

Test Report No:
23C0907R-RFUSV22S-A

TEST REPORT

FCC Rules&Regulations

Product Name	M2M DATA MODULE
Brand Name	Wistron NeWeb Corporation
Model No.	M18QF
FCC ID	NKRM18QF
Applicant's Name / Address	Wistron NeWeb Corporation 20 Park Ave. II, Hsinchu Science Park, Hsinchu 308, Taiwan
Manufacturer's Name / Address	Wistron NeWeb Corporation 20 Park Ave. II, Hsinchu Science Park, Hsinchu 308, Taiwan
Test Method Requested, Standard	FCC CFR Title 47 Part 22 Subpart H FCC CFR Title 47 Part 24 Subpart E ANSI/TIA-603-E-2016 ANSI C63.26-2015
Verdict Summary	IN COMPLIANCE
Documented By	 Amelia Wu
Approved By	 Rueyyan Lin
Date of Receipt	Dec. 28, 2023
Date of Issue	Apr. 11, 2024
Report Version	V1.0

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Competences and Guarantees

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

IMPORTANT: No parts of this report may be reproduced or quoted out of context, in any form or by any means, except in full, without the previous written permission of DEKRA.

General Conditions

1. The test results relate only to the samples tested.
2. 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.
3. This report must not be used to claim product endorsement by TAF or any agency of the government.
4. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.
5. 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.

Revision History

Version	Description	Issued Date
V1.0	Initial issue of report	Apr. 11, 2024

Permissive Change

Permissive Change	Modifications
Class II Permissive Change (C2PC)	1. Additional platform added (Product: Vehicle Gateway, Brand: Samsara, Model: 010-00006, FCC ID: 2AIHD-0055). 2. Add two antennas. 3. Disable LTE band 14 through software. After evaluating, it was verified for RF output power and radiated spurious emission were re-tested.

Summary of Test Result

Report Clause	Test Items	Band	Ref Std. Clause	Limit	Result (PASS/FAIL)	Remark
3	RF Output Power	2	§2.1033 §2.1046 §24.232	< 2 Watts	PASS	-
		5	§2.1033 §2.1046 §22.913	< 7 Watts ERP	PASS	-
4	Spurious Emission	2	§2.1053 §24.238	< -13 dBm	PASS	-
		5	§22.917	< -13 dBm	PASS	-
Note: The EUT was installed to the host (brand name: Samsara, model: 010-00006, FCC ID: 2AIHD-0055) to perform all the tests.						

Comments and Explanations

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Comments and Remarks

The product specification and testing instructions for the EUT declared in the report are provided by the manufacturer who will take all responsibilities for the accuracy.

1. General Information

1.1. EUT Description

Frequency Range	WCDMA Band 2	1850~1910 MHz (Uplink) 1930~1990 MHz (Downlink)
	WCDMA Band 5	824~849 MHz (Uplink) 869~894 MHz (Downlink)
Function	WCDMA / HSDPA / DC-HSDPA / HSUPA / HSPA+	
Type of Modulation	BPSK	
IMEI No.	016531000028288	

Antenna Information										
Ant.	Brand Name	Model No.	Type	Gain (dBi)						
				WCDMA Band 2	WCDMA Band 5	LTE Band 2	LTE Band 4	LTE Band 5	LTE Band 12	LTE Band 13
1	SERCOM	LTE_Main	PIFA	TX: 1.5	TX: 1.2	TX: 1.5	TX: 1.6	TX: 1.2	TX: 0.9	TX: 1.4
				RX: 2.1	RX: 1.5	RX: 2.1	RX: 2.4	RX: 1.5	RX: 1.1	RX: 1.3
2	SERCOM	LTE_Div	Monopole	RX: 1.7	RX: 0.3	RX: 1.7	RX: 2.2	RX: 0.3	RX: -0.1	RX: 0.2

1.2. EUT Information

EUT Power Type	From DC power supply
Hardware Version	v1.0
Software Version	MPSS: M18QFA_v20.01 APSS: M18QFA_v06.02

1.3. Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC CFR Title 47 Part 22 Subpart H
- FCC CFR Title 47 Part 24 Subpart E
- FCC CFR Title 47 Part 2
- ANSI C63.26-2015
- FCC KDB 971168 D01 v03r01

The following reference test guidance is not within the scope of accreditation of TAF.

- FCC KDB 412172 D01 v01r01

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

1.4. Testing Location Information

Testing Location Information		
Test Laboratory : DEKRA Testing and Certification Co., Ltd.		
1 (TAF: 3024)	ADD: No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. TEL: +886-3-582-8001 FAX: +886-3-582-8958 Test site Designation No. TW3024 with FCC. Conformity Assessment Body Identifier (CABID) TW3024 with ISED.	
2 (TAF: 3024)	ADD: No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. TEL: +886-3-582-8001 FAX: +886-3-582-8958 Test site Designation No. TW3024 with FCC. Conformity Assessment Body Identifier (CABID) TW3024 with ISED.	
Test site number for address 1 includes HC-SR02. Test site number for address 2 includes HC-CB02, HC-CB03, HC-CB04, HC-SR10 and HC-SR12.		

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted Emission	HC-SR12	Max Chang	23 / 60	2024/01/17
Radiated Emission	HC-CB02	Gray Liao	22 / 62	2024/01/22

1.5. Measurement Uncertainty

Uncertainties have been calculated according to the DEKRA internal document with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)).

Test Item	Uncertainty
RF Output Power	± 1.16 dB
Spurious Emissions	± 3.52 dB below 1 GHz ± 3.56 dB above 1 GHz

1.6. List of Test Equipment

HC-SR12

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Cal. Date	Next Cal. Date
High Speed Peak Power Meter Dual Input	Anritsu	ML2496A	1602004	0.3-40 GHz	2023/10/25	2024/10/24
Pulse Power Sensor	Anritsu	MA2411B	1531043	0.3-40 GHz	2023/10/25	2024/10/24
Pulse Power Sensor	Anritsu	MA2411B	1531044	0.3-40 GHz	2023/10/25	2024/10/24
Spectrum Analyzer	Keysight	N9030B	MY57140404	3 Hz-26.5 GHz	2023/04/24	2024/04/23
Wideband Radio Communication Tester	R&S	CMW500	106071	LTE 4G	2024/01/03	2025/01/02

HC-CB02

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	10 Hz-40 GHz	2023/10/03	2024/10/02
Trilog Broadband Antenna	Schwarzbeck	VULB 9168	1272	30 MHz-2 GHz	2023/04/13	2024/04/12
Double Ridged Horn Antenna	RF SPIN	DRH18-E	211211A18EN	1G-18GHz	2023/11/09	2024/11/08
Horn Antenna	Schwarzbeck	BBHA 9170	203	18G-40GHz	2023/02/13	2024/02/12
Pre-Amplifier	EMCI	EMC01820I	980365	30M-8 GHz,20 dB	2023/04/07	2024/04/06
Pre-Amplifier	EMEC	EM01G18GA	060741	1G-18 GHz,50 dB	2023/05/05	2024/05/04
Pre-Amplifier	DEKRA	AP-400C	201801231	18G-40 GHz,48 dB	2023/10/03	2024/10/02
Wideband Radio Communication Tester	R&S	CMW500	106071	LTE 4G	2024/01/03	2025/01/02
EMI Test Receiver	R&S	ESR7	102260	10 Hz-7 GHz	2023/11/27	2024/11/26
Magnetic Loop Antenna	Teseq	HLA 6121	44287	0.01-30 MHz	2023/10/13	2024/10/12
Coaxial Cable(13m)	Suhner	SF104	HC-CB02	30M-18 GHz	2023/08/14	2024/08/13
Coaxial Cable(3m)	Suhner,Rosnol	SF102_UP0264	HC-CB02-1	18G-40 GHz 3 m	2023/08/14	2024/08/13
Radiated Software	Audix	e3 V9	HC-CB02_1	N/A	N/A	N/A

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

2. Test Configuration of EUT

2.1. Test Condition

EUT Operational Condition	
Testing Voltage	Vnom (DC 12V)

2.2. The Worst Case Measurement Configuration

Test Mode	Mode 1: WCDMA Band 2 Mode 2: WCDMA Band 5
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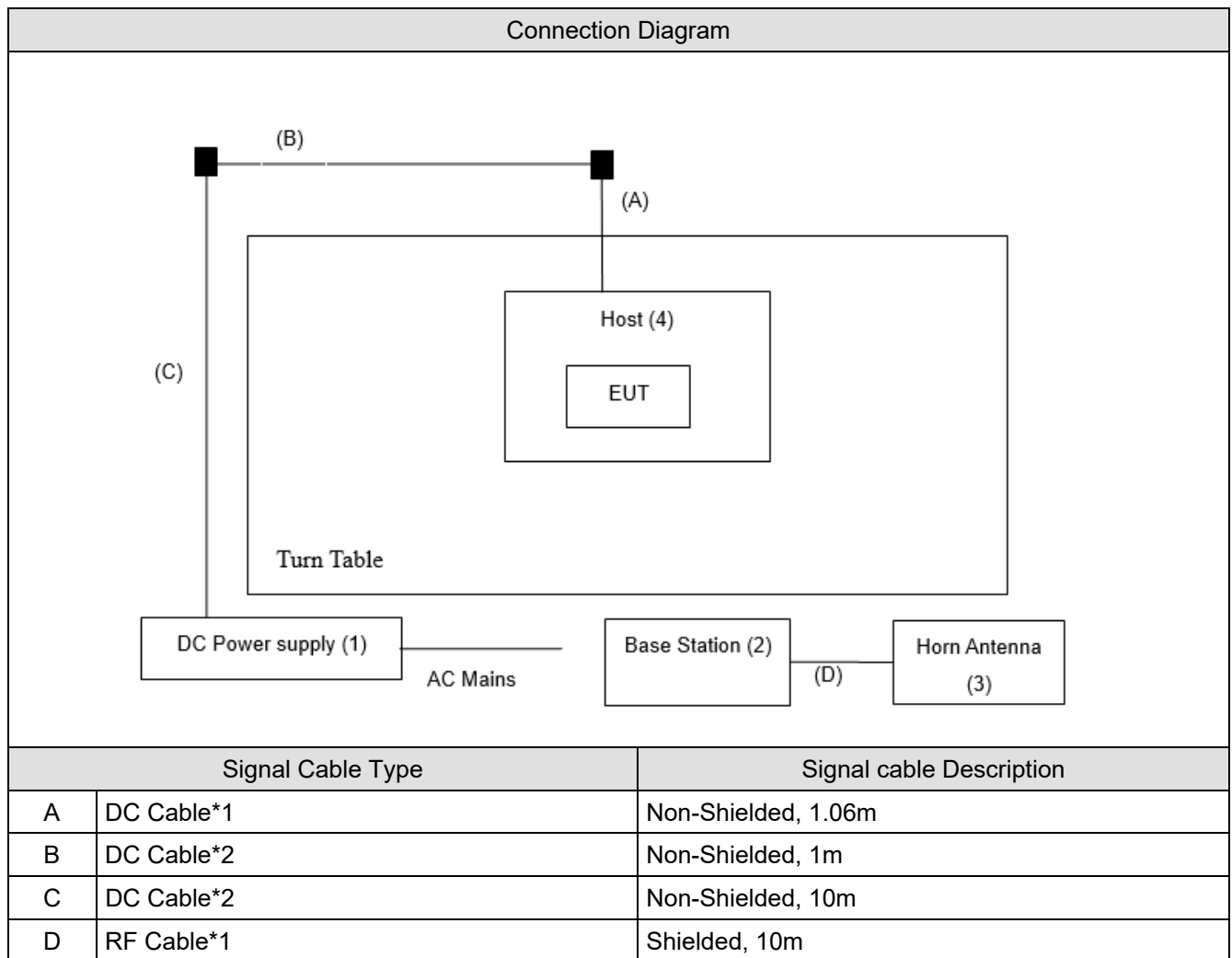
Note:

1. Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. The device was tested under all bandwidths, RB configurations and modulations, and the worst case was found in QPSK modulation and show in "Spurious Emission".
3. The EUT was performed at X axis, Y axis and Z axis position for radiated spurious emission test. The worst case was found at X axis, so the measurement will follow this same test configuration.

2.3. Tested System Details

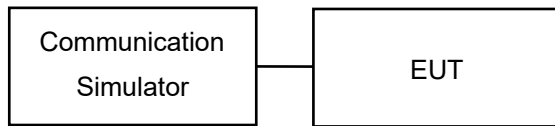
No.	Equipment	Brand Name	Model No.	Serial No.
1	DC Power supply	Topward	6303D	809497
2	Base Station	R&S	CMW500	106071
3	Horn Antenna	Schwarzbeck	BBHA 9120D	1640
4	Host (Vehicle Gateway)	Samsara	010-00006	N/A

2.4. Configuration of Tested System



3. RF Output Power

3.1. Test Setup



3.2. Test Procedure

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum conducted RF output power under transmission mode and specific channel frequency. The relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_T - L_C$$

where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas} , typically dBW or dBm);

P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

G_T = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB

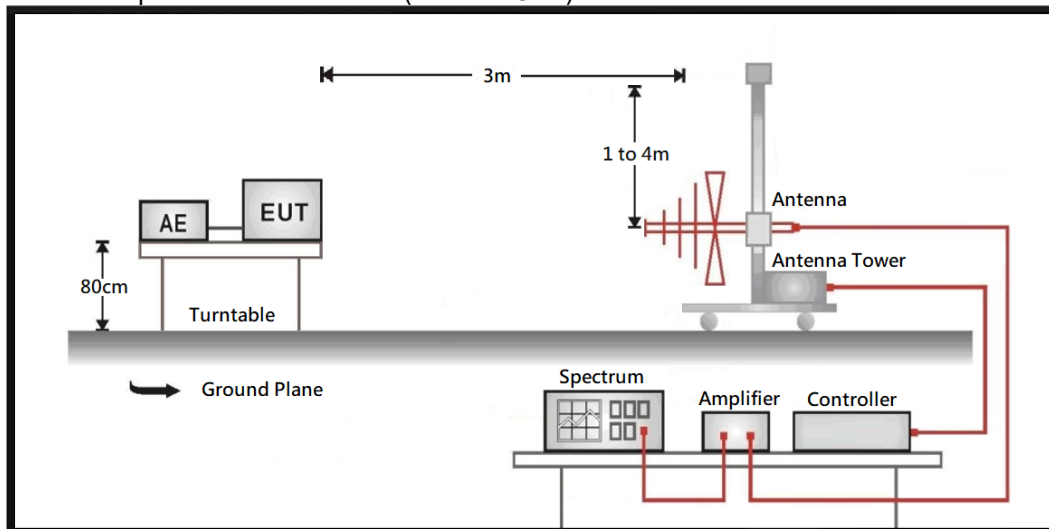
3.3. Test Result of RF Output Power

Refer as Appendix A

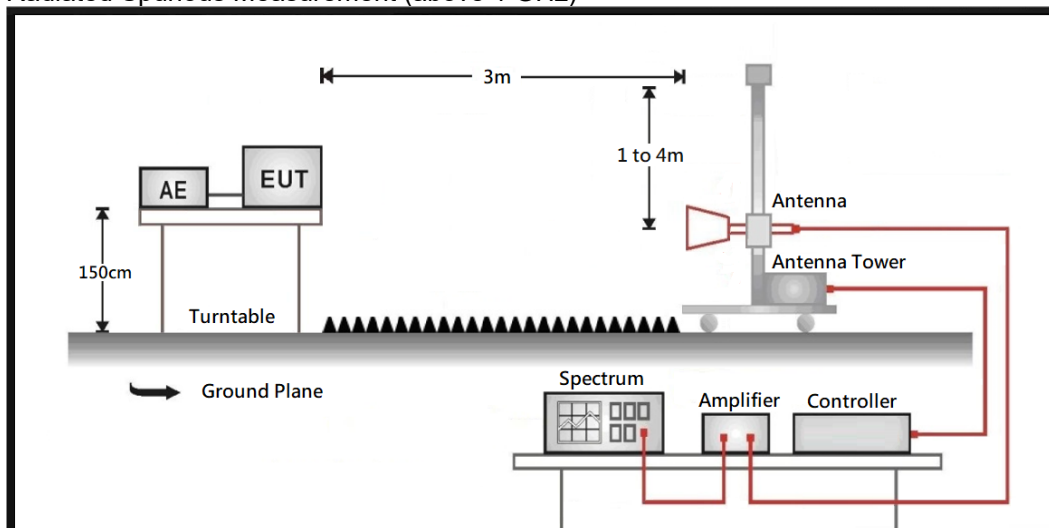
4. Spurious Emission

4.1. Test Setup

Radiated Spurious Measurement (below 1 GHz)



Radiated Spurious Measurement (above 1 GHz)



4.2. Test Procedure

Radiated Spurious Measurement:

The EUT and its simulators are placed on a turn table which is 0.8 or 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations. The resolution bandwidth of the spectrum analyzer was set at 1 MHz, sufficient scans were taken to show the out of band Emission if any up to 10th harmonic. Taking the record of maximum spurious emission.

4.3. Test Methodology and Reference Procedures

KDB 971168 D01 Power Meas License Digital Systems v03r01

ANSI C63.26-2015

4.4. Test Result of Spurious Emission

Refer as Appendix B

Appendix A. Test Result of RF Output Power

WCDMA Band 2						
Test Mode	Frequency (MHz)	Conducted Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	EIRP Limit (W)
RMC	1852.4	23.87	1.5	25.370	0.344	2
	1880	23.95	1.5	25.450	0.351	2
	1907.6	23.92	1.5	25.420	0.348	2
HSUPA Subtest 1	1852.4	22.94	1.5	24.440	0.278	2
	1880	22.98	1.5	24.480	0.281	2
	1907.6	22.97	1.5	24.470	0.280	2
HSUPA Subtest 2	1852.4	22.48	1.5	23.980	0.250	2
	1880	22.56	1.5	24.060	0.255	2
	1907.6	22.55	1.5	24.050	0.254	2
HSUPA Subtest 3	1852.4	22.47	1.5	23.970	0.249	2
	1880	22.51	1.5	24.010	0.252	2
	1907.6	22.49	1.5	23.990	0.251	2
HSUPA Subtest 4	1852.4	22.46	1.5	23.960	0.249	2
	1880	22.54	1.5	24.040	0.254	2
	1907.6	22.48	1.5	23.980	0.250	2
HSUPA Subtest 5	1852.4	22.51	1.5	24.010	0.252	2
	1880	22.56	1.5	24.060	0.255	2
	1907.6	22.48	1.5	23.980	0.250	2
HSDPA Subtest 1	1852.4	22.53	1.5	24.030	0.253	2
	1880	22.54	1.5	24.040	0.254	2
	1907.6	22.51	1.5	24.010	0.252	2
HSDPA Subtest 2	1852.4	22.50	1.5	24.000	0.251	2
	1880	22.53	1.5	24.030	0.253	2
	1907.6	22.48	1.5	23.980	0.250	2
HSDPA Subtest 3	1852.4	22.50	1.5	24.000	0.251	2
	1880	22.53	1.5	24.030	0.253	2
	1907.6	22.52	1.5	24.020	0.252	2
HSDPA Subtest 4	1852.4	22.51	1.5	24.010	0.252	2
	1880	22.53	1.5	24.030	0.253	2
	1907.6	22.52	1.5	24.020	0.252	2

Note:

1. EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi)

2. EIRP (W) = $(10^{(\text{Power(dBm)}/10)}) \times 10^{-3}$

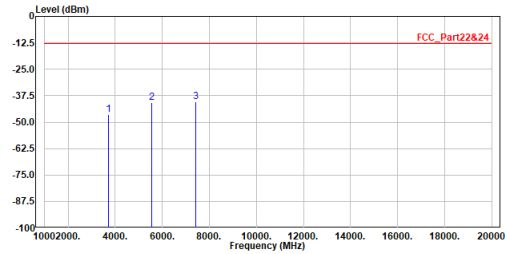
WCDMA Band 5						
Test Mode	Frequency (MHz)	Conducted Output Power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (W)	ERP Limit (W)
RMC	826.4	23.78	1.2	22.830	0.192	7
	836.6	23.90	1.2	22.950	0.197	7
	846.6	23.85	1.2	22.900	0.195	7
HSUPA Subtest 1	826.4	23.18	1.2	22.230	0.167	7
	836.6	23.37	1.2	22.420	0.175	7
	846.6	23.21	1.2	22.260	0.168	7
HSUPA Subtest 2	826.4	22.80	1.2	21.850	0.153	7
	836.6	22.91	1.2	21.960	0.157	7
	846.6	22.84	1.2	21.890	0.155	7
HSUPA Subtest 3	826.4	22.88	1.2	21.930	0.156	7
	836.6	22.91	1.2	21.960	0.157	7
	846.6	22.84	1.2	21.890	0.155	7
HSUPA Subtest 4	826.4	22.80	1.2	21.850	0.153	7
	836.6	22.90	1.2	21.950	0.157	7
	846.6	22.87	1.2	21.920	0.156	7
HSUPA Subtest 5	826.4	22.83	1.2	21.880	0.154	7
	836.6	22.87	1.2	21.920	0.156	7
	846.6	22.86	1.2	21.910	0.155	7
HSDPA Subtest 1	826.4	22.80	1.2	21.850	0.153	7
	836.6	22.86	1.2	21.910	0.155	7
	846.6	22.85	1.2	21.900	0.155	7
HSDPA Subtest 2	826.4	22.83	1.2	21.880	0.154	7
	836.6	22.89	1.2	21.940	0.156	7
	846.6	22.85	1.2	21.900	0.155	7
HSDPA Subtest 3	826.4	22.84	1.2	21.890	0.155	7
	836.6	22.87	1.2	21.920	0.156	7
	846.6	22.86	1.2	21.910	0.155	7
HSDPA Subtest 4	826.4	22.89	1.2	21.940	0.156	7
	836.6	22.91	1.2	21.960	0.157	7
	846.6	22.88	1.2	21.930	0.156	7

Note:

1. EIRP (dBm) = Conducted Output Power (dBm) + Antenna Gain (dBi) - 2.15 dB
2. EIRP (W) = $(10^{(\text{Power(dBm)}/10)}) \times 10^{-3}$

Appendix B. Test Result of Radiated Spurious Emission

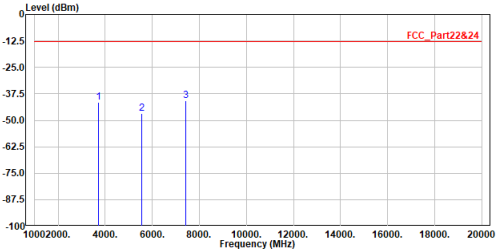
Site :HC-CB02
Condition :3m Horizontal
Mode :WCDMA_Band2_CH9262
Test By :Gary Liao



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	3704.800	-46.58	-13.00	-33.58	-39.36	-7.22	Peak
2	5557.200	-40.66	-13.00	-27.66	-38.77	-1.89	Peak
3	7409.600	-40.53	-13.00	-27.53	-44.56	4.03	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
= $107 + 20\log(3) - 104.8 = 11.8$ dB
5. The other emission levels were very low against the limit.
6. The emission under 1GHz was not included since the emission levels are very low against the limit.

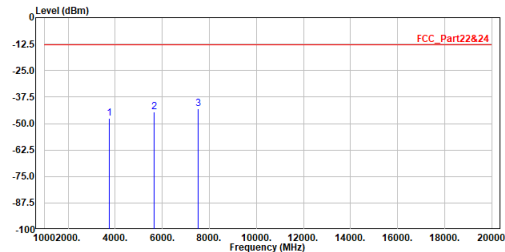
Site :HC-CB02
Condition :3m Vertical
Mode :WCDMA_Band2_CH9262
Test By :Gary Liao



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	3704.800	-41.40	-13.00	-28.40	-34.18	-7.22	Peak
2	5557.200	-46.93	-13.00	-33.93	-45.04	-1.89	Peak
3	7409.600	-40.82	-13.00	-27.82	-44.85	4.03	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
= $107 + 20\log(3) - 104.8 = 11.8$ dB
5. The other emission levels were very low against the limit.
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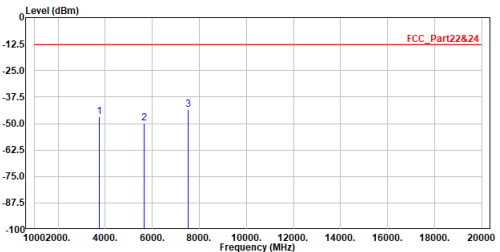
Site :HC-CB02
Condition :3m Horizontal
Mode :WCDMA_Band2_CH9400
Test By :Gary Liao



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	3760.000	-47.61	-13.00	-34.61	-40.65	-6.96	Peak
2	5640.000	-44.43	-13.00	-31.43	-42.80	-1.63	Peak
3	7520.000	-43.06	-13.00	-30.06	-47.20	4.14	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
= $107 + 20\log(3) - 104.8 = 11.8$ dB
5. The other emission levels were very low against the limit.
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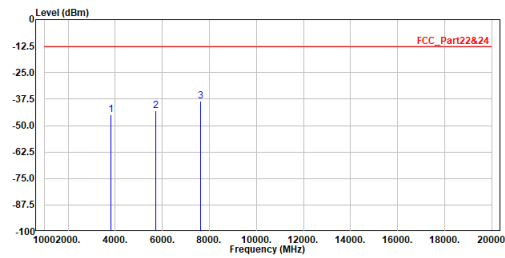
Site :HC-CB02
Condition :3m Vertical
Mode :WCDMA_Band2_CH9400
Test By :Gary Liao



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	3760.000	-46.67	-13.00	-33.67	-39.71	-6.96	Peak
2	5640.000	-49.78	-13.00	-36.78	-48.15	-1.63	Peak
3	7520.000	-43.50	-13.00	-30.50	-47.64	4.14	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
= $107 + 20\log(3) - 104.8 = 11.8$ dB
5. The other emission levels were very low against the limit.
6. The emission under 1GHz was not included since the emission levels are very low against the limit.

Site :HC-CB02
Condition :3m Horizontal
Mode :WCDMA_Band2_CH9538
Test By :Gary Liao

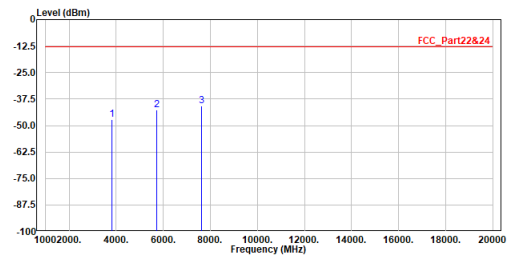


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	3815.200	-44.87	-13.00	-31.87	-38.18	-6.69	Peak
2	5722.800	-43.19	-13.00	-30.19	-41.82	-1.37	Peak
3	7630.400	-38.37	-13.00	-25.37	-42.58	4.21	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.
6. The emission under 1GHz was not included since the emission levels are very low against the limit.

Site :HC-CB02
Condition :3m Vertical
Mode :WCDMA_Band2_CH9538
Test By :Gary Liao

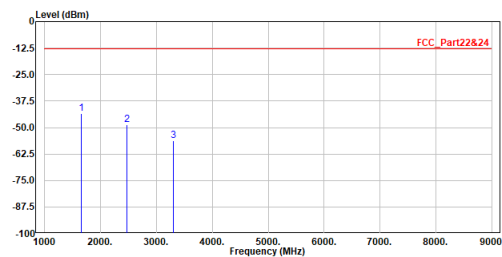


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	3815.200	-47.12	-13.00	-34.12	-40.43	-6.69	Peak
2	5722.800	-42.68	-13.00	-29.68	-41.31	-1.37	Peak
3	7630.400	-40.86	-13.00	-27.86	-45.07	4.21	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.
6. The emission under 1GHz was not included since the emission levels are very low against the limit.

Site :HC-CB02
Condition :3m Horizontal
Mode :WCDMA_Band5_CH4132
Test By :Gary Liao

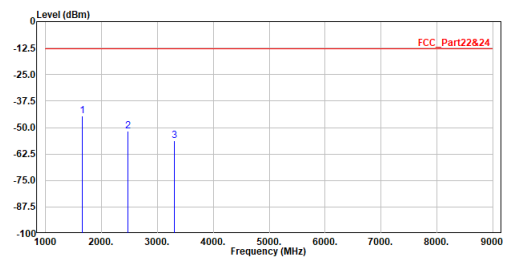


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	1652.800	-43.23	-13.00	-30.23	-28.61	-14.62	Peak
2	2479.200	-48.59	-13.00	-35.59	-37.05	-11.54	Peak
3	3305.600	-56.35	-13.00	-43.35	-47.61	-8.74	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.
6. The emission under 1GHz was not included since the emission levels are very low against the limit.

Site :HC-CB02
Condition :3m Vertical
Mode :WCDMA_Band5_CH4132
Test By :Gary Liao

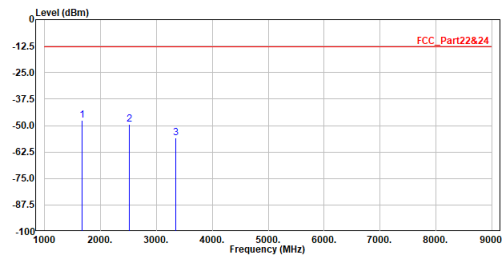


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	Line	Limit	Level	dB	
1	1652.800	-44.51	-13.00	-31.51	-29.89	-14.62	Peak
2	2479.200	-51.76	-13.00	-38.76	-40.22	-11.54	Peak
3	3305.600	-56.37	-13.00	-43.37	-47.63	-8.74	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.
6. The emission under 1GHz was not included since the emission levels are very low against the limit.

Site :HC-CB02
Condition :3m Horizontal
Mode :WCDMA_Band5_CH4183
Test By :Gary Liao

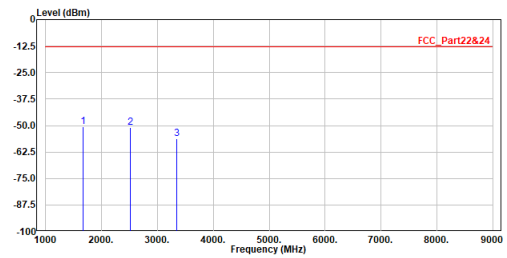


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	dBm	Limit	Level	dB	
1	1673.000	-47.64	-13.00	-34.64	-33.12	-14.52	Peak
2	2509.500	-49.38	-13.00	-36.38	-37.94	-11.44	Peak
3	3346.000	-55.86	-13.00	-42.86	-47.23	-8.63	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.
6. The emission under 1GHz was not included since the emission levels are very low against the limit.

Site :HC-CB02
Condition :3m Vertical
Mode :WCDMA_Band5_CH4183
Test By :Gary Liao

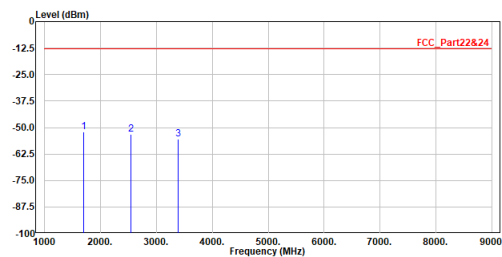


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	dBm	Limit	Level	dB	
1	1673.000	-50.40	-13.00	-37.40	-35.88	-14.52	Peak
2	2509.500	-50.84	-13.00	-37.84	-39.40	-11.44	Peak
3	3346.000	-56.27	-13.00	-43.27	-47.64	-8.63	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.
6. The emission under 1GHz was not included since the emission levels are very low against the limit.

Site :HC-CB02
Condition :3m Horizontal
Mode :WCDMA_Band5_CH4233
Test By :Gary Liao

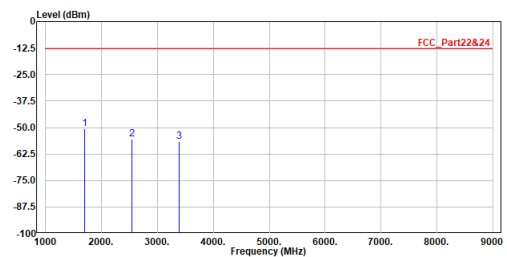


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	dBm	Limit	Level	dB	
1	1693.200	-51.92	-13.00	-38.92	-37.48	-14.44	Peak
2	2539.800	-53.21	-13.00	-40.21	-41.88	-11.33	Peak
3	3386.400	-55.60	-13.00	-42.60	-47.08	-8.52	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.
6. The emission under 1GHz was not included since the emission levels are very low against the limit.

Site :HC-CB02
Condition :3m Vertical
Mode :WCDMA_Band5_CH4233
Test By :Gary Liao



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBm	dBm	Limit	Level	dB	
1	1693.200	-50.54	-13.00	-37.54	-36.10	-14.44	Peak
2	2539.800	-55.57	-13.00	-42.57	-44.24	-11.33	Peak
3	3386.400	-56.46	-13.00	-43.46	-47.94	-8.52	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuV/m) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.
6. The emission under 1GHz was not included since the emission levels are very low against the limit.