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Report On

FCC and ISED Testing of the Ericsson LPRU 4420 B25B66, KRC 161 906/1 LTE, NR, LTE + NR (1900 MHz) Base Station in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 24, Industry Canada RSS-GEN and Industry Canada RSS-133.

COMMERCIAL-IN-CONFIDENCE

FCC: TA8AKRC161906-1
ISED: 287AB-AS1619061

PREPARED BY	APPROVED BY	DATED
Glen Westwell	Scott Drysdale Authorised Signatory	3rd Nov. 2020

Document 7169008570 Report 02 Issue 1 **November 2020**

CONTENTS

SECTION 1

REPORT INFORMATION

1.1 REPORT DETAILS

Manufacturer	Ericsson
Address	Torshamnsgatan 23 Kista SE-16480 Stockholm Sweden
Product Name & Product Number	LPRU 4420 B25B66, KRC 161 906/1
IC Model Name	AS1619061
Serial Number(s)	TD3F082779
Software Version	CXP9013268%17_R84FH
Hardware Version	R1B
Test Specification/Issue/Date	FCC CFR 47 Part 2: 2019 FCC CFR 47 Part 24: 2019 Industry Canada RSS-GEN: Issue 5 March 2019 Amendment 1 Industry Canada RSS-133: Issue 6: January 2018 Amendment 1
Test Plan	LPRU 4420 B25B66_RA_testplan_NR_LTE
Start of Test	29 September 2020
Finish of Test	16 October 2020
Name of Engineer(s)	Glen Westwell
Related Document(s)	KDB 971168 D01 v02r02 KDB 662911 D01 v02r01

ENGINEERING STATEMENT

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported testing was carried out on a sample equipment to demonstrate compliance with FCC CFR 47 Part 24. The sample tested was found to comply with the requirements defined in the applied rules.

Test Engineer(s);

Glen Westwell

1.2 BRIEF SUMMARY OF RESULTS

A brief summary of results for each configuration, in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 24, Industry Canada RSS-GEN and Industry Canada RSS-133 is shown below.

Section	Specification Clause				Test Description	Result
	FCC CFR 47 Part 2	FCC CFR 47 Part 24	RSS-GEN	RSS-133		
-	-	-	-	-	Equivalent Isotropically Radiated Power (EIRP)	N/A[1]
2.1	2.1046	24.232	-	6.4	Maximum Peak Output Power and Peak to Average Ratio - Conducted	Pass
2.2	2.1049	24.238 (b)	6.7	6.5	Occupied Bandwidth	Pass
2.3	2.1051	24.238 (b)	-	6.5	Band Edge	Pass
2.4	2.1051	24.238 (a)	6.13	6.5	Transceiver Spurious Emissions	Pass
2.5	2.1055	24.235	6.11	6.3	Frequency Stability	Pass

N/A[1]– Not Applicable, due to no integral antenna. EIRP assumes a 0dBi gain antenna.
N/A – Not Applicable

This unit was tested without an antenna. ERP/EIRP compliance is addressed at the time of licensing, as required by the responsible ISED Bureau(s). Licensees are required to take into account the maximum allowed antenna gain used in combination with the power settings to prevent the radiated output power exceeding the limits.

Testing in this Report covers only B25 (1900MHz).

For additional configurations and test cases not contained within this test report, refer to the following reports:

7169008570 Report 01 – LPRU 4420 B25B66 LTE, NR, LTE + NR (B66)

Measurement Uncertainty Decision Statement
Determination of conformity with the specification limits is based on the results of the compliance measurement and does not take into account measurement instrumentation uncertainty as defined in ANSI C63.26:2015 Clause 1.3.

1.3 CONFIGURATION DESCRIPTION

Configuration	RAT	No. Of carriers	Carrier Bandwidth	Carrier Frequency Configuration (MHz)		
				Bottom	Middle	Top
A	LTE	1	5 MHz	1932.5	1962.5	1992.5
			10 MHz	1935.0	1962.5	1990.0
			15 MHz	1937.5	1962.5	1987.5
			20 MHz	1940.0	1962.5	1985.0
	NR (SCS 15kHz)		5 MHz	1932.5	1962.5	1992.5
			10 MHz	1935.0	1962.5	1990.0
			15 MHz	1937.5	1962.5	1987.5
			20 MHz	1940.0	1962.5	1985.0
B	LTE	3	5 MHz	1932.5+1937.5+1942.5	1957.5+1962.5+1967.5	1982.5+1987.5+1992.5
			10 MHz	1935.0+1945.0+1955.0	1952.5+1962.5+1972.5	1970.0+1980.0+1990.0
			15 MHz	1937.5+1952.5+1967.5	1947.5+1962.5+1977.5	1957.5+1972.5+1987.5
			20 MHz	1940.0+1960.0+1980.0	1952.5+1962.5+1972.5	1945.0+1965.0+1985.0
	NR (SCS 15kHz)		5 MHz	1932.5+1937.5+1942.5	1957.5+1962.5+1967.5	1982.5+1987.5+1992.5
			10 MHz	1935.0+1945.0+1955.0	1952.5+1962.5+1972.5	1970.0+1980.0+1990.0
			15 MHz	1937.5+1952.5+1967.5	1947.5+1962.5+1977.5	1957.5+1972.5+1987.5
			20 MHz	1940.0+1960.0+1980.0	1952.5+1962.5+1972.5	1945.0+1965.0+1985.0
	NR + LTE		5 MHz	1932.5+1937.5+1942.5	1957.5+1962.5+1967.5	1982.5+1987.5+1992.5
			10 MHz	1935.0+1945.0+1955.0	1952.5+1962.5+1972.5	1970.0+1980.0+1990.0
			15 MHz	1937.5+1952.5+1967.5	1947.5+1962.5+1977.5	1957.5+1972.5+1987.5
			20 MHz	1940.0+1960.0+1980.0	1952.5+1962.5+1972.5	1945.0+1965.0+1985.0

1.4 DECLARATION OF BUILD STATUS

DECLARATION OF BUILD STATUS

MAIN EUT	
MANUFACTURING DESCRIPTION	LPRU 4420 B25B66
MANUFACTURER	Ericsson
TYPE	Remote Radio Base Station
PART NUMBER	KRC 161 906/1
SERIAL NUMBER	TD3F082779
HARDWARE VERSION	R1B
SOFTWARE VERSION	CXP9013268%17_R84FH
TRANSMITTER OPERATING RANGE	B25: 1930-1995 MHz, B66: 2110-2200MHz
RECEIVER OPERATING RANGE	B25: 1850-1915 MHz, B66: 1710-1780MHz
COUNTRY OF ORIGIN	China
INTERMEDIATE FREQUENCIES	None
EMISSION DESIGNATOR(S): (i.e. G1D, GXW)	B25 and B66 LTE: 5M00W7D, 10M0W7D, 15M00W7D, 20M0W7D B25 and B66 NBIoT Guardband: 10M0W7D, 15M00W7D, 20M0W7D B25 and B66 NR: 5M00F9W, 10M0F9W, 15M0F9W, 20M0F9W
MODULATION TYPES: (i.e. GMSK, QPSK)	LTE: QPSK, 16QAM, 64QAM, 256QAM NR: QPSK, 16QAM, 64QAM, 256QAM
HIGHEST INTERNALLY GENERATED FREQUENCY	2.2 GHz
OUTPUT POWER (W or dBm)	B25: 4 x 0.159W (22dBm) B66: 4 x 0.159W (22dBm)
ANTENNA GAIN	B25: 0 dBi B66: 0dBi The LPRU 4420 B25B66 product will only be installed with its RF output ports connected to Active Distributed Antenna Systems (DAS). Our product will not be directly connected to antennas.
FCC ID	TA8AKRC161906-1
INDUSTRY CANADA ID	287AB-AS1619061
TECHNICAL DESCRIPTION (a brief description of the intended use and operation)	LPRU 4420 B25B66 (KRC 161 906/1) is a Remote Radio Unit forming part of the Ericsson Radio Base Station (RBS) equipment. The LPRU provides radio access for mobile and fixed devices and is intended for the indoor environment. The radio operates over 8 Transmit ports in MRO (LTE, NBIoT, and NR);Single, and Multi-Carrier transmission with a maximum rated RF Output of 0.159W per port over an operational temperature of 0°C to +55°C. The unit is designed to be rack mounted. .

Signature:

.....

Denis Lalonde

Date: 30 October 2020

Declaration of Build Status Serial Number: TD3F082779

No responsibility will be accepted by TÜV SÜD UK Limited as to the accuracy of the information declared in this document by the manufacturer.

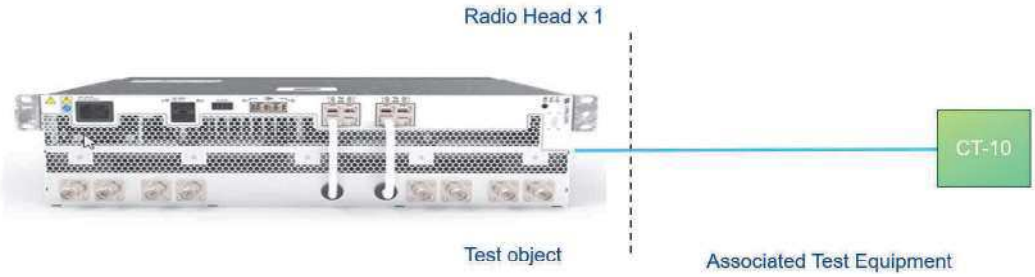
1.5 PRODUCT INFORMATION

1.5.1 Technical Description

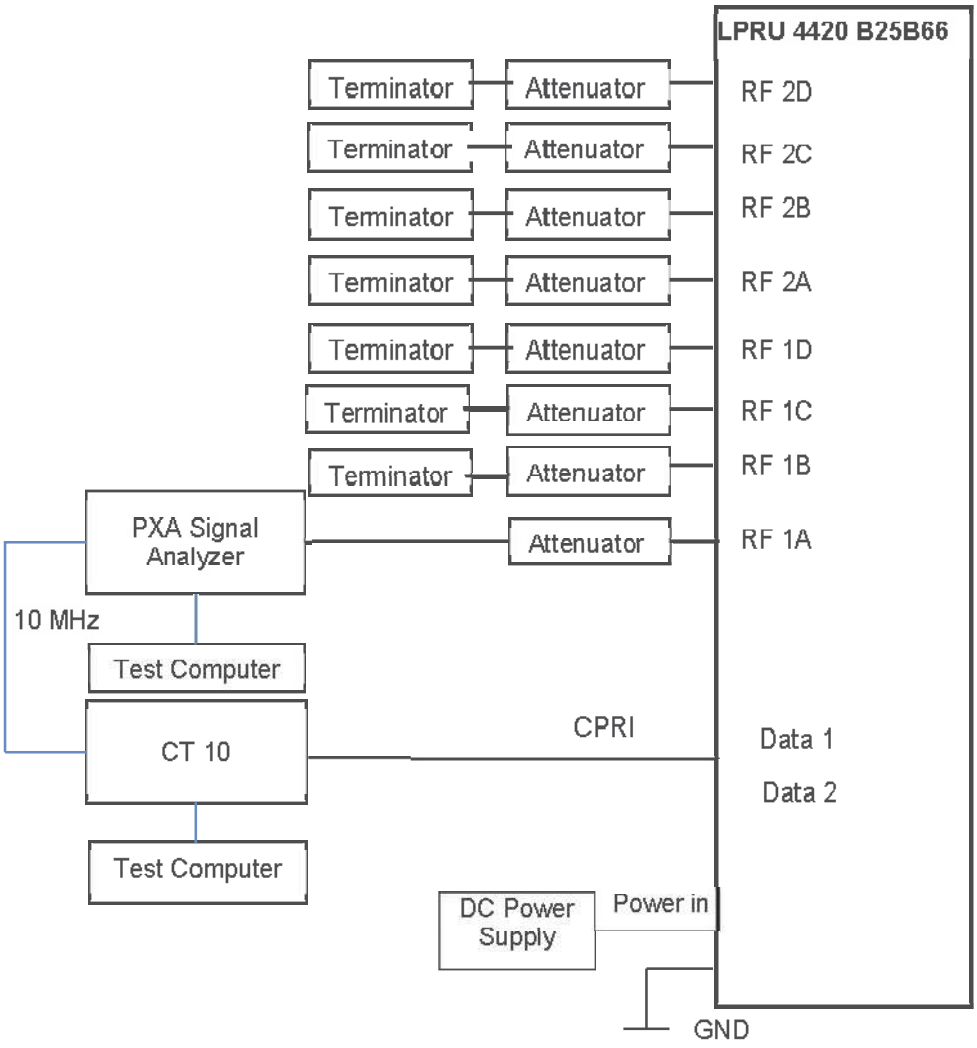
The Equipment Under Test (EUT) LPRU 4420 B25B66 is an Ericsson AB Radio Unit working in the public mobile service 1900MHz band which provides communication connections to 1900 MHz) network. The LPRU 4420 B25B66 operates from a -48V DC supply.

The Equipment Under Test (EUT) is shown in the photograph below. A full technical description can be found in the Manufacturer's documentation.

Equipment Under Test



1.6 TEST SETUP



1.7 TEST CONDITIONS

For all tests the EUT was set up in accordance with the relevant test standard and to represent typical operating conditions. Tests were applied with the EUT situated as described in the Test Method for each Test.

The EUT was powered from a -48V DC supply.

FCC Measurement Facility Registration Number: CA4810

ISED Accreditation
ISED#24015, TUV SUD, Ottawa, Canada

Under our group A2LA Accreditation, TÜV SÜD conducted the following tests at Ericsson, Ottawa.

Test Name	Name of Engineer(s)
Maximum Peak Output Power and Peak to Average Ratio - Conducted	Glen Westwell
Occupied Bandwidth	Glen Westwell
Band Edge	Glen Westwell
Transmitter Spurious Emissions	Glen Westwell
Frequency Stability	Glen Westwell

1.8 TEST LOCATION

Testing was performed at Ericsson Ottawa client facility located at 349 Terry Fox Dr, Kanata On. Canada

1.9 DEVIATION FROM THE STANDARD

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

1.10 MODIFICATION RECORD

No modifications were made to the EUT during testing.

1.11 ADDITIONAL INFORMATION

1. Transmitter performance was measured for top, mid & bottom channels across all 4 antenna ports as presented in the average power measurement tables. Maximum power performance was determined to be, antenna port A, Bottom band.
These worst-case results from antenna port A are presented in this report to demonstrate compliance.

2. The 10MHz LTE carrier contains a NB-IoT GB carrier where possible for evaluation as part of this submission.

SECTION 2

TEST DETAILS

2.1 MAXIMUM PEAK OUTPUT POWER AND PEAK TO AVERAGE RATIO - CONDUCTED

2.1.1 Specification Reference

FCC CFR 47 Part 2, Clause 2.1046
FCC CFR 47 Part 24, Clause 24.232
Industry Canada RSS-133, Clause 6.4

2.1.2 Date of Test and Modification State

07 October 2020 - Modification State 0

2.1.3 Test Equipment Used

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

2.1.4 Environmental Conditions

Ambient Temperature	23.5ºC
Relative Humidity	31.3%

2.1.5 Test Method

All measurements were made in accordance with FCC KDB 971168 D01, clause 5.2.1 and summed in accordance with FCC KDB 662911 D01.

Measurements were performed with a Spectrum Analyser using the Band Power measurement function. The detector was set to RMS with an RBW of at least 1 % of the carrier bandwidth and a VBW of at least 3 times the RBW. The integration bandwidth was configured to be wider than the total bandwidth of the carrier or combinations of carriers, (multi-carrier). Using a sweep time of auto, measurements were performed over 200 samples, with the average measurement recorded.

Due to Average measurements being recorded, an additional Peak to Average measurement was made in all single carrier configurations. This was achieved using the CCDF function of the Spectrum Analyser with the RBW being set to a value wider than the largest signal being measured – in this case – 20 MHz

Using a power meter and attenuator(s), the output power of the EUT was measured at the antenna terminal. The path loss between the EUT and the power sensor was measured and recorded for the test band. The path loss was entered as an offset into the power meter and spectrum analyser.

The EUT was configured to transmit on maximum power on the configurations defined in the tables below. Since the EUT transmits on 4 antennas simultaneously in the same frequency range for MIMO devices, i.e., TX MIMO mode, using the Measure-and-Sum approach, the output power at all antenna ports were tested, and the total output power were then summed mathematically in linear power units as recored in the tables below.

The declared Maximum Antenna Gain to be used with this product, as Declared by the Manufacturer is 0 dBi. The EIRP is calculated as the sum of the measured power plus the antenna gain.

2.1.6 Test Results

Configuration A

Maximum Output Power 22 dBm / Port

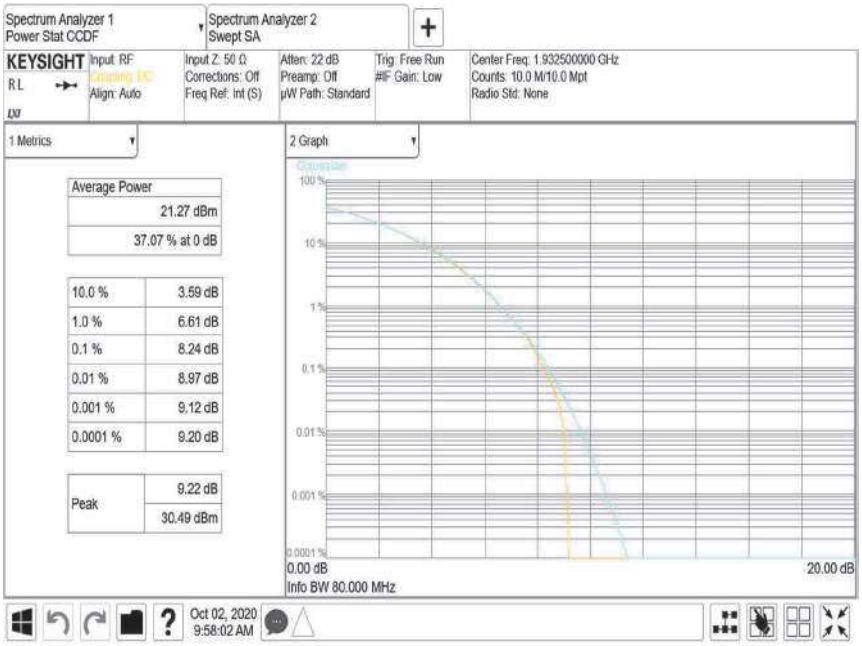
Antenna	Modulation	Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power		
			Channel Position B		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
A	LTE: QPSK	5.0 MHz	9.22	21.22	17.34
B	LTE: QPSK	5.0 MHz	-	21.23	17.34
C	LTE: QPSK	5.0 MHz	-	20.50	17.34
D	LTE: QPSK	5.0 MHz	-	21.38	17.34
Total			-	27.12	23.36
A	LTE: QPSK	10.0 MHz	9.31	21.18	13.05
B	LTE: QPSK	10.0 MHz	-	21.08	13.05
C	LTE: QPSK	10.0 MHz	-	20.16	13.05
D	LTE: QPSK	10.0 MHz	-	21.19	13.05
Total			-	26.94	19.07
A	LTE: QPSK	15.0 MHz	9.29	20.99	11.16
B	LTE: QPSK	15.0 MHz	-	20.96	11.16
C	LTE: QPSK	15.0 MHz	-	20.24	11.16
D	LTE: QPSK	15.0 MHz	-	21.06	11.16
Total			-	26.85	17.18
A	LTE: QPSK	20.0 MHz	9.40	20.99	9.80
B	LTE: QPSK	20.0 MHz	-	21.13	9.80
C	LTE: QPSK	20.0 MHz	-	20.39	9.80
D	LTE: QPSK	20.0 MHz	-	21.16	9.80
Total			-	26.95	15.82
A	NR: QPSK	5.0 MHz	9.17	21.27	15.91
B	NR: QPSK	5.0 MHz	-	21.31	15.91
C	NR: QPSK	5.0 MHz	-	20.51	15.91
D	NR: QPSK	5.0 MHz	-	21.29	15.91
Total			-	27.13	21.93
A	NR: QPSK	10.0 MHz	9.23	21.09	12.39
B	NR: QPSK	10.0 MHz	-	21.06	12.39
C	NR: QPSK	10.0 MHz	-	20.22	12.39
D	NR: QPSK	10.0 MHz	-	21.29	12.39
Total			-	26.95	18.41
A	NR: QPSK	15.0 MHz	9.26	20.96	10.54
B	NR: QPSK	15.0 MHz	-	20.93	10.54
C	NR: QPSK	15.0 MHz	-	20.28	10.54
D	NR: QPSK	15.0 MHz	-	21.08	10.54
Total			-	26.84	16.56
A	NR: QPSK	20.0 MHz	9.39	21.00	9.48
B	NR: QPSK	20.0 MHz	-	20.92	9.48
C	NR: QPSK	20.0 MHz	-	20.30	9.48
D	NR: QPSK	20.0 MHz	-	21.09	9.48
Total			-	26.86	15.50

Remarks

1. Transmitter performance was measured for top, mid & bottom channels across all 4 antenna ports as represented in the average power measurement tables. Maximum power performance was determined to be antenna port A.
2. The plot results presented represent typical performance for all bands and antenna ports based on transmitter port A performance.
3. Plot data performance are on file and available on request.
4. An NB-IoT GB carrier is included in the 10MHz LTE RAT for evaluation as part of this submission.
5. Antenna gain for this LPRU 4420 is 0 dBi. The EIRP is equal to the total carrier power.

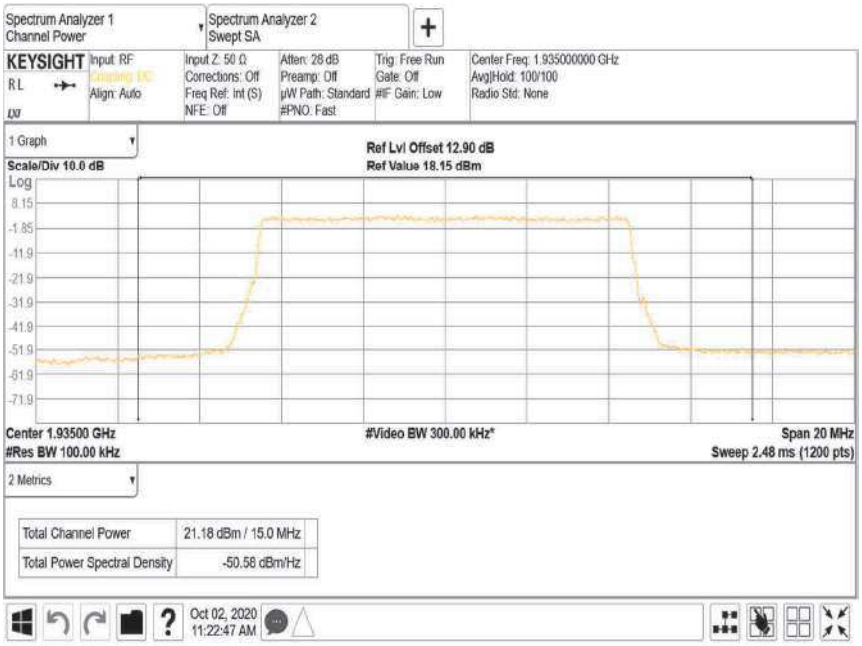
Antenna Port A Carrier Power - Modulation LTE: QPSK - Carrier Bandwidth 5.0 MHz - Channel Position B

Antenna Port A Pk-Av Ratio - Modulation LTE: QPSK - Carrier Bandwidth 5.0 MHz - Channel Position B

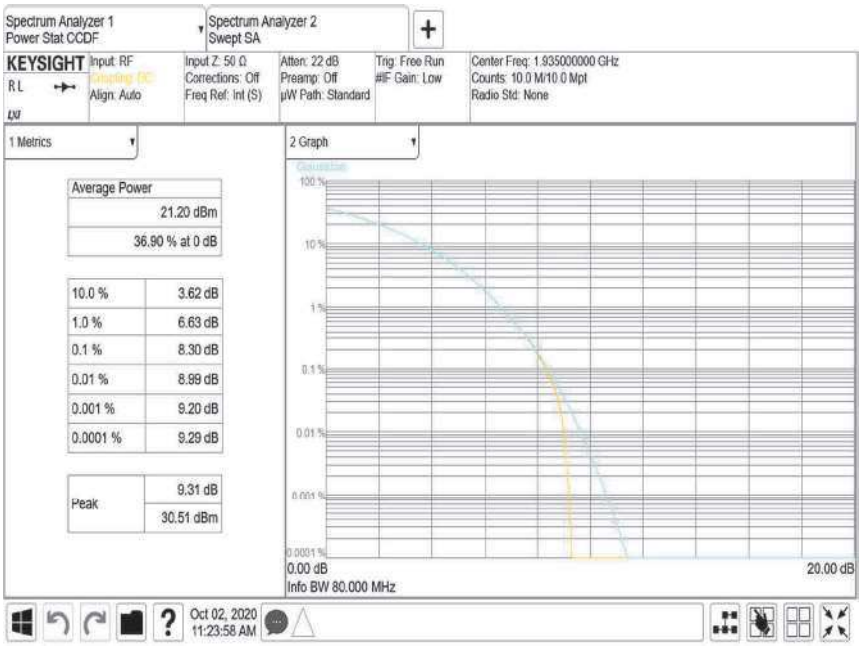


Antenna Port A PSD - Modulation LTE: QPSK - Carrier Bandwidth 5.0 MHz - Channel Position B

Antenna Port A Carrier Power - Modulation LTE: QPSK - Carrier Bandwidth 10.0 MHz - Channel Position B

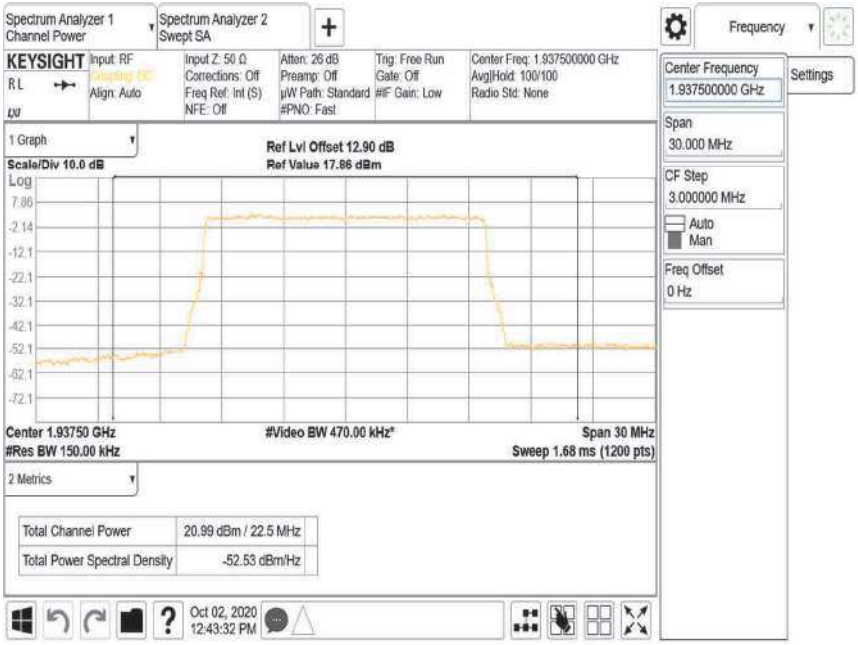


Antenna Port A Pk-Av Ratio - Modulation LTE: QPSK - Carrier Bandwidth 10.0 MHz - Channel Position B

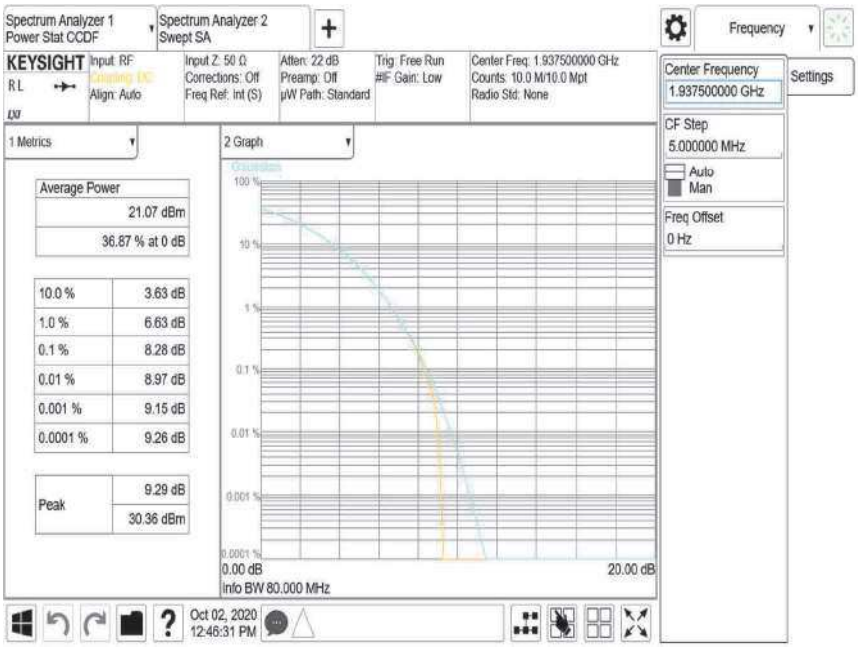


Antenna Port A PSD - Modulation LTE: QPSK - Carrier Bandwidth 10.0 MHz - Channel Position B

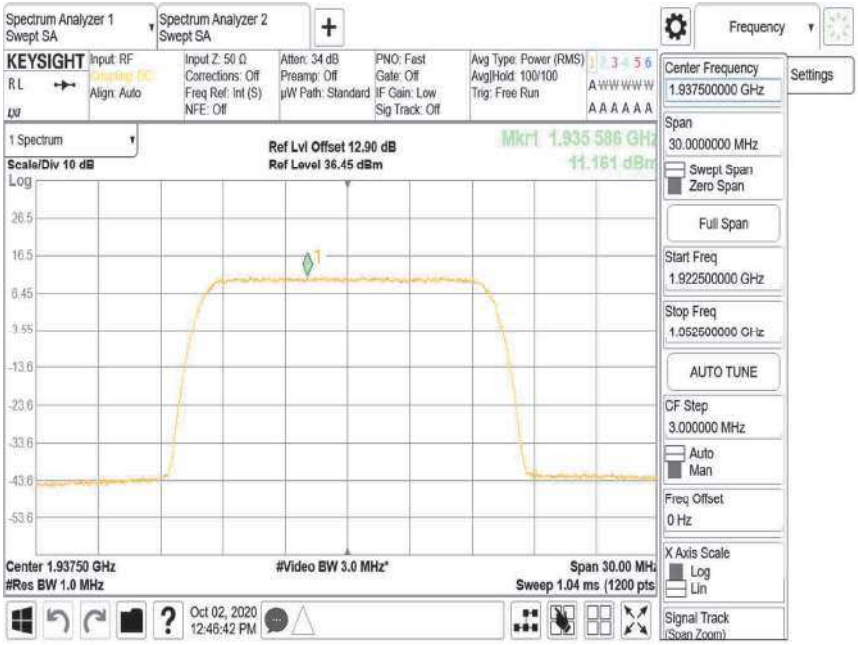
Antenna Port A Carrier Power - Modulation LTE: QPSK - Carrier Bandwidth 15.0 MHz - Channel Position B



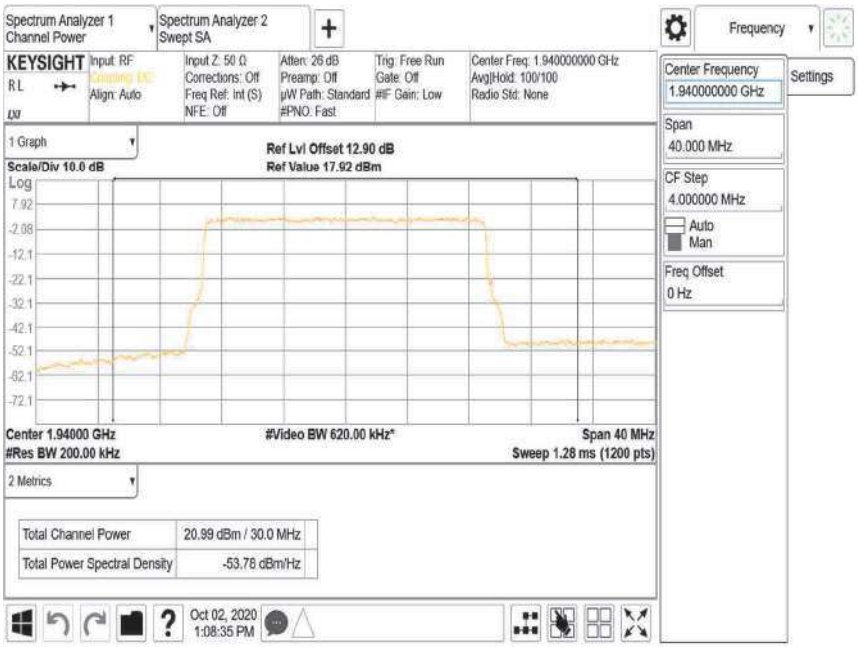
Antenna Port A Pk-Av Ratio - Modulation LTE: QPSK - Carrier Bandwidth 15.0 MHz - Channel Position B



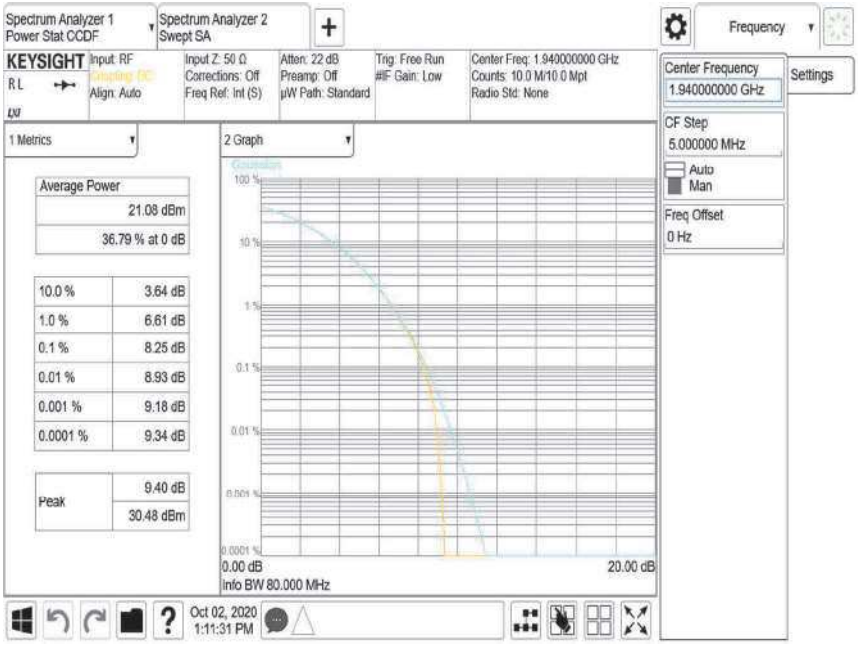
Antenna Port A PSD - Modulation LTE: QPSK - Carrier Bandwidth 15.0 MHz - Channel Position B



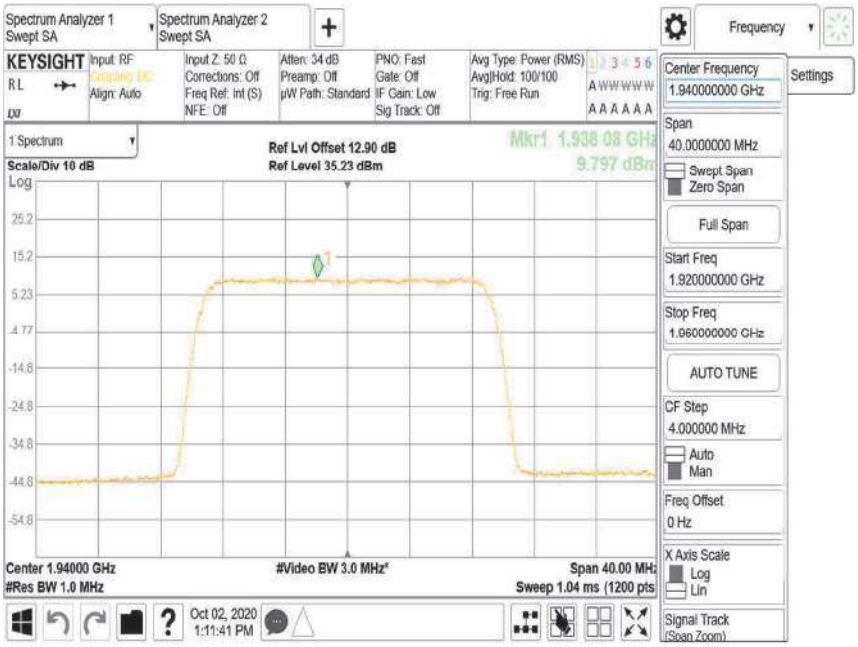
Antenna Port A Carrier Power - Modulation LTE: QPSK - Carrier Bandwidth 20.0 MHz - Channel Position B



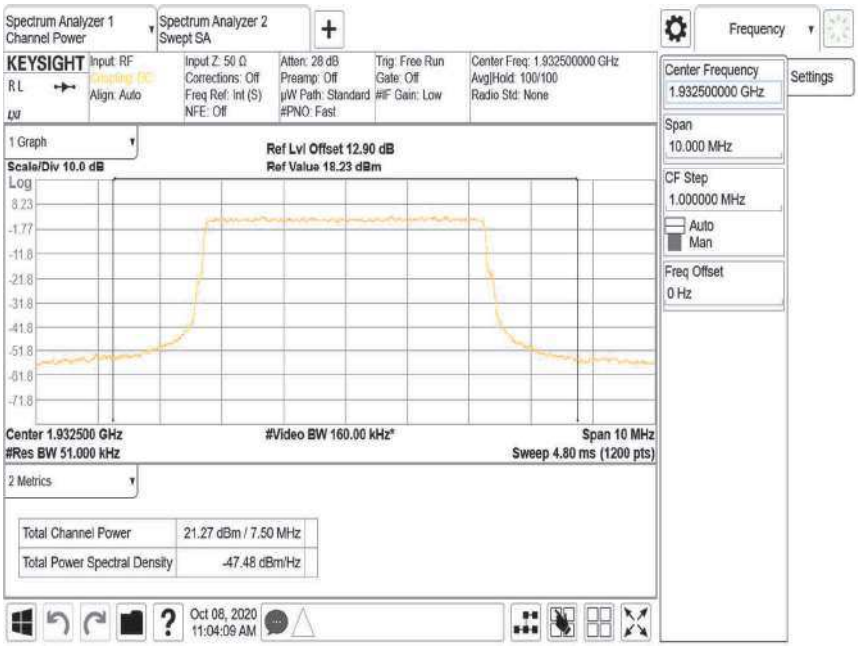
Antenna Port A Pk-Av Ratio - Modulation LTE: QPSK - Carrier Bandwidth 20.0 MHz - Channel Position B



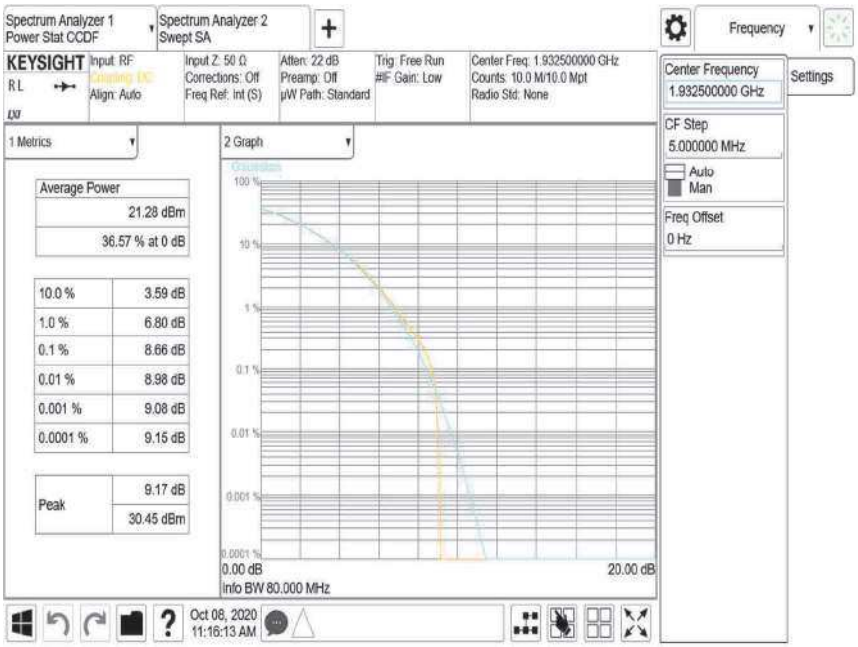
Antenna Port A PSD - Modulation LTE: QPSK - Carrier Bandwidth 20.0 MHz - Channel Position B



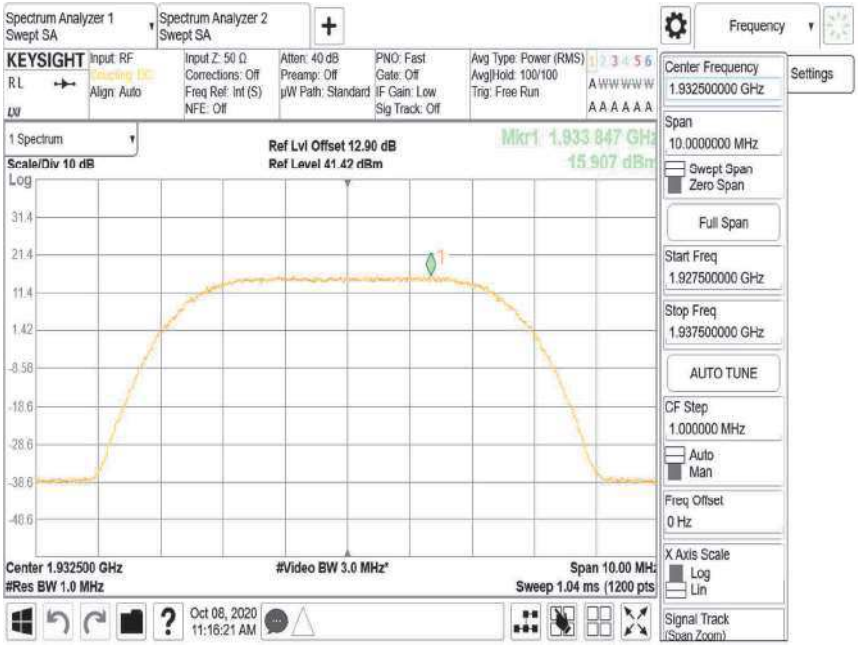
Antenna Port A Carrier Power - Modulation NR: QPSK - Carrier Bandwidth 5.0 MHz - Channel Position B



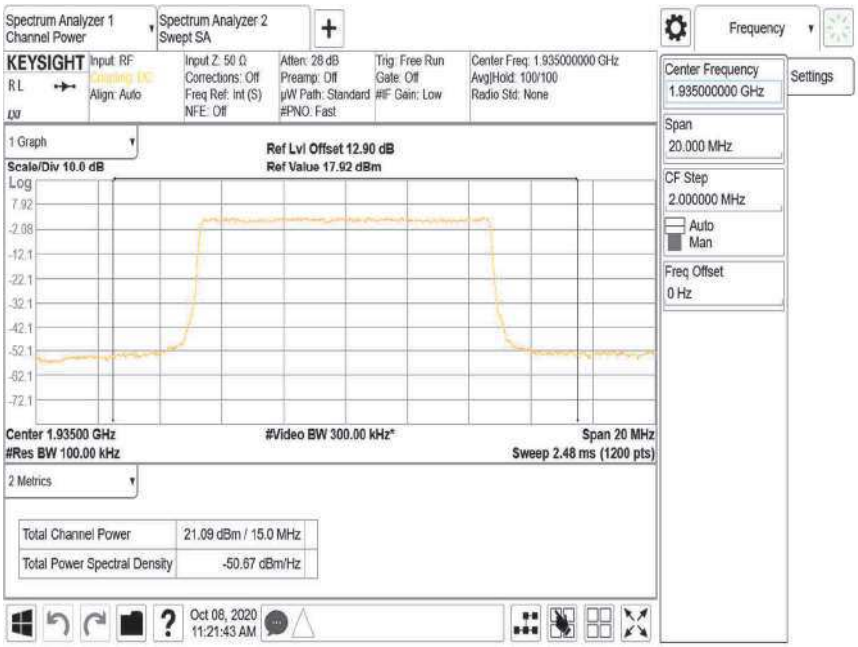
Antenna Port A Pk-Av Ratio - Modulation NR: QPSK - Carrier Bandwidth 5.0 MHz - Channel Position B



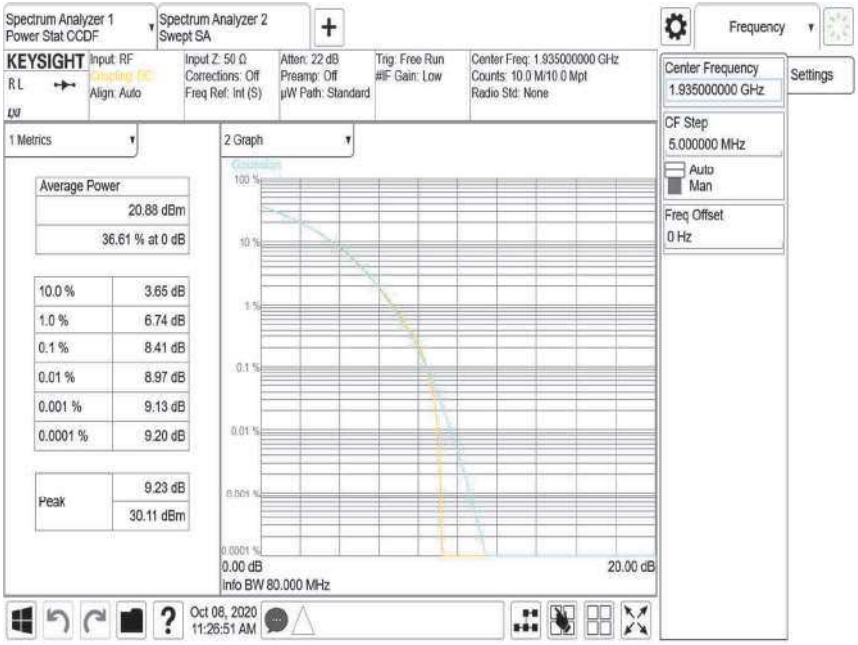
Antenna Port A PSD - Modulation NR: QPSK - Carrier Bandwidth 5.0 MHz - Channel Position B



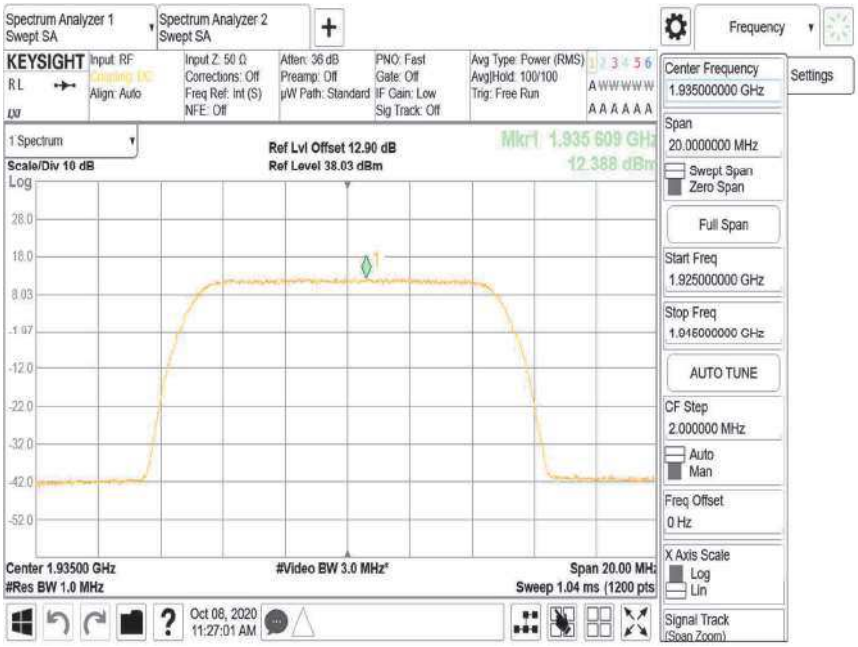
Antenna Port A Carrier Power - Modulation NR: QPSK - Carrier Bandwidth 10.0 MHz - Channel Position B



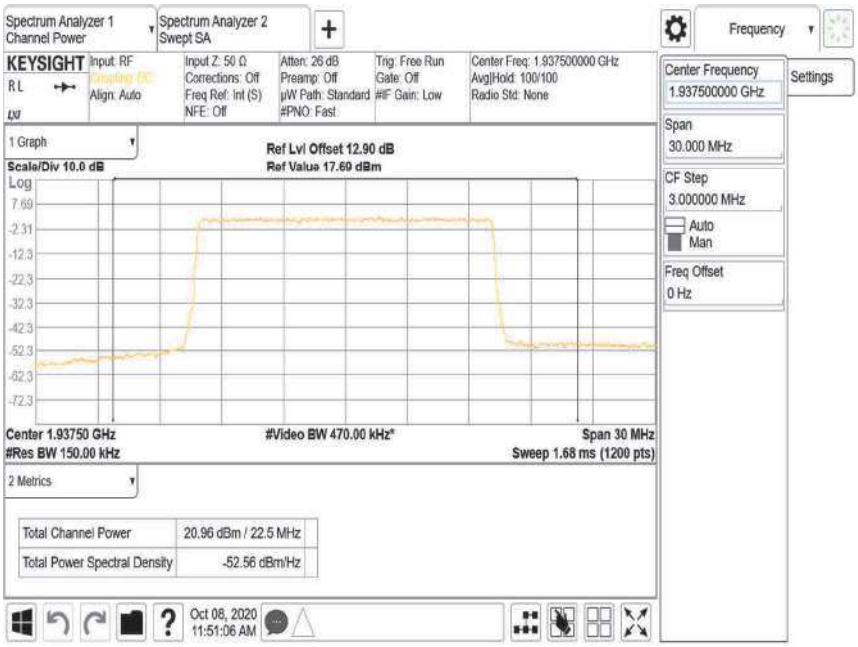
Antenna Port A Pk-Av Ratio - Modulation NR: QPSK - Carrier Bandwidth 10.0 MHz - Channel Position B



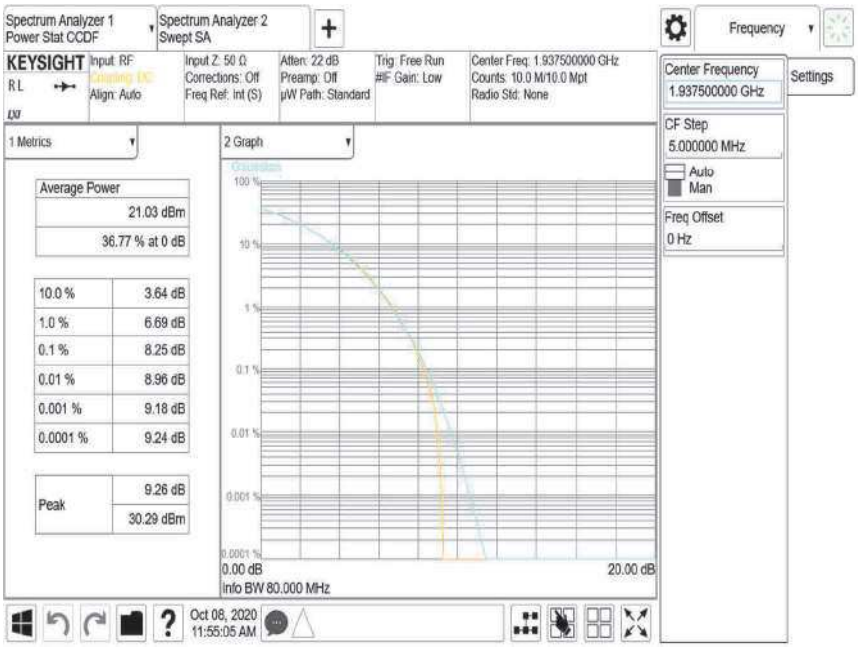
Antenna Port A PSD - Modulation NR: QPSK - Carrier Bandwidth 10.0 MHz - Channel Position B



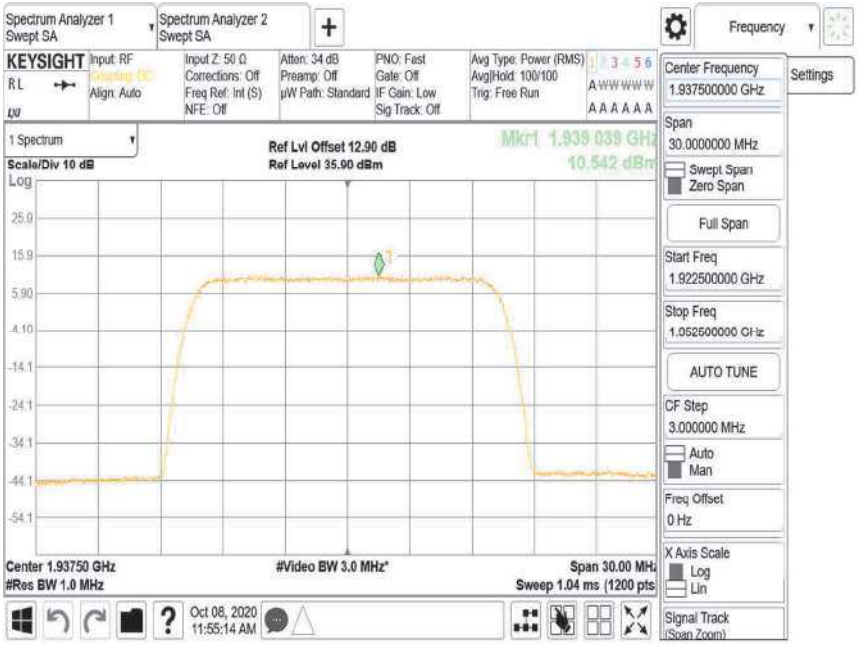
Antenna Port A Carrier Power - Modulation NR: QPSK - Carrier Bandwidth 15.0 MHz - Channel Position B



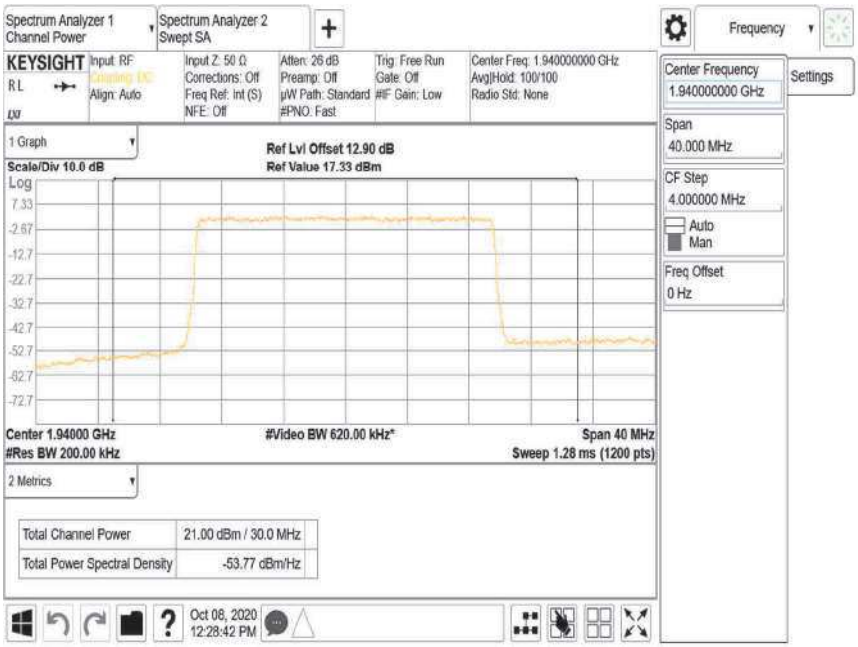
Antenna Port A Pk-Av Ratio - Modulation NR: QPSK - Carrier Bandwidth 15.0 MHz - Channel Position B



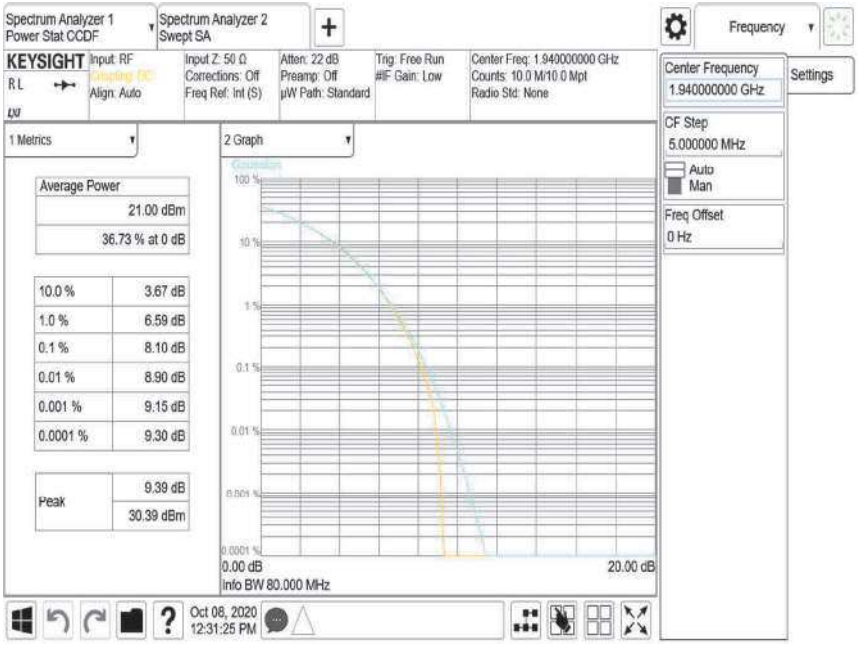
Antenna Port A PSD - Modulation NR: QPSK - Carrier Bandwidth 15.0 MHz - Channel Position B



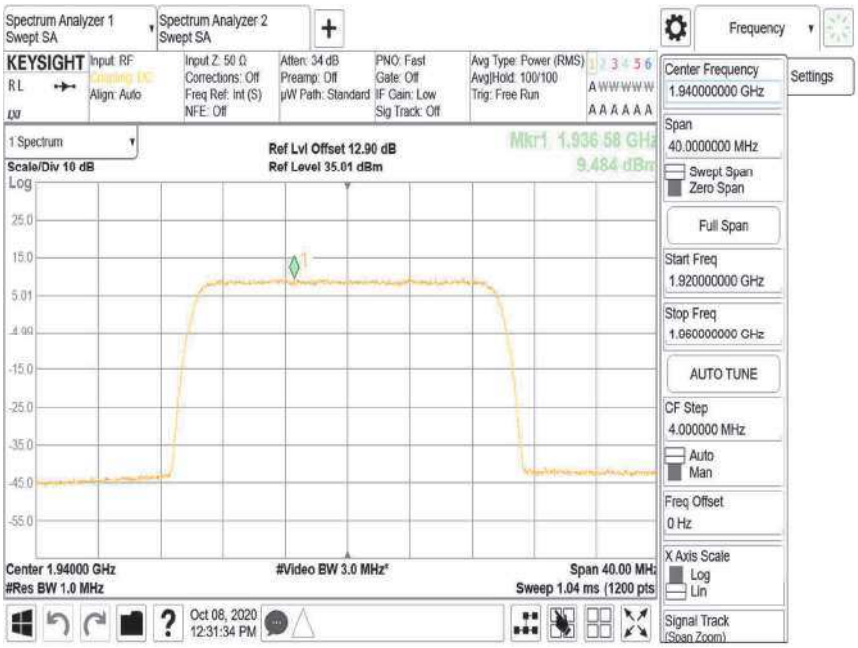
Antenna Port A Carrier Power - Modulation NR: QPSK - Carrier Bandwidth 20.0 MHz - Channel Position B



Antenna Port A Pk-Av Ratio - Modulation NR: QPSK - Carrier Bandwidth 20.0 MHz - Channel Position B



Antenna Port A PSD - Modulation NR: QPSK - Carrier Bandwidth 20.0 MHz - Channel Position B



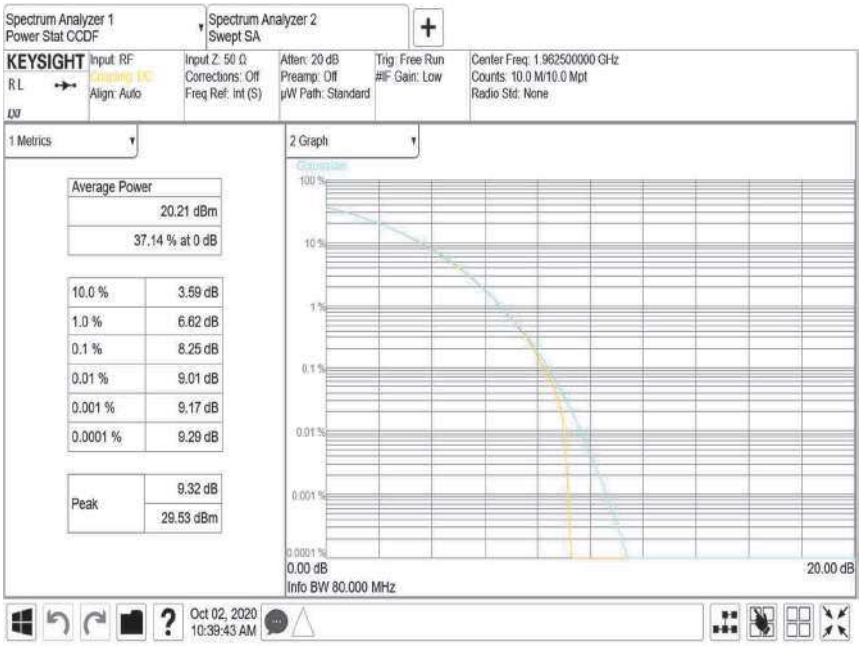
Configuration A

Maximum Output Power 22 dBm / Port.

Antenna	Modulation	Carrier Bandwidth	Peak to Average Ratio (PAR) / Output Power		
			Channel Position M		
			PAR (dB)	Average Power	
				dBm	dBm/MHz
A	LTE: QPSK	5.0 MHz	9.32	20.45	14.67
B	LTE: QPSK	5.0 MHz	-	20.31	14.67
C	LTE: QPSK	5.0 MHz	-	20.48	14.67
D	LTE: QPSK	5.0 MHz	-	20.18	14.67
Total			-	26.38	20.69
A	LTE: QPSK	10.0 MHz	9.30	20.52	12.00
B	LTE: QPSK	10.0 MHz	-	20.35	12.00
C	LTE: QPSK	10.0 MHz	-	20.48	12.00
D	LTE: QPSK	10.0 MHz	-	20.09	12.00
Total			-	26.38	18.02
A	LTE: QPSK	15.0 MHz	9.39	20.61	10.63
B	LTE: QPSK	15.0 MHz	-	20.35	10.63
C	LTE: QPSK	15.0 MHz	-	20.43	10.63
D	LTE: QPSK	15.0 MHz	-	20.17	10.63
Total			-	26.41	16.65
A	LTE: QPSK	20.0 MHz	9.44	20.55	9.53
B	LTE: QPSK	20.0 MHz	-	20.42	9.53
C	LTE: QPSK	20.0 MHz	-	20.43	9.53
D	LTE: QPSK	20.0 MHz	-	20.11	9.53
Total			-	26.40	15.55
A	NR: QPSK	5.0 MHz	9.18	21.43	16.18
B	NR: QPSK	5.0 MHz	-	21.04	16.18
C	NR: QPSK	5.0 MHz	-	21.02	16.18
D	NR: QPSK	5.0 MHz	-	20.90	16.18
Total			-	27.12	22.20
A	NR: QPSK	10.0 MHz	9.38	20.52	12.23
B	NR: QPSK	10.0 MHz	-	20.25	12.23
C	NR: QPSK	10.0 MHz	-	20.42	12.23
D	NR: QPSK	10.0 MHz	-	20.04	12.23
Total			-	26.33	18.25
A	NR: QPSK	15.0 MHz	9.37	20.71	10.57
B	NR: QPSK	15.0 MHz	-	20.44	10.57
C	NR: QPSK	15.0 MHz	-	20.52	10.57
D	NR: QPSK	15.0 MHz	-	20.36	10.57
Total			-	26.53	16.59
A	NR: QPSK	20.0 MHz	9.25	20.59	9.53
B	NR: QPSK	20.0 MHz	-	20.44	9.53
C	NR: QPSK	20.0 MHz	-	20.45	9.53
D	NR: QPSK	20.0 MHz	-	20.41	9.53
Total			-	26.49	15.55

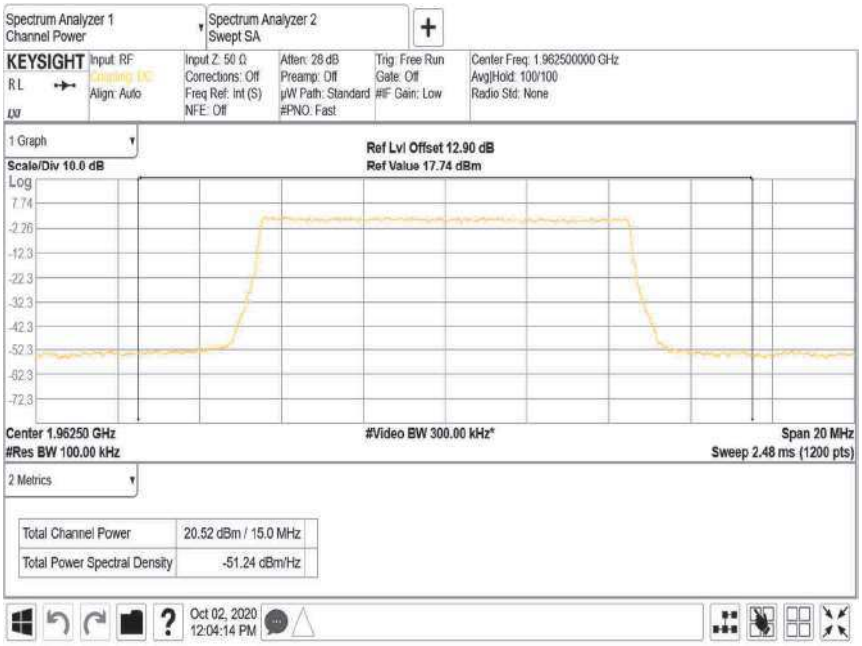
Antenna Port A Carrier Power - Modulation LTE: QPSK - Carrier Bandwidth 5.0 MHz - Channel Position M

Antenna Port A Pk-Av Ratio - Modulation LTE: QPSK - Carrier Bandwidth 5.0 MHz - Channel Position M

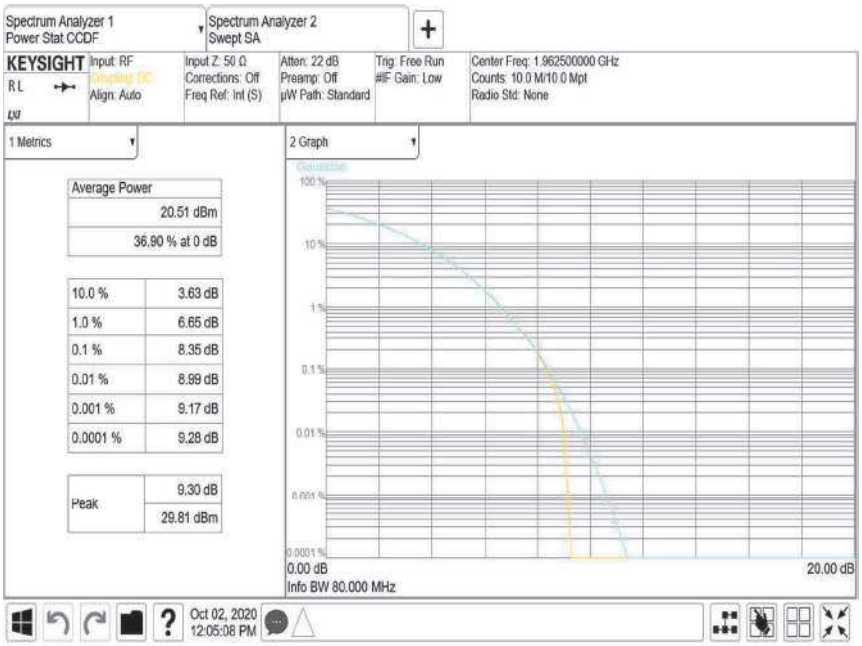


Antenna Port A PSD - Modulation LTE: QPSK - Carrier Bandwidth 5.0 MHz - Channel Position M

Antenna Port A Carrier Power - Modulation LTE: QPSK - Carrier Bandwidth 10.0 MHz - Channel Position M

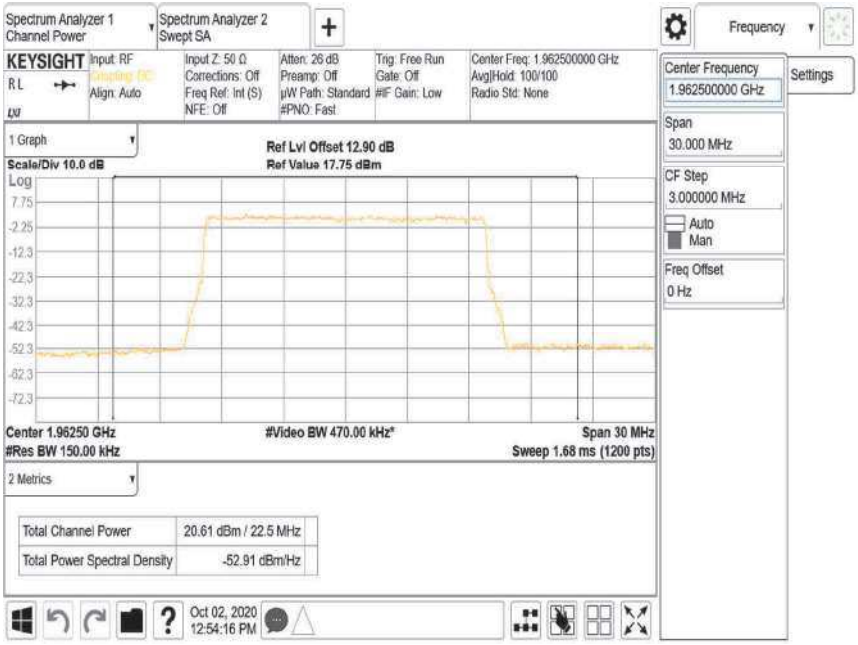


Antenna Port A Pk-Av Ratio - Modulation LTE: QPSK - Carrier Bandwidth 10.0 MHz - Channel Position M

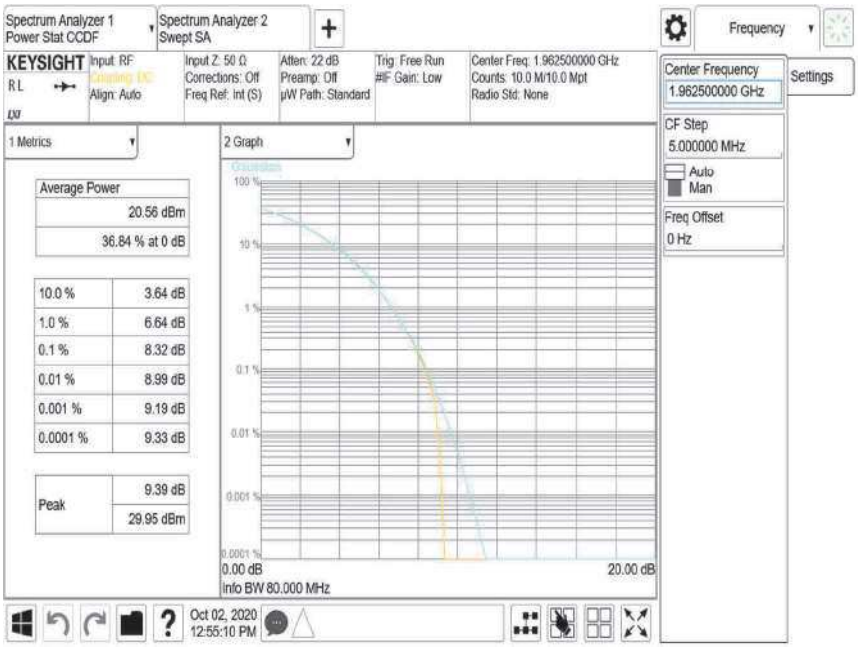


Antenna Port A PSD - Modulation LTE: QPSK - Carrier Bandwidth 10.0 MHz - Channel Position M

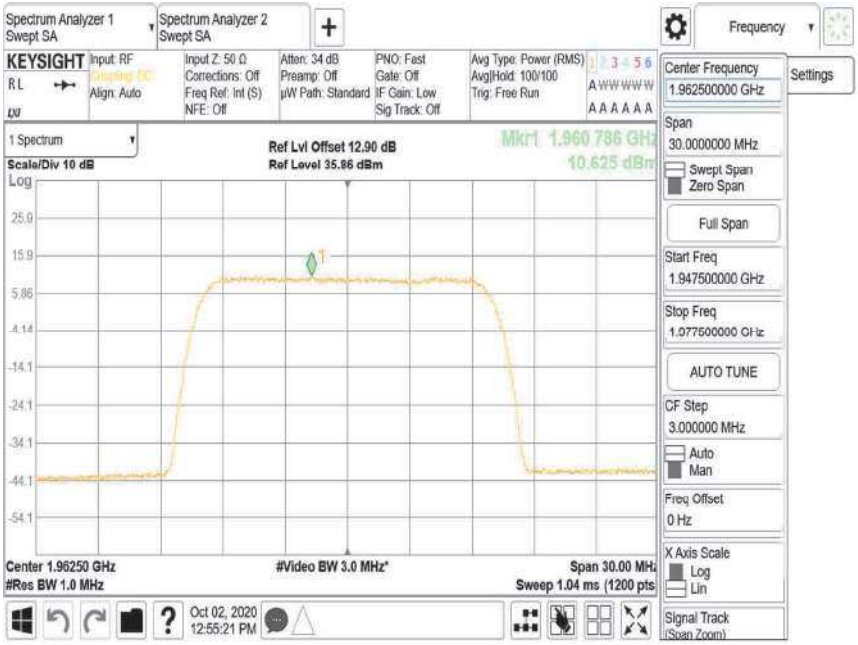
Antenna Port A Carrier Power - Modulation LTE: QPSK - Carrier Bandwidth 15.0 MHz - Channel Position M



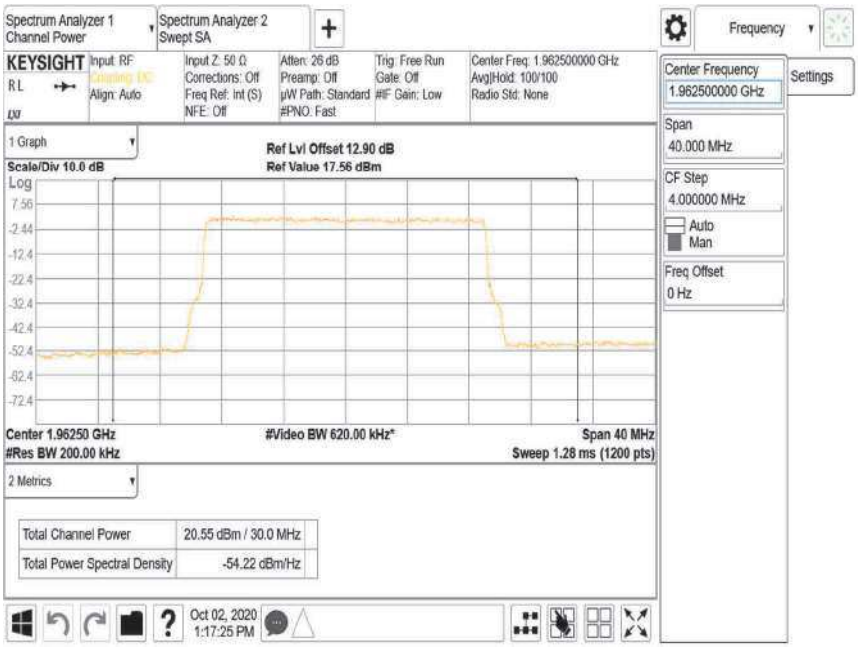
Antenna Port A Pk-Av Ratio - Modulation LTE: QPSK - Carrier Bandwidth 15.0 MHz - Channel Position M



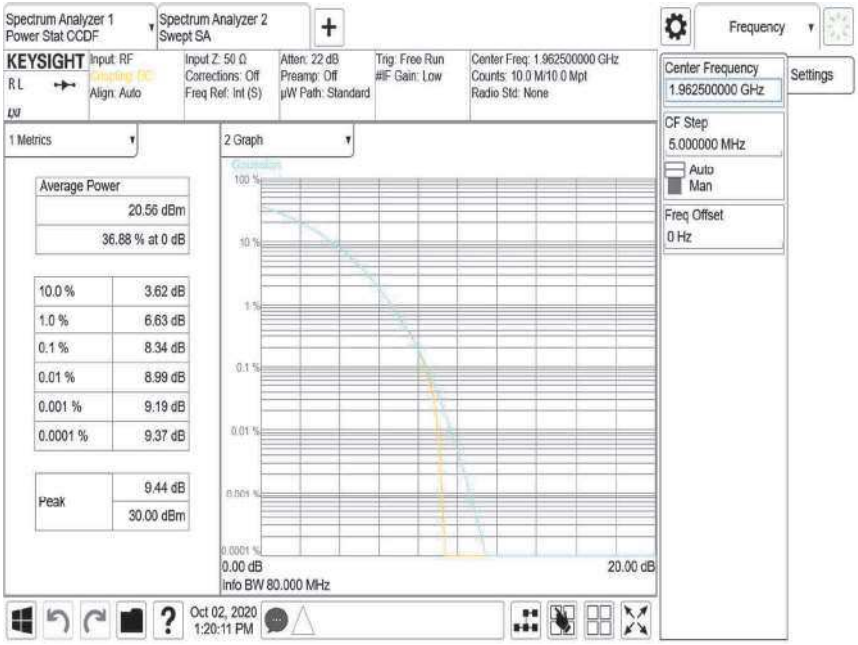
Antenna Port A PSD - Modulation LTE: QPSK - Carrier Bandwidth 15.0 MHz - Channel Position M



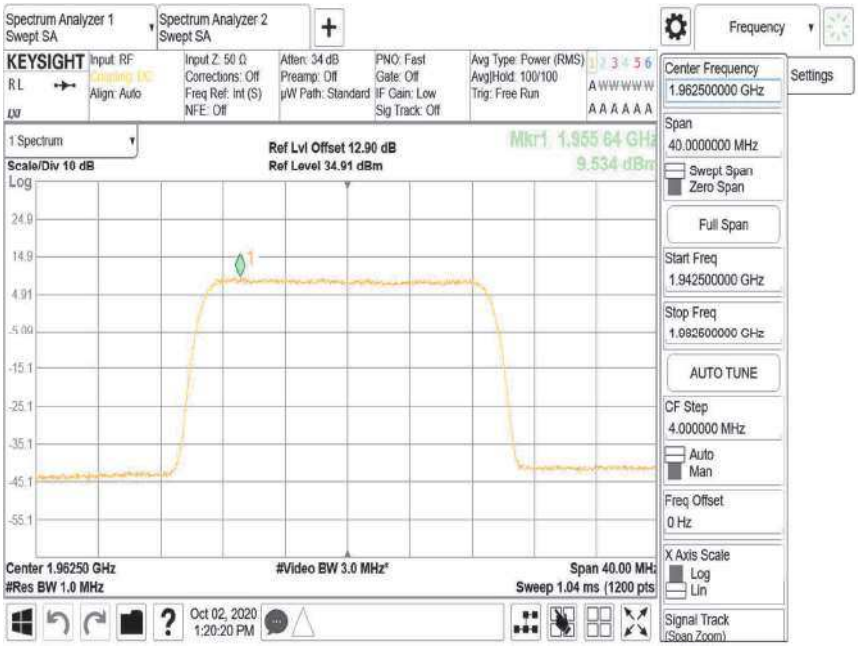
Antenna Port A Carrier Power - Modulation LTE: QPSK - Carrier Bandwidth 20.0 MHz - Channel Position M



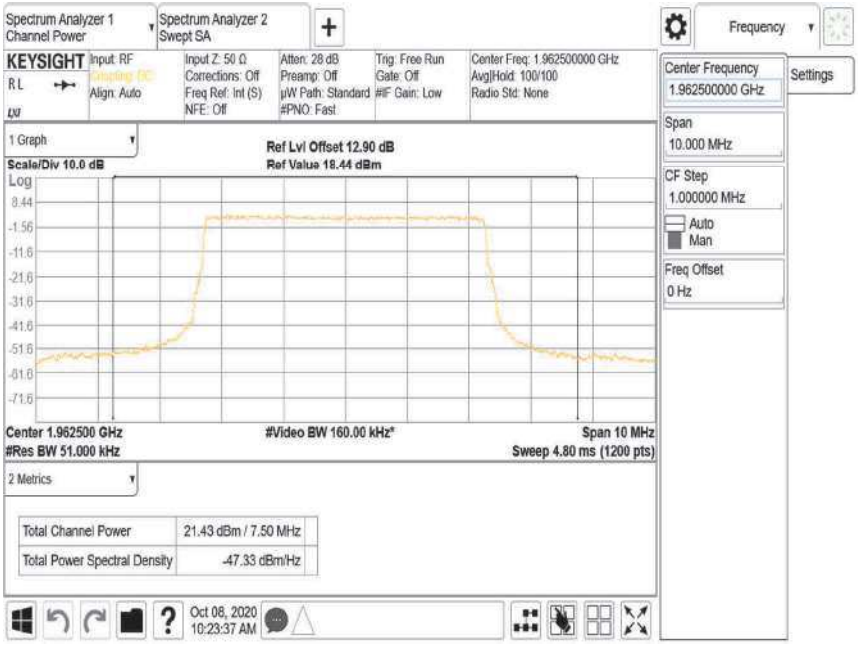
Antenna Port A Pk-Av Ratio - Modulation LTE: QPSK - Carrier Bandwidth 20.0 MHz - Channel Position M



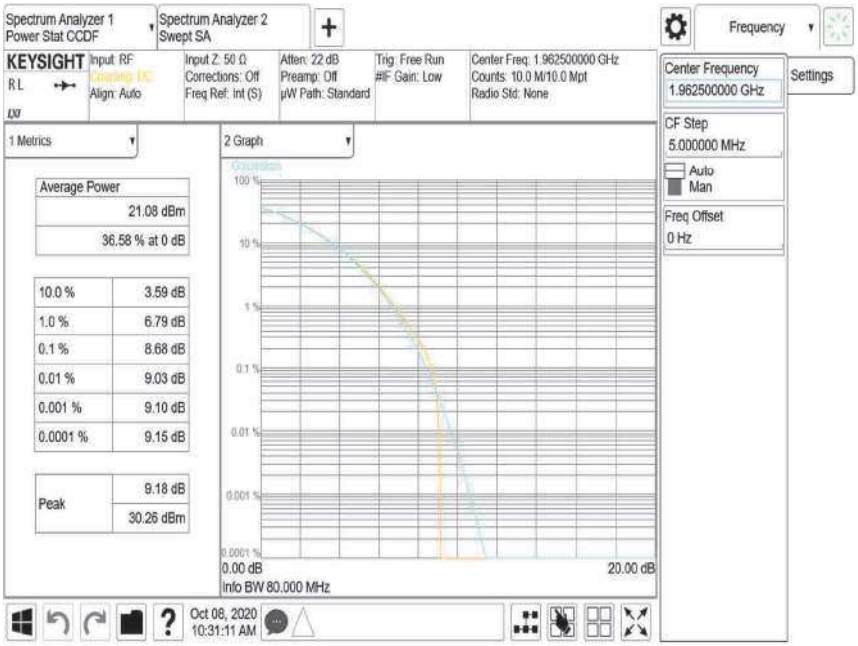
Antenna Port A PSD - Modulation LTE: QPSK - Carrier Bandwidth 20.0 MHz - Channel Position M



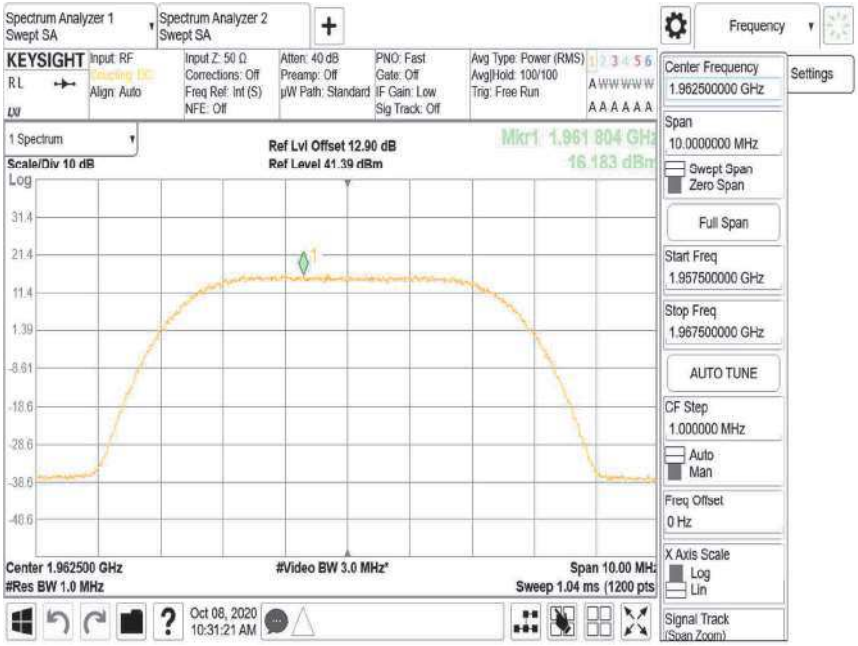
Antenna Port A Carrier Power - Modulation NR: QPSK - Carrier Bandwidth 5.0 MHz - Channel Position M



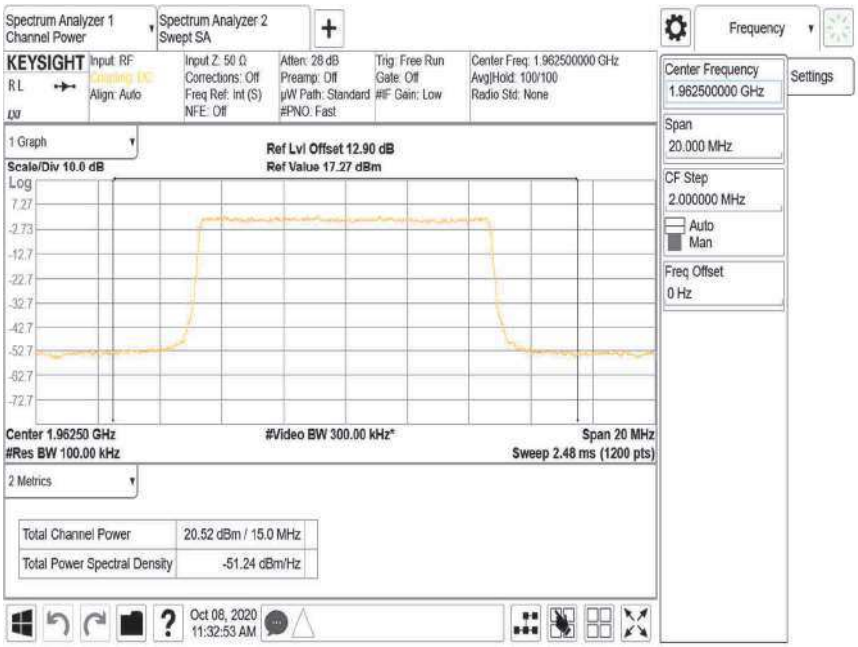
Antenna Port A Pk-Av Ratio - Modulation NR: QPSK - Carrier Bandwidth 5.0 MHz - Channel Position M



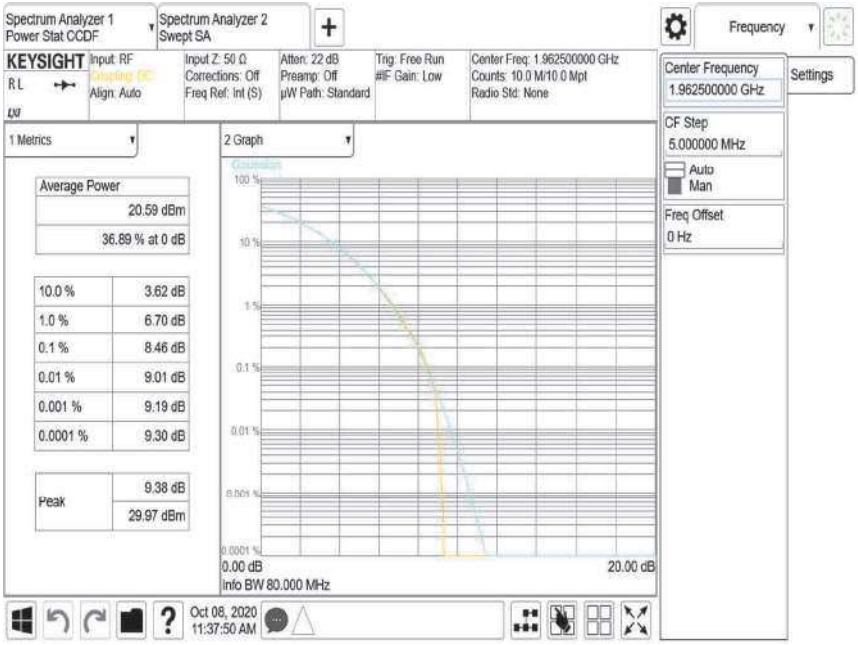
Antenna Port A PSD - Modulation NR: QPSK - Carrier Bandwidth 5.0 MHz - Channel Position M



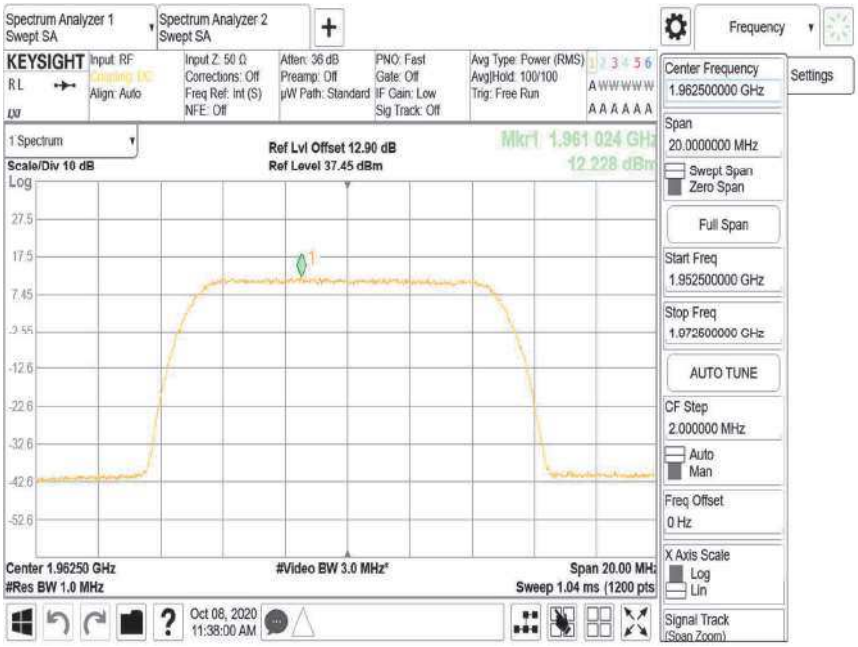
Antenna Port A Carrier Power - Modulation NR: QPSK - Carrier Bandwidth 10.0 MHz - Channel Position M



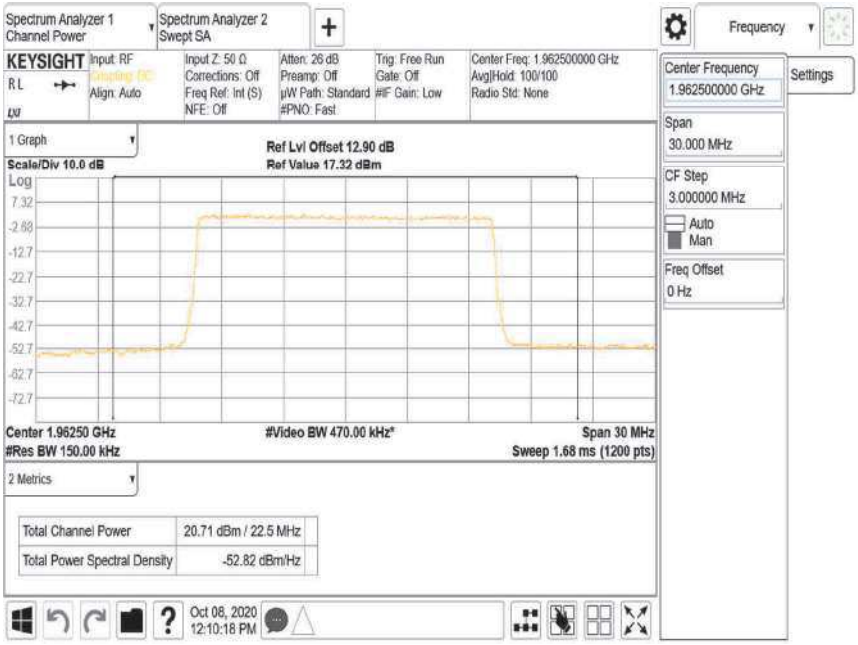
Antenna Port A Pk-Av Ratio - Modulation NR: QPSK - Carrier Bandwidth 10.0 MHz - Channel Position M



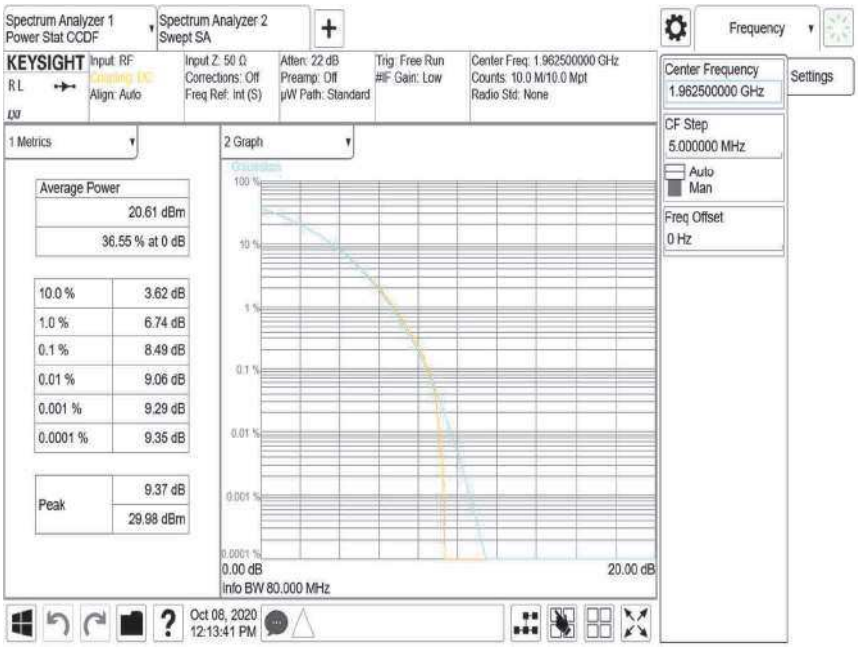
Antenna Port A PSD - Modulation NR: QPSK - Carrier Bandwidth 10.0 MHz - Channel Position M



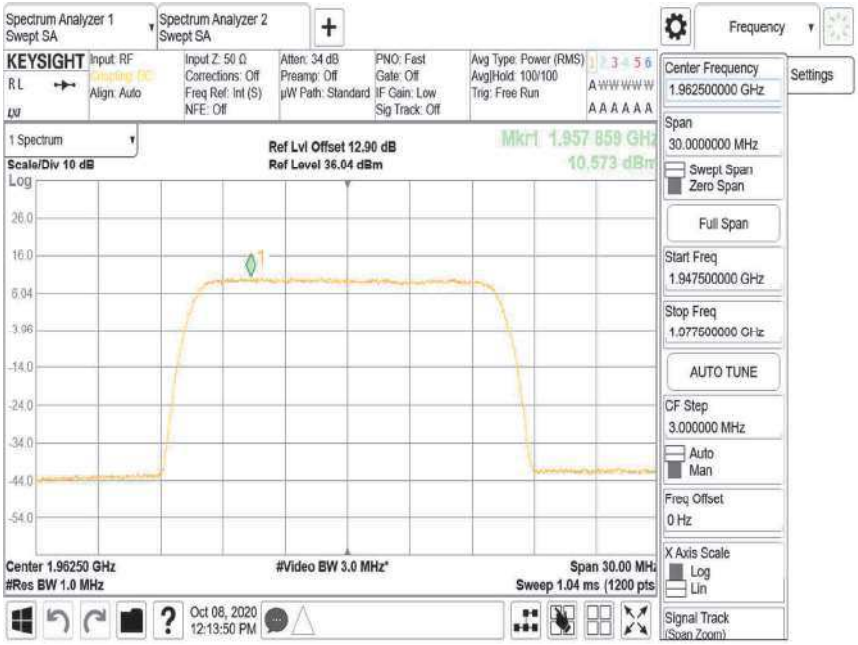
Antenna Port A Carrier Power - Modulation NR: QPSK - Carrier Bandwidth 15.0 MHz - Channel Position M



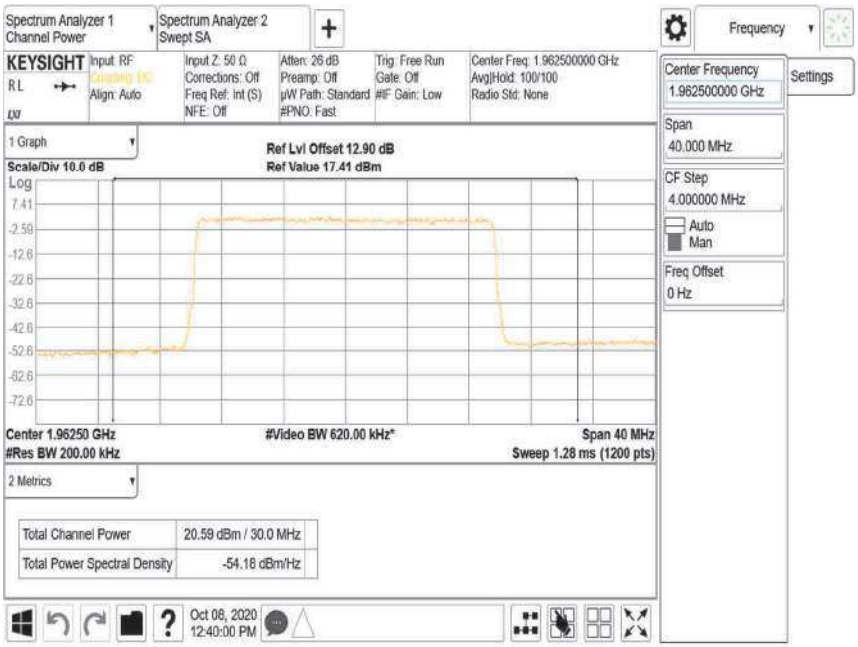
Antenna Port A Pk-Av Ratio - Modulation NR: QPSK - Carrier Bandwidth 15.0 MHz - Channel Position M



Antenna Port A PSD - Modulation NR: QPSK - Carrier Bandwidth 15.0 MHz - Channel Position M



Antenna Port A Carrier Power - Modulation NR: QPSK - Carrier Bandwidth 20.0 MHz - Channel Position M



Antenna Port A Pk-Av Ratio - Modulation NR: QPSK - Carrier Bandwidth 20.0 MHz - Channel Position M