Test Report No:
23C0907R-RFUSV23S-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 FCC CFR Title 47 Part 27 Subpart F, Subpart L 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.

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	-
		4	§2.1033 §2.1046 §27.50	< 1 Watts	PASS	-
		5	§2.1033 §2.1046 §22.913	< 7 Watts ERP	PASS	-
		12, 13	§2.1033 §2.1046 §27.50	< 3 Watts ERP	PASS	-
4	Spurious Emission	2	§2.1053 §24.238	< -13 dBm	PASS	-
		4, 12	§27.53	< -13 dBm	PASS	-
		5	§22.917	< -13 dBm	PASS	-
		13	§27.53	< -13 dBm < −70 dBW/MHz e.i.r.p. of all emissions, including harmonics in the band 1559-1610 MHz	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
nted 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

Uplink Frequency Range (MHz)	LTE Band 2: 1850~1910 LTE Band 4: 1710~1755 LTE Band 5: 824~849 LTE Band 12: 699~716 LTE Band 13: 777~787
Downlink Frequency Range (MHz)	LTE Band 2: 1930~1990 LTE Band 4: 2110~2115 LTE Band 5: 869~894 LTE Band 12: 729~746 LTE Band 13: 746~756
Bandwidth (MHz)	LTE Band 2: 1.4 / 3 / 5 / 10 / 15 / 20 LTE Band 4: 1.4 / 3 / 5 / 10 / 15 / 20 LTE Band 5: 1.4 / 3 / 5 / 10 LTE Band 12: 1.4 / 3 / 5 / 10 LTE Band 13: 5 / 10
Type of Modulation	QPSK / 16QAM
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 27 Subpart F, Subpart L
- ANSI/TIA-603-E (2016)
- 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	21~23 / 60~62	2024/1/17~2024/3/6
Radiated Emission	HC-CB02	Gray Liao Luffy Lin	21.5~22 / 53.6~62	2024/01/22~2024/02/02

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	± 3.56 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: LTE Band 2 Mode 2: LTE Band 4 Mode 3: LTE Band 5 Mode 4: LTE Band 12 Mode 5: LTE Band 13

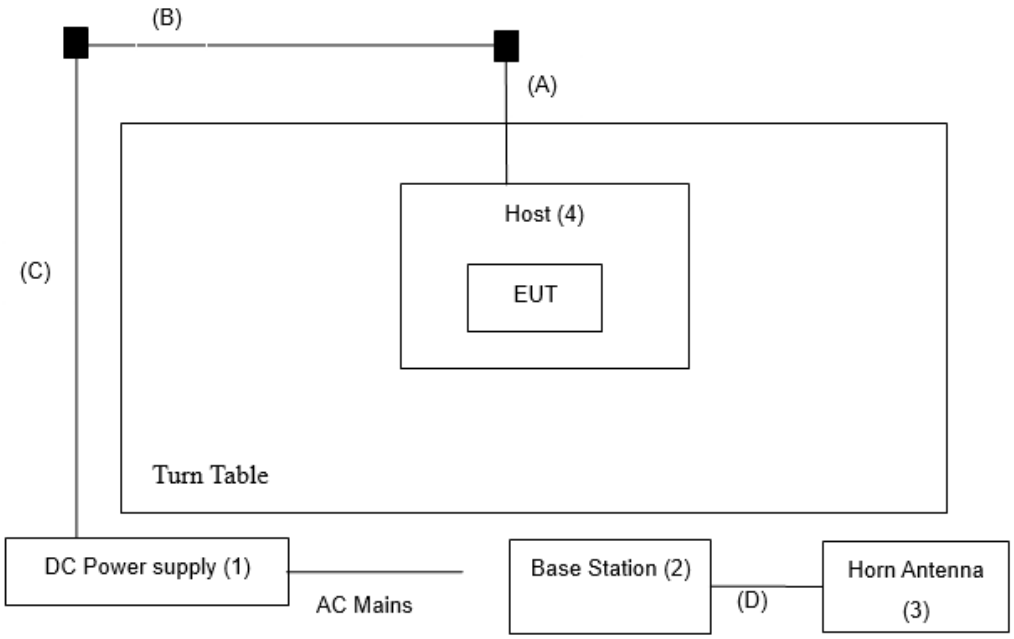
Note:
1. Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. The device was tested under all bandwidths, RB configurations and modulations.
3. The EUT was performed at X axis, Y axis and Z axis position 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

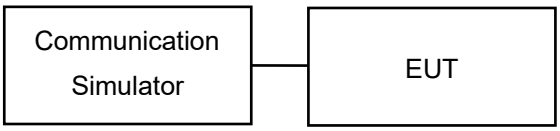
Connection Diagram



Signal Cable Type		Signal cable Description
A	DC Cable*1	Non-Shielded, 1.06m
B	DC Cable*2	Non-Shielded, 1m
C	DC Cable*2	Non-Shielded, 10m
D	RF Cable*1	Shielded, 10m

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:

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

where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as PMeas, 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

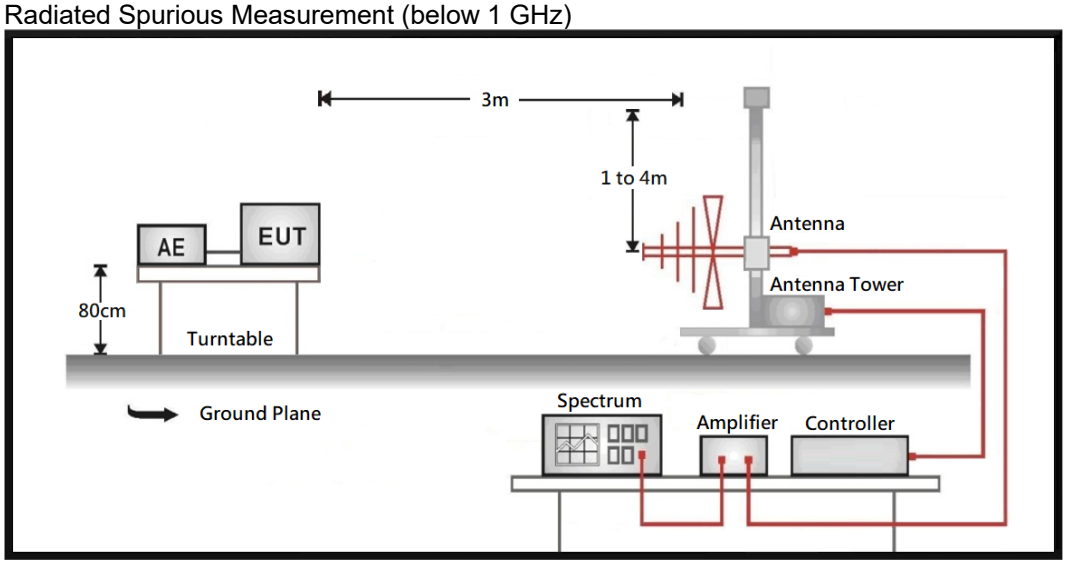
3.3. Test Result of RF Output Power

Refer as Appendix A

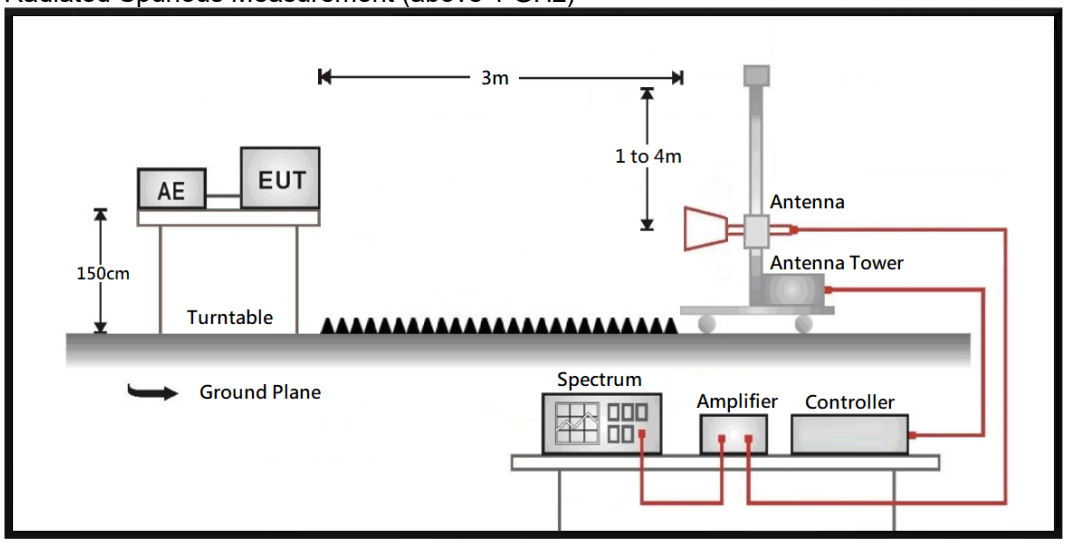
4. Spurious Emission

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 Result of Spurious Emission

Refer as Appendix B

Appendix A. Test Result of RF Output Power

Mode 1: LTE Band 2

Mode					Conducted Power		EIRP Power		Limit
BW (MHz)	Channel	Frequency (MHz)	RB No.	RB offset	QPSK (dBm)	16-QAM (dBm)	QPSK EIRP(W)	16-QAM EIRP(W)	Limit EIRP(W)
1.4	18607	1850.7	1	0	21.65	20.22	0.209	0.151	2
1.4	18607	1850.7	1	2	21.52	20.14	0.203	0.148	2
1.4	18607	1850.7	1	5	21.36	19.89	0.196	0.140	2
1.4	18607	1850.7	6	0	20.85	19.57	0.174	0.130	2
1.4	18900	1880	1	0	22.20	19.19	0.238	0.119	2
1.4	18900	1880	1	2	22.45	19.54	0.252	0.129	2
1.4	18900	1880	1	5	22.32	19.28	0.244	0.121	2
1.4	18900	1880	6	0	21.45	19.30	0.200	0.122	2
1.4	19193	1909.3	1	0	21.13	19.37	0.186	0.124	2
1.4	19193	1909.3	1	2	20.83	19.48	0.173	0.127	2
1.4	19193	1909.3	1	5	20.68	19.26	0.167	0.121	2
1.4	19193	1909.3	6	0	20.80	19.20	0.172	0.119	2
3	18615	1851.5	1	0	21.10	19.94	0.185	0.141	2
3	18615	1851.5	1	7	20.88	20.06	0.175	0.145	2
3	18615	1851.5	1	14	20.56	19.96	0.163	0.142	2
3	18615	1851.5	15	0	20.96	19.71	0.179	0.134	2
3	18900	1880	1	0	22.43	19.71	0.251	0.134	2
3	18900	1880	1	7	22.19	19.73	0.237	0.135	2
3	18900	1880	1	14	21.60	19.63	0.207	0.132	2
3	18900	1880	15	0	21.34	19.34	0.195	0.123	2
3	19185	1908.5	1	0	22.09	19.52	0.232	0.128	2
3	19185	1908.5	1	7	21.29	20.26	0.193	0.152	2
3	19185	1908.5	1	14	20.20	19.63	0.150	0.132	2
3	19185	1908.5	15	0	21.34	19.43	0.195	0.126	2

Note:

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

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

Mode					Conducted Power		EIRP Power		Limit
BW (MHz)	Channel	Frequency (MHz)	RB No.	RB offset	QPSK (dBm)	16-QAM (dBm)	QPSK EIRP(W)	16-QAM EIRP(W)	Limit EIRP(W)
5	18625	1852.5	1	0	21.01	19.43	0.181	0.126	2
5	18625	1852.5	1	12	20.83	19.34	0.173	0.123	2
5	18625	1852.5	1	24	20.33	19.35	0.155	0.123	2
5	18625	1852.5	25	0	20.99	19.51	0.180	0.128	2
5	18900	1880	1	0	22.47	20.23	0.253	0.151	2
5	18900	1880	1	12	22.30	20.07	0.243	0.146	2
5	18900	1880	1	24	21.38	19.80	0.197	0.137	2
5	18900	1880	25	0	21.30	19.30	0.193	0.122	2
5	19175	1907.5	1	0	22.30	18.94	0.243	0.112	2
5	19175	1907.5	1	12	21.78	18.82	0.216	0.109	2
5	19175	1907.5	1	24	20.17	19.11	0.149	0.117	2
5	19175	1907.5	25	0	21.29	19.24	0.193	0.120	2
10	18650	1855	1	0	20.08	19.89	0.146	0.140	2
10	18650	1855	1	24	20.33	20.11	0.155	0.147	2
10	18650	1855	1	49	19.05	18.86	0.115	0.110	2
10	18650	1855	50	0	20.35	19.64	0.155	0.132	2
10	18900	1880	1	0	22.31	19.68	0.244	0.133	2
10	18900	1880	1	24	22.23	19.48	0.239	0.127	2
10	18900	1880	1	49	21.52	20.27	0.203	0.152	2
10	18900	1880	50	0	21.39	19.33	0.197	0.123	2
10	19150	1905	1	0	20.68	18.88	0.167	0.111	2
10	19150	1905	1	24	22.34	19.12	0.245	0.117	2
10	19150	1905	1	49	20.16	19.03	0.149	0.115	2
10	19150	1905	50	0	21.07	19.19	0.183	0.119	2

Note:

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

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

Mode					Conducted Power		EIRP Power		Limit
BW (MHz)	Channel	Frequency (MHz)	RB No.	RB offset	QPSK (dBm)	16-QAM (dBm)	QPSK EIRP(W)	16-QAM EIRP(W)	Limit EIRP(W)
15	18675	1857.5	1	0	19.62	19.44	0.131	0.126	2
15	18675	1857.5	1	37	20.08	19.82	0.146	0.137	2
15	18675	1857.5	1	74	19.74	19.51	0.135	0.128	2
15	18675	1857.5	75	0	20.26	19.54	0.152	0.129	2
15	18900	1880	1	0	22.25	19.43	0.240	0.126	2
15	18900	1880	1	37	22.34	19.82	0.245	0.137	2
15	18900	1880	1	74	21.78	19.76	0.216	0.136	2
15	18900	1880	75	0	21.34	19.26	0.195	0.121	2
15	19125	1902.5	1	0	19.99	18.26	0.143	0.096	2
15	19125	1902.5	1	37	22.16	19.15	0.236	0.118	2
15	19125	1902.5	1	74	19.76	19.37	0.136	0.124	2
15	19125	1902.5	75	0	21.14	19.38	0.186	0.124	2
20	18700	1860	1	0	19.50	19.12	0.128	0.117	2
20	18700	1860	1	49	20.09	19.83	0.146	0.138	2
20	18700	1860	1	99	21.09	20.43	0.184	0.158	2
20	18700	1860	100	0	20.53	19.60	0.162	0.131	2
20	18900	1880	1	0	21.77	19.10	0.215	0.116	2
20	18900	1880	1	49	22.02	19.25	0.228	0.121	2
20	18900	1880	1	99	21.24	19.10	0.191	0.116	2
20	18900	1880	100	0	21.28	19.31	0.192	0.122	2
20	19100	1900	1	0	20.28	19.94	0.153	0.141	2
20	19100	1900	1	49	21.49	20.65	0.202	0.166	2
20	19100	1900	1	99	20.02	19.50	0.144	0.128	2
20	19100	1900	100	0	21.28	19.37	0.192	0.124	2

Note:

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

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

Mode 2: LTE Band 4

Mode					Conducted Power		EIRP Power		Limit
BW (MHz)	Channel	Frequency (MHz)	RB No.	RB offset	QPSK (dBm)	16-QAM (dBm)	QPSK EIRP(W)	16-QAM EIRP(W)	Limit EIRP(W)
1.4	19957	1710.7	1	0	22.47	21.14	0.256	0.189	1
1.4	19957	1710.7	1	2	22.68	20.20	0.269	0.152	1
1.4	19957	1710.7	1	5	22.36	20.44	0.250	0.161	1
1.4	19957	1710.7	6	0	21.45	20.44	0.203	0.161	1
1.4	20175	1732.5	1	0	22.08	20.87	0.234	0.177	1
1.4	20175	1732.5	1	2	22.16	20.14	0.239	0.150	1
1.4	20175	1732.5	1	5	21.93	21.41	0.226	0.201	1
1.4	20175	1732.5	6	0	21.47	20.37	0.204	0.158	1
1.4	20393	1754.3	1	0	21.75	20.68	0.217	0.170	1
1.4	20393	1754.3	1	2	21.57	20.52	0.208	0.164	1
1.4	20393	1754.3	1	5	21.39	20.40	0.200	0.159	1
1.4	20393	1754.3	6	0	21.63	19.81	0.211	0.139	1
3	19965	1711.5	1	0	22.15	20.19	0.238	0.152	1
3	19965	1711.5	1	7	22.46	20.24	0.256	0.153	1
3	19965	1711.5	1	14	22.74	20.85	0.273	0.177	1
3	19965	1711.5	15	0	21.65	20.49	0.212	0.163	1
3	20175	1732.5	1	0	22.21	20.42	0.242	0.160	1
3	20175	1732.5	1	7	22.04	20.04	0.232	0.147	1
3	20175	1732.5	1	14	22.03	20.67	0.232	0.169	1
3	20175	1732.5	15	0	21.40	20.07	0.200	0.148	1
3	20385	1753.5	1	0	21.91	20.56	0.225	0.165	1
3	20385	1753.5	1	7	21.69	20.82	0.214	0.175	1
3	20385	1753.5	1	14	21.00	20.56	0.183	0.165	1
3	20385	1753.5	15	0	21.71	19.65	0.215	0.134	1

Note:

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

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

Mode					Conducted Power		EIRP Power		Limit
BW (MHz)	Channel	Frequency (MHz)	RB No.	RB offset	QPSK (dBm)	16-QAM (dBm)	QPSK EIRP(W)	16-QAM EIRP(W)	Limit EIRP(W)
5	19975	1712.5	1	0	22.54	20.65	0.261	0.169	1
5	19975	1712.5	1	12	22.30	20.68	0.247	0.170	1
5	19975	1712.5	1	24	22.73	20.42	0.272	0.160	1
5	19975	1712.5	25	0	21.59	20.34	0.209	0.157	1
5	20175	1732.5	1	0	22.25	20.83	0.244	0.176	1
5	20175	1732.5	1	12	21.53	20.93	0.207	0.180	1
5	20175	1732.5	1	24	21.40	20.98	0.200	0.182	1
5	20175	1732.5	25	0	21.29	20.22	0.195	0.153	1
5	20375	1752.5	1	0	22.04	20.86	0.232	0.177	1
5	20375	1752.5	1	12	22.00	20.67	0.230	0.169	1
5	20375	1752.5	1	24	21.41	20.35	0.201	0.157	1
5	20375	1752.5	25	0	20.88	19.78	0.178	0.138	1
10	20000	1715	1	0	22.32	20.33	0.248	0.157	1
10	20000	1715	1	24	22.43	20.43	0.254	0.160	1
10	20000	1715	1	49	22.33	20.13	0.248	0.150	1
10	20000	1715	50	0	21.47	20.08	0.204	0.148	1
10	20175	1732.5	1	0	22.63	20.10	0.266	0.149	1
10	20175	1732.5	1	24	22.44	20.88	0.255	0.178	1
10	20175	1732.5	1	49	22.24	20.70	0.243	0.171	1
10	20175	1732.5	50	0	21.25	20.15	0.194	0.150	1
10	20350	1750	1	0	22.85	20.86	0.280	0.177	1
10	20350	1750	1	24	22.27	20.31	0.245	0.156	1
10	20350	1750	1	49	22.08	20.24	0.234	0.153	1
10	20350	1750	50	0	21.55	19.89	0.207	0.142	1

Note:

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

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

Mode					Conducted Power		EIRP Power		Limit
BW (MHz)	Channel	Frequency (MHz)	RB No.	RB offset	QPSK (dBm)	16-QAM (dBm)	QPSK EIRP(W)	16-QAM EIRP(W)	Limit EIRP(W)
15	20025	1717.5	1	0	21.95	20.11	0.228	0.149	1
15	20025	1717.5	1	37	22.21	20.90	0.242	0.179	1
15	20025	1717.5	1	74	22.35	20.97	0.249	0.182	1
15	20025	1717.5	75	0	21.51	20.26	0.206	0.154	1
15	20175	1732.5	1	0	22.46	20.96	0.256	0.181	1
15	20175	1732.5	1	37	22.22	20.74	0.242	0.172	1
15	20175	1732.5	1	74	21.95	20.89	0.228	0.178	1
15	20175	1732.5	75	0	21.35	20.29	0.198	0.155	1
15	20325	1747.5	1	0	22.13	20.15	0.237	0.150	1
15	20325	1747.5	1	37	22.18	20.36	0.240	0.158	1
15	20325	1747.5	1	74	22.07	20.53	0.234	0.164	1
15	20325	1747.5	75	0	21.08	20.01	0.186	0.146	1
20	20050	1720	1	0	22.70	20.72	0.270	0.171	1
20	20050	1720	1	49	21.82	20.64	0.221	0.168	1
20	20050	1720	1	99	22.46	20.91	0.256	0.179	1
20	20050	1720	100	0	21.59	20.48	0.209	0.162	1
20	20175	1732.5	1	0	22.19	20.27	0.240	0.155	1
20	20175	1732.5	1	49	21.88	20.24	0.224	0.153	1
20	20175	1732.5	1	99	21.36	20.45	0.199	0.161	1
20	20175	1732.5	100	0	21.35	20.39	0.198	0.159	1
20	20300	1745	1	0	22.40	20.10	0.252	0.149	1
20	20300	1745	1	49	22.22	20.39	0.242	0.159	1
20	20300	1745	1	99	21.24	20.54	0.193	0.164	1
20	20300	1745	100	0	21.49	20.03	0.205	0.146	1

Note:

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

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

Mode 3: LTE Band 5

Mode					Conducted Power		ERP Power		Limit
BW (MHz)	Channel	Frequency (MHz)	RB No.	RB offset	QPSK (dBm)	16-QAM (dBm)	QPSK ERP(W)	16-QAM ERP(W)	Limit ERP(W)
1.4	20407	824.7	1	0	23.43	22.61	0.281	0.232	7
1.4	20407	824.7	1	2	23.49	22.69	0.284	0.237	7
1.4	20407	824.7	1	5	23.50	22.64	0.285	0.234	7
1.4	20407	824.7	6	0	22.47	21.48	0.225	0.179	7
1.4	20525	836.5	1	0	23.51	22.24	0.286	0.213	7
1.4	20525	836.5	1	2	23.43	22.29	0.281	0.216	7
1.4	20525	836.5	1	5	23.50	22.23	0.285	0.213	7
1.4	20525	836.5	6	0	22.59	21.37	0.231	0.175	7
1.4	20643	848.3	1	0	23.58	22.40	0.290	0.221	7
1.4	20643	848.3	1	2	23.59	22.39	0.291	0.221	7
1.4	20643	848.3	1	5	23.63	21.92	0.294	0.198	7
1.4	20643	848.3	6	0	22.55	21.46	0.229	0.178	7
3	20415	825.5	1	0	23.50	22.30	0.285	0.216	7
3	20415	825.5	1	7	23.45	22.02	0.282	0.203	7
3	20415	825.5	1	14	23.51	22.59	0.286	0.231	7
3	20415	825.5	15	0	22.44	21.41	0.223	0.176	7
3	20525	836.5	1	0	23.57	22.26	0.290	0.214	7
3	20525	836.5	1	7	23.60	22.06	0.292	0.205	7
3	20525	836.5	1	14	23.65	22.06	0.295	0.205	7
3	20525	836.5	15	0	22.38	21.47	0.220	0.179	7
3	20635	847.5	1	0	23.52	22.51	0.286	0.227	7
3	20635	847.5	1	7	23.52	22.42	0.286	0.222	7
3	20635	847.5	1	14	23.53	21.95	0.287	0.200	7
3	20635	847.5	15	0	22.50	21.46	0.226	0.178	7

Note:

1. ERP (W) = Conducted Output Power (dBm) + Antenna Gain (dBi) - 2.15

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

Mode					Conducted Power		ERP Power		Limit
BW (MHz)	Channel	Frequency (MHz)	RB No.	RB offset	QPSK (dBm)	16-QAM (dBm)	QPSK ERP(W)	16-QAM ERP(W)	Limit ERP(W)
5	20425	825.6	1	0	23.60	22.21	0.292	0.212	7
5	20425	825.6	1	12	23.62	22.38	0.293	0.220	7
5	20425	825.6	1	24	23.52	22.35	0.286	0.219	7
5	20425	825.6	25	0	22.57	21.46	0.230	0.178	7
5	20525	836.5	1	0	23.42	22.48	0.280	0.225	7
5	20525	836.5	1	12	23.40	22.64	0.279	0.234	7
5	20525	836.5	1	24	23.57	22.44	0.290	0.223	7
5	20525	836.5	25	0	22.48	21.46	0.225	0.178	7
5	20625	846.5	1	0	23.55	21.96	0.288	0.200	7
5	20625	846.5	1	12	23.56	22.57	0.289	0.230	7
5	20625	846.5	1	24	23.04	22.19	0.256	0.211	7
5	20625	846.5	25	0	22.52	21.46	0.228	0.178	7
10	20450	829	1	0	23.51	22.02	0.286	0.203	7
10	20450	829	1	24	23.65	22.52	0.295	0.228	7
10	20450	829	1	49	23.49	22.62	0.284	0.233	7
10	20450	829	50	0	22.52	21.39	0.228	0.175	7
10	20525	836.5	1	0	23.52	21.97	0.286	0.200	7
10	20525	836.5	1	24	23.66	22.73	0.296	0.239	7
10	20525	836.5	1	49	23.61	22.57	0.292	0.230	7
10	20525	836.5	50	0	22.56	21.39	0.230	0.175	7
10	20600	844	1	0	23.45	22.50	0.282	0.226	7
10	20600	844	1	24	23.57	22.52	0.290	0.228	7
10	20600	844	1	49	23.58	22.23	0.290	0.213	7
10	20600	844	50	0	22.55	21.43	0.229	0.177	7

Note:

1. ERP (W) = Conducted Output Power (dBm) + Antenna Gain (dBi) - 2.15

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

Mode 3: LTE Band 12

Mode					Conducted Power		ERP Power		Limit
BW (MHz)	Channel	Frequency (MHz)	RB No.	RB offset	QPSK (dBm)	16-QAM (dBm)	QPSK ERP(W)	16-QAM ERP(W)	Limit ERP(W)
1.4	23017	699.7	1	0	23.41	22.55	0.188	0.155	3
1.4	23017	699.7	1	2	23.35	22.81	0.186	0.164	3
1.4	23017	699.7	1	5	23.40	22.76	0.188	0.162	3
1.4	23017	699.7	6	0	22.40	21.43	0.149	0.119	3
1.4	23095	707.5	1	0	23.51	22.30	0.193	0.146	3
1.4	23095	707.5	1	2	23.49	22.04	0.192	0.137	3
1.4	23095	707.5	1	5	23.39	22.21	0.187	0.143	3
1.4	23095	707.5	6	0	22.44	21.14	0.151	0.112	3
1.4	23173	715.3	1	0	23.63	22.42	0.198	0.150	3
1.4	23173	715.3	1	2	23.59	22.52	0.196	0.153	3
1.4	23173	715.3	1	5	23.68	22.28	0.200	0.145	3
1.4	23173	715.3	6	0	22.50	21.52	0.153	0.122	3
3	23025	700.5	1	0	23.54	22.55	0.194	0.155	3
3	23025	700.5	1	7	23.67	22.75	0.200	0.162	3
3	23025	700.5	1	14	23.36	22.63	0.186	0.157	3
3	23025	700.5	15	0	22.49	21.46	0.152	0.120	3
3	23095	707.5	1	0	23.53	22.49	0.194	0.152	3
3	23095	707.5	1	7	23.45	22.45	0.190	0.151	3
3	23095	707.5	1	14	23.61	22.81	0.197	0.164	3
3	23095	707.5	15	0	22.43	21.46	0.150	0.120	3
3	23165	714.5	1	0	23.58	22.37	0.196	0.148	3
3	23165	714.5	1	7	23.51	22.81	0.193	0.164	3
3	23165	714.5	1	14	23.46	22.76	0.191	0.162	3
3	23165	714.5	15	0	22.50	21.48	0.153	0.121	3

Note:

1. ERP (W) = Conducted Output Power (dBm) + Antenna Gain (dBi) - 2.15

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

Mode					Conducted Power		ERP Power		Limit
BW (MHz)	Channel	Frequency (MHz)	RB No.	RB offset	QPSK (dBm)	16-QAM (dBm)	QPSK ERP(W)	16-QAM ERP(W)	Limit ERP(W)
5	23035	701.5	1	0	23.68	22.58	0.200	0.156	3
5	23035	701.5	1	12	23.51	22.33	0.193	0.147	3
5	23035	701.5	1	24	23.35	22.61	0.186	0.157	3
5	23035	701.5	25	0	22.48	21.49	0.152	0.121	3
5	23095	707.5	1	0	23.58	22.57	0.196	0.155	3
5	23095	707.5	1	12	23.46	22.65	0.191	0.158	3
5	23095	707.5	1	24	23.35	22.40	0.186	0.149	3
5	23095	707.5	25	0	22.50	21.42	0.153	0.119	3
5	23155	713.5	1	0	23.71	22.32	0.202	0.147	3
5	23155	713.5	1	12	23.53	22.41	0.194	0.150	3
5	23155	713.5	1	24	23.13	22.72	0.177	0.161	3
5	23155	713.5	25	0	22.43	21.45	0.150	0.120	3
10	23060	704	1	0	23.41	22.74	0.188	0.161	3
10	23060	704	1	24	23.42	22.59	0.189	0.156	3
10	23060	704	1	49	23.38	22.41	0.187	0.150	3
10	23060	704	50	0	22.47	21.43	0.152	0.119	3
10	23095	707.5	1	0	23.43	22.59	0.189	0.156	3
10	23095	707.5	1	24	23.71	22.87	0.202	0.166	3
10	23095	707.5	1	49	23.67	22.37	0.200	0.148	3
10	23095	707.5	50	0	22.46	21.45	0.151	0.120	3
10	23130	711	1	0	23.38	22.76	0.187	0.162	3
10	23130	711	1	24	23.52	22.80	0.193	0.164	3
10	23130	711	1	49	23.39	22.80	0.187	0.164	3
10	23130	711	50	0	22.44	21.50	0.151	0.121	3

Note:

1. ERP (W) = Conducted Output Power (dBm) + Antenna Gain (dBi) - 2.15

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

Mode 5: LTE Band 13

Mode					Conducted Power		ERP Power		Limit
BW (MHz)	Channel	Frequency (MHz)	RB No.	RB offset	QPSK (dBm)	16-QAM (dBm)	QPSK ERP(W)	16-QAM ERP(W)	Limit ERP(W)
5	23205	779.5	1	0	23.58	22.52	0.192	0.150	3
5	23205	779.5	1	12	23.61	22.86	0.193	0.163	3
5	23205	779.5	1	24	23.34	22.82	0.182	0.161	3
5	23205	779.5	25	0	22.72	21.68	0.157	0.124	3
5	23230	782	1	0	23.62	22.82	0.194	0.161	3
5	23230	782	1	12	23.69	22.99	0.197	0.167	3
5	23230	782	1	24	23.71	22.82	0.198	0.161	3
5	23230	782	25	0	22.88	21.76	0.163	0.126	3
5	23255	784.5	1	0	23.61	22.64	0.193	0.155	3
5	23255	784.5	1	12	23.65	22.56	0.195	0.152	3
5	23255	784.5	1	24	23.41	22.52	0.185	0.150	3
5	23255	784.5	25	0	22.77	21.70	0.159	0.124	3
10	23230	782	1	0	23.77	22.69	0.200	0.156	3
10	23230	782	1	24	23.93	22.89	0.208	0.164	3
10	23230	782	1	49	23.68	22.42	0.196	0.147	3
10	23230	782	50	0	22.76	21.65	0.159	0.123	3

Note:

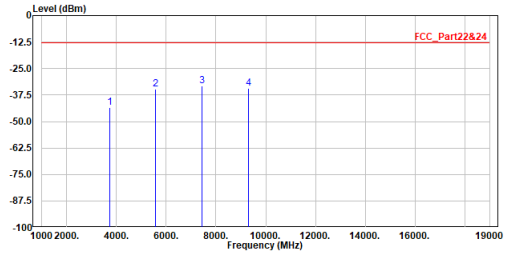
1. ERP (W) = Conducted Output Power (dBm) + Antenna Gain (dBi) - 2.15dB

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

Appendix B. Test Result of Radiated Spurious Emission

Mode 1: LTE Band 2

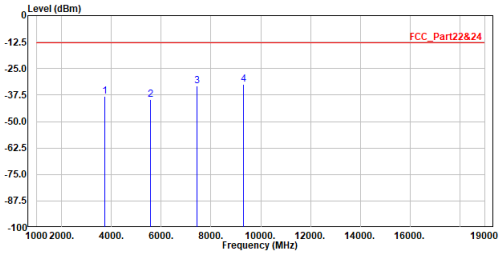
Site :HC-CB02
Condition :3m Horizontal
Mode :LTE_Band2_CH18700
Test By :Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	3720.000	-43.46	-13.00	-30.46	-36.31	-7.15	Peak
2	5580.000	-34.58	-13.00	-21.58	-32.77	-1.81	Peak
3	7440.000	-33.12	-13.00	-20.12	-37.19	4.07	Peak
4	9300.000	-34.28	-13.00	-21.28	-41.14	6.86	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 (dBuVm) 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.

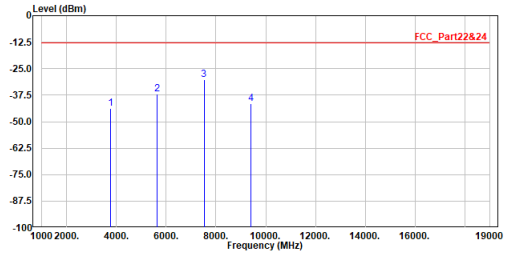
Site :HC-CB02
Condition :3m Vertical
Mode :LTE_Band2_CH18700
Test By :Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	3720.000	-38.22	-13.00	-25.22	-31.07	-7.15	Peak
2	5580.000	-39.50	-13.00	-26.50	-37.69	-1.81	Peak
3	7440.000	-33.11	-13.00	-20.11	-37.18	4.07	Peak
4	9300.000	-32.47	-13.00	-19.47	-39.33	6.86	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 (dBuVm) 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.

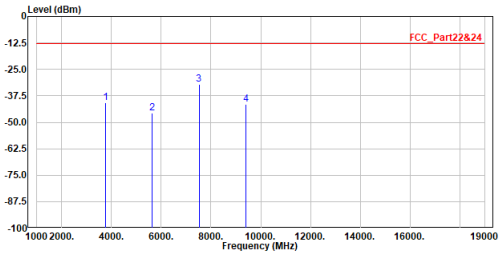
Site :HC-CB02
Condition :3m Horizontal
Mode :LTE_Band2_CH18900
Test By :Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	3760.000	-43.68	-13.00	-30.68	-36.72	-6.96	Peak
2	5640.000	-36.92	-13.00	-23.92	-35.29	-1.63	Peak
3	7520.000	-30.36	-13.00	-17.36	-34.50	4.14	Peak
4	9400.000	-41.37	-13.00	-28.37	-48.32	6.95	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 (dBuVm) 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.

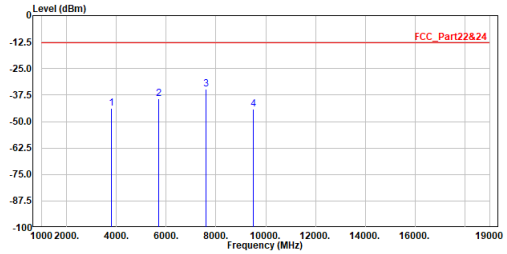
Site :HC-CB02
Condition :3m Vertical
Mode :LTE_Band2_CH18900
Test By :Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	3760.000	-40.80	-13.00	-27.80	-33.84	-6.96	Peak
2	5640.000	-45.58	-13.00	-32.58	-43.95	-1.63	Peak
3	7520.000	-32.11	-13.00	-19.11	-36.25	4.14	Peak
4	9400.000	-41.37	-13.00	-28.37	-48.32	6.95	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 (dBuVm) 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.

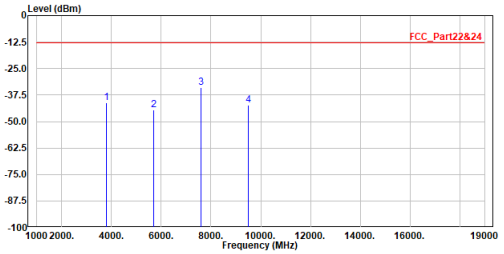
Site :HC-CB02
Condition :3m Horizontal
Mode :LTE_Band2_CH19100
Test By :Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	3800.000	-43.78	-13.00	-30.78	-37.02	-6.76	Peak
2	5700.000	-39.15	-13.00	-26.15	-37.71	-1.44	Peak
3	7600.000	-34.70	-13.00	-21.70	-38.89	4.19	Peak
4	9500.000	-44.04	-13.00	-31.04	-51.06	7.02	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 (dBuVm) 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 :LTE_Band2_CH19100
Test By :Gary Liao

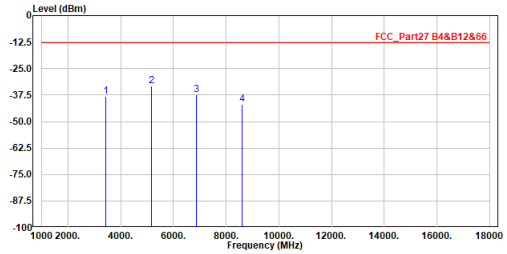


No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	3800.000	-41.08	-13.00	-28.08	-34.32	-6.76	Peak
2	5700.000	-44.50	-13.00	-31.50	-43.06	-1.44	Peak
3	7600.000	-33.88	-13.00	-20.88	-38.07	4.19	Peak
4	9500.000	-42.27	-13.00	-29.27	-49.29	7.02	Peak

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 (dBuVm) 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.

Mode 2: LTE Band 4

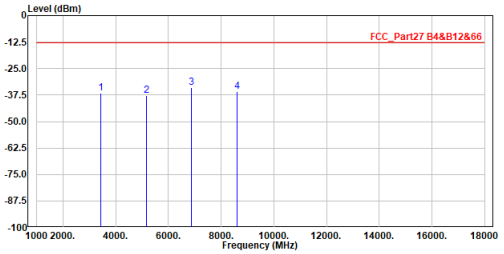
Site : HC-CB02
Condition : 3m Horizontal
Mode : LTE_Band4_CH20050
Test By : Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	3440.000	-38.06	-13.00	-25.06	-29.70	-8.36	Peak
2	5160.000	-33.18	-13.00	-20.18	-31.04	-2.14	Peak
3	6880.000	-37.25	-13.00	-24.25	-40.57	3.32	Peak
4	8600.000	-41.84	-13.00	-28.84	-47.65	5.81	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 (dBuVm) 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.

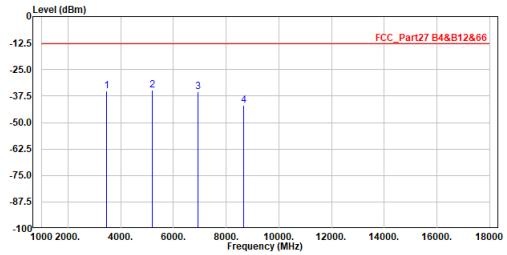
Site : HC-CB02
Condition : 3m Vertical
Mode : LTE_Band4_CH20050
Test By : Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	3440.000	-36.54	-13.00	-23.54	-28.18	-8.36	Peak
2	5160.000	-37.77	-13.00	-24.77	-35.63	-2.14	Peak
3	6880.000	-34.12	-13.00	-21.12	-37.44	3.32	Peak
4	8600.000	-35.73	-13.00	-22.73	-41.54	5.81	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 (dBuVm) 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.

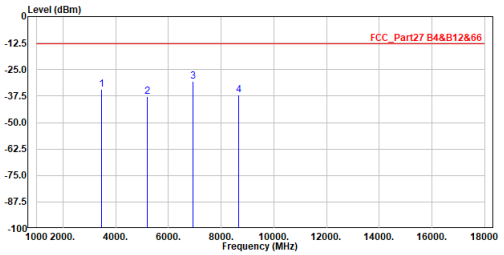
Site : HC-CB02
Condition : 3m Horizontal
Mode : LTE_Band4_CH20175
Test By : Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	3465.000	-34.94	-13.00	-21.94	-26.64	-8.30	Peak
2	5197.500	-34.87	-13.00	-21.87	-32.74	-2.13	Peak
3	6930.000	-35.29	-13.00	-22.29	-38.73	3.44	Peak
4	8662.500	-41.78	-13.00	-28.78	-47.72	5.94	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 (dBuVm) 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.

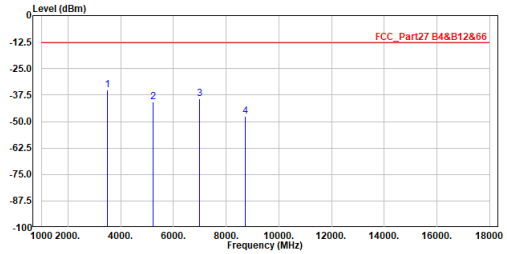
Site : HC-CB02
Condition : 3m Vertical
Mode : LTE_Band4_CH20175
Test By : Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	3465.000	-34.38	-13.00	-21.38	-26.08	-8.30	Peak
2	5197.500	-37.92	-13.00	-24.92	-35.79	-2.13	Peak
3	6930.000	-30.50	-13.00	-17.50	-33.94	3.44	Peak
4	8662.500	-36.80	-13.00	-23.80	-42.74	5.94	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 (dBuVm) 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.

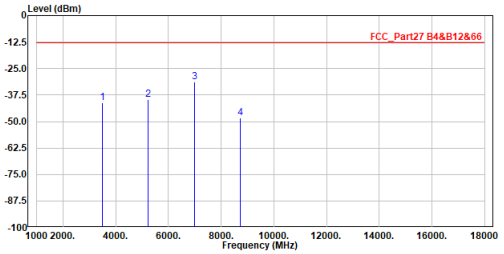
Site :HC-CB02
Condition :3m Horizontal
Mode :LTE_Band4_CH20300
Test By :Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	3490.000	-35.28	-13.00	-22.28	-27.05	-8.23	Peak
2	5235.000	-40.71	-13.00	-27.71	-38.58	-2.13	Peak
3	6980.000	-39.28	-13.00	-26.28	-42.82	3.54	Peak
4	8725.000	-47.42	-13.00	-34.42	-53.49	6.07	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 (dBuVm) 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 :LTE_Band4_CH20300
Test By :Gary Liao

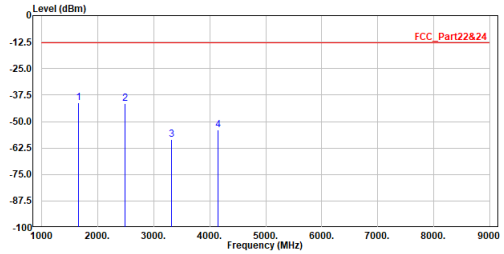


No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	3490.000	-41.18	-13.00	-28.18	-32.95	-8.23	Peak
2	5235.000	-39.50	-13.00	-26.50	-37.37	-2.13	Peak
3	6980.000	-31.32	-13.00	-18.32	-34.86	3.54	Peak
4	8725.000	-48.16	-13.00	-35.16	-54.23	6.07	Peak

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 (dBuVm) 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.

Mode 3: LTE Band 5

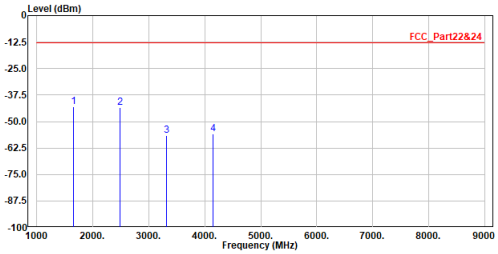
Site : HC-CB02
Condition : 3m Horizontal
Mode : LTE_Band5_CH20450
Test By : Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1658.000	-41.01	-13.00	-28.01	-26.41	-14.60	Peak
2	2487.000	-41.41	-13.00	-28.41	-29.89	-11.52	Peak
3	3316.000	-58.43	-13.00	-45.43	-49.72	-8.71	Peak
4	4144.800	-53.95	-13.00	-40.95	-48.62	-5.33	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 (dBuVm) 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.

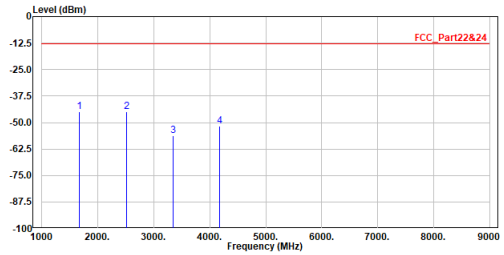
Site : HC-CB02
Condition : 3m Vertical
Mode : LTE_Band5_CH20450
Test By : Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1658.000	-42.93	-13.00	-29.93	-28.33	-14.60	Peak
2	2487.000	-43.31	-13.00	-30.31	-31.79	-11.52	Peak
3	3316.000	-56.49	-13.00	-43.49	-47.78	-8.71	Peak
4	4144.800	-55.75	-13.00	-42.75	-50.42	-5.33	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 (dBuVm) 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.

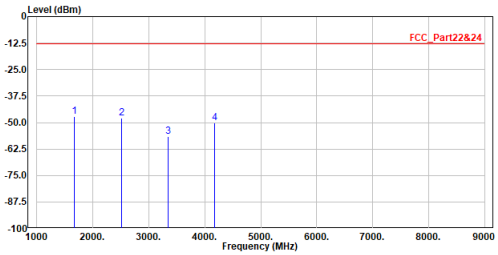
Site : HC-CB02
Condition : 3m Horizontal
Mode : LTE_Band5_CH20525
Test By : Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1673.000	-44.77	-13.00	-31.77	-30.25	-14.52	Peak
2	2509.500	-44.76	-13.00	-31.76	-33.32	-11.44	Peak
3	3346.000	-56.04	-13.00	-43.04	-47.41	-8.63	Peak
4	4182.500	-51.86	-13.00	-38.86	-46.66	-5.20	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 (dBuVm) 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.

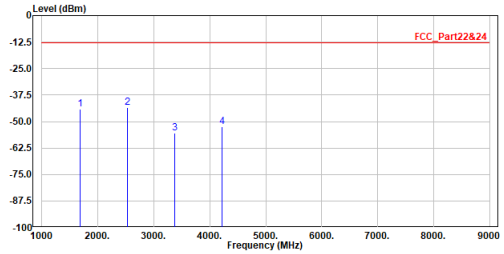
Site : HC-CB02
Condition : 3m Vertical
Mode : LTE_Band5_CH20525
Test By : Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1673.000	-47.21	-13.00	-34.21	-32.69	-14.52	Peak
2	2509.500	-47.97	-13.00	-34.97	-36.53	-11.44	Peak
3	3346.000	-56.46	-13.00	-43.46	-47.83	-8.63	Peak
4	4182.500	-50.11	-13.00	-37.11	-44.91	-5.20	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 (dBuVm) 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.

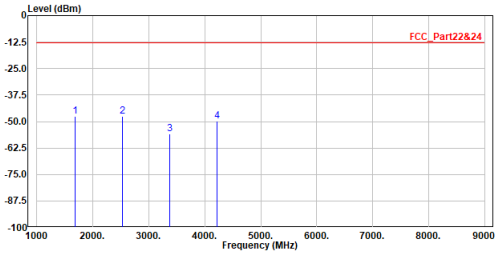
Site :HC-CB02
Condition :3m Horizontal
Mode :LTE_Band5_CH20600
Test By :Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1688.000	-44.23	-13.00	-31.23	-29.77	-14.46	Peak
2	2532.000	-43.43	-13.00	-30.43	-32.07	-11.36	Peak
3	3376.000	-55.60	-13.00	-42.60	-47.05	-8.55	Peak
4	4220.000	-52.55	-13.00	-39.55	-47.47	-5.08	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 (dBuVm) 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 :LTE_Band5_CH20600
Test By :Gary Liao

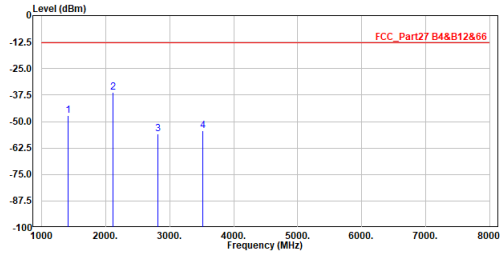


No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1688.000	-47.55	-13.00	-34.55	-33.09	-14.46	Peak
2	2532.000	-47.38	-13.00	-34.38	-36.02	-11.36	Peak
3	3376.000	-56.00	-13.00	-43.00	-47.45	-8.55	Peak
4	4220.000	-49.77	-13.00	-36.77	-44.69	-5.08	Peak

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 (dBuVm) 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.

Mode 4: LTE Band 12

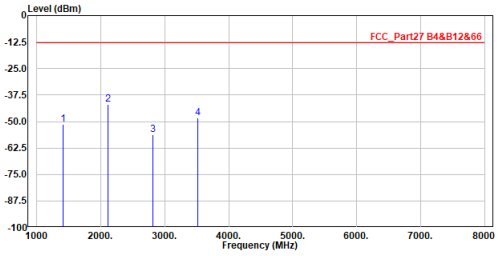
Site :HC-CB02
Condition :3m Horizontal
Mode :LTE_Band12_CH23060
Test By :Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1408.000	-47.05	-13.00	-34.05	-31.44	-15.61	Peak
2	2112.000	-36.41	-13.00	-23.41	-23.69	-12.72	Peak
3	2816.000	-56.01	-13.00	-43.01	-45.72	-10.29	Peak
4	3520.000	-54.27	-13.00	-41.27	-46.17	-8.10	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 (dBuVm) 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.

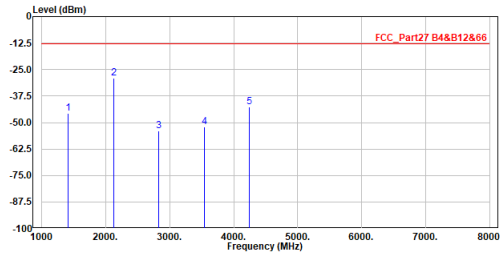
Site :HC-CB02
Condition :3m Vertical
Mode :LTE_Band12_CH23060
Test By :Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1408.000	-51.26	-13.00	-38.26	-35.65	-15.61	Peak
2	2112.000	-41.77	-13.00	-28.77	-29.05	-12.72	Peak
3	2816.000	-56.37	-13.00	-43.37	-46.08	-10.29	Peak
4	3520.000	-48.29	-13.00	-35.29	-40.19	-8.10	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 (dBuVm) 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.

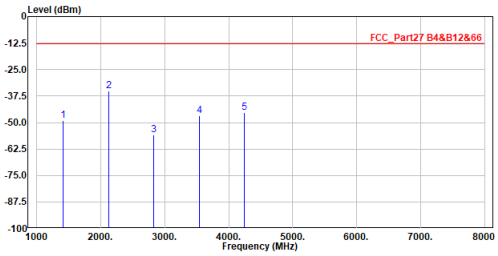
Site :HC-CB02
Condition :3m Horizontal
Mode :LTE_Band12_CH23095
Test By :Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1415.000	-45.66	-13.00	-32.66	-30.08	-15.58	Peak
2	2122.500	-29.16	-13.00	-16.16	-16.48	-12.68	Peak
3	2830.000	-53.98	-13.00	-40.98	-43.75	-10.23	Peak
4	3537.500	-51.98	-13.00	-38.98	-43.96	-8.02	Peak
5	4245.000	-42.78	-13.00	-29.78	-37.78	-5.00	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 (dBuVm) 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.

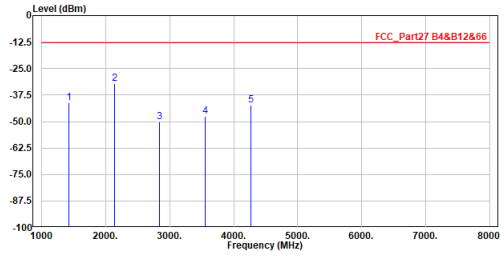
Site :HC-CB02
Condition :3m Vertical
Mode :LTE_Band12_CH23095
Test By :Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1415.000	-49.21	-13.00	-36.21	-33.63	-15.58	Peak
2	2122.500	-35.08	-13.00	-22.08	-22.40	-12.68	Peak
3	2830.000	-55.97	-13.00	-42.97	-45.74	-10.23	Peak
4	3537.500	-46.63	-13.00	-33.63	-38.61	-8.02	Peak
5	4245.000	-45.10	-13.00	-32.10	-40.10	-5.00	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 (dBuVm) 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.

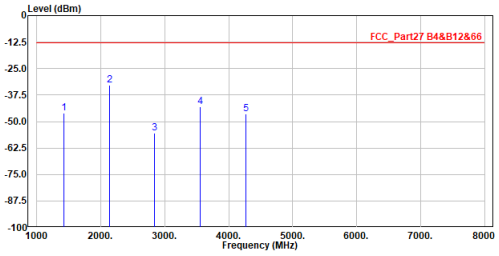
Site :HC-CB02
Condition :3m Horizontal
Mode :LTE_Band12_CH23130
Test By :Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1422.000	-41.16	-13.00	-28.16	-25.60	-15.56	Peak
2	2133.000	-32.07	-13.00	-19.07	-19.42	-12.65	Peak
3	2844.000	-50.09	-13.00	-37.09	-39.91	-10.18	Peak
4	3555.000	-47.41	-13.00	-34.41	-39.48	-7.93	Peak
5	4266.000	-42.45	-13.00	-29.45	-37.51	-4.94	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 (dBuVm) 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 :LTE_Band12_CH23130
Test By :Gary Liao

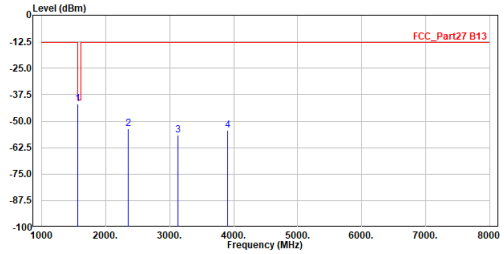


No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	1422.000	-46.21	-13.00	-33.21	-30.65	-15.56	Peak
2	2133.000	-32.83	-13.00	-19.83	-20.18	-12.65	Peak
3	2844.000	-55.38	-13.00	-42.38	-45.20	-10.18	Peak
4	3555.000	-43.19	-13.00	-30.19	-35.26	-7.93	Peak
5	4266.000	-46.52	-13.00	-33.52	-41.58	-4.94	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 (dBuVm) 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.

Mode 5: LTE Band 13

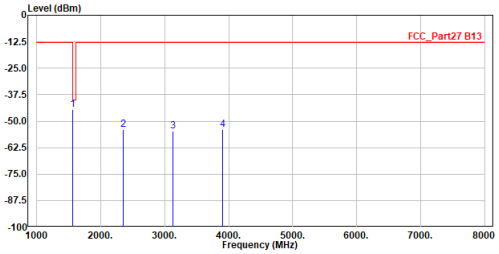
Site :HC-CB02
Condition :3m Horizontal
Mode :LTE_Band13_CH23230
Test By :Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	1564.000	-41.93	-40.00	-1.93	-26.92	-15.01	Peak
2	2346.000	-53.53	-13.00	-40.53	-41.56	-11.97	Peak
3	3128.000	-56.49	-13.00	-43.49	-47.24	-9.25	Peak
4	3910.000	-54.48	-13.00	-41.48	-48.24	-6.24	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
5. The other emission levels were very low against the limit.

Site :HC-CB02
Condition :3m Vertical
Mode :LTE_Band13_CH23230
Test By :Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	1564.000	-44.57	-40.00	-4.57	-29.56	-15.01	Peak
2	2346.000	-54.15	-13.00	-41.15	-42.18	-11.97	Peak
3	3128.000	-54.76	-13.00	-41.76	-45.51	-9.25	Peak
4	3910.000	-53.98	-13.00	-40.98	-47.74	-6.24	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
5. The other emission levels were very low against the limit.