Cellphone-Mate, Inc.

REVISED TEST REPORT TO 102129-30

AC/DC Adapter
Model: GME36A-150240FDS
Dual Enclosure Booster
Models: Fusion4Home RT, Flare RT, Panel RT and RT Main Unit

Tested to The Following Standard:

FCC Part 20.21 / 22H / 24E / 27

Report No.: 102129-30A

Date of issue: June 7, 2021

Test Certificate # 803.01

This test report bears the accreditation symbol indicating that the testing performed herein meets the test and reporting requirements of ISO/IEC 17025 under the applicable scope of testing for CKC Laboratories, Inc.

We strive to create long-term, trust based relationships by providing sound, adaptive, customer first testing services. We embrace each of our customers' unique EMC challenges, not as an interruption to set processes, but rather as the reason we are in business.

TABLE OF CONTENTS

ADMINISTRATIVE INFORMATION

Test Report Information

REPORT PREPARED FOR:

Cellphone-Mate, Inc.
48346 Milmont Drive
Fremont, CA 94538

Representative: Dennis Findley
Customer Reference Number: CKC05172019

REPORT PREPARED BY:

Terri Rayle
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

Project Number: 102129

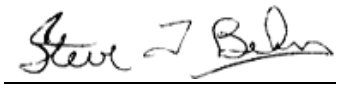
DATE OF EQUIPMENT RECEIPT: May 22, 2019
DATE(S) OF TESTING: May 22, 2019, June 14-18, 2019, November 27, 2019 and May 24, 2021

Revision History

Original: Testing of the AC/DC Adapter, Model: GME36A-150240FDS, Dual Enclosure Booster, Models: Fusion4Home RT, Flare RT, Panel RT and RT Main Unit to FCC Part 20.21 / 22H / 24E / 27.
Revision A: Revised Section 7.14.1 and 7.14.2 notes under the Verification of Self-Monitoring and Summary of Results tables for Configuration 1, 2, and 3. Added data and summary tables to verify worst case for section 7.2 and 7.3. Added section 7.2-7.3 new setup photo to Exhibit A.

Report Authorization

The test data contained in this report documents the observed testing parameters pertaining to and are relevant for only the equipment provided by the client, tested in the agreed upon operational mode(s) and configuration(s) as identified herein. Compliance assessment remains the client's responsibility. This report may not be used to claim product endorsement by A2LA or any government agencies. This test report has been authorized for release under quality control from CKC Laboratories, Inc.



Steve Behm
Director of Quality Assurance & Engineering Services
CKC Laboratories, Inc.

Test Facility Information

Our laboratories are configured to effectively test a wide variety of product types. CKC utilizes first class test equipment, anechoic chambers, data acquisition and information services to create accurate, repeatable and affordable test results.

TEST LOCATION(S):
CKC Laboratories, Inc.
1120 Fulton Place
Fremont, CA 94539

Software Versions

CKC Laboratories Proprietary Software	Version
EMITest Emissions	5.03.11 and 5.03.12
EMITest Immunity	5.03.10

Site Registration & Accreditation Information

Location	*NIST CB #	FCC	Japan
Canyon Park, Bothell, WA	US0081	US1022	A-0136
Brea, CA	US0060	US1025	A-0136
Fremont, CA	US0082	US1023	A-0136
Mariposa, CA	US0103	US1024	A-0136

*CKC's list of NIST designated countries can be found at: https://standards.gov/cabs/designations.html

SUMMARY OF RESULTS

Standard / Specification: FCC Part 20.21/22H/24E/27 Wideband Consumer Signal Booster
Measurement Guidance: KDB #935210 DO3 v04r03, April 15, 2019

Correlation Matrix & Results					
Guidance Section	**Guidance Description**	**FCC Section**	**FCC Rule Description**	**Modifications**	**Results**
7.1 a) - k)	Authorized Frequency Band Verification Test	20.21(e)(3)	Frequency Bands	Mod. #1	Pass
7.2.2 a) - k)	Maximum Power Measurement Procedure	2.1046/20.21(e)(8)(i)(D)	Power Limit	Mod. #1 and #2	Pass
7.3 a) - d)	Maximum Booster Gain Computation	20.21(e)(8)(i)(B)	Bidirectional Capabilities	Mod. #1 and #2	Pass
7.4 a) - n)	Intermodulation Product	20.21(e)(8)(i)(F)	Intermodulation Limit	Mod. #1	Pass
7.5 a) - n)	Out of Band Emissions	20.21(e)(8)(i)(E)	Out of Band Emission	Mod. #1	Pass
7.6 a) - e)	Conducted Spurious Emission	2.1051/22H/24E/27	Spurious emission	Mod. #1	Pass
7.7.1 a) - g) 7.7.1 h) - n) 7.7.2 a) - g)	Noise Limit Procedure Variable Noise Variable Noise Timing	20.21(e)(8)(i)(A)(2)(i) 20.21(e)(8)(i)(A)(1) 20.21(e)(8)(i)(H)	Noise Limits Transmit Power Off Mode	Mod. #1	Pass
7.8 a) - l)	Uplink inactivity	20.21(e)(8)(i)(I)	Uplink Inactivity	Mod. #1	Pass

Standard / Specification: FCC Part 20.21/22H/24E/27 - continued

Correlation Matrix & Results					
Guidance Section	**Guidance Description**	**FCC Section**	**FCC Rule Description**	**Modifications**	**Results**
7.9.1 a) - l) 7.9.2 a) - f)	Variable Booster Gain Variable Uplink Gain Timing	20.21(e)(8)(i)(C) (1), (2)(i) 20.21(e)(8)(i)(H)	Booster Gain Transmit Power Off Mode	Mod. #1	PASS
7.10.a) - j)	Occupied Band Width	2.1049/22H/24E/27	Occupied Band Width	Mod. #1	PASS
7.11.2 a) - r) 7.11.3 a) - h) 7.11.4 a) - h) (alternate to 7.11.3)	Anti-Oscillation	20.21(e)(8)(ii)(A)	Anti-Oscillation	Mod. #1	PASS
7.12a) - f)	Radiated Spurious Emission	2.1053/ 22H/24E/27	Spurious Emission	Mod. #1	PASS
7.13 a) - c)	Spectrum Block Filter	NA	NA	NA	NA1
7.14.2 7.14.3	Verification of self-monitoring Verification of two-enclosure booster system operation	20.21(e)		Mod. #1 and #3	PASS
7.15	Additional requirements for single-donor-port multiple-server-port single-enclosure wideband consumer signal boosters	NA	NA	NA	NA**2**

NA = Not Applicable
NA1 = Not applicable because the EUT does not have spectrum blocking.
NA2 = Not applicable because the EUT does not employ multiple-server or donor port.

ISO/IEC 17025 Decision Rule
The declaration of pass or fail herein is based upon assessment to the specification(s) listed above, including where applicable, assessment of measurement uncertainties. For performance related tests, equipment was monitored for specified criteria identified in that section of testing.

Modifications During Testing

This list is a summary of the modifications made to the equipment during testing.

Summary of Conditions
Modification #1: • Decrease UL B4: 1710-1755: 4dB • Decrease DL B2: 1930-1995: 1dB • Decrease UL: B2: 1.4dB • Decrease UL: B12:1dB
Modification #2: • Band 2: Lowered UL power by 1.1dB • Band 5: Lowered UL power by 0.5dB • Band 12: Lowered UL power by 3.2dB • Band 13: Lowered UL power by 3.6dB
Modification #3: The software change in the newer software is: The slave unit will monitor the communication data from the host unit. If it detects this communication data being received from an additional slave unit, it will shut down the host unit and thus the entire booster.

Modifications listed above must be incorporated into all production units.

Conditions During Testing

This list is a summary of the conditions noted to the equipment during testing.

Summary of Conditions
CKC Laboratories was only contracted to perform tests on Flare RT and Panel RT with RT Main Unit on the 50Ft cable for sections 7.1, 7.2, 7.3, 7.4, 7.6, 7.12 and 7.14.

EQUIPMENT UNDER TEST (EUT)

During testing, numerous configurations may have been utilized. The configurations listed below support compliance to the standard(s) listed in the Summary of Results section.

Configuration 1

Equipment Tested:

Device	Manufacturer	Model #	S/N
Switching Power Adapter	SureCall	GME36A-150240FDS	NA
Dual Enclosure Booster	Cellphone-Mate, Inc.	Fusion4Home RT	RDD201P0508001
Dual Enclosure Booster	Cellphone-Mate, Inc.	RT Main Unit	RDD201P0508001

Support Equipment:

Device	Manufacturer	Model #	S/N
None			

Configuration 2

Equipment Tested:

Device	Manufacturer	Model #	S/N
Switching Power Adapter	SureCall	GME36A-150240FDS	NA
Dual Enclosure Booster	Cellphone-Mate, Inc.	Flare RT	RDD201P0508001
Dual Enclosure Booster	Cellphone-Mate, Inc.	RT Main Unit	RDD201P0508001

Support Equipment:

Device	Manufacturer	Model #	S/N
None			

Configuration 3

Equipment Tested:

Device	Manufacturer	Model #	S/N
Switching Power Adapter	SureCall	GME36A-150240FDS	NA
Dual Enclosure Booster	Cellphone-Mate, Inc.	Panel RT	RDD201P0508001
Dual Enclosure Booster	Cellphone-Mate, Inc.	RT Main Unit	RDD201P0508001

Support Equipment:

Device	Manufacturer	Model #	S/N
None			

Configuration 4

Equipment Tested:

Device	Manufacturer	Model #	S/N
Dual Enclosure Booster	Cellphone-Mate, Inc.	Flare RT	RDD201P0508002
Switching Power Adapter	SureCall	GME36A-150240FDS	NA
Dual Enclosure Booster	Cellphone-Mate, Inc.	RT Main Unit	RDD201P0508001

Support Equipment:

Device	Manufacturer	Model #	S/N
None			

Configuration 5

Equipment Tested:

Device	Manufacturer	Model #	S/N
Dual Enclosure Booster	Cellphone-Mate, Inc.	Panel RT	RDD201P0508002
Switching Power Adapter	SureCall	GME36A-150240FDS	NA
Dual Enclosure Booster	Cellphone-Mate, Inc.	RT Main Unit	RDD201P0508001

Support Equipment:

Device	Manufacturer	Model #	S/N
None			

General Product Information:

Product Information	Manufacturer-Provided Details
Equipment Type:	Stand-Alone Equipment
Type of Equipment	Zone Enhancer
Operating Frequency Range:	UL: 824-849MHz DL: 869-894MHz UL: 1850-1915MHz DL: 1930-1995MHz UL: 1710-1755MHz, 698-716MHz, 776-787MHz DL: 2110-2155MHz, 728-746MHz, 746-757MHz
OBW and Emissions Type(s):	GXW (GSM) G7W (EDGE) F9W(CDMA) F9W(WCDMA) W7D (LTE) See table below for OBW
Modulation Type(s):	0.3 GMSK (GSM) 3p/8 8-PSK (EDGE) QPSK (CDMA) BPSK/QPSK (WCDMA) OFDM (LTE)
Number of TX Chains:	1
Antenna Type(s) and Gain:	Dedicated, See antenna kitting information
Beamforming Type:	NA
Antenna Connection Type:	UL: 50 Ohm/SMA for RT Main Unit DL: 50 Ohm/ N Type for Fusion4Home RT Unit DL: 50 Ohm/SMA for Flare RT Unit DL: 50 Ohm/SMA for Panel RT Unit
Nominal Input Voltage:	120VAC, 60Hz
Firmware / Software used for Test:	Fusion4Home slave unit: stm32f030c8_proj_4Home.hex Flare and panel units: stm32f030c8_NoVR_Panel&Flare.hex

FCC PART 20.21/22H/24E/27

General Test Setup

Summary of Conditions
The equipment under test (EUT) is a Dual Enclosure Wideband Consumer Booster The EUT is placed on the Styrofoam platform for radiated emission and a test bench for conducted emission measurement. UL: 824-849MHz DL: 869-894MHz UL: 1850-1915MHz DL: 1930-1995MHz UL: 1710-1755MHz, 698-716MHz, 776-787MHz DL: 2110-2155MHz, 728-746MHz, 746-757MHz Test procedure: The test was performed in accordance with the FCC document: 935210 D03 Signal Booster Measurements v04r03, dated April 15, 2019. Firmware: Fusion4Home slave unit: stm32f030c8_proj_4Home.hex Flare and panel units: stm32f030c8_NoVR_Panel&Flare.hex

7.1 Authorized Frequency Band Verification

Test Conditions / Setup

Test Location:	CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170
Customer:	Cellphone-Mate, Inc.
Specification:	**7.1 Authorized Frequency Band Verification**
Work Order #:	**102129** Date 5/22/2019
Test Type:	**Conducted Emissions**
Tested By:	**Hieu Song Nguyenpham**
Software:	EMITest 5.03.11

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Test environment conditions:
Temperature: 21.9°C
Relative Humidity: 52%
Atmospheric Pressure: 101.9 kPa
Modification 1 was in place during testing.

Test Equipment:

Asset #	Description	Manufacturer	Model	Calibration Date	Cal Due Date
P05411	Attenuator	Weinschel	54A-10	1/19/2018	1/19/2020
P07192	Cable	Astro	32022-29094K-29094K-48TC	10/9/2017	10/9/2019
P07191	Cable	Astro	32022-29094K-29094K-48TC	10/30/2017	10/30/2019
03418	Signal Generator	Agilent	E4438C	5/13/2019	5/13/2021
03471	Spectrum Analyzer	Agilent	E4440A	1/18/2018	1/18/2020

Test Location:	CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170
Customer:	Cellphone-Mate, Inc.
Specification:	**7.1 Authorized Frequency Band Verification**
Work Order #:	**102129** Date 6/14/2019
Test Type:	**Conducted Emissions**
Tested By:	**Hieu Song Nguyenpham**
Software:	EMITest 5.03.11

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

Test environment conditions:
Temperature: 22.1°C
Relative Humidity: 52%
Atmospheric Pressure: 102.1 kPa
Modification 1 was in place during testing.

Test Equipment:

Asset #	Description	Manufacturer	Model	Calibration Date	Cal Due Date
P05411	Attenuator	Weinschel	54A-10	1/19/2018	1/19/2020
P07192	Cable	Astro	32022-29094K-29094K-48TC	10/9/2017	10/9/2019
P07191	Cable	Astro	32022-29094K-29094K-48TC	10/30/2017	10/30/2019
03418	Signal Generator	Agilent	E4438C	5/13/2019	5/13/2021
03471	Spectrum Analyzer	Agilent	E4440A	1/18/2018	1/18/2020

Test Location:	CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170
Customer:	Cellphone-Mate, Inc.
Specification:	**7.1 Authorized Frequency Band Verification**
Work Order #:	**102129** Date 6/18/2019
Test Type:	**Conducted Emissions**
Tested By:	**Hieu Song Nguyenpham**
Software:	EMITest 5.03.11

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 3			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 3			

Test Conditions / Notes:

Test environment conditions:
Temperature: 20.9°C
Relative Humidity: 48%
Atmospheric Pressure: 101.4kPa
Modification 1 was in place during testing.

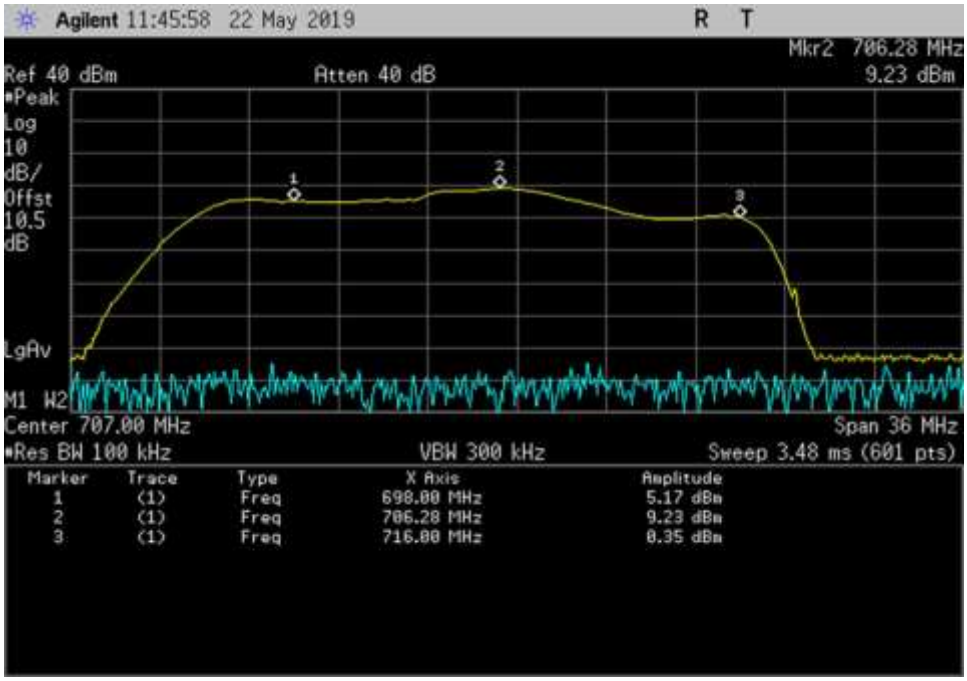
Test Equipment:

Asset #	Description	Manufacturer	Model	Calibration Date	Cal Due Date
P05411	Attenuator	Weinschel	54A-10	1/19/2018	1/19/2020
P07192	Cable	Astro	32022-29094K-29094K-48TC	10/9/2017	10/9/2019
P07191	Cable	Astro	32022-29094K-29094K-48TC	10/30/2017	10/30/2019
03418	Signal Generator	Agilent	E4438C	5/13/2019	5/13/2021
03471	Spectrum Analyzer	Agilent	E4440A	1/18/2018	1/18/2020

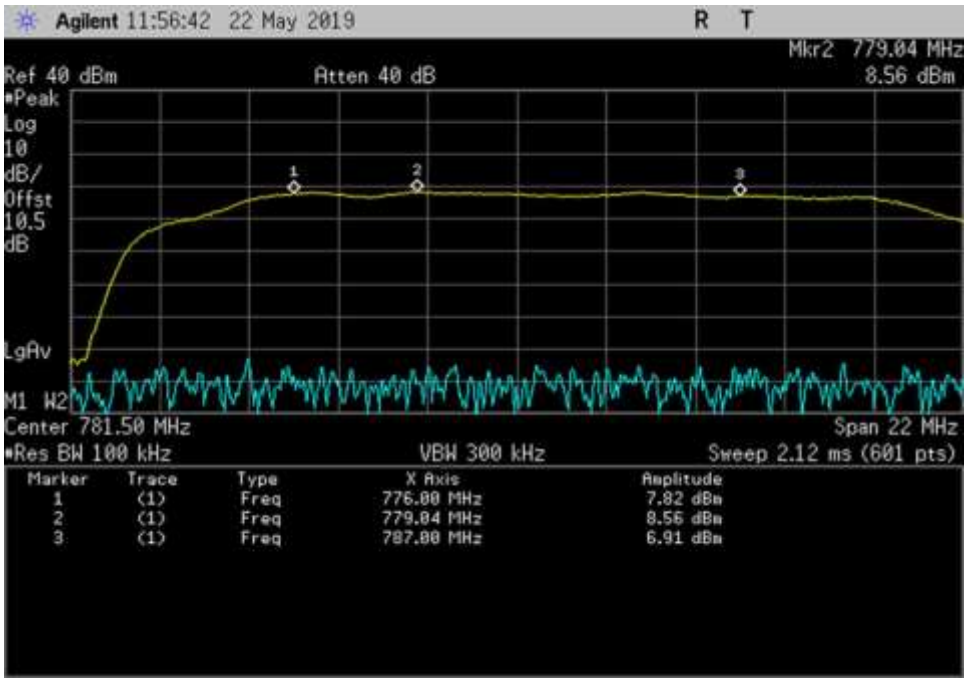
Summary of Results

Pass: The plots below show the device only operates on the CMRS frequency bands authorized for use by the NPS.

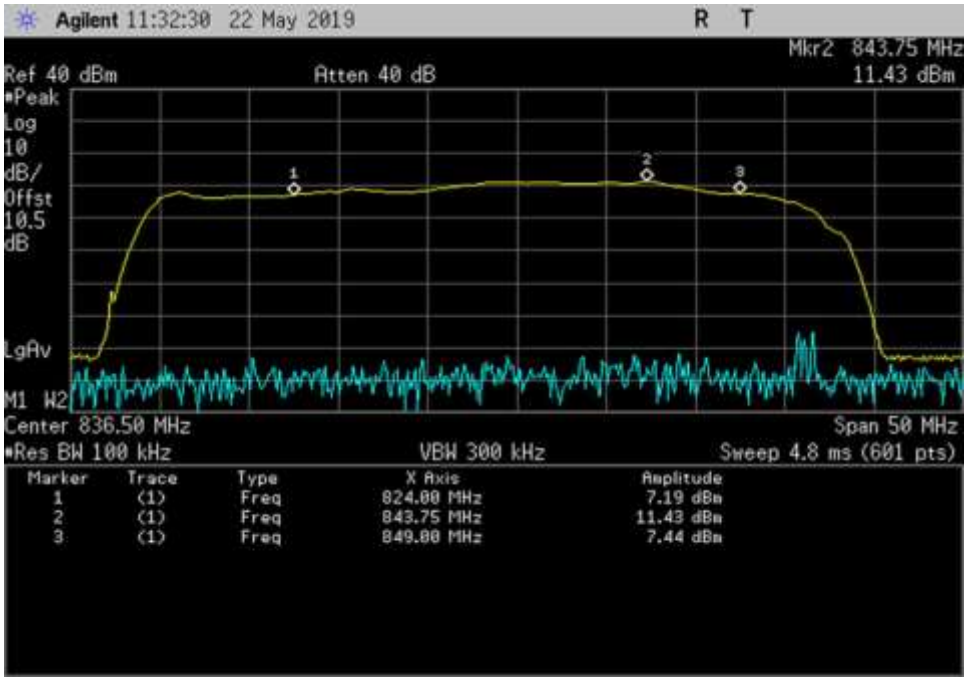
Plots
Configuration 1



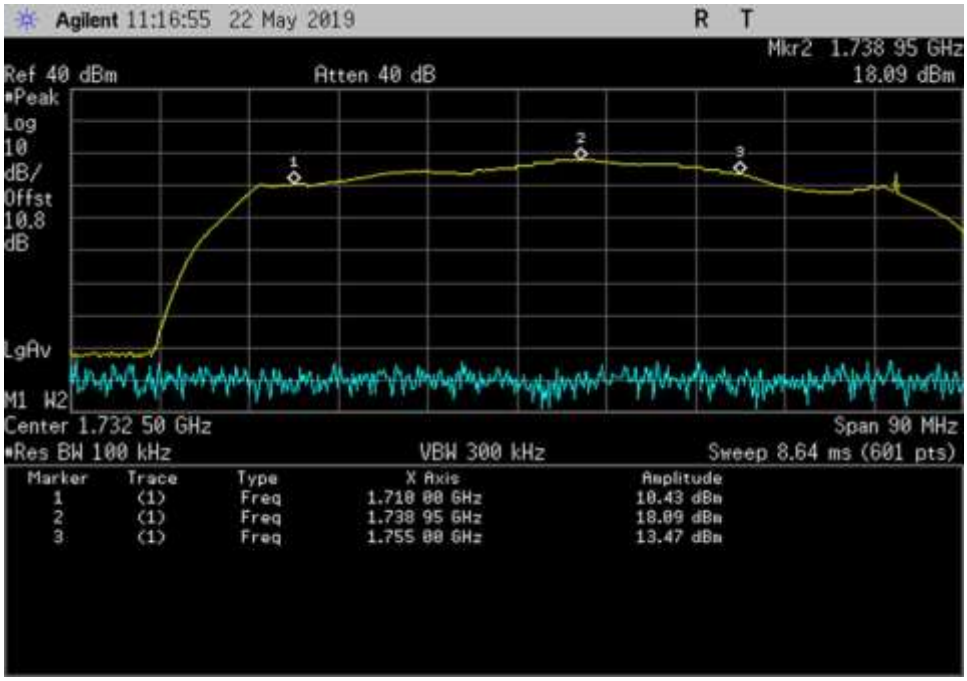
UL_698-716_ 698- 706.28MHz



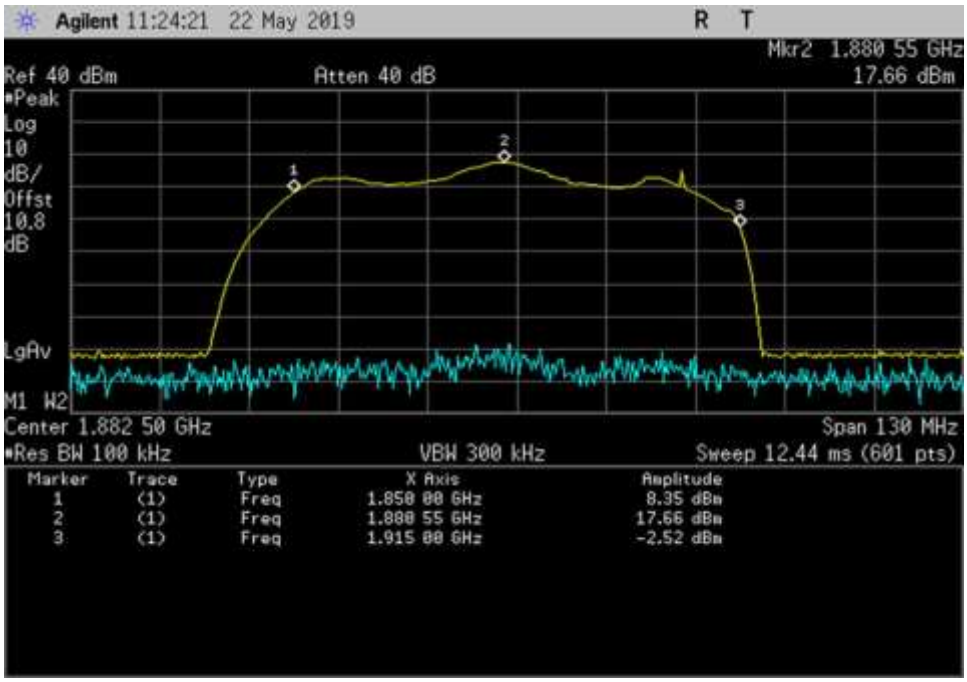
UL_776-787_ 776- 779.04MHz



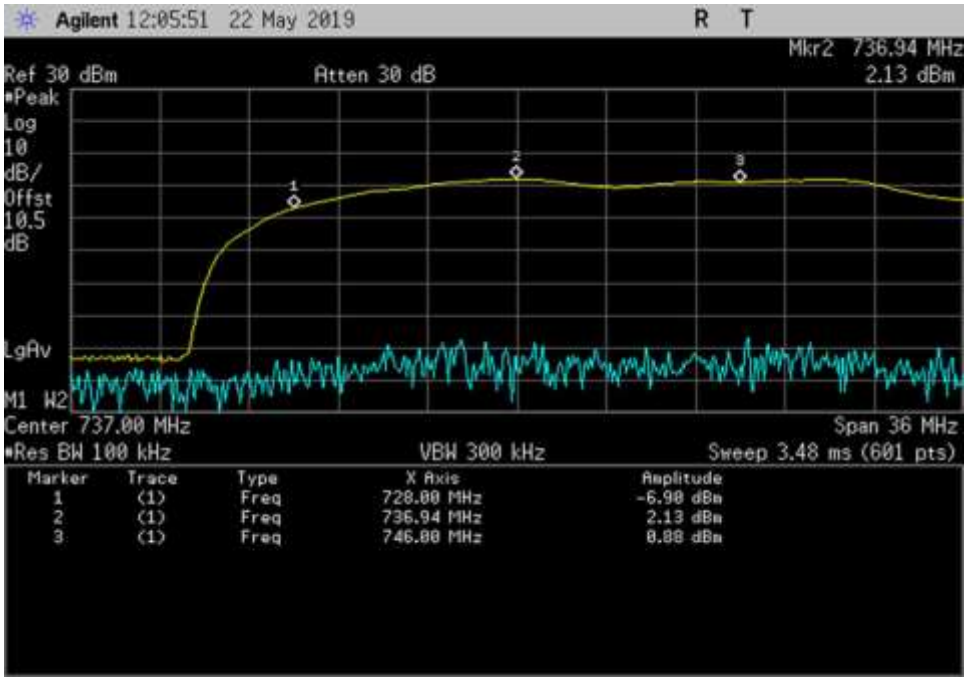
UL_824-849_ 824- 843.75MHz



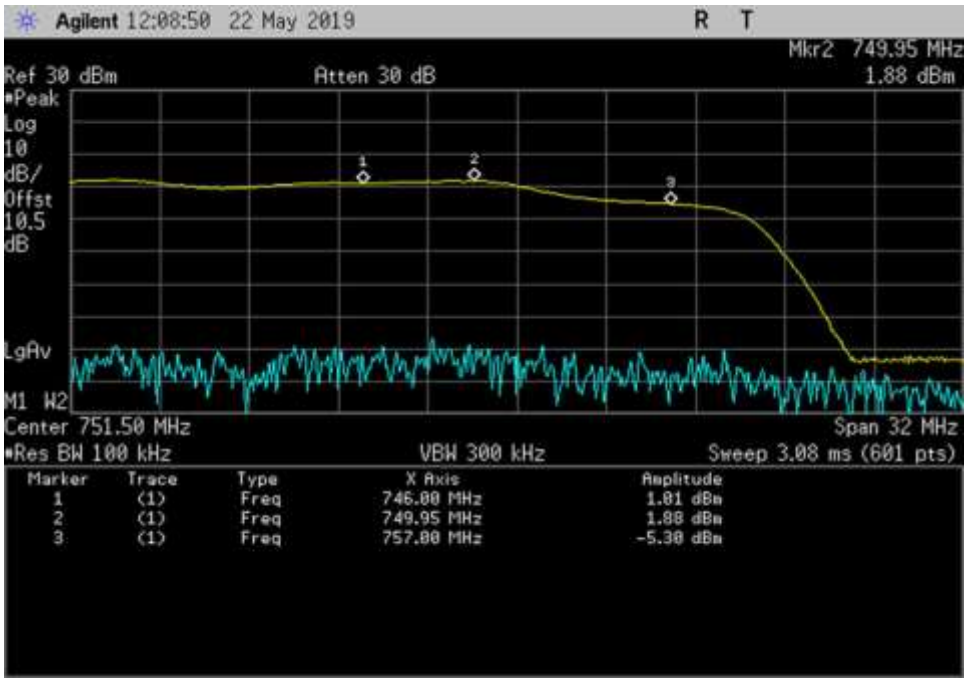
UL_1710-1755_ 1710- 1738.95MHz



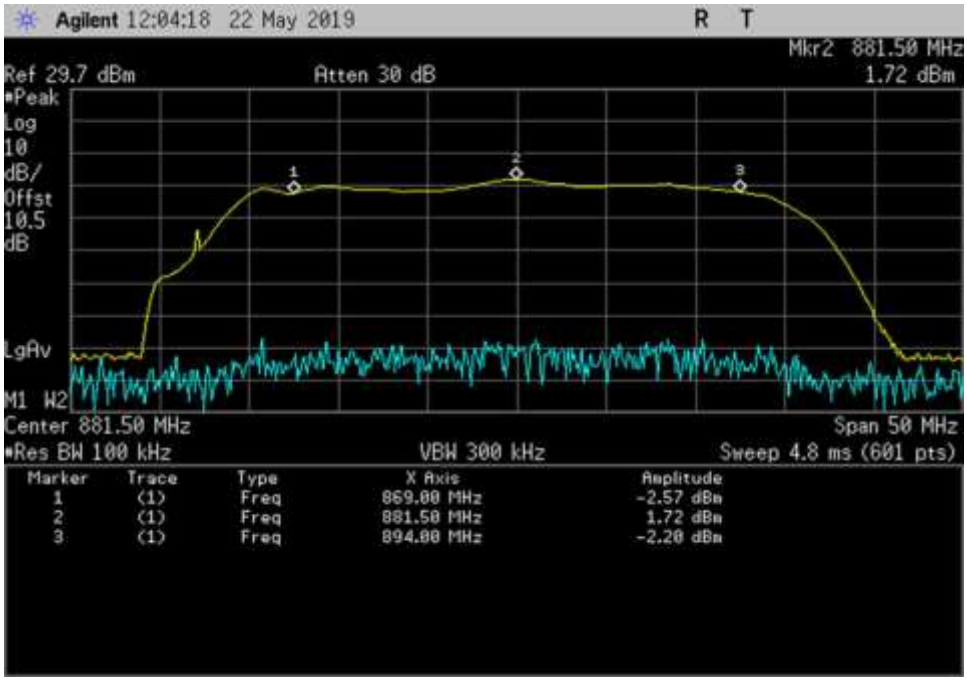
UL_1850-1915_ 1850- 1880.55MHz



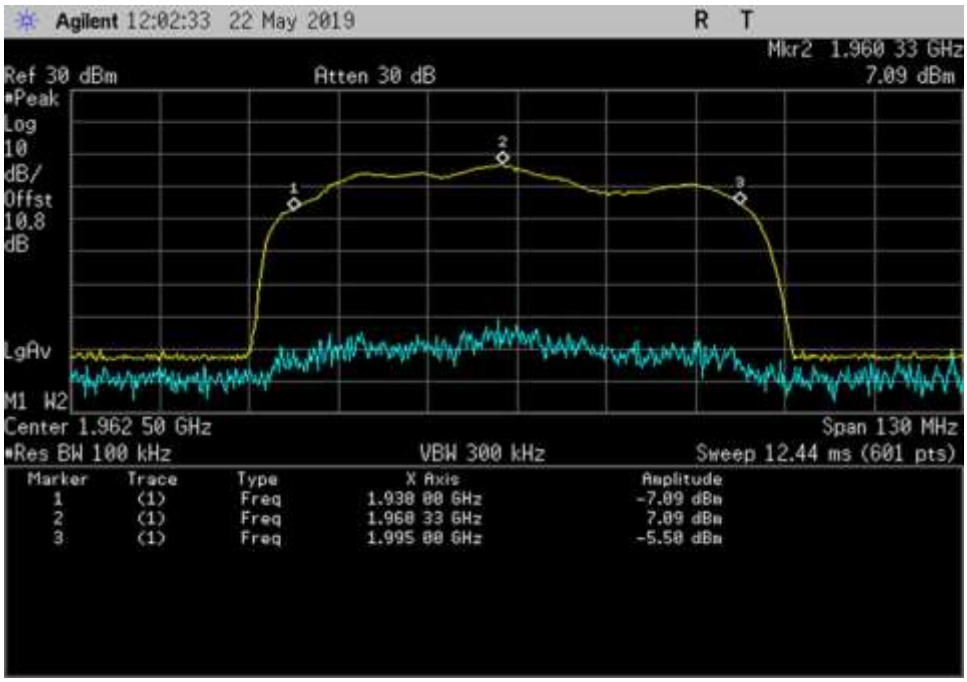
DL_728-746_ 728- 736.94MHz



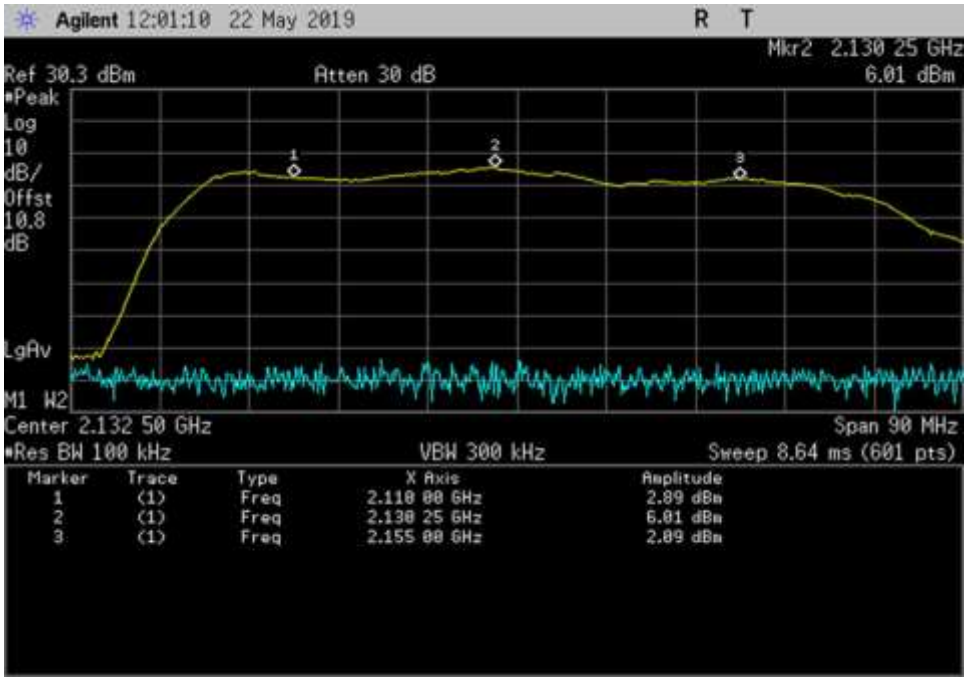
DL_746-757_ 746- 749.95MHz



DL_869-894_ 869- 881.5MHz

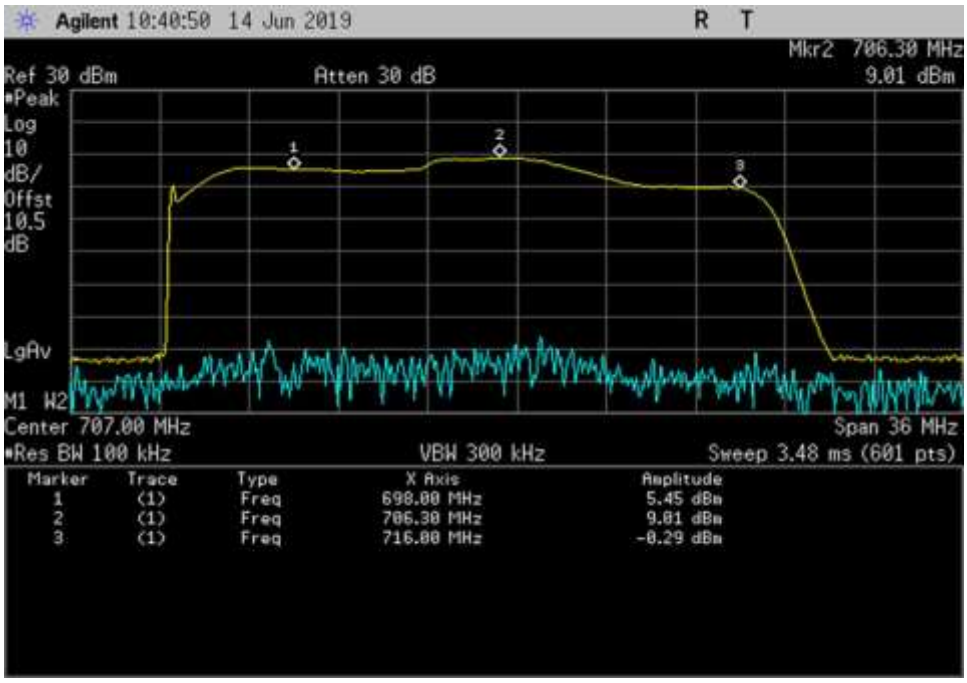


DL_1930-1995_ 1930- 1960.33MHz

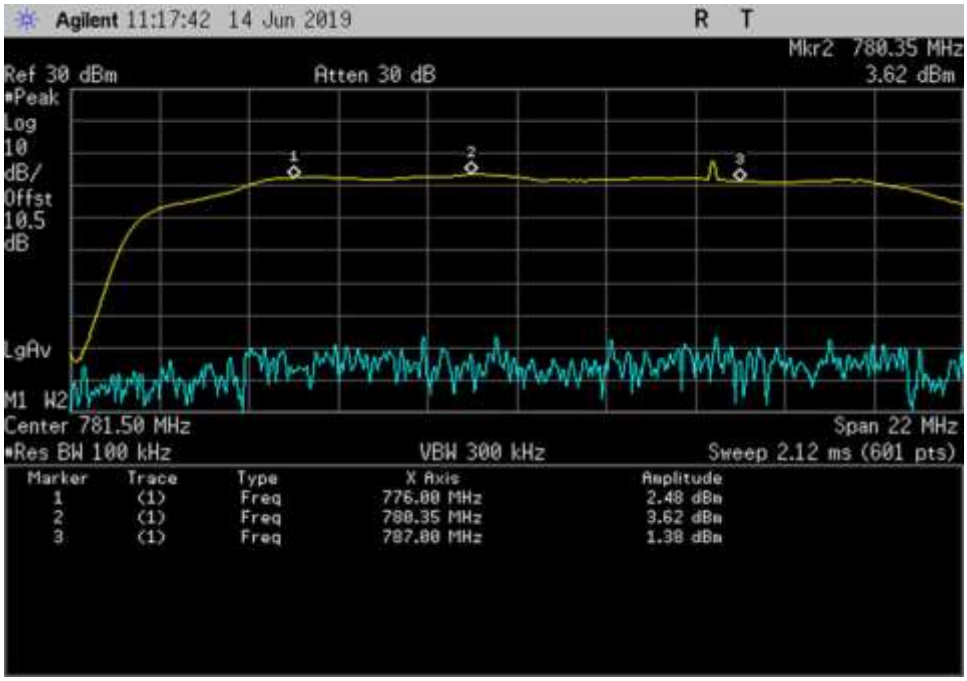


DL_2110-2155_ 2110- 2130.25MHz

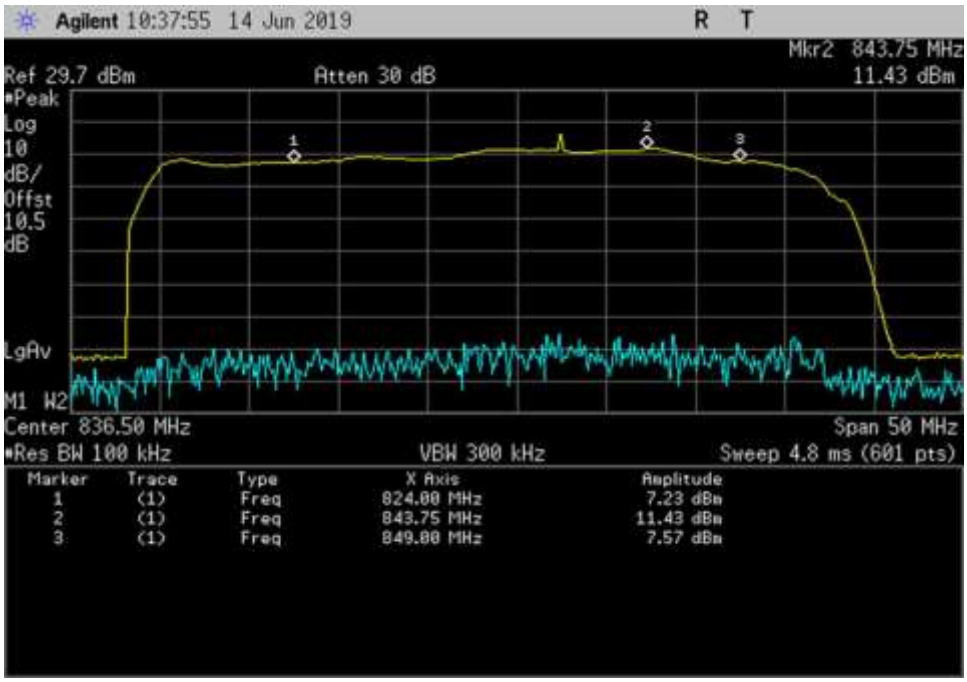
Configuration 2



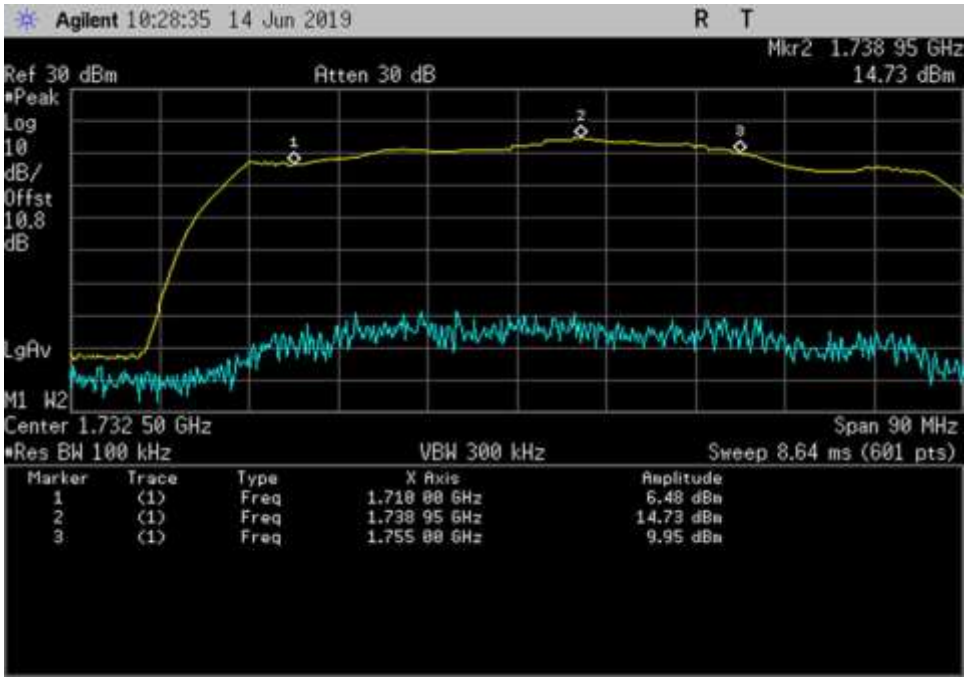
UL_698-716_ 698- 706.3MHz



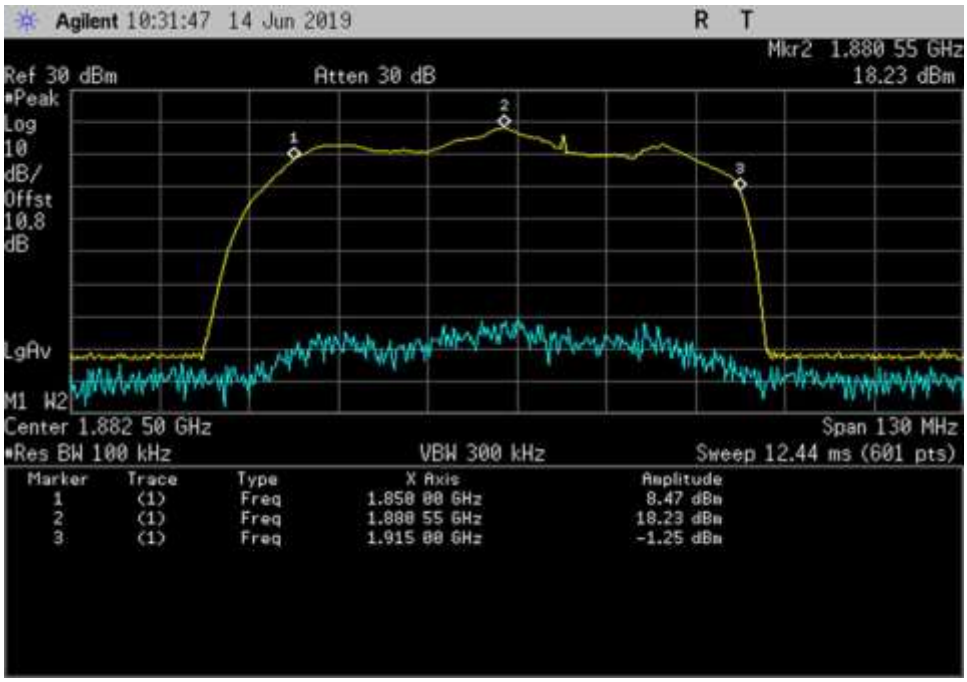
UL_776-787_ 776- 780.35MHz



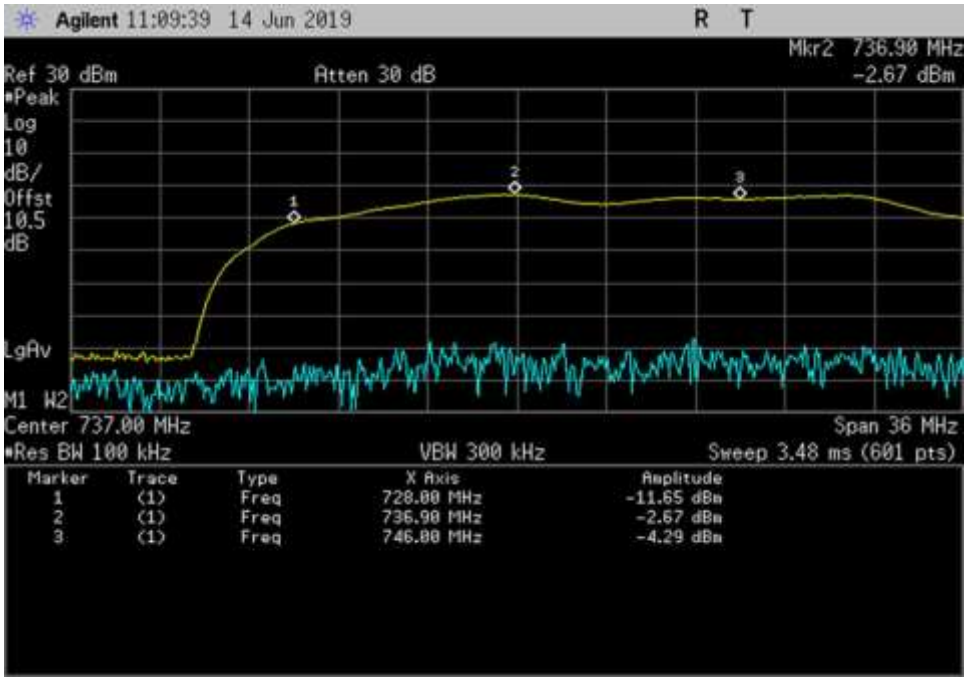
UL_824-849_ 824- 843.75MHz



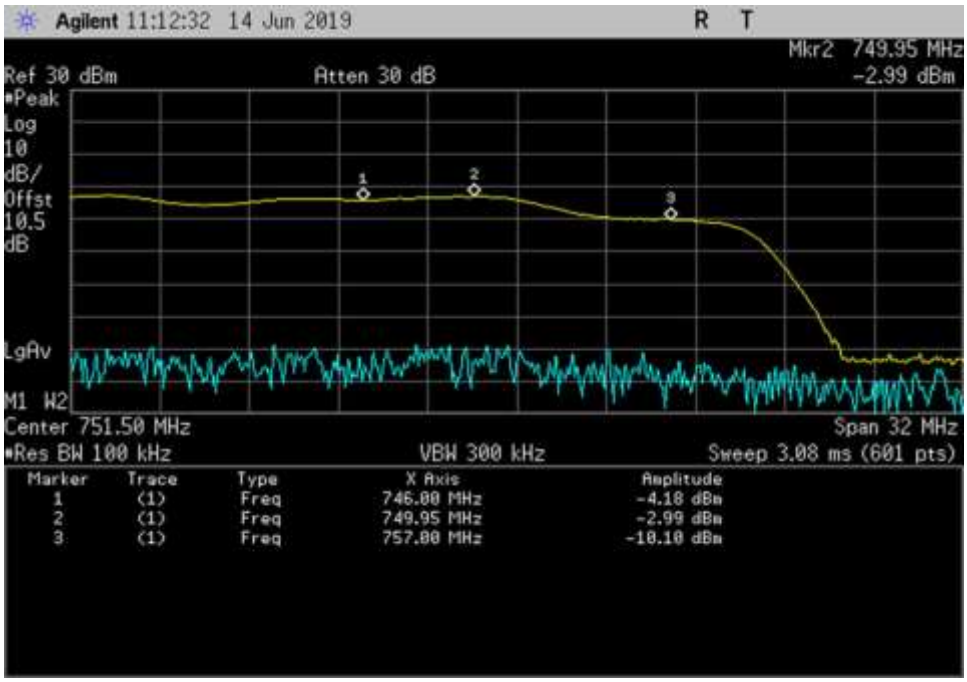
UL_1710-1755_ 1710- 1738.95MHz



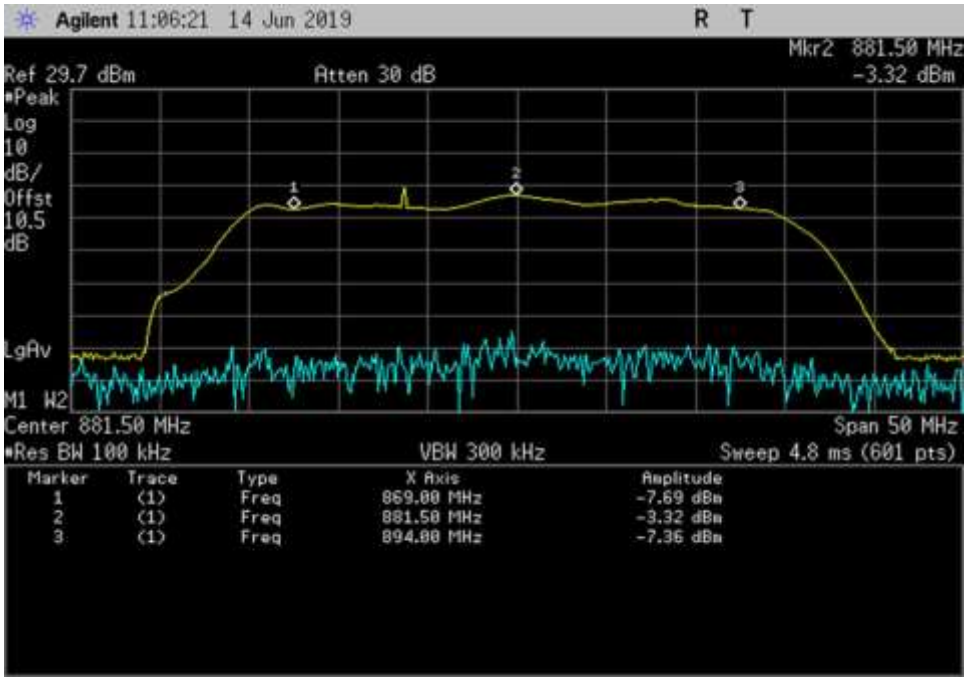
UL_1850-1915_ 1850- 1880.55MHz



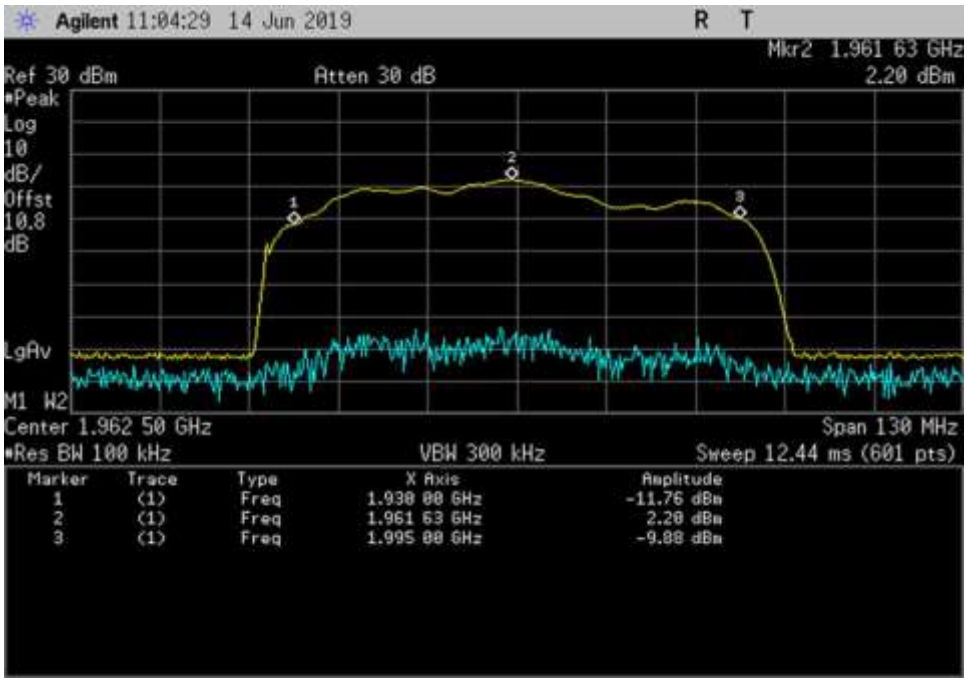
DL_728-746_ 728- 736.9MHz



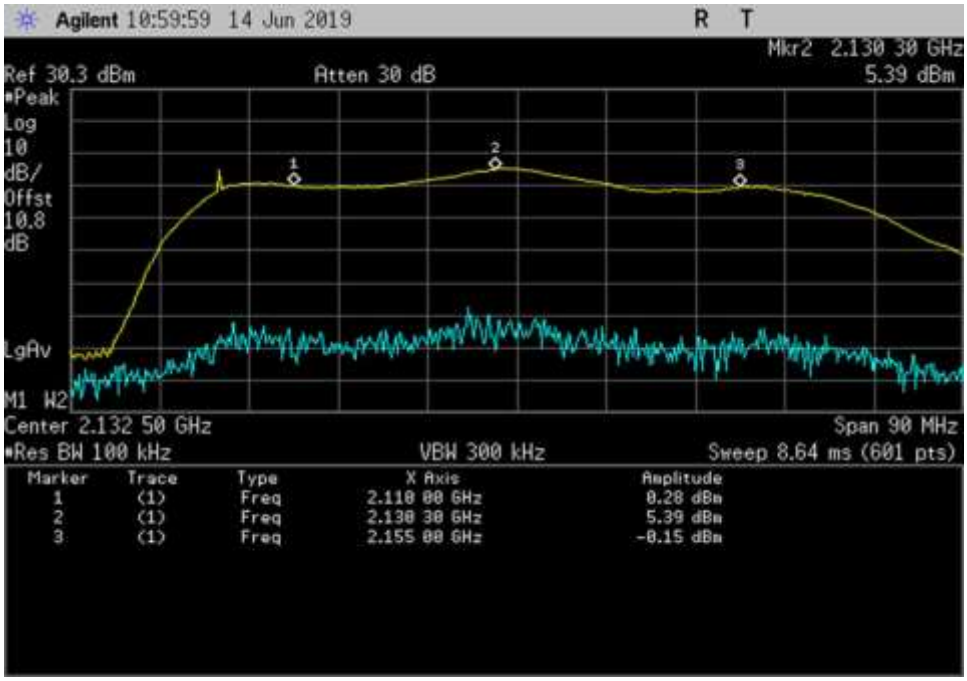
DL_746-757_ 746- 749.95MHz



DL_869-894_ 869- 881.5MHz

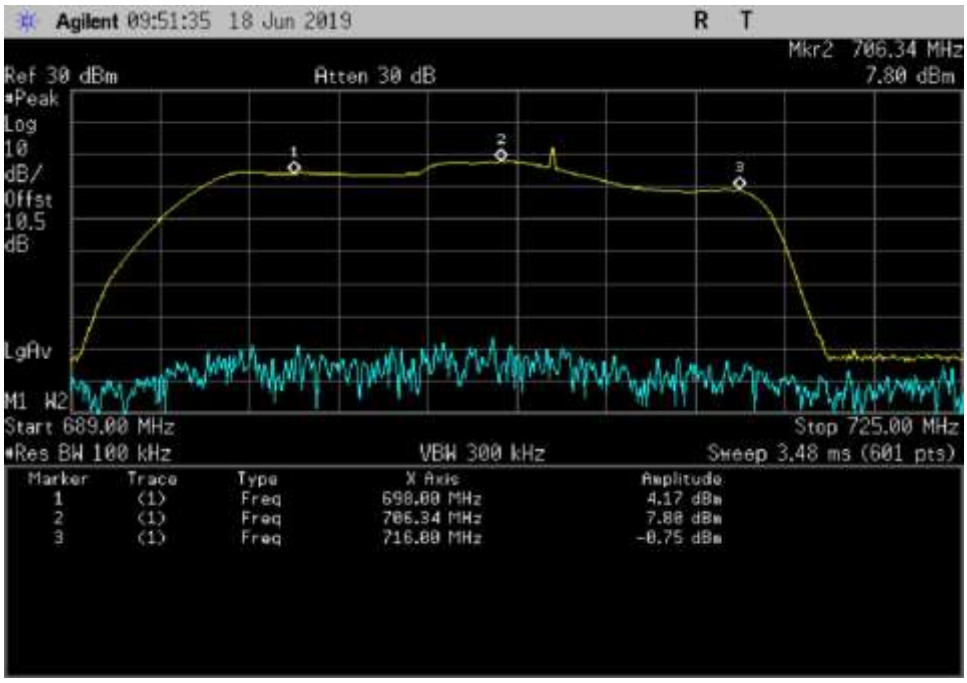


DL_1930-1995_ 1930- 1961.63MHz

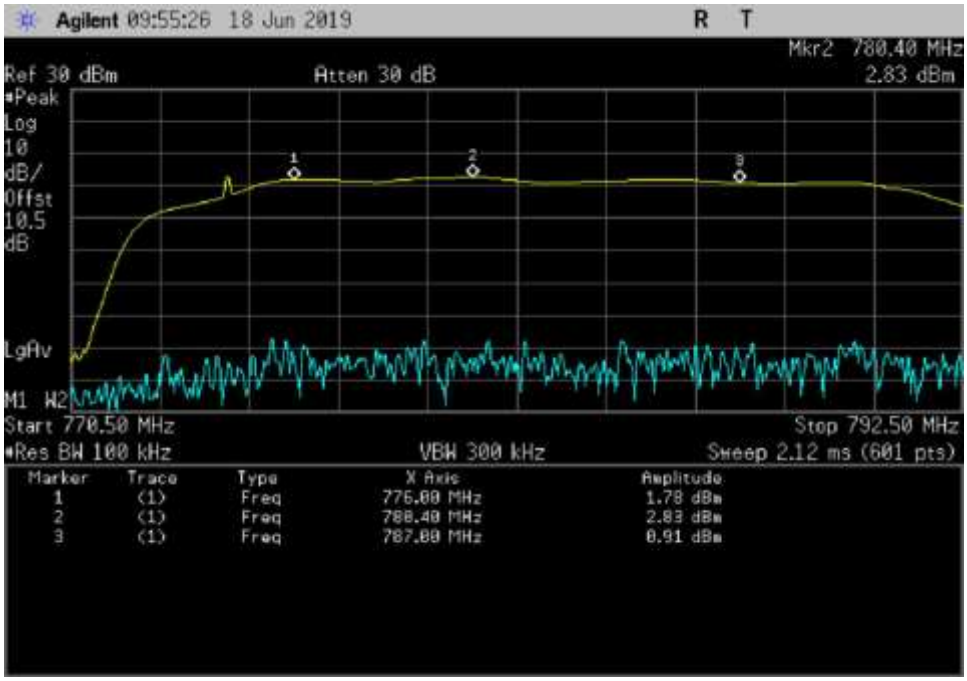


DL_2110-2155_ 2110- 2130.3MHz

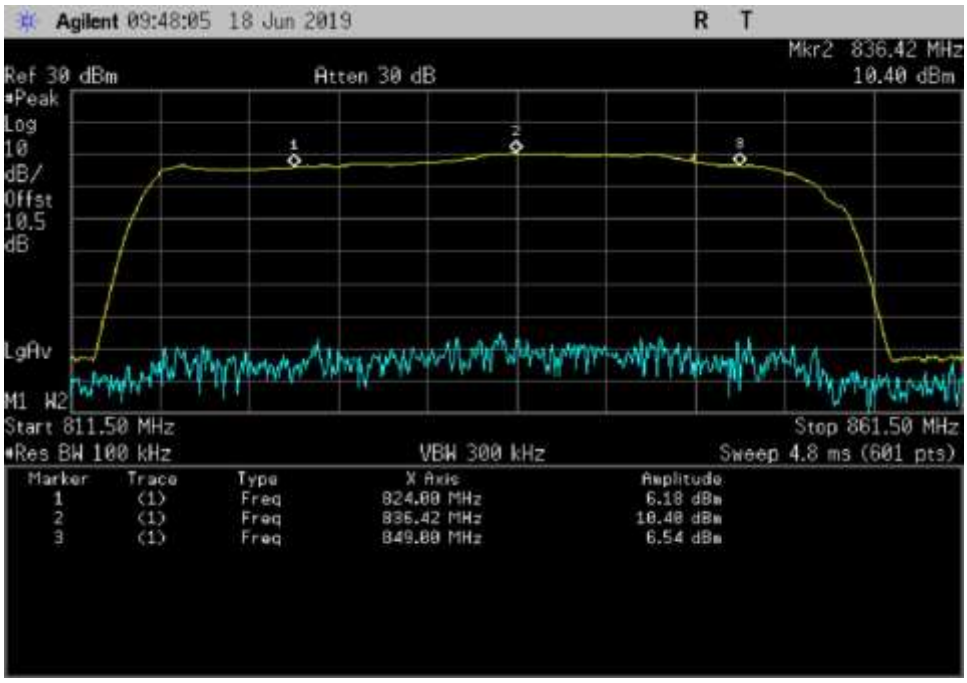
Configuration 3



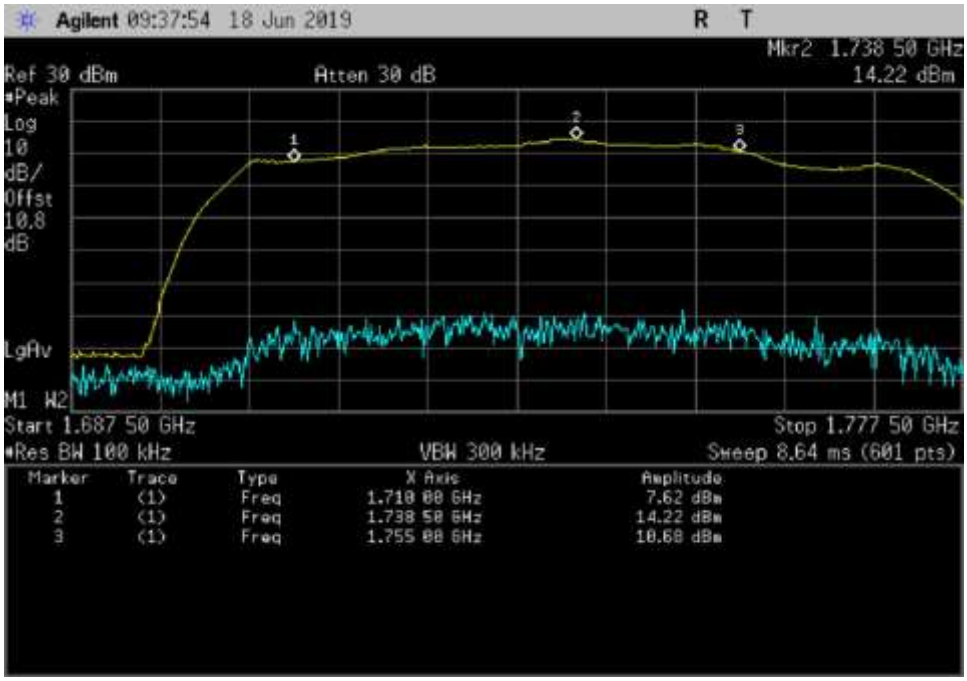
UL_698-716_ 698- 706.34MHz



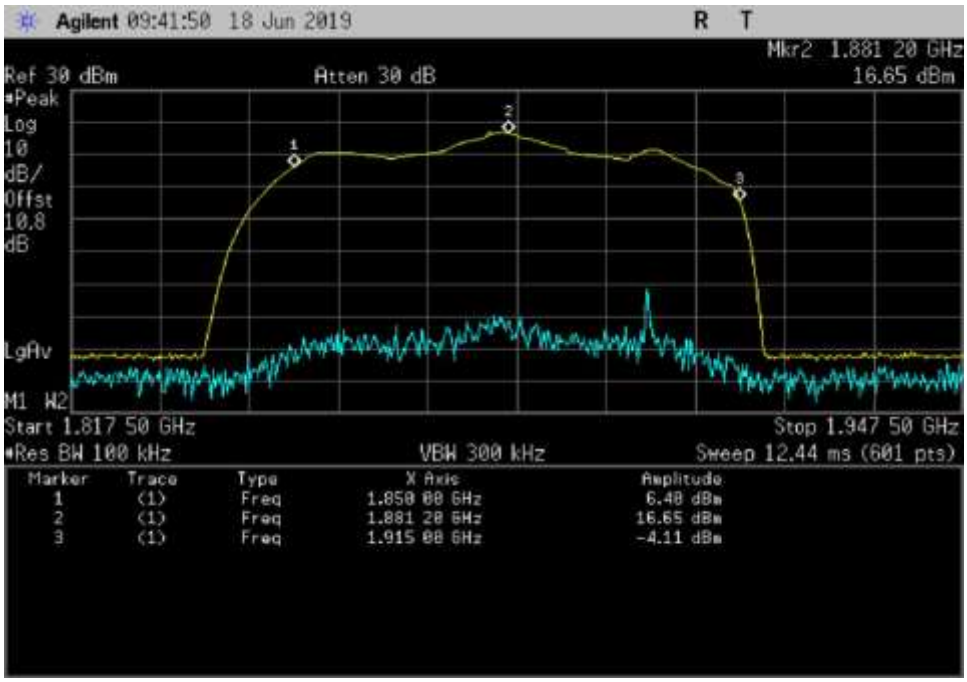
UL_776-787_ 776- 780.4MHz



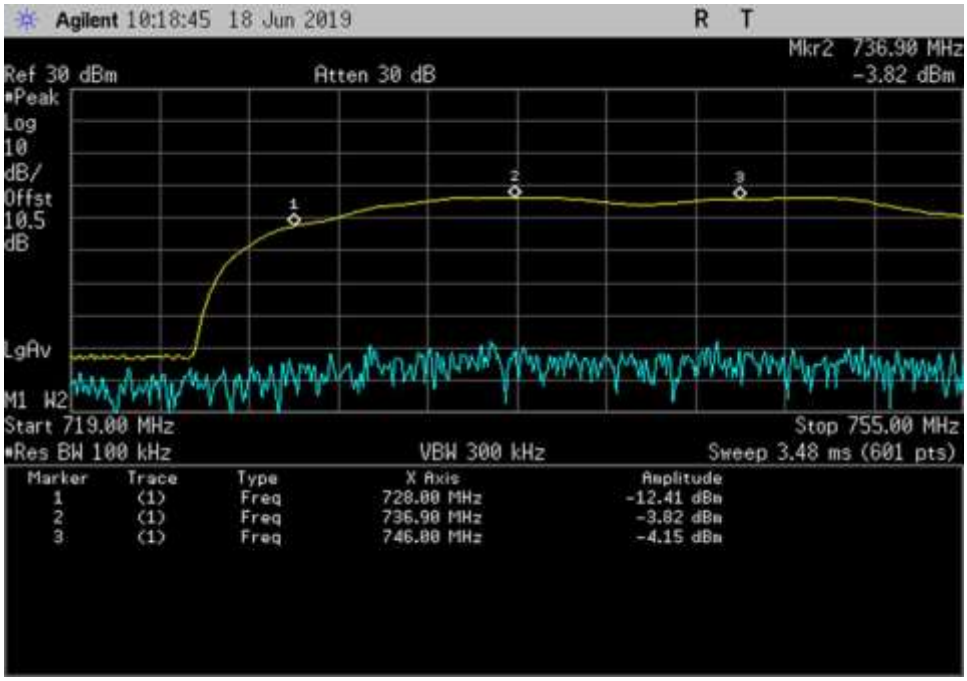
UL_824-849_ 824- 836.42MHz



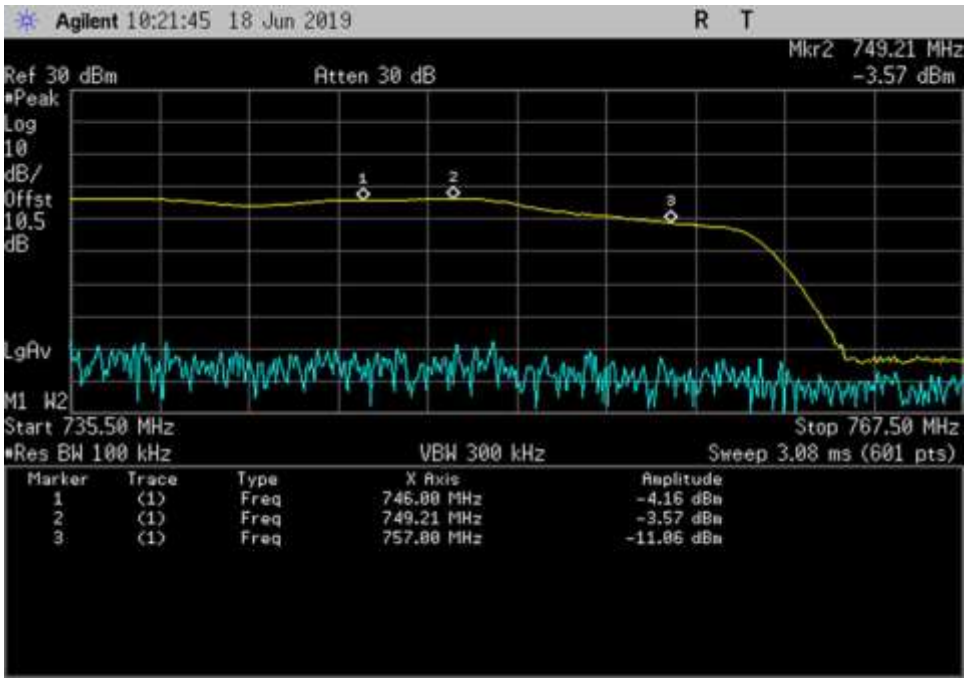
UL_1710-1755_ 1710- 1738.5MHz



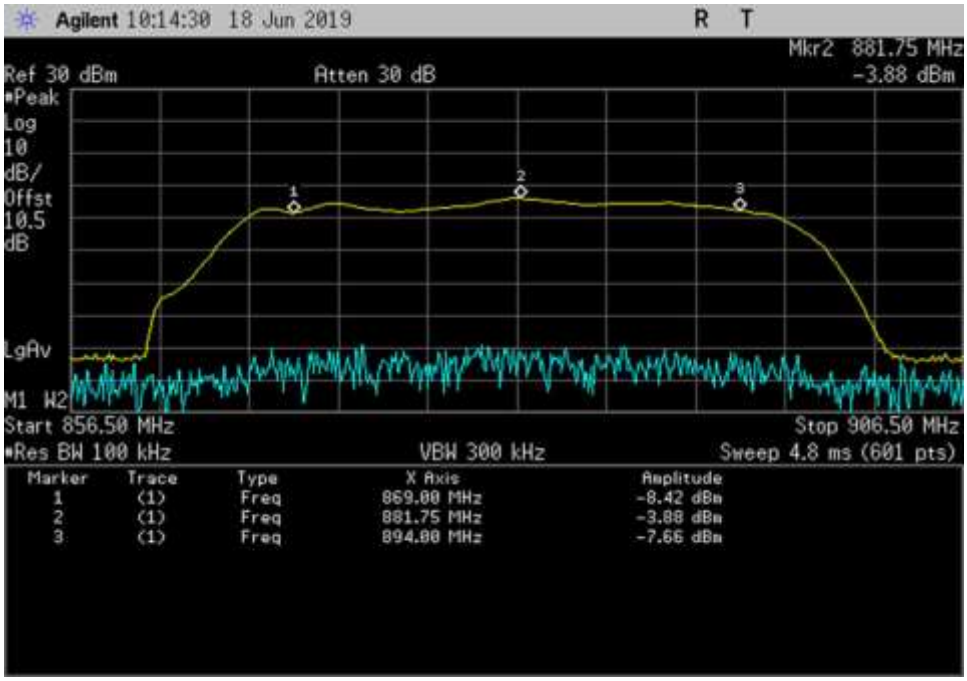
UL_1850-1915_ 1850- 1881.2MHz



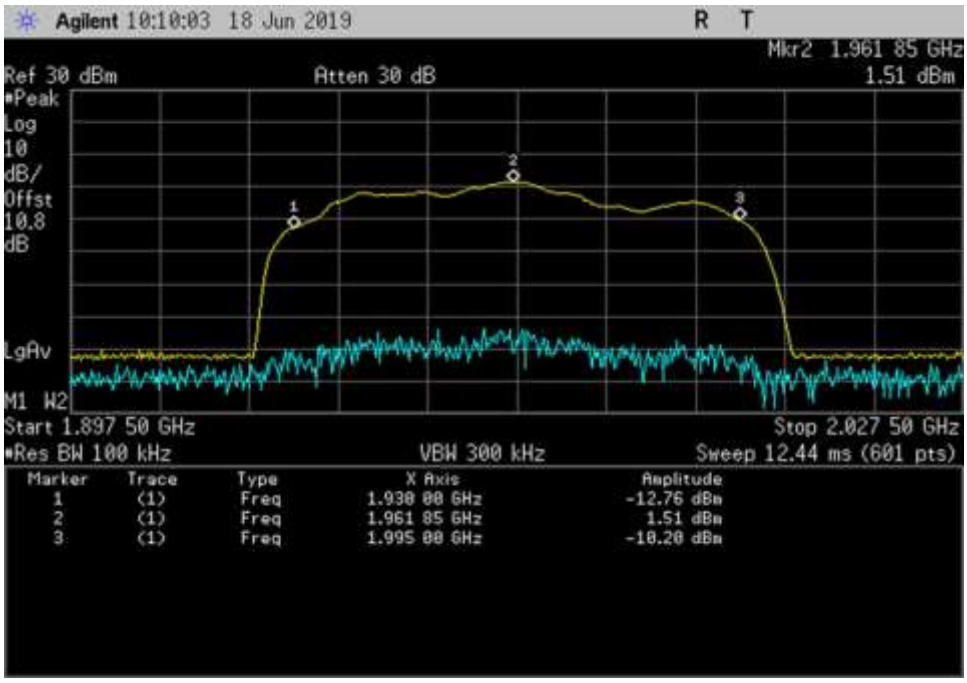
DL_728-746_ 728- 736.9MHz



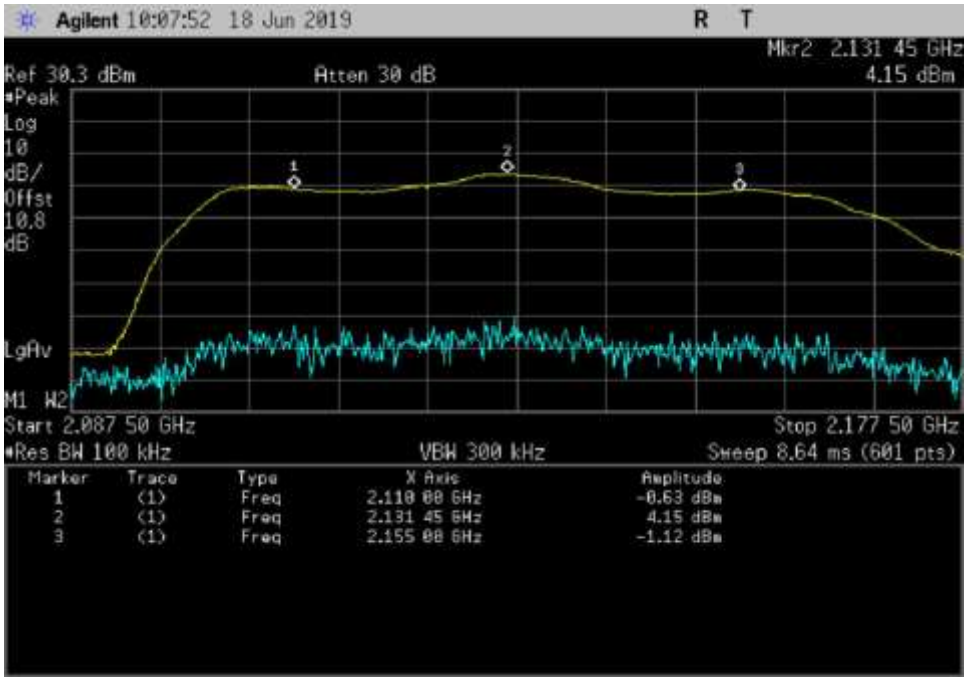
DL_746-757_ 746- 749.21MHz



DL_869-894_ 869- 881.75MHz



DL_1930-1995_ 1930- 1961.85MHz



DL_2110-2155_ 2110- 2131.45MHz

7.2 Maximum Power and 7.3 Maximum Gain

Test Conditions / Setup

Test Location:	CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170
Customer:	Cellphone-Mate, Inc.
Specification:	**7.2 Maximum Power Measurement** **7.3 Maximum Booster Gain**
Work Order #:	**102129** Date 05/24/2021
Test Type:	**Conducted Emissions**
Tested By:	**Hieu Song Nguyenpham**
Software:	EMITest 5.03.11

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

05/24/2021: Test environment conditions:
Temperature: 23°C
Relative Humidity: 42%
Pressure: 101.7kPa

Purpose: To verify the worst case for Section 7.2 Maximum power and Section 7.3 Maximum booster gain computation.
The result is similar to the original result in the original report 102129-30.

Test Equipment:

Asset #	Description	Manufacturer	Model	Calibration Date	Cal Due Date
03418	Signal Generator	Agilent	E4438C	4/27/2021	4/27/2023
03360	Cable	Astrolab	32022-2-29094-36TC	4/9/2020	4/9/2022
P06239	Attenuator	Weinschel	54A-10	6/17/2020	6/17/2022
P06898	Cable	Astrolab	32022-29094K-29094K-48TC	3/25/2020	3/25/2022
03471	Spectrum Analyzer	Agilent	E4440A	2/11/2020	2/11/2022

Summary of Results on a 100ft Cable

Configuration 1

Pass: As summarized in table below, measured EIRP, Gain and UL/DL gain ratio are within limits.

Pre AGC				Pre AGC		
Pulse GSM				4.1 MHz AWGN		
Frequency (MHz)	Input (dBm)	Output (dBm)	Gain (dB)	Input (dBm)	Output (dBm)	Gain (dB)
UL 1710-1755	-40.3	19.1	59.4	-39.7	19.8	59.5
UL 1850-1915	-38.4	20.8	59.2	-40.0	19.0	59.0
U L824-894	-35.8	20.8	56.6	-36.7	19.5	56.2
UL 698-716	-34.3	20.4	54.7	-33.7	20.6	54.3
UL 776-787	-37.3	17.9	55.2	-35.5	19.6	55.1
DL 2110-2155	-61.8	4.3	66.1	-63.6	2.6	66.2
DL 1930-1995	-57.3	5.6	62.9	-59.2	4.0	63.2
DL 869-894	-53.9	7.6	61.5	-54.5	5.8	60.3
DL:728-746	-54.0	7.3	61.3	-54.3	5.5	59.8
DL 746-757	-54.1	6.5	60.6	-55.4	4.5	59.9

Pulse GSM					Conducted	Conducted and EIRP
Frequency (MHz)	Output Power (dBm)	*Ant Gain (dBi)	Cable (dB)	EIRP (dBm)	Limit Min (dBm)	Limit Max (dBm)
UL 1710-1755	19.1	8.5	0.0	27.6	17	30
UL 1850-1915	20.8	8.5	0.0	29.3	17	30
UL 824-894	20.8	8.5	0.0	29.3	17	30
UL 698-716	20.4	8.5	0.0	28.9	17	30
UL 776-787	17.9	8.5	0.0	26.4	17	30
DL 2110-2155	4.3	10.0	3.8	10.5	NA	17
DL 1930-1995	5.6	10.0	3.6	12.0	NA	17
DL 869-894	7.6	7.0	2.3	12.3	NA	17
DL:728-746	7.3	7.0	2.1	12.2	NA	17
DL 746-757	6.5	7.0	2.1	11.4	NA	17

4.1MHz AWGN					Conducted	Conducted and EIRP
Frequency (MHz)	Output Power (dBm)	*Ant Gain (dBi)	Cable (dB)	EIRP (dBm)	Limit Min (dBm)	Limit Max (dBm)
UL 1710-1755	19.8	8.5	0.0	28.3	17	30
UL 1850-1915	19.0	8.5	0.0	27.5	17	30
U L824-894	19.5	8.5	0.0	28.0	17	30
UL 698-716	20.6	8.0	0.0	28.6	17	30
UL 776-787	19.6	8.5	0.0	28.1	17	30
DL 2110-2155	2.6	10.0	3.8	8.8	NA	17
DL 1930-1995	4.0	10.0	3.6	10.4	NA	17
DL 869-894	5.8	7.0	2.3	10.5	NA	17
DL:728-746	5.5	7.0	2.1	10.4	NA	17
DL 746-757	4.5	7.0	2.1	9.4	NA	17

* Antenna gain and cable losses indicated from Fusion4Home V1.02 Antenna Kit
UL: SC232W
DL: SC248W and SC240-20NN

Section 5.5 power						
Pulse GSM				4.1 MHz AWGN		
Frequency (MHz)	Input (dBm)	Output (dBm)	Gain (dB)	Input (dBm)	Output (dBm)	Gain (dB)
UL 1710-1755	0.0	19.1	19.2	0.0	18.8	18.9
UL 1850-1915	0.0	19.6	19.7	0.0	17.2	17.3
UL 824-894	0.0	20.0	20.0	0.0	18.5	18.5
UL 698-716	0.0	19.6	19.6	0.0	20.1	20.1
UL 776-787	0.0			0.0	18.2	18.1
DL 2110-2155	-20.0	4.2	24.2	-20.0	1.4	21.4
DL 1930-1995	-20.0	5.3	25.3	-20.0	2.7	22.7
DL 869-894	-20.0	7.6	27.6	-20.0	4.8	24.8
DL:728-746	-20.0	6.6	26.6	-20.0	5.0	25.0
DL 746-757	-20.0	5.8	25.8	-20.0	4.5	24.5

UL gain vs DL gain	Pulse GSM (dB)	4.1MHz AWGN (dB)	Limit (dB)
UL gain vs DL gain 1710/2110	-6.7	-6.7	9.0
UL gain vs DL gain 1850/1930	-3.8	-4.3	9.0
UL gain vs DL gain 824/869	-4.8	-4.0	9.0
UL gain vs DL gain 776/728	-6.6	-5.5	9.0
UL gain vs DL gain 776/746	-5.4	-4.8	9.0

Test Location:	CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170
Customer:	Cellphone-Mate, Inc.
Specification:	**7.2 Maximum Power Measurement** **7.3 Maximum Booster Gain**
Work Order #:	**102129** Date 5/23/2019 and 11/27/2019
Test Type:	**Conducted Emissions**
Tested By:	**Hieu Song Nguyenpham**
Software:	EMITest 5.03.11

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

5/23/19: Test environment conditions:
Temperature: 22.3°C
Relative Humidity: 46%
Atmospheric Pressure: 102.0kPa

11/27/2019: Test environment conditions:
Temperature: 18.7°C
Relative Humidity: 40%
Atmospheric Pressure: 101.3kPa
Modifications 1 and 2 were in place during testing.

Test Equipment:

Asset #	Description	Manufacturer	Model	Calibration Date	Cal Due Date
P05411	Attenuator	Weinschel	54A-10	1/19/2018	1/19/2020
P06901	Cable	Astrolab	32022-29094K-29094K-36TC	11/27/2019	11/27/2021
03360	Cable	Astrolab	32022-2-29094-36TC	6/25/2018	6/25/2020
03418	Signal Generator	Agilent	E4438C	5/13/2019	5/13/2021
03471	Spectrum Analyzer	Agilent	E4440A	1/18/2018	1/18/2020

Test Location:	CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170
Customer:	Cellphone-Mate, Inc.
Specification:	**7.2 Maximum Power Measurement** **7.3 Maximum Booster Gain**
Work Order #:	**102129** Date 6/17/2019 and 11/27/2019
Test Type:	**Conducted Emissions**
Tested By:	**Hieu Song Nguyenpham**
Software:	EMITest 5.03.11

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

6/17/2019: Test environment conditions:
Temperature: 20.9°C
Relative Humidity: 48
Atmospheric Pressure: 101.4kPa

11/27/2019: Test environment conditions:
Temperature: 18.7°C
Relative Humidity: 40%
Atmospheric Pressure: 101.3kPa
Modifications 1 and 2 were in place during testing.

Test Equipment:

Asset #	Description	Manufacturer	Model	Calibration Date	Cal Due Date
P05411	Attenuator	Weinschel	54A-10	1/19/2018	1/19/2020
P06901	Cable	Astrolab	32022-29094K-29094K-36TC	11/27/2019	11/27/2021
03360	Cable	Astrolab	32022-2-29094-36TC	6/25/2018	6/25/2020
03418	Signal Generator	Agilent	E4438C	5/13/2019	5/13/2021
03471	Spectrum Analyzer	Agilent	E4440A	1/18/2018	1/18/2020

Test Location:	CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170
Customer:	Cellphone-Mate, Inc.
Specification:	**7.2 Maximum Power Measurement** **7.3 Maximum Booster Gain**
Work Order #:	**102129** Date 6/18/2019 and 11/27/2019
Test Type:	**Conducted Emissions**
Tested By:	**Hieu Song Nguyenpham**
Software:	EMITest 5.03.11

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 3			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 3			

Test Conditions / Notes:

6/18/2019: Test environment conditions:
Temperature: 20.9°C
Relative Humidity: 48%
Atmospheric Pressure: 101.4kPa

11/27/2019: Test environment conditions:
Temperature: 18.7°C
Relative Humidity: 40%
Atmospheric Pressure: 101.3kPa
Modifications 1 and 2 were in place during testing.

Test Equipment:

Asset #	Description	Manufacturer	Model	Calibration Date	Cal Due Date
P05411	Attenuator	Weinschel	54A-10	1/19/2018	1/19/2020
P06901	Cable	Astrolab	32022-29094K-29094K-36TC	11/27/2019	11/27/2021
03360	Cable	Astrolab	32022-2-29094-36TC	6/25/2018	6/25/2020
03418	Signal Generator	Agilent	E4438C	5/13/2019	5/13/2021
03471	Spectrum Analyzer	Agilent	E4440A	1/18/2018	1/18/2020

Summary of Results

Configuration 1

Pass: As summarized in table below, measured EIRP, Gain and UL/DL gain ratio are within limits.

Pre AGC				Pre AGC		
Pulse GSM				4.1 MHz AWGN		
Frequency (MHz)	Input (dBm)	Output (dBm)	Gain (dB)	Input (dBm)	Output (dBm)	Gain (dB)
UL 1710-1755	-43.2	19.7	62.9	-42.6	20.0	62.6
UL 1850-1915	-42.4	21.3	63.7	-43.4	19.0	62.4
UL 824-894	-38.7	21.0	59.7	-38.8	19.9	58.7
UL 698-716	-36.8	21.1	57.9	-35.9	21.0	56.9
UL 776-787	-40.3	18.2	58.5	-38.6	20.1	58.7
DL 2110-2155	-59.9	8.9	68.8	-62.4	7.1	69.5
DL 1930-1995	-56.4	10.1	66.5	-59.2	8.4	67.6
DL 869-894	-51.0	10.3	61.3	-52.0	9.0	61.0
DL:728-746	-50.9	10.1	61.0	-53.3	8.6	61.9
DL 746-757	-52.9	8.7	61.6	-54.2	7.5	61.7

Pulse GSM					Conducted	Conducted and EIRP
Frequency (MHz)	Output Power (dBm)	*Ant Gain (dBi)	Cable (dB)	EIRP (dBm)	Limit Min (dBm)	Limit Max (dBm)
UL 1710-1755	19.7	8.5	0.0	28.2	17	30
UL 1850-1915	21.3	8.5	0.0	29.8	17	30
UL 824-894	21.0	8.5	0.0	29.5	17	30
UL 698-716	21.1	8.5	0.0	29.6	17	30
UL 776-787	18.2	8.5	0.0	26.7	17	30
DL 2110-2155	8.9	10.0	3.8	15.1	NA	17
DL 1930-1995	10.1	10.0	3.6	16.5	NA	17
DL 869-894	10.3	7.0	2.3	15.0	NA	17
DL:728-746	10.1	7.0	2.1	15.0	NA	17
DL 746-757	8.7	7.0	2.1	13.6	NA	17

4.1MHz AWGN					Conducted	Conducted and EIRP
Frequency (MHz)	Output Power (dBm)	*Ant Gain (dBi)	Cable (dB)	EIRP (dBm)	Limit Min (dBm)	Limit Max (dBm)
UL 1710-1755	20.0	8.5	0.0	28.5	17	30
UL 1850-1915	19.0	8.5	0.0	27.5	17	30
UL 824-894	19.9	8.5	0.0	28.4	17	30
UL 698-716	21.0	8.5	0.0	29.5	17	30
UL 776-787	20.1	8.5	0.0	28.6	17	30
DL 2110-2155	7.1	10.0	3.8	13.3	NA	17
DL 1930-1995	8.4	10.0	3.6	14.8	NA	17
DL 869-894	9.0	7.0	2.3	13.7	NA	17
DL:728-746	8.6	7.0	2.1	13.5	NA	17
DL 746-757	7.5	7.0	2.1	12.4	NA	17

* Antenna gain and cable losses indicated from Fusion4Home V1.02 Antenna Kit
UL: SC232W
DL: SC248W and SC240-20NN

Section 5.5 power						
Pulse GSM				4.1 MHz AWGN		
Frequency (MHz)	Input (dBm)	Output (dBm)	Gain (dB)	Input (dBm)	Output (dBm)	Gain (dB)
UL 1710-1755	0.0	19.0	19.0	0.0	19.5	19.5
UL 1850-1915	0.0	20.6	20.6	0.0	18.6	18.6
UL 824-894	0.0	21.0	21.0	0.0	19.0	19.0
UL 698-716	0.0	20.5	20.5	0.0	20.3	20.3
UL 776-787	0.0	18.1	18.1	0.0	19.5	19.5
DL 2110-2155	-20.0	8.6	28.6	-20.0	6.6	26.6
DL 1930-1995	-20.0	9.8	29.8	-20.0	7.2	27.2
DL 869-894	-20.0	9.6	29.6	-20.0	8.1	28.1
DL:728-746	-20.0	9.4	29.4	-20.0	8.3	28.3
DL 746-757	-20.0	7.9	27.9	-20.0	7.1	27.1

UL gain vs DL gain	Pulse GSM (dB)	4.1MHz AWGN (dB)	Limit (dB)
UL gain vs DL gain 1710/2110	-5.9	-6.9	9.0
UL gain vs DL gain 1850/1930	-2.8	-5.2	9.0
UL gain vs DL gain 824/869	-1.6	-2.3	9.0
UL gain vs DL gain 776/728	-3.1	-5.0	9.0
UL gain vs DL gain 776/746	-3.1	-3.0	9.0

Summary of Results on a 100ft Cable

Pass: As summarized in table below, measured EIRP, Gain and UL/DL gain ratio are within limits.

Pre AGC				Pre AGC		
Pulse GSM				4.1 MHz AWGN		
Frequency (MHz)	Input (dBm)	Output (dBm)	Gain (dB)	Input (dBm)	Output (dBm)	Gain (dB)
UL1710-1755	-40.1	20.1	60.2	-39.0	20.7	59.7
UL1850-1915	-38.3	21.3	59.6	-39.0	19.0	58.0
UL824-894	-35.9	21.2	57.1	-36.0	19.9	55.9
UL 698-716	-34.3	21.0	55.3	-33.5	21.1	54.6
UL776-787	-37.6	18.3	55.9	-35.5	20.1	55.6
DL2110-2155	-62.6	4.2	66.8	-63.8	2.9	66.7
DL1930-1995	-57.6	5.5	63.1	-59.4	4.4	63.8
DL869-894	-53.0	7.5	60.5	-54.2	6.1	60.3
DL:728-746	-53.9	7.2	61.1	-54.4	6.0	60.4
DL 746-757	-55.1	6.4	61.5	-55.4	5.0	60.4

Pulse GSM					Conducted	Conducted and EIRP
Frequency (MHz)	Output Power (dBm)	*Ant Gain (dBi)	Cable (dB)	EIRP (dBm)	Limit Min (dBm)	Limit Max (dBm)
UL1710-1755	20.1	8.5	0.0	28.6	17	30
UL1850-1915	21.3	8.5	0.0	29.8	17	30
UL824-894	21.2	8.5	0.0	29.7	17	30
UL 698-716	21.0	8.5	0.0	29.5	17	30
UL776-787	18.3	8.5	0.0	26.8	17	30
DL2110-2155	4.2	10.0	3.8	10.4	NA	17
DL1930-1995	5.5	10.0	3.6	11.9	NA	17
DL869-894	7.5	7.0	2.3	12.2	NA	17
DL:728-746	7.2	7.0	2.1	12.1	NA	17
DL 746-757	6.4	7.0	2.1	11.3	NA	17

4.1MHz AWGN					Conducted	Conducted and EIRP
Frequency (MHz)	Output Power (dBm)	*Ant Gain (dBi)	Cable (dB)	EIRP (dBm)	Limit Min (dBm)	Limit Max (dBm)
UL 1710-1755	20.7	8.5	0.0	29.2	17	30
UL 1850-1915	19.0	8.5	0.0	27.5	17	30
U L824-894	19.9	8.5	0.0	28.4	17	30
UL 698-716	21.1	8.5	0.0	29.6	17	30
UL 776-787	20.1	8.5	0.0	28.6	17	30
DL 2110-2155	2.9	10.0	3.8	9.1	NA	17
DL 1930-1995	4.4	10.0	3.6	10.8	NA	17
DL 869-894	6.1	7.0	2.3	10.8	NA	17
DL:728-746	6.0	7.0	2.1	10.9	NA	17
DL 746-757	5.0	7.0	2.1	9.9	NA	17

* Antenna gain and cable losses indicated from Fusion4Home V1.02 Antenna Kit
UL: SC232W
DL: SC248W and SC240-20NN

Section 5.5 power						
Pulse GSM				4.1 MHz AWGN		
Frequency (MHz)	Input (dBm)	Output (dBm)	Gain (dB)	Input (dBm)	Output (dBm)	Gain (dB)
UL 1710-1755	0.0	19.7	19.7	0.0	19.7	19.7
UL 1850-1915	0.0	20.8	20.8	0.0	18.4	18.4
UL 824-894	0.0	20.3	20.3	0.0	18.2	18.2
UL 698-716	0.0	20.1	20.1	0.0	20.1	20.1
UL 776-787	0.0	17.8	17.8	0.0	18.5	18.5
DL 2110-2155	-20.0	3.2	23.2	-20.0	2.4	22.4
DL 1930-1995	-20.0	5.5	25.5	-20.0	3.2	23.2
DL 869-894	-20.0	6.7	26.7	-20.0	5.2	25.2
DL:728-746	-20.0	6.4	26.4	-20.0	5.7	25.7
DL 746-757	-20.0	5.5	25.5	-20.0	4.9	24.9

UL gain vs DL gain	Pulse GSM (dB)	4.1MHz AWGN (dB)	Limit (dB)
UL gain vs DL gain 1710/2110	-6.6	-7.0	9.0
UL gain vs DL gain 1850/1930	-3.5	-5.8	9.0
UL gain vs DL gain 824/869	-3.4	-4.4	9.0
UL gain vs DL gain 776/728	-5.8	-5.8	9.0
UL gain vs DL gain 776/746	-5.6	-4.8	9.0

Summary of Results on a 150ft Cable

Pass: As summarized in table below, measured EIRP, Gain and UL/DL gain ratio are within limits.

Pre AGC				Pre AGC		
Pulse GSM				4.1 MHz AWGN		
Frequency (MHz)	Input (dBm)	Output (dBm)	Gain (dB)	Input (dBm)	Output (dBm)	Gain (dB)
UL 1710-1755	-34.9	19.5	54.4	-34.4	19.9	54.3
UL 1850-1915	-33.3	20.7	54.0	-35.0	19.0	54.0
UL 824-894	-32.4	21.1	53.5	-33.3	19.8	53.1
UL 698-716	-31.7	20.9	52.6	-31.0	21.0	52.0
UL 776-787	-34.6	18.3	52.9	-32.8	20.3	53.1
DL 2110-2155	-62.6	-0.1	62.5	-64.2	-2.0	62.2
DL 1930-1995	-58.4	1.4	59.8	-60.1	-0.4	59.7
DL 869-894	-53.9	4.7	58.6	-54.9	3.1	58.0
DL:728-746	-53.9	4.8	58.7	-55.4	3.1	58.5
DL 746-757	-55.1	3.8	58.9	-56.4	2.1	58.5

Pulse GSM					Conducted	Conducted and EIRP
Frequency (MHz)	Output Power (dBm)	*Ant Gain (dBi)	Cable (dB)	EIRP (dBm)	Limit Min (dBm)	Limit Max (dBm)
UL 1710-1755	19.5	8.5	0.0	28.0	17	30
UL 1850-1915	20.7	8.5	0.0	29.2	17	30
UL 824-894	21.1	8.5	0.0	29.6	17	30
UL 698-716	20.9	8.5	0.0	29.4	17	30
UL 776-787	18.3	8.5	0.0	26.8	17	30
DL 2110-2155	-0.1	10.0	3.8	6.1	NA	17
DL 1930-1995	1.4	10.0	3.6	7.8	NA	17
DL 869-894	4.7	7.0	2.3	9.4	NA	17
DL:728-746	4.8	7.0	2.1	9.7	NA	17
DL 746-757	3.8	7.0	2.1	8.7	NA	17

4.1MHz AWGN					Conducted	Conducted and EIRP
Frequency (MHz)	**Output Power (dBm)**	***Ant Gain (dBi)**	**Cable (dB)**	**EIRP (dBm)**	**Limit Min (dBm)**	Limit Max (dBm)
UL 1710-1755	19.9	8.5	0.0	28.4	17	30
UL 1850-1915	19.0	8.5	0.0	27.5	17	30
UL 824-894	19.8	8.5	0.0	28.3	17	30
UL 698-716	21.0	8.5	0.0	29.5	17	30
UL 776-787	20.3	8.5	0.0	28.8	17	30
DL 2110-2155	-2.0	10.0	3.8	4.2	NA	17
DL 1930-1995	-0.4	10.0	3.6	6.0	NA	17
DL 869-894	3.1	7.0	2.3	7.8	NA	17
DL:728-746	3.1	7.0	2.1	8.0	NA	17
DL 746-757	2.1	7.0	2.1	7.0	NA	17

* Antenna gain and cable losses indicated from Fusion4Home V1.02 Antenna Kit
UL: SC232W
DL: SC248W and SC240-20NN

Section 5.5 power						
Pulse GSM				4.1 MHz AWGN		
Frequency (MHz)	**Input (dBm)**	**Output (dBm)**	**Gain (dB)**	**Input (dBm)**	**Output (dBm)**	**Gain (dB)**
UL 1710-1755	0.0	19.0	19.0	0.0	18.0	18.0
UL 1850-1915	0.0	20.4	20.4	0.0	18.4	18.4
UL 824-894	0.0	21.1	21.1	0.0	19.6	19.6
UL 698-716	0.0	20.4	20.4	0.0	20.5	20.5
UL 776-787	0.0	18.0	18.0	0.0	19.8	19.8
DL 2110-2155	-20.0	-0.5	19.5	-20.0	-3.6	16.4
DL 1930-1995	-20.0	1.1	21.1	-20.0	-1.4	18.6
DL 869-894	-20.0	3.9	23.9	-20.0	2.4	22.4
DL:728-746	-20.0	3.9	23.9	-20.0	2.7	22.7
DL 746-757	-20.0	2.9	22.9	-20.0	2.0	22.0

UL gain vs DL gain	Pulse GSM (dB)	4.1MHz AWGN (dB)	Limit (dB)
UL gain vs DL gain 1710/2110	-8.1	-7.9	9.0
UL gain vs DL gain 1850/1930	-5.8	-5.7	9.0
UL gain vs DL gain 824/869	-5.1	-4.9	9.0
UL gain vs DL gain 776/728	-6.1	-6.5	9.0
UL gain vs DL gain 776/746	-6.0	-5.4	9.0

Configuration 2

Pass: As summarized in table below, measured EIRP, Gain and UL/DL gain ratio are within limits.
CKC Laboratories was only contracted to perform on a 50ft Cable.

Pre AGC				Pre AGC		
Pulse GSM				4.1 MHz AWGN		
Frequency (MHz)	Input (dBm)	Output (dBm)	Gain (dB)	Input (dBm)	Output (dBm)	Gain (dB)
UL 1710-1755	-41.9	18.9	60.8	-41.8	19.6	61.4
UL 1850-1915	-40.0	21.4	61.4	-41.5	18.4	59.9
UL 824-894	-38.0	21.4	59.4	-38.5	19.3	57.8
UL 698-716	-35.5	21.0	56.5	-34.6	21.0	55.6
UL 776-787	-37.8	19.7	57.5	-35.8	21.3	57.1
DL 2110-2155	-60.8	7.2	68.0	-62.8	5.3	68.1
DL 1930-1995	-59.1	7.7	66.8	-60.4	5.6	66.0
DL 869-894	-51.7	9.0	60.7	-52.4	7.2	59.6
DL:728-746	-51.9	8.7	60.6	-53.3	7.1	60.4
DL 746-757	-52.6	8.1	60.7	-53.9	6.4	60.3

Pulse GSM					Conducted	Conducted and EIRP
Frequency (MHz)	Output Power (dBm)	*Ant Gain (dBi)	Cable (dB)	EIRP (dBm)	Limit Min (dBm)	Limit Max (dBm)
UL 1710-1755	18.9	8.5	0.0	27.4	17	30
UL 1850-1915	21.4	8.5	0.0	29.9	17	30
UL 824-894	21.4	8.5	0.0	29.9	17	30
UL 698-716	21.0	8.5	0.0	29.5	17	30
UL 776-787	19.7	8.5	0.0	28.2	17	30
DL 2110-2155	7.2	4.0	0.2	11.0	NA	17
DL 1930-1995	7.7	4.0	0.2	11.5	NA	17
DL 869-894	9.0	3.0	0.2	11.8	NA	17
DL:728-746	8.7	2.5	0.2	11.0	NA	17
DL 746-757	8.1	2.5	0.2	10.4	NA	17

4.1MHz AWGN					Conducted	Conducted and EIRP
Frequency (MHz)	Output Power (dBm)	*Ant Gain (dBi)	Cable (dB)	EIRP (dBm)	Limit Min (dBm)	Limit Max (dBm)
UL 1710-1755	19.6	8.5	0.0	28.1	17	30
UL 1850-1915	18.4	8.5	0.0	26.9	17	30
UL 824-894	19.3	8.5	0.0	27.8	17	30
UL 698-716	21.0	8.5	0.0	29.5	17	30
UL 776-787	21.3	8.5	0.0	29.8	17	30
DL 2110-2155	5.3	4.0	0.2	9.1	NA	17
DL 1930-1995	5.6	4.0	0.2	9.4	NA	17
DL 869-894	7.2	3.0	0.2	10.0	NA	17
DL:728-746	7.1	2.5	0.2	9.4	NA	17
DL 746-757	6.4	2.5	0.2	8.7	NA	17

* Antenna gain and cable losses indicated from Flare RT V1.02 Antenna Kit
UL: SC232W
DL : SC323W and Cable Loss Integrated on the antenna

Section 5.5 power						
Pulse GSM				4.1 MHz AWGN		
Frequency (MHz)	Input (dBm)	Output (dBm)	Gain (dB)	Input (dBm)	Output (dBm)	Gain (dB)
UL 1710-1755	0.0	18.7	18.7	0.0	19.0	19.0
UL 1850-1915	0.0	21.1	21.1	0.0	17.6	17.6
UL 824-894	0.0	21.0	21.0	0.0	19.0	19.0
UL 698-716	0.0	21.0	21.0	0.0	20.8	20.8
UL 776-787	0.0	19.4	19.4	0.0	21.1	21.1
DL 2110-2155	-20.0	7.0	27.0	-20.0	4.8	24.8
DL 1930-1995	-20.0	6.8	26.8	-20.0	5.4	25.4
DL 869-894	-20.0	8.7	28.7	-20.0	6.4	26.4
DL:728-746	-20.0	8.0	28.0	-20.0	5.3	25.3
DL 746-757	-20.0	8.0	28.0	-20.0	5.8	25.8

UL gain vs DL gain	Pulse GSM (dB)	4.1MHz AWGN (dB)	Limit (dB)
UL gain vs DL gain 1710/2110	-7.2	-6.7	9.0
UL gain vs DL gain 1850/1930	-4.6	-5.3	9.0
UL gain vs DL gain 824/869	-1.1	-1.6	9.0
UL gain vs DL gain 776/728	-3.9	-4.6	9.0
UL gain vs DL gain 776/746	-3.2	-3.2	9.0

Configuration 3

Pass: As summarized in table below, measured EIRP, Gain and UL/DL gain ratio are within limits.
CKC Laboratories was only contracted to perform on a 50ft Cable.

Pre AGC				Pre AGC		
Pulse GSM				4.1 MHz AWGN		
Frequency (MHz)	Input (dBm)	Output (dBm)	Gain (dB)	Input (dBm)	Output (dBm)	Gain (dB)
UL 1710-1755	-43.5	20.0	63.5	-42.4	20.1	62.5
UL 1850-1915	-41.1	20.8	61.9	-42.3	19.0	61.3
UL 824-894	-37.8	21.3	59.1	-38.3	19.9	58.2
UL 698-716	-36.1	20.9	57.0	-35.5	20.9	56.4
UL 776-787	-38.9	19.9	58.8	-37.0	21.4	58.4
DL 2110-2155	-60.8	8.8	69.6	-62.9	7.1	70.0
DL 1930-1995	-58.3	8.9	67.2	-60.0	7.2	67.2
DL8 69-894	-51.2	9.8	61.0	-52.3	8.7	61.0
DL:728-746	-52.0	9.8	61.8	-53.2	8.2	61.4
DL 746-757	-53.0	8.4	61.4	-54.4	6.9	61.3

Pulse GSM					Conducted	Conducted and EIRP
Frequency (MHz)	Output Power (dBm)	*Ant Gain (dBi)	Cable (dB)	EIRP (dBm)	Limit Min (dBm)	Limit Max (dBm)
UL 1710-1755	20.0	8.5	0.0	28.5	17	30
UL 1850-1915	20.8	8.5	0.0	29.3	17	30
UL 824-894	21.3	8.5	0.0	29.8	17	30
UL 698-716	20.9	8.5	0.0	29.4	17	30
UL 776-787	19.9	8.5	0.0	28.4	17	30
DL 2110-2155	8.8	8.0	0.2	16.6	NA	17
DL 1930-1995	8.9	8.0	0.2	16.7	NA	17
DL 869-894	9.8	7.0	0.2	16.6	NA	17
DL:728-746	9.8	7.0	0.2	16.6	NA	17
DL 746-757	8.4	7.0	0.2	15.2	NA	17

4.1MHz AWGN					Conducted	Conducted and EIRP
Frequency (MHz)	Output Power (dBm)	*Ant Gain (dBi)	Cable (dB)	EIRP (dBm)	Limit Min (dBm)	Limit Max (dBm)
UL 1710-1755	20.1	8.5	0.0	28.6	17	30
UL1850-1915	19.0	8.5	0.0	27.5	17	30
UL824-894	19.9	8.5	0.0	28.4	17	30
UL 698-716	20.9	8.5	0.0	29.4	17	30
UL776-787	21.4	8.5	0.0	29.9	17	30
DL2110-2155	7.1	8.0	0.2	14.9	NA	17
DL1930-1995	7.2	8.0	0.2	15.0	NA	17
DL869-894	8.7	7.0	0.2	15.5	NA	17
DL:728-746	8.2	7.0	0.2	15.0	NA	17
DL 746-757	6.9	7.0	0.2	13.7	NA	17

* Antenna gain and cable losses indicated from Panel-RT V1.02 Antenna Kit
UL: SC232W
DL: SC248W and Cable Loss Integrated on the antenna

Section 5.5 power						
Pulse GSM				4.1 MHz AWGN		
Frequency (MHz)	Input (dBm)	Output (dBm)	Gain (dB)	Input (dBm)	Output (dBm)	Gain (dB)
UL1710-1755	0.0	19.1	19.1	0.0	17.1	17.1
UL1850-1915	0.0	19.2	19.2	0.0	18.4	18.4
UL824-894	0.0	21.1	21.1	0.0	19.5	19.5
UL 698-716	0.0	20.6	20.6	0.0	19.2	19.2
UL776-787	0.0	19.4	19.4	0.0	21.1	21.1
DL2110-2155	-20.0	8.5	28.5	-20.0	7.3	27.3
DL1930-1995	-20.0	7.9	27.9	-20.0	6.9	26.9
DL869-894	-20.0	9.0	29.0	-20.0	7.3	27.3
DL:728-746	-20.0	9.8	29.8	-20.0	6.1	26.1
DL 746-757	-20.0	8.3	28.3	-20.0	6.8	26.8

UL gain vs DL gain	Pulse GSM (dB)	4.1MHz AWGN (dB)	Limit (dB)
UL gain vs DL gain 1710/2110	-6.1	-7.5	9.0
UL gain vs DL gain 1850/1930	-5.3	-5.9	9.0
UL gain vs DL gain 824/869	-1.9	-2.8	9.0
UL gain vs DL gain 776/728	-4.8	-5.0	9.0
UL gain vs DL gain 776/746	-2.6	-2.9	9.0

7.4 Intermodulation Product

Test Conditions / Setup

Test Location:	CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170
Customer:	Cellphone-Mate, Inc.
Specification:	**7.4 Intermodulation Product**
Work Order #:	**102129** Date 05/28/2019
Test Type:	**Conducted Emissions**
Tested By:	**Hieu S. Nguyenpham**
Software:	EMITest 5.03.11

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Test environment conditions:
Temperature: 22.2°C
Relative Humidity: 44%
Atmospheric Pressure: 101.7kPa
Modification 1 was in place during testing.

Test Equipment:

Asset #	Description	Manufacturer	Model	Calibration Date	Cal Due Date
P05411	Attenuator	Weinschel	54A-10	1/19/2018	1/19/2020
P07192	Cable	Astro	32022-29094K-29094K-48TC	10/9/2017	10/9/2019
P07191	Cable	Astro	32022-29094K-29094K-48TC	10/30/2017	10/30/2019
03418	Signal Generator	Agilent	E4438C	05/13/2019	05/13/2021
03471	Spectrum Analyzer	Agilent	E4440A	1/18/2018	1/18/2020

Test Location: CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170
Customer: Cellphone-Mate, Inc.
Specification: **7.4 Intermodulation Product**
Work Order #: **102129** Date 06/17//2019
Test Type: **Conducted Emissions**
Tested By: **Hieu S. Nguyenpham**
Software: EMITest 5.03.11

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

Test environment conditions:
Temperature: 20.9°C
Relative Humidity: 48%
Atmospheric Pressure: 101.4kPa
Modification 1 was in place during testing.

Test Equipment:

Asset #	Description	Manufacturer	Model	Calibration Date	Cal Due Date
P05411	Attenuator	Weinschel	54A-10	1/19/2018	1/19/2020
P07192	Cable	Astro	32022-29094K-29094K-48TC	10/9/2017	10/9/2019
P07191	Cable	Astro	32022-29094K-29094K-48TC	10/30/2017	10/30/2019
03418	Signal Generator	Agilent	E4438C	05/13/2019	05/13/2021
03471	Spectrum Analyzer	Agilent	E4440A	1/18/2018	1/18/2020

Test Location:	CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170
Customer:	Cellphone-Mate, Inc.
Specification:	**7.4 Intermodulation Product**
Work Order #:	**102129** Date 06/18//2019
Test Type:	**Conducted Emissions**
Tested By:	**Hieu S. Nguyenpham**
Software:	EMITest 5.03.11

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 3			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 3			

Test Conditions / Notes:

Test environment conditions:
Temperature: 20.9°C
Relative Humidity: 48%
Atmospheric Pressure: 101.4kPa
Modification 1 was in place during testing.

Test Equipment:

Asset #	Description	Manufacturer	Model	Calibration Date	Cal Due Date
P05411	Attenuator	Weinschel	54A-10	1/19/2018	1/19/2020
P07192	Cable	Astro	32022-29094K-29094K-48TC	10/9/2017	10/9/2019
P07191	Cable	Astro	32022-29094K-29094K-48TC	10/30/2017	10/30/2019
03418	Signal Generator	Agilent	E4438C	05/13/2019	05/13/2021
03471	Spectrum Analyzer	Agilent	E4440A	1/18/2018	1/18/2020

Summary of Results

Configuration 1

Pass: As shown on the plots, all intermodulation products are measured below -19dbm limit.

Inter Modulation Product			
Frequency (MHz)	**Pre AGC (dBm)**	**Limit (dBm)**	**Results**
UL 1710-1755	-20.3	-19	Pass
UL 1850-1915	-23.3	-19	Pass
UL 824-894	-24.4	-19	Pass
UL 698-716	-23.5	-19	Pass
UL 776-787	-24.2	-19	Pass
DL 2110-2155	-26.0	-19	Pass
DL 1930-1995	-48.9	-19	Pass
DL 869-894	-23.8	-19	Pass
DL 728-746	-36.8	-19	Pass
DL 746-757	-41.6	-19	Pass

Note: The EUT maintains compliance with the intermodulation limit at input power of AGC+10dB

7.4 Summary of Results on a 100ft Cable

Pass: As shown on the plots, all intermodulation products are measured below -19dbm limit.

Inter Modulation Product			
Frequency (MHz)	**Pre AGC (dBm)**	**Limit (dBm)**	**Results**
UL 1710-1755	-20.4	-19	Pass
UL 1850-1915	-23.2	-19	Pass
UL 824-894	-24.7	-19	Pass
UL 698-716	-23.6	-19	Pass
UL 776-787	-23.1	-19	Pass
DL 2110-2155	-30.4	-19	Pass
DL 1930-1995	-51.1	-19	Pass
DL 869-894	-26.8	-19	Pass
DL 728-746	-37.1	-19	Pass
DL 746-757	-43.9	-19	Pass

Note: The EUT maintains compliance with the intermodulation limit at input power of AGC+10dB

7.4 Summary of Results on a 150ft Cable

Pass: As shown on the plots, all intermodulation products are measured below -19dbm limit.

Inter Modulation Product			
Frequency (MHz)	**Pre AGC (dBm)**	**Limit (dBm)**	**Results**
UL 1710-1755	-20.3	-19	Pass
UL 1850-1915	-23.2	-19	Pass
UL 824-894	-25.4	-19	Pass
UL 698-716	-23.8	-19	Pass
UL 776-787	-22.9	-19	Pass
DL 2110-2155	-37.1	-19	Pass
DL 1930-1995	-54.8	-19	Pass
DL 869-894	-30.4	-19	Pass
DL 728-746	-40.3	-19	Pass
DL 746-757	-47.0	-19	Pass

Note: The EUT maintains compliance with the intermodulation limit at input power of AGC+10dB

Configuration 2

Pass: As shown on the plots, all intermodulation products are measured below -19dbm limit. Only contract to perform on a 50ft Cable

Inter Modulation Product			
Frequency (MHz)	**Pre AGC (dBm)**	**Limit (dBm)**	**Results**
UL 1710-1755	-20.0	-19	Pass
UL 1850-1915	-22.2	-19	Pass
UL 824-894	-24.1	-19	Pass
UL 698-716	-23.1	-19	Pass
UL 776-787	-21.5	-19	Pass
DL 2110-2155	-28.5	-19	Pass
DL 1930-1995	-45.5	-19	Pass
DL 869-894	-24.7	-19	Pass
DL 728-746	-34.9	-19	Pass
DL 746-757	-41.0	-19	Pass

Note: The EUT maintains compliance with the intermodulation limit at input power of AGC+10dB

Configuration 3

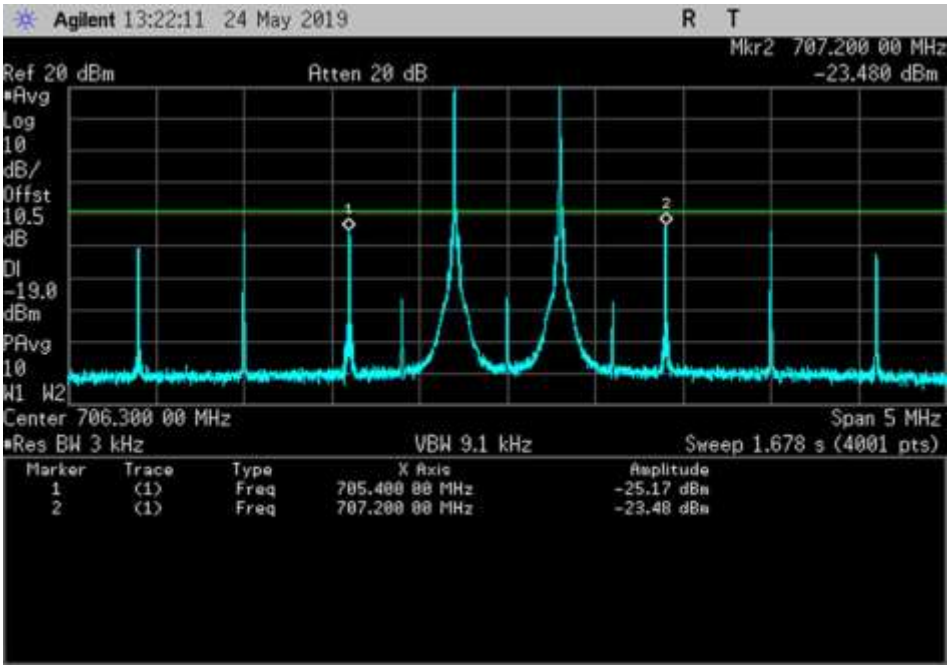
Pass: As shown on the plots, all intermodulation products are measured below -19dbm limit. Only contract to perform on a 50ft Cable

Inter Modulation Product			
Frequency (MHz)	**Pre AGC (dBm)**	**Limit (dBm)**	**Results**
UL 1710-1755	-21.7	-19	Pass
UL 1850-1915	-22.6	-19	Pass
UL 824-894	-21.0	-19	Pass
UL 698-716	-23.4	-19	Pass
UL 776-787	-21.6	-19	Pass
DL 2110-2155	-30.9	-19	Pass
DL 1930-1995	-46.0	-19	Pass
DL 869-894	-24.9	-19	Pass
DL 728-746	-35.4	-19	Pass
DL 746-757	-40.7	-19	Pass

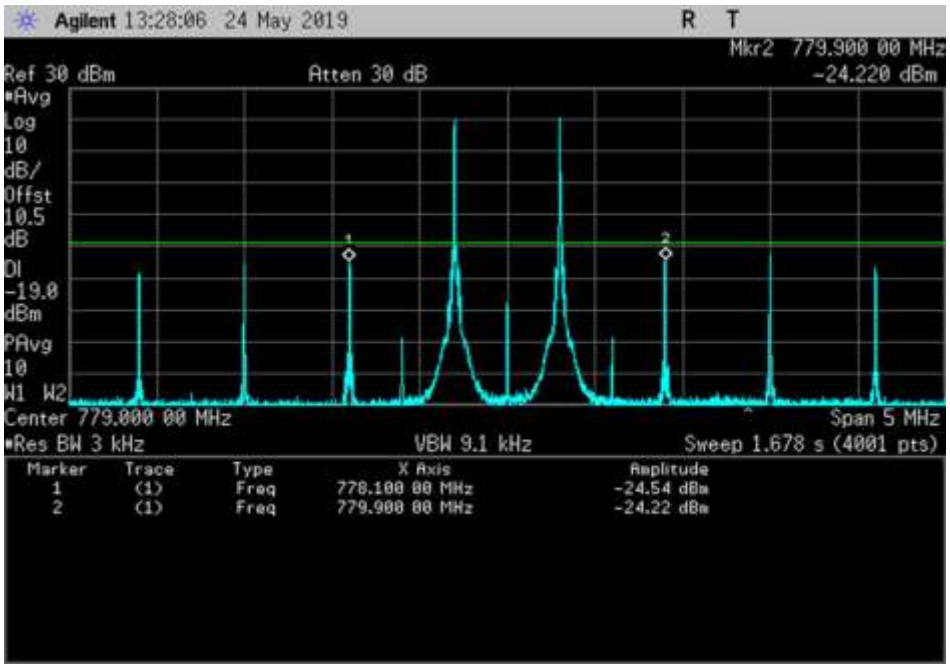
Note: The EUT maintains compliance with the intermodulation limit at input power of AGC+10dB

Plots

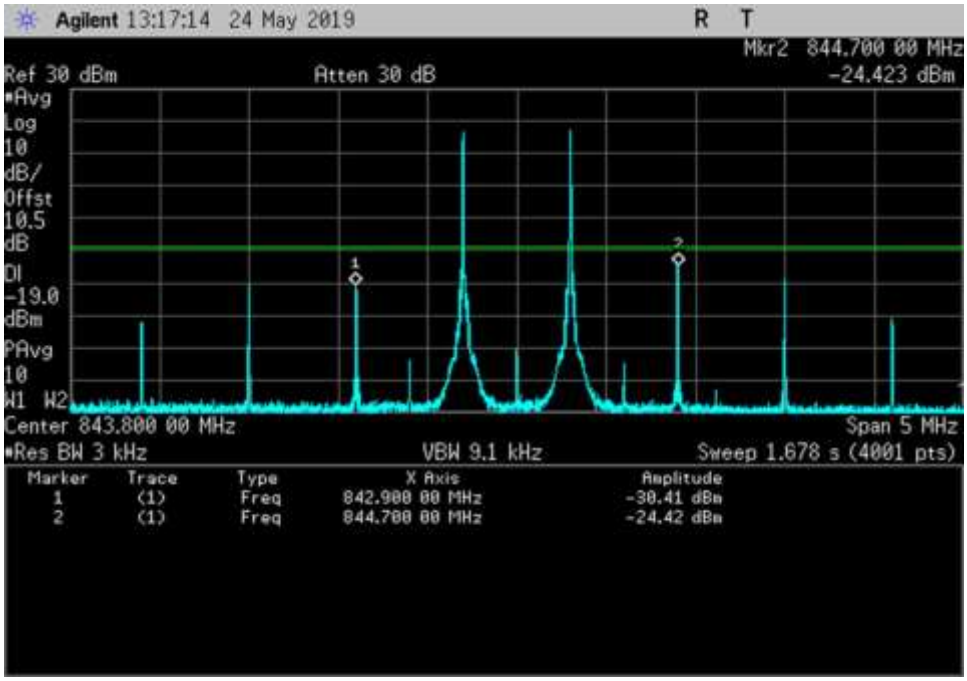
Configuration 1



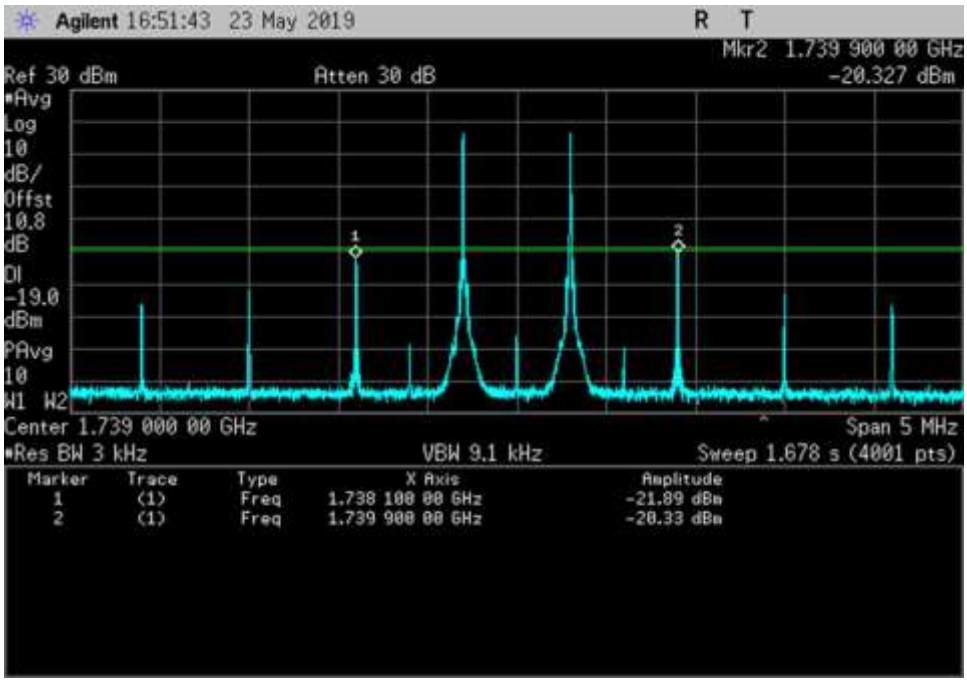
UL_698-716_ 706.3MHz_50ft Cable



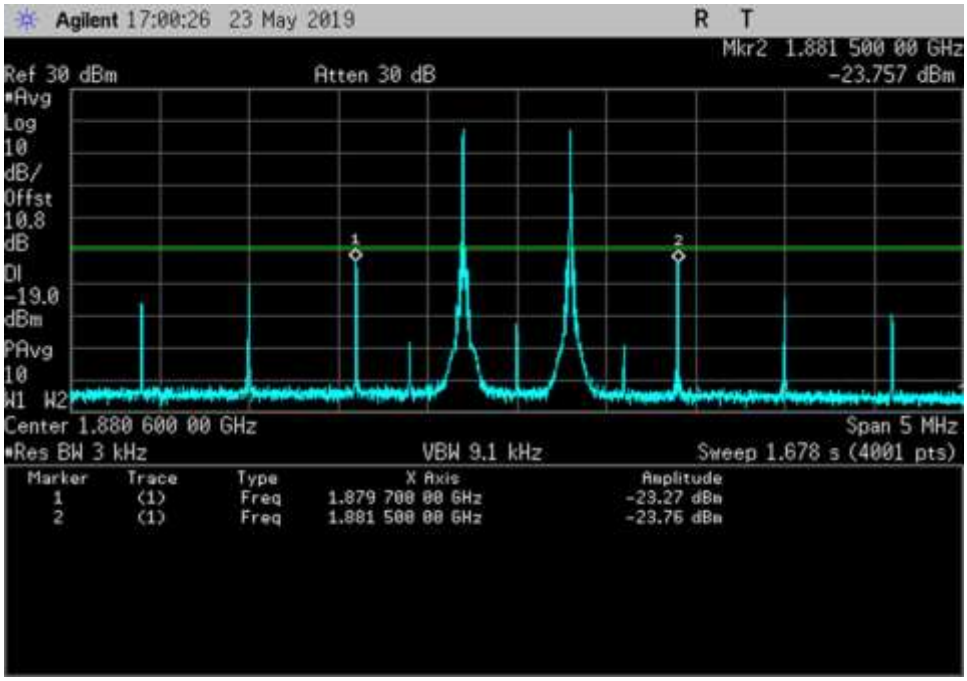
UL_776-787_ 779MHz_50ft Cable



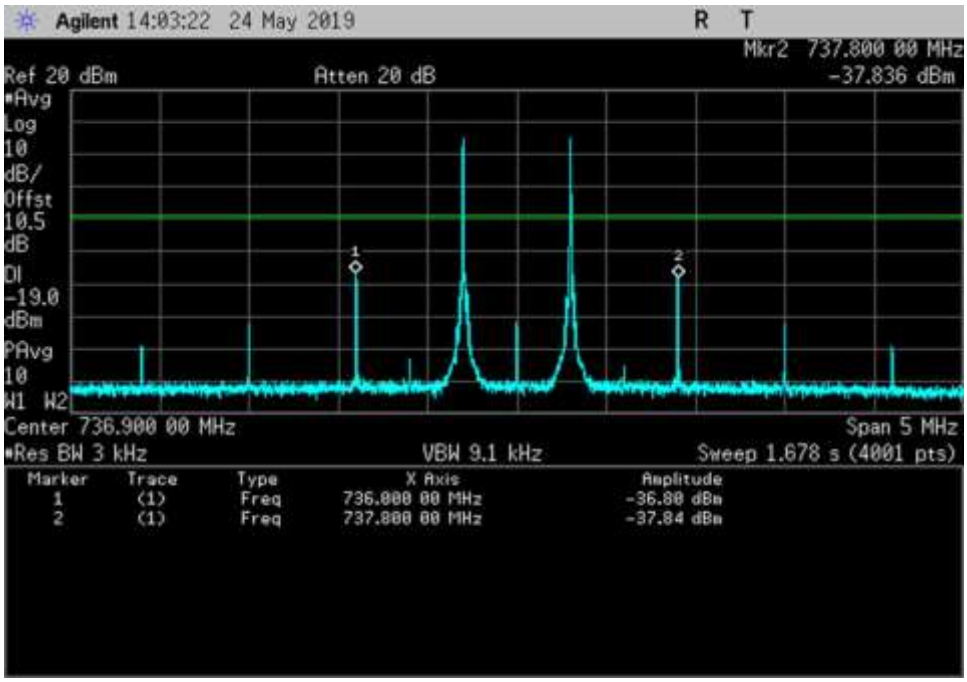
UL_824-849_ 843.8MHz_50ft Cable



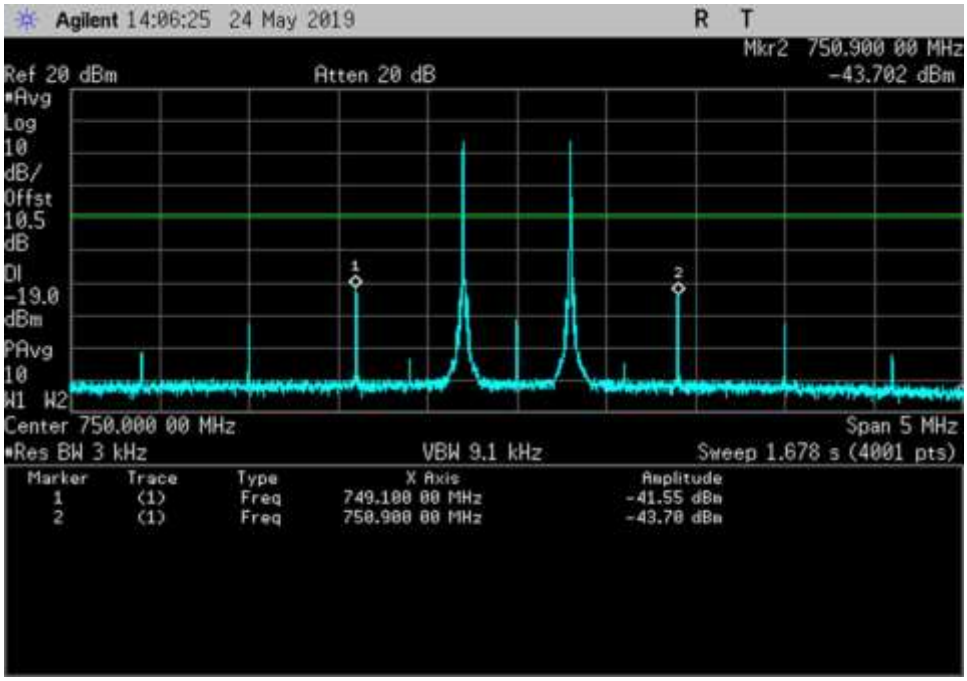
UL_1710-1755_ 1739MHz_50ft Cable



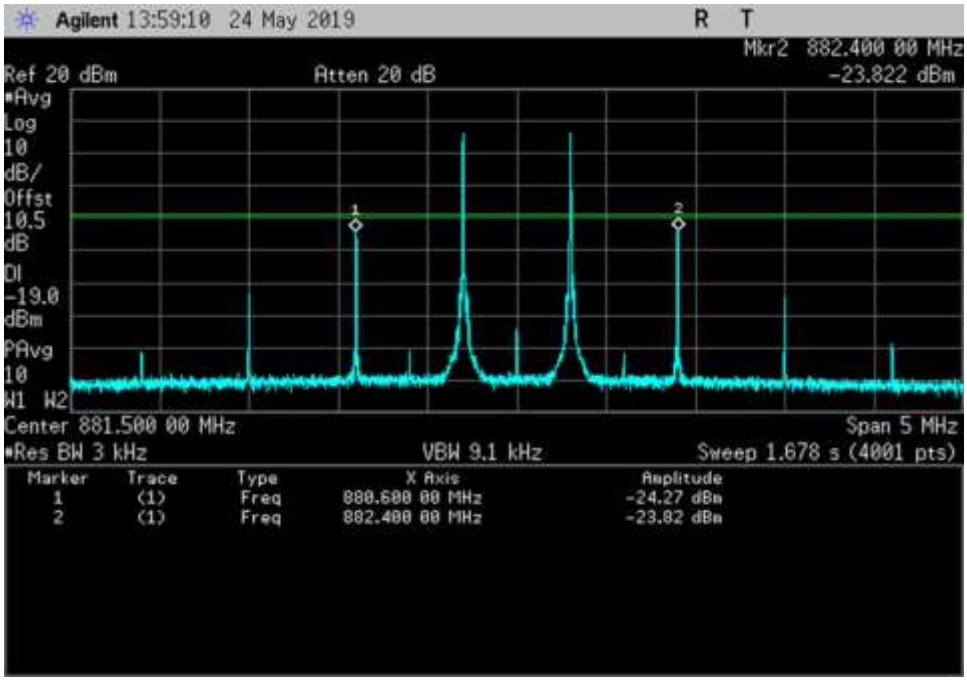
UL_1850-1915_ 1880.6MHz_50ft Cable



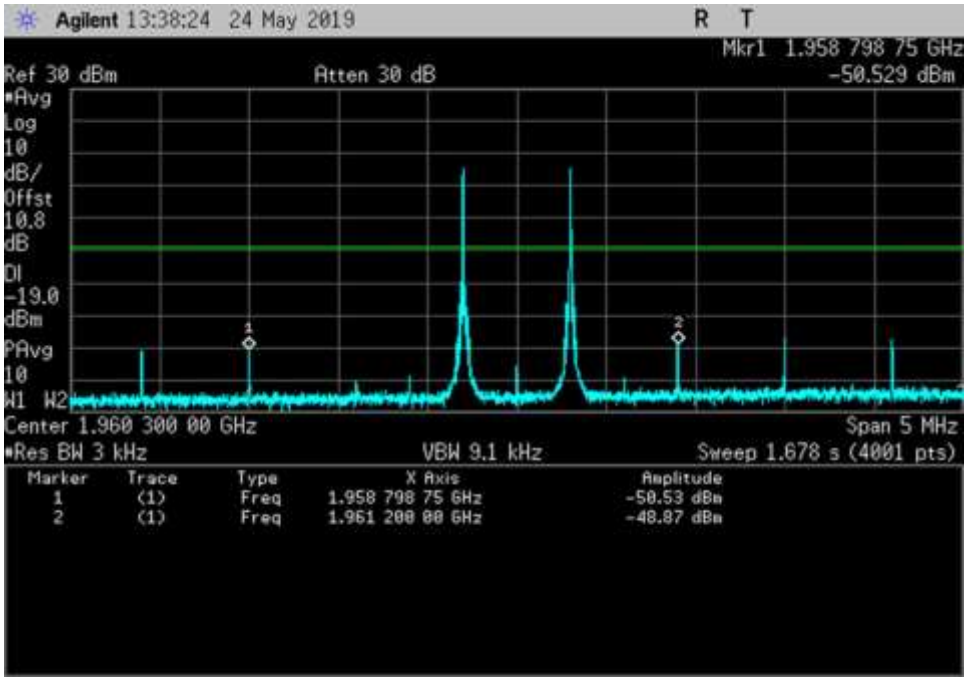
DL_728-746_ 736.9MHz_50ft Cable



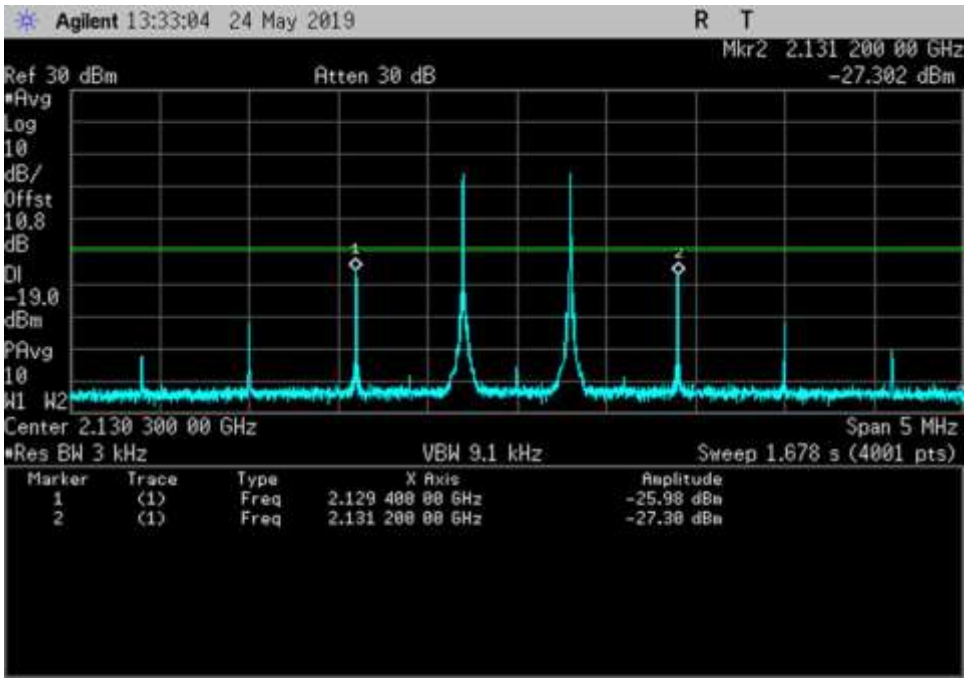
DL_746-757_ 750MHz_50ft Cable



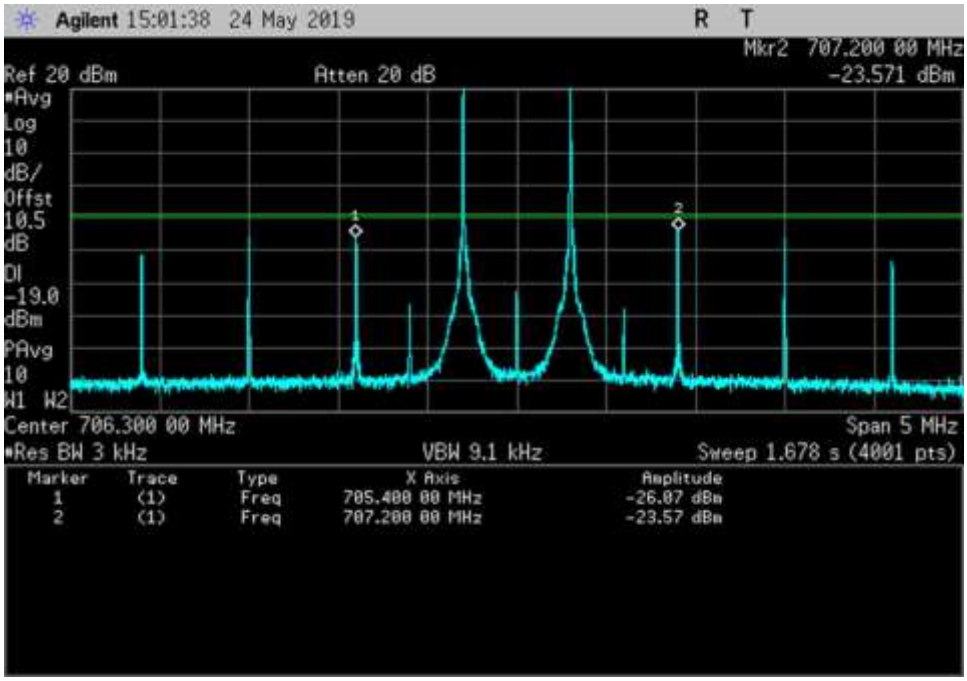
DL_869-894_ 881.5MHz_50ft Cable



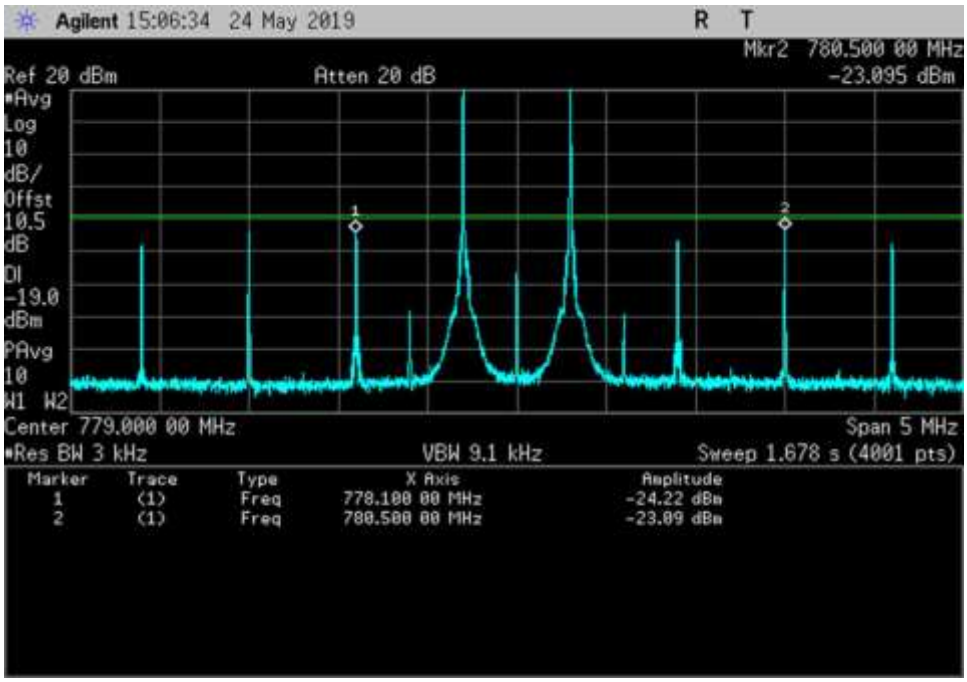
DL_1930-1995_ 1960.3MHz_50ft Cable



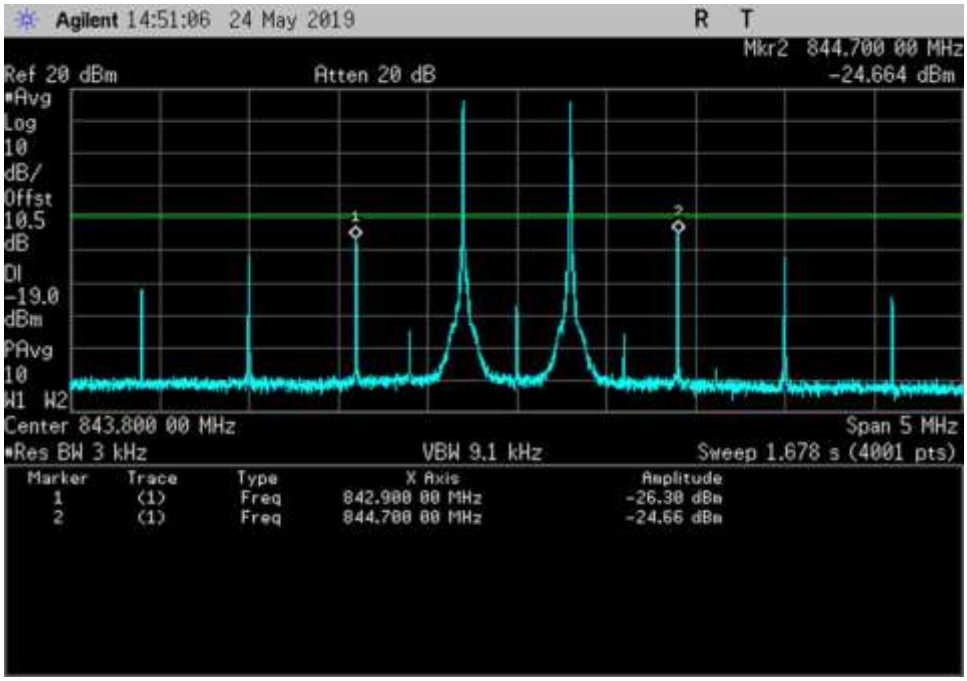
DL_2110-2155_ 2130.3MHz_50ft Cable



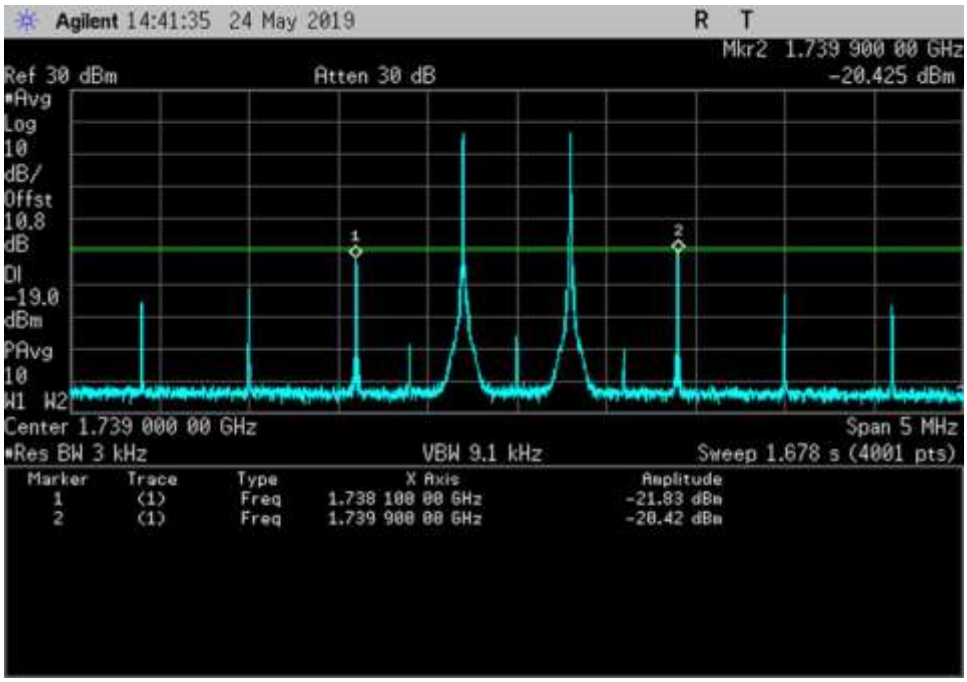
UL_698-716_ 706.3MHz_100ft Cable



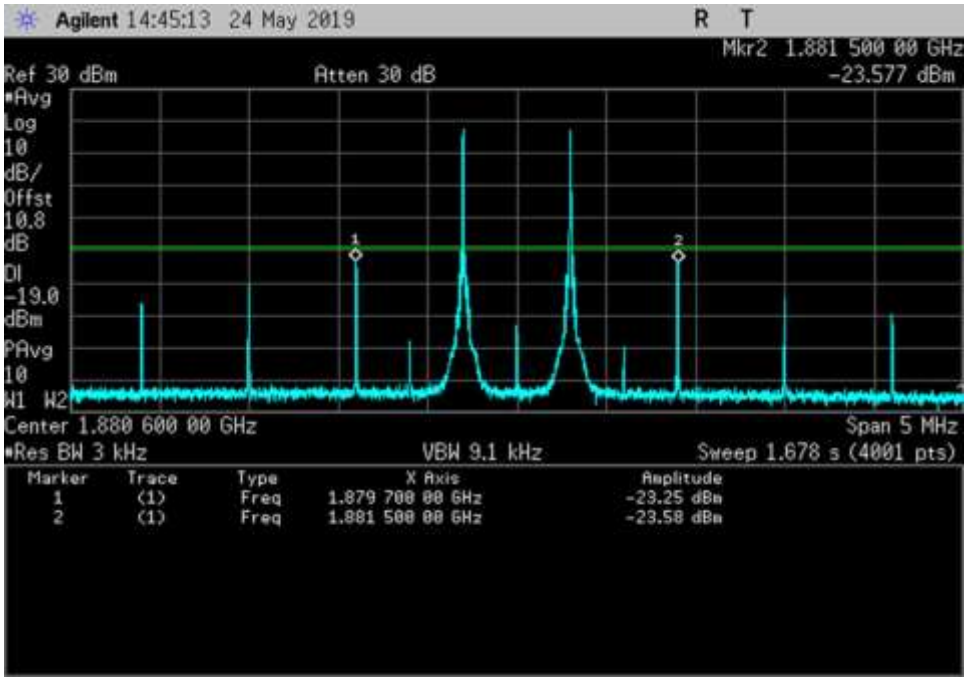
UL_776-787_ 779MHz_100ft Cable



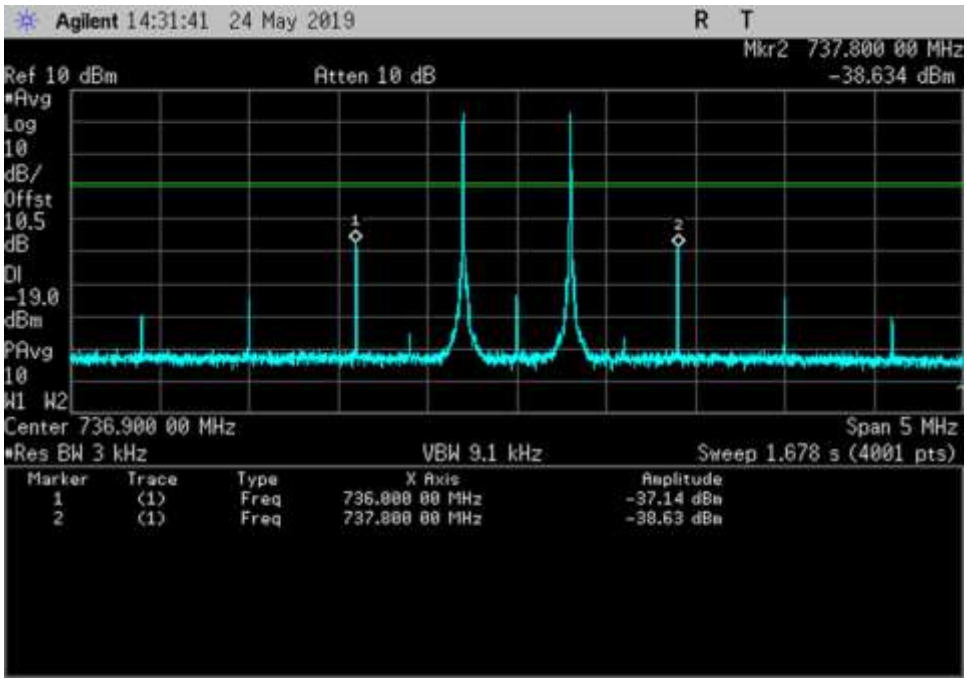
UL_824-849_ 843.8MHz_100ft Cable



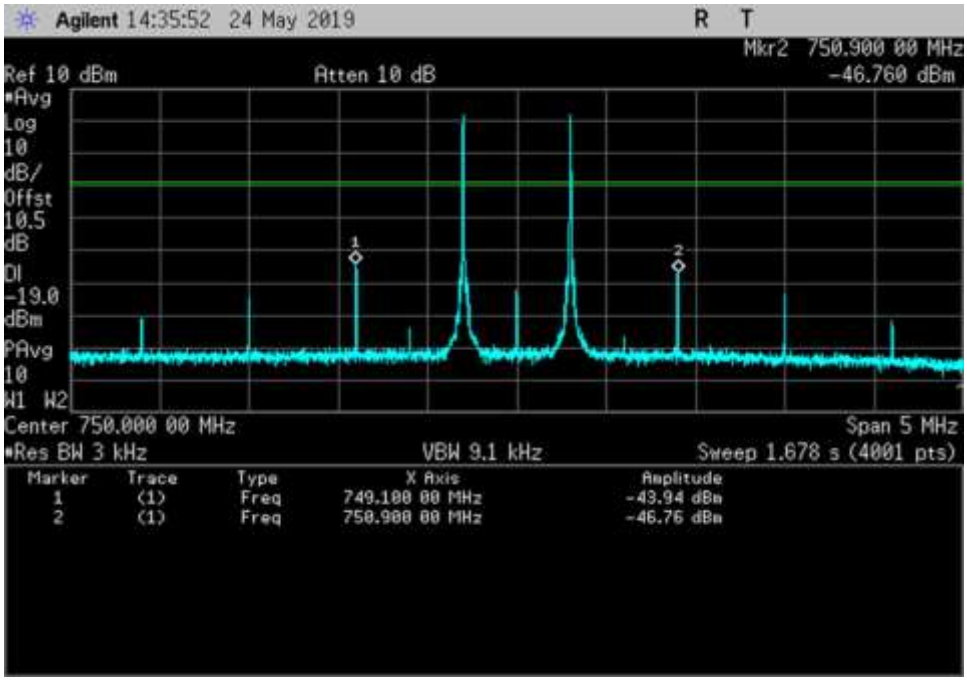
UL_1710-1755_ 1739MHz_100ft Cable



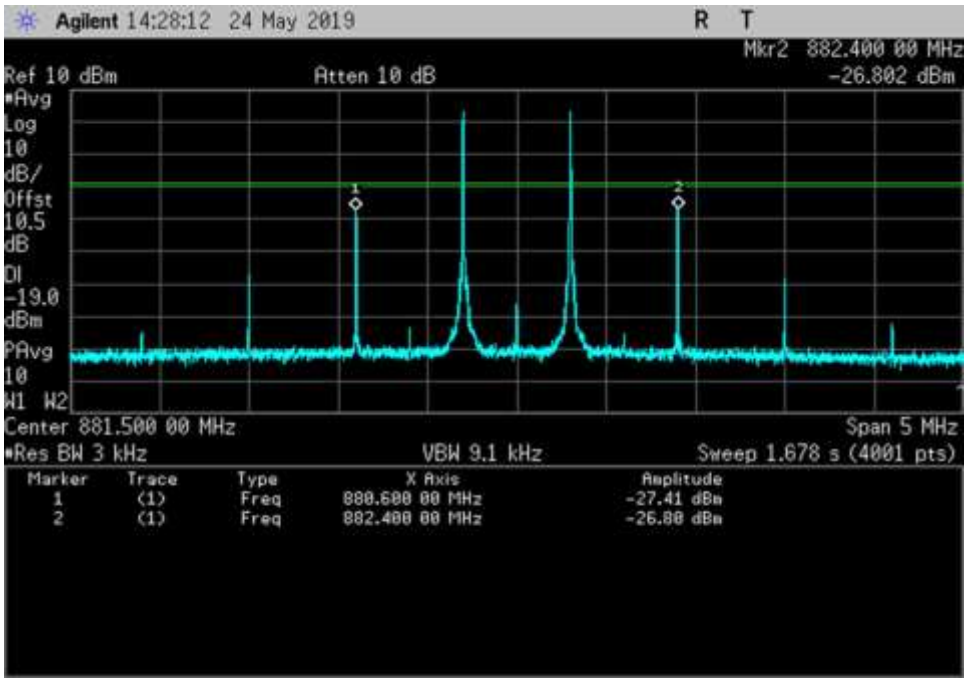
UL_1850-1915_ 1880.6MHz_100ft Cable



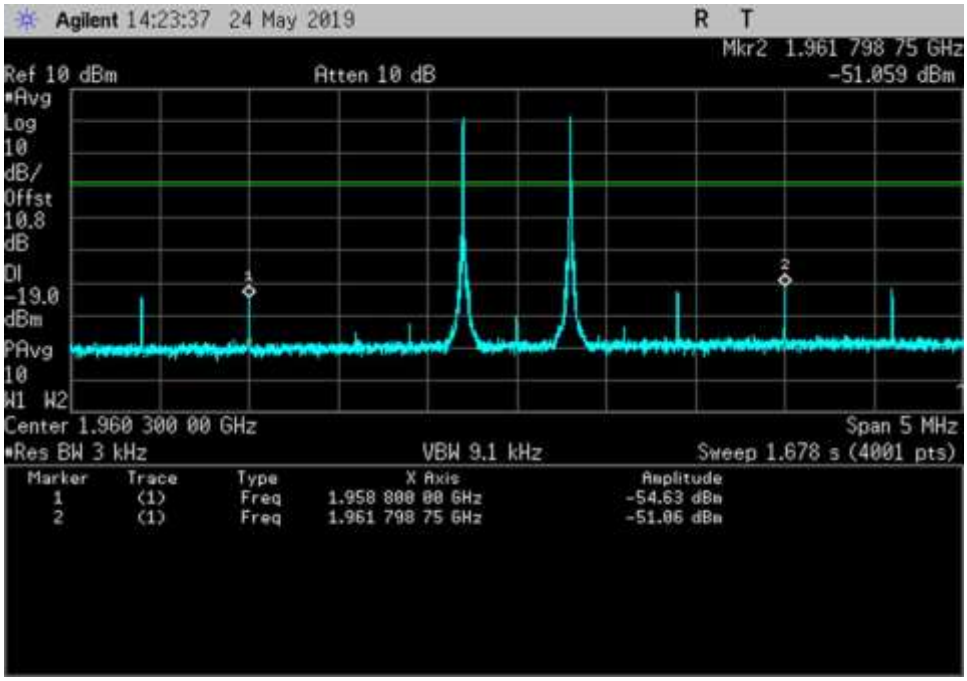
DL_728-746_ 736.9MHz_100ft Cable



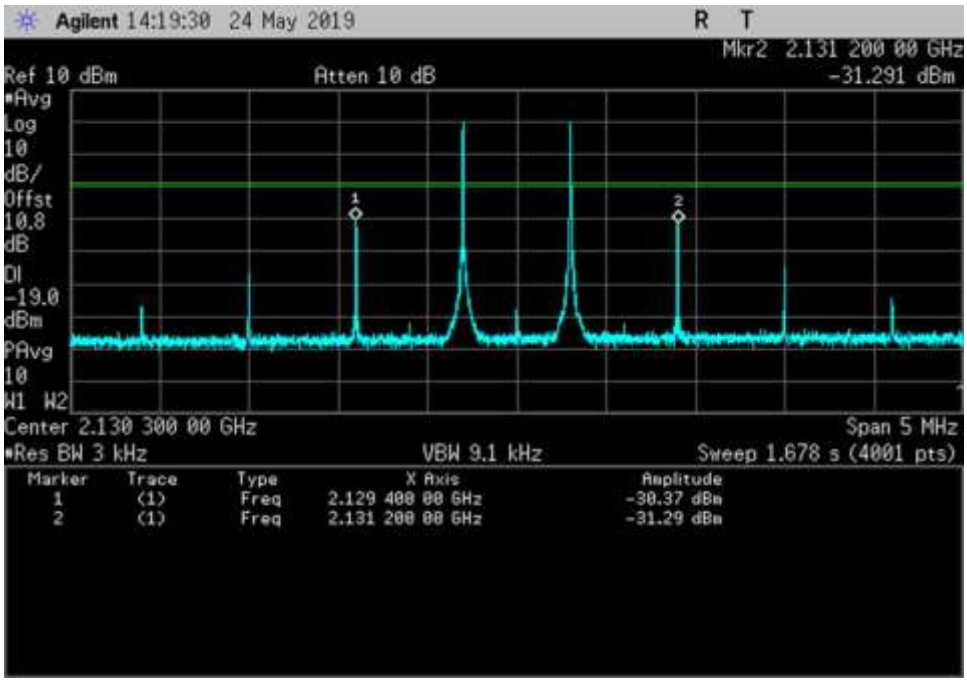
DL_746-757_ 750MHz_100ft Cable



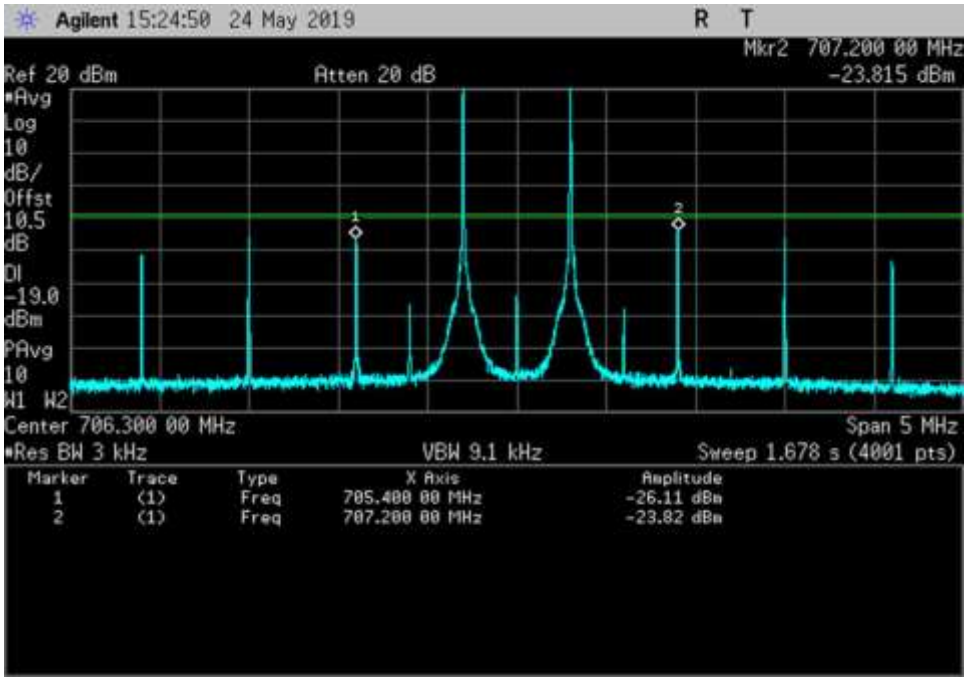
DL_869-894_ 881.5MHz_100ft Cable



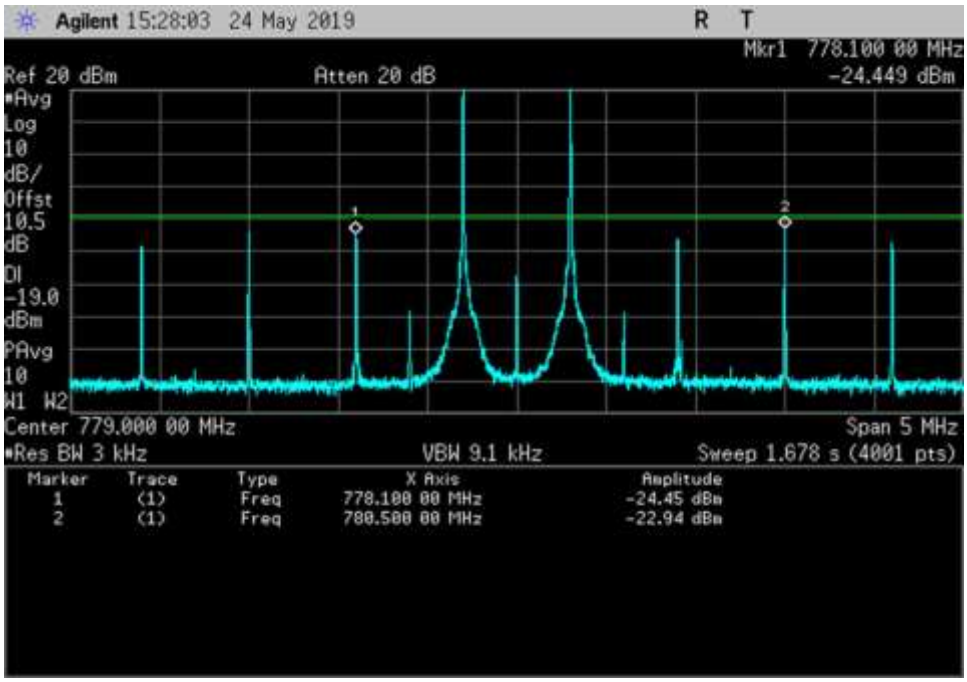
DL_1930-1995_ 1960.3MHz_100ft Cable



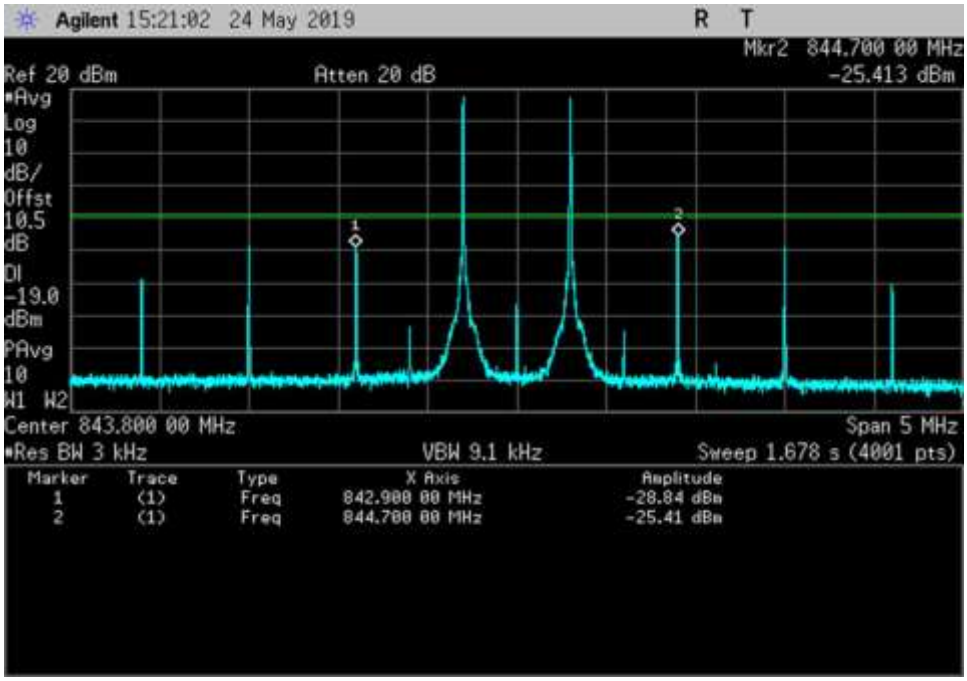
DL_2110-2155_ 2130.3MHz_100ft Cable



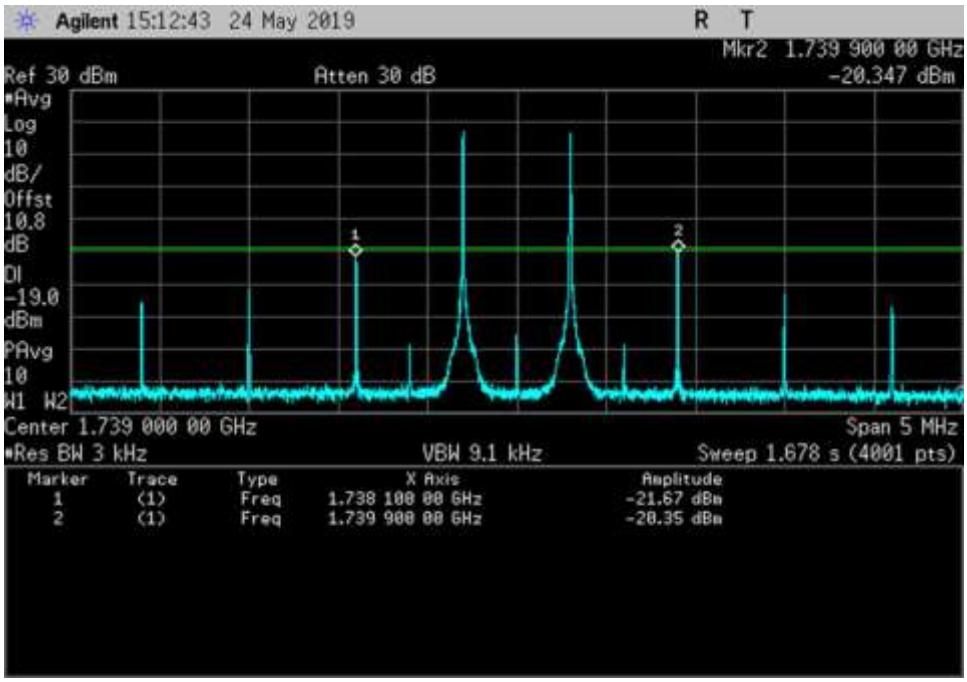
UL_698-716_ 706.3MHz_150ft Cable



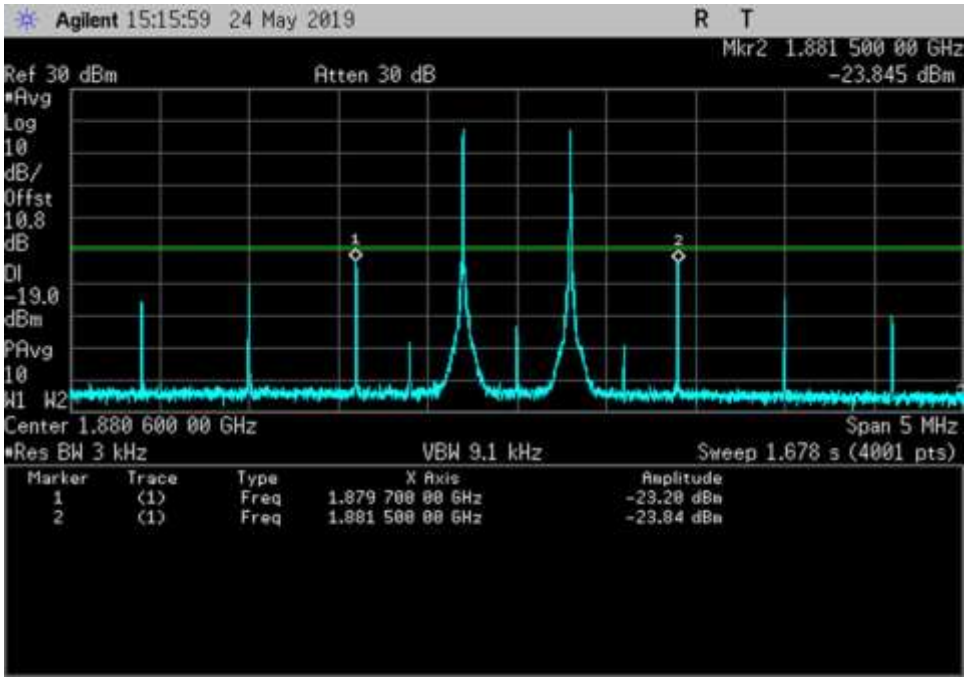
UL_776-787_ 779MHz_150ft Cable



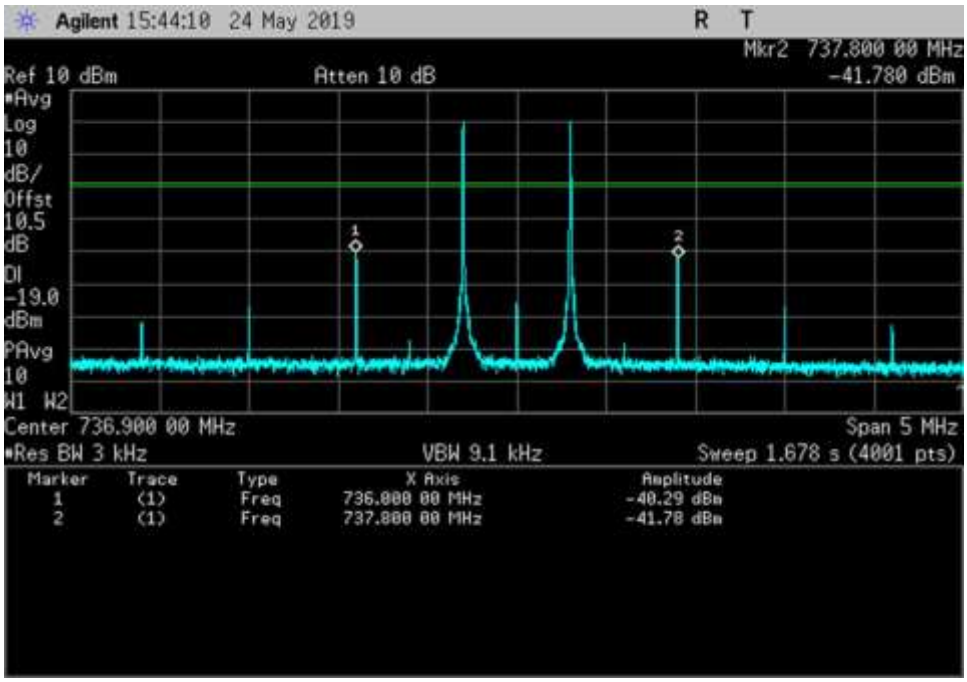
UL_824-849_ 843.8MHz_150ft Cable



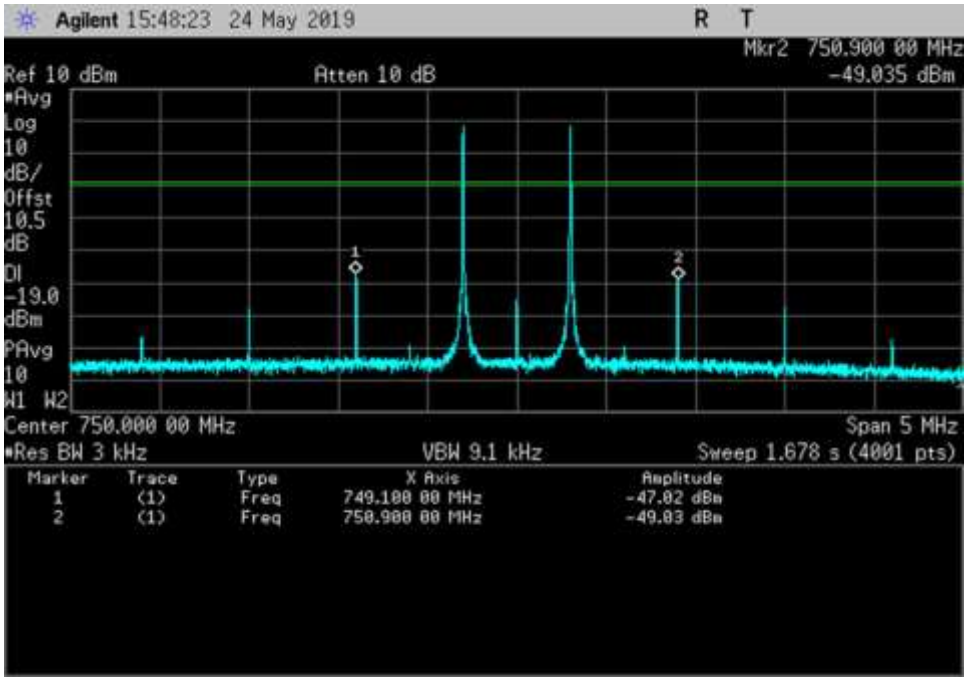
UL_1710-1755_ 1739MHz_150ft Cable



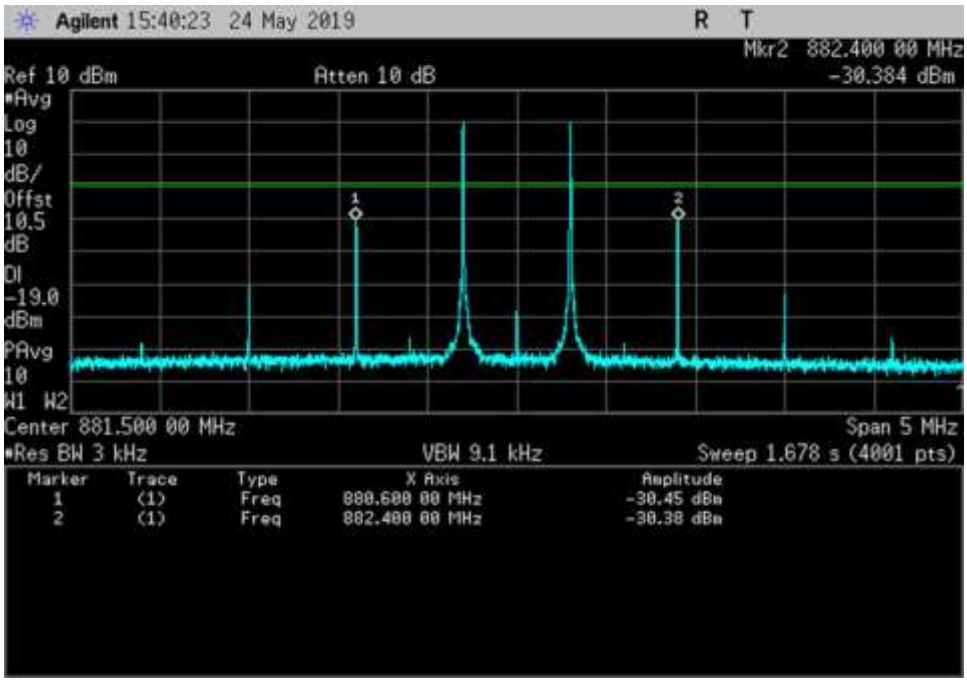
UL_1850-1915_ 1880.6MHz_150ft Cable



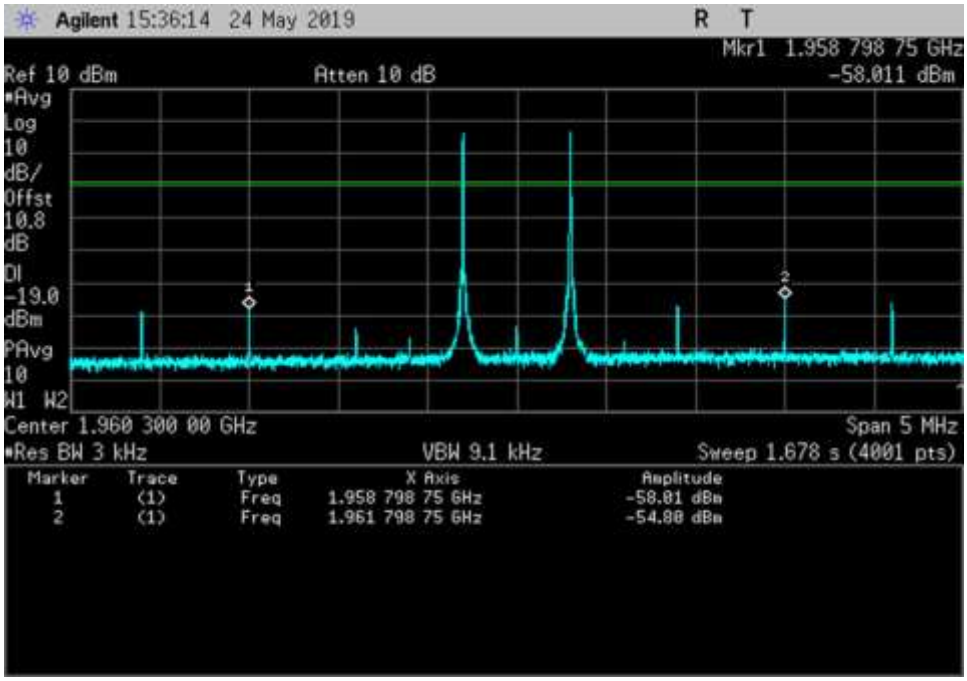
DL_728-746_ 736.9MHz_150ft Cable



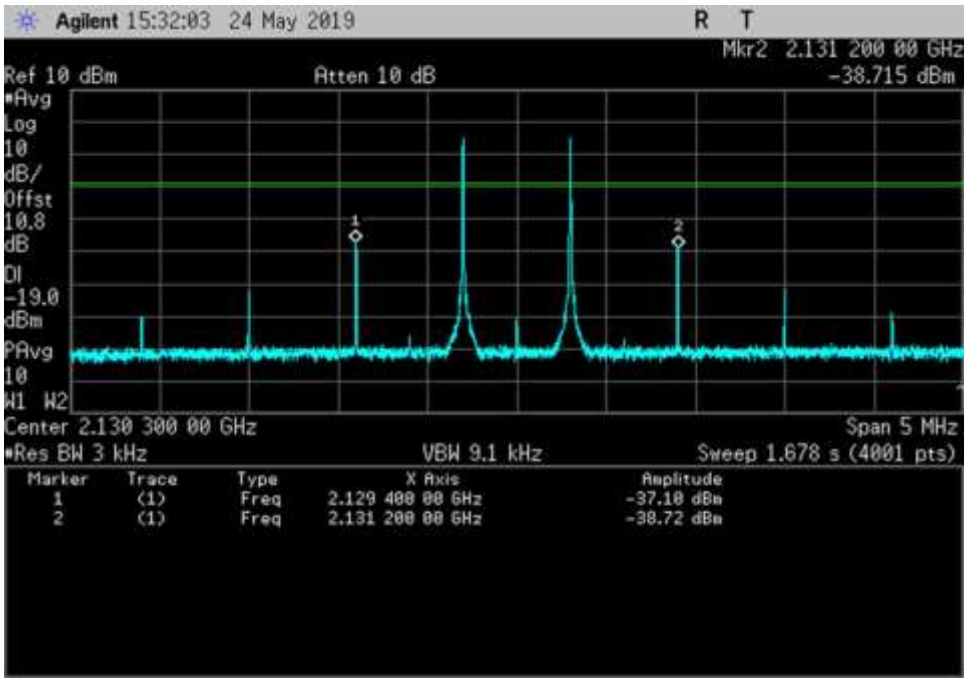
DL_746-757_ 750MHz_150ft Cable



DL_869-894_ 881.5MHz_150ft Cable

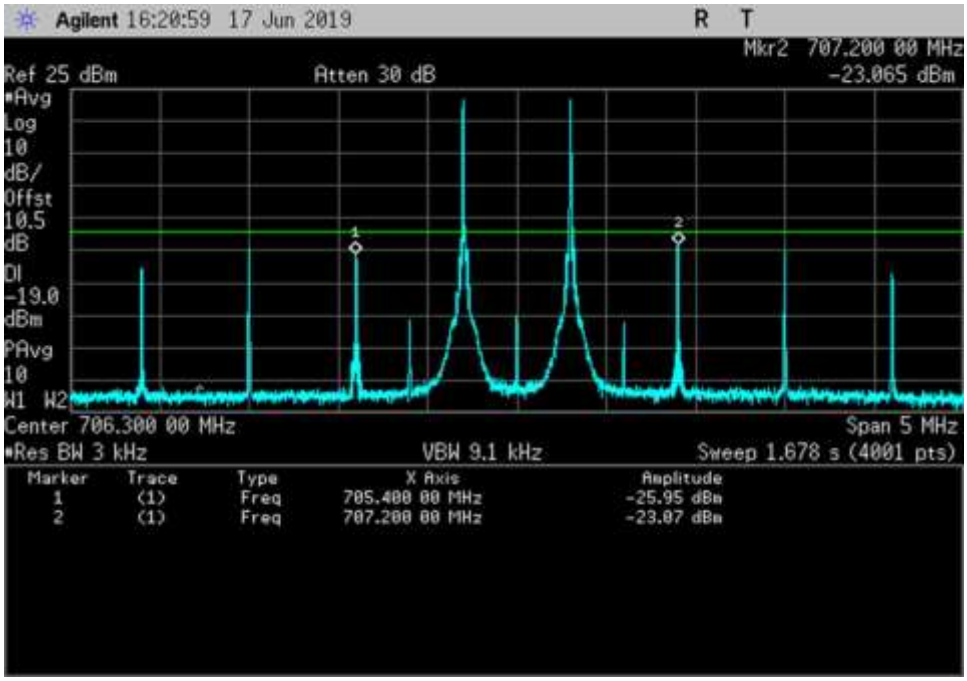


DL_1930-1995_ 1960.3MHz_150ft Cable

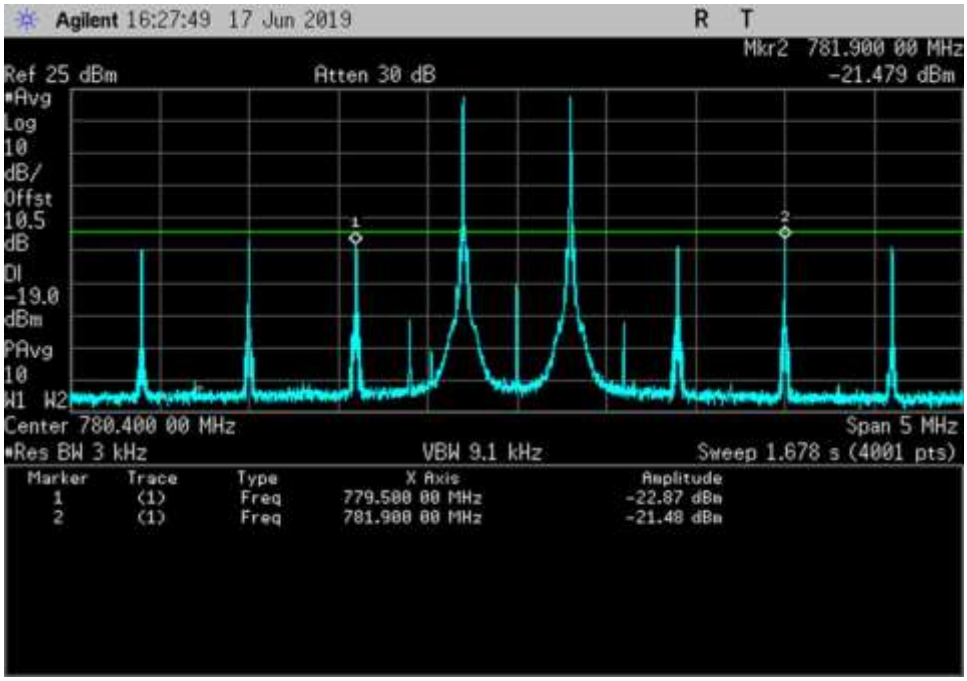


DL_2110-2155_ 2130.3MHz_150ft Cable

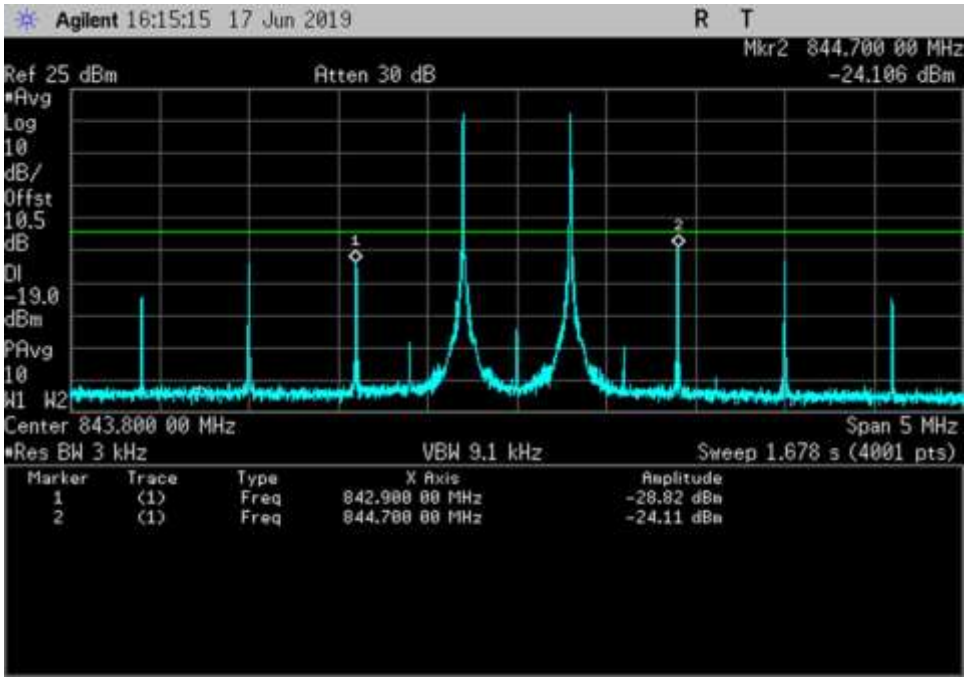
Configuration 2



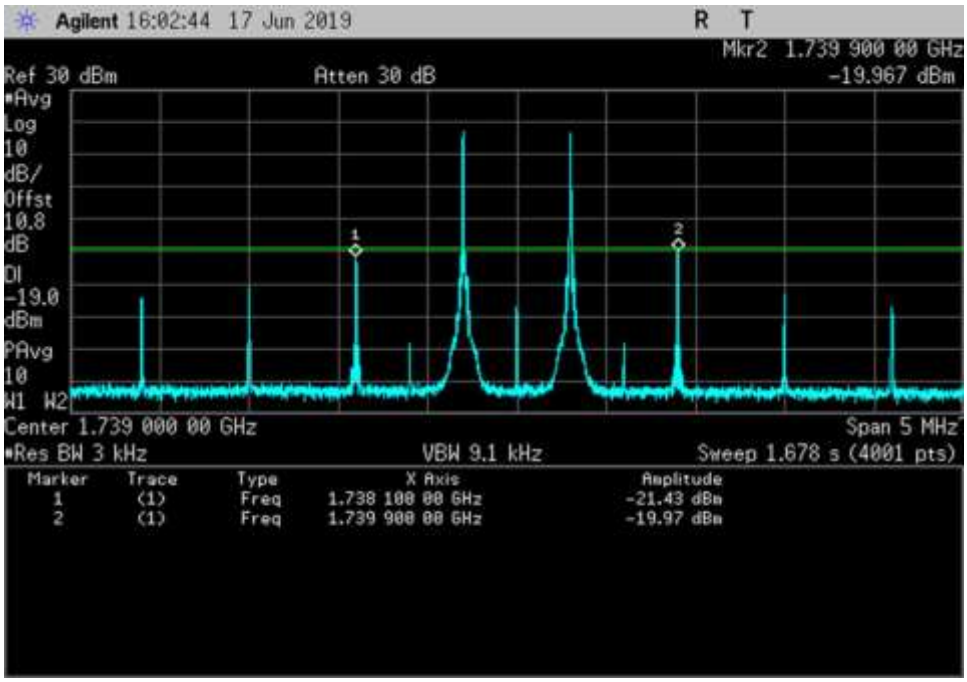
UL_698-716_ 706.3MHz



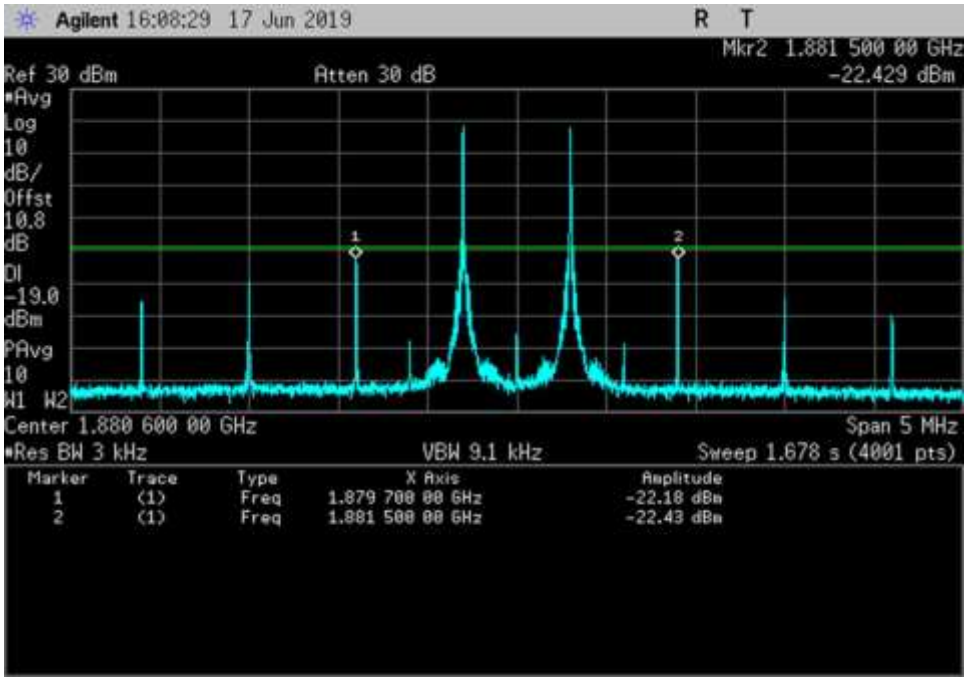
UL_776-787_ 780.4MHz



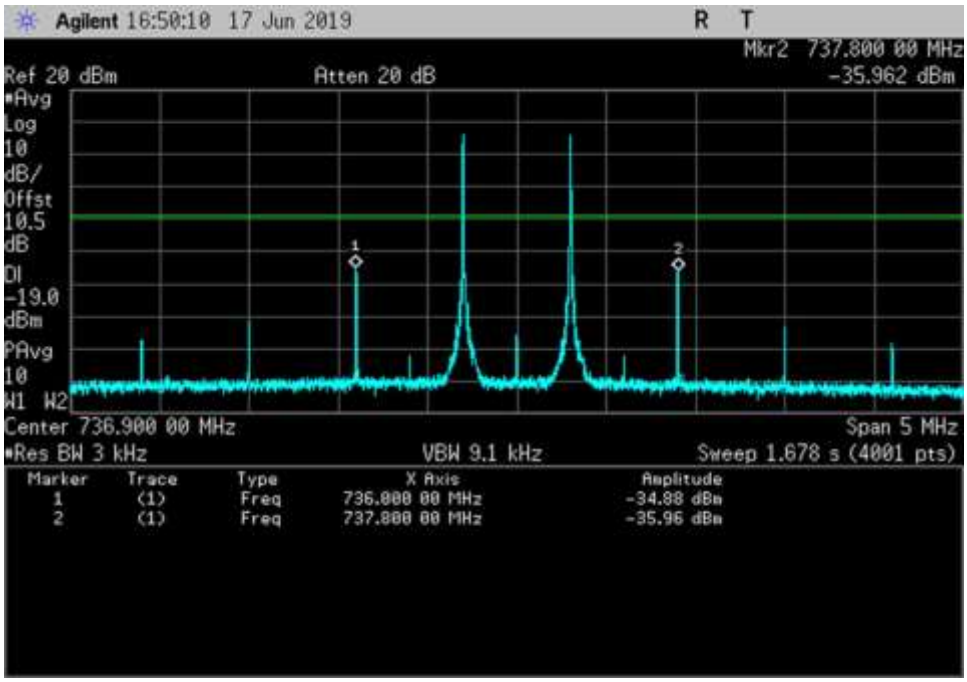
UL_824-849_ 843.8MHz



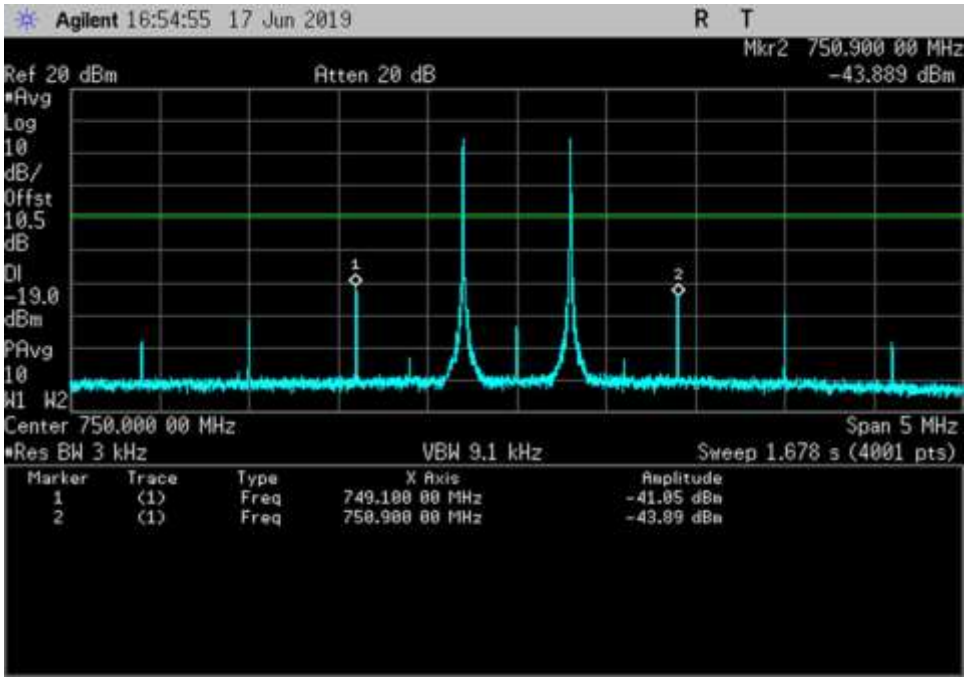
UL_1710-1755_ 1739MHz



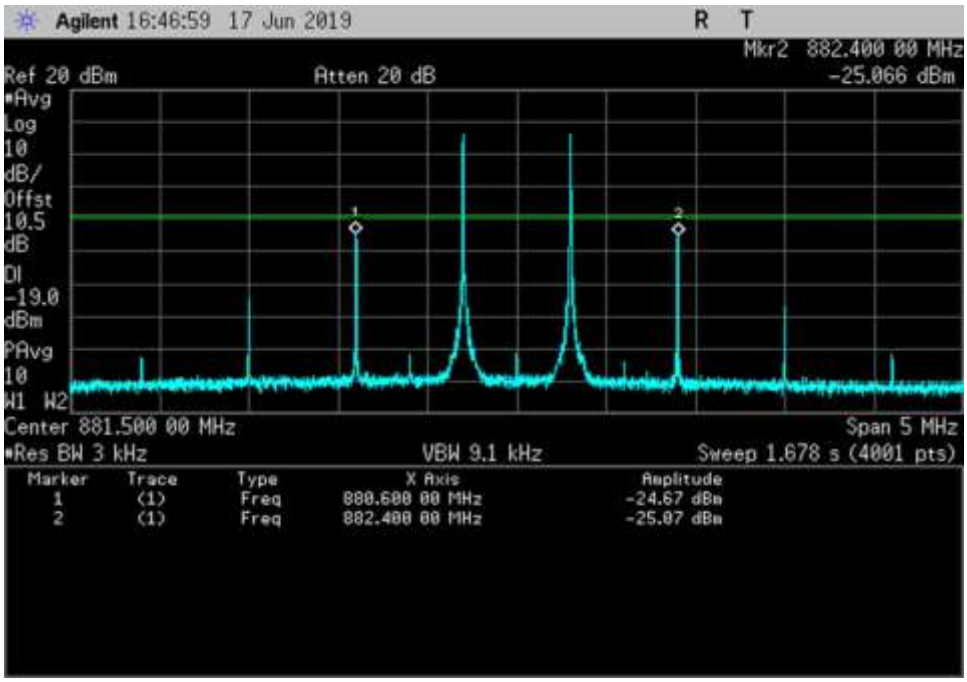
UL_1850-1915_ 1880.6MHz



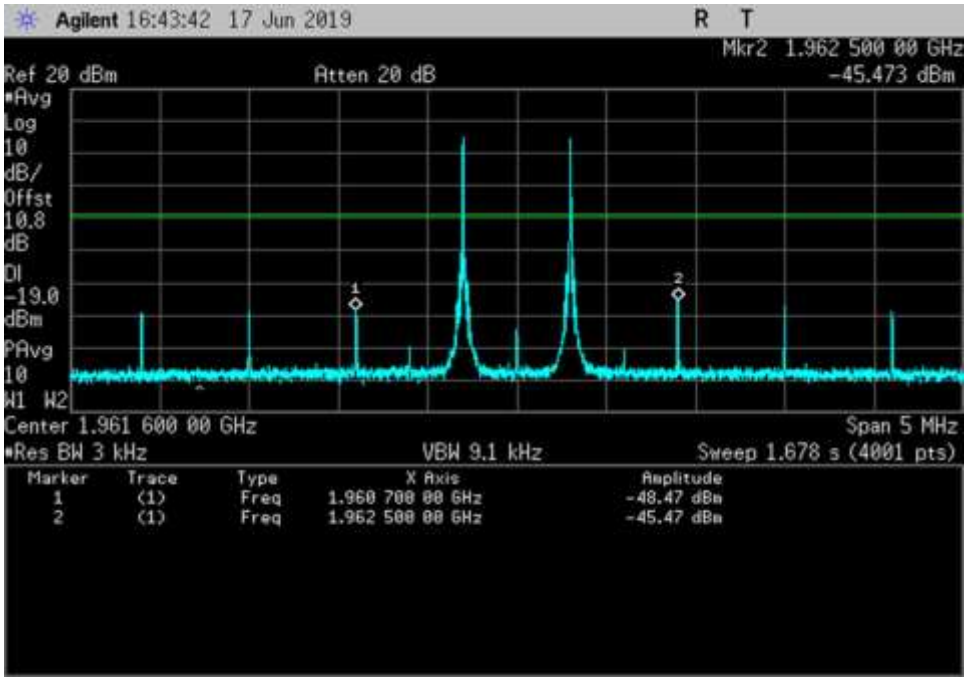
DL_728-746_ 736.9MHz



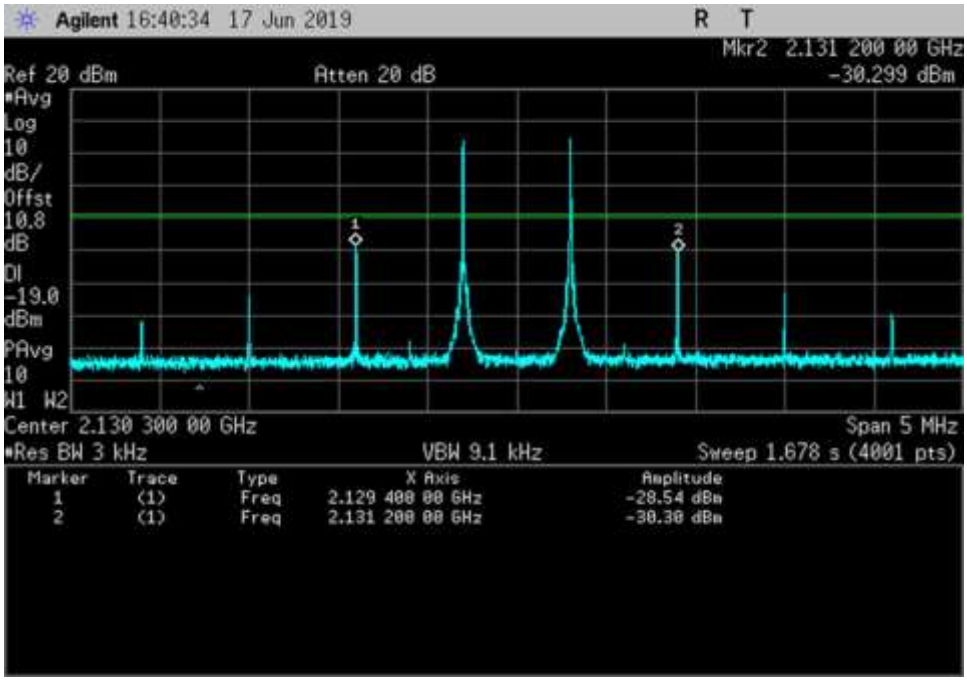
DL_746-757_ 750MHz



DL_869-894_ 881.5MHz

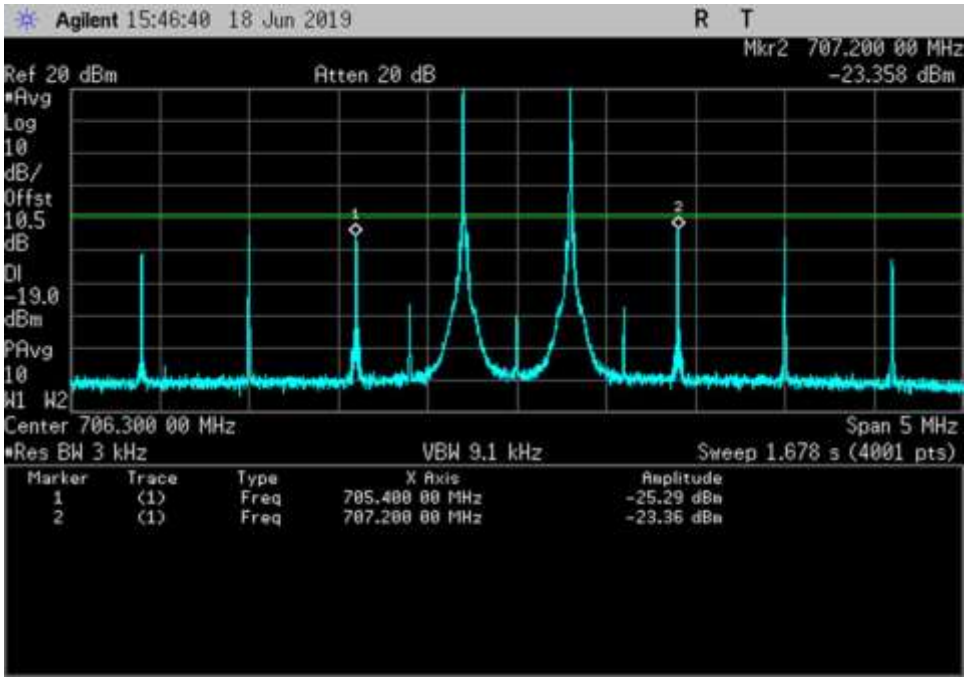


DL_1930-1995_ 1961.6MHz

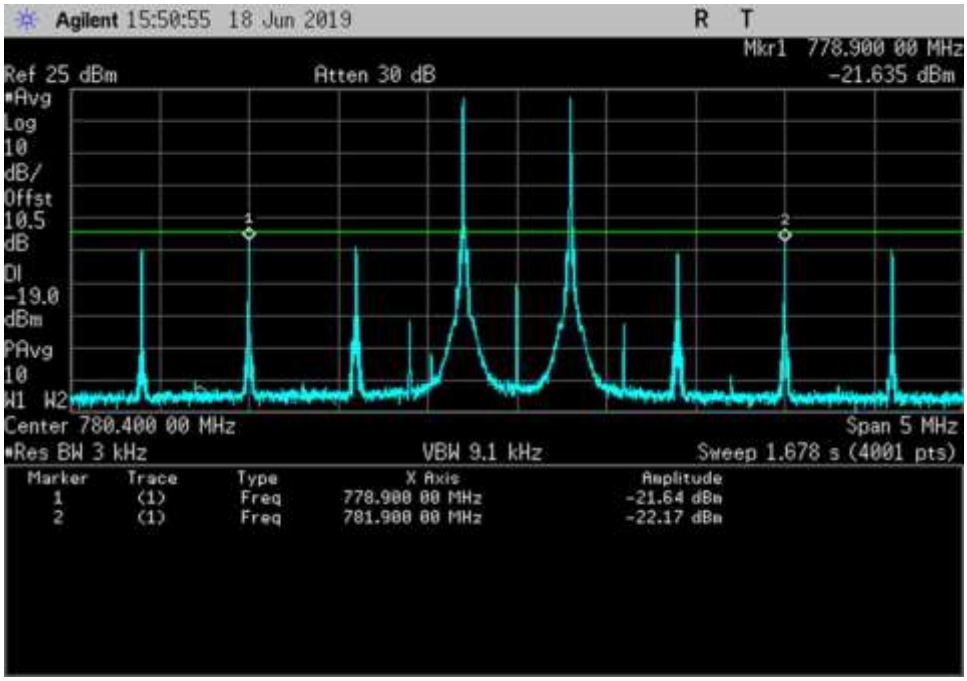


DL_2110-2155_ 2130.3MHz

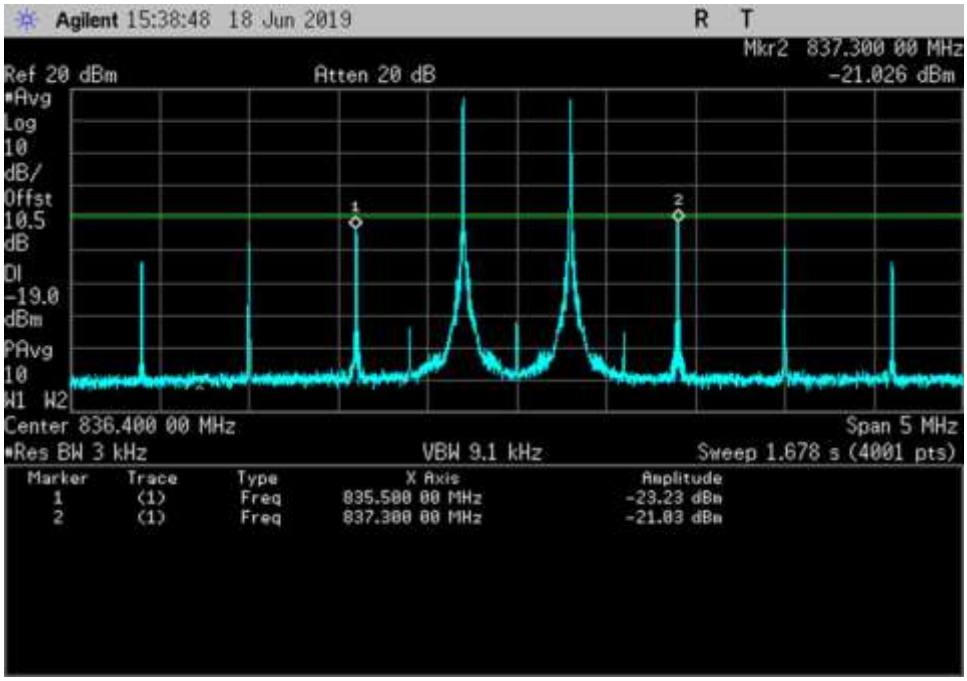
Configuration 3



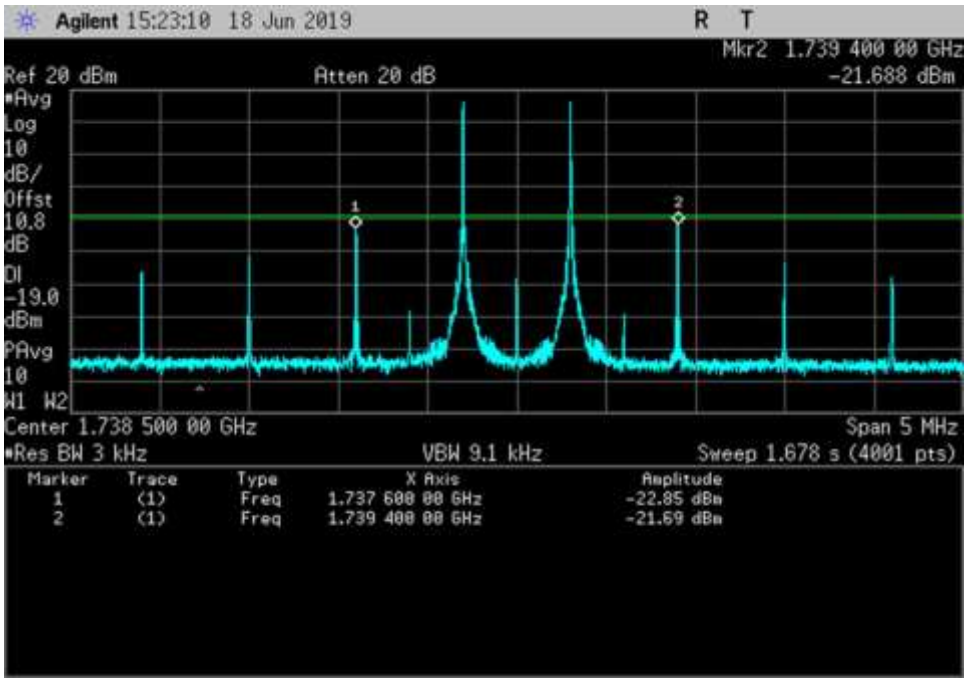
UL_698-716_ 706.3MHz



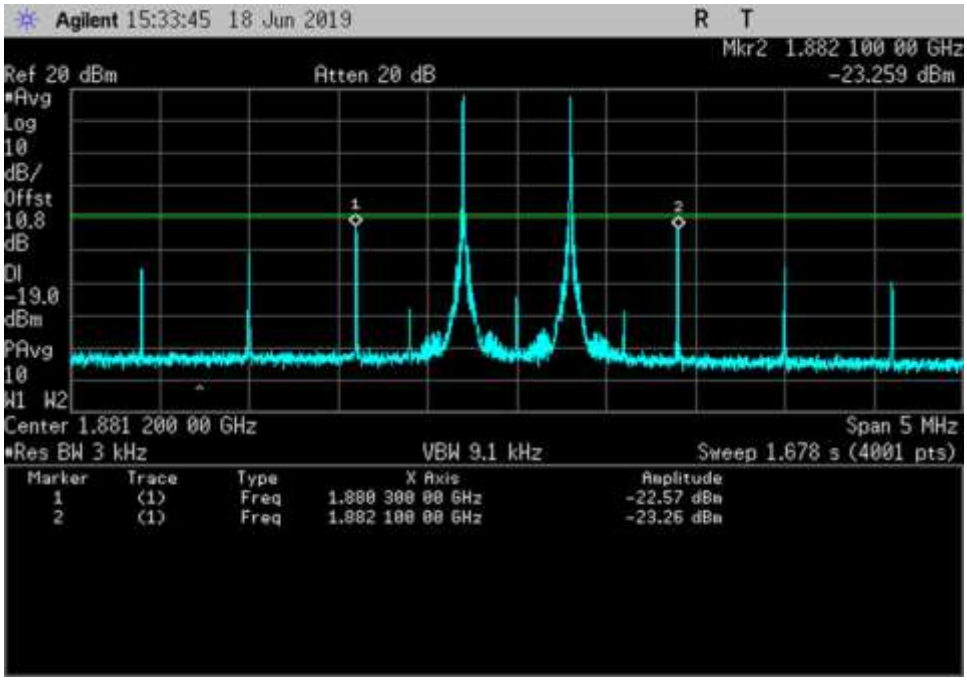
UL_776-787_ 780.4MHz



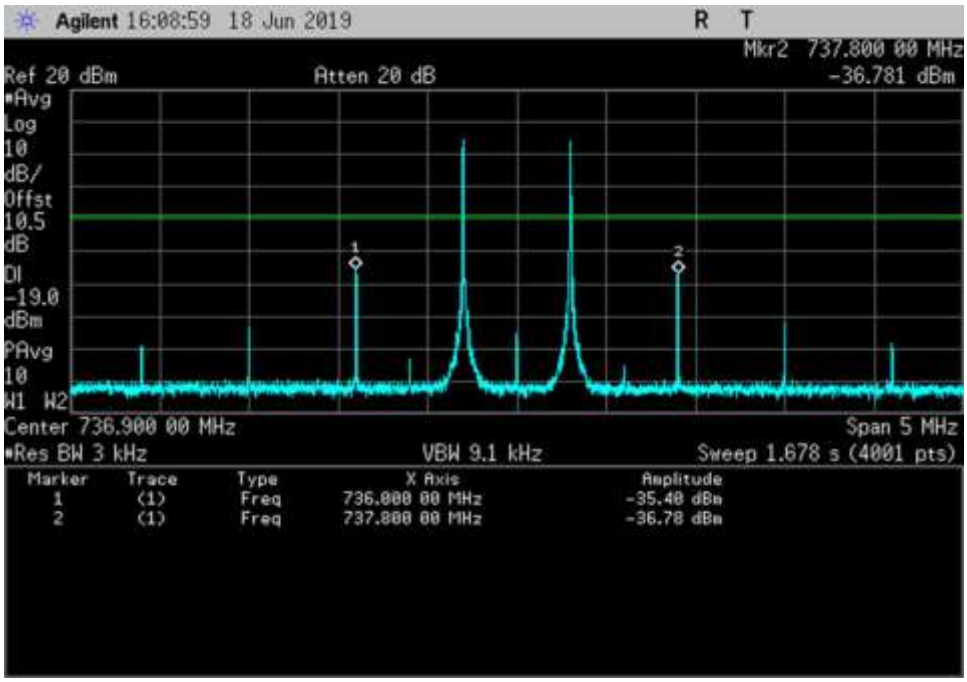
UL_824-849_ 836.4MHz



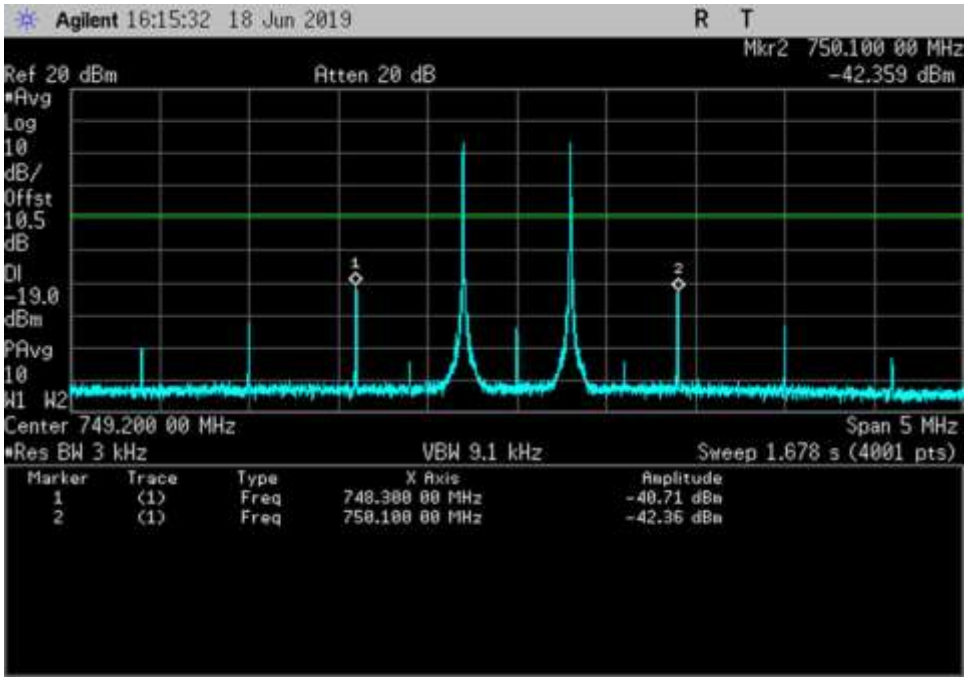
UL_1710-1755_ 1738.5MHz



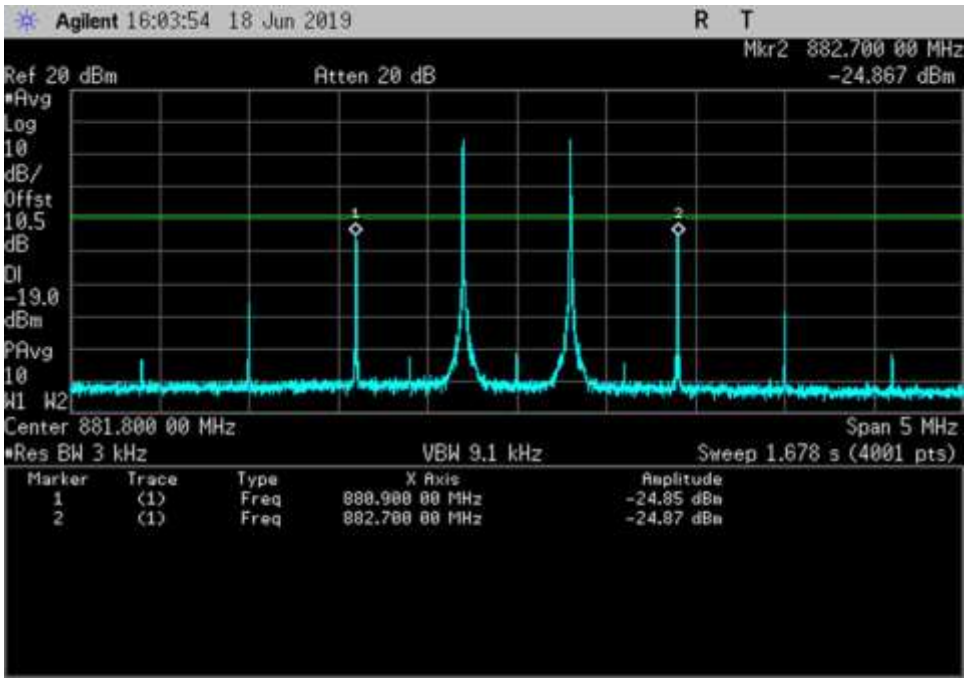
UL_1850-1915_ 1881.2MHz



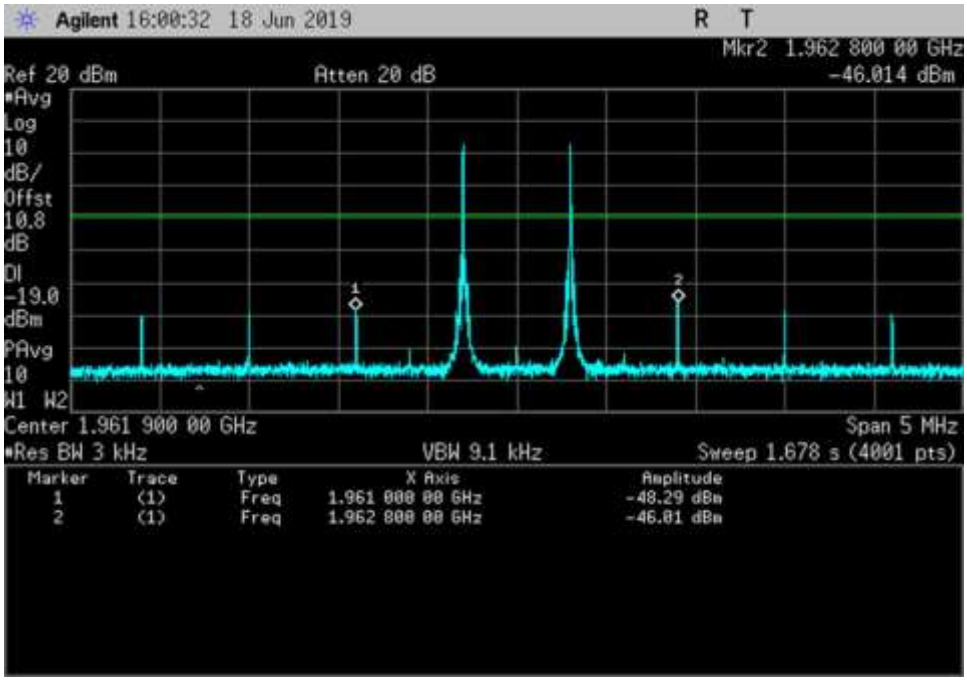
DL_728-746_ 736.9MHz



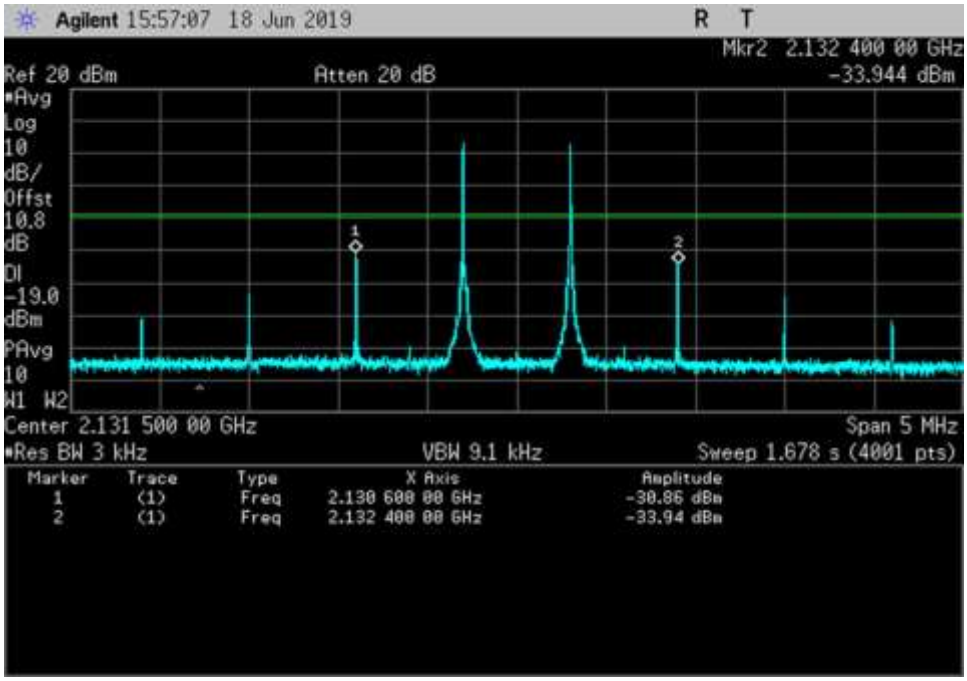
DL_746-757_ 749.2MHz



DL_869-894_ 881.8MHz



DL_1930-1995_ 1961.9MHz



DL_2110-2155_ 2131.5MHz

7.5 Out of Band Emissions

Test Conditions / Setup

Test Location:	CKC Laboratories, Inc. • 1120 Fulton Place • Fremont, CA 94539 • (510) 249-1170		
Customer:	Cellphone-Mate, Inc.		
Specification:	**7.5 Out-of-band Emissions**		
Work Order #:	**102129**	Date	05/29,30,31/2019 and 06/04/2019
Test Type:	**Conducted Emissions**		
Tested By:	**Hieu Song Nguyenpham**		
Software:	EMITest 5.03.11		

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

05/29//2019:
Test environment conditions: Temperature: 21.8°C, Relative Humidity: 48%, Atmospheric Pressure: 101.9kPa

05/30/2019:
Test environment conditions: Temperature: 20.5°C, Relative Humidity: 38%, Atmospheric Pressure: 102.2kPa

05/31/2019:
Test environment conditions: Temperature: 20.5°C, Relative Humidity: 43%, Atmospheric Pressure: 101.9kPa

06/04/2019:
Test environment conditions: Temperature: 23.1°C, Relative Humidity: 42%, Atmospheric Pressure: 101.8kPa
Modification 1 was in place during testing.

Test Equipment:

Asset #	Description	Manufacturer	Model	Calibration Date	Cal Due Date
P05411	Attenuator	Weinschel	54A-10	1/19/2018	1/19/2020
P07192	Cable	Astro	32022-29094K-29094K-48TC	10/9/2017	10/9/2019
P07191	Cable	Astro	32022-29094K-29094K-48TC	10/30/2017	10/30/2019
03418	Signal Generator	Agilent	E4438C	05/13/2019	05/13/2021
03471	Spectrum Analyzer	Agilent	E4440A	1/18/2018	1/18/2020

Summary of Results

7.5 Summary of Results on a 50ft Cable

Pass: as indicated in plots above, all OBE are under the limit of -19dBm.

GSM								
Low					High			
Out of Band Emission					Out of Band Emission			
Frequency (MHz)	Pre AGC	Limit (dBm)	Results		Frequency (MHz)	Pre AGC	Limit (dBm)	Results
UL 1710-1755	-36.4	-19	Pass		UL 1710-1755	-33.8	-19	Pass
UL 1850-1915	-30.0	-19	Pass		UL 1850-1915	-38.8	-19	Pass
UL 824-849	-26.2	-19	Pass		UL 824-849	-26.9	-19	Pass
UL 698-716	-22.5	-19	Pass		UL 698-716	-24.1	-19	Pass
UL 776-787	-21.9	-19	Pass		UL 776-787	-22.3	-19	Pass
DL 2110-2155	-39.3	-19	Pass		DL 2110-2155	-39.8	-19	Pass
DL 1930-1995	-43.2	-19	Pass		DL 1930-1995	-42.0	-19	Pass
DL 869-894	-35.3	-19	Pass		DL 869-894	-38.5	-19	Pass
DL:728-746	-43.4	-19	Pass		DL:728-746	-39.1	-19	Pass
DL 746-757	-37.8	-19	Pass		DL 746-757	-44.3	-19	Pass

CDM (alternative 1.25MHz AWGN)								
Low					High			
Out of Band Emission					Out of Band Emission			
Frequency (MHz)	Pre AGC	Limit (dBm)	Results		Frequency (MHz)	Pre AGC	Limit (dBm)	Results
UL 1710-1755	-41.9	-19	Pass		UL 1710-1755	-39.5	-19	Pass
UL 1850-1915	-41.8	-19	Pass		UL 1850-1915	-46.7	-19	Pass
UL 824-849	-36.7	-19	Pass		UL 824-849	-32.2	-19	Pass
UL 698-716	-32.5	-19	Pass		UL 698-716	-31.1	-19	Pass
UL 776-787	-34.8	-19	Pass		UL 776-787	-26.6	-19	Pass
DL 2110-2155	-35.7	-19	Pass		DL 2110-2155	-30.7	-19	Pass
DL 1930-1995	-50.1	-19	Pass		DL 1930-1995	-52.2	-19	Pass
DL 869-894	-33.2	-19	Pass		DL 869-894	-53.9	-19	Pass
DL:728-746	-60.1	-19	Pass		DL:728-746	-59.9	-19	Pass
DL 746-757	-50.7	-19	Pass		DL 746-757	-60.3	-19	Pass

LTE (alternative 4.1MHz AWGN								
Low					High			
Out of Band Emission					Out of Band Emission			
Frequency (MHz)	Pre AGC	Limit (dBm)	Results		Frequency (MHz)	Pre AGC	Limit (dBm)	Results
UL 1710-1755	-39.2	-19	Pass		UL 1710-1755	-35.8	-19	Pass
UL 1850-1915	-36.8	-19	Pass		UL 1850-1915	-41.7	-19	Pass
UL 824-849	-35.4	-19	Pass		UL 824-849	-32.8	-19	Pass
UL 698-716	-28.8	-19	Pass		UL 698-716	-28.8	-19	Pass
UL 776-787	-26.8	-19	Pass		UL 776-787	-22.6	-19	Pass
DL 2110-2155	-36.7	-19	Pass		DL 2110-2155	-27.2	-19	Pass
DL 1930-1995	-44.8	-19	Pass		DL 1930-1995	-50.9	-19	Pass
DL 869-894	-46.1	-19	Pass		DL 869-894	-45.2	-19	Pass
DL:728-746	-51.5	-19	Pass		DL:728-746	-48.5	-19	Pass
DL 746-757	-46.2	-19	Pass		DL 746-757	-52.3	-19	Pass

Note: The EUT also maintains compliance with the out-of-band emissions limit at input power indicated in section 5.5.

7.5 Summary of Results on a 100ft Cable

Pass: as indicated in plots above, all OBE are under the limit of -19dBm.

GSM								
Low					High			
Out of Band Emission					Out of Band Emission			
Frequency (MHz)	Pre AGC	Limit (dBm)	Results		Frequency (MHz)	Pre AGC	Limit (dBm)	Results
UL 1710-1755	-35.8	-19	Pass		UL 1710-1755	-33.6	-19	Pass
UL 1850-1915	-29.8	-19	Pass		UL 1850-1915	-37.2	-19	Pass
UL 824-849	-22.7	-19	Pass		UL 824-849	-23.8	-19	Pass
UL 698-716	-20.4	-19	Pass		UL 698-716	-20.4	-19	Pass
UL 776-787	-20.7	-19	Pass		UL 776-787	-19.8	-19	Pass
DL 2110-2155	-43.8	-19	Pass		DL 2110-2155	-45.2	-19	Pass
DL 1930-1995	-46.4	-19	Pass		DL 1930-1995	-46.2	-19	Pass
DL 869-894	-34.1	-19	Pass		DL 869-894	-40.5	-19	Pass
DL:728-746	-46.4	-19	Pass		DL:728-746	-39.5	-19	Pass
DL 746-757	-38.6	-19	Pass		DL 746-757	-43.7	-19	Pass

CDMA (alternative 1.25 MHz AWGN)								
Low					High			
Out of Band Emission					Out of Band Emission			
Frequency (MHz)	Pre AGC	Limit (dBm)	Results		Frequency (MHz)	Pre AGC	Limit (dBm)	Results
UL 1710-1755	-41.0	-19	Pass		UL 1710-1755	-39.3	-19	Pass
UL 1850-1915	-41.2	-19	Pass		UL 1850-1915	-42.7	-19	Pass
UL 824-849	-37.6	-19	Pass		UL 824-849	-30.3	-19	Pass
UL 698-716	-29.5	-19	Pass		UL 698-716	-36.9	-19	Pass
UL 776-787	-27.9	-19	Pass		UL 776-787	-21.3	-19	Pass
DL 2110-2155	-42.4	-19	Pass		DL 2110-2155	-34.8	-19	Pass
DL 1930-1995	-53.9	-19	Pass		DL 1930-1995	-57.1	-19	Pass
DL 869-894	-37.0	-19	Pass		DL 869-894	-55.8	-19	Pass
DL:728-746	-60.7	-19	Pass		DL:728-746	-57.0	-19	Pass
DL 746-757	-50.2	-19	Pass		DL 746-757	-61.2	-19	Pass

LTE (alternative 4.1MHz AWGN)								
Low					High			
Out of Band Emission					Out of Band Emission			
Frequency (MHz)	Pre AG	Limit (dBm)	Results		Frequency (MHz)	Pre AGC	Limit (dBm)	Results
UL 1710-1755	-39.3	-19	Pass		UL 1710-1755	-38.1	-19	Pass
UL 1850-1915	-37.5	-19	Pass		UL 1850-1915	-45.4	-19	Pass
UL 824-849	-36.5	-19	Pass		UL 824-849	-32.9	-19	Pass
UL 698-716	-30.0	-19	Pass		UL 698-716	-29.3	-19	Pass
UL 776-787	-28.8	-19	Pass		UL 776-787	-22.0	-19	Pass
DL 2110-2155	-40.1	-19	Pass		DL 2110-2155	-33.7	-19	Pass
DL 1930-1995	-48.4	-19	Pass		DL 1930-1995	-53.3	-19	Pass
DL 869-894	-50.9	-19	Pass		DL 869-894	-51.4	-19	Pass
DL:728-746	-55.0	-19	Pass		DL:728-746	-50.0	-19	Pass
DL 746-757	-46.6	-19	Pass		DL 746-757	-54.8	-19	Pass

Note: The EUT also maintains compliance with the out-of-band emissions limit at input power indicated in section 5.5.

7.5 Summary of Results on a 150ft Cable

Pass: as indicated in plots above, all OBE are under the limit of -19dBm.

GSM								
Low					High			
Out of Band Emission					Out of Band Emission			
Frequency (MHz)	Pre AGC	Limit (dBm)	Results		Frequency (MHz)	Pre AGC	Limit (dBm)	Results
UL 1710-1755	-35.4	-19	Pass		UL 1710-1755	-33.6	-19	Pass
UL 1850-1915	-29.5	-19	Pass		UL 1850-1915	-35.7	-19	Pass
UL 824-849	-24.6	-19	Pass		UL 824-849	-25.1	-19	Pass
UL 698-716	-19.4	-19	Pass		UL 698-716	-21.5	-19	Pass
UL 776-787	-20.3	-19	Pass		UL 776-787	-20.2	-19	Pass
DL 2110-2155	-48.4	-19	Pass		DL 2110-2155	-50.3	-19	Pass
DL 1930-1995	-50.3	-19	Pass		DL 1930-1995	-50.8	-19	Pass
DL 869-894	-38.1	-19	Pass		DL 869-894	-42.4	-19	Pass
DL:728-746	-47.9	-19	Pass		DL:728-746	-43.9	-19	Pass
DL 746-757	-42.1	-19	Pass		DL 746-757	-46.3	-19	Pass

CDMA (alternative 1.25 MHz AWGN)								
Low					High			
Out of Band Emission					Out of Band Emission			
Frequency (MHz)	Pre AGC	Limit (dBm)	Results		Frequency (MHz)	Pre AGC	Limit (dBm)	Results
UL 1710-1755	-40.6	-19	Pass		UL 1710-1755	-38.1	-19	Pass
UL 1850-1915	-41.9	-19	Pass		UL 1850-1915	-48.0	-19	Pass
UL 824-849	-36.7	-19	Pass		UL 824-849	-30.0	-19	Pass
UL 698-716	-32.4	-19	Pass		UL 698-716	-31.7	-19	Pass
UL 776-787	-29.7	-19	Pass		UL 776-787	-22.0	-19	Pass
DL 2110-2155	-49.1	-19	Pass		DL 2110-2155	-49.5	-19	Pass
DL 1930-1995	-55.6	-19	Pass		DL 1930-1995	-58.7	-19	Pass
DL 869-894	-39.8	-19	Pass		DL 869-894	-57.6	-19	Pass
DL:728-746	-63.1	-19	Pass		DL:728-746	-58.9	-19	Pass
DL 746-757	-54.0	-19	Pass		DL 746-757	-64.3	-19	Pass

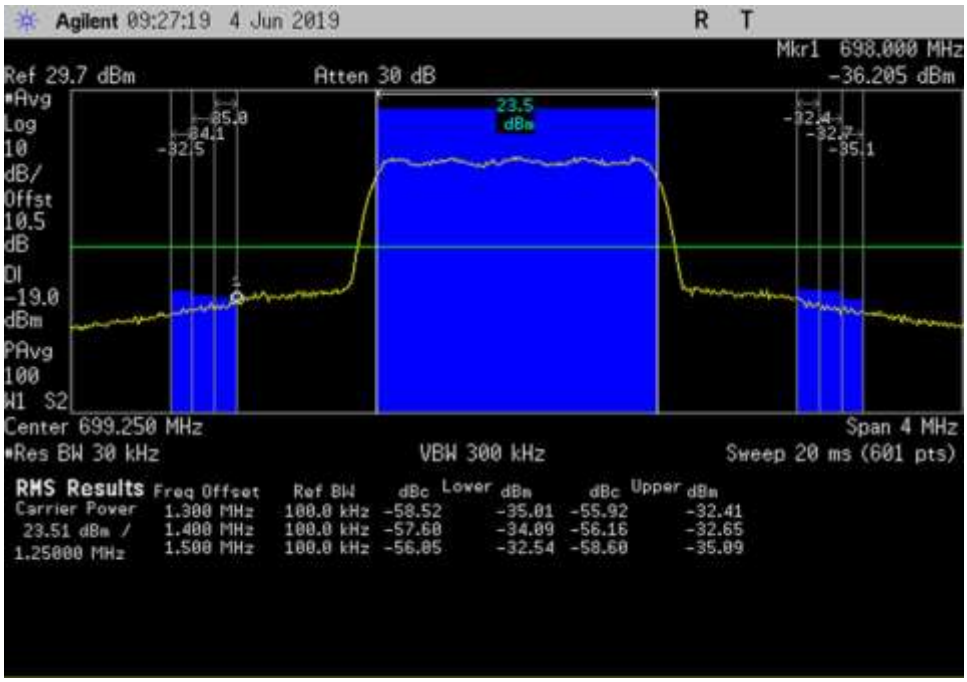
LTE (alternative 4.1MHz AWGN)								
Low					High			
Out of Band Emission					Out of Band Emission			
Frequency (MHz)	Pre AGC	Limit (dBm)	Results		Frequency (MHz)	Pre AGC	Limit (dBm)	Results
UL 1710-1755	-39.2	-19	Pass		UL 1710-1755	-37.0	-19	Pass
UL 1850-1915	-39.5	-19	Pass		UL 1850-1915	-45.5	-19	Pass
UL 824-849	-34.1	-19	Pass		UL 824-849	-34.4	-19	Pass
UL 698-716	-29.6	-19	Pass		UL 698-716	-29.6	-19	Pass
UL 776-787	-28.6	-19	Pass		UL 776-787	-23.6	-19	Pass
DL 2110-2155	-44.6	-19	Pass		DL 2110-2155	-37.7	-19	Pass
DL 1930-1995	-53.3	-19	Pass		DL 1930-1995	-56.8	-19	Pass
DL 869-894	-52.6	-19	Pass		DL 869-894	-53.5	-19	Pass
DL:728-746	-56.7	-19	Pass		DL:728-746	-53.2	-19	Pass
DL 746-757	-52.0	-19	Pass		DL 746-757	-54.7	-19	Pass

Note: The EUT also maintains compliance with the out-of-band emissions limit at input power indicated in section 5.5.

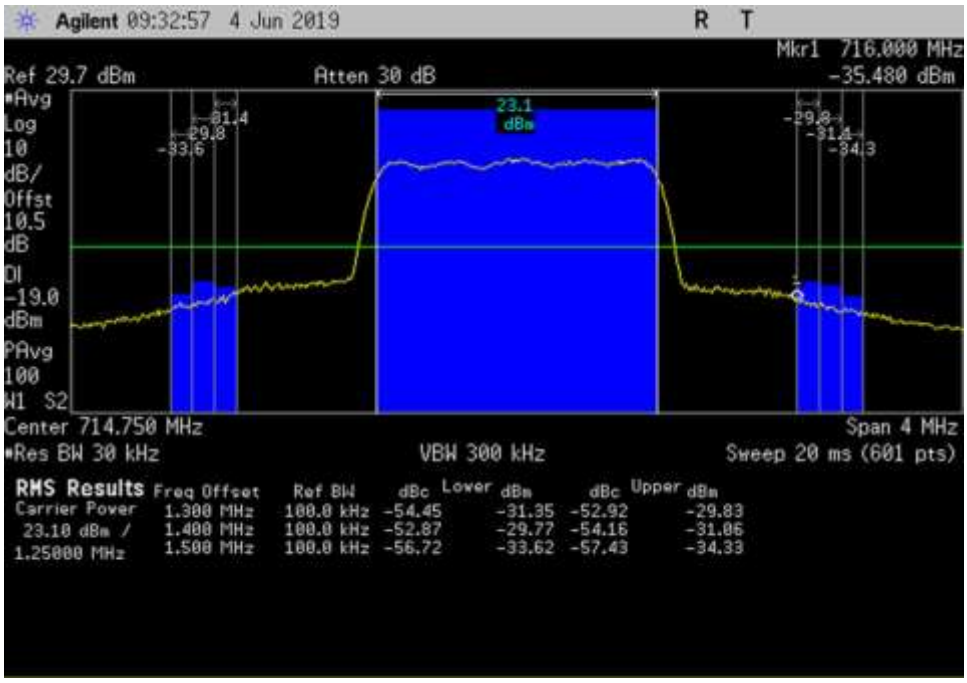
Plots

Configuration 1

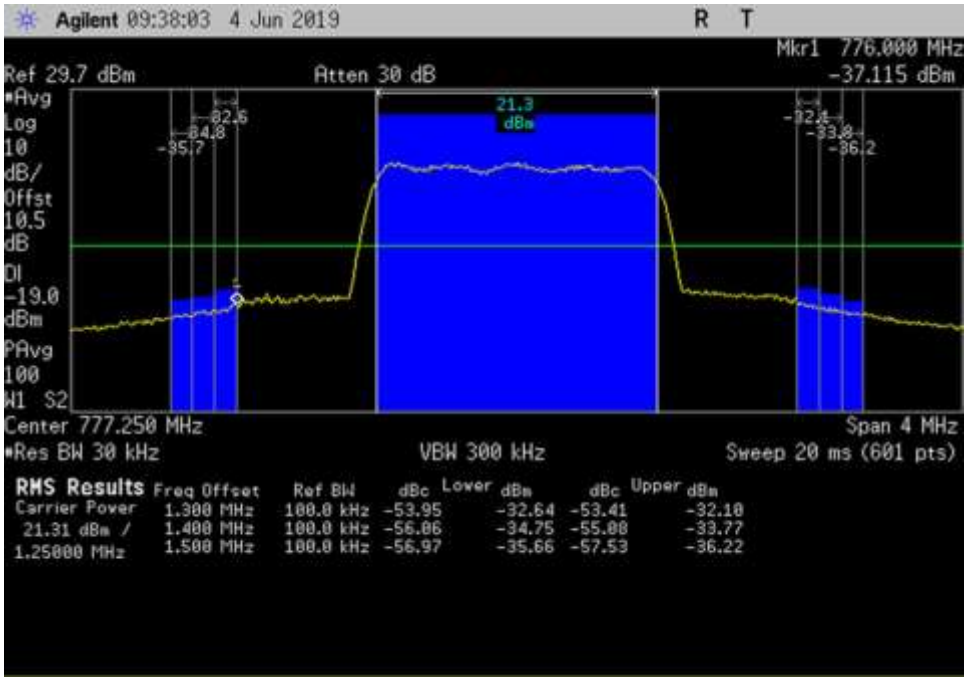
CDMA



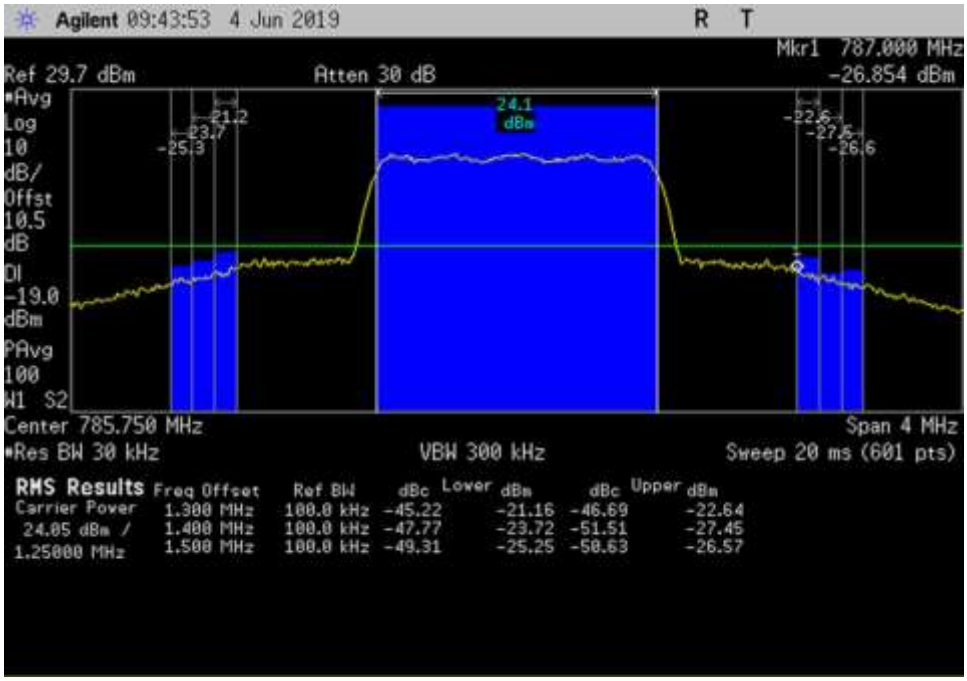
UL_698-716_CDMA_ 697.25- 701.25MHz_50ft Cable



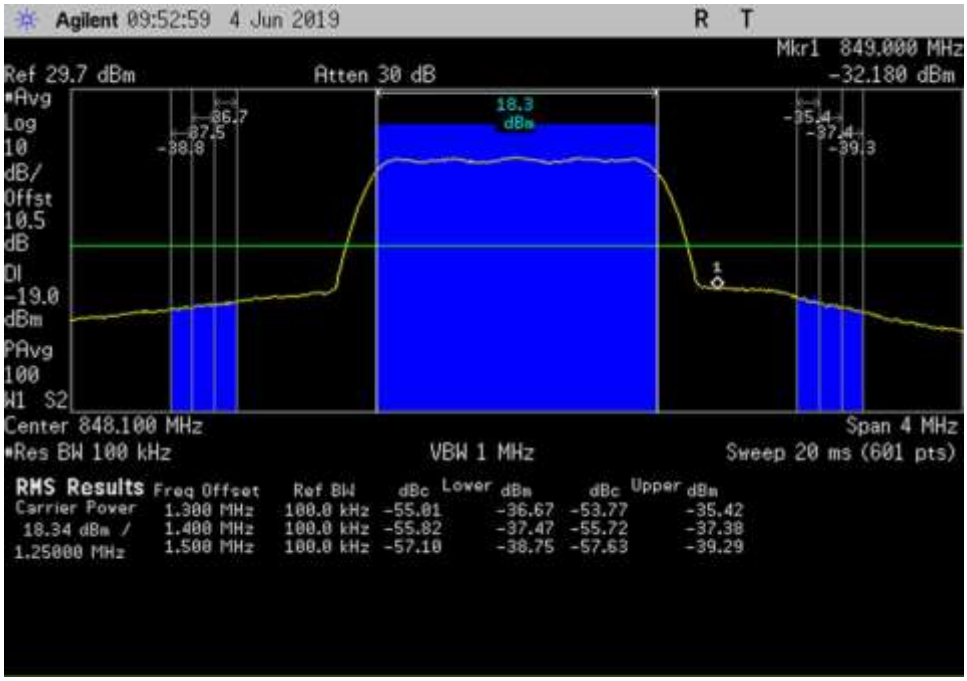
UL_698-716_CDMA_ 712.75- 716.75MHz_50ft Cable



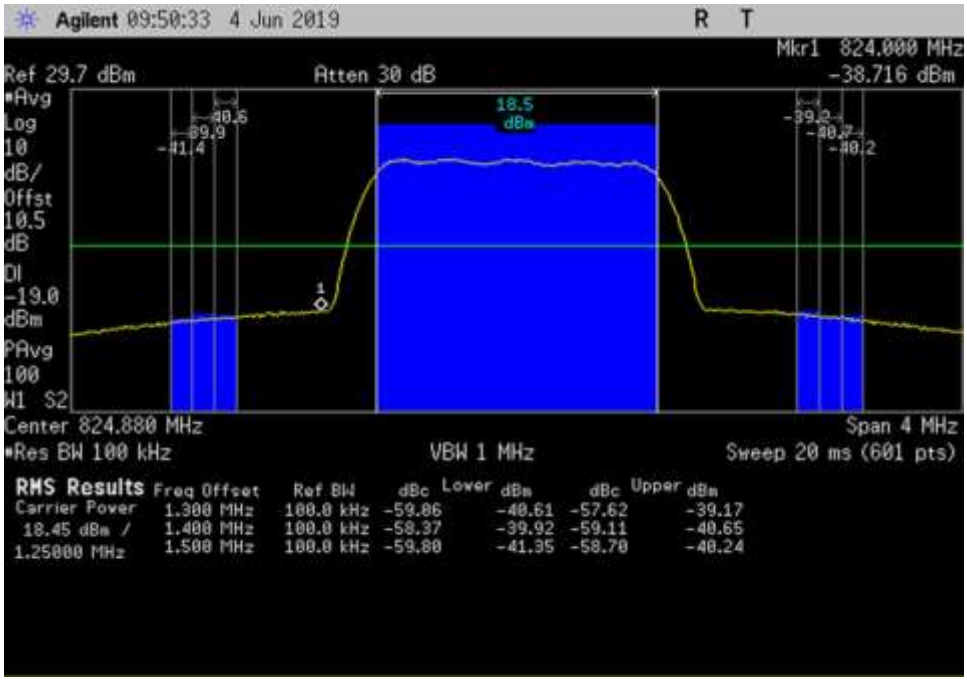
UL_776-787_CDMA_ 775.25- 779.25MHz_50ft Cable



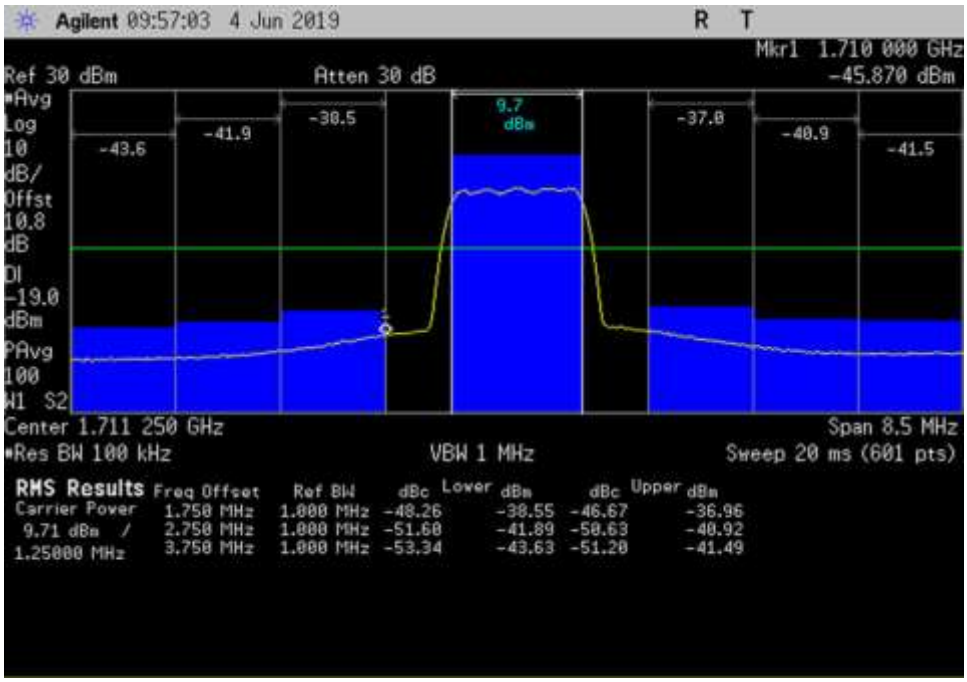
UL_776-787_CDMA_ 783.75- 787.75MHz_50ft Cable



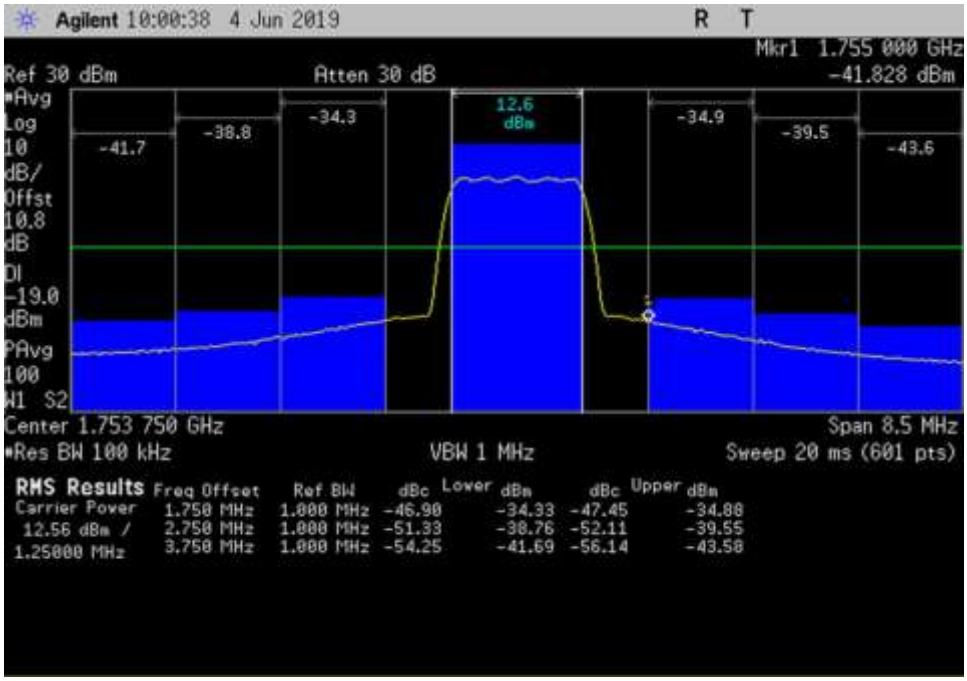
UL_824-849_CDMA_ 846.1- 850.1MHz_50ft Cable



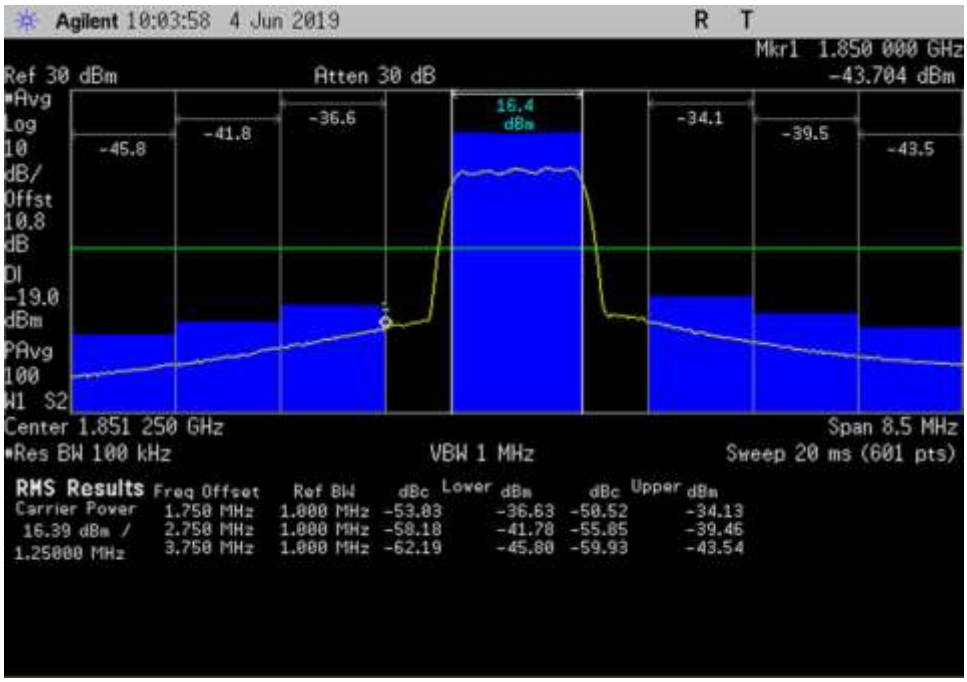
UL_824-849_CDMA_Max_ 822.88- 826.88MHz_50ft Cable



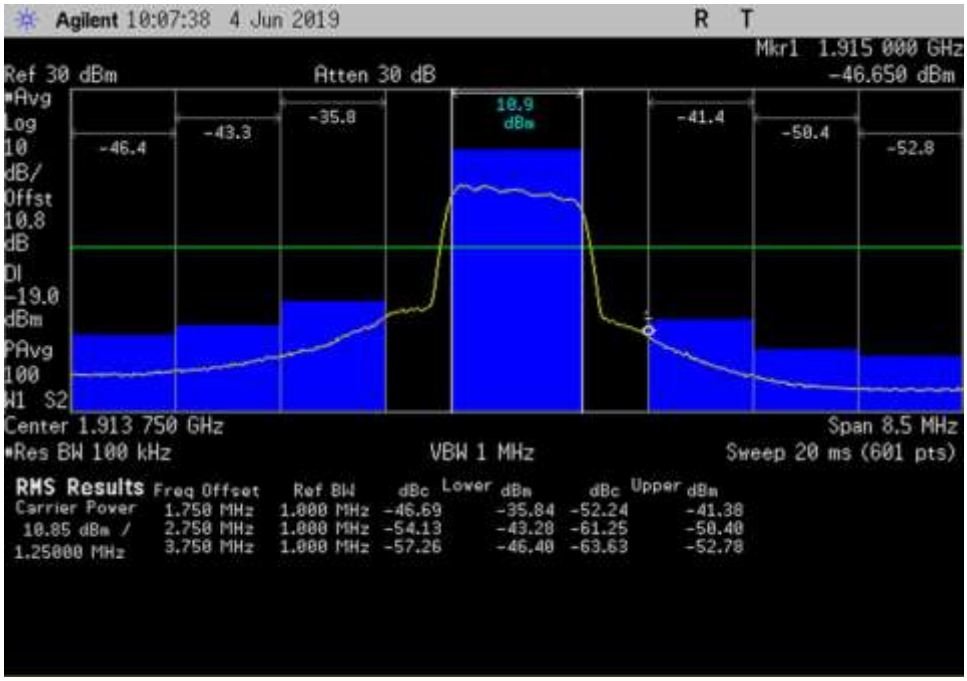
UL_1710-1755_CDMA_ 1707- 1715.5MHz_50ft Cable



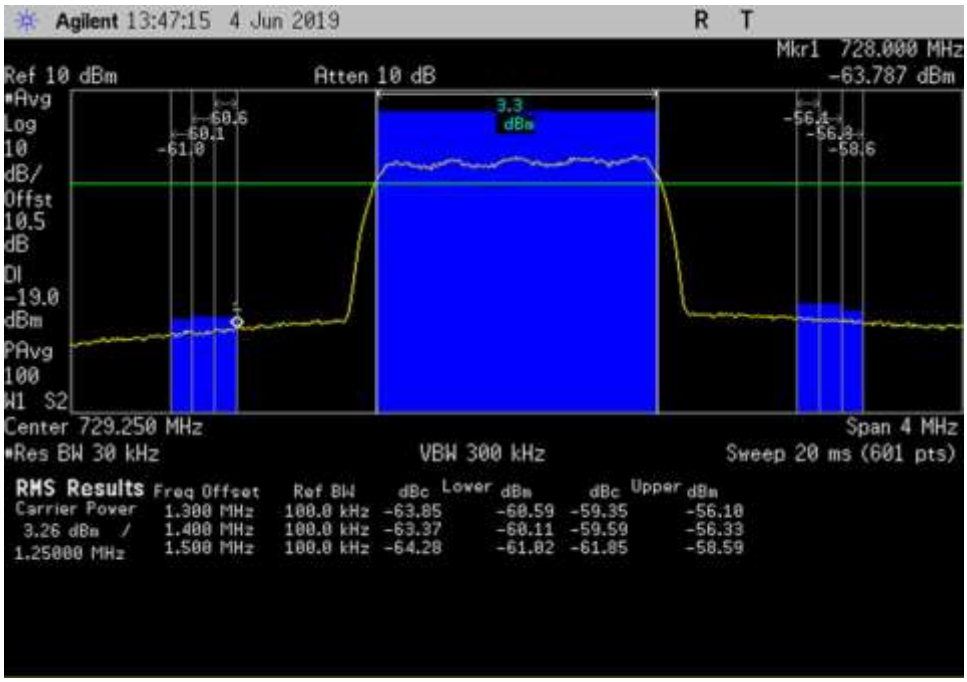
UL_1710-1755_CDMA_ 1749.5- 1758MHz_50ft Cable



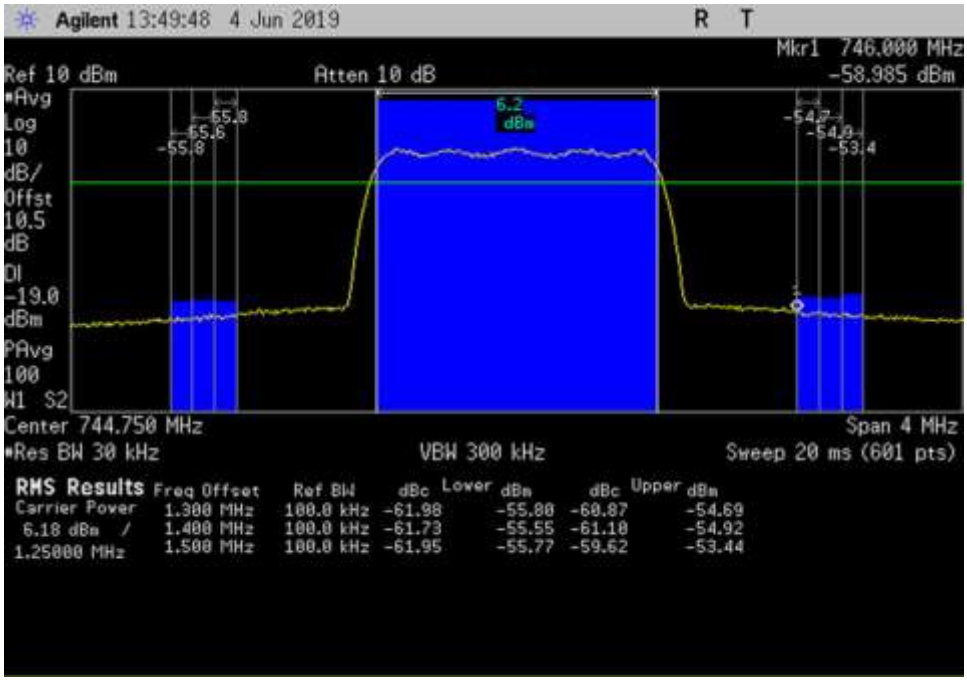
UL_1850-1915_CDMA_ 1847- 1855.5MHz_50ft Cable



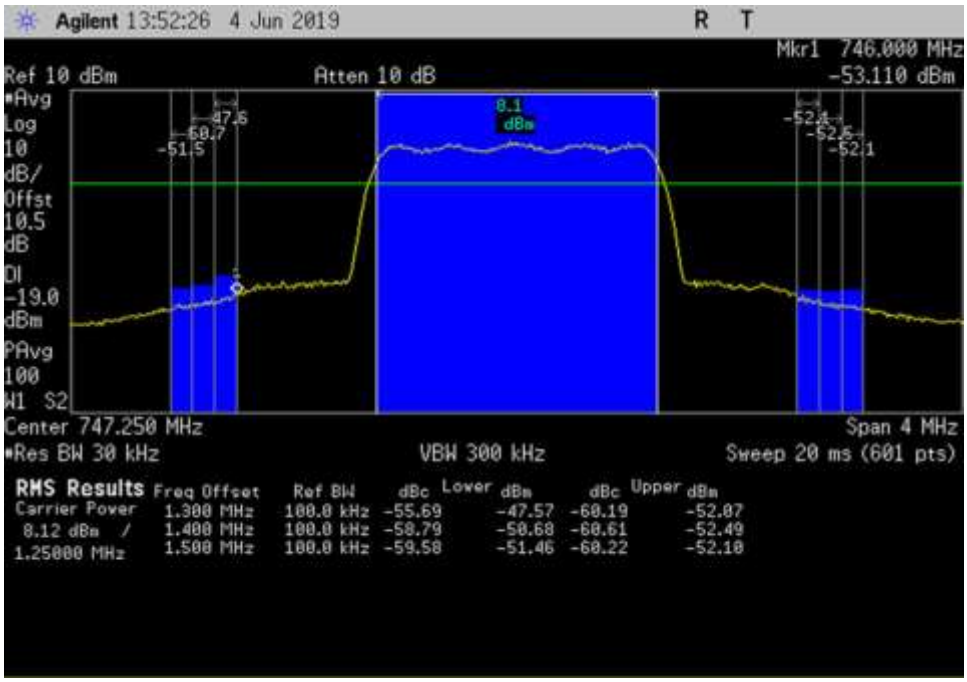
UL_1850-1915_CDMA_ 1909.5- 1918MHz_50ft Cable



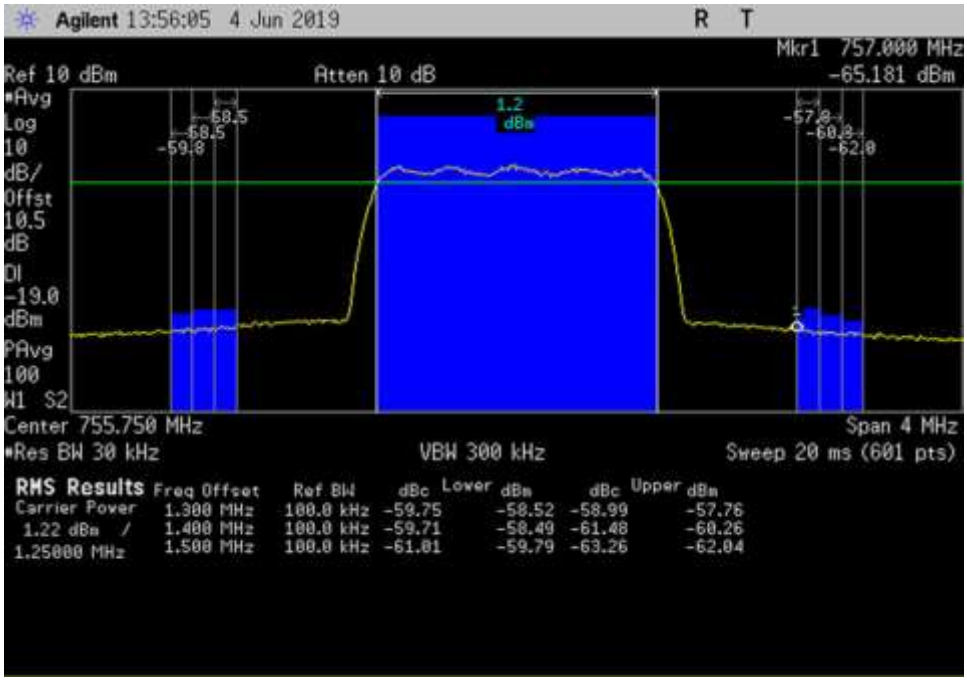
DL_728-746_CDMA_ 727.25- 731.25MHz_50ft Cable



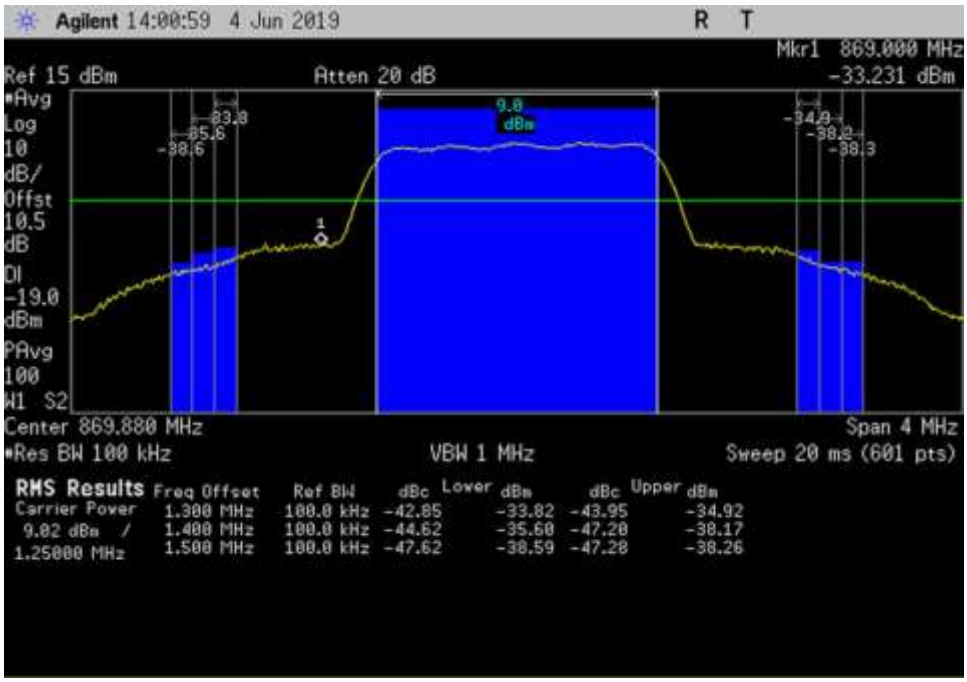
DL_728-746_CDMA_ 742.75- 746.75MHz_50ft Cable



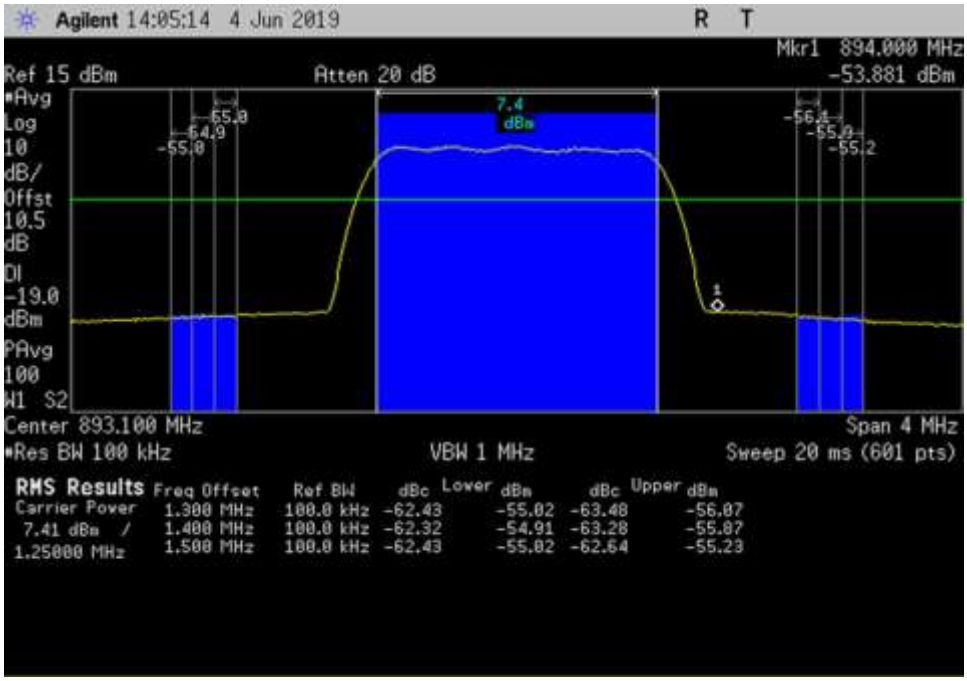
DL_746-757_CDMA_ 745.25- 749.25MHz_50ft Cable



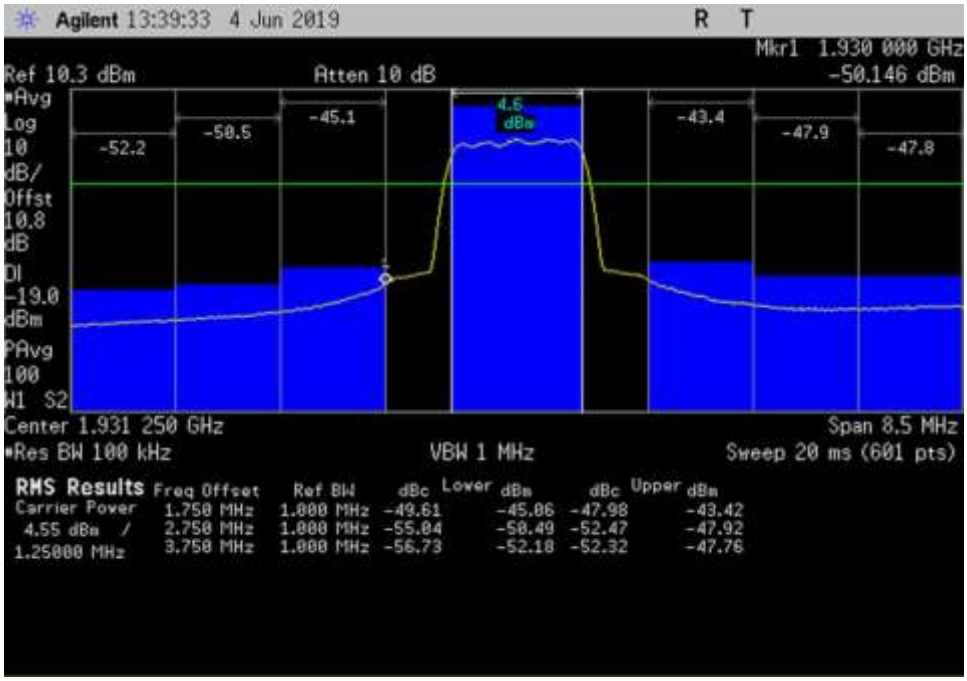
DL_746-757_CDMA_ 753.75- 757.75MHz_50ft Cable



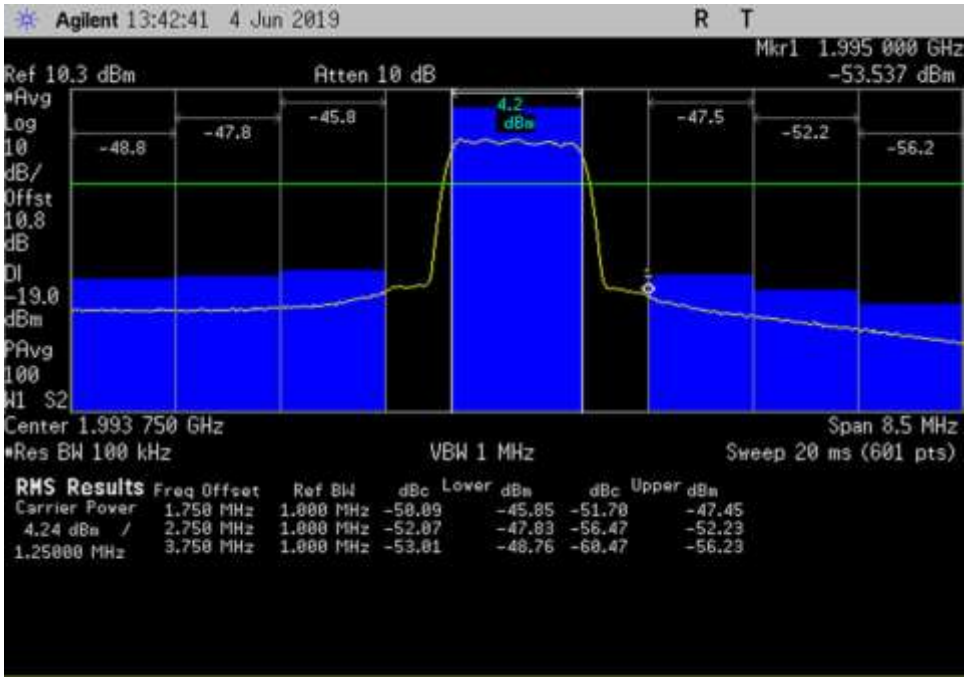
DL_869-894_CDMA_ 867.88- 871.88MHz_50ft Cable



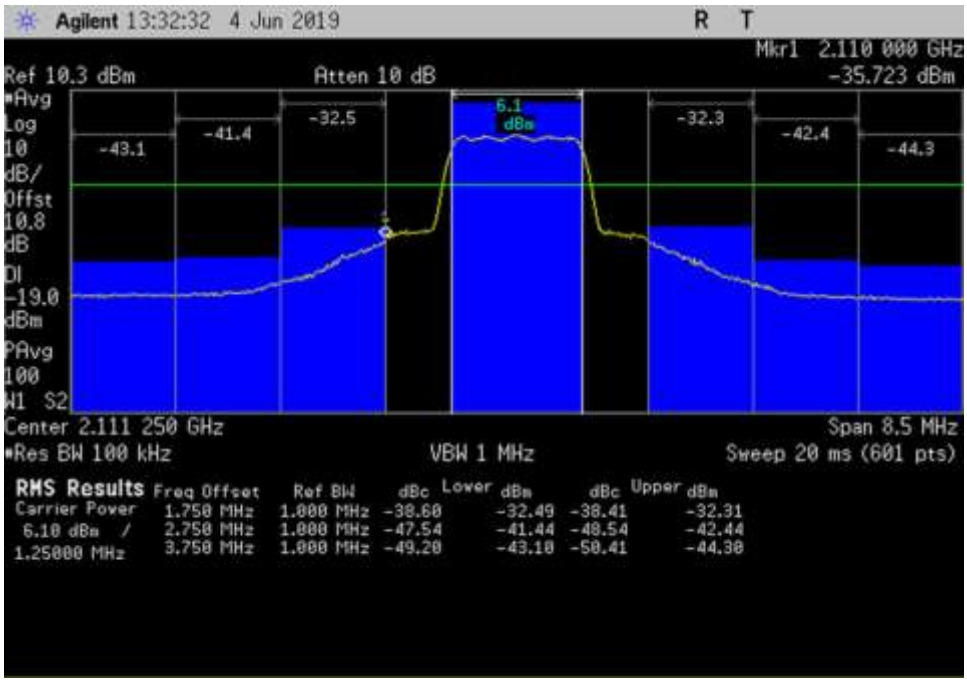
DL_869-894_CDMA_ 891.1- 895.1MHz_50ft Cable



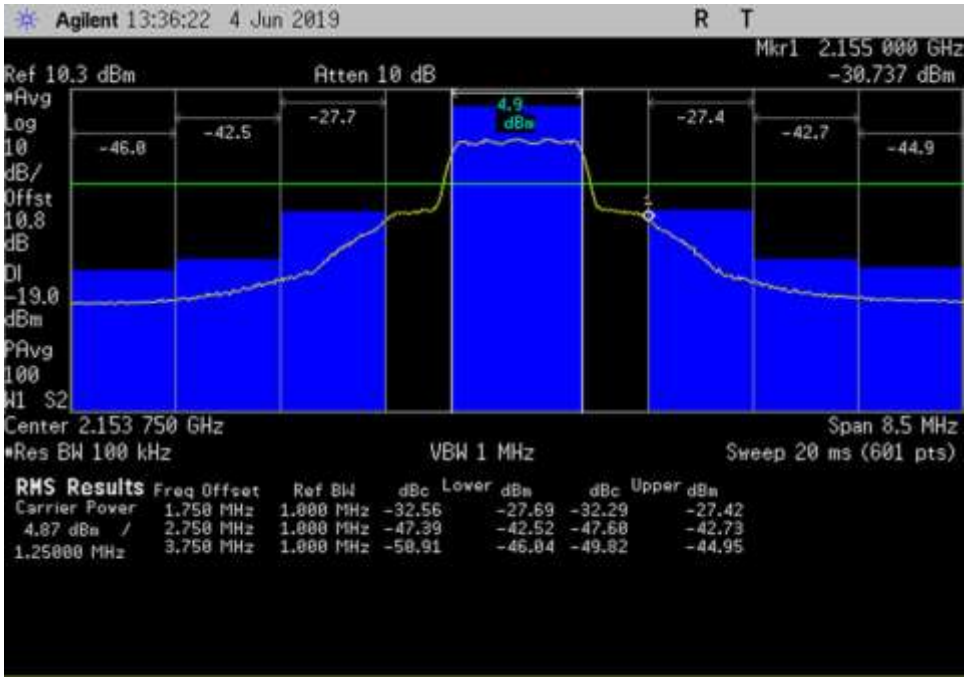
DL_1930-1995_CDMA_ 1927- 1935.5MHz_50ft Cable



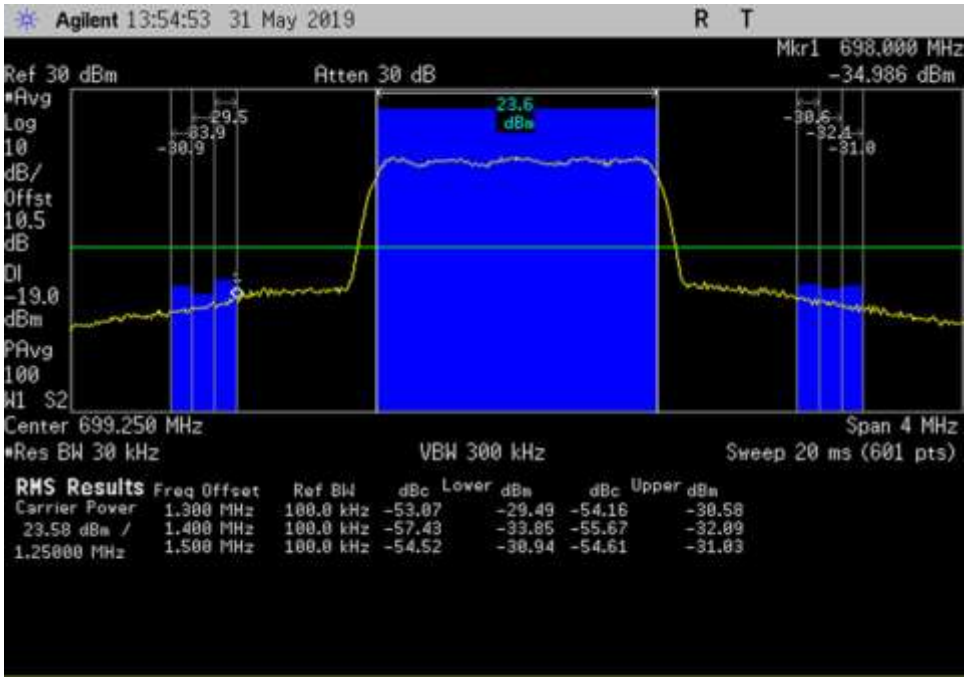
DL_1930-1995_CDMA_ 1989.5- 1998MHz_50ft Cable



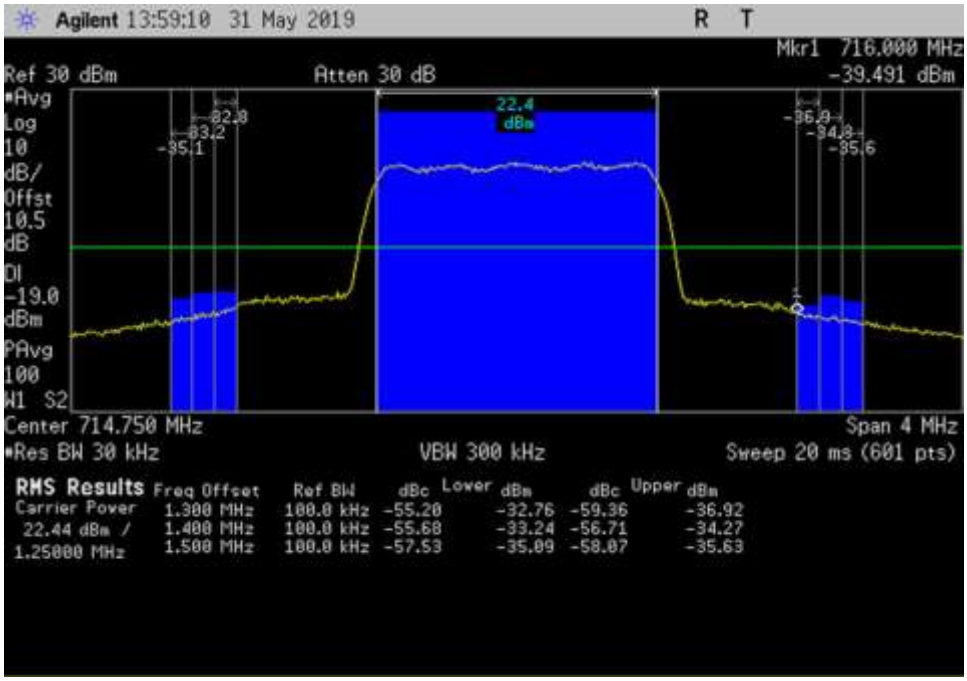
DL_2110-2155_CDMA_ 2107- 2115.5MHz_50ft Cable



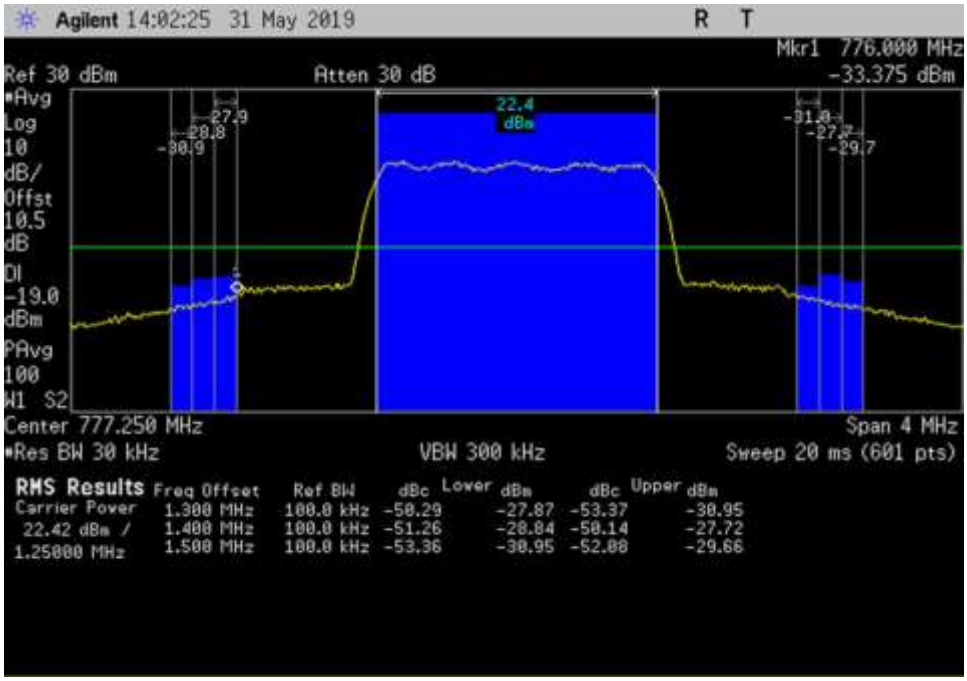
DL_2110-2155_CDMA_ 2149.5- 2158MHz_50ft Cable



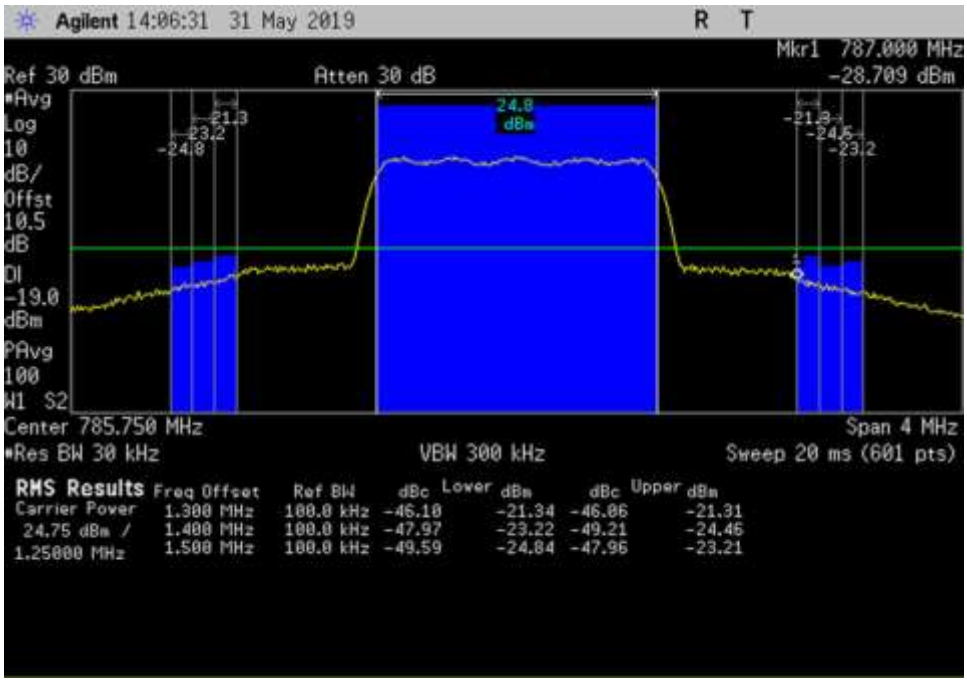
UL_698-716_CDMA_ 697.25- 701.25MHz_100ft Cable



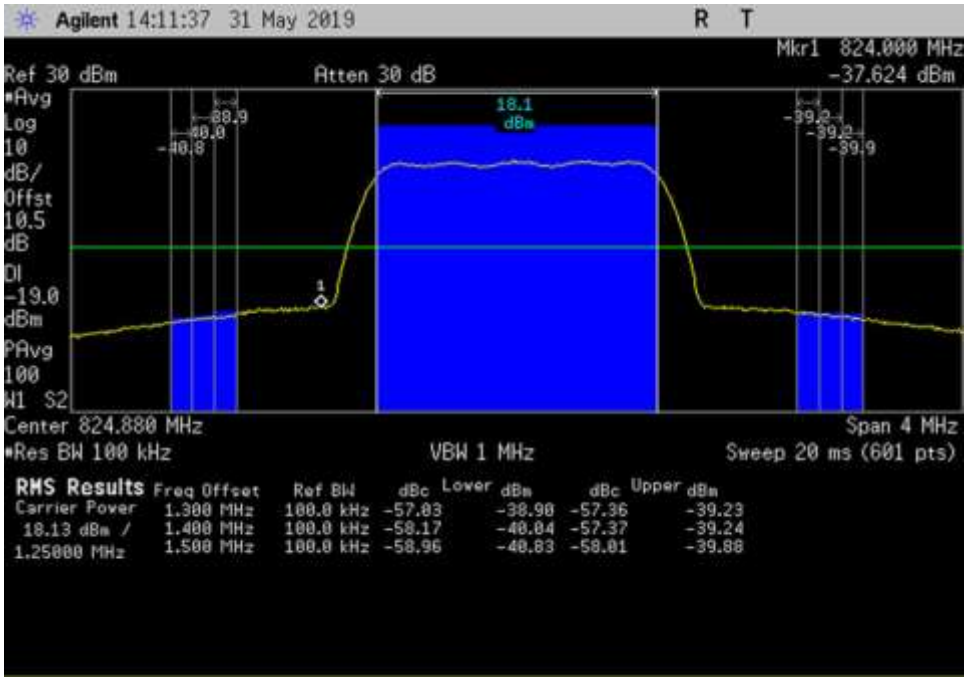
UL_698-716_CDMA_ 712.75- 716.75MHz_100ft Cable



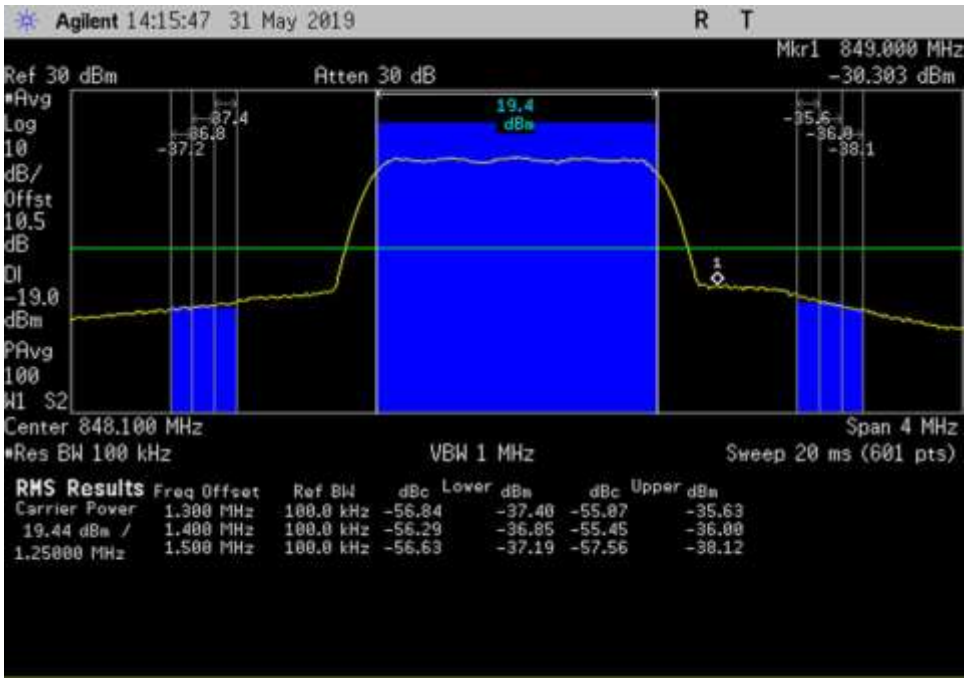
UL_776-787_CDMA_ 775.25- 779.25MHz_100ft Cable



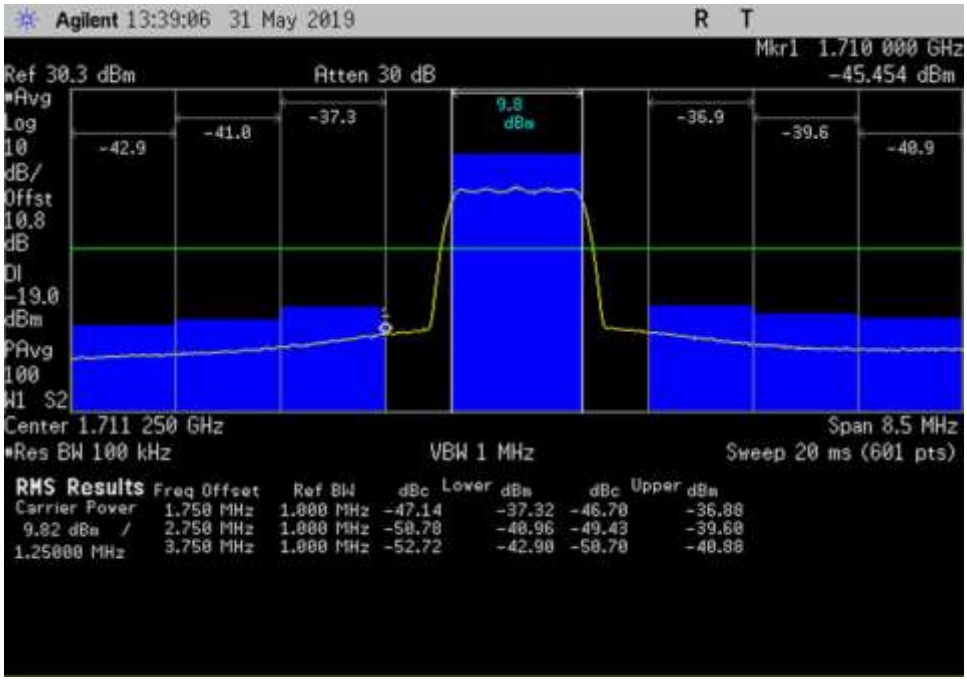
UL_776-787_CDMA_ 783.75- 787.75MHz_100ft Cable



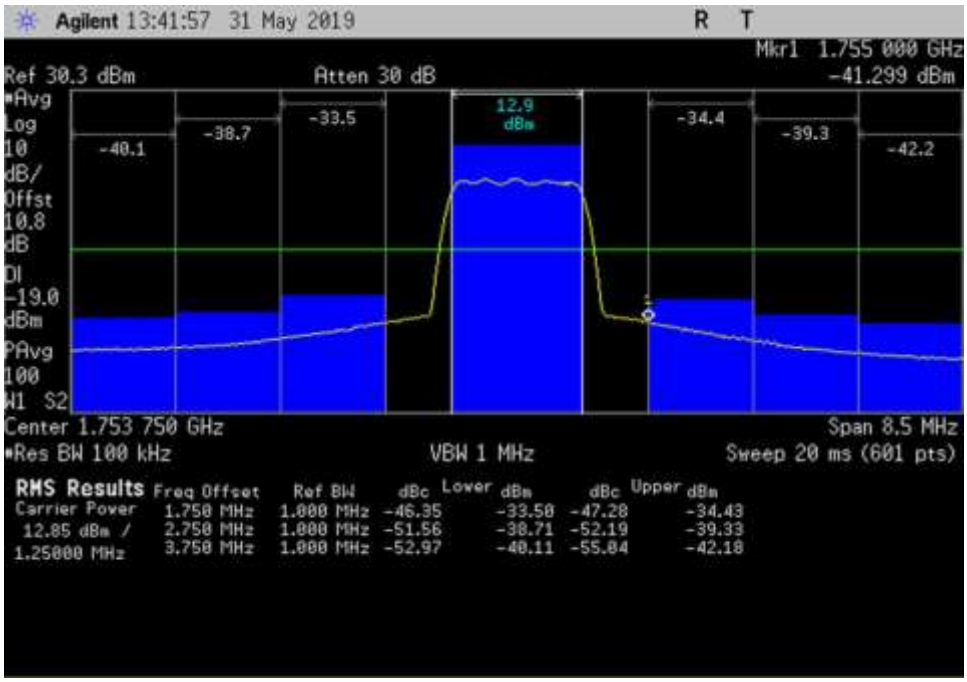
UL_824-849_CDMA_ 822.88- 826.88MHz_100ft Cable



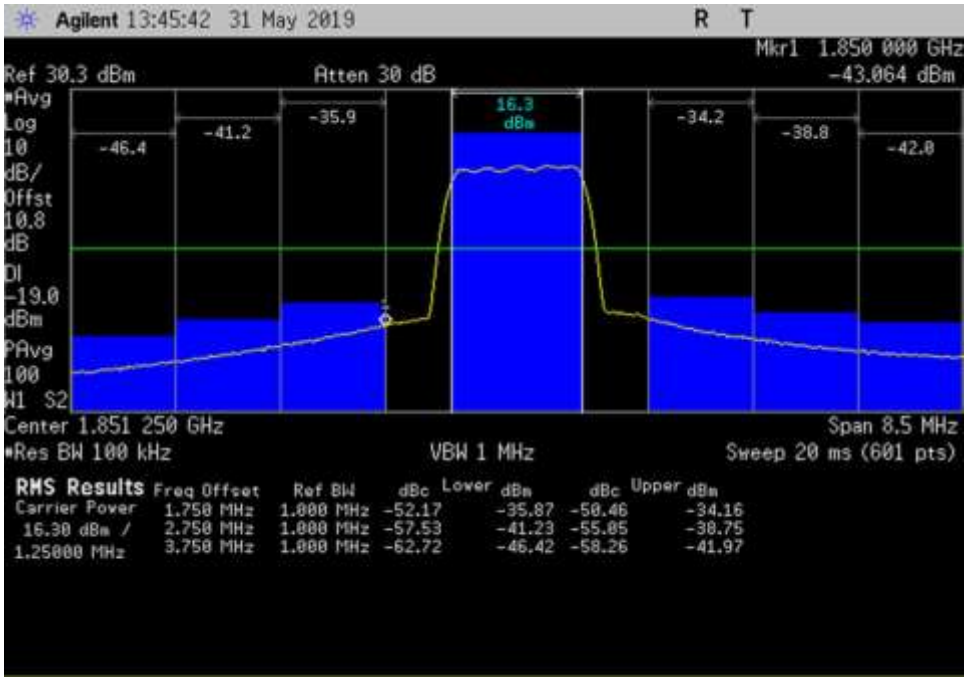
UL_824-849_CDMA_ 846.1- 850.1MHz_100ft Cable



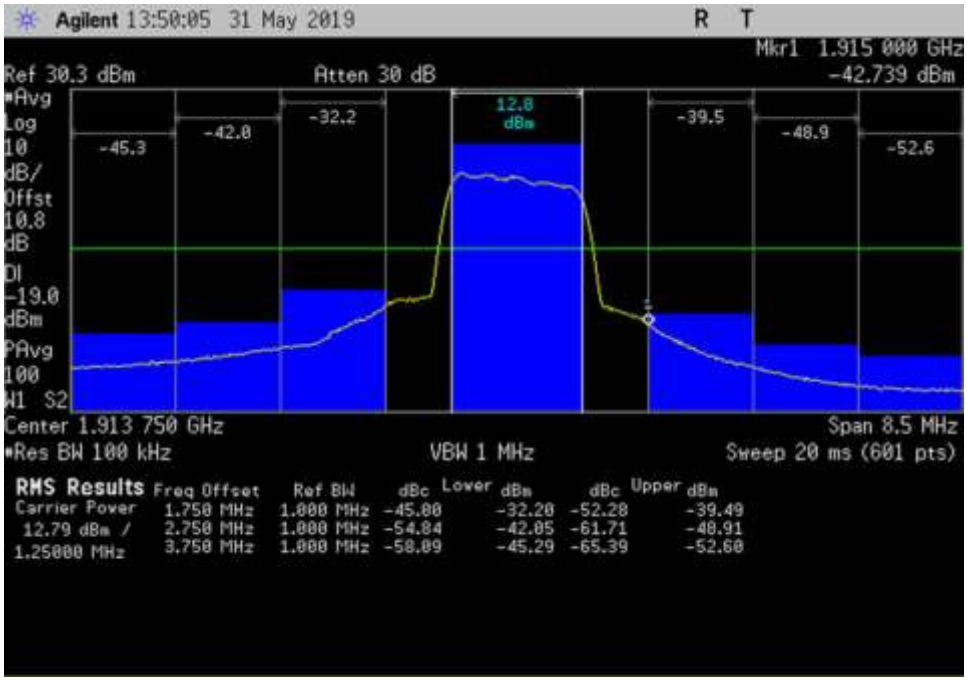
UL_1710-1755_CDMA_ 1707- 1715.5MHz_100ft Cable



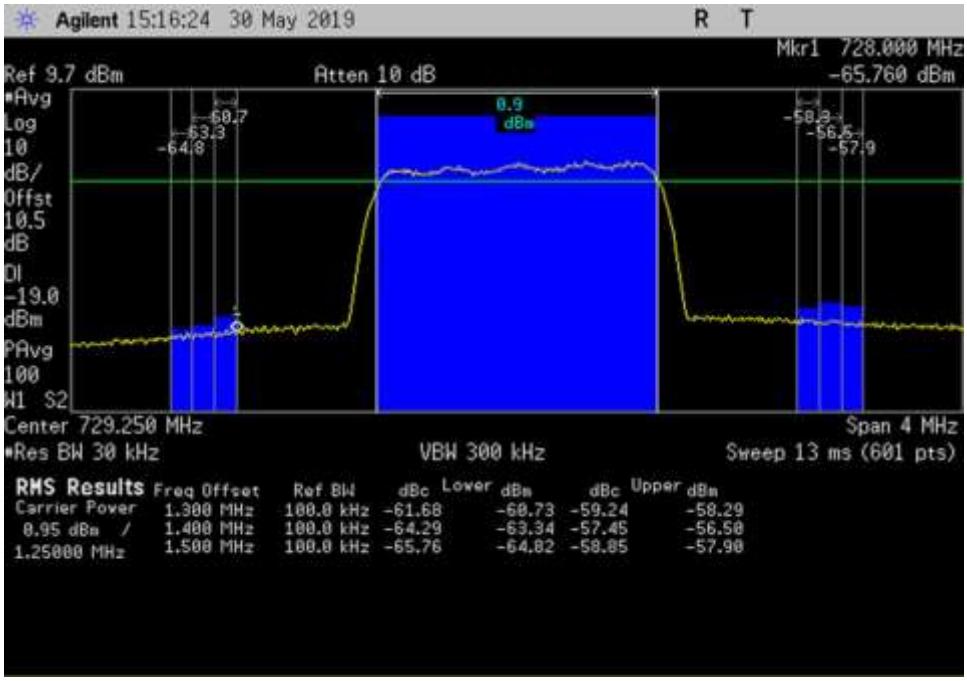
UL_1710-1755_CDMA_ 1749.5- 1758MHz_100ft Cable



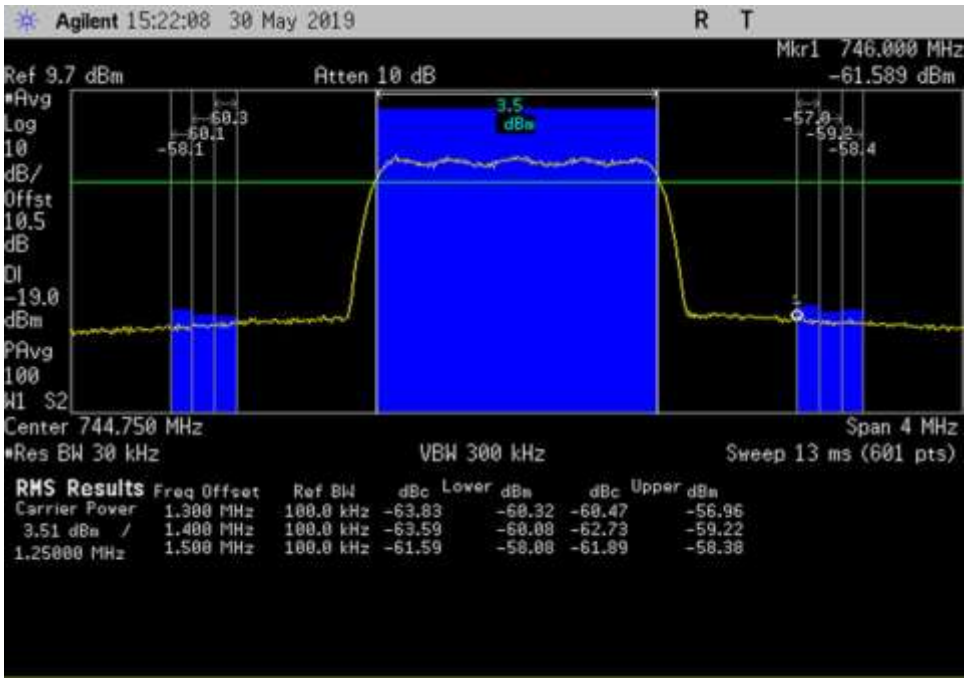
UL_1850-1915_CDMA_ 1847- 1855.5MHz_100ft Cable



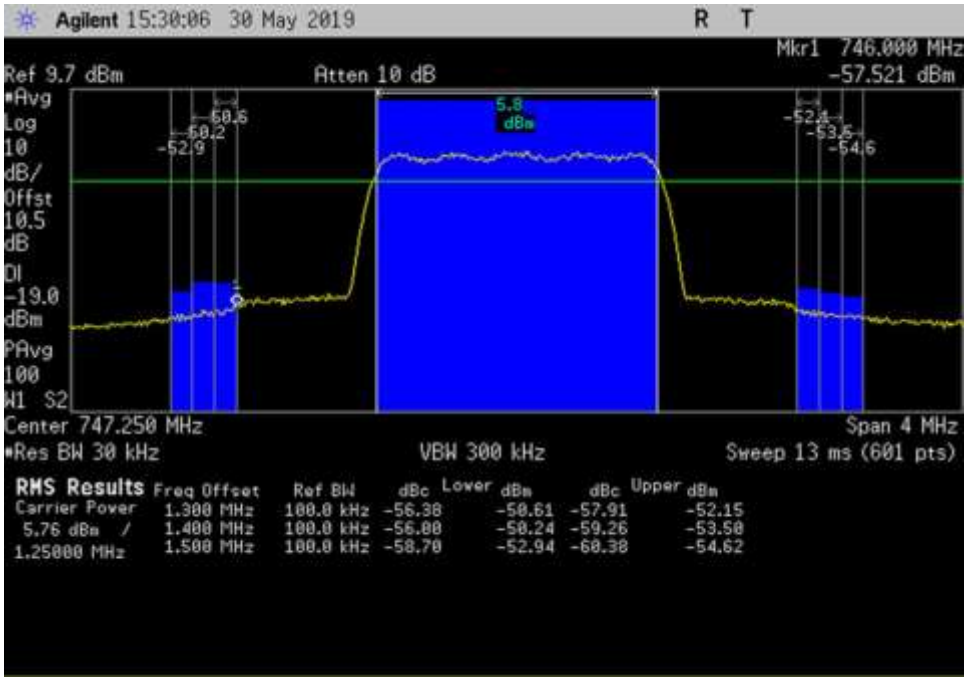
UL_1850-1915_CDMA_ 1909.5- 1918MHz_100ft Cable



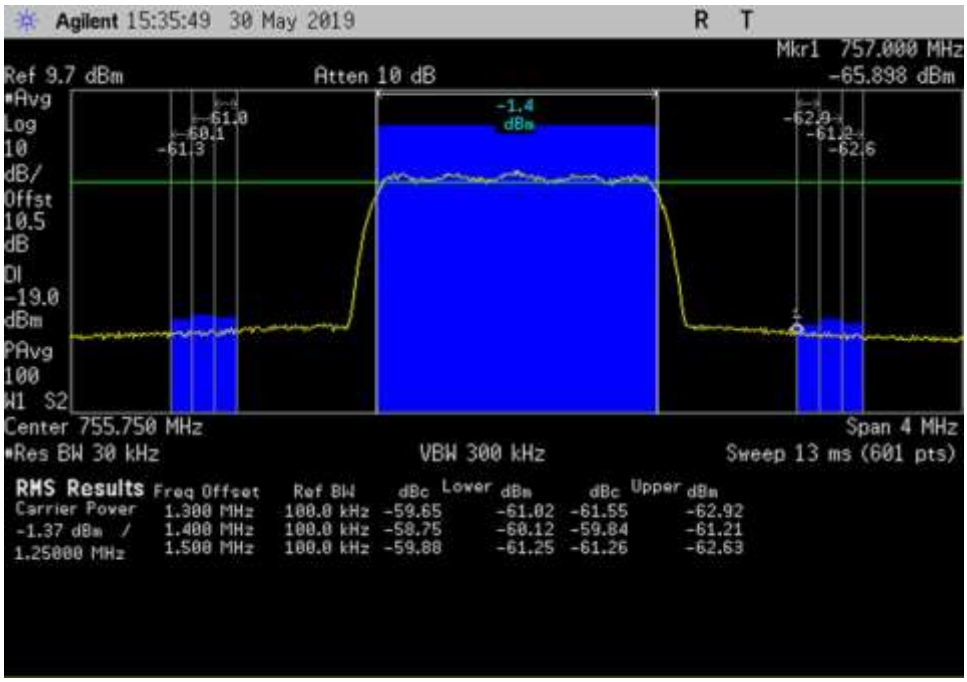
DL_728-746_CDMA_ 727.25- 731.25MHz_100ft Cable



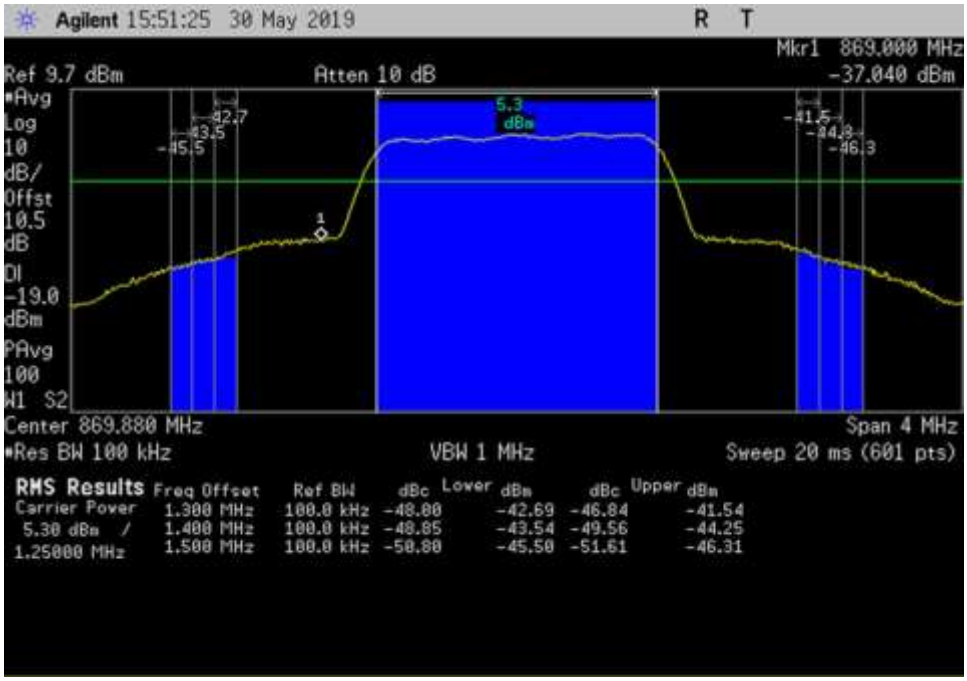
DL_728-746_CDMA_ 742.75- 746.75MHz_100ft Cable



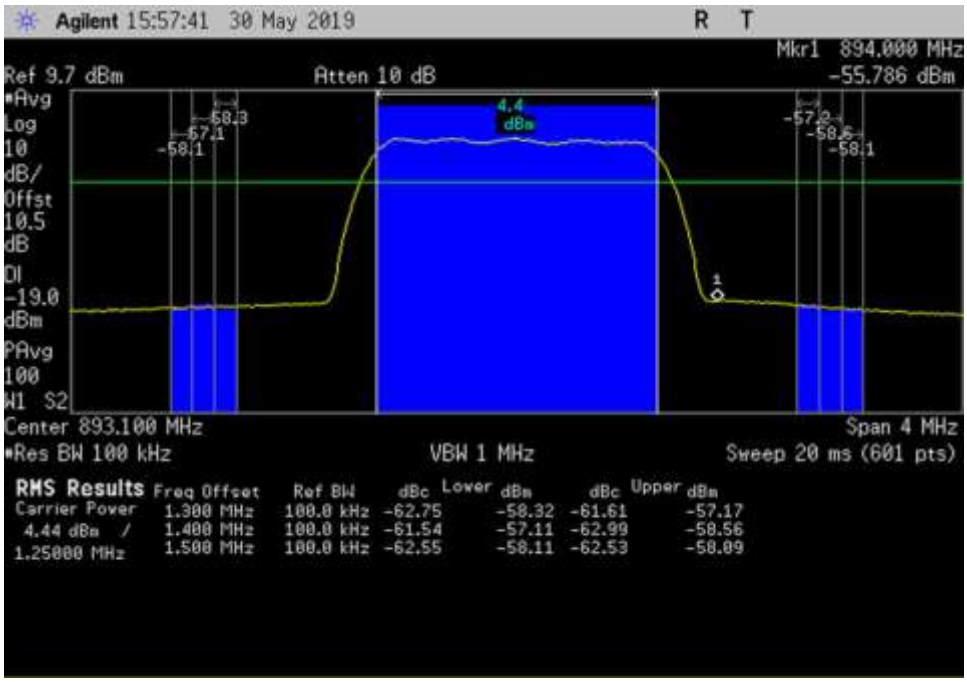
DL_746-757_CDMA_ 745.25- 749.25MHz_100ft Cable



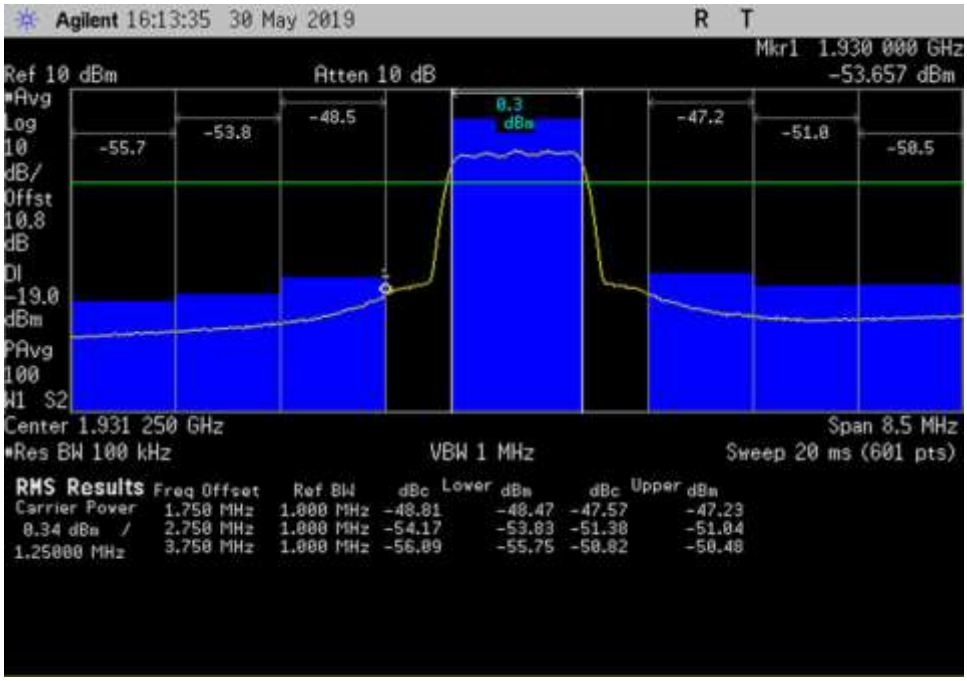
DL_746-757_CDMA_ 753.75- 757.75MHz_100ft Cable



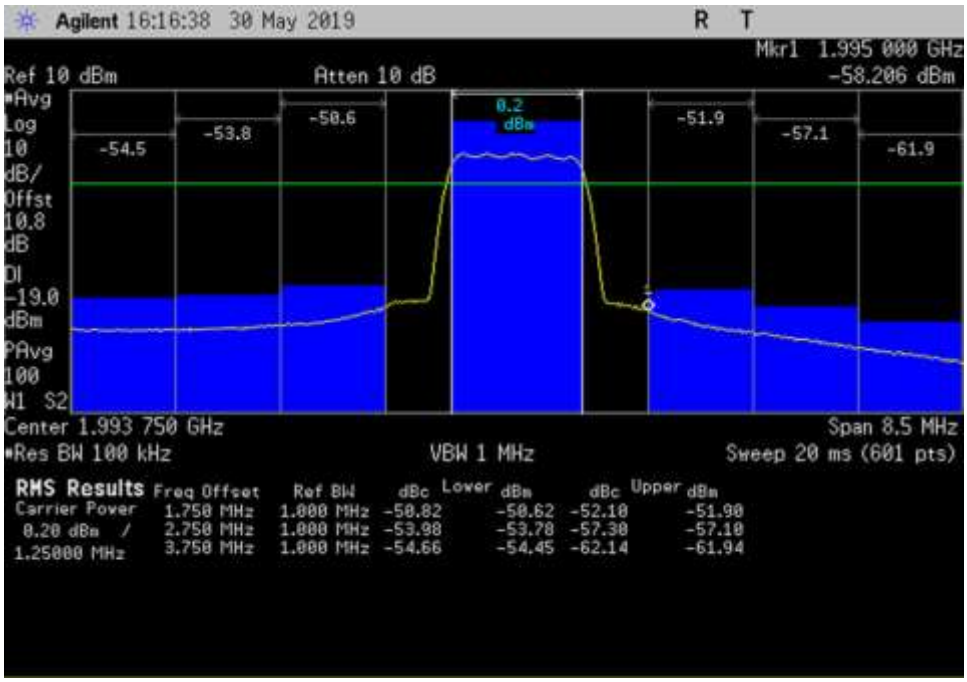
DL_869-894_CDMA_ 867.88- 871.88MHz_100ft Cable



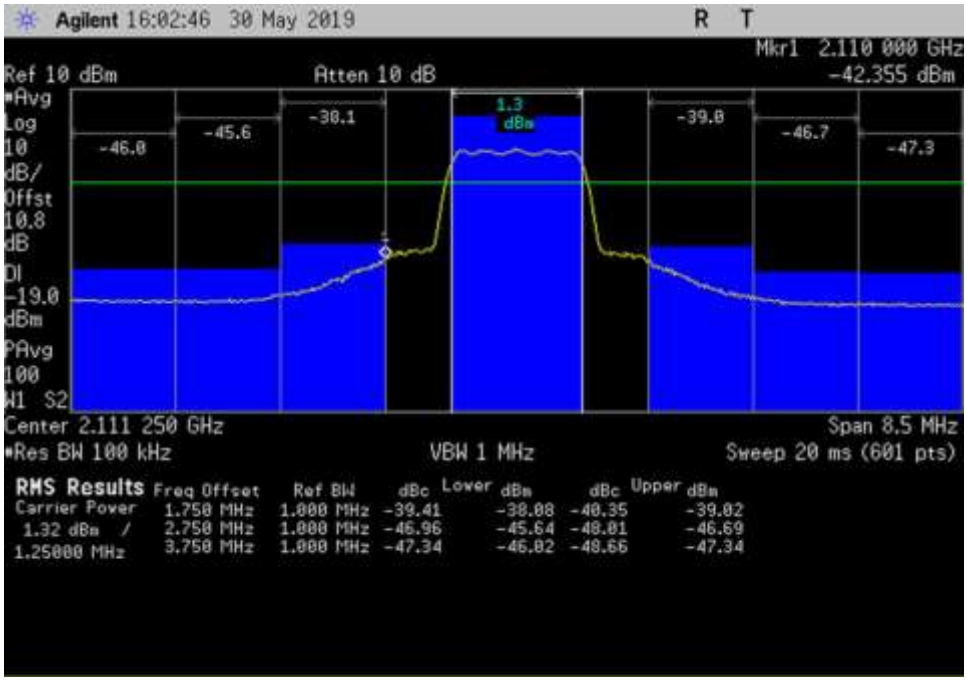
DL_869-894_CDMA_ 891.1- 895.1MHz_100ft Cable



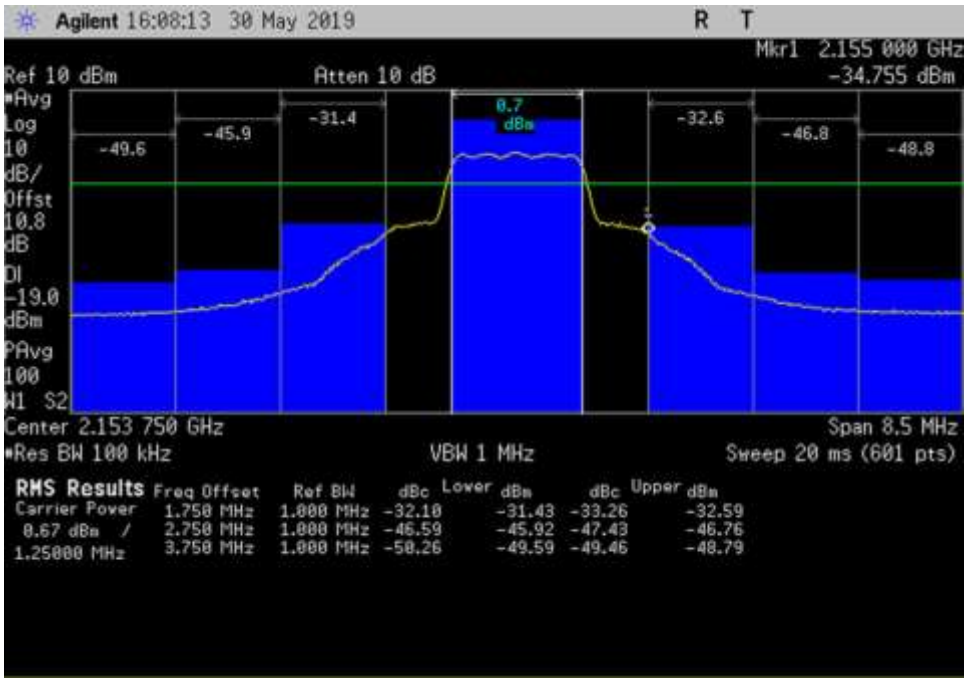
DL_1930-1995_CDMA_ 1927- 1935.5MHz_100ft Cable



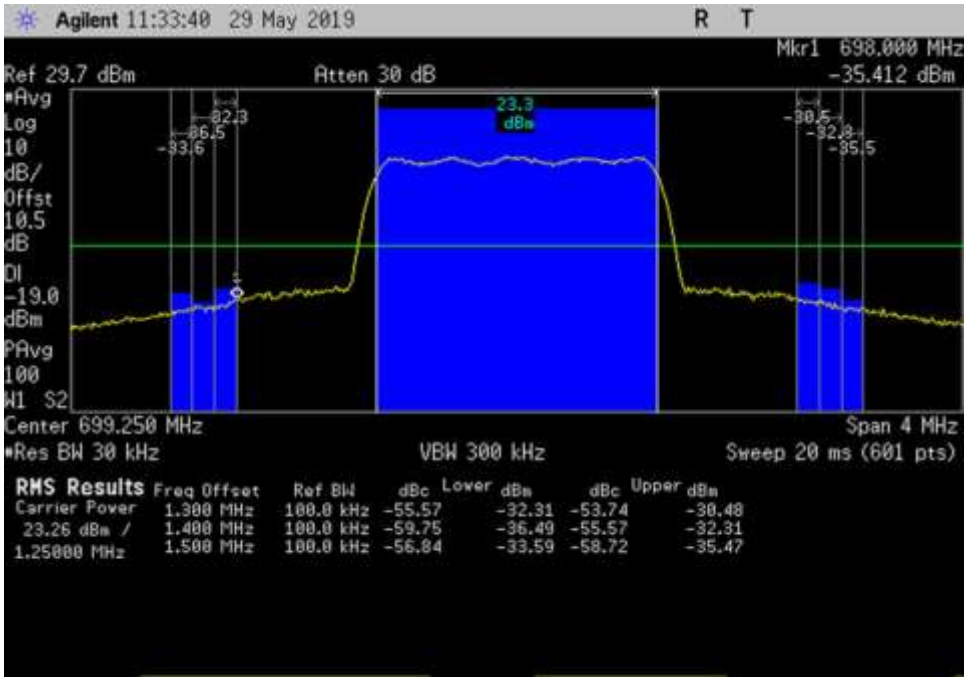
DL_1930-1995_CDMA_ 1989.5- 1998MHz_100ft Cable



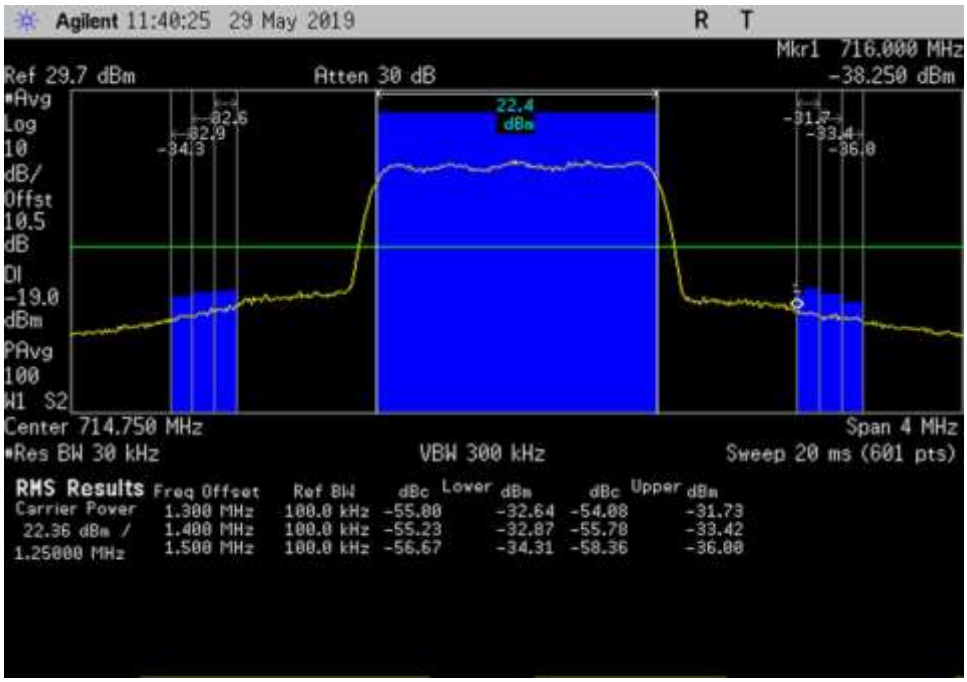
DL_2110-2155_CDMA_ 2107- 2115.5MHz_100ft Cable



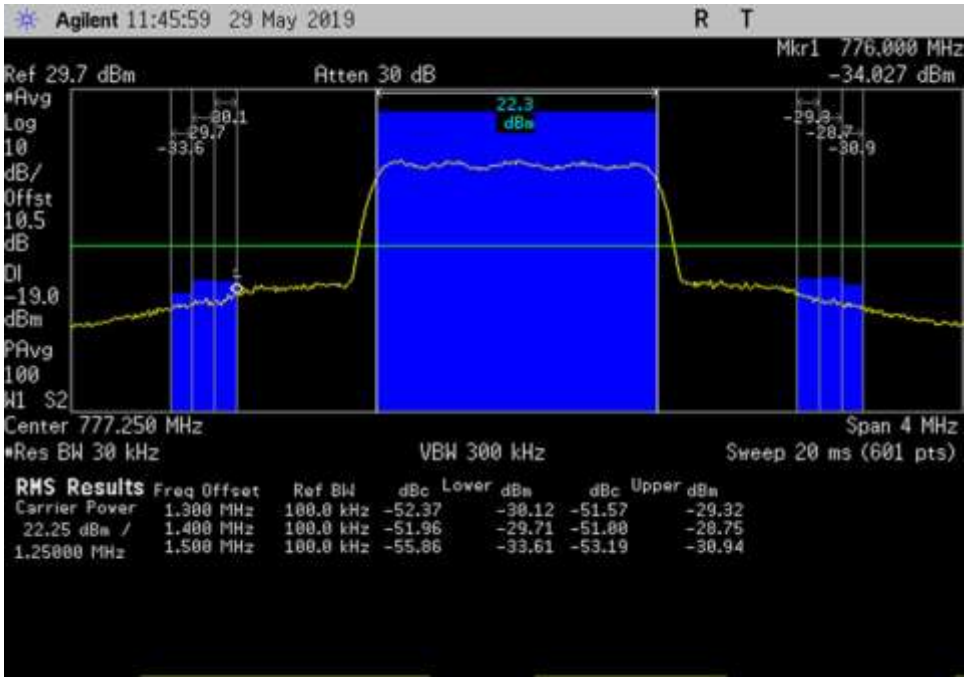
DL_2110-2155_CDMA_ 2149.5- 2158MHz_100ft Cable



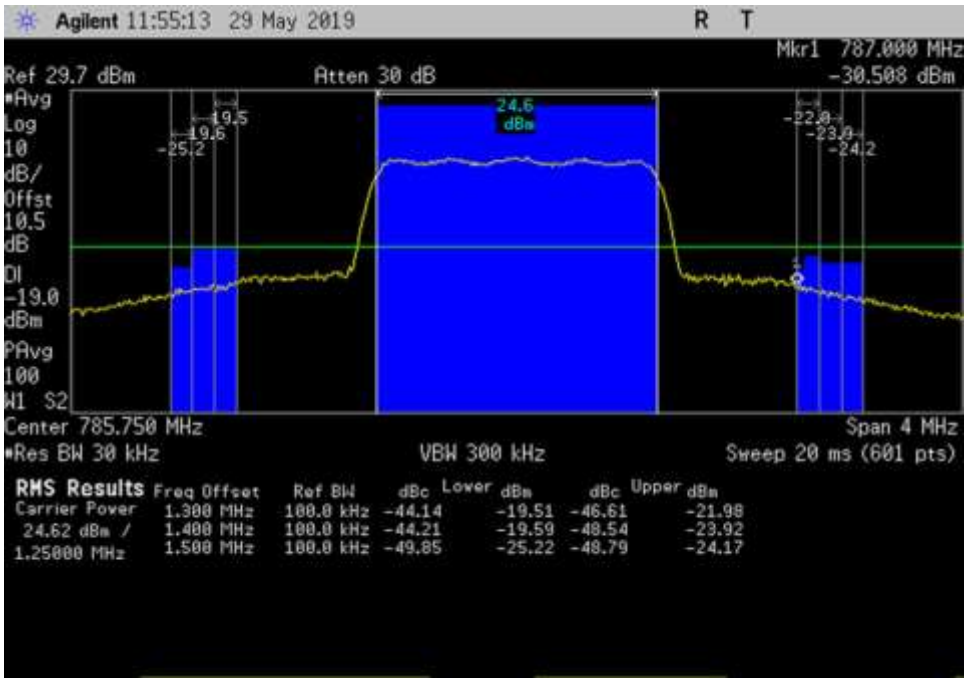
UL_698-716_CDMA_ 697.25- 701.25MHz_150ft Cable



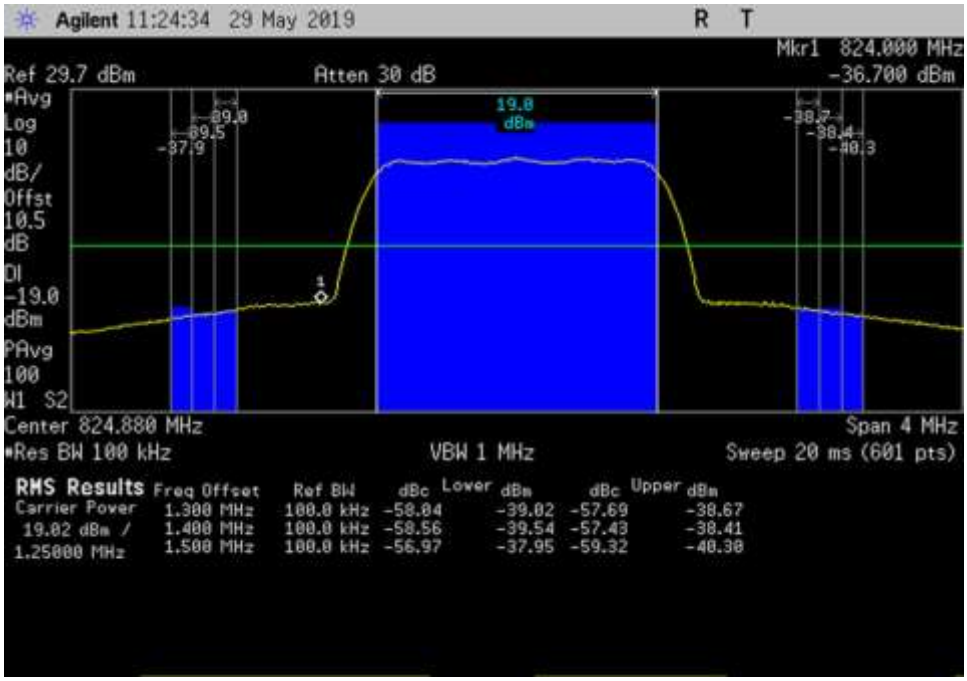
UL_698-716_CDMA_ 712.75- 716.75MHz_150ft Cable



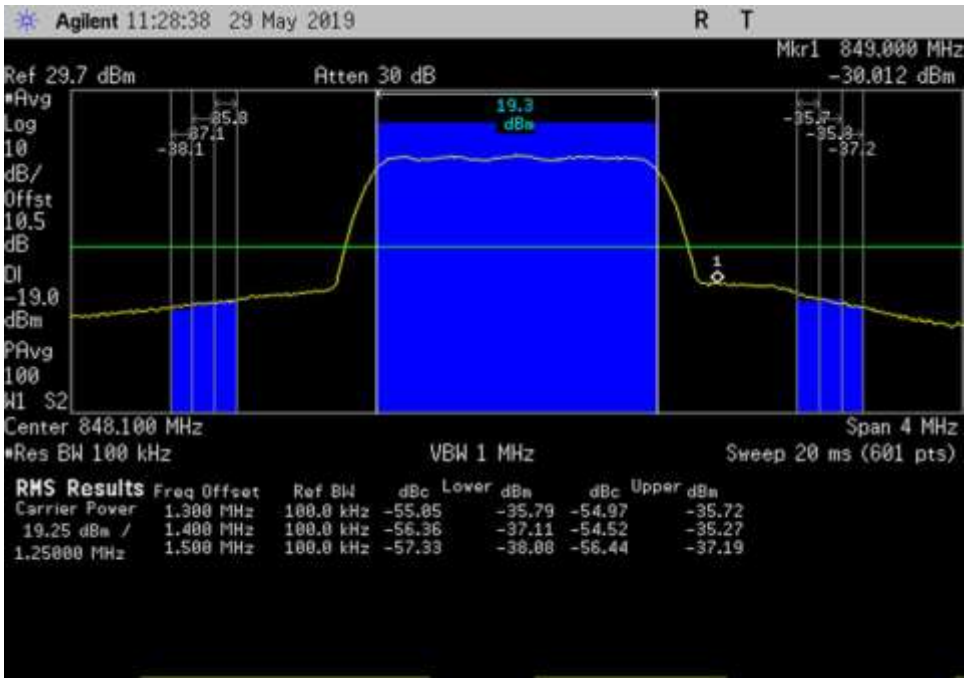
UL_776-787_CDMA_ 775.25- 779.25MHz_150ft Cable



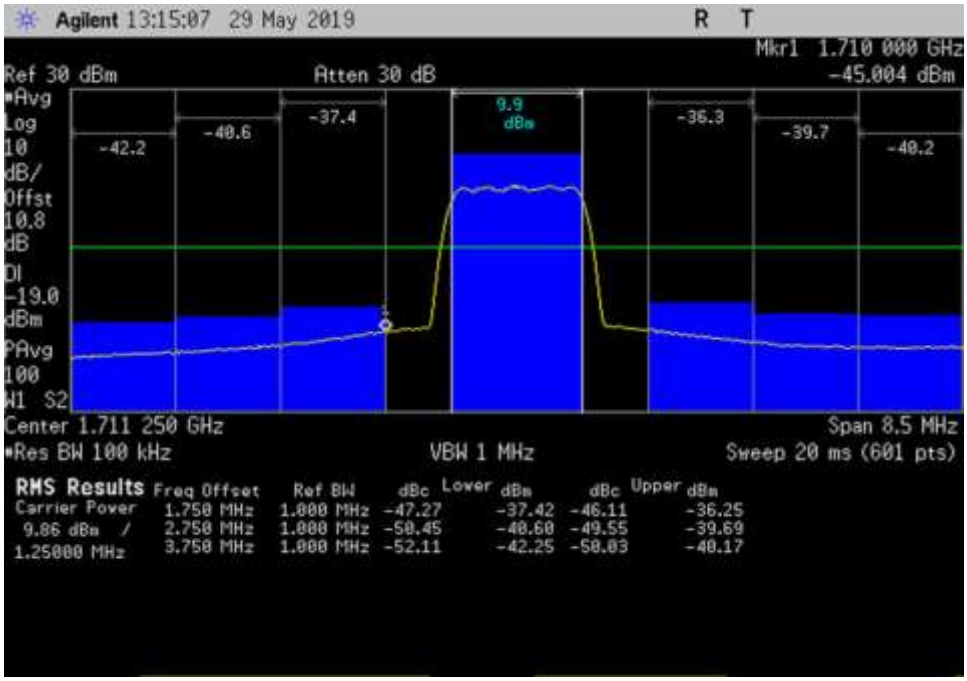
UL_776-787_CDMA_ 783.75- 787.75MHz_150ft Cable



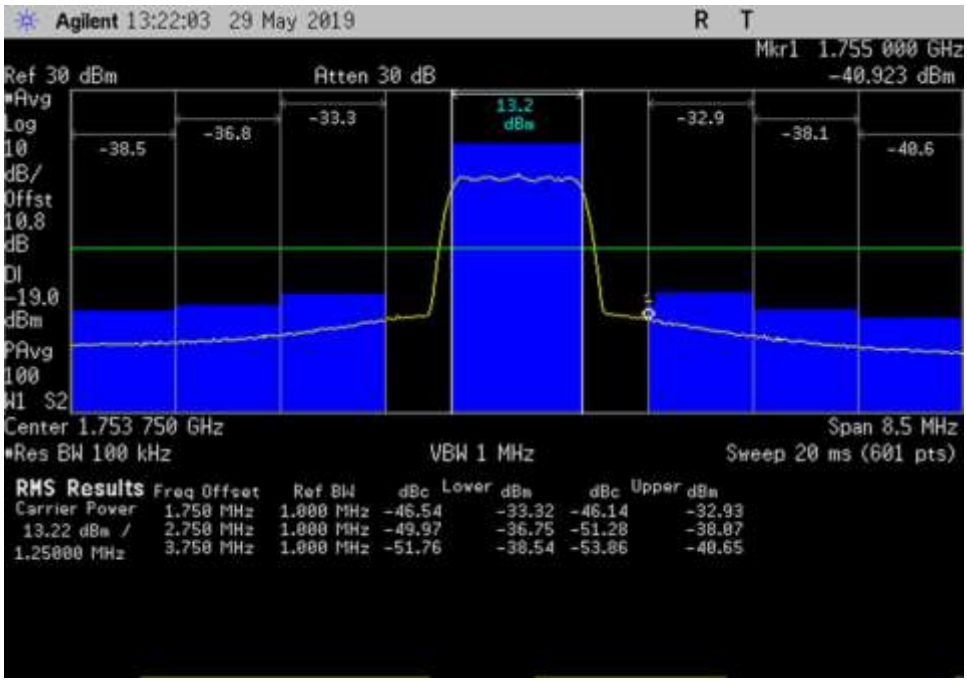
UL_824-849_CDMA_ 822.88- 826.88MHz_150ft Cable



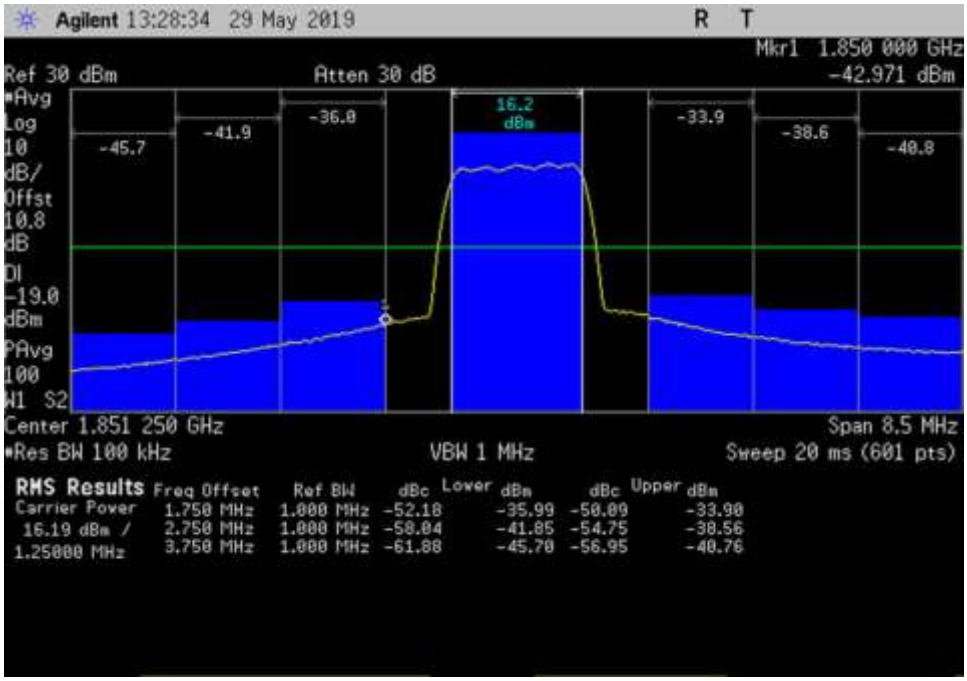
UL_824-849_CDMA_ 846.1- 850.1MHz_150ft Cable



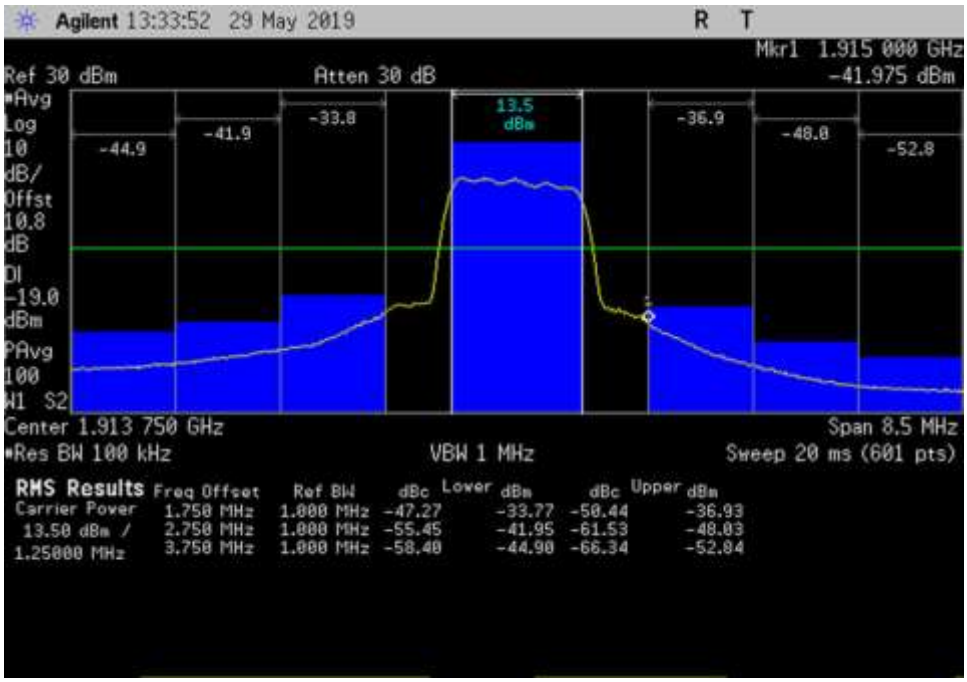
UL_1710-1755_CDMA_ 1707- 1715.5MHz_150ft Cable



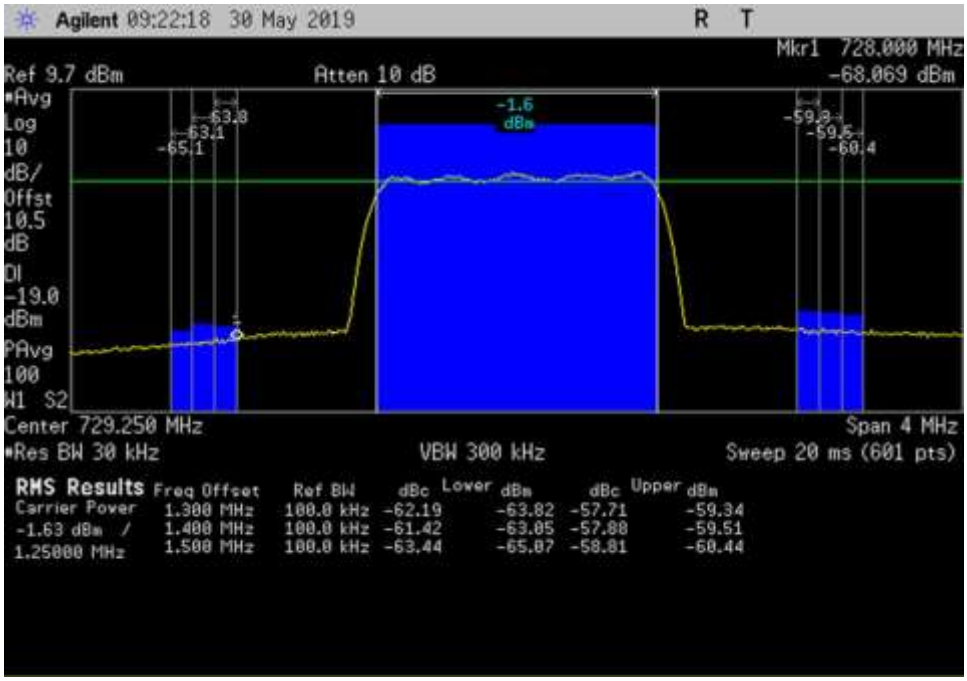
UL_1710-1755_CDMA_ 1749.5- 1758MHz_150ft Cable



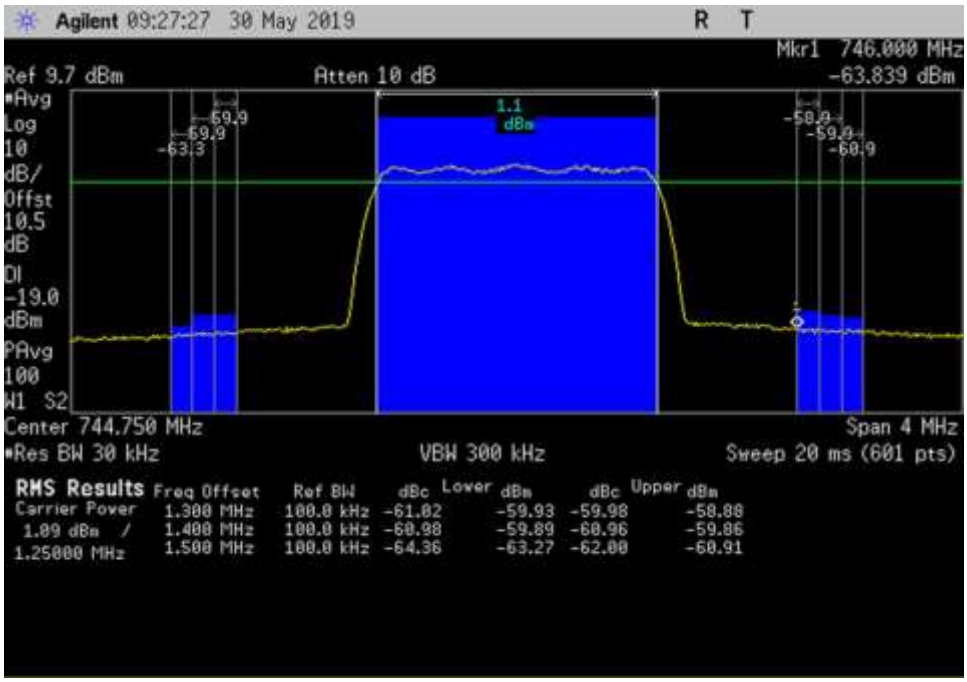
UL_1850-1915_CDMA_ 1847- 1855.5MHz_150ft Cable



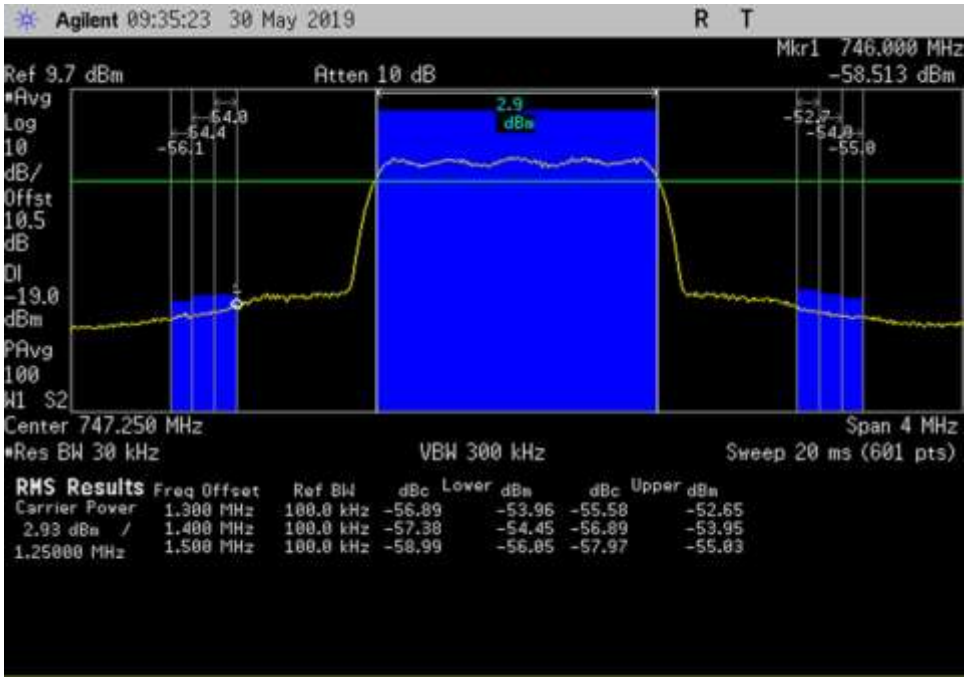
UL_1850-1915_CDMA_ 1909.5- 1918MHz_150ft Cable



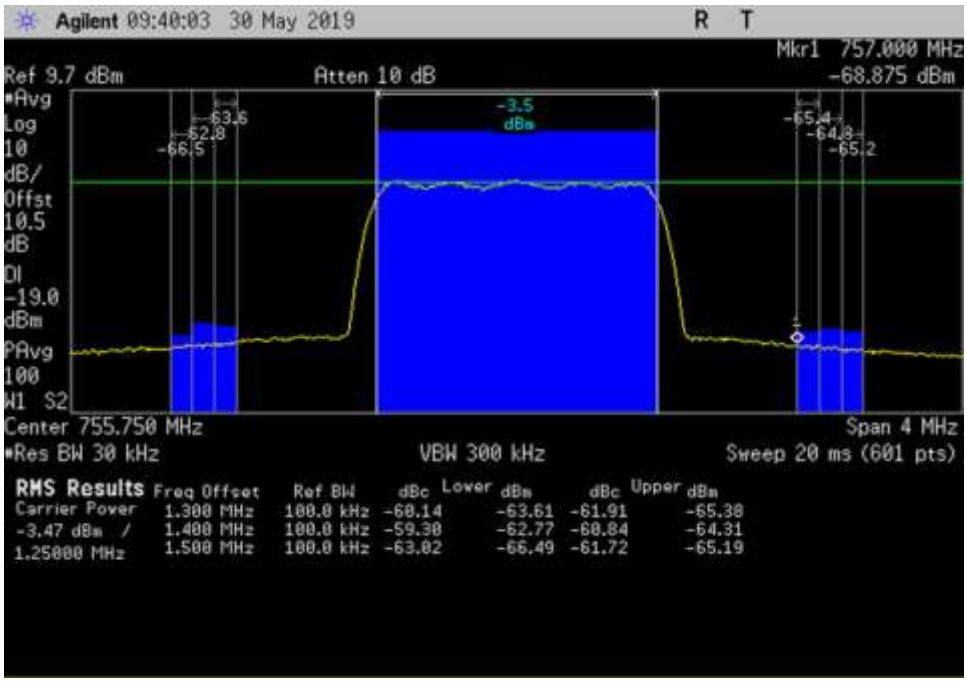
DL_728-746_CDMA_ 727.25- 731.25MHz_150ft Cable



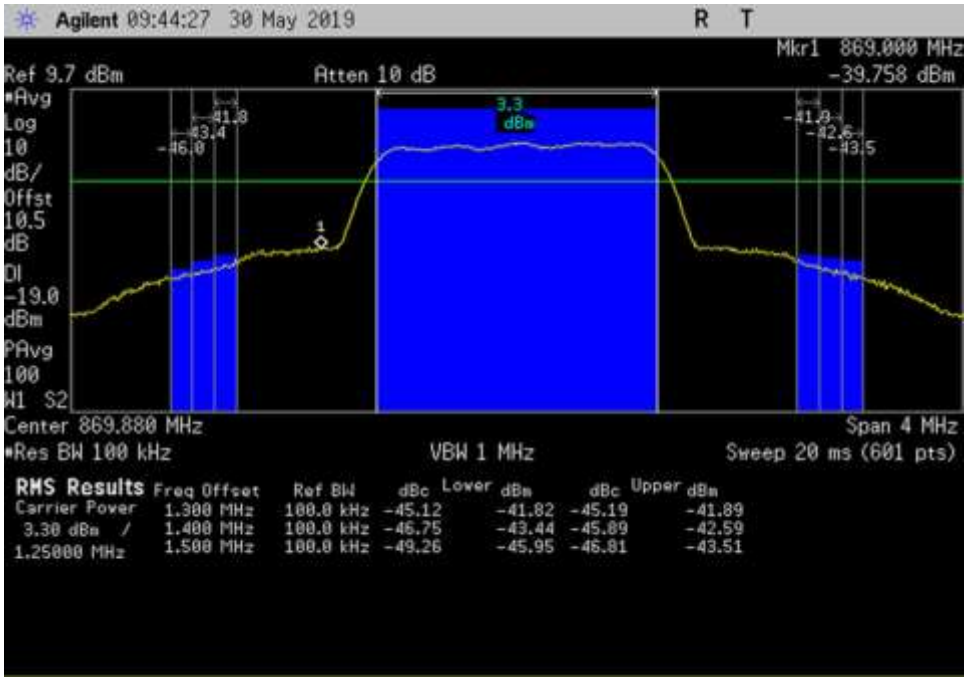
DL_728-746_CDMA_ 742.75- 746.75MHz_150ft Cable



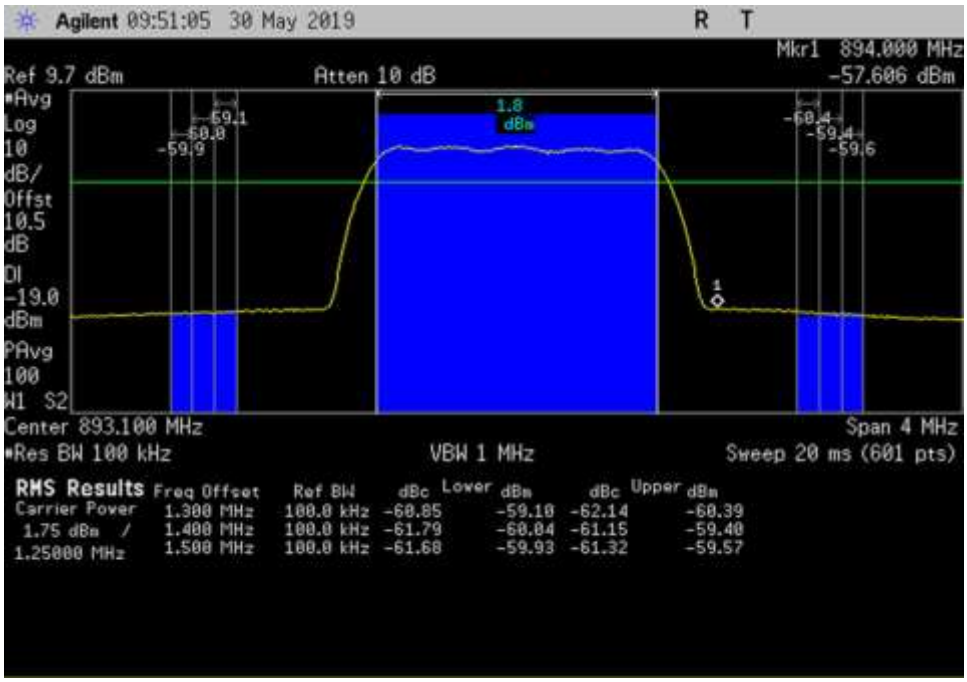
DL_746-757_CDMA_ 745.25- 749.25MHz_150ft Cable



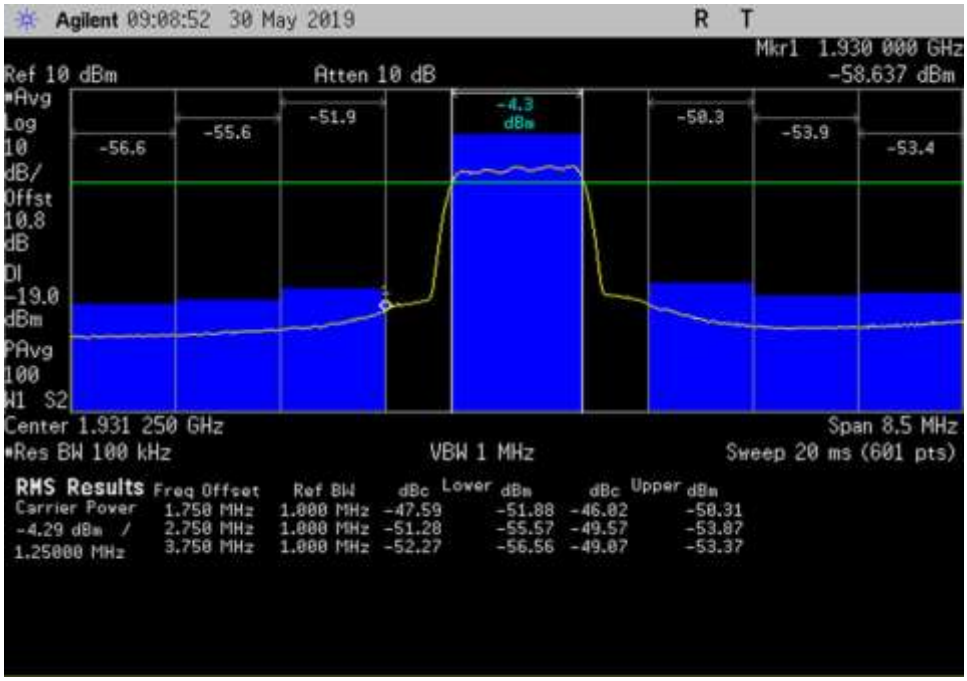
DL_746-757_CDMA_ 753.75- 757.75MHz_150ft Cable



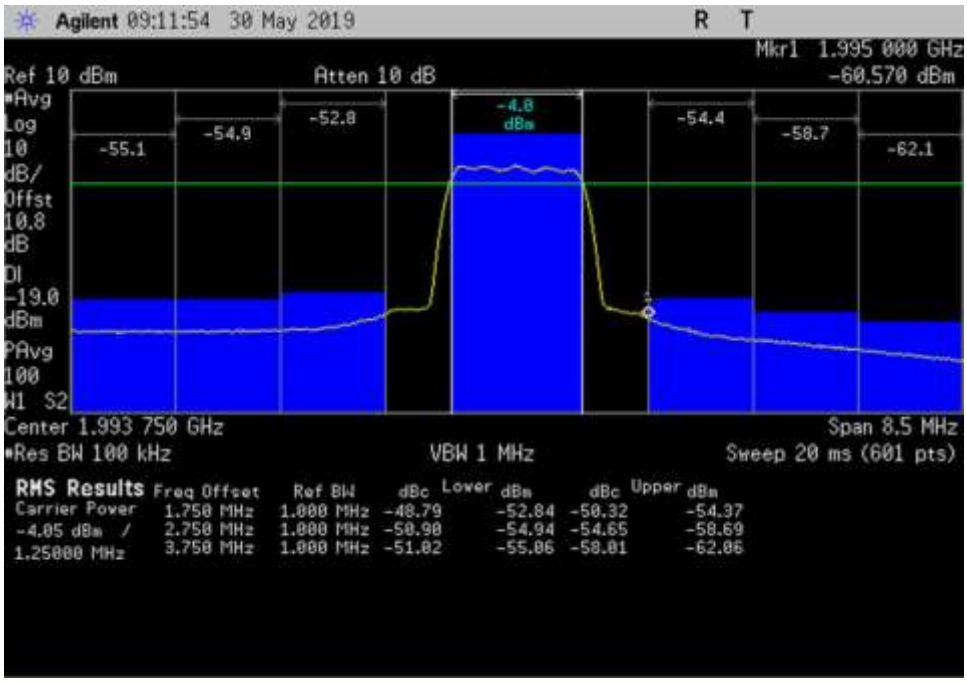
DL_869-894_CDMA_ 867.88- 871.88MHz_150ft Cable



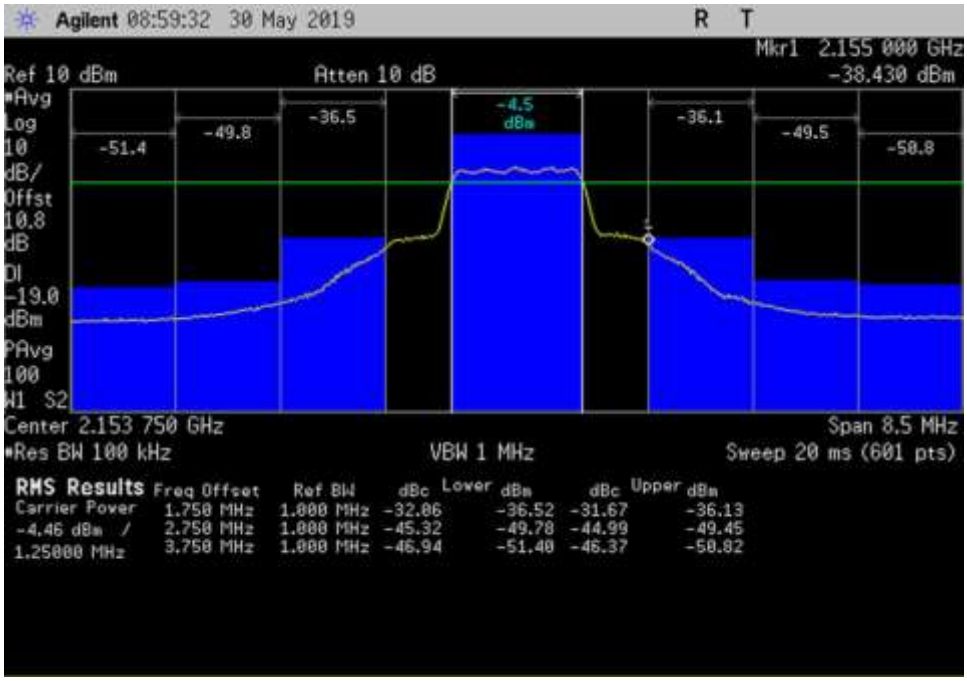
DL_869-894_CDMA_ 891.1- 895.1MHz_150ft Cable



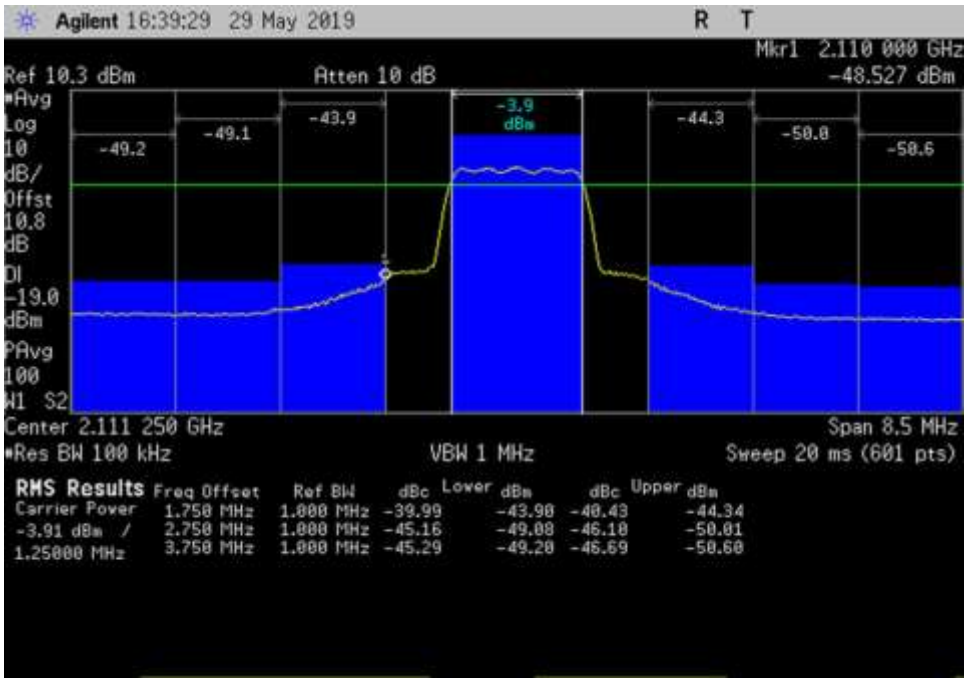
DL_1930-1995_CDMA_ 1927- 1935.5MHz_150ft Cable



DL_1930-1995_CDMA_ 1989.5- 1998MHz_150ft Cable

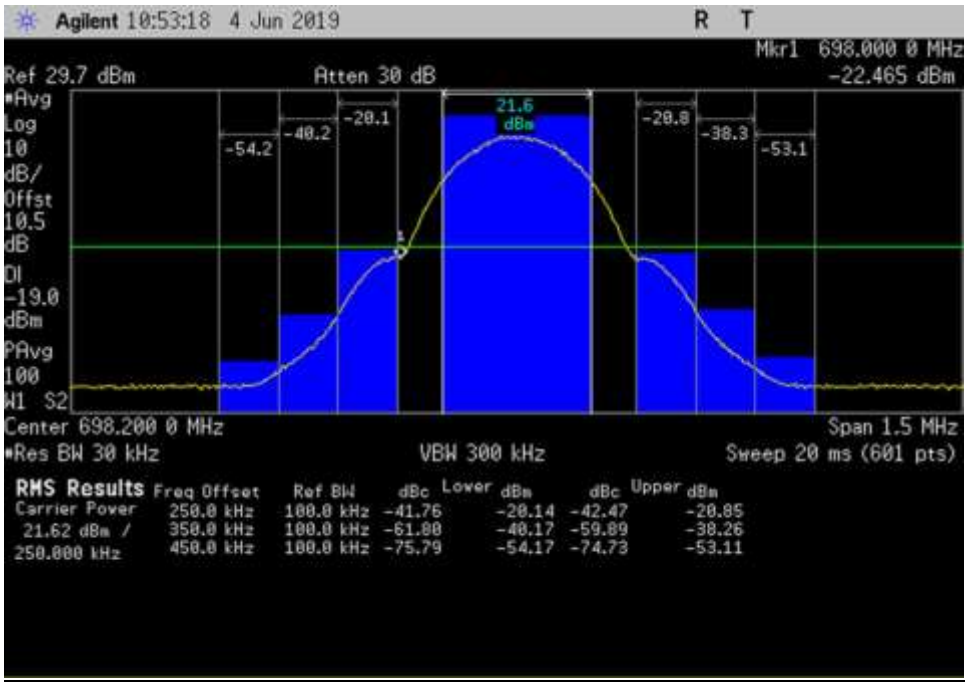


DL_2110-2155_ CDMA_2149.5- 2158MHz_150ft Cable

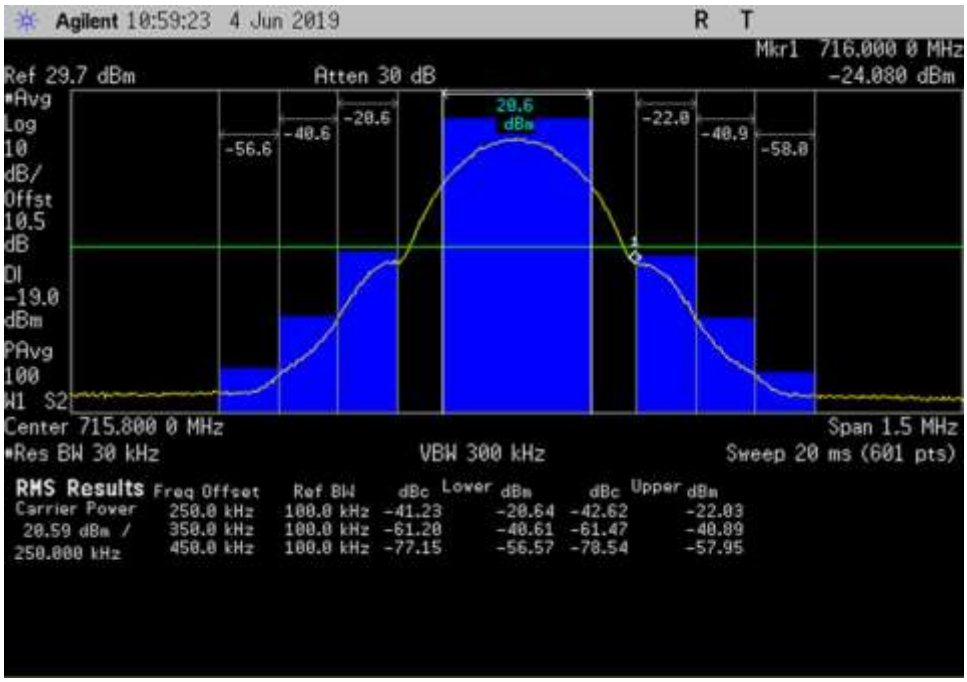


DL_2110-2155_CDMA_ 2107- 2115.5MHz_150ft Cable

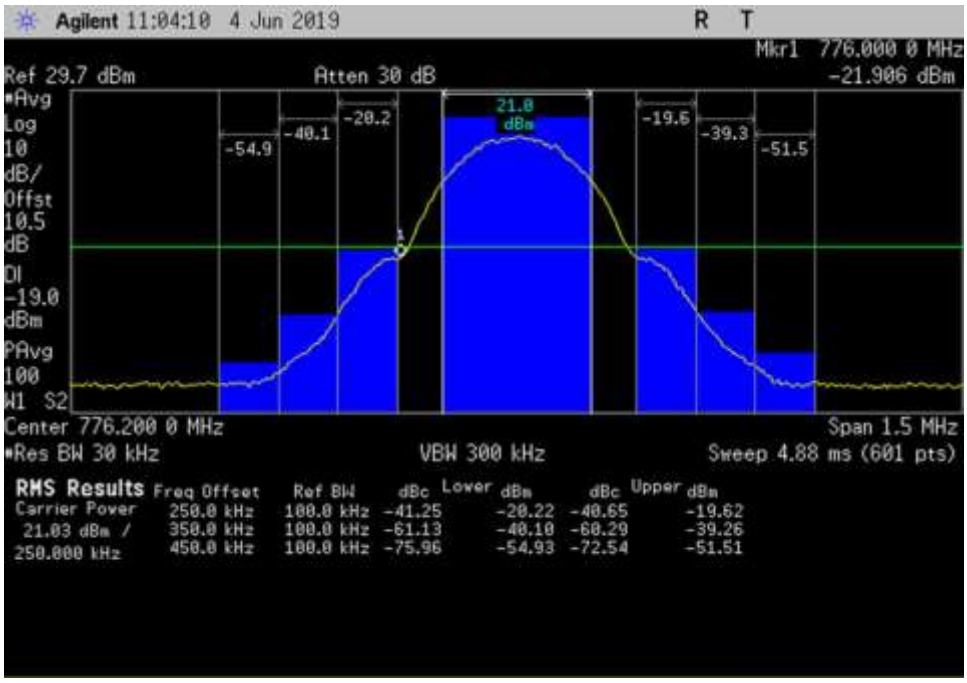
GSM



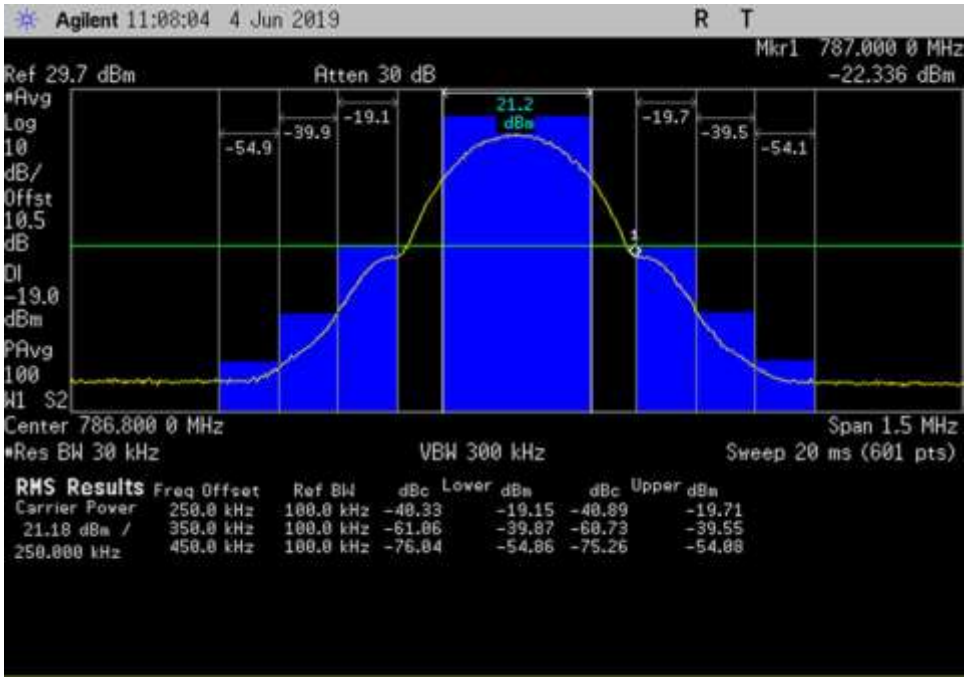
UL_698-716_GSM_ 697.45- 698.95MHz_50ft Cable



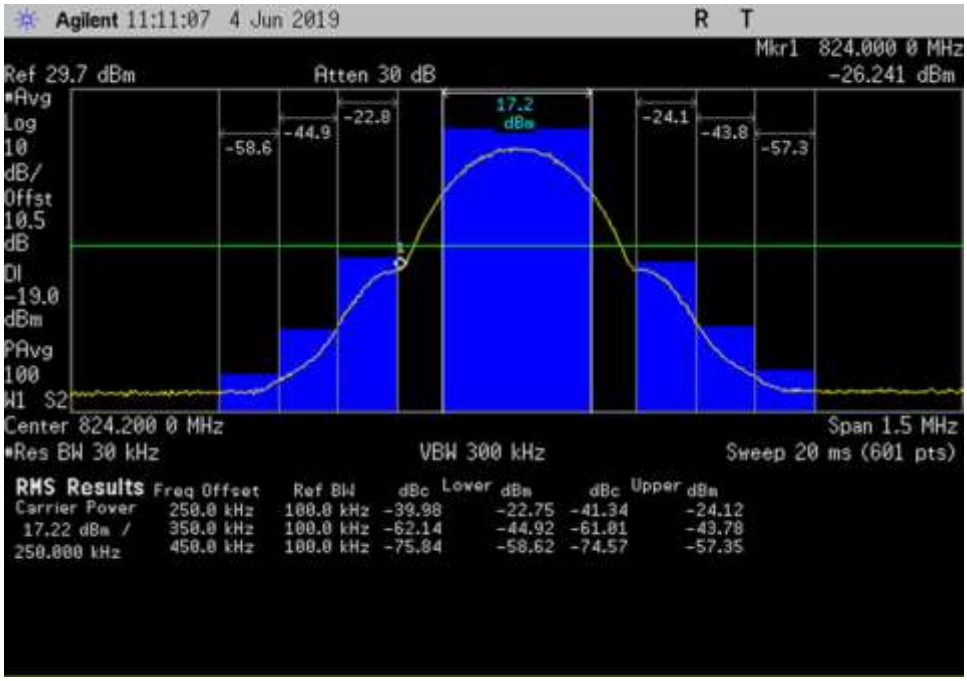
UL_698-716_GSM_ 715.05- 716.55MHz_50ft Cable



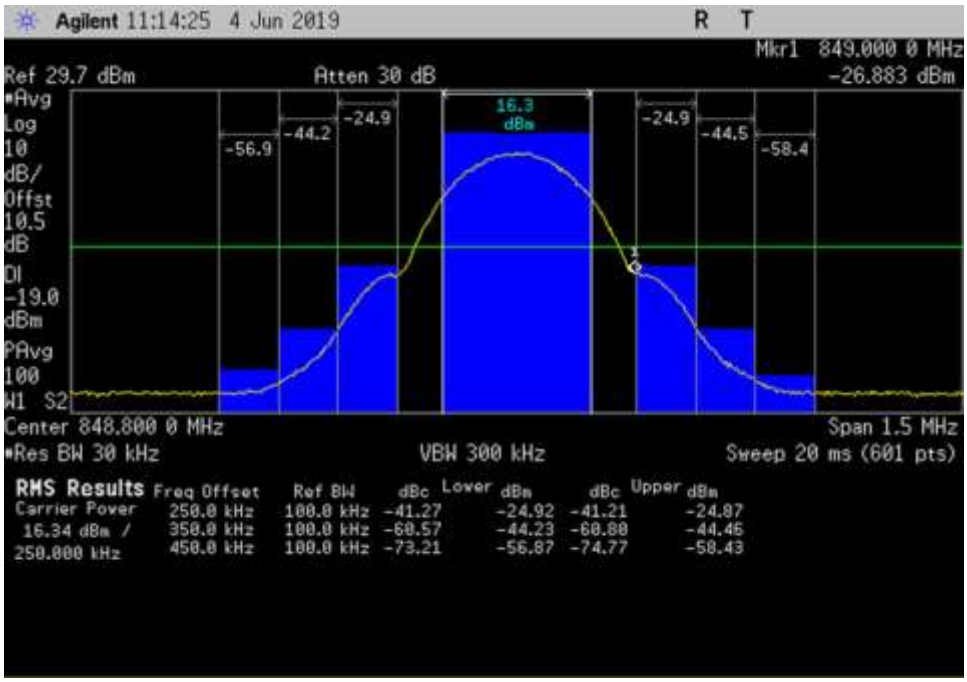
UL_776-787_GSM_ 775.45- 776.95MHz_50ft Cable



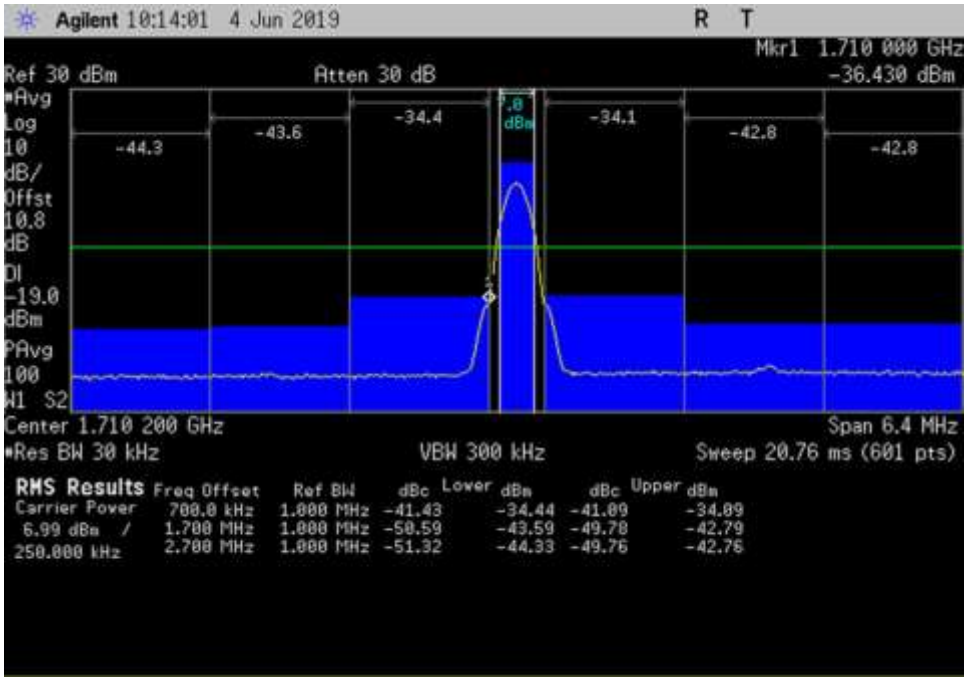
UL_776-787_GSM_ 786.05- 787.55MHz_50ft Cable



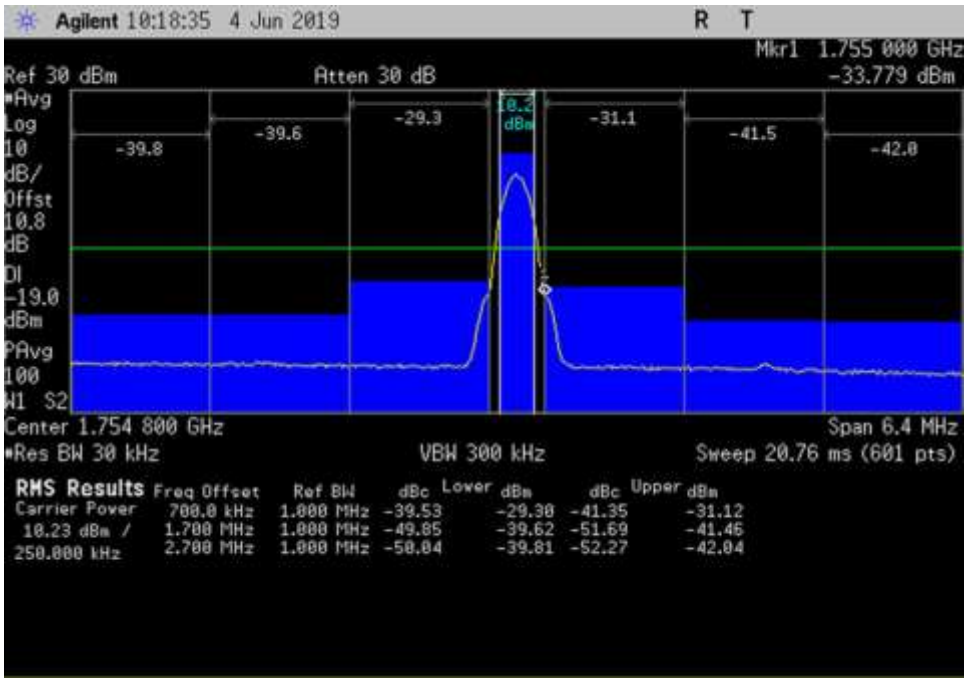
UL_824-849_GSM_ 823.45- 824.95MHz_50ft Cable



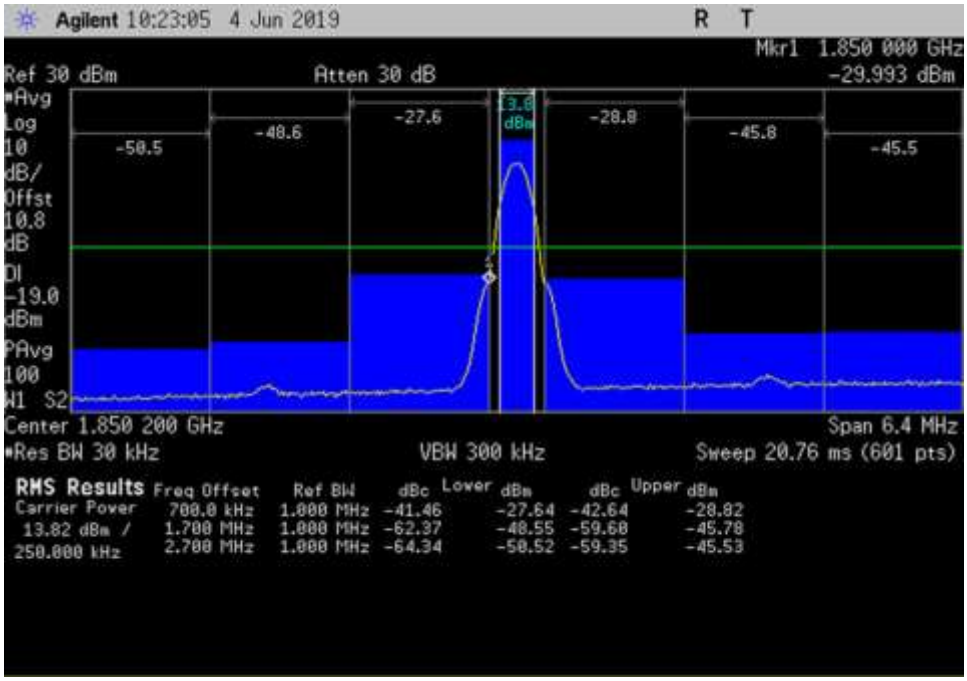
UL_824-849_GSM_ 848.05- 849.55MHz_50ft Cable



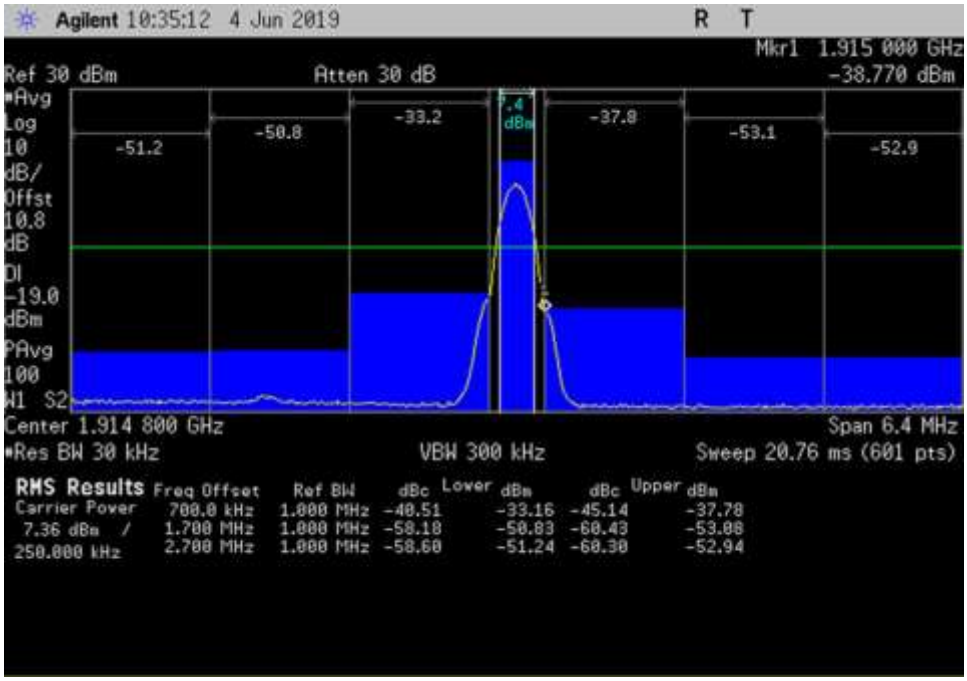
UL_1710-1755_GSM_ 1707- 1713.4MHz_50ft Cable



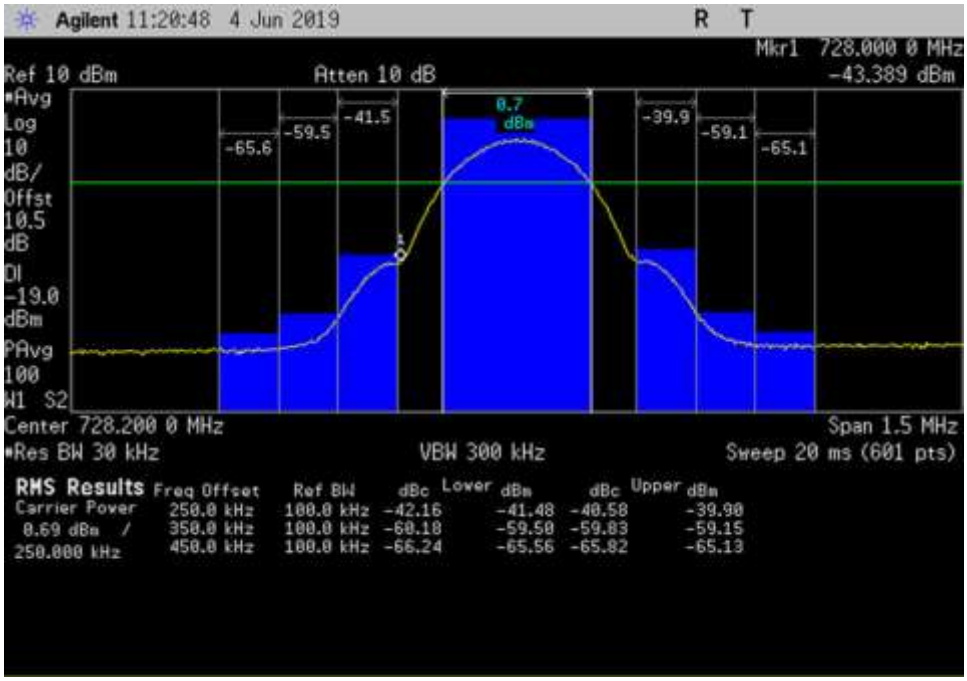
UL_1710-1755_GSM_ 1751.6- 1758MHz_50ft Cable



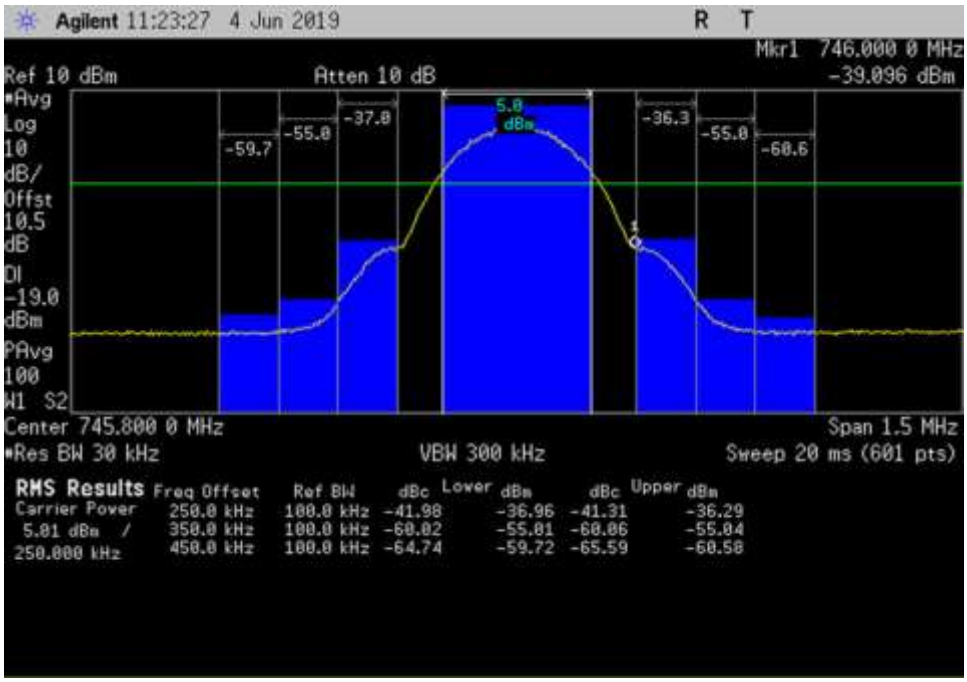
UL_1850-1915_GSM_ 1847- 1853.4MHz_50ft Cable



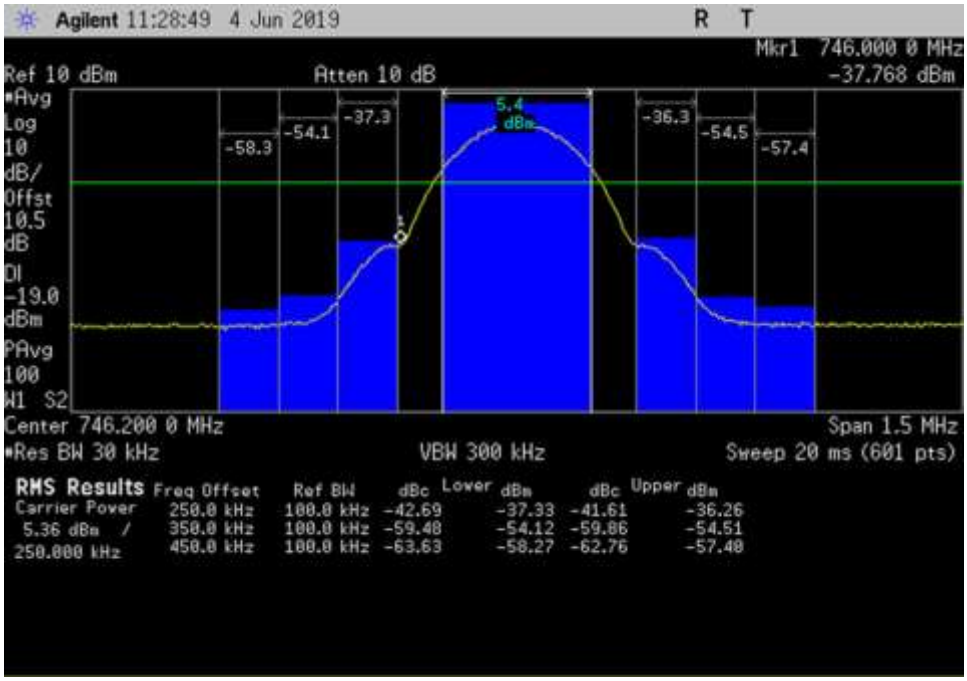
UL_1850-1915_GSM_ 1911.6- 1918MHz_50ft Cable



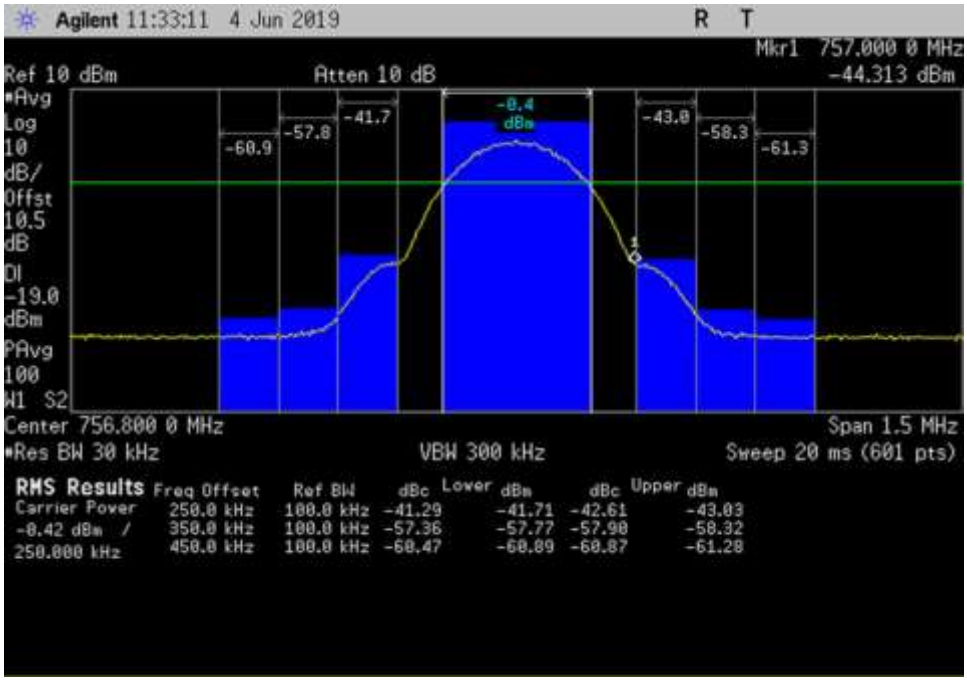
DL_728-746_GSM_ 727.45- 728.95MHz_50ft Cable



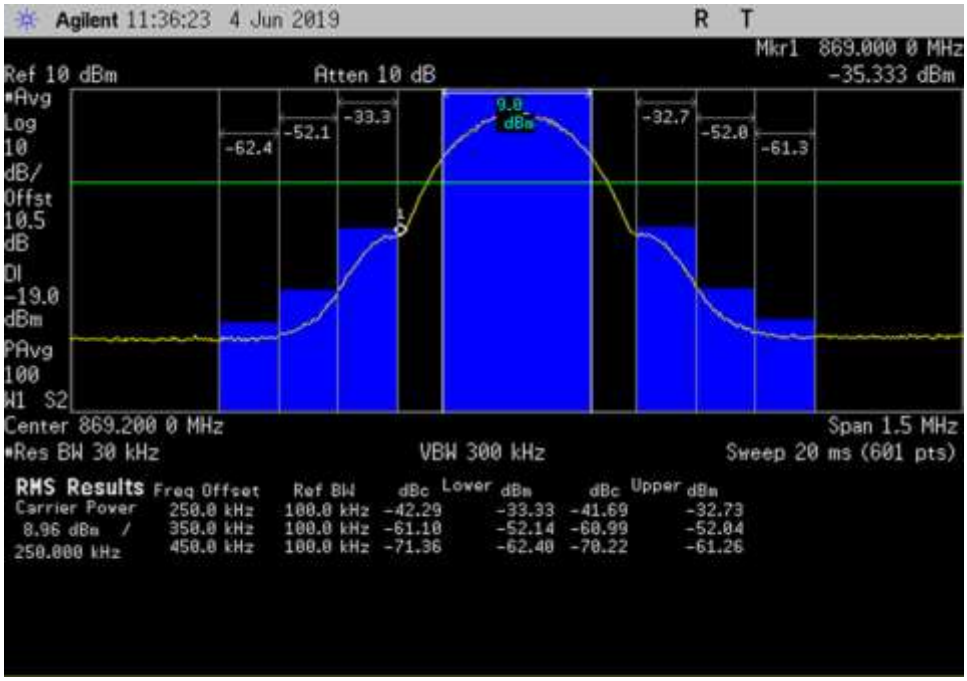
DL_728-746_GSM_ 745.05- 746.55MHz_50ft Cable



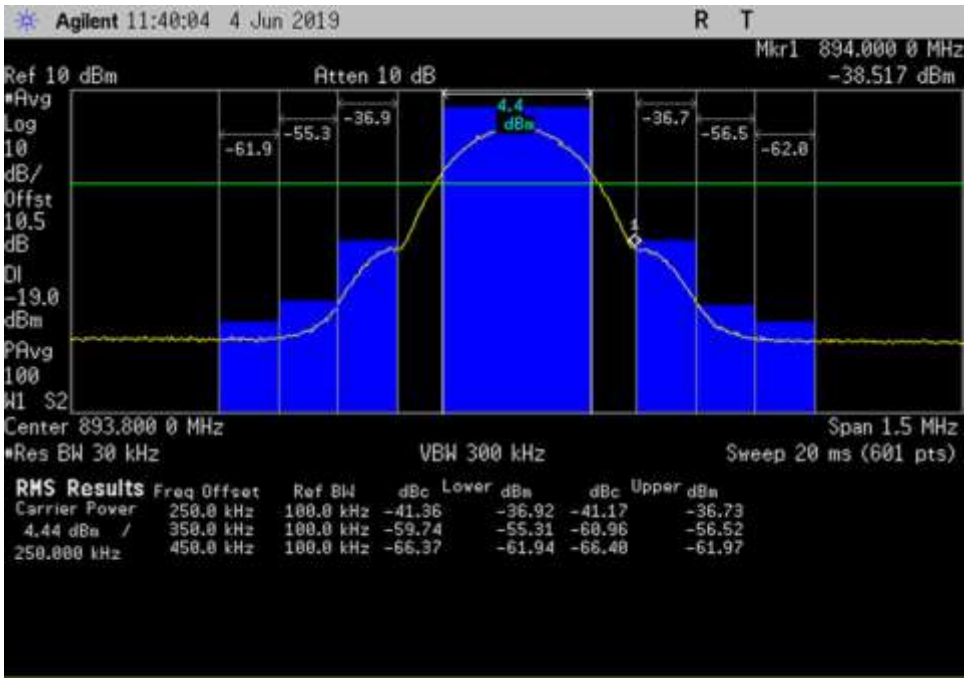
DL_746-757_GSM_ 745.45- 746.95MHz_50ft Cable



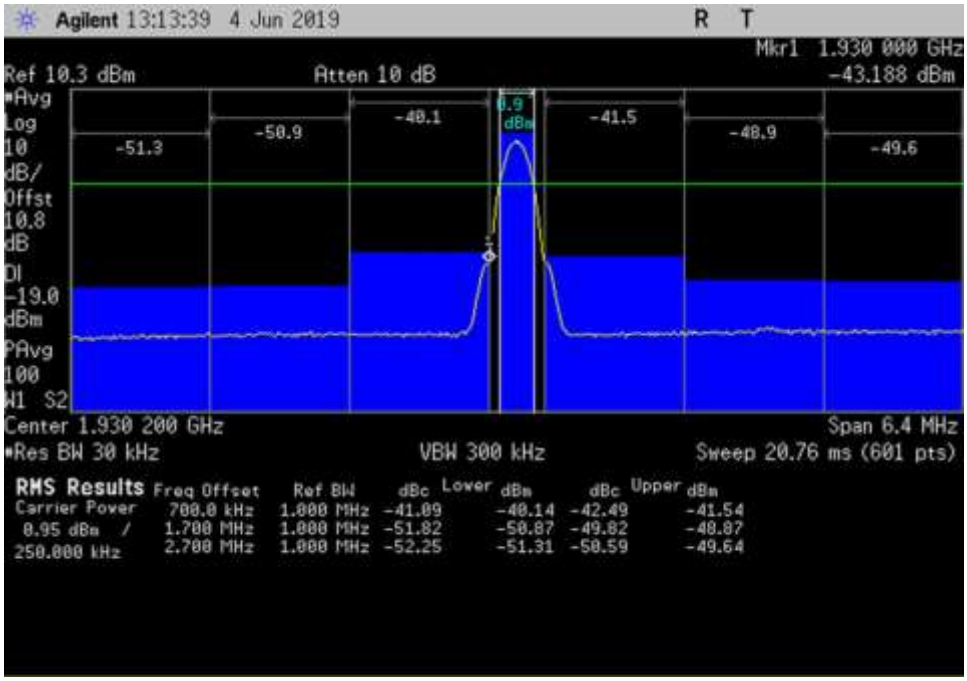
DL_746-757_GSM_ 756.05- 757.55MHz_50ft Cable



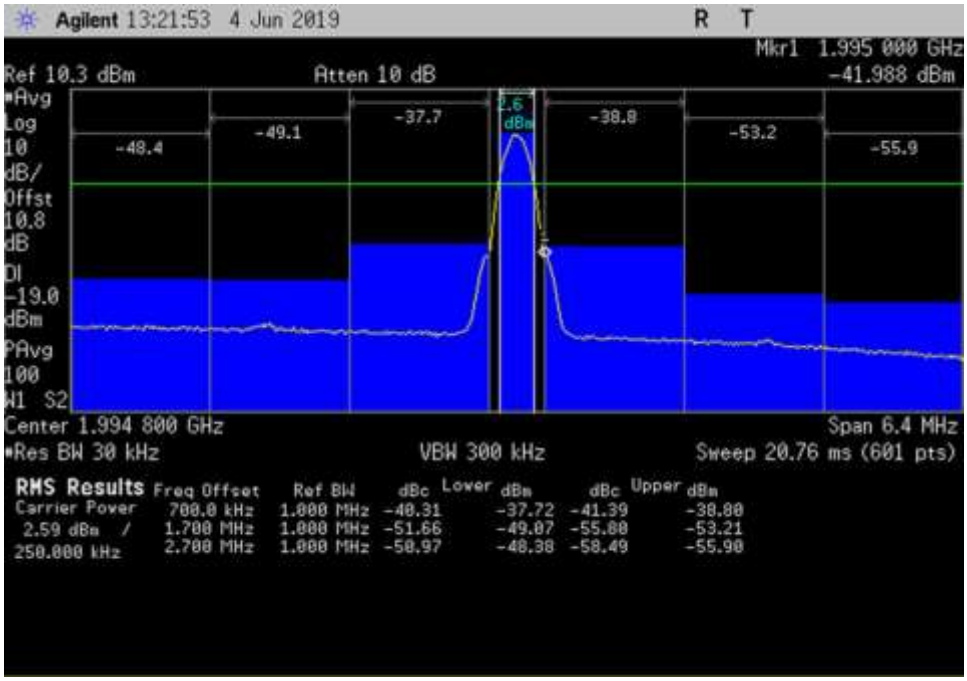
DL_869-894_GSM_ 868.45- 869.95MHz_50ft Cable



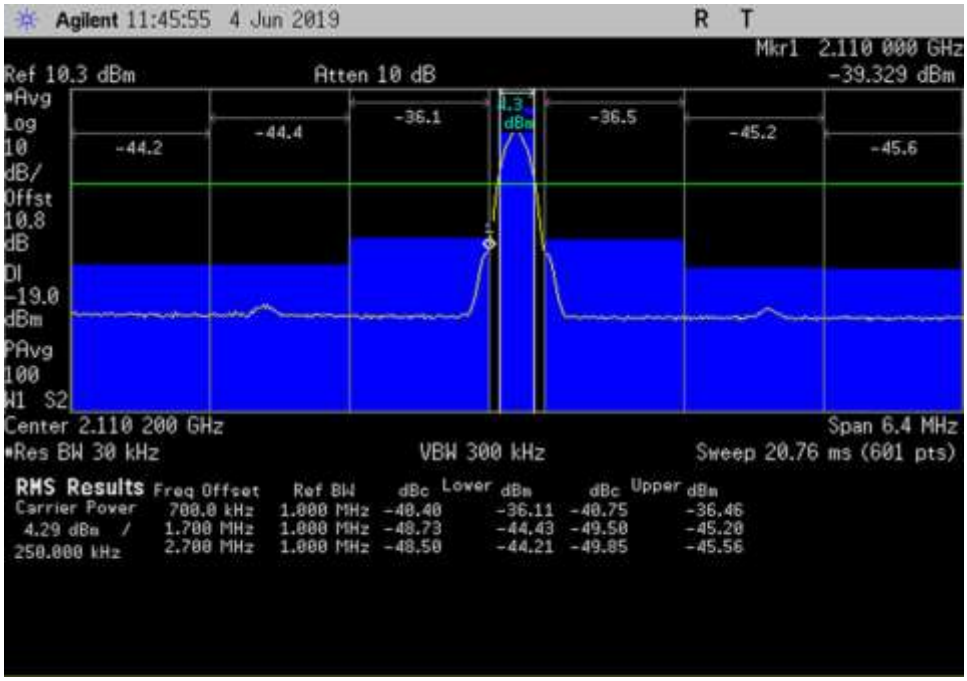
DL_869-894_GSM_ 893.05- 894.55MHz_50ft Cable



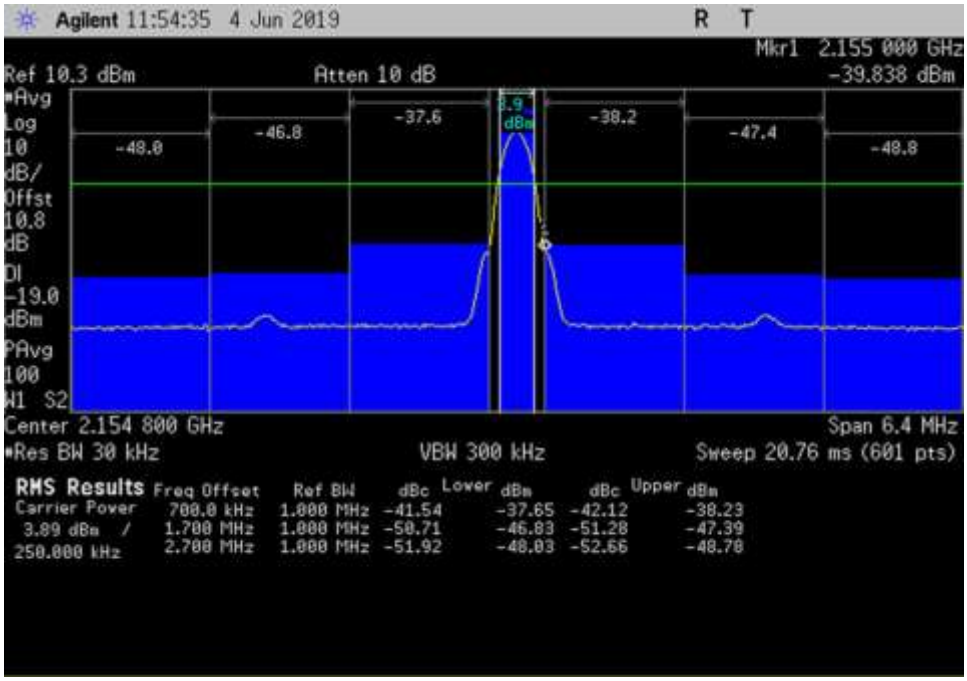
DL_1930-1995_GSM_ 1927- 1933.4MHz_50ft Cable



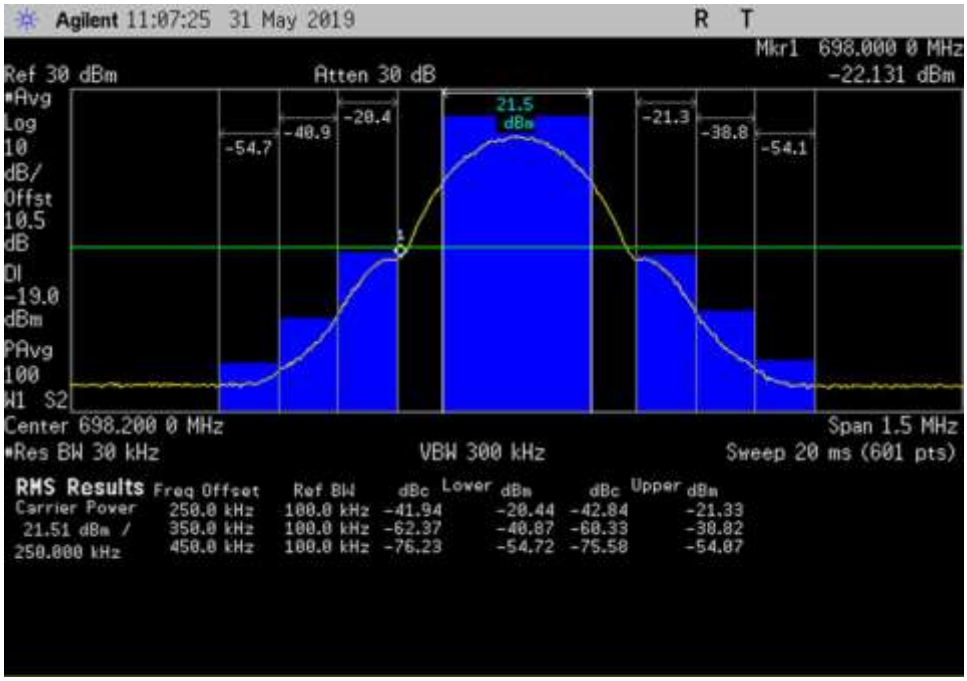
DL_1930-1995_GSM_ 1991.6- 1998MHz_50ft Cable



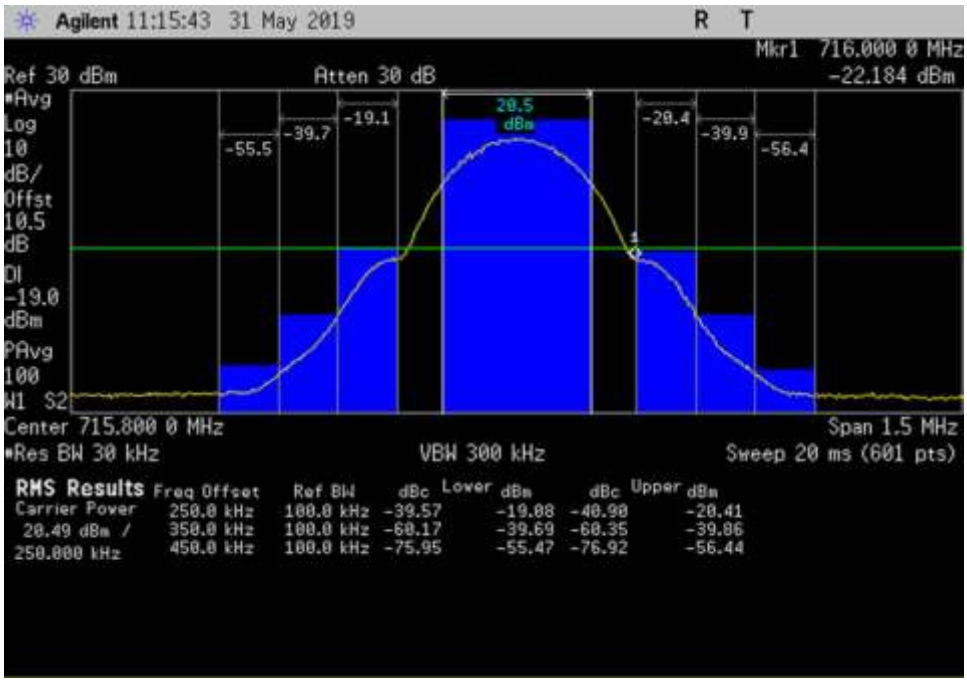
DL_2110-2155_GSM_ 2107- 2113.4MHz_50ft Cable



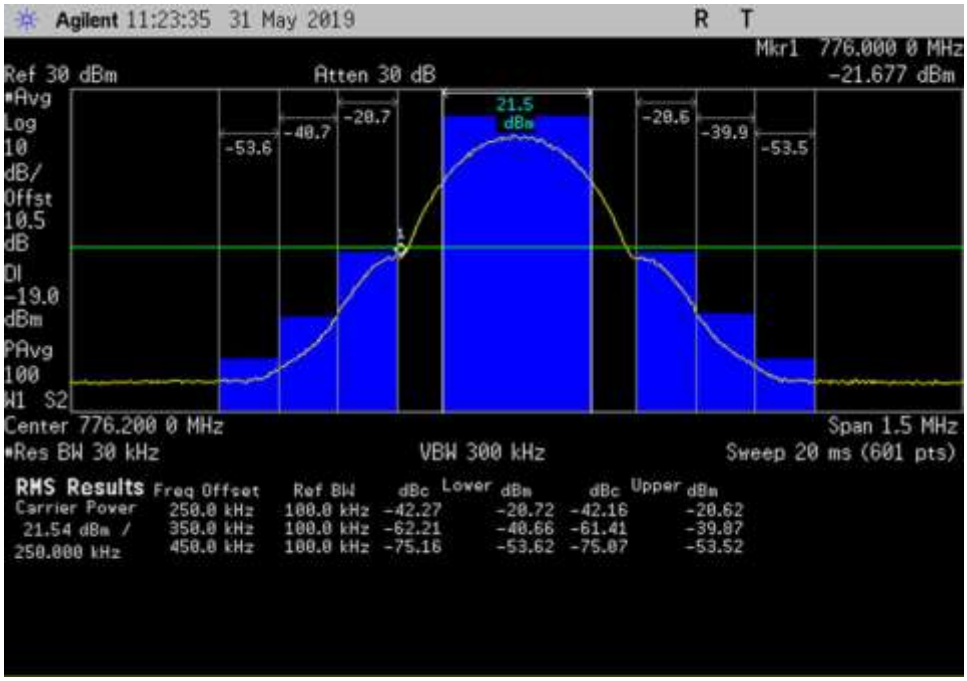
DL_2110-2155_GSM_ 2151.6- 2158MHz_50ft Cable



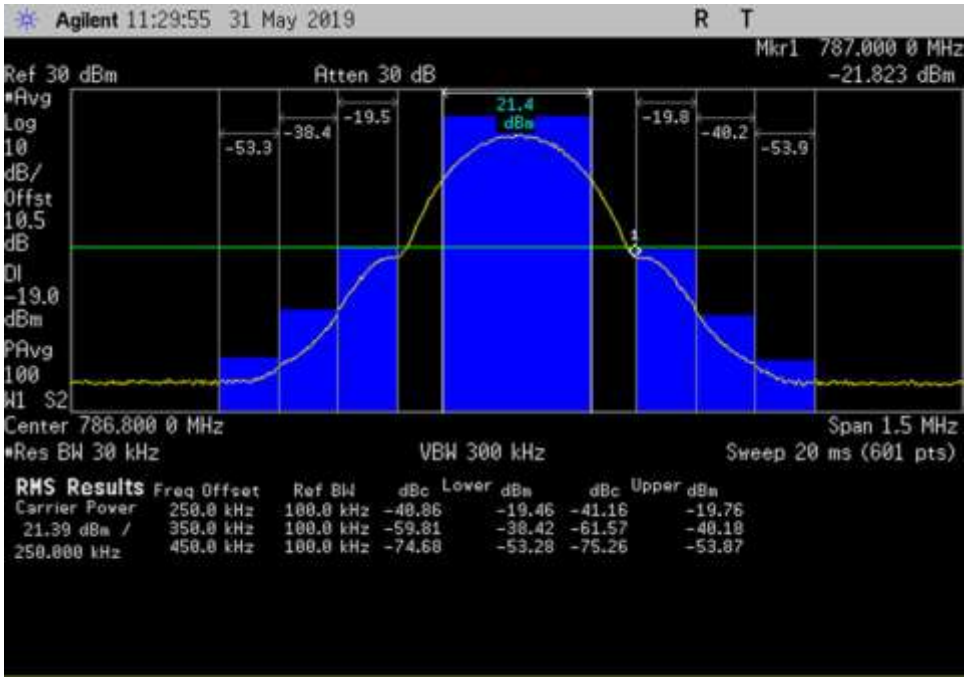
UL_698-716_GSM_ 697.45- 698.95MHz_100ft Cable



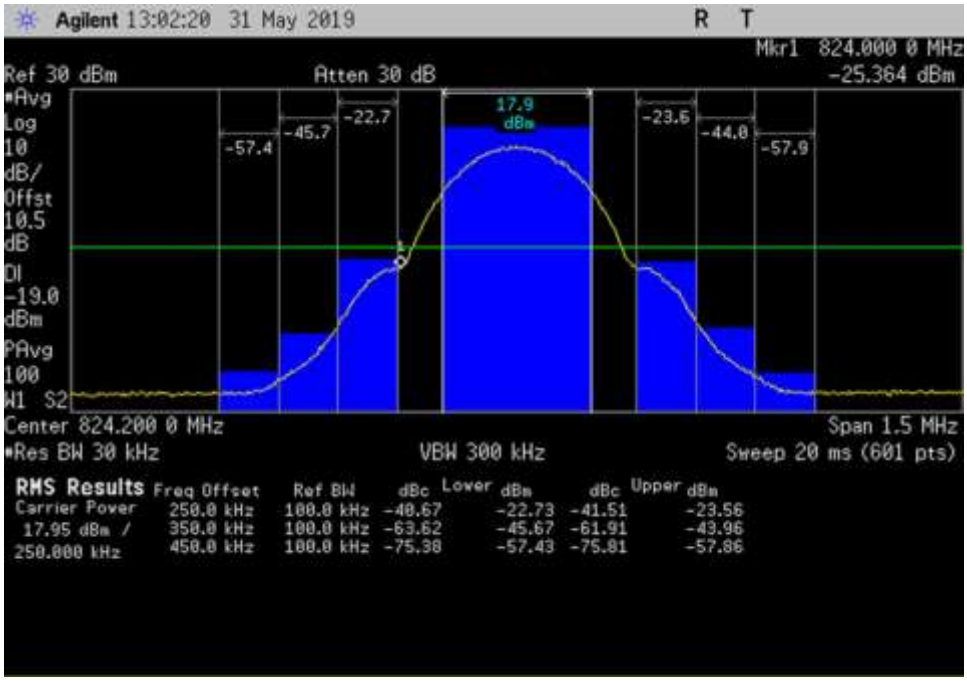
UL_698-716_GSM_ 715.05- 716.55MHz_100ft Cable



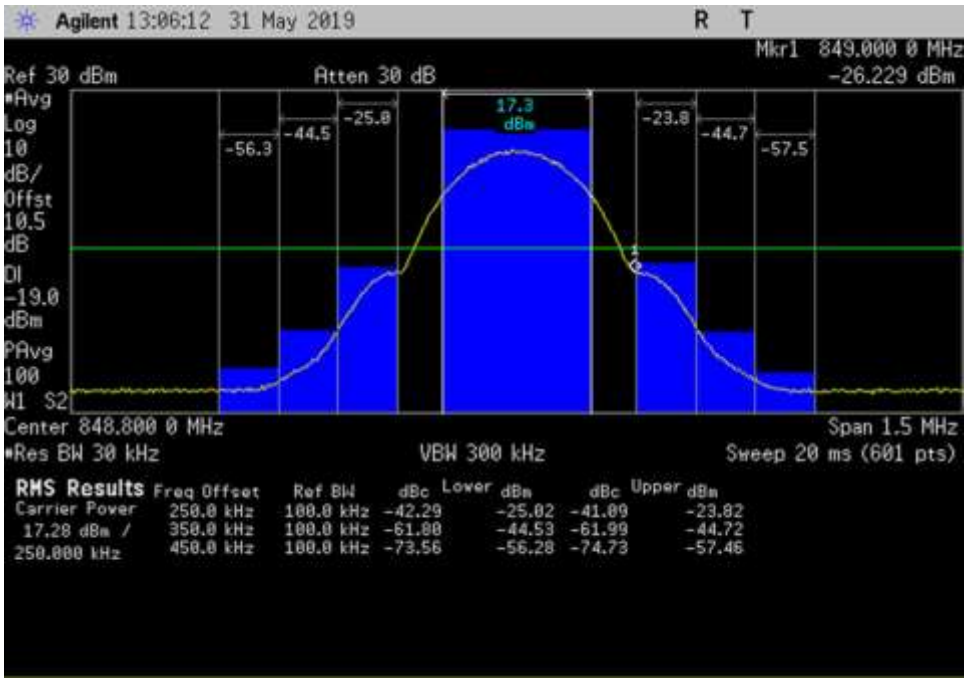
UL_776-787_GSM_ 775.45- 776.95MHz_100ft Cable



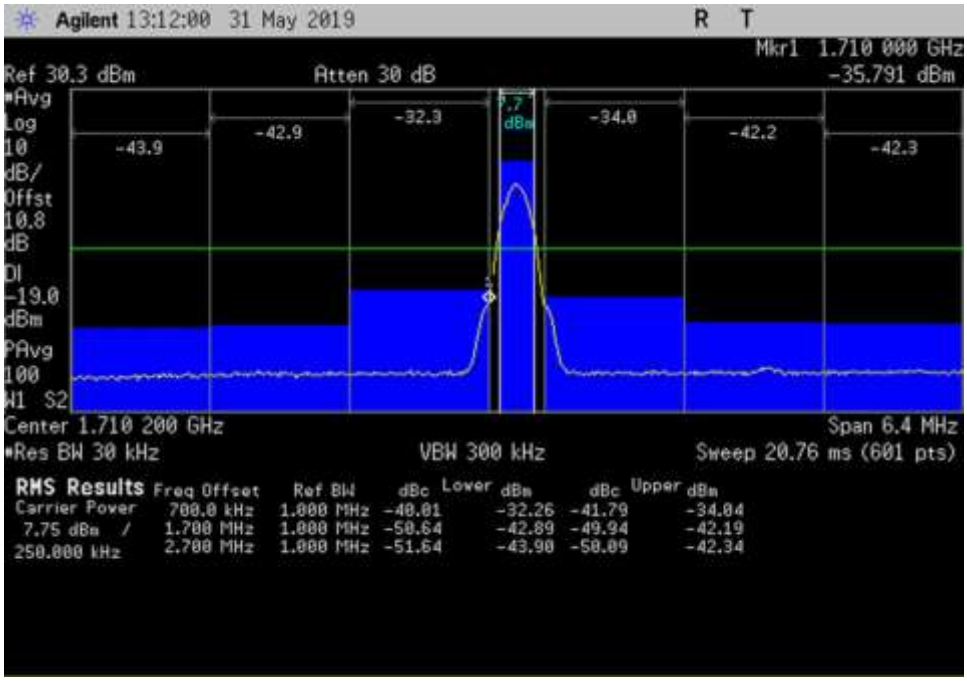
UL_776-787_GSM_ 786.05- 787.55MHz_100ft Cable



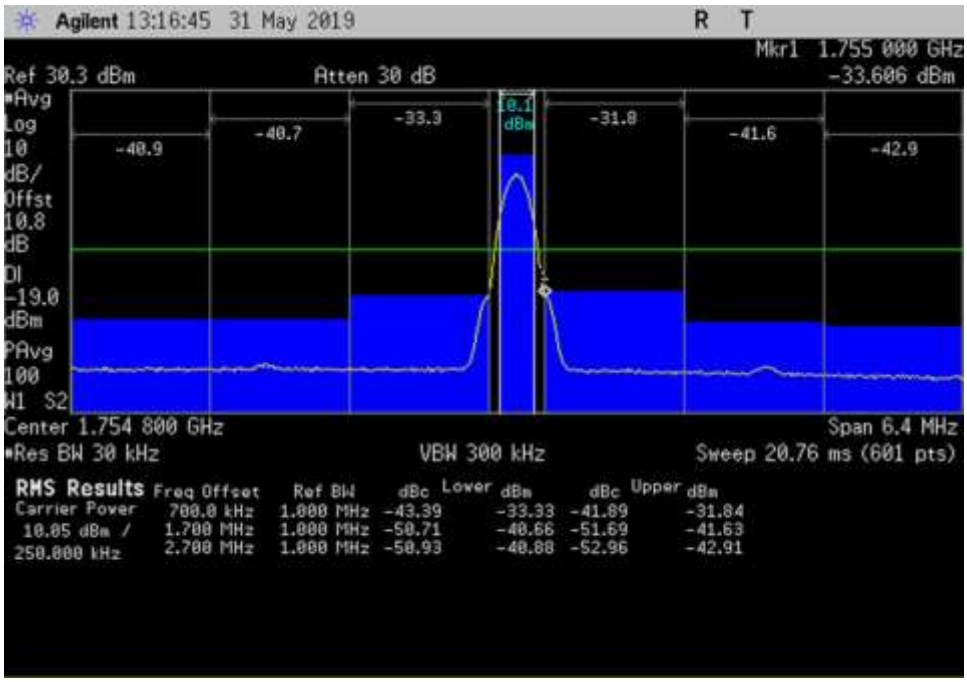
UL_824-849_GSM_ 823.45- 824.95MHz_100ft Cable



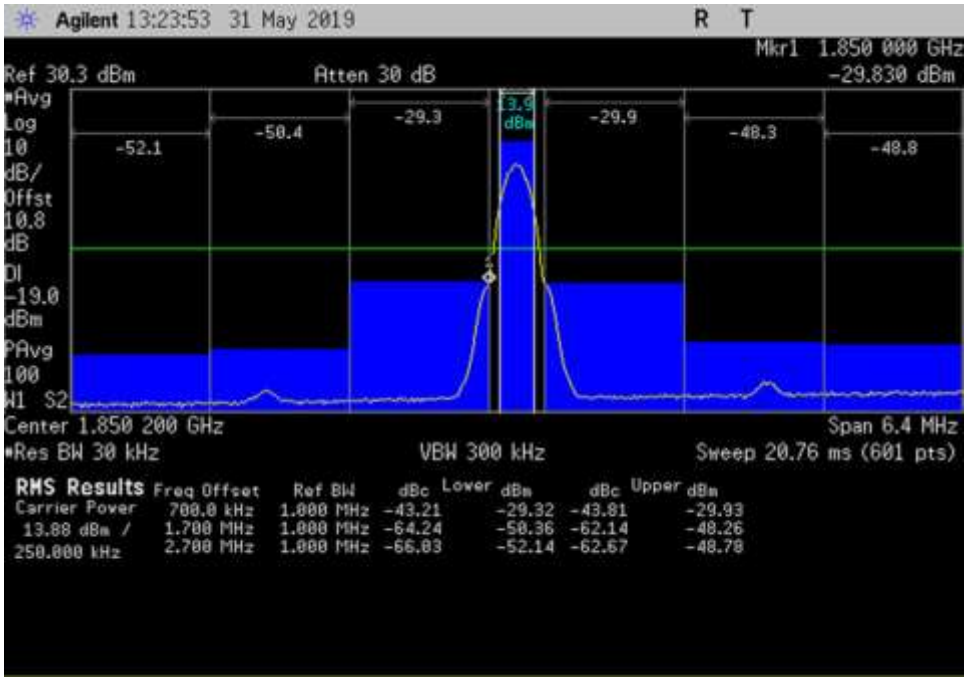
UL_824-849_GSM_ 848.05- 849.55MHz_100ft Cable



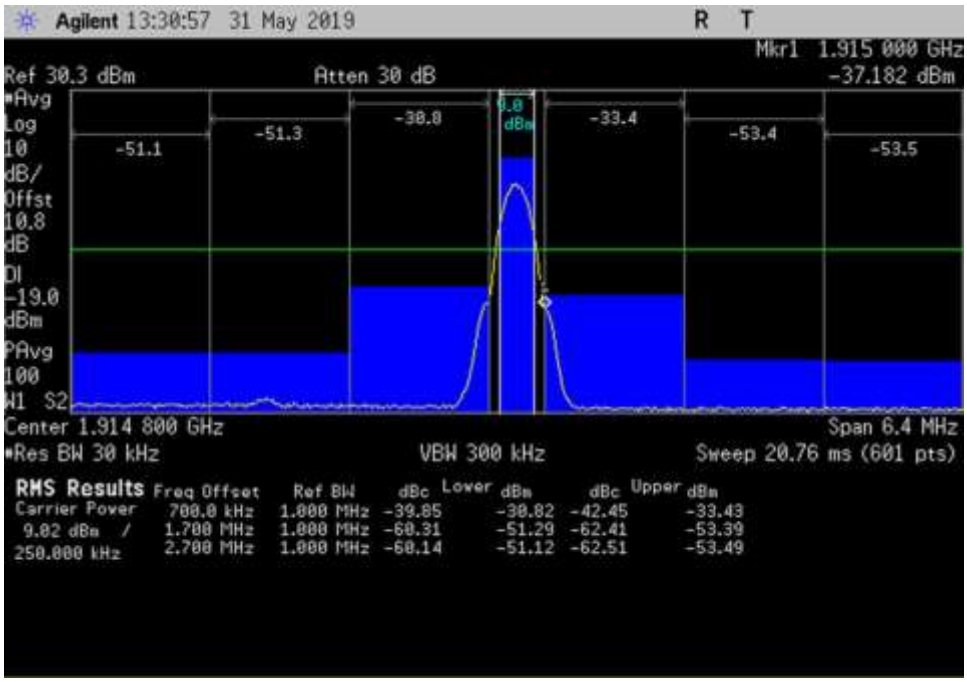
UL_1710-1755_GSM_ 1707- 1713.4MHz_100ft Cable



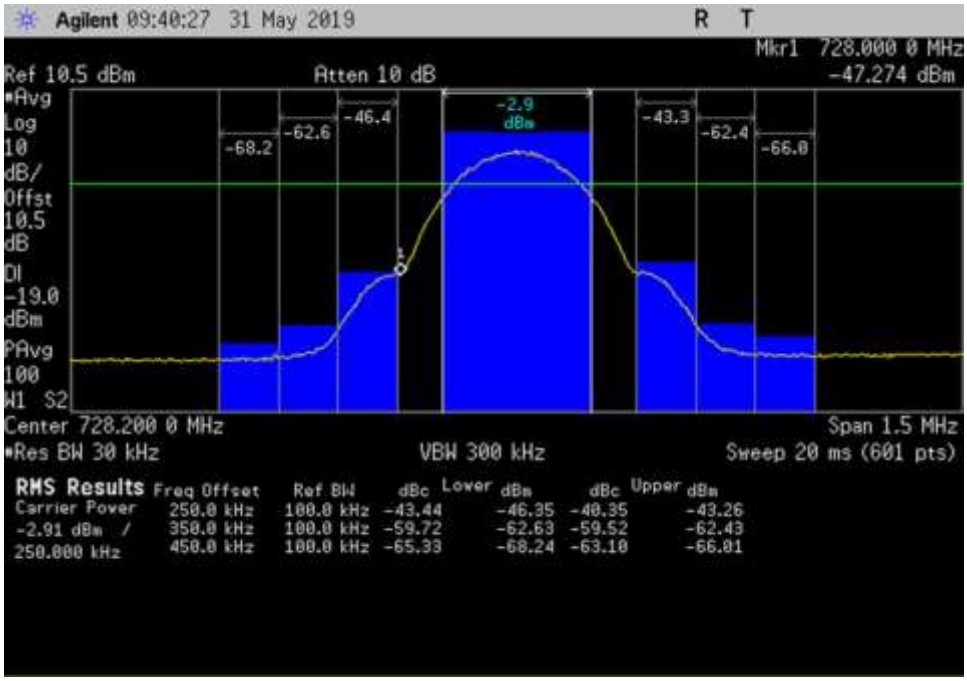
UL_1710-1755_GSM_ 1751.6- 1758MHz_100ft Cable



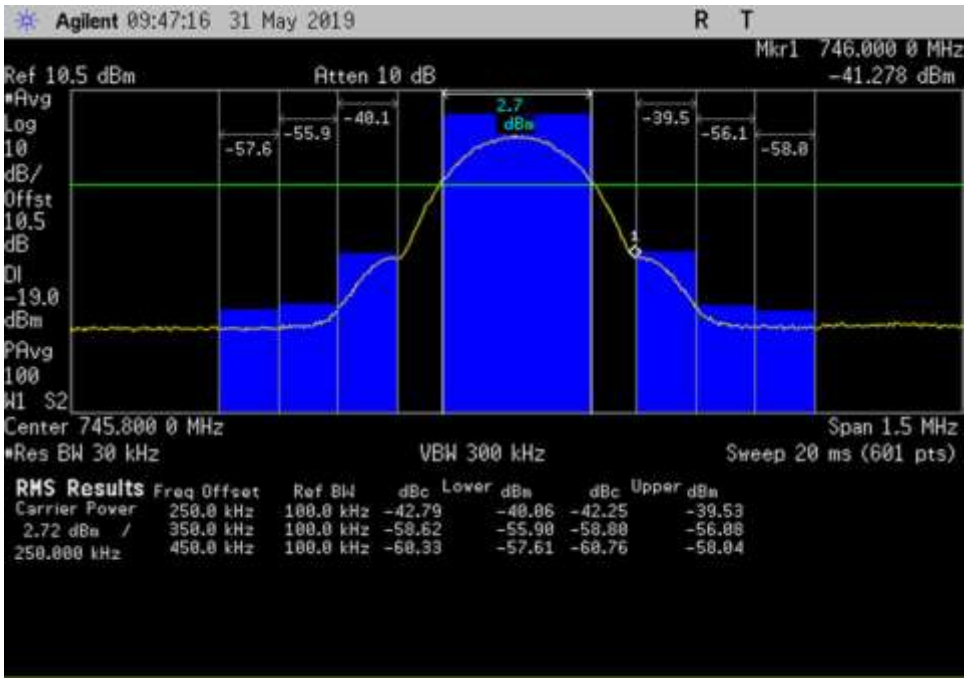
UL_1850-1915_GSM_ 1847- 1853.4MHz_100ft Cable



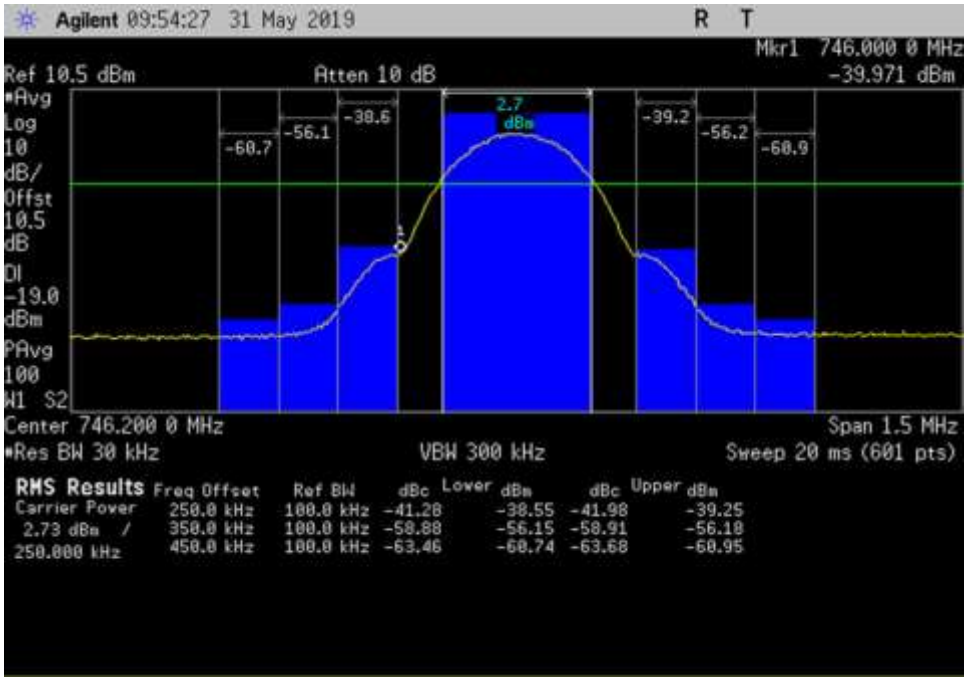
UL_1850-1915_GSM_ 1911.6- 1918MHz_100ft Cable



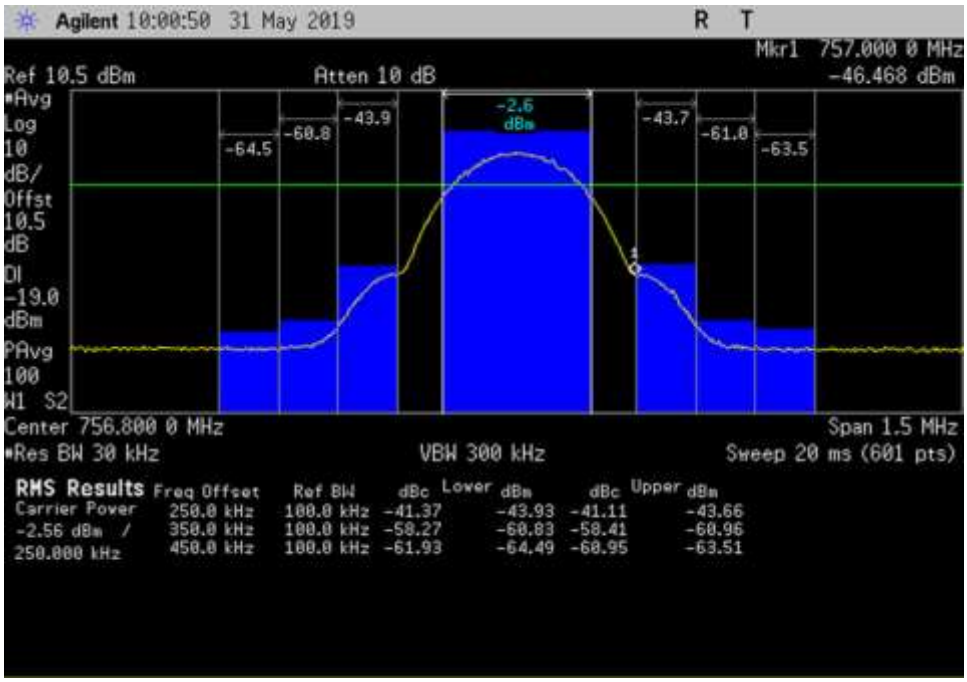
DL_728-746_GSM_ 727.45- 728.95MHz_100ft Cable



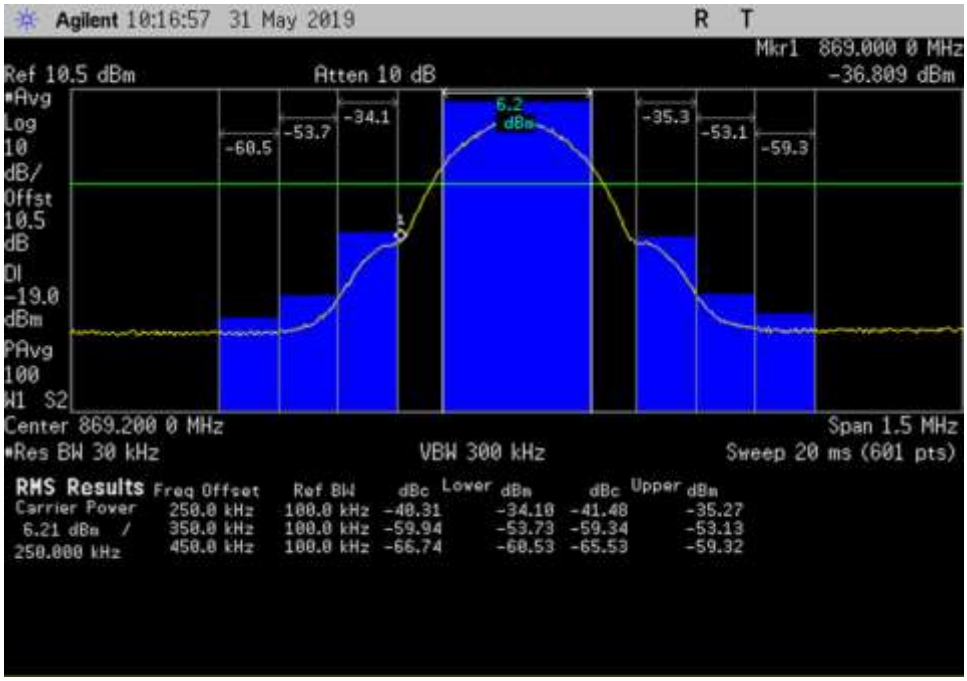
DL_728-746_GSM_ 745.05- 746.55MHz_100ft Cable



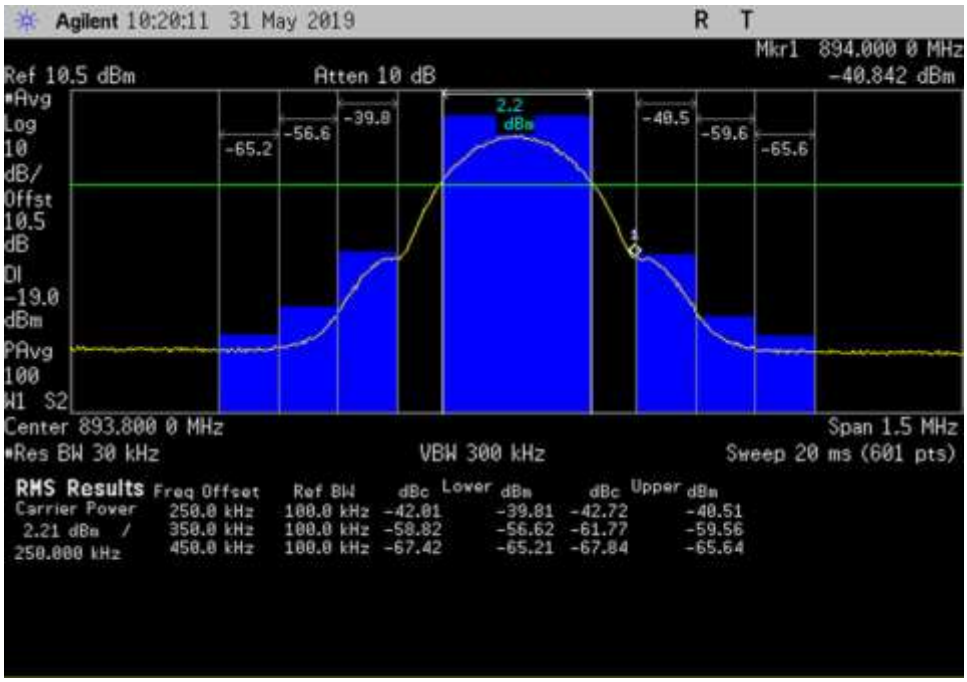
DL_746-757_GSM_ 745.45- 746.95MHz_100ft Cable



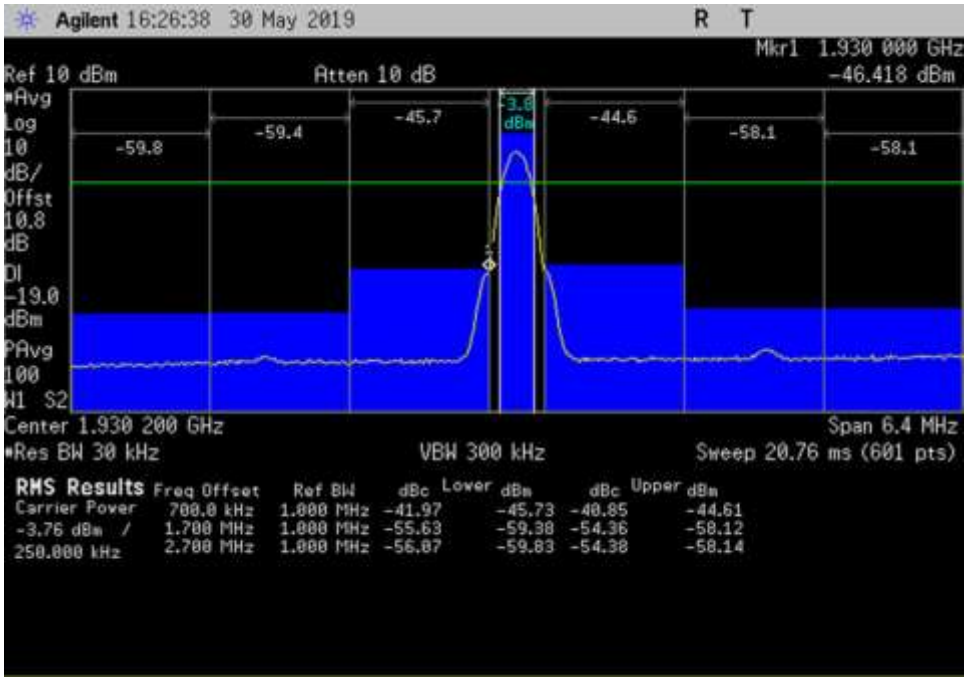
DL_746-757_GSM_ 756.05- 757.55MHz_100ft Cable



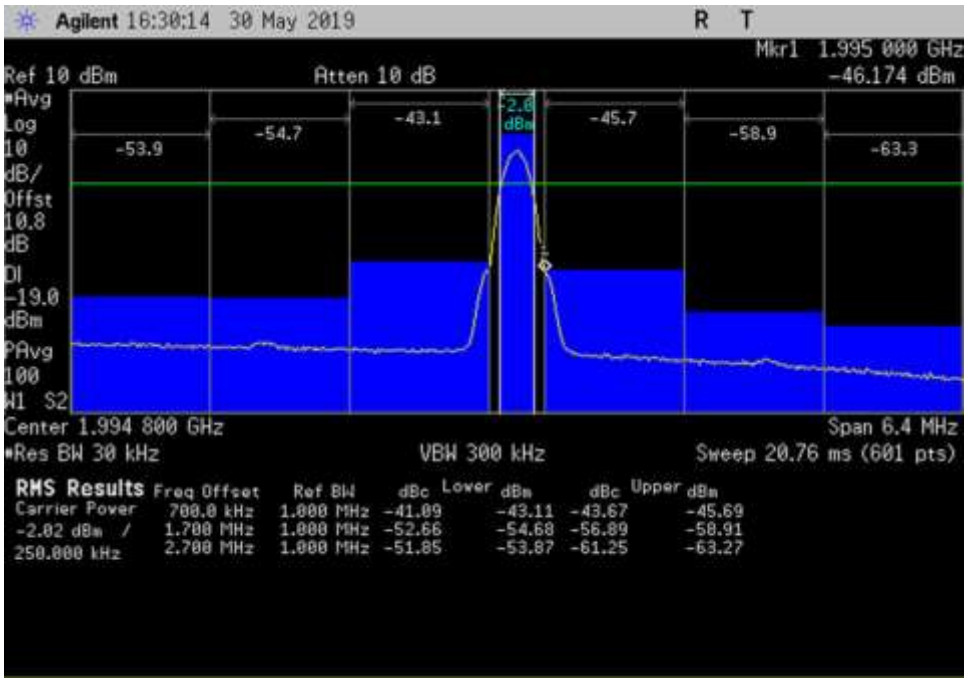
DL_869-894_GSM_ 868.45- 869.95MHz_100ft Cable



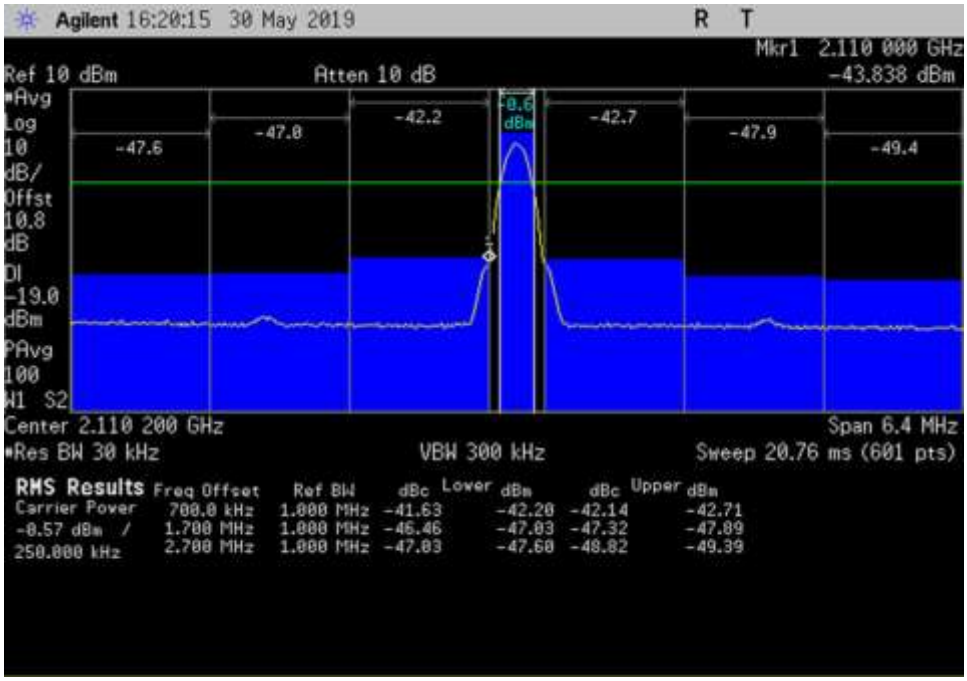
DL_869-894_GSM_ 893.05- 894.55MHz_100ft Cable



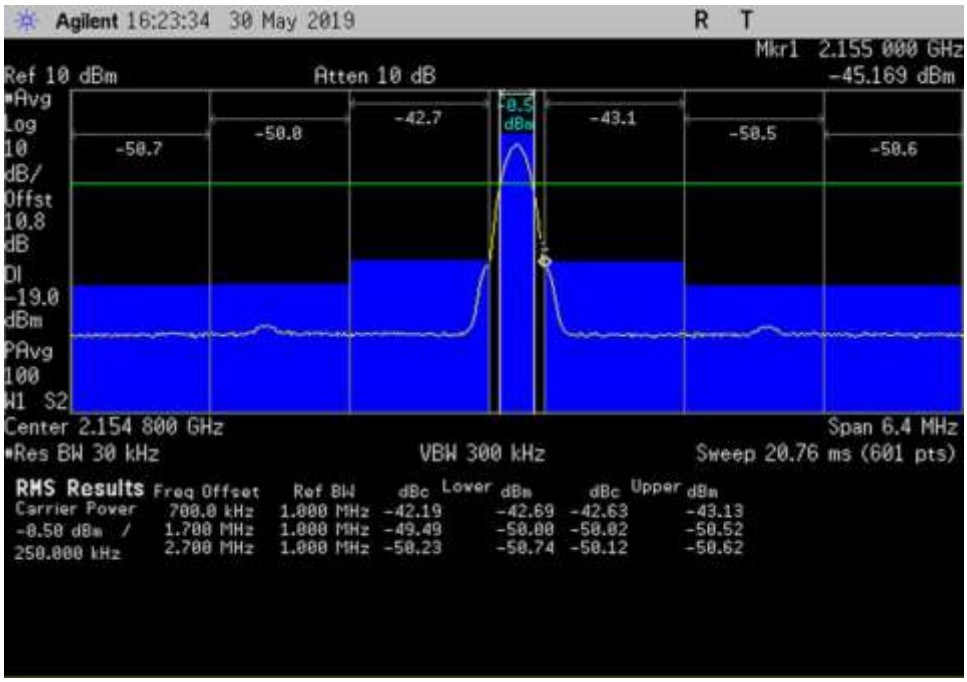
DL_1930-1995_GSM_ 1927- 1933.4MHz_100ft Cable



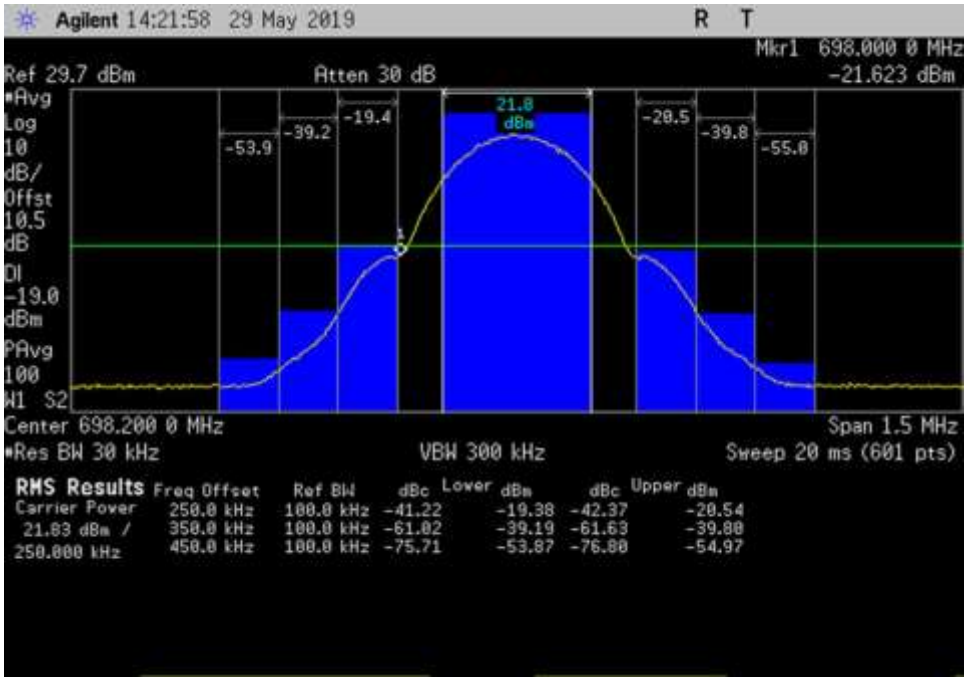
DL_1930-1995_GSM_ 1991.6- 1998MHz_100ft Cable



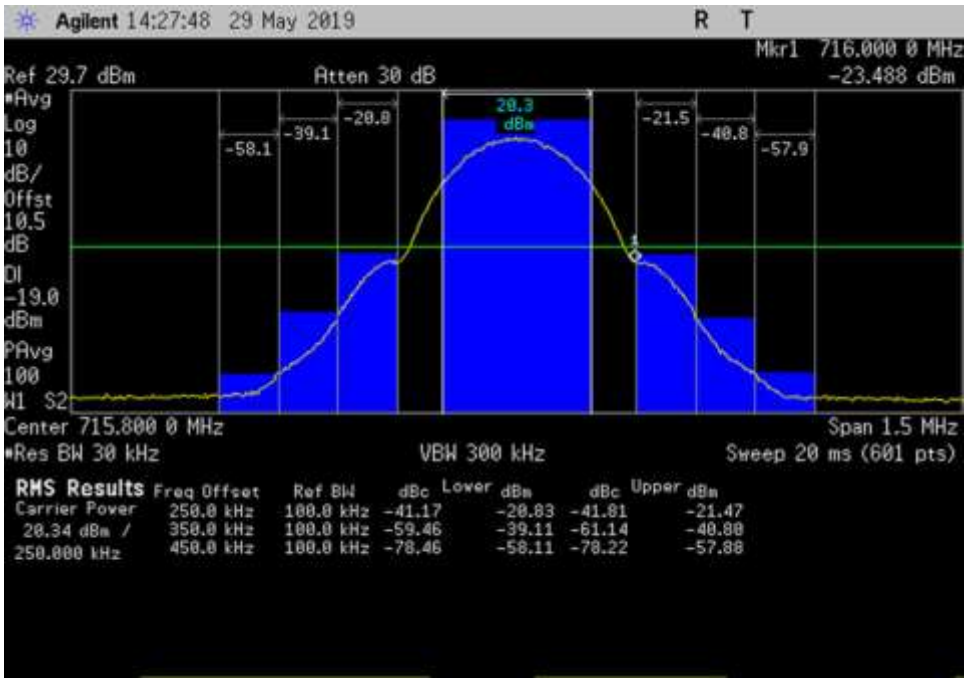
DL_2110-2155_GSM_ 2107- 2113.4MHz_100ft Cable



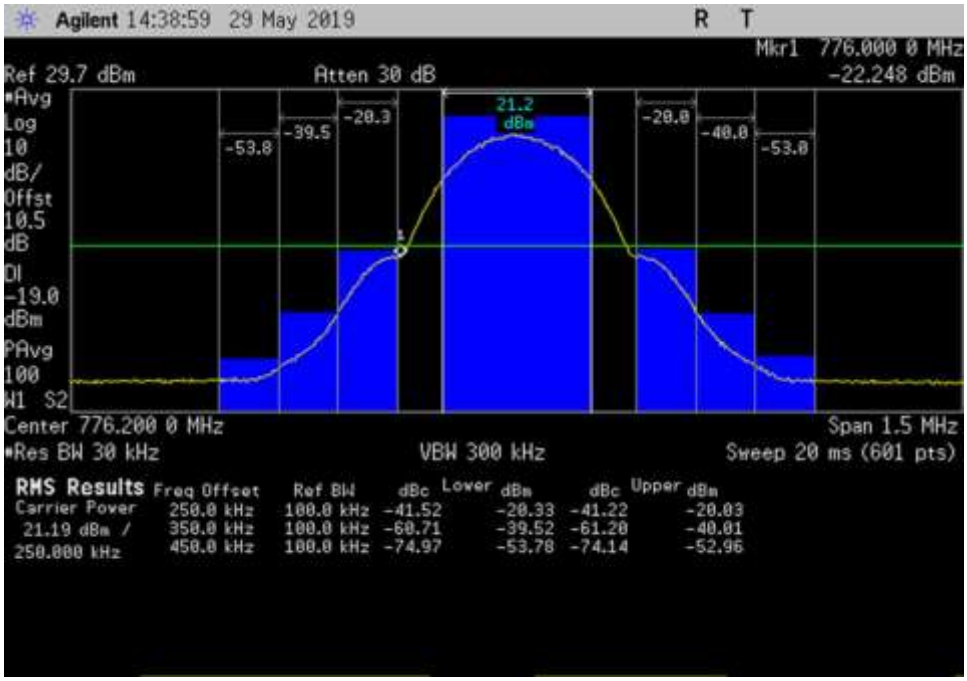
DL_2110-2155_GSM_ 2151.6- 2158MHz_100ft Cable



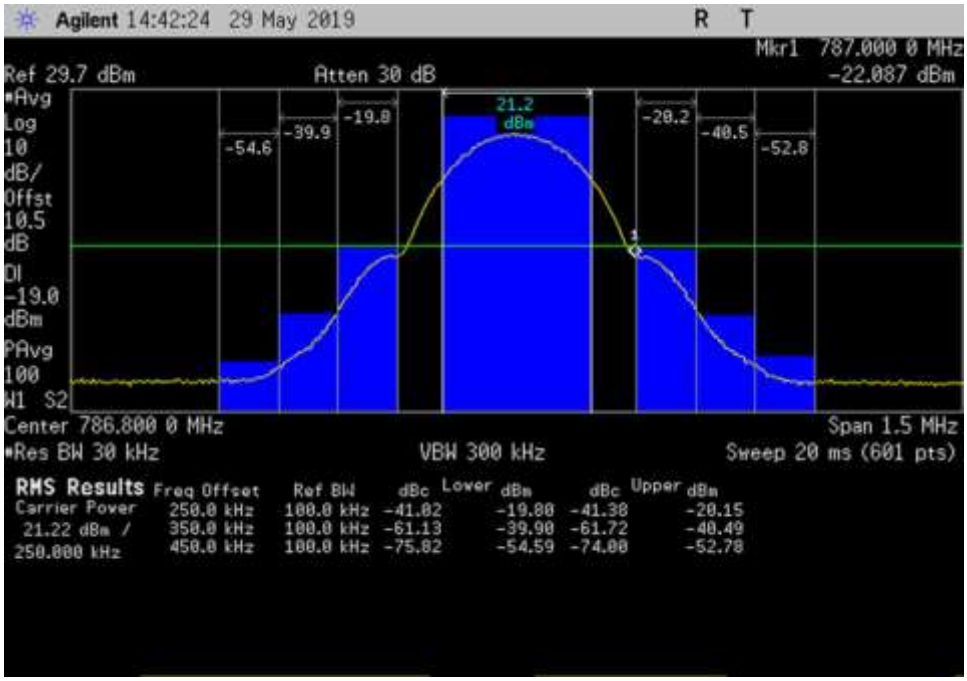
UL_698-716_GSM_ 697.45- 698.95MHz_150ft Cable



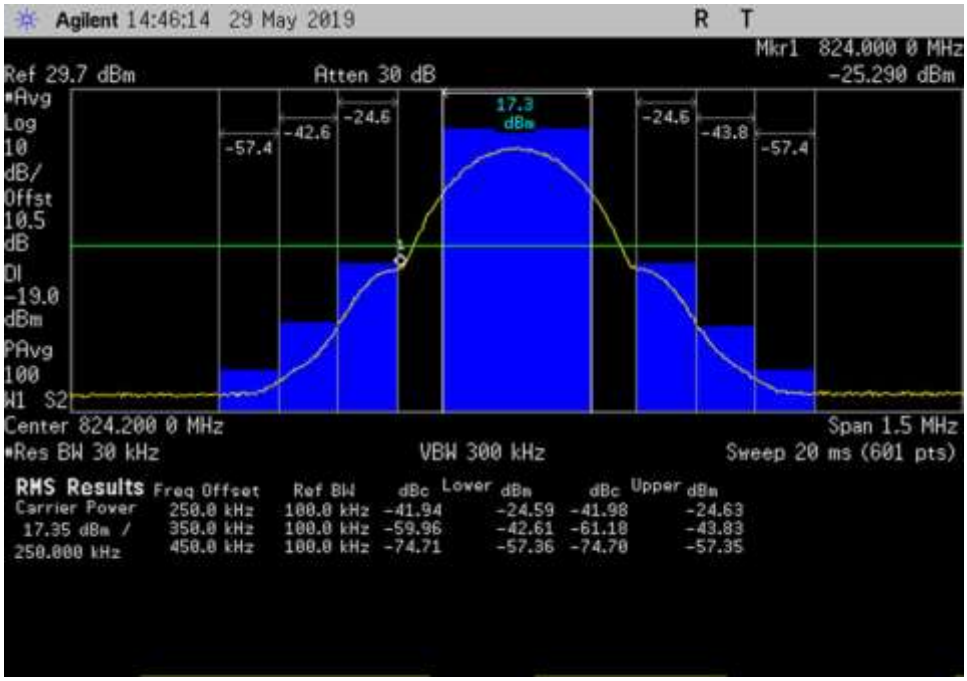
UL_698-716_GSM_ 715.05- 716.55MHz_150ft Cable



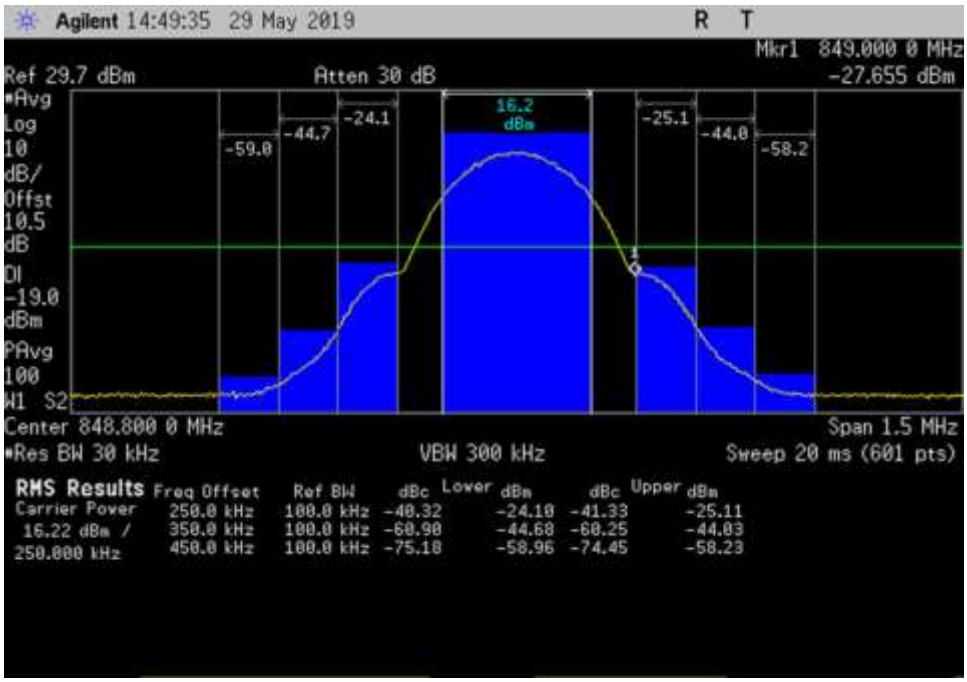
UL_776-787_GSM_ 775.45- 776.95MHz_150ft Cable



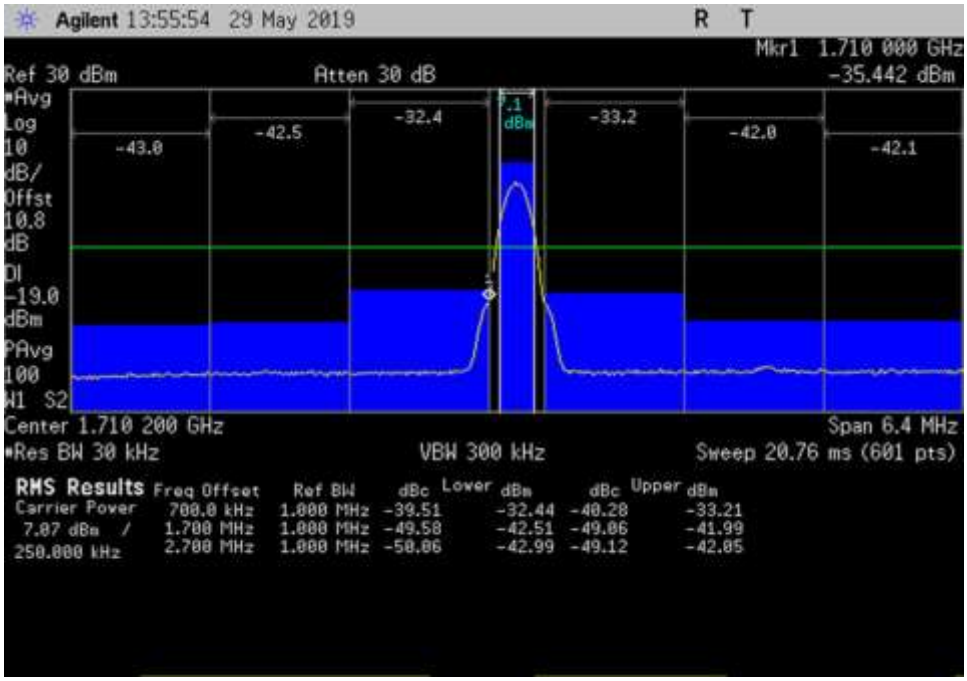
UL_776-787_GSM_ 786.05- 787.55MHz_150ft Cable



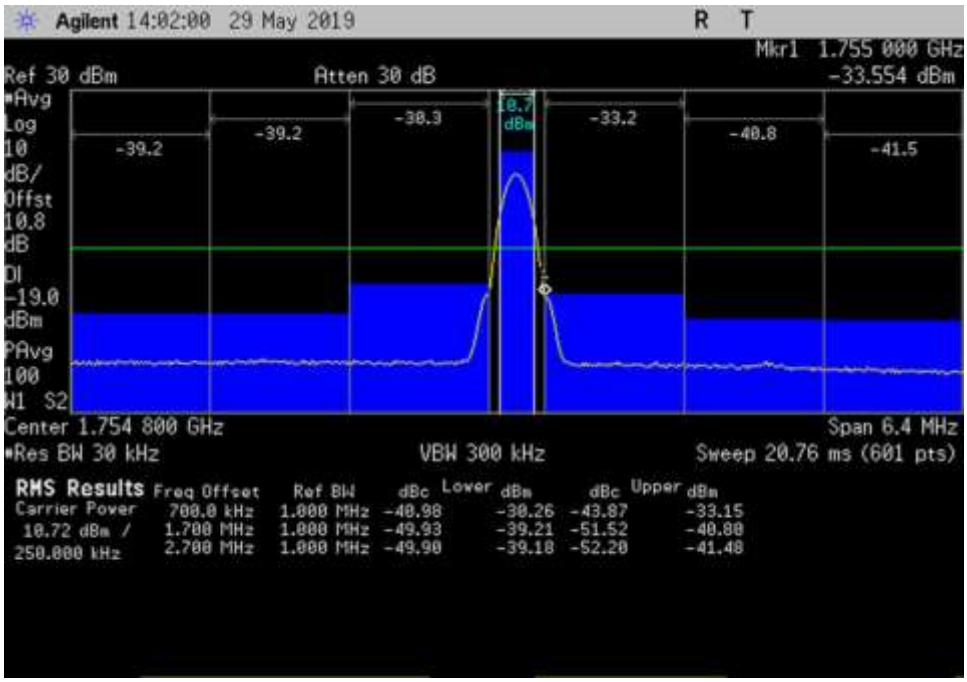
UL_824-849_GSM_ 823.45- 824.95MHz_150ft Cable



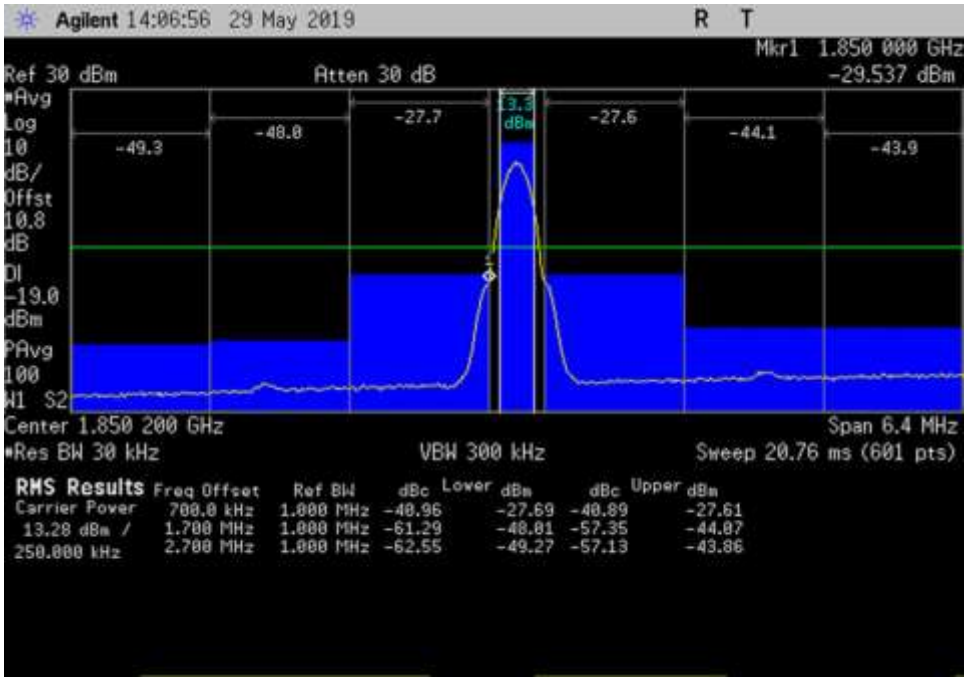
UL_824-849_GSM_ 848.05- 849.55MHz_150ft Cable



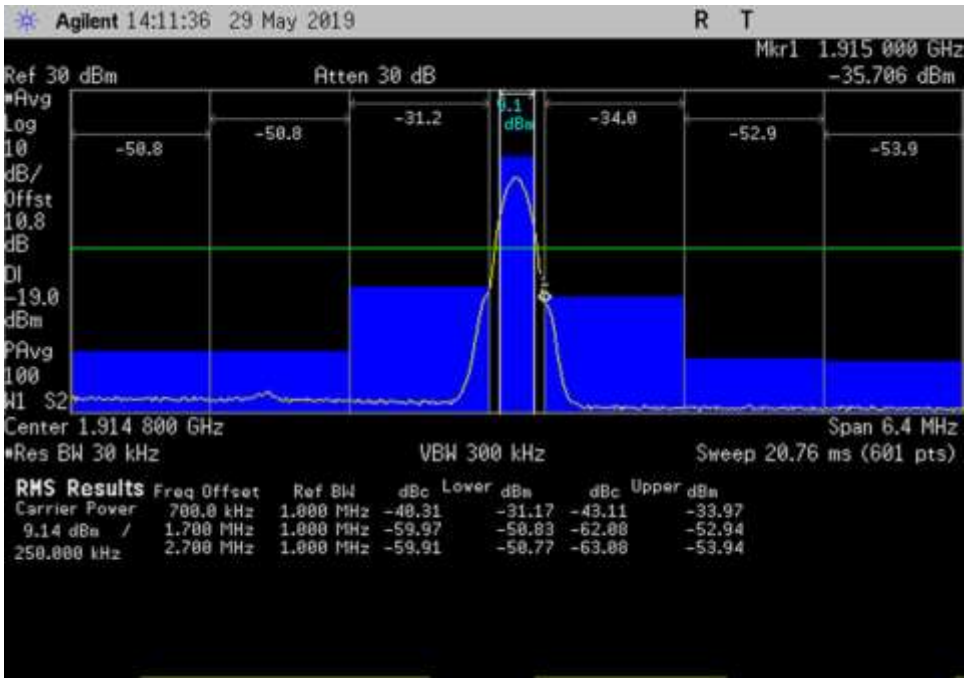
UL_1710-1755_GSM_ 1707- 1713.4MHz_150ft Cable



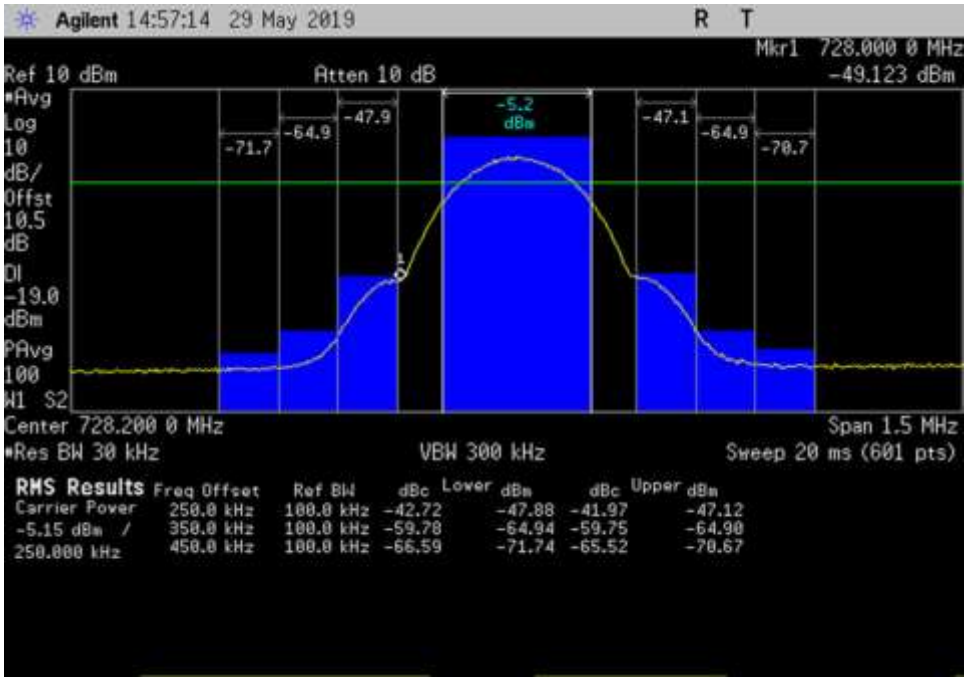
UL_1710-1755_GSM_ 1751.6- 1758MHz_150ft Cable



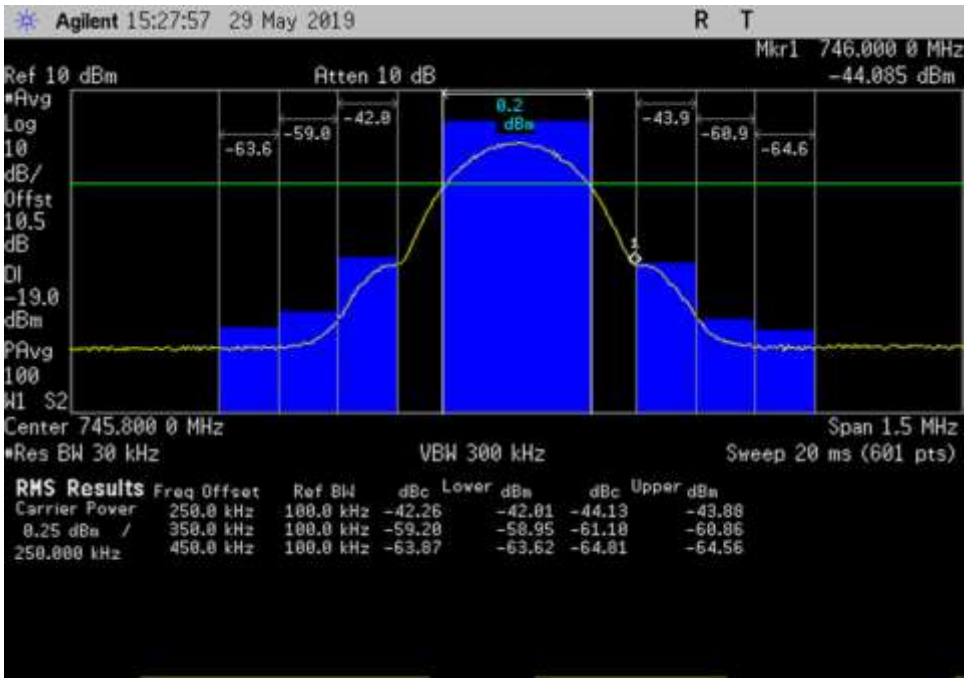
UL_1850-1915_GSM_ 1847- 1853.4MHz_150ft Cable



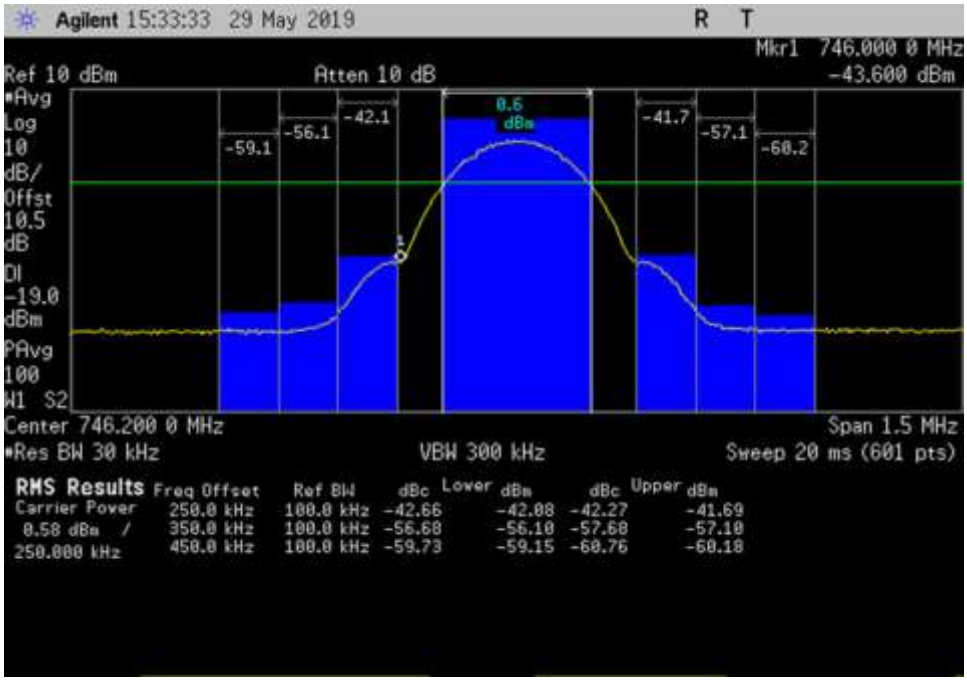
UL_1850-1915_GSM_ 1911.6- 1918MHz_150ft Cable



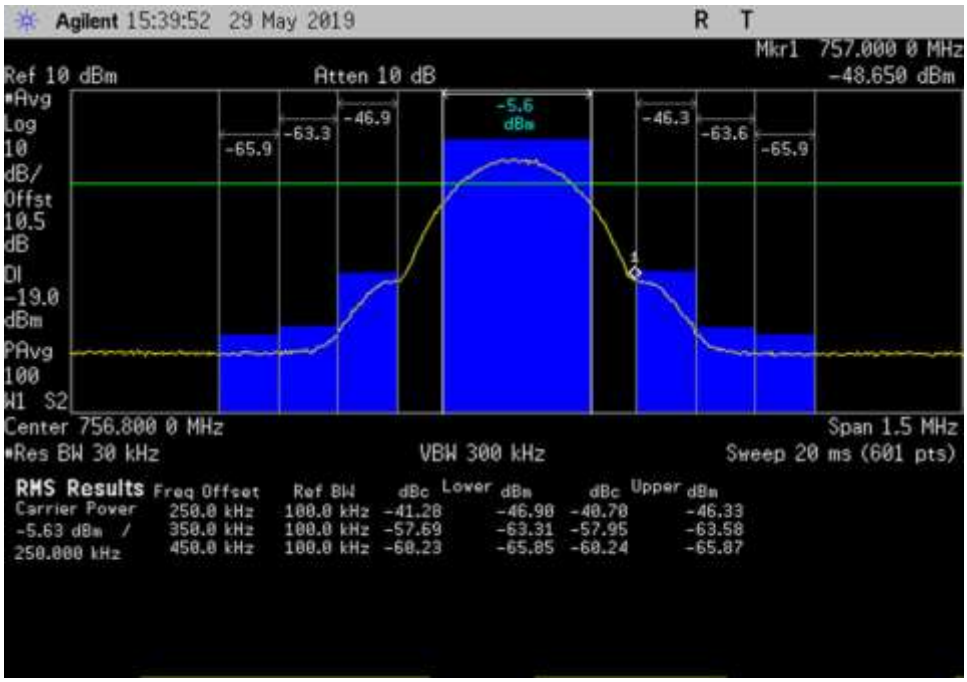
DL_728-746_GSM_ 727.45- 728.95MHz_150ft Cable



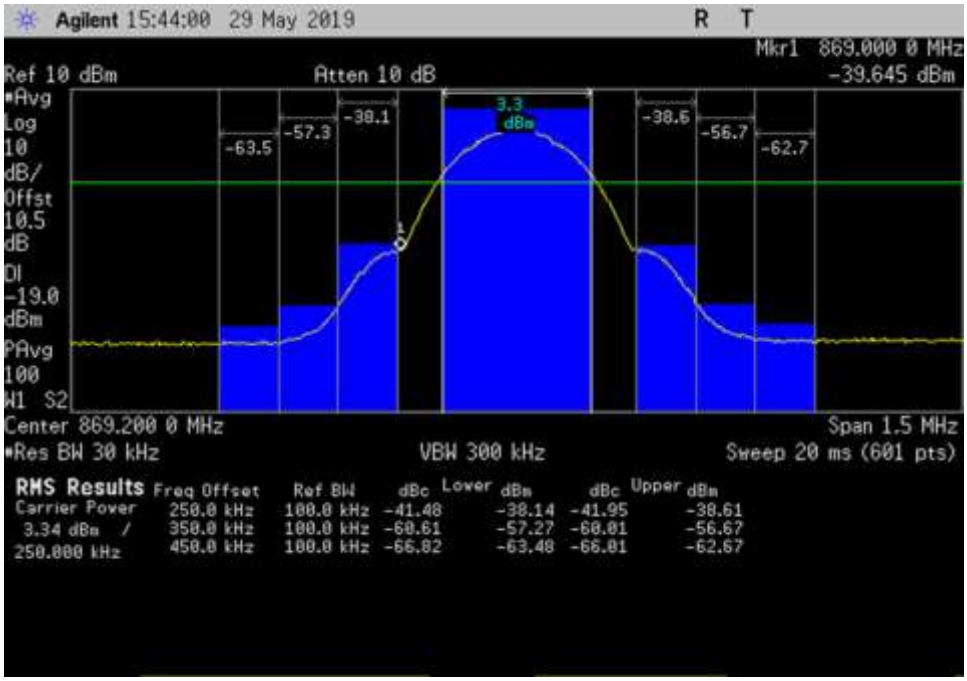
DL_728-746_GSM_ 745.05- 746.55MHz_150ft Cable



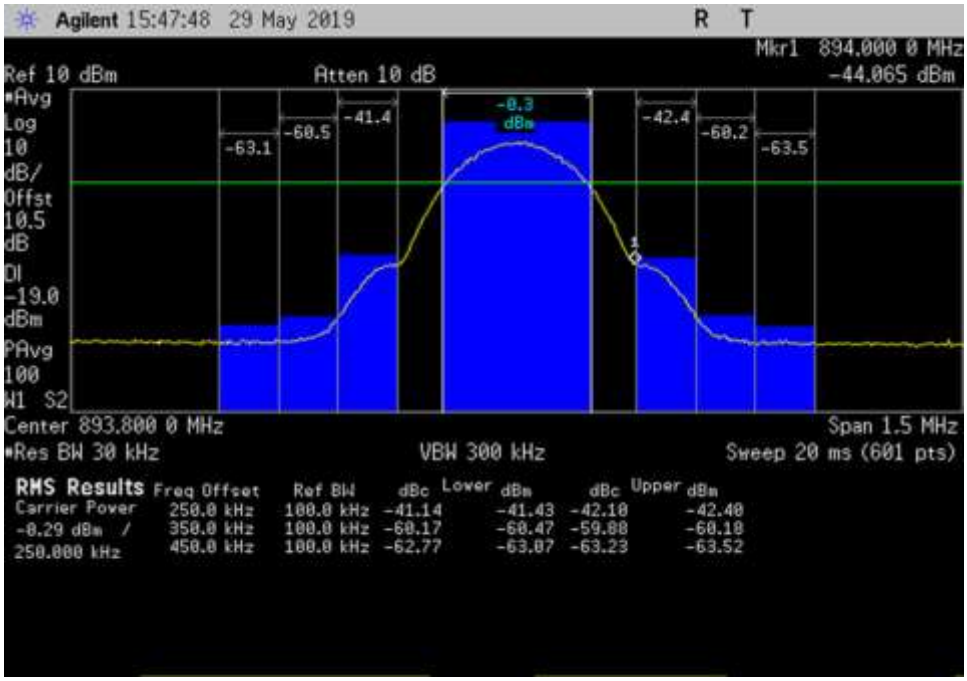
DL_746-757_GSM_ 745.45- 746.95MHz_150ft Cable



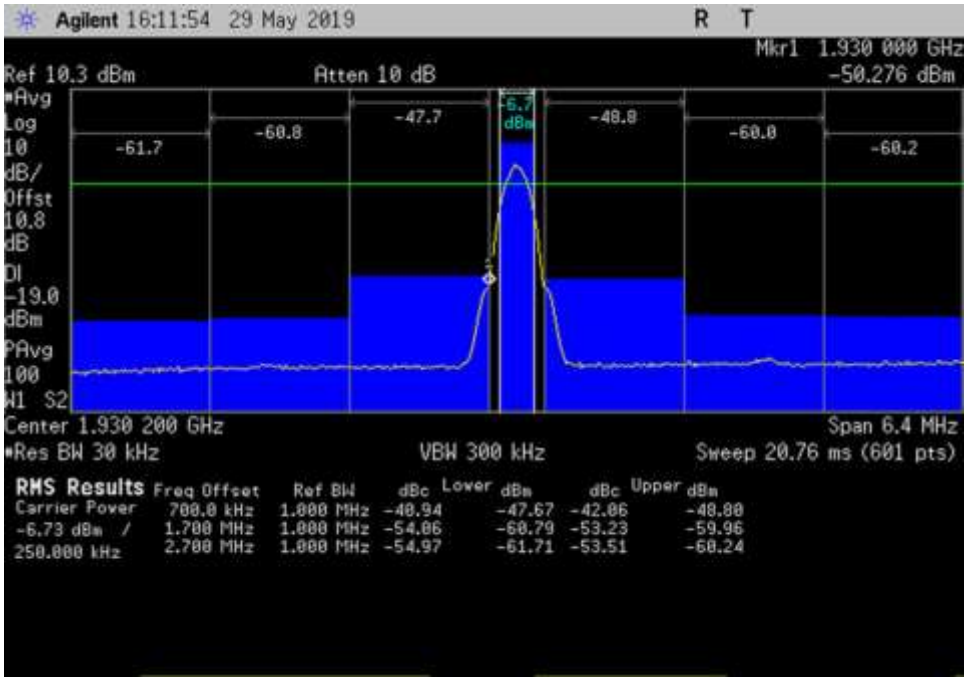
DL_746-757_GSM_ 756.05- 757.55MHz_150ft Cable



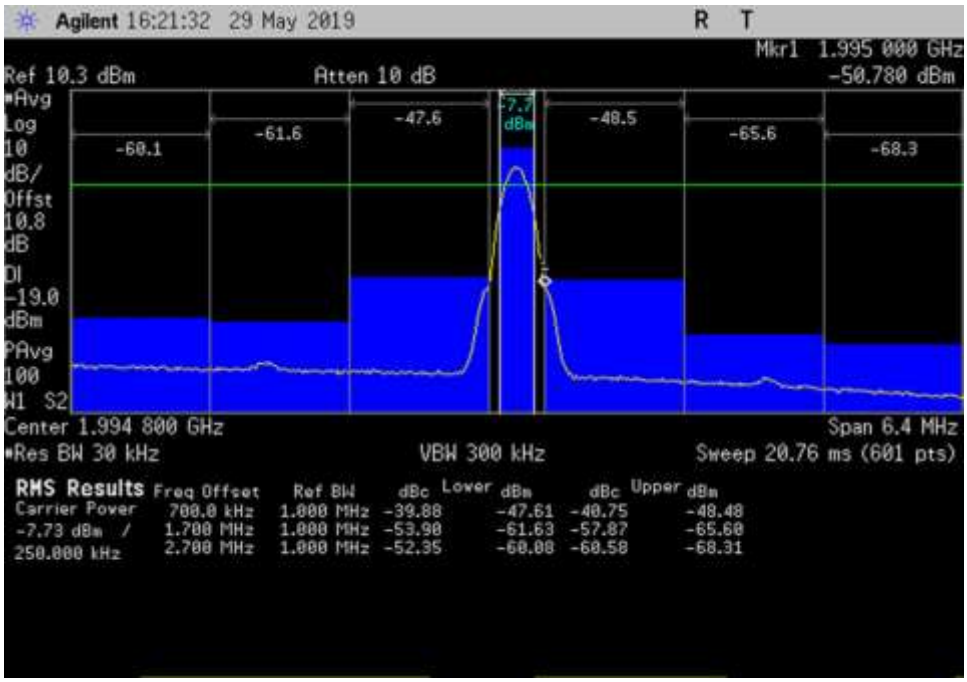
DL_869-894_GSM_ 868.45- 869.95MHz_150ft Cable



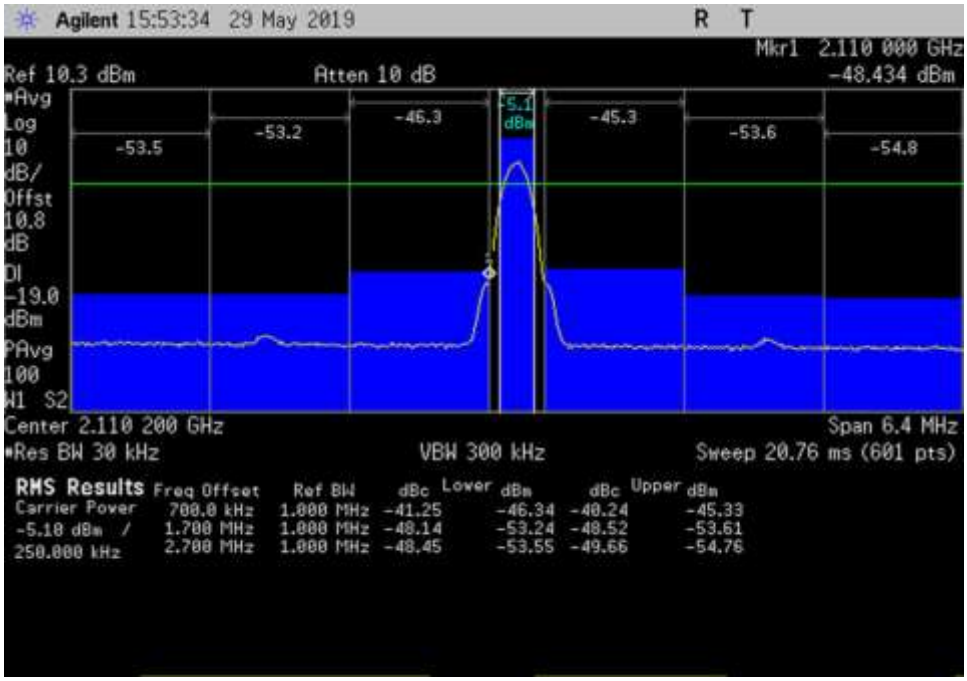
DL_869-894_GSM_ 893.05- 894.55MHz_150ft Cable



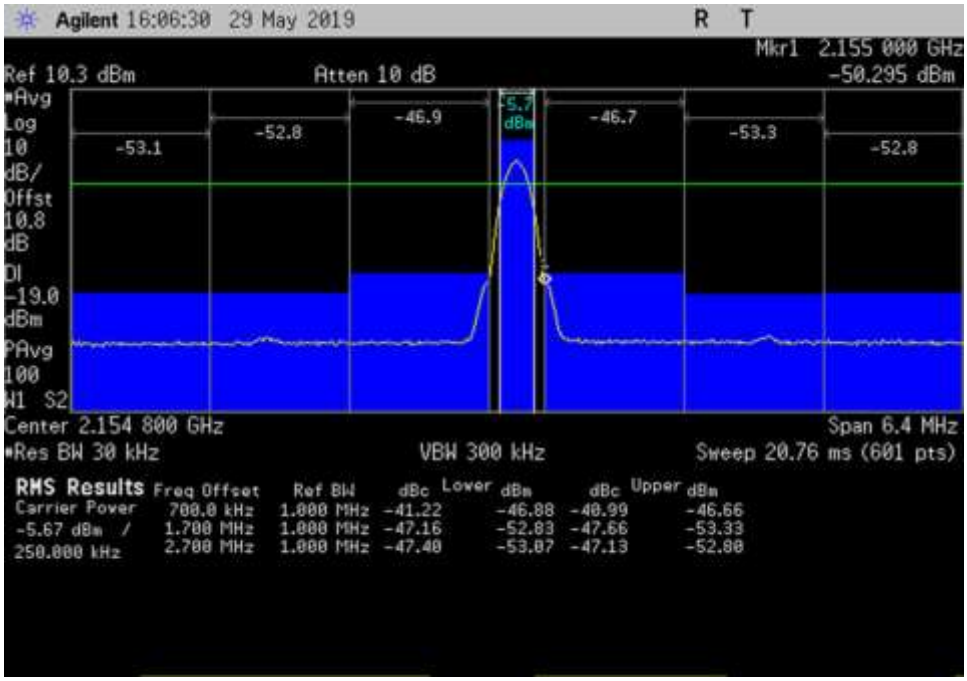
DL_1930-1995_GSM_ 1927- 1933.4MHz_150ft Cable



DL_1930-1995_GSM_ 1991.6- 1998MHz_150ft Cable

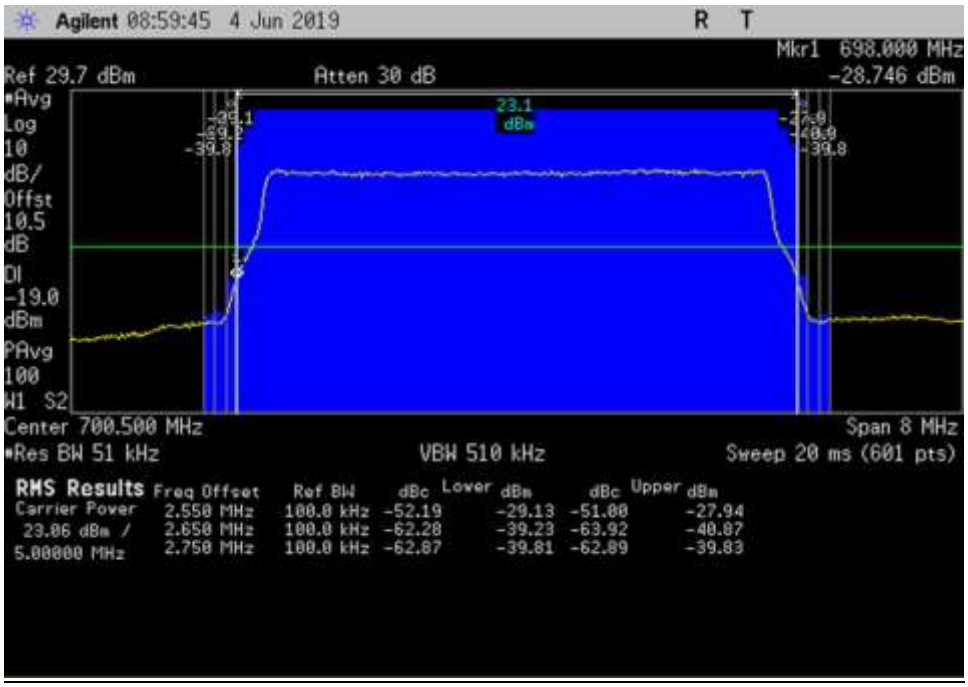


DL_2110-2155_GSM_ 2107- 2113.4MHz_150ft Cable

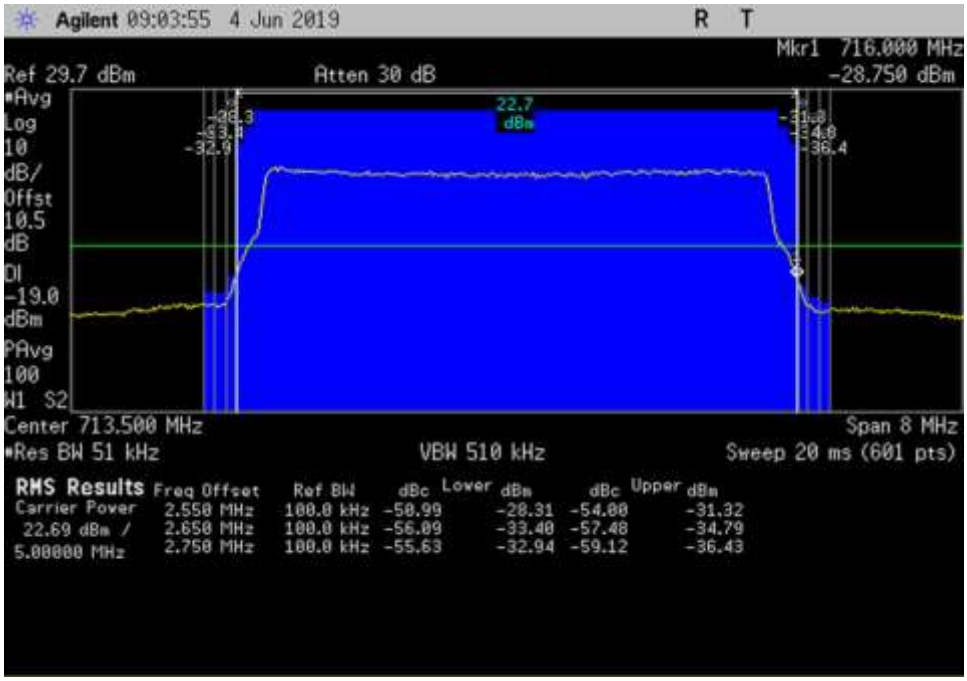


DL_2110-2155_GSM_ 2151.6- 2158MHz_150ft Cable

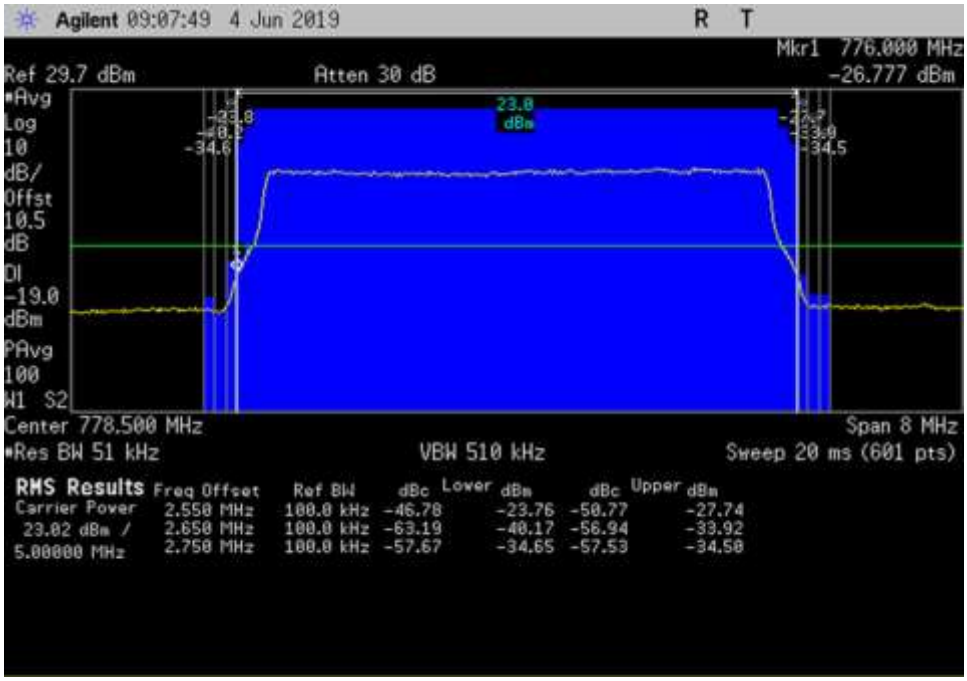
LTE



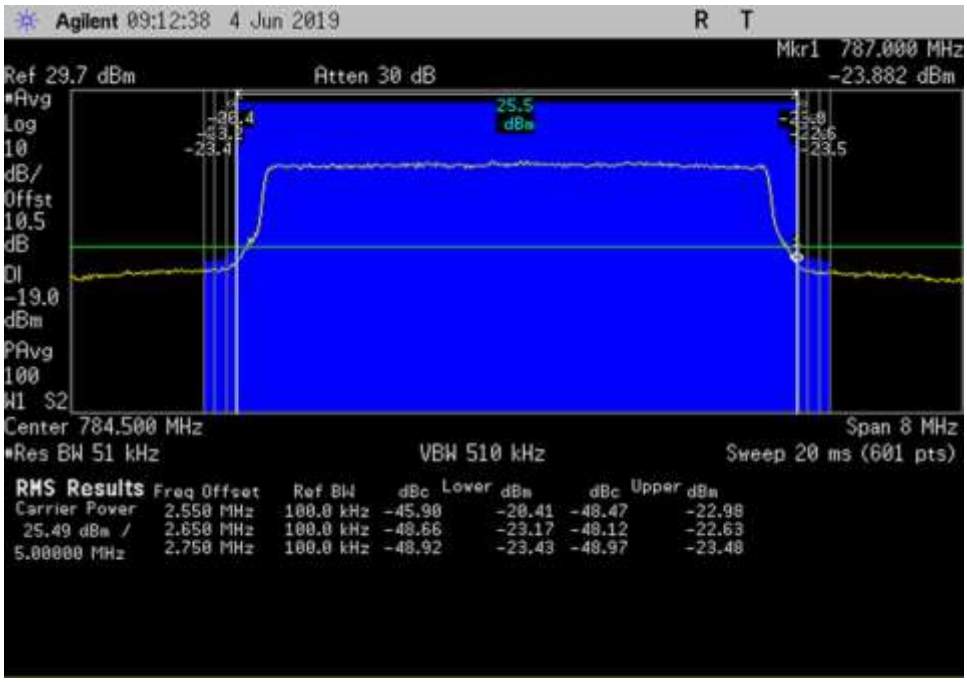
UL_698-716_LTE_ 696.5- 704.5MHz_50ft Cable



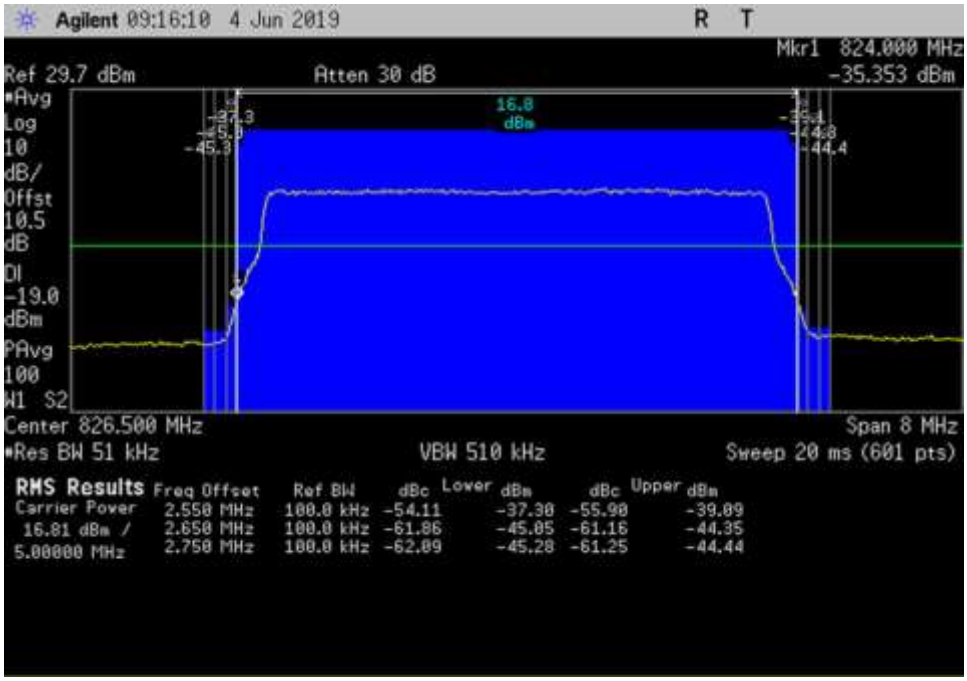
UL_698-716_LTE_ 709.5- 717.5MHz_50ft Cable



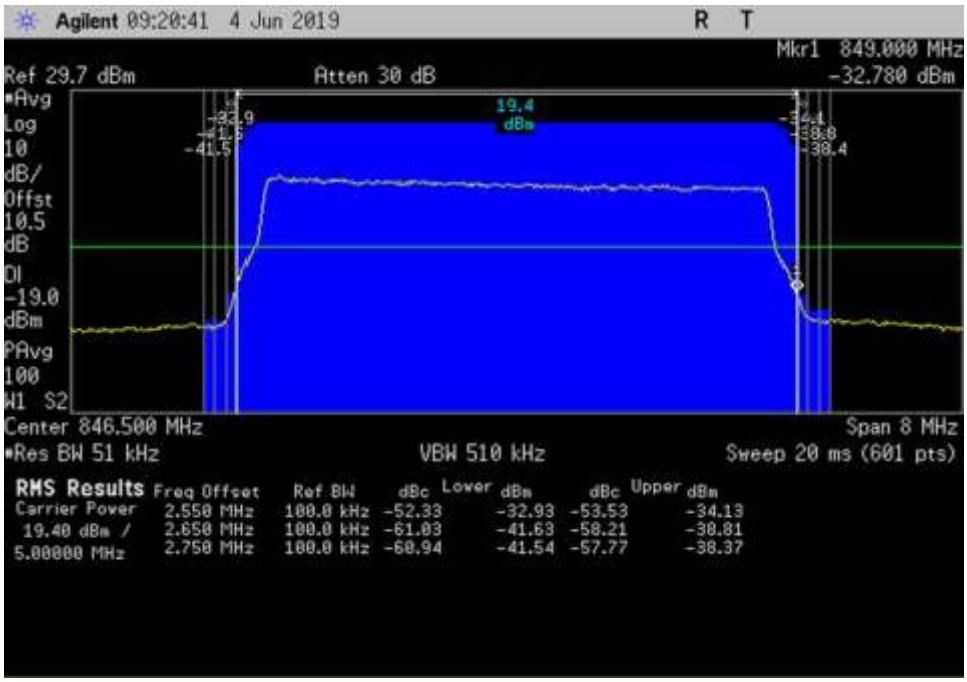
UL_776-787_LTE_ 774.5- 782.5MHz_50ft Cable



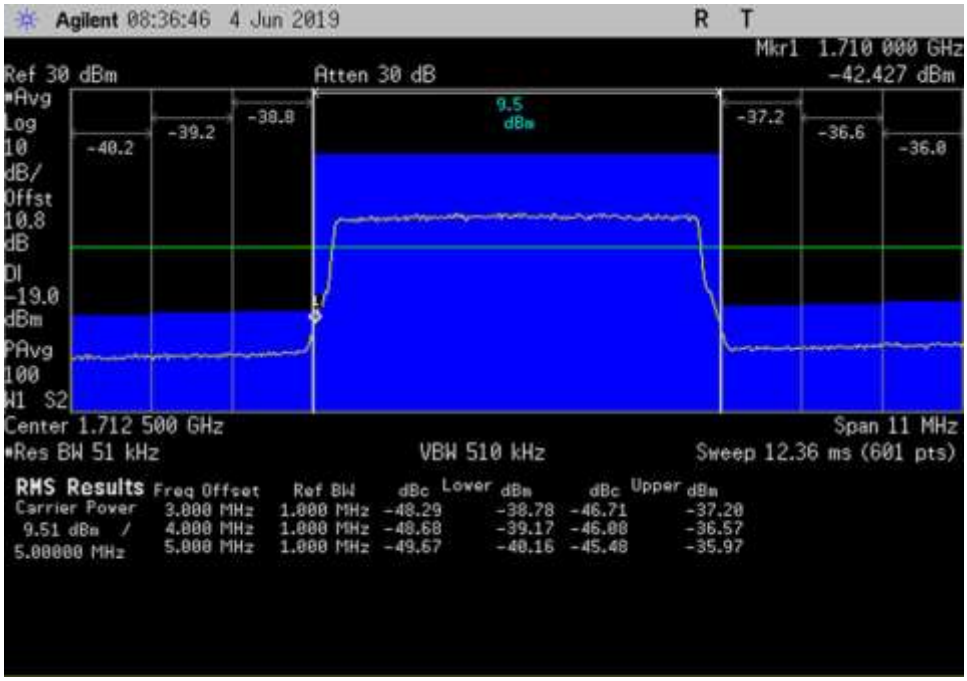
UL_776-787_LTE_ 780.5- 788.5MHz_50ft Cable



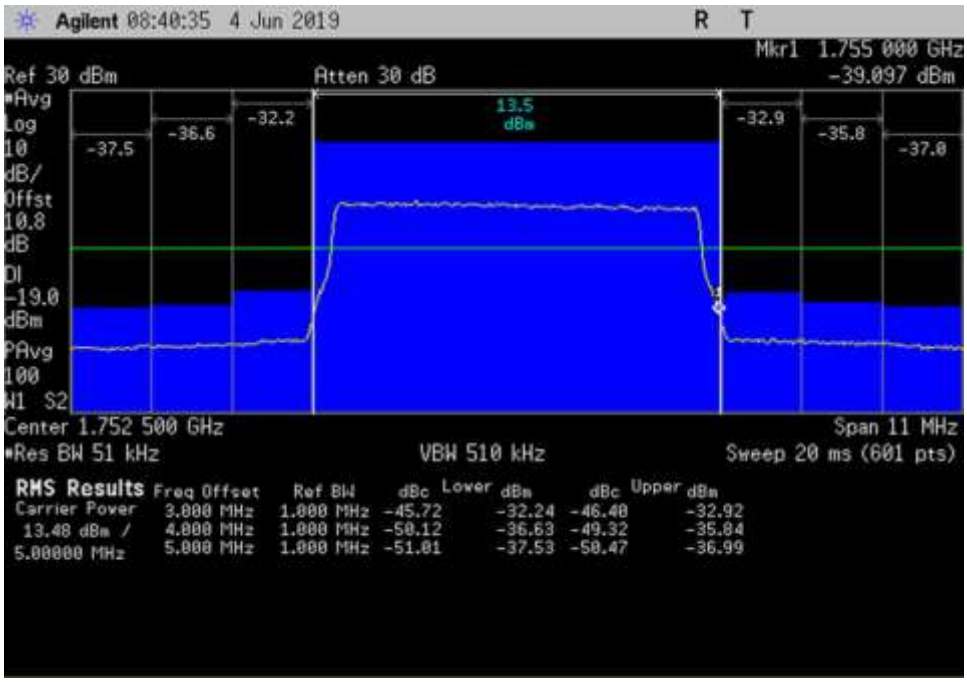
UL_824-849_LTE_ 822.5- 830.5MHz_50ft Cable



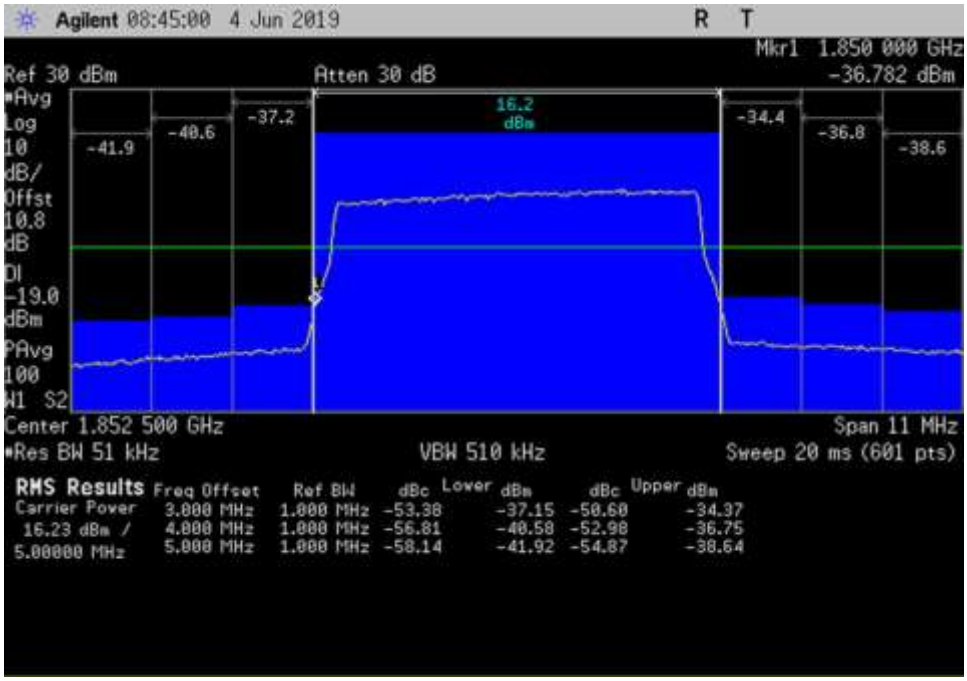
UL_824-849_LTE_ 842.5- 850.5MHz_50ft Cable



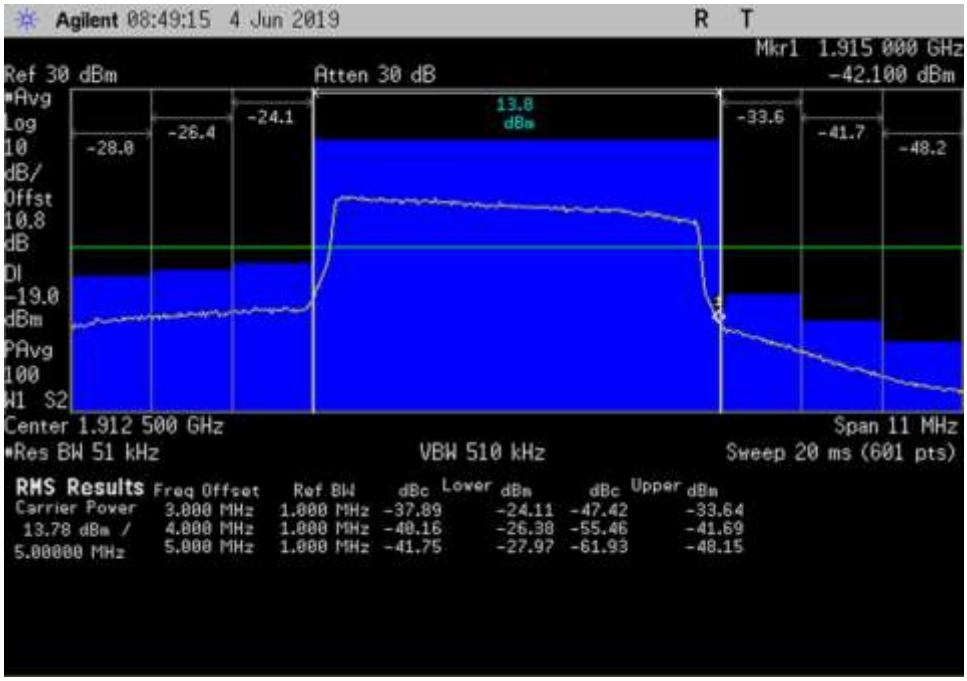
UL_1710-1755_LTE_ 1707- 1718MHz_50ft Cable



UL_1710-1755_LTE_ 1747- 1758MHz_50ft Cable



UL_1850-1915_LTE_ 1847- 1858MHz_50ft Cable



UL_1850-1915_LTE_ 1907- 1918MHz_50ft Cable