Supplemental “CA Mode” Test Report

Report No.:	RF190401E07-5 R1
FCC ID:	NKR-LVSK-ODU
Test Model:	LVSKODU
Received Date:	Apr. 01, 2019
Test Date:	May 19 to June 09, 2019
Issued Date:	July 15, 2019
Applicant:	Wistron NeWeb Corp.
Address:	20 Park Avenue II, Hsinchu Science Park,Hsinchu 308, Taiwan, R.O.C.
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
FCC Registration / Designation Number:	723255 / TW2022

Testing Laboratory
2022

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Release Control Record

Issue No.	Description	Date Issued
RF190401E07-5	Original release.	June 12, 2019
RF190401E07-5 R1	Add the occupied bandwdith measurement of section 4.3.	July 15, 2019

1 Certificate of Conformity

Product:	LVSKODU
Brand:	WNC
Test Model:	LVSKODU
Sample Status:	ENGINEERING SAMPLE
Applicant:	Wistron NeWeb Corp.
Test Date:	May 19 to June 09, 2019
Standards:	FCC Part 22, Subpart H FCC Part 24 Subpart E FCC Part 27, Subpart F / L 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 EMC characteristics under the conditions specified in this report.

Prepared by : _____ , **Date:** July 15, 2019

Phoenix Huang / Specialist

Approved by : _____ , **Date:** July 15, 2019

May Chen / Manager

2 Summary of Test Results

Applied Standard: FCC Part 22, FCC Part 24, FCC Part 27 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 24.232	Equivalent Isotropically Radiated Power	PASS	Meet the requirement of limit.
2.1046 22.913 (a)	Effective radiated power		
2.1046 27.50	Radiated Power		
2.1053 24.238	Radiated Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -10.16 dB at 1564 MHz.
2.1053 22.917			
2.1053 27.53			

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	30MHz ~ 1GHz	4.9 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	5.1 dB
	6GHz ~ 18GHz	4.9 dB
	18GHz ~ 40GHz	5.2 dB

2.2 Test Site and Instruments

For Radiated Spurious Emissions Test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Keysight	N9038A	MY54450088	July 05, 2018	July 04, 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-01	Oct. 30, 2018	Oct. 29, 2019
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-406	Nov. 22, 2018	Nov. 21, 2019
RF Cable	8D	966-4-1	Mar. 19, 2019	Mar. 18, 2020
RF Cable	8D	966-4-2	Mar. 19, 2019	Mar. 18, 2020
RF Cable	8D	966-4-3	Mar. 19, 2019	Mar. 18, 2020
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-4-01	Sep. 27, 2018	Sep. 26, 2019
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-783	Nov. 25, 2018	Nov. 24, 2019
Pre-Amplifier EMCI	EMC12630SE	980385	Aug. 16, 2018	Aug. 15, 2019
RF Cable	EMC104-SM-SM-1200	160923	Jan. 28, 2019	Jan. 27, 2020
RF Cable	104 RF cable	131215	Jan. 10, 2019	Jan. 09, 2020
RF Cable	EMC104-SM-SM-6000	180418	May 03, 2019	May 02, 2020
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 28, 2019	Jan. 27, 2020
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170519	Nov. 25, 2018	Nov. 24, 2019
RF Cable	EMC102-KM-KM-1200	160924	Jan. 28, 2019	Jan. 27, 2020
RF Cable	EMC102-KM-KM-1200	160925	Jan. 28, 2019	Jan. 27, 2020
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	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. 4.
3. Loop antenna was used for all emissions below 30 MHz.
4. Tested Date: May 19 to June 09, 2019

For other test: (Mode 1~7)

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	100964	June 20, 2018	June 19, 2019
Spectrum Analyzer Agilent	E4446A	MY48250254	Nov. 14, 2018	Nov. 13, 2019
Power meter Anritsu	ML2495A	1014008	May 13, 2019	May 12, 2020
Power sensor Anritsu	MA2411B	0917122	May 13, 2019	May 12, 2020
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 15, 2019	Apr. 14, 2020
AC Power Source Extech Electronics	6205	1440452	NA	NA
DC Power Supply Topward	6603D	795558	NA	NA
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	Jan. 09, 2019	Jan. 08, 2020
True RMS Clamp Meter FLUKE	325	31130711WS	May 22, 2018	May 21, 2019
ESG Vector signal generator Agilent	E4438C	MY45094468/005 506 602 UK6 UNJ	Nov. 19, 2018	Nov. 18, 2019
Mech Switch Absorptive Mini-Circuits	MSP4TA-18+	0140	Feb. 11, 2019	Feb. 10, 2020
FXD ATTEN Mini-Circuits	BW-S3W2+	MN71981	Feb. 11, 2019	Feb. 10, 2020
Software	ADT_RF Test Software V6.6.5.4	NA	NA	NA

NOTE:
1. The test was performed in Oven room 2.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: May 19, 2019

For other test: (Mode 8~12)

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	100964	June 20, 2018	June 19, 2019
Spectrum Analyzer Agilent	E4446A	MY48250254	Nov. 14, 2018	Nov. 13, 2019
Power meter Anritsu	ML2495A	1014008	May 13, 2019	May 12, 2020
Power sensor Anritsu	MA2411B	0917122	May 13, 2019	May 12, 2020
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 15, 2019	Apr. 14, 2020
AC Power Source Extech Electronics	6205	1440452	NA	NA
DC Power Supply Topward	6603D	795558	NA	NA
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	Jan. 09, 2019	Jan. 08, 2020
True RMS Clamp Meter FLUKE	325	31130711WS	May 21, 2019	May 20, 2020
ESG Vector signal generator Agilent	E4438C	MY45094468/005 506 602 UK6 UNJ	Nov. 19, 2018	Nov. 18, 2019
Mech Switch Absorptive Mini-Circuits	MSP4TA-18+	0140	Feb. 11, 2019	Feb. 10, 2020
FXD ATTEN Mini-Circuits	BW-S3W2+	MN71981	Feb. 11, 2019	Feb. 10, 2020
Software	ADT_RF Test Software V6.6.5.4	NA	NA	NA

NOTE:
1. The test was performed in Oven room 2.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date: June 09, 2019

3 General Information

3.1 General Description of EUT

Product	LVSKODU	
Brand	WNC	
Test Model	LVSKODU	
Status of EUT	ENGINEERING SAMPLE	
Power Supply Rating	12Vdc from USB interface	
Modulation Type	LTE	QPSK, 16QAM, 64QAM
Operating Frequency	LTE Band 2	1850.7MHz ~ 1909.3MHz
	LTE Band 4	1710.7 ~ 1754.3 MHz
	LTE Band 5	824.7MHz ~ 848.3MHz
	LTE Band 13	779.5 ~ 784.5 MHz
	LTE Band 66	1710.7 ~ 1779.3MHz
Antenna Type	Refer to Note	
Antenna Connector	Refer to Note	
Accessory Device	Refer to Note	
Data Cable Supplied	NA	

Note:

1. The associated devices of EUT information are as below:

For LVSKIDU					
No.	Product	Brand	Model No.	FCC ID	Remark
1	LVSKIDU	WNC	LVSKIDU	NKR-LVSK-IDU	-
2	Adapter	DELTA	ADP-48GR B	-	Input: 100-240Vac, 1A, 50-60Hz AC input cable: Unshielded, 1.7m Output: 12Vdc, 4A DC output cable: Unshielded, 2.9m
3	Battery Cradle	WNC	LVSKCRA	-	Battery Cradle Input: 12Vdc, 4A Battery Cradle Include Battery Battery Output: 3.6Vdc, 3450mAh, 12.42Wh

For LVSKODU				
No.	Product	Brand	Model No.	Remark
4	LVPKROU	WNC	LVPK	Input: 56Vdc, 1.1A (power from POE Adpater)
5	POE Adpater	DELTA	ADP-60HR B	AC Input: 100-240V, 2.0A, 50-60Hz DC Output: 56Vdc, 1.1A AC input cable: Unshielded, 1.7m
6	Surge protection box	CITEL	CRMJ8-POE-C6	Metal case
7	Surge protection box	CITEL	CRMJ8-POE-C6/WNC	Plastic case

2. There are WWAN, 5G NR and Bluetooth technology used for the EUT.
3. Simultaneously transmission condition.

Condition	Technology		
1	WWAN	5G NR (n260/n261)	Bluetooth
Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.			

4. The EUT was pre-tested under the following modes:

For Radiated Emission test	
Pre-test Mode	Description
Mode A	Power from LVSKIDU
Mode B	Power from LVPKROU (with Surge protection box and model No.: CRMJ8-POE-C6)
Mode C	**Power from LVPKROU (with Surge protection box and model No.: CRMJ8-POE-C6/WNC)**
From the above modes, the worst case was found in **Mode C**. Therefore only the test data of the mode was recorded in this report.	

5. The antennas provided to the EUT, please refer to the following table:

LTE					
Ant. No.	Ant. Net Gain (dBi)	Freq. range (MHz)	Ant. Type	Connector Type	Cable Length (mm)
1.ODU-LH1 (Ant. 0)	3.86	746~894	IFA	NA	NA
		1710~2200			
2.ODU-LH2 (Ant. 2)	4.55	746~894	IFA	NA	NA
		1710~2200			
3.ODU-H1 (Ant. 3)	3.58	1710~2200	IFA	i-pex (MHF)	62
4.ODU-H2 (Ant. 4)	2.27	1710~2200	IFA	i-pex (MHF)	66

Bluetooth				
Ant. No.	Ant. Net Gain (dBi)	Freq. range (GHz)	Ant. Type	Connector Type
5.ODU-BT (Ant. 1)	2.69	2.4~2.4835	IFA	NA

5GNR			
Ant. No.	Freq. range (MHz)	Ant. Type	Connector Type
5GNR Antenna	27500~28350 37000~40000	Smart patch array Antenna	NA

6. This device is UE LTE 4G 1Tx/4Rx device for single carrier within ANT0 can support uplink Band 2/4/5/13/66 and device support Inter-Band carrier aggregation (two carriers) uplink. For device operation on uplink CA mode, changed the transmitter mode by 2Tx within ANT0 and ANT2.
7. The device uplink Inter-Band CA maximum configurations set and below test mode are presented in the report:

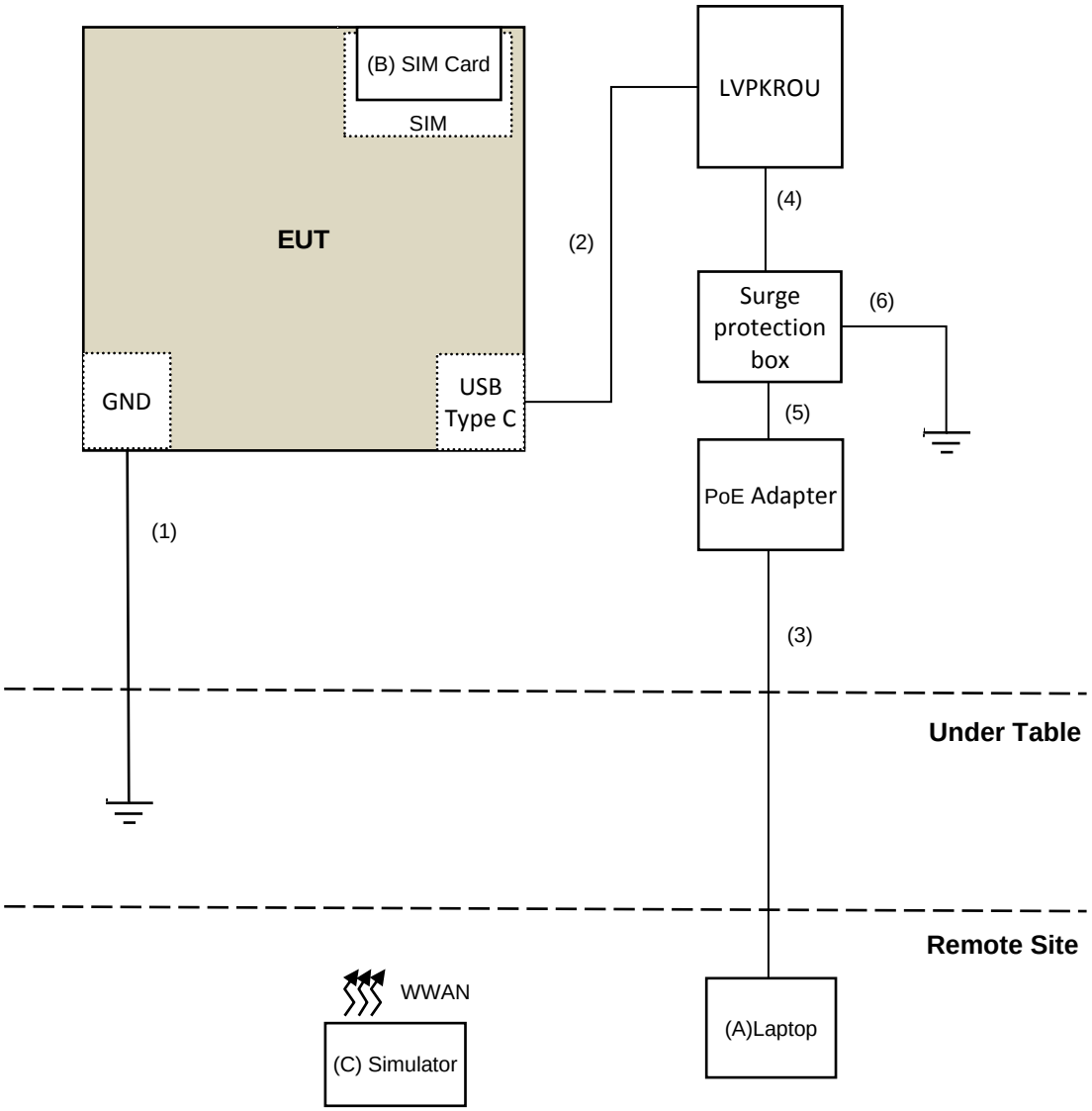
Test Mode	Description
1	CA_PCC Ant 0 Band 2_SCC Ant 2 Band 4
2	CA_PCC Ant 0 Band 4_SCC Ant 2 Band 2
3	CA_PCC Ant 2 Band 2_SCC Ant 0 Band 13
4	CA_PCC Ant 0 Band 13_SCC Ant 2 Band 2
5	CA_PCC Ant 0 Band 66_SCC Ant 2 Band 2
6	CA_PCC Ant 0 Band 13_SCC Ant 2 Band 4
7	CA_PCC Ant 2 Band 66_SCC Ant 0 Band 13
8	CA_PCC Ant 2 Band 2_SCC Ant 0 Band 5
9	CA_PCC Ant 0 Band 5_SCC Ant 2 Band 2
10	CA_PCC Ant 2 Band 4_SCC Ant 0 Band 5
11	CA_PCC Ant 0 Band 5_SCC Ant 2 Band 4
12	CA_PCC Ant 2 Band 66_SCC Ant 0 Band 5

8. This device is LVSKODU that can support carrier aggregation (two carrier) uplink Inter Band contiguous, specification following as below:

Uplink CA Configurations	LTE Bands	Channel Bandwidths for Carrier [MHz]	Maximum Aggregated Bandwidth [MHz]	Bandwidth Combination Set
CA_2A-4A	2	1.4, 3, 5, 10, 15, 20	40	0
	4	5, 10, 15, 20		
	2	5, 10	20	1
	4	5, 10		
	2	5, 10, 15, 20	40	2
	4	5, 10, 15, 20		
CA_2A-13A	2	5, 10, 15, 20	30	0
	13	10		
	2	5, 10	20	1
	13	10		
CA_2A-66A	2	1.4, 3, 5, 10, 15, 20	40	0
	66	5, 10, 15, 20		
	2	5, 10	20	1
	66	5, 10		
	2	5, 10, 15, 20	40	2
	66	5, 10, 15, 20		
CA_4A-13A	4	5, 10, 15, 20	30	0
	13	10		
	4	5, 10	20	1
	13	10		
CA_66A-13A	66	5, 10, 15, 20	30	0
	13	10		
	66	5, 10	20	1
	13	10		
CA_2A-5A	2	5, 10, 15, 20	30	0
	5	5, 10		
	2	5, 10	20	1
	5	5, 10		
CA_4A-5A	4	5, 10	20	0
	5	5, 10		
	4	5, 10, 15, 20	30	1
	5	5, 10		
CA_66A-5A	66	5, 10	20	0
	5	5, 10		
	66	5, 10, 15, 20	30	1
	5	5, 10		

9. 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 Configuration of System under Test



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.	Laptop	DELL	E6420	B92T3R1	FCC DoC	Provided by Lab
B.	SIM Card	NA	NA	NA	NA	Provided by Lab
C.	Simulator	Keysight	E7515A	MY56030229	NA	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.	GND Cable	1	3	No	0	Provided by Lab
2.	USB Type C Cable	1	0.38	No	0	Supplied by client
3.	RJ-45 Cable	1	10	No	0	Provided by Lab
4.	RJ-45 Cable	1	3	Yes	0	Provided by Lab
5.	RJ-45 Cable	1	1	Yes	0	Provided by Lab
6.	GND Cable	1	3	No	0	Provided by Lab

3.3 Test Mode Applicability and Tested Channel Detail

1. Test modes are presented in the report as below, detailed test mode information refer to note 2.

Test Mode	Description
1	CA_PCC Ant 0 Band 2_SCC Ant 2 Band 4
2	CA_PCC Ant 0 Band 4_SCC Ant 2 Band 2
3	CA_PCC Ant 2 Band 2_SCC Ant 0 Band 13
4	CA_PCC Ant 0 Band 13_SCC Ant 2 Band 2
5	CA_PCC Ant 0 Band 66_SCC Ant 2 Band 2
6	CA_PCC Ant 0 Band 13_SCC Ant 2 Band 4
7	CA_PCC Ant 2 Band 66_SCC Ant 0 Band 13
8	CA_PCC Ant 2 Band 2_SCC Ant 0 Band 5
9	CA_PCC Ant 0 Band 5_SCC Ant 2 Band 2
10	CA_PCC Ant 2 Band 4_SCC Ant 0 Band 5
11	CA_PCC Ant 0 Band 5_SCC Ant 2 Band 4
12	CA_PCC Ant 2 Band 66_SCC Ant 0 Band 5

2. The detailed test mode information.

Test Mode	Test Item	Modulation	PCC			SCC		
			Channel Bandwidth	Tested Channel	Mode	Channel Bandwidth	Tested Channel	Mode
1	EIRP & Radiated Emission	QPSK	15 MHz	19125	1 RB / 0 RB offset	15 MHz	20175	1 RB / 0 RB offset
2	EIRP & Radiated Emission	QPSK	20 MHz	20175	1 RB / 50 RB offset	15 MHz	18900	1 RB / 0 RB offset
3	EIRP & Radiated Emission	QPSK	15 MHz	18900	1 RB / 0 RB offset	10 MHz	23230	1 RB / 0 RB offset
4	EIRP & Radiated Emission	QPSK	15 MHz	23230	1 RB / 0 RB offset	10 MHz	18900	1 RB / 0 RB offset
5	EIRP & Radiated Emission	QPSK	10 MHz	132622	1 RB / 0 RB offset	15 MHz	18675	1 RB / 74 RB offset
6	EIRP & Radiated Emission	QPSK	10 MHz	23230	1 RB / 0 RB offset	15 MHz	20325	1 RB / 0 RB offset
7	EIRP & Radiated Emission	QPSK	10 MHz	132622	1 RB / 0 RB offset	10 MHz	23230	1 RB / 0 RB offset
8	EIRP & Radiated Emission	QPSK	15 MHz	18900	1 RB / 0 RB offset	10 MHz	20450	1 RB / 0 RB offset
9	EIRP & Radiated Emission	QPSK	10 MHz	20450	1 RB / 0 RB offset	15 MHz	18675	1 RB / 37 RB offset
10	EIRP & Radiated Emission	QPSK	15 MHz	20025	1 RB / 74 RB offset	10 MHz	20450	1 RB / 24 RB offset
11	EIRP & Radiated Emission	QPSK	10 MHz	20450	1 RB / 0 RB offset	15 MHz	20025	1 RB / 0 RB offset
12	EIRP & Radiated Emission	QPSK	10 MHz	132022	1 RB / 49 RB offset	10 MHz	20450	1 RB / 24 RB offset

Test Condition:

Test Item	Environmental Conditions	Input Power (System)	Tested By
EIRP/ERP	25deg. C, 60%RH	120Vac, 60Hz	Jynuchun Lin
Radiated Emission Below 1GHz	25deg. C, 73%RH, 25deg. C, 75%RH, 25deg. C, 65%RH	120Vac, 60Hz	Robert Cheng
Radiated Emission Above 1GHz	25deg. C, 75%RH, 25deg. C, 73%RH	120Vac, 60Hz	Robert Cheng

3.4 EUT Operating Conditions

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 22, Subpart H

FCC 47 CFR Part 24 Subpart E

FCC 47 CFR Part 27, Subpart F / L

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

For FCC Part 22:

Mobile / Portable station are limited to 7 watts e.r.p.

For FCC Part 24:

Mobile / Portable station are limited to 2 watts e.i.r.p.

For FCC Part 27:

For section 27.50(d)(4): Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

For section 27.50(b)(10): Portable stations (hand-held devices) operating in the 698-787 MHz band are limited to 3 watts ERP. In the BRS and EBS Band, Mobile and other user stations are limited to 2.0 watts EIRP.

4.1.2 Test Procedures

Conducted Power Measurement:

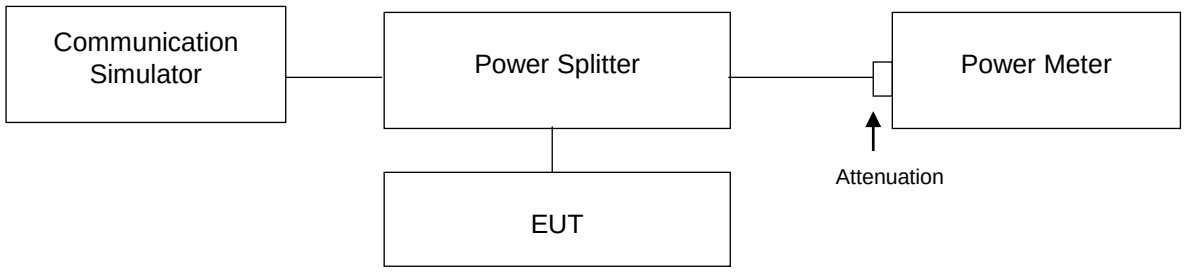
The EUT was set up for the maximum power with WCDMA/LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and difference RB size/ RB offset for difference bandwidth record the power level shown on power meter.

EIRP / ERP Measurement:

a. EIRP = Conducted Output power level + Antenna gain.
b. ERP power can be calculated form EIRP power by subtracting the gain of dipole, ERP power = EIPR power - 2.15dBi.
c. ERP = Conducted Output power level + Antenna gain (dBi) - Isotropically Factor (2.15dB)

4.1.3 Test Setup

Conducted Power Measurement:



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

4.1.4 Test Results (Mode 1)

CONDUCTED OUTPUT POWER (dBm)

Inter Band dis-Contiguous CA																	
LTE CA_2A-4A	Mode 1: CA_PCC Ant 0 Band 2_SCC Ant 2 Band 4																
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Minimum CA_Bandwidth Combination Sets	2	1.4	QPSK	1	0	18607	1850.7	23.02	4	5	QPSK	1	0	19975	1712.5	19.84
				1	2			23.13				1	12			19.95
				1	5			23.20				1	24			19.79
	2	1.4	QPSK	1	0	18900	1880	23.08	4	5	QPSK	1	0	20175	1732.5	19.94
				1	2			22.99				1	12			19.76
				1	5			23.17				1	24			19.84
	2	1.4	QPSK	1	0	19193	1909.3	23.44	4	5	QPSK	1	0	20375	1752.5	20.07
				1	2			23.32				1	12			19.77
				1	5			23.39				1	24			19.54
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Worst CA_Bandwidth Combination Sets	2	15	QPSK	1	0	18675	1857.5	23.04	4	15	QPSK	1	0	20025	1717.5	19.95
				1	37			23.07				1	37			19.85
				1	74			23.22				1	74			19.81
	2	15	QPSK	1	0	18900	1880	22.94	4	15	QPSK	1	0	20175	1732.5	**20.11**
				1	37			23.18				1	37			19.89
				1	74			23.04				1	74			19.90
	2	15	QPSK	1	0	19125	1902.5	**23.45**	4	15	QPSK	1	0	20325	1747.5	19.94
				1	37			23.38				1	37			19.67
				1	74			23.23				1	74			19.76
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Maximum CA_Bandwidth Combination Sets	2	20	QPSK	1	0	18625	1852.5	23.05	4	20	QPSK	1	0	20000	1715	19.87
				1	50			23.00				1	50			19.84
				1	99			23.16				1	99			19.79
	2	20	QPSK	1	0	18900	1880	22.94	4	20	QPSK	1	0	20175	1732.5	19.67
				1	50			23.04				1	50			19.91
				1	99			23.04				1	99			19.85
	2	20	QPSK	1	0	19175	1907.5	23.37	4	20	QPSK	1	0	20350	1750	19.80
				1	50			23.41				1	50			19.84
				1	99			23.41				1	99			19.65

EIRP / ERP POWER

Maximum Power	
PCC Bandwidth	SCC BW Bandwidth
15	15
RB / RB offset	RB / RB offset
1/0	1/0
Freq. (MHz)	Freq. (MHz)
1902.5	1732.5
Conducted Power (dBm)	Conducted Power (dBm)
23.45	20.11
Ant Gain (dBi)	Ant Gain (dBi)
3.86	4.55
EIRP (dBm)	EIRP (dBm)
27.31	24.66

4.1.5 Test Results (Mode 2)

CONDUCTED OUTPUT POWER (dBm)

Inter Band dis-Contiguous CA																	
LTE CA_4A-2A	Mode 2: CA_PCC Ant 0 Band 4_SCC Ant 2 Band 2																
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Minimum CA_Bandwidth Combination Sets	4	5	QPSK	1	0	19975	1712.5	24.82	2	1.4	QPSK	1	0	18607	1850.7	19.83
				1	12			24.66				1	2			19.71
				1	24			24.59				1	5			19.93
	4	5	QPSK	1	0	20175	1732.5	24.72	2	1.4	QPSK	1	0	18900	1880	19.96
				1	12			24.89				1	2			19.80
				1	24			24.59				1	5			19.88
	4	5	QPSK	1	0	20375	1752.5	24.56	2	1.4	QPSK	1	0	19193	1909.3	19.64
				1	12			24.76				1	2			19.65
				1	24			24.44				1	5			19.52
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Worst CA_Bandwidth Combination Sets	4	20	QPSK	1	0	20000	1715	24.84	2	15	QPSK	1	0	18675	1857.5	19.85
				1	50			24.59				1	37			19.79
				1	99			24.58				1	74			19.74
	4	20	QPSK	1	0	20175	1732.5	24.91	2	15	QPSK	1	0	18900	1880	**20.03**
				1	50			**24.92**				1	37			19.96
				1	99			24.51				1	74			19.65
	4	20	QPSK	1	0	20350	1750	24.77	2	15	QPSK	1	0	19125	1902.5	19.76
				1	50			24.71				1	37			19.62
				1	99			24.42				1	74			19.64
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Maximum CA_Bandwidth Combination Sets	4	20	QPSK	1	0	20000	1715	24.78	2	20	QPSK	1	0	18625	1852.5	19.79
				1	50			24.77				1	50			19.86
				1	99			24.59				1	99			19.97
	4	20	QPSK	1	0	20175	1732.5	24.75	2	20	QPSK	1	0	18900	1880	19.94
				1	50			24.71				1	50			19.95
				1	99			24.54				1	99			19.79
	4	20	QPSK	1	0	20350	1750	24.54	2	20	QPSK	1	0	19175	1907.5	19.79
				1	50			24.76				1	50			19.78
				1	99			24.58				1	99			19.64

EIRP / ERP POWER

Maximum Power	
PCC BW Bandwidth	SCC BW Bandwidth
20	15
RB / RB offset	RB / RB offset
1/50	1/0
Freq. (MHz)	Freq. (MHz)
1732.5	1880
Conducted Power (dBm)	Conducted Power (dBm)
24.92	20.03
Ant Gain (dBi)	Ant Gain (dBi)
3.86	4.55
EIRP (dBm)	EIRP (dBm)
28.78	24.58

4.1.6 Test Results (Mode 3)

CONDUCTED OUTPUT POWER (dBm)

Inter Band dis-Contiguous CA																	
LTE CA_2A-13A	Mode 3: CA_PCC Ant 2 Band 2_SCC Ant 0 Band 13																
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Minimum CA_Bandwidth Combination Sets	2	5	QPSK	1	0	18625	1852.5	19.81	13	10	QPSK	1	0	23230	782	24.85
				1	12			19.79				1	24			24.45
				1	24			19.72				1	49			24.43
	2	5	QPSK	1	0	18900	1880	20.11	13	10	QPSK	1	0	23230	782	24.79
				1	12			20.05				1	24			24.68
				1	24			19.68				1	49			24.56
	2	5	QPSK	1	0	19175	1907.5	19.79	13	10	QPSK	1	0	23230	782	24.75
				1	12			19.73				1	24			24.46
				1	24			19.62				1	49			24.36
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Worst CA_Bandwidth Combination Sets	2	15	QPSK	1	0	18675	1857.5	19.94	13	10	QPSK	1	0	23230	782	24.84
				1	37			19.76				1	24			24.70
				1	74			19.72				1	49			24.41
	2	15	QPSK	1	0	18900	1880	**20.13**	13	10	QPSK	1	0	23230	782	**24.88**
				1	37			19.86				1	24			24.67
				1	74			19.79				1	49			24.50
	2	15	QPSK	1	0	19125	1902.5	19.82	13	10	QPSK	1	0	23230	782	24.83
				1	37			19.59				1	24			24.59
				1	74			19.67				1	49			24.49
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Maximum CA_Bandwidth Combination Sets	2	20	QPSK	1	0	18700	1860	19.75	13	10	QPSK	1	0	23230	782	24.77
				1	50			19.68				1	24			24.48
				1	99			19.77				1	49			24.59
	2	20	QPSK	1	0	18900	1880	20.12	13	10	QPSK	1	0	23230	782	24.65
				1	50			19.99				1	24			24.70
				1	99			19.76				1	49			24.43
	2	20	QPSK	1	0	19100	1900	19.74	13	10	QPSK	1	0	23230	782	24.77
				1	50			19.82				1	24			24.42
				1	99			19.62				1	49			24.47

EIRP / ERP POWER

Maximum Power		
PCC BW Bandwidth	SCC BW Bandwidth	
15	10	
RB / RB offset	RB / RB offset	
1/0	1/0	
Freq. (MHz)	Freq. (MHz)	
1880	782	
Conducted Power (dBm)	Conducted Power (dBm)	
20.13	24.88	
Ant Gain (dBi)	Ant Gain (dBi)	
4.55	3.86	
EIRP (dBm)	EIRP (dBm)	ERP (dBm)
24.68	28.74	26.59

4.1.7 Test Results (Mode 4)

CONDUCTED OUTPUT POWER (dBm)

Inter Band dis-Contiguous CA																	
LTE CA_13A-2A	Mode 4: CA_PCC Ant 0 Band 13_SCC Ant 2 Band 2																
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Minimum CA_Bandwidth Combination Sets	13	10	QPSK	1	0	23230	782	24.71	2	5	QPSK	1	0	18625	1852.5	20.00
				1	24			24.52				1	12			19.61
				1	49			24.43				1	24			19.87
	13	10	QPSK	1	0	23230	782	24.84	2	5	QPSK	1	0	18900	1880	19.99
				1	24			24.58				1	12			19.99
				1	49			24.35				1	24			19.82
	13	10	QPSK	1	0	23230	782	24.75	2	5	QPSK	1	0	19175	1907.5	19.61
				1	24			24.67				1	12			19.76
				1	49			24.63				1	24			19.47
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Worst CA_Bandwidth Combination Sets	13	10	QPSK	1	0	23230	782	24.75	2	15	QPSK	1	0	18675	1857.5	19.97
				1	24			24.56				1	37			19.85
				1	49			24.53				1	74			20.00
	13	10	QPSK	1	0	23230	782	24.69	2	15	QPSK	1	0	18900	1880	**20.01**
				1	24			24.67				1	37			19.99
				1	49			24.57				1	74			19.69
	13	10	QPSK	1	0	23230	782	**24.85**	2	15	QPSK	1	0	19125	1902.5	19.61
				1	24			24.44				1	37			19.75
				1	49			24.49				1	74			19.62
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Maximum CA_Bandwidth Combination Sets	13	10	QPSK	1	0	23230	782	24.75	2	20	QPSK	1	0	18700	1860	19.80
				1	24			24.57				1	50			19.62
				1	49			24.53				1	99			19.72
	13	10	QPSK	1	0	23230	782	24.66	2	20	QPSK	1	0	18900	1880	19.92
				1	24			24.43				1	50			19.91
				1	49			24.50				1	99			19.75
	13	10	QPSK	1	0	23230	782	24.61	2	20	QPSK	1	0	19100	1900	19.77
				1	24			24.48				1	50			19.81
				1	49			24.45				1	99			19.64

EIRP / ERP POWER

Maximum Power		
PCC BW Bandwidth		SCC BW Bandwidth
10		15
RB / RB offset		RB / RB offset
1/0		1/0
Freq. (MHz)		Freq. (MHz)
782		1880
Conducted Power (dBm)		Conducted Power (dBm)
24.85		20.01
Ant Gain (dBi)		Ant Gain (dBi)
3.86		4.55
EIRP (dBm)	ERP (dBm)	EIRP (dBm)
28.71	26.56	24.56

4.1.8 Test Results (Mode 5)

CONDUCTED OUTPUT POWER (dBm)

Inter Band dis-Contiguous CA																	
LTE CA_66A-2A	Mode 5: CA_PCC Ant 0 Band 66_SCC Ant 2 Band 2																
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Minimum CA_Bandwidth Combination Sets	66	5	QPSK	1	0	131997	1712.5	24.32	2	1.4	QPSK	1	0	18607	1850.7	19.80
				1	12			24.75				1	2			19.77
				1	24			24.56				1	5			19.89
	66	5	QPSK	1	0	132322	1745	24.61	2	1.4	QPSK	1	0	18900	1880	19.87
				1	12			24.51				1	2			19.85
				1	24			24.43				1	5			19.82
	66	5	QPSK	1	0	132647	1777.5	24.62	2	1.4	QPSK	1	0	19193	1909.3	19.75
				1	12			24.43				1	2			19.81
				1	24			24.43				1	5			19.55
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Worst CA_Bandwidth Combination Sets	66	10	QPSK	1	0	132022	1715	24.22	2	15	QPSK	1	0	18675	1857.5	19.79
				1	24			24.81				1	37			19.62
				1	49			24.54				1	74			**20.12**
	66	10	QPSK	1	0	132322	1745	24.37	2	15	QPSK	1	0	18900	1880	19.93
				1	24			24.43				1	37			19.81
				1	49			24.35				1	74			19.85
	66	10	QPSK	1	0	132622	1775	**24.88**	2	15	QPSK	1	0	19125	1902.5	19.87
				1	24			24.17				1	37			19.65
				1	49			24.41				1	74			19.60
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Maximum CA_Bandwidth Combination Sets	66	20	QPSK	1	0	132072	1720	24.42	2	20	QPSK	1	0	18700	1860	19.73
				1	50			24.68				1	50			19.68
				1	99			24.70				1	99			19.89
	66	20	QPSK	1	0	132322	1745	24.42	2	20	QPSK	1	0	18900	1880	19.97
				1	50			24.52				1	50			20.05
				1	99			24.40				1	99			19.88
	66	20	QPSK	1	0	132572	1770	24.83	2	20	QPSK	1	0	19100	1900	19.66
				1	50			24.28				1	50			19.80
				1	99			24.54				1	99			19.54

EIRP / ERP POWER

Maximum Power	
PCC BW Bandwidth	SCC BW Bandwidth
10	15
RB / RB offset	RB / RB offset
1/0	1/74
Freq. (MHz)	Freq. (MHz)
1745	1880
Conducted Power (dBm)	Conducted Power (dBm)
24.88	20.12
Ant Gain (dBi)	Ant Gain (dBi)
3.86	4.55
EIRP (dBm)	EIRP (dBm)
28.74	24.67

4.1.9 Test Results (Mode 6)

CONDUCTED OUTPUT POWER (dBm)

Inter Band dis-Contiguous CA																	
LTE CA_13A-4A	Mode 6: CA_PCC Ant 0 Band 13_SCC Ant 2 Band 4																
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Minimum CA_Bandwidth Combination Sets	13	10	QPSK	1	0	23230	782	24.72	4	5	QPSK	1	0	19975	1712.5	19.89
				1	24			24.50				1	12			19.86
				1	49			24.54				1	24			19.82
	13	10	QPSK	1	0	23230	782	24.79	4	5	QPSK	1	0	20175	1732.5	19.70
				1	24			24.65				1	12			19.92
				1	49			24.38				1	24			19.68
	13	10	QPSK	1	0	23230	782	24.64	4	5	QPSK	1	0	20375	1752.5	20.04
				1	24			24.58				1	12			19.66
				1	49			24.50				1	24			19.49
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Worst CA_Bandwidth Combination Sets	13	10	QPSK	1	0	23230	782	24.76	4	15	QPSK	1	0	20025	1717.5	19.67
				1	24			24.53				1	37			19.93
				1	49			24.37				1	74			19.71
	13	10	QPSK	1	0	23230	782	**24.89**	4	15	QPSK	1	0	20175	1732.5	19.90
				1	24			24.66				1	37			19.75
				1	49			24.46				1	74			19.89
	13	10	QPSK	1	0	23230	782	24.82	4	15	QPSK	1	0	20325	1747.5	**20.06**
				1	24			24.51				1	37			19.84
				1	49			24.53				1	74			19.51
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Maximum CA_Bandwidth Combination Sets	13	10	QPSK	1	0	23230	782	24.87	4	20	QPSK	1	0	20050	1720	19.75
				1	24			24.49				1	50			19.88
				1	49			24.58				1	99			19.80
	13	10	QPSK	1	0	23230	782	24.71	4	20	QPSK	1	0	20175	1732.5	19.70
				1	24			24.57				1	50			19.83
				1	49			24.36				1	99			19.76
	13	10	QPSK	1	0	23230	782	24.69	4	20	QPSK	1	0	20300	1745	19.87
				1	24			24.48				1	50			19.86
				1	49			24.53				1	99			19.65

EIRP / ERP POWER

Maximum Power		
PCC BW Bandwidth		SCC BW Bandwidth
10		15
RB / RB offset		RB / RB offset
1/0		1/0
Freq. (MHz)		Freq. (MHz)
782		1732.5
Conducted Power (dBm)		Conducted Power (dBm)
24.89		20.06
Ant Gain (dBi)		Ant Gain (dBi)
3.86		4.55
EIRP (dBm)	ERP (dBm)	EIRP (dBm)
28.75	26.60	24.61

4.1.10 Test Results (Mode 7)

CONDUCTED OUTPUT POWER (dBm)

Inter Band dis-Contiguous CA																	
LTE CA_66A-13A	Mode 7: CA_PCC Ant 2 Band 66_SCC Ant 0 Band 13																
	PCC								SCC								
Minimum CA_Bandwidth Combination Sets	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
	66	5	QPSK	1	0	131997	1712.5	23.14	13	10	QPSK	1	0	23230	782	24.72
				1	12			22.89				1	24			24.56
				1	24			23.25				1	49			24.64
	66	5	QPSK	1	0	132322	1745	23.16	13	10	QPSK	1	0	23230	782	24.64
				1	12			22.97				1	24			24.48
				1	24			22.91				1	49			24.45
	66	5	QPSK	1	0	132647	1777.5	23.29	13	10	QPSK	1	0	23230	782	24.74
				1	12			22.96				1	24			24.42
				1	24			23.31				1	49			24.54
	PCC								SCC								
Worst CA_Bandwidth Combination Sets	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
	66	10	QPSK	1	0	132022	1715	23.11	13	10	QPSK	1	0	23230	782	24.73
				1	24			23.01				1	24			24.71
				1	49			23.10				1	49			24.47
	66	10	QPSK	1	0	132322	1745	23.23	13	10	QPSK	1	0	23230	782	24.65
				1	24			23.06				1	24			24.46
				1	49			22.89				1	49			24.43
	66	10	QPSK	1	0	132622	1775	**23.38**	13	10	QPSK	1	0	23230	782	**24.87**
				1	24			22.93				1	24			24.48
				1	49			23.14				1	49			24.41
	PCC								SCC								
Maximum CA_Bandwidth Combination Sets	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
	66	20	QPSK	1	0	132072	1720	23.06	13	10	QPSK	1	0	23230	782	24.78
				1	50			22.85				1	24			24.62
				1	99			23.23				1	49			24.46
	66	20	QPSK	1	0	132322	1745	23.05	13	10	QPSK	1	0	23230	782	24.64
				1	50			23.09				1	24			24.46
				1	99			22.91				1	49			24.43
	66	20	QPSK	1	0	132572	1770	23.27	13	10	QPSK	1	0	23230	782	24.71
				1	50			23.18				1	24			24.60
				1	99			23.35				1	49			24.60

EIRP / ERP POWER

Maximum Power		
PCC BW Bandwidth	SCC BW Bandwidth	
10	10	
RB / RB offset	RB / RB offset	
1/0	1/0	
Freq. (MHz)	Freq. (MHz)	
1745	782	
Conducted Power (dBm)	Conducted Power (dBm)	
23.38	24.87	
Ant Gain (dBi)	Ant Gain (dBi)	
4.55	3.86	
EIRP (dBm)	EIRP (dBm)	ERP (dBm)
27.93	28.73	26.58

4.1.11 Test Results (Mode 8)

CONDUCTED OUTPUT POWER (dBm)

Inter Band dis-Contiguous CA																	
LTE CA_2A-5A	Mode 8: CA_PCC Ant 2 Band 2_SCC Ant 0 Band 5																
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Minimum CA_Bandwidth Combination Sets	2	5	QPSK	1	0	18625	1852.5	20.00	5	5	QPSK	1	0	20425	826.5	24.18
				1	12			20.09				1	12			24.79
				1	24			19.81				1	24			24.59
	2	5	QPSK	1	0	18900	1880	19.69	5	5	QPSK	1	0	20525	836.5	24.27
				1	12			19.79				1	12			24.33
				1	24			19.83				1	24			24.19
	2	5	QPSK	1	0	19175	1907.5	19.72	5	5	QPSK	1	0	20625	846.5	24.20
				1	12			19.63				1	12			24.48
				1	24			19.48				1	24			24.53
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Worst CA_Bandwidth Combination Sets	2	15	QPSK	1	0	18675	1857.5	19.98	5	10	QPSK	1	0	20450	829	**24.81**
				1	37			19.89				1	24			24.63
				1	74			19.68				1	49			24.60
	2	15	QPSK	1	0	18900	1880	**20.11**	5	10	QPSK	1	0	20525	836.5	24.27
				1	37			19.83				1	24			24.32
				1	74			19.66				1	49			24.19
	2	15	QPSK	1	0	19125	1902.5	19.99	5	10	QPSK	1	0	20600	844	24.39
				1	37			19.83				1	24			24.47
				1	74			19.60				1	49			24.56
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Maximum CA_Bandwidth Combination Sets	2	20	QPSK	1	0	18700	1860	19.83	5	10	QPSK	1	0	20450	829	24.38
				1	50			20.07				1	24			24.57
				1	99			19.68				1	49			24.33
	2	20	QPSK	1	0	18900	1880	19.66	5	10	QPSK	1	0	20525	836.5	24.42
				1	50			19.91				1	24			24.17
				1	99			19.83				1	49			24.40
	2	20	QPSK	1	0	19100	1900	19.95	5	10	QPSK	1	0	20600	844	24.23
				1	50			19.74				1	24			24.42
				1	99			19.46				1	49			24.76

EIRP / ERP POWER

Maximum Power		
PCC BW Bandwidth	SCC BW Bandwidth	
15	10	
RB / RB offset	RB / RB offset	
1/0	1/0	
Freq. (MHz)	Freq. (MHz)	
1880	829	
Conducted Power (dBm)	Conducted Power (dBm)	
20.11	24.81	
Ant Gain (dBi)	Ant Gain (dBi)	
3.86	4.55	
EIRP (dBm)	EIRP (dBm)	ERP (dBm)
23.97	29.36	27.21

4.1.12 Test Results (Mode 9)

CONDUCTED OUTPUT POWER (dBm)

Inter Band dis-Contiguous CA																	
LTE CA_5A-2A	Mode 9: CA_PCC Ant 0 Band 5_SCC Ant 2 Band 2																
	PCC								SCC								
Minimum CA_Bandwidth Combination Sets	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
	5	5	QPSK	1	0	20425	826.5	24.39	2	5	QPSK	1	0	18625	1852.5	19.78
				1	12			24.63				1	12			20.12
				1	24			24.47				1	24			19.72
	5	5	QPSK	1	0	20525	836.5	24.19	2	5	QPSK	1	0	18900	1880	19.73
				1	12			24.35				1	12			19.84
				1	24			24.42				1	24			19.63
	5	5	QPSK	1	0	20625	846.5	24.14	2	5	QPSK	1	0	19175	1907.5	19.83
				1	12			24.60				1	12			19.81
				1	24			24.68				1	24			19.49
	PCC								SCC								
Worst CA_Bandwidth Combination Sets	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
	5	10	QPSK	1	0	20450	829	**24.79**	2	15	QPSK	1	0	18675	1857.5	20.00
				1	24			24.67				1	37			**20.15**
				1	49			24.37				1	74			19.70
	5	10	QPSK	1	0	20525	836.5	24.31	2	15	QPSK	1	0	18900	1880	19.70
				1	24			24.16				1	37			19.93
				1	49			24.37				1	74			19.59
	5	10	QPSK	1	0	20600	844	24.23	2	15	QPSK	1	0	19125	1902.5	19.81
				1	24			24.41				1	37			19.64
				1	49			24.74				1	74			19.55
	PCC								SCC								
Maximum CA_Bandwidth Combination Sets	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
	5	10	QPSK	1	0	20450	829	24.35	2	20	QPSK	1	0	18700	1860	19.89
				1	24			24.77				1	50			20.13
				1	49			24.37				1	99			19.65
	5	10	QPSK	1	0	20525	836.5	24.23	2	20	QPSK	1	0	18900	1880	19.83
				1	24			24.31				1	50			19.77
				1	49			24.47				1	99			19.59
	5	10	QPSK	1	0	20600	844	24.20	2	20	QPSK	1	0	19100	1900	19.72
				1	24			24.42				1	50			19.68
				1	49			24.59				1	99			19.56

EIRP / ERP POWER

Maximum Power		
PCC BW Bandwidth		SCC BW Bandwidth
10		15
RB / RB offset		RB / RB offset
1/0		1/37
Freq. (MHz)		Freq. (MHz)
829		1857.5
Conducted Power (dBm)		Conducted Power (dBm)
24.79		20.15
Ant Gain (dBi)		Ant Gain (dBi)
4.55		3.86
EIRP (dBm)	ERP (dBm)	EIRP (dBm)
29.34	27.19	24.01

4.1.13 Test Results (Mode 10)

CONDUCTED OUTPUT POWER (dBm)

Inter Band dis-Contiguous CA																	
LTE CA_4A-5A	Mode 10: CA_PCC Ant 2 Band 4_SCC Ant 0 Band 5																
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Minimum CA_Bandwidth Combination Sets	4	5	QPSK	1	0	19975	1712.5	19.74	5	5	QPSK	1	0	18625	1852.5	24.42
				1	12			19.85				1	12			24.69
				1	24			19.97				1	24			24.35
	4	5	QPSK	1	0	20175	1732.5	19.81	5	5	QPSK	1	0	18900	1880	24.22
				1	12			20.01				1	12			24.23
				1	24			19.66				1	24			24.29
	4	5	QPSK	1	0	20375	1752.5	19.88	5	5	QPSK	1	0	19175	1907.5	24.39
				1	12			19.88				1	12			24.53
				1	24			19.76				1	24			24.49
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Worst CA_Bandwidth Combination Sets	4	15	QPSK	1	0	20025	1717.5	19.85	5	10	QPSK	1	0	20450	829	24.15
				1	37			19.76				1	24			**24.76**
				1	74			**20.08**				1	49			24.38
	4	15	QPSK	1	0	20175	1732.5	19.83	5	10	QPSK	1	0	20525	836.5	24.22
				1	37			19.96				1	24			24.10
				1	74			19.87				1	49			24.26
	4	15	QPSK	1	0	20325	1747.5	19.63	5	10	QPSK	1	0	20600	844	24.25
				1	37			19.95				1	24			24.55
				1	74			19.75				1	49			24.61
	PCC								SCC								
	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
Maximum CA_Bandwidth Combination Sets	4	20	QPSK	1	0	20050	1720	19.76	5	10	QPSK	1	0	20450	829	24.44
				1	50			19.67				1	24			24.68
				1	99			19.97				1	49			24.34
	4	20	QPSK	1	0	20175	1732.5	20.02	5	10	QPSK	1	0	20525	836.5	24.25
				1	50			19.86				1	24			24.20
				1	99			19.91				1	49			24.40
	4	20	QPSK	1	0	20300	1745	19.87	5	10	QPSK	1	0	20600	844	24.19
				1	50			19.83				1	24			24.61
				1	99			19.52				1	49			24.71

EIRP / ERP POWER

Maximum Power		
PCC BW Bandwidth	SCC BW Bandwidth	
15	10	
RB / RB offset	RB / RB offset	
1/74	1/24	
Freq. (MHz)	Freq. (MHz)	
1717.5	829	
Conducted Power (dBm)	Conducted Power (dBm)	
20.08	24.76	
Ant Gain (dBi)	Ant Gain (dBi)	
3.86	4.55	
EIRP (dBm)	EIRP (dBm)	ERP (dBm)
23.94	29.31	27.16

4.1.14 Test Results (Mode 11)

CONDUCTED OUTPUT POWER (dBm)

Inter Band dis-Contiguous CA																	
LTE CA_5A-4A	Mode 11: CA_PCC Ant 0 Band 5_SCC Ant 2 Band 4																
	PCC								SCC								
Minimum CA_Bandwidth Combination Sets	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
	5	5	QPSK	1	0	20425	826.5	24.25	4	5	QPSK	1	0	19975	1712.5	19.39
				1	12			24.68				1	12			19.42
				1	24			24.50				1	24			19.39
	5	5	QPSK	1	0	20525	836.5	24.27	4	5	QPSK	1	0	20175	1732.5	19.39
				1	12			24.21				1	12			19.21
				1	24			24.40				1	24			19.19
	5	5	QPSK	1	0	20625	846.5	24.26	4	5	QPSK	1	0	20375	1752.5	19.27
				1	12			24.55				1	12			19.32
				1	24			24.74				1	24			19.03
	PCC								SCC								
Worst CA_Bandwidth Combination Sets	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
	5	10	QPSK	1	0	20450	829	**24.75**	4	15	QPSK	1	0	20025	1717.5	19.26
				1	24			24.65				1	37			19.26
				1	49			24.34				1	74			19.31
	5	10	QPSK	1	0	20525	836.5	24.28	4	15	QPSK	1	0	20175	1732.5	**19.55**
				1	24			24.35				1	37			19.45
				1	49			24.42				1	74			19.21
	5	10	QPSK	1	0	20600	844	24.14	4	15	QPSK	1	0	20325	1747.5	19.36
				1	24			24.45				1	37			19.24
				1	49			24.66				1	74			19.03
	PCC								SCC								
Maximum CA_Bandwidth Combination Sets	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
	5	10	QPSK	1	0	20450	829	24.43	4	20	QPSK	1	0	20050	1720	19.27
				1	24			24.61				1	50			19.38
				1	49			24.60				1	99			19.32
	5	10	QPSK	1	0	20525	836.5	24.29	4	20	QPSK	1	0	20175	1732.5	19.50
				1	24			24.22				1	50			19.39
				1	49			24.35				1	99			19.42
	5	10	QPSK	1	0	20600	844	24.15	4	20	QPSK	1	0	20300	1745	19.41
				1	24			24.49				1	50			19.42
				1	49			24.71				1	99			19.20

EIRP / ERP POWER

Maximum Power		
PCC BW Bandwidth		SCC BW Bandwidth
10		15
RB / RB offset		RB / RB offset
1/0		1/0
Freq. (MHz)		Freq. (MHz)
829		1732.5
Conducted Power (dBm)		Conducted Power (dBm)
24.75		19.55
Ant Gain (dBi)		Ant Gain (dBi)
4.55		3.86
EIRP (dBm)	ERP (dBm)	EIRP (dBm)
29.30	27.15	23.41

4.1.15 Test Results (Mode 12)

CONDUCTED OUTPUT POWER (dBm)

Inter Band dis-Contiguous CA																	
LTE CA_66A-5A	Mode 12: CA_PCC Ant 2 Band 66_SCC Ant 0 Band 5																
	PCC								SCC								
Minimum CA_Bandwidth Combination Sets	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
	66	5	QPSK	1	0	131997	1712.5	23.03	5	5	QPSK	1	0	20425	826.5	23.72
				1	12			23.17				1	12			24.00
				1	24			23.15				1	24			23.88
	66	5	QPSK	1	0	132322	1745	22.93	5	5	QPSK	1	0	20525	836.5	23.92
				1	12			22.95				1	12			23.46
				1	24			23.11				1	24			23.93
	66	5	QPSK	1	0	132647	1777.5	23.05	5	5	QPSK	1	0	20625	846.5	23.77
				1	12			22.77				1	12			24.13
				1	24			23.33				1	24			24.00
	PCC								SCC								
Worst CA_Bandwidth Combination Sets	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
	66	10	QPSK	1	0	132022	1715	22.96	5	10	QPSK	1	0	20450	829	23.75
				1	24			23.13				1	24			**24.26**
				1	49			**23.34**				1	49			23.63
	66	10	QPSK	1	0	132322	1745	22.88	5	10	QPSK	1	0	20525	836.5	23.91
				1	24			23.20				1	24			23.71
				1	49			23.10				1	49			24.05
	66	10	QPSK	1	0	132622	1775	23.15	5	10	QPSK	1	0	20600	844	23.75
				1	24			22.75				1	24			24.01
				1	49			23.29				1	49			24.08
	PCC								SCC								
Maximum CA_Bandwidth Combination Sets	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)	Band	BW (MHz)	Modulation	RB Size	RB Offset	UL CH	UL Freq. (MHz)	Tx Power with UL-CA Active (dBm)
	66	20	QPSK	1	0	132072	1720	23.02	5	10	QPSK	1	0	20450	829	23.67
				1	50			22.96				1	24			24.23
				1	99			23.11				1	49			23.62
	66	20	QPSK	1	0	132322	1745	22.86	5	10	QPSK	1	0	20525	836.5	23.62
				1	50			22.92				1	24			23.46
				1	99			22.92				1	49			23.88
	66	20	QPSK	1	0	132572	1770	23.03	5	10	QPSK	1	0	20600	844	23.79
				1	50			22.80				1	24			24.16
				1	99			23.07				1	49			24.15

EIRP / ERP POWER

Maximum Power		
PCC BW Bandwidth	SCC BW Bandwidth	
10	10	
RB / RB offset	RB / RB offset	
1/49	1/24	
Freq. (MHz)	Freq. (MHz)	
1715	829	
Conducted Power (dBm)	Conducted Power (dBm)	
23.34	24.26	
Ant Gain (dBi)	Ant Gain (dBi)	
3.86	4.55	
EIRP (dBm)	EIRP (dBm)	ERP (dBm)
27.20	28.81	26.66

4.2 Radiated Emission Measurement

4.2.1 Limits of Radiated Emission Measurement

For FCC Part 22 & Part 24:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to –13dBm.

For FCC Part 27:

According to FCC 27.53 (c) For operations in the 746-758 MHz band and the 776-788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:
(1) On any frequency outside the 746-758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;
(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB;
(3) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 76 + 10 log (P) dB in a 6.25 kHz band segment, for base and fixed stations;
(4) On all frequencies between 763-775 MHz and 793-805 MHz, by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment, for mobile and portable stations;
(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;
(6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

According to FCC 27.53(f) For operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

According to FCC 27.53(h) AWS emission limits— General protection levels. Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least 43 + 10 log10 (P) dB.

4.2.2 Test Procedure

a. The power was measured with Spectrum Analyzer. All measurements were done at 3 channels (low, middle and high channel of operational frequency range.)

b. Substitution method is used for EIRP measurement. In the semi-anechoic chamber, EUT placed on the 0.8m/1.5m 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. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = Read Value (dBµV/m) - Correction Factor @ 3m

d. Correction Factor (dB) @ 3m = 20log(D) − 104.8; where D is the measurement distance @ 3m =-95.26dB

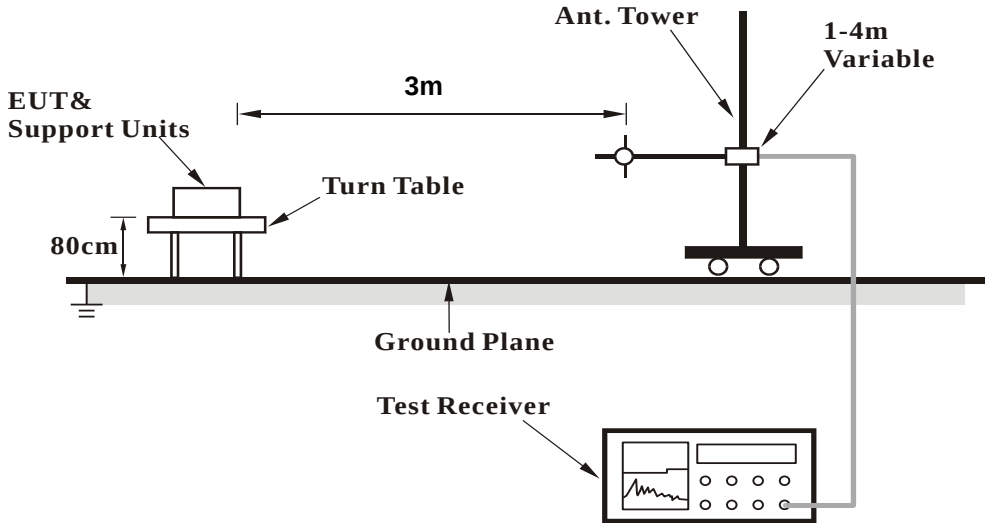
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

4.2.3 Deviation from Test Standard

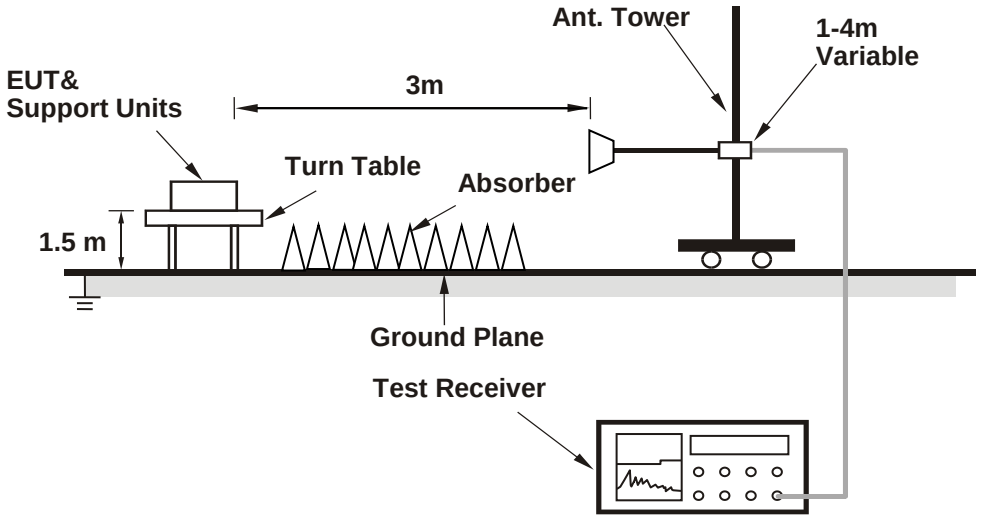
No deviation.

4.2.4 Test Setup

<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



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

4.2.5 Test Results (Mode 1)

Below 1GHz

Channel	TX channel 19125 & TX channel 20175	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	32.39	40.61	-95.26	-54.65	-13	-41.65
2	106.63	36.2	-95.26	-59.06	-13	-46.06
3	159.87	28.26	-95.26	-67.00	-13	-54.00
4	180.96	36.34	-95.26	-58.92	-13	-45.92
5	313.41	32.25	-95.26	-63.01	-13	-50.01
6	440.42	34.82	-95.26	-60.44	-13	-47.44
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	48.67	35.93	-95.26	-59.33	-13	-46.33
2	92.18	34.31	-95.26	-60.95	-13	-47.95
3	133.99	36.98	-95.26	-58.28	-13	-45.28
4	173.3	32.14	-95.26	-63.12	-13	-50.12
5	321.42	36.27	-95.26	-58.99	-13	-45.99
6	555.98	32.09	-95.26	-63.17	-13	-50.17

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

Above 1GHz

Channel	TX channel 19125 & TX channel 20175	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3805	42.64	-95.26	-52.62	-13	-39.62
2	3465	42.42	-95.26	-52.84	-13	-39.84
3	5707.5	38.37	-95.26	-56.89	-13	-43.89
4	5197.5	44.48	-95.26	-50.78	-13	-37.78
5	7610	37.97	-95.26	-57.29	-13	-44.29
6	6930	48.2	-95.26	-47.06	-13	-34.06
7	9512.5	38.96	-95.26	-56.30	-13	-43.30
8	8662.5	43.51	-95.26	-51.75	-13	-38.75
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3805	33.14	-95.26	-62.12	-13	-49.12
2	3465	42.38	-95.26	-52.88	-13	-39.88
3	5707.5	39.29	-95.26	-55.97	-13	-42.97
4	5197.5	42.06	-95.26	-53.20	-13	-40.20
5	7610	41.1	-95.26	-54.16	-13	-41.16
6	6930	44.61	-95.26	-50.65	-13	-37.65
7	9512.5	38.97	-95.26	-56.29	-13	-43.29
8	8662.5	41.66	-95.26	-53.60	-13	-40.60

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dB μV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

4.2.6 Test Results (Mode 2)

Below 1GHz

Channel	TX channel 20175 & TX channel 18900	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	37.09	39.69	-95.26	-55.57	-13	-42.57
2	109.88	36.65	-95.26	-58.61	-13	-45.61
3	165.14	27.88	-95.26	-67.38	-13	-54.38
4	181.32	35.03	-95.26	-60.23	-13	-47.23
5	321.67	31.38	-95.26	-63.88	-13	-50.88
6	448.57	35.33	-95.26	-59.93	-13	-46.93
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	56.37	39.36	-95.26	-55.90	-13	-42.90
2	94.53	34.44	-95.26	-60.82	-13	-47.82
3	141.32	39.64	-95.26	-55.62	-13	-42.62
4	175.14	32.28	-95.26	-62.98	-13	-49.98
5	321.19	35.35	-95.26	-59.91	-13	-46.91
6	562.45	30.74	-95.26	-64.52	-13	-51.52

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

Above 1GHz

Channel	TX channel 20175 & TX channel 18900	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3465	39.96	-95.26	-55.30	-13	-42.30
2	3760	45.48	-95.26	-49.78	-13	-36.78
3	5197.5	36.65	-95.26	-58.61	-13	-45.61
4	5640	45.77	-95.26	-49.49	-13	-36.49
5	6930	35.63	-95.26	-59.63	-13	-46.63
6	7520	44.22	-95.26	-51.04	-13	-38.04
7	8662.5	38.76	-95.26	-56.50	-13	-43.50
8	9400	42.88	-95.26	-52.38	-13	-39.38
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3465	35.55	-95.26	-59.71	-13	-46.71
2	3760	40.61	-95.26	-54.65	-13	-41.65
3	5197.5	42.65	-95.26	-52.61	-13	-39.61
4	5640	40.59	-95.26	-54.67	-13	-41.67
5	6930	43.71	-95.26	-51.55	-13	-38.55
6	7520	44.77	-95.26	-50.49	-13	-37.49
7	8662.5	42.94	-95.26	-52.32	-13	-39.32
8	9400	40.81	-95.26	-54.45	-13	-41.45

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dB μV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

4.2.7 Test Results (Mode 3)

Below 1GHz

Channel	TX channel 18900 & TX channel 23230	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	43.37	38.31	-95.26	-56.95	-13	-43.95
2	114.2	36.79	-95.26	-58.47	-13	-45.47
3	168.91	28.84	-95.26	-66.42	-13	-53.42
4	184.54	34.48	-95.26	-60.78	-13	-47.78
5	323.72	30.44	-95.26	-64.82	-13	-51.82
6	454.32	36.17	-95.26	-59.09	-13	-46.09
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	57.85	39.45	-95.26	-55.81	-13	-42.81
2	98.22	35.7	-95.26	-59.56	-13	-46.56
3	141.88	41.09	-95.26	-54.17	-13	-41.17
4	179.91	34.25	-95.26	-61.01	-13	-48.01
5	327.71	35.35	-95.26	-59.91	-13	-46.91
6	570.64	28.99	-95.26	-66.27	-13	-53.27

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

Above 1GHz

Channel	TX channel 18900 & TX channel 23230	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760	41.41	-95.26	-53.85	-13	-40.85
2	**1564**	**45.1**	**-95.26**	**-50.16**	**-40**	**-10.16**
3	5640	41.51	-95.26	-53.75	-13	-40.75
4	2346	42.02	-95.26	-53.24	-13	-40.24
5	7520	36.75	-95.26	-58.51	-13	-45.51
6	3128	48.6	-95.26	-46.66	-13	-33.66
7	9400	38.97	-95.26	-56.29	-13	-43.29
8	3910	44.26	-95.26	-51.00	-13	-38.00
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760	31.53	-95.26	-63.73	-13	-50.73
2	1564	39.25	-95.26	-56.01	-40	-16.01
3	5640	38.47	-95.26	-56.79	-13	-43.79
4	2346	42.33	-95.26	-52.93	-13	-39.93
5	7520	42.92	-95.26	-52.34	-13	-39.34
6	3128	42.5	-95.26	-52.76	-13	-39.76
7	9400	39.01	-95.26	-56.25	-13	-43.25
8	3910	40.82	-95.26	-54.44	-13	-41.44

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dB μV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

4.2.8 Test Results (Mode 4)

Below 1GHz

Channel	TX channel 23230 & TX channel 18900	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	42.1	37.24	-95.26	-58.02	-13	-45.02
2	115.96	36.74	-95.26	-58.52	-13	-45.52
3	173.15	27.66	-95.26	-67.60	-13	-54.60
4	187.86	33.2	-95.26	-62.06	-13	-49.06
5	319.65	30.62	-95.26	-64.64	-13	-51.64
6	456.57	35.07	-95.26	-60.19	-13	-47.19
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	59.82	39.2	-95.26	-56.06	-13	-43.06
2	95.49	36.69	-95.26	-58.57	-13	-45.57
3	137.55	41.54	-95.26	-53.72	-13	-40.72
4	178.03	34.82	-95.26	-60.44	-13	-47.44
5	323.74	34.9	-95.26	-60.36	-13	-47.36
6	569.92	29.66	-95.26	-65.60	-13	-52.60

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

Above 1GHz

Channel	TX channel 23230 & TX channel 18900	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1564	37.27	-95.26	-57.99	-40	-17.99
2	3760	44.01	-95.26	-51.25	-13	-38.25
3	2346	37.91	-95.26	-57.35	-13	-44.35
4	5640	40.82	-95.26	-54.44	-13	-41.44
5	3128	36.85	-95.26	-58.41	-13	-45.41
6	7520	46.08	-95.26	-49.18	-13	-36.18
7	3910	38.87	-95.26	-56.39	-13	-43.39
8	9400	39.49	-95.26	-55.77	-13	-42.77
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1564	33.98	-95.26	-61.28	-40	-21.28
2	3760	40.32	-95.26	-54.94	-13	-41.94
3	2346	40.17	-95.26	-55.09	-13	-42.09
4	5640	38.62	-95.26	-56.64	-13	-43.64
5	3128	42.14	-95.26	-53.12	-13	-40.12
6	7520	41.48	-95.26	-53.78	-13	-40.78
7	3910	40.43	-95.26	-54.83	-13	-41.83
8	9400	38.7	-95.26	-56.56	-13	-43.56

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dB μ V/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

4.2.9 Test Results (Mode 5)

Below 1GHz

Channel	TX channel 132622 & TX channel 18675	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	46.34	36.35	-95.26	-58.91	-13	-45.91
2	120.28	37.55	-95.26	-57.71	-13	-44.71
3	170.71	28.67	-95.26	-66.59	-13	-53.59
4	188.74	33.89	-95.26	-61.37	-13	-48.37
5	320.36	29.31	-95.26	-65.95	-13	-52.95
6	456.6	35.09	-95.26	-60.17	-13	-47.17
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	58.25	39.53	-95.26	-55.73	-13	-42.73
2	94.79	36.8	-95.26	-58.46	-13	-45.46
3	136.3	42.83	-95.26	-52.43	-13	-39.43
4	174.5	33.53	-95.26	-61.73	-13	-48.73
5	323.77	35.61	-95.26	-59.65	-13	-46.65
6	567.55	28.68	-95.26	-66.58	-13	-53.58

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

Above 1GHz

Channel	TX channel 132622 & TX channel 18675	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3550	38.64	-95.26	-56.62	-13	-43.62
2	3715	43.69	-95.26	-51.57	-13	-38.57
3	5325	39.17	-95.26	-56.09	-13	-43.09
4	5572.5	40.96	-95.26	-54.30	-13	-41.30
5	7100	37.11	-95.26	-58.15	-13	-45.15
6	7430	45.9	-95.26	-49.36	-13	-36.36
7	8875	38.66	-95.26	-56.60	-13	-43.60
8	9287.5	40.19	-95.26	-55.07	-13	-42.07
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3550	33.18	-95.26	-62.08	-13	-49.08
2	3715	39.2	-95.26	-56.06	-13	-43.06
3	5325	40.03	-95.26	-55.23	-13	-42.23
4	5572.5	38.64	-95.26	-56.62	-13	-43.62
5	7100	40.2	-95.26	-55.06	-13	-42.06
6	7430	40.83	-95.26	-54.43	-13	-41.43
7	8875	39.63	-95.26	-55.63	-13	-42.63
8	9287.5	38.61	-95.26	-56.65	-13	-43.65

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dB μV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

4.2.10 Test Results (Mode 6)

Below 1GHz

Channel	TX channel 23230 & TX channel 20325	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	48.21	37.67	-95.26	-57.59	-13	-44.59
2	116.71	38.45	-95.26	-56.81	-13	-43.81
3	168.84	29.94	-95.26	-65.32	-13	-52.32
4	184.24	32.95	-95.26	-62.31	-13	-49.31
5	323.17	29.47	-95.26	-65.79	-13	-52.79
6	457.82	35.06	-95.26	-60.20	-13	-47.20
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	60.58	39.67	-95.26	-55.59	-13	-42.59
2	92.42	37.3	-95.26	-57.96	-13	-44.96
3	137.69	42.21	-95.26	-53.05	-13	-40.05
4	177.68	33.02	-95.26	-62.24	-13	-49.24
5	320.97	36.2	-95.26	-59.06	-13	-46.06
6	566.76	28.33	-95.26	-66.93	-13	-53.93

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

Above 1GHz

Channel	TX channel 23230 & TX channel 20325	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1564	37.17	-95.26	-58.09	-40	-18.09
2	3495	44.32	-95.26	-50.94	-13	-37.94
3	2346	37.85	-95.26	-57.41	-13	-44.41
4	5242.5	41.6	-95.26	-53.66	-13	-40.66
5	3128	36.87	-95.26	-58.39	-13	-45.39
6	6990	44.29	-95.26	-50.97	-13	-37.97
7	3910	40.1	-95.26	-55.16	-13	-42.16
8	8737.5	40.56	-95.26	-54.70	-13	-41.70
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1564	32.57	-95.26	-62.69	-40	-22.69
2	3495	39.38	-95.26	-55.88	-13	-42.88
3	2346	39.55	-95.26	-55.71	-13	-42.71
4	5242.5	36.85	-95.26	-58.41	-13	-45.41
5	3128	41.21	-95.26	-54.05	-13	-41.05
6	6990	40.21	-95.26	-55.05	-13	-42.05
7	3910	39.91	-95.26	-55.35	-13	-42.35
8	8737.5	40.81	-95.26	-54.45	-13	-41.45

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dB μV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

4.2.11 Test Results (Mode 7)

Below 1GHz

Channel	TX channel 132622 & TX channel 23230	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	44.37	38.64	-95.26	-56.62	-13	-43.62
2	119.53	37.75	-95.26	-57.51	-13	-44.51
3	170.33	29.6	-95.26	-65.66	-13	-52.66
4	182.97	33.87	-95.26	-61.39	-13	-48.39
5	325.33	28.62	-95.26	-66.64	-13	-53.64
6	458.19	36.27	-95.26	-58.99	-13	-45.99
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	58.03	38.91	-95.26	-56.35	-13	-43.35
2	95.75	36.04	-95.26	-59.22	-13	-46.22
3	137.07	43.1	-95.26	-52.16	-13	-39.16
4	173.52	33.72	-95.26	-61.54	-13	-48.54
5	321.56	36.61	-95.26	-58.65	-13	-45.65
6	563.09	28.02	-95.26	-67.24	-13	-54.24

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

Above 1GHz

Channel	TX channel 132622 & TX channel 23230	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3550	38.33	-95.26	-56.93	-13	-43.93
2	1564	42.31	-95.26	-52.95	-40	-12.95
3	5325	36.8	-95.26	-58.46	-13	-45.46
4	2346	41.45	-95.26	-53.81	-13	-40.81
5	7100	35.13	-95.26	-60.13	-13	-47.13
6	3128	45.52	-95.26	-49.74	-13	-36.74
7	8875	40.04	-95.26	-55.22	-13	-42.22
8	3910	41.27	-95.26	-53.99	-13	-40.99
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3550	33.45	-95.26	-61.81	-13	-48.81
2	1564	39.54	-95.26	-55.72	-40	-15.72
3	5325	39.08	-95.26	-56.18	-13	-43.18
4	2346	37.76	-95.26	-57.50	-13	-44.50
5	7100	42.53	-95.26	-52.73	-13	-39.73
6	3128	40.42	-95.26	-54.84	-13	-41.84
7	8875	38.79	-95.26	-56.47	-13	-43.47
8	3910	39.47	-95.26	-55.79	-13	-42.79

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dB μV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

4.2.12 Test Results (Mode 8)

Below 1GHz

Channel	TX channel 18900 & TX channel 20450	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	34.45	39.79	-95.26	-55.47	-13	-42.47
2	111.33	36.68	-95.26	-58.58	-13	-45.58
3	161.34	32.53	-95.26	-62.73	-13	-49.73
4	184.03	39.7	-95.26	-55.56	-13	-42.56
5	318.22	35.83	-95.26	-59.43	-13	-46.43
6	442.26	37.57	-95.26	-57.69	-13	-44.69
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	56.19	37.78	-95.26	-57.48	-13	-44.48
2	100.01	33.41	-95.26	-61.85	-13	-48.85
3	138.24	38.42	-95.26	-56.84	-13	-43.84
4	176.07	33.82	-95.26	-61.44	-13	-48.44
5	322.32	36.59	-95.26	-58.67	-13	-45.67
6	560.54	35.31	-95.26	-59.95	-13	-46.95

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

Above 1GHz

Channel	TX channel 18900 & TX channel 20450	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760	41.17	-95.26	-54.09	-13	-41.09
2	1658	44.72	-95.26	-50.54	-13	-37.54
3	5640	36.86	-95.26	-58.40	-13	-45.40
4	2487	45.81	-95.26	-49.45	-13	-36.45
5	7520	38.47	-95.26	-56.79	-13	-43.79
6	3316	45.52	-95.26	-49.74	-13	-36.74
7	9400	43.67	-95.26	-51.59	-13	-38.59
8	4145	42.52	-95.26	-52.74	-13	-39.74
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μ V/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760	35.13	-95.26	-60.13	-13	-47.13
2	1658	39.12	-95.26	-56.14	-13	-43.14
3	5640	41.57	-95.26	-53.69	-13	-40.69
4	2487	41.55	-95.26	-53.71	-13	-40.71
5	7520	43.87	-95.26	-51.39	-13	-38.39
6	3316	45.04	-95.26	-50.22	-13	-37.22
7	9400	43.69	-95.26	-51.57	-13	-38.57
8	4145	41.22	-95.26	-54.04	-13	-41.04

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dB μ V/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

4.2.13 Test Results (Mode 9)

Below 1GHz

Channel	TX channel 20450 & TX channel 18675	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	38.84	38.97	-95.26	-56.29	-13	-43.29
2	113.77	37.61	-95.26	-57.65	-13	-44.65
3	164.99	31.32	-95.26	-63.94	-13	-50.94
4	185.59	41.22	-95.26	-54.04	-13	-41.04
5	321.76	39.26	-95.26	-56.00	-13	-43.00
6	447.16	41.59	-95.26	-53.67	-13	-40.67
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	59.57	39.7	-95.26	-55.56	-13	-42.56
2	107.45	35.11	-95.26	-60.15	-13	-47.15
3	142.58	37.59	-95.26	-57.67	-13	-44.67
4	179.63	36.65	-95.26	-58.61	-13	-45.61
5	328.86	36.46	-95.26	-58.80	-13	-45.80
6	565.41	35.33	-95.26	-59.93	-13	-46.93

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

Above 1GHz

Channel	TX channel 20450 & TX channel 18675	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1658	42.58	-95.26	-52.68	-13	-39.68
2	3715	46.22	-95.26	-49.04	-13	-36.04
3	2487	40.07	-95.26	-55.19	-13	-42.19
4	5572.5	45.08	-95.26	-50.18	-13	-37.18
5	3316	39.93	-95.26	-55.33	-13	-42.33
6	7430	43.69	-95.26	-51.57	-13	-38.57
7	4145	39.79	-95.26	-55.47	-13	-42.47
8	9287.5	40.1	-95.26	-55.16	-13	-42.16
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1658	33.12	-95.26	-62.14	-13	-49.14
2	3715	43.03	-95.26	-52.23	-13	-39.23
3	2487	40.73	-95.26	-54.53	-13	-41.53
4	5572.5	38.03	-95.26	-57.23	-13	-44.23
5	3316	41.76	-95.26	-53.50	-13	-40.50
6	7430	44.46	-95.26	-50.80	-13	-37.80
7	4145	40.41	-95.26	-54.85	-13	-41.85
8	9287.5	38.91	-95.26	-56.35	-13	-43.35

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dB μV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

4.2.14 Test Results (Mode 10)

Below 1GHz

Channel	TX channel 20025 & TX channel 20450	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	46.01	42.15	-95.26	-53.11	-13	-40.11
2	118.08	40.15	-95.26	-55.11	-13	-42.11
3	170.53	33.64	-95.26	-61.62	-13	-48.62
4	189.37	41.72	-95.26	-53.54	-13	-40.54
5	326.81	39.25	-95.26	-56.01	-13	-43.01
6	446.69	41.27	-95.26	-53.99	-13	-40.99
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	63.69	39.54	-95.26	-55.72	-13	-42.72
2	115.11	33.66	-95.26	-61.60	-13	-48.60
3	145.43	41.64	-95.26	-53.62	-13	-40.62
4	183.64	35.55	-95.26	-59.71	-13	-46.71
5	329.98	35.17	-95.26	-60.09	-13	-47.09
6	567.34	39.5	-95.26	-55.76	-13	-42.76

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

Above 1GHz

Channel	TX channel 20025 & TX channel 20450	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3435	38.07	-95.26	-57.19	-13	-44.19
2	1658	45.2	-95.26	-50.06	-13	-37.06
3	5152.5	41.13	-95.26	-54.13	-13	-41.13
4	2487	43.57	-95.26	-51.69	-13	-38.69
5	6870	40.25	-95.26	-55.01	-13	-42.01
6	3316	46.46	-95.26	-48.80	-13	-35.80
7	8587.5	39.24	-95.26	-56.02	-13	-43.02
8	4145	41.81	-95.26	-53.45	-13	-40.45
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3435	33.19	-95.26	-62.07	-13	-49.07
2	1658	44.48	-95.26	-50.78	-13	-37.78
3	5152.5	39.71	-95.26	-55.55	-13	-42.55
4	2487	39.21	-95.26	-56.05	-13	-43.05
5	6870	40.8	-95.26	-54.46	-13	-41.46
6	3316	41.97	-95.26	-53.29	-13	-40.29
7	8587.5	39.9	-95.26	-55.36	-13	-42.36
8	4145	44.22	-95.26	-51.04	-13	-38.04

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dB μV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

4.2.15 Test Results (Mode 11)

Below 1GHz

Channel	TX channel 20450 & TX channel 20175	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	35.14	44.11	-95.26	-51.15	-13	-38.15
2	115.15	36.16	-95.26	-59.10	-13	-46.10
3	166.58	32.45	-95.26	-62.81	-13	-49.81
4	186.85	41.53	-95.26	-53.73	-13	-40.73
5	318.08	39.08	-95.26	-56.18	-13	-43.18
6	449.75	40.73	-95.26	-54.53	-13	-41.53
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	58.27	40.32	-95.26	-54.94	-13	-41.94
2	106.28	33.82	-95.26	-61.44	-13	-48.44
3	141.95	38.5	-95.26	-56.76	-13	-43.76
4	182.84	36.25	-95.26	-59.01	-13	-46.01
5	326.94	35.27	-95.26	-59.99	-13	-46.99
6	562.45	37.4	-95.26	-57.86	-13	-44.86

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

Above 1GHz

Channel	TX channel 20450 & TX channel 20175	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1658	37.71	-95.26	-57.55	-13	-44.55
2	3465	44.83	-95.26	-50.43	-13	-37.43
3	2487	37.34	-95.26	-57.92	-13	-44.92
4	5197.5	43.65	-95.26	-51.61	-13	-38.61
5	3316	37.87	-95.26	-57.39	-13	-44.39
6	6930	49.07	-95.26	-46.19	-13	-33.19
7	4145	40.24	-95.26	-55.02	-13	-42.02
8	8662.5	40.8	-95.26	-54.46	-13	-41.46
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1658	32.93	-95.26	-62.33	-13	-49.33
2	3465	40.97	-95.26	-54.29	-13	-41.29
3	2487	39.54	-95.26	-55.72	-13	-42.72
4	5197.5	39.23	-95.26	-56.03	-13	-43.03
5	3316	45.46	-95.26	-49.80	-13	-36.80
6	6930	44.95	-95.26	-50.31	-13	-37.31
7	4145	43.34	-95.26	-51.92	-13	-38.92
8	8662.5	40.11	-95.26	-55.15	-13	-42.15

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dB μV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

4.2.16 Test Results (Mode 12)

Below 1GHz

Channel	TX channel 132022 & TX channel 20450	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	35.07	38.46	-95.26	-56.80	-13	-43.80
2	114.96	38.17	-95.26	-57.09	-13	-44.09
3	169.37	31.12	-95.26	-64.14	-13	-51.14
4	191.83	38.92	-95.26	-56.34	-13	-43.34
5	325.67	35.44	-95.26	-59.82	-13	-46.82
6	443.62	40.53	-95.26	-54.73	-13	-41.73
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dBμV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	57.5	38.75	-95.26	-56.51	-13	-43.51
2	100	33.41	-95.26	-61.85	-13	-48.85
3	144.53	42.48	-95.26	-52.78	-13	-39.78
4	176.64	35.91	-95.26	-59.35	-13	-46.35
5	324.08	40.87	-95.26	-54.39	-13	-41.39
6	560.14	34.08	-95.26	-61.18	-13	-48.18

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dBμV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

Above 1GHz

Channel	TX channel 132022 & TX channel 20450	Frequency Range	Above 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3430	40.7	-95.26	-54.56	-13	-41.56
2	1658	44.95	-95.26	-50.31	-13	-37.31
3	5145	40.34	-95.26	-54.92	-13	-41.92
4	2487	40.79	-95.26	-54.47	-13	-41.47
5	6860	37.6	-95.26	-57.66	-13	-44.66
6	3316	47.58	-95.26	-47.68	-13	-34.68
7	8575	41.46	-95.26	-53.80	-13	-40.80
8	4145	39.51	-95.26	-55.75	-13	-42.75
Antenna Polarity & Test Distance: Vertical at 3 M						
No.	Freq. (MHz)	Reading (dB μV/m)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3430	33.2	-95.26	-62.06	-13	-49.06
2	1658	42.58	-95.26	-52.68	-13	-39.68
3	5145	39.96	-95.26	-55.30	-13	-42.30
4	2487	41.83	-95.26	-53.43	-13	-40.43
5	6860	41.82	-95.26	-53.44	-13	-40.44
6	3316	40.46	-95.26	-54.80	-13	-41.80
7	8575	40.22	-95.26	-55.04	-13	-42.04
8	4145	41.53	-95.26	-53.73	-13	-40.73

Remarks:

1. Follow ANSI 63.26 section 5.2.7 d), EIRP Value (dBm) = E (dB μV/m) - Correction Factor @ 3m.
2. Correction Factor (dB) = 20log(D) − 104.8; where D is the measurement distance @ 3m.

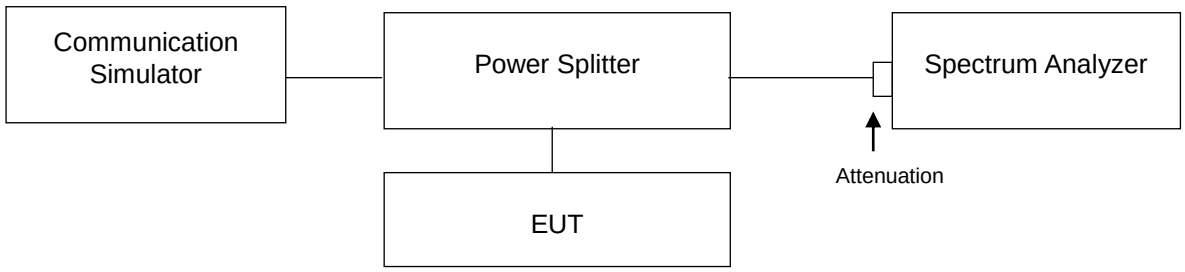
4.3 Occupied Bandwidth Measurement

4.3.1 Test Procedure

All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. The bandwidth of the fundamental frequency was measured by spectrum analyzer with RBW≥1% x OBW and VBW≥3 x VBW.

Occupied Bandwdith Measurement:
Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

4.3.2 Test Setup



4.3.3 Test Result

Mode 1: CA_PCC Ant 0 Band 2_SCC Ant 2 Band 4

Inter Band dis-Contiguous CA								
PCC				SCC				Total OBW BW (MHz)
Band	BW (MHz)	Modulation	OBW BW (MHz)	Band	BW (MHz)	Modulation	OBW BW (MHz)	
2	1.4	QPSK	1.09	4	5	QPSK	4.52	5.61
	15	QPSK	13.53		15	QPSK	13.5	27.03
	20	QPSK	18.04		20	QPSK	18	36.04

Mode 2: CA_PCC Ant 0 Band 4_SCC Ant 2 Band 2

Inter Band dis-Contiguous CA								
PCC				SCC				Total OBW BW (MHz)
Band	BW (MHz)	Modulation	OBW BW (MHz)	Band	BW (MHz)	Modulation	OBW BW (MHz)	
4	5	QPSK	4.52	2	1.4	QPSK	1.09	5.61
	20	QPSK	18.04		15	QPSK	13.53	31.57
	20	QPSK	18.04		20	QPSK	18	36.04

Mode 3: CA_PCC Ant 2 Band 2_SCC Ant 0 Band 13

Inter Band dis-Contiguous CA								
PCC				SCC				Total OBW BW (MHz)
Band	BW (MHz)	Modulation	OBW BW (MHz)	Band	BW (MHz)	Modulation	OBW BW (MHz)	
2	5	QPSK	4.52	13	10	QPSK	9	13.52
	15	QPSK	13.53		10	QPSK	9	22.53
	20	QPSK	18		10	QPSK	9	27

Mode 4: CA_PCC Ant 0 Band 13_SCC Ant 2 Band 2

Inter Band dis-Contiguous CA								
PCC				SCC				Total OBW BW (MHz)
Band	BW (MHz)	Modulation	OBW BW (MHz)	Band	BW (MHz)	Modulation	OBW BW (MHz)	
13	10	QPSK	9	2	5	QPSK	1.09	10.09
	10	QPSK	9		15	QPSK	13.53	22.53
	10	QPSK	9		20	QPSK	18	27

Mode 5: CA_PCC Ant 0 Band 66_SCC Ant 2 Band 2

Inter Band dis-Contiguous CA								
PCC				SCC				Total OBW BW (MHz)
Band	BW (MHz)	Modulation	OBW BW (MHz)	Band	BW (MHz)	Modulation	OBW BW (MHz)	
66	5	QPSK	4.52	2	1.4	QPSK	1.09	5.61
	10	QPSK	9.02		15	QPSK	13.53	22.55
	20	QPSK	18.04		20	QPSK	18	36.04

Mode 6: CA_PCC Ant 0 Band 13_SCC Ant 2 Band 4

Inter Band dis-Contiguous CA								
PCC				SCC				Total OBW BW (MHz)
Band	BW (MHz)	Modulation	OBW BW (MHz)	Band	BW (MHz)	Modulation	OBW BW (MHz)	
13	10	QPSK	9	4	5	QPSK	4.52	13.52
	10	QPSK	9		15	QPSK	13.5	22.5
	10	QPSK	9		20	QPSK	18	27

Mode 7: CA_PCC Ant 2 Band 66_SCC Ant 0 Band 13

Inter Band dis-Contiguous CA								
PCC				SCC				Total OBW BW (MHz)
Band	BW (MHz)	Modulation	OBW BW (MHz)	Band	BW (MHz)	Modulation	OBW BW (MHz)	
66	5	QPSK	4.52	13	10	QPSK	9	13.52
	10	QPSK	9.02		10	QPSK	9	18.02
	20	QPSK	18		10	QPSK	9	27

Mode 8: CA_PCC Ant 2 Band 2_SCC Ant 0 Band 5

Inter Band dis-Contiguous CA								
PCC				SCC				Total OBW BW (MHz)
Band	BW (MHz)	Modulation	OBW BW (MHz)	Band	BW (MHz)	Modulation	OBW BW (MHz)	
2	5	QPSK	4.52	5	5	QPSK	4.51	9.03
	15	QPSK	13.53		10	QPSK	9.02	22.55
	20	QPSK	18		10	QPSK	9.02	27.02

Mode 9: CA_PCC Ant 0 Band 5_SCC Ant 2 Band 2

Inter Band dis-Contiguous CA								
PCC				SCC				Total OBW BW (MHz)
Band	BW (MHz)	Modulation	OBW BW (MHz)	Band	BW (MHz)	Modulation	OBW BW (MHz)	
5	5	QPSK	4.51	2	5	QPSK	4.52	9.03
	10	QPSK	9.02		15	QPSK	13.53	22.55
	10	QPSK	9.02		20	QPSK	18	27.02

Mode 10: CA_PCC Ant 2 Band 4_SCC Ant 0 Band 5

Inter Band dis-Contiguous CA								
PCC				SCC				Total OBW BW (MHz)
Band	BW (MHz)	Modulation	OBW BW (MHz)	Band	BW (MHz)	Modulation	OBW BW (MHz)	
4	5	QPSK	4.52	5	5	QPSK	4.51	9.03
	15	QPSK	13.5		10	QPSK	9.02	22.52
	20	QPSK	18		10	QPSK	9.02	27.02

Mode 11: CA_PCC Ant 0 Band 5_SCC Ant 2 Band 4

Inter Band dis-Contiguous CA								
PCC				SCC				Total OBW BW (MHz)
Band	BW (MHz)	Modulation	OBW BW (MHz)	Band	BW (MHz)	Modulation	OBW BW (MHz)	
5	5	QPSK	4.51	4	5	QPSK	4.52	9.03
	10	QPSK	9.02		15	QPSK	13.5	22.52
	10	QPSK	9.02		20	QPSK	18	27.02

Mode 12: CA_PCC Ant 2 Band 66_SCC Ant 0 Band 5

Inter Band dis-Contiguous CA								
PCC				SCC				Total OBW BW (MHz)
Band	BW (MHz)	Modulation	OBW BW (MHz)	Band	BW (MHz)	Modulation	OBW BW (MHz)	
66	5	QPSK	4.52	5	5	QPSK	4.51	9.03
	10	QPSK	9.02		10	QPSK	9.02	18.04
	20	QPSK	18		10	QPSK	9.02	27.02

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 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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