

OCCUPIED BANDWIDTH

TEST DESCRIPTION

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The fundamental emission Occupied Bandwidth was measured using the channels and modes as called out on the following data sheets. The transmit power was set to its default maximum.

RF conducted emissions testing was performed only on one port. The Aircscale Base Transceiver Station Radio Unit Model AVHA antenna ports are essentially electrically identical (the RF power variation between antenna ports is small as shown in this certification testing) and antenna port 1 was selected to perform the testing under this effort as allowed by ANSI C63.26-2015 paragraphs 5.2.5.3, 5.7.2i, and 6.4.

The 26dB emission bandwidth is measured in accordance with section 4 of FCC KDB 971168 D01v03r01 and ANSI C63.26 section 5.4. FCC 2.1049 requires an emission bandwidth measurement. FCC 27.53(l)(1) defines the emission bandwidth to be used as 26 dB down.

The spectrum analyzer settings were as follows:

- RBW is 1% - 5% of the occupied bandwidth
- VBW is $\geq 3\times$ the RBW
- Peak Detector was used
- Trace max hold was used

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FCC 5G Emission Designators for BRS/EBS Band (2496MHz to 2690MHz)					
Channel Bandwidth	Radio Channel	5G-NR: QPSK	5G-NR: 16QAM	5G-NR: 64QAM	5G-NR: 256QAM
10MHz	Low	9M76G7W			
	Mid	9M76G7W	9M64G7W	9M75G7W	9M74G7W
	High	9M80G7W			
15MHz	Low	14M8G7W			
	Mid	14M8G7W	14M7G7W	14M8G7W	14M8G7W
	High	14M8G7W			
20MHz	Low	19M9G7W			
	Mid	19M8G7W	19M8G7W	19M9G7W	19M8G7W
	High	19M9G7W			
30MHz	Low	29M9G7W			
	Mid	30M0G7W	29M9G7W	29M7G7W	29M9G7W
	High	30M0G7W			
40MHz	Low	40M3G7W			
	Mid	40M3G7W	40M4G7W	40M3G7W	40M2G7W
	High	40M3G7W			
50MHz	Low	50M4G7W			
	Mid	50M4G7W	50M3G7W	50M4G7W	50M4G7W
	High	50M3G7W			
60MHz	Low	60M8G7W			
	Mid	60M8G7W	60M8G7W	60M9G7W	61M0G7W
	High	61M0G7W			
70MHz	Low	71M2G7W			
	Mid	71M2G7W	71M1G7W	71M2G7W	71M3G7W
	High	71M3G7W			
80MHz	Low	81M5G7W			
	Mid	81M6G7W	81M3G7W	81M5G7W	81M6G7W
	High	81M5G7W			
90MHz	Low	91M9G7W			
	Mid	92M0G7W	91M8G7W	92M0G7W	92M0G7W
	High	92M0G7W			
100MHz	Low	102MG7W			
	Mid	102MG7W	102MG7W	102MG7W	102MG7W
	High	102MG7W			
Note: FCC emission designators are based on 26dB emission bandwidth measurement data.					

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFQ	2024-03-12	2025-03-12
Generator - Signal	Agilent	N5173B	TIW	2023-08-07	2026-08-07
Block - DC	Fairview Microwave	SD3379	AMM	2024-08-15	2025-08-15

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EUT:	Airscale Base Transceiver Station Radio Unit Model AVHA	Work Order:	NOKI0079
Serial Number:	L1242005329	Date:	2024-10-04
Customer:	Nokia Solutions and Networks	Temperature:	21.3°C
Attendees:	Mitch Hill, David Le	Relative Humidity:	43.9%
Customer Project:	None	Bar. Pressure (PMSL):	1016 mbar
Tested By:	Jarrold Brenden	Job Site:	PT14
Power:	54VDC	Configuration:	NOKI0079-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27:2024	ANSI C63.26:2015

COMMENTS

All losses in the measurement path were accounted for in the reference level offset; attenuators, filters, cables, and DC blocks. BRS Band n41 carriers were enabled at maximum power levels.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

Tested By

TEST RESULTS

		Value 99% (MHz)	Value 26dB (MHz)	Limit	Result
Port 1					
10 MHz Channel Bandwidth					
QPSK Modulation					
Low Channel, 2501.01 MHz		8.651 MHz	9.756 MHz	Within Band	Pass
Mid Channel, 2592.99 MHz		8.681 MHz	9.76 MHz	Within Band	Pass
High Channel, 2685.00 MHz		8.677 MHz	9.796 MHz	Within Band	Pass
16QAM Modulation					
Mid Channel, 2592.99 MHz		8.584 MHz	9.639 MHz	Within Band	Pass
64QAM Modulation					
Mid Channel, 2592.99 MHz		8.664 MHz	9.746 MHz	Within Band	Pass
256QAM Modulation					
Mid Channel, 2592.99 MHz		8.672 MHz	9.743 MHz	Within Band	Pass
15 MHz Channel Bandwidth					
QPSK Modulation					
Low Channel, 2503.50 MHz		13.629 MHz	14.827 MHz	Within Band	Pass
Mid Channel, 2592.99 MHz		13.663 MHz	14.753 MHz	Within Band	Pass
High Channel, 2682.48 MHz		13.63 MHz	14.832 MHz	Within Band	Pass
16QAM Modulation					
Mid Channel, 2592.99 MHz		13.555 MHz	14.739 MHz	Within Band	Pass
64QAM Modulation					

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	Value 99% (MHz)	Value 26dB (MHz)	Limit	Result
Mid Channel, 2592.99 MHz	13.658 MHz	14.815 MHz	Within Band	Pass
256QAM Modulation				
Mid Channel, 2592.99 MHz	13.648 MHz	14.797 MHz	Within Band	Pass
20 MHz Channel Bandwidth				
QPSK Modulation				
Low Channel, 2506.02 MHz	18.346 MHz	19.88 MHz	Within Band	Pass
Mid Channel, 2592.99 MHz	18.355 MHz	19.813 MHz	Within Band	Pass
High Channel, 2679.99 MHz	18.321 MHz	19.854 MHz	Within Band	Pass
16QAM Modulation				
Mid Channel, 2592.99 MHz	18.404 MHz	19.844 MHz	Within Band	Pass
64QAM Modulation				
Mid Channel, 2592.99 MHz	18.33 MHz	19.852 MHz	Within Band	Pass
256QAM Modulation				
Mid Channel, 2592.99 MHz	18.337 MHz	19.832 MHz	Within Band	Pass
30 MHz Channel Bandwidth				
QPSK Modulation				
Low Channel, 2511.00 MHz	27.925 MHz	29.949 MHz	Within Band	Pass
Mid Channel, 2592.99 MHz	27.972 MHz	29.975 MHz	Within Band	Pass
High Channel, 2674.98 MHz	27.96 MHz	29.999 MHz	Within Band	Pass
16QAM Modulation				
Mid Channel, 2592.99 MHz	28.061 MHz	29.914 MHz	Within Band	Pass
64QAM Modulation				
Mid Channel, 2592.99 MHz	27.996 MHz	29.742 MHz	Within Band	Pass
256QAM Modulation				
Mid Channel, 2592.99 MHz	27.904 MHz	29.873 MHz	Within Band	Pass
40 MHz Channel Bandwidth				
QPSK Modulation				
Low Channel, 2516.01 MHz	37.929 MHz	40.301 MHz	Within Band	Pass
Mid Channel, 2592.99 MHz	37.938 MHz	40.338 MHz	Within Band	Pass
High Channel, 2670.00 MHz	37.926 MHz	40.287 MHz	Within Band	Pass
16QAM Modulation				
Mid Channel, 2592.99 MHz	38.107 MHz	40.37 MHz	Within Band	Pass
64QAM Modulation				
Mid Channel, 2592.99 MHz	37.962 MHz	40.258 MHz	Within Band	Pass
256QAM Modulation				
Mid Channel, 2592.99 MHz	37.968 MHz	40.247 MHz	Within Band	Pass
50 MHz Channel Bandwidth				
QPSK Modulation				
Low Channel, 2521.02 MHz	47.49 MHz	50.359 MHz	Within Band	Pass
Mid Channel, 2592.99 MHz	47.56 MHz	50.37 MHz	Within Band	Pass
High Channel, 2664.99 MHz	47.537 MHz	50.302 MHz	Within Band	Pass
16QAM Modulation				
Mid Channel, 2592.99 MHz	47.761 MHz	50.33 MHz	Within Band	Pass
64QAM Modulation				
Mid Channel, 2592.99 MHz	47.612 MHz	50.417 MHz	Within Band	Pass

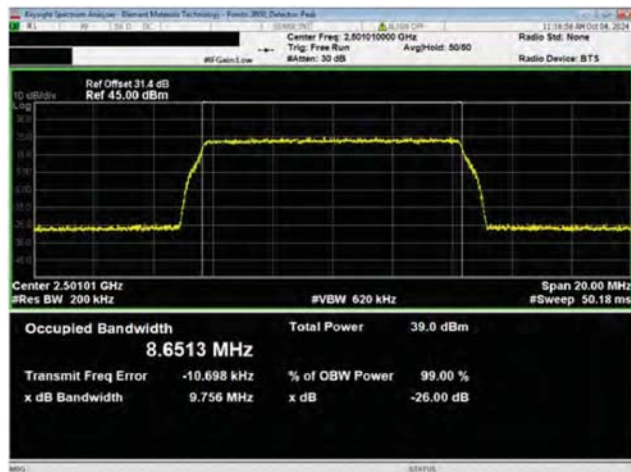
OCCUPIED BANDWIDTH

	Value 99% (MHz)	Value 26dB (MHz)	Limit	Result
256QAM Modulation				
Mid Channel, 2592.99 MHz	47.58 MHz	50.421 MHz	Within Band	Pass
60 MHz Channel Bandwidth				
QPSK Modulation				
Low Channel, 2526.00 MHz	57.887 MHz	60.836 MHz	Within Band	Pass
Mid Channel, 2592.99 MHz	57.921 MHz	60.78 MHz	Within Band	Pass
High Channel, 2659.98 MHz	57.878 MHz	60.979 MHz	Within Band	Pass
16QAM Modulation				
Mid Channel, 2592.99 MHz	58.052 MHz	60.828 MHz	Within Band	Pass
64QAM Modulation				
Mid Channel, 2592.99 MHz	57.791 MHz	60.852 MHz	Within Band	Pass
256QAM Modulation				
Mid Channel, 2592.99 MHz	57.897 MHz	61.009 MHz	Within Band	Pass
70 MHz Channel Bandwidth				
QPSK Modulation				
Low Channel, 2531.01 MHz	67.453 MHz	71.158 MHz	Within Band	Pass
Mid Channel, 2592.99 MHz	67.557 MHz	71.161 MHz	Within Band	Pass
High Channel, 2655.00 MHz	67.483 MHz	71.274 MHz	Within Band	Pass
16QAM Modulation				
Mid Channel, 2592.99 MHz	67.868 MHz	71.144 MHz	Within Band	Pass
64QAM Modulation				
Mid Channel, 2592.99 MHz	67.563 MHz	71.218 MHz	Within Band	Pass
256QAM Modulation				
Mid Channel, 2592.99 MHz	67.609 MHz	71.265 MHz	Within Band	Pass
80 MHz Channel Bandwidth				
QPSK Modulation				
Low Channel, 2536.02 MHz	77.502 MHz	81.477 MHz	Within Band	Pass
Mid Channel, 2592.99 MHz	77.585 MHz	81.567 MHz	Within Band	Pass
High Channel, 2649.99 MHz	77.513 MHz	81.45 MHz	Within Band	Pass
16QAM Modulation				
Mid Channel, 2592.99 MHz	77.868 MHz	81.297 MHz	Within Band	Pass
64QAM Modulation				
Mid Channel, 2592.99 MHz	77.5 MHz	81.504 MHz	Within Band	Pass
256QAM Modulation				
Mid Channel, 2592.99 MHz	77.507 MHz	81.6 MHz	Within Band	Pass
90 MHz Channel Bandwidth				
QPSK Modulation				
Low Channel, 2541.00 MHz	87.47 MHz	91.947 MHz	Within Band	Pass
Mid Channel, 2592.99 MHz	87.491 MHz	92.011 MHz	Within Band	Pass
High Channel, 2644.98 MHz	87.469 MHz	91.988 MHz	Within Band	Pass
16QAM Modulation				
Mid Channel, 2592.99 MHz	87.918 MHz	91.829 MHz	Within Band	Pass
64QAM Modulation				
Mid Channel, 2592.99 MHz	87.552 MHz	92.029 MHz	Within Band	Pass
256QAM Modulation				

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	Value 99% (MHz)	Value 26dB (MHz)	Limit	Result
Mid Channel, 2592.99 MHz	87.572 MHz	91.959 MHz	Within Band	Pass
100 MHz Channel Bandwidth				
QPSK Modulation				
Low Channel, 2546.01 MHz	97.446 MHz	102.394 MHz	Within Band	Pass
Mid Channel, 2592.99 MHz	97.577 MHz	102.403 MHz	Within Band	Pass
High Channel, 2640.00 MHz	97.502 MHz	102.456 MHz	Within Band	Pass
16QAM Modulation				
Mid Channel, 2592.99 MHz	97.569 MHz	102.331 MHz	Within Band	Pass
64QAM Modulation				
Mid Channel, 2592.99 MHz	97.666 MHz	101.863 MHz	Within Band	Pass
256QAM Modulation				
Mid Channel, 2592.99 MHz	97.601 MHz	102.37 MHz	Within Band	Pass

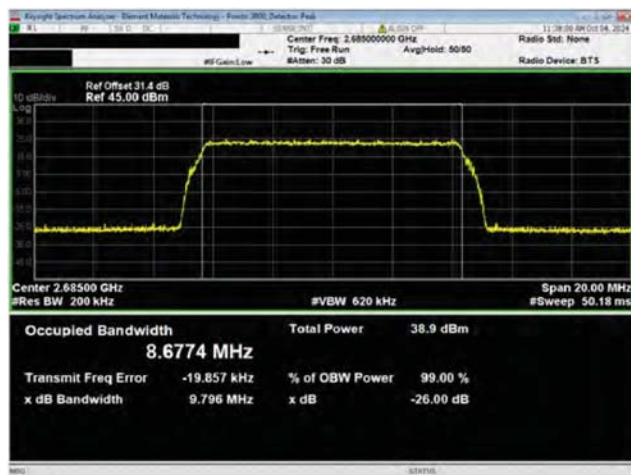
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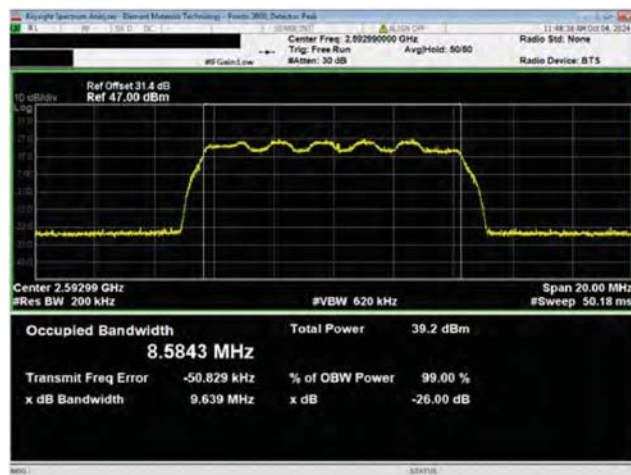
Port 1
10 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2501.01 MHz



Port 1
10 MHz Channel Bandwidth
QPSK Modulation
Mid Channel, 2592.99 MHz



Port 1
10 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2685.00 MHz



Port 1
10 MHz Channel Bandwidth
16QAM Modulation
Mid Channel, 2592.99 MHz

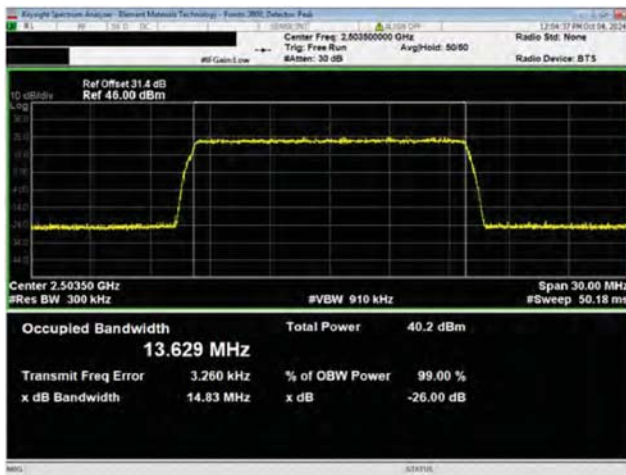
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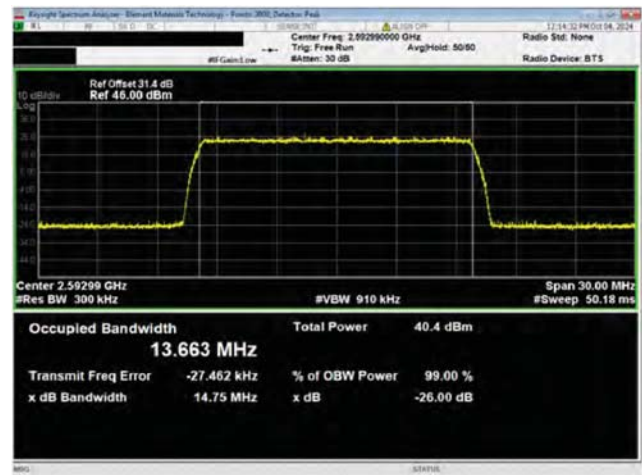
Port 1
10 MHz Channel Bandwidth
64QAM Modulation
Mid Channel, 2592.99 MHz



Port 1
10 MHz Channel Bandwidth
256QAM Modulation
Mid Channel, 2592.99 MHz

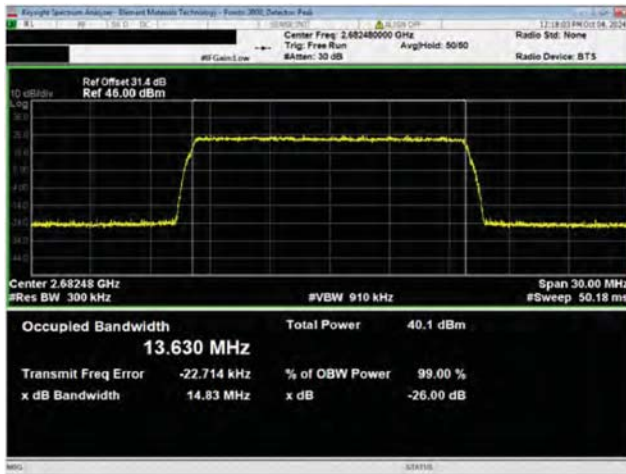


Port 1
15 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2503.50 MHz

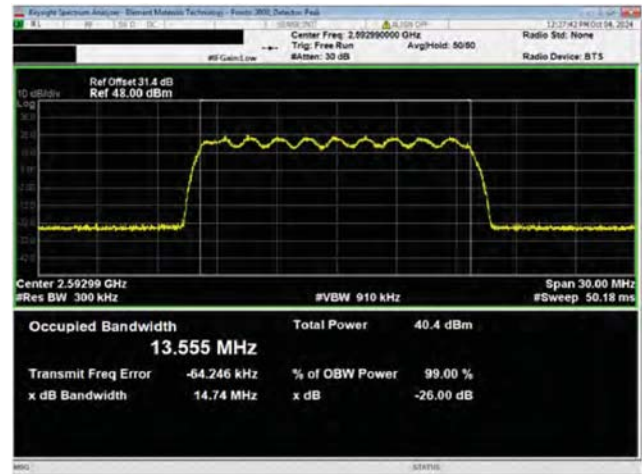


Port 1
15 MHz Channel Bandwidth
QPSK Modulation
Mid Channel, 2592.99 MHz

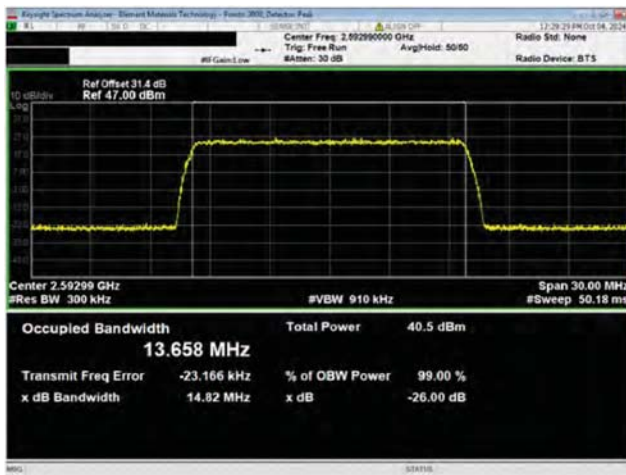
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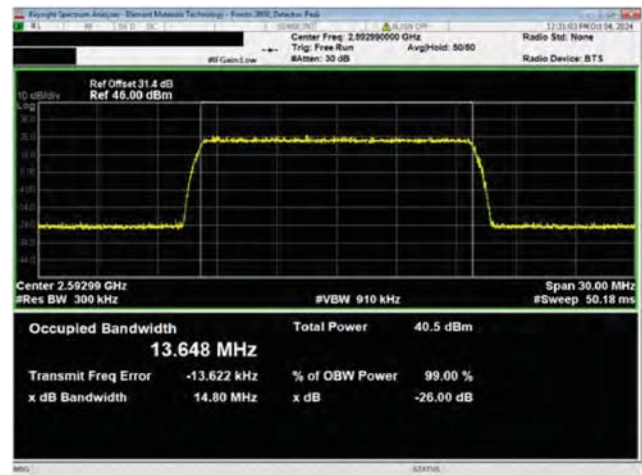
Port 1
15 MHz Channel Bandwidth
QPSK Modulation
High Ch, 2682.48 MHz



Port 1
15 MHz Channel Bandwidth
16QAM Modulation
Mid Channel, 2592.99 MHz

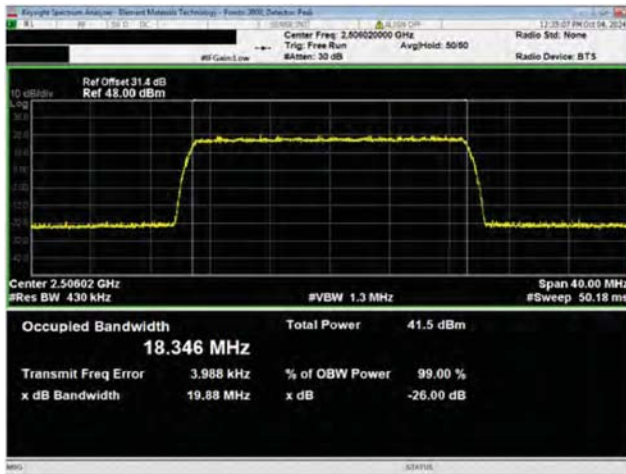


Port 1
15 MHz Channel Bandwidth
64QAM Modulation
Mid Channel, 2592.99 MHz

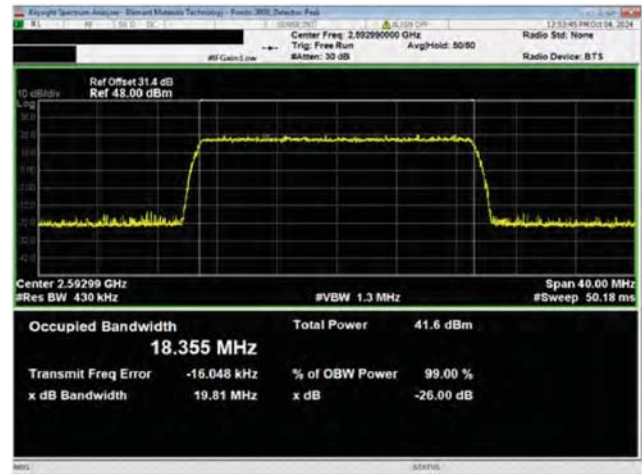


Port 1
15 MHz Channel Bandwidth
256QAM Modulation
Mid Channel, 2592.99 MHz

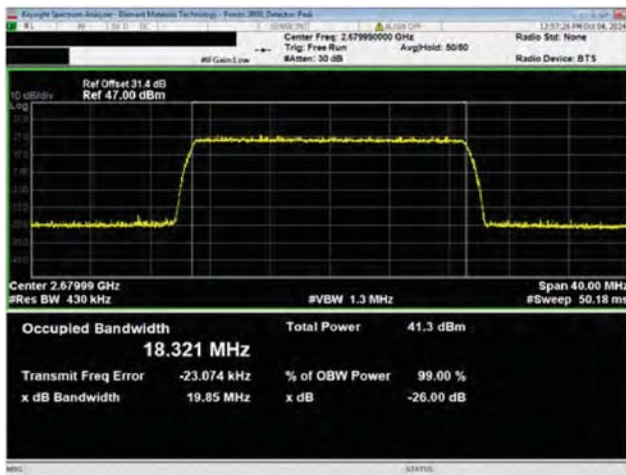
OCCUPIED BANDWIDTH



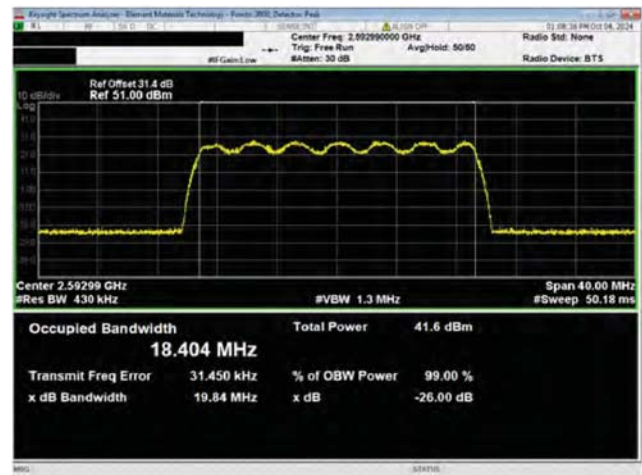
Port 1
20 MHz Channel Bandwidth
QPSK Modulation
Low Ch, 2506.02 MHz



Port 1
20 MHz Channel Bandwidth
QPSK Modulation
Mid Channel, 2592.99 MHz

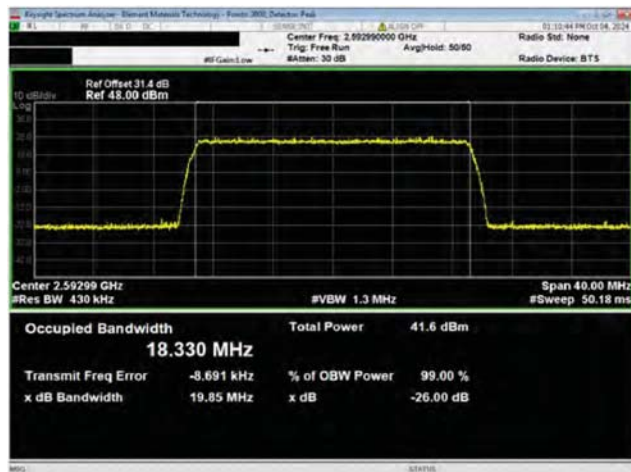


Port 1
20 MHz Channel Bandwidth
QPSK Modulation
High Ch, 2679.99 MHz

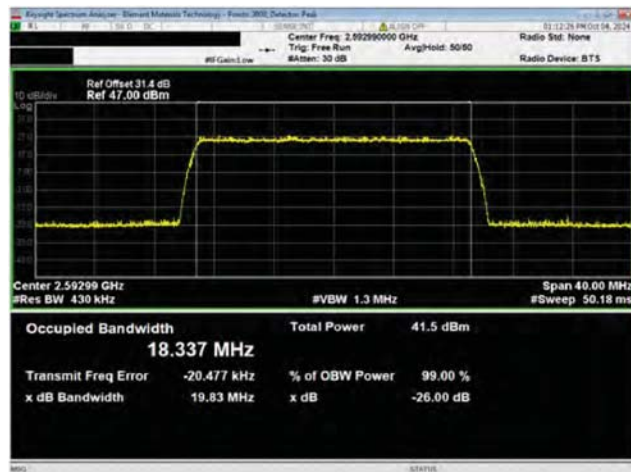


Port 1
20 MHz Channel Bandwidth
16QAM Modulation
Mid Channel, 2592.99 MHz

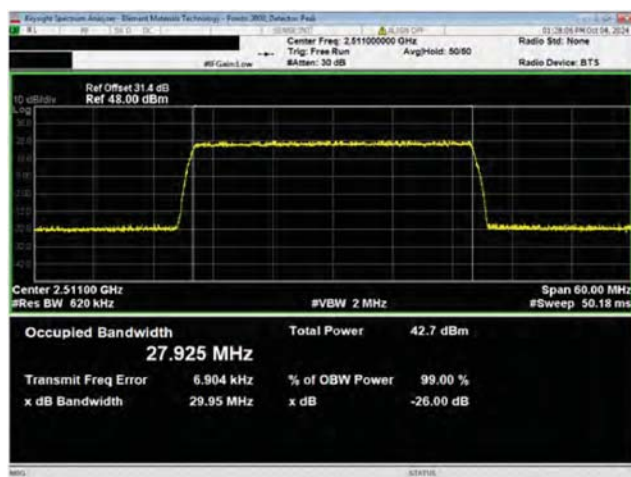
OCCUPIED BANDWIDTH



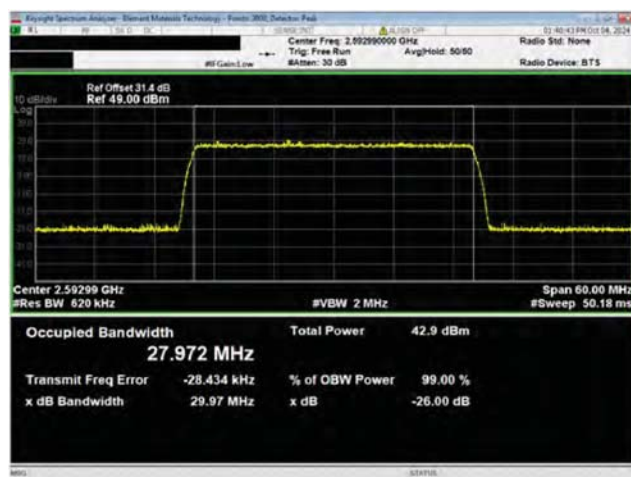
Port 1
20 MHz Channel Bandwidth
64QAM Modulation
Mid Channel, 2592.99 MHz



Port 1
20 MHz Channel Bandwidth
256QAM Modulation
Mid Channel, 2592.99 MHz

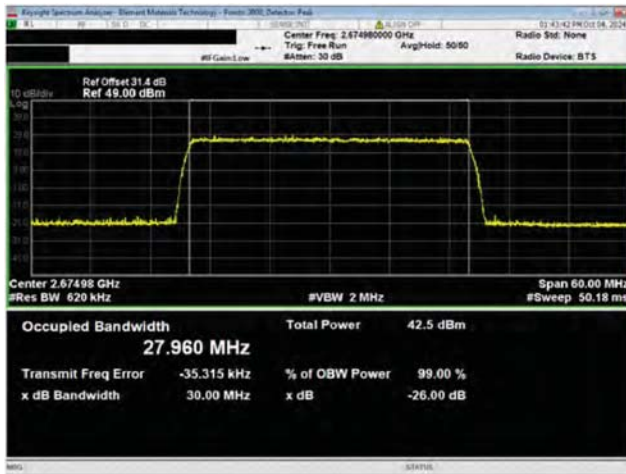


Port 1
30 MHz Channel Bandwidth
QPSK Modulation
Low Ch, 2511.00 MHz

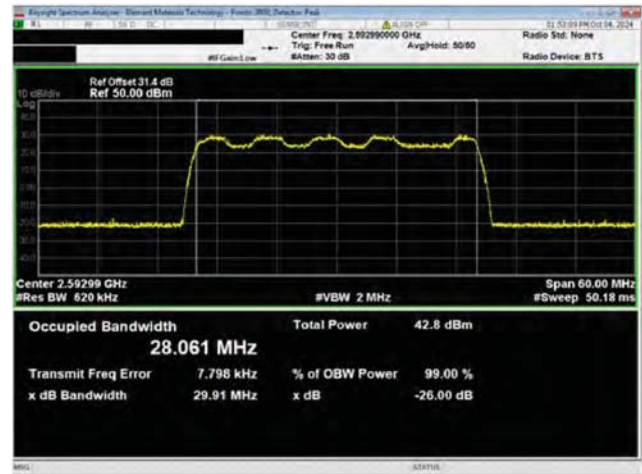


Port 1
30 MHz Channel Bandwidth
QPSK Modulation
Mid Channel, 2592.99 MHz

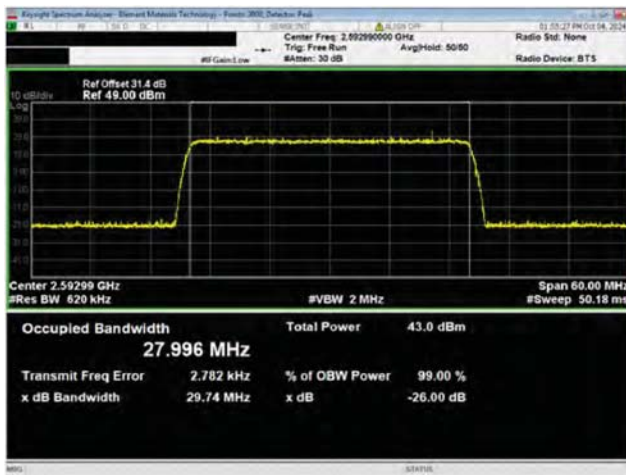
OCCUPIED BANDWIDTH



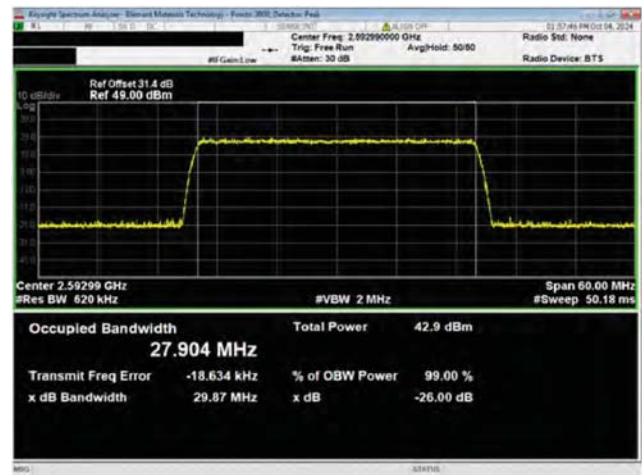
Port 1
30 MHz Channel Bandwidth
QPSK Modulation
High Ch, 2674.98 MHz



Port 1
30 MHz Channel Bandwidth
16QAM Modulation
Mid Channel, 2592.99 MHz

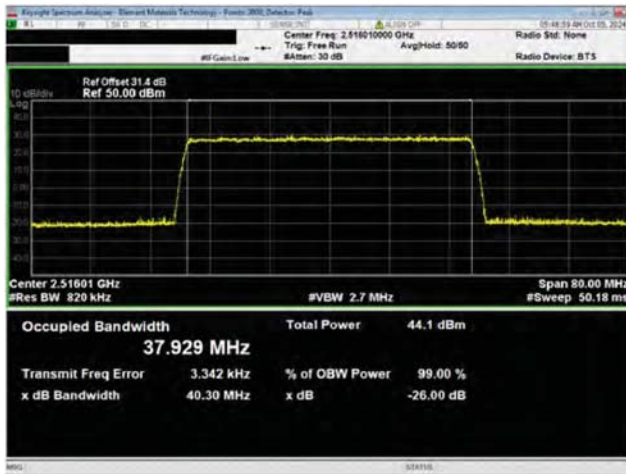


Port 1
30 MHz Channel Bandwidth
64QAM Modulation
Mid Channel, 2592.99 MHz

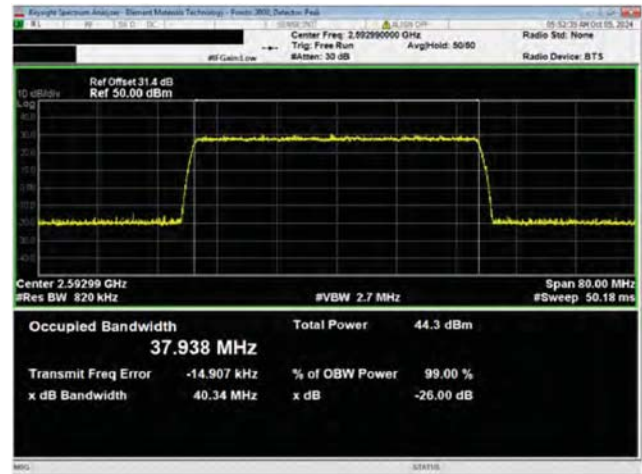


Port 1
30 MHz Channel Bandwidth
256QAM Modulation
Mid Channel, 2592.99 MHz

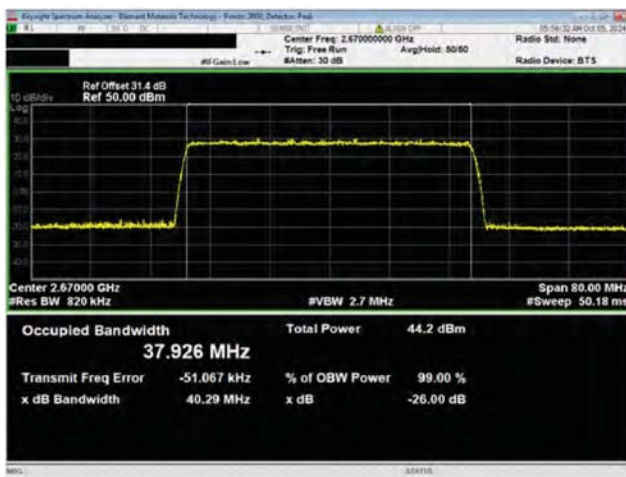
OCCUPIED BANDWIDTH



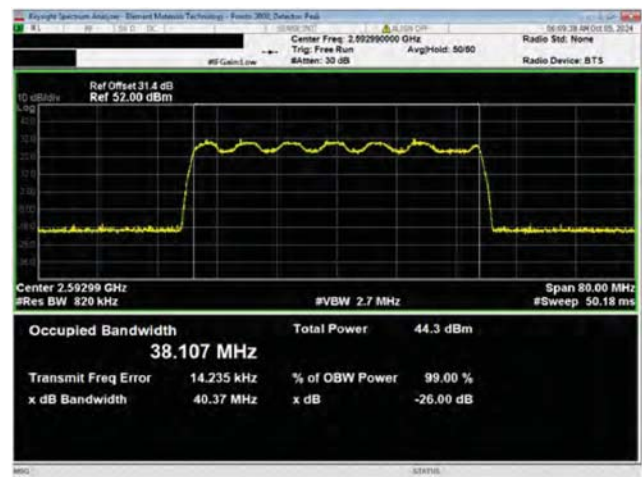
Port 1
40 MHz Channel Bandwidth
QPSK Modulation
Low Ch, 2516.01 MHz



Port 1
40 MHz Channel Bandwidth
QPSK Modulation
Mid Channel, 2592.99 MHz

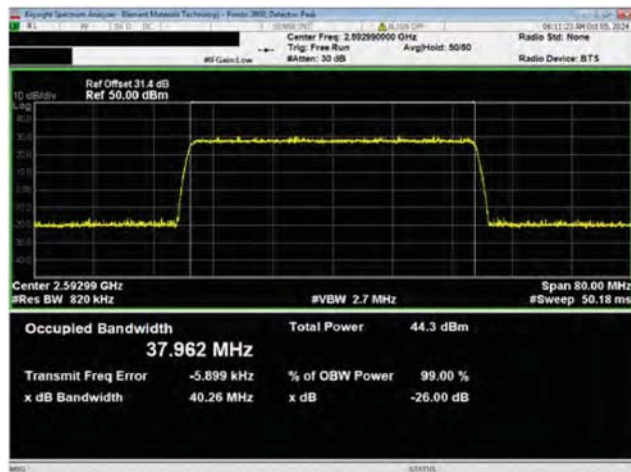


Port 1
40 MHz Channel Bandwidth
QPSK Modulation
High Ch, 2670.00 MHz

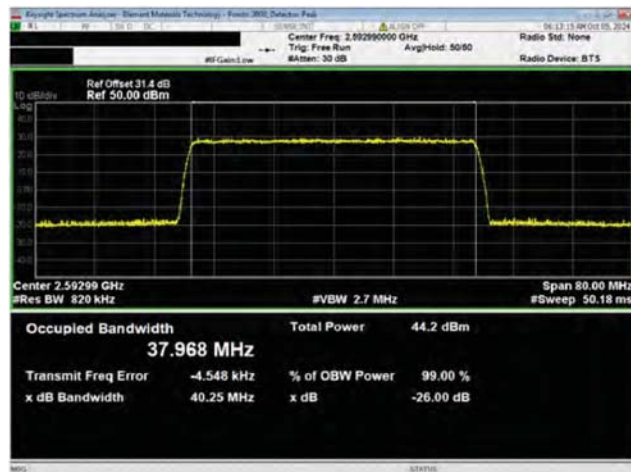


Port 1
40 MHz Channel Bandwidth
16QAM Modulation
Mid Channel, 2592.99 MHz

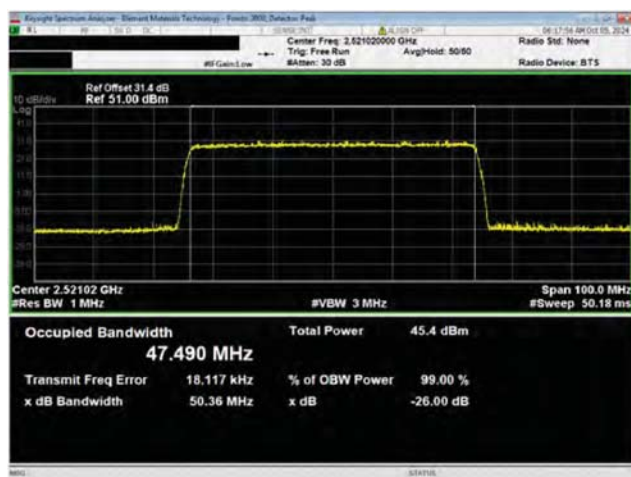
OCCUPIED BANDWIDTH



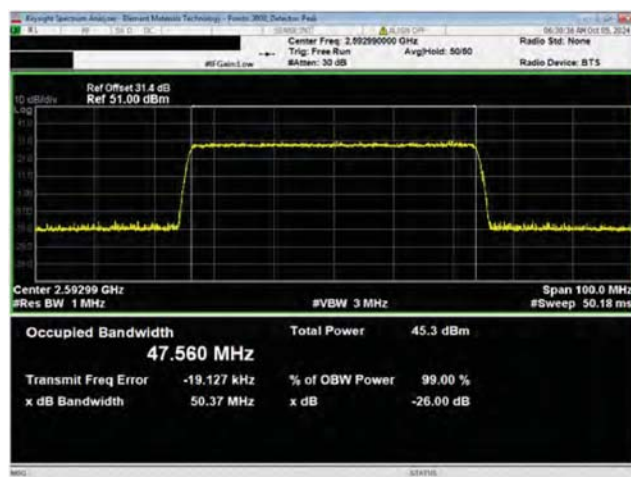
Port 1
40 MHz Channel Bandwidth
64QAM Modulation
Mid Channel, 2592.99 MHz



Port 1
40 MHz Channel Bandwidth
256QAM Modulation
Mid Channel, 2592.99 MHz

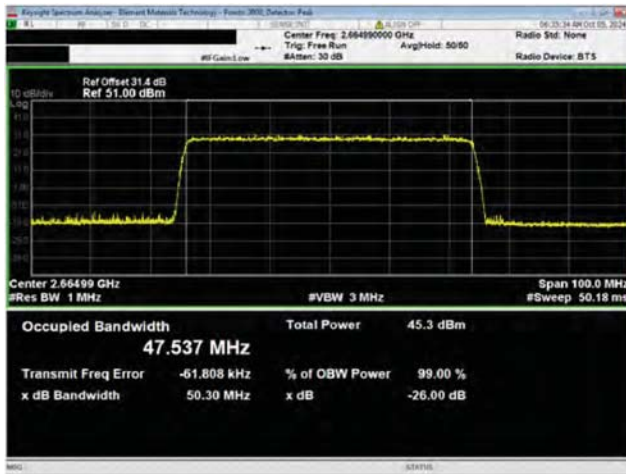


Port 1
50 MHz Channel Bandwidth
QPSK Modulation
Low Ch, 2521.02 MHz

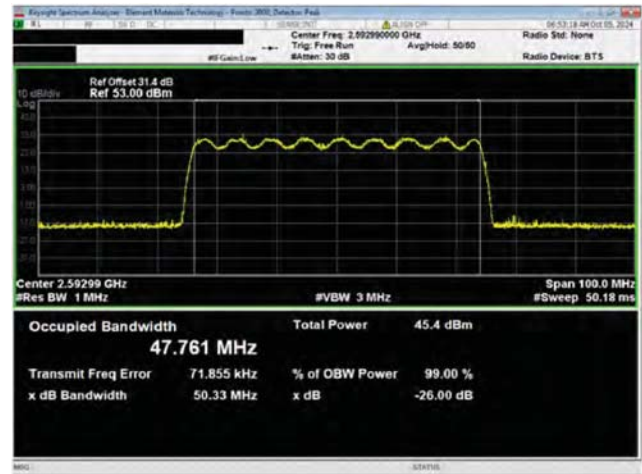


Port 1
50 MHz Channel Bandwidth
QPSK Modulation
Mid Channel, 2592.99 MHz

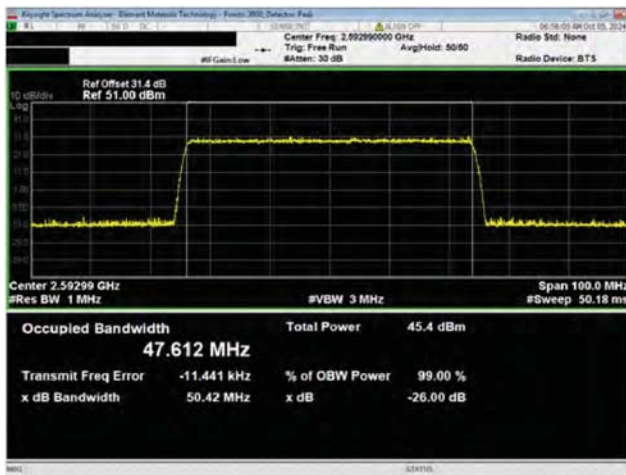
OCCUPIED BANDWIDTH



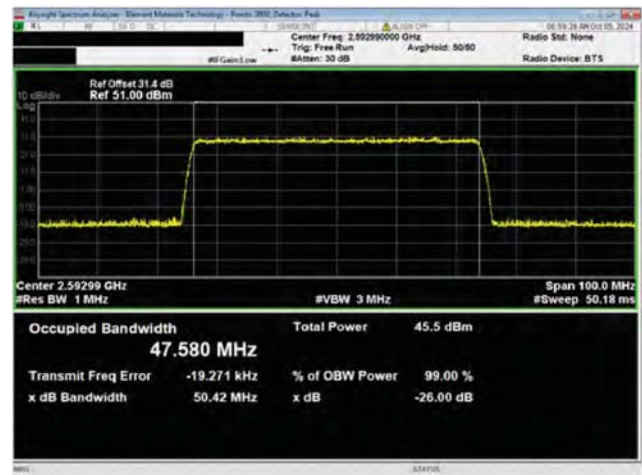
Port 1
50 MHz Channel Bandwidth
QPSK Modulation
High Ch, 2664.99 MHz



Port 1
50 MHz Channel Bandwidth
16QAM Modulation
Mid Channel, 2592.99 MHz

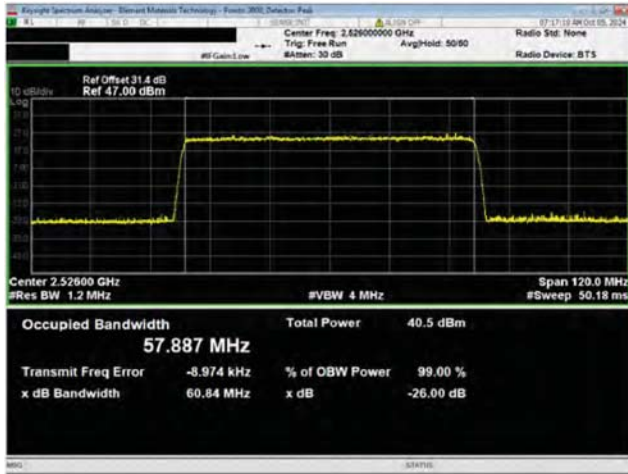


Port 1
50 MHz Channel Bandwidth
64QAM Modulation
Mid Channel, 2592.99 MHz

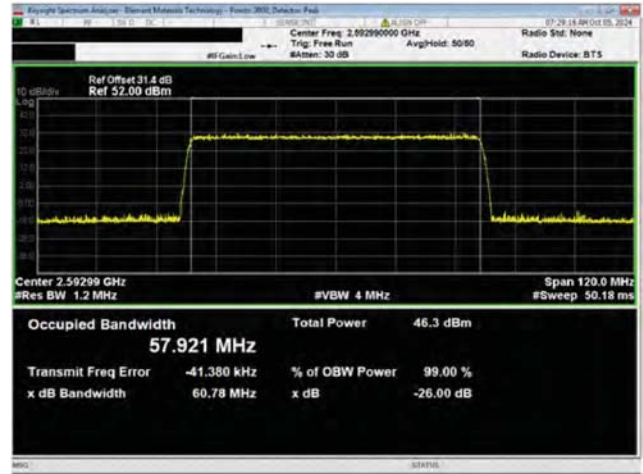


Port 1
50 MHz Channel Bandwidth
256QAM Modulation
Mid Channel, 2592.99 MHz

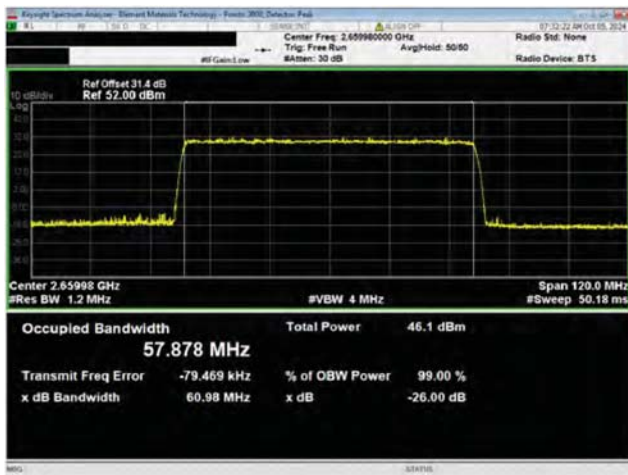
OCCUPIED BANDWIDTH



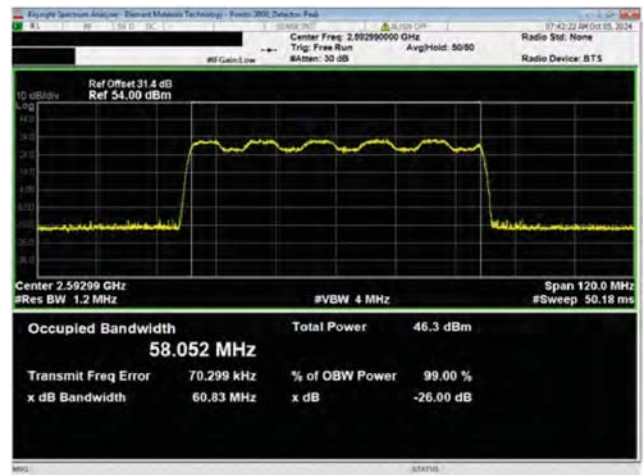
Port 1
60 MHz Channel Bandwidth
QPSK Modulation
Low Ch, 2526.00 MHz



Port 1
60 MHz Channel Bandwidth
QPSK Modulation
Mid Channel, 2592.99 MHz



Port 1
60 MHz Channel Bandwidth
QPSK Modulation
High Ch, 2659.98 MHz

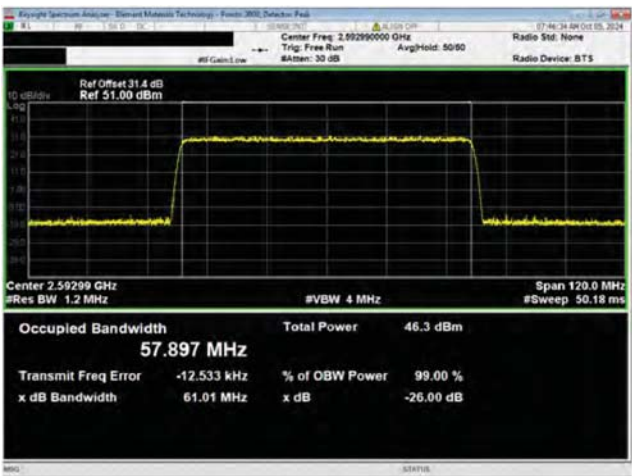


Port 1
60 MHz Channel Bandwidth
16QAM Modulation
Mid Channel, 2592.99 MHz

OCCUPIED BANDWIDTH



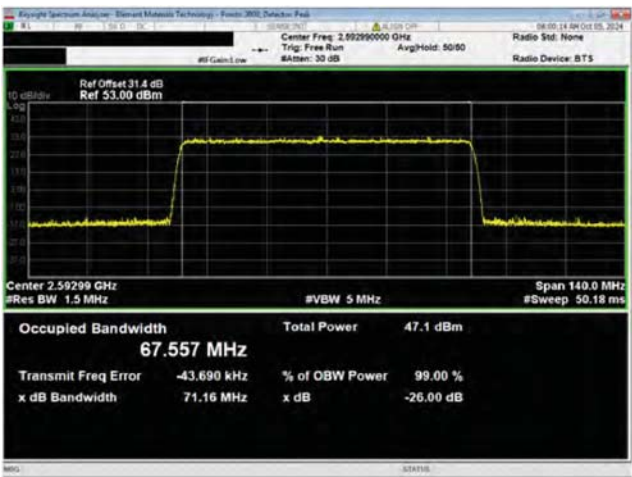
Port 1
60 MHz Channel Bandwidth
64QAM Modulation
Mid Channel, 2592.99 MHz



Port 1
60 MHz Channel Bandwidth
256QAM Modulation
Mid Channel, 2592.99 MHz

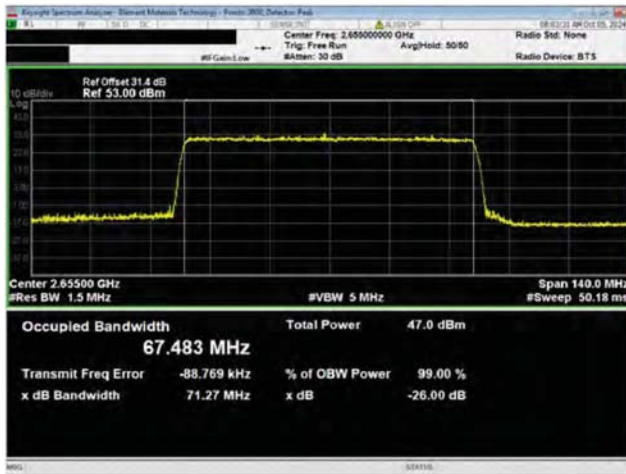


Port 1
70 MHz Channel Bandwidth
QPSK Modulation
Low Ch, 2531.01 MHz



Port 1
70 MHz Channel Bandwidth
QPSK Modulation
Mid Channel, 2592.99 MHz

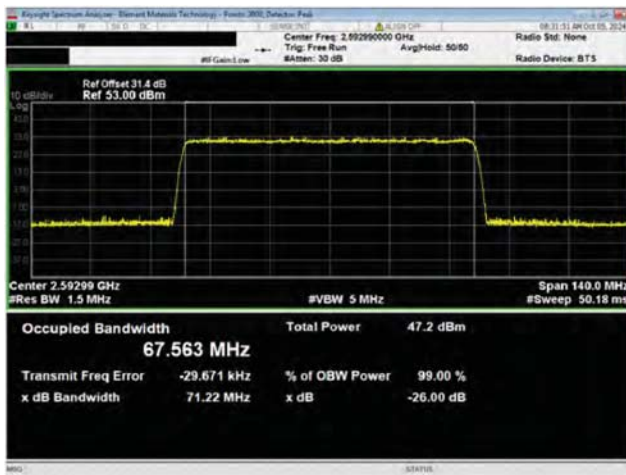
OCCUPIED BANDWIDTH



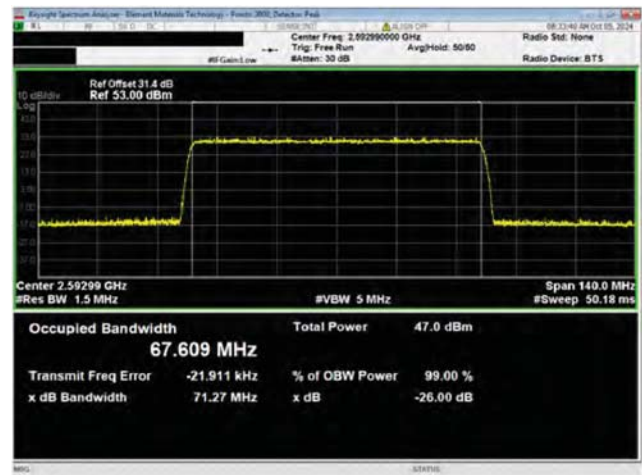
Port 1
70 MHz Channel Bandwidth
QPSK Modulation
High Ch, 2655.00 MHz



Port 1
70 MHz Channel Bandwidth
16QAM Modulation
Mid Channel, 2592.99 MHz

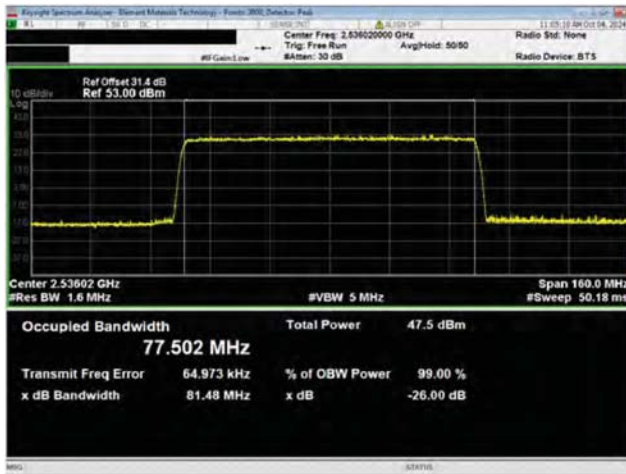


Port 1
70 MHz Channel Bandwidth
64QAM Modulation
Mid Channel, 2592.99 MHz

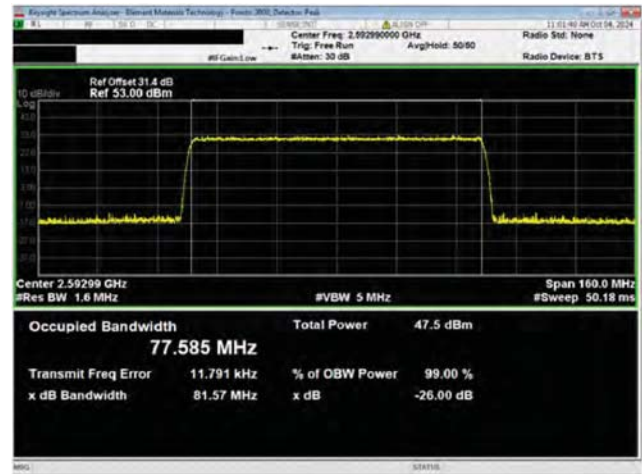


Port 1
70 MHz Channel Bandwidth
256QAM Modulation
Mid Channel, 2592.99 MHz

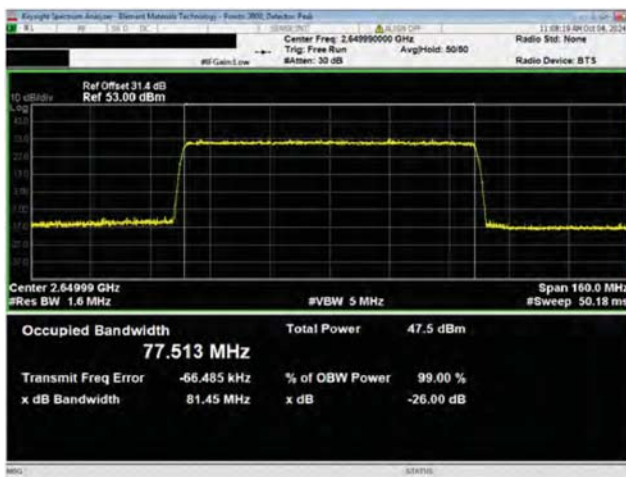
OCCUPIED BANDWIDTH



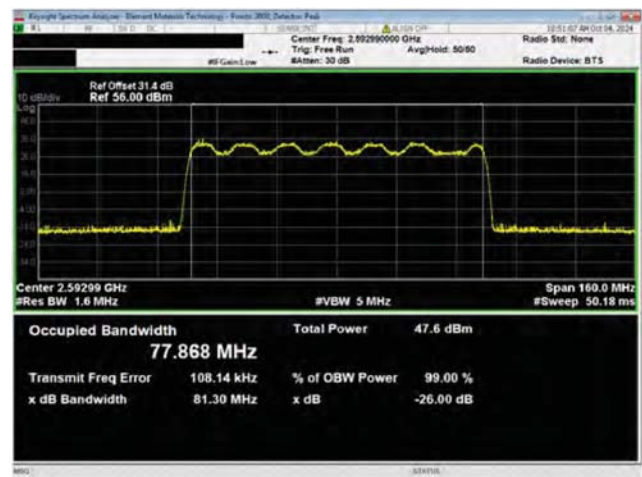
Port 1
80 MHz Channel Bandwidth
QPSK Modulation
Low Ch, 2536.02 MHz



Port 1
80 MHz Channel Bandwidth
QPSK Modulation
Mid Channel, 2592.99 MHz



Port 1
80 MHz Channel Bandwidth
QPSK Modulation
High Ch, 2649.99 MHz



Port 1
80 MHz Channel Bandwidth
16QAM Modulation
Mid Channel, 2592.99 MHz

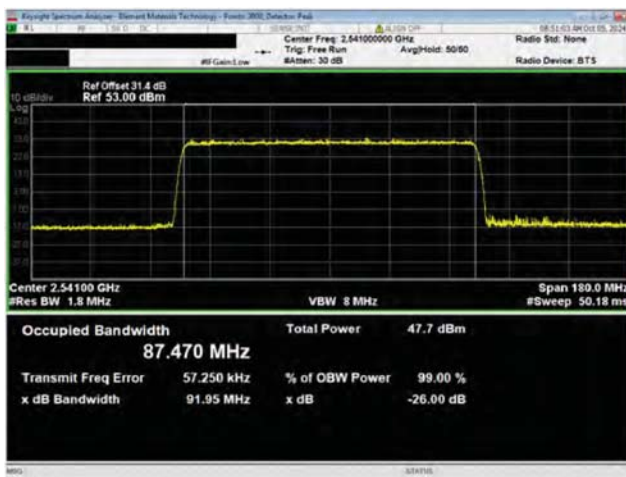
OCCUPIED BANDWIDTH



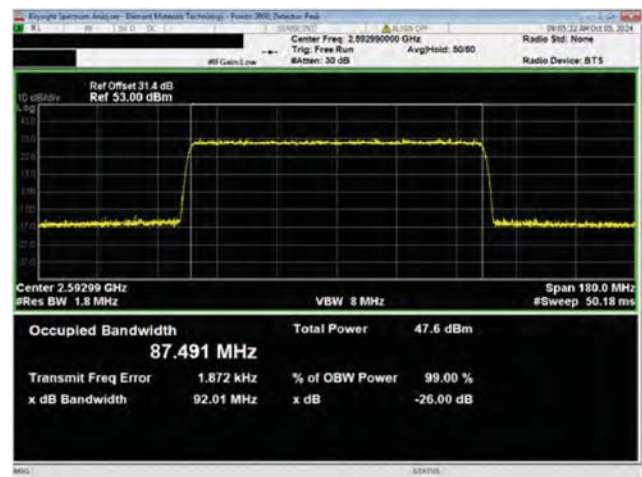
Port 1
80 MHz Channel Bandwidth
64QAM Modulation
Mid Channel, 2592.99 MHz



Port 1
80 MHz Channel Bandwidth
256QAM Modulation
Mid Channel, 2592.99 MHz

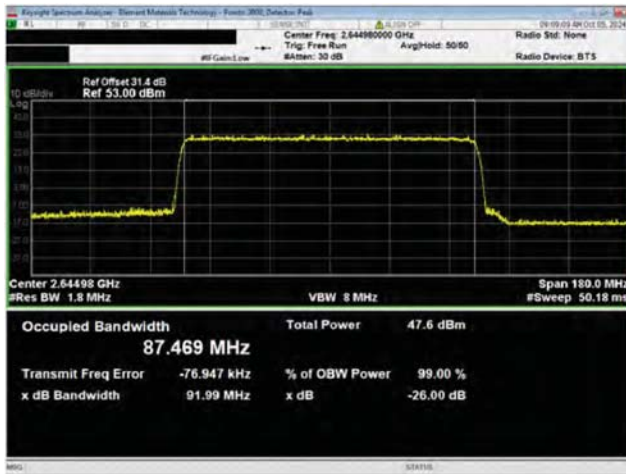


Port 1
90 MHz Channel Bandwidth
QPSK Modulation
Low Ch, 2541.00 MHz

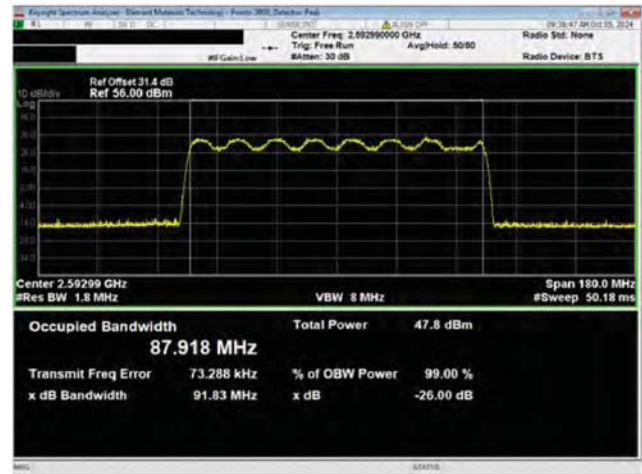


Port 1
90 MHz Channel Bandwidth
QPSK Modulation
Mid Channel, 2592.99 MHz

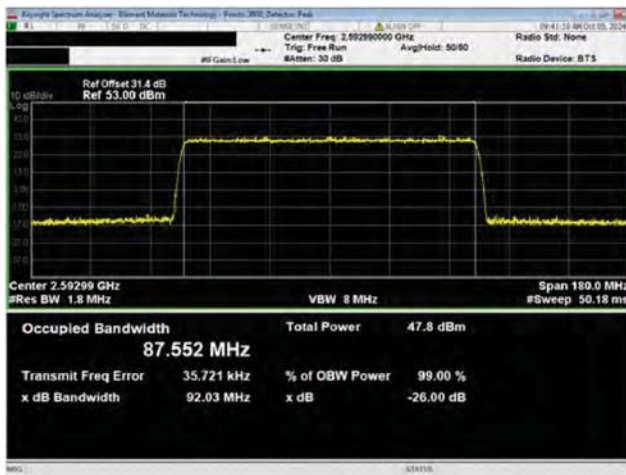
OCCUPIED BANDWIDTH



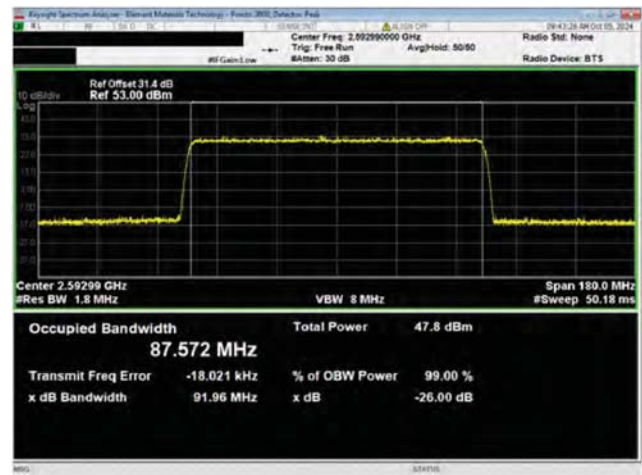
Port 1
90 MHz Channel Bandwidth
QPSK Modulation
High Ch, 2644.98 MHz



Port 1
90 MHz Channel Bandwidth
16QAM Modulation
Mid Channel, 2592.99 MHz

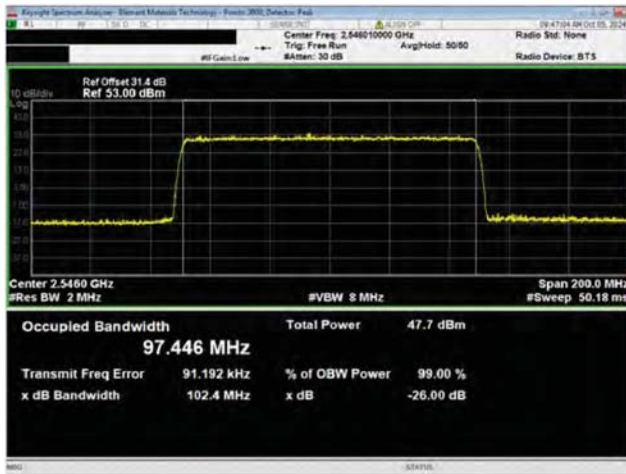


Port 1
90 MHz Channel Bandwidth
64QAM Modulation
Mid Channel, 2592.99 MHz

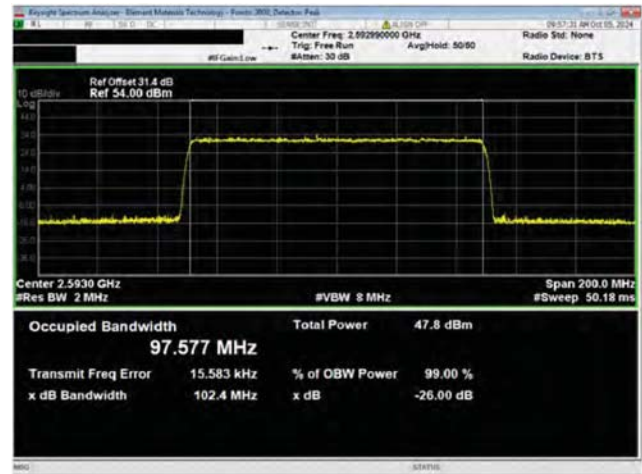


Port 1
90 MHz Channel Bandwidth
256QAM Modulation
Mid Channel, 2592.99 MHz

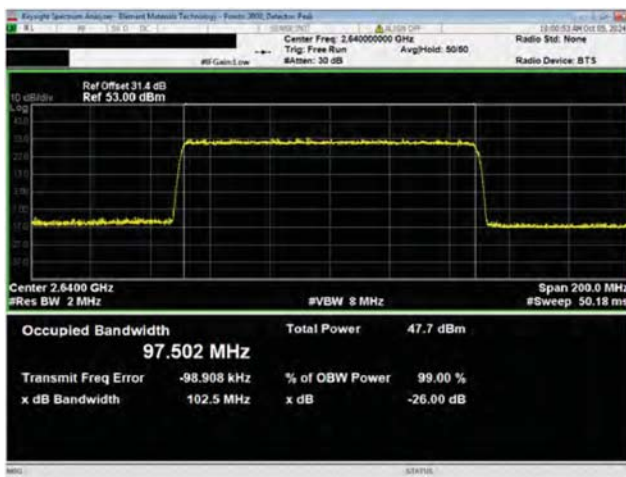
OCCUPIED BANDWIDTH



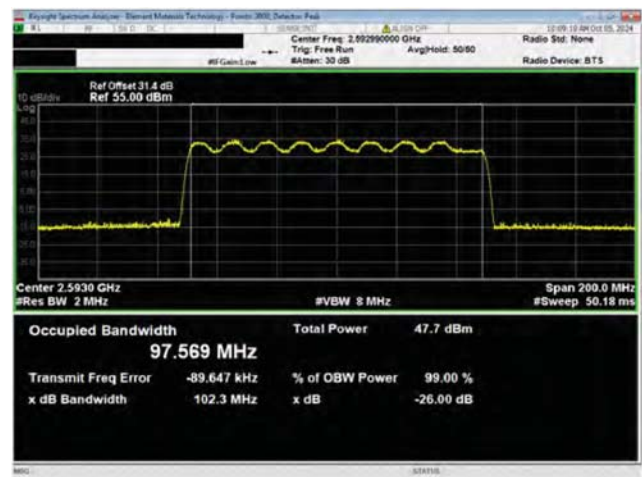
Port 1
100 MHz Channel Bandwidth
QPSK Modulation
Low Ch, 2546.01 MHz



Port 1
100 MHz Channel Bandwidth
QPSK Modulation
Mid Channel, 2592.99 MHz

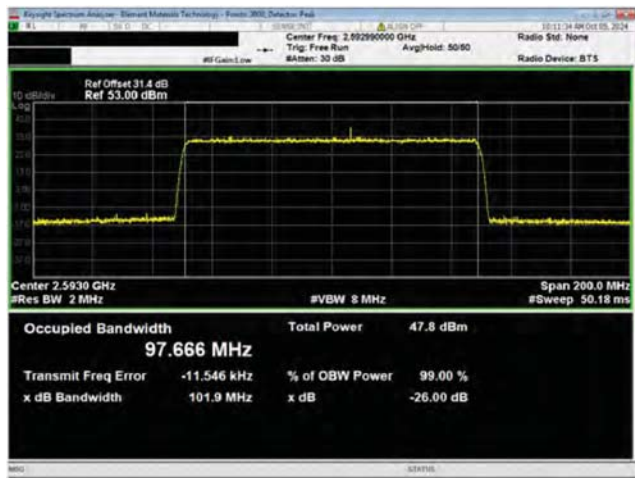


Port 1
100 MHz Channel Bandwidth
QPSK Modulation
High Ch, 2640.00 MHz

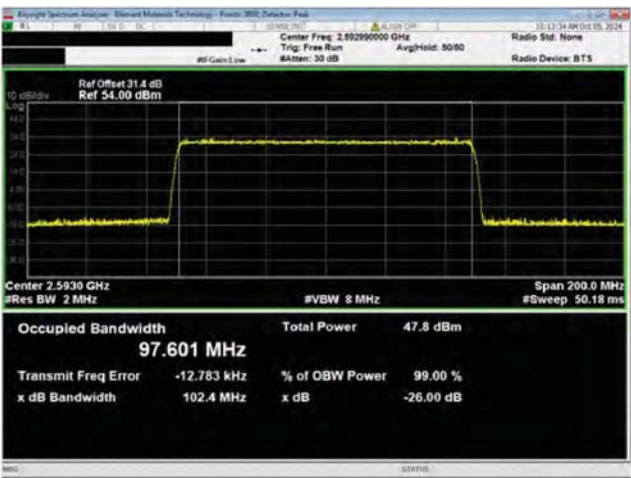


Port 1
100 MHz Channel Bandwidth
16QAM Modulation
Mid Channel, 2592.99 MHz

OCCUPIED BANDWIDTH



Port 1
100 MHz Channel Bandwidth
64QAM Modulation
Mid Channel, 2592.99 MHz



Port 1
100 MHz Channel Bandwidth
256QAM Modulation
Mid Channel, 2592.99 MHz

BAND EDGE COMPLIANCE

TEST DESCRIPTION

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The spurious RF conducted emissions at the edges of the authorized bands were measured on the low and high transmit frequencies of the available band. The channels closest to the band edges were selected. The EUT was transmitting at the power and data rate(s) listed in the datasheet.

RF conducted emissions testing was performed only on one port. The Aircscale Base Transceiver Station Radio Unit Model AVHA antenna ports are essentially electrically identical (the RF power variation between antenna ports is small as shown in this certification testing) and antenna port 1 was selected to perform the testing under this effort as allowed by ANSI C63.26-2015 paragraph 5.7.2i.

The spectrum was scanned below the lower band edge and above the higher band edge.

The measurement methods for FCC measurements are detailed in KDB971168 D01v03 section 6 and ANSI C63.26-2015. Measurements shall be performed at full power on the channel(s) and bandwidth(s) specified by the compliance lab for 5G NR modulation. These measurements are for first 1.0 MHz bands immediately outside and adjacent to the frequency block.

Per section 27.53(m)(2), the power of any emission outside of the authorized operating frequency range cannot exceed -13 dBm. The AVHA AirScale MAA operates as a 64 port MIMO transmitter. The limit is adjusted to -31.1 dBm [-13 dBm -10 log (64)] per FCC KDB 662911D01 v02r01, and ANSI C63.26-2015 section 6.4 because the BTS may operate as a 64 port MIMO transmitter).

The resolution bandwidth to be used for these measurements shall be 1% of the measured emission bandwidth per FCC 27.53(m)(6). A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided that the measured power is integrated over the full required measurement bandwidth (i.e.: 1MHz or 1% of measured emission bandwidth as specified) per FCC 27.53(m)(6).

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFQ	2024-03-12	2025-03-12
Generator - Signal	Agilent	N5173B	TIW	2023-08-07	2026-08-07
Block - DC	Fairview Microwave	SD3379	AMM	2024-08-15	2025-08-15

BAND EDGE COMPLIANCE



EUT:	Airscale Base Transceiver Station Radio Unit Model AVHA	Work Order:	NOKI0079
Serial Number:	L1242005329	Date:	2024-10-04
Customer:	Nokia Solutions and Networks	Temperature:	21.3°C
Attendees:	Mitch Hill, David Le	Relative Humidity:	41.9%
Customer Project:	None	Bar. Pressure (PMSL):	1016 mbar
Tested By:	Jarrold Brenden	Job Site:	PT14
Power:	54VDC	Configuration:	NOKI0079-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27:2024	ANSI C63.26:2015

COMMENTS

All losses in the measurement path were accounted for in the reference level offset; attenuators, filters, cables, and DC blocks. BRS Band n41 carriers were enabled at maximum power levels.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

Tested By

TEST RESULTS

	Frequency Range	Frequency (MHz)	Value (dBm)	Limit (dBm)	Result
Port 1					
10 MHz Channel Bandwidth					
QPSK Modulation					
Low Channel, 2501.01 MHz	2495.0 MHz - 2497.0 MHz	2496	-38.853	-31.1	Pass
	2494.0 MHz - 2495.0 MHz	2494.5	-34.09	-31.1	Pass
	2474.0 MHz - 2494.0 MHz	2494	-34.254	-31.1	Pass
High Channel, 2685.00 MHz	2689.0 MHz - 2691.0 MHz	2690	-37.838	-31.1	Pass
	2691.0 MHz - 2692.0 MHz	2691.5	-33.75	-31.1	Pass
	2692.0 MHz - 2712.0 MHz	2692.06	-33.807	-31.1	Pass
15 MHz Channel Bandwidth					
QPSK Modulation					
Low Channel, 2503.50 MHz	2495.0 MHz - 2497.0 MHz	2496	-34.151	-31.1	Pass
	2494.0 MHz - 2495.0 MHz	2494.5	-34.35	-31.1	Pass
	2474.0 MHz - 2494.0 MHz	2493.98	-34.747	-31.1	Pass
High Channel, 2682.48 MHz	2689.0 MHz - 2691.0 MHz	2690	-35.146	-31.1	Pass
	2691.0 MHz - 2692.0 MHz	2691.5	-33.87	-31.1	Pass
	2692.0 MHz - 2712.0 MHz	2692	-33.801	-31.1	Pass
20 MHz Channel Bandwidth					
QPSK Modulation					
Low Channel, 2506.02 MHz	2495.0 MHz - 2497.0 MHz	2496	-31.994	-31.1	Pass
	2494.0 MHz - 2495.0 MHz	2494.5	-34.24	-31.1	Pass
	2474.0 MHz - 2494.0 MHz	2493.98	-34.753	-31.1	Pass
High Channel, 2679.99 MHz	2689.0 MHz - 2691.0 MHz	2690.1	-38.376	-31.1	Pass
	2691.0 MHz - 2692.0 MHz	2691.5	-33.74	-31.1	Pass

BAND EDGE COMPLIANCE

	Frequency Range	Frequency (MHz)	Value (dBm)	Limit (dBm)	Result
	2692.0 MHz - 2712.0 MHz	2692.06	-33.916	-31.1	Pass
30 MHz Channel Bandwidth					
QPSK Modulation					
Low Channel, 2511.00 MHz	2495.0 MHz - 2497.0 MHz	2495.85	-35.673	-31.1	Pass
	2494.0 MHz - 2495.0 MHz	2494.5	-34.8	-31.1	Pass
	2474.0 MHz - 2494.0 MHz	2494	-34.978	-31.1	Pass
High Channel, 2674.98 MHz	2689.0 MHz - 2691.0 MHz	2690.15	-35.441	-31.1	Pass
	2691.0 MHz - 2692.0 MHz	2691.5	-34.63	-31.1	Pass
	2692.0 MHz - 2712.0 MHz	2692.08	-34.025	-31.1	Pass
40 MHz Channel Bandwidth					
QPSK Modulation					
Low Channel, 2516.01 MHz	2495.6 MHz - 2496.0 MHz	2495.8	-37.82	-31.1	Pass
	2495.2 MHz - 2495.6 MHz	2495.4	-38.14	-31.1	Pass
	2495.0 MHz - 2495.4 MHz	2495.2	-38.12	-31.1	Pass
	2494.0 MHz - 2495.0 MHz	2494.5	-34.45	-31.1	Pass
	2474.0 MHz - 2494.0 MHz	2494	-34.553	-31.1	Pass
High Channel, 2670.00 MHz	2690.0 MHz - 2690.4 MHz	2690.2	-37.36	-31.1	Pass
	2690.4 MHz - 2690.8 MHz	2690.6	-37.36	-31.1	Pass
	2690.6 MHz - 2691.0 MHz	2690.8	-37.73	-31.1	Pass
	2691.0 MHz - 2692.0 MHz	2691.5	-34.17	-31.1	Pass
	2692.0 MHz - 2712.0 MHz	2692	-33.352	-31.1	Pass
50 MHz Channel Bandwidth					
QPSK Modulation					
Low Channel, 2521.02 MHz	2495.5 MHz - 2496.0 MHz	2495.75	-35.73	-31.1	Pass
	2495.0 MHz - 2495.5 MHz	2495.25	-36.51	-31.1	Pass
	2494.0 MHz - 2495.0 MHz	2494.5	-33.5	-31.1	Pass
	2474.0 MHz - 2494.0 MHz	2493.98	-33.71	-31.1	Pass
High Channel, 2664.99 MHz	2690.0 MHz - 2690.5 MHz	2690.25	-35.82	-31.1	Pass
	2690.5 MHz - 2691.0 MHz	2690.75	-36.35	-31.1	Pass
	2691.0 MHz - 2692.0 MHz	2691.5	-33.8	-31.1	Pass
	2692.0 MHz - 2712.0 MHz	2692	-33.251	-31.1	Pass
60 MHz Channel Bandwidth					
QPSK Modulation					
Low Channel, 2526.00 MHz	2495.4 MHz - 2496.0 MHz	2495.7	-35.09	-31.1	Pass
	2495.0 MHz - 2495.6 MHz	2495.3	-35.45	-31.1	Pass
	2494.0 MHz - 2495.0 MHz	2494.5	-33.44	-31.1	Pass
	2474.0 MHz - 2494.0 MHz	2494	-33.606	-31.1	Pass
High Channel, 2659.98 MHz	2690.0 MHz - 2690.6 MHz	2690.3	-35.15	-31.1	Pass
	2690.4 MHz - 2691.0 MHz	2690.7	-35.44	-31.1	Pass
	2691.0 MHz - 2692.0 MHz	2691.5	-33.57	-31.1	Pass
	2692.0 MHz - 2712.0 MHz	2692.1	-33.215	-31.1	Pass
70 MHz Channel Bandwidth					
QPSK Modulation					
Low Channel, 2531.01 MHz	2495.3 MHz - 2496.0 MHz	2495.65	-33.36	-31.1	Pass
	2495.0 MHz - 2495.7 MHz	2495.35	-33.86	-31.1	Pass
	2494.0 MHz - 2495.0 MHz	2494.5	-32.65	-31.1	Pass
	2474.0 MHz - 2494.0 MHz	2493.98	-32.74	-31.1	Pass
High Channel, 2655.00 MHz	2690.0 MHz - 2690.7 MHz	2690.35	-32.97	-31.1	Pass
	2690.3 MHz - 2691.0 MHz	2690.65	-33.28	-31.1	Pass
	2691.0 MHz - 2692.0 MHz	2691.5	-32.25	-31.1	Pass

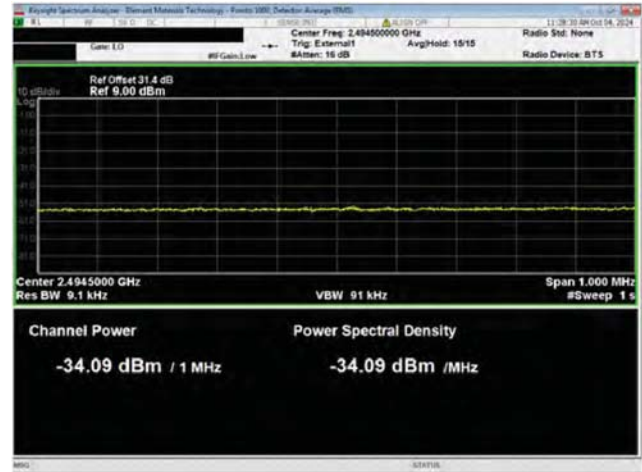
BAND EDGE COMPLIANCE

	Frequency Range	Frequency (MHz)	Value (dBm)	Limit (dBm)	Result
	2692.0 MHz - 2712.0 MHz	2692	-32.216	-31.1	Pass
80 MHz Channel Bandwidth					
QPSK Modulation					
Low Channel, 2536.02 MHz	2495.2 MHz - 2496.0 MHz	2495.6	-32.17	-31.1	Pass
	2495.0 MHz - 2495.8 MHz	2495.4	-32.42	-31.1	Pass
	2494.0 MHz - 2495.0 MHz	2494.5	-32.27	-31.1	Pass
	2474.0 MHz - 2494.0 MHz	2493.9	-32.016	-31.1	Pass
High Channel, 2649.99 MHz	2690.0 MHz - 2690.8 MHz	2690.4	-33.16	-31.1	Pass
	2690.2 MHz - 2691.0 MHz	2690.6	-32.5	-31.1	Pass
	2691.0 MHz - 2692.0 MHz	2691.5	-32.15	-31.1	Pass
	2692.0 MHz - 2712.0 MHz	2692	-31.851	-31.1	Pass
90 MHz Channel Bandwidth					
QPSK Modulation					
Low Channel, 2541.00 MHz	2495.1 MHz - 2496.0 MHz	2495.55	-32.97	-31.1	Pass
	2495.0 MHz - 2495.9 MHz	2495.45	-32.89	-31.1	Pass
	2494.0 MHz - 2495.0 MHz	2494.5	-32.87	-31.1	Pass
	2474.0 MHz - 2494.0 MHz	2494	-32.828	-31.1	Pass
High Channel, 2644.98 MHz	2690.0 MHz - 2690.9 MHz	2690.45	-32.8	-31.1	Pass
	2690.1 MHz - 2691.0 MHz	2690.55	-33.04	-31.1	Pass
	2691.0 MHz - 2692.0 MHz	2691.5	-32.79	-31.1	Pass
	2692.0 MHz - 2712.0 MHz	2692.08	-32.368	-31.1	Pass
100 MHz Channel Bandwidth					
QPSK Modulation					
Low Channel, 2546.01 MHz	2495.0 MHz - 2496.0 MHz	2495.5	-32.28	-31.1	Pass
	2494.0 MHz - 2495.0 MHz	2494.5	-32.87	-31.1	Pass
	2474.0 MHz - 2494.0 MHz	2493.96	-33.046	-31.1	Pass
High Channel, 2640.00 MHz	2690.0 MHz - 2691.0 MHz	2690.5	-33.28	-31.1	Pass
	2691.0 MHz - 2692.0 MHz	2691.5	-33.62	-31.1	Pass
	2692.0 MHz - 2712.0 MHz	2692	-33.501	-31.1	Pass

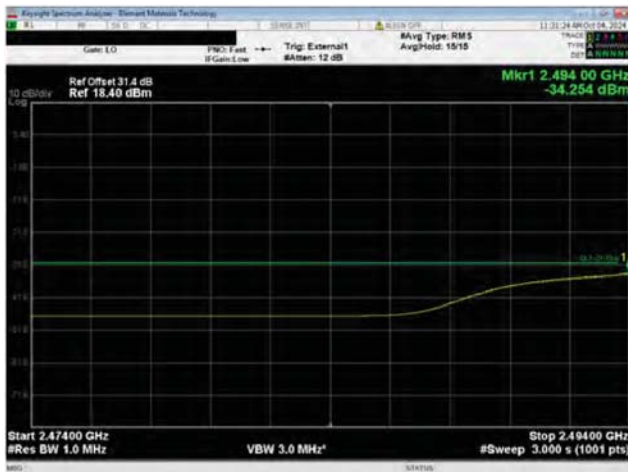
BAND EDGE COMPLIANCE



Port 1
10 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2501.01 MHz
2495.0 MHz - 2497.0 MHz



Port 1
10 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2501.01 MHz
2494.0 MHz - 2495.0 MHz

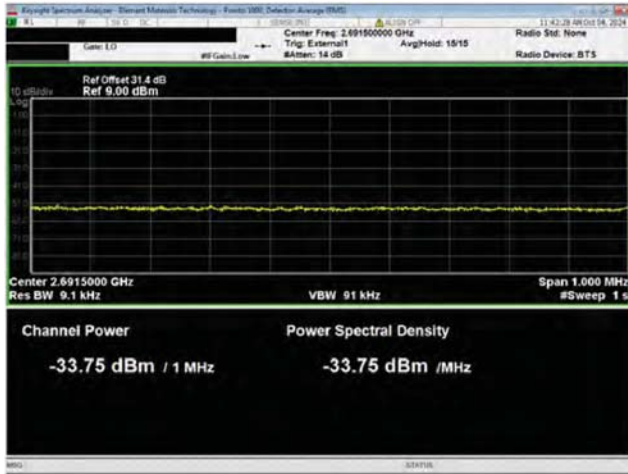


Port 1
10 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2501.01 MHz
2474.0 MHz - 2494.0 MHz

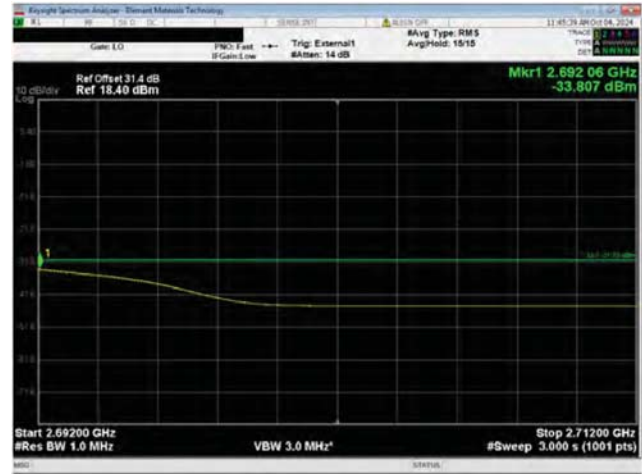


Port 1
10 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2685.00 MHz
2689.0 MHz - 2691.0 MHz

BAND EDGE COMPLIANCE



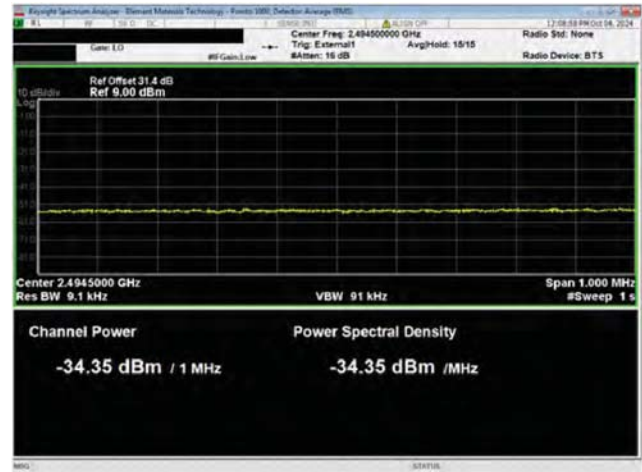
Port 1
10 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2685.00 MHz
2691.0 MHz - 2692.0 MHz



Port 1
10 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2685.00 MHz
2692.0 MHz - 2712.0 MHz

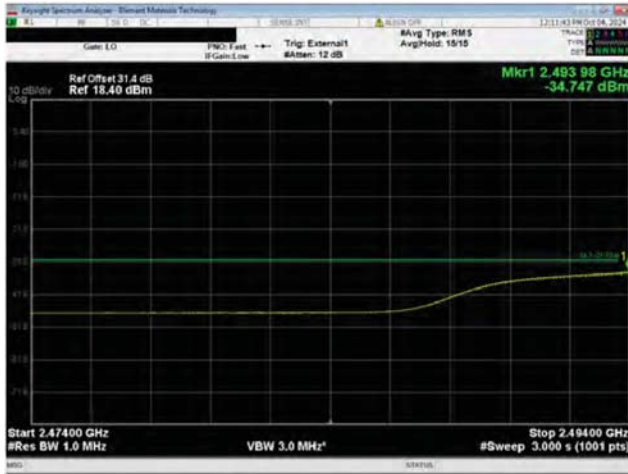


Port 1
15 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2503.50 MHz
2495.0 MHz - 2497.0 MHz



Port 1
15 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2503.50 MHz
2494.0 MHz - 2495.0 MHz

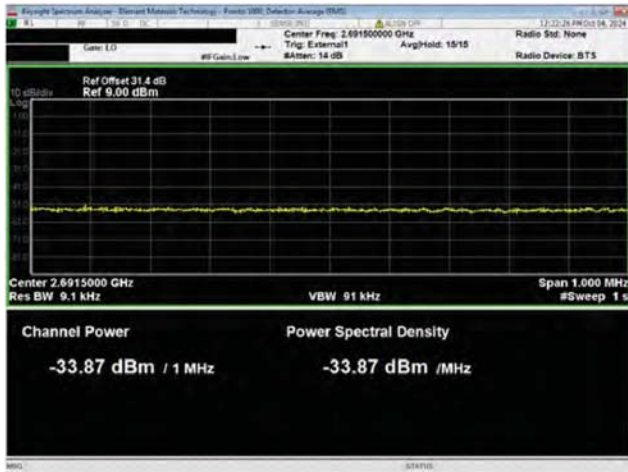
BAND EDGE COMPLIANCE



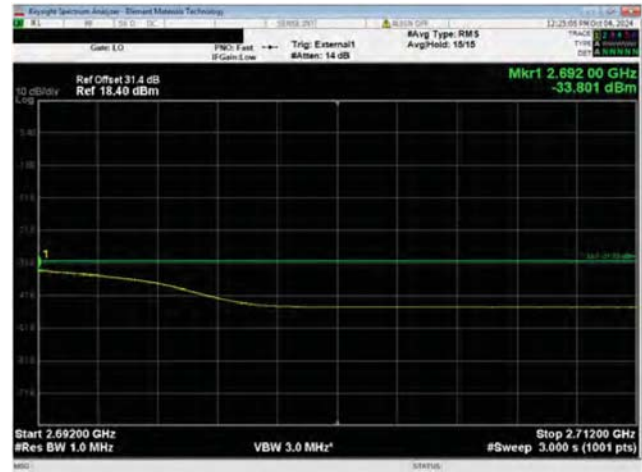
Port 1
15 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2503.50 MHz
2474.0 MHz - 2494.0 MHz



Port 1
15 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2682.48 MHz
2689.0 MHz - 2691.0 MHz



Port 1
15 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2682.48 MHz
2691.0 MHz - 2692.0 MHz

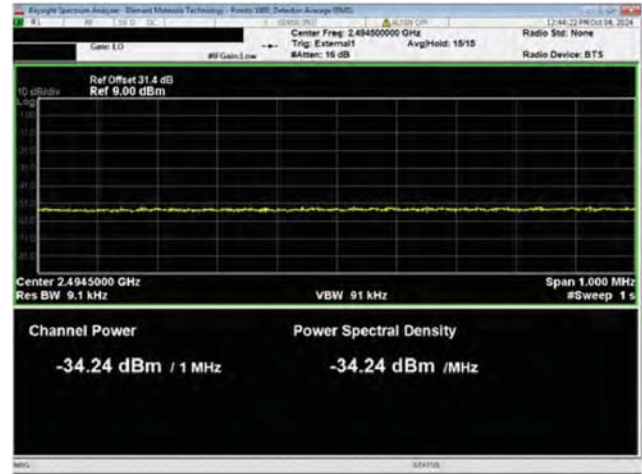


Port 1
15 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2682.48 MHz
2692.0 MHz - 2712.0 MHz

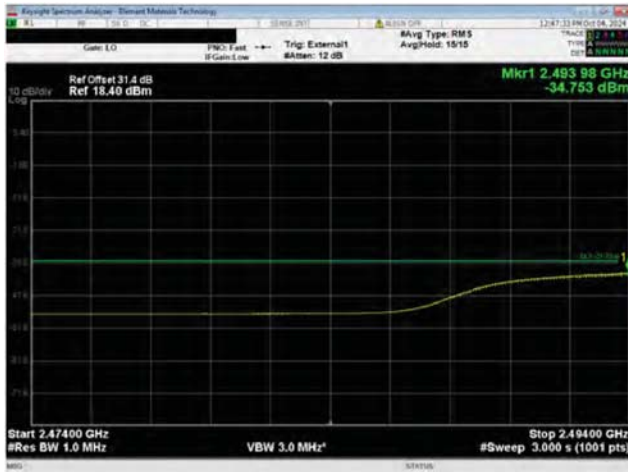
BAND EDGE COMPLIANCE



Port 1
20 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2506.02 MHz
2495.0 MHz - 2497.0 MHz



Port 1
20 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2506.02 MHz
2494.0 MHz - 2495.0 MHz

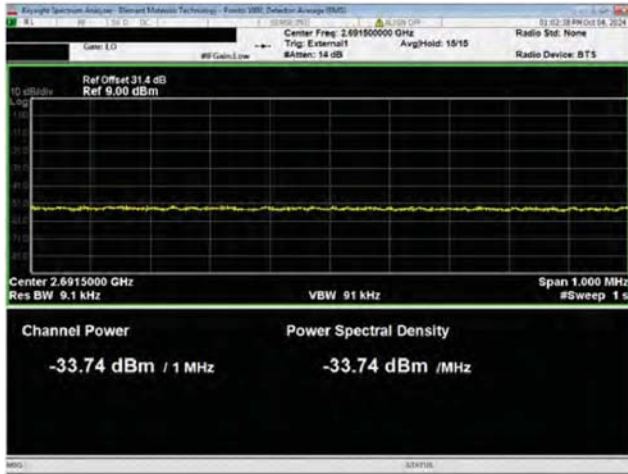


Port 1
20 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2506.02 MHz
2474.0 MHz - 2494.0 MHz

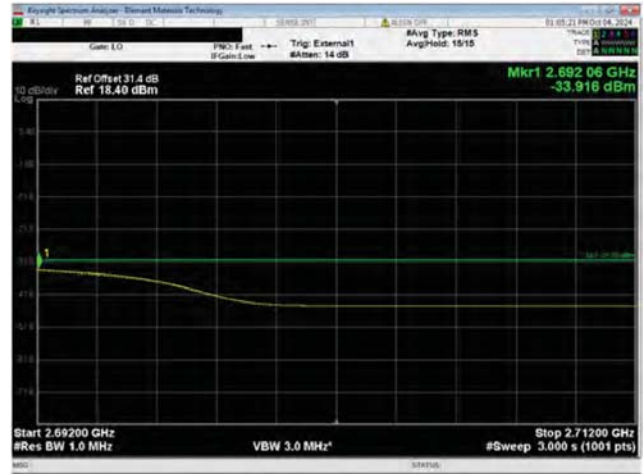


Port 1
20 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2679.99 MHz
2689.0 MHz - 2691.0 MHz

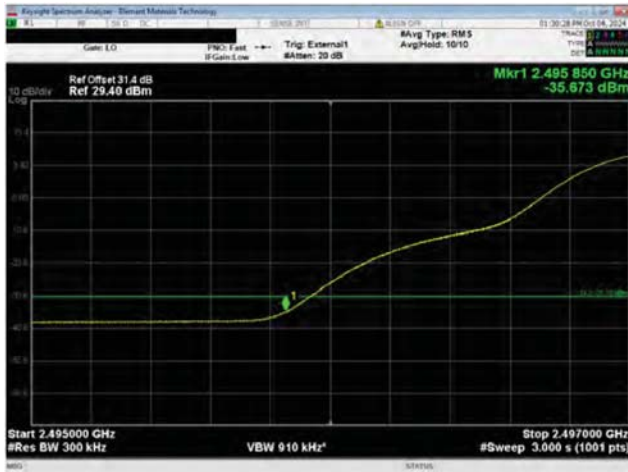
BAND EDGE COMPLIANCE



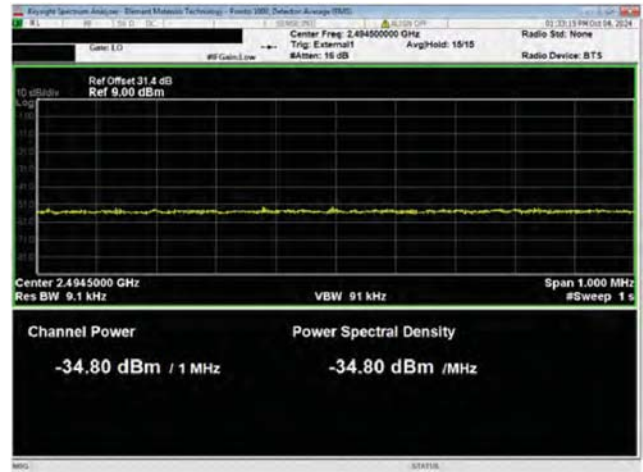
Port 1
20 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2679.99 MHz
2691.0 MHz - 2692.0 MHz



Port 1
20 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2679.99 MHz
2692.0 MHz - 2712.0 MHz

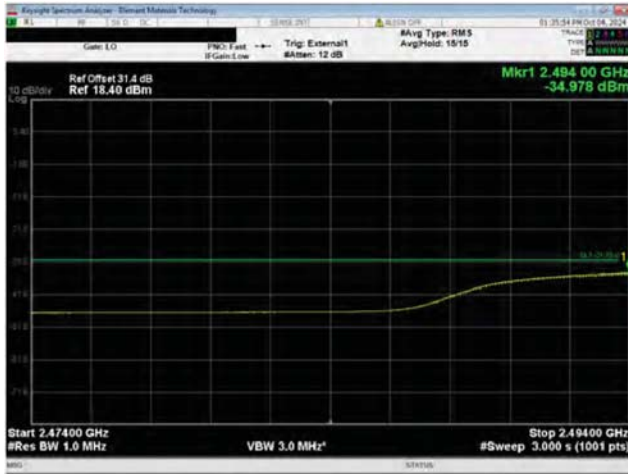


Port 1
30 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2511.00 MHz
2495.0 MHz - 2497.0 MHz



Port 1
30 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2511.00 MHz
2494.0 MHz - 2495.0 MHz

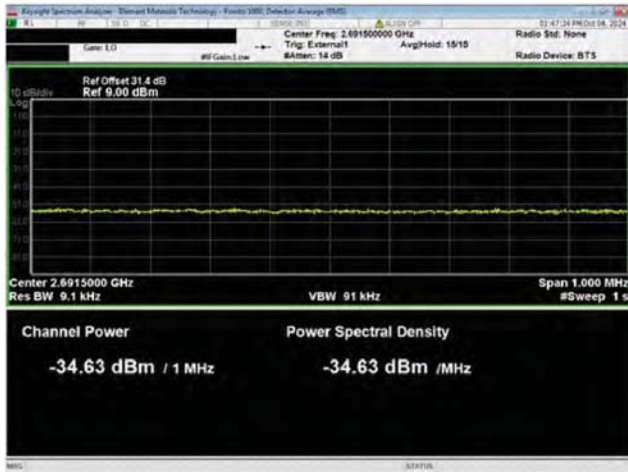
BAND EDGE COMPLIANCE



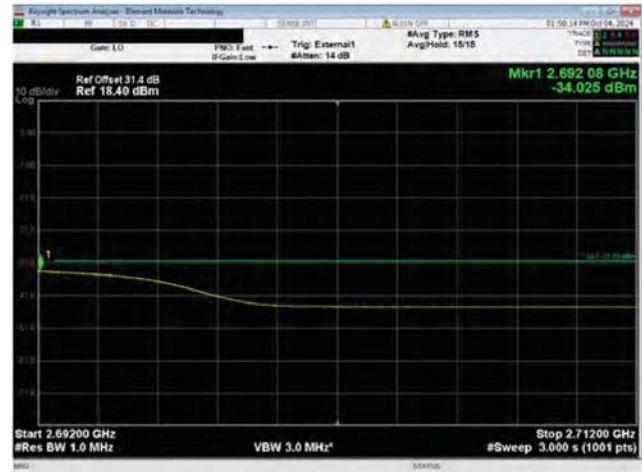
Port 1
30 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2511.00 MHz
2474.0 MHz - 2494.0 MHz



Port 1
30 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2674.98 MHz
2689.0 MHz - 2691.0 MHz

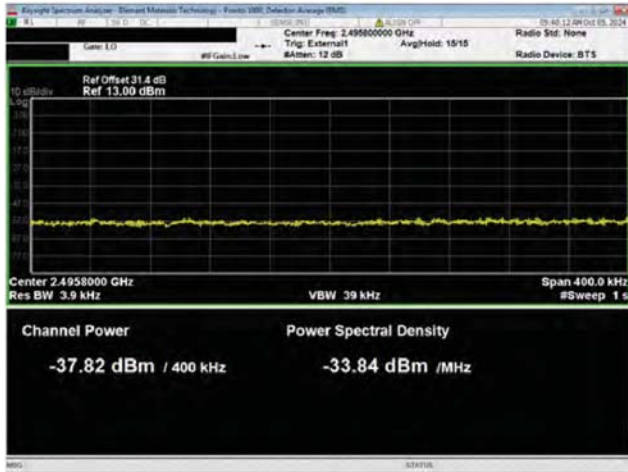


Port 1
30 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2674.98 MHz
2691.0 MHz - 2692.0 MHz

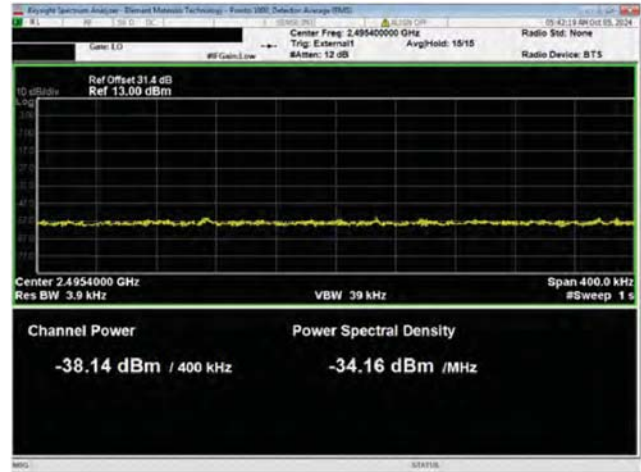


Port 1
30 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2674.98 MHz
2692.0 MHz - 2712.0 MHz

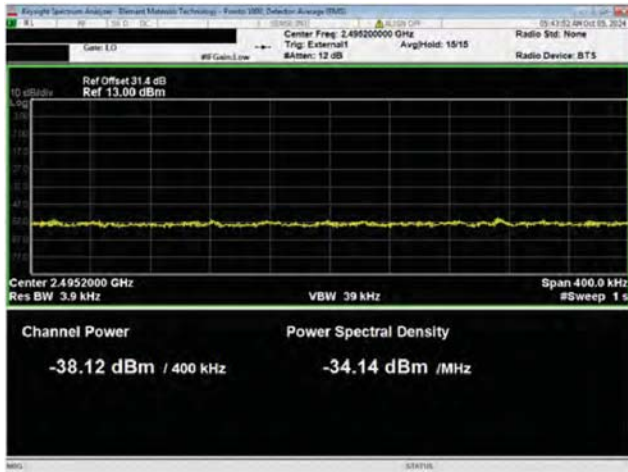
BAND EDGE COMPLIANCE



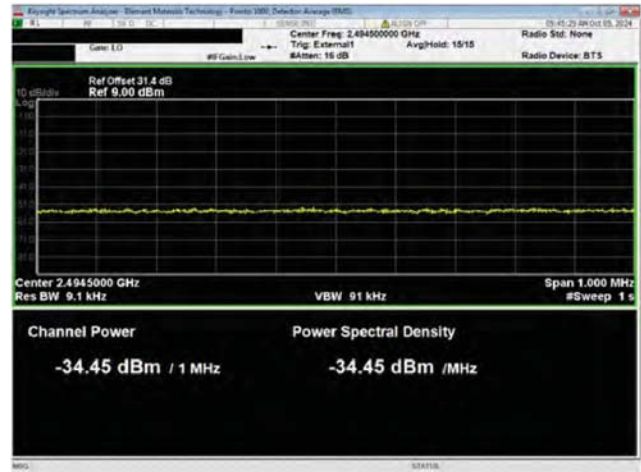
Port 1
40 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2516.01 MHz
2495.6 MHz - 2496.0 MHz



Port 1
40 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2516.01 MHz
2495.2 MHz - 2495.6 MHz

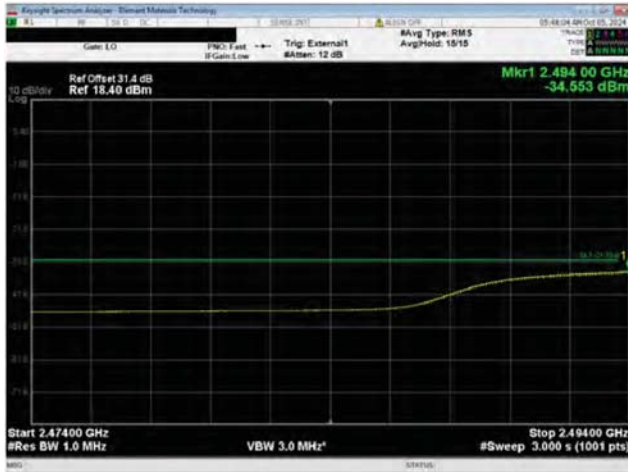


Port 1
40 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2516.01 MHz
2495.0 MHz - 2495.4 MHz

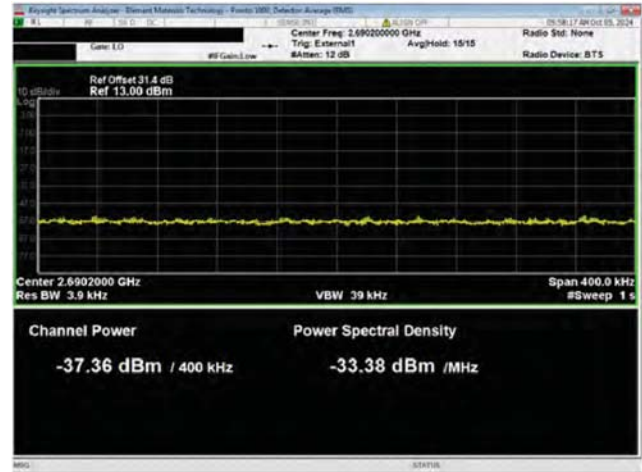


Port 1
40 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2516.01 MHz
2494.0 MHz - 2495.0 MHz

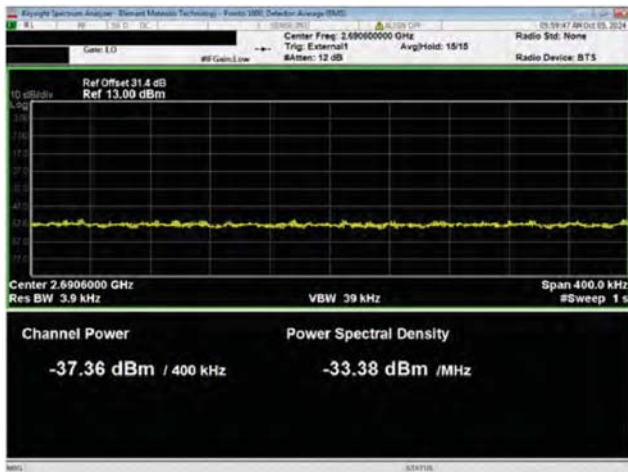
BAND EDGE COMPLIANCE



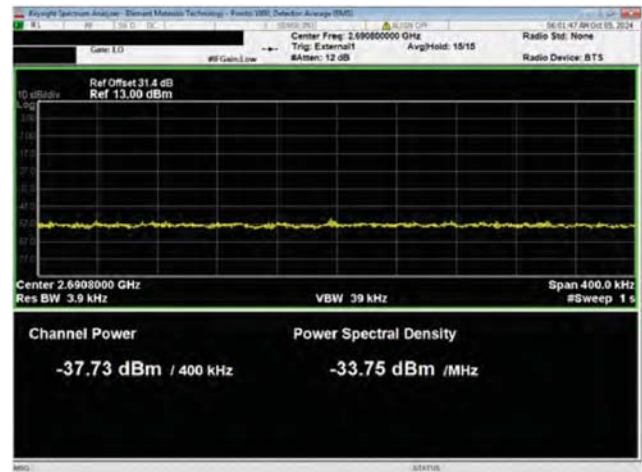
Port 1
40 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2516.01 MHz
2474.0 MHz - 2494.0 MHz



Port 1
40 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2670.00 MHz
2690.0 MHz - 2690.4 MHz

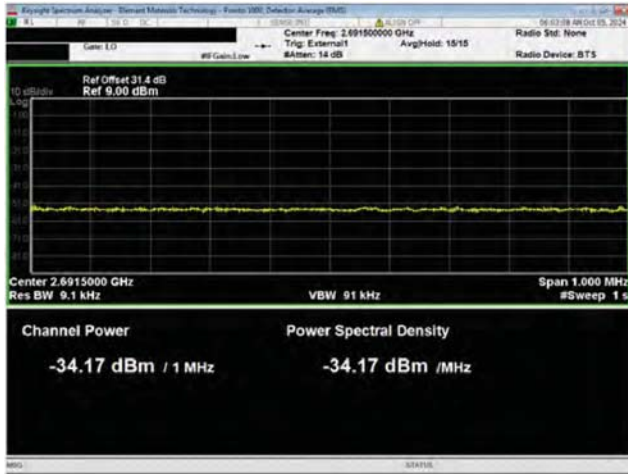


Port 1
40 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2670.00 MHz
2690.4 MHz - 2690.8 MHz

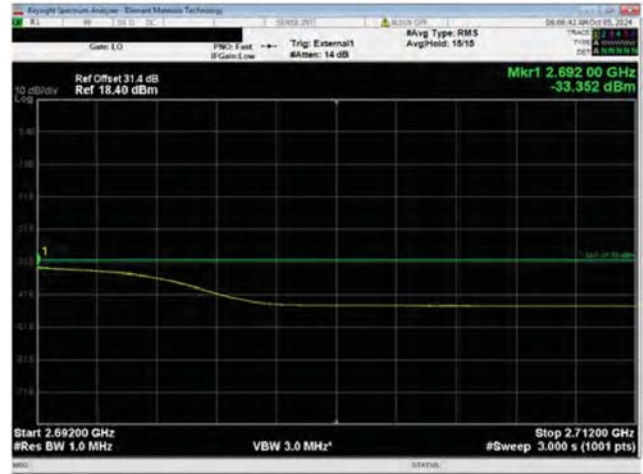


Port 1
40 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2670.00 MHz
2690.6 MHz - 2691.0 MHz

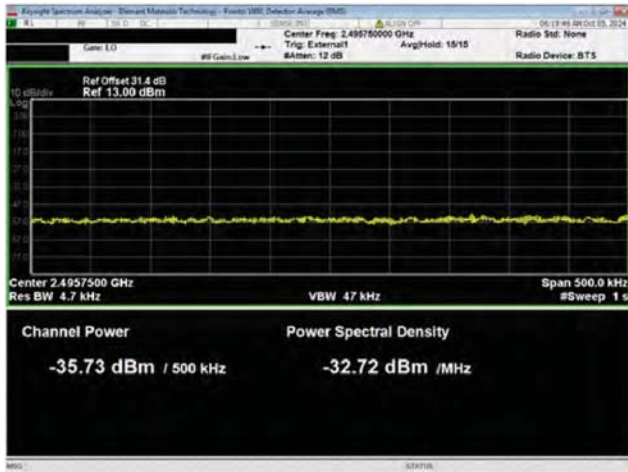
BAND EDGE COMPLIANCE



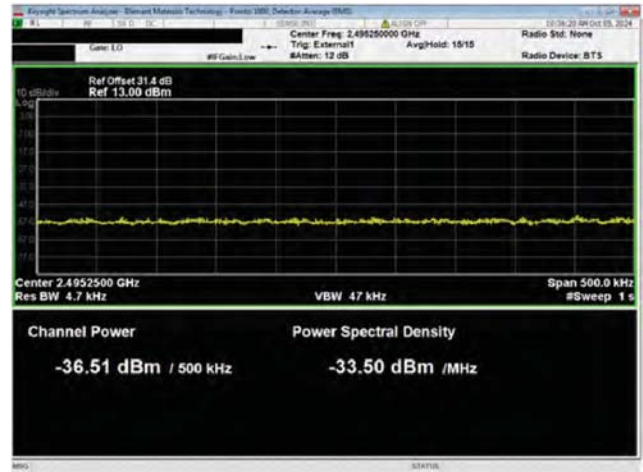
Port 1
40 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2670.00 MHz
2691.0 MHz - 2692.0 MHz



Port 1
40 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2670.00 MHz
2692.0 MHz - 2712.0 MHz

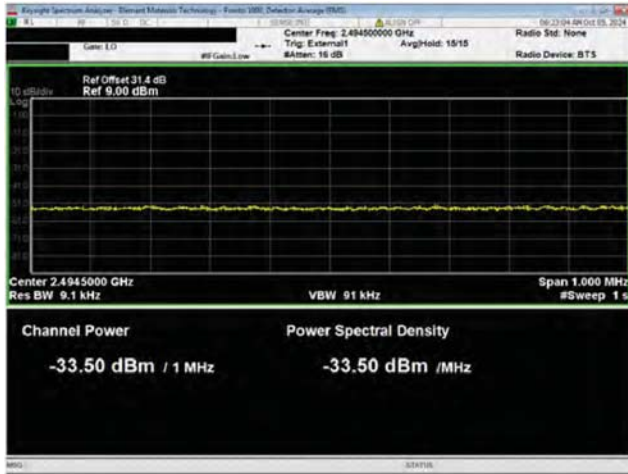


Port 1
50 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2521.02 MHz
2495.5 MHz - 2496.0 MHz

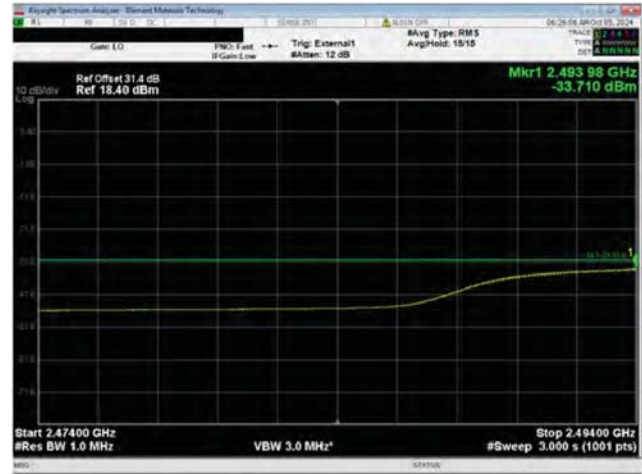


Port 1
50 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2521.02 MHz
2495.0 MHz - 2495.5 MHz

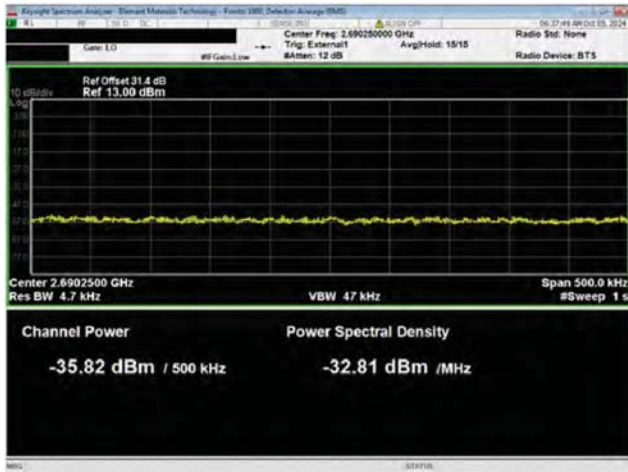
BAND EDGE COMPLIANCE



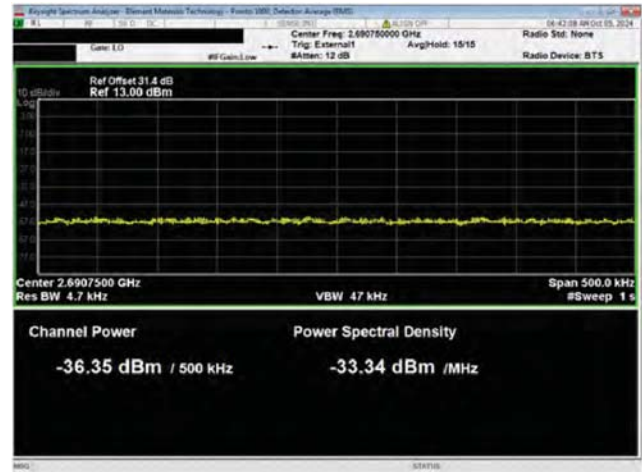
Port 1
50 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2521.02 MHz
2494.0 MHz - 2495.0 MHz



Port 1
50 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2521.02 MHz
2474.0 MHz - 2494.0 MHz

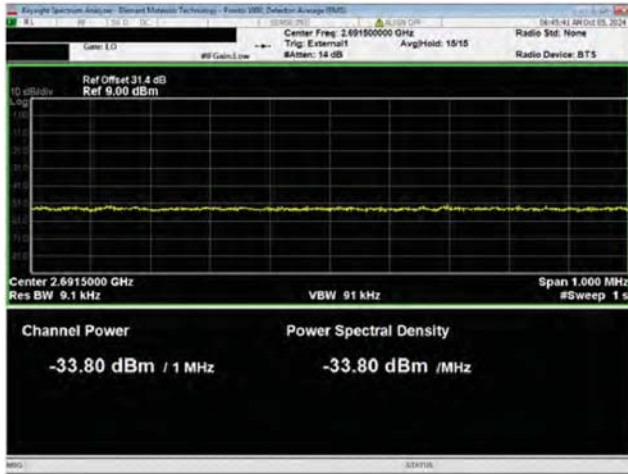


Port 1
50 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2664.99 MHz
2690.0 MHz - 2690.5 MHz

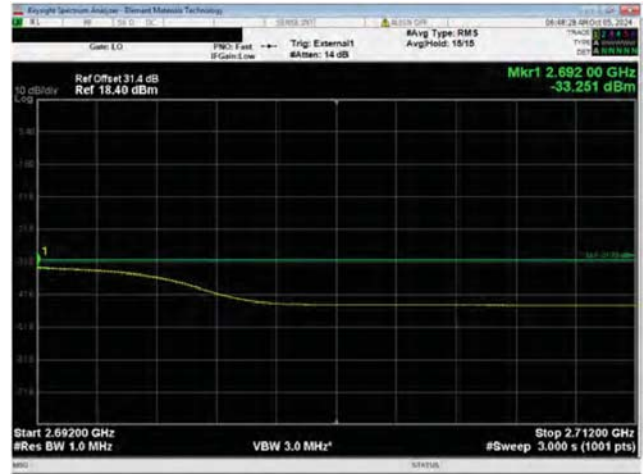


Port 1
50 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2664.99 MHz
2690.5 MHz - 2691.0 MHz

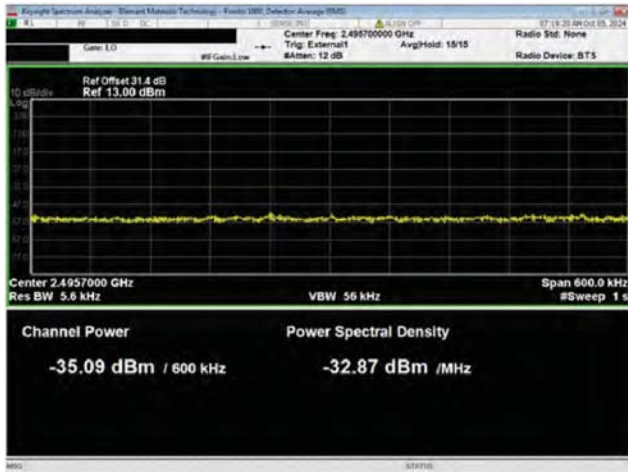
BAND EDGE COMPLIANCE



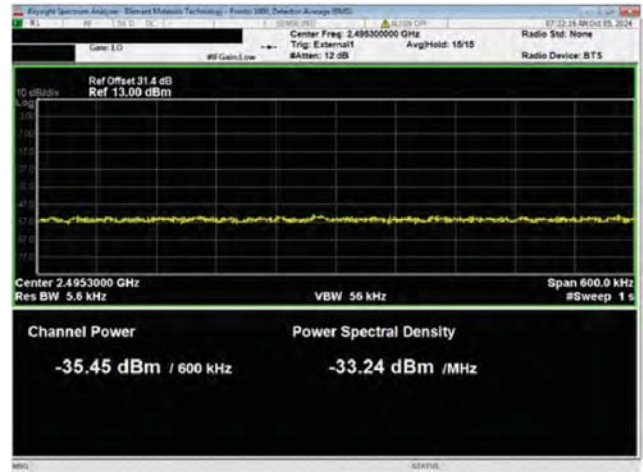
Port 1
50 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2664.99 MHz
2691.0 MHz - 2692.0 MHz



Port 1
50 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2664.99 MHz
2692.0 MHz - 2712.0 MHz

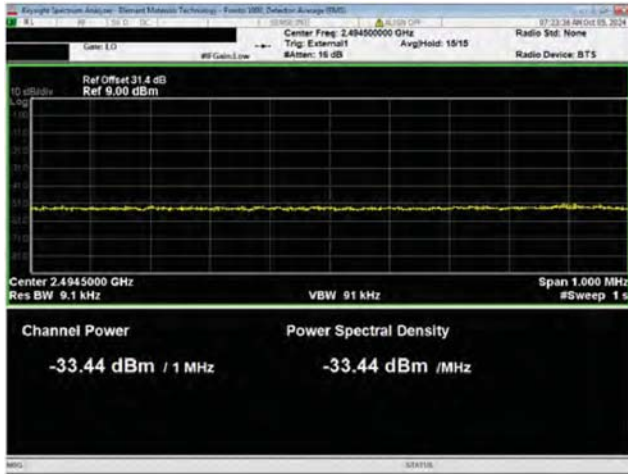


Port 1
60 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2526.00 MHz
2495.4 MHz - 2496.0 MHz

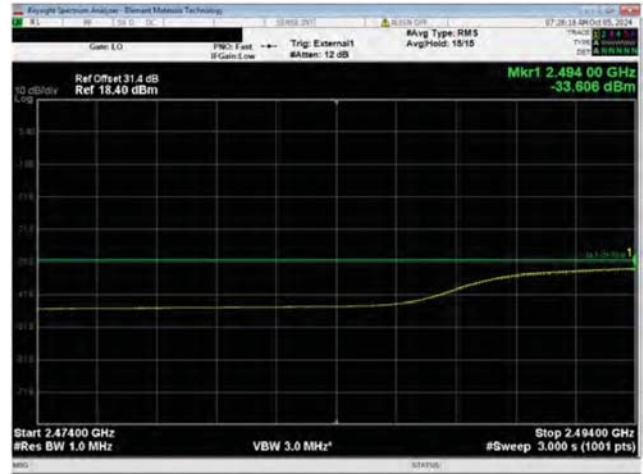


Port 1
60 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2526.00 MHz
2495.0 MHz - 2495.6 MHz

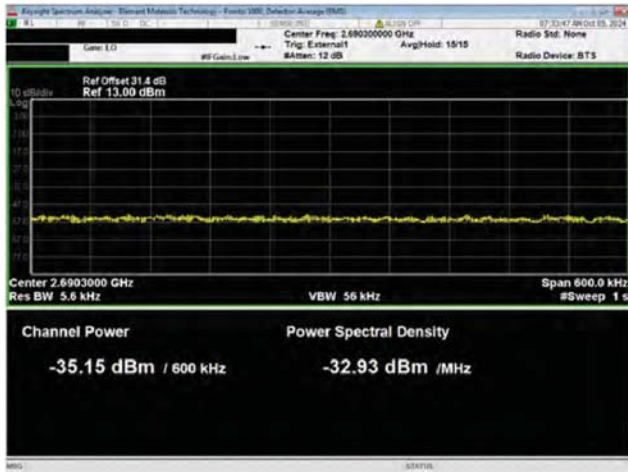
BAND EDGE COMPLIANCE



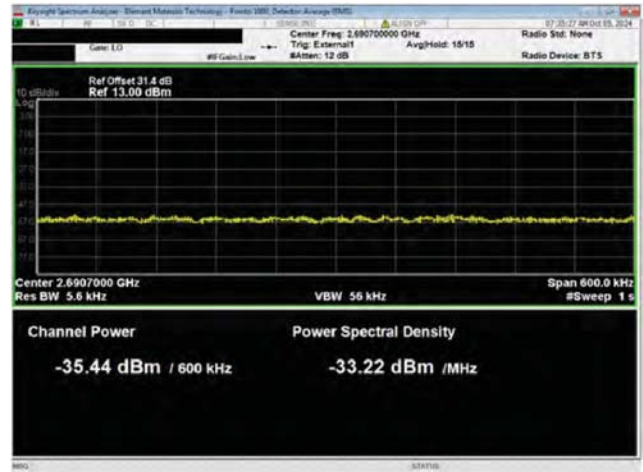
Port 1
60 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2526.00 MHz
2494.0 MHz - 2495.0 MHz



Port 1
60 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2526.00 MHz
2474.0 MHz - 2494.0 MHz

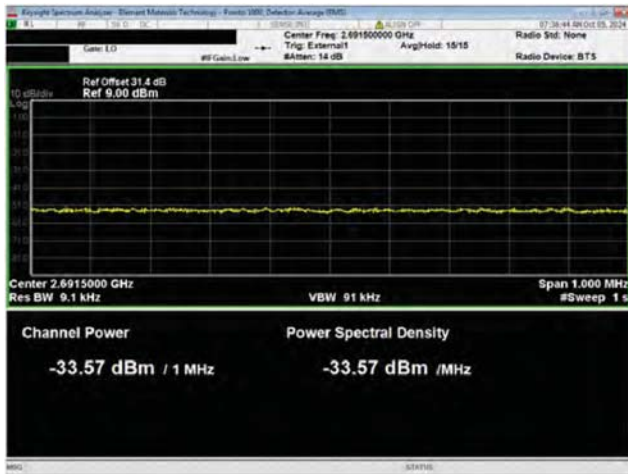


Port 1
60 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2659.98 MHz
2690.0 MHz - 2690.6 MHz

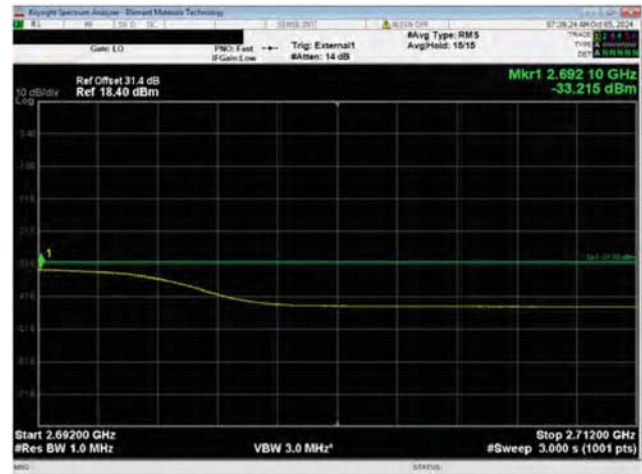


Port 1
60 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2659.98 MHz
2690.4 MHz - 2691.0 MHz

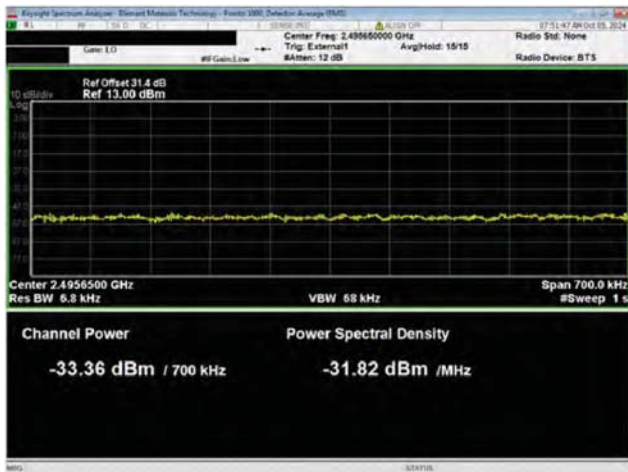
BAND EDGE COMPLIANCE



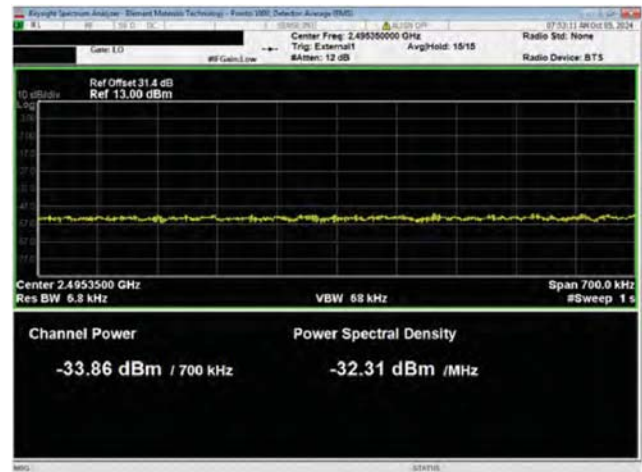
Port 1
60 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2659.98 MHz
2691.0 MHz - 2692.0 MHz



Port 1
60 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2659.98 MHz
2692.0 MHz - 2712.0 MHz

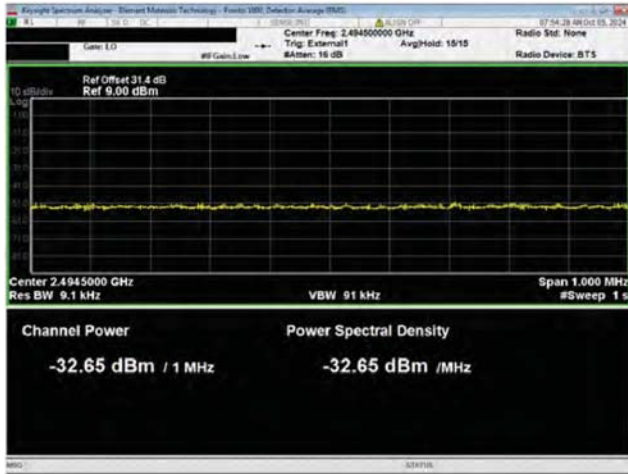


Port 1
70 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2531.01 MHz
2495.3 MHz - 2496.0 MHz

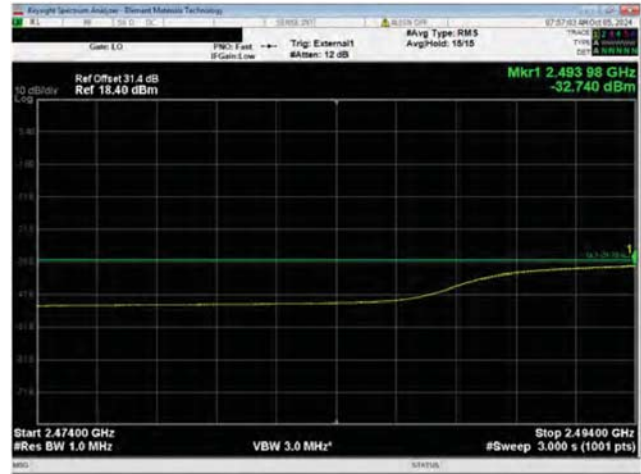


Port 1
70 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2531.01 MHz
2495.0 MHz - 2495.7 MHz

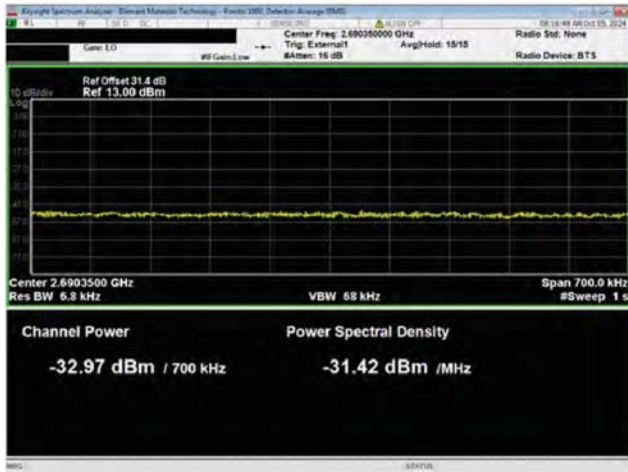
BAND EDGE COMPLIANCE



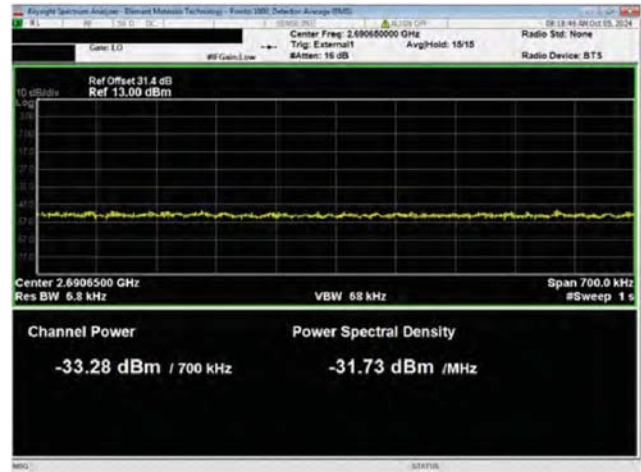
Port 1
70 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2531.01 MHz
2494.0 MHz - 2495.0 MHz



Port 1
70 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2531.01 MHz
2474.0 MHz - 2494.0 MHz

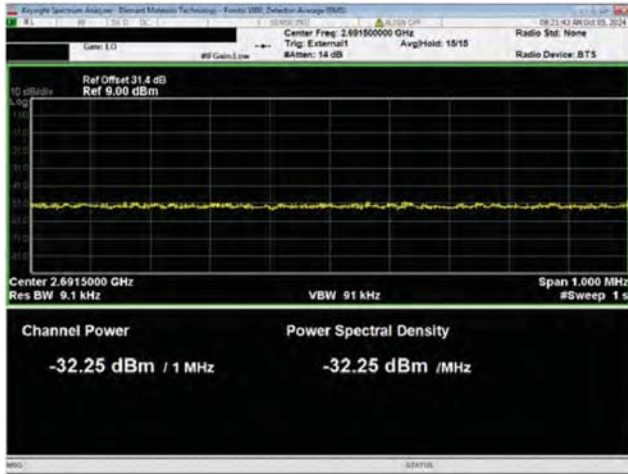


Port 1
70 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2655.00 MHz
2690.0 MHz - 2690.7 MHz

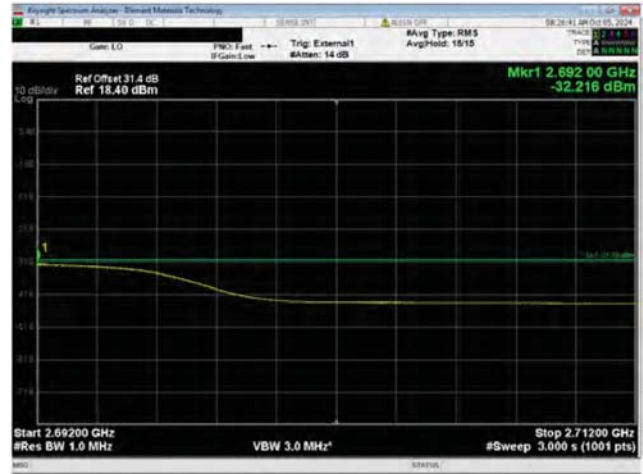


Port 1
70 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2655.00 MHz
2960.3 MHz - 2691.0 MHz

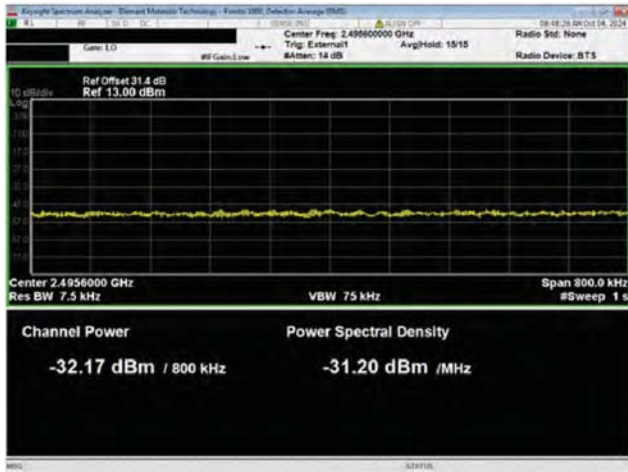
BAND EDGE COMPLIANCE



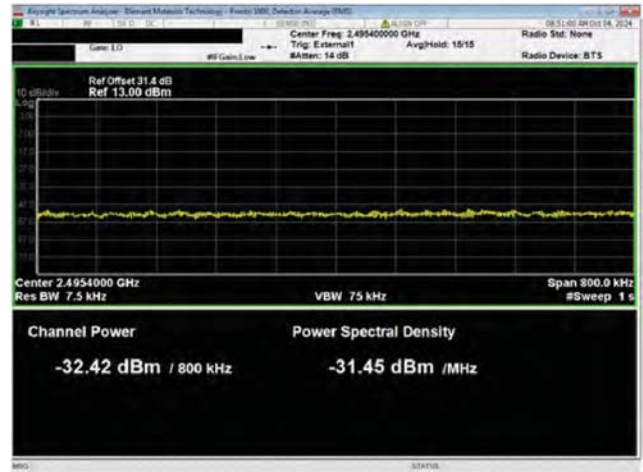
Port 1
70 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2655.00 MHz
2691.0 MHz - 2692.0 MHz



Port 1
70 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2655.00 MHz
2692.0 MHz - 2712.0 MHz

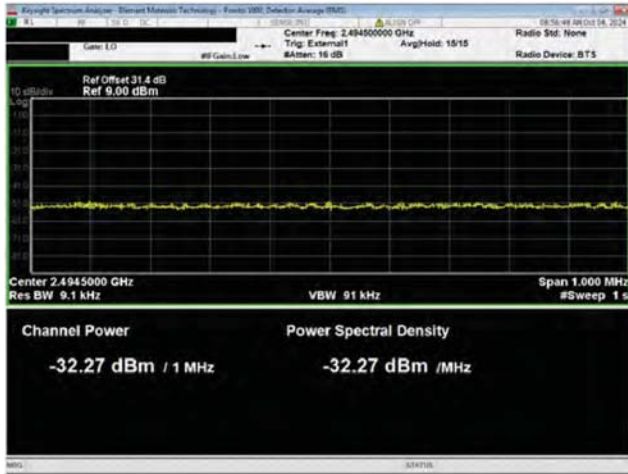


Port 1
80 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2536.02 MHz
2495.2 MHz - 2496.0 MHz

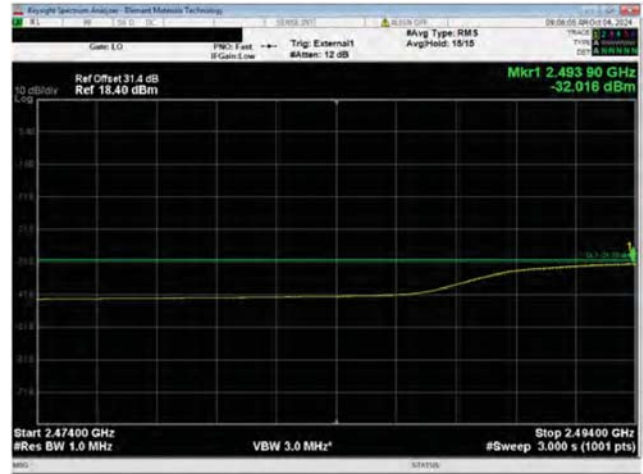


Port 1
80 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2536.02 MHz
2495.0 MHz - 2495.8 MHz

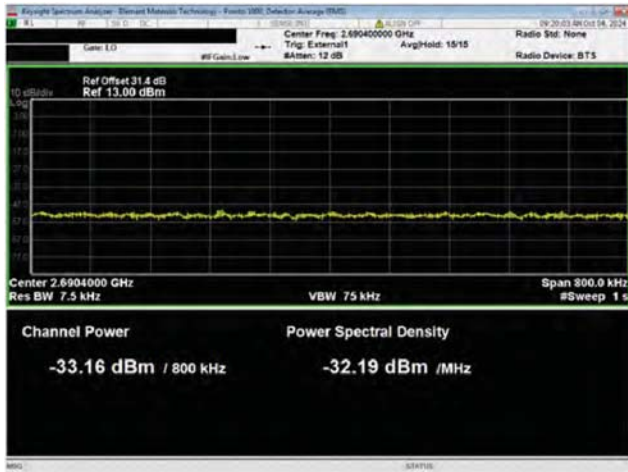
BAND EDGE COMPLIANCE



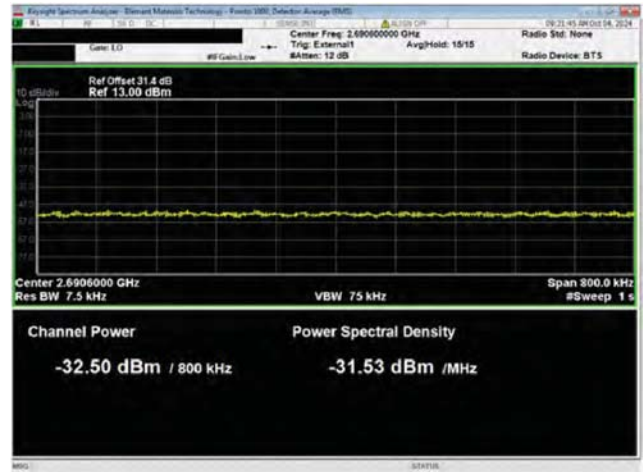
Port 1
80 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2536.02 MHz
2494.0 MHz - 2495.0 MHz



Port 1
80 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2536.02 MHz
2474.0 MHz - 2494.0 MHz

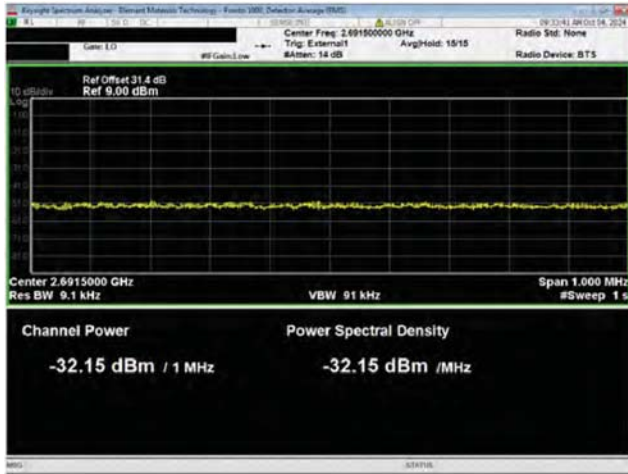


Port 1
80 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2649.99 MHz
2690.0 MHz - 2690.8 MHz

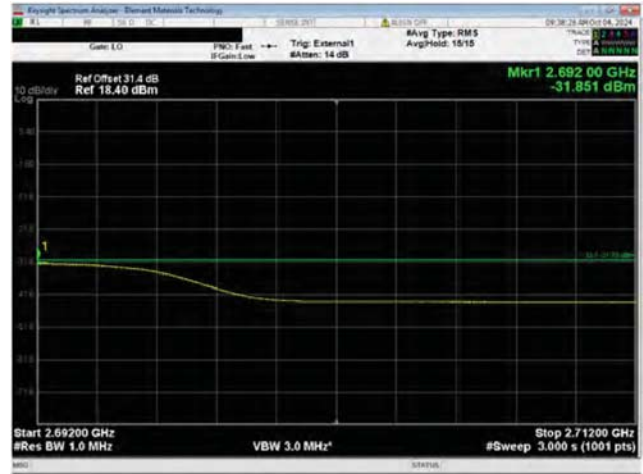


Port 1
80 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2649.99 MHz
2690.2 MHz - 2691.0 MHz

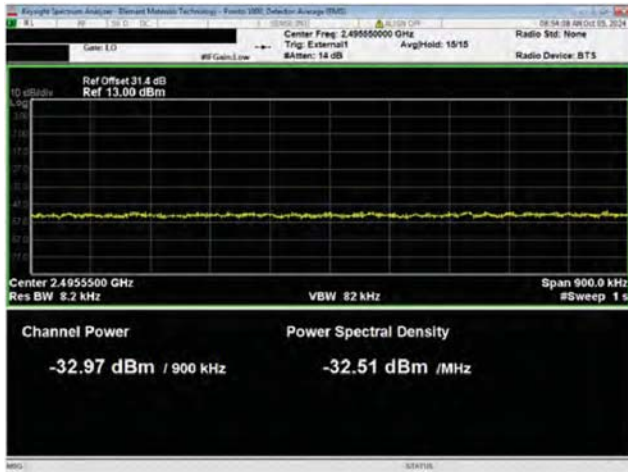
BAND EDGE COMPLIANCE



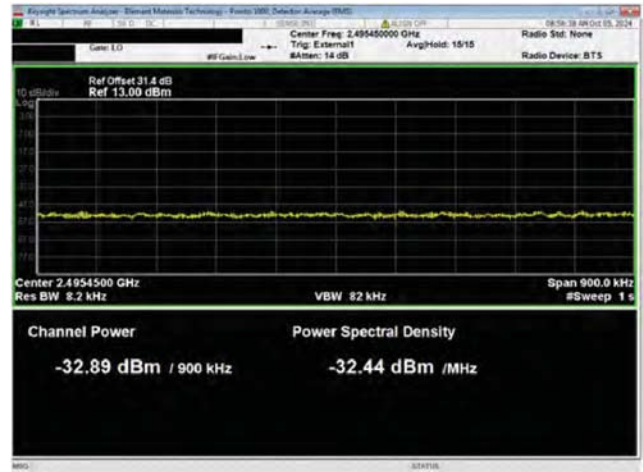
Port 1
80 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2649.99 MHz
2691.0 MHz - 2692.0 MHz



Port 1
80 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2649.99 MHz
2692.0 MHz - 2712.0 MHz

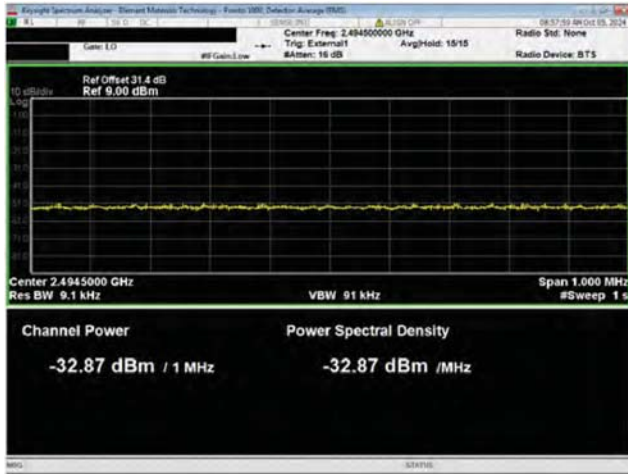


Port 1
90 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2541.00 MHz
2495.1 MHz - 2496.0 MHz

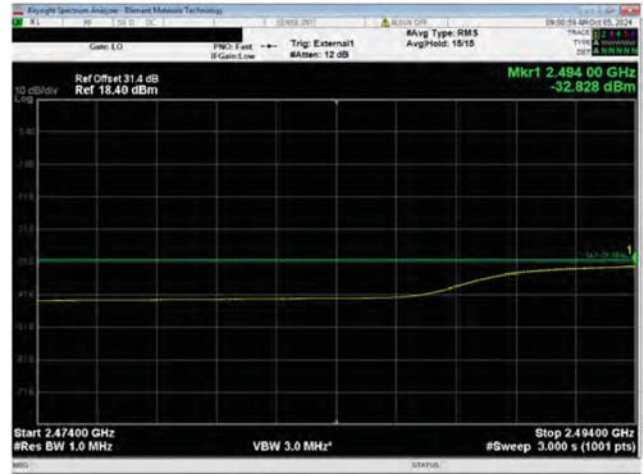


Port 1
90 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2541.00 MHz
2495.0 MHz - 2495.9 MHz

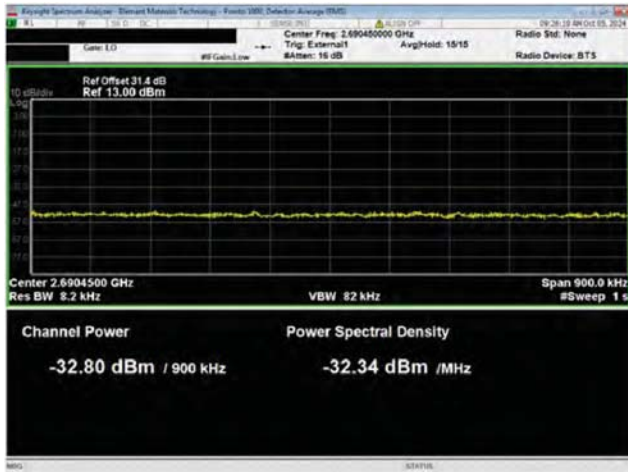
BAND EDGE COMPLIANCE



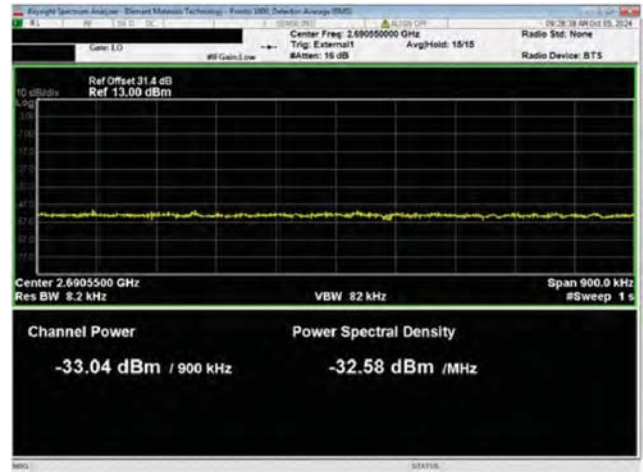
Port 1
90 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2541.00 MHz
2494.0 MHz - 2495.0 MHz



Port 1
90 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2541.00 MHz
2474.0 MHz - 2494.0 MHz

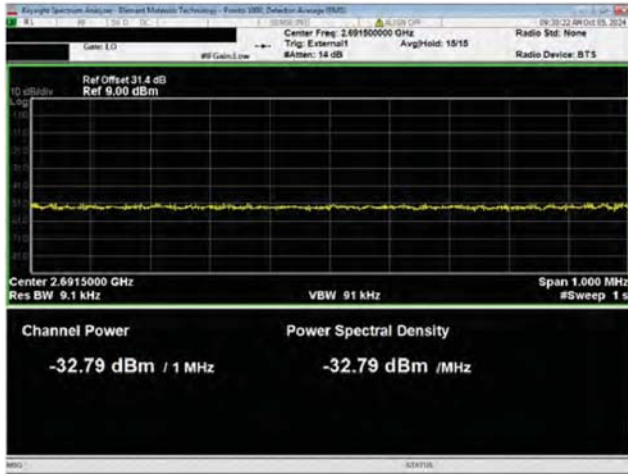


Port 1
90 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2644.98 MHz
2690.0 MHz - 2690.9 MHz

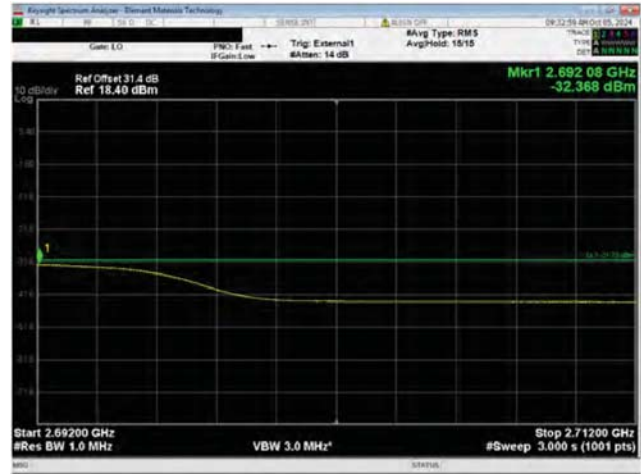


Port 1
90 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2644.98 MHz
2690.1 MHz - 2691.0 MHz

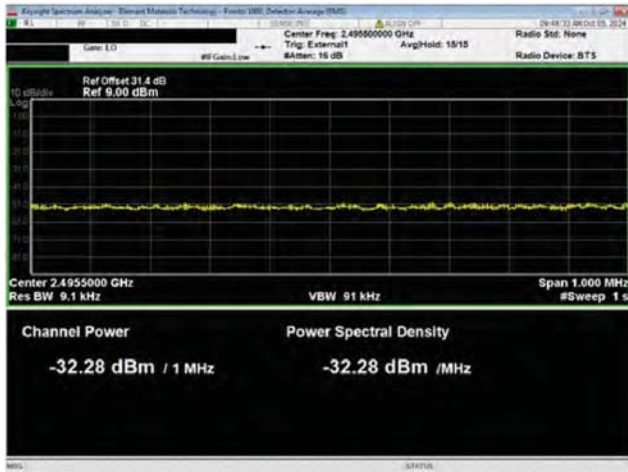
BAND EDGE COMPLIANCE



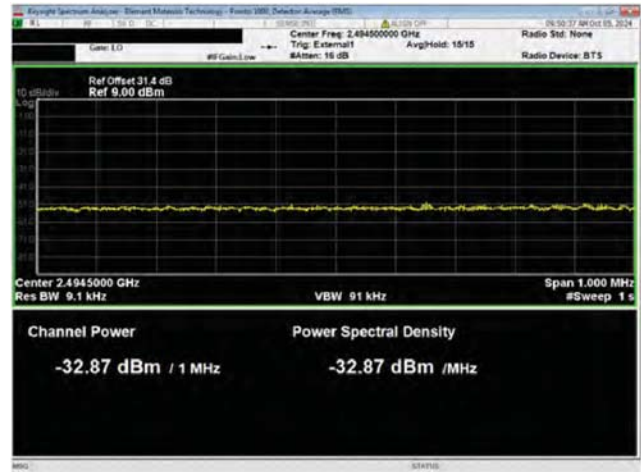
Port 1
90 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2644.98 MHz
2691.0 MHz - 2692.0 MHz



Port 1
90 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2644.98 MHz
2692.0 MHz - 2712.0 MHz

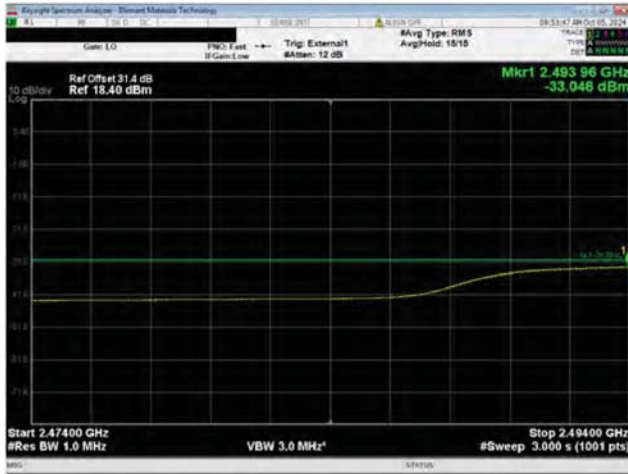


Port 1
100 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2546.01 MHz
2495.0 MHz - 2496.0 MHz

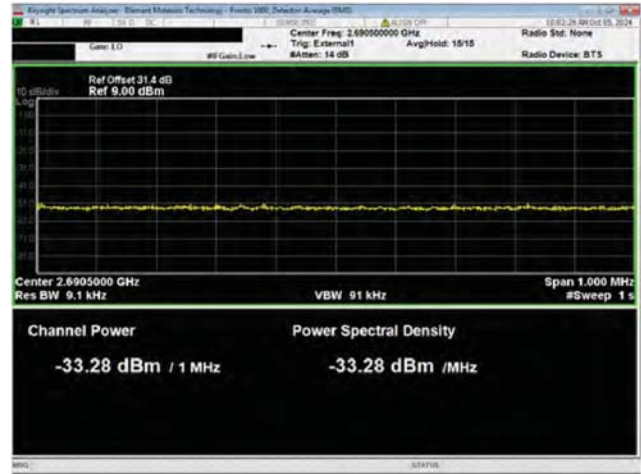


Port 1
100 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2546.01 MHz
2494.0 MHz - 2495.0 MHz

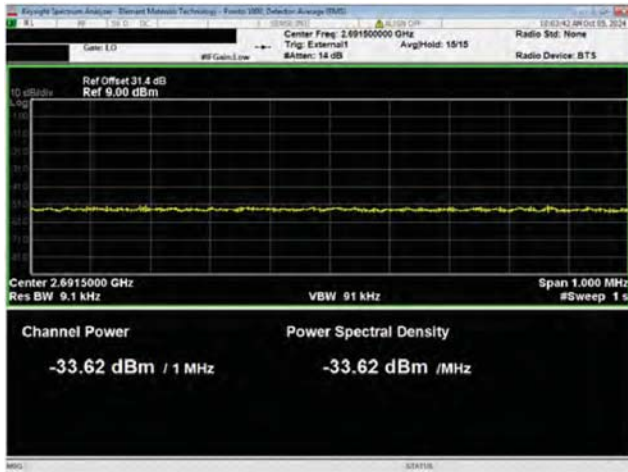
BAND EDGE COMPLIANCE



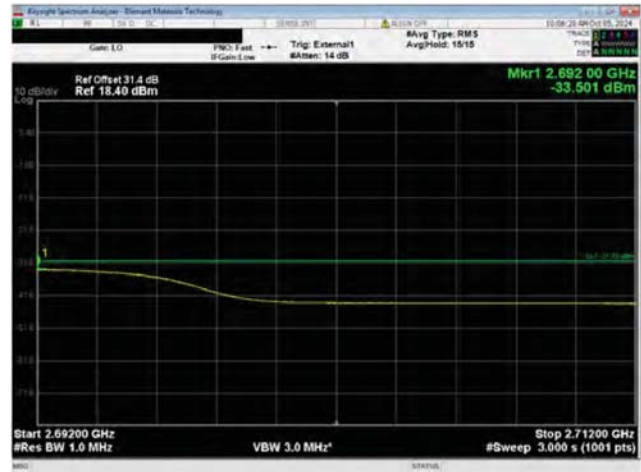
Port 1
100 MHz Channel Bandwidth
QPSK Modulation
Low Channel, 2546.01 MHz
2474.0 MHz - 2494.0 MHz



Port 1
100 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2640.00 MHz
2690.0 MHz - 2691.0 MHz



Port 1
100 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2640.00 MHz
2691.0 MHz - 2692.0 MHz



Port 1
100 MHz Channel Bandwidth
QPSK Modulation
High Channel, 2640.00 MHz
2692.0 MHz - 2712.0 MHz

BAND EDGE COMPLIANCE - MULTICARRIER



TEST DESCRIPTION

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The spurious RF conducted emissions at the edges of the authorized bands were measured on the low and high transmit frequencies of the available band. The channels closest to the band edges were selected. The EUT was transmitting at the power and data rate(s) listed in the datasheet.

RF conducted emissions testing was performed only on one port. The Aircscale Base Transceiver Station Radio Unit Model AVHA antenna ports are essentially electrically identical (the RF power variation between antenna ports is small as shown in this certification testing) and antenna port 1 was selected to perform the testing under this effort as allowed by ANSI C63.26-2015 paragraph 5.7.2i.

The spectrum was scanned below the lower band edge and above the higher band edge.

The measurement methods for FCC measurements are detailed in KDB971168 D01v03 section 6 and ANSI C63.26-2015. Measurements shall be performed at full power on the channel(s) and bandwidth(s) specified by the compliance lab for 5G NR modulation. These measurements are for first 1.0 MHz bands immediately outside and adjacent to the frequency block.

Per section 27.53(m)(2), the power of any emission outside of the authorized operating frequency range cannot exceed -13 dBm. The AVHA AirScale MAA operates as a 64 port MIMO transmitter. The limit is adjusted to -31.1 dBm [-13 dBm -10 log (64)] per FCC KDB 662911D01 v02r01, and ANSI C63.26-2015 section 6.4 because the BTS may operate as a 64 port MIMO transmitter).

The resolution bandwidth to be used for these measurements shall be 1% of the measured emission bandwidth per FCC 27.53(m)(6). A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided that the measured power is integrated over the full required measurement bandwidth (i.e.: 1MHz or 1% of measured emission bandwidth as specified) per FCC 27.53(m)(6).

Multicarrier test cases have been developed as shown below:

- a) *Multicarrier Test Case 1:* Two contiguous NR10 carriers with minimum spacing between carrier frequencies at the lower band edge (2501.01MHz, 2511.0MHz). The smallest channel bandwidth is selected to maximize carrier power spectral density. The carriers are operated at maximum power [31dBm] (80W/carrier) with a total radio power of 160 watts.
- b) *Multicarrier Test Case 2:* Two contiguous NR10 carriers with minimum spacing between carrier frequencies at the upper band edge (2674.98MHz, 2685.00MHz). The smallest channel bandwidth is selected to maximize carrier power spectral density. The carriers are operated at maximum power [31dBm] (80W/carrier) with a total radio power of 160 watts.
- c) *Multicarrier Test Case 3:* Two non-contiguous NR10 Carriers at maximum power with one carrier (2501.01MHz) at the bottom channel and one carrier (2685.00MHz) at the top channel. The carrier power for both NR10 is set to [31dBm] (80W/carrier). The total radio power is 160 watts.
- d) *Multicarrier Test Case 4:* Two Non-contiguous carriers with one NR100 Carrier (2546.01MHz) at the bottom channel and one NR90 Carrier (2644.98MHz) at the top channel (maximum spacing between carriers). All carriers at the same power level (200W/carrier), (34.8dBm/port). The total radio power is 400 watts.
- e) *Multicarrier Test Case 5:* Two Non-contiguous carriers with one NR90 Carrier (2541MHz) at the bottom channel and one NR100 Carrier (2640MHz) at the top channel (maximum spacing between carriers). All carriers at the same power level (200W/carrier) (34.8dBm/port). The total radio power is 400 watts.

BAND EDGE COMPLIANCE - MULTICARRIER



TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFQ	2024-03-12	2025-03-12
Generator - Signal	Agilent	N5173B	TIW	2023-08-07	2026-08-07
Block - DC	Fairview Microwave	SD3379	AMM	2024-08-15	2025-08-15

BAND EDGE COMPLIANCE - MULTICARRIER



EUT:	Airscale Base Transceiver Station Radio Unit Model AVHA	Work Order:	NOKI0079
Serial Number:	L1242005329	Date:	2024-10-07
Customer:	Nokia Solutions and Networks	Temperature:	21.3°C
Attendees:	Mitch Hill, David Le	Relative Humidity:	41.9%
Customer Project:	None	Bar. Pressure (PMSL):	1016 mbar
Tested By:	Jarrold Brenden	Job Site:	PT14
Power:	54VDC	Configuration:	NOKI0079-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 27:2024	ANSI C63.26:2015

COMMENTS

All losses in the measurement path were accounted for in the reference level offset; attenuators, filters, cables, and DC blocks. BRS Band n41 carriers were enabled at maximum power levels.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

Tested By

TEST RESULTS

	Frequency Range	Frequency (MHz)	Value (dBm)	Limit (dBm)	Result
Port 1					
QPSK Modulation					
Multicarrier Test Case 1					
NR10, Low Channel, 2501.01 MHz and NR10, Low Channel, 2511.00 MHz	2495.0 MHz - 2497.0 MHz	2496	-38.5	-31.1	Pass
	2494.0 MHz - 2495.0 MHz	2494.5	-33.5	-31.1	Pass
	2474.0 MHz - 2494.0 MHz	2494	-33.76	-31.1	Pass
Multicarrier Test Case 2					
NR10, High Channel, 2674.98 MHz and NR10, High Channel, 2685.00 MHz	2689.0 MHz - 2691.0 MHz	2690	-37.353	-31.1	Pass
	2691.0 MHz - 2692.0 MHz	2691.5	-32.71	-31.1	Pass
	2692.0 MHz - 2712.0 MHz	2692.06	-32.45	-31.1	Pass
Multicarrier Test Case 3					
NR10, Low Channel, 2501.01 MHz and NR10, High Channel, 2685.00 MHz	2495.0 MHz - 2497.0 MHz	2496	-37.382	-31.1	Pass
	2494.0 MHz - 2495.0 MHz	2494.5	-32.16	-31.1	Pass
	2474.0 MHz - 2494.0 MHz	2494	-32.301	-31.1	Pass
	2689.0 MHz - 2691.0 MHz	2690	-36.863	-31.1	Pass
	2691.0 MHz - 2692.0 MHz	2691.5	-33.97	-31.1	Pass
	2692.0 MHz - 2712.0 MHz	2692.06	-33.252	-31.1	Pass
Multicarrier Test Case 4					
NR100, Low Channel, 2546.01 MHz and NR90, High Channel, 2644.98 MHz	2495.0 MHz - 2496.0 MHz	2495.5	-32.21	-31.1	Pass
	2494.0 MHz - 2495.0 MHz	2494.5	-32.43	-31.1	Pass
	2474.0 MHz - 2494.0 MHz	2493.88	-32.481	-31.1	Pass
	2690.0 MHz - 2690.9 MHz	2690.45	-33.61	-31.1	Pass
	2690.1 MHz - 2691.0 MHz	2690.55	-33.55	-31.1	Pass
	2691.0 MHz - 2692.0 MHz	2691.5	-33.46	-31.1	Pass
	2692.0 MHz - 2712.0 MHz	2692.06	-33.211	-31.1	Pass
Multicarrier Test Case 5					
NR90, Low Channel, 2541.00 MHz and	2495.1 MHz - 2496.0 MHz	2495.55	-32.21	-31.1	Pass

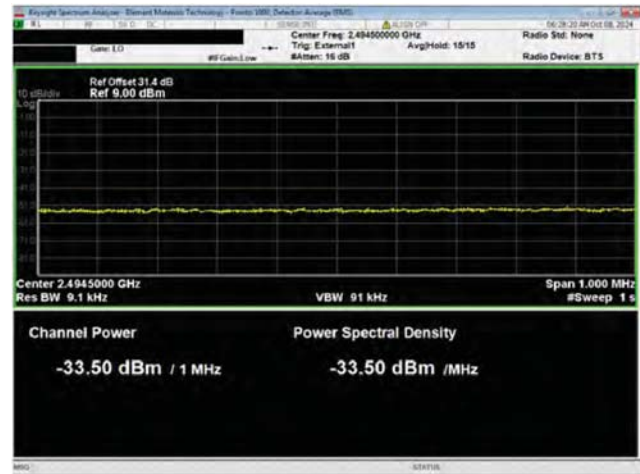
BAND EDGE COMPLIANCE - MULTICARRIER

	Frequency Range	Frequency (MHz)	Value (dBm)	Limit (dBm)	Result
NR100, High Channel, 2640.00 MHz	2495.0 MHz - 2495.9 MHz	2495.45	-32.43	-31.1	Pass
	2494.0 MHz - 2495.0 MHz	2494.5	-32.27	-31.1	Pass
	2474.0 MHz - 2494.0 MHz	2493.48	-32.271	-31.1	Pass
	2690.0 MHz - 2691.0 MHz	2690.5	-33.03	-31.1	Pass
	2691.0 MHz - 2692.0 MHz	2691.5	-33.39	-31.1	Pass
	2692.0 MHz - 2712.0 MHz	2692	-33.078	-31.1	Pass

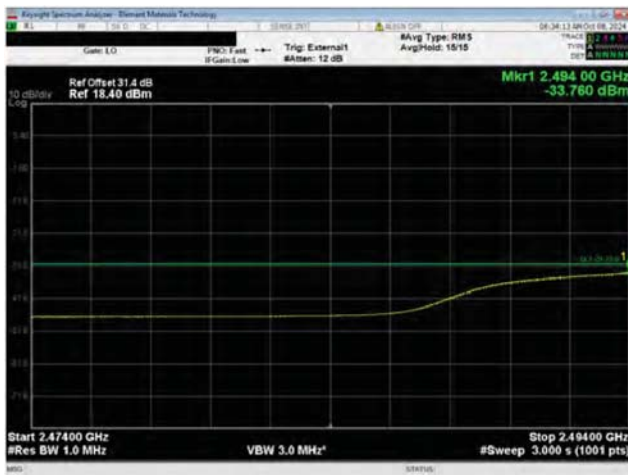
BAND EDGE COMPLIANCE - MULTICARRIER



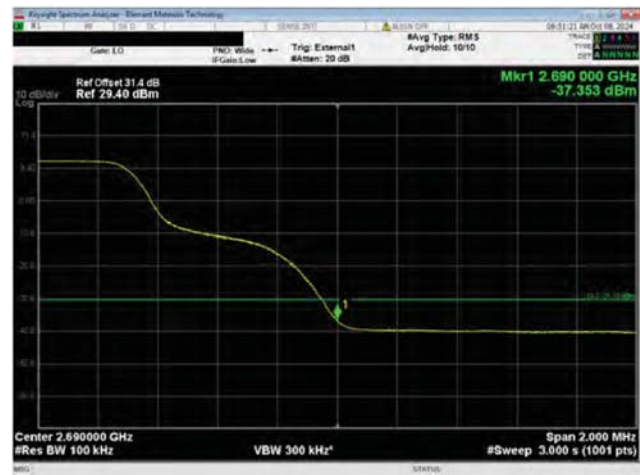
Port 1
QPSK Modulation
Multicarrier Test Case 1
2495.0 MHz - 2496.0 MHz



Port 1
QPSK Modulation
Multicarrier Test Case 1
2494.0 MHz - 2495.0 MHz

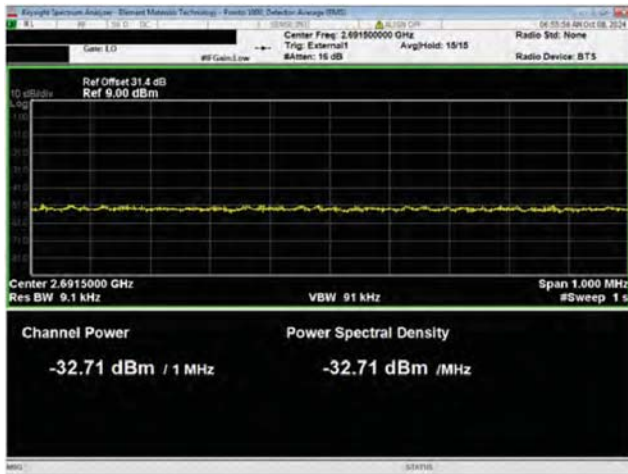


Port 1
QPSK Modulation
Multicarrier Test Case 1
2474.0 MHz - 2494.0 MHz

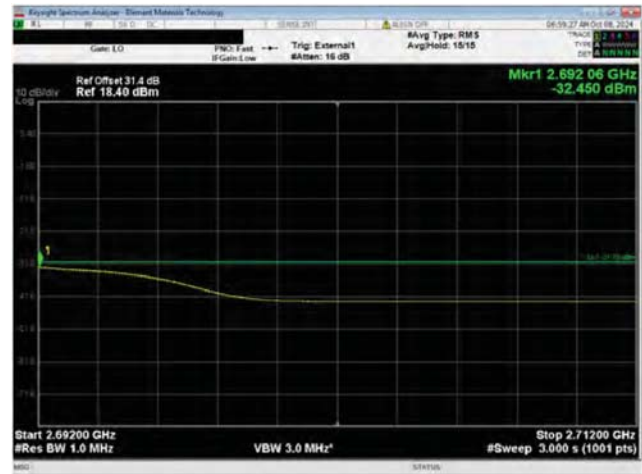


Port 1
QPSK Modulation
Multicarrier Test Case 2
2690.0 MHz - 2691.0 MHz

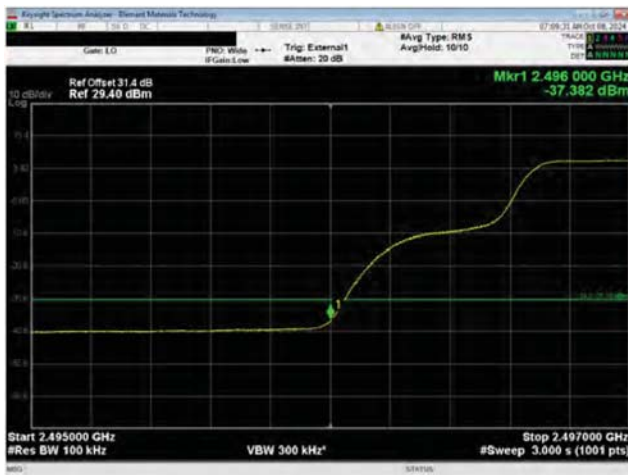
BAND EDGE COMPLIANCE - MULTICARRIER



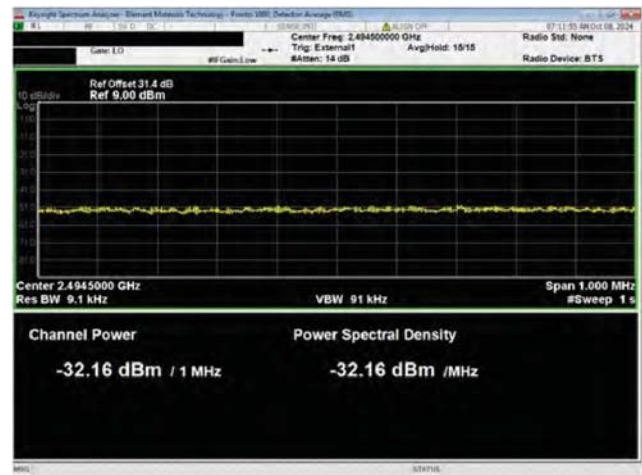
Port 1
QPSK Modulation
Multicarrier Test Case 2
2691.0 MHz - 2692.0 MHz



Port 1
QPSK Modulation
Multicarrier Test Case 2
2692.0 MHz - 2712.0 MHz

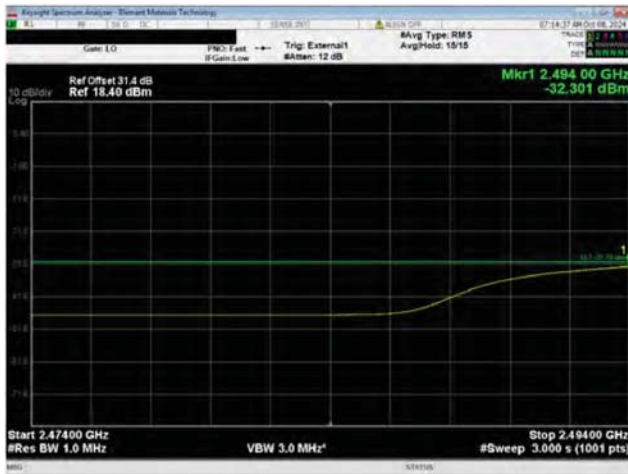


Port 1
QPSK Modulation
Multicarrier Test Case 3
2495.0 MHz - 2497.0 MHz



Port 1
QPSK Modulation
Multicarrier Test Case 3
2494.0 MHz - 2495.0 MHz

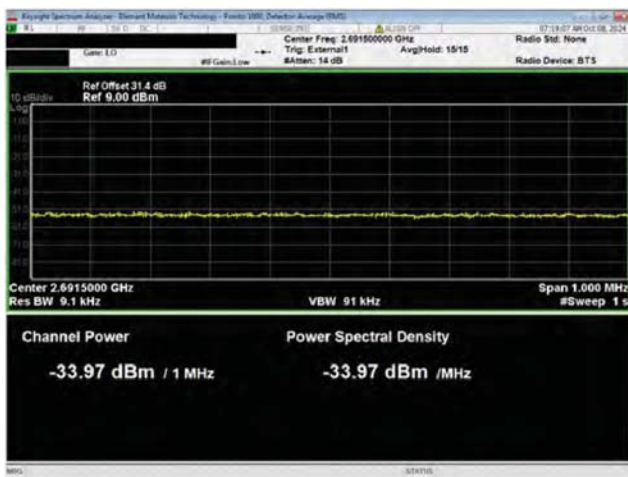
BAND EDGE COMPLIANCE - MULTICARRIER



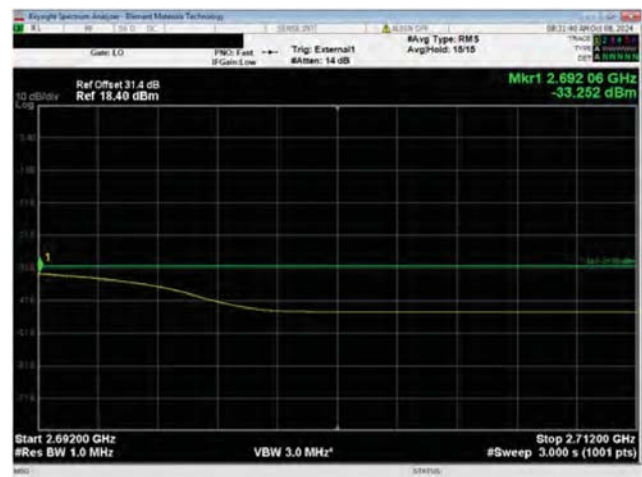
Port 1
QPSK Modulation
Multicarrier Test Case 3
2474.0 MHz - 2494.0 MHz



Port 1
QPSK Modulation
Multicarrier Test Case 3
2689.0 MHz - 2691.0 MHz

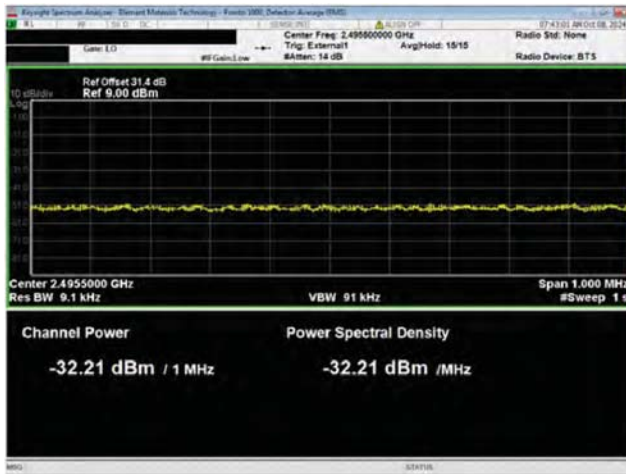


Port 1
QPSK Modulation
Multicarrier Test Case 3
2691.0 MHz - 2692.0 MHz

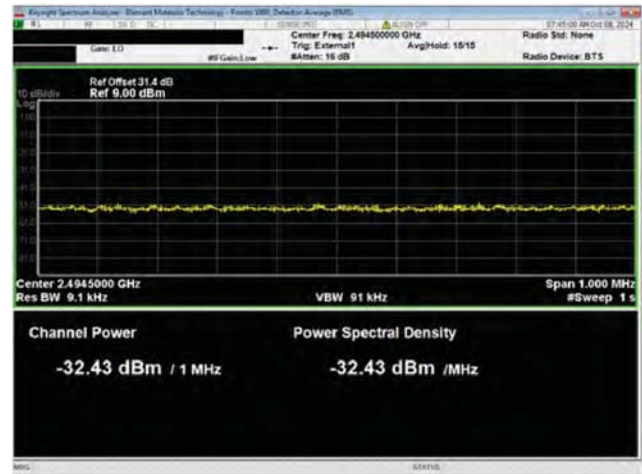


Port 1
QPSK Modulation
Multicarrier Test Case 3
2692.0 MHz - 2712.0 MHz

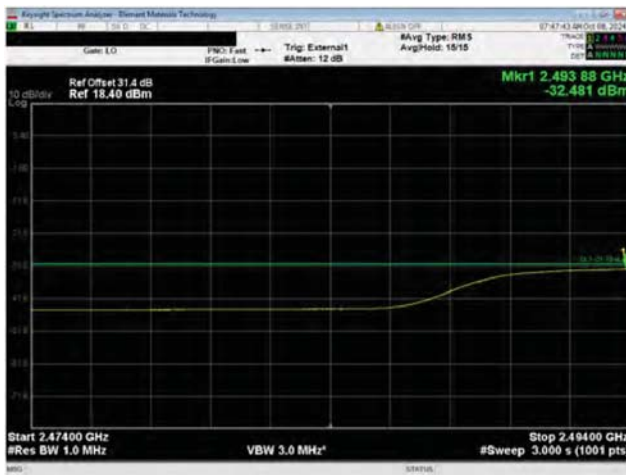
BAND EDGE COMPLIANCE - MULTICARRIER



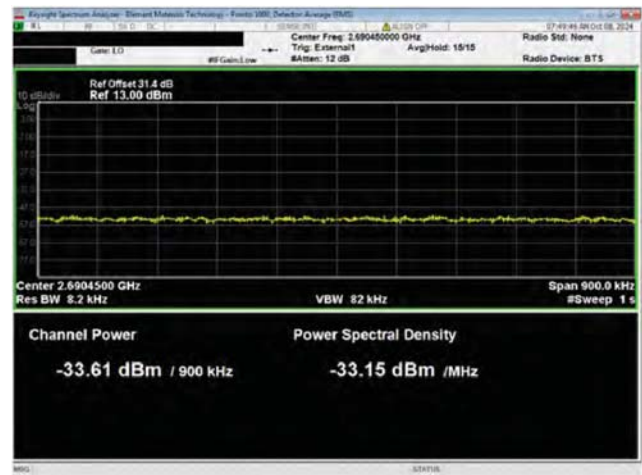
Port 1
QPSK Modulation
Multicarrier Test Case 4
2495.0 MHz - 2496.0 MHz



Port 1
QPSK Modulation
Multicarrier Test Case 4
2494.0 MHz - 2495.0 MHz

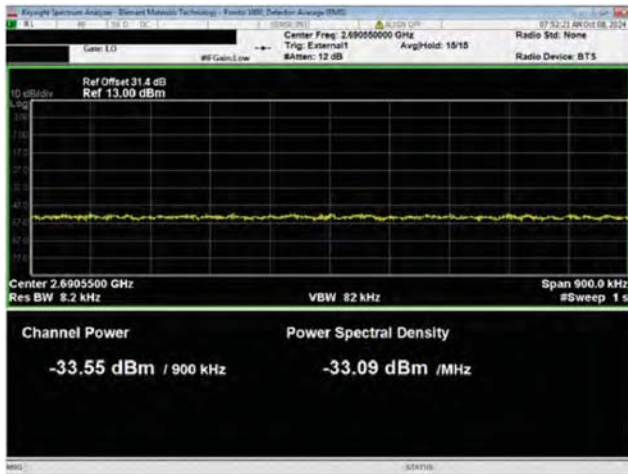


Port 1
QPSK Modulation
Multicarrier Test Case 4
2474.0 MHz - 2494.0 MHz

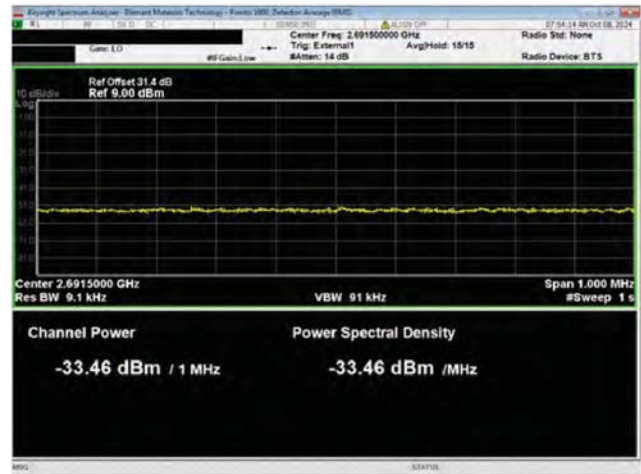


Port 1
QPSK Modulation
Multicarrier Test Case 4
2690.0 MHz - 2690.9 MHz

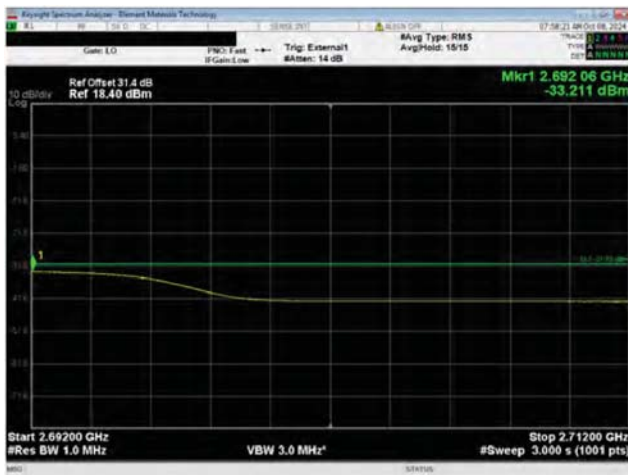
BAND EDGE COMPLIANCE - MULTICARRIER



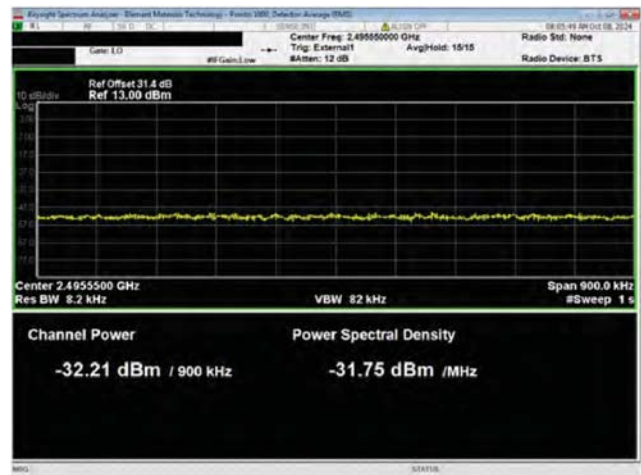
Port 1
QPSK Modulation
Multicarrier Test Case 4
2690.1 MHz - 2691.0 MHz



Port 1
QPSK Modulation
Multicarrier Test Case 4
2691.0 MHz - 2692.0 MHz

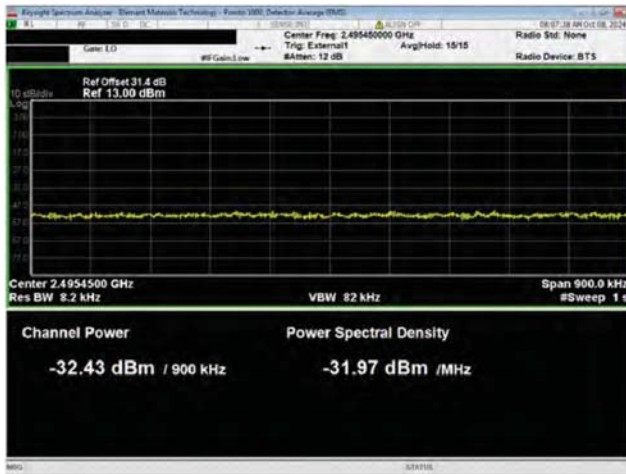


Port 1
QPSK Modulation
Multicarrier Test Case 4
2692.0 MHz - 2712.0 MHz

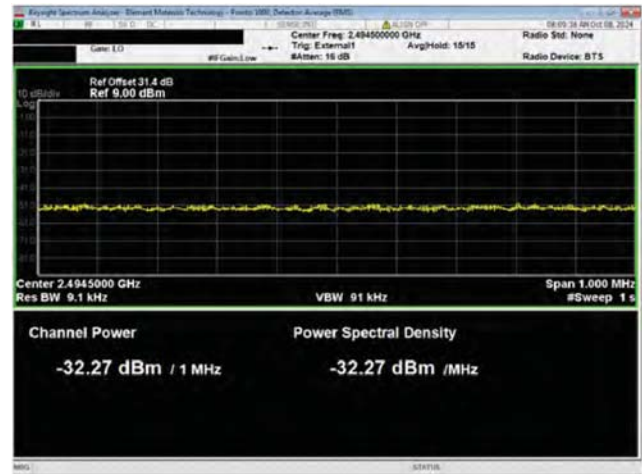


Port 1
QPSK Modulation
Multicarrier Test Case 5
2495.1 MHz - 2496.0 MHz

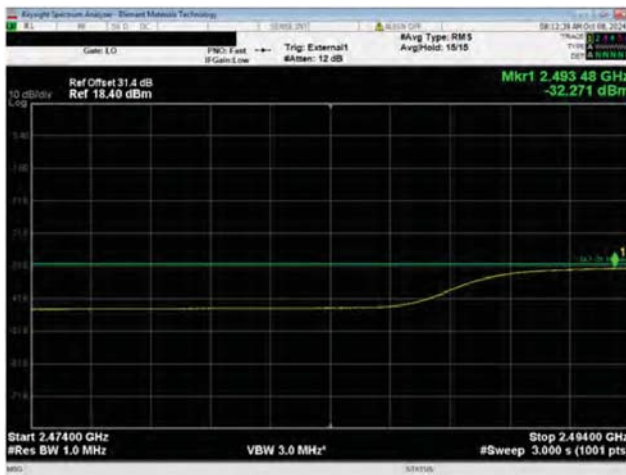
BAND EDGE COMPLIANCE - MULTICARRIER



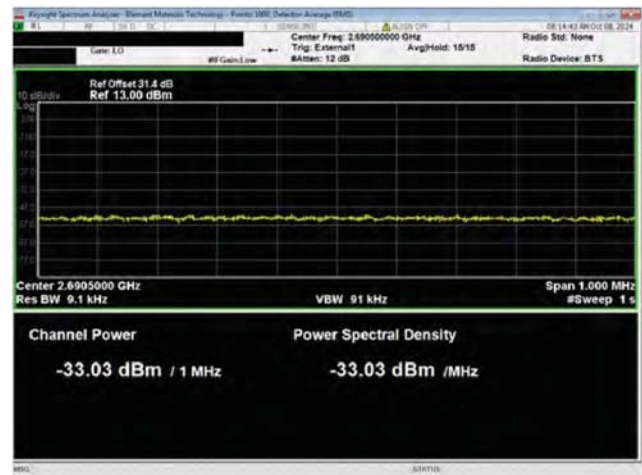
Port 1
QPSK Modulation
Multicarrier Test Case 5
2495.0 MHz - 2495.9 MHz



Port 1
QPSK Modulation
Multicarrier Test Case 5
2494.0 MHz - 2495.0 MHz

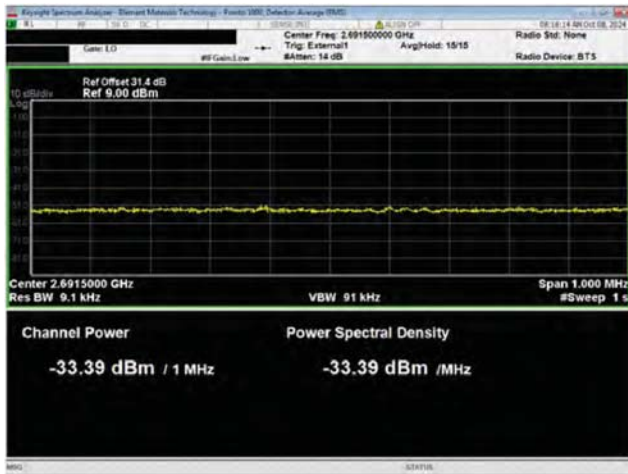


Port 1
QPSK Modulation
Multicarrier Test Case 5
2474.0 MHz - 2494.0 MHz

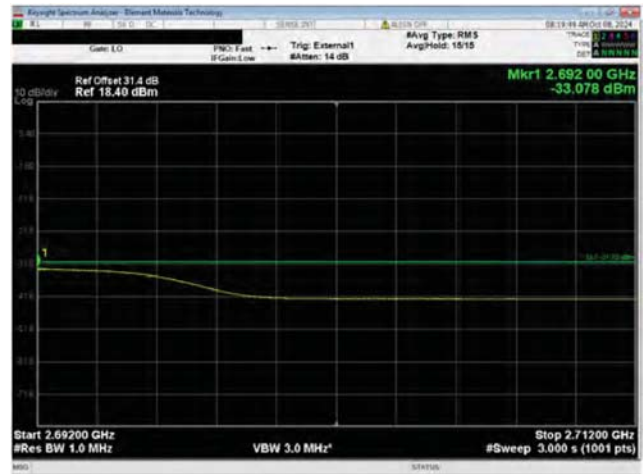


Port 1
QPSK Modulation
Multicarrier Test Case 5
2690.0 MHz - 2691.0 MHz

BAND EDGE COMPLIANCE - MULTICARRIER



Port 1
QPSK Modulation
Multicarrier Test Case 5
2691.0 MHz - 2692.0 MHz



Port 1
QPSK Modulation
Multicarrier Test Case 5
2692.0 MHz - 2712.0 MHz