

FCC Test Report

Report No.: RF181213E15B

FCC ID: I88LTE7461-M602

Test Model: LTE7461-M602

Received Date: June 25, 2019

Test Date: June 26, 2019

Issued Date: July 30, 2019

Applicant: Zyxel Communications Corporation

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

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**FCC Registration /
Designation Number:** 723255 / TW2022



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Release Control Record

Issue No.	Description	Date Issued
RF181213E15B	Original release.	July 30, 2019

1 Certificate of Conformity

Product: 4G LTE-A Outdoor Router

Brand: ZYXEL

Test Model: LTE7461-M602

Sample Status: ENGINEERING SAMPLE

Applicant: Zyxel Communications Corporation

Test Date: June 26, 2019

Standards: 47 CFR FCC Part 15, Subpart C (Section 15.247)
ANSI C63.10: 2013

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 EMC characteristics under the conditions specified in this report.

Prepared by : Wendy Wu , **Date:** July 30, 2019
Wendy Wu / Specialist

Approved by : May Chen , **Date:** July 30, 2019
May Chen / Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247)			
FCC Clause	Test Item	Result	Remarks
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -5.50 at 0.25938MHz
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	PASS	Meet the requirement of limit. Minimum passing margin is -3.1dB at 47.80MHz

Note:

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) (\pm)
Conducted Emissions at mains ports	150kHz ~ 30MHz	1.8 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.1 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	4G LTE-A Outdoor Router
Brand	ZYXEL
Test Model	LTE7461-M602
CPU Model No.	MT7621AT
RF Chip Model No.	WiFi :MT7603E LTE : MDM9240
FW Version (FVIN)	V2.00(ABQN.1)C0
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	DC 48V (POE)
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	DSSS,OFDM
Transfer Rate	802.11b: up to 11Mbps 802.11g: up to 54Mbps 802.11n: up to 300Mbps
Operating Frequency	2.412 ~ 2.462GHz
Number of Channel	802.11b, 802.11g, 802.11n (HT20): 11 802.11n (HT40): 7
Output Power	331.073mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Adapter (POE) x 1 Waterproof plug x 1
Data Cable Supplied	RJ45 cable (Unshielded, 1.8m)

Note:

1. This report is prepared for FCC class II permissive change. The difference compared with the Report No.: RF181213E15 as the following:

- ◆ Leverage original two DC shielding layout into one shielding.
- ◆ Re-layout POE circuit into shielding
- ◆ Updating FW to V2.00(ABQN.1)C0 for bug fixing and optimizations and does not affecting RF characteristic.
- ◆ Update LTE antenna information.

Original

Chain No	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connector Type
WLAN-ANT0	6	2.4 ~ 2.4835GHz	PIFA	iPEX
WLAN-ANT1	5	2.4 ~ 2.4835GHz	PIFA	iPEX
WWAN_0 (TX&RX)	9	2500 ~ 2570 MHz	Dipole	iPEX
	3.5	698 ~ 716 MHz		
	3	777 ~ 787 MHz		
	8	1850 ~ 1915 MHz		
	3.6	814 ~ 849 MHz		
	9	2305 ~ 2315 MHz		
	6	1710 ~ 1780 MHz		
WWAN_1 (RX only)	9	2500 ~ 2570 MHz	Dipole	iPEX
	3.5	698 ~ 716 MHz		
	3	777 ~ 787 MHz		
	8	1850 ~ 1915 MHz		
	3.6	814 ~ 849 MHz		
	9	2305 ~ 2315 MHz		
	6	1710 ~ 1780 MHz		

Newly

Chain No	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connector Type
WLAN-ANT0	6	2.4 ~ 2.4835GHz	PIFA	iPEX
WLAN-ANT1	5	2.4 ~ 2.4835GHz	PIFA	iPEX
WWAN_0 (TX&RX)	6.1	2500 ~ 2570 MHz	PCB	iPEX
	2.3	698 ~ 716 MHz		
	4.2	777 ~ 787 MHz		
	5.7	1850 ~ 1915 MHz		
	3.7	814 ~ 849 MHz		
	5.5	2305 ~ 2315 MHz		
	5.8	1710 ~ 1780 MHz		
WWAN_1 (RX only)	5.5	2500 ~ 2570 MHz	PCB	iPEX
	1.8	698 ~ 716 MHz		
	1.7	777 ~ 787 MHz		
	5.7	1850 ~ 1915 MHz		
	1.7	814 ~ 849 MHz		
	5.3	2305 ~ 2315 MHz		
	5.7	1710 ~ 1780 MHz		

2. According to above conditions, only conducted emission and radiated emission (below 1GHz) test items need to be performed. And all data were verified to meet the requirements.

3. There are WLAN and WWAN technology used for the EUT. The EUT has below radios as following table:

Radio 1	Radio 2
WLAN (2.4GHz)	WWAN (LTE) / 3G

4. Simultaneously transmission condition.

Condition	Technology	
1	WLAN (2.4GHz)	WWAN (LTE) / 3G

Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.

5. The EUT inside has one WWAN (LTE) / 3G module which FCC ID: XMR201807EG06A.

6. The EUT must be supplied with a adapter (POE) as following table:

Brand	Model No.	Spec.
SHENZHEN	TPT24S48A-MC	Input: 100-240Vac, 0.5A, 50/60Hz AC input cable: Unshielded 1.8m Output: 48V

7. The EUT incorporates a MIMO function.

MODULATION MODE	TX & RX CONFIGURATION	
802.11b	1TX diversity	2RX
802.11g	1TX diversity	2RX
802.11n (HT20)	2TX	2RX
802.11n (HT40)	2TX	2RX

Note: Max. gain was selected for 1TX test.

8. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Description of Test Modes

11 channels are provided for 802.11b, 802.11g and 802.11n (HT20):

Channel	Frequency	Channel	Frequency
1	2412MHz	7	2442MHz
2	2417MHz	8	2447MHz
3	2422MHz	9	2452MHz
4	2427MHz	10	2457MHz
5	2432MHz	11	2462MHz
6	2437MHz		

7 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
3	2422MHz	7	2442MHz
4	2427MHz	8	2447MHz
5	2432MHz	9	2452MHz
6	2437MHz		

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO		DESCRIPTION
	RE<1G	PLC	
-	√	√	-

Where **RE<1G**: Radiated Emission below 1GHz **PLC**: Power Line Conducted Emission

Note: In original report, the EUT had been pre-tested on the 0 degree, Vertical +30 degree, Vertical -30 degree, 0 degree clockwise 45 degree and 0 degree counterclockwise 45 degree. The worst case was found when positioned on 0 degree.

Radiated Emission Test (Below 1GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11n (HT20)	1 to 11	6	OFDM	BPSK	6.5

Power Line Conducted Emission Test:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11n (HT20)	1 to 11	6	OFDM	BPSK	6.5

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE<1G	24deg. C, 71%RH	120Vac, 60Hz	Andy Ho
PLC	24deg. C, 76%RH	120Vac, 60Hz	Andy Ho

3.3 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.

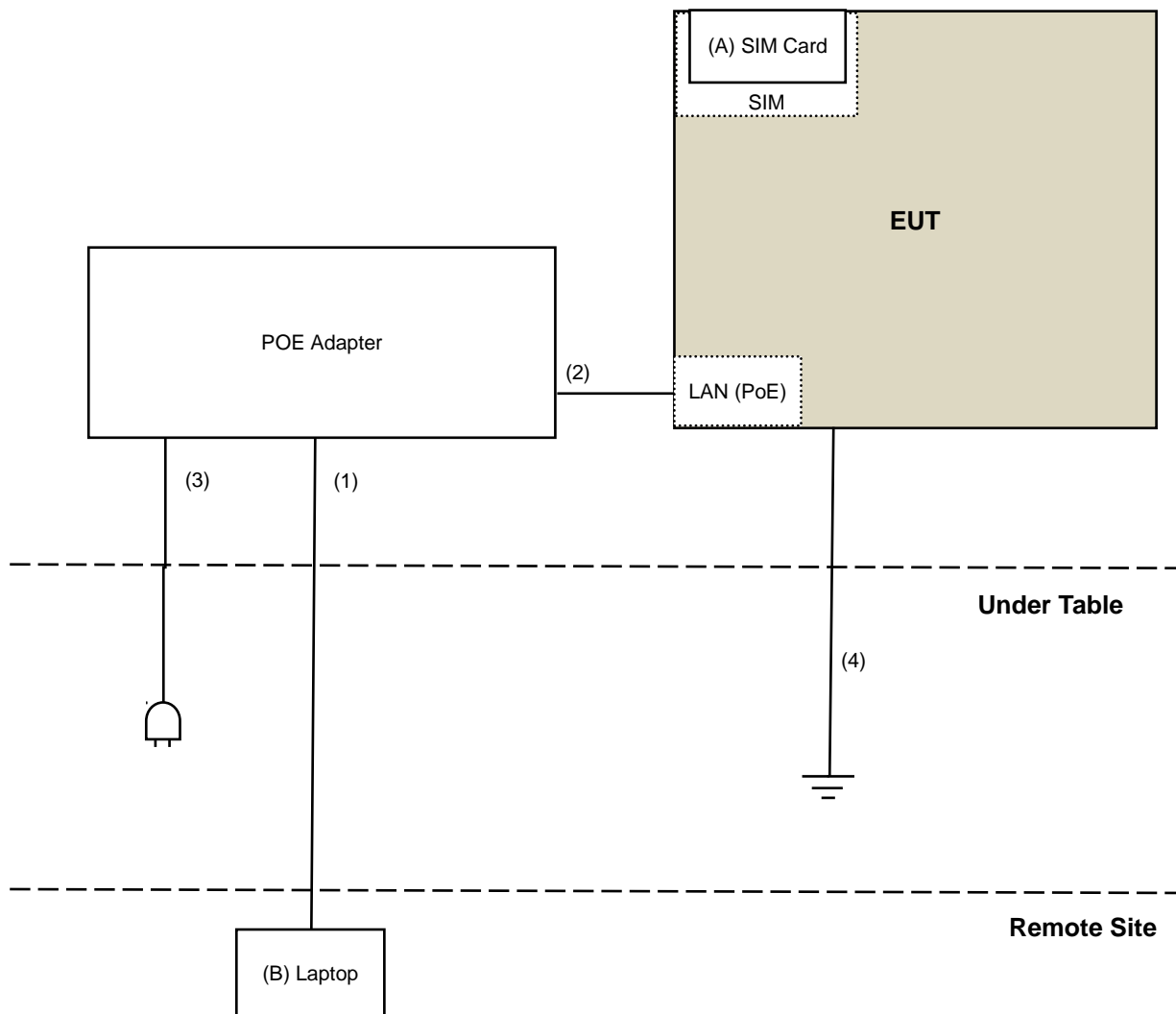
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	SIM Card	R&S	NA	NA	NA	Provided by Lab
B.	Laptop	DELL	E6420	B92T3R1	FCC DoC	Provided by Lab

Note:

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ-45 Cable	1	10	No	0	Provided by Lab
2.	RJ-45 Cable	1	1.8	No	0	Supplied by client
3.	AC Cable	1	1.8	No	0	Supplied by client
4.	GND Cable	1	2.8	No	0	Provided by Lab

3.3.1 Configuration of System under Test



3.4 General Description of Applied Standards

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

FCC Part 15, Subpart C (15.247)
KDB 558074 D01 15.247 Meas Guidance v05r02
KDB 662911 D01 Multiple Transmitter Output v02r01
ANSI C63.10-2013

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.1.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY50010156	July 12, 2018	July 11, 2019
Pre-Amplifier EMCI	EMC001340	980142	Jan. 25, 2019	Jan. 24, 2020
Loop Antenna Electro-Metrics	EM-6879	269	Sep. 07, 2018	Sep. 06, 2019
RF Cable	NA	LOOPCAB-001	Jan. 14, 2019	Jan. 13, 2020
RF Cable	NA	LOOPCAB-002	Jan. 14, 2019	Jan. 13, 2020
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-05	Apr. 30, 2019	Apr. 29, 2020
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Nov. 22, 2018	Nov. 21, 2019
RF Cable	8D	966-3-1	Mar. 18, 2019	Mar. 17, 2020
RF Cable	8D	966-3-2	Mar. 18, 2019	Mar. 17, 2020
RF Cable	8D	966-3-3	Mar. 18, 2019	Mar. 17, 2020
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	Sep. 27, 2018	Sep. 26, 2019
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA

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 966 Chamber No. 3.
3. Loop antenna was used for all emissions below 30 MHz.
4. Tested Date: June 26, 2019

4.1.3 Test Procedures

For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. 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.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Note:

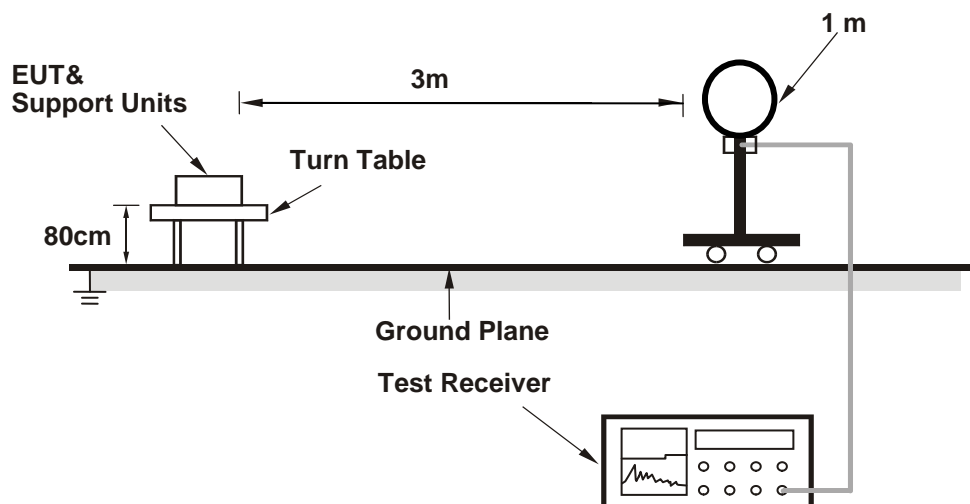
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

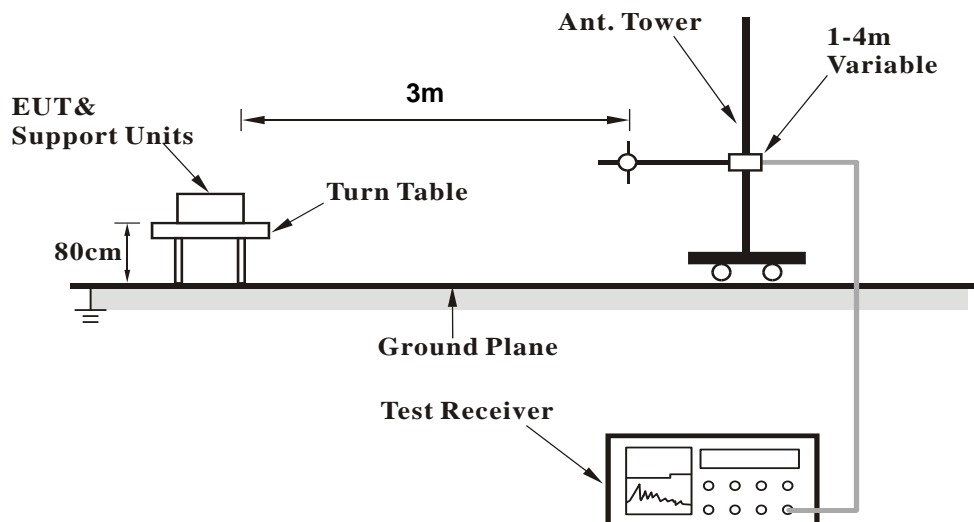
No deviation.

4.1.5 Test Setup

For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



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

4.1.6 EUT Operating Conditions

- Connected the EUT with the Laptop is placed on remote site.
- Controlling software (QA Tool (Version: 0.0.1.85)) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

Below 1GHz Data:

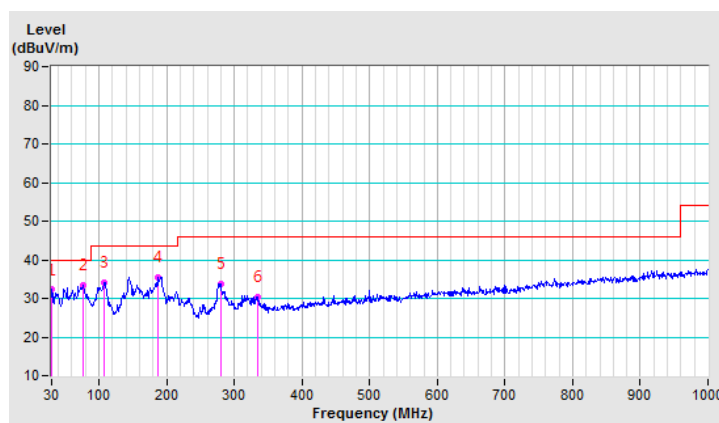
802.11n (HT20)

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.05	32.2 QP	40.0	-7.8	1.00 H	132	41.5	-9.3
2	76.88	33.4 QP	40.0	-6.6	2.00 H	70	45.8	-12.4
3	106.97	34.2 QP	43.5	-9.3	3.00 H	285	45.4	-11.2
4	188.01	35.5 QP	43.5	-8.0	2.00 H	112	45.2	-9.7
5	279.58	33.8 QP	46.0	-12.2	1.00 H	339	40.9	-7.1
6	334.22	30.4 QP	46.0	-15.6	1.00 H	45	35.9	-5.5

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

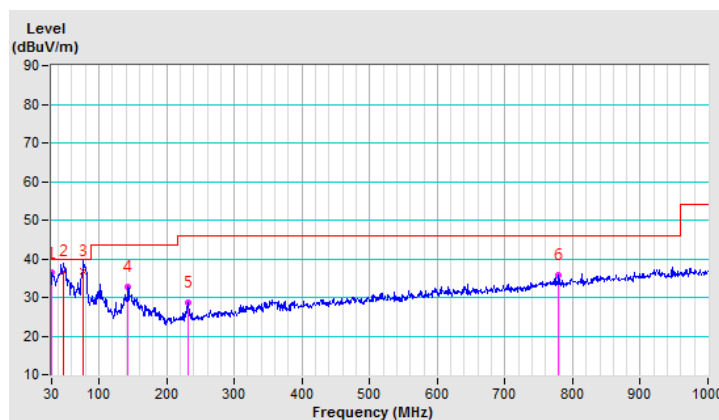


CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.63	36.3 QP	40.0	-3.7	1.00 V	344	45.7	-9.4
2	47.80	36.9 QP	40.0	-3.1	1.00 V	174	45.5	-8.6
3	77.19	36.7 QP	40.0	-3.3	1.00 V	149	49.2	-12.5
4	143.30	32.7 QP	43.5	-10.8	1.50 V	230	40.6	-7.9
5	231.71	28.6 QP	46.0	-17.4	1.00 V	360	37.9	-9.3
6	779.62	35.9 QP	46.0	-10.1	1.50 V	238	32.0	3.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESCS 30	847124/029	Oct. 24, 2018	Oct. 23, 2019
Line-Impedance Stabilization Network (for EUT) R&S	ESH3-Z5	848773/004	Oct. 22, 2018	Oct. 21, 2019
Line-Impedance Stabilization Network (for Peripheral) R&S	ESH3-Z5	835239/001	Mar. 17, 2019	Mar. 16, 2020
50 ohms Terminator	N/A	3	Oct. 22, 2018	Oct. 21, 2019
RF Cable	5D-FB	COCCAB-001	Sep. 28, 2018	Sep. 27, 2019
Fixed attenuator EMCI	STI02-2200-10	003	Mar. 14, 2019	Mar. 13, 2020
Software BVADT	BVADT_Cond_ V7.3.7.4	NA	NA	NA

Note:

1. The calibration interval of the above test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Conduction 1.
- 3 Tested Date: June 26, 2019

4.2.3 Test Procedures

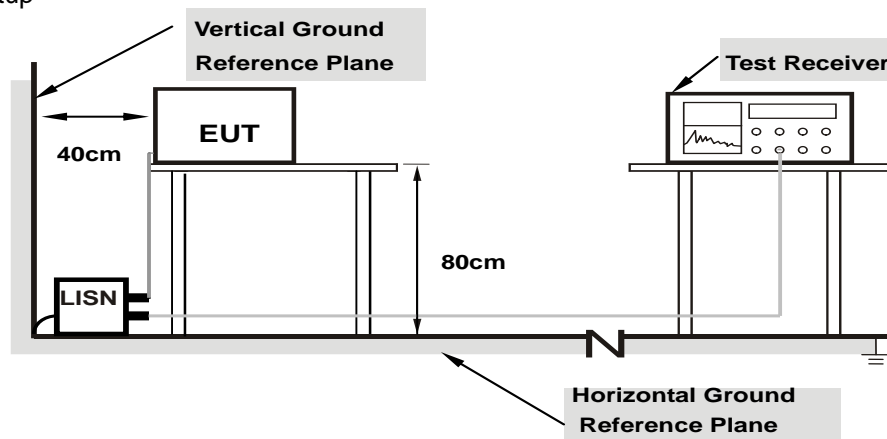
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE: The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



Note: 1.Support units were connected to second LISN.

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

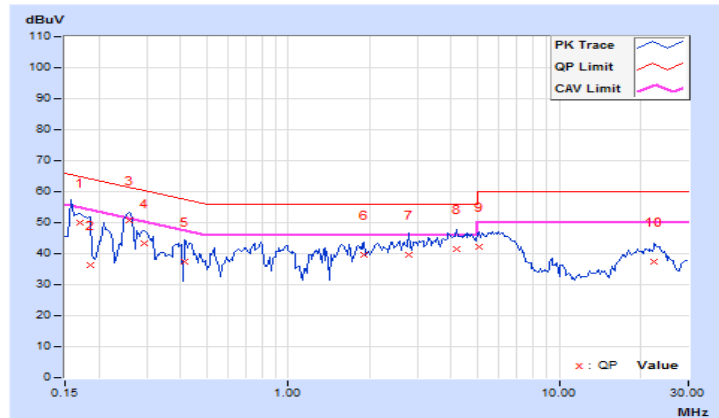
4.2.7 Test Results

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
-------	----------	-------------------	--------------------------------

No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16956	10.03	40.13	29.68	50.16	39.71	64.98	54.98	-14.82	-15.27
2	0.18516	10.03	26.10	5.66	36.13	15.69	64.25	54.25	-28.12	-38.56
3	0.25938	10.05	40.57	35.90	50.62	45.95	61.45	51.45	-10.83	-5.50
4	0.29453	10.05	33.14	24.04	43.19	34.09	60.40	50.40	-17.21	-16.31
5	0.41563	10.07	27.20	7.54	37.27	17.61	57.54	47.54	-20.27	-29.93
6	1.91016	10.16	29.36	22.39	39.52	32.55	56.00	46.00	-16.48	-13.45
7	2.77344	10.19	29.28	22.43	39.47	32.62	56.00	46.00	-16.53	-13.38
8	4.18359	10.26	31.19	25.52	41.45	35.78	56.00	46.00	-14.55	-10.22
9	5.03906	10.30	31.94	27.13	42.24	37.43	60.00	50.00	-17.76	-12.57
10	22.52734	11.11	26.36	21.98	37.47	33.09	60.00	50.00	-22.53	-16.91

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

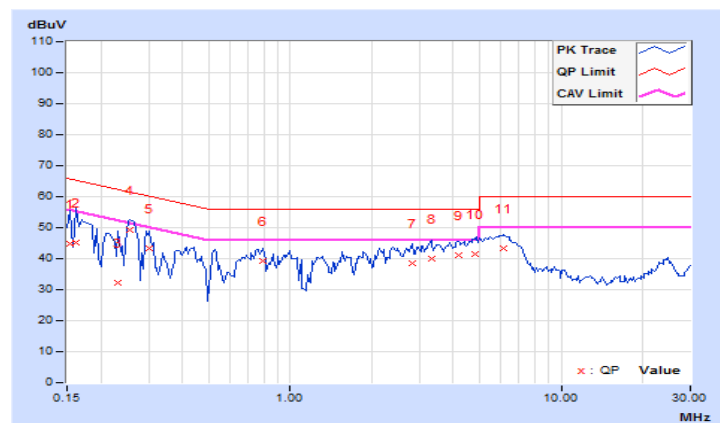


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	9.93	34.99	10.54	44.92	20.47	65.79	55.79	-20.87	-35.32
2	0.16172	9.93	35.22	12.20	45.15	22.13	65.38	55.38	-20.23	-33.25
3	0.23203	9.94	22.37	3.53	32.31	13.47	62.38	52.38	-30.07	-38.91
4	0.25547	9.95	39.14	32.96	49.09	42.91	61.58	51.58	-12.49	-8.67
5	0.30234	9.95	33.50	32.19	43.45	42.14	60.18	50.18	-16.73	-8.04
6	0.79063	9.98	29.42	19.19	39.40	29.17	56.00	46.00	-16.60	-16.83
7	2.81250	10.07	28.60	20.81	38.67	30.88	56.00	46.00	-17.33	-15.12
8	3.32031	10.09	29.82	23.82	39.91	33.91	56.00	46.00	-16.09	-12.09
9	4.16797	10.13	30.87	25.60	41.00	35.73	56.00	46.00	-15.00	-10.27
10	4.80469	10.15	31.45	26.69	41.60	36.84	56.00	46.00	-14.40	-9.16
11	6.15234	10.21	33.20	28.80	43.41	39.01	60.00	50.00	-16.59	-10.99

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.



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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