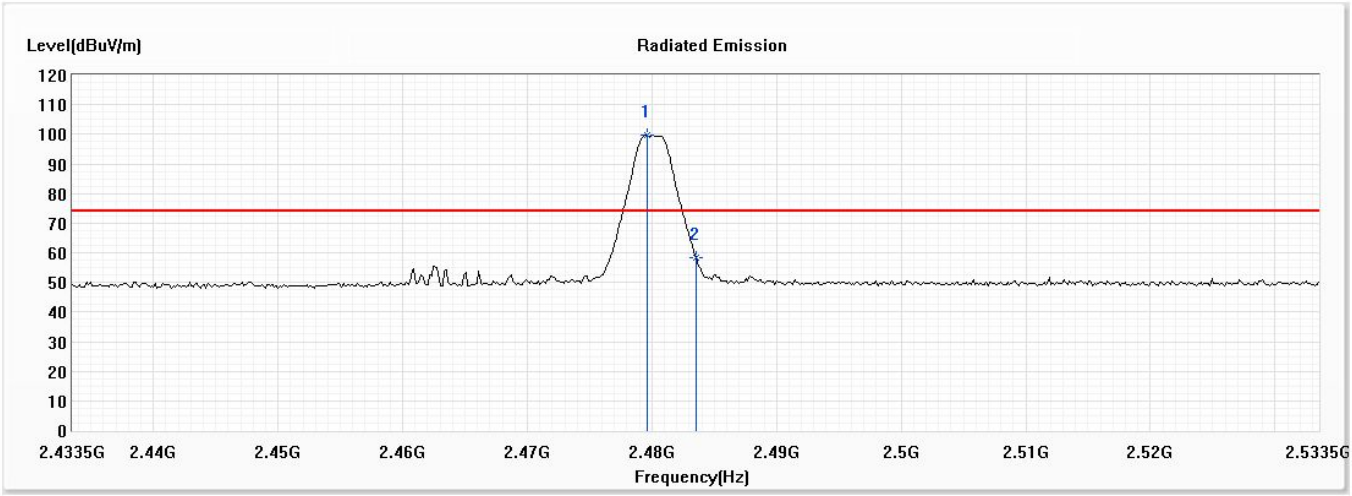
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	2390.000	36.92	54.00	-17.08	25.93	10.99	AV
! 2	2400.000	64.05	--	--	53.01	11.04	AV
! 3	2402.029	95.30	--	--	84.24	11.06	AV

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	Gaming headset
Test Item	:	Band Edge
Test Mode	:	Mode 5: Transmit - 2Mbps-BLE (2480MHz)
Test Date	:	2020/11/02

Horizontal



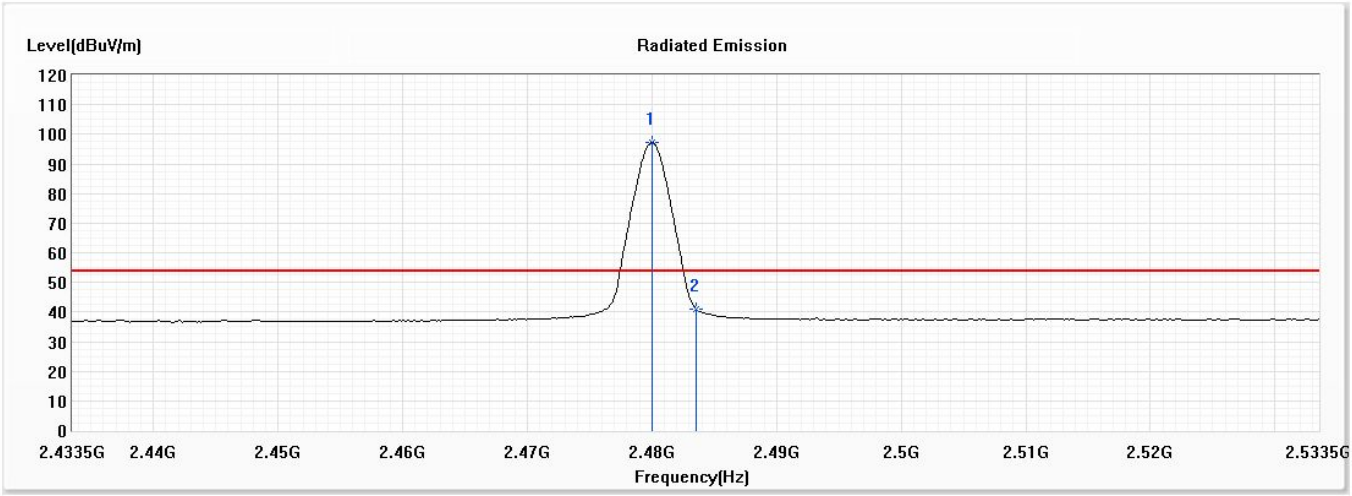
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
! 1	2479.587	99.57	--	--	87.88	11.69	PK
2	2483.500	58.38	74.00	-15.62	46.67	11.71	PK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	Gaming headset
Test Item	:	Band Edge
Test Mode	:	Mode 5: Transmit - 2Mbps-BLE (2480MHz)
Test Date	:	2020/11/02

Horizontal



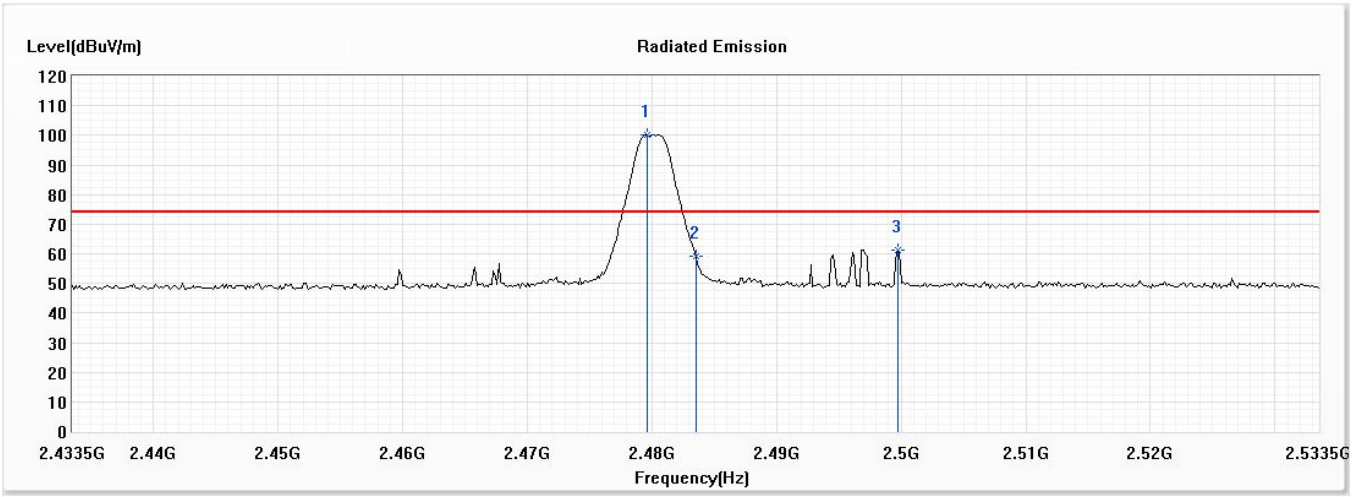
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
! 1	2480.022	97.09	--	--	85.40	11.69	AV
2	2483.500	41.10	54.00	-12.90	29.39	11.71	AV

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : Gaming headset
Test Item : Band Edge
Test Mode : Mode 5: Transmit - 2Mbps-BLE (2480MHz)
Test Date : 2020/11/02

Vertical



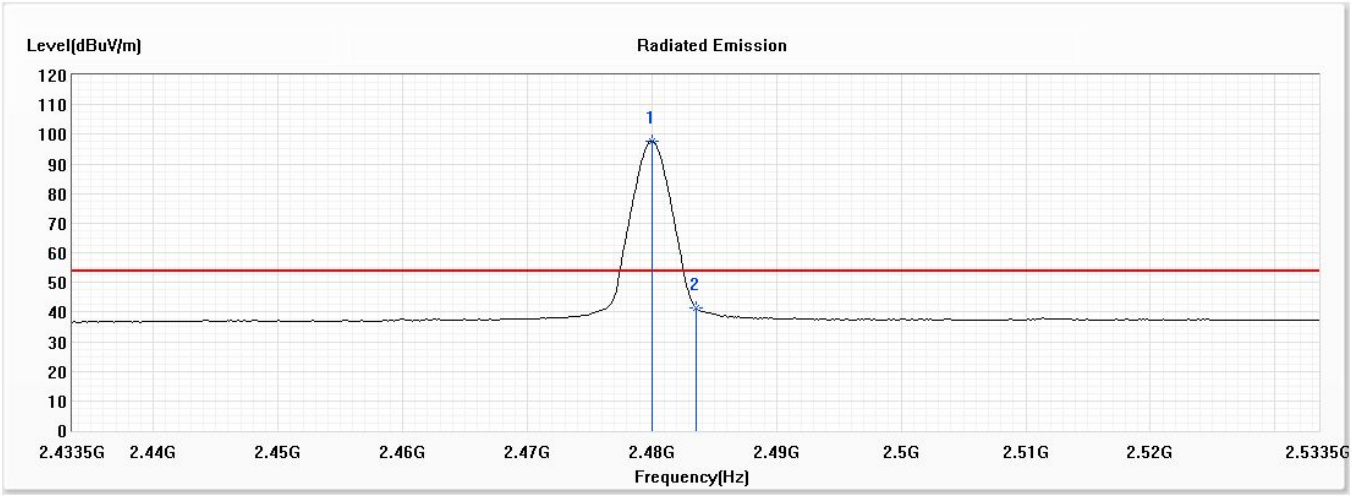
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
! 1	2479.587	100.05	--	--	88.36	11.69	PK
2	2483.500	59.10	74.00	-14.90	47.39	11.71	PK
3	2499.732	61.32	74.00	-12.68	49.51	11.81	PK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.

Product	:	Gaming headset
Test Item	:	Band Edge
Test Mode	:	Mode 5: Transmit - 2Mbps-BLE (2480MHz)
Test Date	:	2020/11/02

Vertical



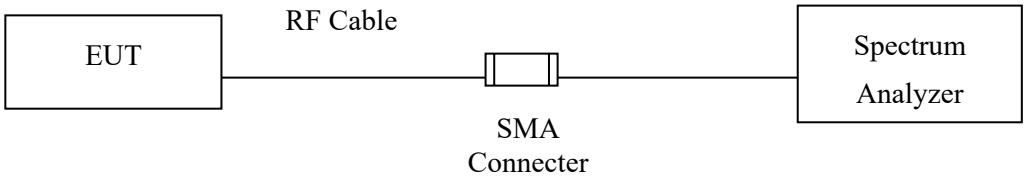
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
! 1	2480.022	97.62	--	--	85.93	11.69	AV
2	2483.500	41.58	54.00	-12.42	29.87	11.71	AV

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. The average measurement was not performed when the peak measured data under the limit of average detection.

7. Channel Number

7.1. Test Setup



7.2. Limit

Frequency hopping systems operating in the 2400-2483.5 MHz bands shall use at least 75 hopping frequencies.

7.3. Test Procedure

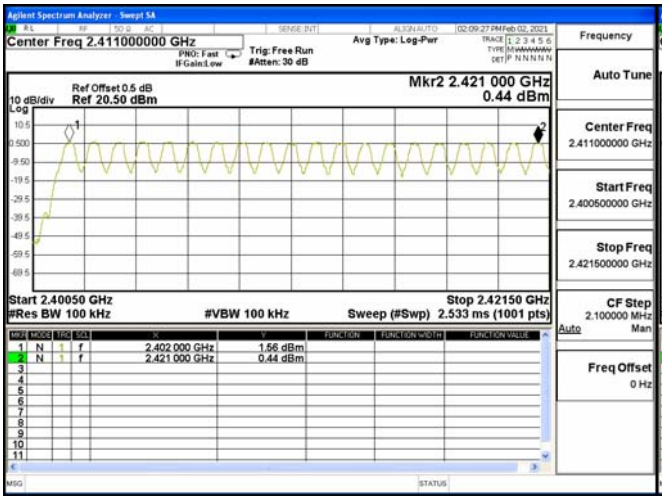
Tested according to FHSS test procedure of KDB558074 section 9 (b for compliance to FCC 47CFR 15.247 requirements.

7.4. Test Result of Channel Number

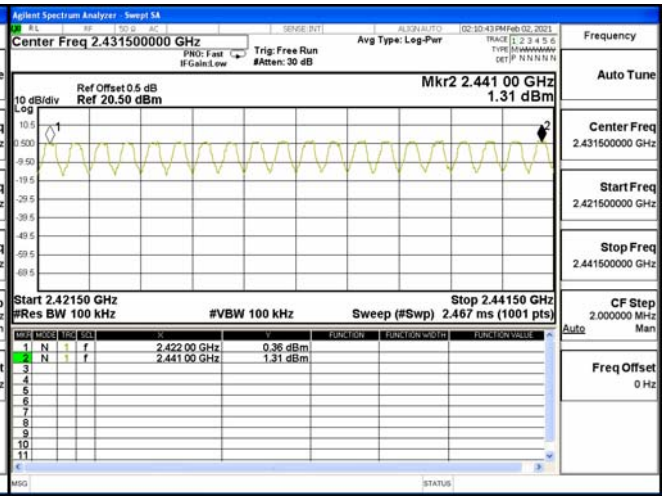
Product : Gaming headset
Test Item : Channel Number
Test Mode : Mode 1: Transmit - 1Mbps
Test Date : 2020/10/27

Frequency Range (MHz)	Measurement (Hopping Channel)	Required Limit (Hopping Channel)	Result
2402 ~ 2480	79	>75	Pass

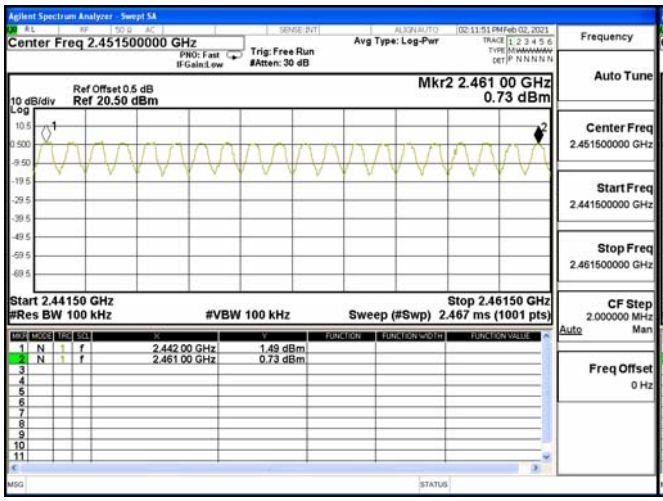
2402-2421MHz



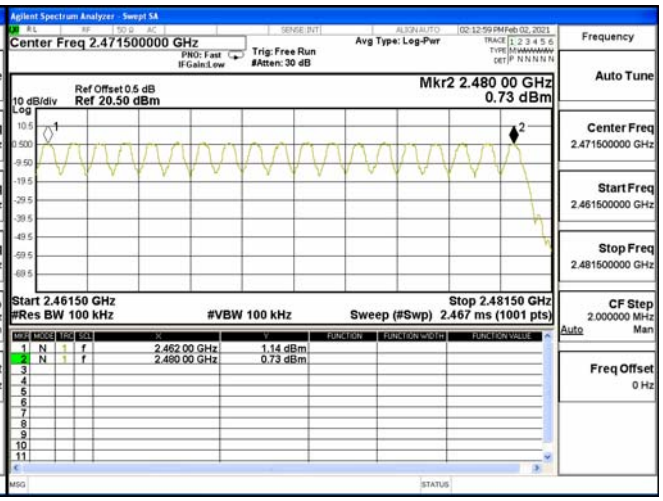
2422-2441MHz



2442-2461MHz



2462-2480MHz

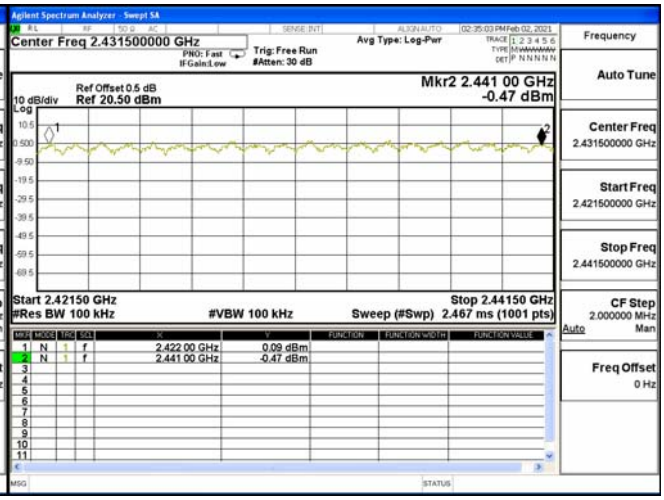


Product : Gaming headset
Test Item : Channel Number
Test Mode : Mode 3: Transmit - 3Mbps
Test Date : 2020/10/27

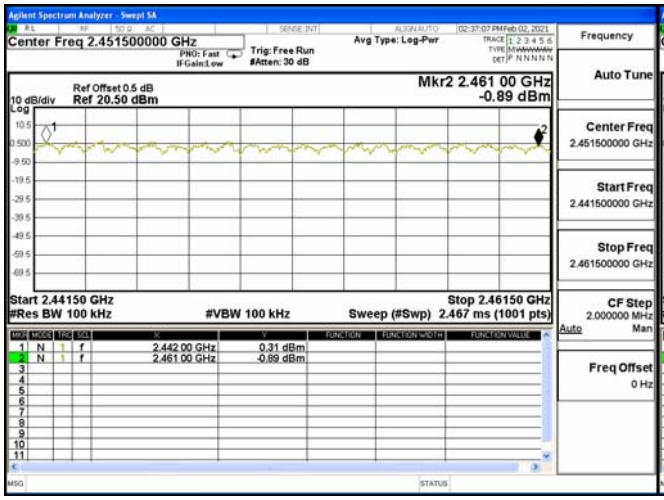
Frequency Range (MHz)	Measurement (Hopping Channel)	Required Limit (Hopping Channel)	Result
2402 ~ 2480	79	>75	Pass

2402-2421MHz

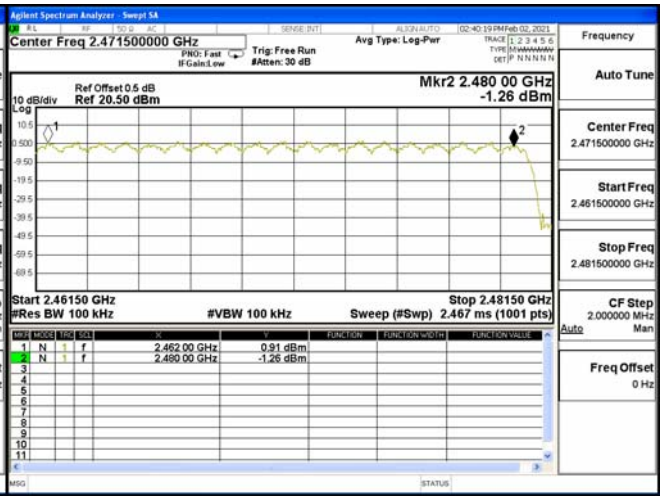
2422-2441MHz



2442-2461MHz

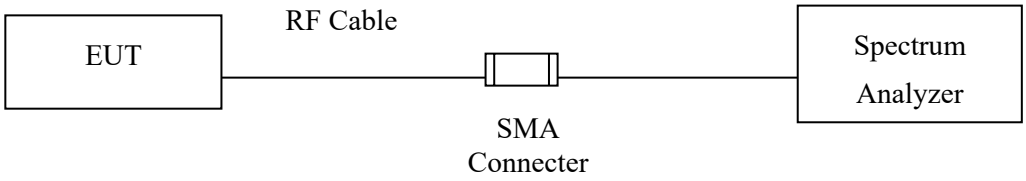


2462-2480MHz



8. Channel Separation

8.1. Test Setup



8.2. 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.

8.3. Test Procedure

Tested according to FHSS test procedure of KDB558074 section 9 (b for compliance to FCC 47CFR 15.247 requirements.

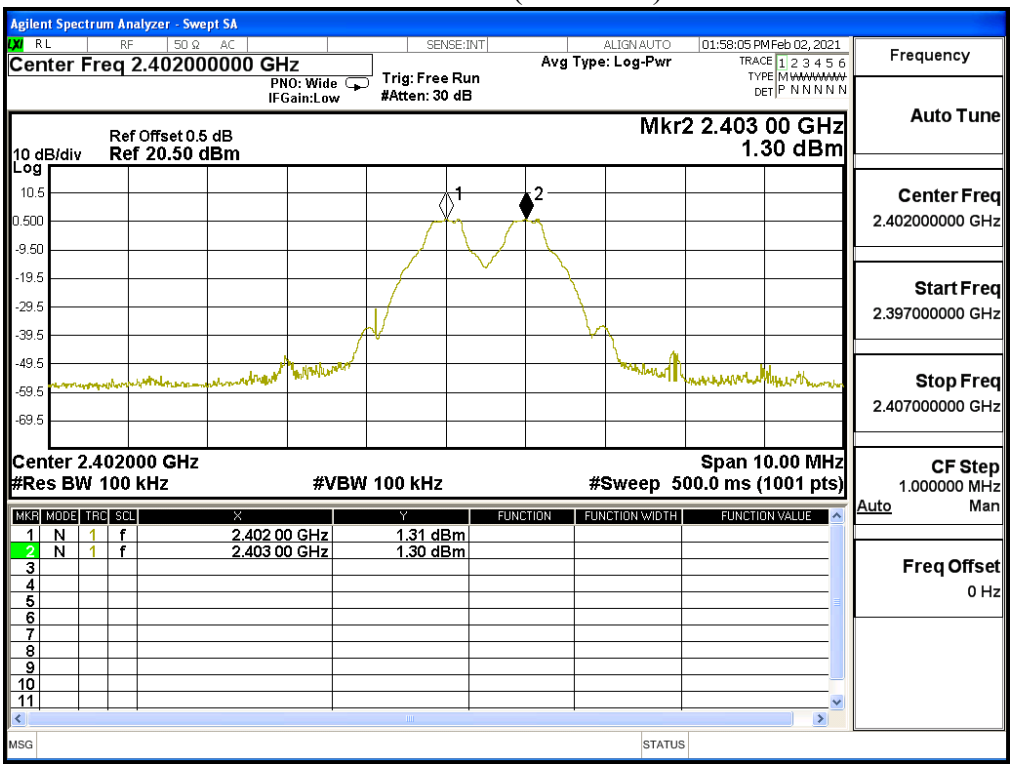
8.4. Test Result of Channel Separation

Product : Gaming headset
Test Item : Channel Separation
Test Mode : Mode 1: Transmit - 1Mbps
Test Date : 2020/10/27

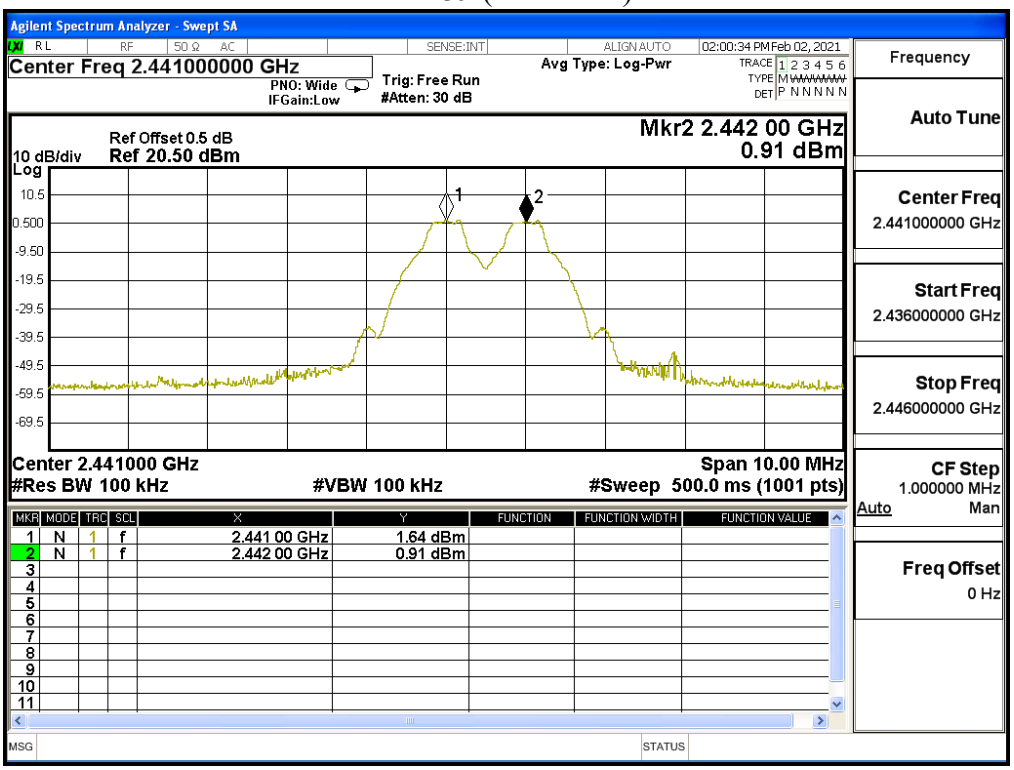
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Limit (kHz)	Limit of (2/3)*20dB Bandwidth (kHz)	Result
00	2402	1000	>25 kHz	644.0	Pass
39	2441	1000	>25 kHz	644.0	Pass
78	2480	1000	>25 kHz	642.0	Pass

NOTE: The 20dB Bandwidth is refer to section 10.

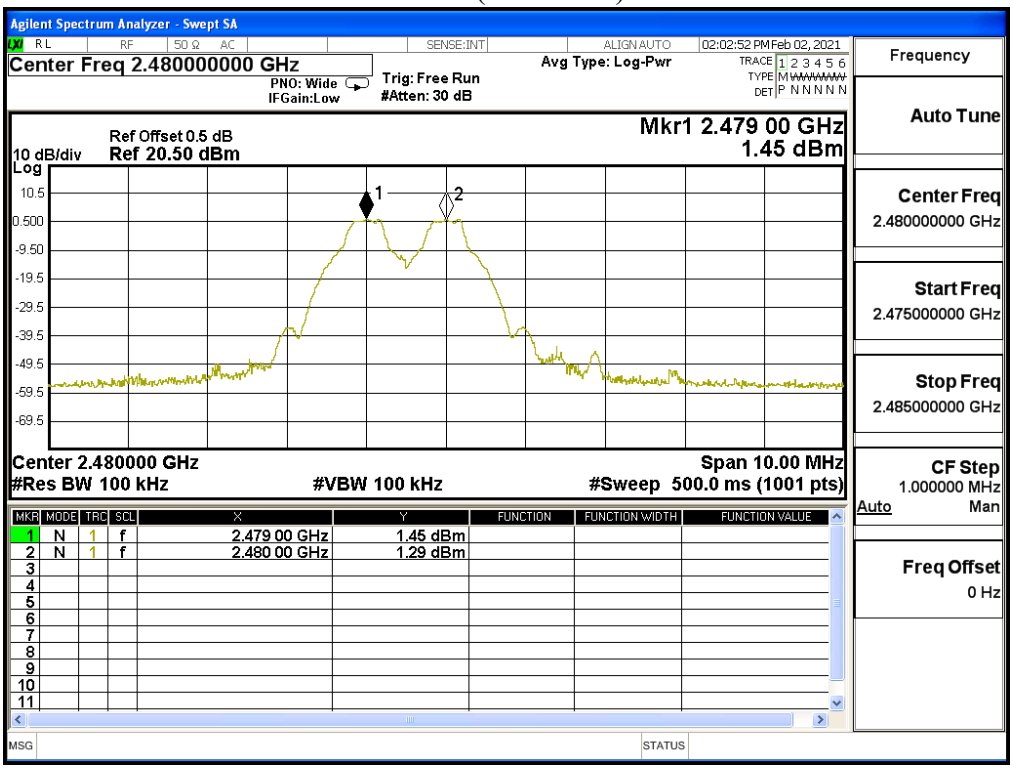
Channel 00 (2402MHz)



Channel 39 (2441MHz)



Channel 78 (2480MHz)

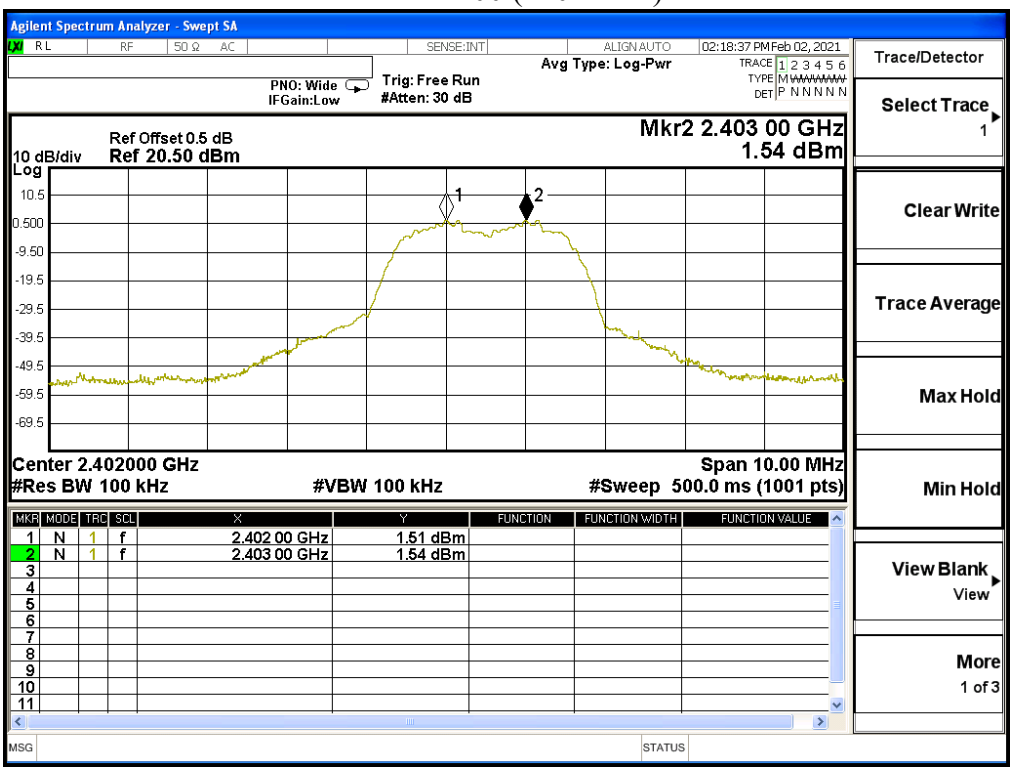


Product : Gaming headset
Test Item : Channel Separation
Test Mode : Mode 3: Transmit - 3Mbps
Test Date : 2020/10/27

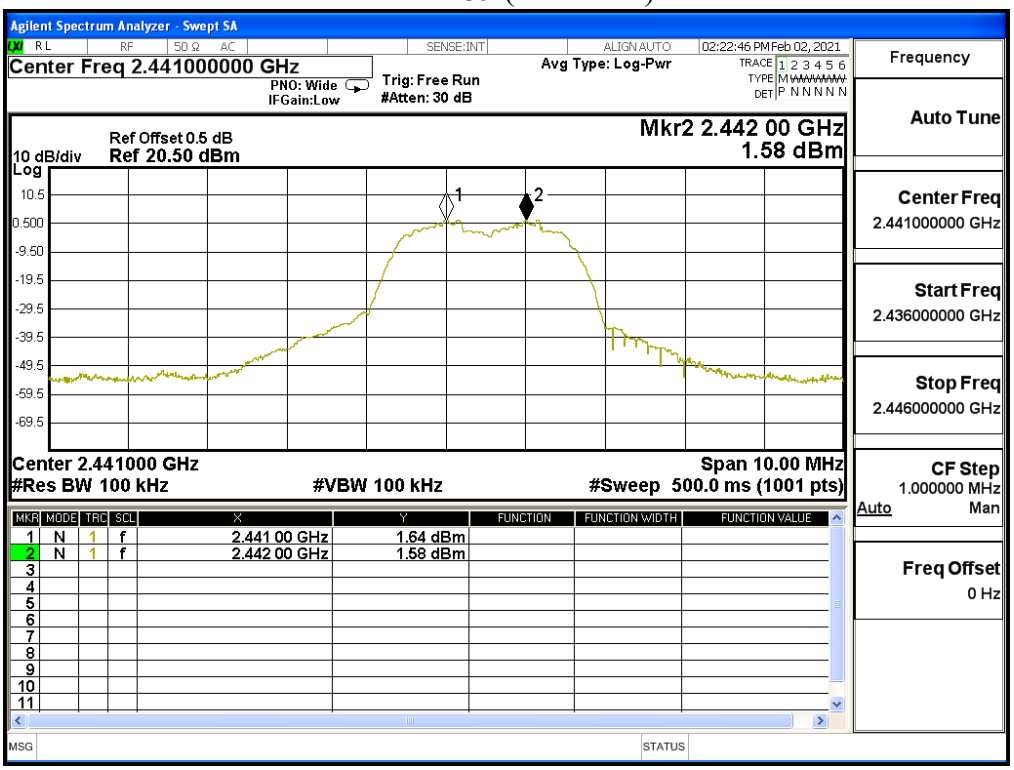
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Limit (kHz)	Limit of (2/3)*20dB Bandwidth (kHz)	Result
00	2402	1000	>25 kHz	874.0	Pass
39	2441	1000	>25 kHz	874.0	Pass
78	2480	1000	>25 kHz	874.0	Pass

NOTE: The 20dB Bandwidth is refer to section 10.

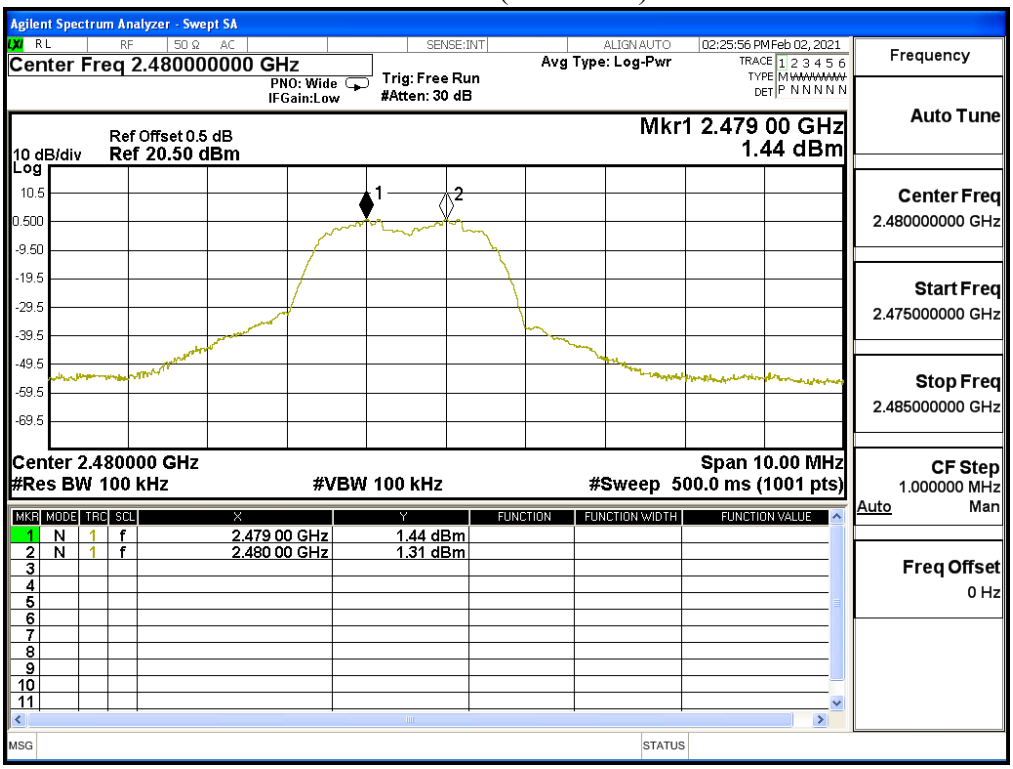
Channel 00 (2402MHz)



Channel 39 (2441MHz)

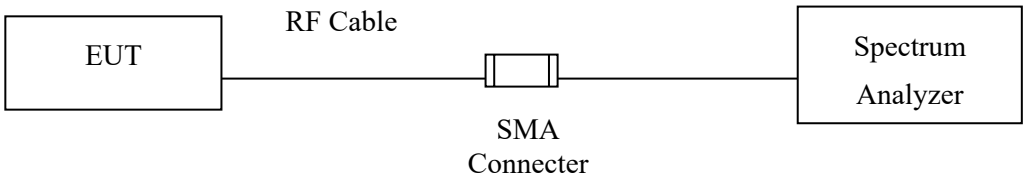


Channel 78 (2480MHz)



9. Dwell Time

9.1. Test Setup



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 Procedure

Tested according to FHSS test procedure of KDB558074 section 9 (b for compliance to FCC 47CFR 15.247 requirements.

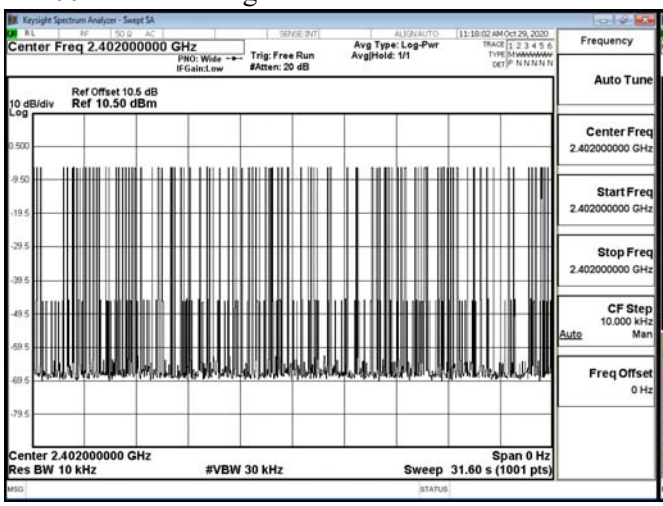
9.4. Test Result of Dwell Time

Product : Gaming headset
Test Item : Dwell Time
Test Mode : Mode 1: Transmit - 1Mbps (Channel 00,39,78)
Test Date : 2020/10/29

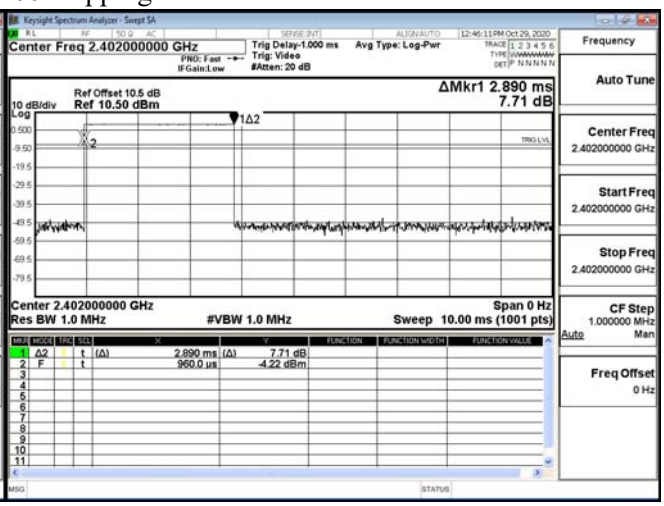
Frequency (MHz)	Time slot length (ms)	Hopping of Number	Sweep time (ms)	Dwell Time (ms)	Limit (ms)	Result
2402	1.000	112	31600	112.000	400	Pass
2441	1.000	116	31600	116.000	400	Pass
2480	1.000	141	31600	141.000	400	Pass

Dwell time = Time slot length(ms)*Hopping of Number

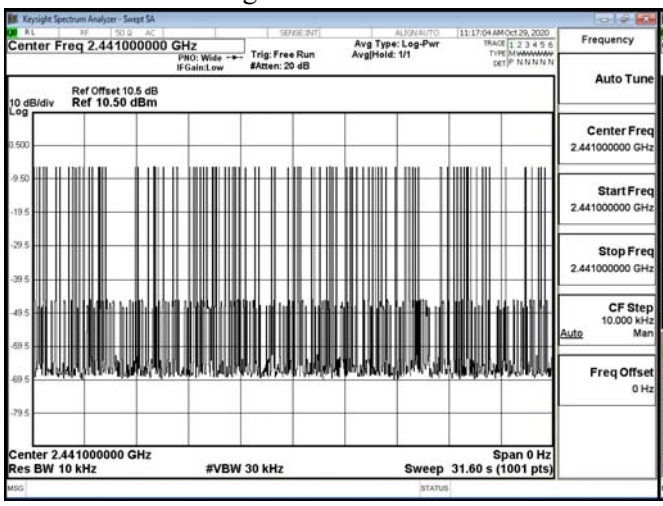
CH 00 Time slot length



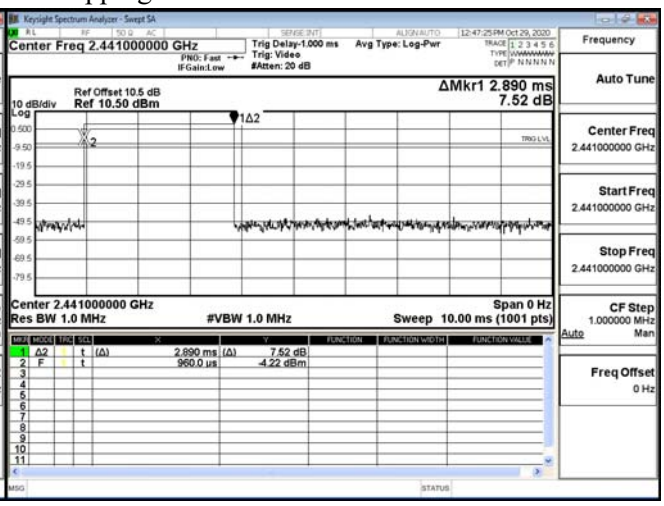
CH 00 Hopping of Number



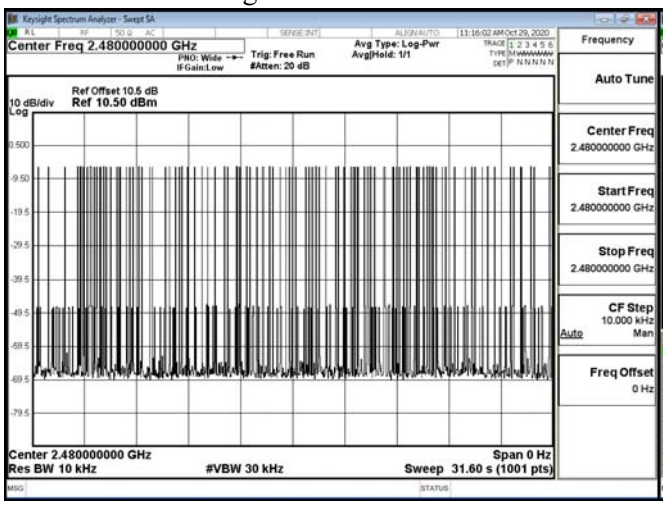
CH 39 Time slot length



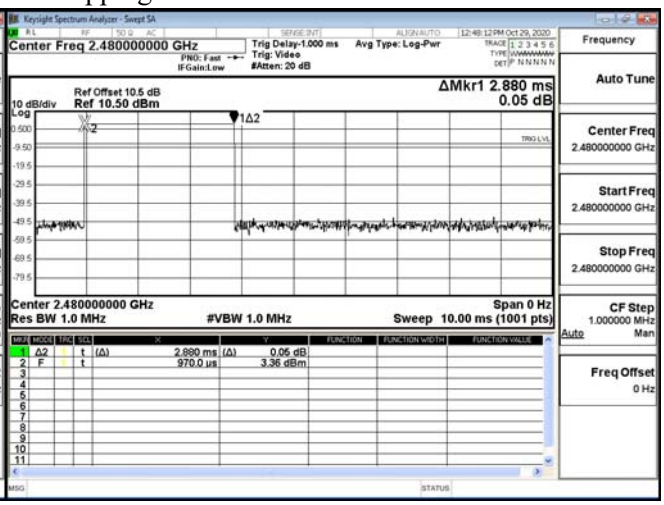
CH 39 Hopping of Number



CH 78 Time slot length



CH 78 Hopping of Number



Note:

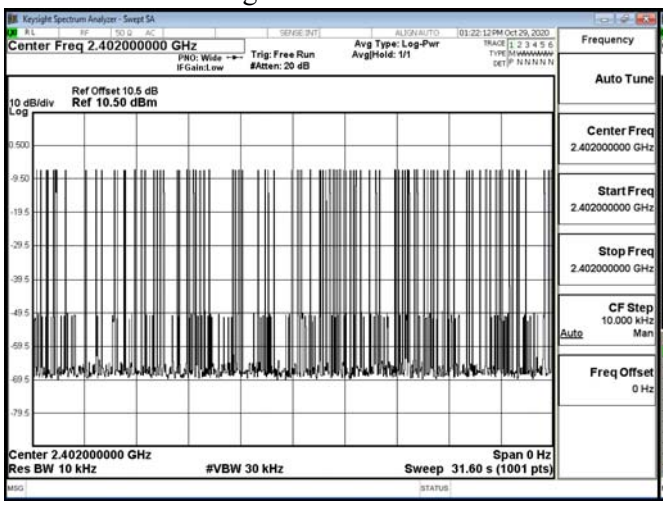
The dwell times of the packet type of DH1, DH3, and DH5 are tested. Only the worst case is shown on the report.

Product : Gaming headset
Test Item : Dwell Time
Test Mode : Mode 3: Transmit - 3Mbps (Channel 00,39,78)
Test Date : 2020/10/29

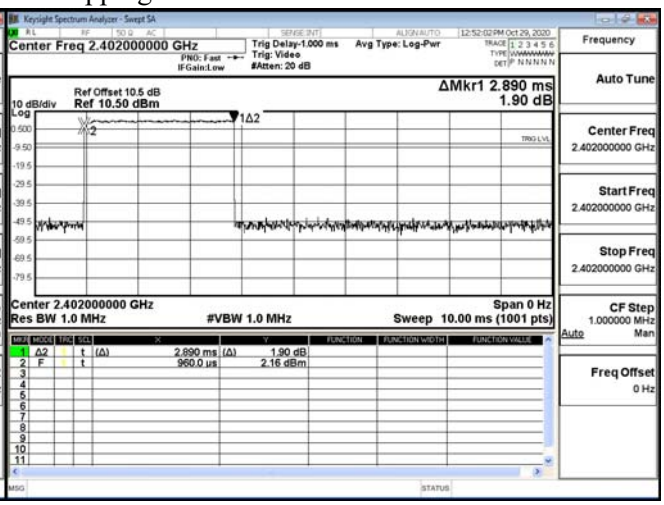
Frequency (MHz)	Time slot length (ms)	Hopping of Number	Sweep time (ms)	Dwell Time (ms)	Limit (ms)	Result
2402	1.000	150	31600	150.000	400	Pass
2441	1.000	144	31600	144.000	400	Pass
2480	1.000	169	31600	169.000	400	Pass

Dwell time = Time slot length(ms)*Hopping of Number

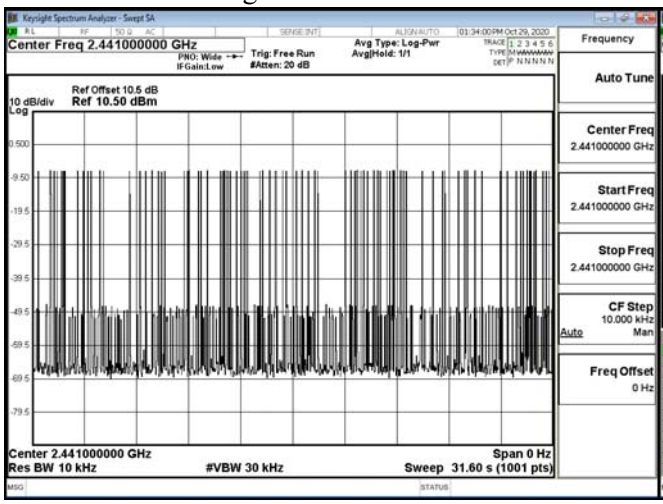
CH 00 Time slot length



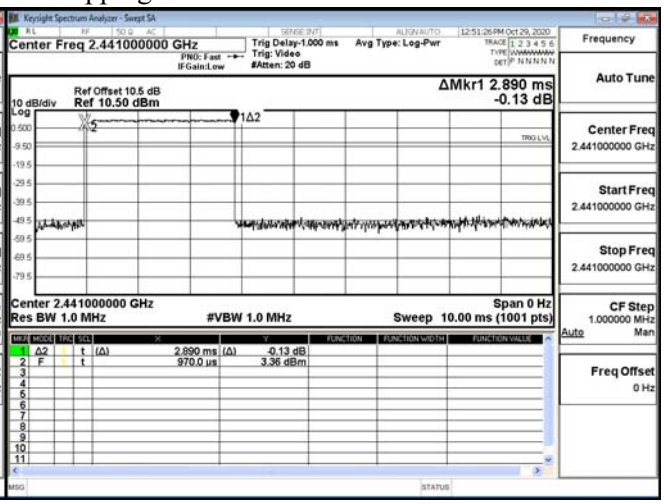
CH 00 Hopping of Number



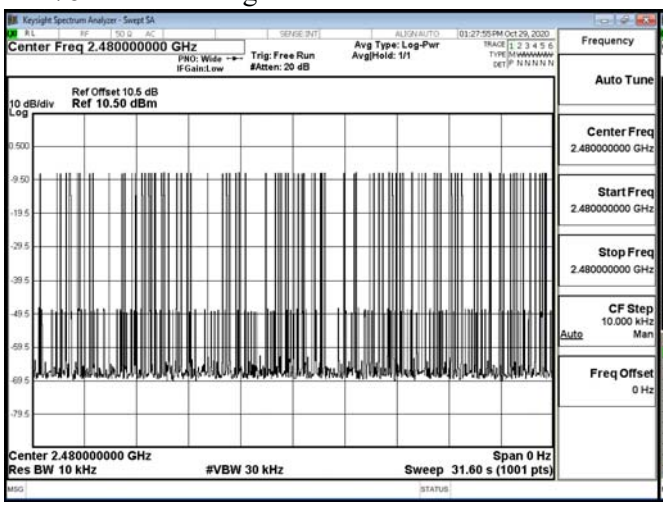
CH 39 Time slot length



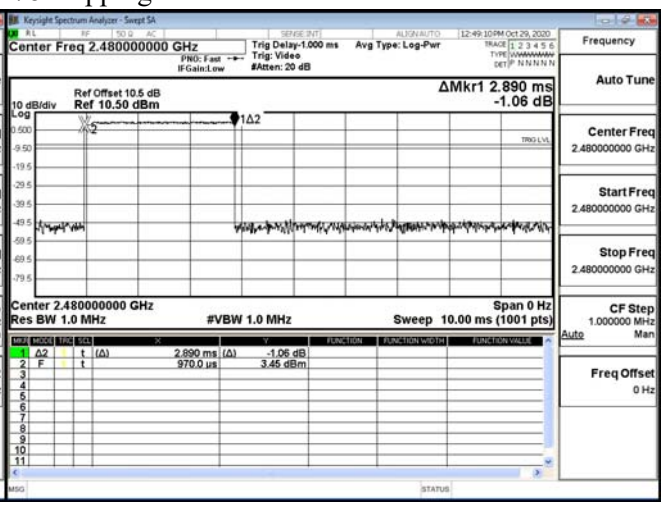
CH 39 Hopping of Number



CH 78 Time slot length



CH 78 Hopping of Number

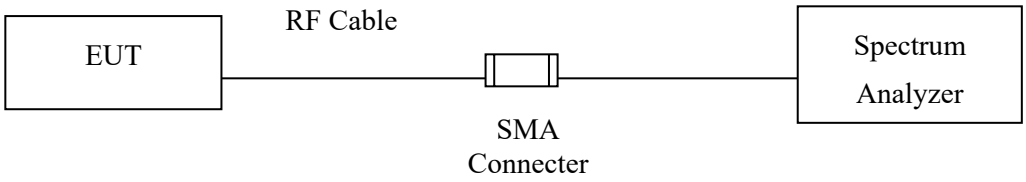


Note:

The dwell times of the packet type of DH1, DH3, and DH5 are tested. Only the worst case is shown on the report.

10. Occupied Bandwidth

10.1. Test Setup



10.2. Limits

N/A

The minimum bandwidth shall be at least 500 kHz.

10.3. Test Procedure

Tested according to FHSS test procedure of KDB558074 section 9 (b for compliance to FCC 47CFR 15.247 requirements.

The EUT was setup according to ANSI C63.4, 2014; tested according to ANSI C63.10 Section 11.8 for compliance to FCC 47CFR 15.247 requirements.

10.4. Test Result of Occupied Bandwidth

Product : Gaming headset
Test Item : Occupied Bandwidth Data
Test Mode : Mode 1: Transmit - 1Mbps
Test Date : 2020/10/26

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
00	2402	927	--	NA
39	2441	927	--	NA
78	2480	924	--	NA

Figure Channel 00:

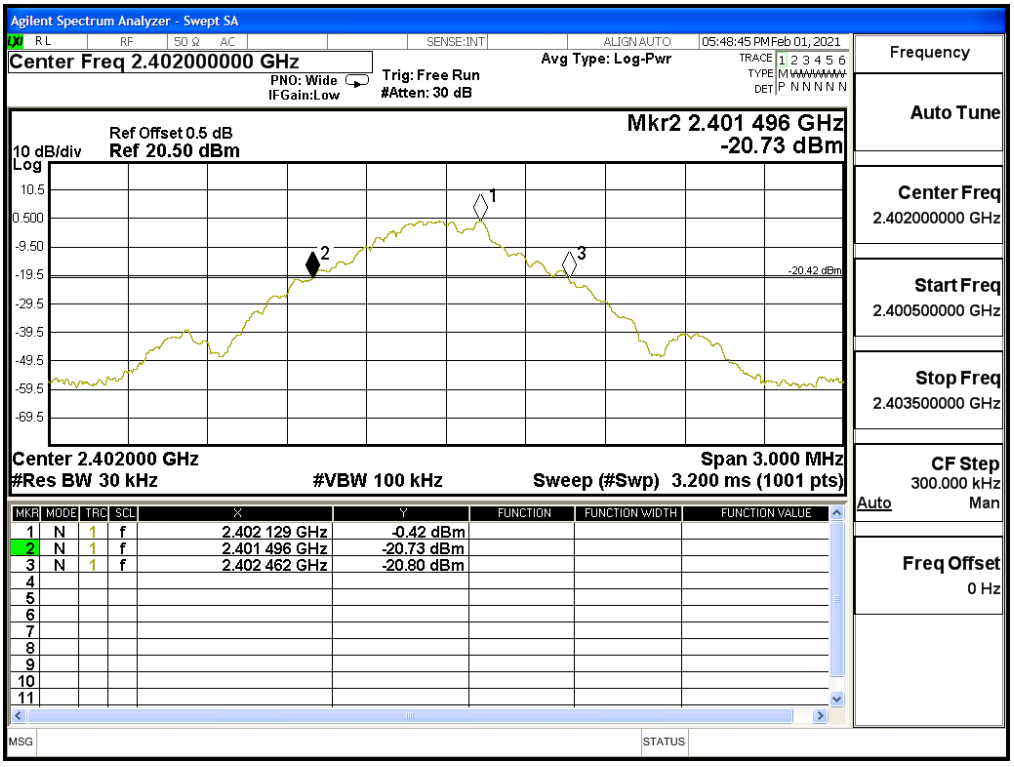


Figure Channel 39:

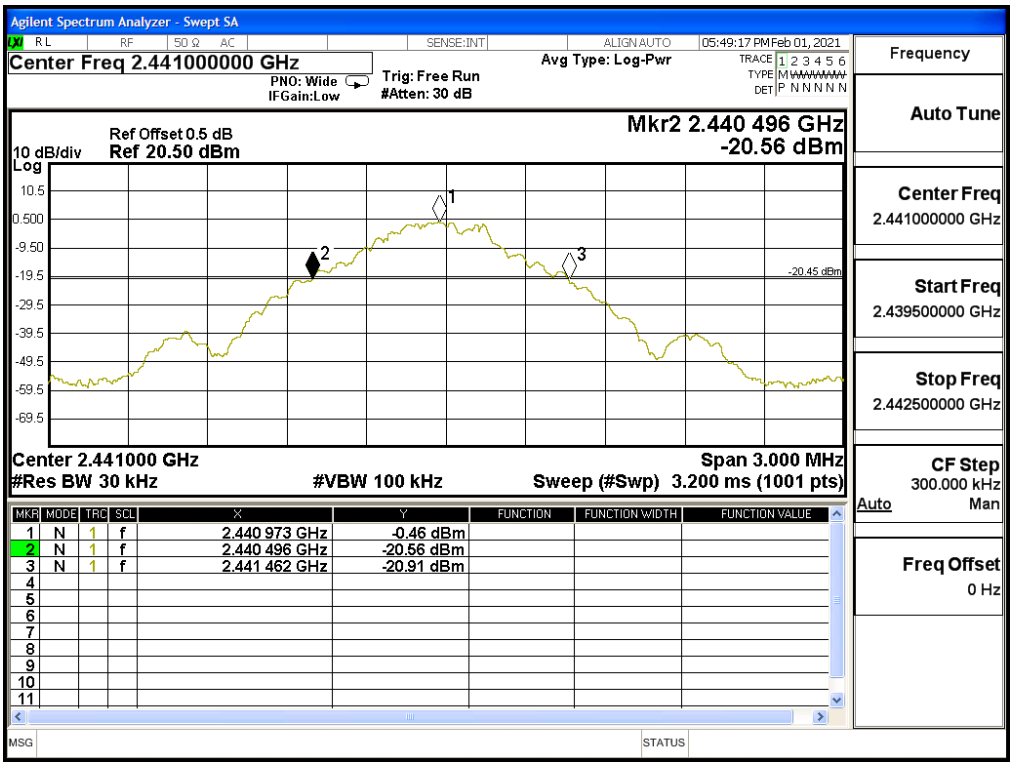
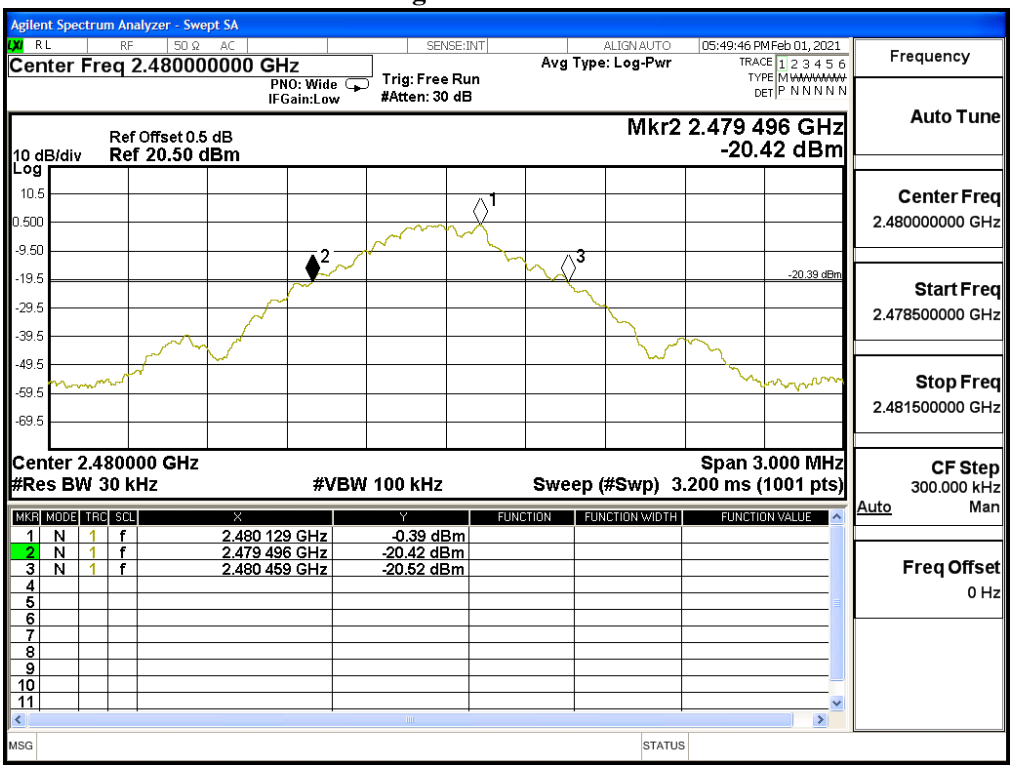


Figure Channel 78:



Product : Gaming headset
Test Item : Occupied Bandwidth Data
Test Mode : Mode 3: Transmit - 3Mbps
Test Date : 2020/10/26

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
00	2402	966	--	NA
39	2441	966	--	NA
78	2480	963	--	NA

Figure Channel 00:

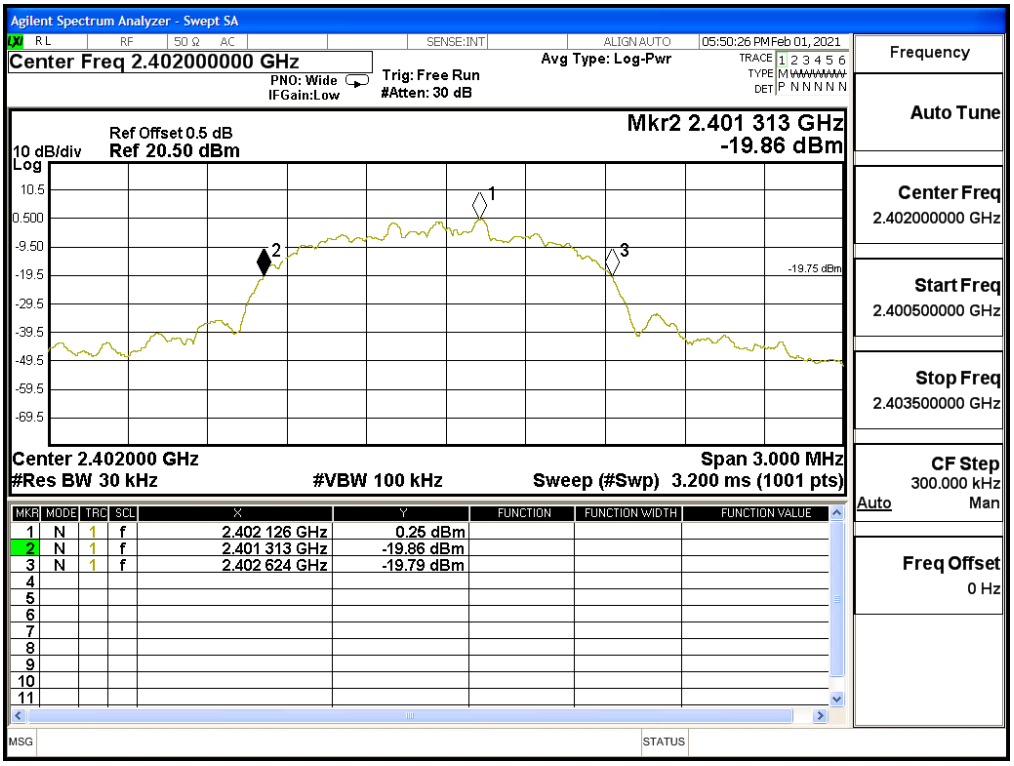


Figure Channel 39:

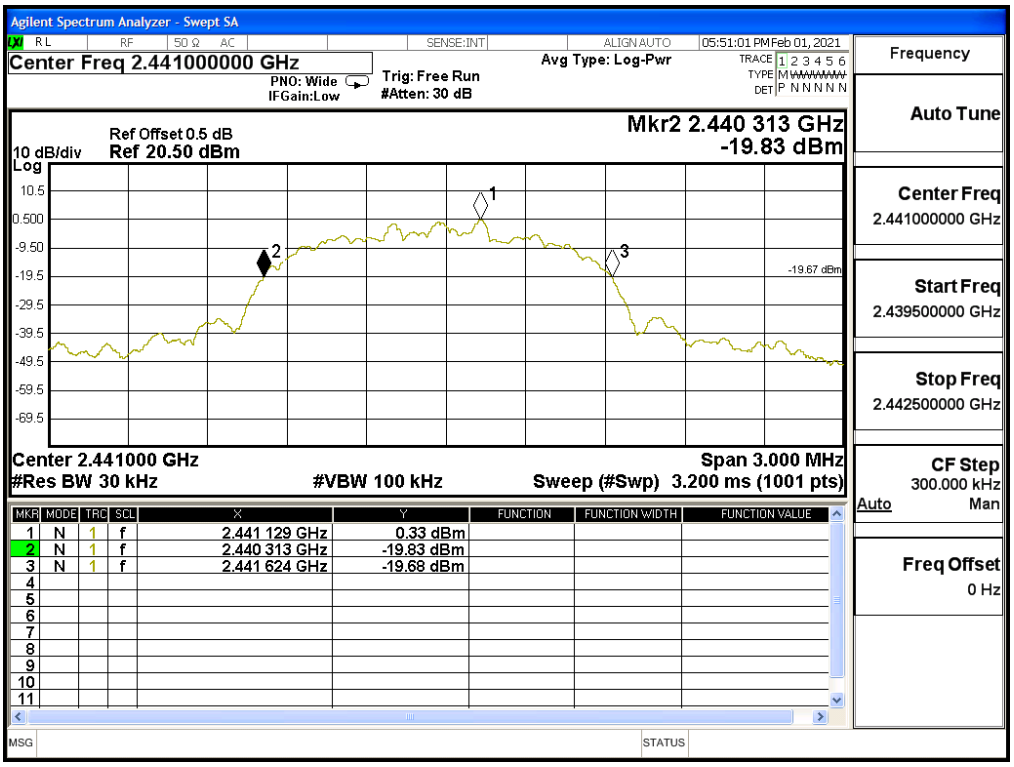
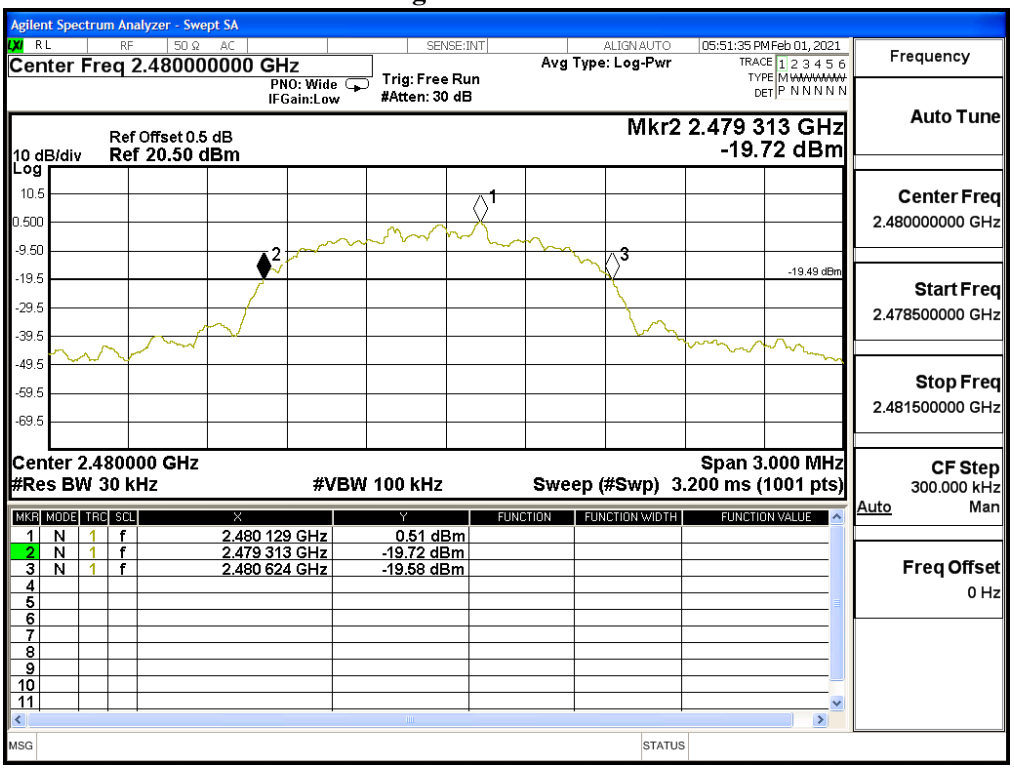


Figure Channel 78:



Product : Gaming headset
Test Item : 6dB Bandwidth Data
Test Mode : Mode 4: Transmit - 1Mbps-BLE
Test Date : 2020/10/26

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
00	2402	1311	>500	Pass
19	2440	1311	>500	Pass
39	2480	1311	>500	Pass

Figure Channel 00:

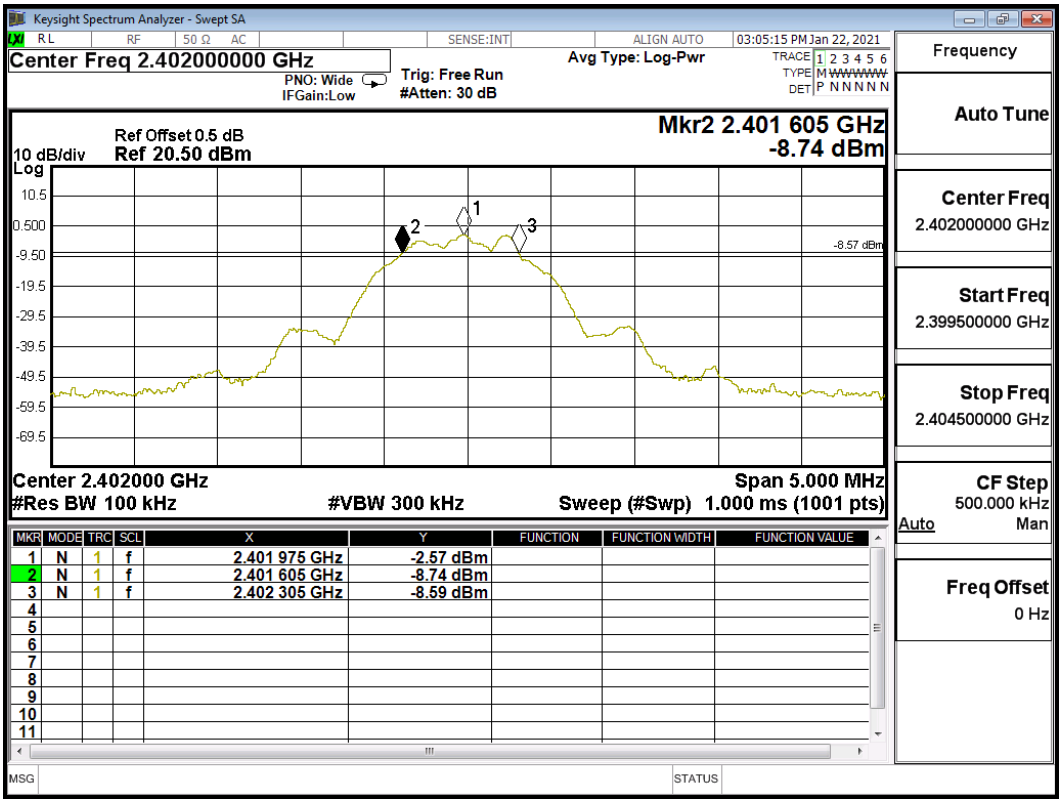


Figure Channel 19:

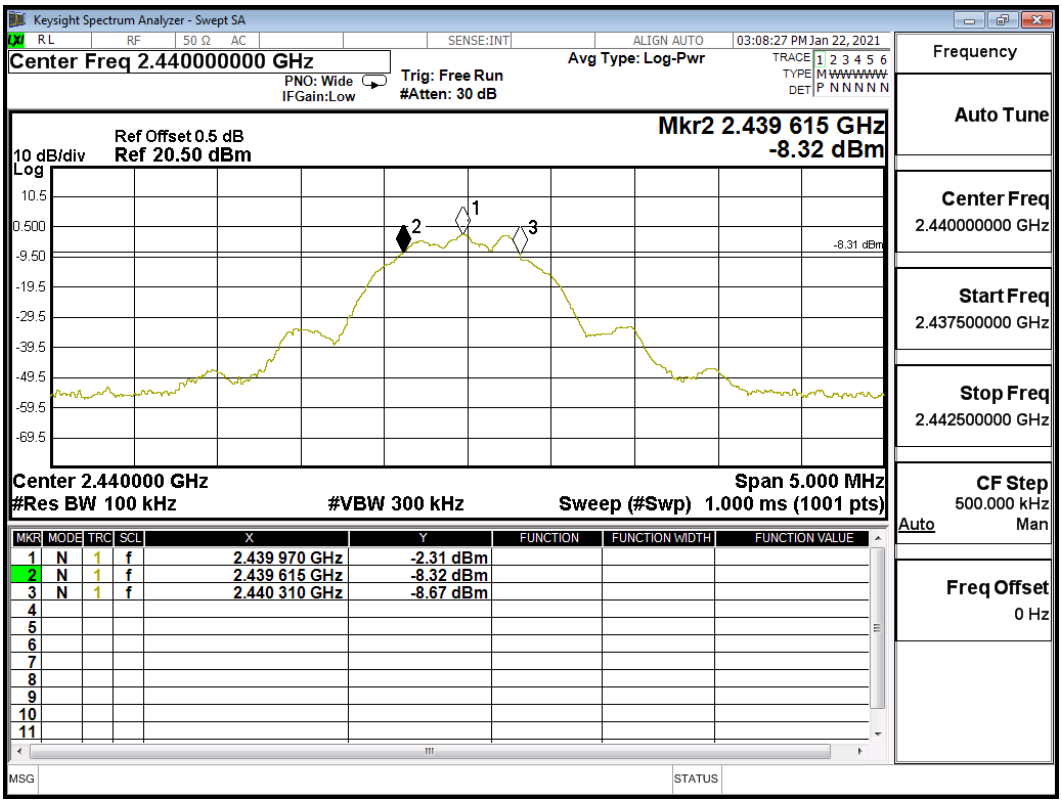
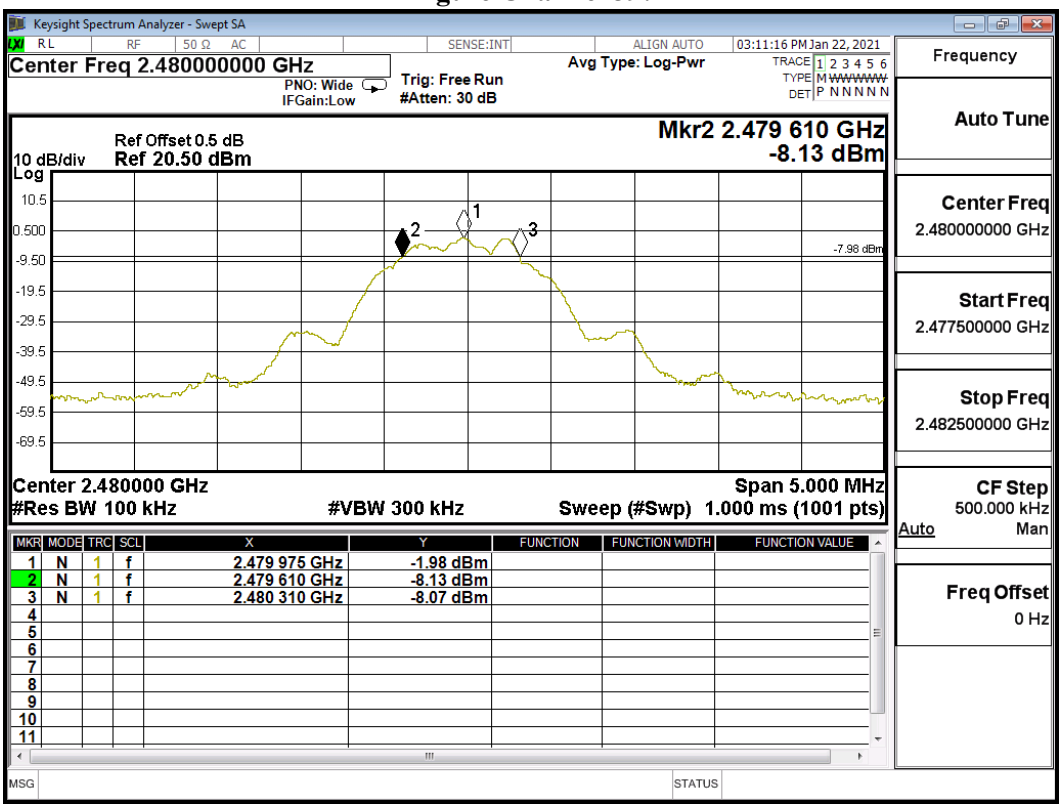


Figure Channel 39:



Product : Gaming headset
Test Item : 6dB Bandwidth Data
Test Mode : Mode 5: Transmit - 2Mbps-BLE
Test Date : 2020/10/26

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
00	2402	1130	>500	Pass
19	2440	1130	>500	Pass
39	2480	1120	>500	Pass

Figure Channel 00:

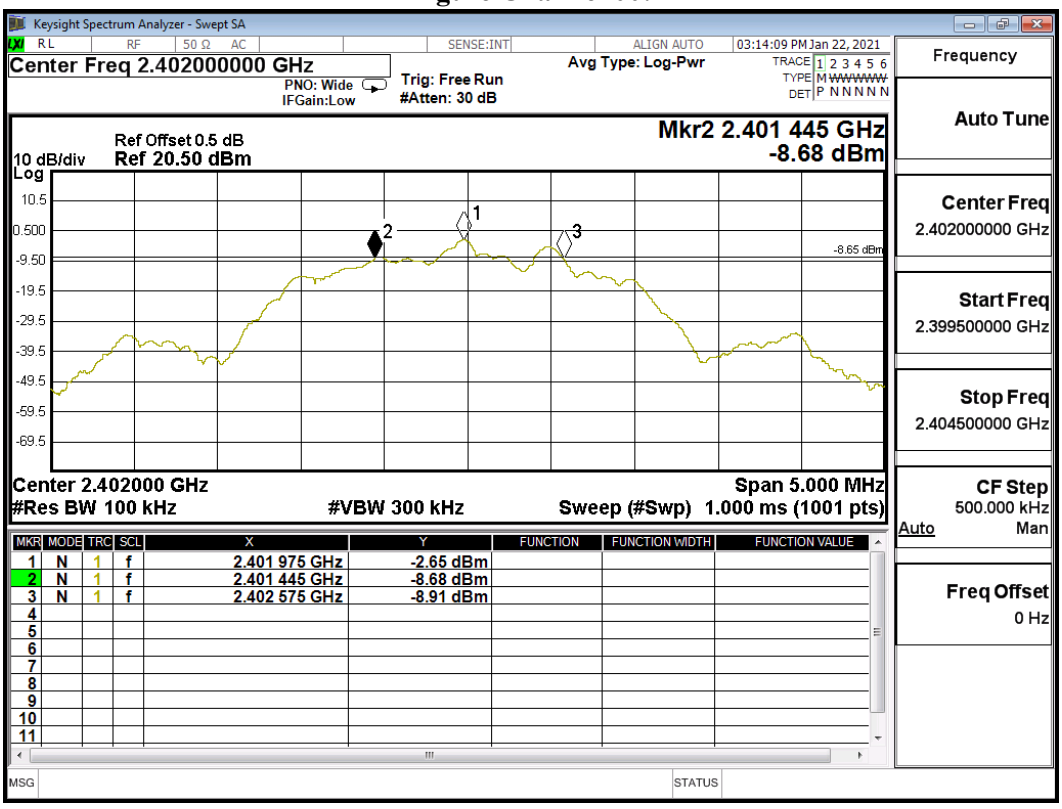


Figure Channel 19:

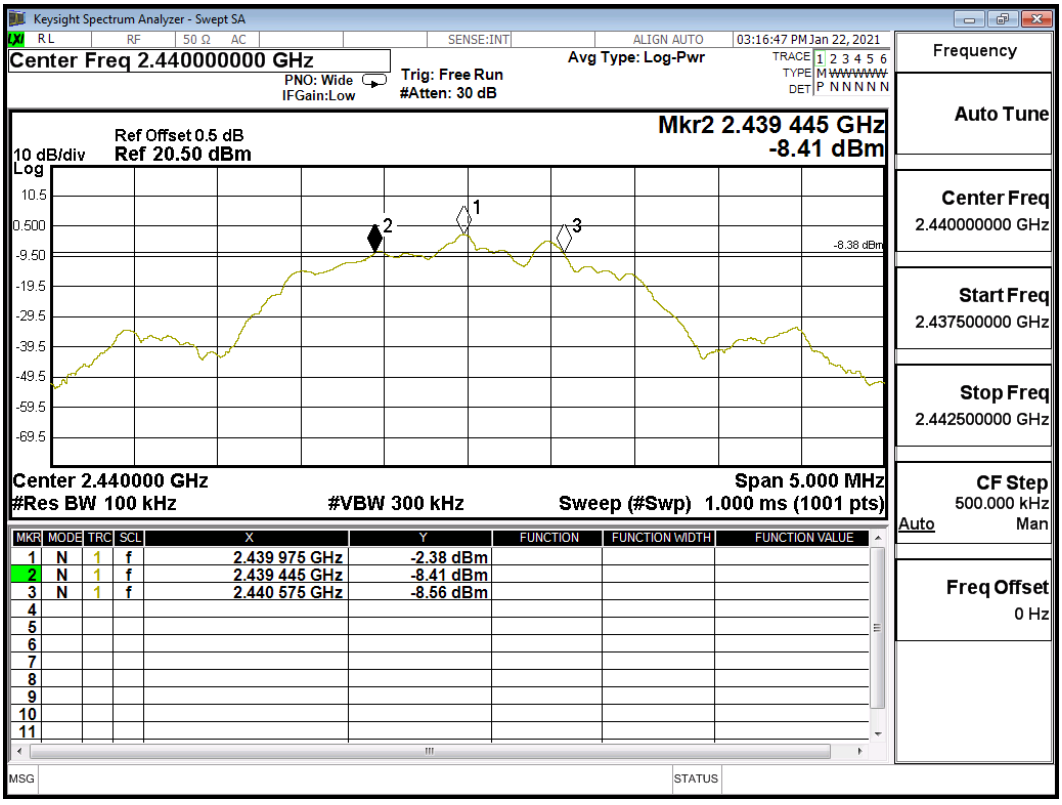
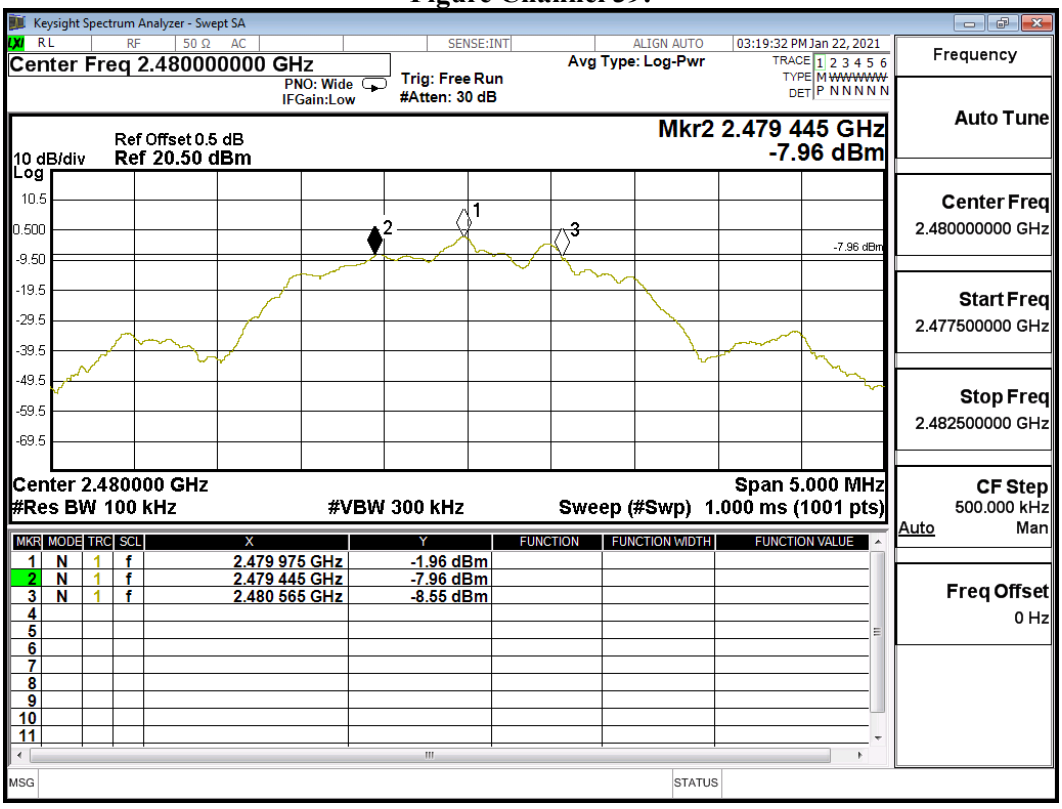
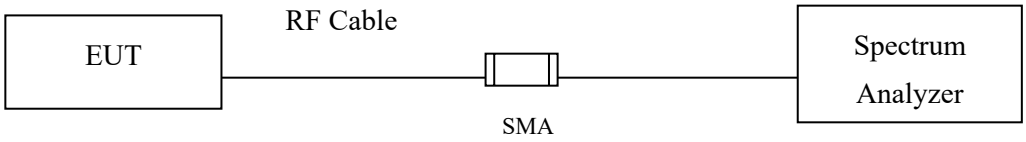


Figure Channel 39:



11. Power Density

11.1. Test Setup



11.2. Limits

The transmitted power density averaged over any 1 second interval shall not be greater +8dBm in any 3kHz bandwidth.

11.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013; tested according to DTS test procedure of KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

The maximum power spectral density using C63.10 Section 11.10.2 Method PKPSD (peak PSD)

11.4. Test Result of Power Density

Product : Gaming headset
Test Item : Power Density Data
Test Mode : Mode 4: Transmit - 1Mbps-BLE
Test Date : 2020/10/26

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
00	2402	-2.66	≦8dBm	Pass
19	2440	-2.39	≦8dBm	Pass
39	2480	-2.01	≦8dBm	Pass

Figure Channel 00:

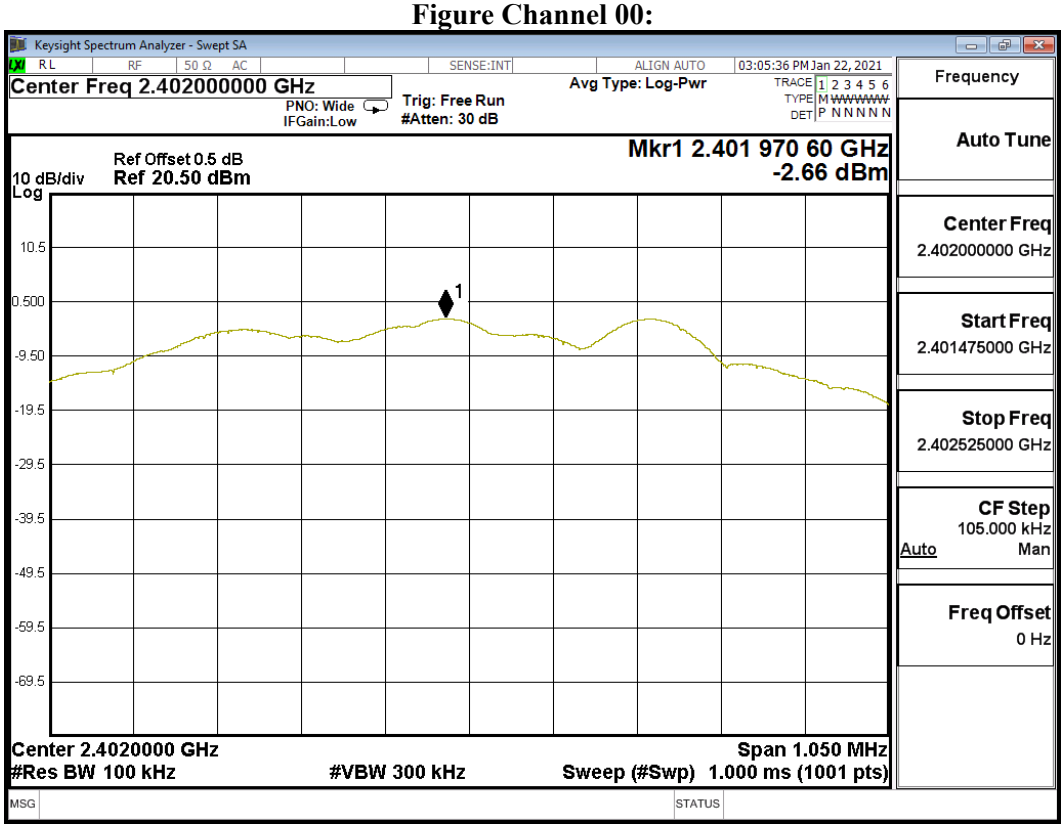


Figure Channel 19:

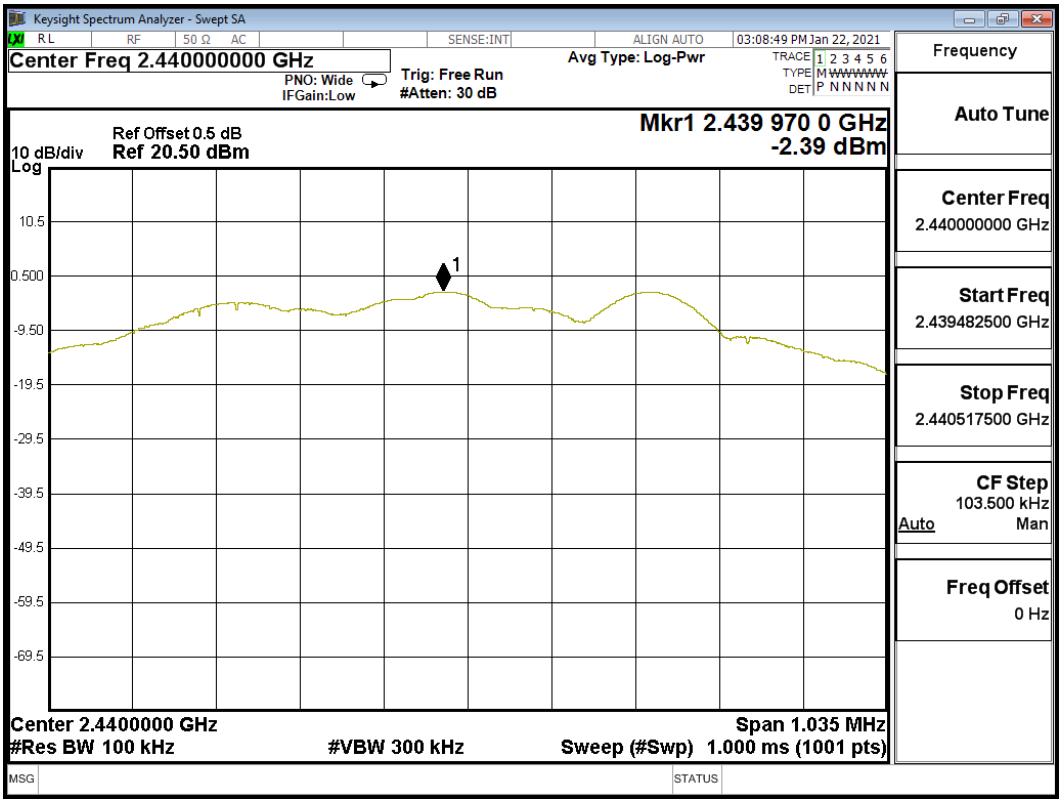
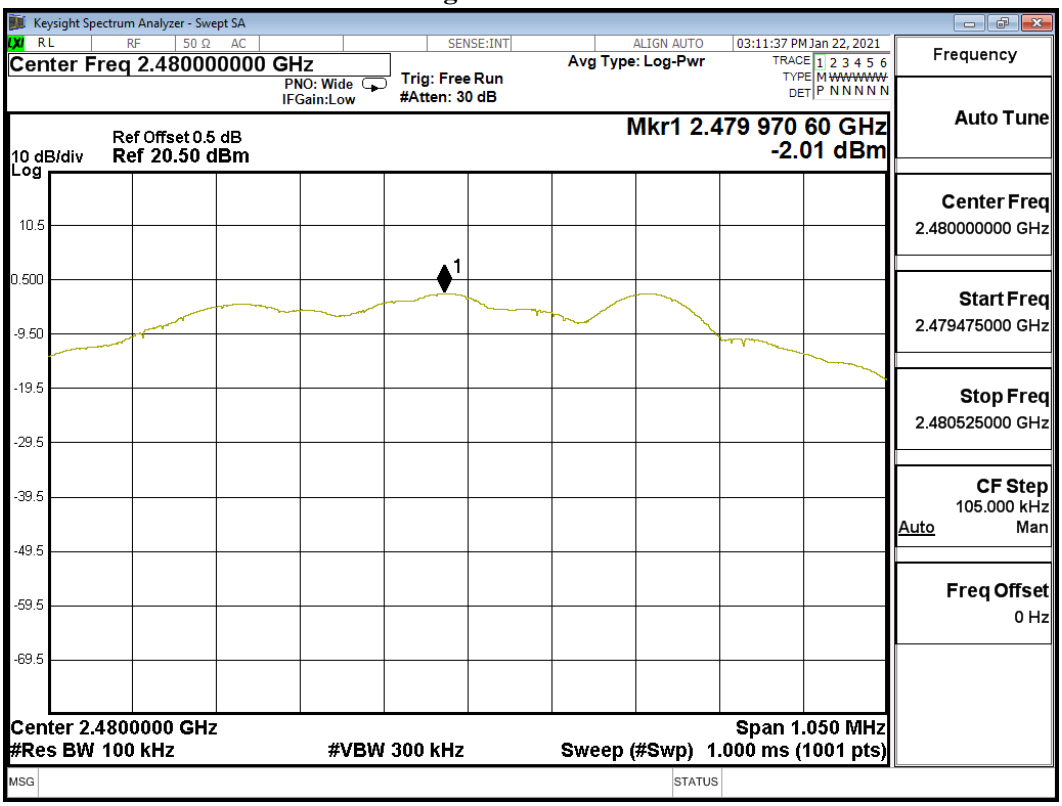


Figure Channel 39:



Product : Gaming headset
Test Item : Power Density Data
Test Mode : Mode 5: Transmit - 2Mbps-BLE
Test Date : 2020/10/26

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
00	2402	-2.74	≦8dBm	Pass
19	2440	-2.47	≦8dBm	Pass
39	2480	-2.06	≦8dBm	Pass

Figure Channel 00:

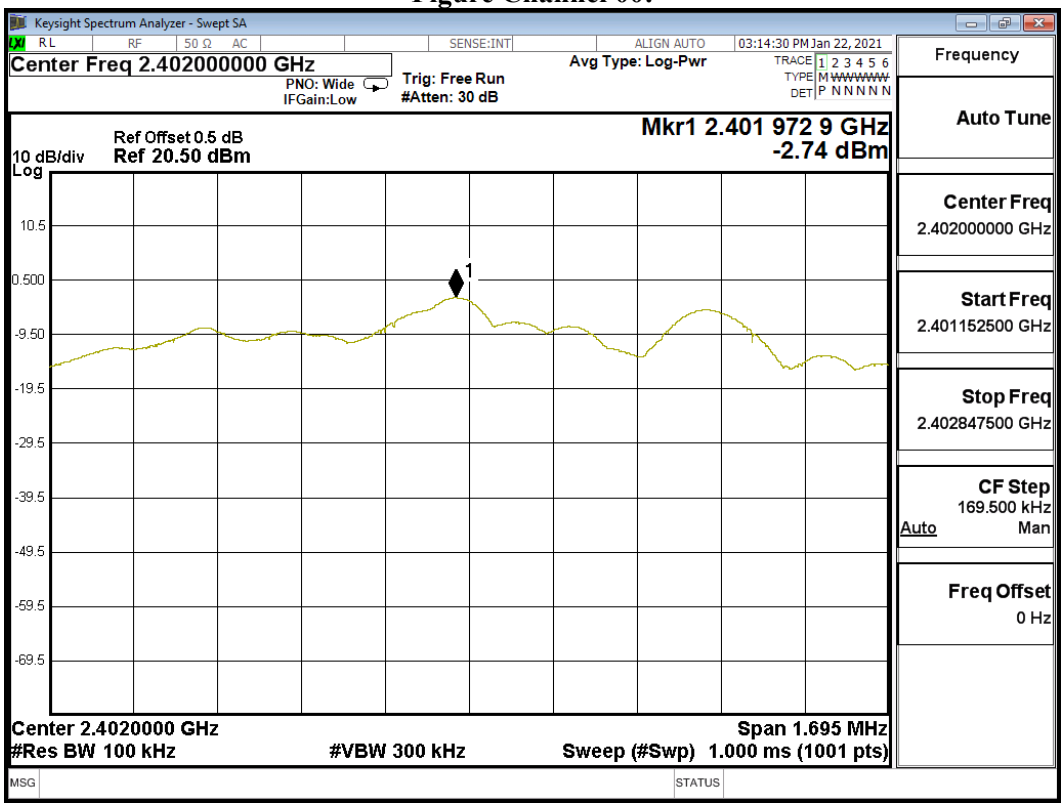


Figure Channel 19:

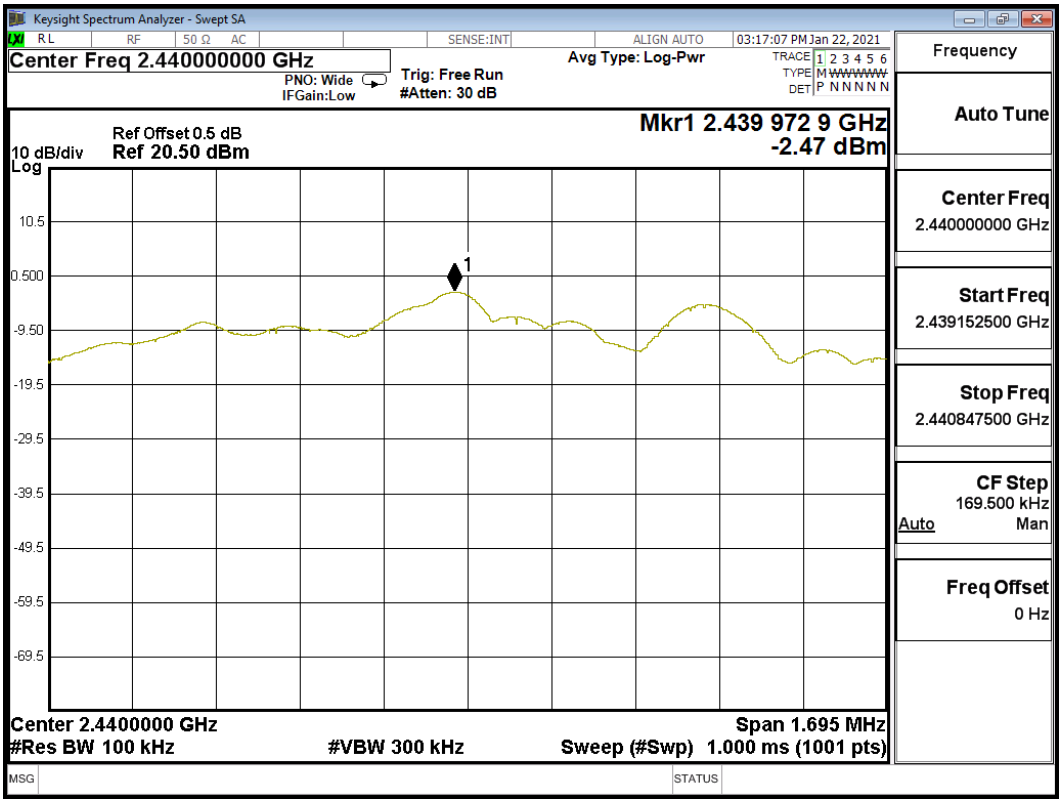
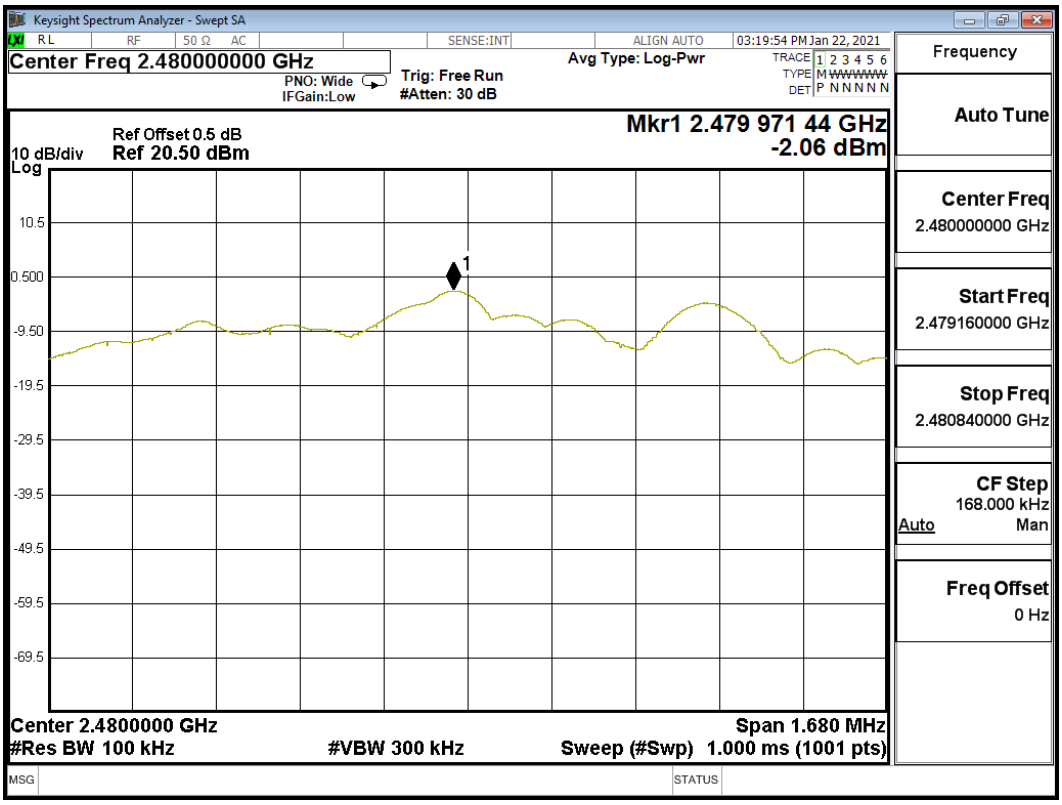
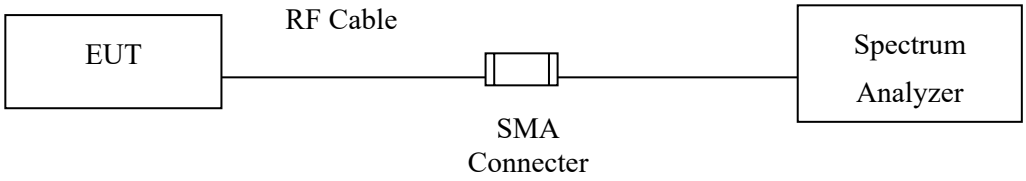


Figure Channel 39:



12. Duty Cycle

12.1. Test Setup

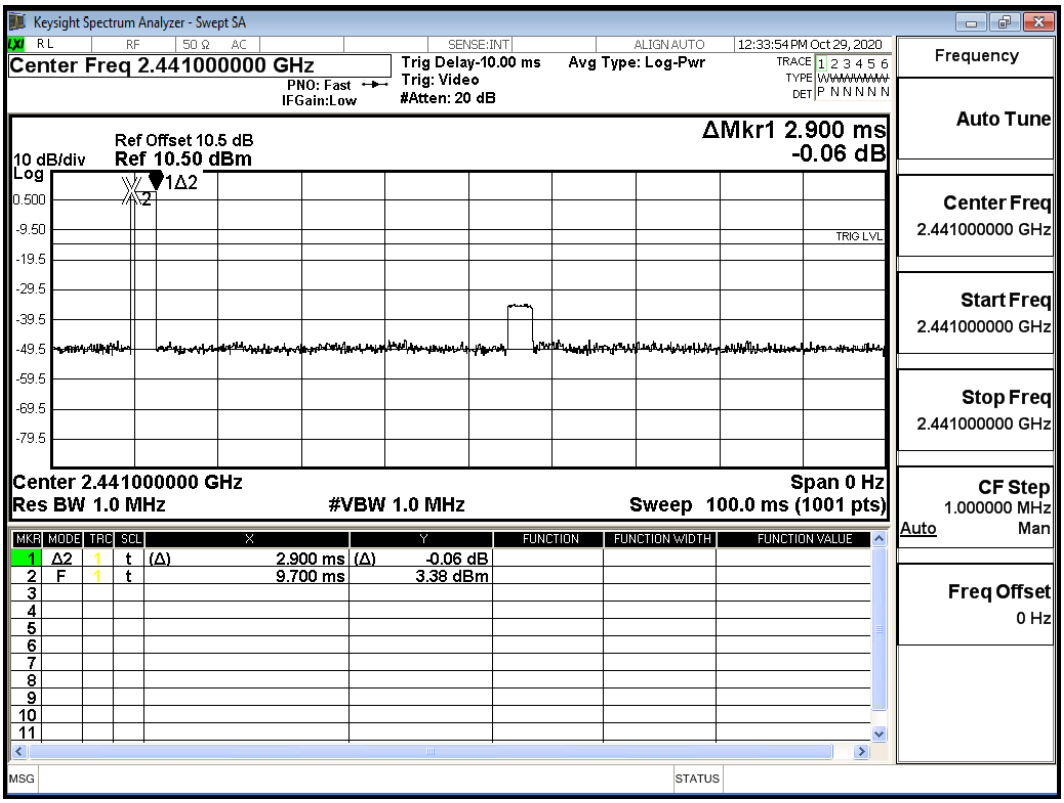


12.2. Test Procedure

The EUT was setup according to ANSI C63.10 2013; tested according to ANSI C63.10 2013 for compliance to FCC 47CFR 15.247 requirements.

12.3. Test Result of Duty Cycle

Product : Gaming headset
Test Item : Duty Cycle Data
Test Mode : Mode 1: Transmit - 1Mbps



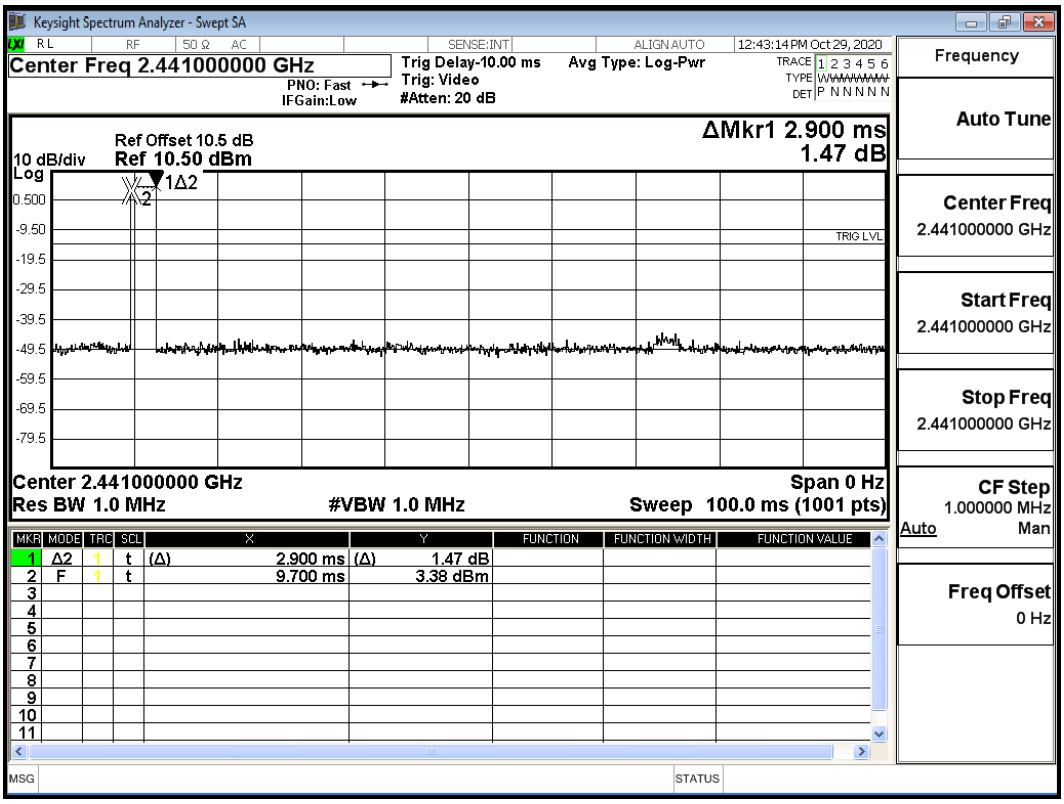
Time on of 100ms= 2.900ms

Duty Cycle= 2.900ms / 100ms= 0.029

Duty Cycle correction factor= 20 LOG 0.029= -30.752 dB

Duty Cycle correction factor	**-30.752**	**dB**

Product : Gaming headset
Test Item : Duty Cycle Data
Test Mode : Mode 3: Transmit - 3Mbps



Time on of 100ms= 2.900ms

Duty Cycle= 2.900ms / 100ms= 0.029

Duty Cycle correction factor= 20 LOG 0.029= -30.752 dB

Duty Cycle correction factor	**-30.752**	**dB**

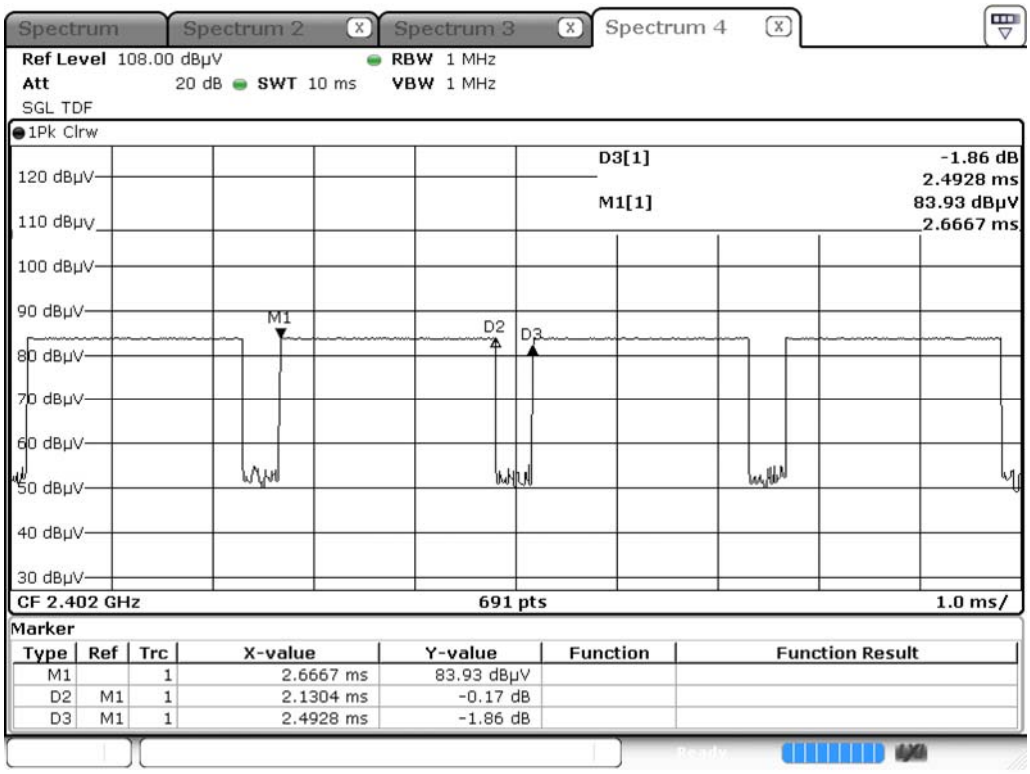
Product : Gaming headset
Test Item : Duty Cycle
Test Mode : Mode 4: Transmit - 1Mbps-BLE

Duty Cycle Formula:
Duty Cycle = Ton / (Ton + Toff)
Duty Factor = 10 Log (1/Duty Cycle)

Results:

2.4GHz band	Ton (ms)	Ton + Toff (ms)	Duty Cycle (%)	Duty Factor (dB)
BLE 1Mbps	2.1304	2.4928	85.46	0.68

BLE 1Mbps



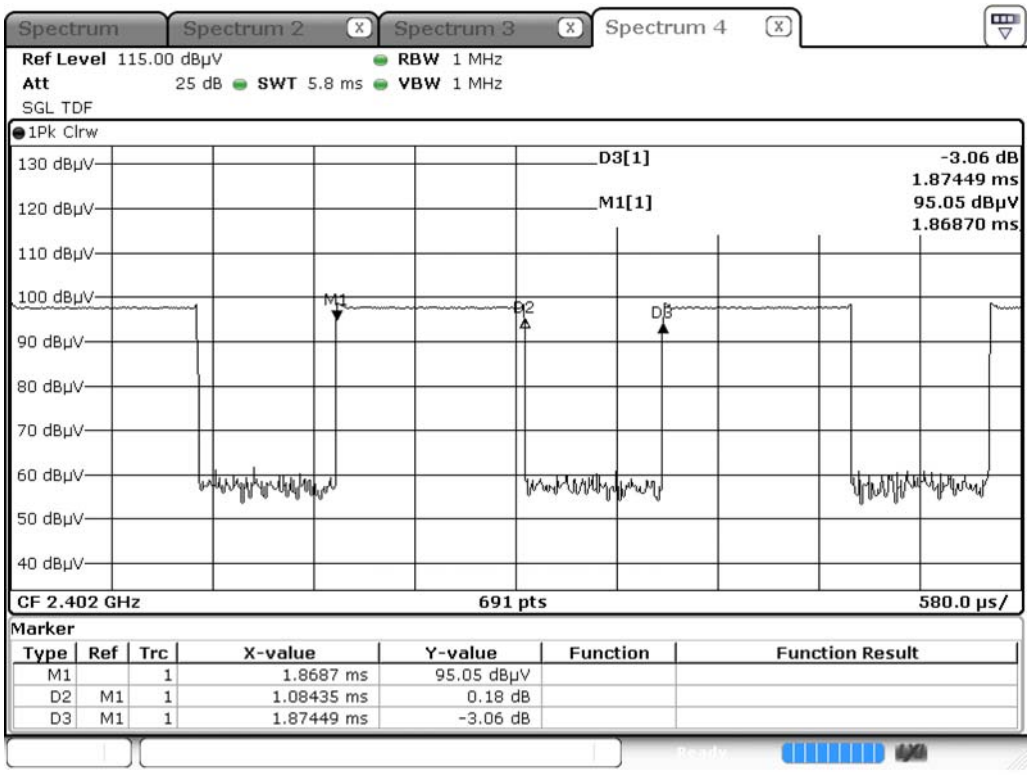
Product : Gaming headset
Test Item : Duty Cycle
Test Mode : Mode 5: Transmit - 2Mbps-BLE

Duty Cycle Formula:
Duty Cycle = Ton / (Ton + Toff)
Duty Factor = 10 Log (1/Duty Cycle)

Results:

2.4GHz band	Ton (ms)	Ton + Toff (ms)	Duty Cycle (%)	Duty Factor (dB)
BLE 2Mbps	1.0844	1.8745	57.85	2.38

BLE 2Mbps



13. EMI Reduction Method During Compliance Testing

No modification was made during testing.