

Page 1 of 45

RF Test Report

Report No.: AGC12440210702EE04

PRODUCT DESIGNATION	: WIRELESS MOON SHAPED SPEAKER
BRAND NAME	: N/A
MODEL NAME	: M09745
APPLACANT	: Mid Ocean Brands B.V.
DATE OF ISSUE	: Jul. 28, 2021
STANDARD(S)	: ETSI EN 300 328 V2.2.2 (2019-07)
REPORT VERSION	: V1.0

ompliar



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 15days after the issues of 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/



Report No.: AGC12440210702EE04 Page 2 of 45

REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Jul. 28, 2021	Valid	Initial Release

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 approver, and 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 issuer of 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/



Report No.: AGC12440210702EE04 Page 3 of 45

TABLE OF CONTENTS

1. TEST RESULT CERTIFICATION	
2. TECHNICAL INFORMATION	-
2.1. EUT DESCRIPTION	5
2.2. SUPPORT EQUIPMENT	
2.3. DESCRIPTION OF TEST MODES	
2.4. OBJECTIVE	
2.5. TEST ITEMS AND THE RESULTS	7
2.6. ENVIRONMENTAL CONDITIONS	
3. MEASUREMENT UNCERTAINTY	8
4. IDENTIFICATION OF THE RESPONSIBLE TESTING LOCATION	9
5. ETSI EN 300 328 REQUIREMENTS	
5.1. RF OUTPUT POWER	10
5.2. ACCUMULATED TRANSMIT TIME, FREQUENCY OCCUPIATION AND HOPPING SEQUENCE	13
5.3. HOPPING FREQUENCY SEPARATION	20
5.4. OCCUPIED CHANNEL BANDWIDTH	21
5.5. TRANSMITTER UNWANTED EMISSIONS IN THE OUT OF BAND DOMAIN	24
5.6. TRANSMITTER SPURIOUS EMISSIONS	
5.7. RECEIVER SPURIOUS EMISSIONS	
5.8. RECEIVER BLOCKING	
APPENDIX A: PHOTOGRAPHS OF TEST SETUP	44
APPENDIX B: PHOTOGRAPHS OF THE EUT	45

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



Applicant	Mid Ocean Brands B.V.
Address	7/F., King Tower, 111King Lam Street, Cheung ShaWan, Kowloon, HongKong.
manufacturer	Mid Ocean Brands B.V.
Address	7/F., King Tower, 111King Lam Street, Cheung ShaWan, Kowloon, HongKong.
Factory	Mid Ocean Brands B.V.
Address	7/F., King Tower, 111King Lam Street, Cheung ShaWan, Kowloon, HongKong.
Product Designation	WIRELESS MOON SHAPED SPEAKER
Brand Name	N/A
Test Model	MO9745
Date of test	Jul. 22, 2021 to Jul. 28, 2021
Deviation	None
Condition of Test Sample	Normal
Test Result	Pass
Report Template	AGCRT-EC-BR/RF

1. TEST RESULT CERTIFICATION

We (AGC), Attestation of Global Compliance (Shenzhen) Co., Ltd. for compliance with the requirements set forth in the European Standard ETSI EN 300 328 V2.2.2. The results of test in this report apply to the product/system which was tested only. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Prepared By

Eddy Lin

Eddy Liu Project Engineer

Jul. 28, 2021

Max Zhan

Reviewed By

Max Zhang Reviewer

Jul. 28, 2021

Approved By

Forrest Lei Authorized Officer

Jul. 28, 2021

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the stand in spectrum of the stand in the report is not permitted without the written authorization of AGC in 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 issues of 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



2. TECHNICAL INFORMATION

2.1. EUT DESCRIPTION

Operating Frequency Range(s)	2402MHz~2480MHz
The type of the equipment	FHSS adaptive equipment with only one antenna
Modulation	⊠GFSK , ⊠π /4-DQPSK, ∏8-DPSK
Bluetooth Version	V5.0
The number of Hopping Frequencies	79
Nominal Channel Bandwidth	1MHz
The maximum RF Output Power	1.34dBm
Hardware Version	V1.1
Software Version	5.0
Antenna designation	☑PCB Antenna (Temporary RF connector provided by manufacture) □Dedicated Antenna
Antenna gain	2dBi
Power Supply	DC 3.7V by battery or DC 5V by adapter
The extreme operating conditions	Operating temperature range: -10°C~45°C
Geo-location capability	□Yes ⊠No

Note:

- 1. The above information was declared by the manufacturer.
- 2. The equipment submitted representative production models.
- 3. The EUT cannot operated unmodulated.
- 4. The EUT provides Bluetooth wireless interface operating at 2.4G ISM band (2402MHz-2480MHz).
- 5. Only the Bluetooth was tested according the standard requirement.
- 6. The EUT is a stand-alone and portable equipment according to ETSI EN 300 328 V2.2.2.
- 7. For more details, please refer to the User's manual of the EUT.
- 8. The EUT doesn't support BLE.

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 AGS. 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 15daySafter the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.



2.2. SUPPORT EQUIPMENT

Item	Equipment	Mfr/Brand	Model/Type No.	Remark	
-				20- 20- 20-	

2.3. DESCRIPTION OF TEST MODES

NO.	TEST MODE DESCRIPTION			
1 0	Low channel TX			
2	Middle channel TX			
3	High channel TX			
4	Normal Hopping			
5	Low channel (Receiver Mode)			
6	Middle channel (Receiver Mode)			
0 7	High channel (Receiver Mode)			

Note:

1. All the transmit mode would tested with each modulation (GFSK, π /4-DQPSK).

2. All modes have been tested and the worst mode test data recording in the test report, if no any other data.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the stand in the report is not permitted without the written authorization of AGE in 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 authorize for the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.



2.4. OBJECTIVE

Perform Radio Spectrum tests for CE Marking according to the provisions of article 3.2 of the Radio Equipment Directive (2014/53/EU) for the BT function of the EUT.

2.5. TEST ITEMS AND THE RESULTS

The EUT has been tested according to ETSI EN 300 328 V2.2.2(2019-07).

ET EL EN 200 229	Wideband transmission systems;	
ETSI EN 300 328	Data transmission equipment operating in the 2,4 GHz band;	
V2.2.2 (2019-07)	Harmonised Standard for access to radio spectrum	

Test items and the results are as bellow:

N⁰	Basic Standard	Test Type	Test Mode	Result
1	ETSI EN 300 328 4.3.1.2	RF Output Power	Mode 4	Pass
2	ETSI EN 300 328 4.3.1.3	Duty Cycle,Tx-sequence,Tx-gap	N/A	N/A
3	ETSI EN 300 328 4.3.1.4	Accumulated transmit time, Frequency Occupation and hopping sequence	Mode 4	Pass
4	ETSI EN 300 328 4.3.1.5	Hopping Frequency Separation	Mode 4	Pass
5	ETSI EN 300 328 4.3.1.6	Medium Utilisation	N/A	N/A
6 ETSI EN 300 328 4.3.1.7		Adaptivity (Adaptive Frequency Hopping)	N/A	N/A
7 ETSI EN 300 328 4.3.1.8		Occupied Channel Bandwidth	Mode 1,3	Pass
8	ETSI EN 300 328 4.3.1.9	Transmitter unwanted emission in the out of band domain	Mode 1,3	Pass
9	ETSI EN 300 328 4.3.1.10	Transmitter unwanted emission in the Spurious domain	Mode 1,3	Pass
10	ETSI EN 300 328 4.3.1.11	Receiver Spurious emissions	Mode 5,7	Pass
11	ETSI EN 300 328 4.3.1.12	Receiver Blocking	Mode 4	Pass

Note:

- 1. N/A means it's not applicable to this item.
- 2. Owing to the maximum declared RF Output power (e.i.r.p.) less than 10 dBm, so the item 2, 5, 6 are not applicable.

2.6. ENVIRONMENTAL CONDITIONS

- Temperature: 5-35°C
- Relative humidity: 30-60 %
- Atmospheric pressure: 86-106 kPa

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 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 15day after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.



3. MEASUREMENT UNCERTAINTY

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO.

- -Uncertainty of Radio Frequency, Uc=±1 x 10-7
- Uncertainty of total RF power, conducted, Uc = ±0.8dB
- Uncertainty of RF power density, conducted, Uc = ±2.6dB
- Uncertainty of spurious emissions, conducted, Uc = ±2.7dB
- Uncertainty of spurious emissions, radiated, Uc = ±5.4dB
- Uncertainty of Temperature: ±0.5° C
- Uncertainty of Humidity: ±1 %
- Uncertainty of DC and low frequency voltages: ±2%

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the bedicated fresh 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 aphorization 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 15days after the issues of 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



mplia

4. IDENTIFICATION OF THE RESPONSIBLE TESTING LOCATION

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				

LIST OF EQUIPMENTS USED

Description	Manufactu rer	Model No.	S/N	Calibration Due.	Calibration Due.
MXG X-Series Vector Signal Generator	Agilent	N5182B	MY50140530	Aug. 21,2020	Aug. 20,2021
Signal Generator	Agilent	N5171B	MY45141029	Aug. 21,2020	Aug. 20,2021
EXA Signal Analyzer	Agilent	N9020A	MY52090123	Aug. 21,2020	Aug. 20,2021
USB Wideband Power Sensor	Agilent	U2021XA	MY54110007	May 11, 2021	May 10, 2025
USB Wideband Power Sensor	Agilent	U2021XA	MY54110009	May 11, 2021	May 10, 2025
RF Communication Tester	R&S	CMW270	1201.0002K7 5 -100528-Tu WIRELESSC O NN.TESTER	Aug. 21,2020	Aug. 20,2021
Attenuator	Wariors	W13	11324	N/A	N/A
Power spliter	Mini- Circuits	ZFRSC-183-s	3122	N/A	N/A
2.4G Band Fliter	EM Electronics	2400-2500	N/A	Mar. 23, 2020	Mar. 22, 2022
Small environment tester	ESPEC	SH-242	N/A	Oct. 08, 2019	Oct. 07, 2021
AMPLIFIER	ETS- LINDGRE N	3117PA	00225134	Oct. 15, 2019	Oct. 14, 2021
ANTENNA	SCHWAR ZBECK	VULB9168	494	Sep. 20, 2019	Sep. 19, 2021
ANTENNA	ETS- LINDGRE N	3142C	00060447	N/A	N/A
HORN ANTENNA	ETS- LINDGRE N	3117	00154520	Oct. 26, 2019	Oct. 25, 2021
HORN ANTENNA	ETS- LINDGRE N	3117	00034609	Apr. 23, 2021	Apr. 22, 2022
RF Cable	Harbour	RE004	N/A	May 15, 2020	May 14, 2022

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

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/



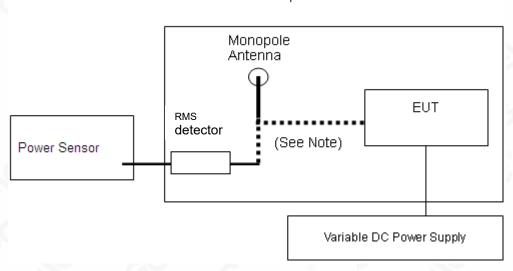
5. ETSI EN 300 328 REQUIREMENTS

5.1. RF OUTPUT POWER

EN 300 328 Clause 4.3.1.2

The maximum RF output power for adaptive Frequency Hopping equipment shall be equal to or less than 20 dBm. The maximum RF output power for non-adaptive Frequency Hopping equipment, shall be declared by the supplier. See clause 5.3.1 m). The maximum RF output power for this equipment shall be equal to or less than the value declared by the supplier. This declared value shall be equal to or less than 20 dBm.

Test Configuration



Temperature Chamber

Remarks:

EUT was direct connected to test equipment through coupling device.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the stand 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 in 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 issues 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 PROCEDURE

- Please refer to ETSI EN 300 328 (V2.2.2) clause 5.4.2.1 for the test conditions.
 Please refer to ETSI EN 300 328 (V2.2.2) clause 5.4.2.2.1 for the measurement method.

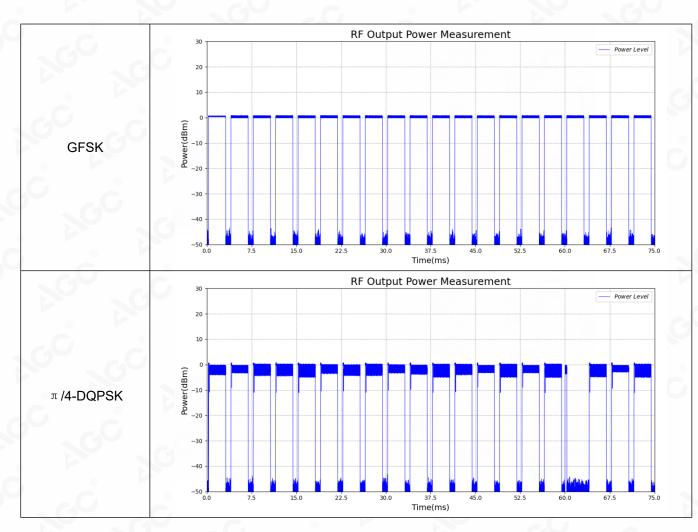
TEST RESULTS

Operation Mode:	Hopping mode	Test Date:	Jul. 23, 2021
Temperature:	25°C	Tested by:	Liu
Humidity:	55 % RH		
Number of Burst		= 13	
Measurement Time		= 50ms	

TEST CONDITIONS	RF OUTPUT POWERMEASUREMENT RESULT (dBm)			
	Temp (25)°C	Temp (-10)°C	Temp (45)°C	
FOR GFSK MOUDULATION	0.51	0.46	0.41	
II /4-DQPSK MOUDULATION	1.34	1.28	1.23	
Limit	20dBm			

Compliance Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "bedicated "rest Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written enhorization of AGE 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 Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com. a/Inspection he test results Bf the test report.





Note: Result=Reading+ Ant. Gain Only the worst case recorded in the test report. Conclusion: PASS

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the stand 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 aphorization of AGE in 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 affective interimeter of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.



5.2. ACCUMULATED TRANSMIT TIME, FREQUENCY OCCUPIATION AND HOPPING SEQUENCE

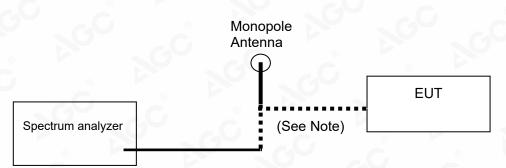
ETSI EN 300 328 SUBCLAUSE 4.3.1.4

ACCUMULATED TRANSMIT TIME				
CONDITION	LIMIT			
□Non-adaptive frequency hopping systems	≤ 15 ms			
⊠Adaptive frequency hopping systems	≤ 400 ms			

FREQUENCY OCCUPATION				
CONDITION LIMIT(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.			

HOPPING SEQUENCE(S)				
CONDITION LIMIT				
□Non-adaptive frequency hopping systems	≥5 hopping frequencies or 5/minimum Hopping Frequency Separation in MHz , whichever is the greater.			
Madenting frequency beauing evidence	Operating frequency band ≥58.45MHz (Operating over a minimum of 70 % of the operating in the band 2,4 GHz to 2,4835 GHz)			
⊠Adaptive frequency hopping systems	≥15 hopping frequencies or 15/minimum Hopping Frequency Separation in MHz , whichever is the greater.			

TEST CONFIGURATION



TEST PROCEDURE Please refer to ETSI EN300328 V2.2.2 Section 5.4.4

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the bedicated restriction of 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 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 15day after the issues of 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



Report No.: AGC12440210702EE04 Page 14 of 45

Channel	Accumulated transmit time (ms)	Limit (ms)	Frequency Occupation (pcs)	Limit (pcs)
Low	247.422	≤400	4	≥1
		ulated transmit	time	G a
	PNO: East +++ Trig	SENSE:INT ALIGN A Delay-2.000 ms Avg Type: RMS : Video ten: 40 dB	UTO 09:47:31 PM Jul 23, 2021 TRACE 2 3 4 5 0 TYPE DET A NUMBER	
	10 dB/div Ref 30.00 dBm		AMkr1 2.877 ms 0.41 dB	
	20.0		Center Freq 2.402000000 GHz	
	0.00 X2	142	2.40200000 GHz	
	-100		Stop Freq 2.40200000 GHz	
	.300		CF Step 510.000 KHz <u>Auto</u> Man	
	-40.0 .50.0 17963 (1716) (1716) (1716)	stage Mary Anglina Mar	Freq Offset	
	Center 2 40200000 GHz	. <mark>, akhiladhk,ad</mark>		
	Center 2.402000000 GHz Res BW 510 kHz #VBW 510		Span 0 Hz 0 8.000 ms (30000 pts)	
	ill keyigint Spectrum Analyzer - Swept SA 02 RL BE 50.04 CORPEC Center Freq 2.402000000 GHz IFGaint.cw ###	SENSE:INT ALIGN A Avg Type: RMS I: Free Run I:en: 40 dB		
	10 dB/div Ref 30.00 dBm	en: 40 aB	Auto Tune	
			Center Freq 2.40200000 GHz	
			Start Freq 2.402000000 GHz	
	-100		Stop Freq 2.402000000 GHz	
			CF Step 510.000 kHz <u>Auto</u> Man	
			Freq Offset 0 Hz	
	Center 2.402000000 GHz		Span 0 Hz	

Bluetooth 1Mbps (DH5) Test Result

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Pasting/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 issuer of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.

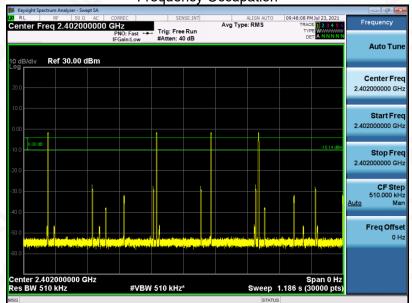
#VBW 510 kHz

ep 31.60 s

510 kH



Report No.: AGC12440210702EE04 Page 15 of 45



Frequency Occupation

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 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 15day after the issues of 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



Report No.: AGC12440210702EE04 Page 16 of 45

Channel	Accumulated transmit time (ms)	Limit (ms)	Frequency Occupation (pcs)	Limit (pcs)	
High	328.092	≤400		≥1	

Bluetooth 1Mbps(DH5) Test Result

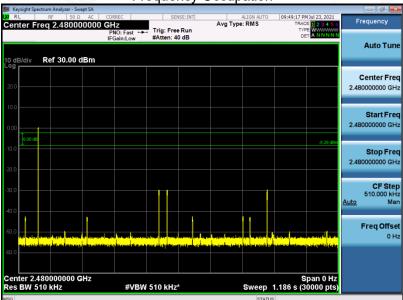
Keysight Spectrum Analy	zer - Swept SA						J
Center Freq 2.4	50 Ω AC CORREC	SENS Trig Delay-	E:INT	ALIGN AUTO Type: RMS	09:48:40 PM Jul 23	,2021 Frequen	су
Center Freq 2.4	PNO: Fr	ast 🛶 Trig: Video		ype. Kino	TRACE 2 TYPE WW DET A N	WWWW NNNN	
	IFGain:L	.ow#Atten: 40	ав	Λ	Mkr1 2.878		Tune
10 dB/div Ref 30).00 dBm			-	-1.17	dB	_
10 dB/div Ref 30							
20.0						Cente	
20.0						2.4800000	0 GHz
10.0							
			▲ 1∆2				tFreq
0.00	X2		·····		т	2.4800000	0 GHz
-10.0							Freq
-20.0						2.4800000	0 GHz
-30.0						CF 510.0	Step
						Auto	Man
-40.0							
-50.0 Long by Physical House	an all he is		1	al trut had a	ana ordāt im taldī	Freq	Offset
			- Alternation	and a habital and a	r distriction and the state of the second	he lith	0 Hz
-60.0 11 11 11 11 11 11	· · ·		<mark>ı</mark>				
s di distribit di set	litera totali		0.60	ald and all of the date	տիիիներել տ	ille i	
Center 2.480000					Span		
Res BW 510 kHz		#VBW 510 kHz*		Sweep 8.0	000 ms (30000		
MSG				STATUS			
📁 Keysight Spectrum Analy	zer - Swept SA		_				J
Keysight Spectrum Analy	50 Ω AC CORREC	SENS		ALIGN AUTO	09:49:14 PMJul 23	. 2021	
📁 Keysight Spectrum Analy	50 Ω AC CORREC 80000000 GHz PNO: Fa	ast 🛶 Trig: Free F	Avg 1 Run		09:49:14 PMJul 23	. 2021	
Keysight Spectrum Analy	50 Ω AC CORREC 80000000 GHz	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO		2021 3 4 5 6 WWWW NNNN	
Keysight Spectrum Analy	SO Q AC CORREC 800000000 GHZ PNO: Fa IFGain:L	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO	09:49:14 PMJul 23	2021 3 4 5 6 WWWW NNNN	cy
Keysight Spectrum Analy	50 Ω AC CORREC 80000000 GHz PNO: Fa	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO	09:49:14 PMJul 23	,2021 3 4 5 6 NNNN Auto	cy Tune
Center Freq 2.4	SO Q AC CORREC 800000000 GHZ PNO: Fa IFGain:L	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO	09:49:14 PMJul 23	Auto	cy Tune r Freq
Keysight Spectrum Analy	SO Q AC CORREC 800000000 GHZ PNO: Fa IFGain:L	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO	09:49:14 PMJul 23	,2021 3 4 5 6 NNNN Auto	cy Tune r Freq
Center Freq 2.4	SO Q AC CORREC 800000000 GHZ PNO: Fa IFGain:L	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO	09:49:14 PMJul 23	Auto	cy Tune r Freq
10 dB/div Ref 30	SO Q AC CORREC 800000000 GHZ PNO: Fa IFGain:L	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO	09:49:14 PMJul 23	2021 S 4 5 0 NNNN Auto Center 2.48000000 Star	cy Tune r Freq 10 GHz t Freq
10 dB/div Ref 30	SO Q AC CORREC 800000000 GHZ PNO: Fa IFGain:L	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO	09:49:14 PMJul 23	2021 Frequen Auto Cente 2.48000000	cy Tune r Freq 10 GHz t Freq
Keysight Spectrum Analy RL RF Center Freq 2.4	SO Q AC CORREC 800000000 GHZ PNO: Fa IFGain:L	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO	09:49:14 PMJul 23	2021 Frequen Auto Center 2.48000000 Star 2.48000000	r Freq 00 GHz 10 GHz
Keysight Spectrum Analy RL RF Center Freq 2.4	SO Q AC CORREC 800000000 GHZ PNO: Fa IFGain:L	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO	09:49:14 PMJul 23	2021 Frequen Auto Centei 2.48000000 Star 2.48000000	r Freq 00 GHz 10 GHz 00 GHz
10 RL RE 10 RL RE 20 RL RE 10 dB/div Ref 30 20 0 0 100 0 0 100 0 0	SO Q AC CORREC 800000000 GHZ PNO: Fa IFGain:L	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO	09:49:14 PMJul 23	2021 Frequen Auto Center 2.48000000 Star 2.48000000	r Freq 00 GHz 10 GHz 00 GHz
Keysight Spectrum Analy RL RF Center Freq 2.4	SO Q AC CORREC 800000000 GHZ PNO: Fa IFGain:L	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO	09:49:14 PMJul 23	2021 Frequen Auto Center 2.4800000 Stop 2.4800000	r Freq 00 GHz t Freq 00 GHz 00 GHz 00 GHz
10 RL RE 10 RL RE 20 RL RE 10 dB/div Ref 30 20 0 0 100 0 0 100 0 0	SO Q AC CORREC 800000000 GHZ PNO: Fa IFGain:L	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO	09:49:14 PMJul 23	2021 Frequen Auto Cente 2.48000000 Star 2.48000000 CF	r Freq 00 GHz t Freq 00 GHz 00 GHz
Image: Second	SO Q AC CORREC 800000000 GHZ PNO: Fa IFGain:L	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO	09:49:14 PMJul 23	2021 Frequen Auto Cente 2.48000000 Star 2.48000000 CF	r Freq 00 GHz t Freq 00 GHz 00 GHz 00 GHz
Image: Separation of the second sec	SO Q AC CORREC 800000000 GHZ PNO: Fa IFGain:L	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO	09:49:14 PMJul 23	2021 Frequen Auto Centel 2.48000000 Star 2.48000000 Star 2.48000000	Tune Tune Treq 0 GHz tFreq 0 GHz 0 GHz
Image: Second Section Analysis Res Res <thres< th=""> Res <thres< th=""> <thres<< td=""><td>SO Q AC CORREC 800000000 GHZ PNO: Fa IFGain:L</td><td>ast 🛶 Trig: Free F</td><td>Avg 1 Run</td><td>ALIGN AUTO</td><td>09:49:14 PMJul 23</td><td>2021 Frequen Auto Centel 2.48000000 Star 2.48000000 Star 2.48000000</td><td>r Freq 100 GHz t Freq 00 GHz 00 GHz 00 GHz 00 GHz 10 Step 00 kHz Man</td></thres<<></thres<></thres<>	SO Q AC CORREC 800000000 GHZ PNO: Fa IFGain:L	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO	09:49:14 PMJul 23	2021 Frequen Auto Centel 2.48000000 Star 2.48000000 Star 2.48000000	r Freq 100 GHz t Freq 00 GHz 00 GHz 00 GHz 00 GHz 10 Step 00 kHz Man
Image: Second	SO Q AC CORREC 800000000 GHZ PNO: Fa IFGain:L	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO	09:49:14 PMJul 23	2021 Frequen Auto Cente 2.4800000 3205 Stop 2.48000000	r Freq 100 GHz t Freq 00 GHz 00 GHz 00 GHz 00 GHz 10 Step 00 kHz Man
Image: Second Section Analysis Res Res <thres< th=""> Res <thres< th=""> <thres<< td=""><td>SO Q AC CORREC 800000000 GHZ PNO: Fa IFGain:L</td><td>ast 🛶 Trig: Free F</td><td>Avg 1 Run</td><td>ALIGN AUTO</td><td>09:49:14 PMJul 23</td><td>2021 Frequen Auto Cente 2.4800000 3205 Stop 2.48000000</td><td>r Freq 100 GHz t Freq 00 GHz 00 GHz 5 Step 000 kHz Man Dffset</td></thres<<></thres<></thres<>	SO Q AC CORREC 800000000 GHZ PNO: Fa IFGain:L	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO	09:49:14 PMJul 23	2021 Frequen Auto Cente 2.4800000 3205 Stop 2.48000000	r Freq 100 GHz t Freq 00 GHz 00 GHz 5 Step 000 kHz Man Dffset
B Rc sight Spectrum Analysis 00 RL RF 01 RL RF 02 RL RF 10 Galaxie RF 10 Galaxie RF 10 Galaxie RF 10 Galaxie Galaxie 10 Galaxie<	SO Q AC CORREC 800000000 GHZ PNO: Fa IFGain:L	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO	09:49:14 PMJul 23	2021 Frequen Auto Cente 2.4800000 3205 Stop 2.48000000	r Freq 100 GHz t Freq 10 GHz 00 GHz 10 GHZ 1
B Rc sight Spectrum Analysis 00 RL RF 00 RL RF 00 RL RF 00 RL RF 10 Galaxies RF 10 Galaxies RF 10 Galaxies Galaxies 10 Galaxies Galaxies <td< td=""><td>900 ac correct 80000000 GHz PRO: Fi FGaint 0.00 dBm</td><td>ast 🛶 Trig: Free F</td><td>Avg 1 Run</td><td>ALIGN AUTO</td><td></td><td>2021 Frequen Auto Cente 2.48000000 2.48000000 2.48000000 CF 510.0 Auto</td><td>r Freq 100 GHz t Freq 10 GHz 00 GHz 10 GHZ 1</td></td<>	900 ac correct 80000000 GHz PRO: Fi FGaint 0.00 dBm	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO		2021 Frequen Auto Cente 2.48000000 2.48000000 2.48000000 CF 510.0 Auto	r Freq 100 GHz t Freq 10 GHz 00 GHz 10 GHZ 1
B Rc sight Spectrum Analysis 00 RL RF 01 RL RF 02 RL RF 10 Galaxie RF 10 Galaxie RF 10 Galaxie RF 10 Galaxie Galaxie 10 Galaxie<	99.9 AC CORPEC 80000000 GHz PRO: Fr PGaint 0.00 dBm 0.00 dBm	ast 🛶 Trig: Free F	Avg 1 Run	ALIGN AUTO	09:49:14 PMJul 23	2021 Frequen Auto Center 2.48000000 Star 2.48000000 Center 2.48000000 Star 2.48000000 Center 2.48000000 Star 2.48000000 Frequen Star 2.48000000 Center 2.48000000 Star 2.48000000 Frequen Star 2.48000000 Center 5.000 Center 5.00000 Center 5.0000000 Center 5.0000000 Center 5.0000 Center 5.00000 Center 5.0000 Center 5.00000 Center 5.0000 Center 5.000000 Center 5.0000 Center 5.000000 Center 5.0000000 Center 5.000000000 Center 5.00000000 Center 5.00000000 Center 5.0000000 Center 5.00000000 Center 5.00000000 Center 5.00000000 Center 5.00000000 Center 5.000000000000000000000000000000000000	r Freq 100 GHz t Freq 00 GHz 00 GHz 5 Step 000 kHz Man Dffset

Accumulated transmit time

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated 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 writter authorization 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 15day after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Report No.: AGC12440210702EE04 Page 17 of 45



Frequency Occupation

- Note: 1) All the modes had been tested, but only the worst data recorded in the report.
 - 2) The Accumulated transmit time and Dwell Time are calculated by a computing device using an appropriate software application or program.
 - 3) Sweep time for Frequency Occupation= Dwell Time*4*79

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the bedicated 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 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 15days after the issues 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 RESULT FOR HOPPING SEQUENCE

Channel	Frequency (GHz)	Channel	Frequency (GHz)
01	2.402	42	2.443
02	2.403	43	2.444
03	2.404	44	2.445
04	2.405	45	2.446
05	2.406	46	2.447
06	2.407	47	2.448
07	2.408	48	2.449
08	2.409	49	2.450
09	2.410	50	2.451
10	2.411	51	2.452
11	2.412	52	2.453
12	2.413	53	2.454
13	2.414	54	2.455
14	2.415	55	2.456
15	2.416	56	2.457
16	2.417	57	2.458
17	2.418	58	2.459
18	2.419	59	2.460
19	2.420	60	2.461
20	2.421	61	2.462
21	2.422	62	2.463
22	2.423	63	2.464
23	2.424	64	2.465
24	2.420	65	2.466
25	2.426	66	2.467
26	2.427	67	2.468
27	2.428	68	2.469
28	2.429	69	2.470
29	2.430	70	2.471
30	2.431	71	2.472
31	2.432	72	2.473
32	2.433	73	2.474
33	2.434	74	2.475
34	2.435	75	2.476
35	2.436	76	2.477
36	2.430	77	2.478
37	2.438	78	2.479
38	2.430	79	2.479
39	2.439	13	2.400
40	2.440		
40	2.441		0

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



Report No.: AGC12440210702EE04 Page 19 of 45

	Hopping Cha	nnel Test Plot	
ng Sequence (MHz)		79.56	
ng Number		79	
Keysight Spectrum Analyzer - S XX RL RF 50	wept SA Ω AC CORREC SENSE:INT	ALIGN AUTO 09:49:49 PM Jul 23,	2021
Center Freq 2.4417	50000 GHz PNO: Fast ↔ Trig: Free Run	Avg Type: Log-Pwr TRACE 2 AvglHold: 100/100 TYPE	456 Frequency
	IFGain:Auto #Atten: 40 dB	Mkr1 2.479 82 (•
10 dB/div Ref 30.00	dBm	0.713 d	Bm
20.0			Center Freq
10.0			1 – 2.441750000 GHz
-10.0 -10.0	valaaaahahahahahahahahahah	aaalaadaabaabaalababaababaababababababab	
-20.0 +		-20.00 dE 79.56 MHz	
-30.0			
-50.0			Stop Freq 2.483500000 GHz
-60.0			
Start 2.40000 GHz #Res BW 510 kHz	#VBW 510 kHz	Stop 2.48350 Sweep (#FFT) ~38.49 ms (1000	
MKR MODE TRC SCL	X Y F	FUNCTION FUNCTION WIDTH FUNCTION VALU	Auto Man
1 N 1 f 2	2.479 82 GHz 0.713 dBm		Freq Offset
3 4 5			0 Hz
6 7			
8			
			-
MSG		STATUS	

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Festure 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 issuance of Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com. g/Inspection The test results the test report.



5.3. HOPPING FREQUENCY SEPARATION

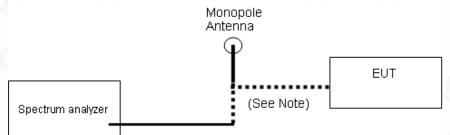
ETSI EN 300 328 SUBCLAUSE 4.3.1.5

For Non-adaptive frequency hopping systems:

The minimum Hopping Frequency Separation shall be equal to Occupied Channel Bandwidth (see clause 4.3.1.7) of a single hop, with a minimum separation of 100 kHz.

For Adaptive frequency hopping systems: The minimum Hopping Frequency Separation shall be 100 kHz.

CONFIGURATION



TEST PROCEDURE

Test Procedure please refer to clause 5.4.5.2.1

TEST RESULT

Hopping Frequency Separation (MHz)

0.999



Note: The modulation used during test is GFSK and this is the worst case. **Conclusion: PASS**

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Perturn/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 issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.

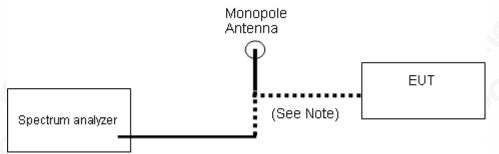


5.4. OCCUPIED CHANNEL BANDWIDTH

EN300328 4.3.1.4 OCCUPIED CHANNEL BANDWIDTH

The Occupied Channel Bandwidth is the bandwidth that contains 99 % of the power of the signal.

CONFIGURATION



TEST PROCEDURE

- 1. Please refer to ETSI EN 300 328 (V2.2.2) clause 5.4.7.1 for the test conditions.
- 2. Please refer to ETSI EN 300 328 (V2.2.2) clause 5.4.7.2 the measurement method.
- 3. The Test equipment information as following
- Centre frequency: 2402MHz,2480MHz Resolution bandwidth: 20kHz Video bandwidth: 62kHz Detector mode :RMS Trace mode :Max Hold

TEST RESULTS

				Law Y	
Modulation	Channel	OBW [MHz]	FL@OBW	FH@OBW	Verdict
GFSK	LCH	0.86500	2402.4364		PASS
GFSK	НСН	0.86545	<u> </u>	2480.4367	PASS
π/4DQPSK	C LCH	1.1992	2401.608	- CT	PASS
π/4DQPSK	НСН	1.2020	o	2480.6102	PASS

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the solution of a stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



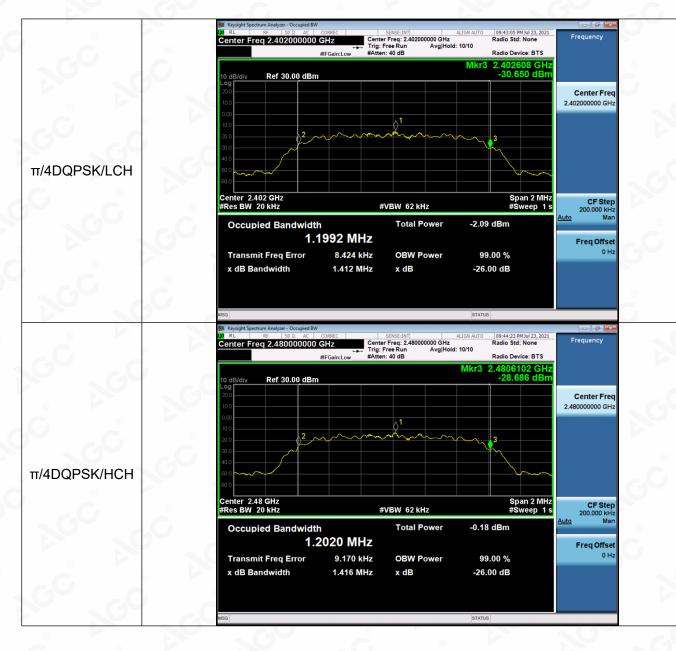
Report No.: AGC12440210702EE04 Page 22 of 45



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 writter explorization 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 15days after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Report No.: AGC12440210702EE04 Page 23 of 45

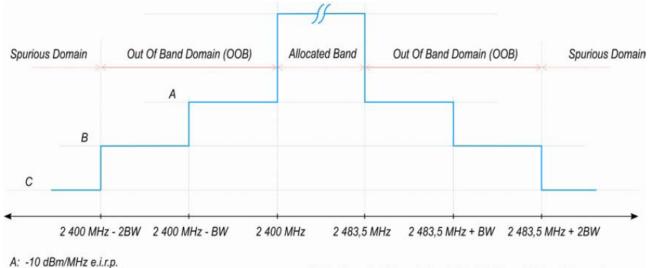


Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Festing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the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



5.5. TRANSMITTER UNWANTED EMISSIONS IN THE OUT OF BAND DOMAIN

EN300328 4.3.1.9 TRANSMITTER UNWANTED EMISSIONS IN THE OUT OF BAND DOMAIN



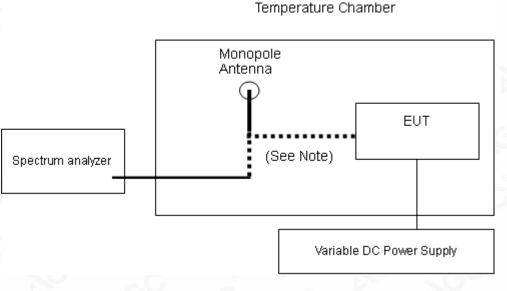
B: -20 dBm/MHz e.i.r.p.

C: Spurious Domain limits

BW = Occupied Channel Bandwidth in MHz or 1 MHz whichever is greater

Figure 1: Transmit mask

TEST CONFIGURATION



For have temporary antenna connector product

TEST PROCEDURE Test Procedure Please refer to ETSI EN 300 328 (V2.2.2) Clause 5.4.8.2.1

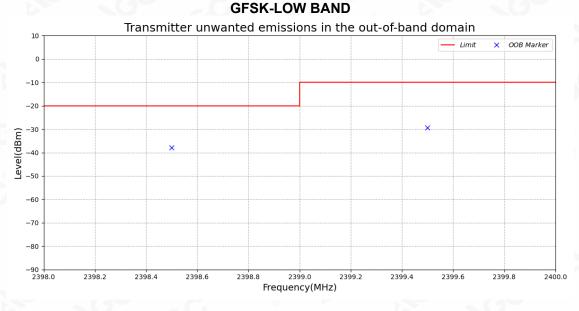
Compliances Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by th a/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the writter approximation of AGE 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 15d 🐙 after Bf he 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/

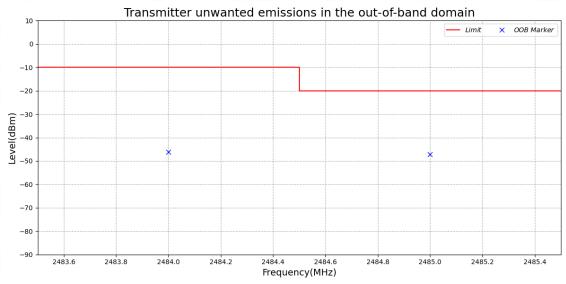


TEST RESULT

TEST CONDITIONS	Hopping mode			
TEST CONDITIONS	Temp (25)°C	Temp (-10)°C	Temp (45)°C	
GFSK MOUDULATION	PASS	PASS	PASS	
П/4-DQPSK MOUDULATION	PASS	PASS	PASS	



GFSK-HIGH BAND



Note: All the modes had been tested, but only the worst data recorded in the report. **Conclusion: PASS**

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Sedicated Pertog/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 in 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 15da/Safter the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



5.6. TRANSMITTER SPURIOUS EMISSIONS

Spurious emissions are emissions outside the frequency range(s) of the equipment as defined in Clause 4.3.1.10.

The spurious emissions of the transmitter shall not exceed the values in tables in the indicated bands:

Frequency Range	Maximum Power e.r.p(<=1GHz)/e.i.r.p(>1GHz)	Bandwidth
30MHz to 47MHz	-36dBm	100kHz
47MHz to 74MHz	-54dBm	100kHz
74MHz to 87.5MHz	-36dBm	100kHz
87.5MHz to 118MHz	-54dBm	100kHz
118MHz to 174MHz	-36dBm	100kHz
174 MHz to 230MHz	-54dBm	100kHz
230 MHz to 470MHz	-36dBm	100kHz
470 MHz to 694MHz	-54dBm	100kHz
694 MHz to 1GHZ	-36dBm	100kHz
1 GHZ to 12.75GHZ	-30dBm	1MHz

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 apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issuer of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Report No.: AGC12440210702EE04 Page 27 of 45

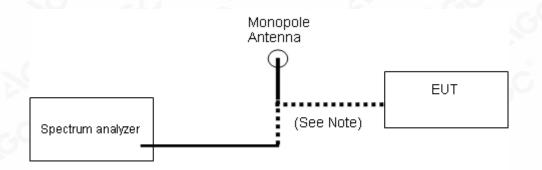
TEST PROCEDURE

- 1) The emissions over the range 30 MHz to 1 000 MHz shall be identified.
- 2) Spectrum analyzer settings: Resolution bandwidth: 100 kHz Video bandwidth: 300 kHz Detector mode: Peak Sweep Points: ≥ 19 400 Trace Mode: Max Hold
- 3) Allow the trace to stabilize. Any emissions identified during the sweeps above and that fall within the 6 dB range below the applicable limit or above, shall be individually measured using RMS detector and compared to the limits.
- 4) The emissions over the range 1 GHz to 12,75 GHz shall be identified.

5) Resolution bandwidth: 1 MHz Video bandwidth: 3 MHz Detector mode: Peak Trace Mode: Max Hold Sweep Points: ≥ 23 500

- 6) Allow the trace to stabilize. Any emissions identified during the sweeps above and that fall within the 6 dB range below the applicable limit or above, shall be individually measured using RMS detector and compared to the limits.
- 7) For radiated method, the applicable measurement procedures as described in the EN 300 328 V2.2.2 annex C.2 and C.4 are used.

Test Configuration



Conducted Method

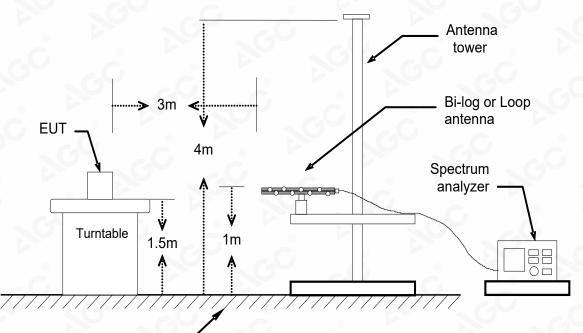
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the stand resting/inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written 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 issues of 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/



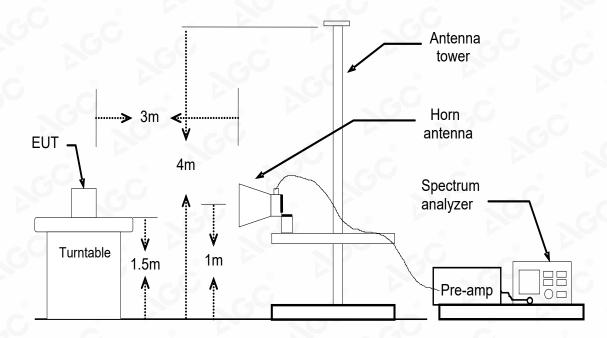
Report No.: AGC12440210702EE04 Page 28 of 45

Below 1GHz



Reference ground plane -

Above 1GHz



Radiated Method

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 writter explorization 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 15days after the issues of 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

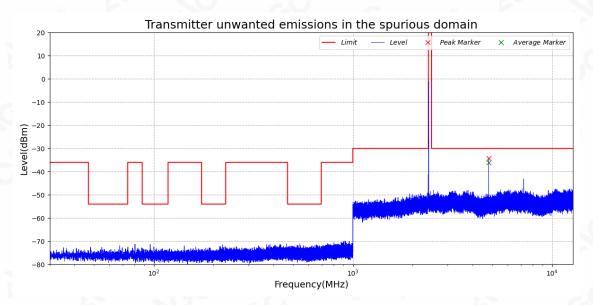
 Tel: +86-755 2523 4088
 E-mail: agc@agc-cert.com



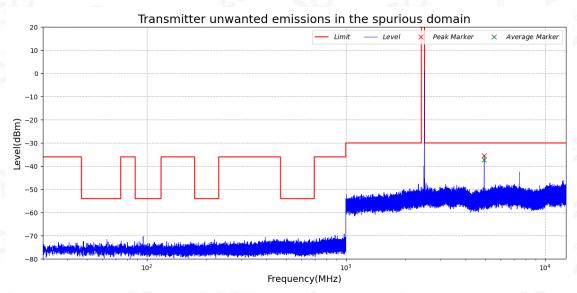
CONDUCTED RESULTS:

Test Mode	Channel	Freq. [MHz]	Level[dBm]	Limit[dBm]	Verdict
	2402	4803.993	-34.248	-30	PASS
DUE	2402	4803.993	-35.995	-30	PASS
DH5	2490	4959.881	-35.544	-30	PASS
	2480	4959.881	-37.382	-30	PASS

(Worst Case: Low channel, 1Mbps)



(Worst Case: High channel, 1Mbps)



Note: 1. All the modes had been test but only the worst data record in the report. 2. The 2.4G fundamental frequency is not considered to compare with the limit.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the stand 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 AGE in the test estimates and the test estimates and the test estimates are 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 issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



RADIATED RESUILTS: (Worst Case: Low channel, 1Mbps)

Transmitter Spurious Emission below 1GHz (30MHz-1GHz)

Frequency	Reading Level	Antenna	S.G.	Cable Loss	Ant.Gain	Emission Level	Limit	Margin
(MHz)	(dBuV/m)	Polarizat ion	(dBm)	(dB)	(dBi)	(dBm)	(dBm)	(dB)
90.28	31.48	V	-63.17	0.04	1.40	-61.81	-54.00	7.81
154.19	27.32	V	-66.48	0.06	0.70	-65.84	-36.00	29.84
357.81	30.34	V	-69.21	0.25	6.41	-63.06	-36.00	27.06
424.99	26.93	V	-72.86	0.33	7.02	-66.17	-36.00	30.17
630.58	28.11	V	-72.50	0.52	7.30	-65.72	-54.00	11.72
759.18	27.63	V	-71.64	0.61	6.55	-65.70	-36.00	29.70
Other(30- 1000)		v			0	-	-36.00/- 54.00	-0
0		-			0.5		- 0 - 1	
105.47	31.94	Н	-61.07	0.04	0.80	-60.31	-54.00	6.31
155.46	27.56	Н	-65.86	0.06	0.70	-65.22	-36.00	29.22
351.41	28.41	。 н 🏳	-70.96	0.25	5.63	-65.58	-36.00	29.58
433.06	27.00	н	-72.52	0.34	6.69	-66.17	-36.00	30.17
633.63	28.37	н	-70.88	0.52	7.24	-64.15	-54.00	10.15
727.08	28.84	н	-70.14	0.59	6.65	-64.08	-36.00	28.08
Other(30- 1000)	200	НС	6	-		-0	-36.00/- 54.00	<u> </u>

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated 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 writter authorization 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 15day after the issues 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	Reading Level	Antenna	S.G.	Cable Loss	Ant.Gain	Emission Level	Limit	Margin
(MHz)	(dBuV/m)	Polarizat ion	(dBm)	(dB)	(dBi)	(dBm)	(dBm)	(dB)
4804	52.21	V	-48.33	2.65	9.34	-41.64	-30.00	11.64
7206	47.34	V	-54.13	3.13	11.32	-45.94	-30.00	15.94
Other(1000- 12750)	·	v	3	GC	ĉ	-	-30.00	0
			0				C	0
4804	51.91	Н	-47.75	2.65	9.34	-41.06	-30.00	11.06
7206	43.77	н	-56.85	3.13	11.32	-48.66	-30.00	18.66
Other(1000- 12750)	SOC.	н			÷C		-30.00	©

Transmitter Spurious Emission above 1GHz (1GHz-12.75GHz)

Note: 1.The margins of the other spectrum are not exceeding the minimum value of margin, and this part of the results without recording in the test report.

2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "--" remark, if no specific emission from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Sedicated 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 AGS 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 affective is the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc~cert.com.



(Worst Case: High channel, 1Mbps)

Transmitter Spurious Emission below 1GHz (30MHz-1GHz)

Frequency	Reading Level	Antenna	S.G.	Cable Loss	Ant.Gain	Emission Level	Limit	Margin
(MHz)	(dBuV/m)	Polarizat ion	(dBm)	(dB)	(dBi)	(dBm)	(dBm)	(dB)
94.26	32.76	V	-61.67	0.04	1.72	-59.99	-54.00	5.99
159.30	28.53	V	-66.54	0.06	1.10	-65.50	-36.00	29.50
353.57	31.36	• V	-68.05	0.25	5.89	-62.40	-36.00	26.40
429.79	27.18	V	-72.26	0.34	6.92	-65.68	-36.00	29.68
628.61	29.82	V	-69.82	0.51	7.22	-63.11	-54.00	9.11
759.16	28.07	V	-70.41	0.61	6.55	-64.47	-36.00	28.47
Other(30- 1000)	-	v	6		-		-36.00/- 54.00)
0				C	l · · · · ·			
109.75	31.59	Н	-62.93	0.04	1.28	-61.69	-54.00	7.69
154.28	26.73	H	-67.47	0.06	0.70	-66.83	-36.00	30.83
351.89	29.14	н	-69.03	0.25	5.63	-63.65	-36.00	27.65
431.68	27.62	н	-71.29	0.34	6.83	-64.80	-36.00	28.80
632.75	28.93	Н	-71.88	0.52	7.26	-65.14	-54.00	11.14
729.37	27.42	н	-72.73	0.59	6.75	-66.57	-36.00	30.57
Other(30- 1000)	50	Н	@		-0		-36.00/- 54.00	©

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 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 issuer 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	Reading Level	Antenna	S.G.	Cable Loss	Ant.Gain	Emission Level	Limit	Margin
(MHz)	(dBuV/m)	Polarizat ion	(dBm)	(dB)	(dBi)	(dBm)	(dBm)	(dB)
4960	52.11	V	-47.52	2.65	9.34	-40.83	-30.00	10.83
7440	46.79	V	-53.89	3.13	11.32	-45.70	-30.00	15.70
Other(1000- 12750)	·	v	3	GC .	ĉ		-30.00	C.
2			8				C	8
4960	52.24	н	-47.13	2.65	9.34	-40.44	-30.00	10.44
7440	44.01	н	-57.51	3.13	11.32	-49.32	-30.00	19.32
Other(1000- 12750)	SOC.	н			÷		-30.00	·

Transmitter Spurious Emission above 1GHz (1GHz-12.75GHz)

Note: 1.The margins of the other spectrum are not exceeding the minimum value of margin, and this part of the results without recording in the test report.

2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "--" remark, if no specific emission from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Conclusion: PASS

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Postno/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 authorization of AGC in 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 issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



5.7. RECEIVER SPURIOUS EMISSIONS

ETSI EN300328 SUBCLAUSE 4.3.1.11

Receiver spurious emissions are emissions at any frequency when the equipment is in receive mode. The spurious emissions of the receiver shall not exceed the values given in table.

Frequency Range	Maximum Power e.r.p(<=1GHz)/e.i.r.p(>1GHz)	Measurement Bandwidth
30MHz to 1000MHz	-57dBm	100kHz
1GHz to 12.75GHz	-47dBm	1MHz

Test Configuration

Same as 5.6.

TEST PROCEDURE

- 1) The emissions over the range 30 MHz to 1 000 MHz shall be identified.
- 2) Spectrum analyzer settings:
 - Resolution bandwidth: 100 kHz

Video bandwidth: 300 kHz

Detector mode: Peak

Sweep Points: \geq 19 400

Trace Mode: Max Hold

- 3) Allow the trace to stabilize. Any emissions identified during the sweeps above and that fall within the 6 dB range below the applicable limit or above, shall be individually measured using RMS detector and compared to the limits.
- 4) The emissions over the range 1 GHz to 12,75 GHz shall be identified.
- 5) Resolution bandwidth: 1 MHz

Video bandwidth: 3 MHz Detector mode: Peak

Trace Mode: Max Hold

Sweep Points: \geq 23 500

- 6) Allow the trace to stabilize. Any emissions identified during the sweeps above and that fall within the 6 dB range below the applicable limit or above, shall be individually measured using RMS detector and compared to the limits.
- 7) For radiated method, the applicable measurement procedures as described in the EN 300 328 V2.2.2 annex C.2 and C.4 are used.

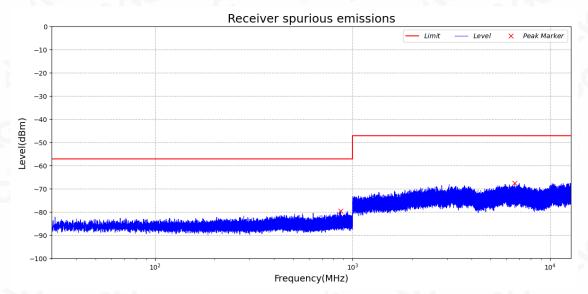
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Festing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the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



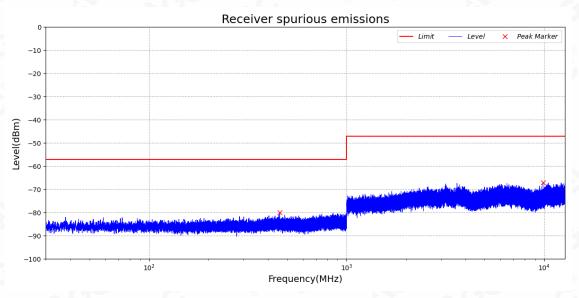
TEST RESULTS FOR CONDUCTED METHOD

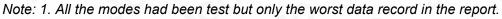
Test Mode	Channel	Freq. [MHz]	Level[dBm]	Limit[dBm]	Verdict
	2402	869.498	-78.639	-57.00	PASS
DH5	2402	6632.354	-67.516	-47.00	PASS
DHD	2480	458.366	-79.962	-57.00	PASS
6	2400	9874.679	-67.012	-47.00	PASS

RECEIVER MODE (Worst Case: Low channel, 1Mbps)



(Worst Case: High channel, 1Mbps)





Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the bedicated frame/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 in 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 15da/Castra the issues of 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/

TEST RESULTS FOR RADIATED METHOD (Worst Case: Low channel, 1Mbps)

Receiver Spurious Emission below 1GHz (30MHz-1GHz)

Frequency	Reading Level	Antenna	S.G.	Cable Loss	Ant.Gain	Emission Level	Limit	Margin
(MHz)	(dBuV/m)	Polarizat ion	(dBm)	(dB)	(dBi)	(dBm)	(dBm)	(dB)
121.35	26.21	V	-68.56	0.04	0.70	-67.90	-57.00	10.90
160.45	29.33	• V 🖻	-64.96	0.06	1.20	-63.82	-57.00	6.82
358.59	28.07	V	-70.47	0.25	6.54	-64.18	-57.00	7.18
531.59	26.22	V	-72.78	0.44	6.66	-66.56	-57.00	9.56
677.88	30.33	V	-69.35	0.55	6.52	-63.38	-57.00	6.38
834.75	30.74	V	-67.56	0.66	6.58	-61.65	-57.00	4.65
Other(30- 1000)		V	<u> </u>	200	0	0	-57.00	
0	<u> </u>	0				- C	3	
134.56	27.01	н	-65.30	0.05	0.02	-65.33	-57.00	8.33
163.41	28.18	н	-66.87	0.06	1.44	-65.49	-57.00	8.49
344.45	30.47	н	-67.32	0.24	5.62	-61.94	-57.00	4.94
541.74	27.05	н	-73.72	0.45	7.15	-67.02	-57.00	10.02
676.42	29.07	н	-69.22	0.55	6.56	-63.21	-57.00	6.21
831.46	28.32	Н	-71.05	0.66	6.37	-65.34	-57.00	8.34
Other(30- 1000)		Н		-		E.O.	-57.00	J

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 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 issuer 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	Reading Level	Antenna	S.G.	Cable Loss	Ant.Gain	Emission Level	Limit	Margin
(MHz)	(dBuV/m)	Polarizat ion	(dBm)	(dB)	(dBi)	(dBm)	(dBm)	(dB)
1540.09	32.22	V	-68.03	1.22	6.84	-62.41	-47.00	15.41
	0-	V				10		©
Other(1000- 12750)	<u> </u>	V	<u> </u>	GC.	-C	-	-47.00	20
			8				C.	®
1550.46	32.30	н	-66.54	1.19	6.67	-61.06	-47.00	14.06
)		Н	- 6		G	·		>
Other(1000- 12750)	J.CC	НС			- C		-47.00	·

Receiver Spurious Emission above 1GHz (1GHz-12.75GHz)

Note: 1.The margins of the other spectrum are not exceeding the minimum value of margin, and this part of the results without recording in the test report.

2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "--" remark, if no specific emission from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

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 aphroization 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 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.



(Worst Case: High channel, 1Mbps)

Receiver Spurious Emission below 1GHz (30MHz-1GHz)

Frequency	Reading Level	Antenna	S.G.	Cable Loss	Ant.Gain	Emission Level	Limit	Margin
(MHz)	(dBuV/m)	Polarizat ion	(dBm)	(dB)	(dBi)	(dBm)	(dBm)	(dB)
126.38	27.40	V	-66.54	0.05	0.26	-66.33	-57.00	9.33
160.80	28.87	V	-65.14	0.06	1.20	-64.00	-57.00	7.00
355.44	28.54	V	-71.07	0.25	6.15	-65.17	-57.00	8.17
531.05	26.85	V	-71.97	0.44	6.66	-65.75	-57.00	8.75
673.61	31.08	V	-67.86	0.55	6.68	-61.73	-57.00	4.73
833.73	30.54	V	-68.29	0.66	6.51	-62.44	-57.00	5.44
Other(30- 1000)		v		-			-57.00	
139.77	27.60	н	-64.75	0.05	0.00	-64.80	-57.00	7.80
161.75	28.75	ЭН	-66.13	0.06	1.28	-64.91	-57.00	7.91
342.65	29.19	н	-68.60	0.24	5.66	-63.18	-57.00	6.18
539.16	27.23	н	-72.51	0.45	7.14	-65.81	-57.00	8.81
675.78	28.64	НС	-70.86	0.55	6.60	-64.81	-57.00	7.81
830.86	28.57	н	-71.08	0.66	6.30	-65.44	-57.00	8.44
Other(30- 1000)	Sec.	н	©				-57.00	©

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 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 issuer 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	Reading Level	Antenna	S.G.	Cable Loss	Ant.Gain	Emission Level	Limit	Margin
(MHz)	(dBuV/m)	Polarizat ion	(dBm)	(dB)	(dBi)	(dBm)	(dBm)	(dB)
1554.62	32.56	V	-67.44	1.22	6.84	-61.82	-47.00	14.82
-	0-	V		@		<u>C</u>		©
Other(1000- 12750)	°	v	3- 3	GC	ĉ	-	-47.00	200
			8				C	®
1546.28	33.40	н	-66.39	1.19	6.67	-60.91	-47.00	13.91
		н			G	·		>
Other(1000- 12750)	e co	Н				2	-47.00	·

Receiver Spurious Emission above 1GHz (1GHz-12.75GHz)

Note: 1.The margins of the other spectrum are not exceeding the minimum value of margin, and this part of the results without recording in the test report.

2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "--" remark, if no specific emission from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.

Conclusion: PASS

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 aphorization 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 15days after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



5.8. RECEIVER BLOCKING

Wanted signal mean power from companion device (dBm) (see notes 1 and 4)	Blocking signal frequency (MHz)	Blocking signal power (dBm) (see note 4)	Type of blocking signal	
(-133 dBm + 10 × log10(OCBW)) or -68 dBm	2 380		0	
whichever is less (see note 2)	2 504			
	2 300			
	2 330	-34	CW	
(-139 dBm + 10 × log10(OCBW)) or -74 dBm	2 360	-34		
whichever is less (see note 3)	2 524			
	2 584	OF GO	8	
	2 674		60 ,	

NOTE 1: OCBW is in Hz.

NOTE 2: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to Pmin + 26 dB where Pmin is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal.

NOTE 3: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to Pmin + 20 dB where Pmin is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal.

NOTE 4: The level specified is the level at the UUT receiver input assuming a 0 dBi antenna assembly gain. In case of conducted measurements, this level has to be corrected for the (in-band) antenna assembly gain (G). In case of radiated measurements, this level is equivalent to a power flux density (PFD) in front of the UUT antenna with the UUT being configured/positioned as recorded in clause 5.4.3.2.2.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the bedicated Pasting/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 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 15days after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Wanted signal mean power from companion device (dBm) (see notes 1 and 3)	Blocking signal frequency (MHz)	Blocking signal power (dBm) (see note 3)	Type of blocking signal	
(-139 dBm + 10 × log10(OCBW) + 10 dB) or (-74 dBm + 10 dB) whichever is less	2 380	-G	0	
	2 504	24	0111	
	2 300	-34	CW	
(see note 2)	2 584			

Receiver Blocking parameters for Receiver Category 2 equipment

NOTE 1: OCBW is in Hz.

NOTE 2: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to Pmin + 26 dB where Pmin is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal.

NOTE 3: The level specified is the level at the UUT receiver input assuming a 0 dBi antenna assembly gain. In case of conducted measurements, this level has to be corrected for the (in-band) antenna assembly gain (G). In case of radiated measurements, this level is equivalent to a power flux density (PFD) in front of the UUT antenna with the UUT being configured/positioned as recorded in clause 5.4.3.2.2.

Receiver Blocking parameters for Receiver Category 3 equipment

Wanted signal mean power from	Blocking signal	Blocking signal	Type of
companion device (dBm)	frequency	power (dBm)	blocking
(see notes 1 and 3)	(MHz)	(see note 3)	signal
(-139 dBm + 10 × log10(OCBW) + 20 dB) or (-74 dBm + 20 dB) whichever is less (see note 2)	2 380 2 504 2 300 2 584	-34	CW

NOTE 1: OCBW is in Hz.

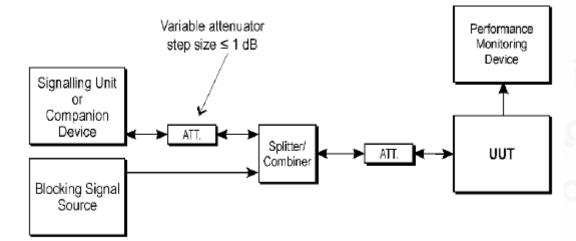
NOTE 2: In case of radiated measurements using a companion device and the level of the wanted signal from the companion device cannot be determined, a relative test may be performed using a wanted signal up to Pmin + 30 dB where Pmin is the minimum level of wanted signal required to meet the minimum performance criteria as defined in clause 4.3.1.12.3 in the absence of any blocking signal.

NOTE 3: The level specified is the level at the UUT receiver input assuming a 0 dBi antenna assembly gain. In case of conducted measurements, this level has to be corrected for the (in-band) antenna assembly gain (G). In case of radiated measurements, this level is equivalent to a power flux density (PFD) in front of the UUT antenna with the UUT being configured/positioned as recorded in clause 5.4.3.2.2.

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 endorization 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 15day after the issuer 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 CONFIGURATION



Test Set-up for receiver blocking

TEST PROCEDURE

The simplified conducted measure procedures are as follows:

1) he UUT shall be set to hopping mode.

2) The blocking signal generator is set to the first frequency as defined in the appropriate table corresponding to the receiver category and type of equipment.

3)With the blocking signal generator switched off, a communication link is established between the UUT and the associated companion device using the test setup. The level of the wanted signal shall be set to the value provided in the table corresponding to the receiver category and type of equipment. This level may be measured directly at the output of the companion device and a correction is made for the coupling loss into the UUT. The actual level for the wanted signal shall be recorded in the test report.

4) The blocking signal at the UUT is set to the level provided in the table corresponding to the receiver category and type of equipment. It shall be verified and recorded in the test report that the performance criteria is met.

5) Repeat step 4 for each remaining combination of frequency and level for the blocking signal as provided in the table corresponding to the receiver category and type of equipment.

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



Report No.: AGC12440210702EE04 Page 43 of 45

TEST RESULT

Test Condition	Blocking Signal Frequency(MHz)	Blocking Signal Power(dBm)	Wanted signal mean power from companion device(dBm)	Performance PER	Limit PER	Result
©	2300	-32.00	-67.63	1.43%	10%	S.
GFSK	2380	-32.00	-67.63	0.84%	10%	
Hopping Mode	2504	-32.00	-67.63	2.63%	10%	Pass
	2584	-32.00	-67.63	1.53%	10%	

Test Condition	Blocking Signal Frequency(MHz)	Blocking Signal Power(dBm)	Wanted signal mean power from companion device(dBm)	Performance PER	Limit PER	Result
	2300	-32.00	-66.21	1.18%	10%	
π/4-DQPSK	2380	-32.00	-66.21	1.16%	10%	
Hopping Mode	2504	-32.00	-66.20	2.91%	10%	Pass
	2584	-32.00	-66.20	1.67%	10%	

Note: The levels of the blocking signal and wanted signal have to be corrected for the (in-band) antenna assembly gain.

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



Report No.: AGC12440210702EE04 Page 44 of 45

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

RADIATED EMISSION TEST SETUP BELOW 1GHZ



RADIATED EMISSION TEST SETUP ABOVE 1GHZ



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the stead of the stamp of the stamp. Stamp is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15day after the issues of 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/



Report No.: AGC12440210702EE04 Page 45 of 45

APPENDIX B: PHOTOGRAPHS OF THE EUT

Refer to the Report No.: AGC12440210702AP01

----END OF REPORT----

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Festiva/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 approximation 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 15days after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Conditions of Issuance of Test Reports

1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").

2. Any report issued by Company as a result of this application for testing services (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.

3. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.

4. The non-CMA report issued by AGC is only permitted to be used by the client as internal reference use and shall not be used for public demonstration purpose.

5. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.

6. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.

7. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.

8. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.

9. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.

10. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Perturn/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 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 15days after the issues of 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/



Health Test Report

Report No.: AGC12440210702EH02

PRODUCT DESIGNATION	: WIRELESS MOON SHAPED SPEAKER
BRAND NAME	: N/A
MODEL NAME	: MO9745
APPLICANT	: Mid Ocean Brands B.V.
DATE OF ISSUE	: Jul. 28, 2021
STANDARD(S)	EN 62479:2010 EN 50663:2017
REPORT VERSION	: V1.0

Attestation of Global Counce (Shenzhen) Co., Ltd

omplian



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 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 15day after the issuer of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Report Version	Revise Time	Issued Date	Valid Version	Notes	
V1.0		Jul. 28, 2021	Valid	Initial release	

REPORT REVISE RECORD

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



Report No.: AGC12440210702EH02 Page 3 of 6

TABLE OF CONTENTS

1.	TEST REPORT CERTIFICATION	
2.	GENERAL INFORMATION	;
3.	TEST RESULT	;

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 approver, and 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 15days after the issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Report No.: AGC12440210702EH02 Page 4 of 6

1. TEST REPORT CERTIFICATION

Applicant	Mid Ocean Brands B.V.			
Address	7/F., King Tower, 111King Lam Street, Cheung ShaWan, Kowloon, HongKong.			
Manufacturer	Mid Ocean Brands B.V.			
Address	7/F., King Tower, 111King Lam Street, Cheung ShaWan, Kowloon, HongKong.			
Factory	Mid Ocean Brands B.V.			
Address	7/F., King Tower, 111King Lam Street, Cheung ShaWan, Kowloon, HongKong.			
Product Designation	WIRELESS MOON SHAPED SPEAKER			
Brand Name	N/A			
Test Model	MO9745			
Date of test	Jul. 22, 2021 to Jul. 28, 2021			
Test Result	Pass			

We, Attestation of Global Compliance (Shenzhen) Co., Ltd. for compliance with the requirements set forth in the European Standard EN 62479 & EN 50663. The results of testing in this report apply to the product/system which was tested only. The test results of this report relate only to the tested sample identified in this report.

Prepared By

Eddy Lin

Eddy Liu **Project Engineer**

Jul. 28, 2021

Reviewed By

Max Zhann

Max Zhang Reviewer

Jul. 28, 2021

Approved By

Forrest Lei Authorized Officer

Jul. 28, 2021

mpliar

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written of the report is not permitten of the report is not permitten of the report is not p licated /Inspection he test results phorization of AGE e of the test report. 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 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/



2. GENERAL INFORMATION

The following data is based on the information by the applicant.

Operating Frequency	2.402GHz to 2.480GHz
Bluetooth Version	V5.0
Modulation	BR⊠GFSK, EDR⊠π /4-DQPSK, □8DPSK BLE□GFSK 1Mbps □GFSK 2Mbps
Hardware Version	V1.1
Software Version	5.0
Antenna designation	PCB Antenna
Number of channels	79 for BR/EDR
Antenna Gain	2dBi
Power Supply	DC 3.7V by battery or DC 5V by adapter

Note: 1. The EUT provides Bluetooth wireless interface operating at 2.4G ISM band (2402MHz-2480MHz). 2. The EUT doesn't support BLE.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the stead of the test report is a 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 in 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 issues of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



3. TEST RESULT

The maximum output power of Bluetooth is <u>-3.18dBm (1.36mW which is less than 20mW)</u>. Please refer to ETSI EN 300 328 (V2.2.2) Test report (AGC12440210702EE04) for the result of Maximum Transmit Power, which deemed to comply with the basic restrictions without testing.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the stand of the stand of the test results of the report is not permitted without the written authorization 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 15day affective for the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc@agc-cert.com.



Conditions of Issuance of Test Reports

1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").

2. Any report issued by Company as a result of this application for testing services (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.

3. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.

4. The non-CMA report issued by AGC is only permitted to be used by the client as internal reference use and shall not be used for public demonstration purpose.

5. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.

6. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.

7. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.

8. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.

9. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.

10. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the Bedicated Perturn/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 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 15days after the issues of 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/