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Report On

Application for Grant of Equipment Authorization of the
Nextivity Inc.
QUATRA 4000 Industrial Signal Booster

FCC CFR 47 Part 2, Part 22 and Part 24
RSS-Gen, RSS-132 and RSS-133

Report No. 72154394A **December 2019**

REPORT ON	Radio Testing of the Nextivity Inc. QUATRA 4000 Industrial Signal Booster
TEST REPORT NUMBER	72154394A
PREPARED FOR	Nextivity Inc. 16550 West Bernardo Drive, Bldg 5, Suite 550, San Diego, CA 92127, USA
CONTACT PERSON	CK Li Sr. Principal Engineer, Regulatory (858) 485-9442 CLi@NextivityInc.com
PREPARED BY	Xiaoying Zhang **Name** Authorized Signatory Title: EMC/Wireless Test Engineer
APPROVED BY	Ferdinand S. Custodio **Name** Authorized Signatory Title: EMC Test Engineer/Wireless Team Lead
DATED	December 19, 2019

Revision History

72154394A Nextivity Inc. QUATRA 4000 Industrial Signal Booster					
DATE	OLD REVISION	NEW REVISION	REASON	PAGES AFFECTED	APPROVED BY
12/19/19	-	Initial Release			Ferdinand S. Custodio

CONTENTS

SECTION 1

REPORT SUMMARY

Radio Testing of the
Nextivity Inc.
QUATRA 4000 Industrial Signal Booster

1.1 INTRODUCTION

The information contained in this report is intended to show verification of the Nextivity Inc. QUATRA 4000 Industrial Signal Booster to the requirements of the following:

- FCC CFR 47 Part 2, Part 22 and Part 24
- RSS-Gen, RSS-132 and RSS-133.

Objective	To perform Radio Testing to determine the Equipment Under Test's (EUT's) compliance with the Test Specification, for the series of tests carried out.
Manufacturer	Nextivity Inc.
Trade Name	Cel-Fi™
Model Name	QUATRA 4000
Model Number(s)	NU: I44-1234CNU CU: I41-5ECU
FCC ID	NU: YETI44-1234CNU CU: YETI41-5ECU
IC Number	NU: 9298A-I441234CNU CU: 9298A-I415ECU
Serial Number(s)	370920000139 (NU) and 371929000156 (CU)
Number of Samples Tested	2
Test Specification/Issue/Date	• FCC CFR 47 Part 2, Part 22 and Part 24 (October 1, 2018). • RSS-132 – Cellular Telephone Systems Operating in the Bands 824-849 MHz and 869-894MHz (Issue 3, January 2013). • RSS-133 – 2 GHz Personal Communications Services (Issue 6, January 2018 Amendment). • RSS-Gen - General Requirements for Compliance of Radio Apparatus (Issue 5, November 2019 Amendment 1). • ANSI C63.26-2015: American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
Start of Test	August 02, 2019
Finish of Test	October 27, 2019
Name of Engineer(s)	Xiaoying Zhang
Related Document(s)	• KDB971168 D01 Power Meas License Digital Systems v03r01 (Measurement Guidance For Certification of Licensed Digital Transmitters) • KDB412172 D01 Determining ERP and EIRP v01r01 (Guidelines for Determining the Effective Radiated Power (ERP) and Equivalent Isotropically Radiated Power (EIRP) of a RF Transmitting System) • Supporting documents for EUT certification are separate exhibits.

1.2 BRIEF SUMMARY OF RESULTS

A brief summary of the tests carried out in accordance with FCC CFR 47 Part 2, Part 22 and Part 24 with cross-reference to the corresponding ISED RSS standard is shown below.

Section	Spec Clause					Test Description	Result
	FCC Part 2	FCC Part 22	FCC Part 24	RSS-132	RSS-133		
2.1	2.1046	-	-	-	-	Transmitter Conducted Output Power	Compliant
2.2	2.1046	22.913 (a)	-	-	-	Effective Radiated Power	Compliant
2.3	2.1046	-	24.232 (c)	5.4	6.4	Equivalent Isotropic Radiated Power	Compliant
2.4	2.1049	22.917 (b)	24.238 (b)	RSS-Gen 6.7		Occupied Bandwidth	Compliant
2.5	-	-	24.232 (d)	5.4	6.4	Peak-Average Ratio	Compliant
2.6	2.1051	22.917 (a)	24.238 (a)	5.5	6.5	Band Edge	Compliant
2.7	2.1051	22.917 (a)	24.238 (a)	5.5	6.5	Conducted Spurious Emissions	Compliant
2.8	2.1053	22.917 (a)	24.238 (a)	5.5	6.5	Field Strength of Spurious Radiation	Compliant
2.9	2.1055	22.355	24.235	5.3	6.3	Frequency Stability	Compliant
-	-	-	-	5.6	6.6	Receiver Spurious Emissions	N/A
2.10	-	-	-	RSS-Gen 8.8		Power Line Conducted Emission	Compliant

N/A - Not applicable. EUT has no Stand-alone receiver port

1.3 PRODUCT INFORMATION

1.3.1 Technical Description

The Equipment Under Test (EUT) is a Nextivity Inc. QUATRA 4000 Industrial Signal Booster. The EUT is a WCDMA/LTE Signal Booster to improve voice and data cellular performance in large enterprise environments. Quatra 4000 is capable to support up to four carriers (via separate donor antenna ports). Quatra 4000 consists of two separate units: the Network Unit (NU), and the Coverage Unit (CU). The NU comprises a transmitter and receiver which communicate with the cell tower and the CU. CU comprises a transmitter and receiver which communicate with the User Equipment (e.g. Cell Phone) and the NU.

Users place the NU in an area with the strongest signal from the carrier networks. The CUs are then either placed in the center of the home or office, or in the area where the best signal quality is most needed. The NU and CU are placed at varying distance apart and are communicated via Ethernet cables.

One NU can connect up to six CUs via Ethernet Cat 5 cables. The NU transmits and receives Cellular signals from the base station and operates similar to a cellular handset. The CU transmits and receives signals with the cellular handset and operates on frequencies similar to the cellular base station.

NU has four antenna ports. Each antenna port is assigned to support one operator, separated donor antennas. Up to two bands can be transmitted simultaneously at each antenna port from yellow group to another colored group (eg. Carrier B: LTE Band 71 + Band 4, Band 71 + Band 25, Band 12 + Band 4, Band 12 + Band 25).

Up to two bands on each antenna port																
Ant Port	1					2				3			4			
Operator #	A					B				C			D			
Max Support BW	30 MHz					40 MHz				30 MHz			40 MHz			
Band	LB12	LB30	W5	L25	L4	L71	L12	L4	L25	L13	L25	L4	L41	L26	L25	
Band Combination	√		√			√		√		√	√		√	√		
	√			√		√			√	√		√	√		√	
	√				√		√	√		-	-	-		√	√	
		√	√				√		√	-	-	-	-	-	-	
		√		√				√	√	-	-	-	-	-	-	
		√			√	-	-	-	-	-	-	-	-	-	-	

The WCDMA Band 5, LTE Band 26 869-894/824-849MHz and LTE 25 function of the EUT were verified in this test report.

1.3.2 EUT General Description

EUT Description	Industrial Signal Booster
Trade Name	Cel-Fi™
Model Name	QUATRA 4000
Model Number(s)	NU: I44-1234CNU CU: I41-5ECU
Rated Voltage	NU: 120 VAC 60Hz CU: 54V DC (powered from NU via 2 Ethernet cables)
Mode Verified	WCDMA Band 5, LTE Band 26 (869-894/824-849MHz) and 25
Frequency Bands	WCDMA B5/LTE B26: Uplink: 824 - 849MHz Downlink: 869 - 894MHz LTE B25: Uplink: 1850 - 1915MHz Downlink: 1930 -1995MHz

Rated Power

Signal Bandwidth (MHz)	WCDMA Band 5/LTE Band 26		LTE Band 25	
	DL (dB)	UL (dB)	DL (dB)	UL (dB)
5	Max. (WCDMA) 13 (LTE) 16	Max. 22	Max. 16	Max. 22
10				
15				
20	N/A			

Capability	WCDMA (Band 5), LTE (Band 4, 12, 13, 25, 26, 30, 41 and 71)
Primary Unit (EUT)	☐ Production ☒ Pre-Production ☐ Engineering
Environment	Fixed, Indoor
Manufacturer Declared Temperature Range	0°C to 40°C

Antenna Type	External Antenna
Manufacturer	Refer to the Antenna information supplied by the manufacture
Antenna Model	Refer to the Antenna information supplied by the manufacture

Maximum Antenna System (Antenna + Cable) Gain

Radio	Uplink (Donor)	Downlink (Server)
WCDMA Band 5	6.31 dBi	0.4 dBi
LTE Band 26	6.35 dBi	0.4 dBi
LTE Band 25	5.37 dBi	2.6 dBi

1.3.3 Transmit Frequency Table

Mode	Signal Bandwidth (MHz)	Tx Frequency (MHz)	Emission Designator	ERP (Part 22)		EIRP (Part 24, RSS-132, RSS-133)	
				Max. Power Avg (dBm)	Max. Power Avg (W)	Max. Power Avg (dBm)	Max. Power Avg (W)
WCDMA Band 5 Downlink	5	869 – 894	3M86F9W	9.17	0.01	11.32	0.01
	5 (3 Carriers)	869 – 894		13.10	0.02	15.25	0.03
WCDMA Band 5 Uplink	5	824 – 849	3M86F9W	27.08	0.51	29.23	0.84
	5 (3 Carriers)	824 – 849		26.07	0.40	28.22	0.66
LTE Band 26 Downlink	5	869 – 894	4M45F9W	9.45	0.01	11.60	0.01
	10	869 – 894	8M90F9W	12.51	0.02	14.66	0.03
	15	869 – 894	13M3F9W	13.96	0.02	16.11	0.04
LTE Band 26 Uplink	5	824 – 849	4M44F9W	25.66	0.37	27.81	0.60
	10	824 – 849	8M90F9W	25.53	0.36	27.68	0.59
	15	824 – 849	13M4F9W	25.86	0.39	28.01	0.63
LTE Band 25 Downlink	5	1930 – 1995	4M46F9W	-	-	13.25	0.02
	10	1930 – 1995	8M94F9W	-	-	16.31	0.04
	15	1930 – 1995	13M4F9W	-	-	17.87	0.06
	20	1930 – 1995	17M8F9W	-	-	19.17	0.08
LTE Band 25 Uplink	5	1850 – 1915	4M45F9W	-	-	28.13	0.65
	10	1850 – 1915	8M89F9W	-	-	28.59	0.72
	15	1850 – 1915	13M3F9W	-	-	27.81	0.60
	20	1850 – 1915	17M7F9W	-	-	28.54	0.71

1.4 EUT TEST CONFIGURATION

1.4.1 Test Configuration Description

Test Configuration	Description
A	Downlink. Input signal is applied to the antenna port of Donor (NU). Output is monitored from the antenna port of Server (CU).
B	Uplink. Input signal is applied to the antenna port of Server (CU). Output is monitored from the antenna port of Donor (NU).
C	Radiated test setup. Downlink. Input signal is applied to the antenna port of Donor (NU). The antenna port of Server (CU) is terminated with a 50Ω load or Signal Generator.
D	Radiated test setup. Uplink. Input signal is applied to the antenna port of Server (CU). The antenna port of Donor (NU) is terminated with a 50Ω load or Signal Generator.

1.4.2 EUT Exercise Software

Manufacturer provided a Nextivity Chart Interface v2.0.0.16 running from a support laptop where both EUT are connected via USB.

1.4.3 Support Equipment and I/O cables

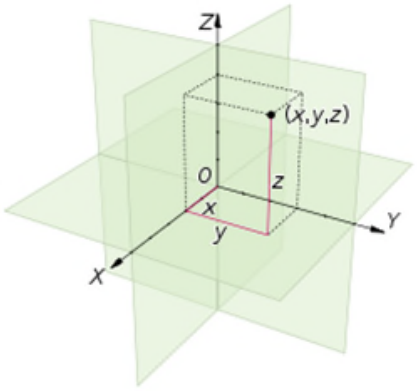
Manufacturer	Equipment/Cable	Description
Dell	Support Laptop	M/N: Latitude D630 PP18L S/N: 5SBJBG1
Dell	Support Laptop AC Adapter	M/N: PA-1900-02D S/N: 5SBJBG1
Nextivity	Support USB cable x 2	Custom 1.0 meter shielded USB Type A to Type A cable
Nextivity	Support USB cable x 2	Custom 1.0 meter shielded USB Type A to Micro B cable
Nextivity	USB / Interface Box x 2	Unshielded with “Tag-Connect” interface
Agilent	ESG Vector Signal Generator	M/N: E4438C S/N: MY49071335
Ramsey	Support Shielded Test Enclosure	With custom USB cable

1.4.4 Worst Case Configuration

Worst-case configuration used in this test report per Transmitter Conducted Output Power (Section 2.1 of this test report). This is for single channel verification, otherwise all three channels (Low, Mid and High) are verified:

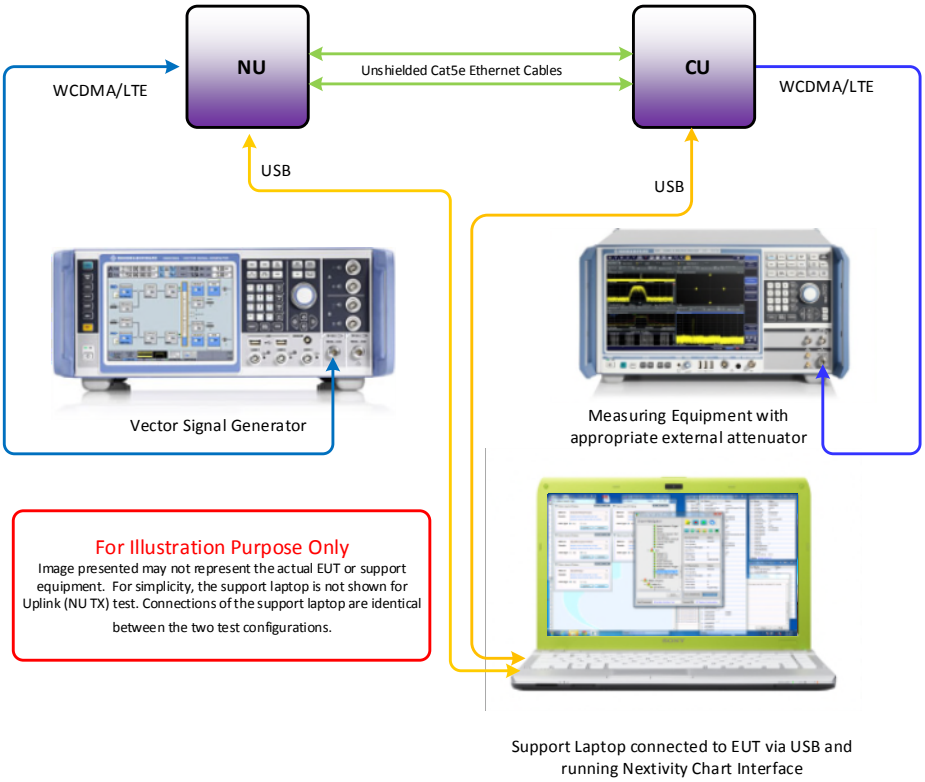
Mode	Signal Bandwidth	Channel No.	Frequency
WCDMA Band 5 Downlink	15MHz	Low Channel 4357+4382+4407	871.4MHz+876.4MHz +881.4MHz
WCDMA Band 5 Uplink	5MHz	Mid Channel 4183	836.6MHz
LTE Band 26 Downlink	15MHz	Low Channel 2475	876.5MHz
LTE Band 26 Uplink	15MHz	Low Channel 20475	831.5MHz
LTE Band 25 Downlink	20MHz	Mid Channel 8365	1962.5MHz
LTE Band 25 Uplink	20MHz	High Channel 26590	1905MHz

Final installation position is unknown at the time of verification. For radiated measurements X and Z orientations were verified since the EUT won't work on Y orientation. No major variation in emissions observed between the three (3) orientations. Verifications performed using "X" configuration.

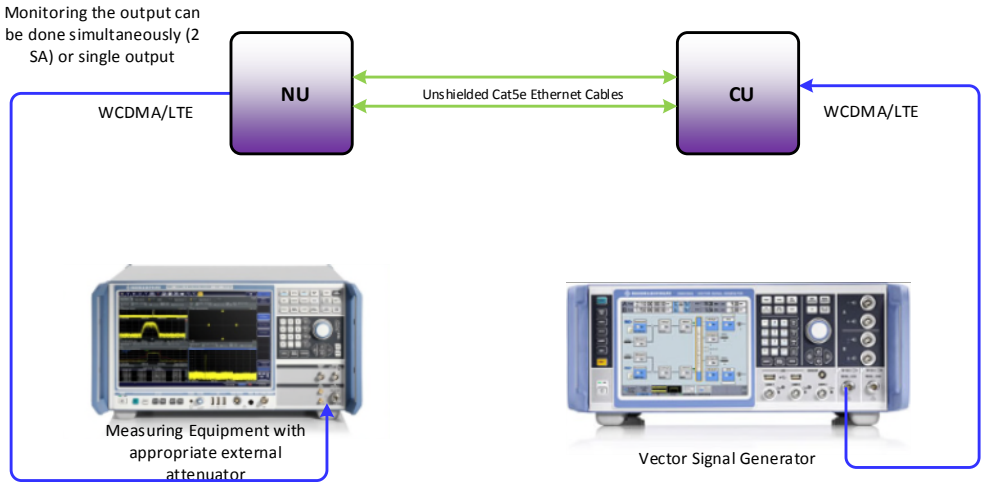


1.4.5 Simplified Test Configuration Diagram

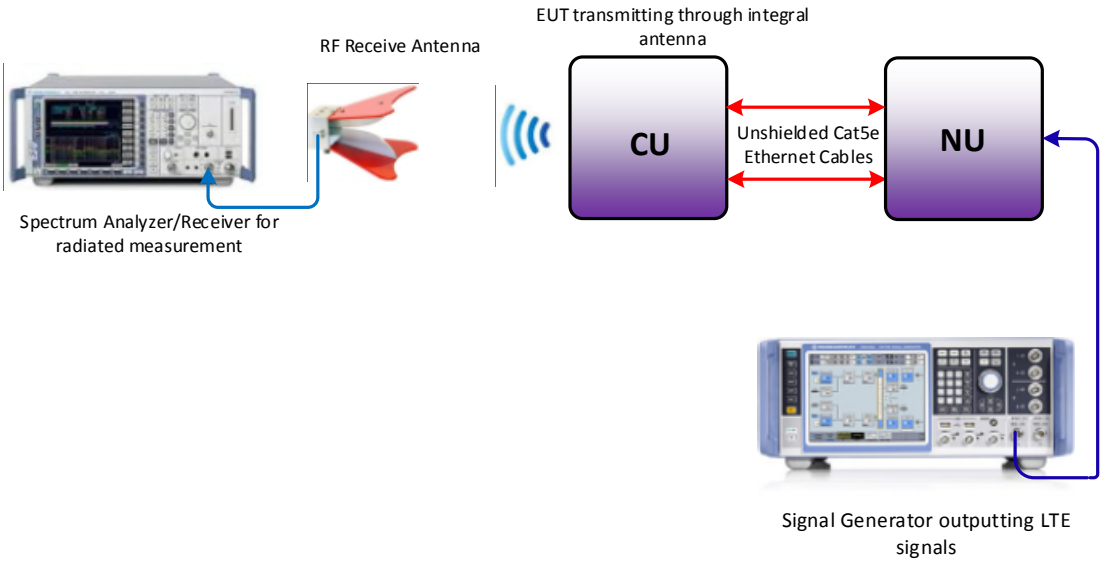
Downlink (CU Tx) Conducted Test



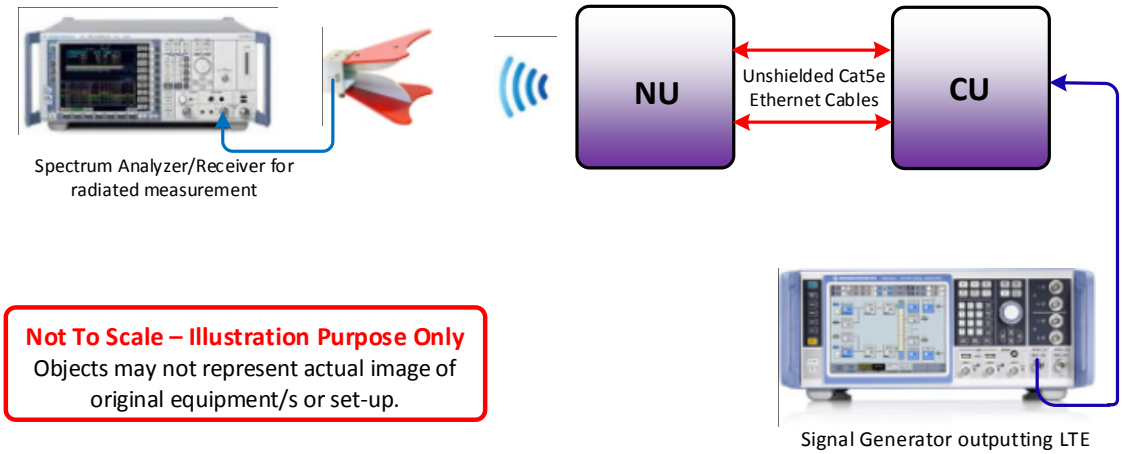
Uplink (NU Tx) Conducted Test



Radiated Testing (Downlink)



Radiated Testing (Uplink)



Not To Scale – Illustration Purpose Only
Objects may not represent actual image of original equipment/s or set-up.

1.5 DEVIATIONS FROM THE STANDARD

No deviations from the applicable test standards or test plan were made during testing.

1.6 MODIFICATION RECORD

Description of Modification	Modification Fitted By	Date Modification Fitted
Serial Number: 370920000139 (NU) and 371929000156 (CU)		
None		

The table above details modifications made to the EUT during the test programme. The modifications incorporated during each test (if relevant) are recorded on the appropriate test pages.

1.7 TEST METHODOLOGY

All measurements contained in this report were conducted with ANSI C63.26 2015, American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
For conducted (if applicable) and radiated emissions the equipment under test (EUT) was configured to measure its highest possible emission level. This level was based on the maximized cable configuration from exploratory testing per ANSI C63.26-2015. The test modes were adapted according to the Operating Instructions provided by the manufacturer/client.

1.8 TEST FACILITY LOCATION

1.8.1 TÜV SÜD America Inc. (Mira Mesa)

10040 Mesa Rim Road, San Diego, CA 92121-2912 (32.901268,-117.177681). Phone: 858 678 1400 FAX: 858-546 0364

1.8.2 TÜV SÜD America Inc. (Rancho Bernardo)

16936 Via Del Campo, San Diego, CA 92127-1708 (33.018644,-117.092409). Phone: 858 678-1400 Fax: 858 546 0364.

1.9 TEST FACILITY REGISTRATION

1.9.1 FCC – Designation No.: US1146

TUV SUD America Inc. (San Diego), is an accredited test facility with the site description report on file and has met all the requirements specified in §2.948 of the FCC rules. The acceptance letter from the FCC is maintained in our files and the Designation is US1146.

1.9.2 Innovation, Science and Economic Development Canada (ISED) Registration No.: 3067A-1 & 22806-1

The 10m Semi-anechoic chamber of TUV SUD America Inc. (San Diego Rancho Bernardo) has been registered by Certification and Engineering Bureau of Innovation, Science and Economic Development Canada for radio equipment testing with Registration No. 3067A-1.

The 3m Semi-anechoic chamber of TUV SUD America Inc. (San Diego Mira Mesa) has been registered by Certification and Engineering Bureau of Innovation, Science and Economic Development Canada for radio equipment testing with Registration No. 22806-1.

1.9.3 BSMI – Laboratory Code: SL2-IN-E-028R (US0102)

TUV Product Service Inc. (San Diego) is a recognized EMC testing laboratory by the BSMI under the MRA (Mutual Recognition Arrangement) with the United States. Accreditation includes CNS 13438 up to 6GHz.

1.9.4 NCC (National Communications Commission - US0102)

TUV SUD America Inc. (San Diego) is listed as a Foreign Recognized Telecommunication Equipment Testing Laboratory and is accredited to ISO/IEC 17025 (A2LA Certificate No.2955.13) which under APEC TEL MRA Phase 1 was designated as a Conformity Assessment Body competent to perform testing of equipment subject to the Technical Regulations covered under its scope of accreditation including RTTE01, PLMN01 and PLMN08 for TTE type of testing and LP002 for Low-Power RF Device type of testing.

1.9.5 VCCI – Registration No. A-0280 and A-0281

TUV SUD America Inc. (San Diego) is a VCCI registered measurement facility which includes radiated field strength measurement, radiated field strength measurement above 1GHz, mains port interference measurement and telecommunication port interference measurement.

1.9.6 RRA – Identification No. US0102

TUV SUD America Inc. (San Diego) is National Radio Research Agency (RRA) recognized laboratory under Phase I of the APEC Tel MRA.

1.9.7 OFCA – U.S. Identification No. US0102

TUV SUD America Inc. (San Diego) is recognized by Office of the Communications Authority (OFCA) under Appendix B, Phase I of the APEC Tel MRA.

1.10 SAMPLE CALCULATIONS

1.10.1 LTE Emission Designator

Emission Designator = 1M30F9W
F = Frequency Modulation
9= Composite Digital Info
W = Combination (Audio/Data)

1.10.2 Spurious Radiated Emission (below 1GHz)

Measuring equipment raw measurement (dBµV/m) @ 30 MHz			24.4
Correction Factor (dB)	Asset# 1066 (cable)	0.3	-12.6
	Asset# 1172 (cable)	0.3	
	Asset# 1016 (preamplifier)	-30.7	
	Asset# 1175(cable)	0.3	
	Asset# 1002 (antenna)	17.2	
Reported QuasiPeak Final Measurement (dBµV/m) @ 30MHz			**11.8**

SECTION 2

TEST DETAILS

Radio Testing of the
Nextivity Inc.
QUATRA 4000 Industrial Signal Booster

2.1 TRANSMITTER CONDUCTED OUTPUT POWER

2.1.1 Specification Reference

FCC 47 CFR Part 2, Clause 2.1046

2.1.2 Standard Applicable

The conducted power mesurements were made in accordance to FCC Part 2 Clasue 2.1046.

FCC 47 CFR Part 2, Clause 2.1046:
(a) For transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in §2.1033(c)(8). The electrical characteristics of the radio frequency load attached to the output terminals when this test is made shall be stated.
(c) For measurements conducted pursuant to paragraphs (a) and (b) of this section, all calculations and methods used by the applicant for determining carrier power or peak envelope power, as appropriate, on the basis of measured power in the radio frequency load attached to the transmitter output terminals shall be shown. Under the test conditions specified, no components of the emission spectrum shall exceed the limits specified in the applicable rule parts as necessary for meeting occupied bandwidth or emission limitations.

2.1.3 Equipment Under Test and Modification State

Serial No: 370920000139 (NU) and 371929000156 (CU) / Test Configuration A and B

2.1.4 Date of Test/Initial of test personnel who performed the test

August 02, 05, 08 and October 15, 16, 2019 /XYZ

2.1.5 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.1.6 Environmental Conditions

Test performed at TÜV SÜD America Inc. Rancho Bernardo facility.

Ambient Temperature	24.5 - 27.0°C
Relative Humidity	39.1 - 51.5%
ATM Pressure	98.5 - 99.0kPa

2.1.7 Additional Observations

- This is a conducted test using an average power meter.
- The path loss was measured and entered as a level offset.
- Both Peak and Average measurements presented.

2.1.8 Test Results

WCDMA Band 5 Downlink				
Bandwidth (MHz)	**Channels**	**Frequency (MHz)**	**Average Power (dBm)**	**Peak Power (dBm)**
5 MHz	4357	871.4	10.92	19.52
	4408	881.6	10.90	19.66
	4458	891.6	10.86	19.75
15 MHz	**4357+4382+4407**	**871.4+876.4+881.4**	**14.85**	25.51
	4383+4408+4433	876.6+881.6+886.6	14.69	27.04
	4408+4433+4458	881.6+886.6+891.6	14.57	24.97

WCDMA Band 5 Uplink				
Bandwidth (MHz)	**Channels**	**Frequency (MHz)**	**Average Power (dBm)**	**Peak Power (dBm)**
5 MHz	4132	826.4	22.78	30.80
	4183	**836.6**	**22.92**	30.83
	4233	846.6	22.88	31.00
15 MHz	4132+4157+4182	826.4+831.4+836.4	21.90	31.81
	4158+4183+4208	831.6+836.6+841.6	20.98	31.43
	4183+4208+4233	836.6+841.6+846.6	21.91	31.89

LTE Band 26 869-894 MHz Downlink				
Bandwidth (MHz)	**Channels**	**Frequency (MHz)**	**Average Power (dBm)**	**Peak Power (dBm)**
5 MHz	2425	871.5	11.20	21.21
	2525	881.5	10.94	22.81
	2625	891.5	10.98	21.79
10 MHz	2450	874	14.26	24.65
	2525	881.5	13.86	23.94
	2600	889	13.79	23.97
15 MHz	**2475**	**876.5**	**15.71**	26.10
	2525	881.5	15.51	25.84
	2575	886.5	15.32	25.27

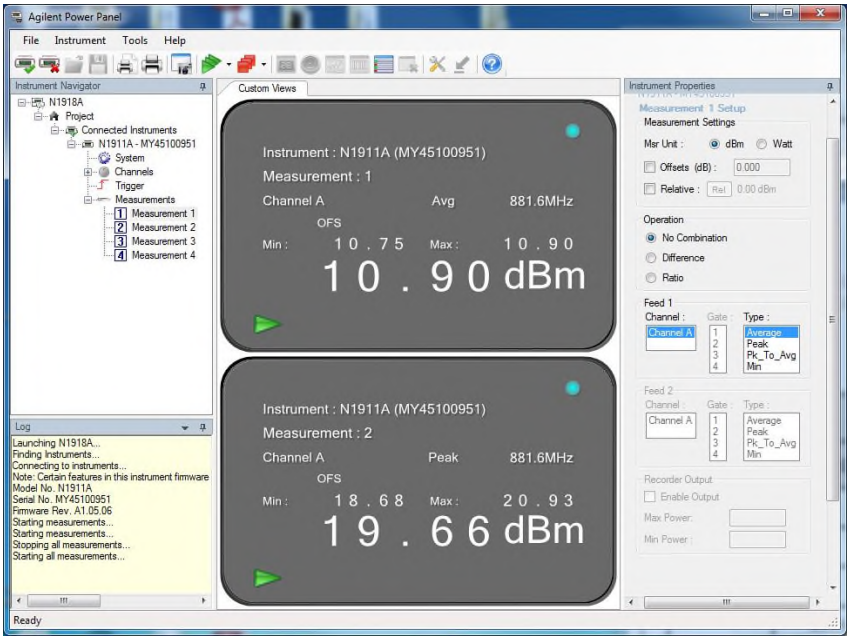
LTE Band 26 824-849 Uplink				
Bandwidth (MHz)	**Channels**	**Frequency (MHz)**	**Average Power (dBm)**	**Peak Power (dBm)**
5 MHz	20425	826.5	21.46	31.31
	20525	836.5	20.82	30.94
	20625	846.5	21.18	31.66
10 MHz	20450	829	21.33	30.84
	20525	836.5	20.93	32.44
	20600	844	21.33	31.45
15 MHz	**20475**	**831.5**	**21.66**	31.34
	20525	836.5	21.12	31.81
	20575	841.5	21.48	31.14

LTE Band 25 Downlink				
Bandwidth (MHz)	**Channels**	**Frequency (MHz)**	**Average Power (dBm)**	**Peak Power (dBm)**
5 MHz	8065	1932.5	9.75	21.55
	8365	1962.5	10.65	22.06
	8665	1992.5	9.51	20.21
10 MHz	8090	1935.0	13.71	24.42
	8365	1962.5	13.43	24.04
	8640	1990.0	13.12	24.05
15 MHz	8115	1937.5	15.26	27.16
	8365	1962.5	15.27	25.99
	8615	1987.5	14.47	25.18
20 MHz	8140	1940.0	16.12	28.73
	8365	**1962.5**	**16.57**	27.19
	8590	1985.0	16.03	26.07

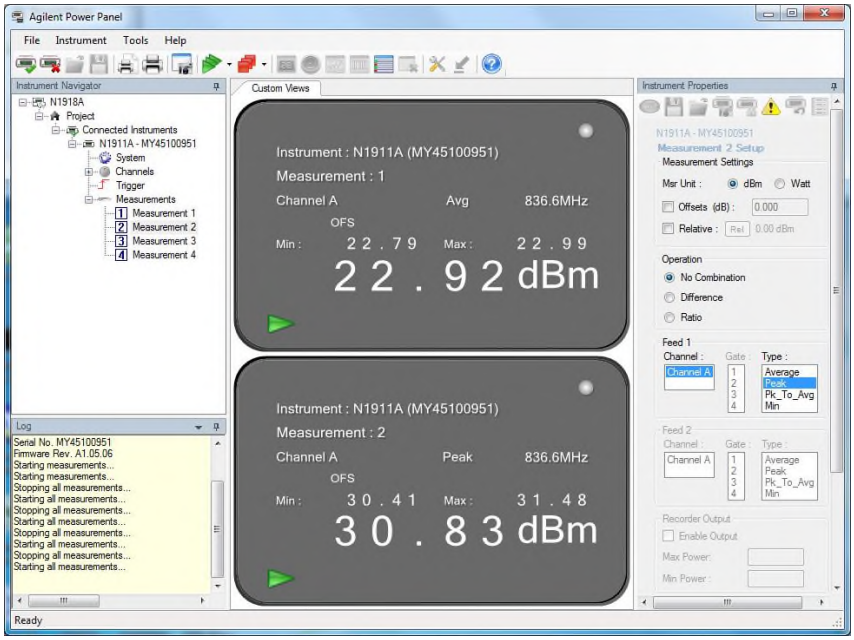
LTE Band 25 Uplink				
Bandwidth (MHz)	**Channels**	**Frequency (MHz)**	**Average Power (dBm)**	**Peak Power (dBm)**
5 MHz	26065	1852.5	22.54	30.93
	26365	1882.5	22.48	31.01
	26665	1912.5	22.76	31.01
10 MHz	26090	1855.0	22.66	29.27
	26365	1882.5	22.51	29.29
	26640	1910.0	23.12	29.64
15 MHz	26115	1857.5	21.16	30.80
	26365	1882.5	21.68	31.60
	26615	1907.5	22.44	31.42
20 MHz	26140	1860.0	22.69	30.27
	26365	1882.5	22.64	29.88
	26590	**1905.0**	**23.17**	30.28

2 Bands/port worst case configuration				
Ant Port	**Band & Bandwidth & Channel**	**Frequency (MHz)**	**Average Power (dBm)**	**PK Power (dBm)**
D	Downlink: LTE Band 25 20MHz BW Mid Ch & LTE Band 26 869-894 MHz 15MHz BW Low Ch	1962.5 MHz + 876.5 MHz	19.08	28.71
	Uplink: LTE Band 25 and Band 26 824-849 MHz 20MHz BW High Ch & LTE Band 26 15MHz BW Low Ch	1905 MHz + 831.5 MHz	23.75	32.39

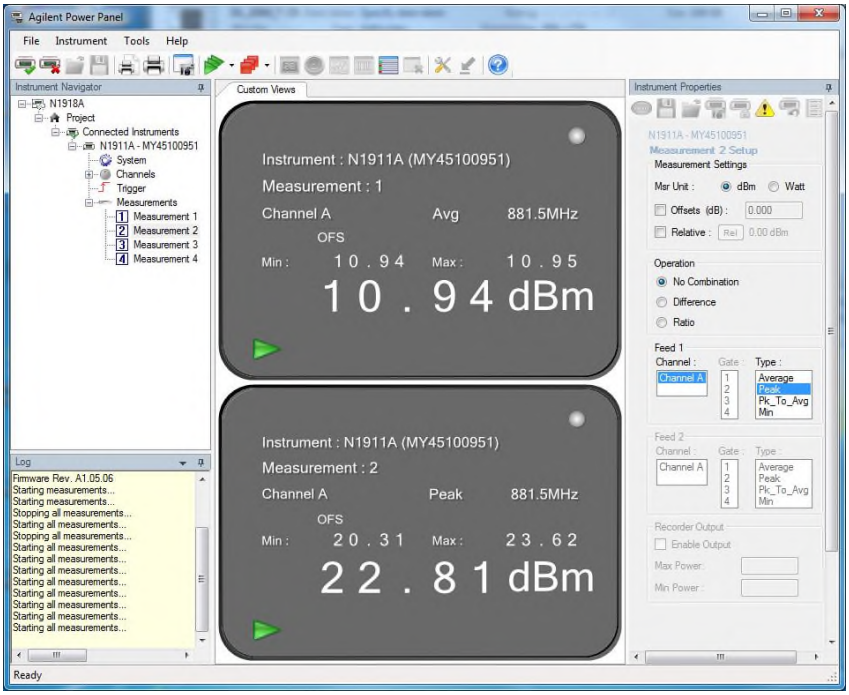
2.1.9 Sample Test Plot



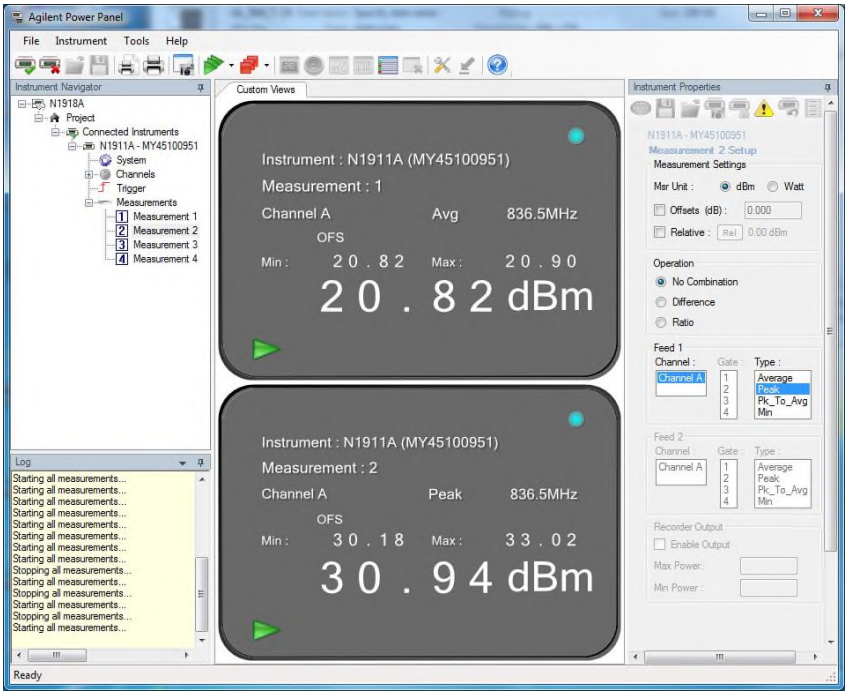
WCDMA Band 5_DownLink_5MHz Bandwidth_Mid Channel



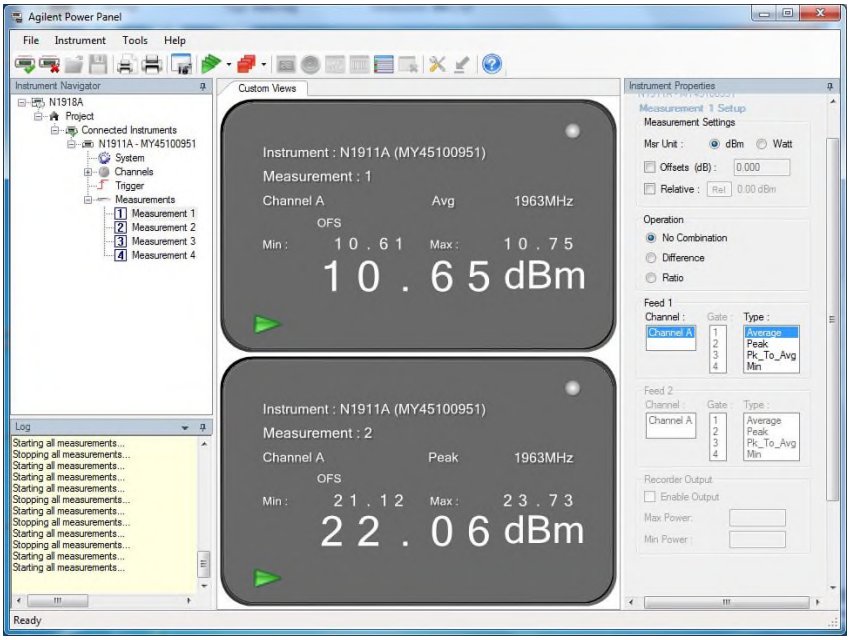
WCDMA Band 5_UpLink_5MHz Bandwidth_Mid Channel



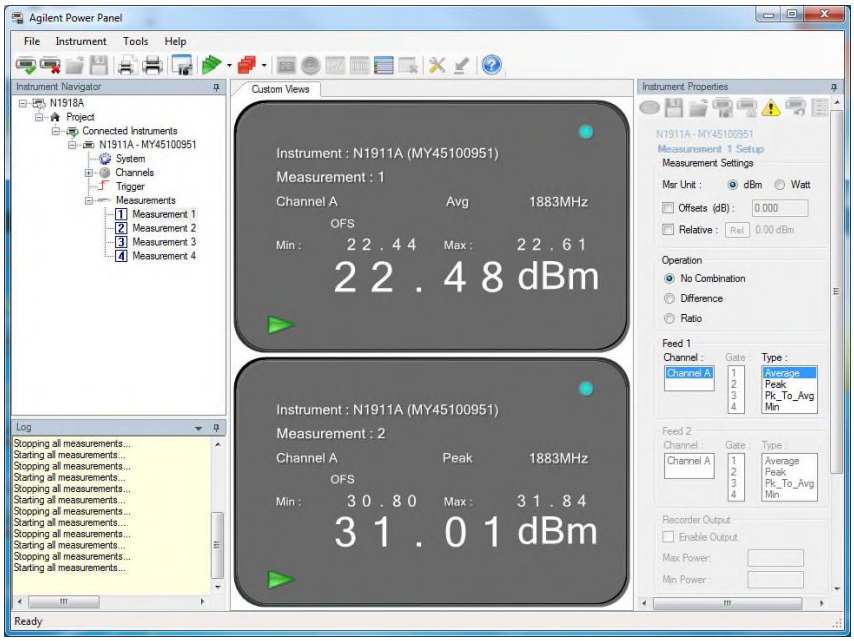
LTE Band 26 869-894 MHz_Downlink_5MHz Bandwidth_Mid Channel



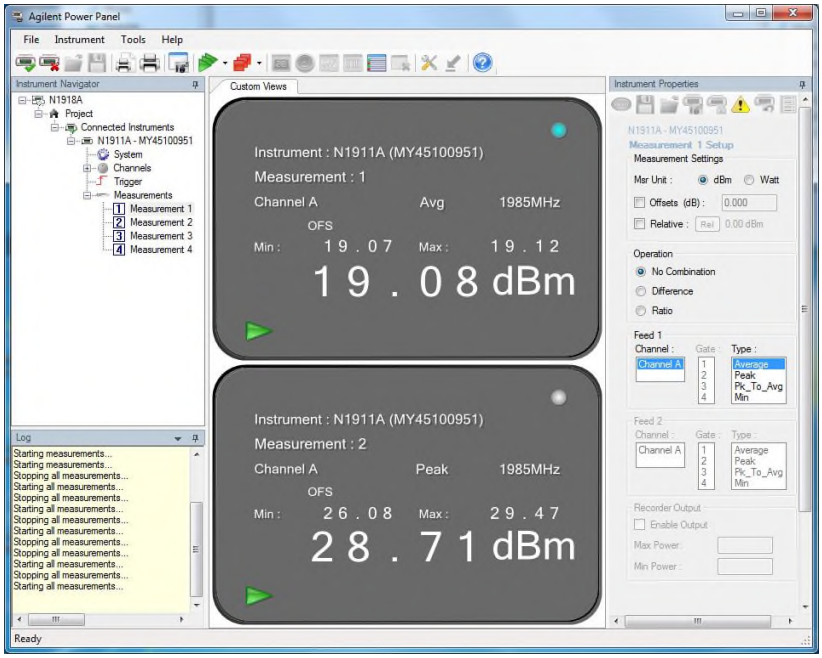
LTE Band 26 824-849 MHz_Uplink_5MHz Bandwidth_Mid Channel



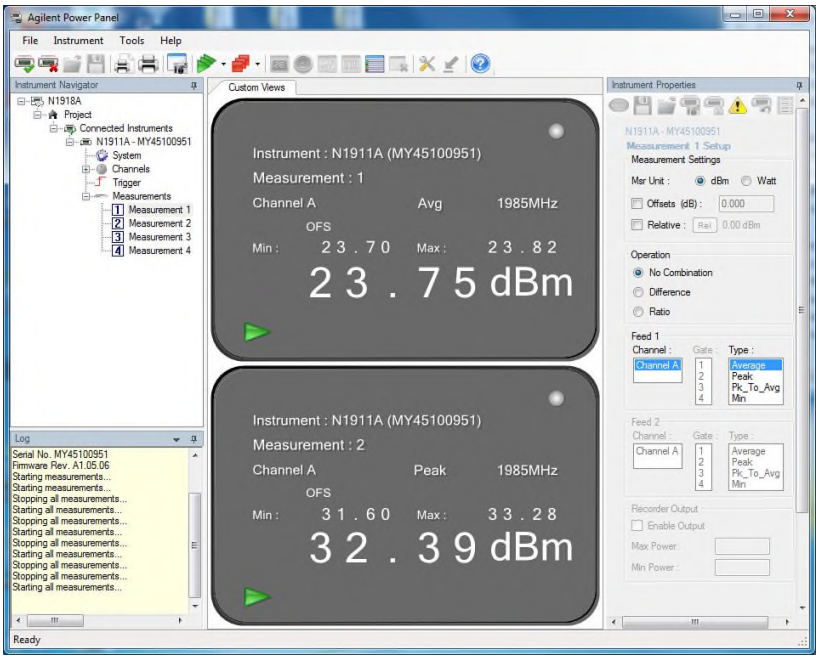
LTE Band 25_Downlink_5MHz Bandwidth_Mid Channel



LTE Band 25_Uplink_5MHz Bandwidth_Mid Channel



Downlink: LTE Band 25 20MHz BW Mid Ch & LTE Band 26 869-894 MHz 15MHz BW Low Ch



Uplink: LTE Band 25 20MHz BW High Ch & LTE Band 26 824-849 MHz 15MHz BW Low Ch

2.2 EFFECTIVE RADIATED POWER

2.2.1 Specification Reference

FCC 47 CFR Part 2, Clause 2.1046
FCC 47 CFR Part 22, Clause 22.913(a)

2.2.2 Standard Applicable

FCC Part 22.913 (a) Maximum ERP. The ERP of transmitters in the cellular Raiotelepone Service must not exceed the limitts in this section.

(1) Except as described in paragraphs (a)(2), (3) and (4) of this secton, the ERP of base stations and repeaters must not exceed
(i) 500 watts per emissions; or
(ii) 400 watts/MHz (PSD) per sector.

2.2.3 Equipment Under Test and Modification State

Serial No: 370920000139 (NU) and 371929000156 (CU) / Test Configuration (N/A, calculation only)

2.2.4 Date of Test/Initial of test personnel who performed the test

August 02, 05, 08 and October 15, 2019 /XYZ

2.2.5 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.2.6 Additional Observations

- ERP was calculated as per Section 1.3.2 of KDB412172 D01 (Determining ERP and EIRP v01).
- Calculation formula in logarithmic terms:

$$\mathbf{ERP = P_T + G_T - L_C - 2.15dB}$$

Where:
P_T = transmitter conducted output power dBm (Section 2.1 of this test report)
G_T = gain of the transmitting antenna, in dBi (the -2.15 in the formula is to convert EIRP to ERP);
L_c = signal attenuation in the connecting cable between the transmitter and antenna, in dB (EUT configuration during verification is mounted on an interface board with short direct connection to the antenna port. The loss between the EUT and the antenna port is considered negligible).

2.2.7 Test Results

WCDMA Band 5 Downlink					
Bandwidth (MHz)	**Frequency (MHz)**	**Max Power Average (dBm)**	**Antenna System Gain (dBi)**	**ERP (dBm)**	**Limit (dBm)**
5	871.4	10.92	0.4	9.17	56.02
	881.6	10.90	0.4	9.15	56.02
	891.6	10.86	0.4	9.11	56.02
15	**871.4+876.4+881.4**	**14.85**	**0.4**	**13.10**	**56.02**
	876.6+881.6+886.6	14.69	0.4	12.94	56.02
	881.6+886.6+891.6	14.57	0.4	12.82	56.02

WCDMA Band 5 Uplink					
Bandwidth (MHz)	**Frequency (MHz)**	**Max Power Average (dBm)**	**Antenna System Gain (dBi)**	**ERP (dBm)**	**Limit (dBm)**
5	826.4	22.78	6.31	26.94	56.02
	836.6	**22.92**	**6.31**	**27.08**	**56.02**
	846.6	22.88	6.31	27.04	56.02
15	826.4+831.4+836.4	21.90	6.31	26.06	56.02
	831.6+836.6+841.6	20.98	6.31	25.14	56.02
	836.6+841.6+846.6	21.91	6.31	26.07	56.02

LTE Band 26 869-894 MHz Downlink					
Bandwidth (MHz)	**Frequency (MHz)**	**Max Power Average (dBm)**	**Antenna System Gain (dBi)**	**ERP (dBm)**	**Limit (dBm)**
5	871.5	11.20	0.4	9.45	56.02
	881.5	10.94	0.4	9.19	56.02
	891.5	10.98	0.4	9.23	56.02
10	874	14.26	0.4	12.51	56.02
	881.5	13.86	0.4	12.11	56.02
	889	13.79	0.4	12.04	56.02
15	**876.5**	**15.71**	**0.4**	**13.96**	**56.02**
	881.5	15.51	0.4	13.76	56.02
	886.5	15.32	0.4	13.57	56.02

LTE Band 26 824-849 MHz Uplink					
Bandwidth (MHz)	**Frequency (MHz)**	**Max Power Average (dBm)**	**Antenna System Gain (dBi)**	**ERP (dBm)**	**Limit (dBm)**
5	826.5	21.46	6.35	25.66	56.02
	836.5	20.82	6.35	25.02	56.02
	846.5	21.18	6.35	25.38	56.02
10	829	21.33	6.35	25.53	56.02
	836.5	20.93	6.35	25.13	56.02
	844	21.33	6.35	25.53	56.02
15	**831.5**	**21.66**	**6.35**	**25.86**	**56.02**
	836.5	21.12	6.35	25.32	56.02
	841.5	21.48	6.35	25.68	56.02

2.3 EQUIVALENT ISOTROPIC RADIATED POWER

2.3.1 Specification Reference

FCC 47 CFR Part 2, Clause 2.1046
RSS-132, Clause 5.4
FCC 47 CFR Part 24, Clause 24.232 (c)
RSS-133, Clause 6.4

2.3.2 Standard Applicable

RSS-132:
The EIRP for mobile equipment shall not exceed 11.5 watts

FCC Part 24:
Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

RSS-133:
The equivalent isotropically radiated power (e.i.r.p.) for Mobile stations and hand-held portables are limited to 2 watts maximum e.i.r.p.

2.3.3 Equipment Under Test and Modification State

Serial No: 370920000139 (NU) and 371929000156 (CU) / Test Configuration (N/A, calculation only)

2.3.4 Date of Test/Initial of test personnel who performed the test

August 02, 05, 08 and October 15, 2019 /XYZ

2.3.5 Additional Observations

- EIRP was calculated as per Section 1.3.2 of KDB412172 D01 (Determining ERP and EIRP v01).
- Calculation formula in logarithmic terms:

$$EIRP = P_T + G_T - L_C$$

Where:

P_T = transmitter conducted output power dBm (Section 2.1 of this test report)
G_T = gain of the transmitting antenna, in dBi (EIRP);
L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

2.3.6 Sample Computation

EIRP = $P_T + G_T - L_C$
= 29.87 (Peak) + 0.13 (max. gain) – 3.84 (cable loss)
= 26.16 dBm

2.3.7 Test Results

WCDMA Band 5 Downlink					
Bandwidth (MHz)	**Frequency (MHz)**	**Max Power Average (dBm)**	**Antenna System Gain (dBi)**	**EIRP (dBm)**	**Limit (dBm)**
5	871.4	10.92	0.4	11.32	40.6
	881.6	10.90	0.4	11.30	40.6
	891.6	10.86	0.4	11.26	40.6
15	**871.4+876.4+881.4**	**14.85**	**0.4**	**15.25**	**40.6**
	876.6+881.6+886.6	14.69	0.4	15.09	40.6
	881.6+886.6+891.6	14.57	0.4	14.97	40.6

WCDMA Band 5 Uplink					
Bandwidth (MHz)	**Frequency (MHz)**	**Max Power Average (dBm)**	**Antenna System Gain (dBi)**	**EIRP (dBm)**	**Limit (dBm)**
5	826.4	22.78	6.31	29.09	40.6
	836.6	**22.92**	**6.31**	**29.23**	**40.6**
	846.6	22.88	6.31	29.19	40.6
15	826.4+831.4+836.4	21.90	6.31	28.21	40.6
	831.6+836.6+841.6	20.98	6.31	27.29	40.6
	836.6+841.6+846.6	21.91	6.31	28.22	40.6

LTE Band 26 869-894 MHz Downlink					
Bandwidth (MHz)	**Frequency (MHz)**	**Max Power Average (dBm)**	**Antenna System Gain (dBi)**	**EIRP (dBm)**	**Limit (dBm)**
5	871.5	11.20	0.4	11.60	40.6
	881.5	10.94	0.4	11.34	40.6
	891.5	10.98	0.4	11.38	40.6
10	874	14.26	0.4	14.66	40.6
	881.5	13.86	0.4	14.26	40.6
	889	13.79	0.4	14.19	40.6
15	**876.5**	**15.71**	**0.4**	**16.11**	**40.6**
	881.5	15.51	0.4	15.91	40.6
	886.5	15.32	0.4	15.72	40.6

LTE Band 26 824-849 MHz Uplink					
Bandwidth (MHz)	**Frequency (MHz)**	**Max Power Average (dBm)**	**Antenna System Gain (dBi)**	**EIRP (dBm)**	**Limit (dBm)**
5	826.5	21.46	6.35	27.81	40.6
	836.5	20.82	6.35	27.17	40.6
	846.5	21.18	6.35	27.53	40.6
10	829	21.33	6.35	27.68	40.6
	836.5	20.93	6.35	27.28	40.6
	844	21.33	6.35	27.68	40.6
15	**831.5**	**21.66**	**6.35**	**28.01**	**40.6**
	836.5	21.12	6.35	27.47	40.6
	841.5	21.48	6.35	27.83	40.6

LTE Band 25 Downlink					
Bandwidth (MHz)	**Frequency (MHz)**	**Max Power Average (dBm)**	**Antenna System Gain (dBi)**	**EIRP (dBm)**	**Limit (dBm)**
5	1932.5	9.75	2.6	12.35	33
	1962.5	10.65	2.6	13.25	33
	1992.5	9.51	2.6	12.11	33
10	1935.0	13.71	2.6	16.31	33
	1962.5	13.43	2.6	16.03	33
	1990.0	13.12	2.6	15.72	33
15	1937.5	15.26	2.6	17.86	33
	1962.5	15.27	2.6	17.87	33
	1987.5	14.47	2.6	17.07	33
20	1940.0	16.12	2.6	18.72	33
	1962.5	**16.57**	**2.6**	**19.17**	**33**
	1985.0	16.03	2.6	18.63	33

LTE Band 25 Uplink					
Bandwidth (MHz)	**Frequency (MHz)**	**Max Power Average (dBm)**	**Antenna System Gain (dBi)**	**EIRP (dBm)**	**Limit (dBm)**
5	1852.5	22.54	5.37	27.91	33
	1882.5	22.48	5.37	27.85	33
	1912.5	22.76	5.37	28.13	33
10	1855.0	22.66	5.37	28.03	33
	1882.5	22.51	5.37	27.88	33
	1910.0	23.12	5.37	28.49	33
15	1857.5	21.16	5.37	26.53	33
	1882.5	21.68	5.37	27.05	33
	1907.5	22.44	5.37	27.81	33
20	1860.0	22.69	5.37	28.06	33
	1882.5	22.64	5.37	28.01	33
	1905.0	**23.17**	**5.37**	**28.54**	**33**

2.4 OCCUPIED BANDWIDTH

2.4.1 Specification Reference

FCC 47 CFR Part 2. Clause 2.1049
FCC 47 CFR Part 22, Clause 22.917(b)
FCC 47 CFR Part 24, Clause 24.238(b)
RSS-Gen, Clause 6.6

2.4.2 Standard Applicable

The 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 26 dB below the transmitter power.

2.4.3 Equipment Under Test and Modification State

Serial No: 370920000139 (NU) and 371929000156 (CU) / Test Configuration A and B

2.4.4 Date of Test/Initial of test personnel who performed the test

August 09, 12, 13, September 04 and October 15, 2019/XYZ

2.4.5 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.4.6 Environmental Conditions

Test performed at TÜV SÜD America Inc. Rancho Bernardo facility.

Ambient Temperature	24.5 - 26.3°C
Relative Humidity	45.0 - 53.3%
ATM Pressure	98.8 - 99.0kPa

2.4.7 Additional Observations

- This is a conducted test. Both 26dB bandwidth and 99% bandwidth presented.
- Using the occupied bandwidth meansurement function in the spectrum analyzer, the 99% occupied bandwith was measured.
- The 26dB bandwidth was measured in accorance with ANSI C63.26 clause 5.4.3 using the ndB measurement function in the spectrum analyzer.
- The transmitter shall be operated at its maximum carrier power measured under normal test conditions.
- The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts.
- The RBW is set to 1% of the OBW while the VBW is ≥3X RBW.

- The detector is peak and the trace mode is max hold.
- All low, middle and high channels were verified. Only test plots for middle channel presented in this test report as the representative configuration.

2.4.8 Test Results

WCDMA Band 5 Downlink			
Channel	**Frequency (MHz)**	**OBW (MHz)**	**-26dB BW (MHz)**
4357	871.4	3.86	4.35
4408	881.6	3.85	4.37
4458	891.6	3.86	4.37

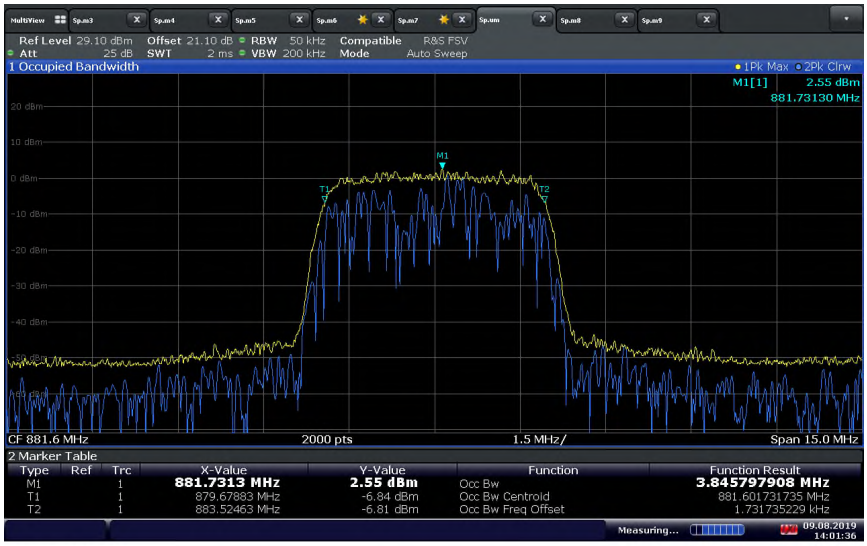
WCDMA Band 5 Uplink			
Channel	**Frequency (MHz)**	**OBW (MHz)**	**-26dB BW (MHz)**
4132	826.4	3.85	4.33
4183	836.6	3.86	4.37
4233	846.6	3.85	4.37

LTE Band 26 869-894 MHz Downlink				
Bandwidth (MHz)	**Channels**	**Frequency (MHz)**	**OBW (MHz)**	**-26dB BW (MHz)**
5 MHz	2425	871.5	4.45	4.76
	2525	881.5	4.45	4.78
	2625	891.5	4.44	4.79
10 MHz	2450	874	8.88	9.54
	2525	881.5	8.90	9.64
	2600	889	8.87	9.57
15 MHz	2475	876.5	13.30	14.22
	2525	881.5	13.30	14.20
	2575	886.5	13.23	14.13

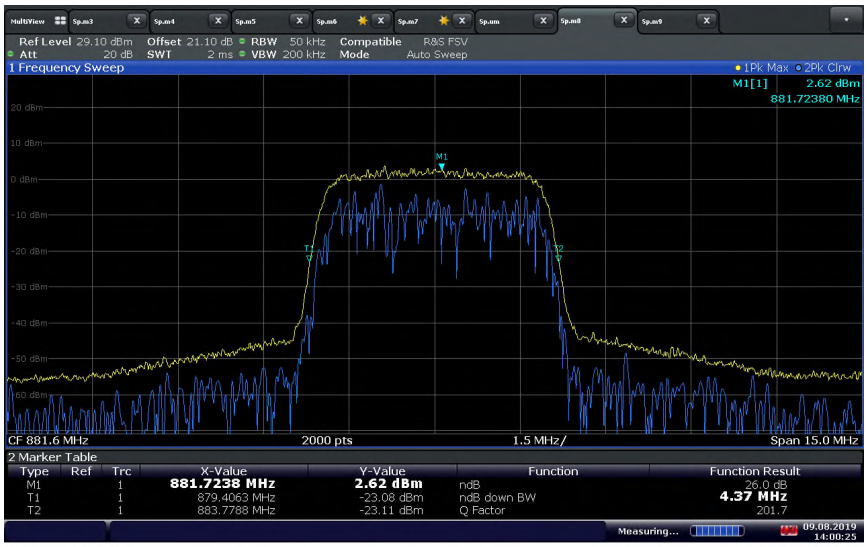
LTE Band 26 824-849 MHz Uplink				
Bandwidth (MHz)	**Channels**	**Frequency (MHz)**	**OBW (MHz)**	**-26dB BW (MHz)**
5 MHz	20425	826.5	4.43	4.76
	20525	836.5	4.44	4.76
	20625	846.5	4.43	4.76
10 MHz	20450	829	8.88	9.46
	20525	836.5	8.90	9.51
	20600	844	8.86	9.48
15 MHz	20475	831.5	13.36	14.22
	20525	836.5	13.36	14.13
	20575	841.5	13.28	14.13

LTE Band 25 Downlink				
Bandwidth (MHz)	**Channels**	**Frequency (MHz)**	**OBW (MHz)**	**-26dB BW (MHz)**
5 MHz	8065	1932.5	4.46	4.82
	8365	1962.5	4.42	4.76
	8665	1992.5	4.33	4.76
10 MHz	8090	1935.0	8.92	9.57
	8365	1962.5	8.88	9.59
	8640	1990.0	8.94	9.39
15 MHz	8115	1937.5	13.38	14.29
	8365	1962.5	13.28	14.22
	8615	1987.5	13.28	14.20
20 MHz	8140	1940.0	17.66	18.81
	8365	1962.5	17.72	18.96
	8590	1985.0	17.80	19.11

LTE Band 25 Uplink				
Bandwidth (MHz)	**Channels**	**Frequency (MHz)**	**OBW (MHz)**	**-26dB BW (MHz)**
5 MHz	26065	1852.5	4.45	4.78
	26365	1882.5	4.43	4.77
	26665	1912.5	4.44	4.75
10 MHz	26090	1855.0	8.88	9.53
	26365	1882.5	8.89	9.49
	26640	1910.0	8.88	9.49
15 MHz	26115	1857.5	13.32	14.15
	26365	1882.5	13.31	14.15
	26615	1907.5	13.26	14.20
20 MHz	26140	1860.0	17.74	18.93
	26365	1882.5	17.73	19.08
	26590	1905.0	17.70	18.96

WCDMA Band 5 Downlink Mid Channel 99% OBW


14:01:37 09.08.2019

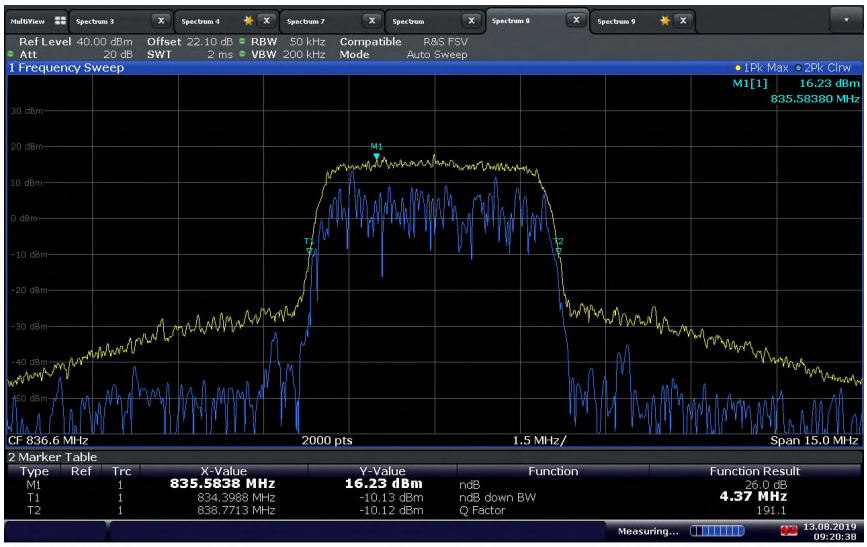
WCDMA Band 5 Downlink Mid Channel -26dB BW


14:00:26 09.08.2019

WCDMA Band 5 Uplink Mid Channel 99% OBW

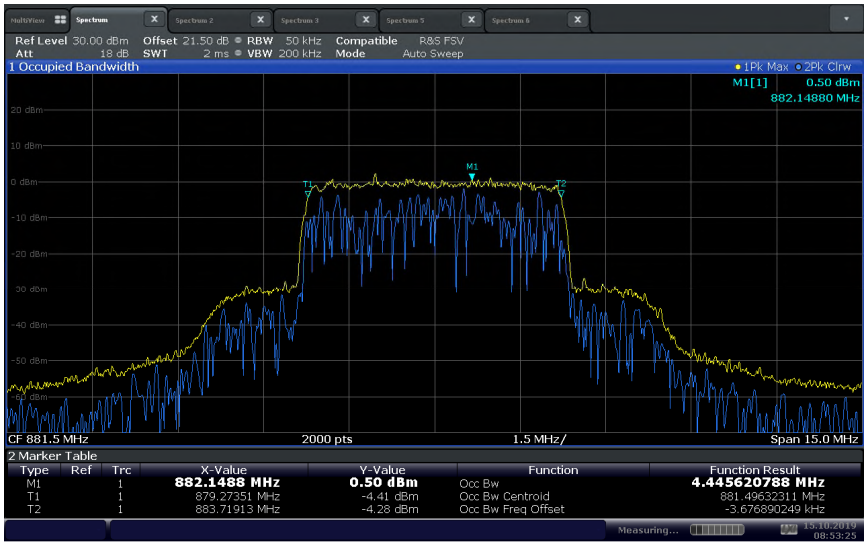
09:19:31 13.08.2019

WCDMA Band 5 Uplink Mid Channel -26dB BW



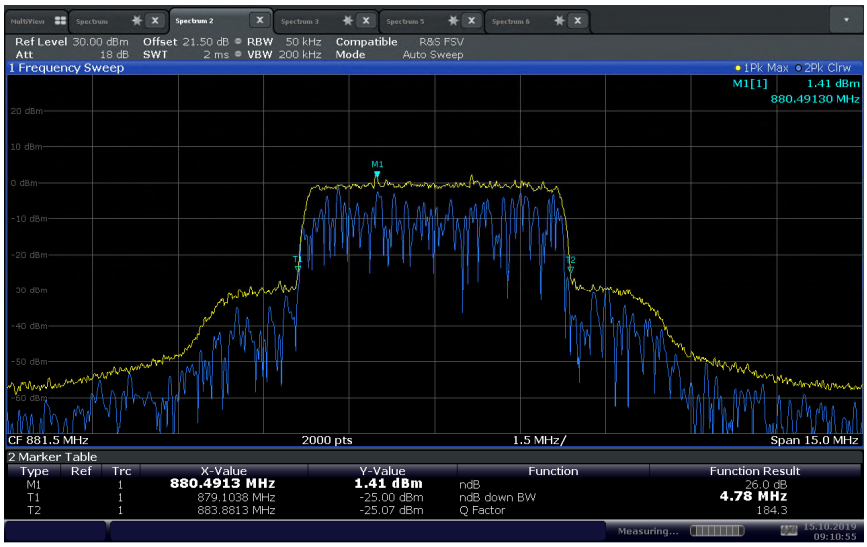
09:20:38 13.08.2019

LTE Band 26 869-894 MHz Downlink_5 MHz BW_Mid Channel 99% OBW



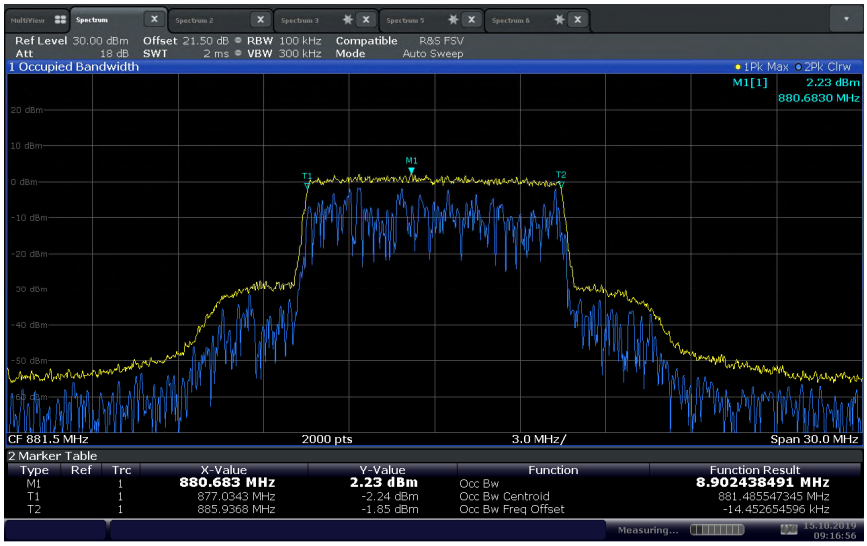
08:53:26 15.10.2019

LTE Band 26 869-894 MHz Downlink_5 MHz BW_Mid Channel -26dB BW



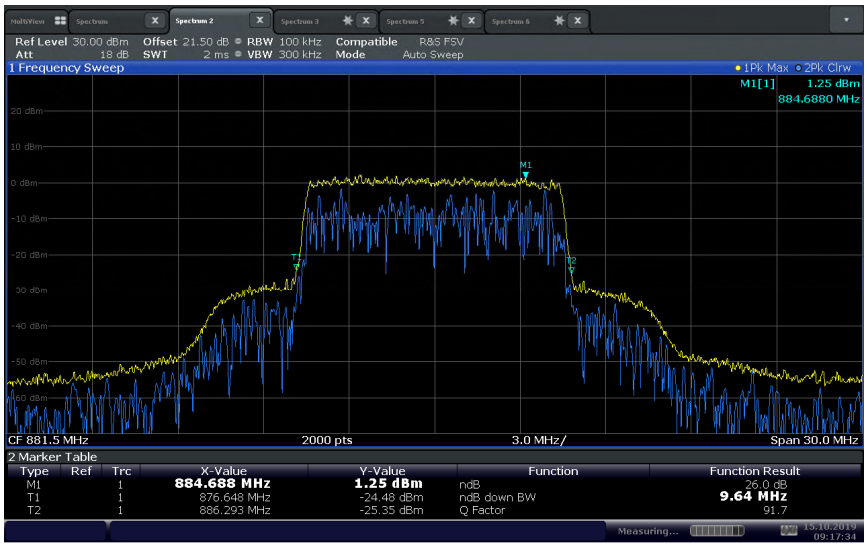
09:10:55 15.10.2019

LTE Band 26 869-894 MHz Downlink_10 MHz BW_Mid Channel 99% OBW



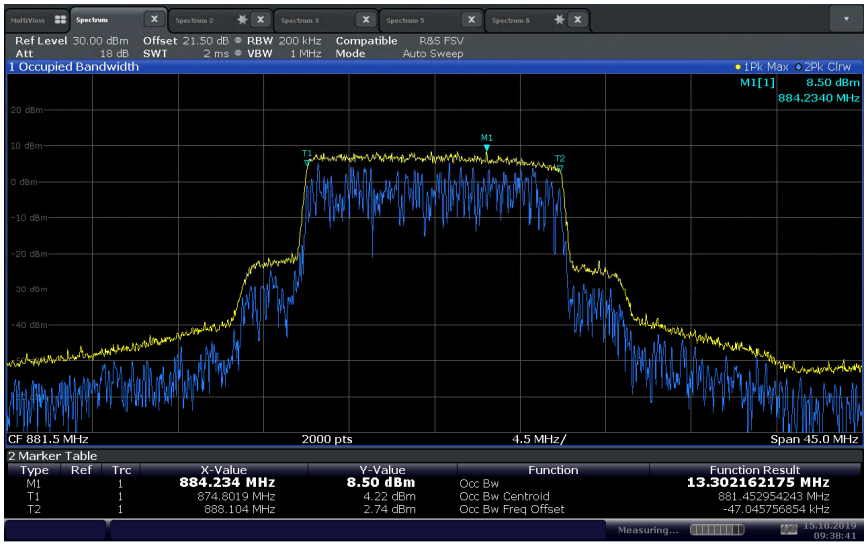
09:16:56 15.10.2019

LTE Band 26 869-894 MHz Downlink_10 MHz BW_Mid Channel -26dB BW



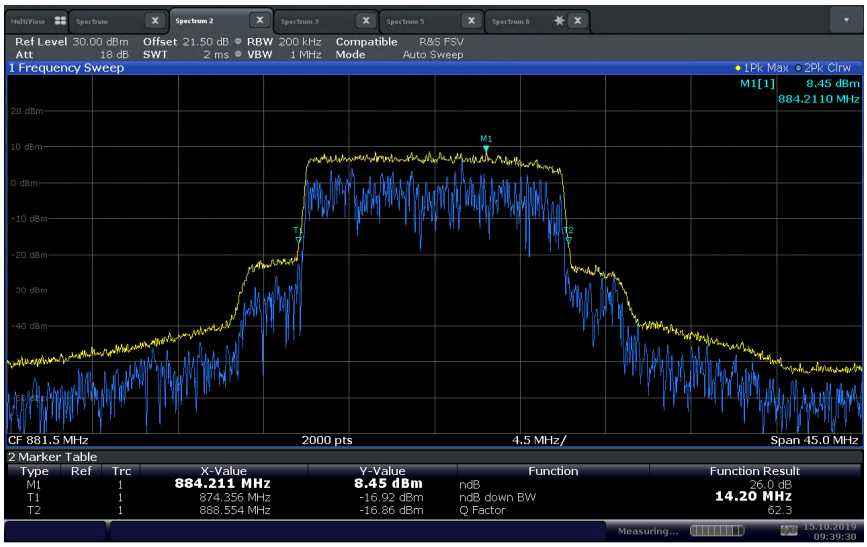
09:17:35 15.10.2019

LTE Band 26 869-894 MHz Downlink_15 MHz BW_Mid Channel 99% OBW



09:38:41 15.10.2019

LTE Band 26 869-894 MHz Downlink_15 MHz BW_Mid Channel -26dB BW



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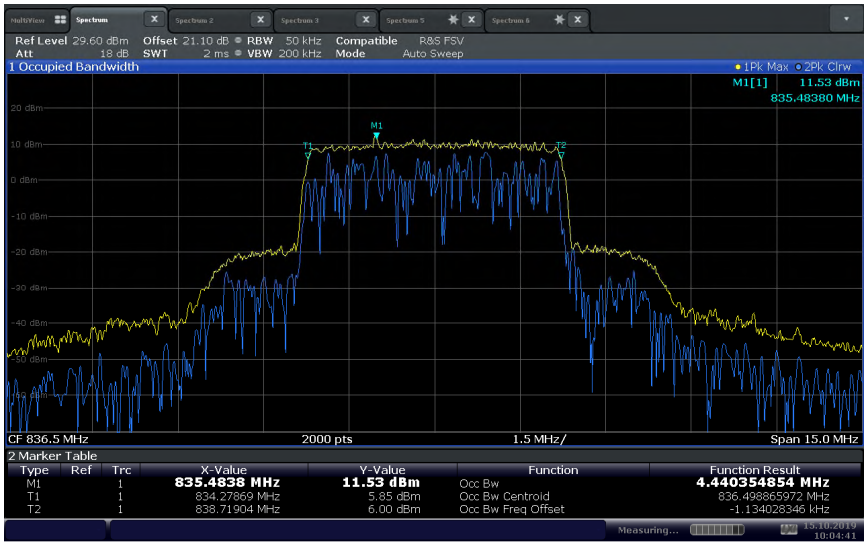
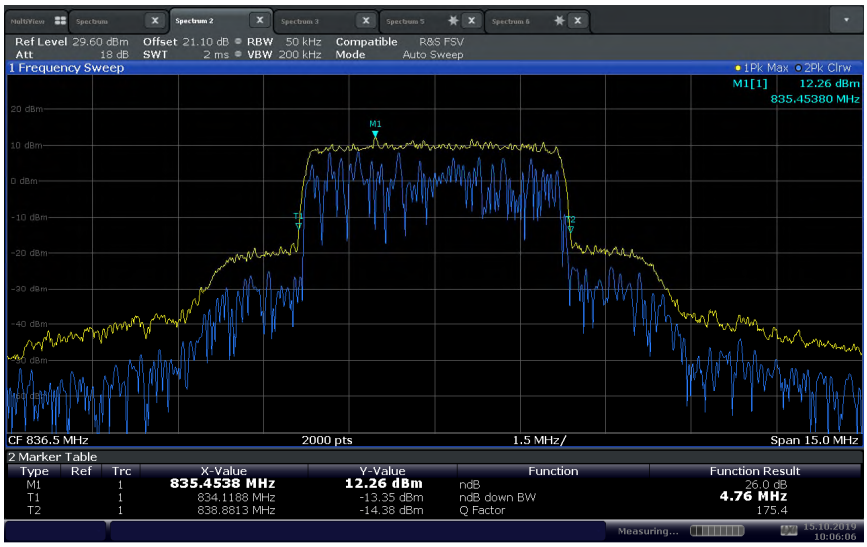
LTE Band 26 824-849 MHz Uplink_5 MHz BW_Mid Channel 99% OBW



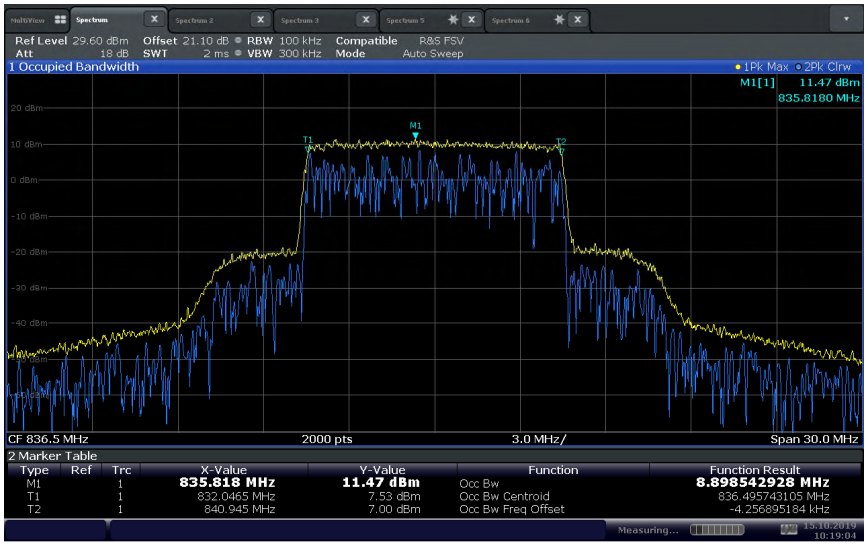
10:04:42 15.10.2019

LTE Band 26 824-849 MHz Uplink_5 MHz BW_Mid Channel -26dB BW



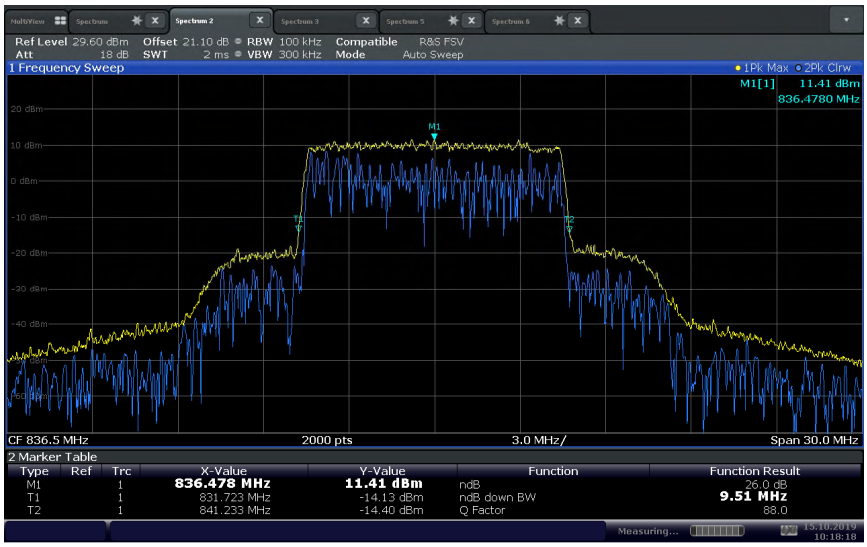
10:06:06 15.10.2019

LTE Band 26 824-849 MHz Uplink_10 MHz BW_Mid Channel 99% OBW



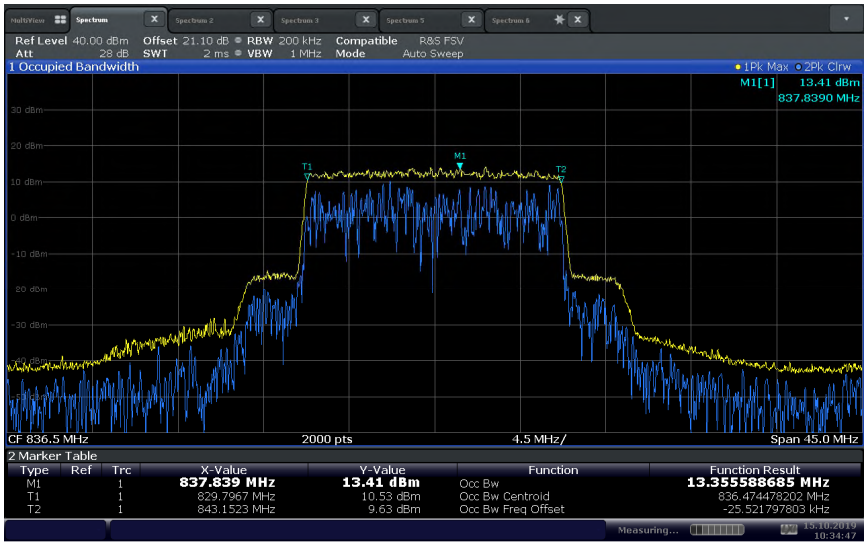
10:19:05 15.10.2019

LTE Band 26 824-849 MHz Uplink_10 MHz BW_Mid Channel -26dB BW



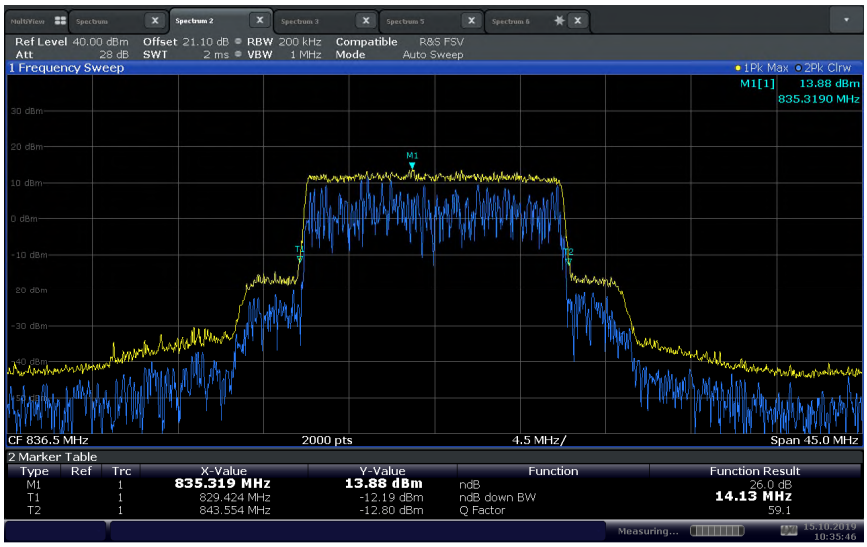
10:18:19 15.10.2019

LTE Band 26 824-849 MHz Uplink_15 MHz BW_Mid Channel 99% OBW



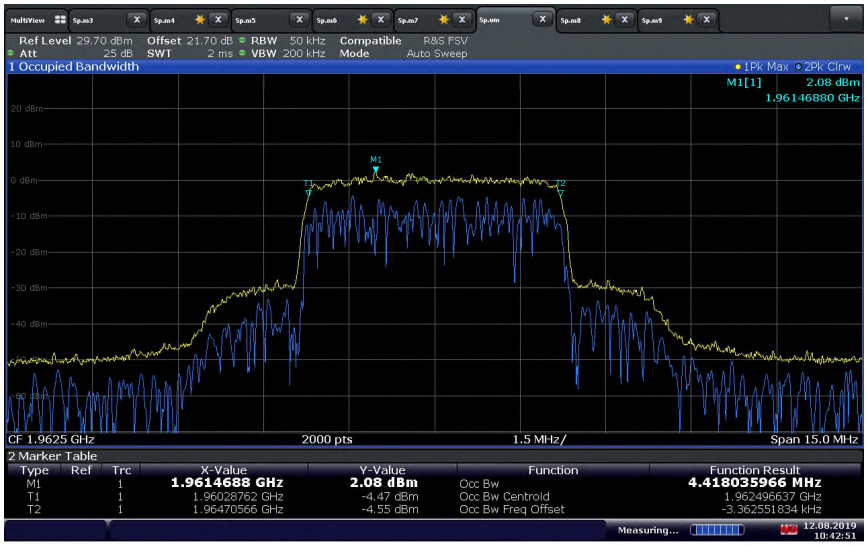
10:34:48 15.10.2019

LTE Band 26 824-849 MHz Uplink_15 MHz BW_Mid Channel -26dB BW



10:35:47 15.10.2019

LTE Band 25 Downlink_5 MHz BW_Mid Channel 99% OBW

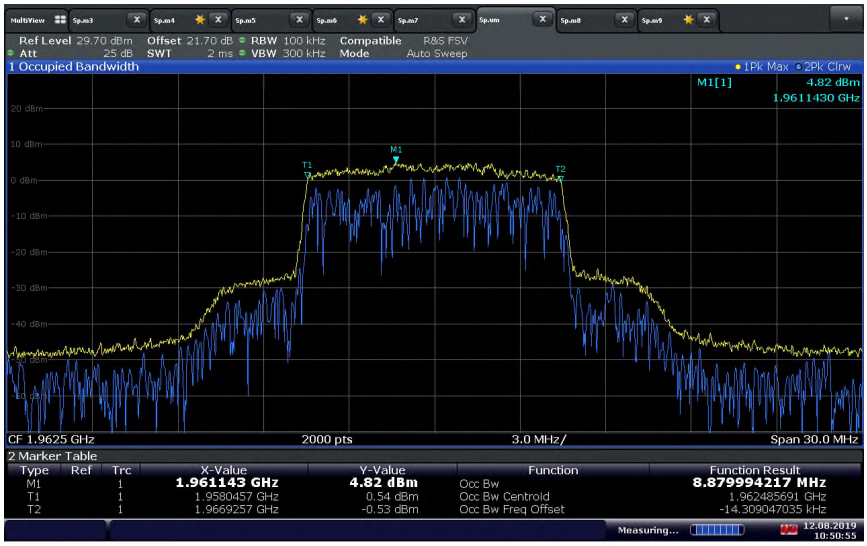


10:42:52 12.08.2019

LTE Band 25 Downlink_5 MHz BW_Mid Channel -26dB BW

10:43:45 12.08.2019

LTE Band 25 Downlink_10 MHz BW_Mid Channel 99% OBW

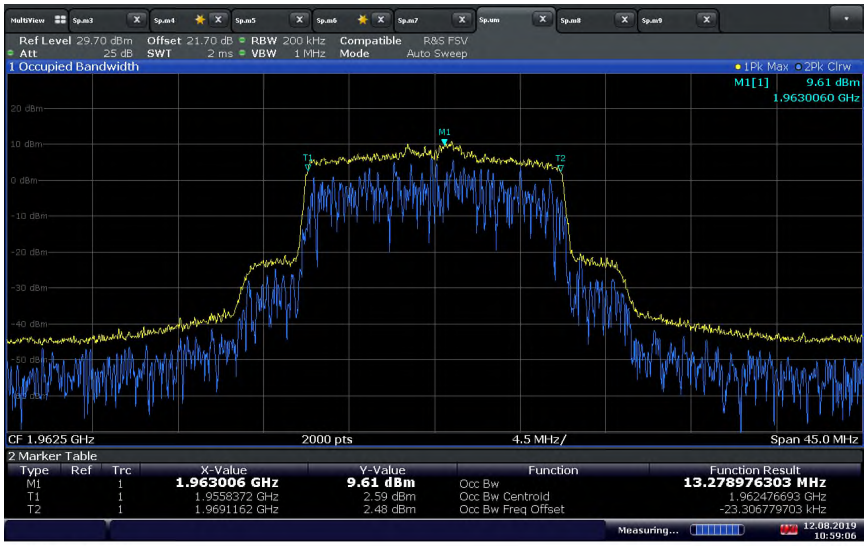


10:50:56 12.08.2019

LTE Band 25 Downlink_10 MHz BW_Mid Channel -26dB BW

10:52:14 12.08.2019

LTE Band 25 Downlink_15 MHz BW_Mid Channel 99% OBW

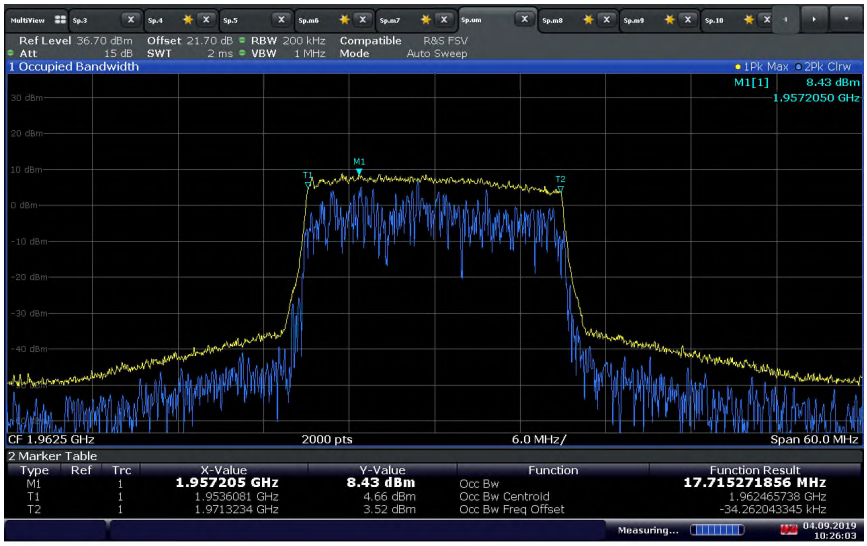


10:59:07 12.08.2019

LTE Band 25 Downlink_15MHz BW_Mid Channel -26dB BW

10:57:43 12.08.2019

LTE Band 25 Downlink_20 MHz BW_Mid Channel 99% OBW



10:26:04 04.09.2019

LTE Band 25 Downlink_20 MHz BW_Mid Channel -26dB BW

10:27:19 04.09.2019

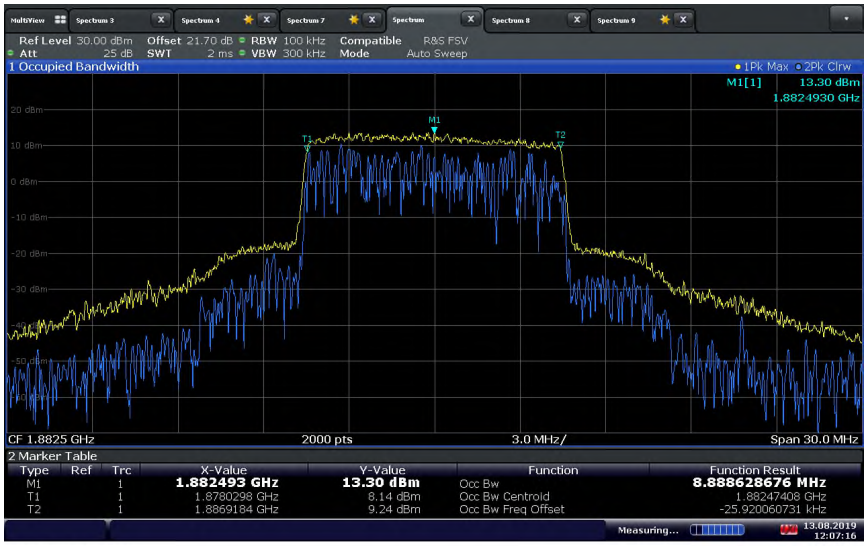
LTE Band 25 Uplink_5 MHz BW_Mid Channel 99% OBW

11:55:30 13.08.2019

LTE Band 25 Uplink_5 MHz BW_Mid Channel -26dB BW

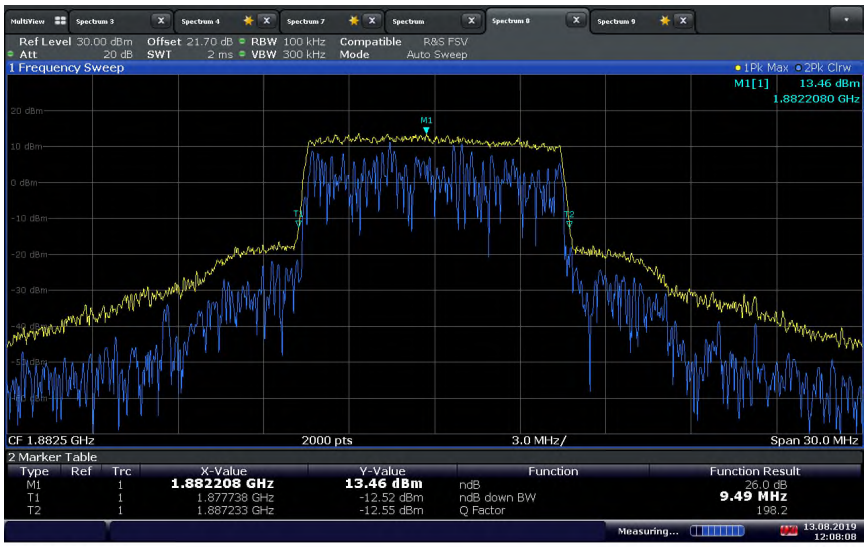
11:54:06 13.08.2019

LTE Band 25 Uplink_10 MHz BW_Mid Channel 99% OBW



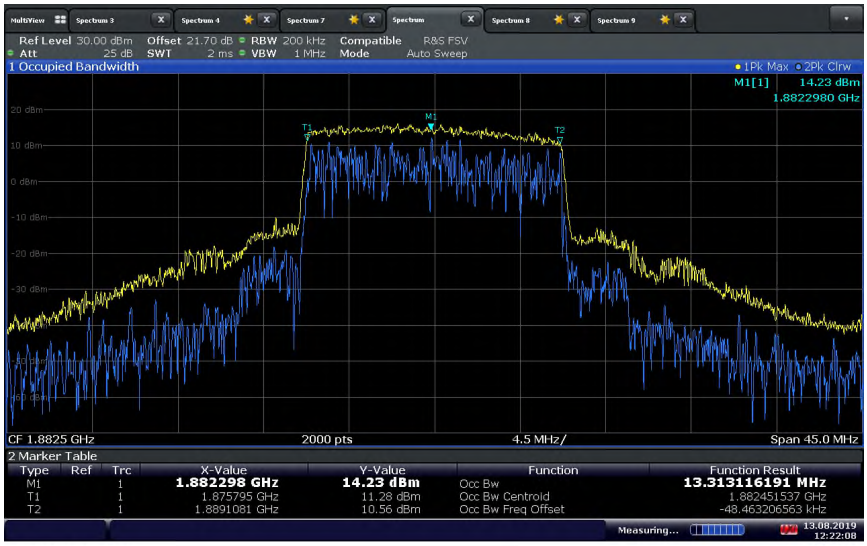
12:07:17 13.08.2019

LTE Band 25 Uplink_10 MHz BW_Mid Channel -26dB BW



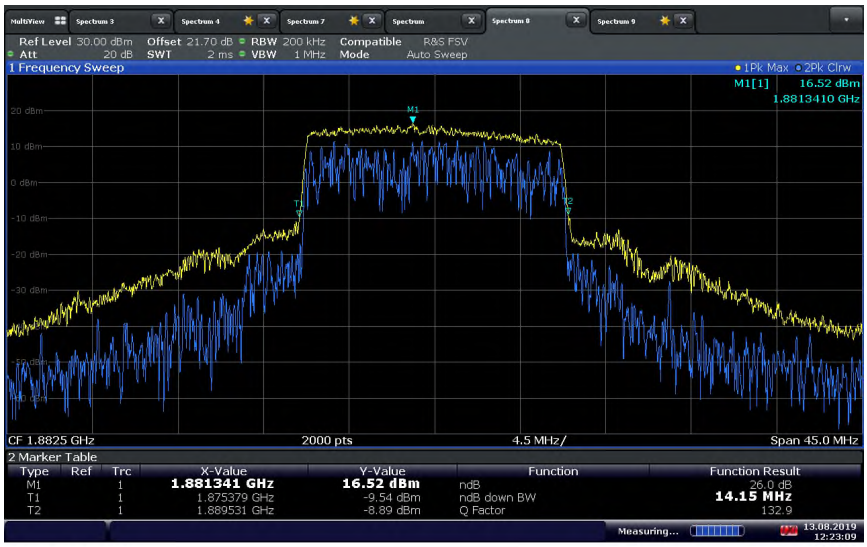
12:08:09 13.08.2019

LTE Band 25 Uplink_15 MHz BW_Mid Channel 99% OBW



12:22:09 13.08.2019

LTE Band 25 Uplink_15 MHz BW_Mid Channel -26dB BW

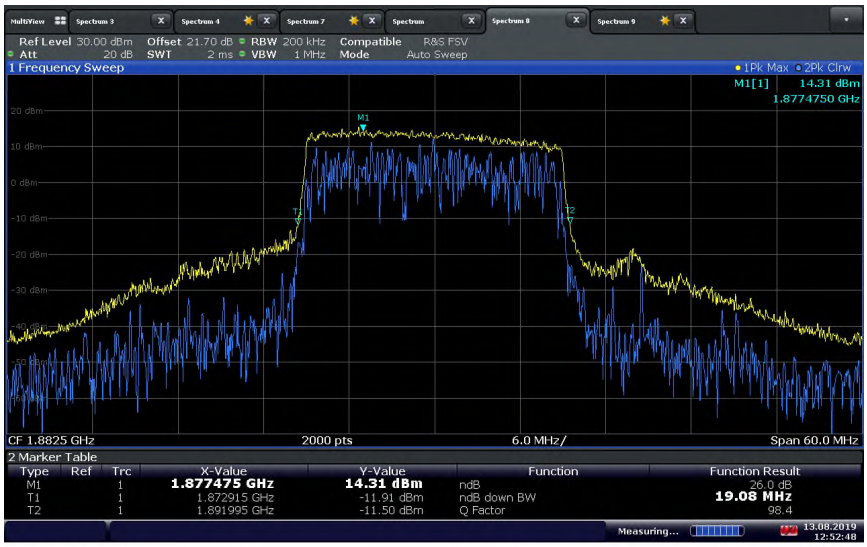


12:23:10 13.08.2019

LTE Band 25 Uplink_20 MHz BW_Mid Channel 99% OBW

12:53:43 13.08.2019

LTE Band 25 Uplink_20 MHz BW_Mid Channel -26dB BW



12:52:49 13.08.2019

2.5 PEAK-AVERAGE RATIO

2.5.1 Specification Reference

FCC 47 CFR Part 24, Clause 24.232 (d)
RSS-132, Clause 5.4
RSS-133, Clause 6.4

2.5.2 Standard Applicable

FCC Part 24:
Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of §24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13dB

RSS-132 and RSS-133:
The transmitter's peak-to-average power ratio (PAPR) shall not exceed 13 dB for more than 0.1% of the time using a signal corresponding to the highest PAPR during periods of continuous transmission.

2.5.3 Equipment Under Test and Modification State

Serial No: 370920000139 (NU) and 371929000156 (CU) / Test Configuration A and B

2.5.4 Date of Test/Initial of test personnel who performed the test

August 09, 13, 15 and October 15, 2019/XYZ

2.5.5 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.5.6 Environmental Conditions

Test performed at TÜV SÜD America Inc. Rancho Bernardo facility.

Ambient Temperature	25.8 - 26.0°C
Relative Humidity	51.1 - 53.3%
ATM Pressure	98.8 - 99.0kPa

2.5.7 Additional Observations

- This is a conducted test.
- Test procedure is per FCC KDB 971168 D01 v03r01 clause 5.7, the PAPR was measured in accorance with ANSI C63.26 clause 5.2.3.4.
- Measurement was done using the Spectrum Analyzer's Complementary Cumulative Distribution Function (CCDF) measurement profile. The built-in function is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth (crest factor or peak-to-average ratio) The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signals spends at or above the level defines the probability for that particular power level.
- RBW was set to maximum the SA can support.
- There are no measured PAR levels greater than 13dB. EUT complies.
- Low, Middle and High channels for all bandwidths were verified.
- Only test plots for middle channel were presented as the representative configuration.

2.5.8 Test Results

WCDMA Band 5 Downlink			
Bandwidth (MHz)	**Channel**	**Frequency (MHz)**	**PAR (dB)**
5	4357	871.4	9.54
	4408	881.6	8.96
	4458	891.6	9.50
15	4357+4382+4407	871.4+876.4+881.4	11.15
	4383+4408+4433	876.6+881.6+886.6	11.02
	4408+4433+4458	881.6+886.6+891.6	10.88

WCDMA Band 5 Uplink			
Bandwidth (MHz)	**Channel**	**Frequency (MHz)**	**PAR (dB)**
5	4132	826.4	7.92
	4183	836.6	7.87
	4233	846.6	8.34
15	4132+4157+4182	826.4+831.4+836.4	10.04
	4158+4183+4208	831.6+836.6+841.6	9.81
	4183+4208+4233	836.6+841.6+846.6	9.74

LTE Band 26 869-894 MHz Downlink			
Bandwidth (MHz)	**Channels**	**Frequency (MHz)**	**PAR (dB)**
5 MHz	2425	871.5	10.80
	2525	881.5	10.85
	2625	891.5	10.60
10 MHz	2450	874	10.59
	2525	881.5	10.69
	2600	889	11.0
15 MHz	2475	876.5	10.86
	2525	881.5	11.27
	2575	886.5	10.68

LTE Band 26 824-849 Uplink			
Bandwidth (MHz)	**Channels**	**Frequency (MHz)**	**PAR (dB)**
5 MHz	20425	826.5	10.48
	20525	836.5	10.79
	20625	846.5	10.85
10 MHz	20450	829	10.70
	20525	836.5	10.54
	20600	844	10.78
15 MHz	20475	831.5	10.39
	20525	836.5	10.82
	20575	841.5	10.45

LTE Band 25 Downlink			
Bandwidth (MHz)	**Channels**	**Frequency (MHz)**	**PAR (dB)**
5 MHz	8065	1932.5	10.35
	8365	1962.5	11.45
	8665	1992.5	10.28
10 MHz	8090	1935.0	11.25
	8365	1962.5	11.56
	8640	1990.0	9.93
15 MHz	8115	1937.5	10.39
	8365	1962.5	11.76
	8615	1987.5	10.42
20 MHz	8140	1940.0	11.74
	8365	1962.5	10.29
	8590	1985.0	11.28

LTE Band 25 Uplink			
Bandwidth (MHz)	**Channels**	**Frequency (MHz)**	**PAR (dB)**
5 MHz	26065	1852.5	9.50
	26365	1882.5	9.34
	26665	1912.5	8.36
10 MHz	26090	1855.0	8.92
	26365	1882.5	9.44
	26640	1910.0	8.65
15 MHz	26115	1857.5	9.37
	26365	1882.5	9.43
	26615	1907.5	8.54
20 MHz	26140	1860.0	9.33
	26365	1882.5	9.45
	26590	1905.0	8.77

2.5.9 Sample Test Plot

WCDMA Band 5 Downlink_5MHz Bandwidth_Mid Channel -PAR


14:02:13 09.08.2019

WCDMA Band 5 Downlink_15MHz Bandwidth_Mid Channel -PAR


09:54:58 13.08.2019

WCDMA Band 5 Uplink_5MHz Bandwidth_Mid Channel -PAR


09:22:37 13.08.2019

WCDMA Band 5 Uplink_15MHz Bandwidth_Mid Channel -PAR


09:39:03 13.08.2019

LTE Band 26 869-894 MHz Downlink_5MHz Bandwidth_Mid Channel -PAR
 09:04:21 15.10.2019
LTE Band 26 869-894 MHz Downlink_10MHz Bandwidth_Mid Channel -PAR
 09:18:55 15.10.2019

LTE Band 26 869-894 MHz Downlink_15MHz Bandwidth_Mid Channel -PAR


09:38:19 15.10.2019

LTE Band 26 824-849 MHz Uplink_5MHz Bandwidth_Mid Channel -PAR


10:07:24 15.10.2019

LTE Band 26 824-849 MHz Uplink_10MHz Bandwidth_Mid Channel -PAR
 10:17:51 15.10.2019

LTE Band 26 824-849 MHz Uplink_15MHz Bandwidth_Mid Channel -PAR
 10:36:32 15.10.2019

LTE Band 25 Downlink_5MHz Bandwidth_Mid Channel -PAR
 14:27:43 09.08.2019
LTE Band 25 Downlink_10MHz Bandwidth_Mid Channel -PAR
 14:48:47 09.08.2019

LTE Band 25 Downlink_15MHz Bandwidth_Mid Channel -PAR
 15:00:31 09.08.2019

LTE Band 25 Downlink_20MHz Bandwidth_Mid Channel -PAR
 15:32:27 09.08.2019

LTE Band 25 Uplink_5MHz Bandwidth_Mid Channel -PAR


11:56:17 13.08.2019

LTE Band 25 Uplink_10MHz Bandwidth_Mid Channel -PAR


12:08:36 13.08.2019

LTE Band 25 Uplink_15MHz Bandwidth_Mid Channel -PAR


12:21:23 13.08.2019

LTE Band 25 Uplink_20MHz Bandwidth_Mid Channel -PAR


12:54:17 13.08.2019