

# RED-Radio Test Report

**Applicant** : SHENZHEN MAONO TECHNOLOGY CO., LTD

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**Address** : No. 1307, 13th Floor, Building 4, Phase II of  
Tianan Yungu Industrial Park, Gangtuo  
Community, Bantian Street, Longgang District,  
Shenzhen, China

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**Product Name** : Gaming Audio Mixer

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**Report Date** : Mar. 26, 2024

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## Shenzhen Anbotek Compliance Laboratory Limited

**Shenzhen Anbotek Compliance Laboratory Limited**

Address: 1/F., Building D, Sogood Science and Technology Park, Sanwei Community,  
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Report No.: 18220WC40032504W

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# TEST REPORT

Applicant : SHENZHEN MAONO TECHNOLOGY CO., LTD  
Manufacturer : Guangdong Dingchuang Smart Manufacturing Co.,Ltd.  
Product Name : Gaming Audio Mixer  
Test Model No. : G1 Neo  
Reference Model No. : G1 Neo 2, G1 Neo 3, G1 Neo 4, G1 Neo 5, G1 Neo Pro, G1 Neo Ultra,  
G1 Neo Max, G1 Neo Lite, G1 Neo Single Mic Bundle, G1 Neo Solo  
Bundle, G1 Neo Dynamic Mic Bundle  
Trade Mark : N/A  
Rating(s) : Input: 5V $\pm$  0.5A  
Test Standard(s) : ETSI EN 300 328 V2.2.2 (2019-07)

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with above listed standard(s) requirements. This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited.

Date of Receipt: Feb. 24, 2024

Date of Test: Feb. 26, 2024 to Mar. 12, 2024

Prepared By:



(Nianxiu Chen)

Approved &amp; Authorized Signer:



(Edward Pan)

## Shenzhen Anbotek Compliance Laboratory Limited

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**Revision History**

Report Version	Description	Issued Date
R00	Original Issue.	Mar. 26, 2024

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## 1. General Information

### 1.1. Client Information

Applicant	:	SHENZHEN MAONO TECHNOLOGY CO., LTD
Address	:	No. 1307, 13th Floor, Building 4, Phase II of Tianan Yungu Industrial Park, Gangtou Community, Bantian Street, Longgang District, Shenzhen, China
Manufacturer	:	Guangdong Dingchuang Smart Manufacturing Co.,Ltd.
Address	:	Room 401, Building 8, Fenggang Tianan Digital City, No.208, Fenggang Section, Dongshen Road, Fenggang Town, Dongguan City, Guangdong Province
Factory	:	Guangdong Dingchuang Smart Manufacturing Co.,Ltd.
Address	:	Room 401, Building 8, Fenggang Tianan Digital City, No.208, Fenggang Section, Dongshen Road, Fenggang Town, Dongguan City, Guangdong Province

### 1.2. Description of Device (EUT)

Product Name	:	Gaming Audio Mixer
Test Model No.	:	G1 Neo
Reference Model No.	:	G1 Neo 2, G1 Neo 3, G1 Neo 4, G1 Neo 5, G1 Neo Pro, G1 Neo Ultra, G1 Neo Max, G1 Neo Lite, G1 Neo Single Mic Bundle, G1 Neo Solo Bundle, G1 Neo Dynamic Mic Bundle (Note: All samples are the same except the model number, shell shape and color, so we prepare "G1 Neo" for test only.)
Trade Mark	:	N/A
Test Power Supply	:	AC 230V/50Hz for Adapter
Test Sample No.	:	1-2-1(Normal Sample), 1-2-2(Engineering Sample)
Adapter	:	N/A
<b>RF Specification</b>		
Operation Frequency	:	2402MHz to 2480MHz
Number of Channel	:	79
Modulation Type	:	GFSK, $\pi/4$ DQPSK, 8DPSK
Antenna Type	:	PCB Antenna
Antenna Gain(Peak)	:	-0.58 dBi
<b>Remark:</b> (1) All of the RF specification are provided by customer. (2) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.		

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### 1.3. Auxiliary Equipment Used During Test

Title	Manufacturer	Model No.	Serial No.
Xiaomi 33W adapter	Xiaomi	MDY-11-EX	SA62212LA04358J

### 1.4. Operation channel list

Operation Band:

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

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### 1.5. Description of Test Modes

Pretest Modes	Descriptions
TM1	Keep the EUT in continuously transmitting mode (non-hopping) with GFSK modulation.
TM2	Keep the EUT in continuously transmitting mode (non-hopping) with $\pi/4$ DQPSK modulation.
TM3	Keep the EUT in continuously transmitting mode (non-hopping) with 8DPSK modulation.
TM4	Keep the EUT in continuously transmitting mode (hopping) with GFSK modulation,.
TM5	Keep the EUT in continuously transmitting mode (hopping) with $\pi/4$ DQPSK modulation.
TM6	Keep the EUT in continuously transmitting mode (hopping) with 8DPSK modulation.
TM7	Keep the EUT in receiving mode.
TM8	Keep the EUT in normal communication with pairing device mode.

### 1.6. Environment Conditions

ENV	Temperature (°C)	Voltage (VAC)
HTNV	45	230
LTVN	-10	230
NTNV	25	230

### 1.7. Measurement Uncertainty

Parameter	Uncertainty
Conducted Output Power	0.76dB
Occupied Bandwidth	925Hz
Conducted Spurious Emission	1.24dB
Radiated spurious emissions (30MHz~1GHz)	Horizontal: 3.92dB; Vertical: 4.52dB
Radiated spurious emissions (above 1GHz)	1G-6GHz: 4.78dB; 6G-18GHz: 4.88dB
The measurement uncertainty and decision risk evaluated according to AB/WI-RF-F-032. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

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### 1.8. Test Summary

Test Items	Test Modes	Status
RF Power	Mode4,5,6	P
Accumulated Transmit Time, Frequency Occupation and Hopping Sequence	Mode4,5,6	P
Hopping Frequency Separation	Mode4,5,6	P
Occupied Channel Bandwidth	Mode1,2,3	P
Transmitter unwanted emissions in the out-of-band domain	Mode1,2,3	P
Transmitter unwanted emissions in the spurious domain, conducted	Mode1,2,3	P
Receiver spurious emissions, conducted	Mode7	P
Transmitter unwanted emissions in the spurious domain (30MHz to 1GHz)	Mode1,2,3	P
Transmitter unwanted emissions in the spurious domain (above 1GHz)	Mode1,2,3	P
Receiver spurious emissions (30MHz to 1GHz)	Mode7	P
Receiver spurious emissions (above 1GHz)	Mode7	P
Receiver Blocking	Mode8	P
Note: P: Pass N: N/A, not applicable		

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## 1.9. Description of Test Facility

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

### FCC-Registration No.:434132

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No. 434132.

### ISED-Registration No.: 8058A

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (ISED) Innovation, Science and Economic Development Canada. The acceptance letter from the ISED is maintained in our files. Registration 8058A.

### Test Location

Shenzhen Anbotek Compliance Laboratory Limited.

1/F, Building D, Sogood Science and Technology Park, Sanwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.

## 1.10. Disclaimer

1. The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
2. The test report is invalid if there is any evidence and/or falsification.
3. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
4. This document may not be altered or revised in any way unless done so by Anbotek and all revisions are duly noted in the revisions section.
5. Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
6. The authenticity of the information provided by the customer is the responsibility of the customer and the laboratory is not responsible for its authenticity.

The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

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**1.11. Test Equipment List**

RF Power						
Accumulated Transmit Time, Frequency Occupation and Hopping Sequence						
Hopping Frequency Separation						
Occupied Channel Bandwidth						
Transmitter unwanted emissions in the out-of-band domain						
Transmitter unwanted emissions in the spurious domain, conducted						
Receiver spurious emissions, conducted						
Receiver Blocking						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due Date
1	MXG RF Vector Signal Generator	Agilent	N5182A	MY48180656	2023-10-12	2024-10-11
2	Constant Temperature Humidity Chamber	ZHONGJIAN	ZJ-KHWS80B	N/A	2023-10-16	2024-10-15
3	MXA Spectrum Analysis	KEYSIGHT	N9020A	MY53280032	2023-10-12	2024-10-11
4	Signal Generator	Agilent	E4421B	MY41000743	2023-10-12	2024-10-11
5	RF Control Unit	Tonscend	JS0806-2	21G8060455	2023-10-12	2024-10-11
6	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	104209	2023-10-12	2024-10-11

Transmitter unwanted emissions in the spurious domain (30MHz to 1GHz)						
Receiver spurious emissions (30MHz to 1GHz)						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due Date
1	EMI Test Receiver	Rohde & Schwarz	ESR26	101481	2023-10-12	2024-10-11
2	Pre-amplifier	SONOMA	310N	186860	2023-10-12	2024-10-11
3	Bilog Broadband Antenna	Schwarzbeck	VULB9163	345	2022-10-23	2025-10-22
4	Loop Antenna (9K-30M)	Schwarzbeck	FMZB1519B	00053	2023-10-12	2024-10-11
5	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	/	/

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Transmitter unwanted emissions in the spurious domain (above 1GHz) Receiver spurious emissions (above 1GHz)						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due Date
1	EMI Test Receiver	Rohde & Schwarz	ESR26	101481	2023-10-12	2024-10-11
2	EMI Preamplifier	SKET Electronic	LNPA-0118G-45	SKET-PA-002	2023-10-12	2024-10-11
3	Double Ridged Horn Antenna	SCHWARZBECK	BBHA 9120D	02555	2022-10-16	2025-10-15
4	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	/	/
5	Horn Antenna	A-INFO	LB-180400-KF	J211060628	2023-10-12	2024-10-11
6	Spectrum Analyzer	Rohde & Schwarz	FSV40-N	101792	2023-05-26	2024-05-25
7	Amplifier	Talent Microwave	TLLA18G40 G-50-30	23022802	2023-05-25	2024-05-24

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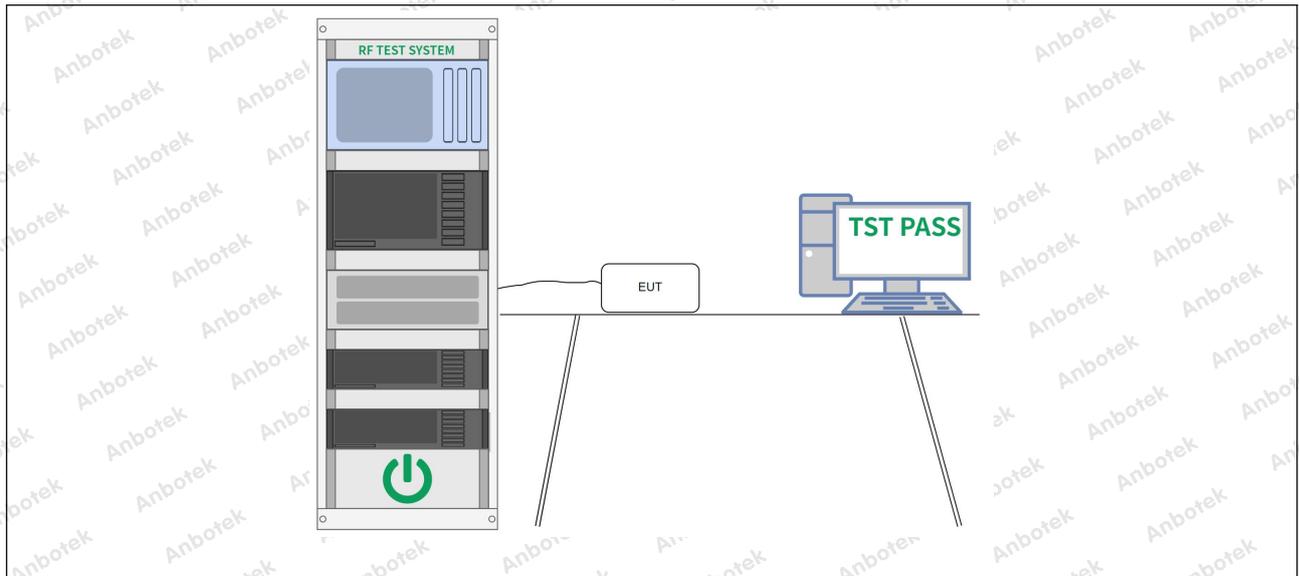
## 2. RF Power

Test Requirement:	Clause 4.3.1.2.1
Test Limit:	<=20dBm
Test Method:	Clause 5.4.2.2.1
Procedure:	Clause 5.4.2.2.1.2

### 2.1. EUT Operation

Operating Environment:	
Test mode:	<p>4: TX-GFSK (Hopping): Keep the EUT in continuously transmitting mode (hopping) with GFSK modulation,.</p> <p>5: TX-<math>\pi/4</math> DQPSK (Hopping): Keep the EUT in continuously transmitting mode (hopping) with <math>\pi/4</math> DQPSK modulation.</p> <p>6: TX-8DPSK (Hopping): Keep the EUT in continuously transmitting mode (hopping) with 8DPSK modulation.</p>

### 2.2. Test Setup



### 2.3. Test Data

Temperature:	22.3 °C	Humidity:	58 %	Atmospheric Pressure:	101 kPa
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Please Refer to Appendix for Details.



### 3. Accumulated Transmit Time, Frequency Occupation and Hopping Sequence

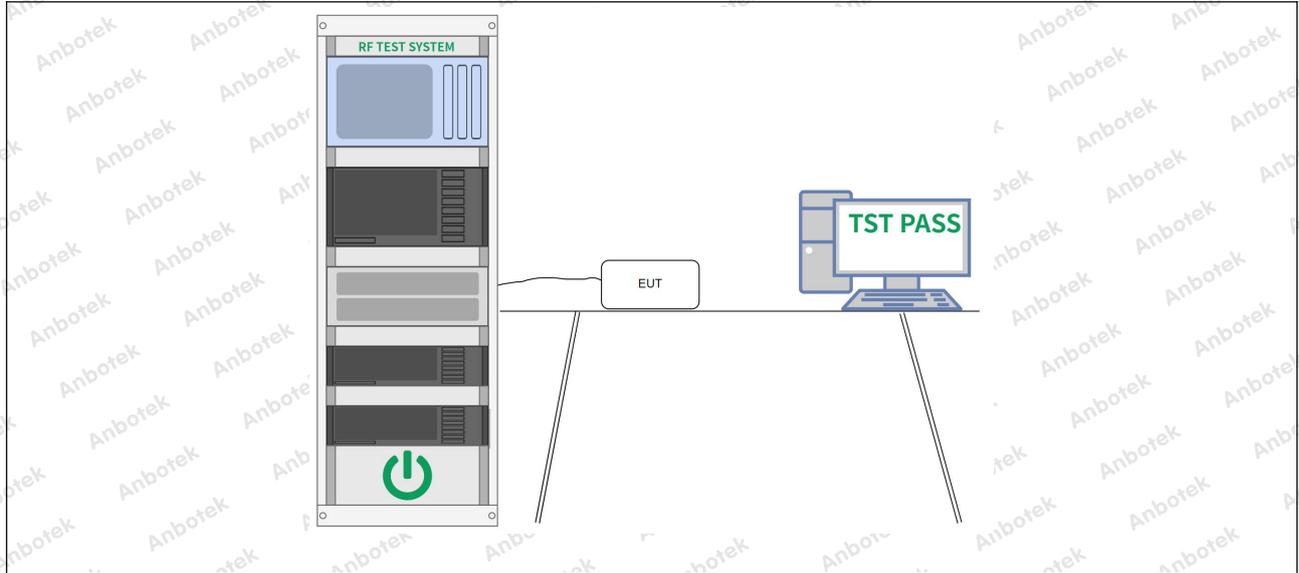
Test Requirement:	Clause 4.3.1.4.1
Test Limit:	Adaptive FHSS equipment shall be capable of operating over a minimum of 70 % of the band specified in table 1. The Accumulated Transmit Time on any hopping frequency shall not be greater than 400 ms within any observation period of 400 ms multiplied by the minimum number of hopping frequencies (N) that have to be used. In order for the FHSS equipment to comply with the Frequency Occupation requirement, it shall meet either of the following two options: Option 1: Each hopping frequency of the Hopping Sequence shall be occupied at least once within a period not exceeding four times the product of the dwell time and the number of hopping frequencies in use. Option 2: The occupation probability for each frequency shall be between $((1 / U) 25 \%)$ and 77 % where U is the number of hopping frequencies in use. 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. NOTE: See also clause 4.3.1.5.3.2 for the Hopping Frequency Separation applicable to adaptive FHSS equipment. For Adaptive FHSS equipment, from the N hopping frequencies defined above, the equipment shall consider at least one hopping frequency for its transmissions. Providing that there is no interference present on this hopping frequency with a level above the detection threshold defined in clause 4.3.1.7.2.2, point 5 or clause 4.3.1.7.3.2, point 5, then the equipment shall have transmissions on this hopping frequency. For Adaptive FHSS equipment using LBT, if a signal is detected during the CCA, the equipment may jump immediately to the next hopping frequency in the Hopping Sequence (see clause 4.3.1.7.2.2, point 2) provided the limit for Accumulated Transmit Time on the new hopping frequency is respected.
Test Method:	Clause 5.4.4.2.1
Procedure:	Clause 5.4.4.2.1

#### 3.1. EUT Operation

Operating Environment:	
Test mode:	<p>4: TX-GFSK (Hopping): Keep the EUT in continuously transmitting mode (hopping) with GFSK modulation,.</p> <p>5: TX-<math>\pi/4</math> DQPSK (Hopping): Keep the EUT in continuously transmitting mode (hopping) with <math>\pi/4</math> DQPSK modulation.</p> <p>6: TX-8DPSK (Hopping): Keep the EUT in continuously transmitting mode (hopping) with 8DPSK modulation.</p>



### 3.2. Test Setup



### 3.3. Test Data

Temperature:	22.3 °C	Humidity:	58 %	Atmospheric Pressure:	101 kPa
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Please Refer to Appendix for Details.



## 4. Hopping Frequency Separation

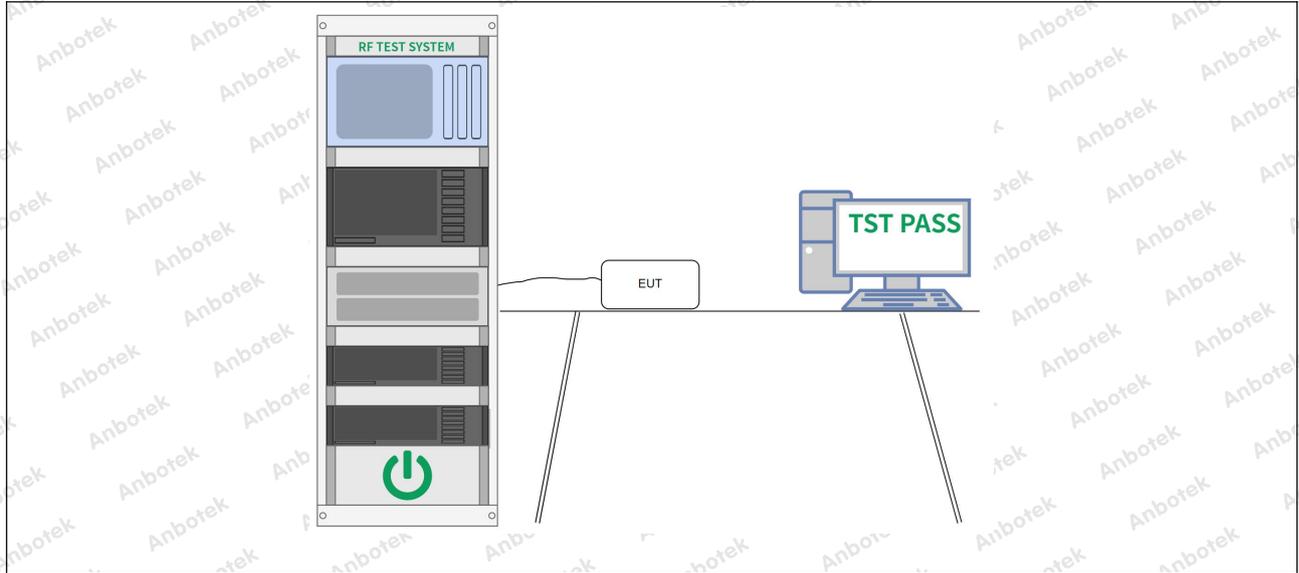
Test Requirement:	Clause 4.3.1.5.1
Test Limit:	<p>For adaptive FHSS equipment, the minimum Hopping Frequency Separation shall be 100 kHz.</p> <p>Adaptive FHSS equipment that switched to a non-adaptive mode for one or more hopping frequencies because interference was detected on each of these hopping frequencies with a level above the threshold level defined in clause 4.3.1.7.2.2, point 5 or clause 4.3.1.7.3.2, point 5, does not have to comply with the Hopping Frequency Separation provided in clause 4.3.1.5.3.1 for non-adaptive FHSS equipment. If the Hopping Frequency Separation is below the Occupied Channel Bandwidth but greater than 100 kHz, the equipment is allowed to continue to operate with this Hopping Frequency Separation as long as the interference remains present on these hopping frequencies. As this relaxed Hopping Frequency Separation only applies to adaptive FHSS equipment, the FHSS equipment shall continue to operate in an adaptive mode on all other hopping frequencies.</p> <p>Adaptive FHSS 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 FHSS equipment defined in clause 4.3.1.5.3.1 (first paragraph) for these hopping frequencies.</p>
Test Method:	Clause 5.4.5.2.2
Procedure:	Clause 5.4.5.2.1

### 4.1. EUT Operation

Operating Environment:	
Test mode:	<p>4: TX-GFSK (Hopping): Keep the EUT in continuously transmitting mode (hopping) with GFSK modulation,.</p> <p>5: TX-<math>\pi/4</math> DQPSK (Hopping): Keep the EUT in continuously transmitting mode (hopping) with <math>\pi/4</math> DQPSK modulation.</p> <p>6: TX-8DPSK (Hopping): Keep the EUT in continuously transmitting mode (hopping) with 8DPSK modulation.</p>



## 4.2. Test Setup



## 4.3. Test Data

Temperature:	22.3 °C	Humidity:	58 %	Atmospheric Pressure:	101 kPa
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Please Refer to Appendix for Details.



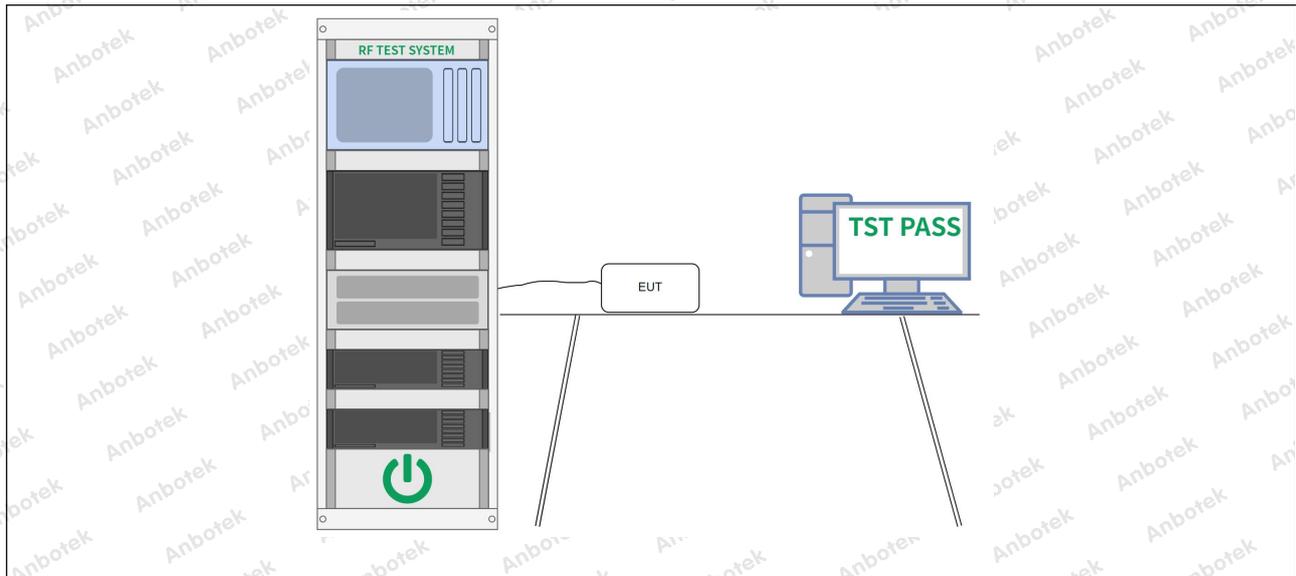
## 5. Occupied Channel Bandwidth

Test Requirement:	Clause 4.3.1.8.1
Test Limit:	Clause 4.3.1.8.3
Test Method:	Clause 5.4.7.2.1
Procedure:	Clause 5.4.7.2

### 5.1. EUT Operation

Operating Environment:	
Test mode:	<p>1: TX-GFSK (Non-Hopping): Keep the EUT in continuously transmitting mode (non-hopping) with GFSK modulation.</p> <p>2: TX-<math>\pi/4</math> DQPSK (Non-Hopping): Keep the EUT in continuously transmitting mode (non-hopping) with <math>\pi/4</math> DQPSK modulation.</p> <p>3: TX-8DPSK (Non-Hopping): Keep the EUT in continuously transmitting mode (non-hopping) with 8DPSK modulation.</p>

### 5.2. Test Setup



### 5.3. Test Data

Temperature:	22.3 °C	Humidity:	58 %	Atmospheric Pressure:	101 kPa
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Please Refer to Appendix for Details.



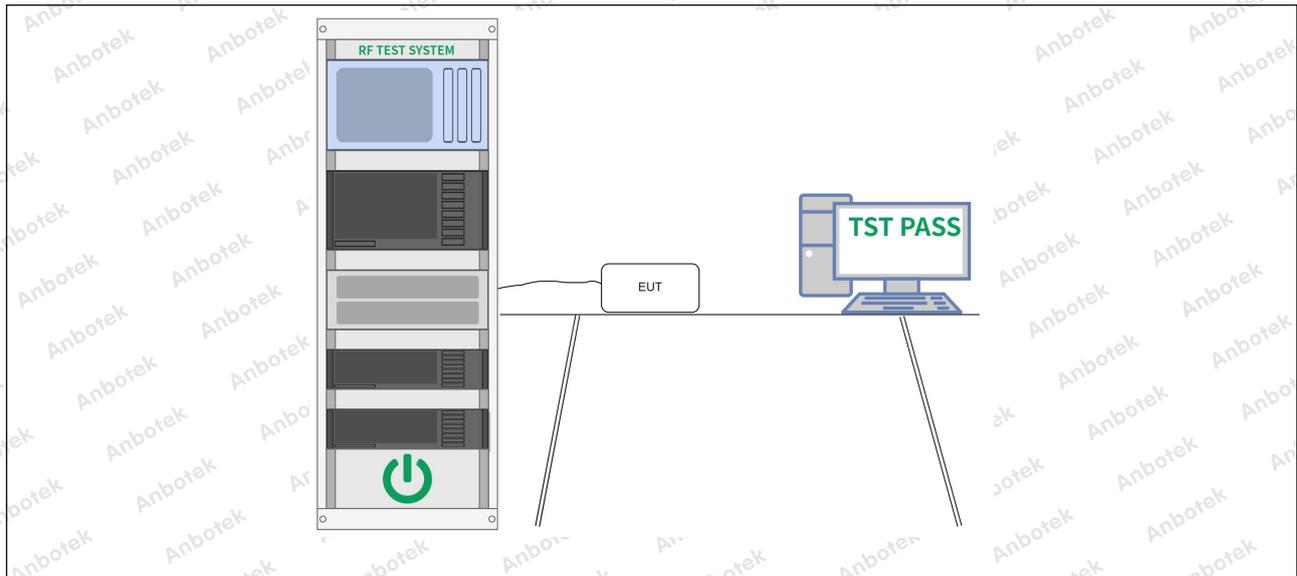
## 6. Transmitter unwanted emissions in the out-of-band domain

Test Requirement:	Clause 4.3.1.9.1
Test Limit:	Clause 4.3.1.9.3
Test Method:	Clause 5.4.8.2.1
Procedure:	Clause 5.4.8.2.1

### 6.1. EUT Operation

Operating Environment:	
Test mode:	<ol style="list-style-type: none"> <li>1: TX-GFSK (Non-Hopping): Keep the EUT in continuously transmitting mode (non-hopping) with GFSK modulation.</li> <li>2: TX-<math>\pi/4</math> DQPSK (Non-Hopping): Keep the EUT in continuously transmitting mode (non-hopping) with <math>\pi/4</math> DQPSK modulation.</li> <li>3: TX-8DPSK (Non-Hopping): Keep the EUT in continuously transmitting mode (non-hopping) with 8DPSK modulation.</li> </ol>

### 6.2. Test Setup



### 6.3. Test Data

Temperature:	22.3 °C	Humidity:	58 %	Atmospheric Pressure:	101 kPa
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Please Refer to Appendix for Details.



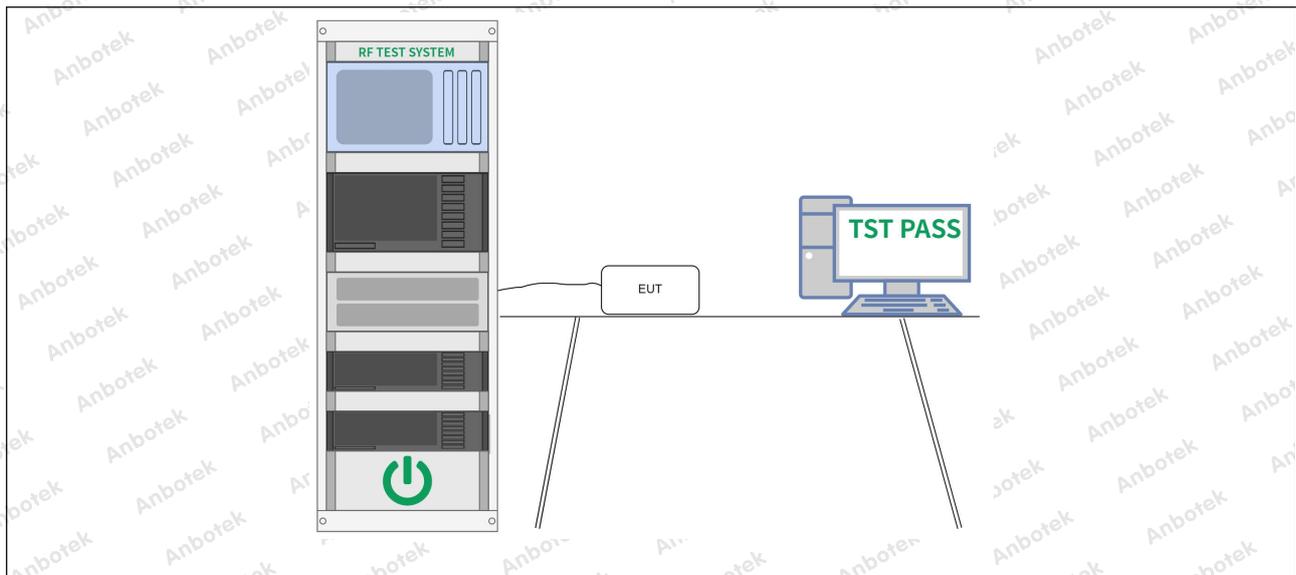
## 7. Transmitter unwanted emissions in the spurious domain, conducted

Test Requirement:	Clause 4.3.1.10.1
Test Limit:	Clause 4.3.1.10.3
Test Method:	Clause 5.4.9.2.1
Procedure:	Clause 5.4.9.2.1

### 7.1. EUT Operation

Operating Environment:	
Test mode:	<p>1: TX-GFSK (Non-Hopping): Keep the EUT in continuously transmitting mode (non-hopping) with GFSK modulation.</p> <p>2: TX-<math>\pi/4</math> DQPSK (Non-Hopping): Keep the EUT in continuously transmitting mode (non-hopping) with <math>\pi/4</math> DQPSK modulation.</p> <p>3: TX-8DPSK (Non-Hopping): Keep the EUT in continuously transmitting mode (non-hopping) with 8DPSK modulation.</p>

### 7.2. Test Setup



### 7.3. Test Data

Temperature:	22.3 °C	Humidity:	58 %	Atmospheric Pressure:	101 kPa
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Please Refer to Appendix for Details.



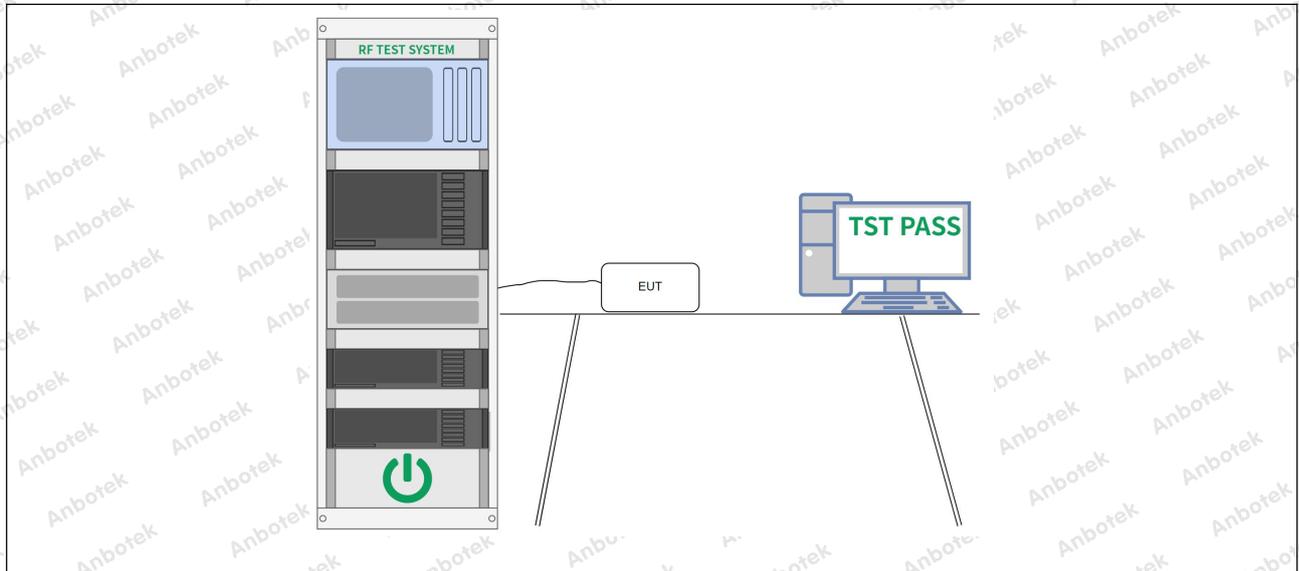
## 8. Receiver spurious emissions, conducted

Test Requirement:	Clause 4.3.1.11.1
Test Limit:	Clause 4.3.1.11.3
Test Method:	Clause 5.4.10.2.1
Procedure:	Clause 5.4.10.2.1

### 8.1. EUT Operation

Operating Environment:	
Test mode:	7: Receiving mode: Keep the EUT in receiving mode.

### 8.2. Test Setup



### 8.3. Test Data

Temperature:	22.3 °C	Humidity:	58 %	Atmospheric Pressure:	101 kPa
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Please Refer to Appendix for Details.



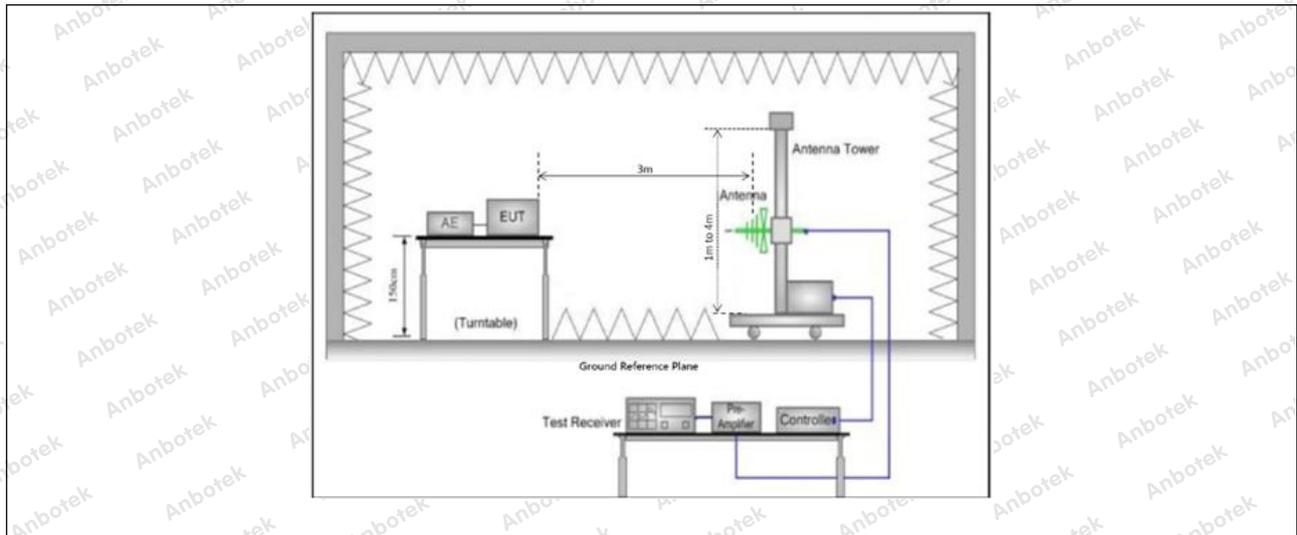
## 9. Transmitter unwanted emissions in the spurious domain (30MHz to 1GHz)

Test Requirement:	Clause 4.3.1.10.1
Test Limit:	Clause 4.3.1.10.3
Test Method:	Clause 5.4.9.2.2
Procedure:	Clause 5.4.9.2.2

### 9.1. EUT Operation

Operating Environment:	
Test mode:	<ol style="list-style-type: none"> <li>1: TX-GFSK (Non-Hopping): Keep the EUT in continuously transmitting mode (non-hopping) with GFSK modulation.</li> <li>2: TX-<math>\pi/4</math> DQPSK (Non-Hopping): Keep the EUT in continuously transmitting mode (non-hopping) with <math>\pi/4</math> DQPSK modulation.</li> <li>3: TX-8DPSK (Non-Hopping): Keep the EUT in continuously transmitting mode (non-hopping) with 8DPSK modulation.</li> </ol>

### 9.2. Test Setup



### 9.3. Test Data

Temperature:	22.3 °C	Humidity:	58 %	Atmospheric Pressure:	101 kPa
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TM1/ L					
Frequency (MHz)	Level(dBm)	Limit (dBm)	Margin(dB)	Polarization	Test Result
69.05	-67.01	-54.00	-13.01	H	PASS
162.39	-65.19	-36.00	-29.19	H	
445.91	-67.19	-36.00	-31.19	H	
502.15	-69.44	-54.00	-15.44	H	
633.30	-74.70	-54.00	-20.70	H	
727.69	-66.97	-36.00	-30.97	H	
55.25	-74.89	-54.00	-20.89	V	
134.21	-66.05	-36.00	-30.05	V	
294.53	-67.60	-36.00	-31.60	V	
522.40	-73.57	-54.00	-19.57	V	
503.40	-69.04	-54.00	-15.04	V	
846.54	-74.87	-36.00	-38.87	V	
TM1/ H					
Frequency (MHz)	Level(dBm)	Limit (dBm)	Margin(dB)	Polarization	Test Result
55.45	-68.02	-54.00	-14.02	H	PASS
154.64	-65.69	-36.00	-29.69	H	
375.52	-71.12	-36.00	-35.12	H	
639.59	-71.47	-54.00	-17.47	H	
484.90	-73.83	-54.00	-19.83	H	
791.86	-70.18	-36.00	-34.18	H	
63.56	-68.43	-54.00	-14.43	V	
134.64	-66.09	-36.00	-30.09	V	
403.55	-68.43	-36.00	-32.43	V	
552.42	-70.01	-54.00	-16.01	V	
652.27	-71.23	-54.00	-17.23	V	
848.52	-67.21	-36.00	-31.21	V	

Note: Only record the worst data in the report.



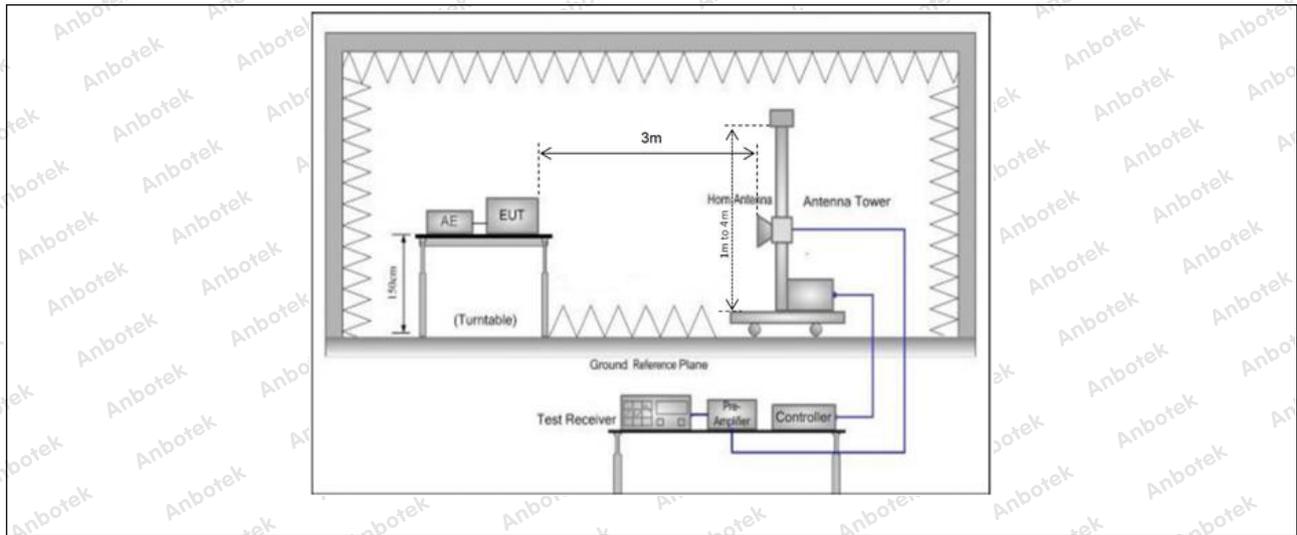
## 10. Transmitter unwanted emissions in the spurious domain (above 1GHz)

Test Requirement:	Clause 4.3.1.10.1
Test Limit:	Clause 4.3.1.10.3
Test Method:	Clause 5.4.9.2.2
Procedure:	Clause 5.4.9.2.2

### 10.1. EUT Operation

Operating Environment:	
Test mode:	<p>1: TX-GFSK (Non-Hopping): Keep the EUT in continuously transmitting mode (non-hopping) with GFSK modulation.</p> <p>2: TX-<math>\pi/4</math> DQPSK (Non-Hopping): Keep the EUT in continuously transmitting mode (non-hopping) with <math>\pi/4</math> DQPSK modulation.</p> <p>3: TX-8DPSK (Non-Hopping): Keep the EUT in continuously transmitting mode (non-hopping) with 8DPSK modulation.</p>

### 10.2. Test Setup



### 10.3. Test Data

Temperature:	22.3 °C	Humidity:	58 %	Atmospheric Pressure:	101 kPa
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TM1/ L					
Frequency (MHz)	Level(dBm)	Limit (dBm)	Margin(dB)	Polarization	Test Result
4027.74	-63.76	-30.00	-33.76	H	PASS
4960.37	-63.56	-30.00	-33.56	H	
7440.25	-63.47	-30.00	-33.47	H	
3933.44	-61.98	-30.00	-31.98	V	
4804.26	-57.88	-30.00	-27.88	V	
7206.64	-66.09	-30.00	-36.09	V	
TM1/ H					
Frequency (MHz)	Level(dBm)	Limit (dBm)	Margin(dB)	Polarization	Test Result
3937.91	-66.74	-30.00	-36.74	H	PASS
4960.80	-62.83	-30.00	-32.83	H	
7440.64	-61.34	-30.00	-31.34	H	
4014.90	-59.04	-30.00	-29.04	V	
4960.54	-61.72	-30.00	-31.72	V	
7440.27	-60.36	-30.00	-30.36	V	

Note: Only record the worst data in the report.



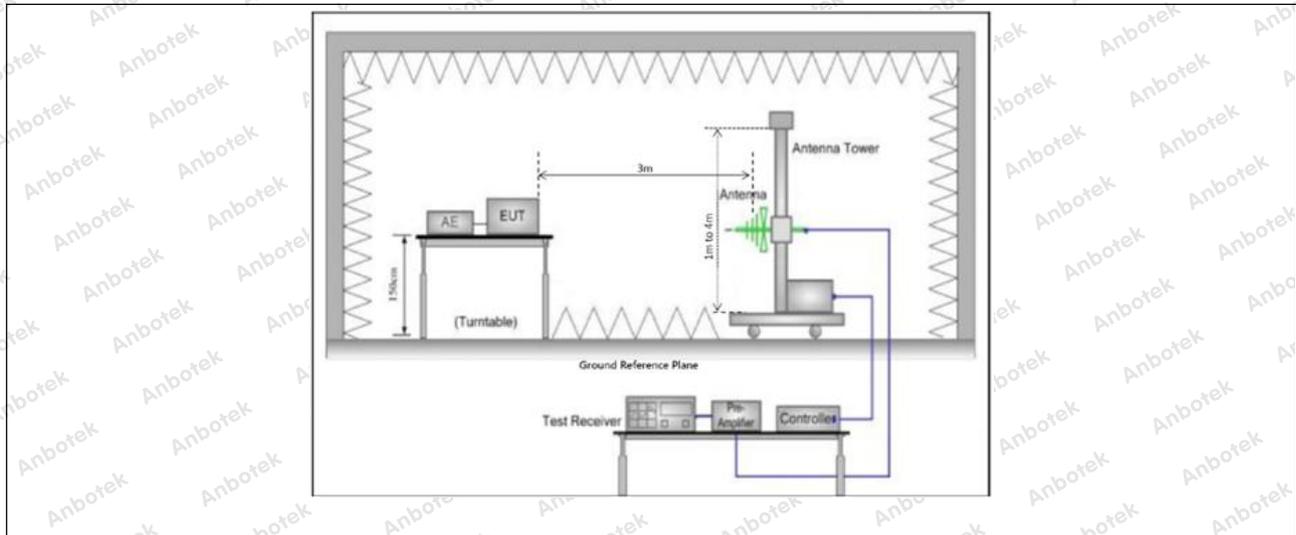
## 11. Receiver spurious emissions (30MHz to 1GHz)

Test Requirement:	Clause 4.3.1.11.1
Test Limit:	Clause 4.3.1.11.3
Test Method:	Clause 5.4.10.2.2
Procedure:	Clause 5.4.10.2.2

### 11.1. EUT Operation

Operating Environment:	
Test mode:	7: Receiving mode: Keep the EUT in receiving mode.

### 11.2. Test Setup



### 11.3. Test Data

Temperature:	22.3 °C	Humidity:	58 %	Atmospheric Pressure:	101 kPa
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TM7/ L					
Frequency (MHz)	Level(dBm)	Limit (dBm)	Margin(dB)	Polarization	Test Result
69.24	-72.92	-57.00	-15.92	H	PASS
135.30	-66.19	-57.00	-9.19	H	
330.42	-67.84	-57.00	-10.84	H	
511.73	-68.69	-57.00	-11.69	H	
567.50	-66.79	-57.00	-9.79	H	
769.46	-68.71	-57.00	-11.71	H	
67.36	-68.30	-57.00	-11.30	V	
129.03	-69.50	-57.00	-12.50	V	
326.52	-67.69	-57.00	-10.69	V	
500.77	-67.07	-57.00	-10.07	V	
560.12	-67.86	-57.00	-10.86	V	
798.88	-74.97	-57.00	-17.97	V	
TM7/ H					
Frequency (MHz)	Level(dBm)	Limit (dBm)	Margin(dB)	Polarization	Test Result
57.50	-64.34	-57.00	-7.34	H	PASS
162.85	-65.67	-57.00	-8.67	H	
322.00	-70.16	-57.00	-13.16	H	
612.15	-68.21	-57.00	-11.21	H	
555.35	-71.73	-57.00	-14.73	H	
792.06	-73.34	-57.00	-16.34	H	
48.74	-73.20	-57.00	-16.20	V	
161.49	-69.16	-57.00	-12.16	V	
409.19	-70.84	-57.00	-13.84	V	
599.23	-74.00	-57.00	-17.00	V	
489.88	-74.69	-57.00	-17.69	V	
868.37	-69.04	-57.00	-12.04	V	

Note: Only record the worst data (GFSK) in the report.



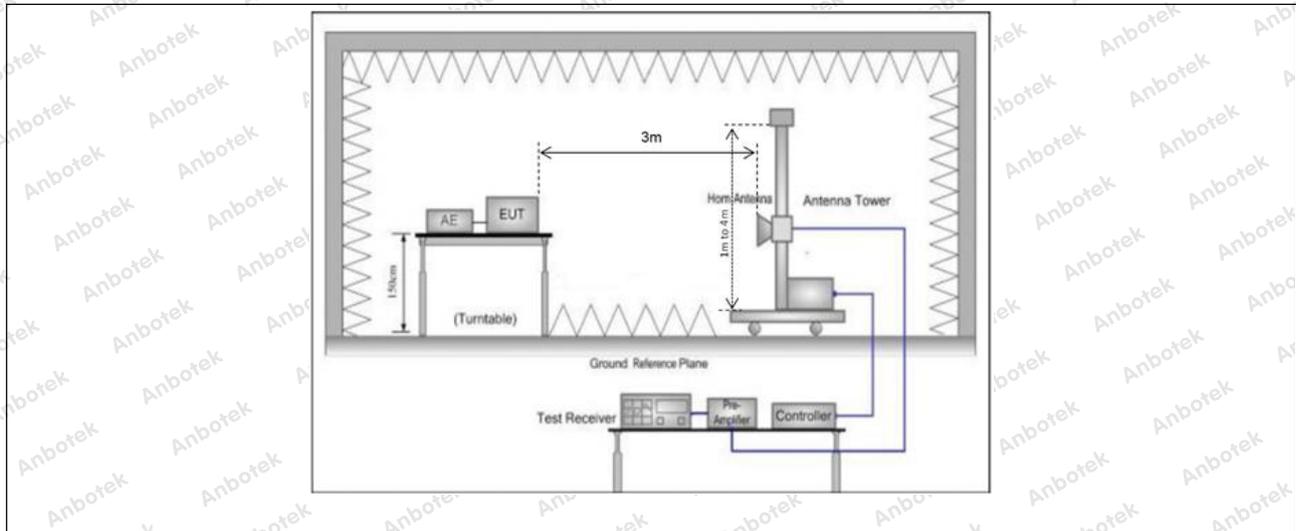
## 12. Receiver spurious emissions (above 1GHz)

Test Requirement:	Clause 4.3.1.11.1
Test Limit:	Clause 4.3.1.11.3
Test Method:	Clause 5.4.10.2.2
Procedure:	Clause 5.4.10.2.2

### 12.1. EUT Operation

Operating Environment:	
Test mode:	7: Receiving mode: Keep the EUT in receiving mode.

### 12.2. Test Setup



**12.3. Test Data**

Temperature:	22.3 °C	Humidity:	58 %	Atmospheric Pressure:	101 kPa
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TM7/ L					
Frequency (MHz)	Level(dBm)	Limit (dBm)	Margin(dB)	Polarization	Test Result
4041.66	-56.23	-47.00	-9.23	H	PASS
3300.26	-60.95	-47.00	-13.95	H	
6600.56	-66.05	-47.00	-19.05	H	
4033.87	-61.63	-47.00	-14.63	V	
3500.81	-60.98	-47.00	-13.98	V	
6500.54	-63.64	-47.00	-16.64	V	
TM7/ H					
Frequency (MHz)	Level(dBm)	Limit (dBm)	Margin(dB)	Polarization	Test Result
3951.71	-67.72	-47.00	-20.72	H	PASS
3300.65	-64.17	-47.00	-17.17	H	
6600.35	-66.74	-47.00	-19.74	H	
3961.49	-66.06	-47.00	-19.06	V	
3500.64	-55.38	-47.00	-8.38	V	
6500.47	-62.54	-47.00	-15.54	V	

Note: Only record the worst data (GFSK) in the report.



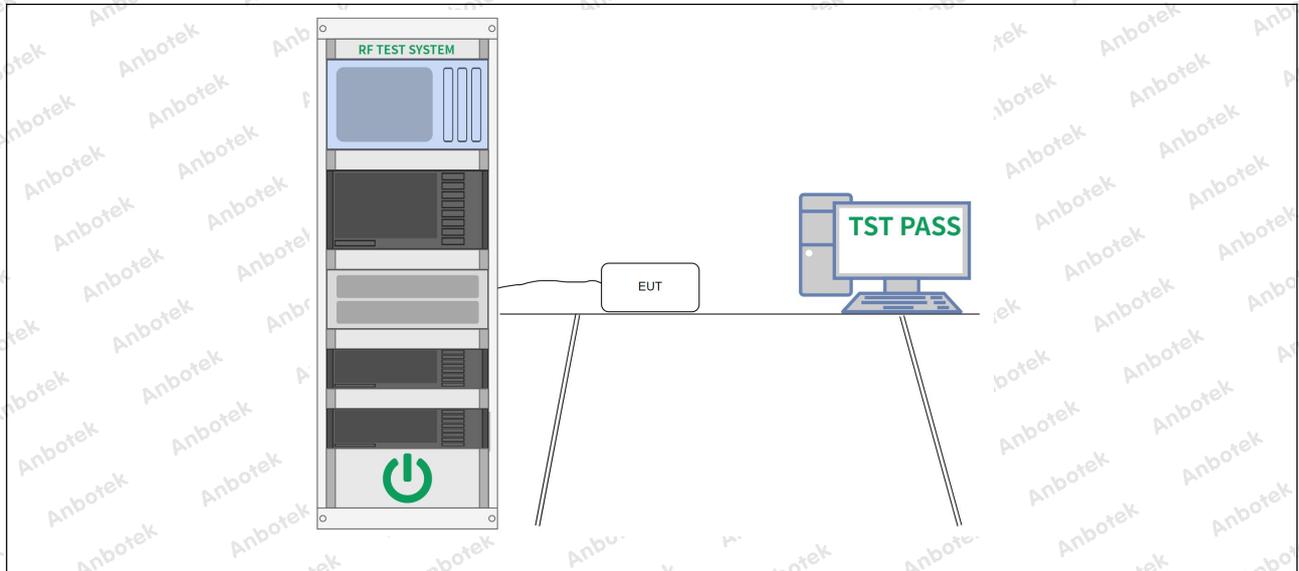
## 13. Receiver Blocking

Test Requirement:	Clause 4.3.1.12.1
Test Limit:	Clause 4.3.1.12.4
Test Method:	Clause 5.4.11.2.1
Procedure:	Clause 5.4.11.2.1

### 13.1. EUT Operation

Operating Environment:	
Test mode:	8: Normal mode: Keep the EUT in normal communication with pairing device mode.

### 13.2. Test Setup



### 13.3. Test Data

Temperature:	22.3 °C	Humidity:	58 %	Atmospheric Pressure:	101 kPa
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Test Mode	Wanted Signal Mean Power from Companion Device (dBm/MHz)	Blocking Signal Frequency (MHz)	Blocking Signal Power (dBm)	Type of Blocking Signal	PER(%)	Test Result
GFSK	-70.42	2380	-34.58	CW	1.38	PASS
		2504			0.80	PASS
		2300			0.95	PASS
		2584			1.16	PASS

Note:

1. According to ETSI EN 300328 clause 5.4.11.1. Only the lowest data rate(GFSK) mode was tested and recorded.
2. Antenna Gain(Peak) is -0.58dBi, so the above table is given with the calculated levels.



**APPENDIX I -- TEST SETUP PHOTOGRAPH**

Please refer to separated files Appendix I -- Test Setup Photograph\_RF

**APPENDIX II -- EXTERNAL PHOTOGRAPH**

Please refer to separated files Appendix II -- External Photograph

**APPENDIX III -- INTERNAL PHOTOGRAPH**

Please refer to separated files Appendix III -- Internal Photograph

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

