

# **Partial FCC Test Report**

# **(PART 90S)**

Report No.: RFBFLF-WTW-P21070538F-5

FCC ID: MSQFM350GL

Test Model: FM350-GL

Received Date: Dec. 28, 2022

**Test Date:** Dec. 30, 2022 ~ Jan. 03, 2023

**Issued Date:** Mar. 08, 2023

Applicant: ASUSTeK COMPUTER INC.

Address: 1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

Lin Kou Laboratories

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

Test Location: No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City

33383, Taiwan

FCC Registration /

788550 / TW0003

**Designation Number:** 





This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <a href="http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/">http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/</a> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

Report No.: RFBFLF-WTW-P21070538F-5 Page N Reference No.: BFLF-WTW-P22120818

Page No. 1 / 20 Report Format Version: 6.1.1



## **Table of Contents**

Re	elease Control Record	3
1	Certificate of Conformity	4
2	Summary of Test Results	5
	Measurement Uncertainty     Test Site and Instruments	
3	General Information	8
	3.1 General Description of EUT	
	3.2.1 Description of Support Units	. 10 11
4		
	4.1 Radiated Emission Measurement	. 12 . 12 . 12 . 13
5	Pictures of Test Arrangements	. 19
Αŗ	pendix – Information of the Testing Laboratories	. 20



## **Release Control Record**

Issue No.	Description	Date Issued
RFBFLF-WTW-P21070538F-5	Original Release	Mar. 08, 2023



## 1 Certificate of Conformity

Product: 5G Module

Brand: Fibocom Wireless Inc

Test Model: FM350-GL

Sample Status: Engineering Sample

Applicant: ASUSTeK COMPUTER INC.

Test Date: Dec. 30, 2022 ~ Jan. 03, 2023

Standards: FCC Part 90, Subpart I, S, R

FCC Part 2

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by :	Lena Wang	,	Date:	Mar. 08, 2023	
	Lena Wang / Specialist				
Approved by:	Jeremy Lin	,	Date:	Mar. 08, 2023	
	Jeremy Lin / Project Engineer				



## 2 Summary of Test Results

	Applied Standard: FCC Part 90 & Part 2 (LTE 14)								
FCC Clause	Test Item	Result	Remarks						
2.1046 90.542 (a)(7)	Effective Radiated Power	N/A	Refer to Note						
2.1047	Modulation Characteristics	N/A	Refer to Note						
2.1055 90.539 (e)	Frequency Stability		Refer to Note						
2.1049	2.1049 Occupied Bandwidth		Refer to Note						
90.210 (n)	Emission Masks	N/A	Refer to Note						
2.1053 90.543 (e)(2)(3)	Band Edge Measurements		Refer to Note						
2.1051 90.543 (e)(3) Conducted Spurious Emissions		N/A	Refer to Note						
2.1053 90.543 (e)(f)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -34.89 dB at 53.28 MHz.						

Applied Standard: FCC Part 90 & Part 2 (LTE 26)								
FCC Clause	Test Item	Result	Remarks					
2.1046 90.635 (b)	Effective Radiated Power	N/A	Refer to Note					
2.1047	Modulation Characteristics	N/A	Refer to Note					
2.1055 90.213	Frequency Stability	N/A	Refer to Note					
2.1049 90.209	Occupied Bandwidth		Refer to Note					
2.1051 90.691	Emission Masks		Refer to Note					
2.1051 90.691	Conducted Spurious Emissions	N/A	Refer to Note					
2.1053 90.691	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -34.70 dB at 278.32 MHz.					

## Note:

- 1. This report is a partial report, only test items of Radiated Spurious Emissions tests was performed. Other testing data please refer to Sporton report no.: FG051802D\_R01, FW051802\_R01 for module (Brand: Fibocom, Model: FM350-GL).
- 2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.



## 2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
	9 kHz ~ 30 MHz	2.44 dB
Radiated Emissions up to 1 GHz	30 MHz ~ 200 MHz	2.95 dB
	200 MHz ~ 1000 MHz	2.95 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	2.26 dB
Radiated Effissions above 1 GHZ	18 GHz ~ 40 GHz	1.94 dB



## 2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower &Turn Max-Full	MFA-440H	AT93021705	NA	NA
Turn Table Max-Full	MFT-201SS	NA	NA	NA
Turn Table Controller Max-Full	MG-7802	NA	NA	NA
Test Receiver KEYSIGHT	N9038A	MY55420137	Apr. 27, 2022	Apr. 26, 2023
Signal Analyzer Agilent	N9010A	MY52220207	Jan. 06, 2022	Jan. 05, 2023
Loop Antenna TESEQ	HLA 6121	45745	Jul. 27, 2022	Jul. 26, 2023
Loop Antenna EMCI	EM-6879	269	Sep. 19, 2022	Sep. 18, 2023
Pre-amplifier EMCI	EMC001340	980201	Sep. 23, 2022	Sep. 22, 2023
RF Coaxial Cable EMCI	5D-NM-BM	140903+140902	Jan. 15, 2022	Jan. 14, 2023
Pre-Ammlifier EMCI	EMC 330H	980112	Oct. 01, 2022	Sep. 30, 2023
Bi_Log Antenna Schwarzbeck	VULB9168	9168-472	Oct. 21, 2022	Oct. 20, 2023
RF Coaxial Cable WORKEN	8D-FB	Cable-Ch10-01	Oct. 01, 2022	Sep. 30, 2023
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-969	Nov. 13, 2022	Nov. 12, 2023
Pre-Amplifier EMCI	EMC 012645	980115	Oct. 01, 2022	Sep. 30, 2023
RF Coaxial Cable EMCI	EMC104-SM-SM- 8000+3000	171005	Oct. 01, 2022	Sep. 30, 2023
RF Coaxial Cable HUBER SUHNER	SUCOFLEX 104	EMC104-SM-SM- 1000(140807)	Oct. 01, 2022	Sep. 30, 2023
RF FLITER MICRO-TRONICS	BRM50716	060	Jan. 10, 2022	Jan. 09, 2023
RF FLITER MICRO-TRONICS	BRM17690	004	Jan. 10, 2022	Jan. 09, 2023
Boresight antenna tower fixture BV	BAF-02	7	NA	NA
Radio Communication Analyzer Anritsu	MT8821C	6201462755	Mar. 03, 2022	Mar. 02, 2023

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

<sup>2.</sup> The test was performed in HY - 966 chamber 5.



## 3 General Information

## 3.1 General Description of EUT

Product	5G Module						
Brand	Fibocom Wireless Inc						
Test Model	FM350-GL						
Status of EUT	Engineering Sample						
Power Supply Rating	11.61 Vdc (Battery) 5 Vdc / 9Vdc / 15Vdc / 20Vdc (Adapter)						
Modulation Type	LTE	QPSK, 16QAM, 64QAM, 256QAM					
	LTE Band 14 (Channel Bandwidth: 5 MHz)	790.5 ~ 795.5 MHz					
	LTE Band 14 (Channel Bandwidth: 10 MHz)	793 MHz					
F	LTE Band 26 (Channel Bandwidth: 1.4 MHz)	814.7 ~ 823.3 MHz					
Frequency Range	LTE Band 26 (Channel Bandwidth: 3 MHz)	815.5 ~ 822.5 MHz					
	LTE Band 26 (Channel Bandwidth: 5 MHz)	816.5 ~ 821.5 MHz					
	LTE Band 26 (Channel Bandwidth: 10 MHz) 819 MHz						
Antenna Type	Refer to Note as below						
Tx / Rx Function	2Tx / 4Rx						

#### Note:

1. The EUT is authorized for use in specific End-product. Please refer to below for more details.

Product Name	Brand	Model	Difference
		B7402FB	
Natabaali		B7402F	
Notebook	ASUS	B7402FV	For marketing purpose
PC/Expertbook		B7402FVA	
		B7402FVAT	



## 2. The antenna information is listed as below.

WWAN Antenna									
Ant. Type	Couple								
	NB					Tal	blet		
Band	,	Antenna Pea	ak Gain (dBi	)		Antenna Pea	ak Gain (dBi	)	
	Ant 0	Ant 1	Ant 2	Ant 3	Ant 0	Ant 1	Ant 2	Ant 3	
	(TX/RX)	(RX)	(TX/RX)	(RX)	(TX/RX)	(RX)	(TX/RX)	(RX)	
WCDMA II / LTE 2 / 5G NR n2	1.96	1.51	1.82	1.96	-1.18	1.92	0.93	-1.73	
WCDMA IV / LTE 4	1.89	1.57	1.84	1.87	1.22	1.95	0.48	-0.24	
WCDMA V / LTE 5 / 5G NR n5	-0.42	-	-	-0.36	-3.96	-	-	-2.49	
LTE 7 / 5G NR n7	1.97	1.61	1.79	1.83	0.29	1.94	1.99	0.79	
LTE 12	0.88	-	-	-0.86	-1.05	-	_	-4.13	
LTE 13	1.95	-	-	1.99	0.23	-	-	-1.81	
LTE 14	1.90	-	-	1.81	-0.78	-	_	-1.95	
LTE 17	0.88	-	-	-0.86	-1.05	-	_	-4.13	
LTE 25 / 5G NR n25	1.93	1.77	1.82	1.97	-1.04	1.92	0.93	-1.69	
LTE 26	-0.03	ı	-	-0.22	-3.72	-	-	-2.49	
LTE 30 / 5G NR n30	1.80	1.27	1.83	1.96	0.49	1.33	0.71	1.63	
LTE 38 / 5G NR n38	1.31	1.55	1.88	1.81	0.8	1.96	1.94	-0.46	
LTE 41 / 5G NR n41	1.97	1.98	1.50	1.84	1.82	1.84	1.86	1.96	
LTE 48	1.90	1.89	1.73	1.91	1.84	1.77	1.82	1.83	
LTE 66 / 5G NR n66	1.94	1.75	1.85	1.85	1.22	1.99	0.51	-0.44	
5G NR n77	1.98	1.91	1.87	1.97	1.80	1.89	1.92	1.90	
5G NR n78	1.98	1.75	1.87	1.91	1.98	1.89	1.82	1.93	

<sup>\*</sup>The max antenna gain was chosen for final test.

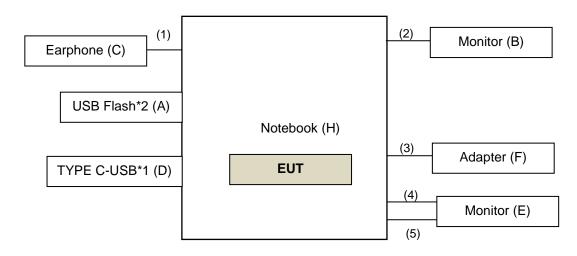
<sup>3.</sup> Detail antenna specification please refer to antenna datasheet.

<sup>4.</sup> The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.



## 3.2 Configuration of System under Test

## <Radiated Emission Test>



-<u>----</u>----

Radio Communication
Analyzer (G)

**Remote Site** 

## 3.2.1 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
Α	USB*2	TRANSCEND	USB3.0 32GB	N/A	N/A	Provided by Lab
В	Monitor	Dell	A14S2421HSXmTW	CN-01KWFW-WSL00-24C- 711B	N/A	Provided by Lab
С	Earphone	HTC	HTC_MAX320	N/A	N/A	Provided by Lab
D	TYPE C-USB*1	SanDisk	SDDDC3-032G	N/A	N/A	Provided by Lab
Е	Monitor	Dell	A14S2421HSXmTW	CN-01KWFW-WSL00-24C- 714B	N/A	Provided by Lab
F	Adapter	CHICONY	A19-065N3A	N/A	N/A	Accessory of the EUT
G	Radio Communication Analyzer	Anritsu	MT8821C	6201462755	NA	Provided by Lab
Н	Notebook	ASUS	B7402FV	NA	NA	Provided by client

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	Audio for Earphone Cable	1	1.2	N	0	Provided by Lab
2.	HDMI Cable	1	1.8	Υ	0	Provided by Lab
3.	Adapter Cable	1	1.6	Υ	0	Accessory of the EUT
4.	Mini DP TO DP Cable	1	1.5	Υ	0	Provided by Lab
5.	Micro HDMI TO HDMI Cable	1	1.5	Υ	0	Provided by Lab



## 3.3 Test Mode Applicability and Tested Channel Detail

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis of Tablet Mode and NB Mode, and antenna ports.

The worst case was found when positioned on NB mode. Following channel(s) was (were) selected for the final test as listed below:

#### LTE Band 14

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Radiated Emission	23330	23330	10 MHz	QPSK	1 RB / 0 RB Offset

#### LTE Band 26

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Radiated Emission	26740	26740	10 MHz	QPSK	1 RB / 0 RB Offset

## **Test Condition:**

Test Item Environmental Conditions		Input Power	Tested By
Radiated Emission	24 deg. C, 66 % RH	120 Vac, 60 Hz	Thomas Cheng

#### 3.4 General Description of Applied Standards and references

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards and references:

**Test Standard:** 

FCC 47 CFR Part 2 FCC 47 CFR Part 90

ANSI 63.26-2015

**Note:** All test items have been performed and recorded as per the above standards.

**References Test Guidance:** 

KDB 971168 D01 Power Meas License Digital Systems v03r01 KDB 971168 D02 Misc Rev Approv License Devices v02r01 ANSI/TIA/EIA-603-E 2016

Note: All test items have been performed as a reference to the above KDB test guidance.

Report No.: RFBFLF-WTW-P21070538F-5 Reference No.: BFLF-WTW-P22120818

Page No. 11 / 20



#### 4 Test Types and Results

#### 4.1 Radiated Emission Measurement

#### 4.1.1 Limits of Radiated Emission Measurement

- (1) The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 +10 log (P) dB. The limit of emission is equal to -13 dBm.
- (2) For operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

#### 4.1.2 Test Procedure

- a. In the semi-anechoic chamber, EUT placed on the 0.8m(below or equal 1GHz) and/or 1.5m(above 1GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- c. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
- d. Following C63.26 section 5.5 and 5.2.7 EIRP (dBm) = E (dB $\mu$ V/m) + 20log(D) 104.8; where D is the measurement distance (in the far field region) in m. ERP (dBm) = E (dB $\mu$ V/m) + 20log(D) 104.8 2.15; where D is the measurement distance (in the far field region) in m.

Note: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

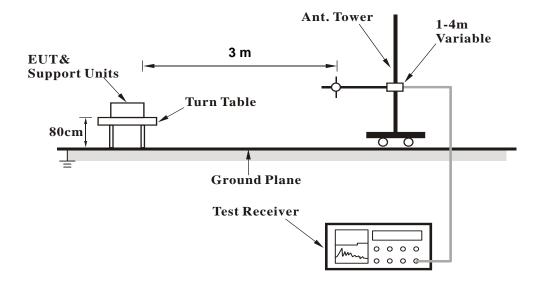
#### 4.1.3 Deviation from Test Standard

No deviation.

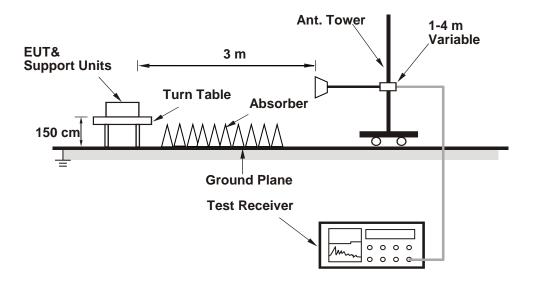


## 4.1.4 Test Setup

## <Radiated Emission below or equal 1 GHz>



## <Radiated Emission above 1 GHz>



For the actual test configuration, please refer to the attached file (Test Setup Photo).



## 4.1.5 Test Results

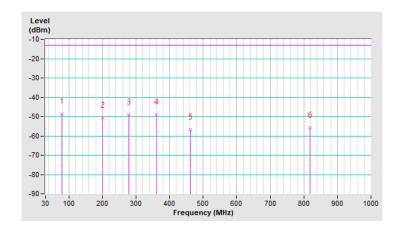
Below 1GHz

LTE Band 14

RF Mode	TX LTE Band XIV- 10MHz	Channel	CH 23330 :793.0MHz
Frequency Range	30MHz ~ 1GHz		

	Antenna Polarity & Test Distance : Horizontal at 3 m									
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)		
1	78.50	-48.63	-13.00	-35.63	2.71 H	70	65.20	-113.83		
2	200.72	-50.59	-13.00	-37.59	1.77 H	102	62.46	-113.05		
3	279.29	-48.88	-13.00	-35.88	3.78 H	146	60.80	-109.68		
4	360.77	-48.97	-13.00	-35.97	1.60 H	91	58.92	-107.89		
5	461.65	-56.62	-13.00	-43.62	2.76 H	38	48.59	-105.21		
6	818.61	-55.64	-13.00	-42.64	2.33 H	164	43.23	-98.87		

- 1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB) + 20log(D) 104.8 2.15
- 3. Margin value = ERP Limit value
- 4. The other ERP levels were very low against the limit.

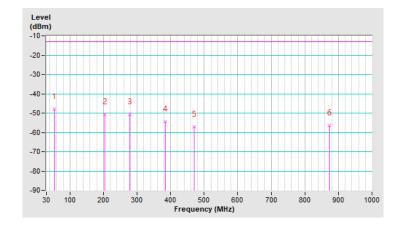




RF Mode	RF Mode TX LTE Band XIV- 10MHz		CH 23330 :793.0MHz
Frequency Range	30MHz ~ 1GHz		

	Antenna Polarity & Test Distance : Vertical at 3 m									
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)		
1	53.28	-47.89	-13.00	-34.89	2.28 V	166	61.91	-109.80		
2	203.63	-50.67	-13.00	-37.67	2.95 V	50	62.41	-113.08		
3	279.29	-50.66	-13.00	-37.66	1.84 V	181	59.02	-109.68		
4	384.05	-54.46	-13.00	-41.46	3.08 V	203	52.69	-107.15		
5	469.41	-57.11	-13.00	-44.11	1.25 V	94	47.91	-105.02		
6	872.93	-56.53	-13.00	-43.53	1.55 V	208	42.26	-98.79		

- 1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB) + 20log(D) 104.8 2.15
- 3. Margin value = ERP Limit value
- 4. The other ERP levels were very low against the limit.



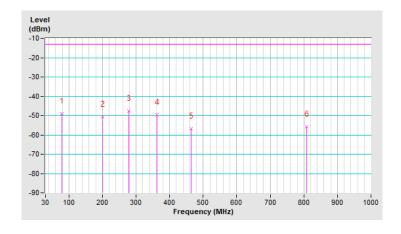


## LTE Band 26

RF Mode	RF Mode TX LTE Band XXVI- 10MHz		CH 26740 :819.0MHz
Frequency Range	30MHz ~ 1GHz		

	Antenna Polarity & Test Distance : Horizontal at 3 m									
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)		
1	78.50	-48.93	-13.00	-35.93	1.90 H	323	64.90	-113.83		
2	200.72	-50.75	-13.00	-37.75	2.61 H	1	62.30	-113.05		
3	278.32	-47.70	-13.00	-34.70	2.31 H	154	62.02	-109.72		
4	361.74	-49.67	-13.00	-36.67	2.09 H	270	58.18	-107.85		
5	463.59	-56.68	-13.00	-43.68	2.28 H	222	48.49	-105.17		
6	808.91	-55.74	-13.00	-42.74	2.75 H	169	43.25	-98.99		

- 1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB) + 20log(D) 104.8 2.15
- 3. Margin value = ERP Limit value
- 4. The other ERP levels were very low against the limit.

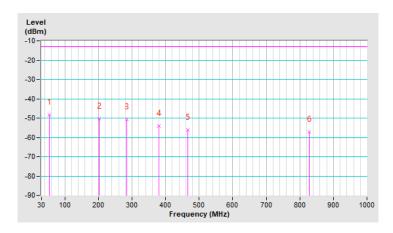




RF Mode TX LTE Band XXVI- 10MHz		Channel	CH 26740 :819.0MHz
Frequency Range	30MHz ~ 1GHz		

	Antenna Polarity & Test Distance : Vertical at 3 m									
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)		
1	53.28	-48.18	-13.00	-35.18	2.18 V	104	61.62	-109.80		
2	201.69	-50.43	-13.00	-37.43	3.05 V	64	62.63	-113.06		
3	285.11	-50.53	-13.00	-37.53	1.43 V	179	58.97	-109.50		
4	380.17	-54.12	-13.00	-41.12	1.39 V	179	53.10	-107.22		
5	465.53	-56.08	-13.00	-43.08	1.11 V	94	49.04	-105.12		
6	828.31	-56.98	-13.00	-43.98	2.36 V	83	41.94	-98.92		

- 1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB) + 20log(D) 104.8 2.15
- 3. Margin value = ERP Limit value
- 4. The other ERP levels were very low against the limit.





#### Above 1GHz

## LTE Band 14

RF Mode	TX LTE Band XIV- 10MHz		CH 23330: 793.0MHz
Frequency Range	1GHz ~ 18GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1586.00	-61.37	-13.00	-48.37	3.05 H	167	56.68	-118.05
	Antenna Polarity & Test Distance : Vertical at 3 m							
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1586.00	-60.31	-13.00	-47.31	1.87 V	251	57.74	-118.05

#### Remarks:

- 1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB) + 20log(D) 104.8 2.15
- 3. Margin value = ERP Limit value
- 4. The other ERP levels were very low against the limit.

#### LTE Band 26

RF Mode	TX LTE Band XXVI- 10MHz	Channel	CH 26740 :819.0MHz	
Frequency Range	1GHz ~ 18GHz			

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1638.00	-61.62	-13.00	-48.62	2.62 H	94	56.37	-117.99
	Antenna Polarity & Test Distance : Vertical at 3 m							
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1638.00	-60.78	-13.00	-47.78	3.08 V	109	57.21	-117.99

#### Remarks:

- 1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
- 2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) Pre-Amplifier Factor(dB) + 20log(D) 104.8 2.15
- 3. Margin value = ERP Limit value
- 4. The other ERP levels were very low against the limit.



5 Pictures of Test Arrangements				
Please refer to the attached file (Test Setup Photo).				



## Appendix - Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

If you have any comments, please feel free to contact us at the following:

Lin Kou EMC/RF Lab

Tel: 886-2-26052180 Fax: 886-2-26051924

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232 Fax: 886-3-3270892

Email: <a href="mailto:service.adt@tw.bureauveritas.com">service.adt@tw.bureauveritas.com</a>
Web Site: <a href="mailto:service.adt@tw.bureauveritas.com">www.bureauveritas.com</a>

The address and road map of all our labs can be found in our web site also.

--- END ---