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Report On

FCC and IC Testing of the
Ericsson AB (1900MHz) RRUS 32 B2 KRC 161 414/1 Remote Radio Unit In accordance with FCC CFR 47 Part 24 and Industry Canada RSS-133: Issue 6

COMMERCIAL-IN-CONFIDENCE

FCC ID: TA8AKRC161414-1
IC: 287AB-AS1614141

PREPARED BY	APPROVED BY	DATED
Zhao Guiying		14 December 2015
Guiying Zhao Project Engineer	Nic Forsyth Authorised Signatory	

Document 75931865 Report 01 Issue 2 December 2015

CONTENTS

SECTION 1

REPORT INFORMATION

1.1 REPORT DETAILS

The information contained in this report is intended to show verification of the Ericsson RRUS 32 B2 KRC 161 414/1 Remote Radio Unit to the requirements of FCC CFR 47 Part 24 and Industry Canada RSS-133.

Testing was carried out in support of an application for Grant of RRUS 32 B2 KRC 161 414/1 in GSM / WCDMA / LTE / GSM & WCDMA / GSM & LTE / WCDMA & LTE MSR mode.

Manufacturer	Ericsson AB
Address	Isafjordsgatan 10 SE-164 80 Stockholm 16480 Sweden
Product Name	RRUS 32 B2
Product Number	KRC 161 414/1
HVIN	AS1614141
Serial Number(s)	D16Q673439
Software Version	CXP9017316/5 Rev R60JH
Hardware Version	R1B
Test Specification/Issue/Date	FCC CFR 47 Part 24: 2014 Industry Canada RSS-133 Issue 6: 2013
Start of Test	17 September 2015
Finish of Test	08 December 2015
Name of Engineer(s)	Guiying Zhao
Related Document(s)	ANSI C63.4: 2009 ANSI/TIA-603-C-2004 FCC CFR 47 Part 2: 2014 Industry Canada RSS-GEN Issue 4: 2014 Industry Canada SRSP-510 Issue 5: 2009 KDB 971168 D01 v02r02 KDB 662911 D01 v02r01

This report has been up issued to Issue 2 and should be read in place of Issue 1. This report has been up issued to Issue to add the results of occupied bandwidth for configuration of multi-carriers.

1.2 BRIEF SUMMARY OF RESULTS

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

Section	Spec Clause			Test Description	Result
	Part 2	Part 24	RSS 133		
2.1	2.1046	24.232(a) 24.232(d)	6.4	Maximum Output Power and Peak to Average Ratio – Conducted	Pass
	-	24.232(a)	6.4	Equivalent Isotropically Radiated Power (EIRP)	N/A[1]
2.2	2.1049(h)	24.238(b)	RSS-Gen 6.6	Occupied Bandwidth	Pass
2.3	2.1051	24.238(b)	6.5	Spurious Emissions at Band Edge	Pass
2.4	2.1053	24.238(a)	6.5	Radiated Spurious Emissions	Pass
2.5	2.1051	24.238(a)	6.5	Conducted Spurious Emissions	Pass
2.6	2.1055	24.235	6.3	Frequency Stability	Pass
	-	-	6.6	Receiver Spurious Emission	N/A

N/A[1] – Not Applicable, due to no integral antenna
N/A – Not Applicable

1.3 CONFIGURATION DESCRIPTION

Configuration Code	Carrier(s)	Configuration Description
G-SC	1C	GSM Single Antenna, Single Carrier
G-MC	2C	GSM Single Antenna, Multi Carrier x2
W-SC	1C	WCDMA Single Antenna, Single Carrier
W-MC	2C	WCDMA Single Antenna, Multi Carrier x2
W-MIMO-SC	1C	WCDMA MIMO, Single Carrier
W-MIMO-MC	2C	WCDMA MIMO, Multi Carrier x2
L-MIMO-SC	1C	LTE MIMO, Single Carrier
L-MIMO-MC 1	2C	LTE MIMO, Multi Carrier x2
L-MIMO-MC 2	3C	LTE MIMO, Multi Carrier x3
G+W-MC 1	1G+1W	GSM+WCDMA Single Antenna, One Tx, 1GSM+1WCDMA
G+W-MC 2	2G+2W	GSM+WCDMA Single Antenna, One Tx, 2GSM+2WCDMA
G+W-MIMO-MC 1	1G+1W	GSM+WCDMA MIMO, 1GSM+1WCDMA
G+W-MIMO-MC 2	2G+2W	GSM+WCDMA MIMO, 2GSM+2WCDMA
G+W-MIMO-MC 3	2G+1W	GSM+WCDMA MIMO, 2GSM+1WCDMA
G+L-MIMO-MC 1	1G+1L	GSM+LTE MIMO, 1GSM+1LTE
G+L-MIMO-MC 2	2G+3L	GSM+LTE MIMO, 2GSM+3LTE
G+L-MIMO-MC 3	2G+2L	GSM+LTE MIMO, 2GSM+2LTE
G+L-MIMO-MC 4	2G+1L	GSM+LTE MIMO, 2GSM+1LTE
W+L-MC 1	1W+1L	WCDMA+LTE Single Antenna, One Tx, 1WCDMA+1LTE
W+L-MC 2	2W+3L	WCDMA+LTE Single Antenna, One Tx, 2WCDMA+3LTE
W+L-MC 3	2W+2L	WCDMA+LTE Single Antenna, One Tx, 2WCDMA+2LTE
W+L-MC 4	2W+1L	WCDMA+LTE Single Antenna, One Tx, 2WCDMA+1LTE
W+L-MIMO-MC 1	1W+1L	WCDMA+LTE MIMO, 1WCDMA+1LTE
W+L-MIMO-MC 2	2W+3L	WCDMA+LTE MIMO, 2WCDMA+3LTE
W+L-MIMO-MC 3	2W+2L	WCDMA+LTE MIMO, 2WCDMA+2LTE
W+L-MIMO-MC 4	2W+1L	WCDMA+LTE MIMO, 2WCDMA+1LTE

The settings below were deemed representative for all traffic scenarios when settings with different modulations, channel bandwidths, number for carriers and RF configurations have been tested to find the worst case setting. The settings below were used for all measurements unless otherwise noted:

GSM:
Single carrier: GMSK
Multi carrier (x2): GMSK

Single carrier: 8-PSK
Multi carrier (x2): 8-PSK

Single carrier: AQPSK
Multi carrier (x2): AQPSK

WCDMA:
Non-MIMO:
Single carrier TM1: 64 DPCHs at 30ksps (SF=128)
Multi carrier TM1 (x2): 32 DPCHs at 30ksps (SF=128) in each carrier

MIMO:
Single carrier TM5: 30 DPCHs at 30ksps (SF=128) and 8 HS-PDSCHs at 240 ksps (SF16)
Multi carrier TM5 (x2): 30 DPCHs at 30ksps (SF=128) and 8 HS-PDSCHs at 240 ksps (SF16)

MIMO:
Single carrier TM6: 30 DPCHs at 30ksps (SF=128) and 8 HS-PDSCHs at 240 ksps (SF16)
Multi carrier TM6 (x2): 30 DPCHs at 30ksps (SF=128) and 8 HS-PDSCHs at 240 ksps (SF16)

LTE:
MIMO mode sigle carrier: E-TM1.1
MIMO mode multi carrier (x2): E-TM1.1
MIMO mode multi carrier (x3): E-TM1.1

MIMO mode sigle carrier: E-TM3.2
MIMO mode multi carrier (x2): E-TM3.2
MIMO mode multi carrier (x3): E-TM3.2

MIMO mode sigle carrier: E-TM3.1
MIMO mode multi carrier (x2): E-TM3.1
MIMO mode multi carrier (x3): E-TM3.1

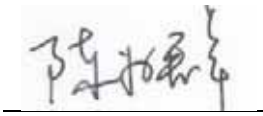
The EUT includes four TX/RX ports and it can be configured to transmit in MIMO mode for WCDMA or LTE carriers, and MIMO mode for WCDMA or LTE was used for measurements as the worst configuration.

The complete testing was performed with the EUT transmiting at maximum RF power unless otherwise stated.

For WCDMA or LTE single RAT (Radio Access Technology) MIMO mode, the maximum output power was tested on all TX/RX output connector RF A, B, C and D. All the other TX measurements of WCDMA or LTE single RAT MIMO mode and all the measurements of other Non-MIMO mode, were performed on the combined TX/RX output connector RF A of the EUT as the representative port.

1.4 DECLARATION OF BUILD STATUS

MAIN EUT	
MANUFACTURING DESCRIPTION	Remote Radio Unit
MANUFACTURER	Ericsson AB
PRODUCT NAME	RRUS 32 B2
PRODUCT NUMBER	KRC 161 414/1
HVIN	AS1614141
TRANSMITTER OPERATING RANGE	TX: 1930 MHz - 1990 MHz RX: 1850 MHz - 1910 MHz
MODULATIONS	GSM: GMSK, 8-PSK, AQPSK WCDMA: QPSK, 16QAM, 64QAM LTE: QPSK, 16QAM, 64QAM
ITU DESIGNATION OF EMISSION	GSM: 245KGXW, 245KG7W WCDMA: 5M00F9W LTE: 5M00F9W, 10M0F9W, 15M0F9W, 20M0F9W
NUMBER OF CARRIERS	Maximum 5 carriers
SUPPORTED CHANNEL BANDWIDTH CONFIGURATION	GSM: 250kHz WCDMA: 4.2MHz to 5MHz (configurable in steps of 100/200kHz) LTE: 5MHz, 10MHz, 15MHz and 20MHz
OUTPUT POWER (RMS) (W or dBm)	Maximum 46.0dBm (40W) per port
OUTPUT POWER TOLERANCE	± 2.0dB
INSTANTANEOUS BANDWIDTH	40MHz for all modes, but only 20MHz for GSM single RAT, 20MHz for GSM carrier(s) in GSM&LTE and GSM&WCDM MSR modes
NUMBER OF ANTENNA PORTS	4 TX/RX ports
FCC ID	TA8AKRC161414-1
IC ID	287AB-AS1614141
Power source	-48V DC
TECHNICAL DESCRIPTION (a brief description of the intended use and operation)	The equipment is the Remote Radio Part of GSM / WCDMA / LTE / GSM & WCDMA / GSM & LTE / WCDMA & LTE MSR Base Station.

Signature 

Date 17 September 2015

D of B S Serial No 75931865/01

No responsibility will be accepted by TÜV SÜD Product Service 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

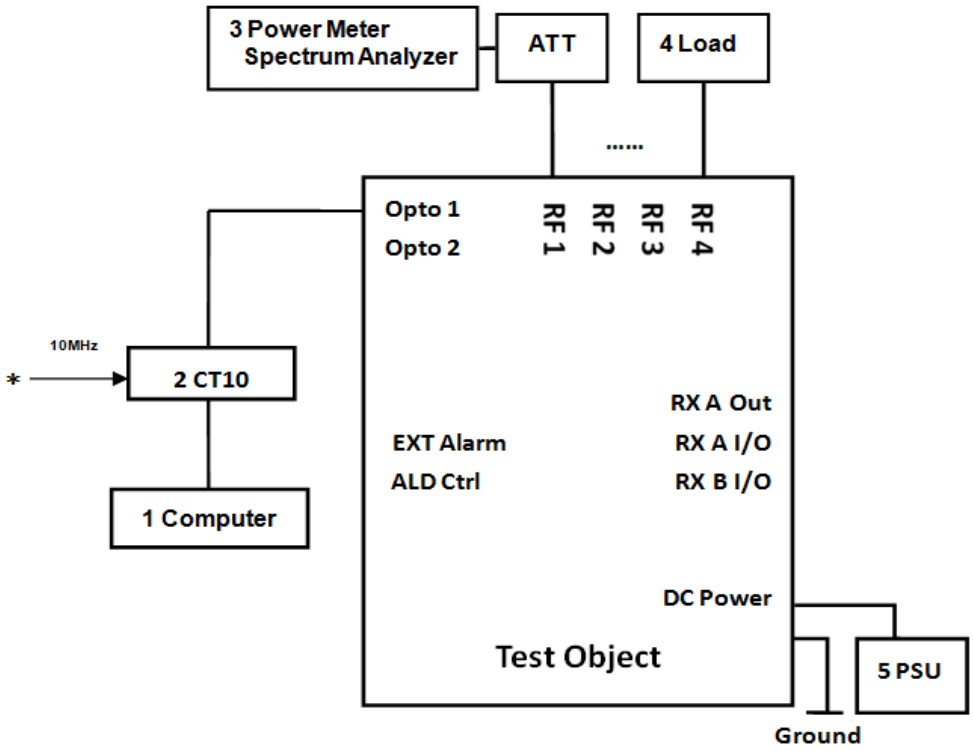
The Equipment Under Test (EUT) RRUS 32 B2 KRC 161 414/1 is an Ericsson Remote Radio Unit working in the public mobile service 1900MHz band which provides communication connections to 1900MHz network in GSM / WCDMA / LTE modes and GSM & WCDMA / GSM & LTE / WCDMA & LTE MSR modes. The RRUS 32 B2 KRC 161 414/1 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

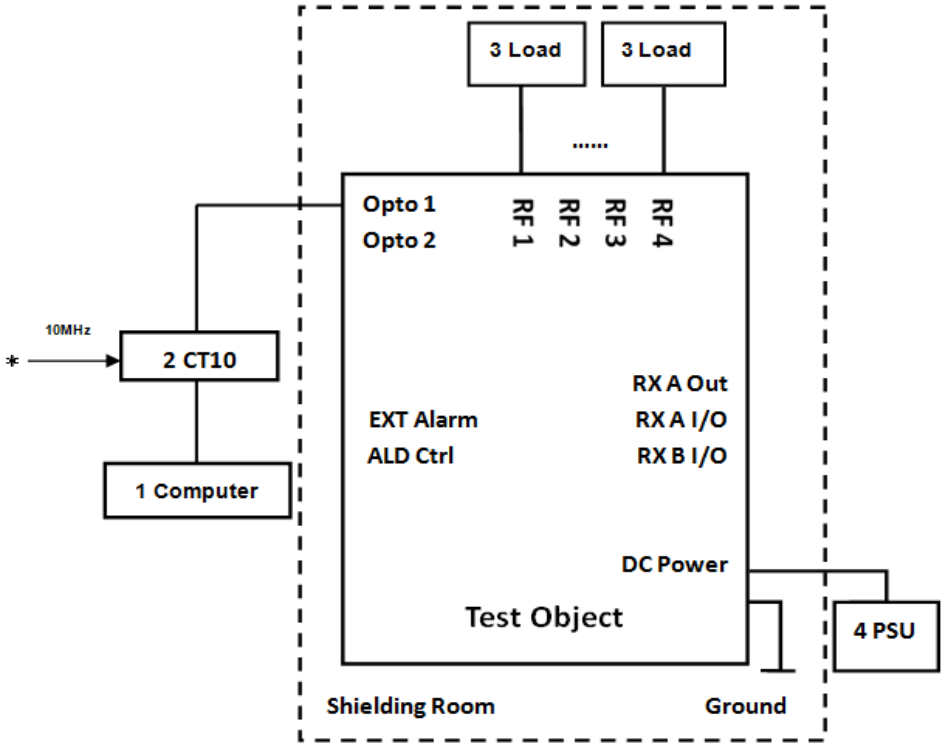
Test Setup, Conducted Measurement:



Product Name	Product Number	Version	Serial Number
RRUS 32 B2	KRC 161 414/1	R1B	D16Q673439

No.	Auxiliary Equipment	Part Number / Model Type	Version	Serial Number
1	Computer	HP EliteBook 8540w	--	CND1234694
2	CT10	LPC 102 487/1	R1C	T01F428608
3	Spectrum Analyzer	N9030A	--	MY54490502
	Power Meter	NRP2	--	104221
	Power Sensor	NRP-Z11	--	121216
	Power Sensor	NRP-Z51		102309
4	40dB Attenuator	66-40-33	--	CD4016
	Load	TF150	--	11081905
	Load	TF150-3	--	090323437
	Load	TF150	--	06081410
5	PSU AC 08	BML 901 341/1	R1B	BR83767592

Test Setup, Radiated Measurement:



Product Name	Product Number	Version	Serial Number
RRUS 32 B2	KRC 161 414/1	R1B	D16Q673439

No.	Auxiliary Equipment	Part Number / Model Type	Version	Serial Number
1	Computer	HP EliteBook 8540w	--	CND1234694
2	CT10	LPC 102 487/1	R1C	T01F428608
3	Load	TF150	--	11081905
	Load	TF150	--	11081910
	Load	TF150	--	06081410
	Load	TF150	--	05112214
4	PSU AC 08	BML 901 341/1	R1B	BR83767592

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 in a shielded enclosure, test laboratories or a chamber as appropriate.

All test case were tested with the EUT supplied with -48V DC by an external power supply.

1.8 DEVIATION FROM THE STANDARD

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

1.9 MODIFICATION RECORD

Modification State 0 - No modifications were made to the EUT during testing.

1.10 ALTERNATIVE TEST SITE

Under our group UKAS Accreditation, TÜV SÜD Product Service conducted the following tests at Ericsson in Beijing, China:

- Maximum Output Power and Peak to Average Ratio – Conducted
- Occupied Bandwidth
- Band Edge
- Conducted Spurious Emissions
- Frequency Stability

Only Radiated Spurious Emissions testing has been performed under the following site registrations:

FCC Accreditation 910917:
The State Radio Monitoring Centre, No.80 Beilishi Road, Xicheng District, Beijing, China

Industry Canada Accreditation 7308A-1:
The State Radio Monitoring Centre, No.80 Beilishi Road, Xicheng District, Beijing, China

SECTION 2

TEST DETAILS

2.1 MAXIMUM 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 (a) (d)
Industry Canada RSS-133, Clause 6.4

2.1.2 Equipment Under Test

RRUS 32 B2, KRC 161 414/1, S/N: D16Q673439

2.1.3 Date of Test and Modification State

17 September to 15 October 2015 - Modification State 0

2.1.4 Test Equipment Used

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

2.1.5 Environmental Conditions

Ambient Temperature	23.5 - 25.5°C
Relative Humidity	42.0 - 56.0%

2.1.6 Test Method

The test was applied in accordance with the test method requirements of FCC Part 24 and Industry Canada RSS-133.

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 Analyzer.

The EUT was configured to transmit on maximum power on the configurations defined in the tables below. In case of the EUT was configured to MIMO mode, since the EUT transmits on four 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 both antennas were tested, and the total output power were then summed mathematically in linear power units according to FCC KDB 662911 D01.

A peak to average ratio measurement is performed at the conducted ports of the EUT for single carrier for single RAT mode. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) was used and 0.1% probability value recorded.

The RMS Power and Peak to Average Ratio was measured and recorded with the results being compared with the limits.

2.1.7 Test Results

Configuration G-SC

Maximum Output Power 46.0dBm per port

Antenna	Modulation	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1930.4MHz			Channel Position M 1960.0MHz			Channel Position T 1989.6MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK	45.73	-	0.23	45.73	-	0.23	45.85	-	0.24
	8-PSK	45.52	-	3.41	45.62	-	3.37	45.67	-	3.37
	AQPSK	45.57	-	3.59	45.67	-	3.59	45.69	-	3.55

Configuration G-MC (2C)

Maximum Output Power 46.0dBm per port

Antenna	Modulation	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1930.4MHz + 1949.8MHz			Channel Position M_{RFBW} 1950.2MHz + 1969.8MHz			Channel Position T_{RFBW} 1970.2MHz + 1989.6MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK	45.60	-	-	45.74	-	-	45.62	-	-
	8-PSK	45.45	-	-	45.56	-	-	45.41	-	-
	AQPSK	45.53	-	-	45.62	-	-	45.38	-	-

Configuration W-SC

Maximum Output Power 46.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1932.4MHz			Channel Position M 1960.0MHz			Channel Position T 1987.6MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / 5.0 MHz	46.20	40.53	7.21	46.19	40.47	7.21	46.23	40.46	7.21

Configuration W-MC (2C)

Maximum Output Power 46.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1932.4MHz +1967.6MHz			Channel Position M_{RFBW} 1942.4MHz + 1977.6MHz			Channel Position T_{RFBW} 1952.4MHz + 1987.6MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / 5.0 MHz	45.96	-	-	46.12	-	-	46.09	-	-

Configuration W-MIMO-SC

Maximum Output Power 46.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1932.4MHz			Channel Position M 1960.0MHz			Channel Position T 1987.6MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / 5.0 MHz	46.17	40.45	7.17	46.17	40.58	7.16	46.21	40.43	7.16
B		46.16	40.45	7.16	46.17	40.40	7.18	46.13	40.49	7.17
C		46.22	40.44	7.17	46.26	40.49	7.17	46.22	40.40	7.17
D		46.24	40.47	7.17	46.20	40.42	7.17	46.26	40.51	7.16
Total		52.22	-	-	52.22	-	-	52.23	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1932.4MHz			Channel Position M 1960.0MHz			Channel Position T 1987.6MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	64QAM / 5.0 MHz	46.18	40.56	7.17	46.17	40.46	7.18	46.20	40.41	7.17
B		46.17	40.51	7.18	46.18	40.31	7.17	46.15	40.34	7.19
C		46.23	40.48	7.17	46.28	40.53	7.17	46.23	40.40	7.18
D		46.24	40.55	7.17	46.19	40.47	7.18	46.24	40.48	7.17
Total		52.23	-	-	52.23	-	-	52.23	-	-

Configuration W-MIMO-MC (2C)

Maximum Output Power 46.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1932.4MHz +1967.6MHz			Channel Position M_{RFBW} 1942.4MHz + 1977.6MHz			Channel Position T_{RFBW} 1952.4MHz + 1987.6MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / 5.0 MHz	45.95	-	-	46.09	-	-	46.06	-	-
B		45.91	-	-	45.98	-	-	45.98	-	-
C		46.01	-	-	45.98	-	-	46.01	-	-
D		46.10	-	-	46.20	-	-	46.15	-	-
Total		52.01	-	-	52.08	-	-	52.07	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1932.4MHz +1967.6MHz			Channel Position M_{RFBW} 1942.4MHz + 1977.6MHz			Channel Position T_{RFBW} 1952.4MHz + 1987.6MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	64QAM / 5.0 MHz	45.94	-	-	46.09	-	-	46.07	-	-
B		45.90	-	-	45.97	-	-	45.96	-	-
C		46.01	-	-	45.97	-	-	46.01	-	-
D		46.10	-	-	46.20	-	-	46.15	-	-
Total		52.01	-	-	52.08	-	-	52.07	-	-

Configuration L-MIMO-SC

Maximum Output Power 46.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1932.5MHz			Channel Position M 1960.0MHz			Channel Position T 1987.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / 5.0 MHz	46.04	39.73	7.09	46.00	39.73	7.08	46.01	39.80	7.08
B		45.92	39.69	7.11	45.98	39.55	7.10	45.88	39.63	7.10
C		45.99	39.78	7.10	46.05	39.66	7.09	46.00	39.60	7.10
D		46.04	39.86	7.10	46.02	39.63	7.09	46.04	39.76	7.09
Total		52.02	-	-	52.03	-	-	52.00	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1932.5MHz			Channel Position M 1960.0MHz			Channel Position T 1987.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / 5.0 MHz	-	-	-	45.98	40.02	7.08	-	-	-
B		-	-	-	45.98	39.99	7.10	-	-	-
C		-	-	-	46.06	39.97	7.08	-	-	-
D		-	-	-	46.02	39.98	7.09	-	-	-
Total		-	-	-	52.03	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1932.5MHz			Channel Position M 1960.0MHz			Channel Position T 1987.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	64QAM / 5.0 MHz	-	-	-	45.99	39.63	7.09	-	-	-
B		-	-	-	45.98	39.56	7.10	-	-	-
C		-	-	-	46.05	39.65	7.08	-	-	-
D		-	-	-	46.02	39.73	7.10	-	-	-
Total		-	-	-	52.03	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1935.0MHz			Channel Position M 1960.0MHz			Channel Position T 1985.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / 10.0 MHz	-	-	-	46.01	37.07	7.09	-	-	-
B		-	-	-	46.00	37.12	7.11	-	-	-
C		-	-	-	46.05	37.14	7.09	-	-	-
D		-	-	-	46.05	37.00	7.10	-	-	-
Total		-	-	-	52.05	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1935.0MHz			Channel Position M 1960.0MHz			Channel Position T 1985.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / 10.0 MHz	-	-	-	45.99	37.42	7.09	-	-	-
B		-	-	-	45.98	37.28	7.10	-	-	-
C		-	-	-	46.06	37.32	7.09	-	-	-
D		-	-	-	46.05	37.55	7.09	-	-	-
Total		-	-	-	52.04	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1935.0MHz			Channel Position M 1960.0MHz			Channel Position T 1985.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	64QAM / 10.0 MHz	-	-	-	45.98	37.17	7.11	-	-	-
B		-	-	-	45.99	37.16	7.10	-	-	-
C		-	-	-	46.04	36.94	7.12	-	-	-
D		-	-	-	46.04	37.02	7.10	-	-	-
Total		-	-	-	52.03	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1937.5MHz			Channel Position M 1960.0MHz			Channel Position T 1982.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / 15.0 MHz	-	-	-	46.02	35.36	7.11	-	-	-
B		-	-	-	45.95	35.41	7.12	-	-	-
C		-	-	-	46.07	35.31	7.11	-	-	-
D		-	-	-	46.10	35.43	7.12	-	-	-
Total		-	-	-	52.06	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1937.5MHz			Channel Position M 1960.0MHz			Channel Position T 1982.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / 15.0 MHz	-	-	-	46.01	36.11	7.10	-	-	-
B		-	-	-	45.94	36.00	7.12	-	-	-
C		-	-	-	46.07	36.06	7.11	-	-	-
D		-	-	-	46.10	36.23	7.11	-	-	-
Total		-	-	-	52.05	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1937.5MHz			Channel Position M 1960.0MHz			Channel Position T 1982.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	64QAM / 15.0 MHz	-	-	-	46.01	35.43	7.12	-	-	-
B		-	-	-	45.95	35.36	7.12	-	-	-
C		-	-	-	46.06	35.28	7.12	-	-	-
D		-	-	-	46.08	35.40	7.11	-	-	-
Total		-	-	-	52.05	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1940.0MHz			Channel Position M 1960.0MHz			Channel Position T 1980.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / 20.0 MHz	45.94	34.06	7.29	45.99	34.06	7.10	45.92	34.03	7.18
B		45.89	34.00	7.27	45.98	34.23	7.11	45.97	34.04	7.22
C		46.04	34.25	7.28	46.07	34.25	7.11	46.07	34.21	7.22
D		46.01	34.06	7.30	46.10	34.31	7.11	46.07	34.22	7.17
Total		51.99	-	-	52.06	-	-	52.03	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1940.0MHz			Channel Position M 1960.0MHz			Channel Position T 1980.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / 20.0 MHz	-	-	-	46.00	34.42	7.10	-	-	-
B		-	-	-	45.98	34.35	7.11	-	-	-
C		-	-	-	46.07	34.49	7.12	-	-	-
D		-	-	-	46.10	34.54	7.12	-	-	-
Total		-	-	-	52.06	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1940.0MHz			Channel Position M 1960.0MHz			Channel Position T 1980.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	64QAM / 20.0 MHz	-	-	-	45.99	34.12	7.11	-	-	-
B		-	-	-	45.99	34.19	7.10	-	-	-
C		-	-	-	46.07	34.29	7.11	-	-	-
D		-	-	-	46.10	34.23	7.12	-	-	-
Total		-	-	-	52.06	-	-	-	-	-

Configuration L-MIMO-MC 1 (2C)

Maximum Output Power 46.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1932.5MHz + 1967.5MHz			Channel Position M_{RFBW} 1942.5MHz + 1977.5MHz			Channel Position T_{RFBW} 1952.5MHz + 1987.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / 5.0 MHz	45.72	-	-	45.87	-	-	45.85	-	-
B		45.66	-	-	45.75	-	-	45.72	-	-
C		45.76	-	-	45.73	-	-	45.76	-	-
D		45.82	-	-	45.92	-	-	45.87	-	-
Total		51.76	-	-	51.84	-	-	51.82	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1932.5MHz + 1967.5MHz			Channel Position M_{RFBW} 1942.5MHz + 1977.5MHz			Channel Position T_{RFBW} 1952.5MHz + 1987.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / 5.0 MHz	-	-	-	45.87	-	-	-	-	-
B		-	-	-	45.77	-	-	-	-	-
C		-	-	-	45.71	-	-	-	-	-
D		-	-	-	45.91	-	-	-	-	-
Total		-	-	-	51.84	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1932.5MHz + 1967.5MHz			Channel Position M_{RFBW} 1942.5MHz + 1977.5MHz			Channel Position T_{RFBW} 1952.5MHz + 1987.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	64QAM / 5.0 MHz	-	-	-	45.87	-	-	-	-	-
B		-	-	-	45.76	-	-	-	-	-
C		-	-	-	45.71	-	-	-	-	-
D		-	-	-	45.91	-	-	-	-	-
Total		-	-	-	51.83	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1935.0MHz + 1965.0MHz			Channel Position M_{RFBW} 1945.0MHz + 1975.0MHz			Channel Position T_{RFBW} 1955.0MHz + 1985.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / 10.0 MHz	-	-	-	45.89	-	-	-	-	-
B		-	-	-	45.82	-	-	-	-	-
C		-	-	-	45.85	-	-	-	-	-
D		-	-	-	45.92	-	-	-	-	-
Total		-	-	-	51.89	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1935.0MHz + 1965.0MHz			Channel Position M_{RFBW} 1945.0MHz + 1975.0MHz			Channel Position T_{RFBW} 1955.0MHz + 1985.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / 10.0 MHz	-	-	-	45.90	-	-	-	-	-
B		-	-	-	45.83	-	-	-	-	-
C		-	-	-	45.86	-	-	-	-	-
D		-	-	-	45.92	-	-	-	-	-
Total		-	-	-	51.90	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1935.0MHz + 1965.0MHz			Channel Position M_{RFBW} 1945.0MHz + 1975.0MHz			Channel Position T_{RFBW} 1955.0MHz + 1985.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	64QAM / 10.0 MHz	-	-	-	45.89	-	-	-	-	-
B		-	-	-	45.81	-	-	-	-	-
C		-	-	-	45.86	-	-	-	-	-
D		-	-	-	45.93	-	-	-	-	-
Total		-	-	-	51.89	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1937.5MHz + 1962.5MHz			Channel Position M_{RFBW} 1947.5MHz + 1972.5MHz			Channel Position T_{RFBW} 1957.5MHz + 1982.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / 15.0 MHz	-	-	-	45.89	-	-	-	-	-
B		-	-	-	45.83	-	-	-	-	-
C		-	-	-	45.91	-	-	-	-	-
D		-	-	-	45.97	-	-	-	-	-
Total		-	-	-	51.92	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1937.5MHz + 1962.5MHz			Channel Position M_{RFBW} 1947.5MHz + 1972.5MHz			Channel Position T_{RFBW} 1957.5MHz + 1982.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / 15.0 MHz	-	-	-	45.89	-	-	-	-	-
B		-	-	-	45.80	-	-	-	-	-
C		-	-	-	45.90	-	-	-	-	-
D		-	-	-	45.97	-	-	-	-	-
Total		-	-	-	51.91	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1937.5MHz + 1962.5MHz			Channel Position M_{RFBW} 1947.5MHz + 1972.5MHz			Channel Position T_{RFBW} 1957.5MHz + 1982.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	64QAM / 15.0 MHz	-	-	-	45.88	-	-	-	-	-
B		-	-	-	45.79	-	-	-	-	-
C		-	-	-	45.90	-	-	-	-	-
D		-	-	-	45.99	-	-	-	-	-
Total		-	-	-	51.91	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1940.0MHz + 1960.0MHz			Channel Position M_{RFBW} 1950.0MHz + 1970.0MHz			Channel Position T_{RFBW} 1960.0MHz + 1980.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / 20.0 MHz	45.84	-	-	45.89	-	-	45.90	-	-
B		45.72	-	-	45.79	-	-	45.72	-	-
C		45.85	-	-	45.88	-	-	45.83	-	-
D		45.92	-	-	45.94	-	-	45.91	-	-
Total		51.85	-	-	51.90	-	-	51.86	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1940.0MHz + 1960.0MHz			Channel Position M_{RFBW} 1950.0MHz + 1970.0MHz			Channel Position T_{RFBW} 1960.0MHz + 1980.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / 20.0 MHz	-	-	-	45.89	-	-	-	-	-
B		-	-	-	45.78	-	-	-	-	-
C		-	-	-	45.87	-	-	-	-	-
D		-	-	-	45.95	-	-	-	-	-
Total		-	-	-	51.89	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1940.0MHz + 1960.0MHz			Channel Position M_{RFBW} 1950.0MHz + 1970.0MHz			Channel Position T_{RFBW} 1960.0MHz + 1980.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	64QAM / 20.0 MHz	-	-	-	45.88	-	-	-	-	-
B		-	-	-	45.77	-	-	-	-	-
C		-	-	-	45.90	-	-	-	-	-
D		-	-	-	45.96	-	-	-	-	-
Total		-	-	-	51.90	-	-	-	-	-

Configuration L-MIMO-MC 2 (3C)

Maximum Output Power 46.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1932.5MHz + 1962.5MHz + 1967.5MHz			Channel Position M_{RFBW} 1942.5MHz + 1972.5MHz + 1977.5MHz			Channel Position T_{RFBW} 1952.5MHz + 1982.5MHz + 1987.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / 5.0 MHz	45.74	-	-	45.81	-	-	45.80	-	-
B		45.69	-	-	45.71	-	-	45.61	-	-
C		45.78	-	-	45.74	-	-	45.66	-	-
D		45.85	-	-	45.88	-	-	45.79	-	-
Total		51.79	-	-	51.81	-	-	51.74	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1932.5MHz + 1962.5MHz + 1967.5MHz			Channel Position M_{RFBW} 1942.5MHz + 1972.5MHz + 1977.5MHz			Channel Position T_{RFBW} 1952.5MHz + 1982.5MHz + 1987.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / 5.0 MHz	-	-	-	45.82	-	-	-	-	-
B		-	-	-	45.69	-	-	-	-	-
C		-	-	-	45.73	-	-	-	-	-
D		-	-	-	45.87	-	-	-	-	-
Total		-	-	-	51.80	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1932.5MHz + 1962.5MHz + 1967.5MHz			Channel Position M_{RFBW} 1942.5MHz + 1972.5MHz + 1977.5MHz			Channel Position T_{RFBW} 1952.5MHz + 1982.5MHz + 1987.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	64QAM / 5.0 MHz	-	-	-	45.81	-	-	-	-	-
B		-	-	-	45.68	-	-	-	-	-
C		-	-	-	45.75	-	-	-	-	-
D		-	-	-	45.88	-	-	-	-	-
Total		-	-	-	51.80	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1935.0MHz + 1955.0MHz + 1965.0MHz			Channel Position M_{RFBW} 1945.0MHz + 1965.0MHz + 1975.0MHz			Channel Position T_{RFBW} 1955.0MHz + 1975.0MHz + 1985.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / 10.0 MHz	45.79	-	-	45.87	-	-	45.84	-	-
B		45.77	-	-	45.82	-	-	45.73	-	-
C		45.82	-	-	45.83	-	-	45.74	-	-
D		45.88	-	-	45.90	-	-	45.84	-	-
Total		51.84	-	-	51.88	-	-	51.81	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1935.0MHz + 1955.0MHz + 1965.0MHz			Channel Position M_{RFBW} 1945.0MHz + 1965.0MHz + 1975.0MHz			Channel Position T_{RFBW} 1955.0MHz + 1975.0MHz + 1985.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / 10.0 MHz	-	-	-	45.86	-	-	-	-	-
B		-	-	-	45.82	-	-	-	-	-
C		-	-	-	45.83	-	-	-	-	-
D		-	-	-	45.91	-	-	-	-	-
Total		-	-	-	51.88	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} 1935.0MHz + 1955.0MHz + 1965.0MHz			Channel Position M_{RFBW} 1945.0MHz + 1965.0MHz + 1975.0MHz			Channel Position T_{RFBW} 1955.0MHz + 1975.0MHz + 1985.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	64QAM / 10.0 MHz	-	-	-	45.84	-	-	-	-	-
B		-	-	-	45.80	-	-	-	-	-
C		-	-	-	45.85	-	-	-	-	-
D		-	-	-	45.90	-	-	-	-	-
Total		-	-	-	51.87	-	-	-	-	-

Configuration G+W-MC 1 (1G+1W)

Maximum Output Power 46.0dBm per port

Antenna	GSM Modulation / WCDMA Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (G) 1930.4MHz + (W) 1967.6MHz			Channel Position M_{RFBW} (G) 1940.2MHz + (W) 1977.6MHz			Channel Position T_{RFBW} (G) 1950.2MHz + (W) 1987.6MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / QPSK 5.0MHz	45.60	-	-	45.87	-	-	45.85	-	-

Configuration G+W-MC 2 (2G+2W)

Maximum Output Power 45.4dBm per port

Antenna	GSM Modulation / WCDMA Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (G) 1930.4MHz + (G) 1935.8MHz + (W) 1962.6MHz + (W) 1967.6MHz			Channel Position M_{RFBW} (G) 1940.2MHz + (G) 1945.8MHz + (W) 1972.6MHz + (W) 1977.6MHz			Channel Position T_{RFBW} (G) 1950.2MHz + (G) 1955.8MHz + (W) 1982.6MHz + (W) 1987.6MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / QPSK 5.0MHz	45.10	-	-	45.26	-	-	45.25	-	-

Configuration G+W-MIMO-MC 1 (1G+1W)

Maximum Output Power 46.0dBm per port

Antenna	GSM Modulation / WCDMA Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (G) 1930.4MHz + (W) 1967.6MHz			Channel Position M_{RFBW} (G) 1940.2MHz + (W) 1977.6MHz			Channel Position T_{RFBW} (G) 1950.2MHz + (W) 1987.6MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / 16QAM 5.0MHz	45.59	-	-	45.86	-	-	45.84	-	-

Configuration G+W-MIMO-MC 2 (2G+2W)

Maximum Output Power 45.4dBm per port

Antenna	GSM Modulation / WCDMA Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (G) 1930.4MHz + (G) 1935.8MHz + (W) 1962.6MHz + (W) 1967.6MHz			Channel Position M_{RFBW} (G) 1940.2MHz + (G) 1945.8MHz + (W) 1972.6MHz + (W) 1977.6MHz			Channel Position T_{RFBW} (G) 1950.2MHz + (G) 1955.8MHz + (W) 1982.6MHz + (W) 1987.6MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / 16QAM 5.0MHz	45.10	-	-	45.27	-	-	45.26	-	-

Configuration G+L-MIMO-MC 1 (1G+1L)

Maximum Output Power 46.0dBm per port

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (G) 1930.4MHz + (L) 1967.5MHz			Channel Position M_{RFBW} (G) 1940.2MHz + (L) 1977.5MHz			Channel Position T_{RFBW} (G) 1950.2MHz + (L) 1987.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / QPSK 5.0MHz	45.61	-	-	45.87	-	-	45.84	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (G) 1930.4MHz + (L) 1965.0MHz			Channel Position M_{RFBW} (G) 1940.2MHz + (L) 1975.0MHz			Channel Position T_{RFBW} (G) 1950.2MHz + (L) 1985.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / QPSK 10.0MHz	45.61	-	-	45.86	-	-	45.87	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (G) 1930.4MHz + (L) 1962.5MHz			Channel Position M_{RFBW} (G) 1940.2MHz + (L) 1972.5MHz			Channel Position T_{RFBW} (G) 1950.2MHz + (L) 1982.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / QPSK 15.0MHz	45.63	-	-	45.86	-	-	45.89	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (G) 1930.4MHz + (L) 1960.0MHz			Channel Position M_{RFBW} (G) 1940.2MHz + (L) 1970.0MHz			Channel Position T_{RFBW} (G) 1950.2MHz + (L) 1980.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / QPSK 20.0MHz	45.65	-	-	45.85	-	-	45.85	-	-

Configuration G+L-MIMO-MC 2 (2G+3L)

Maximum Output Power 46.0dBm per port

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (G) 1930.4MHz + (G) 1935.8MHz + (L) 1957.5MHz + (L) 1962.5MHz + (L) 1967.5MHz			Channel Position M_{RFBW} (G) 1940.2MHz + (G) 1945.8MHz + (L) 1967.5MHz + (L) 1972.5MHz + (L) 1977.5MHz			Channel Position T_{RFBW} (G) 1950.2MHz + (G) 1955.8MHz + (L) 1977.5MHz + (L) 1982.5MHz + (L) 1987.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / QPSK 5.0MHz	45.42	-	-	45.53	-	-	45.63	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (G) 1930.4MHz + (G) 1935.8MHz + (L) 1945.0MHz + (L) 1955.0MHz + (L) 1965.0MHz			Channel Position M_{RFBW} (G) 1940.2MHz + (G) 1945.8MHz + (L) 1955.0MHz + (L) 1965.0MHz + (L) 1975.0MHz			Channel Position T_{RFBW} (G) 1950.2MHz + (G) 1955.8MHz + (L) 1965.0MHz + (L) 1975.0MHz + (L) 1985.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / QPSK 10.0MHz	45.74	-	-	45.91	-	-	45.91	-	-

Configuration G+L-MIMO-MC 3 (2G+2L)

Maximum Output Power 46.0dBm per port

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (G) 1930.4MHz + (G) 1935.8MHz + (L) 1962.5MHz + (L) 1967.5MHz			Channel Position M_{RFBW} (G) 1940.2MHz + (G) 1945.8MHz + (L) 1972.5MHz + (L) 1977.5MHz			Channel Position T_{RFBW} (G) 1950.2MHz + (G) 1955.8MHz + (L) 1982.5MHz + (L) 1987.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / QPSK 5.0MHz	45.67	-	-	45.83	-	-	45.83	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (G) 1930.4MHz + (G) 1935.8MHz + (L) 1955.0MHz + (L) 1965.0MHz			Channel Position M_{RFBW} (G) 1940.2MHz + (G) 1945.8MHz + (L) 1965.0MHz + (L) 1975.0MHz			Channel Position T_{RFBW} (G) 1950.2MHz + (G) 1955.8MHz + (L) 1975.0MHz + (L) 1985.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / QPSK 10.0MHz	45.70	-	-	45.92	-	-	45.91	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (G) 1930.4MHz + (G) 1935.8MHz + (L) 1947.5MHz + (L) 1962.5MHz			Channel Position M_{RFBW} (G) 1940.2MHz + (G) 1945.8MHz + (L) 1957.5MHz + (L) 1972.5MHz			Channel Position T_{RFBW} (G) 1950.2MHz + (G) 1955.8MHz + (L) 1967.5MHz + (L) 1982.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / QPSK 15.0MHz	45.73	-	-	45.91	-	-	45.91	-	-

Configuration G+L-MIMO-MC 4 (2G+1L)

Maximum Output Power 46.0dBm per port

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (G) 1930.4MHz + (G) 1935.8MHz + (L) 1967.5MHz			Channel Position M_{RFBW} (G) 1940.2MHz + (G) 1945.8MHz + (L) 1977.5MHz			Channel Position T_{RFBW} (G) 1950.2MHz + (G) 1955.8MHz + (L) 1987.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / QPSK 5.0MHz	45.57	-	-	45.82	-	-	45.81	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (G) 1930.4MHz + (G) 1935.8MHz + (L) 1965.0MHz			Channel Position M_{RFBW} (G) 1940.2MHz + (G) 1945.8MHz + (L) 1975.0MHz			Channel Position T_{RFBW} (G) 1950.2MHz + (G) 1955.8MHz + (L) 1985.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / QPSK 10.0MHz	45.60	-	-	45.83	-	-	45.83	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (G) 1930.4MHz + (G) 1935.8MHz + (L) 1962.5MHz			Channel Position M_{RFBW} (G) 1940.2MHz + (G) 1945.8MHz + (L) 1972.5MHz			Channel Position T_{RFBW} (G) 1950.2MHz + (G) 1955.8MHz + (L) 1982.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / QPSK 15.0MHz	45.56	-	-	45.79	-	-	45.79	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (G) 1930.4MHz + (G) 1935.8MHz + (L) 1960.0MHz			Channel Position M_{RFBW} (G) 1940.2MHz + (G) 1945.8MHz + (L) 1970.0MHz			Channel Position T_{RFBW} (G) 1950.2MHz + (G) 1955.8MHz + (L) 1980.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / QPSK 20.0MHz	45.58	-	-	45.79	-	-	45.76	-	-

Configuration W+L-MC 1 (1W+1L)

Maximum Output Power 46.0dBm per port

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (W) 1932.4MHz + (L) 1967.5MHz			Channel Position M_{RFBW} (W) 1942.4MHz + (L) 1977.5MHz			Channel Position T_{RFBW} (W) 1952.4MHz + (L) 1987.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / QPSK 5.0 MHz	45.80	-	-	45.97	-	-	45.92	-	-

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (W) 1932.4MHz +(L) 1965.0MHz			Channel Position M_{RFBW} (W) 1942.4MHz + (L) 1975.0MHz			Channel Position T_{RFBW} (W) 1952.4MHz + (L) 1985.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / QPSK 10.0 MHz	45.78	-	-	45.93	-	-	45.93	-	-

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (W) 1932.4MHz + (L) 1962.5MHz			Channel Position M_{RFBW} (W) 1942.4MHz + (L) 1972.5MHz			Channel Position T_{RFBW} (W) 1952.4MHz + (L) 1982.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / QPSK 15.0 MHz	45.79	-	-	45.95	-	-	45.95	-	-

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (W) 1932.4MHz + (L) 1960.0MHz			Channel Position M_{RFBW} (W) 1942.4MHz + (L) 1970.0MHz			Channel Position T_{RFBW} (W) 1952.4MHz + (L) 1980.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / QPSK 20.0 MHz	45.77	-	-	45.94	-	-	45.91	-	-

Configuration W+L-MC 2 (2W+3L)

Maximum Output Power 46.0dBm per port

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (W) 1932.4MHz +(W) 1937.4MHz + (L) 1957.5MHz + (L) 1962.5MHz + (L) 1967.5MHz			Channel Position M_{RFBW} (W) 1942.4MHz + (W)1947.4MHz + (L) 1967.5MHz + (L) 1972.5MHz + (L) 1977.5MHz			Channel Position T_{RFBW} (W) 1952.4MHz + (W) 1957.4MHz + (L) 1977.5MHz + (L) 1982.5MHz + (L) 1987.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / QPSK 5.0 MHz	45.57	-	-	45.66	-	-	45.64	-	-

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (W) 1932.4MHz +(W) 1937.4MHz + (L) 1945.0MHz + (L) 1955.0MHz + (L) 1965.0MHz			Channel Position M_{RFBW} (W) 1942.4MHz + (W)1947.4MHz + (L) 1955.0MHz + (L) 1965.0MHz + (L) 1975.0MHz			Channel Position T_{RFBW} (W) 1952.4MHz + (W) 1957.4MHz + (L) 1965.0MHz + (L) 1975.0MHz + (L) 1985.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / QPSK 10.0 MHz	45.59	-	-	45.71	-	-	45.70	-	-

Configuration W+L-MC 3 (2W+2L)

Maximum Output Power 46.0dBm per port

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (W) 1932.4MHz +(W) 1937.4MHz + (L) 1947.5MHz + (L) 1962.5MHz			Channel Position M_{RFBW} (W) 1942.4MHz + (W)1947.4MHz + (L) 1957.5MHz + (L) 1972.5MHz			Channel Position T_{RFBW} (W) 1952.4MHz + (W) 1957.4MHz + (L) 1967.5MHz + (L) 1982.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / QPSK 15.0 MHz	45.56	-	-	45.71	-	-	45.70	-	-

Configuration W+L-MC 4 (2W+1L)

Maximum Output Power 46.0dBm per port

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (W) 1932.4MHz +(W) 1937.4MHz + (L) 1960.0MHz			Channel Position M_{RFBW} (W) 1942.4MHz + (W)1947.4MHz + (L) 1970.0MHz			Channel Position T_{RFBW} (W) 1952.4MHz + (W) 1957.4MHz + (L) 1980.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / QPSK 20.0 MHz	45.65	-	-	45.82	-	-	45.78	-	-

Configuration W+L-MIMO-MC 1 (1W+1L)

Maximum Output Power 46.0dBm per port

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (W) 1932.4MHz + (L) 1967.5MHz			Channel Position M_{RFBW} (W) 1942.4MHz + (L) 1977.5MHz			Channel Position T_{RFBW} (W) 1952.4MHz + (L) 1987.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / QPSK 5.0 MHz	45.81	-	-	45.98	-	-	45.93	-	-
B		45.79	-	-	45.86	-	-	45.84	-	-
C		45.84	-	-	45.83	-	-	45.86	-	-
D		45.90	-	-	45.99	-	-	45.91	-	-
Total		51.86	-	-	51.93	-	-	51.91	-	-

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (W) 1932.4MHz +(L) 1965.0MHz			Channel Position M_{RFBW} (W) 1942.4MHz + (L) 1975.0MHz			Channel Position T_{RFBW} (W) 1952.4MHz + (L) 1985.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / QPSK 10.0 MHz	45.75	-	-	45.92	-	-	45.92	-	-
B		45.77	-	-	45.87	-	-	45.79	-	-
C		45.78	-	-	45.80	-	-	45.79	-	-
D		45.89	-	-	45.96	-	-	45.88	-	-
Total		51.82	-	-	51.91	-	-	51.87	-	-

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (W) 1932.4MHz + (L) 1962.5MHz			Channel Position M_{RFBW} (W) 1942.4MHz + (L) 1972.5MHz			Channel Position T_{RFBW} (W) 1952.4MHz + (L) 1982.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / QPSK 15.0 MHz	45.80	-	-	45.95	-	-	45.96	-	-
B		45.78	-	-	45.91	-	-	45.79	-	-
C		45.84	-	-	45.89	-	-	45.85	-	-
D		45.94	-	-	45.97	-	-	45.93	-	-
Total		51.86	-	-	51.95	-	-	51.90	-	-

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (W) 1932.4MHz + (L) 1960.0MHz			Channel Position M_{RFBW} (W) 1942.4MHz + (L) 1970.0MHz			Channel Position T_{RFBW} (W) 1952.4MHz + (L) 1980.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / QPSK 20.0 MHz	45.79	-	-	45.94	-	-	45.92	-	-
B		45.78	-	-	45.92	-	-	45.82	-	-
C		45.85	-	-	45.87	-	-	45.86	-	-
D		45.92	-	-	45.99	-	-	45.96	-	-
Total		51.86	-	-	51.95	-	-	51.91	-	-

Configuration W+L-MIMO-MC 2 (2W+3L)

Maximum Output Power 46.0dBm per port

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (W) 1932.4MHz +(W) 1937.4MHz + (L) 1957.5MHz + (L) 1962.5MHz + (L) 1967.5MHz			Channel Position M_{RFBW} (W) 1942.4MHz + (W)1947.4MHz + (L) 1967.5MHz + (L) 1972.5MHz + (L) 1977.5MHz			Channel Position T_{RFBW} (W) 1952.4MHz + (W) 1957.4MHz + (L) 1977.5MHz + (L) 1982.5MHz + (L) 1987.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / QPSK 5.0 MHz	45.57	-	-	45.65	-	-	45.64	-	-
B		45.58	-	-	45.62	-	-	45.53	-	-
C		45.64	-	-	45.66	-	-	45.57	-	-
D		45.64	-	-	45.68	-	-	45.59	-	-
Total		51.63	-	-	51.67	-	-	51.60	-	-

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (W) 1932.4MHz +(W) 1937.4MHz + (L) 1945.0MHz + (L) 1955.0MHz + (L) 1965.0MHz			Channel Position M_{RFBW} (W) 1942.4MHz + (W)1947.4MHz + (L) 1955.0MHz + (L) 1965.0MHz + (L) 1975.0MHz			Channel Position T_{RFBW} (W) 1952.4MHz + (W) 1957.4MHz + (L) 1965.0MHz + (L) 1975.0MHz + (L) 1985.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / QPSK 10.0 MHz	45.58	-	-	45.70	-	-	45.70	-	-
B		45.56	-	-	45.65	-	-	45.56	-	-
C		45.66	-	-	45.70	-	-	45.67	-	-
D		45.70	-	-	45.72	-	-	45.68	-	-
Total		51.65	-	-	51.71	-	-	51.67	-	-

Configuration W+L-MIMO-MC 3 (2W+2L)

Maximum Output Power 46.0dBm per port

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (W) 1932.4MHz +(W) 1937.4MHz + (L) 1947.5MHz + (L) 1962.5MHz			Channel Position M_{RFBW} (W) 1942.4MHz + (W)1947.4MHz + (L) 1957.5MHz + (L) 1972.5MHz			Channel Position T_{RFBW} (W) 1952.4MHz + (W) 1957.4MHz + (L) 1967.5MHz + (L) 1982.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / QPSK 15.0 MHz	45.56	-	-	45.71	-	-	45.69	-	-
B		45.57	-	-	45.67	-	-	45.56	-	-
C		45.65	-	-	45.72	-	-	45.68	-	-
D		45.69	-	-	45.71	-	-	45.69	-	-
Total		51.64	-	-	51.72	-	-	51.68	-	-

Configuration W+L-MIMO-MC 4 (2W+1L)

Maximum Output Power 46.0dBm per port

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B_{RFBW} (W) 1932.4MHz +(W) 1937.4MHz + (L) 1960.0MHz			Channel Position M_{RFBW} (W) 1942.4MHz + (W)1947.4MHz + (L) 1970.0MHz			Channel Position T_{RFBW} (W) 1952.4MHz + (W) 1957.4MHz + (L) 1980.0MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / QPSK 20.0 MHz	45.67	-	-	45.82	-	-	45.79	-	-
B		45.64	-	-	45.76	-	-	45.66	-	-
C		45.76	-	-	45.81	-	-	45.76	-	-
D		45.78	-	-	45.80	-	-	45.80	-	-
Total		51.73	-	-	51.82	-	-	51.77	-	-

Note :

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

Limit	
Output Power	FCC: (ERP) 1640 W or 62.15 dBm for emission bandwidth ≤ 1MHz 1640 W/MHz or 62.15 dBm/MHz for emission bandwidth > 1MHz IC: (e.i.r.p) 1640 W/MHz or 62.15 dBm/MHz
Peak to Average Ratio	13 dB

Remarks

The maximum output power of the EUT is sufficient to keep it within the range of the rated transmitter power that the manufacture declared and the requirements of FCC and IC standards. The peak to average ratio is under the limit of 13dB.

2.2 OCCUPIED BANDWIDTH

2.2.1 Specification Reference

FCC CFR 47 Part 2, Clause 2.1049(h)
FCC CFR 47 Part 24, Clause 24.238 (b)
Industry Canada RSS-GEN, Clause 6.6

2.2.2 Equipment Under Test

RRUS 32 B2, KRC 161 414/1, S/N: D16Q673439

2.2.3 Date of Test and Modification State

17, 21, 22, 30 September and 08 December 2015 - Modification State 0

2.2.4 Test Equipment Used

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

2.2.5 Environmental Conditions

Ambient Temperature	24.2 - 25.5°C
Relative Humidity	28.0 - 44.8%

2.2.6 Test Method

The test was applied in accordance with the test method requirements of FCC Part 24 and Industry Canada RSS-GEN.

The EUT was set to transmit at maximum power and testing was carried out on bottom, middle and top channels. Using the Occupied Bandwidth measurement function in the spectrum analyser, the 26dB bandwidth was measured in accordance with FCC KDB 971168 D01 Power Meas License Digital Systems v02r02 Clause 4.2. In addition, measurements of 99% occupied bandwidths were made in accordance with Industry Canada RSS-GEN Clause 6.6. The RBW was configured to 1% or 3% of the theoretical channel bandwidth, meeting the requirement of being between 1 to 5% of the Occupied Bandwidth described in the KDB aforementioned.

The results are shown in the plots below.

2.2.7 Test Results

Configuration G-SC

Maximum Output Power 46.0dBm per port

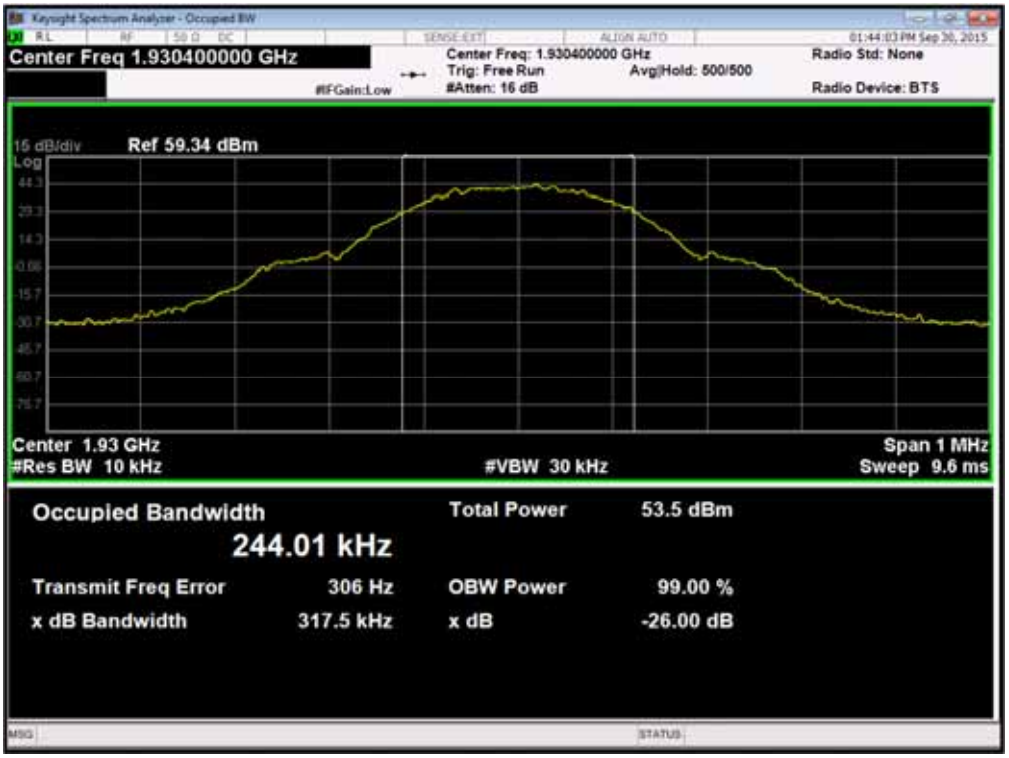
-26dBc Occupied Bandwidth for FCC requirement

Modulation / Bandwidth	Occupied Bandwidth (kHz)		
	Channel Position B 1930.4MHz	Channel Position M 1960.0MHz	Channel Position T 1989.6MHz
GMSK	317.50	314.90	319.90
8-PSK	313.40	314.50	316.60
AQPSK	307.00	310.70	306.80

99% Occupied Bandwidth for IC requirement

Modulation / Bandwidth	Occupied Bandwidth (kHz)		
	Channel Position B 1930.4MHz	Channel Position M 1960.0MHz	Channel Position T 1989.6MHz
GMSK	244.01	243.96	245.35
8-PSK	244.85	246.66	246.93
AQPSK	242.77	245.37	241.98

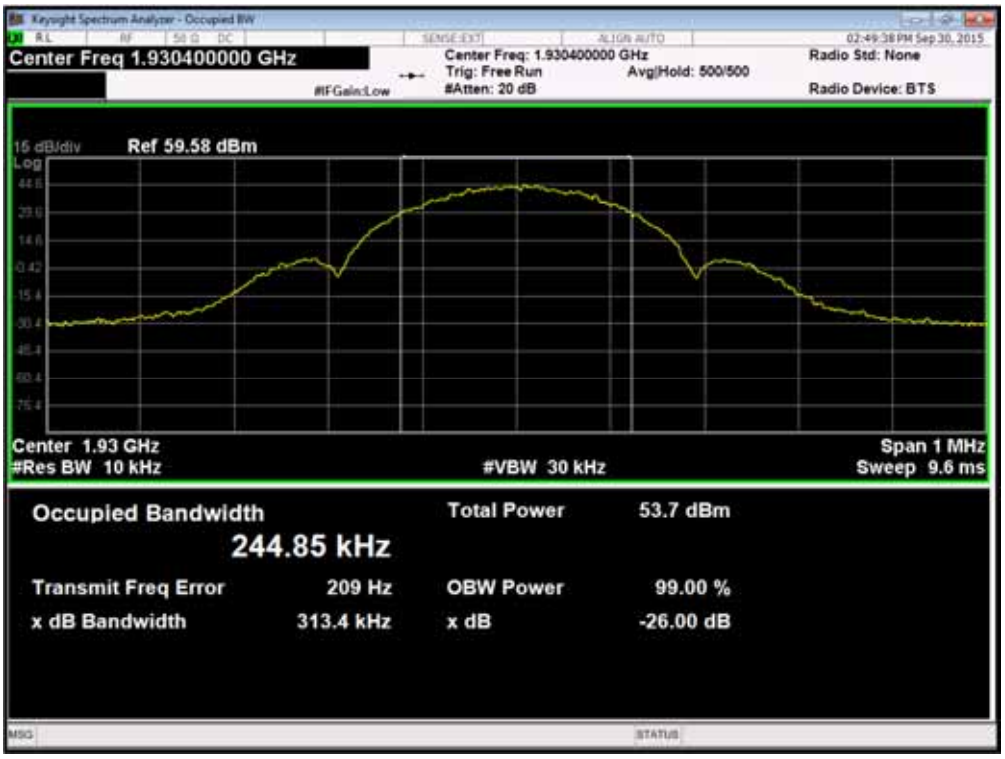
Channel Position B - GMSK



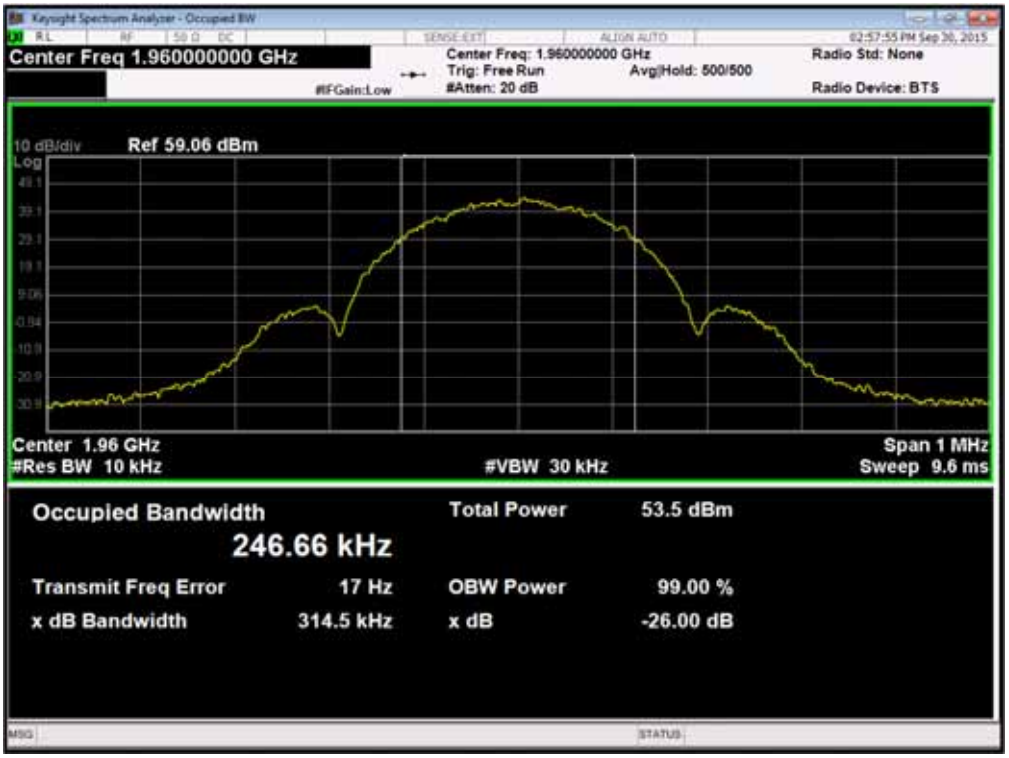
Channel Position M - GMSK

Channel Position T - GMSK

Channel Position B - 8-PSK



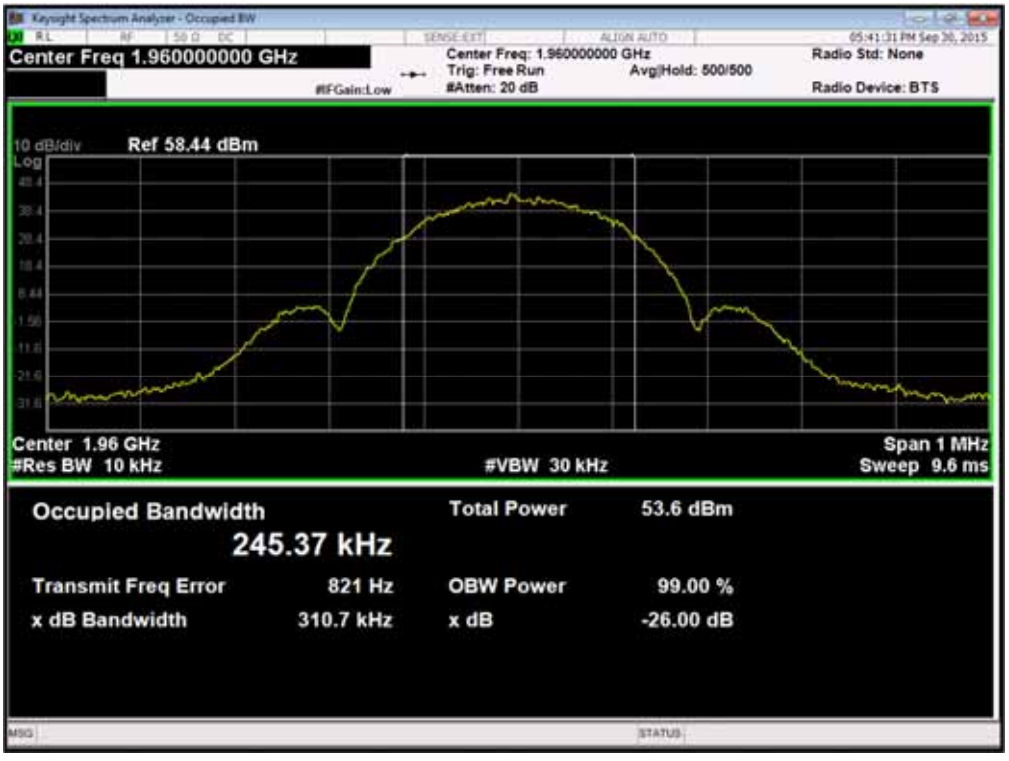
Channel Position M - 8-PSK



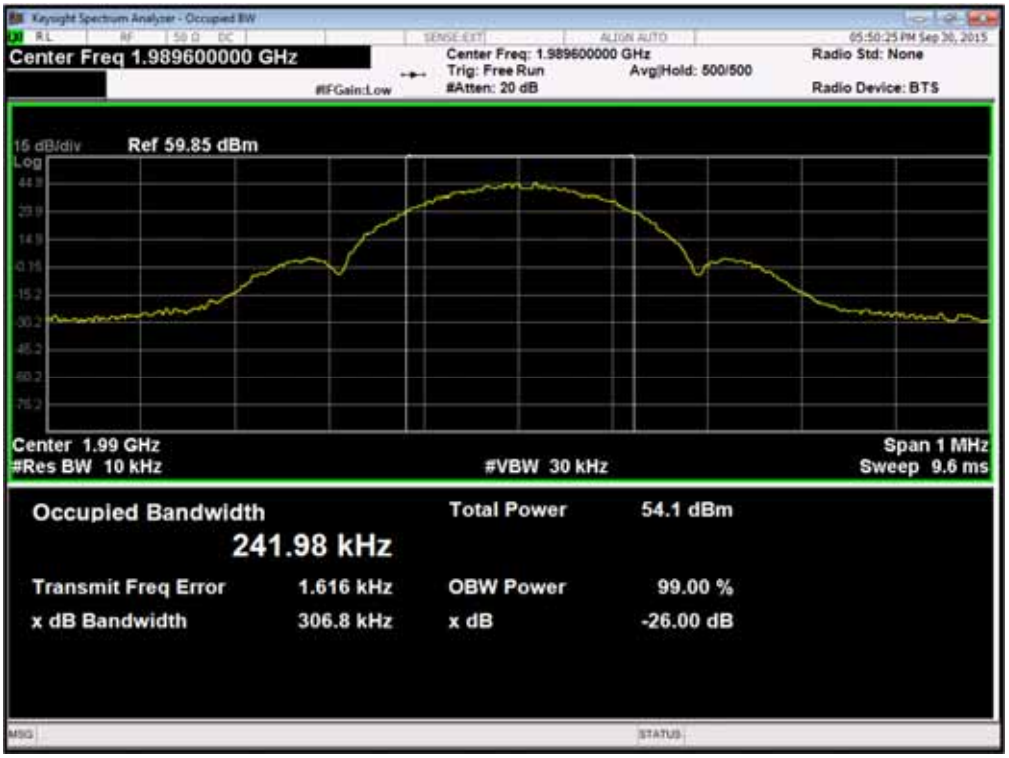
Channel Position T - 8-PSK

Channel Position B - AQPSK

Channel Position M - AQPSK



Channel Position T - AQPSK



Configuration W-SC

Maximum Output Power 46.0dBm per port

-26dBc Occupied Bandwidth for FCC requirement

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1932.4MHz	Channel Position M 1960.0MHz	Channel Position T 1987.6MHz
QPSK / 5.0 MHz	4.652	4.657	4.656

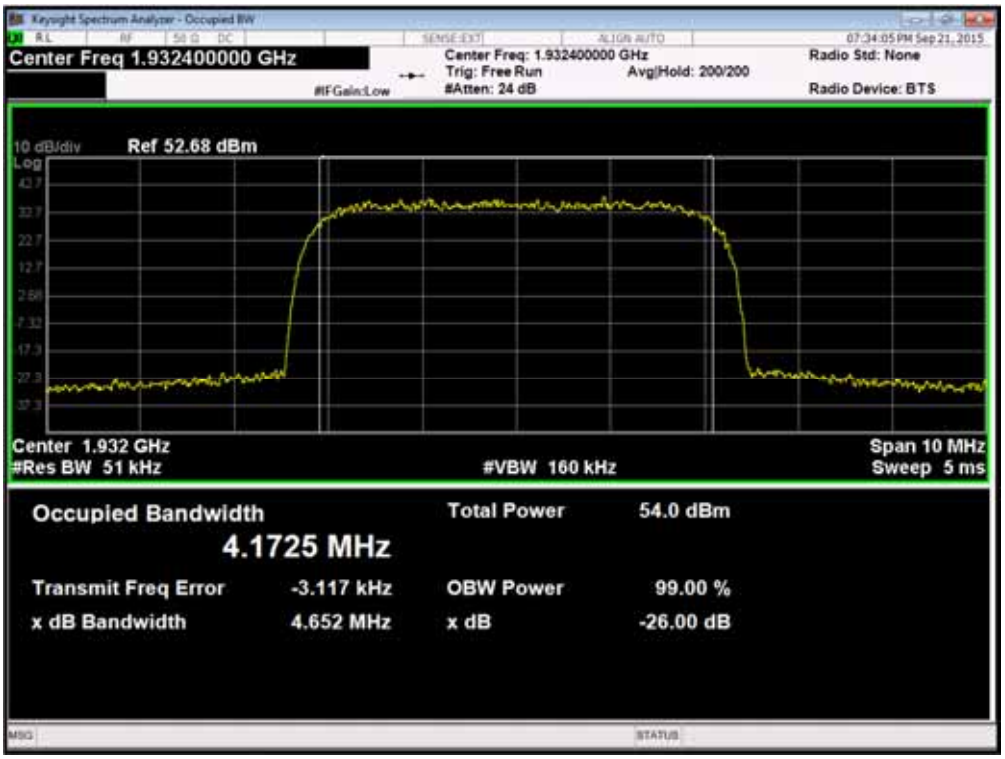
Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1932.4MHz	Channel Position M 1960.0MHz	Channel Position T 1987.6MHz
QPSK / 4.2 MHz	4.121	4.121	4.121

99% Occupied Bandwidth for IC requirement

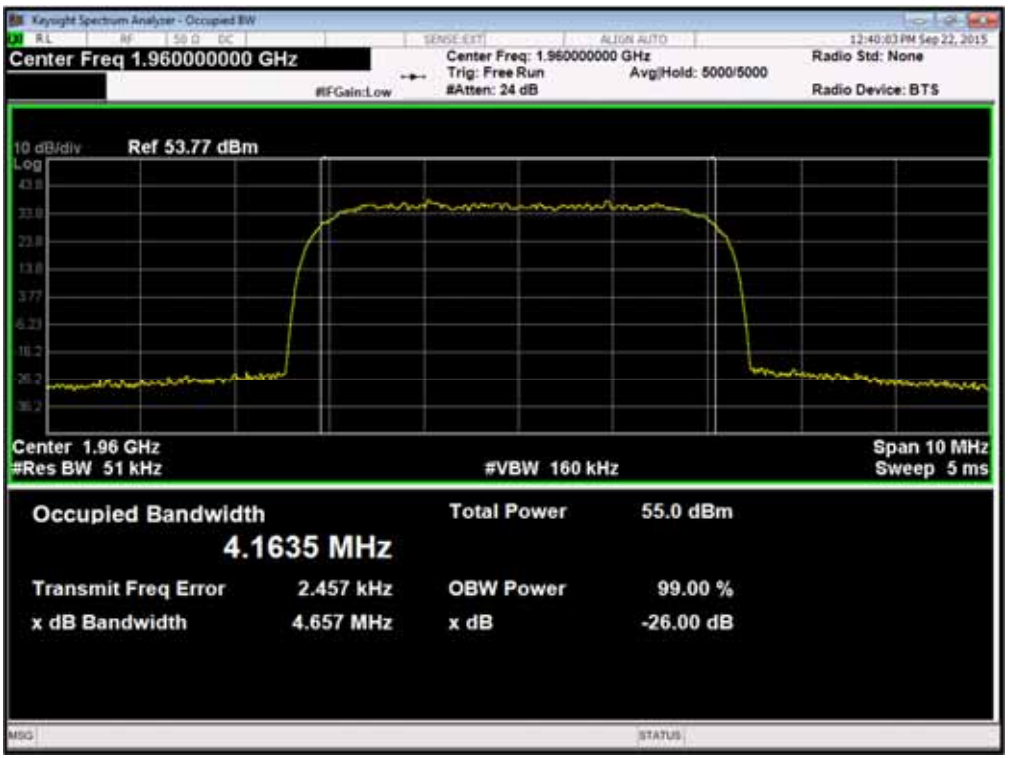
Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1932.4MHz	Channel Position M 1960.0MHz	Channel Position T 1987.6MHz
QPSK / 5.0 MHz	4.173	4.164	4.161

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1932.4MHz	Channel Position M 1960.0MHz	Channel Position T 1987.6MHz
QPSK / 4.2 MHz	3.849	3.849	3.849

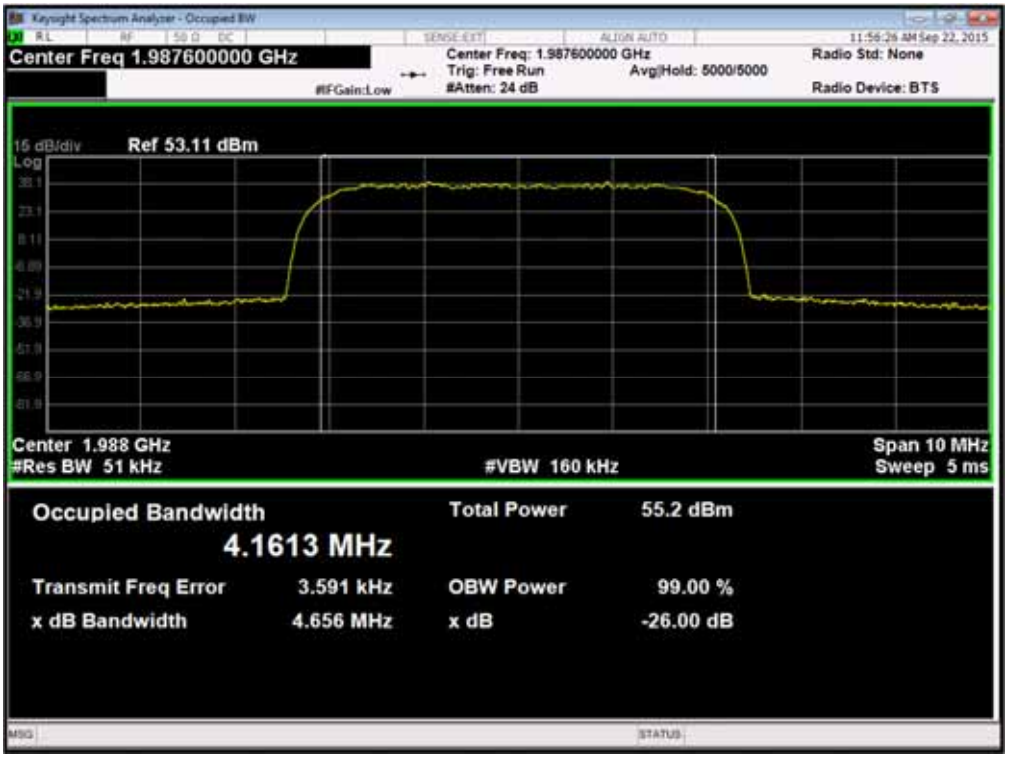
Channel Position B - QPSK / Bandwidth 5.0 MHz



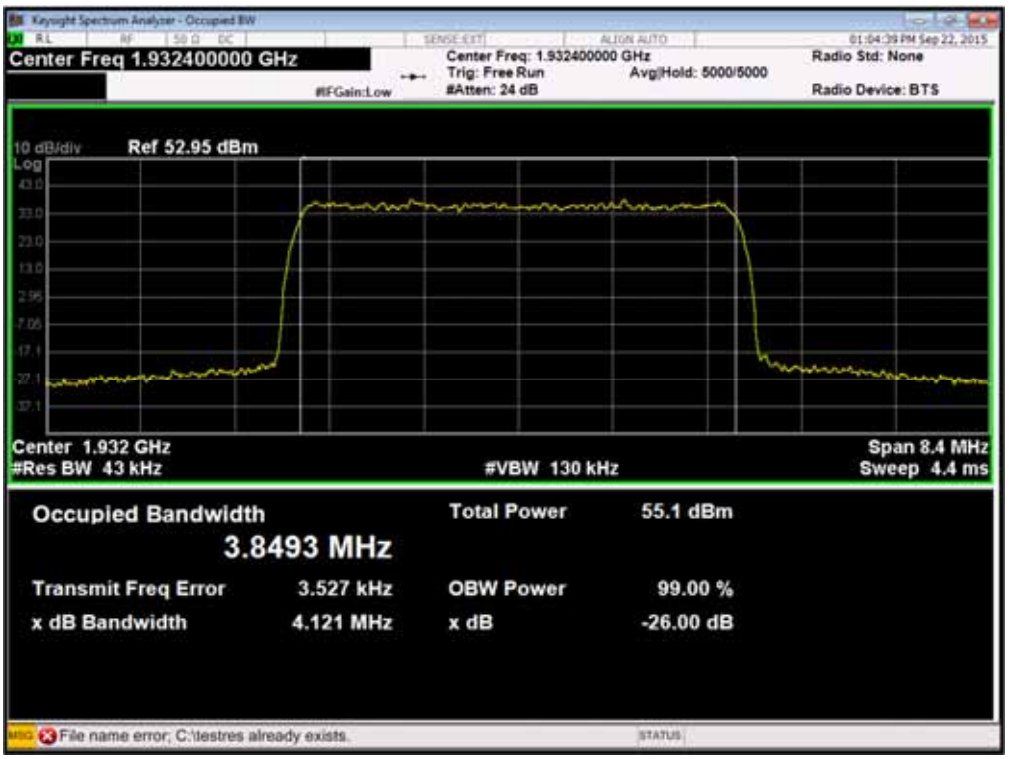
Channel Position M - QPSK / Bandwidth 5.0 MHz



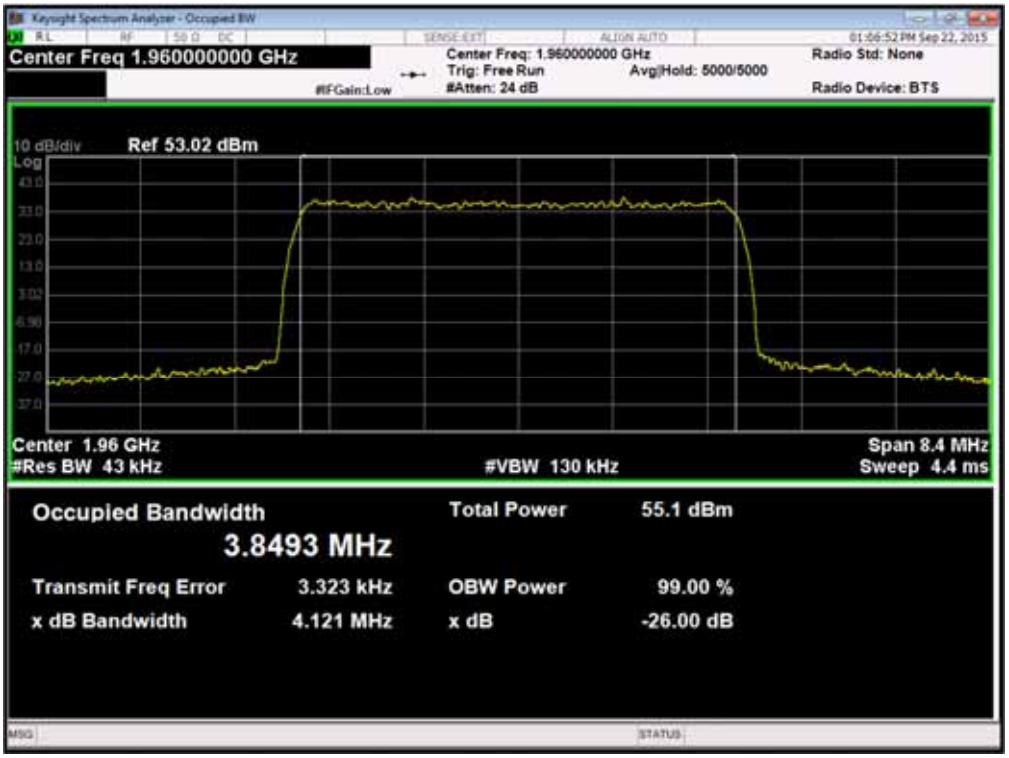
Channel Position T - QPSK / Bandwidth 5.0 MHz



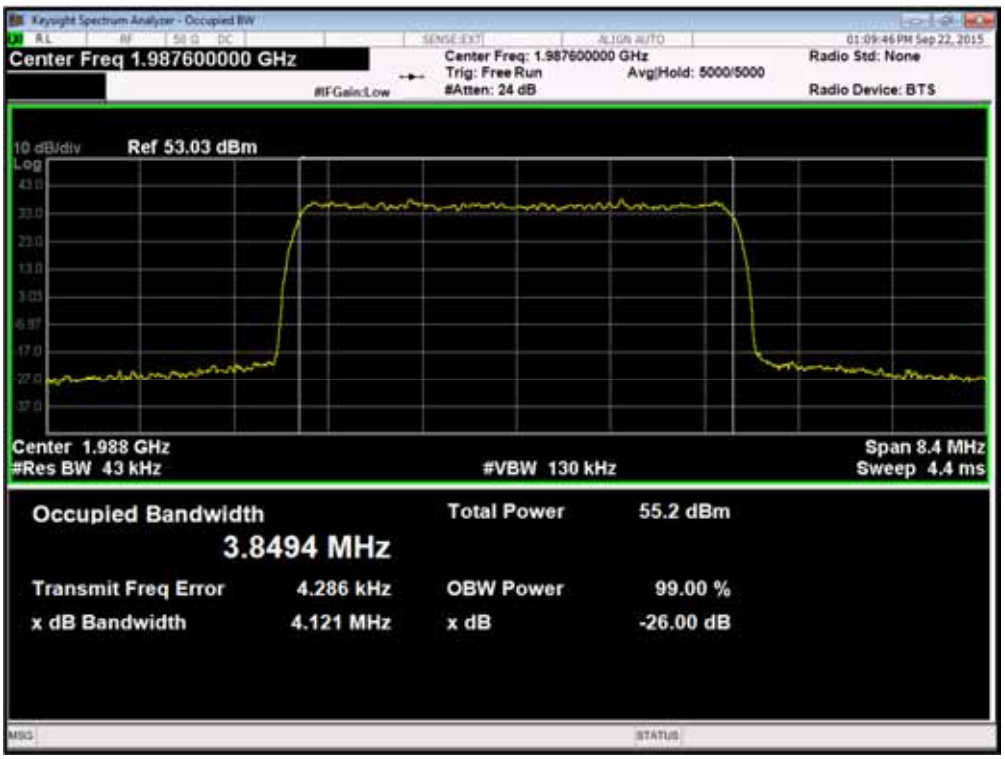
Channel Position B - QPSK / Bandwidth 4.2 MHz



Channel Position M - QPSK / Bandwidth 4.2 MHz



Channel Position T - QPSK / Bandwidth 4.2 MHz



Configuration W-MIMO-SC

Maximum Output Power 46.0dBm per port

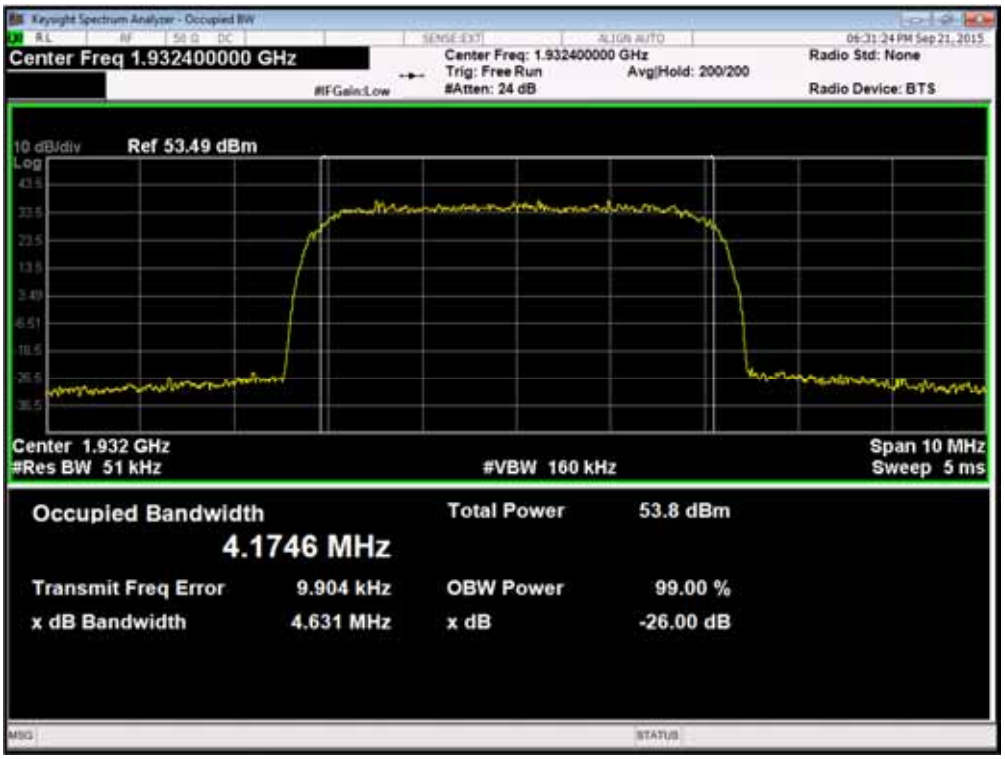
-26dBc Occupied Bandwidth for FCC requirement

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1932.4MHz	Channel Position M 1960.0MHz	Channel Position T 1987.6MHz
16QAM / 5.0 MHz	4.631	4.631	4.619
64QAM / 5.0 MHz	4.661	4.659	4.661

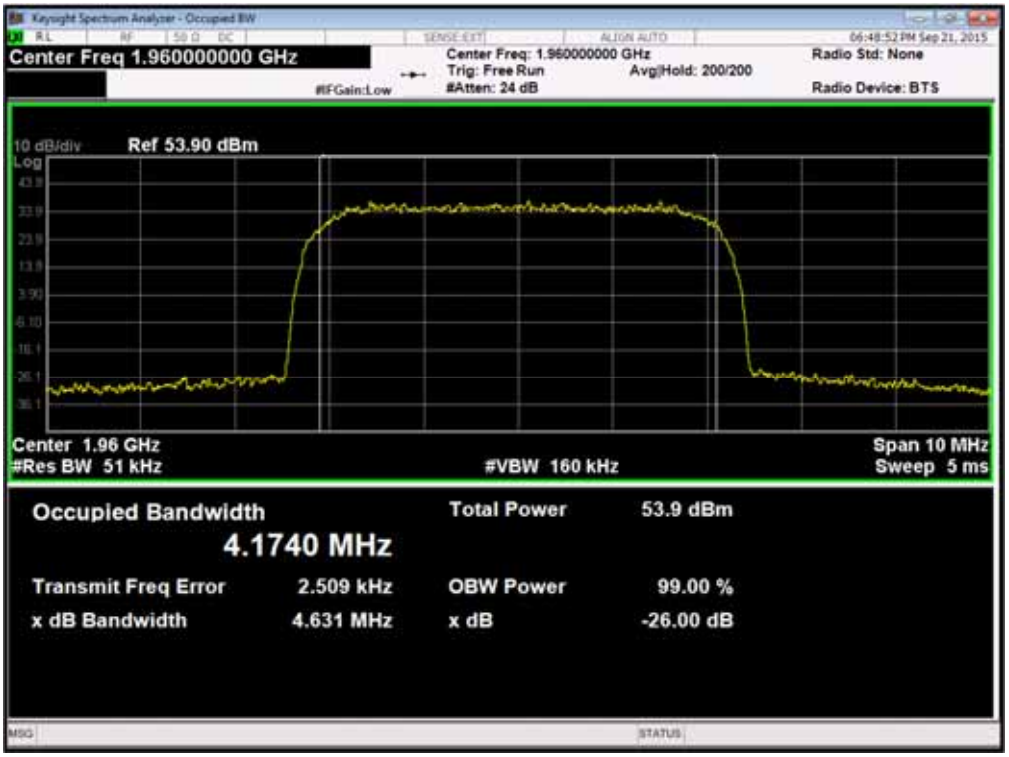
99% Occupied Bandwidth for IC requirement

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1932.4MHz	Channel Position M 1960.0MHz	Channel Position T 1987.6MHz
16QAM / 5.0 MHz	4.175	4.174	4.160
64QAM / 5.0 MHz	4.160	4.154	4.160

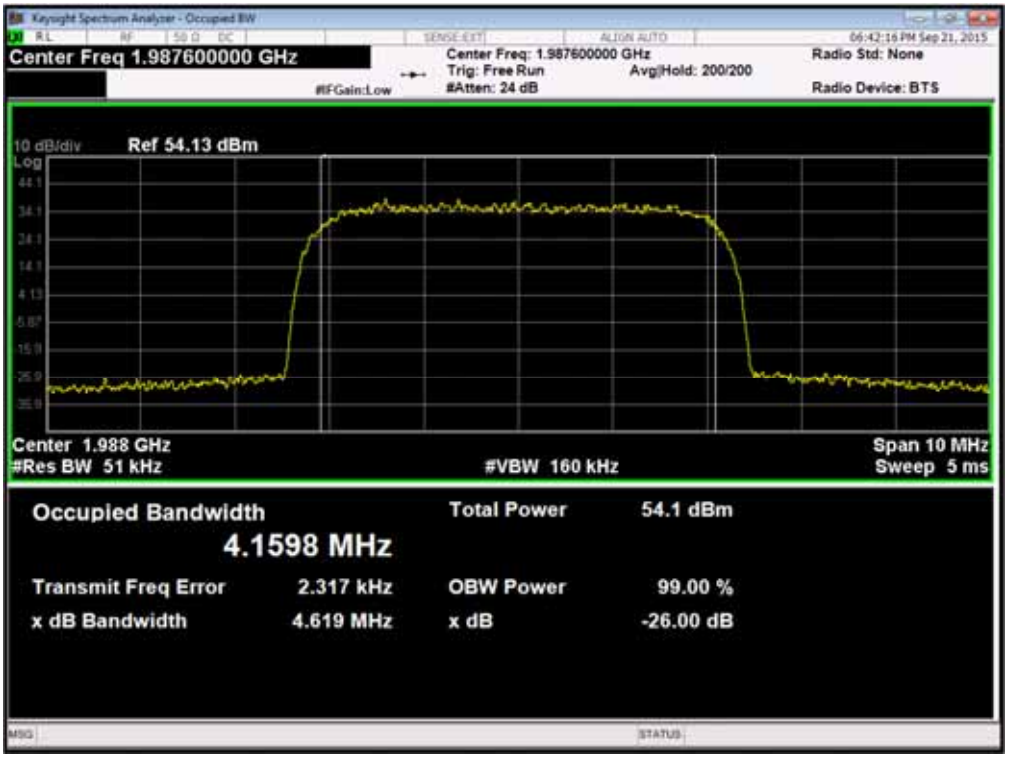
Channel Position B - 16QAM / Bandwidth 5.0 MHz



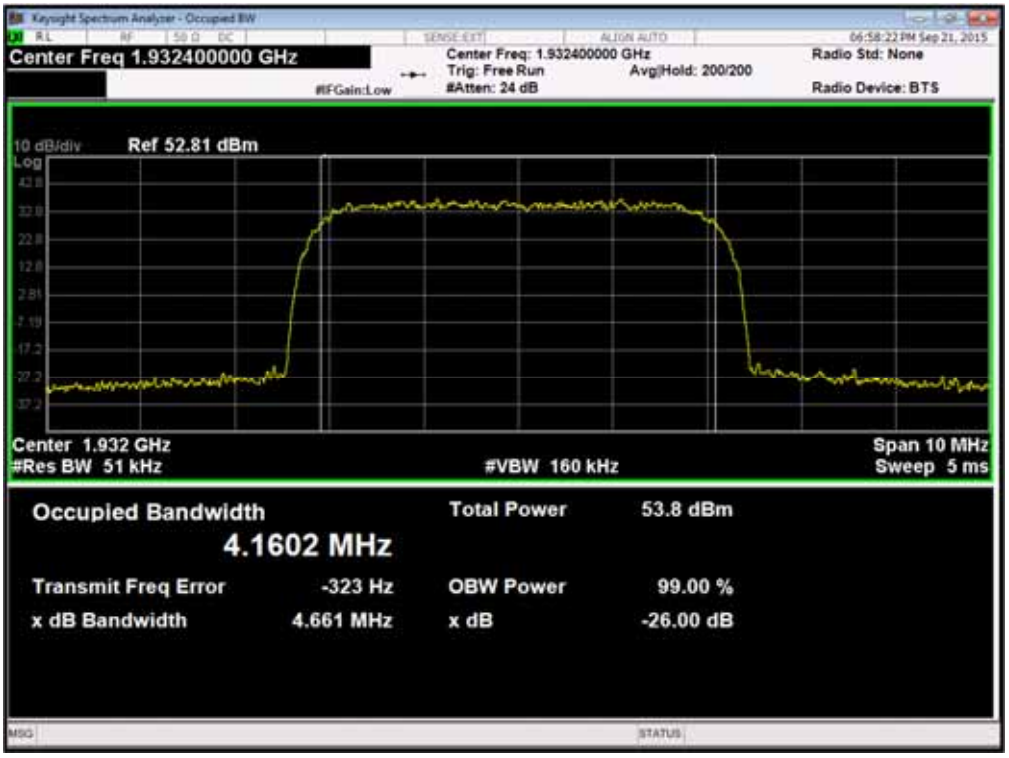
Channel Position M - 16QAM / Bandwidth 5.0 MHz



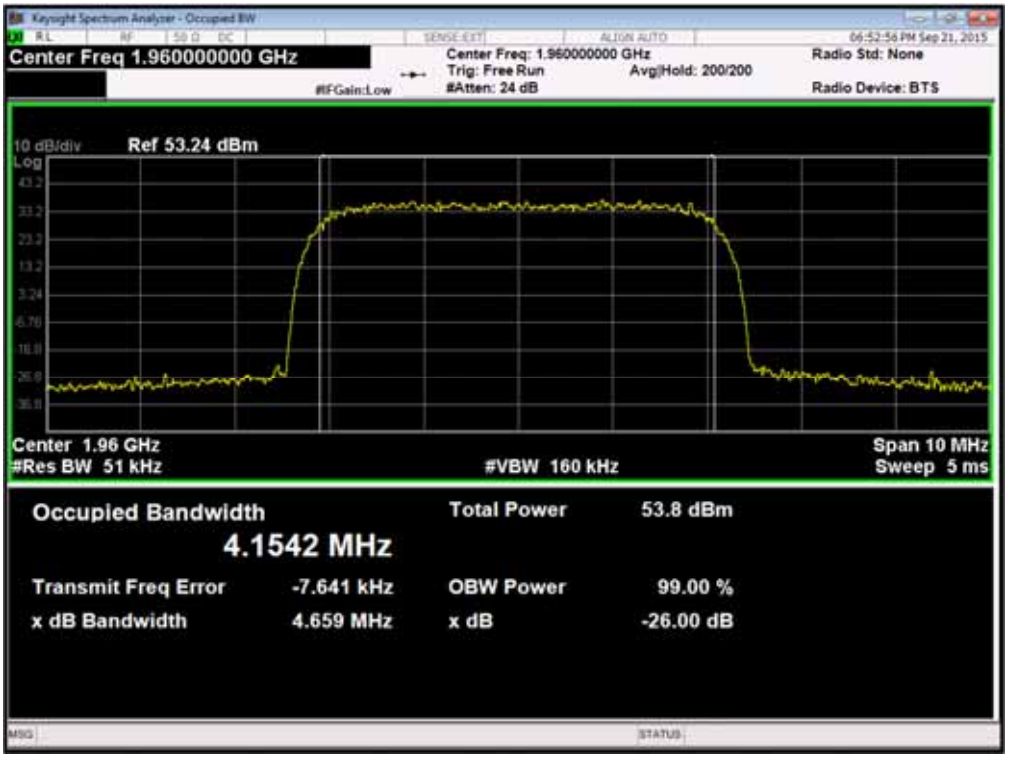
Channel Position T - 16QAM / Bandwidth 5.0 MHz



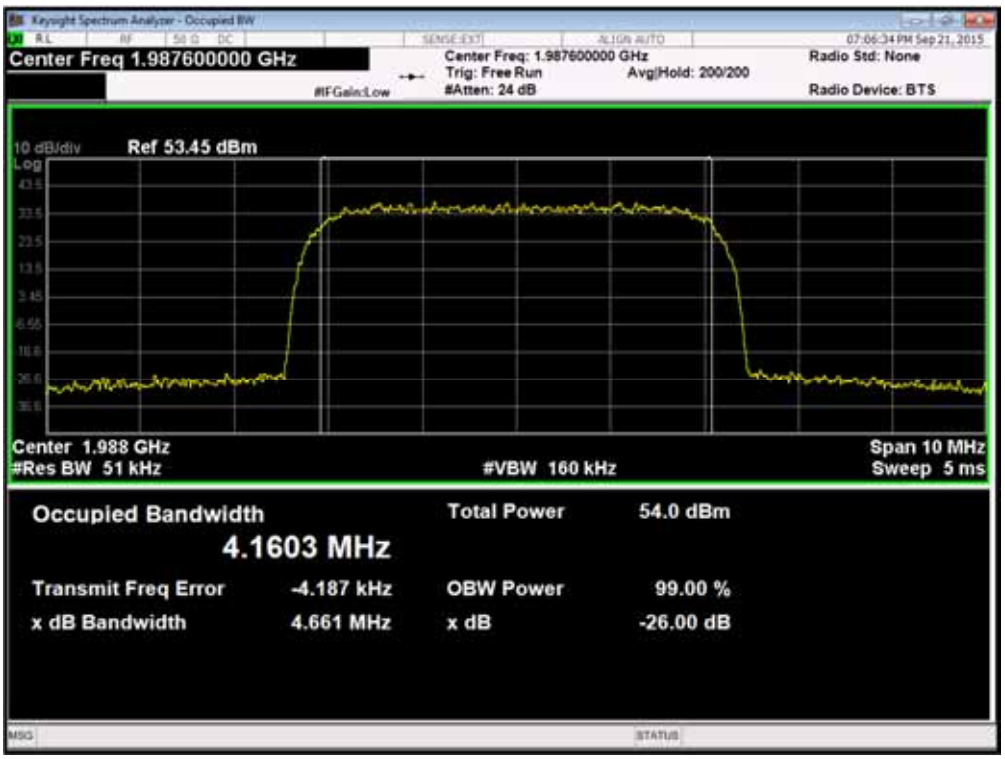
Channel Position B - 64QAM / Bandwidth 5.0 MHz



Channel Position M - 64QAM / Bandwidth 5.0 MHz



Channel Position T - 64QAM / Bandwidth 5.0 MHz



Configuration L-MIMO-SC

Maximum Output Power 46.0dBm per port

-26dBc Occupied Bandwidth for FCC requirement

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1932.5MHz	Channel Position M 1960.0MHz	Channel Position T 1987.5MHz
QPSK / 5.0 MHz	4.812	4.816	4.815
16QAM / 5.0 MHz	-	4.809	-
64QAM / 5.0 MHz	-	4.830	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1935.0MHz	Channel Position M 1960.0MHz	Channel Position T 1985.0MHz
QPSK / 10.0 MHz	-	9.653	-
16QAM / 10.0 MHz	-	9.644	-
64QAM / 10.0 MHz	-	9.664	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1937.5MHz	Channel Position M 1960.0MHz	Channel Position T 1982.5MHz
QPSK / 15.0 MHz	-	14.440	-
16QAM / 15.0 MHz	-	14.410	-
64QAM / 15.0 MHz	-	14.440	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1940.0MHz	Channel Position M 1960.0MHz	Channel Position T 1980.0MHz
QPSK / 20.0 MHz	19.290	19.270	19.200
16QAM / 20.0 MHz	-	19.170	-
64QAM / 20.0 MHz	-	19.200	-

99% Occupied Bandwidth for IC requirement

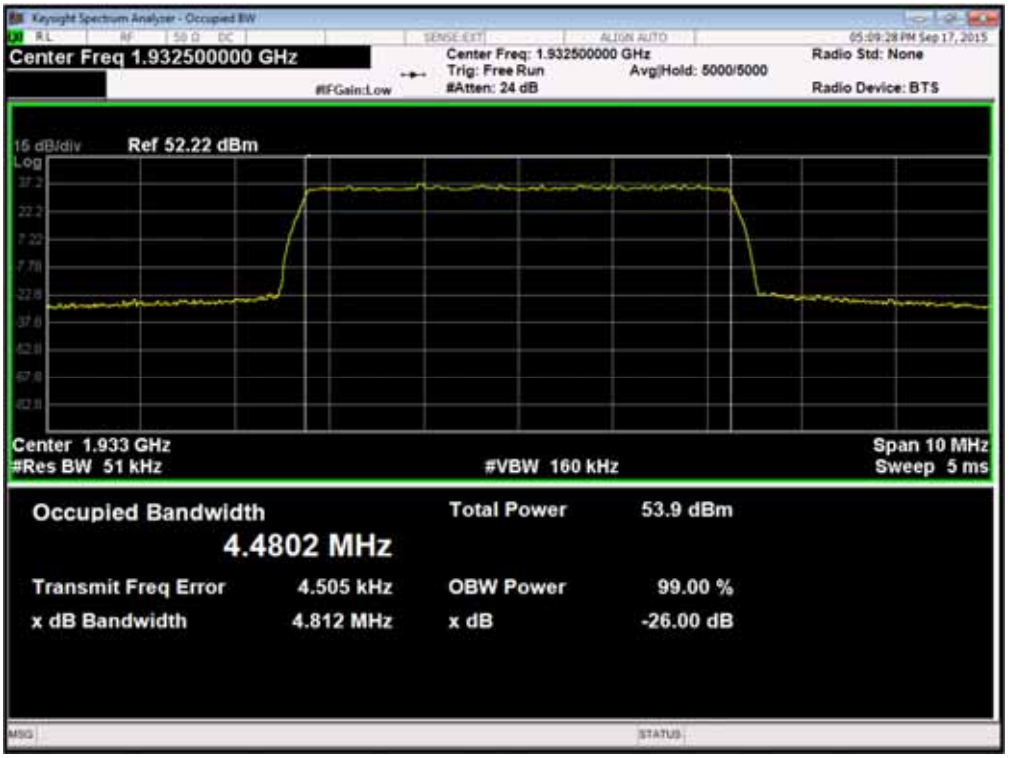
Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1932.5MHz	Channel Position M 1960.0MHz	Channel Position T 1987.5MHz
QPSK / 5.0 MHz	4.480	4.481	4.480
16QAM / 5.0 MHz	-	4.482	-
64QAM / 5.0 MHz	-	4.497	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1935.0MHz	Channel Position M 1960.0MHz	Channel Position T 1985.0MHz
QPSK / 10.0 MHz	-	8.973	-
16QAM / 10.0 MHz	-	8.976	-
64QAM / 10.0 MHz	-	8.983	-

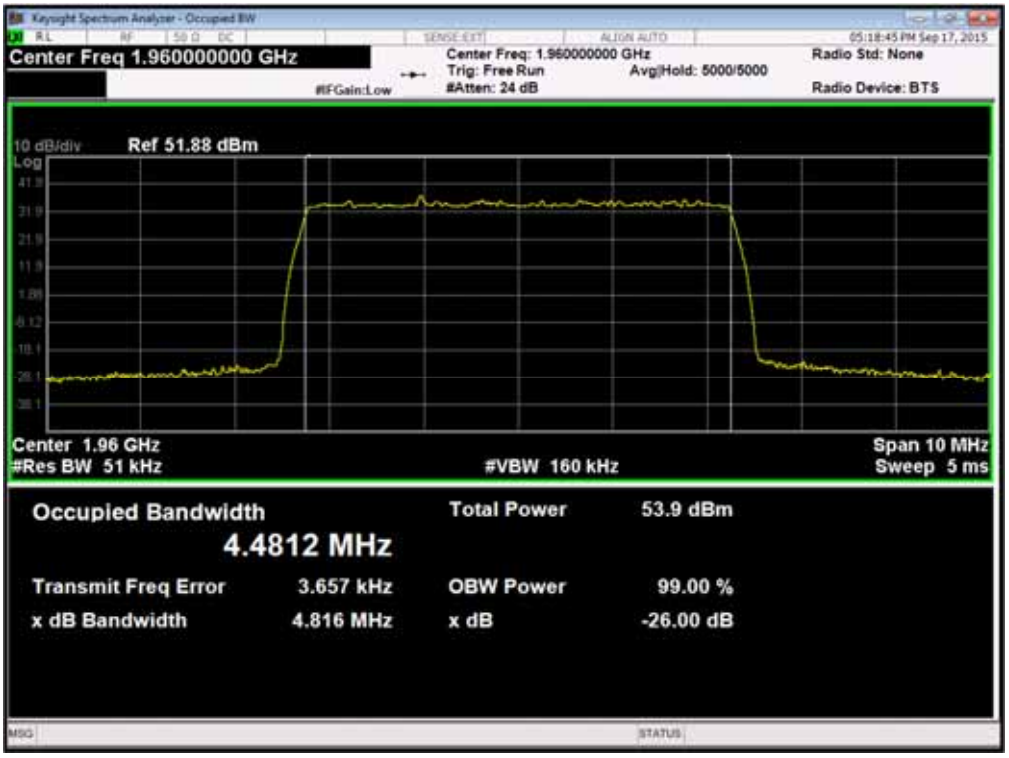
Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1937.5MHz	Channel Position M 1960.0MHz	Channel Position T 1982.5MHz
QPSK / 15.0 MHz	-	13.440	-
16QAM / 15.0 MHz	-	13.457	-
64QAM / 15.0 MHz	-	13.450	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1940.0MHz	Channel Position M 1960.0MHz	Channel Position T 1980.0MHz
QPSK / 20.0 MHz	17.887	17.910	17.902
16QAM / 20.0 MHz	-	17.927	-
64QAM / 20.0 MHz	-	17.893	-

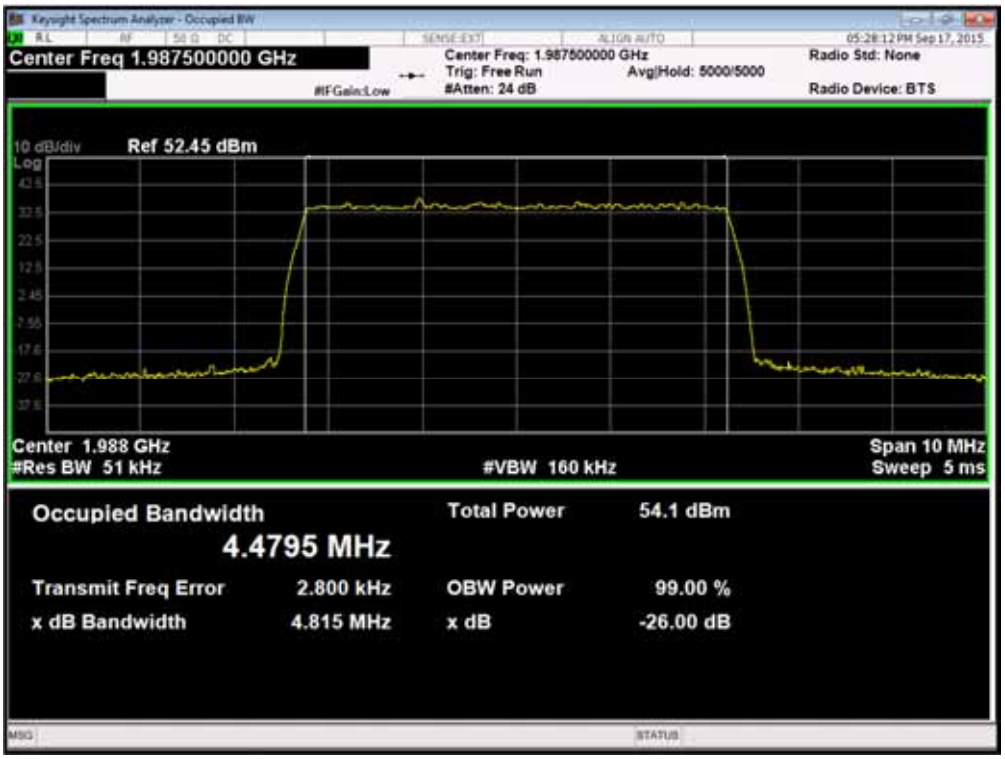
Channel Position B - QPSK / Bandwidth 5.0 MHz



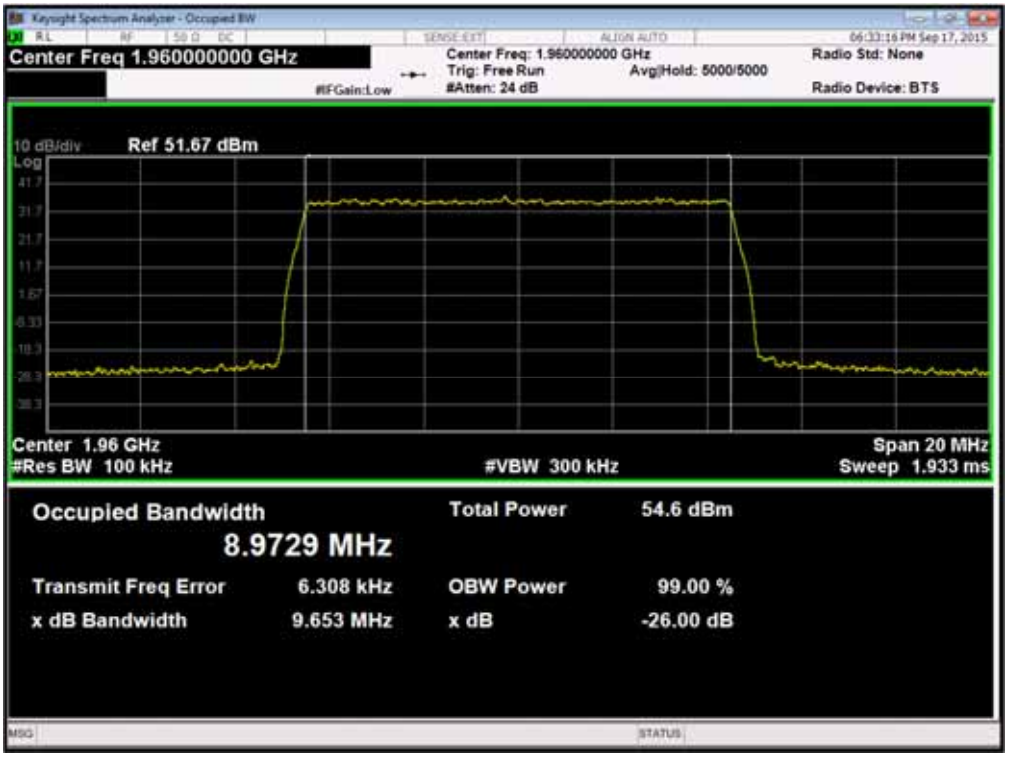
Channel Position M - QPSK / Bandwidth 5.0 MHz



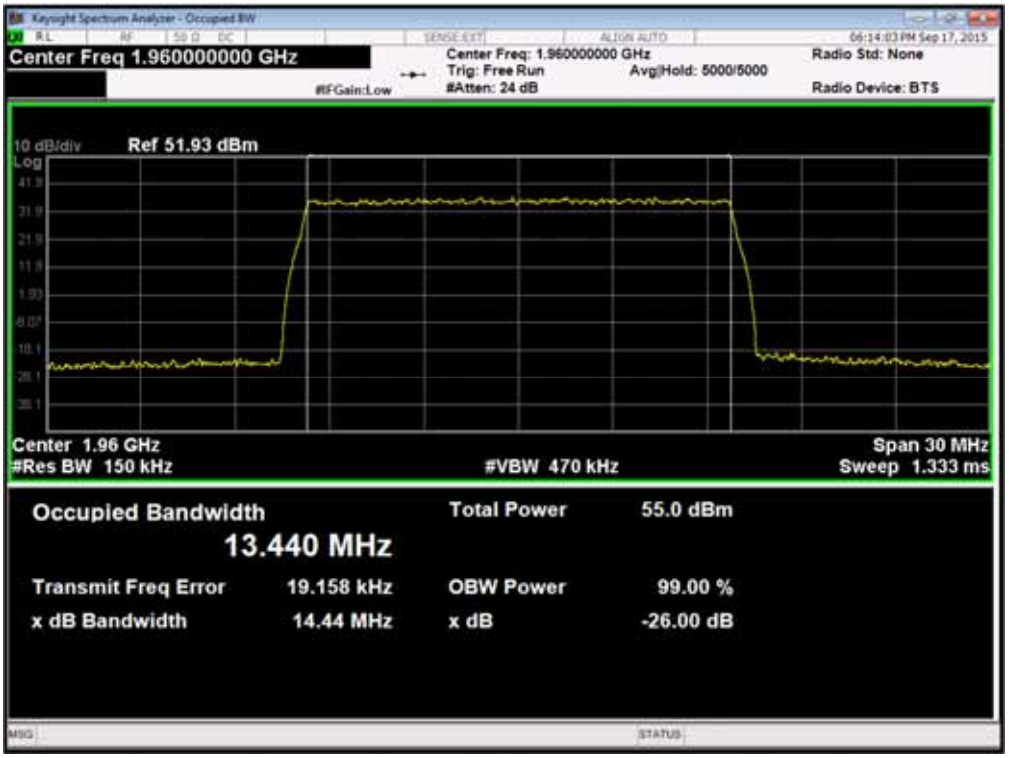
Channel Position T - QPSK / Bandwidth 5.0 MHz



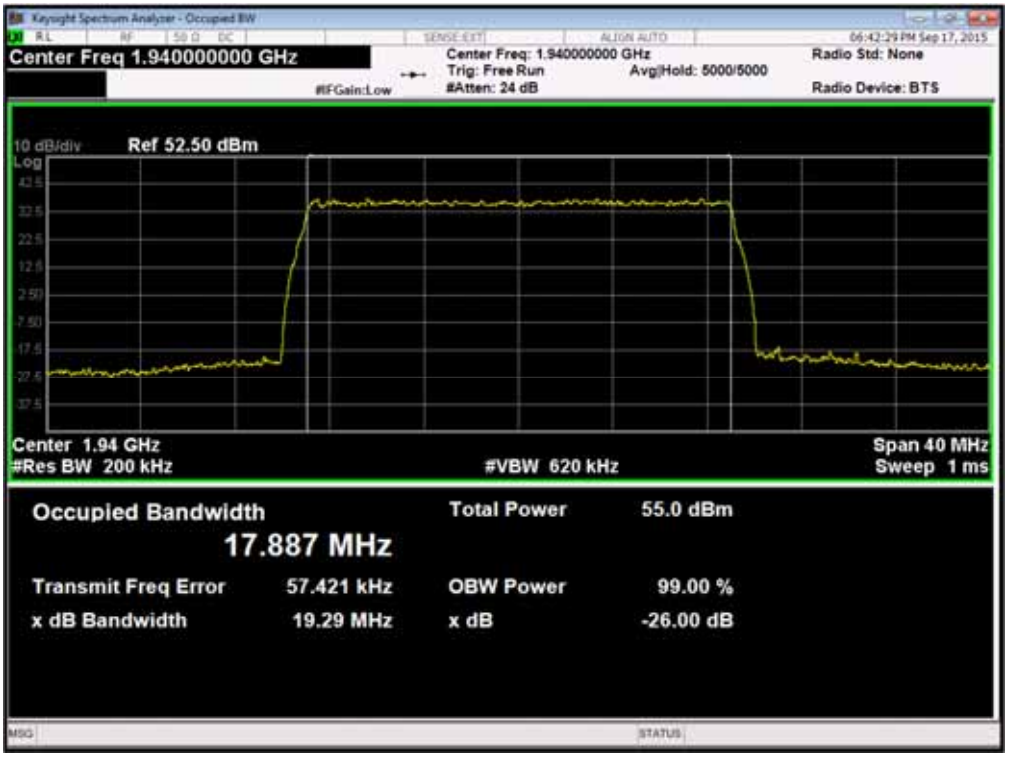
Channel Position M - QPSK / Bandwidth 10.0 MHz



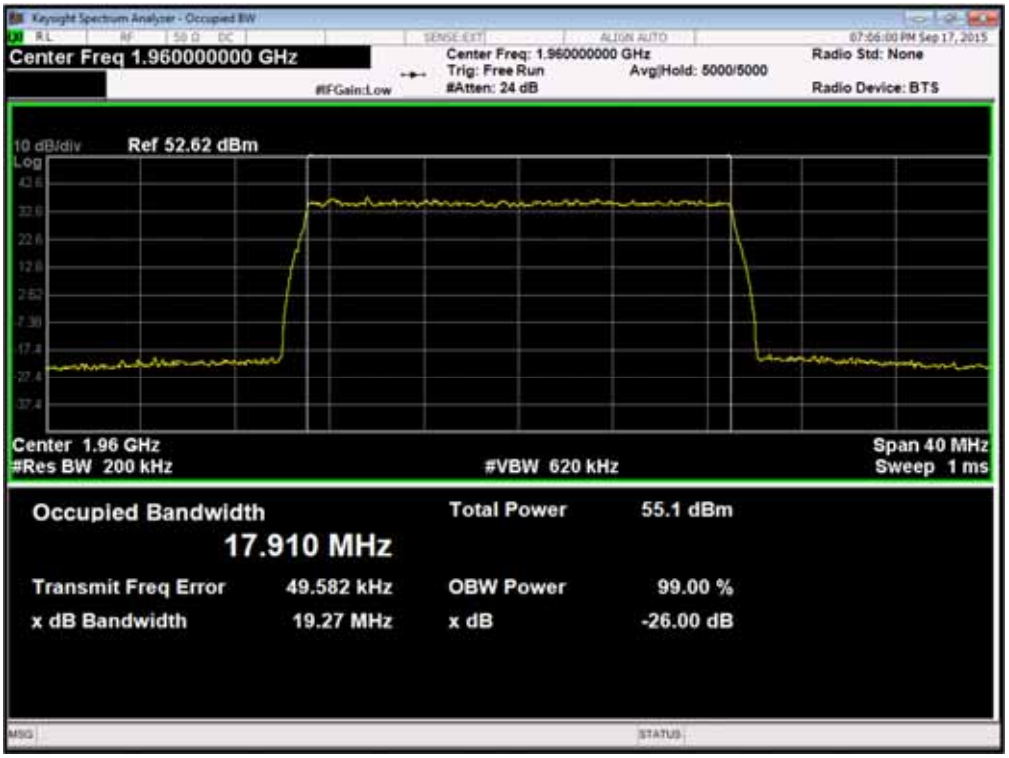
Channel Position M - QPSK / Bandwidth 15.0 MHz



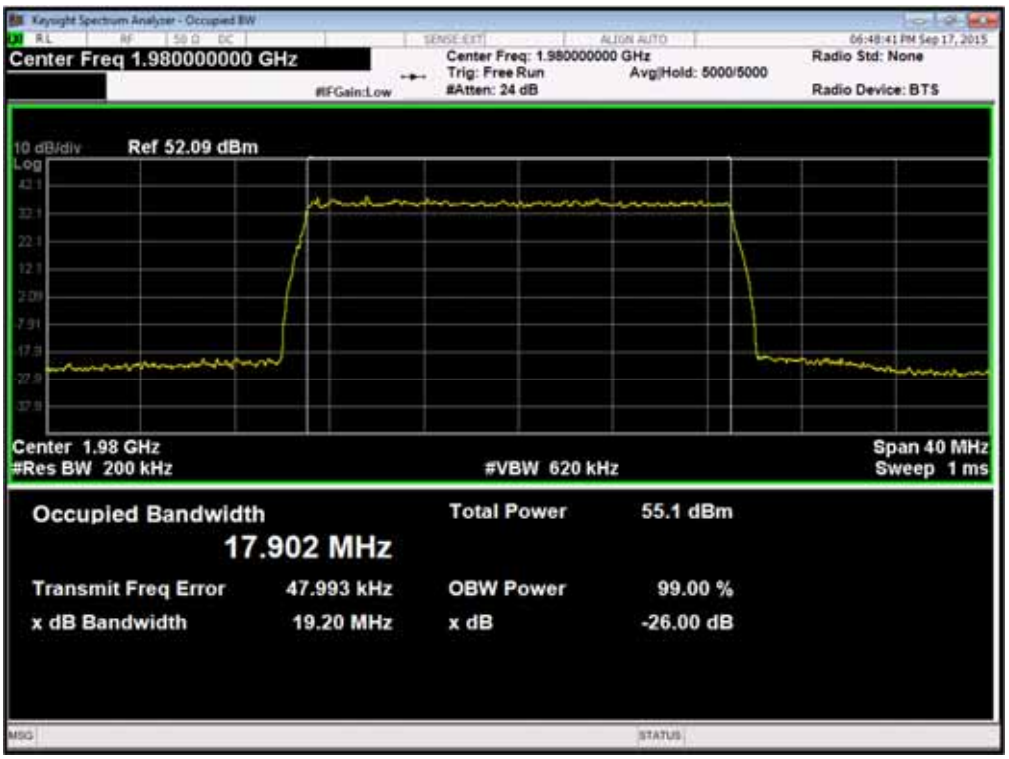
Channel Position B - QPSK / Bandwidth 20.0 MHz



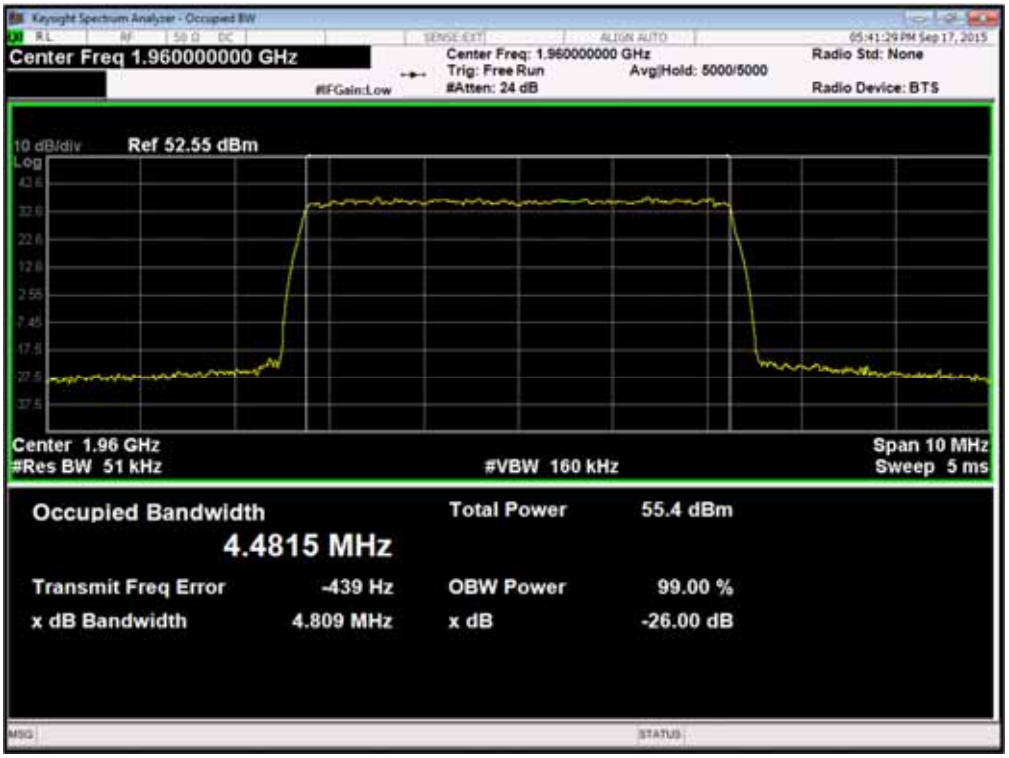
Channel Position M - QPSK / Bandwidth 20.0 MHz



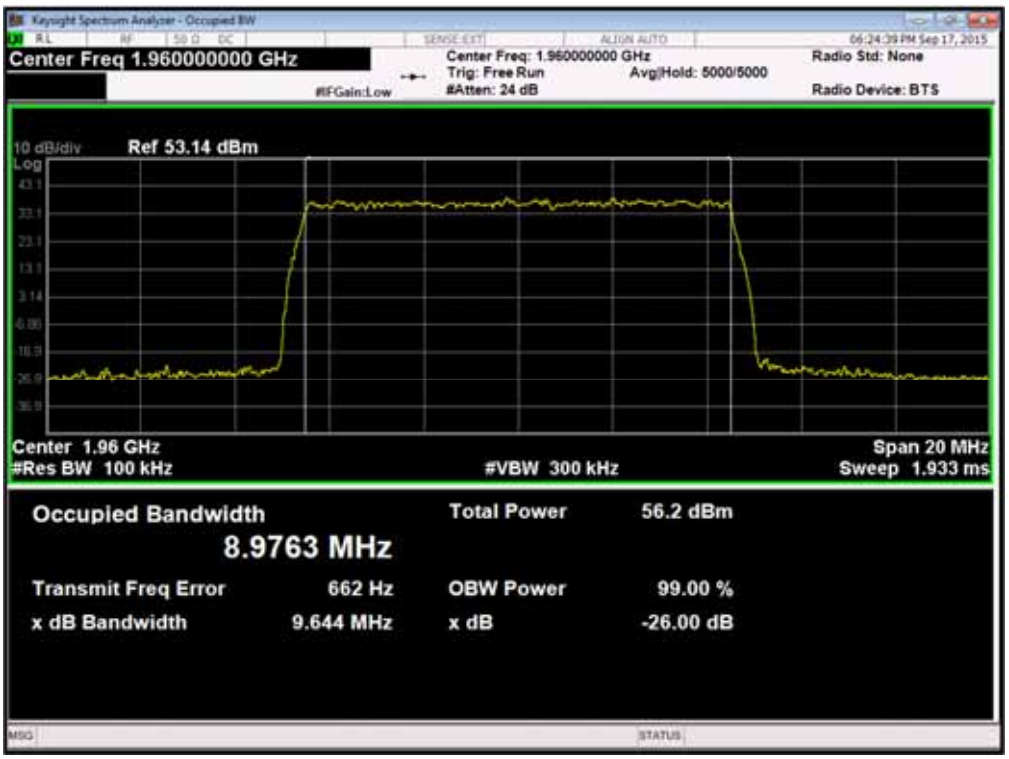
Channel Position T - QPSK / Bandwidth 20.0 MHz



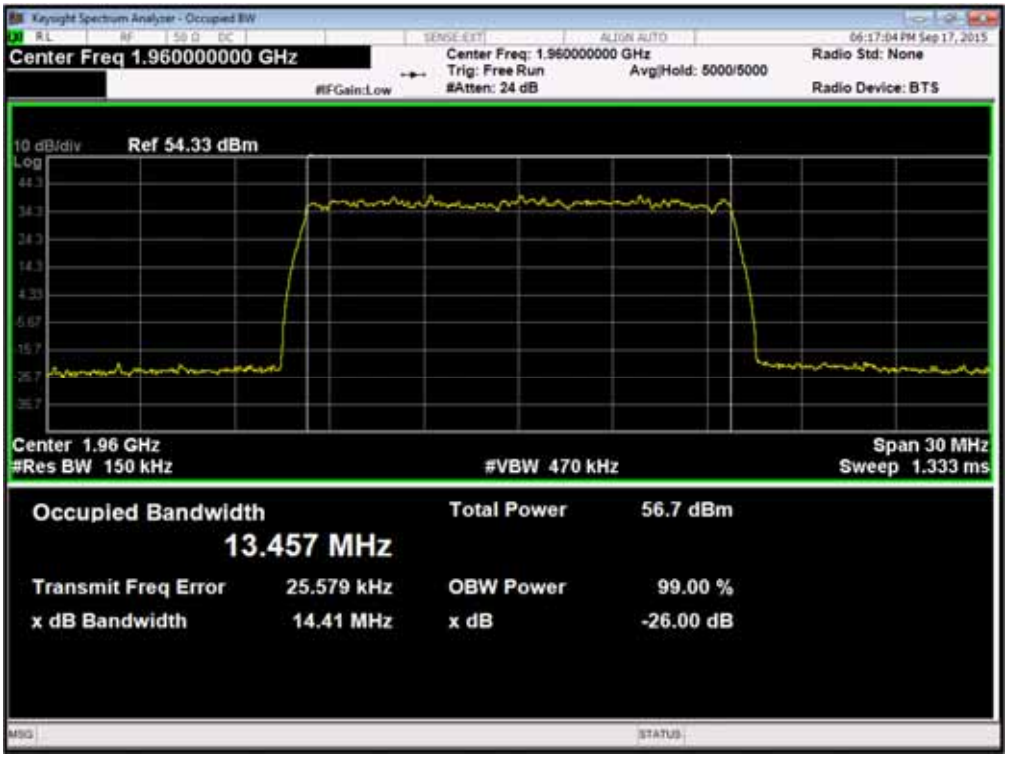
Channel Position M - 16QAM / Bandwidth 5.0 MHz



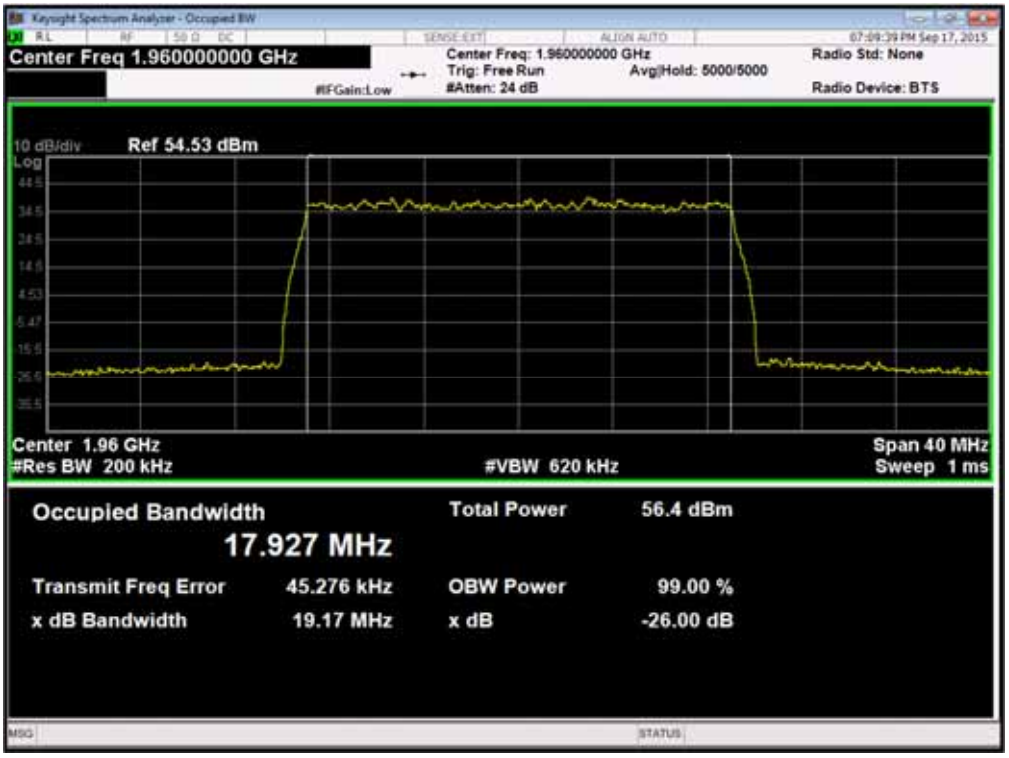
Channel Position M - 16QAM / Bandwidth 10.0 MHz



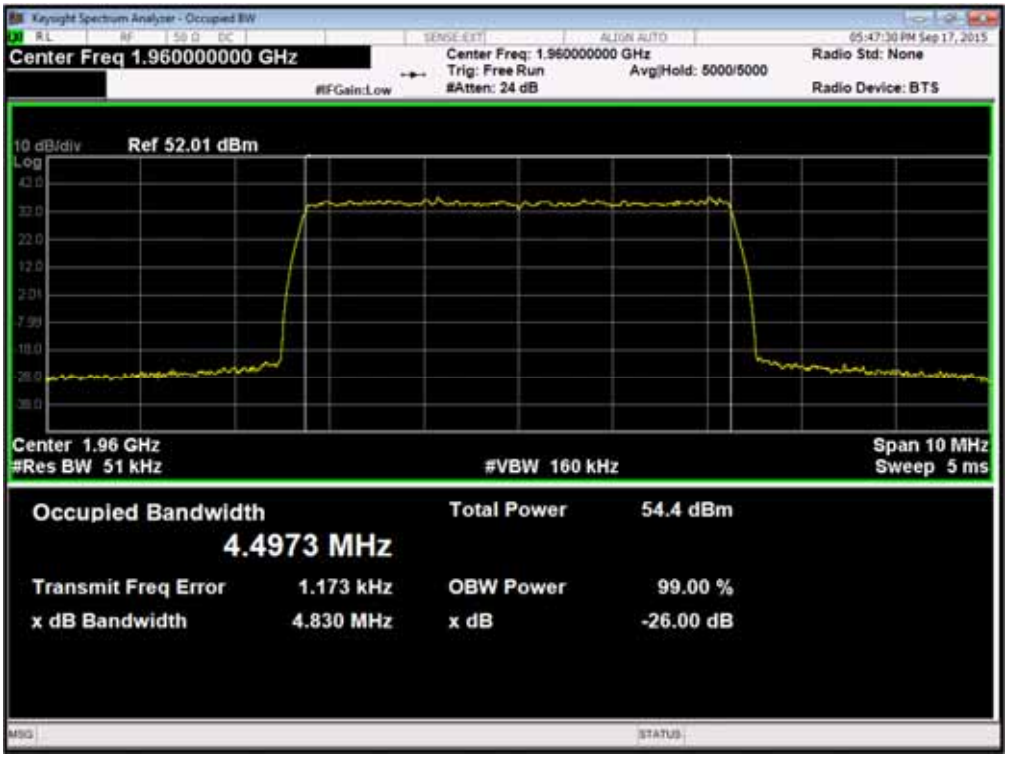
Channel Position M - 16QAM / Bandwidth 15.0 MHz



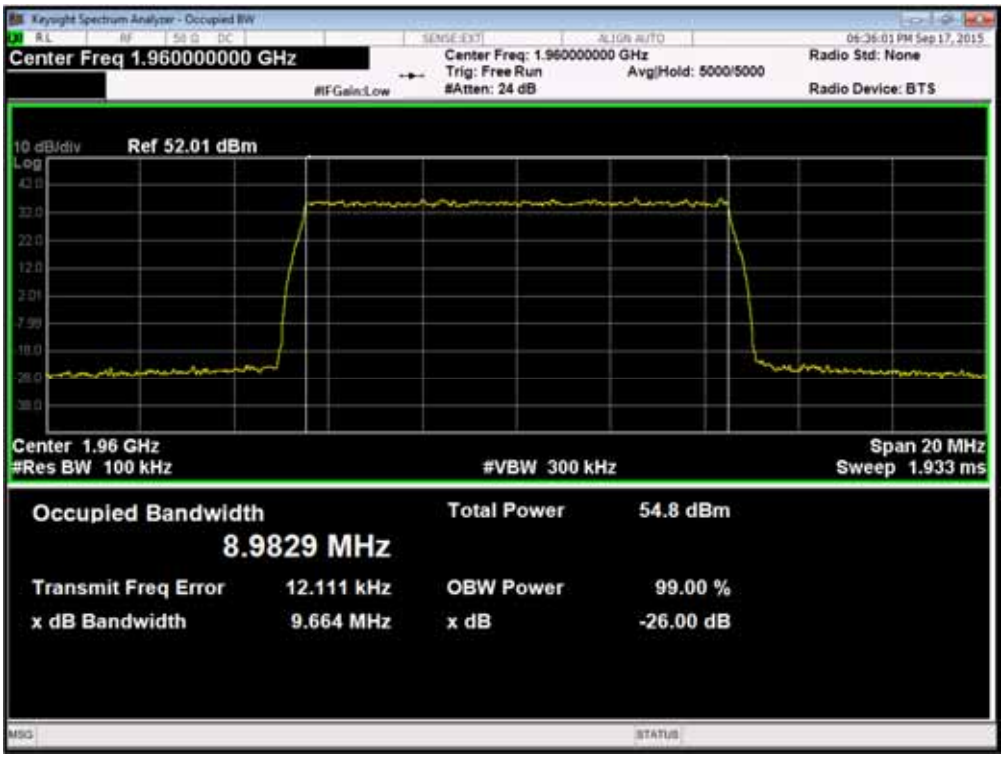
Channel Position M - 16QAM / Bandwidth 20.0 MHz



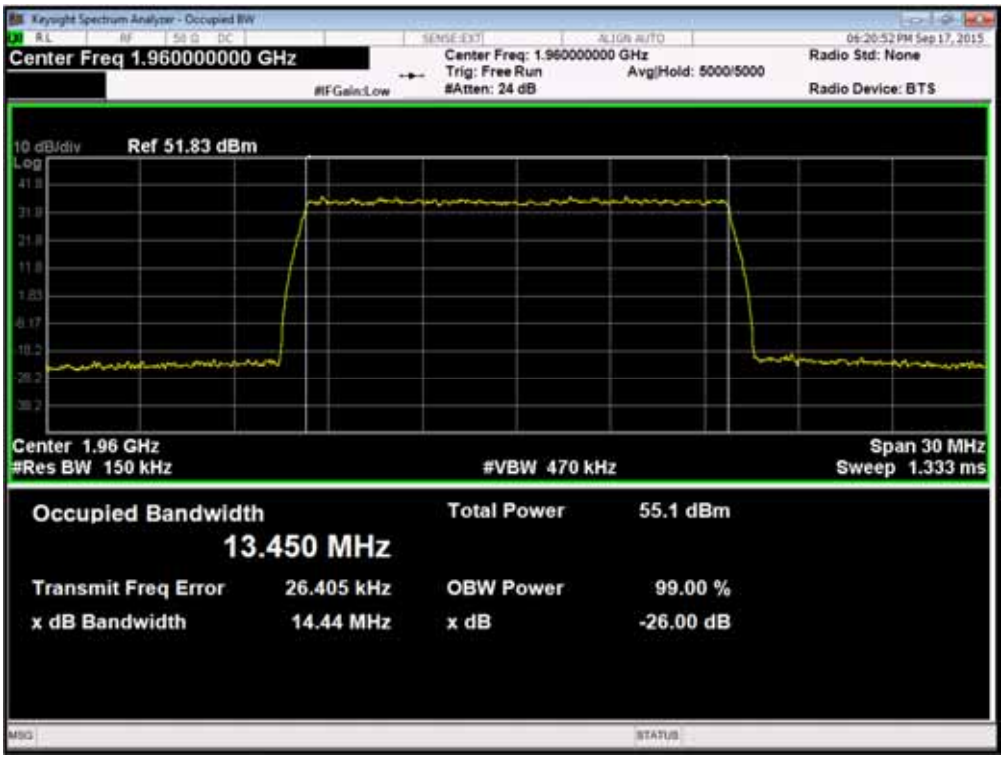
Channel Position M - 64QAM / Bandwidth 5.0 MHz



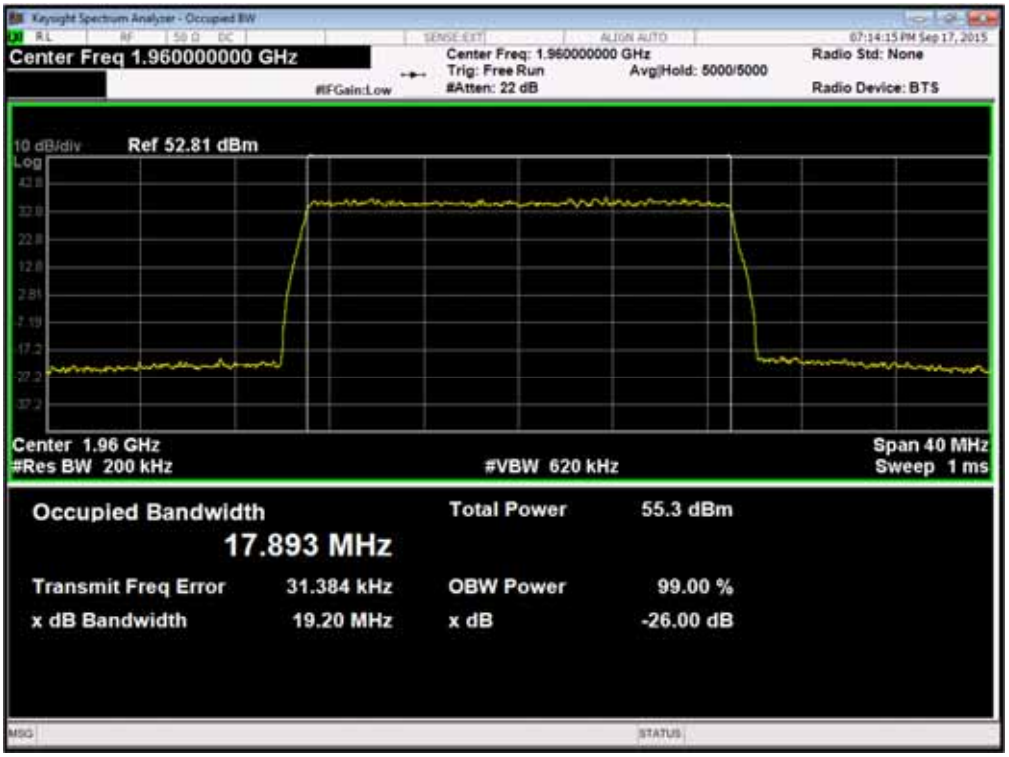
Channel Position M - 64QAM / Bandwidth 10.0 MHz



Channel Position M - 64QAM / Bandwidth 15.0 MHz



Channel Position M - 64QAM / Bandwidth 20.0 MHz



Configuration L-MIMO-MC 1 (2C)

Maximum Output Power 46.0dBm per port

-26dBc Occupied Bandwidth for FCC requirement

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B_{RFBW} 1932.5MHz + 1967.5MHz	Channel Position M_{RFBW} 1942.5MHz + 1977.5MHz	Channel Position T_{RFBW} 1952.5MHz + 1987.5MHz
QPSK / 5.0 MHz & 5.0 MHz	39.960	39.940	39.950
16QAM / 5.0 MHz & 5.0 MHz	-	39.910	-
64QAM / 5.0 MHz & 5.0 MHz	-	39.980	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B_{RFBW} 1932.5MHz + 1965.0MHz	Channel Position M_{RFBW} 1942.5MHz + 1975.0MHz	Channel Position T_{RFBW} 1952.5MHz + 1985.0MHz
QPSK / 5.0 MHz & 10.0 MHz	39.750	39.760	39.760
16QAM / 5.0 MHz & 10.0 MHz	-	39.750	-
64QAM / 5.0 MHz & 10.0 MHz	-	39.740	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B_{RFBW} 1932.5MHz + 1962.5MHz	Channel Position M_{RFBW} 1942.5MHz + 1972.5MHz	Channel Position T_{RFBW} 1952.5MHz + 1982.5MHz
QPSK / 5.0 MHz & 15.0 MHz	39.780	39.790	39.730
16QAM / 5.0 MHz & 15.0 MHz	-	39.770	-
64QAM / 5.0 MHz & 15.0 MHz	-	39.780	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B_{RFBW} 1932.5MHz + 1960.0MHz	Channel Position M_{RFBW} 1942.5MHz + 1970.0MHz	Channel Position T_{RFBW} 1952.5MHz + 1980.0MHz
QPSK / 5.0 MHz & 20.0 MHz	39.260	39.300	39.260
16QAM / 5.0 MHz & 20.0 MHz	-	39.210	-
64QAM / 5.0 MHz & 20.0 MHz	-	39.240	-

99% Occupied Bandwidth for IC requirement

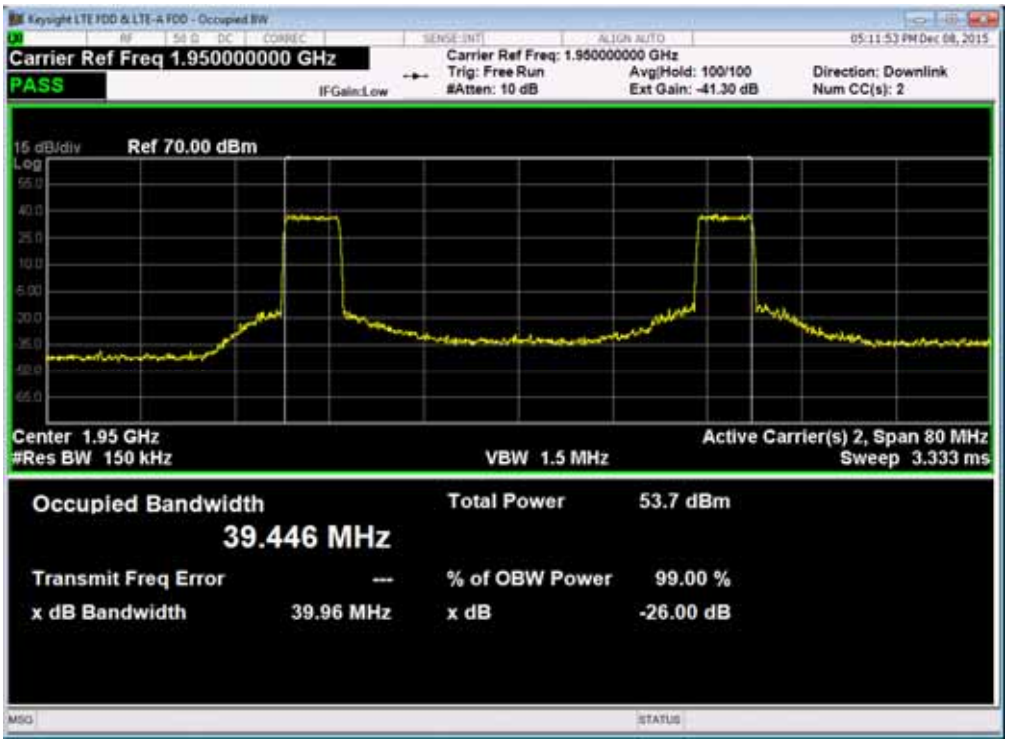
Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B_{RFBW} 1932.5MHz + 1967.5MHz	Channel Position M_{RFBW} 1942.5MHz + 1977.5MHz	Channel Position T_{RFBW} 1952.5MHz + 1987.5MHz
QPSK / 5.0 MHz & 5.0 MHz	39.446	39.451	39.453
16QAM / 5.0 MHz & 5.0 MHz	-	39.497	-
64QAM / 5.0 MHz & 5.0 MHz	-	39.483	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B_{RFBW} 1932.5MHz + 1965.0MHz	Channel Position M_{RFBW} 1942.5MHz + 1975.0MHz	Channel Position T_{RFBW} 1952.5MHz + 1985.0MHz
QPSK / 5.0 MHz & 10.0 MHz	39.141	39.178	39.162
16QAM / 5.0 MHz & 10.0 MHz	-	39.141	-
64QAM / 5.0 MHz & 10.0 MHz	-	39.170	-

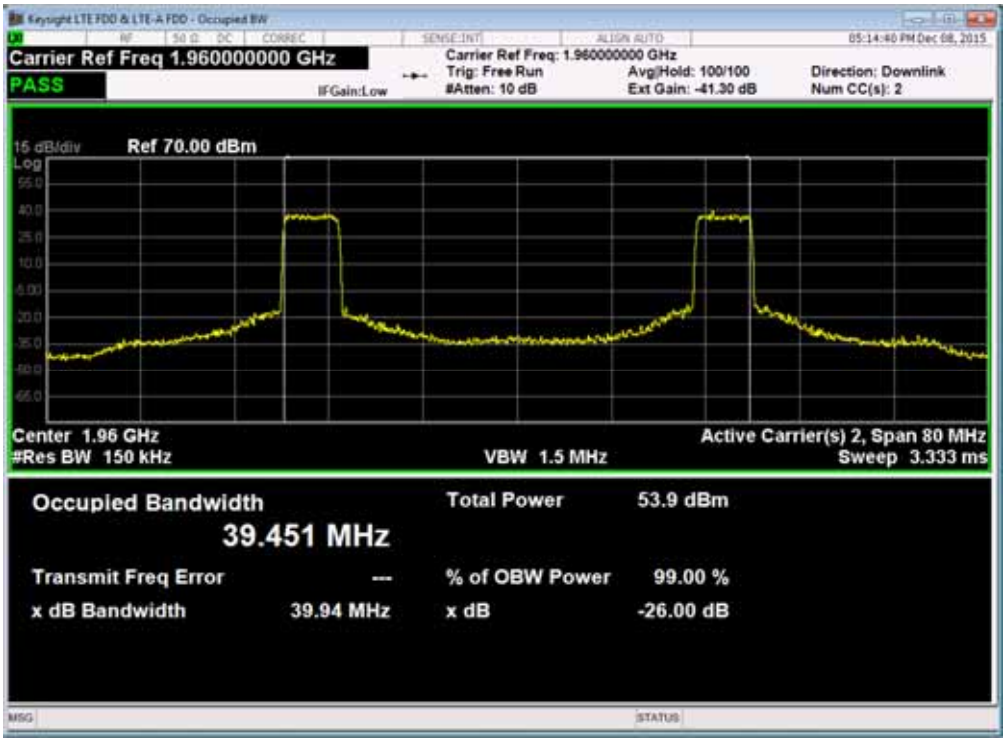
Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B_{RFBW} 1932.5MHz + 1962.5MHz	Channel Position M_{RFBW} 1942.5MHz + 1972.5MHz	Channel Position T_{RFBW} 1952.5MHz + 1982.5MHz
QPSK / 5.0 MHz & 15.0 MHz	38.917	38.914	38.908
16QAM / 5.0 MHz & 15.0 MHz	-	38.911	-
64QAM / 5.0 MHz & 15.0 MHz	-	38.915	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B_{RFBW} 1932.5MHz + 1960.0MHz	Channel Position M_{RFBW} 1942.5MHz + 1970.0MHz	Channel Position T_{RFBW} 1952.5MHz + 1980.0MHz
QPSK / 5.0 MHz & 20.0 MHz	38.594	38.567	38.570
16QAM / 5.0 MHz & 20.0 MHz	-	38.514	-
64QAM / 5.0 MHz & 20.0 MHz	-	38.620	-

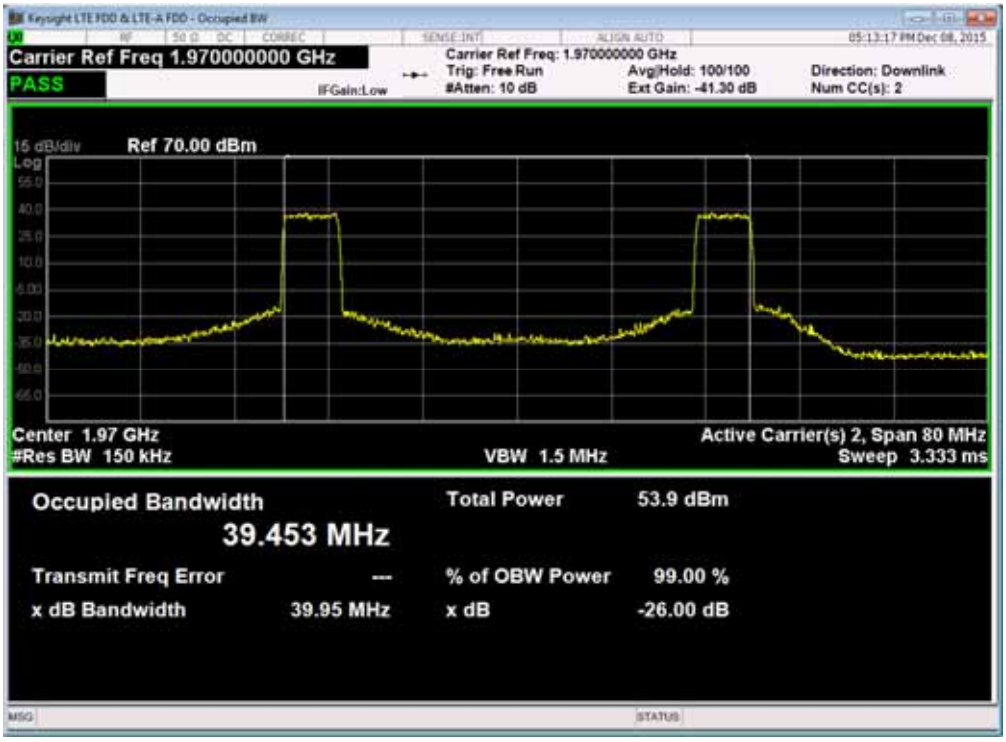
Channel Position B_{RFBW} - QPSK / Bandwidth 5.0 MHz & 5.0 MHz



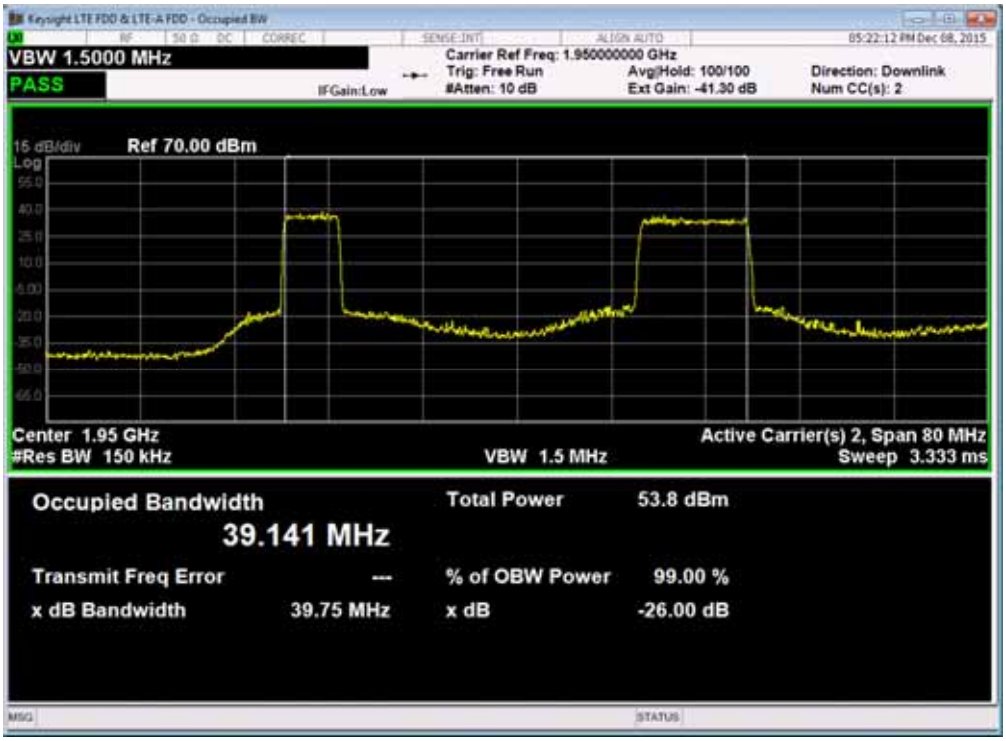
Channel Position M_{RFBW} - QPSK / Bandwidth 5.0 MHz & 5.0 MHz



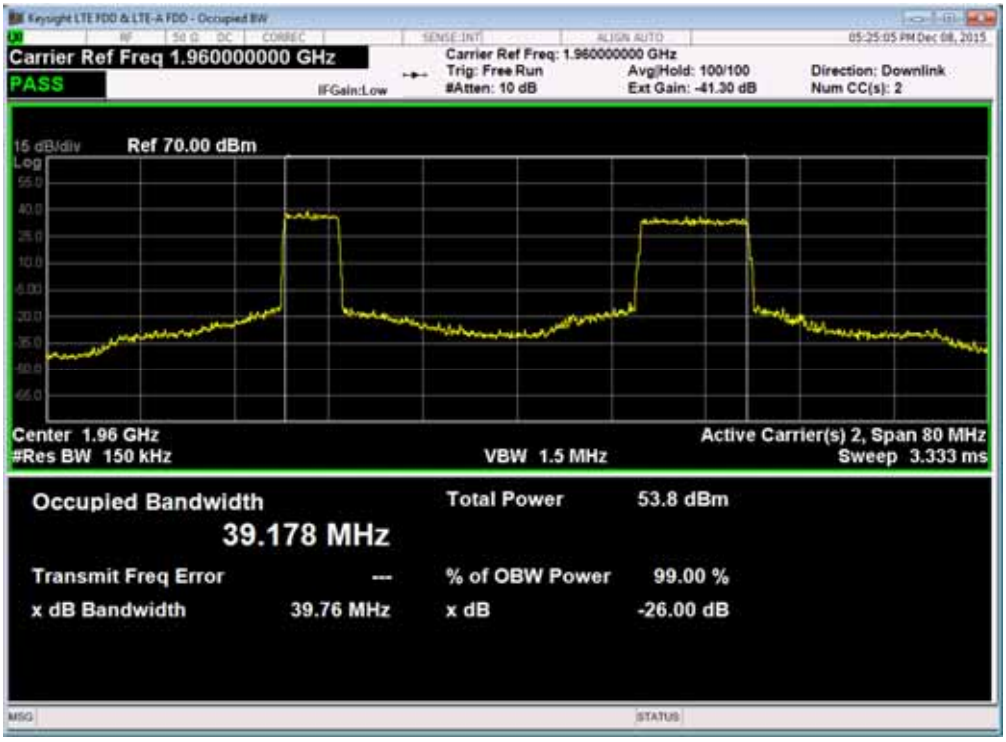
Channel Position T_{RFBW} - QPSK / Bandwidth 5.0 MHz & 5.0 MHz



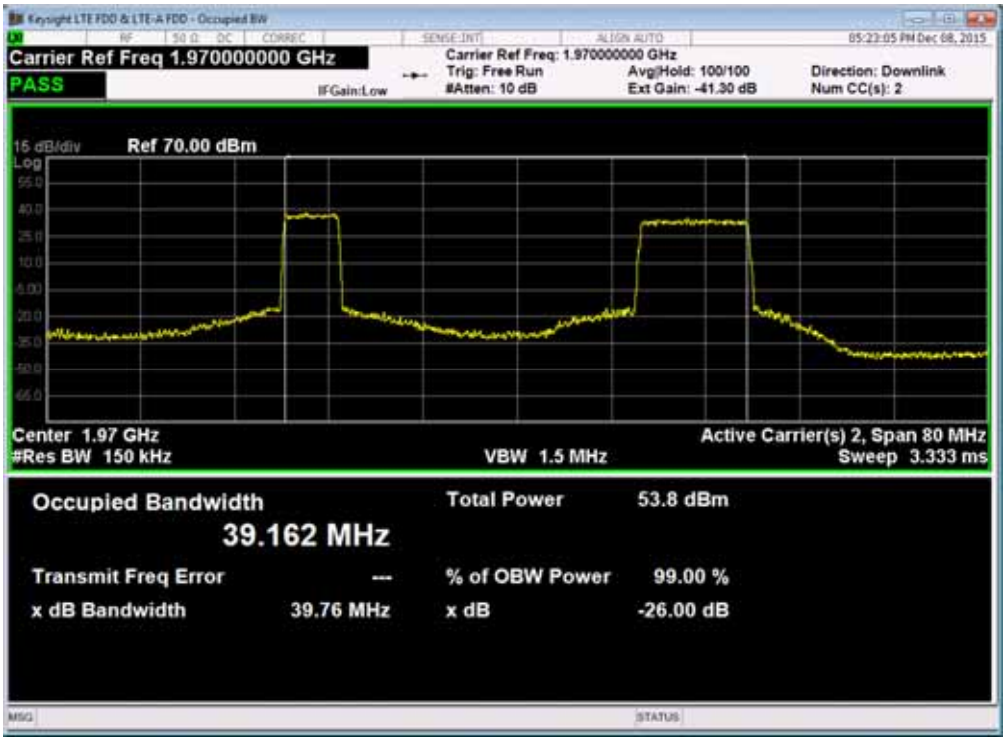
Channel Position B_{RFBW} - QPSK / Bandwidth 5.0 MHz & 10.0 MHz



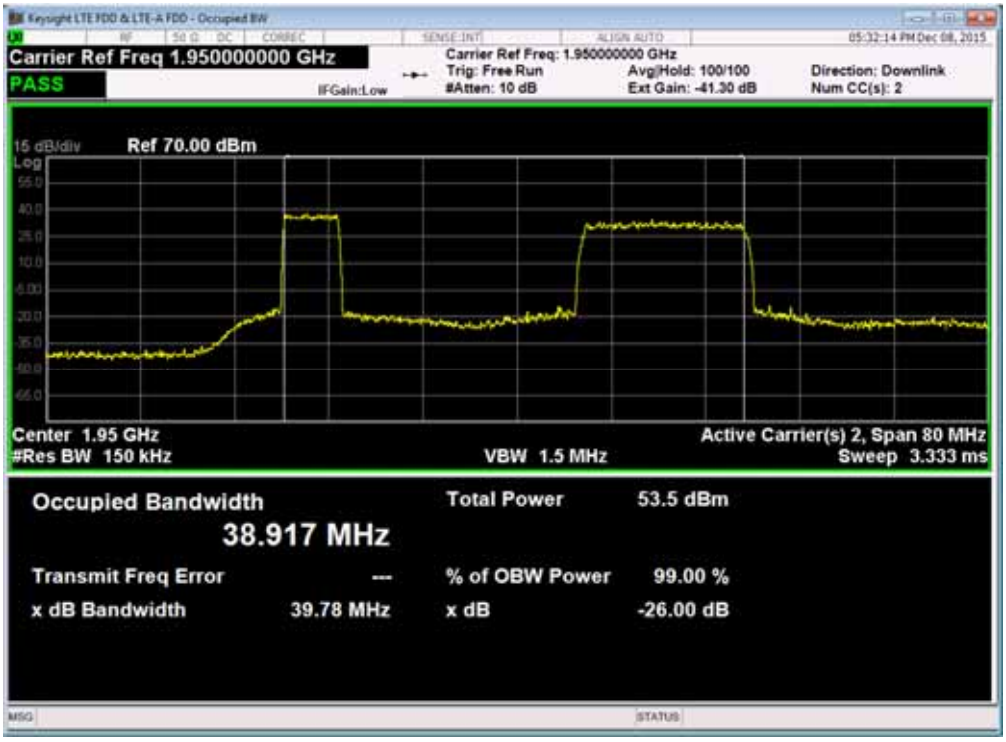
Channel Position M_{RFBW} - QPSK / Bandwidth 5.0 MHz & 10.0 MHz



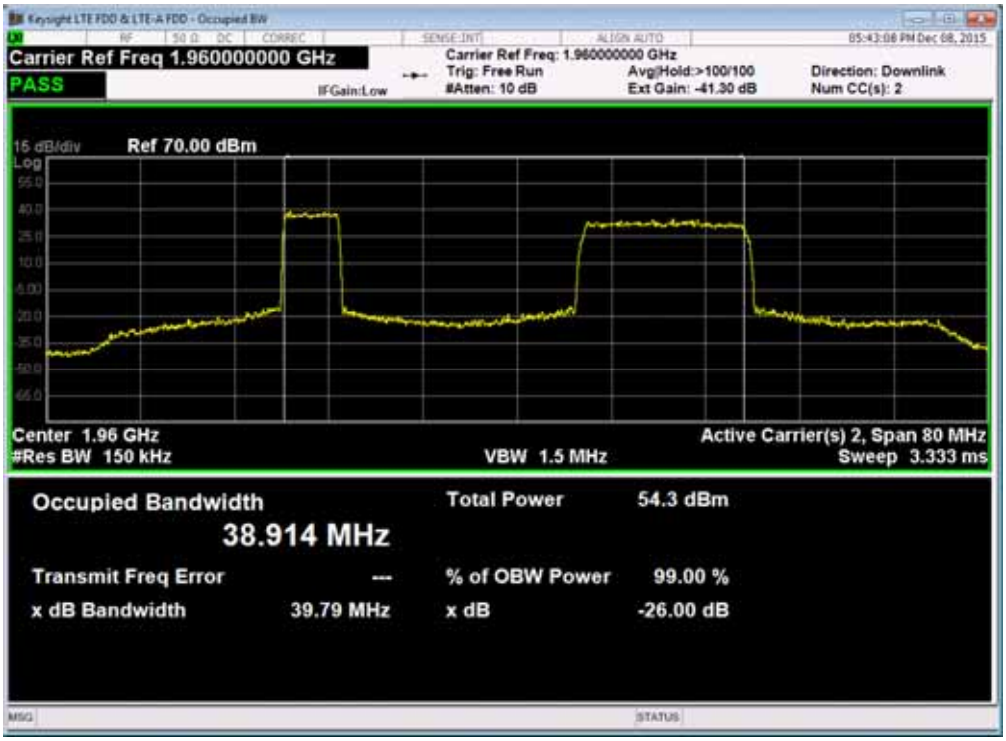
Channel Position T_{RFBW} - QPSK / Bandwidth 5.0 MHz & 10.0 MHz



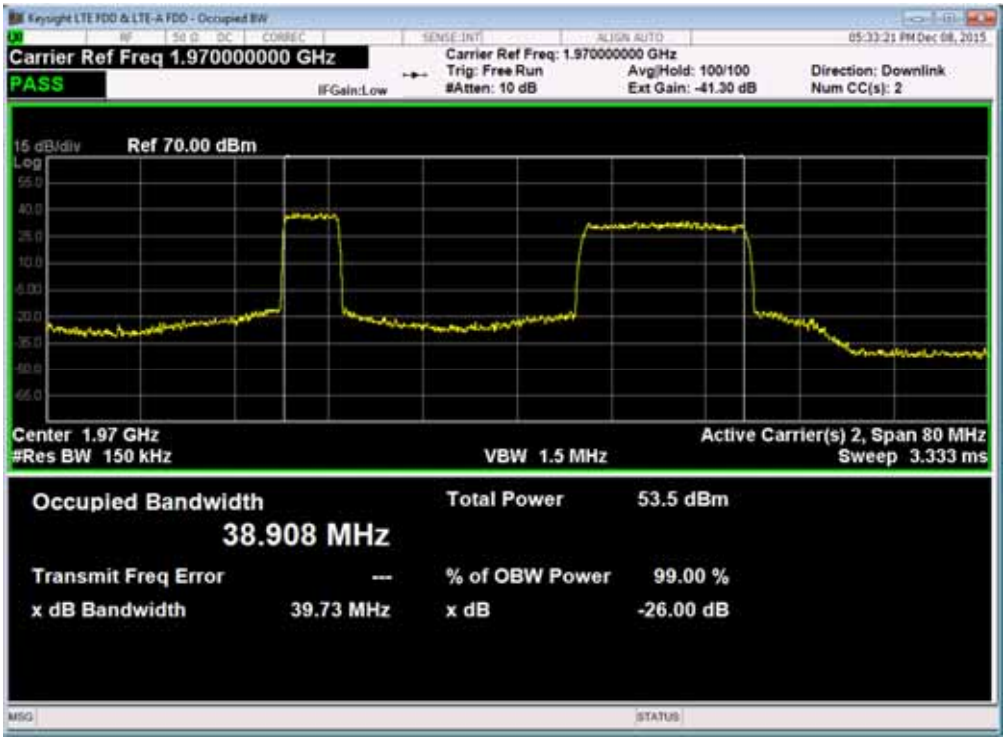
Channel Position B_{RFBW} - QPSK / Bandwidth 5.0 MHz & 15.0 MHz



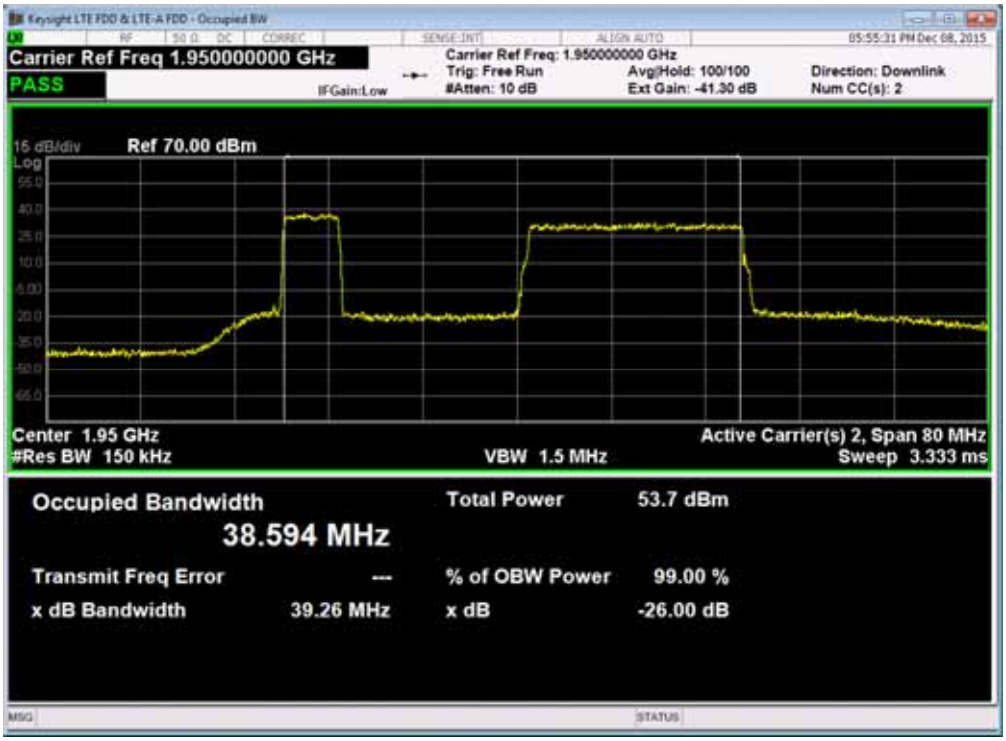
Channel Position M_{RFBW} - QPSK / Bandwidth 5.0 MHz & 15.0 MHz



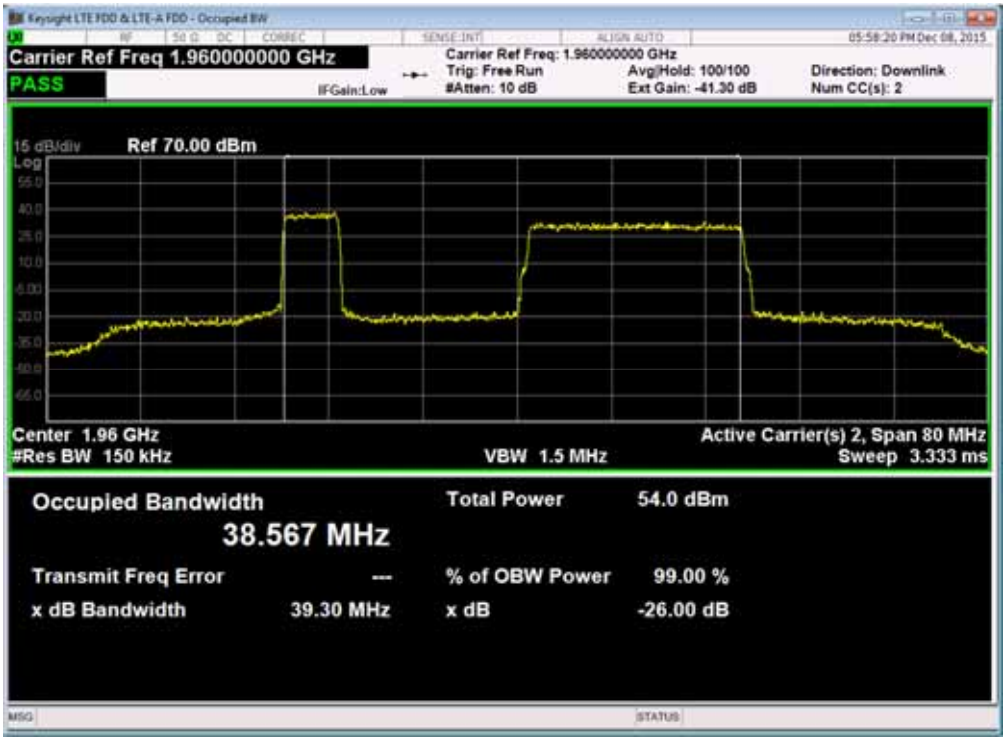
Channel Position T_{RFBW} - QPSK / Bandwidth 5.0 MHz & 15.0 MHz



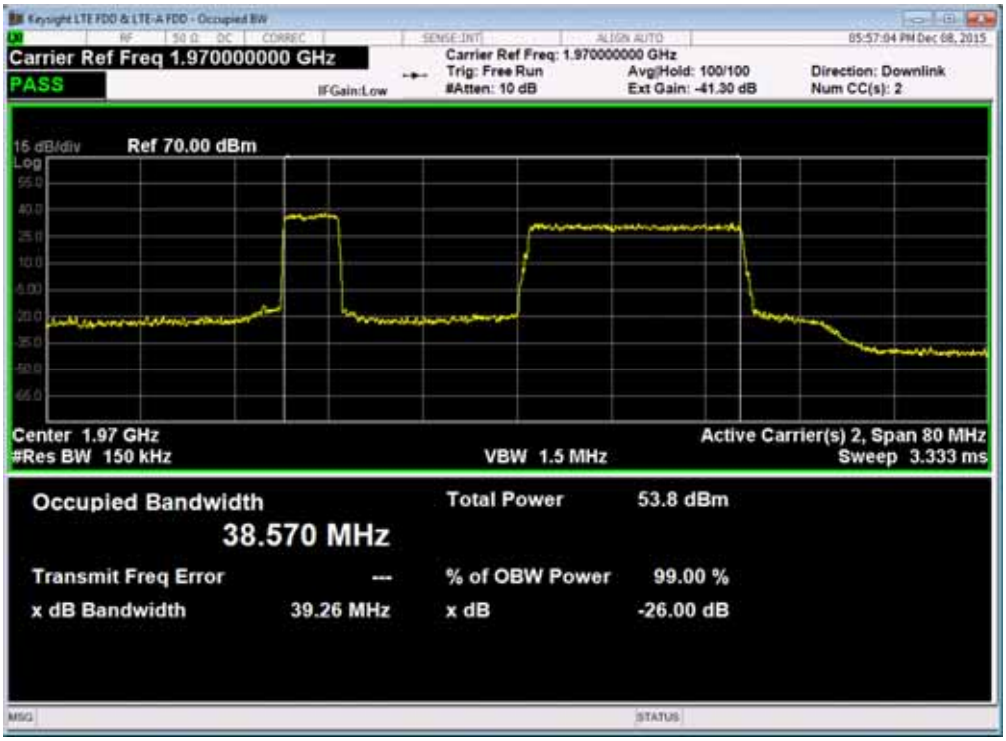
Channel Position B_{RFBW} - QPSK / Bandwidth 5.0 MHz & 20.0 MHz



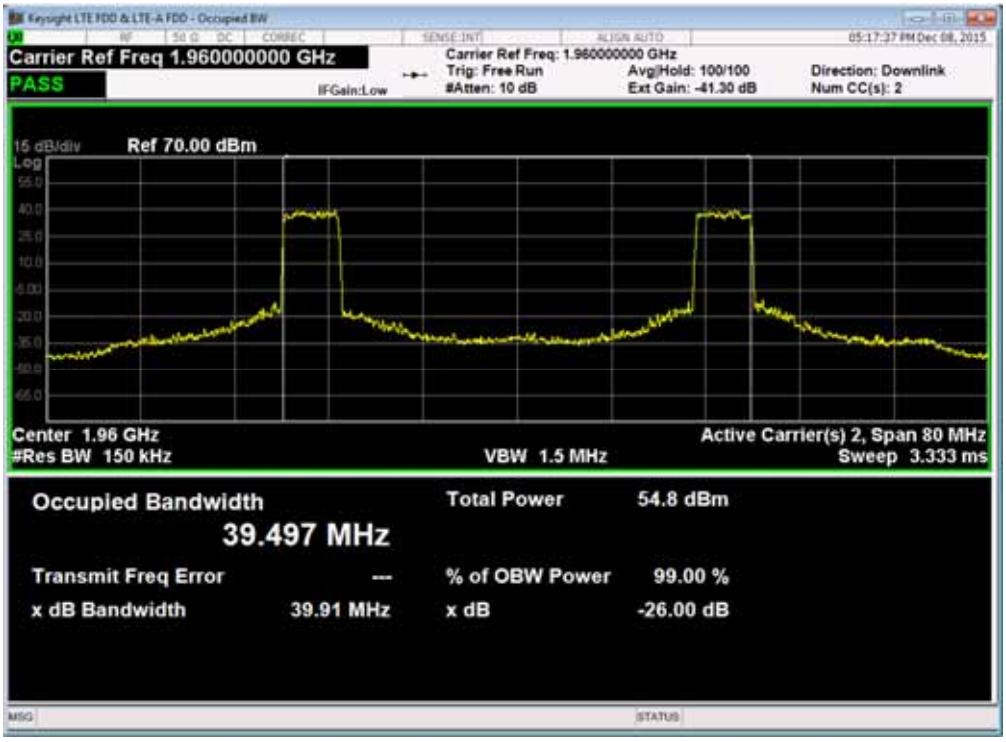
Channel Position M_{RFBW} - QPSK / Bandwidth 5.0 MHz & 20.0 MHz



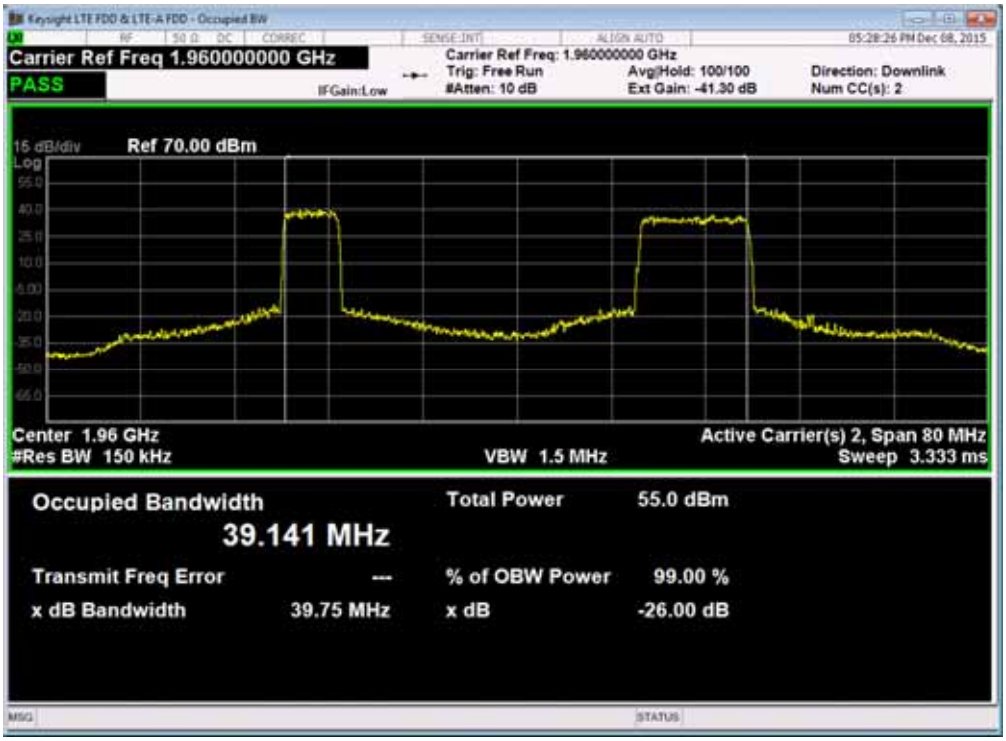
Channel Position T_{RFBW} - QPSK / Bandwidth 5.0 MHz & 20.0 MHz



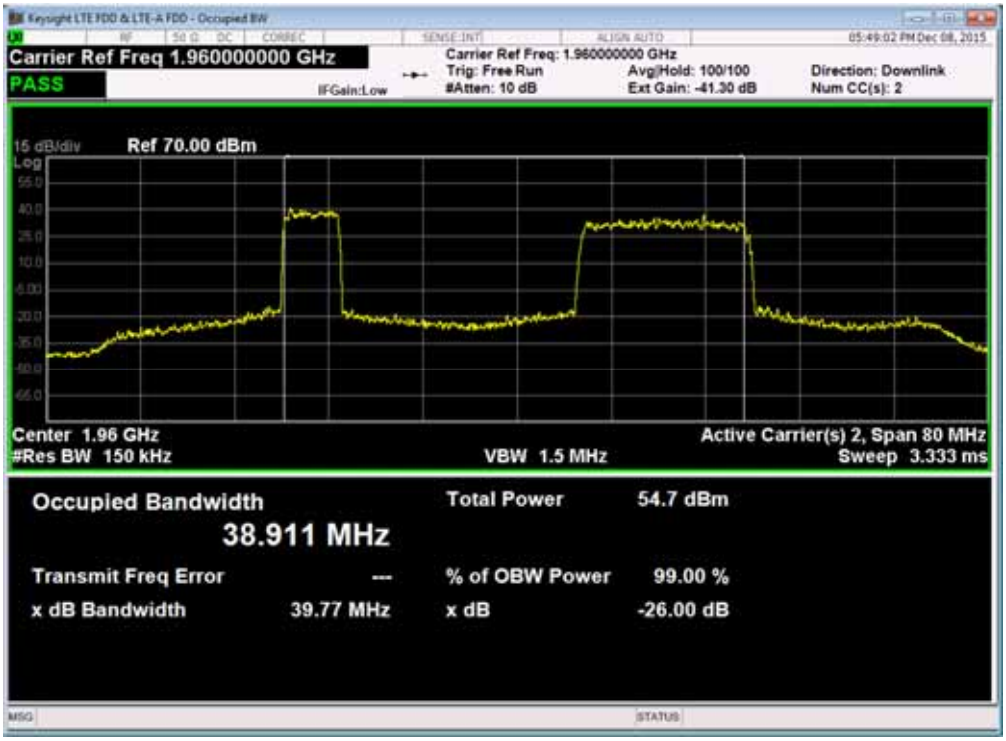
Channel Position M_{RFBW} - 16QAM / Bandwidth 5.0 MHz & 5.0 MHz



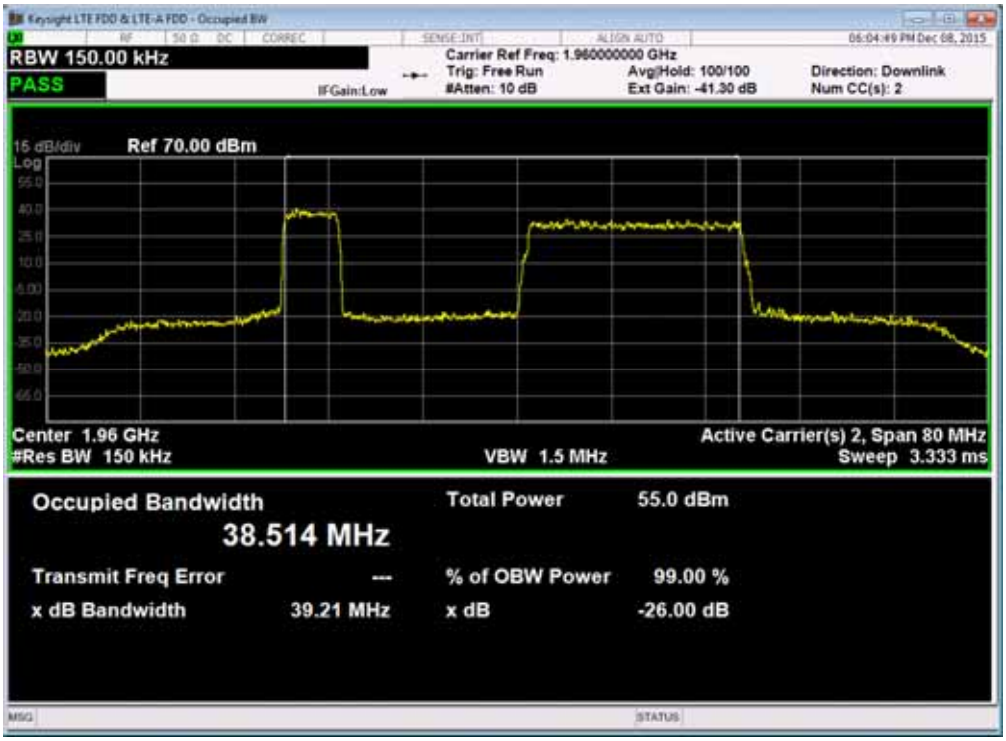
Channel Position M_{RFBW} - 16QAM / Bandwidth 5.0 MHz & 10.0 MHz



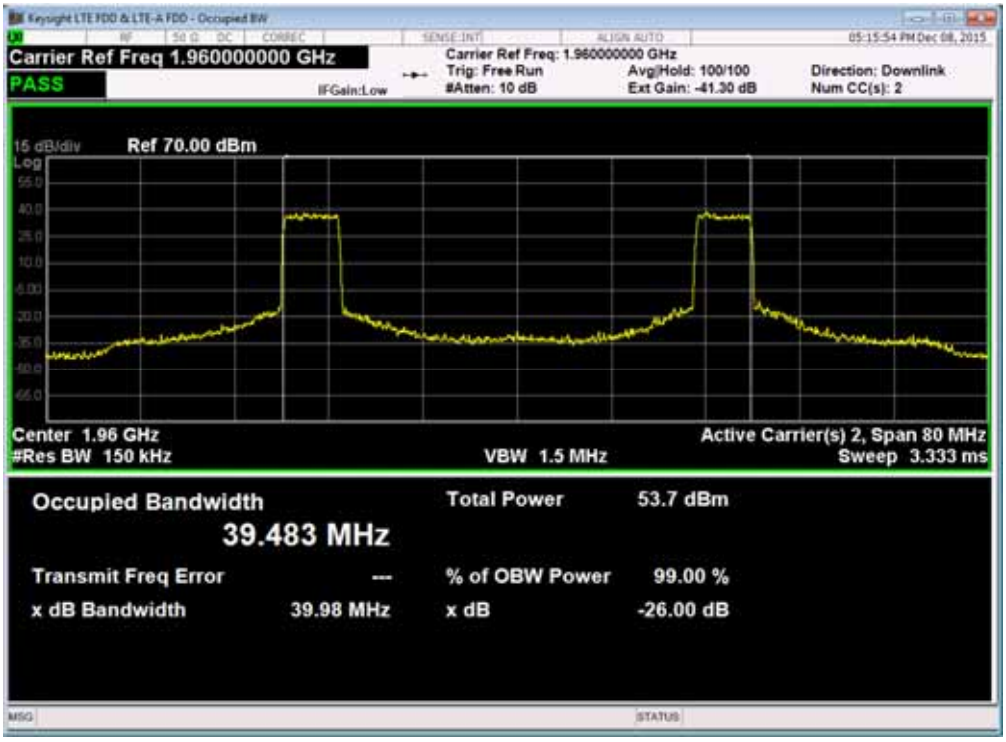
Channel Position M_{RFBW} - 16QAM / Bandwidth 5.0 MHz & 15.0 MHz



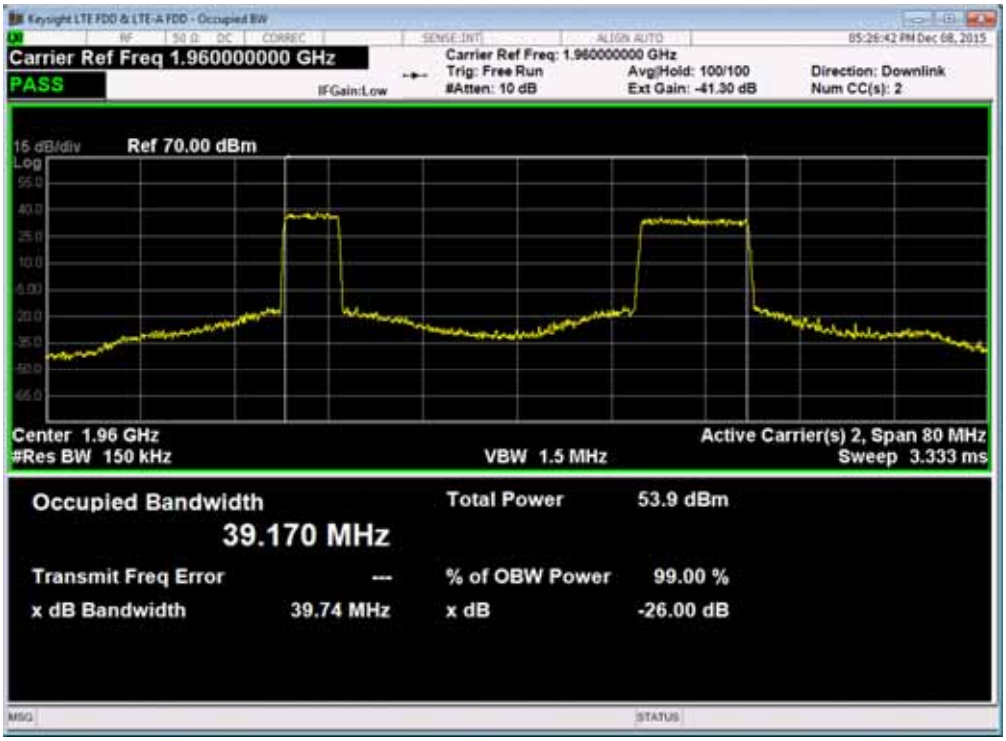
Channel Position M_{RFBW} - 16QAM / Bandwidth 5.0 MHz & 20.0 MHz



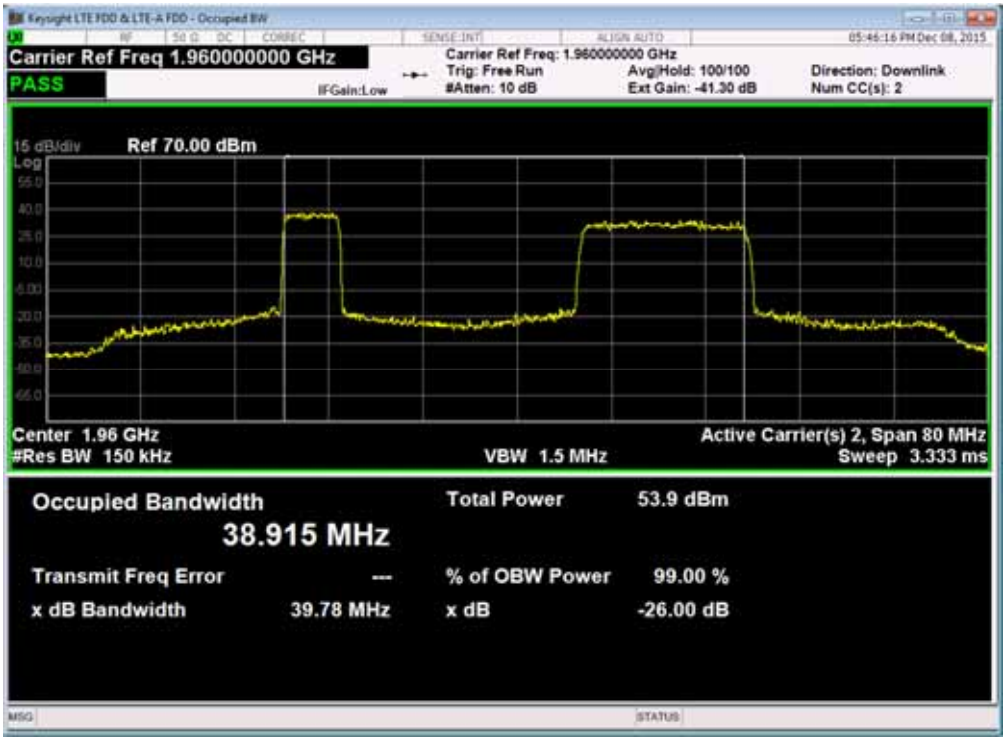
Channel Position M_{RFBW} - 64QAM / Bandwidth 5.0 MHz & 5.0 MHz



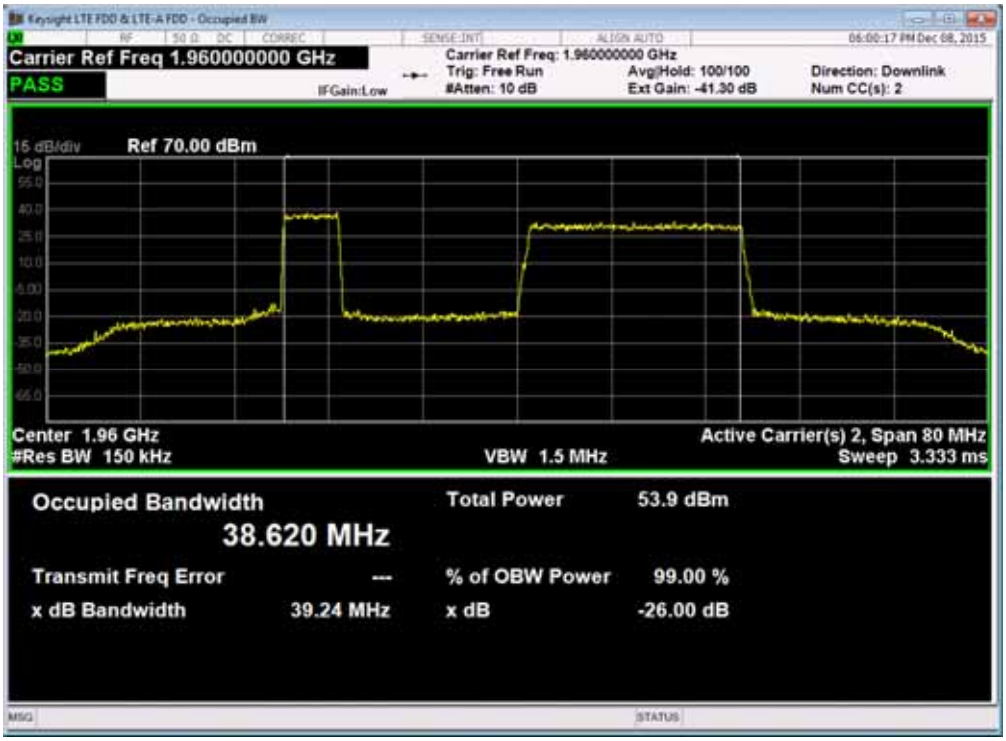
Channel Position M_{RFBW} - 64QAM / Bandwidth 5.0 MHz & 10.0 MHz



Channel Position M_{RFBW} - 64QAM / Bandwidth 5.0 MHz & 15.0 MHz



Channel Position M_{RFBW} - 64QAM / Bandwidth 5.0 MHz & 20.0 MHz



Configuration L-MIMO-MC 2 (3C)

Maximum Output Power 46.0dBm per port

-26dBc Occupied Bandwidth for FCC requirement

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B_{RFBW} 1932.5MHz + 1945.0MHz + 1967.5MHz	Channel Position M_{RFBW} 1942.5MHz + 1955.0MHz + 1977.5MHz	Channel Position T_{RFBW} 1952.5MHz +1965.0MHz + 1987.5MHz
QPSK / 5.0 MHz & 20.0MHz & 5.0 MHz	39.940	39.950	39.960
16QAM / 5.0 MHz & 20.0MHz & 5.0 MHz	-	39.970	-
64QAM / 5.0 MHz & 20.0MHz & 5.0 MHz	-	39.920	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B_{RFBW} 1932.5MHz + 1945.0MHz + 1965.0MHz	Channel Position M_{RFBW} 1942.5MHz + 1955.0MHz + 1975.0MHz	Channel Position T_{RFBW} 1952.5MHz +1965.0MHz + 1985.0MHz
QPSK / 5.0 MHz & 20.0MHz & 10.0 MHz	39.730	39.780	39.800
16QAM / 5.0 MHz & 20.0MHz & 10.0 MHz	-	39.760	-
64QAM / 5.0 MHz & 20.0MHz & 10.0 MHz	-	39.820	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B_{RFBW} 1932.5MHz + 1945.0MHz + 1962.5MHz	Channel Position M_{RFBW} 1942.5MHz + 1955.0MHz + 1972.5MHz	Channel Position T_{RFBW} 1952.5MHz +1965.0MHz + 1982.5MHz
QPSK / 5.0 MHz & 20.0MHz & 15.0 MHz	39.620	39.580	39.630
16QAM / 5.0 MHz & 20.0MHz & 15.0 MHz	-	39.460	-
64QAM / 5.0 MHz & 20.0MHz & 15.0 MHz	-	39.530	-

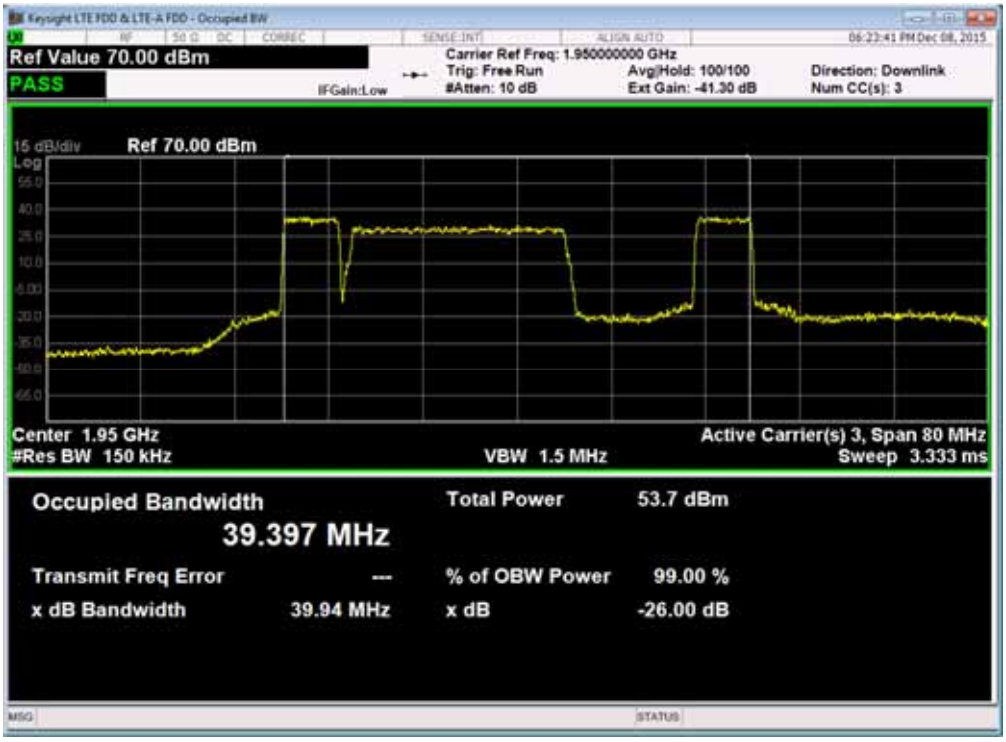
99% Occupied Bandwidth for IC requirement

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B_{RFBW} 1932.5MHz + 1945.0MHz + 1967.5MHz	Channel Position M_{RFBW} 1942.5MHz + 1955.0MHz + 1977.5MHz	Channel Position T_{RFBW} 1952.5MHz +1965.0MHz + 1987.5MHz
QPSK / 5.0 MHz & 20.0MHz & 5.0 MHz	39.397	39.416	39.387
16QAM / 5.0 MHz & 20.0MHz & 5.0 MHz	-	39.387	-
64QAM / 5.0 MHz & 20.0MHz & 5.0 MHz	-	39.381	-

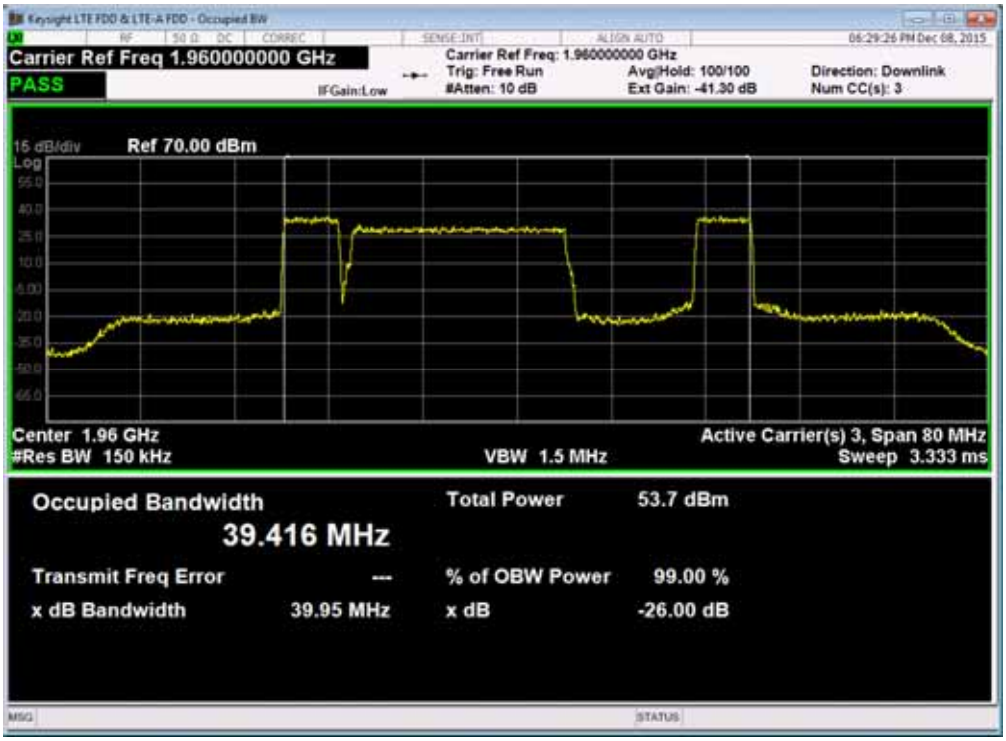
Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B_{RFBW} 1932.5MHz + 1945.0MHz + 1965.0MHz	Channel Position M_{RFBW} 1942.5MHz + 1955.0MHz + 1975.0MHz	Channel Position T_{RFBW} 1952.5MHz +1965.0MHz + 1985.0MHz
QPSK / 5.0 MHz & 20.0MHz & 10.0 MHz	39.052	39.055	39.069
16QAM / 5.0 MHz & 20.0MHz & 10.0 MHz	-	39.091	-
64QAM / 5.0 MHz & 20.0MHz & 10.0 MHz	-	39.093	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B_{RFBW} 1932.5MHz + 1945.0MHz + 1962.5MHz	Channel Position M_{RFBW} 1942.5MHz + 1955.0MHz + 1972.5MHz	Channel Position T_{RFBW} 1952.5MHz +1965.0MHz + 1982.5MHz
QPSK / 5.0 MHz & 20.0MHz & 15.0 MHz	38.754	38.760	38.751
16QAM / 5.0 MHz & 20.0MHz & 15.0 MHz	-	38.764	-
64QAM / 5.0 MHz & 20.0MHz & 15.0 MHz	-	38.746	-

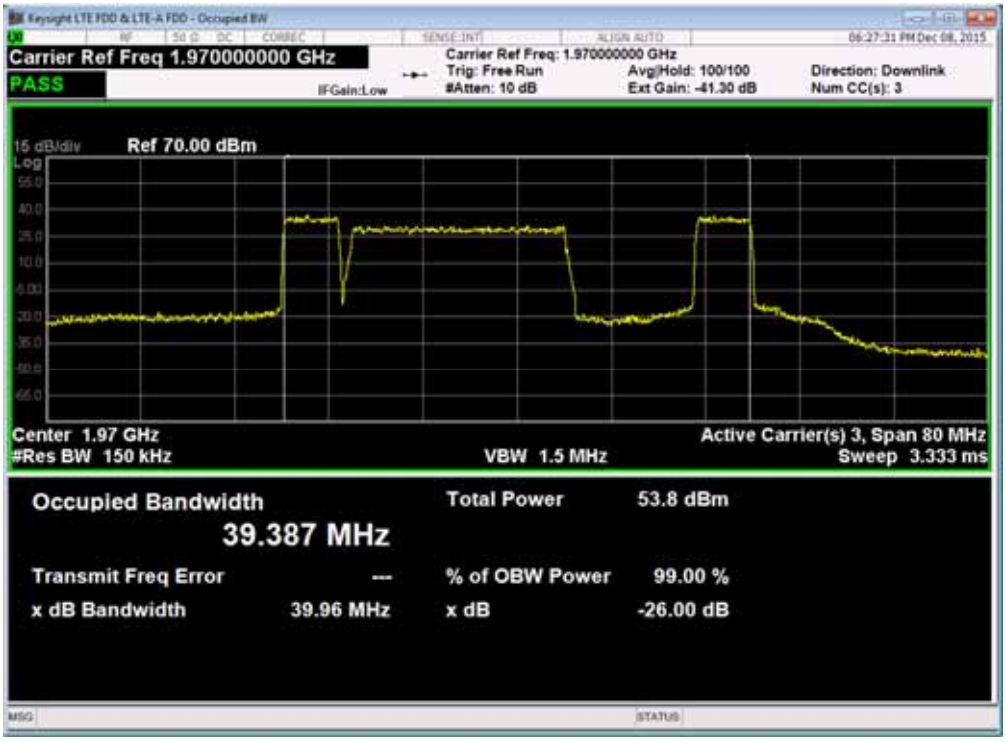
Channel Position B_{RFBW} - QPSK / Bandwidth 5.0 MHz & 20.0 MHz & 5.0 MHz



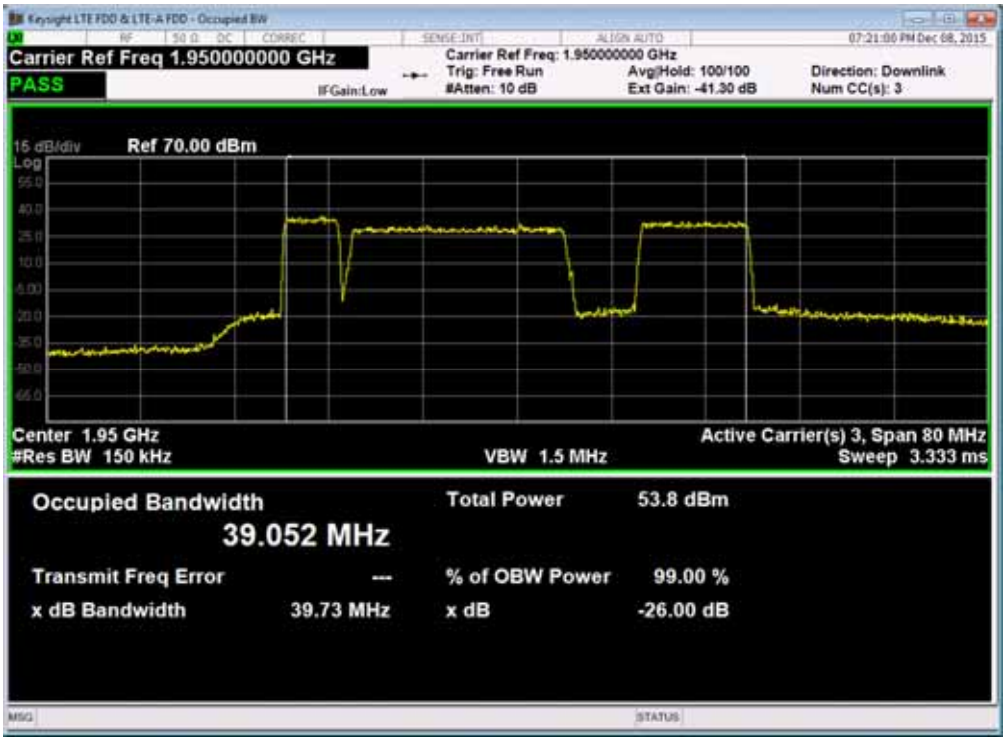
Channel Position M_{RFBW} - QPSK / Bandwidth 5.0 MHz & 20.0 MHz & 5.0 MHz



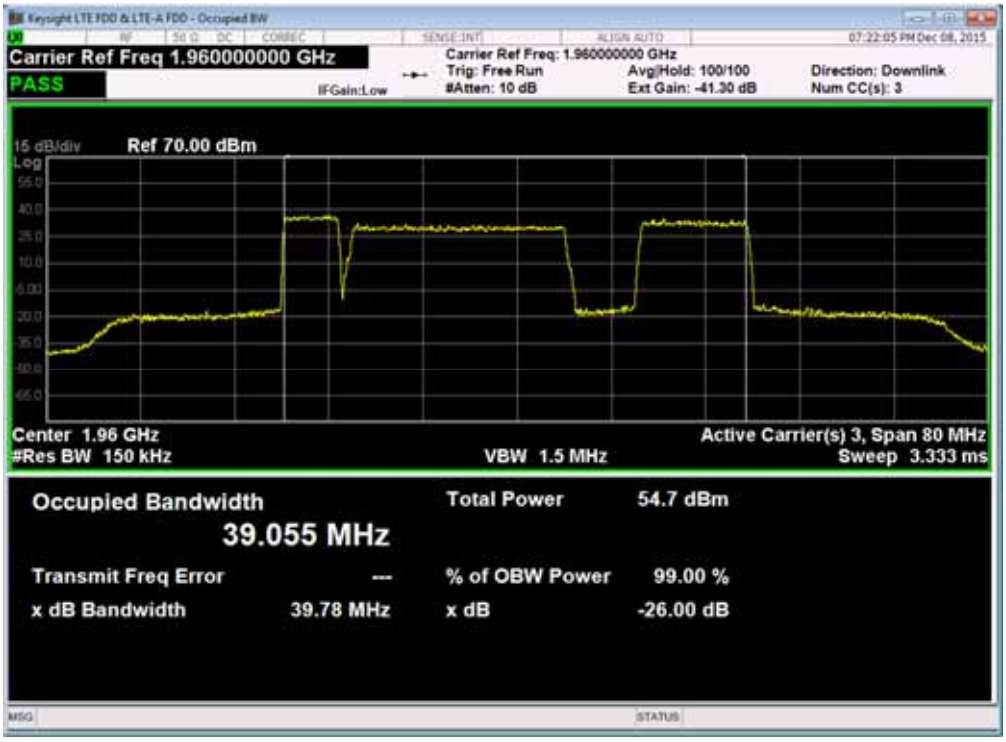
Channel Position T_{RFBW} - QPSK / Bandwidth 5.0 MHz & 20.0 MHz & 5.0 MHz



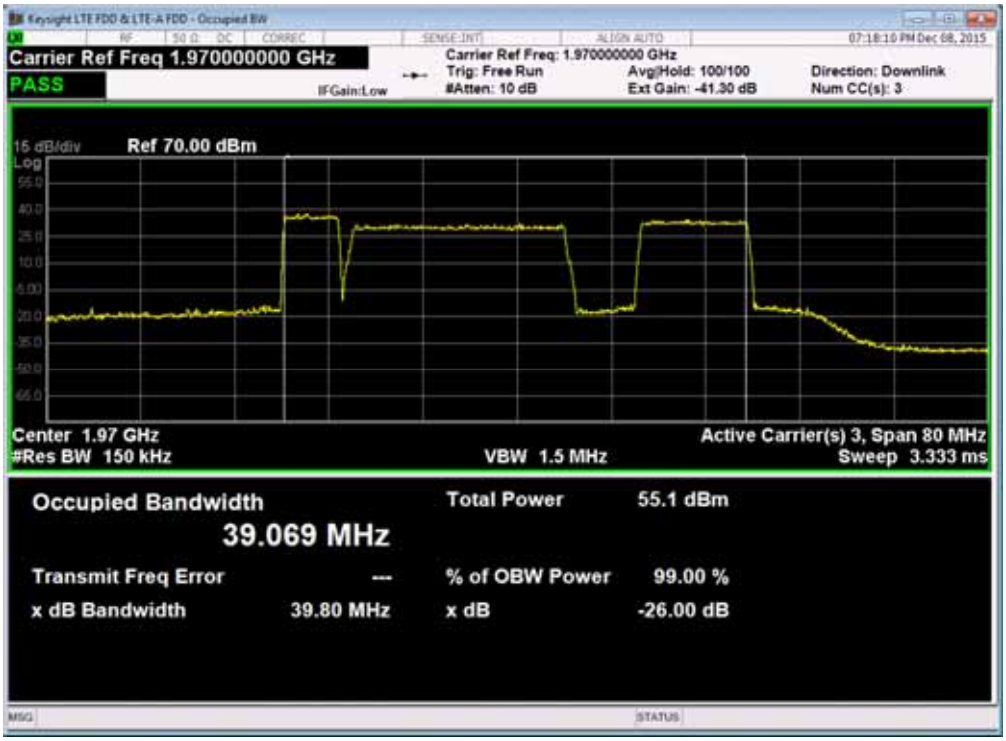
Channel Position B_{RFBW} - QPSK / Bandwidth 5.0 MHz & 20.0 MHz & 10.0 MHz



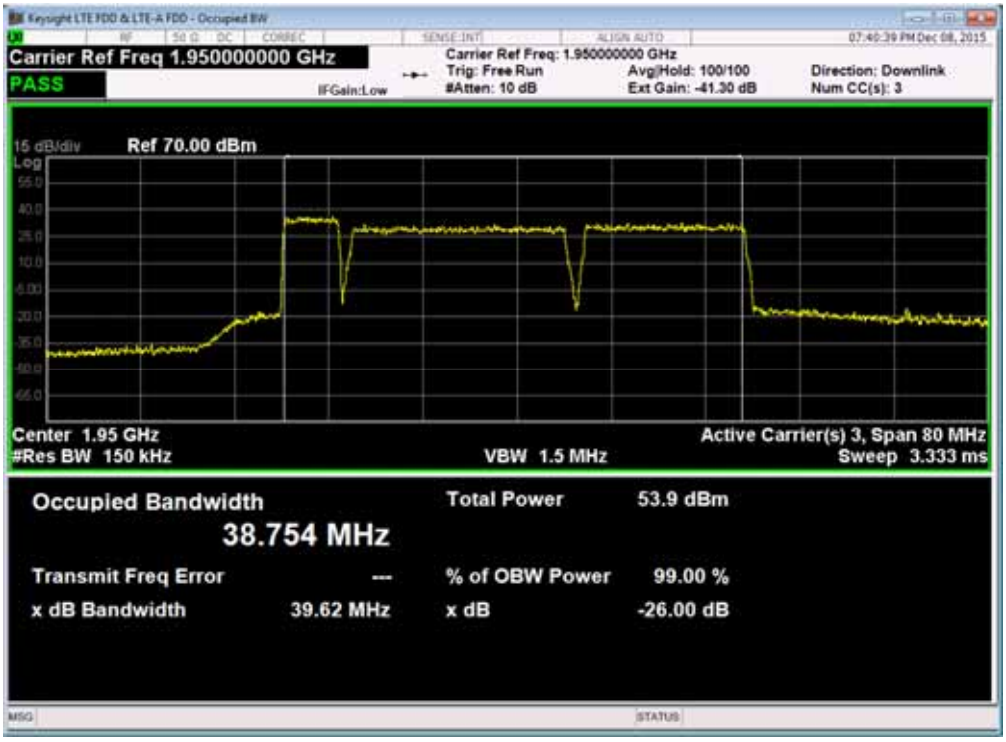
Channel Position M_{RFBW} - QPSK / Bandwidth 5.0 MHz & 20.0 MHz & 10.0 MHz



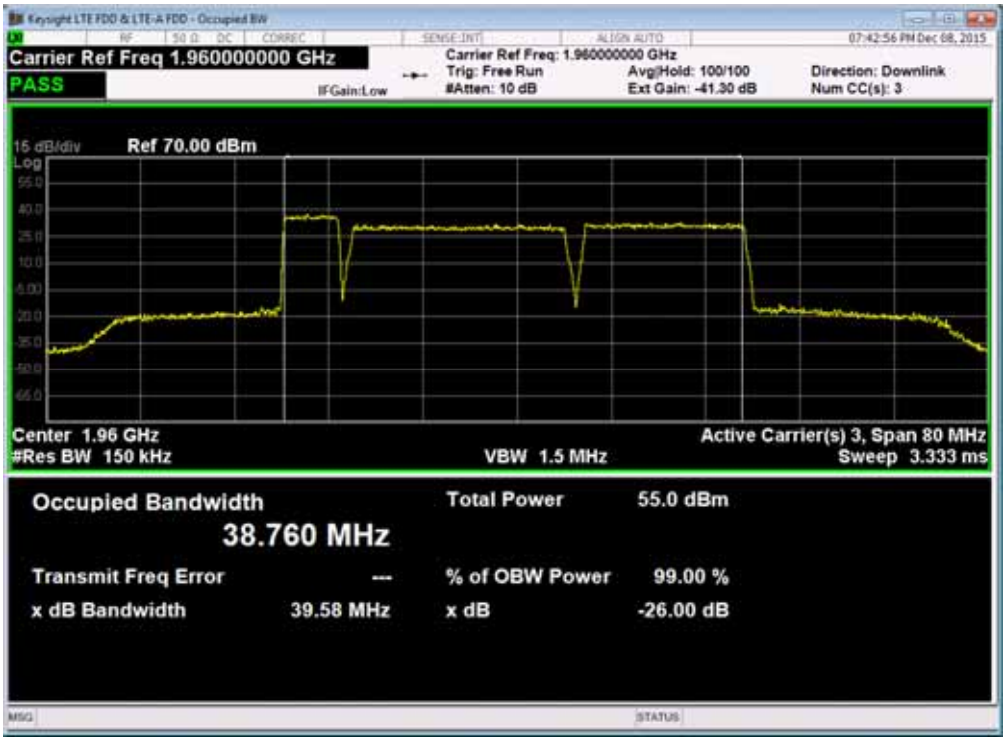
Channel Position T_{RFBW} - QPSK / Bandwidth 5.0 MHz & 20.0 MHz & 10.0 MHz



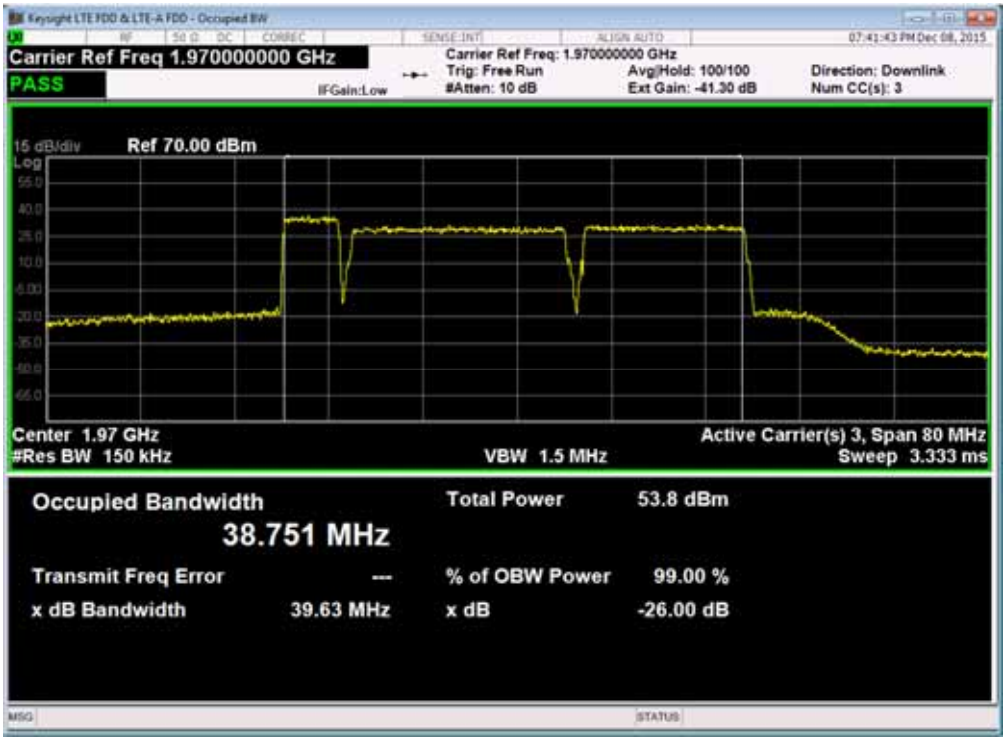
Channel Position B_{RFBW} - QPSK / Bandwidth 5.0 MHz & 20.0 MHz & 15.0 MHz



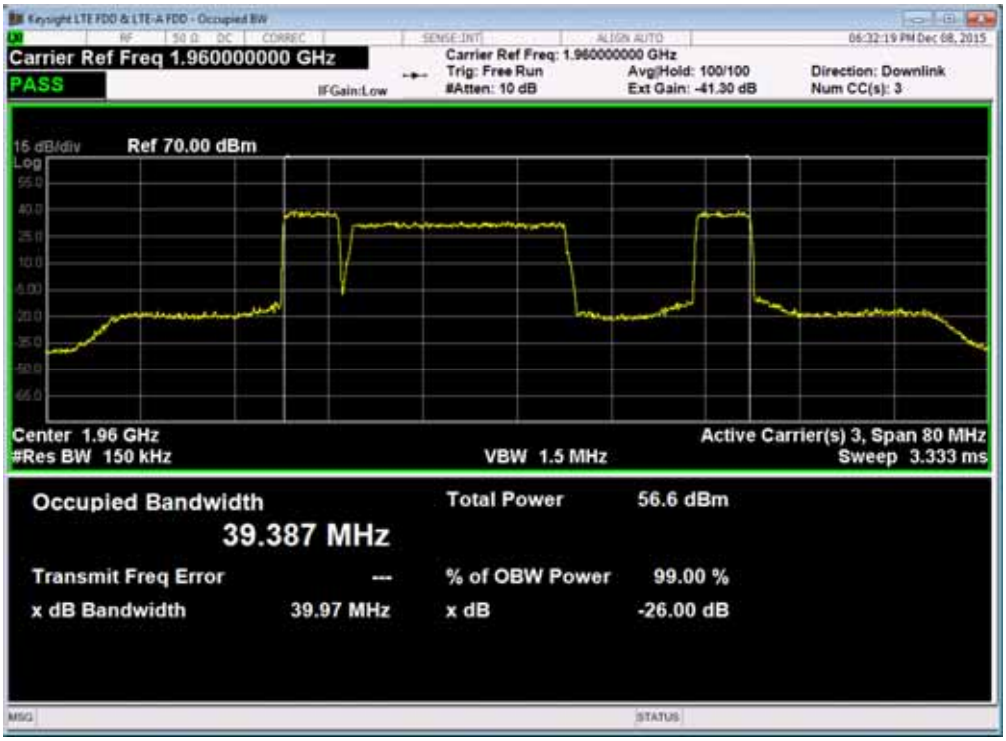
Channel Position M_{RFBW} - QPSK / Bandwidth 5.0 MHz & 20.0 MHz & 15.0 MHz



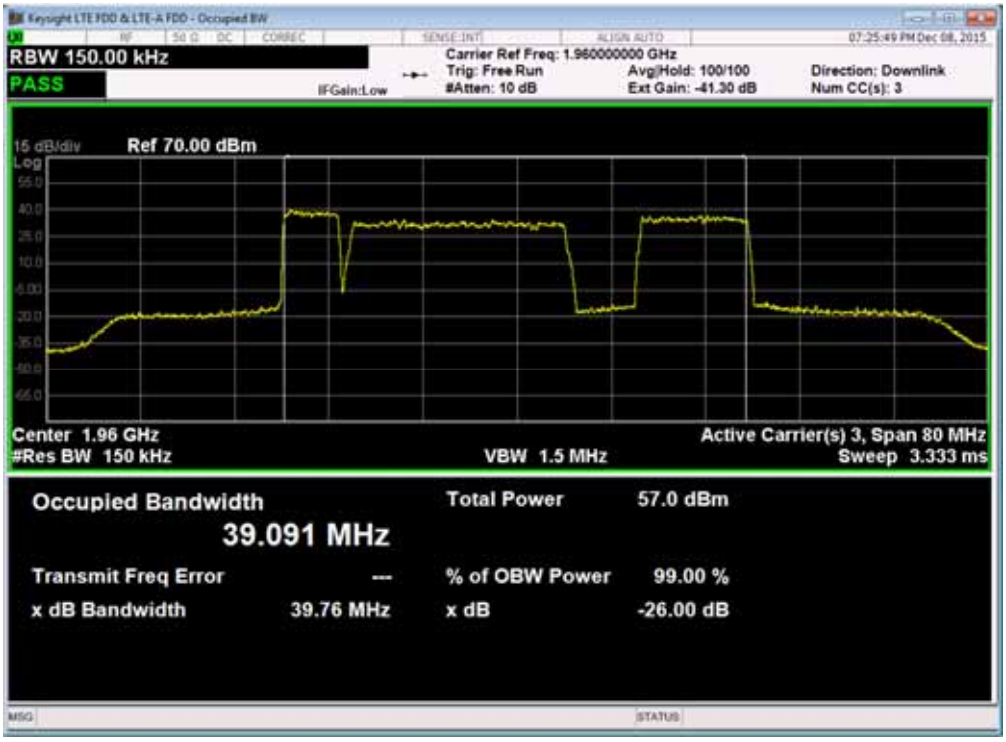
Channel Position T_{RFBW} - QPSK / Bandwidth 5.0 MHz & 20.0 MHz & 15.0 MHz



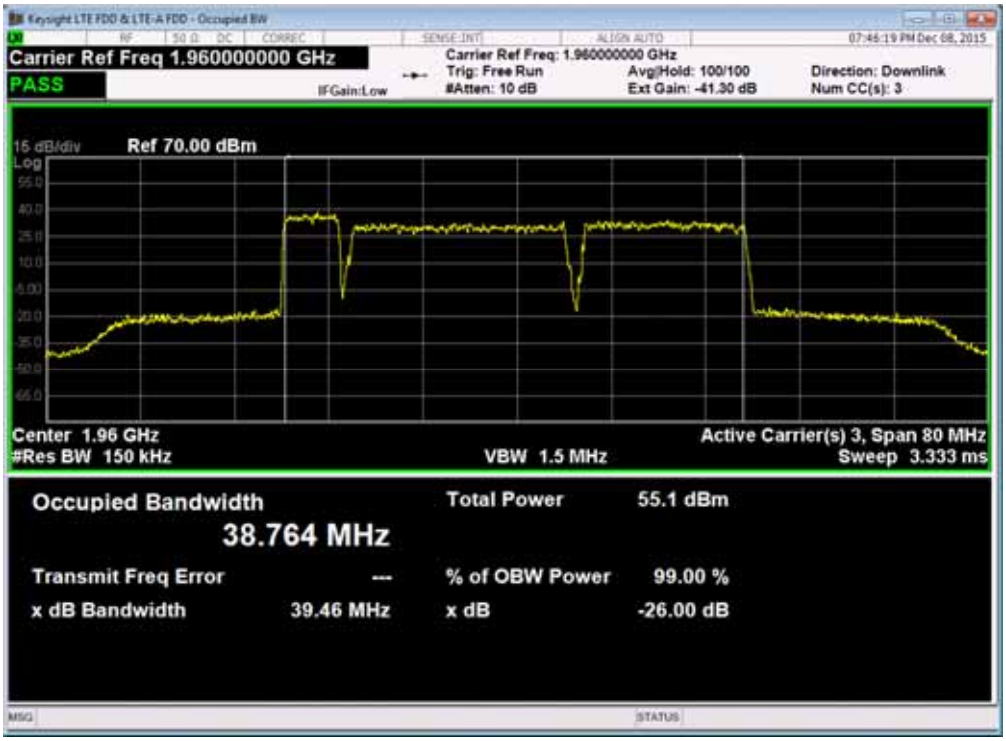
Channel Position M_{RFBW} - 16QAM / Bandwidth 5.0 MHz & 20.0 MHz & 5.0 MHz



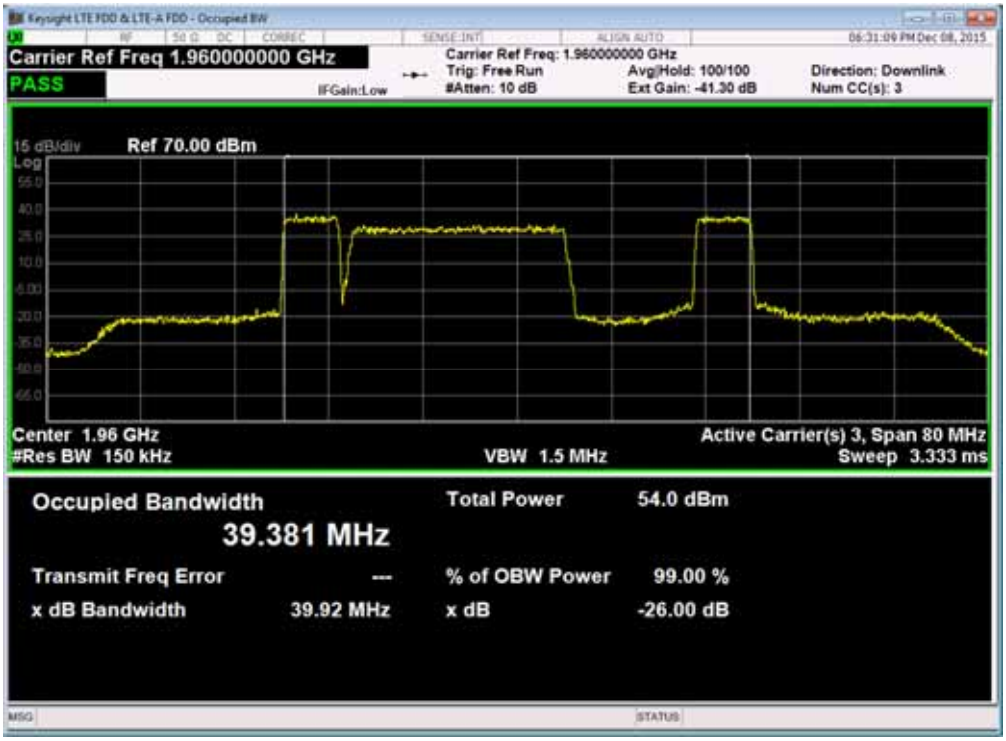
Channel Position M_{RFBW} - 16QAM / Bandwidth 5.0 MHz & 20.0 MHz & 10.0 MHz



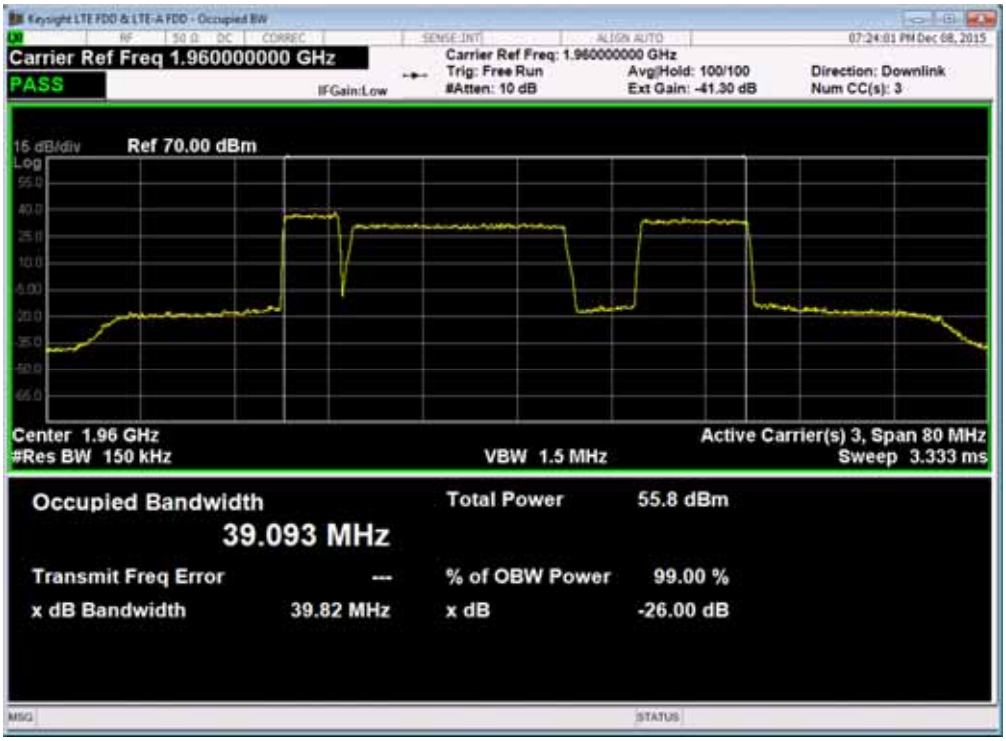
Channel Position M_{RFBW} - 16QAM / Bandwidth 5.0 MHz & 20.0 MHz & 15.0 MHz



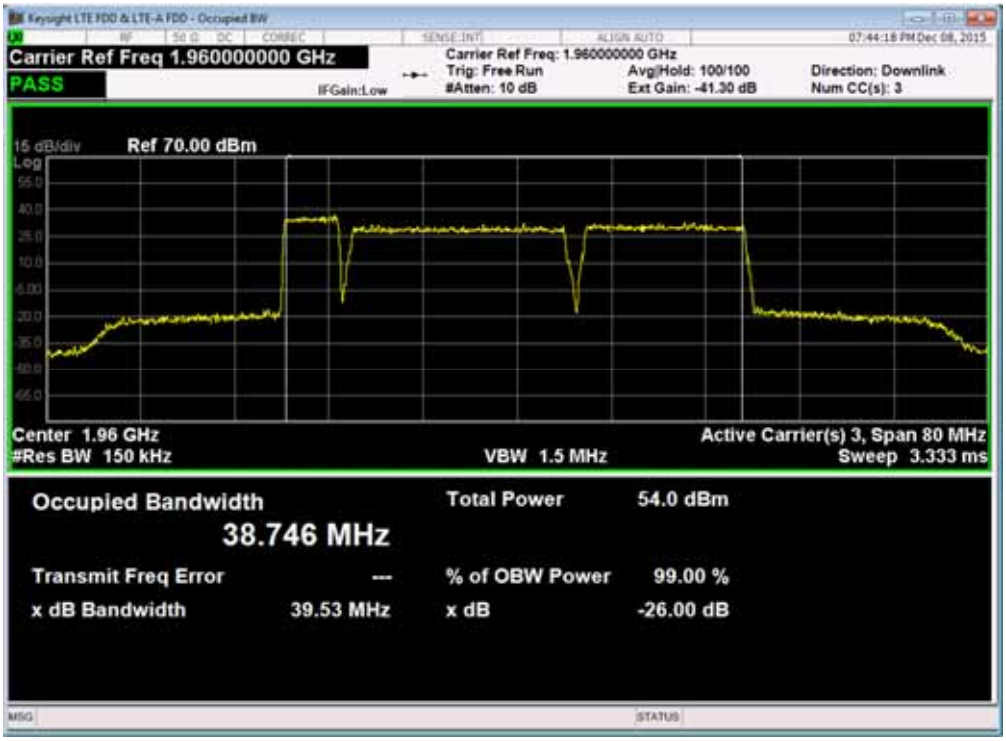
Channel Position M_{RFBW} - 64QAM / Bandwidth 5.0 MHz & 20.0 MHz & 5.0 MHz



Channel Position M_{RFBW} - 64QAM / Bandwidth 5.0 MHz & 20.0 MHz & 10.0 MHz



Channel Position M_{RFBW} - 64QAM / Bandwidth 5.0 MHz & 20.0 MHz & 15.0 MHz



2.3 SPURIOUS EMISSION AT BAND EDGE

2.3.1 Specification Reference

FCC CFR 47 Part 2, Clause 2.1051
FCC CFR 47 Part 24, Clause 24.238 (b)
Industry Canada RSS-133, Clause 6.5

2.3.2 Equipment Under Test

RRUS 32 B2, KRC 161 414/1, S/N: D16Q673439

2.3.3 Date of Test and Modification State

17 September to 19 October 2015 - Modification State 0

2.3.4 Test Equipment Used

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

2.3.5 Environmental Conditions

Ambient Temperature	23.5 - 25.5°C
Relative Humidity	39.0 - 53.0%

2.3.6 Test Method

The test was applied in accordance with the test method requirements of FCC Part 24 and Industry Canada RSS-133.

In accordance with FCC CFR 47 Part 24, Clause 24.238(b), the power of any emissions outside of the block edges shall be attenuated below the transmitter power (P) with the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. At least 1% of the emission bandwith was used for the resolution bandwidths up to 1MHz away from the block edge.

For MIMO mode configurations, the limit was adjusted with a correction of -6.02dB [10Log(4)] by using the Measure and Add 10Log(4) dB technique according to FCC KDB 662911 D01 Multiple Transmitter Output v02r01 accounting for simultaneous transmission from antennas port RF A to RF D.

As the FCC rules specify a RBW of 1MHz for measurements of emissions > 1MHz away from the band edges, the limit was adjusted with -13.01dB [10Log(50/1000)] to compensate for the reduce mesurement bandwidth. For MIMO mode, the limit of -32.03dBm was used for emission > 1MHz away from the band edges. For Non-MIMO mode, the limit of -26.01dBm was used for emission > 1MHz away from the band edges. Spectrum analyser detector was set as RMS.

The limits and RBW applied to the measurement of emissions in the 1MHz immediately outside and adjacent to the frequency block were shown in the test results for each test configuration.

The path loss measured and entered as a reference level offset. The EUT was set to transmit at its maximum rated output power in the configurations described in the tables below. The measurements were made at the bottom and top of the band with all channel bandwidth.

2.3.7 Test Results

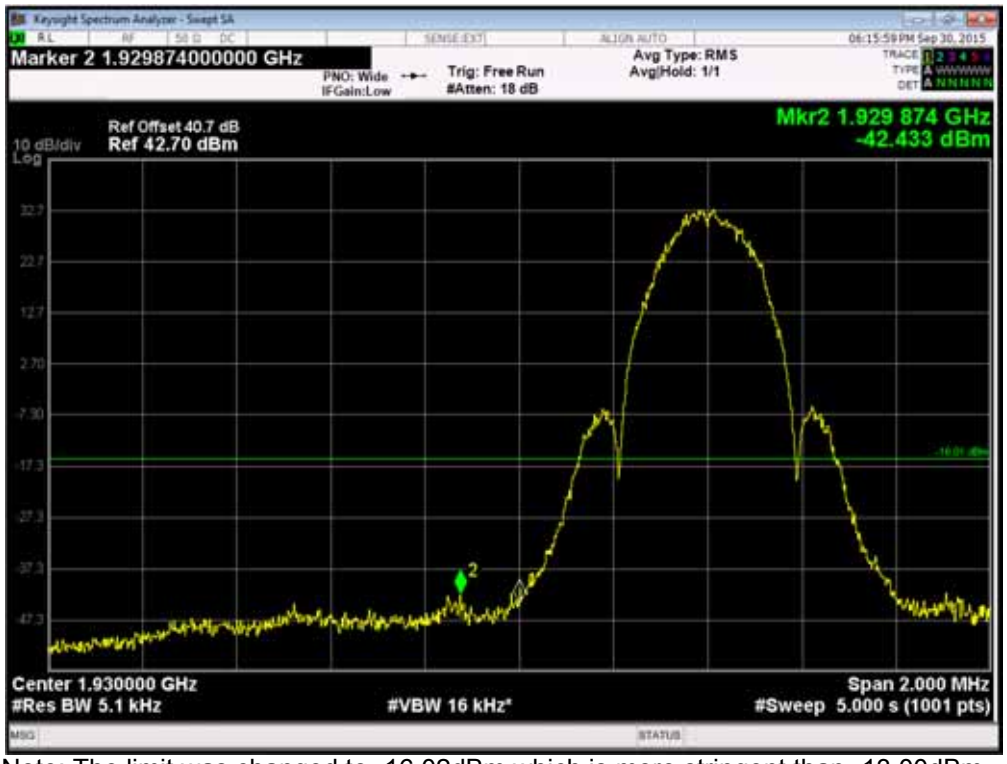
Configuration G-SC

Maximum Output Power 46.0dBm per port

Band Edge Frequency	Channel Bandwidth	Edge Test with modulation AQPSK Channel Frequencies	RBW (kHz)	Limit (dBm)
Channel Position B 1930.0 MHz	250 kHz	1930.4MHz	5.1	-13.00
Channel Position T 1990.0 MHz	250 kHz	1989.6MHz	5.1	-13.00

Note: The channels shown in the table above are the minimum and maximum channels that can be used in the authorised frequency ranges to maintain compliance. Channels outside of the ranges shown in the above tables shall not be available to the end user.

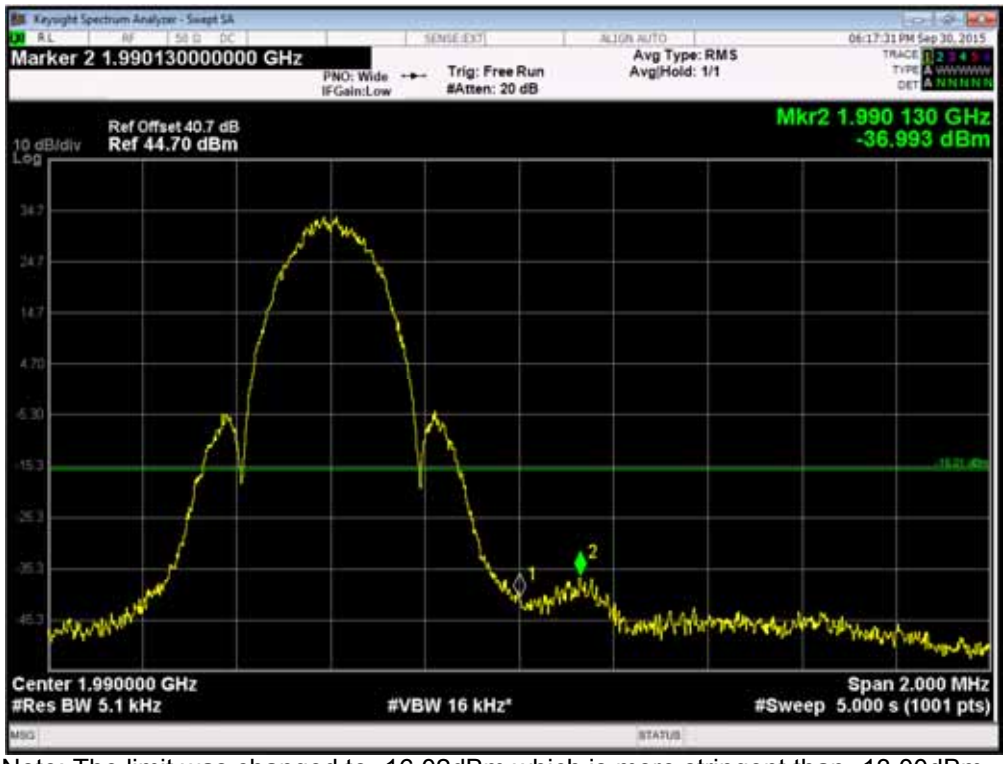
Channel Position B – AQPSK



Note: The limit was changed to -16.02dBm which is more stringent than -13.00dBm.

Note: The limit was changed to -29.02dBm which is more stringent than -26.01dBm.

Channel Position T - AQPSK



Note: The limit was changed to -16.02dBm which is more stringent than -13.00dBm.

Note: The limit was changed to -29.02dBm which is more stringent than -26.01dBm.

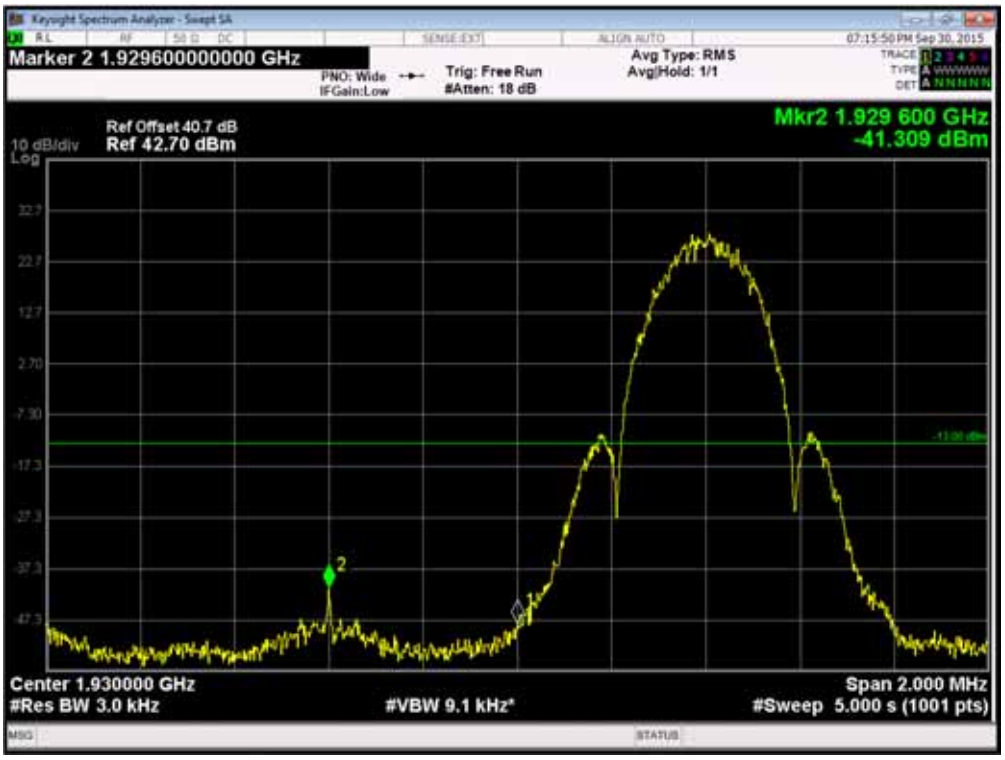
Configuration G-MC (2C)

Maximum Output Power 46.0dBm per port

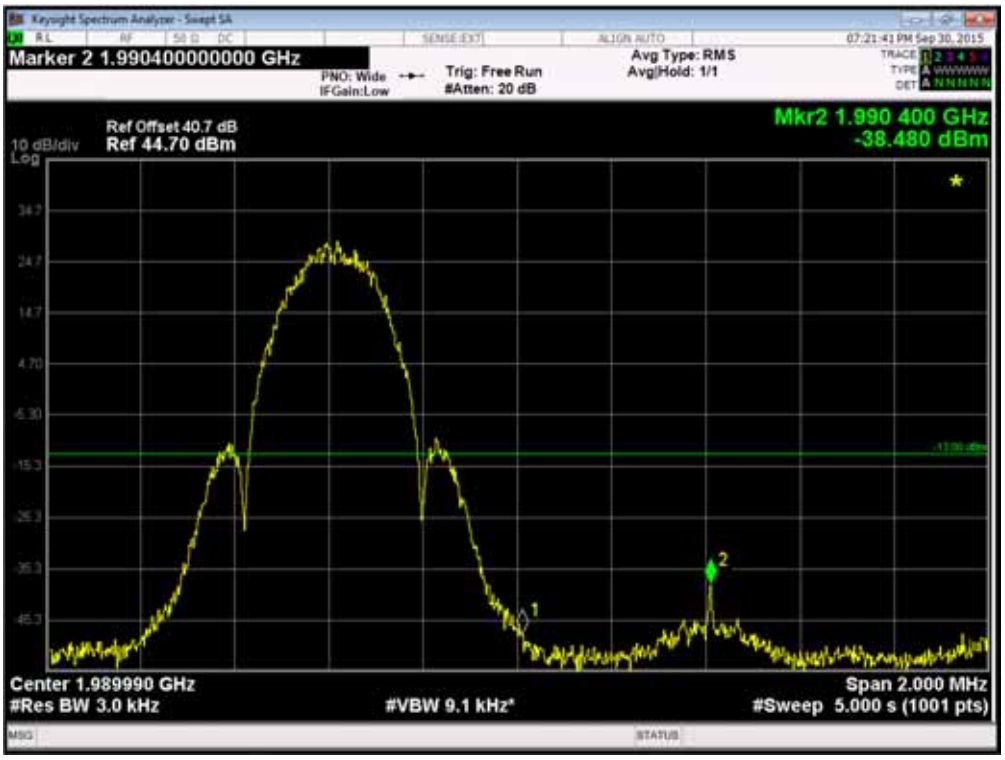
Band Edge Frequency	Channel Bandwidth	Edge Test with modulation AQPSK Channel Frequencies	RBW (kHz)	Limit (dBm)
Channel Position B_{RFBW} 1930.0 MHz	250 kHz	1930.4MHz + 1932.0MHz	3.0	-13.00
Channel Position T_{RFBW} 1990.0 MHz	250 kHz	1988.0MHz + 1989.6MHz	3.0	-13.00

Note: The channels shown in the table above are the minimum and maximum channels that can be used in the authorised frequency ranges to maintain compliance. Channels outside of the ranges shown in the above tables shall not be made available to the end user.

Channel Position B_{RFBW} - AQPSK



Channel Position T_{RFBW} - AQPSK



Configuration W-SC

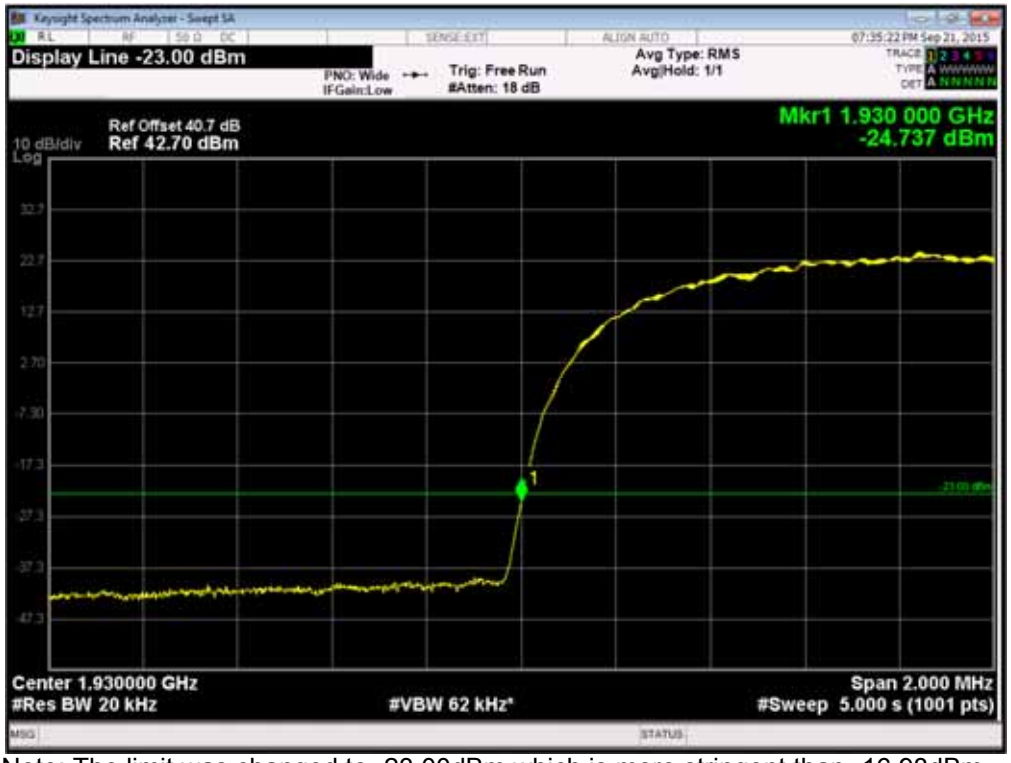
Maximum Output Power 46.0dBm per port

Band Edge Frequency	Channel Bandwidth	Edge Test with modulation QPSK Channel Frequencies	RBW (kHz)	Limit (dBm)
Channel Position B 1930.0 MHz	5.0 MHz	1932.4MHz	20	-16.98
Channel Position T 1990.0 MHz	5.0 MHz	1987.6MHz	20	-16.98

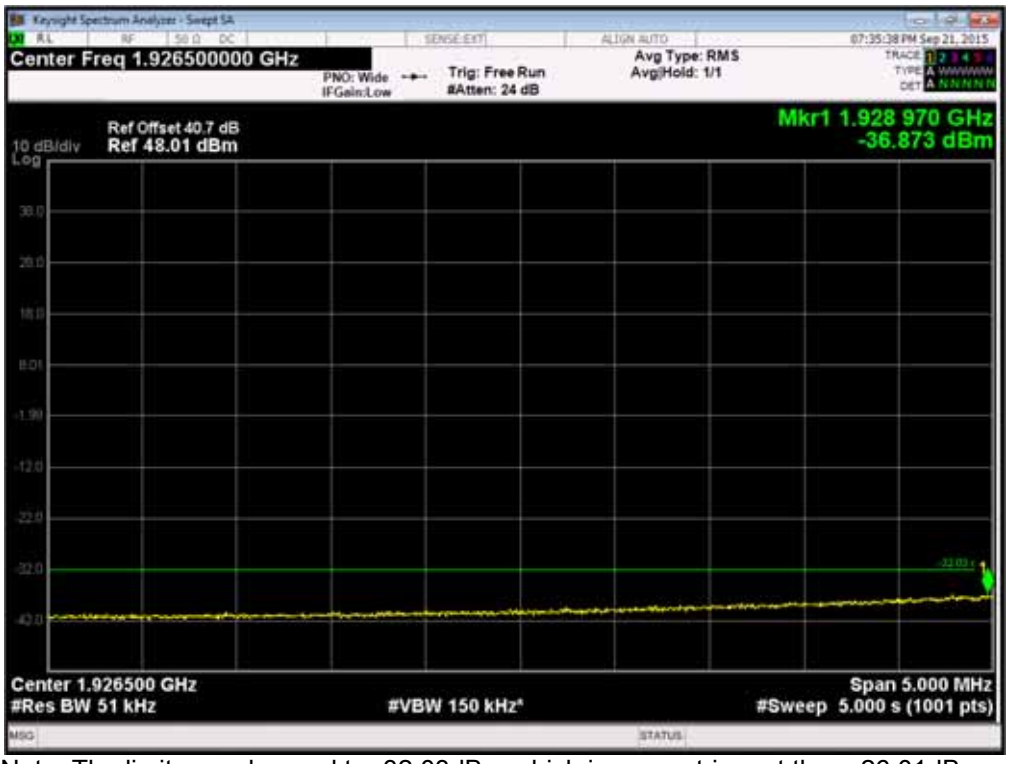
Note 1: For the measurement of 1MHz immediately outside and adjacent to the frequency band edge, a resolution bandwidth of 20kHz was used, and 20kHz is < 50kHz (1% of nominal bandwidth). To compensate for the reduced measurement bandwidth, the limit was adjusted with a correction of -3.98dB [10Log(20/50)] to -13dBm.The test results should be compared to a limit of -16.98dBm.

Note 2: The channels shown in the table above are the minimum and maximum channels that can be used in the authorised frequency ranges to maintain compliance. Channels outside of the ranges shown in the above tables shall not be available to the end user.

Channel Position B - QPSK / Bandwidth 5.0 MHz



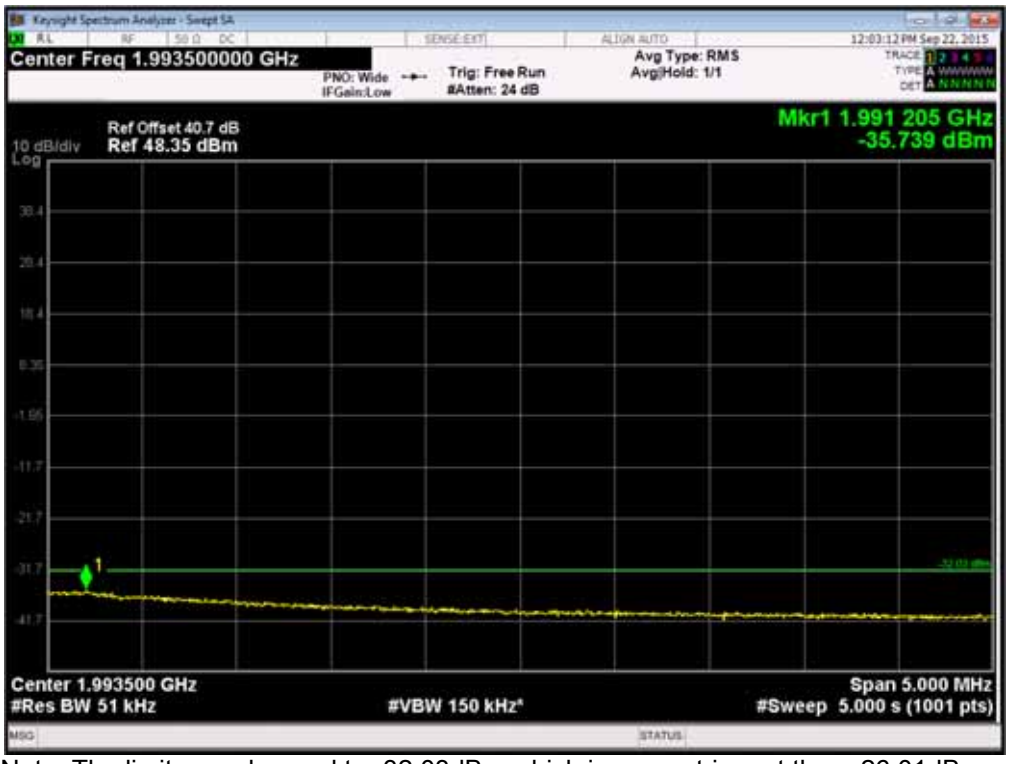
Note: The limit was changed to -23.00dBm which is more stringent than -16.98dBm.



Note: The limit was changed to -32.03dBm which is more stringent than -26.01dBm.

Channel Position T - QPSK / Bandwidth 5.0 MHz

Note: The limit was changed to -23.00dBm which is more stringent than -16.98dBm.



Note: The limit was changed to -32.03dBm which is more stringent than -26.01dBm.

Configuration W-MC (2C)

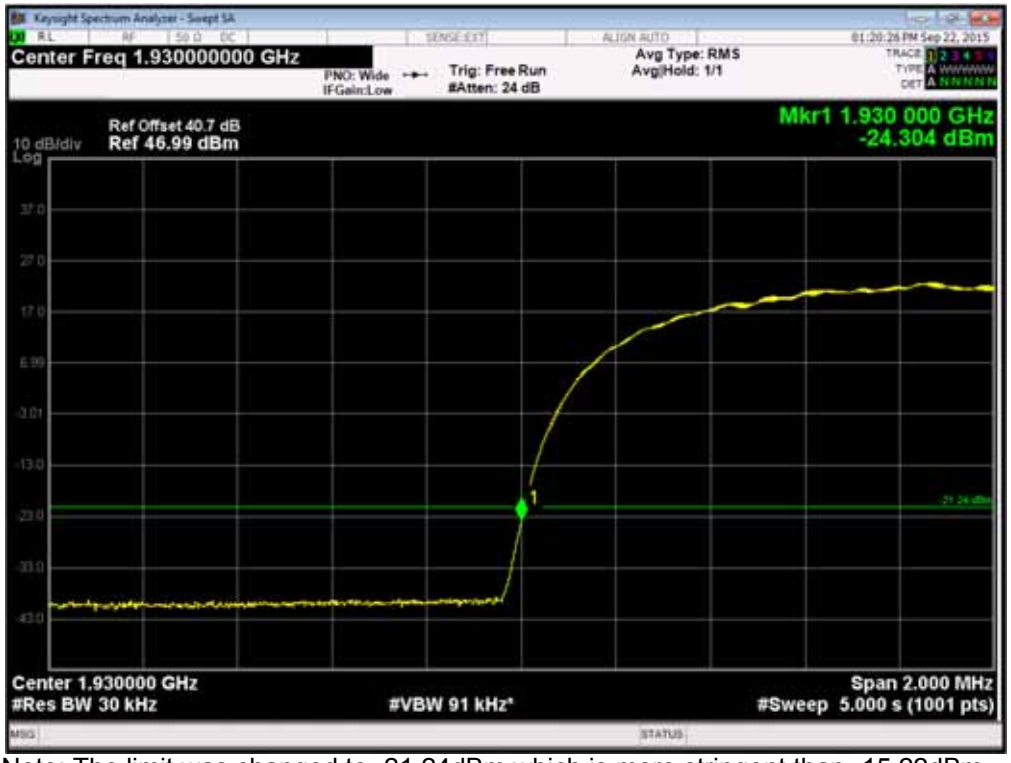
Maximum Output Power 46.0dBm per port

Band Edge Frequency	Channel Bandwidth	Edge Test with modulation QPSK Channel Frequencies	RBW (kHz)	Limit (dBm)
Channel Position B_{RFBW} 1930.0 MHz	5.0 MHz	1932.4MHz + 1937.4MHz	30	-15.22
Channel Position T_{RFBW} 1990.0 MHz	5.0 MHz	1982.6MHz + 1987.6MHz	30	-15.22

Note 1: For the measurement of 1MHz immediately outside and adjacent to the frequency band edge, a resolution bandwidth of 30kHz was used, and 30kHz is < 50kHz (1% of nominal bandwidth). To compensate for the reduced measurement bandwidth, the limit was adjusted with a correction of -2.22dB [10Log(30/50)] to -13dBm.The test results should be compared to a limit of -15.22dBm.

Note 2: The channels shown in the table above are the minimum and maximum channels that can be used in the authorised frequency ranges to maintain compliance. Channels outside of the ranges shown in the above tables shall not be made available to the end user.

Channel Position B_{RFBW} - QPSK / Bandwidth 5.0 MHz



Note: The limit was changed to -21.24dBm which is more stringent than -15.22dBm.

Note: The limit was changed to -32.03dBm which is more stringent than -26.01dBm.

Channel Position T_{RFBW} – QPSK / Bandwidth 5.0 MHz

Note: The limit was changed to -21.24dBm which is more stringent than -15.22dBm.

Note: The limit was changed to -32.03dBm which is more stringent than -26.01dBm.

Configuration W-MIMO-SC

Maximum Output Power 46.0dBm per port

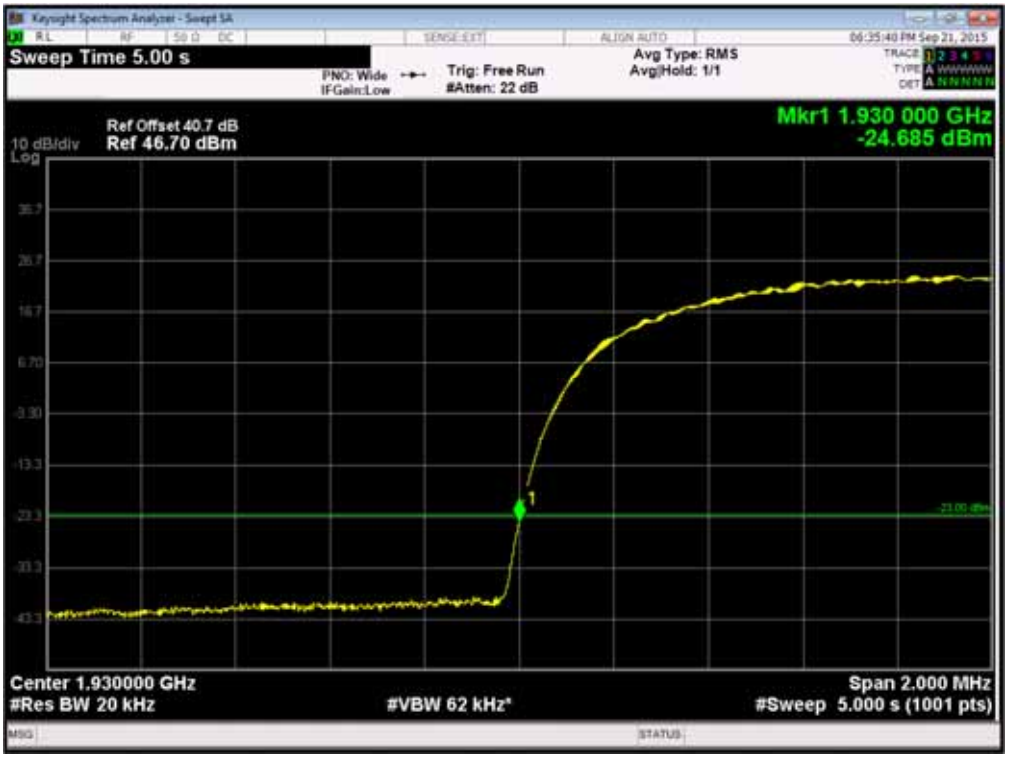
Band Edge Frequency	Channel Bandwidth	Edge Test with modulation 16QAM Channel Frequencies	RBW (kHz)	Limit (dBm)
Channel Position B 1930.0 MHz	5.0 MHz	1932.4MHz	20	-23.00
Channel Position T 1990.0 MHz	5.0 MHz	1987.6MHz	20	-23.00

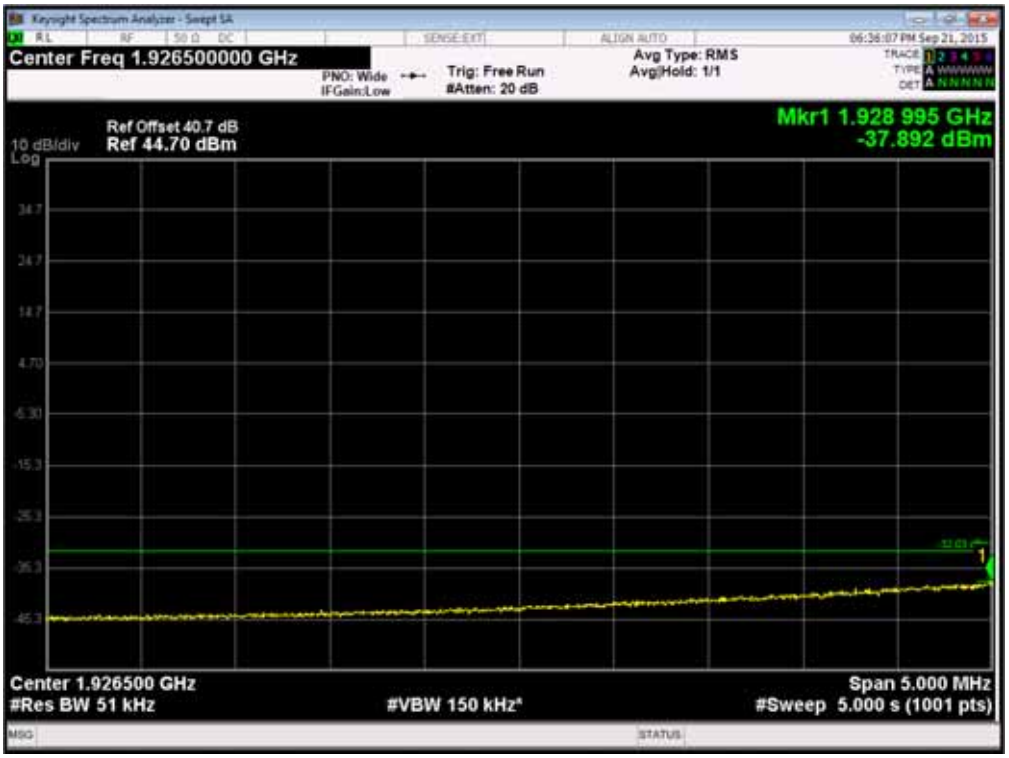
Band Edge Frequency	Channel Bandwidth	Edge Test with modulation 64QAM Channel Frequencies	RBW (kHz)	Limit (dBm)
Channel Position B 1930.0 MHz	5.0 MHz	1932.4MHz	20	-23.00
Channel Position T 1990.0 MHz	5.0 MHz	1987.6MHz	20	-23.00

Note 1: For MIMO mode configurations, the limit was adjusted with a correction of -6.02dB [10Log(4)] to -13dBm. For the measurement of 1MHz immediately outside and adjacent to the frequency band edge, a resolution bandwidth of 20kHz was used, and 20kHz is < 50kHz (1% of nominal bandwidth). To compensate for the reduced measurement bandwidth, the limit was adjusted with a correction of -3.98dB [10Log(20/50)] to -19.02dBm.

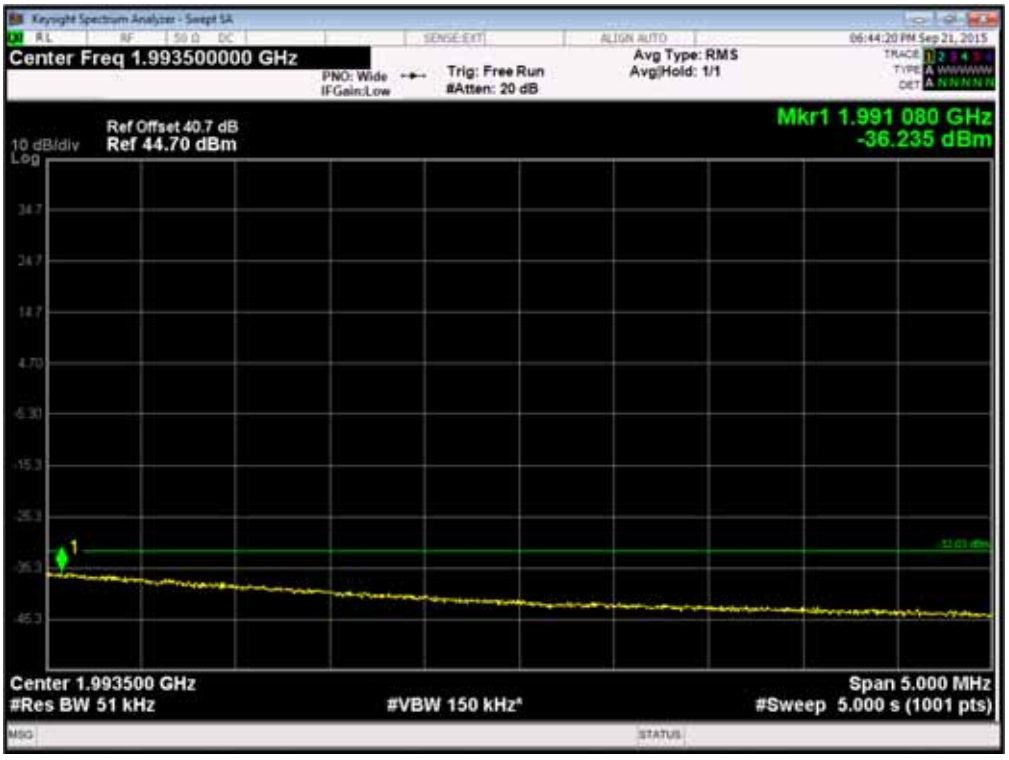
Note 2: The channels shown in the table above are the minimum and maximum channels that can be used in the authorised frequency ranges to maintain compliance. Channels outside of the ranges shown in the above tables shall not be available to the end user.

Channel Position B - 16QAM / Bandwidth 5.0 MHz

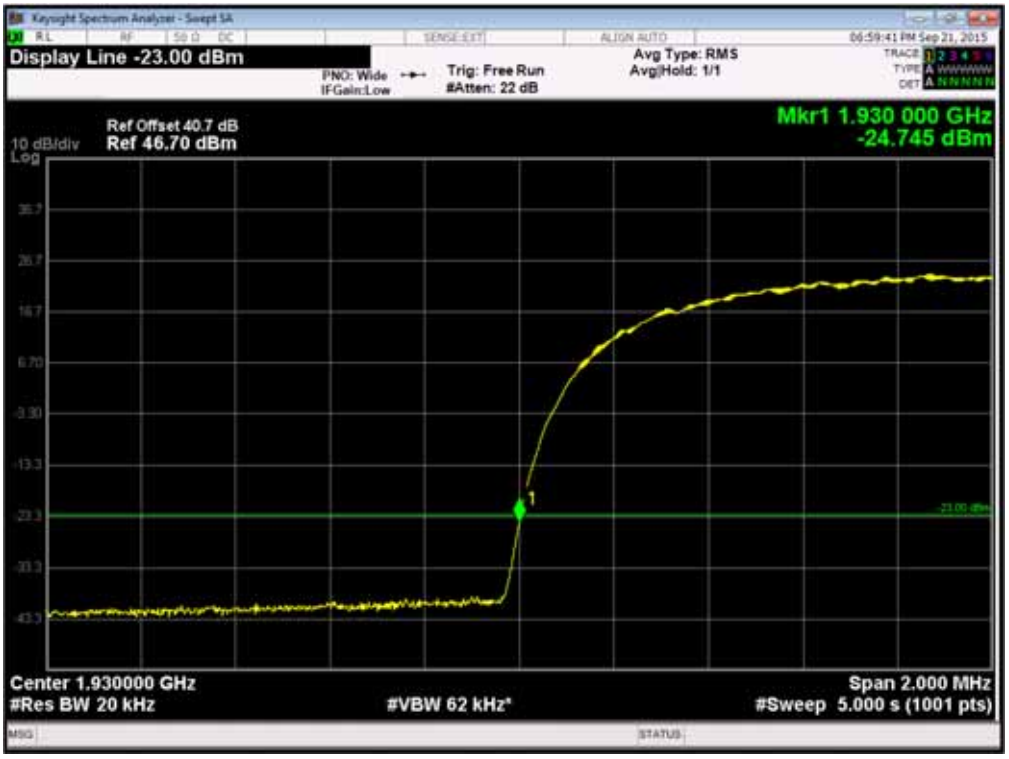


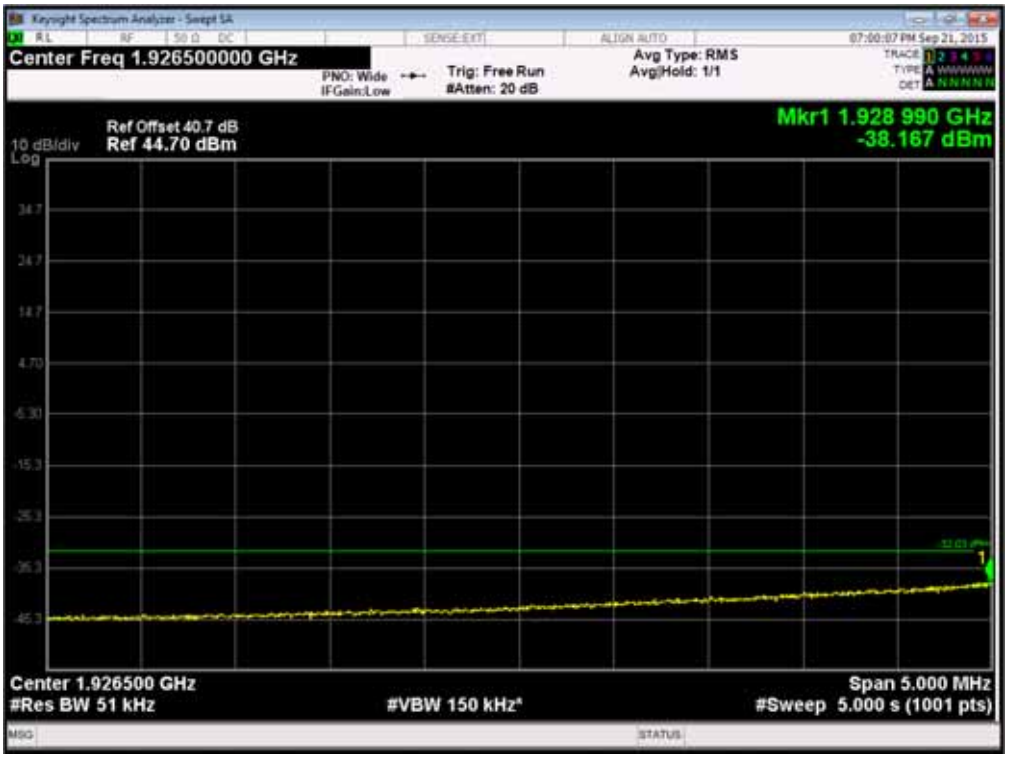


Channel Position T - 16QAM / Bandwidth 5.0 MHz

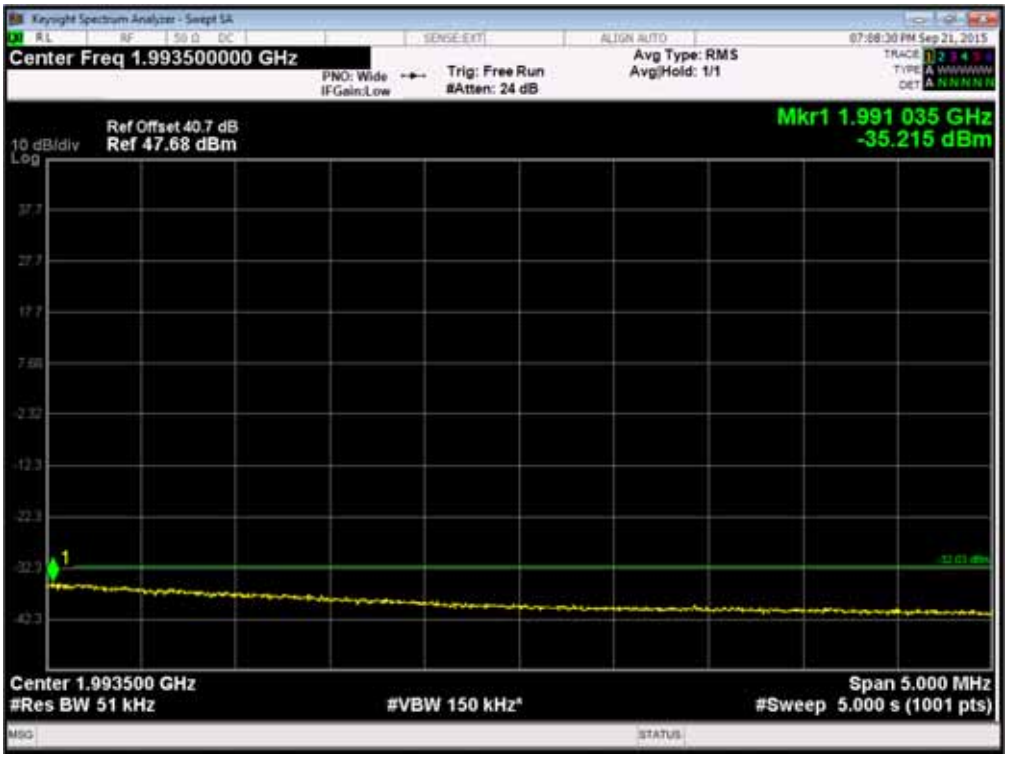


Channel Position B - 64QAM / Bandwidth 5.0 MHz





Channel Position T - 64QAM / Bandwidth 5.0 MHz



Configuration W-MIMO-MC (2C)

Maximum Output Power 46.0dBm per port

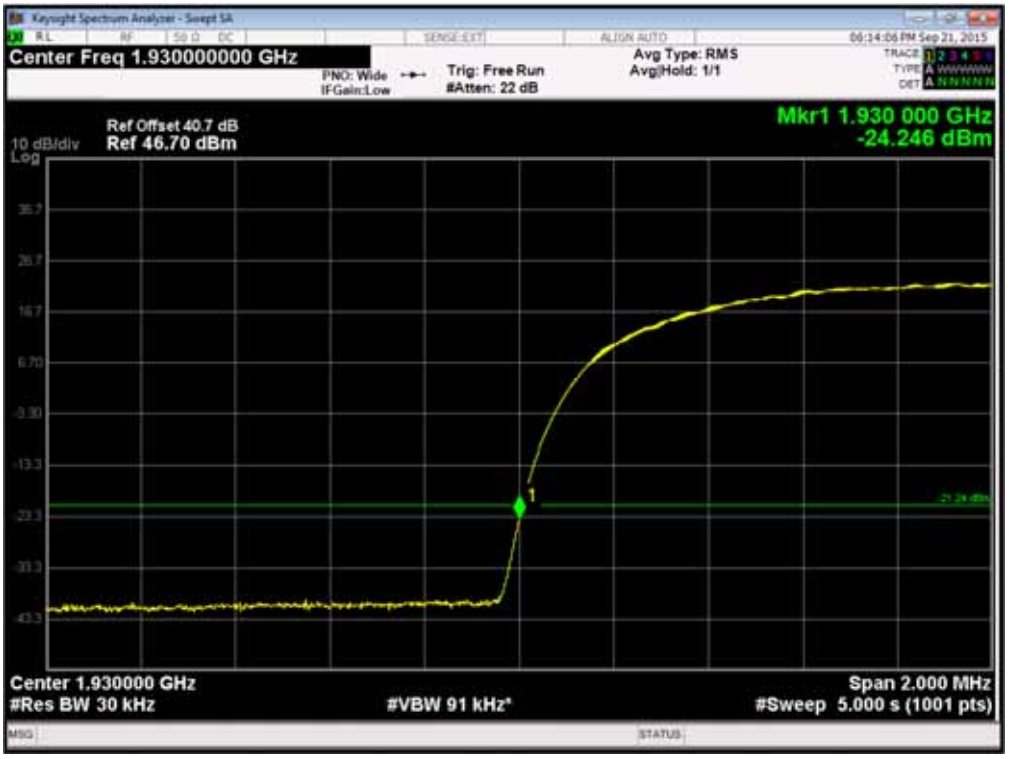
Band Edge Frequency	Channel Bandwidth	Edge Test with modulation 16QAM Channel Frequencies	RBW (kHz)	Limit (dBm)
Channel Position B_{RFBW} 1930.0 MHz	5.0 MHz	1932.4MHz + 1937.4MHz	30	-21.24
Channel Position T_{RFBW} 1990.0 MHz	5.0 MHz	1982.6MHz + 1987.6MHz	30	-21.24

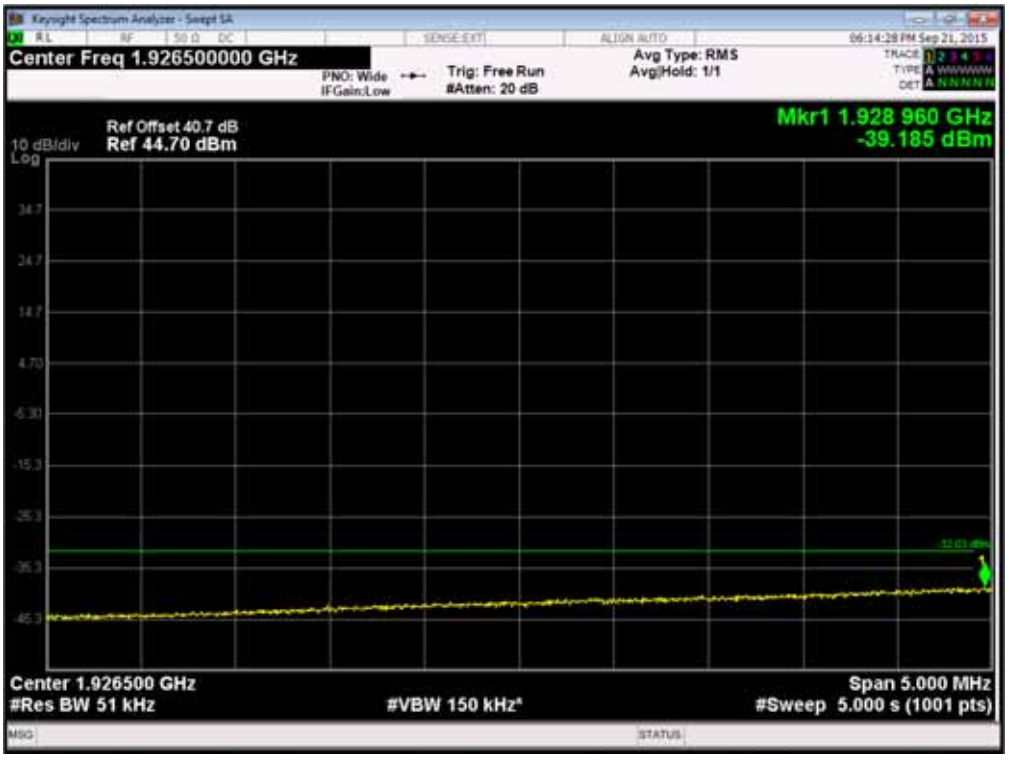
Band Edge Frequency	Channel Bandwidth	Edge Test with modulation 64QAM Channel Frequencies	RBW (kHz)	Limit (dBm)
Channel Position B_{RFBW} 1930.0 MHz	5.0 MHz	1932.4MHz + 1937.4MHz	30	-21.24
Channel Position T_{RFBW} 1990.0 MHz	5.0 MHz	1982.6MHz + 1987.6MHz	30	-21.24

Note 1: For MIMO mode configurations, the limit was adjusted with a correction of -6.02dB [10Log(4)] to -13dBm. For the measurement of 1MHz immediately outside and adjacent to the frequency band edge, a resolution bandwidth of 30kHz was used, and 30kHz is < 50kHz (1% of nominal bandwidth). To compensate for the reduced measurement bandwidth, the limit was adjusted with a correction of -2.22dB [10Log(30/50)] to -19.02dBm.

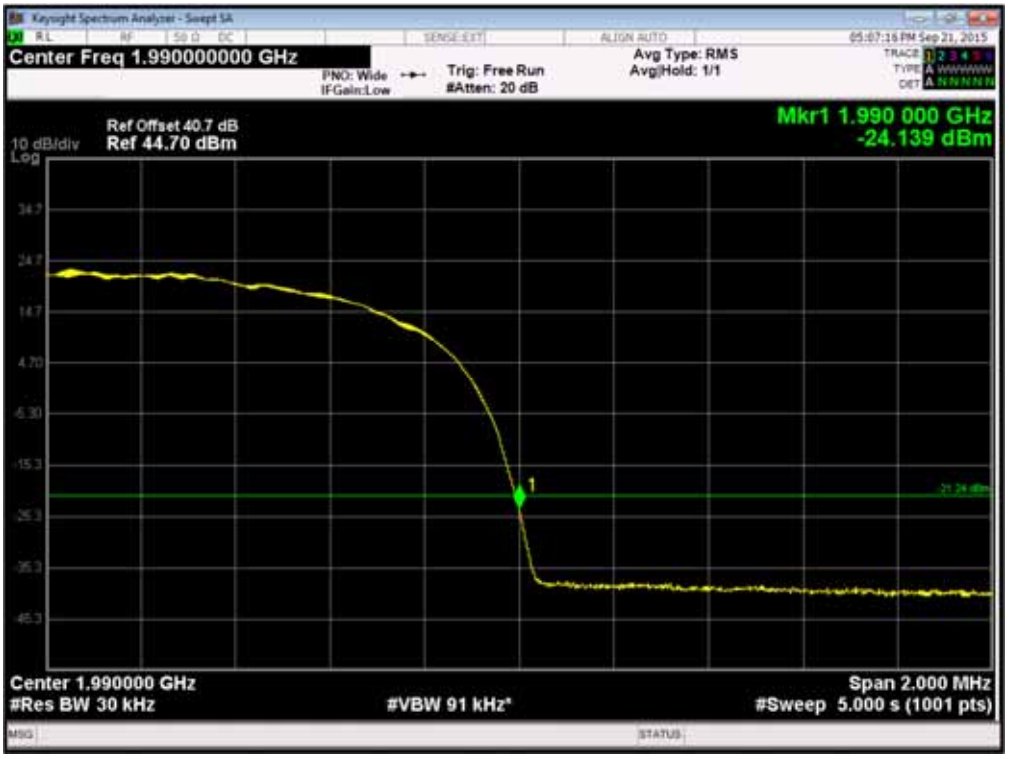
Note 2: The channels shown in the table above are the minimum and maximum channels that can be used in the authorised frequency ranges to maintain compliance. Channels outside of the ranges shown in the above tables shall not be available to the end user.

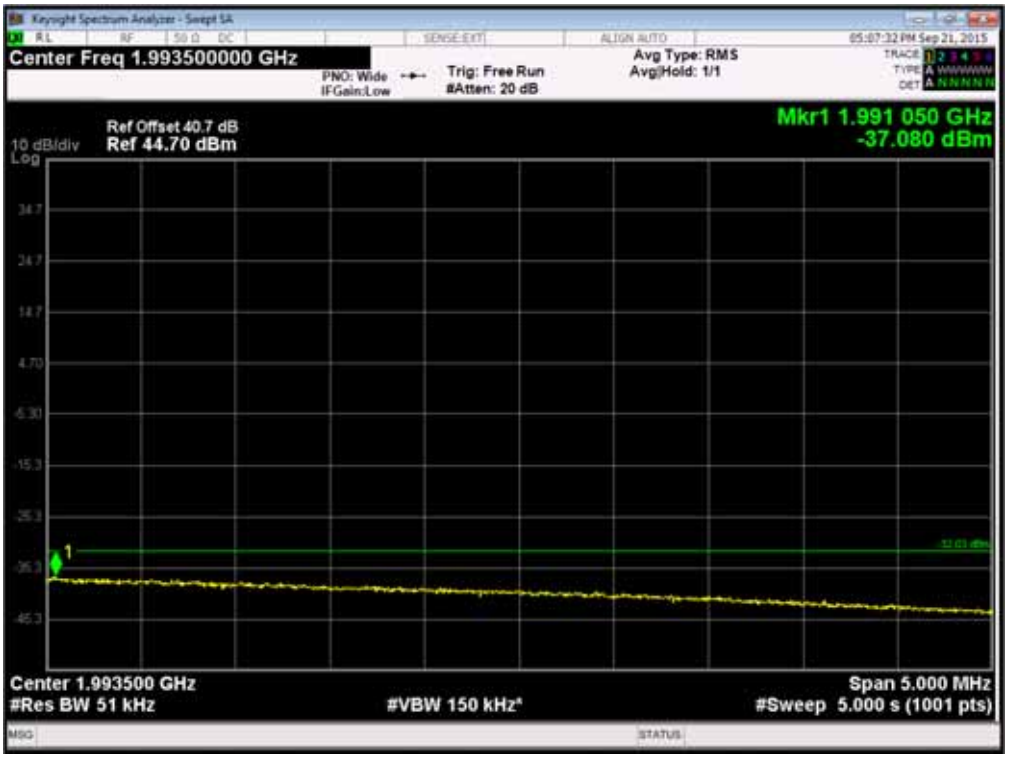
Channel Position B_{RFBW} - 16QAM / Bandwidth 5.0 MHz



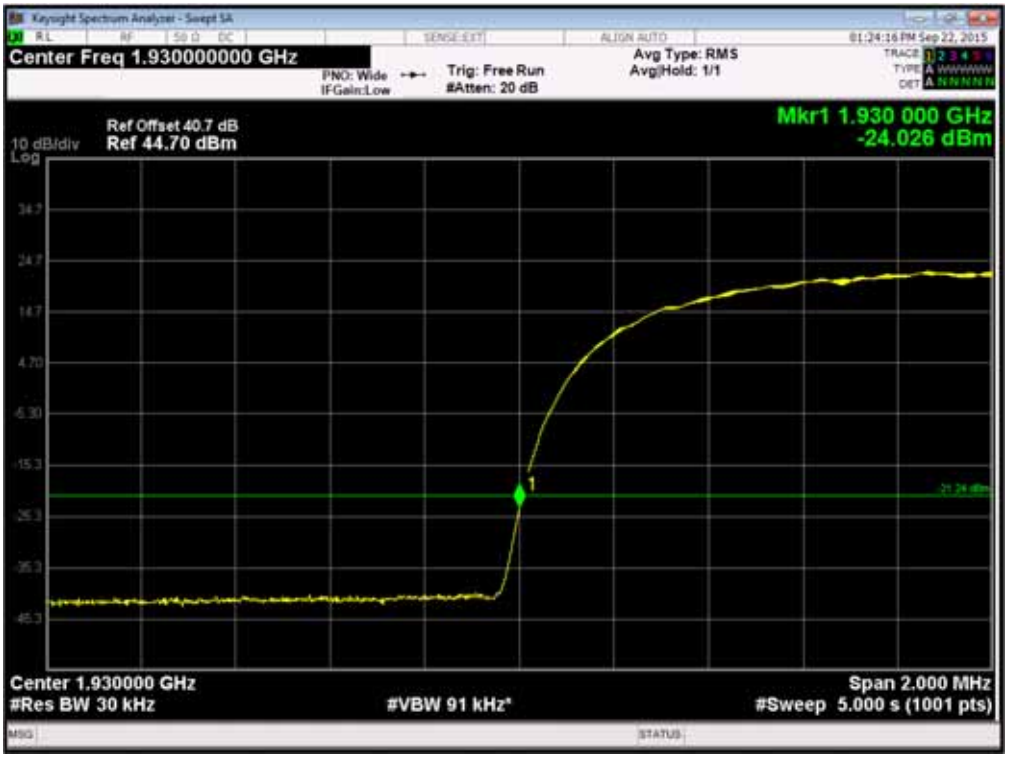


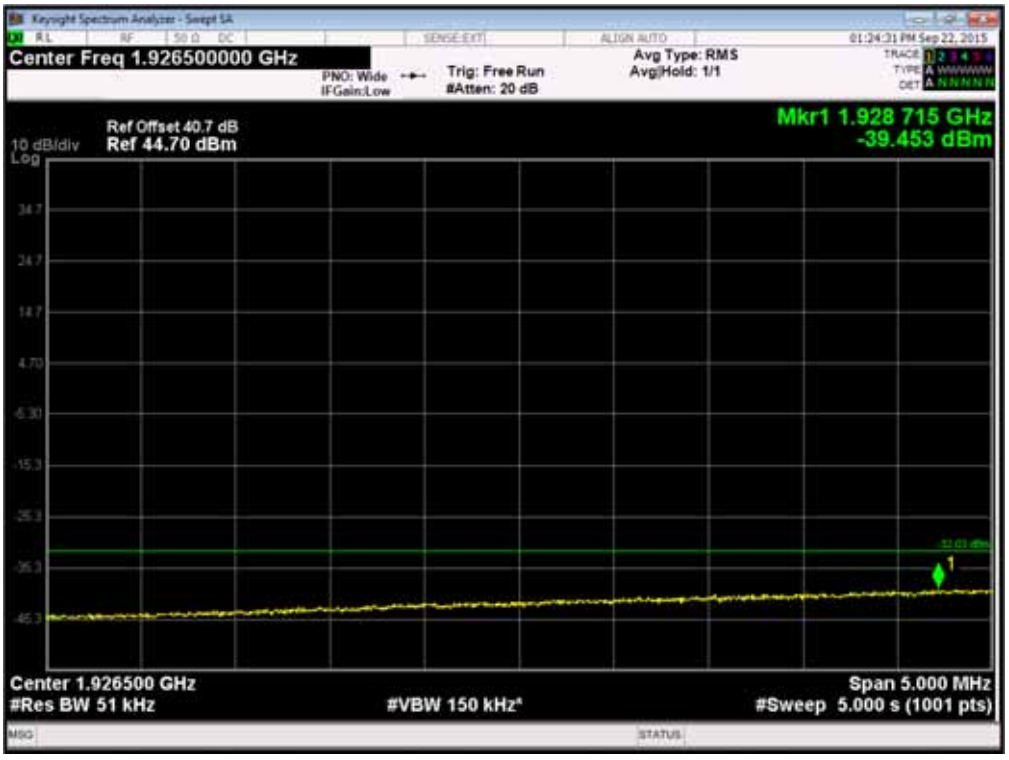
Channel Position T_{RFBW} - 16QAM / Bandwidth 5.0 MHz



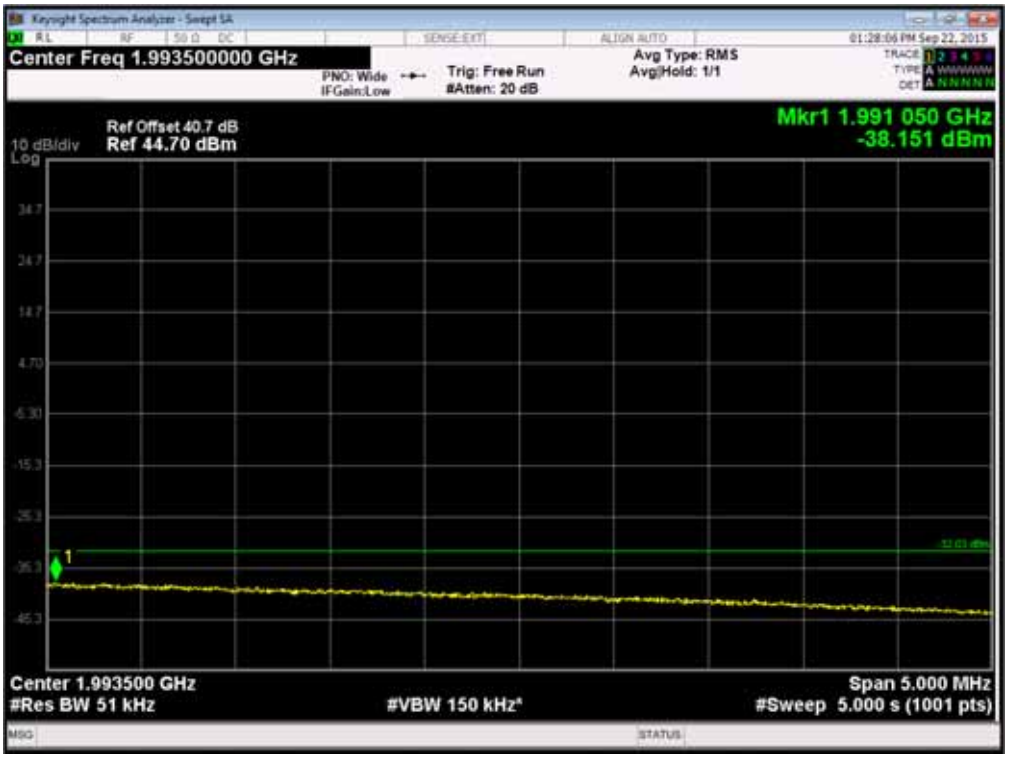


Channel Position B_{RFBW} - 64QAM / Bandwidth 5.0 MHz





Channel Position T_{RFBW} - 64QAM / Bandwidth 5.0 MHz



Configuration L-MIMO-SC

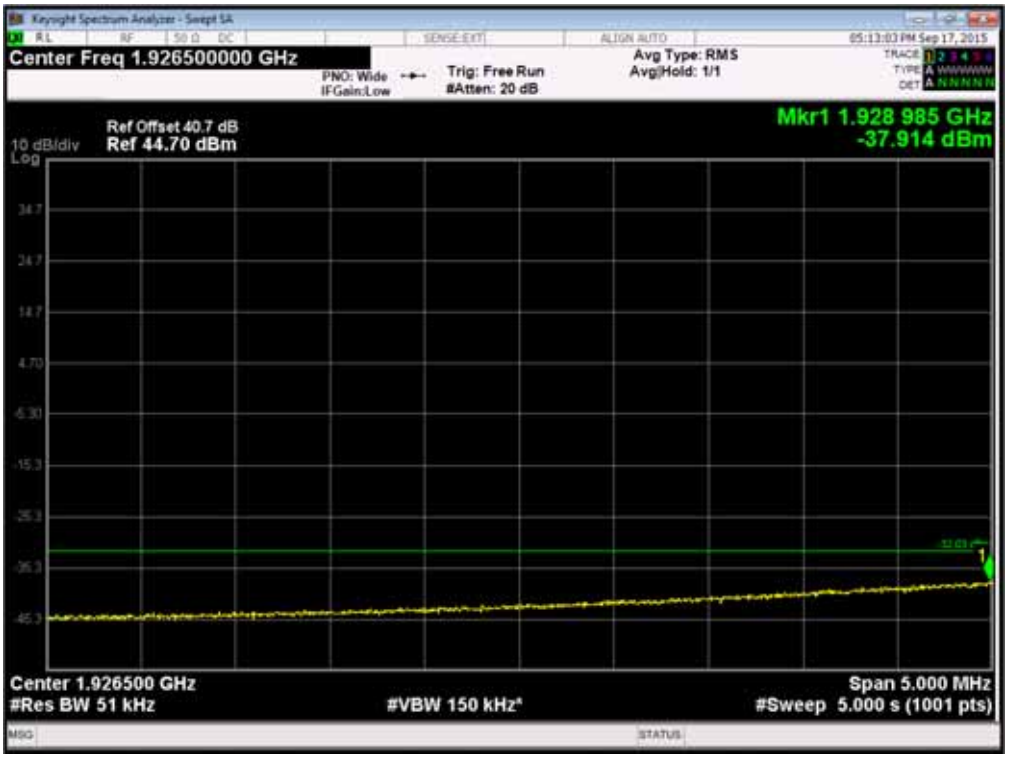
Maximum Output Power 46.0dBm per port

Band Edge Frequency	Channel Bandwidth	Edge Test with modulation QPSK Channel Frequencies	RBW (kHz)	Limit (dBm)
Channel Position B 1930.0 MHz	5.0 MHz	1932.5MHz	51	-19.02
	10.0 MHz	1935.0MHz	100	-19.02
	15.0 MHz	1937.5MHz	200	-19.02
	20.0 MHz	1940.0MHz	200	-19.02
Channel Position T 1990.0 MHz	5.0 MHz	1987.5MHz	51	-19.02
	10.0 MHz	1985.0MHz	100	-19.02
	15.0 MHz	1982.5MHz	200	-19.02
	20.0 MHz	1980.0MHz	200	-19.02

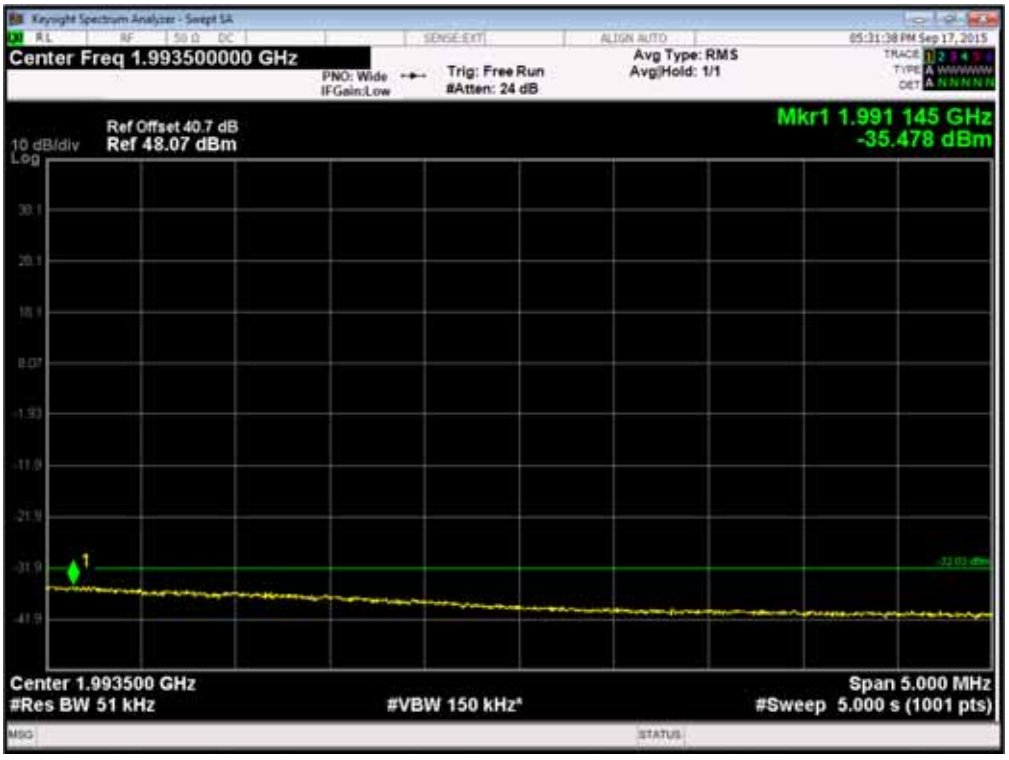
Note 1: For MIMO mode configurations, the limit was adjusted with a correction of -6.02dB [10Log(4)] to -13dBm.

Note 2: The channels shown in the table above are the minimum and maximum channels that can be used in the authorised frequency ranges to maintain compliance. Channels outside of the ranges shown in the above tables shall not be made available to the end user.

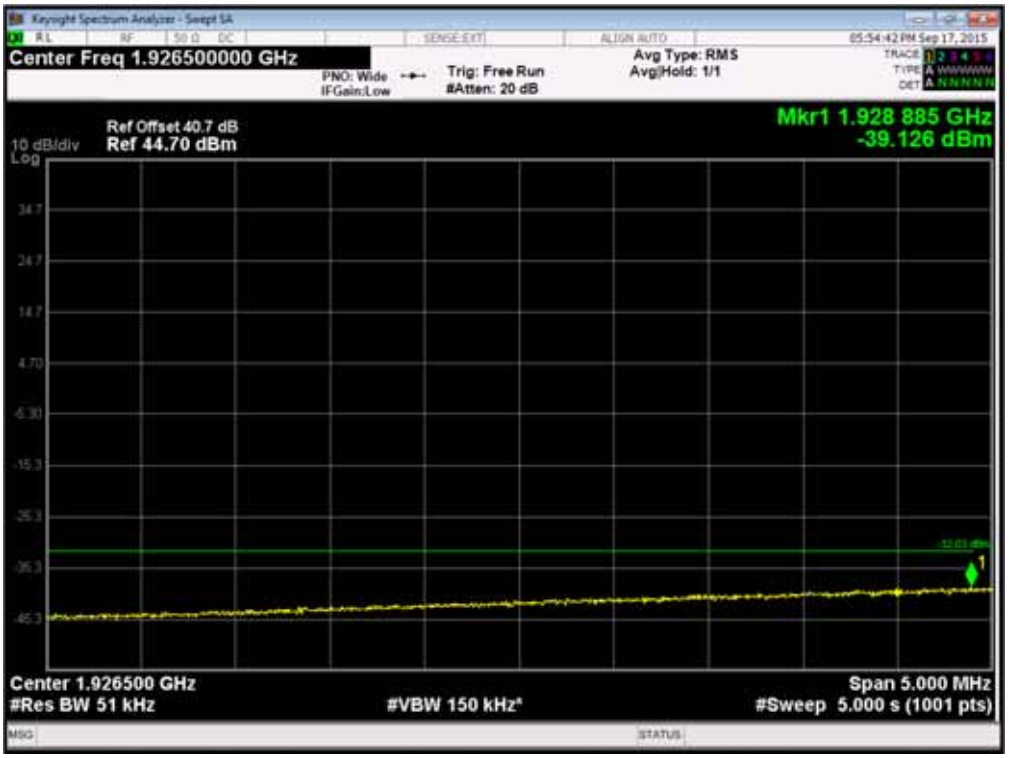
Channel Position B - QPSK / Bandwidth 5.0 MHz



Channel Position T - QPSK / Bandwidth 5.0 MHz

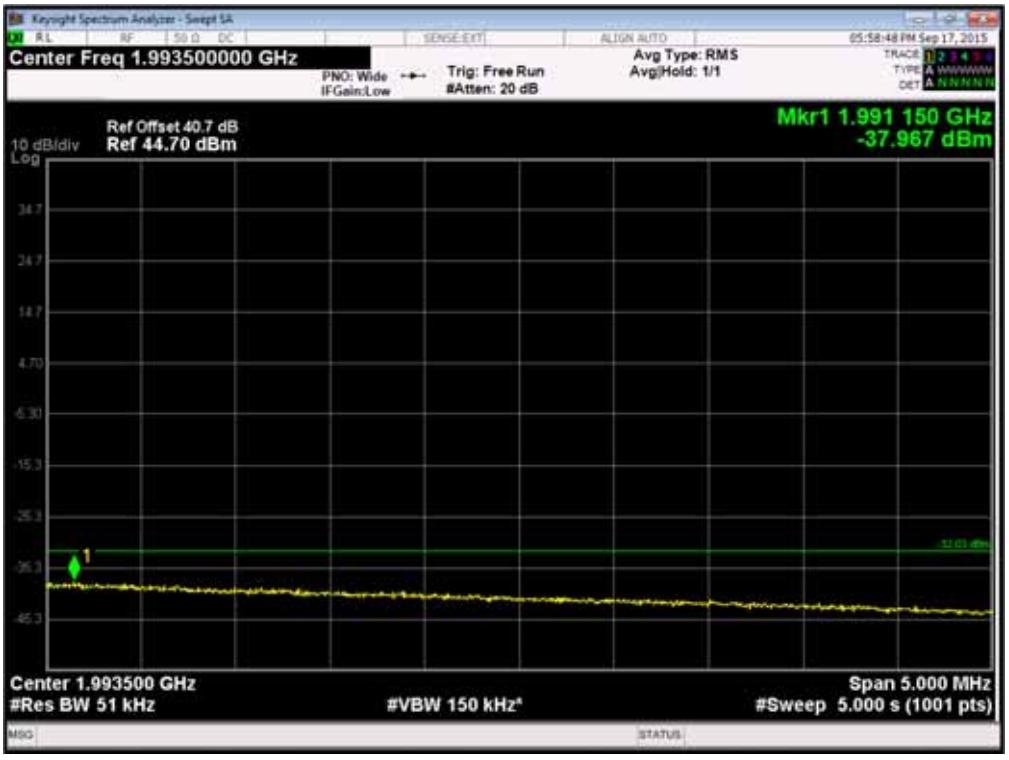


Channel Position B - QPSK / Bandwidth 10.0 MHz

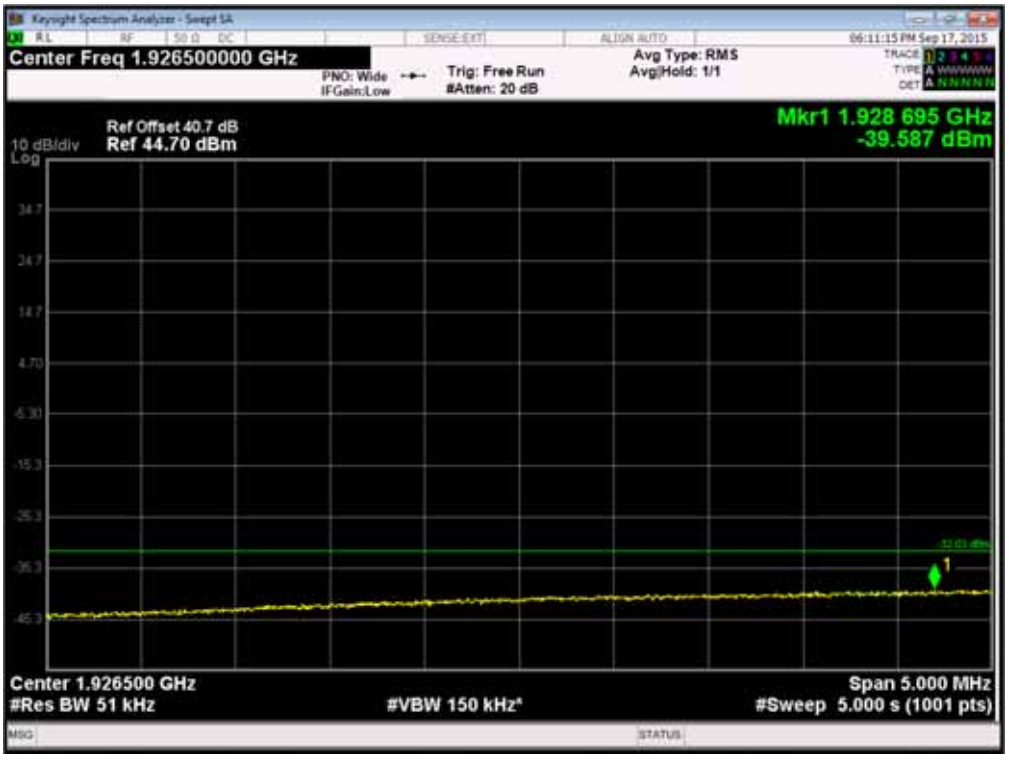


Channel

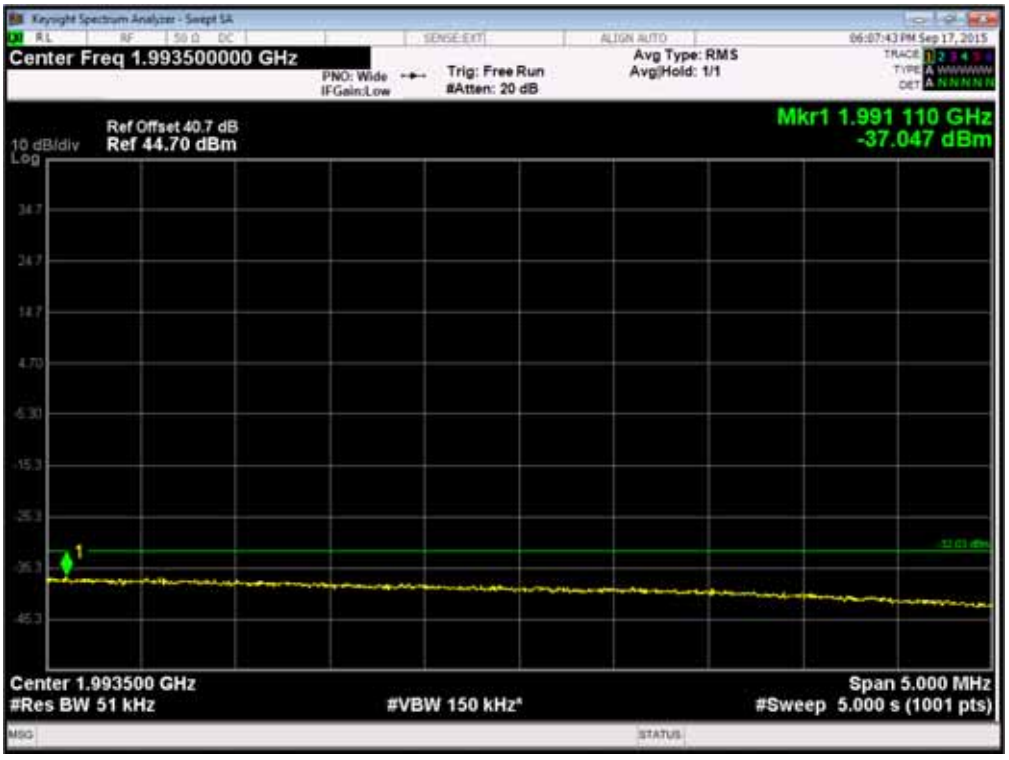
Position T - QPSK / Bandwidth 10.0 MHz



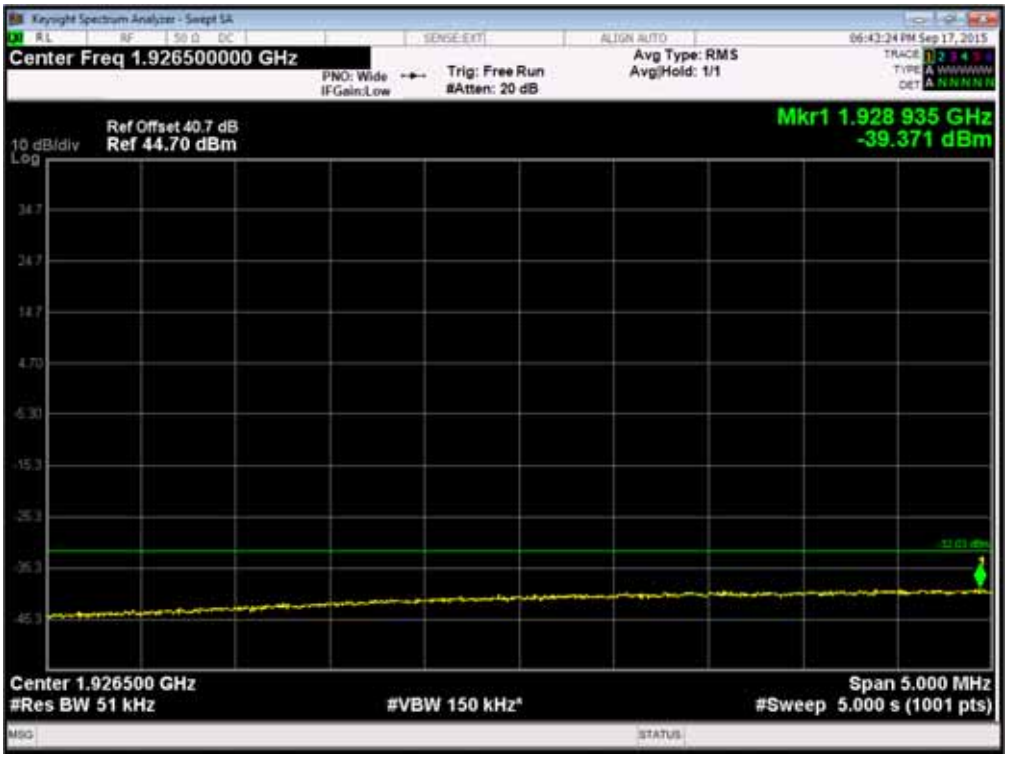
Channel Position B - QPSK / Bandwidth 15.0 MHz



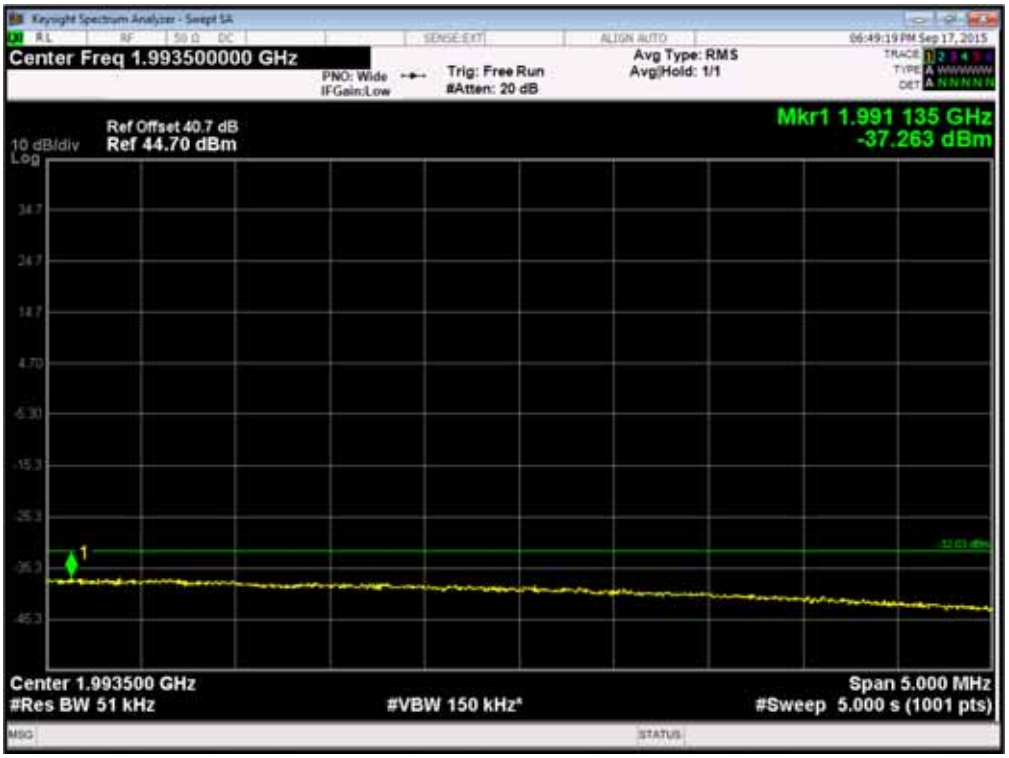
Channel Position T - QPSK / Bandwidth 15.0 MHz



Channel Position B - QPSK / Bandwidth 20.0 MHz



Channel Position T - QPSK / Bandwidth 20.0 MHz



Configuration L-MIMO-MC 1 (2C)

Maximum Output Power 46.0dBm per port

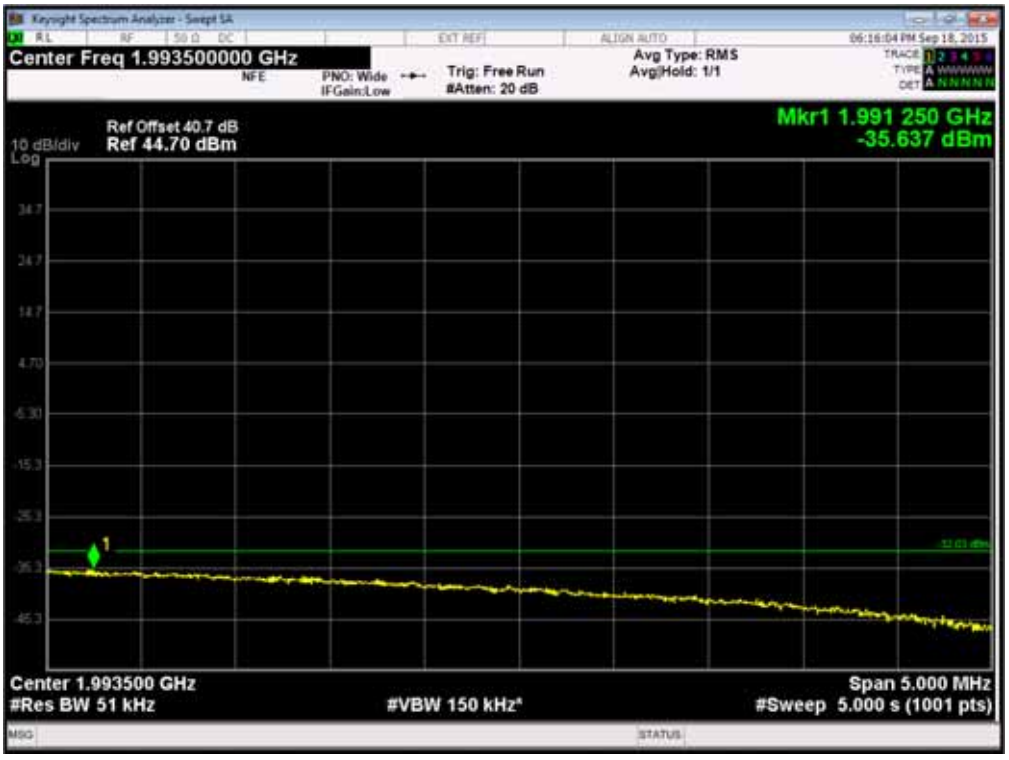
Band Edge Frequency	Channel Bandwidth	Edge Test with modulation QPSK Channel Frequencies	RBW (kHz)	Limit (dBm)
Channel Position B_{RFBW} 1930.0 MHz	5.0 MHz	1932.5MHz + 1967.5MHz	51	-19.02
	10.0 MHz	1935.0MHz + 1965.0MHz	100	-19.02
	15.0 MHz	1937.5MHz + 1962.5MHz	200	-19.02
	20.0 MHz	1940.0MHz + 1960.0MHz	200	-19.02
Channel Position T_{RFBW} 1990.0 MHz	5.0 MHz	1952.5MHz + 1987.5MHz	51	-19.02
	10.0 MHz	1955.0MHz + 1985.0MHz	100	-19.02
	15.0 MHz	1957.5MHz + 1982.5MHz	200	-19.02
	20.0 MHz	1960.0MHz + 1980.0MHz	200	-19.02

Note 1: For MIMO mode configurations, the limit was adjusted with a correction of -6.02dB [10Log(4)] to -13dBm.

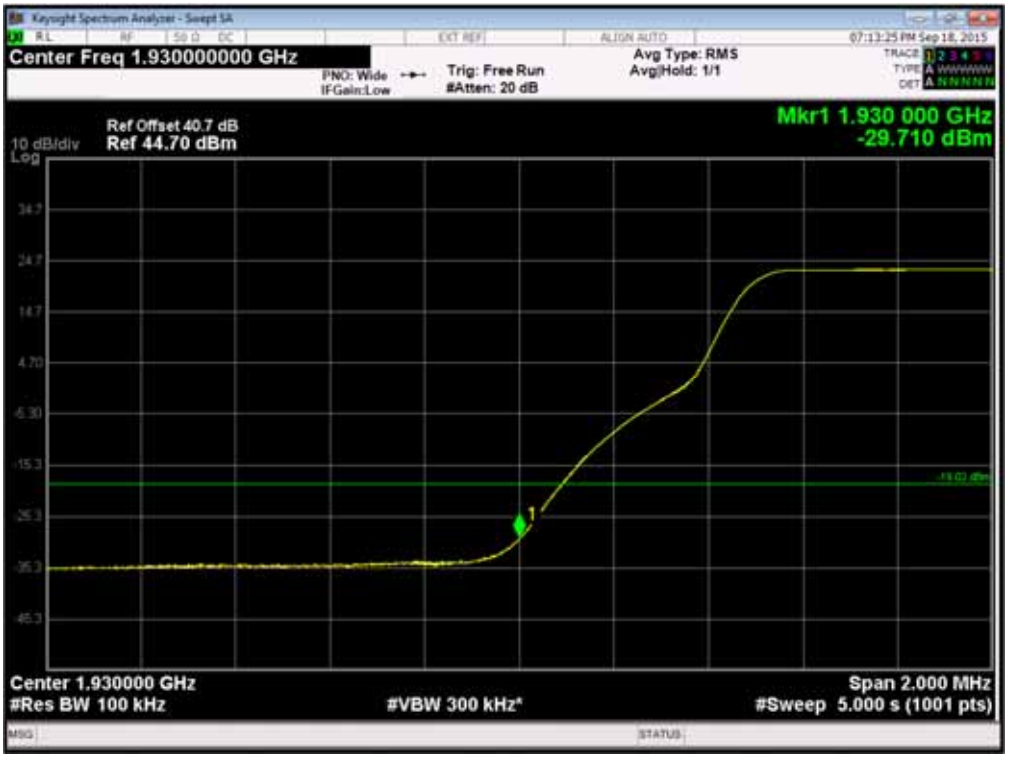
Note 2: The channels shown in the table above are the minimum and maximum channels that can be used in the authorised frequency ranges to maintain compliance. Channels outside of the ranges shown in the above tables shall not be available to the end user.

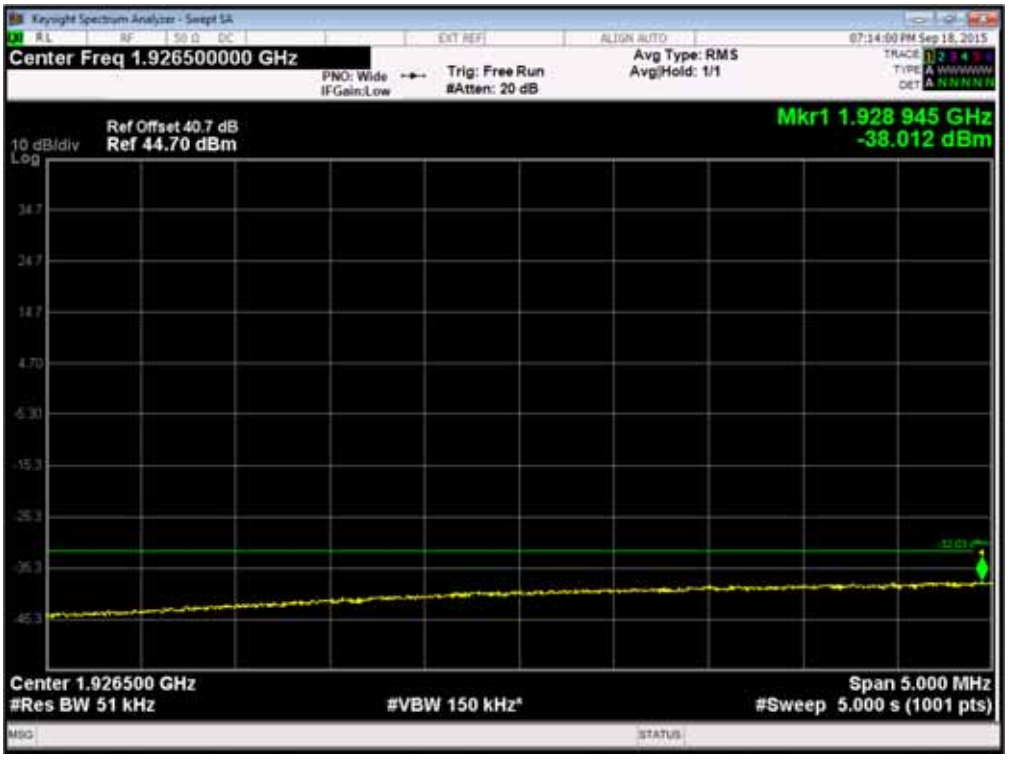
Channel Position B_{RFBW} - QPSK / Bandwidth 5.0 MHz

Channel Position T_{RFBW} - QPSK / Bandwidth 5.0 MHz

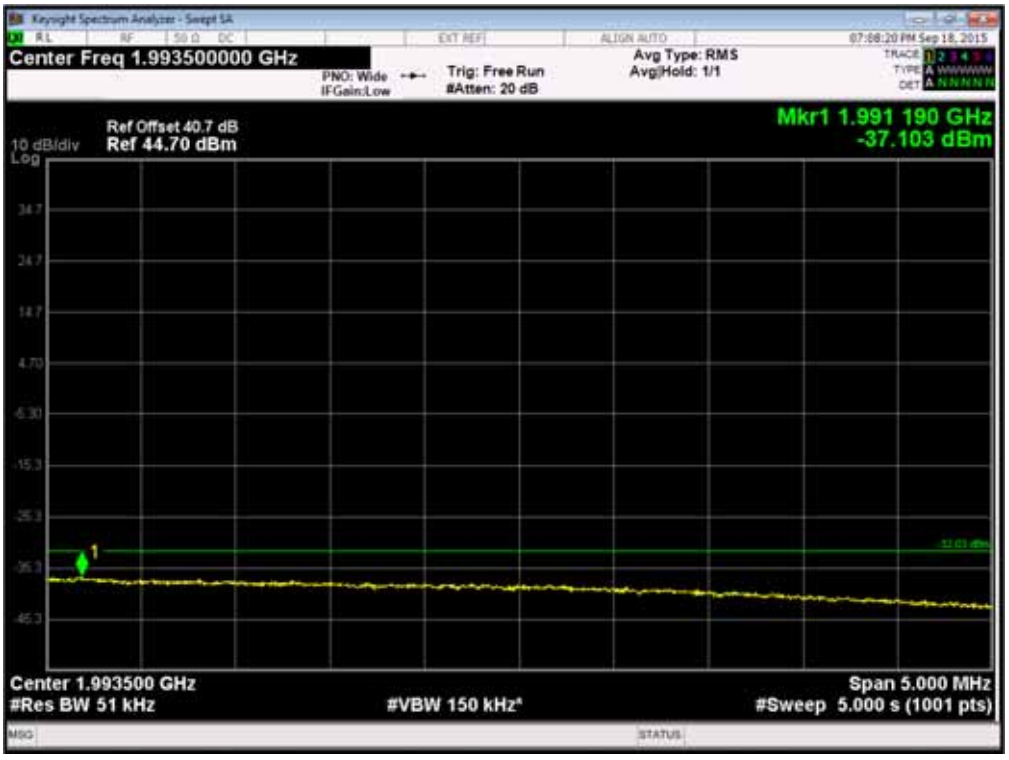


Channel Position B_{RFBW} - QPSK / Bandwidth 10.0 MHz

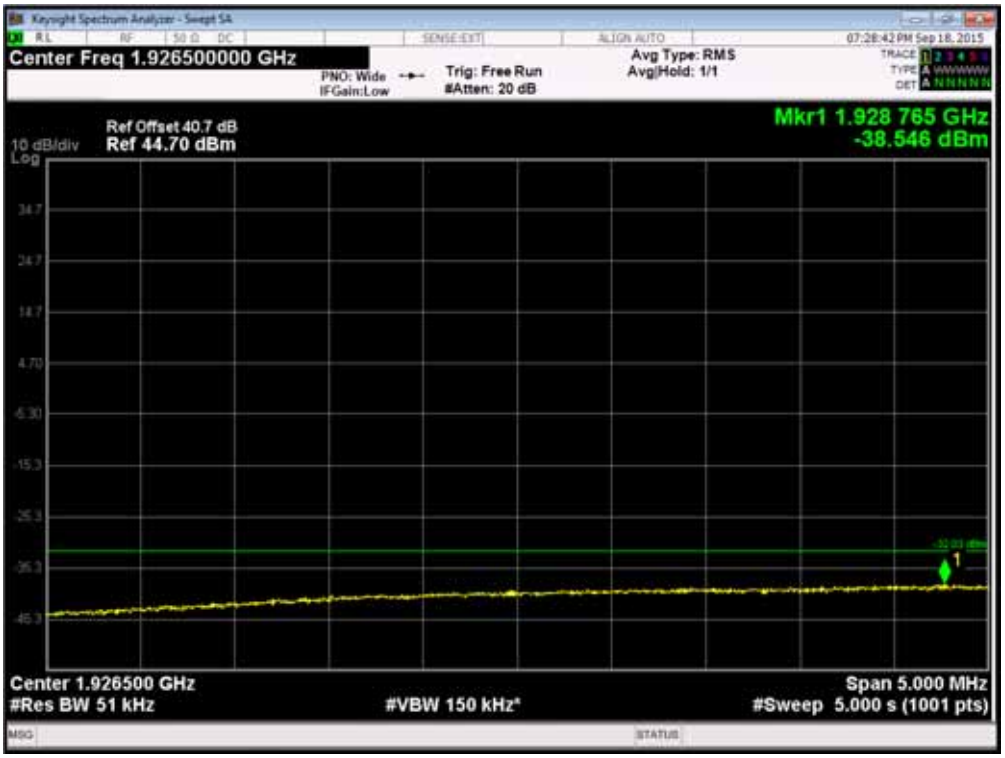




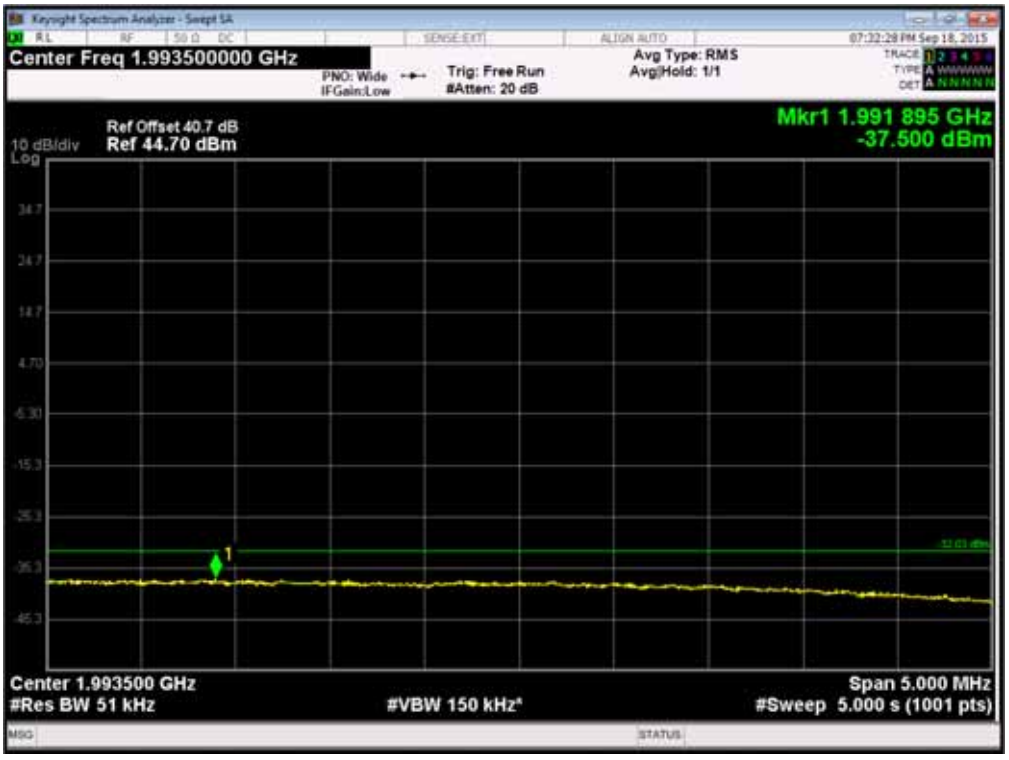
Channel Position T_{RFBW} - QPSK / Bandwidth 10.0 MHz



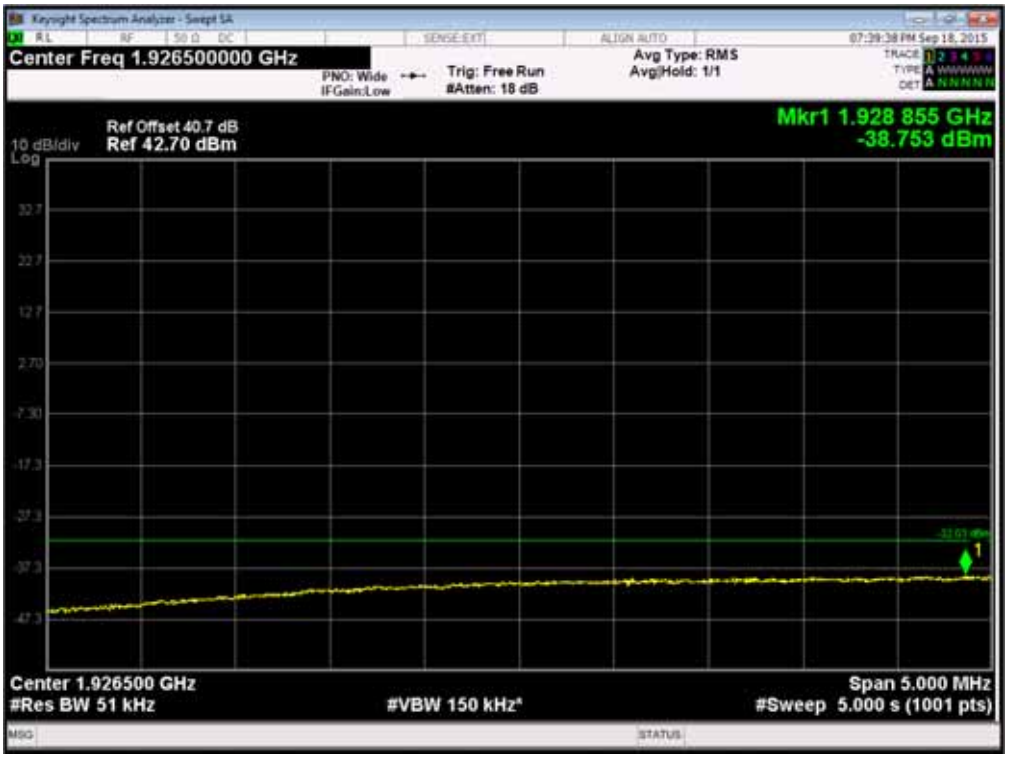
Channel Position B_{RFBW} - QPSK / Bandwidth 15.0 MHz



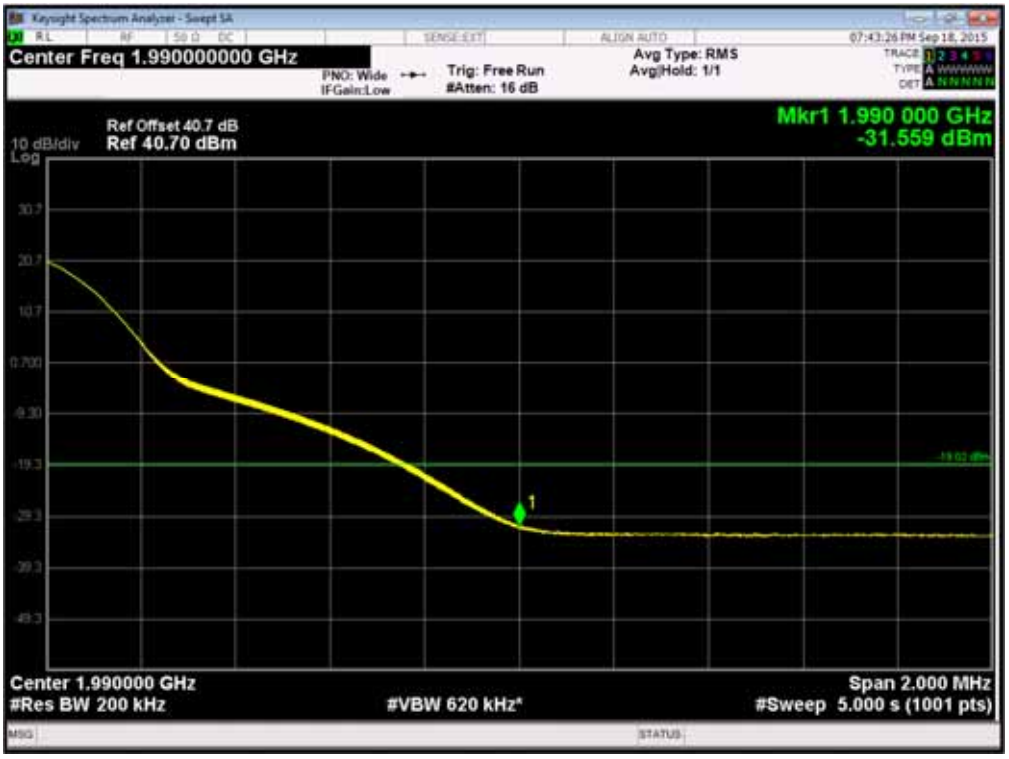
Channel Position T_{RFBW} - QPSK / Bandwidth 15.0 MHz

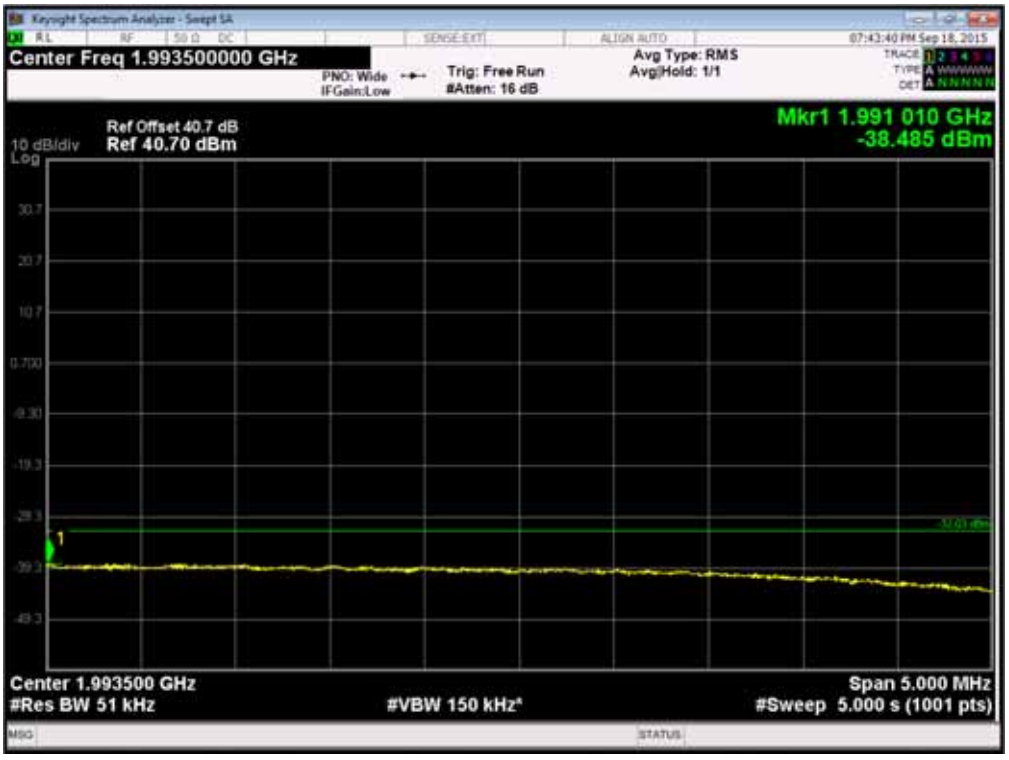


Channel Position B_{RFBW} - QPSK / Bandwidth 20.0 MHz



Channel Position T_{RFBW} - QPSK / Bandwidth 20.0 MHz





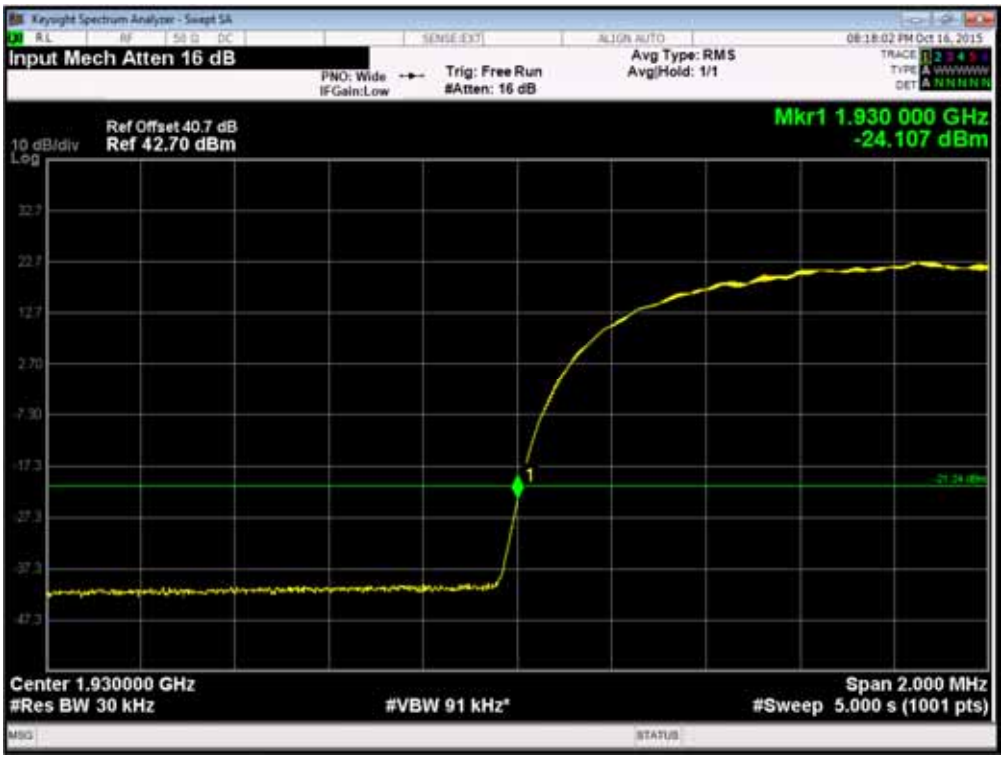
Configuration G+W-MIMO-MC 1 (1G+1W)

Maximum Output Power 46.0dBm per port

Band Edge Frequency	Channel Bandwidth	Edge Test with modulation (G) GMSK + (W) 16QAM Channel Frequencies	RBW (kHz)	Limit (dBm)
Channel Position B_{RFBW} 1930.0 MHz	G: 250 kHz W: 5.0 MHz	(W) 1932.4MHz + (G) 1935.2MHz	30	-21.24
Channel Position T_{RFBW} 1990.0 MHz	G: 250 kHz W: 5.0 MHz	(G) 1984.8MHz + (W) 1987.6MHz	30	-21.24

Note: For MIMO mode configurations, the limit was adjusted with a correction of -6.02dB [10Log(4)] to -13dBm. For the measurement of 1MHz immediately outside and adjacent to the frequency band edge, a resolution bandwidth of 30kHz was used, and 30kHz is < 50kHz (1% of nominal bandwidth). To compensate for the reduced measurement bandwidth, the limit was adjusted with a correction of -2.22dB [10Log(30/50)] to -19.02dBm.

Channel Position B_{RFBW} - GSM GMSK / WCDMA 16QAM: Bandwidth 5.0 MHz



Channel Position T_{RFBW} - GSM GMSK / WCDMA 16QAM: Bandwidth 5.0 MHz

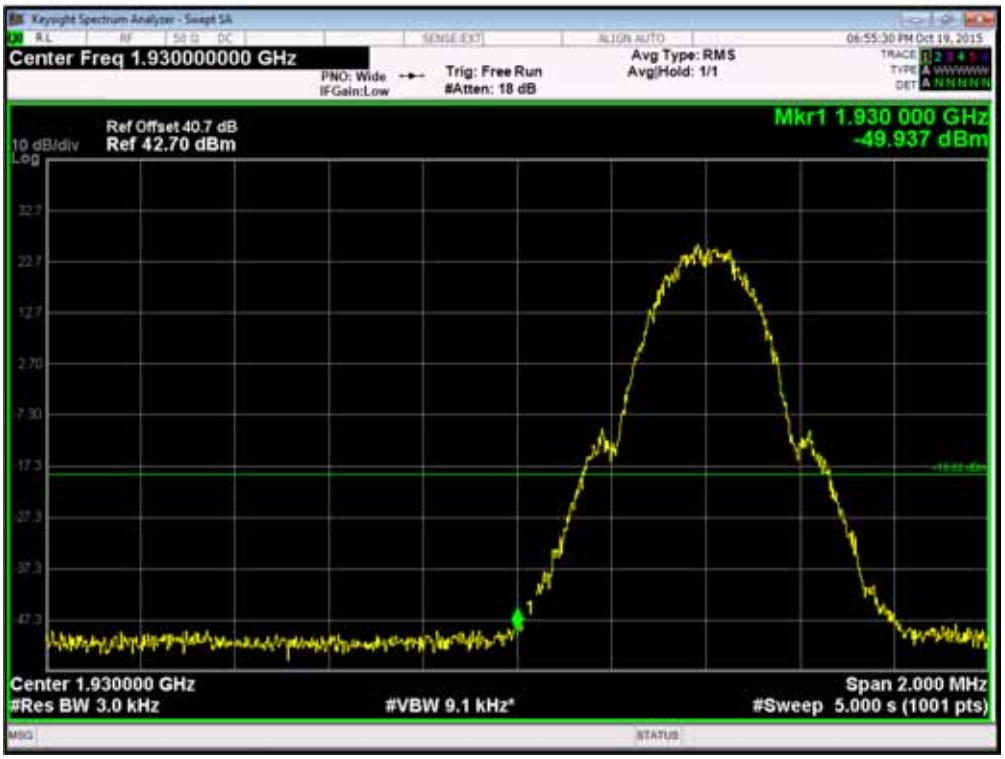
Configuration G+W-MIMO-MC 3 (2G+1W)

Maximum Output Power 46.0dBm per port

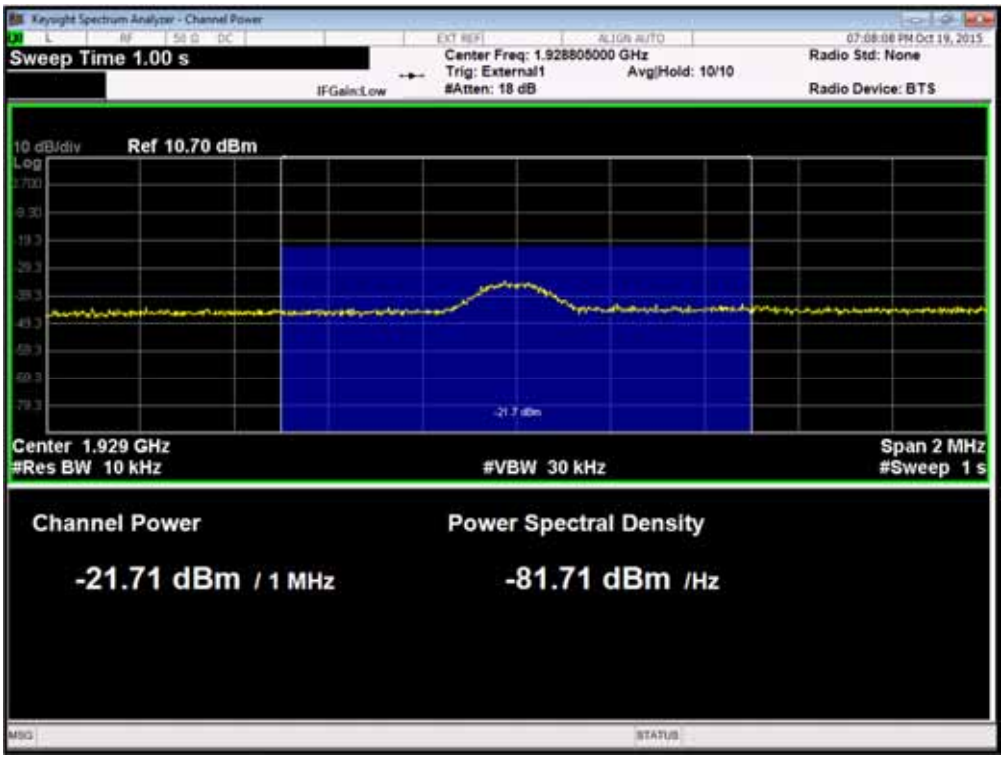
Band Edge Frequency	Channel Bandwidth	Edge Test with modulation (G) GMSK + (W) 16QAM Channel Frequencies	RBW (kHz)	Limit (dBm)
Channel Position B_{RFBW} 1930.0 MHz	G: 250 kHz W: 5.0 MHz	(G) 1930.4MHz + (G) 1932.0MHz + (W) 1934.8MHz	3.0	-19.02
Channel Position T_{RFBW} 1990.0 MHz	G: 250 kHz W: 5.0 MHz	(W) 1985.2MHz + (G) 1988.0MHz + (G) 1989.6MHz	3.0	-19.02

Note: For MIMO mode configurations, the limit was adjusted with a correction of -6.02dB [10Log(4)] to -13dBm.

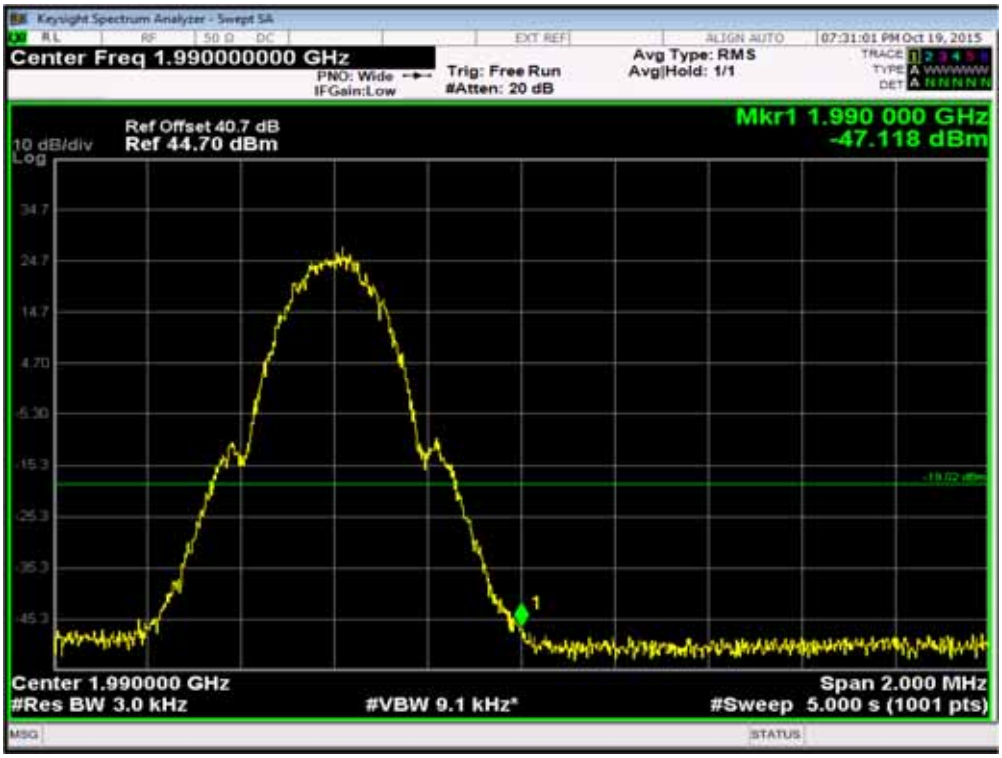
Channel Position B_{RFBW} - GSM GMSK / WCDMA 16QAM: Bandwidth 5.0 MHz



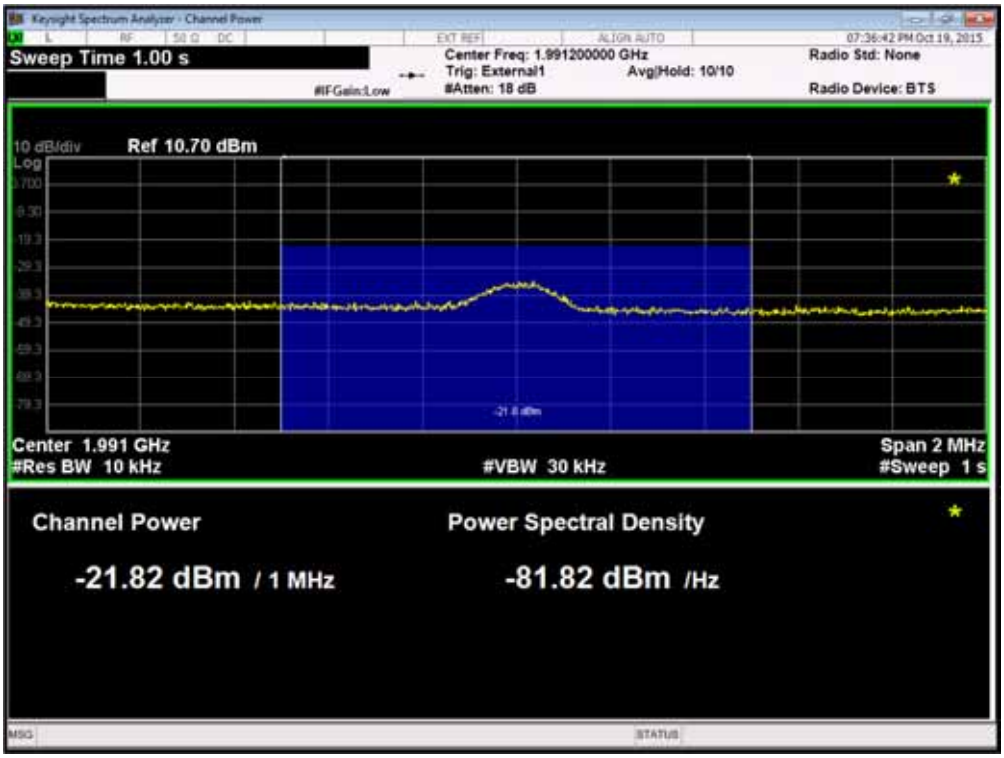
The channel power of 1MHz for 1928.805MHz is -21.71dBm, which is within the limit of -19.02dBm.



Channel Position T_{RFBW} - GSM GMSK / WCDMA 16QAM: Bandwidth 5.0 MHz



The channel power of 1MHz for 1991.200MHz is -21.82dBm, which is within the limit of -19.02dBm.



Configuration G+L-MIMO-MC 1 (1G+1L)

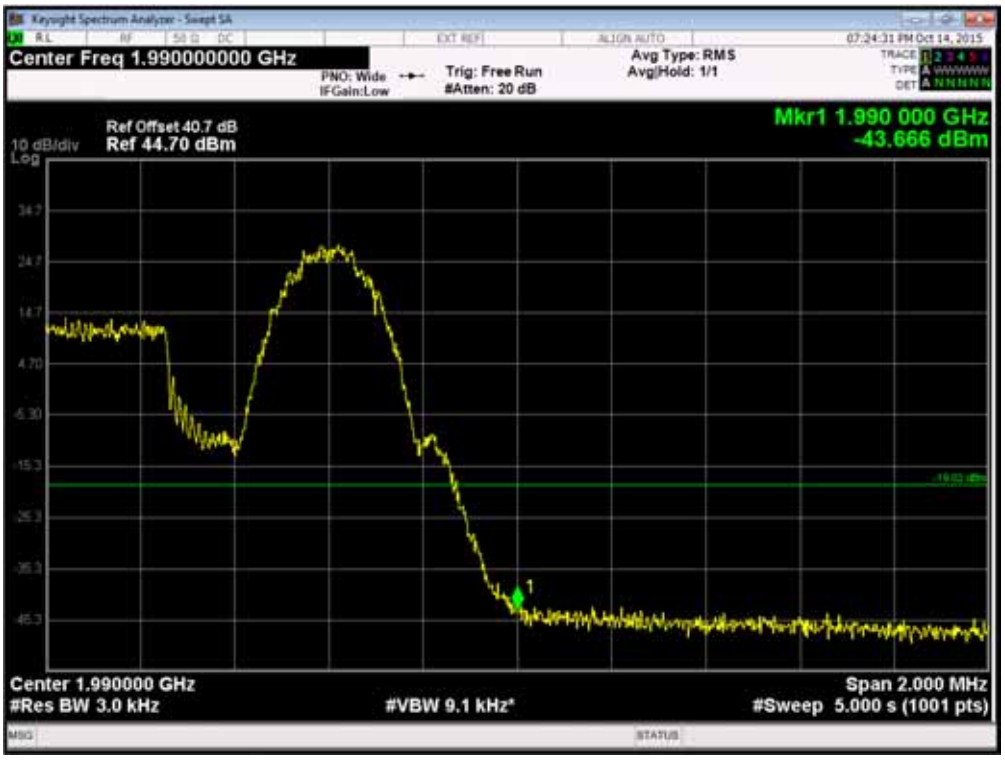
Maximum Output Power 46.0dBm per port

Band Edge Frequency	Channel Bandwidth	Edge Test with modulation (G) GMSK + (L) QPSK Channel Frequencies	RBW (kHz)	Limit (dBm)
Channel Position B_{RFBW} 1930.0 MHz	G: 250 kHz L: 5.0 MHz	(G) 1930.4MHz + (L) 1933.0MHz	3.0	-19.02
Channel Position T_{RFBW} 1990.0 MHz	G: 250 kHz L: 5.0 MHz	(L) 1987.0MHz + (G) 1989.6MHz	3.0	-19.02

Note: For MIMO mode configurations, the limit was adjusted with a correction of -6.02dB [10Log(4)] to -13dBm.

Channel Position B_{RFBW} - GSM GMSK / LTE QPSK: Bandwidth 5.0 MHz

Channel Position T_{RFBW} - GSM GMSK / LTE QPSK: Bandwidth 5.0 MHz



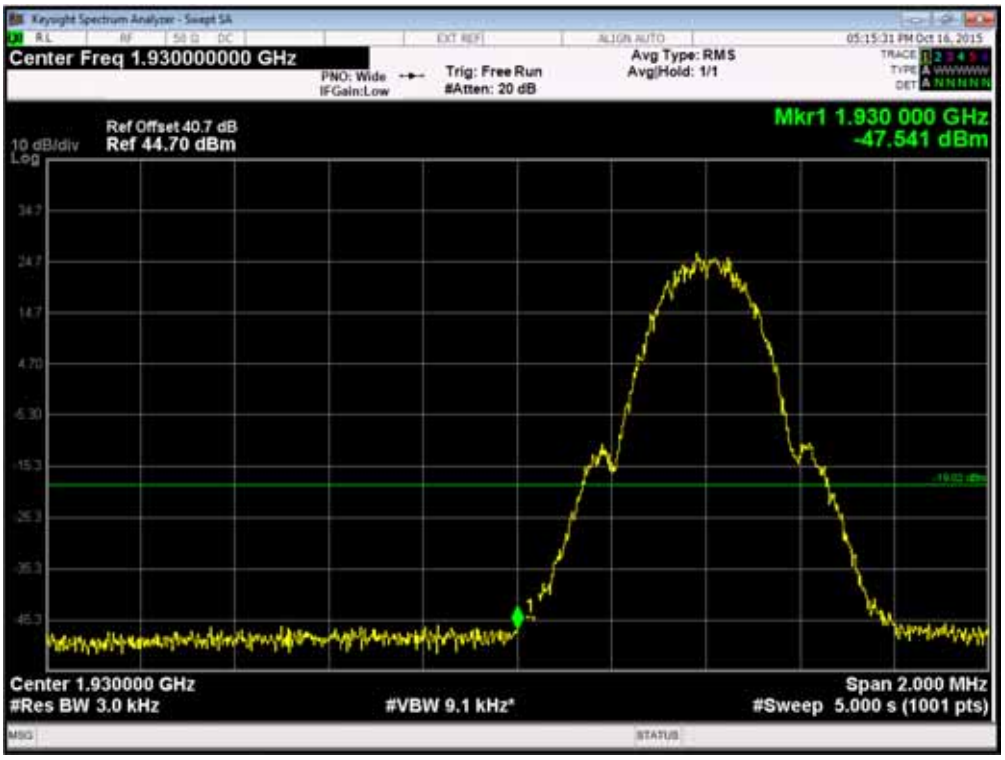
Configuration G+L-MIMO-MC 4 (2G+1L)

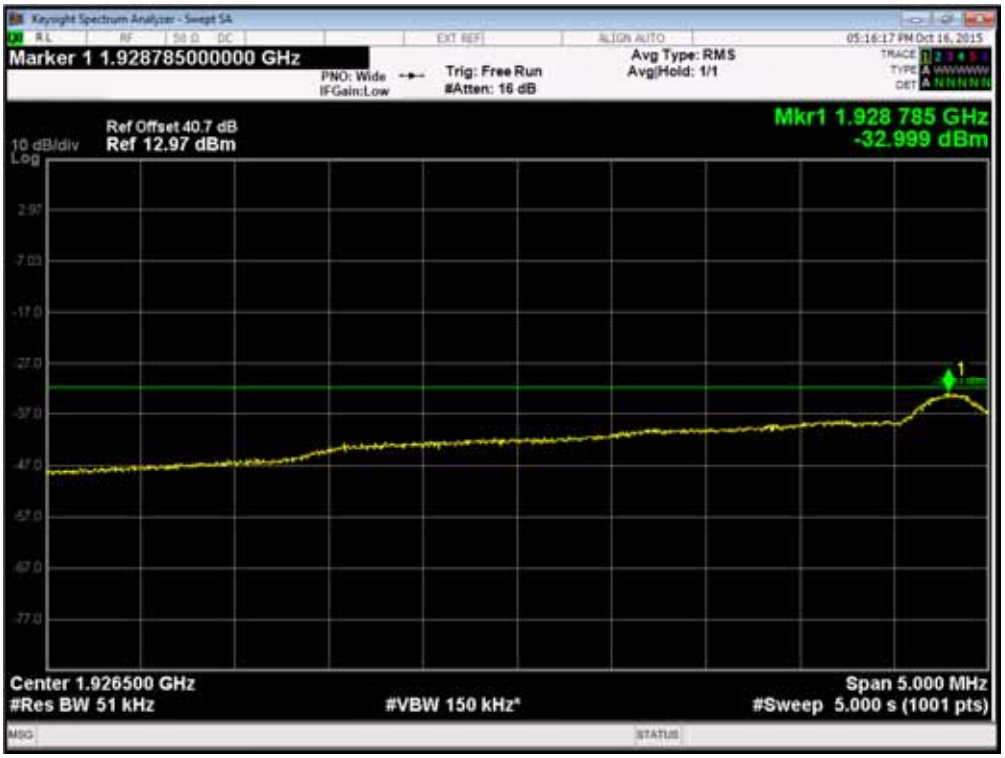
Maximum Output Power 46.0dBm per port

Band Edge Frequency	Channel Bandwidth	Edge Test with modulation (G) GMSK + (L) QPSK Channel Frequencies	RBW (kHz)	Limit (dBm)
Channel Position B_{RFBW} 1930.0 MHz	G: 250 kHz L: 5.0 MHz	(G) 1930.4MHz + (G) 1932.0MHz + (L) 1934.7MHz	3.0	-19.02
Channel Position T_{RFBW} 1990.0 MHz	G: 250 kHz L: 5.0 MHz	(L) 1985.3MHz + (G) 1988.0MHz + (G) 1989.6MHz	3.0	-19.02

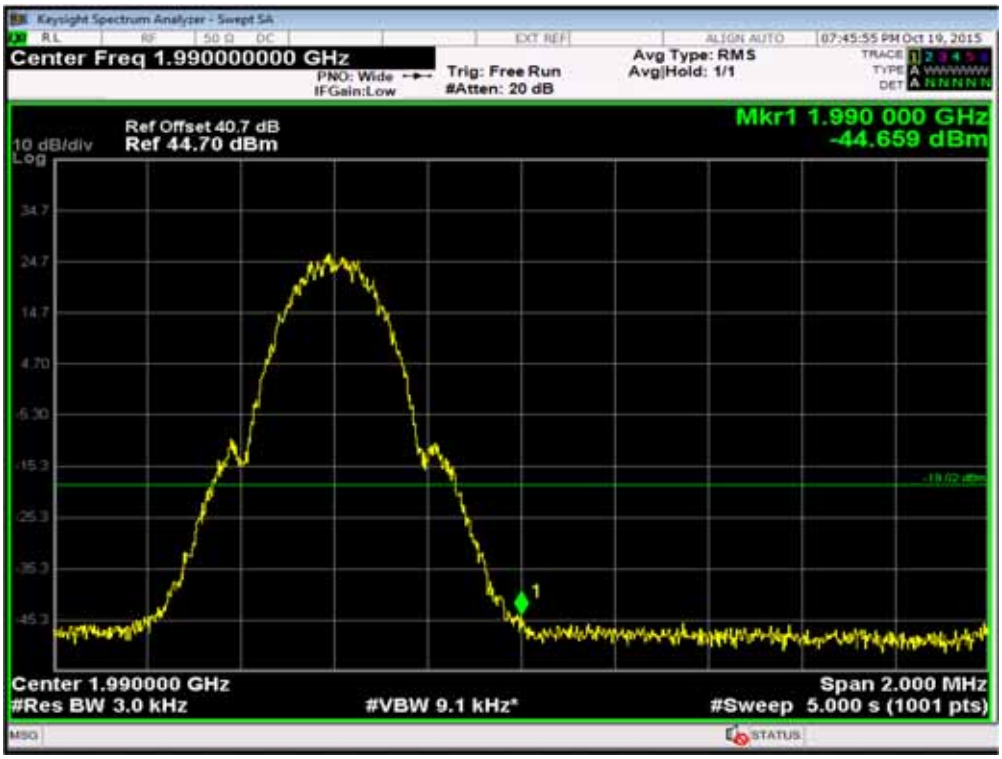
Note: For MIMO mode configurations, the limit was adjusted with a correction of -6.02dB [10Log(4)] to -13dBm.

Channel Position B_{RFBW} - GSM GMSK / LTE QPSK: Bandwidth 5.0 MHz

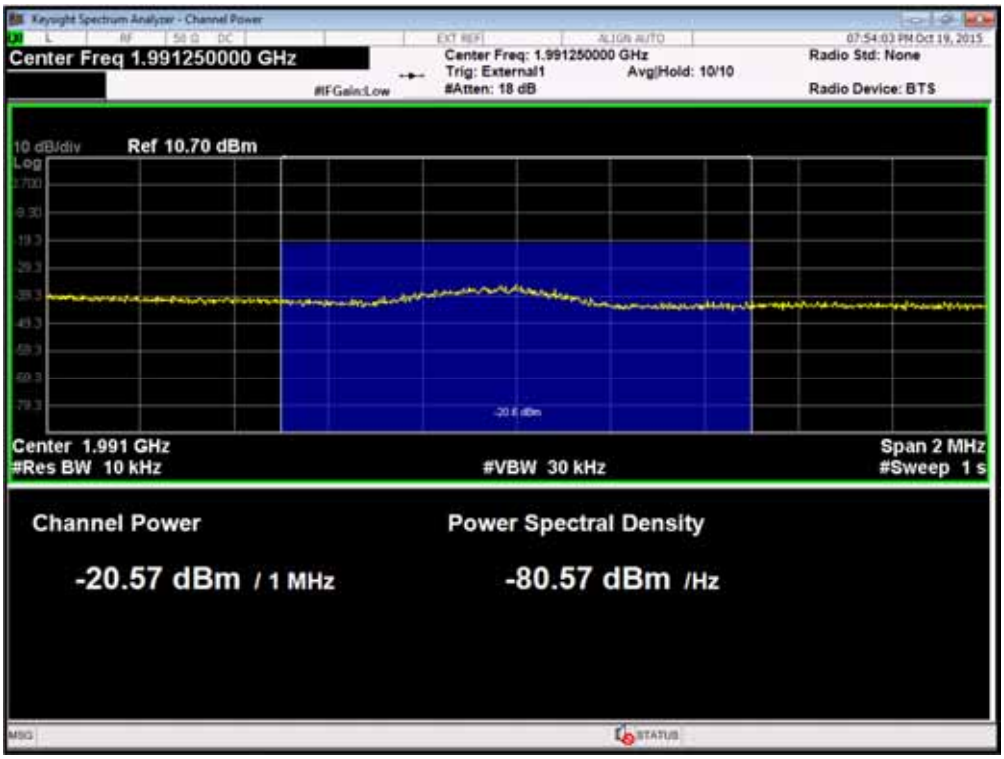




Channel Position T_{RFBW} - GSM GMSK / LTE QPSK: Bandwidth 5.0 MHz



The channel power of 1MHz for 1991.250MHz is -20.57dBm, which is within the limit of -19.02dBm.



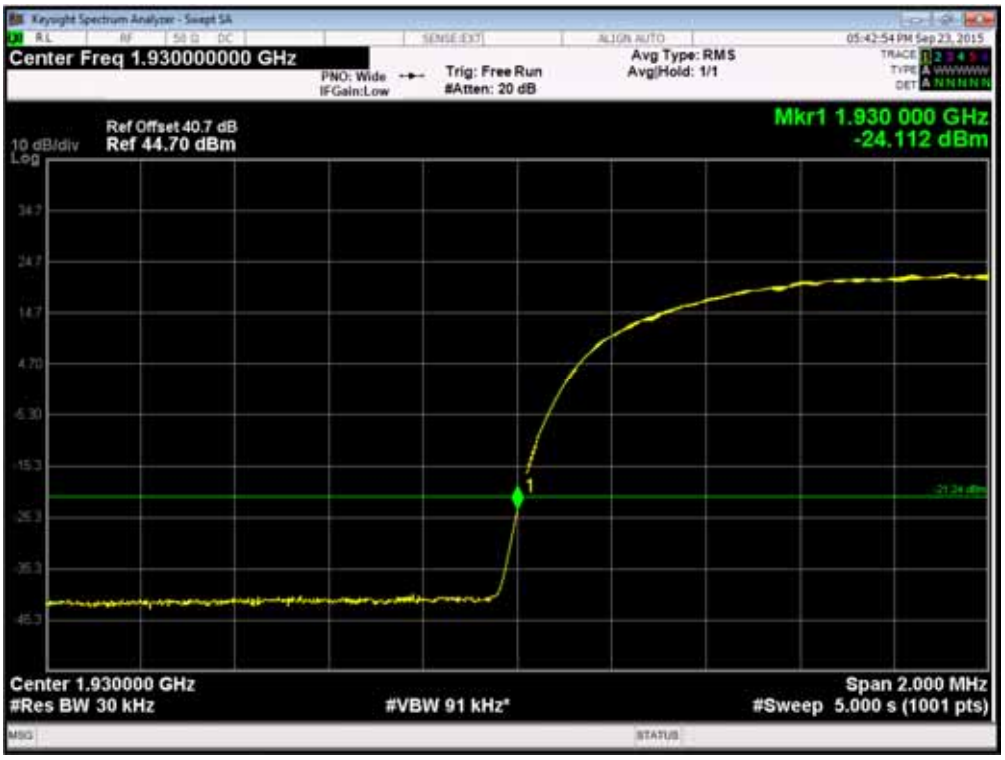
Configuration W+L-MIMO-MC 1 (1W+1L)

Maximum Output Power 46.0dBm per port

Band Edge Frequency	Channel Bandwidth	Edge Test with modulation (W)16QAM + (L) QPSK Channel Frequencies	RBW (kHz)	Limit (dBm)
Channel Position B_{RFBW} 1930.0 MHz	W: 5.0 MHz L: 10.0 MHz	(W) 1932.4MHz + (L) 1939.9MHz	30	-21.24
Channel Position T_{RFBW} 1990.0 MHz	W: 5.0 MHz L: 10.0 MHz	(L) 1980.1MHz + (W) 1987.6MHz	30	-21.24

Note: For MIMO mode configurations, the limit was adjusted with a correction of -6.02dB [10Log(4)] to -13dBm. For the measurement of 1MHz immediately outside and adjacent to the frequency band edge, a resolution bandwidth of 30kHz was used, and 30kHz is < 50kHz (1% of nominal bandwidth). To compensate for the reduced measurement bandwidth, the limit was adjusted with a correction of -2.22dB [10Log(30/50)] to -19.02dBm.

Channel Position B_{RFBW} - WCDMA 16QAM / LTE QPSK: Bandwidth 10.0 MHz



Channel Position T_{RFBW} - WCDMA 16QAM / LTE QPSK: Bandwidth 10.0 MHz

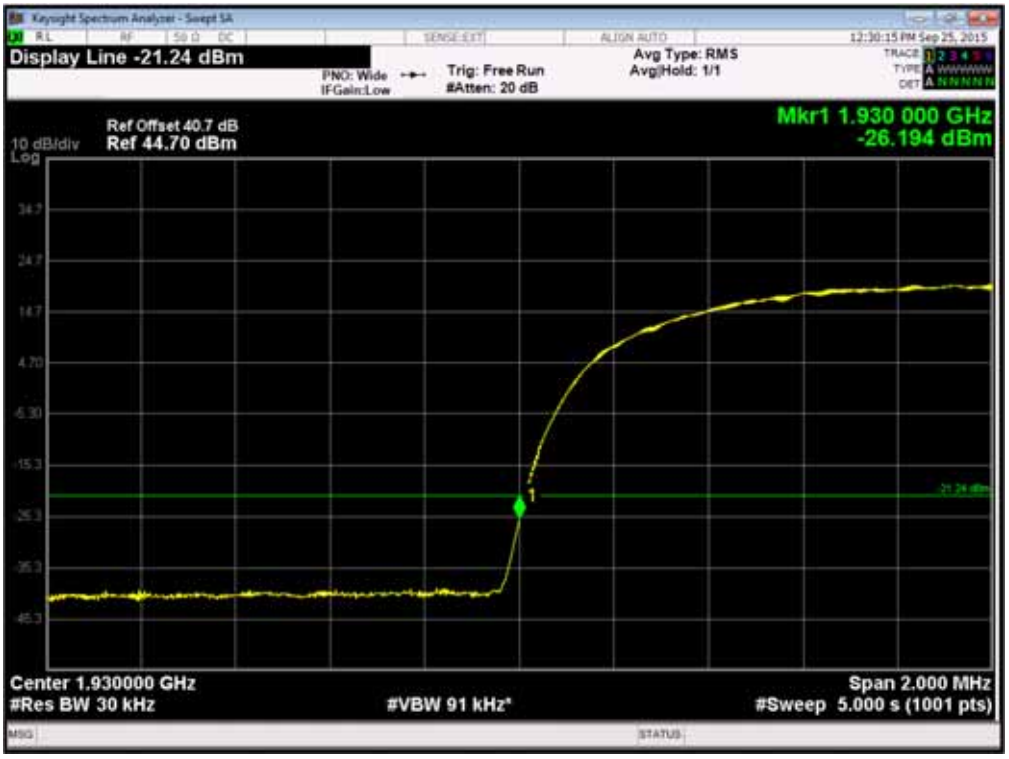
Configuration W+L-MIMO-MC 4 (2W+1L)

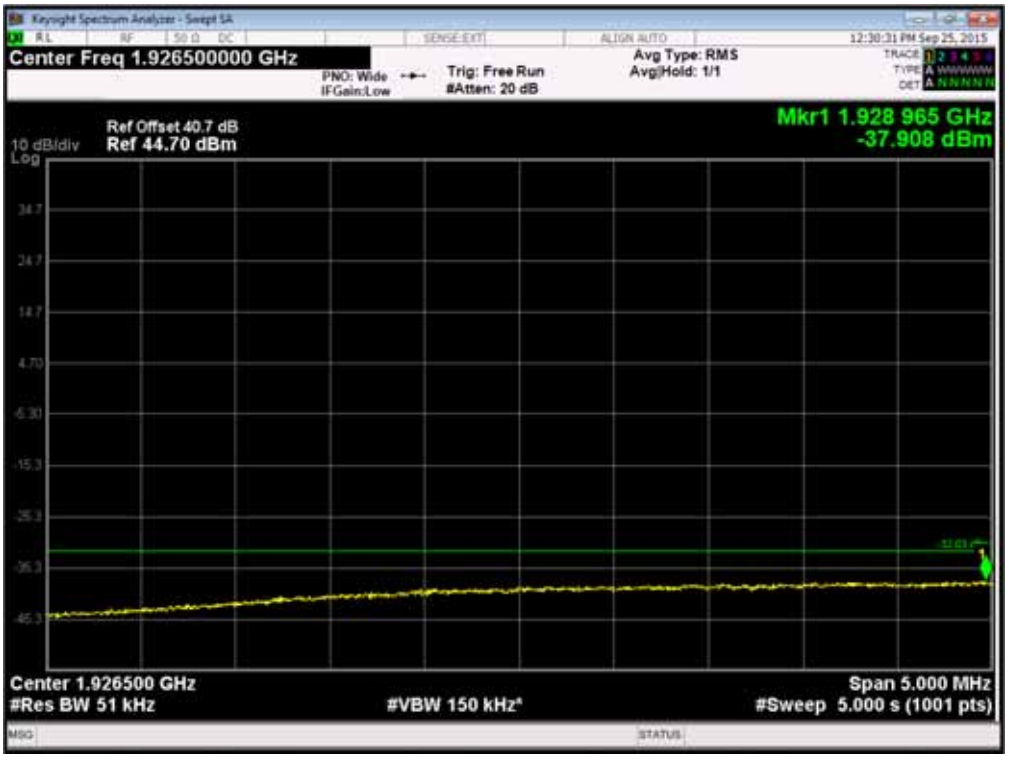
Maximum Output Power 46.0dBm per port

Band Edge Frequency	Channel Bandwidth	Edge Test with modulation (W) 16QAM + (L) QPSK Channel Frequencies	RBW (kHz)	Limit (dBm)
Channel Position B_{RFBW} 1930.0 MHz	W: 5.0 MHz L: 5.0 MHz	(W) 1932.4MHz + (W) 1937.4MHz + (L) 1967.5MHz	30	-21.24
Channel Position T_{RFBW} 1990.0 MHz	W: 5.0 MHz L: 5.0 MHz	(L) 1952.5MHz + (W) 1982.6MHz + (W) 1987.6MHz	30	-21.24

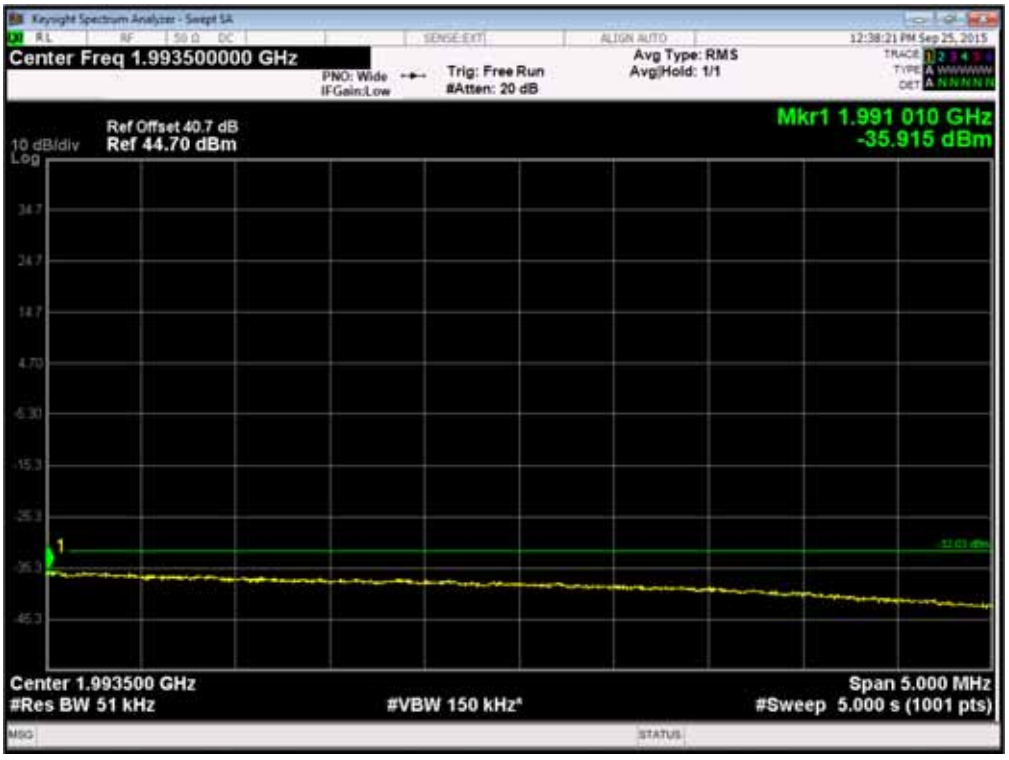
Note: For MIMO mode configurations, the limit was adjusted with a correction of -6.02dB [10Log(4)] to -13dBm. For the measurement of 1MHz immediately outside and adjacent to the frequency band edge, a resolution bandwidth of 30kHz was used, and 30kHz is < 50kHz (1% of nominal bandwidth). To compensate for the reduced measurement bandwidth, the limit was adjusted with a correction of -2.22dB [10Log(30/50)] to -19.02dBm.

Channel Position B_{RFBW} - WCDMA 16QAM / LTE QPSK: Bandwidth 5.0 MHz





Channel Position T_{RFBW} - WCDMA 16QAM / LTE QPSK: Bandwidth 5.0 MHz



Limit

The power of any emission outside the frequency band shall be attenuated below the transmitter power (P) by at least 43 + 10logP dB.

2.4 RADIATED SPURIOUS EMISSIONS

2.4.1 Specification Reference

FCC CFR 47 Part 2, Clause 2.1053
FCC CFR 47 Part 24, Clause 24.238 (a)
Industry Canada RSS-133, Clause 6.5

2.4.2 Equipment Under Test

RRUS 32 B2, KRC 161 414/1, S/N: D16Q673439

2.4.3 Date of Test and Modification State

21, 23, 27 and 28 October 2015 - Modification State 0

2.4.4 Test Equipment Used

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

2.4.5 Environmental Conditions

Ambient Temperature	19.0 – 22.0°C
Relative Humidity	34.0 – 41.0%

2.4.6 Test Method

The test was applied in accordance with test method requirements of FCC Part 24 and RSS-133 and ANSI/TIA-603-C-2004.

A preliminary profile of the Spurious Radiated Emissions was obtained by operating the EUT on a remotely controlled turntable within the chamber. Measurements of emissions from the EUT were obtained with the measurement antenna in both horizontal and vertical polarisations.

Emissions identified within the range 30MHz to 20GHz were then formally measured using a peak detector as the worst case.

The limits for outside a licensee's frequency band(s) of operation the power of the spurious emissions have been calculated, as shown below using the following formula:

Field Strength of Carrier - (43 + 10Log (P)) dB

Where:
Field Strength is measured in dBµV/m
P is measured Transmitter Power in Watts

The EUT was measured with the antenna height varied between 1 and 4 m with the turntable rotated between 0 and 360 degrees. The emission of any outside a licensee's frequencies within 20dB of the limit were measured with the substitution method used according to the standard.

The measurements were performed at a 3m distance unless otherwise stated.

Determination of Spurious Emission Limit

The field strength of the carrier has been calculated assuming that the power is to be fed to a half-wave tuned dipoles as per 2.1053 (a).

$E_{(v/m)}=(30 \times G_i \times P_o)^{0.5} / d$

Where G_i is the antenna gain of ideal half-wave dipoles,
P_o is the power out of the transceiver in W,
d is the measurement distance in meter.

Therefore at 3m measurement distance the field strength using the lowest transceiver output power would be:

$E_{(v/m)}=(30 \times 1.64 \times 32.36)^{0.5} / 3 = 13.30$ V/m = 142.48 dBµV/m

As per 24.238 (a) the spurious emission must be attenuated by 43 + 10log (P_o) dB this gives:

43 + 10log(32.36) = 58.10 dB

Therefore the limit at 3m measurement distance is:

142.48 – 58.10 = 84.4 dBµV/m

These limits have been used to determine Pass or Fail for the harmonics measured and detailed in the following results.

The results are shown in the plots below.

2.4.7 Test Results

Note: Only the worst case results plots have been included as all of the emissions are greater than 20dB below the limit. A set of plots have been included to show the measurement system noise floor.

Configuration G-SC

Maximum Output Power 46.0dBm per port

Channel Position	Channel Frequencies
Channel Position M	1960.0MHz

Channel Position M - GMSK

No emissions were detected within 20dB of the limit.

Configuration W-SC

Maximum Output Power 46.0dBm per port, WCDMA Bandwidth 5.0MHz

Channel Position	Channel Frequencies
Channel Position M	1960.0MHz

Channel Position M - QPSK

No emissions were detected within 20dB of the limit.

Configuration W-MIMO-SC

Maximum Output Power 46.0dBm per port, WCDMA Bandwidth 5.0MHz

Channel Position	Channel Frequencies
Channel Position M	1960.0MHz

Channel Position M - 16QAM

No emissions were detected within 20dB of the limit.

Configuration L-MIMO-SC

Maximum Output Power 46.0dBm per port, LTE Bandwidth 5.0MHz

Channel Position	Channel Frequencies
Channel Position B	1932.5MHz
Channel Position M	1960.0MHz
Channel Position T	1987.5MHz

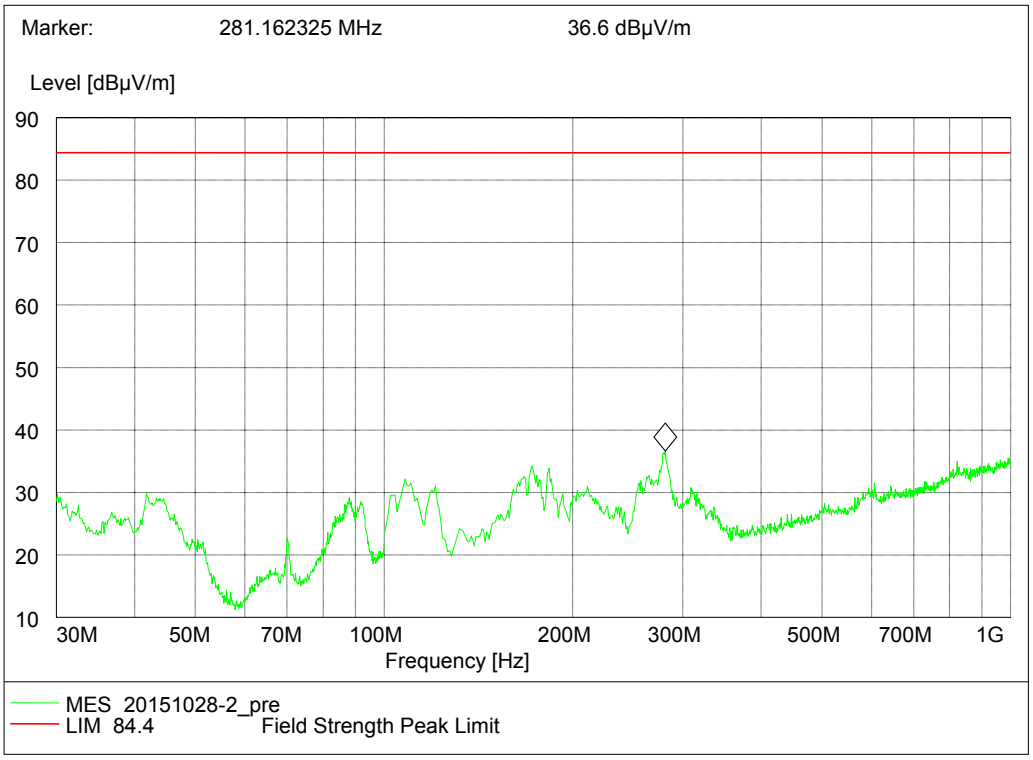
Channel Position B - QPSK

No emissions were detected within 20dB of the limit.

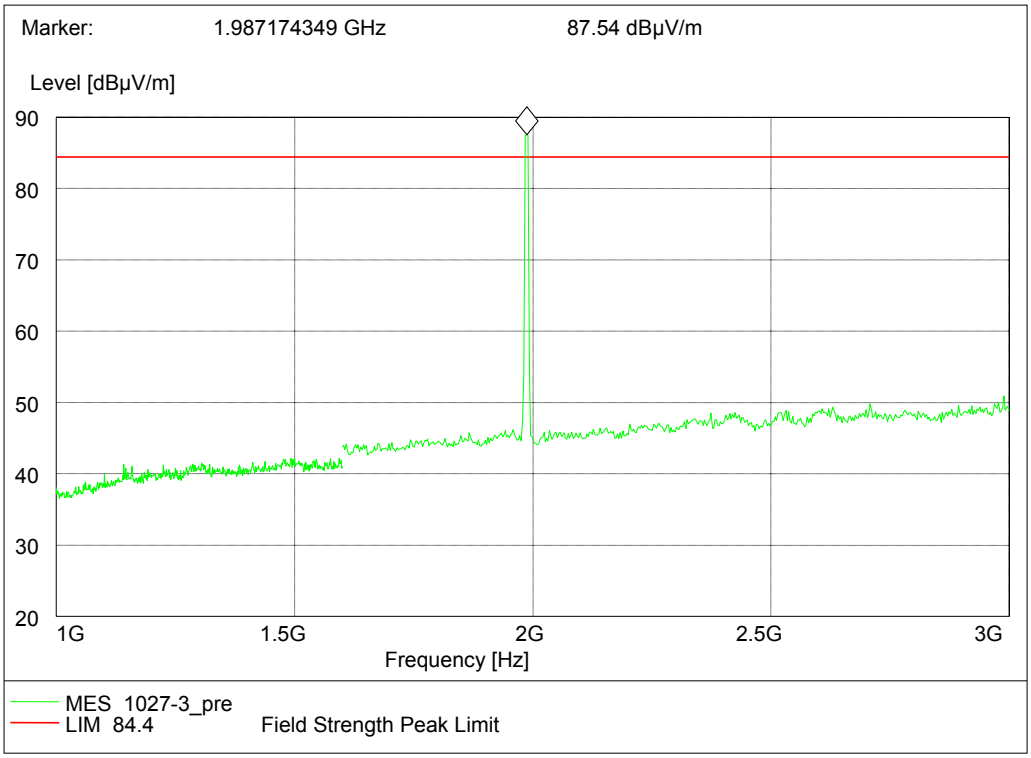
Channel Position M - QPSK/16QAM/64QAM

No emissions were detected within 20dB of the limit.

Channel Position T - QPSK - 30MHz - 1GHz



Channel Position T - QPSK - 1GHz - 3GHz



Note: The emission beyond the limit is the operating frequency.

Channel Position T - QPSK - 3GHz - 18GHz