

FCC Test Report (Part 27)

(Spot Check)

Report No.: RF190507C02-7

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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Release Control Record

Issue No.	Description	Date Issued
RF190507C02-7	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, L, 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 : Pettie Chen , **Date:** May 29, 2019
Pettie Chen / Senior Specialist

Approved by : Bruce Chen , **Date:** May 29, 2019
Bruce Chen / Project Engineer

2 Summary of Test Results

Applied Standard: FCC Part 27 & Part 2				
FCC Clause		Test Item	Result	Remarks
WCDMA Band 4 / LTE Band 4	LTE Band 7 / LTE Band 38 / LTE Band 41			
2.1053 27.53(h)	2.1053 27.53(m)(4)(6)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -19.10dB at 5070.00MHz.

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) (±)
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	3.63 dB
	200MHz ~ 1000MHz	3.64 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	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.
2. The test was performed in HwaYa Chamber 4.

3 General Information

3.1 General Description of EUT

Product	ASUS Phone		
Brand	ASUS		
Test Model	ASUS_I01WDX		
Status of EUT	Identical Prototype		
Power Supply Rating	3.85 Vdc (Battery) 5 or 9 Vdc (Adapter) 5 Vdc (Host equipment)		
Modulation Type	WCDMA: BPSK, QPSK HSDPA: BPSK HSUPA: QPSK LTE: QPSK, 16QAM, 64QAM		
Operating Frequency	WCDMA Band 4		1712.4MHz ~ 1752.6MHz
	LTE Band 4	Channel Bandwidth 1.4MHz	1710.7MHz ~ 1754.3MHz
		Channel Bandwidth 3MHz	1711.5MHz ~ 1753.5MHz
		Channel Bandwidth 5MHz	1712.5MHz ~ 1752.5MHz
		Channel Bandwidth 10MHz	1715.0MHz ~ 1750.0MHz
		Channel Bandwidth 15MHz	1717.5MHz ~ 1747.5MHz
		Channel Bandwidth 20MHz	1720.0MHz ~ 1745.0MHz
	LTE Band 7	Channel Bandwidth 5MHz	2502.5MHz ~ 2567.5MHz
		Channel Bandwidth 10MHz	2505.0MHz ~ 2565.0MHz
		Channel Bandwidth 15MHz	2507.5MHz ~ 2562.5MHz
		Channel Bandwidth 20MHz	2510.0MHz ~ 2560.0MHz
	LTE Band 38	Channel Bandwidth 5MHz	2572.5MHz ~ 2617.5MHz
		Channel Bandwidth 10MHz	2575.0MHz ~ 2615.0MHz
		Channel Bandwidth 15MHz	2577.5MHz ~ 2615.0MHz
		Channel Bandwidth 20MHz	2580.0MHz ~ 2610.0MHz
	LTE Band 41	Channel Bandwidth 5MHz	2537.5MHz ~ 2652.5MHz
		Channel Bandwidth 10MHz	2540.0MHz ~ 2650.0MHz
		Channel Bandwidth 15MHz	2542.5MHz ~ 2647.5MHz
		Channel Bandwidth 20MHz	2545.0MHz ~ 2645.0MHz

Max. EIRP Power	WCDMA Band 4		190.546mW (22.80dBm)		
			QPSK	16QAM	64QAM
	LTE Band 4	Channel Bandwidth 1.4MHz	91.201mW (19.60dBm)	70.795mW (18.50dBm)	60.256mW (17.80dBm)
		Channel Bandwidth 3MHz	95.499mW (19.80dBm)	70.795mW (18.50dBm)	63.096mW (18.00dBm)
		Channel Bandwidth 5MHz	97.724mW (19.90dBm)	70.795mW (18.50dBm)	61.660mW (17.90dBm)
		Channel Bandwidth 10MHz	95.499mW (19.80dBm)	66.069mW (18.20dBm)	63.096mW (18.00dBm)
		Channel Bandwidth 15MHz	91.201mW (19.60dBm)	66.069mW (18.20dBm)	63.096mW (18.00dBm)
		Channel Bandwidth 20MHz	97.724mW (19.90dBm)	67.608mW (18.30dBm)	61.660mW (17.90dBm)
	LTE Band 7	Channel Bandwidth 5MHz	58.884mW (17.70dBm)	52.481mW (17.20dBm)	46.774mW (16.70dBm)
		Channel Bandwidth 10MHz	57.544mW (17.60dBm)	51.286mW (17.10dBm)	44.668mW (16.50dBm)
		Channel Bandwidth 15MHz	57.544mW (17.60dBm)	50.119mW (17.00dBm)	41.687mW (16.20dBm)
		Channel Bandwidth 20MHz	53.703mW (17.30dBm)	46.774mW (16.70dBm)	41.687mW (16.20dBm)
	LTE Band 38	Channel Bandwidth 5MHz	58.884mW (17.70dBm)	52.481mW (17.20dBm)	44.668mW (16.50dBm)
		Channel Bandwidth 10MHz	61.660mW (17.90dBm)	53.703mW (17.30dBm)	44.668mW (16.50dBm)
		Channel Bandwidth 15MHz	58.884mW (17.70dBm)	50.119mW (17.00dBm)	43.652mW (16.40dBm)
		Channel Bandwidth 20MHz	63.096mW (18.00dBm)	53.703mW (17.30dBm)	45.709mW (16.60dBm)
	LTE Band 41	Channel Bandwidth 5MHz	56.234mW (17.50dBm)	52.481mW (17.20dBm)	46.774mW (16.70dBm)
		Channel Bandwidth 10MHz	57.544mW (17.60dBm)	51.286mW (17.10dBm)	45.709mW (16.60dBm)
		Channel Bandwidth 15MHz	57.544mW (17.60dBm)	50.119mW (17.00dBm)	44.668mW (16.50dBm)
		Channel Bandwidth 20MHz	57.544mW (17.60dBm)	51.286mW (17.10dBm)	45.709mW (16.60dBm)

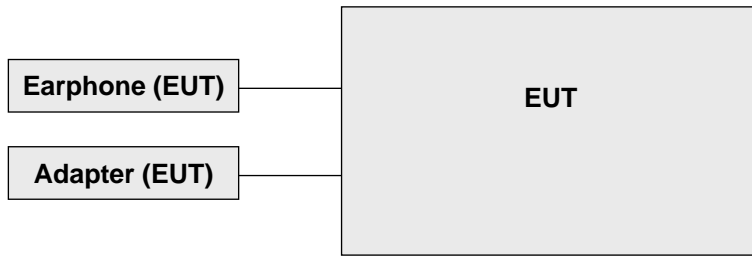
Emission Designator	WCDMA Band 4		4M18F9W		
			QPSK	16QAM	64QAM
	LTE Band 4	Channel Bandwidth 1.4MHz	1M09G7D	1M09D7W	1M09D7W
		Channel Bandwidth 3MHz	2M70G7D	2M70D7W	2M70D7W
		Channel Bandwidth 5MHz	4M49G7D	4M49D7W	4M49D7W
		Channel Bandwidth 10MHz	8M97G7D	8M98D7W	8M97D7W
		Channel Bandwidth 15MHz	13M5G7D	13M5D7W	13M5D7W
		Channel Bandwidth 20MHz	18M0G7D	18M0D7W	18M0D7W
	LTE Band 7	Channel Bandwidth 5MHz	4M50G7D	4M49D7W	4M49D7W
		Channel Bandwidth 10MHz	8M97G7D	8M98D7W	8M97D7W
		Channel Bandwidth 15MHz	13M5G7D	13M5D7W	13M5D7W
		Channel Bandwidth 20MHz	18M0G7D	18M0D7W	18M0D7W
	LTE Band 38	Channel Bandwidth 5MHz	4M49G7D	4M49D7W	4M49D7W
		Channel Bandwidth 10MHz	8M96G7D	8M98D7W	8M97D7W
		Channel Bandwidth 15MHz	13M5G7D	13M5D7W	13M5D7W
		Channel Bandwidth 20MHz	17M9G7D	18M0D7W	18M0D7W
	LTE Band 41	Channel Bandwidth 5MHz	4M50G7D	4M50D7W	4M48D7W
		Channel Bandwidth 10MHz	8M93G7D	8M93D7W	8M93D7W
		Channel Bandwidth 15MHz	13M4G7D	13M4D7W	13M4D7W
		Channel Bandwidth 20MHz	17M9G7D	18M0D7W	17M9D7W
Antenna Type	Refer to Note as below				
Antenna Connector	Refer to Note as below				
Accessory Device	Refer to Note as below				
Cable Supplied	Refer to Note as below				

Note:

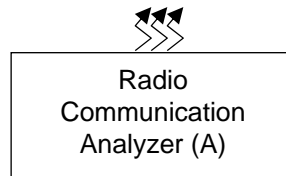
1. This report is a supplementary report to the original BV CPS report no.: RF190114C07-8. Exhibit prepared for FCC Spot Check Verification report, the format, test items and amount of spot-check test data are decided by applicant's engineering judgment, for more details please refer to declaration letter exhibit. Radiated emission and output power (WCDMA) verification worst test refer to original report.
2. The EUT accessories list refers to EUT Photo.pdf.
3. The following antennas were provided to the EUT.

Ant. No.	Type	Connector	Gain (dBi)											
			GSM 850	GSM 1900	WCDMA B2	WCDMA B4	WCDMA B5	LTE B2	LTE B4	LTE B5	LTE B7	LTE B26	LTE B38	LTE 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

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
A.	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

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. The worst case was found when positioned on Z-plane. Following channel(s) was (were) selected for the final test as listed below.

WCDMA Band 4

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Mode
-	Conducted Output Power	1312 to 1513	1312(1712.4MHz), 1413(1732.6MHz), 1513(1752.6MHz)	WCDMA

LTE Band 4

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Conducted Output Power	19957 to 20393	19957(1710.7MHz), 20175(1732.5MHz), 20393(1754.3MHz)	1.4MHz	QPSK / 16QAM / 64QAM	3 RB / 0 RB Offset
		19965 to 20385	19965(1711.5MHz), 20175(1732.5MHz), 20385(1753.5MHz)	3MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		19975 to 20375	19975(1712.5MHz), 20175(1732.5MHz), 20375(1752.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		20000 to 20350	20000(1715.0MHz), 20175(1732.5MHz), 20350(1750.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		20025 to 20325	20025(1717.5MHz), 20175(1732.5MHz), 20325(1747.5MHz)	15MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		20050 to 20300	20050(1720.0MHz), 20175(1732.5MHz), 20300(1745.0MHz)	20MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset

LTE Band 7

EUT Configure Mode	Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
-	Conducted Output Power	2775 to 3425	20775(2502.5MHz), 21100(2535.0MHz), 21425(2567.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 RB / 24 RB Offset
		2800 to 3400	20800(2505.0MHz), 21100(2535.0MHz), 21400(2565.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 RB / 49 RB Offset
		2825 to 3375	20825(2507.5MHz), 21100(2535.0MHz), 21375(2562.5MHz)	15MHz	QPSK / 16QAM / 64QAM	1 RB / 74 RB Offset
		2850 to 3350	20850(2510.0MHz), 21100(2535.0MHz), 21350(2560.0MHz)	20MHz	QPSK / 16QAM / 64QAM	1 RB / 99 RB Offset
-	Radiated Emission Above 1GHz	2850 to 3350	21100(2535.0MHz)	20MHz	QPSK	1 RB / 99 RB Offset

LTE Band 38

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	Conducted Output Power	37775 to 38225	37775(2572.5MHz), 38000(2595.0MHz), 38225(2617.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 RB / 24 RB Offset
		37800 to 38200	37800(2575.0MHz), 38000(2595.0MHz), 38200(2615.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 RB / 49 RB Offset
		37825 to 38175	37825(2577.5MHz), 38000(2595.0MHz), 38175(2612.5MHz)	15MHz	QPSK / 16QAM / 64QAM	1 RB / 74 RB Offset
		37850 to 38150	37850(2580.0MHz), 38000(2595.0MHz), 38150(2610.0MHz)	20MHz	QPSK / 16QAM / 64QAM	1 RB / 99 RB Offset
-	Radiated Emission Below 1GHz	37775 to 38225	37775(2572.5MHz)	5MHz	QPSK	1 RB / 24 RB Offset

LTE Band 41

EUT Configure Mode	Test item	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	Conducted Output Power	40065 to 41215	40065(2537.5MHz), 40445(2575.5MHz), 40825(2613.5MHz), 41215(2652.5MHz)	5MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		40090 to 41190	40090(2540.0MHz), 40450(2576.0MHz), 40820(2613.0MHz), 41190(2650.0MHz)	10MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		40115 to 41165	40115(2542.5MHz), 40465(2577.5MHz), 40815(2612.5MHz), 41165(2647.5MHz)	15MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset
		40140 to 41140	40140(2545.0MHz), 40470(2578.0MHz), 40810(2612.0MHz), 41140(2645.0MHz)	20MHz	QPSK / 16QAM / 64QAM	1 RB / 0 RB Offset

Test Condition:

Test Item	Environmental Conditions	Input Power (system)	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 1 watts e.i.r.p for WCDMA, LTE Band 4; 2 watts e.i.r.p. for LTE Band 7, Band 38, Band 41.

4.1.2 Test Procedures

EIRP / ERP Measurement:

- All measurements were done at low, middle and high operational frequency range. RBW and VBW is 5MHz for WCDMA mode, 10MHz for LTE mode.
- 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.
- 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
- $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, $E.R.P \text{ power} = E.I.R.P \text{ power} - 2.15\text{dBi}$.

Where:

$$ERP/EIRP = P_{Meas} + G_T - L_C$$

P_{Meas} : Measure transmitter output power.

G_T : Gain of the transmitting antenna.

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

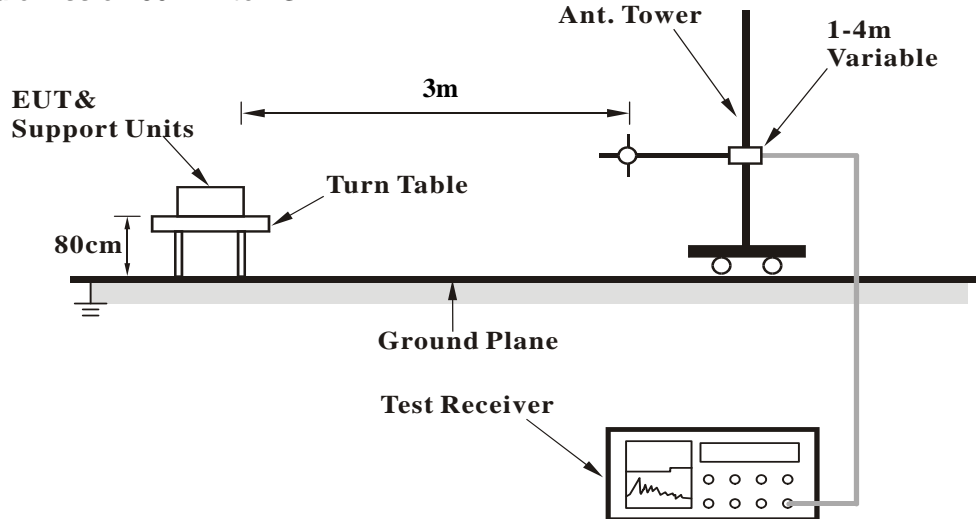
Conducted Power Measurement:

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

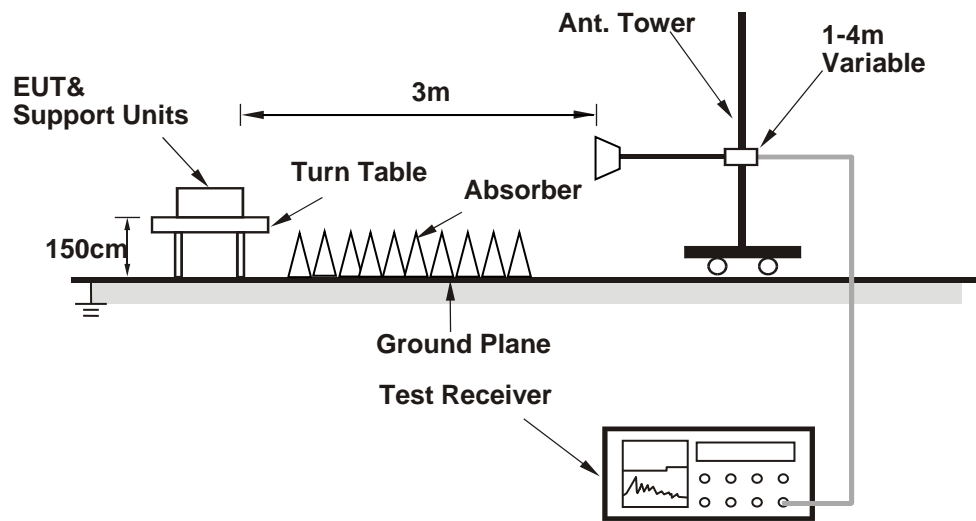
4.1.3 Test Setup

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)

Band	WCDMA IV		
TX Channel	1312	1413	1513
Rx Channel	1537	1638	1738
Frequency	1712.4	1732.6	1752.6
RMC 12.2K	21.33	21.42	21.38

LTE Band 4							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		19957	20175	20393	
		Frequency (MHz)		1710.7	1732.5	1754.3	
1.4M	QPSK	1	0	21.35	21.25	21.20	0
		1	2	21.32	21.23	21.14	0
		1	5	21.25	21.15	21.08	0
		3	0	21.17	21.06	21.02	0
		3	1	21.15	21.04	20.95	0
		3	3	21.14	21.03	20.95	0
	16QAM	6	0	20.30	20.20	20.15	1
		1	0	20.37	20.28	20.22	1
		1	2	20.34	20.22	20.16	1
		1	5	20.25	20.16	20.12	1
		3	0	20.20	20.10	20.05	1
		3	1	20.15	20.09	20.02	1
	64QAM	3	3	20.14	20.15	20.01	1
		6	0	19.35	19.24	19.16	2
		1	0	19.36	19.26	19.20	2
		1	2	19.32	19.25	19.16	2
		1	5	19.25	19.12	19.11	2
		3	0	19.20	19.08	19.05	2
		3	1	19.18	19.05	19.01	2
	3	3	19.15	19.40	18.96	2	
	6	0	18.30	18.22	18.15	3	

LTE Band 4							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		19965	20175	20385	
		Frequency (MHz)		1711.5	1732.5	1753.5	
3M	QPSK	1	0	21.40	21.28	21.22	0
		1	7	21.35	20.25	21.18	0
		1	14	21.28	21.20	21.14	0
		8	0	20.80	20.28	20.22	1
		8	3	20.35	20.25	20.20	1
		8	7	20.33	20.23	20.17	1
		15	0	20.31	20.25	20.15	1
	16QAM	1	0	20.40	20.32	20.25	1
		1	7	20.35	20.26	20.20	1
		1	14	20.30	20.20	20.15	1
		8	0	19.40	19.30	19.24	2
		8	3	19.38	19.27	19.22	2
		8	7	19.36	19.25	19.21	2
		15	0	19.35	19.24	19.21	2
	64QAM	1	0	19.40	19.30	19.24	2
		1	7	19.34	19.26	19.20	2
		1	14	19.28	19.16	19.13	2
		8	0	18.38	18.27	18.22	3
		8	3	18.35	18.25	18.20	3
		8	7	18.34	18.24	18.17	3
		15	0	18.32	18.22	18.16	3

LTE Band 4							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		19975	20175	20375	
		Frequency (MHz)		1712.5	1732.5	1752.5	
5M	QPSK	1	0	21.30	21.11	21.18	0
		1	12	21.26	21.18	21.13	0
		1	24	21.24	21.14	21.06	0
		12	0	20.32	20.24	21.14	1
		12	6	20.30	20.21	20.12	1
		12	13	20.28	20.20	20.10	1
		25	0	20.26	20.16	20.10	1
	16QAM	1	0	20.50	20.25	20.20	1
		1	12	20.30	20.20	20.16	1
		1	24	20.25	20.16	20.11	1
		12	0	19.35	19.25	19.20	2
		12	6	19.34	19.23	19.17	2
		12	13	19.30	19.20	19.14	2
		25	0	19.28	19.19	19.12	2
	64QAM	1	0	19.35	19.25	19.18	2
		1	12	19.30	19.21	19.12	2
		1	24	19.24	19.14	19.06	2
		12	0	18.34	18.22	18.17	3
		12	6	18.30	18.21	18.15	3
		12	13	18.28	18.20	18.14	3
		25	0	19.27	18.18	18.13	3

LTE Band 4							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		20000	20175	20350	
		Frequency (MHz)		1715	1732.5	1750	
10M	QPSK	1	0	21.37	21.28	21.22	0
		1	24	21.32	21.23	21.18	0
		1	49	21.26	21.18	21.10	0
		25	0	20.35	20.25	20.22	1
		25	12	20.32	20.23	20.18	1
		25	25	20.30	20.22	20.16	1
		50	0	20.30	20.21	20.15	1
	16QAM	1	0	20.40	20.30	20.25	1
		1	24	20.35	20.25	20.19	1
		1	49	20.30	20.20	20.14	1
		25	0	19.38	19.28	19.23	2
		25	12	19.37	19.27	19.20	2
		25	25	19.34	19.24	19.19	2
		50	0	19.33	19.23	19.18	2
	64QAM	1	0	19.37	19.28	19.22	2
		1	24	19.34	19.24	19.18	2
		1	49	19.27	19.16	19.10	2
		25	0	18.36	18.25	18.20	3
		25	12	18.34	18.23	18.16	3
		25	25	18.33	18.21	18.15	3
		50	0	18.31	18.20	18.14	3

LTE Band 4							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		20025	20175	20325	
		Frequency (MHz)		1717.5	1732.5	1747.5	
15M	QPSK	1	0	21.43	21.30	21.25	0
		1	37	21.38	21.29	21.23	0
		1	74	21.32	21.22	21.17	0
		36	0	20.42	20.32	20.25	1
		36	19	20.40	20.28	20.23	1
		36	39	20.37	20.27	20.22	1
		75	0	20.36	20.26	20.20	1
	16QAM	1	0	20.45	20.35	20.30	1
		1	37	20.41	20.31	20.24	1
		1	74	20.34	20.24	20.18	1
		36	0	19.42	19.34	19.29	2
		36	19	19.40	19.32	19.23	2
		36	39	19.38	19.28	19.22	2
		75	0	19.37	19.27	19.21	2
	64QAM	1	0	19.42	19.34	19.28	2
		1	37	19.37	19.28	19.23	2
		1	74	19.33	19.22	19.20	2
		36	0	18.42	18.33	18.25	3
		36	19	18.40	18.28	18.24	3
		36	39	18.35	18.27	18.22	3
		75	0	18.34	18.25	18.20	3

LTE Band 4							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		20050	20175	20300	
		Frequency (MHz)		1720	1732.5	1745	
20M	QPSK	1	0	21.45	31.35	21.30	0
		1	50	21.40	21.32	21.26	0
		1	99	21.36	21.25	21.20	0
		50	0	20.45	20.35	20.28	1
		50	25	20.43	20.32	20.26	1
		50	50	20.40	20.31	20.24	1
		100	0	20.38	20.30	20.23	1
	16QAM	1	0	20.48	20.35	20.32	1
		1	50	20.42	20.33	20.28	1
		1	99	20.36	20.25	20.20	1
		50	0	19.48	19.36	19.30	2
		50	25	19.42	19.35	19.27	2
		50	50	19.41	19.33	19.26	2
		100	0	19.40	19.31	19.25	2
	64QAM	1	0	19.45	19.36	19.30	2
		1	50	19.40	19.32	19.26	2
		1	99	19.36	19.25	19.19	2
		50	0	18.45	18.36	18.27	3
		50	25	18.43	18.32	18.26	3
		50	50	18.40	18.30	18.24	3
		100	0	18.40	18.29	18.23	3

LTE Band 7							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		20775	21100	21425	
		Frequency (MHz)		2502.5	2535	2567.5	
5M	QPSK	1	0	21.90	21.96	20.10	0
		1	12	21.96	21.99	22.13	0
		1	24	22.05	22.10	22.22	0
		12	0	21.06	21.12	21.25	1
		12	6	21.10	21.15	21.27	1
		12	13	21.15	21.20	21.33	1
		25	0	20.99	21.04	21.18	1
	16QAM	1	0	21.11	21.14	21.20	1
		1	12	21.20	21.18	21.23	1
		1	24	21.38	21.39	21.52	1
		12	0	20.23	20.27	20.28	2
		12	6	20.44	20.52	20.57	2
		12	13	20.48	20.52	20.60	2
		25	0	20.26	20.27	20.33	2
	64QAM	1	0	20.20	20.30	20.37	2
		1	12	20.06	20.14	20.21	2
		1	24	20.37	20.43	20.54	2
		12	0	19.36	19.39	19.42	3
		12	6	19.32	19.41	19.51	3
		12	13	19.37	19.46	19.53	3
		25	0	19.34	19.34	19.46	3

LTE Band 7							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		20800	21100	21400	
		Frequency (MHz)		2505	2535	2565	
10M	QPSK	1	0	21.95	22.00	22.13	0
		1	24	21.99	22.05	22.19	0
		1	49	22.10	22.15	22.29	0
		25	0	21.12	21.20	21.30	1
		25	12	21.20	21.24	21.33	1
		25	25	21.22	21.30	21.40	1
		50	0	21.11	21.21	21.26	1
	16QAM	1	0	21.21	21.22	21.43	1
		1	24	21.29	21.27	21.37	1
		1	49	21.30	21.33	21.50	1
		25	0	20.40	20.40	20.43	2
		25	12	20.57	20.58	20.62	2
		25	25	20.41	20.52	20.63	2
		50	0	20.33	20.39	20.49	2
	64QAM	1	0	20.25	20.23	20.36	2
		1	24	20.16	20.15	20.39	2
		1	49	20.28	20.31	20.49	2
		25	0	19.32	19.39	19.45	3
		25	12	19.32	19.44	19.49	3
		25	25	19.44	19.51	19.58	3
		50	0	19.27	19.29	19.39	3

LTE Band 7							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		20825	21100	21375	
		Frequency (MHz)		2507.5	2535	2562.5	
15M	QPSK	1	0	21.92	21.98	22.10	0
		1	37	21.95	22.08	22.16	0
		1	74	22.08	22.13	22.26	0
		36	0	21.11	21.18	21.30	1
		36	19	21.13	21.20	21.31	1
		36	39	21.20	21.25	21.39	1
		75	0	21.01	21.11	21.21	1
	16QAM	1	0	21.05	21.15	21.29	1
		1	37	21.24	21.21	21.39	1
		1	74	21.41	21.43	21.50	1
		36	0	20.32	20.43	20.52	2
		36	19	20.36	20.43	20.57	2
		36	39	20.40	20.49	20.64	2
		75	0	20.29	20.35	20.45	2
	64QAM	1	0	20.24	20.34	20.41	2
		1	37	20.29	20.35	20.49	2
		1	74	20.37	20.42	20.54	2
		36	0	19.52	19.55	19.57	3
		36	19	19.51	19.59	19.57	3
		36	39	19.46	19.51	19.62	3
		75	0	19.39	19.44	19.52	3

LTE Band 7							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		20850	21100	21350	
		Frequency (MHz)		2510	2535	2560	
20M	QPSK	1	0	22.01	22.06	22.20	0
		1	50	22.05	22.10	22.21	0
		1	99	22.15	22.20	22.33	0
		50	0	21.19	21.22	21.36	1
		50	25	21.20	21.25	21.36	1
		50	50	21.26	21.30	21.45	1
		100	0	21.10	21.15	21.31	1
	16QAM	1	0	21.29	21.31	21.36	1
		1	50	21.32	21.33	21.43	1
		1	99	21.43	21.46	21.63	1
		50	0	20.39	20.42	20.56	2
		50	25	20.41	20.42	20.51	2
		50	50	20.53	20.58	20.64	2
		100	0	20.28	20.35	20.46	2
	64QAM	1	0	20.26	20.35	20.44	2
		1	50	20.28	20.38	20.47	2
		1	99	20.32	20.45	20.53	2
		50	0	19.40	19.49	19.54	3
		50	25	19.42	19.50	19.55	3
		50	50	19.48	19.55	19.67	3
		100	0	19.35	19.42	19.52	3

LTE Band 38							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		37775	38000	38225	
		Frequency (MHz)		2572.5	2595	2617.5	
5M	QPSK	1	0	22.19	22.21	22.30	0
		1	12	22.25	22.27	22.33	0
		1	24	22.31	22.44	22.46	0
		12	0	21.43	21.49	21.41	1
		12	6	21.42	21.42	21.45	1
		12	13	21.31	21.35	21.43	1
		25	0	21.24	21.17	21.35	1
	16QAM	1	0	21.04	21.08	21.09	1
		1	12	21.19	21.20	21.21	1
		1	24	21.34	21.21	21.35	1
		12	0	20.27	20.26	20.29	2
		12	6	20.42	20.43	20.45	2
		12	13	20.44	20.47	20.49	2
		25	0	20.31	20.35	20.38	2
	64QAM	1	0	20.02	20.07	20.04	2
		1	12	20.14	20.13	20.14	2
		1	24	20.24	20.22	20.25	2
		12	0	19.31	19.30	19.32	3
		12	6	19.32	19.33	19.34	3
		12	13	19.36	19.39	19.37	3
		25	0	19.31	19.34	19.35	3

LTE Band 38							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		37800	38000	38200	
		Frequency (MHz)		2575	2595	2615	
10M	QPSK	1	0	22.17	22.23	22.21	0
		1	24	22.34	22.33	22.21	0
		1	49	22.31	22.38	22.42	0
		25	0	21.30	21.31	21.32	1
		25	12	21.41	21.43	21.44	1
		25	25	21.37	21.41	21.47	1
		50	0	21.45	21.40	21.40	1
	16QAM	1	0	21.12	21.13	21.17	1
		1	24	21.23	21.22	21.24	1
		1	49	21.32	21.33	21.39	1
		25	0	20.34	20.39	20.46	2
		25	12	20.45	20.36	20.49	2
		25	25	20.44	20.43	20.43	2
		50	0	20.35	20.36	20.36	2
	64QAM	1	0	20.21	20.22	20.22	2
		1	24	20.24	20.29	20.30	2
		1	49	20.48	20.42	20.49	2
		25	0	19.21	19.28	19.24	3
		25	12	19.22	19.21	19.24	3
		25	25	19.28	19.19	19.23	3
		50	0	19.24	19.24	19.25	3

LTE Band 38							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		37825	38000	38175	
		Frequency (MHz)		2577.5	2595	2612.5	
15M	QPSK	1	0	22.21	22.24	22.25	0
		1	37	22.31	22.37	22.38	0
		1	74	22.43	22.41	22.48	0
		36	0	21.37	21.32	21.38	1
		36	19	21.44	21.37	21.45	1
		36	39	21.40	21.45	21.46	1
		75	0	21.41	21.42	21.42	1
	16QAM	1	0	21.26	21.25	21.27	1
		1	37	21.25	21.20	21.30	1
		1	74	21.45	21.42	21.47	1
		36	0	20.47	20.43	20.46	2
		36	19	20.48	20.40	20.49	2
		36	39	20.44	20.45	20.45	2
		75	0	20.47	20.43	20.48	2
	64QAM	1	0	20.18	20.19	20.28	2
		1	37	20.33	20.31	20.34	2
		1	74	20.33	20.38	20.39	2
		36	0	19.33	19.34	19.35	3
		36	19	19.35	19.39	19.41	3
		36	39	19.39	19.34	19.43	3
		75	0	19.41	19.40	19.42	3

LTE Band 38							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		37850	38000	38150	
		Frequency (MHz)		2580	2595	2610	
20M	QPSK	1	0	22.22	22.23	22.27	0
		1	50	22.30	22.22	22.21	0
		1	99	22.52	22.55	22.57	0
		50	0	21.51	21.54	21.58	1
		50	25	21.54	21.57	21.58	1
		50	50	21.55	21.56	21.57	1
		100	0	21.40	21.43	21.44	1
	16QAM	1	0	21.21	21.22	21.23	1
		1	50	21.37	21.22	21.38	1
		1	99	21.43	21.44	21.45	1
		50	0	20.42	20.41	20.47	2
		50	25	20.46	20.42	20.47	2
		50	50	20.47	20.45	20.48	2
		100	0	20.30	20.35	20.48	2
	64QAM	1	0	20.23	20.24	20.25	2
		1	50	20.35	20.34	20.36	2
		1	99	20.38	20.39	20.44	2
		50	0	19.44	19.42	19.45	3
		50	25	19.47	19.43	19.48	3
		50	50	19.47	19.50	19.52	3
		100	0	19.43	19.44	19.49	3

LTE Band 41								
BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	High	3GPP MPR (dB)
		Channel		40065	40445	40825	41215	
		Frequency (MHz)		2537.5	2575.5	2613.5	2652.5	
5M	QPSK	1	0	22.44	22.18	22.14	22.59	0
		1	12	22.45	22.15	22.18	22.48	0
		1	24	22.43	22.14	22.12	22.45	0
		12	0	21.52	21.05	21.03	21.56	1
		12	6	21.57	21.02	21.09	21.55	1
		12	13	21.57	21.03	21.02	21.58	1
		25	0	21.55	21.04	21.01	21.58	1
	16QAM	1	0	21.44	21.07	21.00	21.47	1
		1	12	21.43	20.93	21.00	21.46	1
		1	24	21.29	20.95	20.96	21.30	1
		12	0	20.54	20.06	20.16	20.55	2
		12	6	20.49	20.04	20.15	20.52	2
		12	13	20.48	20.09	20.00	20.50	2
		25	0	20.51	20.03	20.00	20.53	2
	64QAM	1	0	20.43	20.07	20.01	20.44	2
		1	12	20.39	19.94	20.01	20.42	2
		1	24	20.22	19.83	19.82	20.21	2
		12	0	19.44	19.09	19.08	19.48	3
		12	6	19.48	19.06	19.01	19.49	3
		12	13	19.45	18.97	19.00	19.50	3
		25	0	19.43	19.04	19.02	19.45	3

LTE Band 41								
BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	High	3GPP MPR (dB)
		Channel		40090	40450	40820	41190	
		Frequency (MHz)		2540	2576	2613	2650	
10M	QPSK	1	0	22.50	22.11	22.15	22.61	0
		1	24	22.47	22.08	22.12	22.55	0
		1	49	22.41	21.90	22.05	22.44	0
		25	0	21.68	21.19	21.22	21.69	1
		25	12	21.65	21.24	21.23	21.61	1
		25	25	21.61	21.25	21.27	21.64	1
		50	0	21.58	21.21	21.21	21.59	1
	16QAM	1	0	21.56	21.12	21.23	21.58	1
		1	24	21.49	21.13	21.16	21.54	1
		1	49	21.43	21.09	20.96	21.46	1
		25	0	20.46	20.18	20.18	20.54	2
		25	12	20.53	20.11	20.17	20.50	2
		25	25	20.47	20.08	20.03	20.55	2
		50	0	20.50	20.04	20.09	20.58	2
	64QAM	1	0	20.51	20.12	20.12	20.56	2
		1	24	20.50	20.03	20.10	20.51	2
		1	49	20.37	20.01	20.04	20.38	2
		25	0	19.57	19.24	19.19	19.66	3
		25	12	19.56	19.09	19.05	19.59	3
		25	25	19.57	19.06	19.08	19.44	3
		50	0	19.59	19.01	19.10	19.42	3

LTE Band 41								
BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	High	3GPP MPR (dB)
		Channel		40115	40465	40815	41165	
		Frequency (MHz)		2542.5	2577.5	2612.5	2647.5	
15M	QPSK	1	0	22.54	22.17	22.17	22.55	0
		1	37	22.52	22.10	22.09	22.51	0
		1	74	22.35	21.90	21.85	22.40	0
		36	0	21.59	21.26	21.26	21.63	1
		36	19	21.55	21.26	21.28	21.66	1
		36	39	21.60	21.20	21.24	21.63	1
		75	0	21.55	21.31	21.30	21.68	1
	16QAM	1	0	21.56	21.27	21.21	21.57	1
		1	37	21.55	21.17	21.29	21.56	1
		1	74	21.47	21.03	21.05	21.45	1
		36	0	20.69	20.30	20.25	20.67	2
		36	19	20.61	20.21	20.27	20.68	2
		36	39	20.65	20.24	20.30	20.65	2
		75	0	20.64	20.27	20.29	20.67	2
	64QAM	1	0	20.52	20.23	20.21	20.55	2
		1	37	20.53	20.15	20.13	20.54	2
		1	74	20.38	20.00	20.03	20.47	2
		36	0	19.48	19.10	19.11	19.56	3
		36	19	19.50	19.12	19.14	19.56	3
		36	39	19.49	19.19	19.12	19.58	3
		75	0	19.45	19.16	19.18	19.50	3

LTE Band 41								
BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	High	3GPP MPR (dB)
		Channel		40140	40470	40810	41140	
		Frequency (MHz)		2545	2578	2612	2645	
20M	QPSK	1	0	22.64	22.24	22.21	22.67	0
		1	50	22.56	22.23	22.26	22.59	0
		1	99	22.52	22.10	22.12	22.53	0
		50	0	21.52	21.13	21.15	21.60	1
		50	25	21.58	21.18	21.13	21.56	1
		50	50	21.57	21.19	21.23	21.58	1
		100	0	21.52	21.12	21.15	21.59	1
	16QAM	1	0	21.74	21.39	21.36	21.72	1
		1	50	21.65	21.37	21.31	21.70	1
		1	99	21.54	21.27	21.21	21.52	1
		50	0	20.65	20.20	20.19	20.63	2
		50	25	20.54	20.17	20.18	20.59	2
		50	50	20.51	20.15	20.16	20.56	2
		100	0	20.52	20.14	20.18	20.56	2
	64QAM	1	0	20.65	20.22	20.26	20.67	2
		1	50	20.63	20.20	20.25	20.63	2
		1	99	20.35	20.00	20.15	20.41	2
		50	0	19.65	19.18	19.16	19.60	3
		50	25	19.59	19.20	19.21	19.60	3
		50	50	19.62	19.24	19.20	19.61	3
		100	0	19.59	19.24	19.21	19.64	3

4.2 Radiated Emission Measurement

4.2.1 Limits of Radiated Emission Measurement

For LTE Band 7, 38

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. $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution antenna}$.

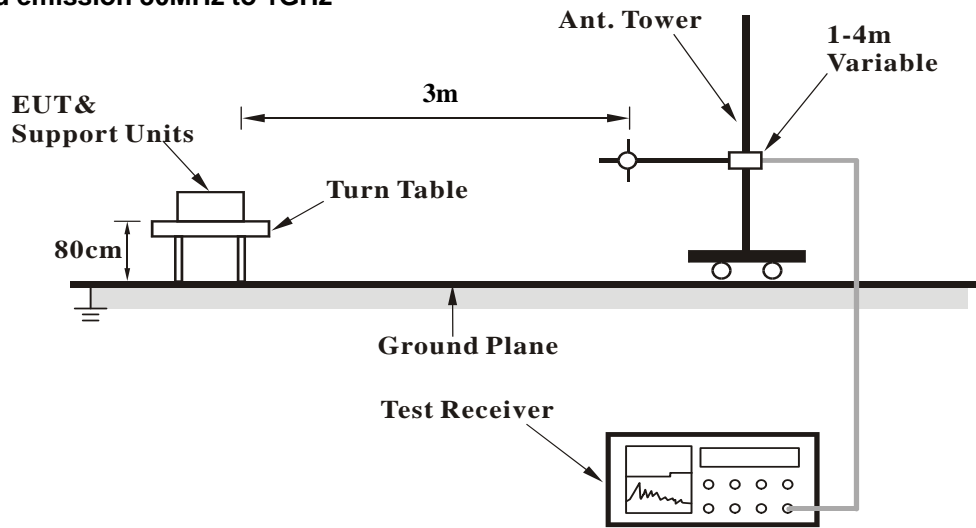
Note: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

4.2.3 Deviation from Test Standard

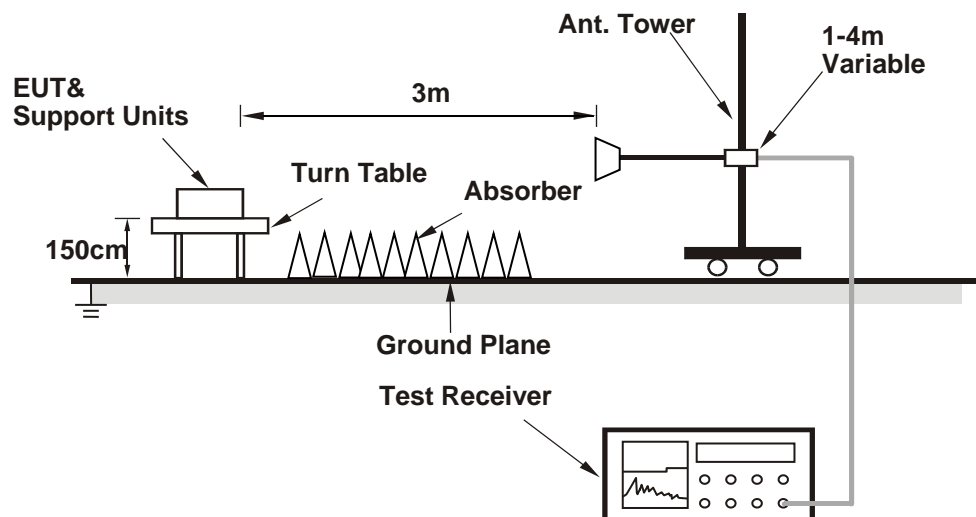
No deviation.

4.2.4 Test Setup

For radiated emission 30MHz to 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

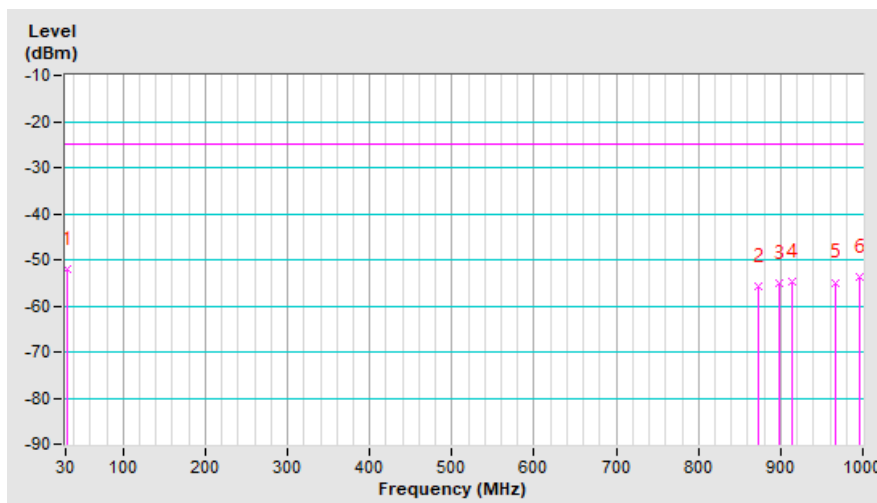
LTE Band 38, Channel Bandwidth: 5MHz

Mode	TX channel 37775 (2572.5MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	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	31.94	-55.3	-51.0	-0.9	-51.9	-25.0	-26.9
2	871.96	-63.1	-52.1	-3.6	-55.7	-25.0	-30.7
3	898.15	-62.7	-51.5	-3.7	-55.2	-25.0	-30.2
4	914.64	-62.7	-51.2	-3.7	-54.9	-25.0	-29.9
5	966.05	-63.2	-51.1	-3.8	-54.9	-25.0	-29.9
6	995.15	-62.7	-49.8	-4.0	-53.8	-25.0	-28.8

Remarks:

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

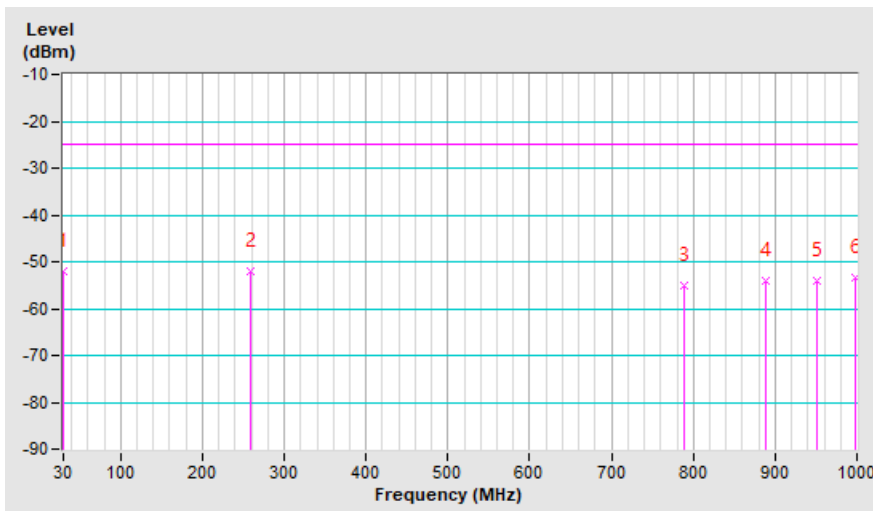


Mode	TX channel 37775 (2572.5MHz)	Frequency Range	Below 1000 MHz
Environmental Conditions	24deg. C, 64%RH	Input Power	120Vac, 60Hz
Tested By	Match Tsui		

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	-42.0	-51.1	-0.8	-51.9	-25.0	-26.9
2	258.92	-52.7	-49.8	-2.2	-52.0	-25.0	-27.0
3	788.54	-62.0	-51.7	-3.4	-55.1	-25.0	-30.1
4	888.45	-62.2	-50.4	-3.7	-54.1	-25.0	-29.1
5	951.50	-63.3	-50.3	-3.7	-54.0	-25.0	-29.0
6	997.09	-63.3	-49.3	-4.0	-53.3	-25.0	-28.3

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 7, Channel Bandwidth: 20MHz

Mode	TX channel 21100 (2535MHz)	Frequency Range	1GHz ~ 27GHz
Environmental Conditions	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	5070.00	-60.90	-48.40	1.40	-47.00	-25.00	-22.00
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	5070.00	-56.90	-45.50	1.40	-44.10	-25.00	-19.10

Remarks:

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

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.

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Web Site: www.bureauveritas-adt.com

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

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