

## Partial FCC Test Report

### (Part 90S)

**Report No.:** RFBHDI-WTW-P22040138-4

**FCC ID:** 2ATM8EG25G

**Test Model:** EG25-G MINIPCIE

**Received Date:** Apr. 15, 2022

**Test Date:** Apr. 15 ~ Apr. 18, 2022

**Issued Date:** Sep. 07, 2022

**Applicant:** Hawkeye Tech Co., Ltd.

**Address:** 13F. No. 736, Zhongzheng Rd., Zhonghe Dist., New Taipei City 235,  
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 /**

**Designation Number:** 788550 / TW0003



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### Release Control Record

Issue No.	Description	Date Issued
RFBHDI-WTW-P22040138-4	Original Release	Sep. 07, 2022

## 1 Certificate of Conformity

**Product:** LTE Module

**Brand:** Hawkeye Tech Co., Ltd.

**Test Model:** EG25-G MINIPCIE

**Sample Status:** Engineering Sample

**Applicant:** Hawkeye Tech Co., Ltd.

**Test Date:** Apr. 15 ~ Apr. 18, 2022

**Standards:** FCC Part 90, Subpart I, S  
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 :** \_\_\_\_\_, **Date:** Sep. 07, 2022  
Pettie Chen / Senior Specialist



**Approved by :** \_\_\_\_\_, **Date:** Sep. 07, 2022  
Jeremy Lin / Project Engineer

## 2 Summary of Test Results

Applied Standard: FCC Part 90 & Part 2 (LTE 26)			
FCC Clause	Test Item	Result	Remarks
2.1046 90.635 (b)	Effective Radiated Power	Pass	Meet the requirement of limit.
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	N/A	Refer to Note
90.691	Emission Masks	N/A	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 -21.80 dB at 35.82 MHz.

Note:

1. This report is a partial report. Therefore, only test item of Effective Radiated Power and Radiated Spurious Emissions tests were performed for this report. Other testing data please refer to SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch report no.: HR/2019/1001601 for module (Brand: Quectel, Model: EG25-G MINIPCIE).
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) (±)
Radiated Emissions up to 1 GHz	9 kHz ~ 30 MHz	3.04 dB
	30 MHz ~ 200 MHz	3.59 dB
	200 MHz ~ 1000 MHz	3.60 dB
Radiated Emissions above 1 GHz	1 GHz ~ 18 GHz	2.29 dB
	18 GHz ~ 40 GHz	2.29 dB

## 2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date of Calibration
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Dec. 30, 2021	Dec. 29, 2022
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Jun. 10, 2021	Jun. 09, 2022
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Oct. 28, 2021	Oct. 27, 2022
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-1169	Nov. 14, 2021	Nov. 13, 2022
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Oct. 26, 2021	Oct. 25, 2022
Preamplifier Agilent (Below 1GHz)	8447D	2944A10638	Jun. 05, 2021	Jun. 04, 2022
Preamplifier Agilent (Above 1GHz)	8449B	3008A02367	Feb. 16, 2022	Feb. 15, 2023
RF signal cable HUBER+SUHNER&EMCI	SUCOFLEX 104 & EMC104-SM- SM8000	CABLE-CH9-02 (248780+171006)	Jan. 15, 2022	Jan. 14, 2023
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9- (250795/4)	Jan. 15, 2022	Jan. 14, 2023
RF signal cable Woken	8D-FB	Cable-CH9-01	Jun. 05, 2021	Jun. 04, 2022
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower &Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY55 190004/MY551900 07/MY55210005	Jul. 12, 2021	Jul. 11, 2022
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 01, 2021	May 31, 2022
JFW 20dB attenuation	50HF-020-SMA	NA	NA	NA
True RMS Clamp Meter Fluke	376	43860087WS	Feb. 20, 2022	Feb. 19, 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.  
 2. The test was performed in HwaYa Chamber 9.

### 3 General Information

#### 3.1 General Description of EUT

<b>Product</b>	LTE Module		
<b>Brand</b>	Hawkeye Tech Co., Ltd.		
<b>Test Model</b>	EG25-G MINIPCIE		
<b>Status of EUT</b>	Engineering Sample		
<b>Power Supply Rating</b>	3.8Vdc (Host equipment)		
<b>Modulation Type</b>	LTE	QPSK, 16QAM	
<b>Frequency Range</b>	LTE Band 26 (Channel Bandwidth: 1.4 MHz)	814.7 ~ 823.3 MHz	
	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	
<b>Max. ERP Power</b>		QPSK	16QAM
	LTE Band 26 (Channel Bandwidth: 1.4 MHz)	137.721mW (21.39dBm)	109.396mW (20.39dBm)
	LTE Band 26 (Channel Bandwidth: 3 MHz)	138.038mW (21.40dBm)	109.648mW (20.40dBm)
	LTE Band 26 (Channel Bandwidth: 5 MHz)	137.088mW (21.37dBm)	107.647mW (20.32dBm)
	LTE Band 26 (Channel Bandwidth: 10 MHz)	138.038mW (21.40dBm)	109.396mW (20.39dBm)
<b>Antenna Type</b>	Dipole Antenna with 0.3 dBi gain		
<b>Accessory Device</b>	N/A		
<b>Data Cable Supplied</b>	N/A		

Note:

- The EUT was installed in a specific End-product.

Product	Brand	Model	FCC ID
veeaHub	veeaHub	VHH10XXX (X=A-Z, 0-9, blank or "-")	2ARXKVHH10

- The End-product contains following accessory devices.

Product	Brand	Model	Description
Adapter	EDACPOWER ELEC.	EA1062SGR-480	I/P: 100-240 Vac, 50/60 Hz, 2.5A O/P: 48 Vdc, 1.35 A 1.2m DC cable with 1 core

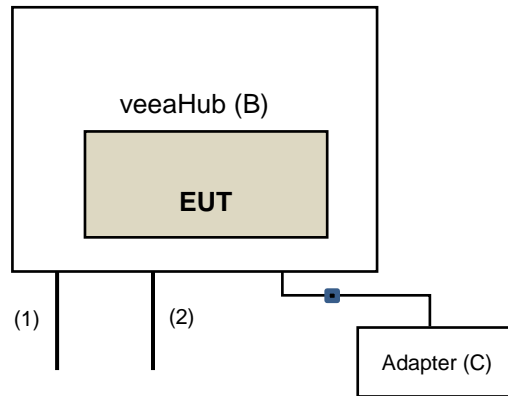
- The End-product use following devices (Support unit).

Product	Brand	Model	Description
PoE	OPEN-MESH	APOE02-WM	O/P: 48 Vdc

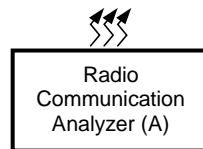
- The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.
- The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

### 3.2 Configuration of System under Test

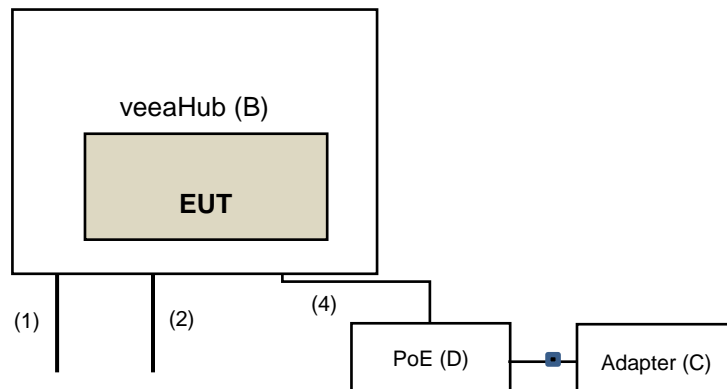
Test Mode A



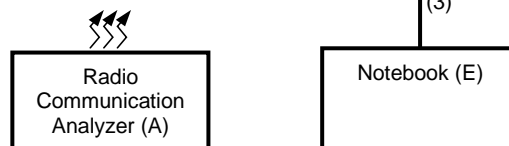
Under Table



Test Mode B



Under Table





### 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
1.	Radio Communication Analyzer	Anritsu	MT8820C	6201240432	NA	-
2.	veeaHub		VHH10	NA	NA	-
3.	Adapter	EDACPOWER ELEC.	EA1062SGR-480	NA	NA	Supplied by applicant
4.	PoE	OPEN-MESH	APOE02-WM	NA	NA	Supplied by applicant
5.	Notebook	DELL	Inspiron 14R	NA	NA	

Note: All power cords of the above support units are non-shielded (1.8m).

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RS232 Cable	1	0.5	N	0	Supplied by applicant
2.	LAN Cable	2	0.5	N	0	Supplied by applicant
3.	LAN Cable	1	10	N	0	Provided by Lab
4.	LAN Cable	1	0.5	N	0	Supplied by applicant

### 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 and antenna ports. Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Description
A	Power from adapter
B	Power from PoE

Band	Radiated Emission
LTE Band 26	Z-axis

#### LTE Band 26

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
A	ERP	26697 to 26783	26697 (814.7 MHz), 26740 (819.0 MHz), 26783 (823.3 MHz)	1.4 MHz	QPSK, 16QAM	1 Half Full
		26705 to 26775	26705 (815.5 MHz), 26740 (819.0 MHz), 26775 (822.5 MHz)	3 MHz	QPSK, 16QAM	1 Half Full
		26715 to 26765	26715 (816.5 MHz), 26740 (819.0 MHz), 26765 (821.5 MHz)	5 MHz	QPSK, 16QAM	1 Half Full
		26740	26740 (819 MHz)	10 MHz	QPSK, 16QAM	1 Half Full
A, B	Radiated Emission Below 1GHz	26740	26740 (819 MHz)	10 MHz	QPSK	1
A	Radiated Emission Above 1GHz	26740	26740 (819 MHz)	10 MHz	QPSK	1

#### Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
ERP	25 deg. C, 65 % RH	3.8 Vdc	Charles Hsiao
Radiated Emission	22 deg. C, 70 % RH	120 Vac, 60 Hz	Greg Lin Rex Wang

### 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.

## 4 Test Types and Results

### 4.1 Output Power Measurement

#### 4.1.1 Limits of Output Power Measurement

The maximum output power of the transmitter for mobile stations is 100 watts (20 dBw) ERP.

#### 4.1.2 Test Procedures

##### Conducted Power Measurement:

- a. The EUT was set up for the maximum power with LTE link data modulation and link up with simulator.
- b. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

##### Maximum EIRP / ERP

The relevant equation for determining the maximum ERP or EIRP from the measured RF output power is given in Equation as follows:

$$\text{EIRP} = P_{\text{Meas}} + G_{\text{T}}$$

$$\text{ERP} = P_{\text{Meas}} + G_{\text{T}} - 2.15$$

where

ERP or EIRP effective radiated power or equivalent isotropically radiated power, respectively

(expressed in the same units as  $P_{\text{Meas}}$ , e.g., dBm or dBW)

$P_{\text{Meas}}$  measured transmitter output power or PSD, in dBm or dBW

$G_{\text{T}}$  gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

#### 4.1.3 Test Setup

##### Conducted Power Measurement:



#### 4.1.4 Test Results

##### Conducted Output Power (dBm)

LTE Band 26						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26697	26740	26783
		Frequency (MHz)		814.7	819	823.3
1.4M	QPSK	1	0	23.07	23.08	23.20
		1	2	23.04	23.00	23.04
		1	5	23.21	23.10	23.24
		3	0	22.95	22.92	22.79
		3	1	22.76	22.89	22.84
		3	3	23.04	22.93	22.95
		6	0	22.08	21.95	22.04
	16QAM	1	0	21.92	22.03	22.00
		1	2	21.99	21.90	21.84
		1	5	22.19	22.01	22.24
		3	0	21.89	21.88	21.73
		3	1	21.67	21.71	21.82
		3	3	21.98	21.90	21.76
		6	0	20.97	20.94	20.95
BW	MCS Index	Channel		26705	26740	26775
		Frequency (MHz)		815.5	819	822.5
3M	QPSK	1	0	22.96	23.08	23.23
		1	7	23.12	23.13	23.25
		1	14	23.05	23.09	23.24
		8	0	21.96	22.03	22.03
		8	3	21.91	22.03	22.17
		8	7	21.88	21.97	22.00
		15	0	21.89	21.95	22.10
	16QAM	1	0	21.77	21.94	22.12
		1	7	22.01	21.99	22.25
		1	14	21.95	21.94	22.17
		8	0	20.77	20.83	21.01
		8	3	20.89	21.03	21.11
		8	7	20.83	20.80	20.87
		15	0	20.69	20.90	20.93

LTE Band 26						
BW	MCS Index	Channel		26715	26740	26765
		Frequency (MHz)		816.5	819	821.5
5M	QPSK	1	0	22.90	22.95	22.97
		1	12	22.99	23.11	23.22
		1	24	23.09	23.06	23.20
		12	0	21.88	21.97	21.86
		12	6	21.89	22.01	22.05
		12	13	21.91	21.97	21.95
		25	0	21.88	21.97	21.97
	16QAM	1	0	21.77	21.95	21.83
		1	12	21.97	21.93	22.10
		1	24	21.93	22.05	22.17
		12	0	20.70	20.93	20.68
		12	6	20.75	20.86	20.91
		12	13	20.88	20.81	20.75
		25	0	20.78	20.91	20.96
BW	MCS Index	Channel		26740		
		Frequency (MHz)		819		
10M	QPSK	1	0	23.22		
		1	24	23.25		
		1	49	21.97		
		25	0	22.13		
		25	12	22.02		
		25	25	22.29		
		50	0	22.08		
	16QAM	1	0	22.24		
		1	24	20.92		
		1	49	20.98		
		25	0	20.86		
		25	12	21.27		
		25	25	21.06		
		50	0	21.07		

## ERP Power (dBm)

LTE Band 26						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		26697	26740	26783
		Frequency (MHz)		814.7	819	823.3
1.4M	QPSK	1	0	21.22	21.23	21.35
		1	2	21.19	21.15	21.19
		1	5	21.36	21.25	<b>21.39</b>
		3	0	21.10	21.07	20.94
		3	1	20.91	21.04	20.99
		3	3	21.19	21.08	21.10
		6	0	20.23	20.10	20.19
	16QAM	1	0	20.07	20.18	20.15
		1	2	20.14	20.05	19.99
		1	5	20.34	20.16	<b>20.39</b>
		3	0	20.04	20.03	19.88
		3	1	19.82	19.86	19.97
		3	3	20.13	20.05	19.91
		6	0	19.12	19.09	19.10
BW	MCS Index	Channel		26705	26740	26775
		Frequency (MHz)		815.5	819	822.5
3M	QPSK	1	0	21.11	21.23	21.38
		1	7	21.27	21.28	<b>21.40</b>
		1	14	21.20	21.24	21.39
		8	0	20.11	20.18	20.18
		8	3	20.06	20.18	20.32
		8	7	20.03	20.12	20.15
		15	0	20.04	20.10	20.25
	16QAM	1	0	19.92	20.09	20.27
		1	7	20.16	20.14	<b>20.40</b>
		1	14	20.10	20.09	20.32
		8	0	18.92	18.98	19.16
		8	3	19.04	19.18	19.26
		8	7	18.98	18.95	19.02
		15	0	18.84	19.05	19.08

\*ERP = Conducted + antenna gain (0.3dBi)-2.15

LTE Band 26						
BW	MCS Index	Channel		26715	26740	26765
		Frequency (MHz)		816.5	819	821.5
5M	QPSK	1	0	21.05	21.10	21.12
		1	12	21.14	21.26	<b>21.37</b>
		1	24	21.24	21.21	21.35
		12	0	20.03	20.12	20.01
		12	6	20.04	20.16	20.20
		12	13	20.06	20.12	20.10
		25	0	20.03	20.12	20.12
	16QAM	1	0	19.92	20.10	19.98
		1	12	20.12	20.08	20.25
		1	24	20.08	20.20	<b>20.32</b>
		12	0	18.85	19.08	18.83
		12	6	18.90	19.01	19.06
		12	13	19.03	18.96	18.90
		25	0	18.93	19.06	19.11
BW	MCS Index	Channel		26740		
		Frequency (MHz)		819		
10M	QPSK	1	0	21.37		
		1	24	<b>21.40</b>		
		1	49	20.12		
		25	0	20.28		
		25	12	20.17		
		25	25	20.44		
		50	0	20.23		
	16QAM	1	0	<b>20.39</b>		
		1	24	19.07		
		1	49	19.13		
		25	0	19.01		
		25	12	19.42		
		25	25	19.21		
		50	0	19.22		

\*ERP = Conducted + antenna gain (0.3dBi)-2.15



## 4.2 Radiated Emission Measurement

### 4.2.1 Limits of Radiated Emission Measurement

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.

### 4.2.2 Test Procedure

- a. In the semi-anechoic chamber, EUT placed on the 0.8 m (below or equal 1 GHz) and/or 1.5 m (above 1 GHz) 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 1 m to 4 m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. 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.
- c. 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:

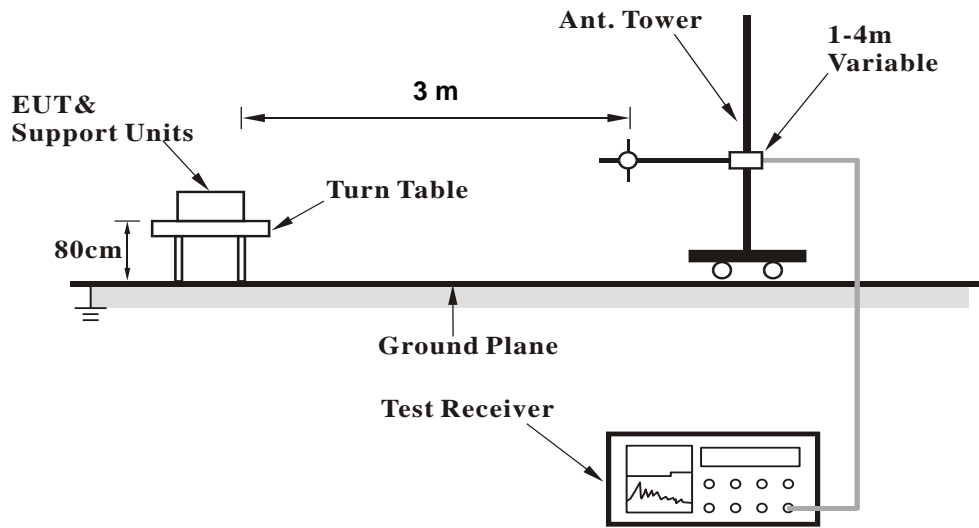
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz/3 MHz.
2. 9 kHz ~ 30 MHz Data:  
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

### 4.2.3 Deviation from Test Standard

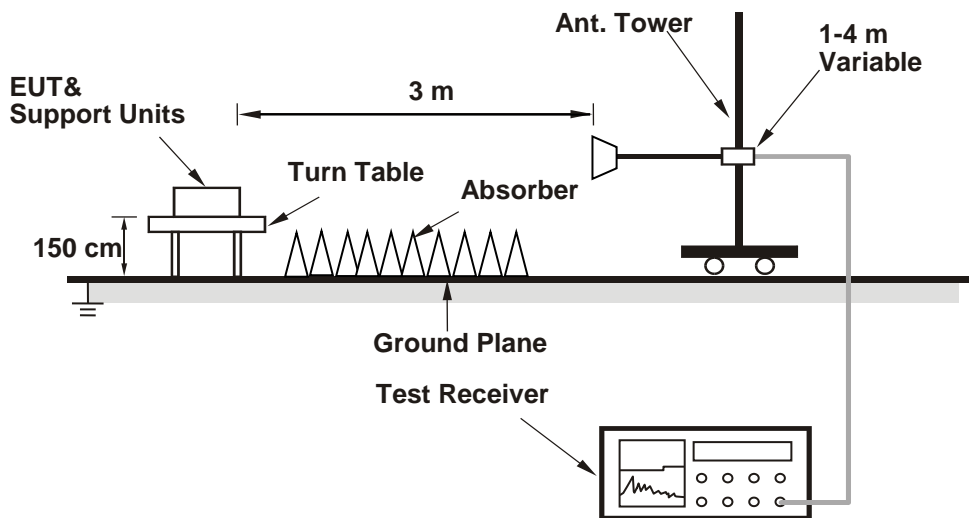
No deviation.

4.2.4 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).

#### 4.2.5 Test Results

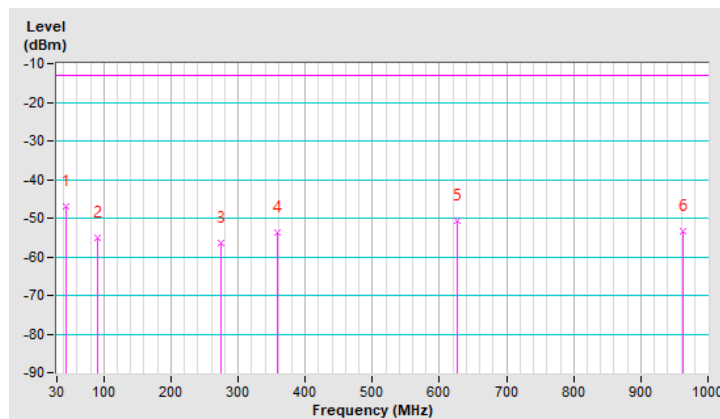
##### Below 1GHz

<b>RF Mode</b>	TX LTE Band 26-10MHz	<b>Channel</b>	CH 26740 : 819 MHz
<b>Frequency Range</b>	30MHz ~ 1GHz	<b>Test Mode</b>	A

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	44.55	-47.11	-13.00	-34.11	1.50 H	346	59.51	-106.62
2	91.11	-55.11	-13.00	-42.11	1.25 H	269	56.99	-112.10
3	275.41	-56.59	-13.00	-43.59	1.00 H	24	48.47	-105.06
4	358.83	-53.79	-13.00	-40.79	1.25 H	166	49.49	-103.28
5	625.58	-50.83	-13.00	-37.83	1.50 H	123	46.52	-97.35
6	962.17	-53.42	-13.00	-40.42	1.25 H	221	37.59	-91.01

##### Remarks:

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

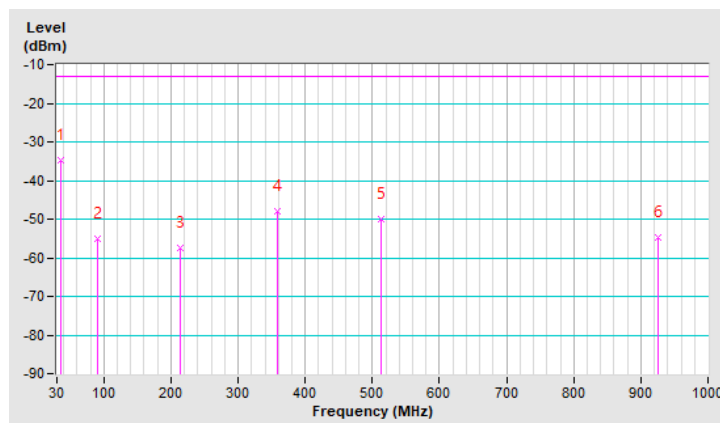


<b>RF Mode</b>	TX LTE Band 26-10MHz	<b>Channel</b>	CH 26740 : 819 MHz
<b>Frequency Range</b>	30MHz ~ 1GHz	<b>Test Mode</b>	A

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	35.82	-34.80	-13.00	-21.80	1.25 V	264	72.81	-107.61
2	91.11	-55.01	-13.00	-42.01	1.00 V	28	57.09	-112.10
3	214.30	-57.62	-13.00	-44.62	1.50 V	28	50.95	-108.57
4	357.86	-48.04	-13.00	-35.04	1.00 V	49	55.25	-103.29
5	513.06	-49.90	-13.00	-36.90	1.25 V	338	49.75	-99.65
6	925.31	-54.88	-13.00	-41.88	1.25 V	314	36.45	-91.33

**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.

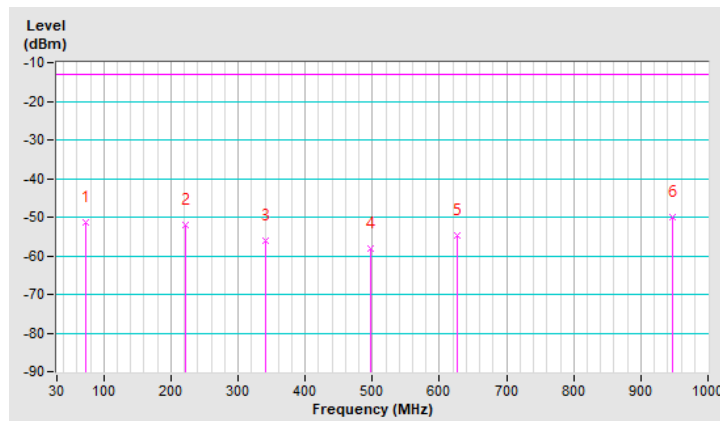


<b>RF Mode</b>	TX LTE Band 26-10MHz	<b>Channel</b>	CH 26740 : 819 MHz
<b>Frequency Range</b>	30MHz ~ 1GHz	<b>Test Mode</b>	B

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	73.65	-51.26	-13.00	-38.26	1.50 H	205	58.16	-109.42
2	221.09	-51.88	-13.00	-38.88	1.00 H	137	56.67	-108.55
3	340.40	-56.01	-13.00	-43.01	1.25 H	33	47.48	-103.49
4	496.57	-57.98	-13.00	-44.98	1.25 H	15	42.07	-100.05
5	625.58	-54.82	-13.00	-41.82	1.00 H	54	42.53	-97.35
6	946.65	-50.14	-13.00	-37.14	2.00 H	88	41.15	-91.29

**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.

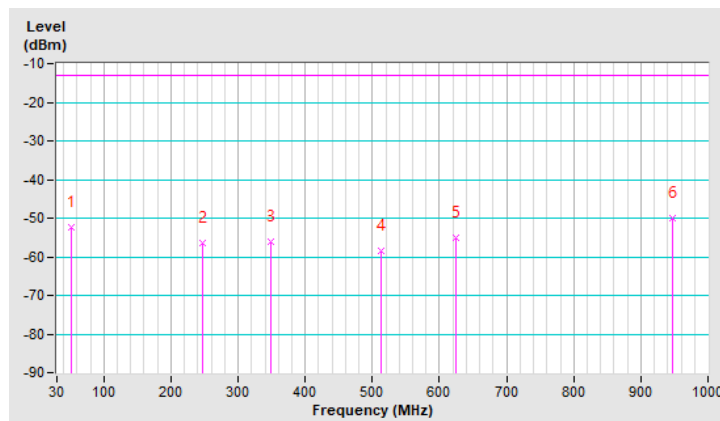


<b>RF Mode</b>	TX LTE Band 26-10MHz	<b>Channel</b>	CH 26740 : 819 MHz
<b>Frequency Range</b>	30MHz ~ 1GHz	<b>Test Mode</b>	B

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	52.31	-52.54	-13.00	-39.54	2.00 V	202	53.86	-106.40
2	246.31	-56.28	-13.00	-43.28	1.50 V	170	50.25	-106.53
3	348.16	-56.24	-13.00	-43.24	1.00 V	6	47.28	-103.52
4	512.09	-58.39	-13.00	-45.39	1.25 V	42	41.27	-99.66
5	624.61	-55.18	-13.00	-42.18	1.00 V	61	42.18	-97.36
6	946.65	-50.06	-13.00	-37.06	1.00 V	90	41.23	-91.29

**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.



**Above 1GHz**

<b>RF Mode</b>	TX LTE Band 26-10MHz	<b>Channel</b>	CH 26740 : 819 MHz
<b>Frequency Range</b>	1GHz ~ 20GHz		

<b>Antenna Polarity &amp; Test Distance : Horizontal at 3 m</b>								
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	-54.54	-13.00	-41.54	1.79 H	138	47.96	-102.50

<b>Antenna Polarity &amp; Test Distance : Vertical at 3m</b>								
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	-52.34	-13.00	-39.34	1.57 V	31	50.16	-102.50

**Remarks:**

1.  $ERP(dBm) = Raw\ Value(dBuV) + Correction\ Factor(dB/m)$
2.  $Correction\ Factor(dB/m) = Antenna\ Factor(dB/m) + Cable\ Factor(dB) - Pre-Amplifier\ Factor(dB) + 20\log(D) - 104.8 - 2.15$
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.

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

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