

FCC Test Report

(PART 24)

Report No.: RF151005D01-3

FCC ID: P279962MSEC

Test Model: 9962 Multi-Standard Enterprise Cell

Series Model: 9962 Multi-Standard Enterprise Cellxxxxx
(where "x" is blank, number or any characters)

Received Date: Oct. 5, 2015

Test Date: Oct. 22 ~ 29, 2015

Issued Date: Nov. 19, 2015

Applicant: Sercomm Corp.

Address: 8F, No. 3-1, YuangQu St., NanKang, Taipei 115, Taiwan, R.O.C. (NanKang Software Park)

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

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



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Release Control Record

Issue No.	Description	Date Issued
RF151005D01-3	Original release.	Nov. 19, 2015

1 Certificate of Conformity

Product: 9962 Multi-Standard AP; Metro Cell Indoor

Brand: Alcatel-Lucent

Test Model: 9962 Multi-Standard Enterprise Cell

Series Model: 9962 Multi-Standard Enterprise Cellxxxxx
(where "x" is blank, number or any characters)

Sample Status: Engineering sample

Applicant: Sercomm Corp.

Test Date: Oct. 22 ~ 29, 2015

Standards: FCC Part 24

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 : Annie Chang , **Date:** Nov. 19, 2015
Annie Chang / Senior Specialist

Approved by : Rex Lai , **Date:** Nov. 19, 2015
Rex Lai / Assistant Manager

2 Summary of Test Results

Applied Standard: FCC Part 24 & Part 2			
FCC Clause	Test Item	Result	Remarks
2.1046 24.232	Effective Radiated Power	PASS	Meet the requirement of limit.
2.1046 24.232(d)	Peak To Average Ratio	PASS	Meet the requirement of limit.
2.1055 24.235	Frequency Stability	PASS	Meet the requirement of limit.
2.1049 24.238(b)	Occupied Bandwidth	PASS	Meet the requirement of limit.
24.238(b)	Band Edge Measurements	PASS	Meet the requirement of limit.
2.1051 24.238	Conducted Spurious Emissions	PASS	Meet the requirement of limit.
2.1053 24.238	Radiated Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -11.20 dB at 5272.14MHz.

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	Expended Uncertainty (k=2) (±)
Radiated Emissions up to 1 GHz	4.00 dB
Radiated Emissions above 1 GHz	3.36 dB

2.2 Test Site And Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
HP Preamplifier	8447D	2432A03504	Feb. 26, 2015	Feb. 25, 2016
HP Preamplifier	8449B	3008A01201	Feb. 26, 2015	Feb. 25, 2016
MITEQ Preamplifier	AMF-6F-260400-3 3-8P	892164	Mar. 01, 2015	Feb. 28, 2016
Agilent Spectrum	E4446A	MY51100009	May 30, 2015	May 29, 2016
Agilent TEST RECEIVER	N9038A	MY51210129	Jan. 20, 2015	Jan. 19, 2016
Schwarzbeck Antenna	VULB 9168	139	Feb. 04, 2015	Feb. 03, 2016
Schwarzbeck Antenna	VHBA 9123	480	May 29, 2015	May 28, 2017
Schwarzbeck Horn Antenna	BBHA-9170	212	Feb. 09, 2015	Feb. 08, 2016
Schwarzbeck Horn Antenna	BBHA 9120-D1	D130	Feb. 10, 2015	Feb. 09, 2016
ADT. Turn Table	TT100	0306	NA	NA
ADT. Tower	AT100	0306	NA	NA
Software	Radiated_V7.6.15. 9.4	NA	NA	NA
SUHNER RF cable With 4dB PAD	SF104	CABLE-CH6	Aug. 15, 2015	Aug. 14, 2016
SUHNER RF cable With 3dB PAD	SF102	Cable-CH8-3.6m	Aug. 15, 2015	Aug. 14, 2016
EMCO Horn Antenna	3115	00028257	Feb. 05, 2015	Feb. 04, 2016
Highpass filter Wainwright Instruments	WHK 3.1/18G-10SS	SN 8	NA	NA
ROHDE & SCHWARZ Spectrum Analyzer	FSV40	101042	Sep. 23, 2015	Sep. 22, 2016
Anritsu Power Sensor	MA2411B	0738404	Apr. 21, 2015	Apr. 20, 2016
Anritsu Power Meter	ML2495A	0842014	Apr. 21, 2015	Apr. 20, 2016
KEYSIGHT Spectrum Analyzer	N9030A	MY54490260	Jul. 14, 2015	Jul. 13, 2016

- NOTE:**
1. The calibration interval of the above test instruments is 12/24 months. And the calibrations are traceable to NML/ROC and NIST/USA.
 2. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
 3. The test was performed in Chamber No. 6.
 4. The Industry Canada Reference No. IC 7450E-6.
 5. The FCC Site Registration No. is 447212.

3 General Information

3.1 General Description of EUT

Product	9962 Multi-Standard AP; Metro Cell Indoor	
Brand	Alcatel-Lucent	
Test Model	9962 Multi-Standard Enterprise Cell	
Series Model	9962 Multi-Standard Enterprise Cellxxxxx (where "x" is blank, number or any characters)	
Model Difference	Marketing purpose	
Status of EUT	Engineering sample	
Power Supply Rating	48Vdc from Adapter or 55Vdc from PoE	
Modulation Type	WCDMA, LTE	
Modulation Technology	QPSK, 16QAM, 64QAM	
Operating Frequency	WCDMA	1932.5, 1960.0, 1987.5
	LTE	Channel Bandwidth 5MHz: 1932.5, 1960.0, 1987.5
		Channel Bandwidth 10MHz: 1935.0, 1960.0, 1985.0
		Channel Bandwidth 15MHz: 1937.5, 1960.0, 1982.5
		Channel Bandwidth 20MHz: 1940.0, 1960.0, 1980.0
Max. EIRP Power	WCDMA	374.11mW
	LTE	Channel Bandwidth 5MHz: 388.15mW
		Channel Bandwidth 10MHz: 481.95mW
		Channel Bandwidth 15MHz: 483.06mW
		Channel Bandwidth 20MHz: 467.74mW
Emission Designator	WCDMA	QPSK: 4M17G7D, 16QAM: 4M15W7D, 64QAM: 4M15W7D
	LTE	Channel Bandwidth 5MHz: QPSK: 4M45G7D, 16QAM: 4M43W7D, 64QAM: 4M45W7D
		Channel Bandwidth 10MHz: QPSK: 8M93G7D, 16QAM: 8M97W7D, 64QAM: 8M93W7D
		Channel Bandwidth 15MHz: QPSK: 13M3G7D, 16QAM: 13M3W7D, 64QAM: 13M3W7D
		Channel Bandwidth 20MHz: QPSK: 17M8G7D, 16QAM: 17M9W7D, 64QAM: 17M8W7D
Antenna Type	PIFA Antenna with 3.61dBi gain	
Antenna Connector	N/A	
Accessory Device	Adapter, PoE	
Data Cable Supplied	GPS cable (10m)	

Note:

1. The EUT uses following adapter or PoE:

Item	Brand	Model No.	Rating
Adapter 1	AmpowerTek	AU60AA-00	AC I/P: 100-240V, 50-60Hz, 1.5A DC O/P: 48V, 1.25A Non-shielded AC 3-Pin cable (1.5m) Non-shielded DC cable (1.2m) with one ferrite core
Adapter 2	LEI	NU60-S48012 5-I2	AC I/P: 100-240V, 50-60Hz, 1.4A DC O/P: 48V, 1.25A Non-shielded AC 3-Pin cable (1.5m) Non-shielded DC cable (1.2m) with one ferrite core
PoE	Microsemi	PD-9601G/AC	AC I/P: 100-240V, 50-60Hz, 1.35A DC O/P: 55V, 1.75A

After pre-tested, adapter 1 was the worst case, therefore, only its test data was recorded in the report.

2. SW version is V1.4.0.1.
3. HW version is D01_W.
4. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 Description of Test Modes

WCDMA Band 2

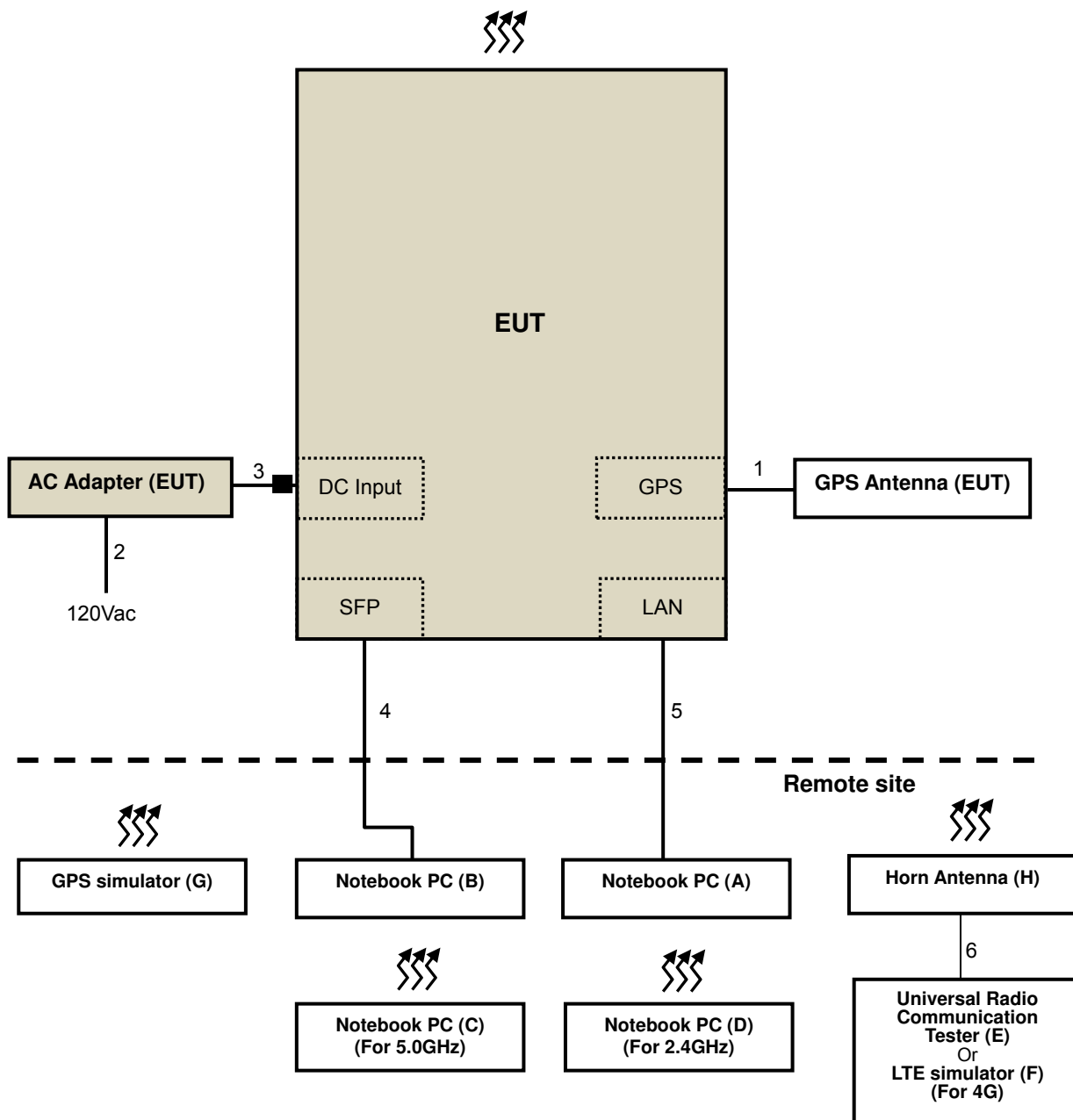
Channel Bandwidth (MHz)	Channel	Frequency (MHz)
5	Low	1932.5
	Middle	1960.0
	High	1987.5

LTE Band 2

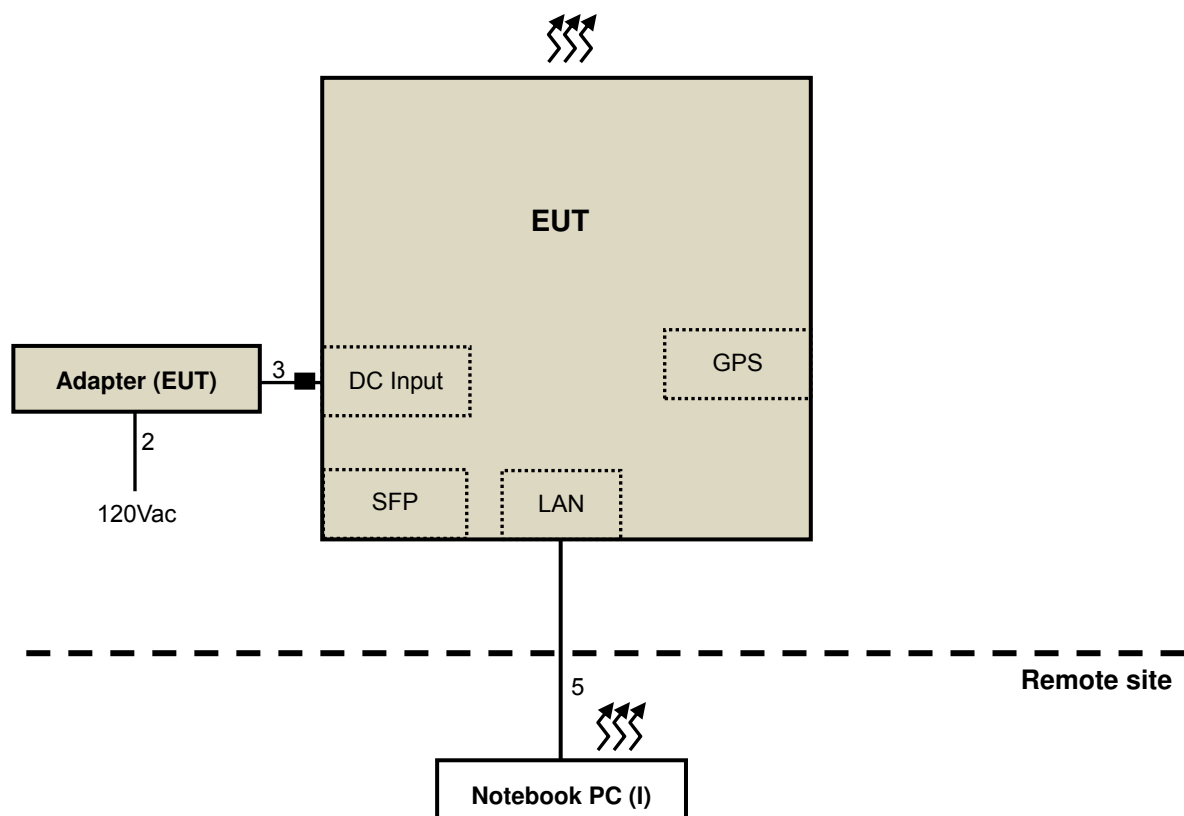
Channel Bandwidth (MHz)	Channel	Frequency (MHz)
5	Low	1932.5
	Middle	1960.0
	High	1987.5
10	Low	1935.0
	Middle	1960.0
	High	1985.0
15	Low	1937.5
	Middle	1960.0
	High	1982.5
20	Low	1940.0
	Middle	1960.0
	High	1980.0

3.3 Configuration Of System Under Test

For Radiated up to 1GHz test:



For Radiated above 1GHz test:



3.3.1 Description Of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook PC	DELL	PP04X	JV9ZZ1S	FCC DoC Approved	Provided by Lab
B.	Notebook PC	DELL	PP04X	1W9ZZ1S	FCC DoC Approved	Provided by Lab
C.	Notebook PC	SONY	SVS151A12P	275548477001024	FCC DoC Approved	Provided by Lab
D.	Notebook PC	SONY	SVS151A12P	275548477001087	FCC DoC Approved	Provided by Lab
E.	Universal Radio Communication Tester	R&S	CMU200	117260	N/A	Provided by Lab
F.	LTE simulator	Anritsu	LTE Band 11 & 18	N/A	N/A	Provided by Lab
G.	GPS simulator	PENDULUM	GSG-5	200447	N/A	Provided by Lab
H.	HORN Antenna	ETS	3117	00123980	N/A	Provided by Lab
I.	Notebook PC	DELL	E6530	9331GV1	FCC DoC Approved	Provided by Lab

Note:

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	Antenna cable	1	8	Y	0	Supplied by client
2.	AC Power Cord	1	1.5	N	0	Supplied by client
3.	DC cable	1	1.2	N	1	Supplied by client
4.	SFP to LAN cable	1	10	N	0	Provided by Lab
5.	LAN cable	2	10	N	0	Provided by Lab
6.	Coaxial cable	1	10	Y	0	Provided by Lab

Note: The core(s) is(are) originally attached to the cable(s).

3.4 Test Mode Applicability and Tested Channel Detail

Test Item	Modulation Type	Available Frequency	Tested Frequency	Channel Bandwidth	Mode
ERP	WCDMA	1932.5 to 1987.5	1932.5, 1960.0, 1987.5	5MHz	QPSK, 16QAM, 64QAM
	LTE	1932.5 to 1987.5	1932.5, 1960.0, 1987.5	5MHz	
		1935.0 to 1985.0	1935.0, 1960.0, 1985.0	10MHz	
		1937.5 to 1982.5	1937.5, 1960.0, 1982.5	15MHz	
		1940.0 to 1980.0	1940.0, 1960.0, 1980.0	20MHz	
Frequency Stability	WCDMA	1932.5 to 1987.5	1960.0	5MHz	-
	LTE	1932.5 to 1987.5	1960.0	5MHz	-
Occupied Bandwidth	WCDMA	1932.5 to 1987.5	1932.5, 1960.0, 1987.5	5MHz	QPSK, 16QAM, 64QAM
	LTE	1932.5 to 1987.5	1932.5, 1960.0, 1987.5	5MHz	
		1935.0 to 1985.0	1935.0, 1960.0, 1985.0	10MHz	
		1937.5 to 1982.5	1937.5, 1960.0, 1982.5	15MHz	
		1940.0 to 1980.0	1940.0, 1960.0, 1980.0	20MHz	
Band Edge	WCDMA	1932.5 to 1987.5	1932.5, 1987.5	5MHz	QPSK, 16QAM, 64QAM
	LTE	1932.5 to 1987.5	1932.5, 1987.5	5MHz	
		1935.0 to 1985.0	1935.0, 1985.0	10MHz	
		1937.5 to 1982.5	1937.5, 1982.5	15MHz	
		1940.0 to 1980.0	1940.0, 1980.0	20MHz	
Peak To Average Ratio	WCDMA	1932.5 to 1987.5	1932.5, 1960.0, 1987.5	5MHz	QPSK, 16QAM, 64QAM
	LTE	1932.5 to 1987.5	1932.5, 1960.0, 1987.5	5MHz	
		1935.0 to 1985.0	1935.0, 1960.0, 1985.0	10MHz	
		1937.5 to 1982.5	1937.5, 1960.0, 1982.5	15MHz	
		1940.0 to 1980.0	1940.0, 1960.0, 1980.0	20MHz	
Conducuted Emission	WCDMA	1932.5 to 1987.5	1932.5, 1960.0, 1987.5	5MHz	QPSK, 16QAM, 64QAM
	LTE	1932.5 to 1987.5	1932.5, 1960.0, 1987.5	5MHz	
		1935.0 to 1985.0	1935.0, 1960.0, 1985.0	10MHz	
		1937.5 to 1982.5	1937.5, 1960.0, 1982.5	15MHz	
		1940.0 to 1980.0	1940.0, 1960.0, 1980.0	20MHz	
Radiated Emission Below 1GHz	WCDMA	1932.5 to 1987.5	1960.0	5MHz	16QAM
	LTE	1937.5 to 1982.5	1960.0	15MHz	QPSK
Radiated Emission Above 1GHz	WCDMA	1932.5 to 1987.5	1932.5, 1960.0, 1987.5	5MHz	16QAM
	LTE	1937.5 to 1982.5	1937.5, 1960.0, 1982.5	15MHz	QPSK

NOTE:

1. For radiated emission below 1 GHz, the low, mid and high channels were pre-tested in chamber. The middle channel was the worst case and chosen for final test.
2. Select the worst mode from conducted output power of WCDMA band & LTE band. Therefore, RADIATED EMISSION was performed under 16QAM mode for WCDMA band and QPSK mode for LTE band.

Test Condition:

Test Item	Environmental Conditions	Input Power	Tested By
ERP	18deg. C, 71%RH	120Vac, 60Hz	Aaron You
Frequency Stability	18deg. C, 71%RH	120Vac, 60Hz	Aaron You
Occupied Bandwidth	18deg. C, 71%RH	120Vac, 60Hz	Aaron You
Band Edge	18deg. C, 71%RH	120Vac, 60Hz	Aaron You
Peak To Average Ratio	18deg. C, 71%RH	120Vac, 60Hz	Aaron You
Condcudeted Emission	18deg. C, 71%RH	120Vac, 60Hz	Aaron You
Radiated Emission	18deg. C, 71%RH	120Vac, 60Hz	Aaron You

3.5 EUT Operating Conditions

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

3.6 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 24

KDB 971168 D01 Power Meas License Digital Systems v02r01

ANSI/TIA/EIA-603-C 2004

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

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

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

4.1.2 Test Procedures

EIRP / ERP Measurement:

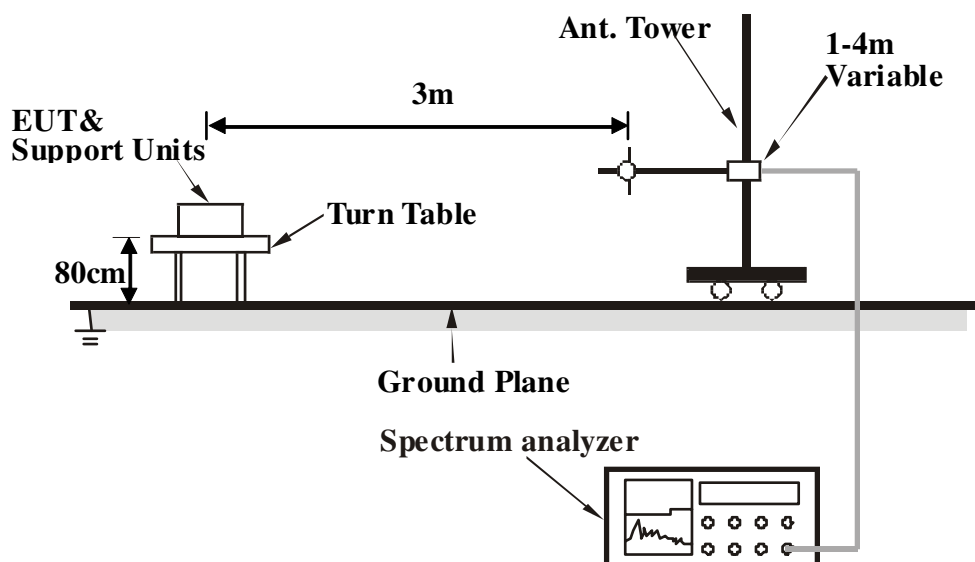
- a. All measurements were done at low, middle and high operational frequency range. RBW and VBW is 5MHz for WCDMA mode.
- b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- c. The substitution 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. $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, $E.R.P \text{ power} = E.I.P.R \text{ power} - 2.15\text{dBi}$.

Conducted Power Measurement:

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

4.1.3 Test Setup

EIRP / ERP MEASUREMENT:



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

CONDUCTED POWER MEASUREMENT:



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

4.1.4 Test Results

CONDUCTED OUTPUT POWER (dBm)

WCDMA Band 2 (Channel Bandwidth 5MHz):

Frequency (MHz)	CONDUCTED OUTPUT POWER (dBm)		
	QPSK	16QAM	64QAM
1932.5	23.32	23.34	23.42
1960.0	23.69	23.71	23.67
1987.5	23.63	23.61	23.64

LTE Band 2 (Channel Bandwidth 5MHz):

Frequency (MHz)	CONDUCTED OUTPUT POWER (dBm)								
	QPSK			16QAM			64QAM		
	Chain 0	Chain 1	Total	Chain 0	Chain 1	Total	Chain 0	Chain 1	Total
1932.5	22.75	22.43	25.60	21.66	21.68	24.68	21.82	21.42	24.63
1960.0	23.38	23.09	26.25	22.62	22.41	25.53	22.51	22.16	25.35
1987.5	23.45	23.41	26.44	22.34	22.19	25.28	22.20	22.23	25.23

LTE Band 2 (Channel Bandwidth 10MHz):

Frequency (MHz)	CONDUCTED OUTPUT POWER (dBm)								
	QPSK			16QAM			64QAM		
	Chain 0	Chain 1	Total	Chain 0	Chain 1	Total	Chain 0	Chain 1	Total
1935.0	23.68	23.41	26.56	22.71	22.52	25.63	22.91	22.56	25.75
1960.0	24.32	24.08	27.21	23.46	23.07	26.28	23.22	23.15	26.20
1985.0	24.24	24.32	27.29	23.08	23.05	26.08	23.05	22.91	25.99

LTE Band 2 (Channel Bandwidth 15MHz):

Frequency (MHz)	CONDUCTED OUTPUT POWER (dBm)								
	QPSK			16QAM			64QAM		
	Chain 0	Chain 1	Total	Chain 0	Chain 1	Total	Chain 0	Chain 1	Total
1937.5	23.73	23.21	26.49	22.24	21.86	25.06	22.53	22.34	25.45
1960.0	24.83	24.17	27.52	23.58	22.94	26.28	22.85	23.20	26.04
1982.5	24.80	24.12	27.48	23.37	23.10	26.25	23.58	23.13	26.37

LTE Band 2 (Channel Bandwidth 20MHz):

Frequency (MHz)	CONDUCTED OUTPUT POWER (dBm)								
	QPSK			16QAM			64QAM		
	Chain 0	Chain 1	Total	Chain 0	Chain 1	Total	Chain 0	Chain 1	Total
1940.0	23.12	23.11	26.13	22.32	22.30	25.32	22.34	22.40	25.38
1960.0	24.28	24.20	27.25	23.48	23.18	26.34	23.30	23.12	26.22
1980.0	23.12	23.24	26.19	22.60	22.48	25.55	22.34	22.45	25.41

EIRP Power (dBm)

WCDMA Band 2 (Channel Bandwidth 5MHz): QPSK

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1932.5	12.74	11.95	24.69	294.44	33.00	-8.31
2	1960.0	13.73	11.91	25.64	366.44	33.00	-7.36
3	1987.5	12.47	11.87	24.34	271.64	33.00	-8.66
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1932.5	4.77	11.95	16.72	46.99	33.00	-16.28
2	1960.0	7.65	11.91	19.56	90.36	33.00	-13.44
3	1987.5	8.65	11.87	20.52	112.72	33.00	-12.48

NOTE: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

WCDMA Band 2 (Channel Bandwidth 5MHz): 16QAM

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1932.5	13.67	11.95	25.62	364.75	33.00	-7.38
2	1960.0	13.82	11.91	25.73	374.11	33.00	-7.27
3	1987.5	12.42	11.87	24.29	268.53	33.00	-8.71
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1932.5	4.59	11.95	16.54	45.08	33.00	-16.46
2	1960.0	7.11	11.91	19.02	79.80	33.00	-13.98
3	1987.5	8.19	11.87	20.06	101.39	33.00	-12.94

NOTE: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

WCDMA Band 2 (Channel Bandwidth 5MHz): 64QAM

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1932.5	13.07	11.95	25.02	317.69	33.00	-7.98
2	1960.0	13.13	11.91	25.04	319.15	33.00	-7.96
3	1987.5	12.22	11.87	24.09	256.45	33.00	-8.91
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1932.5	4.64	11.95	16.59	45.6	33.00	-16.41
2	1960.0	6.82	11.91	18.73	74.64	33.00	-14.27
3	1987.5	8.01	11.87	19.88	97.27	33.00	-13.12

NOTE: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 2 (Channel Bandwidth 5MHz): QPSK

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1932.5	12.88	11.95	24.83	304.09	33.00	-8.17
2	1960.0	13.11	11.91	25.02	317.69	33.00	-7.98
3	1987.5	14.02	11.87	25.89	388.15	33.00	-7.11
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1932.5	12.26	11.95	24.21	263.63	33.00	-8.79
2	1960.0	11.66	11.91	23.57	227.51	33.00	-9.43
3	1987.5	13.60	11.87	25.47	352.37	33.00	-7.53

NOTE: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 2 (Channel Bandwidth 5MHz): 16QAM

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1932.5	12.06	11.95	24.01	251.77	33.00	-8.99
2	1960.0	13.08	11.91	24.99	315.50	33.00	-8.01
3	1987.5	12.85	11.87	24.72	296.48	33.00	-8.28
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1932.5	11.97	11.95	23.92	246.60	33.00	-9.08
2	1960.0	12.38	11.91	24.29	268.53	33.00	-8.71
3	1987.5	12.24	11.87	24.11	257.63	33.00	-8.89

NOTE: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 2 (Channel Bandwidth 5MHz): 64QAM

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1932.5	12.24	11.95	24.19	262.42	33.00	-8.81
2	1960.0	12.82	11.91	24.73	297.17	33.00	-8.27
3	1987.5	12.51	11.87	24.38	274.16	33.00	-8.62
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1932.5	10.56	11.95	22.51	178.24	33.00	-10.49
2	1960.0	10.15	11.91	22.06	160.69	33.00	-10.94
3	1987.5	12.38	11.87	24.25	266.07	33.00	-8.75

NOTE: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 2 (Channel Bandwidth 10MHz): QPSK

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1935.0	13.95	11.95	25.90	389.05	33.00	-7.10
2	1960.0	14.62	11.91	26.53	449.78	33.00	-6.47
3	1985.0	14.96	11.87	26.83	481.95	33.00	-6.17
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1935.0	10.25	11.95	22.20	165.96	33.00	-10.80
2	1960.0	9.14	11.91	21.05	127.35	33.00	-11.95
3	1985.0	10.84	11.87	22.71	186.64	33.00	-10.29

NOTE: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 2 (Channel Bandwidth 10MHz): 16QAM

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1935.0	13.06	11.95	25.01	316.96	33.00	-7.99
2	1960.0	13.87	11.91	25.78	378.44	33.00	-7.22
3	1985.0	13.37	11.87	25.24	334.2	33.00	-7.76
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1935.0	9.23	11.95	21.18	131.22	33.00	-11.82
2	1960.0	9.11	11.91	21.02	126.47	33.00	-11.98
3	1985.0	10.66	11.87	22.53	179.06	33.00	-10.47

NOTE: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 2 (Channel Bandwidth 10MHz): 64QAM

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1935.0	13.16	11.95	25.11	324.34	33.00	-7.89
2	1960.0	13.71	11.91	25.62	364.75	33.00	-7.38
3	1985.0	13.41	11.87	25.28	337.29	33.00	-7.72
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1935.0	9.66	11.95	21.61	144.88	33.00	-11.39
2	1960.0	10.15	11.91	22.06	160.69	33.00	-10.94
3	1985.0	9.82	11.87	21.69	147.57	33.00	-11.31

NOTE: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 2 (Channel Bandwidth 15MHz): QPSK

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1937.5	13.94	11.95	25.89	388.15	33.00	-7.11
2	1960.0	14.93	11.91	26.84	483.06	33.00	-6.16
3	1982.5	14.85	11.87	26.72	469.89	33.00	-6.28
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1937.5	10.05	11.95	22.00	158.49	33.00	-11.00
2	1960.0	9.53	11.91	21.44	139.32	33.00	-11.56
3	1982.5	10.29	11.87	22.16	164.44	33.00	-10.84

NOTE: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 2 (Channel Bandwidth 15MHz): 16QAM

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1937.5	12.31	11.95	24.26	266.69	33.00	-8.74
2	1960.0	13.61	11.91	25.52	356.45	33.00	-7.48
3	1982.5	13.62	11.87	25.49	354.00	33.00	-7.51
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1937.5	9.49	11.95	21.44	139.32	33.00	-11.56
2	1960.0	9.52	11.91	21.43	139.00	33.00	-11.57
3	1982.5	10.54	11.87	22.41	174.18	33.00	-10.59

NOTE: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 2 (Channel Bandwidth 15MHz): 64QAM

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1937.5	12.91	11.95	24.86	306.20	33.00	-8.14
2	1960.0	13.42	11.91	25.33	341.19	33.00	-7.67
3	1982.5	13.88	11.87	25.75	375.84	33.00	-7.25
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1937.5	9.56	11.95	21.51	141.58	33.00	-11.49
2	1960.0	8.66	11.91	20.57	114.02	33.00	-12.43
3	1982.5	9.32	11.87	21.19	131.52	33.00	-11.81

NOTE: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 2 (Channel Bandwidth 20MHz): QPSK

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1940.0	13.68	11.95	25.63	365.59	33.00	-7.37
2	1960.0	14.79	11.91	26.70	467.74	33.00	-6.30
3	1980.0	13.41	11.87	25.28	337.29	33.00	-7.72
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1940.0	7.95	11.95	19.9	97.72	33.00	-13.10
2	1960.0	8.16	11.91	20.07	101.62	33.00	-12.93
3	1980.0	7.89	11.87	19.76	94.62	33.00	-13.24

NOTE: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 2 (Channel Bandwidth 20MHz): 16QAM

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1940.0	13.77	11.95	25.72	373.25	33.00	-7.28
2	1960.0	13.93	11.91	25.84	383.71	33.00	-7.16
3	1980.0	13.13	11.87	25.00	316.23	33.00	-8.00
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1940.0	6.45	11.95	18.40	69.18	33.00	-14.60
2	1960.0	8.30	11.91	20.21	104.95	33.00	-12.79
3	1980.0	8.77	11.87	20.64	115.88	33.00	-12.36

NOTE: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

LTE Band 2 (Channel Bandwidth 20MHz): 64QAM

Antenna Polarity & Test Distance: Horizontal at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1940.0	12.98	11.95	24.93	311.17	33.00	-8.07
2	1960.0	13.66	11.91	25.57	360.58	33.00	-7.43
3	1980.0	12.94	11.87	24.81	302.69	33.00	-8.19
Antenna Polarity & Test Distance: Vertical at 3 M							
No.	Freq. (MHz)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Margin (dB)
1	1940.0	7.28	11.95	19.23	83.75	33.00	-13.77
2	1960.0	7.91	11.91	19.82	95.94	33.00	-13.18
3	1980.0	8.09	11.87	19.96	99.08	33.00	-13.04

NOTE: EIRP (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

4.2 Frequency Stability Measurement

4.2.1 Limits of Frequency Stability Measurement

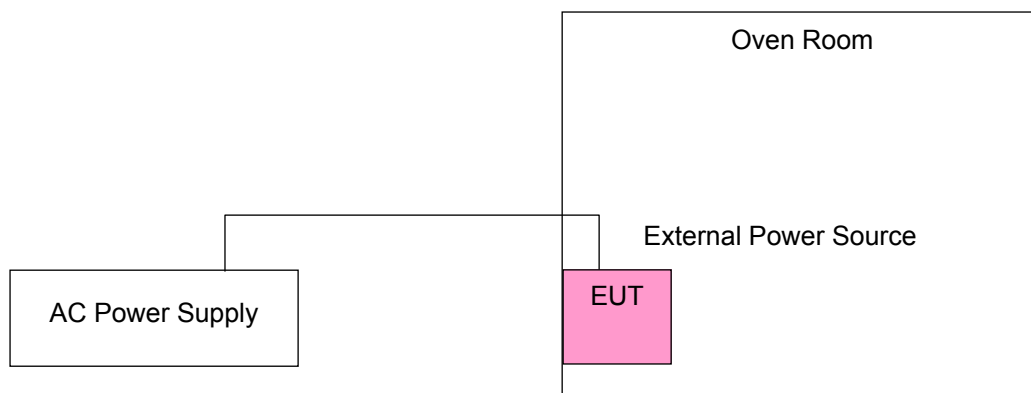
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

4.2.2 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. EUT is connected the external power supply to control the AC input power. 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 °C 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.

NOTE: The frequency error was recorded frequency error from the communication simulator.

4.2.3 Test Setup



4.2.4 Test Results

WCDMA Band 2:

Frequency Error vs. Voltage

Voltage (Volts)	Frequency Error (ppm)	Limit (ppm)
126.5	0.0091836735	2.5
120.0	0.0086734694	2.5
93.5	0.0081632653	2.5

Frequency Error vs. Temperature.

TEMP. (°C)	Frequency Error (ppm)	Limit (ppm)
50	0.0086734694	2.5
40	0.0081632653	2.5
30	0.0076530612	2.5
20	0.0086734694	2.5
10	0.0091836735	2.5
0	0.0081632653	2.5
-10	0.0096938776	2.5
-20	0.0076530612	2.5

LTE Band 2

Frequency Error vs. Voltage

TX Antenna	Voltage (Volts)	Frequency Error (ppm)	Limit (ppm)
Chain 0	126.5	0.0076530612	2.5
	120.0	0.0076530612	2.5
	93.5	0.0071428571	2.5
Chain 1	126.5	0.0071428571	2.5
	120.0	0.0081632653	2.5
	93.5	0.0081632653	2.5

Frequency Error vs. Temperature.

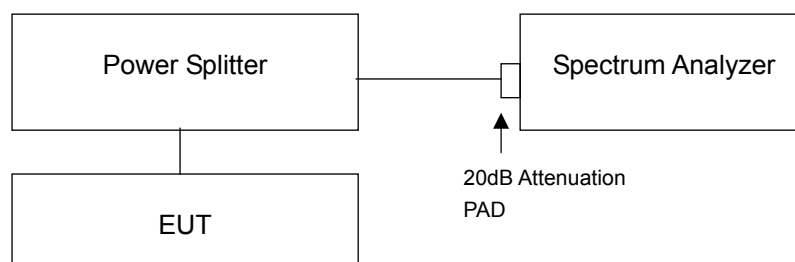
TX Antenna	TEMP. (°C)	Frequency Error (ppm)	Limit (ppm)
Chain 0	50	0.0081632653	2.5
	40	0.0091836735	2.5
	30	0.0086734694	2.5
	20	0.0076530612	2.5
	10	0.0056122449	2.5
	0	0.0051020408	2.5
	-10	0.0045918367	2.5
	-20	0.0045918367	2.5
Chain 1	50	0.0076530612	2.5
	40	0.0086734694	2.5
	30	0.0076530612	2.5
	20	0.0081632653	2.5
	10	0.0051020408	2.5
	0	0.0045918367	2.5
	-10	0.0040816327	2.5
	-20	0.0035714286	2.5

4.3 Occupied Bandwidth Measurement

4.3.1 Test Procedure

The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

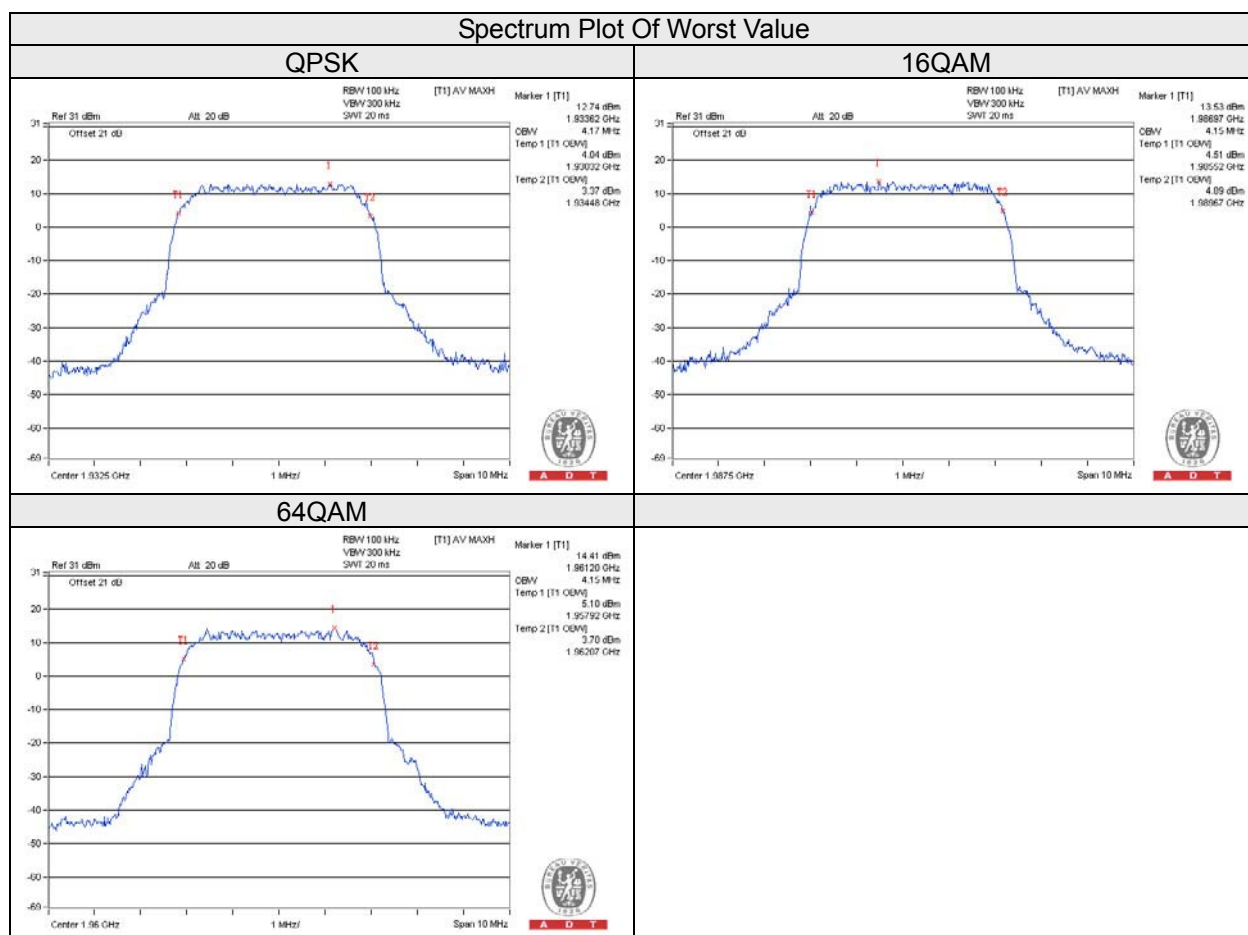
4.3.2 Test Setup



4.3.3 Test Result

WCDMA Band 2 (Channel Bandwidth 5MHz):

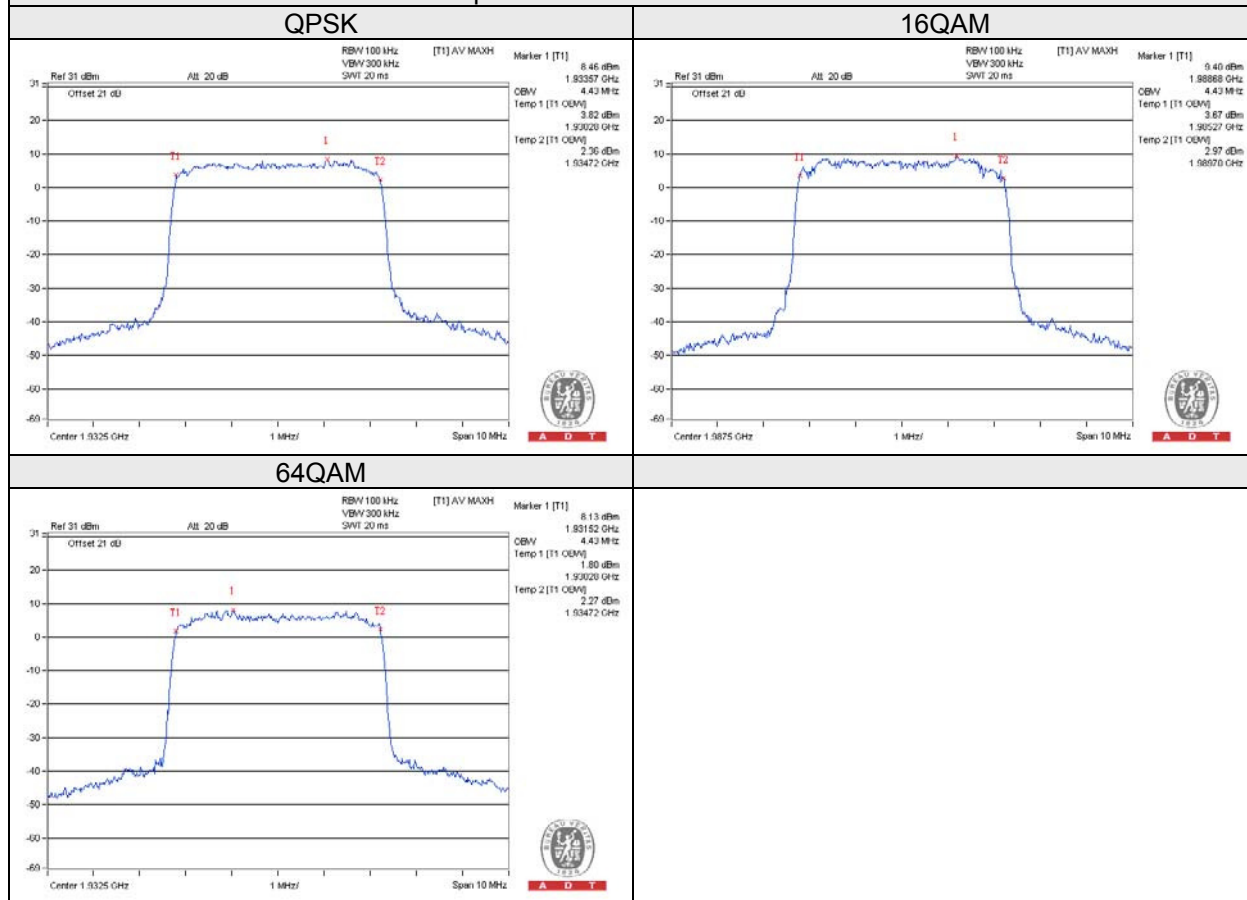
Frequency (MHz)	99% Occupied Bandwidth (MHz)		
	QPSK	16QAM	64QAM
1932.5	4.17	4.13	4.13
1960.0	4.15	4.13	4.15
1987.5	4.15	4.15	4.13



LTE Band 2 (Channel Bandwidth 5MHz): Chain 0

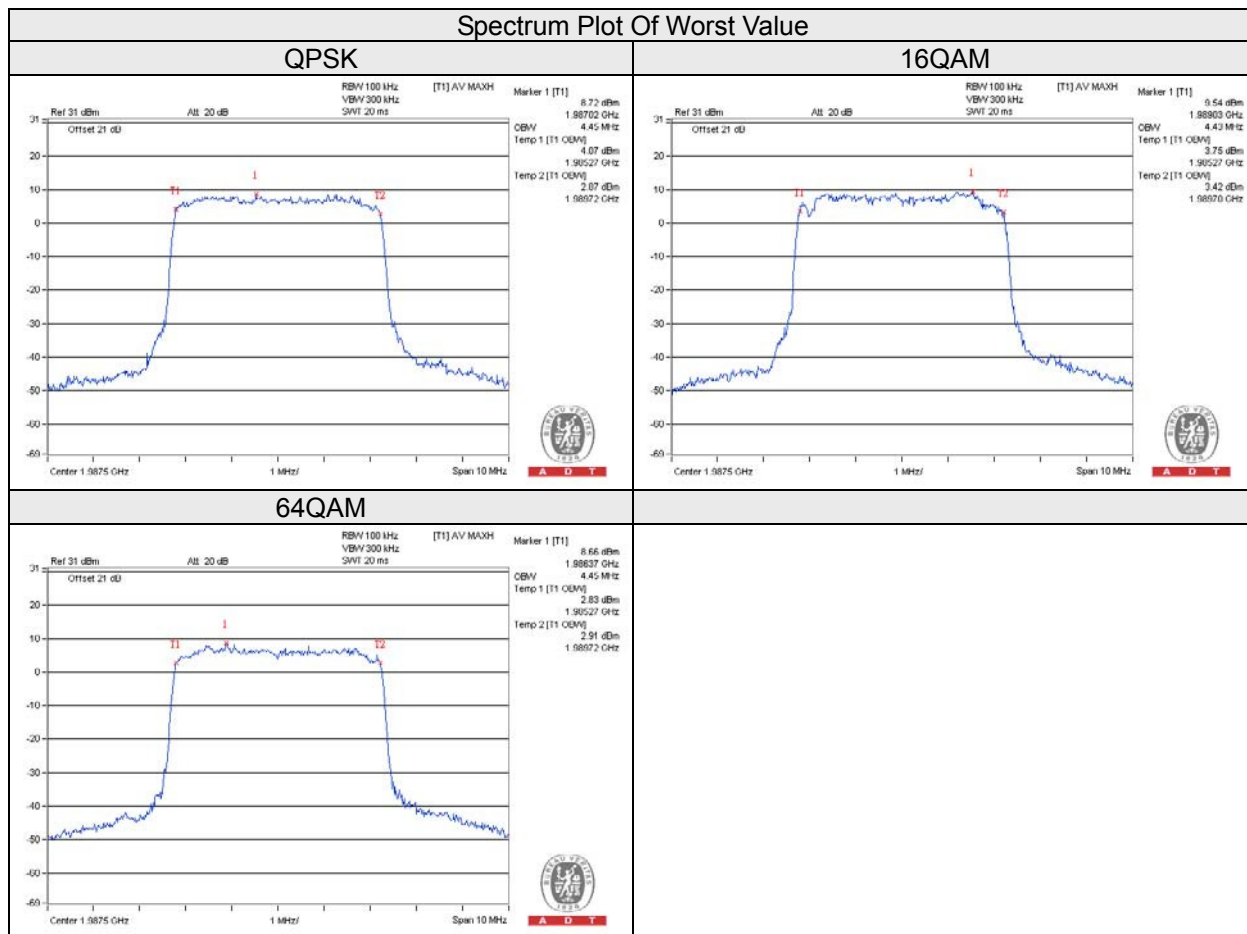
Frequency (MHz)	99% Occupied Bandwidth (MHz)		
	QPSK	16QAM	64QAM
1932.5	4.43	4.42	4.43
1960.0	4.43	4.40	4.43
1987.5	4.43	4.43	4.43

Spectrum Plot Of Worst Value



LTE Band 2 (Channel Bandwidth 5MHz): Chain 1

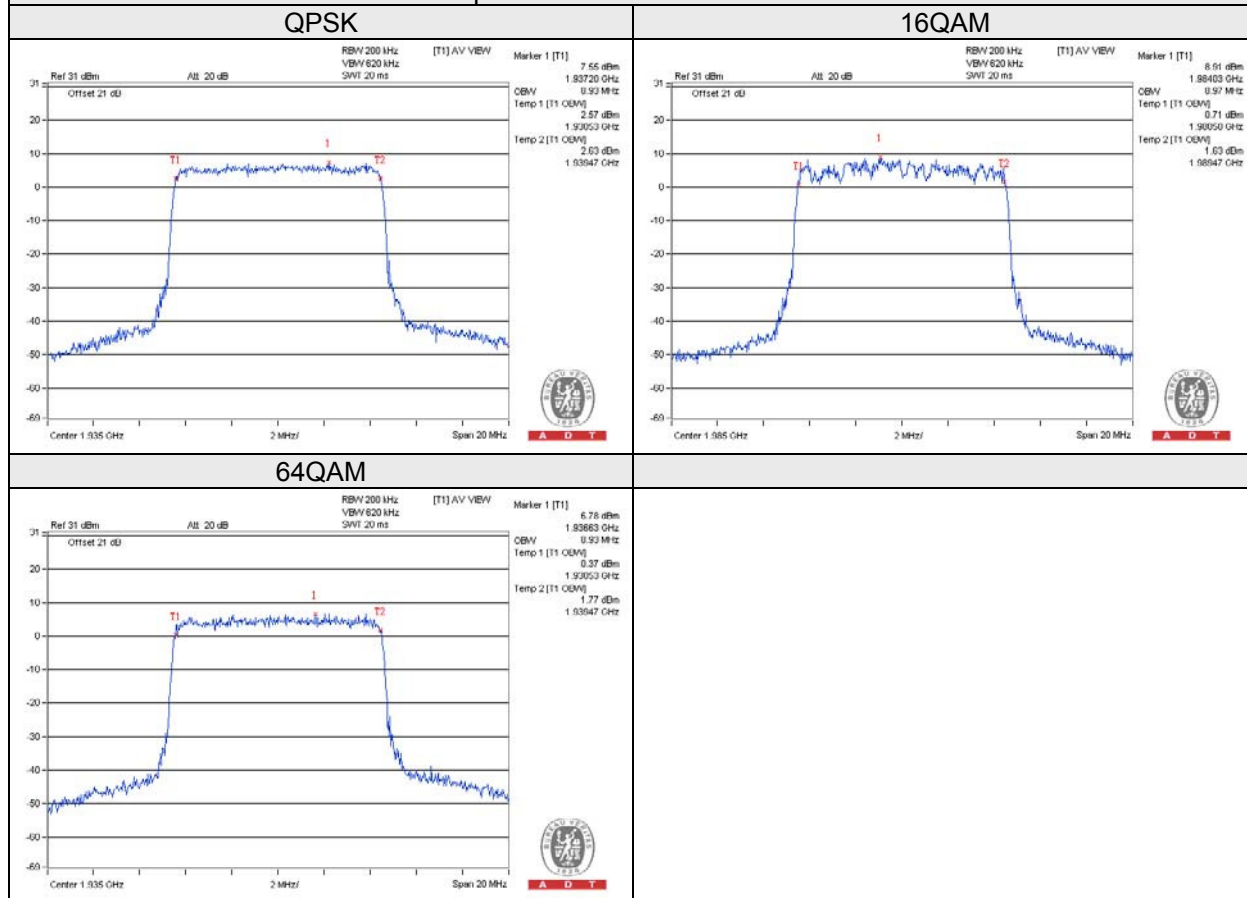
Frequency (MHz)	99% Occupied Bandwidth (MHz)		
	QPSK	16QAM	64QAM
1932.5	4.43	4.42	4.43
1960.0	4.43	4.42	4.43
1987.5	4.45	4.43	4.45



LTE Band 2 (Channel Bandwidth 10MHz): Chain 0

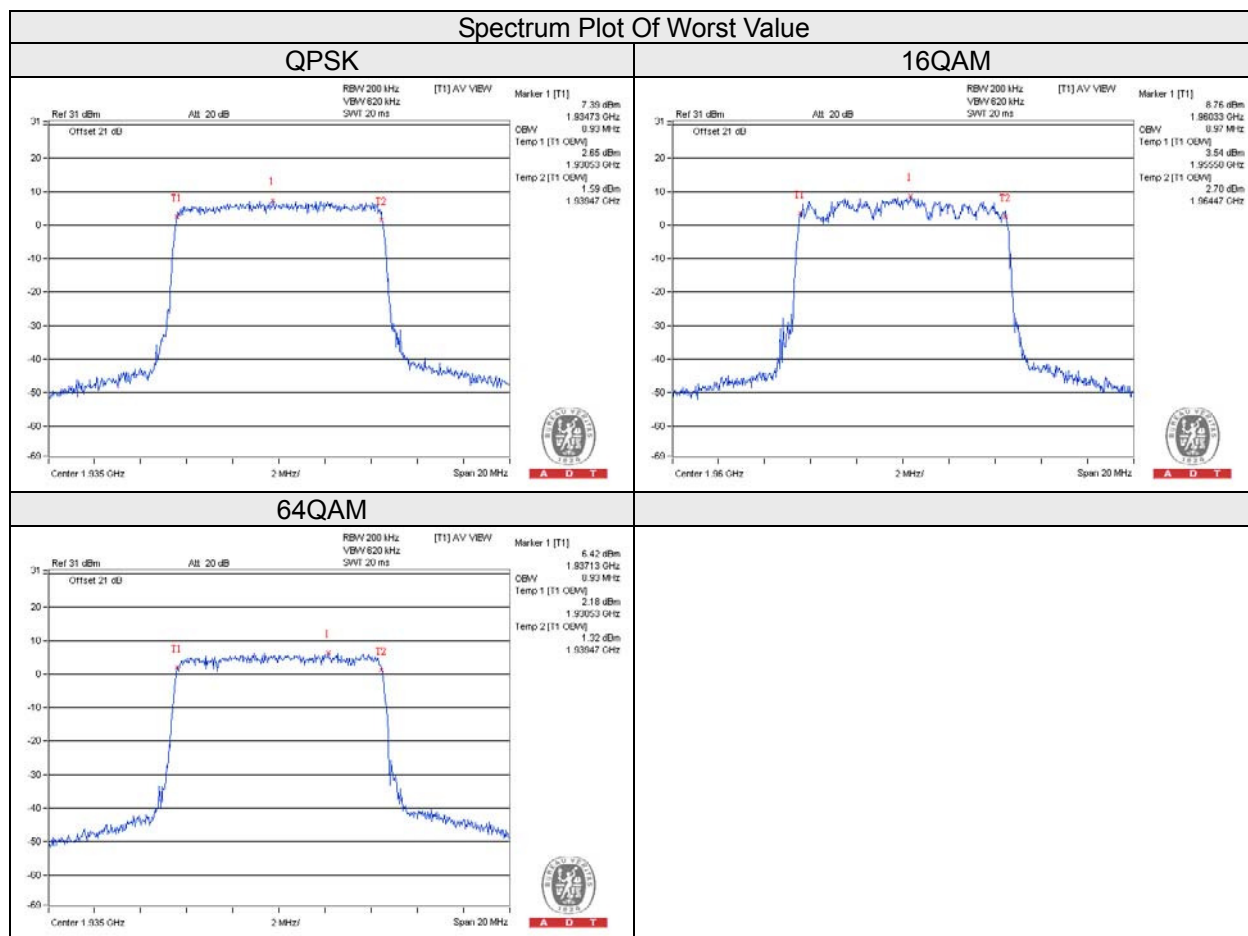
Frequency (MHz)	99% Occupied Bandwidth (MHz)		
	QPSK	16QAM	64QAM
1935.0	8.93	8.93	8.93
1960.0	8.93	8.90	8.90
1985.0	8.90	8.97	8.90

Spectrum Plot Of Worst Value



LTE Band 2 (Channel Bandwidth 10MHz): Chain 1

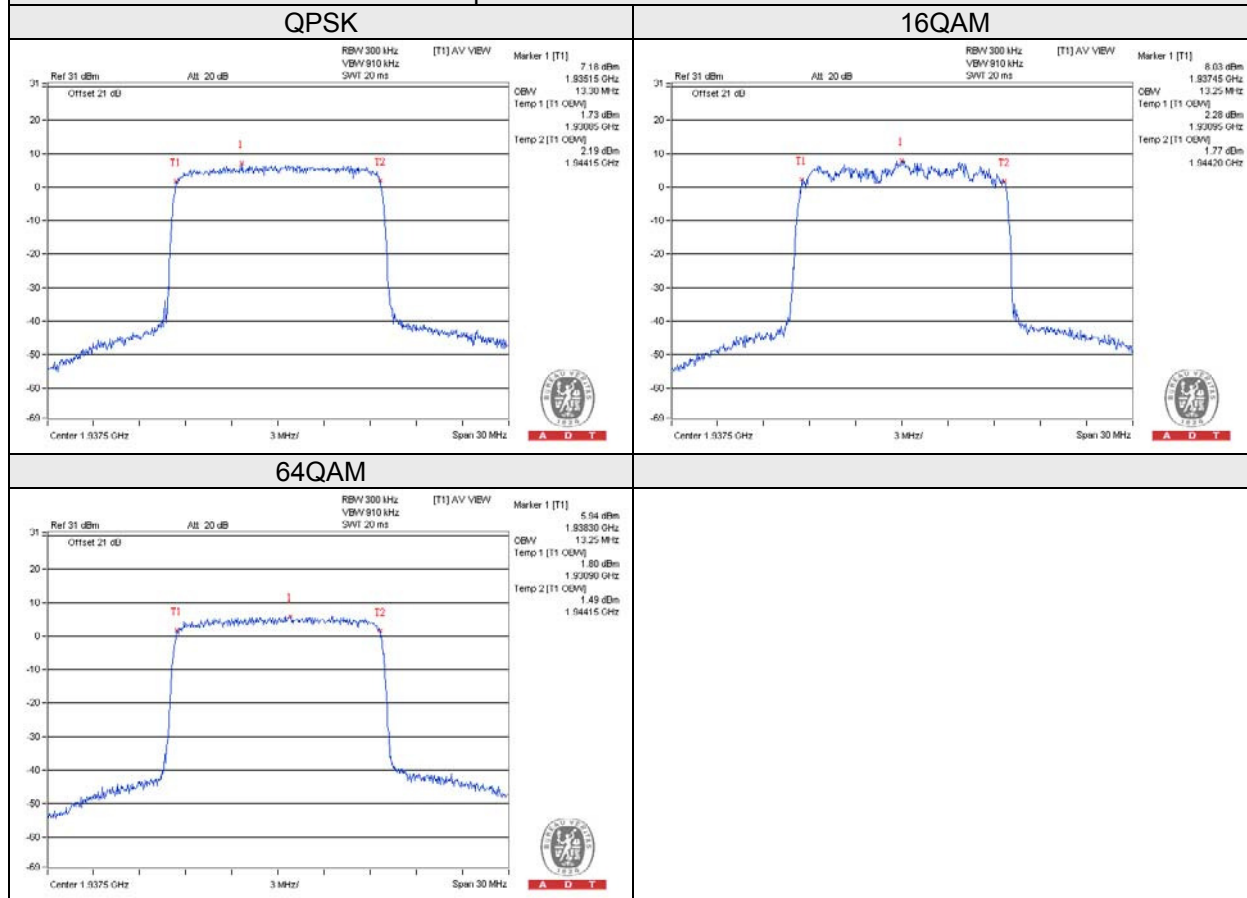
Frequency (MHz)	99% Occupied Bandwidth (MHz)		
	QPSK	16QAM	64QAM
1935.0	8.93	8.90	8.93
1960.0	8.93	8.97	8.93
1985.0	8.90	8.93	8.90



LTE Band 2 (Channel Bandwidth 15MHz): Chain 0

Frequency (MHz)	99% Occupied Bandwidth (MHz)		
	QPSK	16QAM	64QAM
1937.5	13.30	13.25	13.25
1960.0	13.30	13.20	13.25
1982.5	13.25	13.15	13.25

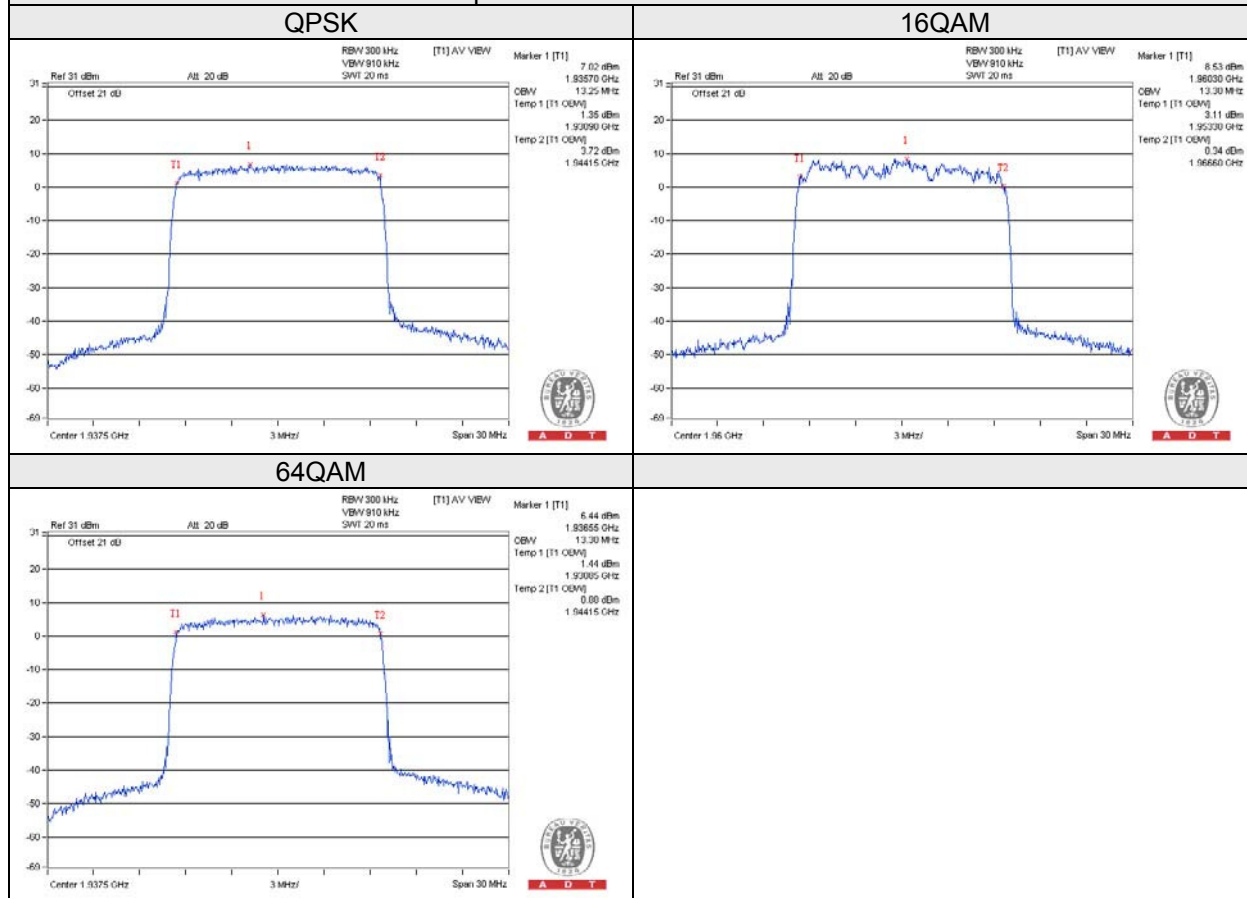
Spectrum Plot Of Worst Value



LTE Band 2 (Channel Bandwidth 15MHz): Chain 1

Frequency (MHz)	99% Occupied Bandwidth (MHz)		
	QPSK	16QAM	64QAM
1937.5	13.25	13.20	13.30
1960.0	13.25	13.30	13.25
1982.5	13.25	13.20	13.25

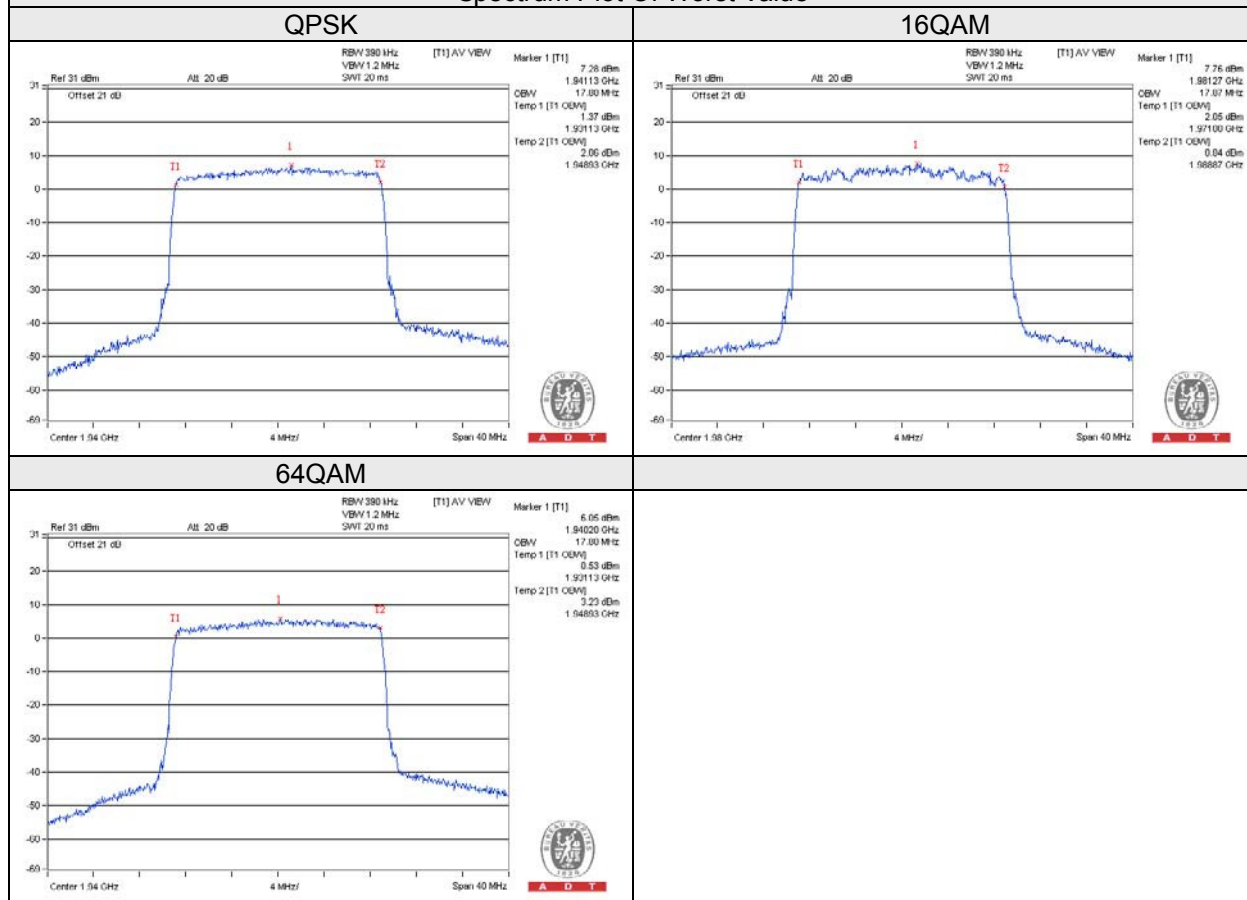
Spectrum Plot Of Worst Value



LTE Band 2 (Channel Bandwidth 20MHz): Chain 0

Frequency (MHz)	99% Occupied Bandwidth (MHz)		
	QPSK	16QAM	64QAM
1940.0	17.80	17.80	17.80
1960.0	17.80	17.67	17.80
1980.0	17.80	17.87	17.73

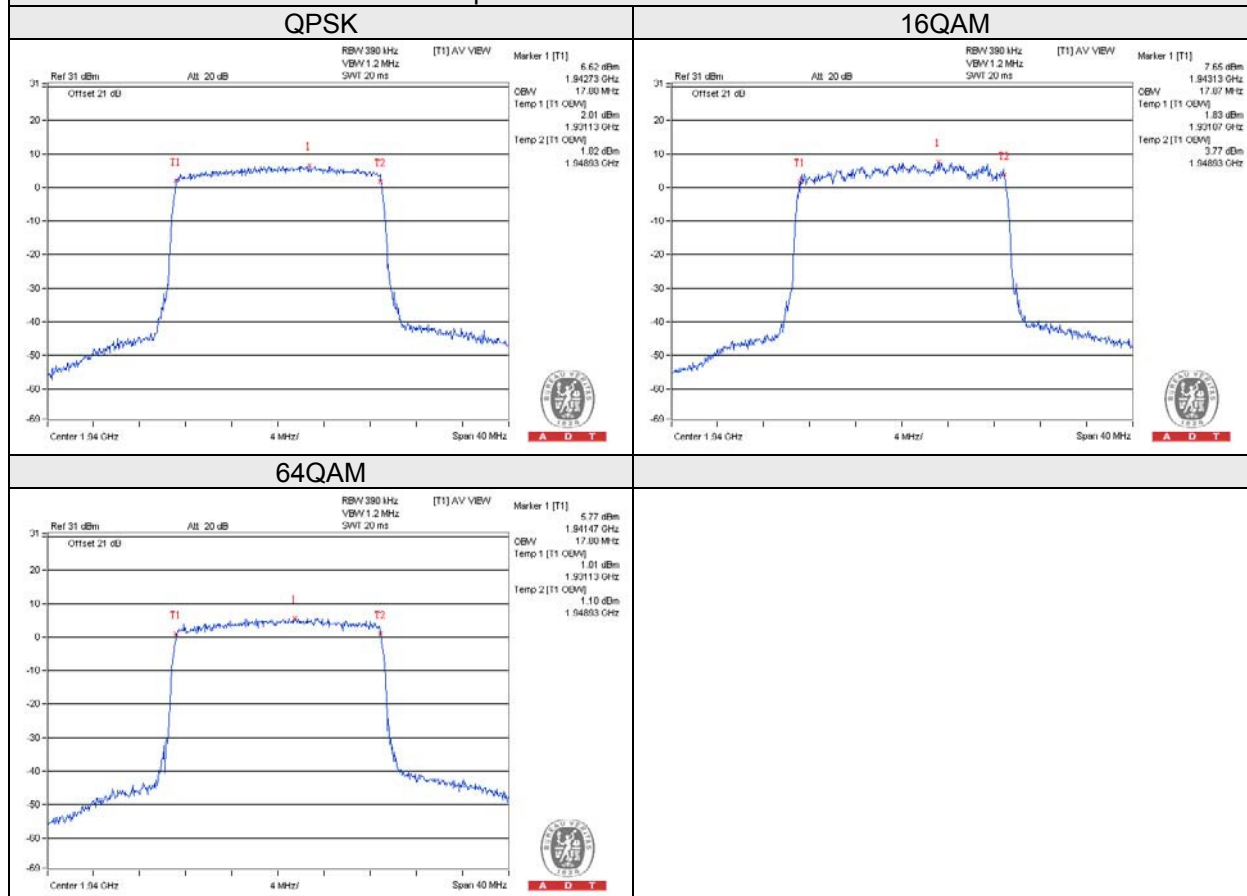
Spectrum Plot Of Worst Value



LTE Band 2 (Channel Bandwidth 20MHz): Chain 1

Frequency (MHz)	99% Occupied Bandwidth (MHz)		
	QPSK	16QAM	64QAM
1940.0	17.80	17.87	17.80
1960.0	17.80	17.73	17.80
1980.0	17.80	17.87	17.80

Spectrum Plot Of Worst Value

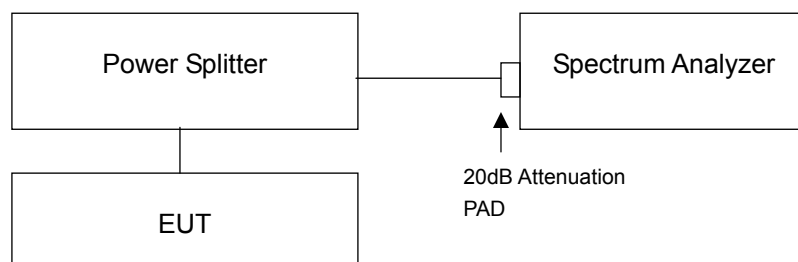


4.4 Band Edge Measurement

4.4.1 Limits of Band Edge Measurement

Power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. 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.

4.4.2 Test Setup

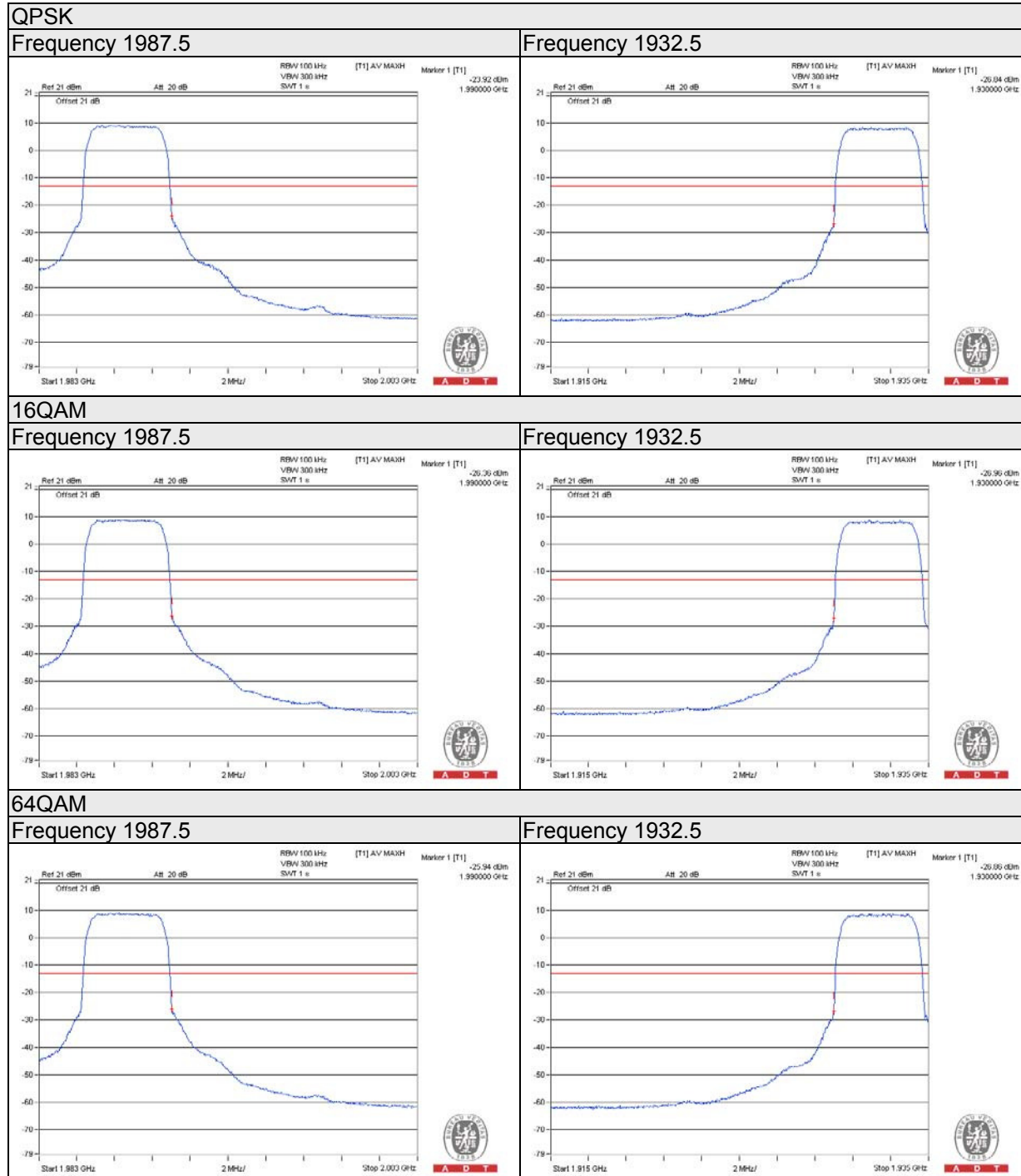


4.4.3 Test Procedures

- All measurements were done at low and high operational frequency range.
- The center frequency of spectrum is the band edge frequency and span is 10MHz. RB of the spectrum is 100kHz and VB of the spectrum is 300kHz .
- Record the max trace plot into the test report.

4.4.4 Test Results

WCDMA Band 2 (Channel Bandwidth 5MHz):

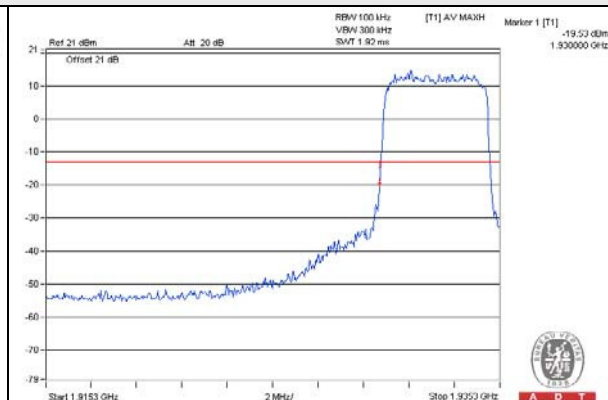
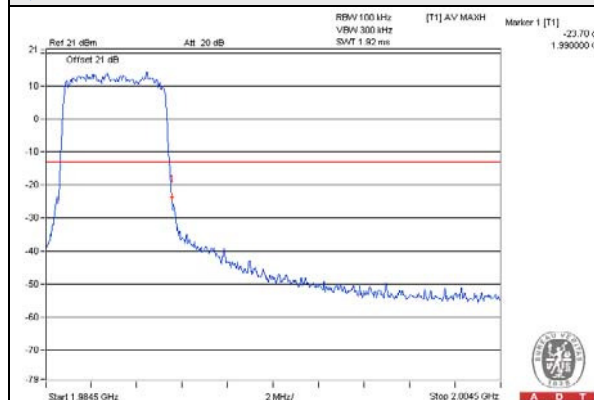


LTE Band 2 (Channel Bandwidth 5MHz): Chain 0

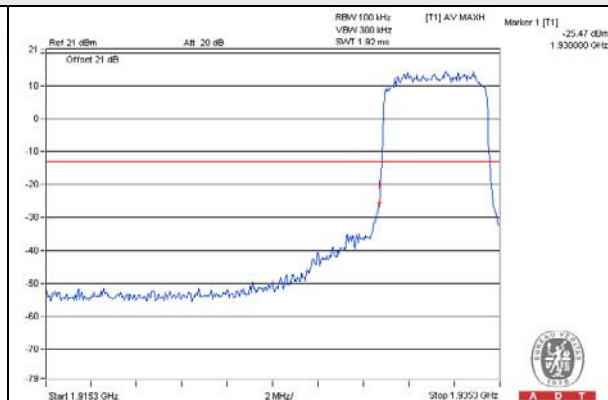
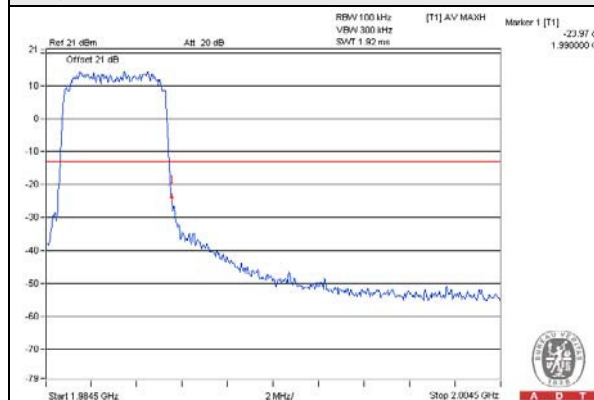
Frequency 1987.5

Frequency 1932.5

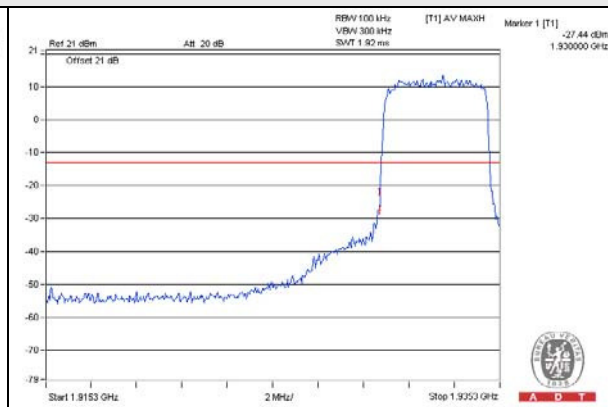
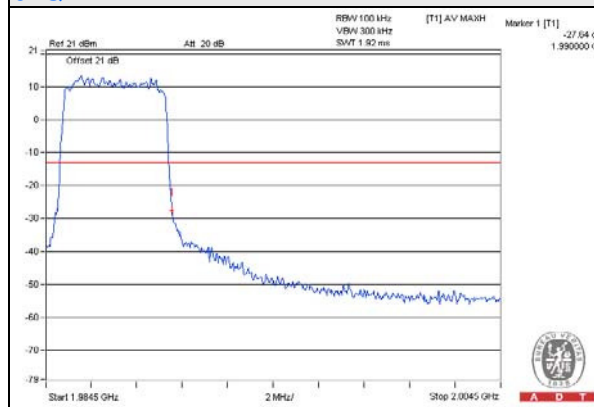
QPSK



16QAM



64QAM

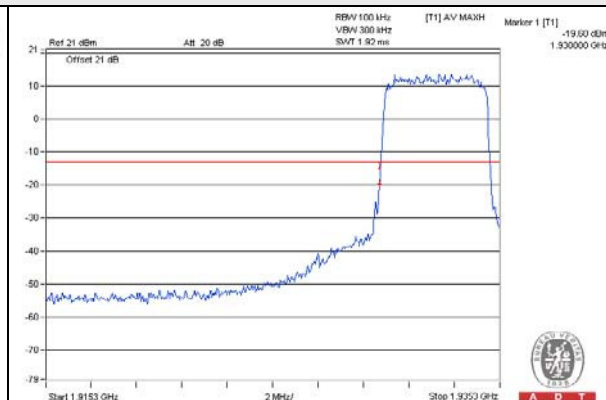
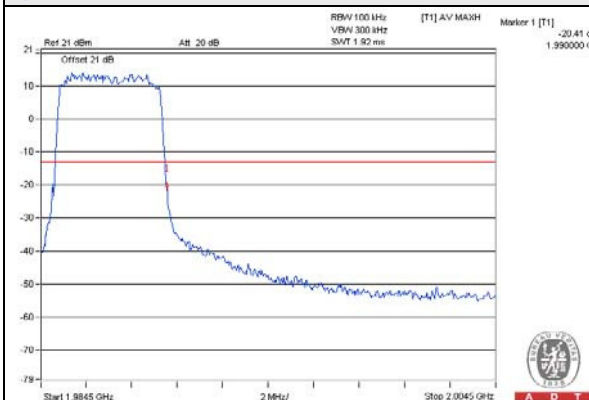


LTE Band 2 (Channel Bandwidth 5MHz): Chain 1

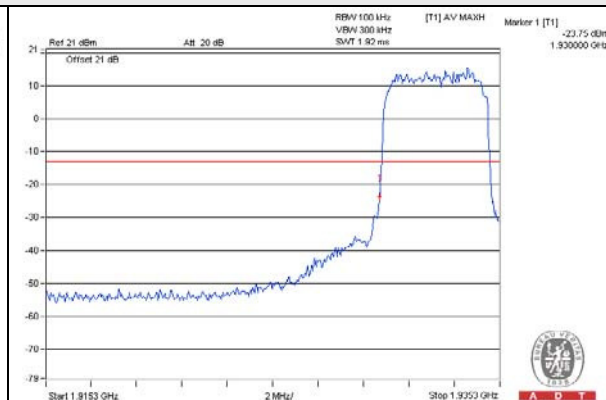
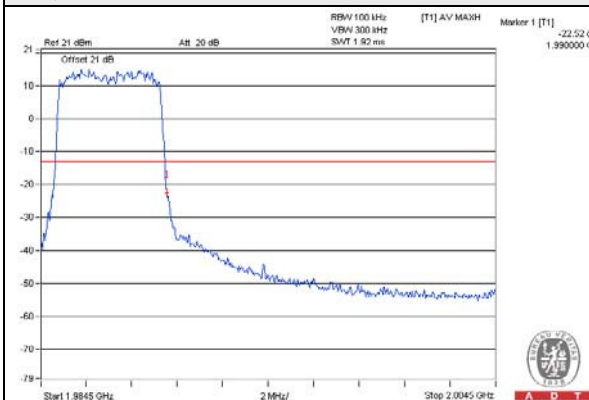
Frequency 1987.5

Frequency 1932.5

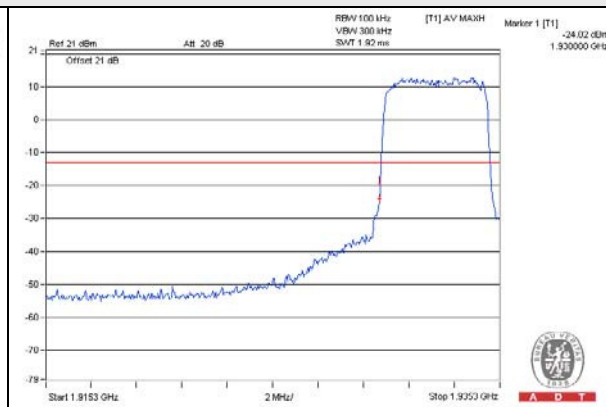
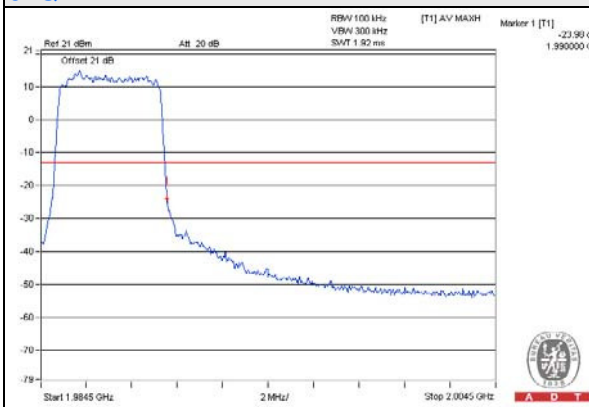
QPSK



16QAM



64QAM

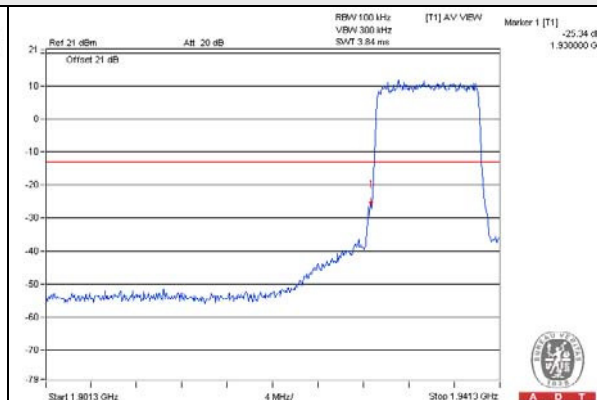
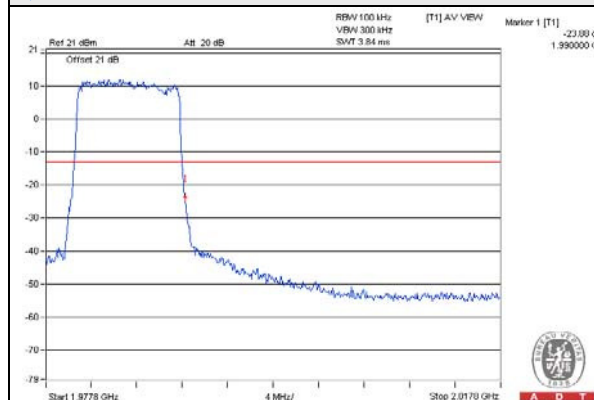


LTE Band 2 (Channel Bandwidth 10MHz): Chain 0

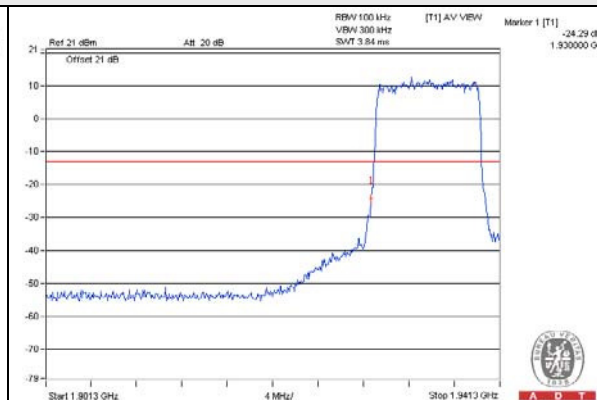
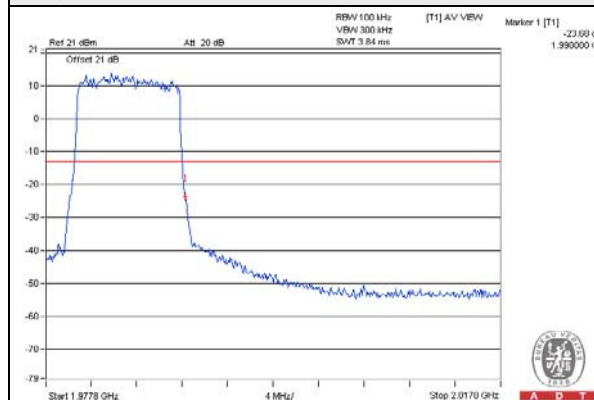
Frequency 1985.0

Frequency 1935.0

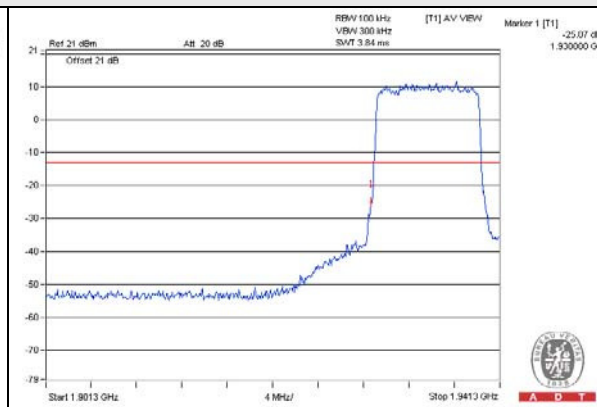
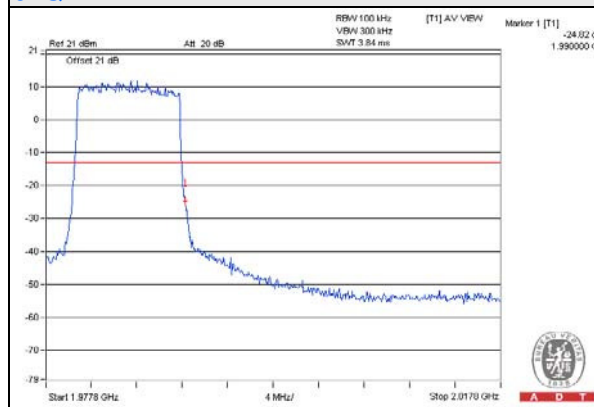
QPSK



16QAM



64QAM

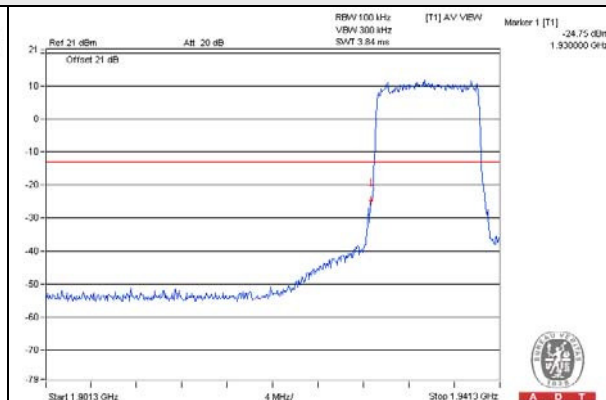
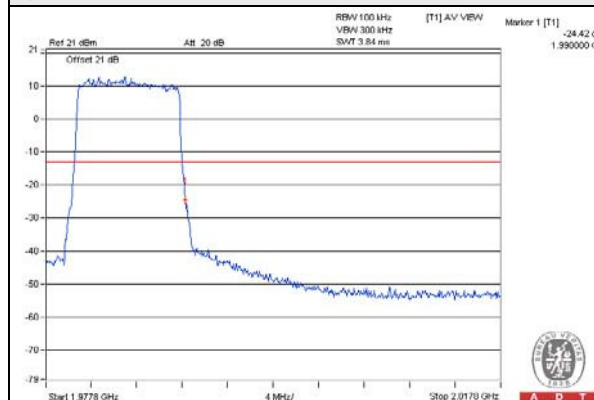


LTE Band 2 (Channel Bandwidth 10MHz): Chain 1

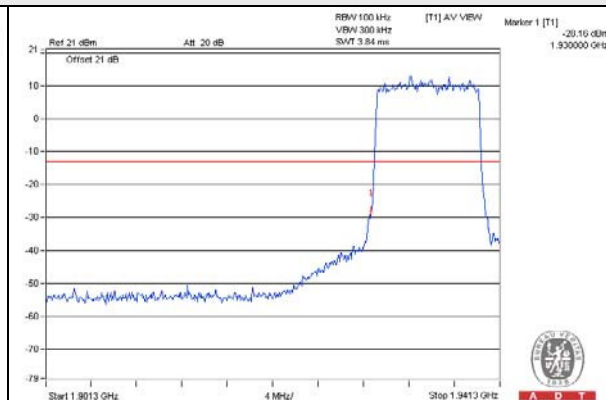
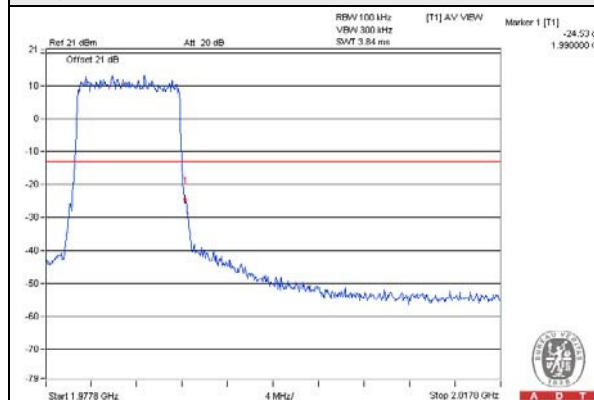
Frequency 1985.0

Frequency 1935.0

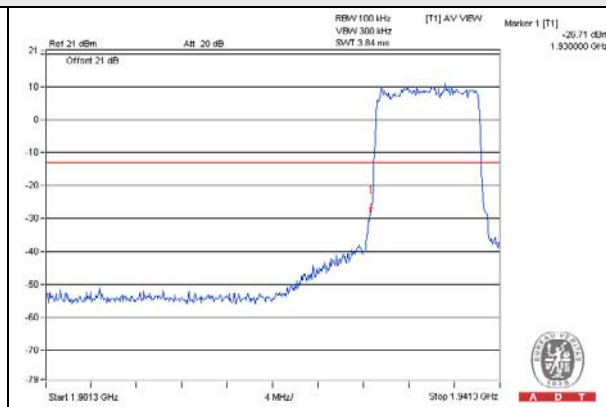
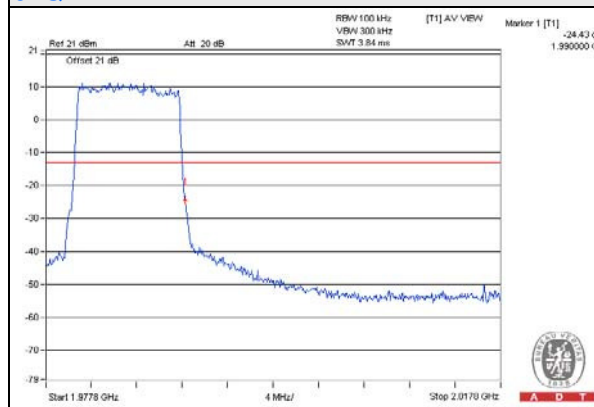
QPSK



16QAM



64QAM

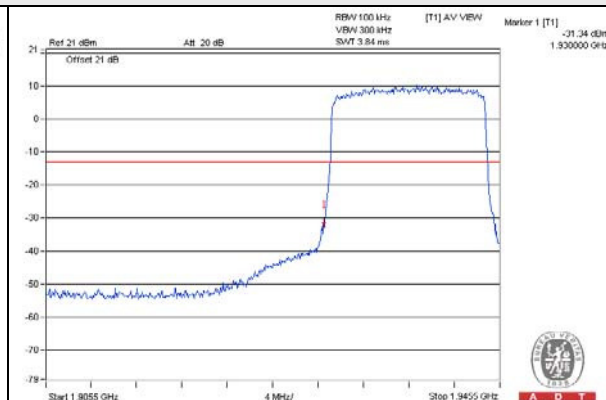
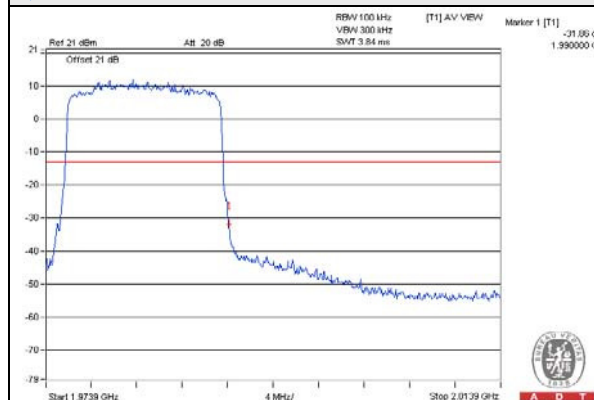


LTE Band 2 (Channel Bandwidth 15MHz): Chain 0

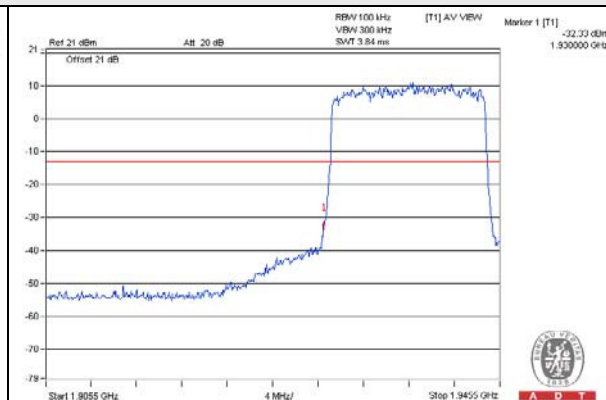
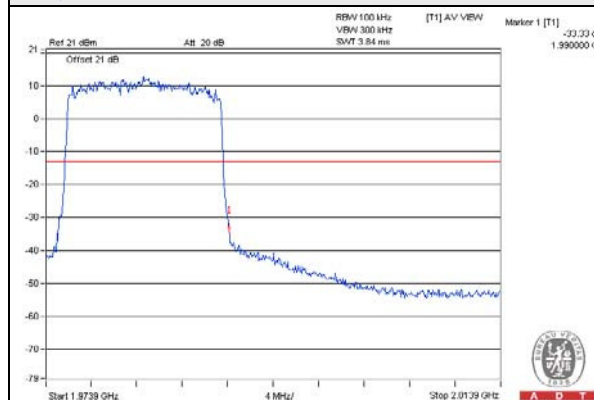
Frequency 1982.5

Frequency 1937.5

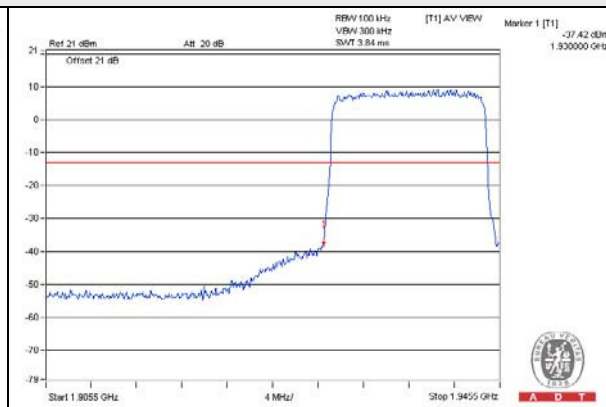
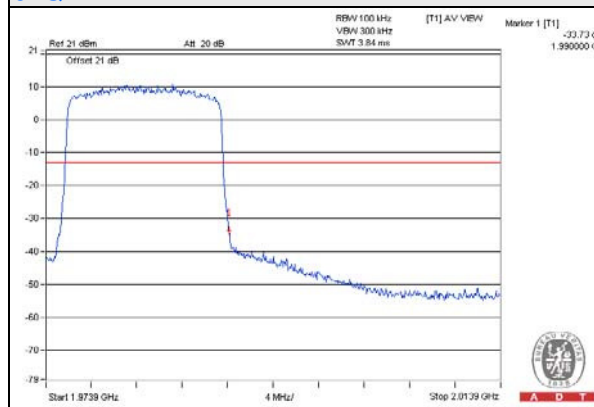
QPSK



16QAM



64QAM

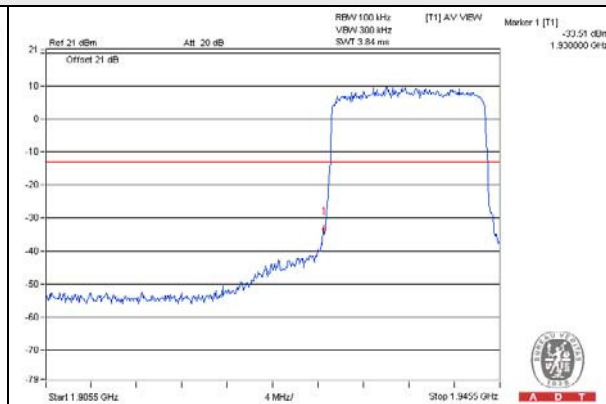
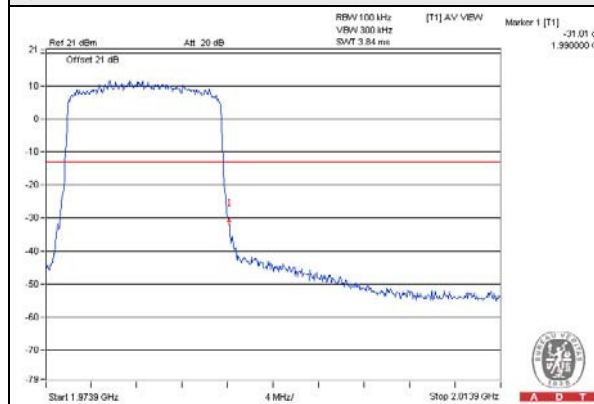


LTE Band 2 (Channel Bandwidth 15MHz): Chain 1

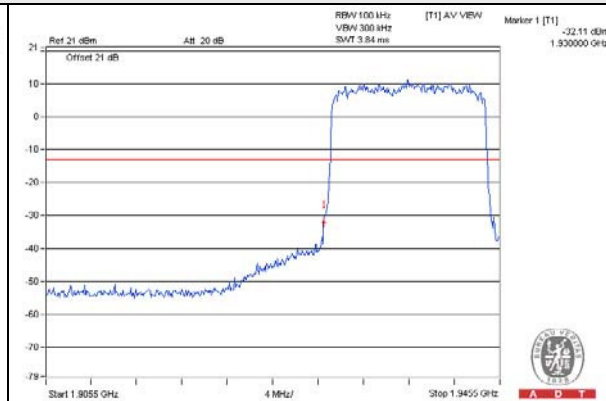
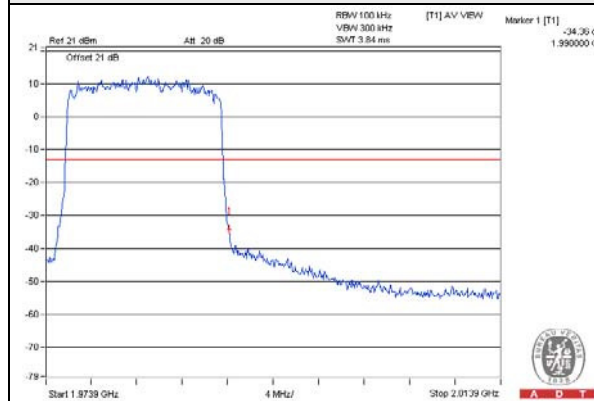
Frequency 1982.5

Frequency 1937.5

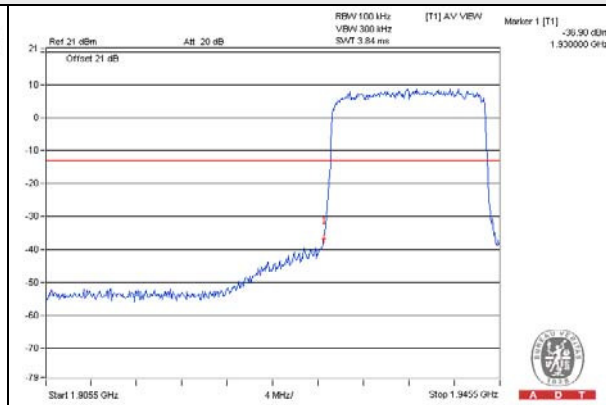
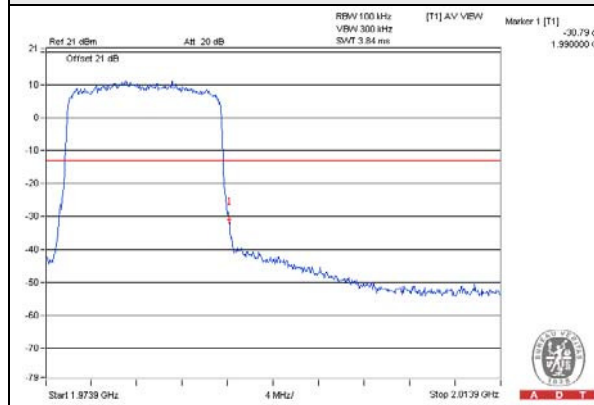
QPSK



16QAM



64QAM

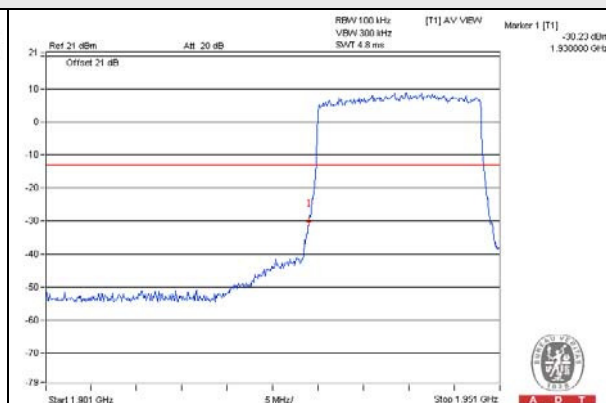
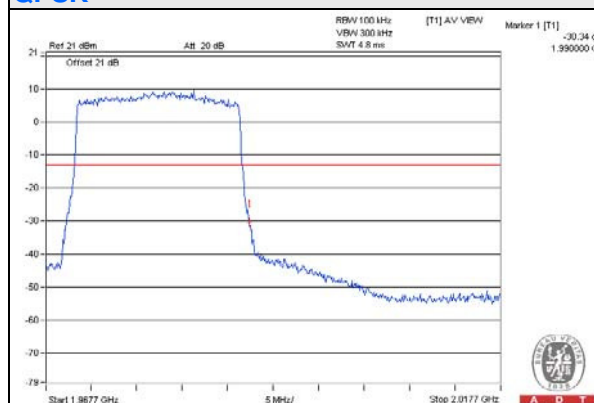


LTE Band 2 (Channel Bandwidth 20MHz): Chain 0

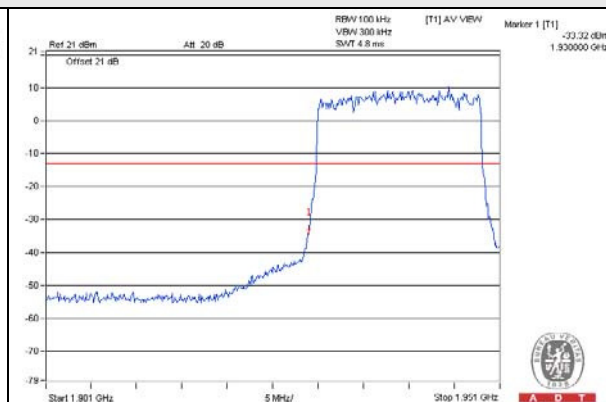
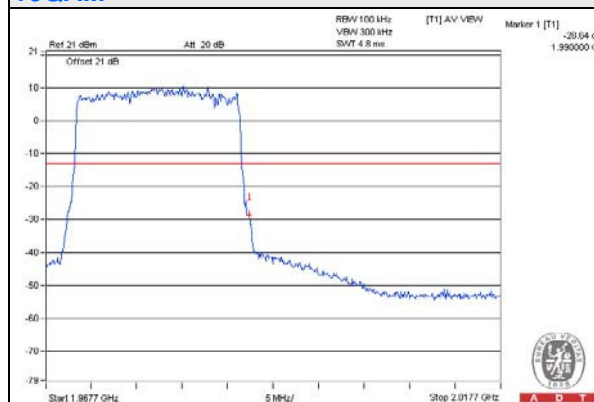
Frequency 1980.0

Frequency 1940.0

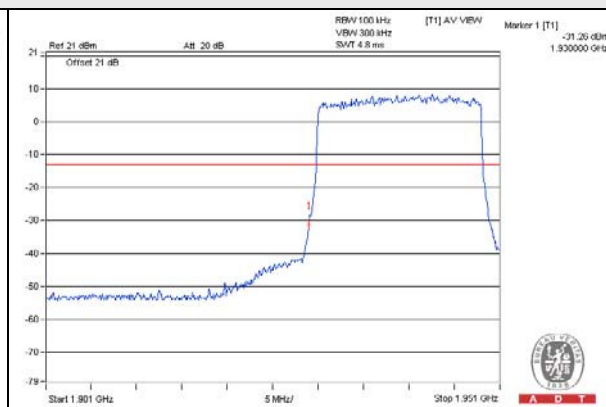
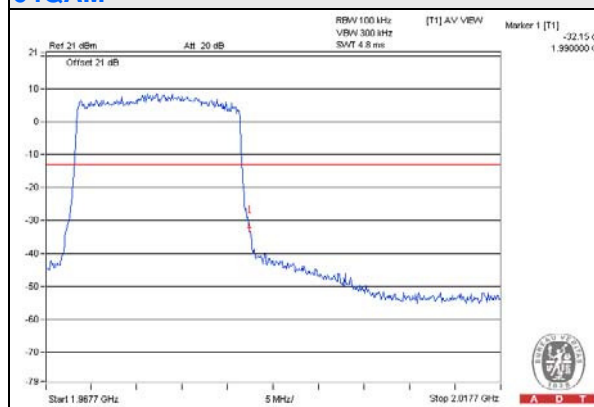
QPSK



16QAM



64QAM

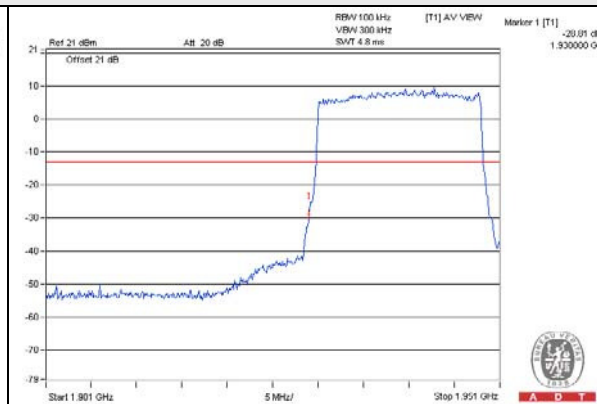
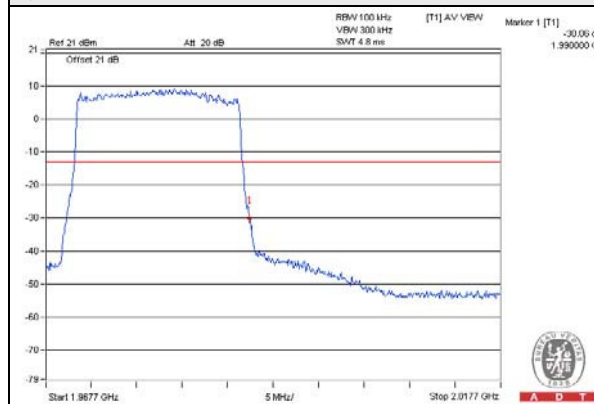


LTE Band 2 (Channel Bandwidth 20MHz): Chain 1

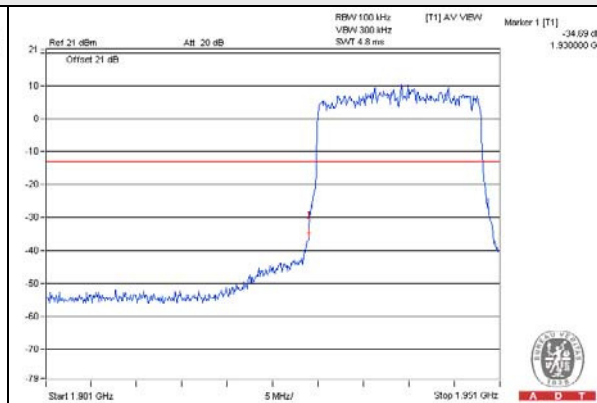
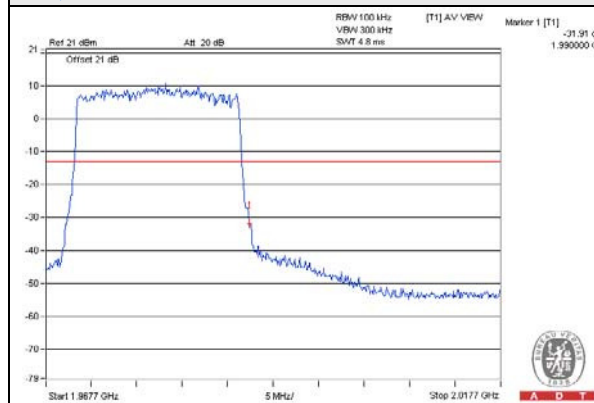
Frequency 1980.0

Frequency 1940.0

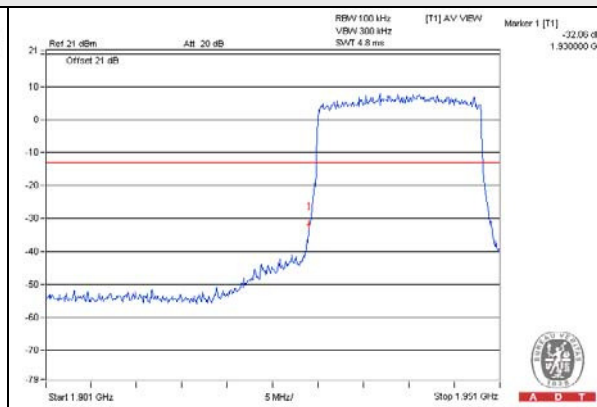
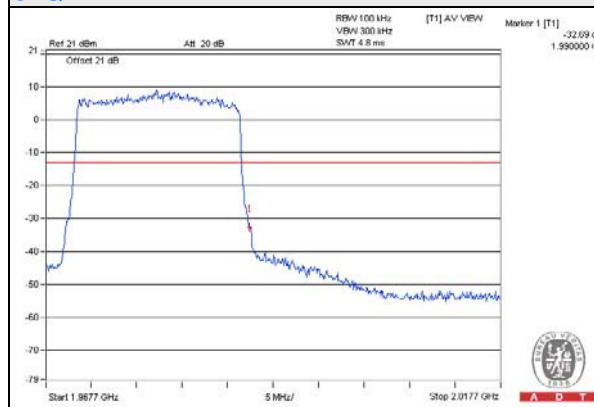
QPSK



16QAM



64QAM

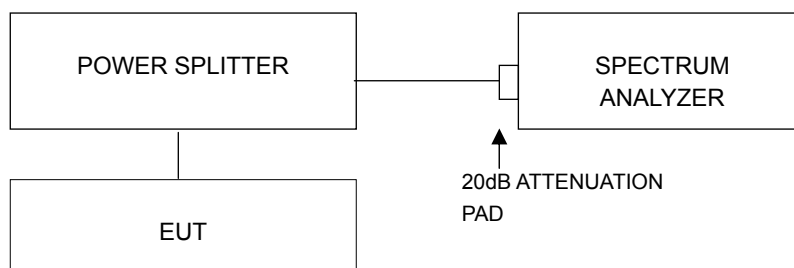


4.5 Peak To Average Ratio

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 $\geq$ 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 Band 2 (Channel Bandwidth 5MHz):

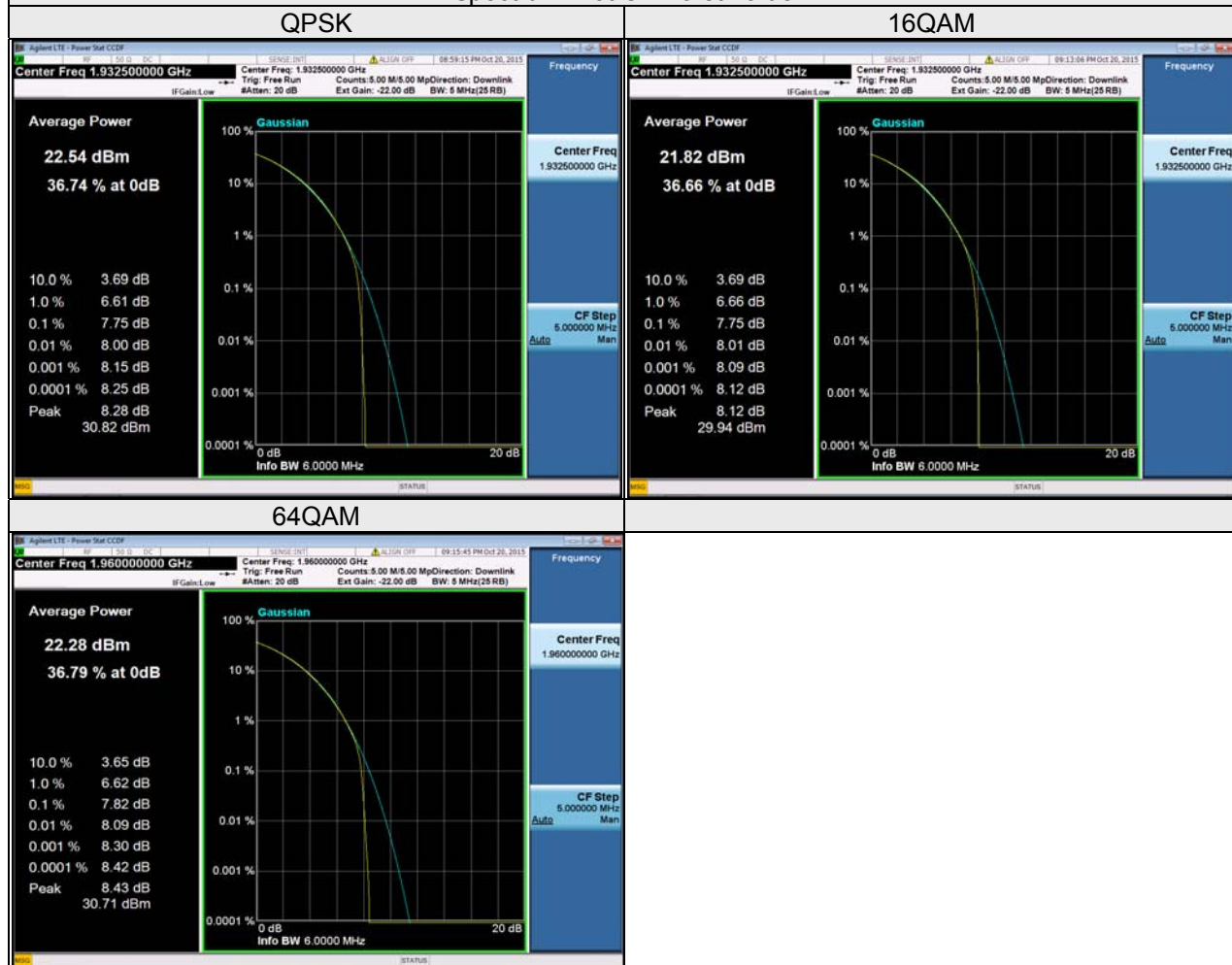
Frequency (MHz)	Peak To Average Ratio (dB)		
	QPSK	16QAM	64QAM
1932.5	7.61	7.65	7.58
1960.0	7.58	7.62	7.60
1987.5	7.46	7.53	7.49



LTE Band 2 (CHANNEL BANDWIDTH 5MHz): Chain 0

Frequency (MHz)	Peak To Average Ratio (dB)		
	QPSK	16QAM	64QAM
1932.5	7.75	7.75	7.77
1960.0	7.73	7.75	7.82
1987.5	7.63	7.69	7.78

Spectrum Plot Of Worst Value



LTE Band 2 (CHANNEL BANDWIDTH 5MHz): Chain 1

Frequency (MHz)	Peak To Average Ratio (dB)		
	QPSK	16QAM	64QAM
1932.5	7.72	7.76	7.82
1960.0	7.70	7.74	7.82
1987.5	7.62	7.69	7.73

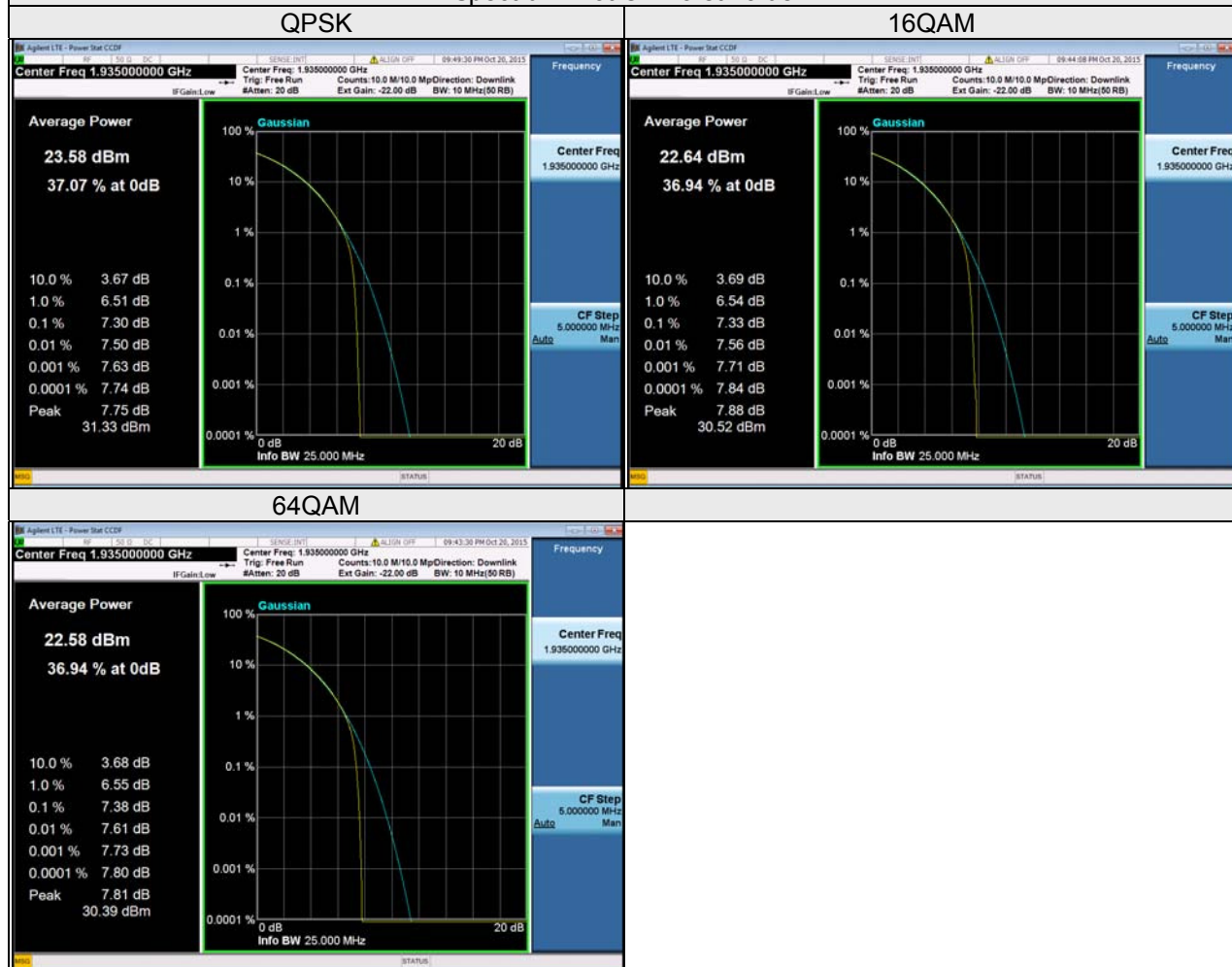
Spectrum Plot Of Worst Value



LTE Band 2 (CHANNEL BANDWIDTH 10MHz): Chain 0

Frequency (MHz)	Peak To Average Ratio (dB)		
	QPSK	16QAM	64QAM
1935.0	7.30	7.33	7.38
1960.0	7.23	7.27	7.31
1985.0	7.20	7.26	7.30

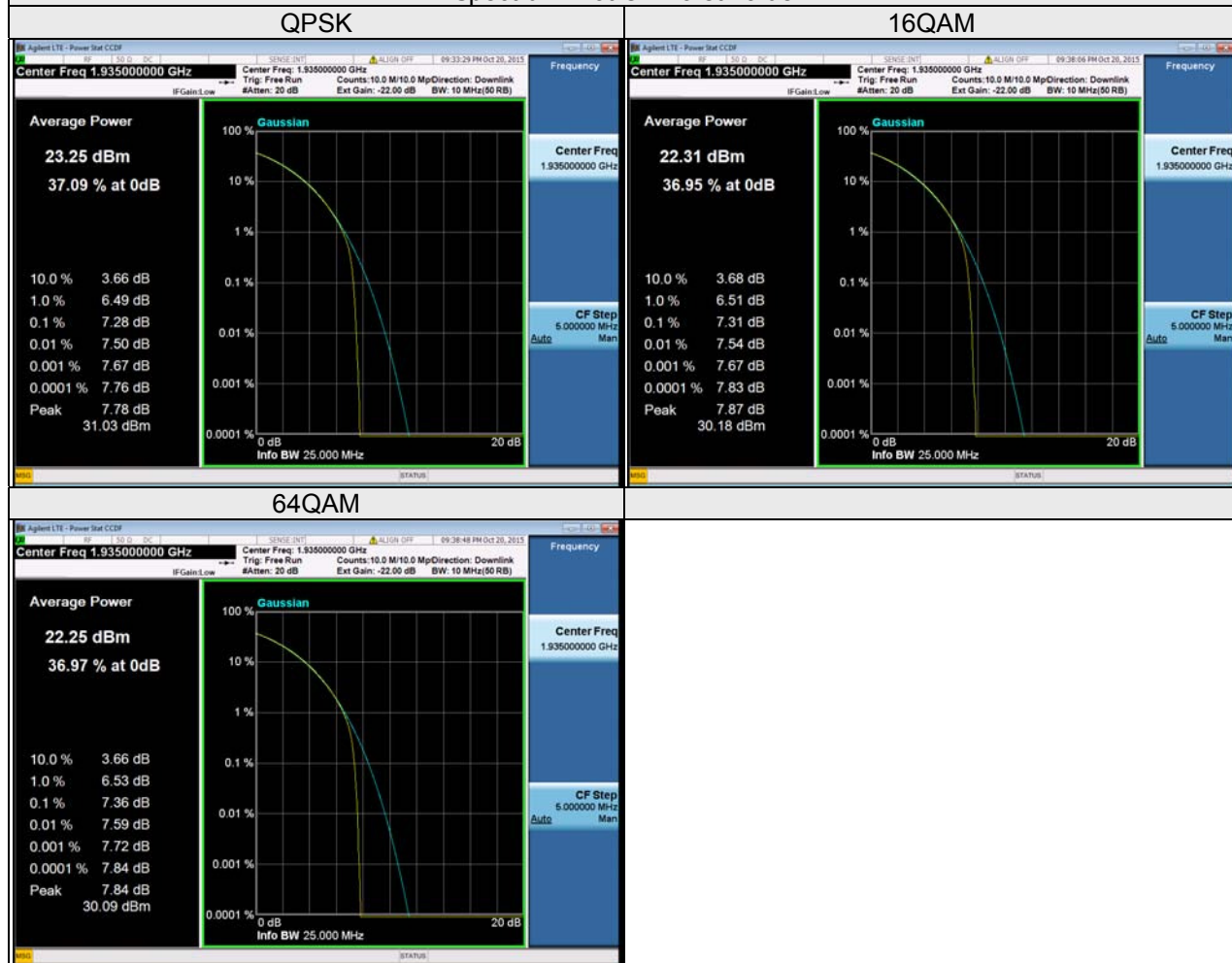
Spectrum Plot Of Worst Value



LTE Band 2 (CHANNEL BANDWIDTH 10MHz): Chain 1

Frequency (MHz)	Peak To Average Ratio (dB)		
	QPSK	16QAM	64QAM
1935.0	7.28	7.31	7.36
1960.0	7.22	7.26	7.30
1985.0	7.14	7.22	7.26

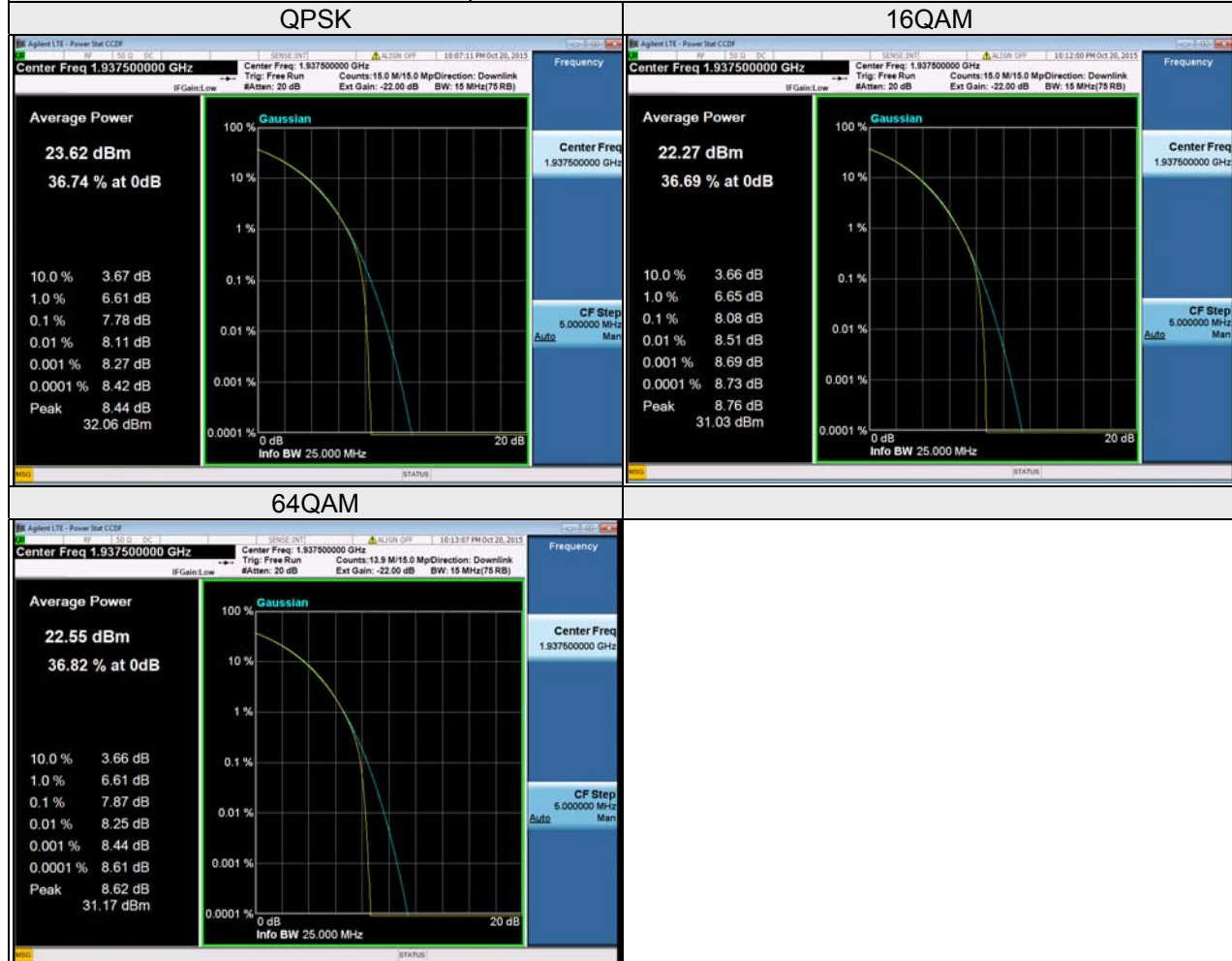
Spectrum Plot Of Worst Value



LTE Band 2 (CHANNEL BANDWIDTH 15MHz): Chain 0

Frequency (MHz)	Peak To Average Ratio (dB)		
	QPSK	16QAM	64QAM
1937.5	7.78	8.08	7.87
1960.0	7.66	8.00	7.80
1982.5	7.59	7.93	7.74

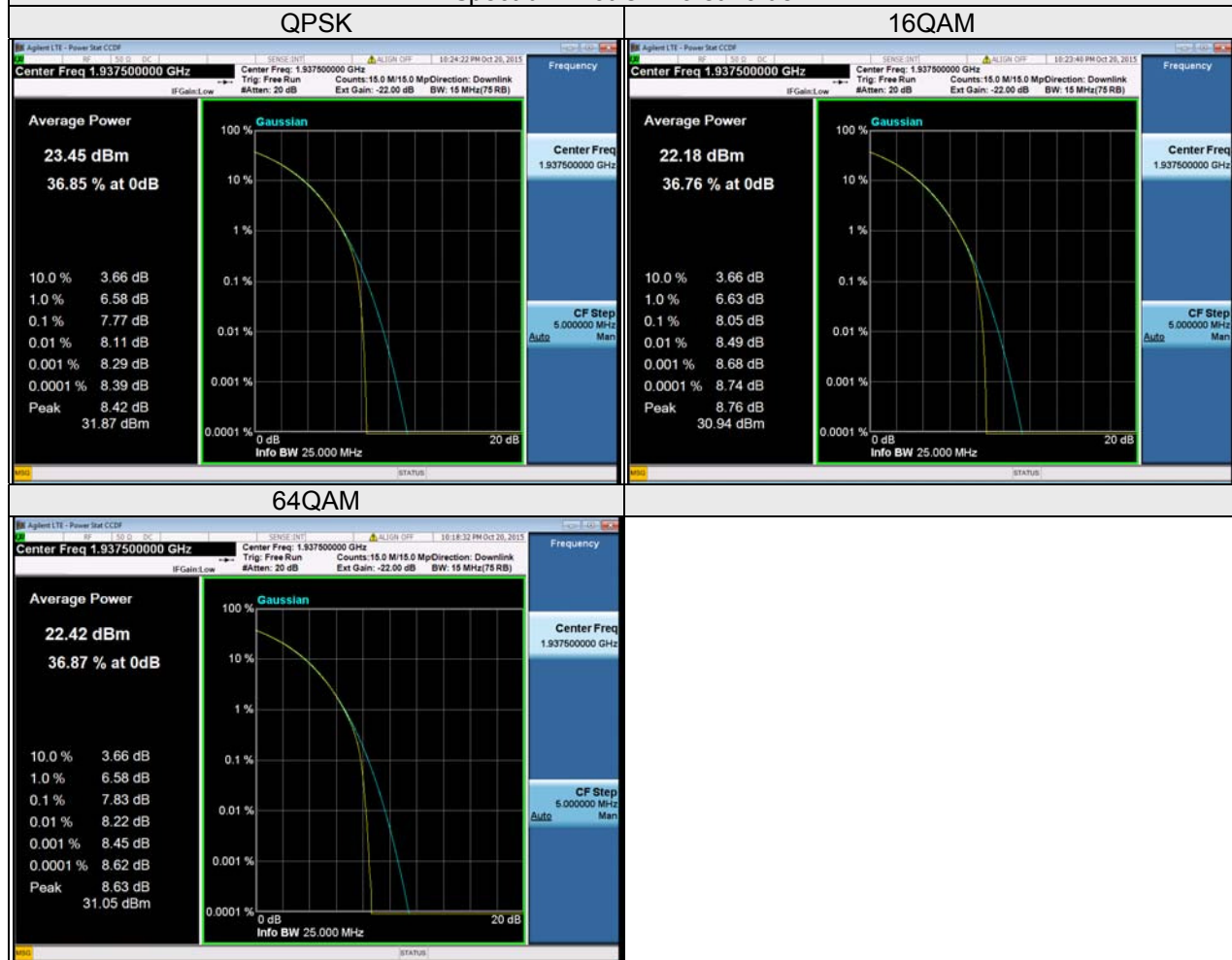
Spectrum Plot Of Worst Value



LTE Band 2 (CHANNEL BANDWIDTH 15MHz): Chain 1

Frequency (MHz)	Peak To Average Ratio (dB)		
	QPSK	16QAM	64QAM
1937.5	7.77	8.05	7.83
1960.0	7.65	7.98	7.78
1982.5	7.53	7.90	7.71

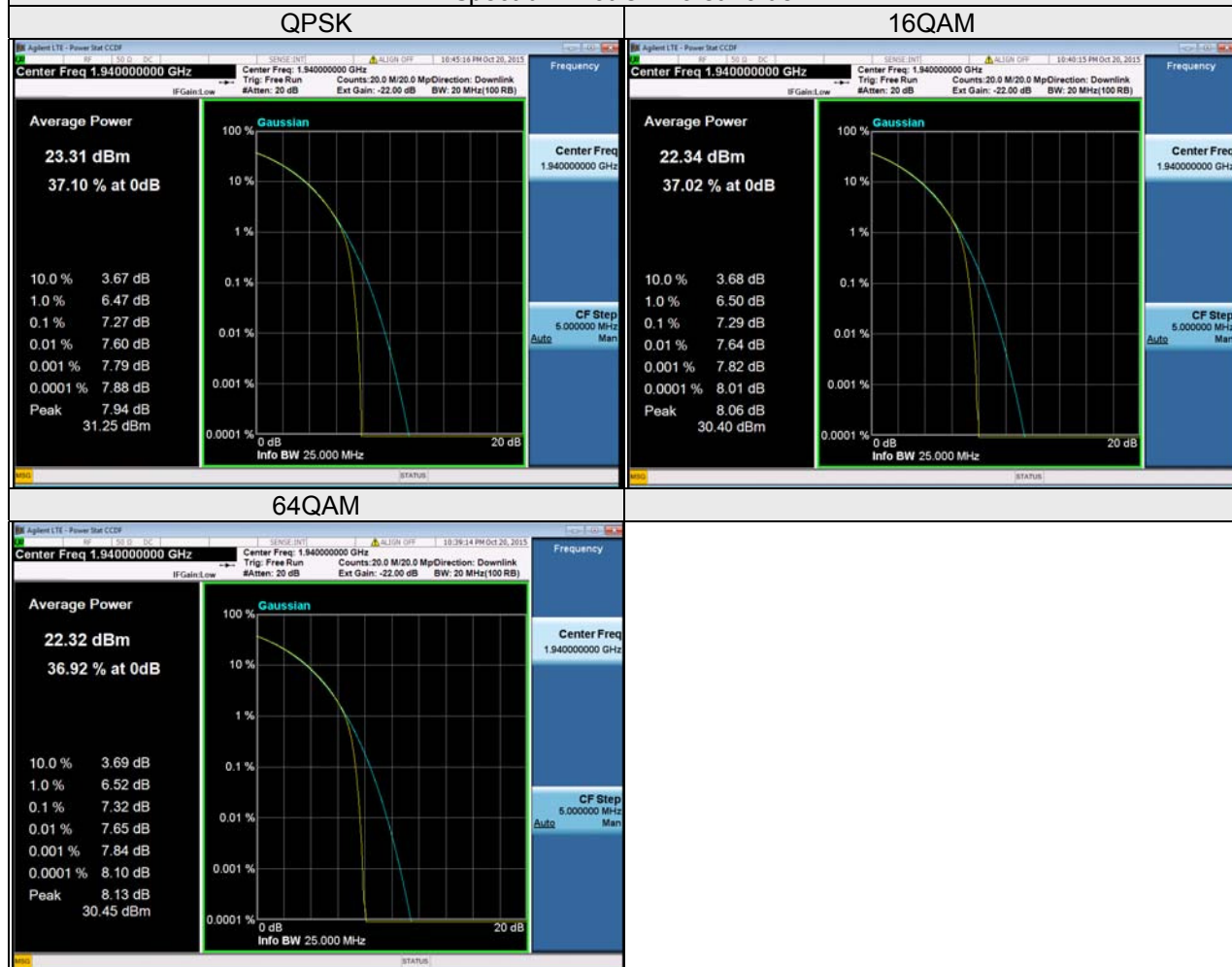
Spectrum Plot Of Worst Value



LTE Band 2 (CHANNEL BANDWIDTH 20MHz): Chain 0

Frequency (MHz)	Peak To Average Ratio (dB)		
	QPSK	16QAM	64QAM
1940.0	7.27	7.29	7.32
1960.0	7.14	7.16	7.19
1980.0	7.25	7.27	7.30

Spectrum Plot Of Worst Value



LTE Band 2 (CHANNEL BANDWIDTH 20MHz): Chain 1

Frequency (MHz)	Peak To Average Ratio (dB)		
	QPSK	16QAM	64QAM
1940.0	7.28	7.28	7.31
1960.0	7.11	7.14	7.17
1980.0	7.20	7.23	7.24

Spectrum Plot Of Worst Value

