FCC Test Report

(PART 27)

Report No.:	RF150326E02M
FCC ID:	2AD8UFZPFWID01
Test Model:	FWID
Received Date:	Oct. 12, 2017
Test Date:	Oct. 18, 2017 ; Dec. 14 to 15, 2017
Issued Date:	Feb. 08, 2018
Applicant:	Nokia Solutions and Networks
Address:	2000 W. Lucent Lane, Room 8F-050B, Naperville, IL 60563 USA
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

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Release Control Record

Issue No.	Description	Date Issued
RF150326E02M	Original release.	Feb. 08, 2018

1 Certificate of Conformity

Product:	Flexi Zone Indoor Pico BTS
Brand:	Nokia
Test Model:	FWID
Sample Status:	MASS-PRODUCTION
Applicant:	Nokia Solutions and Networks
Test Date:	Oct. 18, 2017 ; Dec. 14 to 15, 2017
Standards:	FCC Part 27 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:** Feb. 08, 2018

Claire Kuan / Specialist

Approved by : _____ , **Date:** Feb. 08, 2018

May Chen / Manager

2 Summary of Test Results

Applied Standard: FCC Part 27 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 27.50(d)(3)	Equivalent Isotropically radiated power	PASS	Meet the requirement of limit.
2.1047	Modulation characteristics	PASS	Meet the requirement
2.1055 27.54	Frequency Stability Stay with the authorized bands of operation	PASS	Meet the requirement of limit.
2.1049 27.53(h)	Occupied Bandwidth	PASS	Meet the requirement of limit.
27.53(h)	Band Edge Measurements	PASS	Meet the requirement of limit.
27.50(d)(5)	Peak To Average Ratio	PASS	Meet the requirement of limit.
2.1051 27.53(h)	Conducted Spurious Emissions	PASS	Meet the requirement of limit.
2.1053 27.53(h)	Radiated Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -3.0dB at 959.99MHz.

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	Expended Uncertainty (k=2) (±)
Conducted emissions	30MHz ~ 40GHz	3dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.30 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	5.16 dB
	6GHz ~ 18GHz	4.91 dB
	18GHz ~ 40GHz	5.30 dB

2.2 Test Site and Instruments

For WCDMA radiated spurious emissions test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Keysight	N9038A	MY54450088	July 08, 2017	July 07, 2018
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-01	Nov. 09, 2017	Nov. 08, 2018
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-406	Nov. 29, 2017	Nov. 28, 2018
RF Cable	8D	966-4-1 966-4-2 966-4-3	Apr. 01, 2017	Mar. 31, 2018
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-4-01	Oct. 03, 2017	Oct. 02, 2018
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-783	Dec. 27, 2016	Dec. 26, 2017
Pre-Amplifier EMCI	EMC12630SE	980385	Feb. 02, 2017	Feb. 01, 2018
RF Cable	EMC104-SM-SM-1200 EMC104-SM-SM-2000 EMC104-SM-SM-5000	160923 150318 150321	Feb. 02, 2017 Mar. 29, 2017 Mar. 29, 2017	Feb. 01, 2018 Mar. 28, 2018 Mar. 28, 2018
Pre-Amplifier EMCI	EMC184045SE	980387	Feb. 02, 2017	Feb. 01, 2018
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170608	Dec. 14, 2017	Dec. 13, 2018
RF Cable	SUCOFLEX 102	36432/2 36433/2	Jan. 15, 2017	Jan. 14, 2018
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208410	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP02	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. The CANADA Site Registration No. is 20331-2
4. Loop antenna was used for all emissions below 30 MHz.
5. Tested Date: Dec. 14 to 15, 2017

For WCDMA other test items:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	100964	July 01, 2017	June 30, 2018
Spectrum Analyzer Keysight	N9030A	MY54490570	July 08, 2017	July 07, 2018
AC Power Source Extech Electronics	6502	1140503	NA	NA
Temperature & Humidity Chamber TERCHY	MHU-225AU	911033	Dec. 01, 2017	Nov. 30, 2018
DC Power Supply GOOD WILL INSTRUMENT CO., LTD.	GPC - 3030D	7700087	NA	NA
ESG Vector signal generator Agilent	E4438C	MY45094468/005 506 602 UK6 UNJ	Nov. 26, 2017	Nov. 25, 2018
Power meter Anritsu	ML2495A	0824006	June 26, 2017	June 25, 2018
Power sensor Anritsu	MA2411B	0738172	June 26, 2017	June 25, 2018
Software	ADT_RF Test Software V6.6.5.4	NA	NA	NA
Digital Multimeter FLUKE	325	31130711WS	May 29, 2017	May 28, 2018

NOTE: 1. The test was performed in Oven room 1.
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: Dec. 15, 2017

For LTE 256QAM test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	100964	July 01, 2017	June 30, 2018
Spectrum Analyzer Keysight	N9030A	MY54490570	July 08, 2017	July 07, 2018
AC Power Source Extech Electronics	6502	1140503	NA	NA
Temperature & Humidity Chamber TERCHY	MHU-225AU	911033	Dec. 02, 2016	Dec. 01, 2017
DC Power Supply GOOD WILL INSTRUMENT CO., LTD.	GPC - 3030D	7700087	NA	NA
ESG Vector signal generator Agilent	E4438C	Y45094468/005 506 602 UK6 UNJ	Nov. 25, 2016	Nov. 24, 2017
Power meter Anritsu	ML2495A	0824006	June 26, 2017	June 25, 2018
Power sensor Anritsu	MA2411B	0738172	June 26, 2017	June 25, 2018
Software	ADT_RF Test Software V6.6.5.4	NA	NA	NA
Digital Multimeter FLUKE	87III	73680266	Nov. 10, 2016	Nov. 09, 2017

NOTE: 1. The test was performed in Oven room 1.
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: Oct. 18, 2017

3 General Information

3.1 General Description of EUT

Product	Flexi Zone Indoor Pico BTS	
Brand	Nokia	
Test Model	FWID	
Test Sample S/N	EA153610017	
Hardware Version	X33	
Status of EUT	MASS-PRODUCTION	
Power Supply Rating	12Vdc from power adapter or 55Vdc from POE	
Modulation Type	QPSK, 16QAM, 64QAM, 256QAM	
Modulation Technology	WCDMA and LTE	
Transfer Rate	Uplink ：75Mbps , Downlink ：300Mbps	
Operating Frequency	WCDMA Band 4	2112.4MHz ~ 2152.6 MHz
	LTE Channel Bandwidth: 5MHz	2112.5MHz ~2152.5MHz
	LTE Channel Bandwidth: 10MHz	2115MHz ~2150MHz
	LTE Channel Bandwidth: 15MHz	2117.5MHz ~2147.5MHz
	LTE Channel Bandwidth: 20MHz	2120MHz ~2145MHz
Max. EIRP Power	WCDMA Band 4 Channel Bandwidth: 5MHz	1016.25mW (QPSK)
	WCDMA Band 4 Channel Bandwidth: 5MHz + 5MHz	1009.25mW (QPSK)
	LTE Channel Bandwidth: 5MHz	980.2mW (256QAM)
	LTE Channel Bandwidth: 10MHz	998.4mW (256QAM)
	LTE Channel Bandwidth: 15MHz	987.0mW (256QAM)
	LTE Channel Bandwidth: 20MHz	964.5mW (256QAM)
Emission Designator	WCDMA Band 4 Channel Bandwidth: 5MHz	4M11F9W
	WCDMA Band 4 Channel Bandwidth: 5MHz + 5MHz	9M02F9W
	LTE Channel Bandwidth: 5MHz	256QAM: 4M51D7W
	LTE Channel Bandwidth: 10MHz	256QAM: 9M02D7W
	LTE Channel Bandwidth: 15MHz	256QAM: 13M5D7W
	LTE Channel Bandwidth: 20MHz	256QAM: 18M2D7W
Antenna Type	Refer to note as below	
Antenna Connector	Refer to user's manual	
Accessory Device	Adapter x1	
Data Cable Supplied	NA	

Note:

1. This is a supplementary report of Report No.: RF150326E02C. The differences between them are as below information:
   - ◆ Added the WCDMA Band 4 (BW 5MHz, Support 2 carriers).
   - ◆ Added the LTE 256QAM modulation.
2. For above conditions, all test items for WCDMA band 4 / Equivalent Isotropic Radiated Power, Emission Bandwidth and Peak to Average Ratio for LTE 256QAM test items has to be performed. And all data was verified to meet the requirements.
3. There are BT, WCDMA, LTE and GPS technology used for the EUT.
4. The EUT incorporates a MIMO function.

WCDMA			
Channel Bandwidth	Modulation	TX & RX configuration	
5MHz, 5+5MHz (2CA)	QPSK	2TX	2RX
LTE			
Channel Bandwidth	Modulation	TX & RX configuration	
5MHz	QPSK, 16QAM, 64QAM, 256QAM	2TX	2RX
10MHz	QPSK, 16QAM, 64QAM, 256QAM	2TX	2RX
15MHz	QPSK, 16QAM, 64QAM, 256QAM	2TX	2RX
20MHz	QPSK, 16QAM, 64QAM, 256QAM	2TX	2RX

5. The EUT's spec. as below table:

Model name	LTE			WCDMA		BT	GPS
	Freq.(MHz)		Band	Freq.(MHz)			
FWID	DL	BW 5MHz : 2112.5~2152.5	4 (AWS)	DL	BW 5MHz : 2112.4 ~ 2152.6	✓	✓
		BW 10MHz : 2115~2150					
		BW 15MHz : 2117.5~2174.5			BW 5+5MHz : 2112.4 ~ 2152.6		
		BW 20MHz : 2120~2145					

6. The emission of the simultaneous operation (BT & LTE) has been evaluated and no non-compliance was found.
7. The EUT must be supplied with a POE(option) or power adapter as following table:

Brand	Model No.	Spec.
DVE	DSA-60PFE-12 1 120500	Input: 100-240V, 2.0A, 50/60Hz AC input cable(1.8m, unshielded) Output: 12V, 5A DC output cable(1.2m, unshielded, with one core)

8. The EUT was pre-tested under following test modes :

Test Mode	Description
Mode A	**With POE**
Mode B	With adapter

For the above modes, the worst radiated emission (above 1GHz) test was found in **Mode A**. Therefore only the test data of the modes were recorded in this report.

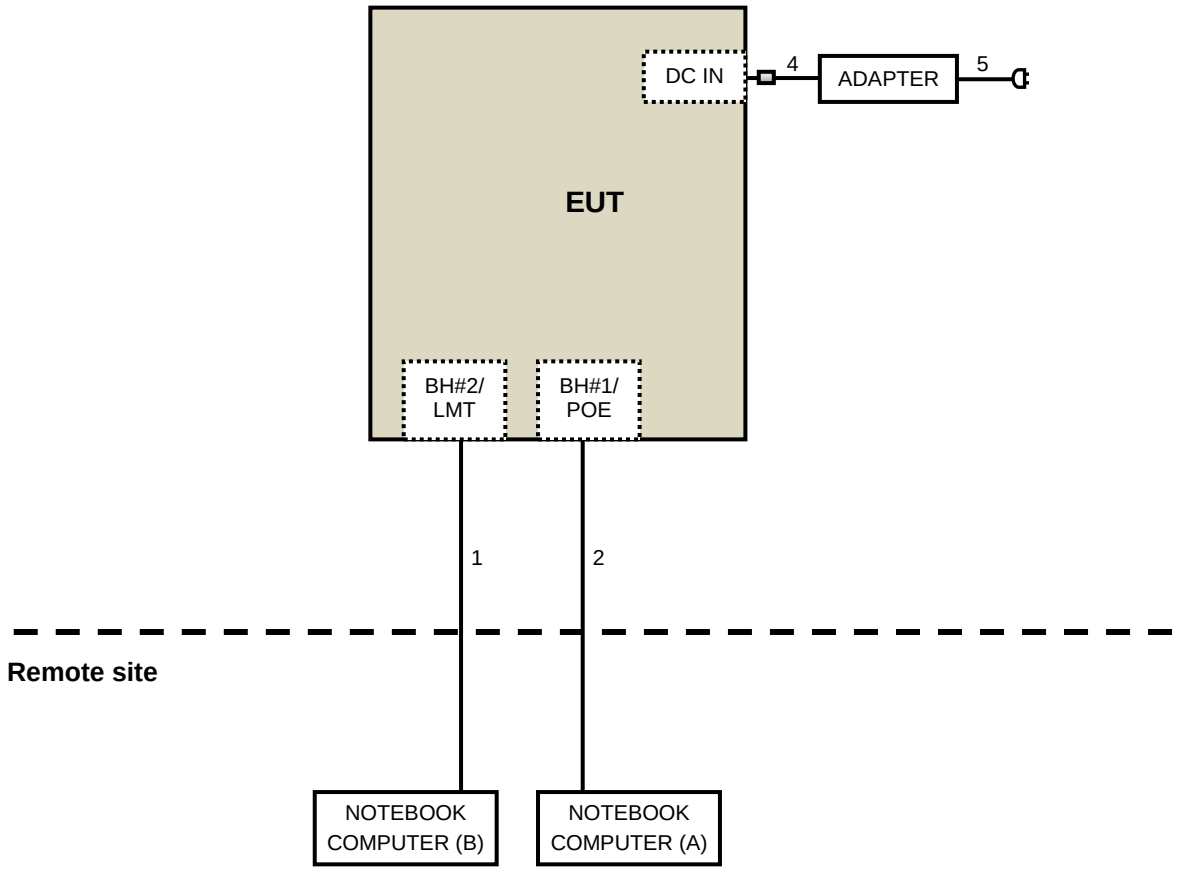
9. The antennas provided to the EUT, please refer to the following table:

WCDMA / LTE Antenna Spec.							
Antenna No	Brand	Model	Antenna Type	Antenna Connector	Gain(dBi) <Including cable loss>	Cable Length (mm)	Frequency (MHz)
Internal LTE (Main)	TongDa	T-543-8141050-6	PIFA	i-pex(MHF)	4.9	50	1710~2390 (Band 4)
Internal LTE (Aux)		T-543-8141050-7			4.6	190	1710~2390 (Band 4)
GPS Antenna Spec.							
Antenna No	Brand	Model	Antenna Type	Antenna Connector	Gain(dBi) <Including cable loss>	Cable Length (mm)	Frequency (MHz)
External GPS Ant	TongDa	T-543-8141037-9	ElecPatch	SMA Male	4.0	9140 ± 100	GPS：1575.42 ± 3 MHz Glonass：1602 ± 8 MHz
BT Antenna Spec.							
Antenna No	Brand	Model	Antenna Type	Antenna Connector	Gain(dBi) <Including cable loss>	Cable Length (mm)	Frequency (MHz)
Internal BT Ant	INPAQ	Fz PICO	Chip	NA	-1.22	NA	2400~2500

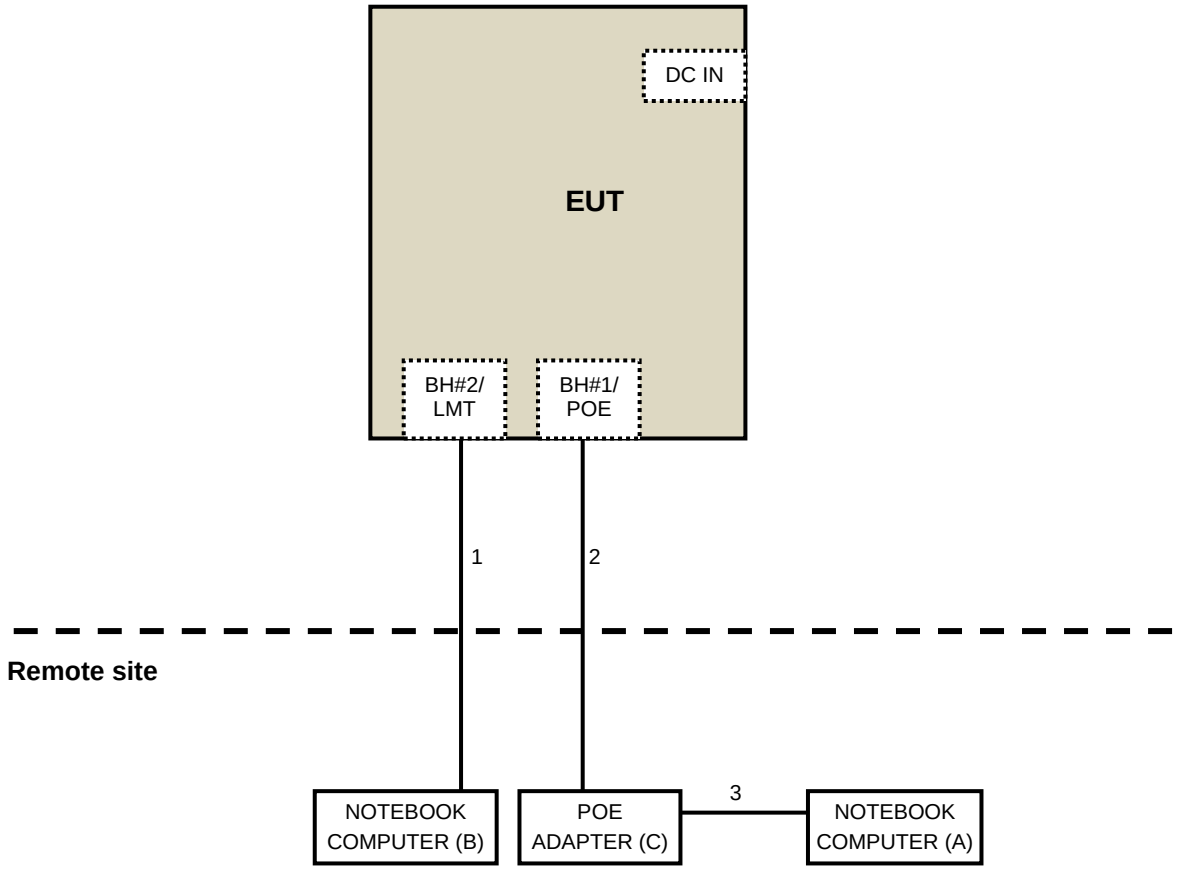
10. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Configuration of System under Test

For Adapter mode:



For POE mode:


DC IN
EUT
BH#2/
LMT
BH#1/
POE
1
2
Remote site
NOTEBOOK
COMPUTER (B)
POE
ADAPTER (C)
3
NOTEBOOK
COMPUTER (A)

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.

No.	Product	Brand	Model No.	Serial No.	FCC ID	Remark
A	NOTEBOOK COMPUTER	DELL	E5430	HYV4VY1	FCC DoC	Provided by Lab
B	NOTEBOOK COMPUTER	DELL	E6420	H62T3R1	FCC DoC	Provided by Lab
C	POE ADAPTER	NA	PD-7001G	D11326441001235A01	FCC DoC	Provided by Lab

NOTE:

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

No.	Cable	Qty.	Length (m)	Shielded (Yes/ No)	Cores (Number)	Remark
1	RJ-45	1	10	No	0	Provided by Lab
2	RJ-45	1	10	No	0	Provided by Lab
3	RJ-45	1	1.5	No	0	Provided by Lab
4	DC Cable	1	1.2	No	1	Supplied by client
5	AC Cable	1	1.8	Yes	0	Supplied by client

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, XY axis and antenna ports
The worst case was found when positioned on Y-plane. Following channel(s) was (were) selected for the final test as listed below:

WCDMA

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	TESTED FREQUENCY (MHz)	CHANNEL BANDWIDTH	MODULATION
EIRP	1537 to 1738	1537, 1638, 1738	2112.4, 2132.6, 2152.6	5MHz	QPSK
	1537 to 1738	1537+1562, 1626+1651, 1713+1738	2112.4+2117.4, 2130.2+2135.2, 2147.6+2152.6,	5+5MHz	QPSK
Modulation Characteristics	1537 to 1738	1638,	2132.6	5MHz	QPSK
	1537 to 1738	1626+1651	2130.2+2135.2	5+5MHz	QPSK
Frequency Stability	1537 to 1738	1638,	2132.6	5MHz	QPSK
	1537 to 1738	1626+1651	2130.2+2135.2	5+5MHz	QPSK
Emission Bandwidth	1537 to 1738	1537, 1638, 1738	2112.4, 2132.6, 2152.6	5MHz	QPSK
	1537 to 1738	1537+1562, 1626+1651, 1713+1738	2112.4+2117.4, 2130.2+2135.2, 2147.6+2152.6,	5+5MHz	QPSK
Peak to Average Ratio	1537 to 1738	1537, 1638, 1738	2112.4, 2132.6, 2152.6	5MHz	QPSK
	1537 to 1738	1537+1562, 1626+1651, 1713+1738	2112.4+2117.4, 2130.2+2135.2, 2147.6+2152.6,	5+5MHz	QPSK
Band Edge	1537 to 1738	1537, 1738	2112.4, 2152.6	5MHz	QPSK
	1537 to 1738	1537+1562, 1713+1738	2112.4+2117.4 2147.6+2152.6	5+5MHz	QPSK
Radiated Emission	1537 to 1738	1537, 1638, 1738	2112.4, 2132.6, 2152.6	5MHz	QPSK
	1537 to 1738	1537+1562, 1626+1651, 1713+1738	2112.4+2117.4, 2130.2+2135.2, 2147.6+2152.6,	5+5MHz	QPSK

Test Condition:

Test Item	Environmental Conditions	Input Power (System)	Tested By
EIRP	25deg. C, 63%RH	120Vac, 60Hz	Allen Chuang
Modulation Characteristics	25deg. C, 63%RH	120Vac, 60Hz	Allen Chuang
Frequency Stability	25deg. C, 63%RH	120Vac, 60Hz	Allen Chuang
Emission Bandwidth	25deg. C, 63%RH	120Vac, 60Hz	Allen Chuang
Peak To Average Ratio	25deg. C, 63%RH	120Vac, 60Hz	Allen Chuang
Band Edge	25deg. C, 63%RH	120Vac, 60Hz	Allen Chuang
Radiated Emission	24deg. C, 62%RH	120Vac, 60Hz	Andy Ho

LTE 256QAM

Test Item	Available Channel	Tested Channel	Tested Frequency (MHz)	Channel Bandwidth	Modulation
EIRP	1975 to 2375	1975, 2175, 2375	2112.5, 2132.5, 2152.5	5MHz	256QAM
	2000 to 2350	2000, 2175, 2350	2115, 2132.5, 2150	10MHz	256QAM
	2025 to 2325	2025, 2175, 2325	2117.5, 2132.5, 2147.5	15MHz	256QAM
	2050 to 2300	2050, 2175, 2300	2120, 2132.5, 2145	20MHz	256QAM
Modulation Characteristics	1975 to 2375	1975, 2175, 2375	2132.5	5MHz	256QAM
	2000 to 2350	2000, 2175, 2350	2132.5	10MHz	256QAM
	2025 to 2325	2025, 2175, 2325	2132.5	15MHz	256QAM
	2050 to 2300	2050, 2175, 2300	2132.5	20MHz	256QAM
Emission Bandwidth	1975 to 2375	1975, 2175, 2375	2112.5, 2132.5, 2152.5	5MHz	256QAM
	2000 to 2350	2000, 2175, 2350	2115, 2132.5, 2150	10MHz	256QAM
	2025 to 2325	2025, 2175, 2325	2117.5, 2132.5, 2147.5	15MHz	256QAM
	2050 to 2300	2050, 2175, 2300	2120, 2132.5, 2145	20MHz	256QAM
Peak To Average Ratio	1975 to 2375	1975, 2175, 2375	2112.5, 2132.5, 2152.5	5MHz	256QAM
	2000 to 2350	2000, 2175, 2350	2115, 2132.5, 2150	10MHz	256QAM
	2025 to 2325	2025, 2175, 2325	2117.5, 2132.5, 2147.5	15MHz	256QAM
	2050 to 2300	2050, 2175, 2300	2120, 2132.5, 2145	20MHz	256QAM

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
EIRP	22deg. C, 62%RH	120Vac, 60Hz	Allen Chuang
Modulation Characteristics	22deg. C, 62%RH	120Vac, 60Hz	Allen Chuang
Emission Bandwidth	25deg. C, 63%RH	120Vac, 60Hz	Zoey Peng
Peak To Average Ratio	25deg. C, 63%RH	120Vac, 60Hz	James Chan

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 27

KDB 971168 D01 Power Meas License Digital Systems v03

KDB 662911 D01 Multiple Transmitter Output v02r01

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

The radiated peak output power shall be according to the specific rule Part 27.50(d)(3) that are limited to EIRP of 1640 watts/MHz when transmitting with an emission bandwidth greater than 1 MHz.

4.1.2 Test Procedures

EIRP / ERP Measurement:

a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 10MHz.

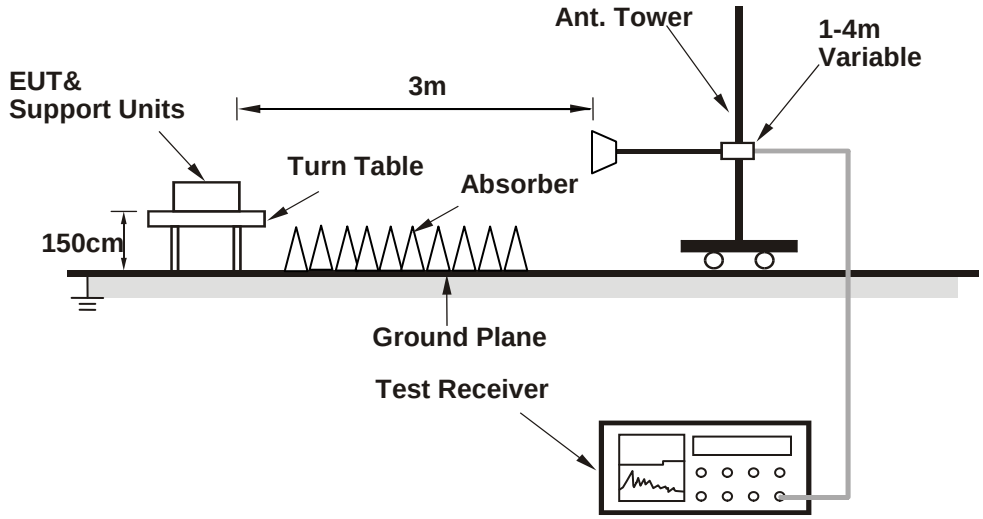
b. Substitution method is used for EIRP measurement. In the semi-anechoic chamber, EUT placed on the 1.5m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.

c. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a tx cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value“ of step b. Record the power level of S.G

d. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.

4.1.3 Test Setup

EIRP / ERP MEASUREMENT:



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

4.1.4 Test Results

WCDMA

EIRP Power (dBm)

WCDMA Band 4					
Channel Bandwidth: 5MHz / QPSK					
Channel	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor(dB)**	**EIRP(dBm)**	**EIRP(mW)**
1537	2112.4	23.5	6.5	30.01	1002.31
1638	2132.6	23.7	6.4	30.07	1016.25
1738	2152.6	23.4	6.6	29.99	997.70

WCDMA Band 4					
Channel Bandwidth: 5MHz + 5MHz / QPSK					
Channel	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor(dB)**	**EIRP(dBm)**	**EIRP(mW)**
1537+1562	2112.4+2117.4	23.06	6.93	29.99	997.70
1626+1651	2130.2+2135.2	23.10	6.92	30.02	1004.62
1713+1738	2147.6+2152.6	23.13	6.91	30.04	1009.25

LTE

EIRP Power (dBm)

LTE Band 4					
Channel Bandwidth: 5MHz / 256QAM					
Channel	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor(dB)**	**EIRP(dBm)**	**EIRP(mW)**
1975	2112.5	23.4	6.4	29.83	962.3
2175	2132.5	23.5	6.4	29.91	980.2
2375	2152.5	23.4	6.4	29.79	953.5

LTE Band 4					
Channel Bandwidth: 10MHz / 256QAM					
Channel	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor(dB)**	**EIRP(dBm)**	**EIRP(mW)**
2000	2115	23.6	6.4	29.99	998.4
2175	2132.5	23.6	6.4	29.97	993.8
2350	2147.5	23.5	6.4	29.94	987.0

LTE Band 4					
Channel Bandwidth: 15MHz / 256QAM					
Channel	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor(dB)**	**EIRP(dBm)**	**EIRP(mW)**
2025	2117.5	23.5	6.4	29.94	987.0
2175	2132.5	23.4	6.4	29.81	957.9
2325	2147.5	23.3	6.4	29.71	936.1

LTE Band 4					
Channel Bandwidth: 20MHz / 256QAM					
Channel	**Frequency (MHz)**	**LVL (dBm)**	**Correction Factor(dB)**	**EIRP(dBm)**	**EIRP(mW)**
2050	2120	23.4	6.4	29.84	964.5
2175	2132.5	23.3	6.4	29.71	936.1
2300	2145	23.2	6.4	29.64	921.1

4.2 Modulation characteristics Measurement

4.2.1 Limits of Modulation characteristics

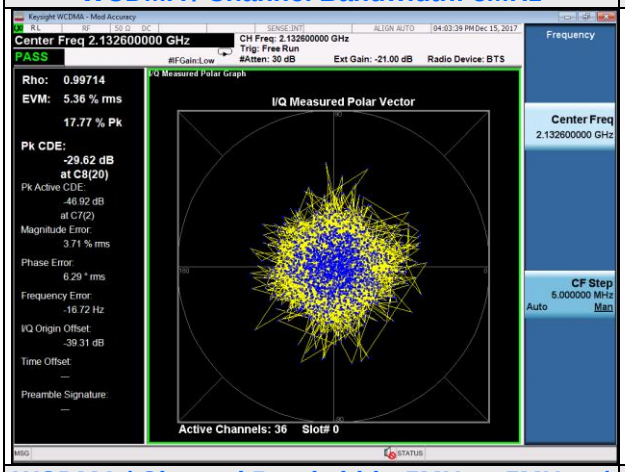
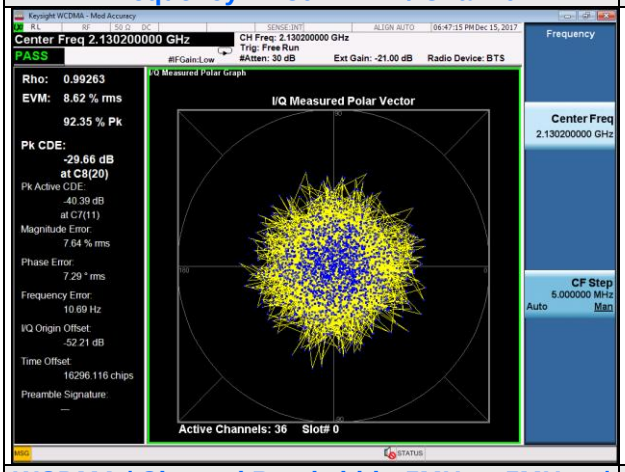
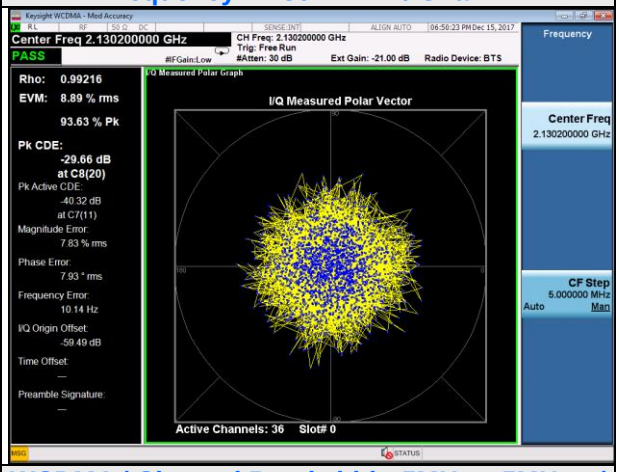
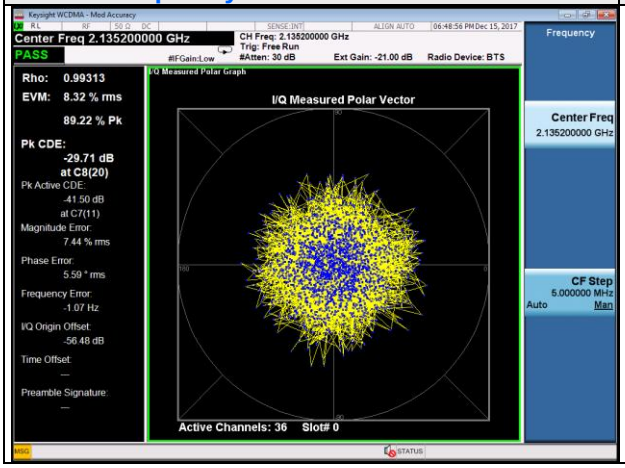
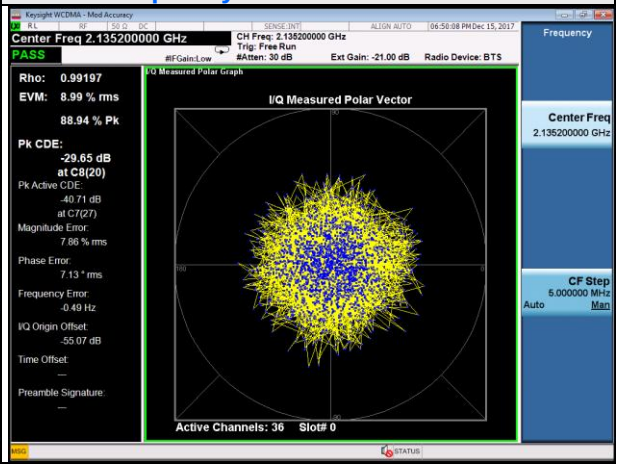
N/A

4.2.2 Test Procedure

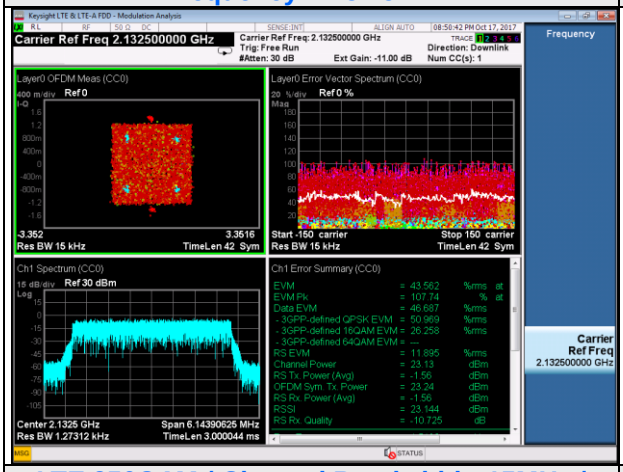
Connect the EUT to Communication Simulator via the antenna connector, The frequency band is set as EUT supported Modulation and Channels, the EUT output is matched with 50 ohm load, the waveform quality and constellation of the EUT was tested.

4.2.3 Test Setup

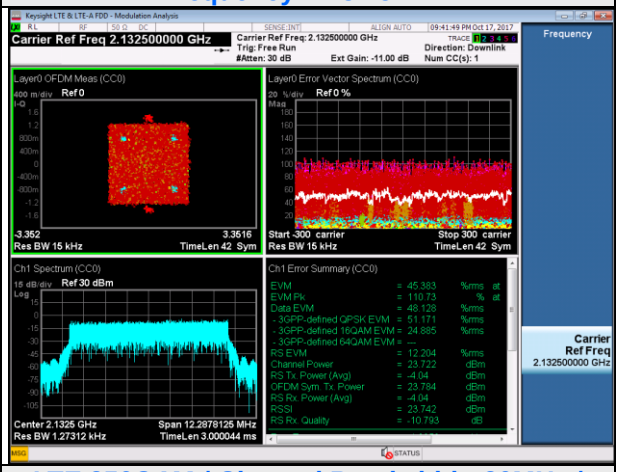
4.2.4 Test Results

Spectrum Plot of Measurement Value	
WCDMA / Channel Bandwidth: 5MHz	
	
WCDMA / Channel Bandwidth: 5MHz + 5MHz / Frequency: 2130.2 MHz / Chain 0	**WCDMA / Channel Bandwidth: 5MHz + 5MHz / Frequency: 2130.2 MHz / Chain 1**
	
WCDMA / Channel Bandwidth: 5MHz + 5MHz / Frequency: 2135.2 MHz / Chain 0	**WCDMA / Channel Bandwidth: 5MHz + 5MHz / Frequency: 2135.2 MHz / Chain 1**
	

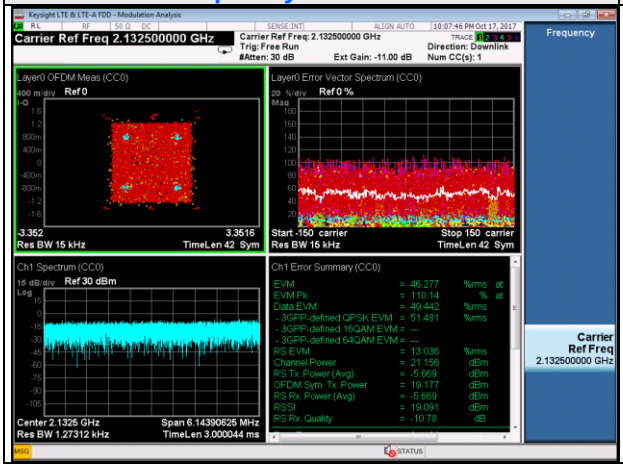
LTE 256QAM / Channel Bandwidth: 5MHz / Frequency: 2132.5 MHz



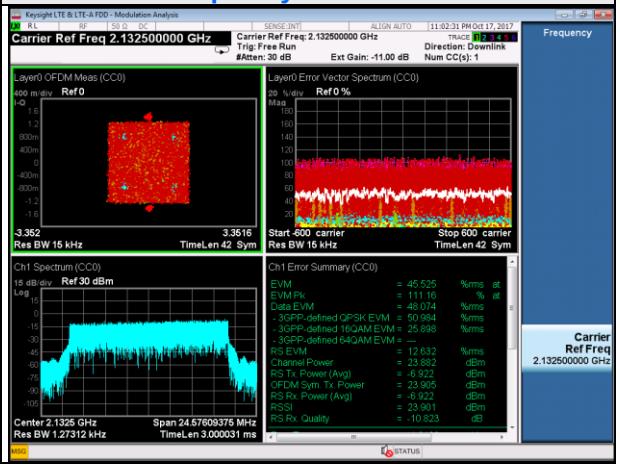
LTE 256QAM / Channel Bandwidth: 10MHz / Frequency: 2132.5 MHz



LTE 256QAM / Channel Bandwidth: 15MHz / Frequency: 2132.5 MHz



LTE 256QAM / Channel Bandwidth: 20MHz / Frequency: 2132.5 MHz



4.3 Frequency Stability Measurement

4.3.1 Limits of Frequency stability Measurement

According to the FCC part 2.1055 shall be tested the frequency stability. The rule is defined that" The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block." The test extreme voltage is according to the 2.1055(d)(1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment and the extreme temperature rule is comply with specification of EUT -30℃ ~ 50℃.

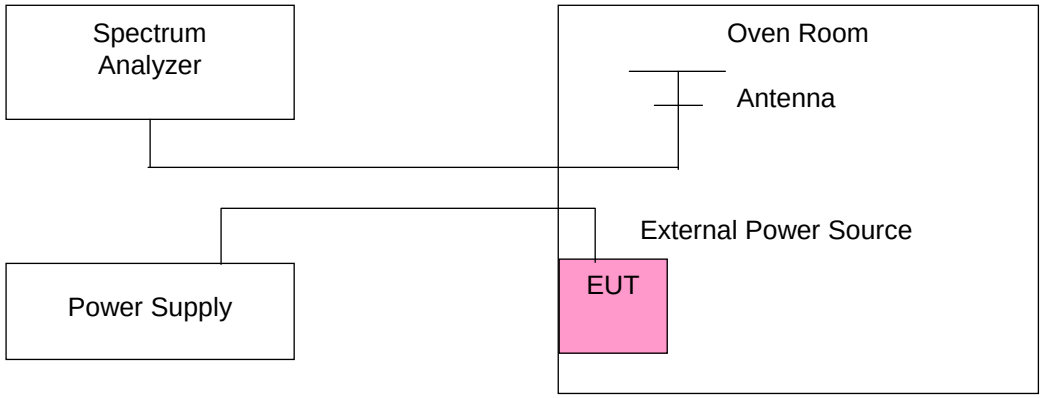
4.3.2 Test Procedure

a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.

b. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.

c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5 ℃ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

4.3.3 Test Setup



4.3.4 Test Results (With POE)

WCDMA

Norminal voltage value (120VAC)

Frequency Error vs. Voltage

Voltage (Volts)	Frequency Error (ppm)	Limit (ppm)
	5MHz	
102	0.012	2.5
138	0.023	2.5

TEMP. (℃)	Frequency Error (ppm)	Limit (ppm)
	5MHz	
75	0.010	2.5
70	0.020	2.5
60	0.022	2.5
50	0.023	2.5
40	0.010	2.5
30	0.017	2.5
20	0.022	2.5
10	0.011	2.5
0	0.018	2.5
-10	0.021	2.5
-20	0.016	2.5
-30	0.013	2.5

Norminal voltage value (120VAC)

Frequency Error vs. Voltage

Voltage (Volts)	Frequency Error (ppm)		Limit (ppm)
	CA_5+5 MHz Low Channel	CA_5+5 MHz High Channel	
102	0.020	0.015	2.5
138	0.009	0.011	2.5

TEMP. (℃)	Frequency Error (ppm)		Limit (ppm)
	CA_5+5 MHz Low Channel	CA_5+5 MHz High Channel	
75	0.013	0.021	2.5
70	0.014	0.018	2.5
60	0.017	0.013	2.5
50	0.012	0.021	2.5
40	0.018	0.009	2.5
30	0.020	0.015	2.5
20	0.013	0.014	2.5
10	0.013	0.015	2.5
0	0.022	0.021	2.5
-10	0.010	0.022	2.5
-20	0.011	0.016	2.5
-30	0.019	0.013	2.5

LTE

Norminal voltage value (120VAC)

Frequency Error vs. Voltage

Voltage (Volts)	Frequency Error (ppm)				Limit (ppm)
	5MHz	10MHz	15MHz	20MHz	
102	0.001	0.002	0.002	0.002	2.5
138	0.002	0.002	0.002	0.002	2.5

TEMP. (℃)	Frequency Error (ppm)				Limit (ppm)
	5MHz	10MHz	15MHz	20MHz	
75	0.002	0.002	0.002	0.002	2.5
70	0.002	0.002	0.002	0.002	2.5
60	0.002	0.002	0.001	0.002	2.5
50	0.001	0.001	0.002	0.002	2.5
40	0.001	0.001	0.002	0.002	2.5
30	0.001	0.001	0.001	0.002	2.5
20	0.002	0.002	0.002	0.002	2.5
10	0.002	0.002	0.002	0.002	2.5
0	0.002	0.002	0.002	0.001	2.5
-10	0.002	0.002	0.002	0.002	2.5
-20	0.002	0.002	0.002	0.002	2.5
-30	0.002	0.002	0.001	0.001	2.5

Note: The data was from the original test report (Report No.: RF150326E02C).

4.3.5 Test Results (With Adapter)

WCDMA

Norminal voltage value (120VAC)

Frequency Error vs. Voltage

Voltage (Volts)	Frequency Error (ppm)	Limit (ppm)
	5MHz	
102	0.017	2.5
138	0.016	2.5

TEMP. (℃)	Frequency Error (ppm)	Limit (ppm)
	5MHz	
75	0.018	2.5
70	0.012	2.5
60	0.017	2.5
50	0.016	2.5
40	0.021	2.5
30	0.016	2.5
20	0.015	2.5
10	0.020	2.5
0	0.011	2.5
-10	0.011	2.5
-20	0.023	2.5
-30	0.021	2.5

Norminal voltage value (120VAC)

Frequency Error vs. Voltage

Voltage (Volts)	Frequency Error (ppm)		Limit (ppm)
	CA_5+5 MHz Low Channel	CA_5+5 MHz High Channel	
102	0.018	0.010	2.5
138	0.015	0.010	2.5

TEMP. (℃)	Frequency Error (ppm)		Limit (ppm)
	CA_5+5 MHz Low Channel	CA_5+5 MHz High Channel	
75	0.015	0.020	2.5
70	0.015	0.022	2.5
60	0.015	0.019	2.5
50	0.014	0.017	2.5
40	0.020	0.010	2.5
30	0.011	0.022	2.5
20	0.016	0.022	2.5
10	0.019	0.011	2.5
0	0.015	0.017	2.5
-10	0.015	0.011	2.5
-20	0.012	0.012	2.5
-30	0.013	0.019	2.5

LTE

Norminal voltage value (120VAC)

Frequency Error vs. Voltage

Voltage (Volts)	Frequency Error (ppm)				Limit (ppm)
	5MHz	10MHz	15MHz	20MHz	
102	0.002	0.002	0.002	0.002	2.5
138	0.001	0.002	0.002	0.001	2.5

TEMP. (℃)	Frequency Error (ppm)				Limit (ppm)
	5MHz	10MHz	15MHz	20MHz	
75	0.002	0.001	0.001	0.001	2.5
70	0.002	0.002	0.002	0.002	2.5
60	0.001	0.002	0.002	0.002	2.5
50	0.002	0.002	0.002	0.002	2.5
40	0.002	0.002	0.001	0.001	2.5
30	0.001	0.002	0.002	0.001	2.5
20	0.002	0.001	0.001	0.002	2.5
10	0.002	0.002	0.001	0.001	2.5
0	0.002	0.001	0.002	0.002	2.5
-10	0.002	0.002	0.001	0.002	2.5
-20	0.002	0.002	0.001	0.002	2.5
-30	0.002	0.001	0.002	0.002	2.5

Note: The data was from the original test report (Report No.: RF150326E02C).

4.4 Emission Bandwidth Measurement

4.4.1 Limits of Emission Bandwidth Measurement

According to FCC 27.53(h)(3) specified that emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26dB below the transmitter power.

4.4.2 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to sampling. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

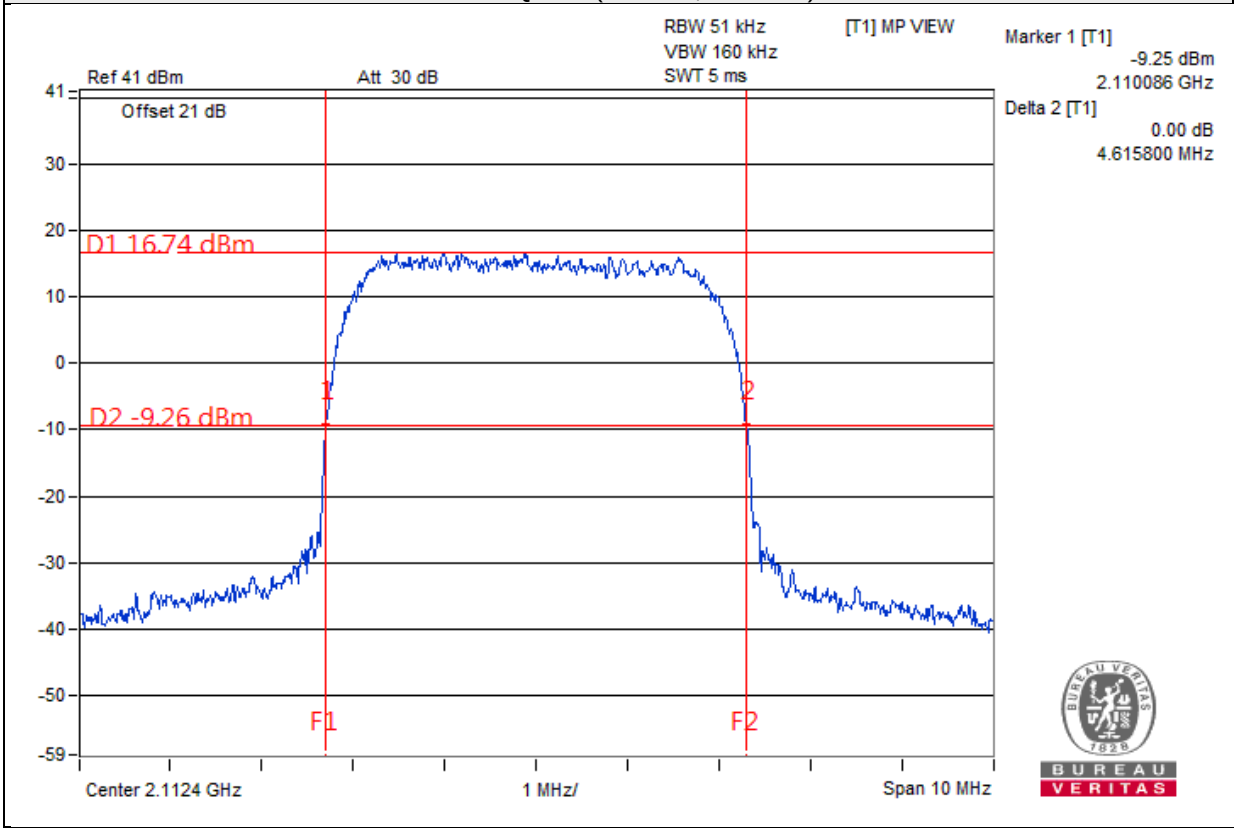
4.4.3 Test Setup

4.4.4 Test Results (-26dBc Bandwidth)

WCDMA

Channel Bandwidth: 5MHz			
Channel	Frequency (MHz)	-26dBc Bandwidth (MHz)	
		Chain0	Chain1
		QPSK	QPSK
1537	2112.4	4.60	4.61
1638	2132.6	4.60	4.61
1738	2152.6	4.60	4.59

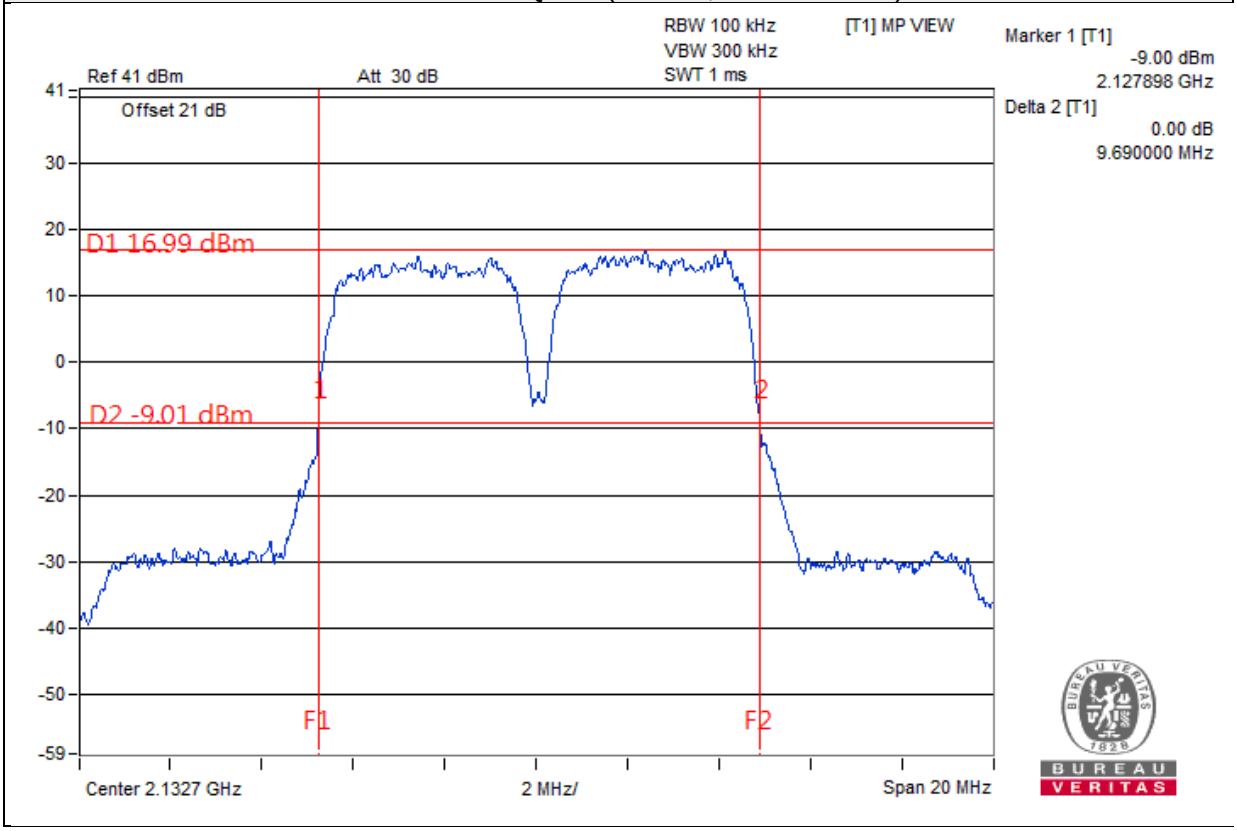
Spectrum Plot of Worst Value
5MHz / QPSK (Chain 1, CH1537)



Channel Bandwidth: 5MHz + 5MHz			
Channel	Frequency (MHz)	-26dBc Bandwidth (MHz)	
		Chain0	Chain1
		QPSK	QPSK
1537+1562	2112.4+2117.4	9.67	9.64
1626+1651	2130.2+2135.2	9.69	9.68
1713+1738	2147.6+2152.6	9.67	9.67

Spectrum Plot of Worst Value

5MHz + 5MHz / QPSK (Chain 0, CH1626+1651)

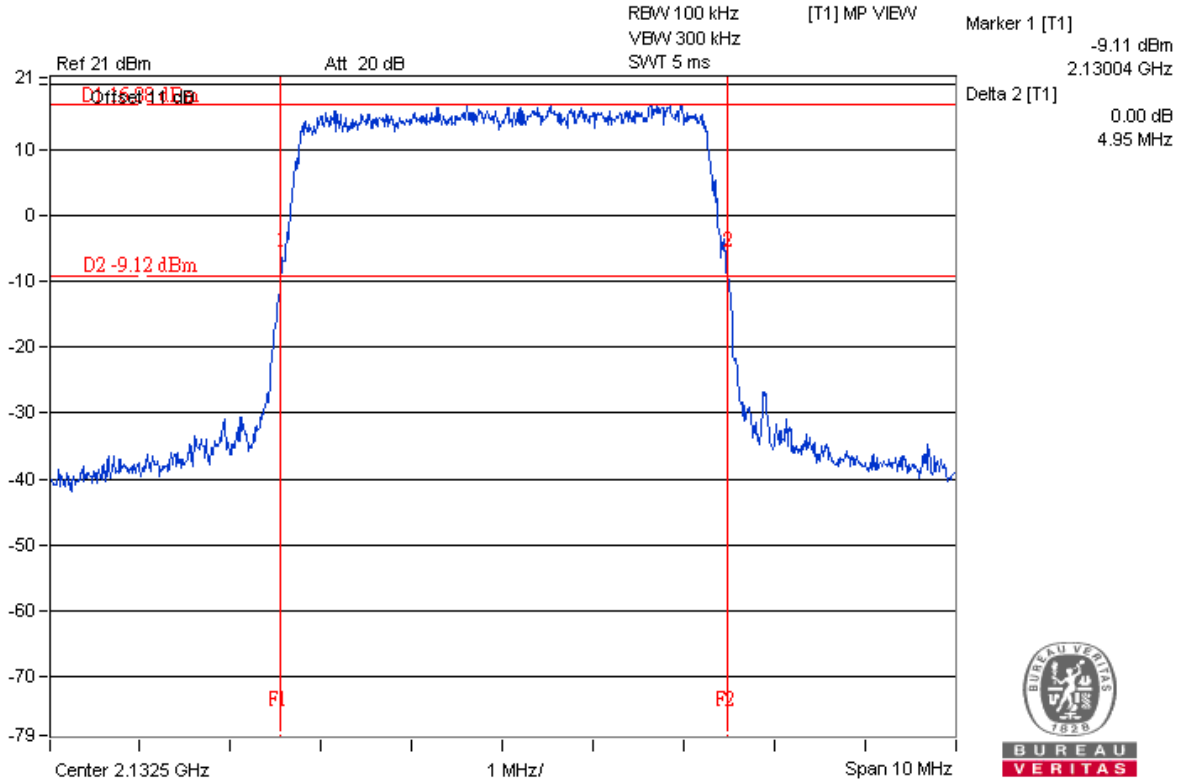


LTE

Channel Bandwidth: 5MHz			
Channel	Frequency (MHz)	-26dBc Bandwidth (MHz)	
		Chain0	Chain1
		256QAM	256QAM
1975	2112.5	4.90	4.90
2175	2132.5	4.92	4.95
2375	2152.5	4.94	4.94

Spectrum Plot of Worst Value

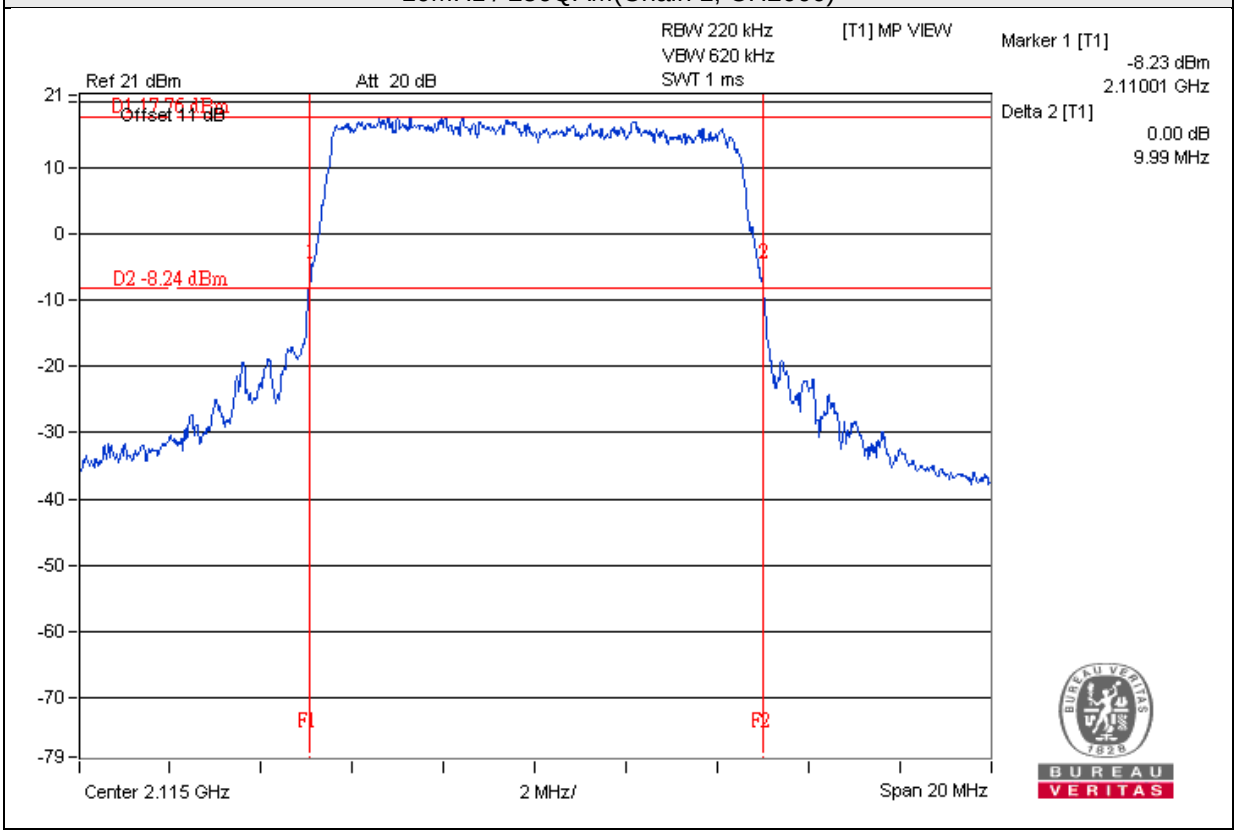
5MHz / 256QAM (Chain 1, CH2175)



Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	-26dBc Bandwidth (MHz)	
		Chain0	Chain1
		256QAM	256QAM
2000	2115	9.97	9.99
2175	2132.5	9.97	9.92
2350	2150	9.91	9.88

Spectrum Plot of Worst Value

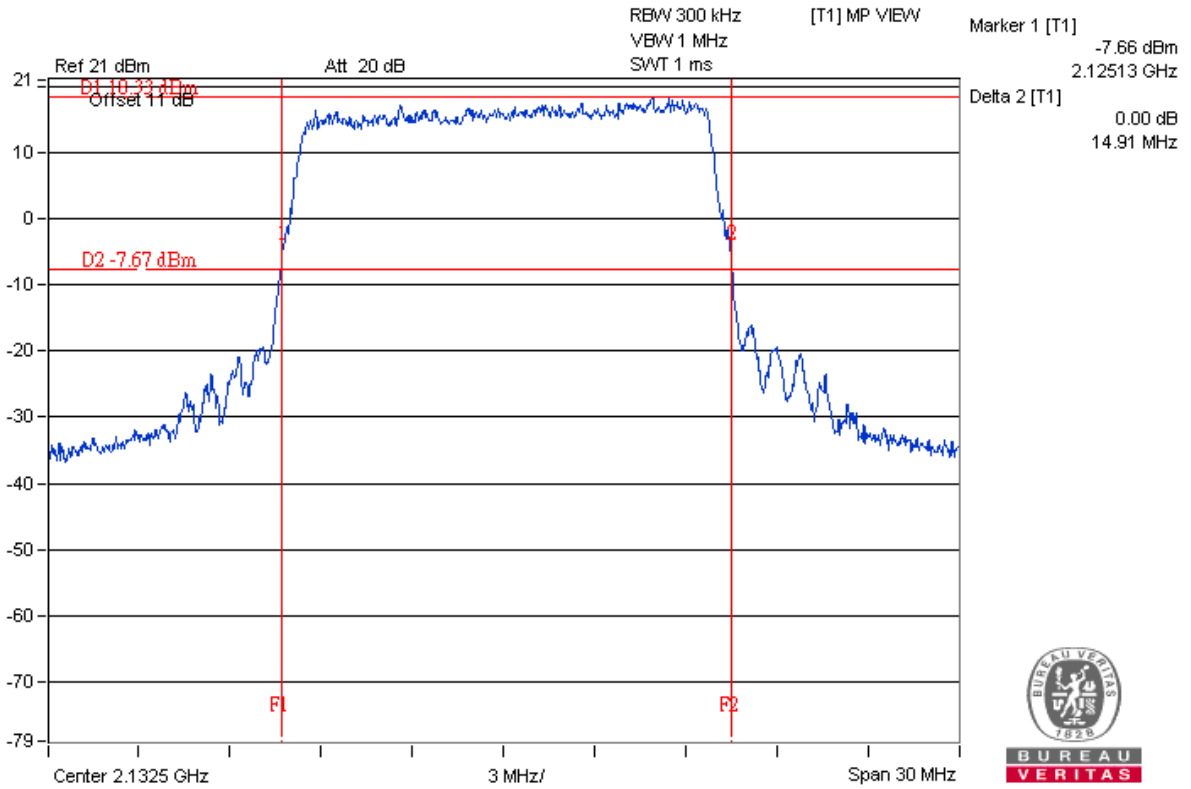
10MHz / 256QAM(Chain 1, CH2000)



Channel Bandwidth: 15MHz			
Channel	Frequency (MHz)	-26dBc Bandwidth (MHz)	
		Chain0	Chain1
		256QAM	256QAM
2025	2117.5	14.83	14.89
2175	2132.5	14.91	14.88
2325	2147.5	14.81	14.78

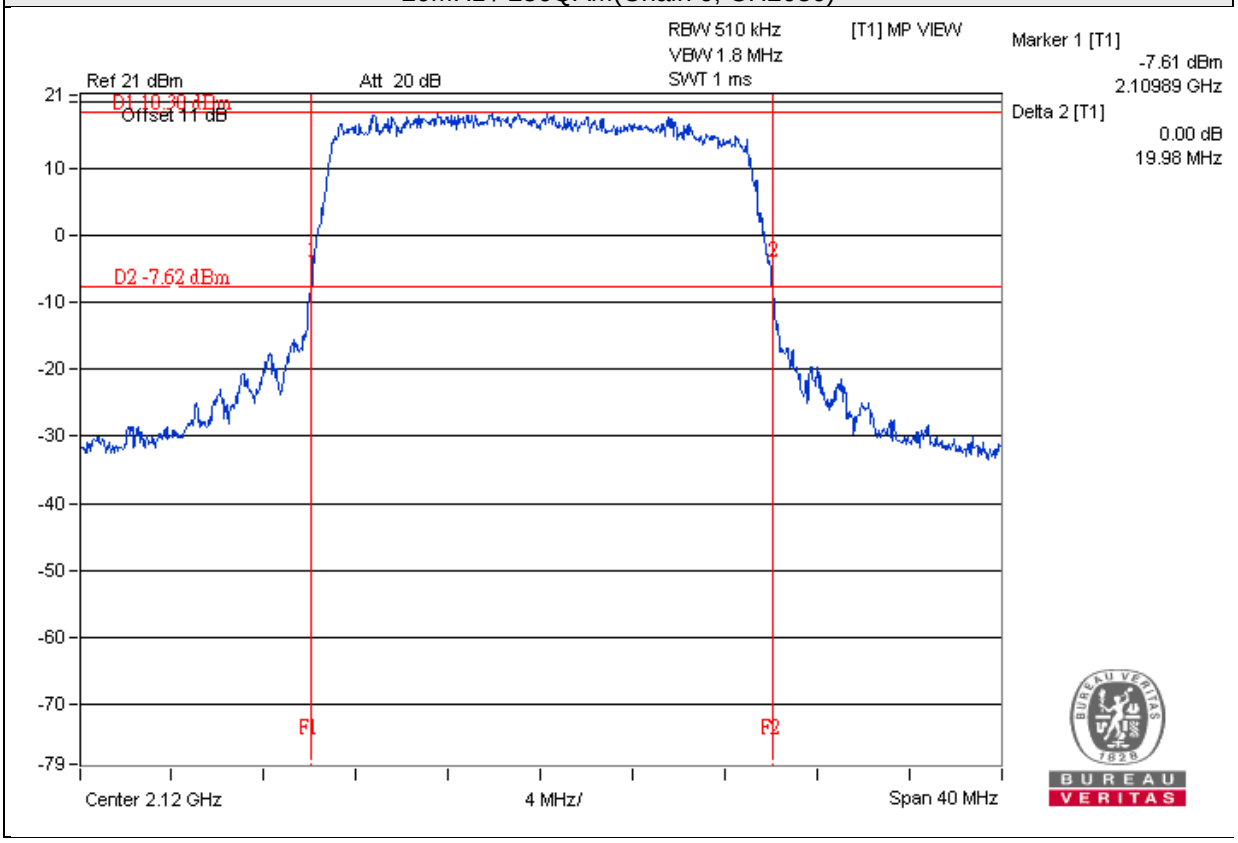
Spectrum Plot of Worst Value

15MHz / 256QAM(Chain 0, CH2175)



Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	-26dBc Bandwidth (MHz)	
		Chain0	Chain1
		256QAM	256QAM
2050	2120	19.98	19.95
2175	2132.5	19.88	19.95
2300	2145	19.89	19.72

Spectrum Plot of Worst Value
20MHz / 256QAM(Chain 0, CH2050)

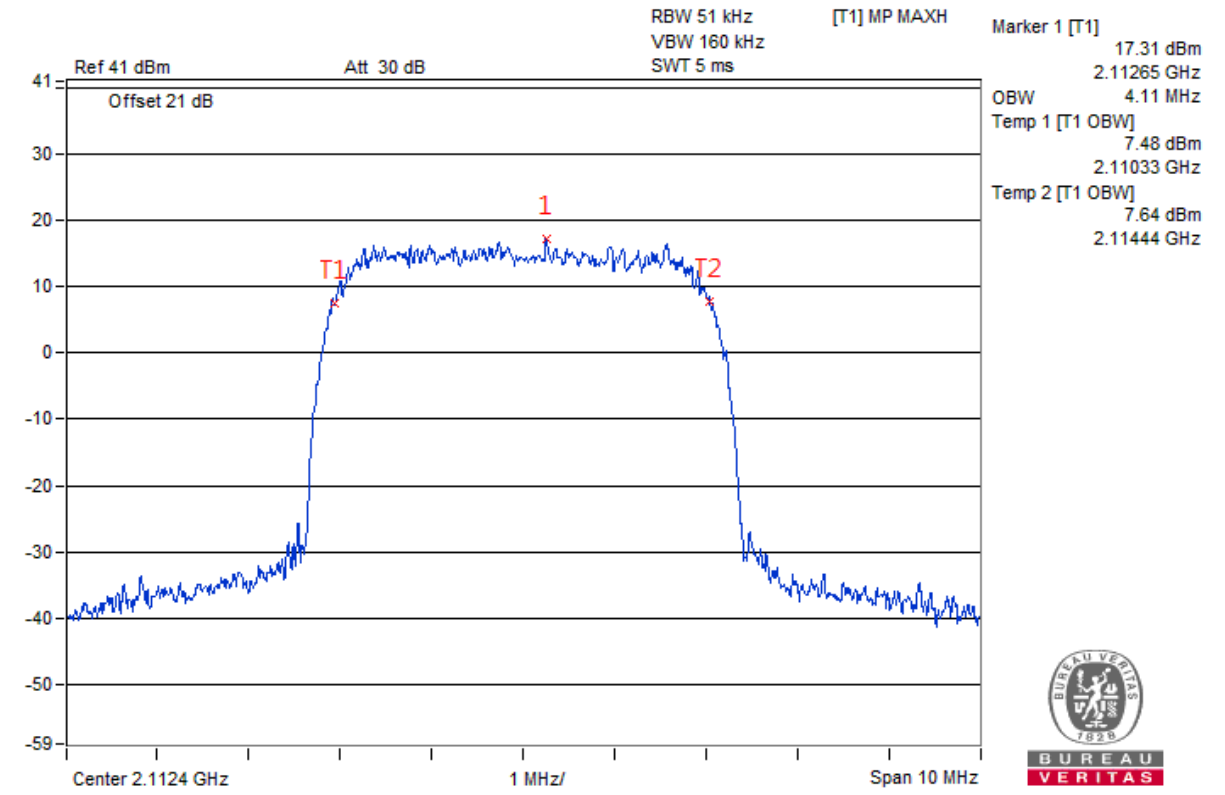


4.4.5 Test Results (99% Occupied Bandwidth)

WCDMA

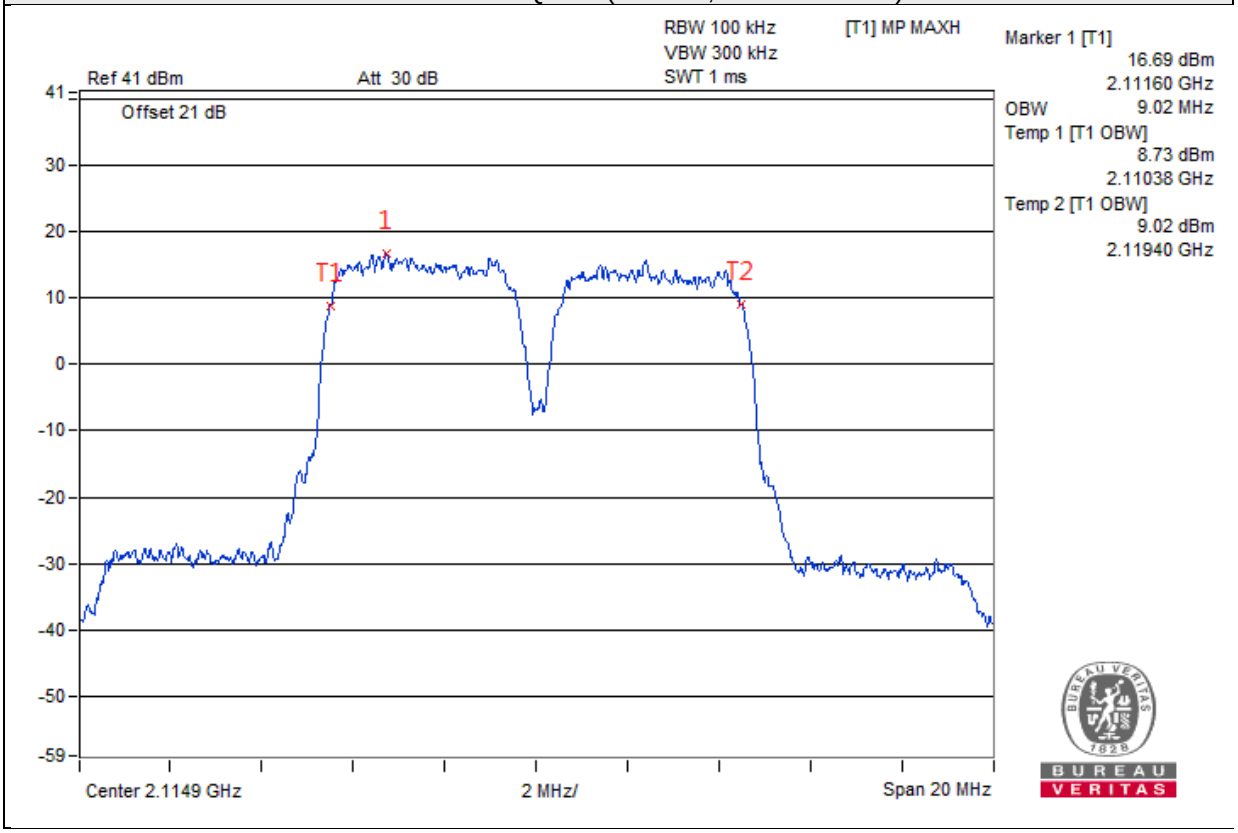
Channel Bandwidth: 5MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	
		Chain0	Chain1
		QPSK	QPSK
1537	2112.4	4.11	4.11
1638	2132.6	4.11	4.10
1738	2152.6	4.10	4.11

Spectrum Plot of Worst Value
5MHz / QPSK (Chain 0, CH1537)



Channel Bandwidth: 5MHz + 5MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	
		Chain0	Chain1
		QPSK	QPSK
1537+1562	2112.4+2117.4	9.00	9.02
1626+1651	2130.2+2135.2	9.00	9.00
1713+1738	2147.6+2152.6	8.98	8.98

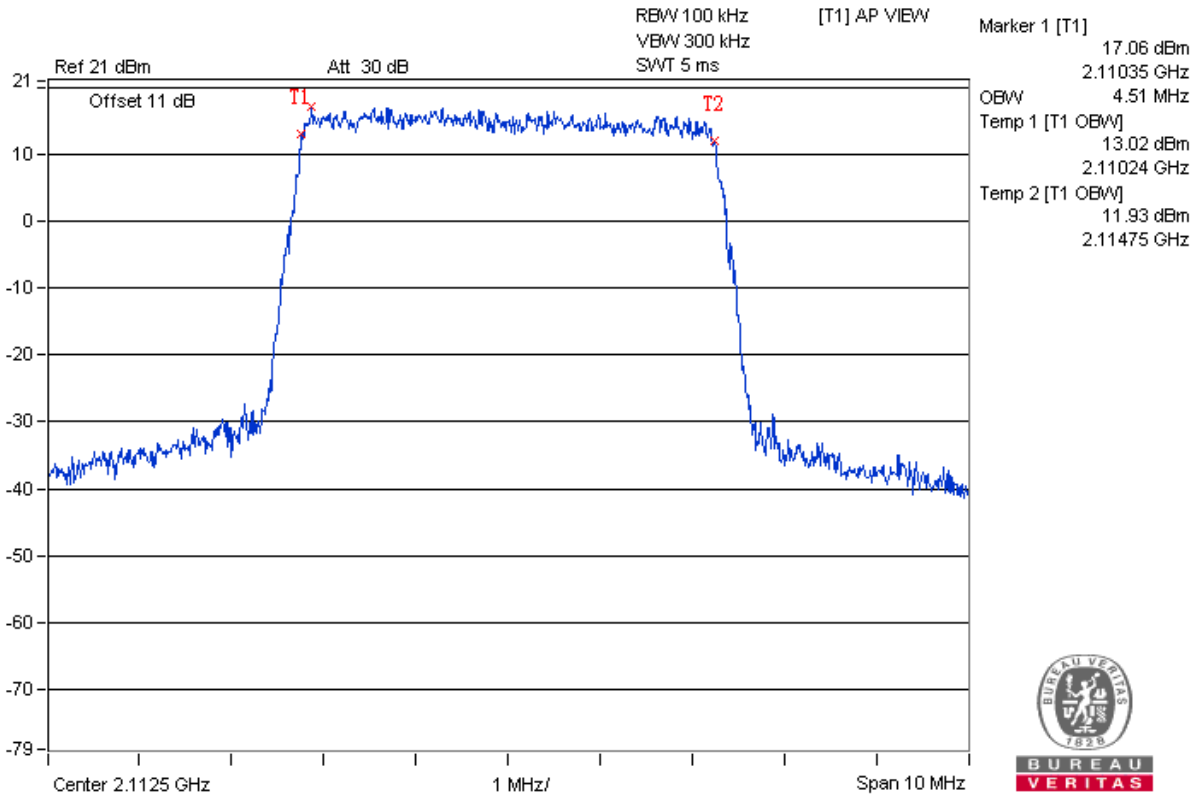
Spectrum Plot of Worst Value
5MHz + 5MHz / QPSK (Chain 1, CH1537+1562)



LTE

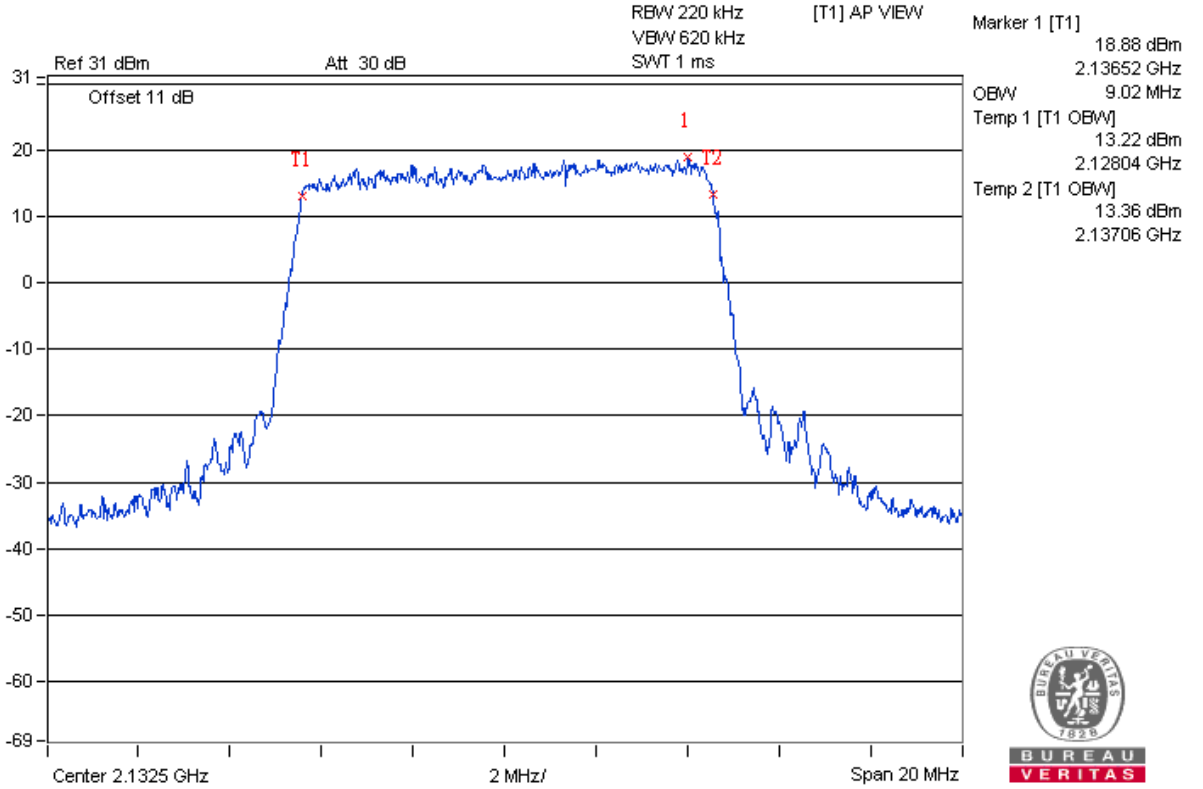
Channel Bandwidth: 5MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	
		Chain0	Chain1
		256QAM	256QAM
1975	2112.5	4.49	4.51
2175	2132.5	4.49	4.50
2375	2152.5	4.50	4.50

Spectrum Plot of Worst Value
5MHz / 256QAM (Chain 1, CH1975)



Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	
		Chain0	Chain1
		256QAM	256QAM
2000	2115	8.98	9.02
2175	2132.5	9.00	9.02
2350	2150	9.02	8.98

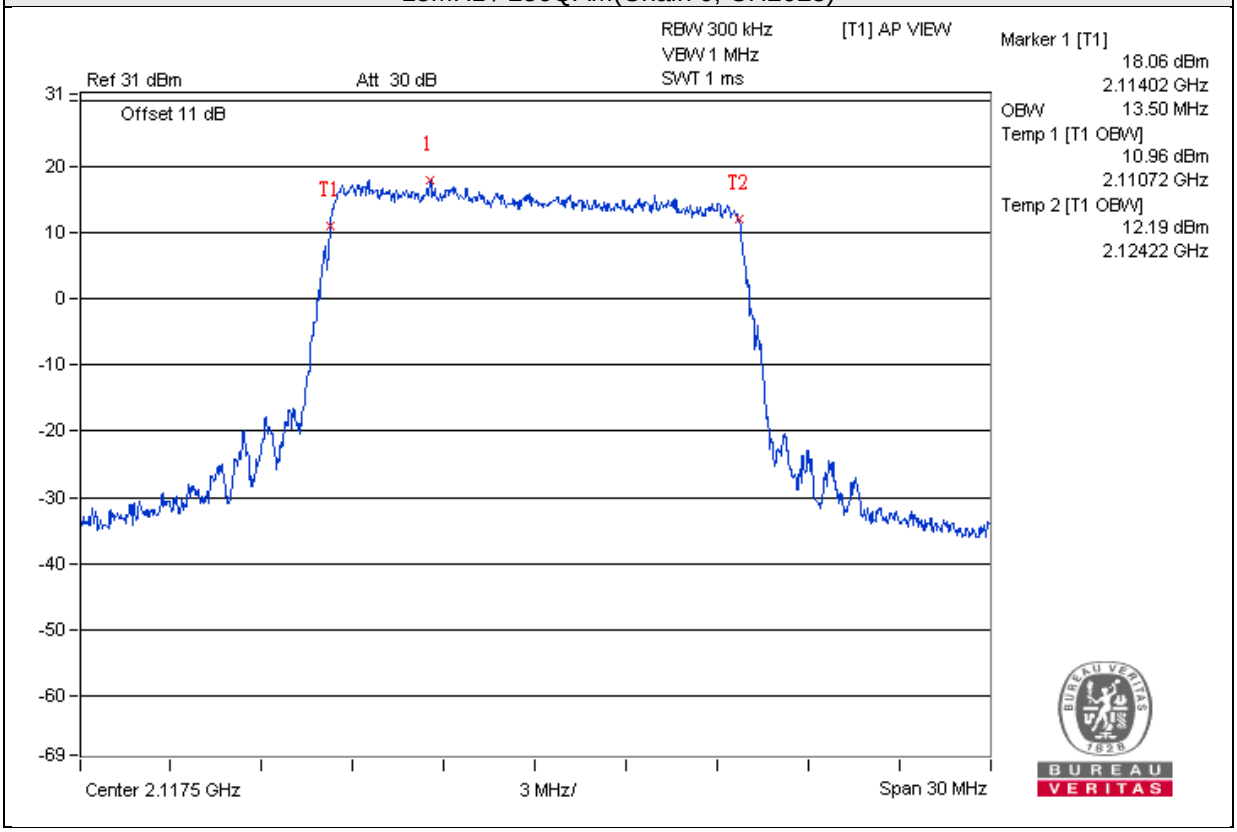
Spectrum Plot of Worst Value
10MHz / 256QAM(Chain 1, CH2000)



Channel Bandwidth: 15MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	
		Chain0	Chain1
		256QAM	256QAM
2025	2117.5	13.50	13.50
2175	2132.5	13.47	13.47
2325	2147.5	13.44	13.44

Spectrum Plot of Worst Value

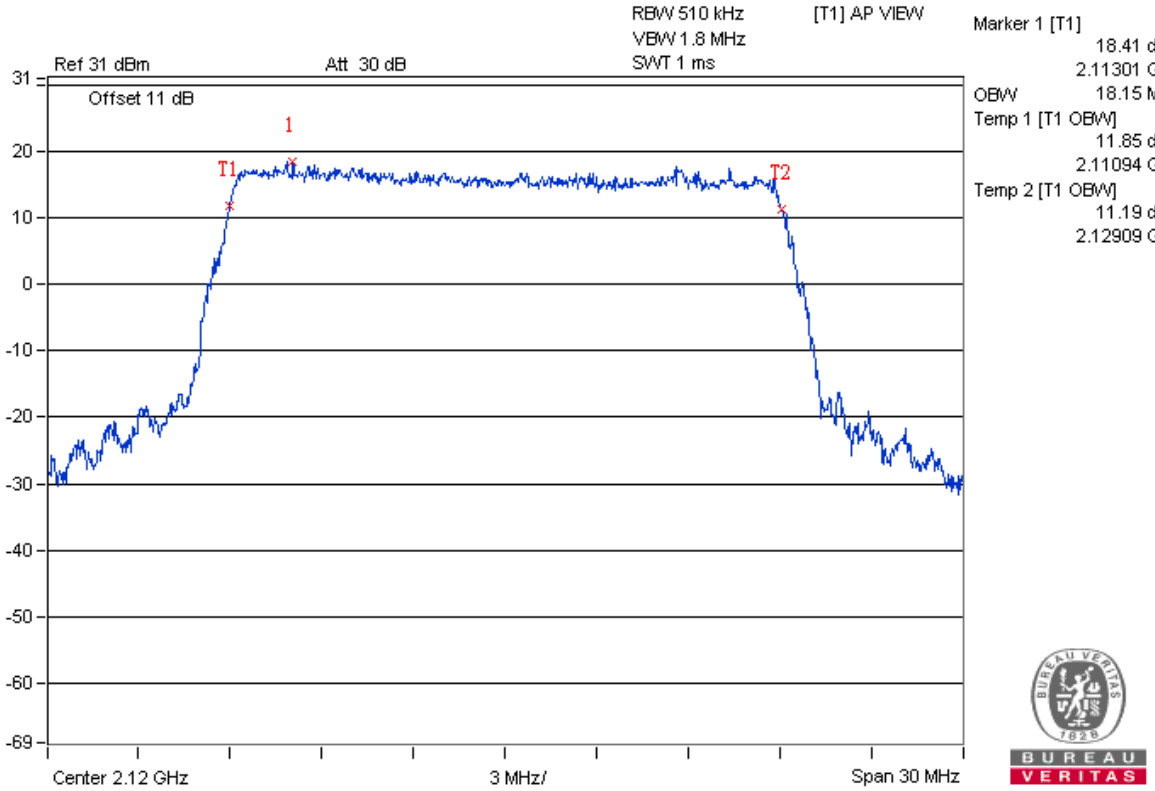
15MHz / 256QAM(Chain 0, CH2025)



Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	
		Chain0	Chain1
		256QAM	256QAM
2050	2120	18.06	18.15
2175	2132.5	18.06	18.06
2300	2145	17.85	17.85

Spectrum Plot of Worst Value

20MHz / 256QAM(Chain 1, 2050)



4.5 Channel Edge Measurement

4.5.1 Limits of Channel Edge Measurement

According to FCC 27.53(h) specified 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. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

Note:

This device can be implement MIMO function, so the limit of spurious emissions needs to be reduced by 10log($Numbers_{Ant}$) according to FCC KDB 662911 D01 guidance.

{The limit is adjusted to -13dBm – 10*log(2) = -16.01dBm.}

4.5.2 Test Setup

4.5.3 Test Procedures

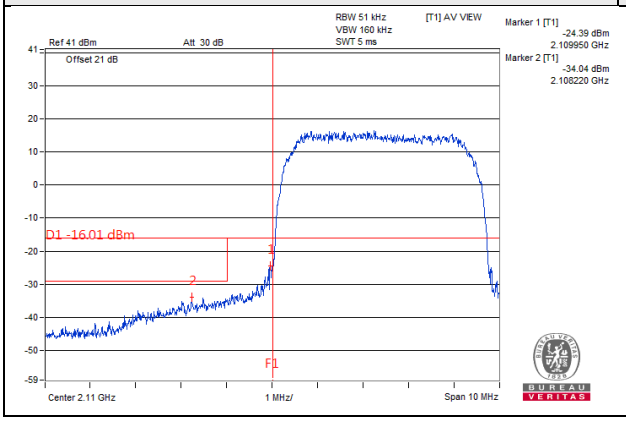
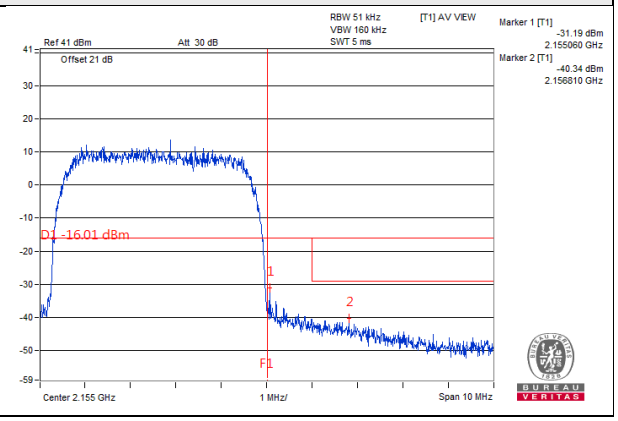
a. All measurements were done at low and high operational frequency range.
b. The center frequency of spectrum is the band edge frequency and s RB of the spectrum is >1% EMISSION BANDWIDTH and VB of the spectrum is ≧ 3*RB, Detector=RMS.
c. Record the max trace plot into the test report.

4.5.4 Test Results

WCDMA

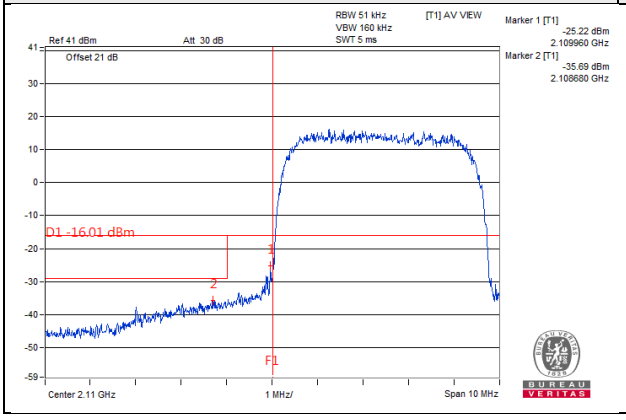
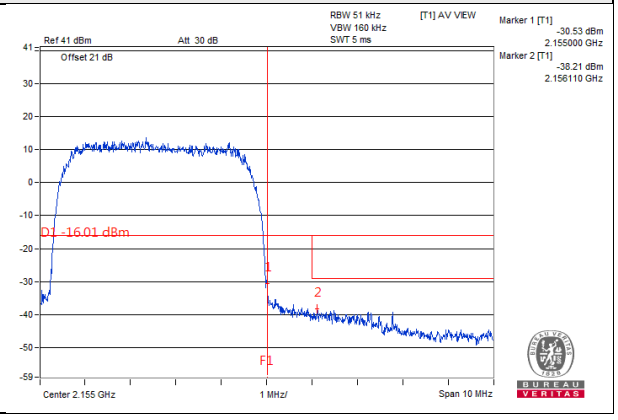
Chain 0						
QPSK / Channel Bandwidth: 5MHz						
Channel	Frequency (MHz)	Band Edge	Measurement Value (dBm)	Limit (dBm)	Margin (dB)	Result
1537	2112.4	Within 1MHz	-24.39	-16.01	-9.38	Pass
		After 1MHz	-34.04	-28.93	-6.76	Pass
1738	2152.6	Within 1MHz	-31.19	-16.01	-15.18	Pass
		After 1MHz	-40.34	-28.93	-11.41	Pass

Note: For after 1MHz Band edge limit is -28.93dBm/51kHz= -16.01dBm/1MHz+10*log(51kHz/1MHz)

Ch1537	Ch1738
	

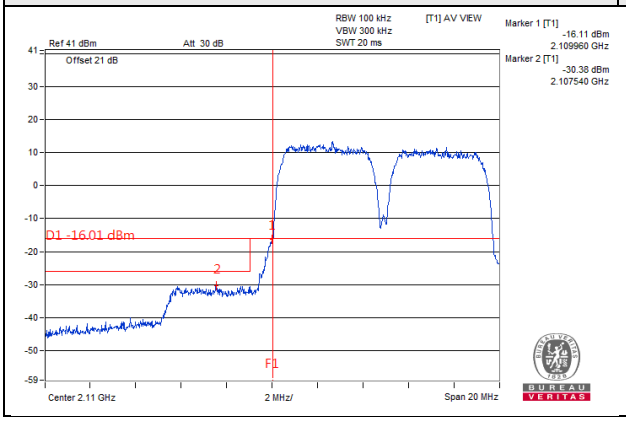
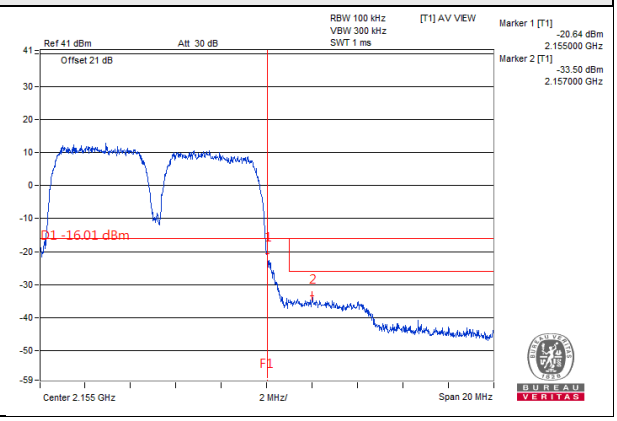
Chain 1						
QPSK / Channel Bandwidth: 5MHz						
Channel	Frequency (MHz)	Band Edge	Measurement Value (dBm)	Limit (dBm)	Margin (dB)	Result
1537	2112.4	Within 1MHz	-25.22	-16.01	-9.21	Pass
		After 1MHz	-35.69	-28.93	-6.76	Pass
1738	2152.6	Within 1MHz	-30.53	-16.01	-14.52	Pass
		After 1MHz	-38.21	-28.93	-9.28	Pass

Note: For after 1MHz Band edge limit is -28.93dBm/51kHz= -16.01dBm/1MHz+10*log(51kHz/1MHz)

Ch1537	Ch1738
	

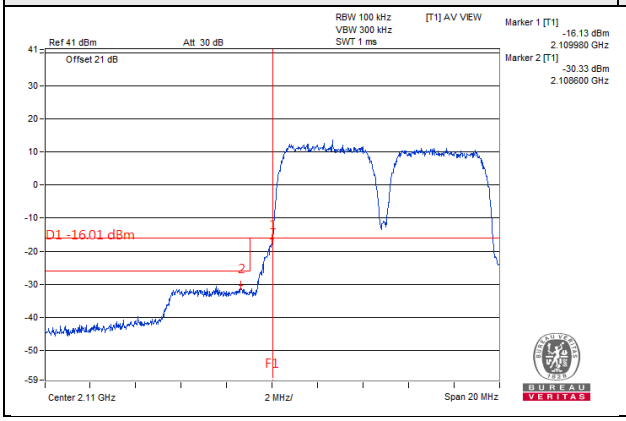
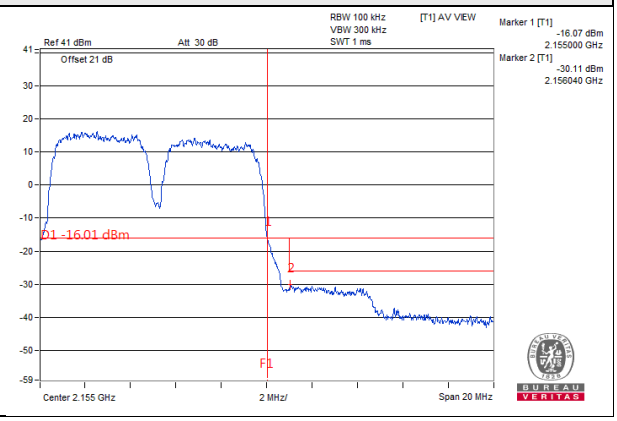
Chain 0						
QPSK / Channel Bandwidth: 5MHz						
Channel	Frequency (MHz)	Band Edge	Measurement Value (dBm)	Limit (dBm)	Margin (dB)	Result
1537+1562	2112.4 + 2117.4	Within 1MHz	-16.11	-16.01	-0.10	Pass
		After 1MHz	-30.38	-26.01	-4.37	Pass
1713+1738	2147.6 + 2152.6	Within 1MHz	-20.64	-16.01	-4.63	Pass
		After 1MHz	-33.50	-26.01	-7.49	Pass

Note: For after 1MHz Band edge limit is -26.01dBm/100kHz= -16.01dBm/1MHz+10*log(100kHz/1MHz)

Ch1537+1562	Ch1713+1738
	

Chain 0						
QPSK / Channel Bandwidth: 5MHz						
Channel	Frequency (MHz)	Band Edge	Measurement Value (dBm)	Limit (dBm)	Margin (dB)	Result
1537+1562	2112.4 + 2117.4	Within 1MHz	-16.13	-16.01	-0.12	Pass
		After 1MHz	-30.33	-26.01	-4.32	Pass
1713+1738	2147.6 + 2152.6	Within 1MHz	-16.07	-16.01	-0.06	Pass
		After 1MHz	-30.11	-26.01	-4.10	Pass

Note: For after 1MHz Band edge limit is -26.01dBm/100kHz= -16.01dBm/1MHz+10*log(100kHz/1MHz)

Ch1537+1562	Ch1713+1738
	

4.6 Peak to Average Ratio

4.5.1 Limits of Peak to Average Ratio Measurement

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB

4.5.2 Test Setup

4.5.3 Test Procedures

1. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1%.

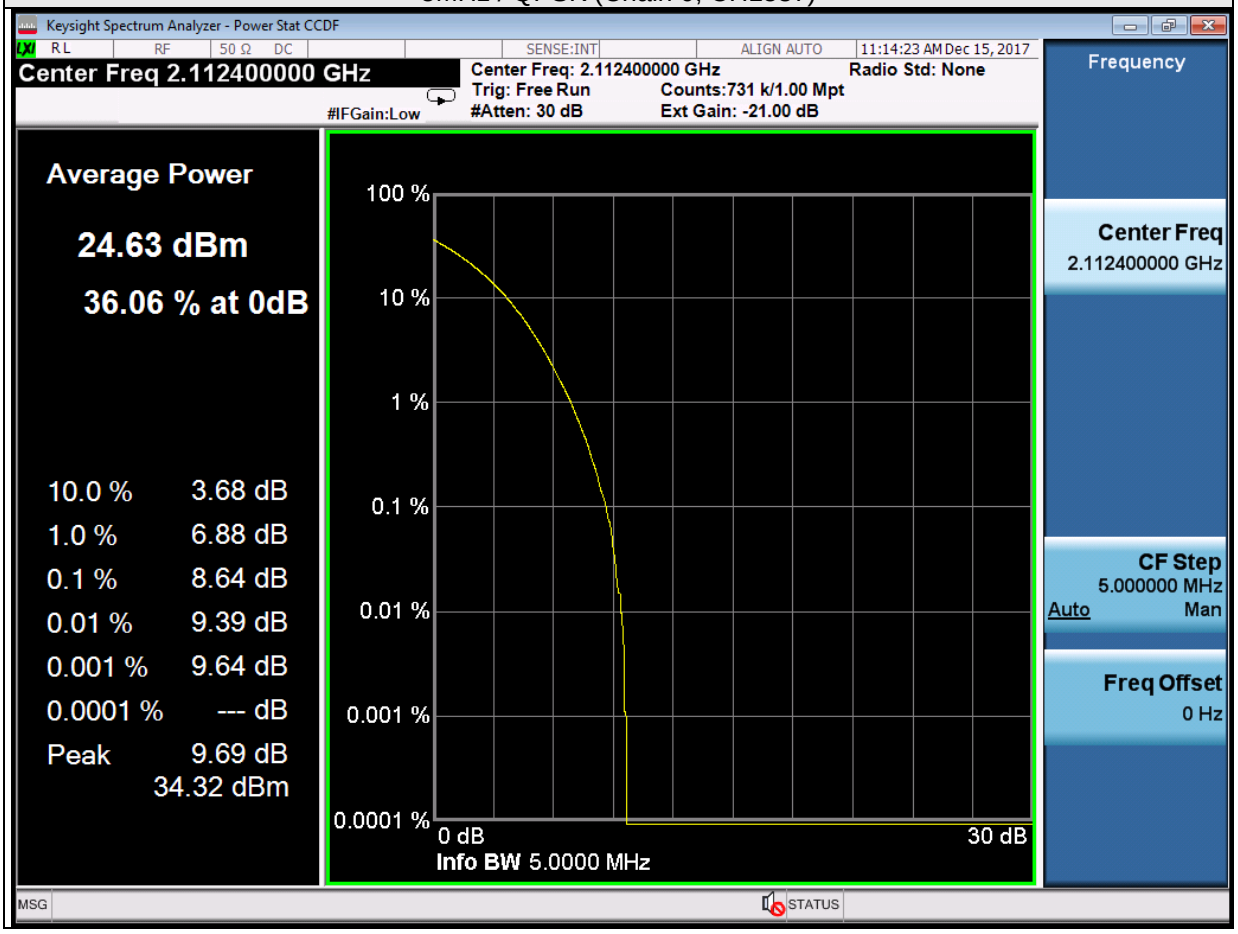
4.5.4 Test Results

WCDMA

Channel Bandwidth: 5MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		Chain0	Chain1
		QPSK	QPSK
1537	2112.4	8.64	8.58
1638	2132.6	8.62	8.58
1738	2152.6	8.57	8.59

SPECTRUM PLOT OF WORST VALUE

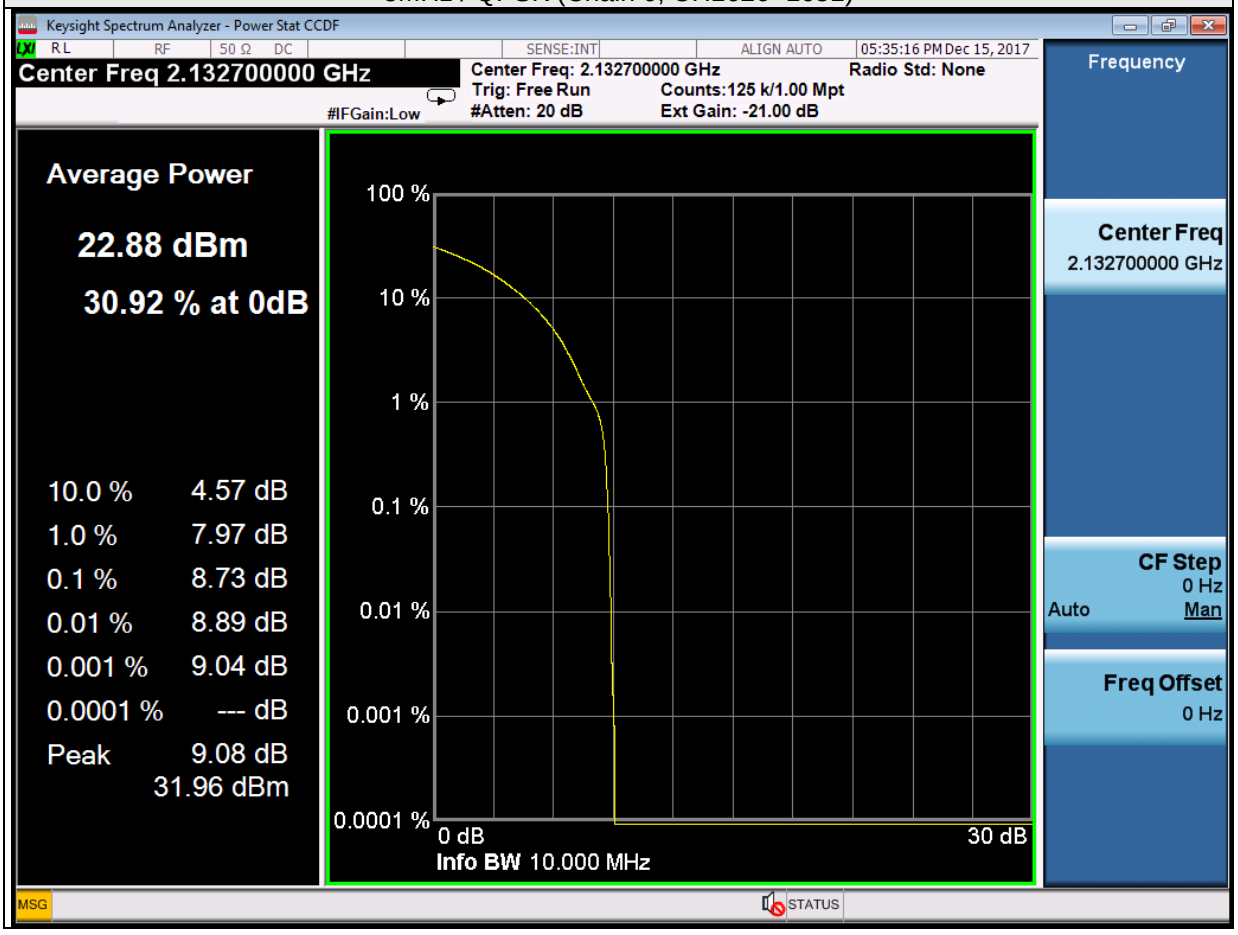
5MHz / QPSK (Chain 0, CH1537)



Channel Bandwidth: 5MHz + 5MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		Chain0	Chain1
		QPSK	QPSK
1537+1562	2112.4+2117.4	8.64	8.60
1626+1651	2130.2+2135.2	8.73	8.57
1713+1738	2147.6+2152.6	8.70	8.67

SPECTRUM PLOT OF WORST VALUE

5MHz / QPSK (Chain 0, CH1626+1651)

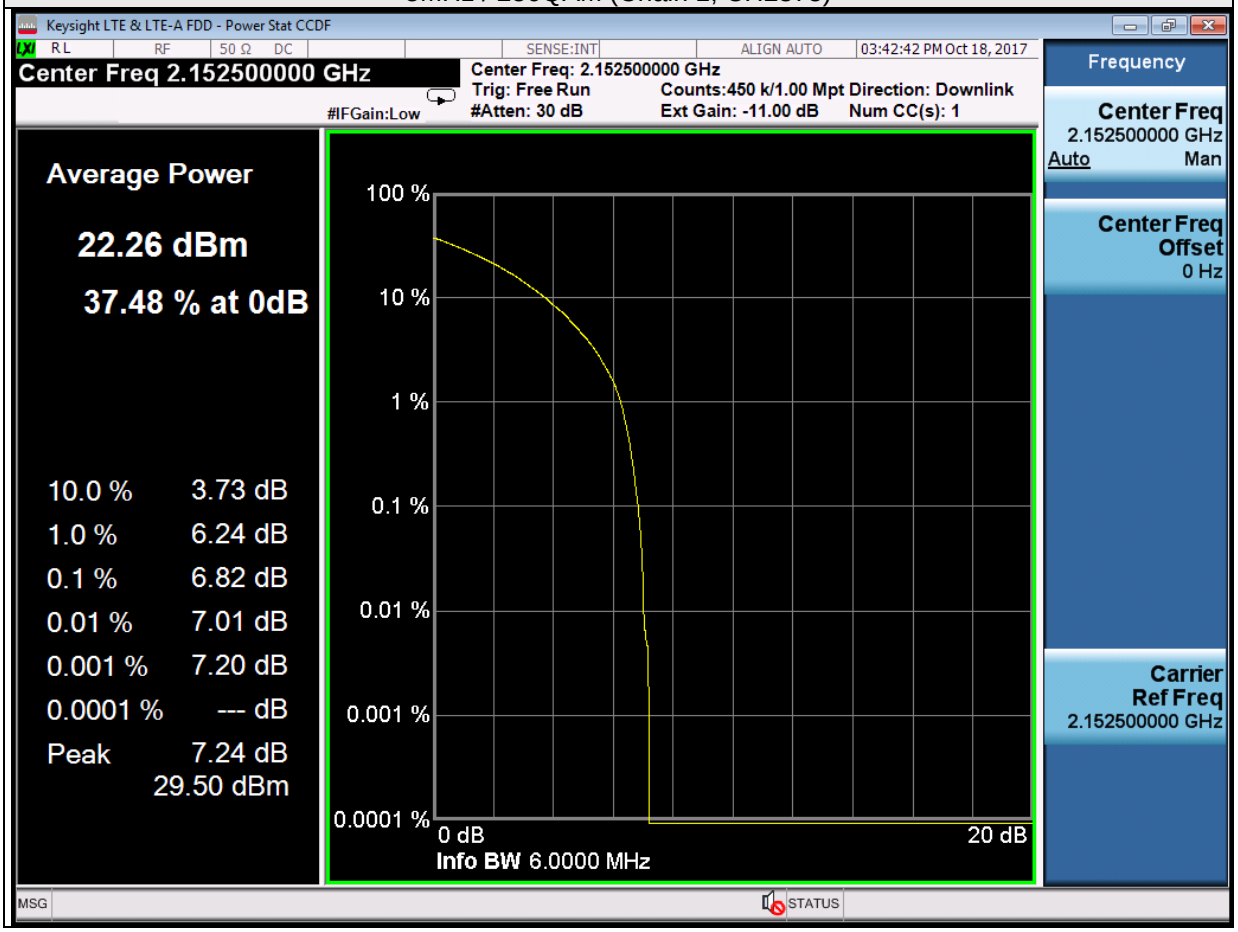


LTE

Channel Bandwidth: 5MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		Chain0	Chain1
		256QAM	256QAM
1975	2112.5	6.77	6.79
2175	2132.5	6.70	6.71
2375	2152.5	6.79	6.82

SPECTRUM PLOT OF WORST VALUE

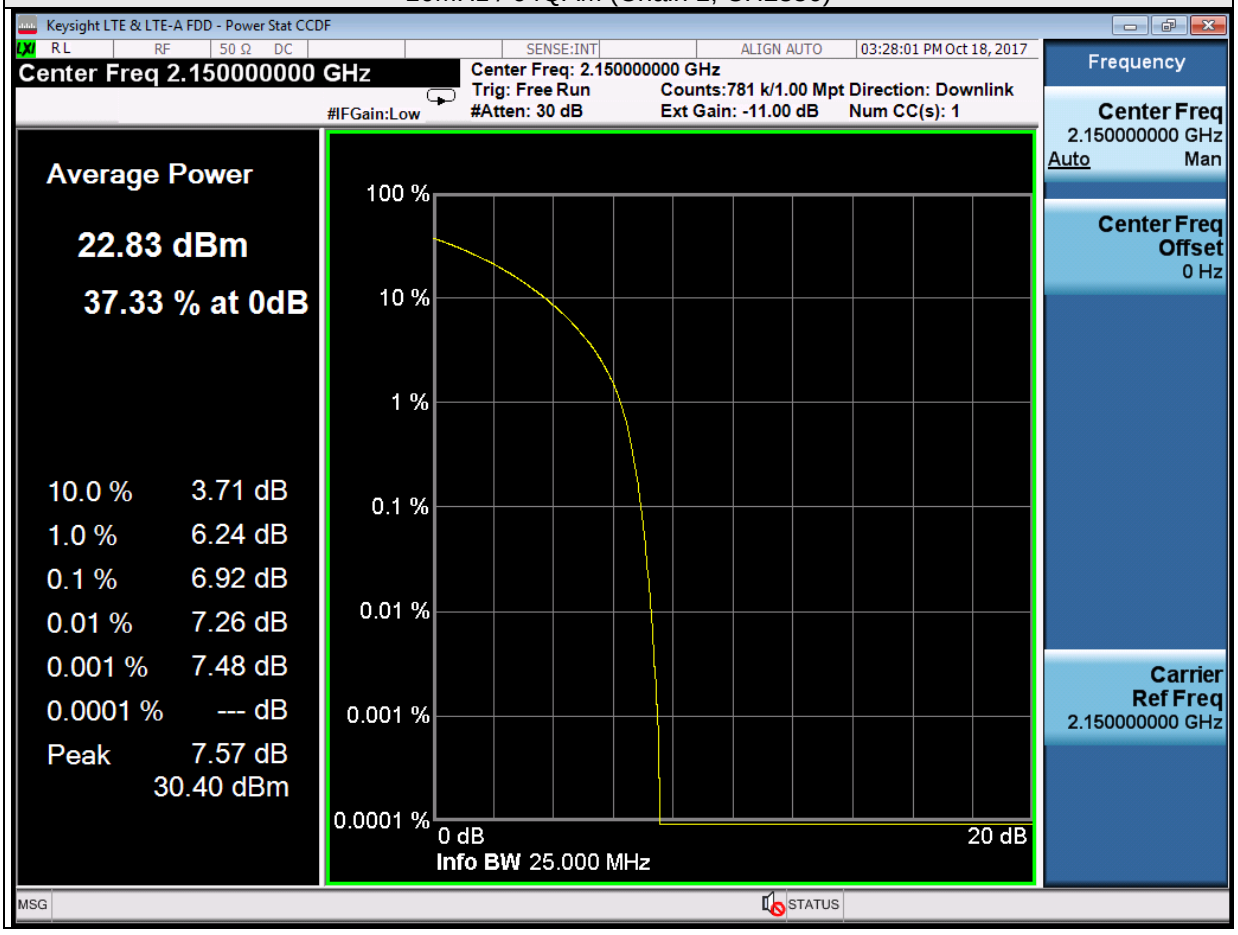
5MHz / 256QAM (Chain 1, CH2375)



Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		Chain0	Chain1
		256QAM	256QAM
2000	2115	6.82	6.76
2175	2132.5	6.82	6.79
2350	2150	6.90	6.92

SPECTRUM PLOT OF WORST VALUE

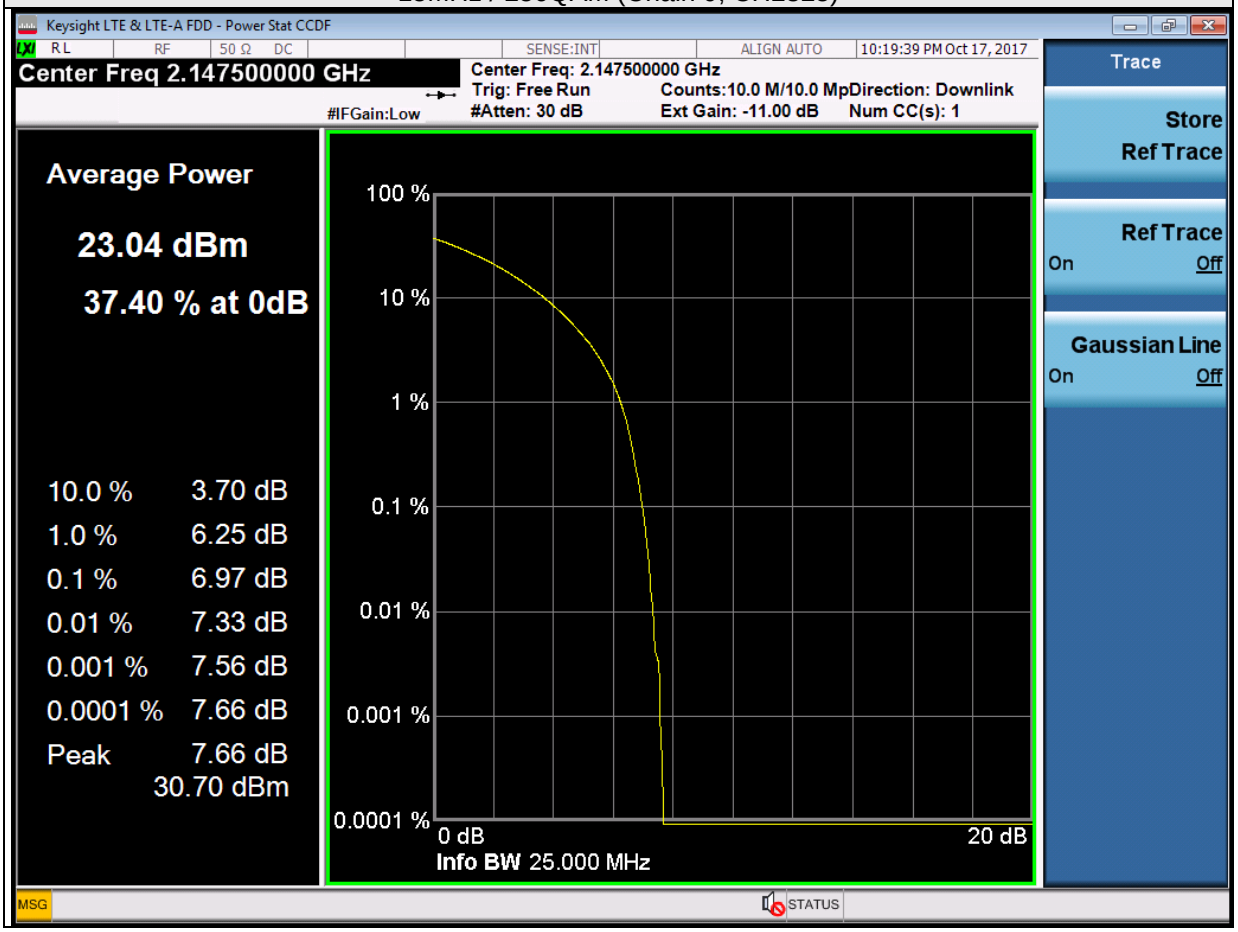
10MHz / 64QAM (Chain 1, CH2350)



Channel Bandwidth: 15MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		Chain0	Chain1
		256QAM	256QAM
2025	2117.5	6.86	6.91
2175	2132.5	6.89	6.91
2325	2147.5	6.97	6.93

SPECTRUM PLOT OF WORST VALUE

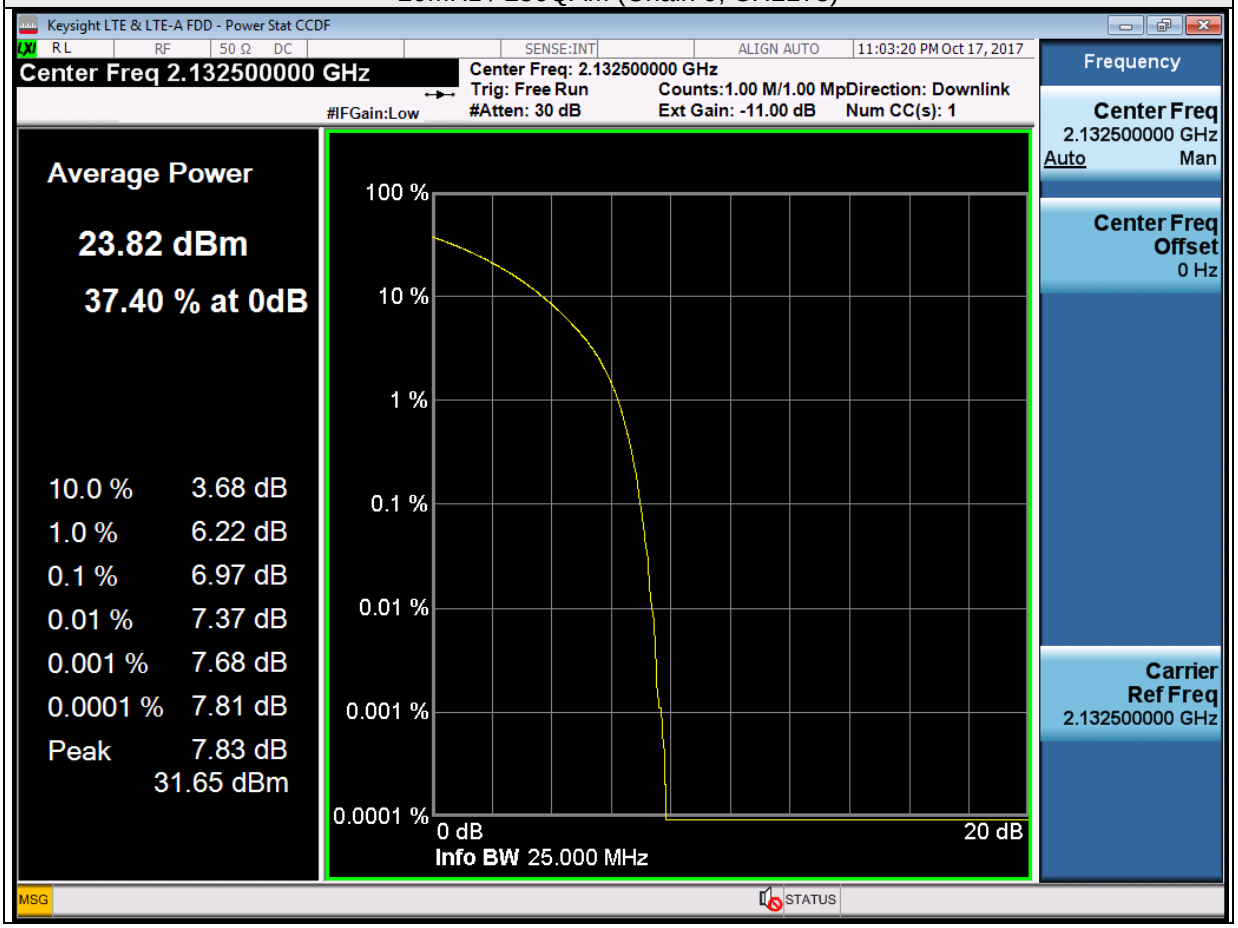
15MHz / 256QAM (Chain 0, CH2325)



Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	Peak To Average Ratio (dB)	
		Chain0	Chain1
		256QAM	256QAM
2050	2120	6.86	6.91
2175	2132.5	6.97	6.91
2300	2145	6.89	6.82

SPECTRUM PLOT OF WORST VALUE

20MHz / 256QAM (Chain 0, CH2175)



4.7 Conducted Spurious Emissions

4.7.1 Limits of Conducted Spurious Emissions Measurement

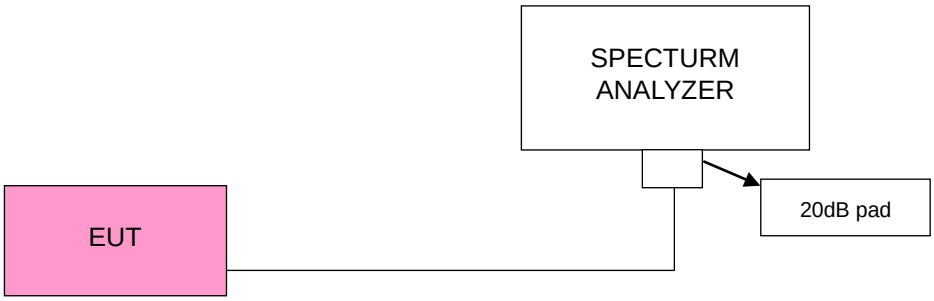
In the FCC 27.53(h), On any frequency outside a licensee's frequency block, The power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, the emission limit equal to –13dBm.

Note:

This device can be implement MIMO function, so the limit of spurious emissions needs to be reduced by $10\log(Numbers_{Ant})$ according to FCC KDB 662911 D01 guidance.

{The limit is adjusted to -13dBm – 10*log(2) = -16.01dBm.}

4.7.2 Test Setup



4.7.3 Test Procedure

a. All measurements were done at 3 channels: low, middle and high operational frequency range.

b. When the spectrum scanned from 9kHz to 22GHz, it shall be connected to the 20dB pad attenuated the carried frequency.

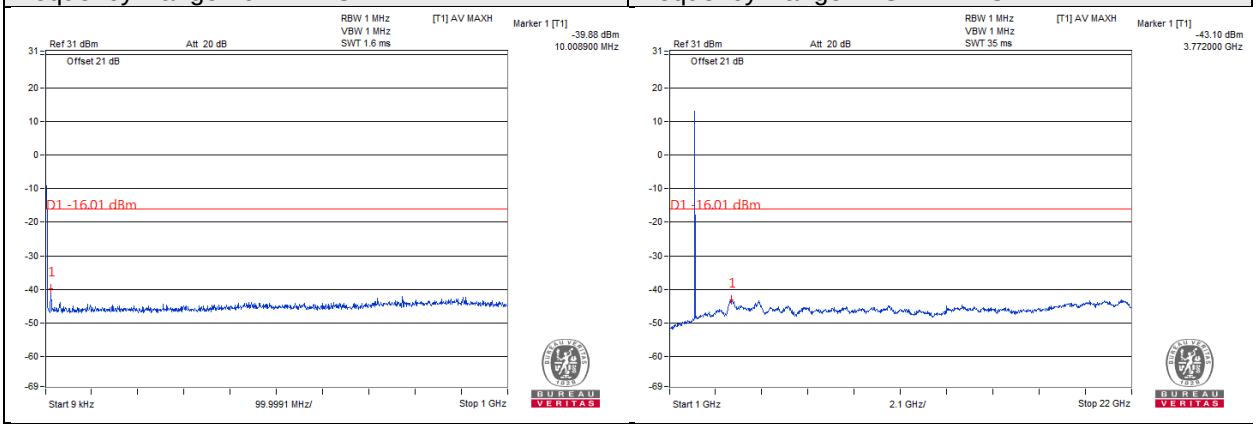
c. S.A. setting: RBW=1MHz, VBW=1MHz, Detector=RMS (Power average)

4.7.4 Test Results (With POE)

WCDMA

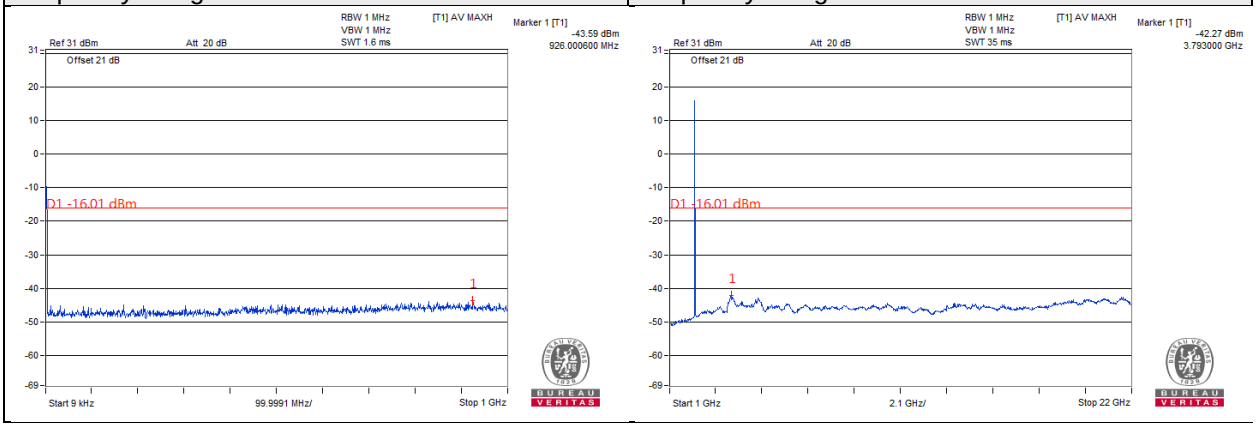
Chain 0				
QPSK / Channel Bandwidth: 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
10.00	-39.88	-23.87	-16.01	Pass
3772.00	-43.10	-27.09	-16.01	Pass

Channel 1537	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



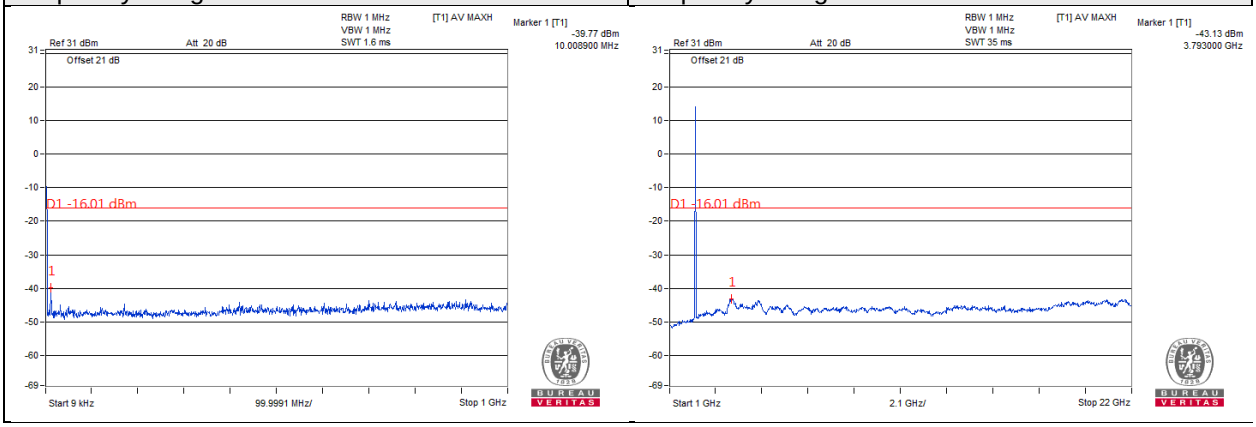
Chain 1				
QPSK / Channel Bandwidth: 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
926.00	-43.59	-27.58	-16.01	Pass
3793.00	-42.27	-26.26	-16.01	Pass

Channel 1537	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



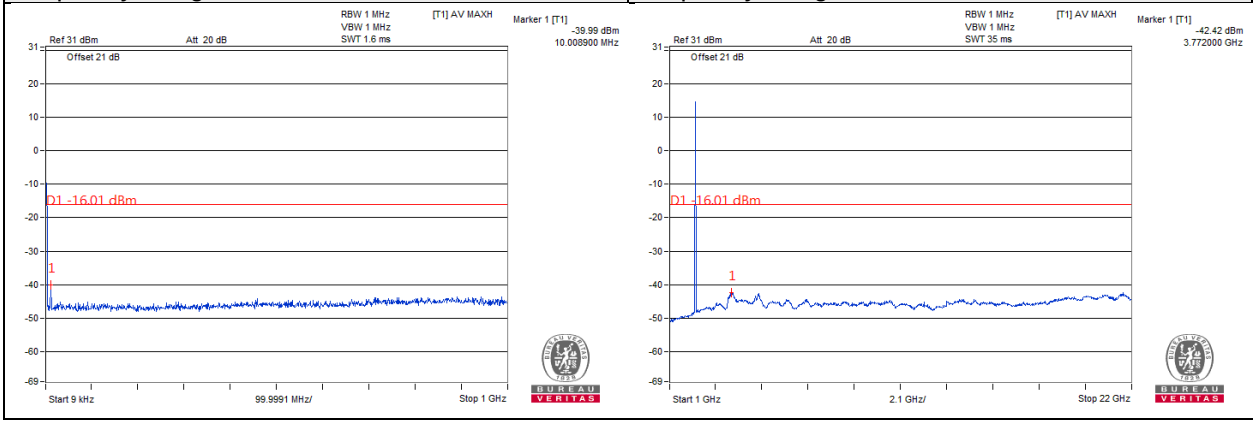
Chain 0				
QPSK / Channel Bandwidth: 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
10.00	-39.77	-23.76	-16.01	Pass
3793.00	-43.13	-27.12	-16.01	Pass

Channel 1638	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



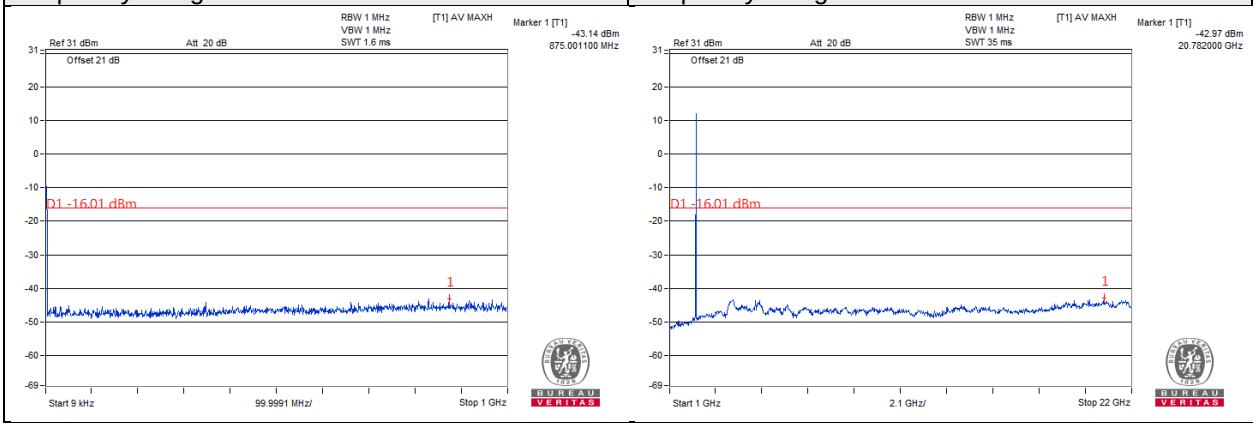
Chain 1				
QPSK / Channel Bandwidth: 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
10.00	-39.99	-23.98	-16.01	Pass
3772.00	-42.42	-26.41	-16.01	Pass

Channel 1638	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



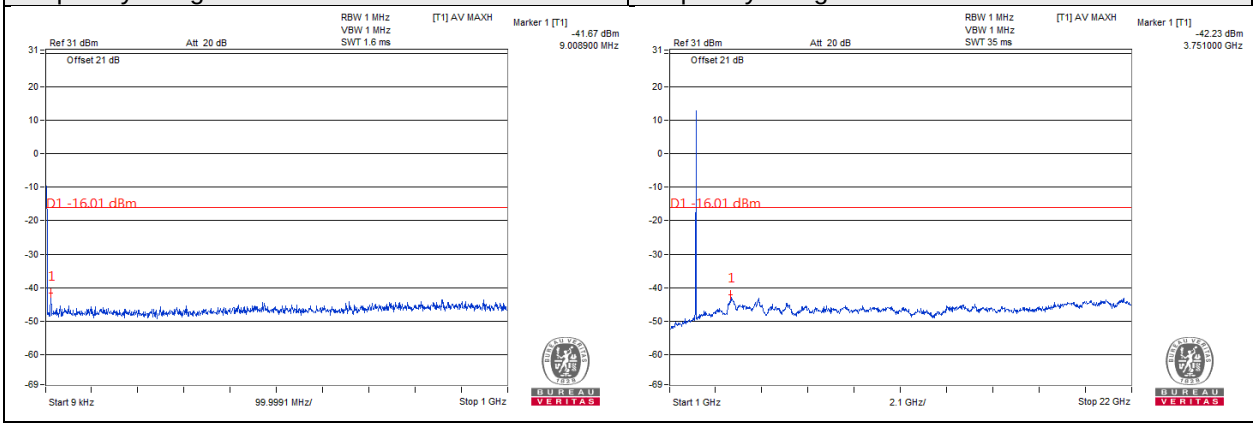
Chain 0				
QPSK / Channel Bandwidth: 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
875.00	-43.14	-27.13	-16.01	Pass
20782.00	-42.97	-26.96	-16.01	Pass

Channel 1738	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



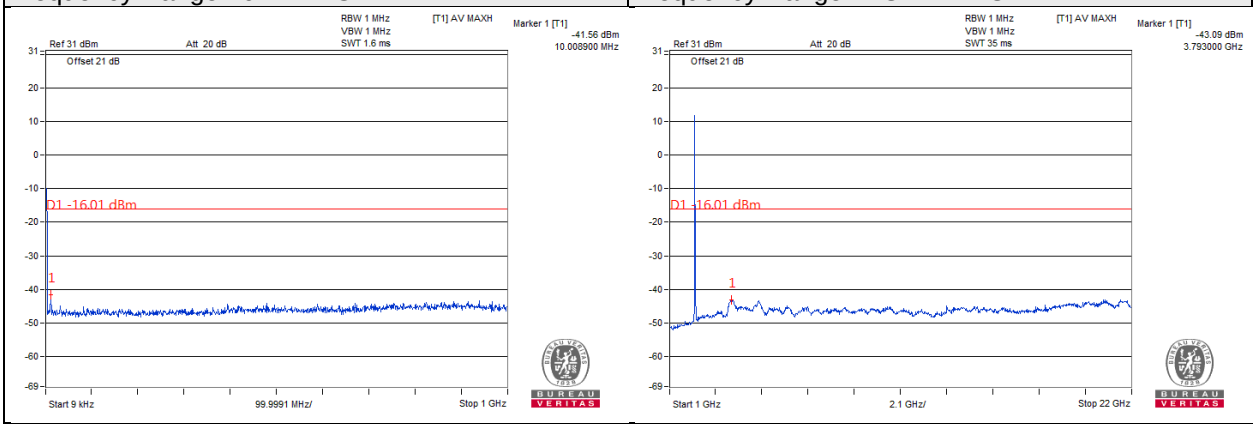
Chain 1				
QPSK / Channel Bandwidth: 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
9.00	-41.67	-25.66	-16.01	Pass
3751.00	-42.23	-26.22	-16.01	Pass

Channel 1738	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



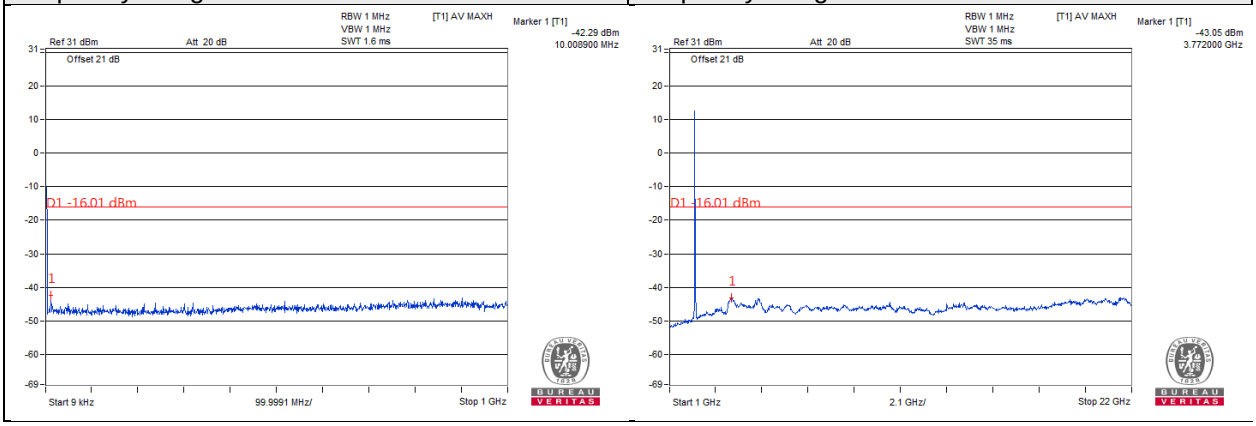
Chain 0				
QPSK / Channel Bandwidth: 5MHz + 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
10.00	-41.56	-25.55	-16.01	Pass
3793.00	-43.09	-27.08	-16.01	Pass

Channel 1537+1562	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



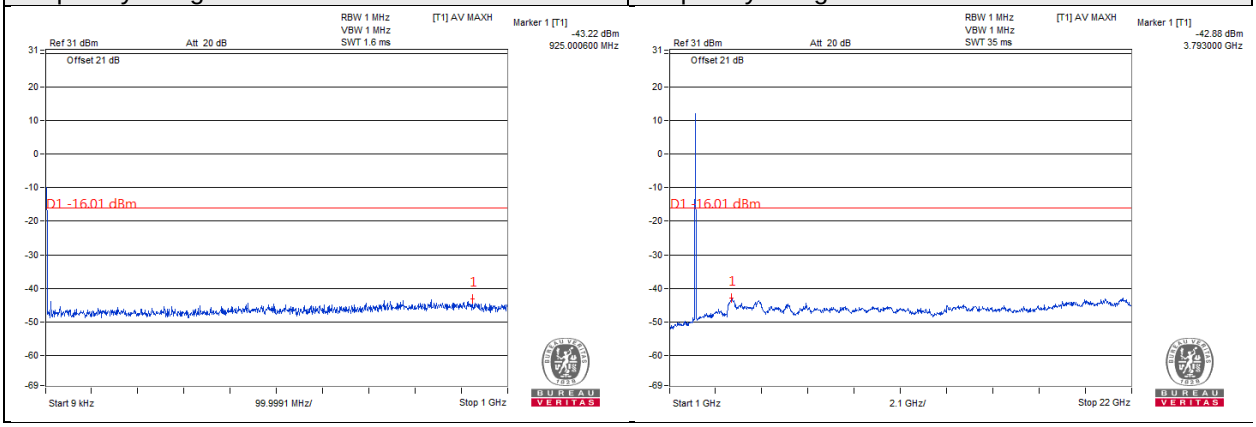
Chain 1				
QPSK / Channel Bandwidth: 5MHz + 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
10.00	-42.29	-26.28	-16.01	Pass
3772.00	-43.05	-27.04	-16.01	Pass

Channel 1537+1562	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



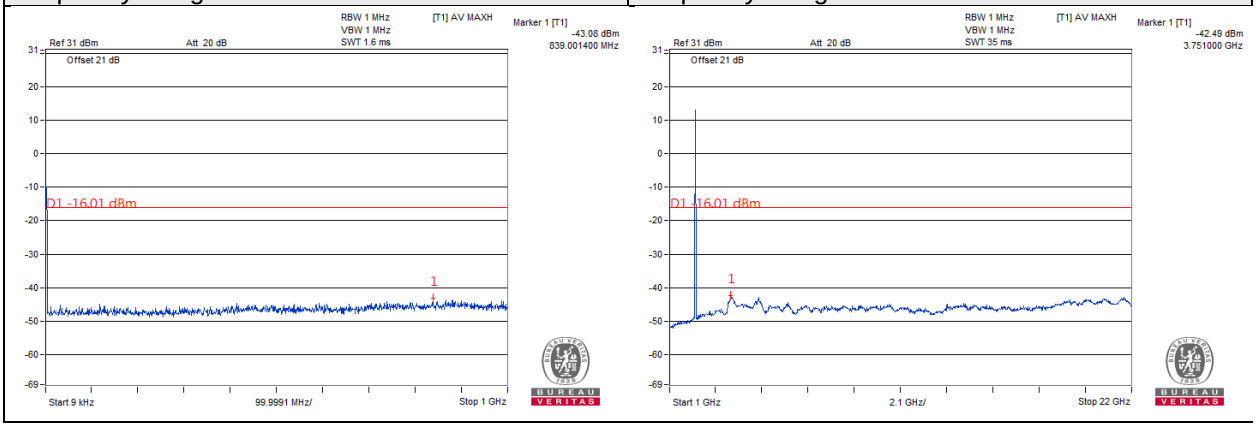
Chain 0				
QPSK / Channel Bandwidth: 5MHz + 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
925.00	-43.22	-27.21	-16.01	Pass
3793.00	-42.88	-26.87	-16.01	Pass

Channel 1626+1651	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



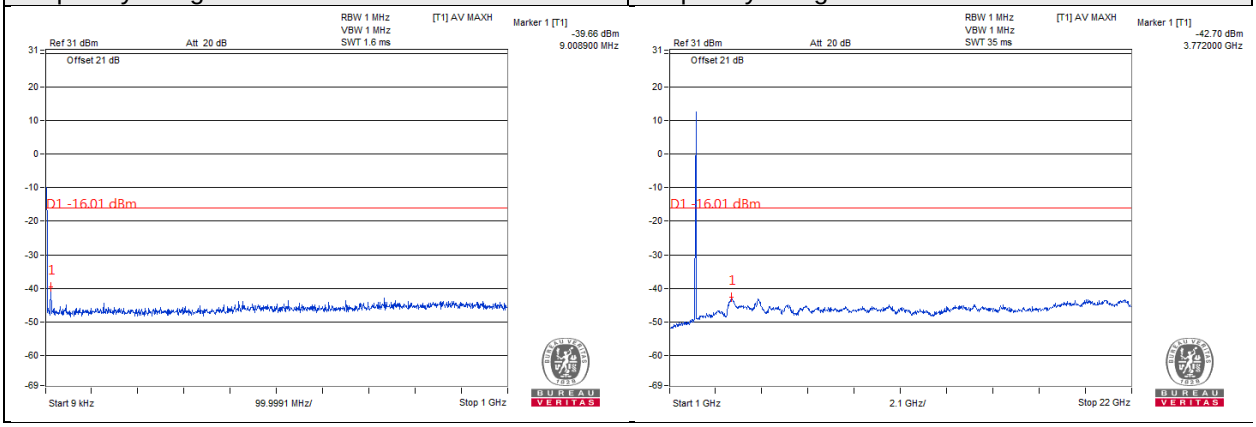
Chain 1				
QPSK / Channel Bandwidth: 5MHz + 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
839.00	-43.08	-27.07	-16.01	Pass
3751.00	-42.49	-26.48	-16.01	Pass

Channel 1626+1651	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



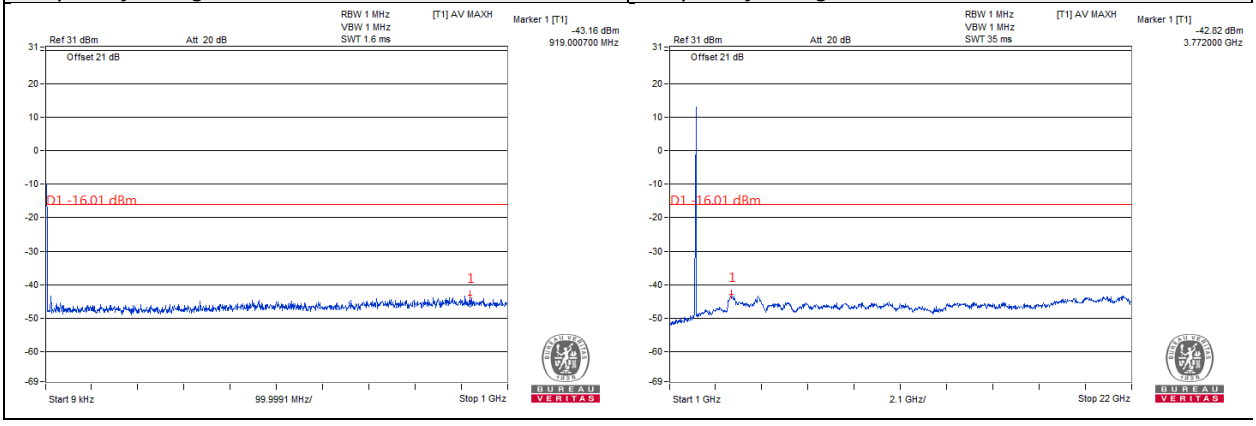
Chain 0				
QPSK / Channel Bandwidth: 5MHz + 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
9.00	-39.66	-23.65	-16.01	Pass
3772.00	-42.70	-26.69	-16.01	Pass

Channel 1713+1738	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



Chain 1				
QPSK / Channel Bandwidth: 5MHz + 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
919.00	-43.16	-27.15	-16.01	Pass
3772.00	-42.82	-26.81	-16.01	Pass

Channel 1713+1738	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz

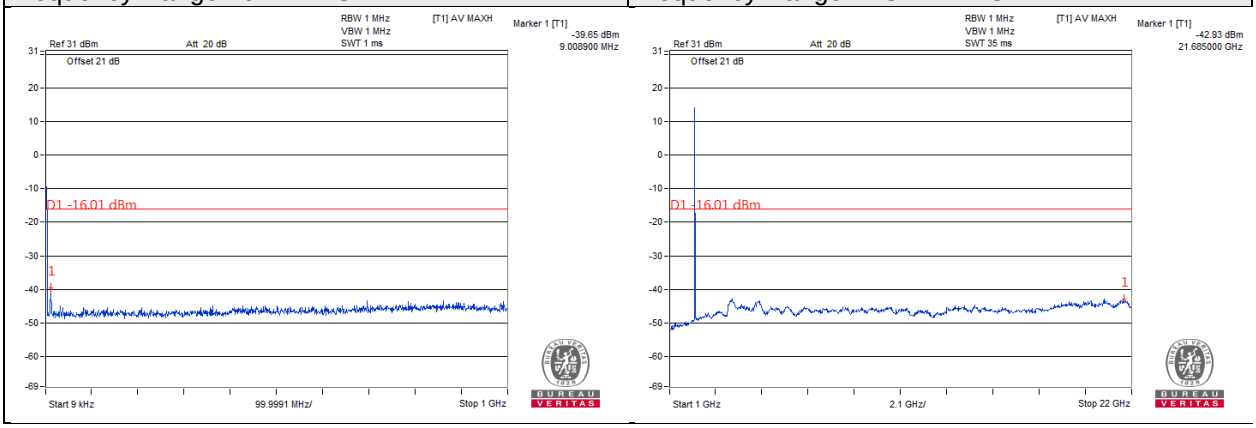


4.7.5 Test Results (With Adapter)

WCDMA

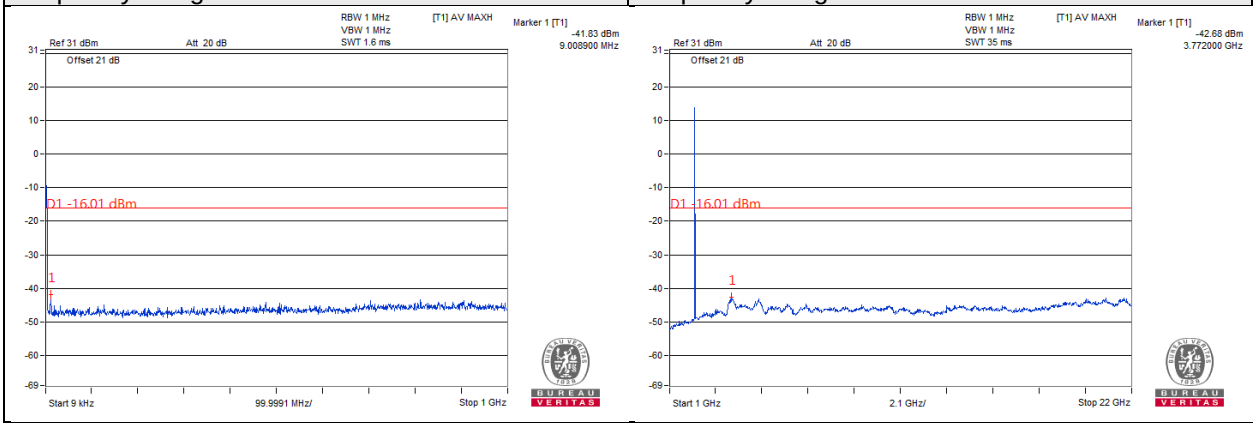
Chain 0				
QPSK / Channel Bandwidth: 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
9.00	-39.65	-23.64	-16.01	Pass
21685.00	-42.93	-26.92	-16.01	Pass

Channel 1537	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



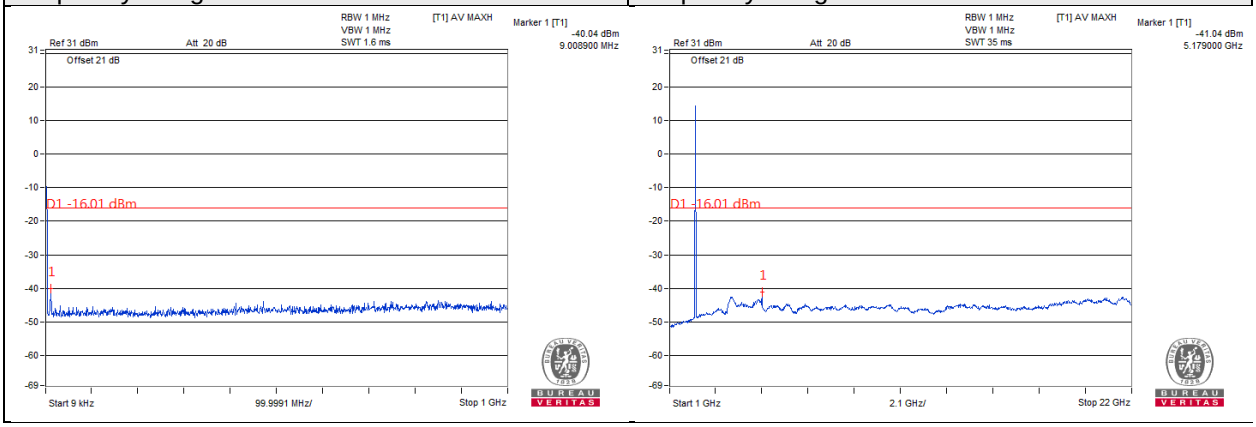
Chain 1				
QPSK / Channel Bandwidth: 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
9.00	-41.83	-25.82	-16.01	Pass
3772.00	-42.68	-26.67	-16.01	Pass

Channel 1537	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



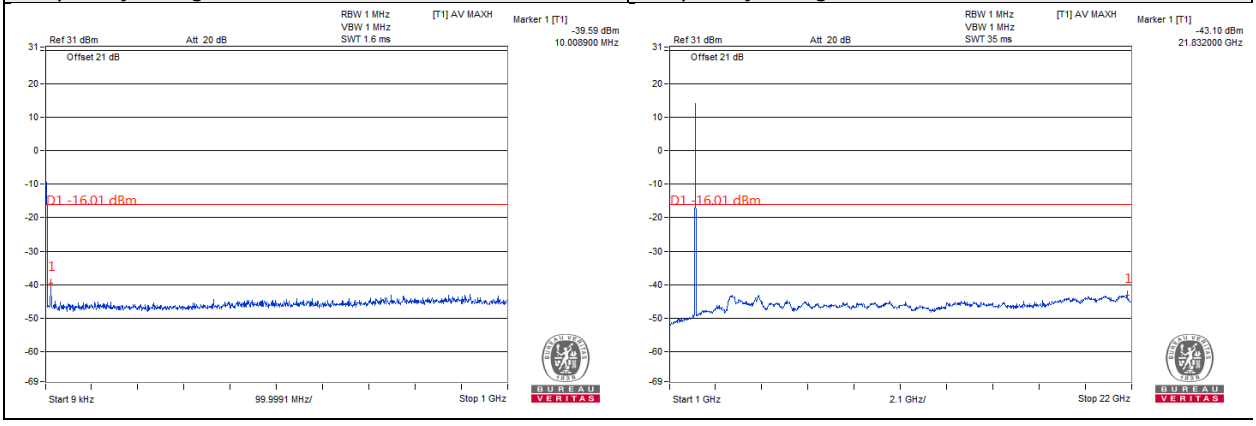
Chain 0				
QPSK / Channel Bandwidth: 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
9.00	-40.04	-24.03	-16.01	Pass
5179.00	-41.04	-25.03	-16.01	Pass

Channel 1638	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



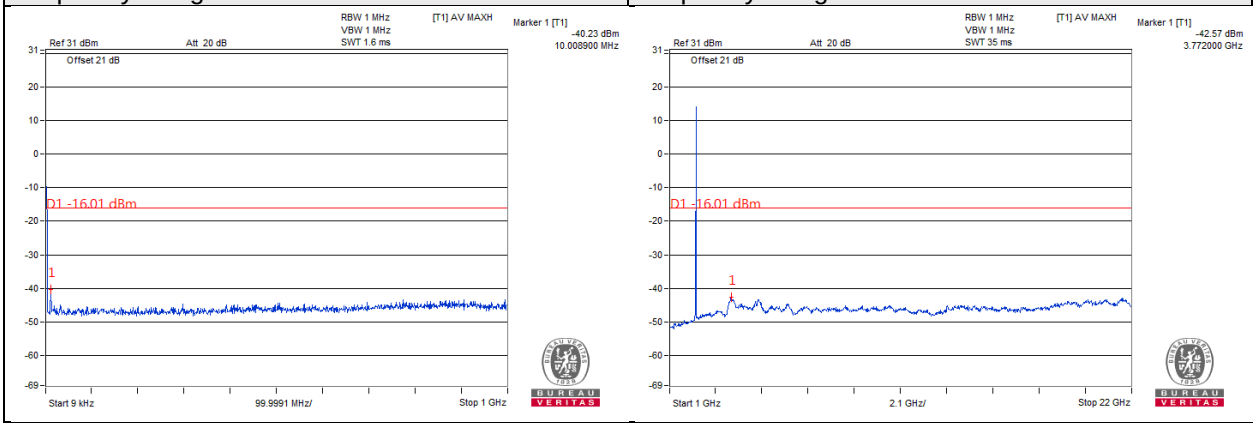
Chain 1				
QPSK / Channel Bandwidth: 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
10.00	-39.59	-23.58	-16.01	Pass
21832.00	-43.10	-27.09	-16.01	Pass

Channel 1638	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



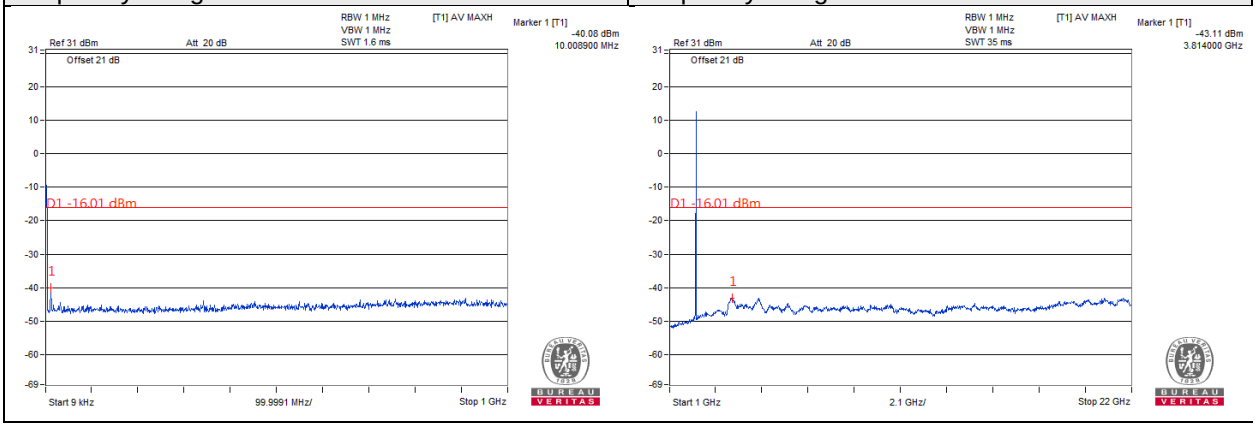
Chain 0				
QPSK / Channel Bandwidth: 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
10.00	-40.23	-24.22	-16.01	Pass
3772.00	-42.57	-26.56	-16.01	Pass

Channel 1738	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



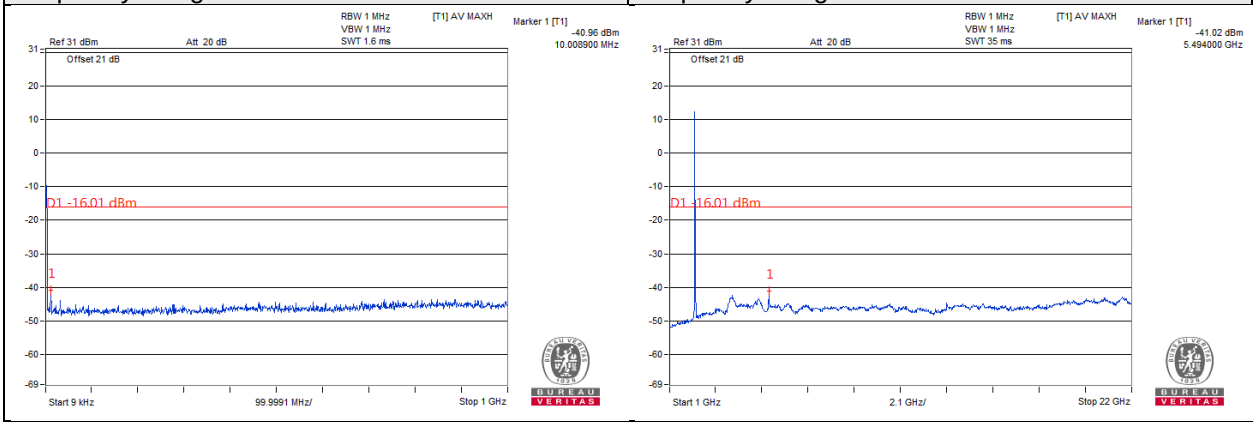
Chain 1				
QPSK / Channel Bandwidth: 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
10.00	-40.08	-24.07	-16.01	Pass
3814.00	-43.11	-27.10	-16.01	Pass

Channel 1738	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



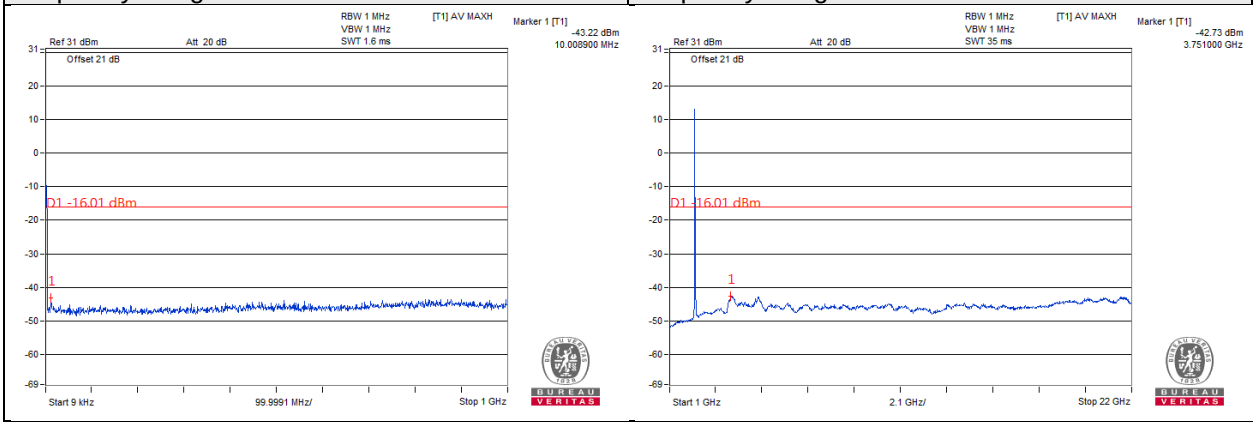
Chain 0				
QPSK / Channel Bandwidth: 5MHz + 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
10.00	-40.96	-24.95	-16.01	Pass
5494.00	-41.02	-25.01	-16.01	Pass

Channel 1537+1562	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



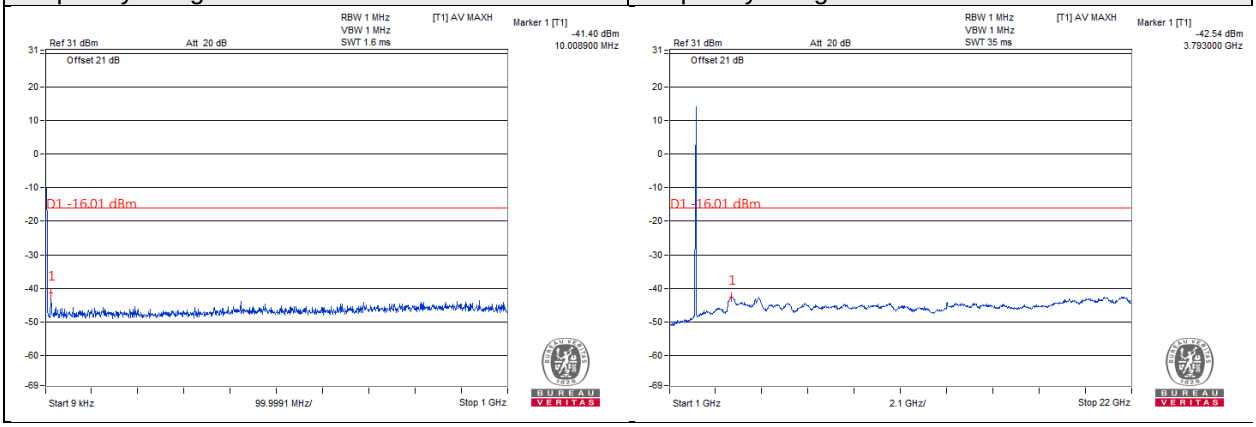
Chain 1				
QPSK / Channel Bandwidth: 5MHz + 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
10.00	-43.22	-27.21	-16.01	Pass
3751.00	-42.73	-26.72	-16.01	Pass

Channel 1537+1562	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



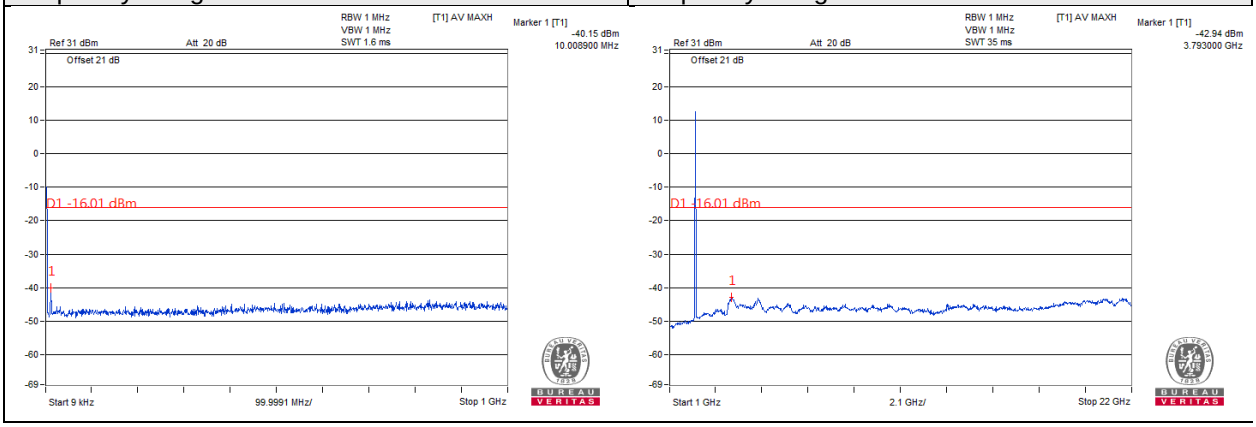
Chain 0				
QPSK / Channel Bandwidth: 5MHz + 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
10.00	-41.40	-25.39	-16.01	Pass
3793.00	-42.54	-26.53	-16.01	Pass

Channel 1626+1651	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



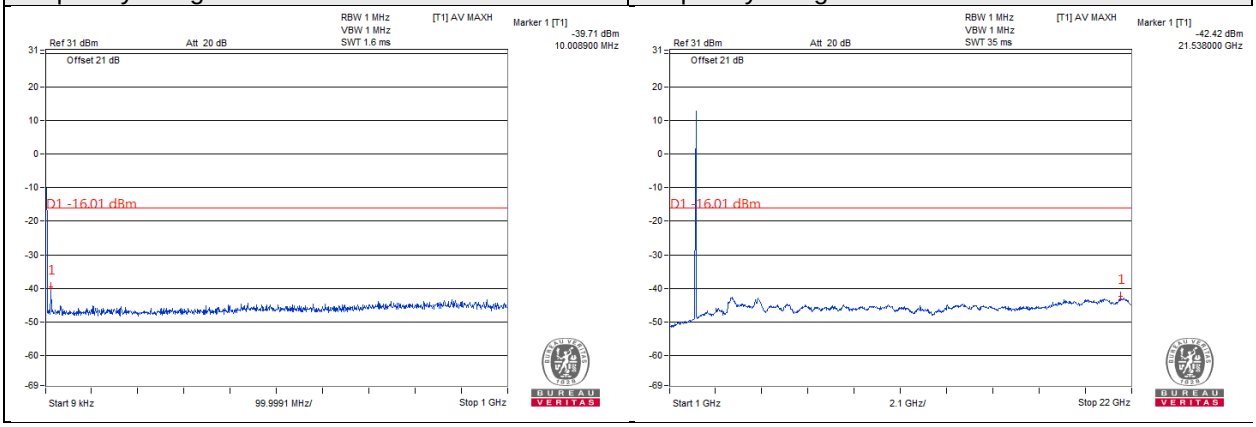
Chain 1				
QPSK / Channel Bandwidth: 5MHz + 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
10.00	-40.15	-24.14	-16.01	Pass
3793.00	-42.94	-26.93	-16.01	Pass

Channel 1626+1651	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



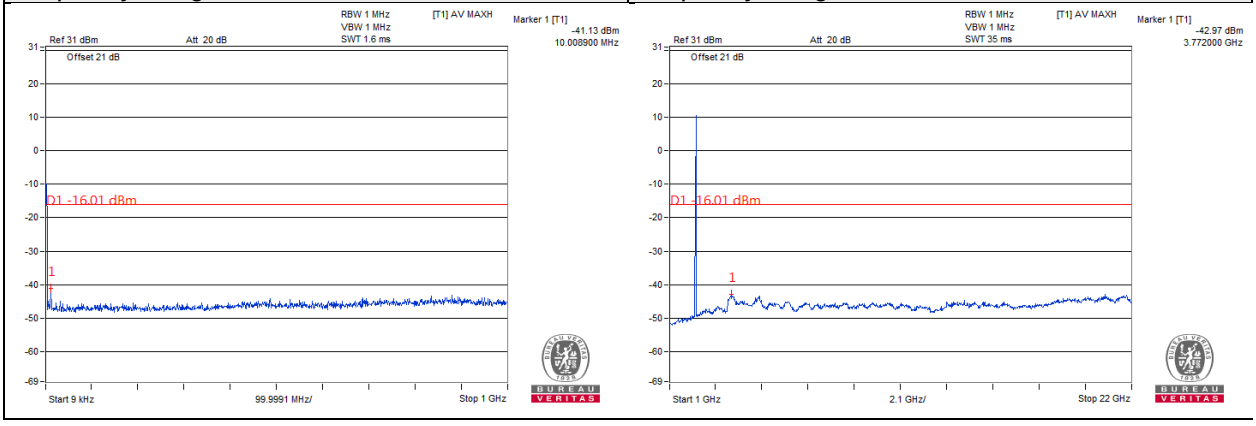
Chain 0				
QPSK / Channel Bandwidth: 5MHz + 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
10.00	-39.71	-23.70	-16.01	Pass
21538.00	-42.42	-26.41	-16.01	Pass

Channel 1713+1738	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



Chain 1				
QPSK / Channel Bandwidth: 5MHz + 5MHz				
Frequency(MHz)	Measurement Value	Margin	Limit	Result
10.00	-41.13	-25.12	-16.01	Pass
3772.00	-42.97	-26.96	-16.01	Pass

Channel 1713+1738	
Frequency Range : 9kHz~1GHz	Frequency Range : 1GHz ~22GHz



4.8 Radiated Emission Measurement

4.8.1 Limits of Radiated Emission Measurement

In the FCC 27.53(h), 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 43 + 10 log (P) dB, the emission limit equal to –13dBm.

4.8.2 Test Procedure

a. 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(below or equal 1GHz) and/or 1.5m(above 1GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.

c. The substitution antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value " of step b. Record the power level of S.G

d. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution antenna.

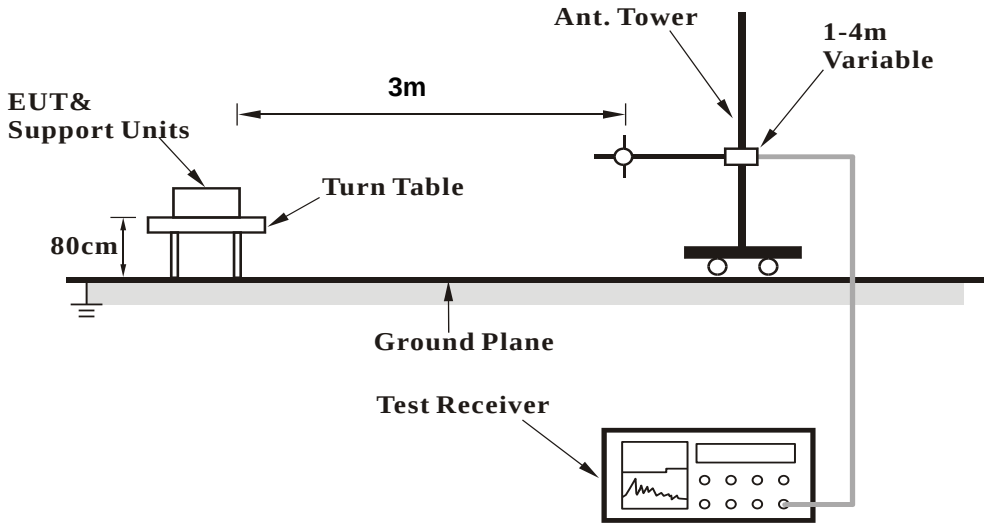
NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

4.8.3 Deviation from Test Standard

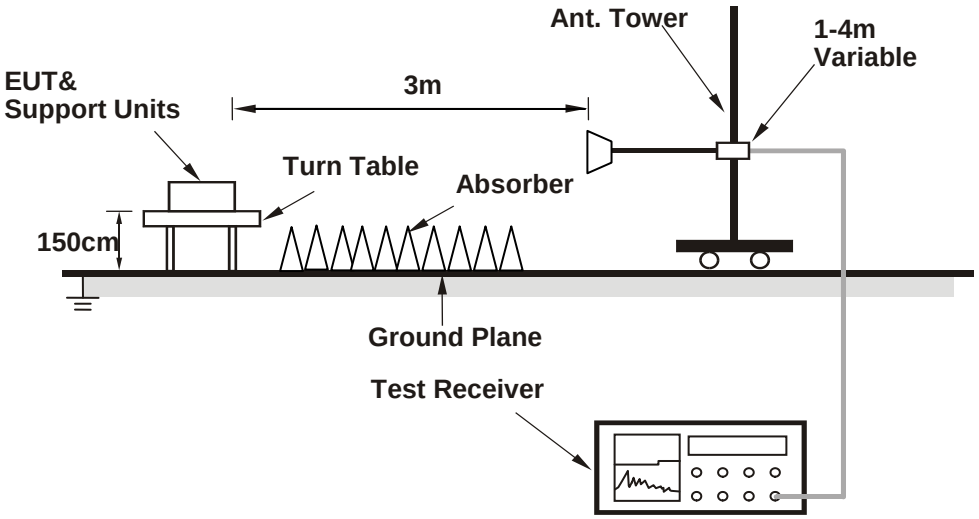
No deviation.

4.8.4 Test Setup

<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



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

4.8.5 Test Results (With POE, Transmitter)

WCDMA

Below 1GHz

Channel Bandwidth: 5MHz

Mode	TX channel 1537	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	30	28.65	-42.61	-14.90	-57.51	-13	-44.51
2	125.01	36.93	-53.75	-1.21	-54.97	-13	-41.97
3	295.78	30.06	-65.55	3.72	-61.82	-13	-48.82
4	400.54	30.64	-67.21	3.33	-63.88	-13	-50.88
5	699.3	30.07	-66.27	1.63	-64.64	-13	-51.64
6	959.26	34.59	-63.27	0.39	-62.88	-13	-49.88
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	36.2	34.93	-38.58	-13.39	-51.96	-13	-38.96
2	125.34	38.67	-52.09	-1.22	-53.30	-13	-40.30
3	300.3	33.21	-62.59	3.71	-58.87	-13	-45.87
4	400.01	35.24	-62.60	3.33	-59.27	-13	-46.27
5	550.7	38.19	-56.73	2.51	-54.23	-13	-41.23
6	960.24	40.78	-57.04	0.39	-56.65	-13	-43.65

Remarks:

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

Mode	TX channel 1638	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	30.48	27.85	-43.58	-14.78	-58.37	-13	-45.37
2	125.48	35.59	-55.20	-1.22	-56.41	-13	-43.41
3	295.18	28.81	-66.82	3.75	-63.07	-13	-50.07
4	401.06	29.14	-70.88	3.47	-67.40	-13	-54.40
5	698.74	28.86	-55.76	3.22	-52.54	-13	-39.54
6	958.38	33.27	-63.26	-2.54	-65.80	-13	-52.80
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	37.04	33.46	-40.35	-13.18	-53.53	-13	-40.53
2	125.02	38.25	-52.44	-1.21	-53.65	-13	-40.65
3	300.82	33.10	-62.72	3.71	-59.01	-13	-46.01
4	399.11	35.02	-62.82	3.34	-59.47	-13	-46.47
5	550.35	37.37	-57.56	2.51	-55.04	-13	-42.04
6	960.33	40.18	-57.64	0.39	-57.25	-13	-44.25

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 1738	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	29.51	26.88	-44.55	-14.78	-59.34	-13	-46.34
2	125.82	35.39	-60.36	5.33	-55.03	-13	-42.03
3	294.51	28.63	-67.03	3.74	-63.29	-13	-50.29
4	401.86	28.27	-71.74	3.47	-68.27	-13	-55.27
5	699.66	28.82	-55.79	3.22	-52.57	-13	-39.57
6	959.26	33.19	-63.34	-2.54	-65.88	-13	-52.88
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	37.76	32.32	-36.45	-14.04	-50.48	-13	-37.48
2	125.02	36.91	-49.29	0.87	-48.42	-13	-35.42
3	301.45	31.69	-59.66	-1.23	-60.90	-13	-47.90
4	398.64	33.95	-60.85	1.71	-59.15	-13	-46.15
5	550.86	36.52	-58.40	2.51	-55.89	-13	-42.89
6	961.21	38.73	-58.58	1.45	-57.13	-13	-44.13

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

WCDMA

ABOVE 1GHz

Channel Bandwidth: 5MHz

Mode	TX channel 1537	Frequency Range	Above 1000MHz

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	4224.8	61.41	-43.27	7.47	-35.80	-13	-22.80
2	6337.2	56.59	-48.24	6.24	-42.00	-13	-29.00
3	8449.6	59.43	-43.16	4.20	-38.96	-13	-25.96
4	10562	54.88	-47.17	3.51	-43.66	-13	-30.66
5	12674.4	47.45	-53.88	4.38	-49.51	-13	-36.51
6	14786.8	49.19	-48.16	3.70	-44.46	-13	-31.46
7	16899.2	52.5	-44.85	3.70	-41.15	-13	-28.15
8	19011.6	58.68	-38.73	3.71	-35.02	-13	-22.02
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	4224.8	61.14	-43.54	7.47	-36.07	-13	-23.07
2	6337.2	53.98	-50.85	6.24	-44.61	-13	-31.61
3	8449.6	50.3	-52.29	4.20	-48.09	-13	-35.09
4	10562	54.45	-47.60	3.51	-44.09	-13	-31.09
5	12674.4	48.37	-52.96	4.38	-48.59	-13	-35.59
6	14786.8	48	-49.35	3.70	-45.65	-13	-32.65
7	16899.2	50.14	-47.21	3.70	-43.51	-13	-30.51
8	19011.6	56.69	-40.72	3.71	-37.01	-13	-24.01

Remarks:

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

Mode	TX channel 1638	Frequency Range	Above 1000MHz

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	4265.2	61.80	-44.20	7.35	-36.85	-13	-23.85
2	6397.8	57.50	-47.07	6.12	-40.95	-13	-27.95
3	8530.4	59.40	-43.24	4.21	-39.02	-13	-26.02
4	10663	53.9	-48.03	3.41	-44.62	-13	-31.62
5	12795.6	48.1	-53.05	4.40	-48.64	-13	-35.64
6	14928.2	49.6	-47.75	3.70	-44.05	-13	-31.05
7	17060.8	51.8	-45.55	3.70	-41.85	-13	-28.85
8	19193.4	57.9	-40.44	3.74	-36.70	-13	-23.70
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	4265.2	61.5	-44.50	7.35	-37.15	-13	-24.15
2	6397.8	54.8	-49.77	6.12	-43.65	-13	-30.65
3	8530.4	51	-51.64	4.21	-47.42	-13	-34.42
4	10663	53.7	-48.23	3.41	-44.82	-13	-31.82
5	12795.6	47.6	-53.55	4.40	-49.14	-13	-36.14
6	14928.2	48.9	-48.45	3.70	-44.75	-13	-31.75
7	17060.8	51.1	-46.25	3.70	-42.55	-13	-29.55
8	19193.4	57.1	-41.24	3.74	-37.50	-13	-24.50

Remarks:

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

Mode	TX channel 1738	Frequency Range	Above 1000MHz

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	4305.2	61.31	-43.32	7.42	-35.90	-13	-22.90
2	6457.8	57.44	-46.88	6.01	-40.87	-13	-27.87
3	8610.4	60.38	-42.30	4.22	-38.08	-13	-25.08
4	10763	54.64	-47.18	3.32	-43.86	-13	-30.86
5	12915.6	47.99	-52.96	4.65	-48.31	-13	-35.31
6	15068.2	50.08	-47.27	3.70	-43.57	-13	-30.57
7	17220.8	52.64	-44.71	3.70	-41.01	-13	-28.01
8	19373.4	58.42	-40.84	3.78	-37.07	-13	-24.07
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	4305.2	61.41	-43.22	7.42	-35.80	-13	-22.80
2	6457.8	53.87	-50.45	6.01	-44.44	-13	-31.44
3	8610.4	50.93	-51.75	4.22	-47.53	-13	-34.53
4	10763	54.08	-47.74	3.32	-44.42	-13	-31.42
5	12915.6	47.83	-53.12	4.65	-48.47	-13	-35.47
6	15068.2	48.71	-48.64	3.70	-44.94	-13	-31.94
7	17220.8	50.61	-46.74	3.70	-43.04	-13	-30.04
8	19373.4	57.82	-41.44	3.78	-37.67	-13	-24.67

Remarks:

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

WCDMA

Below 1GHz

Channel Bandwidth: 5MHz + 5MHz

Mode	TX channel 1537+1562	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	30.42	28.45	-42.96	-14.80	-57.76	-13	-44.76
2	124.99	36.47	-59.28	5.34	-53.94	-13	-40.94
3	296.49	29.65	-66.03	3.74	-62.29	-13	-49.29
4	400.27	30.13	-69.84	3.48	-66.36	-13	-53.36
5	698.86	29.89	-54.78	3.22	-51.56	-13	-38.56
6	958.74	33.20	-63.33	-2.54	-65.87	-13	-52.87
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	35.59	34.39	-32.58	-14.91	-47.49	-13	-34.49
2	124.99	37.86	-48.38	0.86	-47.53	-13	-34.53
3	300.84	32.45	-63.37	3.71	-59.66	-13	-46.66
4	400.59	34.11	-60.69	1.69	-59.00	-13	-46.00
5	549.71	36.94	-57.99	2.52	-55.47	-13	-42.47
6	960.06	39.38	-57.93	1.45	-56.48	-13	-43.48

Remarks:

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

Mode	TX channel 1626+1651	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	30.48	27.85	-43.58	-14.78	-58.37	-13	-45.37
2	124.99	35.59	-60.17	5.35	-54.82	-13	-41.82
3	295.18	28.81	-66.83	3.74	-63.08	-13	-50.08
4	401.06	29.14	-70.88	3.47	-67.41	-13	-54.41
5	698.74	28.86	-55.84	3.22	-52.62	-13	-39.62
6	958.38	33.27	-63.26	-2.53	-65.79	-13	-52.79
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	36.58	32.29	-35.95	-14.29	-50.25	-13	-37.25
2	125.01	37.03	-49.32	0.82	-48.50	-13	-35.50
3	300.81	32.08	-63.74	3.71	-60.03	-13	-47.03
4	398.71	34.75	-60.06	1.71	-58.34	-13	-45.34
5	549.68	36.62	-58.30	2.52	-55.79	-13	-42.79
6	959.67	39.51	-57.80	1.45	-56.35	-13	-43.35

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 1713+1738	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	30.4	26.37	-45.06	-14.78	-59.85	-13	-46.85
2	126.71	34.98	-60.76	5.30	-55.46	-13	-42.46
3	293.58	28.57	-67.02	3.75	-63.27	-13	-50.27
4	401.76	27.93	-72.09	3.47	-68.62	-13	-55.62
5	699.43	27.57	-57.04	3.22	-53.82	-13	-40.82
6	958.59	33.10	-63.43	-2.54	-65.97	-13	-52.97
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	37.17	31.18	-37.67	-14.00	-51.67	-13	-38.67
2	124.99	36.31	-50.09	0.80	-49.28	-13	-36.28
3	301.65	31.66	-64.19	3.71	-60.48	-13	-47.48
4	399.35	33.51	-61.30	1.72	-59.58	-13	-46.58
5	551.52	35.88	-59.04	2.51	-56.53	-13	-43.53
6	961.15	38.24	-59.08	1.45	-57.62	-13	-44.62

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

WCDMA

ABOVE 1GHz

Channel Bandwidth: 5MHz + 5MHz

Mode	TX channel 1537+1562	Frequency Range	Above 1000MHz

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	4224.8	61.57	-43.11	7.47	-35.64	-13	-22.64
2	6337.2	59.51	-45.32	6.24	-39.08	-13	-26.08
3	8449.6	57.92	-44.67	4.20	-40.47	-13	-27.47
4	10562	52.93	-49.12	3.51	-45.61	-13	-32.61
5	12674.4	46.48	-54.85	4.38	-50.48	-13	-37.48
6	14786.8	48.34	-49.01	3.70	-45.31	-13	-32.31
7	16899.2	49.99	-47.36	3.70	-43.66	-13	-30.66
8	19011.6	57.51	-39.90	3.71	-36.19	-13	-23.19
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	4224.8	52.77	-51.91	7.47	-44.44	-13	-31.44
2	6337.2	55.51	-49.32	6.24	-43.08	-13	-30.08
3	8449.6	47.75	-54.84	4.20	-50.64	-13	-37.64
4	10562	50.77	-51.28	3.51	-47.77	-13	-34.77
5	12674.4	44.32	-57.01	4.38	-52.64	-13	-39.64
6	14786.8	45.01	-52.34	3.70	-48.64	-13	-35.64
7	16899.2	45.68	-51.67	3.70	-47.97	-13	-34.97
8	19011.6	53.7	-43.71	3.71	-40.00	-13	-27.00

Remarks:

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

Mode	TX channel 1626+1651	Frequency Range	Above 1000MHz

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	4265.2	60.80	-45.20	7.35	-37.85	-13	-24.85
2	6397.8	59.40	-45.17	6.12	-39.05	-13	-26.05
3	8530.4	57.40	-45.24	4.21	-41.02	-13	-28.02
4	10663	52.8	-49.13	3.41	-45.72	-13	-32.72
5	12795.6	46.1	-55.05	4.40	-50.64	-13	-37.64
6	14928.2	48.2	-49.15	3.70	-45.45	-13	-32.45
7	17060.8	50.5	-46.85	3.70	-43.15	-13	-30.15
8	19193.4	56.6	-41.74	3.74	-38.00	-13	-25.00
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	4265.2	52.9	-53.10	7.35	-45.75	-13	-32.75
2	6397.8	55.1	-49.47	6.12	-43.35	-13	-30.35
3	8530.4	47.1	-55.54	4.21	-51.32	-13	-38.32
4	10663	50.8	-51.13	3.41	-47.72	-13	-34.72
5	12795.6	44	-57.15	4.40	-52.74	-13	-39.74
6	14928.2	45.8	-51.55	3.70	-47.85	-13	-34.85
7	17060.8	45.9	-51.45	3.70	-47.75	-13	-34.75
8	19193.4	53.5	-44.84	3.74	-41.10	-13	-28.10

Remarks:

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

Mode	TX channel 1713+1738	Frequency Range	Above 1000MHz

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	4305.2	60.46	-44.17	7.42	-36.75	-13	-23.75
2	6457.8	58.44	-45.88	6.01	-39.87	-13	-26.87
3	8610.4	56.84	-45.84	4.22	-41.62	-13	-28.62
4	10763	52.24	-49.58	3.32	-46.26	-13	-33.26
5	12915.6	46.88	-54.07	4.65	-49.42	-13	-36.42
6	15068.2	47.21	-50.14	3.70	-46.44	-13	-33.44
7	17220.8	50.06	-47.29	3.70	-43.59	-13	-30.59
8	19373.4	57.45	-41.81	3.78	-38.04	-13	-25.04
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	4305.2	53.07	-51.56	7.42	-44.14	-13	-31.14
2	6457.8	55.49	-48.83	6.01	-42.82	-13	-29.82
3	8610.4	47.65	-55.03	4.22	-50.81	-13	-37.81
4	10763	50.72	-51.10	3.32	-47.78	-13	-34.78
5	12915.6	44.66	-56.29	4.65	-51.64	-13	-38.64
6	15068.2	45.31	-52.04	3.70	-48.34	-13	-35.34
7	17220.8	46.1	-51.25	3.70	-47.55	-13	-34.55
8	19373.4	53.97	-45.29	3.78	-41.52	-13	-28.52

Remarks:

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

4.8.6 Test Results (With Adapter, Transmitter)

Below 1GHz

Channel Bandwidth: 5MHz

Mode	TX channel 1537	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	30.02	27.42	-43.85	-14.89	-58.74	-13	-45.74
2	125.01	35.84	-59.91	5.34	-54.58	-13	-41.58
3	295.82	28.92	-66.71	3.75	-62.96	-13	-49.96
4	401.32	29.53	-70.48	3.47	-67.01	-13	-54.01
5	698.6	30.06	-65.81	11.76	-54.05	-13	-41.05
6	959.42	33.24	-63.29	-2.53	-65.82	-13	-52.82
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	36.07	33.77	-34.37	-14.34	-48.71	-13	-35.71
2	125.01	37.57	-48.71	0.85	-47.86	-13	-34.86
3	299.85	33.02	-62.76	3.71	-59.04	-13	-46.04
4	399.01	35.16	-59.65	1.71	-57.93	-13	-44.93
5	551.03	38.13	-56.78	2.51	-54.27	-13	-41.27
6	960.34	40.28	-57.03	1.45	-55.58	-13	-42.58

Remarks:

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

Mode	TX channel 1638	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	30.26	26.98	-44.37	-14.84	-59.21	-13	-46.21
2	125.5	35.22	-60.53	5.34	-55.20	-13	-42.20
3	295.29	28.65	-66.98	3.75	-63.24	-13	-50.24
4	400.69	28.91	-71.10	3.47	-67.62	-13	-54.62
5	698.72	27.51	-57.19	3.22	-53.96	-13	-40.96
6	957.64	32.00	-64.53	-2.51	-67.04	-13	-54.04
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	37.36	32.53	-35.60	-14.35	-49.95	-13	-36.95
2	124.99	37.37	-53.32	-1.21	-54.53	-13	-41.53
3	300.56	31.82	-64.00	3.71	-60.29	-13	-47.29
4	398.22	35.01	-59.80	1.72	-58.08	-13	-45.08
5	549.98	36.24	-58.69	2.52	-56.17	-13	-43.17
6	960.03	40.04	-57.26	1.45	-55.81	-13	-42.81

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 1738	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	30.2	25.83	-45.60	-14.78	-60.39	-13	-47.39
2	125.63	34.10	-61.65	5.33	-56.32	-13	-43.32
3	294.28	28.43	-67.17	3.75	-63.42	-13	-50.42
4	400.91	27.11	-72.84	3.48	-69.36	-13	-56.36
5	698.98	27.40	-57.26	3.22	-54.04	-13	-41.04
6	959.1	33.12	-63.41	-2.55	-65.96	-13	-52.96
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	38.19	31.42	-37.34	-14.04	-51.38	-13	-38.38
2	124.99	36.83	-49.65	0.78	-48.87	-13	-35.87
3	301.31	30.25	-61.10	-1.23	-62.34	-13	-49.34
4	398.05	33.18	-61.63	1.73	-59.90	-13	-46.90
5	551.65	36.45	-58.46	2.50	-55.95	-13	-42.95
6	960.66	38.68	-58.63	1.45	-57.18	-13	-44.18

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Below 1GHz

Channel Bandwidth: 5MHz + 5MHz

Mode	TX channel 1537+1562	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	31.41	27.32	-44.09	-14.80	-58.89	-13	-45.89
2	125.02	36.30	-59.45	5.34	-54.12	-13	-41.12
3	295.76	28.60	-67.05	3.74	-63.31	-13	-50.31
4	401.07	30.09	-69.92	3.47	-66.45	-13	-53.45
5	699.51	29.53	-55.04	3.23	-51.82	-13	-38.82
6	958.14	33.04	-63.49	-2.52	-66.01	-13	-53.01
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	35.07	33.65	-33.27	-14.93	-48.20	-13	-35.20
2	124.99	37.01	-49.48	0.77	-48.71	-13	-35.71
3	300.08	32.41	-63.41	3.71	-59.70	-13	-46.70
4	401.04	33.48	-61.32	1.68	-59.63	-13	-46.63
5	550.2	36.37	-58.57	2.52	-56.04	-13	-43.04
6	960.54	37.90	-59.41	1.45	-57.96	-13	-44.96

Remarks:

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

Mode	TX channel 1626+1651	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	31.48	26.81	-44.62	-14.78	-59.41	-13	-46.41
2	125.01	34.67	-61.08	5.34	-55.74	-13	-42.74
3	295.99	28.78	-66.89	3.74	-63.16	-13	-50.16
4	400.58	28.69	-71.29	3.48	-67.81	-13	-54.81
5	699.34	27.64	-57.00	3.22	-53.78	-13	-40.78
6	957.53	32.90	-63.63	-2.52	-66.15	-13	-53.15
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	36.23	31.98	-35.60	-14.61	-50.21	-13	-37.21
2	124.99	35.61	-50.96	0.75	-50.21	-13	-37.21
3	300.07	31.12	-64.70	3.71	-60.99	-13	-47.99
4	398.71	34.02	-60.78	1.71	-59.08	-13	-46.08
5	549.08	35.82	-59.12	2.52	-56.59	-13	-43.59
6	959.26	38.91	-58.39	1.45	-56.94	-13	-43.94

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 1713+1738	Frequency Range	Below 1000 MHz

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	30.47	25.07	-46.36	-14.78	-61.15	-13	-48.15
2	125.02	34.05	-61.69	5.30	-56.39	-13	-43.39
3	293.89	27.52	-68.07	3.75	-64.32	-13	-51.32
4	400.93	26.65	-73.37	3.47	-69.90	-13	-56.90
5	699.19	27.34	-57.27	3.22	-54.05	-13	-41.05
6	959.01	32.28	-64.25	-2.54	-66.79	-13	-53.79
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	Reading (dBuV/m)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	36.47	30.73	-36.88	-14.60	-51.48	-13	-38.48
2	124.99	35.45	-50.93	0.81	-50.12	-13	-37.12
3	301.52	30.17	-64.63	1.70	-62.93	-13	-49.93
4	399.89	33.47	-61.45	2.51	-58.94	-13	-45.94
5	551.63	35.19	-62.13	1.45	-60.67	-13	-47.67
6	961.72	37.28	-60.04	1.45	-58.58	-13	-45.58

Remarks:
1. Output Power (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

4.8.7 Test Results (With POE, Receiver)

5MHz

RX ABOVE 1GHz DATA

Mode	RX channel 1537	Frequency Range	Above 1000MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3424.80	54.9 PK	74.0	-19.1	1.55 H	203	54.4	0.5
2	3424.80	43.2 AV	54.0	-10.8	1.55 H	203	42.7	0.5
3	5137.20	51.9 PK	74.0	-22.1	1.32 H	249	48.3	3.6
4	5137.20	36.4 AV	54.0	-17.6	1.32 H	249	32.8	3.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3424.80	55.7 PK	74.0	-18.3	1.27 V	209	55.2	0.5
2	3424.80	44.8 AV	54.0	-9.2	1.27 V	209	44.3	0.5
3	5137.20	56.1 PK	74.0	-17.9	1.43 V	189	52.5	3.6
4	5137.20	41.2 AV	54.0	-12.8	1.43 V	189	37.6	3.6

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

Mode	RX Channel 1638	Frequency Range	Above 1000MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3465.20	57.4 PK	74.0	-16.6	1.50 H	211	56.8	0.6
2	3465.20	45.7 AV	54.0	-8.3	1.50 H	211	45.1	0.6
3	6930.40	63.9 PK	74.0	-10.1	1.46 H	178	56.0	7.9
4	6930.40	47.7 AV	54.0	-6.3	1.46 H	178	39.8	7.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3465.20	57.6 PK	74.0	-16.4	1.38 V	162	57.0	0.6
2	3465.20	46.4 AV	54.0	-7.6	1.38 V	162	45.8	0.6
3	6930.40	63.8 PK	74.0	-10.2	1.57 V	290	55.9	7.9
4	6930.40	48.1 AV	54.0	-5.9	1.57 V	290	40.2	7.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

Mode	RX Channel 1738	Frequency Range	Above 1000MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3505.20	55.1 PK	74.0	-18.9	1.43 H	287	54.5	0.6
2	3505.20	44.2 AV	54.0	-9.8	1.43 H	287	43.6	0.6
3	5257.80	51.2 PK	74.0	-22.8	1.49 H	262	47.2	4.0
4	5257.80	35.7 AV	54.0	-18.3	1.49 H	262	31.7	4.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3505.20	56.1 PK	74.0	-17.9	1.18 V	261	55.5	0.6
2	3505.20	43.2 AV	54.0	-10.8	1.18 V	261	42.6	0.6
3	5257.80	55.2 PK	74.0	-18.8	1.65 V	241	51.2	4.0
4	5257.80	40.8 AV	54.0	-13.2	1.65 V	241	36.8	4.0

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

RX BELOW 1GHz DATA

Mode	RX channel 1537	Frequency Range	Below 1000MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.00	27.7 QP	40.0	-12.3	1.00 H	323	37.0	-9.3
2	125.01	38.5 QP	43.5	-5.0	1.50 H	250	47.9	-9.4
3	295.78	29.7 QP	46.0	-16.3	1.00 H	243	37.2	-7.5
4	400.54	30.5 QP	46.0	-15.5	1.50 H	238	35.5	-5.0
5	699.30	28.6 QP	46.0	-17.4	1.00 H	145	27.7	0.9
6	959.26	33.6 QP	46.0	-12.4	1.00 H	224	28.7	4.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	36.91	35.1 QP	40.0	-4.9	1.00 V	350	43.8	-8.7
2	125.01	39.8 QP	43.5	-3.7	1.00 V	224	49.2	-9.4
3	299.98	34.3 QP	46.0	-11.7	1.00 V	238	41.7	-7.4
4	400.03	34.8 QP	46.0	-11.2	1.50 V	187	39.8	-5.0
5	550.02	37.4 QP	46.0	-8.6	2.00 V	207	39.1	-1.7
6	**959.99**	**43.0 QP**	**46.0**	**-3.0**	**2.00 V**	**89**	**38.1**	**4.9**

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

Mode	RX Channel 1638	Frequency Range	Below 1000MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.00	27.6 QP	40.0	-12.4	1.10 H	245	36.9	-9.3
2	125.00	38.5 QP	43.5	-5.0	1.62 H	182	47.9	-9.4
3	295.78	30.9 QP	46.0	-15.1	1.22 H	261	38.4	-7.5
4	400.54	31.6 QP	46.0	-14.4	1.10 H	194	36.6	-5.0
5	699.30	29.6 QP	46.0	-16.4	2.64 H	187	28.7	0.9
6	959.26	33.5 QP	46.0	-12.5	1.00 H	149	28.6	4.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	36.91	35.1 QP	40.0	-4.9	1.09 V	257	43.8	-8.7
2	125.01	39.6 QP	43.5	-3.9	1.12 V	289	49.0	-9.4
3	299.98	35.5 QP	46.0	-10.5	1.10 V	269	42.9	-7.4
4	400.03	35.9 QP	46.0	-10.1	1.43 V	264	40.9	-5.0
5	550.02	38.5 QP	46.0	-7.5	1.58 V	224	40.2	-1.7
6	959.99	42.9 QP	46.0	-3.1	1.50 V	241	38.0	4.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

Mode	RX Channel 1738	Frequency Range	Below 1000MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.00	29.6 QP	40.0	-10.4	1.12 H	241	38.9	-9.3
2	125.01	38.4 QP	43.5	-5.1	1.34 H	189	47.8	-9.4
3	295.78	30.5 QP	46.0	-15.5	1.24 H	193	38.0	-7.5
4	400.54	31.1 QP	46.0	-14.9	1.00 H	89	36.1	-5.0
5	699.30	30.6 QP	46.0	-15.4	1.10 H	201	29.7	0.9
6	959.26	35.6 QP	46.0	-10.4	1.23 H	143	30.7	4.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	36.91	35.1 QP	40.0	-4.9	1.10 V	224	43.8	-8.7
2	125.01	39.5 QP	43.5	-4.0	1.00 V	203	48.9	-9.4
3	299.98	34.6 QP	46.0	-11.4	1.00 V	203	42.0	-7.4
4	400.03	36.1 QP	46.0	-9.9	1.16 V	209	41.1	-5.0
5	550.02	39.2 QP	46.0	-6.8	1.14 V	109	40.9	-1.7
6	959.99	41.8 QP	46.0	-4.2	1.08 V	191	36.9	4.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

5MHz + 5MHz

RX ABOVE 1GHz DATA

Mode	RX Channel 1537+1562	Frequency Range	Above 1000MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3424.80	54.6 PK	74.0	-19.4	1.44 H	127	54.1	0.5
2	3424.80	43.7 AV	54.0	-10.3	1.44 H	127	43.2	0.5
3	5137.20	50.8 PK	74.0	-23.2	1.56 H	298	47.2	3.6
4	5137.20	36.5 AV	54.0	-17.5	1.56 H	298	32.9	3.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3424.80	56.2 PK	74.0	-17.8	1.89 V	115	55.7	0.5
2	3424.80	45.1 AV	54.0	-8.9	1.89 V	115	44.6	0.5
3	5137.20	56.3 PK	74.0	-17.7	1.06 V	241	52.7	3.6
4	5137.20	41.6 AV	54.0	-12.4	1.06 V	241	38.0	3.6

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

Mode	RX Channel 1626+1651	Frequency Range	Above 1000MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3465.20	57.6 PK	74.0	-16.4	1.14 H	281	57.0	0.6
2	3465.20	46.0 AV	54.0	-8.0	1.14 H	281	45.4	0.6
3	6930.40	64.2 PK	74.0	-9.8	1.51 H	209	56.3	7.9
4	6930.40	47.9 AV	54.0	-6.1	1.51 H	209	40.0	7.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3465.20	57.8 PK	74.0	-16.2	1.55 V	249	57.2	0.6
2	3465.20	46.6 AV	54.0	-7.4	1.55 V	249	46.0	0.6
3	6930.40	63.7 PK	74.0	-10.3	1.43 V	187	55.8	7.9
4	6930.40	47.8 AV	54.0	-6.2	1.43 V	187	39.9	7.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

Mode	RX Channel 1713+1738	Frequency Range	Above 1000MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3505.20	55.4 PK	74.0	-18.6	1.69 H	206	54.8	0.6
2	3505.20	43.8 AV	54.0	-10.2	1.69 H	206	43.2	0.6
3	5257.80	51.3 PK	74.0	-22.7	1.55 H	178	47.3	4.0
4	5257.80	35.8 AV	54.0	-18.2	1.55 H	178	31.8	4.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	3505.20	56.7 PK	74.0	-17.3	1.20 V	224	56.1	0.6
2	3505.20	43.6 AV	54.0	-10.4	1.20 V	224	43.0	0.6
3	5257.80	55.5 PK	74.0	-18.5	1.72 V	108	51.5	4.0
4	5257.80	41.3 AV	54.0	-12.7	1.72 V	108	37.3	4.0

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

RX BELOW 1GHz DATA

Mode	RX Channel 1537+1562	Frequency Range	Below 1000MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.02	28.6 QP	40.0	-11.4	1.14 H	281	37.8	-9.2
2	125.01	38.4 QP	43.5	-5.1	1.56 H	198	47.8	-9.4
3	295.78	30.5 QP	46.0	-15.5	1.51 H	278	38.0	-7.5
4	400.54	30.9 QP	46.0	-15.1	1.00 H	279	35.9	-5.0
5	699.30	29.1 QP	46.0	-16.9	1.10 H	264	28.2	0.9
6	959.26	34.5 QP	46.0	-11.5	1.50 H	271	29.6	4.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	36.90	35.2 QP	40.0	-4.8	1.51 V	224	43.9	-8.7
2	125.01	39.6 QP	43.5	-3.9	1.50 V	132	49.0	-9.4
3	299.97	35.5 QP	46.0	-10.5	1.22 V	89	42.9	-7.4
4	400.03	36.6 QP	46.0	-9.4	2.00 V	264	41.6	-5.0
5	550.02	36.8 QP	46.0	-9.2	1.50 V	255	38.5	-1.7
6	959.98	42.7 QP	46.0	-3.3	1.50 V	262	37.8	4.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

Mode	RX Channel 1626+1651	Frequency Range	Below 1000MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.02	28.6 QP	40.0	-11.4	1.00 H	238	37.8	-9.2
2	124.99	38.4 QP	43.5	-5.1	1.53 H	226	47.8	-9.4
3	295.78	31.2 QP	46.0	-14.8	1.58 H	173	38.7	-7.5
4	400.53	32.2 QP	46.0	-13.8	1.50 H	261	37.2	-5.0
5	699.28	29.5 QP	46.0	-16.5	2.50 H	105	28.6	0.9
6	959.25	33.7 QP	46.0	-12.3	1.50 H	241	28.8	4.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	36.91	34.9 QP	40.0	-5.1	1.21 V	228	43.6	-8.7
2	125.01	39.5 QP	43.5	-4.0	1.20 V	172	48.9	-9.4
3	299.98	36.5 QP	46.0	-9.5	1.43 V	181	43.9	-7.4
4	400.03	35.6 QP	46.0	-10.4	1.52 V	225	40.6	-5.0
5	550.02	38.2 QP	46.0	-7.8	1.41 V	106	39.9	-1.7
6	959.99	42.6 QP	46.0	-3.4	1.44 V	226	37.7	4.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

Mode	RX Channel 1713+1738	Frequency Range	Below 1000MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.02	30.2 QP	40.0	-9.8	1.43 H	189	39.4	-9.2
2	125.01	38.2 QP	43.5	-5.3	1.50 H	271	47.6	-9.4
3	295.78	31.4 QP	46.0	-14.6	1.50 H	88	38.9	-7.5
4	400.55	31.5 QP	46.0	-14.5	1.51 H	288	36.5	-5.0
5	699.30	30.9 QP	46.0	-15.1	1.26 H	243	30.0	0.9
6	959.25	35.8 QP	46.0	-10.2	1.18 H	241	30.9	4.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	36.90	35.1 QP	40.0	-4.9	1.42 V	183	43.8	-8.7
2	124.99	39.4 QP	43.5	-4.1	1.16 V	139	48.8	-9.4
3	299.99	34.8 QP	46.0	-11.2	1.38 V	257	42.2	-7.4
4	400.03	36.5 QP	46.0	-9.5	1.20 V	146	41.5	-5.0
5	550.02	39.1 QP	46.0	-6.9	1.54 V	279	40.8	-1.7
6	959.99	41.5 QP	46.0	-4.5	1.22 V	231	36.6	4.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

4.8.8 Test Results (With Adapter, Receiver)

5MHz

RX BELOW 1GHz DATA

Mode	RX channel 1537	Frequency Range	Below 1000MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	37.94	33.6 QP	40.0	-6.4	1.00 H	143	42.1	-8.5
2	141.55	31.4 QP	43.5	-12.1	1.00 H	206	39.4	-8.0
3	296.56	30.5 QP	46.0	-15.5	1.00 H	281	37.8	-7.3
4	580.04	37.0 QP	46.0	-9.0	1.50 H	223	37.5	-0.5
5	653.05	36.4 QP	46.0	-9.6	1.50 H	135	35.5	0.9
6	948.39	42.7 QP	46.0	-3.3	2.00 H	249	37.6	5.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	35.94	33.9 QP	40.0	-6.1	1.00 V	221	42.6	-8.7
2	137.55	32.4 QP	43.5	-11.1	1.00 V	143	40.8	-8.4
3	300.56	32.5 QP	46.0	-13.5	1.00 V	109	39.7	-7.2
4	550.04	39.0 QP	46.0	-7.0	1.50 V	243	40.3	-1.3
5	650.05	36.9 QP	46.0	-9.1	1.50 V	267	36.0	0.9
6	959.99	42.8 QP	46.0	-3.2	2.00 V	231	37.7	5.1

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

Mode	RX Channel 1638	Frequency Range	Below 1000MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	35.94	32.8 QP	40.0	-7.2	1.10 H	225	41.5	-8.7
2	137.55	33.4 QP	43.5	-10.1	1.06 H	159	41.8	-8.4
3	300.56	34.4 QP	46.0	-11.6	1.00 H	143	41.6	-7.2
4	550.04	39.1 QP	46.0	-6.9	1.49 H	265	40.4	-1.3
5	650.05	36.6 QP	46.0	-9.4	1.00 H	224	35.7	0.9
6	959.99	42.8 QP	46.0	-3.2	1.98 H	138	37.7	5.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	36.90	34.9 QP	40.0	-5.1	1.12 V	243	43.6	-8.7
2	125.01	39.5 QP	43.5	-4.0	1.06 V	276	48.9	-9.4
3	299.98	36.4 QP	46.0	-9.6	1.02 V	149	43.8	-7.4
4	400.03	36.6 QP	46.0	-9.4	1.56 V	173	41.6	-5.0
5	550.02	38.5 QP	46.0	-7.5	1.94 V	107	40.2	-1.7
6	959.99	42.8 QP	46.0	-3.2	1.43 V	203	37.9	4.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

Mode	RX Channel 1738	Frequency Range	Below 1000MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.00	30.1 QP	40.0	-9.9	1.00 H	247	39.4	-9.3
2	125.01	38.4 QP	43.5	-5.1	1.26 H	117	47.8	-9.4
3	295.78	32.4 QP	46.0	-13.6	1.32 H	206	39.9	-7.5
4	400.54	33.1 QP	46.0	-12.9	1.23 H	109	38.1	-5.0
5	699.30	32.5 QP	46.0	-13.5	1.09 H	184	31.6	0.9
6	959.26	42.7 QP	46.0	-3.3	1.23 H	143	37.8	4.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	36.90	33.7 QP	40.0	-6.3	1.00 V	144	42.4	-8.7
2	125.01	39.5 QP	43.5	-4.0	1.00 V	143	48.9	-9.4
3	299.98	36.6 QP	46.0	-9.4	1.09 V	221	44.0	-7.4
4	400.03	36.7 QP	46.0	-9.3	1.81 V	274	41.7	-5.0
5	550.02	38.5 QP	46.0	-7.5	1.87 V	205	40.2	-1.7
6	959.99	42.4 QP	46.0	-3.6	1.56 V	179	37.5	4.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

5MHz + 5MHz

RX BELOW 1GHz DATA

Mode	RX Channel 1537+1562	Frequency Range	Below 1000MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.02	32.6 QP	40.0	-7.4	1.00 H	153	41.8	-9.2
2	125.01	38.2 QP	43.5	-5.3	1.52 H	109	47.6	-9.4
3	295.78	33.4 QP	46.0	-12.6	1.46 H	179	40.9	-7.5
4	400.54	34.5 QP	46.0	-11.5	1.09 H	178	39.5	-5.0
5	699.30	33.6 QP	46.0	-12.4	1.10 H	179	32.7	0.9
6	959.26	41.9 QP	46.0	-4.1	1.05 H	119	37.0	4.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	36.91	35.0 QP	40.0	-5.0	1.10 V	238	43.7	-8.7
2	125.01	39.4 QP	43.5	-4.1	1.06 V	178	48.8	-9.4
3	299.98	36.4 QP	46.0	-9.6	1.23 V	193	43.8	-7.4
4	400.03	35.6 QP	46.0	-10.4	1.56 V	207	40.6	-5.0
5	550.02	38.4 QP	46.0	-7.6	1.64 V	173	40.1	-1.7
6	959.99	42.2 QP	46.0	-3.8	1.13 V	253	37.3	4.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

Mode	RX Channel 1626+1651	Frequency Range	Below 1000MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.02	30.6 QP	40.0	-9.4	1.00 H	153	39.8	-9.2
2	125.01	39.1 QP	43.5	-4.4	1.61 H	228	48.5	-9.4
3	295.78	31.5 QP	46.0	-14.5	1.32 H	267	39.0	-7.5
4	400.54	33.5 QP	46.0	-12.5	1.10 H	271	38.5	-5.0
5	699.30	32.5 QP	46.0	-13.5	1.00 H	289	31.6	0.9
6	959.26	42.0 QP	46.0	-4.0	1.10 H	243	37.1	4.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	36.92	34.8 QP	40.0	-5.2	1.06 V	147	43.5	-8.7
2	124.99	39.3 QP	43.5	-4.2	1.22 V	283	48.7	-9.4
3	299.98	38.5 QP	46.0	-7.5	1.19 V	271	45.9	-7.4
4	400.03	38.6 QP	46.0	-7.4	1.00 V	173	43.6	-5.0
5	550.02	39.7 QP	46.0	-6.3	1.47 V	203	41.4	-1.7
6	959.99	42.4 QP	46.0	-3.6	1.48 V	220	37.5	4.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

Mode	RX Channel 1713+1738	Frequency Range	Below 1000MHz

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.00	31.6 QP	40.0	-8.4	1.10 H	138	40.9	-9.3
2	125.01	38.4 QP	43.5	-5.1	1.34 H	224	47.8	-9.4
3	295.78	34.6 QP	46.0	-11.4	1.24 H	233	42.1	-7.5
4	400.54	34.0 QP	46.0	-12.0	1.05 H	179	39.0	-5.0
5	699.30	34.5 QP	46.0	-11.5	1.00 H	220	33.6	0.9
6	959.26	42.6 QP	46.0	-3.4	1.00 H	206	37.7	4.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	36.90	34.8 QP	40.0	-5.2	1.10 V	224	43.5	-8.7
2	125.01	39.4 QP	43.5	-4.1	1.00 V	172	48.8	-9.4
3	299.98	37.6 QP	46.0	-8.4	1.21 V	143	45.0	-7.4
4	400.03	37.8 QP	46.0	-8.2	1.56 V	187	42.8	-5.0
5	550.02	38.4 QP	46.0	-7.6	1.64 V	172	40.1	-1.7
6	959.99	42.5 QP	46.0	-3.5	1.51 V	171	37.6	4.9

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information on 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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