

# **FCC Test Report**

Report No.: AGC00408221201FE10

FCC ID : 2A3DR-G2

**APPLICATION PURPOSE** : Original Equipment

**PRODUCT DESIGNATION**: 5G Smart phone

**BRAND NAME** : AGM

MODEL NAME

AGM G2, AGM G2 Pro, AGM G2 Guardian, AGM G2 1KM,

Glory G2

**APPLICANT** : AGM MOBILE LIMITED

**DATE OF ISSUE** : Feb. 23, 2023

**STANDARD(S) TEST PROCEDURE(S)**FCC Part 15.407
KDB 905462 D02

**REPORT VERSION**: V1.0

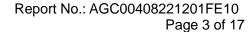
Attestation of Global Compliance (Shenzhen) Co., Ltd



Page 2 of 17

## REPORT REVISE RECORD

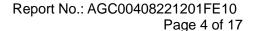
Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Feb. 23, 2023	Valid	Initial Release





# **TABLE OF CONTENTS**

1. VERIFICATION OF CONFORMITY	4
2. GENERAL INFORMATION	5
3. DESCRIPTION OF TEST MODES	7
4. SUMMARY OF TEST RESULTS	7
5. TEST FACILITY	7
6. DYNAMIC FREQUENCY SELECTION (DFS)	8
6.1. APPLICABILITY OF DFS REQUIREMENTS	8
6.2. TEST SET-UP	
6.3. LIMITS	
6.4. RADAR TEST WAVEFORMS	1′
6.5. TEST PROCEDURE	1′
6.6. TEST RESULT	12
APPENDIX A: PHOTOGRAPHS OF TEST SETUP	17
APPENDIX B: PHOTOGRAPHS OF EUT	17





# 1. VERIFICATION OF CONFORMITY

FLAT/RM 2253 22/F HOI TAI FACTORY ESTATE TSING YEUNG CIRCUIT TUEN MUN NT HONG KONG	
feng Century Technology ict, Shenzhen, China	
feng Century Technology ict, Shenzhen, China	
Glory G2	
1	

## 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 KDB 905462 D02.

Prepared By	Bibo Mang		
	Bibo Zhang (Project Engineer)	Feb. 23, 2023	
Reviewed By	Calin	Lin	
	Calvin Liu (Reviewer)	Feb. 23, 2023	
Approved By	Max Zhang		
	Max Zhang Authorized Officer	Feb. 23, 2023	



Page 5 of 17

## 2. GENERAL INFORMATION

Equipment Type	☐ Outdoor access points ☐ Indoor access points		
Equipment Type	☐ Fixed P2P access points ☐ Client devices		
Operation Frequency	☐ U-NII 1:5150MHz~5250MHz ☐ U-NII 2A: 5250MHz~5350MHz		
	☐ U-NII 2C:5470MHz~5725MHz ☐ U-NII 3: 5725MHz~5850MHz		
DFS Design Type	☐ Master ☐ Slave with radar detection ☐ Slave without radar detection		
TPC Function	☐ Yes ☐ No		
	For 802.11a/n/ac-HT20-VHT20: 5180~5240MHz, 5260~5320MHz,		
	5500~5700MHz, 5745~5825MHz		
Test Frequency Range:	For 802.11n/ac-HT40: 5190~5230MHz, 5270~5310MHz,		
	5510~5670MHz,5755~5795MHz		
	For 802.11ac-HT80: 5210MHz, 5290MHz, 5530MHz, 5610MHz,5775MHz		
	IEEE 802.11a(HT20):14.08dBm; IEEE 802.11n(HT20):13.61dBm;		
	IEEE802.11n(HT40):13.46dBm; IEEE 802.11ac(VHT20):13.22dBm;		
Output Power	IEEE802.11ac(VHT40):13.83dBm; IEEE802.11ac(VHT80):13.55dBm;		
	IEEE802.11ax(HE20):10.96dBm; IEEE802.11ax(HE40):10.12dBm;		
	IEEE802.11ax(HE80):8.80dBm		
	IEEE 802.11nHT(20):15.79dBm;IEEE802.11n(HT40):15.45dBm		
Output Power_MIMO	IEEE 802.11ac(VHT20):15.24dBm; IEEE802.11ac(VHT40):15.33dBm;		
Output Fower_willing	IEEE802.11ac(VHT80):14.70dBm;IEEE802.11ax(HE20):13.12dBm;		
	IEEE802.11ax(HE40):12.41dBm;IEEE802.11ax(HE80):11.62dBm		
	802.11a/n:(64-QAM, 16-QAM, QPSK, BPSK) OFDM		
Modulation	802.11ac :(256-QAM, 64-QAM, 16-QAM, QPSK, BPSK) OFDM		
	802.11ax :(1024-QAM,256-QAM, 64-QAM, 16-QAM, QPSK, BPSK) OFDMA		
	802.11a:6/9/12/18/24/36/48/54Mbps;		
Data Rate	802.11n:up to 300Mbps;		
Data Nate	802.11ac:up to 866.6Mbps;		
802.11ax:up to 1201Mbps			
	7 channels of U-NII-1 Band		
Number of channels	7 channels of U- NII-2A Band		
Number of chamiles	21 channels of U-NII-2C Band		
	8 channels of U- NII 3 Band		
Hardware Version	V1.00		
Software Version	N2060.6.01.00.00		
Antenna Designation	PIFA antenna (Comply with requirements of the FCC part 15.203)		
Number of transmit	2(802.a/11n/ac/ax all used two antennas, but 802.11a support SISO and		
chain	802.11n/ac/ax support MIMO)		
Power Supply	DC 3.85V by battery		

## Note:

# 1. This device does not support radar monitoring.



Page 6 of 17

2. The signal loading method between the client device and the Master device is TCP technology.

3. Distribution of start-up time of Master device and client device:

Equipment	Boot time(s)
Passive device(client)	10s
Active device(master)	40s



Page 7 of 17

## 3. DESCRIPTION OF TEST MODES

The tests in this section are run sequentially and the UUT must pass all tests successfully.

If the UUT fails any one of the tests it will count as a failure of compliance.

To show compliance, all tests must be performed with waveforms randomly generated as specified with test results meeting the required percentage of successful detection criteria.

One frequency will be chosen from the operating Channels of the UUT within the 5250-5350 MHz or 5470-5725 MHz bands.

## 4. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.407(h)(2)	Dynamic Frequency Selection Channel Move Time and Channel Closing Transmission Time	Compliant

## 5. 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	

Description	Manufacturer	Model No.	S/N	Calibration Due.	Calibration Due.
MXG X-Series Vector Signal Generator	Agilent	N5182B	MY53050647	Aug. 03, 2022	Aug. 02, 2023
EXA Signal Analyzer	Agilent	N9020A	MY49100060	Aug. 04, 2022	Aug. 03, 2023
Attenuator	ZHINAN	E-002	N/A	Sep. 01, 2022	Aug. 31, 2023
Power spliter	Mini-Circuits	ZFRSC-183-s	3122	N/A	N/A
RF Cable	Harbour	SHWCB-3000-N	N/A	May 13, 2022	May 12, 2023
DFS waveform Generator software	Keysight	N7607C V2.0.0.0	N/A	N/A	N/A
DFS data Analyzer software	Tonscend	JS1120-2	N/A	N/A	N/A
AP(Master)	ZTE	ZXHN F670	N/A	N/A	N/A

FCC ID of AP(Master): Q78-ZXHNF670E



Page 8 of 17

# 6. DYNAMIC FREQUENCY SELECTION (DFS)

## **6.1. APPLICABILITY OF DFS REQUIREMENTS**

Table 1: Applicability of DFS Requirements Prior to Use of a Channel

	Operational Mode			
Requirement	<b>☐</b> Master	⊠Client Without Radar	☐Client With Radar	
		Detection	Detection	
Non-Occupancy Period	Yes	Not required	Yes	
DFS Detection Threshold	Yes	Not required	Yes	
Channel Availability Check Time	Yes	Not required	Not required	
U-NII Detection Bandwidth	Yes	Not required	Yes	

Table 2: Applicability of DFS requirements during normal operation

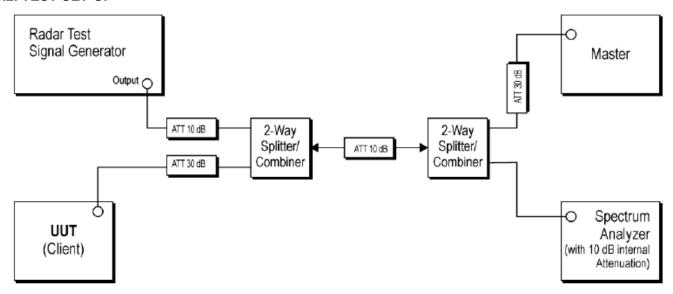
	Operational Mode		
Requirement	☐ Master Device or Client with	⊠Client Without Radar	
	Radar Detection	Detection	
DFS Detection Threshold	Yes	Not required	
Channel Closing Transmission Time	Yes	Yes	
Channel Move Time	Yes	Yes	
U-NII Detection Bandwidth	Yes	Not required	

Additional requirements for devices	☐Master Device or Client with	⊠Client Without Radar	
with multiple bandwidth modes	Radar Detection	Detection	
U-NII Detection Bandwidth and	All BW modes must be tested	Not required	
Statistical Performance Check			
Channel Move Time and Channel	Test using widest BW mode	Test using the widest BW mode	
Closing Transmission Time	available	available for the link	
All other tests	Any single BW mode	Not required	

Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.



#### 6.2. TEST SET-UP



## 6.3. LIMITS

Table 3: DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection

Maximum Transmit Power	Value (See Notes 1, 2, and 3)	
EIRP ≥ 200 milliwatt	-64 dBm	
EIRP < 200 milliwatt and	00 ID	
power spectral density < 10 dBm/MHz	-62 dBm	
EIRP < 200 milliwatt that do not meet the power	CA JD	
spectral density requirement	-64 dBm	

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.

Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.

Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.



Page 10 of 17

Table 4: DFS Response Requirement Values

Parameter	Value		
Non-occupancy period	eriod Minimum 30 minutes		
Channel Availability Check Time	60 seconds		
Oles and Maria Trees	10 seconds		
Channel Move Time	See Note 1.		
Channel Closing Transmission Time	200 milliseconds + an		
	aggregate of 60		
	milliseconds over remaining		
	10 second period.		
	See Notes 1 and 2.		
	Minimum 100% of the U-		
U-NII Detection Bandwidth	NII 99% transmission power bandwidth.		
	See Note 3.		

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.



Page 11 of 17

#### 6.4. RADAR TEST WAVEFORMS

Radar Type	Pulse Width (µsec)	PRI (µsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1

#### **6.5. TEST PROCEDURE**

- 1. When a Client Device without Radar Detection is the UUT, the Master Device is the Radar Detection Device.
- 2. A spectrum analyzer is used to establish the test signal level for each radar type.
- 3. During this process, there are no transmissions by either the Master Device or Client Device.
- 4. The spectrum analyzer is switched to the zero span (time domain) mode at the frequency of the Radar Waveform generator. The peak detector function of the spectrum analyzer is utilized. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) are set to at least 3 MHz.
- 5. The measured channels are 5530MHz in 80MHz Bandwidth and 5290MHz in 80MHz Bandwidth. The Radar signal was the same as transmitted channels, and injected into the antenna port of AP(master) ,measured the DFS parameters. The master transmitted the test data to client, the transmitted duty cycle is 30.8%.

#### **6.6. TEST RESULT**

#### 6.6.1 DFS DETECTION THRESHOLD

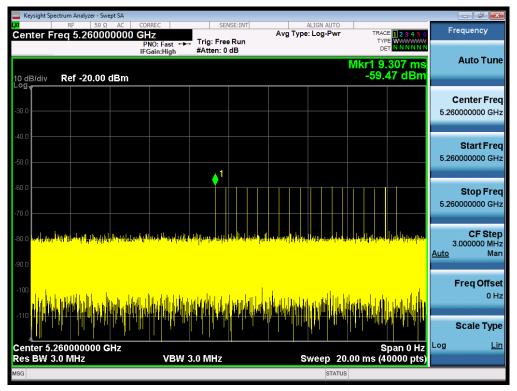
## Calibration:

For a detection threshold level of -64dBm and the antenna gain is 2dBi, required detection threshold is -62dBm (= -64+2).

Note: Maximum Transmit Power is greater than 200 milliwatt in this report, so detection threshold level is -64dBm.



# Radar Type 0



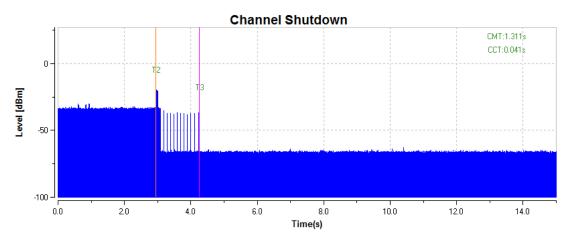
## 6.6.2TEST RESULT

## Channel Move Time and Channel Closing Transmission Time

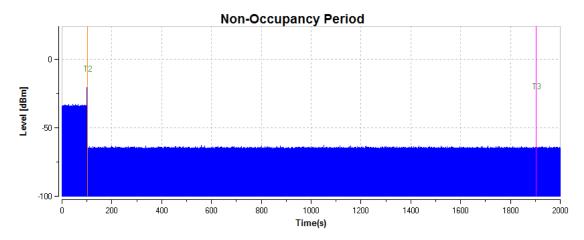
Test Frequency	Requirement	Measurement Level	Limit
5260MHz	Channel Closing Transmission Time	0.041s	≤10s
	Channel Move Time	1.311s	≤0.26s
5500MHz	Channel Closing Transmission Time	0.009s	≤10s
	Channel Move Time	1.069s	≤0.26s
5280MHz	Channel Closing Transmission Time	0.008s	≤10s
	Channel Move Time	1.028s	≤0.26s
5520MHz	Channel Closing Transmission Time	0.020s	≤10s
	Channel Move Time	1.190s	≤0.26s



# Radar Type 0(20MHz/5260MHz)

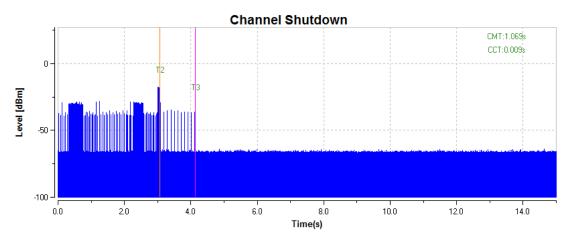


# Non-occupancy Period-Elapse time 30minutes

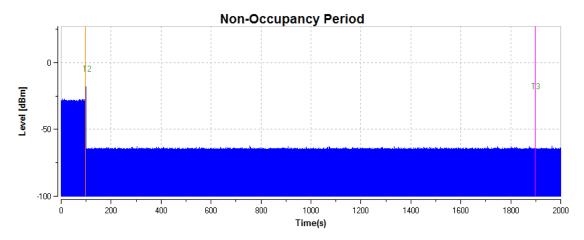




# Radar Type 0(20MHz/5500MHz)

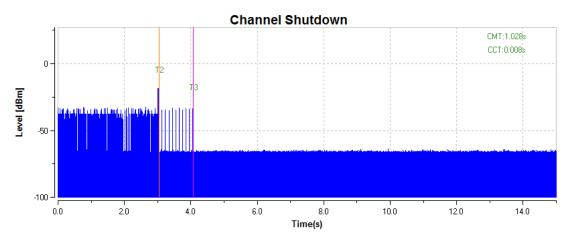


# Non-occupancy Period-Elapse time 30minutes

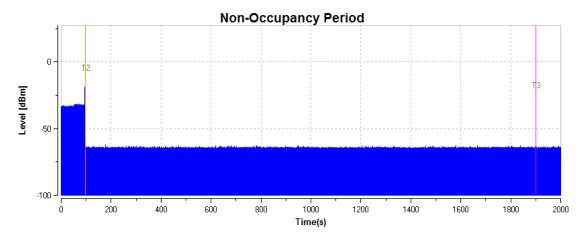




# Radar Type 0(80MHz/5280MHz)

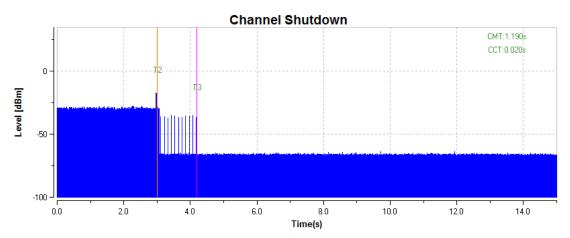


# Non-occupancy Period-Elapse time 30minutes

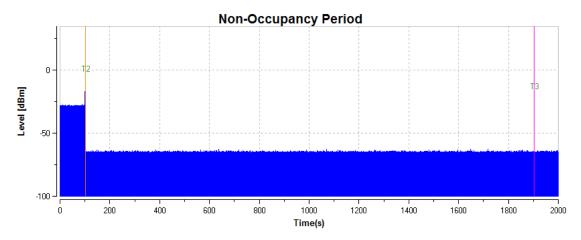




# Radar Type 0(80MHz/5520MHz)



# Non-occupancy Period-Elapse time 30minutes



**RESULT: PASS** 



Page 17 of 17

## **APPENDIX A: PHOTOGRAPHS OF TEST SETUP**

Refer to the Report No.: AGC00408221201AP01

**APPENDIX B: PHOTOGRAPHS OF EUT** 

Refer to the Report No.: AGC00408221201AP03

----END OF REPORT----



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