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Report On

Application for Class II Permissive Change of the
Nextivity Inc.
Cel-Fi PRO Network Unit

FCC CFR 47 Part 20, Part 22H, Part 24E and Part 27

Report No. SD72117098-0516A **September 2016**

REPORT ON	Class II Permissive Change Verification of the Nextivity Inc. Cel-Fi PRO Network Unit
TEST REPORT NUMBER	SD72117098-0516A
PREPARED FOR	Nextivity Inc. 11230 World Trade Drive, Suite 250 San Diego, CA 92128
CONTACT PERSON	CK Li Sr. Principal Engineer, Regulatory (858) 829-1692 CLi@NextivityInc.com
PREPARED BY	Ferdinand S. Custodio **Name** Authorized Signatory Title: EMC/Senior Wireless Test Engineer
APPROVED BY	Juan Manuel Gonzalez Name Authorized Signatory Title: EMC SL Manager West Region
DATED	September 02, 2016

Revision History

SD72117098-0516A Nextivity Inc. Cel-Fi PRO Network Unit					
DATE	OLD REVISION	NEW REVISION	REASON	PAGES AFFECTED	APPROVED BY
09/02/2016	Initial Release				Juan Manuel Gonzalez

CONTENTS

SECTION 1

REPORT SUMMARY

Class II Permissive Change Verification of the
Nextivity Inc.
Cel-Fi PRO Network Unit

1.1 INTRODUCTION

The information contained in this report is intended to show verification of the Nextivity Inc. Network Unit to the requirements of FCC CFR 47 Part 20, Part 22H, Part 24E and Part 27

Objective	To perform Class II Permissive Change Verification to determine the Equipment Under Test's (EUT's) compliance with the Test Specification, for the series of tests carried out. The EUT is being assessed due to an external antenna port added.
Manufacturer	Nextivity Inc.
Model Number(s)	P34-2/4/5/12
FCC ID	YETP24512NU
Serial Number(s)	900610000028
Number of Samples Tested	1
Test Specification/Issue/Date	FCC CFR 47 Part 20, Part 22H, Part 24E and Part 27 (October 1, 2015).
Start of Test	July 12, 2016
Finish of Test	August 22, 2016
Name of Engineer(s)	Ferdinand Custodio
Related Document(s)	• ANSI C63.26-2015. American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services • ANSI/TIA-603-C-2004 – Land Mobile FM or PM – Communications Equipment – Measurement and Performance Standards. • 971168 D01 Power Meas License Digital Systems v02r02: October 17 2014; (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. • KDB447498 D01 General RF Exposure Guidance v06. RF Exposure Procedures And Equipment Authorization Policies For Mobile And Portable Devices. • Report No. 95128-32. Radio Frequency Exposure Report for the Device: Provider Specific Consumer Signal Booster Model: Cel-Fi P34-2/4/5/12 (May 23, 2014). Issued by CKC Laboratories, Inc. 5046 Sierra Pines Drive, Mariposa, CA 95338. • 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 20, Part 22H, Part 24E and Part 27 is shown below.

Section	Spec Clause			Test Description	Result
	FCC Part 2	FCC Part 22	FCC Part 24		
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)	Equivalent Isotropic Radiated Power	Compliant
-	2.1049	22.917 (b)	24.238 (b)	Occupied Bandwidth	N/A*
-	-	-	24.232 (d)	Peak-Average Ratio	N/A*
2.4	2.1051	22.917 (a)	24.238 (a)	Band Edge	Compliant
2.5	2.1051	22.917 (a)	24.238 (a)	Conducted Spurious Emissions	Compliant
2.6	2.1053	22.917 (a)	24.238 (a)	Field Strength of Spurious Radiation	Compliant
-	2.1055	22.355	24.235	Frequency Stability	N/A*
-	-	-	-	Power Line Conducted Emission	N/A*

*N/A** *Not applicable. Test not performed, test results from the original test report applies. This test was deemed to be non-essential in view of the type of change on the EUT the Class II Permissive Change is applied for.*

1.3 PRODUCT INFORMATION

1.3.1 Technical Description

The Equipment Under Test (EUT) was a Nextivity Inc. Cel-Fi PRO Network Unit (NU). The EUT is part of the provider specific signal booster pair consisted of the EUT and a Coverage Unit (CU) using proprietary 5.8GHz wireless interface. The EUT is manufacturer configurable to operate in relay bandwidth of 5MHz, 10 MHz, 15 MHz and 20 MHz within the CMRS band by setting the Spectrum Block Filter, Gain and other operational parameter based on received public land mobile network (PLMN) ID. Only spectrum block filter of 5 MHz were evaluated for testing purposes. The EUT and the CU are connected via coax cable with 60dB attenuator. Since the CU is not part of this evaluation, it will be placed inside a shielded enclosure for improved RF isolation. Since only the NU will be evaluated, therefore only Uplink will be tested.

EUT (Network Unit) showing additional external antenna port subject to C2PC

1.3.2 EUT General Description

EUT Description	Network Unit
Model Name	Cel-Fi PRO
Model Number(s)	P34-2/4/5/12
Rated Voltage	12VDC via external AC Adapter

Original Filing Specification:

FCC Rule Part	Frequency Range (MHz)	Output (dBm)	Output (Watts)
27	1710.0 – 1755.0	21.5	0.1413
24E	1850.0 – 1910.0	22.1	0.1622
22H	824.0 – 849.0	21.6	0.1445
27	698.0 – 716.0	22.1	0.1622

Primary Unit (EUT)

☒ Production

☐ Pre-Production

☐ Engineering

Manufacturer Declared Temperature Range: 0°C to 40°C

Antenna Type: N/A. The EUT is being assessed due to the addition of an external antenna port. The end user normally is responsible to what type of antenna could be used as long as RF exposure compliance is maintained.

1.4 EUT TEST CONFIGURATION

1.4.1 Test Configuration Description

Test Configuration	Description
A	Conducted Antenna Port test setup. Uplink (NU TX). Input signal is applied to B2/12 or B4/B5 antenna port of CU. Output is monitored from the external antenna port of NU.
B	Radiated test setup. Uplink (NU TX). Input signal is applied to B2/12 or B4/B5 antenna port of CU. External antenna port of NU is terminated with a 50Ω load.

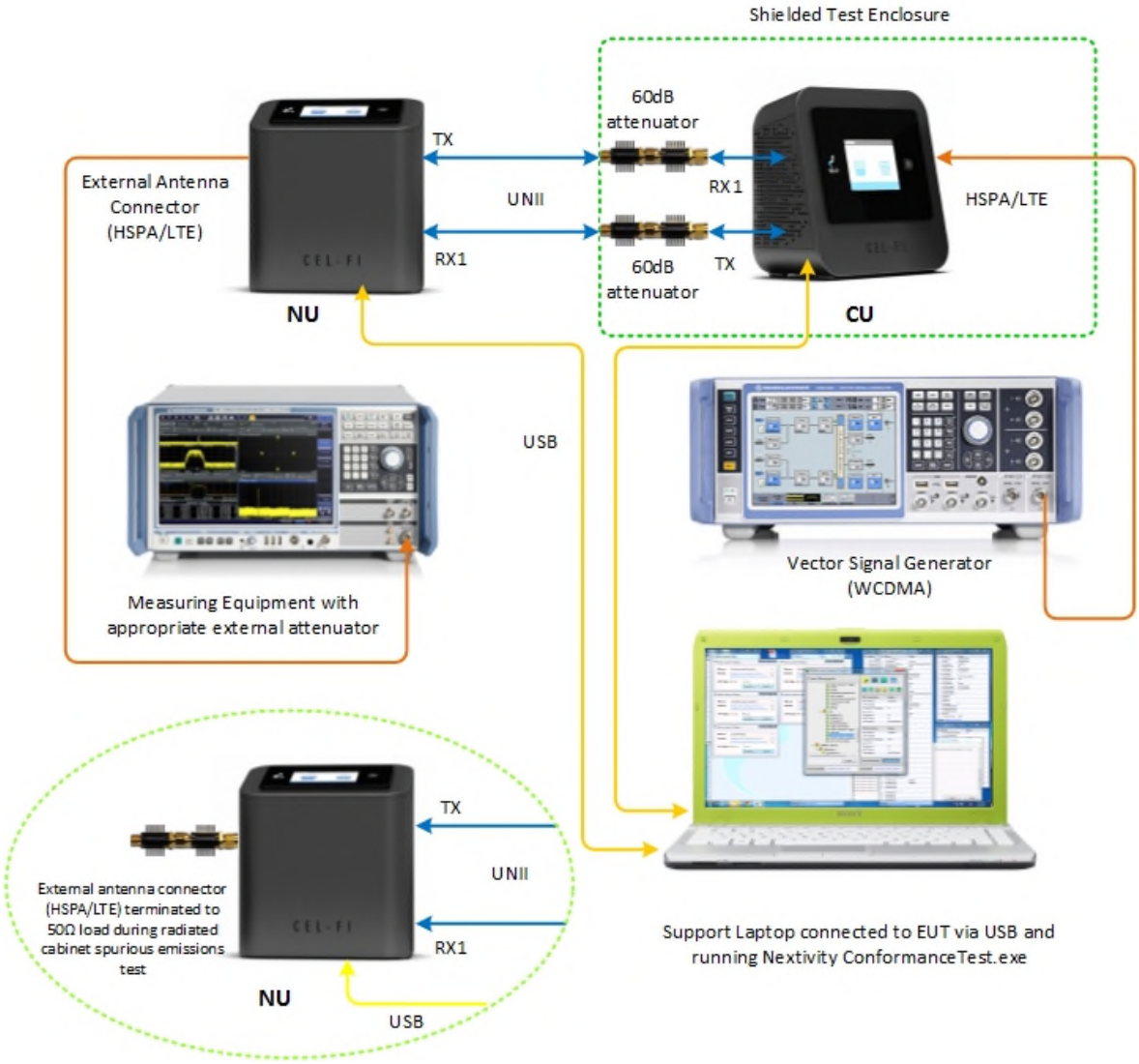
1.4.2 EUT Exercise Software

Manufacturer provided a configuration software (ConformanceTest.exe) 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
Hon-Kwang	AC/DC Adapter (NU)	M/N: HK-AB-120ª250-US S/N: DA0000123
Hon-Kwang	AC/DC Adapter (CU)	M/N: HK-AB-120ª250-US S/N: E50008263
Nextivity	Support CU	M/N P34-2/4/5/12 CU S/N 900610000028
-	Support USB cable	1.75 meters, shielded Type A to Micro B connector
Nextivity	Support USB cable	Custom 1.0 meter shielded USB Type A to DB9 for the Shielded Test Enclosure
Mini-Circuits	Support Coaxial SMA Fixed Attenuator (x4)	M/N VAT-30W2 30dB DC-6GHz
Lenovo	Support Laptop	M/N: 2912-3VU, S/N: R9-92MH0 10/11
Lenovo	Support Laptop AC Adapter	M/N: 42T4430 S/N: 11S42T4430Z1ZGWE27AA9X
Rhode & Schwarz	Support Radio Communication Tester	M/N: CMU200, S/N: 114536
Aeroflex international LTD.	DFS Radar Simulator and Analyzer	M/N: Aeroflex 3005, S/N: 30050A/09L
Ramsey	Support Shielded Test Enclosure	with custom USB cable

1.4.4 Simplified Test Configuration Diagram



1.5 DEVIATIONS FROM THE STANDARD

Initial prescan at 1.5 meters were performed for above 1GHz radiated measurement. It was verified that no significant difference in emissions were observed between 1.5m height and 0.8m placement of the EUT on the table. For more efficient transition between each mode and test configuration during testing, both radiated emissions tests below and above 1GHz were performed at 0.8 meter height placement of the EUT.

1.6 MODIFICATION RECORD

Description of Modification	Modification Fitted By	Date Modification Fitted
Serial Number 900610000028		
N/A		

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 and radiated emissions the equipment under test (EUT) was configured to measure its highest possible emission level. 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: 858 942 5542 Fax: 858 546 0364.

1.9 TEST FACILITY REGISTRATION

1.9.1 FCC – Registration 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 §2.498 of the FCC rules. The acceptance letter from the FCC is maintained in our files and the Registration is US1146.

1.9.2 Innovation, Science and Economic Development Canada (IC) Registration No.: 3067A

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

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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**

1.10.3 Spurious Radiated Emission – Substitution Method

Example = 84dBµV/m @ 1413 MHz (numerical sample only)

The field strength reading of 84dBµV/m @ 1413 MHz (2nd Harmonic of 706.5 MHz) is the maximized measurement when the EUT is on the turntable measured at 3 meters. The gain of the substituted antenna is 7.8dBi while the transmit cable loss is 1.0 dB (cable between signal generator and the substituted antenna). The signal generator level is adjusted until the 84dBµV/m level at the receiving end is replicated (identical test setup, i.e. same antenna, cable/s and preamp). If the adjusted signal generator level is -18dBm, then we have the following for both EIRP and ERP as required:

P_{EIRP} = -18 dBm + 7.8 dBi – 1dB
= 11.2 dBm
P_{ERP} = P_{EIRP} – 2.15 dB
= 11.2 dBm – 2.15 dB
= 9.05 dBm

SECTION 2

TEST DETAILS

Class II Permissive Change Verification of the
Nextivity Inc.
Cel-Fi PRO Network Unit

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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.

2.1.3 Equipment Under Test and Modification State

Serial No: 900610000028 / Test Configuration A

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

July 13 and 29 2016/FSC

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	25.7 - 26.9 °C
Relative Humidity	39.4 – 47.5 %
ATM Pressure	98.7 - 99.3 kPa

2.1.7 Additional Observations

- This is a conducted test using the built-in Channel Power/ACLR function of the spectrum analyzer.
- The path loss was measured and entered as a level offset.

2.1.8 Test Results

HSPA Uplink				
Band	**Bandwidth (MHz)**	**Channel**	**Frequency (MHz)**	***RMS Power (dBm)***
Band 2	5	9262	1852.4	21.12
		9400	1880.0	20.95
		9538	1907.6	20.84

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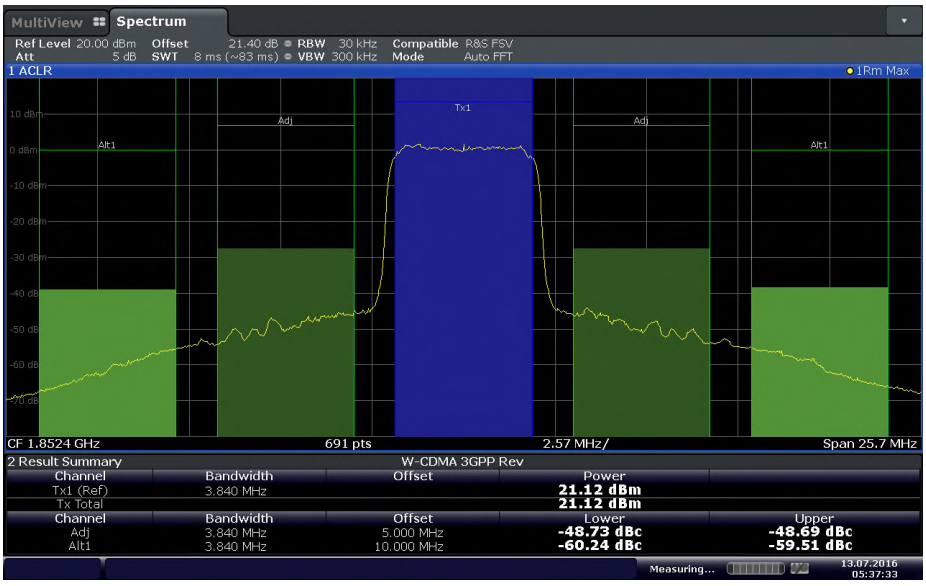
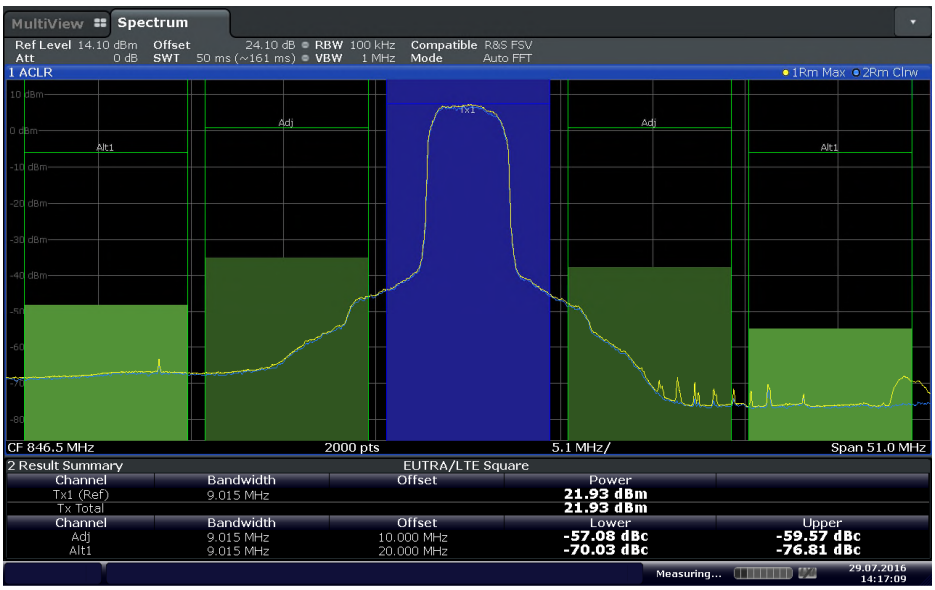
Band 5	5	4132	826.4	21.76
		4183	836.6	21.93
		4233	846.6	21.91

LTE Uplink				
Band	**Bandwidth (MHz)**	**Channel**	**Frequency (MHz)**	***RMS Power (dBm)***
Band 2	5	18625	1852.5	19.12
		18900	1880	20.04
		19175	1907.5	19.33
Band 4	5	19975	1712.5	21.44
		20175	1732.5	20.69
		20375	1752.5	21.55
Band 5	5	20425	826.5	21.06
		20525	836.5	21.26
		20625	846.5	21.93
Band 12	5	23035	701.5	21.97
		23095	707.5	22.37
		23155	713.5	21.82

2.1.9 Sample Test Plot



WCDMA Band 2 Low Channel (9262 / 1852.4 MHz)



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LTE Band 5 High Channel (20625 / 846.5 MHz)

2.2 EFFECTIVE RADIATED POWER

2.2.1 Specification Reference

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

2.2.2 Standard Applicable

FCC Part 22: The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

2.2.3 Equipment Under Test and Modification State

Serial No: 900610000028 / Test Configuration A

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

July 29, 2016 / FSC

2.2.5 Test Equipment Used

N/A. Calculation only.

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:

$$ERP = P_T + G_T - L_C - 2.15dB$$

Where:

P_T = transmitter conducted output power dBm (Section 2.1 of this test report)

G_T = gain of the transmitting antenna, in dBi (EIRP: 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 has a temporary 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 Uplink						
Band	**Bandwidth (MHz)**	**Frequency (MHz)**	**Max Power RMS (dBm)**	**Antenna Gain (dBi)**	**ERP (dBm)**	**Limit (dBm)**
5	5	826.4	21.76	2	21.61	38.45
		836.6	21.93	2	21.78	38.45
		846.6	21.91	2	21.76	38.45

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LTE Uplink						
Band	**Bandwidth (MHz)**	**Frequency (MHz)**	**Max Power RMS (dBm)**	**Antenna Gain (dBi)**	**ERP (dBm)**	**Limit (dBm)**
5	5	826.4	21.06	2	20.91	38.45
		836.6	21.26	2	21.11	38.45
		846.6	21.93	2	21.78	38.45

2.3 EQUIVALENT ISOTROPIC RADIATED POWER

2.3.1 Specification Reference

FCC 47 CFR Part 2, Clause 2.1046 and Part 24, Clause 24.232 (c)

2.3.2 Standard Applicable

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.

2.3.3 Equipment Under Test and Modification State

Serial No: 900610000028 / Test Configuration A

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

July 29, 2016 / FSC

2.3.5 Test Equipment Used

N/A. Calculation only.

2.3.6 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.
L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB (EUT has a temporary short direct connection to the antenna port. The loss between the EUT and the antenna port is considered negligible).

2.3.7 Test Results

WCDMA B5 Uplink						
Band	**Bandwidth (MHz)**	**Frequency (MHz)**	**Max Power RMS (dBm)**	**Antenna Gain (dBi)**	**EIRP (dBm)**	**Limit (dBm)**
2	5	1852.4	21.12	3.0	24.12	33
		1880.0	20.95	3.0	23.95	33
		1907.6	20.84	3.0	23.84	33

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LTE B5 Uplink						
Band	**Bandwidth (MHz)**	**Frequency (MHz)**	**Max Power RMS (dBm)**	**Antenna Gain (dBi)**	**EIRP (dBm)**	**Limit (dBm)**
2	5	1852.4	21.06	3.0	24.06	33
		1880.0	21.26	3.0	24.26	33
		1907.6	21.93	3.0	24.93	33

2.4 MPE CALCULATION AT 20 CM DISTANCE

2.4.1 Standard Applicable

KDB 447498 D01 Mobile Portable RF Exposure v06.

2.4.2 Equipment Under Test and Modification State

Serial No: 900610000028 / Calculation Only

2.4.3 Date of Verification

August 01, 2016 / FSC

2.4.4 Power Measurements Used In Calculation (NU only)

Technology	Power (dBm)	Source of Power Measurements
U-NII	19.40	Original filing MPE test report. Report No. 95128-32. Radio Frequency Exposure Report for the Device: Provider Specific Consumer Signal Booster Model: Cel-Fi P34-2/4/5/12 (May 23, 2014). Issued by CKC Laboratories, Inc. 5046 Sierra Pines Drive, Mariposa, CA 95338.
LTE	21.93	See Section 2.4 of this test report. LTE Band 5 High Channel was considered worst case for power measurement as covered by this test report.

2.4.5 Calculation Results

- Equation for predicting RF field was used to determine the minimum distance that will comply with the requirements:

$$S = \frac{PG}{4\pi r^2}$$

Where: S=the power flux
P=input power of the antenna
G=antenna gain relative to an isotropic antenna
r=distance from the antenna to the point of investigation

- From this formula, using minimum distance of 20 cm, the highest antenna gain that can be used on the external antenna port was calculated. Limit used was 1.0 mW/cm as S:

$$G = \frac{S(4\pi r^2)}{P}$$

$$G = \frac{(1.0\frac{mw}{cm})(4\pi)(20cm)^2}{156\ mW}$$

- Therefore the maximum antenna gain that can be used with the external antenna port while still complying with RF Exposure requirements at 20cm is: **14 dBi.**
- Calculation results calls for 15dBi (32.2 numeric), however it was adjusted to 14dBi to address simultaneous transmission MPE requirements below.
- Next, the simultaneous transmission MPE was verified:

Transmitter type	MPE (mw/cm^2)	Limit (mW/cm^2)	MPE ratio (MPE/Limit)
U-NII	0.02746	1.0	0.02746
LTE	0.77935	1.0	0.77935
		Sum of the ratios (should be <1.0)	0.80681

1. Mobile MPE Calculation using a 20cm separation distance (U-NII):

Maximum peak output power at antenna input terminal:	**19.40**	(dBm)
Maximum peak output power at antenna input terminal:	**87.10**	(mW)
Antenna gain(typical):	**2.0**	(dBi)
Maximum antenna gain:	**1.585**	(numeric)
Prediction distance:	**20**	(cm)
Sourse Based Time Average Duty Cycle:	**100**	(%)
Prediction frequency:	**5745**	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	**1.000**	(mW/cm^2)
Power density at prediction frequency:	**0.02746**	(mW/cm^2)
Power density at prediction frequency:	**0.2746**	(W/m^2)
Margin of Compliance:	**-15.61**	(dB)

2. Mobile MPE Calculation using a 20cm separation distance (LTE):

Maximum peak output power at antenna input terminal:	**21.93**	(dBm)
Maximum peak output power at antenna input terminal:	**155.96**	(mW)
Antenna gain(typical):	**14**	(dBi)
Maximum antenna gain:	**25.119**	(numeric)
Prediction distance:	**20**	(cm)
Sourse Based Time Average Duty Cycle:	**100**	(%)
Prediction frequency:	**1907.6**	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	**1.000**	(mW/cm^2)
Power density at prediction frequency:	**0.77935**	(mW/cm^2)
Power density at prediction frequency:	**7.793**	(W/m^2)
Margin of Compliance:	**-1.08**	(dB)

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2.5 BAND EDGE

2.5.1 Specification Reference

FCC 47 CFR Part 2, Clause 2.1051; Part 22 Clause 22.917(a) and Part 24 Clause 24.238(a)

2.5.2 Standard Applicable

In the 1.0 MHz bands immediately outside and adjacent to the equipment's operating frequency block, the emission power per any 1% of the emission bandwidth shall be attenuated (in dB) below the transmitter output power P (dBW) by at least 43 + 10 log10 p(watts).

2.5.3 Equipment Under Test and Modification State

Serial No: 900610000028 / Test Configuration A

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

August 22, 2016/FSC

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	26.4 °C
Relative Humidity	47.0 %
ATM Pressure	98.9 kPa

2.5.7 Additional Observations

- This is a conducted test.
- Test guidance is per Section 6 of KDB971168 (D01 Power Meas License Digital Systems v02r02).
- The path loss was measured and entered as a transducer factor (TDF).
- Only the worst bandwidth (LTE) presented.
- For band edge measurements, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter was employed except for Band 12 (Part 27), wherein a fixed 100 kHz RBW was used.
- The limit was set to -13dBm.

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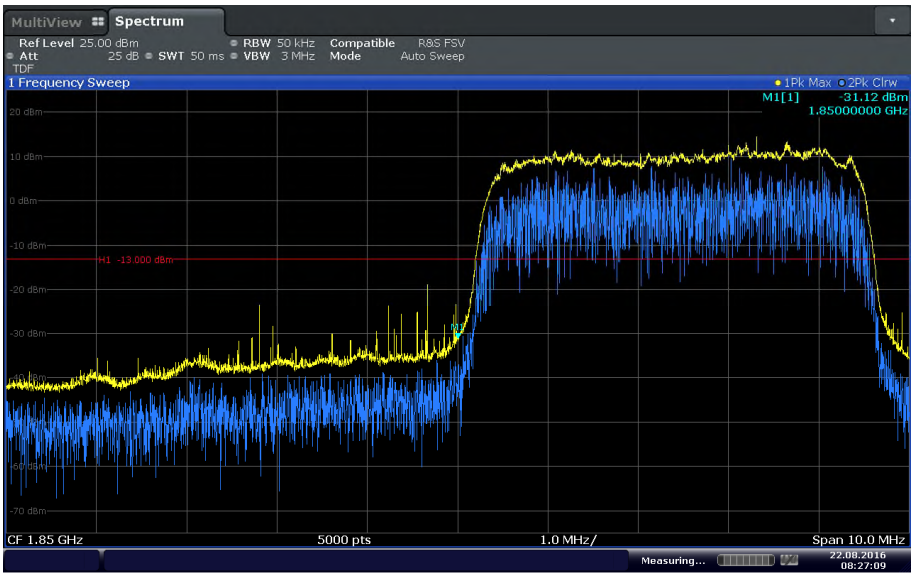
2.5.8 Test Results

WCDMA Band 2 Uplink Low Channel Band Edge



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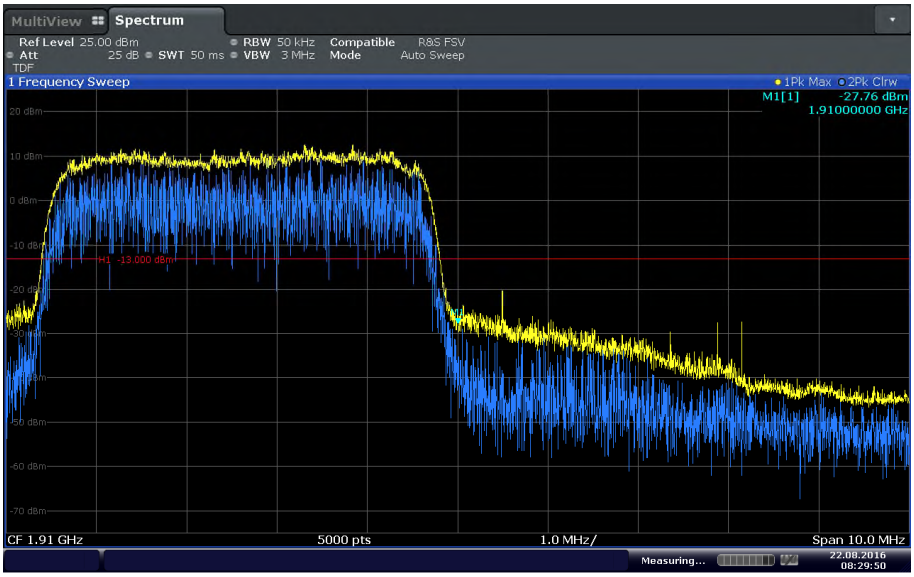
WCDMA Band 2 Uplink High Channel Band Edge



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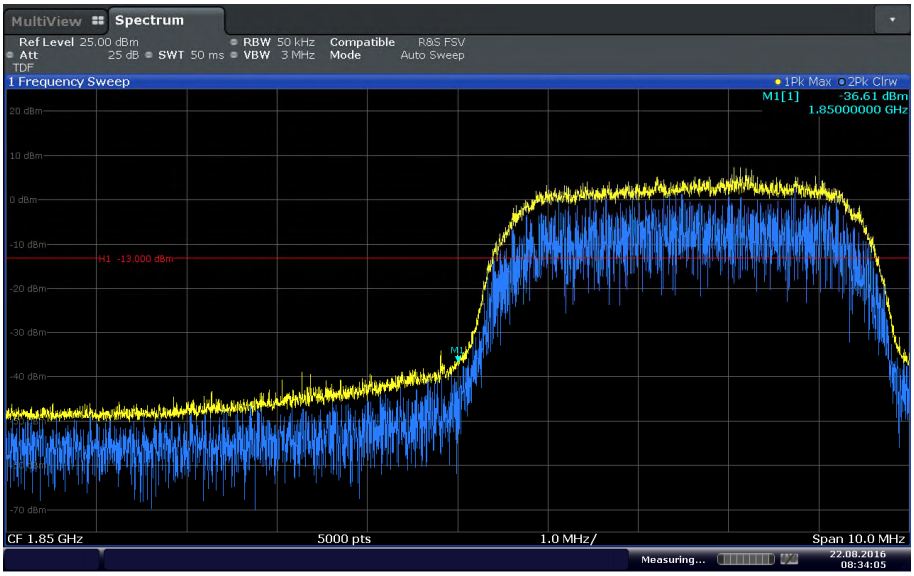
LTE Band 2 Uplink Low Channel Band Edge



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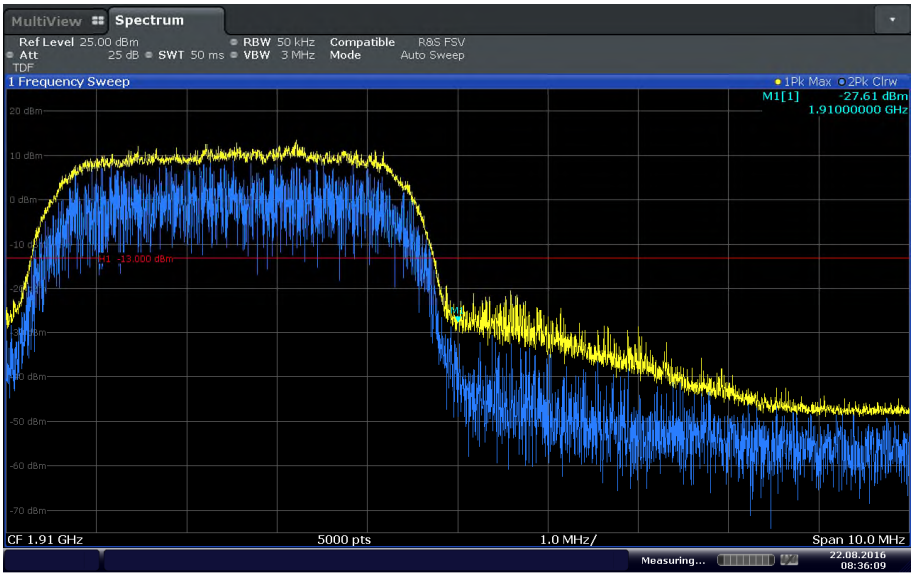
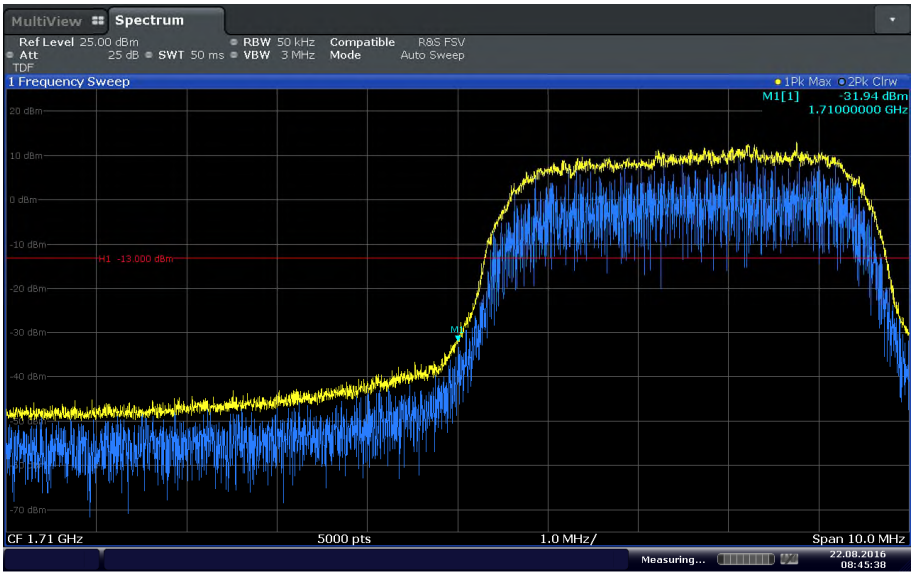
LTE Band 2 Uplink Low Channel Band Edge



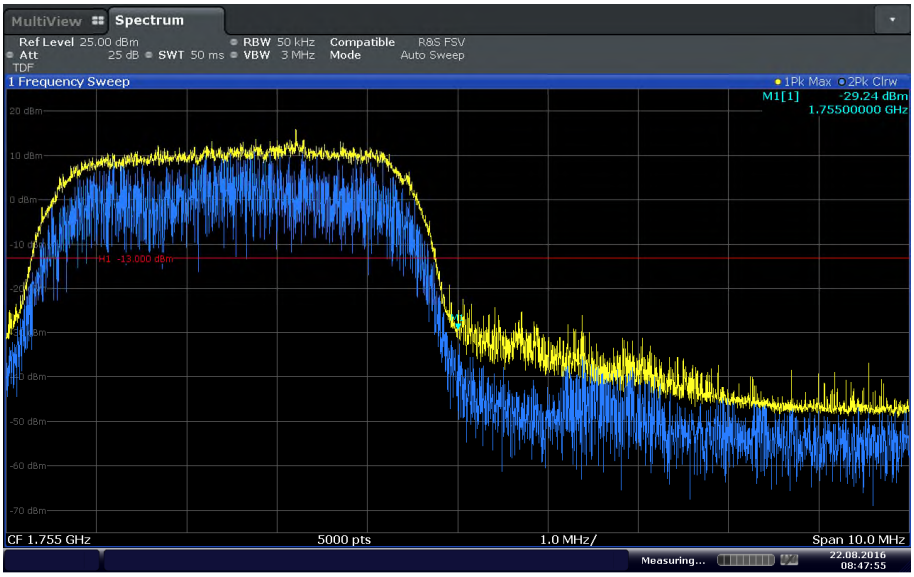
08:36:09 22.08.2016

LTE Band 4 Uplink Low Channel Band Edge



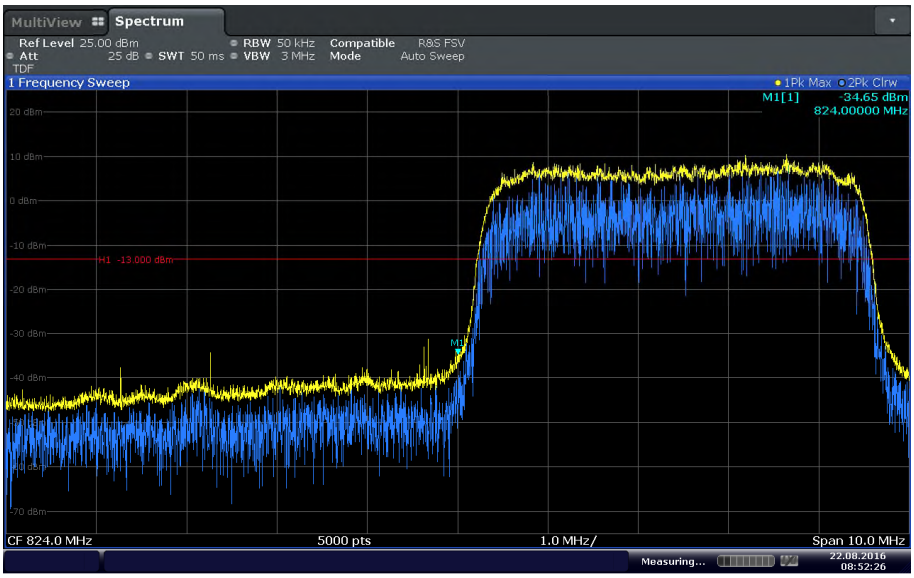
08:45:38 22.08.2016

LTE Band 4 Uplink Low Channel Band Edge



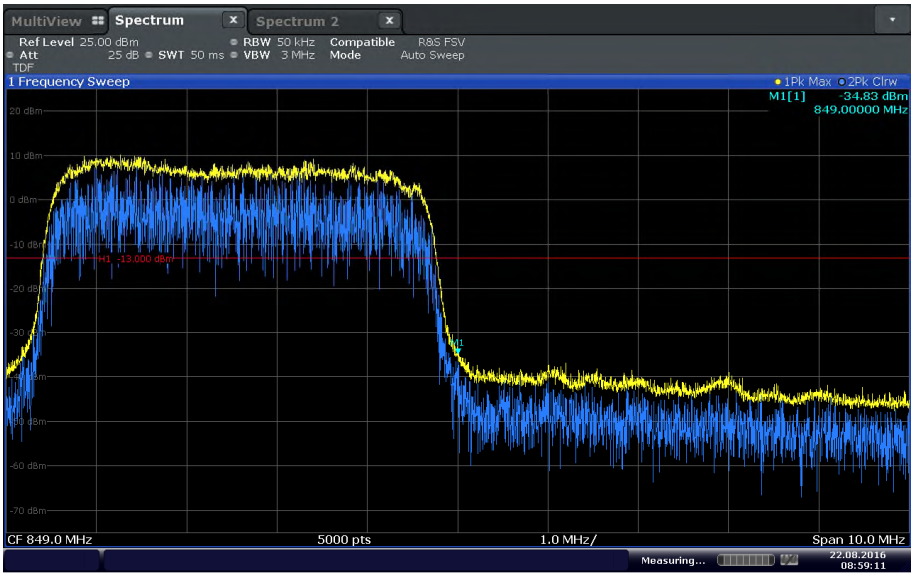
08:47:56 22.08.2016

WCDMA Band 5 Uplink Low Channel Band Edge



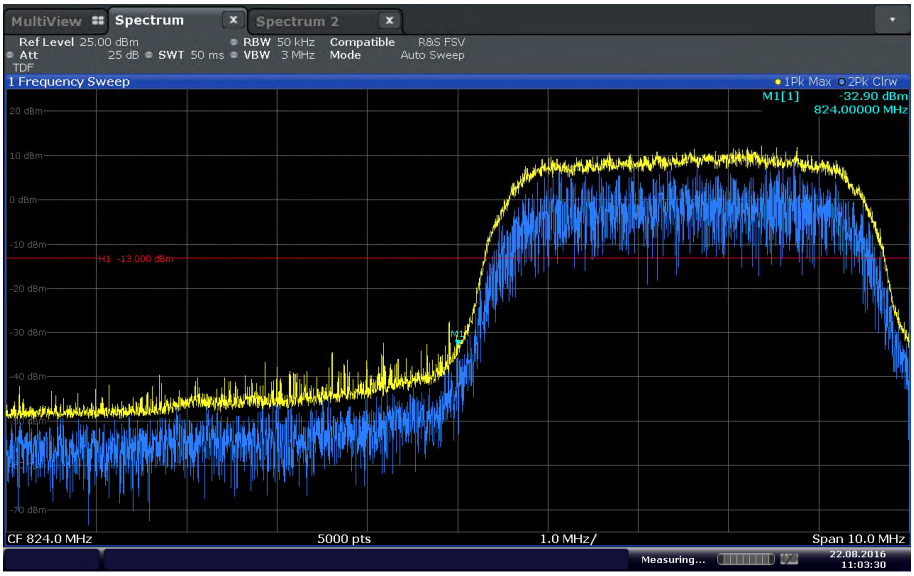
08:52:26 22.08.2016

WCDMA Band 5 Uplink High Channel Band Edge



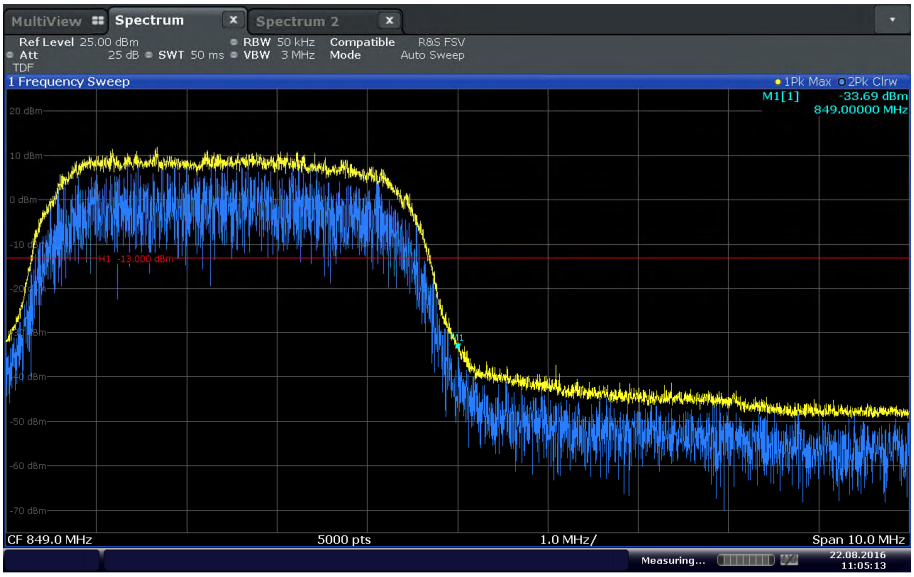
08:59:11 22.08.2016

LTE Band 5 Uplink Low Channel Band Edge



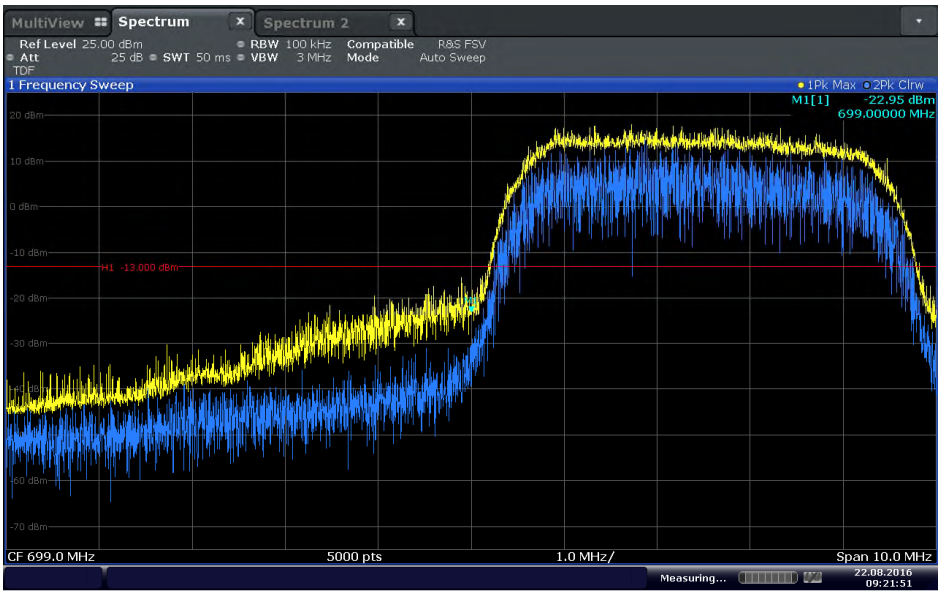
11:03:31 22.08.2016

LTE Band 5 Uplink High Channel Band Edge



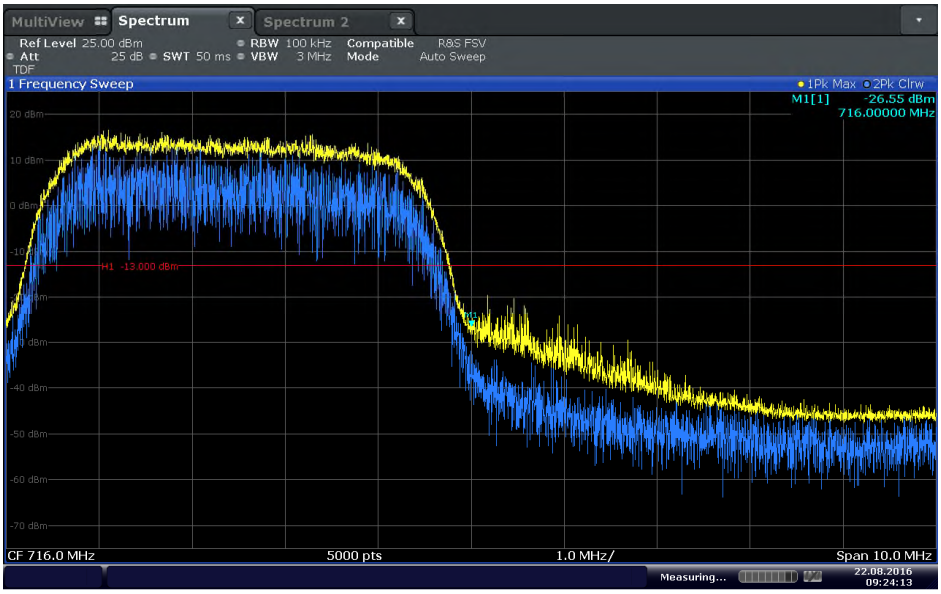
11:05:13 22.08.2016

LTE Band 12 Uplink Low Channel Band Edge



09:21:52 22.08.2016

LTE Band 12 Uplink High Channel Band Edge



09:24:14 22.08.2016

2.6 CONDUCTED SPURIOUS EMISSIONS

2.6.1 Specification Reference

FCC 47 CFR Part 2, Clause 2.1051, Part 22 Clause 22.917(a) and Part 24 Clause 24.238(a)

2.6.2 Standard Applicable

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

2.6.3 Equipment Under Test and Modification State

Serial No: 900610000028 / Test Configuration A

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

August 22, 2016/FSC

2.6.5 Test Equipment Used

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

2.6.6 Environmental Conditions

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

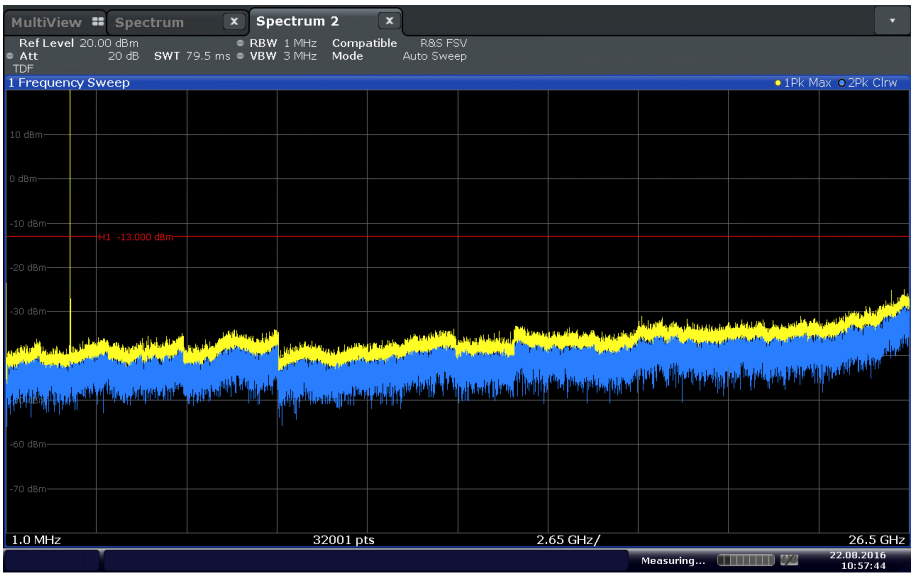
Ambient Temperature	26.4 °C
Relative Humidity	47.0 %
ATM Pressure	98.9 kPa

2.6.7 Additional Observations

- This is a conducted test.
- The transducer factor (TDF) used is from the external attenuators and cables used.
- Reference bandwidth used for measuring unwanted emission levels are based on the authorized frequency band/block. A resolution bandwidth of 100 kHz was used if the authorized frequency band/block is at or below 1 GHz and 1 MHz if the authorized frequency band/block is above 1 GHz.
- The limit is set to -13dBm.
- Only test plots for middle channel were presented as the representative configuration.

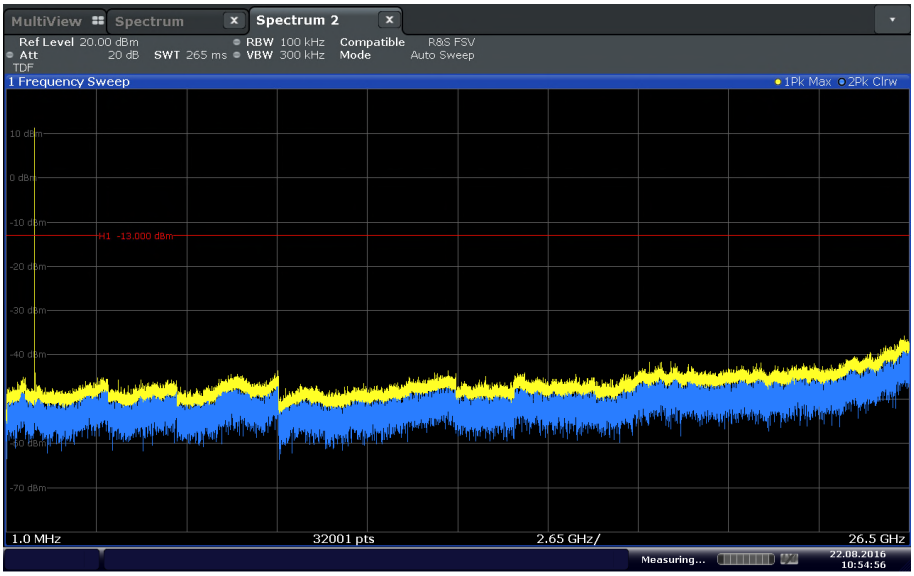
2.6.8 Test Results

WCDMA Band 2 Uplink



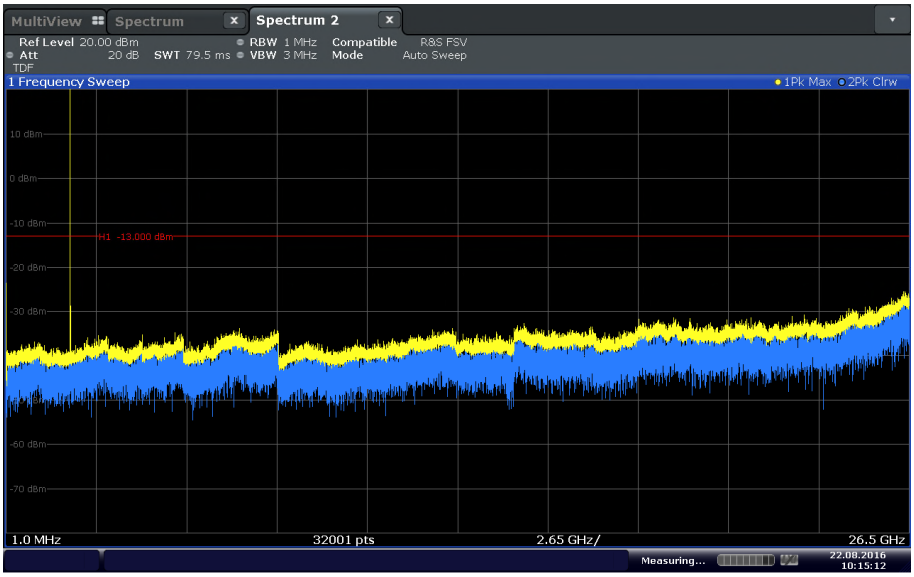
10:57:45 22.08.2016

WCDMA Band 5 Uplink



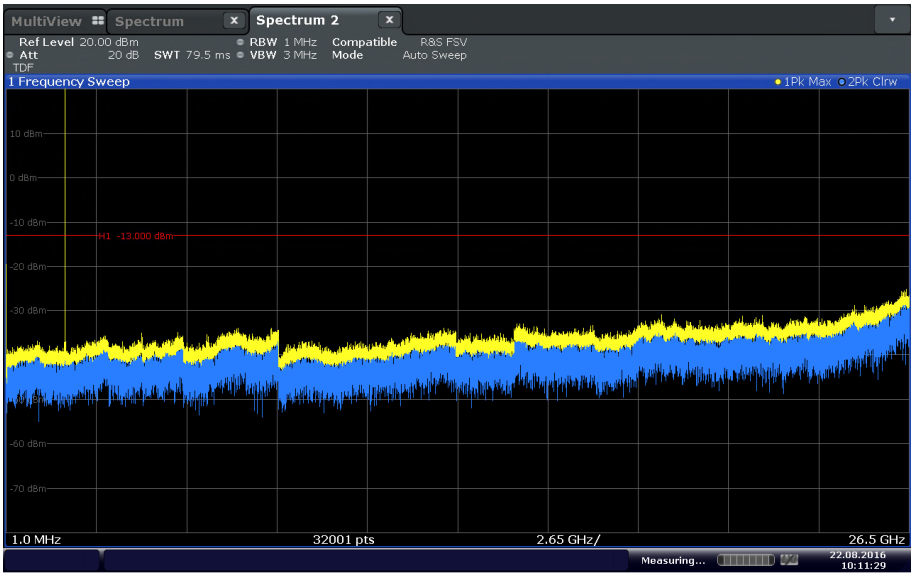
10:54:57 22.08.2016

LTE Band 2 Uplink



10:15:13 22.08.2016

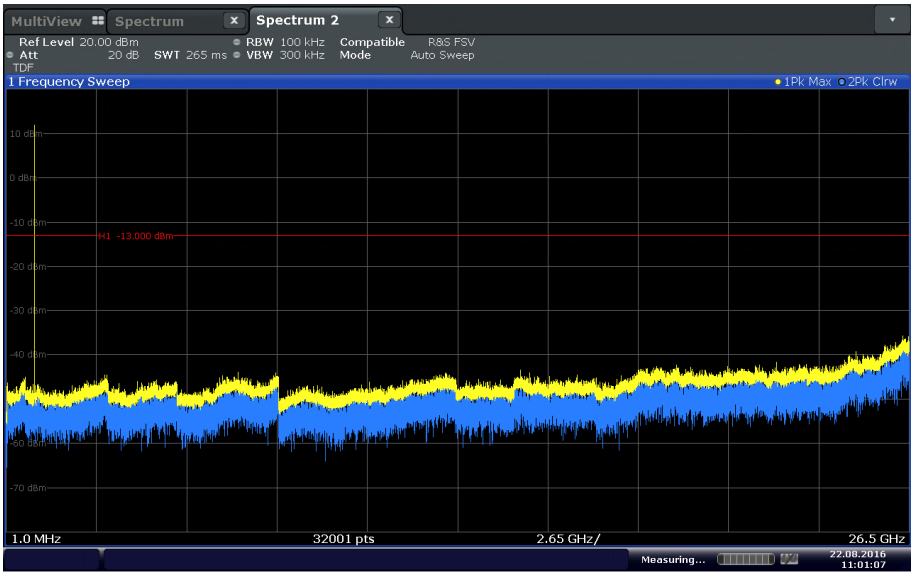
LTE Band 4 Uplink



10:11:29 22.08.2016

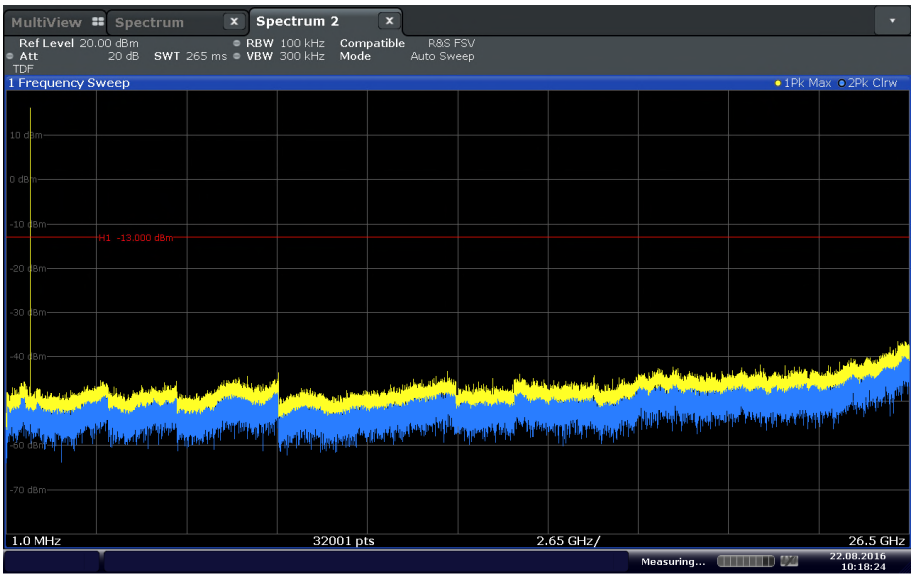
TÜV SÜD AMERICA INC 10040 Mesa Rim Road San Diego, CA 92121-2912 Phone: 858 678 1400 FAX: 858 546 0364

LTE Band 5 Uplink



11:01:08 22.08.2016

LTE Band 12 Uplink



10:18:24 22.08.2016

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2.7 FIELD STRENGTH OF SPURIOUS RADIATION

2.7.1 Specification Reference

FCC 47 CFR Part 2, Clause 2.1053, Part 22 Clause 22.917(a) and Part 24 Clause 24.238(a)

2.7.2 Standard Applicable

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

2.7.3 Equipment Under Test and Modification State

Serial No: 900610000028 / Test Configuration B

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

July 13, 2016 and August 01, 2016/FSC

2.7.5 Test Equipment Used

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

2.7.6 Environmental Conditions

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

Ambient Temperature	27.0-29.2 °C
Relative Humidity	45.4-49.5 %
ATM Pressure	99.0-99.1 kPa

2.7.7 Additional Observations

- Radiated measurement was performed to detect spurious emissions that may be radiated directly from the cabinet, control circuits, power leads, or intermediate circuit elements under normal conditions of installation and operation.
- The power limit was first converted to field strength limit using the formula:
  E (dBµV/m) = EIRP (dBm) – 20log(D) +104.8 where D is 3 meters
- This is a radiated test using substitution method as per Unwanted Emissions: Radiated Spurious method of measurement of ANSI/TIA/EIA-603-C 2004, August 17, 2004. Any emissions within 6dB of the limit will be proven by this method, however no such spurious emission observed.
- Only the worst case configuration presented in this test report.
- Measurement was done using EMC32 V8.53 automated software. Reported level is the actual level with all the correction factors factored in. Correction Factor column is for informational purposes only.

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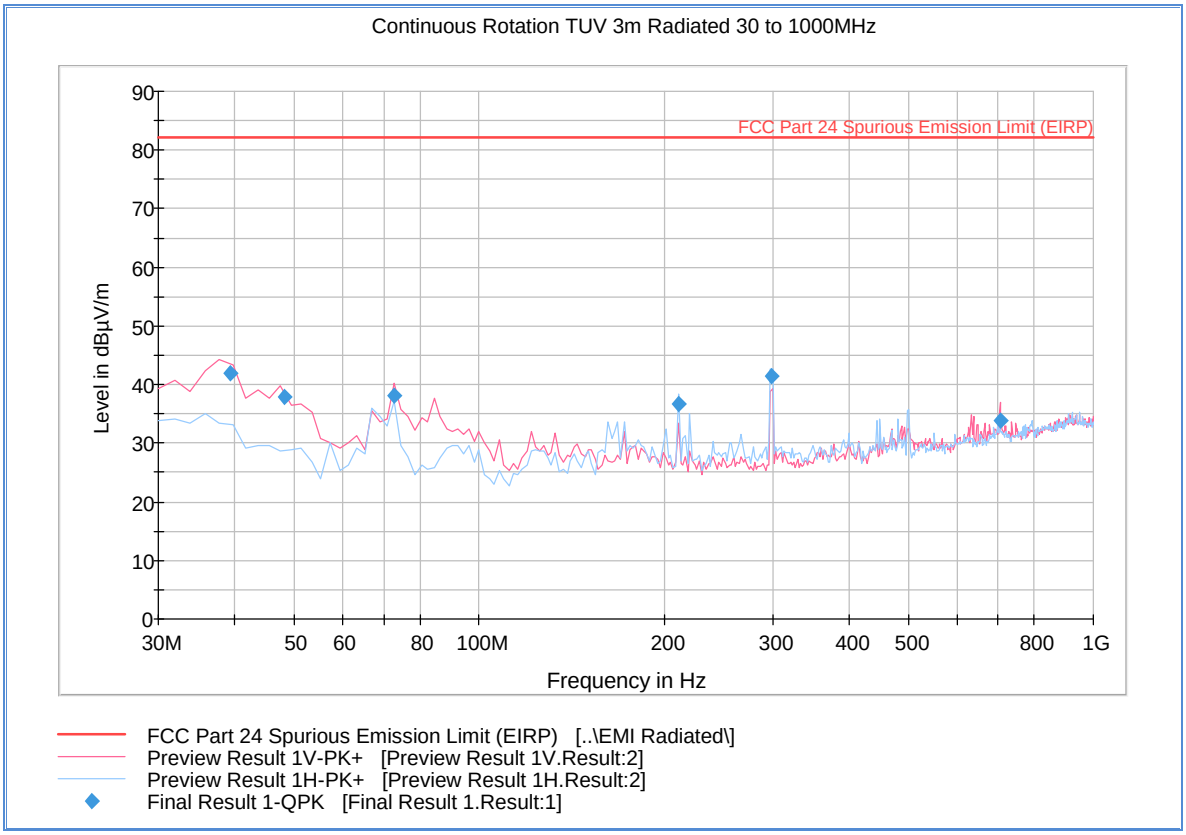
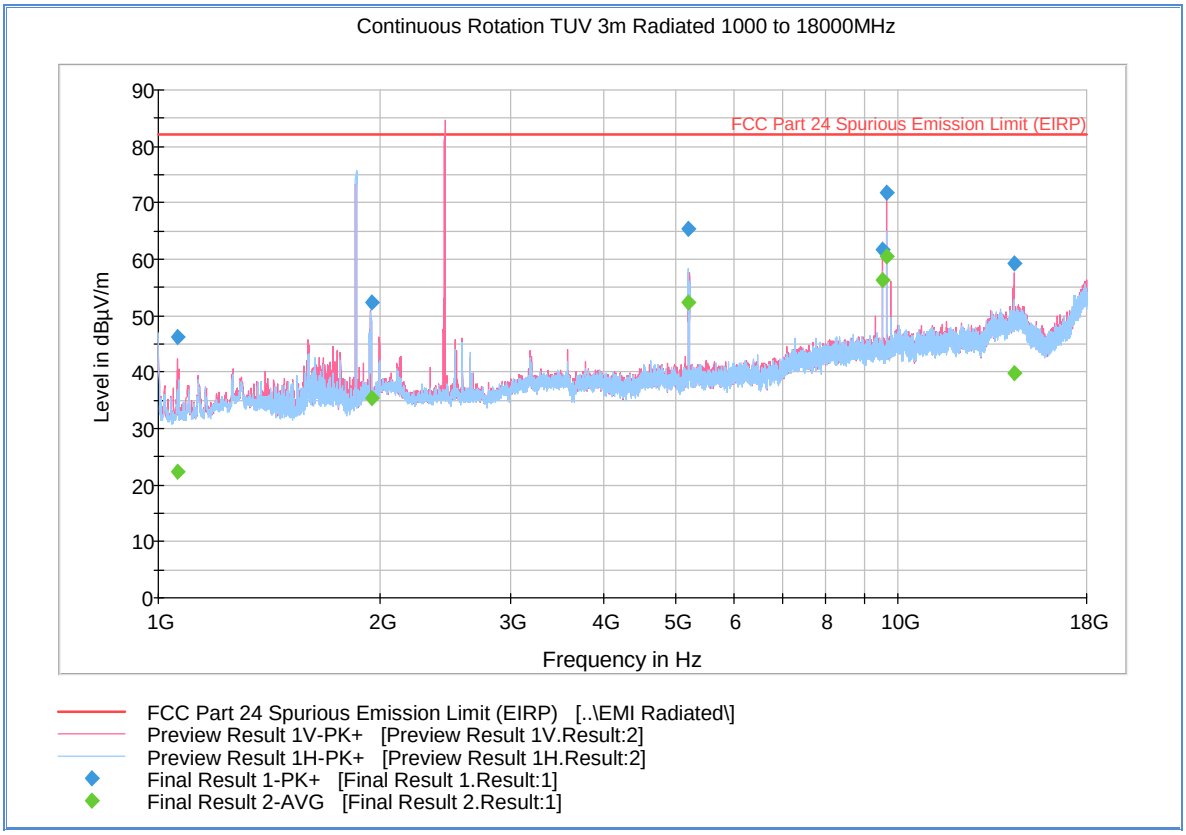
2.7.8 Test Results Below 1GHz (HSPA Band 2)



Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
39.335551	42.0	1000.0	120.000	100.0	V	183.0	-10.8	40.2	82.2
48.094990	37.8	1000.0	120.000	100.0	V	55.0	-13.8	44.4	82.2
72.605531	38.0	1000.0	120.000	114.0	V	217.0	-16.8	44.2	82.2
211.141563	36.6	1000.0	120.000	133.0	H	266.0	-10.9	45.6	82.2
298.560401	41.5	1000.0	120.000	105.0	H	44.0	-7.2	40.7	82.2
704.769058	33.8	1000.0	120.000	160.0	V	76.0	3.0	48.4	82.2

2.7.9 Test Results Above 1GHz (HSPA Band 2)



Peak Data

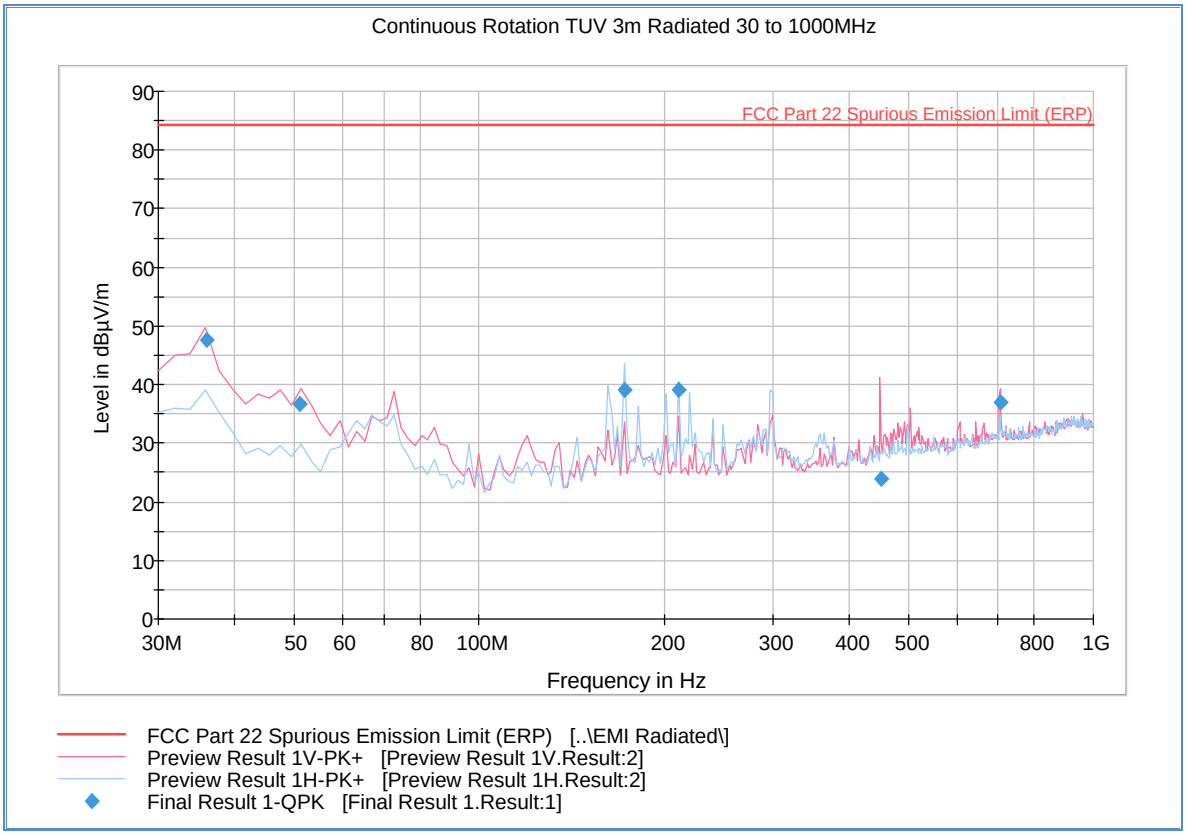
Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1061.233333	46.2	1000.0	1000.000	175.6	V	136.0	-10.5	36.0	82.2
1941.066667	52.4	1000.0	1000.000	370.1	H	288.0	-4.6	29.8	82.2
5219.200000	65.5	1000.0	1000.000	143.7	H	304.0	2.9	16.7	82.2
9554.533333	61.6	1000.0	1000.000	402.7	V	159.0	11.1	20.6	82.2
9665.033333	71.8	1000.0	1000.000	119.7	V	168.0	10.9	10.4	82.2
14357.266667	59.4	1000.0	1000.000	265.3	V	183.0	18.4	22.8	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1061.233333	22.4	1000.0	1000.000	175.6	V	136.0	-10.5	59.8	82.2
1941.066667	35.5	1000.0	1000.000	370.1	H	288.0	-4.6	46.8	82.2
5219.200000	52.5	1000.0	1000.000	143.7	H	304.0	2.9	29.7	82.2
9554.533333	56.3	1000.0	1000.000	402.7	V	159.0	11.1	25.9	82.2
9665.033333	60.4	1000.0	1000.000	119.7	V	168.0	10.9	21.8	82.2
14357.266667	39.8	1000.0	1000.000	265.3	V	183.0	18.4	42.4	82.2

Test Notes: Uplink and Downlink frequencies were ignored for this test.

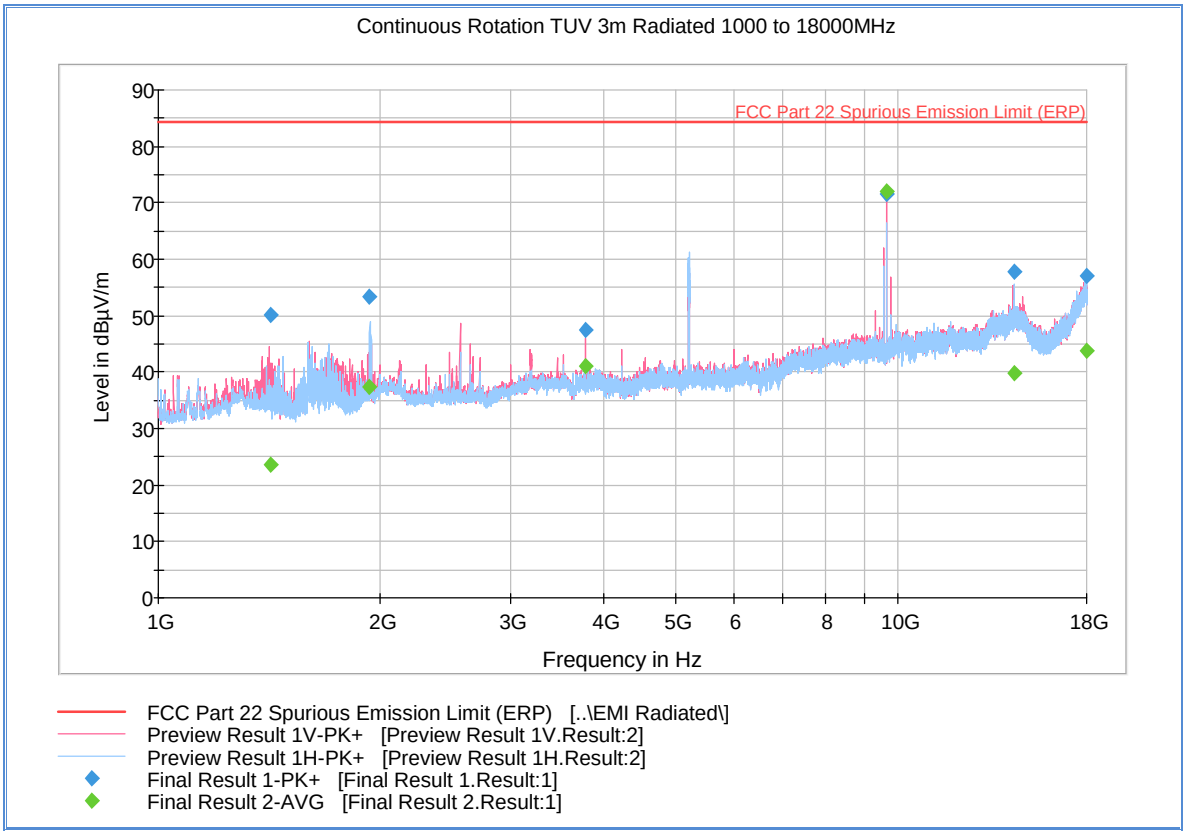
2.7.10 Test Results Below 1GHz (HSPA Band 5)



Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
36.071663	47.7	1000.0	120.000	100.0	V	141.0	-9.1	34.6	82.2
51.062766	36.8	1000.0	120.000	100.0	V	261.0	-14.6	45.5	82.2
172.743808	39.2	1000.0	120.000	183.0	H	253.0	-12.8	43.1	82.2
211.341563	39.0	1000.0	120.000	150.0	H	76.0	-10.9	43.2	82.2
450.119760	24.0	1000.0	120.000	150.0	V	282.0	-2.9	58.3	82.2
704.729058	37.0	1000.0	120.000	159.0	V	160.0	3.0	45.2	82.2

2.7.11 Test Results Above 1GHz (HSPA Band 5)



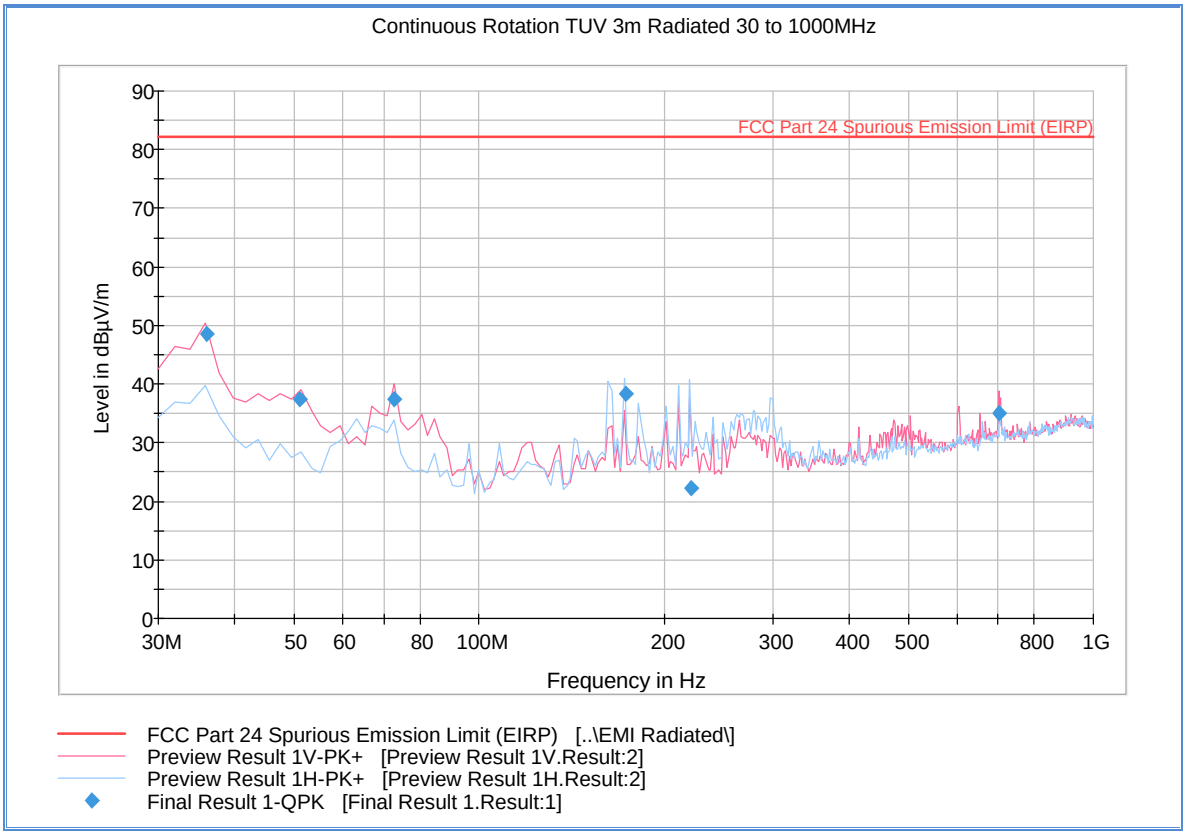
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1416.366667	50.3	1000.0	1000.000	297.3	V	220.0	-8.8	32.0	82.2
1932.533333	53.5	1000.0	1000.000	299.3	H	203.0	-4.6	28.8	82.2
3789.533333	47.4	1000.0	1000.000	102.8	V	202.0	0.8	34.8	82.2
9671.566667	71.6	1000.0	1000.000	207.5	V	172.0	10.9	10.6	82.2
14393.566667	57.8	1000.0	1000.000	305.2	V	326.0	18.5	24.5	82.2
17964.700000	57.1	1000.0	1000.000	403.9	H	316.0	24.2	25.1	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1416.366667	23.6	1000.0	1000.000	297.3	V	220.0	-8.8	58.6	82.2
1932.533333	37.3	1000.0	1000.000	299.3	H	203.0	-4.6	44.9	82.2
3789.533333	41.1	1000.0	1000.000	102.8	V	202.0	0.8	41.2	82.2
9671.566667	71.9	1000.0	1000.000	207.5	V	172.0	10.9	10.3	82.2
14393.566667	39.8	1000.0	1000.000	305.2	V	326.0	18.5	42.4	82.2
17964.700000	43.8	1000.0	1000.000	403.9	H	316.0	24.2	38.4	82.2

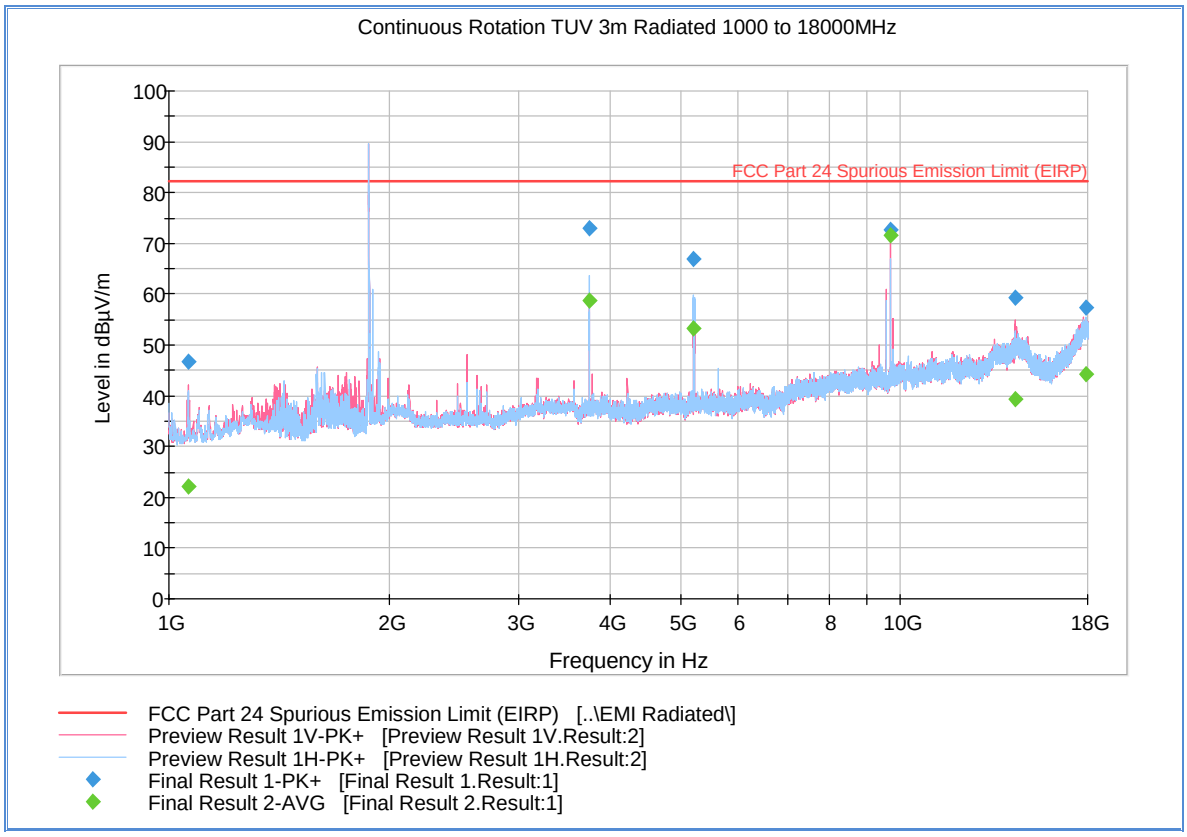
2.7.12 Test Results Below 1GHz (LTE Band 2)



Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
36.071663	48.6	1000.0	120.000	100.0	V	192.0	-9.1	33.6	82.2
51.022766	37.5	1000.0	120.000	100.0	V	233.0	-14.6	44.7	82.2
72.605531	37.4	1000.0	120.000	121.0	V	184.0	-16.8	44.9	82.2
172.903808	38.4	1000.0	120.000	150.0	H	236.0	-12.8	43.8	82.2
220.981002	22.3	1000.0	120.000	100.0	H	262.0	-10.2	59.9	82.2
702.001283	35.0	1000.0	120.000	134.0	V	194.0	2.9	47.2	82.2

2.7.13 Test Results Above 1GHz (LTE Band 2)



Peak Data

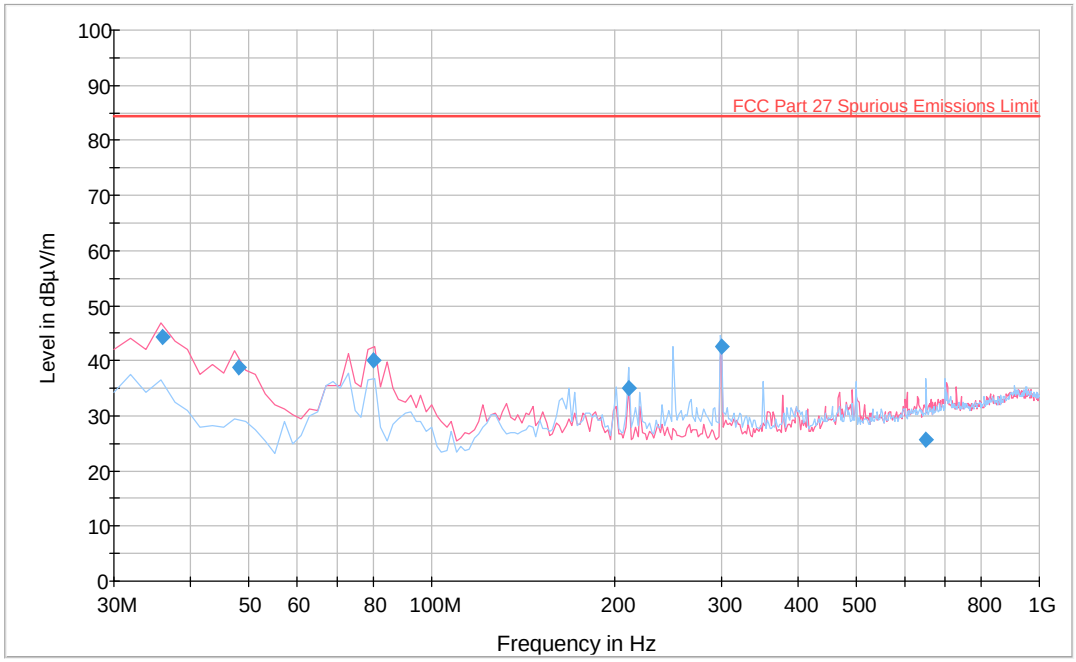
Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1062.700000	46.6	1000.0	1000.000	103.7	V	263.0	-10.5	35.6	82.2
3753.233333	73.1	1000.0	1000.000	200.5	H	78.0	0.5	9.1	82.2
5212.433333	66.9	1000.0	1000.000	149.6	H	321.0	2.8	15.3	82.2
9672.133333	72.6	1000.0	1000.000	182.6	V	179.0	10.9	9.6	82.2
14327.800000	59.3	1000.0	1000.000	139.7	V	190.0	18.3	22.9	82.2
17884.766667	57.4	1000.0	1000.000	371.1	H	213.0	24.0	24.8	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1062.700000	22.2	1000.0	1000.000	103.7	V	263.0	-10.5	60.0	82.2
3753.233333	58.8	1000.0	1000.000	200.5	H	78.0	0.5	23.4	82.2
5212.433333	53.2	1000.0	1000.000	149.6	H	321.0	2.8	29.0	82.2
9672.133333	71.5	1000.0	1000.000	182.6	V	179.0	10.9	10.8	82.2
14327.800000	39.5	1000.0	1000.000	139.7	V	190.0	18.3	42.8	82.2
17884.766667	44.2	1000.0	1000.000	371.1	H	213.0	24.0	38.1	82.2

Test Notes: Uplink and Downlink frequencies were ignored for this test.

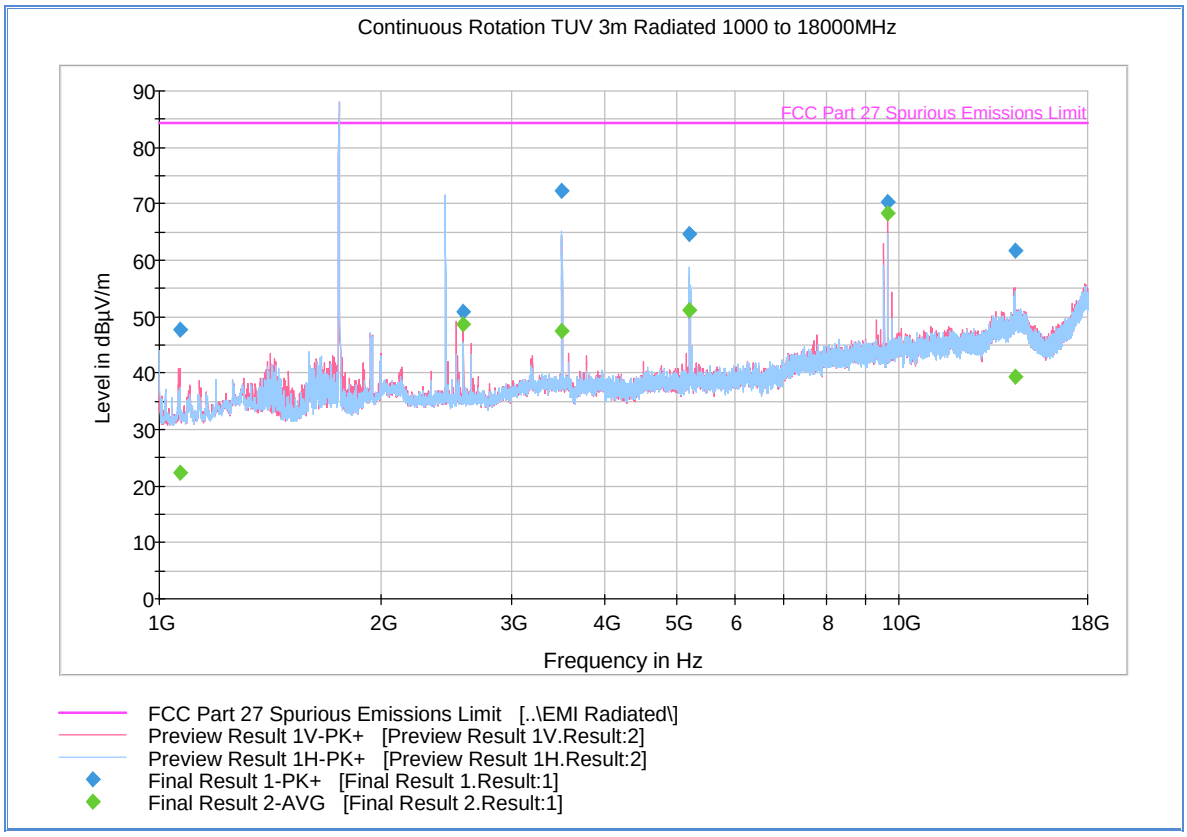
2.7.14 Test Results Below 1GHz (LTE Band 4)



Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
36.071663	44.4	1000.0	120.000	100.0	V	175.0	-9.1	40.0	84.4
48.134990	38.7	1000.0	120.000	109.0	V	338.0	-13.9	45.7	84.4
80.021082	39.9	1000.0	120.000	100.0	V	149.0	-16.6	44.5	84.4
211.461563	35.1	1000.0	120.000	121.0	H	243.0	-10.9	49.3	84.4
299.936513	42.5	1000.0	120.000	105.0	H	42.0	-7.1	41.9	84.4
651.220200	25.6	1000.0	120.000	350.0	H	237.0	1.1	58.8	84.4

2.7.15 Test Results Above 1GHz (LTE Band 4)



Peak Data

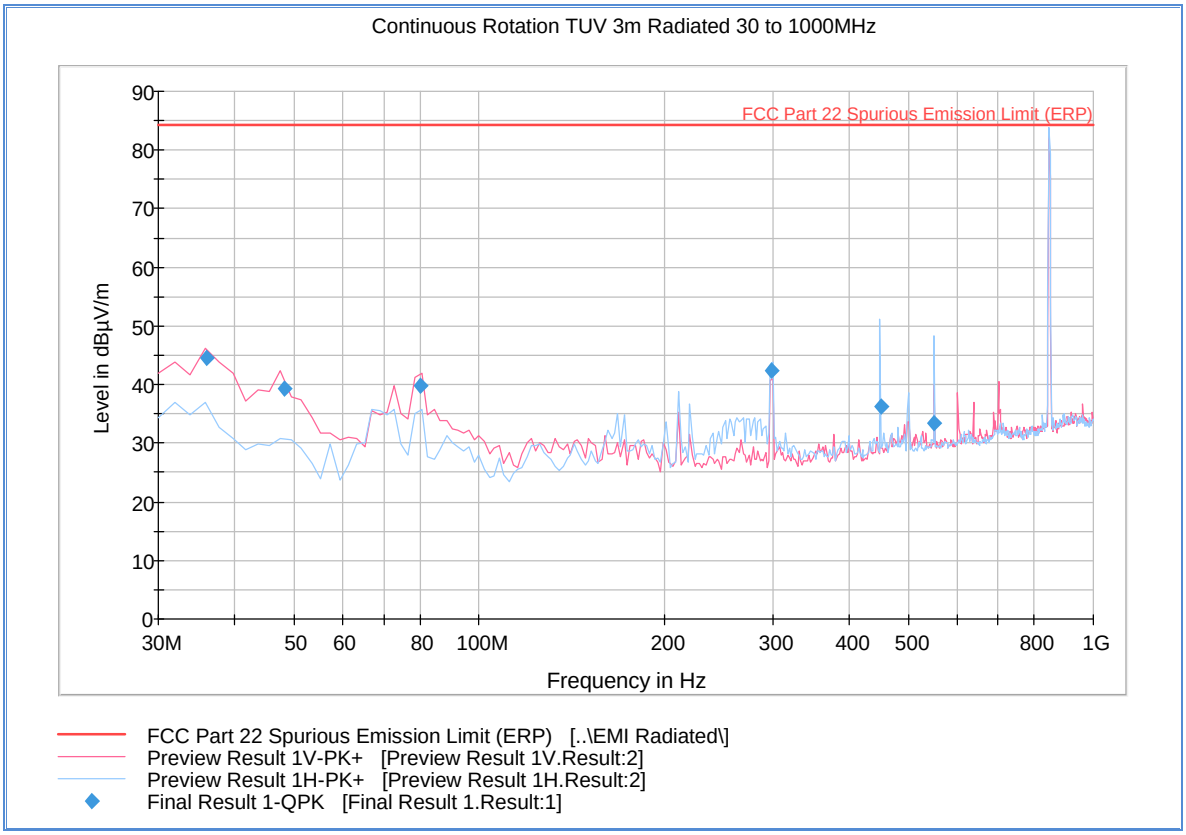
Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1065.966667	47.8	1000.0	1000.000	173.6	V	141.0	-10.4	36.6	84.4
2580.266667	50.9	1000.0	1000.000	103.7	V	177.0	-4.7	33.5	84.4
3505.466667	72.4	1000.0	1000.000	197.5	H	333.0	-1.0	12.0	84.4
5212.166667	64.6	1000.0	1000.000	173.6	H	303.0	2.8	19.8	84.4
9668.266667	70.2	1000.0	1000.000	186.5	V	178.0	10.9	14.2	84.4
14393.866667	61.7	1000.0	1000.000	190.5	V	4.0	18.5	22.7	84.4

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1065.966667	22.3	1000.0	1000.000	173.6	V	141.0	-10.4	62.1	84.4
2580.266667	48.6	1000.0	1000.000	103.7	V	177.0	-4.7	35.8	84.4
3505.466667	47.4	1000.0	1000.000	197.5	H	333.0	-1.0	37.0	84.4
5212.166667	51.2	1000.0	1000.000	173.6	H	303.0	2.8	33.2	84.4
9668.266667	68.4	1000.0	1000.000	186.5	V	178.0	10.9	16.0	84.4
14393.866667	39.4	1000.0	1000.000	190.5	V	4.0	18.5	45.0	84.4

Test Notes: Uplink and Downlink frequencies were ignored for this test.

2.7.16 Test Results Below 1GHz (LTE Band 5)



Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
36.071663	44.4	1000.0	120.000	100.0	V	182.0	-9.1	40.0	84.4
48.094990	39.2	1000.0	120.000	100.0	V	-7.0	-13.8	45.1	84.4
80.021082	39.7	1000.0	120.000	105.0	V	151.0	-16.6	44.7	84.4
298.560401	42.4	1000.0	120.000	100.0	H	45.0	-7.2	42.0	84.4
449.999760	36.3	1000.0	120.000	100.0	H	351.0	-2.9	48.1	84.4
550.041924	33.4	1000.0	120.000	100.0	H	1.0	-0.4	51.0	84.4

Test Notes: Uplink and Downlink frequencies were ignored for this test.

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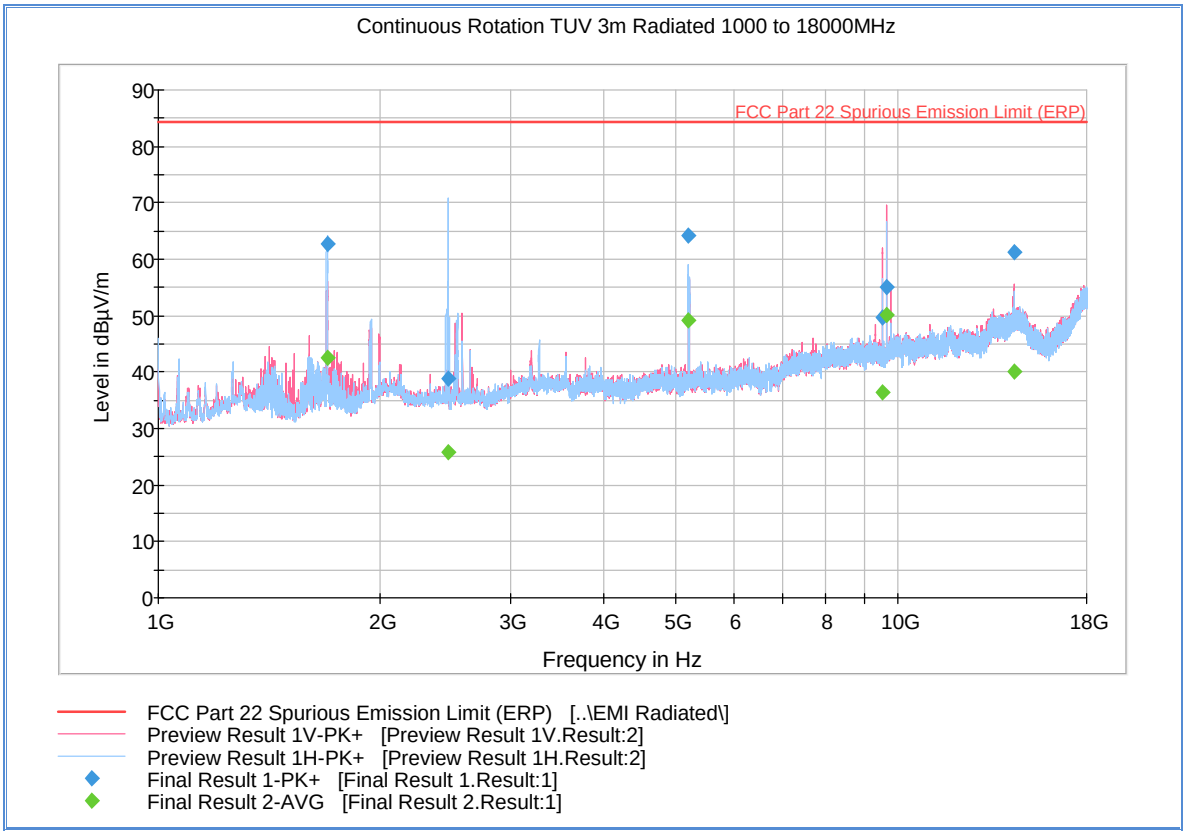
2.7.17 Test Results Above 1GHz (LTE Band 5)



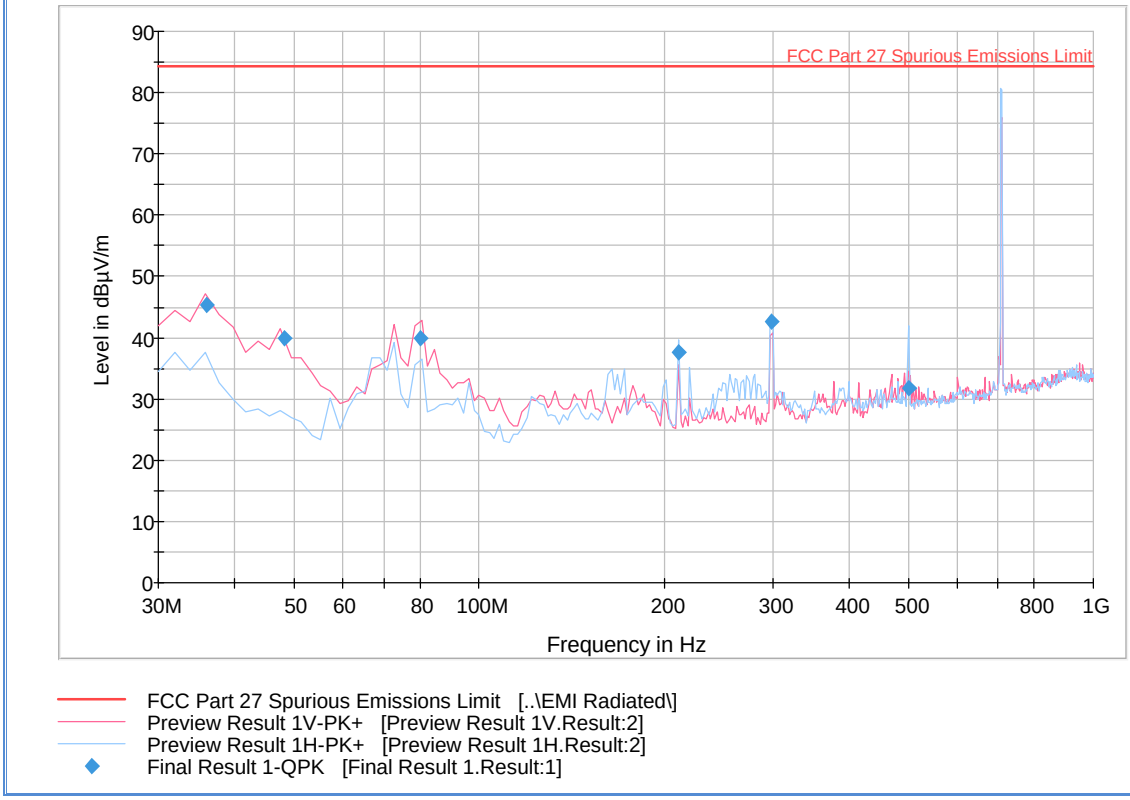
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1693.233333	62.7	1000.0	1000.000	178.6	H	160.0	-7.4	21.7	84.4
2466.200000	38.9	1000.0	1000.000	134.7	H	-10.0	-5.1	45.5	84.4
5213.366667	64.2	1000.0	1000.000	177.6	H	349.0	2.8	20.1	84.4
9553.500000	49.6	1000.0	1000.000	292.2	V	182.0	11.1	34.8	84.4
9664.766667	55.0	1000.0	1000.000	393.0	V	159.0	10.9	29.4	84.4
14401.633333	61.3	1000.0	1000.000	243.4	V	186.0	18.5	23.1	84.4

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1693.233333	42.5	1000.0	1000.000	178.6	H	160.0	-7.4	41.9	84.4
2466.200000	25.7	1000.0	1000.000	134.7	H	-10.0	-5.1	58.6	84.4
5213.366667	49.3	1000.0	1000.000	177.6	H	349.0	2.8	35.1	84.4
9553.500000	36.3	1000.0	1000.000	292.2	V	182.0	11.1	48.1	84.4
9664.766667	50.1	1000.0	1000.000	393.0	V	159.0	10.9	34.2	84.4
14401.633333	40.0	1000.0	1000.000	243.4	V	186.0	18.5	44.4	84.4

2.7.18 Test Results Below 1GHz (LTE Band 12)

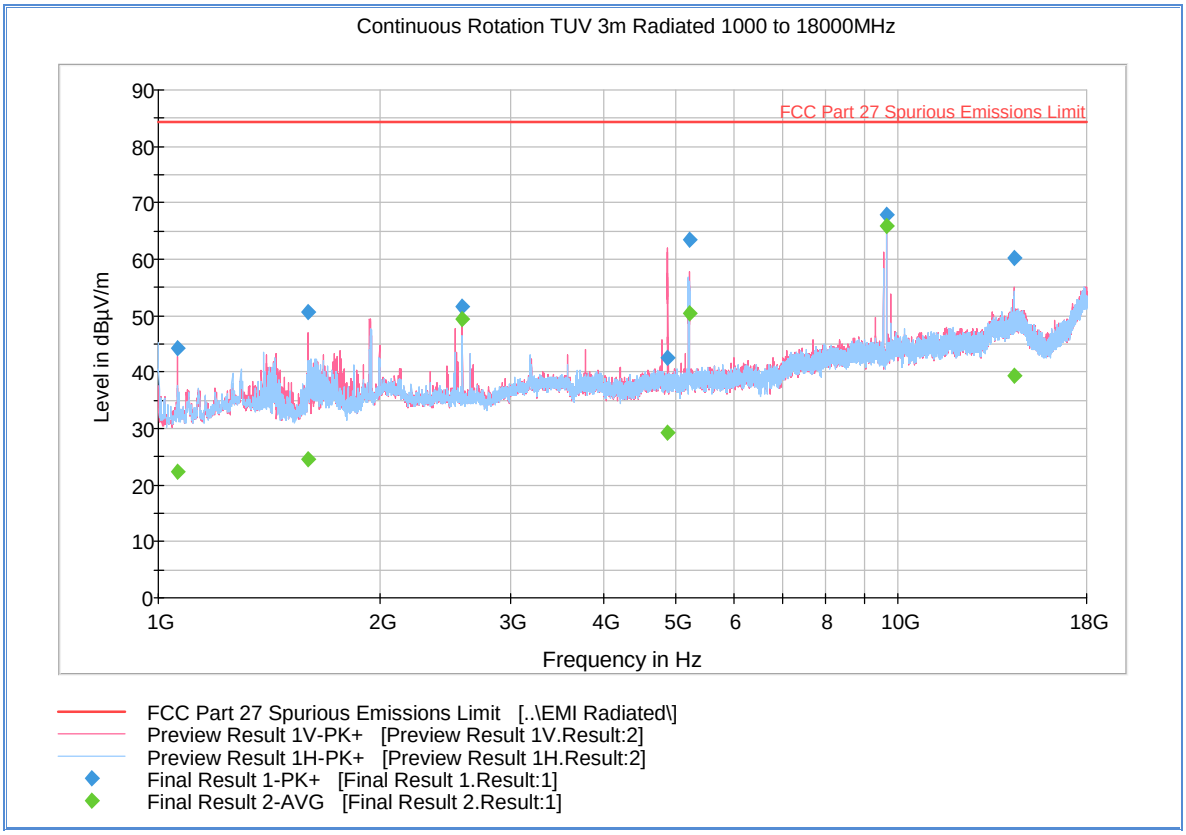


Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
36.071663	45.4	1000.0	120.000	100.0	V	175.0	-9.1	39.0	84.4
48.094990	39.8	1000.0	120.000	100.0	V	222.0	-13.8	44.6	84.4
80.021082	39.9	1000.0	120.000	105.0	V	166.0	-16.6	44.5	84.4
211.221563	37.7	1000.0	120.000	109.0	H	254.0	-10.9	46.7	84.4
298.560401	42.7	1000.0	120.000	100.0	H	33.0	-7.2	41.7	84.4
500.060842	31.7	1000.0	120.000	110.0	H	49.0	-1.8	52.7	84.4

Test Notes: Uplink and Downlink frequencies were ignored for this test.

2.7.19 Test Results Above 1GHz (LTE Band 12)



Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1061.800000	44.3	1000.0	1000.000	148.7	V	106.0	-10.5	40.1	84.4
1593.100000	50.7	1000.0	1000.000	272.3	V	117.0	-8.5	33.8	84.4
2580.633333	51.6	1000.0	1000.000	111.7	V	1.0	-4.7	32.8	84.4
4885.433333	42.5	1000.0	1000.000	313.2	V	130.0	2.3	41.9	84.4
5222.033333	63.5	1000.0	1000.000	204.5	V	183.0	2.9	20.9	84.4
9670.566667	67.9	1000.0	1000.000	202.5	V	138.0	10.9	16.5	84.4

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1061.800000	22.3	1000.0	1000.000	148.7	V	106.0	-10.5	62.1	84.4
1593.100000	24.6	1000.0	1000.000	272.3	V	117.0	-8.5	59.8	84.4
2580.633333	49.4	1000.0	1000.000	111.7	V	1.0	-4.7	35	84.4
4885.433333	29.2	1000.0	1000.000	313.2	V	130.0	2.3	55.2	84.4
5222.033333	50.3	1000.0	1000.000	204.5	V	183.0	2.9	34.1	84.4
9670.566667	66.0	1000.0	1000.000	202.5	V	138.0	10.9	18.4	84.4

SECTION 3

TEST EQUIPMENT USED

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3.1 TEST EQUIPMENT USED

List of absolute measuring and other principal items of test equipment.

ID Number (SDGE/SDRB)	Test Equipment	Type	Serial Number	Manufacturer	Cal Date	Cal Due Date
Antenna Conducted Port Setup						
7624	USB Wideband Power Sensor	55340	9543	Boonton	02/12/16	02/12/18
7562	Wideband Radio Communication Tester	CMW 500	1201.0002k50 /103829	Rhode & Schwarz	10/09/13	10/09/15
7582	Signal/Spectrum Analyzer	FSW26	101614	Rhode & Schwarz	10/05/15	10/05/16
7608	Vector Signal Generator	SMBV100A	259021	Rhode & Schwarz	07/29/15	07/29/16
7610	DFS Radar Simulator and Analyzer	Aeroflex 3005	30050A/09L	Aeroflex international LTD. UK	06/30/16	06/30/17
7606	USB RF Power Sensor	RadiPower RPR3006W	14I00048SNO 048	DARE!! Instruments	09/24/15	09/24/16
Radiated Emissions						
1002	Bilog Antenna	3142C	00058717	ETS-Lindgren	11/06/15	11/06/17
1051	Double-ridged waveguide horn antenna	3115	9408-4329	EMCO	03/21/16	03/21/17
8628	Pre-amplifier	QLJ 01182835-JO	8986002	QuinStar Technologies Inc.	03/20/16	03/20/17
1040	EMI Test Receiver	ESIB40	100292	Rhode & Schwarz	09/29/15	09/29/16
1049	EMI Test Receiver	ESU	100133	Rhode & Schwarz	03/11/16	03/11/17
1003	Signal Generator	SMR-40	1104.0002.40	Rhode & Schwarz	05/16/16	05/16/17
1016	Pre-amplifier	PAM-0202	187	PAM	12/15/15	12/15/16
1153	High-frequency cable	SucoFlex 100 SX	N/A	Suhner	Verified by 7582 and 7608	
1054	Horn antenna (18-40 GHz)	3116	9407-2233	EMCO	12/22/2015	12/22/2017
8543	High-frequency cable	Micropore 19057793	N/A	United Microwave Products	09/03/15	09/03/16
-	Pre-amplifier (18-40 GHz)	SLKKa-30-6	15G27	Spacek Labs	Verified by 1049 and 1003	
Miscellaneous						
6792	Multimeter	3478A	2911A70964	Hewlett Packard	08/14/15	08/14/16
7560	Barometer/Temperature /Humidity Transmitter	iBTHX-W	1240476	Omega	10/19/15	10/19/16
	Test Software	EMC32	V8.53	Rhode & Schwarz	N/A	

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3.2 MEASUREMENT UNCERTAINTY

For a 95% confidence level, the measurement uncertainties for defined systems are:

3.2.1 Radiated Measurements (Below 1GHz)

	Contribution	Probability Distribution Type	Probability Distribution x_i	Standard Uncertainty $u(x_i)$	$[u(x_i)]^2$
1	Receiver/Spectrum Analyzer	Rectangular	0.45	0.26	0.07
2	Cables	Rectangular	0.50	0.29	0.08
3	Preamp	Rectangular	0.50	0.29	0.08
4	Antenna	Rectangular	0.75	0.43	0.19
5	Site	Rectangular	2.70	1.56	2.43
6	EUT Setup	Rectangular	1.00	0.58	0.33
				Combined Uncertainty (u_c):	1.78
				Coverage Factor (k):	2
				Expanded Uncertainty:	3.57

3.2.2 Radiated Emission Measurements (Above 1GHz)

	Contribution	Probability Distribution Type	Probability Distribution x_i	Standard Uncertainty $u(x_i)$	$[u(x_i)]^2$
1	Receiver/Spectrum Analyzer	Rectangular	0.57	0.33	0.11
2	Cables	Rectangular	0.70	0.40	0.16
3	Preamp	Rectangular	0.50	0.29	0.08
4	Antenna	Rectangular	0.37	0.21	0.05
5	Site	Rectangular	2.70	1.56	2.43
6	EUT Setup	Rectangular	1.00	0.58	0.33
				Combined Uncertainty (u_c):	1.78
				Coverage Factor (k):	2
				Expanded Uncertainty:	3.56

3.2.3 Conducted Antenna Port Measurement

	Contribution	Probability Distribution Type	Probability Distribution x_i	Standard Uncertainty $u(x_i)$	$[u(x_i)]^2$
1	Receiver/Spectrum Analyzer	Rectangular	0.57	0.33	0.11
2	Cables	Rectangular	0.50	0.29	0.08
3	EUT Setup	Rectangular	1.00	0.58	0.33
				Combined Uncertainty (u_c):	0.72
				Coverage Factor (k):	2
				Expanded Uncertainty:	1.45

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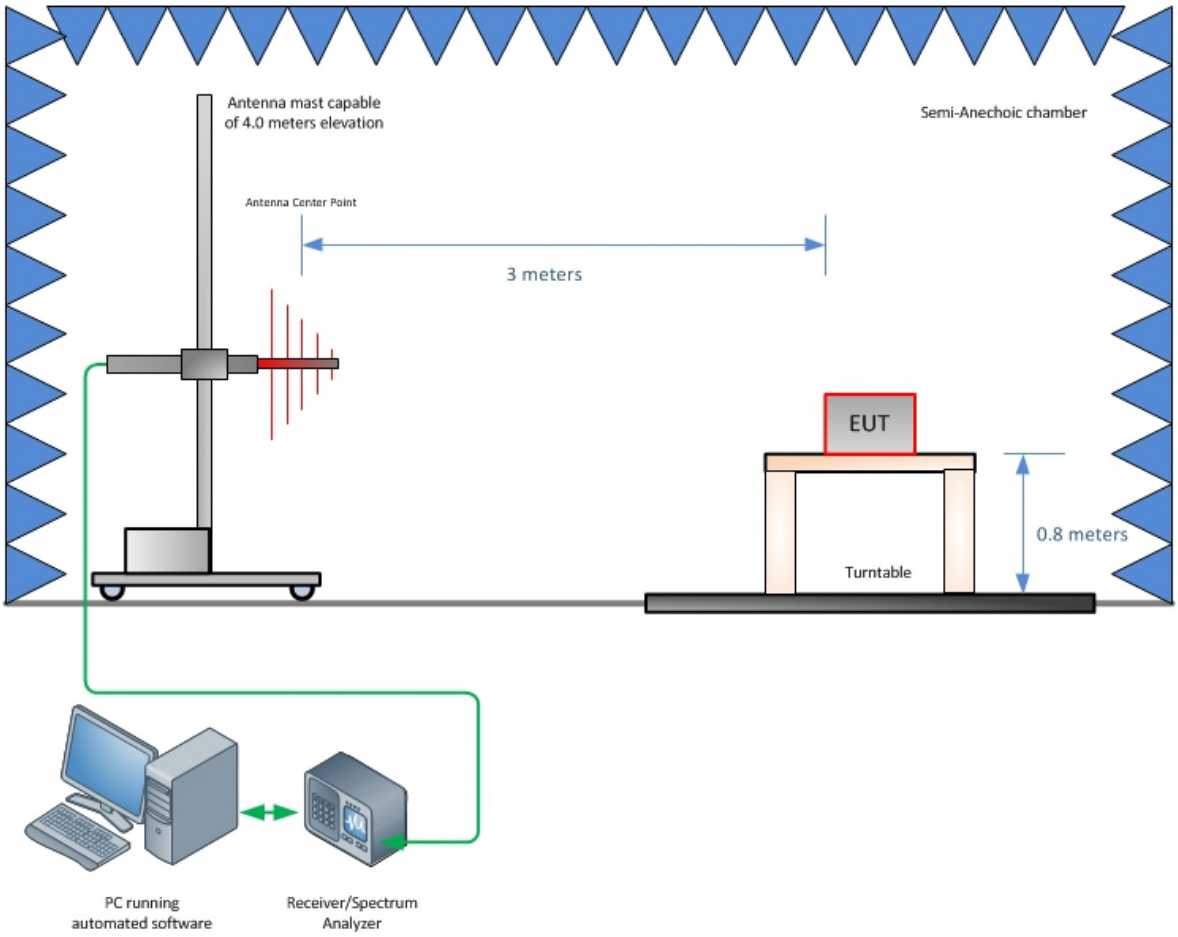
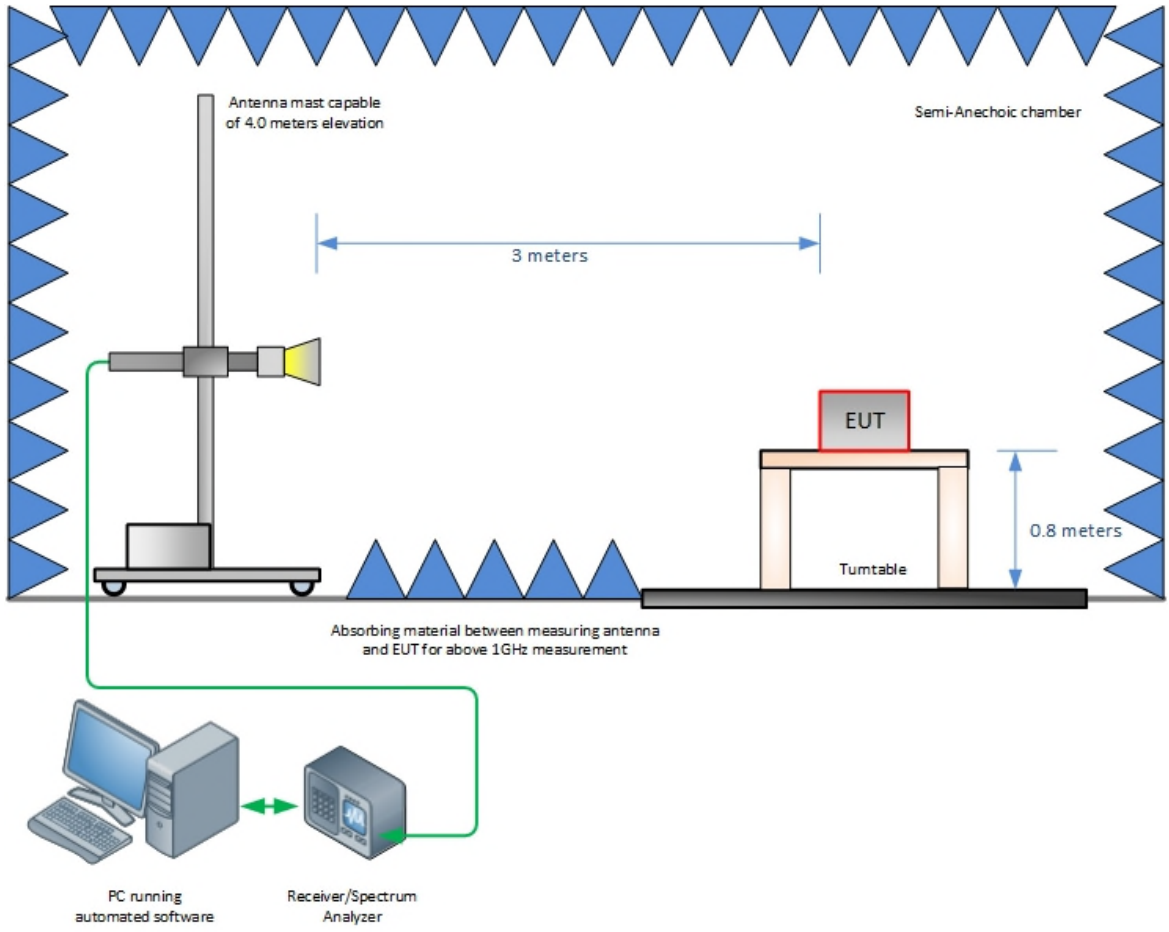
SECTION 4

DIAGRAM OF TEST SETUP

4.1 TEST SETUP DIAGRAM



Radiated Emission Test Setup (Below 1GHz)



Radiated Emission Test Setup (Above 1GHz)

SECTION 5

ACCREDITATION, DISCLAIMERS AND COPYRIGHT

5.1 ACCREDITATION, DISCLAIMERS AND COPYRIGHT

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