

# **FCC Test Report**

Report No.: AGC00408240102FR02

FCC ID : 2A3DR-AGMP2

**APPLICATION PURPOSE**: Original Equipment

**PRODUCT DESIGNATION**: 4G smart PAD, Tablet

**BRAND NAME** : AGM

**MODEL NAME** : AGM\_PAD\_P2, AGM\_PAD\_P2W

**APPLICANT**: AGM MOBILE LIMITED

**DATE OF ISSUE** : Mar. 12, 2024

**STANDARD(S)** : FCC Part 15 Subpart C §15.247

**REPORT VERSION**: V1.0

Attestation Of Global Concellance (Shenzhen) Co., Ltd



Page 2 of 84

# **Report Revise Record**

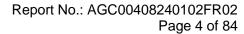
Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Mar. 12, 2024	Valid	Initial Release



# **Table of Contents**

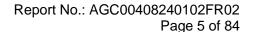
1. General Information	5
2. Product Information	6
2.1 Product Technical Description	6
2.2 Test Frequency List	6
2.3 Related Submittal(S) / Grant (S)	7
2.4 Test Methodology	7
2.5 Special Accessories	7
2.6 Equipment Modifications	7
2.7 Antenna Requirement	7
3. Test Environment	8
3.1 Address of the Test Laboratory	8
3.2 Test Facility	8
3.3 Environmental Conditions	9
3.4 Measurement Uncertainty	9
3.5 List of Equipment Use	10
4.System Test Configuration	12
4.1 EUT Configuration	12
4.2 EUT Exercise	12
4.3 Configuration of Tested System	12
4.4 Equipment Used In Tested System	12
4.5 Summary of Test Results	13
5. Description of Test Modes	
6. Duty Cycle Measurement	15
7. RF Output Power Measurement	16
7.1 Provisions Applicable	16
7.2 Measurement Procedure	16
7.3 Measurement Setup (Block Diagram of Configuration)	16
7.4 Measurement Result	17
8. 6dB Bandwidth Measurement	21
8.1 Provisions Applicable	21
8.2 Measurement Procedure	21
8.3 Measurement Setup (Block Diagram of Configuration)	21
8.4 Measurement Results	
9. Power Spectral Density Measurement	26
9.1 Provisions Applicable	
9.2 Measurement Procedure	29
9.3 Measurement Setup (Block Diagram of Configuration)	
9.4 Measurement Results	
10. Conducted Band Edge and Out-of-Band Emissions	
10.1 Provisions Applicable.  Any report having not been signed by authorized approver, or having been altered without authorization, or having no Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted.	34 t been stamped by the "Dedicated Testing/Inspection d 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	

Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.





10.2 Measurement Procedure	34
10.3 Measurement Setup (Block Diagram of Configuration)	34
10.4 Measurement Results	35
11. Radiated Spurious Emission	46
11.1 Measurement Limit	46
11.2 Measurement Procedure	46
11.3 Measurement Setup (Block Diagram of Configuration)	49
11.4 Measurement Result	50
12. AC Power Line Conducted Emission Test	78
12.1 Measurement Limit	78
12.2 Measurement Setup (Block Diagram of Configuration)	78
12.3 Preliminary Procedure of Line Conducted Emission Test	79
12.4 Final Procedure of Line Conducted Emission Test	79
12.5 Measurement Results	79
Appendix I: Photographs of Test Setup	84
Appendix II: Photographs of Test EUT	84





# 1. General Information

AGM MOBILE LIMITED
FLAT/RM 2253 22/F HOI TAI FACTORY ESTATE TSING YEUNG CIRCUIT TUEN
MUN NT HONG KONG, CHINA
Guangdong Aijiemo Electronic Industry Co., Ltd
AGM Technology Park, No. 187 Lianfa Road, Tongqiao Town, Zhongkai High-tech
District, Huizhou City, Guangdong, China
Guangdong Aijiemo Electronic Industry Co., Ltd
AGM Technology Park, No. 187 Lianfa Road, Tongqiao Town, Zhongkai High-tech
District, Huizhou City, Guangdong, China
4G smart PAD, Tablet
AGM
AGM_PAD_P2
AGM_PAD_P2W
In addition to the different model names between the main test and the series,
there are also different headphone plate layouts, and corresponding antenna
types and gains. There are no differences in the other PCB layouts and RF
parameters.
Jan. 22, 2024
Jan. 22, 2024~Mar. 06, 2024
No any deviation from the test method
Normal
Pass
AGCER-FCC-BLE-V1

Note: The test results of this report relate only to the tested sample identified in this report.

Prepared By	Bibo Zhang	
	Bibo Zhang (Project Engineer)	Mar. 12, 2024
Reviewed By	Calin Lin	
	Calvin Liu (Reviewer)	Mar. 12, 2024
Approved By	Max Zhang	
	Max Zhang Authorized Officer	Mar. 12, 2024



Page 6 of 84

## 2. Product Information

# 2.1 Product Technical Description

Frequency Band	2400MHz-2483.5MHz		
Operation Frequency Range	2402MHz-2480MHz		
Bluetooth Version	V5.2		
Modulation Type	BLE ⊠GFSK 1Mbps ⊠GFSK 2Mbps		
Number of channels	40		
Carrier Frequency of Each Channel	40 Channels (37 Data channels + 3 advertising channels)		
Channel Separation	2 MHz		
Maximum Transmitter Power	Bluetooth LE (1Mbps): 0.260dBm (0.0011W) Bluetooth LE (2Mbps): 0.096dBm (0.0010W)		
Hardware Version	V1.0		
Software Version	M193_P9901_V1		
Antenna Designation	Internal Antenna		
Antenna Gain	AGM_PAD_P2:-0.5dBi AGM_PAD_P2W: 2.36dBi		
Power Supply	DC 3.85V by battery		

# 2.2 Test Frequency List

Frequency Band	Channel Number	Frequency		
	0	2402 MHz		
	1	2404 MHz		
2400~2483.5MHz	:	:		
	19	2440MHz		
	÷	:		
	38	2478 MHz		
	39	2480 MHz		
Note: f = 2402 + 2*k MHz, k = 0,, 39 f is the operating frequency (MHz); k is the operating channel.				



Page 7 of 84

## 2.3 Related Submittal(S) / Grant (S)

This submittal(s) (test report) is intended for FCC ID: **2A3DR-AGMP2**, filing to comply with Part 2, Part 15 of the Federal Communication Commission rules.

## 2.4 Test Methodology

The tests were performed according to following standards:

No.	Identity	Document Title		
1	FCC 47 CFR Part 2	Frequency allocations and radio treaty matters; general rules and regulations		
2	FCC 47 CFR Part 15	Radio Frequency Devices		
3	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices		
4	KDB 558074 D01 15.247 Meas Guidance v05r02	Guidance for compliance measurements on Digital Transmission Systems, Frequency Hopping Spread Spectrum system, and Hybrid system devices operating under Section 15.247 of the FCC rules		

## 2.5 Special Accessories

Not available for this EUT intended for grant.

## 2.6 Equipment Modifications

Not available for this EUT intended for grant.

## 2.7 Antenna Requirement

## Standard Requirement

#### 15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

## 15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi

## **EUT Antenna:**

The non-detachable antenna inside the device cannot be replaced by the user at will. The gain of the antenna is -0.5dBi(AGM\_PAD\_P2) and 2.36dBi(AGM\_PAD\_P2W)



Page 8 of 84

#### 3. Test Environment

## 3.1 Address of the Test Laboratory

Laboratory: Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address: 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

## 3.2 Test Facility

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

# CNAS-Lab Code: L5488

Attestation of Global Compliance (Shenzhen) Co., Ltd. has been assessed and proved to follow CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories).

#### A2LA-Lab Cert. No.: 5054.02

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to follow ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

#### FCC-Registration No.: 975832

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files with Registration 975832.

## IC-Registration No.: 24842 (CAB identifier: CN0063)

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Certification and Engineering Bureau of Industry Canada. The acceptance letter from the IC is maintained in our files with Registration 24842.



Page 9 of 84

#### 3.3 Environmental Conditions

	Normal Conditions
Temperature range (℃)	15 - 35
Relative humidity range	20 % - 75 %
Pressure range (kPa)	86 - 106
Power supply	DC 3.85V

# 3.4 Measurement Uncertainty

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

uncertainty multiplied by a coverage factor of k=2, pro	viding a level of confidence of approximately 35 %.		
Item	Measurement Uncertainty		
Uncertainty of Conducted Emission for AC Port	$U_c = \pm 2.9 \text{ dB}$		
Uncertainty of Radiated Emission below 1GHz	$U_c = \pm 3.9 \text{ dB}$		
Uncertainty of Radiated Emission above 1GHz	$U_c = \pm 4.9 \text{ dB}$		
Uncertainty of total RF power, conducted	$U_c = \pm 0.8 \text{ dB}$		
Uncertainty of RF power density, conducted	$U_c = \pm 2.6 \text{ dB}$		
Uncertainty of spurious emissions, conducted	U <sub>c</sub> = ±2 %		
Uncertainty of Occupied Channel Bandwidth	U <sub>c</sub> = ±2 %		
	Uncertainty of Conducted Emission for AC Port Uncertainty of Radiated Emission below 1GHz Uncertainty of Radiated Emission above 1GHz Uncertainty of total RF power, conducted Uncertainty of RF power density, conducted Uncertainty of spurious emissions, conducted		



Report No.: AGC00408240102FR02 Page 10 of 84

# 3.5 List of Equipment Use

• R	RF Conducted Test System							
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)	
$\boxtimes$	AGC-ER-E036	Spectrum Analyzer	Agilent	N9020A	MY49100060	2023-06-01	2024-05-31	
$\boxtimes$	AGC-ER-E062	Power Sensor	Agilent	U2021XA	MY54110007	2023-03-03	2024-03-02	
$\boxtimes$	AGC-ER-E063	Power Sensor	Agilent	U2021XA	MY54110009	2023-03-03	2024-03-02	
$\boxtimes$	AGC-EM-A152	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-06-09	2024-06-08	
	AGC-ER-E083	Signal Generator	Agilent	E4421B	US39340815	2023-06-01	2024-05-31	
$\boxtimes$	N/A	RF Connection Cable	N/A	1#	N/A	Each time	N/A	
$\boxtimes$	N/A	RF Connection Cable	N/A	2#	N/A	Each time	N/A	

• F	Radiated Spurious Emission						
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
	AGC-EM-E046	EMI Test Receiver	R&S	ESCI	10096	2023-02-18	2024-02-17
$\boxtimes$	AGC-EM-E116	EMI Test Receiver	R&S	ESCI	100034	2023-06-03	2024-06-02
$\boxtimes$	AGC-EM-E061	Spectrum Analyzer	Agilent	N9010A	MY53470504	2023-06-01	2024-05-31
$\boxtimes$	AGC-EM-E086	Loop Antenna	ZHINAN	ZN30900C	18051	2022-03-12	2024-03-11
$\boxtimes$	AGC-EM-E001	Wideband Antenna	SCHWARZBECK	VULB9168	D69250	2023-05-11	2025-05-10
$\boxtimes$	AGC-EM-E029	Broadband Ridged Horn Antenna	ETS	3117	00034609	2023-03-23	2024-03-22
$\boxtimes$	AGC-EM-E082	Horn Antenna	SCHWARZBECK	BBHA 9170	#768	2023-11-13	2024-11-12
$\boxtimes$	AGC-EM-E146	Pre-amplifier	ETS	3117-PA	00246148	2022-08-04	2024-08-03
$\boxtimes$	AGC-EM-A119	2.4G Filter	SongYi	N/A	N/A	2023-06-01	2024-05-31
$\boxtimes$	AGC-EM-A138	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-06-09	2024-06-08
	AGC-EM-A139	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-06-09	2024-06-08

• A	AC Power Line Conducted Emission						
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
$\boxtimes$	AGC-EM-E045	EMI Test Receiver	R&S	ESPI	101206	2023-06-03	2024-06-02
	AGC-EM-E023	AMN	R&S	100086	ESH2-Z5	2023-06-03	2024-06-02
$\boxtimes$	AGC-EM-A130	6dB Attenuator	Eeatsheep	LM-XX-6-5W	DC-6GZ	2023-06-09	2024-06-08



Page 11 of 84

• Te	● Test Software						
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Version Information		
$\boxtimes$	AGC-EM-S001	CE Test System	R&S	ES-K1	V1.71		
	AGC-EM-S003	RE Test System	FARA	EZ-EMC	VRA-03A		
$\boxtimes$	AGC-ER-S012	BT/WIFI Test System	Tonscend	JS1120-2	2.6		
$\boxtimes$	AGC-EM-S011	RSE Test System	Tonscend	TS+-Ver2.1(JS36-RSE)	4.0.0.0		



Page 12 of 84

# 4. System Test Configuration

## 4.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

#### 4.2 EUT Exercise

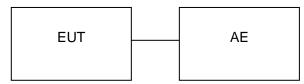
The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

# 4.3 Configuration of Tested System

Radiated Emission Configure:



Conducted Emission Configure:



## 4.4 Equipment Used In Tested System

The following peripheral devices and interface cables were connected during the measurement:

- ☐ Test Accessories Come From The Laboratory

No.	Equipment	Model No.	Manufacturer	Specification Information	Cable
1	Adapter	FX202E	HUNAN GAOYUAN BATTERY CO.,LTD	Input: AC 100-240V 50/60Hz, 0.7A DC: 5V3A 9V2.22A 12V1.67A	
2	Battery	AGM_PAD_P2	SHENZHEN Fangxin Technology Co. ,Ltd	DC 3.85V 8000mAh	
3	USB Cable	N/A	N/A	N/A	1.2m unshielded



Page 13 of 84

# 4.5 Summary of Test Results

Item	FCC Rules	Description of Test	Result
1	§15.203&15.247(b)(4)	Antenna Equipment	Pass
2	§15.247 (b)(3)	RF Output Power	Pass
3	§15.247 (a)(2)	6 dB Bandwidth	Pass
4	§15.247 (e)	Power Spectral Density	Pass
4	§15.247 (d)	Conducted Band Edge and Out-of-Band Emissions	Pass
5	§15.209	Radiated Emission& Band Edge	Pass
6	§15.207	AC Power Line Conducted Emission	Pass



Page 14 of 84

# 5. Description of Test Modes

Summary Table of Test Cases				
Test Item	Data Rate / Modulation			
rest item	Bluetooth – LE(1Mbps/2Mbps) / GFSK			
	Mode 1: Bluetooth Tx CH00_2402 MHz_1Mbps(Battery powered or AC/DC adapter)			
	Mode 2: Bluetooth Tx CH19_2440 MHz_1Mbps(Battery powered or AC/DC adapter)			
Radiated & Conducted	Mode 3: Bluetooth Tx CH39_2480 MHz_1Mbps(Battery powered or AC/DC adapter)			
Test Cases	Mode 4: Bluetooth Tx CH00_2402 MHz_2Mbps(Battery powered or AC/DC adapter)			
	Mode 5: Bluetooth Tx CH19_2440 MHz_2Mbps(Battery powered or AC/DC adapter)			
	Mode 6: Bluetooth Tx CH39_2480 MHz_2Mbps(Battery powered or AC/DC adapter)			
AC Conducted Emission	Mode 1: Bluetooth Link + Battery + USB Cable (Charging from AC Adapter)			

#### Note:

- 1. Only the result of the worst case was recorded in the report, if no other cases.
- 2. The battery is full-charged during the test.
- 3. For Radiated Emission, 3axis were chosen for testing for each applicable mode.
- 4. For Conducted Test method, a temporary antenna connector is provided by the manufacture.
- 5. The test software is through engineering commands. EUT can be set to a separate test mode.



Report No.: AGC00408240102FR02 Page 15 of 84

# 6. Duty Cycle Measurement

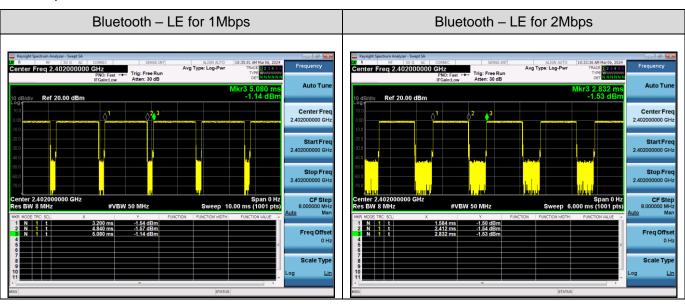
The maximum achievable duty cycles for all modes were determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz, and detector = Peak. The RBW and VBW were both greater than 50/T, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

Operating mode	T(µs)	Duty Cycle (%)	Duty Cycle Factor (dB)	1/ T Minimum VBW (kHz)
BLE_1Mbps	1640	87	0.6	0.61
BLE_2Mbps	828	66	1.8	1.21

#### Remark:

- 1. Duty Cycle factor = 10 \* log (1/ Duty cycle)
- 2. The duty cycle of each frequency band mode reflects the determination requirements of the low channel measurement value

# The test plots as follows:





Page 16 of 84

# 7. RF Output Power Measurement

## 7.1 Provisions Applicable

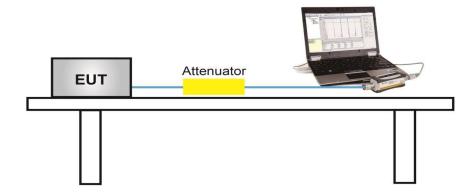
For DTSs employing digital modulation techniques operating in the bands 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1 W.

#### 7.2 Measurement Procedure

- For Peak Power, the testing follows ANSI C63.10 Section 11.9.1.1 Method Max peak power:
- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2. Set the RBW≥DTS bandwidth
- 3. Set the VBW $\geq$ [3 x RBW].
- 4. Span ≥ [3 x RBW].
- 5. Sweep= auto couple.
- 6. Detector Function= Peak.
- 7. Trace mode= Max hold.
- 8. Allow trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power, after any corrections for external attenuators and cables.
- For Average power, the testing follows ANSI C63.10 Section 11.9.2.3.2 Method AVGPM-G:
- 1. The RF output of EUT was connected to the power meter by RF cable and attenuator.
- 2. The path loss was compensated to the results for each measurement.
- 3. Set to the maximum power setting and enable the EUT transmit continuously.
- 4. Measure the conducted output power and record the results in the test report.

# 7.3 Measurement Setup (Block Diagram of Configuration)

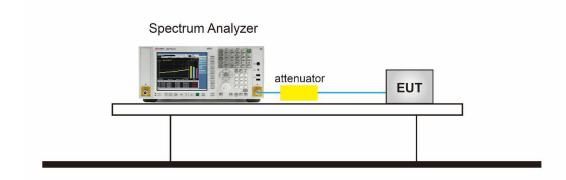
For Average power test setup





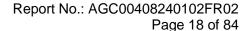
Page 17 of 84

# 



#### 7.4 Measurement Result

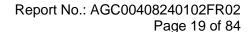
Test Data of Conducted Output Power					
Test Mode	Test Frequency (MHz)	Peak Power (dBm)	Limits (dBm)	Pass or Fail	
	2402	-0.090	≤30	Pass	
GFSK_1Mbps	2440	0.260	≤30	Pass	
	2480	-0.864	≤30	Pass	
	2402	-0.194	≤30	Pass	
GFSK_2Mbps	2440	0.096	≤30	Pass	
	2480	-1.107	≤30	Pass	



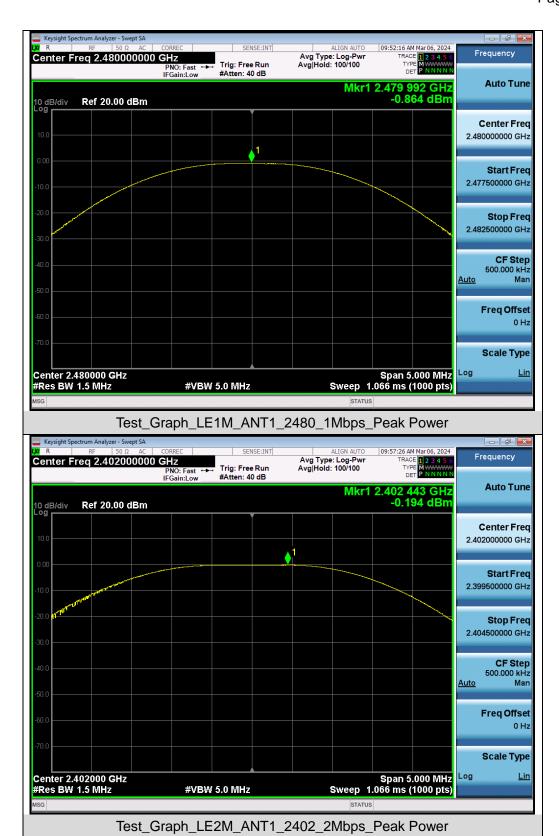


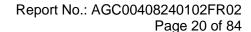
**Test Graphs of Conducted Output Power** Avg Type: Log-Pwr Avg|Hold: 100/100 Frequency Center Freq 2.402000000 GHz Trig: Free Run #Atten: 40 dB PNO: Fast → IFGain:Low **Auto Tune** Mkr1 2.402 008 GHz -0.090 dBm 10 dB/div Ref 20.00 dBm Center Freq 2.402000000 GHz Start Freq 2.399500000 GHz Stop Freq 2.404500000 GHz **CF Step** 500.000 kHz <u>Auto</u> Man Freq Offset Scale Type Center 2.402000 GHz #Res BW 1.5 MHz Span 5.000 MHz Sweep 1.066 ms (1000 pts) Log <u>Lin</u> **#VBW 5.0 MHz** Test\_Graph\_LE1M\_ANT1\_2402\_1Mbps\_Peak Power



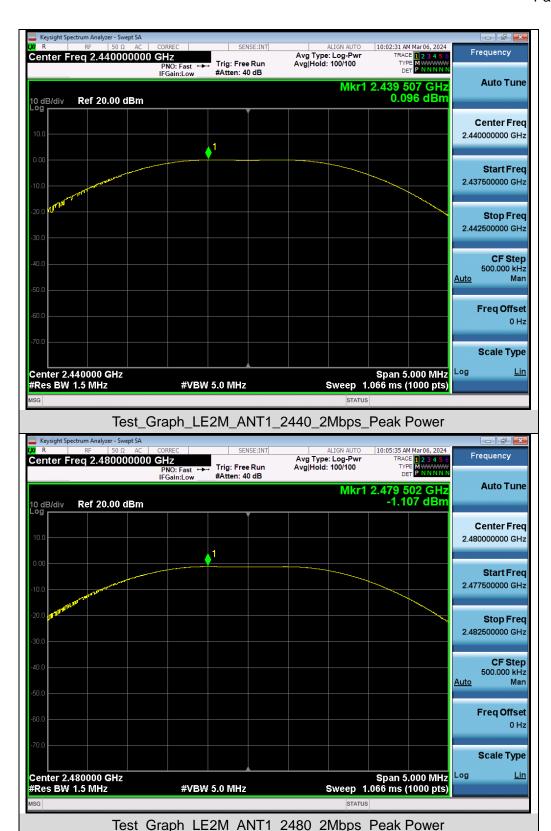














Page 21 of 84

#### 8. 6dB Bandwidth Measurement

# 8.1 Provisions Applicable

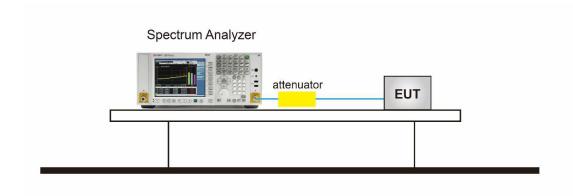
The minimum 6 dB bandwidth shall be 500 kHz.

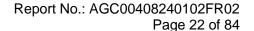
#### **8.2 Measurement Procedure**

The testing follows the ANSI C63.10 Section 6.9.3 (OBW) and 11.8.1 (6dB BW).

- The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
- 2. Set to the maximum power setting and enable the EUT transmit continuously.
- Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 kHz.
- For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the OBW and set the Video bandwidth (VBW) ≥ 3 \* RBW.
- Measure and record the results in the test report.

# 8.3 Measurement Setup (Block Diagram of Configuration)



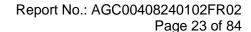




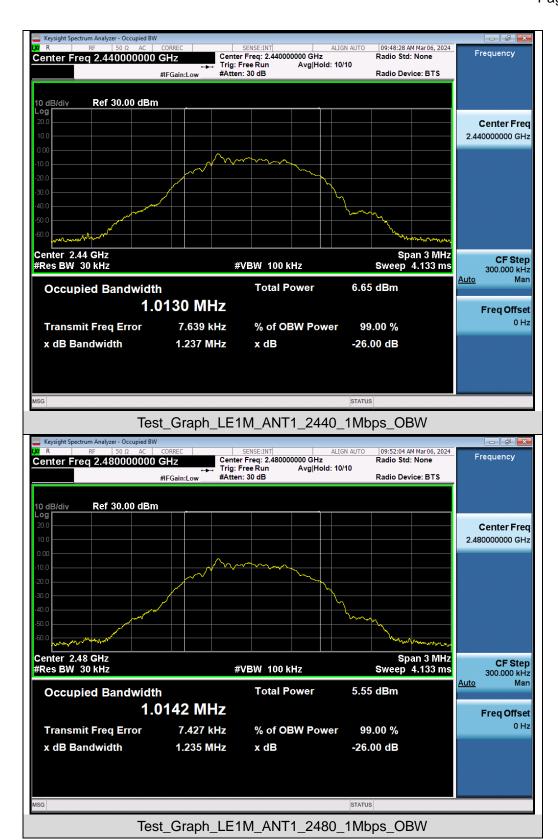
#### **8.4 Measurement Results**

	Test Data of Occupied Bandwidth and DTS Bandwidth						
Test Mode	Test Frequency (MHz)	Occupied Bandwidth (MHz)	DTS BW (MHz)	DTS BW Limits (MHz)	Pass or Fail		
	2402	1.014	0.667	≥0.5	Pass		
GFSK_1Mbps	2440	1.013	0.667	≥0.5	Pass		
	2480	1.014	0.666	≥0.5	Pass		
	2402	2.022	1.176	≥0.5	Pass		
GFSK_2Mbps	2440	2.020	1.173	≥0.5	Pass		
	2480	2.022	1.171	≥0.5	Pass		

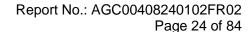
**Test Graphs of Occupied Bandwidth** 09:44:24 AM Mar 06, 2024 Radio Std: None Center Freq: 2.402000000 GHz Trig: Free Run Avg|Hol #Atten: 30 dB Avg|Hold: 10/10 Radio Device: BTS Ref 30.00 dBm Center Freq 2.402000000 GHz Center 2.402 GHz #Res BW 30 kHz Span 3 MHz Sweep 4.133 ms CF Step 300.000 kHz Man **#VBW 100 kHz** <u>Auto</u> 6.30 dBm **Total Power Occupied Bandwidth** 1.0140 MHz Freq Offset 8.864 kHz **Transmit Freq Error** % of OBW Power 99.00 % -26.00 dB x dB Bandwidth 1.235 MHz x dB Test\_Graph\_LE1M\_ANT1\_2402\_1Mbps\_OBW





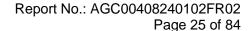


Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/

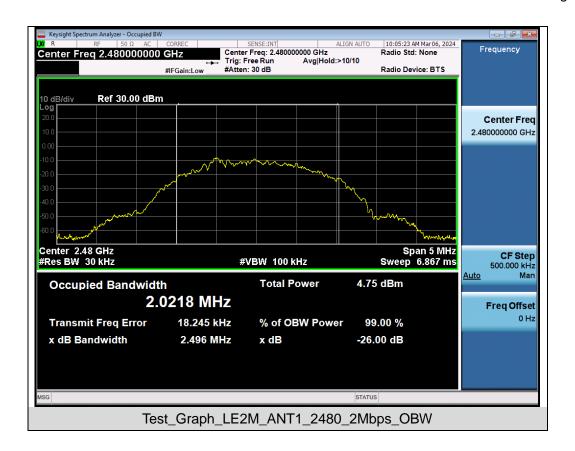


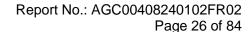






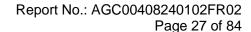








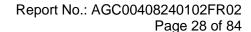








Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/







Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/



Report No.: AGC00408240102FR02 Page 29 of 84

# 9. Power Spectral Density Measurement

## 9.1 Provisions Applicable

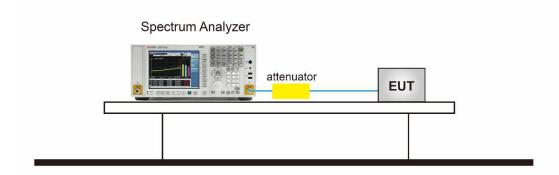
The transmitter power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

#### 9.2 Measurement Procedure

The testing follows the ANSI C63.10 Section 11.10.2 Method PKPSD.

- The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss
  was compensated to the results for each measurement.
- 2. Set to the maximum power setting and enable the EUT transmit continuously.
- Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz in order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
- 4. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
- 5. Measure and record the results in the test report.
- 6. The Measured power density (dBm)/ 100kHz is a reference level and used as 20dBc down limit line for Conducted Band Edges and Conducted Spurious Emission.

## 9.3 Measurement Setup (Block Diagram of Configuration)

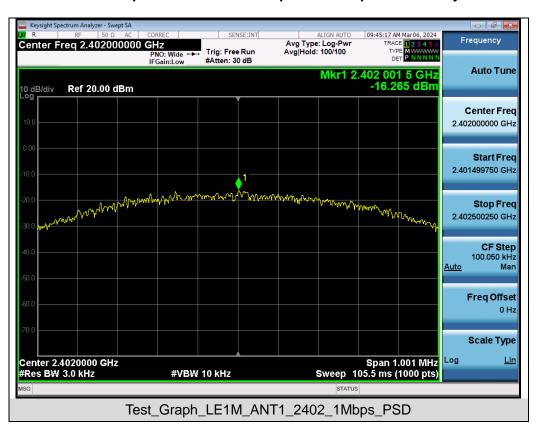


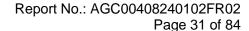


#### 9.4 Measurement Results

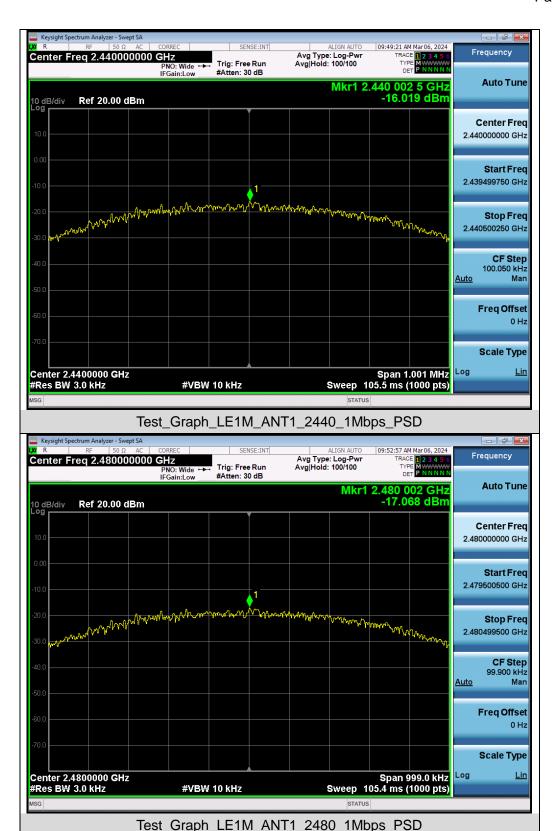
Test Data of Conducted Output Power Spectral Density					
Test Mode	Test Frequency (MHz)	Power density (dBm/3kHz)	Limit (dBm/3kHz)	Pass or Fail	
	2402	-16.265	≤8	Pass	
GFSK_1Mbps	2440	-16.019	≪8	Pass	
	2480	-17.068	≪8	Pass	
	2402	-19.887	≪8	Pass	
GFSK_2Mbps	2440	-19.581	≤8	Pass	
	2480	-20.782	≪8	Pass	

# **Test Graphs of Conducted Output Power Spectral Density**



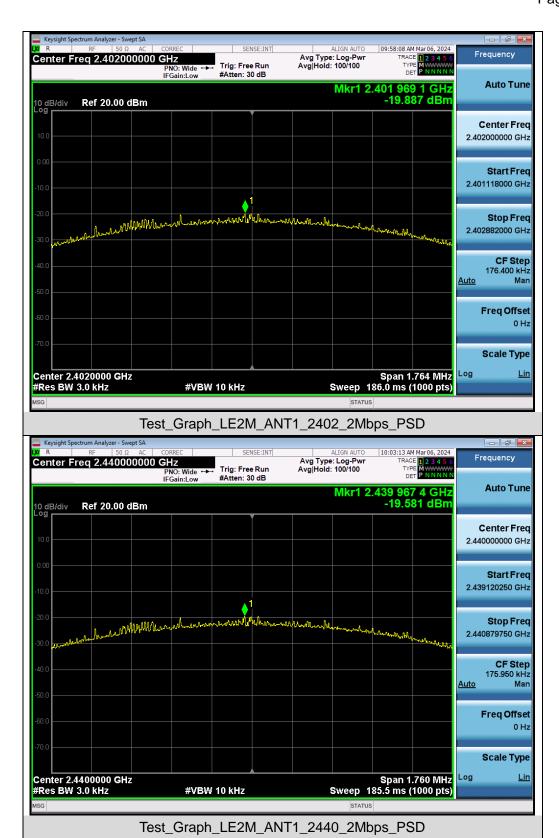


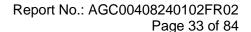




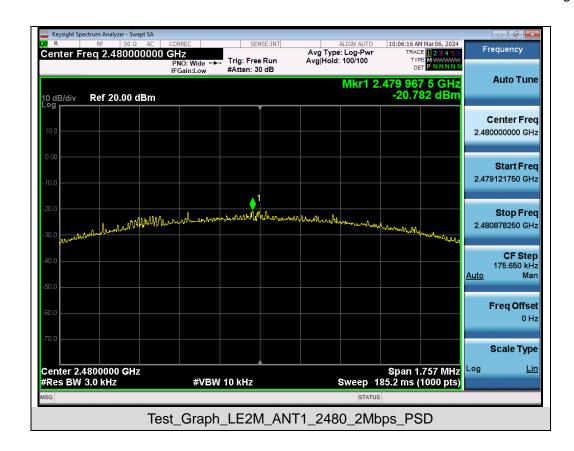














Page 34 of 84

# 10. Conducted Band Edge and Out-of-Band Emissions

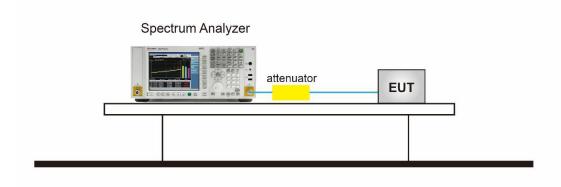
## **10.1 Provisions Applicable**

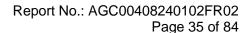
The limit for out-of-band spurious emissions at the band edge is 20dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100kHz bandwidth per the PSD procedure.

#### 10.2 Measurement Procedure

- Reference level measurement
- 1. Set instrument center frequency to DTS channel center frequency
- 2. Set the span to  $\geq$  1.5 times the DTS bandwidth
- 3. Set the RBW = 100 kHz
- 4. Set the VBW ≥ 3 x RBW
- 5. Detector = peak
- 6. Sweep time = auto couple
- 7. Trace mode = max hold
- 8. Allow trace to fully stabilize
- Emission level measurement
- 1. Set the center frequency and span to encompass frequency range to be measured
- 2. RBW = 100kHz
- 3. VBW = 300kHz
- 4. Detector = Peak
- 5. Trace mode = max hold
- 6. Sweep time = auto couple
- 7. The trace was allowed to stabilize

## 10.3 Measurement Setup (Block Diagram of Configuration)

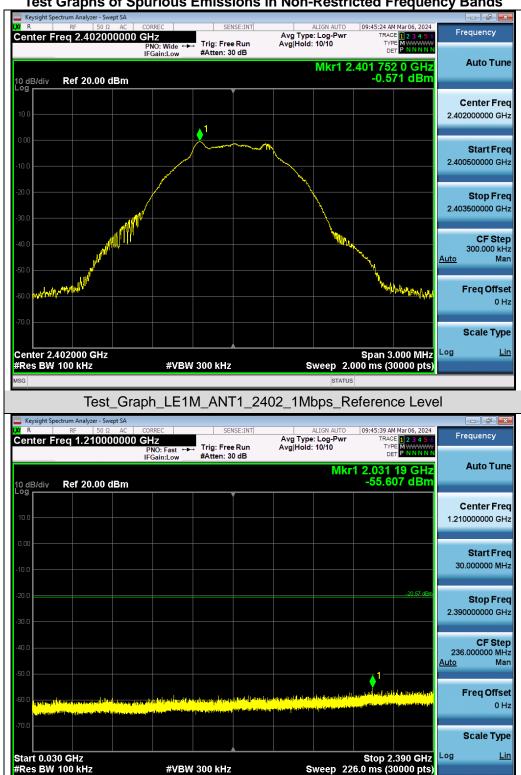






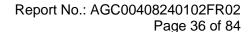
#### 10.4 Measurement Results

Test Graphs of Spurious Emissions in Non-Restricted Frequency Bands

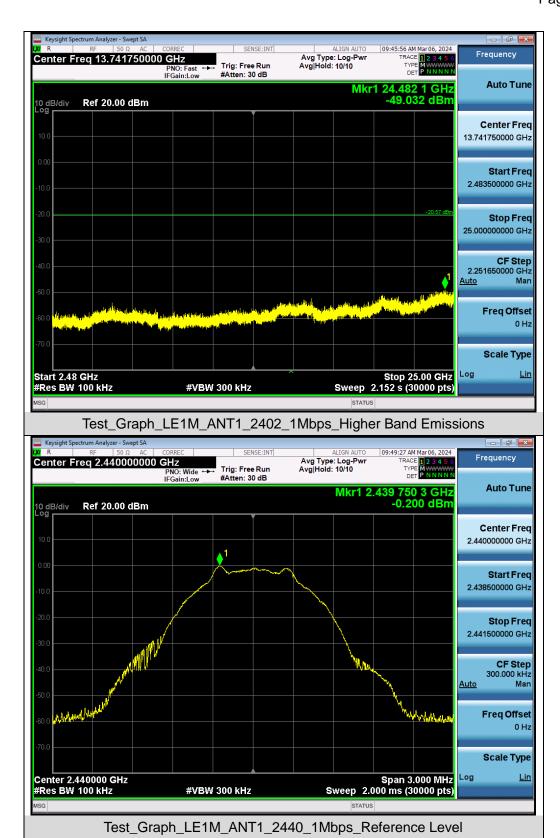


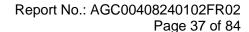
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the 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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Test\_Graph\_LE1M\_ANT1\_2402\_1Mbps\_Lower Band Emissions

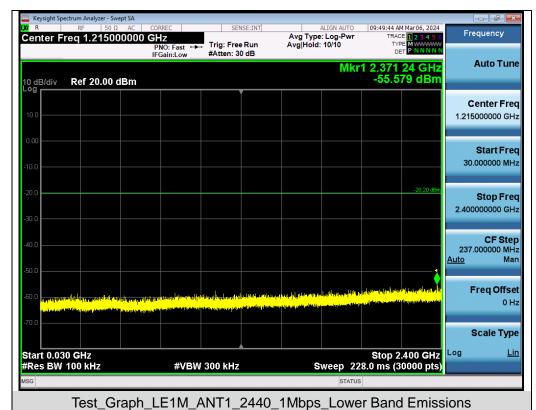




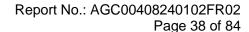




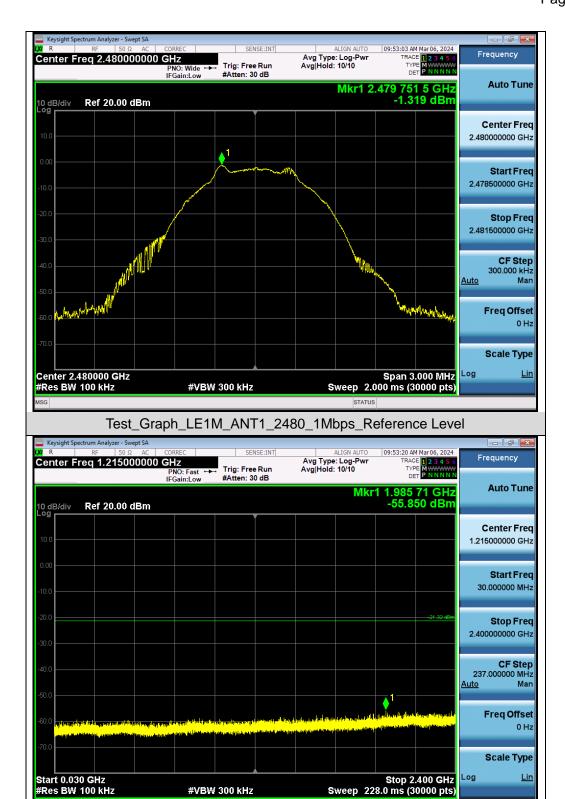




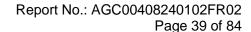




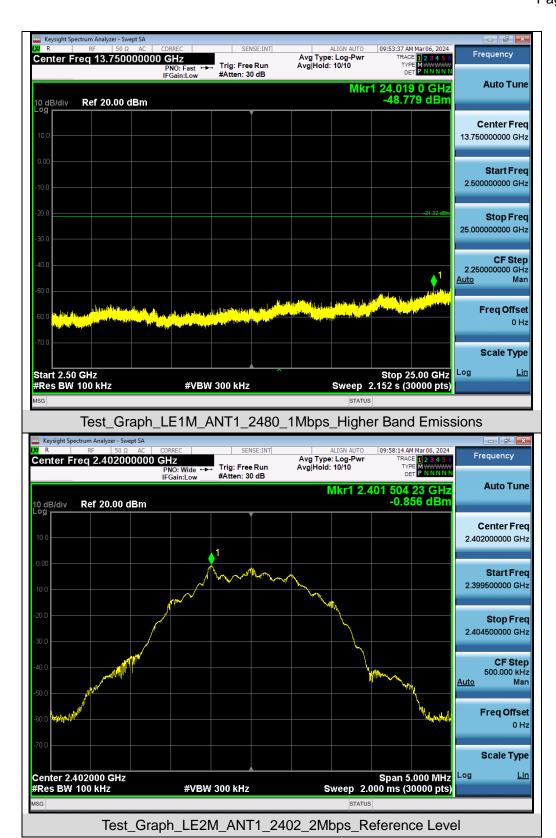


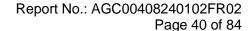


Test Graph LE1M ANT1 2480 1Mbps Lower Band Emissions

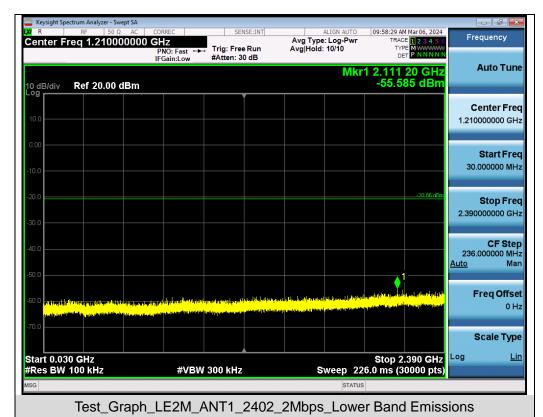




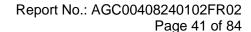




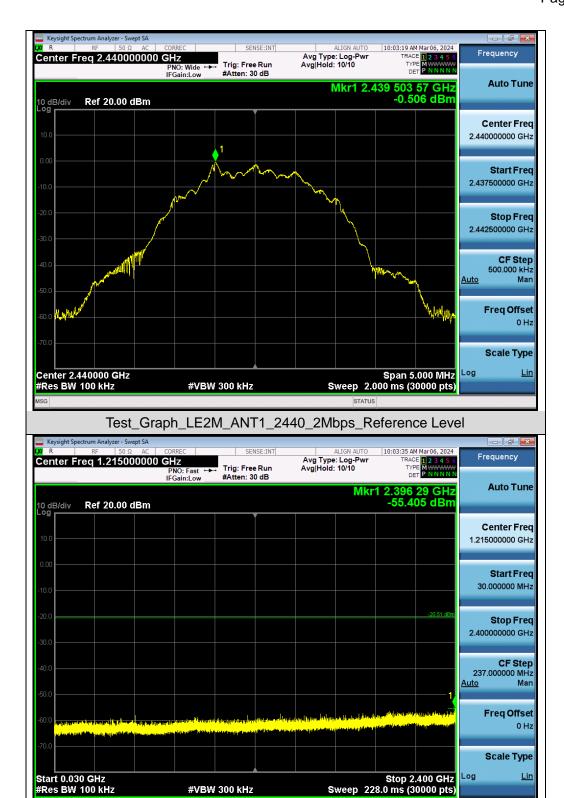






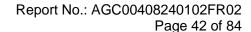




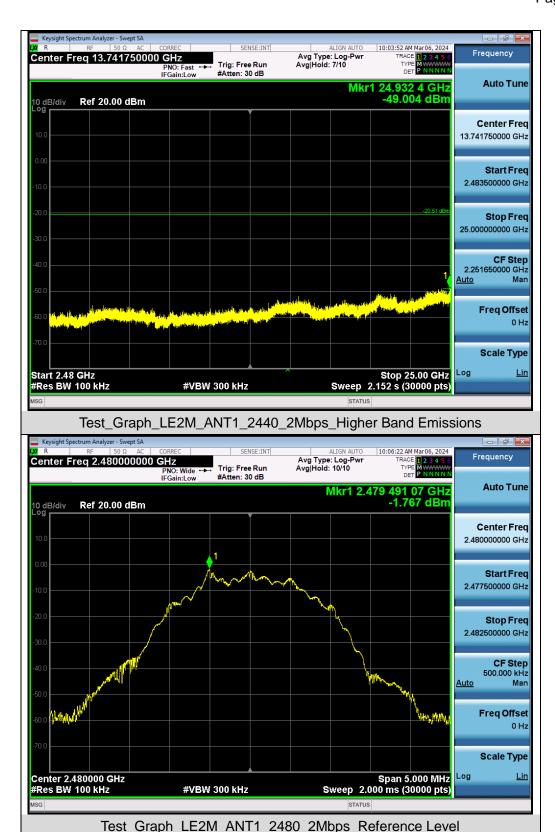


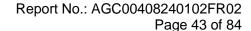
Test Graph LE2M ANT1 2440 2Mbps Lower Band Emissions

#VBW 300 kHz

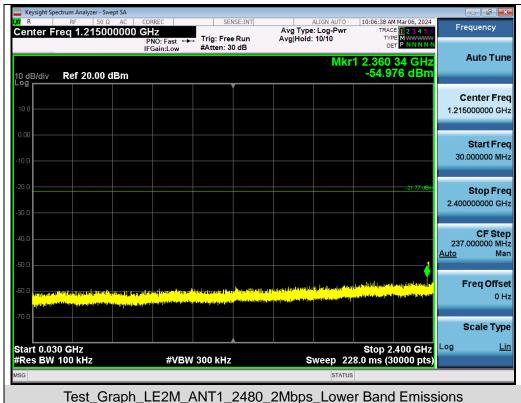




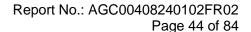




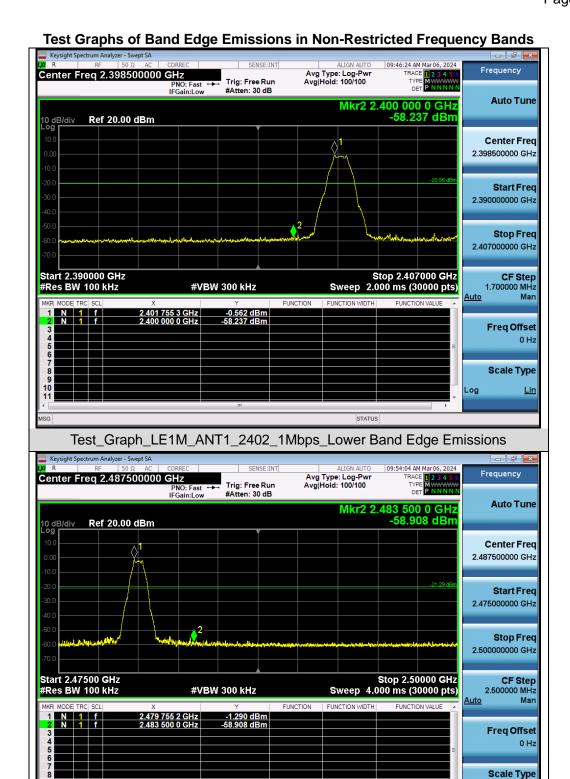








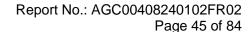




Test\_Graph\_LE1M\_ANT1\_2480\_1Mbps\_Higher Band Edge Emissions

Log

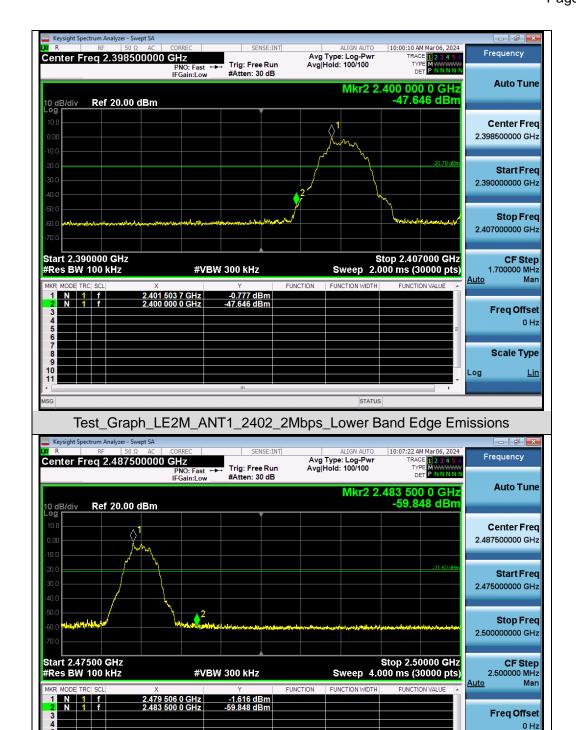
<u>Lin</u>



Scale Type

Log





Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Test Graph LE2M ANT1 2480 2Mbps Higher Band Edge Emissions



Page 46 of 84

# 11. Radiated Spurious Emission

#### 11.1 Measurement Limit

FCC Part 15.209 Limit in the below table to be followed

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

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

#### 11.2 Measurement Procedure

- The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4. For each suspected emission, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6. For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- 7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds.



Report No.: AGC00408240102FR02 Page 47 of 84

pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.

- 8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
- 9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- 10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High Low scan is not required in this case.

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

Spectrum Parameter	Setting
Start ~Stop Frequency	9kHz~150kHz/RB 200Hz for QP
Start ~Stop Frequency	150kHz~30MHz/RB 9kHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120kHz for QP
Start ~Stop Frequency	1GHz~26.5GHz
Clart - Clop i requerity	1MHz/3MHz for Peak, 1MHz/3MHz for Average

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



Page 48 of 84

#### Quasi-Peak Measurements below 1GHz

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. Span was set greater than 1MHz
- 3. RBW = as shown in the table above
- 4. Detector = CISPR quasi-peak
- 5. Sweep time = auto couple
- 6. Trace was allowed to stabilize

#### Peak Measurements above 1GHz

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 1MHz
- 3. VBW = 3MHz
- 4. Detector = peak
- 5. Sweep time = auto couple
- 6. Trace mode = max hold
- 7. Trace was allowed to stabilize

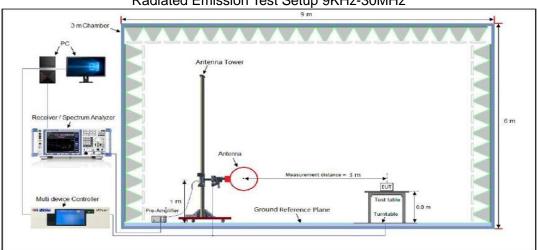
## Average Measurements above 1GHz (Method VB)

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 1MHz
- 3. VBW setting requirements are as follows:
- 4. If the EUT is configured to transmit with duty cycle ≥ 98%, set VBW = 10 Hz.
- 5. If the EUT duty cycle is < 98%, set VBW  $\ge 1/T$ . T is the minimum transmission duration.
- 6. Detector = Peak
- 7. Sweep time = auto
- 8. Trace mode = max hold
- 8. Trace was allowed to stabilize

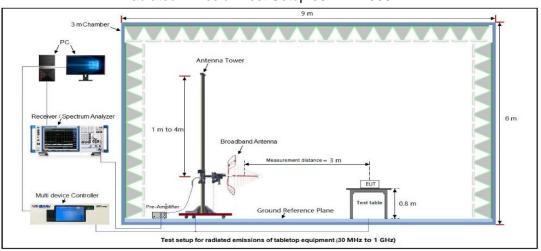


# 11.3 Measurement Setup (Block Diagram of Configuration)

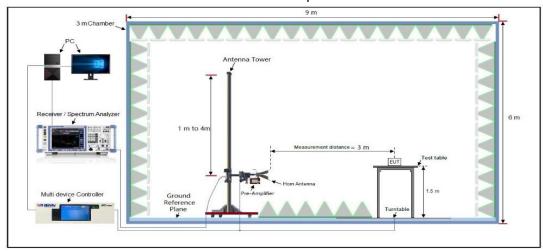
Radiated Emission Test Setup 9KHz-30MHz



## Radiated Emission Test Setup 30MHz-1000MHz



#### Radiated Emission Test Setup Above 1000MHz



Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/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 issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/



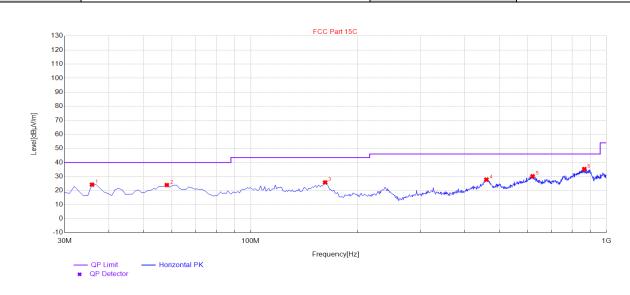
Report No.: AGC00408240102FR02 Page 50 of 84

#### 11.4 Measurement Result

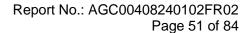
#### **Radiated Emission Below 30MHz**

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

Radiated Emission Test Results at 30MHz-1GHz						
EUT Name	4G smart PAD	Model Name	AGM_PAD_P2			
Temperature	22.0℃	Relative Humidity	59.1%			
Pressure	960hPa	Test Voltage	DC 3.85V by battery			
Test Mode	Mode 2	Antenna Polarity	Horizontal			

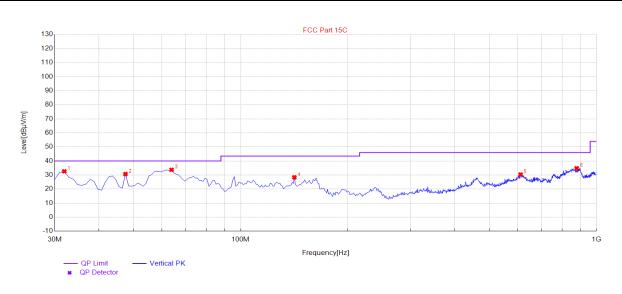


#### Final Data List\_Peak Freq. Level Factor Limit Margin Height Angle NO. Polarity [dB] [dBµV/m] [dB] [dBµV/m] [MHz] [cm] [°] 1 35.82 24.24 11.52 40.00 15.76 100 210 Horizontal 2 23.94 17.38 Horizontal 58.13 40.00 16.06 100 180 3 161.92 25.81 17.31 43.50 17.69 100 30 Horizontal 4 459.71 27.81 24.69 46.00 18.19 100 340 Horizontal 5 619.76 30.19 25.90 46.00 15.81 100 310 Horizontal 6 866.14 35.31 29.80 46.00 10.69 100 180 Horizontal





Radiated Emission Test Results at 30MHz-1GHz						
EUT Name4G smart PADModel NameAGM_PAD_P2						
Temperature	22.0℃	Relative Humidity	59.1%			
Pressure	960hPa	Test Voltage	DC 3.85V by battery			
Test Mode	Mode 2	Antenna Polarity	Vertical			

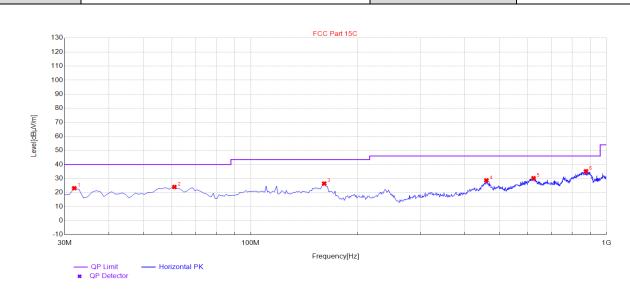


Final I	Final Data List_Peak								
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	
1	31.94	32.66	12.71	40.00	7.34	100	140	Vertical	
2	47.46	30.72	13.96	40.00	9.28	100	220	Vertical	
3	63.95	33.70	16.61	40.00	6.30	100	320	Vertical	
4	141.55	28.39	16.13	43.50	15.11	100	340	Vertical	
5	612	30.37	25.03	46.00	15.63	100	180	Vertical	
6	879.72	34.85	29.34	46.00	11.15	100	10	Vertical	



Page 52 of 84

Radiated Emission Test Results at 30MHz-1GHz						
EUT Name	Model Name	AGM_PAD_P2				
Temperature	22.0℃	Relative Humidity	59.1%			
Pressure	960hPa	Test Voltage	DC 3.85V by battery			
Test Mode	Mode 5	Antenna Polarity	Horizontal			



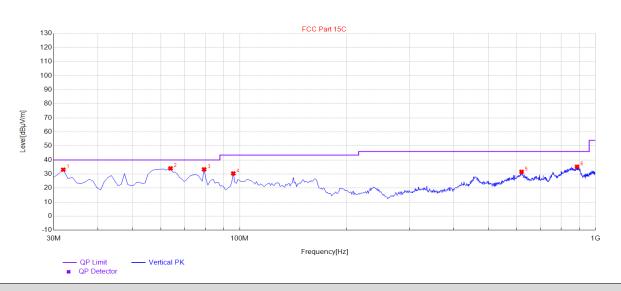
# Final Data List\_Peak

NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	31.94	23.11	12.71	40.00	16.89	100	130	Horizontal
2	61.04	24.00	17.54	40.00	16.00	100	260	Horizontal
3	160.95	26.45	17.56	43.50	17.05	100	220	Horizontal
4	459.71	28.69	24.69	46.00	17.31	100	340	Horizontal
5	623.64	30.22	25.40	46.00	15.78	100	200	Horizontal
6	875.84	35.21	29.48	46.00	10.79	100	150	Horizontal



Report No.: AGC00408240102FR02 Page 53 of 84

Radiated Emission Test Results at 30MHz-1GHz						
EUT Name	AGM_PAD_P2					
Temperature	22.0℃	Relative Humidity	59.1%			
Pressure	960hPa	Test Voltage	DC 3.85V by battery			
Test Mode	Mode 5	Antenna Polarity	Vertical			



Finai	Data	LISt_	Peak
		_	

NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	31.94	33.08	12.71	40.00	6.92	100	160	Vertical
2	63.95	33.97	16.61	40.00	6.03	100	160	Vertical
3	79.47	33.34	12.06	40.00	6.66	100	70	Vertical
4	95.96	30.44	15.85	43.50	13.06	100	200	Vertical
5	619.76	31.61	25.90	46.00	14.39	100	150	Vertical
6	887.48	35.20	29.70	46.00	10.80	100	300	Vertical

# **RESULT: Pass**

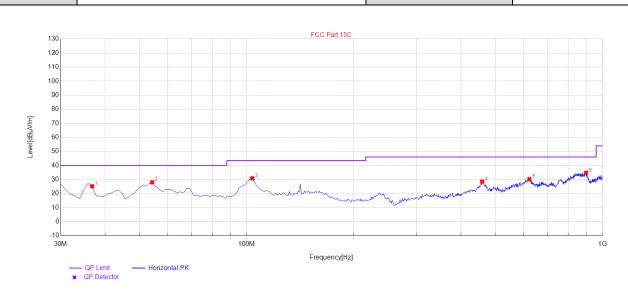
Note: 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

2. All test modes had been pre-tested. The mode 2/5 are the worst case and recorded in the report.



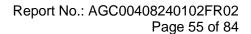


Radiated Emission Test Results at 30MHz-1GHz **EUT Name** 4G smart PAD **Model Name** AGM\_PAD\_P2W **Temperature 22.0**℃ **Relative Humidity** 59.1% **Pressure** 960hPa **Test Voltage** DC 3.85V by battery **Test Mode** Mode 2 **Antenna Polarity** Horizontal



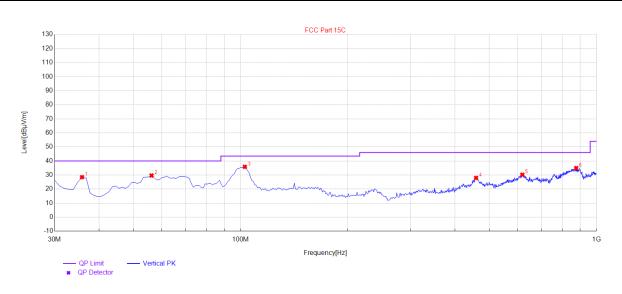
### Final Data List\_Peak

NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.79	25.20	11.23	40.00	14.80	100	30	Horizontal
2	54.25	28.01	16.35	40.00	11.99	100	50	Horizontal
3	103.72	30.87	16.88	43.50	12.63	100	270	Horizontal
4	458.74	28.51	24.42	46.00	17.49	100	50	Horizontal
5	622.67	30.31	25.54	46.00	15.69	100	220	Horizontal
6	899.12	34.76	30.26	46.00	11.24	100	80	Horizontal

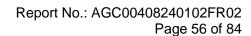




Radiated Emission Test Results at 30MHz-1GHz								
EUT Name 4G smart PAD Model Name AGM_PAD_P2W								
Temperature	22.0℃	Relative Humidity	59.1%					
Pressure	960hPa	Test Voltage	DC 3.85V by battery					
Test Mode	Mode 2	Antenna Polarity	Vertical					

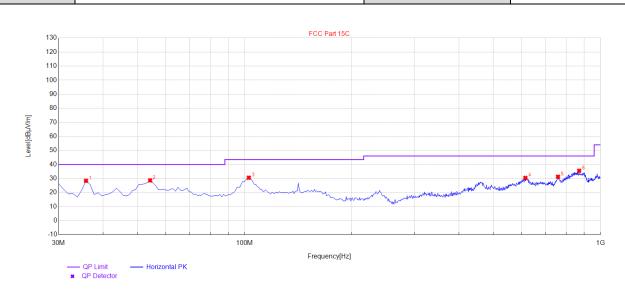


Final I	Final Data List_Peak									
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity		
1	35.82	28.47	11.52	40.00	11.53	100	100	Vertical		
2	56.19	29.68	16.87	40.00	10.32	100	280	Vertical		
3	102.75	35.85	16.93	43.50	7.65	100	300	Vertical		
4	458.74	27.97	24.42	46.00	18.03	100	190	Vertical		
5	618.79	30.23	25.79	46.00	15.77	100	180	Vertical		
6	876.81	34.96	29.44	46.00	11.04	100	170	Vertical		





Radiated Emission Test Results at 30MHz-1GHz							
EUT Name 4G smart PAD Model Name AGM_P							
Temperature	22.0℃	Relative Humidity	59.1%				
Pressure	960hPa	Test Voltage	DC 3.85V by battery				
Test Mode	Mode 5	Antenna Polarity	Horizontal				



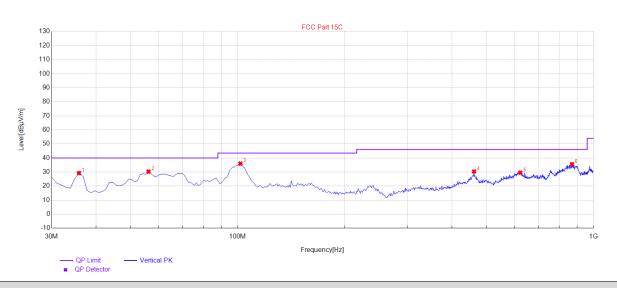
# Final Data List\_Peak

NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	35.82	28.38	11.52	40.00	11.62	100	90	Horizontal
2	54.25	28.66	16.35	40.00	11.34	100	320	Horizontal
3	102.75	30.59	16.93	43.50	12.91	100	150	Horizontal
4	614.91	30.46	25.36	46.00	15.54	100	320	Horizontal
5	759.44	31.29	26.55	46.00	14.71	100	330	Horizontal
6	870.99	35.55	29.64	46.00	10.45	100	10	Horizontal



Page 57 of 84

	Radiated Emission Test Results at 30MHz-1GHz								
EUT Name	4G smart PAD	Model Name	AGM_PAD_P2W						
Temperature	22.0℃	Relative Humidity	59.1%						
Pressure	960hPa	Test Voltage	DC 3.85V by battery						
Test Mode	Mode 5	Antenna Polarity	Vertical						



Final I	Final Data List_Peak										
NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity			
1	35.82	29.28	11.52	40.00	10.72	100	20	Vertical			
2	56.19	30.32	16.87	40.00	9.68	100	130	Vertical			
3	101.78	36.01	16.98	43.50	7.49	100	30	Vertical			
4	461.65	30.40	24.36	46.00	15.60	100	330	Vertical			
5	622.67	29.56	25.54	46.00	16.44	100	260	Vertical			

# **RESULT: Pass**

870.02

6

Note: 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

29.67

35.57

2. All test modes had been pre-tested. The mode 2/5 are the worst case and recorded in the report.

46.00

10.43

100

190

Vertical



Page 58 of 84

#### Radiated Emissions Test Results for Above 1GHz

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 1	Antenna Polarity	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
4804.000	49.99	0.08	50.07	74.00	-23.93	peak
4804.000	42.12	0.08	42.20	54.00	-11.80	AVG
7206.000	50.25	2.21	52.46	74.00	-21.54	peak
7206.000	41.34	2.21	43.55	54.00	-10.45	AVG

Remark:

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

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 1	Antenna Polarity	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	7.
4804.000	50.11	0.08	50.19	74.00	-23.81	peak
4804.000	41.98	0.08	42.06	54.00	-11.94	AVG
7206.000	49.99	2.21	52.20	74.00	-21.80	peak
7206.000	40.74	2.21	42.95	54.00	-11.05	AVG
				_		

Remark:

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

## **RESULT: Pass**



Page 59 of 84

#### Radiated Emissions Test Results for Above 1GHz

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 2	Antenna Polarity	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
4880.000	51.74	0.08	51.82	74.00	-22.18	peak
4880.000	40.89	0.08	40. 7	54.00	-13.03	AVG
7320.000	48.78	2.21	50.99	74.00	-23.01	peak
7320.000	41.34	2.21	43.55	54.00	-10.45	AVG
			_			

#### Remark:

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

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 2	Antenna Polarity	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
4880.000	50.58	0.08	50.6	74.00	-23.34	peak
4880.000	41.34	0.08	41.42	54.00	-12.58	AVG
7320.000	49.95	2.21	52.16	74.00	-21.84	peak
7320.000	40.74	2.21	42.95	54.00	-11.05	AVG

## Remark:

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

# **RESULT: Pass**



Page 60 of 84

#### Radiated Emissions Test Results for Above 1GHz

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 3	Antenna Polarity	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
4960.000	48.88	0.22	49.10	74.00	-24.90	peak
4960.000	38.74	0.22	38.96	54.00	-15.04	AVG
7440.000	49.04	2.64	51.68	74.00	-22.32	peak
7440.000	39.99	2.64	42.63	54.00	-11.37	AVG
	_			_	_	

Remark:

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

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 3	Antenna Polarity	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
4960.000	51.37	0.22	51.59	74.00	-22.41	peak
4960.000	39.85	0.22	40.07	54.00	-13.93	AVG
7440.000	49.36	2.64	52.00	74.00	-22.00	peak
7440.000	40.28	2.64	42.92	54.00	-11.08	AVG

Remark:

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

## **RESULT: Pass**



Page 61 of 84

#### Radiated Emissions Test Results for Above 1GHz

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 4	Antenna Polarity	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
4804.000	50.55	0.08	50.63	74.00	-23.37	peak
4804.000	42.34	0.08	42.42	54.00	-11.58	AVG
7206.000	48.79	2.21	51.00	74.00	-23.00	peak
7206.000	39.52	2.21	41.73	54.00	-12.27	AVG

Remark:

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

EUT Name	4G smart PAD	Model Name AGM_PAD_P2	
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 4	Antenna Polarity	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	7.
4804.000	51.01	0.08	51.09	74.00	-22.91	peak
4804.000	41.39	0.08	41.47	54.00	-12.53	AVG
7206.000	49.52	2.21	51.73	74.00	-22.27	peak
7206.000	40.19	2.21	42.40	54.00	-11.60	AVG
		_		_		

#### Remark:

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

## **RESULT: Pass**



Page 62 of 84

#### Radiated Emissions Test Results for Above 1GHz

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 5	Antenna Polarity	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
4880.000	50.58	0.08	50.66	74.00	-23.34	peak
4880.000	41.34	0.08	41.42	54.00	-12.58	AVG
7320.000	49.95	2.21	52.16	74.00	-21.84	peak
7320.000	40.74	2.21	42.95	54.00	-11.05	AVG

Remark:

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

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 5	Antenna Polarity	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	dB)	(dBµV/m)	(dBµV/m)	(dB)	
4880.000	52.14	0.08	52.22	74.00	-21.78	peak
4880.000	41.36	0.08	41.44	54.00	-12.56	AVG
7320.000	49.96	2.21	52.17	74.00	-21.83	peak
7320.000	39.22	2.21	41.43	54.00	-12.57	AVG

Remark:

Factor = Antenna Factor Cable Loss – Pre-amplifier.

## **RESULT: Pass**



Page 63 of 84

#### Radiated Emissions Test Results for Above 1GHz

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 6	Antenna Polarity	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
4960.000	48.88	0.22	49.10	74.00	-24.90	peak
4960.000	38.74	0.22	38.96	54.00	-15.04	AVG
7440.000	49.04	2.64	51.68	74.0	-22.32	peak
7440.000	39.99	2.64	42.63	54.00	-11.37	AVG

## Remark:

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

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 6	Antenna Polarity	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	7.
4960.000	52.36	0.22	52.58	74.00	-21.42	peak
4960.000	41.22	0.22	41.44	54.00	-12.56	AVG
7440.000	50.23	2.64	52.87	74.00	-21.13	peak
7440.000	40.11	2.64	42.75	54.00	-11.25	AVG
	_					

#### Remark

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

## **RESULT: Pass**

#### Note:

- 1. The amplitude of other spurious emissions from 1G to 25 GHz which are attenuated more than 20 dB below the permissible value need not be reported.
- 2. Factor = Antenna Factor + Cable loss Pre-amplifier gain, Margin = Emission Level-Limit.
- 3. The "Factor" value can be calculated automatically by software of measurement system.



Page 64 of 84

#### Radiated Emissions Test Results for Above 1GHz

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2W
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 1	Antenna Polarity	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
4804.000	51.14	0.08	51.22	74.00	-22.78	peak
4804.000	41.01	0.08	41.09	54.00	-12.91	AVG
7206.000	48.77	2.21	50.98	74.00	-23.02	peak
7206.000	39.12	2.21	41.33	54.00	-12.67	AVG

Remark:

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

EUT Name	4G smart PAD	Model Name AGM_PAD_P2W		
Temperature	25℃	Relative Humidity	55.4%	
Pressure	960hPa	Test Voltage	DC 3.85V by battery	
Test Mode	Mode 1	Antenna Polarity	Vertical	

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	7.
4804.000	50.85	0.08	50.93	74.00	-23.07	peak
4804.000	41.33	0.08	41.41	54.00	-12.59	AVG
7206.000	49.17	2.21	51.38	74.00	-22.62	peak
7206.000	40.56	2.21	42.77	54.00	-11.23	AVG
				_		

#### Remark:

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

## **RESULT: Pass**



Page 65 of 84

#### Radiated Emissions Test Results for Above 1GHz

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2W
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 2	Antenna Polarity	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
4880.000	52.01	0.08	52.09	74.00	-21.91	peak
4880.000	40.58	0.08	40.66	54.00	-13.34	AVG
7320.000	49.14	2.21	51.35	74.00	-22.65	peak
7320.000	40.77	2.21	42.98	54.00	-11.02	AVG

Remark:

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

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2W
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 2	Antenna Polarity	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
4880.000	51.52	0.08	51.6	74.00	-22.40	peak
4880.000	41.27	0.08	41.35	54.00	-12.65	AVG
7320.000	49.12	2.21	51.33	74.00	-22.67	peak
7320.000	40.33	2.21	42.54	54.00	-11.46	AVG

Remark:

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

# **RESULT: Pass**



Page 66 of 84

#### Radiated Emissions Test Results for Above 1GHz

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2W
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 3	Antenna Polarity	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
4960.000	51.25	0.22	51.47	74.00	-22.53	peak
4960.000	40.39	0.22	40.61	54.00	-13.39	AVG
7440.000	49.74	2.64	52.38	74.00	-21.62	peak
7440.000	39.41	2.64	42.05	54.00	-11.95	AVG
	_	_	-			

Remark:

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

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2W
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 3	Antenna Polarity	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
4960.000	51.21	0.22	51.43	74.00	-22.57	peak
4960.000	40.29	0.22	40.51	54.00	-13.49	AVG
7440.000	48.74	2.64	51.38	74.00	-22.62	peak
7440.000	38.96	2.64	41.60	54.00	-12.40	AVG

Remark:

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

## **RESULT: Pass**



Page 67 of 84

#### Radiated Emissions Test Results for Above 1GHz

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2W
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 4	Antenna Polarity	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
4804.000	51.21	0.08	51.29	74.00	-22.71	peak
4804.000	40.37	0.08	40.45	54.00	-13.55	AVG
7206.000	48.96	2.21	51.17	74.00	-22.83	peak
7206.000	41.25	2.21	43.46	54.00	-10.54	AVG

Remark:

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

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 4	Antenna Polarity	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
4804.000	50.96	0.08	51.04	74.00	-22.96	peak
4804.000	40.38	0.08	40.46	54.00	-13.54	AVG
7206.000	48.63	2.21	50.84	74.00	-23.16	peak
7206.000	40.38	2.21	42.59	54.00	-11.41	AVG

#### Remark:

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

## **RESULT: Pass**



Page 68 of 84

#### Radiated Emissions Test Results for Above 1GHz

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2W
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 5	Antenna Polarity	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
4880.000	50.58	0.08	50.66	74.00	-23.34	peak
4880.000	41.34	0.08	41.42	54.00	-12.58	AVG
7320.000	49.95	2.21	52.16	74.00	-21.84	peak
7320.000	40.74	2.21	42.95	54.00	-11.05	AVG
			-			

Remark:

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

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2W
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 5	Antenna Polarity	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	dB)	(dBµV/m)	(dBµV/m)	(dB)	
4880.000	50.77	0.08	50.85	74.00	-23.15	peak
4880.000	41.89	0.08	41.97	54.00	-12.03	AVG
7320.000	48.74	2.21	50.95	74.00	-23.05	peak
7320.000	41.28	2.21	43.49	54.00	-10.51	AVG

Remark:

Factor = Antenna Factor Cable Loss – Pre-amplifier.

## **RESULT: Pass**



Page 69 of 84

#### Radiated Emissions Test Results for Above 1GHz

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2W
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 6	Antenna Polarity	Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
4960.000	51.35	0.22	51.57	74.00	-22.43	peak
4960.000	39.99	0.22	40.21	54.00	-13.79	AVG
7440.000	48.12	2.64	50.76	74.00	-23.24	peak
7440.000	39.74	2.64	42.38	54.00	-11.62	AVG

Remark:

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

EUT Name	4G smart PAD	Model Name	AGM_PAD_P2W
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 6	Antenna Polarity	Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Value Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
4960.000	52.34	0.22	52.56	74.00	-21.44	peak
4960.000	40.12	0.22	40.34	54.00	-13.66	AVG
7440.000	49.34	2.64	51.98	74.00	-22.02	peak
7440.000	38.52	2.64	41.16	54.00	-12.84	AVG

Remark

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

## **RESULT: Pass**

#### Note:

- The amplitude of other spurious emissions from 1G to 25 GHz which are attenuated more than 20 dB below the permissible value need not be reported.
- 2. Factor = Antenna Factor + Cable loss Pre-amplifier gain, Margin = Emission Level-Limit.
- 3. The "Factor" value can be calculated automatically by software of measurement system.

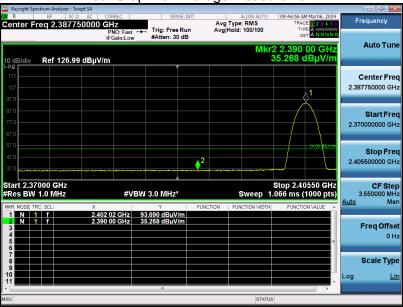


EUT Name	4G smart PAD	Model Name	AGM_PAD_P2
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 1	Antenna Polarity	Horizontal

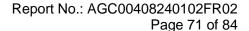
Test Graph for Peak Measurement







# **RESULT: Pass**



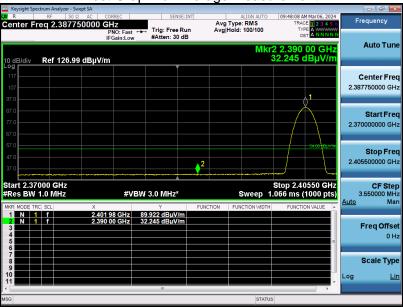


EUT Name	4G smart PAD	Model Name	AGM_PAD_P2
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 1	Antenna Polarity	Vertical

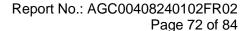
Test Graph for Peak Measurement







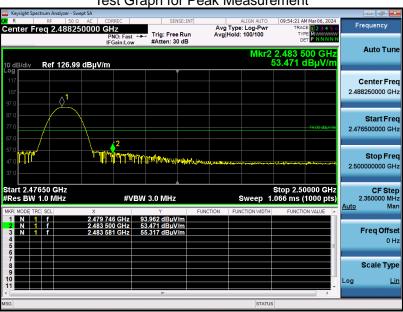
# **RESULT: Pass**



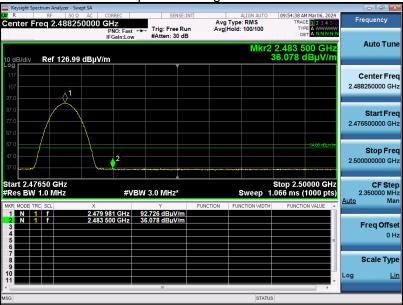


EUT Name	4G smart PAD, Tablet	Model Name	AGM_PAD_P2
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 3	Antenna Polarity	Horizontal

Test Graph for Peak Measurement





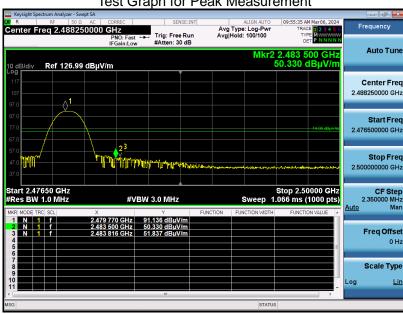


# **RESULT: Pass**

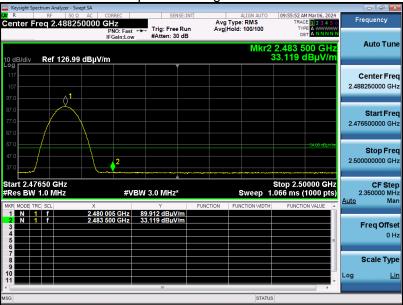


EUT Name	4G smart PAD	Model Name	AGM_PAD_P2
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 3	Antenna Polarity	Vertical

Test Graph for Peak Measurement





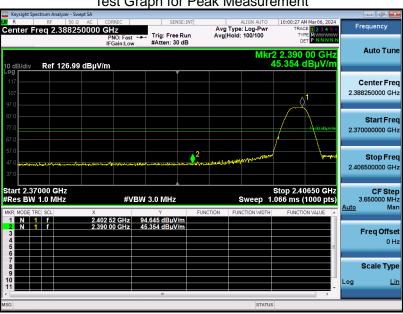


# **RESULT: Pass**

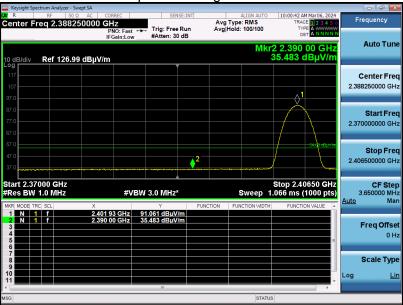


EUT Name	4G smart PAD	Model Name	AGM_PAD_P2
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 4	Antenna Polarity	Horizontal

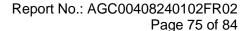
Test Graph for Peak Measurement







# **RESULT: Pass**



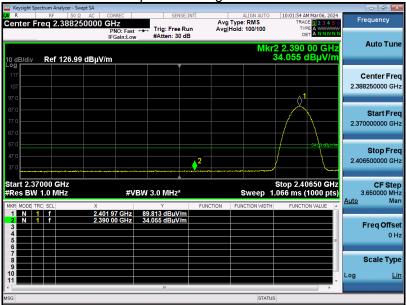


EUT Name	4G smart PAD	Model Name	AGM_PAD_P2
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 4	Antenna Polarity	Vertical

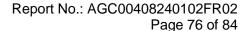
Test Graph for Peak Measurement







# **RESULT: Pass**



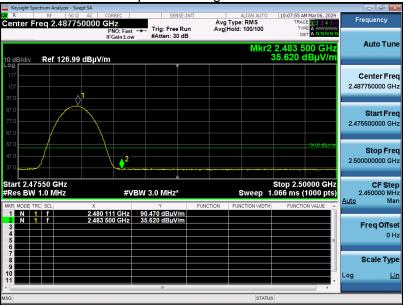


EUT Name	4G smart PAD	Model Name	AGM_PAD_P2
Temperature	25℃	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	DC 3.85V by battery
Test Mode	Mode 6	Antenna Polarity	Horizontal

Test Graph for Peak Measurement







# **RESULT: Pass**