

# **FCC Test Report**

# Report No.: AGC03285201001FE03

FCC ID	: 2AMWOFSC-BT806
APPLICATION PURPOSE	: Original Equipment
PRODUCT DESIGNATION	: Bluetooth module
BRAND NAME	: Feasycom
MODEL NAME	: FSC-BT806
APPLICANT	: Shenzhen Feasycom Technology Co., LTD
DATE OF ISSUE	: Nov. 05,2020
STANDARD(S)	: FCC Part 15.247
REPORT VERSION	: V1.0

# Attestation of Global Compliance (Shenzhen) Co., Ltd



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## **REPORT REVISE RECORD**

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	© /	Nov. 05,2020	Valid	Initial Release

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## 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	
	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	8
	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	
	5.2. EQUIPMENT USED IN TESTED SYSTEM	11
	5.3. SUMMARY OF TEST RESULTS	11
	6. TEST FACILITY	
	7. PEAK OUTPUT POWER	
	7.1. MEASUREMENT PROCEDURE	
	7.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	
	7.3. LIMITS AND MEASUREMENT RESULT	
	8. 20DB BANDWIDTH	
	8.1. MEASUREMENT PROCEDURE	20
	8.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	
	8.3. LIMITS AND MEASUREMENT RESULTS	
	9. CONDUCTED SPURIOUS EMISSION	
St pro	9.1. MEASUREMENT PROCEDURE any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated tamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter explorization of resented 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 issue writter enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.	f AGC. The test results



9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)	
9.3. MEASUREMENT EQUIPMENT USED	
9.4. LIMITS AND MEASUREMENT RESULT	27
10. RADIATED EMISSION	
10.1. MEASUREMENT PROCEDURE	
10.2. TEST SETUP	
10.3. LIMITS AND MEASUREMENT RESULT	
10.4. TEST RESULT	
11. NUMBER OF HOPPING FREQUENCY	
11.1. MEASUREMENT PROCEDURE	53
11.2. TEST SETUP (BLOCK DIAGRAM OF CONFIGURATION)	53
11.3. MEASUREMENT EQUIPMENT USED	
11.4. LIMITS AND MEASUREMENT RESULT	
12. TIME OF OCCUPANCY (DWELL TIME)	
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	
13.2. TEST SETUP (BLOCK DIAGRAM OF CONFIGURATION)	
13.3. MEASUREMENT EQUIPMENT USED	
13.4. LIMITS AND MEASUREMENT RESULT	
14. FCC LINE CONDUCTED EMISSION TEST	
14.1. LIMITS OF LINE CONDUCTED EMISSION TEST	
14.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST	
14.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST	
14.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST	
14.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST	61
APPENDIX A: PHOTOGRAPHS OF TEST SETUP	
APPENDIX B: PHOTOGRAPHS OF EUT	65

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## **1. VERIFICATION OF CONFORMITY**

Applicant	Shenzhen Feasycom Technology Co., LTD	
Address	Room 2004A,20th Floor, Huichao Technology Building, Jinhai Road, Xixiang, Baoan District, Shenzhen, China	
Manufacturer	Shenzhen Feasycom Technology Co., LTD	
Address	Room 2004A,20th Floor, Huichao Technology Building, Jinhai Road, Xixiang, Baoan District, Shenzhen, China	
Factory	Shenzhen Feasycom Technology Co., LTD	
Address	Room 2004A,20th Floor, Huichao Technology Building, Jinhai Road, Xixiang, Baoan District, Shenzhen, China	
Product Designation	Bluetooth module	
Brand Name	Feasycom	
Test Model	FSC-BT806	
Date of test	Oct. 22,2020 to Nov. 05,2020	
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

**Reviewed By** 

Sky dong

Sky Dong (Project Engineer)

Nov. 05,2020

Max Zhang

Max Zhang (Reviewer)

Nov. 05,2020

Approved By

Lowa Forrest Lei

(Authorized Officer)

Nov. 05,2020

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## 2. GENERAL INFORMATION

## 2.1. PRODUCT DESCRIPTION

The EUT is designed as "Bluetooth module". 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

Operation Frequency	2.402 GHz to 2.480 GHz
RF Output Power	9.295dBm (Max)
Bluetooth Version	V 5.0
Modulation	BR 🖂 GFSK, EDR 🖾 $\pi$ /4-DQPSK, 🖾 8DPSK
Number of channels	79
Hardware Version	V1.1
Software Version	V1.1.1
Antenna Designation	PCB Antenna (Comply with requirements of the FCC part 15.203)
Antenna Gain	2dBi
Power Supply	DC 3.3V

## 2.2. TABLE OF CARRIER FREQUENCYS

Frequency Band	Channel Number	Frequency
	0	2402 MHz
	1	2403 MHz
	38	2440 MHz
2402~2480MHz	39	2441 MHz
	40	2442 MHz
	77	2479 MHz
	78	2480 MHz

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## 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, 79, 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.

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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: 2AMWOFSC-BT806** 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.

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## **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%.

- Uncertainty of Conducted Emission, Uc = ±3.2 dB
- Uncertainty of Radiated Emission below 1GHz, Uc = ±3.9 dB
- Uncertainty of Radiated Emission above 1GHz, Uc = ±4.8 dB
- Uncertainty of total RF power, conducted,  $Uc = \pm 0.8$ dB
- Uncertainty of spurious emissions, conducted, Uc = ±2.7dB
- Uncertainty of Occupied Channel Bandwidth: Uc = ±2 %
- Uncertainty of Dwell Time:  $Uc = \pm 2\%$
- Uncertainty of Frequency:  $Uc = \pm 2\%$

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## **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 0	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

BlueTest3		
est Commands IT ERR2	Test Arguments Packet Type 31	Close
OOF BACK ER LOOF BACK	Packet Size 1021	Help
TFG FREQ		Execute
FG BIT ERR		Cold Reze Warm Reze
WAR OUT OF	trator\AppData\Local\QTI Ltd\BlueTe	
pening USB SFT 000 siled to open USB pening USB SFI 000 siled to open USB pening USB SFI 000 pening USB SFI 0000 pening USB SFI 000 pening USB SFI	00601) STE 0 STE 0 STE (600601) 30601) 30601) 30601) 30601) 30601) 30601 3100000013 3000000013 30000000000	

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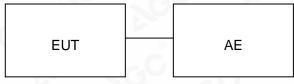
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## **5. SYSTEM TEST CONFIGURATION**

**5.1. CONFIGURATION OF EUT SYSTEM** 

Radiated Emission Configure:



Conducted Emission Configure:

	w.	
EUT		AE

## 5.2. EQUIPMENT USED IN TESTED SYSTEM

ltem	Equipment	Model No.	ID or Specification	Remark
1	Bluetooth module	FSC-BT806	2AMWOFSC-BT806	EUT
2	PC	161301-01	N/A	AE
3	PC adapter		N/A	AE
4	control board	EPS-35-3.3	DC 3.3V	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	Compliant

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## 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, 2020	May 14, 2021
LISN	R&S	ESH2-Z5	100086	Jul. 03,2020	Jul. 02,2021
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, 2020	May 14, 2021
EXA Signal Analyzer	Aglient	N9010A	MY53470504	Dec. 12, 2019	Dec. 11, 2020
2.4GHz Filter	EM Electronics	2400-2500MHz	N/A	Mar. 23, 2020	Mar. 22, 2022
Attenuator	ZHINAN	E-002	N/A	N/A	N/A
Horn antenna	SCHWARZBECK	BBHA 9170	#768	Sep. 09, 2019	Sep. 08, 2021
Active loop antenna (9K-30MHz)	ZHINAN	ZN30900C	18051	May 22, 2020	May 21, 2022
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00034609	May 17, 2019	May 16, 2021
Broadband Preamplifier	ETS LINDGREN	3117PA	00225134	Sep. 03,2020	Sep. 02,2022
ANTENNA	SCHWARZBECK	VULB9168	494	Jan. 09, 2019	Jan. 08, 2021
Test software	Tonscend	JS32-RE (Ver.2.5)	N/A	N/A	N/A

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## 7. PEAK OUTPUT POWER

## 7.1. MEASUREMENT PROCEDURE

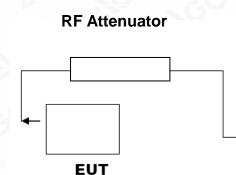
For peak power test:

- 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  $\geq$ RBW.
- 5. Sweep: Auto.
- 6. Detector function: Peak.
- 7. Trace: Max hold.

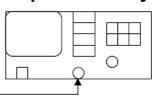
Allow trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power, after any corrections for external attenuators and cables.

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

## PEAK POWER TEST SETUP



## Spectrum Analyzer



**RF** Cable

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#### 7.3. LIMITS AND MEASUREMENT RESULT

PEAK OUTPUT POWER MEASUREMENT RESULT FOR GFSK MOUDULATION						
Frequency (GHz)Peak Power (dBm)Applicable Limits (dBm)Pass or Fail						
2.402	6.595	30	Pass			
2.441	8.963	30	Pass			
2.480	9.295	30	Pass			

## CH0



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#### Report No.: AGC03285201001FE03 Page 15 of 69





CH78

ilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC enter Freg 2.48000000		SENSE:PULSE	ALIGNAUTO		Frequency
anter Freq 2.4800000	PNO: Fast +++ IFGain:Low	Trig: Free Run Atten: 30 dB	Avg Hold: 100/100	TYPE MWWWWW DET P N N N N N	
dB/div Ref 20.00 dBm	ii Gain.Euw		Mkı	1 2.479 770 GHz 9.295 dBm	Auto Ti
1.0		<b>↓</b> 1			Center F 2.480000000
					Start F 2.477500000
0					Stop F 2.482500000
0					CF S 500.000 <u>Auto</u>
0					Freq Of
enter 2.480000 GHz				Span 5.000 MHz	
tes BW 1.5 MHz	#VBW	5.0 MHz	Sweep	1.000 ms (1001 pts) <sup>TUS</sup>	

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#### Report No.: AGC03285201001FE03 Page 16 of 69

PEAK OUTPUT POWER MEASUREMENT RESULT FOR II/4-DQPSK MODULATION					
Frequency (GHz)	Peak Power (dBm)	Applicable Limits (dBm)	Pass or Fail		
2.402	7.352	21	Pass		
2.441	8.283	21	Pass		
2.480	8.419	21	Pass		

CH0



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Avg Type: Log-Pw Avg|Hold: 100/100 Trig: Free Run Atten: 30 dB





CH78

Agilent Spectrum Analyzer - Swept S XI RL RF 50 Ω A	SA IC CORREC	SENSE:PULSE	ALIGN AUTO	09:37:59 PM Oct 26, 2020	
Center Freq 2.4800000	000 GHz		Avg Type: Log-Pwr	109:37:39 PM Oct 28, 2020 TRACE 1 2 3 4 5 6 TYPE M	Frequency
	PNO: Fast 🔸	Trig: Free Run Atten: 30 dB	Avg Hold: 100/100	DET	
10 dB/div Ref 20.00 dBr	m		Mkr1	2.479 850 GHz 8.419 dBm	Auto Tun
-og 10.0		<b>↓</b> 1			Center Fre 2.480000000 G⊦
0.00					<b>Start Fre</b> 2.477500000 G⊦
20.0					<b>Stop Fre</b> 2.482500000 GH
40.0					<b>CF Ste</b> 500.000 kł <u>Auto</u> Ma
50.0					Freq Offs 0 I
70.0				Span 5.000 MHz	
#Res BW 1.5 MHz	#VBW	5.0 MHz	Sweep	1.000 ms (1001 pts)	
ISG			STATU	S	

Compliances Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Perton 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 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 issues of the requiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com. g/Inspection The test results Bf he test report.

#### Report No.: AGC03285201001FE03 Page 18 of 69

	PEAK OUTPUT POWER MEASU	REMENT RESULT	
	FOR 8-DPSK MODUL	ATION	
Frequency (GHz)	Peak Power (dBm)	Applicable Limits (dBm)	Pass or Fail
2.402	7.570	21	Pass
2.441	8.431	21	Pass
2.480	8.625	21	Pass

CH0



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 Tel: +86-755 2523 4088
 E-mail: agc@agc-cert.com

#### Report No.: AGC03285201001FE03 Page 19 of 69





CH78

g <mark>ilent Spectrum Analyzer - Swept SA</mark> GRL RF 50Ω AC	CORREC	SENSE:PULSE	ALIGN AUT	09:40:09 PM Oct 26, 2020	
Center Freq 2.48000000	) GHz		Avg Type: Log-Pv Avg Hold: 100/100	Vr TRACE 123456	Frequency
	PNO: Fast 🔸	Atten: 30 dB	<u>.</u>	DET PNNNN	
0 dB/div Ref 20.00 dBm			Mk	r1 2.479 985 GHz 8.625 dBm	Auto Tun
10.0		1			Center Fre 2.480000000 G⊢
0.00					Start Fre 2.477500000 G⊢
20.0					Stop Fre 2.482500000 GH
40.0					CF Ste 500.000 kł Auto Ma
60.0					Freq Offs
70.0					UT UT
Center 2.480000 GHz Res BW 1.5 MHz	#VBW	5.0 MHz	Sweep	Span 5.000 MHz 1.000 ms (1001 pts)	
ISG			STA	ITUS	

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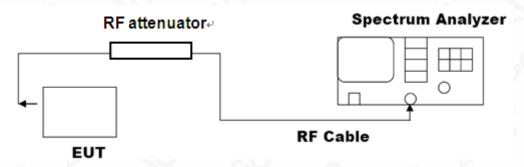


## 8. 20DB BANDWIDTH

### **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)



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#### 8.3. LIMITS AND MEASUREMENT RESULTS

MEASUREMENT RESULT FOR GFSK MOUDULATION					
Applicable Limite		Measurement Resu	lt		
Applicable Limits	Test Dat	Criteria			
	Low Channel	0.936	PASS		
N/A	Middle Channel	0.940	PASS		
	High Channel	0.943	PASS		

#### 09:34:34 PM Oct 26, 2020 Radio Std: None Frequency Center Freq: 2.402000000 GHz Trig: Free Run Avg|Hold: 100/100 #Atten: 30 dB 402000000 GHz Cente Radio Device: BTS #IFGain:Low Ref 20.00 dBm **Center Freq** 2.402000000 GHz Center 2.402 GHz #Res BW 30 kHz Span 3 MHz Sweep 3.2 ms CF Step 300.000 kHz #VBW 100 kHz <u>Auto</u> Mar Total Power 14.3 dBm **Occupied Bandwidth** 863.13 kHz Freq Offset 0 Hz 11.547 kHz **Transmit Freq Error OBW Power** 99.00 % x dB Bandwidth 935.5 kHz x dB -20.00 dB

TEST PLOT OF BANDWIDTH FOR LOW CHANNEL

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the stand of t



#### TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL

#### TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL

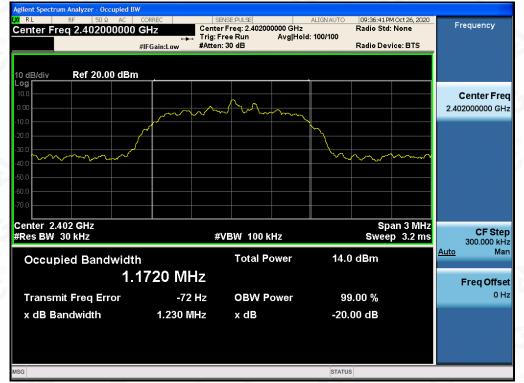


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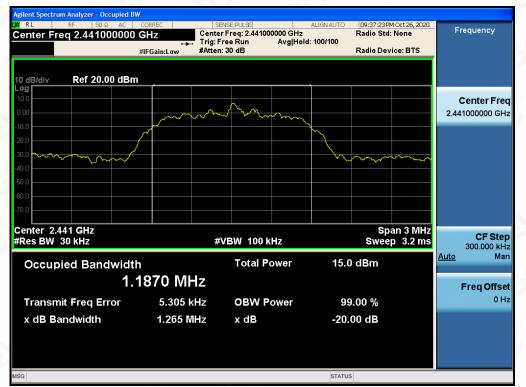


MEASUREMENT RESULT FOR II /4-DQPSK MODULATION					
Annliachta Limite		Measurement Resul	lt		
Applicable Limits	Test Data	Test Data (MHz)			
N/A	Low Channel	1.230	PASS		
	Middle Channel	1.265	PASS		
	High Channel	1.263	PASS		

#### TEST PLOT OF BANDWIDTH FOR LOW CHANNEL



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#### TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL

#### TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL

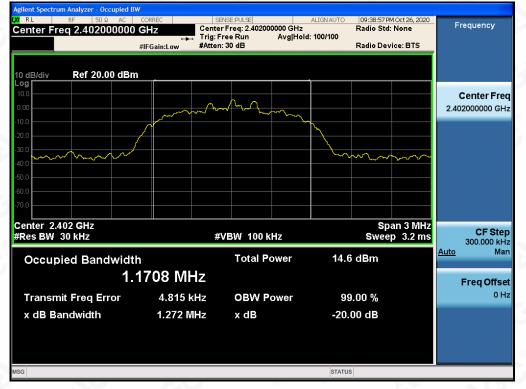


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MEASUREMENT RESULT FOR 8-DPSK MODULATION					
Applicable Limits Measurement Result					
	Test Da	ata (MHz)	Criteria		
	Low Channel	1.272	PASS		
N/A	Middle Channel	1.269	PASS		
	High Channel	1.269	PASS		

#### TEST PLOT OF BANDWIDTH FOR LOW CHANNEL



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#### TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL

#### TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL



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## 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.
- 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

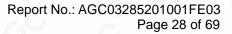
## 9.3. MEASUREMENT EQUIPMENT USED

The same as described in section 6

#### 9.4. LIMITS AND MEASUREMENT RESULT

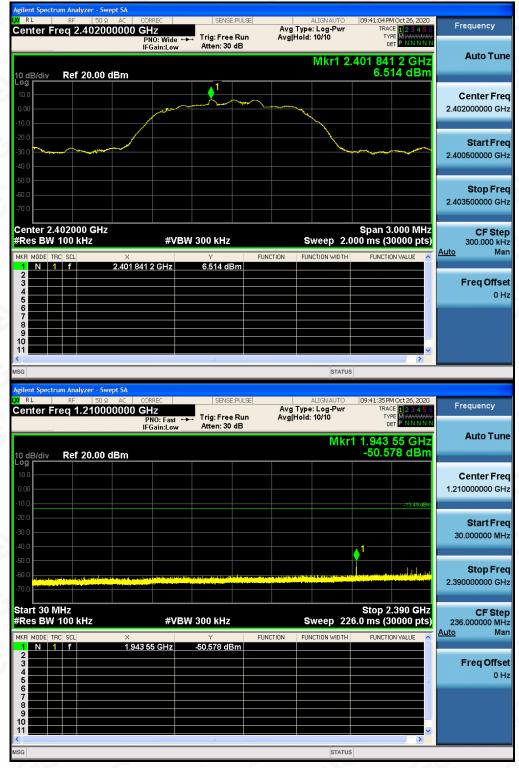
LIMITS AND MEA	SUREMENT RESULT												
Applicable Limits Measurement Result													
	Test Data	Criteria											
In any 100 kHz Bandwidth Outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency	At least -20dBc than the limit Specified 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											

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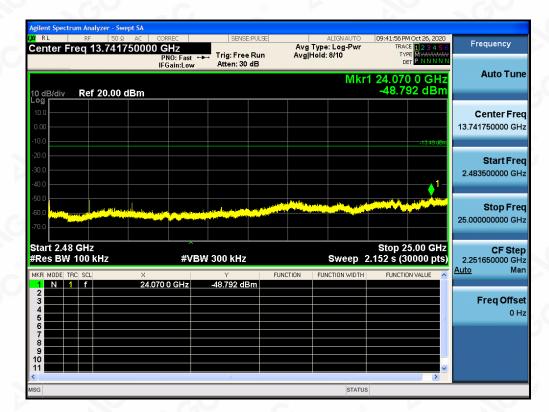
## TEST RESULT FOR ENTIRE FREQUENCY RANGE TEST PLOT OF OUT OF BAND EMISSIONS WITH THE WORST CASE OF GFSK MODULATION IN LOW CHANNEL



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#### Report No.: AGC03285201001FE03 Page 29 of 69





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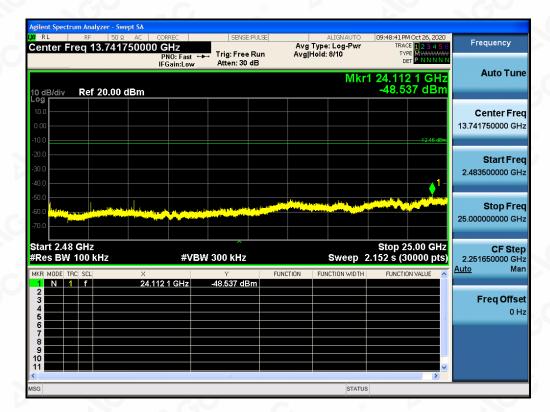
Ω AC CORREC	SENSE:PULSE	ALIGNAUTO	19:47:49 PM Oct 26, 2020	
000000 GHz PNO: Wide +-	► Trig: Free Run	Avg Type: Log-Pwr Avg Hold: 10/10	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Frequency
IFGain:Low	Atten. 30 dB	Mkr1 2 4		Auto Tu
dBm			7.545 dBm	
				Conton Fr
				Center Fr 2.441000000 G
				2.4410000000
				Otort Er
		+	~~~~~	Start Fr 2.439500000 G
				2.40000000000
				Oton Er
				<b>Stop Fr</b> 2.442500000 G
				CF St
#VB	W 300 kHz	Sweep 2.000	0 ms (30000 pts)	300.000 k
× 2 440 843 2 GHz		JNCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> M
2.440 040 2 0112				Freq Offs
				01
			<u> </u>	
		STATUS		
wept SA				
	SENSE:PULSE		19:48:20 PM Oct 26, 2020 TRACE 1 2 3 4 5 6	Frequency
PNO: Fast ←	Trig: Free Run Atten: 30 dB	Avg Hold: 10/10	DET P N N N N N	
ii Gain.20w		Mkr1	2.285 05 GHz	Auto Tu
dBm			-52.237 dBm	
				Center Fr
				1.215000000 G
			12.46 dBm	
				Start Fr
				30.000000 M
			1	
				Stop Fre
				2.400000000 G
	N 200 KI			CF Ste
				237.000000 M Auto M
× 2.285 05 GHz	Y FL -52.237 dBm	JNCTION FUNCTION WIDTH	FUNCTION VALUE	
				Freq Offs
				TICY OIS
			1	01
	PNO: Wide IFGain:Low	PNO: Wide Trig: Free Run Atten: 30 dB PdBm	PND: Wildle + Atten: 30 dB       Avginde: 10/10         IFGain:Low       Atten: 30 dB         MIKT 2.44         dBm         d       d </td <td>Mkr1 2.440 943 2 GHz 7.545 dBm</td>	Mkr1 2.440 943 2 GHz 7.545 dBm

## TEST PLOT OF OUT OF BAND EMISSIONS OF GFSK MODULATION IN MIDDLE CHANNEL

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#### Report No.: AGC03285201001FE03 Page 31 of 69





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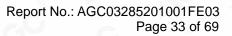
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 E-mail: agc@agc-cert.com



Agilent Spectrum Analyzer - S X/ RL RF 50		CENCE DUIL CE	ALIGNAUTO	00-50-00 PM 0-+ 05, 2020	
Center Freq 2.4800		SENSE:PULSE	Avg Type: Log-Pwr	09:50:09 PM Oct 26, 2020 TRACE 1 2 3 4 5 6 TYPE MWWWWW	Frequency
	PNO: Wide 🔸	Trig: Free Run Atten: 30 dB	Avg Hold: 10/10	TYPE MWWWWWW DET P N N N N N	
	IFGain:Low	Atten: 00 dB	Miked O	470 040 6 611-	Auto Tu
			IVIKET 2.	479 842 6 GHz 7.525 dBm	
10 dB/div Ref 20.00	) dBm			7.323 UBII	
10.0		<b>♦'</b>			Center Fr
0.00		mark			2.480000000 G
-10.0					
-20.0					
	- And a start of the				Start Fr
-30.0					2.478500000 G
-40.0					
-50.0					Stop Fr
-60.0					2.481500000 G
-70.0					
Center 2.480000 GH	7			Span 3.000 MHz	05.00
#Res BW 100 kHz		300 kHz	Sweep 2.0	00 ms (30000 pts)	CF St 300.000 k
MKR MODE TRC SCL	×		INCTION FUNCTION WIDTH	FUNCTION VALUE	Auto M
1 N 1 f	2.479 842 6 GHz	7.525 dBm	INCTION FONCTION WIDTH	PONCTION VALUE	
2 3					Freq Offs
4					01
5					
7 8					
9					
10					
<				>	
MSG					
			STATUS		
	Swept SA		STATUS		
Agilent Spectrum Analyzer - S XI RL RF 50	Ω AC CORREC	SENSE:PULSE	ALIGN AUTO	09:50:40 PM Oct 26, 2020	Frequency
Agilent Spectrum Analyzer - S X RL RF 50	Ω AC CORREC		ALIGNAUTO Avg Type: Log-Pwr	09:50:40 PM Oct 26, 2020	Frequency
Agilent Spectrum Analyzer - S XI RL RF 50	Ω AC CORREC		ALIGN AUTO	09:50:40 PM Oct 26, 2020	
Agilent Spectrum Analyzer - S X RL RF 50	Ω AC CORREC D000000 GHz PN0: Fast ↔	. Trig: Free Run	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10	09:50:40 PM Oct 26, 2020 TRACE 1 2 3 4 5 6 TYPE MUMUMUM DET P MUMUMUM 1 2.324 00 GHz	
Agient Spectrum Analyzer - S R RL RF So Center Freq 1.2150 10 dB/div Ref 20.00	Ω AC CORREC 000000 GHz PN0: Fast ↔ IFGain:Low	. Trig: Free Run	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10	09:50:40 PM Oct 26, 2020 TRACE 2 3 4 5 6 TYPE MUNICIPAL DET P.N.N.N.N	
Agilent Spectrum Analyzer - S R RL RF So Center Freq 1.215( 10 dB/div Ref 20.00	Ω AC CORREC 000000 GHz PN0: Fast ↔ IFGain:Low	. Trig: Free Run	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10	09:50:40 PM Oct 26, 2020 TRACE 1 2 3 4 5 6 TYPE MUMUMUM DET P MUMUMUM 1 2.324 00 GHz	Auto Tu
Agilent Spectrum Analyzer - S R RL RF So Center Freq 1.215( 10 dB/div Ref 20.00 10.0	Ω AC CORREC 000000 GHz PN0: Fast ↔ IFGain:Low	. Trig: Free Run	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10	09:50:40 PM Oct 26, 2020 TRACE 1 2 3 4 5 6 TYPE MUMUMUM DET P MUMUMUM 1 2.324 00 GHz	Auto Tur Center Fro
Agilent Spectrum Analyzer - S           RL         RF         SO           Center Freq 1.2150           10 dB/div         Ref 20.00           00         00         00	Ω AC CORREC 000000 GHz PN0: Fast ↔ IFGain:Low	. Trig: Free Run	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10	09:50:40 PM Oct 26, 2020 TRACE 12 3 4 5 6 TYPE MAXWAWN OFT P NANN M 1 2.3224 00 GHz -50.391 dBm	Auto Tur Center Fr
Agilent Spectrum Analyzer - 5 R RL RF 50 Center Freq 1.215( 10 dB/div Ref 20.00 0 00 -10.0	Ω AC CORREC 000000 GHz PN0: Fast ↔ IFGain:Low	. Trig: Free Run	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10	09:50:40 PM Oct 26, 2020 TRACE 1 2 3 4 5 6 TYPE MUMANN N DET P MUMANN N 1 2.324 00 GHz	Auto Tur Center Fr
Agilent Spectrum Analyzer - S RL RF So Center Freq 1.2150 10 dB/div Ref 20.00 0 00	Ω AC CORREC 000000 GHz PN0: Fast ↔ IFGain:Low	. Trig: Free Run	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10	09:50:40 PM Oct 26, 2020 TRACE 1 2 3 4 5 6 TYPE MAXWAW OFT P NANN M 1 2.3224 00 GHz -50.391 dBm	Auto Tur Center Fr 1.215000000 G
Agilent Spectrum Analyzer - 5 R RL RF 50 Center Freq 1.215( 10 dB/div Ref 20.00 0 00 -10.0	Ω AC CORREC 000000 GHz PN0: Fast ↔ IFGain:Low	. Trig: Free Run	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10	09:50:40 PM Oct 26, 2020 TRACE 1 2 3 4 5 6 TYPE MAXWAW OFT P NANN M 1 2.3224 00 GHz -50.391 dBm	Auto Tur Center Fr 1.21500000 G Start Fr
Agilent Spectrum Analyzer - S RL RF SO Center Freq 1.2150 10 dB/div Ref 20.00 0 00 -10.0 -20.0	Ω AC CORREC 000000 GHz PN0: Fast ↔ IFGain:Low	. Trig: Free Run	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10	09:50:40 PM Oct 26, 2020 TRACE 1 2 3 4 5 6 TYPE MAXWAW OFT P NANN M 1 2.3224 00 GHz -50.391 dBm	Auto Tur Center Fra 1.21500000 Gi Start Fra
Agient Spectrum Analyzer - So           RL         RF         So           Center Freq 1.2150           10 dB/div         Ref 20.00           00	Ω AC CORREC 000000 GHz PN0: Fast ↔ IFGain:Low	. Trig: Free Run	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10	09:50:40 PM Oct 26, 2020 TRACE 1 2 3 4 5 6 TYPE MAXWAW OFT P NANN M 1 2.3224 00 GHz -50.391 dBm	Auto Tur Center Fr 1.21500000 G Start Fr 30.000000 M
Agient Spectrum Analyzer - 5 R RL RF 50 Center Freq 1.2150 10 dB/div Ref 20.00 000 10.0 -10.0 -20.0 -30.0 -40.0	Ω AC CORREC 000000 GHz PN0: Fast ↔ IFGain:Low	. Trig: Free Run	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10	09:50:40 PM Oct 26, 2020 TRACE 1 2 3 4 5 6 TYPE MAXWAW OFT P NANN M 1 2.3224 00 GHz -50.391 dBm	Auto Tur Center Fr 1.21500000 G Start Fr 30.000000 M Stop Fr
Agient Spectrum Analyzer - 5 X RL RF 50 Center Freq 1.2150 10 dB/div Ref 20.00 10 0 10 0 -0 0 -10 0 -20 0 -30 0 -40 0 -50 0	Ω AC CORREC 000000 GHz PN0: Fast ↔ IFGain:Low	. Trig: Free Run	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10	09:50:40 PM Oct 26, 2020 TRACE 1 2 3 4 5 6 TYPE MAXWAW OFT P NANN M 1 2.3224 00 GHz -50.391 dBm	Auto Tur Center Fr 1.21500000 G Start Fr 30.000000 M Stop Fr
Agilent Spectrum Analyzer So           RL         RF         So           Center Freq 1.215(           10 dB/div         Ref 20.00           -0 dB/div         Ref 20.00	Ω AC CORREC 000000 GHz PN0: Fast ↔ IFGain:Low	. Trig: Free Run	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10	09:50:40 PM Oct 26, 2020 TRACE 1 2 3 4 5 6 TYPE MUNIMIN OFT P MININ N 1 2.3224 00 GHz -50.391 dBm -12.49 dB= -12.49 dB	Auto Tu Center Fr 1.215000000 G Start Fr 30.000000 M Stop Fr 2.400000000 G
Agilent Spectrum Analyzer - 50 Center Freq 1.215( 10 dB/div Ref 20.00 10.0	Ω AC CORREC     PN0: Fast      IFGain:Low	Trig: Free Run Atten: 30 dB	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10 Mkr	09:50:40 PM Oct 26, 2020 TRACE 1 2 3 4 5 6 TYPE MUNITUM DET P NUMUN N 1 2.324 00 GHz -50.391 dBm 12.49.484 12.49.484 12.49.484 11 5100 2.400 GHz	Auto Tur Center Fr 1.21500000 G Start Fr 30.000000 M Stop Fr 2.40000000 G
Agilent Spectrum Analyzer - 5 RL RF 50 Center Freq 1.215( 10 dB/div Ref 20.00 10.0 10	Ω AC CORREC     PN0: Fast     FGain:Low	Trig: Free Run Atten: 30 dB	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10 Mkr/	09:50:40 PM Oct 26, 2020 TRACE 1 2 3 4 5 6 TYPE MINIMUM OF P MININ N 1 2.324 00 GHz -50.391 dBm 1 2.49 dBe 1 2.49 dBe	Auto Tur Center Fr 1.215000000 G Start Fr 30.000000 M Stop Fr 2.400000000 G
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Agilent Spectrum Analyzer - 5 X RL RF 50 Center Freq 1.215( 10 dB/div Ref 20.00 10.0	Ω AC CORREC     PN0: Fast     FGain:Low	Trig: Free Run Atten: 30 dB	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10 Mkr/	09:50:40 PM Oct 26, 2020 TRACE 1 2 3 4 5 6 TYPE MINIMUM OT P MININ N 1 2.324 00 GHz -50.391 dBm 1 2.49 dBe 1 2.49 dBe	Auto Tu Center Fr 1.215000000 G Start Fr 30.000000 M Stop Fr 2.400000000 G CF St 237.000000 M Auto M
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Agilent Spectrum Analyzer - S RL RF SO Center Freq 1.2150 Conter Freq 1.21500 Conter Freq 1.21500 Con	Ω     AC     CORREC       D00000     GHz     PN0: Fast →       IFGain:Low     IFGain:Low	Trig: Free Run Atten: 30 dB	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10 Mkr/	09:50:40 PM Oct 26, 2020 TRACE 12 34 5 6 TYPE MAXWAWNIN 1 2.3224 00 GHz -50.3911 dBm 12.4946m 12.4946m 13.4946m 13.4946m 13.4946m 14.494	Auto Tur Center Fre 1.215000000 GI Start Fre 30.000000 MI Stop Fre 2.400000000 GI CF Ste 237.000000 MI Auto M Freq Offs
Agilent Spectrum Analyzer - So           Q RL         RF         SO           Center Freq 1.2150           10 dB/div         Ref 20.00           -00	Ω     AC     CORREC       D00000     GHz     PN0: Fast →       IFGain:Low     IFGain:Low	Trig: Free Run Atten: 30 dB	ALIGNAUTO Avg Type: Log-Pwr Avg Hold: 10/10 Mkr/	09:50:40 PM Oct 26, 2020 TRACE 12 3 4 5 6 TYPE MAXWAW OCT 20, 324 00 GHz -50.3911 dBm -12.48.499 -12.49.499 -12.499 -12.49.499 -1	Auto Tur Center Fra 1.21500000 Gl Start Fra 30.000000 Ml Stop Fra 2.400000000 Gl CF Sta 237.00000 Ml

## TEST PLOT OF OUT OF BAND EMISSIONS OF GFSK MODULATION IN HIGH CHANNEL

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Note: The GFSK modulation is the worst case and only those data recorded in the report.

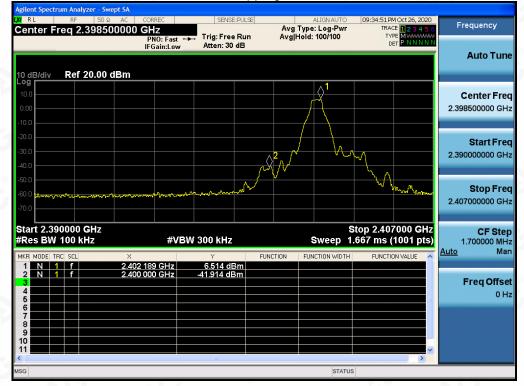
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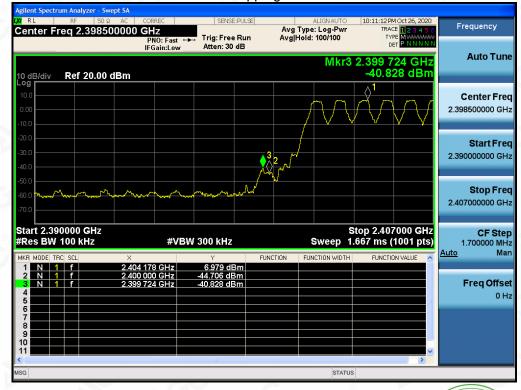
#### TEST RESULT FOR BAND EDGE

#### GFSK MODULATION IN LOW CHANNEL

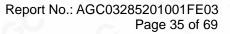
Hopping off



Hopping on



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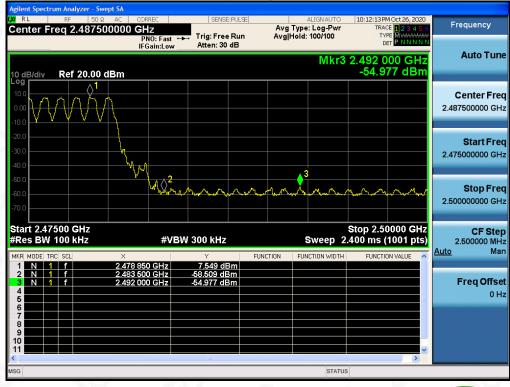






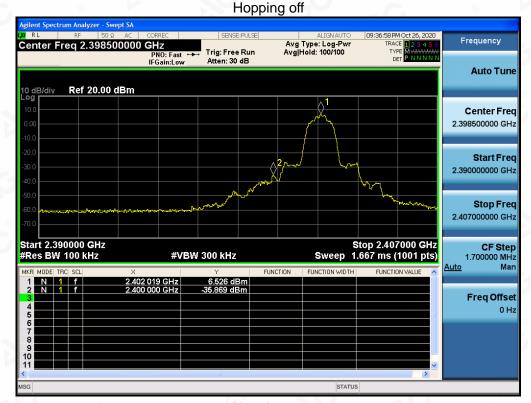
# GFSK MODULATION IN HIGH CHANNEL

Hopping on



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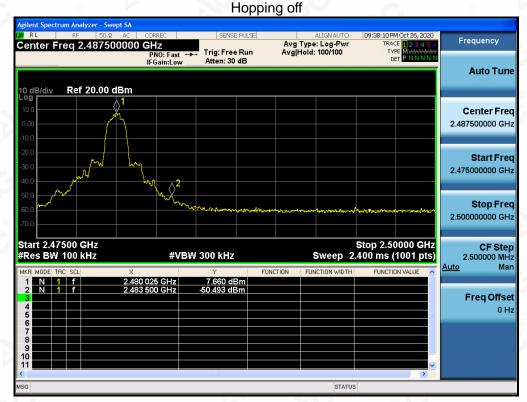
# $\pi$ /4-DQPSK MODULATION IN LOW CHANNEL

Hopping on



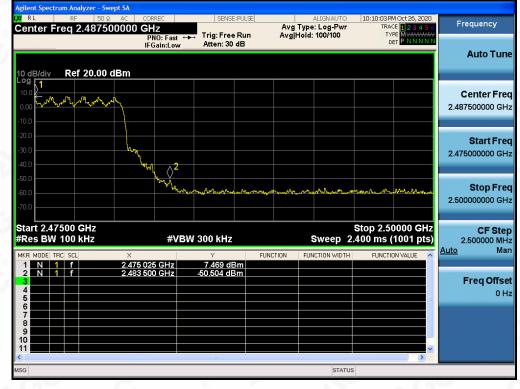
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the selecicated resting/inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written approver, be 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 issuence of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.





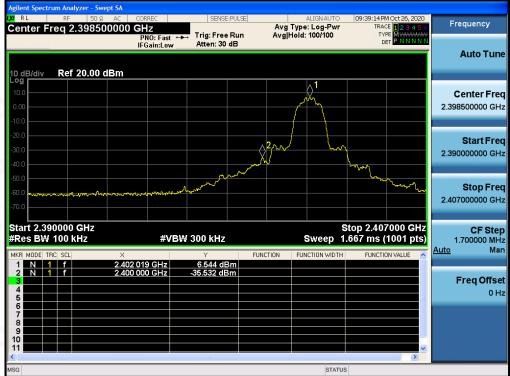
# $\pi$ /4-DQPSK MODULATION IN HIGH CHANNEL

Hopping on



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# 8-DPSK MODULATION IN LOW CHANNEL

Hopping off

Hopping on



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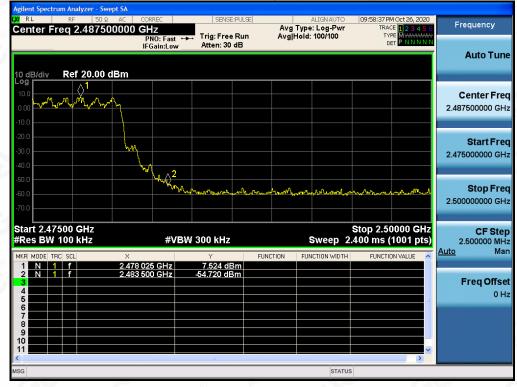




# 8-DPSK MODULATION IN HIGH CHANNEL

Hopping off

Hopping on



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# **10. RADIATED EMISSION**

#### **10.1. MEASUREMENT PROCEDURE**

- 1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4. For each suspected emission, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- 5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6. For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- 7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
- 8.If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
- 9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- 10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High Low scan is not required in this case.

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The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP
Start ~Stop Frequency	1GHz~26.5GHz 1MHz/3MHz for Peak, 1MHz/3MHz for Average

Receiver Parameter	Setting
Start ~Stop Frequency	9KHz~150KHz/RB 200Hz for QP
Start ~Stop Frequency	150KHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120KHz for QP

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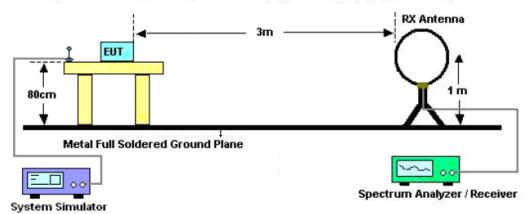
 Attestation of Global Compliance(Shenzhen)Std & Tech Co., Ltd

 Tel: +86-755 2523 4088
 E-mail: agc@agc-cert.com

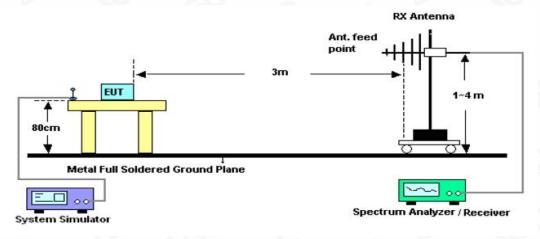


## 10.2. TEST SETUP

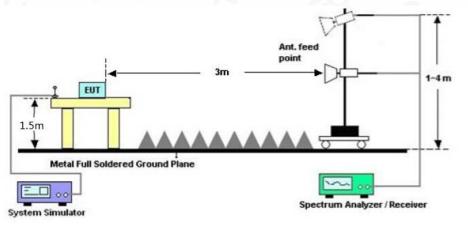
Radiated Emission Test-Setup Frequency Below 30MHz



# RADIATED EMISSION TEST SETUP 30MHz-1000MHz



# RADIATED EMISSION TEST SETUP ABOVE 1000MHz



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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/

#### **10.3. LIMITS AND MEASUREMENT RESULT**

#### 15.209 Limit in the below table has to be followed

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Note: All modes were tested for restricted band radiated emission, the test records reported below are the worst result compared to other modes.

# **10.4. TEST RESULT**

# **RADIATED EMISSION BELOW 30MHz**

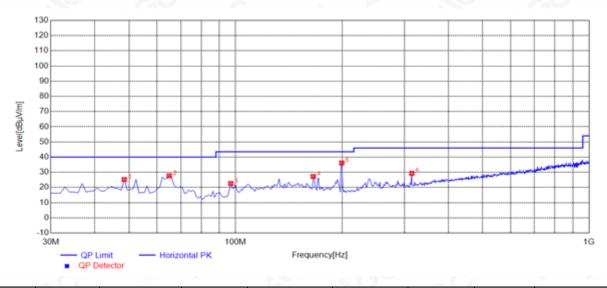
The amplitude of spurious emissions from 9kHz to 30MHz which are attenuated more than 20 dB below the permissible value need not be reported.

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# **RADIATED EMISSION BELOW 1GHz**

EUT	Bluetooth module	Model Name	FSC-BT806
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 3	Antenna	Horizontal



NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	48.4300	25.23	11.71	40.00	14.77	100	282	Horizontal
2	64.9200	27.68	10.09	40.00	12.32	100	159	Horizontal
3	96.9300	22.63	10.11	43.50	20.87	100	225	Horizontal
4	165.800	27.25	14.36	43.50	16.25	100	360	Horizontal
5	199.750	36.16	12.07	43.50	7.34	100	342	Horizontal
6	315.180	29.34	16.48	46.00	16.66	100	140	Horizontal

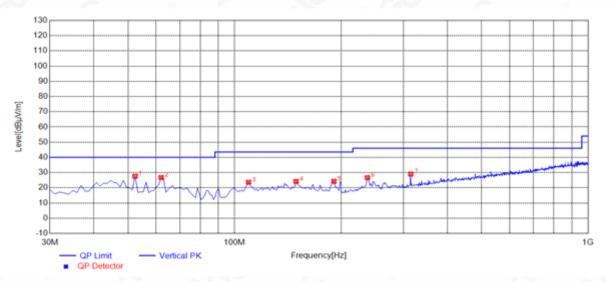
#### **RESULT: PASS**

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#### Report No.: AGC03285201001FE03 Page 45 of 69

EUT	Bluetooth module	Model Name	FSC-BT806
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 3	Antenna	Vertical



Suspe	Suspected Data List								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	
1	52.3100	27.63	11.49	40.00	12.37	100	267	Vertical	
2	62.0100	26.72	10.58	40.00	13.28	100	4	Vertical	
3	109.540	23.60	12.37	43.50	19.90	100	183	Vertical	
4	149.310	24.17	14.88	43.50	19.33	100	343	Vertical	
5	191.020	24.25	12.48	43.50	19.25	100	41	Vertical	
6	237.580	26.64	14.65	46.00	19.36	100	356	Vertical	
7	315.180	29.03	16.48	46.00	16.97	100	100	Vertical	

# **RESULT: PASS**

Note: 1. Factor=Antenna Factor + Cable loss, Margin= Limit –Level.

2. All test modes had been pre-tested. The mode 3 is the worst case and recorded in the report.

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#### Report No.: AGC03285201001FE03 Page 46 of 69

# **RADIATED EMISSION ABOVE 1GHz**

EUT	Bluetooth module	Model Name	FSC-BT806
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4804.000	45.95	0.08	46.03	74	-27.97	peak
4804.000	35.67	0.08	35.75	54	-18.25	AVG
7206.000	38.87	2.21	41.08	74	-32.92	peak
7206.000	32.69	2.21	34.9	54	-19.1	AVG
50	.0			CC C		
emark:			e l			
actor = Anter	na Factor + Cab	le Loss – Pre-	amplifier.	8		

EUT	Bluetooth module	Model Name FSC-BT806	
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4804.000	44.58	0.08	44.66	74	-29.34	peak
4804.000	35.62	0.08	35.7	54	-18.3	AVG
7206.000	39.28	2.21	41.49	74	-32.51	peak
7206.000	32.47	2.21	34.68	54	-19.32	AVG
- 60	0			50	G	
emark:	< C >		R		6	
actor = Anter	na Factor + Cabl	e Loss – Pre-a	mplifier.	8		. 6

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#### Report No.: AGC03285201001FE03 Page 47 of 69

EUT	Bluetooth module	Model Name	FSC-BT806
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 2	Antenna	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4882.000	47.74	0.14	47.88	74	-26.12	peak
4882.000	36.56	0.14	36.7	54	-17.3	AVG
7323.000	41.26	2.36	43.62	74	-30.38	peak
7323.000	32.96	2.36	35.32	54	-18.68	AVG
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emark:	- 6	8			- 6	0
actor = Anter	nna Factor + Cable	Loss – Pre-	amplifier.			- 6

EUT	Bluetooth module	Model Name	FSC-BT806
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 2	Antenna	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4882.000	46.89	0.14	47.03	74	-26.97	peak
4882.000	38.78	0.14	38.92	54	-15.08	AVG
7323.000	42.26	2.36	44.62	74	-29.38	peak
7323.000	33.58	2.36	35.94	54	-18.06	AVG
8						
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			1.6			

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

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#### Report No.: AGC03285201001FE03 Page 48 of 69

EUT	Bluetooth module	Model Name	FSC-BT806
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 3	Antenna	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4960.000	45.81	0.22	46.03	74	-27.97	peak
4960.000	35.92	0.22	36.14	54	-17.86	AVG
7440.000	38.65	2.64	41.29	74	-32.71	peak
7440.000	32.23	2.64	34.87	54	-19.13	AVG
®				®		
	8					
emark:	- 61	8			- 61	6
actor = Anten	na Factor + Cable	Loss – Pre-	amplifier.		<b>NO</b>	

EUT **Model Name** FSC-BT806 Bluetooth module Temperature 25°C **Relative Humidity** 55.4% Pressure 960hPa **Test Voltage** Normal Voltage **Test Mode** Mode 3 Vertical Antenna

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	value Type
4960.000	45.48	0.22	45.7	74	-28.3	peak
4960.000	35.65	0.22	35.87	54	-18.13	AVG
7440.000	39.25	2.64	41.89	74	-32.11	peak
7440.000	30.31	2.64	32.95	54	-21.05	AVG
		<u> </u>	©			6
emark:				(3)		

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

# **RESULT: PASS**

Note:

The amplitude of other spurious emissions from 1G to 25 GHz which are attenuated more than 20 dB below the permissible value need not be reported.

Factor = Antenna Factor + Cable loss - Amplifier gain, Margin= Level -Limit.

The "Factor" value can be calculated automatically by software of measurement system.

All test modes had been tested. The GFSK modulation is the worst case and recorded in the report.

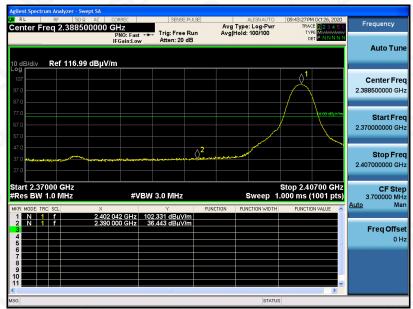
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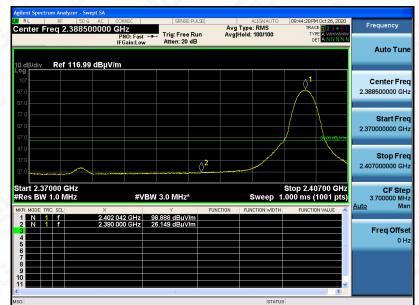
TEST RESOLT OK RESTRICTED BANDS REGOMENTERTS					
EUT         Bluetooth module         Model Name         FSC-BT		FSC-BT806			
Temperature	25°C	Relative Humidity	55.4%		
Pressure	960hPa	Test Voltage	Normal Voltage		
Test Mode	Mode 1	Antenna	Horizontal		

### TEST RESULT FOR RESTRICTED BANDS REQUIREMENTS

PK



AV



### **RESULT: PASS**

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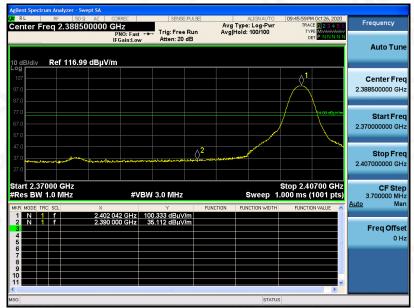
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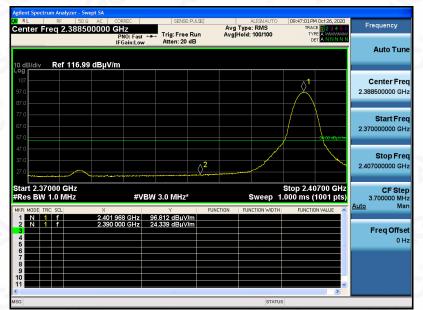
#### Report No.: AGC03285201001FE03 Page 50 of 69

EUT	Bluetooth module	Model Name	FSC-BT806
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	Mode 1	Antenna	Vertical

PK



AV



**RESULT: PASS** 

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