

47 CFR PART 15 SUBPART B

TEST REPORT

of

Plextalk Player

Model Name: PTX1
Brand Name: Plextor
Report No.: SZ08110077E03
FCC ID: WNU-PTX1

prepared for

Shinano Kenshi Co., Ltd.

6-15-26 Chuo, Ueda-Shi, Nagano-Ken, 386-0012 JAPAN

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1. TEST CERTIFICATION

Equipment under Test: Plectalk Player

Brand Name: Plector
Model Name: PTX1
FCC ID: WNU-PTX1
Applicant: Shinano Kenshi Co., Ltd.
6-15-26 Chuo, Ueda-Shi, Nagano-Ken, 386-0012 JAPAN

Manufacturer: GROUP SENSE Mobile-Tech Ltd
6th Floor, Building 9, No.5 Science Park West Avenue, Hong Kong
Science Park, Shatin, New Territories, Hong Kong.

Test Standards: 47 CFR Part 15 Subpart B

Test Date(s): December 02, 2008 - December 12, 2008

Test Result: PASS

* We Hereby Certify That:

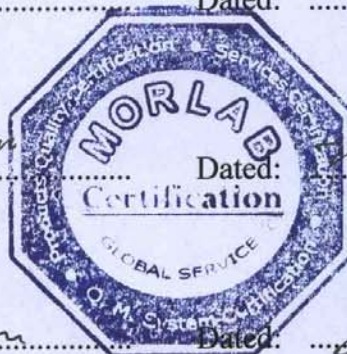
The equipment under test was tested by Shenzhen Electronic Product Quality Testing Center Morlab Laboratory. The test data, data evaluation, test procedures and equipment configurations shown in this report were made in accordance with the requirement of related FCC rules.

The test results of this report only apply for the tested sample equipment identified above. The test report shall be invalid without all the signatures of the test engineer, the reviewer and the approver.

Tested by: Li Yi Dated: 2009.1.15
Li Yi

Reviewed by: Wei Yanquan Dated: 2009.1.15
Wei Yanquan

Approved by: Shu Luan Dated: 2009.1.15
Shu Luan



2. GENERAL INFORMATION

2.1 EUT Description

EUT Type: Plectalk Player
Serial No.: (n.a, marked #1 by test site)
Hardware Version.....: PP
Software Version: PP
Modulation Type: DSSS
Power Supply: Battery
 Brand Name: Plector
 Model No.: PTX1
 Serial No.: (n.a. marked #1 by test site)
 Capacitance: 1800mAh
 Rated Voltage: 7.2V
 Manufacturer: HUANYU POWER SOURCE CO., LTD
 Manufacturer Address: Huanyu Avenue, Xinxiang, He Nan, China
Ancillary Equipment 1 : AC Adapter (Charger for Battery)
 Brand Name: Plector
 Model Name: SQN36W12P-01
 Serial No.: (n.a. marked #1 by test site)
 Rated Input: ~ 100-240V, 750-400mA, Max 96W, 60Hz
 Rated Output: = 12V, 3000mA, Max 36W
 Manufacturer: Nagano Japan Radio Co. Ltd.
 Manufacturer Address: Nagano Japan Radio Co., Ltd, 1163 Inasato-machi,
 Nagano-city, 381-2288, Japan
 Wire Length: 120cm

Note 1: The EUT is DAISY Book Playback and Wi-Fi Module, with 802.11b/g interface

Note 2: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

2.2 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart B:

No.	Identity	Document Title
1	47 CFR Part 15 (10-1-05 Edition)	Radio Frequency Devices

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Result	Test date
1	15.107	Conducted Emission	PASS	2008-12-03
2	15.109	Radiated Emission	PASS	2008-12-05

NOTE:

The tests were performed according to the method of measurements prescribed in ANSI C63.4 2003.

2.3 Facilities and Accreditations

2.3.1 Facilities

Shenzhen Electronic Product Quality Testing Center Morlab Laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L1659.

All measurement facilities used to collect the measurement data are located at Electronic Testing Building, Shahe Road, Xili, Nanshan District, Shenzhen 518055 CHINA. The test site is constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22; the FCC registration number is 741109.

2.3.2 Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	20 - 25
Relative Humidity (%):	40 - 60
Atmospheric Pressure (kPa):	96

2.3.3 Measurement Uncertainty

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

Uncertainty of Conducted Emission:	$\pm 1.8\text{dB}$
Uncertainty of Radiated Emission:	$\pm 3.1\text{dB}$

3. TEST CONDITIONS SETTING

3.1 Test Mode

During the measurement, the test modes of the EUT are showed as below:

- (1) The first test modes (CD)

The EUT configuration of the emission tests is EUT + Battery + Charger + CD Card.

During the test, the CD Card was inserted into the EUT, the EUT was playing CD

- (2) The second test mode (USB)

The EUT configuration of the emission tests is EUT + Battery + Charger + USB.

During the test, the USB was connected with EUT via USB cable. And the EUT was playing USB music.

- (3) The third test mode (SD + WI-FI)

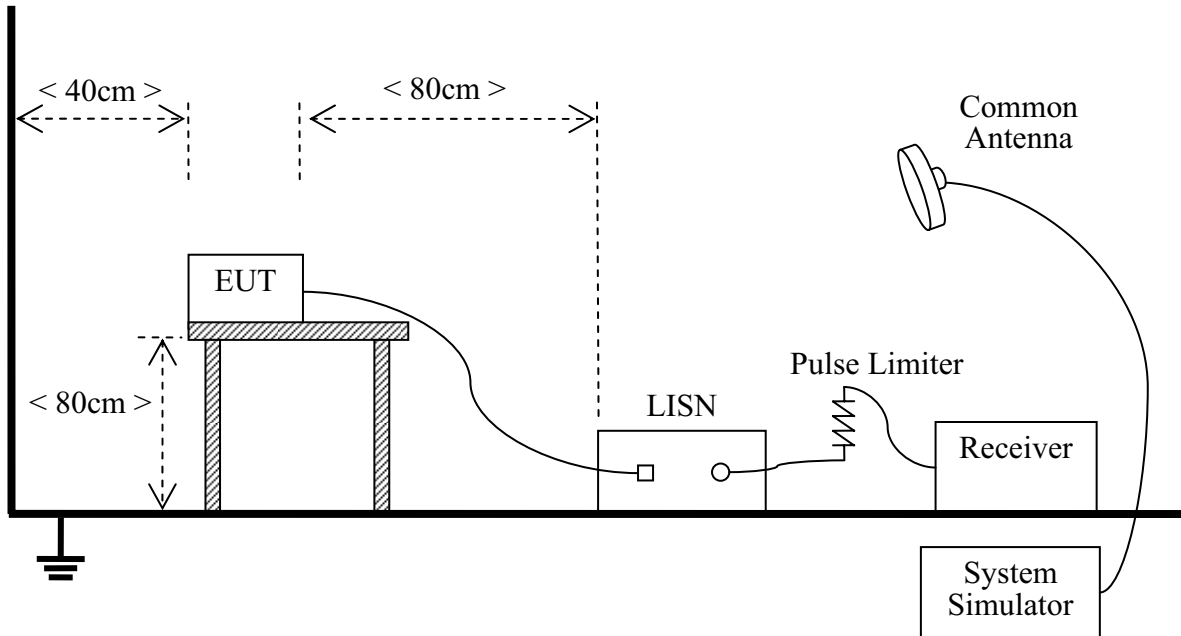
The EUT configuration of the emission tests is EUT + SD Card + Battery + Charger + Wireless Router.

During the test, a communication link was established between the EUT and the Wireless Router until test end.

3.2 Test Setup and Equipments List

3.2.1 Conducted Emission

A. Test Setup:



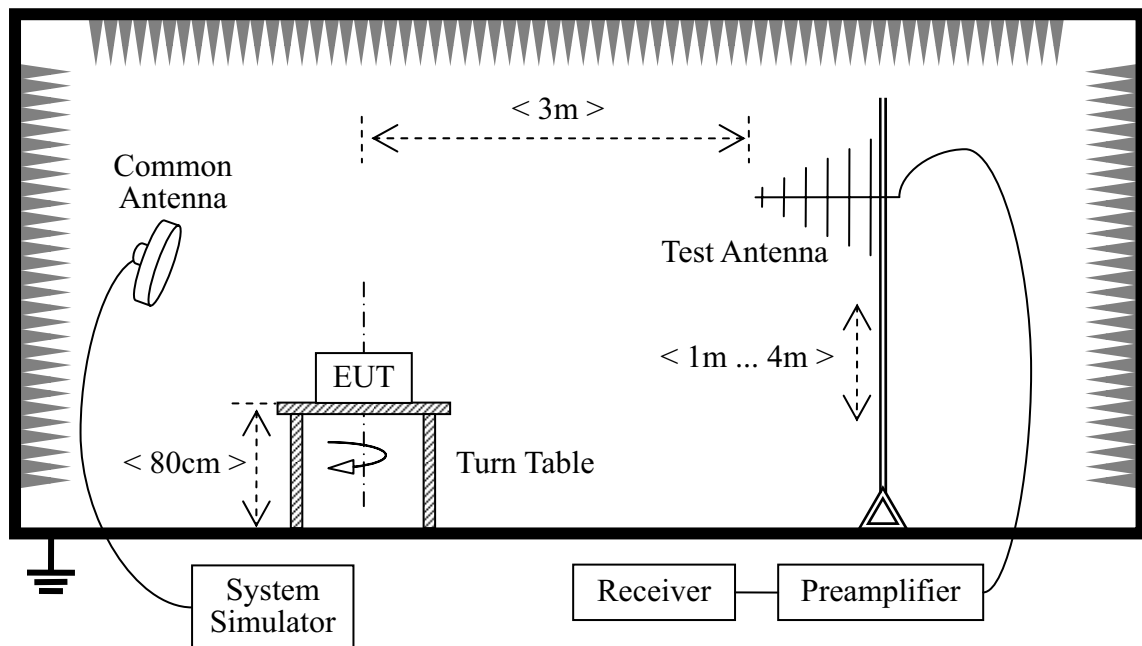
The EUT is placed on a 0.8m high insulating table, which stands on the grounded conducting floor, and keeps 0.4m away from the grounded conducting wall. The EUT is connected to the power mains through a LISN which provides $50\Omega/50\mu\text{H}$ of coupling impedance for the measuring instrument. The Common Antenna is used for the call between the EUT and the System Simulator (SS). A Pulse Limiter is used to protect the measuring instrument. The factors of the whole test system are calibrated to correct the reading.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2008.07	1year
LISN	Schwarzbeck	NSLK 8127	812744	2008.08	1year
Pulse Limiter (20dB)	Schwarzbeck	VTSD 9561-D	9391	(n.a.)	(n.a.)
System Simulator	Agilent	E5515C	GB43130131	2008.06	1year

3.2.2 Radiated Emission

C. Test Setup:



The test is performed in a 3m Semi-Anechoic Chamber; the antenna factor, cable loss and so on of the site (factors) is calculated to correct the reading. The EUT is placed on a 0.8m high insulating Turn Table, and keeps 3m away from the Test Antenna, which is mounted on a variable-height antenna master tower. The Common Antenna is used for the call between the EUT and the System Simulator (SS).

D. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2008.07	1year
Semi-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2008.08	2year
Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	9163-274	2008.07	1year
Test Antenna - Horn	Schwarzbeck	BBHA 9120C	9120C-384	2008.07	1year
System Simulator	Agilent	E5515C	GB43130131	2008.06	1year

4. 47 CFR PART 15B REQUIREMENTS

4.1 Conducted Emission

4.1.1 Requirement

According to FCC section 15.107, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

NOTE:

- The limit subjects to the Class B digital device.
- The lower limit shall apply at the band edges.
- The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

4.1.2 Test Description

See section 3.2.1 of this report.

4.1.3 Test Result

The maximum conducted interference is searched using Peak (PK), Quasi-peak (QP) and Average (AV) detectors; the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. All test modes are considered, refer to recorded points and plots below.

4.1.3.1 The first test modes (CD)

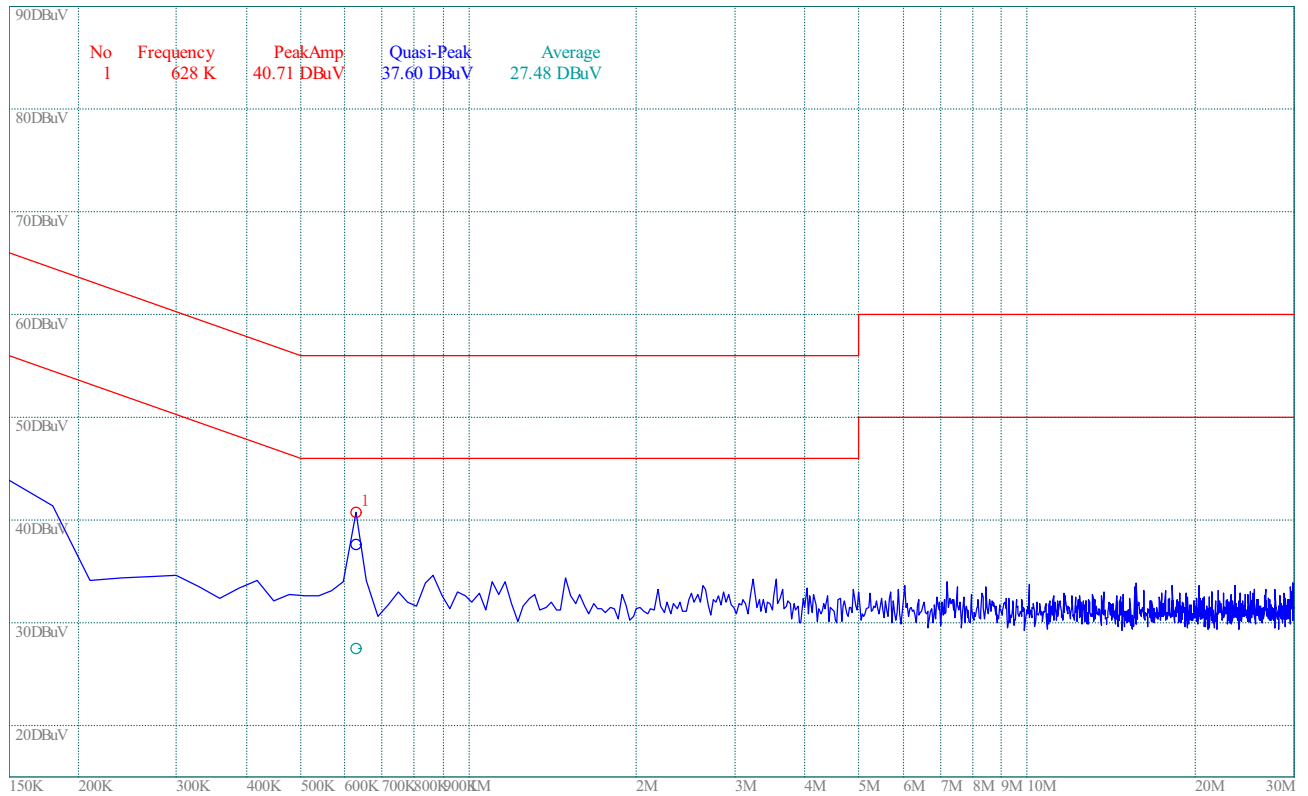
The EUT configuration of the emission tests is EUT + Battery + Charger + CD.

A. Test Verdict Recorded for Suspicious Points:

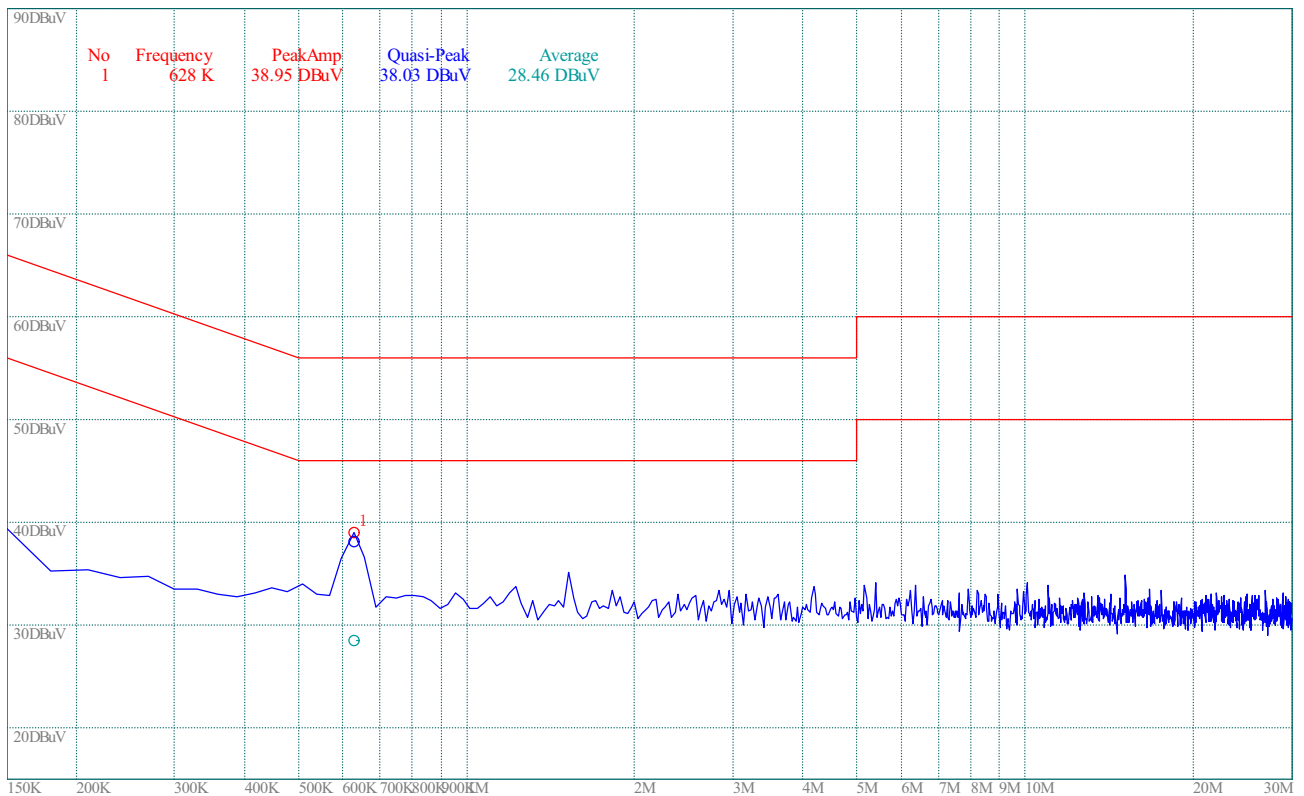
No.	@Frequency (MHz)	Measured Emission Level (dB μ V)				Limit (dB μ V)		Verdict
		PK	QP	AV	Phase	QP	AV	

No.	@Frequency (MHz)	Measured Emission Level (dB μ V)				Limit (dB μ V)		Verdict
		PK	QP	AV	Phase	QP	AV	
1	0.628	40.71	37.6	27.48	L	56.0	46.0	PASS
2	0.628	38.95	38.3	28.46	N	56.0	46.0	PASS

B. Test Plot:



(Plot A: L Phase)



(Plot B: N Phase)

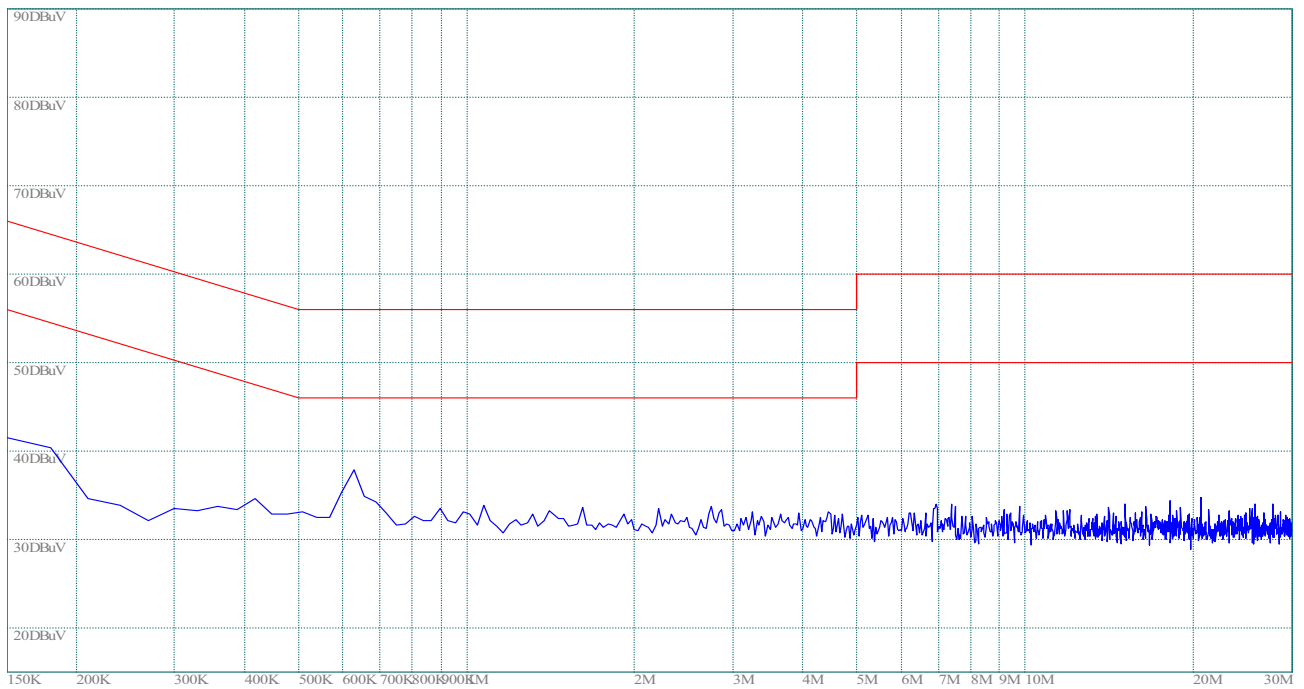
4.1.3.2 The second test mode (USB)

The EUT configuration of the emission tests is EUT + Battery + Charger + USB.

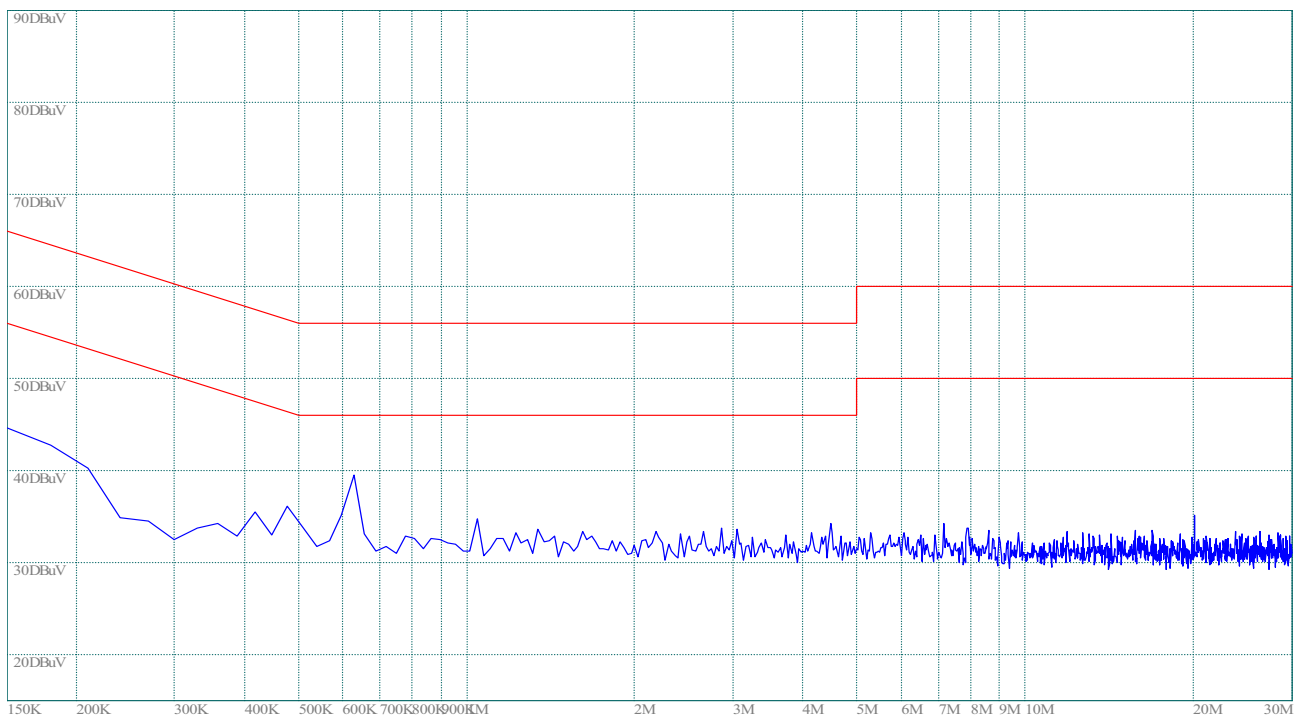
A. Test Verdict Recorded for Suspicious Points:

No.	@Frequency (MHz)	Measured Emission Level (dBμV)				Limit (dBμV)		Verdict
		PK	QP	AV	Phase	QP	AV	
1	0.628	--	--	--	L	56.0	46.0	PASS
2	0.628	--	--	--	N	56.0	46.0	PASS

B. Test Plot And Suspicious Points:



(Plot A: L Phase)



(Plot B: N Phase)

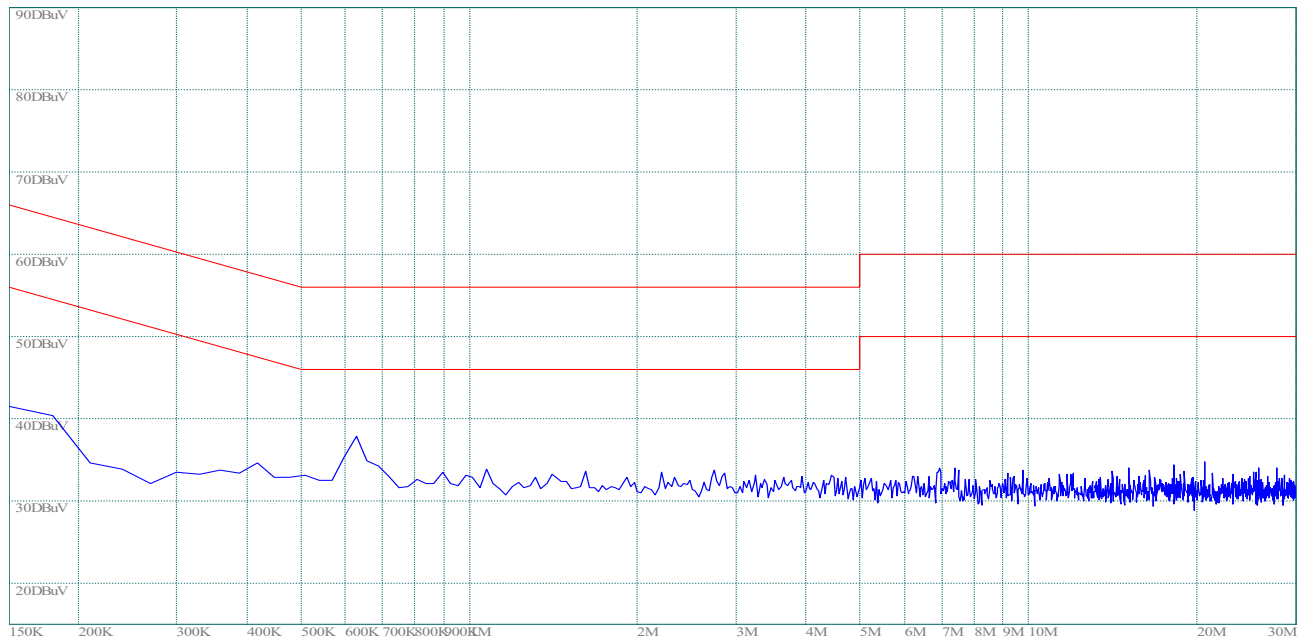
4.1.3.3 The third test mode (SD + WI-FI)

The EUT configuration of the emission tests is EUT + Battery + SD Card + Charger + Wireless Router.

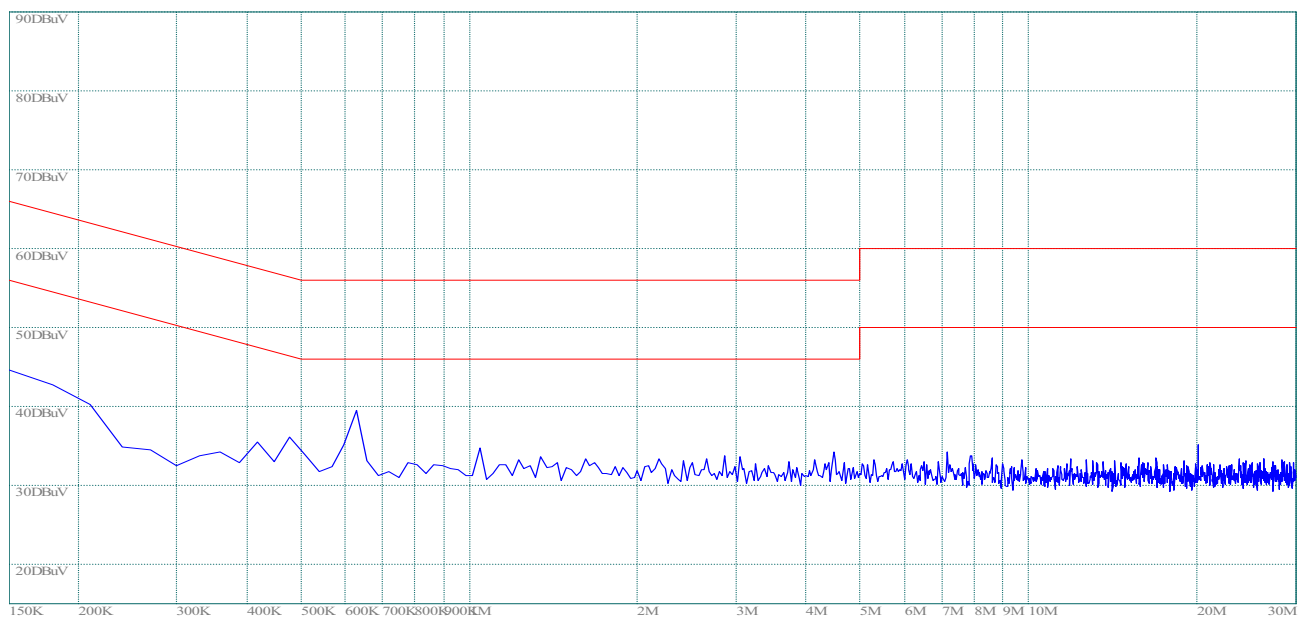
A. Test Verdict Recorded for Suspicious Points:

No.	@Frequency (MHz)	Measured Emission Level (dBμV)				Limit (dBμV)		Verdict
		PK	QP	AV	Phase	QP	AV	
1	0.628	--	--	--	L	56.0	46.0	PASS
2	0.628	--	--	--	N	56.0	46.0	PASS

B. Test Plot And Suspicious Points:



(Plot A: L Phase)



(Plot B: N Phase)

4.2 Radiated Emission

4.2.1 Requirement

According to FCC section 15.109, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency range (MHz)	Field Strength	
	$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

NOTE:

- Field Strength ($\text{dB}\mu\text{V/m}$) = $20 \cdot \log[\text{Field Strength } (\mu\text{V/m})]$.
- In the emission tables above, the tighter limit applies at the band edges.

4.2.2 Test Description

See section 3.2.2 of this report.

4.2.3 Test Result

The maximum radiated emission is searched using PK, QP and AV detectors; the emission levels more than the limits, and that have narrow margins from the limits will be re-measured with AV and QP detectors. Both the vertical and the horizontal polarizations of the Test Antenna are considered to perform the tests. All test modes are considered, refer to recorded points and plots below.

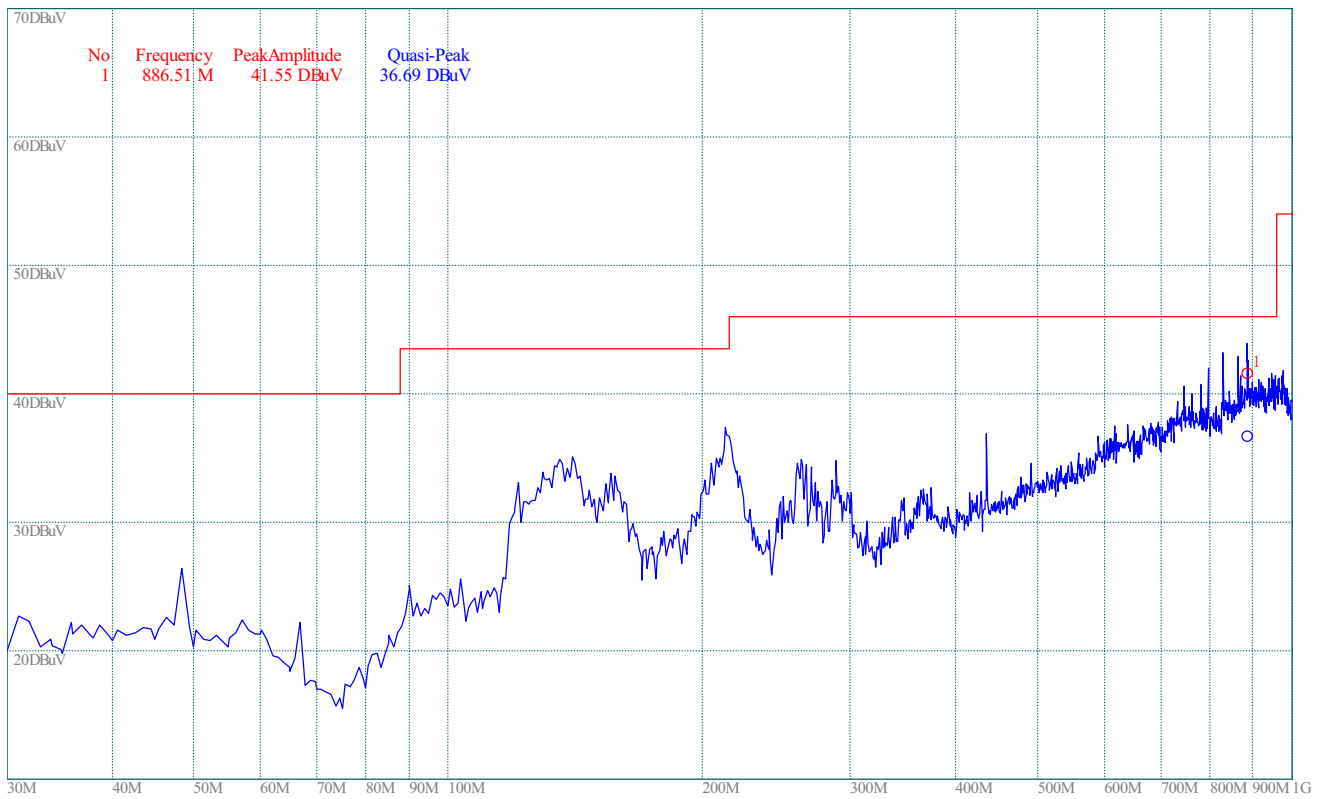
4.2.3.1 The first test modes (CD)

The EUT configuration of the emission tests is EUT + Battery + Charger + CD.

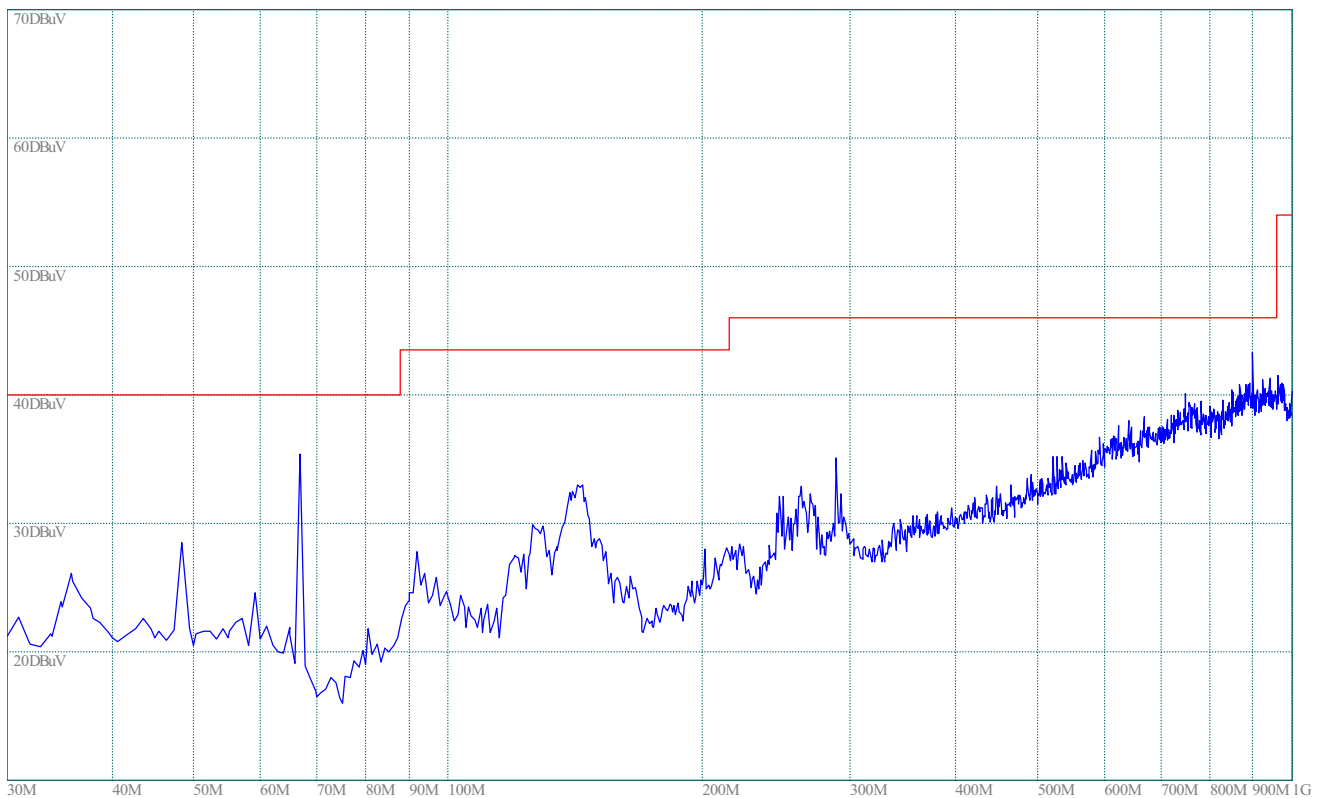
A. Test Verdict Recorded for Suspicious Points:

No.	@Frequency (MHz)	Emission Level ($\text{dB}\mu\text{V/m}$)			Quasi-Peak Limit ($\text{dB}\mu\text{V/m}$)	Result
		PK	QP	Antenna Polarization		
1	886.51	41.55	36.69	Horizontal	46	PASS

B. Test Plot:



(Plot A: Test Antenna Horizontal)



(Plot B: Test Antenna Vertical)

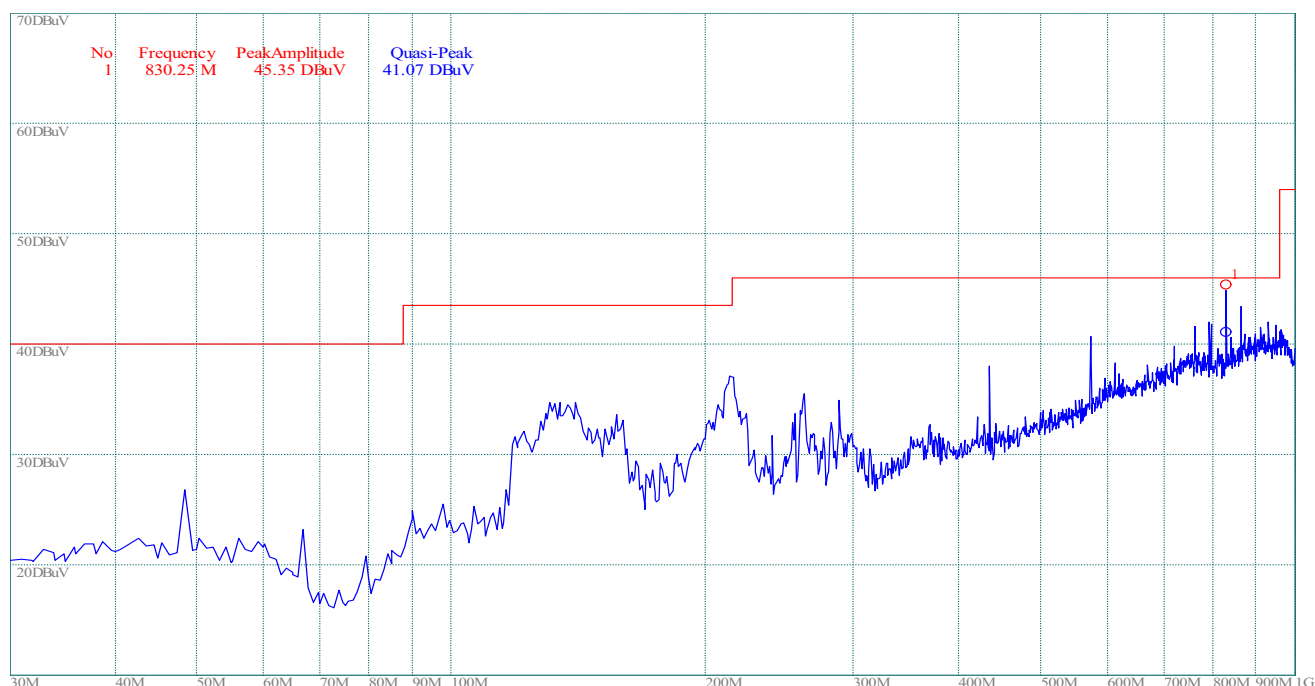
4.2.3.2 The second test mode (USB)

The EUT configuration of the emission tests is EUT + Battery + Charger + USB.

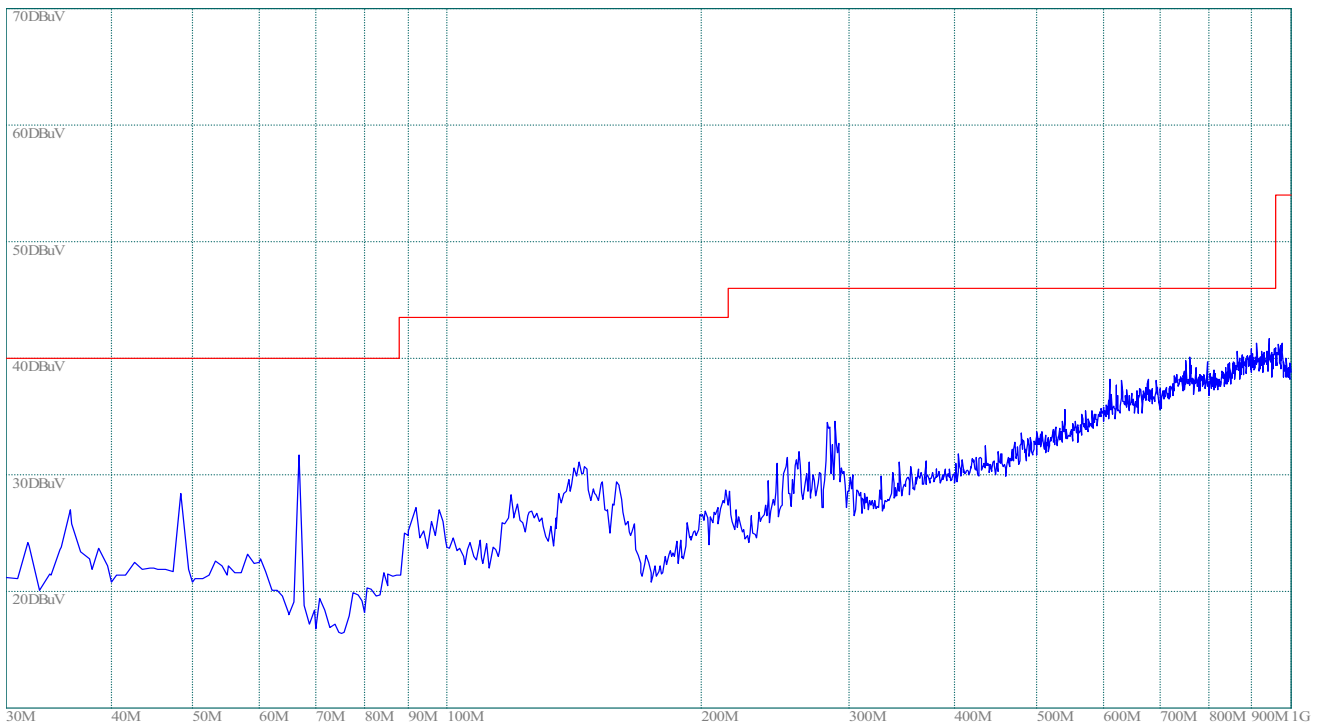
A. Test Verdict Recorded for Suspicious Points:

No.	@Frequency (MHz)	Emission Level (dB μ V/m)			Quasi-Peak Limit (dB μ V/m)	Result
		PK	QP	Antenna Polarization		
1	830.25	46.35	41.07	Horizontal	46	PASS

B. Test Plot:



(Plot C: Test Antenna Horizontal)



(Plot D: Test Antenna Vertical)

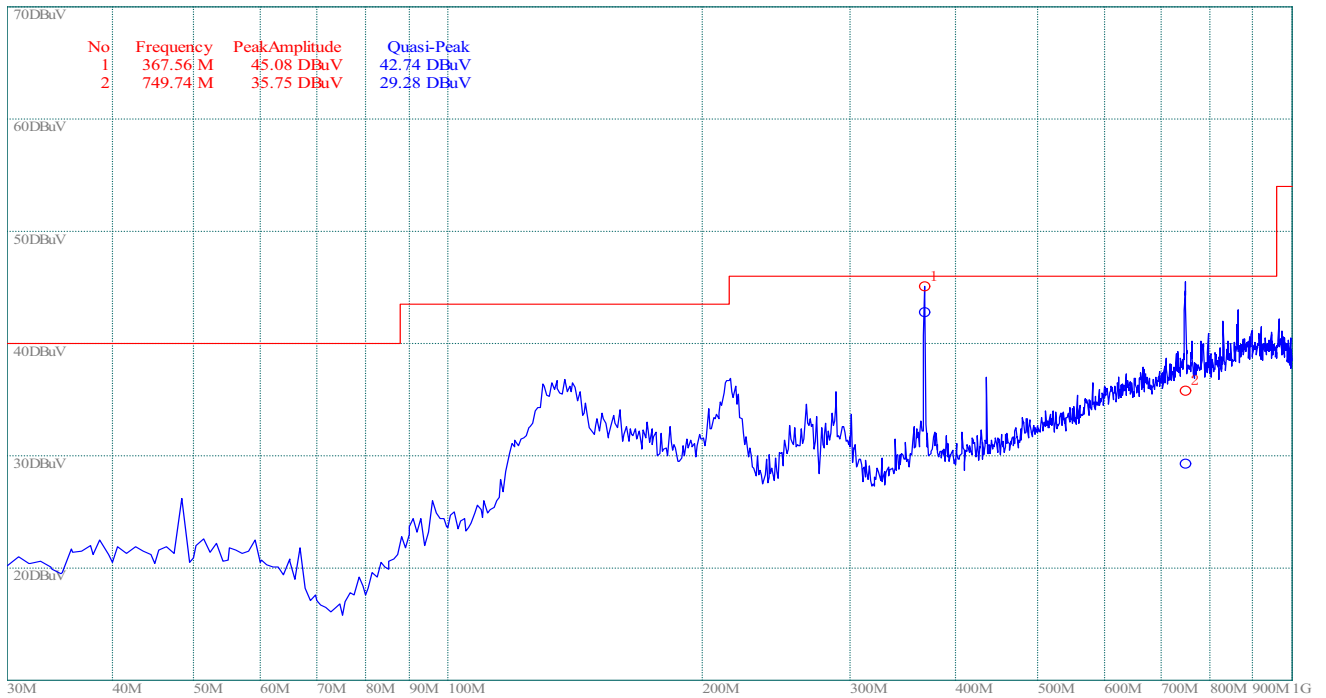
4.2.3.3 The third test mode (SD + WI-FI)

The EUT configuration of the emission tests is EUT + Battery + SD Card + Charger + Wireless Router.

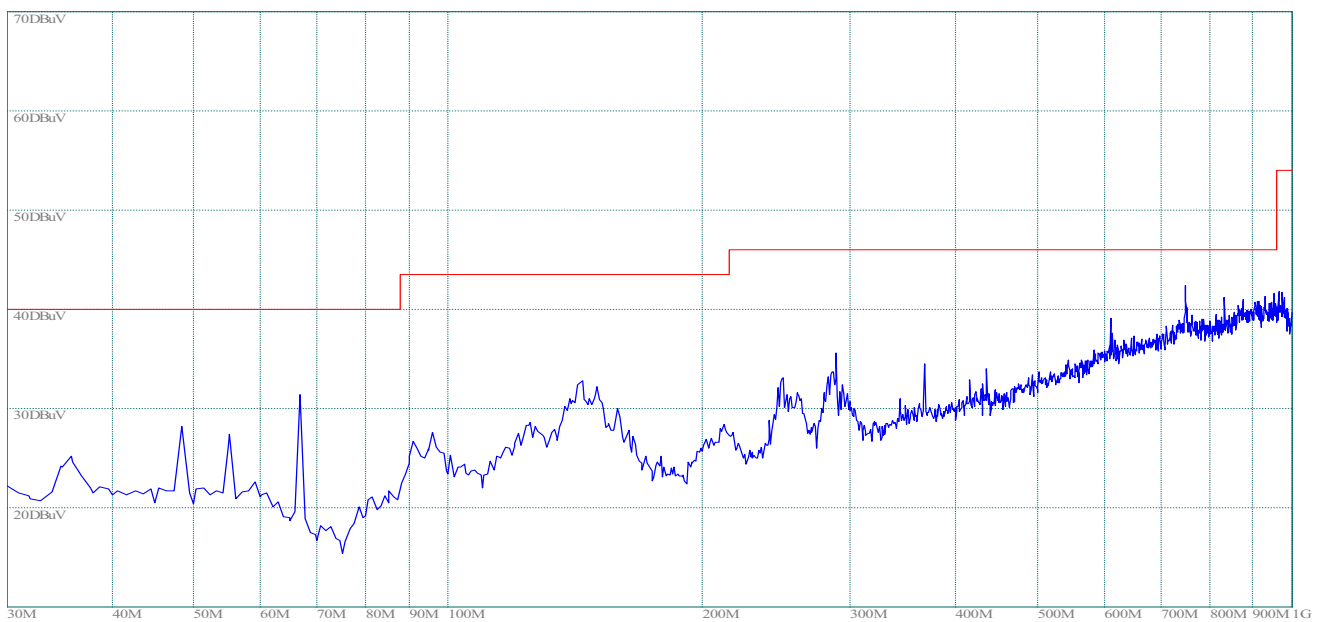
A. Test Verdict Recorded for Suspicious Points:

No.	@Frequency (MHz)	Emission Level (dBμV/m)			Quasi-Peak Limit (dBμV/m)	Result
		PK	QP	Antenna Polarization		
1	367.56	45.08	42.74	Horizontal	46	PASS
2	749.74	35.75	29.28	Horizontal	46	PASS

B. Test Plot:



(Plot E: Test Antenna Horizontal)



(Plot F: Test Antenna Vertical)

** END OF REPORT **