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# Report On

FCC and IC Testing of the  
Ericsson AB (1900MHz) Radio 2219 B2 KRC 161 627/1 Remote Radio  
Unit In accordance with FCC CFR 47 Part 24 and Industry Canada  
RSS-133: Issue 6

COMMERCIAL-IN-CONFIDENCE

FCC ID: TA8AKRC161627-1  
IC: 287AB-AS1616271

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DATED

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Product Service

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## **SECTION 1**

### **REPORT INFORMATION**



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## 1.1 REPORT DETAILS

The information contained in this report is intended to show verification of the Ericsson Radio 2219 B2 KRC 161 627/1 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 Radio 2219 B2 KRC 161 627/1 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	Radio 2219 B2
Product Number	KRC 161 627/1
HVIN	AS1616271
Serial Number(s)	D825490218, D825544531
Software Version	CXP9013268/9 Rev R65FC09 CXP9013268/9 Rev R66FS05
Hardware Version	R1A
Test Specification/Issue/Date	FCC CFR 47 Part 24: 2015 Industry Canada RSS-133 Issue 6: 2013
Start of Test	21 April 2017
Finish of Test	10 May 2017
Name of Engineer(s)	Lei Zhao
Related Document(s)	ANSI C63.4: 2014 ANSI/TIA-603-D:2010 FCC CFR 47 Part 2: 2015 Industry Canada RSS-GEN Issue 4: 2014 Industry Canada SRSP-510 Issue 5: 2009 KDB 971168 D01 v02r02 KDB 662911 D01 v02r01

At the time of test FCC CFR Parts 2 and 24:2016 were not on our UKAS schedule, however a Gap Analysis has now been completed and FCC CFR Parts 2 and 24:2016 have been added to our UKAS Scope. The Gap Analysis showed that there are no changes to the requirements for this product and so the product can be considered to be compliant with FCC CFR Parts 2 and 24:2016.



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## 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 <sup>1</sup>
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<sup>1</sup> – 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 1	2C	GSM Single Antenna, Multi Carrier x2
G-MC 2	3C	GSM Single Antenna, Multi Carrier x3
G-MC 3	4C	GSM Single Antenna, Multi Carrier x4
W-SC	1C	WCDMA Single Antenna, Single Carrier
W-MC 1	2C	WCDMA Single Antenna, Multi Carrier x2
W-MC 2	4C	WCDMA Single Antenna, Multi Carrier x4
W-MIMO-SC	1C	WCDMA MIMO, Single Carrier
W-MIMO-MC 1	2C	WCDMA MIMO, Multi Carrier x2
W-MIMO-MC 2	4C	WCDMA MIMO, Multi Carrier x4
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
L-MIMO-MC 3	4C	LTE MIMO, Multi Carrier x4
G+W-MC 1	1G+1W	GSM+WCDMA Single Antenna, One Tx, 1GSM+1WCDMA
G+W-MC 2	4G+2W	GSM+WCDMA Single Antenna, One Tx, 4GSM+2WCDMA
G+W-MIMO-MC 1	1G+1W	GSM+WCDMA MIMO, 1GSM+1WCDMA
G+W-MIMO-MC 2	4G+2W	GSM+WCDMA MIMO, 4GSM+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	4G+2L	GSM+LTE MIMO, 4GSM+2LTE
G+L-MIMO-MC 3	2G+2L	GSM+LTE MIMO, 2GSM+2LTE
G+L-MIMO-MC 4	2G+1L	GSM+LTE MIMO, 2GSM+1LTE
G+L-MIMO-MC 5	4G+1L	GSM+LTE MIMO, 4GSM+1LTE
W+L-MC 1	1W+1L	WCDMA+LTE Single Antenna, One Tx, 1WCDMA+1LTE
W+L-MC 2	3W+3L	WCDMA+LTE Single Antenna, One Tx, 3WCDMA+3LTE
W+L-MC 3	3W+2L	WCDMA+LTE Single Antenna, One Tx, 3WCDMA+2LTE
W+L-MC 4	2W+2L	WCDMA+LTE Single Antenna, One Tx, 2WCDMA+2LTE
W+L-MC 5	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	3W+3L	WCDMA+LTE MIMO, 3WCDMA+3LTE
W+L-MIMO-MC 3	3W+2L	WCDMA+LTE MIMO, 3WCDMA+2LTE
W+L-MIMO-MC 4	2W+2L	WCDMA+LTE MIMO, 2WCDMA+2LTE
W+L-MIMO-MC 5	2W+1L	WCDMA+LTE MIMO, 2WCDMA+1LTE



Product Service

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  
Multi carrier (x3): GMSK  
Multi carrier (x4): GMSK

Single carrier: 8-PSK  
Multi carrier (x2): 8-PSK  
Multi carrier (x3): 8-PSK  
Multi carrier (x4): 8-PSK

Single carrier: AQPSK  
Multi carrier (x2): AQPSK  
Multi carrier (x3): AQPSK  
Multi carrier (x4): 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  
Multi carrier TM1 (x3): 32 DPCHs at 30ksps (SF=128) in each carrier  
Multi carrier TM1 (x4): 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)  
Multi carrier TM5 (x3): 30 DPCHs at 30ksps (SF=128) and 8 HS-PDSCHs at 240 ksps (SF16)  
Multi carrier TM5 (x4): 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)  
Multi carrier TM6 (x3): 30 DPCHs at 30ksps (SF=128) and 8 HS-PDSCHs at 240 ksps (SF16)  
Multi carrier TM6 (x4): 30 DPCHs at 30ksps (SF=128) and 8 HS-PDSCHs at 240 ksps (SF16)

**LTE:**

MIMO mode single carrier: E-TM1.1  
MIMO mode multi carrier (x2): E-TM1.1  
MIMO mode multi carrier (x3): E-TM1.1  
MIMO mode multi carrier (x4): E-TM1.1

MIMO mode single carrier: E-TM3.2  
MIMO mode multi carrier (x2): E-TM3.2  
MIMO mode multi carrier (x3): E-TM3.2  
MIMO mode multi carrier (x4): E-TM3.2

MIMO mode single carrier: E-TM3.1  
MIMO mode multi carrier (x2): E-TM3.1  
MIMO mode multi carrier (x3): E-TM3.1  
MIMO mode multi carrier (x4): E-TM3.1



Product Service

The EUT includes two 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.

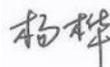
The complete testing was performed with the EUT transmitting at maximum RF power unless otherwise stated.

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 and B. 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

<b>MAIN EUT</b>	
<b>MANUFACTURING DESCRIPTION</b>	Remote Radio Unit
<b>MANUFACTURER</b>	Ericsson AB
<b>PRODUCT NAME</b>	Radio 2219 B2
<b>PRODUCT NUMBER</b>	KRC 161 627/1
<b>HVIN</b>	AS1616271
<b>TRANSMITTER OPERATING RANGE</b>	TX: 1930 MHz - 1990 MHz RX: 1850 MHz - 1910 MHz
<b>MODULATIONS</b>	GSM: GMSK, 8-PSK, AQPSK WCDMA: QPSK, 16QAM, 64QAM LTE: QPSK, 16QAM, 64QAM, 256QAM
<b>ITU DESIGNATION OF EMISSION</b>	GSM: 245KGXW, 245KG7W WCDMA: 5M00F9W LTE: 1M40F9W, 3M00F9W, 5M00F9W, 10M0F9W, 15M0F9W, 20M0F9W
<b>NUMBER OF CARRIERS</b>	Maximum 4 carriers for single RAT per port, Maximum 6 carriers for Multi-RAT per port.
<b>SUPPORTED CHANNEL BANDWIDTH CONFIGURATION</b>	GSM: 250kHz WCDMA: 3.8MHz to 5MHz LTE: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz and 20MHz
<b>OUTPUT POWER (RMS) (W or dBm)</b>	Maximum 49.0dBm (80W) per port for all modes except maximum 43.0dBm (20W) per carrier per port for GSM, LTE 1.4MHz and 3MHz
<b>INSTANTANEOUS BANDWIDTH</b>	40MHz for all modes, but only 12.8MHz for GSM single RAT and 20MHz for LTE 1.4MHz & 3MHz BW single RAT, 20MHz for GSM carrier(s) in GSM&LTE and GSM&WCDMA MSR modes, 20MHz for LTE 1.4MHz & 3MHz BW carrier(s) in GSM&LTE and WCDMA&LTE MSR modes
<b>NUMBER OF ANTENNA PORTS</b>	2 TX/RX ports
<b>FCC ID</b>	TA8AKRC161627-1
<b>IC</b>	287AB-AS1616271
<b>Power source</b>	-48V DC
<b>TECHNICAL DESCRIPTION (a brief description of the intended use and operation)</b>	The equipment is the Remote Radio Part of GSM / WCDMA / LTE / GSM & WCDMA / GSM & LTE / WCDMA & LTE MSR Base Station.

Signature



Date

21 April 2017

D of B S Serial No

75938768/01

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) Radio 2219 B2 KRC 161 627/1 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 Radio 2219 B2 KRC 161 627/1 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.

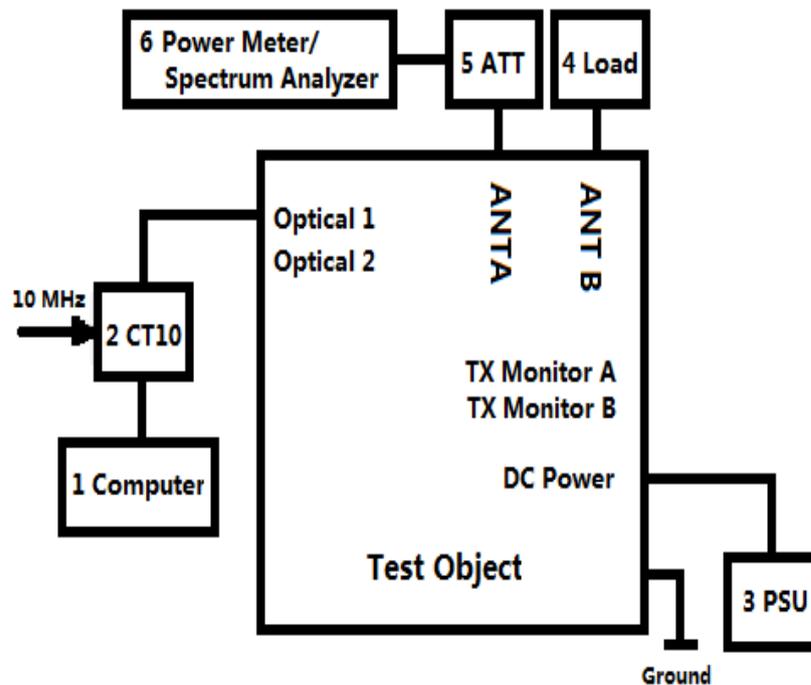


Equipment Under Test



1.6 TEST SETUP

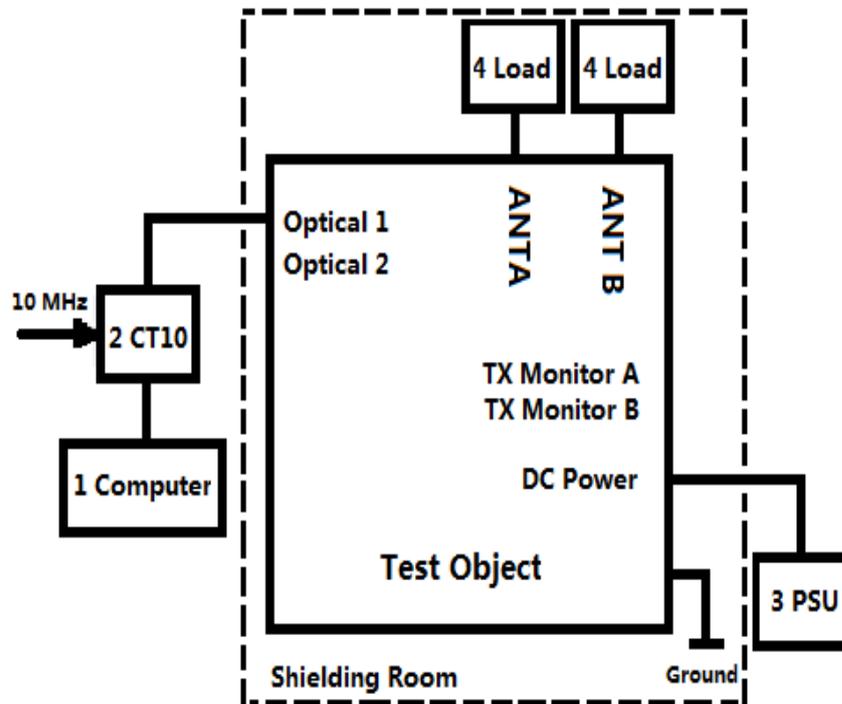
Test Setup, Conducted Measurement:



Product Name	Product Number	Version	Serial Number
Radio 2219 B2	KRC 161 627/1	R1A	D825490218

No.	Auxiliary Equipment	Part Number / Model Type	Version	Serial Number
1	Computer	HP EliteBook 8540w	--	CND1234694
2	CT10	LPC 102 487/1	R1C	T01F62515
3	PSU	Keysight 5767A	--	US15C4120P
4	Load	TF150	--	11081907
5	40dB Attenuator	66-40-33	--	CD4019
6	Spectrum Analyzer	N9030A	--	MY54490502
	Power Meter	NRP	--	101593
	Power Sensor	NRP-Z11	--	121216
	Power Sensor	NRP-Z51	--	102309

**Test Setup, Radiated Measurement:**



Product Name	Product Number	Version	Serial Number
Radio 2219 B2	KRC 161 627/1	R1A	D825544531

No.	Auxiliary Equipment	Part Number / Model Type	Version	Serial Number
1	Computer	HP EliteBook 8540w	--	CND1234642
2	CT10	LPC 102 487/1	R1C	T01F282579
3	PSU	BML 901 341/1	R1B	BR83767592
4	Load	TF150	--	090323432
	Load	TF100	--	090323433

## 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



Product Service

## **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

Radio 2219 B2, KRC 161 627/1, S/N: D825490218

### 2.1.3 Date of Test and Modification State

21, 24, 25 and 26 April 2017 - 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	21.5 - 22.1°C
Relative Humidity	24.0 - 30.0%

### 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 two 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 43.0dBm 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	42.65	-	0.23	42.73	-	0.23	42.72	-	0.23
	8-PSK	42.19	-	3.39	42.30	-	3.37	42.30	-	3.38
	AQPSK	42.59	-	3.53	42.65	-	3.56	42.31	-	3.54

### Configuration G-MC 1 (2C)

Maximum Output Power 46.0dBm per port

Antenna	Modulation	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1930.4MHz + 1949.8MHz			Channel Position M <sub>RFBW</sub> 1950.2MHz + 1969.8MHz			Channel Position T <sub>RFBW</sub> 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	45.43	-	-	45.58	-	-	45.56	-	-
	8-PSK	43.50	-	-	43.66	-	-	43.55	-	-
	AQPSK	43.77	-	-	44.01	-	-	43.90	-	-

### Configuration G-MC 3 (4C)

Maximum Output Power 49.0dBm per port

Antenna	Modulation	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1930.4MHz + 1934.4MHz + 1938.4MHz + 1942.8MHz			Channel Position M <sub>RFBW</sub> 1956.0MHz + 1960.0MHz + 1964.0MHz+1968.4MHz			Channel Position T <sub>RFBW</sub> 1977.2MHz + 1982.0MHz + 1986.0MHz + 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	47.91	-	-	48.26	-	-	48.07	-	-
	8-PSK	45.85	-	-	46.24	-	-	46.06	-	-
	AQPSK	46.18	-	-	46.56	-	-	46.40	-	-

Configuration W-SC

Maximum Output Power 49.0dBm 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	48.54	43.20	6.89	48.89	43.59	6.87	49.60	43.25	6.89

Configuration W-MC 1 (2C)

Maximum Output Power 49.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1932.4MHz + 1967.6MHz			Channel Position M <sub>RFBW</sub> 1942.4MHz + 1977.6MHz			Channel Position T <sub>RFBW</sub> 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	48.38	-	-	48.58	-	-	49.60	-	-

Configuration W-MC 2 (4C)

Maximum Output Power 49.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1932.4MHz + 1937.4MHz + 1962.4MHz + 1967.6MHz			Channel Position M <sub>RFBW</sub> 1942.4MHz + 1947.4MHz + 1972.4MHz + 1977.6MHz			Channel Position T <sub>RFBW</sub> 1952.6MHz + 1967.6MHz + 1982.6MHz + 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	48.41	-	-	48.58	-	-	48.60	-	-

Configuration W-MIMO-SC

Maximum Output Power 47.0dBm 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	46.85	41.50	6.77	47.04	41.51	6.76	46.95	41.47	6.77
B		46.90	41.44	6.77	47.15	41.65	6.77	47.19	41.82	6.77
Total		49.89	-	-	50.11	-	-	50.08	-	-

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	46.84	41.40	6.77	47.01	41.56	6.76	46.93	41.55	6.77
B		46.91	41.64	6.77	47.14	41.94	6.77	47.17	41.84	6.77
Total		49.89	-	-	50.09	-	-	50.06	-	-

Configuration W-MIMO-MC 1 (2C)

Maximum Output Power 49.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1932.4MHz + 1967.4MHz			Channel Position M <sub>RFBW</sub> 1942.4MHz + 1977.4MHz			Channel Position T <sub>RFBW</sub> 1952.6MHz + 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	48.32	-	-	48.60	-	-	48.59	-	-
B		48.57	-	-	48.77	-	-	48.65	-	-
Total		51.46	-	-	51.70	-	-	51.63	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1932.4MHz + 1967.4MHz			Channel Position M <sub>RFBW</sub> 1942.4MHz + 1977.4MHz			Channel Position T <sub>RFBW</sub> 1952.6MHz + 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	48.34	-	-	48.56	-	-	48.60	-	-
B		48.58	-	-	48.70	-	-	48.66	-	-
Total		51.47	-	-	51.64	-	-	51.64	-	-



Product Service

Configuration W-MIMO-MC 2 (4C)

Maximum Output Power 49.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1932.4MHz + 1937.4MHz + 1962.4MHz + 1967.4MHz			Channel Position M <sub>RFBW</sub> 1942.4MHz + 1947.4MHz + 1962.4MHz + 1977.4MHz			Channel Position T <sub>RFBW</sub> 1952.6MHz + 1957.6MHz + 1982.6MHz + 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	48.37	-	-	48.56	-	-	48.60	-	-
B		48.59	-	-	48.76	-	-	48.63	-	-
Total		51.49	-	-	51.67	-	-	51.63	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1932.4MHz + 1937.4MHz + 1962.4MHz + 1967.4MHz			Channel Position M <sub>RFBW</sub> 1942.4MHz + 1947.4MHz + 1962.4MHz + 1977.4MHz			Channel Position T <sub>RFBW</sub> 1952.6MHz + 1957.6MHz + 1982.6MHz + 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	48.37	-	-	48.60	-	-	48.60	-	-
B		48.61	-	-	48.78	-	-	48.65	-	-
Total		51.50	-	-	51.70	-	-	51.64	-	-



Product Service

Configuration L-MIMO-SC

Maximum Output Power 43.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1930.7MHz			Channel Position M 1960.0MHz			Channel Position T 1989.3MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / 1.4 MHz	42.83	42.27	8.29	42.99	42.32	8.37	42.90	42.34	8.32
B		42.81	42.34	8.21	43.18	42.74	8.25	43.28	42.74	8.15
Total		45.83	-	-	46.10	-	-	46.10	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1930.7MHz			Channel Position M 1960.0MHz			Channel Position T 1989.3MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / 1.4 MHz	-	-	-	42.98	42.58	8.21	-	-	-
B		-	-	-	43.19	42.67	8.09	-	-	-
Total		-	-	-	46.10	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1930.7MHz			Channel Position M 1960.0MHz			Channel Position T 1989.3MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	64QAM / 1.4 MHz	-	-	-	42.95	42.41	8.20	-	-	-
B		-	-	-	43.14	42.54	8.22	-	-	-
Total		-	-	-	46.06	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1930.7MHz			Channel Position M 1960.0MHz			Channel Position T 1989.3MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	256QAM / 1.4 MHz	-	-	-	42.99	42.40	8.28	-	-	-
B		-	-	-	43.14	42.55	8.06	-	-	-
Total		-	-	-	46.08	-	-	-	-	-



Product Service

Maximum Output Power 43.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1931.5MHz			Channel Position M 1960.0MHz			Channel Position T 1988.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / 3.0 MHz	-	-	-	43.05	39.23	8.30	-	-	-
B		-	-	-	43.15	39.31	8.15	-	-	-
Total		-	-	-	46.11	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1931.5MHz			Channel Position M 1960.0MHz			Channel Position T 1988.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / 3.0 MHz	-	-	-	43.03	39.48	8.27	-	-	-
B		-	-	-	43.14	39.70	8.25	-	-	-
Total		-	-	-	46.10	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1931.5MHz			Channel Position M 1960.0MHz			Channel Position T 1988.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	64QAM / 3.0 MHz	-	-	-	43.01	39.18	8.20	-	-	-
B		-	-	-	43.14	39.29	8.32	-	-	-
Total		-	-	-	46.09	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B 1931.5MHz			Channel Position M 1960.0MHz			Channel Position T 1988.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	256QAM / 3.0 MHz	-	-	-	43.02	39.19	8.27	-	-	-
B		-	-	-	43.12	39.28	8.27	-	-	-
Total		-	-	-	46.08	-	-	-	-	-



Product Service

Maximum Output Power 49.0dBm 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	48.14	42.246	7.04	48.54	42.526	7.04	48.30	42.180	7.04
B		48.25	42.263	7.07	48.72	42.683	7.06	48.56	42.473	7.06
Total		51.21	-	-	51.64	-	-	51.44	-	-

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	-	-	-	48.55	43.008	7.03	-	-	-
B		-	-	-	48.69	43.065	7.05	-	-	-
Total		-	-	-	51.63	-	-	-	-	-

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	-	-	-	48.56	42.569	7.04	-	-	-
B		-	-	-	48.70	42.715	7.05	-	-	-
Total		-	-	-	51.64	-	-	-	-	-

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	256QAM / 5.0 MHz	-	-	-	48.54	42.564	7.06	-	-	-
B		-	-	-	48.68	42.734	7.06	-	-	-
Total		-	-	-	51.62	-	-	-	-	-



Product Service

Maximum Output Power 49.0dBm per port

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	-	-	-	48.50	40.06	7.00	-	-	-
B		-	-	-	48.99	40.23	7.02	-	-	-
Total		-	-	-	51.76		-	-	-	-

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	-	-	-	48.86	40.51	7.00	-	-	-
B		-	-	-	49.00	40.67	7.02	-	-	-
Total		-	-	-	51.94	-	-	-	-	-

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	-	-	-	48.86	40.19	7.01	-	-	-
B		-	-	-	49.01	40.31	7.01	-	-	-
Total		-	-	-	51.95	-	-	-	-	-

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	256QAM / 10.0 MHz	-	-	-	48.89	40.24	7.01	-	-	-
B		-	-	-	49.04	40.14	7.02	-	-	-
Total		-	-	-	51.98	-	-	-	-	-



Product Service

Maximum Output Power 49.0dBm per port

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	-	-	-	48.84	38.27	7.02	-	-	-
B		-	-	-	48.94	38.42	7.03	-	-	-
Total		-	-	-	51.90	-	-	-	-	-

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	-	-	-	48.85	39.11	7.01	-	-	-
B		-	-	-	48.94	39.16	7.03	-	-	-
Total		-	-	-	51.91	-	-	-	-	-

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	-	-	-	48.85	38.26	7.04	-	-	-
B		-	-	-	48.96	38.46	7.02	-	-	-
Total		-	-	-	51.92	-	-	-	-	-

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	256QAM / 15.0 MHz	-	-	-	48.94	38.26	7.03	-	-	-
B		-	-	-	48.96	38.71	7.03	-	-	-
Total		-	-	-	51.96	-	-	-	-	-



Product Service

Maximum Output Power 49.0dBm per port

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	48.52	36.89	7.10	48.87	37.11	6.91	48.76	37.01	6.99
B		48.82	37.12	7.11	48.94	37.22	6.92	48.97	37.18	7.01
Total		51.68	-	-	51.92	-	-	51.88	-	-

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	-	-	-	48.87	37.14	6.91	-	-	-
D		-	-	-	48.94	37.61	6.92	-	-	-
Total		-	-	-	51.92	-	-	-	-	-

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	-	-	-	48.87	37.19	6.92	-	-	-
D		-	-	-	48.95	37.14	6.92	-	-	-
Total		-	-	-	51.92	-	-	-	-	-

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	256QAM / 20.0 MHz	-	-	-	48.87	37.00	6.92	-	-	-
D		-	-	-	48.95	37.30	6.92	-	-	-
Total		-	-	-	51.92	-	-	-	-	-



Product Service

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 <sub>RFBW</sub> 1930.7MHz + 1949.3 MHz			Channel Position M <sub>RFBW</sub> 1950.7MHz + 1969.3MHz			Channel Position T <sub>RFBW</sub> 1970.7MHz + 1989.3MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / 1.4 MHz	45.50	-	-	45.66	-	-	45.68	-	-
B		45.84	-	-	45.90	-	-	45.96	-	-
Total		48.68	-	-	48.79	-	-	48.83	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1930.7MHz + 1949.3 MHz			Channel Position M <sub>RFBW</sub> 1950.7MHz + 1969.3MHz			Channel Position T <sub>RFBW</sub> 1970.7MHz + 1989.3MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / 1.4 MHz	-	-	-	45.73	-	-	-	-	-
B		-	-	-	45.94	-	-	-	-	-
Total		-	-	-	48.85	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1930.7MHz + 1949.3 MHz			Channel Position M <sub>RFBW</sub> 1950.7MHz + 1969.3MHz			Channel Position T <sub>RFBW</sub> 1970.7MHz + 1989.3MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	64QAM / 1.4 MHz	-	-	-	45.70	-	-	-	-	-
B		-	-	-	45.91	-	-	-	-	-
Total		-	-	-	48.82	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1930.7MHz + 1949.3 MHz			Channel Position M <sub>RFBW</sub> 1950.7MHz + 1969.3MHz			Channel Position T <sub>RFBW</sub> 1970.7MHz + 1989.3MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	256QAM / 1.4 MHz	-	-	-	45.70	-	-	-	-	-
B		-	-	-	45.93	-	-	-	-	-
Total		-	-	-	48.83	-	-	-	-	-



Product Service

Maximum Output Power 46.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1931.5MHz + 1948.5MHz			Channel Position M <sub>RFBW</sub> 1951.5MHz + 1968.5MHz			Channel Position T <sub>RFBW</sub> 1971.5MHz + 1988.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / 3.0 MHz	45.51	-	-	45.77	-	-	45.72	-	-
B		45.84	-	-	45.99	-	-	46.01	-	-
Total		48.69	-	-	48.89	-	-	48.88	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1931.5MHz + 1948.5MHz			Channel Position M <sub>RFBW</sub> 1951.5MHz + 1968.5MHz			Channel Position T <sub>RFBW</sub> 1971.5MHz + 1988.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / 3.0 MHz	-	-	-	45.75	-	-	-	-	-
B		-	-	-	46.00	-	-	-	-	-
Total		-	-	-	48.89	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1931.5MHz + 1948.5MHz			Channel Position M <sub>RFBW</sub> 1951.5MHz + 1968.5MHz			Channel Position T <sub>RFBW</sub> 1971.5MHz + 1988.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	64QAM / 3.0 MHz	-	-	-	45.72	-	-	-	-	-
B		-	-	-	45.98	-	-	-	-	-
Total		-	-	-	48.86	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1931.5MHz + 1948.5MHz			Channel Position M <sub>RFBW</sub> 1951.5MHz + 1968.5MHz			Channel Position T <sub>RFBW</sub> 1971.5MHz + 1988.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	256QAM / 3.0 MHz	-	-	-	45.71	-	-	-	-	-
B		-	-	-	45.95	-	-	-	-	-
Total		-	-	-	48.84	-	-	-	-	-



Product Service

Maximum Output Power 49.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1932.5MHz + 1967.5MHz			Channel Position M <sub>RFBW</sub> 1942.5MHz + 1977.5MHz			Channel Position T <sub>RFBW</sub> 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	47.83	-	-	48.05	-	-	48.08	-	-
B		47.95	-	-	48.10	-	-	48.03	-	-
Total		50.90	-	-	51.09	-	-	51.07	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1932.5MHz + 1967.5MHz			Channel Position M <sub>RFBW</sub> 1942.5MHz + 1977.5MHz			Channel Position T <sub>RFBW</sub> 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	-	-	-	48.02	-	-	-	-	-
B		-	-	-	48.09	-	-	-	-	-
Total		-	-	-	51.07	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1932.5MHz + 1967.5MHz			Channel Position M <sub>RFBW</sub> 1942.5MHz + 1977.5MHz			Channel Position T <sub>RFBW</sub> 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	-	-	-	48.02	-	-	-	-	-
B		-	-	-	48.09	-	-	-	-	-
Total		-	-	-	51.07	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1932.5MHz + 1967.5MHz			Channel Position M <sub>RFBW</sub> 1942.5MHz + 1977.5MHz			Channel Position T <sub>RFBW</sub> 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	256QAM / 5.0 MHz	-	-	-	48.01	-	-	-	-	-
B		-	-	-	48.09	-	-	-	-	-
Total		-	-	-	51.06	-	-	-	-	-



Product Service

Maximum Output Power 49.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1935.0MHz + 1965.0MHz			Channel Position M <sub>RFBW</sub> 1945.0MHz + 1975.0MHz			Channel Position T <sub>RFBW</sub> 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	-	-	-	48.02	-	-	-	-	-
B		-	-	-	48.12	-	-	-	-	-
Total		-	-	-	51.08	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1935.0MHz + 1965.0MHz			Channel Position M <sub>RFBW</sub> 1945.0MHz + 1975.0MHz			Channel Position T <sub>RFBW</sub> 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	-	-	-	48.02	-	-	-	-	-
B		-	-	-	48.11	-	-	-	-	-
Total		-	-	-	51.08	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1935.0MHz + 1965.0MHz			Channel Position M <sub>RFBW</sub> 1945.0MHz + 1975.0MHz			Channel Position T <sub>RFBW</sub> 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	-	-	-	48.01	-	-	-	-	-
B		-	-	-	48.13	-	-	-	-	-
Total		-	-	-	51.08	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1935.0MHz + 1965.0MHz			Channel Position M <sub>RFBW</sub> 1945.0MHz + 1975.0MHz			Channel Position T <sub>RFBW</sub> 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	256QAM / 10.0 MHz	-	-	-	48.00	-	-	-	-	-
B		-	-	-	48.12	-	-	-	-	-
Total		-	-	-	51.07	-	-	-	-	-



Product Service

Maximum Output Power 49.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1937.5MHz + 1962.5MHz			Channel Position M <sub>RFBW</sub> 1947.5MHz + 1972.5MHz			Channel Position T <sub>RFBW</sub> 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	-	-	-	48.05	-	-	-	-	-
B		-	-	-	48.15	-	-	-	-	-
Total		-	-	-	51.11	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1937.5MHz + 1962.5MHz			Channel Position M <sub>RFBW</sub> 1947.5MHz + 1972.5MHz			Channel Position T <sub>RFBW</sub> 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	-	-	-	48.03	-	-	-	-	-
B		-	-	-	48.15	-	-	-	-	-
Total		-	-	-	51.10	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1937.5MHz + 1962.5MHz			Channel Position M <sub>RFBW</sub> 1947.5MHz + 1972.5MHz			Channel Position T <sub>RFBW</sub> 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	-	-	-	48.03	-	-	-	-	-
B		-	-	-	48.15	-	-	-	-	-
Total		-	-	-	51.10	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1937.5MHz + 1962.5MHz			Channel Position M <sub>RFBW</sub> 1947.5MHz + 1972.5MHz			Channel Position T <sub>RFBW</sub> 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	256QAM / 15.0 MHz	-	-	-	48.02	-	-	-	-	-
B		-	-	-	48.14	-	-	-	-	-
Total		-	-	-	51.09	-	-	-	-	-



Product Service

Maximum Output Power 49.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1940.0MHz + 1960.0MHz			Channel Position M <sub>RFBW</sub> 1950.0MHz + 1970.0MHz			Channel Position T <sub>RFBW</sub> 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	48.75	-	-	48.85	-	-	48.90	-	-
B		48.87	-	-	48.95	-	-	48.90	-	-
Total		51.82	-	-	51.91	-	-	51.91	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1940.0MHz + 1960.0MHz			Channel Position M <sub>RFBW</sub> 1950.0MHz + 1970.0MHz			Channel Position T <sub>RFBW</sub> 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	-	-	-	48.84	-	-	-	-	-
B		-	-	-	48.94	-	-	-	-	-
Total		-	-	-	51.90	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1940.0MHz + 1960.0MHz			Channel Position M <sub>RFBW</sub> 1950.0MHz + 1970.0MHz			Channel Position T <sub>RFBW</sub> 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	-	-	-	48.84	-	-	-	-	-
B		-	-	-	48.95	-	-	-	-	-
Total		-	-	-	51.91	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1940.0MHz + 1960.0MHz			Channel Position M <sub>RFBW</sub> 1950.0MHz + 1970.0MHz			Channel Position T <sub>RFBW</sub> 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	256QAM / 20.0 MHz	-	-	-	48.84	-	-	-	-	-
B		-	-	-	48.94	-	-	-	-	-
Total		-	-	-	51.90	-	-	-	-	-



Product Service

Configuration L-MIMO-MC 3 (4C)

Maximum Output Power 49.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1930.7MHz + 1946.5MHz + 1947.9MHz + 1949.3MHz			Channel Position M <sub>RFBW</sub> 1950.7MHz + 1966.5MHz + 1967.9MHz + 1969.3MHz			Channel Position T <sub>RFBW</sub> 1970.7MHz + 1986.5MHz + 1987.9MHz + 1989.3MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / 1.4 MHz	47.26	-	-	47.42	-	-	47.28	-	-
B		47.52	-	-	47.57	-	-	47.52	-	-
Total		50.40	-	-	50.51	-	-	50.41	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1930.7MHz + 1946.5MHz + 1947.9MHz + 1949.3MHz			Channel Position M <sub>RFBW</sub> 1950.7MHz + 1966.5MHz + 1967.9MHz + 1969.3MHz			Channel Position T <sub>RFBW</sub> 1970.7MHz + 1986.5MHz + 1987.9MHz + 1989.3MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / 1.4 MHz	-	-	-	47.55	-	-	-	-	-
B		-	-	-	47.68	-	-	-	-	-
Total		-	-	-	50.63	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1930.7MHz + 1946.5MHz + 1947.9MHz + 1949.3MHz			Channel Position M <sub>RFBW</sub> 1950.7MHz + 1966.5MHz + 1967.9MHz + 1969.3MHz			Channel Position T <sub>RFBW</sub> 1970.7MHz + 1986.5MHz + 1987.9MHz + 1989.3MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	64QAM / 1.4 MHz	-	-	-	47.45	-	-	-	-	-
B		-	-	-	47.62	-	-	-	-	-
Total		-	-	-	50.55	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1930.7MHz + 1946.5MHz + 1947.9MHz + 1949.3MHz			Channel Position M <sub>RFBW</sub> 1950.7MHz + 1966.5MHz + 1967.9MHz + 1969.3MHz			Channel Position T <sub>RFBW</sub> 1970.7MHz + 1986.5MHz + 1987.9MHz + 1989.3MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	256QAM / 1.4 MHz	-	-	-	47.48	-	-	-	-	-
B		-	-	-	47.64	-	-	-	-	-
Total		-	-	-	50.57	-	-	-	-	-



Product Service

Maximum Output Power 49.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1931.5MHz + 1942.5MHz + 1945.5MHz + 1948.5MHz			Channel Position M <sub>RFBW</sub> 1951.5MHz + 1962.5MHz + 1965.5MHz + 1968.5MHz			Channel Position T <sub>RFBW</sub> 1971.5MHz + 1982.5MHz + 1985.5MHz + 1988.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / 3.0 MHz	47.17	-	-	47.40	-	-	47.31	-	-
B		47.39	-	-	47.61	-	-	47.50	-	-
Total		50.29	-	-	50.52	-	-	50.42	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1931.5MHz + 1942.5MHz + 1945.5MHz + 1948.5MHz			Channel Position M <sub>RFBW</sub> 1951.5MHz + 1962.5MHz + 1965.5MHz + 1968.5MHz			Channel Position T <sub>RFBW</sub> 1971.5MHz + 1982.5MHz + 1985.5MHz + 1988.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / 3.0 MHz	-	-	-	47.41	-	-	-	-	-
B		-	-	-	47.56	-	-	-	-	-
Total		-	-	-	50.50	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1931.5MHz + 1942.5MHz + 1945.5MHz + 1948.5MHz			Channel Position M <sub>RFBW</sub> 1951.5MHz + 1962.5MHz + 1965.5MHz + 1968.5MHz			Channel Position T <sub>RFBW</sub> 1971.5MHz + 1982.5MHz + 1985.5MHz + 1988.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	64QAM / 3.0 MHz	-	-	-	47.38	-	-	-	-	-
B		-	-	-	47.54	-	-	-	-	-
Total		-	-	-	50.47	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1931.5MHz + 1942.5MHz + 1945.5MHz + 1948.5MHz			Channel Position M <sub>RFBW</sub> 1951.5MHz + 1962.5MHz + 1965.5MHz + 1968.5MHz			Channel Position T <sub>RFBW</sub> 1971.5MHz + 1982.5MHz + 1985.5MHz + 1988.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	256QAM / 3.0 MHz	-	-	-	47.39	-	-	-	-	-
B		-	-	-	47.53	-	-	-	-	-
Total		-	-	-	50.47	-	-	-	-	-



Product Service

Maximum Output Power 49.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1932.5MHz + 1957.5MHz + 1962.5MHz + 1967.5MHz			Channel Position M <sub>RFBW</sub> 1942.5MHz + 1967.5MHz + 1972.5MHz + 1977.5MHz			Channel Position T <sub>RFBW</sub> 1952.5MHz + 1977.5MHz + 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	48.20	-	-	48.40	-	-	48.39	-	-
B		48.41	-	-	48.47	-	-	48.41	-	-
Total		51.32	-	-	51.45	-	-	51.41	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1932.5MHz + 1957.5MHz + 1962.5MHz + 1967.5MHz			Channel Position M <sub>RFBW</sub> 1942.5MHz + 1967.5MHz + 1972.5MHz + 1977.5MHz			Channel Position T <sub>RFBW</sub> 1952.5MHz + 1977.5MHz + 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	-	-	-	48.34	-	-	-	-	-
B		-	-	-	48.50	-	-	-	-	-
Total		-	-	-	51.43	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1932.5MHz + 1957.5MHz + 1962.5MHz + 1967.5MHz			Channel Position M <sub>RFBW</sub> 1942.5MHz + 1967.5MHz + 1972.5MHz + 1977.5MHz			Channel Position T <sub>RFBW</sub> 1952.5MHz + 1977.5MHz + 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	-	-	-	48.34	-	-	-	-	-
B		-	-	-	48.43	-	-	-	-	-
Total		-	-	-	51.40	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1932.5MHz + 1957.5MHz + 1962.5MHz + 1967.5MHz			Channel Position M <sub>RFBW</sub> 1942.5MHz + 1967.5MHz + 1972.5MHz + 1977.5MHz			Channel Position T <sub>RFBW</sub> 1952.5MHz + 1977.5MHz + 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	256QAM / 5.0 MHz	-	-	-	48.25	-	-	-	-	-
B		-	-	-	48.43	-	-	-	-	-
Total		-	-	-	51.35	-	-	-	-	-



Product Service

Maximum Output Power 49.0dBm per port

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1935.0MHz +1945.0MHz + 1955.0MHz + 1965.0MHz			Channel Position M <sub>RFBW</sub> 1945.0MHz +1955.0MHz + 1965.0MHz + 1975.0MHz			Channel Position T <sub>RFBW</sub> 1955.0MHz + 1965.0MHz + 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	48.65	-	-	48.77	-	-	48.86	-	-
B		48.96	-	-	48.97	-	-	48.91	-	-
Total		51.82	-	-	51.88	-	-	51.90	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1935.0MHz +1945.0MHz + 1955.0MHz + 1965.0MHz			Channel Position M <sub>RFBW</sub> 1945.0MHz +1955.0MHz + 1965.0MHz + 1975.0MHz			Channel Position T <sub>RFBW</sub> 1955.0MHz + 1965.0MHz + 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	-	-	-	48.78	-	-	-	-	-
B		-	-	-	48.96	-	-	-	-	-
Total		-	-	-	51.88	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1935.0MHz +1945.0MHz + 1955.0MHz + 1965.0MHz			Channel Position M <sub>RFBW</sub> 1945.0MHz +1955.0MHz + 1965.0MHz + 1975.0MHz			Channel Position T <sub>RFBW</sub> 1955.0MHz + 1965.0MHz + 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	-	-	-	48.80	-	-	-	-	-
B		-	-	-	48.98	-	-	-	-	-
Total		-	-	-	51.90	-	-	-	-	-

Antenna	Modulation / Carrier Bandwidth (MHz)	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> 1935.0MHz +1945.0MHz + 1955.0MHz + 1965.0MHz			Channel Position M <sub>RFBW</sub> 1945.0MHz +1955.0MHz + 1965.0MHz + 1975.0MHz			Channel Position T <sub>RFBW</sub> 1955.0MHz + 1965.0MHz + 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	256QAM / 10.0 MHz	-	-	-	48.82	-	-	-	-	-
B		-	-	-	48.99	-	-	-	-	-
Total		-	-	-	51.92	-	-	-	-	-



Product Service

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

Maximum Output Power 49.0dBm per port

Antenna	GSM Modulation / WCDMA Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (W) 1967.6MHz			Channel Position M <sub>RFBW</sub> (G) 1940.2MHz + (W) 1977.6MHz			Channel Position T <sub>RFBW</sub> (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	48.17	-	-	48.16	-	-	48.13	-	-

Configuration G+W-MC 2 (4G+2W)

Maximum Output Power 49.0dBm per port

Antenna	GSM Modulation / WCDMA Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (G) 1932.2MHz + (G) 1934.0MHz + (G) 1935.8MHz + (W) 1962.6MHz + (W) 1967.6MHz			Channel Position M <sub>RFBW</sub> (G) 1940.2MHz + (G) 1942.0MHz + (G) 1943.8MHz + (G) 1945.8MHz + (W) 1972.6MHz + (W) 1977.6MHz			Channel Position T <sub>RFBW</sub> (G) 1950.2MHz + (G) 1952.0MHz + (G) 1953.8MHz + (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	47.42	-	-	47.66	-	-	47.76	-	-

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

Maximum Output Power 48.5dBm per port

Antenna	GSM Modulation / WCDMA Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (W) 1967.6MHz			Channel Position M <sub>RFBW</sub> (G) 1940.2MHz + (W) 1977.6MHz			Channel Position T <sub>RFBW</sub> (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	48.26	-	-	48.33	-	-	48.22	-	-

Configuration G+W-MIMO-MC 2 (4G+2W)

Maximum Output Power 49.0dBm per port

Antenna	GSM Modulation / WCDMA Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (G) 1932.2MHz + (G) 1934.0MHz + (G) 1935.8MHz + (W) 1962.6MHz + (W) 1967.6MHz			Channel Position M <sub>RFBW</sub> (G) 1940.2MHz + (G) 1942.0MHz + (G) 1943.8MHz + (G) 1945.8MHz + (W) 1972.6MHz + (W) 1977.6MHz			Channel Position T <sub>RFBW</sub> (G) 1950.2MHz + (G) 1952.0MHz + (G) 1953.8MHz + (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	47.43	-	-	47.69	-	-	47.89	-	-



Product Service

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 <sub>RFBW</sub> (G) 1930.4MHz + (L) 1949.3MHz			Channel Position M <sub>RFBW</sub> (G) 1950.2MHz + (L) 1969.3MHz			Channel Position T <sub>RFBW</sub> (G) 1970.2MHz + (L) 1989.3MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / QPSK 1.4MHz	45.6	-	-	45.66	-	-	45.6	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (L) 1948.5MHz			Channel Position M <sub>RFBW</sub> (G) 1950.2MHz + (L) 1968.5MHz			Channel Position T <sub>RFBW</sub> (G) 1970.2MHz + (L) 1988.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / QPSK 3.0MHz	45.46	-	-	45.58	-	-	45.60	-	-

Maximum Output Power 49.0dBm per port

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (L) 1967.5MHz			Channel Position M <sub>RFBW</sub> (G) 1940.2MHz + (L) 1977.5MHz			Channel Position T <sub>RFBW</sub> (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	48.06	-	-	48.27	-	-	48.21	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (L) 1965.0MHz			Channel Position M <sub>RFBW</sub> (G) 1940.2MHz + (L) 1975.0MHz			Channel Position T <sub>RFBW</sub> (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	47.96	-	-	48.12	-	-	48.13	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (L) 1962.5MHz			Channel Position M <sub>RFBW</sub> (G) 1940.2MHz + (L) 1972.5MHz			Channel Position T <sub>RFBW</sub> (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	48.04	-	-	48.24	-	-	48.19	-	-



Product Service

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (L) 1960.0MHz			Channel Position M <sub>RFBW</sub> (G) 1940.2MHz + (L) 1970.0MHz			Channel Position T <sub>RFBW</sub> (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	48.19	-	-	48.39	-	-	48.45	-	-

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

Maximum Output Power 49.0dBm per port

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (G) 1931.0MHz + (L) 1939.3MHz + (L) 1940.7MHz + (G) 1949.4MHz + (G) 1950.0MHz			Channel Position M <sub>RFBW</sub> (G) 1950.2MHz + (G) 1950.8MHz + (L) 1959.3MHz + (L) 1960.7MHz + (G) 1969.2MHz + (G) 1969.8MHz			Channel Position T <sub>RFBW</sub> (G) 1970.2MHz + (G) 1970.8MHz + (L) 1979.3MHz + (L) 1980.7MHz + (G) 1989.0MHz + (G) 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 / QPSK 1.4MHz	47.07	-	-	47.40	-	-	47.29	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (G) 1931.0MHz + (L) 1938.5MHz + (L) 1941.5MHz + (G) 1949.4MHz + (G) 1950.0MHz			Channel Position M <sub>RFBW</sub> (G) 1950.2MHz + (G) 1950.8MHz + (L) 1958.5MHz + (L) 1961.5MHz + (G) 1969.2MHz + (G) 1969.8MHz			Channel Position T <sub>RFBW</sub> (G) 1970.2MHz + (G) 1970.8MHz + (L) 1978.5MHz + (L) 1981.5MHz + (G) 1989.0MHz + (G) 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 / QPSK 3.0MHz	47.09	-	-	47.41	-	-	47.26	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (G) 1932.2MHz + (G) 1934.0MHz + (G) 1935.8MHz + (L) 1962.5MHz + (L) 1967.5MHz			Channel Position M <sub>RFBW</sub> (G) 1940.2MHz + (G) 1942.0MHz + (G) 1943.8MHz + (G) 1945.8MHz + (L) 1972.5MHz + (L) 1977.5MHz			Channel Position T <sub>RFBW</sub> (G) 1950.2MHz + (G) 1952.2MHz + (G) 1953.8MHz + (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	47.25	-	-	47.49	-	-	47.59	-	-



Product Service

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (G) 1932.2MHz + (G) 1934.0MHz + (G) 1935.8MHz + (L) 1955.0MHz + (L) 1965.0MHz			Channel Position M <sub>RFBW</sub> (G) 1940.2MHz + (G) 1942.0MHz + (G) 1943.8MHz + (G) 1945.8MHz + (L) 1965.0MHz + (L) 1975.0MHz			Channel Position T <sub>RFBW</sub> (G) 1950.2MHz + (G) 1952.2MHz + (G) 1953.8MHz + (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	47.80	-	-	48.07	-	-	48.18	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (G) 1932.2MHz + (G) 1934.0MHz + (G) 1935.8MHz + (L) 1947.5MHz + (L) 1962.5MHz			Channel Position M <sub>RFBW</sub> (G) 1940.2MHz + (G) 1942.0MHz + (G) 1943.8MHz + (G) 1945.8MHz + (L) 1957.5MHz + (L) 1972.5MHz			Channel Position T <sub>RFBW</sub> (G) 1950.2MHz + (G) 1952.2MHz + (G) 1953.8MHz + (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	47.99	-	-	48.27	-	-	48.39	-	-



Product Service

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

Maximum Output Power 49.0dBm per port

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz+ (L) 1939.3MHz + (L) 1940.7MHz + (G) 1950.0MHz			Channel Position M <sub>RFBW</sub> (G) 1950.2MHz + (L) 1959.3MHz + (L) 1960.7MHz+ (G) 1969.8MHz			Channel Position T <sub>RFBW</sub> (G) 1970.2MHz+ (L) 1979.3MHz + (L) 1980.7MHz+ (G) 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 / QPSK 1.4MHz	47.03	-	-	47.36	-	-	47.27	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz+ (L) 1938.5MHz + (L) 1941.5MHz+ (G) 1950.0MHz			Channel Position M <sub>RFBW</sub> (G) 1950.2MHz+ (L) 1958.5MHz + (L) 1961.5MHz+ (G) 1969.8MHz			Channel Position T <sub>RFBW</sub> (G) 1970.2MHz + (L) 1978.5MHz + (L) 1981.5MHz+ (G) 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 / QPSK 3.0MHz	47.07	-	-	47.51	-	-	47.41	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (G) 1935.8MHz + (L) 1962.5MHz + (L) 1967.5MHz			Channel Position M <sub>RFBW</sub> (G) 1940.2MHz + (G) 1945.8MHz + (L) 1972.5MHz + (L) 1977.5MHz			Channel Position T <sub>RFBW</sub> (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	47.33	-	-	47.55	-	-	47.53	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (G) 1935.8MHz + (L) 1955.0MHz + (L) 1965.0MHz			Channel Position M <sub>RFBW</sub> (G) 1940.2MHz + (G) 1945.8MHz + (L) 1965.0MHz + (L) 1975.0MHz			Channel Position T <sub>RFBW</sub> (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	48.10	-	-	48.35	-	-	48.44	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (G) 1935.8MHz + (L) 1947.5MHz + (L) 1962.5MHz			Channel Position M <sub>RFBW</sub> (G) 1940.2MHz + (G) 1945.8MHz + (L) 1957.5MHz + (L) 1972.5MHz			Channel Position T <sub>RFBW</sub> (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	48.13	-	-	48.28	-	-	48.39	-	-



Product Service

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

Maximum Output Power 47.8dBm per port

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (G) 1935.8MHz + (L) 1949.3MHz			Channel Position M <sub>RFBW</sub> (G) 1950.2MHz + (G) 1955.8MHz + (L) 1969.3MHz			Channel Position T <sub>RFBW</sub> (G) 1970.2MHz + (G) 1975.8MHz + (L) 1989.3MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / QPSK 1.4MHz	46.73	-	-	47.02	-	-	46.93	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (G) 1935.8MHz + (L) 1948.5MHz			Channel Position M <sub>RFBW</sub> (G) 1950.2MHz + (G) 1955.8MHz + (L) 1968.5MHz			Channel Position T <sub>RFBW</sub> (G) 1970.2MHz + (G) 1975.8MHz + (L) 1988.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	GMSK / QPSK 3.0MHz	47.66	-	-	47.01	-	-	46.91	-	-

Maximum Output Power 49.0dBm per port

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (G) 1935.8MHz + (L) 1967.5MHz			Channel Position M <sub>RFBW</sub> (G) 1940.2MHz + (G) 1945.8MHz + (L) 1977.5MHz			Channel Position T <sub>RFBW</sub> (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	47.22	-	-	47.43	-	-	47.47	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (G) 1935.8MHz + (L) 1965.0MHz			Channel Position M <sub>RFBW</sub> (G) 1940.2MHz + (G) 1945.8MHz + (L) 1975.0MHz			Channel Position T <sub>RFBW</sub> (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	47.67	-	-	47.98	-	-	47.95	-	-

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (G) 1935.8MHz + (L) 1962.5MHz			Channel Position M <sub>RFBW</sub> (G) 1940.2MHz + (G) 1945.8MHz + (L) 1972.5MHz			Channel Position T <sub>RFBW</sub> (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	47.96	-	-	48.19	-	-	48.27	-	-



Product Service

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (G) 1935.8MHz + (L) 1960.0MHz			Channel Position M <sub>RFBW</sub> (G) 1940.2MHz + (G) 1945.8MHz + (L) 1970.0MHz			Channel Position T <sub>RFBW</sub> (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	48.08	-	-	48.32	-	-	48.39	-	-

Configuration G+L-MIMO-MC 5 (4G+1L)

Maximum Output Power 49.0dBm per port

Antenna	GSM Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (G) 1930.4MHz + (G) 1932.2MHz + (G) 1934.0MHz + (G) 1935.8MHz + (L) 1960.0MHz			Channel Position M <sub>RFBW</sub> (G) 1940.2MHz + (G) 1942.0MHz + (G) 1943.8MHz + (G) 1945.8MHz + (L) 1970.0MHz			Channel Position T <sub>RFBW</sub> (G) 1950.2MHz + (G) 1952.2MHz + (G) 1953.8MHz + (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	47.51	-	-	47.81	-	-	47.91	-	-



Product Service

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

Maximum Output Power 49.0dBm per port

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (L) 1969.3MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (L) 1979.3MHz			Channel Position T <sub>RFBW</sub> (W) 1952.4MHz + (L) 1989.3MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / QPSK 1.4 MHz	47.72	-	-	48.01	-	-	48.07	-	-

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (L) 1968.5MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (L) 1978.5MHz			Channel Position T <sub>RFBW</sub> (W) 1952.4MHz + (L) 1988.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / QPSK 3.0 MHz	47.74	-	-	48.05	-	-	48.05	-	-

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (L) 1967.5MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (L) 1977.5MHz			Channel Position T <sub>RFBW</sub> (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	47.90	-	-	48.13	-	-	48.17	-	-

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (L) 1965.0MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (L) 1975.0MHz			Channel Position T <sub>RFBW</sub> (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	47.86	-	-	48.09	-	-	48.11	-	-

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (L) 1962.5MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (L) 1972.5MHz			Channel Position T <sub>RFBW</sub> (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	47.83	-	-	48.07	-	-	48.16	-	-

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (L) 1960.0MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (L) 1970.0MHz			Channel Position T <sub>RFBW</sub> (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	47.86	-	-	48.05	-	-	48.08	-	-



Product Service

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

Maximum Output Power 49.0dBm per port

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (W) 1937.4MHz +(W) 1942.4MHz + (L) 1966.5MHz + (L) 1967.9MHz + (L) 1969.3MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (W) 1947.4MHz + (W) 1952.4MHz + (L) 1976.5MHz + (L) 1977.9MHz + (L) 1979.3MHz			Channel Position T <sub>RFBW</sub> (W) 1952.4MHz + (W) 1957.4MHz + (W) 1962.4MHz + (L) 1986.5MHz + (L) 1987.9MHz + (L) 1989.3MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / QPSK 1.4 MHz	48.10	-	-	48.23	-	-	48.16	-	-

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (W) 1937.4MHz +(W) 1942.4MHz + (L) 1962.5MHz + (L) 1965.5MHz + (L) 1968.5MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (W) 1947.4MHz + (W) 1952.4MHz + (L) 1972.5MHz + (L) 1975.5MHz + (L) 1978.5MHz			Channel Position T <sub>RFBW</sub> (W) 1952.4MHz + (W) 1957.4MHz + (W) 1962.4MHz + (L) 1982.5MHz + (L) 1985.5MHz + (L) 1988.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	QPSK / QPSK 3.0 MHz	48.02	-	-	48.16	-	-	48.21	-	-

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (W) 1937.4MHz +(W) 1942.4MHz + (L) 1957.5MHz + (L) 1962.5MHz + (L) 1967.5MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (W) 1947.4MHz + (W) 1952.4MHz + (L) 1967.5MHz + (L) 1972.5MHz + (L) 1977.5MHz			Channel Position T <sub>RFBW</sub> (W) 1952.4MHz + (W) 1957.4MHz + (W) 1962.4MHz + (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	48.14	-	-	48.27	-	-	48.34	-	-

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

Maximum Output Power 49.0dBm per port

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (W) 1937.4MHz +(W) 1942.4MHz + (L) 1955.0MHz + (L) 1965.0MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (W) 1947.4MHz + (W) 1952.4MHz + (L) 1965.0MHz + (L) 1975.0MHz			Channel Position T <sub>RFBW</sub> (W) 1952.4MHz + (W) 1957.4MHz + (W) 1962.4MHz + (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	48.11	-	-	48.31	-	-	48.38	-	-

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

Maximum Output Power 49.0dBm per port

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz +(W) 1937.4MHz +(L) 1947.5MHz +(L) 1962.5MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (W)1947.4MHz +(L) 1957.5MHz +(L) 1972.5MHz			Channel Position T <sub>RFBW</sub> (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	47.98	-	-	48.19	-	-	48.29	-	-

Configuration W+L-MC 5 (2W+1L)

Maximum Output Power 49.0dBm per port

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz +(W) 1937.4MHz +(L) 1960.0MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (W)1947.4MHz +(L) 1970.0MHz			Channel Position T <sub>RFBW</sub> (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	47.94	-	-	48.17	-	-	48.27	-	-



Product Service

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

Maximum Output Power 48.5dBm per port

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (L) 1969.3MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (L) 1979.3MHz			Channel Position T <sub>RFBW</sub> (W) 1952.4MHz + (L) 1989.3MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / QPSK 1.4 MHz	47.89	-	-	48.15	-	-	48.22	-	-
B		48.08	-	-	48.25	-	-	48.22	-	-
Total		51.00	-	-	51.21	-	-	51.23	-	-

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (L) 1968.5MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (L) 1978.5MHz			Channel Position T <sub>RFBW</sub> (W) 1952.4MHz + (L) 1988.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / QPSK 3.0 MHz	47.92	-	-	48.21	-	-	48.27	-	-
B		48.12	-	-	48.31	-	-	48.29	-	-
Total		51.03	-	-	51.27	-	-	51.29	-	-

Maximum Output Power 49.0dBm per port

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (L) 1967.5MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (L) 1977.5MHz			Channel Position T <sub>RFBW</sub> (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	48.01	-	-	48.24	-	-	48.29	-	-
B		48.17	-	-	48.34	-	-	48.28	-	-
Total		51.10	-	-	51.30	-	-	51.30	-	-

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (L) 1965.0MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (L) 1975.0MHz			Channel Position T <sub>RFBW</sub> (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	47.93	-	-	48.18	-	-	48.30	-	-
B		48.13	-	-	48.30	-	-	48.28	-	-
Total		51.04	-	-	51.25	-	-	51.30	-	-

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (L) 1962.5MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (L) 1972.5MHz			Channel Position T <sub>RFBW</sub> (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	47.81	-	-	48.13	-	-	48.26	-	-
B		48.14	-	-	48.30	-	-	48.27	-	-
Total		50.99	-	-	51.23	-	-	51.28	-	-



Product Service

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (L) 1960.0MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (L) 1970.0MHz			Channel Position T <sub>RFBW</sub> (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	47.79	-	-	48.11	-	-	48.21	-	-
B		48.07	-	-	48.28	-	-	48.27	-	-
Total		50.94	-	-	51.21	-	-	51.25	-	-

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

Maximum Output Power 49.0dBm per port

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (W) 1937.4MHz +(W) 1942.4MHz + (L) 1966.5MHz + (L) 1967.9MHz + (L) 1969.3MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (W) 1947.4MHz + (W) 1952.4MHz + (L) 1976.5MHz + (L) 1977.9MHz + (L) 1979.3MHz			Channel Position T <sub>RFBW</sub> (W) 1952.4MHz + (W) 1957.4MHz + (W) 1962.4MHz + (L) 1986.5MHz + (L) 1987.9MHz + (L) 1989.3MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / QPSK 1.4 MHz	48.02	-	-	48.15	-	-	48.17	-	-
B		48.29	-	-	48.32	-	-	48.26	-	-
Total		51.17	-	-	51.25	-	-	51.23	-	-

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (W) 1937.4MHz +(W) 1942.4MHz + (L) 1962.5MHz + (L) 1965.5MHz + (L) 1968.5MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (W) 1947.4MHz + (W) 1952.4MHz + (L) 1972.5MHz + (L) 1975.5MHz + (L) 1978.5MHz			Channel Position T <sub>RFBW</sub> (W) 1952.4MHz + (W) 1957.4MHz + (W) 1962.4MHz + (L) 1982.5MHz + (L) 1985.5MHz + (L) 1988.5MHz		
		Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)	Power (dBm)	Power (dBm/MHz)	PAR (dB)
A	16QAM / QPSK 3.0 MHz	47.99	-	-	48.16	-	-	48.19	-	-
B		48.19	-	-	48.32	-	-	48.25	-	-
Total		51.10	-	-	51.25	-	-	51.23	-	-

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (W) 1937.4MHz +(W) 1942.4MHz + (L) 1957.5MHz + (L) 1962.5MHz + (L) 1967.5MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (W) 1947.4MHz + (W) 1952.4MHz + (L) 1967.5MHz + (L) 1972.5MHz + (L) 1977.5MHz			Channel Position T <sub>RFBW</sub> (W) 1952.4MHz + (W) 1957.4MHz + (W) 1962.4MHz + (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	48.11	-	-	48.31	-	-	48.33	-	-
B		48.36	-	-	48.43	-	-	48.36	-	-
Total		51.25	-	-	51.38	-	-	51.36	-	-

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

Maximum Output Power 49.0dBm per port

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (W) 1937.4MHz + (L) 1942.4MHz + (L) 1955.0MHz + (L) 1965.0MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (W) 1947.4MHz + (L) 1952.4MHz + (L) 1965.0MHz + (L) 1975.0MHz			Channel Position T <sub>RFBW</sub> (W) 1952.4MHz + (W) 1957.4MHz + (L) 1962.4MHz + (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	48.13	-	-	48.33	-	-	48.41	-	-
B		48.30	-	-	48.44	-	-	48.36	-	-
Total		51.23	-	-	51.40	-	-	51.40	-	-

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

Maximum Output Power 49.0dBm per port

Antenna	WCDMA Modulation / LTE Modulation Bandwidth	RMS Output Power / Peak to Average Ratio (PAR)								
		Channel Position B <sub>RFBW</sub> (W) 1932.4MHz + (W) 1937.4MHz + (L) 1947.5MHz + (L) 1962.5MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (W) 1947.4MHz + (L) 1957.5MHz + (L) 1972.5MHz			Channel Position T <sub>RFBW</sub> (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	47.98	-	-	48.22	-	-	48.29	-	-
B		48.23	-	-	48.37	-	-	48.30	-	-
Total		51.12	-	-	51.31	-	-	51.31	-	-

Configuration W+L-MIMO-MC 5 (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 <sub>RFBW</sub> (W) 1932.4MHz + (W) 1937.4MHz + (L) 1960.0MHz			Channel Position M <sub>RFBW</sub> (W) 1942.4MHz + (W) 1947.4MHz + (L) 1970.0MHz			Channel Position T <sub>RFBW</sub> (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	47.96	-	-	48.19	-	-	48.29	-	-
B		48.18	-	-	48.35	-	-	48.31	-	-
Total		51.08	-	-	51.28	-	-	51.31	-	-

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.



Product Service

Limit	
Output Power	FCC: (ERP) 1640 W or 62.15 dBm for emission bandwidth $\leq$ 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.



Product Service

## **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**

Radio 2219 B2, KRC 161 627/1, S/N: D825490218

### **2.2.3 Date of Test and Modification State**

26 April to 08 May 2017 - 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	21.4 - 22.3°C
Relative Humidity	22.0 - 40.0%

### **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% 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 43.0dBm 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	320.90	319.70	318.90
8-PSK	314.20	313.50	314.60
AQPSK	318.90	318.60	316.70

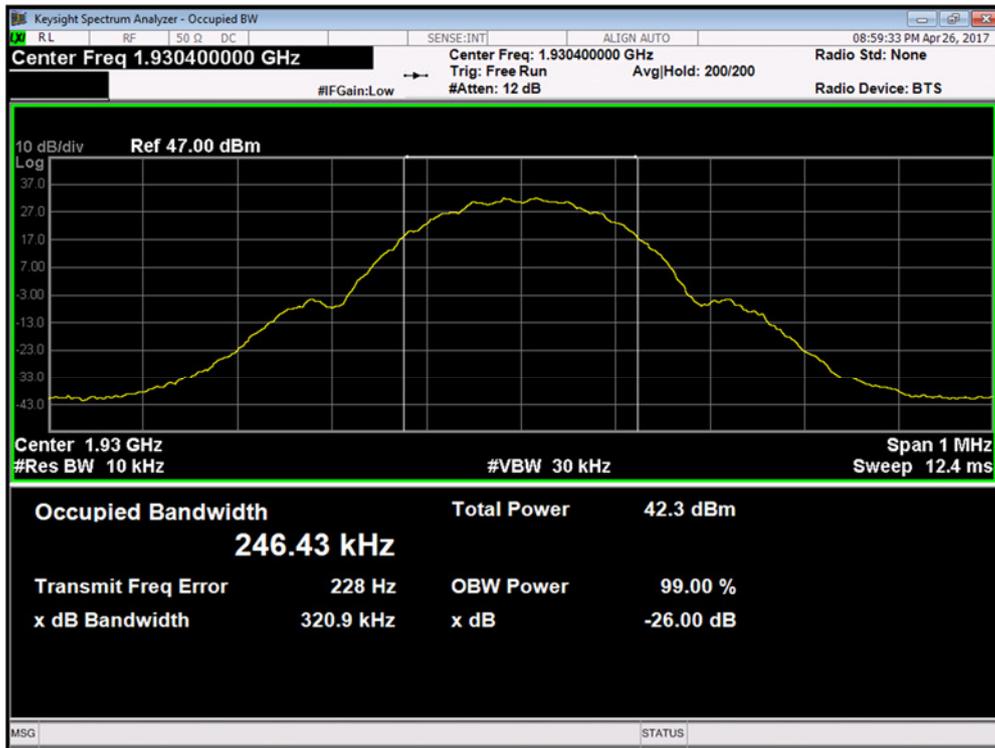
99% Occupied Bandwidth for IC requirement

Modulation / Bandwidth	Occupied Bandwidth (kHz)		
	Channel Position B 1930.4MHz	Channel Position M 1960.0MHz	Channel Position T 1989.6MHz
GMSK	246.43	245.71	245.58
8-PSK	245.01	243.37	245.15
AQPSK	241.64	241.05	241.98

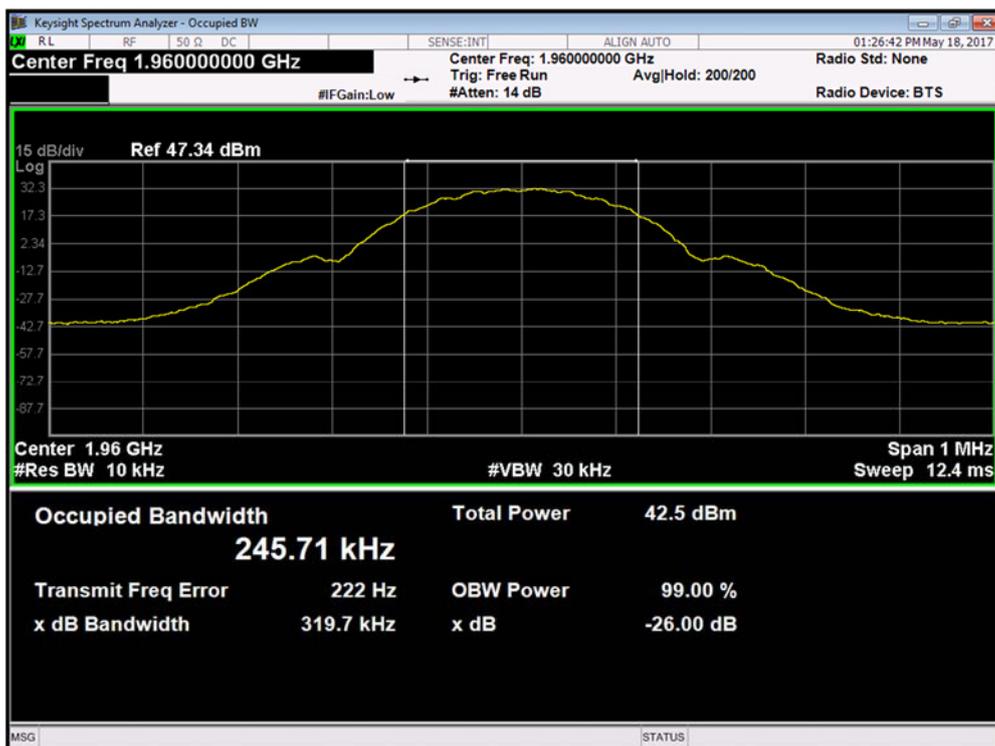


Product Service

### Channel Position B - GMSK



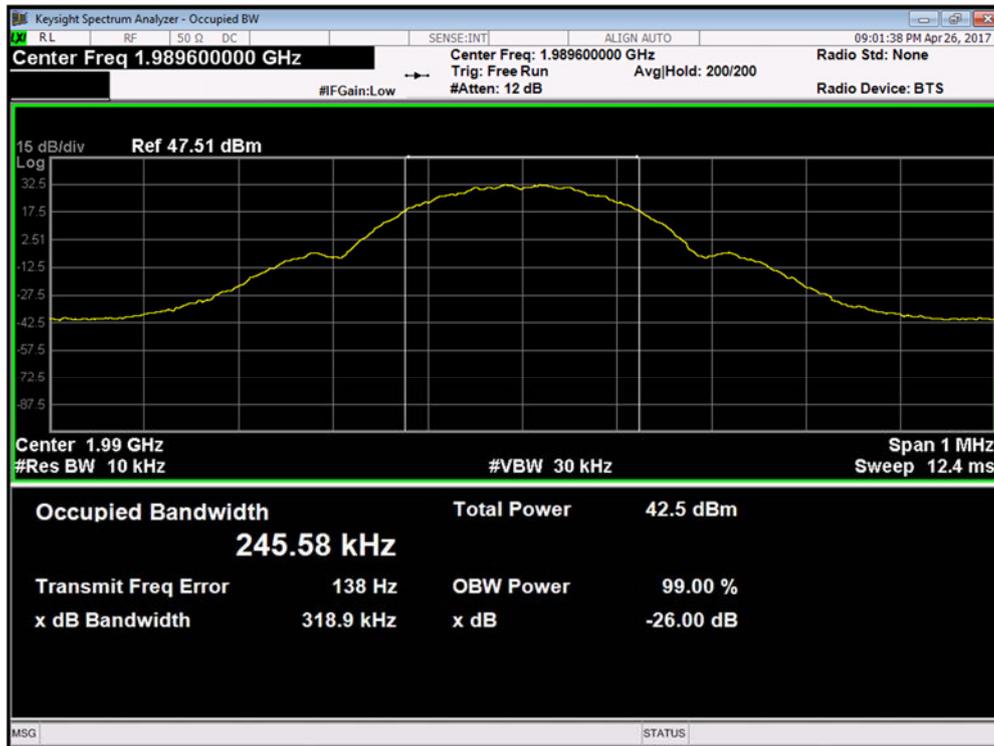
### Channel Position M - GMSK



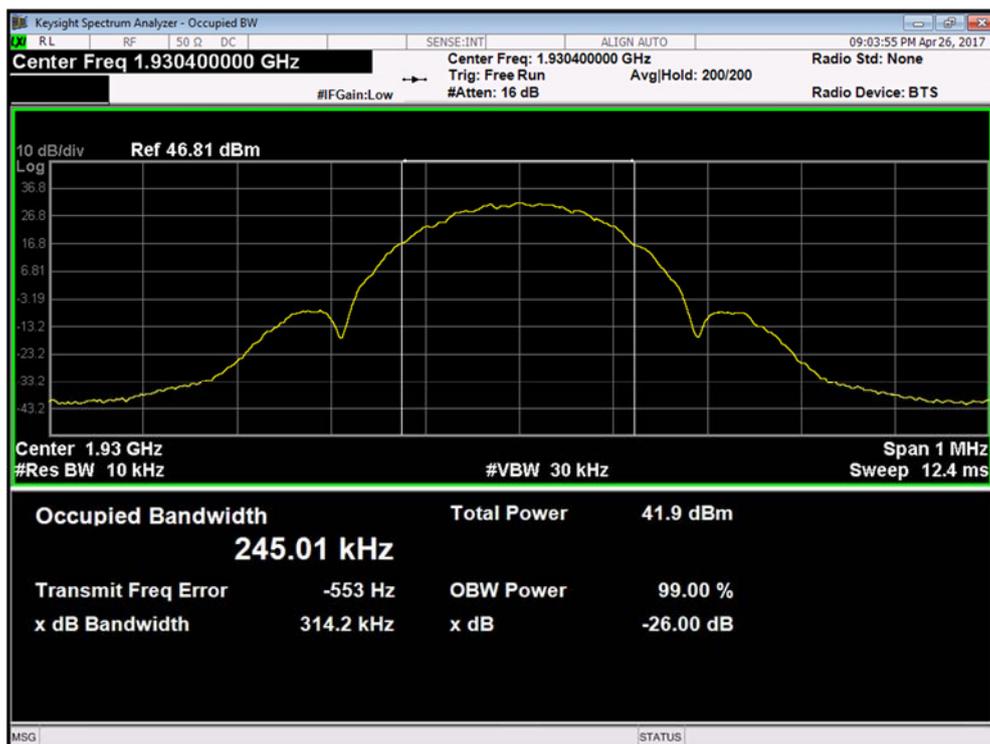


Product Service

### Channel Position T - GMSK



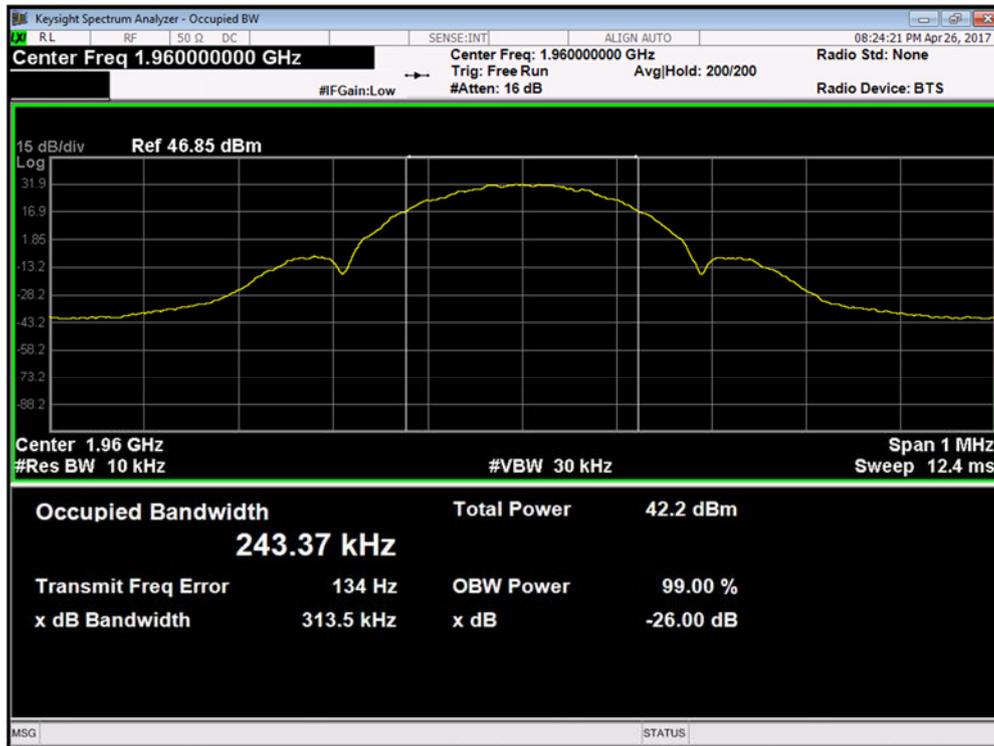
### Channel Position B - 8-PSK



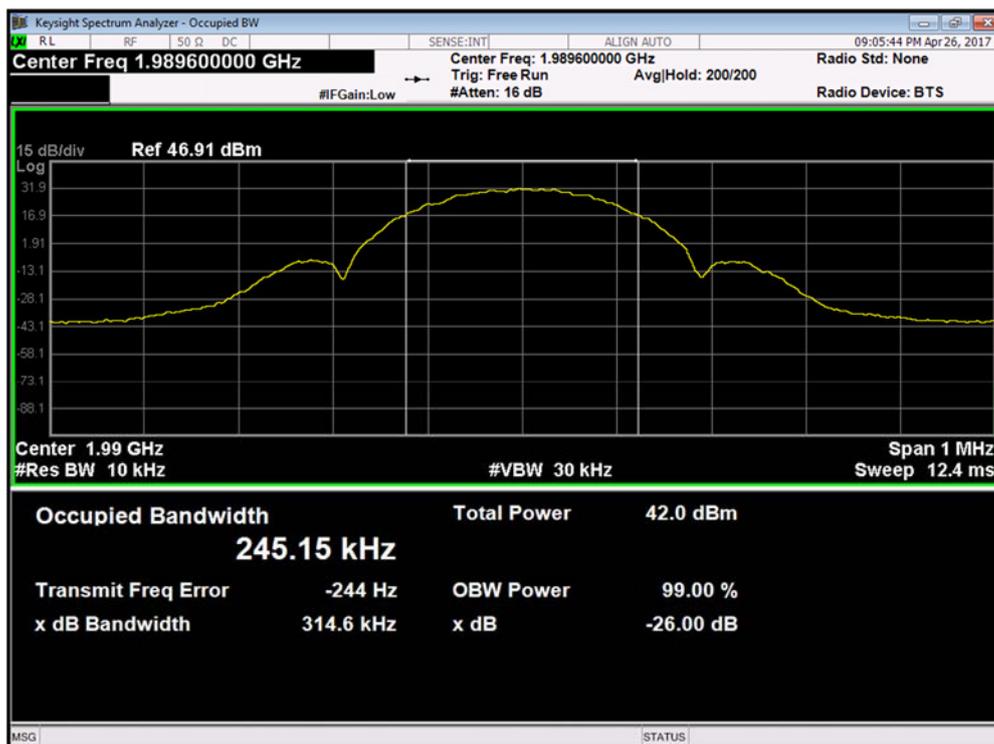


Product Service

### Channel Position M - 8-PSK



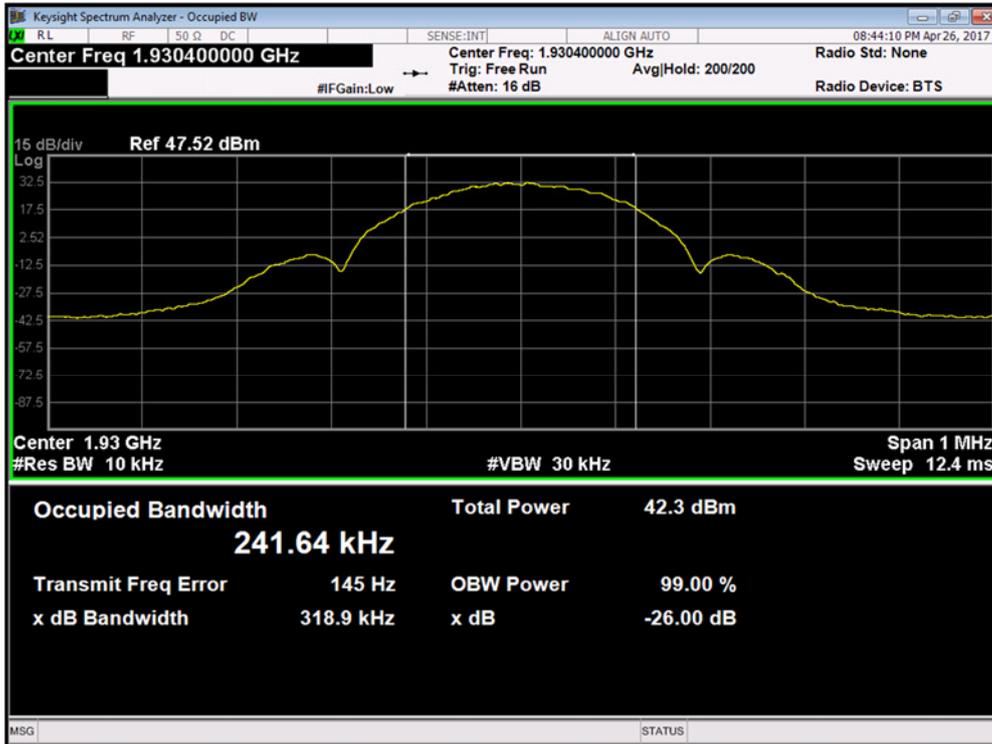
### Channel Position T - 8-PSK



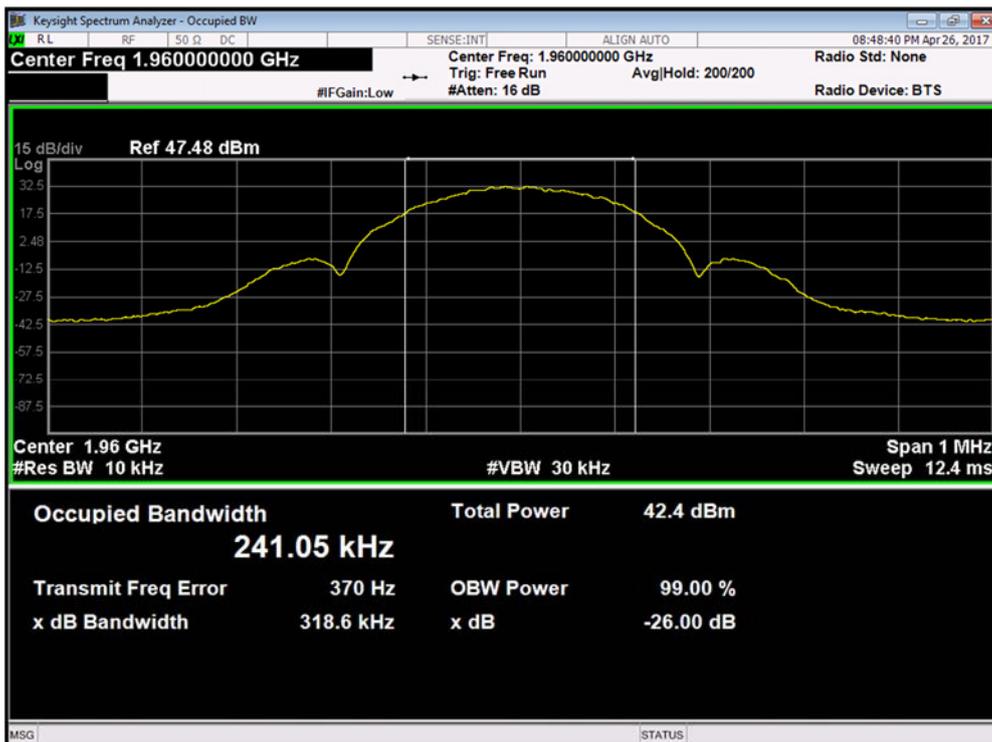


Product Service

### Channel Position B - AQPSK



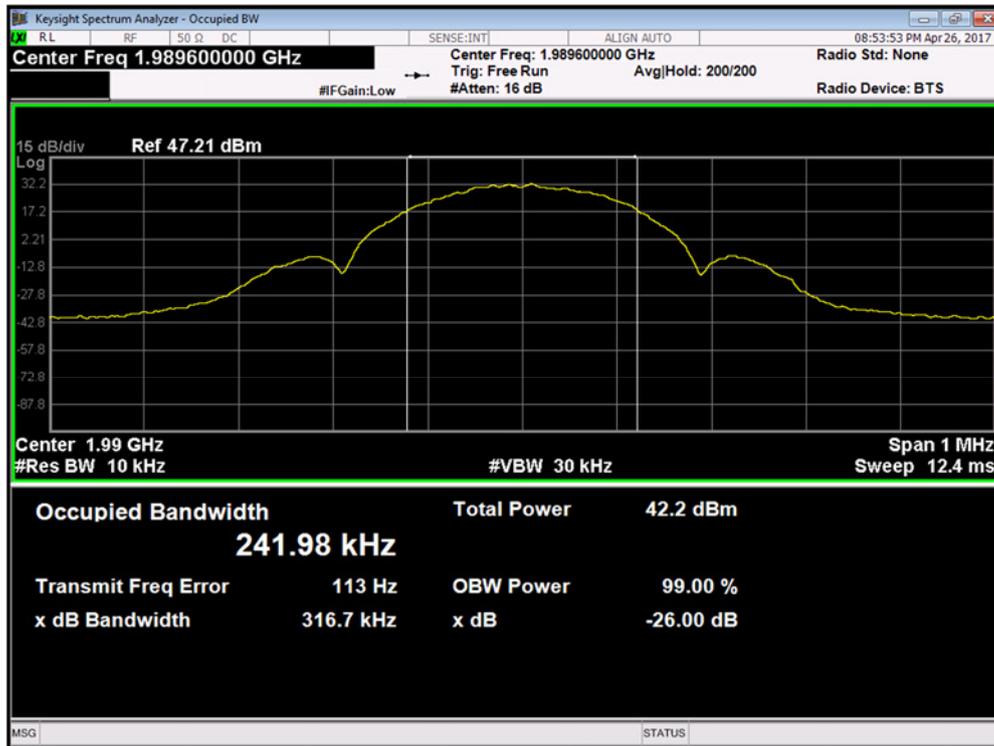
### Channel Position M - AQPSK





Product Service

### Channel Position T - AQPSK



Configuration W-SC

Maximum Output Power 49.0dBm 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	4.667	4.665	4.671

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1932.4MHz	Channel Position M 1960.0MHz	Channel Position T 1987.6MHz
QPSK / 3.8 MHz	3.749	3.747	3.747

99% Occupied Bandwidth for IC requirement

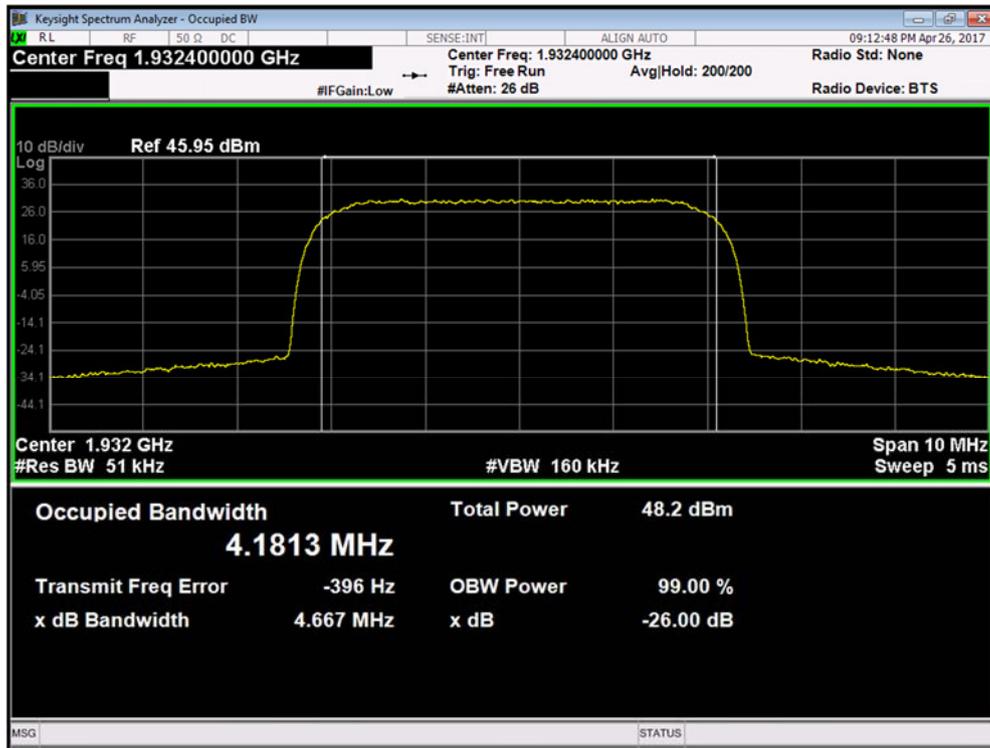
Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1932.4MHz	Channel Position M 1960.0MHz	Channel Position T 1987.6MHz
QPSK / 5.0 MHz	4.181	4.166	4.164

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1932.4MHz	Channel Position M 1960.0MHz	Channel Position T 1987.6MHz
QPSK / 3.8 MHz	3.570	3.571	3.572

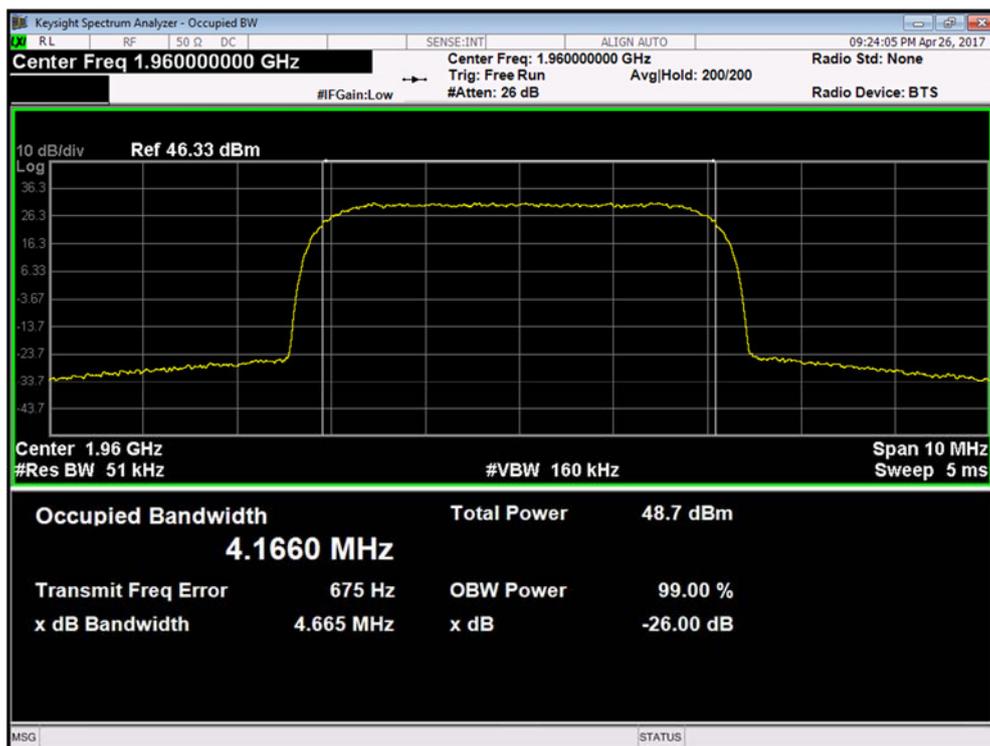


Product Service

### Channel Position B - QPSK / Bandwidth 5.0 MHz



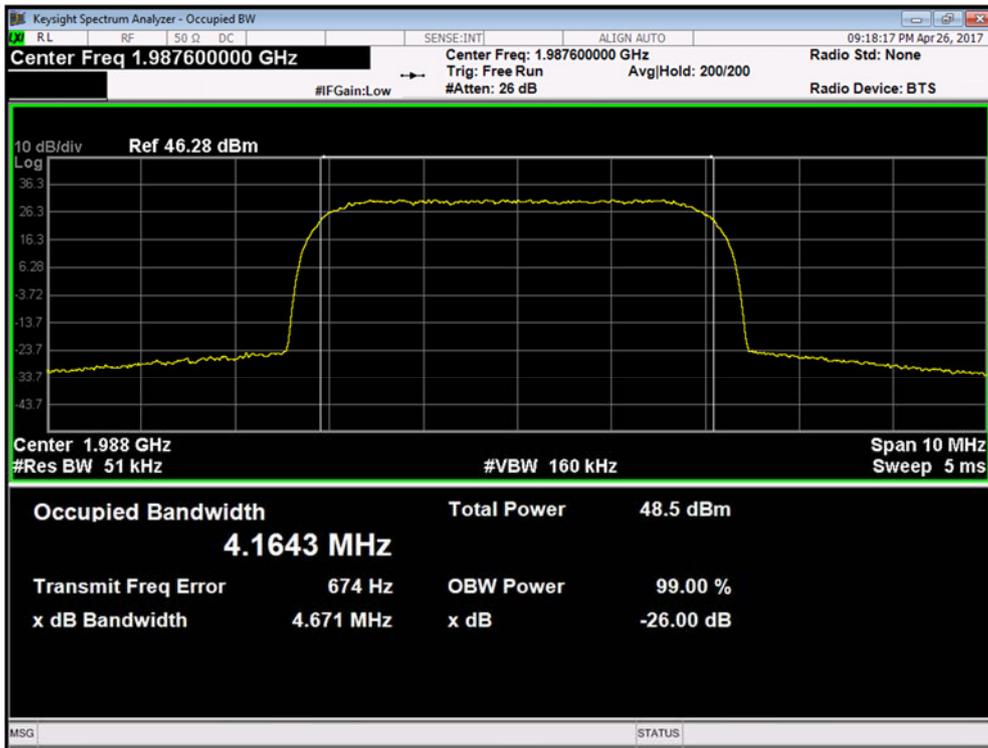
### Channel Position M - QPSK / Bandwidth 5.0 MHz



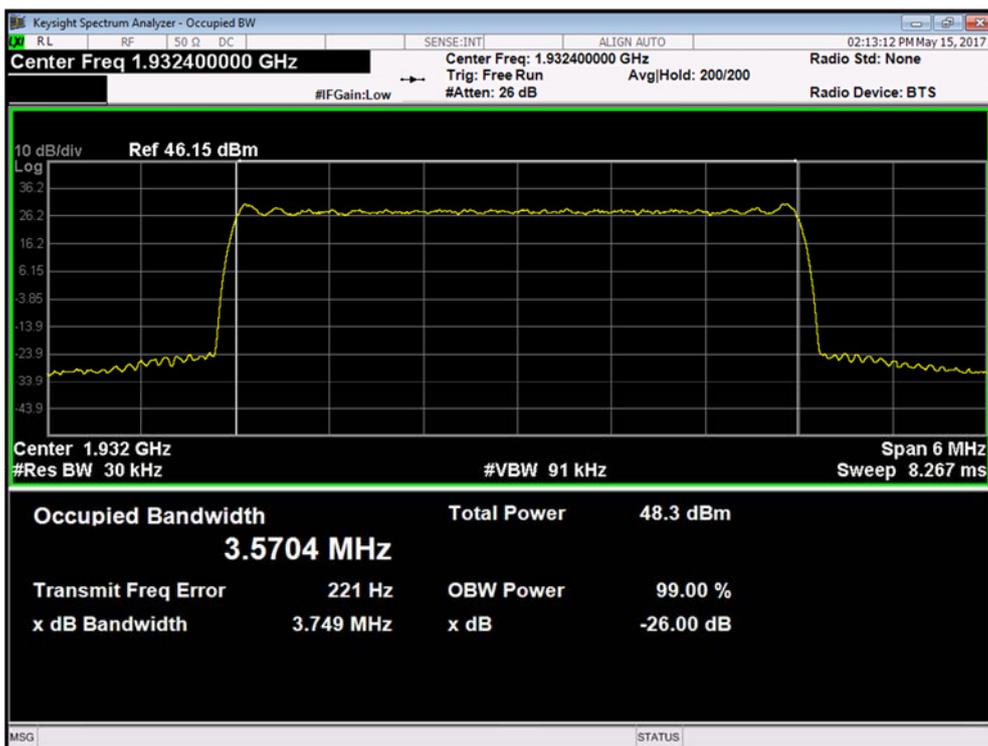


Product Service

### Channel Position T - QPSK / Bandwidth 5.0 MHz



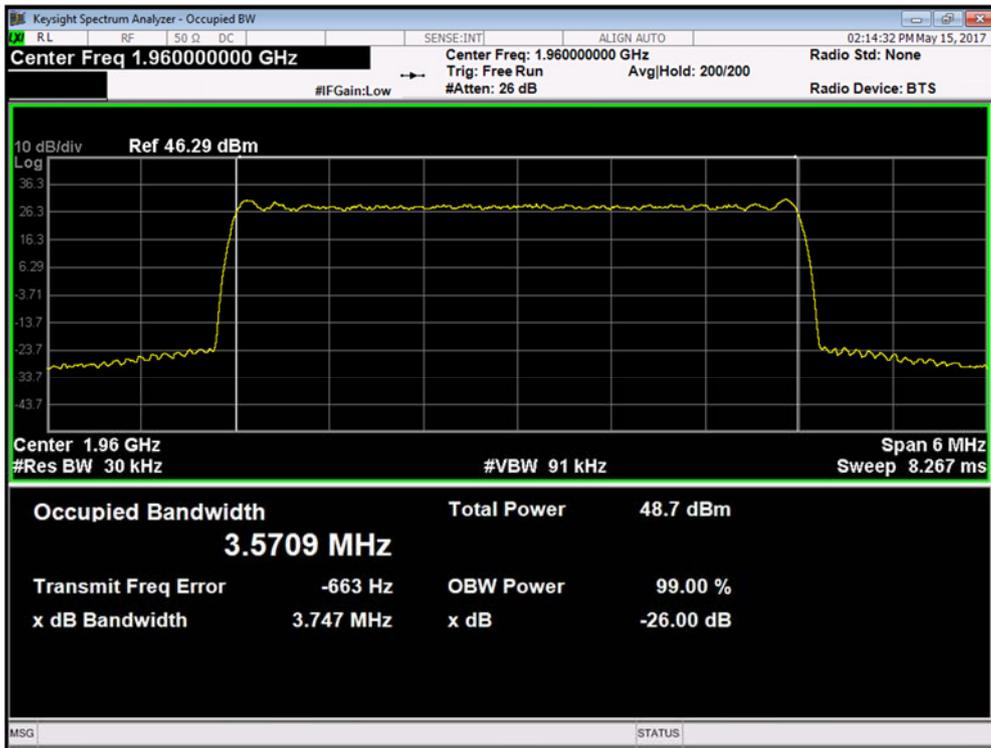
### Channel Position B - QPSK / Bandwidth 3.8 MHz



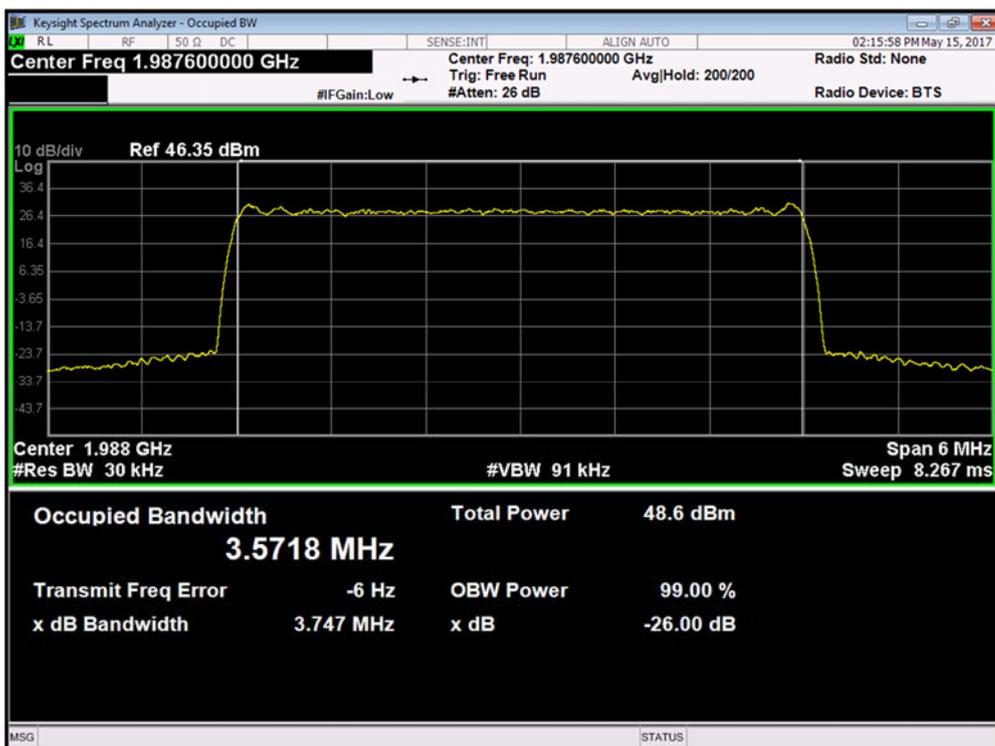


Product Service

Channel Position M - QPSK / Bandwidth 3.8 MHz



Channel Position T - QPSK / Bandwidth 3.8 MHz



Configuration W-MIMO-SC

Maximum Output Power 47.0dBm 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	4.662	4.664	4.659
64QAM / 5.0 MHz	4.666	4.665	4.664

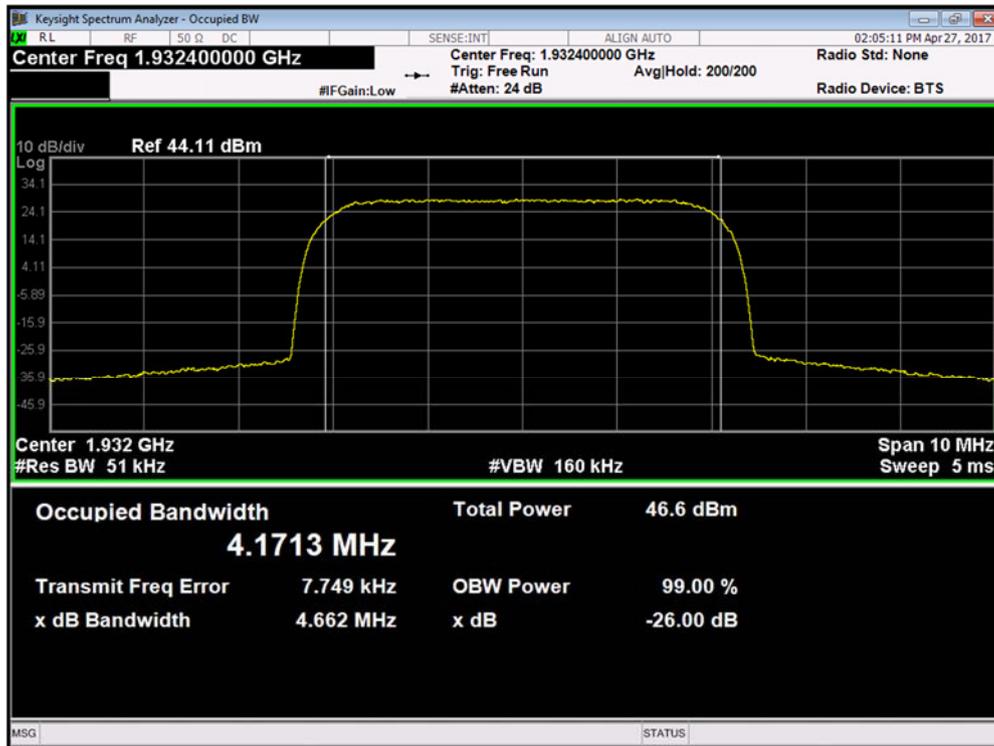
99% Occupied Bandwidth for IC requirement

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1932.4MHz	Channel Position M 1960.0MHz	Channel Position T 1987.6MHz
16QAM / 5.0 MHz	4.171	4.166	4.169
64QAM / 5.0 MHz	4.173	4.174	4.170

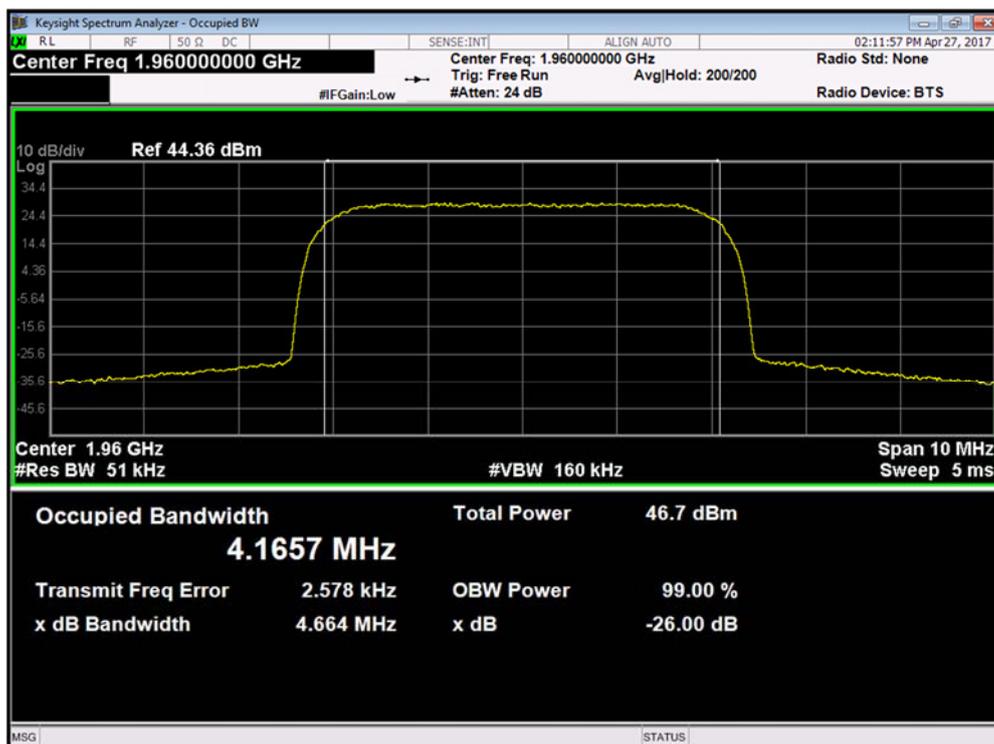


Product Service

Channel Position B - 16QAM / Bandwidth 5.0 MHz



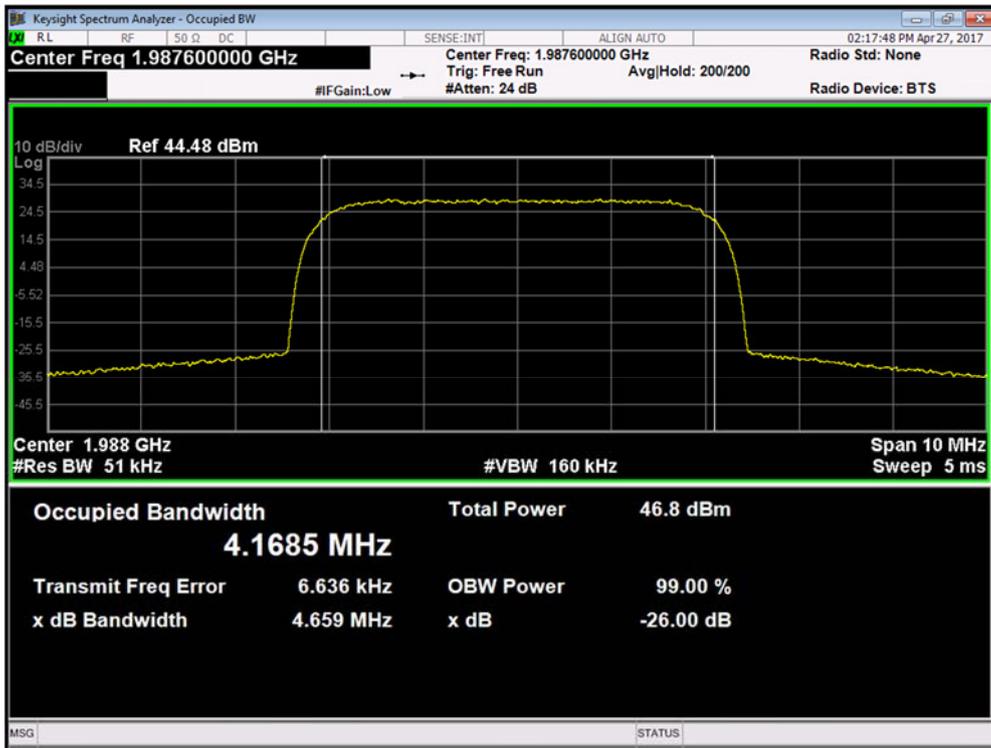
Channel Position M - 16QAM / Bandwidth 5.0 MHz



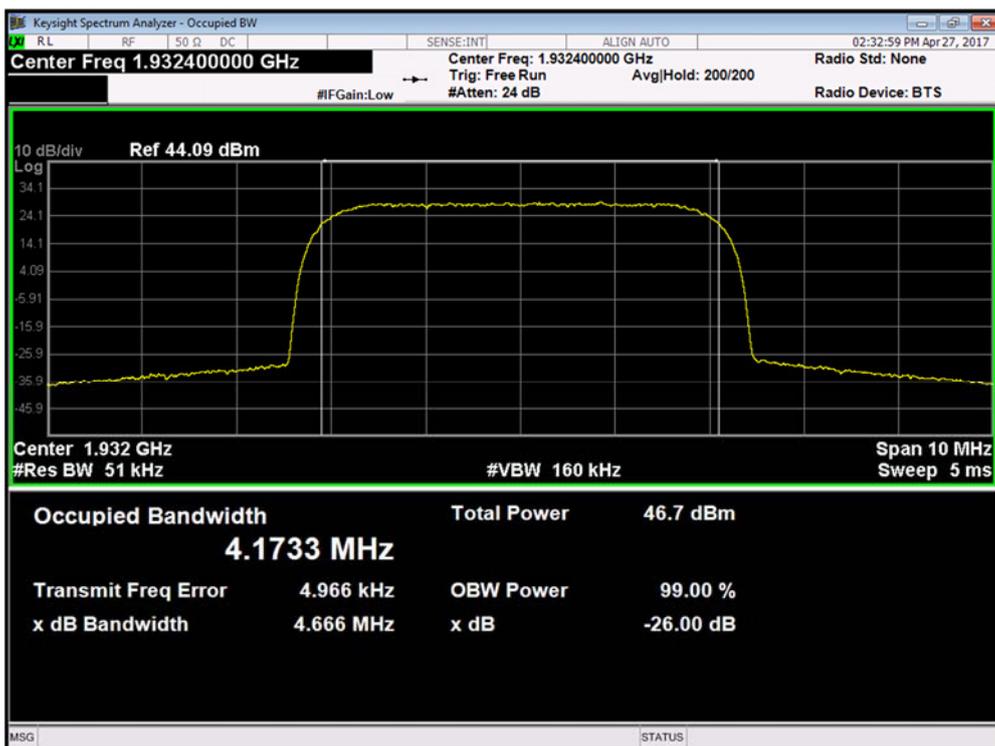


Product Service

### Channel Position T - 16QAM / Bandwidth 5.0 MHz



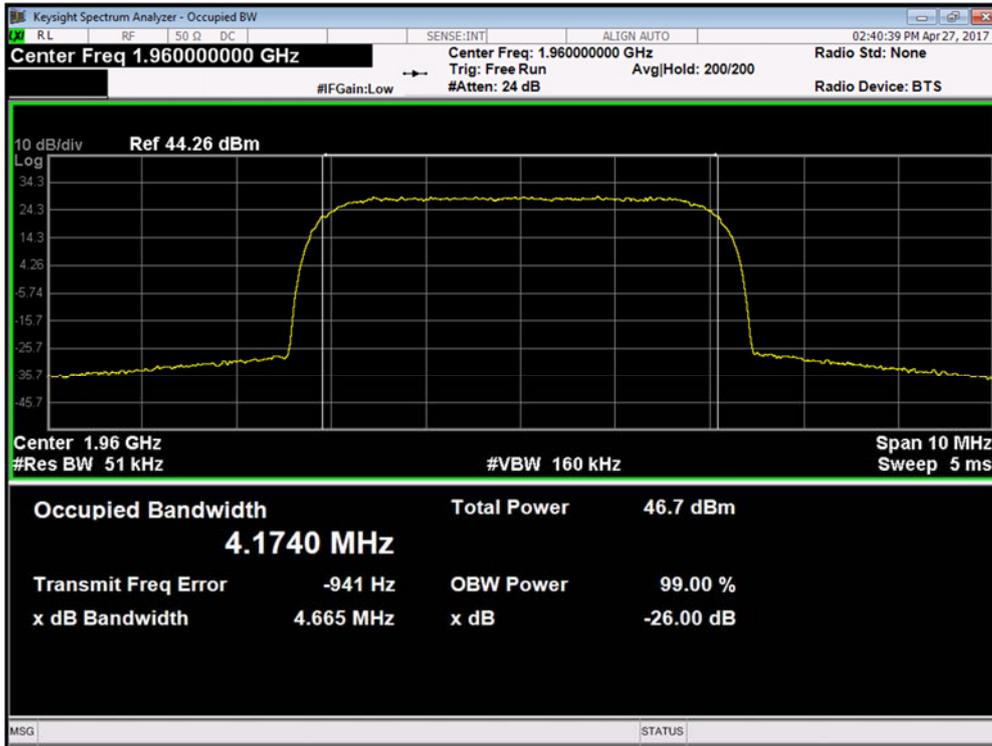
### Channel Position B - 64QAM / Bandwidth 5.0 MHz



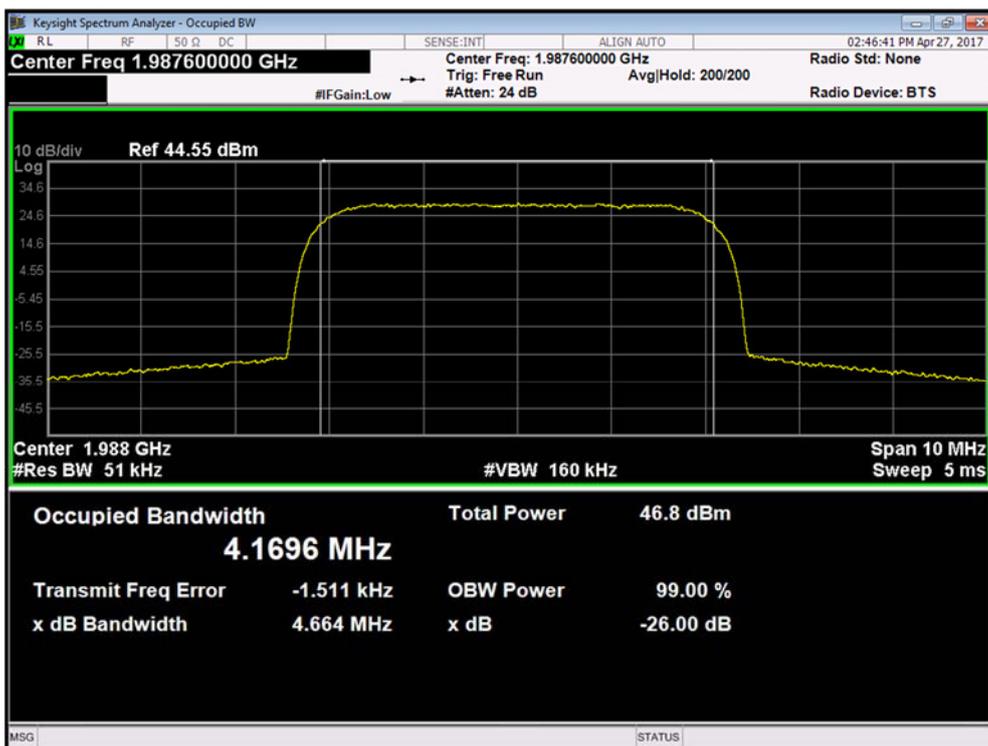


Product Service

Channel Position M - 64QAM / Bandwidth 5.0 MHz



Channel Position T - 64QAM / Bandwidth 5.0 MHz



### Configuration L-MIMO-SC

Maximum Output Power 43.0dBm per port for 1.4MHz and 3.0MHz bandwidth.

Maximum Output Power 49.0dBm per port for 5.0MHz to 20.0MHz bandwidth.

-26dBc Occupied Bandwidth for FCC requirement

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1930.7MHz	Channel Position M 1960.0MHz	Channel Position T 1989.3MHz
QPSK / 1.4 MHz	1.238	1.241	1.234
16QAM / 1.4 MHz	-	1.226	-
64QAM / 1.4 MHz	-	1.231	-
256QAM / 1.4 MHz	-	1.230	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1931.5MHz	Channel Position M 1960.0MHz	Channel Position T 1988.5MHz
QPSK / 3.0 MHz	-	2.852	-
16QAM / 3.0 MHz	-	2.856	-
64QAM / 3.0 MHz	-	2.849	-
256QAM / 3.0 MHz	-	2.857	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1932.5MHz	Channel Position M 1960.0MHz	Channel Position T 1987.5MHz
QPSK / 5.0 MHz	4.734	4.731	4.730
16QAM / 5.0 MHz	-	4.695	-
64QAM / 5.0 MHz	-	4.738	-
256QAM / 5.0 MHz	-	4.741	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1935.0MHz	Channel Position M 1960.0MHz	Channel Position T 1985.0MHz
QPSK / 10.0 MHz	-	9.324	-
16QAM / 10.0 MHz	-	9.309	-
64QAM / 10.0 MHz	-	9.326	-
256QAM / 10.0 MHz	-	9.378	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1937.5MHz	Channel Position M 1960.0MHz	Channel Position T 1982.5MHz
QPSK / 15.0 MHz	-	14.070	-
16QAM / 15.0 MHz	-	13.940	-
64QAM / 15.0 MHz	-	13.970	-
256QAM / 15.0 MHz	-	13.960	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1940.0MHz	Channel Position M 1960.0MHz	Channel Position T 1980.0MHz
QPSK / 20.0 MHz	18.550	18.660	18.600
16QAM / 20.0 MHz	-	18.520	-
64QAM / 20.0 MHz	-	18.570	-
256QAM / 20.0 MHz	-	18.590	-



Product Service

99% Occupied Bandwidth for IC requirement

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1930.7MHz	Channel Position M 1960.0MHz	Channel Position T 1989.3MHz
QPSK / 1.4 MHz	1.088	1.089	1.089
16QAM / 1.4 MHz	-	1.087	-
64QAM / 1.4 MHz	-	1.087	-
256QAM / 1.4 MHz	-	1.088	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1931.5MHz	Channel Position M 1960.0MHz	Channel Position T 1988.5MHz
QPSK / 3.0 MHz	-	2.691	-
16QAM / 3.0 MHz	-	2.689	-
64QAM / 3.0 MHz	-	2.691	-
256QAM / 3.0 MHz	-	2.690	-

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	4.477	4.478
16QAM / 5.0 MHz	-	4.460	-
64QAM / 5.0 MHz	-	4.479	-
256QAM / 5.0 MHz	-	4.478	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1935.0MHz	Channel Position M 1960.0MHz	Channel Position T 1985.0MHz
QPSK / 10.0 MHz	-	8.938	-
16QAM / 10.0 MHz	-	8.939	-
64QAM / 10.0 MHz	-	8.937	-
256QAM / 10.0 MHz	-	8.934	-

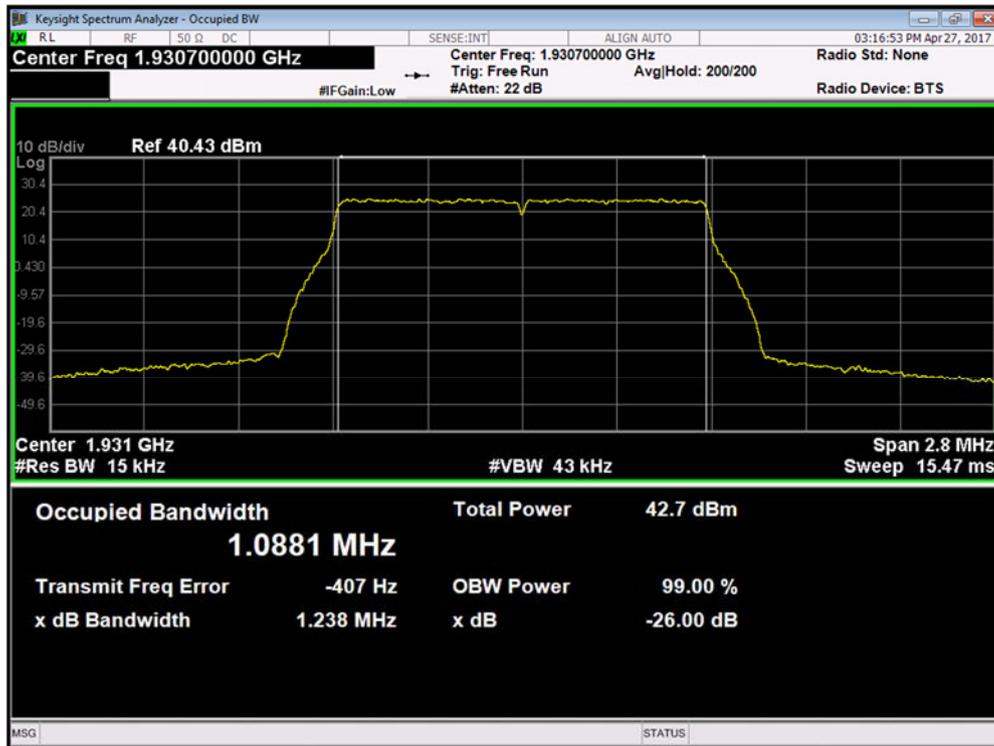
Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1937.5MHz	Channel Position M 1960.0MHz	Channel Position T 1982.5MHz
QPSK / 15.0 MHz	-	13.397	-
16QAM / 15.0 MHz	-	13.394	-
64QAM / 15.0 MHz	-	13.396	-
256QAM / 15.0 MHz	-	13.399	-

Modulation / Bandwidth	Occupied Bandwidth (MHz)		
	Channel Position B 1940.0MHz	Channel Position M 1960.0MHz	Channel Position T 1980.0MHz
QPSK / 20.0 MHz	17.865	17.845	17.854
16QAM / 20.0 MHz	-	17.841	-
64QAM / 20.0 MHz	-	17.860	-
256QAM / 20.0 MHz	-	17.851	-

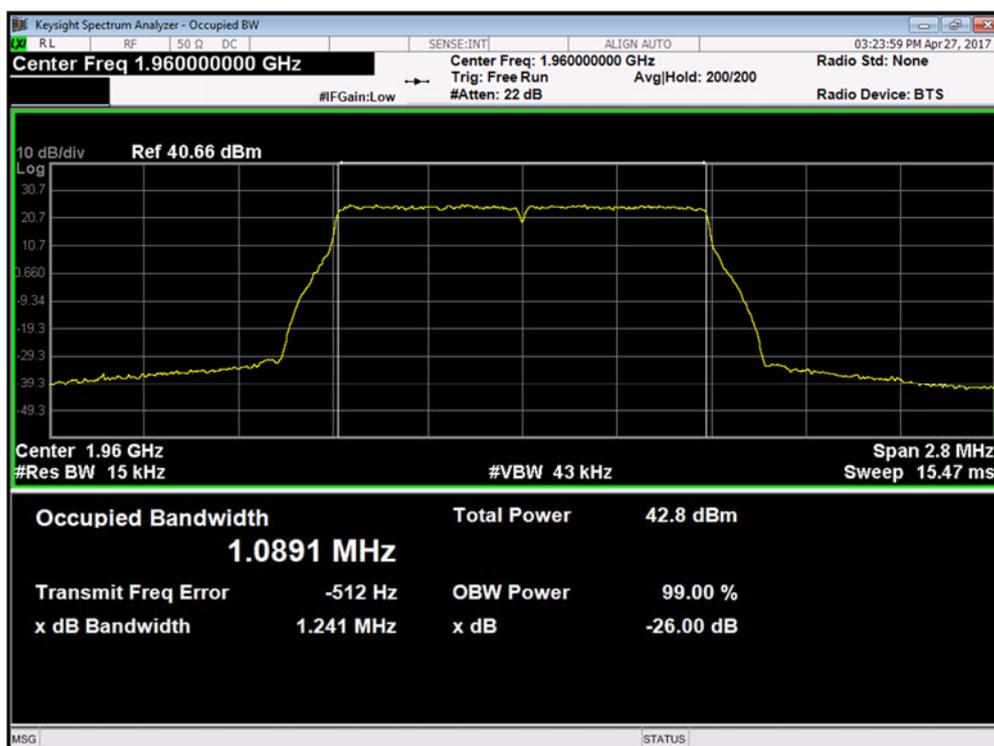


Product Service

### Channel Position B - QPSK / Bandwidth 1.4 MHz



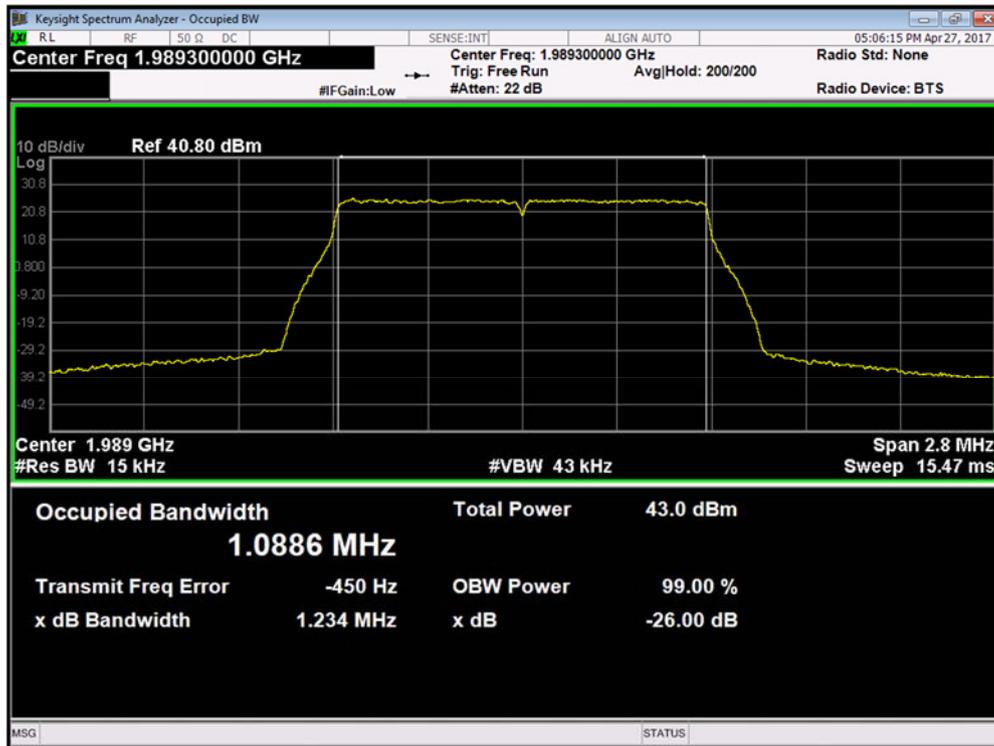
### Channel Position M - QPSK / Bandwidth 1.4 MHz



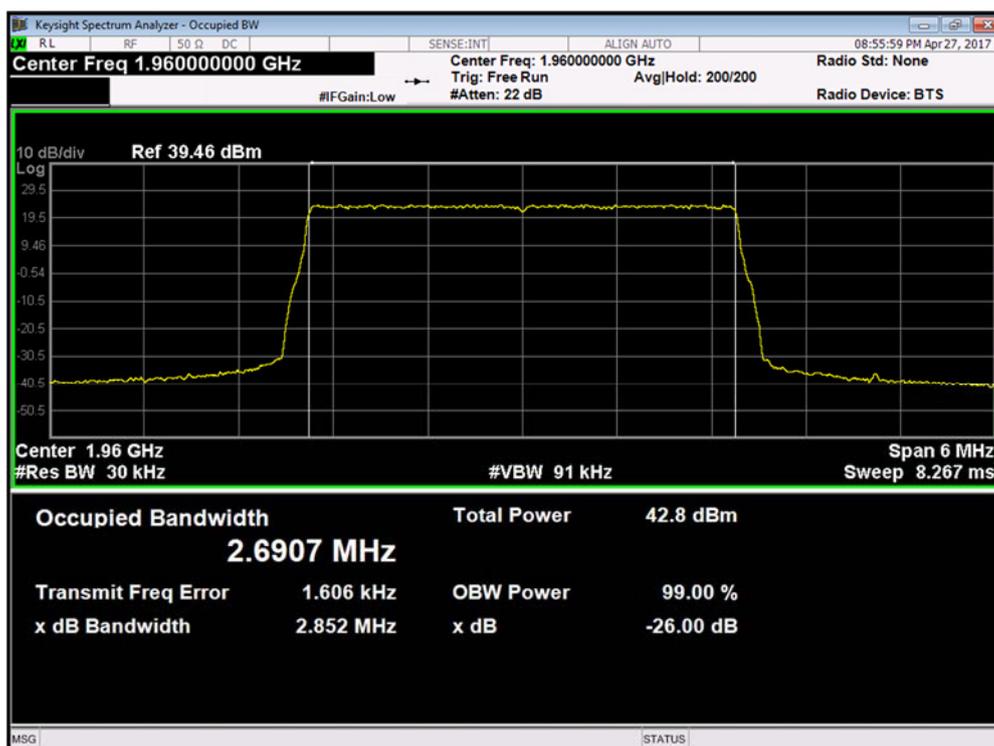


Product Service

### Channel Position T - QPSK / Bandwidth 1.4 MHz



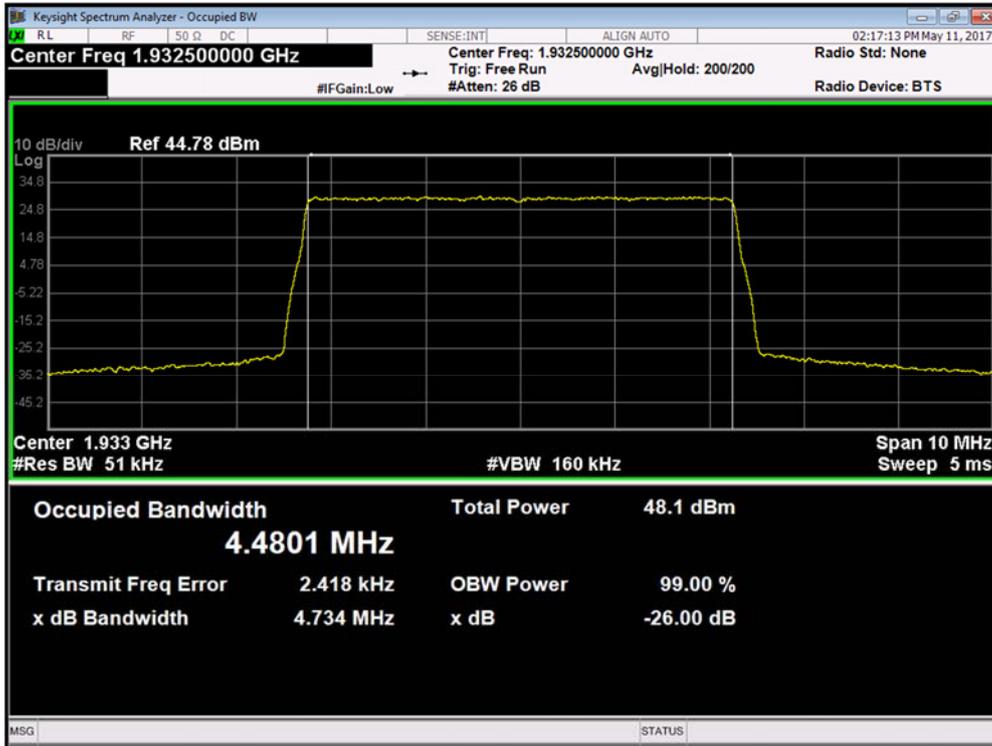
### Channel Position M - QPSK / Bandwidth 3.0 MHz



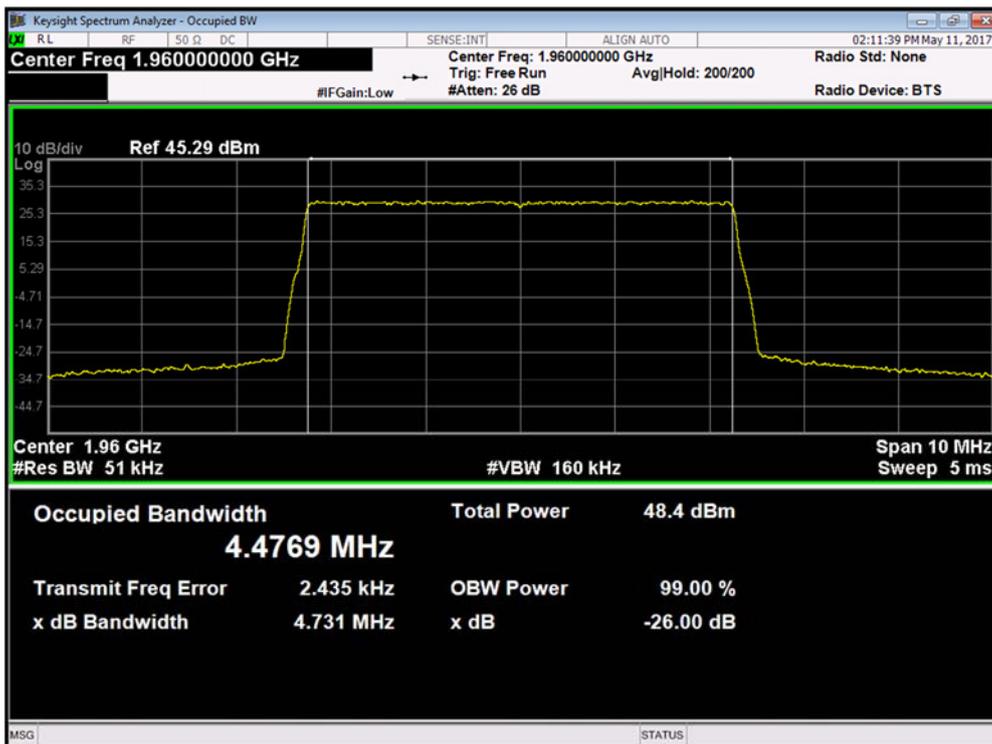


Product Service

Channel Position B - QPSK / Bandwidth 5.0 MHz



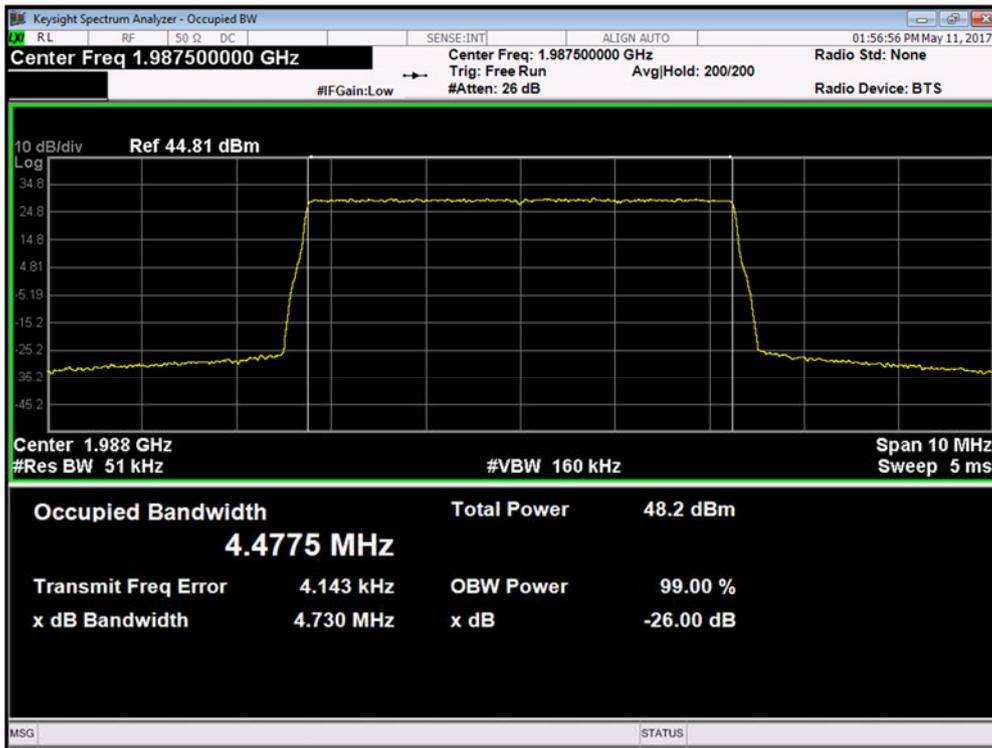
Channel Position M - QPSK / Bandwidth 5.0 MHz



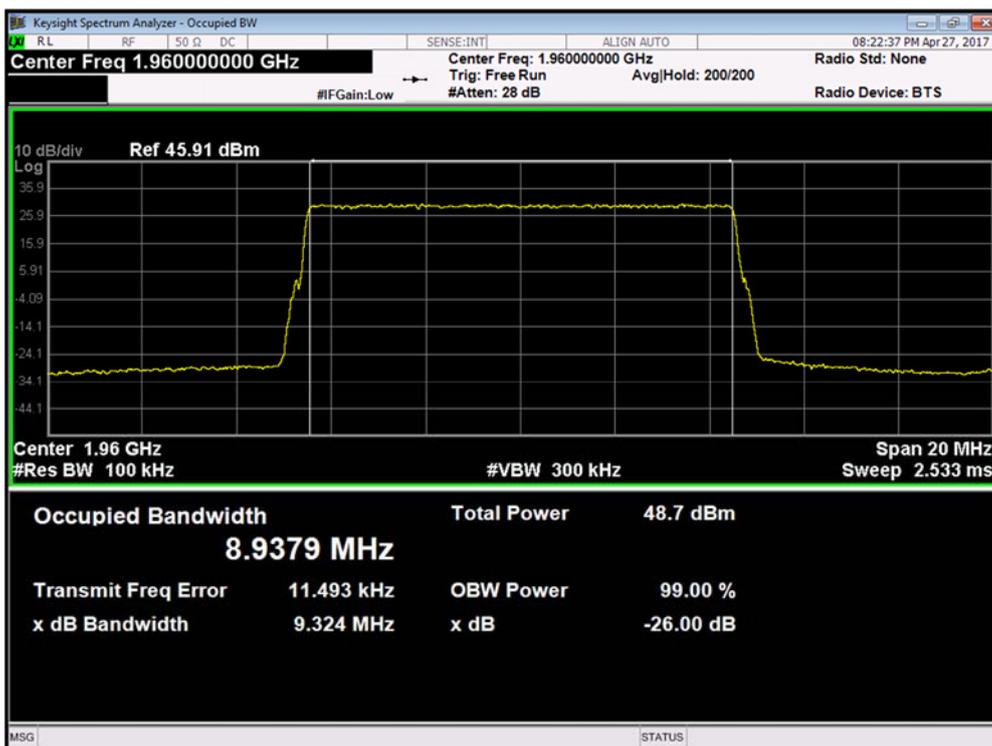


Product Service

Channel Position T - QPSK / Bandwidth 5.0 MHz



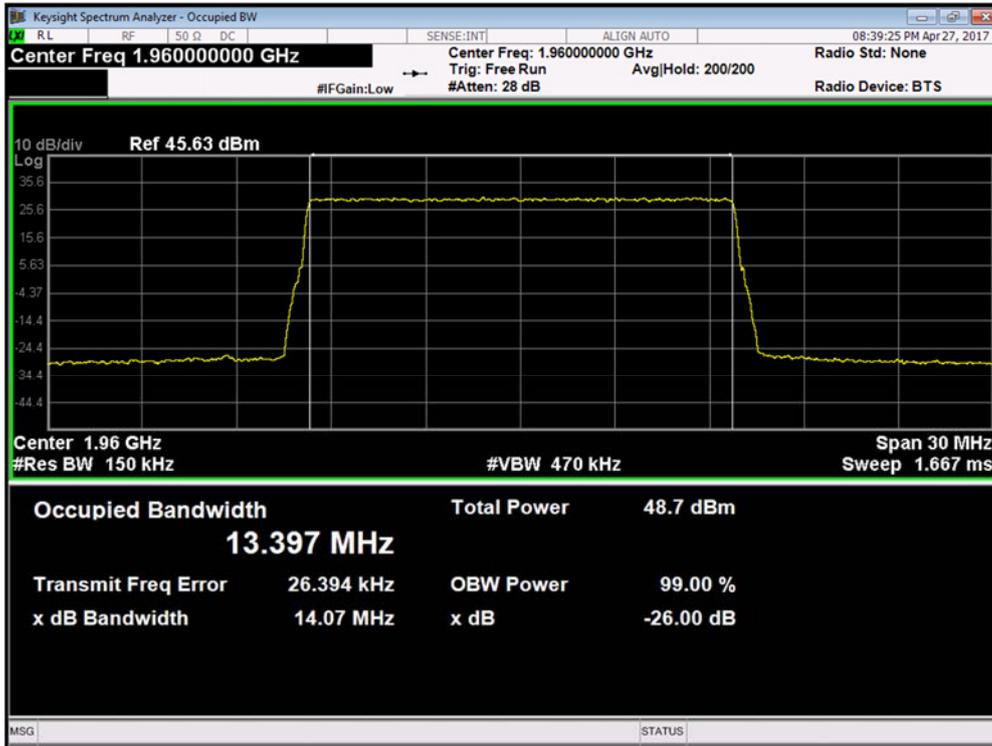
Channel Position M - QPSK / Bandwidth 10.0 MHz



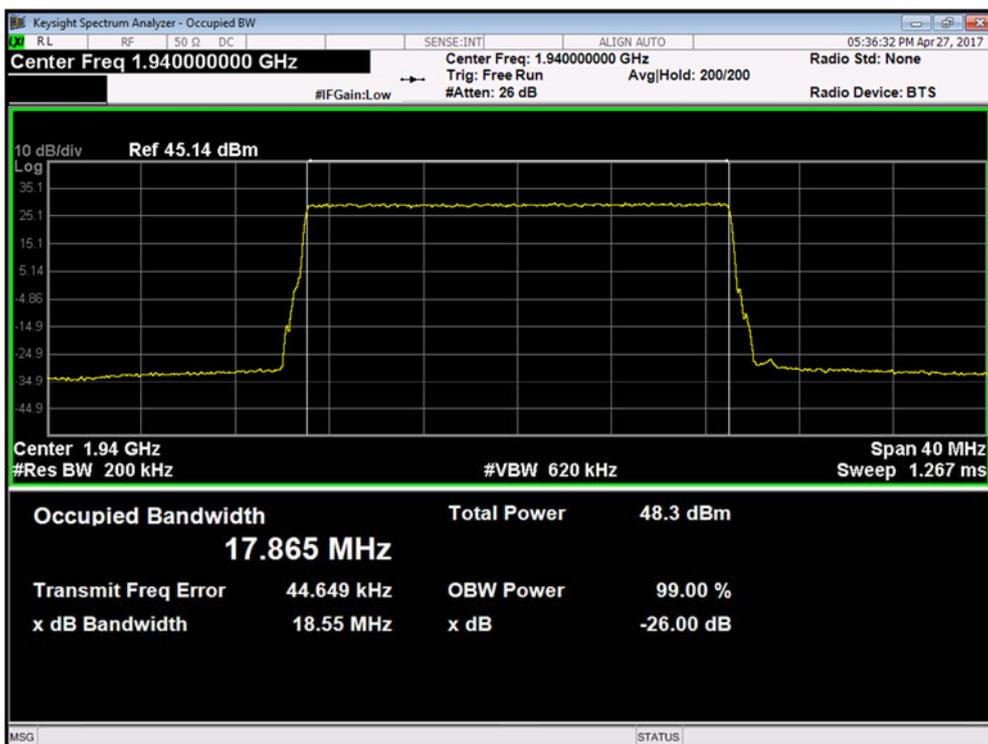


Product Service

Channel Position M - QPSK / Bandwidth 15.0 MHz



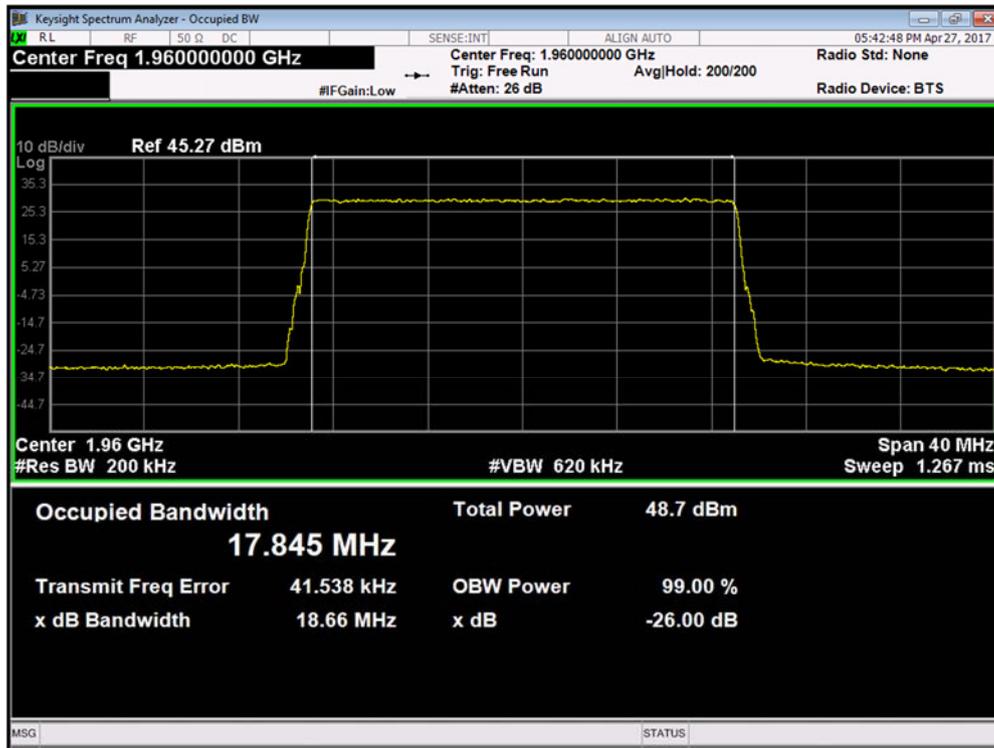
Channel Position B - QPSK / Bandwidth 20.0 MHz



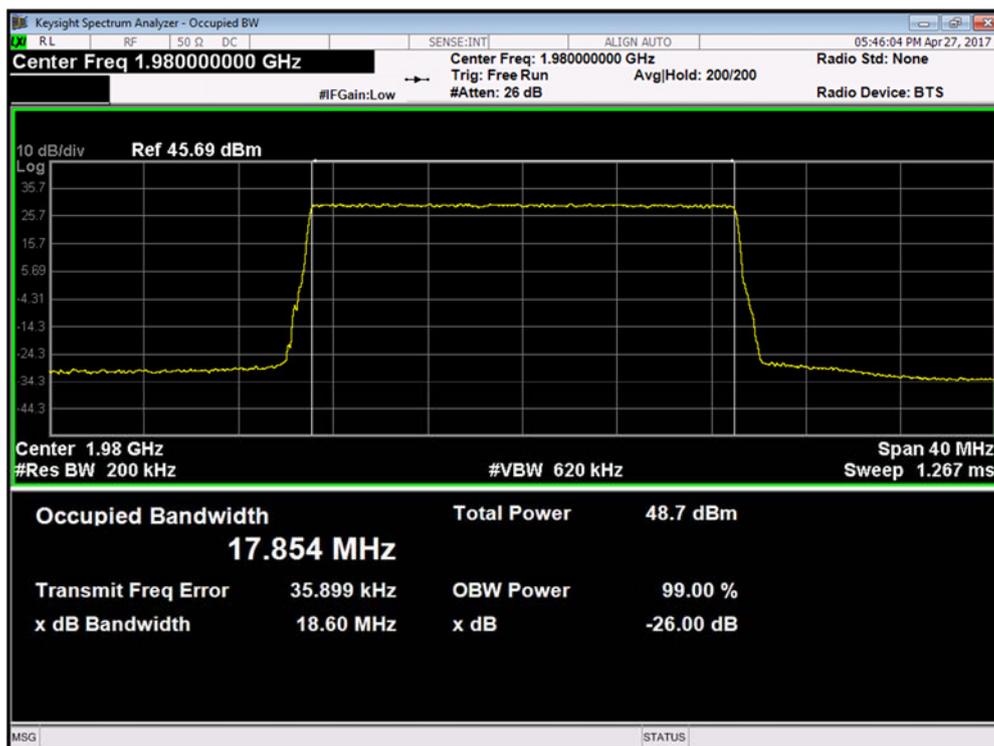


Product Service

### Channel Position M - QPSK / Bandwidth 20.0 MHz



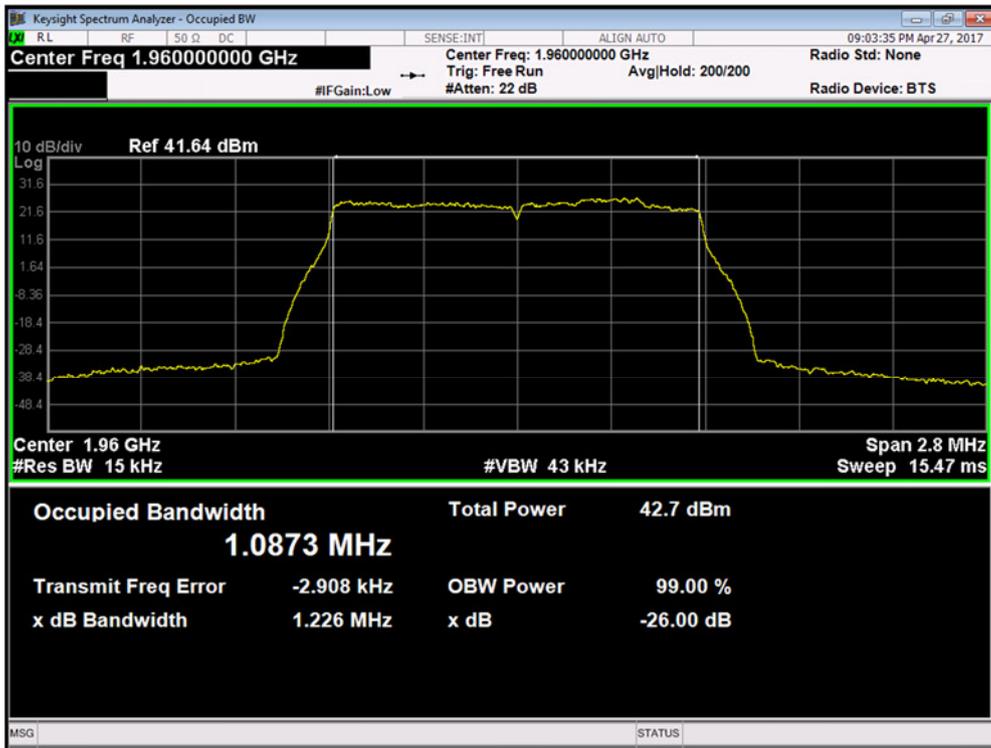
### Channel Position T - QPSK / Bandwidth 20.0 MHz



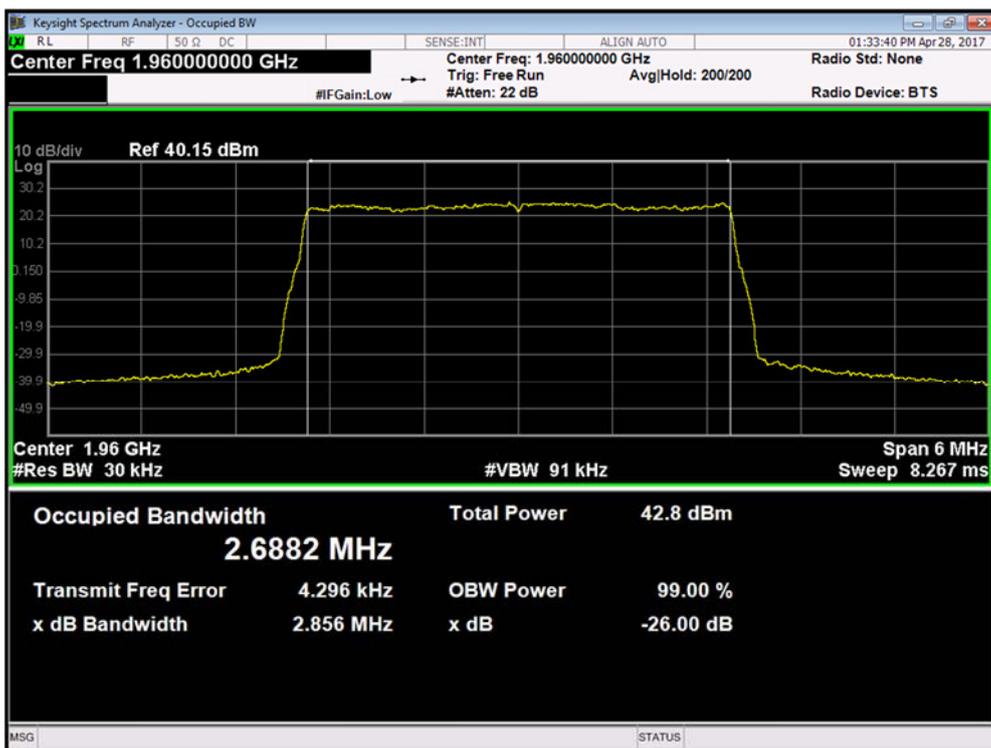


Product Service

Channel Position M - 16QAM / Bandwidth 1.4 MHz



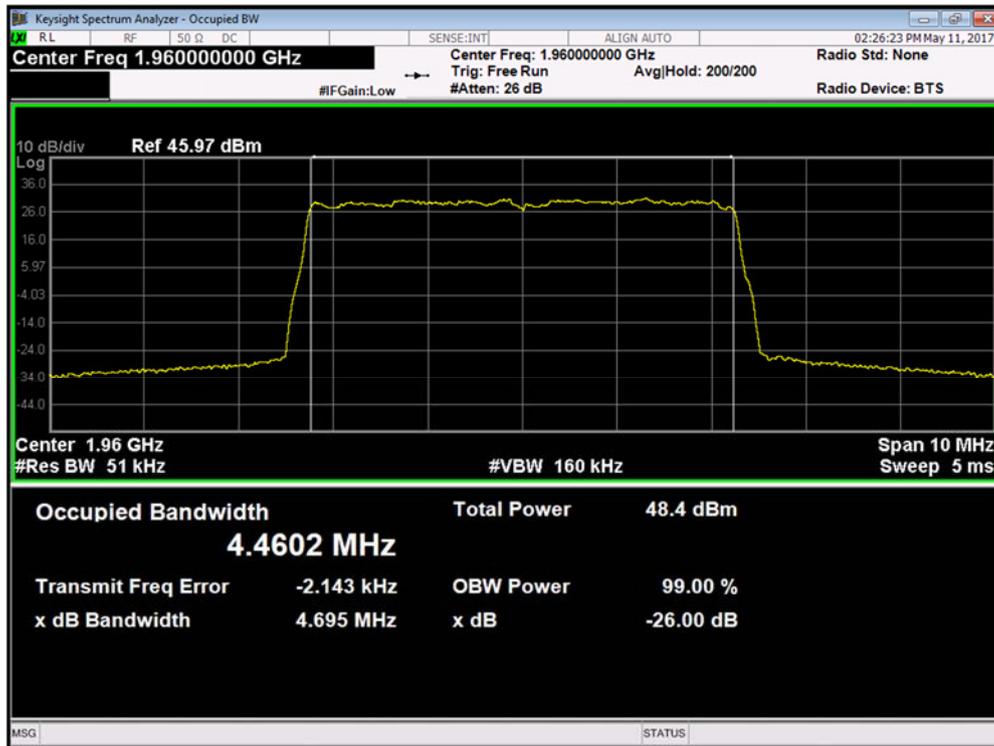
Channel Position M - 16QAM / Bandwidth 3.0 MHz



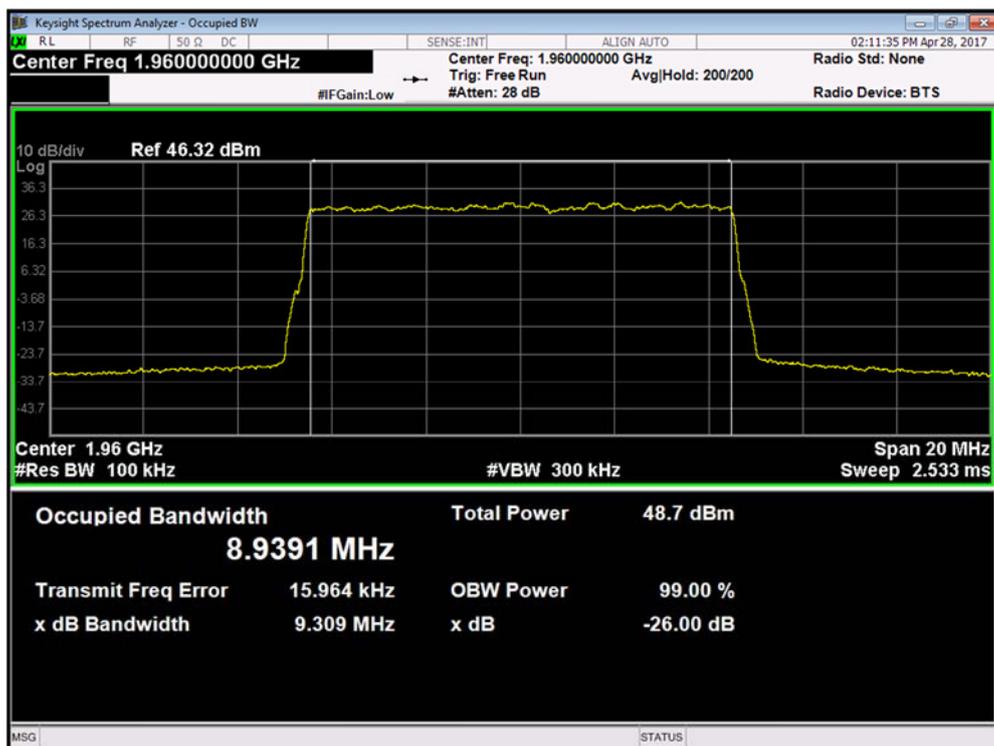


Product Service

### Channel Position M - 16QAM / Bandwidth 5.0 MHz



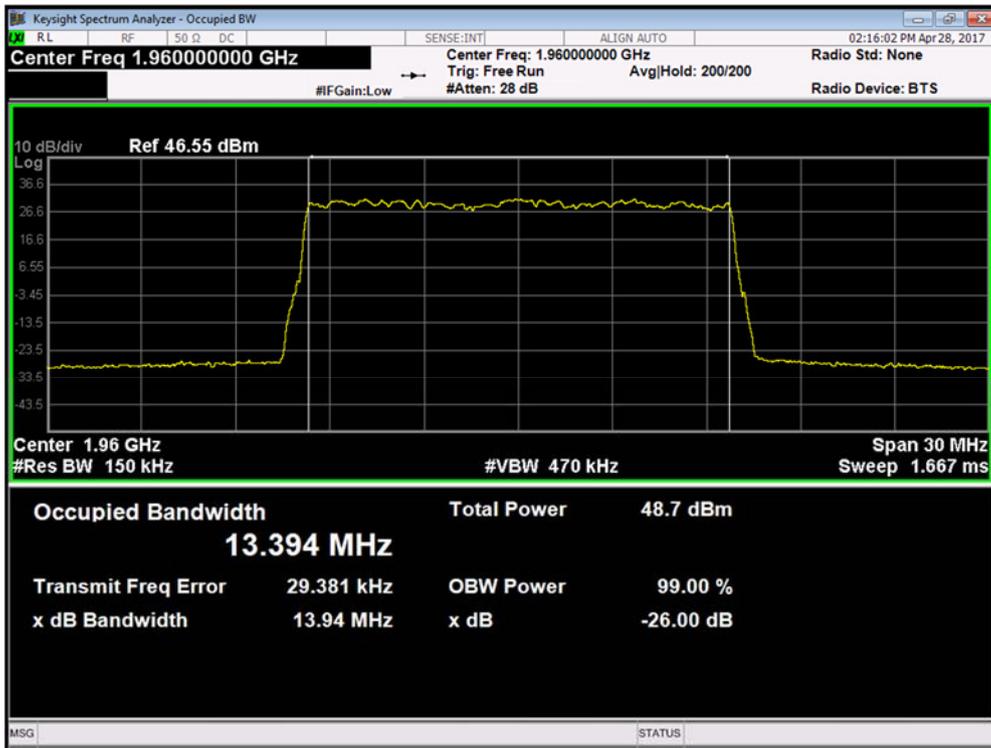
### Channel Position M - 16QAM / Bandwidth 10.0 MHz



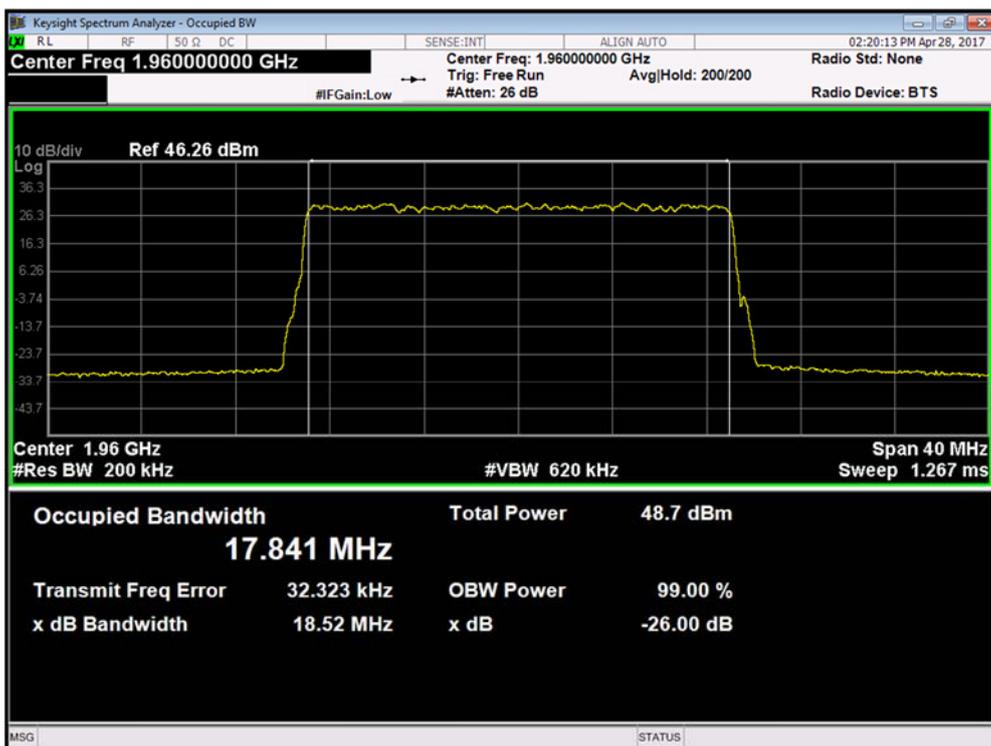


Product Service

Channel Position M - 16QAM / Bandwidth 15.0 MHz



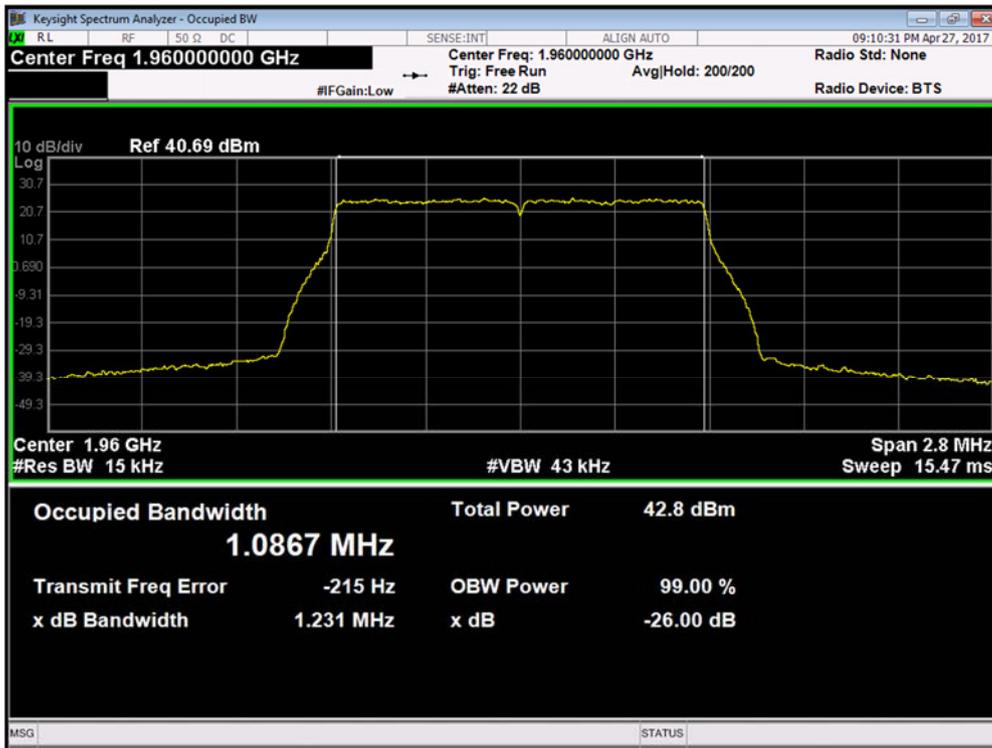
Channel Position M - 16QAM / Bandwidth 20.0 MHz



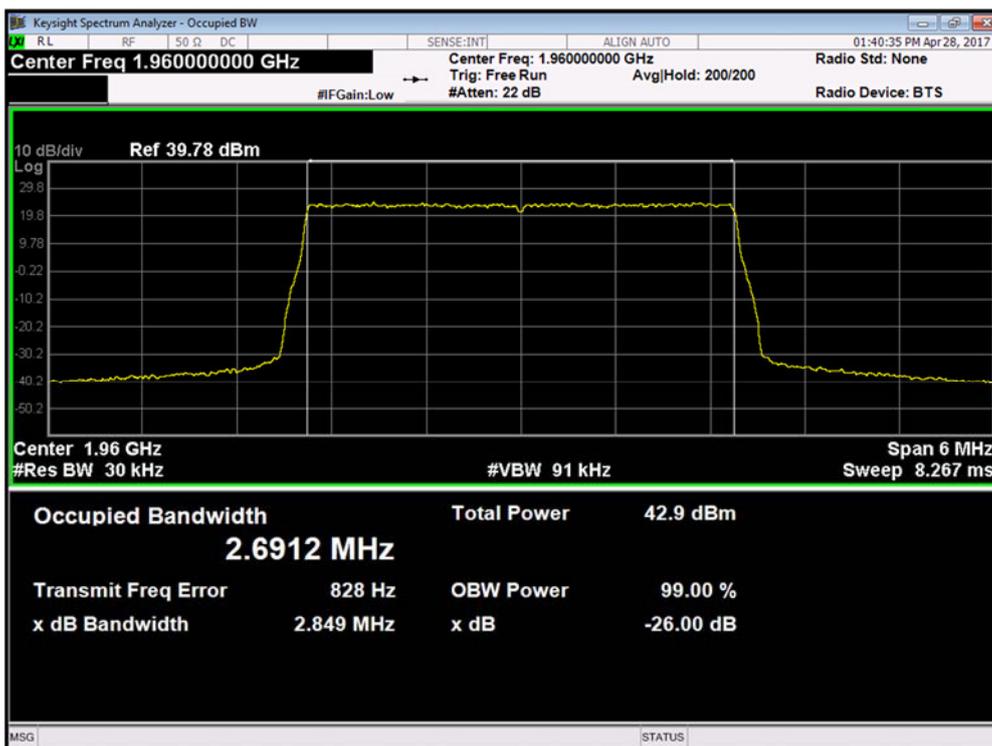


Product Service

Channel Position M - 64QAM / Bandwidth 1.4 MHz



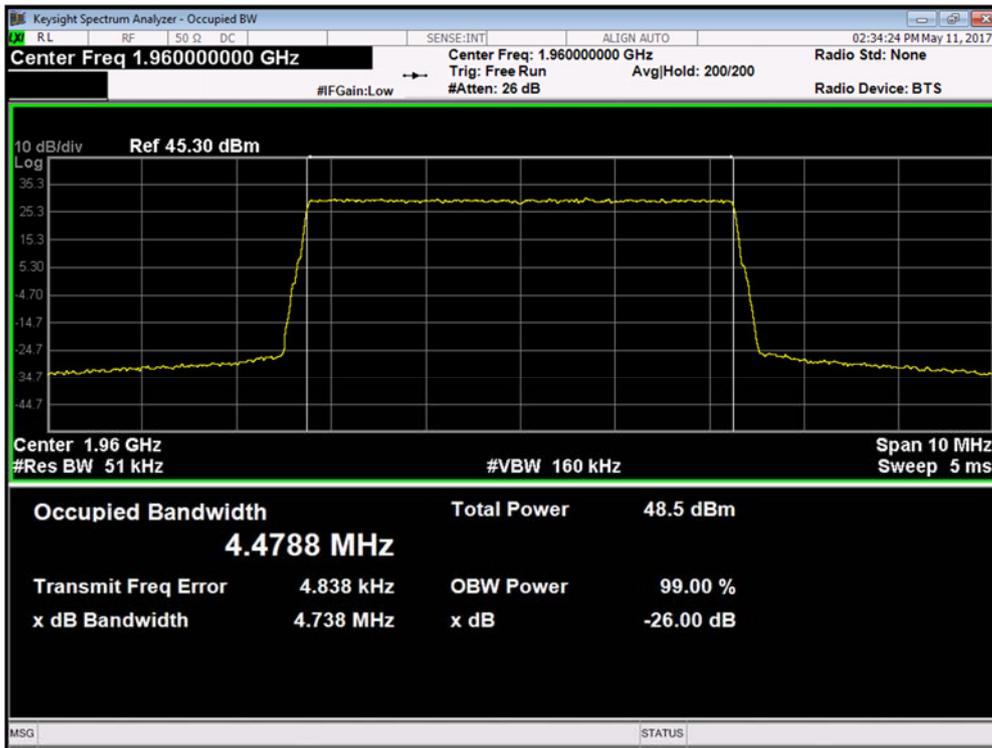
Channel Position M - 64QAM / Bandwidth 3.0 MHz



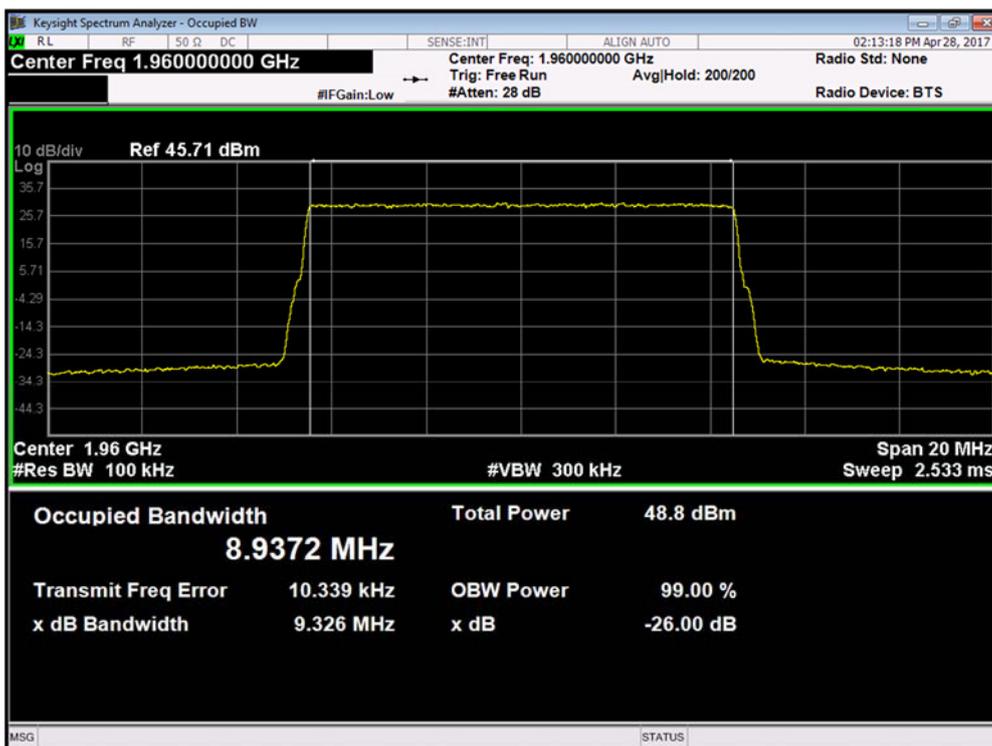


Product Service

### Channel Position M - 64QAM / Bandwidth 5.0 MHz



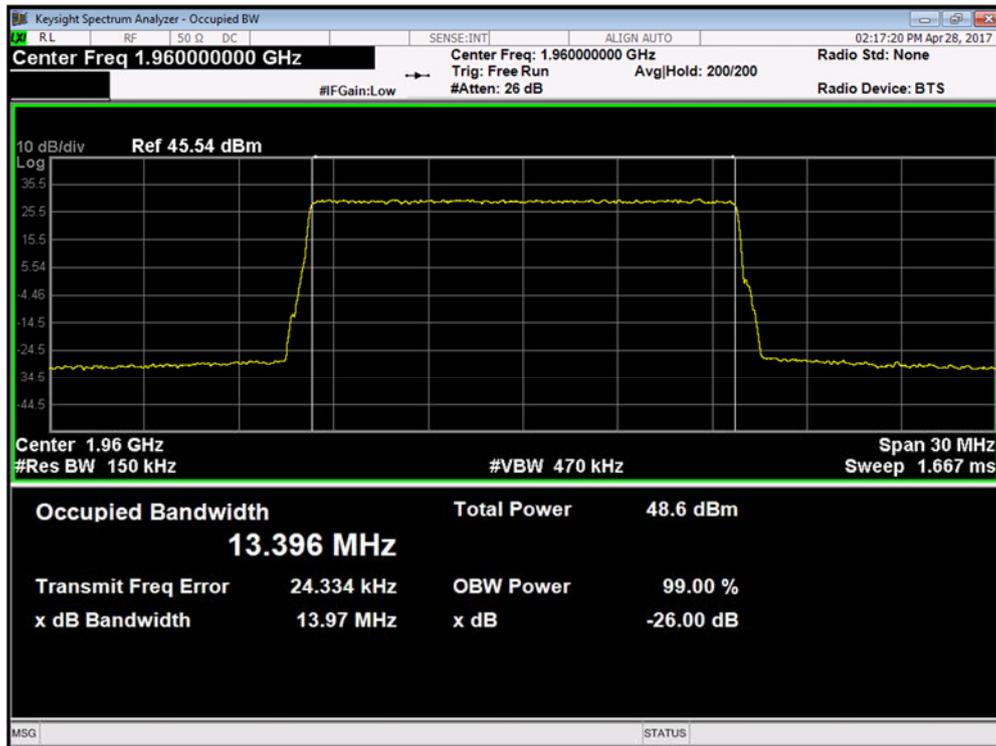
### Channel Position M - 64QAM / Bandwidth 10.0 MHz



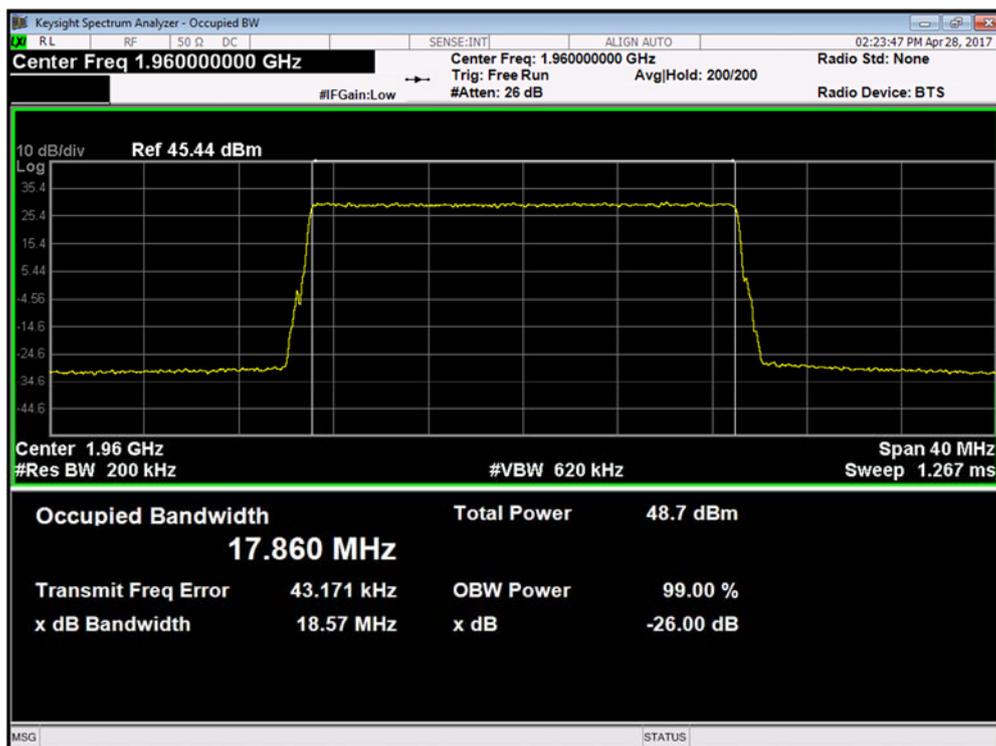


Product Service

Channel Position M - 64QAM / Bandwidth 15.0 MHz



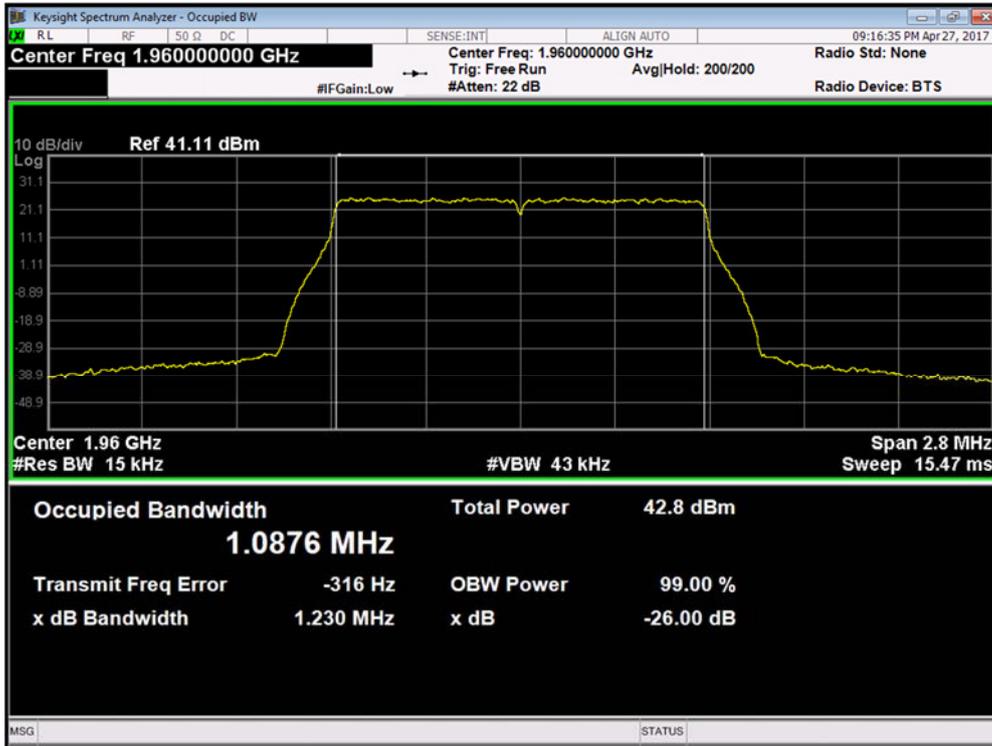
Channel Position M - 64QAM / Bandwidth 20.0 MHz



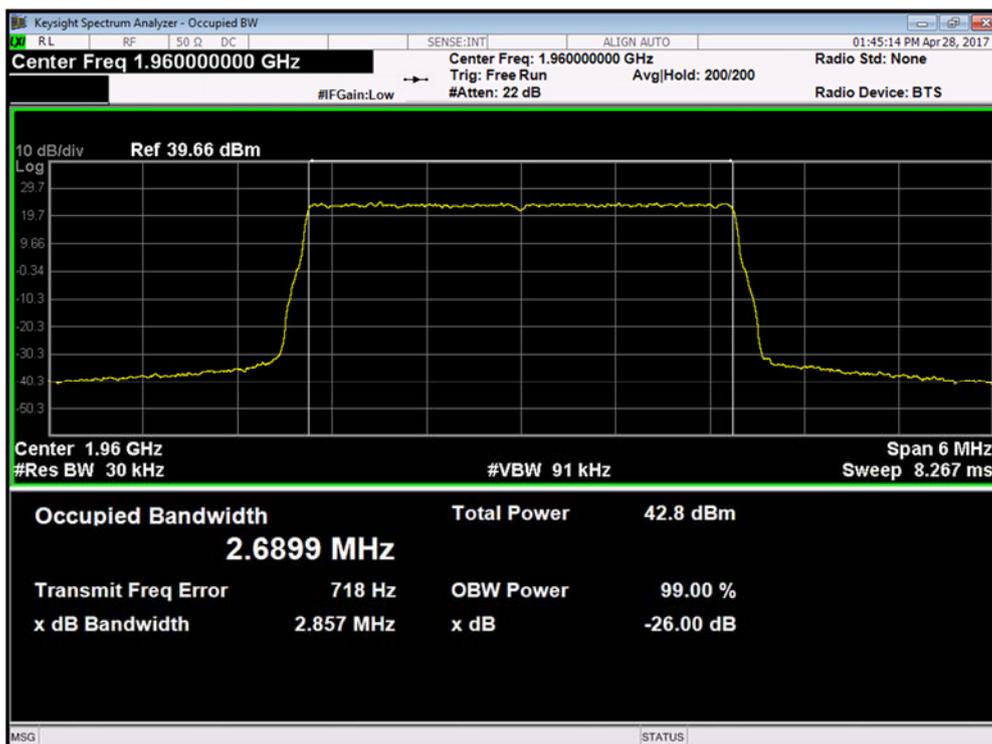


Product Service

Channel Position M - 256QAM / Bandwidth 1.4 MHz



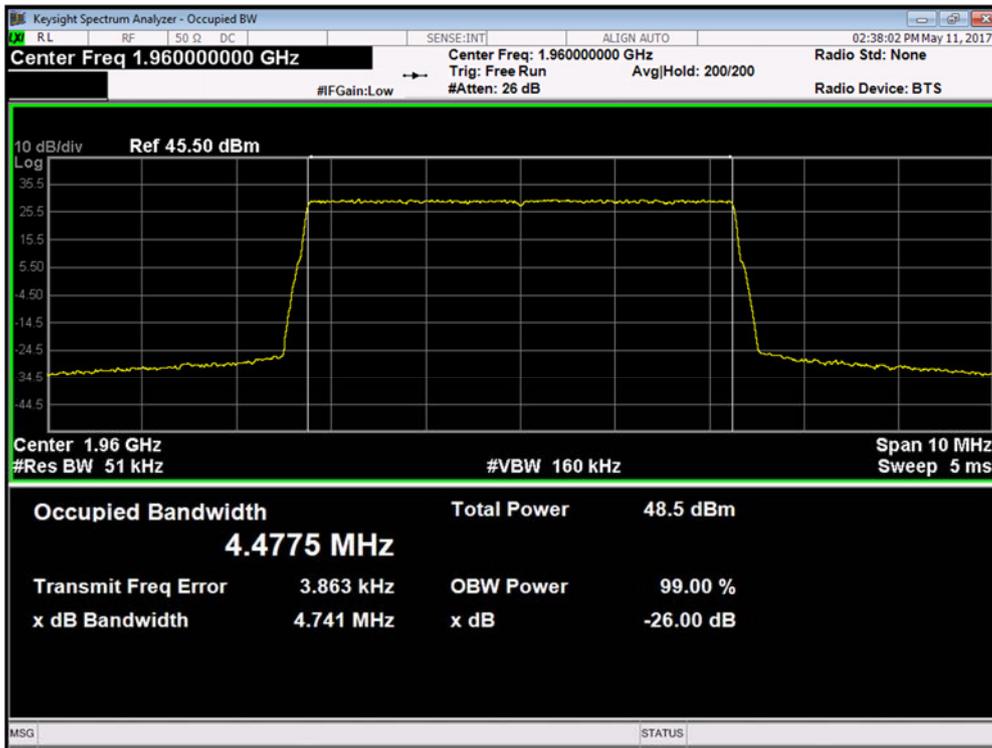
Channel Position M - 256QAM / Bandwidth 3.0 MHz



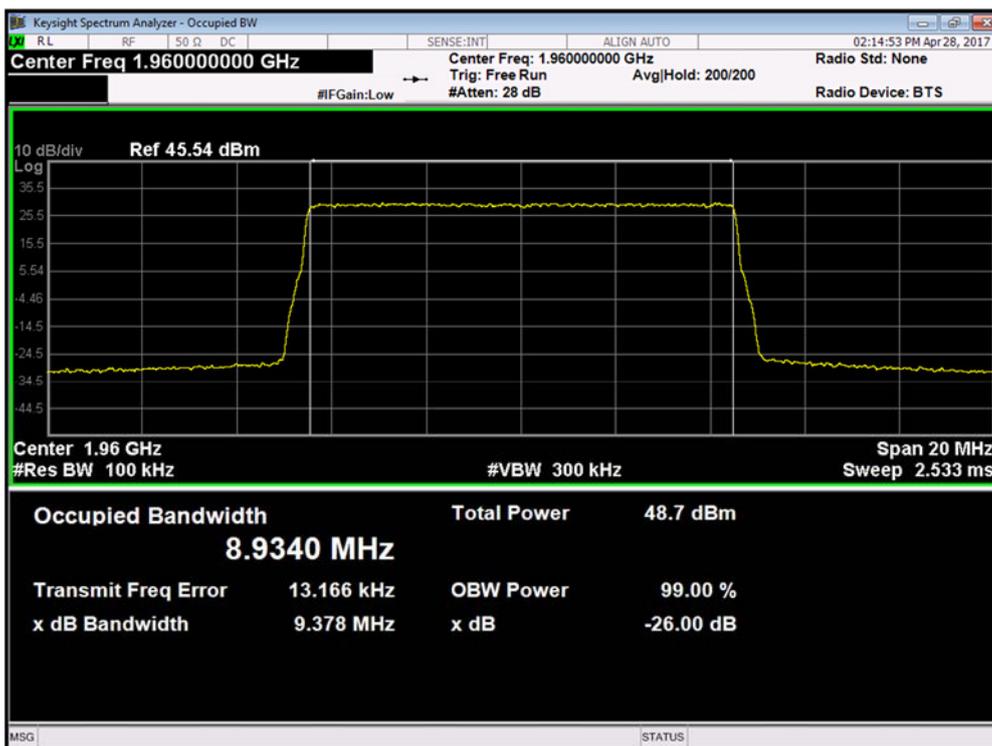


Product Service

Channel Position M - 256QAM / Bandwidth 5.0 MHz



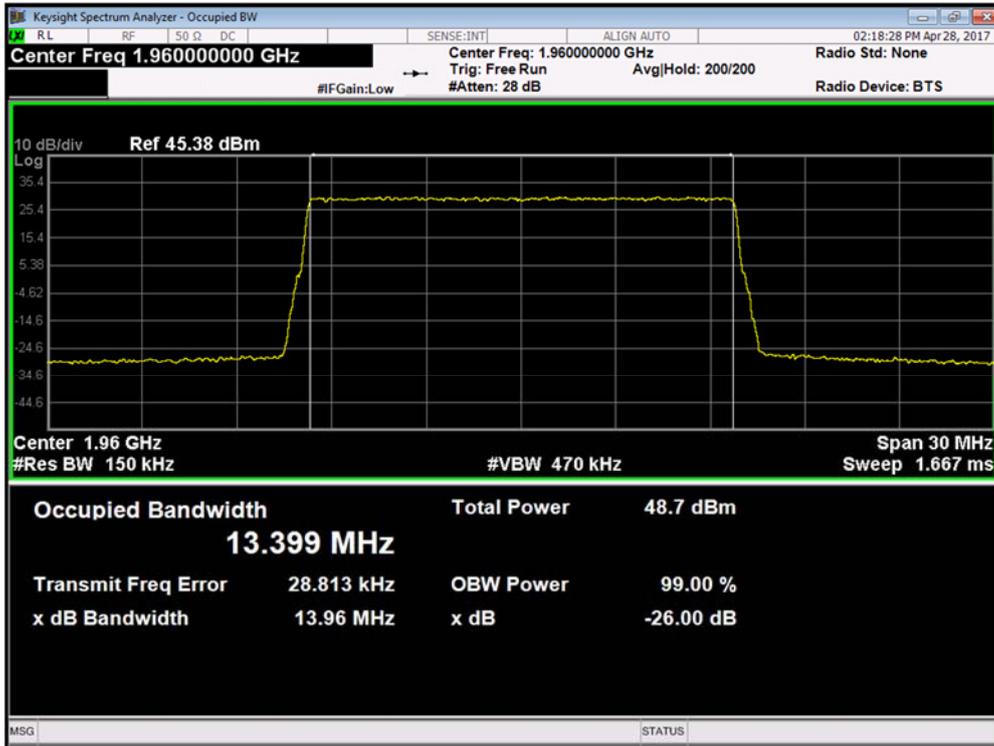
Channel Position M - 256QAM / Bandwidth 10.0 MHz



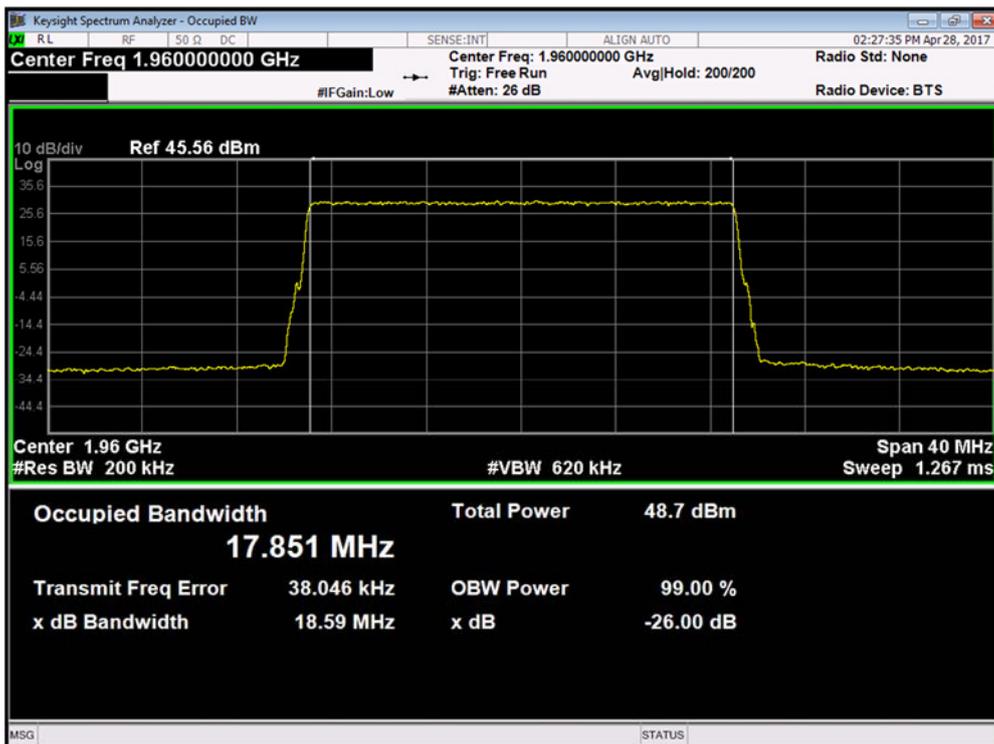


Product Service

Channel Position M - 256QAM / Bandwidth 15.0 MHz



Channel Position M - 256QAM / Bandwidth 20.0 MHz





Product Service

## **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**

Radio 2219 B2, KRC 161 627/1, S/N: D825490218

### **2.3.3 Date of Test and Modification State**

26 April to 04 May 2017 - 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	21.5 - 22.3°C
Relative Humidity	22.0 - 38.0%

### **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 bandwidth 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  $-3.01\text{dB} [10\text{Log}(2)]$  by using the Measure and Add  $10\text{Log}(N)$  dB technique according to FCC KDB 662911 D01 Multiple Transmitter Output v02r01 accounting for simultaneous transmission from antennas port RF A to RF B.

As the FCC rules specify a RBW of 1MHz for measurements of emissions > 1MHz away from the band edges, the limit was adjusted with  $-13.01\text{dB} [10\text{Log}(50/1000)]$  to compensate for the reduce measurement bandwidth 50kHz. For MIMO mode, the limit of  $-29.02\text{dBm}$  was used for emission > 1MHz away from the band edges. For Non-MIMO mode, the limit of  $-26.01\text{dBm}$  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 43.0dBm per port

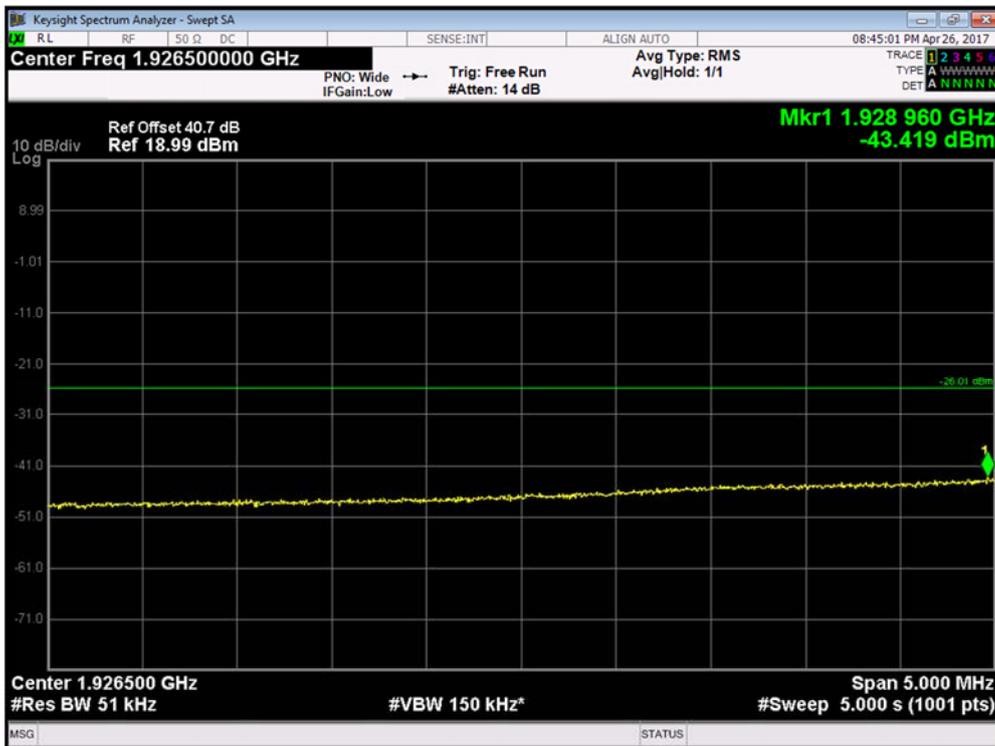
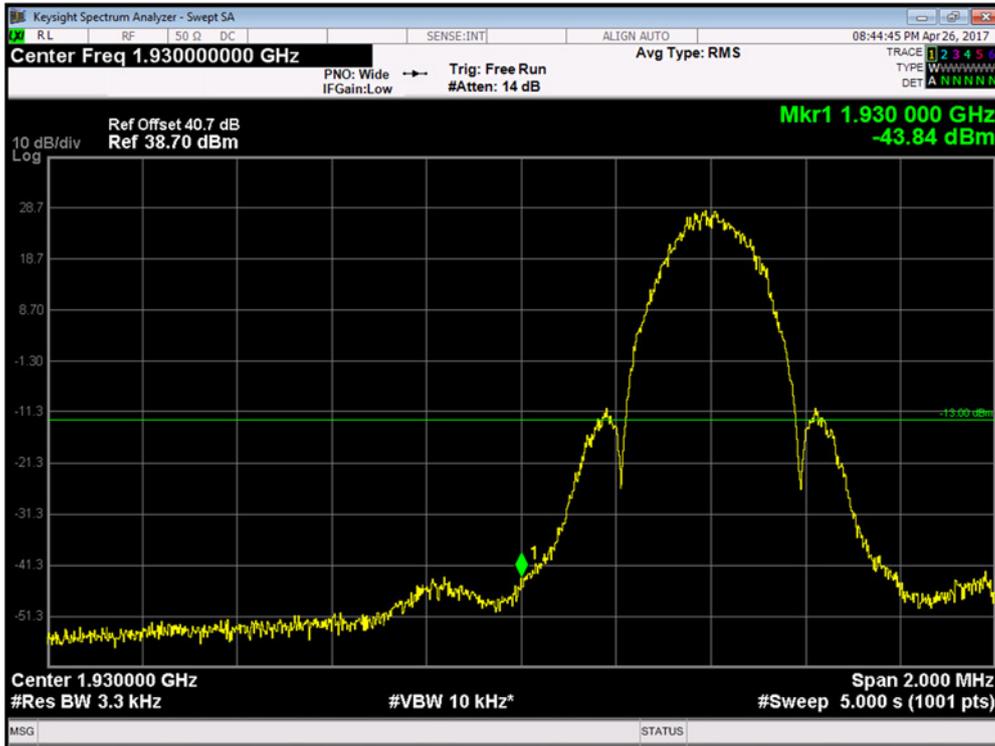
Band Edge Frequency	Channel Bandwidth	Edge Test with modulation GMSK Channel Frequencies	RBW (kHz)	Limit (dBm)
Channel Position B 1930.0 MHz	250 kHz	1930.4MHz	3.3	-13.00
Channel Position T 1990.0 MHz	250 kHz	1989.6MHz	3.3	-13.00

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.



Product Service

### Channel Position B – AQPSK





Product Service

### Channel Position T - AQPSK

