

Prüfbericht-Nr.: Test report no.:	CN248NTN 001	Auftrags-Nr.: Order no.:	168452191	Page 1 of 20 Seite 1 von 20
Kunden-Referenz-Nr.: Client reference no.:	N/A	Auftragsdatum: Order date:	2023-11-13	
Auftraggeber: Client:	Harman International Industries, Incorporated 8500 Balboa Blvd, Northridge, California, 91329, United States			
Prüfgegenstand: Test item:	WiFi & BT Platform Module			
Bezeichnung / Typ-Nr.: Identification / Type no.:	AP72598V			
Auftrags-Inhalt: Order content:	Type test			
Prüfgrundlage: Test specification:	CFR47 FCC Part 15: Subpart C Section 15.247 CFR47 FCC Part 15: Subpart C Section 15.407 CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209		RSS-247-Issue 3 August 2023 RSS-Gen Issue 5 March 2019	
Wareneingangsdatum: Date of sample receipt:	2024-01-02	Refer to photos document		
Prüfmuster-Nr.: Test sample no:	A003631329-001, A003654742-008, A003654742-005			
Prüfzeitraum: Testing period:	2024-01-03 – 2024-01-31			
Ort der Prüfung: Place of testing:	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: Test result*:	Pass			
geprüft von: tested by:			genehmigt von: authorized by:	
Datum: Date:	2024-03-28 Signed by: Harry W. C. Wu		Ausstellungsdatum: Issue date:	2024-03-28 Signed by: Alex Lan
Stellung / Position:	Project Manager		Stellung / Position:	Reviewer
Sonstiges / Other:	FCC ID: APIAP72598V IC: 6132A-AP72598V HVIN: AP72598V, HMN: MA710, MA7100HP, MA9100HP FVIN: V1.44			
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:		Prüfmuster vollständig und unbeschädigt Test item complete and undamaged		
* Legende: P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet * Legend: P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested				
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

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Prüfbericht-Nr.: CN248NTN 001
Test report no.:

Page 2 of 20
Seite 2 von 20

Remarks
Anmerkungen

1	The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request. <i>Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben.</i> <i>Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden.</i>
2	As contractually agreed, this document has been signed digitally only. TÜV Rheinland has not verified and unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TÜV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged. <i>Wie vertraglich vereinbart, wurde dieses Dokument nur digital unterzeichnet. Der TÜV Rheinland hat nicht überprüft, welche rechtlichen oder sonstigen diesbezüglichen Anforderungen für dieses Dokument gelten. Diese Überprüfung liegt in der Verantwortung des Benutzers dieses Dokuments. Auf Verlangen des Kunden kann der TÜV Rheinland die Gültigkeit der digitalen Signatur durch ein gesondertes Dokument bestätigen. Diese Anfrage ist an unseren Vertrieb zu richten. Eine Umweltgebühr für einen solchen zusätzlichen Service wird erhoben.</i>
3	Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report. Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report. <i>Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt.</i>
4	The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019. <i>Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezüglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019.</i>

Prüfbericht-Nr.: CN248NTN 001
Test report no.:

Seite 3 von 20
Page 3 of 20

Test Summary

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 RADIATED SPURIOUS EMISSION

RESULT: Pass

5.1.3 CONDUCTED EMISSION ON AC MAINS

RESULT: Pass

Contents

1	GENERAL REMARKS	5
1.1	COMPLEMENTARY MATERIALS	5
2	TEST SITES.....	5
2.1	TEST FACILITIES.....	5
2.2	LIST OF TEST AND MEASUREMENT INSTRUMENTS	6
2.3	TRACEABILITY	7
2.4	CALIBRATION	7
2.5	MEASUREMENT UNCERTAINTY	7
2.6	LOCATION OF ORIGINAL DATA	7
2.7	STATUS OF FACILITY USED FOR TESTING	7
3	GENERAL PRODUCT INFORMATION.....	8
3.1	PRODUCT FUNCTION AND INTENDED USE	8
3.2	RATINGS AND SYSTEM DETAILS	8
3.3	INDEPENDENT OPERATION MODES	13
3.4	NOISE GENERATING AND NOISE SUPPRESSING PARTS	13
3.5	SUBMITTED DOCUMENTS.....	13
4	TEST SET-UP AND OPERATION MODES	14
4.1	PRINCIPLE OF CONFIGURATION SELECTION	14
4.2	TEST OPERATION AND TEST SOFTWARE	14
4.3	SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT	14
4.4	COUNTERMEASURES TO ACHIEVE EMC COMPLIANCE	14
4.5	TEST SETUP DIAGRAM	15
5	TEST RESULTS.....	17
5.1	TRANSMITTER REQUIREMENT & TEST SUITES.....	17
5.1.1	<i>Antenna Requirement.....</i>	<i>17</i>
5.1.2	<i>Radiated Spurious Emission.....</i>	<i>18</i>
5.1.3	<i>Conducted Emission on AC Mains.....</i>	<i>19</i>
6	PHOTOGRAPHS OF THE TEST SET-UP	20
7	LIST OF TABLES	20

1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Test Results of Bluetooth Low Energy.

Appendix B: Photographs of the Test Set-up.

Remark:

1. This is a C2PC(FCC) or C4PC(IC) application to evaluate the antenna(s) used for the module: AP72598V transmit simultaneously with Bluetooth module: QCC5181 in specific hosts (Model No.: MA710, MA7100HP, MA9100HP).
2. The Bluetooth function of module AP72598V will be disabled via software.
3. Electrically identical in RF signal characteristics in transmitting singly. So only re-test radiated emissions transmitting simultaneously.

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

No.362, Huanguan Middle Road, Songyuansha Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China/518110

FCC Registration No.: 694916

IC Registration No.: 25069 and the CAB identifier is CN0078.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Radio Spectrum Testing (TS8997)				
Equipment	Manufacturer	Model	Serial No.	Cal. until
EXA Signal Analyzer, Multi-touch	Keysight	N9010B	MY60241175	21.09.2024
MXG X-Series RF Vector Signal Generator	Keysight	N5182B	MY61250137	21.09.2024
EXG X-Series Microwave Analog Signal Generator	Keysight	N5173B	MY61250141	21.09.2024
DC Power Supply	Keysight	E3642A	MY61276100	21.09.2024
Wireless Connectivity Tester	R&S	CMW270	102505	21.09.2024
Power Control Unit	Tonscend	JS0806-4ADC	N/A	21.09.2024
Automation Control Unit	Tonscend	JS0806-2	21C8060396	21.09.2024
Test Software	Tonscend	JS1120-3	N/A	N/A
Control PC	Lenovo	TianYi510S-071MB	YLX23JMF	N/A
Unwanted Emission Testing (TS9975)				
Equipment	Manufacturer	Model	Serial No.	Cal. until
EMI Test Receiver	R&S	ESR 7	102021	25.07.2024
Signal Analyzer	R&S	FSV 40	101439	25.07.2024
System Controller Interface	R&S	SCI-100	S10010038	N/A
Filterbank	R&S	Wlan	100759	25.07.2024
OSP	R&S	OSP 120	102040	N/A
Pre-amplifier	R&S	SCU08F1	08320031	25.07.2024
Amplifier	R&S	SCU-18F	180070	25.07.2024
Amplifier	R&S	SCU40A	100475	25.07.2024
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	06.08.2024
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	06.08.2024
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	27.08.2024
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	06.08.2024
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	22.06.2024
Conducted Emission on AC Mains				
Equipment	Manufacturer	Model	Serial No.	Cal. until
EMI Test Receiver	R&S	ESR3	102428	31.07.2024
Artificial Mains Network	R&S	ENV216	102333	01.08.2024
Impedance Stabilisation Network	R&S	ENY81-CA6	101810	01.08.2024
EMC32 test software	R&S	EMC32(Ver.10.50.00)	N/A	N/A

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table.

Parameter	Uncertainty (k=2)
RF output power, conducted	± 0.99 dB
All emissions, radiated	± 4.17 dB
Conducted Emission, (9kHz to 150kHz)/(150kHz to 30MHz)	± 3.70 dB / ± 3.30 dB

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A & B of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at No.362, Huanguan Middle Road, Songyuansha Community, Guanhu Subdistrict, Longhua District, Shenzhen, Guangdong, China/518110 is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3 General Product Information

3.1 Product Function and Intended Use

The module (Model: AP72598V) supports 2.4GHz WiFi and 5GHz WiFi technologies. Bluetooth module (Model: QCC5181) supports Bluetooth dual technology. Two module were built in the hosts with Model No.: MA710, MA7100HP, MA9100HP. The hosts are amplifiers which support Bluetooth dual mode, 2.4GHz WiFi and 5GHz WiFi technologies. The Bluetooth and WiFi can transmit at the same time, but 2.4GHz Wi-Fi and 5GHz Wi-Fi can't transmit at the same time.

For details refer to the User Manual and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment	WiFi & BT Platform Module
Type Designation	AP72598V
FCC ID	APIAP72598V
IC	6132A-AP72598V
HVIN	AP72598V
Operating Voltage	4.5 – 5.5V DC
Technical Specification of 2.4GHz Wi-Fi 802.11 b/g/n-HT20	
Characteristic	Description
Frequency Range:	2412 - 2462 MHz for 802.11b/g/n(HT20)
Type of Modulation:	DSSS(DBPSK/DQPSK/CCK) OFDM(BPSK/QPSK/16QAM/64QAM)
Data Rate:	1/2/5.5/11 Mbps for 802.11b 6/9/12/18/24/36/48/54 Mbps for 802.11g MCS0 ~ MCS7 for 802.11n(HT20)
Channel Number:	11 channels for 802.11b/g/n(HT20)
Channel Separation:	5 MHz
Antenna Type:	Pole Antenna
Antenna Number:	1Tx1Rx for SISO mode (ANT1 or ANT2) 2Tx2Rx for MIMO mode (ANT1+ANT2)
Antenna Gain:	2.53 dBi for each antenna (Provided by the Client)

Technical Specification of Wi-Fi 802.11 a/n/ac (Band1/2/3)	
Characteristic	Description
Operating Frequency Range:	5150-5250MHz, 5250-5350MHz, 5470-5725MHz
Operating Frequency / Channels / Protocol:	5180-5320MHz, 14CHs, 802.11 a/n20/n40/ac20/ac40/ac80 5500-5700MHz, 18CHs, 802.11 a/n20/n40/ac20/ac40/ac80
Data Rate:	6/9/12/18/24/36/48/54 Mbps for 802.11a MCS0 ~ MCS15 Mbps for 802.11n

Prüfbericht-Nr.: CN248NTN 001
Test report no.:

Seite 9 von 20
Page 9 of 20

	MCS0 ~ MCS9 Mbps for 802.11ac
Channel Separation:	20MHz, 40MHz, 80MHz
Modulation:	OFDMA(BPSK/QPSK/16QAM/64QAM/256QAM)
Antenna Type:	Pole Antenna
Antenna Number:	1Tx1Rx for SISO mode (ANT1 or ANT2) 2Tx2Rx for MIMO mode (ANT1+ANT2)
Antenna Gain:	3.75 dBi for each antenna (Provided by the Client)

Technical Specification of Wi-Fi 802.11 a/n/ac (Band4)

Characteristic	Description
Operating Frequency	5745–5825MHz for 802.11 a/n20/n40/ac20/ac40/ac80
Type of Modulation	OFDMA(BPSK/QPSK/16QAM/64QAM/256QAM)
Data Rate	1) 6/9/12/18/24/36/48/54 Mbps for 802.11a 2) MCS0 ~ MCS15 for 802.11 20/n40/ac20/ac40/ac80
Channel Number	8 channels for 5725 – 5850 MHz
Channel Separation	20MHz, 40MHz, 80MHz
Antenna Type	Pole Antenna
Antenna Number	1Tx1Rx for SISO mode (ANT1 or ANT2) 2Tx2Rx for MIMO mode (ANT1+ANT2)
Antenna Gain	3.75 dBi for each antenna (Provided by the Client)

General Information of EUT	Value
Kind of Equipment	Bluetooth Module
Type Designation	AP72598VQCC5181
FCC ID	API-QCC5181
IC	6132A-QCC5181
Technical Specification of Classical Bluetooth	
Bluetooth Core Version	Bluetooth 5.4
Operating Frequency band	2402 ~ 2480 MHz
Channel Number	79 channels
Channel separation	1MHz
Modulation	GFSK, $\pi/4$ DQPSK, 8DPSK
Antenna Type	Pole Antenna
Antenna Gain	1.24 dBi (Provided by the Client)
Technical Specification of Bluetooth Low Energy	
Bluetooth Core Version	Bluetooth 5.4
Operating Frequency band	2402 ~ 2480 MHz for 1Mbps 2404 ~ 2478 MHz for 2Mbps
Channel Number	40 channels for 1Mbps 38 channels for 2Mbps
Channel separation	2MHz
Data rate	1Mbps, 2Mbps
Modulation	GFSK
Antenna Type	Pole Antenna
Antenna Gain	1.24 dBi (Provided by the Client)

Table 3: RF Channel and Frequency of 5GHz Wi-Fi 802.11 a/n/ac

U-NII-1					
20MHz Bandwidth		40MHz Bandwidth		80MHz Bandwidth	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230		
44	5220				
48	5240				

U-NII-2A					
20MHz Bandwidth		40MHz Bandwidth		80MHz Bandwidth	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	54	5270	58	5290
56	5280	62	5310		
60	5300				
64	5320				

U-NII-2C					
20MHz Bandwidth		40MHz Bandwidth		80MHz Bandwidth	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	102	5510	106	5530
104	5520	110	5550	122	5610
108	5540	134	5670		
112	5560				
116	5580				
132	5660				
136	5680				
140	5700				

U-NII-3					
20MHz Bandwidth		40MHz Bandwidth		80MHz Bandwidth	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	151	5755	155	5775
153	5765	159	5795		
157	5785				
161	5805				
165	5825				

Table 4: RF Channel and Frequency of Classic Bluetooth

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
00	2402.00	20	2422.00	40	2442.00	60	2462.00
01	2403.00	21	2423.00	41	2443.00	61	2463.00
02	2404.00	22	2424.00	42	2444.00	62	2464.00
03	2405.00	23	2425.00	43	2445.00	63	2465.00
04	2406.00	24	2426.00	44	2446.00	64	2466.00
05	2407.00	25	2427.00	45	2447.00	65	2467.00
06	2408.00	26	2428.00	46	2448.00	66	2468.00
07	2409.00	27	2429.00	47	2449.00	67	2469.00
08	2410.00	28	2430.00	48	2450.00	68	2470.00
09	2411.00	29	2431.00	49	2451.00	69	2471.00
10	2412.00	30	2432.00	50	2452.00	70	2472.00
11	2413.00	31	2433.00	51	2453.00	71	2473.00
12	2414.00	32	2434.00	52	2454.00	72	2474.00
13	2415.00	33	2435.00	53	2455.00	73	2475.00
14	2416.00	34	2436.00	54	2456.00	74	2476.00
15	2417.00	35	2437.00	55	2457.00	75	2477.00
16	2418.00	36	2438.00	56	2458.00	76	2478.00
17	2419.00	37	2439.00	57	2459.00	77	2479.00
18	2420.00	38	2440.00	58	2460.00	78	2480.00
19	2421.00	39	2441.00	59	2461.00	--	--

Table 5: RF Channel and Frequency of Bluetooth Low Energy

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
00	2402.00	10	2422.00	20	2442.00	30	2462.00
01	2404.00	11	2424.00	21	2444.00	31	2464.00
02	2406.00	12	2426.00	22	2446.00	32	2466.00
03	2408.00	13	2428.00	23	2448.00	33	2468.00
04	2410.00	14	2430.00	24	2450.00	34	2470.00
05	2412.00	15	2432.00	25	2452.00	35	2472.00
06	2414.00	16	2434.00	26	2454.00	36	2474.00
07	2416.00	17	2436.00	27	2456.00	37	2476.00
08	2418.00	18	2438.00	28	2458.00	38	2478.00
09	2420.00	19	2440.00	29	2460.00	39	2480.00

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, Bluetooth & WiFi transmitting simultaneously mode
 - 1. Low channel
 - 2. Middle channel
 - 3. High channel
- B. On, Normal operation + Bluetooth & WiFi
- C. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- Application Form
- Block Diagram
- FCC/IC Label and Location Info
- Operation Description
- Photo Document
- Schematics
- User Manual

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.10: 2013.

According to clause 3.1, all test items were applied on the hosts (Model No.: MA710, MA7100HP, MA9100HP) with built-in module AP72598V and QCC5181.

4.3 Special Accessories and Auxiliary Equipment

Table 6: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N
Laptop	Lenovo	T480	PF-16A6N8
Resistance 1	Lab provided	/	4 Ohm
Resistance 2	Lab provided	/	1K Ohm
Speaker	Blueant	X3D	N/A
USB Disk	Kingston	IronKey S1000	N/A
DVD Player	GIEC	BDP-G3606	BD3606LXXM20061000 285
TV	PHILIPS	272P7V	AUCA1833000075472
Laptop	Lenovo	L470	N/A
Mobile phone	SAMSUNG	Galaxy Z Fold4	RFCT80V5XYF

4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 30MHz)

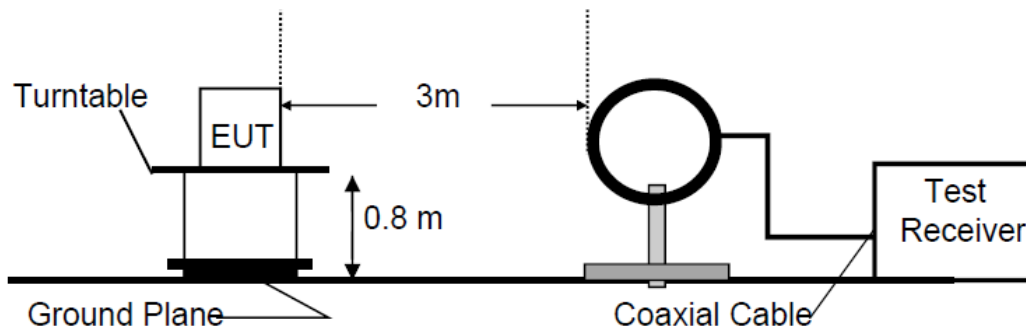


Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

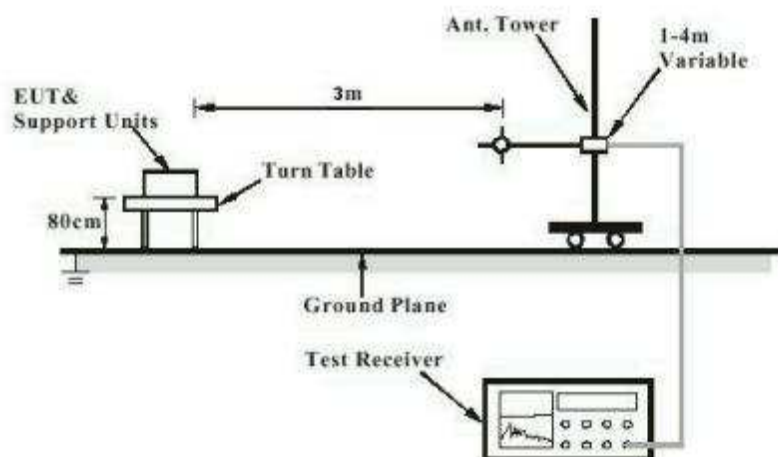


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

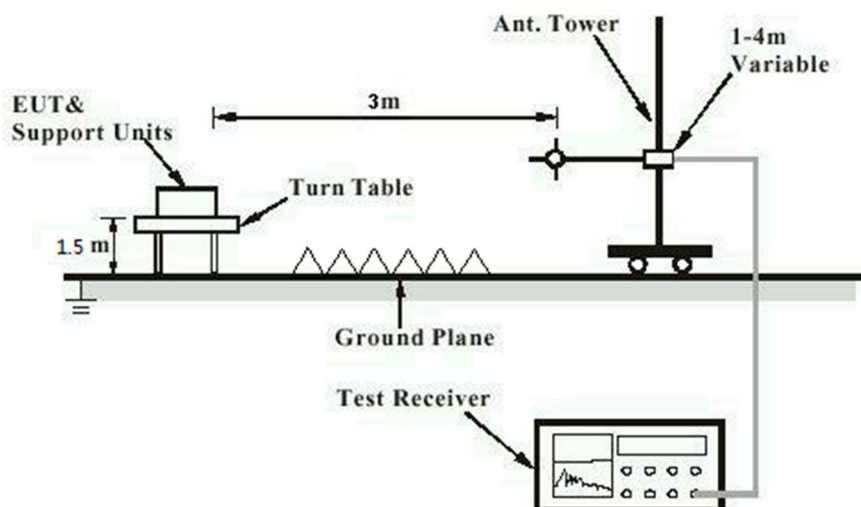


Diagram of Measurement Configuration for Conducted Transmitter Measurement

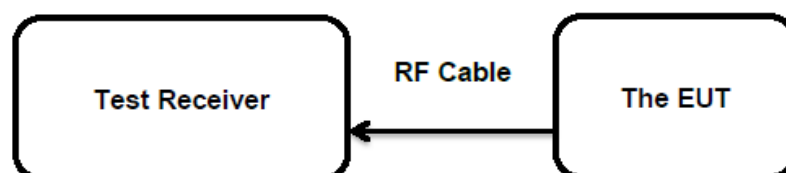
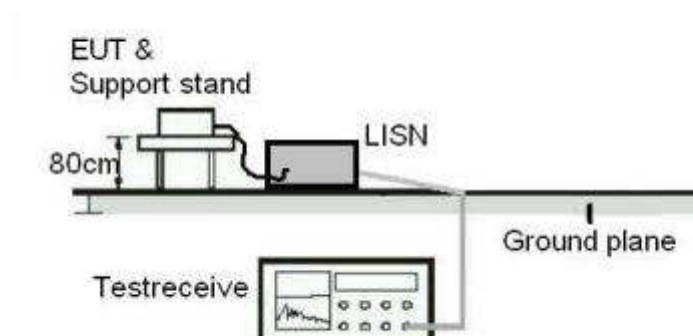


Diagram of Measurement Configuration for Mains Conduction Measurement



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:

Pass

Test Specification

Test standard	:	FCC Part 15.247(b)(4) and Part 15.203
	:	RSS-Gen Clause 6.7
Limit	:	the use of antennas with directional gains that do not exceed 6 dBi

According to the manufacturer declared, the antenna type is Pole Antenna , the directional gain of antennas are 2.53 dBi in 2.4GHz Band and 3.75 dBi in 5GHz Band, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

Prüfbericht-Nr.: CN248NTN 001
Test report no.:Seite 18 von 20
Page 18 of 20

5.1.2 Radiated Spurious Emission

RESULT:

Pass

Test Specification

Test standard

: FCC Part 15.247(d) & FCC Part 15.407(b) & FCC Part
15.205 & FCC Part 15.209
RSS-247 Clause 3.3 & 5.5 & 6

Basic standard

: ANSI C63.10: 2013

KDB 789033 D02 v01r03

Refer to 15.209(a) of FCC part 15.247(d)

RSS-Gen Table 4 & Table 5

Limits

- For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- Emissions outside the band 5470-5600 MHz and 5650-5725 MHz shall not exceed -27 dBm/MHz e.i.r.p.
- For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Kind of test site

: 3m Semi-anechoic Chamber

Test Setup

Date of testing

: 2024-01-03 to 2024-01-31

Input voltage

: AC120V, 60Hz

Operation mode

: A

Test channel

: Low / Middle / High

Ambient temperature

: Refer to test result

Relative humidity

: Refer to test result

Atmospheric pressure

: Refer to test result

Remark:

Testing was carried out within frequency range 9kHz to the tenth harmonics. Only the worst case spurious emissions configuration of the each mode were reported.

For the measurement records, refer to the appendix A.

Prüfbericht-Nr.: CN248NTN 001
Test report no.:

Seite 19 von 20
Page 19 of 20

5.1.3 Conducted Emission on AC Mains

RESULT:

Pass

Test Specification

Test standard	: FCC Part 15.207(a) RSS-Gen Clause 8.8
Basic standard	: ANSI C63.10: 2013
Frequency range	: 0.15 – 30MHz
Limits	: FCC Part 15.207(a) RSS-Gen Table 4
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2024-01-03 to 2024-01-31
Input voltage	: AC120V, 60Hz
Operation mode	: B
Earthing	: Not connected
Ambient temperature	: Refer to test result
Relative humidity	: Refer to test result
Atmospheric pressure	: Refer to test result

For the measurement records, refer to the appendix A.

6 Photographs of the Test Set-Up

For photographs of the test set-up, refer to the appendix B.

7 List of Tables

Table 1: List of Test and Measurement Equipment.....	6
Table 2: Technical Specification of EUT	8
Table 3: RF Channel and Frequency of 5GHz Wi-Fi 802.11 a/n/ac	10
Table 4: RF Channel and Frequency of Classic Bluetooth.....	11
Table 5: RF Channel and Frequency of Bluetooth Low Energy.....	12
Table 6: List of Accessories and Auxiliary Equipment.....	14

Appendix A: Test Results

APPENDIX A: TEST RESULTS1

APPENDIX A.6: TEST RESULTS OF RADIATED SPURIOUS EMISSIONS2

30 MHz - 1GHz.....2

1GHz - 18GHz8

APPENDIX A.8: TEST RESULTS OF CONDUCTED EMISSIONS ON AC MAINS.....20

Appendix A.1: Test Results of Radiated Spurious Emissions

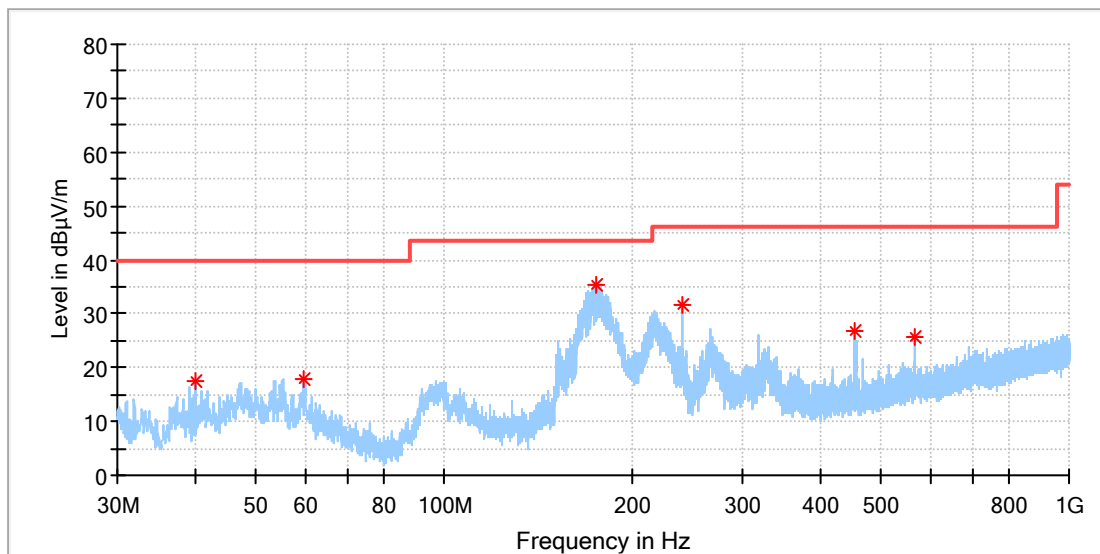
Note:

- 1) This testing was carried out on different modulations, but only the worst case was presented in this report.
- 2) Testing was carried out within frequency range 9kHz to the tenth harmonics. The measurement results below 30MHz and 18GHz - 26.5GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported.

30 MHz - 1GHz

EUT Information

EUT Name:	WiFi & BT Platform Module
Model:	AP72598V
Host Model:	MA710
Test Mode:	BLE 1M_High channel+WIFI 5G_11n20_Ch36
Sample No:	A003631329-001
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

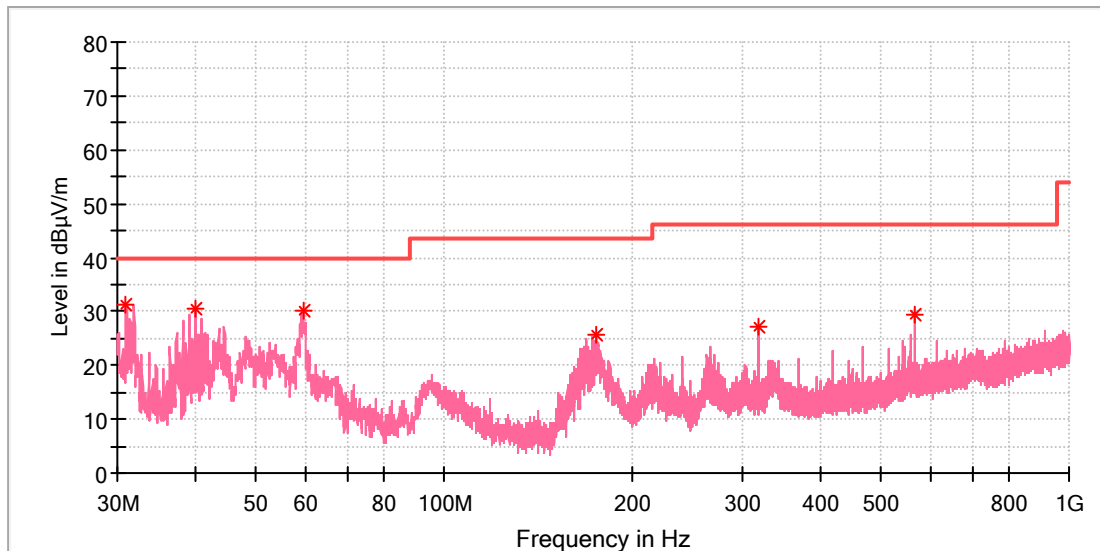


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
40.035769	17.45	40.00	22.55	100.0	H	247.0	-20.4
59.808846	17.75	40.00	22.25	100.0	H	288.0	-19.3
174.753846	35.41	43.50	8.09	100.0	H	134.0	-21.3
240.005000	31.55	46.00	14.45	100.0	H	13.0	-18.0
455.382308	26.65	46.00	19.35	100.0	H	215.0	-13.2
565.328077	25.71	46.00	20.29	100.0	H	28.0	-10.9

EUT Information

EUT Name:	WiFi & BT Platform Module
Model:	AP72598V
Host Model:	MA710
Test Mode:	BLE 1M_High channel+WIFI 5G_11n20_Ch36
Sample No:	A003631329-001
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

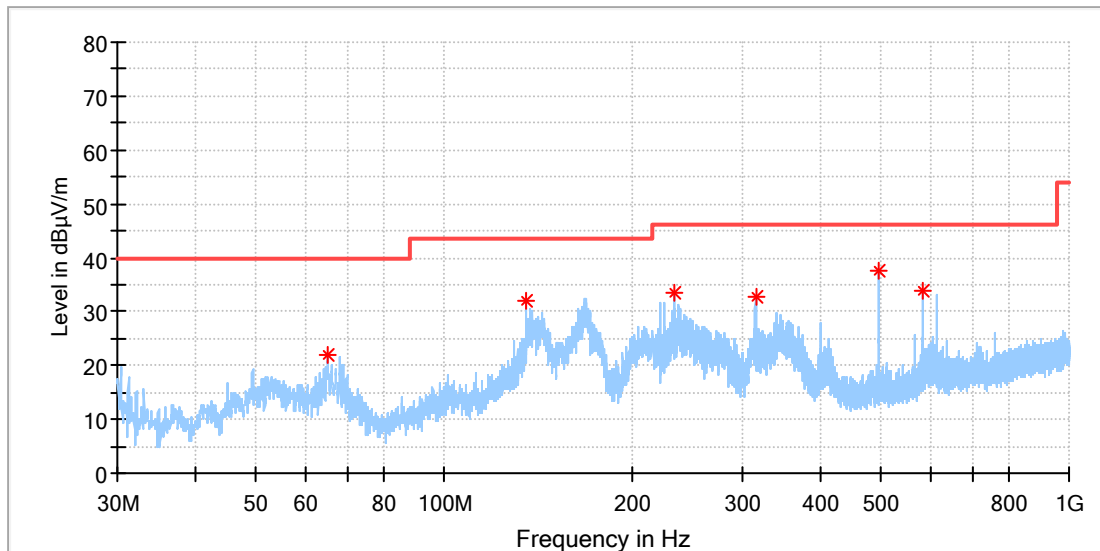


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
31.007308	31.36	40.00	8.64	100.0	V	3.0	-23.2
40.035769	30.46	40.00	9.54	100.0	V	326.0	-20.4
59.398462	30.16	40.00	9.84	100.0	V	283.0	-19.2
175.350769	25.64	43.50	17.86	100.0	V	197.0	-21.2
319.507692	27.05	46.00	18.95	100.0	V	100.0	-16.1
565.290769	29.53	46.00	16.47	100.0	V	180.0	-10.9

EUT Information

EUT Name:	WiFi & BT Platform Module
Model:	AP72598V
Host Model:	MA7100HP
Test Mode:	BLE 1M_Mid channel + WIFI 5G_11n20_Ch157
Sample No:	A003654742-008
Test Voltage::	120V/60Hz
Remark:	Temp 22 Humi:52%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

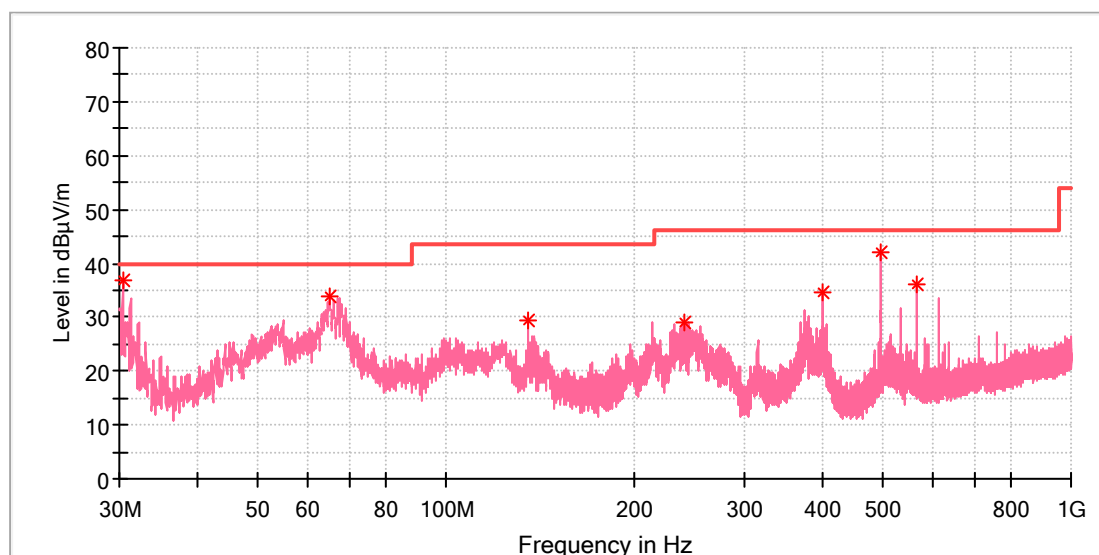


Critical Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
65.069231	21.80	40.00	18.20	100.0	H	21.0	-20.4
134.983846	32.00	43.50	11.50	100.0	H	311.0	-22.4
233.886539	33.48	46.00	12.52	100.0	H	204.0	-18.3
314.993462	32.60	46.00	13.40	100.0	H	116.0	-16.2
495.040385	37.46	46.00	8.54	100.0	H	286.0	-12.3
584.989231	33.96	46.00	12.04	100.0	H	147.0	-10.5

EUT Information

EUT Name:	WiFi & BT Platform Module
Model:	AP72598V
Host Model:	MA7100HP
Test Mode:	BLE 1M_Mid channel + WIFI 5G_11n20_Ch157
Sample No:	A003654742-008
Test Voltage::	120V/60Hz
Remark:	Temp 22 Humi:52%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

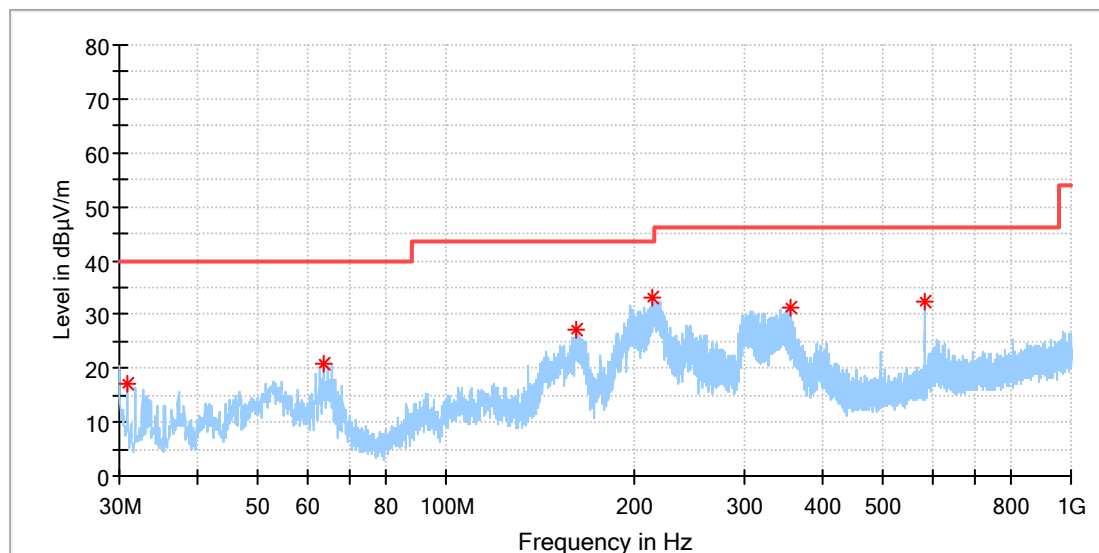


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
30.373077	36.74	40.00	3.26	100.0	V	283.0	-23.3
65.106539	34.01	40.00	5.99	100.0	V	301.0	-20.4
135.021154	29.45	43.50	14.05	100.0	V	143.0	-22.4
240.490000	29.07	46.00	16.93	100.0	V	53.0	-18.0
399.756539	34.55	46.00	11.45	100.0	V	250.0	-14.1
495.003077	42.10	46.00	3.90	100.0	V	78.0	-12.3
565.328077	36.02	46.00	9.98	100.0	V	194.0	-10.9

EUT Information

EUT Name:	WiFi & BT Platform Module
Model:	AP72598V
Host Model:	MA9100HP
Test Mode:	BLE 1M_Mid channel + WIFI 5G_11n20_Ch157
Sample No:	A003654742-005
Test Voltage::	120V/60Hz
Remark:	Temp 22 Humi:52%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

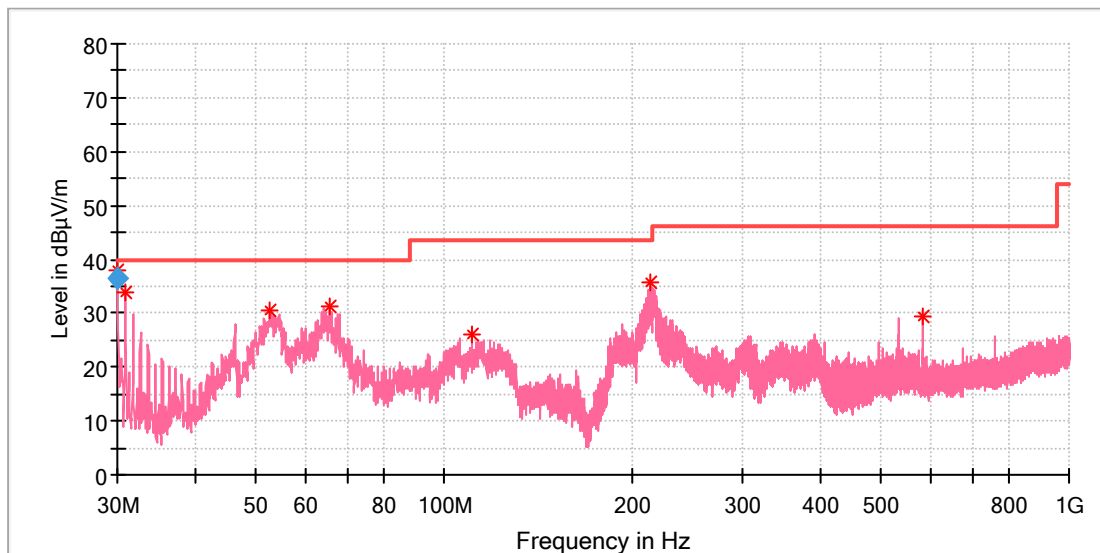


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
30.932692	17.27	40.00	22.73	100.0	H	287.0	-23.2
63.614231	21.01	40.00	18.99	100.0	H	0.0	-20.1
161.770769	27.32	43.50	16.18	100.0	H	0.0	-21.9
213.815000	33.20	43.50	10.30	100.0	H	26.0	-19.1
354.576923	31.13	46.00	14.87	100.0	H	53.0	-15.1
584.989231	32.31	46.00	13.69	100.0	H	192.0	-10.5

EUT Information

EUT Name:	WiFi & BT Platform Module
Model:	AP72598V
Host Model:	MA9100HP
Test Mode:	BLE 1M_Mid channel + WIFI 5G_11n20_Ch157
Sample No:	A003654742-005
Test Voltage::	120V/60Hz
Remark:	Temp 22 Humi:52%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

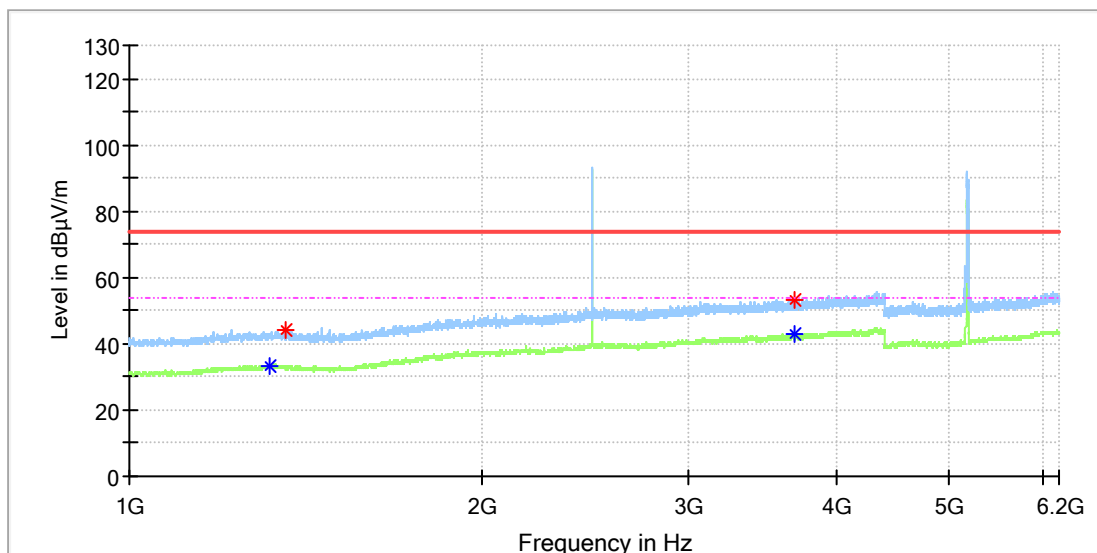
Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
30.000000	37.92	40.00	2.08	100.0	V	200.0	-23.3
30.895385	33.76	40.00	6.24	100.0	V	272.0	-23.2
52.757692	30.64	40.00	9.37	100.0	V	208.0	-18.7
65.405000	31.10	40.00	8.90	100.0	V	102.0	-20.5
110.845769	25.97	43.50	17.53	100.0	V	322.0	-19.5
213.964231	35.71	43.50	7.79	100.0	V	38.0	-19.1
585.026539	29.28	46.00	16.72	100.0	V	176.0	-10.5

1GHz - 18GHz

Note: The highest waveform in the figure is Bluetooth/WiFi Fundamental.

EUT Information

EUT Name:	WiFi & BT Platform Module
Model:	AP72598V
Host Model:	MA710
Test Mode:	BLE 1M_High channel+WIFI 5G_11n20_Ch36
Sample No:	A003631329-001
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

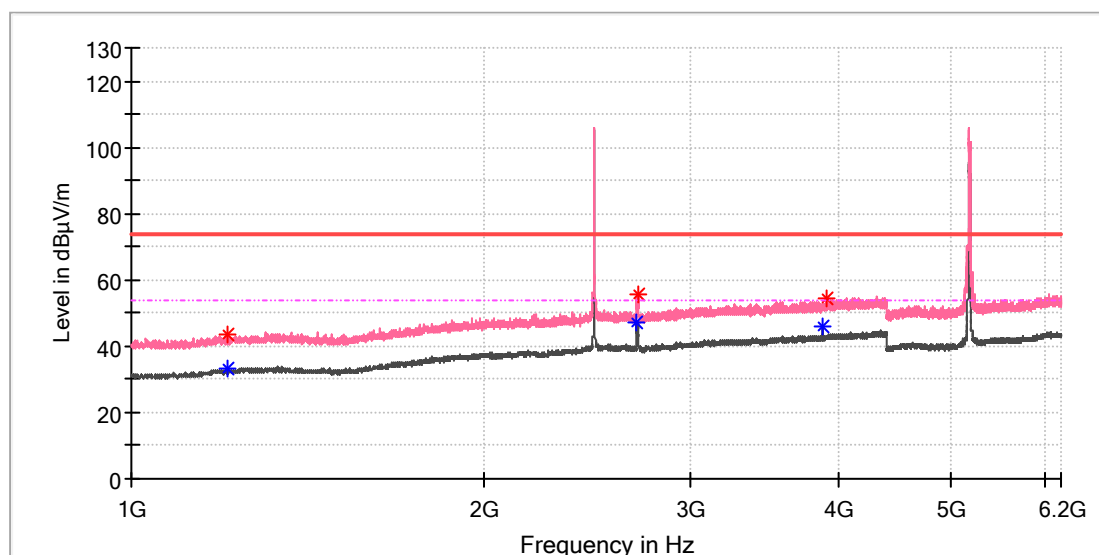


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1318.500000	---	33.39	54.00	20.61	150.0	H	296.0	2.0
1357.000000	44.02	---	74.00	29.98	150.0	H	182.0	2.1
3684.500000	53.22	---	74.00	20.78	150.0	H	122.0	9.5
3687.500000	---	43.12	54.00	10.88	150.0	H	41.0	9.5

EUT Information

EUT Name:	WiFi & BT Platform Module
Model:	AP72598V
Host Model:	MA710
Test Mode:	BLE 1M_High channel+WIFI 5G_11n20_Ch36
Sample No:	A003631329-001
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

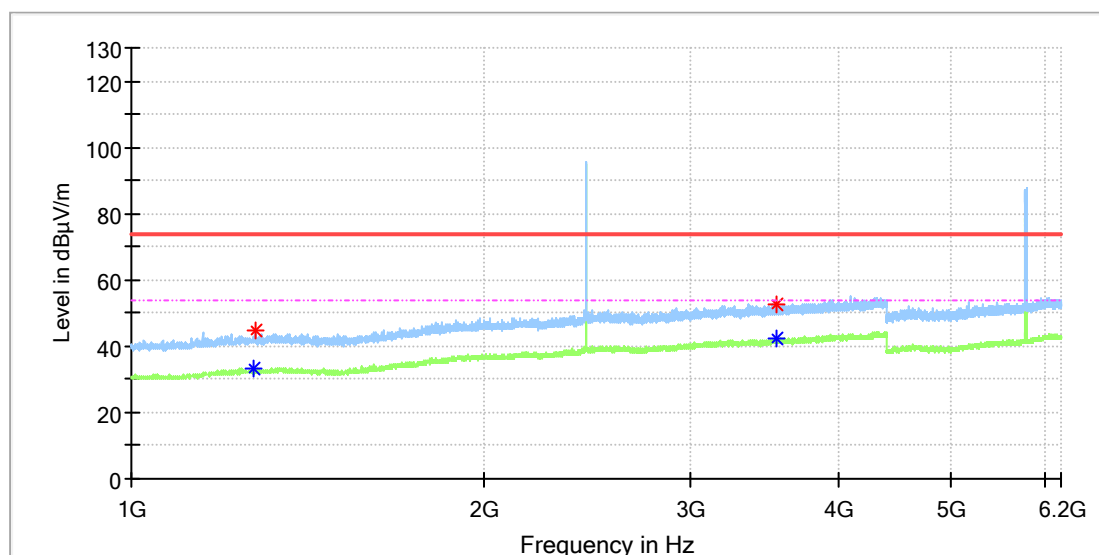


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1208.500000	---	33.12	54.00	20.88	150.0	V	234.0	1.3
1209.500000	43.50	---	74.00	30.50	150.0	V	192.0	1.3
2692.500000	---	47.45	54.00	6.55	150.0	V	303.0	7.5
2702.500000	55.63	---	74.00	18.37	150.0	V	0.0	7.5
3885.000000	---	45.88	54.00	8.12	150.0	V	285.0	10.0
3909.500000	54.42	---	74.00	19.58	150.0	V	137.0	10.1

EUT Information

EUT Name:	WiFi & BT Platform Module
Model:	AP72598V
Host Model:	MA7100HP
Test Mode:	BLE 1M_Mid channel + WIFI 5G_11n20_Ch157
Sample No:	A003654742-008
Test Voltage::	120V/60Hz
Remark:	Temp 22 Humi:52%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

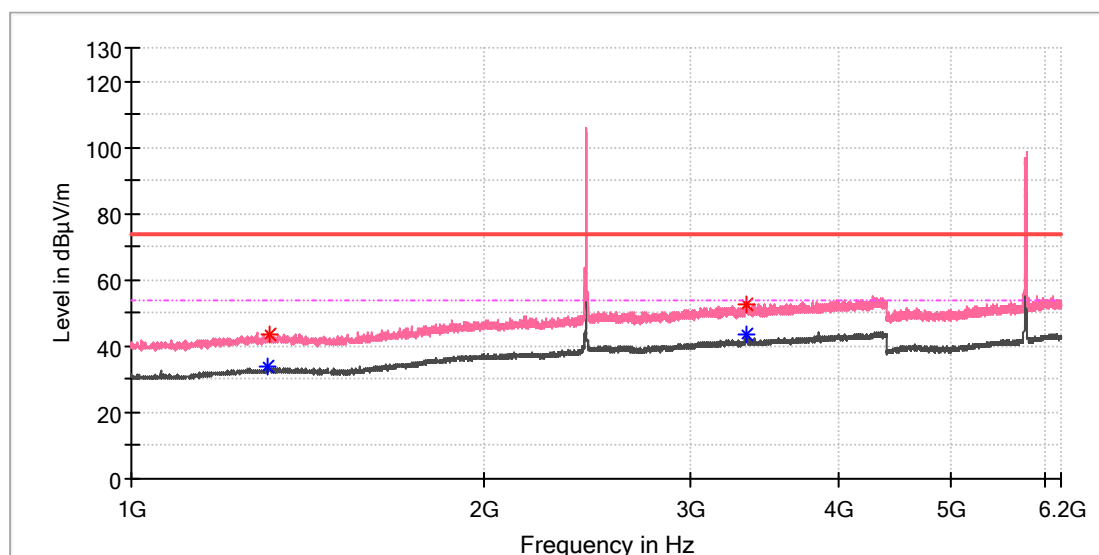


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1272.500000	---	33.47	54.00	20.53	150.0	H	113.0	1.9
1278.000000	44.45	---	74.00	29.55	150.0	H	165.0	1.9
3544.500000	---	42.51	54.00	11.49	150.0	H	16.0	9.1
3547.500000	52.72	---	74.00	21.28	150.0	H	334.0	9.2

EUT Information

EUT Name:	WiFi & BT Platform Module
Model:	AP72598V
Host Model:	MA7100HP
Test Mode:	BLE 1M_Mid channel + WIFI 5G_11n20_Ch157
Sample No:	A003654742-008
Test Voltage::	120V/60Hz
Remark:	Temp 22 Humi:52%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

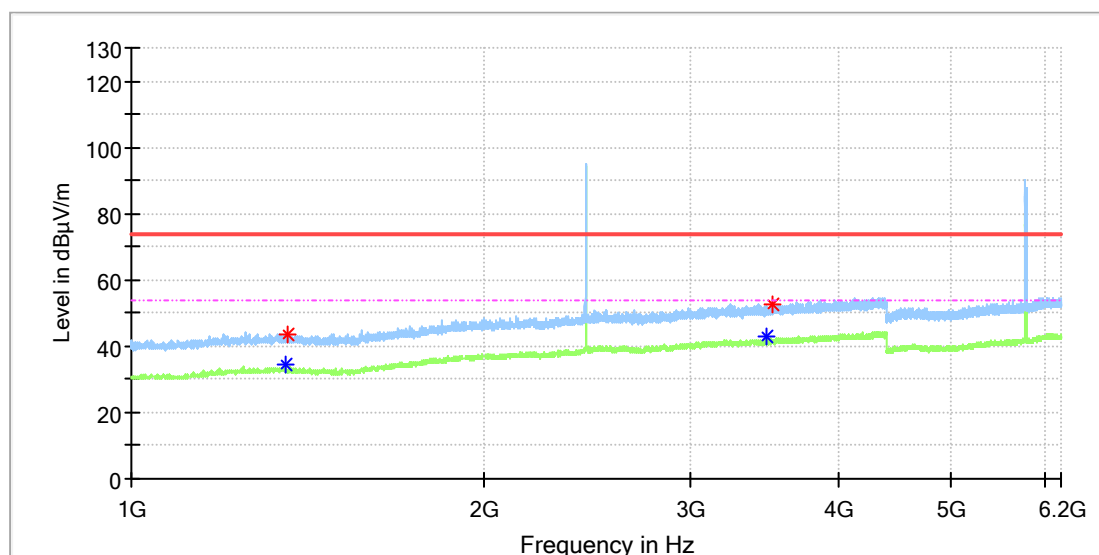


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1304.500000	---	33.82	54.00	20.18	150.0	V	44.0	1.9
1310.000000	43.83	---	74.00	30.17	150.0	V	344.0	2.0
3347.500000	52.59	---	74.00	21.41	150.0	V	356.0	8.5
3349.500000	---	43.57	54.00	10.43	150.0	V	0.0	8.5

EUT Information

EUT Name:	WiFi & BT Platform Module
Model:	AP72598V
Host Model:	MA9100HP
Test Mode:	BLE 1M_Mid channel + WIFI 5G_11n20_Ch157
Sample No:	A003654742-005
Test Voltage::	120V/60Hz
Remark:	Temp 22 Humi:52%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

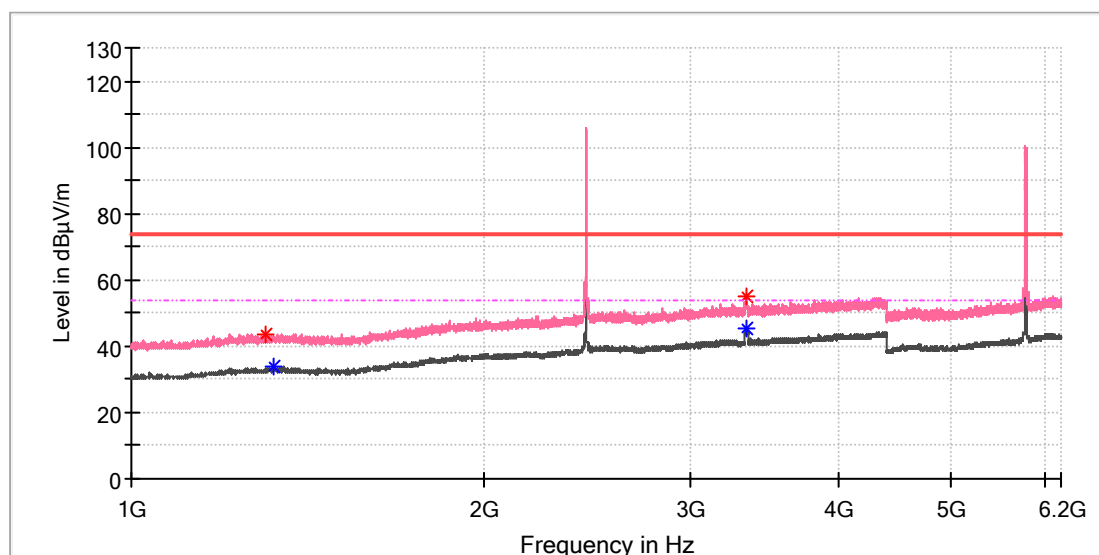


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1352.500000	---	34.20	54.00	19.80	150.0	H	149.0	2.1
1356.500000	43.73	---	74.00	30.27	150.0	H	0.0	2.1
3485.000000	---	42.64	54.00	11.36	150.0	H	339.0	8.9
3522.000000	52.50	---	74.00	21.50	150.0	H	167.0	9.1

EUT Information

EUT Name:	WiFi & BT Platform Module
Model:	AP72598V
Host Model:	MA9100HP
Test Mode:	BLE 1M_Mid channel + WIFI 5G_11n20_Ch157
Sample No:	A003654742-005
Test Voltage::	120V/60Hz
Remark:	Temp 22 Humi:52%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

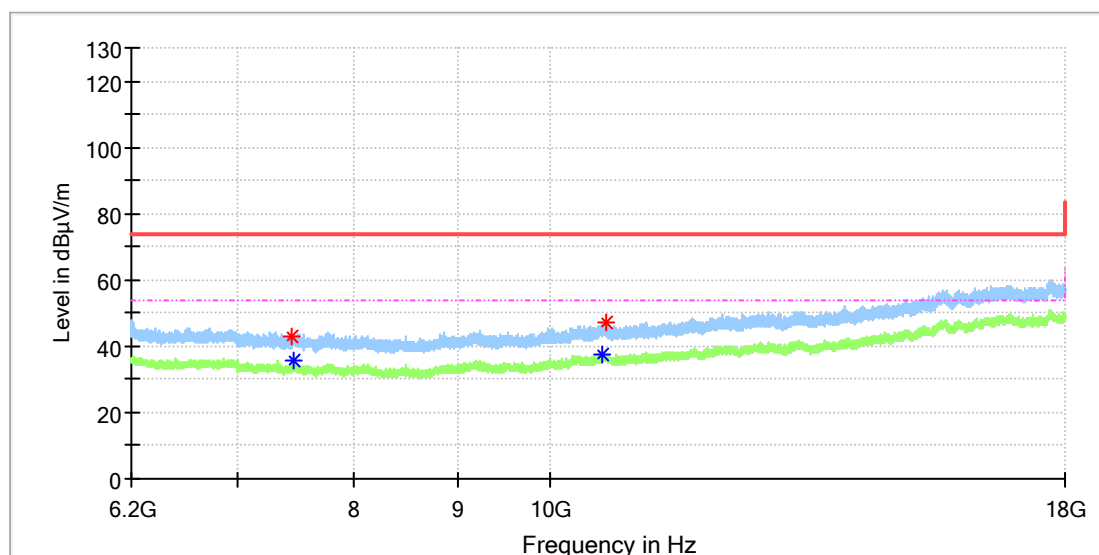


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1300.000000	43.74	---	74.00	30.26	150.0	V	0.0	1.9
1320.000000	---	33.63	54.00	20.37	150.0	V	267.0	2.0
3340.500000	54.87	---	74.00	19.13	150.0	V	16.0	8.5
3346.000000	---	45.58	54.00	8.42	150.0	V	23.0	8.5

EUT Information

EUT Name:	WiFi & BT Platform Module
Model:	AP72598V
Host Model:	MA710
Test Mode:	BLE 1M_High channel+WIFI 5G_11n20_Ch36
Sample No:	A003631329-001
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

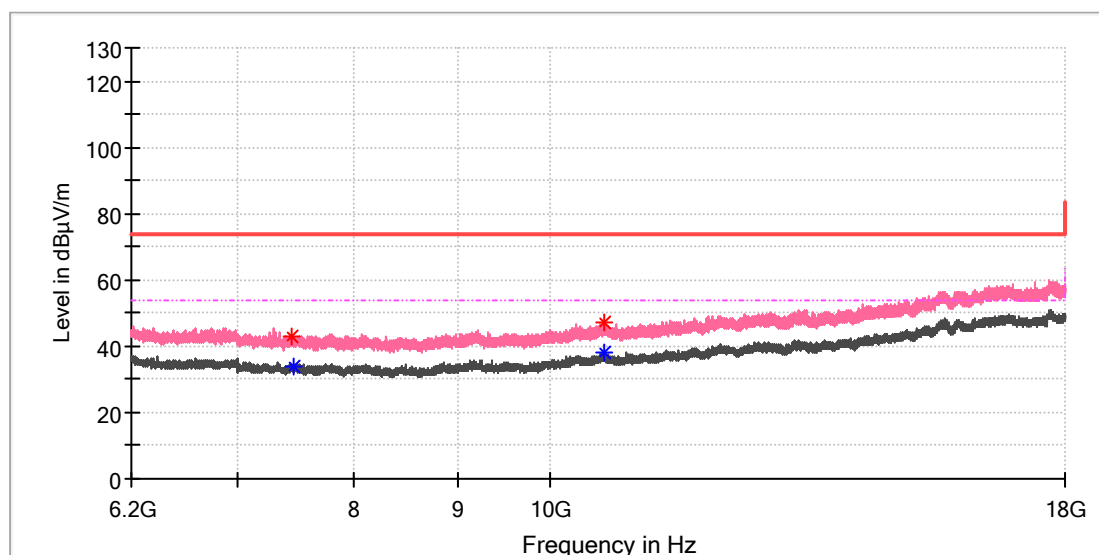


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7437.033333	43.14	---	74.00	30.86	150.0	H	293.0	8.4
7454.241667	---	35.37	54.00	18.63	150.0	H	305.0	8.5
10621.558333	---	37.78	54.00	16.22	150.0	H	293.0	12.0
10654.500000	47.20	---	74.00	26.80	150.0	H	198.0	12.0

EUT Information

EUT Name:	WiFi & BT Platform Module
Model:	AP72598V
Host Model:	MA710
Test Mode:	BLE 1M_High channel+WIFI 5G_11n20_Ch36
Sample No:	A003631329-001
Test Voltage::	120V/60Hz
Remark:	Temp 23 Humi:56%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
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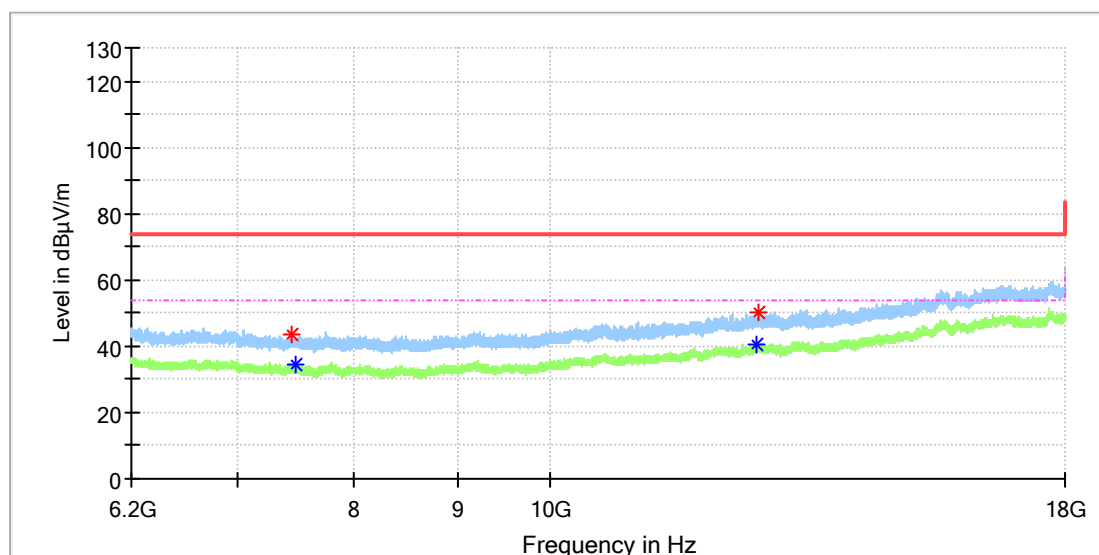


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7448.833333	43.08	---	74.00	30.92	150.0	V	0.0	8.5
7453.750000	---	34.16	54.00	19.84	150.0	V	218.0	8.5
10634.341667	---	37.91	54.00	16.09	150.0	V	25.0	12.0
10640.733333	46.95	---	74.00	27.05	150.0	V	122.0	12.0

EUT Information

EUT Name:	WiFi & BT Platform Module
Model:	AP72598V
Host Model:	MA7100HP
Test Mode:	BLE 1M_Mid channel + WIFI 5G_11n20_Ch157
Sample No:	A003654742-008
Test Voltage::	120V/60Hz
Remark:	Temp 22 Humi:52%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

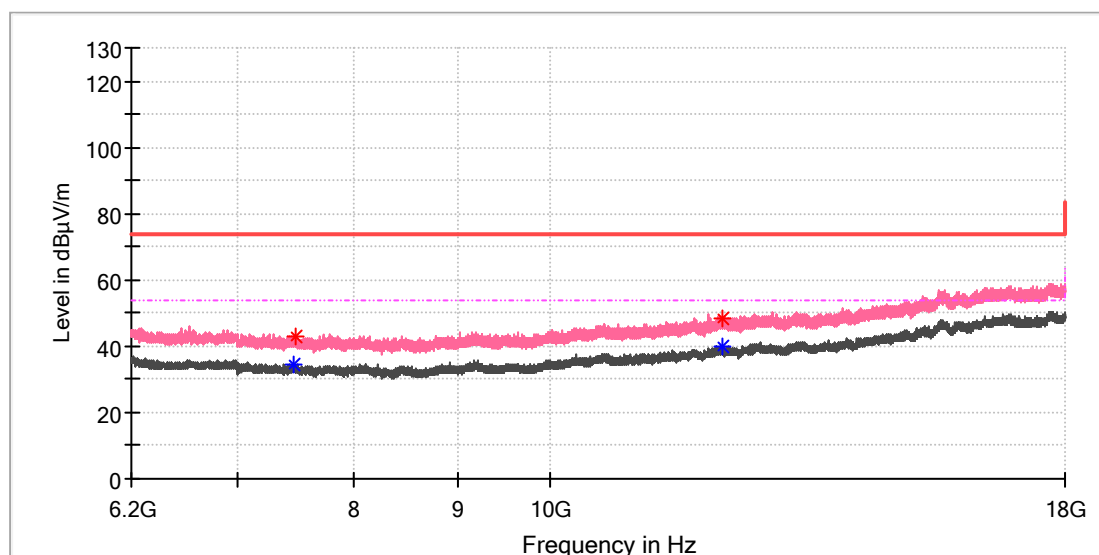


Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7437.033333	43.41	---	74.00	30.59	150.0	H	10.0	8.4
7473.908333	---	34.34	54.00	19.66	150.0	H	180.0	8.6
12662.466667	---	40.59	54.00	13.41	150.0	H	180.0	15.0
12672.791667	50.27	---	74.00	23.73	150.0	H	241.0	15.1

EUT Information

EUT Name:	WiFi & BT Platform Module
Model:	AP72598V
Host Model:	MA7100HP
Test Mode:	BLE 1M_Mid channel + WIFI 5G_11n20_Ch157
Sample No:	A003654742-008
Test Voltage::	120V/60Hz
Remark:	Temp 22 Humi:52%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

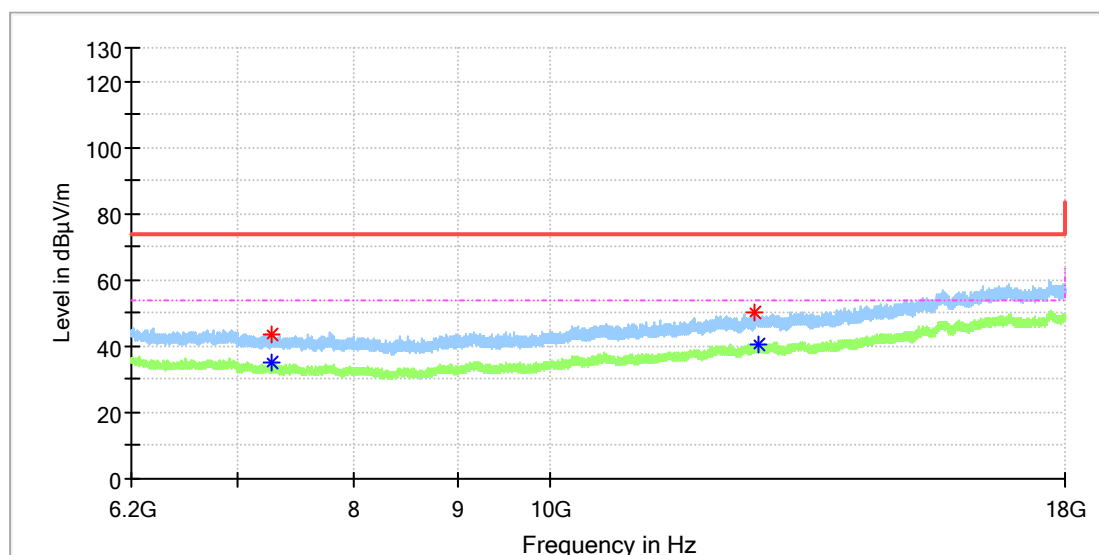


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7458.666667	---	34.55	54.00	19.45	150.0	V	226.0	8.5
7486.200000	43.11	---	74.00	30.89	150.0	V	359.0	8.7
12176.208333	48.66	---	74.00	25.34	150.0	V	189.0	14.6
12181.616667	---	39.82	54.00	14.18	150.0	V	226.0	14.6

EUT Information

EUT Name:	WiFi & BT Platform Module
Model:	AP72598V
Host Model:	MA9100HP
Test Mode:	BLE 1M_Mid channel + WIFI 5G_11n20_Ch157
Sample No:	A003654742-005
Test Voltage::	120V/60Hz
Remark:	Temp 22 Humi:52%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin

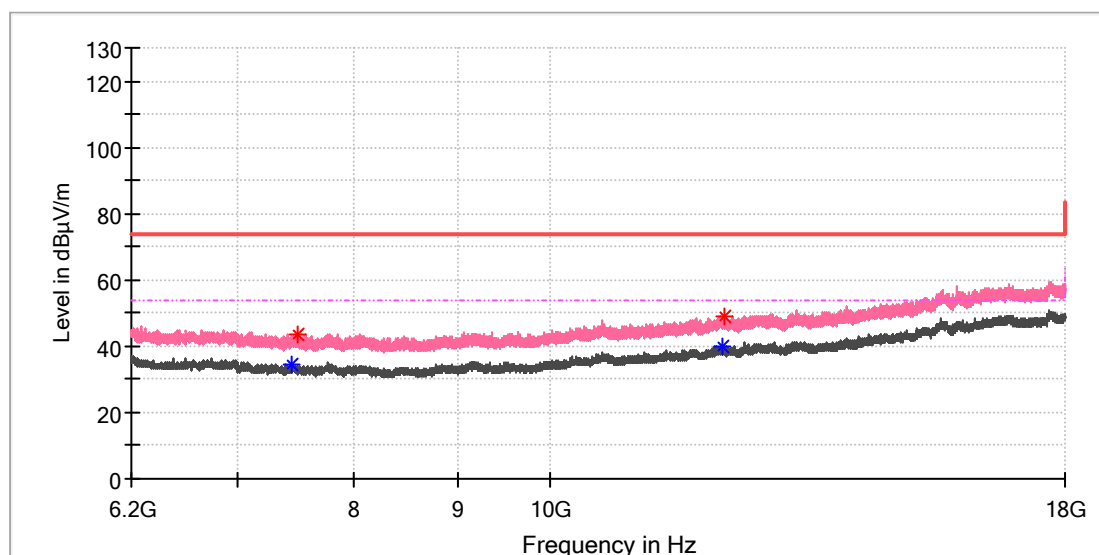


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7279.208333	---	35.12	54.00	18.88	150.0	H	145.0	8.4
7281.666667	43.56	---	74.00	30.44	150.0	H	122.0	8.4
12626.575000	50.20	---	74.00	23.80	150.0	H	297.0	14.9
12680.658333	---	40.53	54.00	13.47	150.0	H	356.0	15.1

EUT Information

EUT Name:	WiFi & BT Platform Module
Model:	AP72598V
Host Model:	MA9100HP
Test Mode:	BLE 1M_Mid channel + WIFI 5G_11n20_Ch157
Sample No:	A003654742-005
Test Voltage::	120V/60Hz
Remark:	Temp 22 Humi:52%
Test Standard:	FCC Part 15C
Tested By:	Kei Zhang
Reviewed By:	Terry Yin



Critical_Freqs

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
7439.491667	---	34.42	54.00	19.58	150.0	V	355.0	8.4
7494.066667	43.52	---	74.00	30.48	150.0	V	202.0	8.7
12169.816667	---	39.81	54.00	14.19	150.0	V	0.0	14.5
12201.283333	49.19	---	74.00	24.81	150.0	V	105.0	14.7

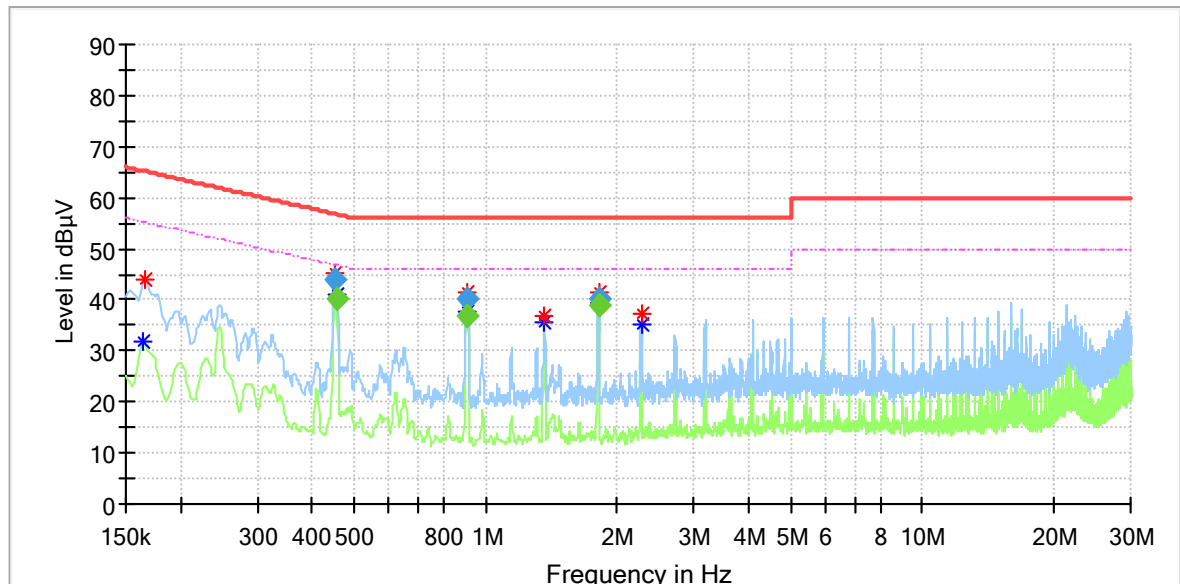
Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
---	---	---	---	---		---	---

Appendix A.2: Test Results of Conducted Emissions on AC Mains

EUT Information

EUT Name: WiFi & BT Platform Module
Model: AP72598V
Host Model: MA710
Test Mode: BLE 1M_High channel+WIFI 5G_11n20_Ch36
Test Voltage: AC 120V/60Hz
Test Standard: FCC Part 15C
Test By:/Review By: Charlie Zha / Gary Chen
Tem./Hum./Pressure: 21.3°C/50.8%/101kPa
Remark: SR1



Critical_Freqs

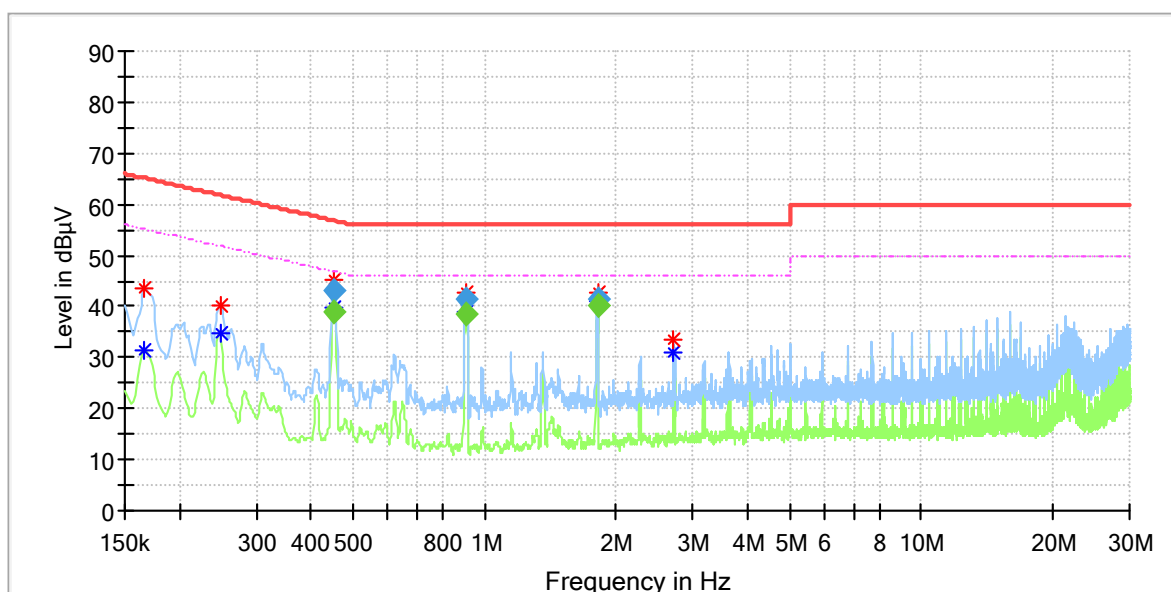
Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.163267	---	31.62	55.30	23.68	L1	9.7
0.166583	44.15	---	65.13	20.98	L1	9.7
0.452475	45.34	---	56.81	11.47	L1	9.9
0.456475	---	41.16	46.81	5.65	L1	9.9
0.906858	41.59	---	56.00	14.41	L1	9.7
0.910858	---	37.59	46.00	8.41	L1	9.7
1.363900	---	35.44	46.00	10.56	L1	9.8
1.363900	36.66	---	56.00	19.34	L1	9.8
1.817283	41.33	---	56.00	14.67	L1	9.8
1.817283	---	39.50	46.00	6.50	L1	9.8
2.272667	---	35.02	46.00	10.98	L1	9.9
2.272667	37.08	---	56.00	18.92	L1	9.9

Final_Result

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.452475	43.88	---	56.83	12.95	1000.0	9.000	L1	9.9
0.456475	---	40.25	46.76	6.51	1000.0	9.000	L1	9.9
0.906858	40.31	---	56.00	15.69	1000.0	9.000	L1	9.7
0.910858	---	36.91	46.00	9.09	1000.0	9.000	L1	9.7
1.817283	---	39.04	46.00	6.96	1000.0	9.000	L1	9.8
1.817283	40.09	---	56.00	15.91	1000.0	9.000	L1	9.8

EUT Information

EUT Name: WiFi & BT Platform Module
Model: AP72598V
Host Model: MA710
Test Mode: BLE 1M_High channel+WIFI 5G_11n20_Ch36
Test Voltage: AC 120V/60Hz
Test Standard: FCC Part 15C
Test By:/Review By: Charlie Zha / Gary Chen
Tem./Hum./Pressure: 21.3°C/50.8%/101kPa
Remark: SR1



Critical_Freqs

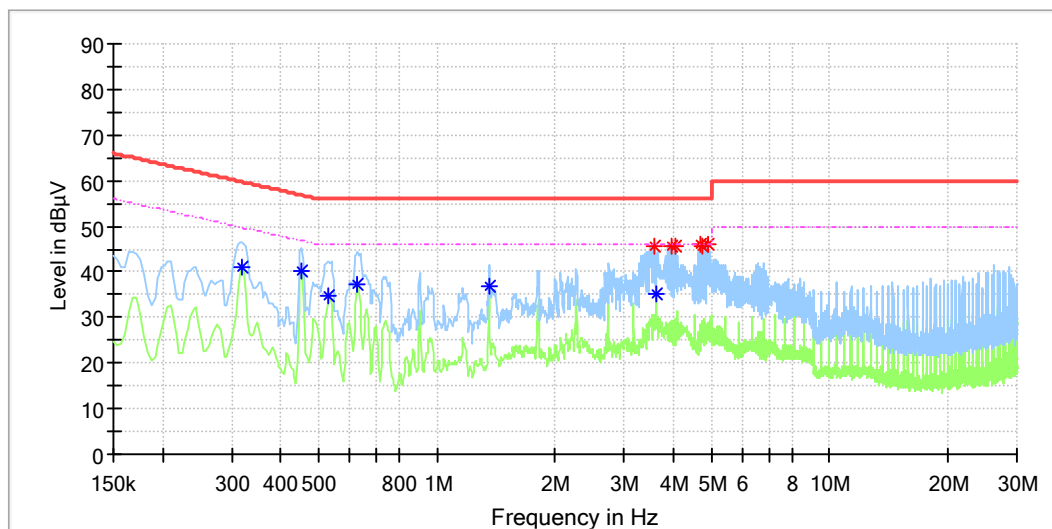
Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.166583	---	31.54	55.13	23.59	N	9.8
0.166583	43.44	---	65.13	21.69	N	9.8
0.247842	---	34.84	51.83	16.99	N	9.7
0.247842	40.25	---	61.83	21.58	N	9.7
0.450817	---	39.58	46.84	7.26	N	9.7
0.450817	45.39	---	56.84	11.46	N	9.7
0.909200	42.79	---	56.00	13.21	N	9.7
0.910858	---	38.88	46.00	7.12	N	9.7
1.817283	42.54	---	56.00	13.46	N	9.9
1.817283	---	40.86	46.00	5.14	N	9.9
2.713783	---	30.95	46.00	15.05	N	10.0
2.713783	33.65	---	56.00	22.35	N	10.0

Final_Result

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.450817	---	39.11	46.86	7.75	1000.0	9.000	N	9.7
0.450817	43.20	---	56.86	13.66	1000.0	9.000	N	9.7
0.909200	41.33	---	56.00	14.67	1000.0	9.000	N	9.7
0.910858	---	38.35	46.00	7.65	1000.0	9.000	N	9.7
1.817283	---	40.26	46.00	5.74	1000.0	9.000	N	9.9
1.817283	41.47	---	56.00	14.53	1000.0	9.000	N	9.9

EUT Information

EUT Name: WiFi & BT Platform Module
Model: AP72598V
Host Model: MA7100HP
Test Mode: BLE 1M_Mid channel + WIFI 5G_11n20_Ch157
Test Voltage: AC 120V/60Hz
Test Standard: FCC Part 15C
Test By:/Review By: Eric Guo/ Gary Chen
Tem./Hum./Pressure: 24.3°C/52.2%/101kPa
Remark: SR1

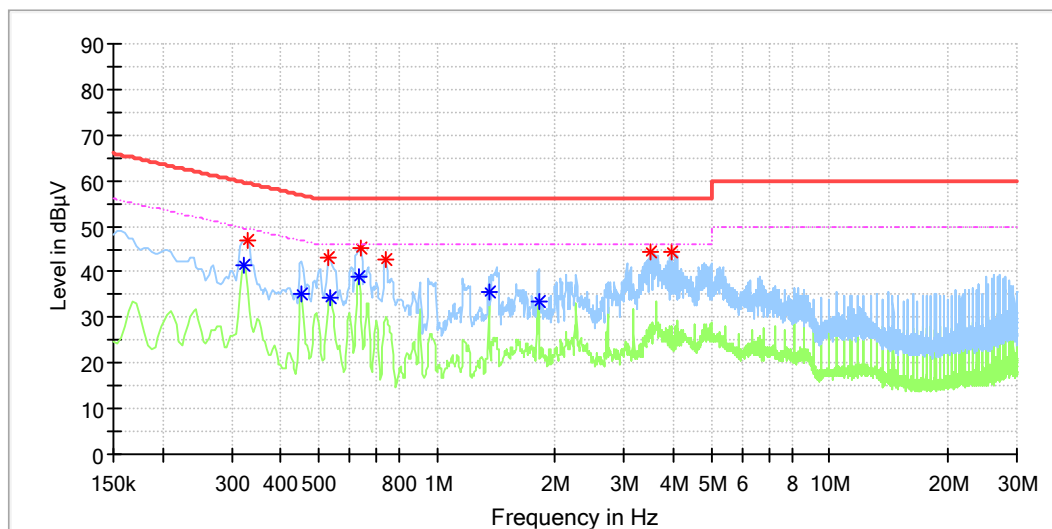


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.317906	---	41.16	49.76	8.60	L1	9.9
0.452231	---	40.13	46.83	6.70	L1	9.9
0.530588	---	34.60	46.00	11.40	L1	10.0
0.627600	---	37.13	46.00	8.87	L1	10.0
1.358925	---	36.96	46.00	9.04	L1	10.1
3.575288	45.83	---	56.00	10.17	L1	10.2
3.627525	---	34.96	46.00	11.04	L1	10.2
3.978263	45.81	---	56.00	10.19	L1	10.2
4.041694	45.48	---	56.00	10.52	L1	10.2
4.687200	46.08	---	56.00	9.92	L1	10.2
4.754363	45.66	---	56.00	10.34	L1	10.2
4.918538	45.89	---	56.00	10.11	L1	10.2

EUT Information

EUT Name: WiFi & BT Platform Module
Model: AP72598V
Host Model: MA7100HP
Test Mode: BLE 1M_Mid channel + WIFI 5G_11n20_Ch157
Test Voltage: AC 120V/60Hz
Test Standard: FCC Part 15C
Test By:/Review By: Eric Guo/ Gary Chen
Tem./Hum./Pressure: 24.3°C/52.2%/101kPa
Remark: SR1

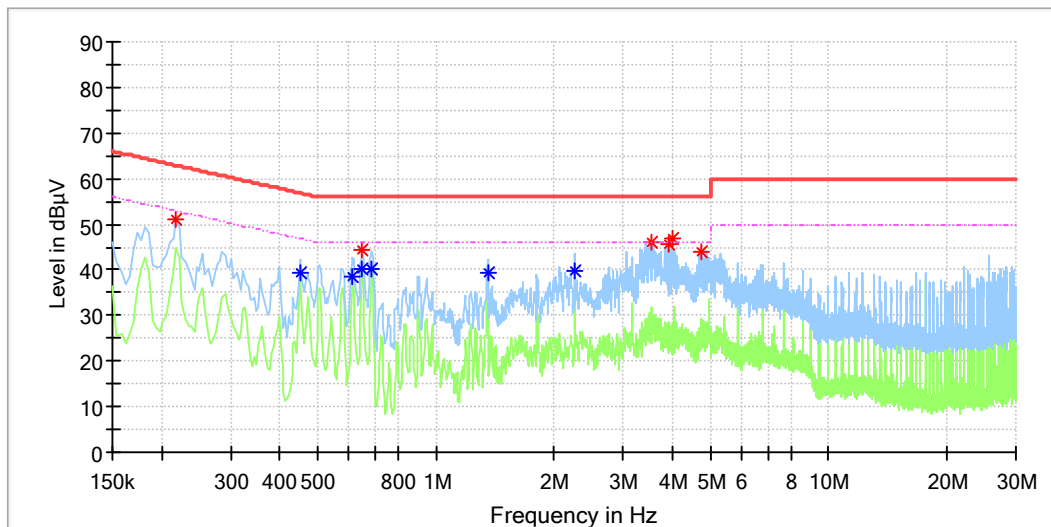


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.321638	---	41.43	49.66	8.24	N	9.8
0.329100	46.95	---	59.47	12.53	N	9.8
0.452231	---	35.01	46.83	11.83	N	9.8
0.530588	43.33	---	56.00	12.67	N	9.8
0.534319	---	34.41	46.00	11.59	N	9.8
0.631331	---	38.90	46.00	7.10	N	9.8
0.638794	45.21	---	56.00	10.79	N	9.8
0.739538	42.67	---	56.00	13.33	N	9.8
1.358925	---	35.77	46.00	10.23	N	9.8
1.814138	---	33.65	46.00	12.35	N	9.8
3.508125	44.40	---	56.00	11.60	N	9.9
3.978263	44.19	---	56.00	11.81	N	9.9

EUT Information

EUT Name: WiFi & BT Platform Module
Model: AP72598V
Host Model: MA9100HP
Test Mode: BLE 1M_Mid channel + WIFI 5G_11n20_Ch157
Test Voltage: AC 120V/60Hz
Test Standard: FCC Part 15C
Test By:/Review By: Eric Guo/ Gary Chen
Tem./Hum./Pressure: 24.3°C/52.2%/101kPa
Remark: SR1

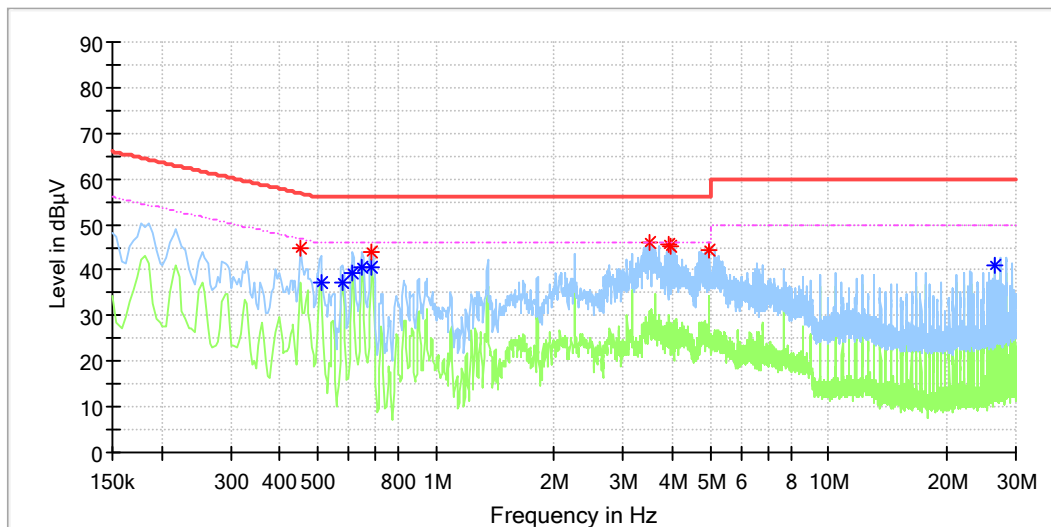


Critical_Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)
0.218000	51.03	---	62.90	11.86	L1	9.9
0.450000	---	39.14	46.88	7.73	L1	9.9
0.614000	---	38.42	46.00	7.58	L1	10.0
0.650000	44.26	---	56.00	11.74	L1	10.0
0.650000	---	40.04	46.00	5.96	L1	10.0
0.686000	---	40.11	46.00	5.89	L1	10.0
1.354000	---	39.48	46.00	6.52	L1	10.1
2.258000	---	39.85	46.00	6.15	L1	10.2
3.558000	46.19	---	56.00	9.81	L1	10.2
3.914000	45.48	---	56.00	10.52	L1	10.2
3.986000	46.89	---	56.00	9.11	L1	10.2
4.758000	44.03	---	56.00	11.97	L1	10.2

EUT Information

EUT Name:	WiFi & BT Platform Module
Model:	AP72598V
Host Model:	MA9100HP
Test Mode:	BLE 1M_Mid channel + WIFI 5G_11n20_Ch157
Test Voltage:	AC 120V/60Hz
Test Standard:	FCC Part 15C
Test By:/Review By:	Eric Guo/ Gary Chen
Tem./Hum./Pressure:	24.3°C/52.2%/101kPa
Remark:	SR1



Critical Freqs

Frequency (MHz)	MaxPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)
0.454000	44.92	---	56.80	11.88	N	9.8
0.510000	---	37.08	46.00	8.92	N	9.8
0.578000	---	37.33	46.00	8.67	N	9.8
0.614000	---	39.25	46.00	6.75	N	9.8
0.650000	---	40.53	46.00	5.47	N	9.8
0.682000	44.00	---	56.00	12.00	N	9.8
0.686000	---	40.45	46.00	5.55	N	9.8
3.494000	46.11	---	56.00	9.89	N	9.9
3.918000	45.65	---	56.00	10.35	N	9.9
3.982000	45.02	---	56.00	10.98	N	9.9
4.986000	44.50	---	56.00	11.50	N	9.9
26.646000	---	41.06	50.00	8.94	N	10.4