

FCC Test Report

Product Name	Mobile Computer
Model No.	RS35
FCC ID.	Q3N-RS35

Applicant	Cipherlab Co, Ltd.
Address	12F, NO.333, SEC.2, DUNHUA S. RD., TAIPEI, TAIWAN, R.O.C.

Date of Receipt	June 08, 2020
Issued Date	Aug. 07, 2020
Report No.	2060284R-E3032110140
Report Version	V1.0



Testing Laboratory

3023

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.

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Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test Report

Issued Date: Aug. 07, 2020

Report No.: 2060284R-E3032110140



Product Name	Mobile Computer
Applicant	Cipherlab Co, Ltd.
Address	12F, NO.333, SEC.2, DUNHUA S. RD., TAIPEI, TAIWAN, R.O.C.
Manufacturer	Cipherlab Co, Ltd.
Model No.	RS35
FCC ID.	Q3N-RS35
EUT Rated Voltage	AC 100-240V, 50-60Hz or DC 5V by USB or DC 3.8V by battery
EUT Test Voltage	AC 120V / 60Hz
Trade Name	CIPHERLAB
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C ANSI C63.4: 2014, ANSI C63.10: 2013
Test Result	Complied

Documented By :



(Senior Adm. Specialist / Genie Chang)

Tested By :



(Engineer / Yunche Chen)

Approved By :



(Director / Vincent Lin)

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Revision History

Report No.	Version	Description	Issued Date
2060284R-E3032110140	V1.0	Initial issue of report.	2020-08-07

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Mobile Computer
Trade Name	CIPHERLAB
Model No.	RS35
FCC ID.	Q3N-RS35
Frequency Range	WLAN : 802.11b/g/n-20: 2412-2462 MHz, 802.11n-40: 2422-2452 MHz 802.11a/n-20MHz: 5180-5320MHz, 5500-5700MHz, 5745-5825MHz 802.11n-40MHz: 5190-5310, 5510-5670MHz, 5755-5795MHz 802.11ac-80MHz: 5210-5290MHz, 5530-5690MHz, 5775MHz Bluetooth : 2402-2480 MHz
Channel Number	WLAN : 802.11b/g/n-20MHz: 11, n-40MHz: 7 802.11a/n-20MHz: 25, 802.11n-40MHz: 12 802.11ac-80MHz: 6 Bluetooth : V3.0+HS, V2.1+EDR: 79, V4.0: 40
Data Rate	WLAN : 802.11b: 1-11Mbps, 802.11a/g: 6-54Mbps, 802.11n: up to 150Mbps 802.11ac-80 MHz: up to 433.3 Mbps Bluetooth: 1-3Mbps
Channel Separation	WLAN : 802.11b/g/n: 5 MHz, 802.11a/n-20 MHz: 20 MHz, 802.11n-40 MHz: 40 MHz 802.11ac-80 MHz: 80 MHz Bluetooth : V3.0: 1 MHz; V4.0: 2 MHz
Type of Modulation	WLAN : 802.11b:DSSS, DBPSK, DQPSK, CCK 802.11a/g/n/ac: OFDM, BPSK, QPSK, 16QAM, 64QAM, 256QAM Bluetooth : V3.0+HS, V2.1+EDR: GFSK(1Mbps) / π /4DQPSK(2Mbps) / 8DPSK(3Mbps); V4.0: GFSK(1Mbps)
Antenna Type	PIFA Antenna
Channel Control	Auto
Antenna Gain	Refer to the table "Antenna List"
USB to Type-C Cable	Shielded, 1m
USB Docking Cable	Shielded, 1.5m, with one ferrite core boned.
Power Adapter	MFR: SUNNY, M/N: SYS1561-1005 Input: AC 100-240V, 50-60Hz Output: 5V $\overline{\text{---}}$ 2A

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	Auden	RS35	PIFA Antenna	0.1dBi for 2.4GHz 1.9dBi for 5.150-5.250 GHz 3.0dBi for 5.250-5.350 GHz 3.6dBi for 5.470-5.725 GHz 2.7dBi For 5.725~5.825GHz

Note: The antenna of EUT is conform to FCC 15.203

1.2. Test Summary

Part 15C Requirement

Requirement – Test Item	Result
Spurious emissions	Pass

Part 22H,Part 24E,Part 27,Part 90 Requirement

Requirement – Test Item	Result
Spurious emissions	Pass

Note:

1. The EUT is a Mobile Computer with a built-in 2.4 GHz and 5 GHz WLAN and Bluetooth V4.0, V3.0, V2.1+EDR and WWAN transceiver.
2. These tests were conducted on a sample for the purpose of demonstrating compliance of transmitter with Part 15 Subpart C Paragraph 15.247 for spread spectrum devices.
3. The consider Co-Location based on KDB 996369 D02 Question 1 and KDB 996369 D04 for Radiated Spurious Emission & SAR testing.
4. The final test results meets all the applicable FCC rules, including FCC Part 15C and Part 22H, Part 24E, Part 27 Part 90.

<p>Test Mode (Simultaneous Transmit)</p>	<p>(1) Select adjacent operating bands.</p> <p>Mode 1: LTE B41 (20MBW 2506MHz)+WLAN 802.11n20 (2462MHz)+NFC+GPS</p> <p>Mode 2: LTE B7 (20MBW 2510MHz)+WLAN 802.11n40 (2452MHz)+NFC+GPS</p> <p>Mode 3: WLAN 802.11n20 (2412MHz)+BT EDR 3Mbps (2402MHz)+NFC+GPS</p> <p>(2) Select higher power channel from each pair of simultaneous transmission</p> <p>Mode 4: WCDMA Band V (846.6MHz)+WLAN 802.11g (2437MHz)+NFC+GPS</p> <p>Mode 5: LTE Band 14 (10MBW 793MHz)+WLAN 802.11a (5500MHz)+NFC+GPS</p> <p>Mode 6: LTE Band 66 (20MBW 1745MHz)+BT 1Mbps (2402MHz)+NFC+GPS</p>
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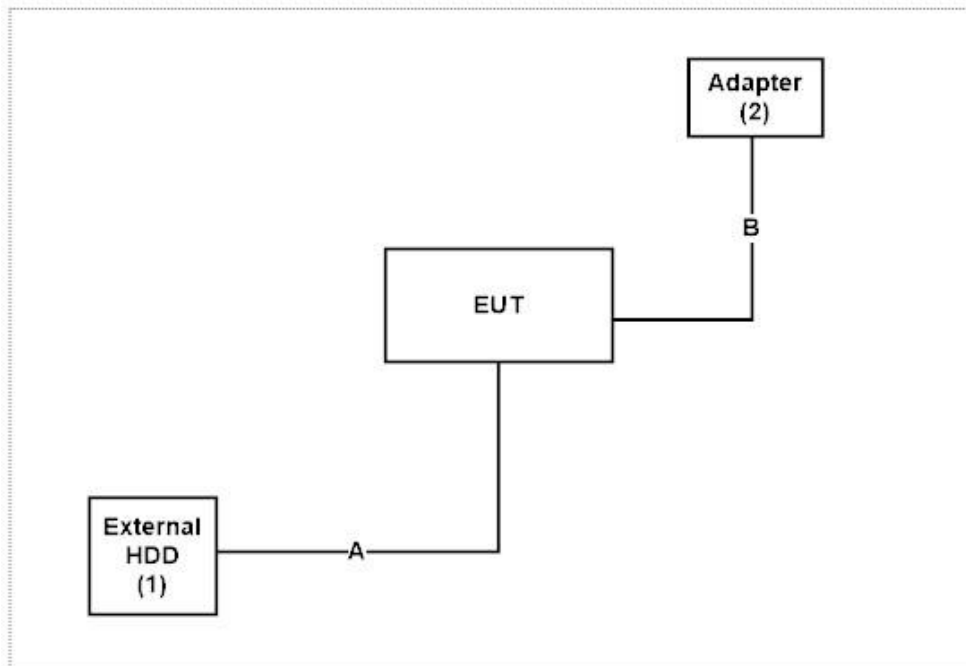
1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	External HDD	Transcend	TS1TSJ25H3B	F21786-0125	N/A
2	Adapter	SUNNY	SYS1561-1005	N/A	N/A

Signal Cable Type	Signal cable Description
A	USB to Type-C Cable Shielded, 1m
B	USB Docking Cable Shielded, 1.5m, with one ferrite core boned.

1.4. Configuration of Tested System



1.5. EUT Exercise Software

- (1) Setup the EUT as shown on 1.4
- (2) Execute software "QRCT v3.0.271.0" on the EUT.
- (3) The Communication Analyzer (MT8820C) uses in controlling EUT to transmit continuously.
- (4) Configure the test mode, the test channel, and the data rate.
- (5) Start the continuous transmission.
- (6) Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Performed Item	Items	Required	Actual
Radiated Emission	Temperature (°C)	10~40 °C	26.6 °C
	Humidity (%RH)	10~90 %	60 %

USA : FCC Registration Number: TW3023

Canada : IC Registration Number: 4075A

Site Description: Accredited by TAF
Accredited Number: 3023

Test Laboratory: DEKRA Testing and Certification Co., Ltd
Address: No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451,
Taiwan, R.O.C.

Phone number: 886-2-8601-3788

Fax number: 886-2-8601-3789

Email address: info.tw@dekra.com

Website: <http://www.dekra.com.tw>

1.7. List of Test Item and Equipment

For Radiated measurements /Site3/CB8

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Date	Due. Date
X	Test Receiver	R&S	ESR7	101602	2019/12/16	2020/12/15
X	Signal Analyzer	R&S	FSV40	101869	2020/06/24	2021/06/23
X	Loop Antenna	Teseq	HLA6121	37133	2019/10/15	2021/10/14
X	Bilog Antenna	Schaffner Chase	CBL6112B	2916	2020/01/20	2021/01/19
X	Coaxial Cable	DEKRA	L1907-001C	280280.F141.1000D	2020/07/09	2021/07/08
X	Amplifier	EMCI	EMC001330	980254	2019/08/22	2020/08/21
X	Horn Antenna	ETS-LINDGREN	3117	00228113	2020/05/28	2021/05/27
X	Coaxial Cable	DEKRA	L1907-002C	280280.F141.1000D	2020/07/09	2021/07/08
X	Amplifier	EMCI	EMC05820SE	980362	2020/06/30	2021/06/29
X	Amplifier	EMCI	EMC051845SE	980632	2019/08/08	2020/08/07
X	Horn Antenna	Com-Power	AH-1840	101101	2019/10/31	2020/10/30
X	Amplifier + Cable	EMCI	EMC184045SE	980369	2020/04/23	2021/04/22
	Bilog Antenna	Schaffner Chase	CBL6112B	2925	2020/02/20	2021/02/19
	Coaxial Cable	DEKRA	L1907-003C	00100A1B3A120M	2019/07/10	2020/07/09
	Amplifier	EMCI	EMC001330	980255	2020/03/17	2021/03/16
X	Filter	MICRO-TRONIC	BRM50702	G270	2019/08/08	2020/08/07
X	Filter	MICRO-TRONIC	BRM50716	G196	2019/08/08	2020/08/07
X	Radio Communication Analyzer	Anritsu	MT8820C	6201091166	2019/03/21	2021/03/20

Note:

1. Loop Antenna is calibrated every two years, the other equipments are calibrated every one year.
2. The test instruments marked with "X" are used to measure the final test results.
3. Test Software version : DEKRA Test SystemV1.1.

1.8. Uncertainty

Uncertainties have been calculated according to the DEKRA internal document, and is described in each test chapter of this report.

The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

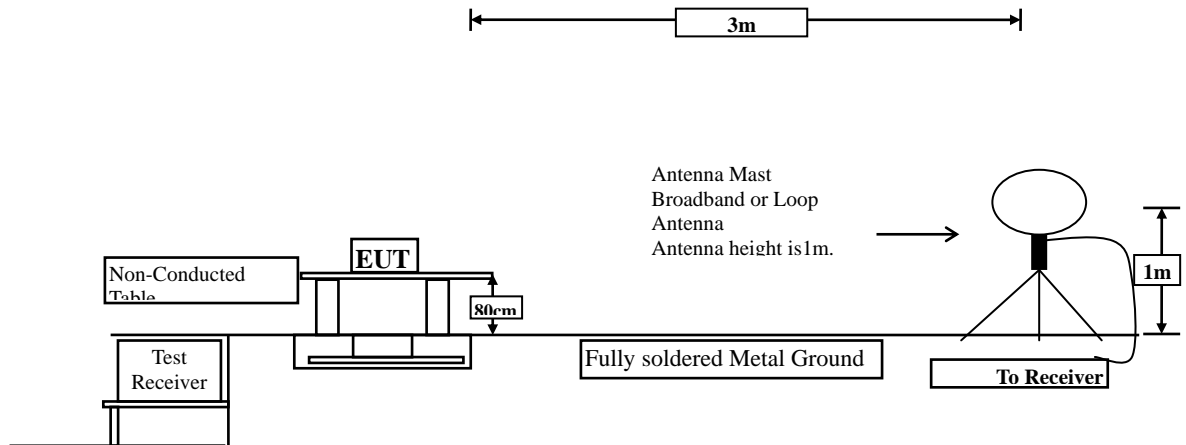
Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Test item	Uncertainty
Radiated Emission	9kHz~30MHz: ± 3.88 dB
	30MHz~1GHz: ± 4.06 dB
	1GHz~18GHz: ± 3.71 dB
	18GHz~40GHz: ± 3.73 dB
	40GHz~50GHz: ± 3.75 dB
	50GHz~325GHz: ± 4.39 dB

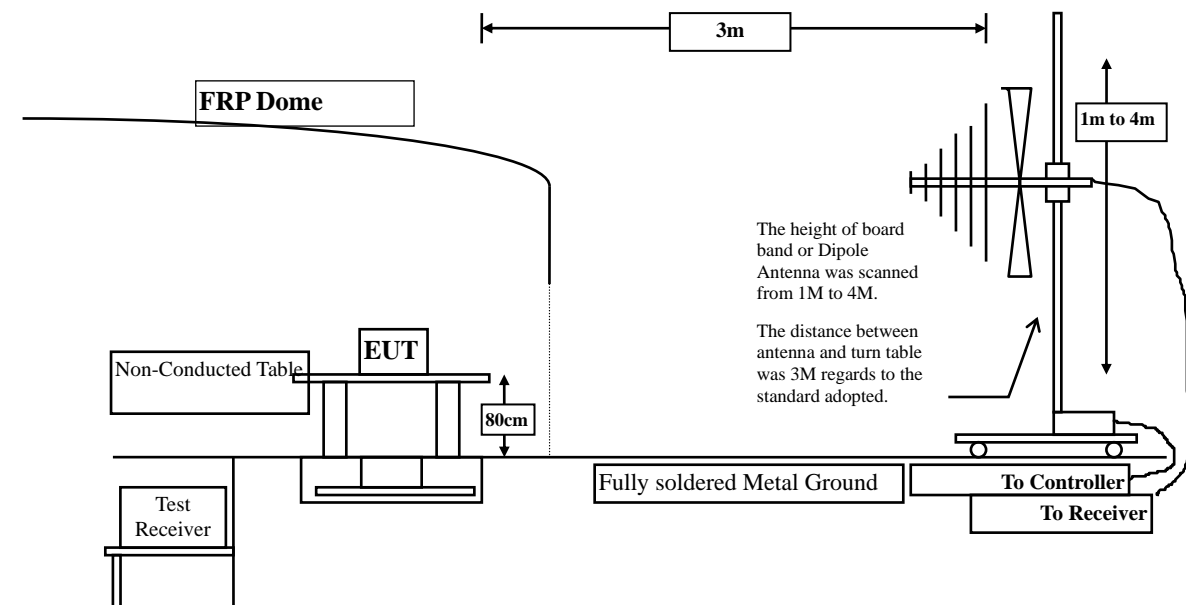
2. Radiated Emission

2.1. Test Setup

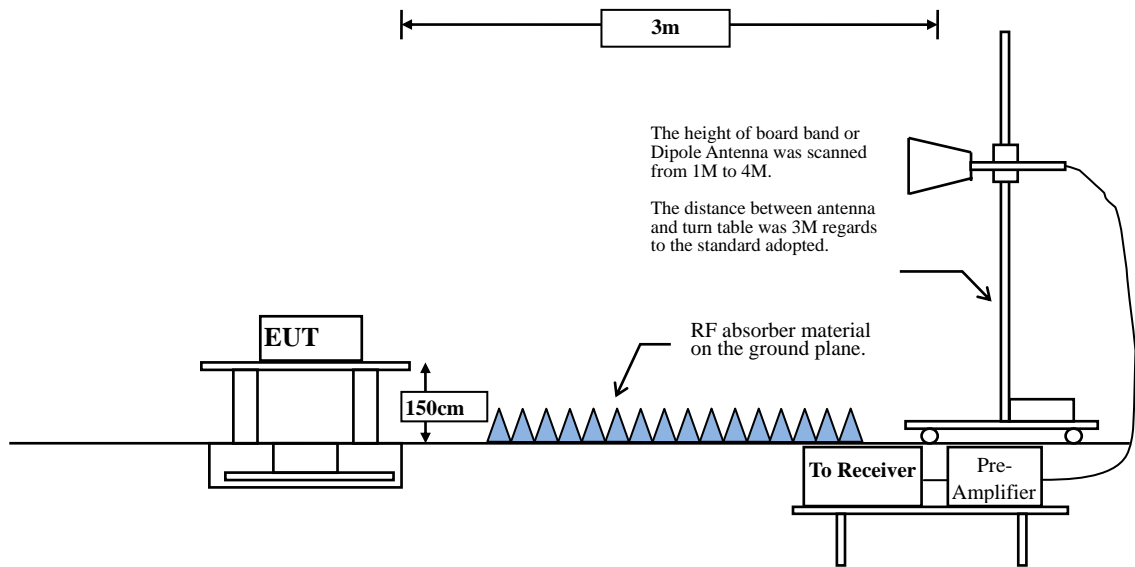
Under 30MHz



Below 1GHz



Above 1GHz



2.2. Limits

➤ General Radiated Emission Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits		
Frequency MHz	Field strength (microvolts/meter)	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

- Remarks:
1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
 2. In the Above Table, the tighter limit applies at the band edges.
 3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

The final test results meets all the applicable FCC rules, including FCC Part 15C and Part 22H, Part 24E, Part 27 Part 90.

2.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground, when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

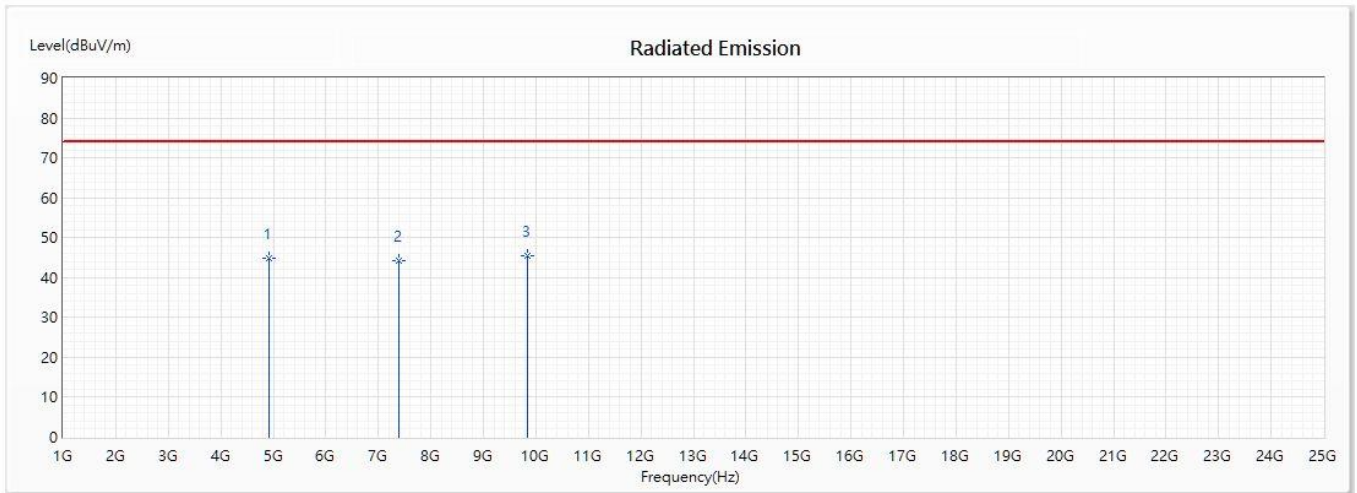
The worst radiated emission is measured in the Open Area Test Site on the Final Measurement.

The measurement frequency range from 9kHz - 10th Harmonic of fundamental was investigated.

2.4. Test Result of Radiated Emission

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 1: LTE B41 (20MBW 2506MHz)+WLAN 802.11n20 (2462MHz)+NFC+GPS

Horizontal



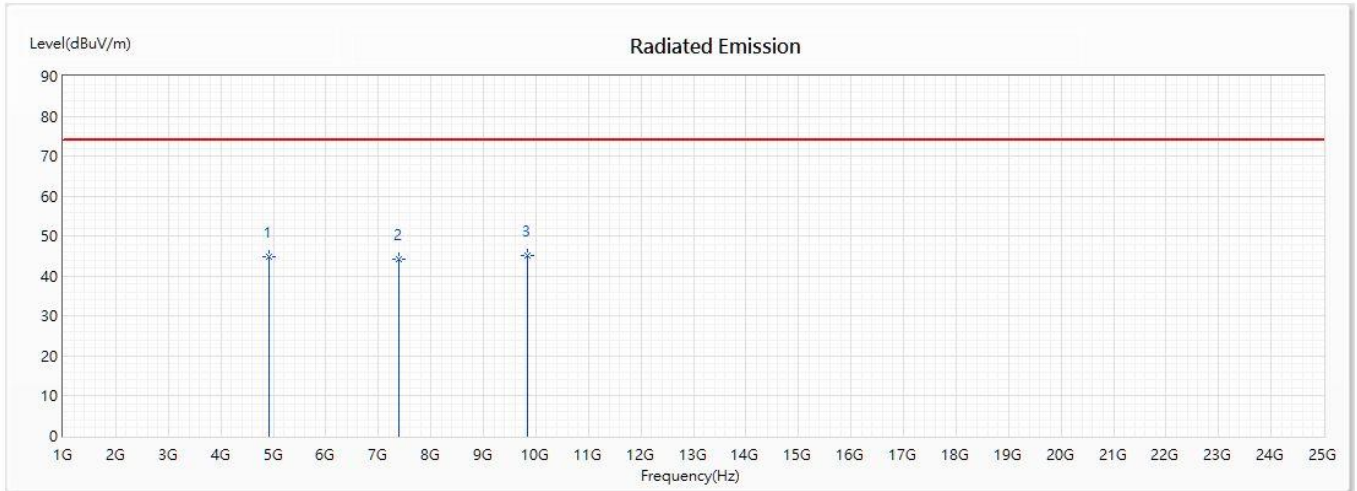
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4924	44.85	74.00	-29.15	55.89	-11.04	PK
2	7386	44.18	74.00	-29.82	58.18	-14.00	PK
* 3	9848	45.38	74.00	-28.62	58.62	-13.24	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 1: LTE B41 (20MBW 2506MHz)+WLAN 802.11n20 (2462MHz)+NFC+GPS

Vertical



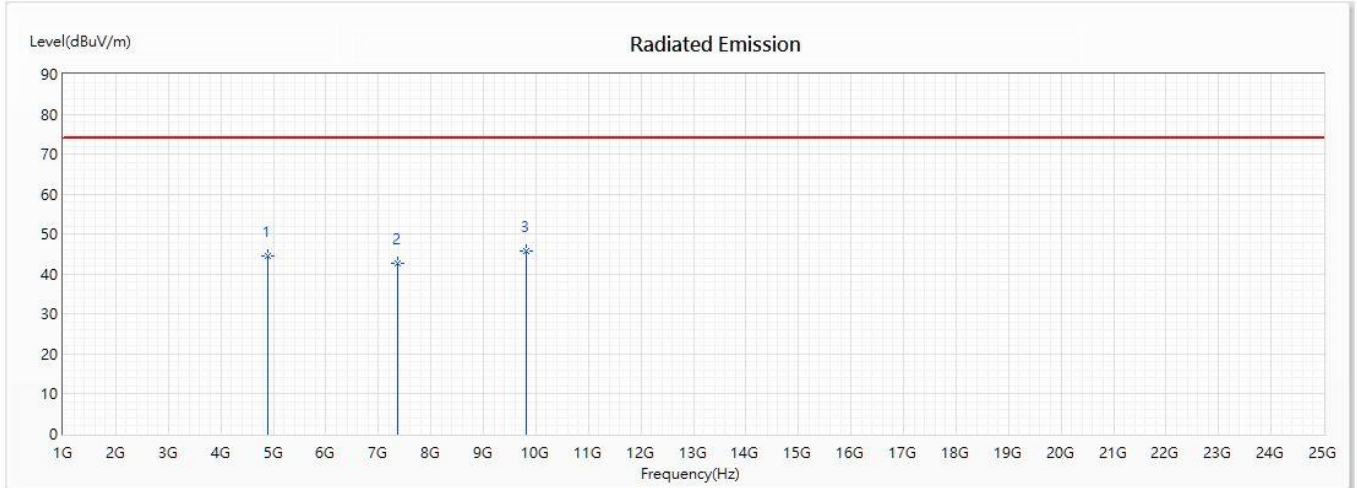
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4924	44.82	74.00	-29.18	55.86	-11.04	PK
2	7386	44.25	74.00	-29.75	58.25	-14.00	PK
* 3	9848	45.27	74.00	-28.73	58.51	-13.24	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 2: LTE B7 (20MBW 2510MHz)+WLAN 802.11n40 (2452MHz)+NFC+GPS

Horizontal



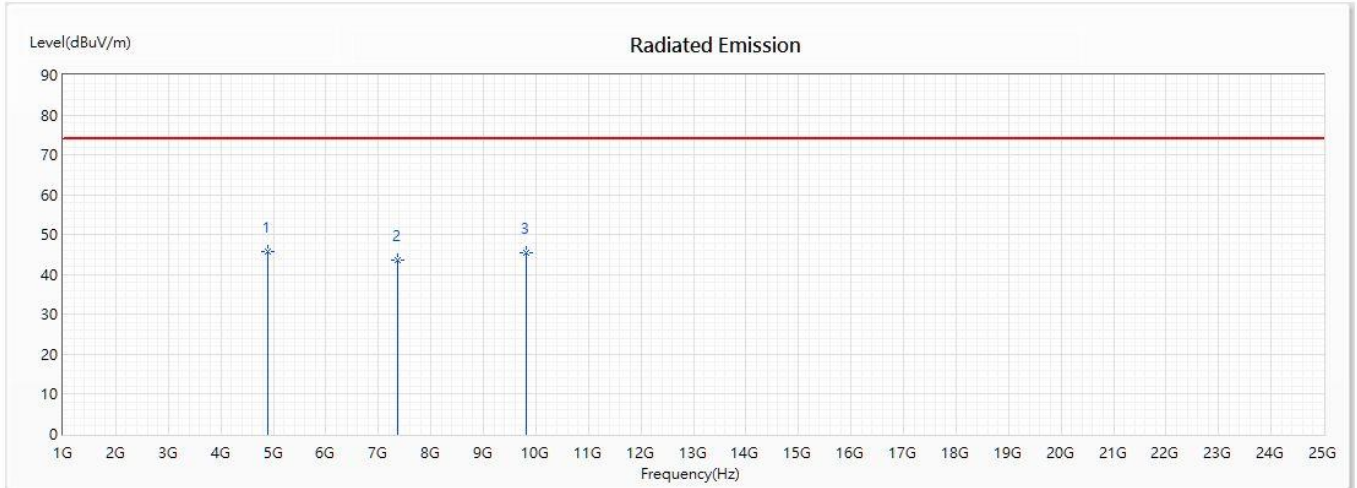
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4904	44.65	74.00	-29.35	55.89	-11.24	PK
2	7356	42.76	74.00	-31.24	56.50	-13.74	PK
* 3	9808	45.67	74.00	-28.33	58.47	-12.80	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 2: LTE B7 (20MBW 2510MHz)+WLAN 802.11n40 (2452MHz)+NFC+GPS

Vertical



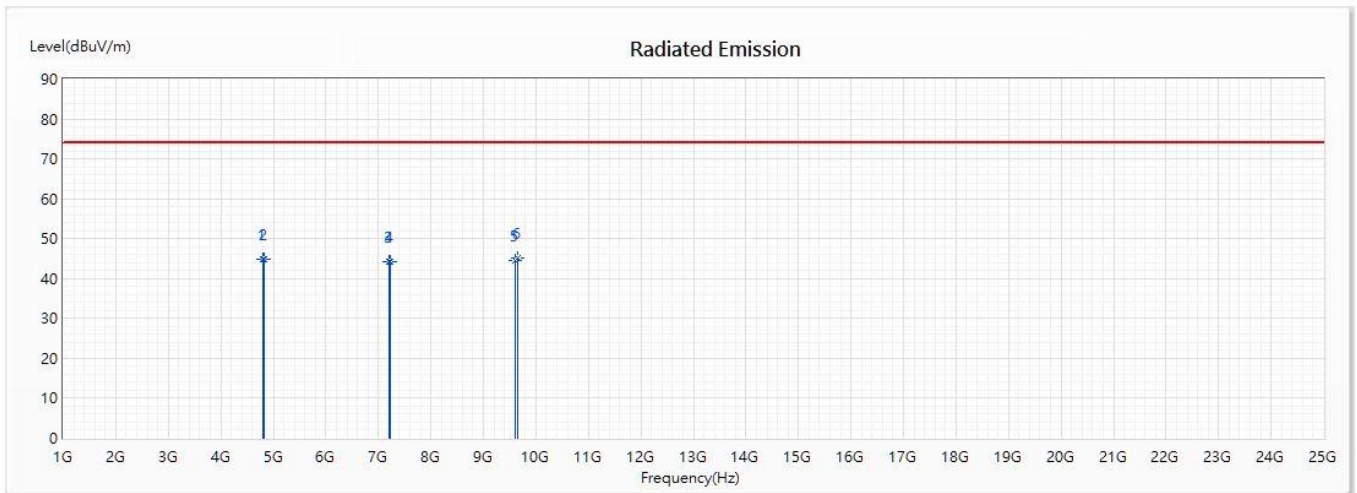
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
* 1	4904	45.65	74.00	-28.35	56.89	-11.24	PK
2	7356	43.75	74.00	-30.25	57.49	-13.74	PK
3	9808	45.56	74.00	-28.44	58.36	-12.80	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 3: WLAN 802.11n20 (2412MHz)+BT EDR 3Mbps (2402MHz)+NFC+GPS

Horizontal



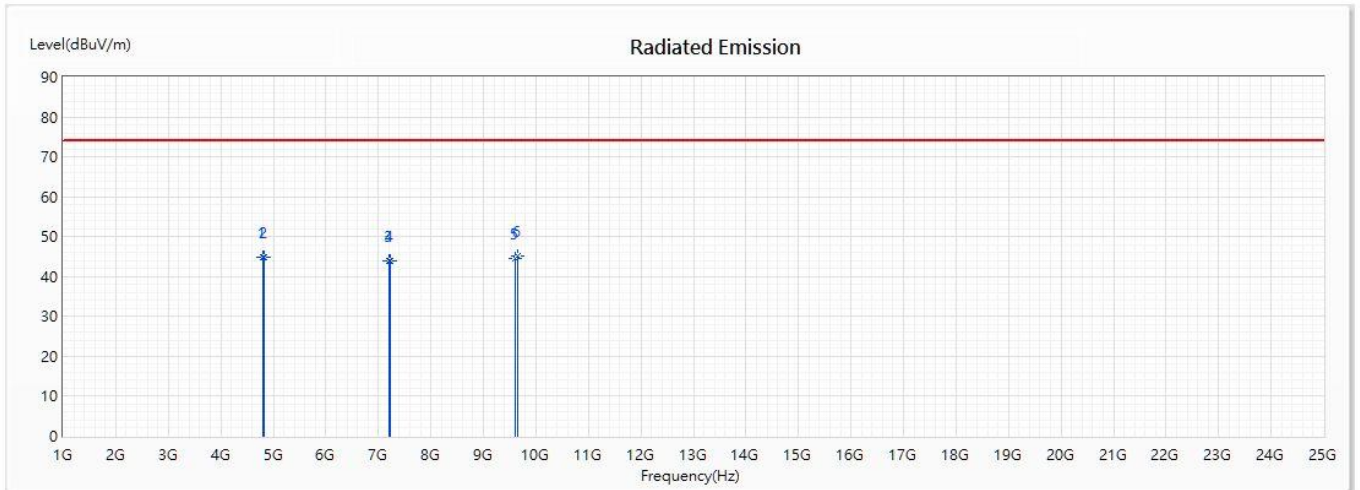
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4804	44.89	74.00	-29.11	57.12	-12.23	PK
2	4824	44.78	74.00	-29.22	56.77	-11.99	PK
3	7206	44.18	74.00	-29.82	57.04	-12.86	PK
4	7236	44.17	74.00	-29.83	56.97	-12.80	PK
5	9608	44.56	74.00	-29.44	57.88	-13.32	PK
* 6	9648	45.25	74.00	-28.75	58.25	-13.00	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 3: WLAN 802.11n20 (2412MHz)+BT EDR 3Mbps (2402MHz)+NFC+GPS

Vertical



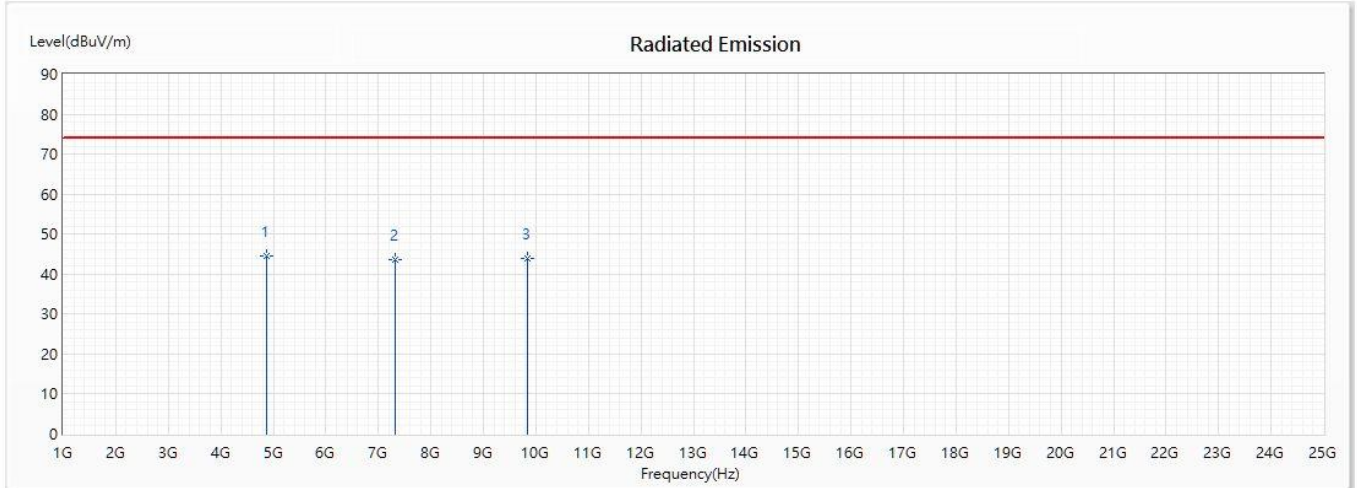
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4804	44.81	74.00	-29.19	57.04	-12.23	PK
2	4824	44.76	74.00	-29.24	56.75	-11.99	PK
3	7206	44.07	74.00	-29.93	56.93	-12.86	PK
4	7236	44.03	74.00	-29.97	56.83	-12.80	PK
5	9608	44.52	74.00	-29.48	57.84	-13.32	PK
* 6	9648	45.27	74.00	-28.73	58.27	-13.00	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 4: WCDMA Band V (846.6MHz)+WLAN 802.11g (2437MHz)+NFC+GPS

Horizontal



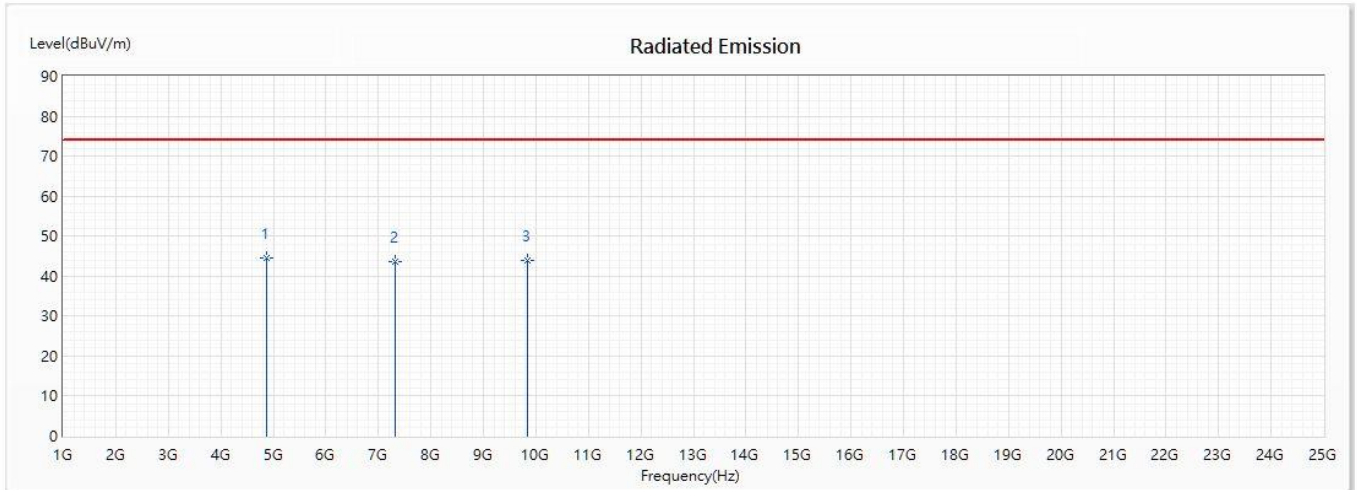
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
* 1	4874	44.47	74.00	-29.53	55.96	-11.49	PK
2	7311	43.56	74.00	-30.44	56.94	-13.38	PK
3	9848	43.87	74.00	-30.13	57.11	-13.24	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 4: WCDMA Band V (846.6MHz)+WLAN 802.11g (2437MHz)+NFC+GPS

Vertical



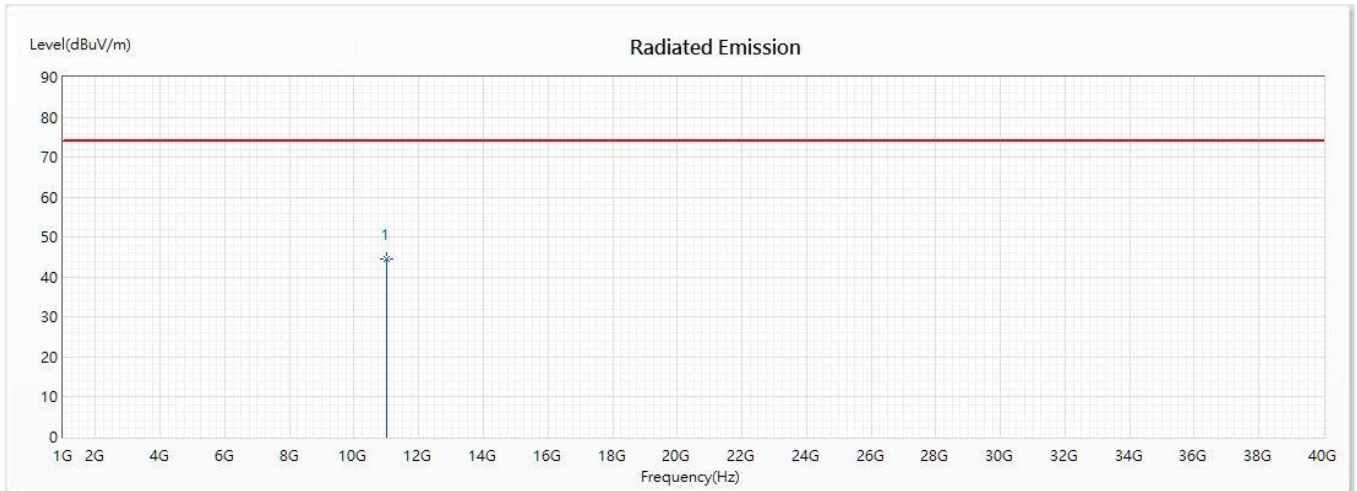
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
* 1	4874	44.61	74.00	-29.39	56.10	-11.49	PK
2	7311	43.72	74.00	-30.28	57.10	-13.38	PK
3	9848	44.03	74.00	-29.97	57.27	-13.24	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 5: LTE Band 14 (10MBW 793MHz)+WLAN 802.11a (5500MHz)+NFC+GPS

Horizontal



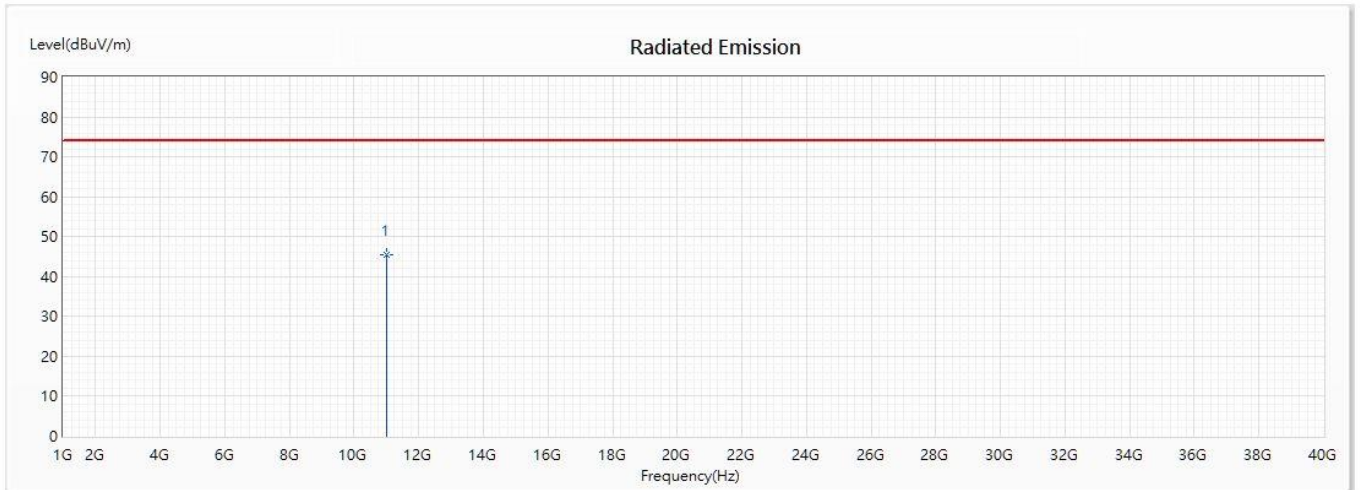
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
* 1	11000	44.57	74.00	-29.43	57.17	-12.60	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 5: LTE Band 14 (10MBW 793MHz)+WLAN 802.11a (5500MHz)+NFC+GPS

Vertical



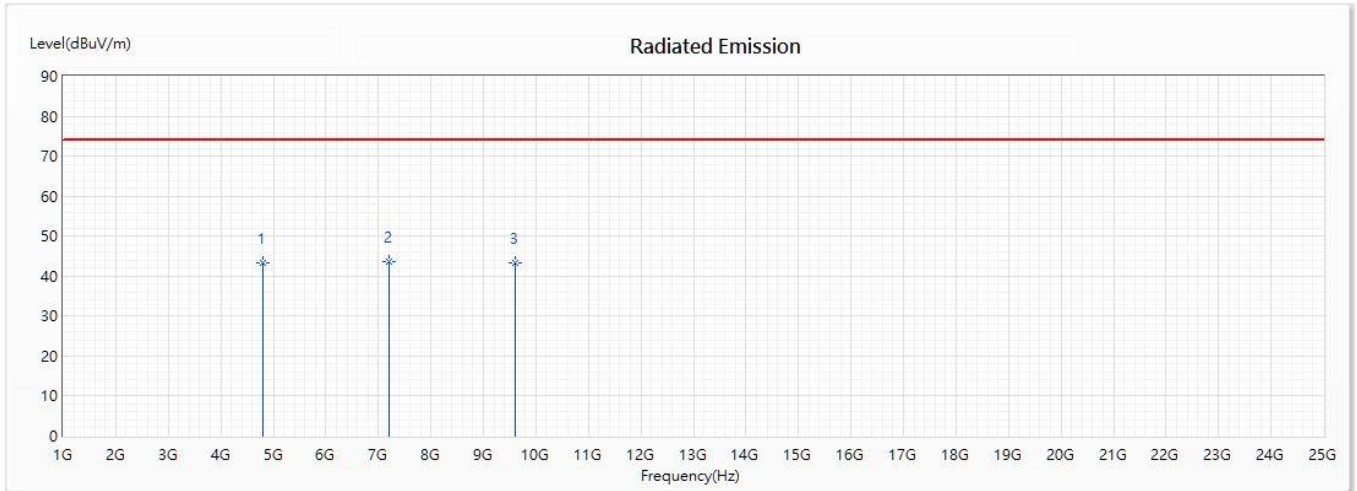
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
* 1	11000	45.36	74.00	-28.64	57.96	-12.60	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 6: LTE Band 66 (20MBW 1745MHz)+BT 1Mbps (2402MHz)+NFC+GPS

Horizontal



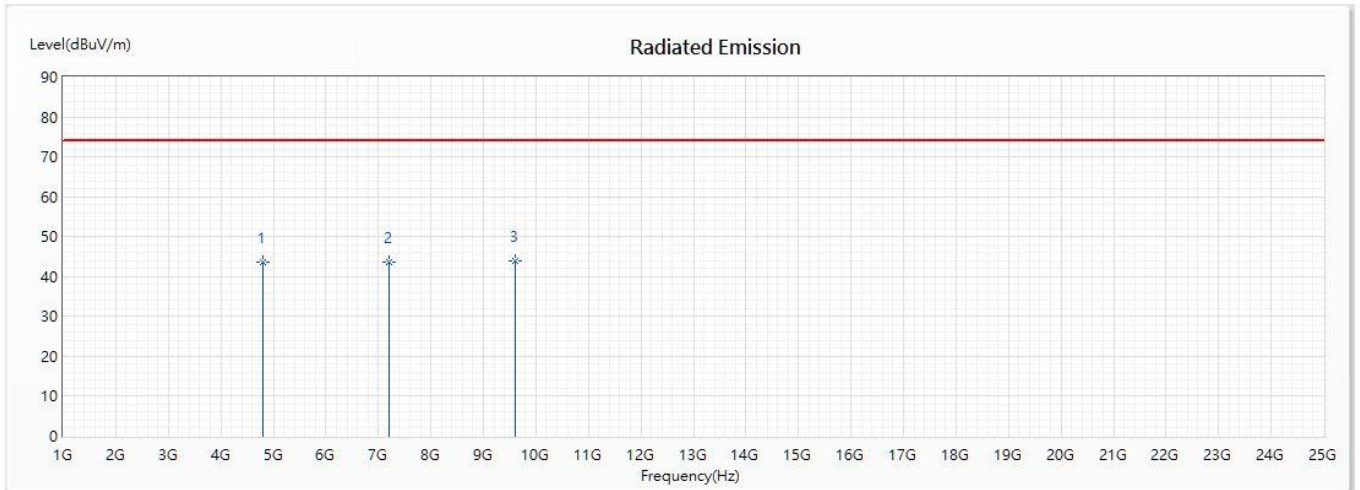
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4804	43.26	74.00	-30.74	55.49	-12.23	PK
* 2	7206	43.63	74.00	-30.37	56.49	-12.86	PK
3	9608	43.33	74.00	-30.67	56.65	-13.32	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 6: LTE Band 66 (20MBW 1745MHz)+BT 1Mbps (2402MHz)+NFC+GPS

Vertical



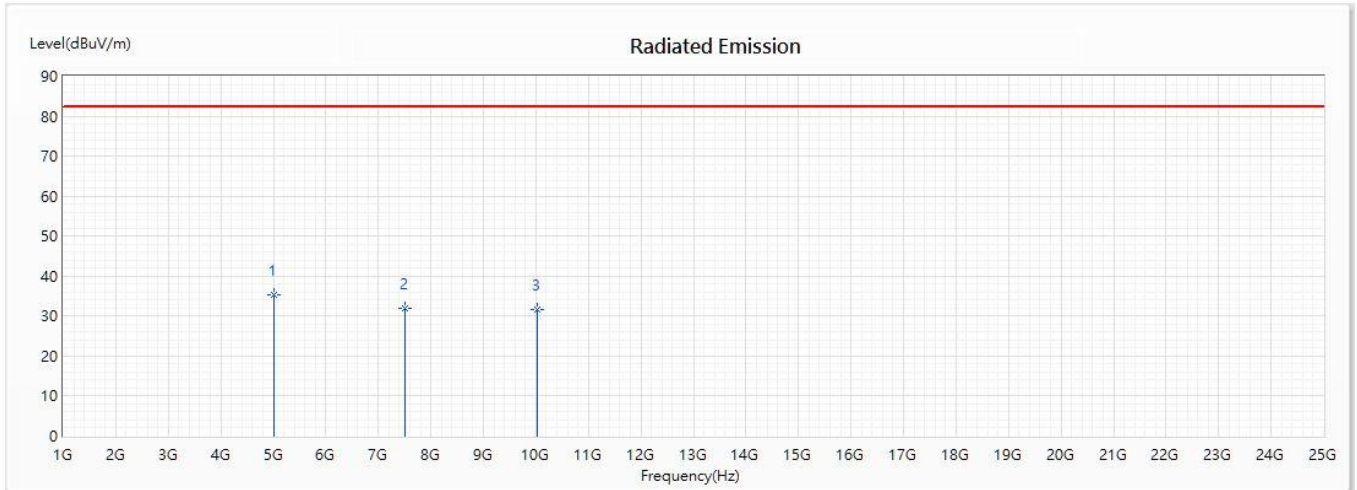
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	4804	43.77	74.00	-30.23	56.00	-12.23	PK
2	7206	43.55	74.00	-30.45	56.41	-12.86	PK
* 3	9608	44.02	74.00	-29.98	57.34	-13.32	PK

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The average measurement was not performed when the peak measured data under the limit of average detection.
5. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 1: LTE B41 (20MBW 2506MHz)+WLAN 802.11n20 (2462MHz)+NFC+GPS

Horizontal



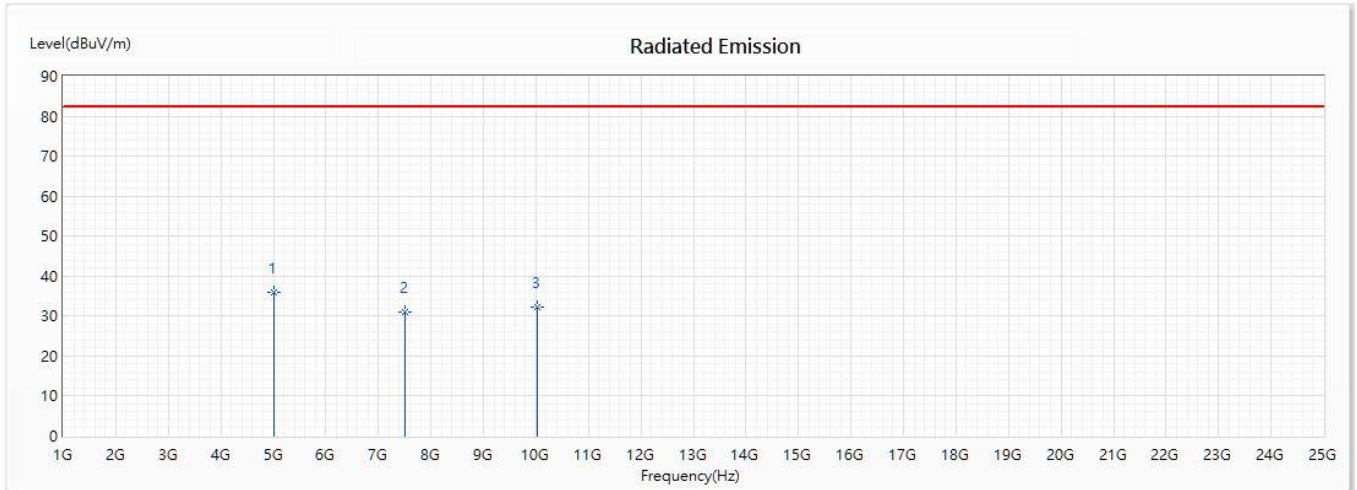
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
* 1	5012	35.47	82.23	-46.76	45.97	-10.50	AV
2	7518	31.92	82.23	-50.31	47.11	-15.19	AV
3	10024	31.75	82.23	-50.48	46.30	-14.55	AV

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 1: LTE B41 (20MBW 2506MHz)+WLAN 802.11n20 (2462MHz)+NFC+GPS

Vertical



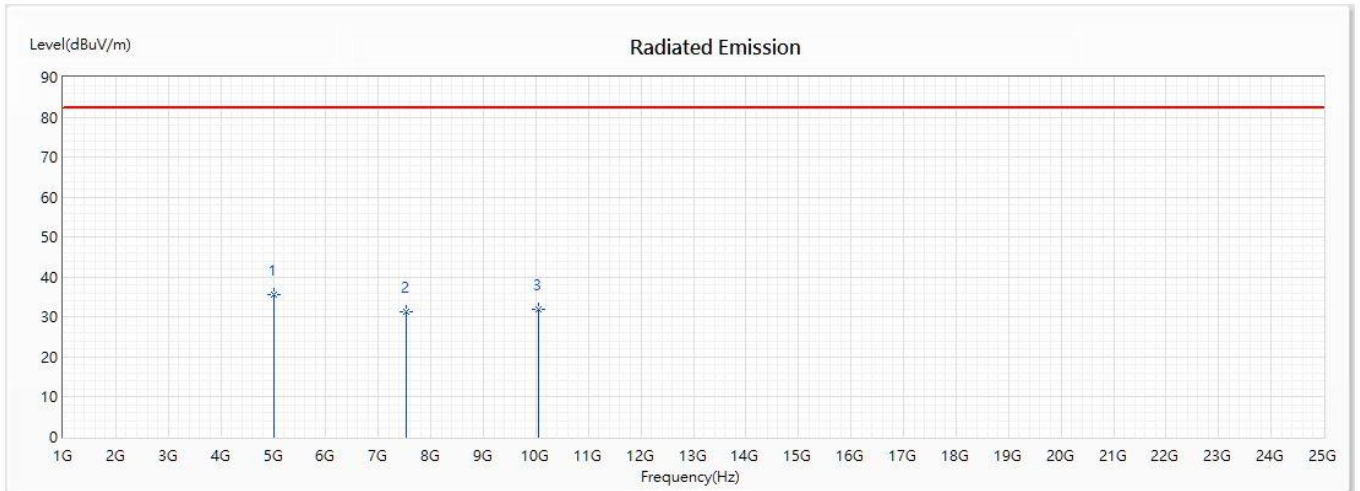
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
* 1	5012	35.93	82.23	-46.30	46.43	-10.50	AV
2	7518	31.12	82.23	-51.11	46.31	-15.19	AV
3	10024	32.27	82.23	-49.96	46.82	-14.55	AV

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 2: LTE B7 (20MBW 2510MHz)+WLAN 802.11n40 (2452MHz)+NFC+GPS

Horizontal



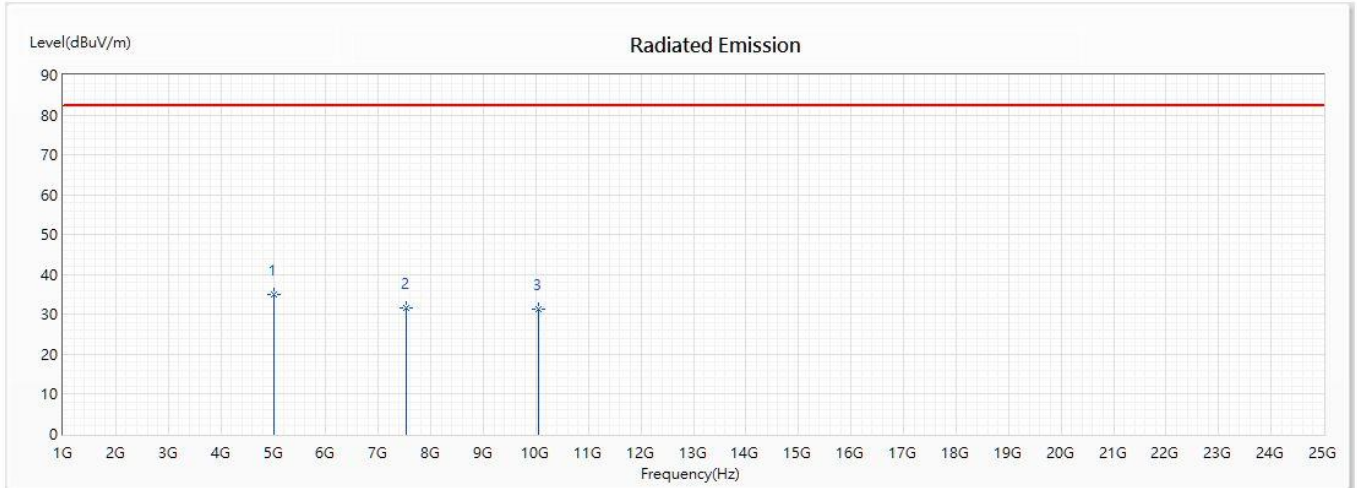
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
* 1	5020	35.76	82.23	-46.47	46.35	-10.59	AV
2	7530	31.26	82.23	-50.97	46.49	-15.23	AV
3	10040	32.05	82.23	-50.18	46.29	-14.24	AV

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 2: LTE B7 (20MBW 2510MHz)+WLAN 802.11n40 (2452MHz)+NFC+GPS

Vertical



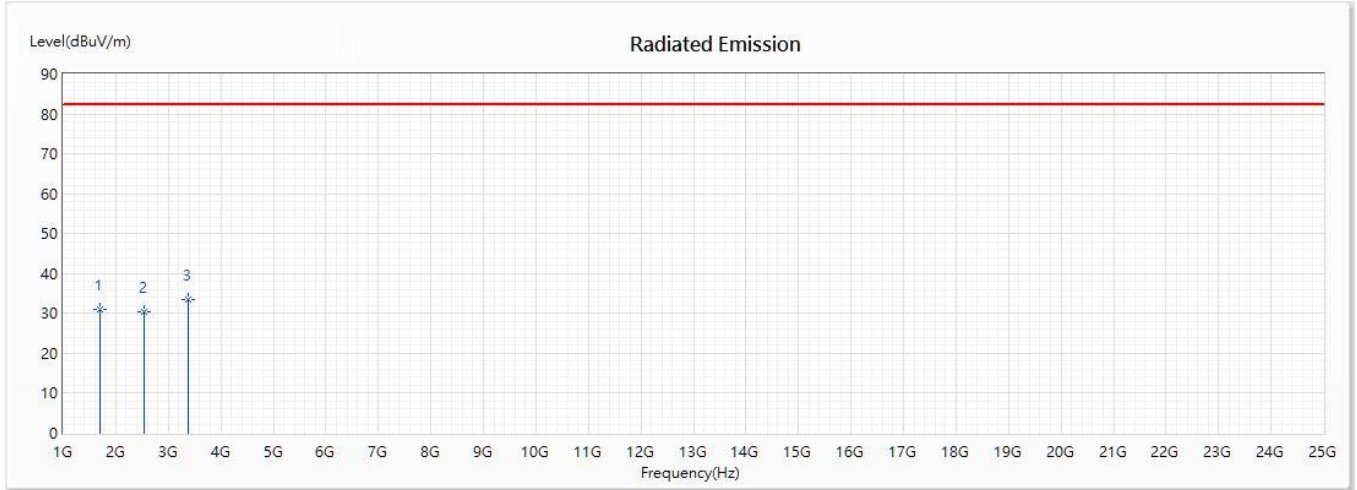
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
* 1	5020	34.92	82.23	-47.31	45.51	-10.59	AV
2	7530	31.55	82.23	-50.68	46.78	-15.23	AV
3	10040	31.28	82.23	-50.95	45.52	-14.24	AV

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 4: WCDMA Band V (846.6MHz)+WLAN 802.11g (2437MHz)+NFC+GPS

Horizontal



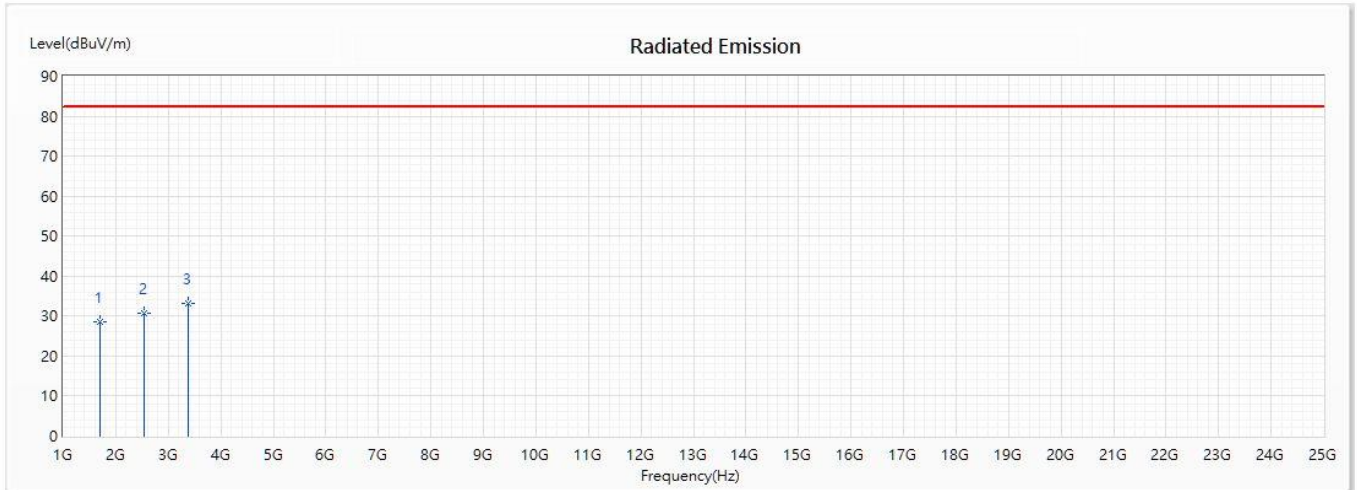
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	1693.2	30.95	82.23	-51.28	50.44	-19.49	AV
2	2539.8	30.55	82.23	-51.68	44.84	-14.29	AV
* 3	3386.4	33.56	82.23	-48.67	46.60	-13.04	AV

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 4: WCDMA Band V (846.6MHz)+WLAN 802.11g (2437MHz)+NFC+GPS

Vertical



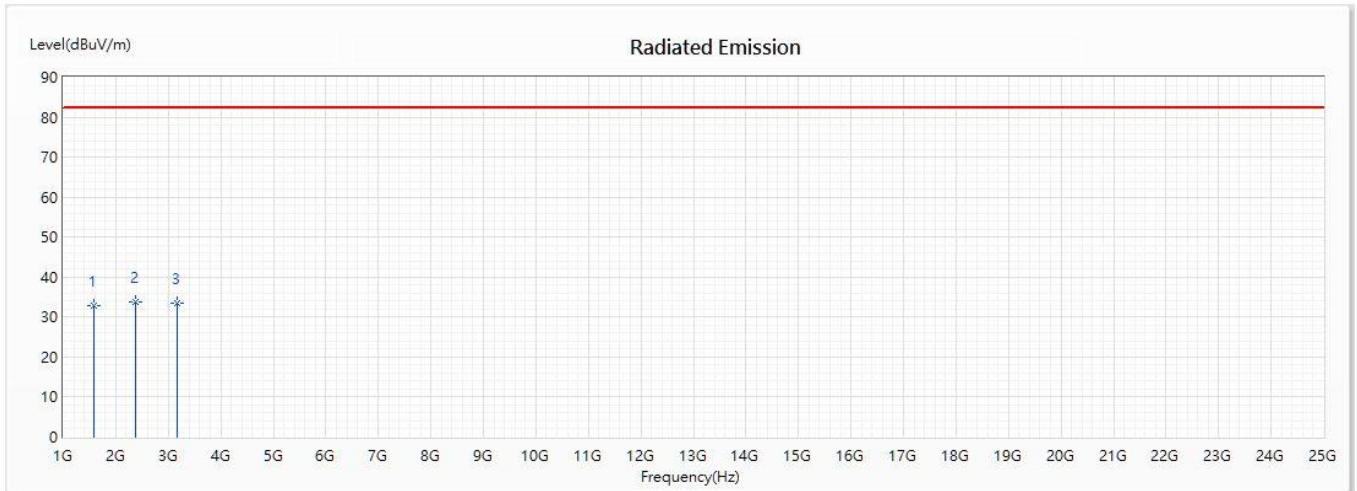
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	1693.2	28.43	82.23	-53.80	47.92	-19.49	AV
2	2539.8	30.76	82.23	-51.47	45.05	-14.29	AV
* 3	3386.4	33.07	82.23	-49.16	46.11	-13.04	AV

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 5: LTE Band 14 (10MBW 793MHz)+WLAN 802.11a (5500MHz)+NFC+GPS

Horizontal



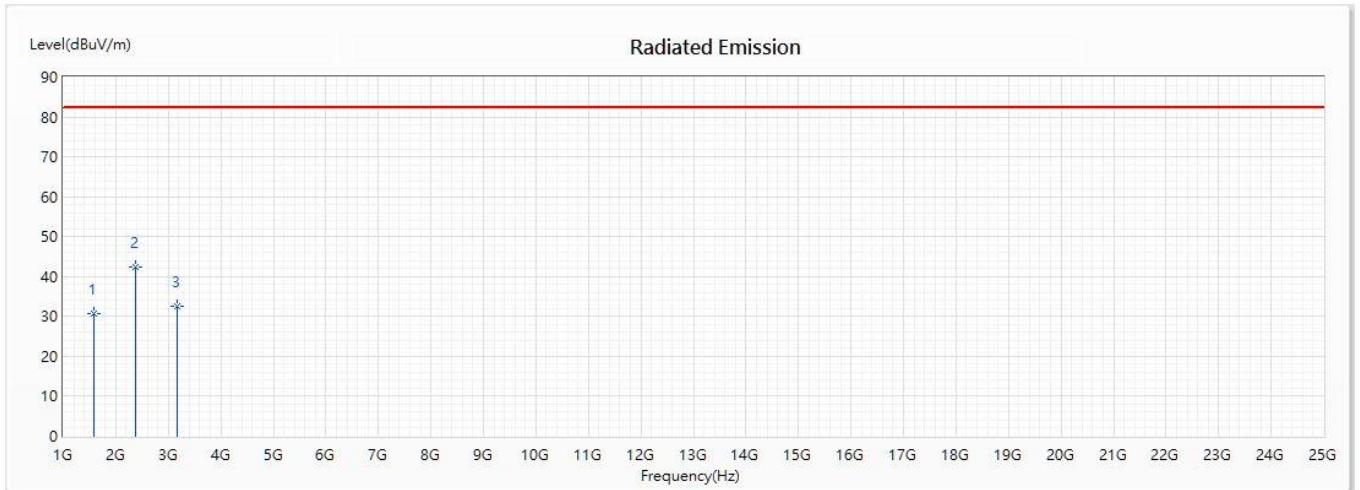
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	1586	32.78	82.23	-49.45	52.09	-19.31	AV
* 2	2379	33.66	82.23	-48.57	48.56	-14.90	AV
3	3172	33.55	82.23	-48.68	46.61	-13.06	AV

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 5: LTE Band 14 (10MBW 793MHz)+WLAN 802.11a (5500MHz)+NFC+GPS

Vertical



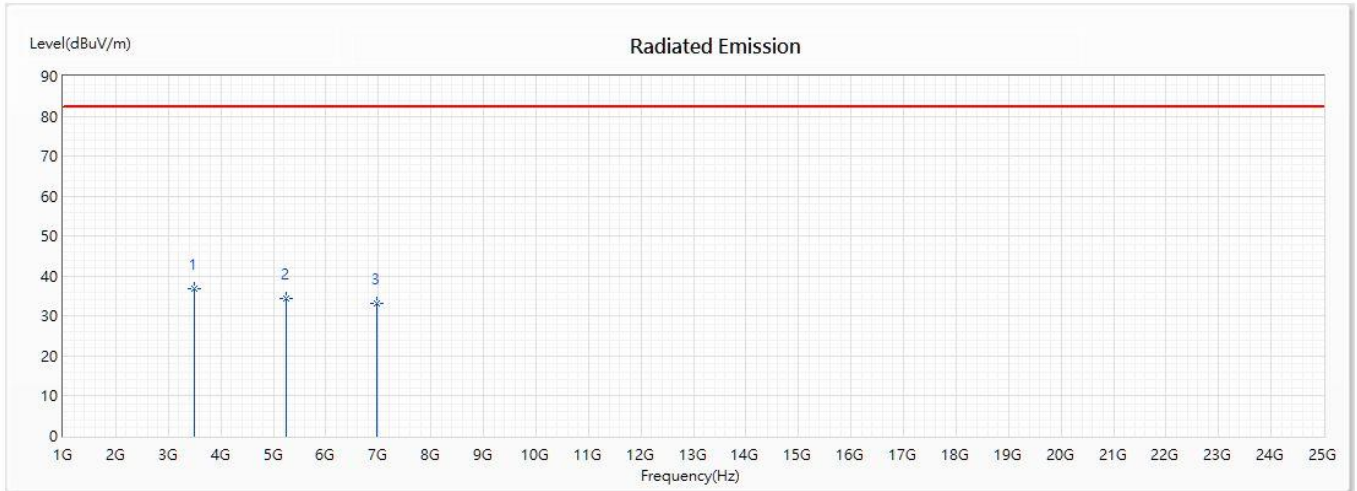
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	1586	30.73	82.23	-51.50	50.04	-19.31	AV
* 2	2379	42.43	82.23	-39.80	57.33	-14.90	AV
3	3172	32.56	82.23	-49.67	45.62	-13.06	AV

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 6: LTE Band 66 (20MBW 1745MHz)+BT 1Mbps (2402MHz)+NFC+GPS

Horizontal



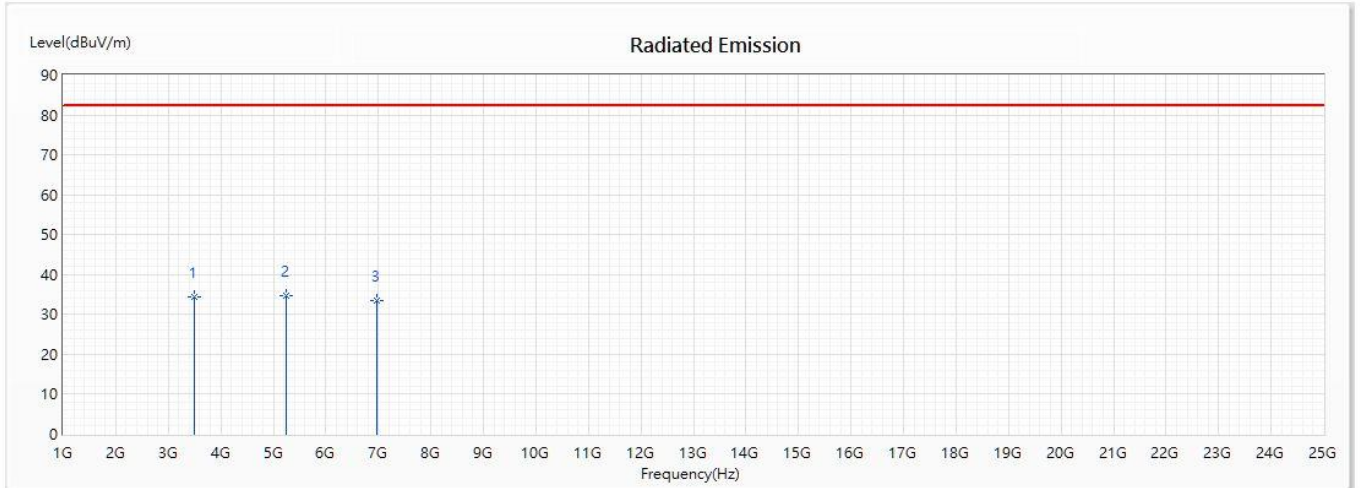
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
* 1	3490	36.85	82.23	-45.38	49.40	-12.55	AV
2	5235	34.53	82.23	-47.70	46.52	-11.99	AV
3	6980	33.17	82.23	-49.06	46.67	-13.50	AV

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : Mobile Computer
 Test Item : Harmonic Radiated Emission
 Test date : 2020/08/07
 Test Mode : Mode 6: LTE Band 66 (20MBW 1745MHz)+BT 1Mbps (2402MHz)+NFC+GPS

Vertical



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Detector Type
1	3490	34.47	82.23	-47.76	47.02	-12.55	AV
* 2	5235	34.65	82.23	-47.58	46.64	-11.99	AV
3	6980	33.42	82.23	-48.81	46.92	-13.50	AV

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Emission Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
4. The emission levels of other frequencies are very lower than the limit and not show in test report.

3. EMI Reduction Method During Compliance Testing

No modification was made during testing.