

Test Report

FCC Part15 Subpart C

Product Name : Massage Chair

Model No. : RT5786

FCC ID : 2A2VFRT5786

Applicant : ARONT(H.K.)LIMITED

Address : ROOM 3602 LEVEL 36 TOWER 1 ENTERPRISE
SQUARE FIVE 38 WANG CHIU ROAD KOWLOON
BAYKL HONGKONG

Tested by : 
(Testing Engineer: Heaven Yang)

Reviewed by : 
(Technical Manager: Harry Zhao)

Approved by : 
(Technical Manager: Harry Zhao)

Performed Location : Suzhou EPIN Electrical Testing Technology Co., Ltd.
Building B, No.5 Minsheng Road, Suzhou Industrial Park,
Suzhou, China Tel: +86-512-67997780

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

The test report shall not be reproduced or partially used without the written approval of Suzhou EPIN Electrical Testing Technology Co., Ltd.

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1. General Information

1.1. EUT Description

Product Name	Massage Chair
Brand Name	
Model No.	RT5786
EUT Voltage	120V/60Hz
Frequency Range	2402 ~ 2480 MHz
Channel Number	79
Type of Modulation	GFSK, Pi/4 DQPSK, 8DPSK
Data Rate	1Mbps(GFSK), 2Mbps(Pi/4 DQPSK), 3Mbps(8DPSK)
Antenna Type	PCB
Peak Antenna Gain	3.4dBi

1.2. Working Frequency of Each Channel:

Bluetooth Working Frequency of Each Channel:							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2403 MHz	02	2404 MHz	03	2405 MHz
04	2406 MHz	05	2407 MHz	06	2408 MHz	07	2409 MHz
08	2410 MHz	09	2411 MHz	10	2412 MHz	11	2413 MHz
12	2414 MHz	13	2415 MHz	14	2416 MHz	15	2417 MHz
16	2418 MHz	17	2419 MHz	18	2420 MHz	19	2421 MHz
20	2422 MHz	21	2423 MHz	22	2424 MHz	23	2425 MHz
24	2426 MHz	25	2427 MHz	26	2428 MHz	27	2429 MHz
28	2430 MHz	29	2431 MHz	30	2432 MHz	31	2433 MHz
32	2434 MHz	33	2435 MHz	34	2436 MHz	35	2437 MHz
36	2438 MHz	37	2439 MHz	38	2440 MHz	39	2441 MHz
40	2442 MHz	41	2443 MHz	42	2444 MHz	43	2445 MHz
44	2446 MHz	45	2447 MHz	46	2448 MHz	47	2449 MHz
48	2450 MHz	49	2451 MHz	50	2452 MHz	51	2453 MHz
52	2454 MHz	53	2455 MHz	54	2456 MHz	55	2457 MHz
56	2458 MHz	57	2459 MHz	58	2460 MHz	59	2461 MHz
60	2462 MHz	61	2463 MHz	62	2464 MHz	63	2465 MHz
64	2466 MHz	65	2467 MHz	66	2468 MHz	67	2469 MHz
68	2470 MHz	69	2471 MHz	70	2472 MHz	71	2473 MHz
72	2474 MHz	73	2475 MHz	74	2476 MHz	75	2477 MHz
76	2478 MHz	77	2479 MHz	78	2480 MHz		

1.3. Antenna information

Antenna Manufacturer						
Antenna Delivery	☒	1*TX+1*RX	☐	2*TX+2*RX	☐	3*TX+3*RX
Antenna Technology	☒	SISO				
	☐	MIMO	☐	Basic		
			☐	Sectorized antenna systems		
			☐	Cross-polarized antennas		
			☐	Unequal antenna gains, with equal transmit powers		
			☐	Spatial Multiplexing		
			☐	CDD		
			☐	Beam-forming		
Antenna Type	☐	External	☐	Dipole		
	☒	Internal	☐	PIFA		
			☒	PCB		
			☐	Ceramic Chip Antenna		
			☐	Metal plate type F antenna		
			☐	FPC		
			☐	Cross-polarize Antenna		
Antenna Gain	3.4dBi					

1.4. Mode of Operation by antenna

Test Mode
Mode 1: Transmitter-1Mbps(GFSK)
Mode 2: Transmitter-2Mbps(Pi/4 DQPSK)
Mode 3: Transmitter-3Mbps(8DPSK)
Mode 4: Transmitter-Hopping

1.5. Power Setting

Test Software	EspRFTTestTool_v2.8	
Antenna technology	SISO	
Test Mode	Test Frequency	Ant 1 Power Setting
Transmitter-1Mbps(GFSK)	2402	8
	2441	8
	2480	8
Transmitter-2Mbps(Pi/4 DQPSK)	2402	8
	2441	8
	2480	8
Transmitter-3Mbps(8DPSK)	2402	8
	2441	8
	2480	8

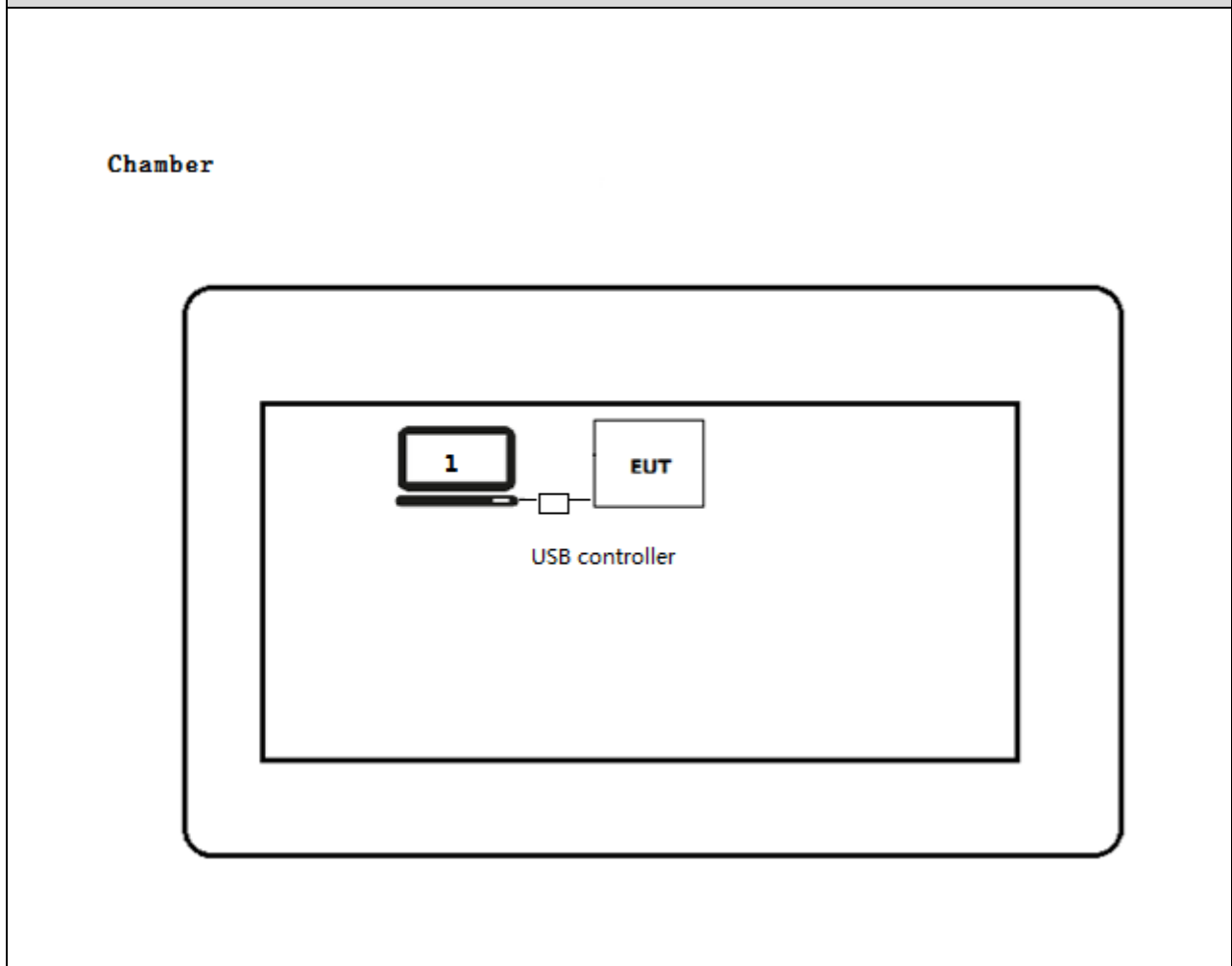
1.6. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

No.	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	Think Pad	20KN-A001CD	PF-17SAMW	Power by adapter
Power Adapter information: Model :ADLX65YDC3A Input: 100-240V~ 1.8A 50-60Hz Output: 20VDC 3.25A AC Cable: 1.1m unshielded and no ferrite core DC Cable 1.8m unshielded and no ferrite core					

1.7. Configuration of Tested System

Test setup Diagram- Radiated Emission



1.8. EUT Exercise Software

1	Setup the EUT and simulators as shown on above.
2	Turn on the power of all equipment.
3	Run the software EspRFTestTool_v2.8 and set the test mode and channel, then press start to continue for transmitting testing.

1.9. Mode of Operation

See the all test mode shown in this test report and defined as:

Test Mode Listed		
Mode 1: Transmitter-1Mbps(GFSK_DH1/3/5)		
Mode 2: Transmitter-2Mbps(Pi/4 DQPSK_DH1/3/5)		
Mode 3: Transmitter-3Mbps(8DPSK_DH1/3/5)		
Mode 4: Transmitter-Hopping		
According to the test items in part 2.1, the following channels may be selected to be the test channel:		
Lowest channel:	Channel 00	2402MHz
Middle channel:	Channel 39	2441MHz
Highest channel:	Channel 79	2480MHz

2. Technical Test

2.1. Summary of Test Result

For FCC rule

Performed Test Item	Normative References	Test Performed	Deviation
Conducted Emission	FCC CFR Title 47 Part 15 Subpart C Section 15.207	Yes	No
Emissions in restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C Section 15.209	Yes	No
20dB Bandwidth	FCC CFR Title 47 Part 15 Subpart C Section 15.247(a)(1)	Yes	No
Carrier Frequency Separation	FCC CFR Title 47 Part 15 Subpart C Section 15.247(a)(1)	Yes	No
Number of Hopping Frequencies	FCC CFR Title 47 Part 15 Subpart C Section 15.247(a)(1)(iii)	Yes	No
Time of Occupancy (Dwell Time)	FCC CFR Title 47 Part 15 Subpart C Section 15.247(a)(1)(iii)	Yes	No
Peak Output Power	FCC CFR Title 47 Part 15 Subpart C Section 15.247(b)(1)	Yes	No
Emissions in non-restricted frequency bands	FCC CFR Title 47 Part 15 Subpart C Section 15.215(c), 15.247(d)	Yes	No
Radiated Emission Band Edge	FCC CFR Title 47 Part 15 Subpart C Section 15.247(d)	Yes	No
Antenna Requirement	FCC CFR Title 47 Part 15 Subpart C Section 15.203	Yes	No

2.2. Test Lab Description

The test is performed in the location of:

Suzhou EPIN Electrical Testing Technology Co., Ltd.

Building B, No.5 Minsheng Road, Suzhou Industrial Park, Suzhou, China

Tel: +86-512-67997780

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

FCC – Designation Number: CN1285

ISED– Recognition Number: CN0106

2.3. Test Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	25
Humidity (%RH)	25-75	50
Barometric pressure (mbar)	860-1060	950-1000

2.4. Measurement Uncertainty

Test Items	Uncertainty
AC Power Line Conducted Emission	The maximum measurement uncertainty is evaluated as: Mains: 9kHz~150kHz: 1.70dB 150kHz~30MHz: 2.50dB
Radiated Emission	Horizontal: 30MHz~300MHz: 3.38 dB 300MHz~1GHz: 3.17 dB 1GHz~18GHz: 4.27 dB 18~40GHz: 4.34 dB Vertical: 30MHz~300MHz: 3.93 dB 300MHz~1GHz: 3.19 dB 1GHz~18GHz: 4.84 dB 18~40GHz: 4.90 dB
RF Antenna Port Conducted Emission	± 1.27dB
Radiated Emission Band Edge	± 4.84dB
Occupied Bandwidth	± 1kHz
Power Spectral Density	± 1.27dB

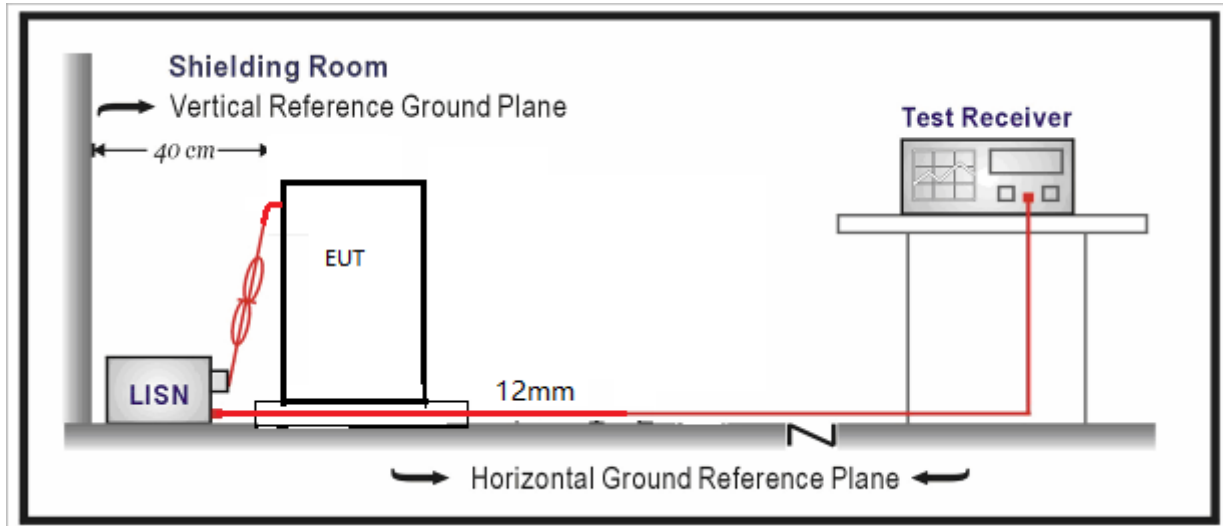
2.5. Test Equipment

Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
USB Wideband power sensor	Keysight	U2021XA	MY54320002	2022.05.05
USB Wideband power sensor	Keysight	U2021XA	MY55060009	2022.05.05
USB Wideband power sensor	Keysight	U2021XA	MY55240005	2022.05.05
USB Wideband power sensor	Keysight	U2021XA	MY55060008	2022.05.05
USB Modular Simultaneous Sampling Multifunction DAQ Devices	Agilent	U2531A	TW59323513	N/A
MXA Signal Analyzer	Agilent	N9020A	MY51110329	2021.09.22
Radio frequency control box	MW	MW100-RFCB	N/A	N/A
Power detection box	MW	MW100-PSB	N/A	N/A
Loop Antenna	Schwarzbeck	FMZB 1519 B	00107	2022.03.15
Horn Antenna	ZKY	LOG 70180	YP-LBTX-001	2022.05.22
Horn Antenna	Schwarzbeck	BBHA9120D	01938	2021.09.22
Pre Amplifier	SKET	LNPA_0118G-45	SK2018063001	2022.02.21
Broadband Amplifier	Schwarzbeck	BBV 9721	79	2021.10.10
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	01029	2021.10.10
RF Cable	SHX-SH	PT40-KMKM-2M	N/A	2021.09.18
RF Cable	SHX-SH	PT40-KMKM-8M	N/A	2021.09.18
RF Cable	SHX-SH	PT40-KMKM-1M	N/A	2021.09.18
Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.				

3. AC Power Line Conducted Emission

3.1. Test Setup

AC Power Line Conducted Emission test setup



3.2. Limit

Frequency of Emission (MHz)	Conducted Limit	
	Quasi-peak (dB μ V)	Average(dB μ V)
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

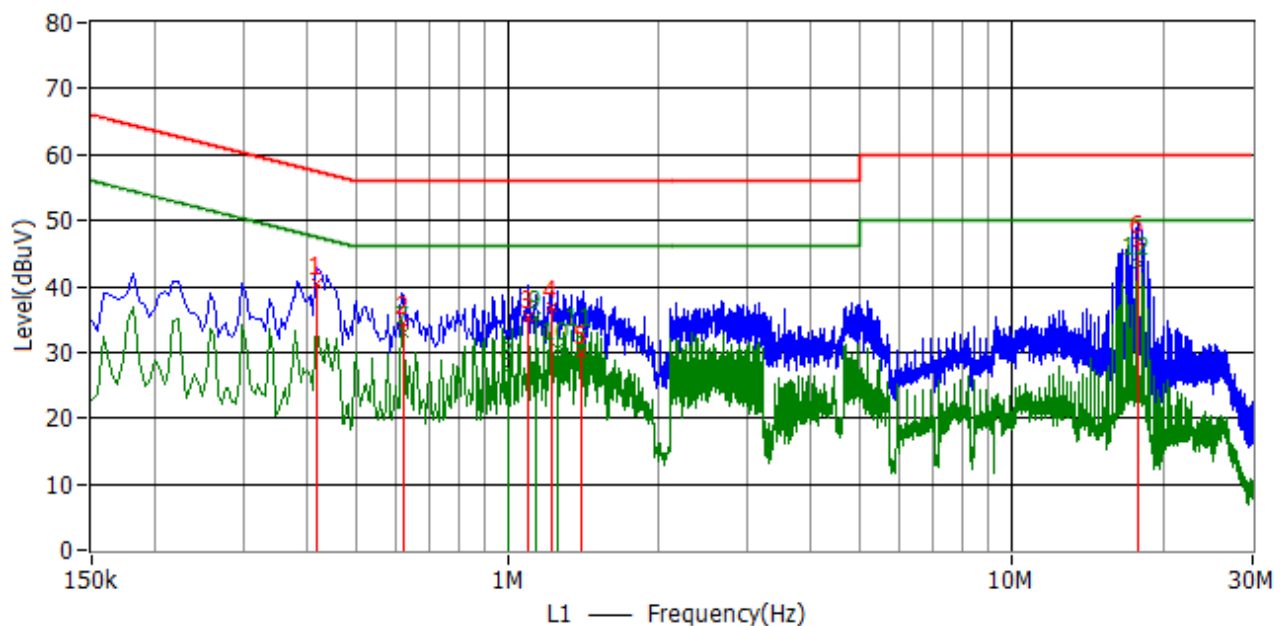
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

3.3. Test Procedure

Test Method			
	References Rule	Chapter	Item
☒	ANSI C63.10-2013	6.2	Standard test method for ac power-line conducted emissions from unlicensed wireless devices
☒	ANSI C63.4-2014	7	AC power-line conducted emission measurements

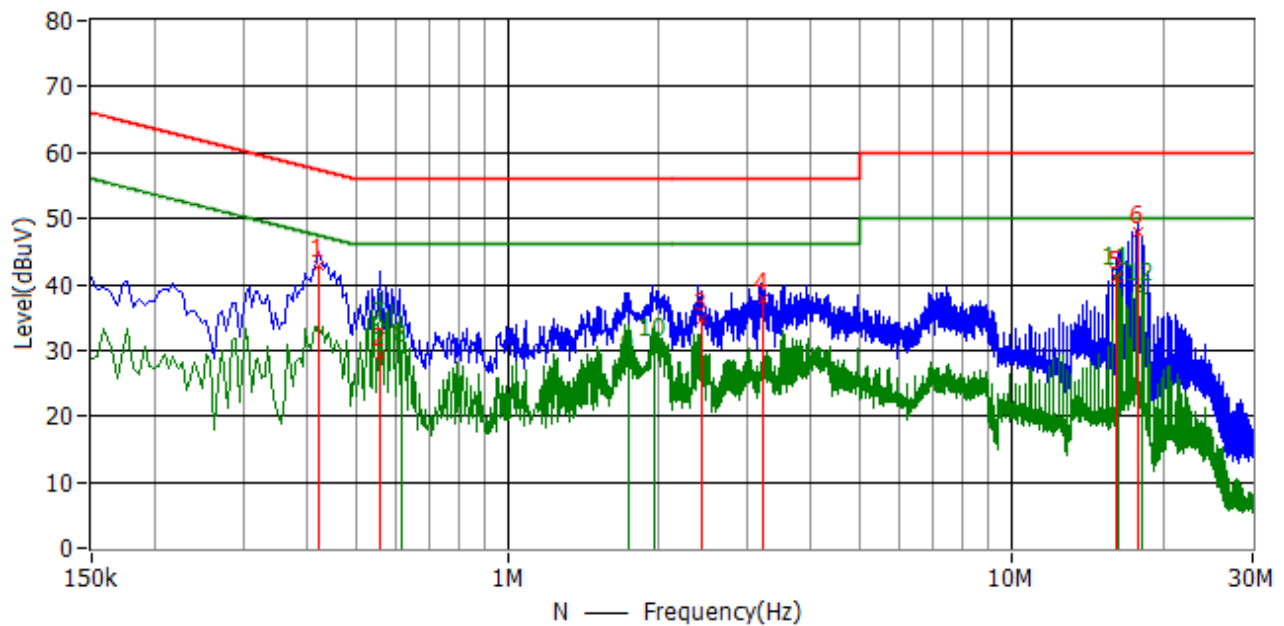
3.4. Test Result

Test Site	Shielding Room	Date of Test	2021.08.30
EUT	Massage Chair	Test Voltage	120V/60Hz
Temperature	25°C	Humidity	50%RH
Barometric Pressure	101.3kPa	Test Engineer	Heaven
Test Mode	Mode 1: Transmit-1Mbps(GFSK)		
Note	Mains terminal disturbance voltage (Test line L)		



No.	Frequency	Limit dBuV	Level dBuV	Margin dB	Factor dB	Detector	Phase
1	420.000 kHz	57.4	40.4	-17.0	9.4	QP	L1
2	622.500 kHz	56.0	34.6	-21.4	9.4	QP	L1
3	1.099 MHz	56.0	35.4	-20.6	9.4	QP	L1
4	1.221 MHz	56.0	36.9	-19.1	9.4	QP	L1
5	1.401 MHz	56.0	29.9	-26.1	9.5	QP	L1
6	17.822 MHz	60.0	46.8	-13.2	9.8	QP	L1
7	622.500 kHz	46.0	33.0	-13.0	9.4	CAV	L1
8	1.005 MHz	46.0	27.5	-18.5	9.4	CAV	L1
9	1.140 MHz	46.0	35.4	-10.6	9.4	CAV	L1
10	1.262 MHz	46.0	30.5	-15.5	9.4	CAV	L1
11	1.401 MHz	46.0	32.6	-13.4	9.5	CAV	L1
12	17.822 MHz	50.0	43.3	-6.7	9.8	CAV	L1

Test Site	Shielding Room	Date of Test	2021.08.30
EUT	Massage Chair	Test Voltage	120V/60Hz
Temperature	25°C	Humidity	50%RH
Barometric Pressure	101.3kPa	Test Engineer	Heaven
Test Mode	Mode 1: Transmit-1Mbps(GFSK)		
Note	Mains terminal disturbance voltage (Test line N)		

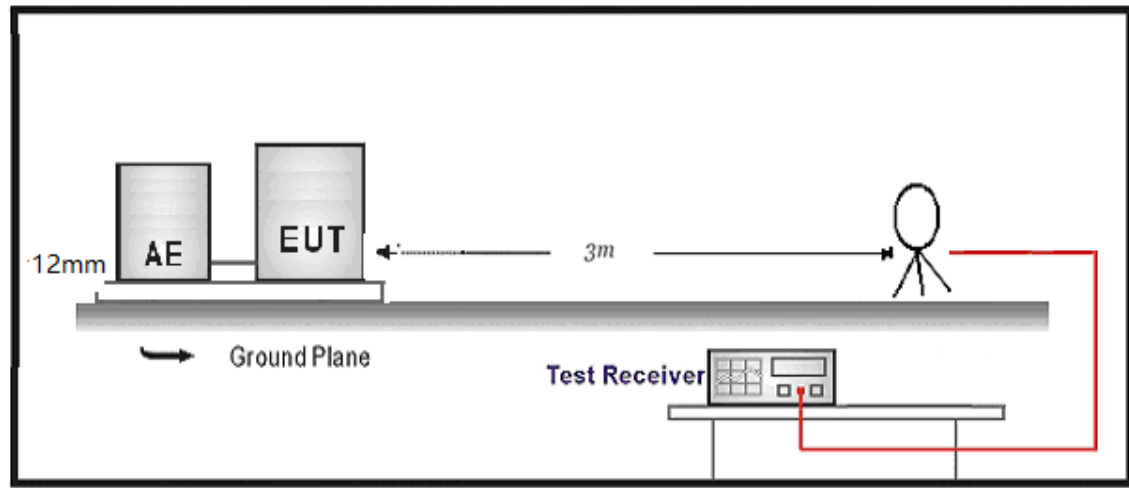


No.	Frequency	Limit dBuV	Level dBuV	Delta dB	Factor dB	Detector	Phase
1	424.500 kHz	57.4	42.7	-14.7	9.4	QP	N
2	559.500 kHz	56.0	29.3	-26.7	9.3	QP	N
3	2.418 MHz	56.0	34.8	-21.2	9.5	QP	N
4	3.196 MHz	56.0	37.8	-18.2	9.5	QP	N
5	16.084 MHz	60.0	41.1	-18.9	9.8	QP	N
6	17.822 MHz	60.0	47.8	-12.2	9.8	QP	N
7	559.500 kHz	46.0	33.4	-12.6	9.3	CAV	N
8	618.000 kHz	46.0	29.9	-16.1	9.3	CAV	N
9	1.738 MHz	46.0	28.5	-17.5	9.5	CAV	N
10	1.964 MHz	46.0	30.8	-15.2	9.5	CAV	N
11	16.328 MHz	50.0	41.6	-8.4	9.8	CAV	N
12	18.055 MHz	50.0	39.2	-10.8	9.8	CAV	N

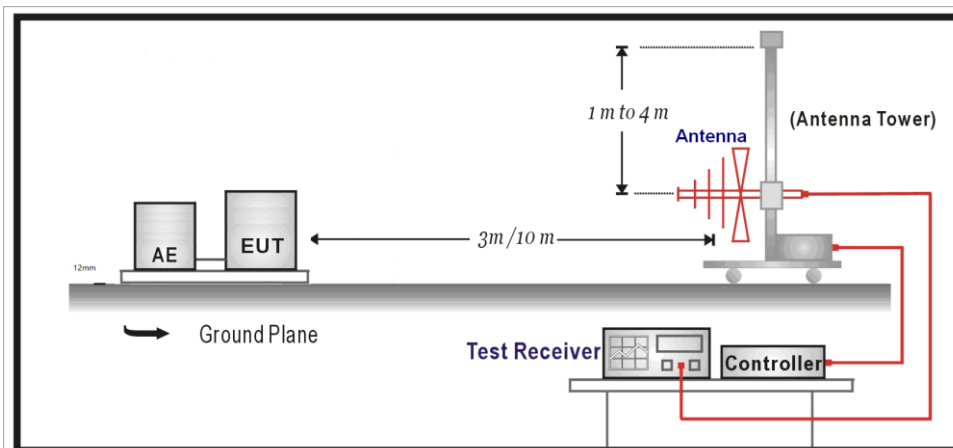
4. Emissions in restricted frequency bands

4.1. Test Setup

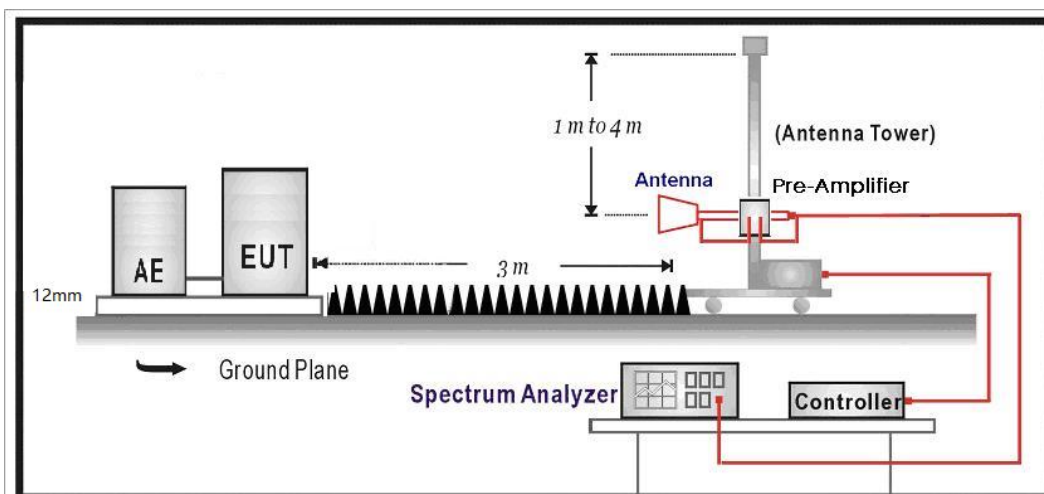
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



4.2. Limit

For FCC

Restricted Bands of operation			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
0.495 – 0.505	16.69475 – 16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128	25.5 – 25.67	1300 – 1427	8.025 – 8.5
4.17725 – 4.17775	37.5 – 38.25	1435 – 1626.5	9.0 – 9.2
4.20725 – 4.20775	73 – 74.6	1645.5 – 1646.5	9.3 – 9.5
6.215 – 6.218	74.8 – 75.2	1660 – 1710	10.6 – 12.7
6.26775 – 6.26825	108 – 121.94	1718.8 – 1722.2	13.25 – 13.4
6.31175 – 6.31225	123 – 138	2200 – 2300	14.47 – 14.5
8.291 – 8.294	149.9 – 150.05	2310 – 2390	15.35 – 16.2
8.362 – 8.366	156.52475 – 156.52525	2483.5 – 2500	17.7 – 21.4
8.37625 – 8.38675	156.7 – 156.9	2690 – 2900	22.01 – 23.12
8.81425 – 8.81475	162.0125 – 167.17	3260 – 3267	23.6 – 24.0
12.29 – 12.293	167.72 – 173.2	3332 – 3339	31.2 – 31.8
12.51975 – 12.52025	240 – 285	3345.8 – 3358	36.43 – 36.5
12.57675 – 12.57725	322 – 335.4	3600 – 4400	
13.36 – 13.41			

For IC:
Restricted Bands of operation

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090-0.110	13.36-13.41	1645.5-1646.5	9.0-9.2
2.1735-2.1905	16.42-16.423	1660-1710	9.3-9.5
3.020-3.026	16.69475-16.69525	1718.8-1722.2	10.6-12.7
4.125-4.128	16.80425-16.80475	2200-2300	13.25-13.4
4.17725-4.17775	25.5-25.67	2310-2390	14.47-14.5
4.20725-4.20775	37.5-38.25	2655-2900	15.35-16.2
5.677-5.683	73-74.6	3260-3267	17.7-21.4
6.215-6.218	74.8-75.2	3332-3339	22.01-23.12
6.26775-6.26825	108-138	3345.8-3358	23.6-24.0
6.31175-6.31225	156.52475-156.52525	3500-4400	31.2-31.8
8.291-8.294	156.7-156.9	4500-5150	36.43-36.5
8.362-8.366	240-285	5350-5460	Above 38.6
8.37625-8.38675	322-335.4	7250-7750	
8.41425-8.41475	399.9-410	8025-8500	
12.29-12.293	608-614		
12.51975-12.52025	960-1427		
12.57675-12.57725	1435-1626.5		

Restricted Band Emissions Limit			
Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Field strength ($\text{dB}\mu\text{V/m}$)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	300 _(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30 _(Note 1)
1.705 - 30	30	29.5	30 _(Note 1)
30 - 88	100	40	3 _(Note 2)
88 - 216	150	43.5	3 _(Note 2)
216 - 960	200	46	3 _(Note 2)
Above 960	500	54	3 _(Note 2)

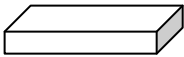
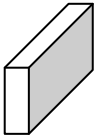
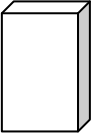
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

4.3. Test Procedure

Test Method				
	References Rule		Chapter	Description
☐	ANSI C63.10		11.11	Emissions in non-restricted frequency bands
	☐	ANSI C63.10	11.11.2	Reference level measurement
	☐	ANSI C63.10	11.11.3	Emission level measurement
☒	ANSI C63.10		11.12	Emissions in restricted frequency bands
	☒	ANSI C63.10	11.12.1	Radiated emission measurements
	☒	ANSI C63.10	11.12.2.7	Radiated spurious emission test
	☒	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
		ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
		ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
	☐	ANSI C63.10	11.12.2.3	Quasi-peak measurement procedure
		ANSI C63.10	11.12.2.4	Peak power measurement procedure
		ANSI C63.10	11.12.2.5	Average power measurement procedures
	☐	ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
		ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
		ANSI C63.10	11.12.2.5.3	Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold

4.4. EUT test Axis definition

Item	Emissions in restricted frequency bands			
Device Category	☐	Fixed point-to-point		
	☐	Emit multiple directional beams, simultaneously or sequentially		
	☒	Other cases		
Test mode	Mode 1			
Test method	☒	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☒	Worst Axis ☐	Worst Axis ☐
	☐	Conducted		
	☐	Chain 0		
				
	☐	Chain 0	Chain 1	
				
	☐	Chain 0	Chain 1	Chain 2
				

4.5. Test Result

Test Site	3m Semi -Anechoic Chamber	Date of Test	2021.09.08
EUT	Massage Chair	Test Voltage	120V/60Hz
Temperature	25°C	Humidity	50%RH
Barometric Pressure	101.3kPa	Test Engineer	Heaven
Test Mode	Mode 1: Transmit-1Mbps(GFSK)		

CH	Antenna	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measured Level (dBμV/m)	Limit (dBμV/m)	Delta (dB)	Detector
0	H	4804	44.1	-1.6	42.5	54.0(Note1)	-11.5	PK
	H	7212	40.2	4.1	44.3	54.0(Note1)	-9.7	PK
	V	4804	44.1	-1.6	42.5	54.0(Note1)	-11.5	PK
	V	7212	39.6	4.1	43.7	54.0(Note1)	-10.3	PK
39	H	4882	44.2	-1.7	42.5	54.0(Note1)	-11.5	PK
	H	7323	39.7	4.2	43.9	54.0(Note1)	-10.1	PK
	V	4882	43.2	-1.7	41.5	54.0(Note1)	-12.5	PK
	V	7323	39.1	4.2	43.3	54.0(Note1)	-10.7	PK
79	H	4960	43.8	-1.2	42.6	54.0(Note1)	-11.4	PK
	H	7440	39.6	4.4	44.0	54.0(Note1)	-10.0	PK
	V	4960	44.1	-1.2	42.9	54.0(Note1)	-11.1	PK
	V	7440	39.4	4.4	43.8	54.0(Note1)	-10.2	PK

Note 1: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Note 2: Measured Level = Reading Level + Factor

Factor = Antenna factor + Cable Loss – Pre-amplifier gain

Note 3: The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report

Test Site	3m Semi -Anechoic Chamber	Date of Test	2021.09.08
EUT	Massage Chair	Test Voltage	120V/60Hz
Temperature	25°C	Humidity	50%RH
Barometric Pressure	101.3kPa	Test Engineer	Heaven
Test Mode	Mode 2: Transmit-2Mbps(Pi/4 DQPSK)		

CH	Antenna	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measured Level (dBμV/m)	Limit (dBμV/m)	Delta (dB)	Detector
0	H	4804	43.8	-1.6	42.2	54.0(Note1)	-11.8	PK
	H	7212	39.9	4.1	44.0	54.0(Note1)	-10.0	PK
	V	4804	43.9	-1.6	42.3	54.0(Note1)	-11.7	PK
	V	7212	39.1	4.1	43.2	54.0(Note1)	-10.8	PK
39	H	4882	44.7	-1.7	43.0	54.0(Note1)	-11.0	PK
	H	7323	40.1	4.2	44.3	54.0(Note1)	-9.7	PK
	V	4882	43.9	-1.7	42.2	54.0(Note1)	-11.8	PK
	V	7323	39.5	4.2	43.7	54.0(Note1)	-10.3	PK
79	H	4960	44.1	-1.2	42.9	54.0(Note1)	-11.1	PK
	H	7440	39.8	4.4	44.2	54.0(Note1)	-9.8	PK
	V	4960	43.8	-1.2	42.6	54.0(Note1)	-11.4	PK
	V	7440	39.1	4.4	43.5	54.0(Note1)	-10.5	PK

Note 1: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Note 2: Measured Level = Reading Level + Factor

Factor = Antenna factor + Cable Loss – Pre-amplifier gain

Note 3: The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report

Test Site	3m Semi -Anechoic Chamber	Date of Test	2021.09.08
EUT	Massage Chair	Test Voltage	120V/60Hz
Temperature	25°C	Humidity	50%RH
Barometric Pressure	101.3kPa	Test Engineer	Heaven
Test Mode	Mode 3: Transmit-3Mbps(8DPSK)		

CH	Antenna	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measured Level (dBμV/m)	Limit (dBμV/m)	Delta (dB)	Detector
0	H	4804	44.1	-1.6	42.5	54.0(Note1)	-11.5	PK
	H	7212	40.2	4.1	44.3	54.0(Note1)	-9.7	PK
	V	4804	43.2	-1.6	41.6	54.0(Note1)	-12.4	PK
	V	7212	38.9	4.1	43.0	54.0(Note1)	-11.0	PK
39	H	4882	43.7	-1.7	42.0	54.0(Note1)	-12.0	PK
	H	7323	39.6	4.2	43.8	54.0(Note1)	-10.2	PK
	V	4882	43.5	-1.7	41.8	54.0(Note1)	-12.2	PK
	V	7323	39.4	4.2	43.6	54.0(Note1)	-10.4	PK
80	H	4960	43.8	-1.2	42.6	54.0(Note1)	-11.4	PK
	H	7440	39.9	4.4	44.3	54.0(Note1)	-9.7	PK
	V	4960	43.2	-1.2	42.0	54.0(Note1)	-12.0	PK
	V	7440	39.4	4.4	43.8	54.0(Note1)	-10.2	PK

Note 1: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

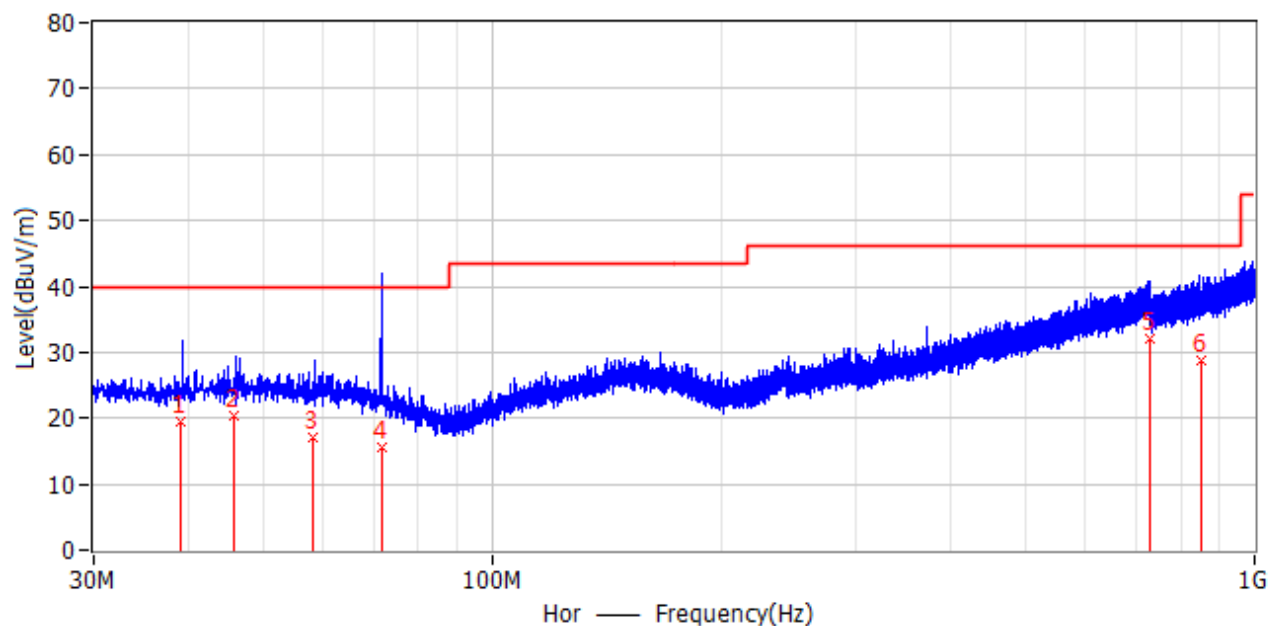
Note 2: Measured Level = Reading Level + Factor

Factor = Antenna factor + Cable Loss – Pre-amplifier gain

Note 3: The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 20dB below the limits, therefore no data appear in the report

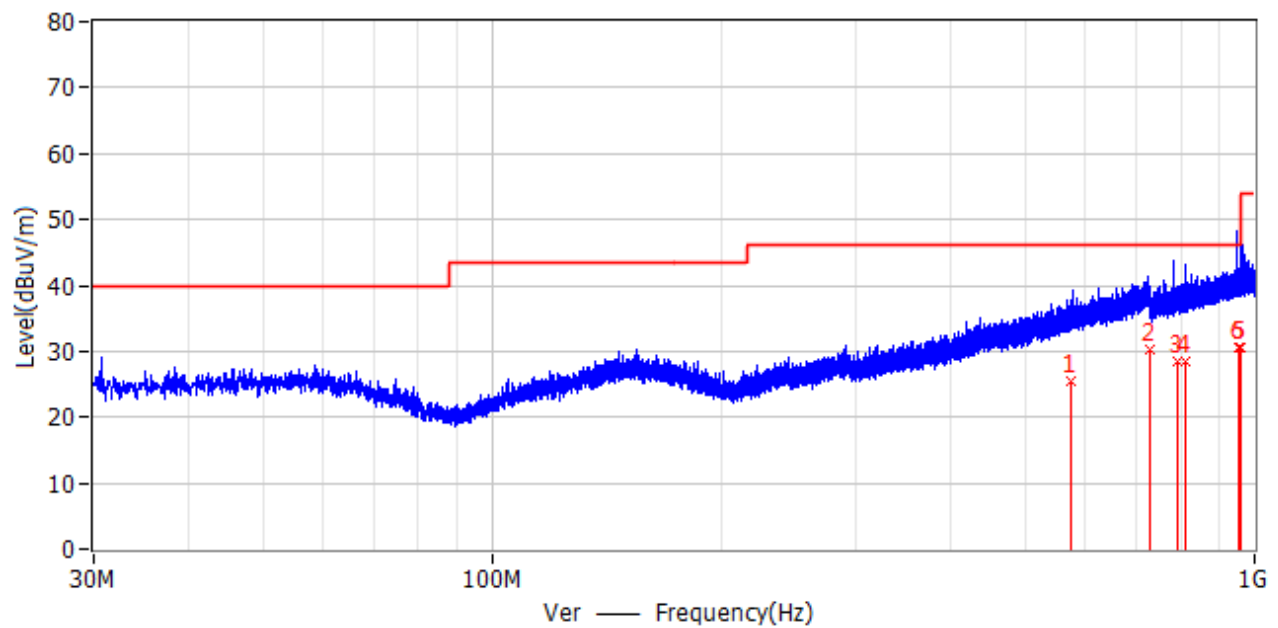
The worst case of Radiated Emission below 1GHz:

Test Site	3m Semi -Anechoic Chamber	Date of Test	2021.09.08
EUT	Massage Chair	Test Voltage	120V/60Hz
Temperature	25°C	Humidity	50%RH
Barometric Pressure	101.3kPa	Test Engineer	Heaven
Test Mode	Mode 1: Transmit-1Mbps(GFSK)		
Polarity	Horizontal polarization		



No.	Frequency	Limit dBμV/m	Level dBμV/m	Delta dB	Factor dB/m	Detector	Polar	Height cm	Angle deg
1	38.989 MHz	40.0	19.4	-20.6	19.4	QP	Hor	100.0	340.0
2	45.842 MHz	40.0	20.3	-19.7	19.9	QP	Hor	100.0	181.0
3	58.027 MHz	40.0	17.1	-22.9	19.8	QP	Hor	100.0	128.0
4	71.637 MHz	40.0	15.6	-24.4	17.7	QP	Hor	100.0	166.0
5	727.194 MHz	46.0	32.2	-13.8	30.3	QP	Hor	100.0	183.0
6	851.428 MHz	46.0	28.8	-17.2	31.8	QP	Hor	100.0	19.0

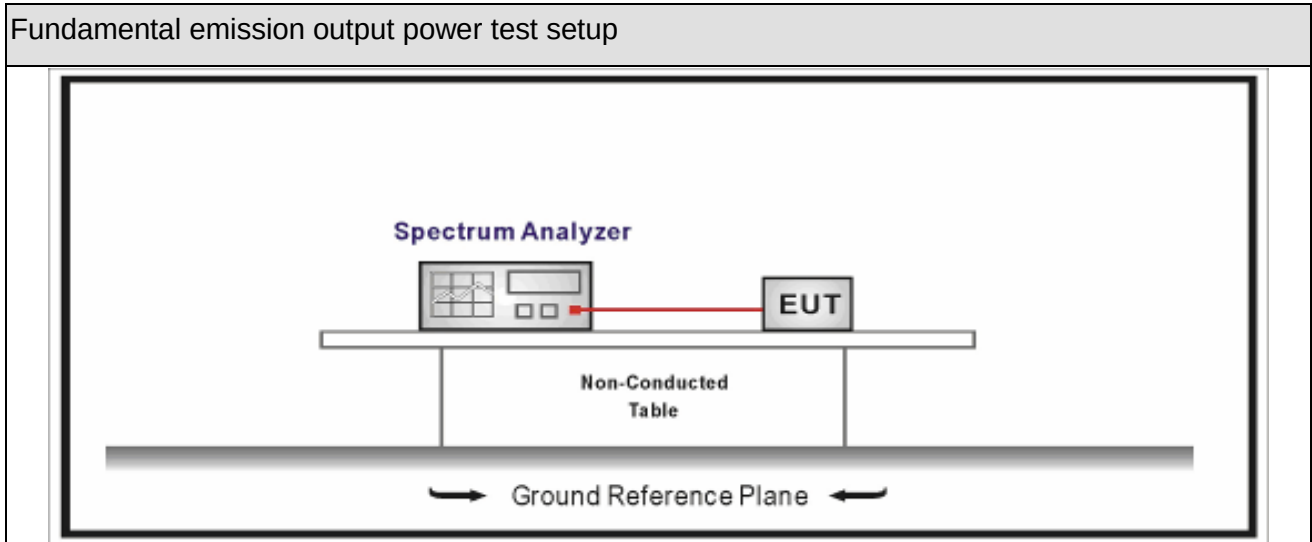
Test Site	3m Semi -Anechoic Chamber	Date of Test	2021.09.08
EUT	Massage Chair	Test Voltage	120V/60Hz
Temperature	25°C	Humidity	45%RH
Barometric Pressure	101.3kPa	Test Engineer	Heaven
Test Mode	Mode 1: Transmit-1Mbps(GFSK)		
Polarity	Vertical polarization		



No.	Frequency	Limit dB μ V/m	Level dB μ V/m	Delta dB	Factor dB/m	Detector	Polar	Height cm	Angle deg
1	574.582 MHz	46.0	25.5	-20.5	27.3	QP	Ver	100.0	133.2
2	731.184 MHz	46.0	30.3	-15.7	30.4	QP	Ver	100.0	197.4
3	791.494 MHz	46.0	28.4	-17.6	31.3	QP	Ver	100.0	110.2
4	811.527 MHz	46.0	28.5	-17.5	31.5	QP	Ver	100.0	149.0
5	956.749 MHz	46.0	30.6	-15.4	33.2	QP	Ver	100.0	28.4
6	953.373 MHz	46.0	30.5	-15.5	33.1	QP	Ver	100.0	60.0

5. Fundamental emission output power

5.1. Test Setup



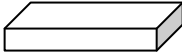
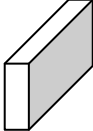
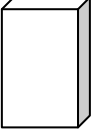
5.2. Limit

Peak Output Power	
☐	Frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.
☒	Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.
☐	For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels

5.3. Test Procedure

Test Method			
	References Rule	Chapter	Description
☒	ANSI C63.10	7.8.5	Output power test procedure for frequency-hopping spread-spectrum (FHSS) devices

5.4. EUT test definition

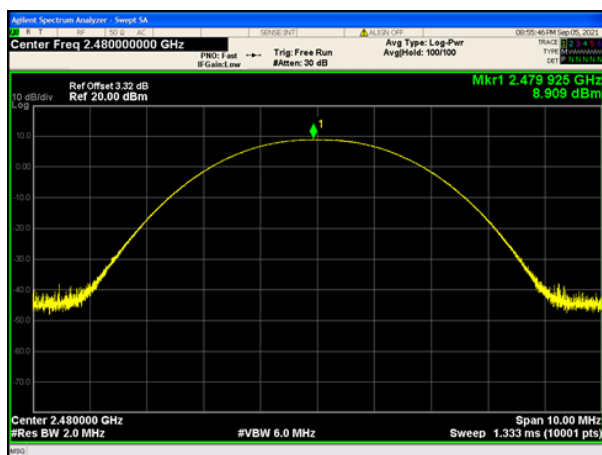
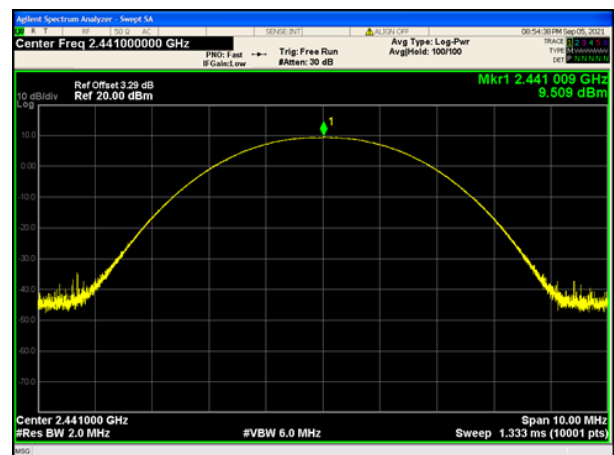
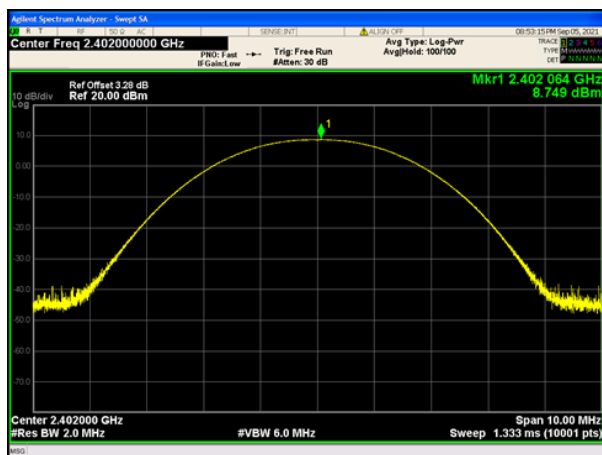
Item	Fundamental emission output power			
Device Category	☐	Fixed point-to-point		
	☐	Emit multiple directional beams, simultaneously or sequentially		
	☒	Other cases		
Test mode	Mode 1			
Test method	☐	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis ☐	Worst Axis ☐	Worst Axis ☐
	☒	Conducted		
	☒	Chain 0		
				
	☐	Chain 0	Chain 1	
				
	☐	Chain 0	Chain 1	Chain 2
				

5.5. Test Result

Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 1: Transmit-1Mbps(GFSK_DH1)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
1Mbps(GFSK_DH1)	00	2402	8.749	21	Pass
	39	2441	9.509	21	Pass
	79	2480	8.909	21	Pass

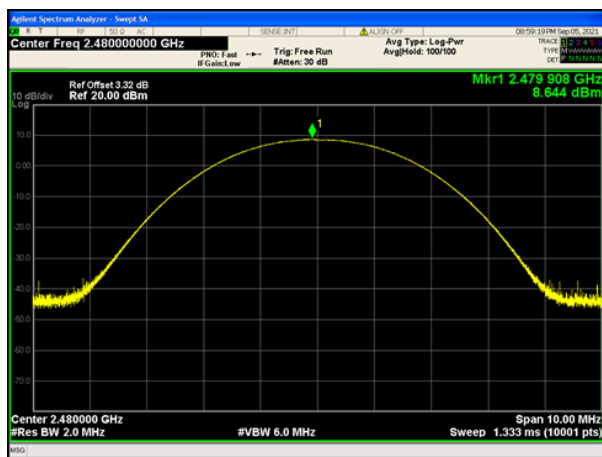
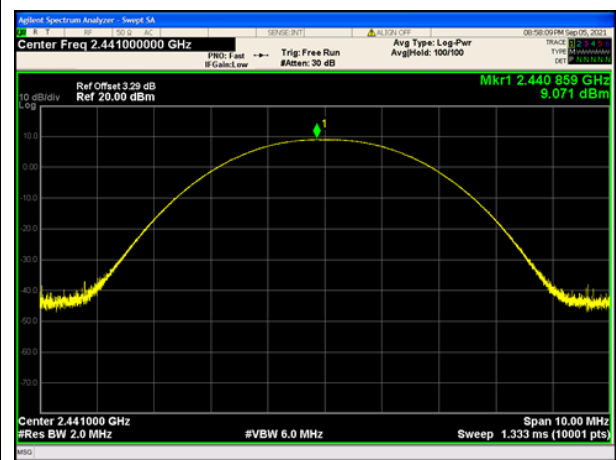
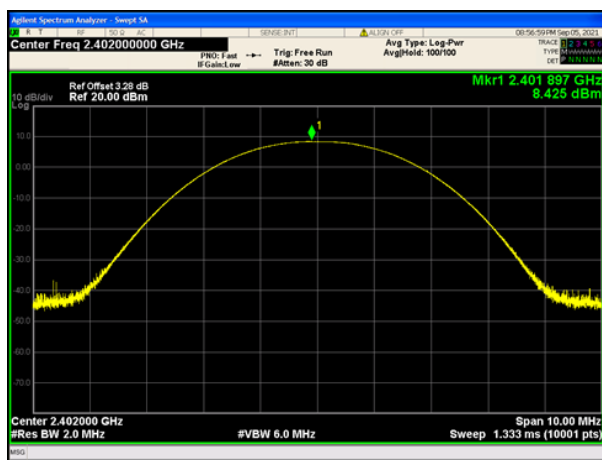
1Mbps(GFSK_DH1)



Product Name	:	Massage Chair	Power	:	120V/60Hz
Test Mode	:	Mode 1: Transmit-1Mbps(GFSK_DH3)	Test Site	:	Test Room#1
Test Date	:	2021.09.06	Test Engineer	:	Heaven

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
1Mbps(GFSK_DH3)	00	2402	8.425	21	Pass
	39	2441	9.071	21	Pass
	79	2480	8.644	21	Pass

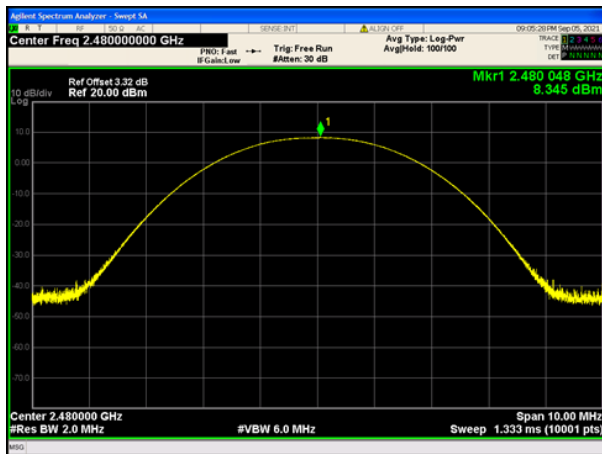
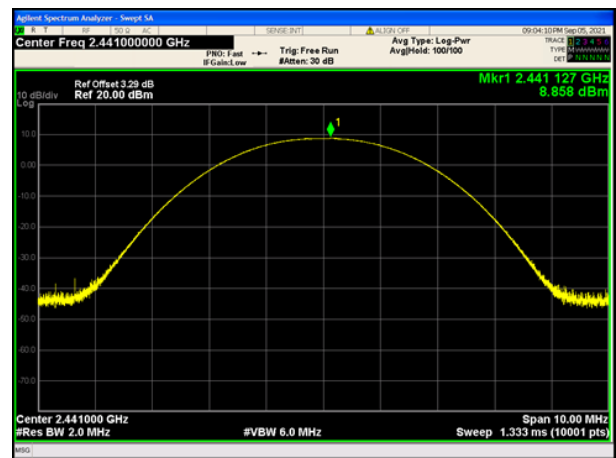
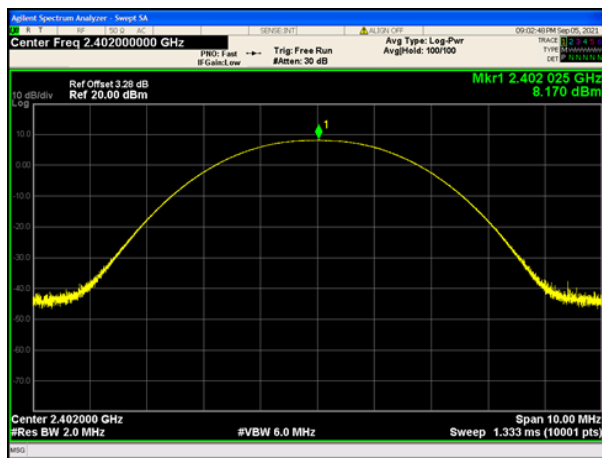
1Mbps(GFSK_DH3)



Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 1: Transmit-1Mbps(GFSK_DH5)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
1Mbps(GFSK_DH5)	00	2402	8.170	21	Pass
	39	2441	8.858	21	Pass
	79	2480	8.345	21	Pass

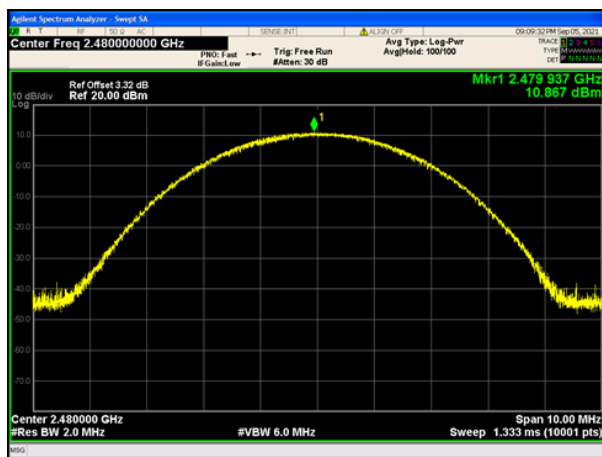
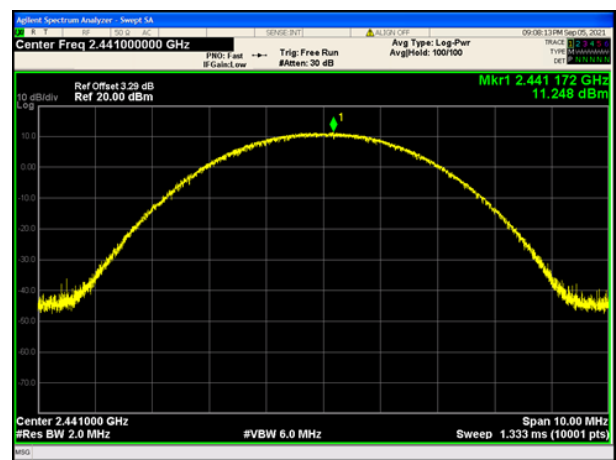
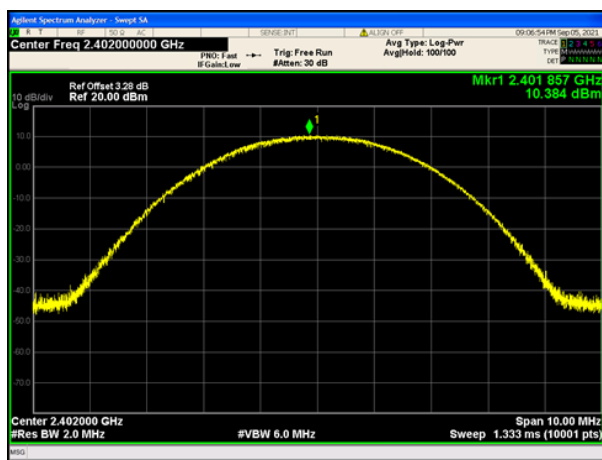
1Mbps(GFSK_DH5)



Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 2: Transmit-2Mbps(Pi/4 DQPSK_DH1)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
2Mbps(Pi/4 DQPSK_DH1)	00	2402	10.384	21	Pass
	39	2441	11.248	21	Pass
	79	2480	10.867	21	Pass

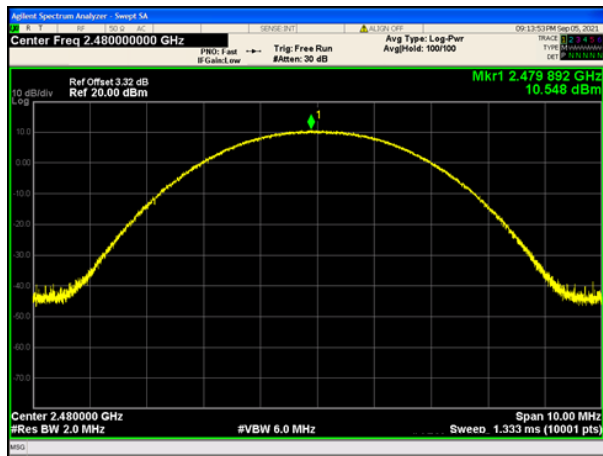
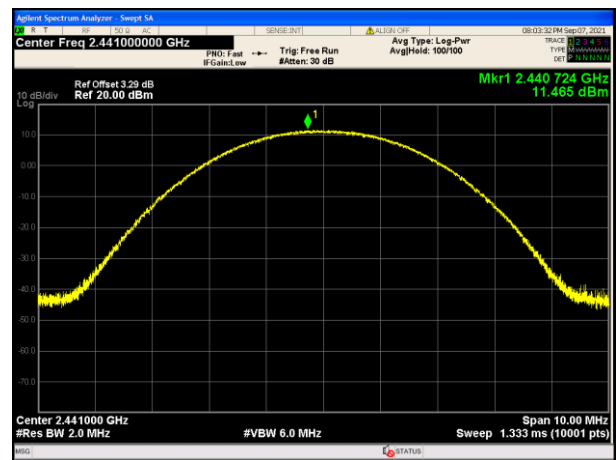
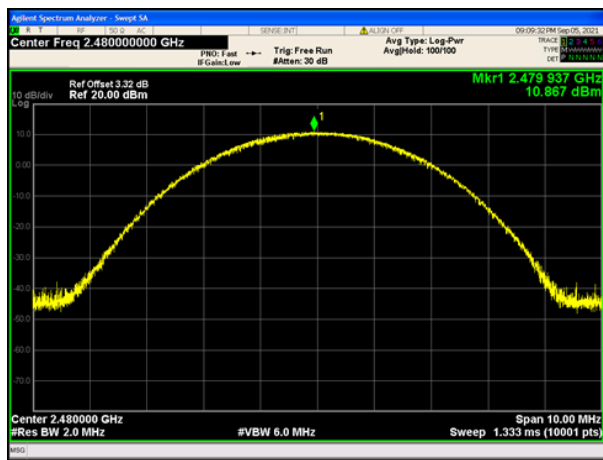
2Mbps(Pi/4 DQPSK_DH1)



Product Name	:	Massage Chair	Power	:	120V/60Hz
Test Mode	:	Mode 2: Transmit-2Mbps(Pi/4 DQPSK_DH3)	Test Site	:	Test Room#1
Test Date	:	2021.09.06	Test Engineer	:	Heaven

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
2Mbps(Pi/4 DQPSK_DH3)	00	2402	10.357	21	Pass
	39	2441	11.465	21	Pass
	79	2480	10.548	21	Pass

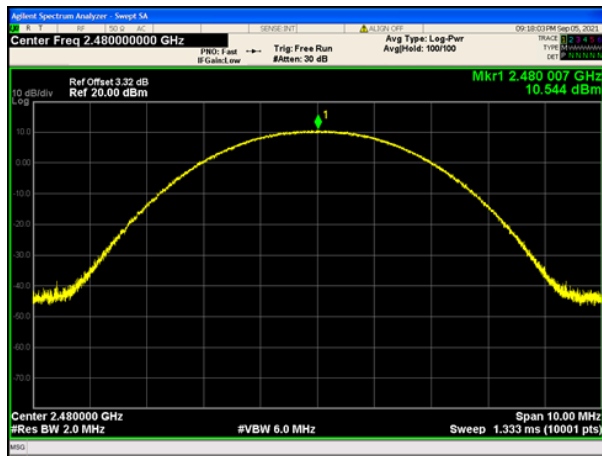
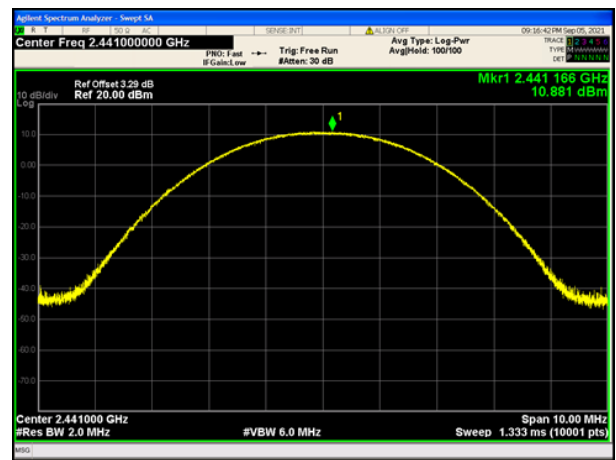
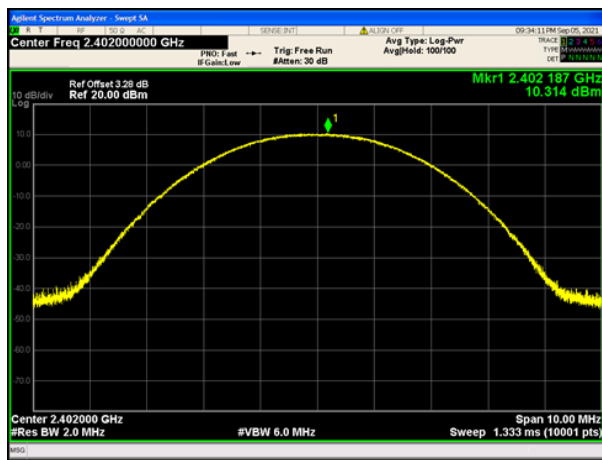
2Mbps(Pi/4 DQPSK_DH3)



Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 2: Transmit-2Mbps(Pi/4 DQPSK_DH5)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
2Mbps(Pi/4 DQPSK_DH5)	00	2402	10.314	21	Pass
	39	2441	10.881	21	Pass
	79	2480	10.544	21	Pass

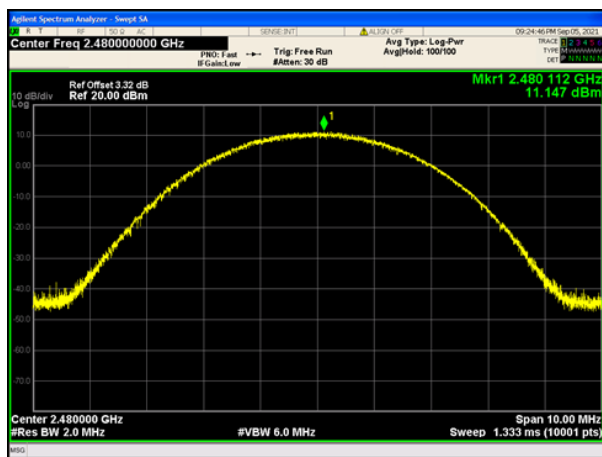
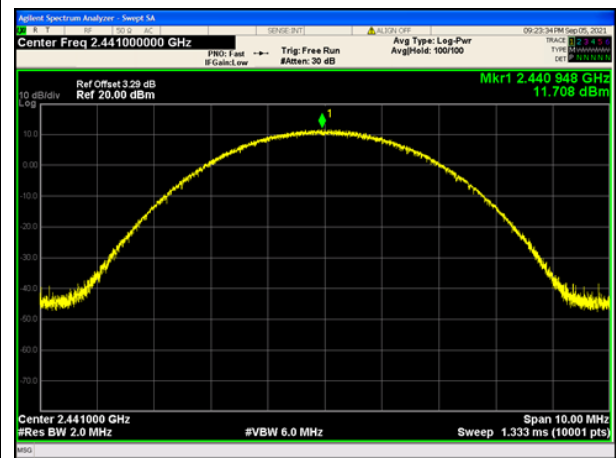
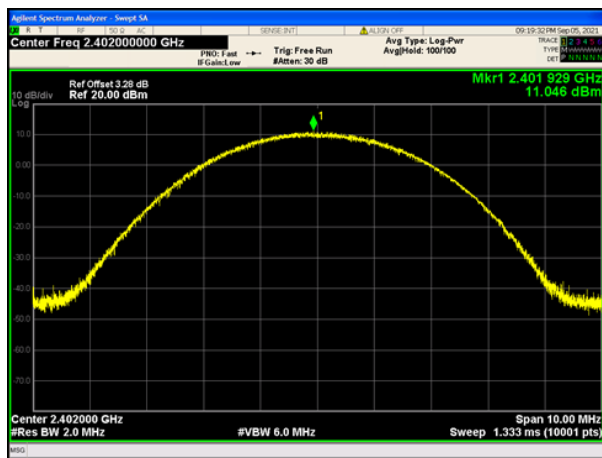
2Mbps(Pi/4 DQPSK_DH5)



Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 3: Transmit-3Mbps(8DPSK_DH1)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
Transmit-3Mbps (8DPSK_DH1)	00	2402	11.046	21	Pass
	39	2441	11.708	21	Pass
	79	2480	11.147	21	Pass

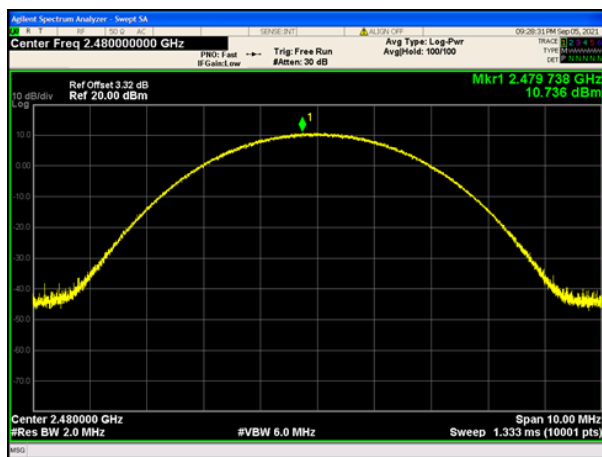
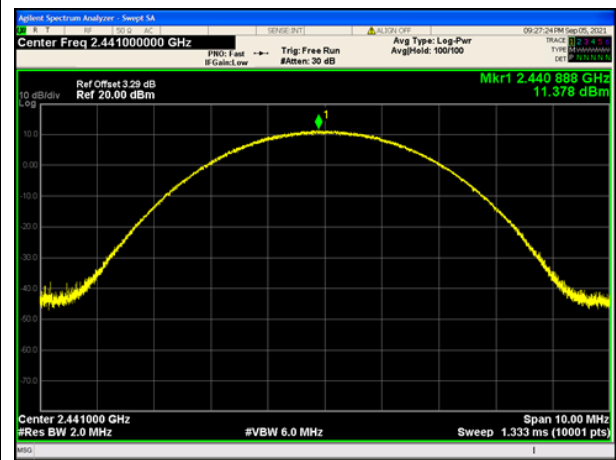
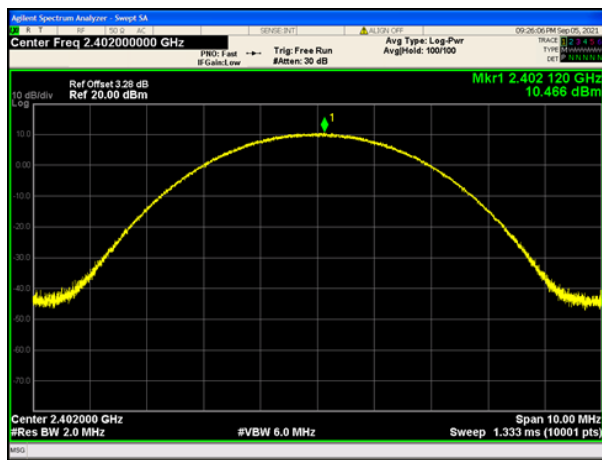
3Mbps(8DPSK_DH1)



Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 3: Transmit-3Mbps(8DPSK_DH3)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
Transmit-3Mbps (8DPSK_DH3)	00	2402	10.466	21	Pass
	39	2441	11.378	21	Pass
	79	2480	10.736	21	Pass

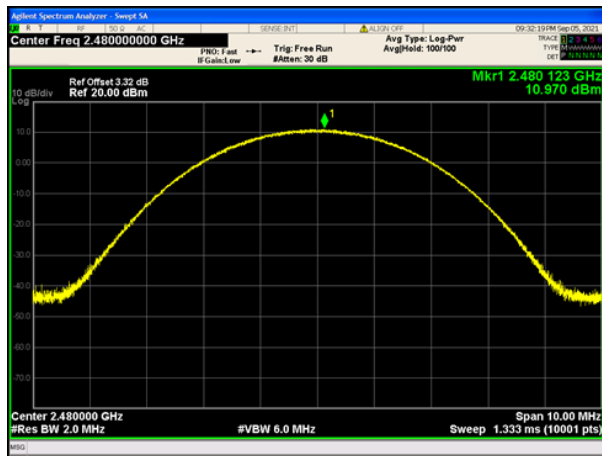
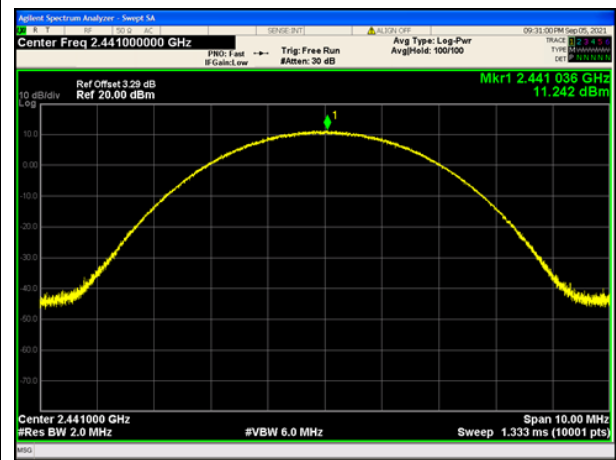
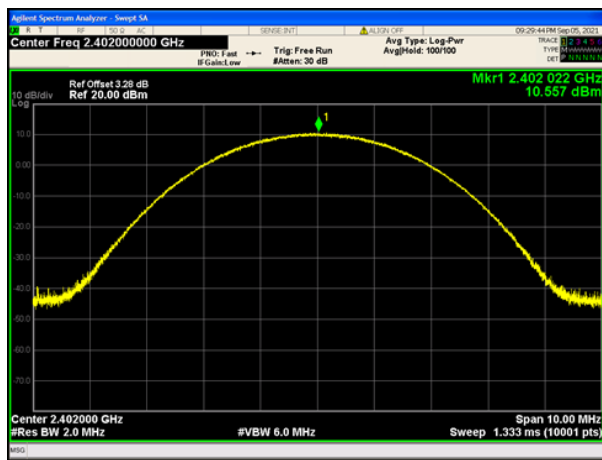
3Mbps(8DPSK_DH3)



Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 3: Transmit-3Mbps(8DPSK_DH5)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

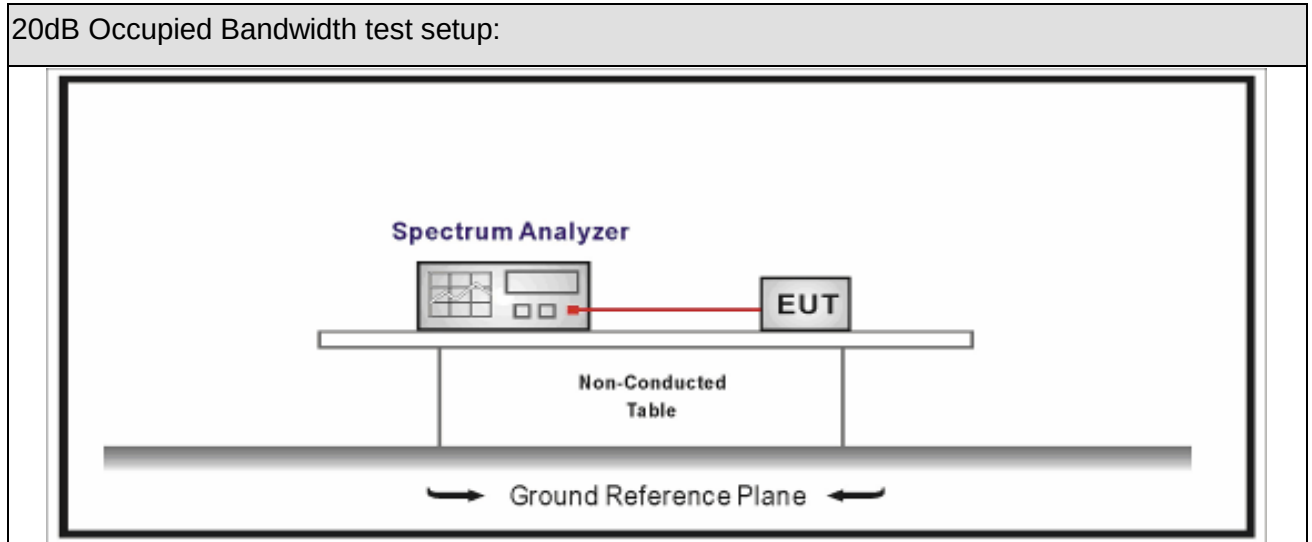
Mode	Channel	Test Frequency (MHz)	Measurement Power Output (dBm)	Limit (dBm)	Result
Transmit-3Mbps (8DPSK_DH5)	00	2402	10.557	21	Pass
	39	2441	11.242	21	Pass
	79	2480	10.970	21	Pass

3Mbps(8DPSK_DH5)



6. 20dB Bandwidth

6.1. Test Setup



6.2. Limit

20dB Bandwidth	
☒	For frequency hopping systems operating in 2400-2483.5 MHz band, within frequency range.
☐	For frequency hopping systems operating in 902-928 MHz band, the maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.
☐	For frequency hopping systems operating in 5725-5850 MHz band, the maximum 20 dB bandwidth of the hopping channel is 1 MHz.

6.3. Test Procedure

Test Method			
	References Rule	Chapter	Description
☒	DA 00-705	N/A	20 dB Bandwidth

6.4. Uncertainty

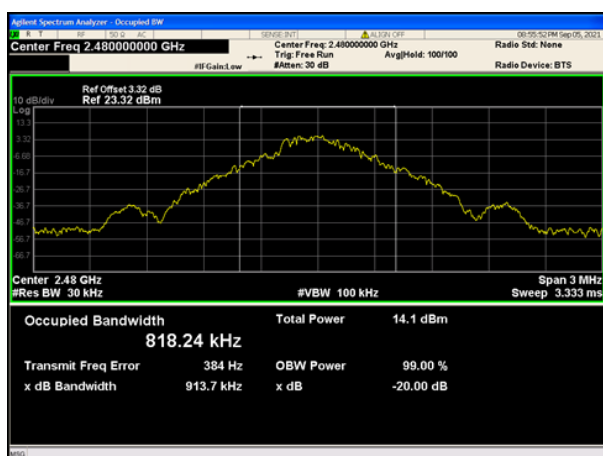
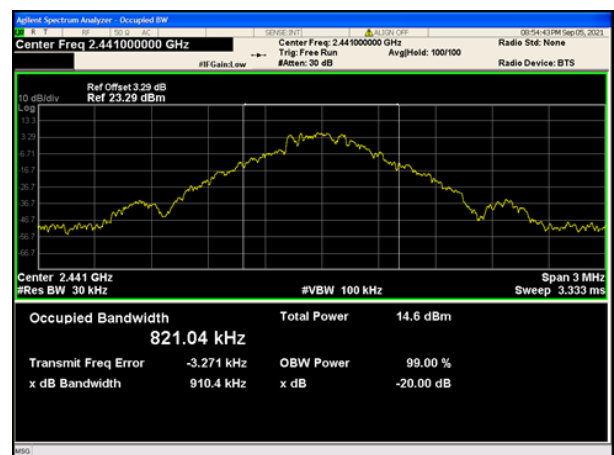
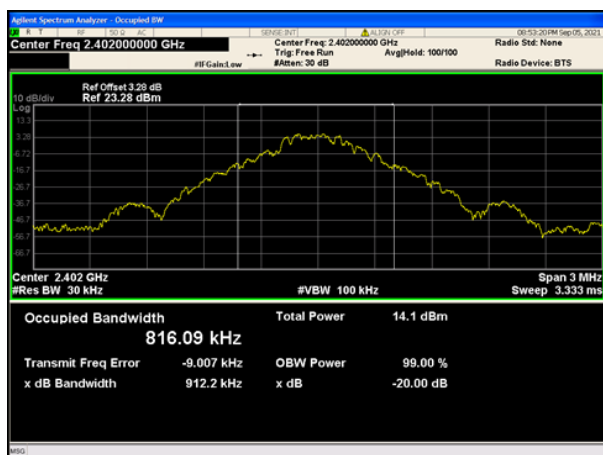
The measurement uncertainty is defined as ± 1 kHz

6.5. Test Result

Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 1: Transmit-1Mbps(GFSK_DH1)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

Mode	Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
Mode 1: Transmit -1Mbps(GFSK_DH1)	00	2402	912.2	816.09
	39	2441	910.4	821.04
	78	2480	913.7	818.24

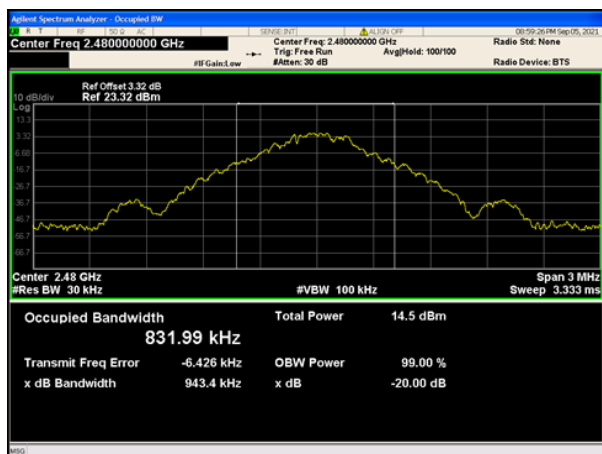
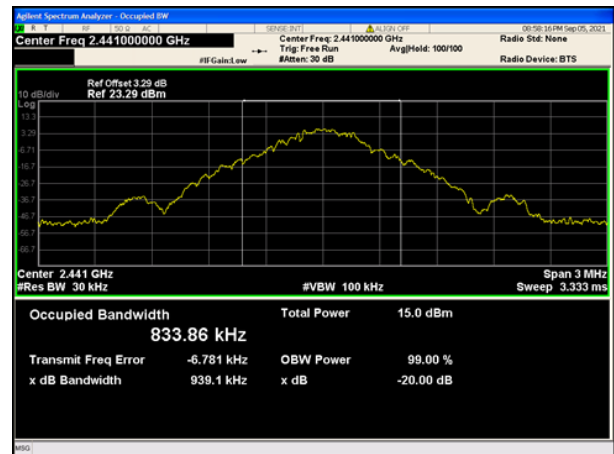
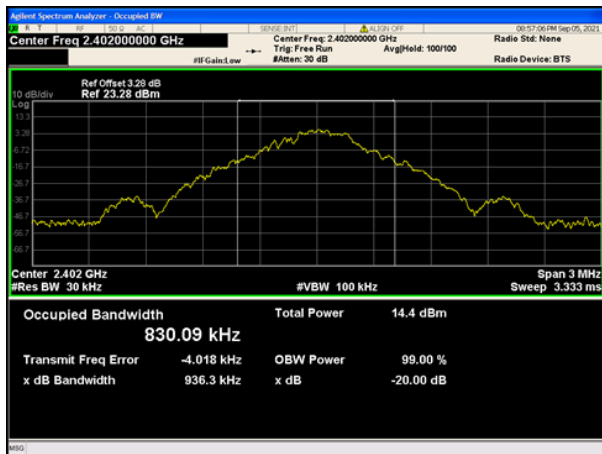
1Mbps(GFSK_DH1)



Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 1: Transmit-1Mbps(GFSK_DH3)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

Mode	Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
Mode 1: Transmit -1Mbps(GFSK_DH3)	00	2402	936.3	830.09
	39	2441	939.1	833.86
	78	2480	943.4	831.99

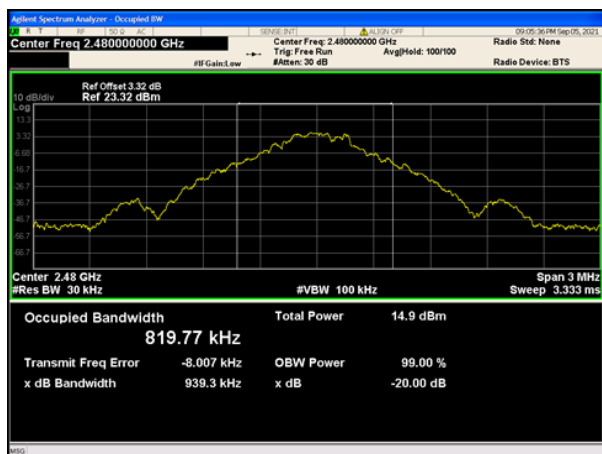
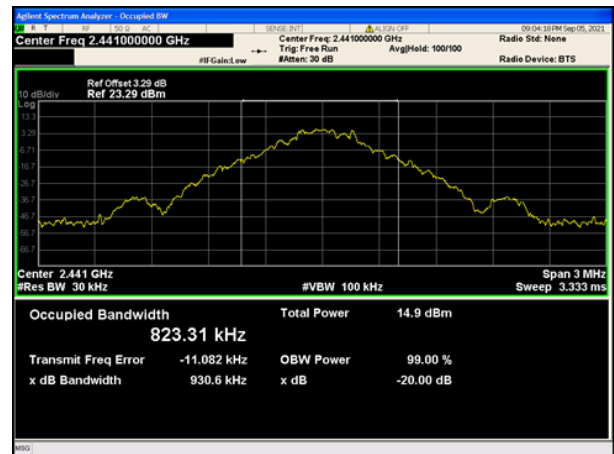
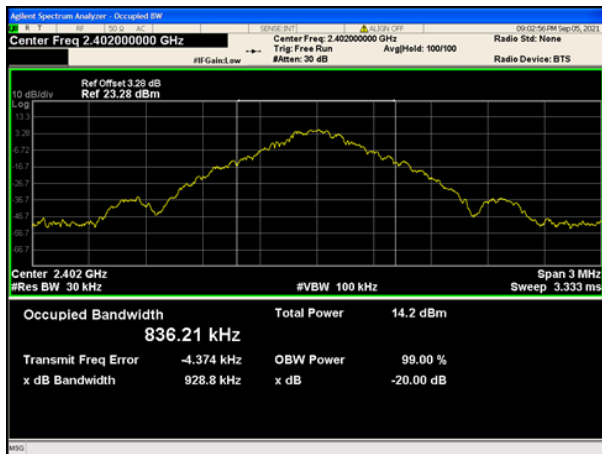
1Mbps(GFSK_DH3)



Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 1: Transmit-1Mbps(GFSK_DH5)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

Mode	Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
Mode 1: Transmit -1Mbps(GFSK_DH5)	00	2402	928.8	836.21
	39	2441	930.6	823.31
	78	2480	939.3	819.77

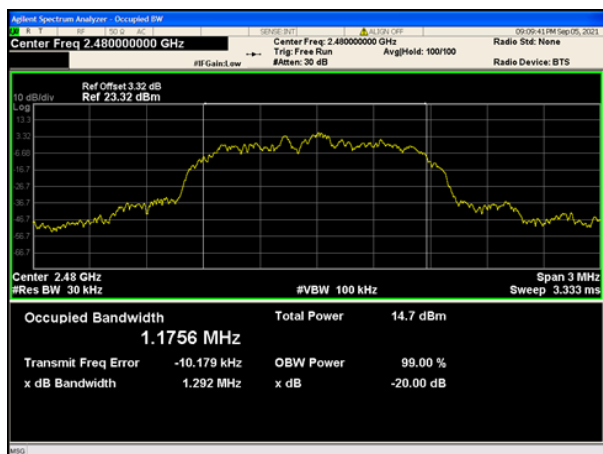
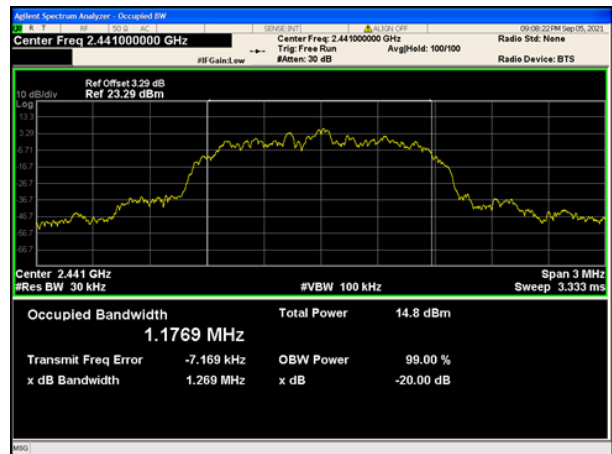
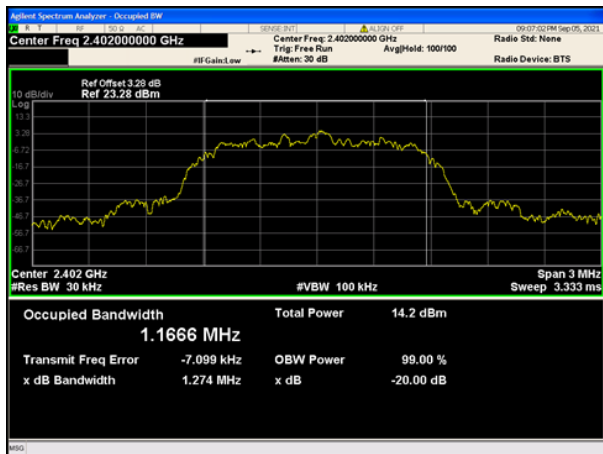
1Mbps(GFSK_DH5)



Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 2: Transmit-2Mbps(Pi/4 DQPSK_DH1)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

Mode	Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
Mode 2: Transmit -2Mbps(Pi/4 DQPSK_DH1)	00	2402	1274	1166.6
	39	2441	1269	1176.9
	78	2480	1292	1175.6

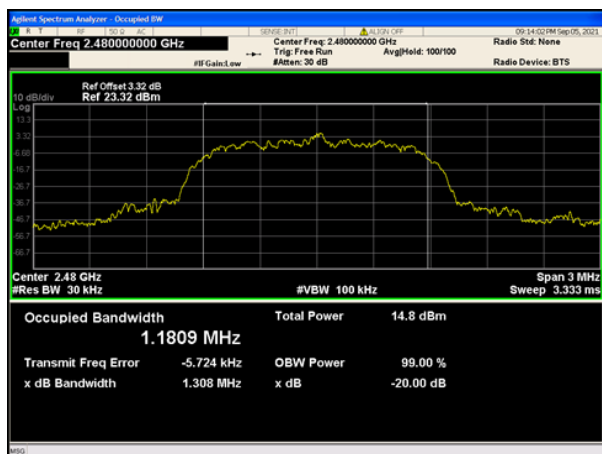
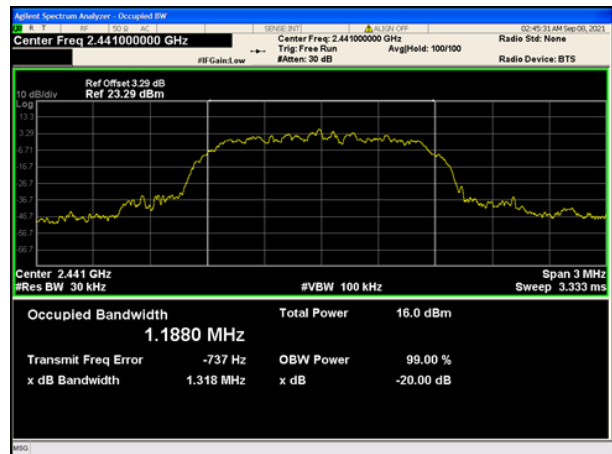
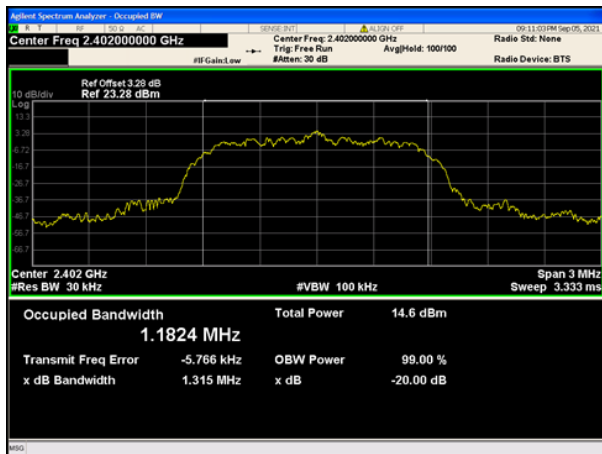
2Mbps(Pi/4 DQPSK_DH1)



Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 2: Transmit-2Mbps(Pi/4 DQPSK_DH3)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

Mode	Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
Mode 2: Transmit -2Mbps(Pi/4 DQPSK_DH3)	00	2402	1315	1182.4
	39	2441	1318	1188.0
	78	2480	1308	1180.9

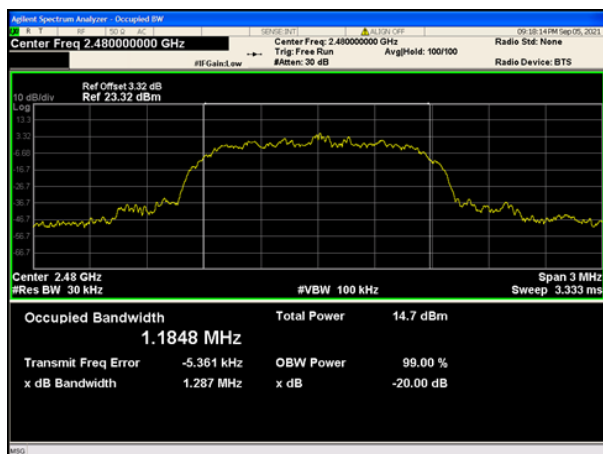
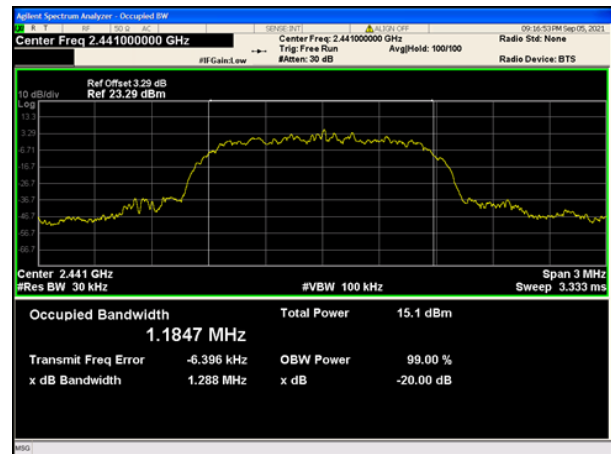
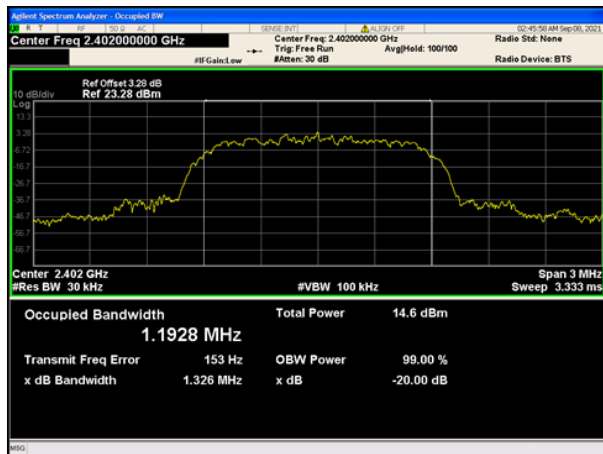
2Mbps(Pi/4 DQPSK_DH3)



Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 2: Transmit-2Mbps(Pi/4 DQPSK_DH5)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

Mode	Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
Mode2: Transmit -2Mbps(Pi/4 DQPSK_DH5)	00	2402	1326	1192.8
	39	2441	1288	1184.7
	78	2480	1287	1184.8

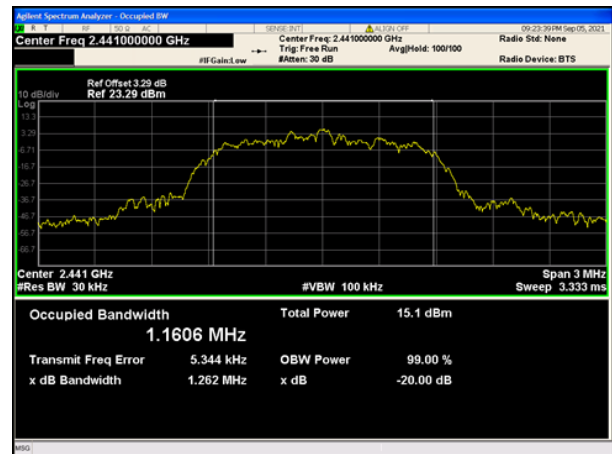
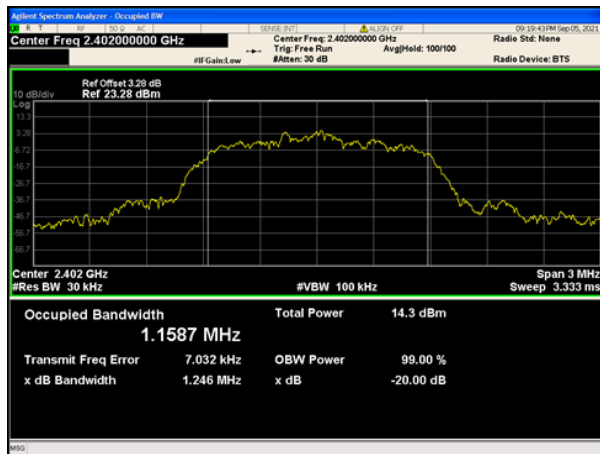
2Mbps(Pi/4 DQPSK_DH5)



Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 3: Transmit-3Mbps(8DPSK_DH1)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

Mode	Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
Mode 3: Transmit -3Mbps(8DPSK_DH1)	00	2402	1246	1158.7
	39	2441	1262	1160.6
	78	2480	1263	1148.0

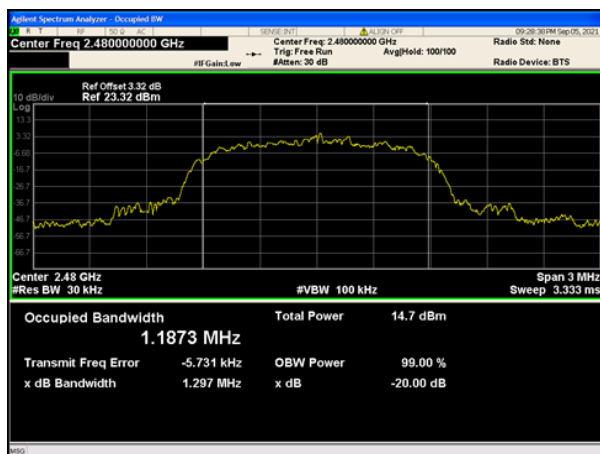
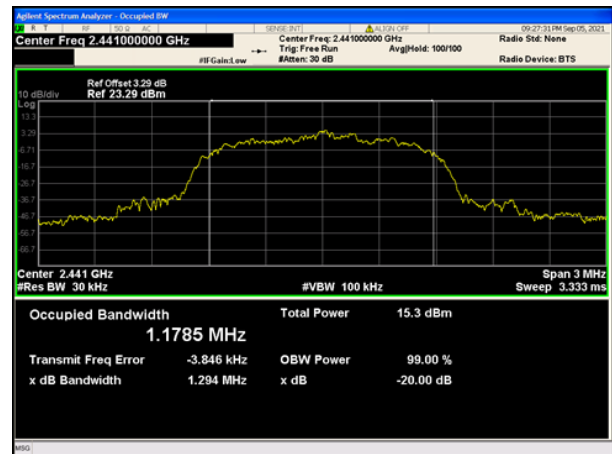
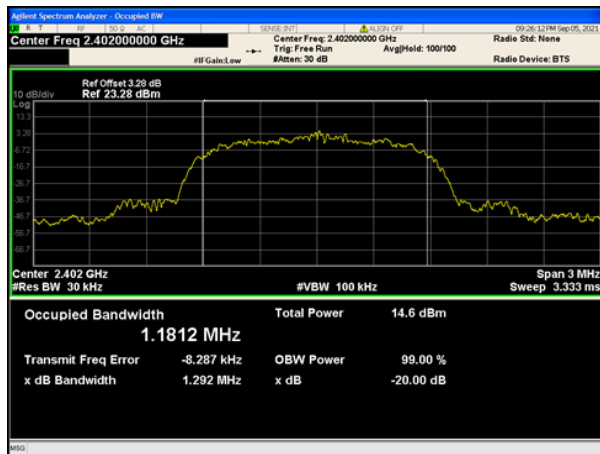
3Mbps(8DPSK_DH1)



Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 3: Transmit-3Mbps(8DPSK _DH3)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

Mode	Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
Mode 3: Transmit -3Mbps(8DPSK _DH3)	00	2402	1292	1181.2
	39	2441	1294	1178.5
	78	2480	1297	1187.3

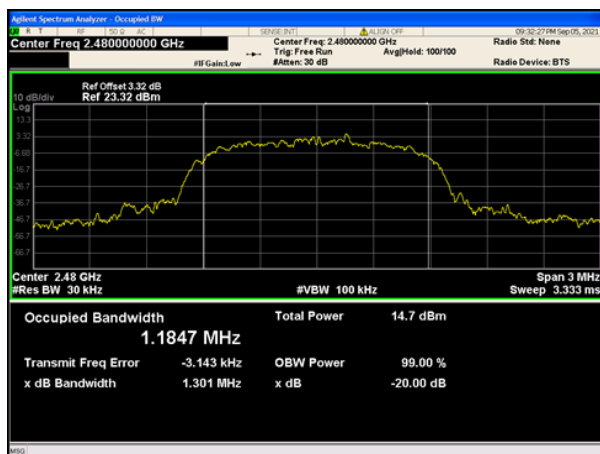
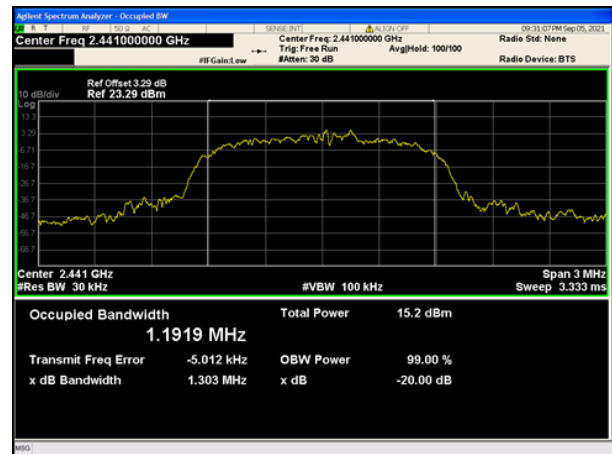
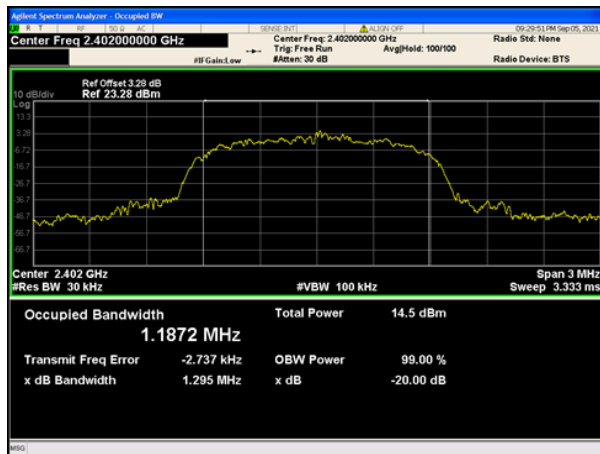
3Mbps(8DPSK_DH3)



Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 3: Transmit-3Mbps(8DPSK _DH5)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

Mode	Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)
Mode 3: Transmit -3Mbps(8DPSK _DH5)	00	2402	1295	1187.2
	39	2441	1303	1191.9
	78	2480	1301	1184.7

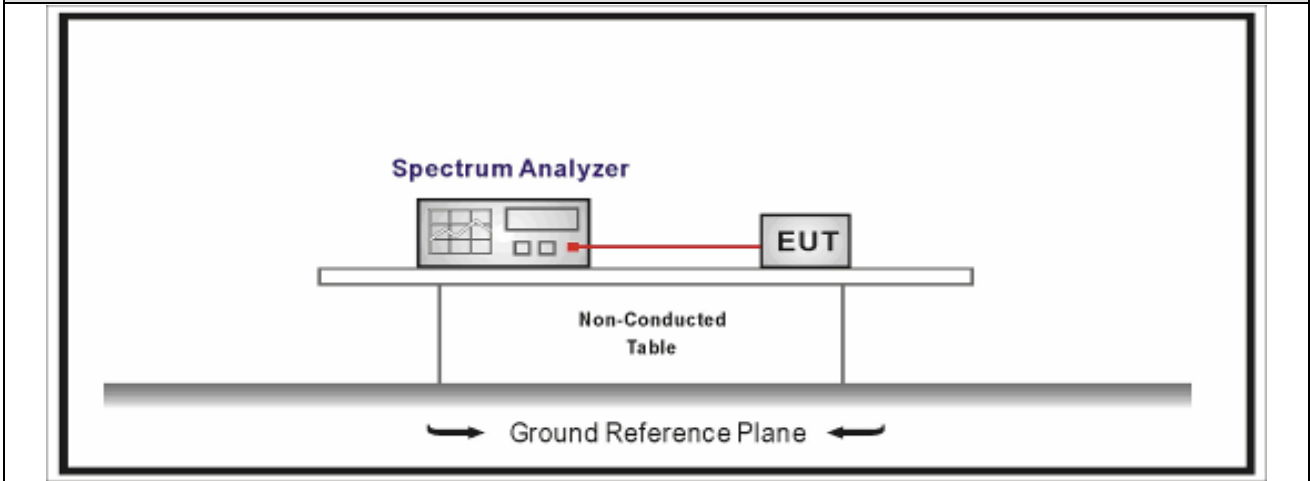
3Mbps(8DPSK_DH5)



7. Carrier Frequency Separation

7.1. Test Setup

Carrier Frequency Separation test setup:



7.2. Limit

Carrier Frequency Separation	
☐	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.
☒	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.
☐	The 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period;
☐	The 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.
☐	Frequency hopping systems operating in the 5725-5850 MHz band shall use at least 75 hopping frequencies. The maximum 20 dB bandwidth of the hopping channel is 1 MHz.

7.3. Test Procedure

Test Method			
	References Rule	Chapter	Description
☒	ANSI C63.10	7.8.2	Carrier frequency separation

7.4. Uncertainty

The measurement uncertainty is defined as ± 1 kHz

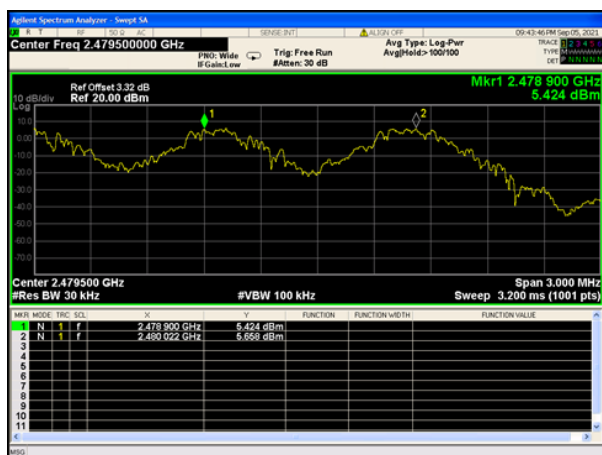
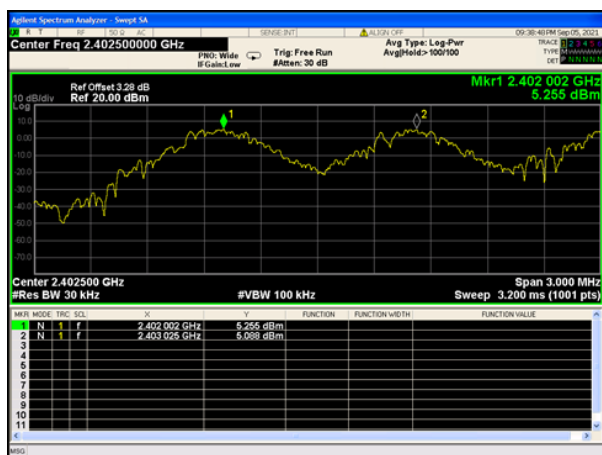
7.5. Test Result

Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 1: Transmit-1Mbps(GFSK_DH1)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

Mode	Channel No.	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
Mode 1: Transmit-1Mbps(GFSK_DH1)	00	2402	1023	608.1	Pass
	39	2441	924	606.9	Pass
	78	2480	1122	609.1	Pass

Note: The limit is two-thirds of the 20 dB bandwidth of the hopping channel.

1Mbps(GFSK_DH1)

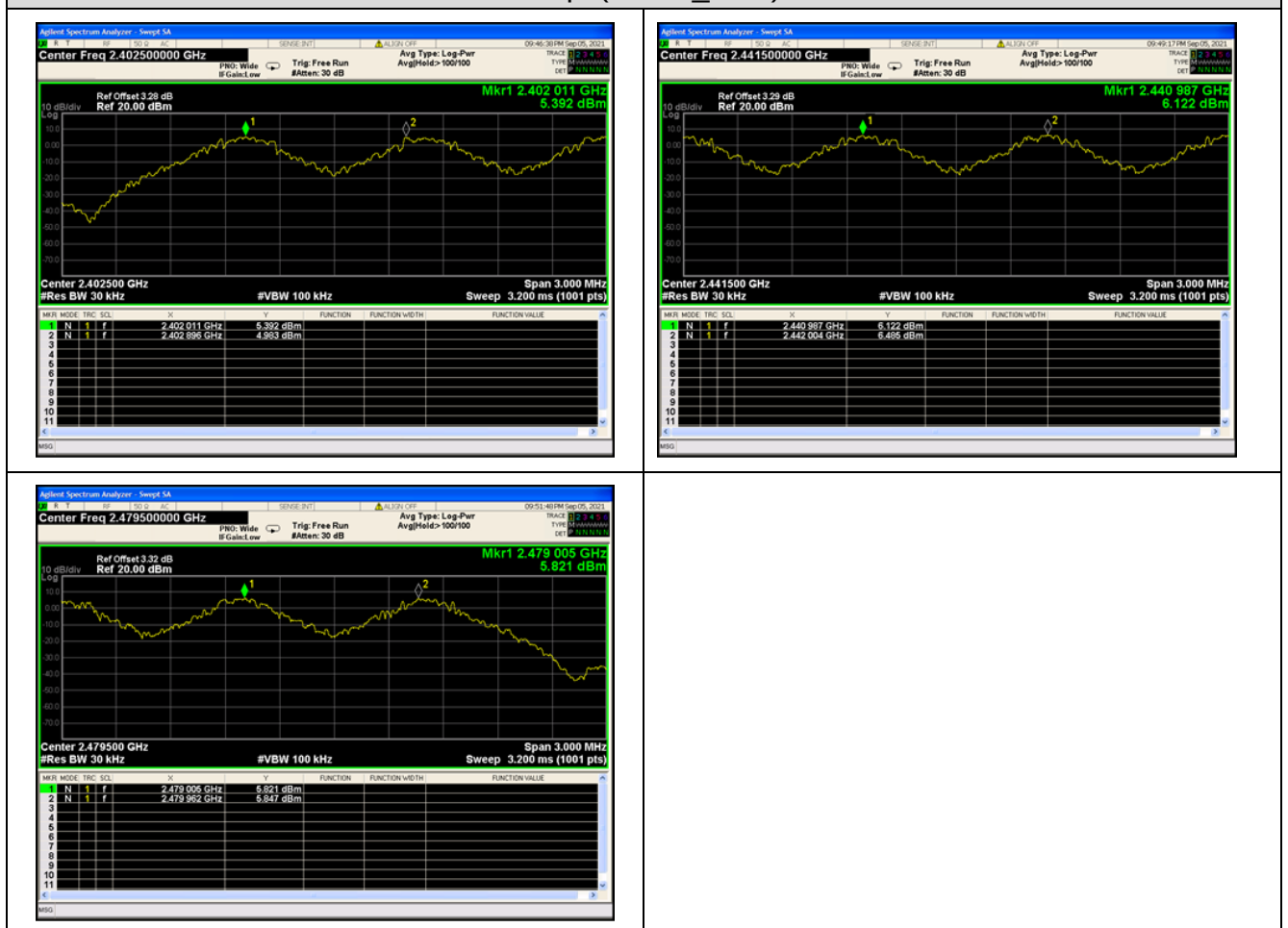


Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 1: Transmit-1Mbps(GFSK_DH3)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

Mode	Channel No.	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
Mode 1: Transmit-1Mbps(GFSK_DH3)	00	2402	885	624.2	Pass
	39	2441	1017	626.1	Pass
	78	2480	957	628.9	Pass

Note: The limit is two-thirds of the 20 dB bandwidth of the hopping channel.

1Mbps(GFSK_DH3)

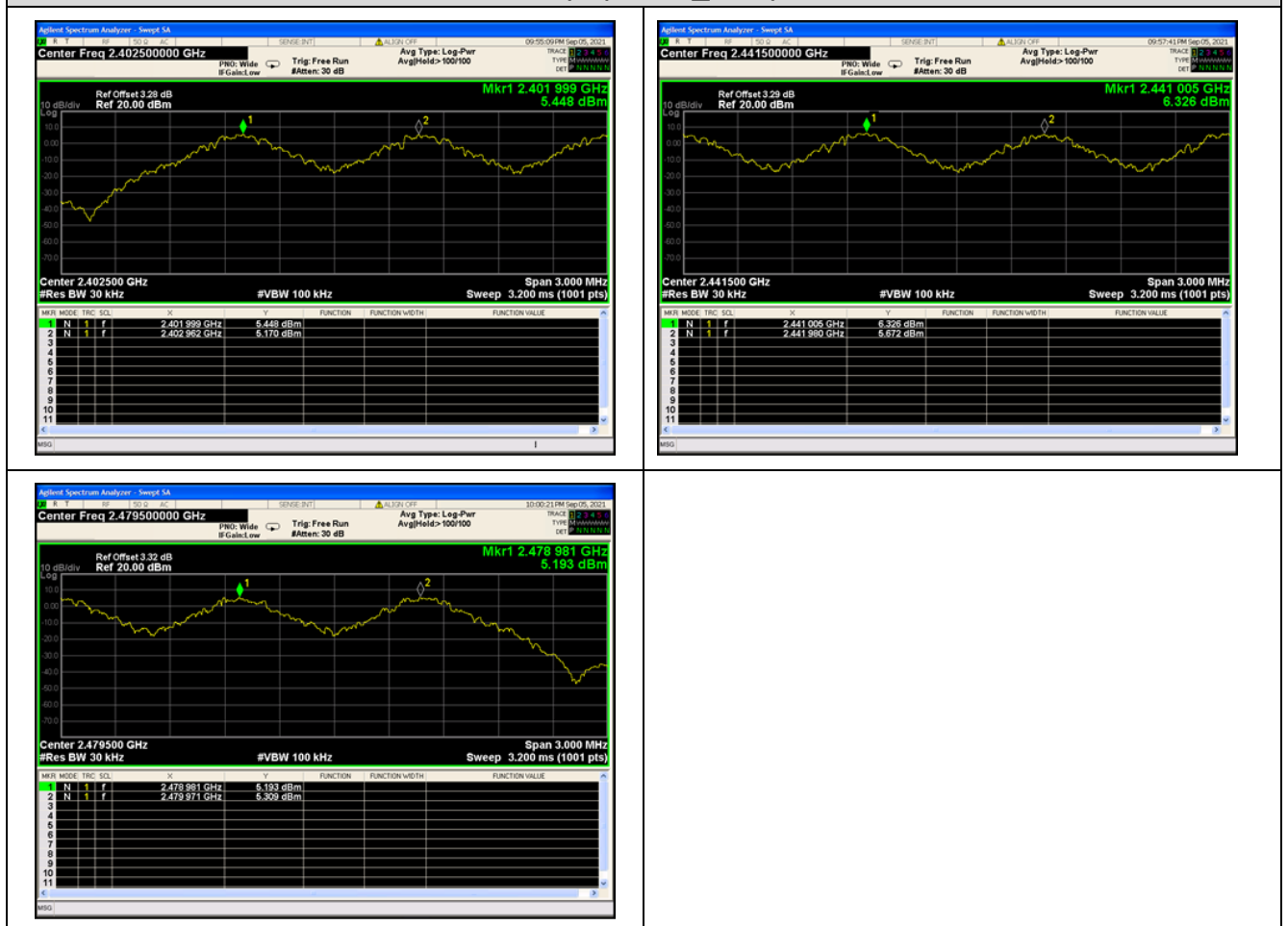


Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 1: Transmit-1Mbps(GFSK_DH5)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

Mode	Channel No.	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
Mode 1: Transmit-1Mbps(GFSK_DH5)	00	2402	963	619.2	Pass
	39	2441	975	620.4	Pass
	78	2480	990	626.2	Pass

Note: The limit is two-thirds of the 20 dB bandwidth of the hopping channel.

1Mbps(GFSK_DH5)



Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 2: Transmit-2Mbps(Pi/4 DQPSK_DH1)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

Mode	Channel No.	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
Mode 2: Transmit-2Mbps(Pi/4 DQPSK_DH1)	00	2402	876	849.3	Pass
	39	2441	1032	846.0	Pass
	78	2480	882	861.3	Pass

Note: The limit is two-thirds of the 20 dB bandwidth of the hopping channel.

2Mbps(Pi/4 DQPSK_DH1)



Product Name	: Massage Chair	Power	: 120V/60Hz
Test Mode	: Mode 2: Transmit-2Mbps(Pi/4 DQPSK_DH3)	Test Site	: Test Room#1
Test Date	: 2021.09.06	Test Engineer	: Heaven

Mode	Channel No.	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
Mode 2: Transmit-2Mbps(Pi/4 DQPSK_DH3)	00	2402	1050	876.7	Pass
	39	2441	996	878.7	Pass
	78	2480	1005	872.0	Pass

Note: The limit is two-thirds of the 20 dB bandwidth of the hopping channel.

2Mbps(Pi/4 DQPSK_DH3)

