

# **FCC Test Report (CA Mode)**

# (Spot Check)

Report No.: RF190507C02-9

FCC ID: MSQI01WDX

Original FCC ID: MSQI01WD

Test Model: ASUS\_I01WDX

Received Date: May 07, 2019

**Test Date:** May 11 ~ May 20, 2019

Issued Date: May 29, 2019

**Applicant:** ASUSTek COMPUTER INC.

Address: 4F, No. 150, LI-TE Rd., PEITOU, TAIPEI 112, TAIWAN

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

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

(R.O.C.)

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

33383, TAIWAN (R.O.C.)

FCC Registration / 788550 / TW0003

**Designation Number:** 





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The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any government agencie



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# **Release Control Record**

Issue No.	Description	Date Issued
RF190507C02-9	Original release	May 29, 2019



### 1 Certificate of Conformity

Product: ASUS Phone

Brand: ASUS

Test Model: ASUS\_I01WDX

Sample Status: Identical Prototype

Applicant: ASUSTek COMPUTER INC.

**Test Date:** May 11 ~ May 20, 2019

Standards: FCC Part 27, Subpart C, M

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: May 29, 2019

Pettie Chen / Senior Specialist

**Approved by:** , **Date**: May 29, 2019

Bruce Chen / Project Engineer



# 2 Summary of Test Results

Applied Standard: FCC Part 27 & Part 2									
FCC Clause	Remarks								
2.1053 27.53 (m)(4)(6)	Radiated Spurious Emissions		Meet the requirement of limit. Minimum passing margin is -19.1dB at 243.40MHz.						

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) (±)
	9kHz ~ 30MHz	3.04 dB
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	3.63 dB
	200MHz ~1000MHz	3.64 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
Radiated Emissions above 1 GHZ	18GHz ~ 40GHz	2.29 dB



### 2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Jan. 03, 2019	Jan. 02, 2020
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Sep. 25, 2018	Sep. 24, 2019
MXG Vector signal generator Agilent	N5182B	MY53050162	Jan. 16, 2019	Jan. 15, 2020
HORN Antenna SCHWARZBECK	9120D	9120D-1169	Nov. 25, 2018	Nov. 24, 2019
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Nov. 21, 2018	Nov. 20, 2019
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-1170	Nov. 25, 2018	Nov. 24, 2019
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 25, 2018	Nov. 24, 2019
Loop Antenna TESEQ	HLA 6121	45745	Jun. 14, 2018	Jun. 13, 2019
Preamplifier Agilent (Below 1GHz)	8447D	2944A10631	Aug. 08, 2018	Aug. 07, 2019
Preamplifier KEYSIGHT (Above 1GHz)	83017A	MY53270295	Jul. 02, 2018	Jul. 01, 2019
RF signal cable HUBER+SUHNER	SUCOFLEX 104	MY 13380+295012/04	Aug. 08, 2018	Aug. 07, 2019
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03 (250724)	Aug. 08, 2018	Aug. 07, 2019
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021703	NA	NA
Turn Table BV ADT	TT100	TT93021703	NA	NA
Turn Table Controller BV ADT	SC100	SC93021703	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 04, 2018	Jun. 03, 2019
JFW 20dB attenuation	50HF-020-SMA	NA	NA	NA
True RMS Clamp Meter Fluke	325	31130711WS	May 22, 2018	May 21, 2019

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 HwaYa Chamber 4.



#### 3 General Information

### 3.1 General Description of EUT

Product	ASUS Phone	ASUS Phone						
Brand	ASUS							
Test Model	ASUS_I01WDX							
Status of EUT	Identical Prototype							
	3.85 Vdc (Battery)							
Power Supply Rating	5 or 9 Vdc (Adapter	·)						
	5 Vdc (Host equipm	nent)						
	WCDMA: BPSK, QI	PSK						
Modulation Type	HSDPA: BPSK							
Modulation Type	HSUPA: QPSK							
	LTE: QPSK, 16QAN	M, 64QAM						
	LTE Band 7	Channel Bandwidth 20MHz	2510.0MHz ~ 2560.0MHz					
Operating Frequency	LTE Band 38	Channel Bandwidth 20MHz	2580.0MHz ~ 2610.0MHz					
	LTE Band 41	Channel Bandwidth 20MHz	2545.0MHz ~ 2645.0MHz					
Max. EIRP Power	Refer to Note as be	low						
Emission Designator	Refer to Note as be	low						
Antenna Type	Refer to Note as be	low						
Antenna Connector	Refer to Note as be	low						
Accessory Device	Refer to Note as be	low						
Cable Supplied	Refer to Note as be	low						

### Note:

- 1. This report is a supplementary report to the original BV CPS report no.: RF190114C07-10. Exhibit prepared for FCC Spot Check Verification report, the format, test items and amount of spot-check test data are decided by applicant's engineering judgment, for more details please refer to declaration letter exhibit. Radiated emission verification test based on the worst channel refer to original report.
- 2. The EUT accessories list refers to EUT Photo.pdf.

3. The following antennas were provided to the EUT.

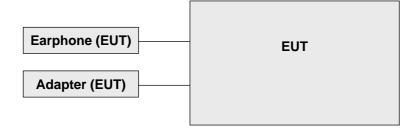
				Gain (dBi)										
Ant. No.	Type	Connector	GSM	GSM	WCDMA	WCDMA	WCDMA	ITE B2	ITE DA	LTE B5	ITE D7	LTE	LTE	LTE
			850	1900	B2	B4	B5	LIL DZ	LIL D4		LIL DI	B26	B38	B41
WWAN Antenna-0	PIFA	NA	-4.5	-2.6	-2.6	-1.9	-4.5	-2.5	-1.9	-4.5	-1.3	-4.4	-1.0	-1.0
WWAN Antenna-1	PIFA	NA	-3.4	-3.2	-3.2	-5.3	-3.4	-3.2	-5.3	-3.3	-4.7	-3.3	-5.7	-5.7

4. Max. EIRP Power and Emission Designator as below.

Mode	Output power (W)	Emission Designator
CA mode: LTE Band 7 20M + LTE Band 7 20M	60.256mW (17.80dBm)	689KG7D
CA mode: LTE Band 38 20M + LTE Band 38 20M	44.668mW (16.50dBm)	685KG7D
CA mode: LTE Band 41 20M + LTE Band 41 20M	54.954mW (17.40dBm)	734KG7D



# 3.2 Configuration of System under Test



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.	Radio Communication Analyzer	Anritsu	MT8860C	1702001	NA	-

#### Note:

- 1. All power cords of the above support units are non-shielded (1.8m).
- 2. Item A acted as a communication partner to transfer data.



# 3.3 Test Mode Applicability and Tested Channel Detail

Following channel(s) was (were) selected for the final test as listed below:

# LTE Band 7 + LTE Band 7

LIL Dand	id / + LTE Ballu /							
EUT Configure Mode	Test item	Band	Tested Channel		Band	Tested Channel		Modulation
		LTE Band 7 (Channel Bandwidth 20MHz)	20850	1 RB / 0 RB Offset	LTE Band 7 (Channel Bandwidth 20MHz)	21048	1 RB / 99 RB Offset	QPSK
		LTE Band 7 (Channel Bandwidth 20MHz)	20850	1 RB / 99 RB Offset	LTE Band 7 (Channel Bandwidth 20MHz)	21048	1 RB / 0 RB Offset	QPSK
	Conducted	LTE Band 7 (Channel Bandwidth 20MHz)	21001	1 RB / 0 RB Offset	LTE Band 7 (Channel Bandwidth 20MHz)	21199	1 RB / 99 RB Offset	QPSK
-	Output Power	LTE Band 7 (Channel Bandwidth 20MHz)	21001	1 RB / 99 RB Offset	LTE Band 7 (Channel Bandwidth 20MHz)	21199	1 RB / 0 RB Offset	QPSK
		LTE Band 7 (Channel Bandwidth 20MHz)	21152	1 RB / 0 RB Offset	LTE Band 7 (Channel Bandwidth 20MHz)	21350	1 RB / 99 RB Offset	QPSK
		LTE Band 7 (Channel Bandwidth 20MHz)	21152	1 RB / 99 RB Offset	LTE Band 7 (Channel Bandwidth 20MHz)	21350	1 RB / 0 RB Offset	QPSK
-	Radiated Emission Below 1GHz	LTE Band 7 (Channel Bandwidth 20MHz)	20850	1 RB / 0 RB Offset	LTE Band 7 (Channel Bandwidth 20MHz)	21048	1 RB / 99 RB Offset	QPSK

# LTE Band 38 + LTE Band 38

EUT Configure Mode	Test item	Band	Tested Channel		Band	Tested Channel		Modulation
		LTE Band 38 (Channel Bandwidth 20MHz)	37850	1 RB / 0 RB Offset	LTE Band 38 (Channel Bandwidth 20MHz)	38048	1 RB / 99 RB Offset	QPSK
		LTE Band 38 (Channel Bandwidth 20MHz)	37850	1 RB / 99 RB Offset	LTE Band 38 (Channel Bandwidth 20MHz)	38048	1 RB / 0 RB Offset	QPSK
_	Conducted	LTE Band 38 (Channel Bandwidth 20MHz)	37901	1 RB / 0 RB Offset	LTE Band 38 (Channel Bandwidth 20MHz)	38099	1 RB / 99 RB Offset	QPSK
-	Output Power	LTE Band 38 (Channel Bandwidth 20MHz)	37901	1 RB / 99 RB Offset	LTE Band 38 (Channel Bandwidth 20MHz)	38099	1 RB / 0 RB Offset	QPSK
		LTE Band 38 (Channel Bandwidth 20MHz)	37952	1 RB / 0 RB Offset	LTE Band 38 (Channel Bandwidth 20MHz)	38150	1 RB / 99 RB Offset	QPSK
		LTE Band 38 (Channel Bandwidth 20MHz)	37952	1 RB / 99 RB Offset	LTE Band 38 (Channel Bandwidth 20MHz)	38150	1 RB / 0 RB Offset	QPSK



# LTE Band 41 + LTE Band 41

EUT Configure Mode	Test item	Band	Tested C	Channel	Band	Tested C	Tested Channel	
		LTE Band 41 (Channel Bandwidth 20MHz)	40140	1 RB / 0 RB Offset	LTE Band 41 (Channel Bandwidth 20MHz)	40338	1 RB / 99 RB Offset	QPSK
		LTE Band 41 (Channel Bandwidth 20MHz)	40140	1 RB / 99 RB Offset	LTE Band 41 (Channel Bandwidth 20MHz)	40338	1 RB / 0 RB Offset	QPSK
		LTE Band 41 (Channel Bandwidth 20MHz)	40470	1 RB / 0 RB Offset	LTE Band 41 (Channel Bandwidth 20MHz)	40668	1 RB / 99 RB Offset	QPSK
	Conducted	LTE Band 41 (Channel Bandwidth 20MHz)	40470	1 RB / 99 RB Offset	LTE Band 41 (Channel Bandwidth 20MHz)	40668	1 RB / 0 RB Offset	QPSK
-	Output Power	LTE Band 41 (Channel Bandwidth 20MHz)	40810	1 RB / 0 RB Offset	LTE Band 41 (Channel Bandwidth 20MHz)	41008	1 RB / 99 RB Offset	QPSK
		LTE Band 41 (Channel Bandwidth 20MHz)	40810	1 RB / 99 RB Offset	LTE Band 41 (Channel Bandwidth 20MHz)	41008	1 RB / 0 RB Offset	QPSK
		LTE Band 41 (Channel Bandwidth 20MHz)	40942	1 RB / 0 RB Offset	LTE Band 41 (Channel Bandwidth 20MHz)	41140	1 RB / 99 RB Offset	QPSK
		LTE Band 41 (Channel Bandwidth 20MHz)	40942	1 RB / 99 RB Offset	LTE Band 41 (Channel Bandwidth 20MHz)	41140	1 RB / 0 RB Offset	QPSK
-	Radiated Emission Above 1GHz	LTE Band 41 (Channel Bandwidth 20MHz)	40140	1 RB / 0 RB Offset	LTE Band 41 (Channel Bandwidth 20MHz)	40338	1 RB / 99 RB Offset	QPSK

# Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
Conducted Output Power	25deg. C, 70%RH	120Vac, 60Hz	Han Wu
Radiated Emission Below 1GHz	24deg. C, 64%RH	120Vac, 60Hz	Match Tsui
Radiated Emission Above 1GHz	24deg. C, 66%RH	120Vac, 60Hz	Greg Lin



# 3.4 EUT Operating Conditions

The EUT makes a call to the communication simulator. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency

### 3.5 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 47 CFR Part 2
FCC 47 CFR Part 27
KDB 971168 D01 Power Meas License Digital Systems v03r01
ANSI/TIA/EIA-603-E 2016
ANSI 63.26-2015

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



#### 4 Test Types and Results

### 4.1 Output Power Measurement

#### 4.1.1 Limits of Output Power Measurement

Mobile / Portable station are limited to 2 watts e.i.r.p. for LTE Band 7, Band 38 and Band 41.

#### 4.1.2 Test Procedures

#### **EIRP / ERP Measurement:**

- a. All measurements were done at low, middle and high operational frequency range. RWB and VBW is 10MHz for LTE mode.
- b. Substitution method is used for E.I.R.P measurement. 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.
- c. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step b. Record the power level of S.G
- d. EIRP = Output power level of S.G TX cable loss + Antenna gain of substitution horn.E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.R.P power 2.15dBi.

Where:

 $ERP/EIRP = P_{Meas} + G_{T} - L_{C}$ 

 $P_{Meas}$ : Measure transmitter output power.  $G_{T}$ : Gain of the transmitting antenna.

Lc: signal attenuation in the connecting cable between the transmitter and antenna.

#### **Conducted Power Measurement:**

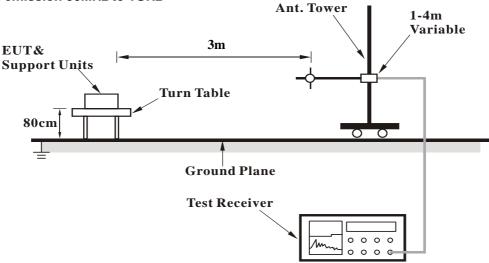
A power sensor was used on the output port of the EUT. A power meter was used to read the response of the power sensor. Record the power level.



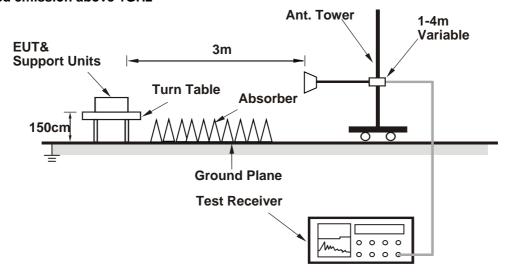
# 4.1.3 Test Setup

EIRP / ERP Measurement:

### For radiated emission 30MHz to 1GHz



### For radiated emission above 1GHz



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

#### **Conducted Power Measurement:**



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



# 4.1.4 Test Results

**Conducted Output Power (dBm)** 

COIN	uucte	ea Outpu		wei	(авііі)					000				14.		<b></b>
	1		PCC	1		1				SCC					surement F	ower
Band	Band BW Modulation			RB Offset	UL Channel	UL Frequency	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL Channel	UL Frequency	Tx Power with UL-CA Active (dBm)		
	(		0.20	0001	0110111101	(MHz)		()		0.20	0.1001	0.10.11.01	(MHz)	PCC	SCC	Total
7	20	QPSK	1	0	20850	2510	7	20	QPSK	1	99	21048	2529.8	13.44	6.8	14.29
,	20	QFSK	1	99	20000	2510	<b>'</b>	20	QFSK	1	0	21040	2529.6	21.22	13.71	21.93
7	00	ODOK	1	0	04.004	0505.4	_	00	QPSK	1	99	04400	0544.0	13.11	6.63	13.99
7	20	QPSK	1	99	21001	2525.1	7	20	QPSK	1	0	21199	2544.9	21.01	15.98	22.20
7	00	QPSK	1	0	04450	0540.0	_	00	QPSK	1	99	21350	0500	12.99	6.92	13.95
7	20	QPSK	1	99	21152	2540.2	7	20	QPSK	1	0		2560	20.93	15.91	22.12
38	20	QPSK	1	0	37850	2580	20	20	QPSK	1	99	38048	2599.8	10.97	10.63	13.81
30	20	QPSK	1	99	37650	2560	38	20	QPSK	1	0			19.18	19.26	22.23
20	00	ODOK	1	0	07004	0505.4	20	00	ODOK	1	99	20000	38099 2604.9	11.08	10.82	13.96
38	20	QPSK	1	99	37901	2585.1	38	20	QPSK	1	0	38099		19.05	19.01	22.04
38	20	QPSK	1	0	37952	2590.2	20	20	QPSK	1	99	38150 2610	2640	11.44	10.88	14.18
30	20	QPSK	1	99	3/952	2590.2	38	20	QPSK	1	0	36150	38150 2610	19.06	19.09	22.09
41	00	QPSK	1	0	40140	0545	44	20	ODOK	1	99	40000	40338 2564.8	11.15	11.45	14.31
41	20	QPSK	1	99	40140	2545	41	20	QPSK	1	0	40336		18.37	18.35	21.37
41	20	QPSK	1	0	40470	2578	41	20	QPSK	1	99	40660	0507.0	11.06	10.95	14.02
41	20	QPSK	1	99	40470	2576	41	20	QPSK	1	0	40668	2597.8	19.15	19.22	22.20
41	20	QPSK	1	0	40810	2612	44	20	ODSK	1	99	41008	2631.8	10.37	10.4	13.40
41	20	QP3K	1	99	40810	2012	41	20	QP3K	QPSK 1	0	41008	2631.8	18.9	19.03	21.98
41	20	QPSK	1	0	40942	2625.2	41	20	QPSK	1	99		2645	9.5	9.52	12.52
41	20	QP5K	1	99	40942	2025.2	41	20	QP5K	1	0	41140	∠645	18.06	18.1	21.09



#### 4.2 Radiated Emission Measurement

#### 4.2.1 Limits of Radiated Emission Measurement

In the FCC 27.53(m) (4)(6),On any frequency outside a licensee's frequency block, The power of any emission shall be attenuated below the transmitter power (P) by at least  $55 + 10 \log (P) dB$ . The emission limit equal to -25dBm.

#### 4.2.2 Test Procedure

- a. The power was measured with R&S Spectrum Analyzer. All measurements were done at 3 channels (low, middle and high channel of operational frequency range.)
- b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m 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.
- c. The substitution antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step b. Record the power level of S.G
- d. EIRP = Output power level of S.G TX cable loss + Antenna gain of substitution antenna.

Note: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

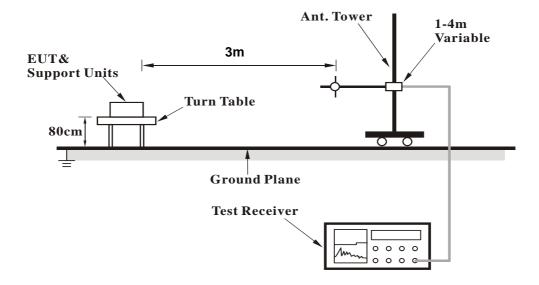
#### 4.2.3 Deviation from Test Standard

No deviation.

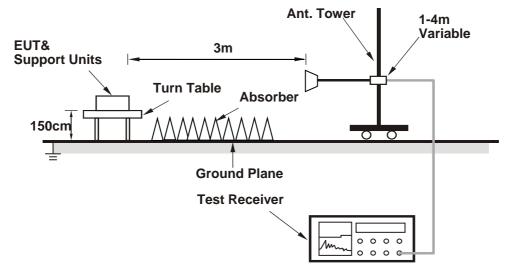


# 4.2.4 Test Setup

# For Radiated Emission below or equal 1GHz



### For Radiated Emission above 1GHz



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



### 4.2.5 Test Results

Below 1GHz

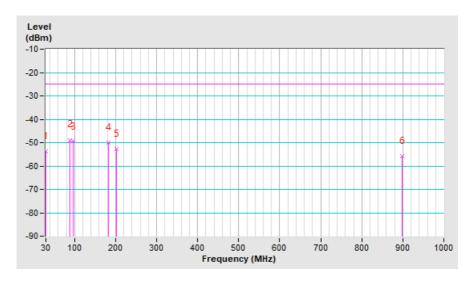
LTE Band 7, Channel Bandwidth: 20MHz + LTE Band 7, Channel Bandwidth: 20MHz

Mode	TX channel 20850 (1 RB / 0 RB Offset) + TX channel 21048 (1 RB / 99 RB Offset)	Frequency Range	Below 1000 MHz
<b>Environmental Conditions</b>	24deg. C, 64%RH	Input Power	120Vac, 60Hz
Tested By	Match Tsui		

	Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	30.00	-57.9	-53.0	-0.8	-53.8	-25.0	-28.8
2	88.20	-52.9	-47.3	-1.5	-48.8	-25.0	-23.8
3	96.93	-53.6	-47.9	-1.6	-49.5	-25.0	-24.5
4	183.26	-54.1	-47.9	-2.1	-50.0	-25.0	-25.0
5	202.66	-56.9	-50.8	-2.0	-52.8	-25.0	-27.8
6	899.12	-59.9	-52.1	-3.7	-55.8	-25.0	-30.8

#### Remarks:

- 1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
- 2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



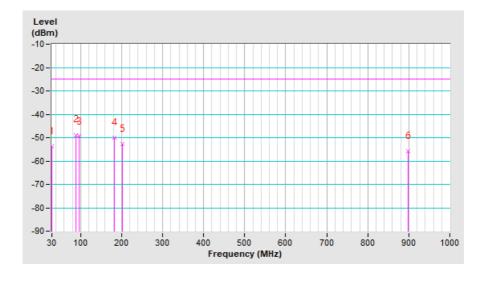


Mode	TX channel 20850 (1 RB / 0 RB Offset) + TX channel 21048 (1 RB / 99 RB Offset)	Frequency Range	Below 1000 MHz
<b>Environmental Conditions</b>	24deg. C, 64%RH	Input Power	120Vac, 60Hz
Tested By	Match Tsui		

	Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	30.00	-56.5	-51.1	-0.8	-51.9	-25.0	-26.9
2	89.17	-54.5	-48.4	-1.5	-49.9	-25.0	-24.9
3	95.96	-54.8	-48.5	-1.6	-50.1	-25.0	-25.1
4	243.40	-48.8	-42.0	-2.1	-44.1	-25.0	-19.1
5	708.03	-60.5	-52.7	-3.2	-55.9	-25.0	-30.9
6	940.83	-60.5	-52.2	-3.7	-55.9	-25.0	-30.9

### Remarks:

- 1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
- 2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).





# Above 1GHz

LTE Band 41, Channel Bandwidth: 20MHz + LTE Band 41, Channel Bandwidth: 20MHz

Mode	TX channel 40140 (1 RB / 0 RB Offset) + TX channel 40338 (1 RB / 99 RB Offset)	Frequency Range	1GHz ~ 27GHz
<b>Environmental Conditions</b>	24deg. C, 66%RH	Input Power	120Vac, 60Hz
Tested By	Greg Lin		

	Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	
1	5090.00	-62.1	-49.6	1.4	-48.2	-25.0	-23.2	
2	5129.60	-61.5	-49.3	1.4	-47.9	-25.0	-22.9	
		Anter	nna Polarity & T	est Distance: '	Vertical at 3 M			
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)	
1	5090.00	-62.2	-50.6	1.4	-49.2	-25.0	-24.2	
2	5129.60	-62.6	-50.8	1.4	-49.4	-25.0	-24.4	



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 and approved according to ISO/IEC 17025.

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

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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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