TEST REPORT

Applicant	:	Shenzhen Jinbei Youyou Industrial Co.,Ltd
Address	:	Building B3, Block B, Yuhong Industrial Park, No.20 Xingye West Road, Heyi Community, Shajing Street, Bao'an District, Shenzhen, China
Manufacturer	:	Shenzhen Jinbei Youyou Industrial Co.,Ltd
Address	:	Building B3, Block B, Yuhong Industrial Park, No.20 Xingye West Road, Heyi Community, Shajing Street, Bao'an District, Shenzhen, China
Product Name	:	Puzzle card early education machine
Model Number	:	D7
Trademark	:	N/A
FCC ID	:	2BVSB-D7
Test Date	:	Apr. 03, 2026 - Apr. 14, 2026
Date of Report	:	Apr. 14, 2026
Test Result	:	This device described above has been tested by BKC, and the test results show that the equipment under test (EUT) is in compliance with the Standard requirements. And it is applicable only to the tested sample identified in the report.

Test Procedure Used:

Standards	:	FCC CFR Title 47 Part 15 Subpart C Section 15.249 ANSI C63.10-2020+Cor.1-2023

Prepared by(Test Engineer):
Carey Zheng

Reviewer(Supervisor):
Casey Wang

Approved(Manager):
Jerry Liao

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Revision History of This Test Report		
Report Number	Description	Issued Date
BKC26041578DE-1	Initial Issue	2026-04-14

1. General Information

1.1.Description of Device (EUT)

EUT Name	:	Puzzle card early education machine
Model No.	:	D7
Model Difference	:	N/A
Power supply	:	Rating(s): 5V Battery: 3.7V
Operation frequency	:	2402-2480MHz
Max. Field Strength	:	100.90dBuV/m
Modulation	:	GFSK, Pi/4 DQPSK, 8DPSK
Antenna Type	:	PCB Antenna, Maximum Gain is -0.58dBi
Hardware Version	:	V1.0
Software Version	:	V1.0.0
Intend use environment	:	Residential, commercial and light industrial environment

1.2.Channel List

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	1	2403	2	2404	3	2405
4	2406	5	2407	6	2408	7	2409
8	2410	9	2411	10	2412	11	2413
12	2414	13	2415	14	2416	15	2417
16	2418	17	2419	18	2420	19	2421
20	2422	21	2423	22	2424	23	2425
24	2426	25	2427	26	2428	27	2429
28	2430	29	2431	30	2432	31	2433
32	2434	33	2435	34	2436	35	2437
36	2438	37	2439	38	2440	39	2441
40	2442	41	2443	42	2444	43	2445
44	2446	45	2447	46	2448	47	2449
48	2450	49	2451	50	2452	51	2453
52	2454	53	2455	54	2456	55	2457
56	2458	57	2459	58	2460	59	2461
60	2462	61	2463	62	2464	63	2465
64	2466	65	2467	66	2468	67	2469
68	2470	69	2471	70	2472	71	2473
72	2474	73	2475	74	2476	75	2477
76	2478	77	2479	78	2480	-	-

1.3.Summary of test result

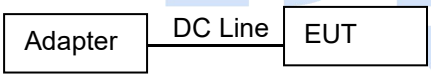
RF PART		
Test Items	**Test Requirement**	**Result**
Antenna requirement	FCC part 15.203	PASS
AC Power Line Conducted Emission	FCC part 15.207	PASS
Field strength of the fundamental signal	FCC part 15.249 (a)	PASS
Spurious emissions	FCC part 15.249 (a) (d)/15.209	PASS
Band edge	FCC part 15.249 (d)/15.205	PASS
20dB Occupied Bandwidth	FCC part 15.215 (c)	PASS
Remark: N/A is an abbreviation for Not Applicable. Measurement Uncertainty is not taken into account for conformity statement		

1.4.Special Accessories and Auxiliary Equipment

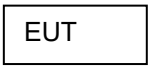
Description	Manufacturer	Model No.	Hardware Version	Software Version
Serial port board	-	USB-TTL-01	-	-
Adapter	-	WH088	-	-
PC	DELL	DESKTOP-P4 V7MAJ	21H1	Windows 10

1.5.Block Diagram

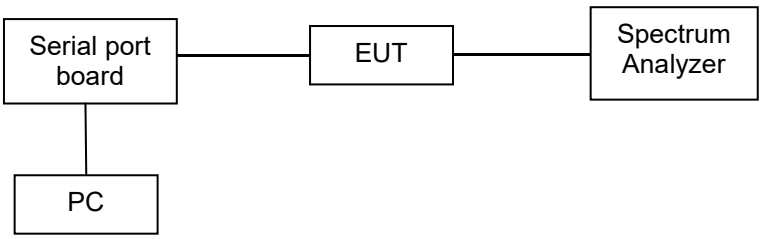
Conducted Emission



Radiated Emission



RF Conducted Test



1.6.Test mode

The special RF test software was used to control EUT work in Continuous BT TX mode, and select test channel, wireless mode.

Test mode	Low channel	Middle channel	High channel
GFSK	2402MHz	2441MHz	2480MHz
Pi/4 DQPSK	2402MHz	2441MHz	2480MHz
8DPSK	2402MHz	2441MHz	2480MHz
Note: /			

1.7.Test configuration

Test Software	FCC_assist_1.0.2.2
Power level setup	Maximum

1.8.Test Conditions

Category	Normal Conditions	Extreme Conditions
Temperature range	15-35℃	N/A
Humidity range	20-75%	N/A
Pressure range	86-106kPa	N/A
Power supply	Rating(s): 5V Battery: 3.7V	N/A
Note: N/A is an abbreviation for Not Applicable.		

1.9.Measurement Uncertainty (95% confidence levels, k=2)

Item	MU	Remark
Uncertainty for radio frequency	±7×10-8	
Conducted Emissions (150kHz~30MHz)	±2.54dB	
Radiated Emission(9KHz~30MHz)	±1.6 dB	
Radiated Emission(30MHz~1GHz)	Vertical:±4.14dB Horizontal:±4.25dB	
Radiated Emission(1GHz~6GHz)	±3.9dB	
Radiated Emission(6GHz~18GHz)	±4.3dB	
Radiated Emission(18GHz~40GHz)	±3.38dB	
Uncertainty for conducted RF Power	±0.20dB	
Conducted spurious emissions	±0.24dB	
Uncertainty for temperature	0.6℃	
Uncertainty for humidity	1%	
Bandwidth	± 1.5 x 10-6	
Time	±2%	
Duty Cycle	±2%	
Remark: The coverage Factor (k=2), and measurement Uncertainty for a level of Confidence of 95%		

1.10.Test Facility

Site Description		
Name of Firm	:	Shenzhen BKC Testing Co., Ltd.
Site Location	:	Room 103, 1/F, Huaya Building, Huaya Industrial Park, Longhua Community, Longhua District, Shenzhen, Guangdong, China.
ISED CAB identifier	:	CN0188
ISED Company Number	:	34333
FCC Designation Number	:	CN1416
FCC Test Firm Registration Number	:	701543

1.11.Test Equipment

Conducted Test Site

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	LISN	R&S	ENV216	102762	Mar. 11. 2026	Mar. 10. 2027
2	EMI Test Receiver	R&S	ESCI	101424	Mar. 11. 2026	Mar. 10. 2027
3	Rf cables	HTEC	HCE 2M-CE	N/A	Mar. 11. 2026	Mar. 10. 2027
4	Coupling/ Decoupling Network	Diamond	CX210	N/A	Mar. 11. 2026	Mar. 10. 2027
5	CE Testing software	EZ	EZ-EMC	/	/	/

Radiated Test Site(Below 1G and Above 1G)

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Antenna	Schwarzbeck	VULB 9168	01321	Mar. 20. 2025	Mar. 19. 2028
2	EMI Test Receiver	R&S	ESRP	101478	Mar. 11. 2026	Mar. 10. 2027
3	Preamplifier	HP	8447D	2727A05345	Mar. 11. 2026	Mar. 10. 2027
4	Double Ridged Broadband	SCHWARZBECK	BBHA 9120D	02621	Mar. 11. 2026	Mar. 19. 2028
5	Preamplifier	Schwarzbeck	BBV 9718D	00041	Mar. 11. 2026	Mar. 10. 2027
6	Rf cables	HUBER+SUHNER	8M-RE	N/A	Mar. 11. 2026	Mar. 10. 2027
7	Rf cables	HUBER+SUHNER	1.5M-RE	N/A	Mar. 11. 2026	Mar. 10. 2027
8	Rf cables	HUBER+SUHNER	1.5M-AP-RE	N/A	Mar. 11. 2026	Mar. 10. 2027
9	Loop antenna	ANRF	ANRF-6603	091802	Mar. 13. 2026	Mar. 12. 2027
10	Spectrum analyzer	R&S	FSP40	200061	Mar. 11. 2026	Mar. 10. 2027
11	Double Ridged Broadband Horn	COM-POWER	AH-1840	10100009	Mar. 11. 2026	Mar. 10. 2027

	Antenna					
12	Spectrum	Agilent	N9020A	MY50510311	Mar. 11. 2026	Mar. 10. 2027
13	Band Stop Filter	Bafang	BSF5G	2024052610	Mar. 11. 2026	Mar. 10. 2027
14	RE Testing software	EZ	EZ-EMC	/	/	/

RF Test Site

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Spectrum	Agilent	N9020A	MY50510311	Mar. 11. 2026	Mar. 10. 2027
2	Vector source	Agilent	N5182A	MY47420223	Mar. 11. 2026	Mar. 10. 2027
3	All instrument	Rohde & Schwarz	CMW 500	101131	Mar. 11. 2026	Mar. 10. 2027
4	control unit	MW	MW100-RFCB	MW200411B K-34	Mar. 11. 2026	Mar. 10. 2027
5	RF Testing software	MW	MTS 8310	/	/	/
6	Spectrum analyzer	R&S	FSP40	200061	Mar. 11. 2026	Mar. 10. 2027

Test software

Software name	RF Testing software
Software version	2.0.0.0
Software name	RE Testing software
Software version	EMEC-03A2 RE+
Software name	CE Testing software
Software version	EMEC-3A1+

2. Conducted emission at the mains terminals test

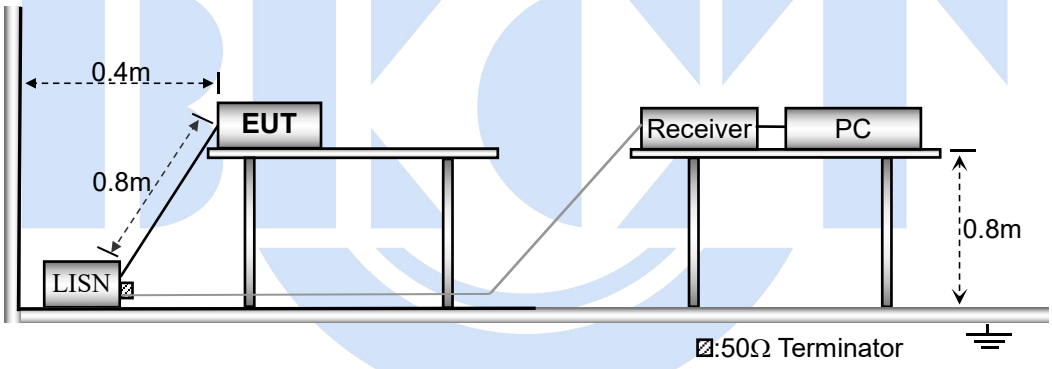
2.1.Limit

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10-2020+Cor.1-2023
Test Frequency Range:	150KHz to 30MHz
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

2.2.Test Setup

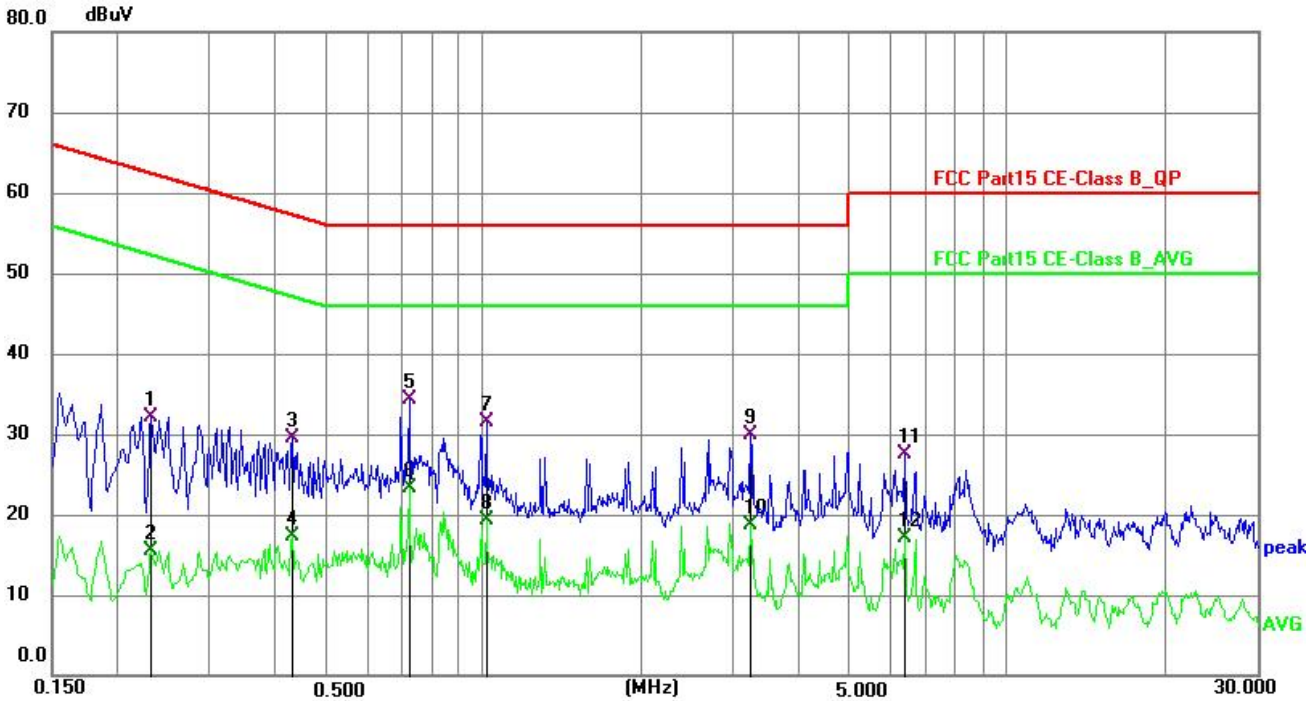


2.3.Test Procedure

1. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
2. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
3. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
4. LISN at least 80 cm from nearest part of EUT chassis.
5.For the actual test configuration, please refer to the related Item – EUT Test Photos.

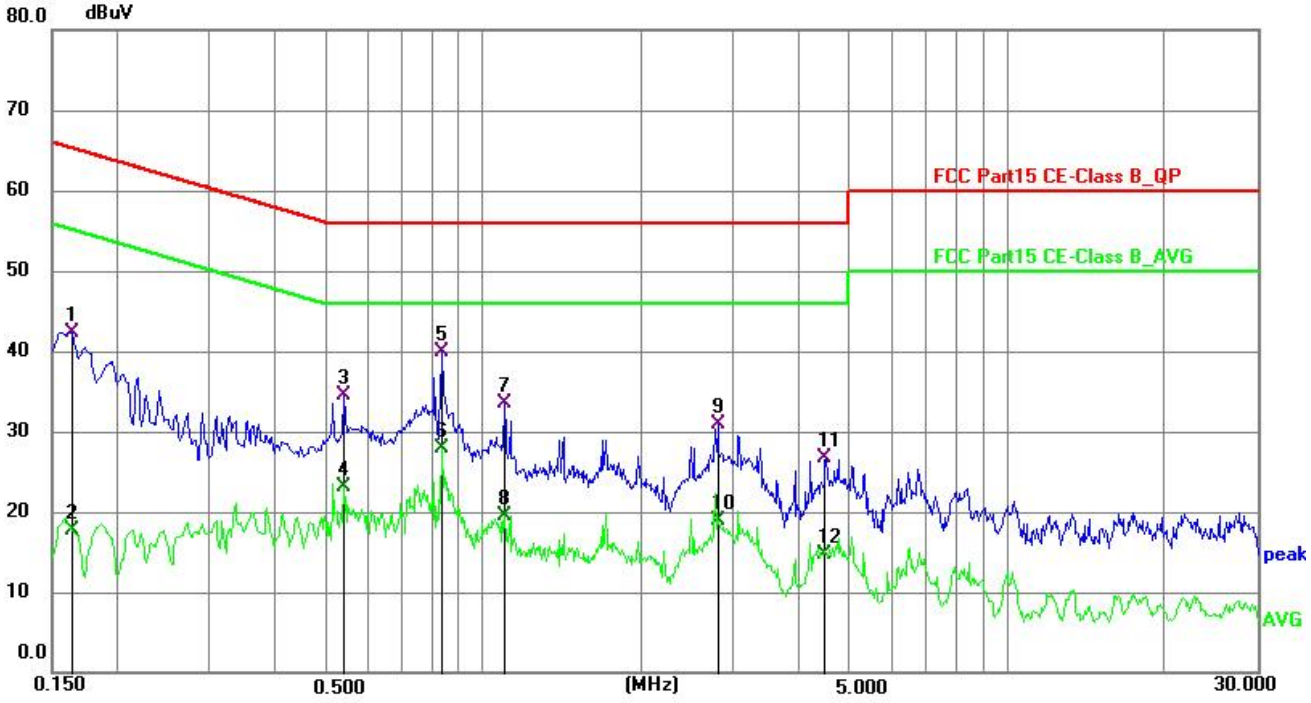
2.4.Test Result

Conducted Emission At The Mains Terminals Test Data			
Temperature:	25.1℃	Relative Humidity:	56%
Pressure:	1008hPa	Phase :	Line
Test Voltage :	AC 120V/60Hz	Test Mode:	BT transmitting



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.2310	22.38	9.80	32.18	62.41	-30.23	QP	P
2	0.2310	5.66	9.80	15.46	52.41	-36.95	AVG	P
3	0.4289	19.66	9.77	29.43	57.27	-27.84	QP	P
4	0.4289	7.56	9.77	17.33	47.27	-29.94	AVG	P
5 *	0.7215	24.57	9.77	34.34	56.00	-21.66	QP	P
6	0.7215	13.48	9.77	23.25	46.00	-22.75	AVG	P
7	1.0140	21.81	9.74	31.55	56.00	-24.45	QP	P
8	1.0140	9.53	9.74	19.27	46.00	-26.73	AVG	P
9	3.2370	20.20	9.79	29.99	56.00	-26.01	QP	P
10	3.2370	8.87	9.79	18.66	46.00	-27.34	AVG	P
11	6.3825	17.78	9.80	27.58	60.00	-32.42	QP	P
12	6.3825	7.31	9.80	17.11	50.00	-32.89	AVG	P

Conducted Emission At The Mains Terminals Test Data			
Temperature:	25.1℃	Relative Humidity:	56%
Pressure:	1008hPa	Phase :	Neutral
Test Voltage :	AC 120V/60Hz	Test Mode:	BT transmitting



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1635	32.64	9.69	42.33	65.28	-22.95	QP	P
2	0.1635	7.96	9.69	17.65	55.28	-37.63	AVG	P
3	0.5415	24.77	9.70	34.47	56.00	-21.53	QP	P
4	0.5415	13.43	9.70	23.13	46.00	-22.87	AVG	P
5 *	0.8340	30.17	9.69	39.86	56.00	-16.14	QP	P
6	0.8340	18.13	9.69	27.82	46.00	-18.18	AVG	P
7	1.0995	23.87	9.68	33.55	56.00	-22.45	QP	P
8	1.0995	9.88	9.68	19.56	46.00	-26.44	AVG	P
9	2.8005	21.26	9.71	30.97	56.00	-25.03	QP	P
10	2.8005	9.12	9.71	18.83	46.00	-27.17	AVG	P
11	4.5104	16.98	9.72	26.70	56.00	-29.30	QP	P
12	4.5104	5.08	9.72	14.80	46.00	-31.20	AVG	P

Remark:
1. Margin = Limit – Level, Correct Factor = Cable lose + LISN insertion loss, Level= Reading + Correct factor
2. Only the worst Data GFSK/2402MHz mode Record in the report.

3. Radiated Spurious Emissions

3.1.Limit

Test Requirement: FCC CFR47 Part 15 Section 15.209 & 15.249

Test Result: PASS

Measurement Distance: 3m

Frequency	Detector	RBW	VBW	Value
9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

Standard FCC15.249

Fundamental Frequency	**Field Strength of Fundamental (millivolts/meter)**	**Field Strength of Harmonics (microvolts/meter)**
900-928MHz	50	500
2400-2483.5MHz	50	500
5725-5875MHz	50	500
24.0-24.25GHz	250	2500

Limit:

Frequency (MHz)	**Field Strength**		**Field Strength Limit at 3m Measurement Dist**	
	uV/m	**Distance (m)**	**uV/m**	**dBuV/m**
0.009 ~ 0.490	2400/F(kHz)	300	10000 * 2400/F(kHz)	20log(2400/F(kHz)) + 80
0.490 ~ 1.705	24000/F(kHz)	30	100 * 24000/F(kHz)	20log(24000/F(kHz)) + 40
1.705 ~ 30	30	30	100 * 30	20log(30) + 40
30 ~ 88	100	3	100	20log(100)
88 ~ 216	150	3	150	20log(150)
216 ~ 960	200	3	200	20log(200)
Above 960	500	3	500	20log(500)

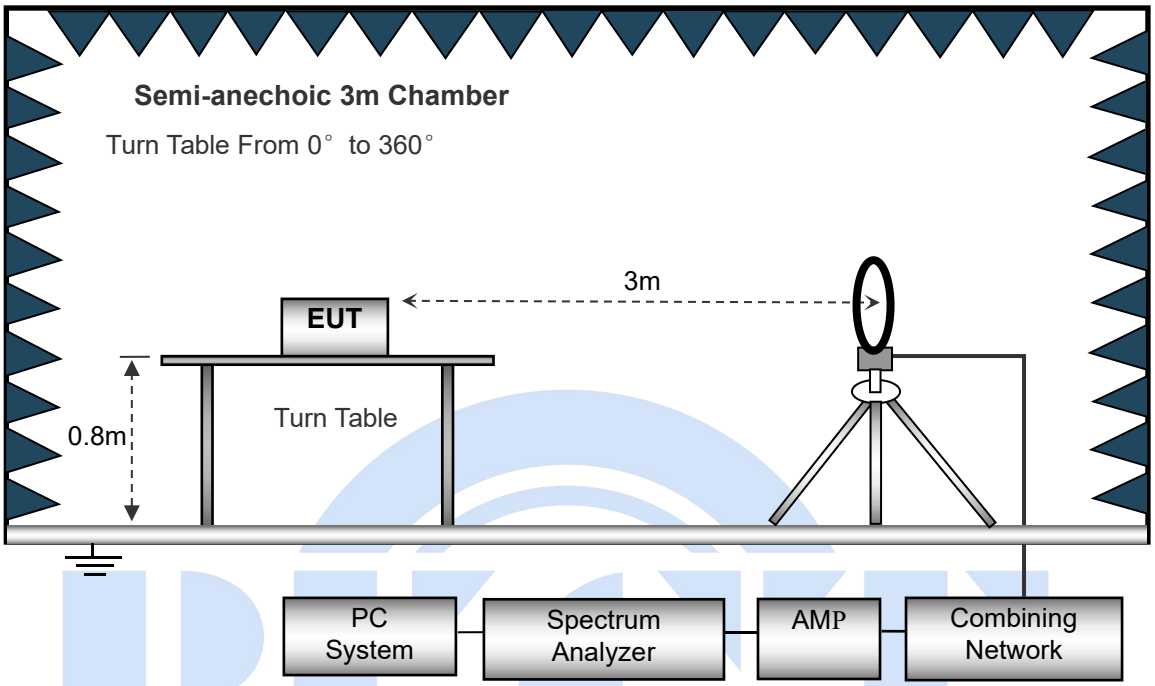
Limit 2:

§ 15.249(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.

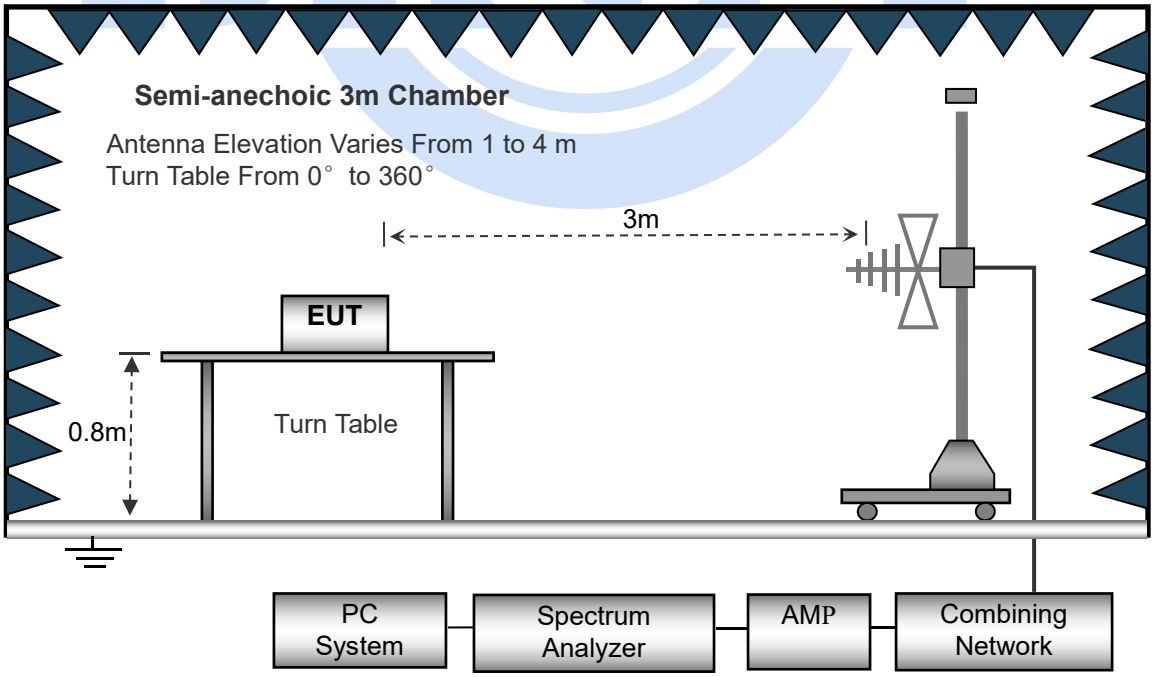
3.2.Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.10.

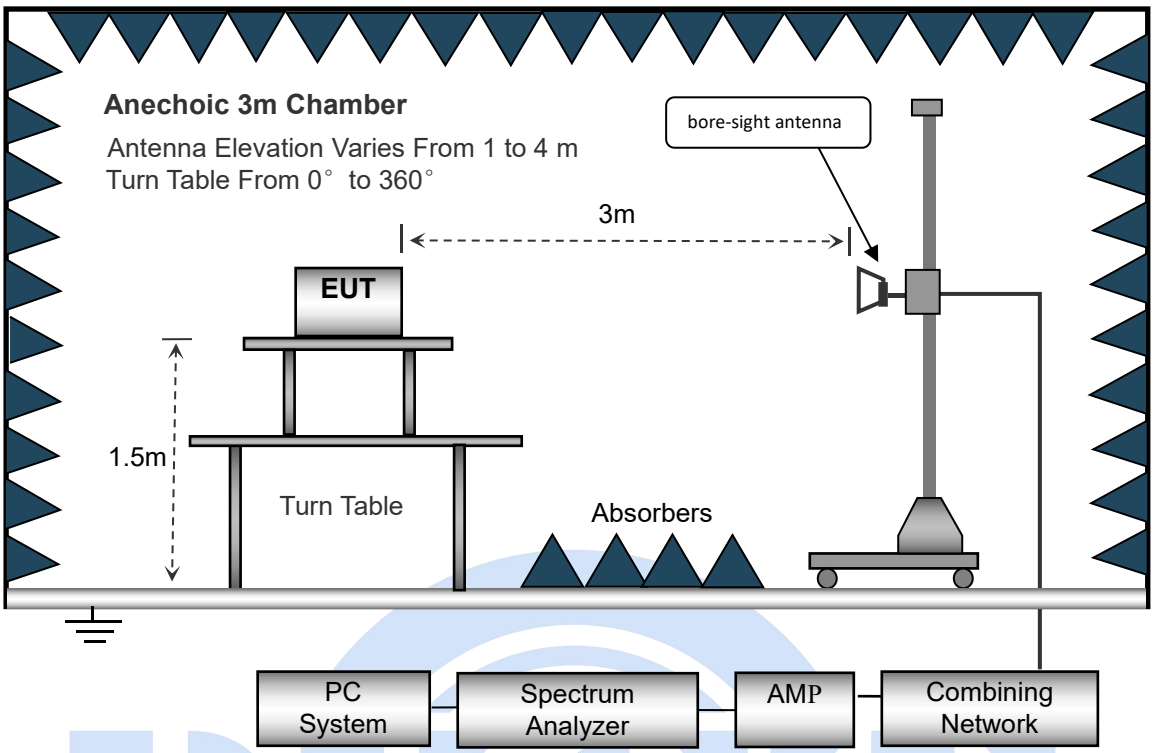
The test setup for emission measurement below 30MHz.

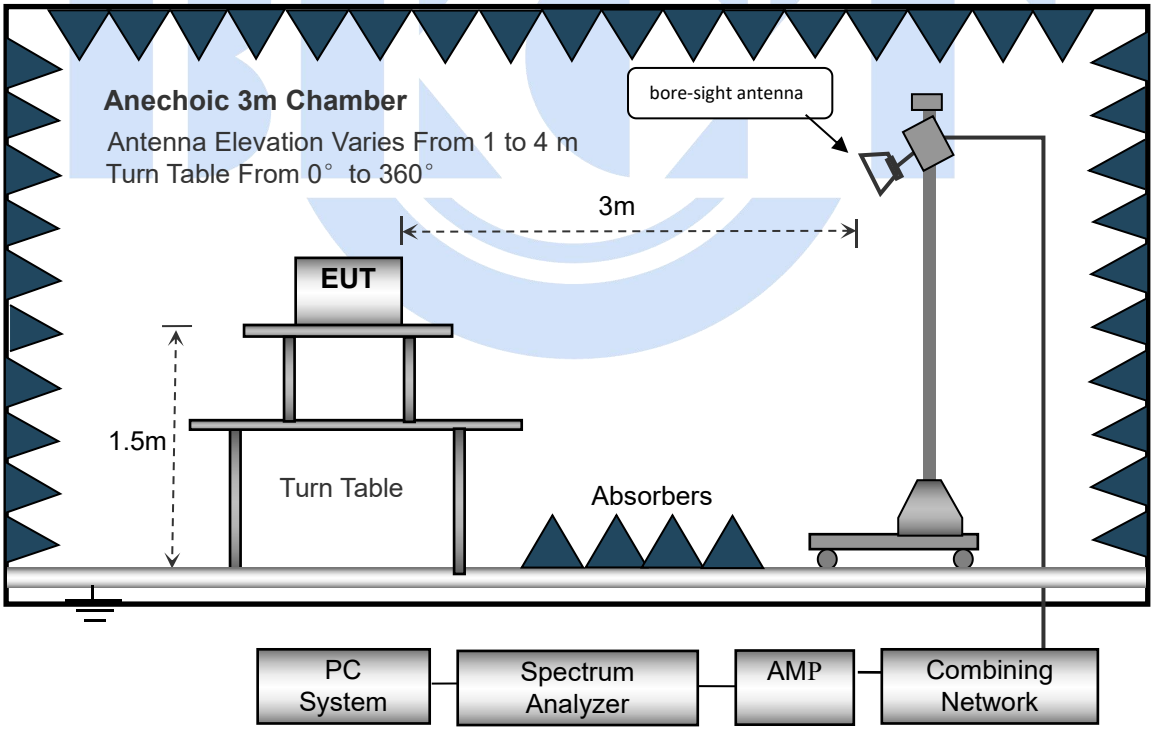


The test setup for emission measurement from 30 MHz to 1 GHz.



The test setup for emission measurement above 1 GHz.





3.3.Test Procedure

1. The EUT is placed on a turntable, which is 0.8m above ground plane for below 1GHz and 1.5m for above 1GHz.

2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.

3. EUT is set 3m away from the receiving antenna, which is moved from 1m to 4m to find out the maximum emissions.

4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.

5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

6. Repeat above procedures until the measurements for all frequencies are complete.

7. The radiation measurements are performed in X,Y and Z axis positioning(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand),the worst condition was tested putting the eut in Z axis,so the worst data were shown as follow.

8. A 2.4GHz high - pass filter is used druing radiated emissions above 1GHz measurement.

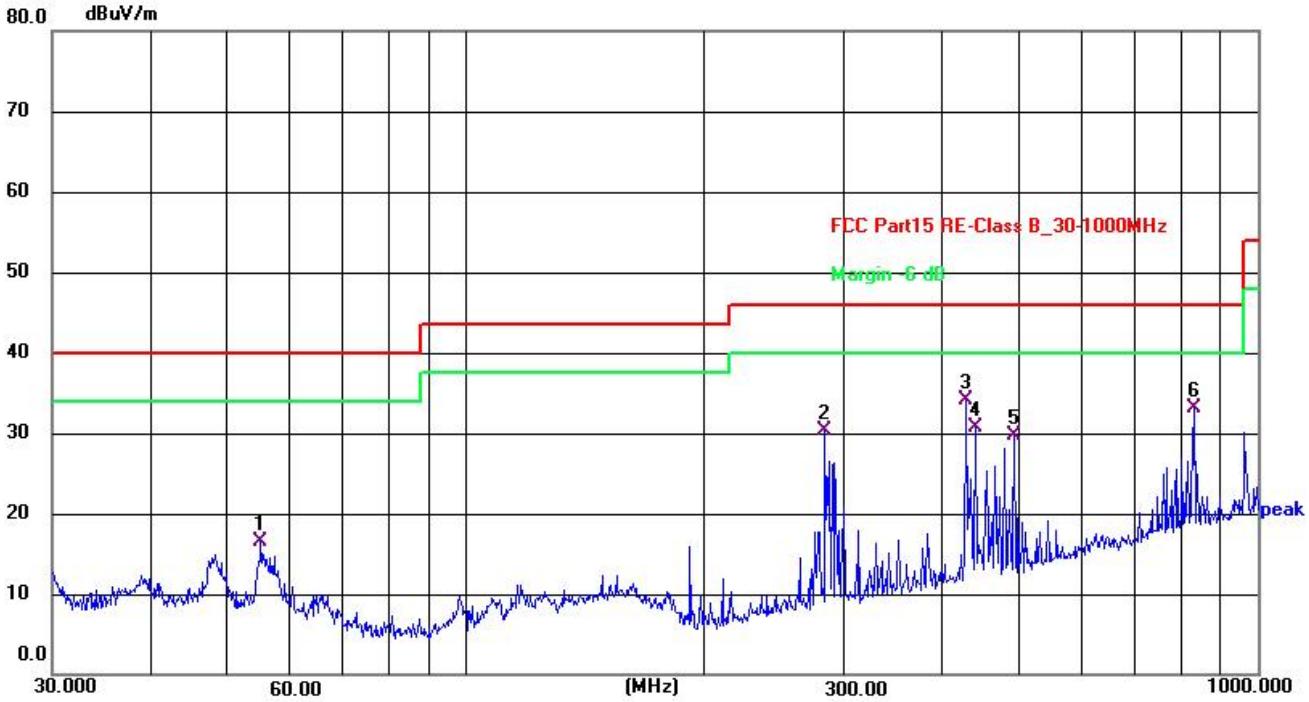
3.4.Test Result

Test Frequency: 9KHz~30MHz

The measurements were more than 20 dB below the limit and not reported.

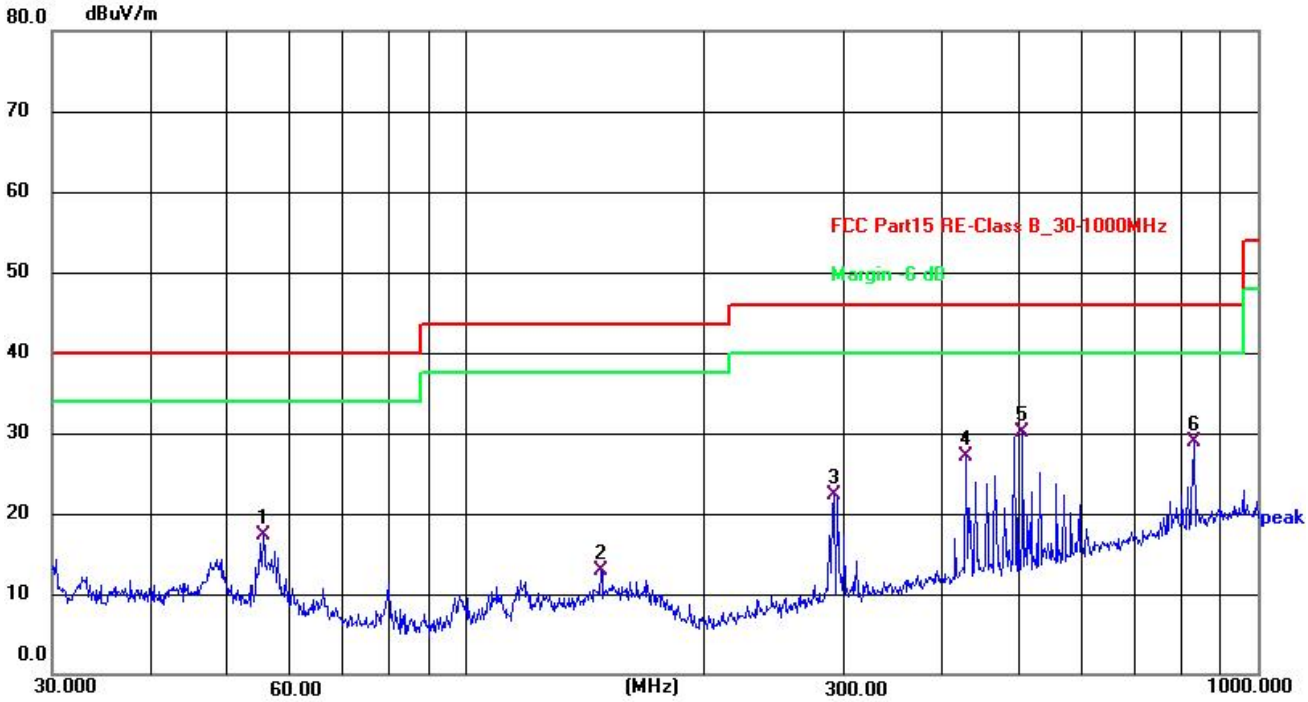
Test Frequency : 30MHz ~ 1GHz

Radiation Emission Test Data			
Temperature:	25.1℃	Relative Humidity:	56%
Pressure:	1008hPa	Phase :	Horizontal
Test Voltage :	DC 3.7V	Test Mode	BT transmitting



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	55.0467	33.63	-17.05	16.58	40.00	-23.42	QP
2	283.9791	47.16	-16.88	30.28	46.00	-15.72	QP
3 *	428.0193	48.19	-14.12	34.07	46.00	-11.93	QP
4	440.1963	44.48	-13.85	30.63	46.00	-15.37	QP
5	492.4685	43.04	-13.42	29.62	46.00	-16.38	QP
6	830.4002	41.62	-8.51	33.11	46.00	-12.89	QP

Radiation Emission Test Data			
Temperature:	25.1°C	Relative Humidity:	56%
Pressure:	1008hPa	Phase :	Vertical
Test Voltage :	DC 3.7V	Test Mode	BT transmitting



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	55.4147	34.37	-17.09	17.28	40.00	-22.72	QP
2	147.9214	28.85	-16.02	12.83	43.50	-30.67	QP
3	292.0583	38.93	-16.63	22.30	46.00	-23.70	QP
4	428.0192	41.15	-14.12	27.03	46.00	-18.97	QP
5 *	504.7062	43.30	-13.29	30.01	46.00	-15.99	QP
6	830.4001	37.34	-8.51	28.83	46.00	-17.17	QP

Remark:
1. Level = Reading + Correct Factor
2. Correct Factor=Antenna Factor + Cable Loss - Preamplifier Factor.
3. Only the worst Data GFSK/2402MHz mode Record in the report

Test Frequency 1GHz-25GHz:

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel:2402MHz									
V	4804.00	54.69	30.55	5.77	24.66	54.57	74.00	-19.43	Pk
V	4804.00	43.90	30.55	5.77	24.66	43.78	54.00	-10.22	AV
V	7206.00	52.57	30.33	6.32	24.55	53.11	74.00	-20.89	Pk
V	7206.00	43.49	30.33	6.32	24.55	44.03	54.00	-9.97	AV
V	9608.00	54.87	30.85	7.45	24.69	56.16	74.00	-17.84	Pk
V	9608.00	43.45	30.85	7.45	24.69	44.74	54.00	-9.26	AV
V	12010.00	51.57	31.02	8.99	25.57	55.11	74.00	-18.89	Pk
V	12010.00	43.42	31.02	8.99	25.57	46.96	54.00	-7.04	AV
H	4804.00	52.63	30.55	5.77	24.66	52.51	74.00	-21.49	Pk
H	4804.00	43.24	30.55	5.77	24.66	43.12	54.00	-10.88	AV
H	7206.00	51.90	30.33	6.32	24.55	52.44	74.00	-21.56	Pk
H	7206.00	43.74	30.33	6.32	24.55	44.28	54.00	-9.72	AV
H	9608.00	54.65	30.85	7.45	24.69	55.94	74.00	-18.06	Pk
H	9608.00	43.82	30.85	7.45	24.69	45.11	54.00	-8.89	AV
H	12010.00	51.05	31.02	8.99	25.57	54.59	74.00	-19.41	Pk
H	12010.00	43.34	31.02	8.99	25.57	46.88	54.00	-7.12	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Middle Channel:2441MHz									
V	4880.00	54.80	30.55	5.77	24.66	54.68	74.00	-19.32	Pk
V	4880.00	43.14	30.55	5.77	24.66	43.02	54.00	-10.98	AV
V	7320.00	51.82	30.33	6.32	24.55	52.36	74.00	-21.64	Pk
V	7320.00	43.23	30.33	6.32	24.55	43.77	54.00	-10.23	AV
V	9760.00	54.91	30.85	7.45	24.69	56.20	74.00	-17.80	Pk
V	9760.00	43.39	30.85	7.45	24.69	44.68	54.00	-9.32	AV
V	12200.00	53.14	31.02	8.99	25.57	56.68	74.00	-17.32	Pk
V	12200.00	43.95	31.02	8.99	25.57	47.49	54.00	-6.51	AV
H	4880.00	52.17	30.55	5.77	24.66	52.05	74.00	-21.95	Pk
H	4880.00	43.45	30.55	5.77	24.66	43.33	54.00	-10.67	AV
H	7320.00	53.24	30.33	6.32	24.55	53.78	74.00	-20.22	Pk
H	7320.00	43.13	30.33	6.32	24.55	43.67	54.00	-10.33	AV
H	9760.00	53.31	30.85	7.45	24.69	54.60	74.00	-19.40	Pk
H	9760.00	43.24	30.85	7.45	24.69	44.53	54.00	-9.47	AV
H	12200.00	53.55	31.02	8.99	25.57	57.09	74.00	-16.91	Pk
H	12200.00	43.69	31.02	8.99	25.57	47.23	54.00	-6.77	AV

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
High Channel:2480MHz									
V	4960.00	54.37	30.55	5.77	24.66	54.25	74.00	-19.75	Pk
V	4960.00	43.41	30.55	5.77	24.66	43.29	54.00	-10.71	AV
V	7440.00	52.45	30.33	6.32	24.55	52.99	74.00	-21.01	Pk
V	7440.00	43.10	30.33	6.32	24.55	43.64	54.00	-10.36	AV
V	9920.00	50.42	30.85	7.45	24.69	51.71	74.00	-22.29	Pk
V	9920.00	43.80	30.85	7.45	24.69	45.09	54.00	-8.91	AV
V	12400.00	53.26	31.02	8.99	25.57	56.80	74.00	-17.20	Pk
V	12400.00	43.03	31.02	8.99	25.57	46.57	54.00	-7.43	AV
H	4960.00	51.25	30.55	5.77	24.66	51.13	74.00	-22.87	Pk
H	4960.00	43.68	30.55	5.77	24.66	43.56	54.00	-10.44	AV
H	7440.00	51.63	30.33	6.32	24.55	52.17	74.00	-21.83	Pk
H	7440.00	43.54	30.33	6.32	24.55	44.08	54.00	-9.92	AV
H	9920.00	50.99	30.85	7.45	24.69	52.28	74.00	-21.72	Pk
H	9920.00	43.16	30.85	7.45	24.69	44.45	54.00	-9.55	AV
H	12400.00	50.73	31.02	8.99	25.57	54.27	74.00	-19.73	Pk
H	12400.00	43.01	31.02	8.99	25.57	46.55	54.00	-7.45	AV

Note: 1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
Margin= Emission Level - Limit
2. If peak below the average limit, the average emission was no test.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
4.Only the worst Data GFSK mode Record in the report

Band Edge:

	Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV /m)	Margin (dB)	Detector Type	Result
GFSK	Low Channel: 2402MHz										
	H	2310.00	52.74	30.22	4.85	23.98	51.35	74.00	-22.65	PK	PASS
	H	2310.00	44.36	30.22	4.85	23.98	42.97	54.00	-11.03	AV	PASS
	H	2390.00	53.89	30.22	4.85	23.98	52.50	74.00	-21.50	PK	PASS
	H	2390.00	44.49	30.22	4.85	23.98	43.10	54.00	-10.90	AV	PASS
	H	2400.00	54.56	30.22	4.85	23.98	53.17	74.00	-20.83	PK	PASS
	H	2400.00	44.37	30.22	4.85	23.98	42.98	54.00	-11.02	AV	PASS
	V	2310.00	53.65	30.22	4.85	23.98	52.26	74.00	-21.74	PK	PASS
	V	2310.00	44.88	30.22	4.85	23.98	43.49	54.00	-10.51	AV	PASS
	V	2390.00	54.21	30.22	4.85	23.98	52.82	74.00	-21.18	PK	PASS
	V	2390.00	44.40	30.22	4.85	23.98	43.01	54.00	-10.99	AV	PASS
	V	2400.00	53.52	30.22	4.85	23.98	52.13	74.00	-21.87	PK	PASS
	V	2400.00	44.54	30.22	4.85	23.98	43.15	54.00	-10.85	AV	PASS
	High Channel: 2480MHz										
	H	2483.50	54.61	30.22	4.85	23.98	53.22	74.00	-20.78	PK	PASS
	H	2483.50	44.30	30.22	4.85	23.98	42.91	54.00	-11.09	AV	PASS
	H	2500.00	54.23	30.22	4.85	23.98	52.84	74.00	-21.16	PK	PASS
	H	2500.00	44.86	30.22	4.85	23.98	43.47	54.00	-10.53	AV	PASS
	V	2483.50	53.29	30.22	4.85	23.98	51.90	74.00	-22.10	PK	PASS
	V	2483.50	44.52	30.22	4.85	23.98	43.13	54.00	-10.87	AV	PASS
	V	2500.00	54.48	30.22	4.85	23.98	53.09	74.00	-20.91	PK	PASS
	V	2500.00	44.46	30.22	4.85	23.98	43.07	54.00	-10.93	AV	PASS

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss − Pre-amplifier;

Margin= Emission Level - Limit

2. Only the worst Data GFSK mode Record in the report

Field Strength of The Fundamental Signal Data

GFSK

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel:2402MHz									
V	2402.000	92.17	30.55	5.77	33.51	**100.90**	114.00	-13.10	Pk
V	2402.000	70.85	30.55	5.77	33.51	79.58	94.00	-14.42	AV
H	2402.000	91.52	30.55	5.77	33.51	100.25	114.00	-13.75	Pk
H	2402.000	72.74	30.55	5.77	33.51	81.47	94.00	-12.53	AV
Mid Channel:2441MHz									
V	2441.000	91.89	30.55	5.77	33.58	100.69	114.00	-13.31	Pk
V	2441.000	73.76	30.55	5.77	33.58	82.56	94.00	-11.44	AV
H	2441.000	90.69	30.55	5.77	33.58	99.49	114.00	-14.51	Pk
H	2441.000	71.06	30.55	5.77	33.58	79.86	94.00	-14.14	AV
High Channel:2480MHz									
V	2480.000	91.33	30.55	5.77	33.58	100.13	114.00	-13.87	Pk
V	2480.000	70.80	30.55	5.77	33.58	79.60	94.00	-14.40	AV
H	2480.000	91.98	30.55	5.77	33.58	100.78	114.00	-13.22	Pk
H	2480.000	72.58	30.55	5.77	33.58	81.38	94.00	-12.62	AV

Pi/4 DQPSK

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel:2402MHz									
V	2402.000	91.77	30.55	5.77	33.51	100.50	114.00	-13.50	Pk
V	2402.000	70.93	30.55	5.77	33.51	79.66	94.00	-14.34	AV
H	2402.000	93.51	30.55	5.77	33.51	102.24	114.00	-11.76	Pk
H	2402.000	72.60	30.55	5.77	33.51	81.33	94.00	-12.67	AV
Mid Channel:2441MHz									
V	2441.000	90.55	30.55	5.77	33.58	99.35	114.00	-14.65	Pk
V	2441.000	72.84	30.55	5.77	33.58	81.64	94.00	-12.36	AV
H	2441.000	90.11	30.55	5.77	33.58	98.91	114.00	-15.09	Pk
H	2441.000	70.85	30.55	5.77	33.58	79.65	94.00	-14.35	AV
High Channel:2480MHz									
V	2480.000	90.31	30.55	5.77	33.58	99.11	114.00	-14.89	Pk
V	2480.000	70.54	30.55	5.77	33.58	79.34	94.00	-14.66	AV
H	2480.000	90.33	30.55	5.77	33.58	99.13	114.00	-14.87	Pk
H	2480.000	71.54	30.55	5.77	33.58	80.34	94.00	-13.66	AV

8DPSK

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel:2402MHz									
V	2402.000	91.17	30.55	5.77	33.51	99.90	114.00	-14.10	Pk
V	2402.000	70.62	30.55	5.77	33.51	79.35	94.00	-14.65	AV
H	2402.000	91.36	30.55	5.77	33.51	100.09	114.00	-13.91	Pk
H	2402.000	71.44	30.55	5.77	33.51	80.17	94.00	-13.83	AV
Mid Channel:2441MHz									
V	2441.000	91.01	30.55	5.77	33.58	99.81	114.00	-14.19	Pk
V	2441.000	72.36	30.55	5.77	33.58	81.16	94.00	-12.84	AV
H	2441.000	90.55	30.55	5.77	33.58	99.35	114.00	-14.65	Pk
H	2441.000	70.63	30.55	5.77	33.58	79.43	94.00	-14.57	AV
High Channel:2480MHz									
V	2480.000	90.52	30.55	5.77	33.58	99.32	114.00	-14.68	Pk
V	2480.000	70.43	30.55	5.77	33.58	79.23	94.00	-14.77	AV
H	2480.000	90.84	30.55	5.77	33.58	99.64	114.00	-14.36	Pk
H	2480.000	72.14	30.55	5.77	33.58	80.94	94.00	-13.06	AV

Remark:

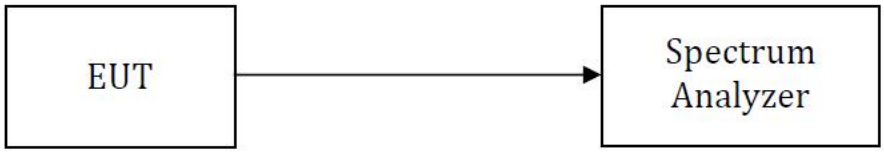
1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,
2. Margin= Emission Level - Limit

4. -20 dB Bandwidth Measurement

4.1.Limit

Test Requirement: FCC CFR47 Part 15 Section 15.215

4.2.Test Setup

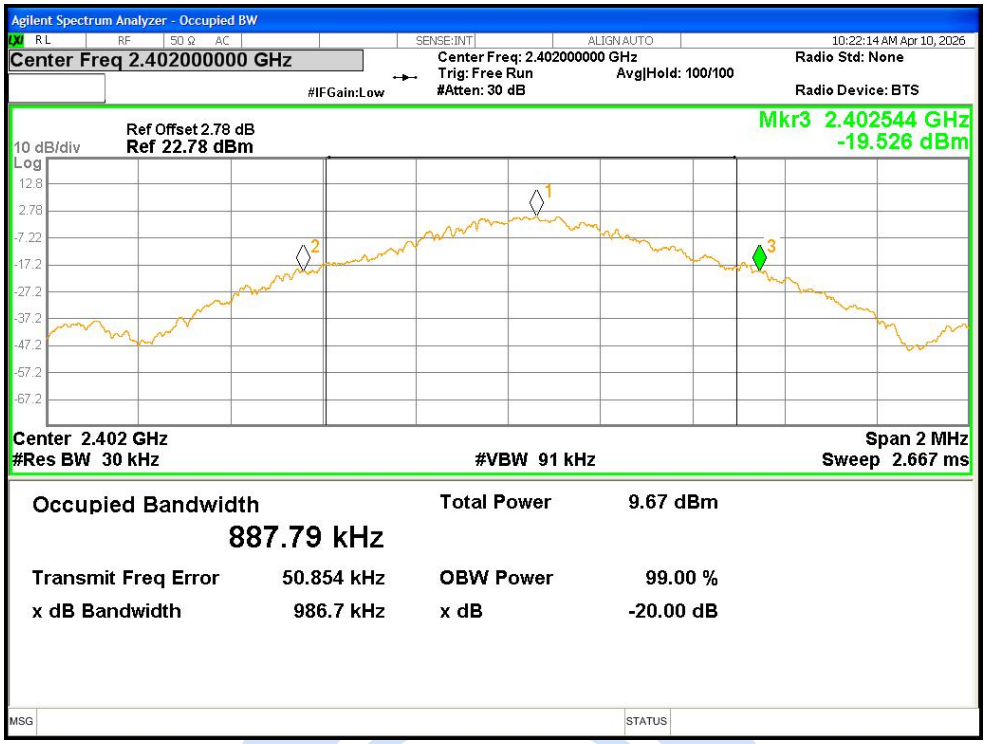


4.3.Test Procedure

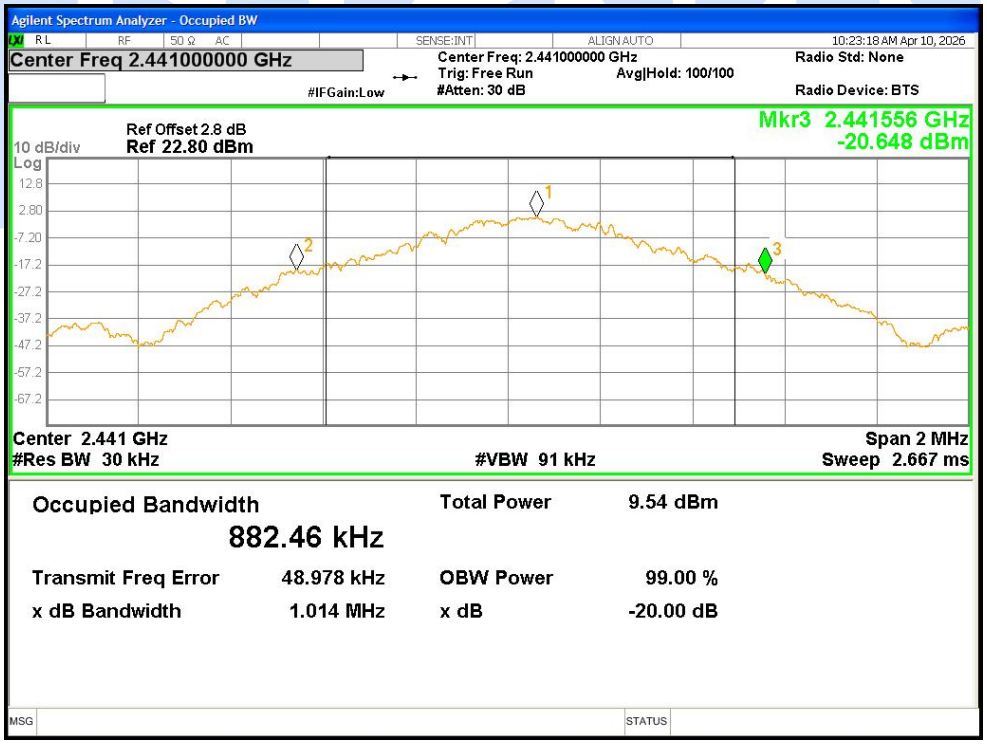
1. Set the spectrum analyzer: RBW = 1%-5% OBW
2. Set the video bandwidth (VBW) ≥ 3 x RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by -20 dB relative to the maximum level measured in the fundamental emission

4.4.Test Result

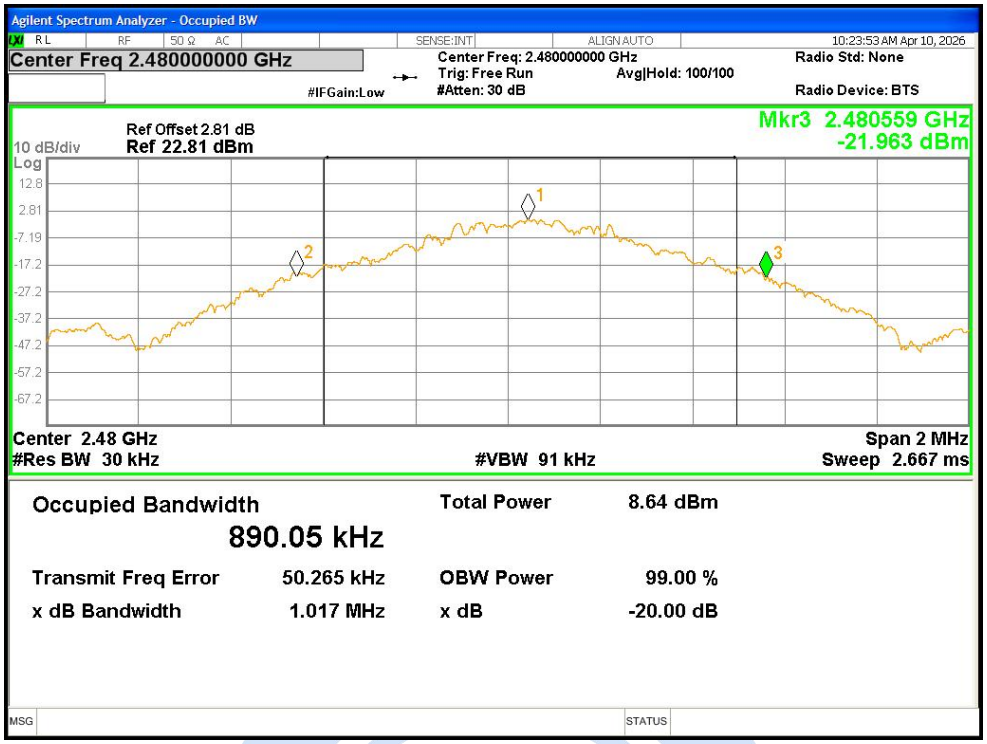
Mode	Frequency (MHz)	Antenna	99% OBW (MHz)	-20dB OBW (MHz)
DH5	2402	Ant1	0.888	0.987
	2441	Ant1	0.882	1.014
	2480	Ant1	0.890	1.017
2DH5	2402	Ant1	1.191	1.309
	2441	Ant1	1.184	1.282
	2480	Ant1	1.190	1.331
3DH5	2402	Ant1	1.196	1.303
	2441	Ant1	1.194	1.296
	2480	Ant1	1.203	1.299



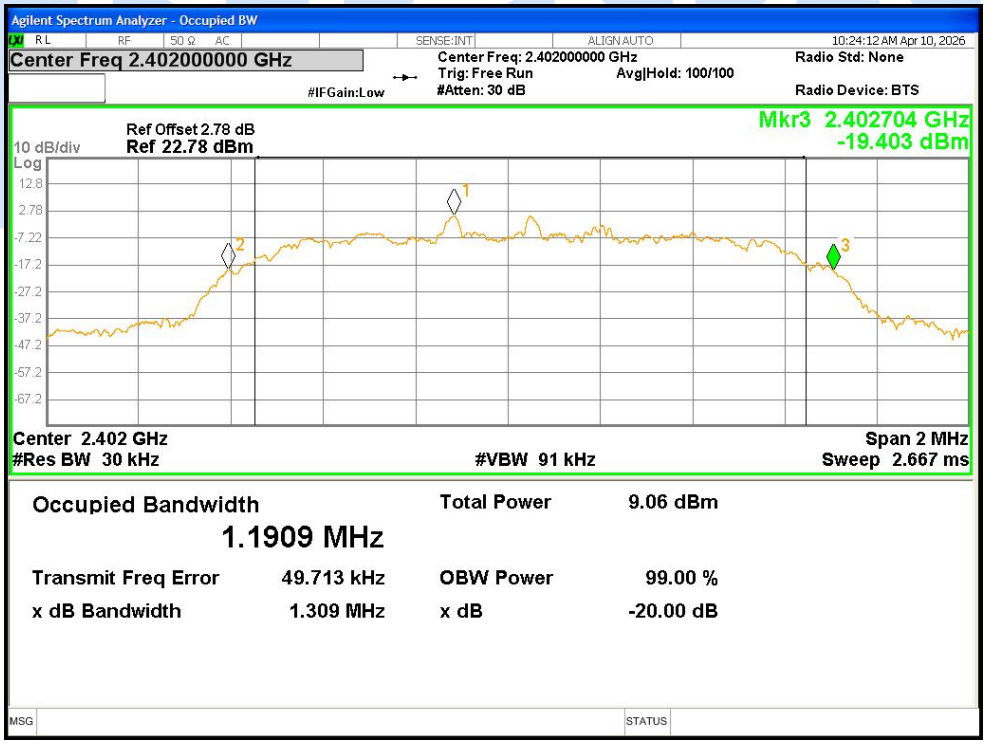
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



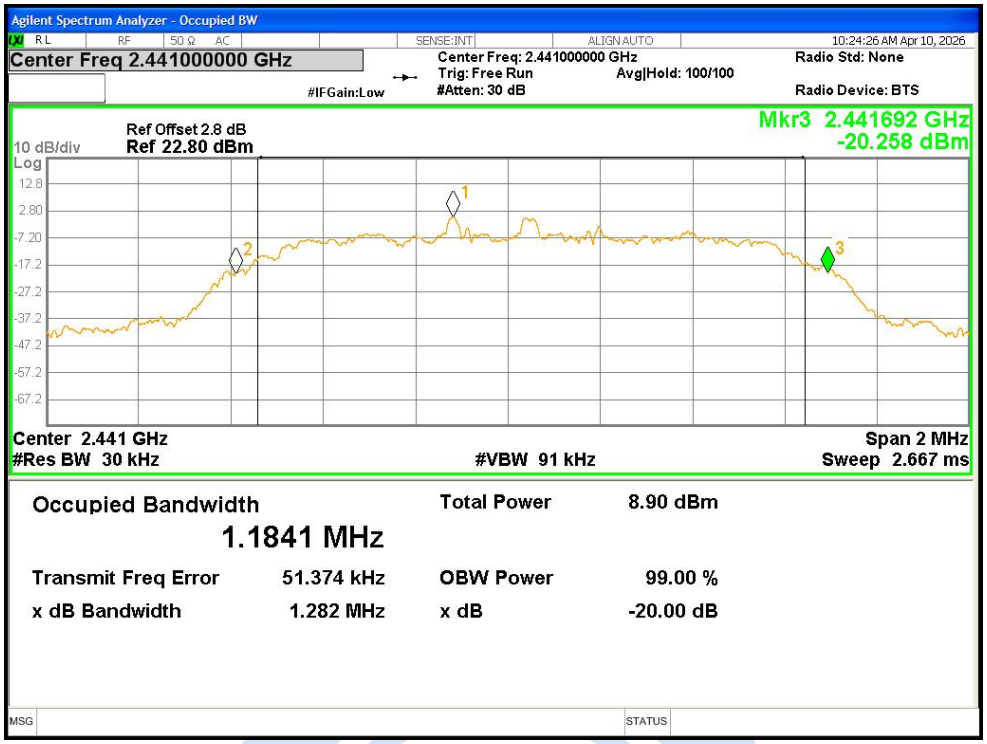
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



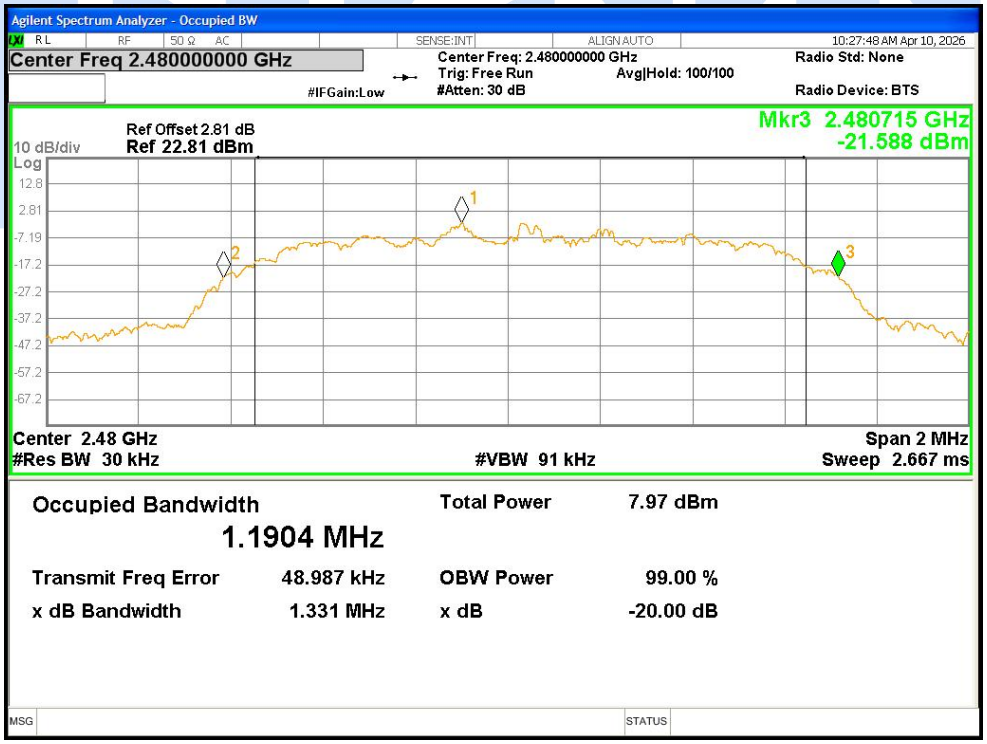
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



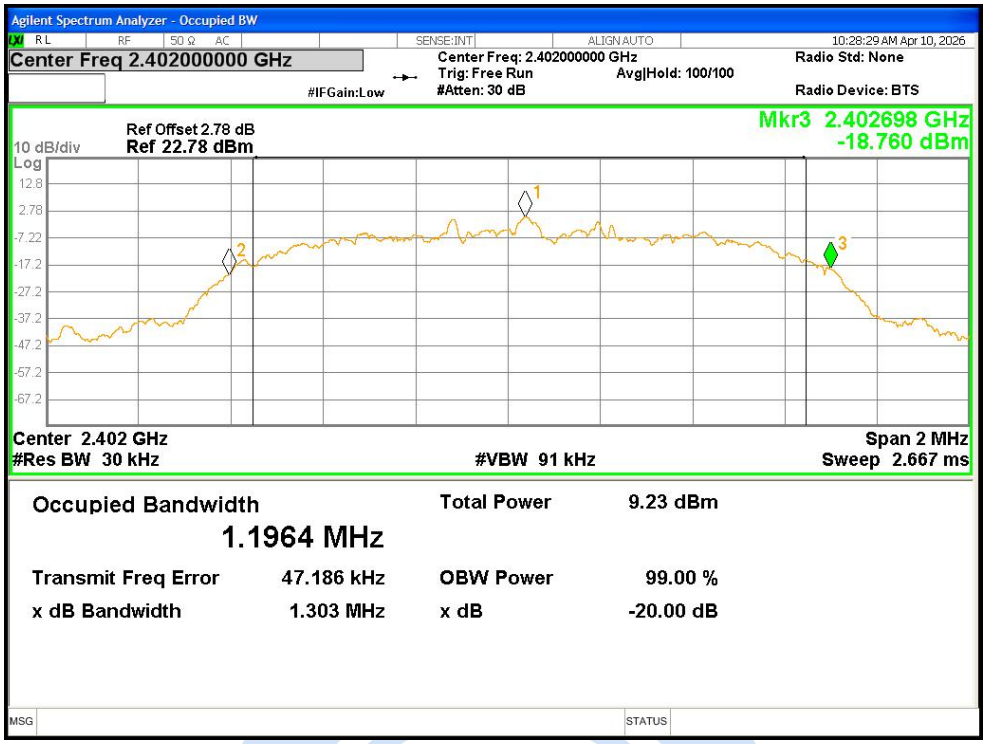
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



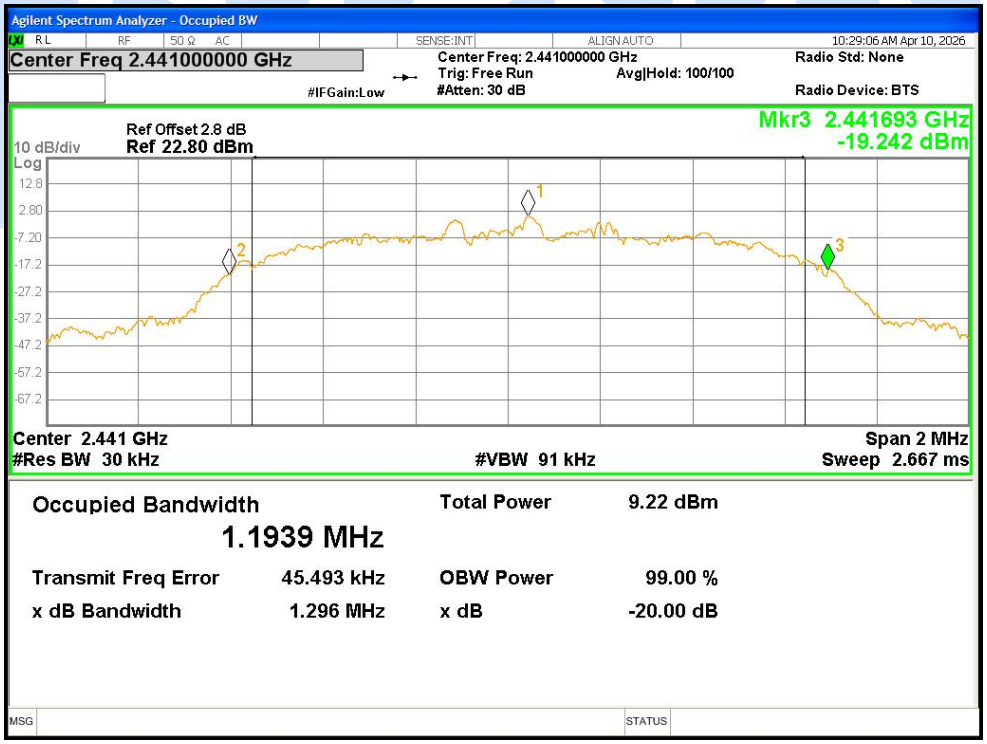
-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



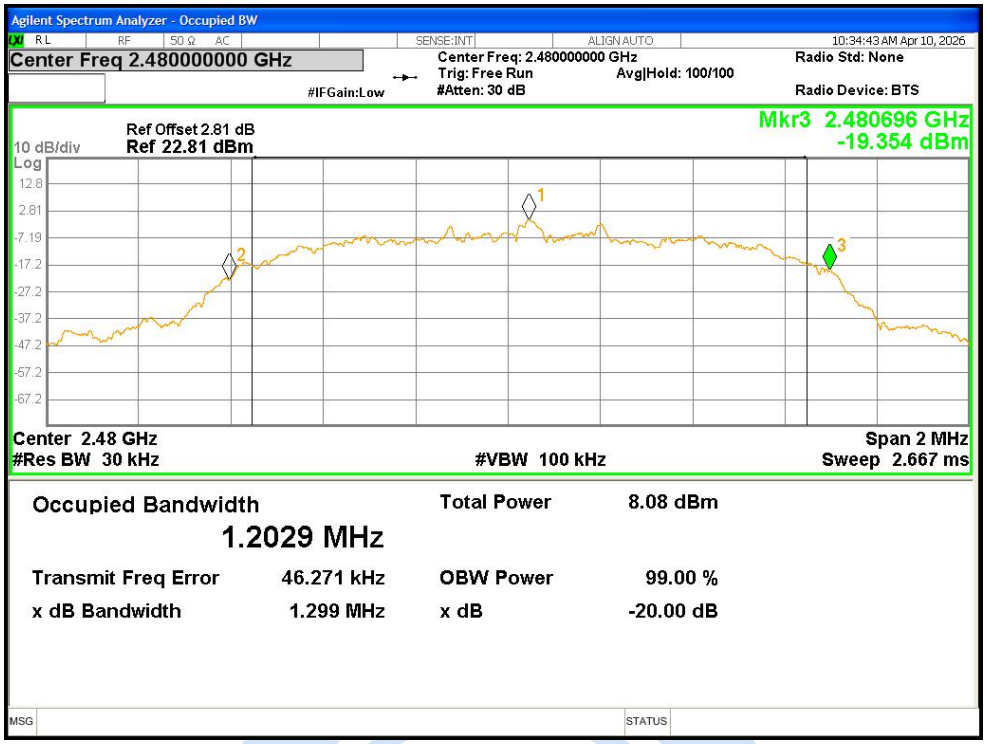
-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2480MHz Ant1

5. Antenna Requirement

According to the FCC Part 15 Paragraph 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. This product has an Internal Antenna fulfill the requirement of this section.

This product has an PCB antenna, and the maximum antenna gain is -0.58dBi, fulfill the requirement of this section.

6. Test Photographs

Please see Attachment BKC26041578DE-3.

7. Appendix I: Photos of the EUT

Please see Attachment BKC26041578DE-4 and BKC26041578DE-5.