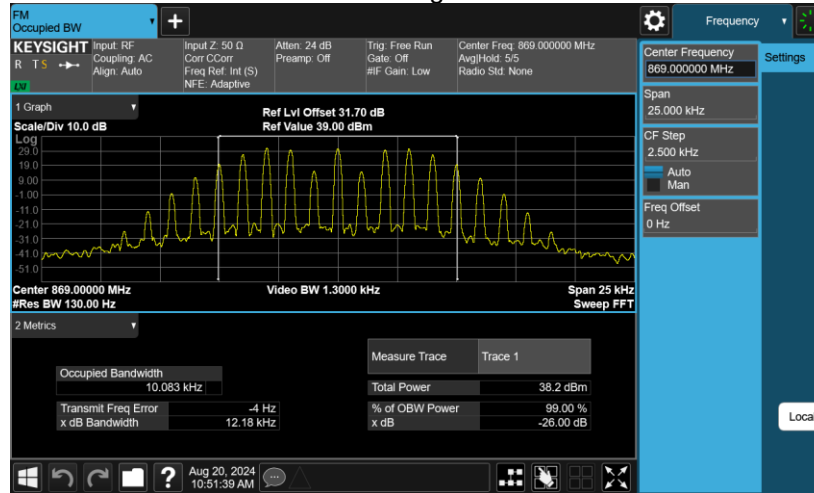
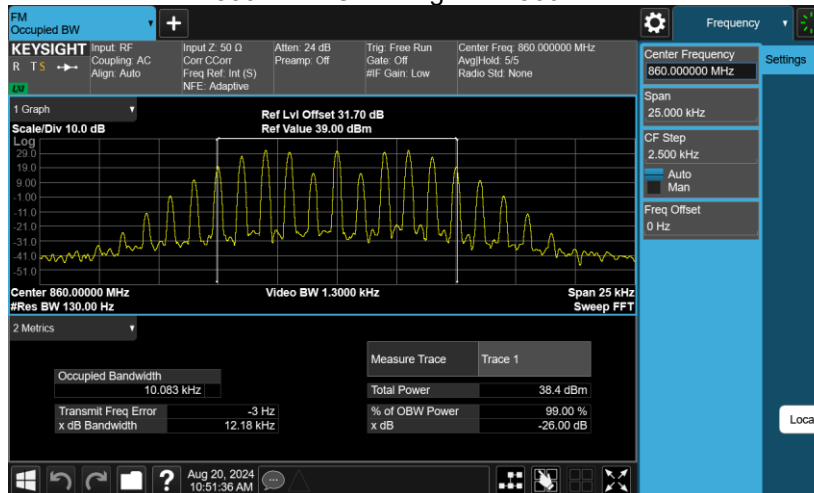


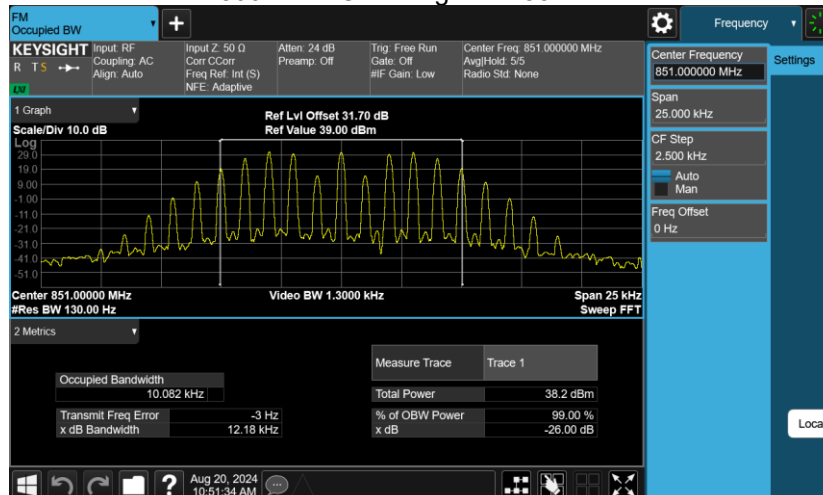
800PS ALC FM Signal at 869 MHz



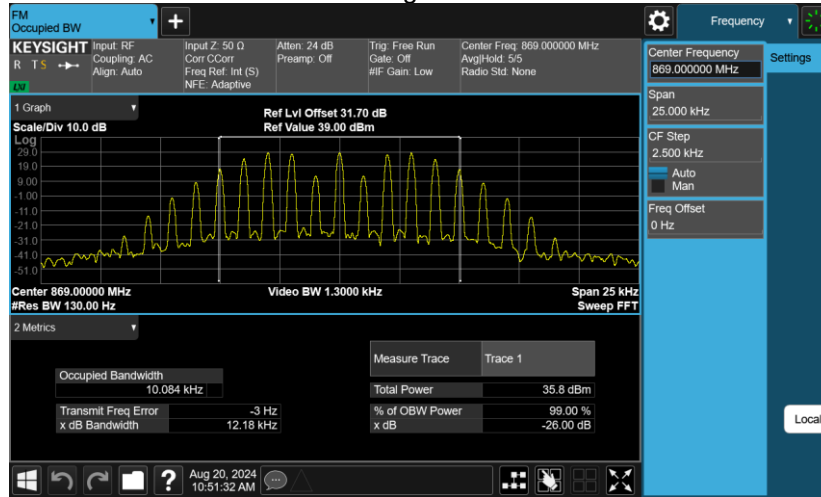
800PS ALC FM Signal at 860 MHz



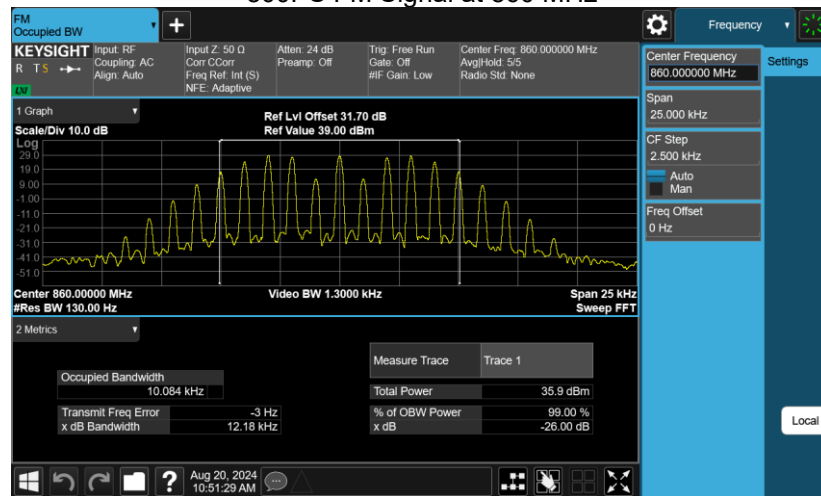
800PS ALC FM Signal at 851 MHz



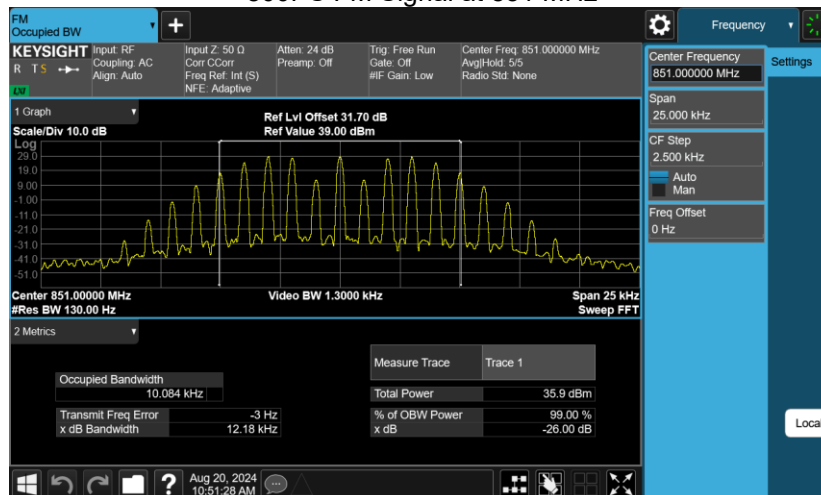
800PS FM Signal at 869 MHz



800PS FM Signal at 860 MHz



800PS FM Signal at 851 MHz



3.3 Out of Band Rejection

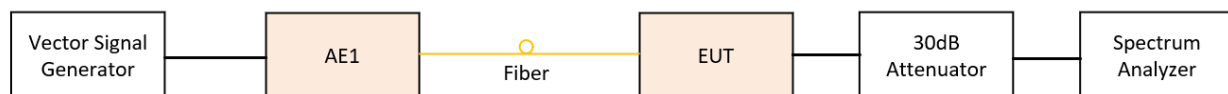
Governing Doc	RSS-119, Issue 12 2015, Amendment (April 1, 2022) RSS-Gen, Issue 5 2018 FCC Part 90	Room Temperature (°C)	20.5		
Test Procedure	ANSI C63.26-2015, Section 7.2.3.2 KDB 935210 D05, v01r04, Clause 3.3, 4.3	Relative Humidity (%)	38.6		
Test Location	Bench top, Richmond Lab	Barometric Pressure	101.8		
Test Engineer	Zara Vali	Date	August 20, 2024		
EUT Voltage	<input checked="" type="checkbox"/> +48VDC <input type="checkbox"/> 120VAC @ 60Hz				
Test Equipment Used	Manufacturer	Model	Serial Number	Calibration date	Calibration due
Signal Generator	Keysight	N5172B-506	MY53050270	Dec 12, 2023	Dec 12, 2026
Spectrum Analyzer	Keysight	N9020B-526	MY62153079	Aug 1, 2023	Aug 1, 2025
Frequency Range:	<input checked="" type="checkbox"/> Product Passband \pm 250%				
Detector:	<input checked="" type="checkbox"/> Peak				
RBW/VBW:	<input checked="" type="checkbox"/> 1 to 5% of the EUT passband / \geq 3 X RBW				
Type of Facility:	<input checked="" type="checkbox"/> Tabletop				
Distance:	<input checked="" type="checkbox"/> Direct				
Compliant <input checked="" type="checkbox"/> Non-Compliant <input type="checkbox"/> Not Applicable <input type="checkbox"/>					

Test setup

The procedure used was ANSI C63.26-2015. The signal booster was set to maximum gain. A swept CW signal was set to the range of \pm 250 % of the product pass band. The CW amplitude was set to 3 dB below the AGC threshold so that the ALC should not activate throughout the test.

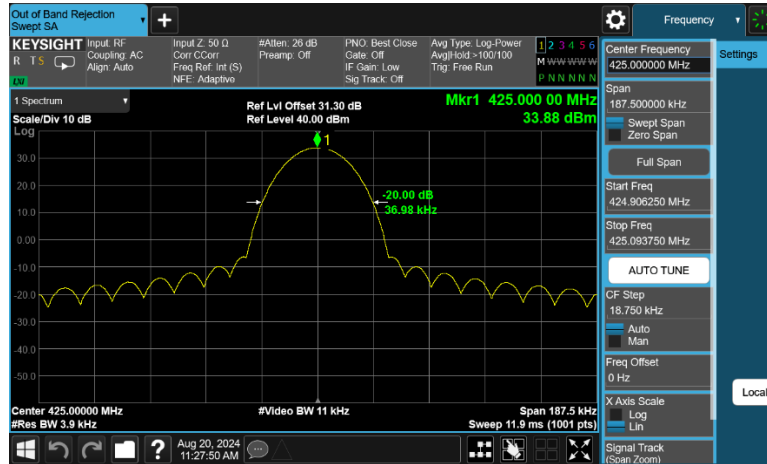
After the max-hold sweep trace was completed, a marker was set to the peak amplitude, and a 20dB bandwidth was measured between two additional markers fall 20 dB from the peak.

The EUT was set to Operation Mode #1 with configuration Mode #1.

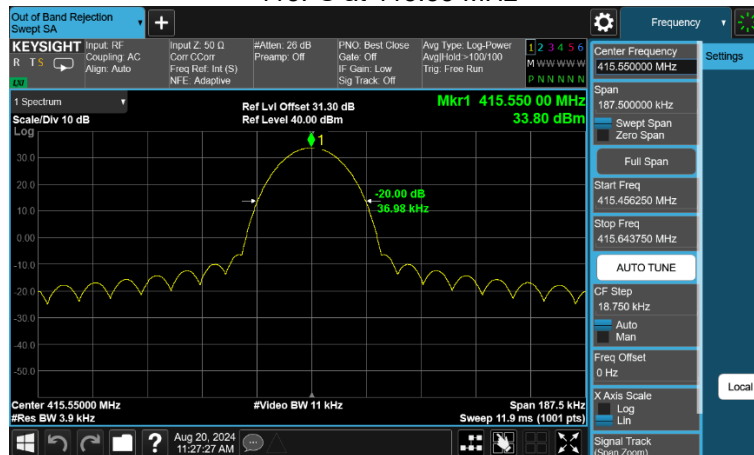


Results - Out of Band Rejection (415PS)

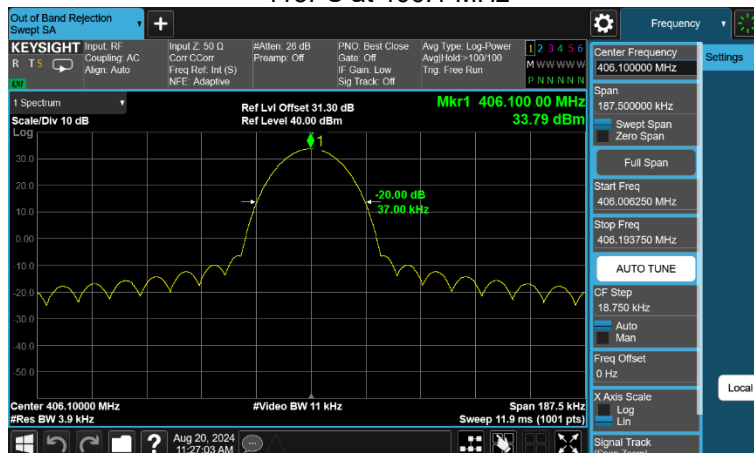
415PS at 425 MHz



415PS at 415.55 MHz

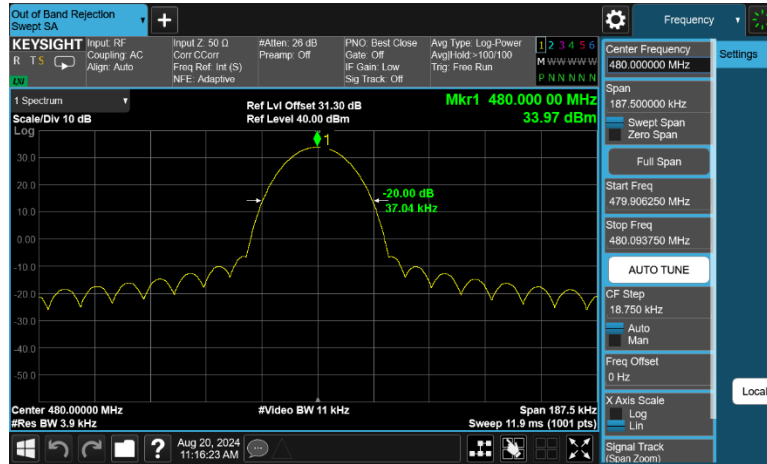


415PS at 406.1 MHz

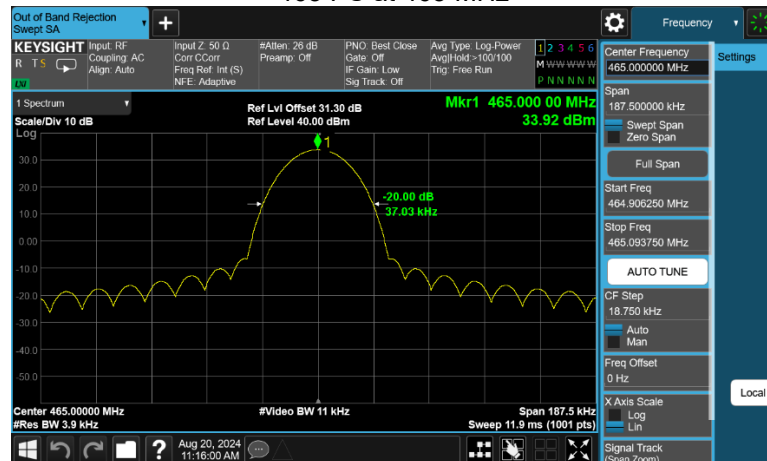


Results - Out of Band Rejection (465 PS)

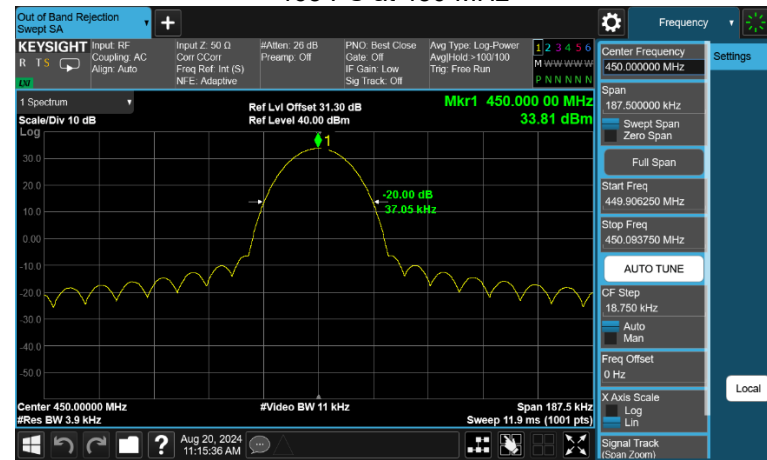
465 PS at 480 MHz



465 PS at 465 MHz

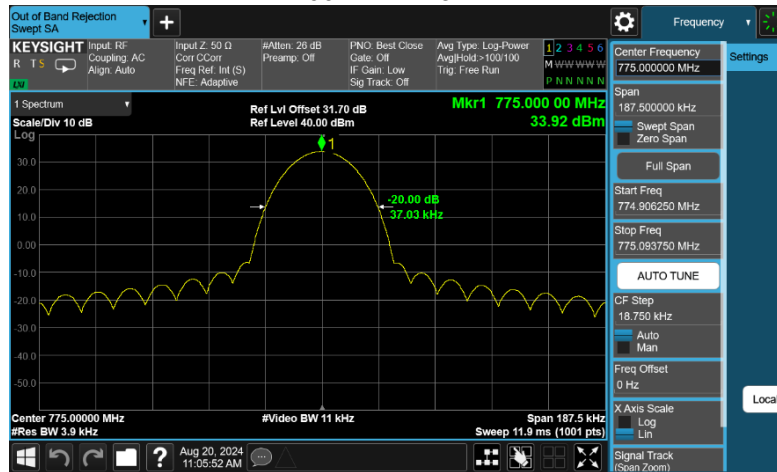


465 PS at 450 MHz

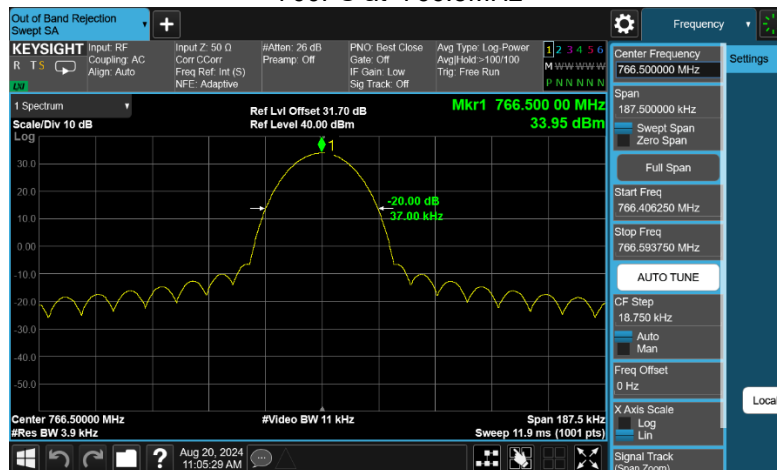


Results - Out of Band Rejection (700PS)

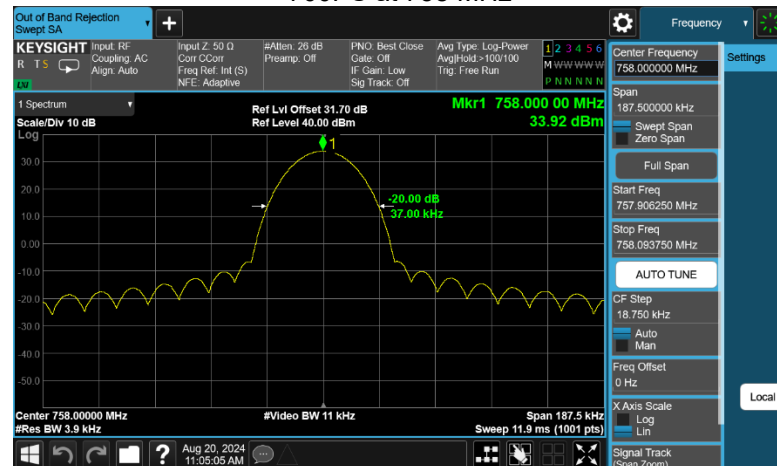
700PS at 775MHz



700PS at 766.5MHz

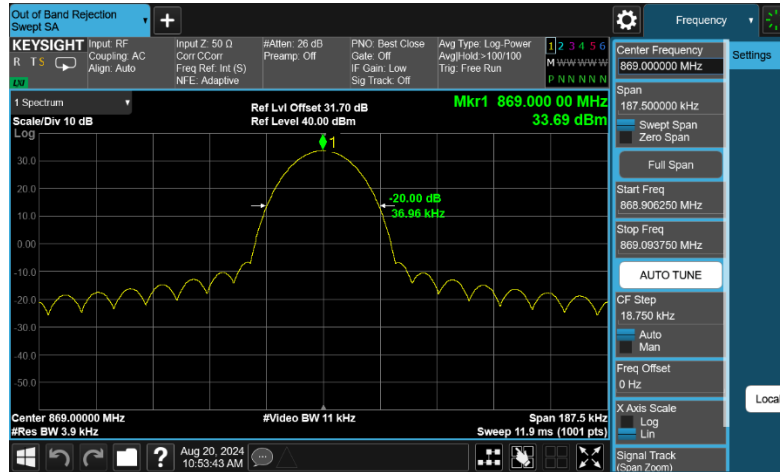


700PS at 758 MHz

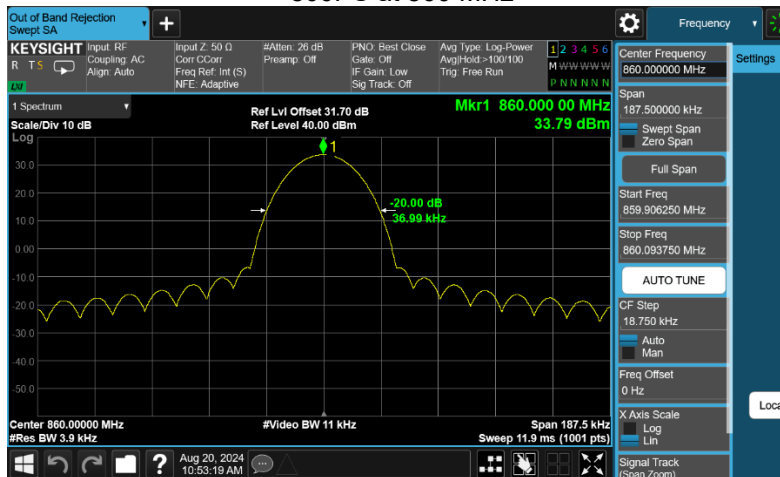


Results - Out of Band Rejection (800PS)

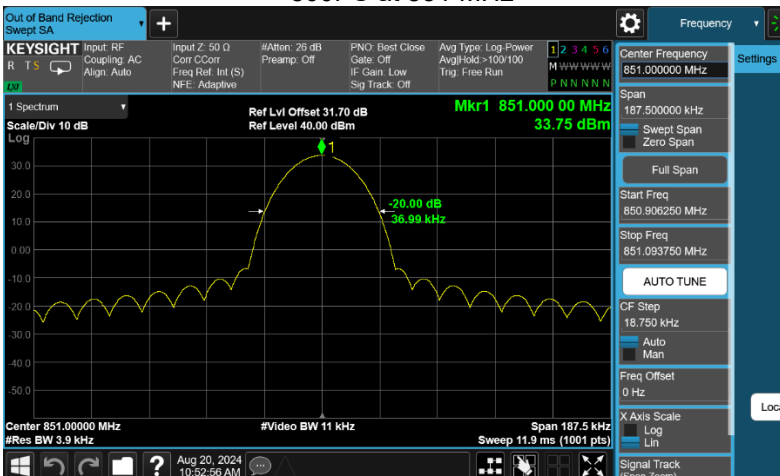
800PS at 869 MHz



800PS at 860 MHz



800PS at 851 MHz



3.4 Input-Versus-Output Signal Comparison

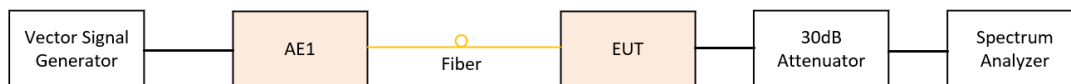
Governing Doc	RSS-119, Issue 12 2015, Amendment (April 1, 2022) RSS-Gen, Issue 5 2018 FCC Part 90		Room Temperature (°C)	20.5	
Test Procedure	ANSI C63.26-2015, Section 7.2.3.3 KDB 935210 D05, v01r04, Clause 3.4, 4.4		Relative Humidity (%)	38.6	
Test Location	Bench top, Richmond Lab		Barometric Pressure (kPa)	101.8	
Test Engineer	Zara Vali		Date	August 20, 2024	
EUT Voltage	<input checked="" type="checkbox"/> +48VDC <input type="checkbox"/> 120VAC @ 60Hz				
Test Equipment Used	Manufacturer	Model	Serial Number	Calibration date	Calibration due
Signal Generator	Keysight	N5172B-506	MY53050270	Dec 12, 2023	Dec 12, 2026
Spectrum Analyzer	Keysight	N9020B-526	MY62153079	Aug 1, 2023	Aug 1, 2025
Frequency Range:	<input checked="" type="checkbox"/> 405 MHz – 425 MHz <input checked="" type="checkbox"/> 450 MHz – 512 MHz <input checked="" type="checkbox"/> 851 MHz – 869 MHz <input checked="" type="checkbox"/> 758 MHz – 775 MHz				
Detector:	<input checked="" type="checkbox"/> Peak				
RBW/VBW:	<input checked="" type="checkbox"/> 100 Hz				
Type of Facility:	<input checked="" type="checkbox"/> Testbench				
Distance:	<input checked="" type="checkbox"/> direct connect				
Arrangement of EUT:	<input checked="" type="checkbox"/> Table-top only <input type="checkbox"/> Floor-standing only <input type="checkbox"/> Rack Mounted				
Signal of all types of modulation is contained within the emission mask.					
Compliant <input checked="" type="checkbox"/> Non-Compliant <input type="checkbox"/> Not Applicable <input type="checkbox"/>					

Test setup

Spectrum Emission Mask is measured by connecting a Spectrum Analyzer to the RF output connector. The input power was adjusted to produce maximum output power on the antenna port. The reference level was measured with integrated BW of the designated channel BW. The emission was measured with RBW 100 Hz.

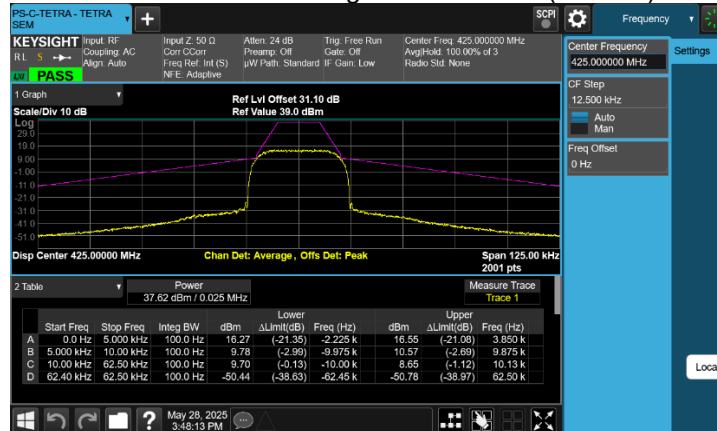
Mask types according to FCC § 90.210 Emission masks were applied to all measurements. The mask applied is specified in the title of each plot.

The EUT was set to **Operation Mode #1 with configuration Mode #1**.

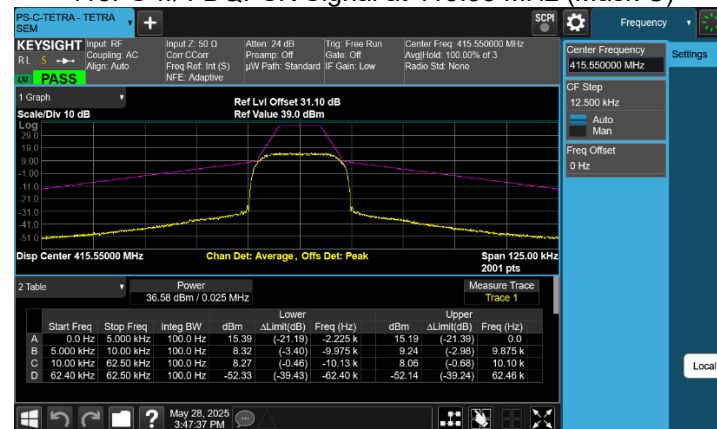


Results - Spectrum Emission Mask (415PS)

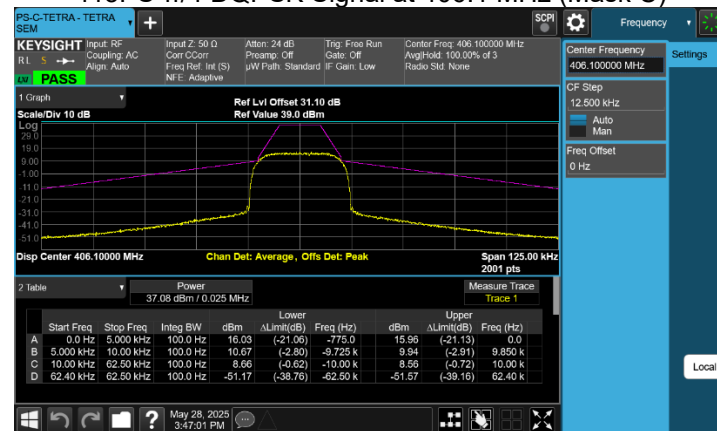
415PS $\pi/4$ DQPSK Signal at 425 MHz (Mask C)



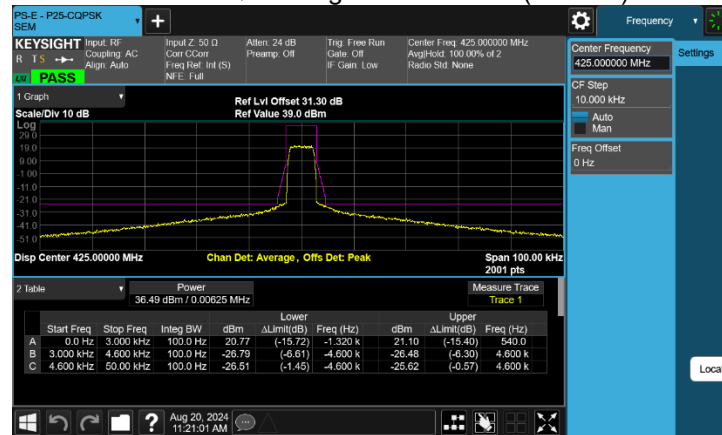
415PS $\pi/4$ DQPSK Signal at 415.55 MHz (Mask C)



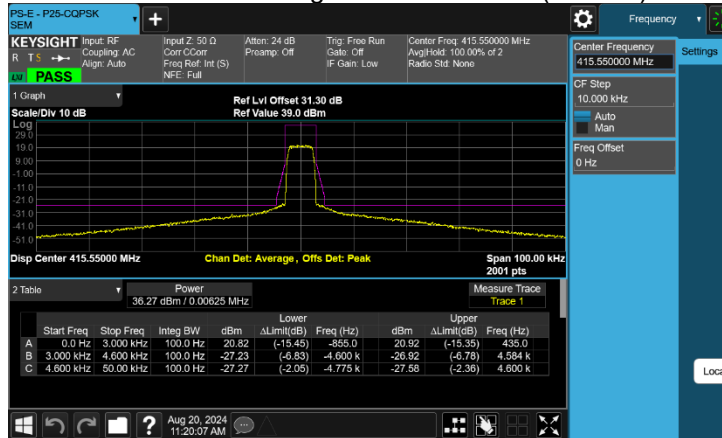
415PS $\pi/4$ DQPSK Signal at 406.1 MHz (Mask C)



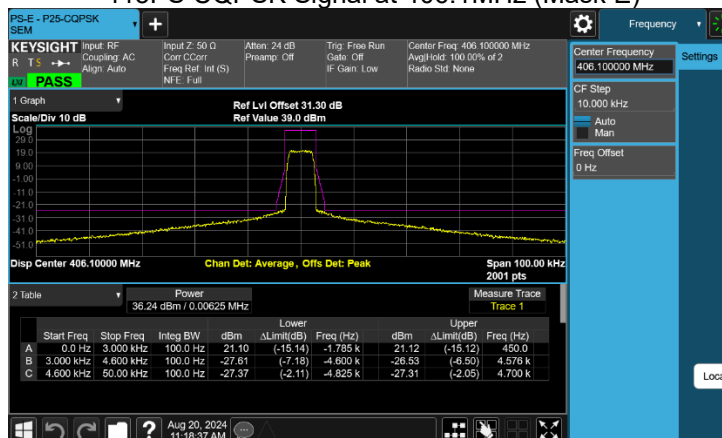
415PS CQPSK Signal at 425MHz (Mask E)



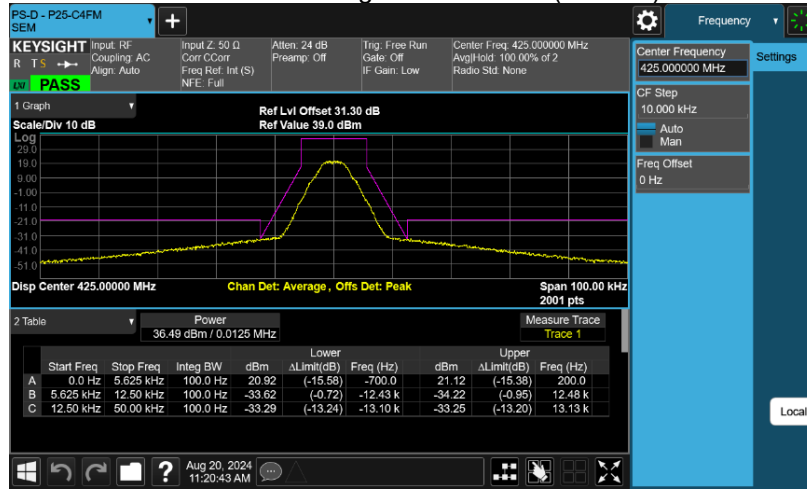
415PS CQPSK Signal at 415.55MHz (Mask E)



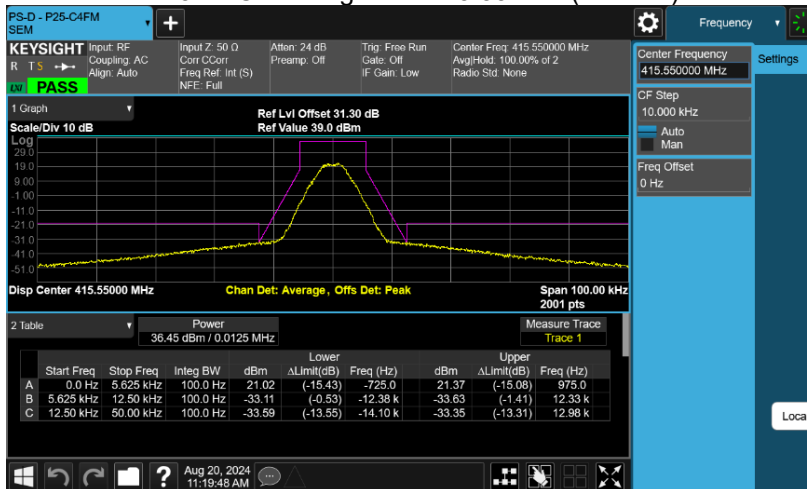
415PS CQPSK Signal at 406.1MHz (Mask E)



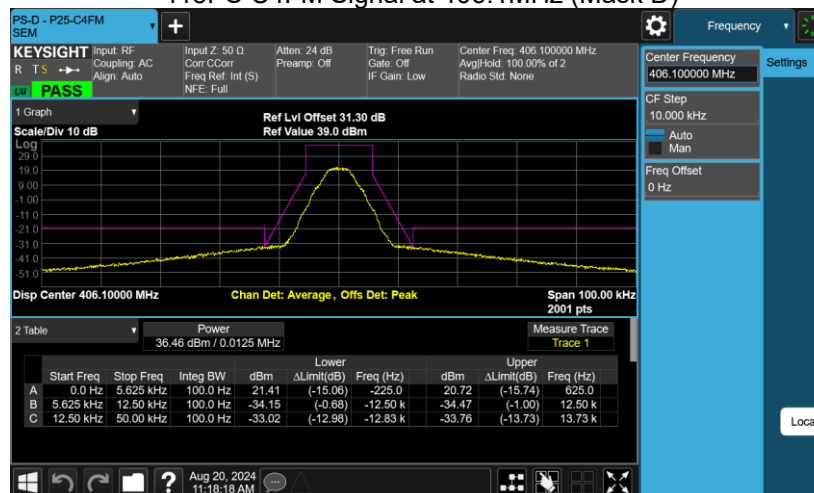
415PS C4FM Signal at 425MHz (Mask D)



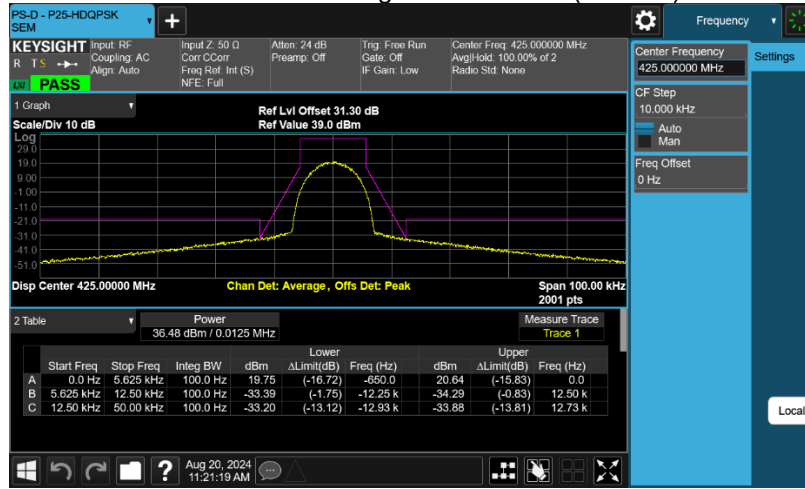
415PS C4FM Signal at 415.55MHz (Mask D)



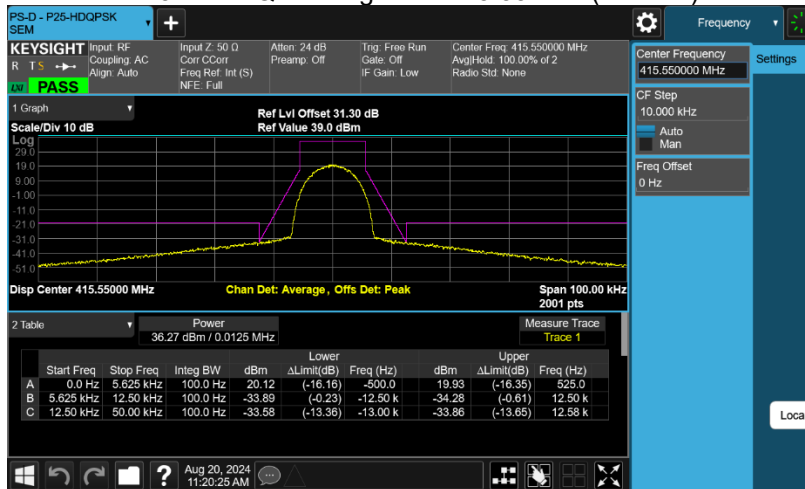
415PS C4FM Signal at 406.1MHz (Mask D)



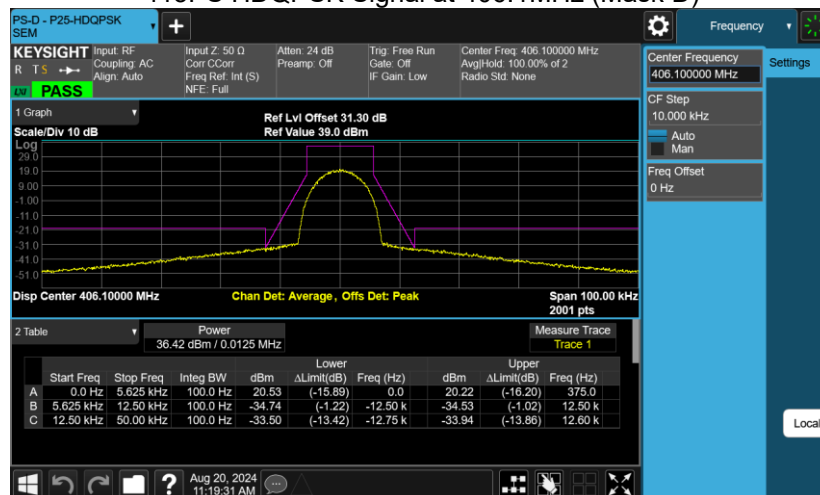
415PS HDQPSK Signal at 425MHz (Mask D)



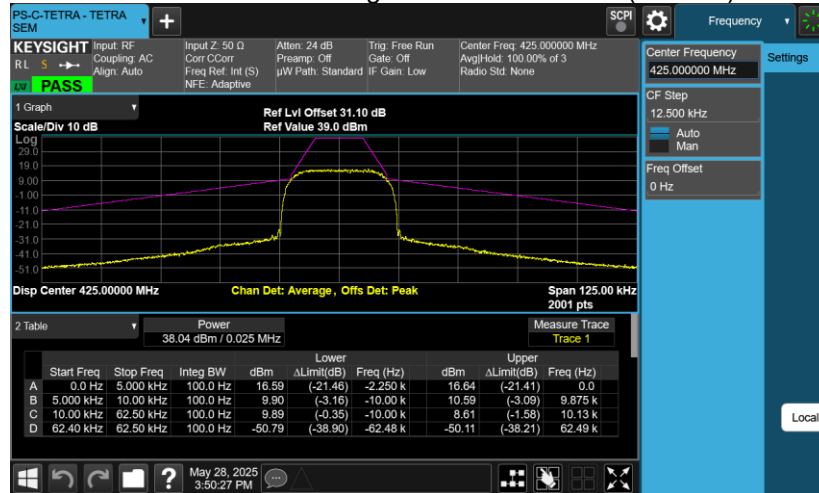
415PS HDQPSK Signal at 415.55MHz (Mask D)



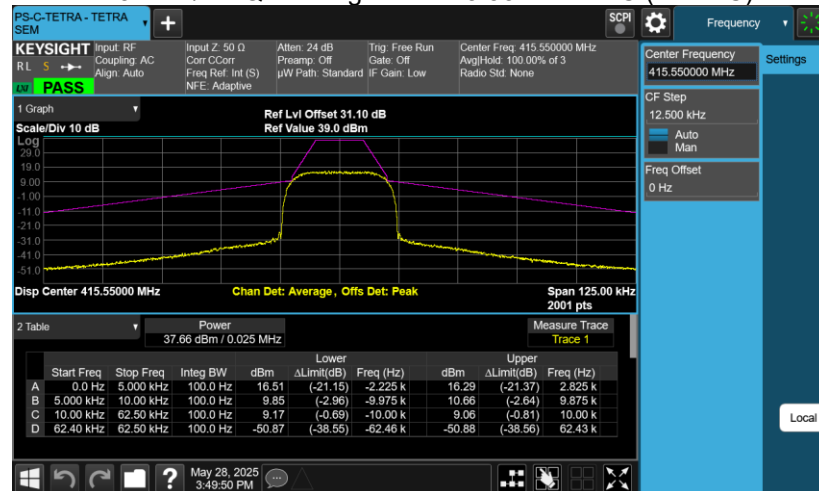
415PS HDQPSK Signal at 406.1MHz (Mask D)



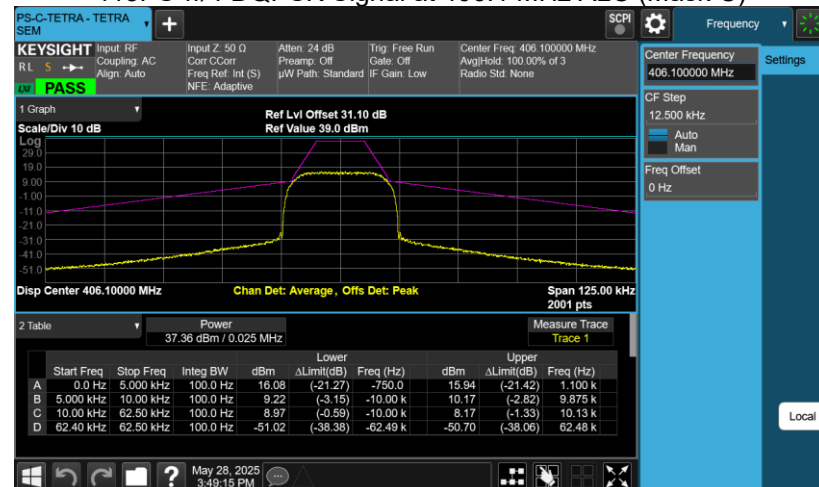
415PS $\pi/4$ DQPSK Signal at 425 MHz ALC (Mask C)



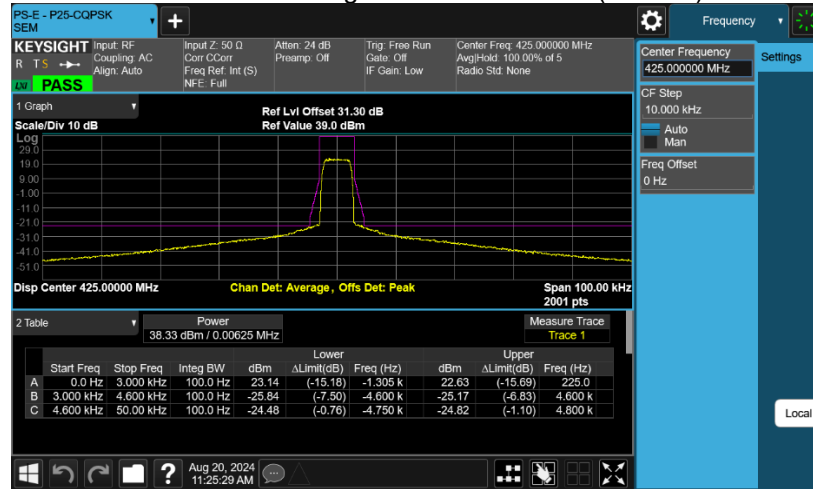
415PS $\pi/4$ DQPSK Signal at 415.55 MHz ALC (Mask C)



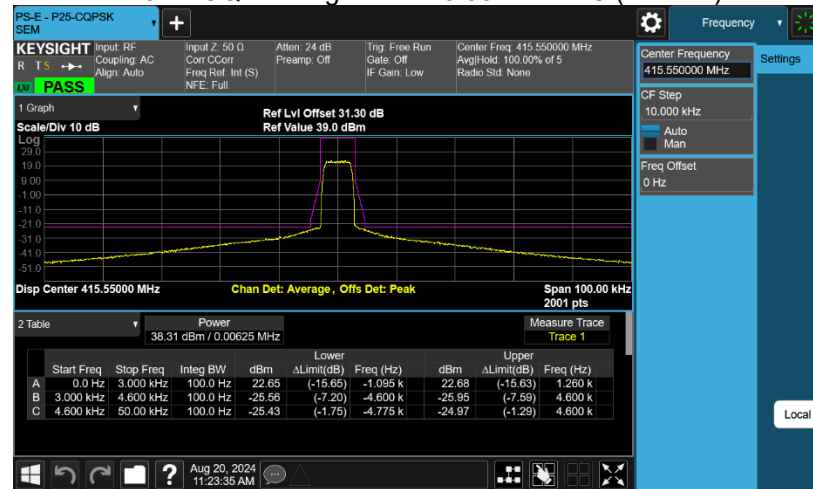
415PS $\pi/4$ DQPSK Signal at 406.1 MHz ALC (Mask C)



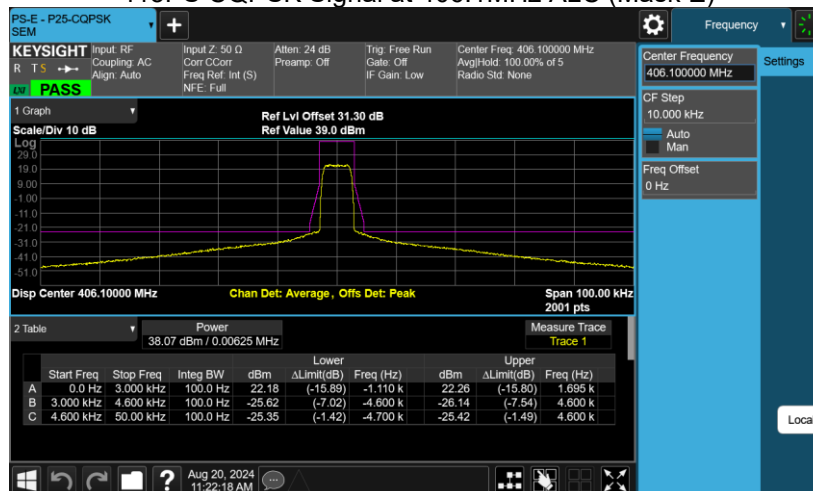
415PS CQPSK Signal at 425MHz ALC (Mask E)



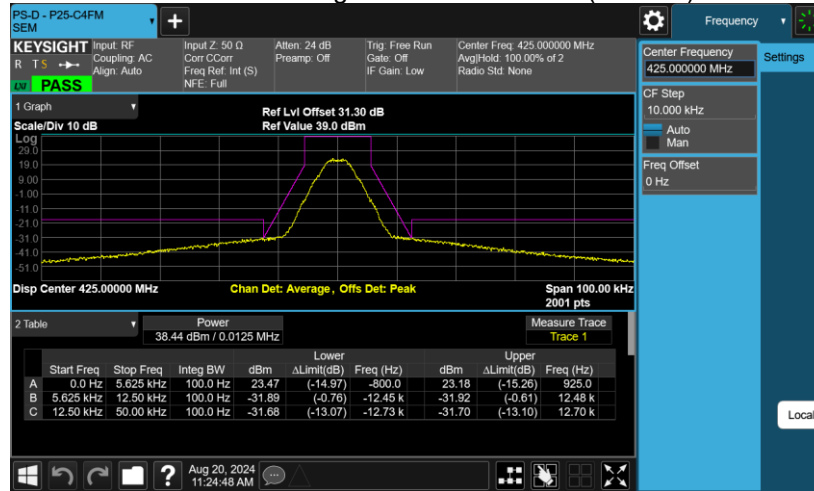
415PS CQPSK Signal at 415.55MHz ALC (Mask E)



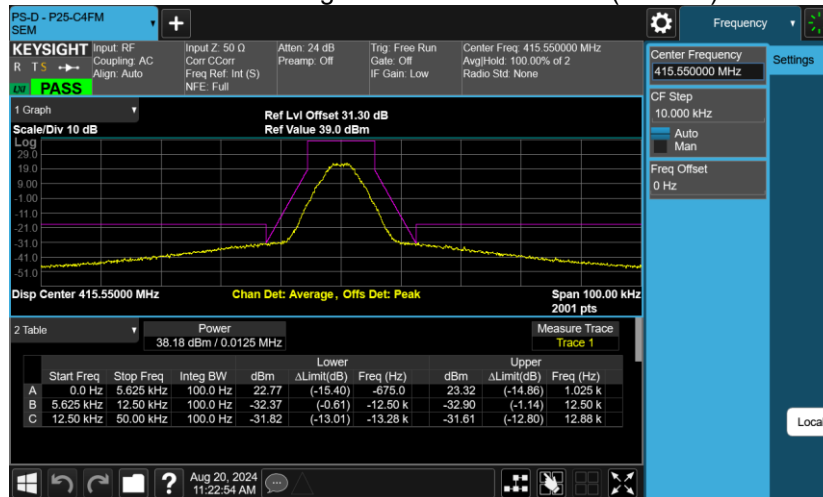
415PS CQPSK Signal at 406.1MHz ALC (Mask E)



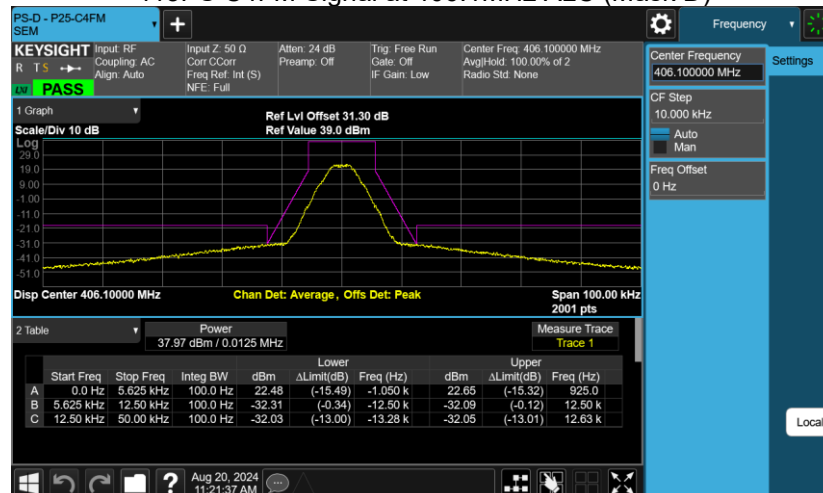
415PS C4FM Signal at 425MHz ALC (Mask D)



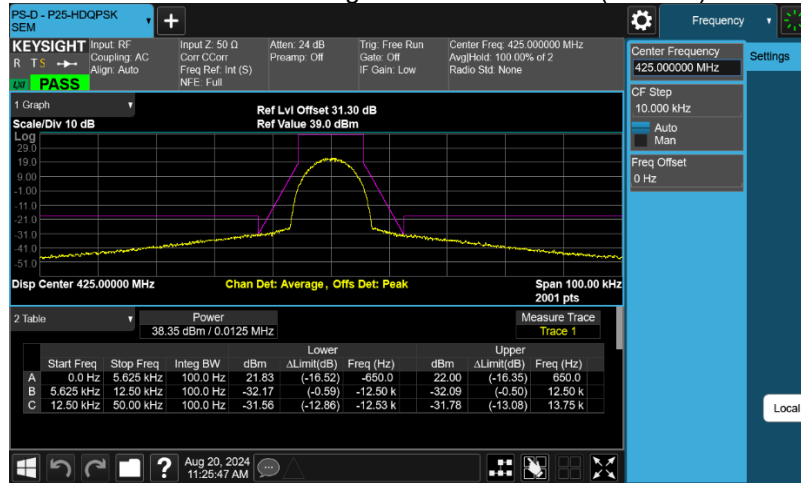
415PS C4FM Signal at 415.55MHz ALC (Mask D)



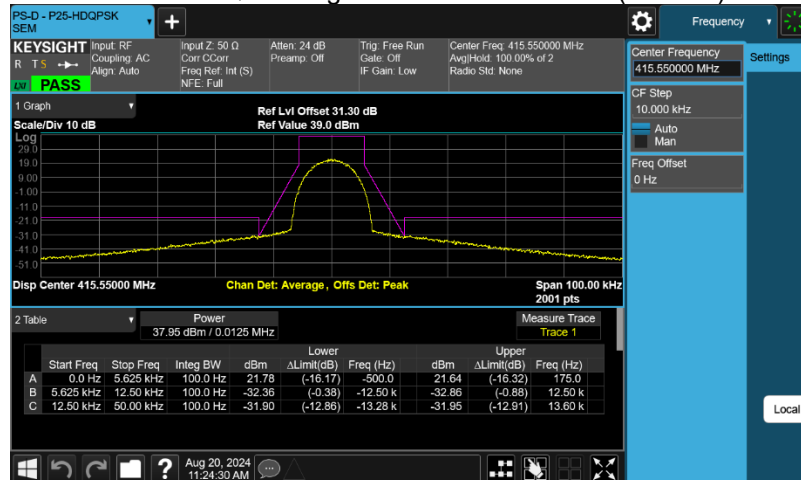
415PS C4FM Signal at 406.1MHz ALC (Mask D)



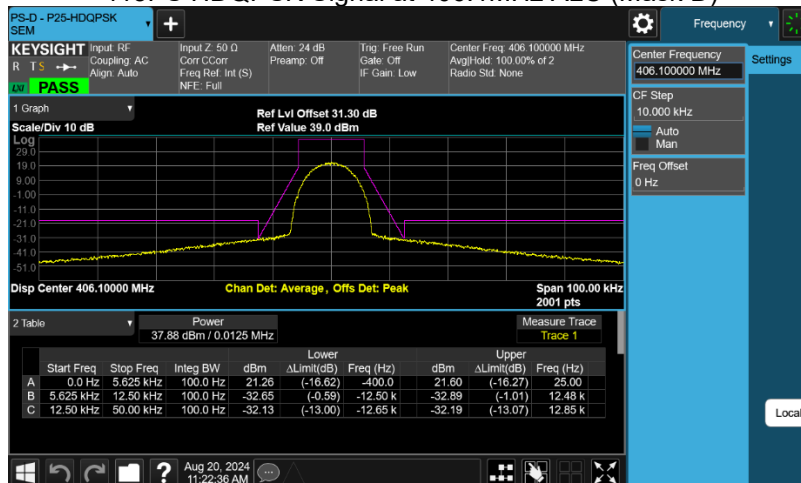
415PS HDQPSK Signal at 425MHz ALC (Mask D)



415PS HDQPSK Signal at 415.55MHz ALC (Mask D)

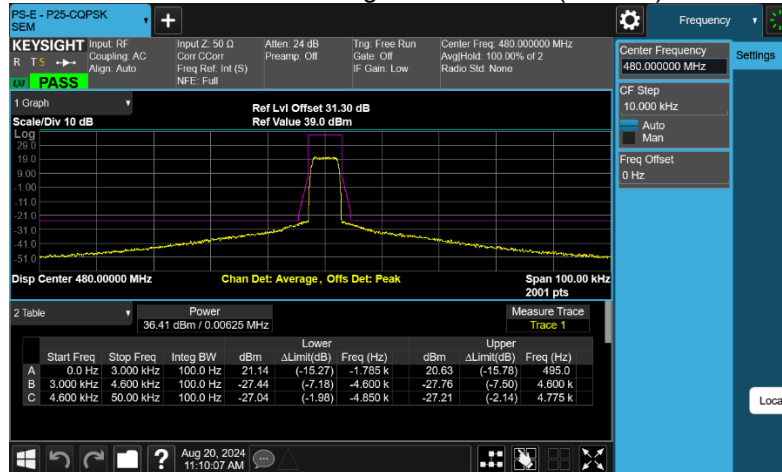


415PS HDQPSK Signal at 406.1MHz ALC (Mask D)

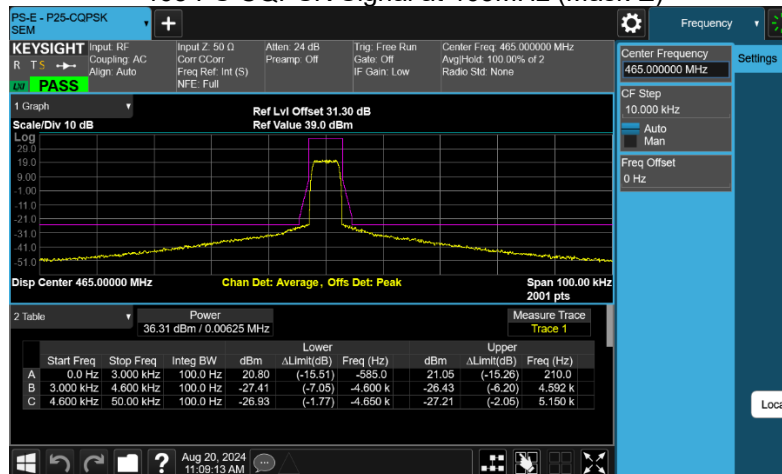


Results - Spectrum Emission Mask (465 PS)

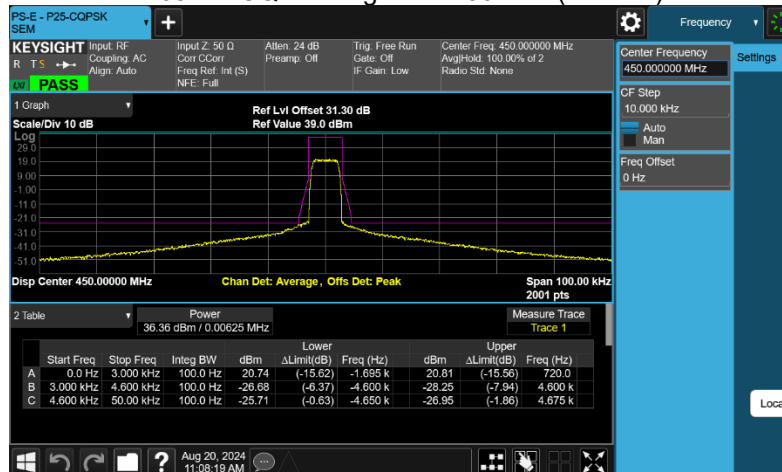
465 PS CQPSK Signal at 480MHz (Mask E)



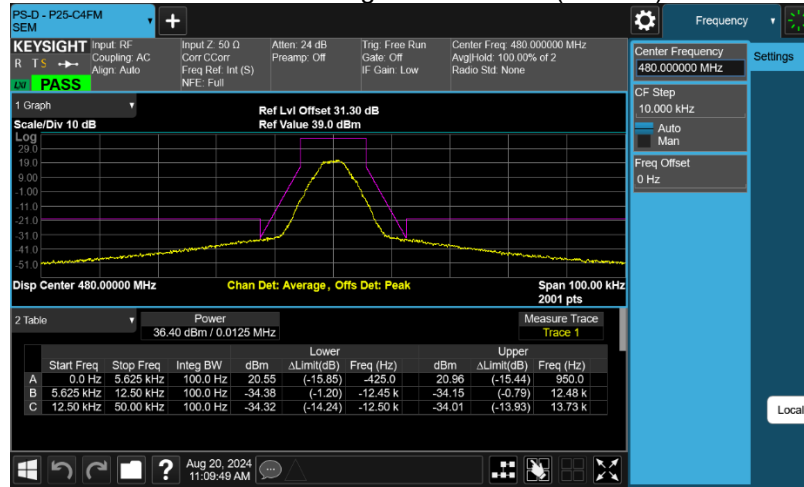
465 PS CQPSK Signal at 465MHz (Mask E)



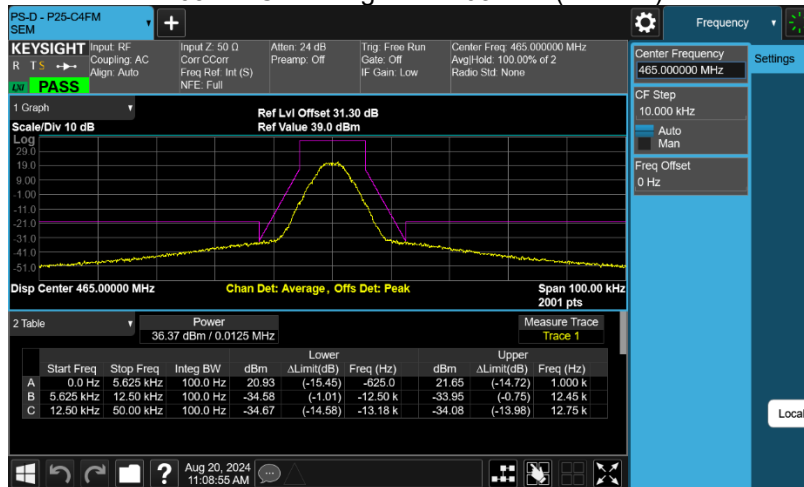
465 PS CQPSK Signal at 450MHz (Mask E)



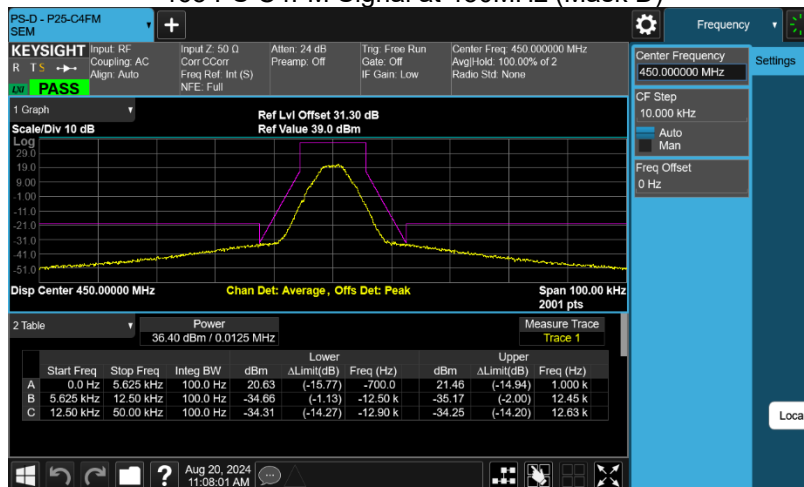
465 PS C4FM Signal at 480MHz (Mask D)



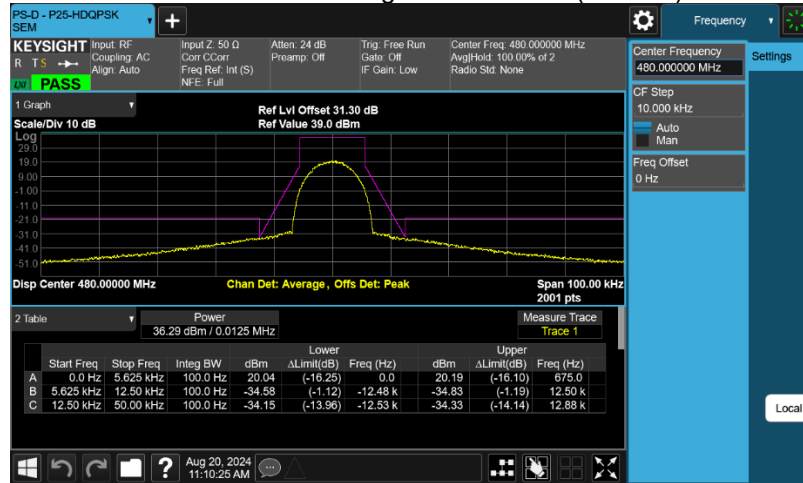
465 PS C4FM Signal at 465MHz (Mask D)



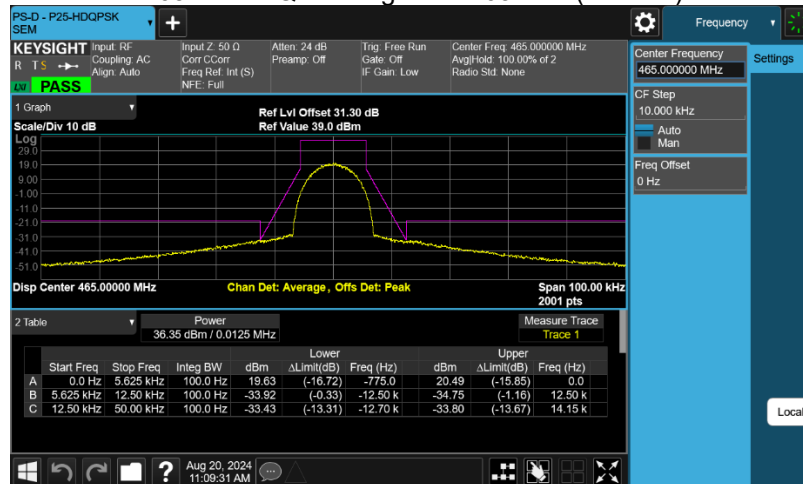
465 PS C4FM Signal at 450MHz (Mask D)



465 PS HDQPSK Signal at 480MHz (Mask D)



465 PS HDQPSK Signal at 465MHz (Mask D)



465 PS HDQPSK Signal at 450MHz (Mask D)

