

# **FCC Test Report**

Report No.: AGC02180211201FE03

**FCC ID** : 2AR6E-100079037

**APPLICATION PURPOSE** : Original Equipment

**PRODUCT DESIGNATION**: BT FM transmitter

**BRAND NAME** : N/A

100079037, HK203, HK205, HK206, HK207, HK305,

**MODEL NAME** : HK403, HK405, HK406, HK407, HK408, HK409, HK501,

HK502, HK503, HK505, HK506

**APPLICANT** : HAIKE PLASTIC AND ELECTRONIC CO LTD

**DATE OF ISSUE** : Jan. 06, 2022

**STANDARD(S)** : FCC Part 15.247

**REPORT VERSION** : V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd





Page 2 of 67

## REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	® /	Jan. 06, 2022	Valid	Initial Release

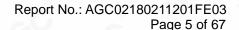


# **TABLE OF CONTENTS**

1. VERIFICATION OF CONFORMITY	5
2. GENERAL INFORMATION	6
2.1. PRODUCT DESCRIPTION	6
2.2. TABLE OF CARRIER FREQUENCYS	6
2.3. RECEIVER INPUT BANDWIDTH	7
2.4. EXAMPLE OF A HOPPING SEQUENCY IN DATA MODE	7
2.5. EQUALLY AVERAGE USE OF FREQUENCIES AND BEHAVIOUR	7
2.6. RELATED SUBMITTAL(S) / GRANT (S)	8
2.7. TEST METHODOLOGY	8
2.8. SPECIAL ACCESSORIES	
2.9. EQUIPMENT MODIFICATIONS	
2.10. ANTENNA REQUIREMENT	
3. MEASUREMENT UNCERTAINTY	9
4. DESCRIPTION OF TEST MODES	
5. SYSTEM TEST CONFIGURATION	11
5.1. CONFIGURATION OF EUT SYSTEM	11
5.2. EQUIPMENT USED IN TESTED SYSTEM	11
5.3. SUMMARY OF TEST RESULTS	11
6. TEST FACILITY	12
7. PEAK OUTPUT POWER	13
7.1. MEASUREMENT PROCEDURE	13
7.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	13
7.2 LIMITS AND MEASUDEMENT DESUIT	- 11
8. 20DB BANDWIDTH	19
8.1. MEASUREMENT PROCEDURE	
8.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	19
8.3. LIMITS AND MEASUREMENT RESULTS	20
9. CONDUCTED SPURIOUS EMISSION	25
9.1. MEASUREMENT PROCEDURE	25



9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	25
9.3. MEASUREMENT EQUIPMENT USED	
9.4. LIMITS AND MEASUREMENT RESULT	
10. RADIATED EMISSION	46
10.1. MEASUREMENT PROCEDURE	46
10.2. TEST SETUP	
10.3. LIMITS AND MEASUREMENT RESULT	49
10.4. TEST RESULT	
11. NUMBER OF HOPPING FREQUENCY	
11.1. MEASUREMENT PROCEDURE	59
11.2. TEST SETUP (BLOCK DIAGRAM OF CONFIGURATION)	59
11.3. MEASUREMENT EQUIPMENT USED	59
11.4. LIMITS AND MEASUREMENT RESULT	59
12. TIME OF OCCUPANCY (DWELL TIME)	60
12.1. MEASUREMENT PROCEDURE	
12.2. TEST SETUP (BLOCK DIAGRAM OF CONFIGURATION)	
12.3. MEASUREMENT EQUIPMENT USED	
12.4. LIMITS AND MEASUREMENT RESULT	
13. FREQUENCY SEPARATION	
13.1. MEASUREMENT PROCEDURE	64
13.2. TEST SETUP (BLOCK DIAGRAM OF CONFIGURATION)	64
13.3. MEASUREMENT EQUIPMENT USED	64
13.4. LIMITS AND MEASUREMENT RESULT	
14. LINE CONDUCTED EMISSION TEST	65
14.1. LIMITS OF LINE CONDUCTED EMISSION TEST	65
14.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST	65
14.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST	66
14.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST	
14.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST	66
APPENDIX A: PHOTOGRAPHS OF TEST SETUP	67
APPENDIX B: PHOTOGRAPHS OF EUT	67





# 1. VERIFICATION OF CONFORMITY

Applicant	Plicant HAIKE PLASTIC AND ELECTRONIC CO LTD	
Address	Block B.Shanghengyuan Bai Fuli Industrial, Dalang Street, Long Hua, Shenzhen, China.	
Manufacturer	HAIKE PLASTIC AND ELECTRONIC CO LTD	
Address	Block B.Shanghengyuan Bai Fuli Industrial, Dalang Street, Long Hua, Shenzhen, China.	
Factory	HAIKE PLASTIC AND ELECTRONIC CO LTD	
Address	Block B.Shanghengyuan Bai Fuli Industrial, Dalang Street, Long Hua, Shenzhen, China.	
Product Designation	BT FM transmitter	
Brand Name	N/A	
Test Model	100079037	
Series Model	HK203, HK205, HK206, HK207, HK305, HK403, HK405, HK406, HK407, HK408, HK409, HK501, HK502, HK503, HK505, HK506	
Declaration of Difference	All the series models are the same as the test model except for the model names and the color of appearance.	
Date of test	Dec. 31, 2021 to Jan. 06, 2022	
Deviation	No any deviation from the test method	
Condition of Test Sample	Normal	
Test Result	Pass	
Report Template	AGCRT-US-BR/RF	

## We hereby certify that:

The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC PART 15.247.

Prepared By	keny chang	
-0	Kelly Cheng (Project Engineer)	Jan. 06, 2022
Reviewed By	Calin Lin	
,C _C	Calvin Liu (Reviewer)	Jan. 06, 2022
Approved By	Max Zhang	
	Max Zhang (Authorized Officer)	Jan. 06, 2022

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the bedicated restriction Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter pathorization of AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Page 6 of 67

## 2. GENERAL INFORMATION

## 2.1. PRODUCT DESCRIPTION

The EUT is designed as "BT FM transmitter". It is designed by way of utilizing the GFSK, Pi/4 DQPSK and 8DPSK technology to achieve the system operation.

A major technical description of EUT is described as following

r time, join to ori in took do oo in piloti or	
Operation Frequency	2.402 GHz to 2.480 GHz
RF Output Power	1.145dBm (Max)
Bluetooth Version	V5.0
Modulation	BR ⊠GFSK, EDR ⊠π /4-DQPSK, ⊠8DPSK BLE □GFSK 1Mbps □GFSK 2Mbps
Number of channels	79
Hardware Version	1.0
Software Version	1.0
Antenna Designation	PCB Antenna (Comply with requirements of the FCC part 15.203)
Antenna Gain	-0.58dBi
Power Supply	DC 12/24V

#### 2.2. TABLE OF CARRIER FREQUENCYS

Frequency Band	Channel Number	Frequency
0	0	2402 MHz
	. 1	2403 MHz
	do d	-C -C
0	38	2440 MHz
2402~2480MHz	39	2441 MHz
	40	2442 MHz
-C		
9 20	77	2479 MHz
	78	2480 MHz





#### 2.3. RECEIVER INPUT BANDWIDTH

The input bandwidth of the receiver is 1.3MHz, in every connection one Bluetooth device is the master and the other one is slave. The master determines the hopping sequence. The slave follows this sequence. Both devices shift between RX and TX time slot according to the clock of the master. Additionally, the type of connection (e.g. single of multi slot packet) is set up at the beginning of the connection. The master adapts its hopping frequency and its TX/RX timing according to the packet type of the connection. Also, the slave of the connection will use these settings. Repeating of a packet has no influence on the hopping sequence. The hopping sequence generated by the master of the connection will be followed in any case. That means, a repeated packet will not be send on the same frequency, it is send on the next frequency of the hopping sequence.

#### 2.4. EXAMPLE OF A HOPPING SEQUENCY IN DATA MODE

Example of a hopping sequence in data mode:

40, 21, 44, 23, 04, 15, 66, 56, 19, 78, 07, 28, 69, 55,

36, 45, 05, 13, 43, 74, 57, 35, 67, 76, 02, 34, 54, 63,

42, 11, 30, 06, 64, 25, 75, 48, 17, 33, 58, 01, 29, 14,

51, 72, 03, 31, 50, 61, 77, 18, 10, 47, 12, 68, 08, 49,

20, 00, 73, 09, 16, 60, 71, 41, 24, 53, 38, 26, 46, 37,

65, 32, 70, 52, 27, 59, 22, 62, 39

#### 2.5. EQUALLY AVERAGE USE OF FREQUENCIES AND BEHAVIOUR

The generation of the hopping sequence in connection mode depends essentially on two input values:

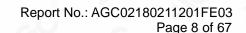
- 1. LAP/UAP of the master of the connection.
- 2. Internal master clock.

The LAP (lower address part) are the 24 LSB's of the 48 BD\_ADDRESS. The BD\_ADDRESS is an unambiguous number of every Bluetooth unit. The UAP (upper address part) are the 24MSB's of the 48BD\_ADDRESS

The internal clock of a Bluetooth unit is derived from a free running clock which is never adjusted and is never turned off. For behavior action with other units only offset is used. It has no relation to the time of the day. Its resolution is at least half the RX/TX slot length of 312.5us. The clock has a cycle of about one day(23h30). In most case it is implemented as 28 bits counter. For the deriving of the hopping sequence the entire. LAP (24 bits),4LSB's(4bits) (Input 1) and the 27MSB's of the clock (Input 2) are used. With this input values different mathematical procedures (permutations, additions, XOR-operations) are performed to generate the Sequence. This will be done at the beginning of every new transmission.

Regarding short transmissions the Bluetooth system has the following behavior:

The first connection between the two devices is established, a hopping sequence was generated. For Transmitting the wanted data the complete hopping sequence was not used. The connection ended.





The second connection will be established. A new hopping sequence is generated. Due to the fact the Bluetooth clock has a different value, because the period between the two transmission is longer (and it Cannot be shorter) than the minimum resolution of the clock(312.5us). The hopping sequence will always differ from the first one.

## 2.6. RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID: 2AR6E-100079037** filing to comply with the FCC PART 15.247 requirements.

#### 2.7. TEST METHODOLOGY

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10 (2013). Radiated testing was performed at an antenna to EUT distance 3 meters.

#### 2.8. SPECIAL ACCESSORIES

Refer to section 5.2.

#### 2.9. EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

#### 2.10. ANTENNA REQUIREMENT

This intentional radiator is designed with a permanently attached antenna of an antenna to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

For more information of the antenna, please refer to the APPENDIX B: PHOTOGRAPHS OF EUT.



Page 9 of 67

# 3. MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y ±U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

Item	Measurement Uncertainty
Uncertainty of Conducted Emission for AC Port	$U_c = \pm 3.1 \text{ dB}$
Uncertainty of Radiated Emission below 1GHz	$U_c = \pm 4.0 \text{ dB}$
Uncertainty of Radiated Emission above 1GHz	$U_c = \pm 4.8 \text{ dB}$
Uncertainty of total RF power, conducted	$U_c = \pm 0.8 \text{ dB}$
Uncertainty of RF power density, conducted	$U_c = \pm 2.6 \text{ dB}$
Uncertainty of spurious emissions, conducted	U <sub>c</sub> = ±2 %
Uncertainty of Occupied Channel Bandwidth	U <sub>c</sub> = ±2 %



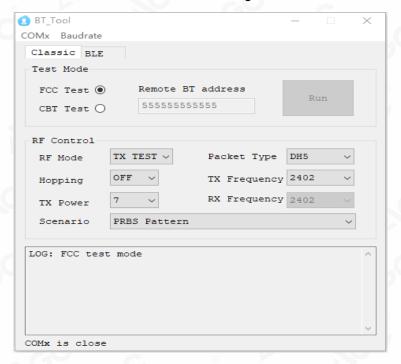
# 4. DESCRIPTION OF TEST MODES

NO.	TEST MODE DESCRIPTION
1	Low channel GFSK
2	Middle channel GFSK
3	High channel GFSK
4	Low channel π/4-DQPSK
5	Middle channel π/4-DQPSK
6	High channel π/4-DQPSK
7	Low channel 8DPSK
8	Middle channel 8DPSK
9	High channel 8DPSK
10	Hopping mode GFSK
11	Hopping mode π/4-DQPSK
12	Hopping mode 8DPSK

#### Note:

- 1. Only the result of the worst case was recorded in the report, if no other cases.
- 2. For Radiated Emission, 3axis were chosen for testing for each applicable mode.
- 3. For Conducted Test method, a temporary antenna connector is provided by the manufacture.

#### Software Setting



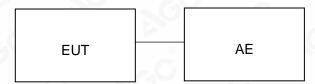


Page 11 of 67

# 5. SYSTEM TEST CONFIGURATION

# **5.1. CONFIGURATION OF EUT SYSTEM**

Radiated Emission Configure:



## **5.2. EQUIPMENT USED IN TESTED SYSTEM**

Item	Equipment	Model No.	ID or Specification	Remark
<b>®</b> 1	BT FM transmitter	100079037	2AR6E-100079037	EUT
2	Car battery	SCOSCHE	N/A	AE
3	SD card	N/A	N/A	AE
4	control board	EPS-35-3.3	DC 3.3V	AE
5	Load	N/A	N/A	AE

## **5.3. SUMMARY OF TEST RESULTS**

FCC RULES	DESCRIPTION OF TEST	RESULT
15.247 (b)(1)	Peak Output Power	Compliant
15.247 (a)(1)	20 dB Bandwidth	Compliant
15.247 (d)	Conducted Spurious Emission	Compliant
15.209	Radiated Emission	Compliant
15.247 (a)(1)(iii)	Number of Hopping Frequency	Compliant
15.247 (a)(1)(iii)	Time of Occupancy	Compliant
15.247 (a)(1)	Frequency Separation	Compliant
15.207	Conducted Emission	Not applicable

Note: The conducted emission tests at AC port are not required for devices which only employ battery power for operation.



Page 12 of 67

# 6. TEST FACILITY

Test Site	Attestation of Global Compliance (Shenzhen) Co., Ltd	
Location	1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China	
Designation Number	CN1259	
FCC Test Firm Registration Number	975832	
A2LA Cert. No.	5054.02	
Description	Attestation of Global Compliance (Shenzhen) Co., Ltd is accredited by A2LA	

# TEST EQUIPMENT OF CONDUCTED EMISSION TEST

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESPI	101206	May 15, 2021	May 14, 2022
LISN	R&S	ESH2-Z5	100086	Jun. 09, 2021	Jun. 08, 2022
Test software	R&S	ES-K1(Ver.V1.71)	N/A	N/A	N/A

## **TEST EQUIPMENT OF RADIATED EMISSION TEST**

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESCI	10096	May 15, 2021	May 14, 2022
EXA Signal Analyzer	Aglient	N9010A	MY53470504	Nov. 17, 2021	Nov. 16, 2022
2.4GHz Filter	EM Electronics	2400-2500MHz	N/A	Mar. 23, 2020	Mar. 22, 2022
Attenuator	ZHINAN	E-002	N/A	Sep. 03, 2020	Sep. 02, 2022
Horn antenna	SCHWARZBECK	BBHA 9170	#768	Oct. 31, 2021	Oct. 30, 2023
Active loop antenna (9K-30MHz)	ZHINAN	ZN30900C	18051	May 22, 2020	May 21, 2022
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00034609	Apr. 23, 2021	Apr. 22, 2022
Broadband Preamplifier	ETS LINDGREN	3117PA	00225134	Sep. 03, 2020	Sep. 02, 2022
ANTENNA	SCHWARZBECK	VULB9168	494	Jan. 08, 2021	Jan. 07, 2023
Test software	Tonscend	JS32-RE (Ver.2.5)	N/A	N/A	N/A



Page 13 of 67

## 7. PEAK OUTPUT POWER

#### 7.1. MEASUREMENT PROCEDURE

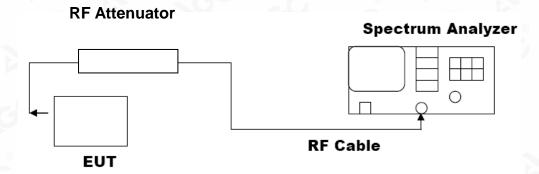
For peak power test:

- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2. Span: Approximately five times the 20 dB bandwidth, centered on a hopping channel.
- 3. RBW > 20 dB bandwidth of the emission being measured.
- 4. VBW ≥RBW.
- 5. Sweep: Auto.
- 6. Detector function: Peak.
- 7. Trace: Max hold.

Allow trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power, after any corrections for external attenuators and cables.

## 7.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

#### **PEAK POWER TEST SETUP**





## 7.3. LIMITS AND MEASUREMENT RESULT

Test Data of Conducted Output Power					
Test Mode	Test Channel (MHz)	Peak Power (dBm)	Limits (dBm)	Pass or Fail	
-6	2402	-1.629	≤21	Pass	
GFSK	2441	-2.901	<b>≨</b> 1	Pass	
	2480	-4.138	<b>₹21</b>	Pass	
6	2402	0.777	<b>⊴21</b>	Pass	
π /4-DQPSK	2441	-0.549	<b>≨</b> 21	Pass	
	2480	-1.939	<b>₹21</b>	Pass	
8DPSK	2402	1.145	<b>₹21</b>	Pass	
	2441	-0.226	<b>≨</b> 1	Pass	
	2480	-1.525	<b>₹21</b>	Pass	

# **Test Graphs of Conducted Output Power**



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the condition of Pestino/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.





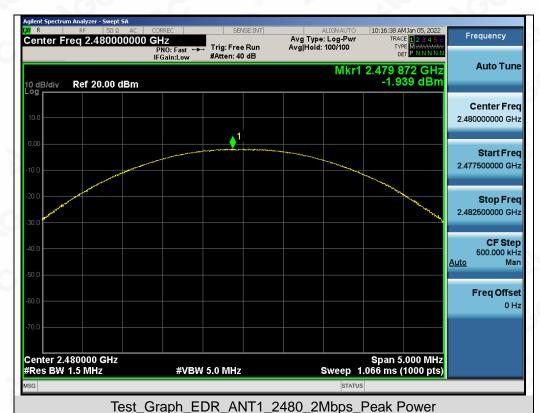














Test\_Graph\_EDR\_ANT1\_2402\_3Mbps\_Peak Power









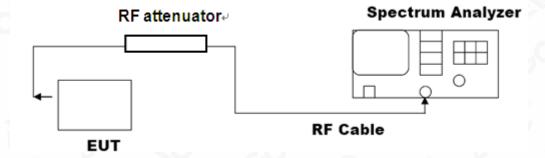
Page 19 of 67

## 8. 20DB BANDWIDTH

### **8.1. MEASUREMENT PROCEDURE**

- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2, Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 3. Set Span = approximately 2 to 5 times the 20 dB bandwidth, centered on a hoping channel
  The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video
  bandwidth (VBW) shall be approximately three times RBW; Sweep = auto; Detector function = peak
- 4. Set SPA Trace 1 Max hold, then View.

# 8.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

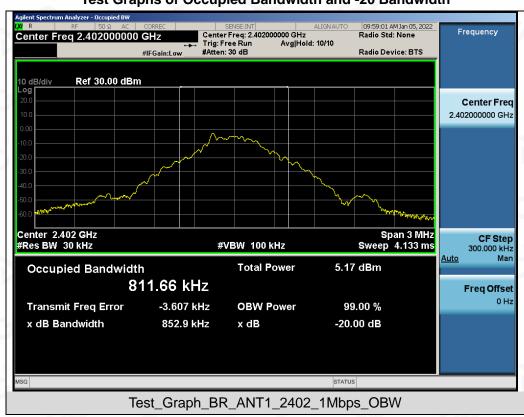




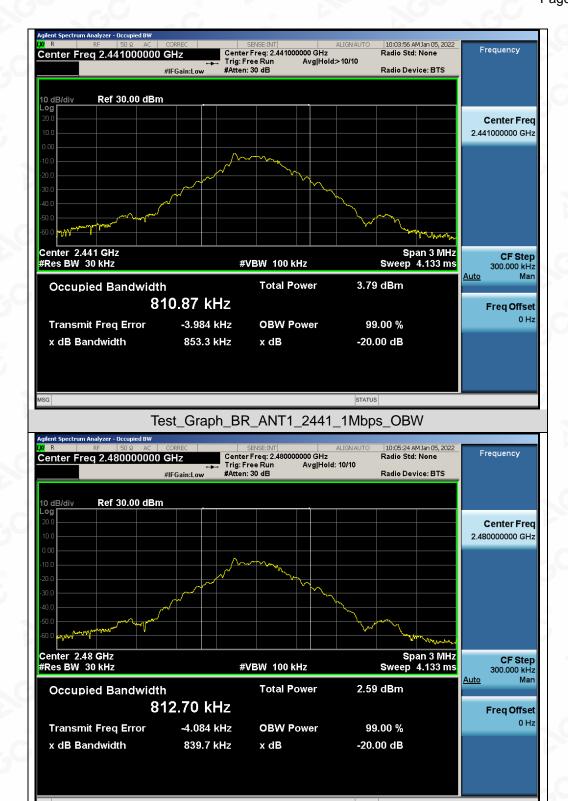
#### 8.3. LIMITS AND MEASUREMENT RESULTS

Test Data of Occupied Bandwidth and -20dB Bandwidth					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	-20dB Bandwidth (MHz)	Limits	Pass or Fail
-0	2402	0.812	0.853	N/A	Pass
GFSK	2441	0.811	0.853	N/A	Pass
	2480	0.813	0.840	N/A	Pass
π /4-DQPSK	2402	1.176	1.284	N/A	Pass
	2441	1.173	1.284	N/A	Pass
	2480	1.172	1.283	N/A	Pass
8DPSK	2402	1.161	1.266	N/A	Pass
	2441	1.161	1.265	N/A	Pass
	2480	1.165	1.279	N/A	Pass

# Test Graphs of Occupied Bandwidth and -20 Bandwidth







Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC he test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance at the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

Test\_Graph\_BR\_ANT1\_2480\_1Mbps\_OBW





Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pestua/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.

x dB

Test\_Graph\_EDR\_ANT1\_2441\_2Mbps\_OBW

-20.00 dB

1.284 MHz

x dB Bandwidth

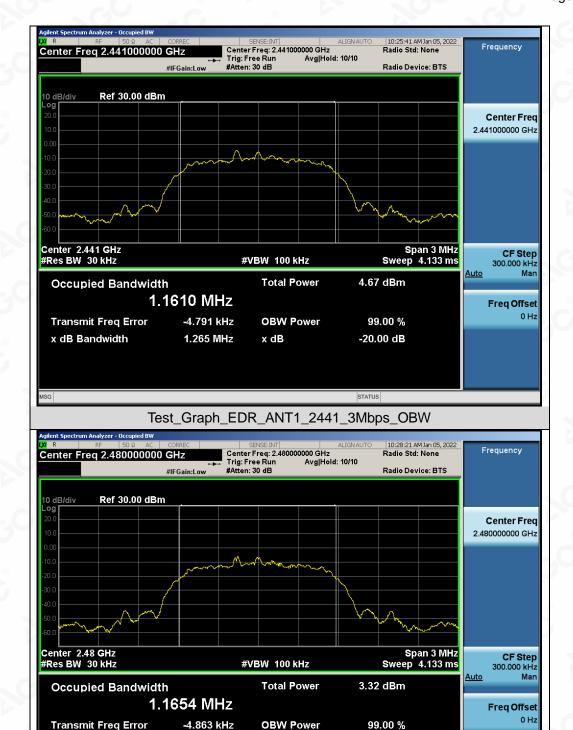




Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pestua/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

Test\_Graph\_EDR\_ANT1\_2402\_3Mbps\_OBW





Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pestua/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.

x dB

Test\_Graph\_EDR\_ANT1\_2480\_3Mbps\_OBW

-20.00 dB

1.279 MHz

x dB Bandwidth



Page 25 of 67

## 9. CONDUCTED SPURIOUS EMISSION

# 9.1. MEASUREMENT PROCEDURE

- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2. Set the EUT Work on the top, the Middle and the bottom operation frequency individually.
- 3. Set the Span = wide enough to capture the peak level of the in-band emission and all spurious emissions from the lowest frequency generated in the EUT up through the 10th harmonic.
  RBW = 100 kHz; VBW= 300 kHz; Sweep = auto; Detector function = peak.
- 4. Set SPA Trace 1 Max hold, then View.

# 9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The same as described in section 8.2

## 9.3. MEASUREMENT EQUIPMENT USED

The same as described in section 6

#### 9.4. LIMITS AND MEASUREMENT RESULT

LIMITS AND MEASUREMENT RESULT				
Applicable Limite	Measurement Result			
Applicable Limits	Test Data	Criteria		
In any 100 kHz Bandwidth Outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency	At least -20dBc than the limit Specified on the BOTTOM Channel	PASS		
power that is produce by the intentional radiator shall be at least 20 dB below that in 100KHz bandwidth within the band that contains the highest level of the desired power.  In addition, radiation emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in§15.209(a))	At least -20dBc than the limit Specified on the TOP Channel	PASS		



# Test Graphs of Spurious Emissions in Non-Restricted Frequency Bands



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Bedicated Pesting/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written each orization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day Safter the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

Test\_Graph\_BR\_ANT1\_2402\_1Mbps\_Lower Band Emissions

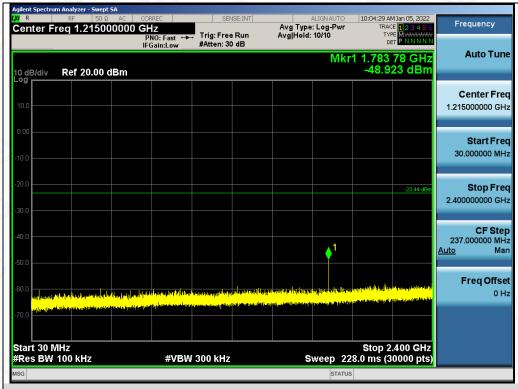




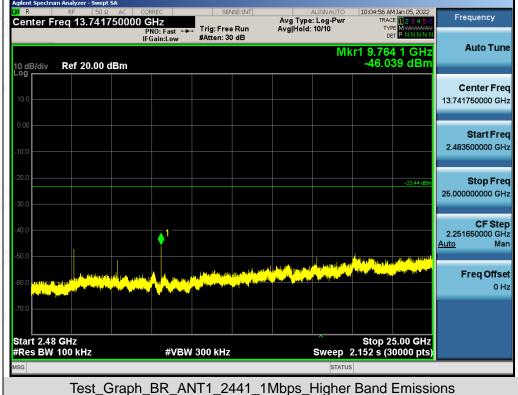
Test\_Graph\_BR\_ANT1\_2402\_1Mbps\_Higher Band Emissions







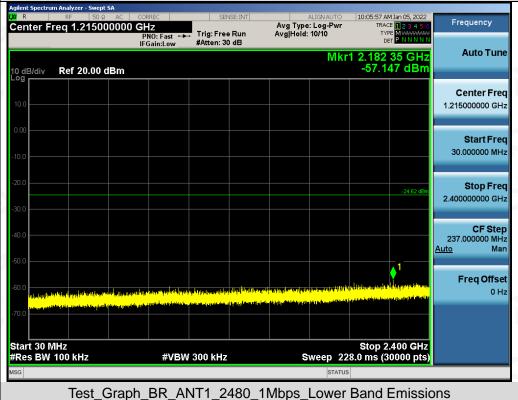




Compliance Bedicated Festing/Inspection Any report having not been signed by authorized approver, or having been altered without authorization, or naving not been signed by authorized approver, or having been altered without authorization, or naving not been signed by according to the test results of the report is not permitted without the written authorization of AGC. The test results are the insulated by AGC should be submitted to AGC within 15day after the issuance of the test report. The test results Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

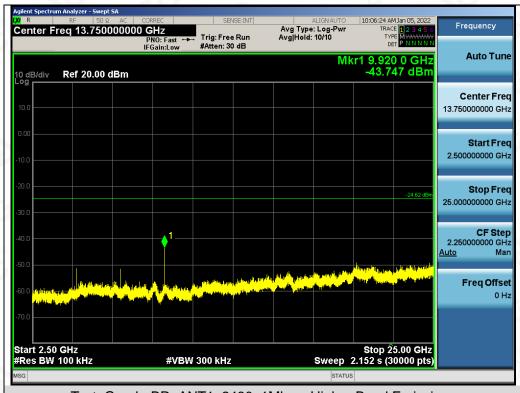


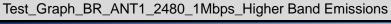




The test results



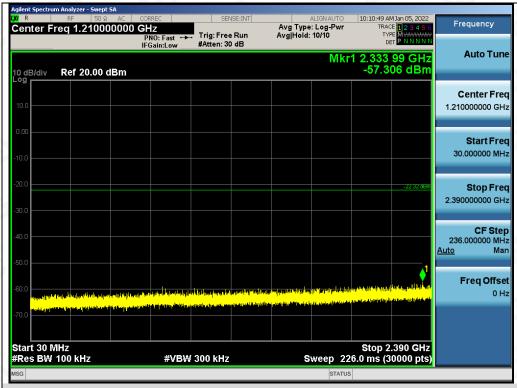


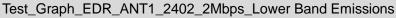


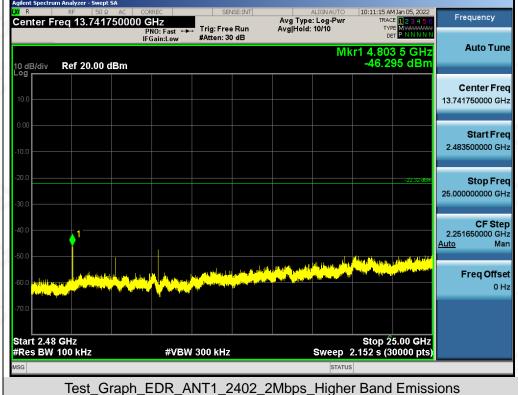


Compliance Bedicated Festing/Inspection Any report having not been signed by authorized approver, or having been attered without authorized united to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results the tested cample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.





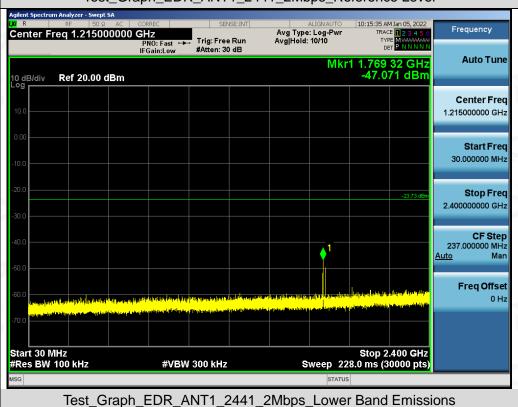




Compliance Bedicated Festing/Inspection Any report having not been signed by authorized approver, or having been attered without authorized united to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results the tested cample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the The test results Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.





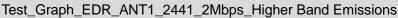


Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Festing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC he test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

The test results



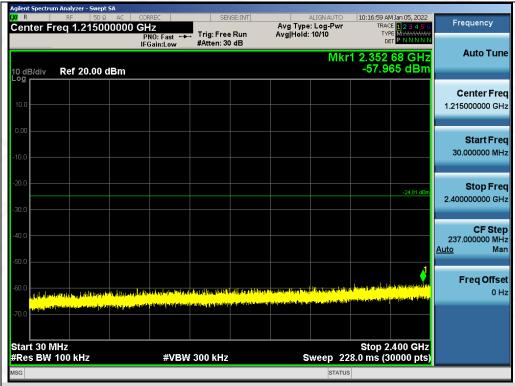


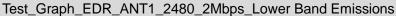


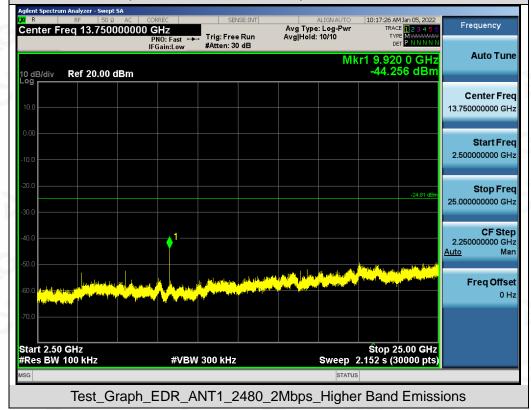


Compliance Bedicated Festing/Inspection Any report having not been signed by authorized approver, or having been attered without authorized united to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results the tested cample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.









Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Dedicated Pestho/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC he test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

Frequency





Agilent Spectrum Analyzer - Swept SA

ON R RF SO Ω AC CORREC SENSE:INT ALIGNAUTO 10:21:42 AM 3an 05, 2022

Center Freq 1.210000000 GHz

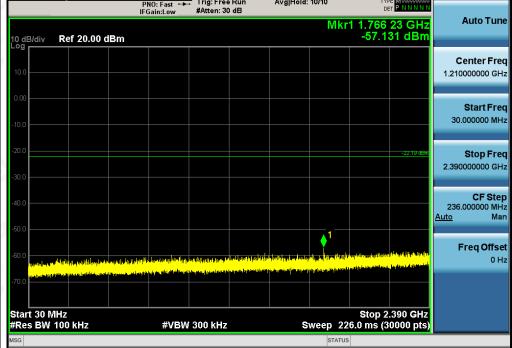
PNO: Fast PNO: Fast Free Run

#Atten: 30 dB

Avg Type: Log-Pwr

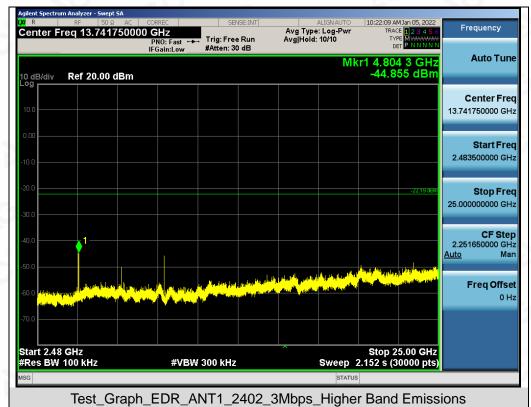
Avg|Hold: 10/10

Mkr1 1.766 23 GHz



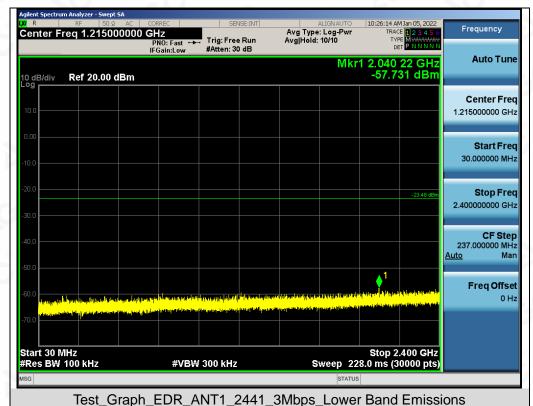
Test\_Graph\_EDR\_ANT1\_2402\_3Mbps\_Lower Band Emissions

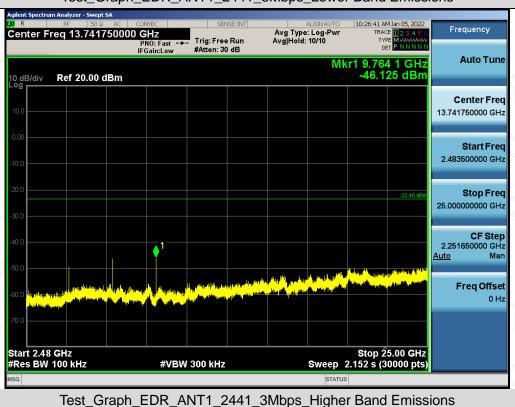












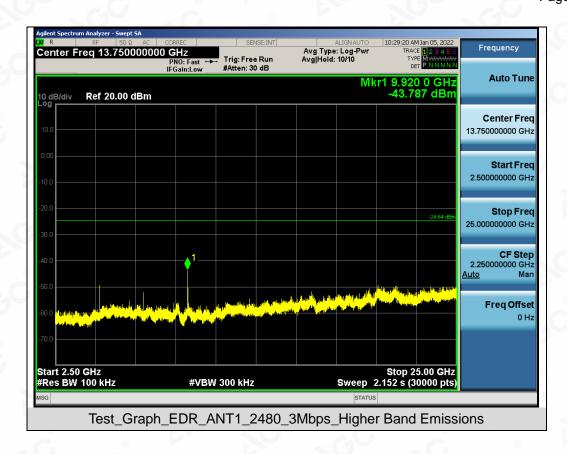
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Feating/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.







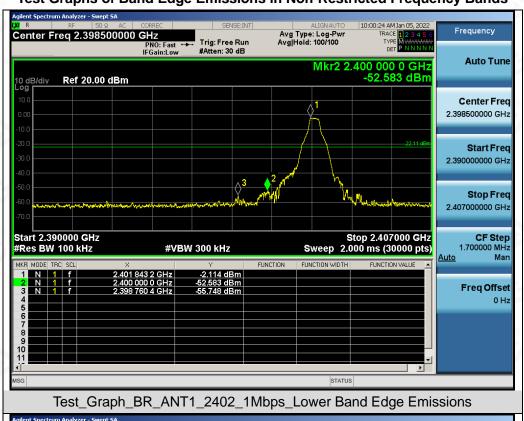


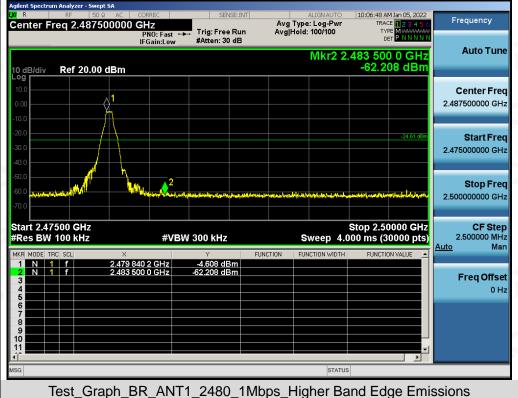


Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated restriction. Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter pathorization of AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



# Test Graphs of Band Edge Emissions in Non-Restricted Frequency Bands

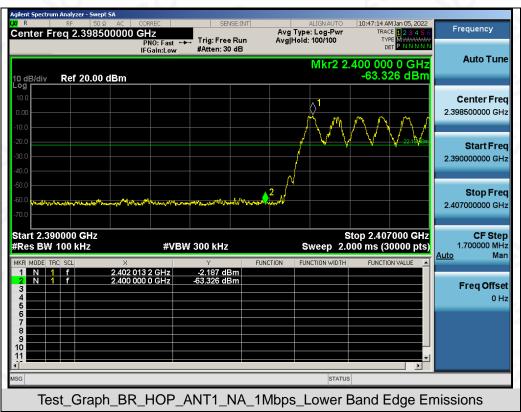


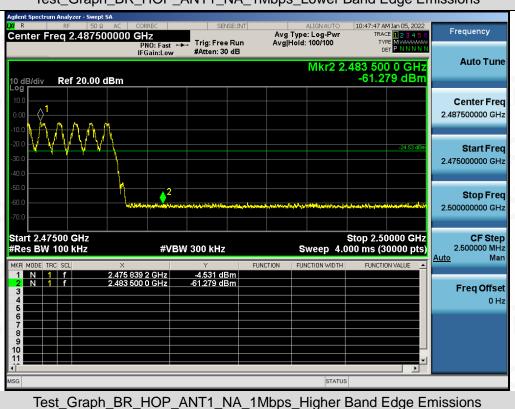


Compliance Sest Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the g/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter action of AGE The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15d the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd Tel: +86-755 2523 4088 E-mail: agc@agc-cert.com Web: http://cn.agc-cert.com/

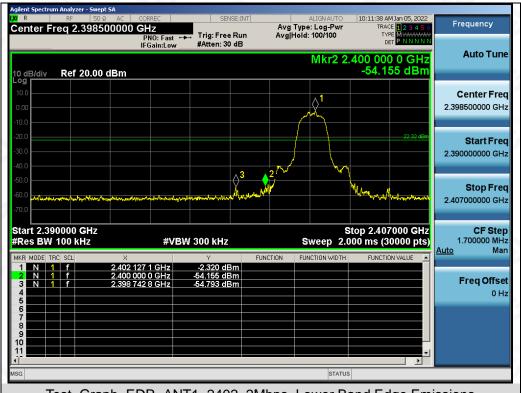




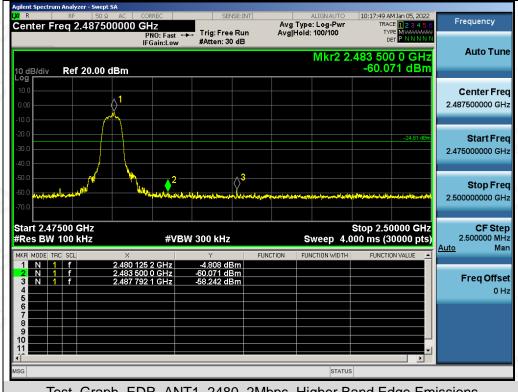


Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Dedicated Festivo/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written portion of AGC within 15day after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.





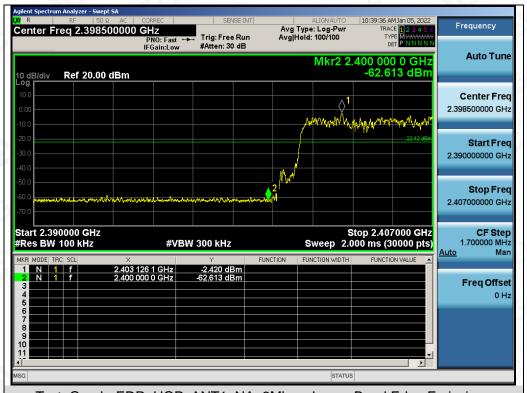
Test\_Graph\_EDR\_ANT1\_2402\_2Mbps\_Lower Band Edge Emissions



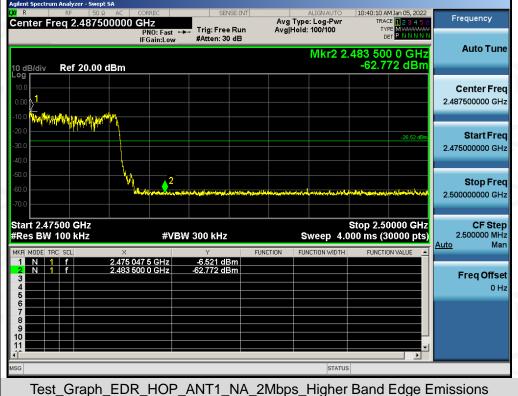
Test\_Graph\_EDR\_ANT1\_2480\_2Mbps\_Higher Band Edge Emissions

The test results





Test\_Graph\_EDR\_HOP\_ANT1\_NA\_2Mbps\_Lower Band Edge Emissions



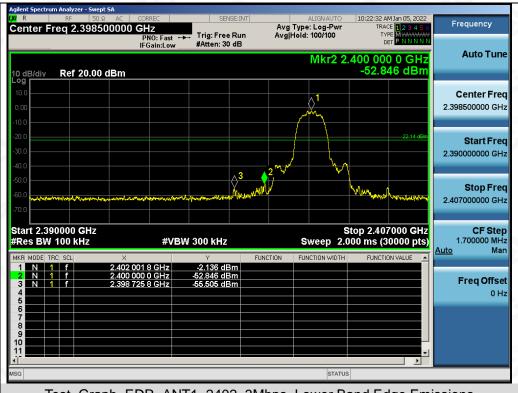
Complian Pesting/Inspection Any report having not been signed by authorized approver, or having been attered without authorized united to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results the tested cample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuance of the test report. Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the

Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

Attestation of Global Compliance(Shenzhen)Co., Ltd Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd

E-mail: agc@agc-cert.com Web: http://cn.agc-cert.com/





Test\_Graph\_EDR\_ANT1\_2402\_3Mbps\_Lower Band Edge Emissions

