

Appendix B

RF Test Data for 5.2G WIFI (Conducted Measurement)

Product Name: DASH CAM

Trade Mark: Pernis

Test Model: S2

Environmental Conditions

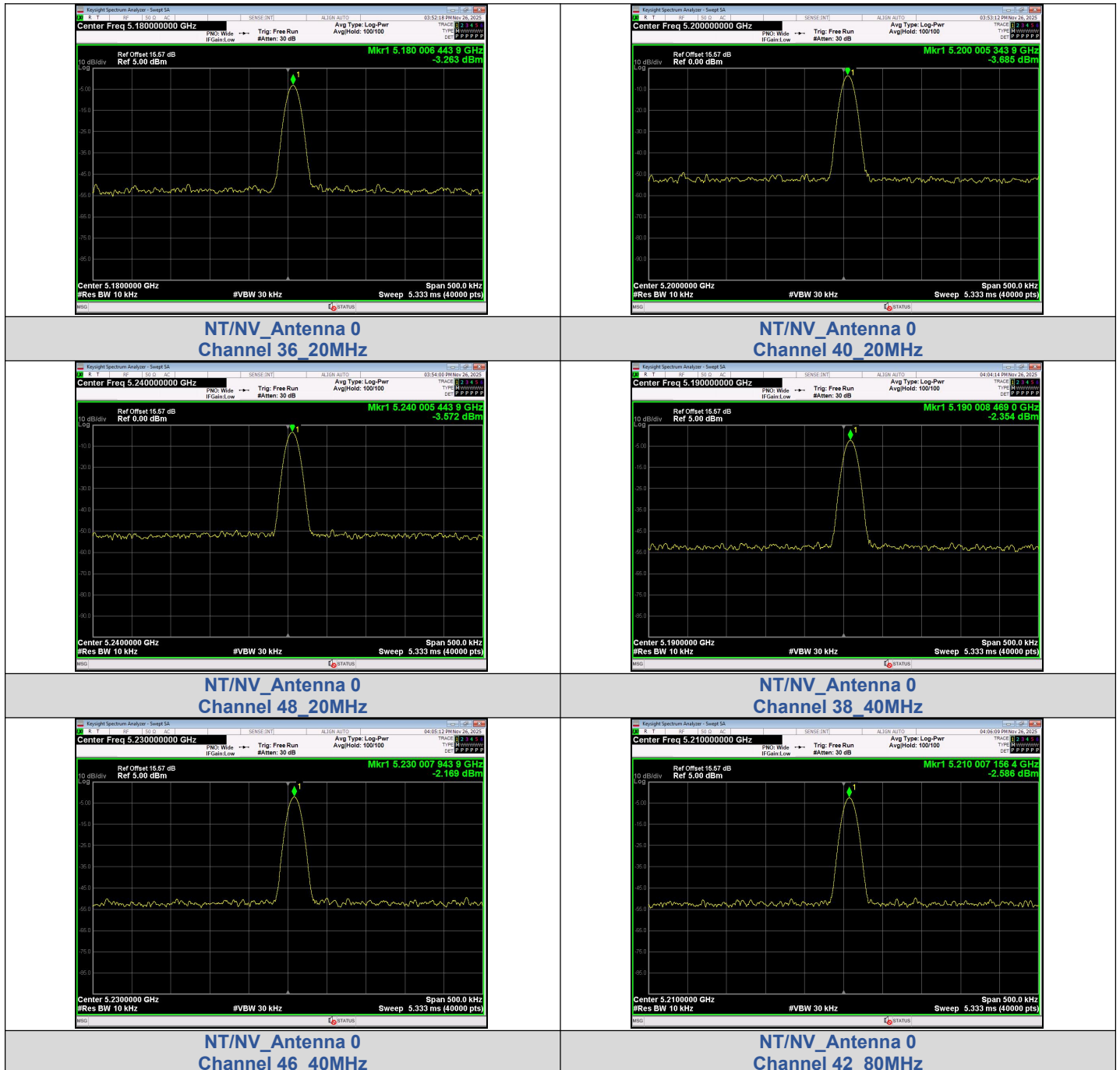
Temperature:	23.4 ° C
Relative Humidity:	55.7%
ATM Pressure:	100.0 kPa
Test Engineer:	<i>Hugh Zhang</i>
Supervised by:	<i>Cherry Chen</i>

B.1 FREQUENCY STABILITY

Test Result

Condition	Ch.	Antenna	Center Frequency (MHz)	Calculated Value of Center Frequency(MHz)	Result (ppm)	Limit (ppm)	State
NT/NV	36	0	5180.0	5180.006444	1.24	Within authorized band	PASS
	40		5200.0	5200.005344	1.03		PASS
	48		5240.0	5240.005444	1.04		PASS
	38		5190.0	5190.008469	1.63		PASS
	46		5230.0	5230.007944	1.52		PASS
	42		5210.0	5210.007156	1.37		PASS

Test Graphs NT/NV



B.2 MAXIMUM CONDUCTED OUTPUT POWER

Test Result

Condition	Mode	Frequency (MHz)	RU & Index	Antenna	Maximum conducted output power (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	N/A	Ant0	8.76	30	Pass
NVNT	a	5200		Ant0	9.14	30	Pass
NVNT	a	5240		Ant0	8.72	30	Pass
NVNT	n20	5180		Ant0	8.49	30	Pass
NVNT	n20	5200		Ant0	8.34	30	Pass
NVNT	n20	5240		Ant0	8.69	30	Pass
NVNT	n40	5190		Ant0	8.42	30	Pass
NVNT	n40	5230		Ant0	8.09	30	Pass
NVNT	ac20	5180		Ant0	9.04	30	Pass
NVNT	ac20	5200		Ant0	9.16	30	Pass
NVNT	ac20	5240		Ant0	8.73	30	Pass
NVNT	ac40	5190		Ant0	5.78	30	Pass
NVNT	ac40	5230		Ant0	6.17	30	Pass
NVNT	ac80	5210		Ant0	3.95	30	Pass
NVNT	ax20	5180	Full RU	Ant0	8.83	30	Pass
NVNT	ax20	5200		Ant0	8.66	30	Pass
NVNT	ax20	5240		Ant0	8.59	30	Pass
NVNT	ax40	5190		Ant0	7.99	30	Pass
NVNT	ax40	5230		Ant0	7.38	30	Pass
NVNT	ax80	5210		Ant0	5.95	30	Pass

Partial RU:

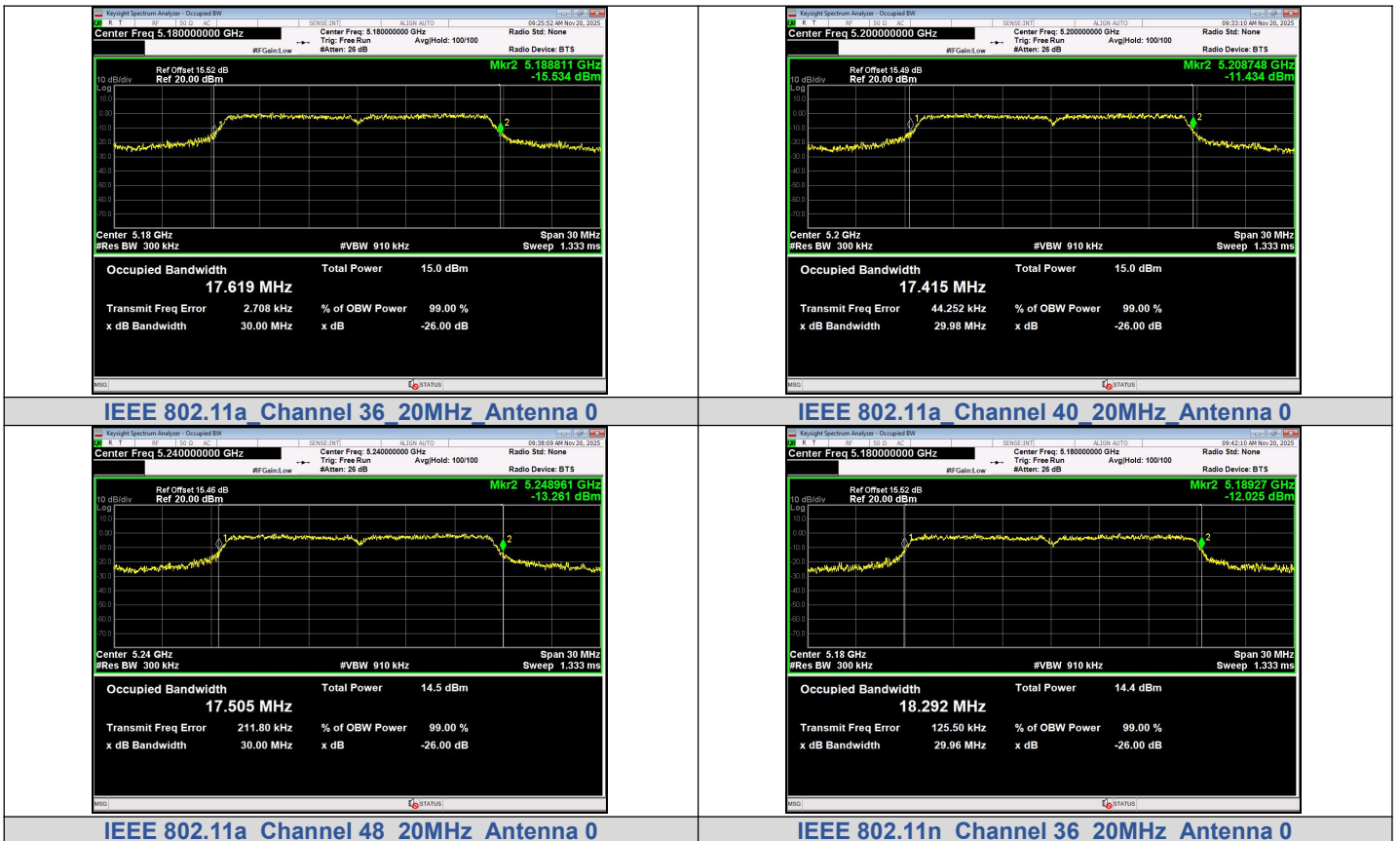
Test Mode	Channel/ Frequency (MHz)	RU configure	Maximum peak conducted output power (dBm)	Limit (dBm)	Verdict
AX20	36 / 5180	26 / 0	4.11	30	Pass
AX20	36 / 5180	52 / 37	4.28	30	Pass
AX20	36 / 5180	106 / 53	4.09	30	Pass

B.3 99% BANDWIDTH

Test Result

Mode	Channel	RU & Index	Ant.	Center Frequency (MHz)	99% BW (MHz)
IEEE 802.11a	36	N/A	0	5180	17.619
	40			5200	17.415
	48			5240	17.505
IEEE 802.11n_20	36			5180	18.292
	40			5200	18.108
	48			5240	18.204
IEEE 802.11n_40	38			5190	37.115
	46			5230	37.132
IEEE 802.11ac_20	36			5180	18.268
	40			5200	18.098
	48			5240	18.208
IEEE 802.11ac_40	38			5190	36.817
	46			5230	37.290
IEEE 802.11ac_80	42			5210	77.095
IEEE 802.11ax_20	36	Full RU	5180	19.381	
	40		5200	18.400	
	48		5240	18.196	
IEEE 802.11ax_40	38		5190	37.324	
	46		5230	37.123	
IEEE 802.11ax_80	42		5210	77.314	

Test Graphs



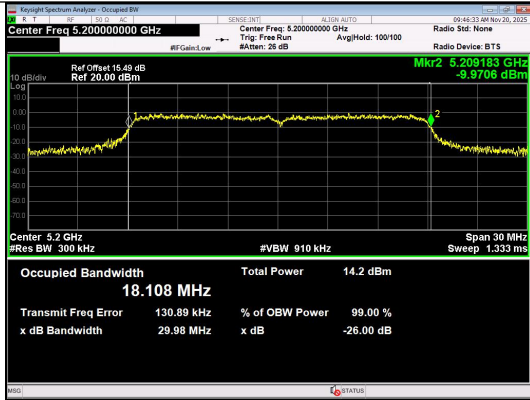


KEYWAY

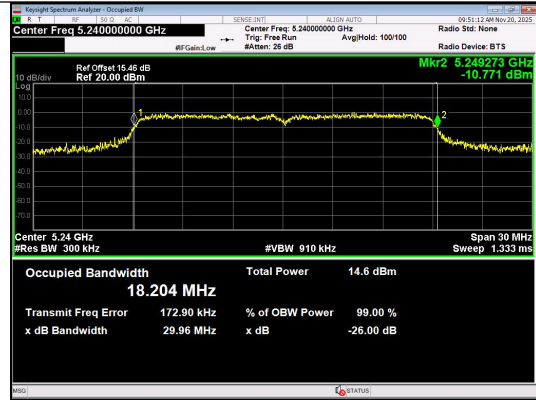
REV.00

Report No. 2025112686538037-00

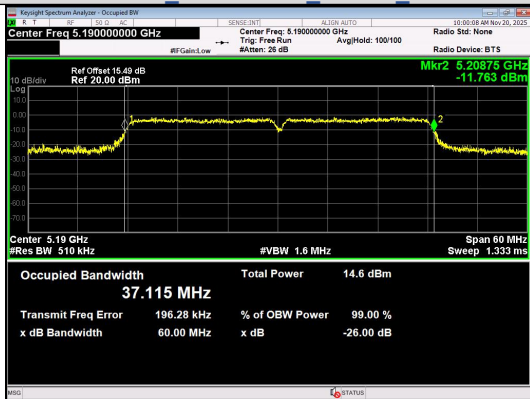
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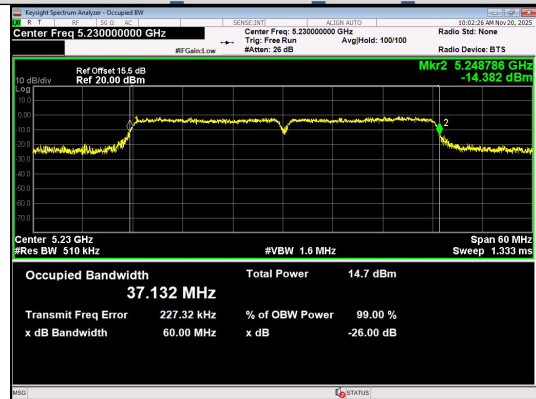
IEEE 802.11n Channel 40 20MHz Antenna 0



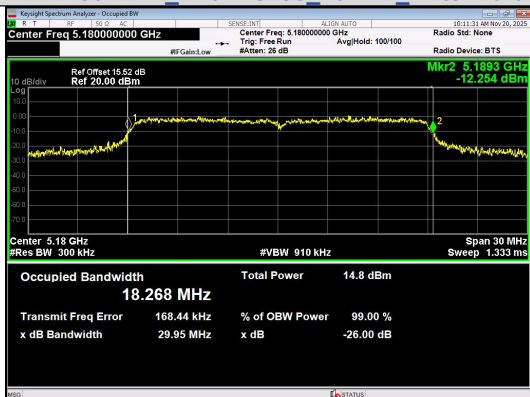
IEEE 802.11n Channel 48 20MHz Antenna 0



IEEE 802.11n Channel 38 40MHz Antenna 0



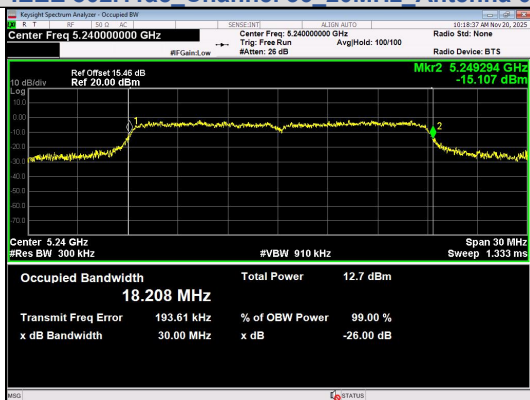
IEEE 802.11n Channel 46 40MHz Antenna 0



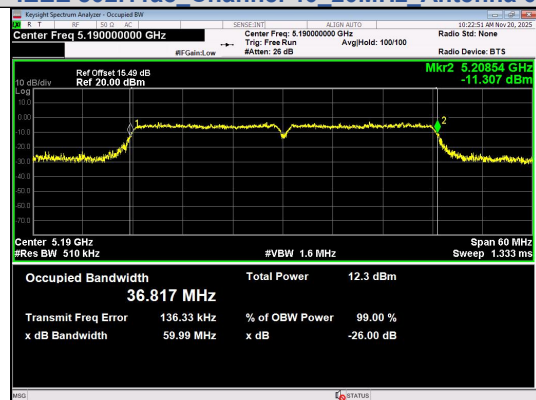
IEEE 802.11ac Channel 36 20MHz Antenna 0



IEEE 802.11ac Channel 40 20MHz Antenna 0



IEEE 802.11ac Channel 48 20MHz Antenna 0



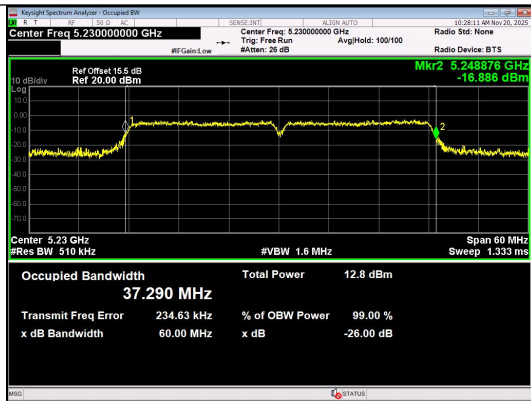
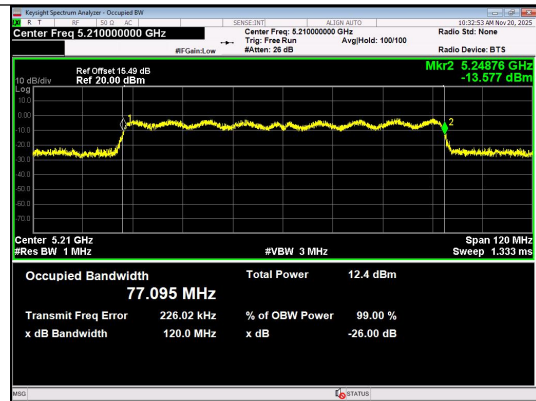
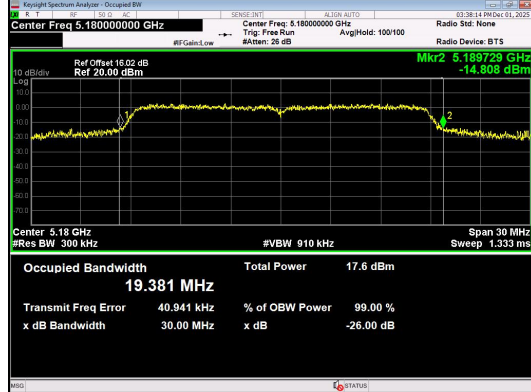
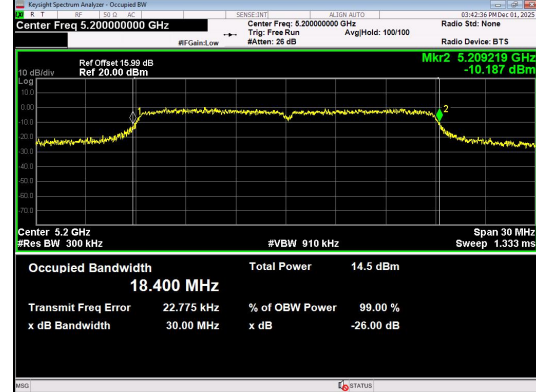
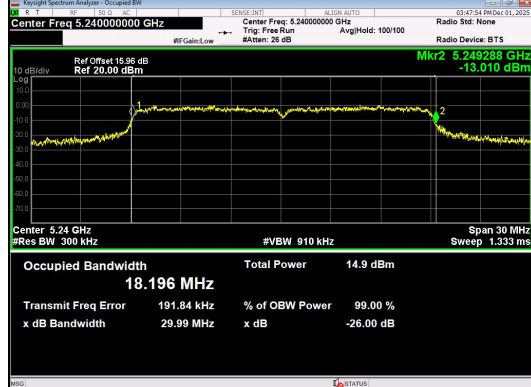
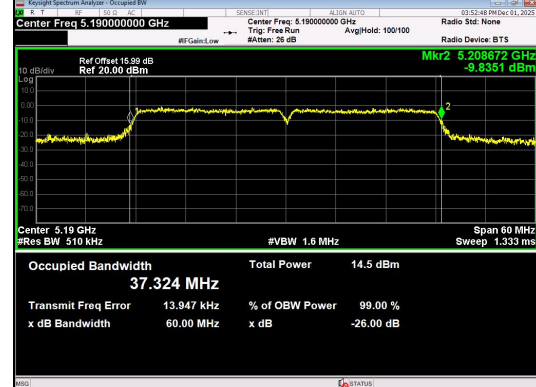
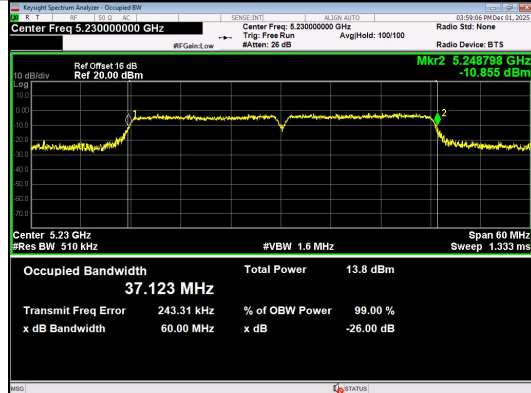
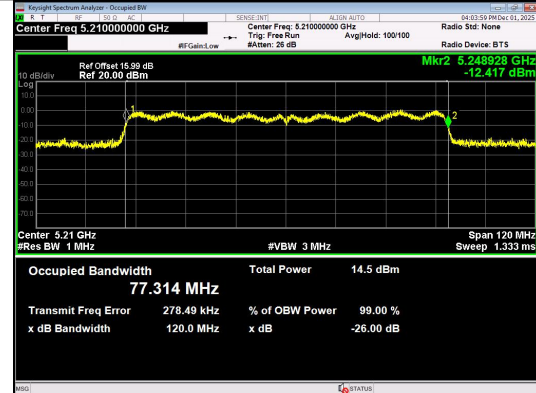
IEEE 802.11ac Channel 38 40MHz Antenna 0

**KEYWAY**

REV.00

Report No. 2025112686538037-00

FCC ID: 2BSYP-S2

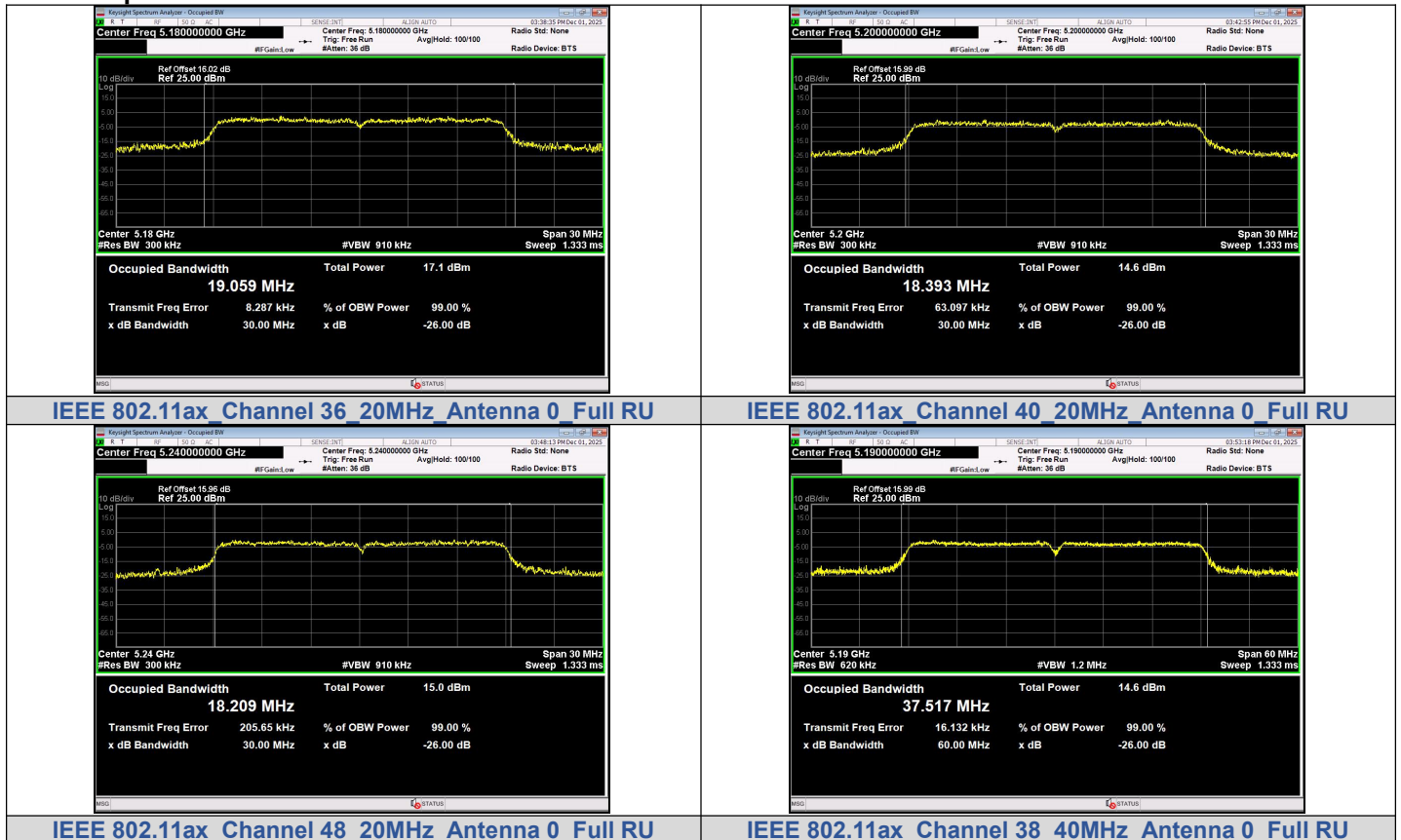
**IEEE 802.11ac Channel 46 40MHz Antenna 0****IEEE 802.11ac Channel 42 80MHz Antenna 0****IEEE 802.11ac Channel 46 40MHz Antenna 0****IEEE 802.11ac Channel 42 80MHz Antenna 0****IEEE 802.11ax Channel 36 20MHz Antenna 0 Full RU****IEEE 802.11ax Channel 40 20MHz Antenna 0 Full RU****IEEE 802.11ax Channel 48 20MHz Antenna 0 Full RU****IEEE 802.11ax Channel 38 40MHz Antenna 0 Full RU**

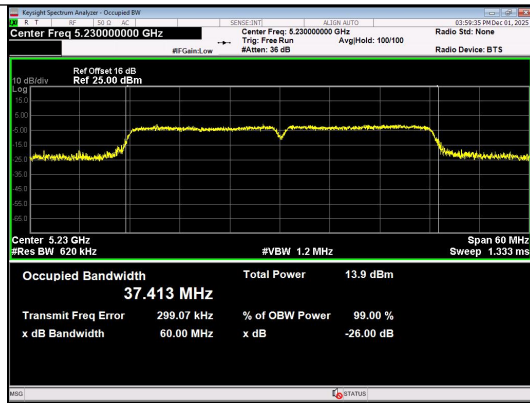
B.4 26DB BANDWIDTH

Test Result

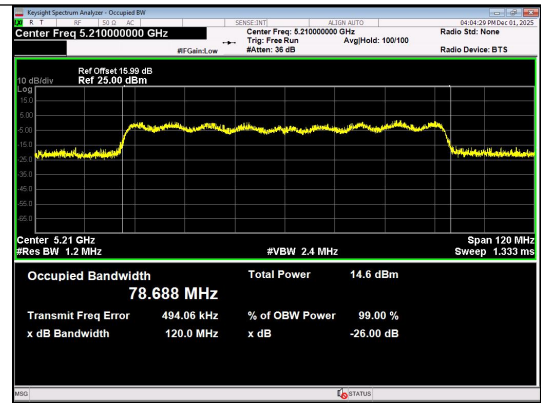
Mode	Channel	RU & Index	Ant.	Center Frequency (MHz)	26 dB Bandwidth (MHz)	RBW/EBW
IEEE 802.11a	36	N/A	0	5180	30.00	1.0
	40			5200	30.00	1.0
	48			5240	30.00	1.0
IEEE 802.11n_20	36			5180	30.00	1.0
	40			5200	29.99	1.0
	48			5240	30.00	1.0
IEEE 802.11n_40	38			5190	60.00	1.03
	46			5230	60.00	1.03
IEEE 802.11ac_20	36			5180	30.00	1.0
	40			5200	29.86	1.0
	48			5240	30.00	1.0
IEEE 802.11ac_40	38			5190	60.00	1.03
	46			5230	60.00	1.03
IEEE 802.11ac_80	42			5210	120.00	1.02
IEEE 802.11ax_20	36	Full RU		5180	30.00	1.0
	40			5200	30.00	1.0
	48			5240	30.00	1.0
IEEE 802.11ax_40	38			5190	60.00	1.03
	46			5230	60.00	1.03
IEEE 802.11ax_80	42			5210	120.00	1.02

Test Graphs





IEEE 802.11ax Channel 46 40MHz Antenna 0 Full RU



IEEE 802.11ax Channel 42 80MHz Antenna 0 Full RU

B.5 CONDUCTED OUT OF BAND EMISSION

Test Result

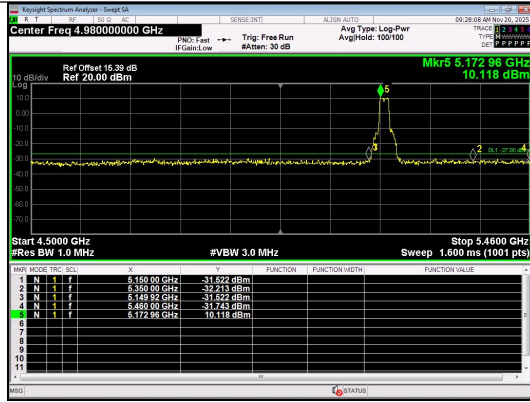
Mode	Channel	RU & Index	Ant.	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	
IEEE 802.11a	36	N/A	0	5149.74	-37.321	-27	-10.320	PASS	
				5149.92	-31.522	-27	-5.000	PASS	
				5150.00	-31.522	-27	-5.000	PASS	
				5350.00	-32.213	-27	-5.000	PASS	
				5460.00	-31.743	-27	-5.000	PASS	
	21164.3			-36.958	-27	-9.960	PASS		
	40			3797.42	-45.978	-27	-18.980	PASS	
				5149.92	-32.197	-27	-5.000	PASS	
				5150.00	-32.197	-27	-5.000	PASS	
				5350.00	-32.243	-27	-5.000	PASS	
				5460.00	-32.242	-27	-5.000	PASS	
	48			21596.6	-37.144	-27	-10.140	PASS	
				4439.47	-45.889	-27	-18.890	PASS	
				5148.96	-33.075	-27	-6.000	PASS	
				5150.00	-33.200	-27	-6.000	PASS	
5350.00				-31.867	-27	-5.000	PASS		
IEEE 802.11n_20	36			5456.16	-31.554	-27	-5.000	PASS	
				21130.4	-36.724	-27	-9.720	PASS	
				5148.00	-30.067	-27	-3.000	PASS	
				5148.59	-33.138	-27	-6.140	PASS	
				5150.00	-31.228	-27	-4.000	PASS	
	40			5350.00	-30.732	-27	-4.000	PASS	
				5435.04	-30.194	-27	-3.000	PASS	
				21144.7	-36.805	-27	-9.800	PASS	
				3679.92	-45.483	-27	-18.480	PASS	
				5148.96	-32.480	-27	-5.000	PASS	
	48			5150.00	-32.808	-27	-6.000	PASS	
				5350.00	-31.932	-27	-5.000	PASS	
				5455.20	-29.925	-27	-3.000	PASS	
				21177.1	-35.837	-27	-8.840	PASS	
				3819.70	-46.131	-27	-19.130	PASS	
IEEE 802.11n_40	38			5148.96	-32.448	-27	-5.000	PASS	
				5150.00	-33.279	-27	-6.000	PASS	
				5350.00	-32.563	-27	-6.000	PASS	
				5460.00	-31.643	-27	-5.000	PASS	
				21191.8	-37.315	-27	-10.310	PASS	
	46			5150.00	-29.872	-27	-2.872	PASS	
				5150.00	-29.023	-27	-2.023	PASS	
				5350.00	-31.332	-27	-4.000	PASS	
				5448.48	-31.230	-27	-4.000	PASS	
				21162.8	-36.967	-27	-9.970	PASS	
	IEEE 802.11ac_20			36	2626.48	-33.147	-27	-6.150	PASS
					5149.92	-31.802	-27	-5.000	PASS
					5150.00	-31.802	-27	-5.000	PASS
					5350.00	-31.929	-27	-5.000	PASS
					5456.16	-30.784	-27	-4.000	PASS
40				21564.7	-36.913	-27	-9.910	PASS	
				5142.24	-30.874	-27	-4.000	PASS	
				5150.00	-31.171	-27	-4.000	PASS	
				5150.00	-33.980	-27	-6.980	PASS	
				5350.00	-31.926	-27	-5.000	PASS	
48				5456.16	-31.597	-27	-5.000	PASS	
				21588.3	-37.072	-27	-10.070	PASS	
				2464.56	-42.425	-27	-15.420	PASS	
				5149.92	-32.047	-27	-5.000	PASS	
				5150.00	-32.047	-27	-5.000	PASS	

				5148.96	-32.703	-27	-6.000	PASS
				5150.00	-33.026	-27	-6.000	PASS
				5350.00	-32.404	-27	-5.000	PASS
				5459.04	-31.361	-27	-4.000	PASS
				21156.5	-36.484	-27	-9.480	PASS
IEEE 802.11ac_40	38	Full RU	0	5148.72	-29.205	-27	-2.205	PASS
				5149.92	-29.997	-27	-2.997	PASS
				5150.00	-29.997	-27	-2.997	PASS
				5350.00	-33.250	-27	-6.000	PASS
				5460.00	-31.732	-27	-5.000	PASS
	46			21156.0	-36.767	-27	-9.770	PASS
				5148.59	-42.674	-27	-15.670	PASS
				5149.92	-31.951	-27	-5.000	PASS
				5150.00	-31.951	-27	-5.000	PASS
				5350.00	-31.290	-27	-4.000	PASS
				5457.12	-30.862	-27	-4.000	PASS
				21143.7	-37.320	-27	-10.320	PASS
IEEE 802.11ac_80	42			5148.98	-28.838	-27	-1.838	PASS
				5149.92	-29.698	-27	-2.698	PASS
				5150.00	-29.698	-27	-2.698	PASS
				5350.00	-30.495	-27	-3.000	PASS
				5439.84	-29.348	-27	-2.000	PASS
	21121.1			-36.686	-27	-9.690	PASS	
IEEE 802.11ax_20	36			5149.62	-29.583	-27	-2.580	PASS
				5149.92	-27.822	-27	-1.000	PASS
				5150.00	-27.822	-27	-1.000	PASS
				5350.00	-32.523	-27	-6.000	PASS
				5460.00	-31.955	-27	-5.000	PASS
	40			21553.4	-36.887	-27	-9.890	PASS
				5148.85	-44.883	-27	-17.880	PASS
		5148.96	-32.409	-27	-5.000	PASS		
		5150.00	-33.181	-27	-6.000	PASS		
		5350.00	-31.044	-27	-4.000	PASS		
		5452.32	-30.177	-27	-3.000	PASS		
		24869.3	-36.863	-27	-9.860	PASS		
	48	3804.98	-45.598	-27	-18.600	PASS		
		5149.92	-32.774	-27	-6.000	PASS		
		5150.00	-32.774	-27	-6.000	PASS		
		5350.00	-31.103	-27	-4.000	PASS		
		5444.64	-30.864	-27	-4.000	PASS		
		21201.7	-36.089	-27	-9.090	PASS		
		5150.00	-30.045	-27	-3.045	PASS		
IEEE 802.11ax_40	38	5150.00	-30.045	-27	-3.045	PASS		
		5350.00	-31.232	-27	-4.000	PASS		
		5444.64	-31.135	-27	-4.000	PASS		
		21595.6	-36.603	-27	-9.600	PASS		
		32.82	-43.375	-27	-16.380	PASS		
	46	5149.92	-31.134	-27	-4.000	PASS		
		5150.00	-31.134	-27	-4.000	PASS		
		5350.00	-30.728	-27	-4.000	PASS		
		5453.28	-30.652	-27	-4.000	PASS		
		24921.9	-36.551	-27	-9.550	PASS		
IEEE 802.11ax_80	42	5139.38	-30.305	-27	-3.305	PASS		
		5149.92	-30.310	-27	-3.310	PASS		
		5150.00	-30.310	-27	-3.310	PASS		
		5350.00	-30.274	-27	-3.000	PASS		
		5351.97	-36.100	-27	-9.100	PASS		
		5456.16	-30.257	-27	-3.000	PASS		

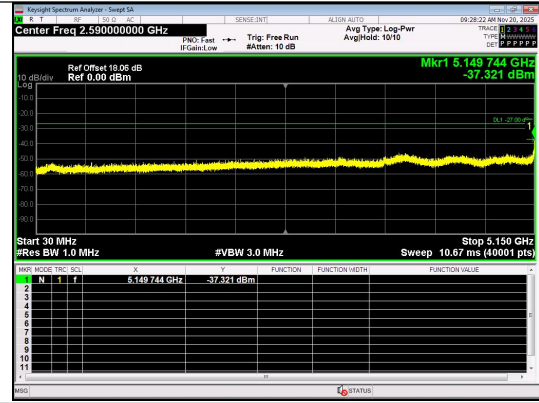
Note: 1. input compensation coefficient (dB)= Cable Loss (dB)

2. The antenna gain has already been taken into account in the test profile.

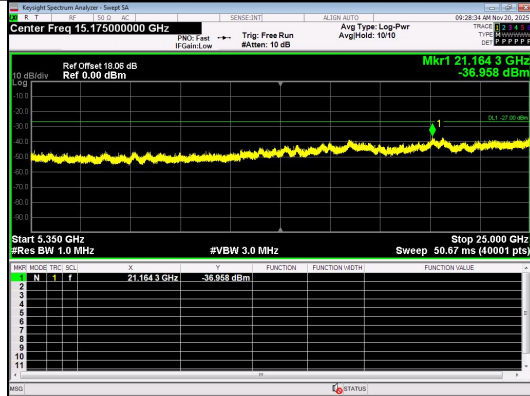
Test Graphs



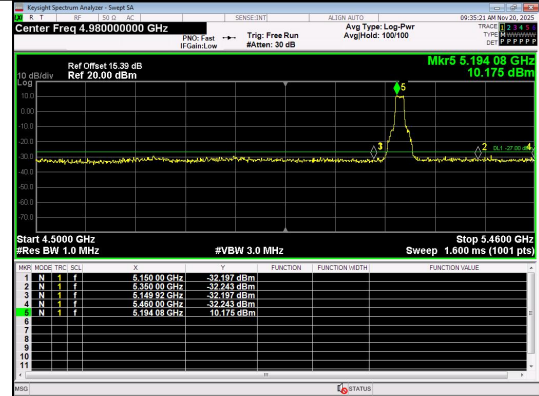
Out Of Band Emission
IEEE 802.11a Channel 36 20MHz Antenna 0



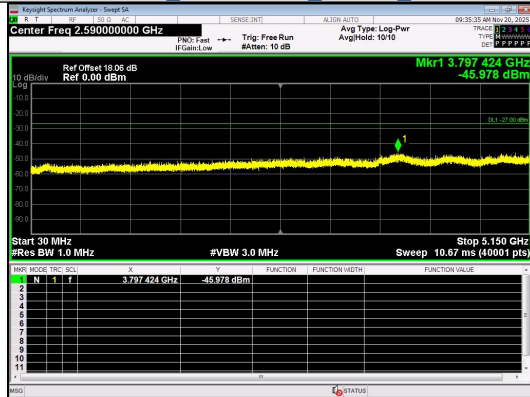
Spurious Emission:30.0~5150 MHz
IEEE 802.11a Channel 36 20MHz Antenna 0



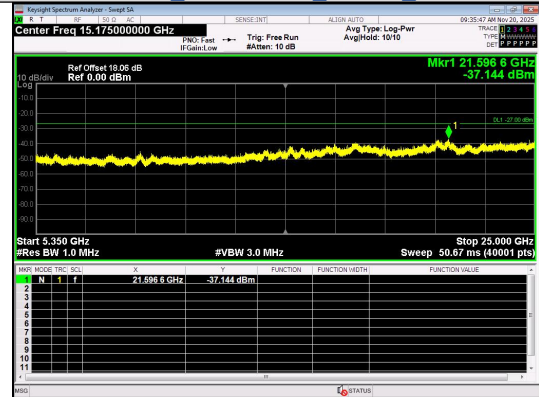
Spurious Emission:5350~25000.0 MHz
IEEE 802.11a Channel 36 20MHz Antenna 0



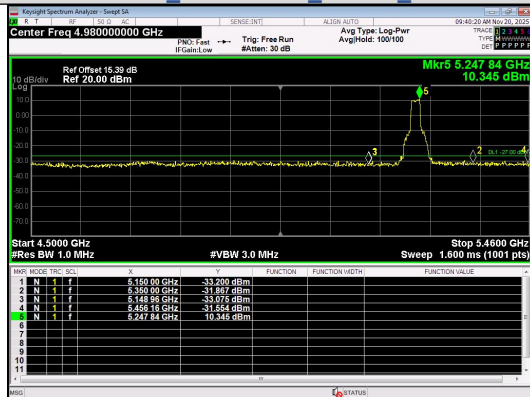
Out Of Band Emission
IEEE 802.11a Channel 40 20MHz Antenna 0



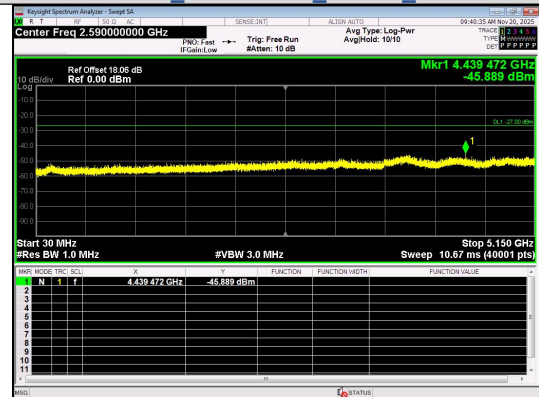
Spurious Emission:30.0~5150 MHz
IEEE 802.11a Channel 40 20MHz Antenna 0



Spurious Emission:5350~25000.0 MHz
IEEE 802.11a Channel 40 20MHz Antenna 0



Out Of Band Emission
IEEE 802.11a Channel 48 20MHz Antenna 0



Spurious Emission:30.0~5150 MHz
IEEE 802.11a Channel 48 20MHz Antenna 0