Test Report

Application No.:	DNT2409100260R1603-02468
Applicant:	Collection Design B.V.
Address of Applicant:	Kingsfordweg 151, 1043GR Amsterdam
EUT Description:	Portable Speaker
Model No.:	Speaker M
Power Supply:	DC 5V/1A
Trade Mark:	STYLISTIC
Standards:	EN 300 328 V2.2.2
Date of Receipt:	2024/9/10
Date of Test:	2024/9/11 to 2024/9/20
Date of Issue:	2024/9/29
Test Result:	**PASS ***

Prepared By: Wayne.Lin (Testing Engineer)

Reviewed By: Pencils.Chen (Project Engineer)

Approved By: Jerse Zhan (Manager)

Note: If there is any objection to the results in this report, please submit a written inquiry to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp, and is issued by the company in accordance with the requirements of the "Conditions of Issuance of Test Reports" printed in the attached page. Unless otherwise stated, the results presented in this report only apply to the samples tested this time. Partial reproduction of this report is not allowed unless approved by the company in writing.

Dongguan DN Testing Co., Ltd.
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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V2.0	/	Sep.29, 2024	Valid	Original Report

1 Test Summary

Radio Spectrum Technical Requirement			
Item	**Method**	**Requirement**	**Result**
Geo-location capability	EN 300 328 V2.2.2	EN 300 328 V2.2.2	N/A

Radio Spectrum Matter Part			
Item	**Method**	**Requirement**	**Result**
RF Output Power	EN 300 328 V2.2.2 clause 5.4.2.2.1.2	EN 300 328 V2.2.2 Clause 4.3.1.2	Pass
Accumulated Transmit Time, Frequency Occupation and Hopping Sequence	EN 300 328 V2.2.2 clause 5.4.4.2.1	EN 300 328 V2.2.2 Clause 4.3.1.4	Pass
Hopping Frequency Separation	EN 300 328 V2.2.2 clause 5.4.5.2.1	EN 300 328 V2.2.2 Clause 4.3.1.5	Pass
Occupied Channel Bandwidth	EN 300 328 V2.2.2 clause 5.4.7.2.1	EN 300 328 V2.2.2Clause 4.3.1.8	Pass
Transmitter unwanted emissions in the out-of-band domain	EN 300 328 V2.2.2 clause 5.4.8.2.1	EN 300 328 V2.2.2 Clause 4.3.1.9	Pass
Transmitter unwanted emissions in the spurious domain	EN 300 328 V2.2.2 clause 5.4.9.2	EN 300 328 V2.2.2 Clause 4.3.1.10	Pass
Receiver spurious emissions	EN 300 328 V2.2.2 clause 5.4.10.2	EN 300 328 V2.2.2 Clause 4.3.1.11	Pass
Receiver Blocking	EN 300 328 V2.2.2 clause 5.4.11.2	EN 300 328 V2.2.2 Clause 4.3.1.12	Pass
Adaptivity	EN 300 328 V2.2.2 clause 5.4.6.2	EN 300 328 V2.2.2 Clause 4.3.1.7	N/A

Contents

1 Test Summary 3
2 General Information 5
2.1 Test Location 5
2.2 General Description of EUT 6
2.3 Test Environment 7
2.4 Channel List 7
2.5 Test Mode 8
2.6 Power Setting of Test Software 8
2.7 Description of Support Units 8
2.8 Test Facility 9
2.9 Measurement Uncertainty 9
2.10 Assistant equipment used for test 9
2.11 Equipment List 10
3 Radio Spectrum Technical Requirement 11
3.1 Geo-location capability 11
4 Radio Spectrum Matter Test Results 12
4.1 RF Output Power 12
4.2 Accumulated Transmit Time, Frequency Occupation and Hopping Sequence 13
4.3 Hopping Frequency Separation 15
4.4 Occupied Channel Bandwidth 17
4.5 Transmitter unwanted emissions in the out-of-band domain 18
4.6 Transmitter unwanted emissions in the spurious domain 20
4.7 Receiver spurious emissions 22
4.8 Receiver Blocking 24
4.9 Adaptivity 27
5 Appendix 29
Appendix A: RF Output Power 29
Appendix B: Accumulated Transmit Time, Frequency Occupation and Hopping Sequence 33
Appendix C: Hopping Frequency Separation 41
Appendix D: Occupied Channel Bandwidth 43
Appendix E Transmitter Unwanted Emissions In The Out-Of-BandDomain 46
Appendix F: Transmitter unwanted emissions in the spurious domain 49
Appendix G: Receiver spurious emissions 51
Appendix H: Receiver Blocking 53
6 Photographs 54
6.1 Test Setup 54
6.2 EUT Photos 55

2 General Information

2.1 Test Location

Company:	Dongguan DN Testing Co., Ltd
Address:	No. 1, West Fourth Street, South Xinfa Road, Wusha Liwu, Chang ’an Town, Dongguan City, Guangdong P.R.China
Test engineer:	Wayne Lin

2.2 General Description of EUT

Manufacturer:	Nowgo International Co.,Ltd
Address of Manufacturer:	1903, Building 2, Manjinghua Science and Technology Innovation Workshop, No.6 Songjiang Road, Shapu Community, Songgang Street, Baoan District, Shenzhen
EUT Description:	Portable Speaker
Test Model No.:	Speaker M
Additional Model(s):	/
Trade Mark:	STYLISTIC
Hardware Version:	V1.0
Software Version:	V1.0
Operation Frequency:	2402MHz to 2480MHz
Spectrum Spread Technology:	Frequency Hopping Spread Spectrum(FHSS)
Modulation Type:	GFSK, π/4-DQPSK, 8DPSK
Number of Channels:	79
Channel Spacing:	1MHz
Antenna Type:	PCB Antenna
Antenna Gain*:	☒ Provided by client
	-0.58dBi
Receiver Category:	☐ Category 1, ☒ Category 2, ☐ Category 3
RF Cable:	0.5dB(0.6~1GHz); 0.8dB(1.4~2GHz); 1.0dB(2.1~2.7GHz); 1.5dB(3~4GHz); 1.8dB(4.4~6GHz);

Note:

*Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, DNT is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.

*As above information is provided and confirmed by the applicant. DNT is not liable to the accuracy, suitability, reliability or/and integrity of the information.

2.3 Test Environment

Environment Parameter	101.0 kPa Selected Values During Tests	
Relative Humidity	44-60 % RH Ambient	
Value	Temperature(℃)	Voltage(V)
NTNV	22~25	DC 5V
LTNV	0	DC 5V
HTNV	35	DC 5V

Remark:
NV: Normal Voltage
NT: Normal Temperature
LT: Low Extreme Test Temperature
HT: High Extreme Test Temperature

2.4 Channel List

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

2.5 Test Mode

Combining all the rates, modulations, and packet types, the Pre-scans had been carried out. The worst case test mode was selected for the final test as listed below.

Test Item	Modulation Type	Operating Mode	Packet Type	Test Channel
RF Output Power	GFSK&π/4-DQPSK &8-DPSK	Hopping	DH5/2DH5 /3DH5	All Channel Hopping
Accumulated Transmit Time, Frequency Occupation and Hopping Sequence	GFSK&π/4-DQPSK &8-DPSK	Hopping	DH5/2DH5 /3DH5	All Channel Hopping
Hopping Frequency Separation	GFSK&π/4-DQPSK &8-DPSK	Hopping	DH5/2DH5 /3DH5	Low/High
Occupied Channel Bandwidth	GFSK&π/4-DQPSK &8-DPSK	Non Hopping	DH5/2DH5 /3DH5	Low/High
Transmitter Unwanted Emissions In The OOB Domain	GFSK&π/4-DQPSK &8-DPSK	Hopping	DH5/2DH5 /3DH5	All Channel Hopping
Transmitter Unwanted Emissions In The Spurious Domain	GFSK&π/4-DQPSK &8-DPSK	Non Hopping	DH5/2DH5 /3DH5	Low/ High
Receiver Spurious Emissions	GFSK&π/4-DQPSK &8-DPSK	Receive	DH5/2DH5 /3DH5	Low/ High
Receiver Blocking	GFSK	Normal Hopping	DH5	Low/ High

2.6 Power Setting of Test Software

Software Name	FCC_assist_1.0.2.2		
Frequency(MHz)	2402	2441	2480
GFSK Setting	10	10	10
π/4-DQPSK	10	10	10
8DPSK	10	10	10

2.7 Description of Support Units

The EUT has been tested as an independent unit.

2.8 Test Facility

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

Lab A:

• CNAS, China

Registration No. CNAS L6483

2.9 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	RF output power	± 1.24 dB
2	Power Spectral Density	±1.88 dB
3	Duty Cycle	±0.566 dB
4	Tx-sequence	±0.566 dB
5	Tx-gap	±0.566 dB
6	Medium Utilisation (MU) factor	±0.566 dB
7	Dwell time	±0.028%
8	Minimum Frequency Occupation	±0.028%
9	Hopping Sequence	±1.9%
10	Hopping Frequency Separation	±1.9%
11	Occupied Channel Bandwidth	±0.0196%
12	Transmitter unwanted emissions in the out-of-band domain	±1.328dB
13	Receiver spurious emissions	30MHz-1GHz:±0.746dB 1GHz-12.75GHz: ±1.328dB
Remark: The U_{lab} (lab Uncertainty) is less than $U_{cispr/ETSI}$ (CISPR/ETSI Uncertainty), so the test results – compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit; – non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.		

2.10 Assistant equipment used for test

Code	Equipment	Manufacturer	Model No.	Equipment No.
1	Computer	acer	N22C8	EMC notebook01

2.11 Equipment List

For Connect EUT Antenna Terminal Test					
Description	Manufacturer	Model	Serial Number	Cal date	Due date
Signal Generator	Keysight	N5181A-6G	MY48180415	2023-10-25	2024-10-24
Signal Generator	Keysight	N5182B	MY57300617	2023-10-25	2024-10-24
Power supply	Keysight	E3640A	ZB2022656	2023-10-25	2024-10-24
Radio Communication Tester	R&S	CMW500	105082	2023-10-25	2024-10-24
Spectrum Analyzer	Aglient	N9010A	MY52221458	2023-10-25	2024-10-24
BT/WIFI Test Software	Tonscend	JS1120 V3.1.83	NA	NA	NA
RF Control Unit	Tonscend	JS0806-2	22F8060581	NA	NA
temperature and humidity box	SCOTEK	SCD-C40-80PRO	6866682020008	2023-10-25	2024-10-24

Test Equipment for Radiated Emission					
Description	Manufacturer	Model	Serial Number	Cal Date	Due Date
Frequency analyser	Keysight	N9010A	MY52221458	2023-10-24	2024-10-23
Test Software	ETS-LINDGREN	TiLE-FULL	NA	NA	NA
RF Cable	ETS-LINDGREN	RFC-NMS-100-NMS-350-IN	NA	2023-10-24	2024-10-23
Log periodic antenna	ETS-LINDGREN	VULB 9168	01479	2023-10-24	2024-10-23
Horn Antenna	ETS-LINDGREN	3117	00252567	2023-10-24	2024-10-23
Double ridged waveguide antenna	ETS-LINDGREN	3116C	00251780	2023-10-24	2024-10-23
Pre-amplifier	S&B	BBV9743B	00427	2023-10-24	2024-10-23
Pre-amplifier	ETS-LINDGREN	3117-PA	252567	2023-10-24	2024-10-23
Pre-amplifier	ETS-LINDGREN	3116C-PA	251780	2023-10-24	2024-10-23

3 Radio Spectrum Technical Requirement

3.1 Geo-location capability

3.1.1 Test Requirement:

EN 300 328 Clause 4.3.1.13

Limit: This requirement only applies to equipment with geo-location capability as defined EN 300 328 in clause 4.3.1.13.2.

3.1.2 Conclusion

Standard Requirement:

The geographical location determined by the equipment as defined in clause below shall not be accessible to the user. Geo-location capability is a feature of the equipment to determine its geographical location with the purpose to configure itself according to the regulatory requirements applicable at the geographical location where it operates. The geo-location capability may be present in the equipment or in an external device (temporary) associated with the equipment operating at the same geographical location during the initial power up of the equipment. The geographical location may also be available in equipment already installed and operating at the same geographical location.

The applicant declares:

The product does not have the geo-location function.

4 Radio Spectrum Matter Test Results

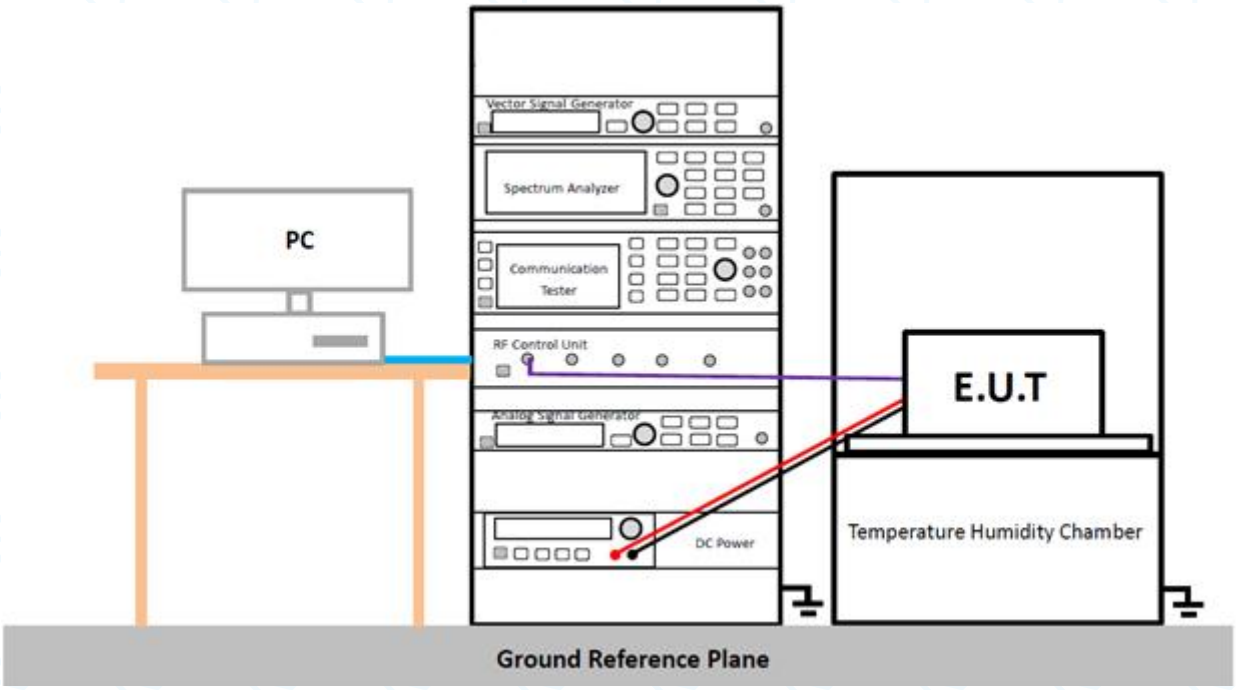
4.1 RF Output Power

Test Requirement:	EN 300 328 Clause 4.3.1.2
Test Method:	EN 300 328 V2.2.2 clause 5.4.2.2.1.2
Limit:	20dBm/(100mW) (e.i.r.p)

4.1.1 E.U.T. Operation

Operating Environment:					
Temperature:	0~35°C	Humidity:	47% RH	Atmospheric Pressure:	101.2 kPa
Test mode:					
a: TX_Hop mode_Keep the EUT in frequency hopping mode with GFSK modulation, π/4-DQPSK modulation, 8DPSK modulation.					
All modes have been tested and only the data of worst case is recorded in the report.					

4.1.2 Test Setup Diagram



4.1.3 Measurement Procedure and Data

a. Turn the EUT OFF and place it inside the environmental temperature chamber.

b. Connected antenna port of the EUT to the TS 1120 system.

c. Set the EUT transmit continuously with maximum output power in hopping mode.

d. The measurement procedure refer to clause 5.4.2.2.1.2 of ETSI EN300 328 V2.2.2.

e. Repeat above procedures until all modulation types were measured.

f. Repeat above procedures until normal environmental conditions and at the extremes of the operating temperature range were measured.

g. Record the results in the test report.

The detailed test data see: Appendix A

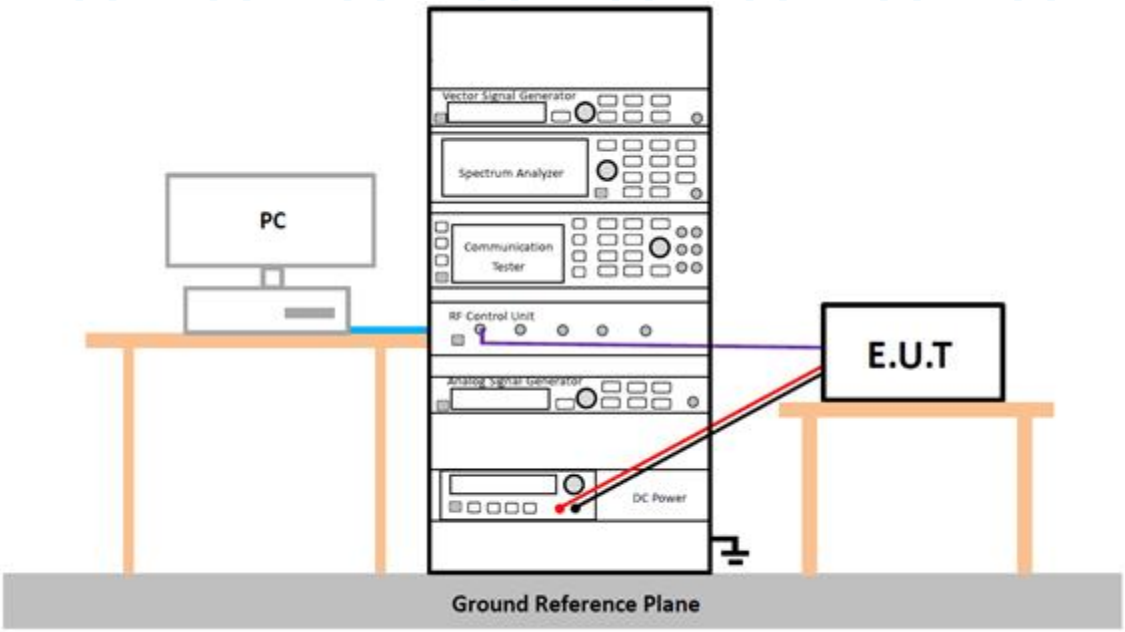
4.2 Accumulated Transmit Time, Frequency Occupation and Hopping Sequence

Test Requirement:	EN 300 328 Clause 4.3.1.4
Test Method:	EN 300 328 V2.2.2 clause 5.4.4.2.1
Limit:	**Non-adaptive frequency hopping equipment:** The Accumulated Transmit Time on any hopping frequency shall not be greater than 15 ms within any observation period of 15 ms multiplied by the minimum number of hopping frequencies (N) that have to be used. The hopping sequence(s) shall contain at least N hopping frequencies where N is either 5 or the result of 15 MHz divided by the minimum Hopping Frequency Separation in MHz, whichever is the greater. The minimum Hopping Frequency Separation for non-adaptive equipment is equal to the Occupied Channel Bandwidth with a minimum of 100 kHz. **Adaptive frequency hopping equipment:** Adaptive Frequency Hopping equipment shall be capable of operating over a minimum of 70 % of the band. The Accumulated Transmit Time on any hopping frequency shall not be greater than 400 ms within any observation period of 400 ms multiplied by the minimum number of hopping frequencies (N) that have to be used. The hopping sequence(s) shall contain at least N hopping frequencies at all times, where N is either 15 or the result of 15 MHz divided by the minimum Hopping Frequency Separation in MHz, whichever is the greater.

4.2.1 E.U.T. Operation

Operating Environment:					
Temperature:	23.5°C	Humidity:	47% RH	Atmospheric Pressure:	101.2 kPa
Test mode:					
a: TX_Hop mode_Keep the EUT in frequency hopping mode with GFSK modulation, π/4-DQPSK modulation, 8DPSK modulation.					
All modes have been tested and only the data of worst case is recorded in the report.					

4.2.2 Test Setup Diagram



4.2.3 Measurement Procedure and Data

a. Connected antenna port of the EUT to the TS 1120 system.
b. Set the EUT transmit continuously with maximum output power in hopping mode.
c. The measurement procedure refer to clause 5.4.4.2.1 of ETSI EN300 328 V2.2.2.
d. Repeat above procedures until all modulation types were measured.
e. Record the results in the test report.

The detailed test data see: Appendix B

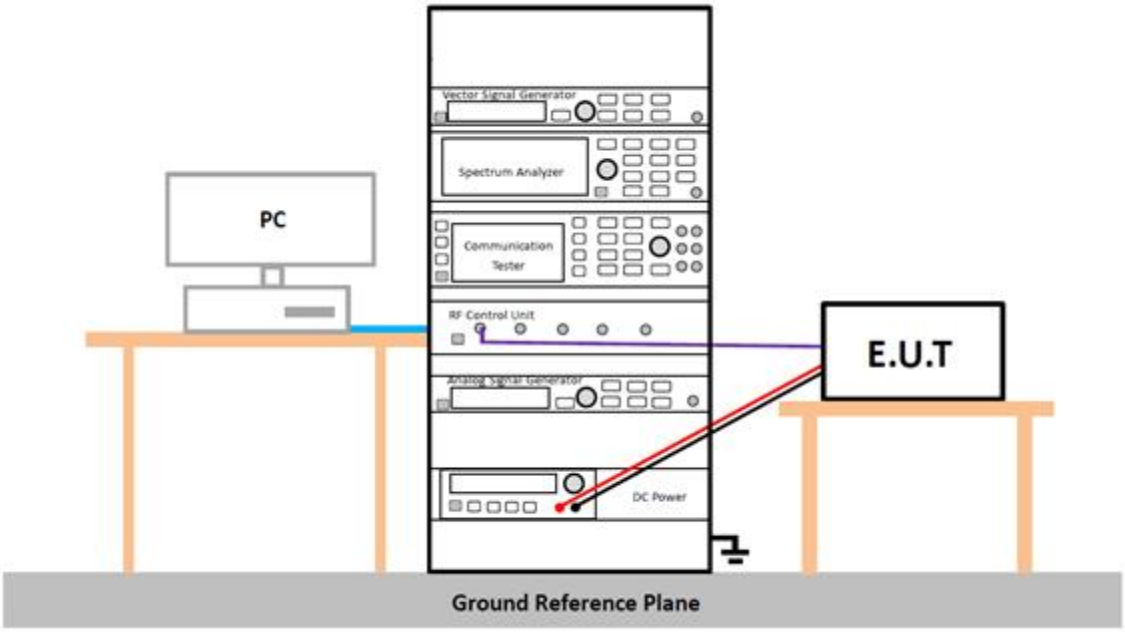
4.3 Hopping Frequency Separation

Test Requirement:	EN 300 328 Clause 4.3.1.5
Test Method:	EN 300 328 V2.2.2 clause 5.4.5.2.1
Limit:	**Non-adaptive frequency hopping equipment:** For non-adaptive Frequency Hopping equipment, the Hopping Frequency Separation shall be equal to or greater than the Occupied Channel Bandwidth, with a minimum separation of 100 kHz. For equipment with a maximum declared RF Output power level of less than 10 dBm e.i.r.p. or for non-adaptive Frequency Hopping equipment operating in a mode where the RF Output power is less than 10 dBm e.i.r.p. only the minimum Hopping Frequency Separation of 100 kHz applies. **Adaptive frequency hopping equipment:** For adaptive Frequency Hopping equipment, the minimum Hopping Frequency Separation shall be 100 kHz. Adaptive Frequency Hopping equipment that switched to a non-adaptive mode for one or more hopping frequencies because interference was detected on these hopping frequencies with a level above the threshold level, is allowed to continue to operate with a minimum Hopping Frequency Separation of 100 kHz as long as the interference remains present on these hopping frequencies. The equipment shall continue to operate in an adaptive mode on other hopping frequencies. Adaptive Frequency Hopping equipment which decided to operate in a non-adaptive mode on one or more hopping frequencies without the presence of interference, shall comply with the limit for Hopping Frequency Separation for non-adaptive equipment for these hopping frequencies as well as with all other requirements applicable to non-adaptive frequency hopping equipment.

4.3.1 E.U.T. Operation

Operating Environment:					
Temperature:	23.5°C	Humidity:	47% RH	Atmospheric Pressure:	101.2 kPa
Test mode:					
a: TX_Hop mode_Keep the EUT in frequency hopping mode with GFSK modulation, π/4-DQPSK modulation, 8DPSK modulation.					
All modes have been tested and only the data of worst case is recorded in the report.					

4.3.2 Test Setup Diagram



4.3.3 Measurement Procedure and Data

a. Connected antenna port of the EUT to the TS 1120 system.
b. Set the EUT transmit continuously with maximum output power in hopping mode.
c. The measurement procedure refer to clause 5.4.5.2.1.3 of ETSI EN300 328 V2.2.2.
d. Repeat above procedures until all modulation types were measured.
e. Record the results in the test report.

The detailed test data see: Appendix C

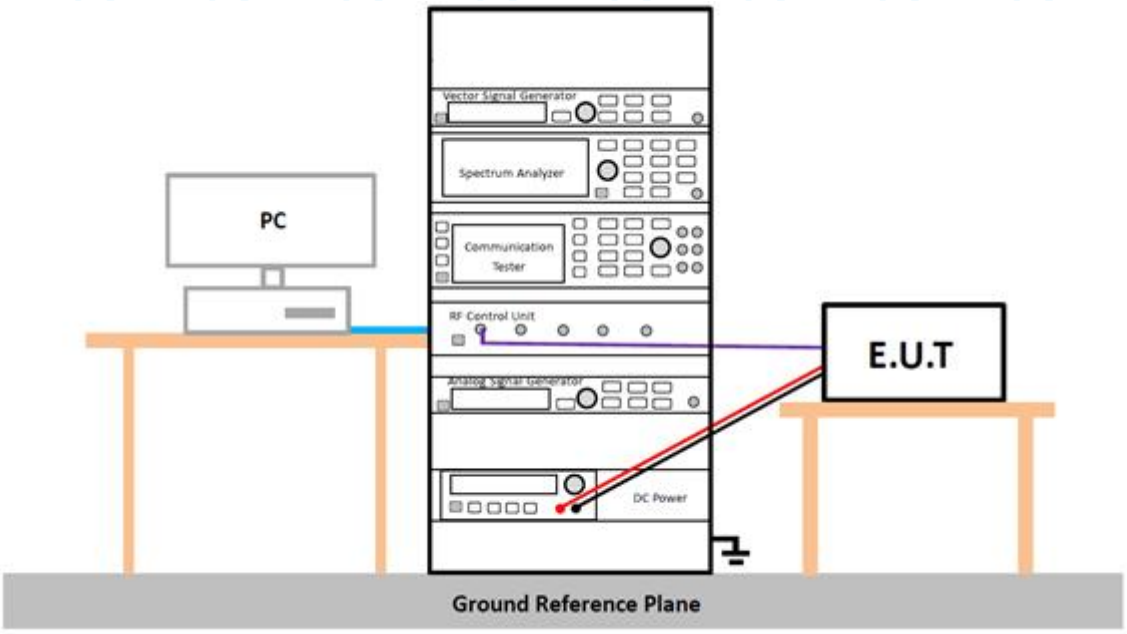
4.4 Occupied Channel Bandwidth

Test Requirement:	EN 300 328 Clause 4.3.1.8
Test Method:	EN 300 328 V2.2.2 clause 5.4.7.2.1
Limit:	The Occupied Channel Bandwidth shall fall completely within the band given in clause 1. For non-adaptive Frequency Hopping equipment with e.i.r.p. greater than 10 dBm, the Occupied Channel Bandwidth for every occupied hopping frequency shall be equal to or less than the Nominal Channel Bandwidth declared by the manufacturer. See clause 5.4.1 j). This declared value shall not be greater than 5 MHz. The Occupied Channel Bandwidth shall fall completely within the band given in table 1. In addition, for non-adaptive equipment using wide band modulations other than FHSS and with e.i.r.p. greater than 10 dBm, the occupied channel bandwidth shall be less than 20 MHz.

4.4.1 E.U.T. Operation

Operating Environment:					
Temperature:	23.5°C	Humidity:	47% RH	Atmospheric Pressure:	101.2 kPa
Test mode:					
a: TX_non-Hop mode_Keep the EUT in continuously transmitting mode with GFSK modulation, π/4-DQPSK modulation, 8DPSK modulation					
All modes have been tested and only the data of worst case is recorded in the report.					

4.4.2 Test Setup Diagram



4.4.3 Measurement Procedure and Data

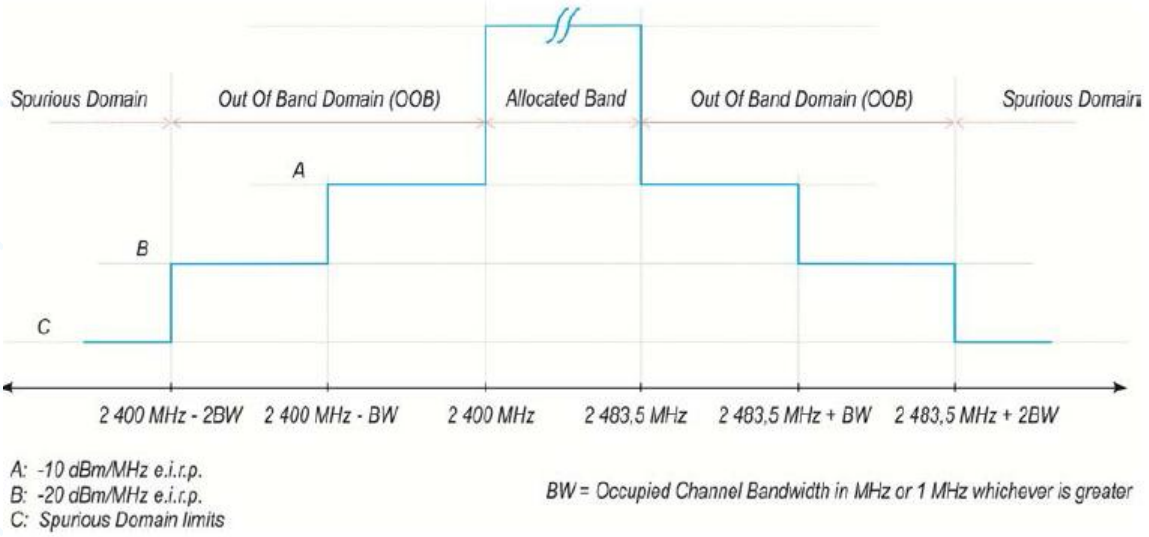
a. Connected antenna port of the EUT to the TS 1120 system.
b. Set the EUT transmit continuously with maximum output power in non hopping mode.
c. The measurement procedure refer to clause 5.4.7.2.1 of ETSI EN300 328 V2.2.2.
d. Repeat above procedures until low channel and high channel were measured.
e. Repeat above procedures until all modulation types were measured.
f · Record the results in the test report.

The detailed test data see: Appendix D

4.5 Transmitter unwanted emissions in the out-of-band domain

Test Requirement:	EN 300 328 Clause 4.3.1.9
Test Method:	EN 300 328 V2.2.2 clause 5.4.8.2.1

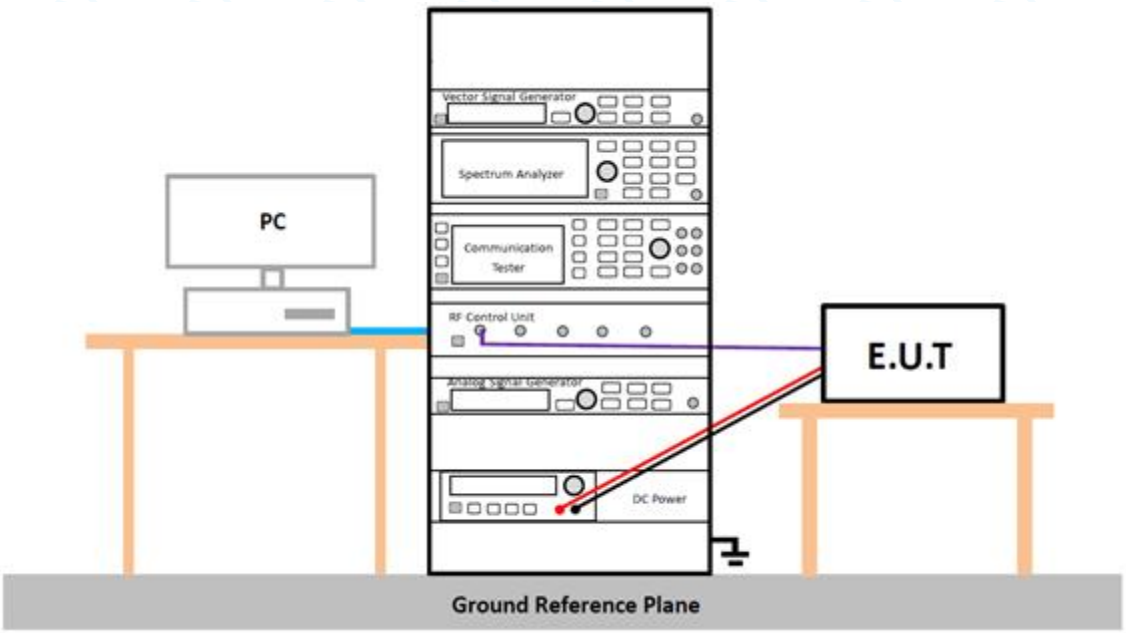
Limit:



4.5.1 E.U.T. Operation

Operating Environment:					
Temperature:	23.5°C	Humidity:	47% RH	Atmospheric Pressure:	101.2 kPa
Test mode:					
a: TX_non-Hop mode_Keep the EUT in continuously transmitting mode with GFSK modulation, π/4-DQPSK modulation, 8DPSK modulation					
All modes have been tested and only the data of worst case is recorded in the report.					

4.5.2 Test Setup Diagram



4.5.3 Measurement Procedure and Data

a. Connected antenna port of the EUT to the TS 1120 system.
b. Set the EUT transmit continuously with maximum output power in hopping mode.
c. The measurement procedure refer to clause 5.4.8.2.1 of ETSI EN300 328 V2.2.2.
d. Repeat above procedures until low channel and high channel were measured.
e. Repeat above procedures until all modulation types were measured.
f. Record the results in the test report.

The detailed test data see: Appendix E

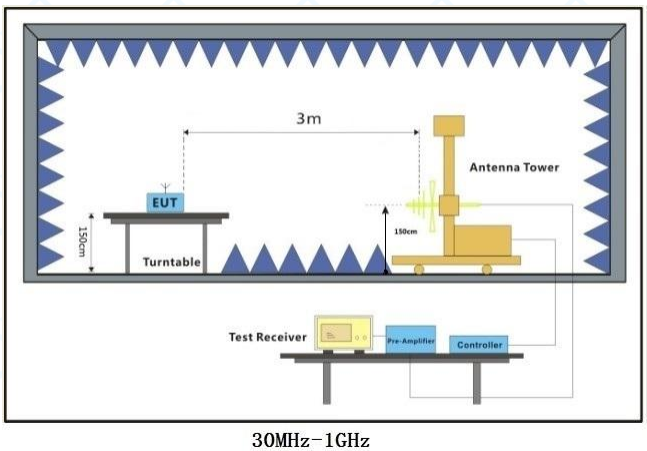
4.6 Transmitter unwanted emissions in the spurious domain

Test Requirement:	EN 300 328 Clause 4.3.1.10		
Test Method:	EN 300 328 V2.2.2 clause 5.4.9.2		
Measurement Distance:	3m		
Limit:	**Table 1: Transmitter limits for spurious emissions**		
	Frequency range	**Maximum power, e.r.p. (≤ 1 GHz) e.i.r.p. (> 1 GHz)**	**Bandwidth**
	30 MHz to 47 MHz	-36dBm	100 kHz
	47 MHz to 74 MHz	-54dBm	100 kHz
	74 MHz to 87,5 MHz	-36dBm	100 kHz
	87,5 MHz to 118 MHz	-54dBm	100 kHz
	118 MHz to 174 MHz	-36dBm	100 kHz
	174 MHz to 230 MHz	-54dBm	100 kHz
	230 MHz to 470 MHz	-36dBm	100 kHz
	470 MHz to 694 MHz	-54dBm	100 kHz
	694 MHz to 1 GHz	-36dBm	100 kHz
	1 GHz to 12,75 GHz	-30dBm	1MHz

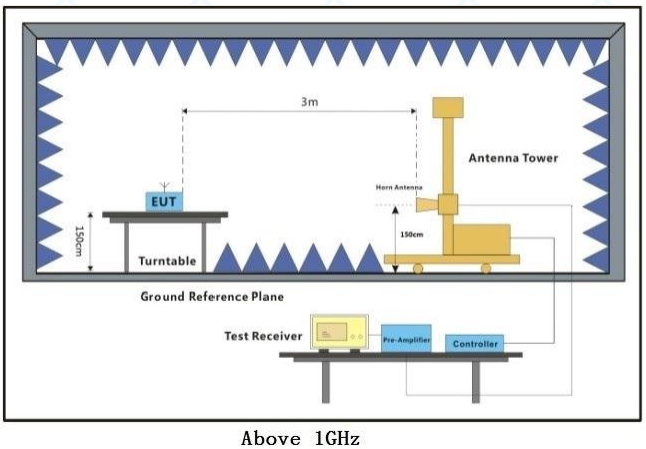
4.6.1 E.U.T. Operation

Operating Environment:					
Temperature:	23.5°C	Humidity:	47% RH	Atmospheric Pressure:	101.2 kPa
Test mode:					
a: TX_non-Hop mode_Keep the EUT in continuously transmitting mode with GFSK modulation, π/4-DQPSK modulation, 8DPSK modulation					
All modes have been tested and only the data of worst case is recorded in the report.					

4.6.2 Test Setup Diagram



30MHz-1GHz



Above 1GHz

4.6.3 Measurement Procedure and Data

1. The measurement procedure follows the clause 5.4.9.2 of the EN 300 328 V2.2.2
2. The EUT was placed on a turntable with 1.5m height.
3. The test distance between the receiving antenna and the EUT is 3meter below 1GHz frequency range, and 3 meter which is in far field test condition for measured frequency above 1GHz, while the receiving (test) antenna scanning from 1m to 4m height in an OATS or SAR (or in a FAR the height scan is omitted).
4. Set EUT in continuous transmitting with maximum output power.

5. The table was rotated from 0 to 360 degree to search the highest radiated emission.
6. Repeating step 2 and 5 for each polarization and channel to find the worst emission level.
7. The results obtained are compared to the limits in order to prove compliance with the requirement.

Remark: General,substitution method is used for calibration. For test sites with a fixed setup of the measurement antenna(s) and a reproducible positioning of the UUT, correction values from a verified site calibration may be used alternatively. So using Pre-Test Site Calibration Correction Factor to Determine EUT Emission Power. The system correction factor for each frequency in dB using the following equation:
Correction Factor [CF] = Pref [dBm] – Prec [dBm]

The detailed test data see: Appendix F

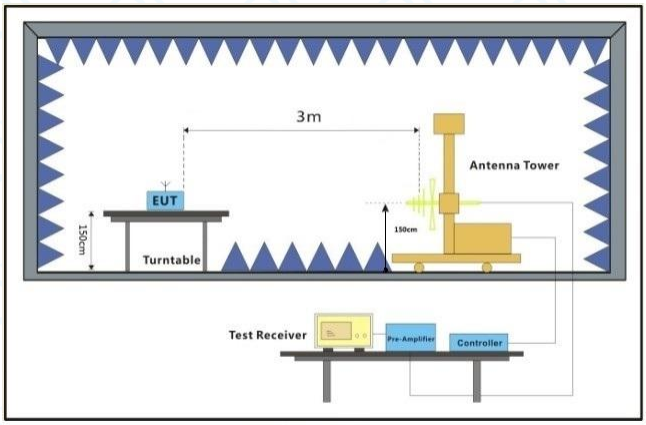
4.7 Receiver spurious emissions

Test Requirement:	EN 300 328 Clause 4.3.1.11	
Test Method:	EN 300 328 V2.2.2 clause 5.4.10.2	
Measurement Distance:	3m	
Limit:	The spurious emissions of the receiver shall not exceed the values in tables in the indicated bands:	
	Frequency Range	**Limit**
	30MHz to 1GHz	-57dBm
	Above 1GHz	-47dBm

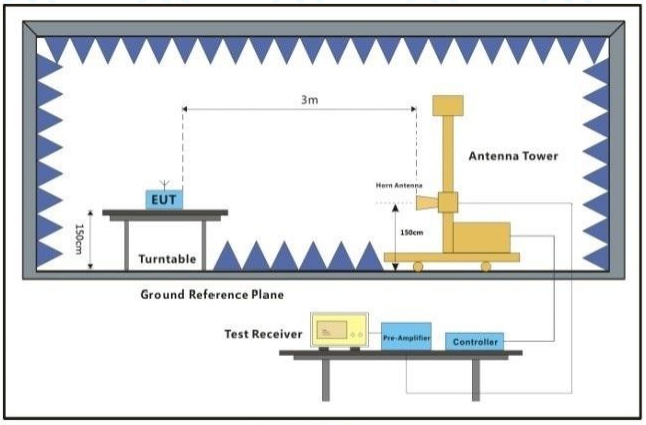
4.7.1 E.U.T. Operation

Operating Environment:					
Temperature:	23.5°C	Humidity:	47% RH	Atmospheric Pressure:	101.2 kPa
Test mode:					
a: RX mode_Keep the EUT in receiving mode with GFSK modulation, π/4-DQPSK modulation, 8DPSK modulation.					
All modes have been tested and only the data of worst case is recorded in the report.					

4.7.2 Test Setup Diagram



30MHz-1GHz



Above 1GHz

4.7.3 Measurement Procedure and Data

1. The measurement procedure follows the clause 5.4.10.2 of the EN 300 328 V2.2.2
2. The EUT was placed on a turntable with 1.5m height.
3. The test distance between the receiving antenna and the EUT is 3 meter below 1GHz frequency range, and 3 meter which is in far field test condition for measured frequency above 1GHz, while the receiving (test) antenna scanning from 1m to 4m height in an OATS or SAR (or in a FAR the height scan is omitted).
4. Set EUT in receiver mode.
5. The table was rotated from 0 to 360 degree to search the highest radiated emission.
6. Repeating step 2 and 5 for each polarization and channel to find the worst emission level.
7. The results obtained are compared to the limits in order to prove compliance with the requirement.

Remark: General,substitution method is used for calibration. For test sites with a fixed setup of the measurement antenna(s) and a reproducible positioning of the UUT, correction values from a verified site calibration may be used alternatively. So using Pre-Test Site Calibration Correction Factor to Determine EUT Emission Power. The system correction factor for each frequency in dB using the following equation:
Correction Factor [CF] = Pref [dBm] – Prec [dBm]

The detailed test data see: Appendix G

4.8 Receiver Blocking

Test Requirement:	EN 300 328 Clause 4.3.1.12
Test Method:	EN 300 328 V2.2.2 clause 5.4.11.2

Limit:

For equipment that supports a PER or FER test to be performed, the minimum performance criterion shall be a PER or FER less than or equal to 10 %.

For equipment that does not support a PER or a FER test to be performed, the minimum performance criterion shall be no loss of the wireless transmission function needed for the intended use of the equipment.

The blocking levels at specified frequency offsets shall be equal to or greater than the limits defined for the applicable receiver category provided below table.

Receiver Blocking parameters for Receiver Category 1 equipment			
Wanted signal mean power from companion device (dBm) (see notes 1 and 4)	**Blocking signal frequency (MHz)**	**Blocking signal power (dBm) (see note 4)**	**Type of blocking signal**
(-133 dBm + 10 × log10(OCBW)) or -68 dBm whichever is less (see note 2)	2380 2504	-34	CW
(-139 dBm + 10 × log10(OCBW)) or -74 dBm whichever is less (see note 3)	2 300 2 330 2 360 2 524 2 584 2 674		
NOTE 1: OCBW is in Hz. NOTE 2: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to Pmin + 26 dB where Pmin is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal. NOTE 3: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to Pmin + 20 dB where Pmin is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal. NOTE 4: The level specified is the level at the UUT receiver input assuming a 0 dBi antenna assembly gain. In case of conducted measurements, this level has to be corrected for the (in-band) antenna assembly gain (G). In case of radiated measurements, this level is equivalent to a power flux density (PFD) in front of the UUT antenna with the UUT being configured/positioned as recorded in clause 5.4.3.2.2.			

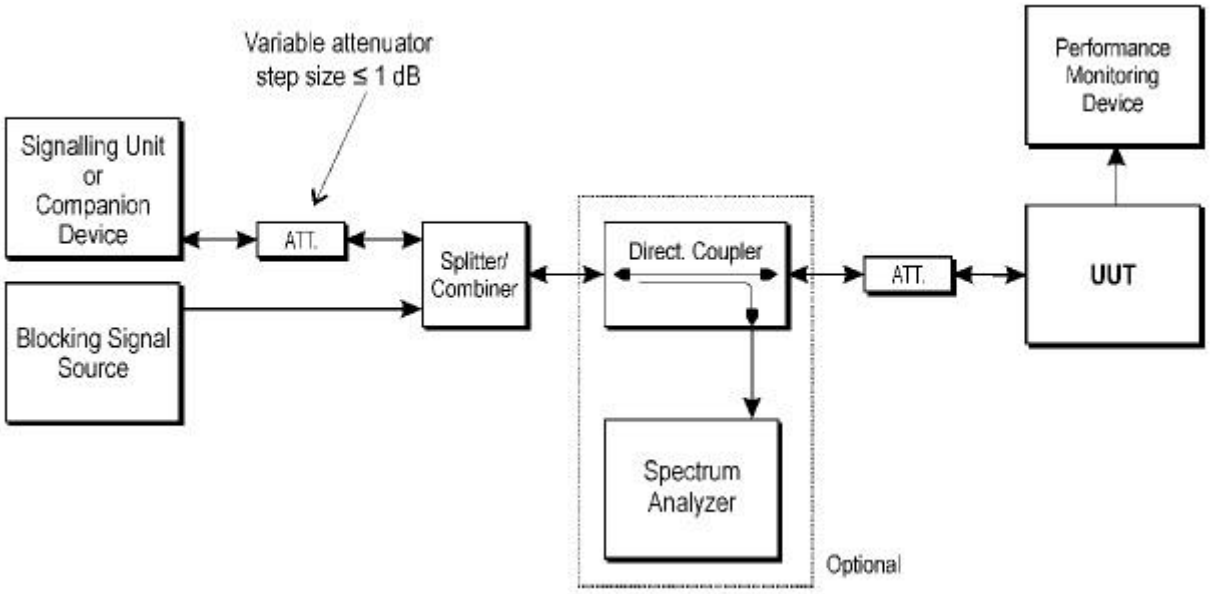
Receiver Blocking parameters for Receiver Category 2 equipment			
Wanted signal mean power from companion device (dBm) (see notes 1 and 3)	**Blocking signal frequency (MHz)**	**Blocking signal power (dBm) (see note 3)**	**Type of blocking signal**
(-139 dBm + 10 × log10(OCBW) + 10 dB) or (-74 dBm + 10 dB) whichever is less (see note 2)	2 380 2 504 2 300 2 584	-34	CW
NOTE 1: OCBW is in Hz. NOTE 2: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to Pmin + 26 dB where Pmin is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal. NOTE 3: The level specified is the level at the UUT receiver input assuming a 0 dBi antenna assembly gain. In case of conducted measurements, this level has to be corrected for the (in-band) antenna assembly gain (G). In case of radiated measurements, this level is equivalent to a power flux density (PFD) in front of the UUT antennawith the UUT being configured/positioned as recorded in clause 5.4.3.2.2.			

Receiver Blocking parameters for Receiver Category 3 equipment			
Wanted signal mean power from companion device (dBm) (see notes 1 and 3)	**Blocking signal frequency (MHz)**	**Blocking signal power (dBm) (see note 3)**	**Type of blocking signal**
(-139 dBm + 10 × log10(OCBW) + 20 dB) or (-74 dBm + 20 dB) whichever is less (see note 2)	2 380 2 504 2 300 2 584	-34	CW
NOTE 1: OCBW is in Hz. NOTE 2: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to Pmin + 30 dB where Pmin is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal. NOTE 3: The level specified is the level at the UUT receiver input assuming a 0 dBi antenna assembly gain. In case of conducted measurements, this level has to be corrected for the (in-band) antenna assembly gain (G). In case of radiated measurements, this level is equivalent to a power flux density (PFD) in front of the UUT antennawith the UUT being configured/positioned as recorded in clause 5.4.3.2.2.			

4.8.1 E.U.T. Operation

Operating Environment:					
Temperature:	23.5°C	Humidity:	47% RH	Atmospheric Pressure:	101.2 kPa
Test mode:					
Normal operating_Keep the EUT communication with the companion device.					

4.8.2 Test Setup Diagram



4.8.3 Measurement Procedure and Data

a. Connected antenna port of the EUT to the TS 1120 system.
b. The measurement procedure refer to clause 5.4.11.2 of ETSI EN300 328 V2.2.2.
c. Repeat step b with the EUT operating at the lowest and highest channel on normal mode,record the result.

The detailed test data see: Appendix H

4.9 Adaptivity

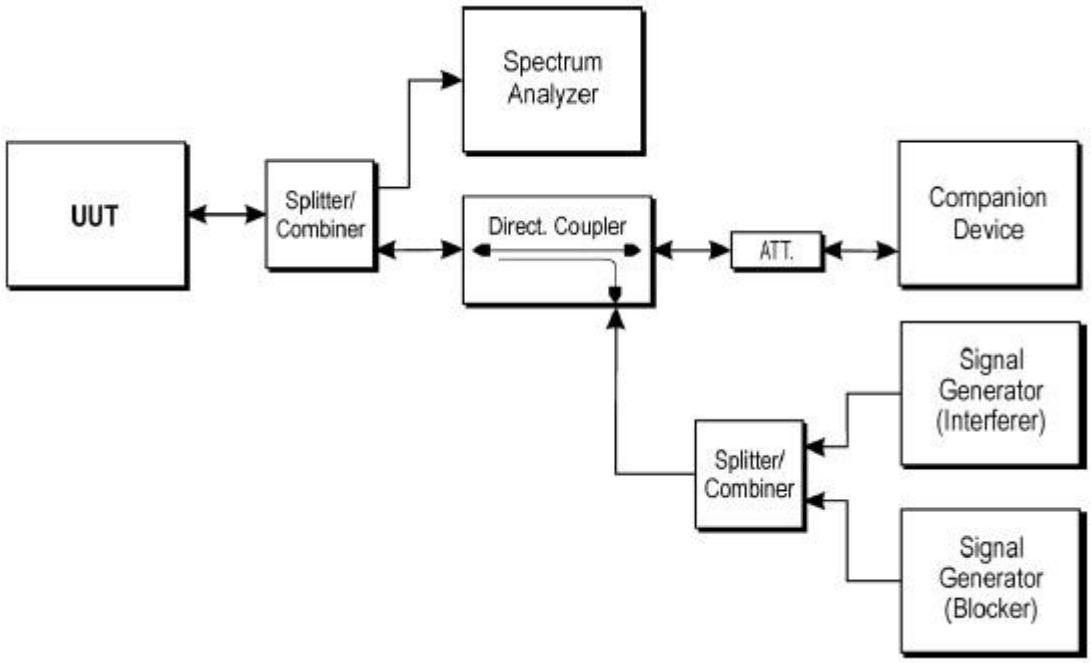
Test Requirement:	EN 300 328 Clause 4.3.1.7
Test Method:	EN 300 328 V2.2.2 clause 5.4.6.2

Adaptive Type	Limit
Adaptive Frequency Hopping using LBT based DAA	The CCA observation time shall be not less than 0,2 % of the Channel Occupancy Time with a minimum of 18 µs.
	The Channel Occupancy Time for a given hopping frequency, which starts immediately after a successful CCA, shall be less than 60 ms followed by an Idle Period of minimum 5 % of the Channel Occupancy Time with a minimum of 100 µs.
	For LBT based adaptive frequency hopping equipment with a dwell time < 60 ms, the maximum Channel Occupancy Time is limited by the dwell time.
Adaptive Frequency Hopping using other forms of DAA (non-LBT based)	The hopping frequency shall remain unavailable for a minimum time equal to 1 second or 5 times the actual number of hopping frequencies in the current (adapted) channel map used by the equipment, multiplied with the Channel Occupancy Time whichever is greater.
	The Channel Occupancy Time for a given hopping frequency shall be less than 40 ms. For equipment using a dwell time > 40 ms that wants to have other transmissions during the same hop (dwell time) an Idle Period (no transmissions) of minimum 5 % of the Channel Occupancy Period with a minimum of 100 µs shall be implemented.
	For non-LBT based frequency hopping equipment with a dwell time < 40 ms, the maximum Channel Occupancy Time may be non-contiguous, i.e. spread over a number of hopping sequences (equal to 40 ms divided by the dwell time [ms]).
Short Control Signalling Transmissions	If implemented, Short Control Signalling Transmissions shall have a maximum TxOn / (TxOn + TxOff) ratio of 10 % within any observation period of 50 ms or within an observation period equal to the dwell time, whichever is less.
Non-LBT based Detect and Avoid	The Channel Occupancy Time shall be less than 40 ms. Each such transmission sequence shall be followed by an Idle Period (no transmissions) of minimum 5 % of the Channel Occupancy Time with a minimum of 100 µs.
LBT based Detect and Avoid (FBE)	The equipment shall observe the operating channel for the duration of the CCA observation time which shall be not less than 18 µs.
	The Channel Occupancy Time shall be in the range 1 ms to 10 ms followed by an Idle Period of at least 5 % of the Channel Occupancy Time used in the equipment for the current Fixed Frame Period.
	The threshold level (TL) may be corrected for the (receive) antenna assembly gain (G); however, beamforming gain (Y) shall not be taken into account. For power levels less than 20 dBm e.i.r.p. the CCA threshold level may be relaxed to: TL = -70 dBm/MHz + 10 × log10 (100 mW / Pout) (Pout in mW e.i.r.p.)
LBT based Detect and Avoid (LBE)	The equipment shall observe the operating channel for the duration of the CCA observation time which shall be not less than 18 µs.
	This Channel Occupancy Time shall be less than 13 ms
	The threshold level (TL) may be corrected for the (receive) antenna assembly gain (G); however, beamforming gain (Y) shall not be taken into account. For power levels less than 20 dBm e.i.r.p. the CCA threshold level may be relaxed to: TL = -70 dBm/MHz + 10 × log10 (100 mW / Pout) (Pout in mW e.i.r.p.)

4.9.1 E.U.T. Operation

Operating Environment:					
Temperature:	23.5°C	Humidity:	47% RH	Atmospheric Pressure:	101.2 kPa
Test mode:					
Normal operating_Keep the EUT communication with the companion device.					

4.9.2 Test Setup Diagram



4.9.3 Measurement Procedure and Data

This requirement does not apply for FHSS equipment with a maximum declared RF Output power level of less than 10dBm e.i.r.p. or for FHSS equipment when operating in a mode where the RF Output power is less than 10 dBm e.i.r.p

5 Appendix

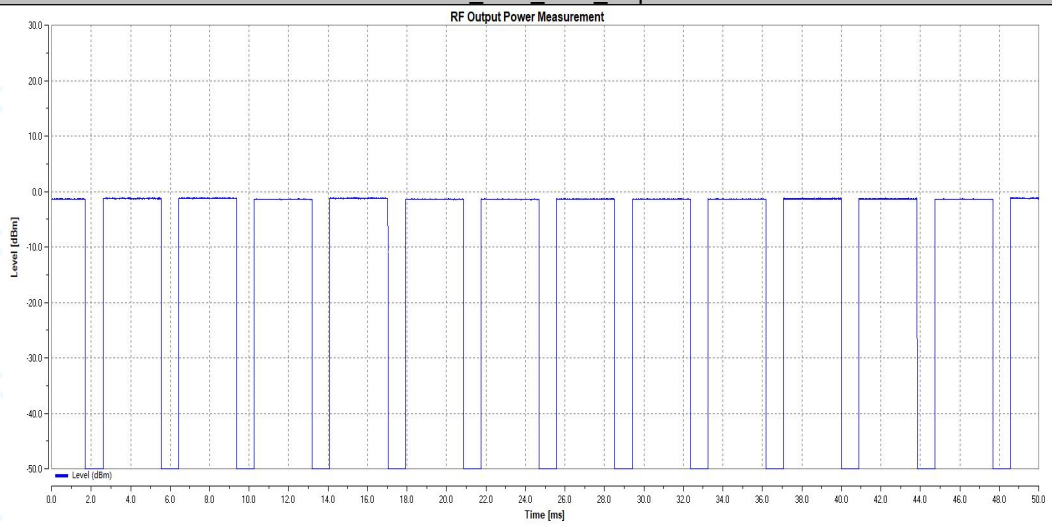
Appendix A: RF Output Power

Test Result

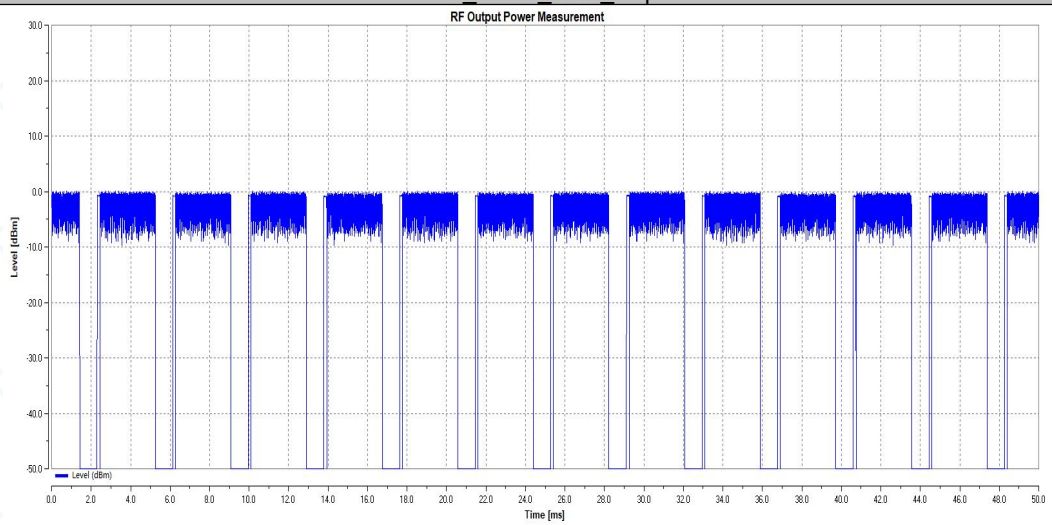
Test Condition	Test Mode	Antenna	Freq (MHz)	Burst Power [dBm]	Gain [dBi]	EIRP [dBm]	Limit [dBm]	Verdict
NTNV	DH5	Ant1	Hop	-1.17	-0.58	-1.75	20	PASS
	2DH5	Ant1	Hop	-2.15	-0.58	-2.73	20	PASS
	3DH5	Ant1	Hop	-1.58	-0.58	-2.16	20	PASS
LTNV	DH5	Ant1	Hop	-1.22	-0.58	-1.8	20	PASS
	2DH5	Ant1	Hop	-2.16	-0.58	-2.74	20	PASS
	3DH5	Ant1	Hop	-1.57	-0.58	-2.15	20	PASS
HTNV	DH5	Ant1	Hop	-1.18	-0.58	-1.76	20	PASS
	2DH5	Ant1	Hop	-2.16	-0.58	-2.74	20	PASS
	3DH5	Ant1	Hop	-1.54	-0.58	-2.12	20	PASS

Test Graphs

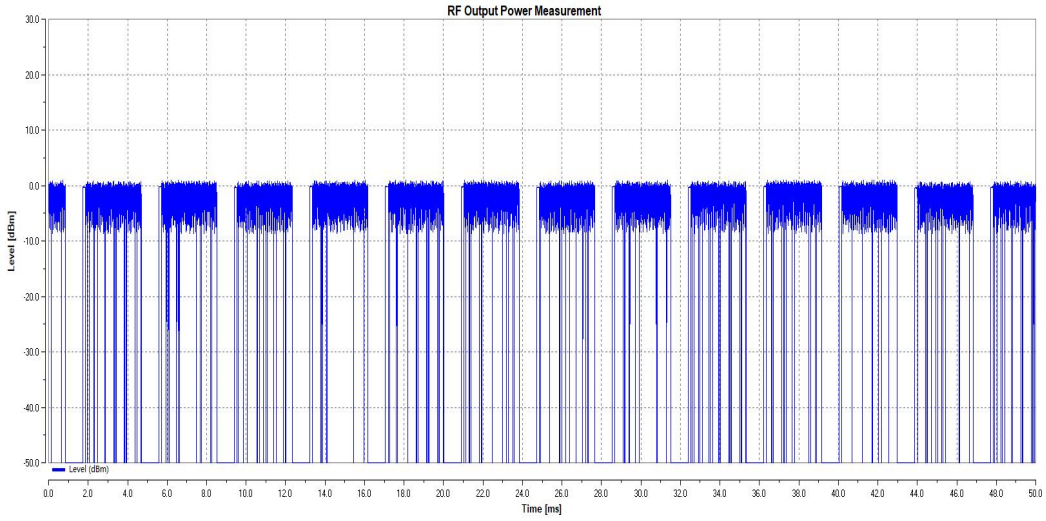
NTNV_DH5_Ant1_Hop



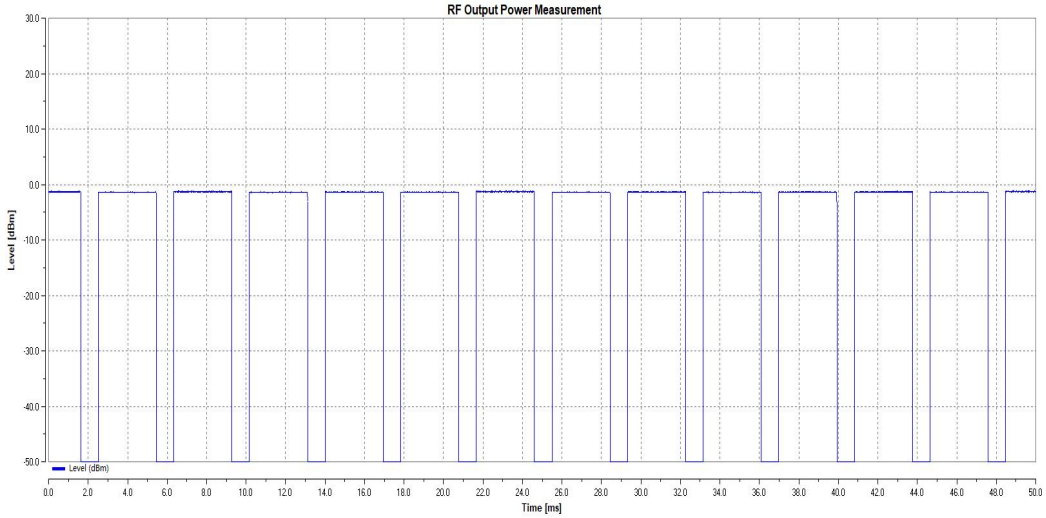
NTNV_2DH5_Ant1_Hop



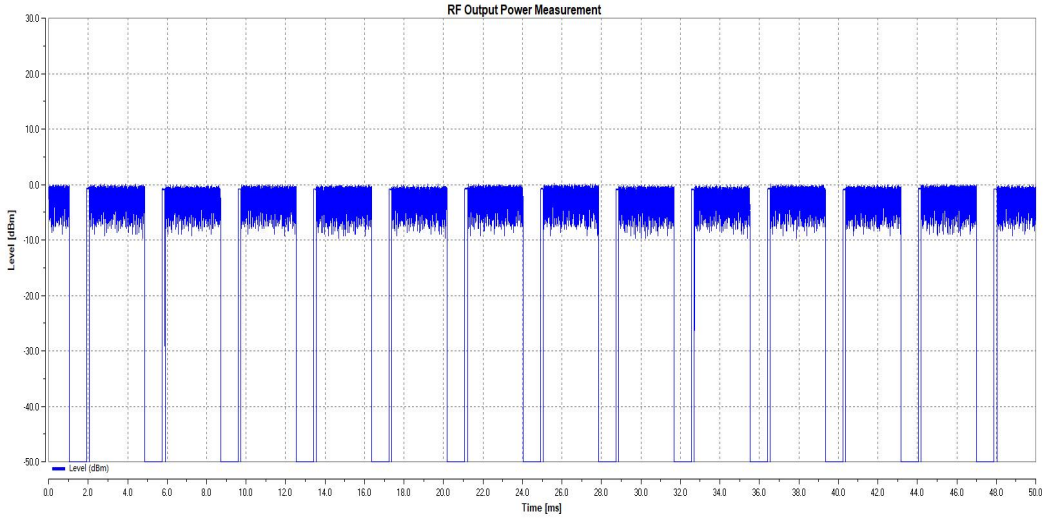
NTNV_3DH5_Ant1_Hop



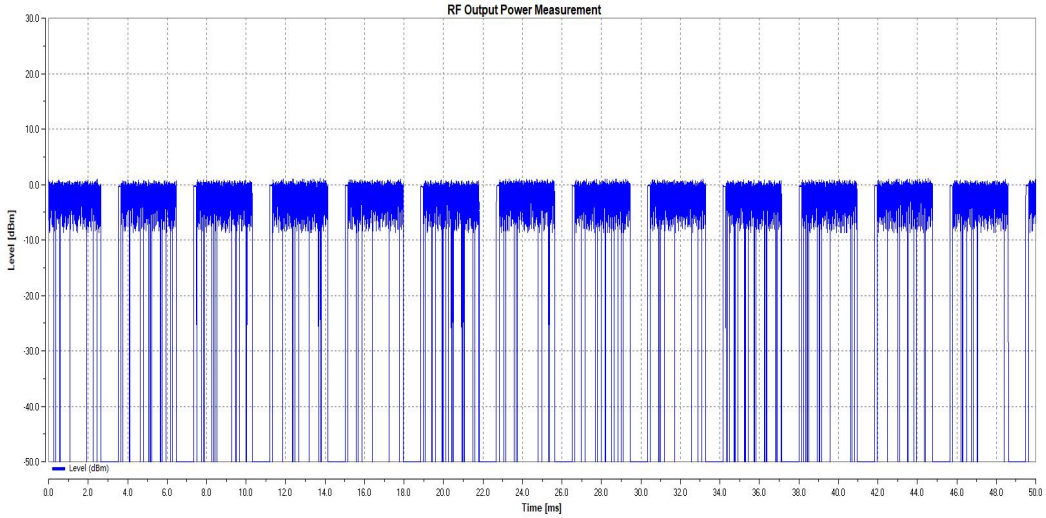
LTNV_DH5_Ant1_Hop



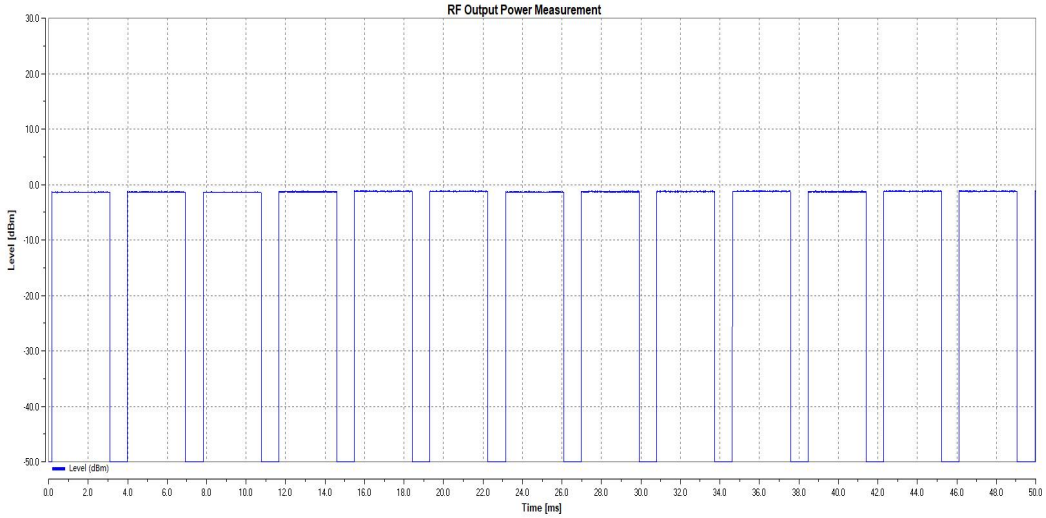
LTNV_2DH5_Ant1_Hop



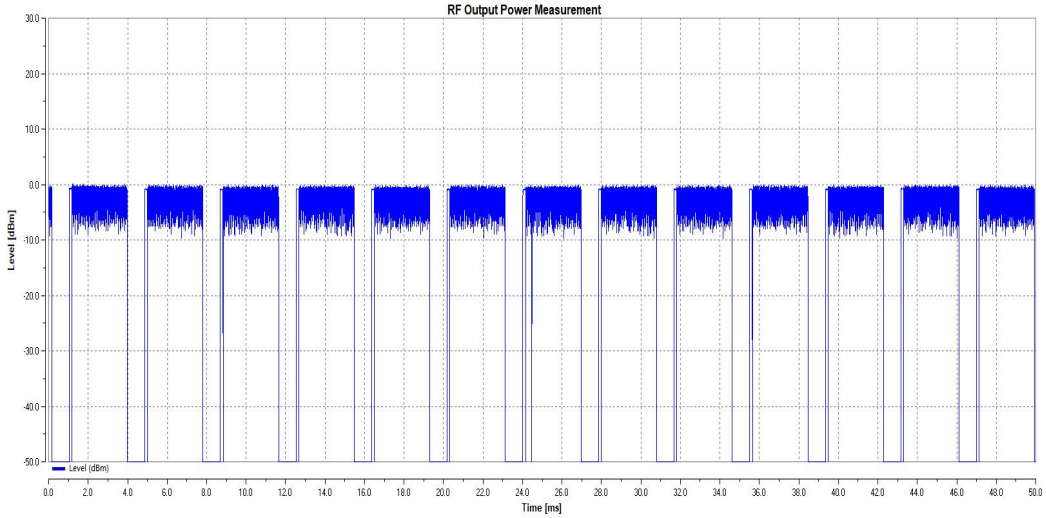
LTNV_3DH5_Ant1_Hop



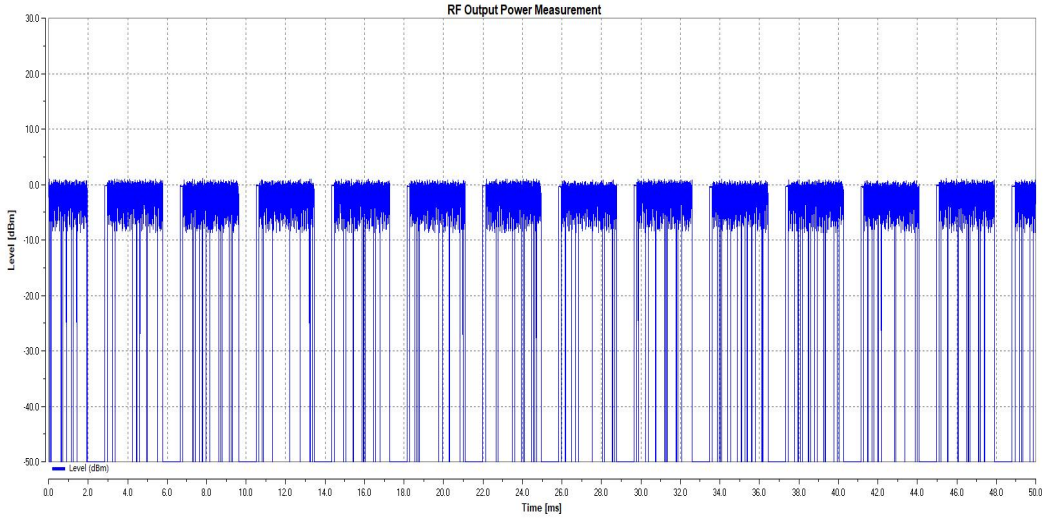
HTNV_DH5_Ant1_Hop



HTNV_2DH5_Ant1_Hop



HTNV_3DH5_Ant1_Hop



Appendix B: Accumulated Transmit Time, Frequency Occupation and Hopping Sequence

Test Result

Accumulated Transmit Time

Test Mode	Antenna	Freq(MHz)	Result[ms]	Limit[ms]	Verdict
DH5	Ant1	Hop_2402	288.632	400	PASS
		Hop_2480	336.035	400	PASS
2DH5	Ant1	Hop_2402	351.836	400	PASS
		Hop_2480	297.059	400	PASS
3DH5	Ant1	Hop_2402	345.515	400	PASS
		Hop_2480	352.889	400	PASS

Frequency Occupation

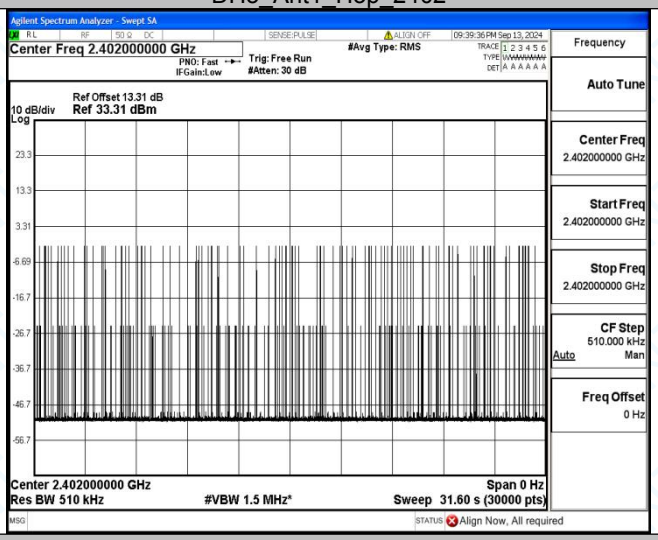
Test Mode	Antenna	Freq(MHz)	Result[Num.]	Limit[Num.]	Verdict
DH5	Ant1	Hop_2402	4	1	PASS
		Hop_2480	5	1	PASS
2DH5	Ant1	Hop_2402	1	1	PASS
		Hop_2480	1	1	PASS
3DH5	Ant1	Hop_2402	3	1	PASS
		Hop_2480	3	1	PASS

Hopping Sequence

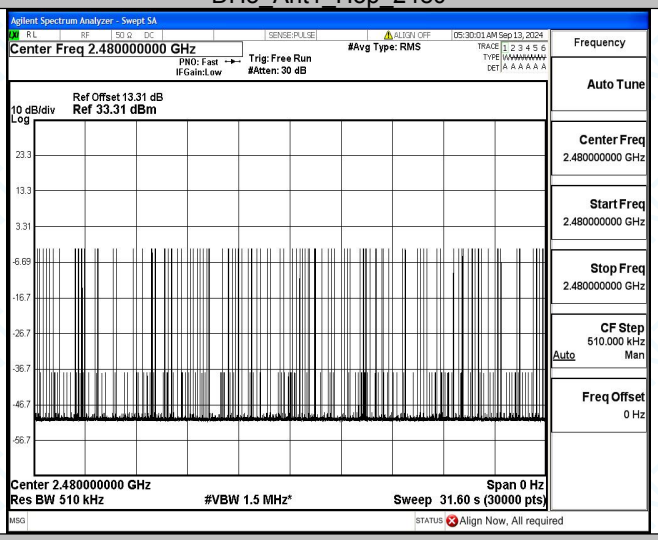
Test Mode	Antenna	Freq (MHz)	Hop. [Num.]	Limit [Num.]	Band Use [%]	Limit [%]	Verdict
DH5	Ant1	Hop	79	15	95.90	70	PASS
2DH5	Ant1	Hop	79	15	96.30	70	PASS
3DH5	Ant1	Hop	79	15	96.20	70	PASS

Test Graphs

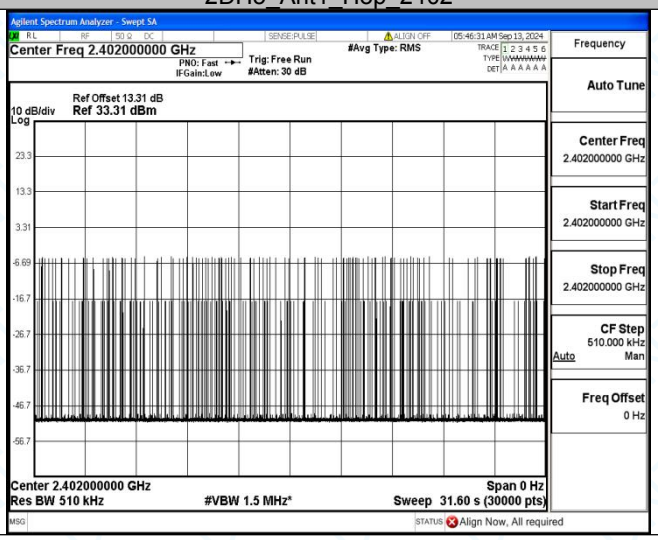
DH5_Ant1_Hop_2402



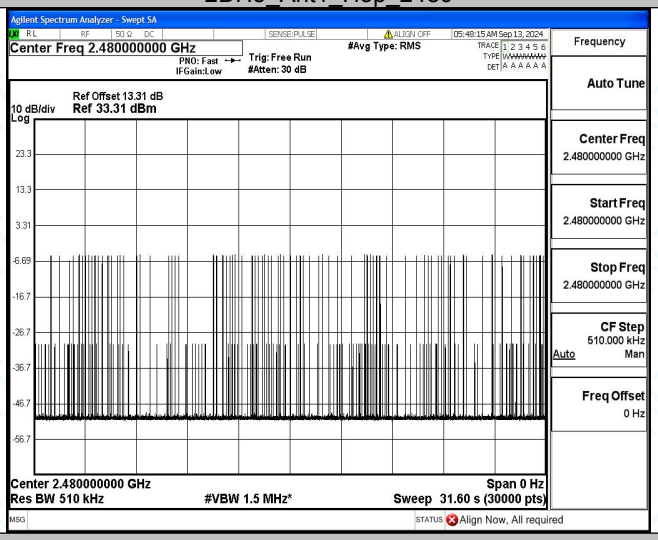
DH5_Ant1_Hop_2480



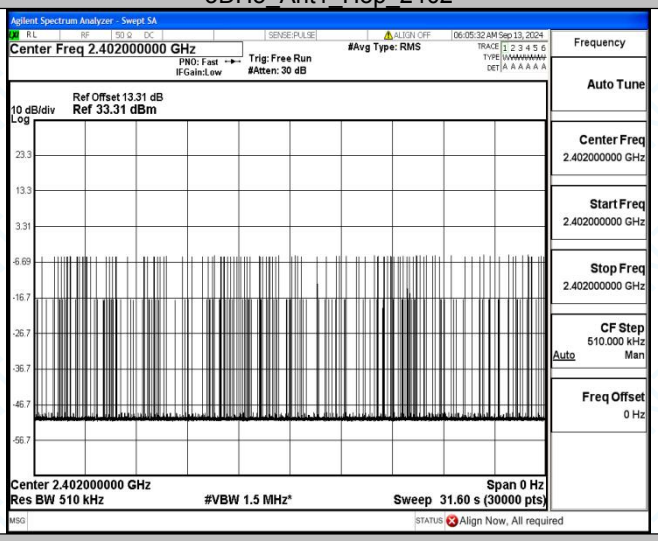
2DH5_Ant1_Hop_2402



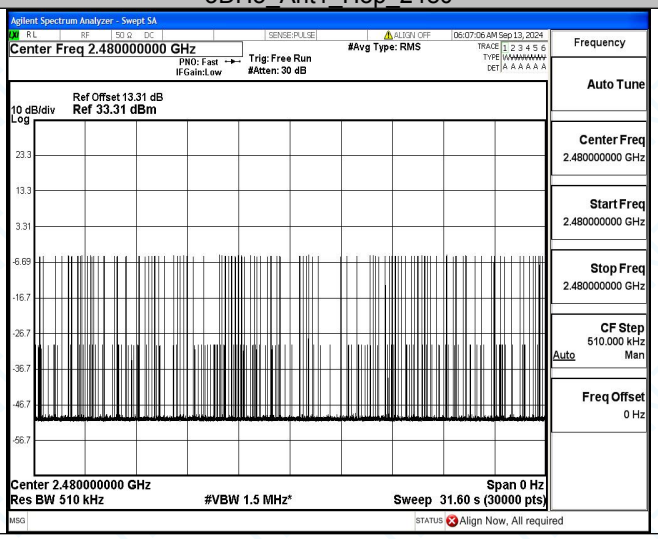
2DH5_Ant1_Hop_2480



3DH5_Ant1_Hop_2402



3DH5_Ant1_Hop_2480



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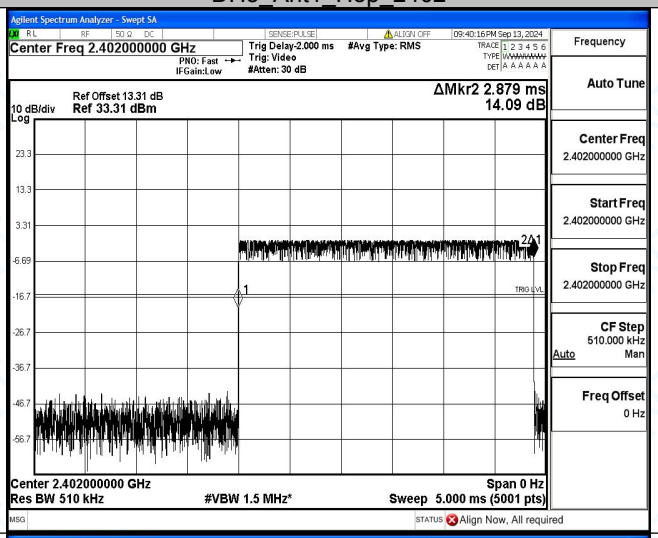
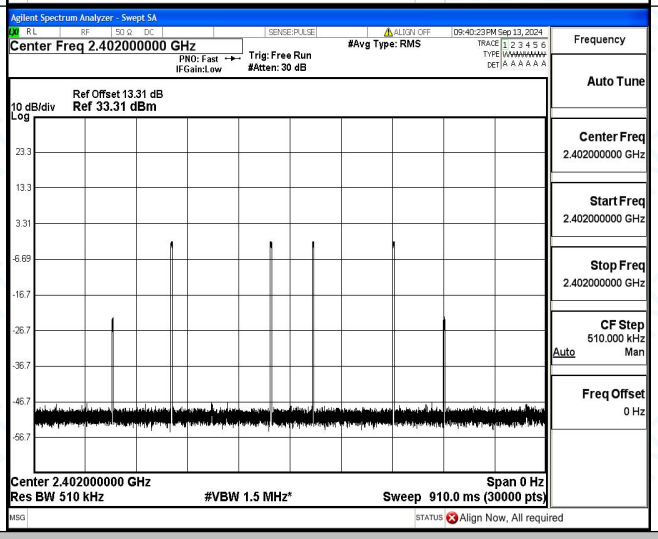
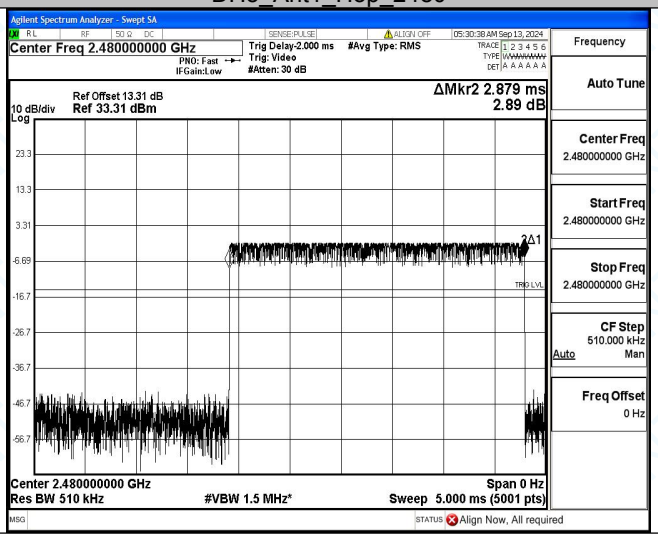
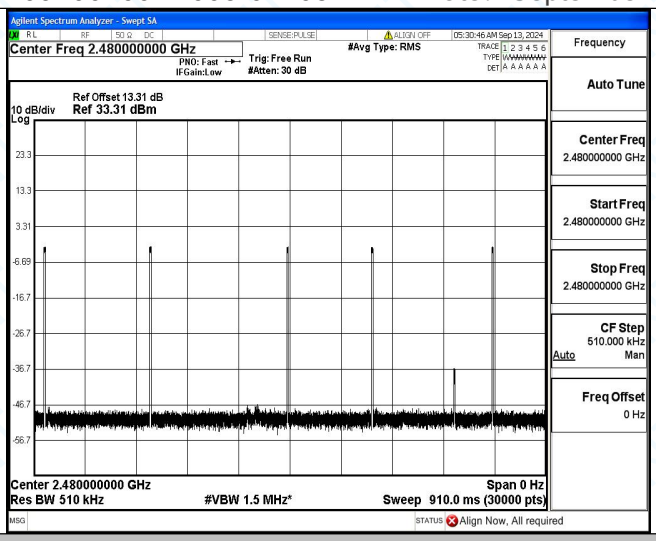


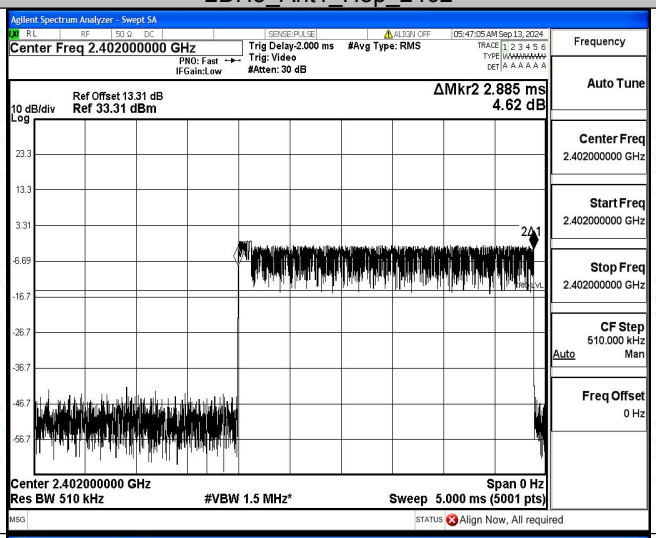


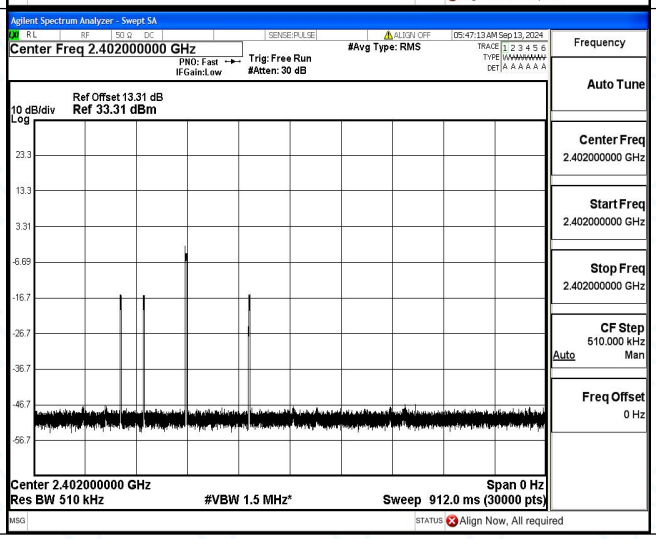
DH5_Ant1_Hop_2480



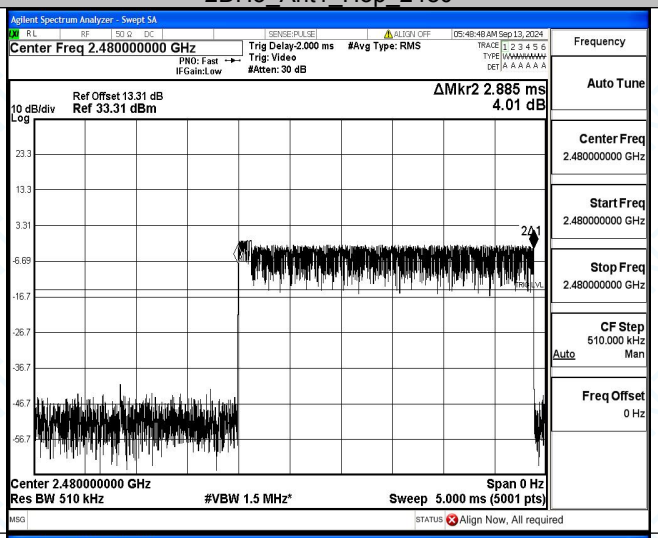


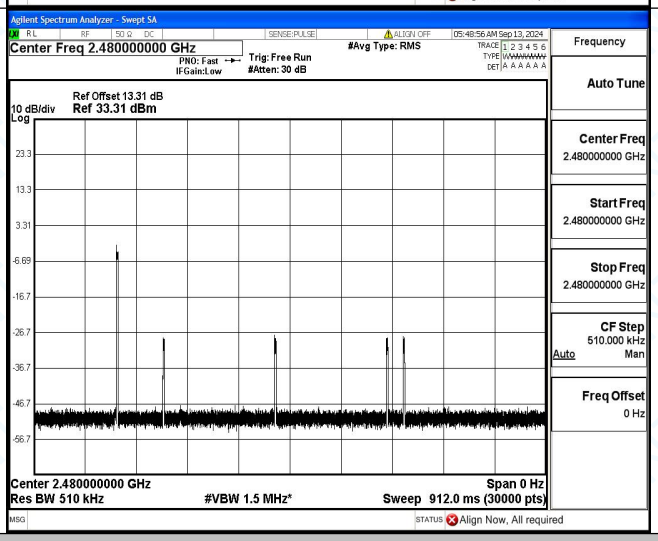
2DH5_Ant1_Hop_2402



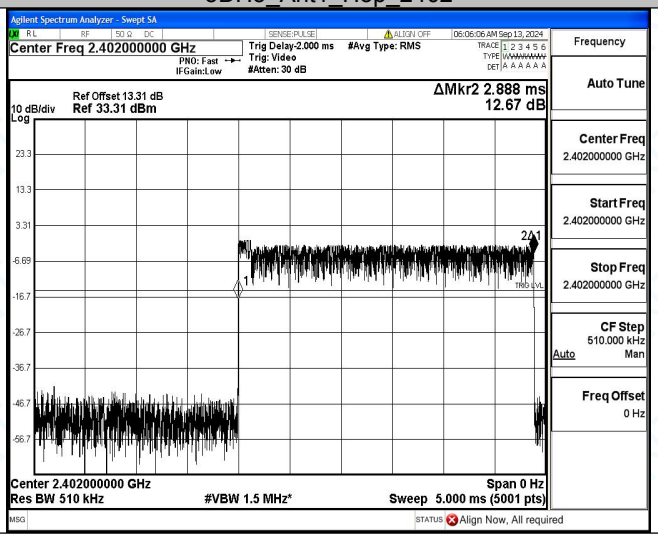


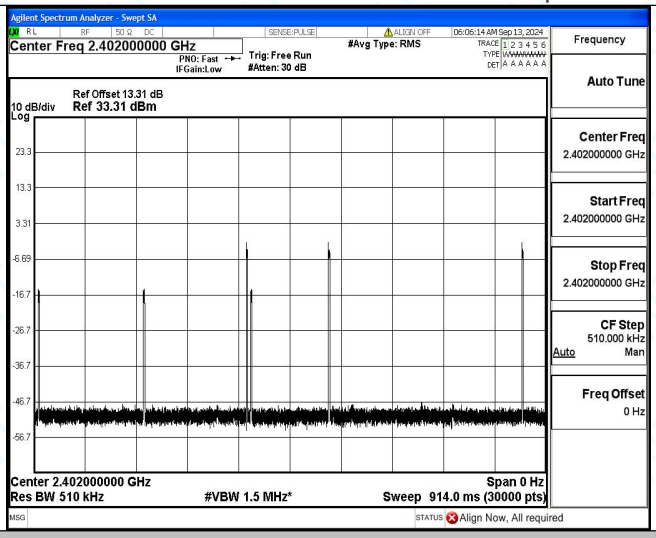
2DH5_Ant1_Hop_2480



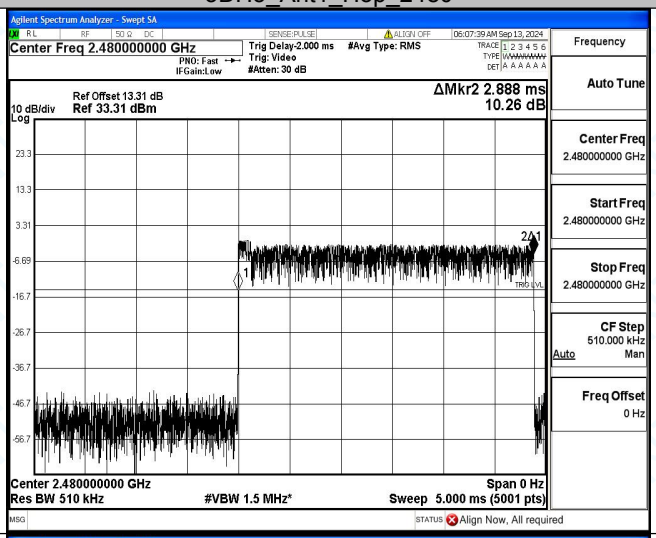


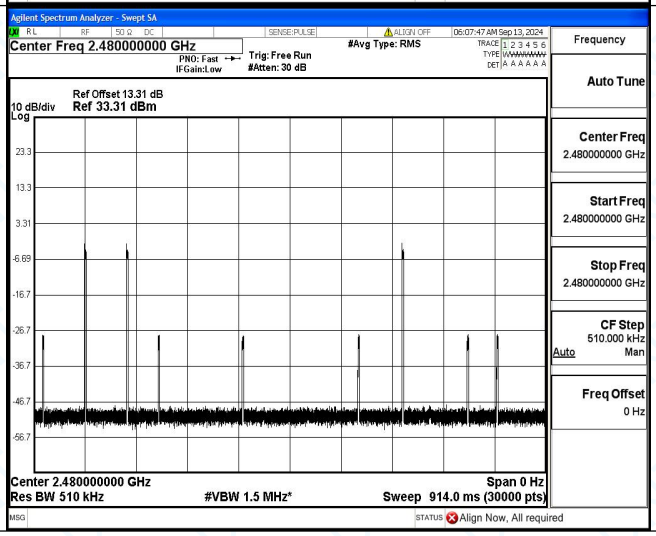
3DH5_Ant1_Hop_2402



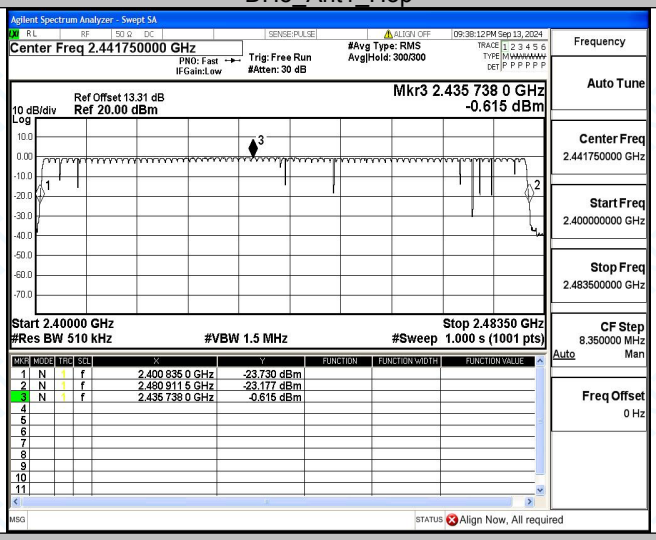


3DH5_Ant1_Hop_2480

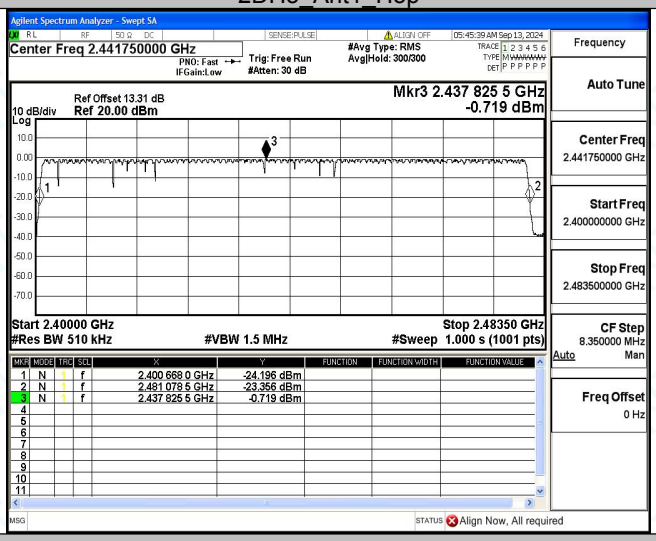




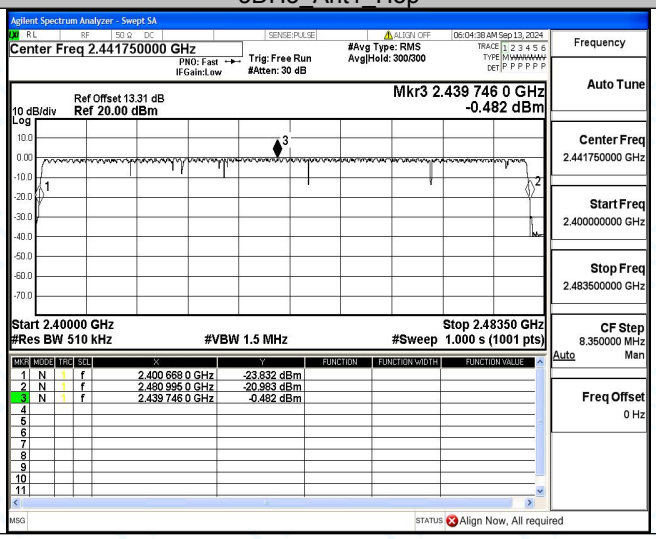
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop



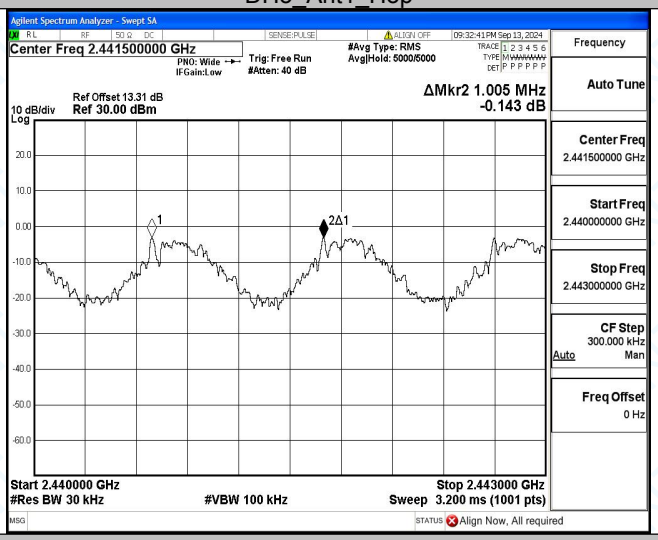
Appendix C: Hopping Frequency Separation

Test Result

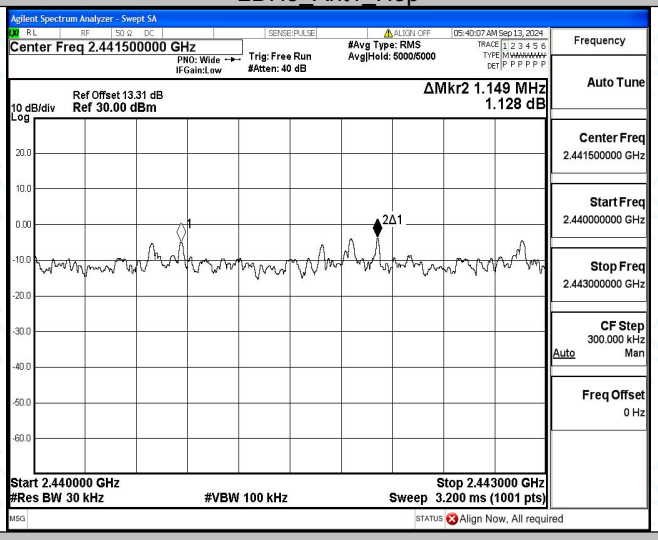
Test Mode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Hop	1.005	0.100	PASS
2DH5	Ant1	Hop	1.149	0.100	PASS
3DH5	Ant1	Hop	1.029	0.100	PASS

Test Graphs

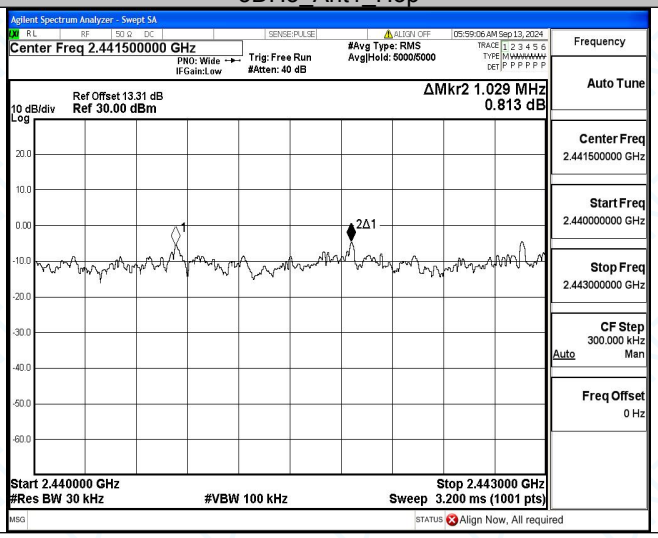
DH5_Ant1_Hop



2DH5_Ant1_Hop



3DH5_Ant1_Hop



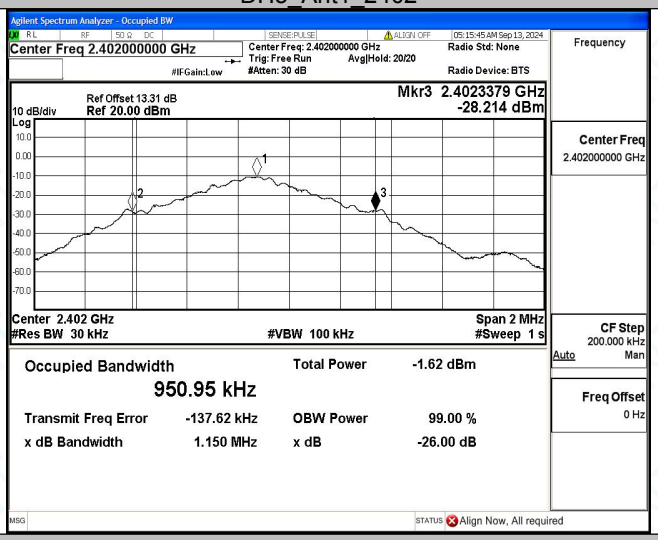
Appendix D: Occupied Channel Bandwidth

Test Result

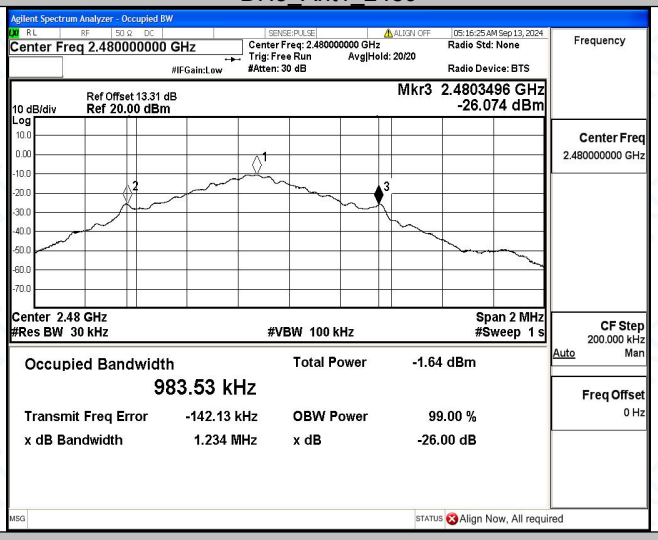
Test Mode	Antenna	Freq(MHz)	OCB[MHz]	FL [MHz]	FH[MHz]	Limit[MHz]	Verdict
DH5	Ant1	2402	0.95095	2401.3869	2402.3379	2400 to 2483.5	PASS
		2480	0.98353	2479.3661	2480.3496	2400 to 2483.5	PASS
2DH5	Ant1	2402	1.2207	2401.2587	2402.4794	2400 to 2483.5	PASS
		2480	1.2362	2479.2473	2480.4835	2400 to 2483.5	PASS
3DH5	Ant1	2402	1.2267	2401.2465	2402.4732	2400 to 2483.5	PASS
		2480	1.2349	2479.2380	2480.4729	2400 to 2483.5	PASS

Test Graphs

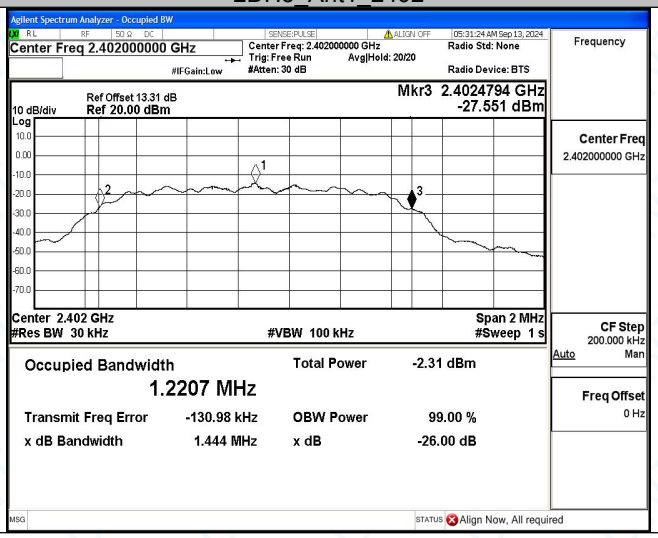
DH5_Ant1_2402



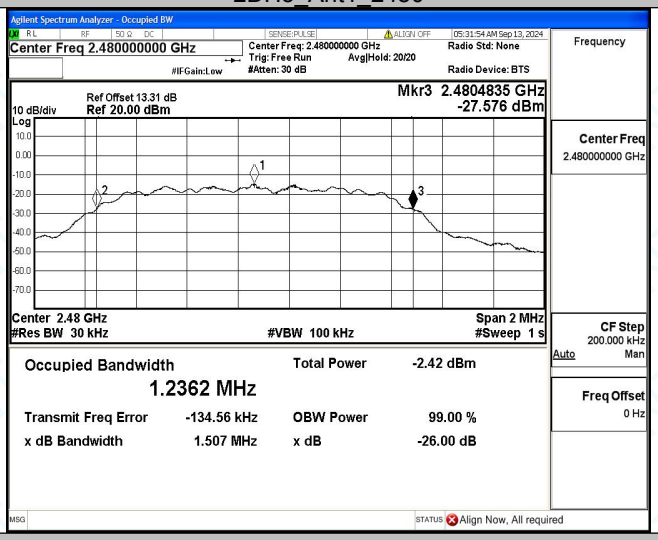
DH5_Ant1_2480



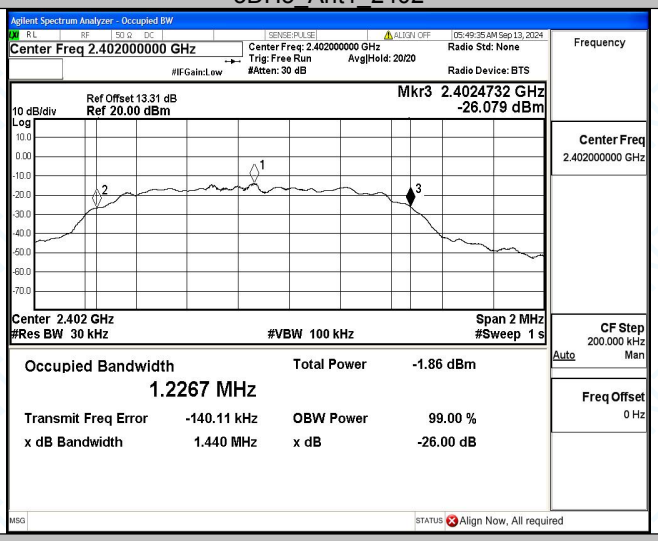
2DH5_Ant1_2402



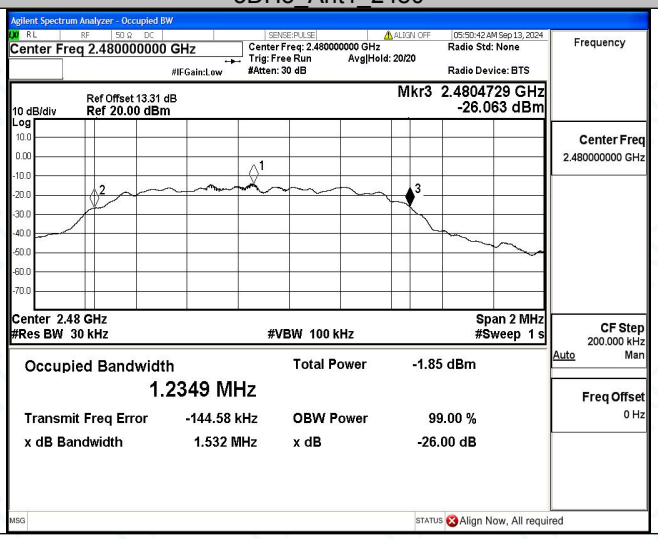
2DH5_Ant1_2480



3DH5_Ant1_2402



3DH5_Ant1_2480



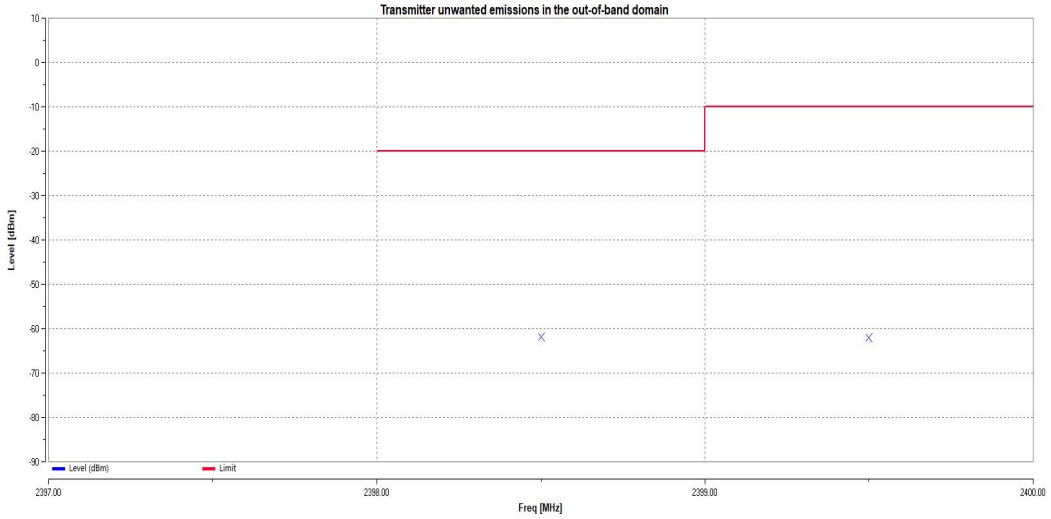
Appendix E Transmitter Unwanted Emissions In The Out-Of-BandDomain

Test Result

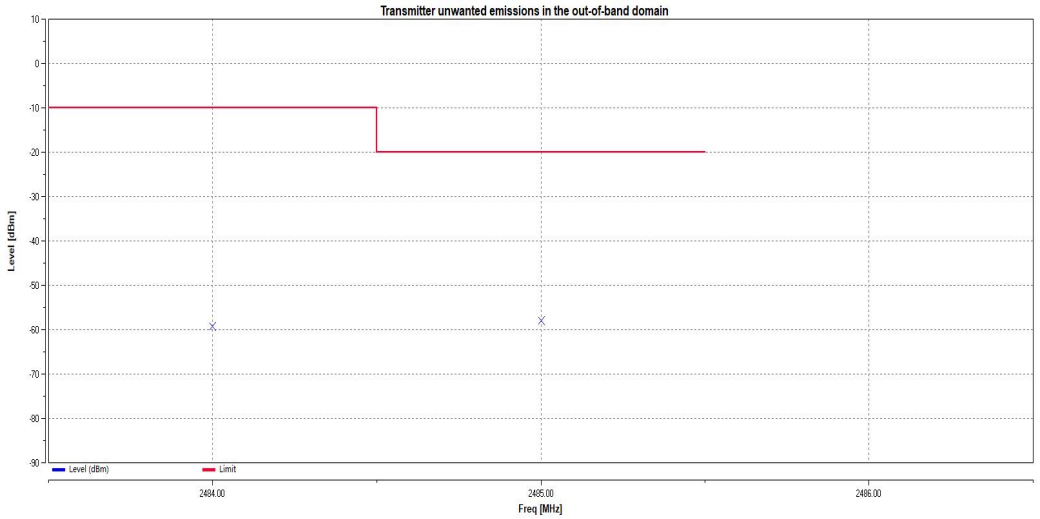
Test Mode	Antenna	Freq(MHz)	Freq. [MHz]	Level[dBm]	Limit[dBm]	Verdict
DH5	Ant1	Hop	2398.5	-61.84	-20.00	PASS
			2399.5	-61.99	-10.00	PASS
			2484	-59.17	-10.00	PASS
			2485	-57.95	-20.00	PASS
2DH5	Ant1	Hop	2398.03	-59.42	-20.00	PASS
			2399.26	-60.66	-10.00	PASS
			2484.24	-60.89	-10.00	PASS
			2485.47	-60.48	-20.00	PASS
3DH5	Ant1	Hop	2398.03	-61.8	-20.00	PASS
			2399.5	-59.69	-10.00	PASS
			2484	-60.7	-10.00	PASS
			2485.23	-59.96	-20.00	PASS

Test Graphs

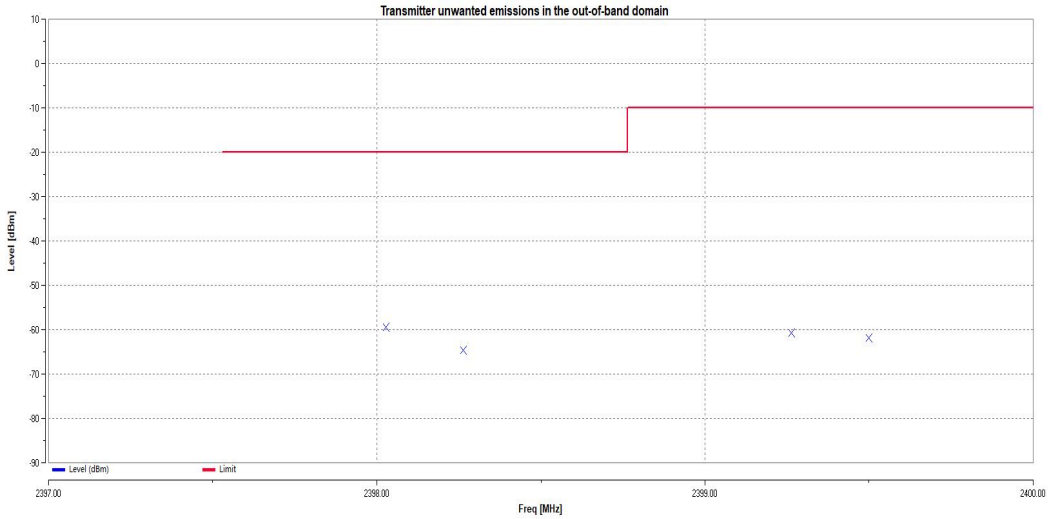
DH5_Ant1_Hop_2400MHz-2BW to 2400MHz



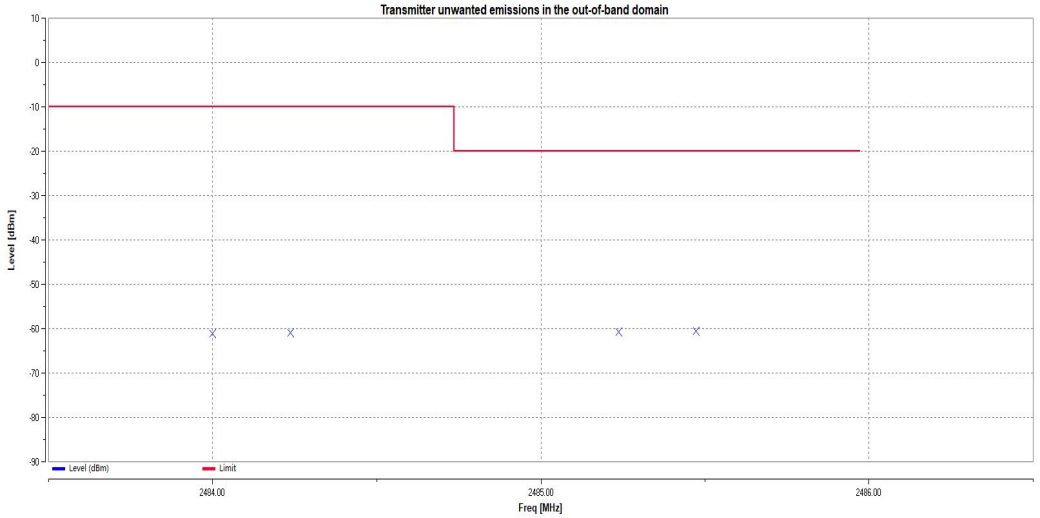
DH5_Ant1_Hop_2483.5MHz to 2483.5MHz+2BW



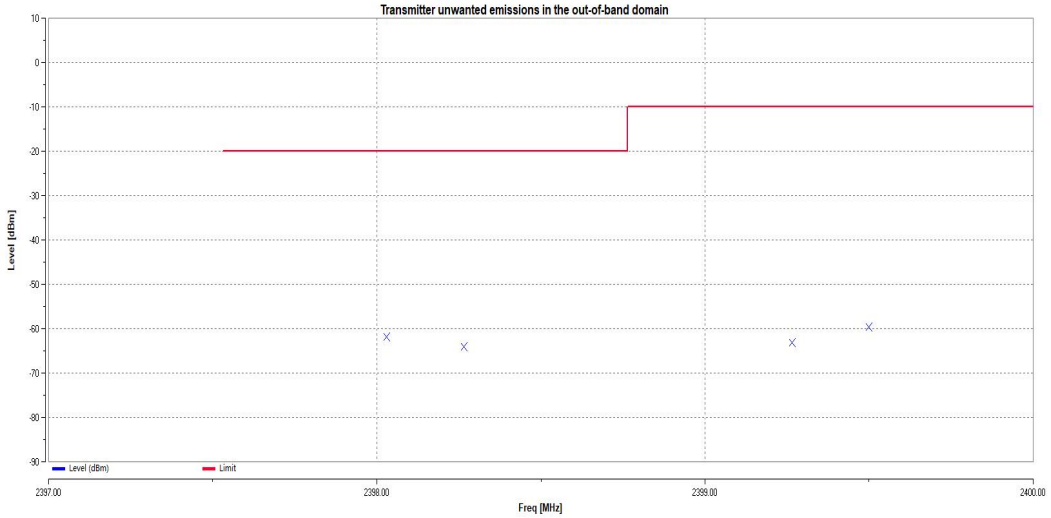
2DH5_Ant1_Hop_2400MHz-2BW to 2400MHz



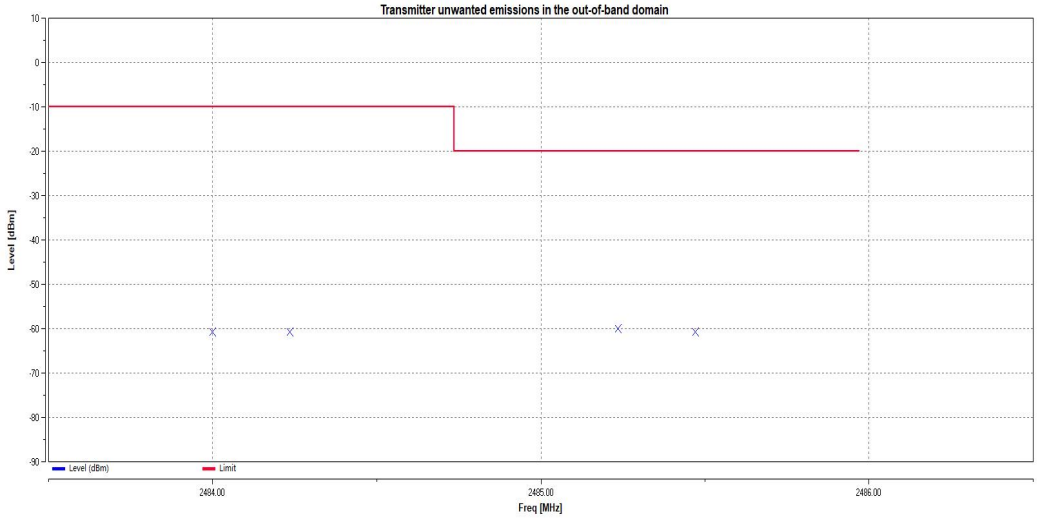
2DH5_Ant1_Hop_2483.5MHz to 2483.5MHz+2BW



3DH5_Ant1_Hop_2400MHz-2BW to 2400MHz



3DH5_Ant1_Hop_2483.5MHz to 2483.5MHz+2BW



Appendix F: Transmitter unwanted emissions in the spurious domain

Test Result

For 30-1000MHz

Horizontal:

NO.	Freq. [MHz]	Reading Level [dBm]	Correct Factor [dB/m]	Result Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]
1	73.36	-59.74	-7.34	-67.08	-54.00	13.08	150	86
2	116.43	-57.33	-8.36	-65.69	-54.00	11.69	150	177
3	192.00	-63.25	-7.02	-70.27	-54.00	16.27	150	220
4	287.94	-48.62	-1.86	-50.48	-36.00	14.48	150	264
5	479.93	-63.81	3.04	-60.77	-54.00	6.77	150	287
6	659.98	-72.79	6.12	-66.67	-54.00	12.67	150	51

Vertical:

NO.	Freq. [MHz]	Reading Level [dBm]	Correct Factor [dB/m]	Result Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]
1	73.36	-54.95	-7.03	-61.98	-54.00	7.98	150	177
2	116.43	-54.86	-7.03	-61.89	-54.00	7.89	150	265
3	323.93	-56.06	-0.83	-56.89	-36.00	20.89	150	305
4	455.96	-56.28	2.12	-54.16	-36.00	18.16	150	360
5	479.93	-60.27	3.18	-57.09	-54.00	3.09	150	350
6	957.50	-63.56	11.24	-52.32	-36.00	16.32	150	6

For 1000-12750MHz

DH5 CH0

Horizontal:

NO.	Freq. [MHz]	Reading Level [dBm]	Correct Factor [dB/m]	Result Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]
1	2054.4	-50.94	10.03	-40.91	-30.00	10.91	150	360
2	2996.8	-52.61	12.59	-40.02	-30.00	10.02	150	70
3	3488.15	-55.77	4.51	-51.26	-30.00	21.26	150	122
4	4804.07	-51.54	7.34	-44.20	-30.00	14.20	150	164
5	7206.15	-61.44	9.83	-51.61	-30.00	21.61	150	164
6	9608.22	-60.11	12.63	-47.48	-30.00	17.48	150	164

Vertical:

NO.	Freq. [MHz]	Reading Level [dBm]	Correct Factor [dB/m]	Result Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]
1	2038.8	-50.67	10.16	-40.51	-30.00	10.51	150	187
2	2975.2	-52.67	12.47	-40.20	-30.00	10.20	150	30
3	3942.82	-56.82	5.42	-51.40	-30.00	21.40	150	353
4	4803.75	-56.24	7.31	-48.93	-30.00	18.93	150	74
5	7206.15	-61.84	9.96	-51.88	-30.00	21.88	150	215
6	9608.22	-62.39	12.71	-49.68	-30.00	19.68	150	54

DH5 CH78

Horizontal:

NO.	Freq. [MHz]	Reading Level [dBm]	Correct Factor [dB/m]	Result Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]
1	2018.4	-52.19	10.00	-42.19	-30.00	12.19	150	330
2	2987.2	-52.71	12.52	-40.19	-30.00	10.19	150	33
3	3393.9	-55.62	3.92	-51.70	-30.00	21.70	150	207
4	4959.75	-55.01	6.65	-48.36	-30.00	18.36	150	207
5	7440.15	-61.04	10.24	-50.80	-30.00	20.80	150	143
6	9920.22	-60.26	14.75	-45.51	-30.00	15.51	150	78

Vertical:

NO.	Freq. [MHz]	Reading Level [dBm]	Correct Factor [dB/m]	Result Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]
1	1955.6	-49.71	9.46	-40.25	-30.00	10.25	150	205
2	2995.4	-52.63	12.58	-40.05	-30.00	10.05	150	360
3	3587.27	-56.65	5.14	-51.51	-30.00	21.51	150	176
4	4960.07	-57.19	6.73	-50.46	-30.00	20.46	150	107
5	7440.15	-61.69	10.49	-51.20	-30.00	21.20	150	240
6	9920.22	-61.75	14.93	-46.82	-30.00	16.82	150	47

Note: 1. DH5 is the worst case, which has recorded in the report.

2.The Measurement (Result Level) is calculated by Reading Level adding the Correct Factor(maybe including Ant.Factor and the Cable Factor etc.), The basic equation is as follows:

Result Level= Reading Level + Correct Factor(including Ant.Factor, Cable Factor etc.)

Appendix G: Receiver spurious emissions

Test Result

For 30-1000MHz

Horizontal:

NO.	Freq. [MHz]	Reading Level [dBm]	Correct Factor [dB/m]	Result Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]
1	36.11	-72.15	-1.65	-73.80	-57.00	16.80	150	238
2	69.77	-70.79	-7.30	-78.09	-57.00	21.09	150	345
3	157.17	-73.27	-4.67	-77.94	-57.00	20.94	150	134
4	257.09	-71.62	-0.80	-72.42	-57.00	15.42	150	178
5	455.96	-69.68	2.08	-67.60	-57.00	10.60	150	325
6	636.01	-71.39	6.08	-65.31	-57.00	8.31	150	258

Vertical:

NO.	Freq. [MHz]	Reading Level [dBm]	Correct Factor [dB/m]	Result Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]
1	33.97	-70.10	-0.80	-70.90	-57.00	13.90	150	353
2	69.87	-70.50	-6.72	-77.22	-57.00	20.22	150	136
3	120.31	-70.32	-6.87	-77.19	-57.00	20.19	150	5
4	360.02	-65.22	1.31	-63.91	-57.00	6.91	150	244
5	456.06	-66.63	2.12	-64.51	-57.00	7.51	150	201
6	659.98	-68.39	5.51	-62.88	-57.00	5.88	150	5

For 1000-12750MHz

Horizontal:

NO.	Freq. [MHz]	Reading Level [dBm]	Correct Factor [dB/m]	Result Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]
1	1074.61	-51.87	-4.15	-56.02	-47.00	9.02	150	72
2	2309.01	-56.92	1.14	-55.78	-47.00	8.78	150	9
3	3613.91	-58.95	4.68	-54.27	-47.00	7.27	150	72
4	4561.60	-60.80	6.38	-54.42	-47.00	7.42	150	360
5	5934.65	-60.41	7.41	-53.00	-47.00	6.00	150	226
6	6637.93	-60.98	8.54	-52.44	-47.00	5.44	150	72

Vertical:

NO.	Freq. [MHz]	Reading Level [dBm]	Correct Factor [dB/m]	Result Level [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [°]
1	1115.15	-51.79	-5.10	-56.89	-47.00	9.89	150	204
2	2574.57	-57.37	3.09	-54.28	-47.00	7.28	150	246
3	3613.33	-58.32	4.68	-53.64	-47.00	6.64	150	266
4	4316.60	-59.97	6.14	-53.83	-47.00	6.83	150	30
5	5149.72	-60.84	7.57	-53.27	-47.00	6.27	150	161
6	6614.43	-61.15	8.65	-52.50	-47.00	5.50	150	118

Note: 1. DH5 is the worst case, which has recorded in the report.

2.The Measurement (Result Level) is calculated by Reading Level adding the Correct Factor(maybe including Ant.Factor and the Cable Factor etc.), The basic equation is as follows:

Result Level= Reading Level + Correct Factor(including Ant.Factor, Cable Factor etc.)

Appendix H: Receiver Blocking

Test Result

Parameters for Receiver Category 2 equipment								
Test Mode	Antenna	Freq(MHz)	Wanted signal [dBm]	Blocking signal Freq. [MHz]	CW [dBm]	PER [%]	Limit [%]	Verdict
DH5	Ant1	Hop	-70	2300	-34	3.48	≤10	PASS
				2380	-34	4.31	≤10	PASS
			-70	2504	-34	6.51	≤10	PASS
				2584	-34	5.84	≤10	PASS

6 Photographs

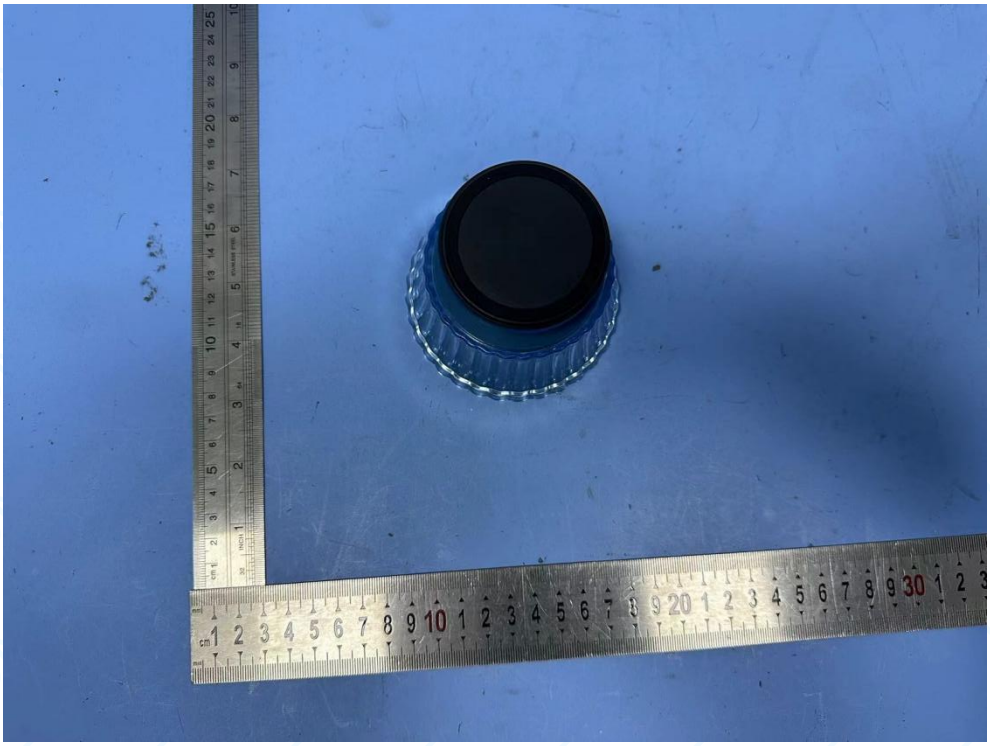
6.1 Test Setup

Setup for Radio Spectrum Testing

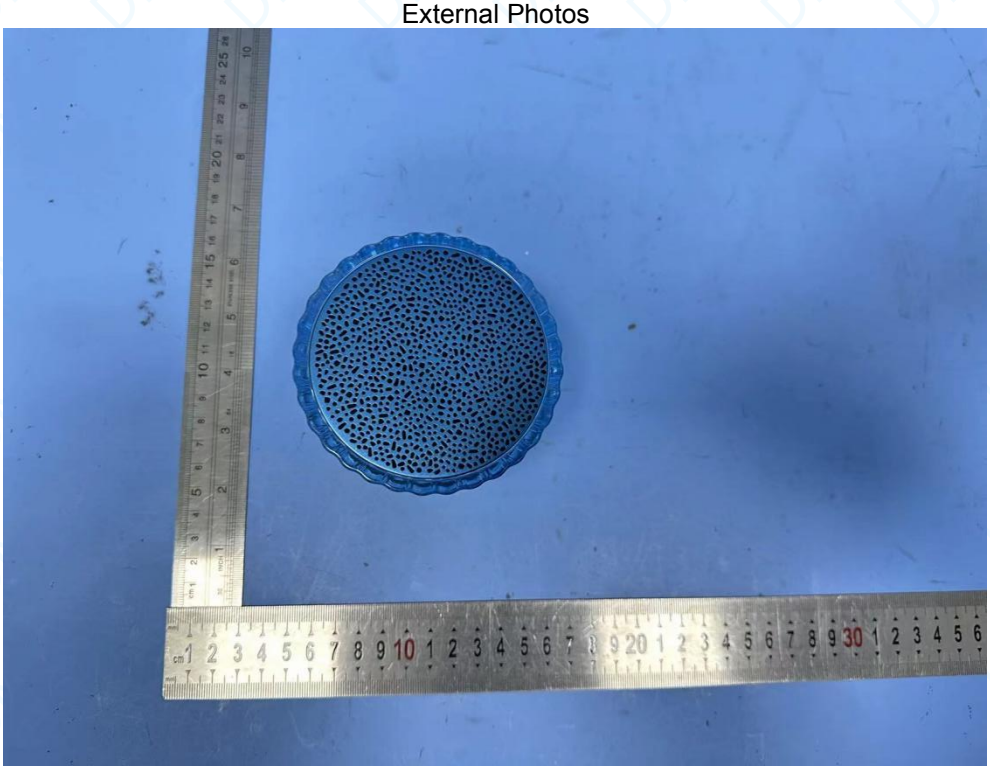
Setup for Transmitter & Receiver Spurious Emissions

6.2 EUT Photos

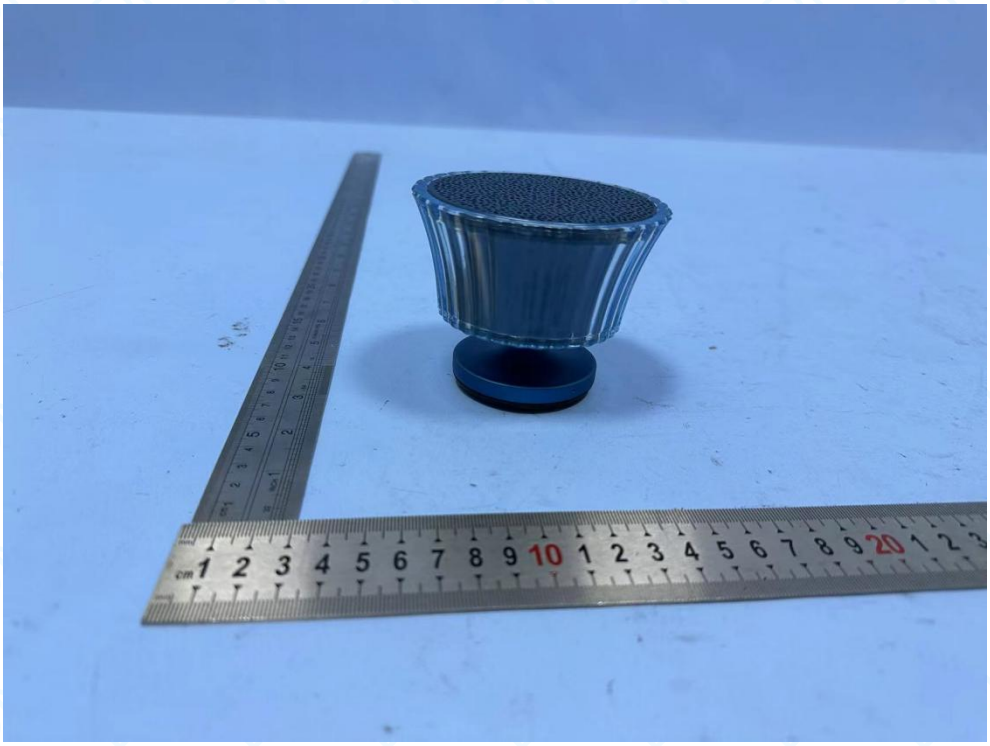
External Photos



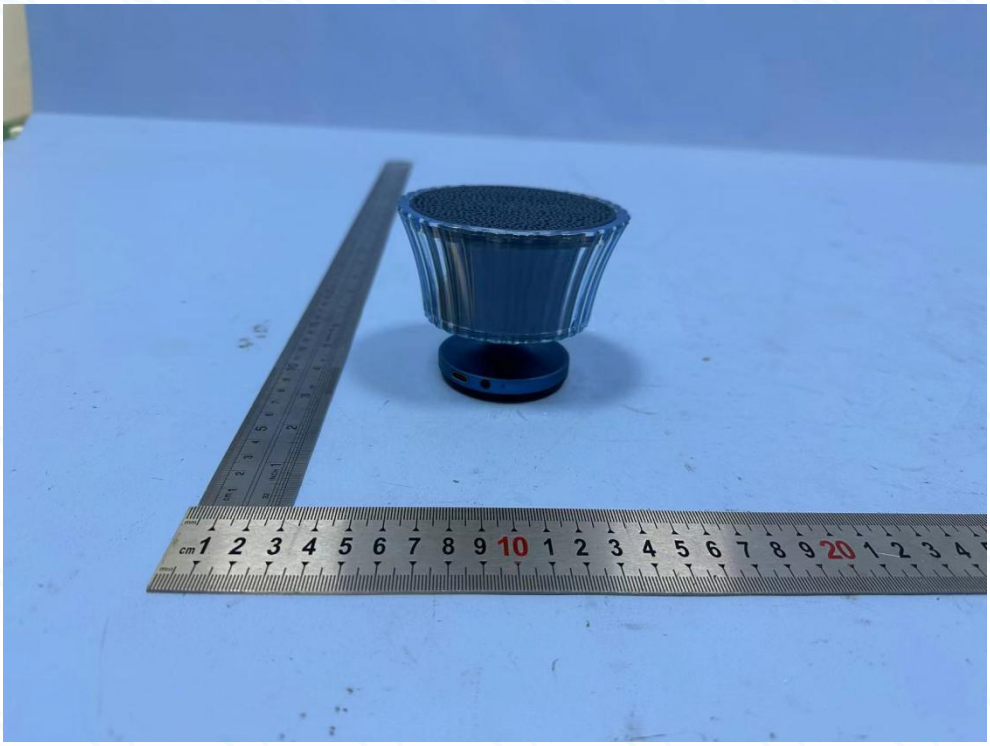
External Photos



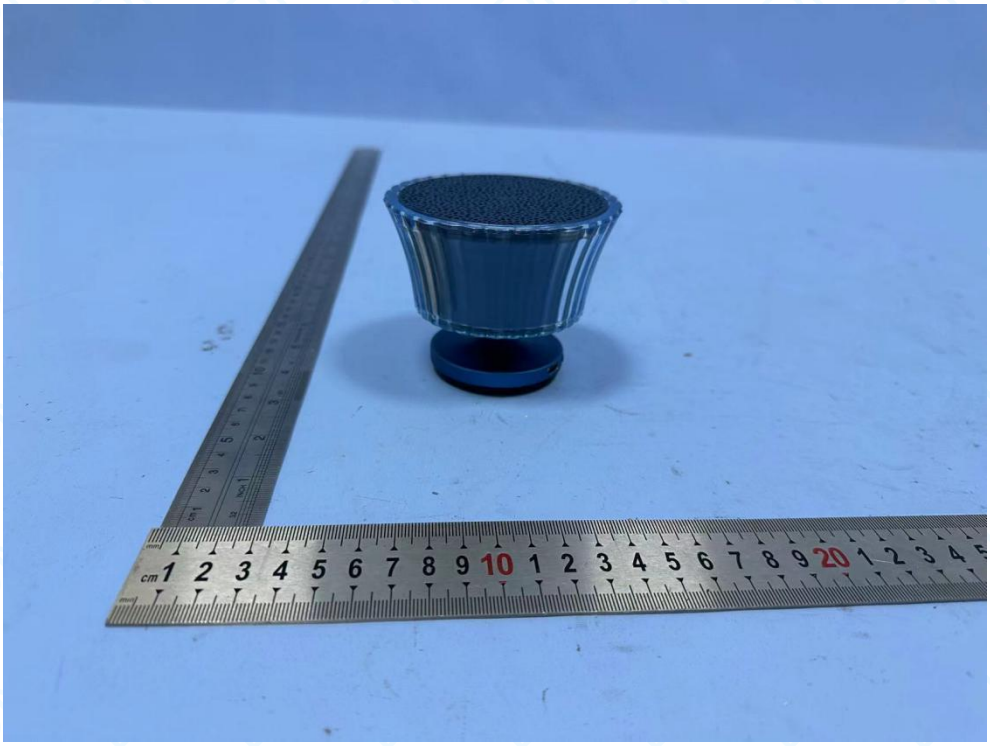
External Photos



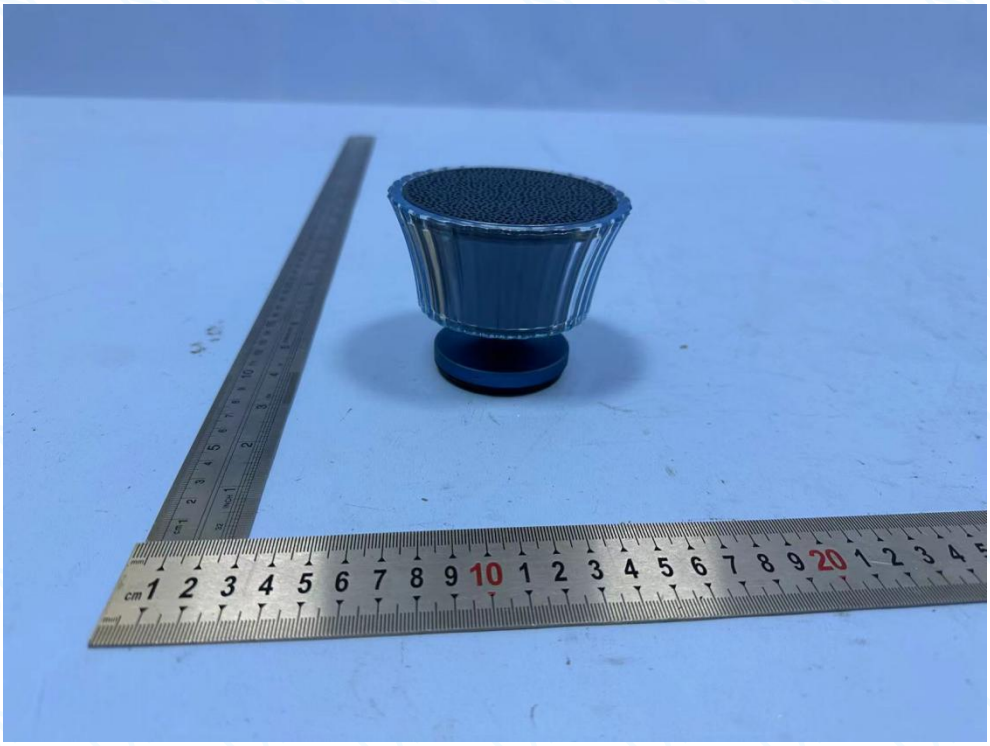
External Photos



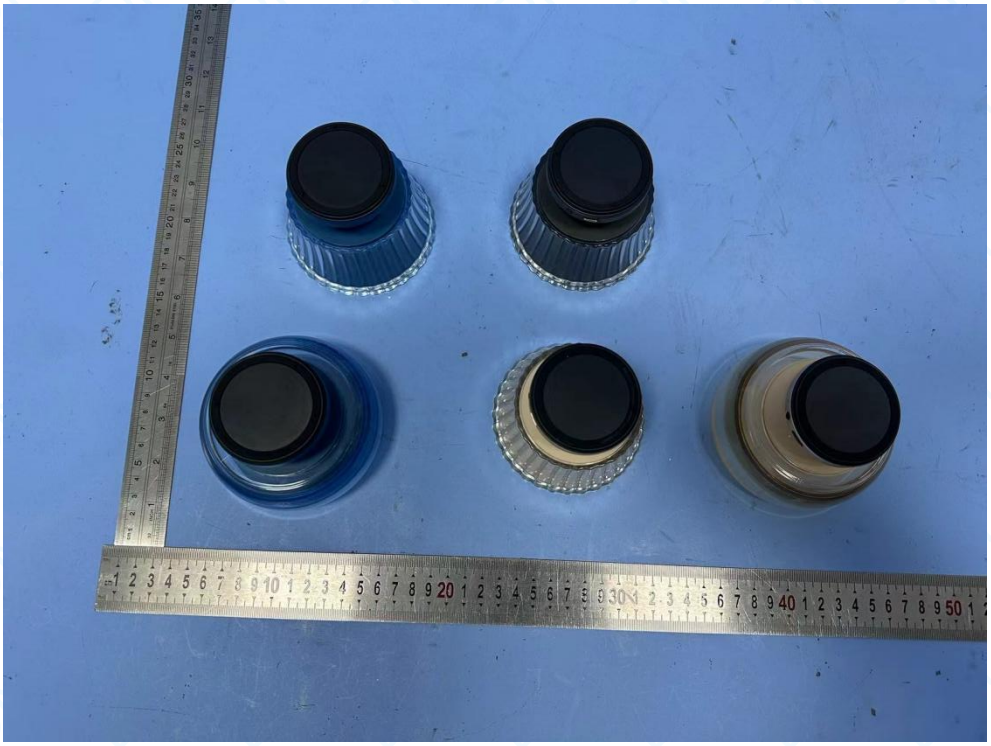
External Photos



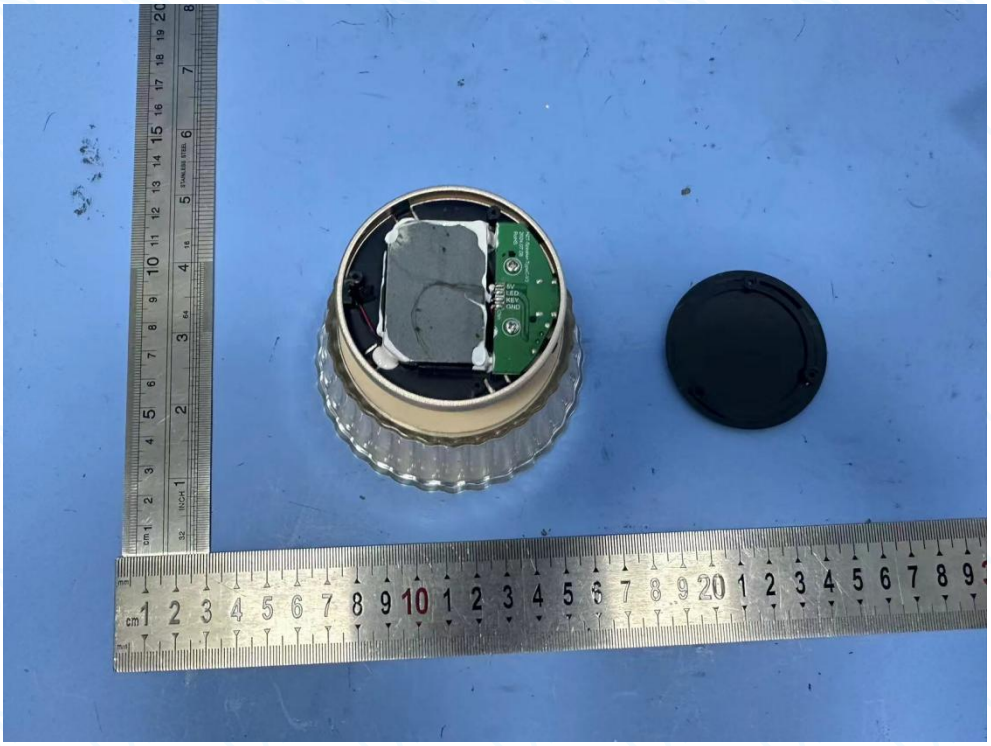
External Photos



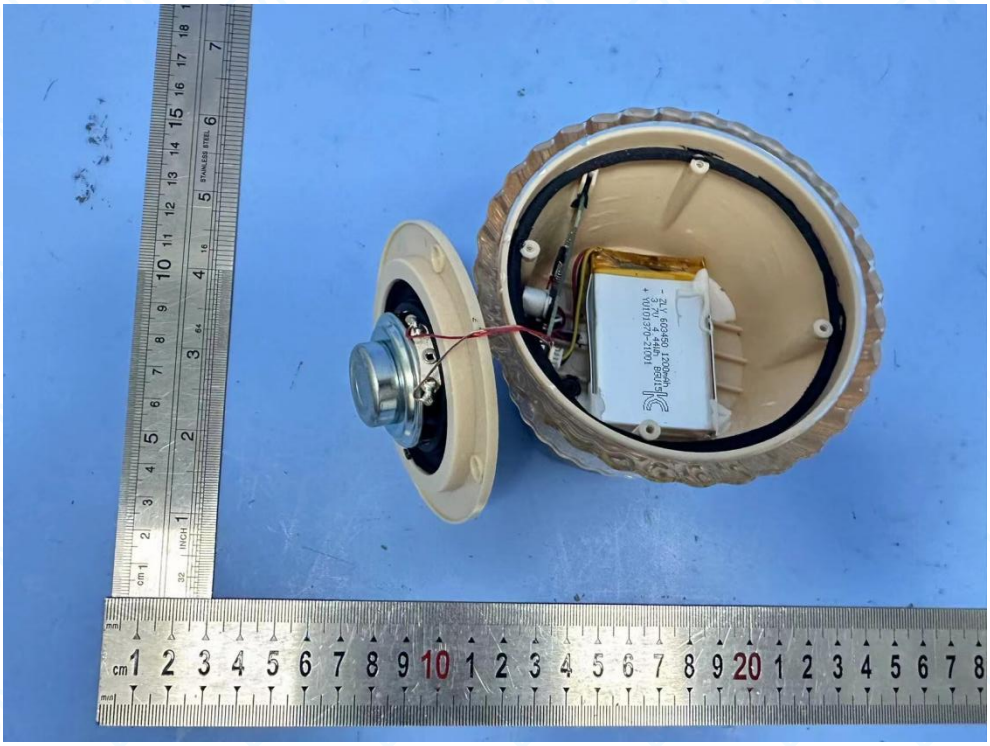
External Photos



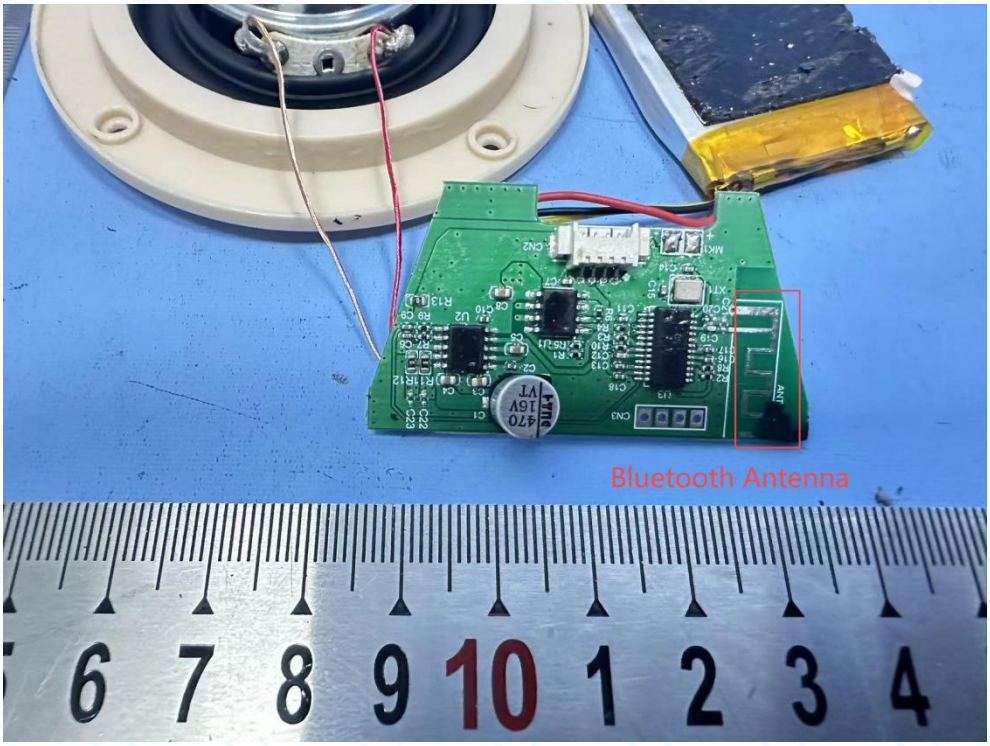
Internal Photos



Internal Photos



Internal Photos



-------End of Report-------