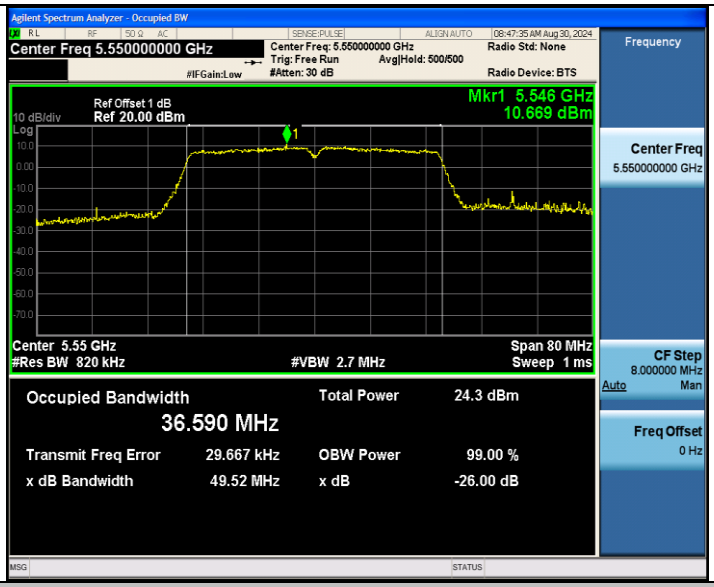
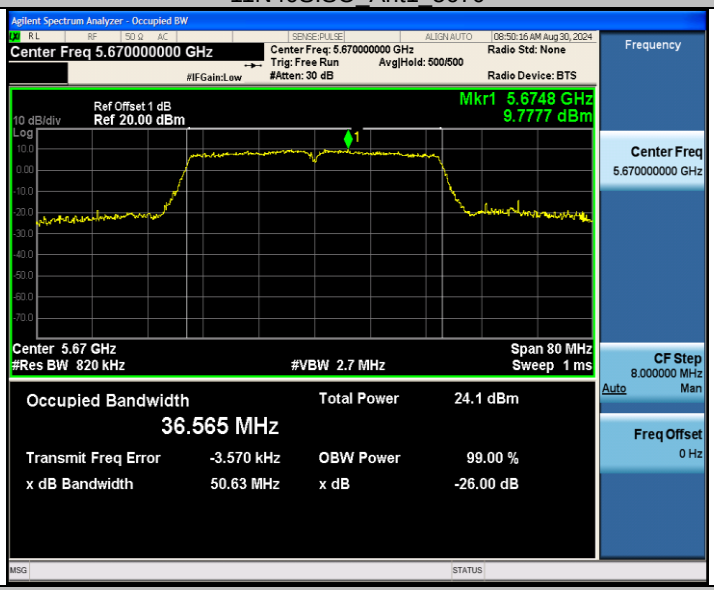


11N40SISO_Ant1_5670



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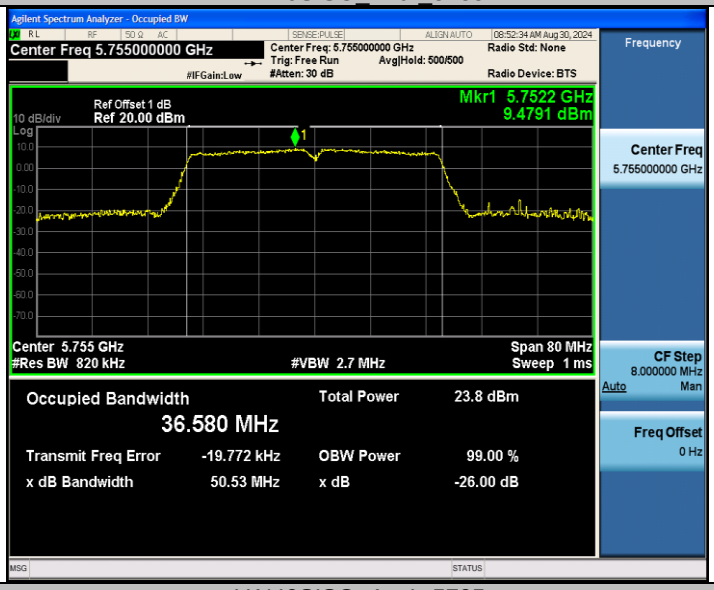

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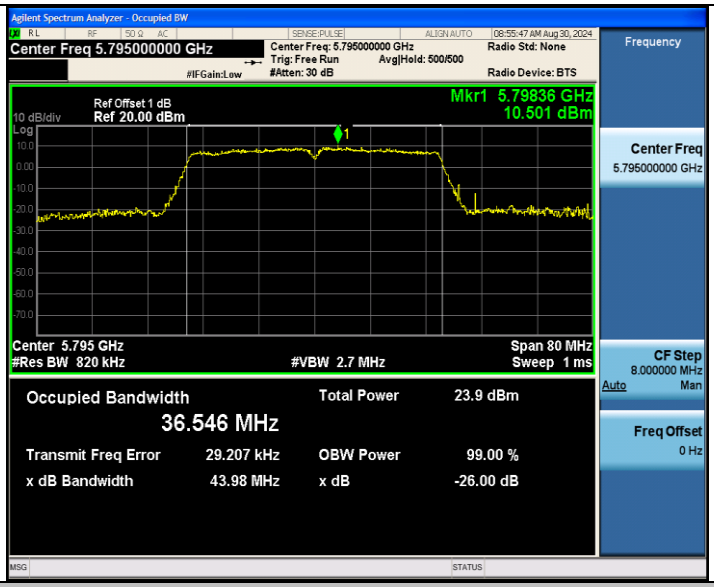

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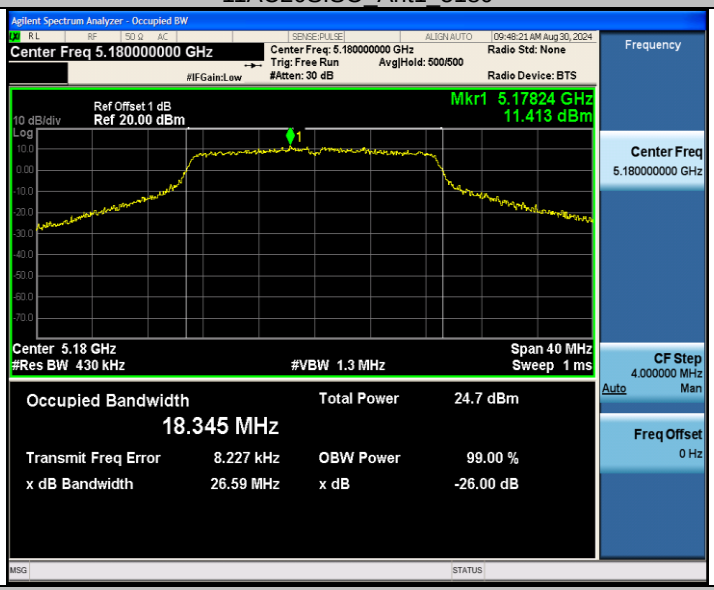

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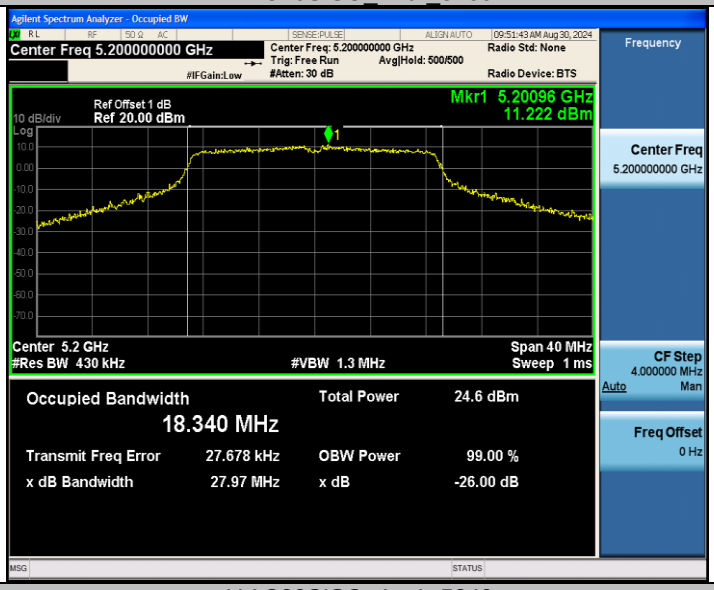

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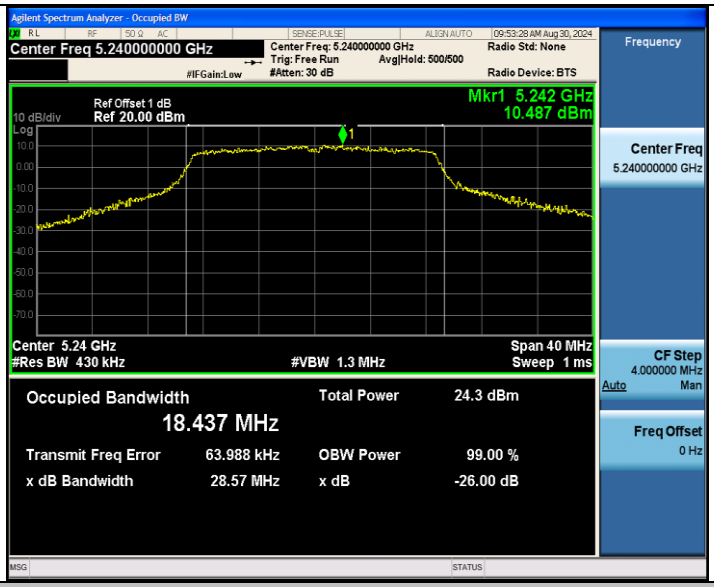

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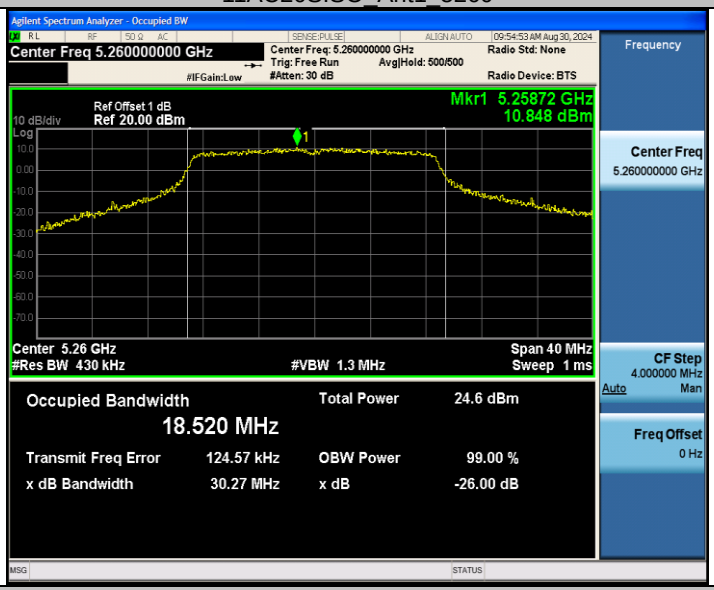
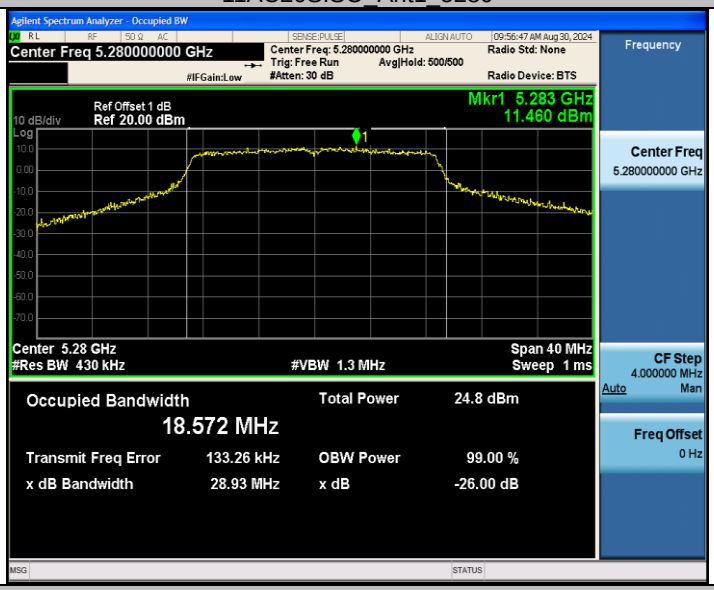
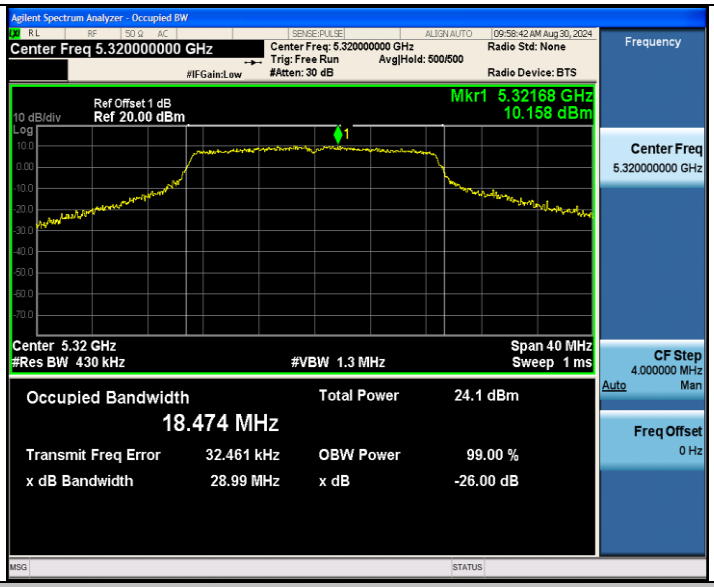


11AC20SISO_Ant1_5280



11AC20SISO_Ant1_5320



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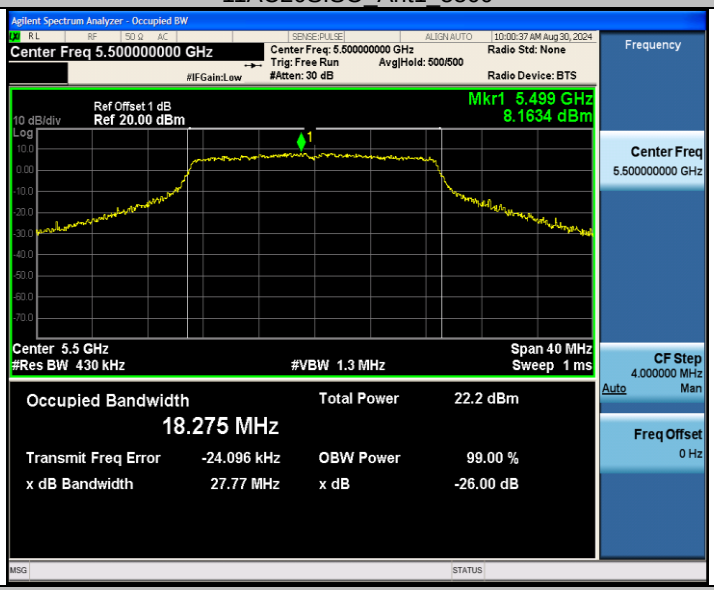

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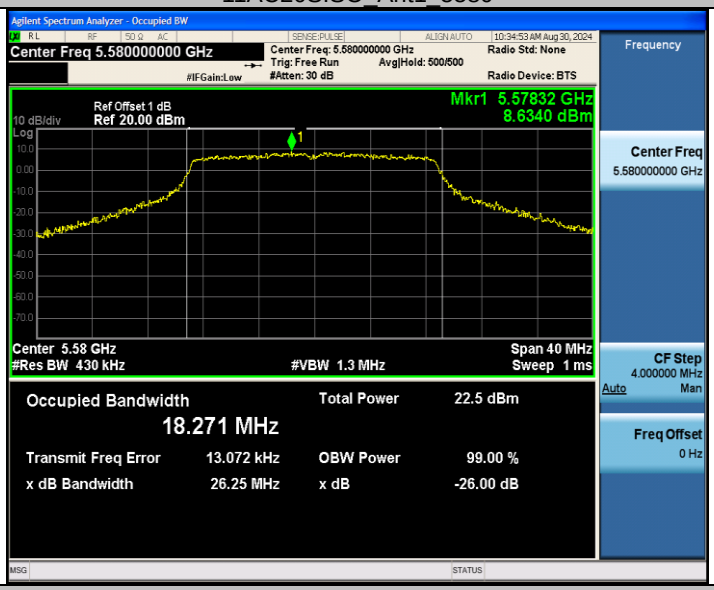

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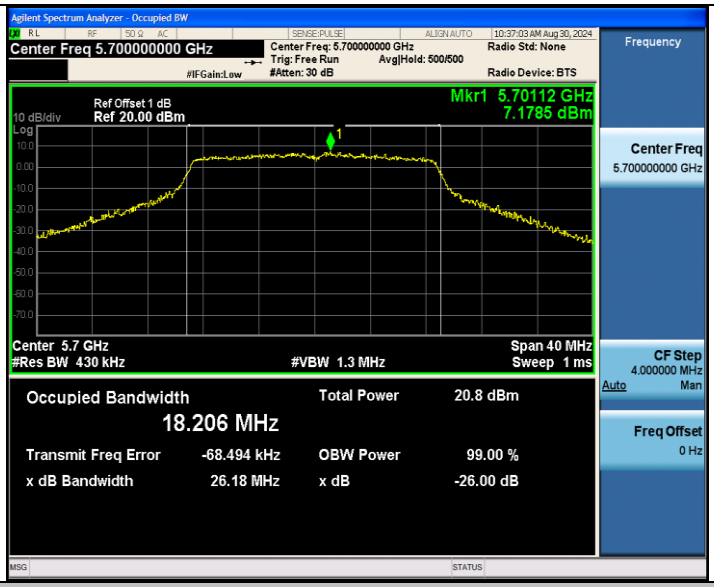

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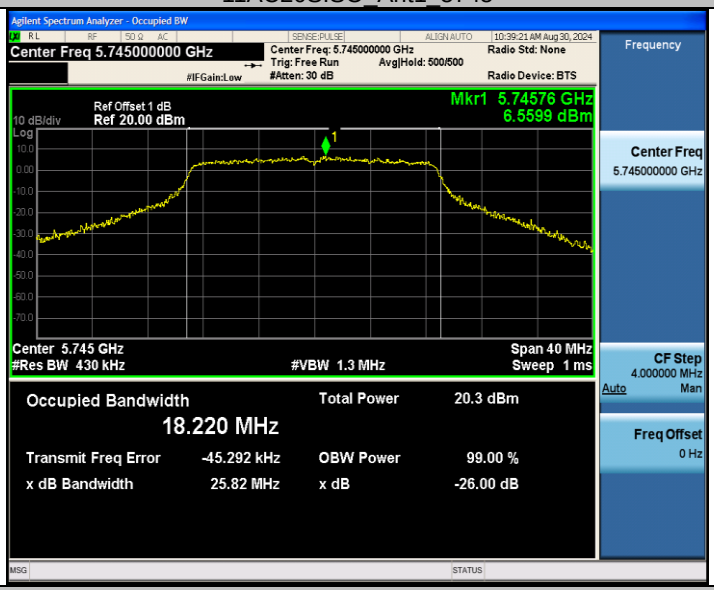

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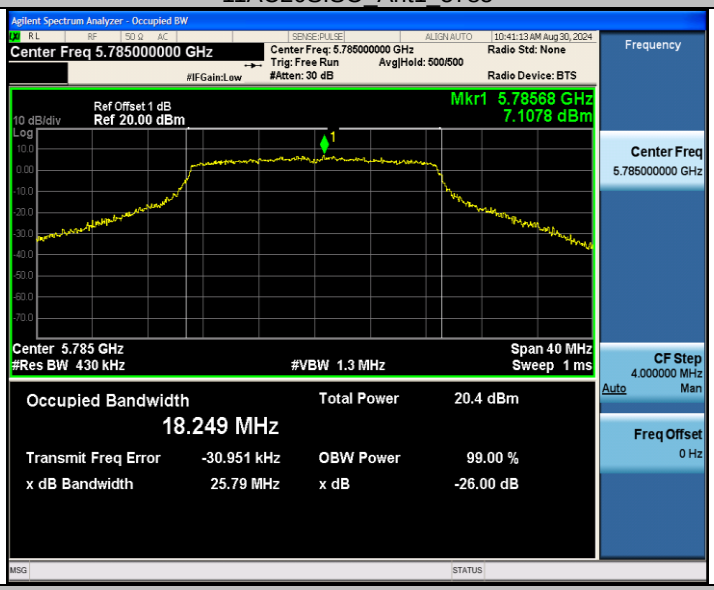

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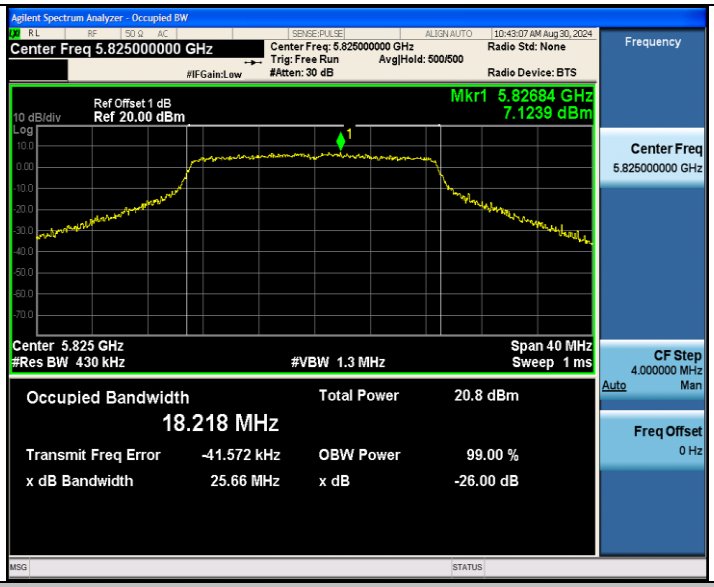

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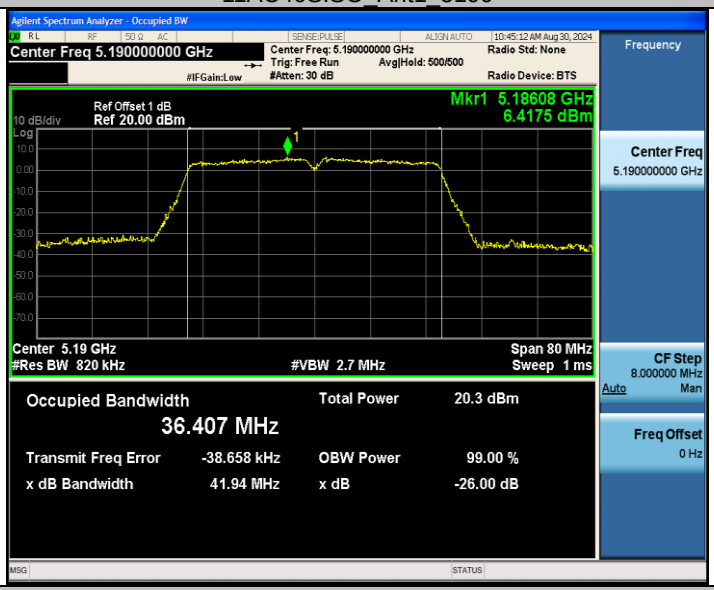

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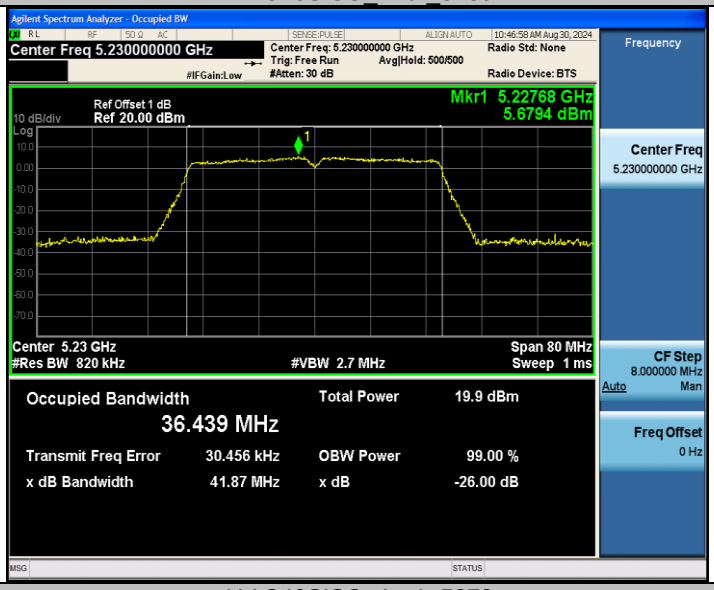

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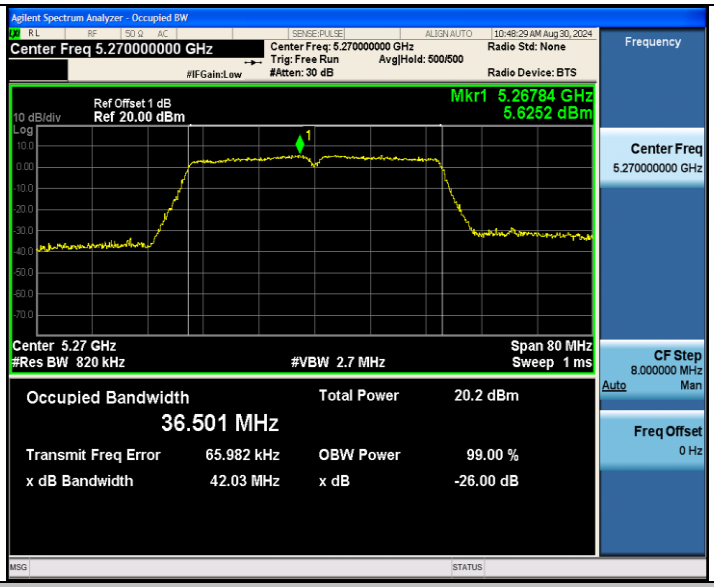

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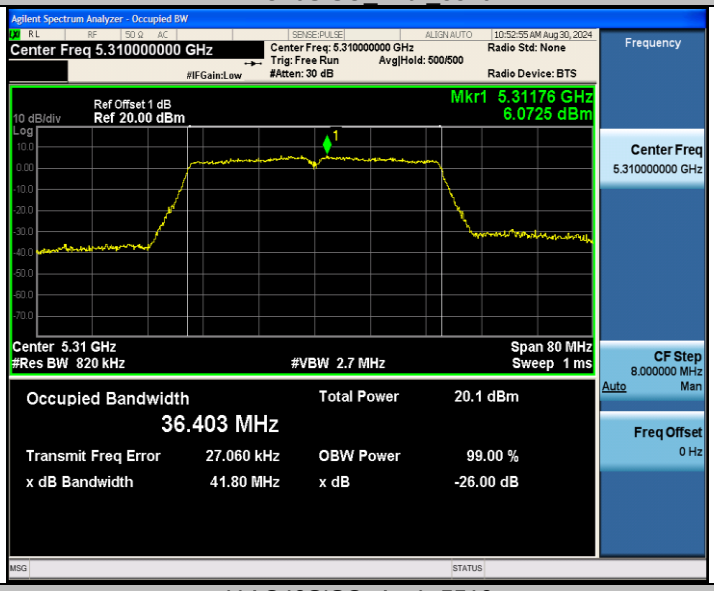

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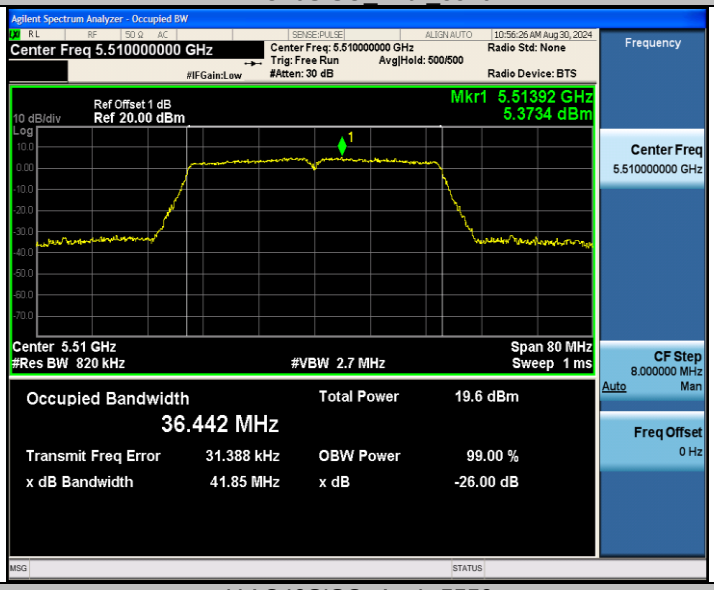

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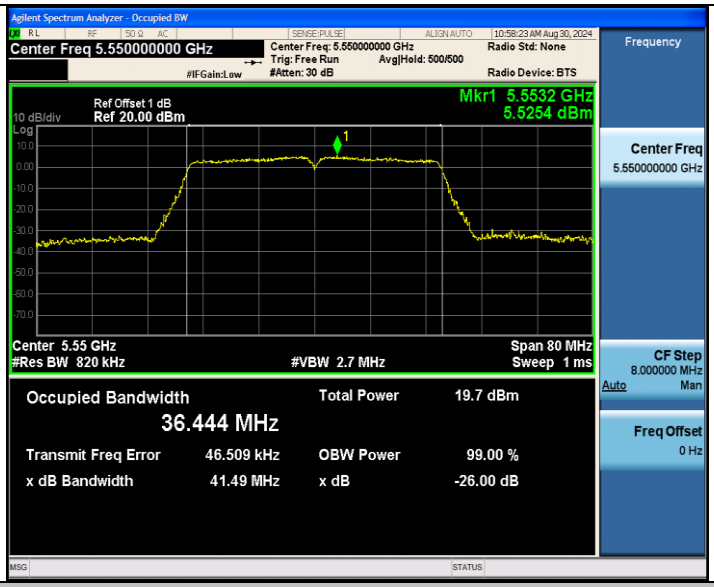

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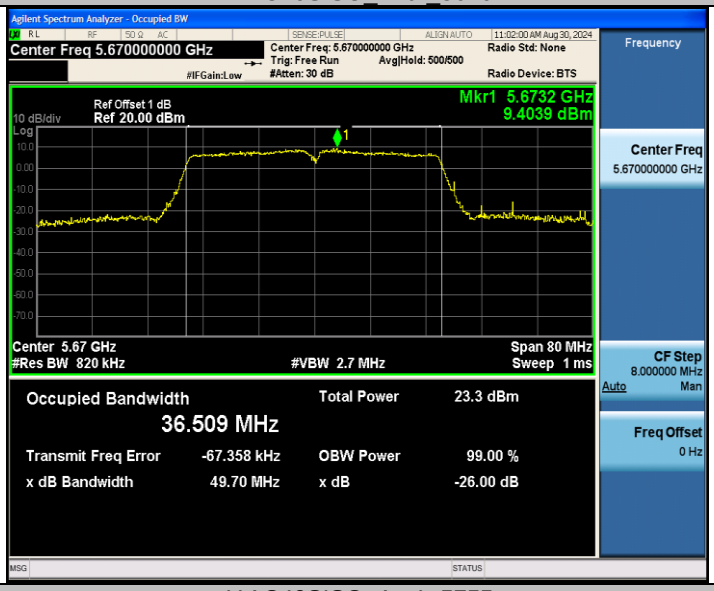

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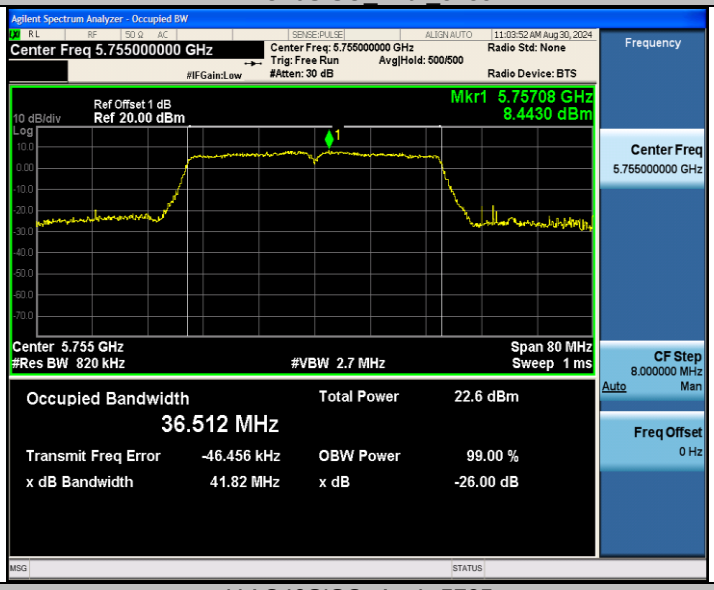
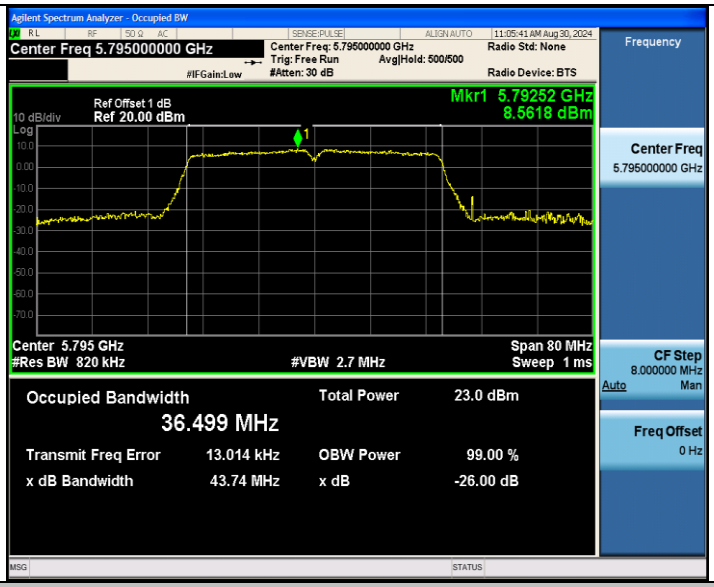
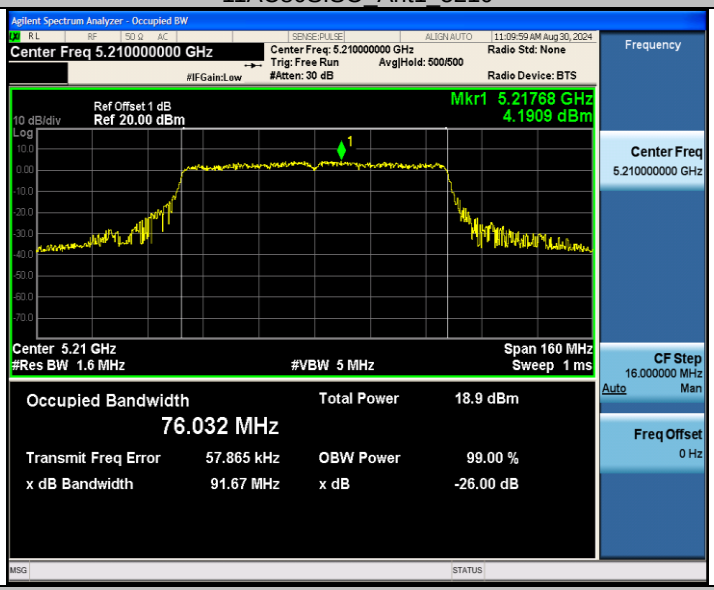


11AC40SISO_Ant1_5795



11AC80SISO_Ant1_5210



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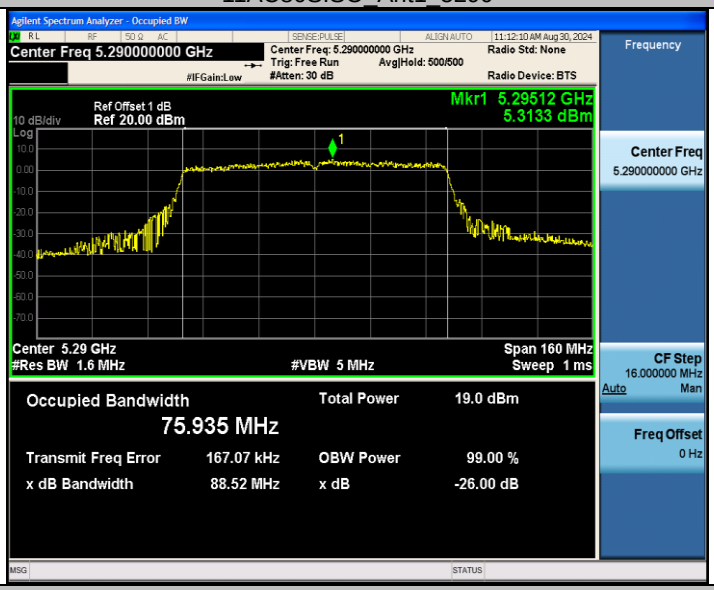

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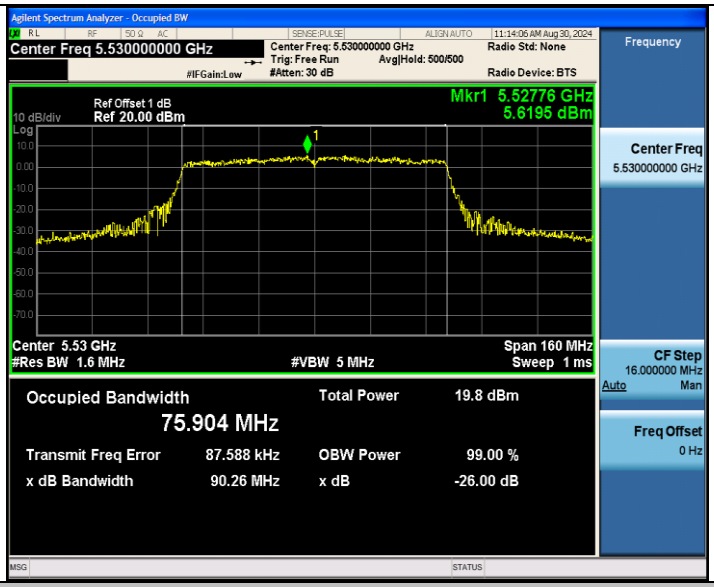
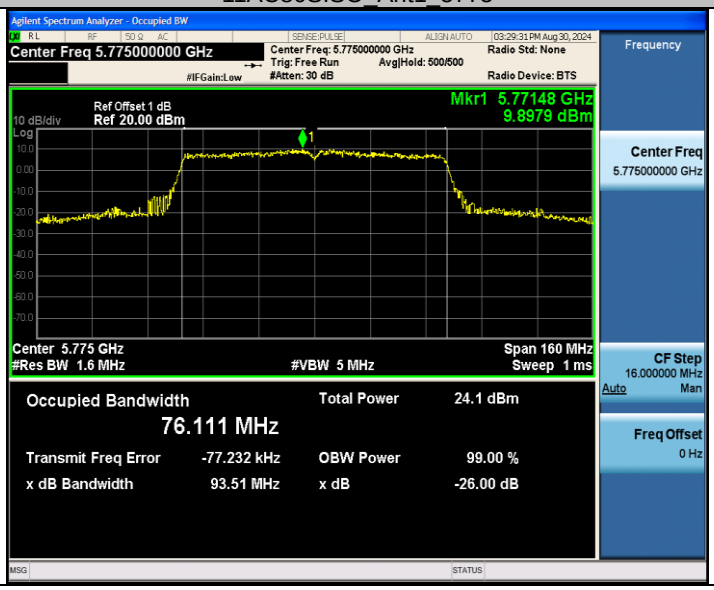


11AC80SISO_Ant1_5610

11AC80SISO_Ant1_5775



3.5. Peak Output Power

Limit

FCC CFR Title 47 Part 15 Subpart E Section 15.407(a)

Test Item	Limit	Frequency Range (MHz)
Conducted Output Power	Fixed: 1 Watt (30dBm) Mobile and Portable: 250mW (24dBm)	5150~5250
	250mW (24dBm)	5250~5350
	250mW (24dBm)	5500~5700
	1 Watt (30dBm)	5725~5850

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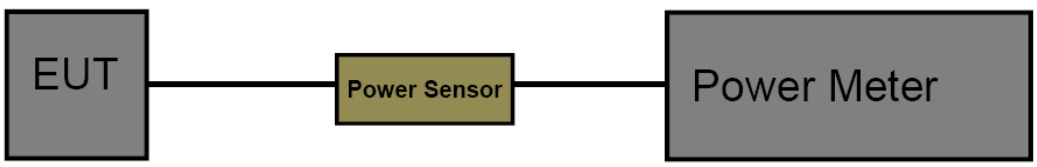
IC Power&PSD Limit

Frequency	Type of devices	Maximum Conducted Output Power	EIRP Output Power	Conducted Power Spectral Density	EIRP Power Spectral Density
5150MHz-5250MHz	in vehicles		30mW or 1.76 + 10 × log10B dBm, whichever is less (B=99% OBW in MHz)		
	Other Devices		200mW or 10 + 10 × log10B dBm, whichever is less (B=99% OBW in MHz)		10dBm/MHz
5250MHz-5350MHz	in vehicles		30mW or 1.76 + 10 × log10B dBm, whichever is less (B=99% OBW in MHz)		
	Other Devices	250mW or 11 + 10 × log10B dBm, whichever is less (B=99% OBW in MHz)	1W or 17 + 10 ×log10B dBm, whichever is less (B=99% OBW in MHz)	11dBm/Mhz	
5470MHz-5600MHz 5650MHz-5725MHz	ALL Devices	250mW or 11 + 10 × log10B dBm, whichever is less (B=99% OBW in MHz)	1W or 17 + 10 ×log10B dBm, whichever is less (B=99% OBW in MHz)	11dBm/Mhz	
5725MHz-5850MHz	ALL Devices	1W		30dBm/500KHz	

Test Configuration



Test Procedure

The measurement is according to section 3 of KDB 789033 D02 General UNII Test Procedures New Rules V02r01.

Test Mode

Please refer to the clause 2.4.

Test Result

Test Mode	Freq(MHz)	Conducted Output Power [dBm]	Limit [dBm]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
11A	5180	16.78	≤24	19.28	≤23	PASS
	5200	16.77	≤24	19.27	≤23	PASS
	5240	17.44	≤24	19.94	≤23	PASS
	5260	17.69	≤24	20.19	≤30	PASS
	5280	17.89	≤24	20.39	≤30	PASS
	5320	18.15	≤24	20.65	≤30	PASS
	5500	15.54	≤24	18.04	≤30	PASS
	5580	16.12	≤24	18.62	≤30	PASS
	5700	15.97	≤24	18.47	≤30	PASS
	5745	15.66	≤30	/	/	PASS
	5785	15.50	≤30	/	/	PASS
	5825	15.73	≤30	/	/	PASS
11N20SISO	5180	16.09	≤24	18.59	≤23	PASS
	5200	15.55	≤24	18.05	≤23	PASS
	5240	15.36	≤24	17.86	≤23	PASS
	5260	15.66	≤24	18.16	≤30	PASS
	5280	15.90	≤24	18.40	≤30	PASS
	5320	16.34	≤24	18.84	≤30	PASS
	5500	15.86	≤24	18.36	≤30	PASS
	5580	16.46	≤24	18.96	≤30	PASS
	5700	16.88	≤24	19.38	≤30	PASS
	5745	16.36	≤30	/	/	PASS
	5785	16.25	≤30	/	/	PASS
	5825	16.61	≤30	/	/	PASS
11N40SISO	5190	16.69	≤24	19.19	≤23	PASS
	5230	16.45	≤24	18.95	≤23	PASS
	5270	16.69	≤24	19.19	≤30	PASS
	5310	16.88	≤24	19.38	≤30	PASS
	5510	16.82	≤24	19.32	≤30	PASS
	5550	16.87	≤24	19.37	≤30	PASS
	5670	16.62	≤24	19.12	≤30	PASS
	5755	16.35	≤30	/	/	PASS
	5795	16.00	≤30	/	/	PASS
11AC20SISO	5180	17.54	≤24	20.04	≤23	PASS
	5200	17.41	≤24	19.91	≤23	PASS
	5240	17.15	≤24	19.65	≤23	PASS
	5260	17.56	≤24	20.06	≤30	PASS
	5280	17.59	≤24	20.09	≤30	PASS
	5320	16.97	≤24	19.47	≤30	PASS
	5500	15.27	≤24	17.77	≤30	PASS
	5580	15.45	≤24	17.95	≤30	PASS
	5700	13.89	≤24	16.39	≤30	PASS
	5745	13.25	≤30	/	/	PASS
	5785	13.53	≤30	/	/	PASS
	5825	13.69	≤30	/	/	PASS

11AC40SISO	5190	12.80	≤24	15.30	≤23	PASS
	5230	12.23	≤24	14.73	≤23	PASS
	5270	12.70	≤24	15.20	≤30	PASS
	5310	12.24	≤24	14.74	≤30	PASS
	5510	12.15	≤24	14.65	≤30	PASS
	5550	12.36	≤24	14.86	≤30	PASS
	5670	15.50	≤24	18.00	≤30	PASS
	5755	15.13	≤30	/	/	PASS
	5795	15.54	≤30	/	/	PASS
11AC80SISO	5210	10.48	≤24	12.98	≤23	PASS
	5290	10.57	≤24	13.07	≤30	PASS
	5530	11.58	≤24	14.08	≤30	PASS
	5610	16.40	≤24	18.90	≤30	PASS
	5775	15.84	≤30	/	/	PASS

3.6. Power Spectral Density

Limit

FCC CFR Title 47 Part 15 Subpart E Section 15.407(a)

For the 5.15~5.25GHz band:

- Outdoor AP

  The peak power spectral density (PSD) shall not exceed the lesser of 17dBm/MHz.
  If G_{Tx}>6dBi, then PSD =17-(G_{Tx}-6).

- Indoor AP

  The peak power spectral density (PSD) shall not exceed the lesser of 17dBm/MHz.
  If G_{Tx}>6dBi, then PSD =17-(G_{Tx}-6).

- Point-to-point AP

  The peak power spectral density (PSD) shall not exceed the lesser of 17dBm/MHz.
  If G_{Tx}>23dBi, then PSD =17-(G_{Tx}-23).

- Client devices

  The peak power spectral density (PSD) shall not exceed the lesser of 11dBm/MHz.
  If G_{Tx}>6dBi, then PSD =11-(G_{Tx}-6).

For the 5.25~5.35GHz band:

The peak power spectral density (PSD) shall not exceed the lesser of 11dBm/MHz.
If G_{Tx}>6dBi, then PSD =11-(G_{Tx}-6).

For the 5.47~5.725GHz band:

The peak power spectral density (PSD) shall not exceed the lesser of 11dBm/MHz.
If G_{Tx}>6dBi, then PSD =11-(G_{Tx}-6).

For the 5.725~5.85GHz band:

- Point-to-multipoint systems (P2M)

  The peak power spectral density (PSD) shall not exceed the lesser of 30dBm/500kHz.
  If G_{Tx}>6dBi, then PSD =30-(G_{Tx}-6).

- Point-to-point systems (P2P)

  The peak power spectral density (PSD) shall not exceed the lesser of 30dBm/500kHz.

Note: G_{Tx}: EUT Antenna gain.

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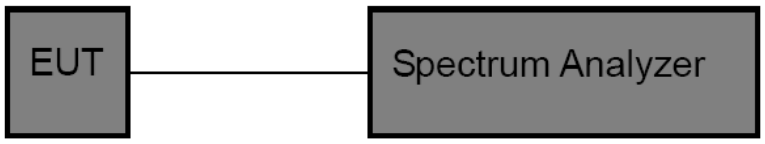
IC Power&PSD Limit					
Frequency	Type of devices	Maximum Conducted Output Power	EIRP Output Power	Conducted Power Spectral Density	EIRP Power Spectral Density
5150MHz-5250MHz	in vehicles		30mW or 1.76 + 10 × log10B dBm, whichever is less (B=99% OBW in MHz)		
	Other Devices		200mW or 10 + 10 × log10B dBm, whichever is less (B=99% OBW in MHz)		10dBm/MHz
5250MHz-5350MHz	in vehicles		30mW or 1.76 + 10 × log10B dBm, whichever is less (B=99% OBW in MHz)		
	Other Devices	250mW or 11 + 10 × log10B dBm, whichever is less (B=99% OBW in MHz)	1W or 17 + 10 ×log10B dBm, whichever is less (B=99% OBW in MHz)	11dBm/Mhz	
5470MHz-5600MHz 5650MHz-5725MHz	ALL Devices	250mW or 11 + 10 × log10B dBm, whichever is less (B=99% OBW in MHz)	1W or 17 + 10 ×log10B dBm, whichever is less (B=99% OBW in MHz)	11dBm/Mhz	
5725MHz-5850MHz	ALL Devices	1W		30dBm/500KHz	

Test Configuration



Test Procedure

The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement is according to KDB 789033 D02 General UNII Test Procedures New Rules V02r01.

(1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
(2) Set analyzer center frequency to transmitting frequency.
(3) Set the span to encompass the entire emissions bandwidth (EBW) (alternatively, the entire 99% OBW) of the signal.
(4) RBW=1MHz for devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz RBW=500kHz for devices operating in the band 5.725-5.85 GHz.
(5) Set the VBW to: ≥ 3 RBW
(6) Detector: AVG
(7) Trace: Max Hold and View
(7) Sweep time: auto
(8) Trace average at least 100 traces in power averaging.
(9) User the peak marker function to determine the maximum amplitude level within the RBW. Apply correction to the result if different RBW is used.

NOTE: The EUT was set to continuously transmitting in each mode and low, middle and high channel for the test.

Test Mode

Please refer to the clause 2.4.

Test Result

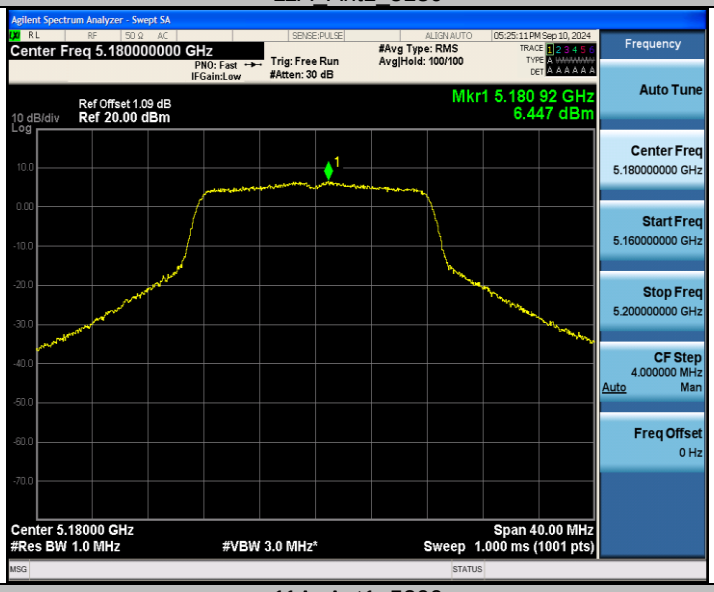
Test Mode	Freq(MHz)	Conducted PSD [dBm/MHz]	Conducted PSD Limit [dBm/MHz]	Conducted PSD Limit [dBm/500kHz]	EIRP PSD [dBm/MHz]	EIRP PSD Limit [dBm/MHz]	Verdict
11A	5180	6.45	≤11	/	8.95	≤10	PASS
	5200	6.49	≤11	/	8.99	≤10	PASS
	5240	7.04	≤11	/	9.54	≤10	PASS
	5260	7.13	≤11	/	/	/	PASS
	5280	7.60	≤11	/	/	/	PASS
	5320	7.90	≤11	/	/	/	PASS
	5500	5.16	≤11	/	/	/	PASS
	5580	5.64	≤11	/	/	/	PASS
	5700	5.71	≤11	/	/	/	PASS
	5745	2.43	/	≤30	/	/	PASS
	5785	2.49	/	≤30	/	/	PASS
	5825	2.69	/	≤30	/	/	PASS
11N20SISO	5180	5.39	≤11	/	7.89	≤10	PASS
	5200	4.92	≤11	/	7.42	≤10	PASS
	5240	4.65	≤11	/	7.15	≤10	PASS
	5260	5.03	≤11	/	/	/	PASS
	5280	5.19	≤11	/	/	/	PASS
	5320	5.69	≤11	/	/	/	PASS
	5500	5.23	≤11	/	/	/	PASS
	5580	5.67	≤11	/	/	/	PASS
	5700	6.28	≤11	/	/	/	PASS
	5745	3.01	/	≤30	/	/	PASS
	5785	2.75	/	≤30	/	/	PASS
	5825	3.53	/	≤30	/	/	PASS
11N40SISO	5190	3.01	≤11	/	5.51	≤10	PASS
	5230	2.78	≤11	/	5.28	≤10	PASS
	5270	2.85	≤11	/	/	/	PASS
	5310	3.33	≤11	/	/	/	PASS
	5510	3.10	≤11	/	/	/	PASS
	5550	3.32	≤11	/	/	/	PASS
	5670	3.05	≤11	/	/	/	PASS
	5755	0.18	/	≤30	/	/	PASS
	5795	-0.35	/	≤30	/	/	PASS
11AC20SISO	5180	6.98	≤11	/	9.48	≤10	PASS
	5200	6.78	≤11	/	9.28	≤10	PASS
	5240	6.62	≤11	/	9.12	≤10	PASS
	5260	6.94	≤11	/	/	/	PASS
	5280	7.08	≤11	/	/	/	PASS
	5320	6.38	≤11	/	/	/	PASS
	5500	4.36	≤11	/	/	/	PASS
	5580	4.69	≤11	/	/	/	PASS
	5700	3.21	≤11	/	/	/	PASS
	5745	-0.13	/	≤30	/	/	PASS
	5785	0.14	/	≤30	/	/	PASS
	5825	0.30	/	≤30	/	/	PASS
11AC40SISO	5190	-0.73	≤11	/	1.77	≤10	PASS
	5230	-1.37	≤11	/	1.13	≤10	PASS
	5270	-0.92	≤11	/	/	/	PASS
	5310	-1.17	≤11	/	/	/	PASS
	5510	-1.37	≤11	/	/	/	PASS
	5550	-1.69	≤11	/	/	/	PASS
	5670	1.69	≤11	/	/	/	PASS
	5755	-1.06	/	≤30	/	/	PASS
	5795	-0.80	/	≤30	/	/	PASS
11AC80SISO	5210	-6.45	≤11	/	-3.95	≤10	PASS

	5290	-6.00	≤11	/	/	/	PASS
	5530	-5.37	≤11	/	/	/	PASS
	5610	-0.15	≤11	/	/	/	PASS
	5775	-3.83	/	≤30	/	/	PASS

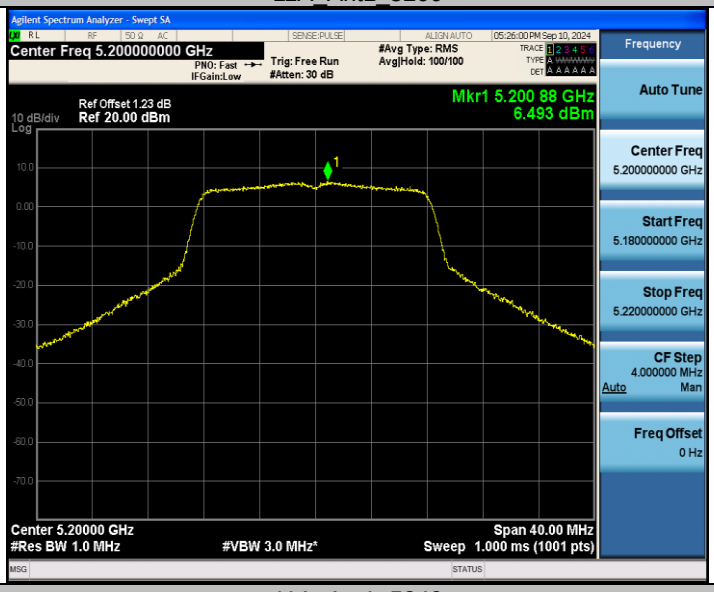
Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

Test Graphs

11A_Ant1_5180



11A_Ant1_5200



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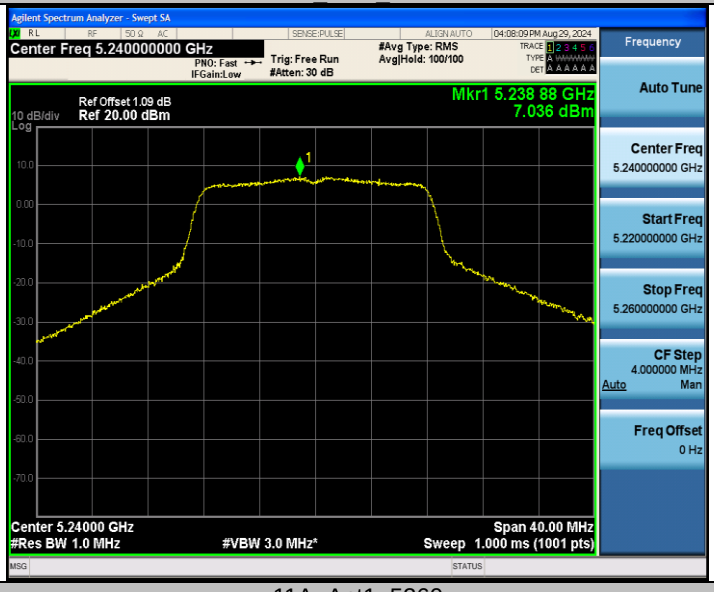
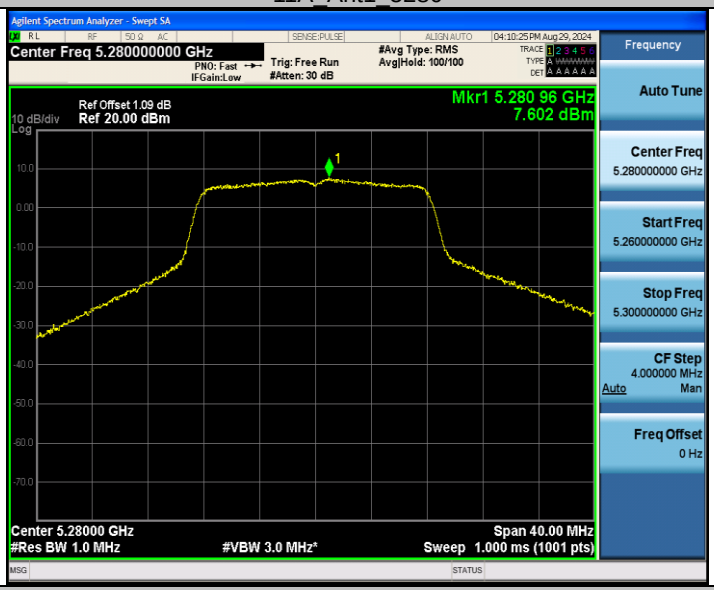
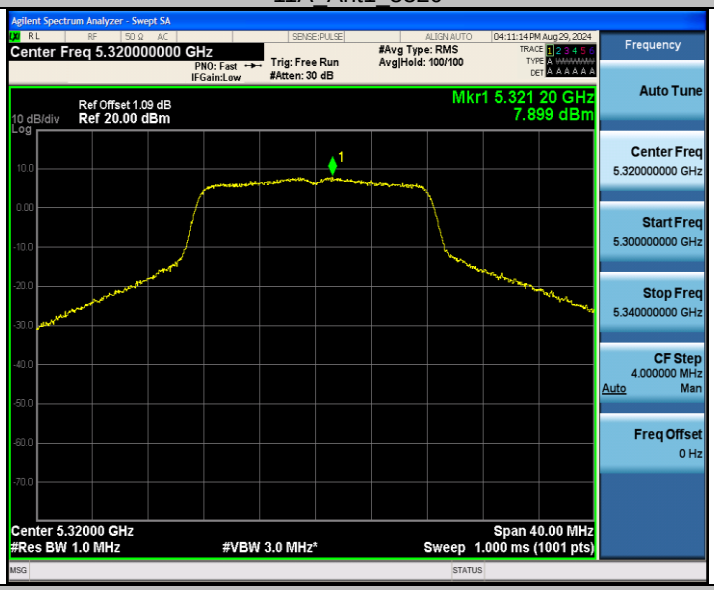


11A_Ant1_5260

11A_Ant1_5280



11A_Ant1_5320



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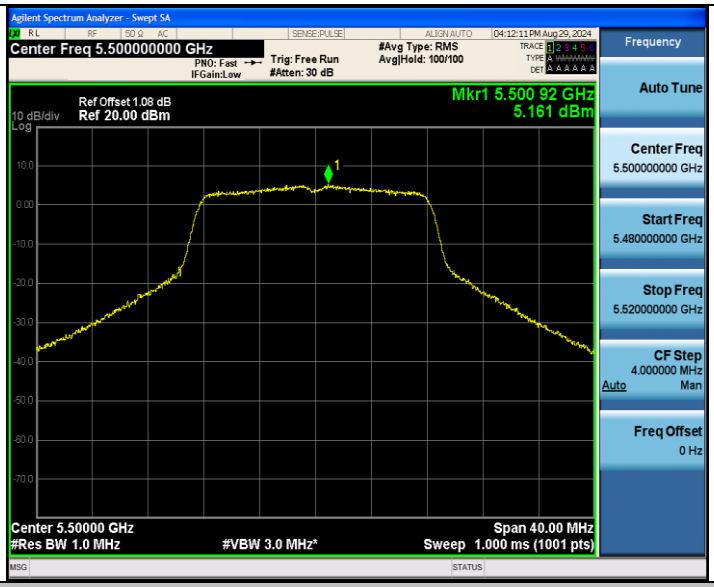

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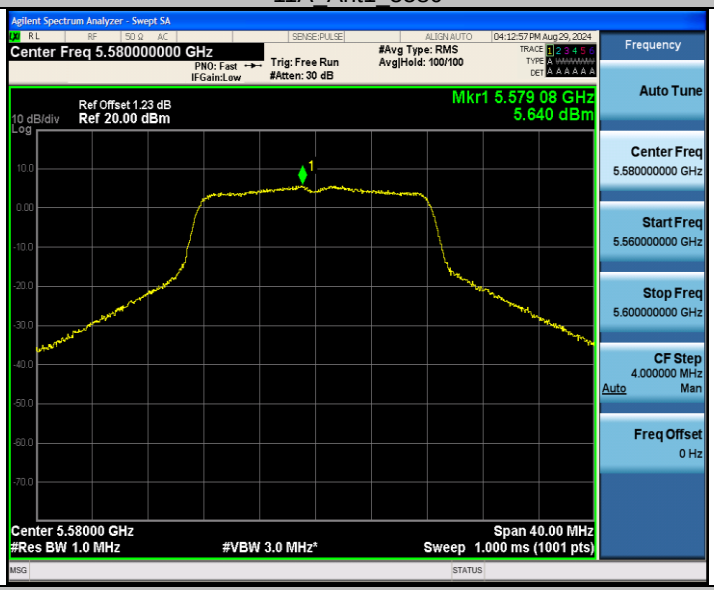

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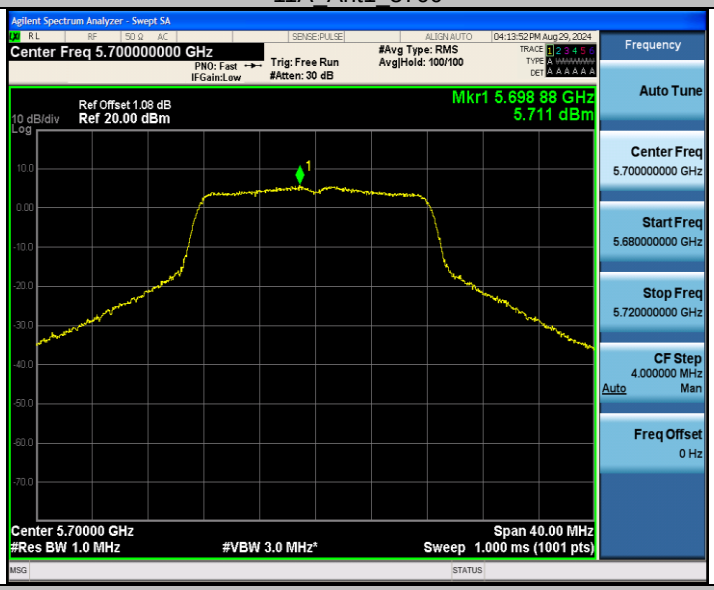
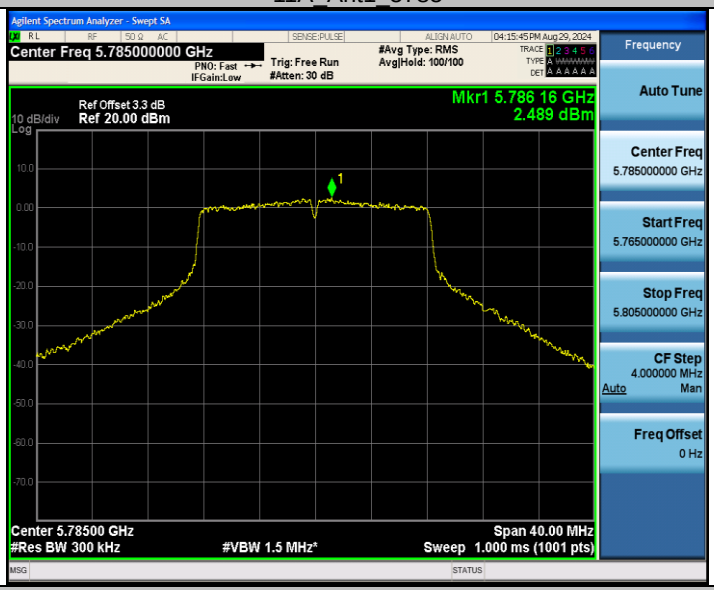


11A_Ant1_5745

11A_Ant1_5785



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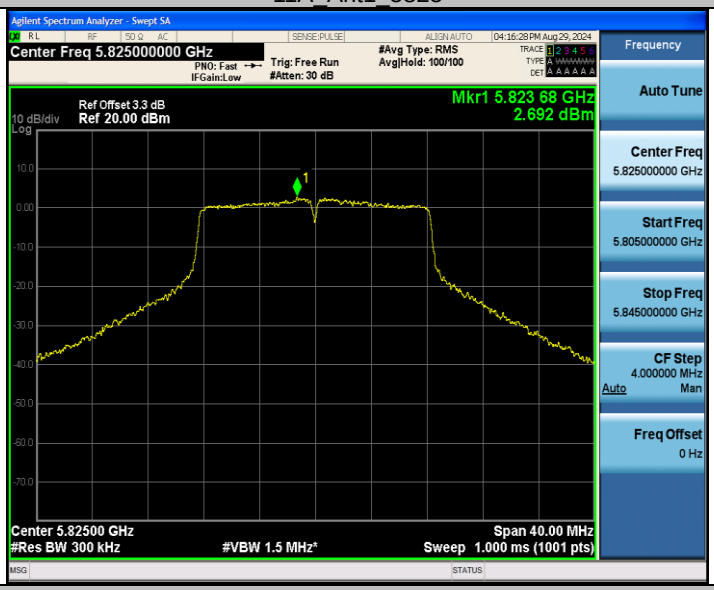

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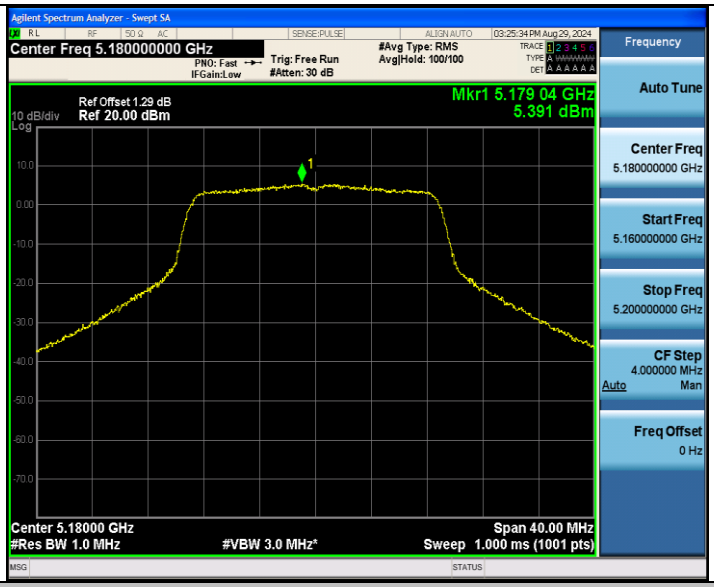
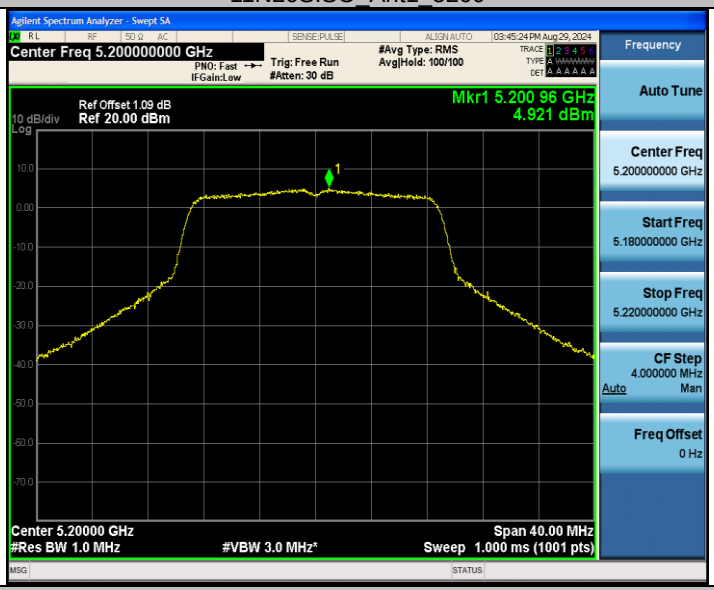


11N20SISO_Ant1_5200



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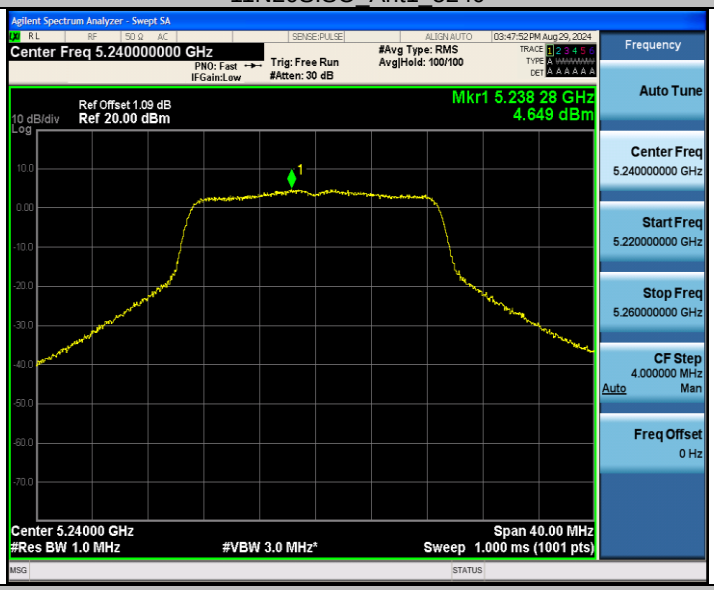
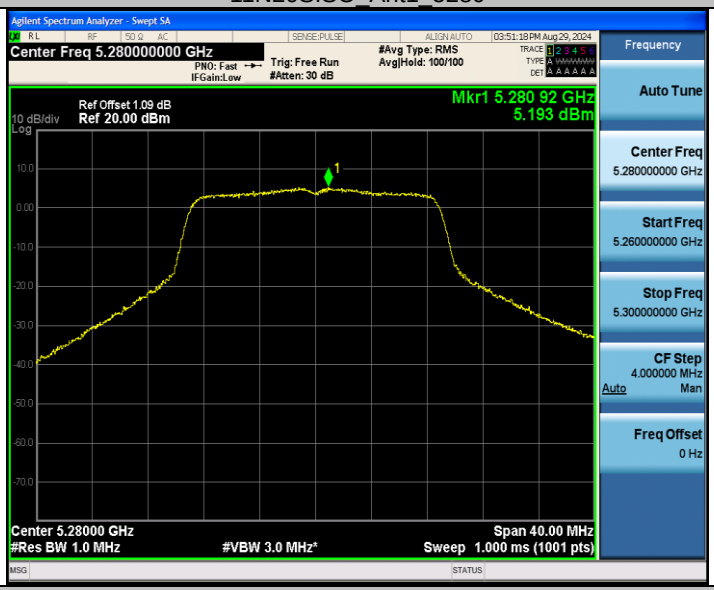


11N20SISO_Ant1_5260

11N20SISO_Ant1_5280



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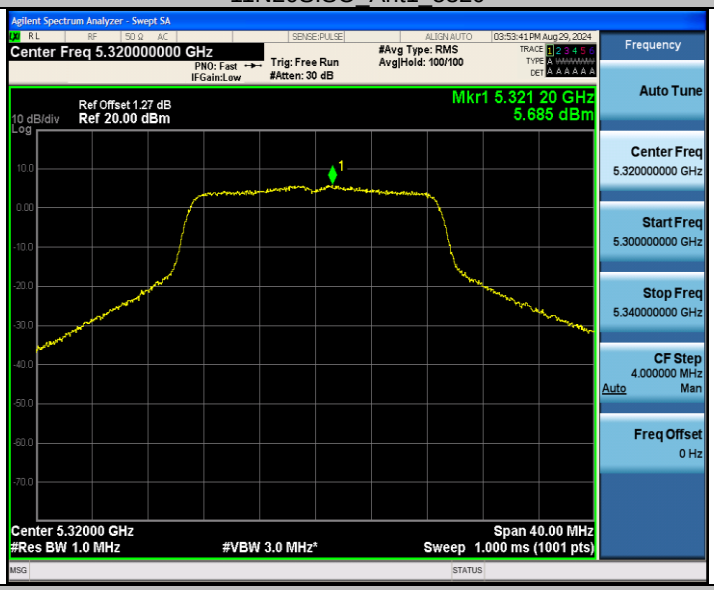
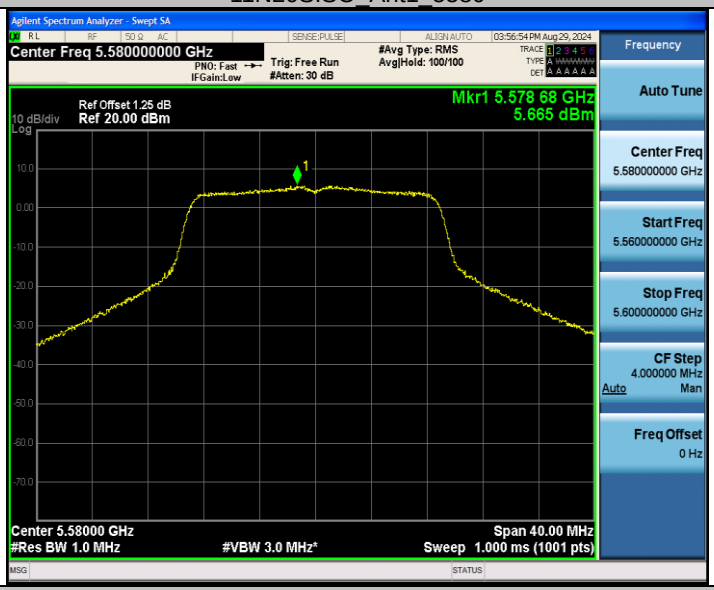


11N20SISO_Ant1_5500

11N20SISO_Ant1_5580



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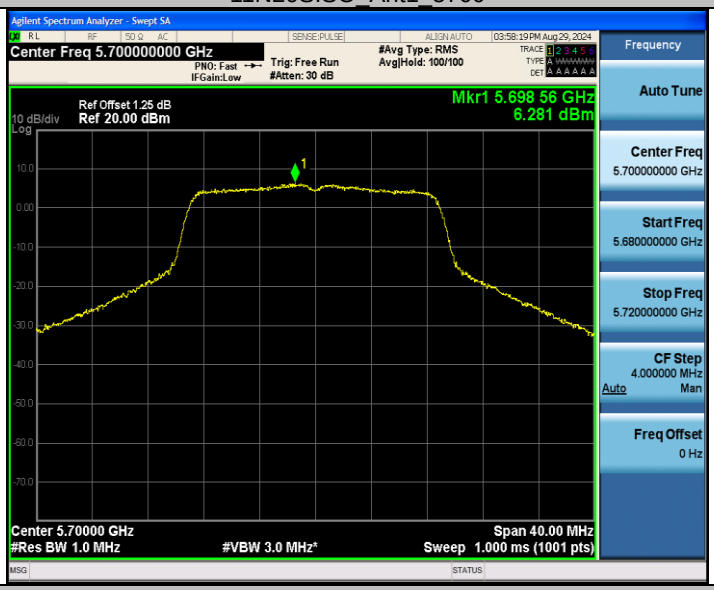
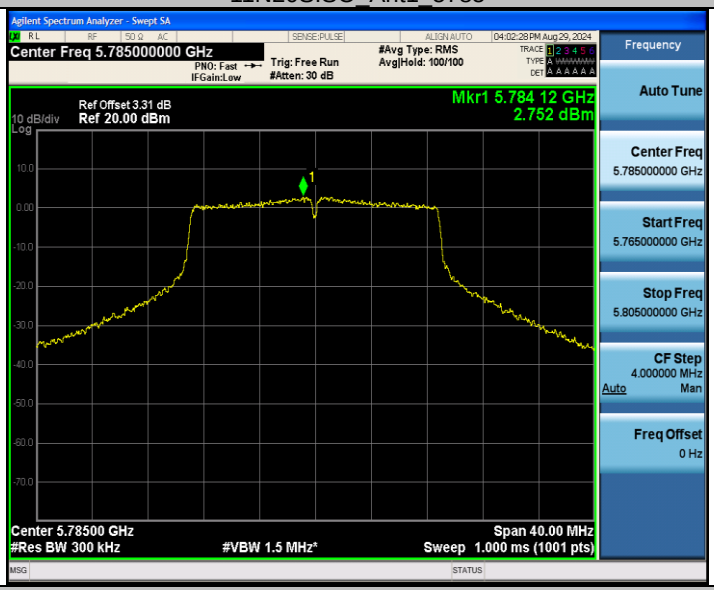


11N20SISO_Ant1_5745

11N20SISO_Ant1_5785



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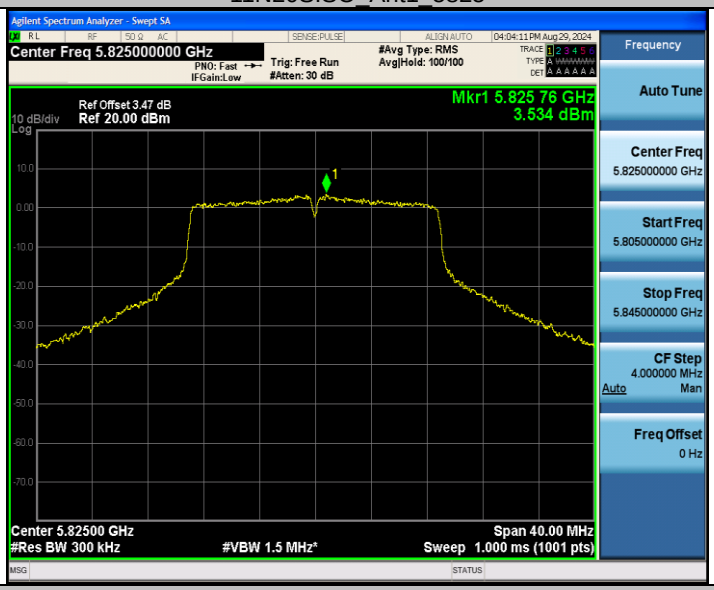

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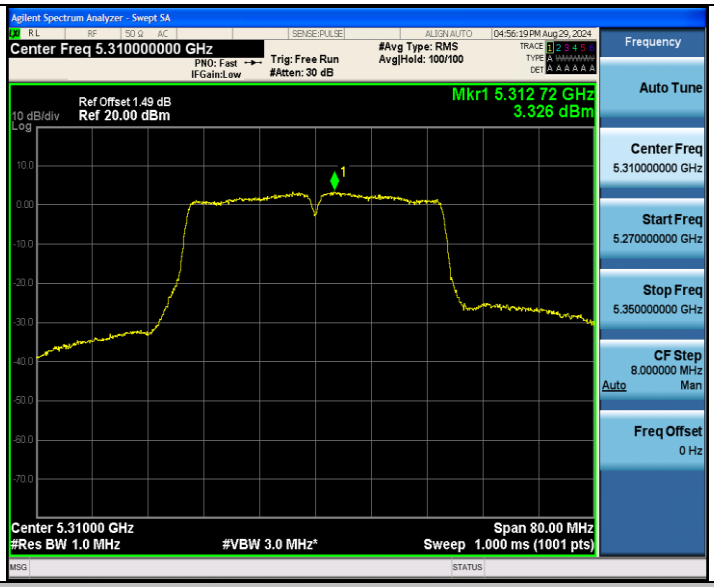
11N40SISO_Ant1_5230

11N40SISO_Ant1_5270

11N40SISO_Ant1_5310



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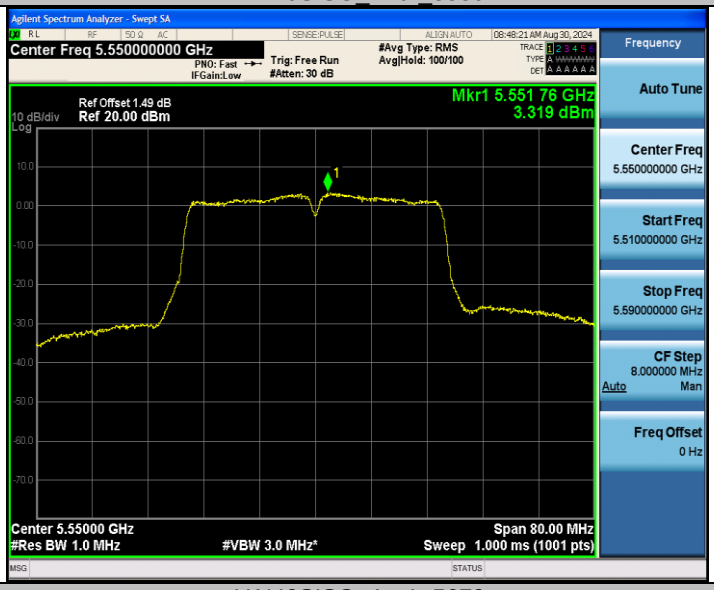

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