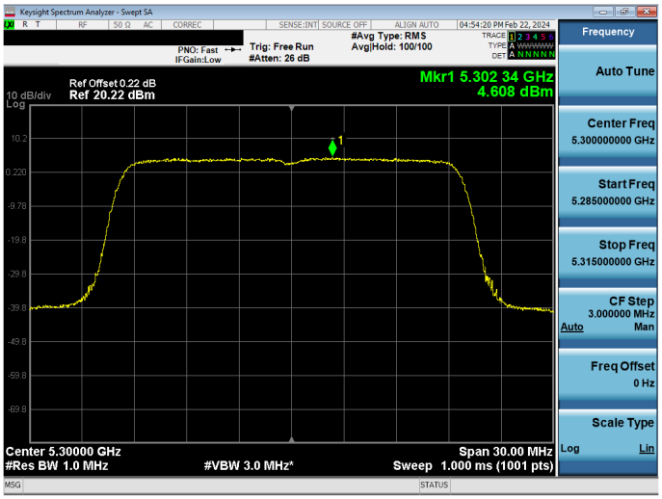
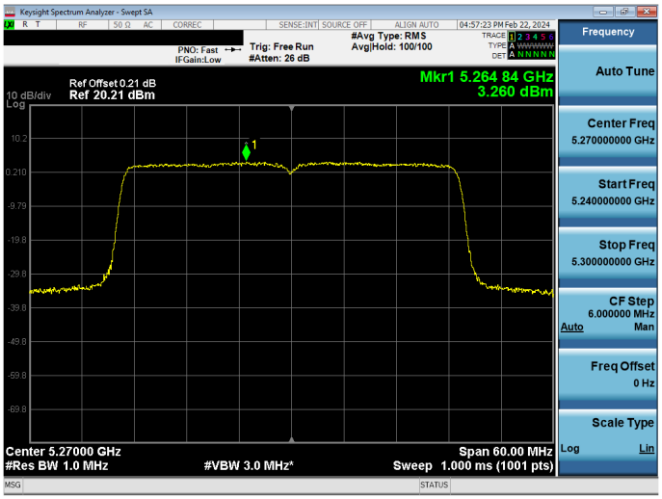
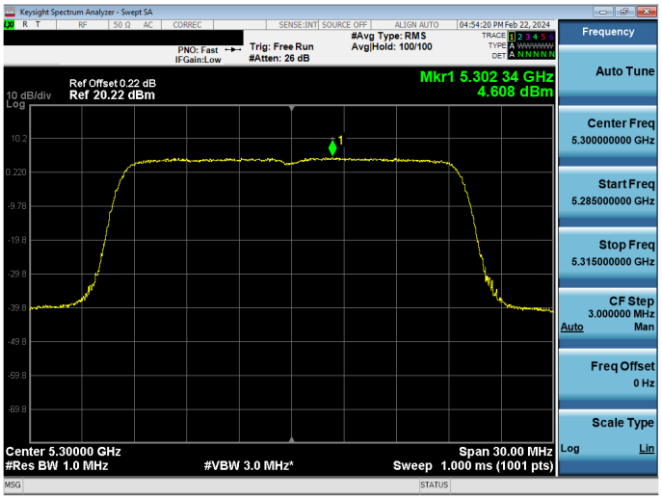


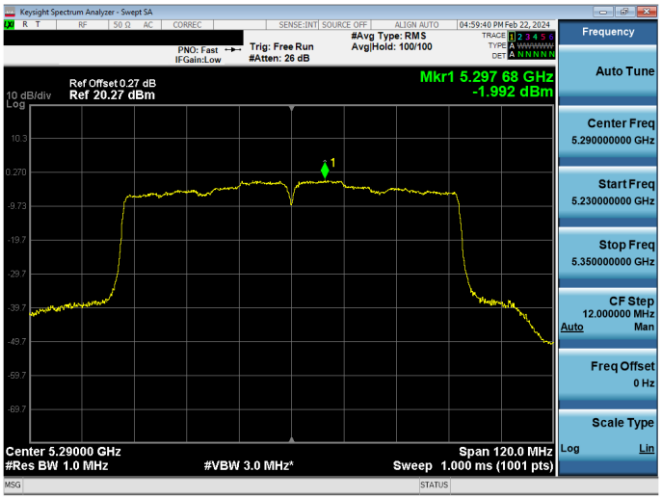
Plot 7-811. PSD CDD Diversity Antenna 2a (20MHz BW 802.11n – Ch. 60, MCS12)



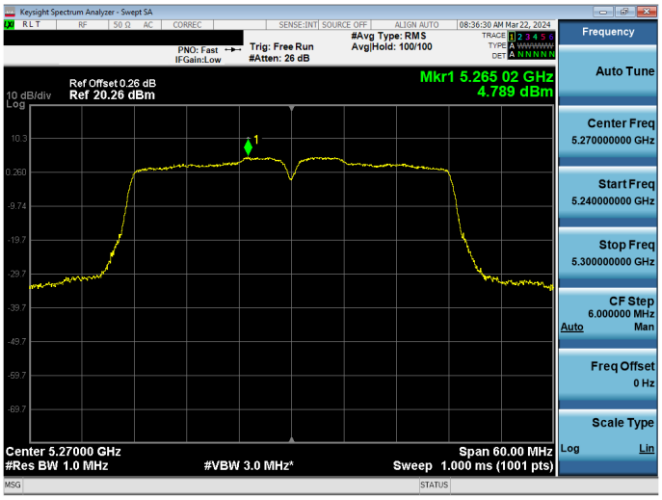
Plot 7-814. PSD CDD Diversity Antenna 2a (40MHz BW 802.11ax(SU) – Ch. 54, MCS4)



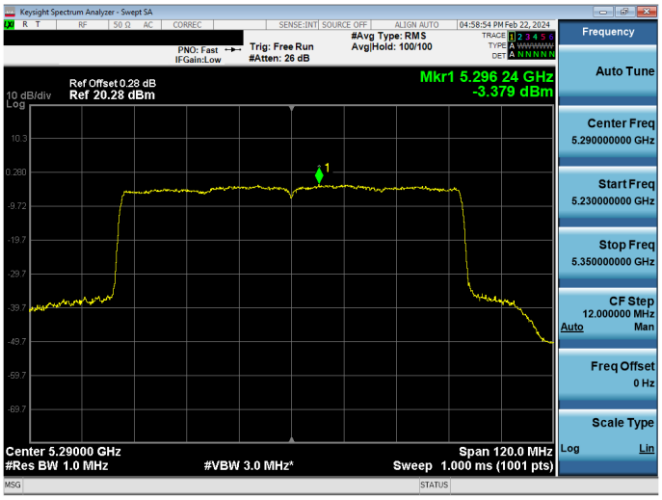
Plot 7-812. PSD CDD Diversity Antenna 2a (20MHz BW 802.11ax(SU) – Ch. 60, MCS4)



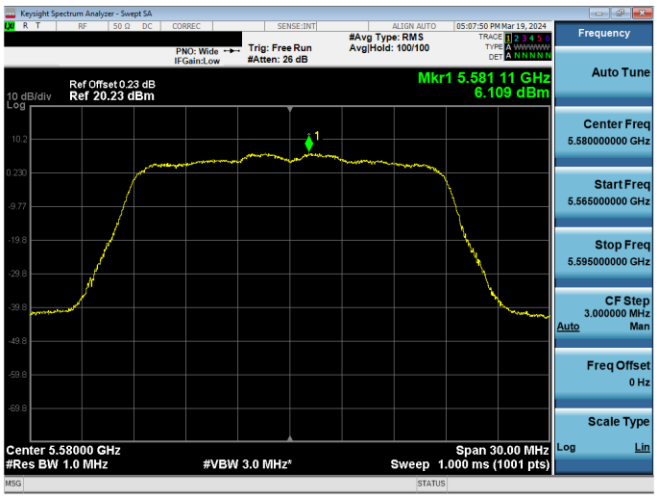
Plot 7-815. PSD CDD Diversity Antenna 2a (80MHz BW 802.11ac – Ch. 58, MCS4)



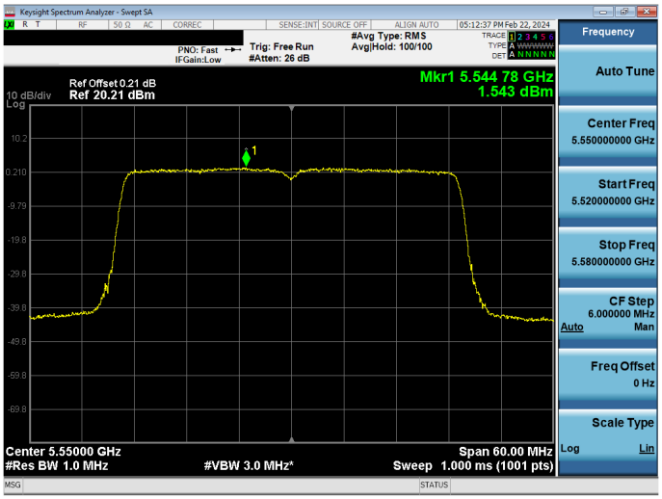
Plot 7-813. PSD CDD Diversity Antenna 2a (40MHz BW 802.11n – Ch. 54, MCS12)



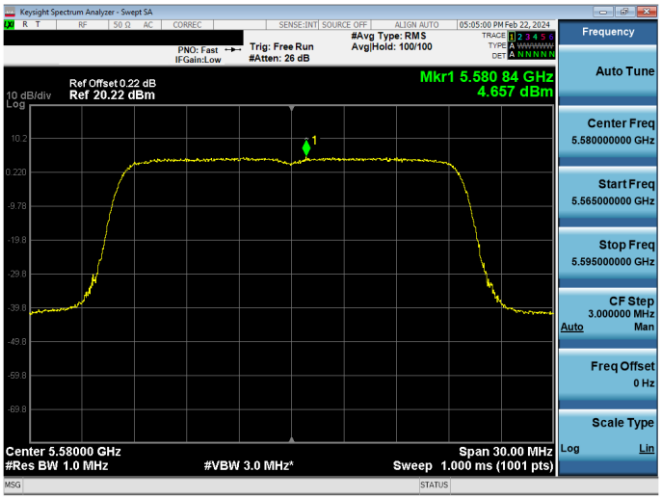
Plot 7-816. PSD CDD Diversity Antenna 2a (80MHz BW 802.11ax(SU) – Ch. 58, MCS4)



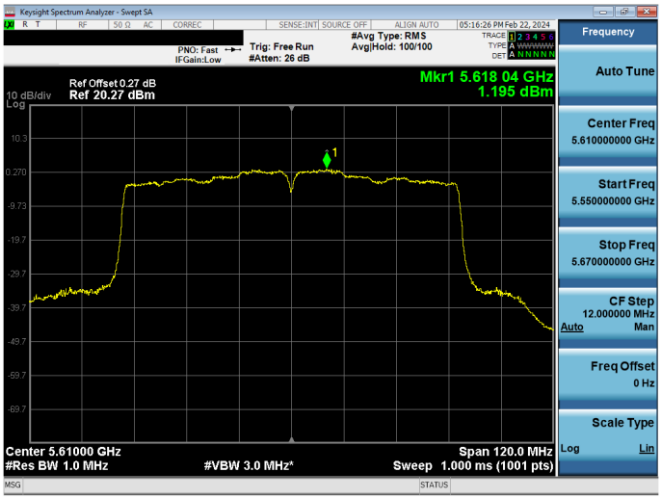
Plot 7-817. PSD CDD Diversity Antenna 2a (20MHz BW 802.11n – Ch. 116, MCS12)



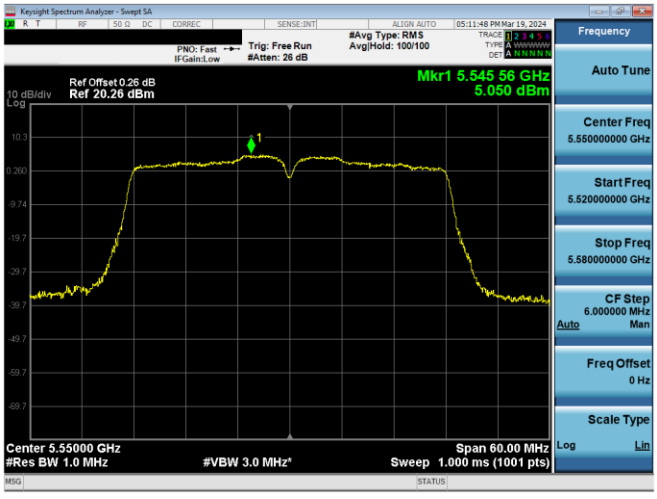
Plot 7-820. PSD CDD Diversity Antenna 2a (40MHz BW 802.11ax(SU) – Ch. 110, MCS4)



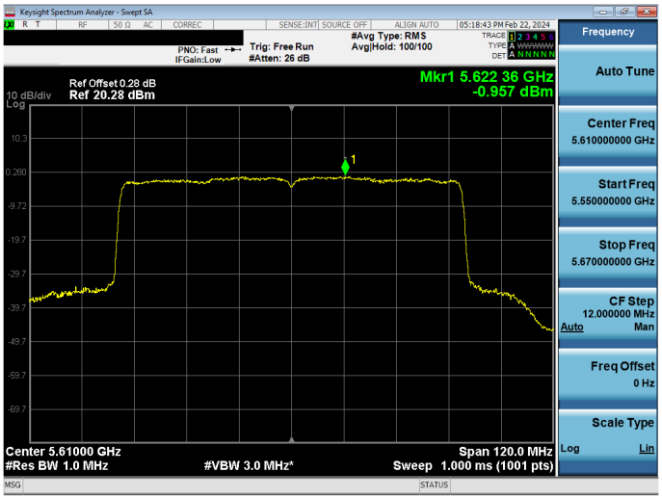
Plot 7-818. PSD CDD Diversity Antenna 2a (20MHz BW 802.11ax(SU) – Ch. 116, MCS4)



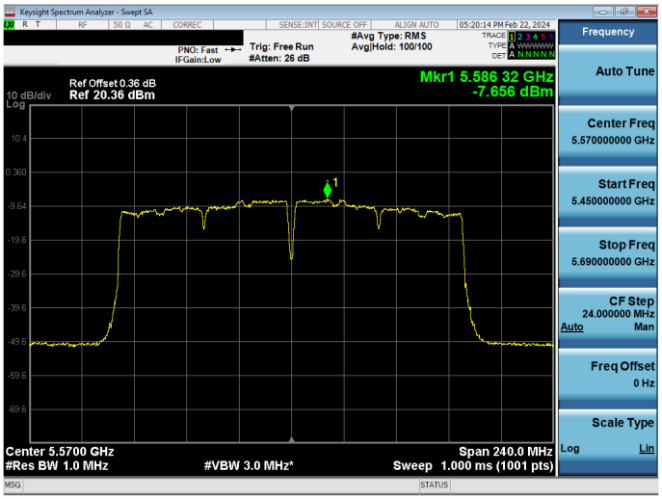
Plot 7-821. PSD CDD Diversity Antenna 2a (80MHz BW 802.11ac – Ch. 122, MCS4)



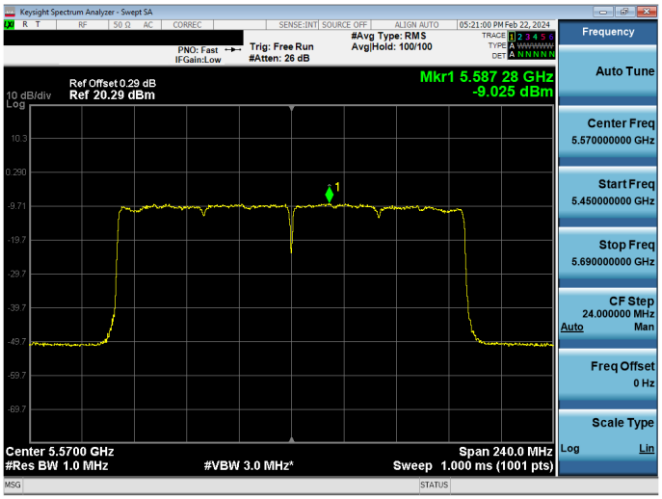
Plot 7-819. PSD CDD Diversity Antenna 2a (40MHz BW 802.11n – Ch. 110, MCS12)



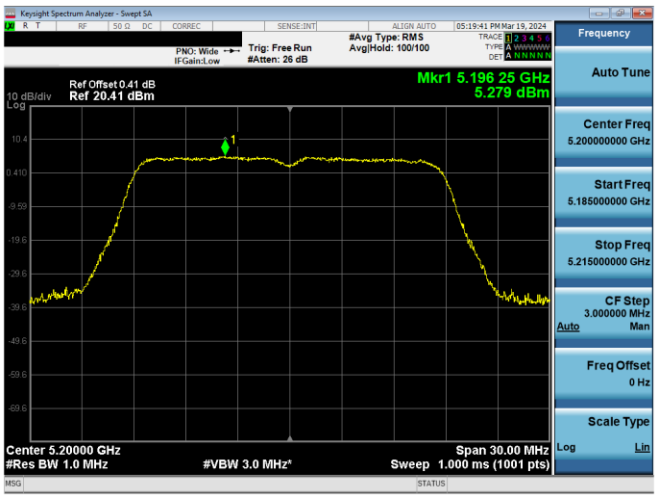
Plot 7-822. PSD CDD Diversity Antenna 2a (80MHz BW 802.11ax(SU) – Ch. 122, MCS4)



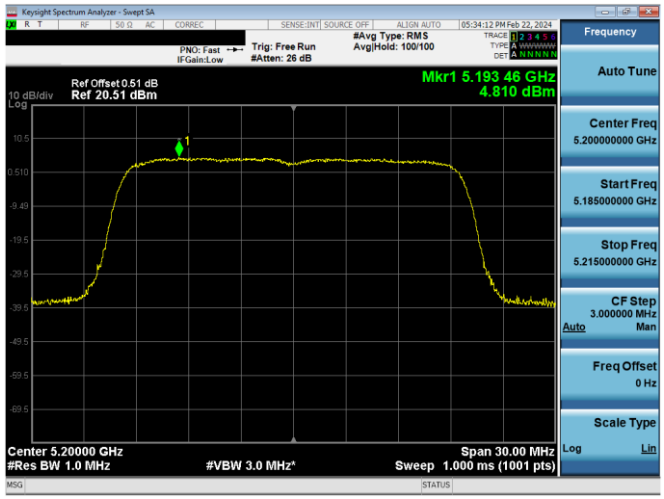
Plot 7-823. PSD CDD Diversity Antenna 2a (160MHz BW 802.11ac – Ch. 114, MCS4)



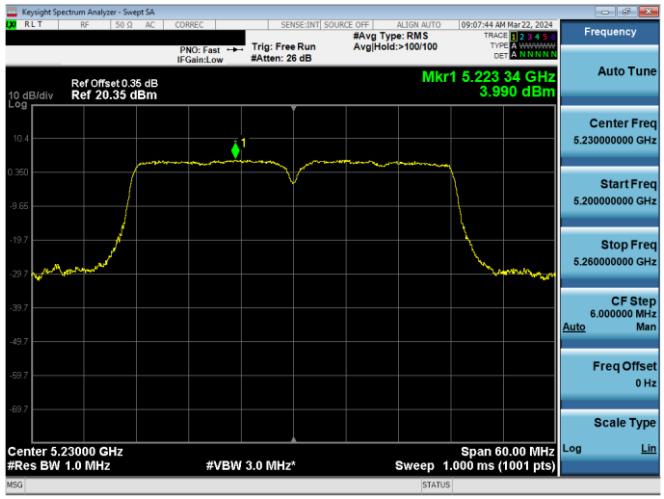
Plot 7-824. PSD CDD Diversity Antenna 2a (160MHz BW 802.11ax(SU) – Ch. 114, MCS4)



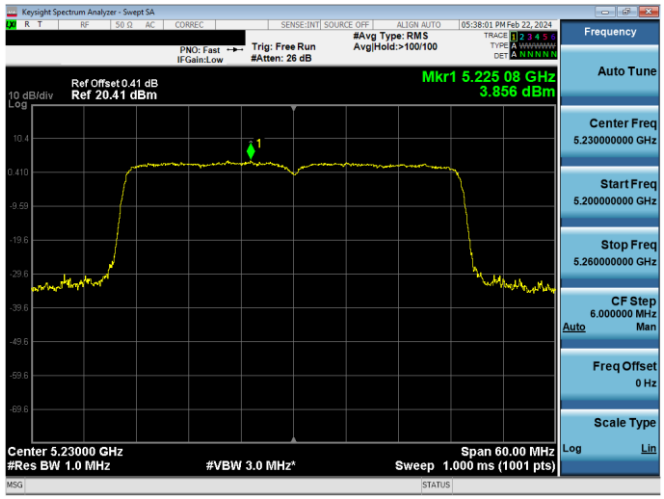
Plot 7-825. PSD CDD Diversity Antenna 2a (20MHz BW 802.11n – Ch. 40, MCS15)



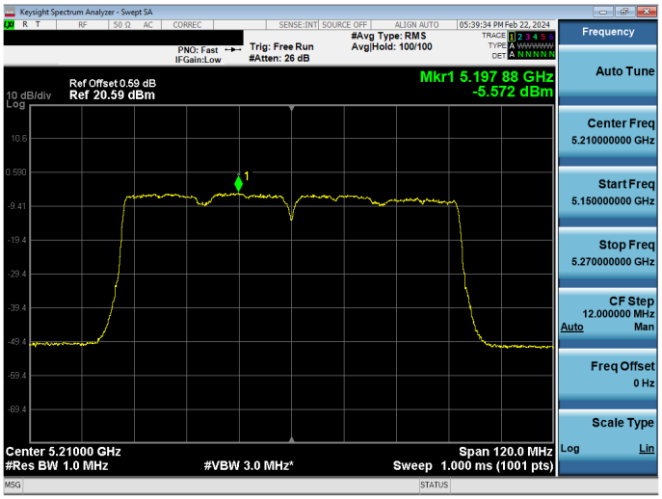
Plot 7-826. PSD CDD Diversity Antenna 2a (20MHz BW 802.11ax(SU) – Ch. 40, MCS11)



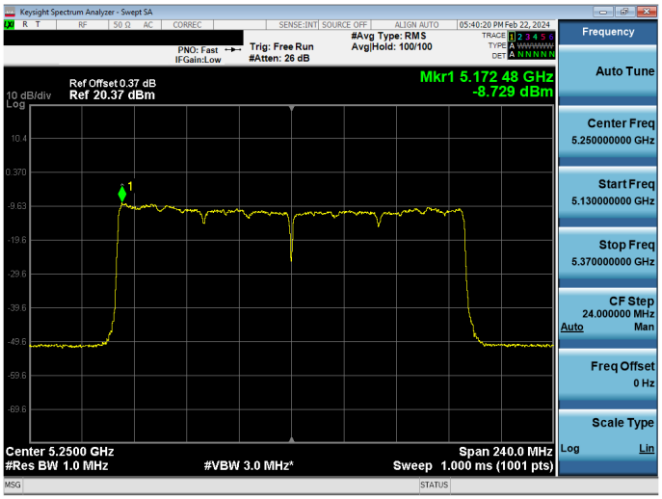
Plot 7-827. PSD CDD Diversity Antenna 2a (40MHz BW 802.11n – Ch. 46, MCS15)



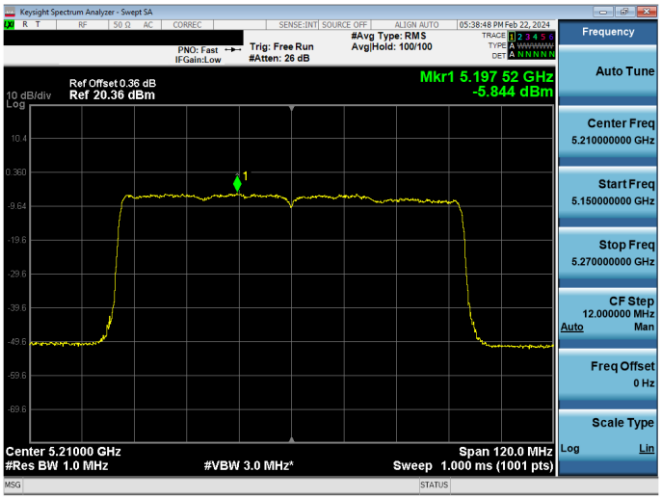
Plot 7-828. PSD CDD Diversity Antenna 2a (40MHz BW 802.11ax(SU) – Ch. 46, MCS11)



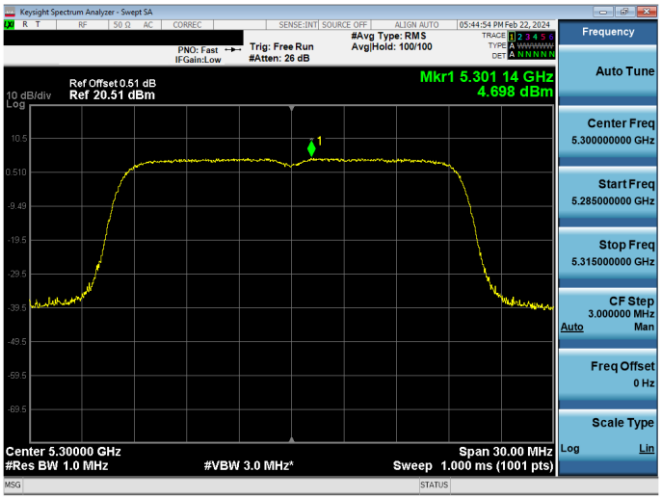
Plot 7-829. PSD CDD Diversity Antenna 2a (80MHz BW 802.11ac – Ch. 42, MCS9)



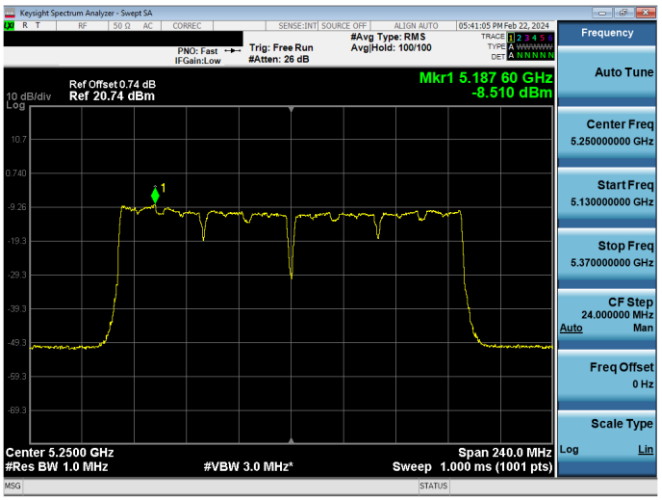
Plot 7-832. PSD CDD Diversity Antenna 2a (160MHz BW 802.11ax(SU) – Ch. 50, MCS11)



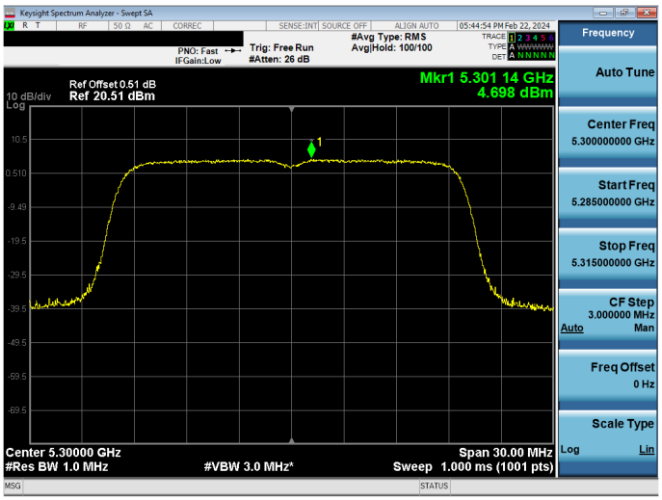
Plot 7-830. PSD CDD Diversity Antenna 2a (80MHz BW 802.11ax(SU) – Ch. 42, MCS11)



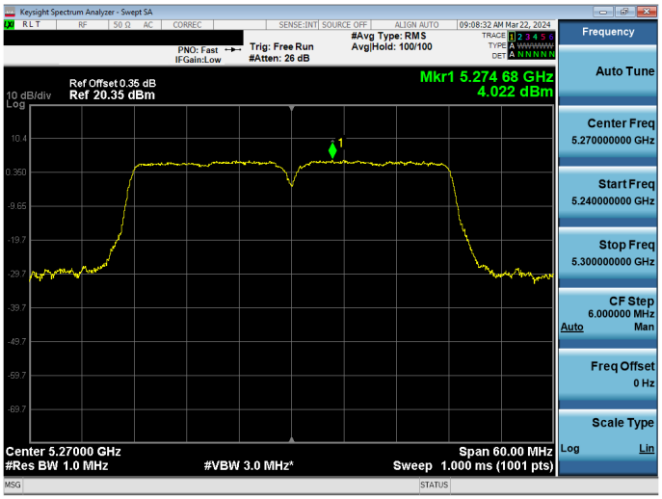
Plot 7-833. PSD CDD Diversity Antenna 2a (20MHz BW 802.11n – Ch. 60, MCS15)



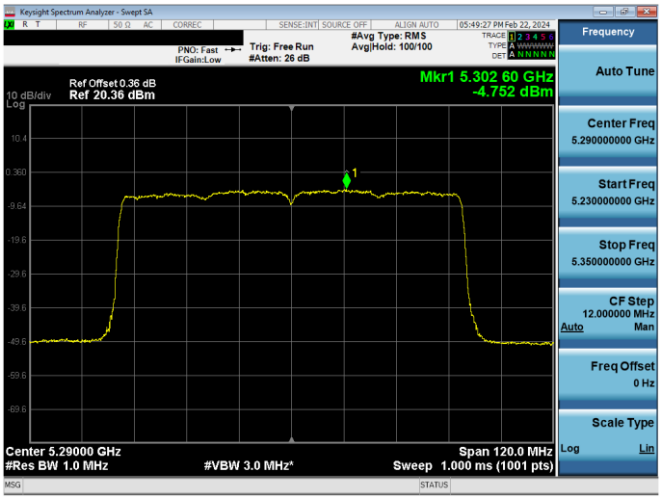
Plot 7-831. PSD CDD Diversity Antenna 2a (160MHz BW 802.11ac – Ch. 50, MCS9)



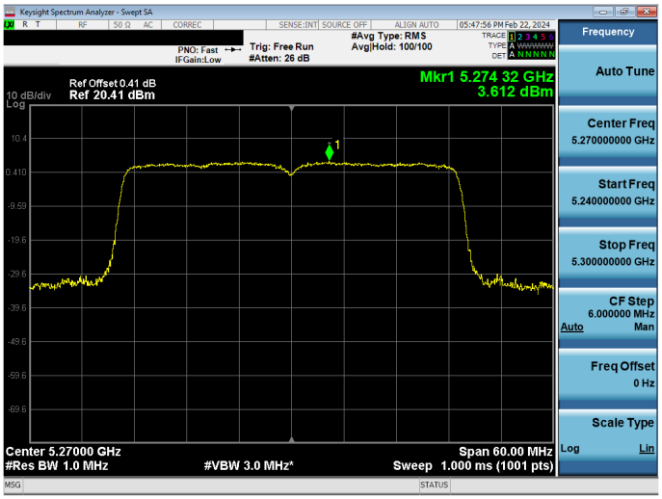
Plot 7-834. PSD CDD Diversity Antenna 2a (20MHz BW 802.11ax(SU) – Ch. 60, MCS11)



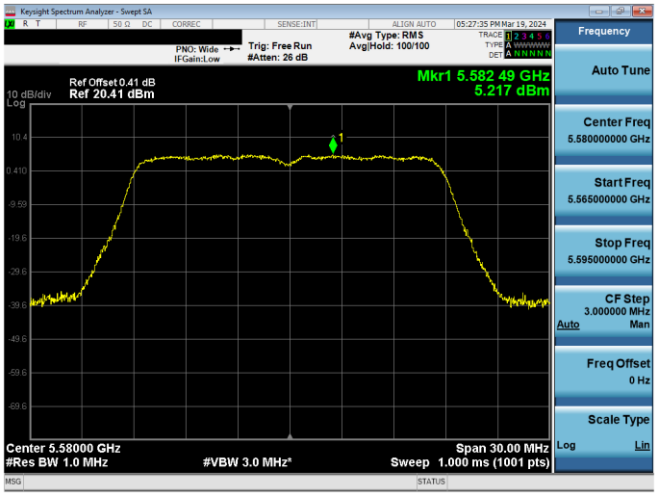
Plot 7-835. PSD CDD Diversity Antenna 2a (40MHz BW 802.11n – Ch. 54, MCS15)



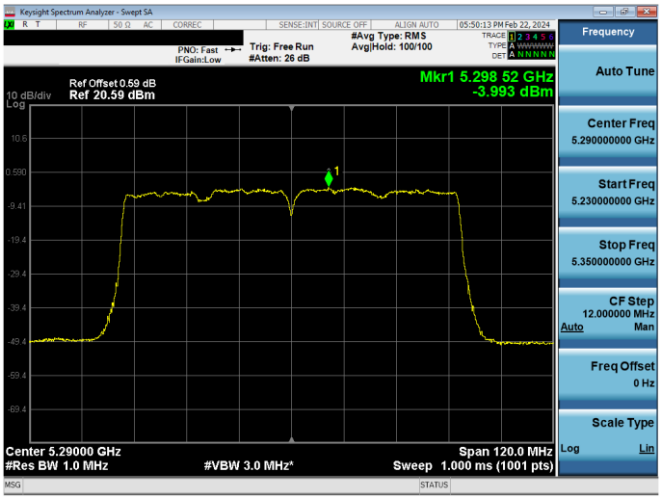
Plot 7-838. PSD CDD Diversity Antenna 2a (80MHz BW 802.11ax(SU) – Ch. 58, MCS11)



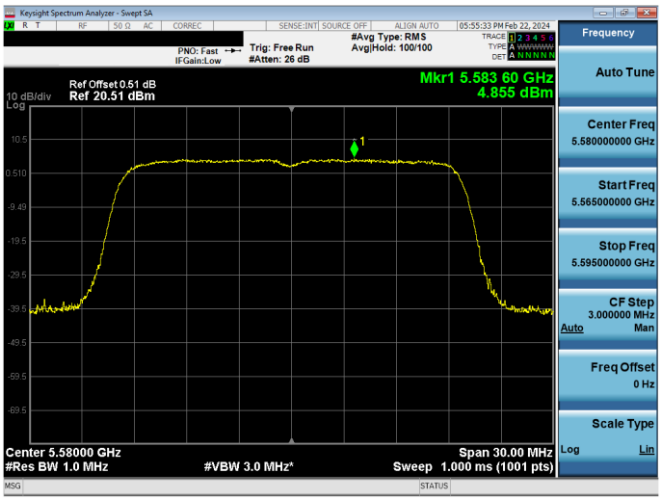
Plot 7-836. PSD CDD Diversity Antenna 2a (40MHz BW 802.11ax(SU) – Ch. 54, MCS11)



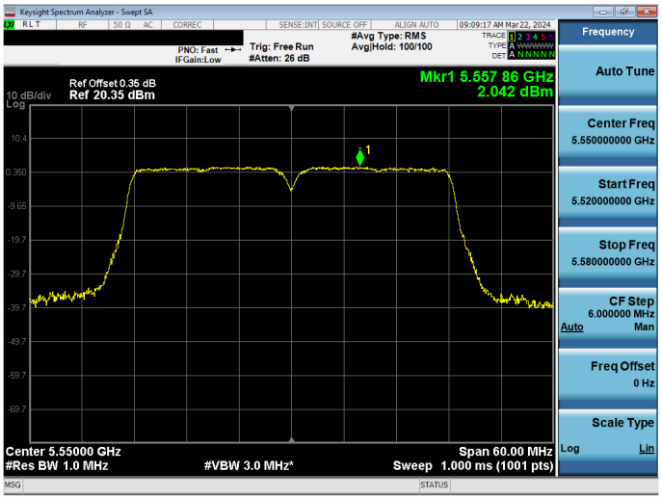
Plot 7-839. PSD CDD Diversity Antenna 2a (20MHz BW 802.11n – Ch. 116, MCS15)



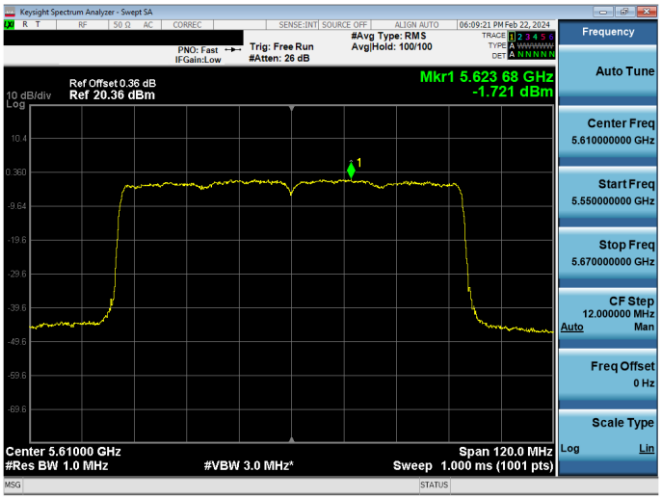
Plot 7-837. PSD CDD Diversity Antenna 2a (80MHz BW 802.11ac – Ch. 58, MCS9)



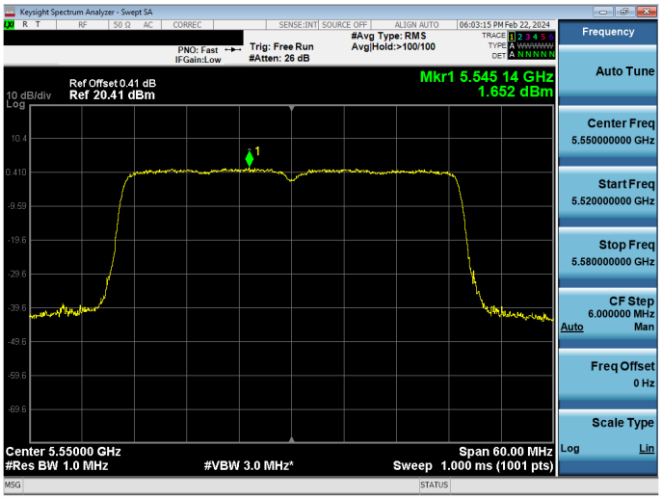
Plot 7-840. PSD CDD Diversity Antenna 2a (20MHz BW 802.11ax(SU) – Ch. 116, MCS11)



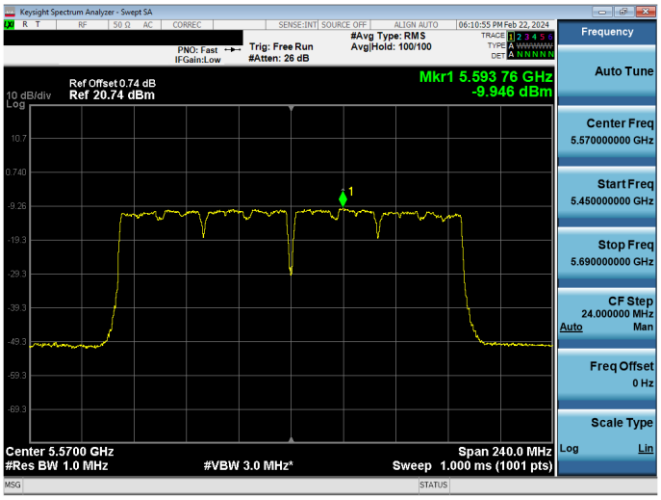
Plot 7-841. PSD CDD Diversity Antenna 2a (40MHz BW 802.11n – Ch. 110, MCS15)



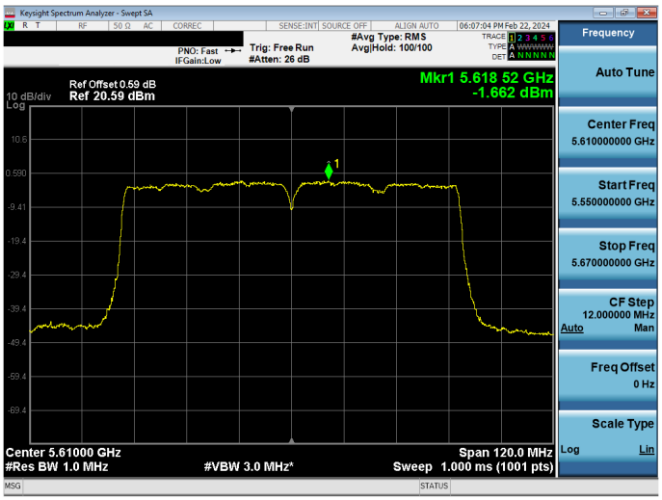
Plot 7-844. PSD CDD Diversity Antenna 2a (80MHz BW 802.11ax(SU) – Ch. 122, MCS11)



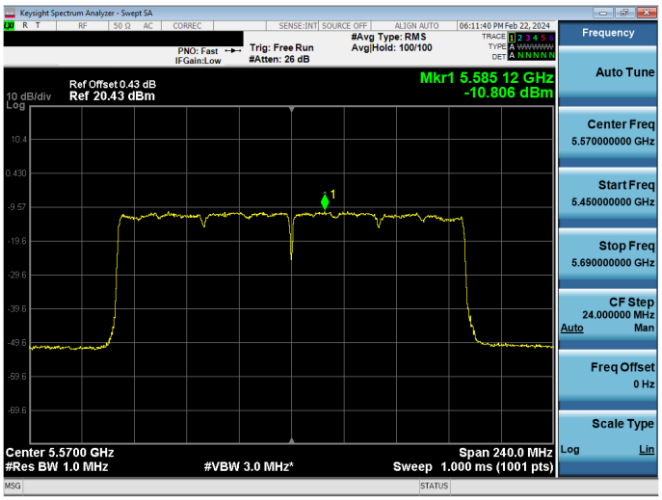
Plot 7-842. PSD CDD Diversity Antenna 2a (40MHz BW 802.11ax(SU) – Ch. 110, MCS11)



Plot 7-845. PSD CDD Diversity Antenna 2a (160MHz BW 802.11ac – Ch. 114, MCS9)



Plot 7-843. PSD CDD Diversity Antenna 2a (80MHz BW 802.11ac – Ch. 122, MCS9)



Plot 7-846. PSD CDD Diversity Antenna 2a (160MHz BW 802.11ax(SU) – Ch. 114, MCS11)

	Frequency [MHz]	Channel	802.11 MODE	Mode	Data Rate [Mbps]	Ant 4a Power Density [dBm/500kHz]	Ant 2a Power Density [dBm/500kHz]	Summed Power Density [dBm/500kHz]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	n (20MHz)	CDD	39/43.3 (MCS10)	5.60	4.49	8.09	30.0	-21.91
	5785	157	n (20MHz)	CDD	39/43.3 (MCS10)	4.94	4.27	7.63	30.0	-22.37
	5825	165	n (20MHz)	CDD	39/43.3 (MCS10)	5.34	4.45	7.93	30.0	-22.07
	5745	149	ax (SU) (20MHz)	CDD	48/51.6 (MCS2)	4.00	3.20	6.63	30.0	-23.37
	5785	157	ax (SU) (20MHz)	CDD	48/51.6 (MCS2)	3.62	3.09	6.37	30.0	-23.63
	5825	165	ax (SU) (20MHz)	CDD	48/51.6 (MCS2)	3.97	3.47	6.74	30.0	-23.26
	5755	151	n (40MHz)	CDD	81/60 (MCS10)	2.39	2.36	5.38	30.0	-24.62
	5795	159	n (40MHz)	CDD	81/60 (MCS10)	2.24	1.94	5.10	30.0	-24.90
	5755	151	ax (SU) (40MHz)	CDD	98/103.2 (MCS2)	0.95	0.42	3.70	30.0	-26.30
	5795	159	ax (SU) (40MHz)	CDD	98/103.2 (MCS2)	0.37	0.28	3.34	30.0	-26.66
	5775	155	ac (80MHz)	CDD	175.5/195 (MCS2)	-0.72	-1.47	1.93	30.0	-28.07
	5775	155	ax (SU) (80MHz)	CDD	204/216.2 (MCS2)	-2.63	-3.04	0.18	30.0	-29.82

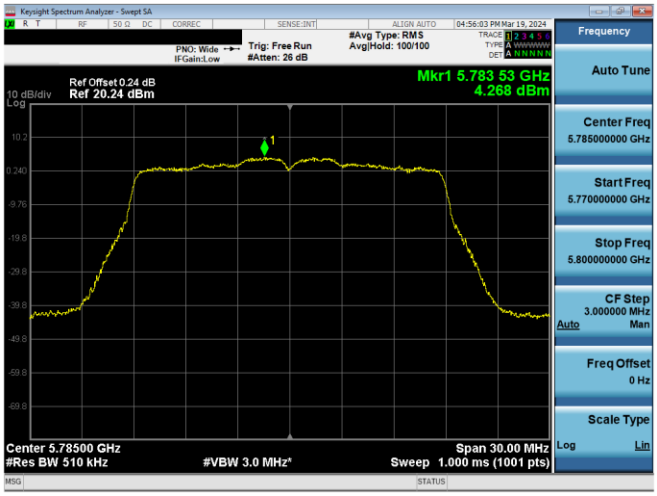
Table 7-239. Band 3 Power Spectral Density Measurements CDD Diversity (Low Data Rate)

	Frequency [MHz]	Channel	802.11 MODE	Mode	Data Rate [Mbps]	Ant 4a Power Density [dBm/500kHz]	Ant 2a Power Density [dBm/500kHz]	Summed Power Density [dBm/500kHz]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	n (20MHz)	CDD	78/86.7 (MCS12)	5.43	4.65	8.07	30.0	-21.93
	5785	157	n (20MHz)	CDD	78/86.7 (MCS12)	5.19	4.26	7.76	30.0	-22.24
	5825	165	n (20MHz)	CDD	78/86.7 (MCS12)	5.70	4.70	8.24	30.0	-21.76
	5745	149	ax (SU) (20MHz)	CDD	98/103.2 (MCS4)	4.35	3.65	7.03	30.0	-22.97
	5785	157	ax (SU) (20MHz)	CDD	98/103.2 (MCS4)	3.78	2.94	6.39	30.0	-23.61
	5825	165	ax (SU) (20MHz)	CDD	98/103.2 (MCS4)	4.11	3.27	6.72	30.0	-23.28
	5755	151	n (40MHz)	CDD	162/180 (MCS12)	2.58	2.47	5.53	30.0	-24.47
	5795	159	n (40MHz)	CDD	162/180 (MCS12)	2.19	1.83	5.02	30.0	-24.98
	5755	151	ax (SU) (40MHz)	CDD	196/206.5 (MCS4)	1.01	0.72	3.88	30.0	-26.12
	5795	159	ax (SU) (40MHz)	CDD	196/206.5 (MCS4)	0.60	0.20	3.41	30.0	-26.59
	5775	155	ac (80MHz)	CDD	351/390 (MCS4)	-0.78	-1.05	2.10	30.0	-27.90
	5775	155	ax (SU) (80MHz)	CDD	408/432.4 (MCS4)	-3.93	-4.15	-1.03	30.0	-31.03

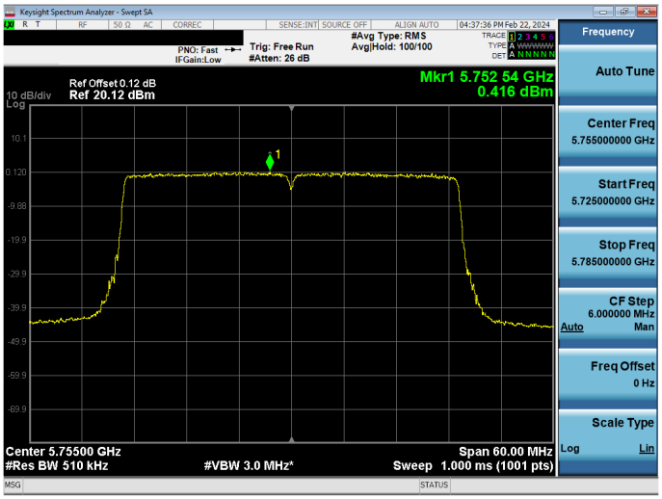
Table 7-240. Band 3 Power Spectral Density Measurements CDD Diversity (Mid Data Rate)

	Frequency [MHz]	Channel	802.11 MODE	Mode	Data Rate [Mbps]	Ant 4a Power Density [dBm/500kHz]	Ant 2a Power Density [dBm/500kHz]	Summed Power Density [dBm/500kHz]	Max Permissible Power Density [dBm/500kHz]	Margin [dB]
Band 3	5745	149	n (20MHz)	CDD	130/144.4 (MCS15)	4.14	3.79	6.98	30.0	-23.02
	5785	157	n (20MHz)	CDD	130/144.4 (MCS15)	3.74	3.19	6.48	30.0	-23.52
	5825	165	n (20MHz)	CDD	130/144.4 (MCS15)	4.42	3.61	7.04	30.0	-22.96
	5745	149	ax (SU) (20MHz)	CDD	270/286.8 (MCS11)	3.90	3.61	6.77	30.0	-23.23
	5785	157	ax (SU) (20MHz)	CDD	270/286.8 (MCS11)	3.77	3.40	6.60	30.0	-23.40
	5825	165	ax (SU) (20MHz)	CDD	270/286.8 (MCS11)	4.05	3.99	7.03	30.0	-22.97
	5755	151	n (40MHz)	CDD	270/300 (MCS15)	1.25	1.32	4.29	30.0	-25.71
	5795	159	n (40MHz)	CDD	270/300 (MCS15)	1.16	0.84	4.01	30.0	-25.99
	5755	151	ax (SU) (40MHz)	CDD	271/286.8 (MCS11)	1.93	0.63	4.34	30.0	-25.66
	5795	159	ax (SU) (40MHz)	CDD	271/286.8 (MCS11)	2.05	0.84	4.50	30.0	-25.50
	5775	155	ac (80MHz)	CDD	780/866.7 (MCS9)	-2.36	-2.60	0.53	30.0	-29.47
	5775	155	ax (SU) (80MHz)	CDD	1134/1201 (MCS11)	-3.14	-4.10	-0.58	30.0	-30.58

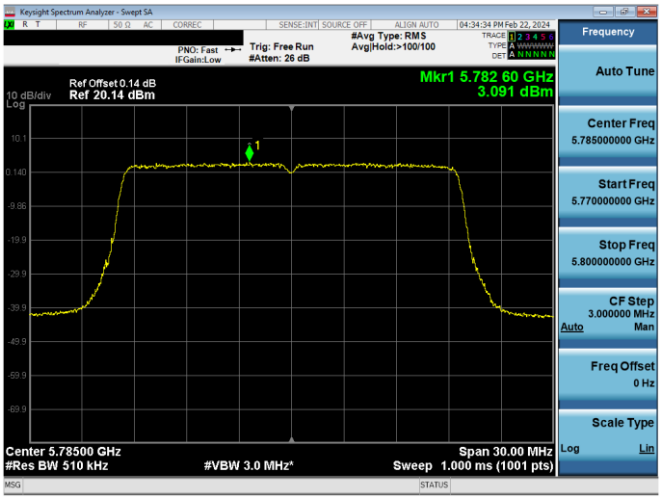
Table 7-241. Band 3 Power Spectral Density Measurements CDD Diversity (High Data Rate)



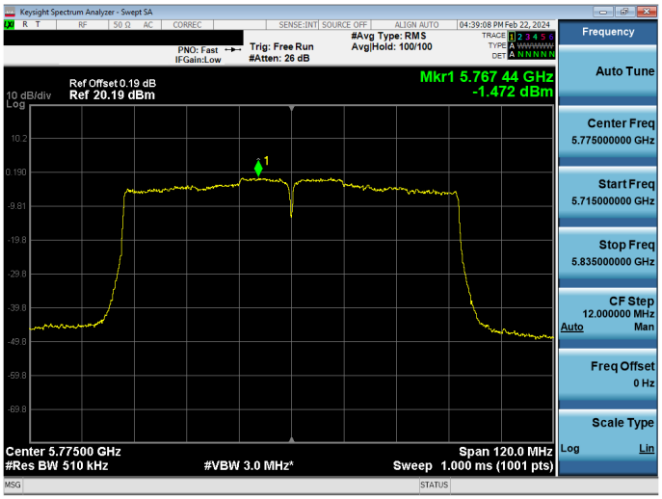
Plot 7-847. PSD CDD Diversity Antenna 2a (20MHz BW 802.11n – Ch. 157, MCS10)



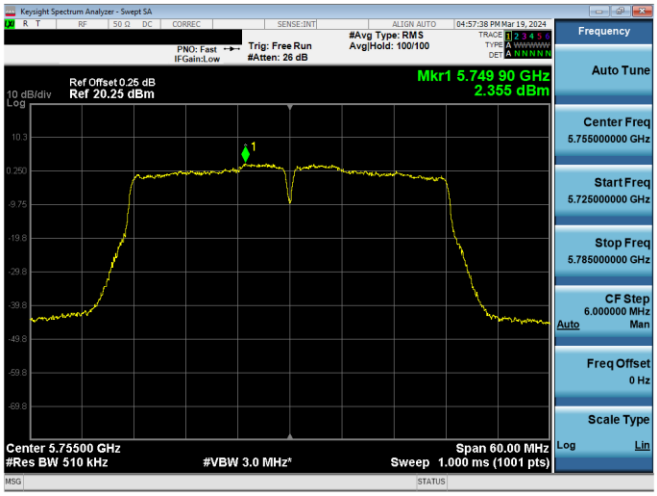
Plot 7-850. PSD CDD Diversity Antenna 2a (40MHz BW 802.11ax(SU) – Ch. 151, MCS2)



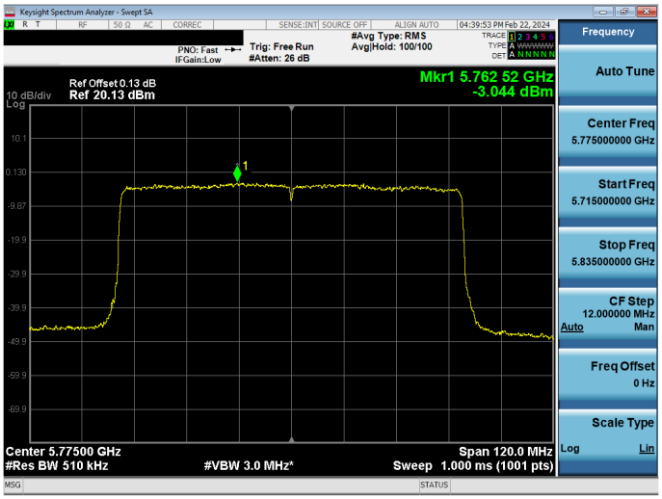
Plot 7-848. PSD CDD Diversity Antenna 2a (20MHz BW 802.11ax(SU) – Ch. 157, MCS2)



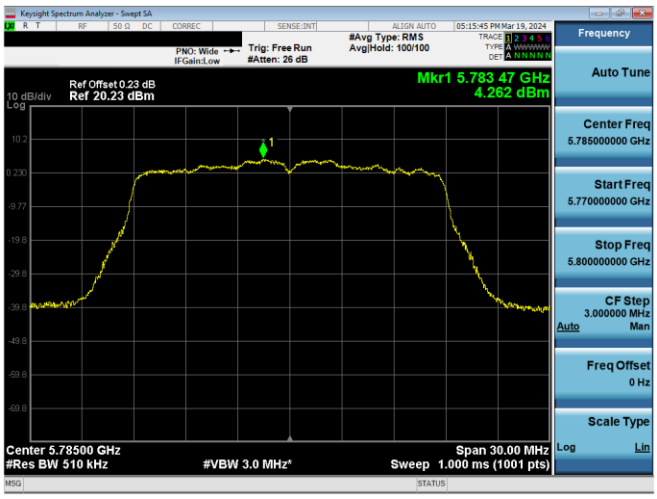
Plot 7-851. PSD CDD Diversity Antenna 2a (80MHz BW 802.11ac – Ch. 155, MCS2)



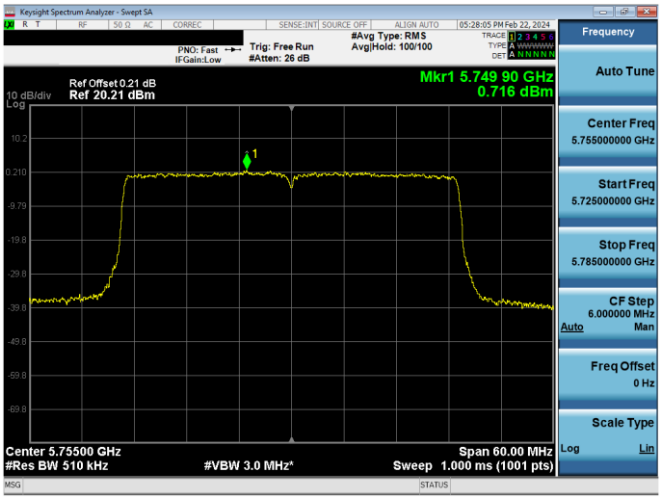
Plot 7-849. PSD CDD Diversity Antenna 2a (40MHz BW 802.11n – Ch. 151, MCS10)



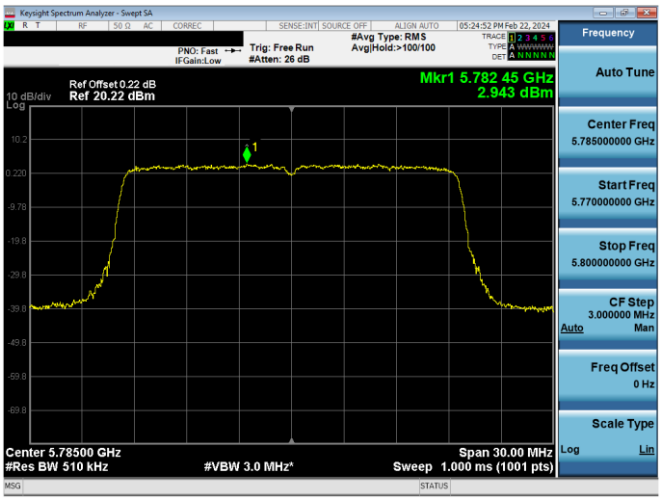
Plot 7-852. PSD CDD Diversity Antenna 2a (80MHz BW 802.11ax(SU) – Ch. 155, MCS2)



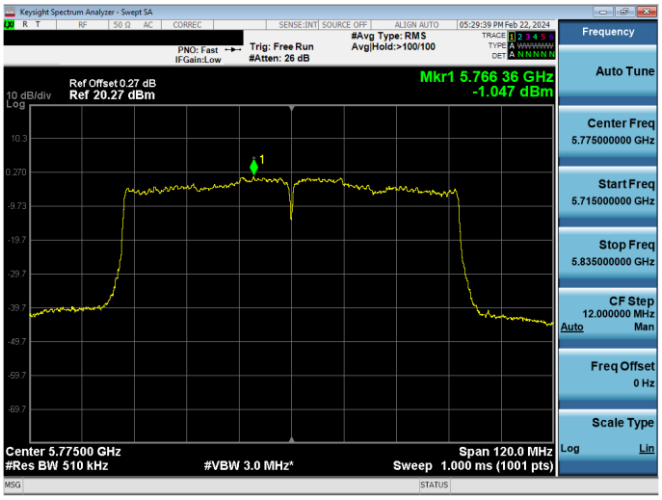
Plot 7-853. PSD CDD Diversity Antenna 2a (20MHz BW 802.11n – Ch. 157, MCS12)



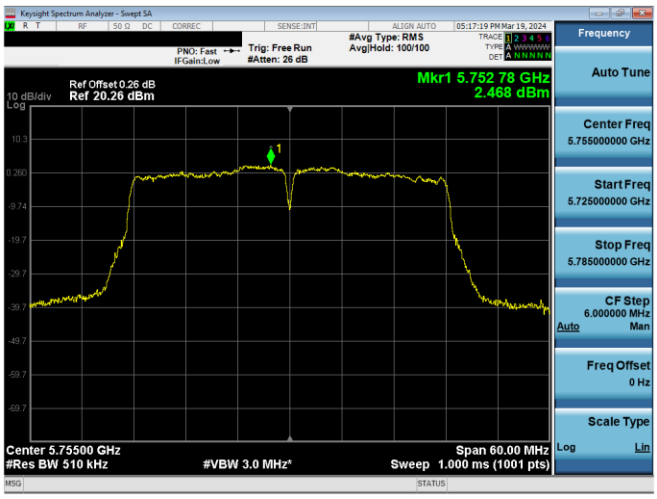
Plot 7-856. PSD CDD Diversity Antenna 2a (40MHz BW 802.11ax(SU) – Ch. 151, MCS4)



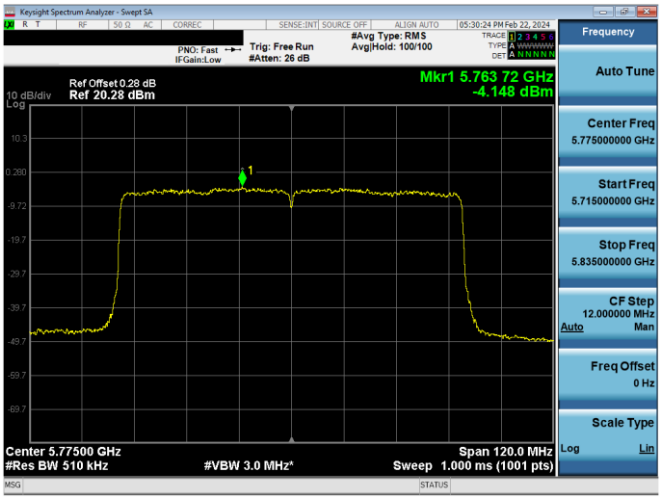
Plot 7-854. PSD CDD Diversity Antenna 2a (20MHz BW 802.11ax(SU) – Ch. 157, MCS4)



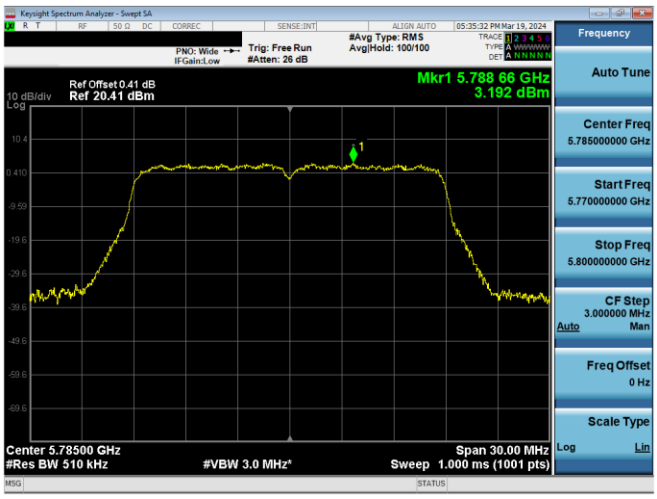
Plot 7-857. PSD CDD Diversity Antenna 2a (80MHz BW 802.11ac – Ch. 155, MCS4)



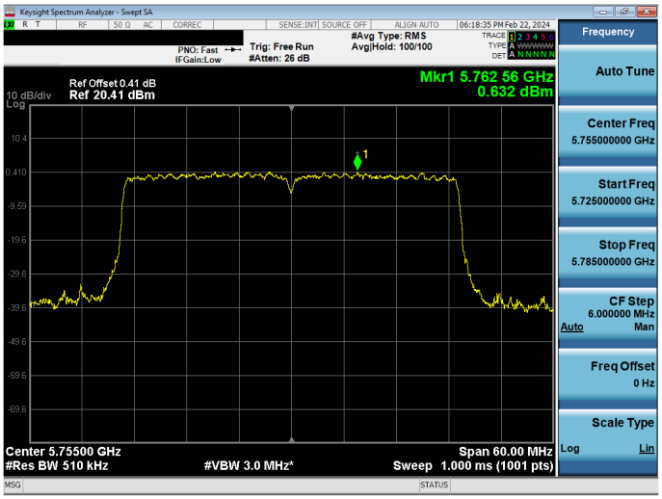
Plot 7-855. PSD CDD Diversity Antenna 2a (40MHz BW 802.11n – Ch. 151, MCS12)



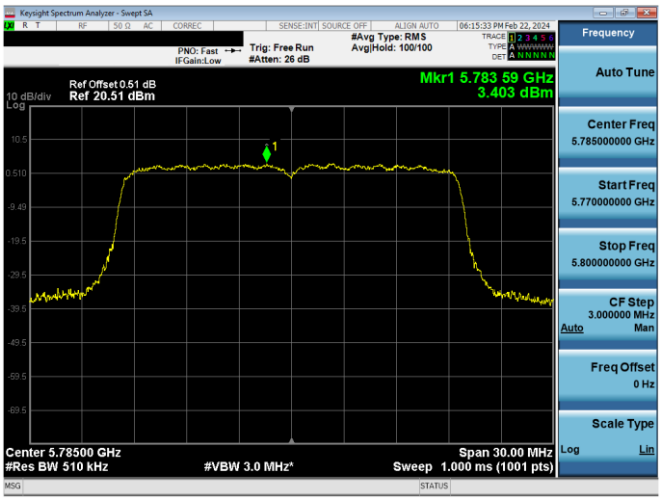
Plot 7-858. PSD CDD Diversity Antenna 2a (80MHz BW 802.11ax(SU) – Ch. 155, MCS4)



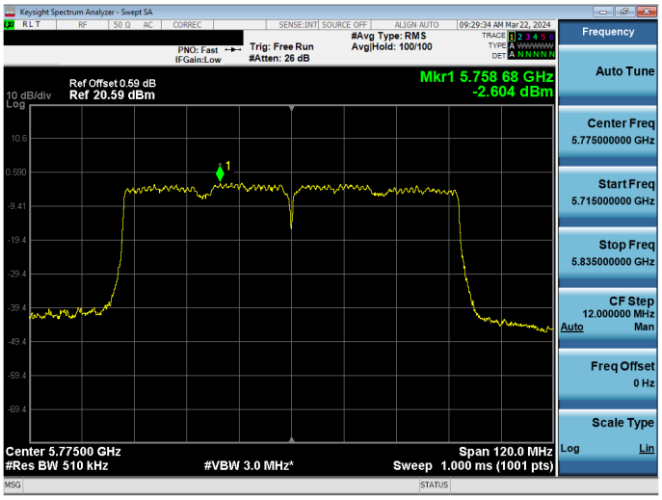
Plot 7-859. PSD CDD Diversity Antenna 2a (20MHz BW 802.11n – Ch. 157, MCS15)



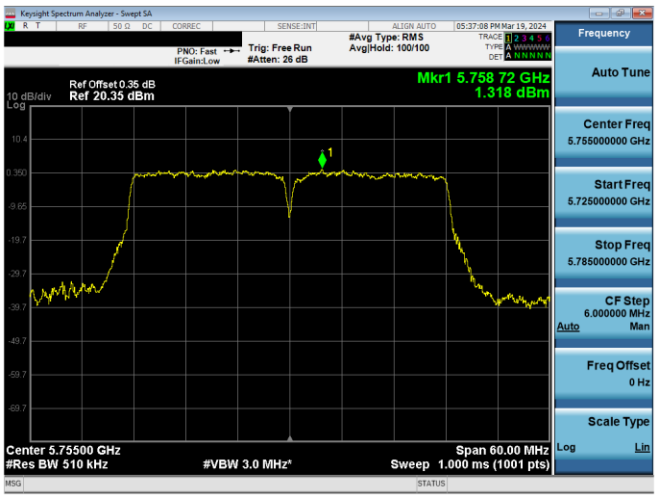
Plot 7-862. PSD CDD Diversity Antenna 2a (40MHz BW 802.11ax(SU) – Ch. 151, MCS11)



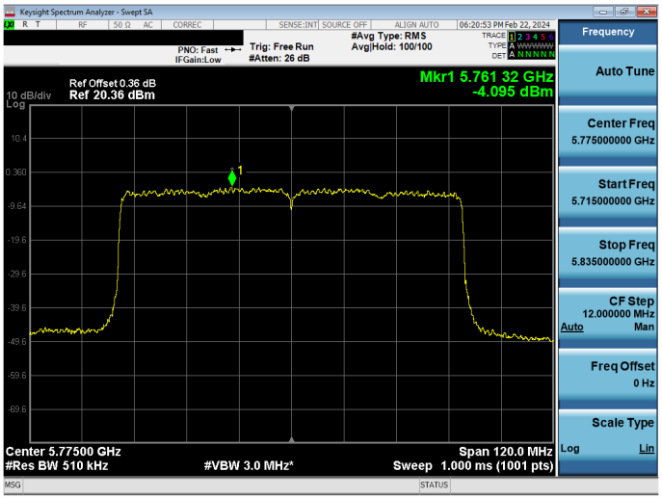
Plot 7-860. PSD CDD Diversity Antenna 2a (20MHz BW 802.11ax(SU) – Ch. 157, MCS11)



Plot 7-863. PSD CDD Diversity Antenna 2a (80MHz BW 802.11ac – Ch. 155, MCS9)



Plot 7-861. PSD CDD Diversity Antenna 2a (40MHz BW 802.11n – Ch. 151, MCS15)



Plot 7-864. PSD CDD Diversity Antenna 2a (80MHz BW 802.11ax(SU) – Ch. 155, MCS11)

	Frequency [MHz]	Channel No.	802.11 MODE	Mode	Data Rate [Mbps]	Ant 4a Power Density [dBm/MHz]	Ant 2a Power Density [dBm/MHz]	Summed Power Density [dBm/MHz]	Directional Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	n (20MHz)	SDM	39/43.3 (MCS10)	4.42	4.79	7.62	-1.34	3.45	10.0	-6.55
	5200	40	n (20MHz)	SDM	39/43.3 (MCS10)	4.34	4.50	7.43	-1.34	3.16	10.0	-6.84
	5240	48	n (20MHz)	SDM	39/43.3 (MCS10)	4.76	4.90	7.84	-1.34	3.55	10.0	-6.45
	5180	36	ax (SU) (20MHz)	SDM	48/51.6 (MCS2)	3.18	3.08	6.14	-1.34	1.74	10.0	-8.26
	5200	40	ax (SU) (20MHz)	SDM	48/51.6 (MCS2)	3.33	3.00	6.18	-1.34	1.66	10.0	-8.34
	5240	48	ax (SU) (20MHz)	SDM	48/51.6 (MCS2)	3.70	3.18	6.45	-1.34	1.83	10.0	-8.17
	5190	38	n (40MHz)	CDD	81/60 (MCS10)	1.30	1.40	4.36	1.66	3.07	10.0	-6.93
	5230	46	n (40MHz)	SDM	81/60 (MCS10)	4.37	4.11	7.25	-1.34	2.76	10.0	-7.24
	5190	38	ax (SU) (40MHz)	CDD	98/103.2 (MCS2)	-1.16	-1.26	1.80	1.66	0.41	10.0	-9.59
	5230	46	ax (SU) (40MHz)	SDM	98/103.2 (MCS2)	2.86	2.85	5.87	-1.34	1.51	10.0	-8.49
	5210	42	ac (80MHz)	CDD	175.5/195 (MCS2)	-2.85	-3.08	0.04	1.66	-1.42	10.0	-11.42
	5210	42	ax (SU) (80MHz)	CDD	204/216.2 (MCS2)	-4.33	-4.59	-1.45	1.66	-2.92	10.0	-12.92
Band 1/2	5250	50	ac (160MHz)	CDD	175.5/195 (MCS2)	-6.88	-7.86	-4.33	1.66	-6.20	10.0	-16.20
	5250	50	ax (SU) (160MHz)	CDD	204/216.2 (MCS2)	-8.06	-7.13	-4.56	1.66	-5.46	10.0	-15.46

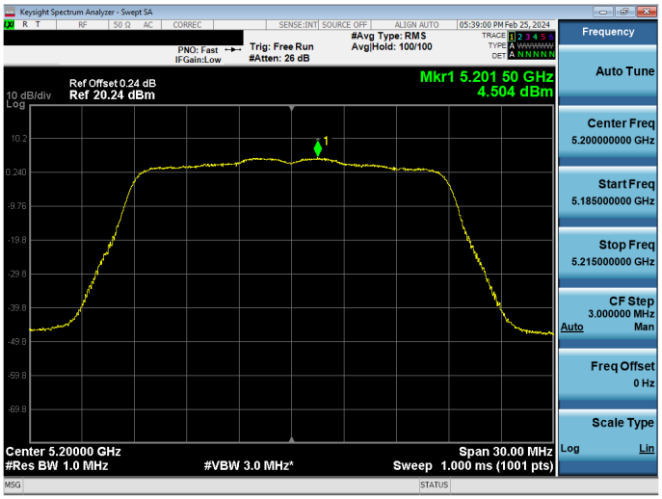
Table 7-242. ISED Band 1 e.i.r.p. Power Spectral Density Measurements CDD/SDM Diversity (Low Data Rate)

	Frequency [MHz]	Channel No.	802.11 MODE	Mode	Data Rate [Mbps]	Ant 4a Power Density [dBm/MHz]	Ant 2a Power Density [dBm/MHz]	Summed Power Density [dBm/MHz]	Directional Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	n (20MHz)	SDM	78/86.7 (MCS12)	4.58	4.63	7.61	-1.34	3.29	10.0	-6.71
	5200	40	n (20MHz)	SDM	78/86.7 (MCS12)	4.53	4.69	7.62	-1.34	3.34	10.0	-6.66
	5240	48	n (20MHz)	SDM	78/86.7 (MCS12)	4.87	4.95	7.92	-1.34	3.60	10.0	-6.40
	5180	36	ax (SU) (20MHz)	SDM	98/103.2 (MCS4)	3.25	3.24	6.25	-1.34	1.89	10.0	-8.11
	5200	40	ax (SU) (20MHz)	SDM	98/103.2 (MCS4)	3.30	3.22	6.27	-1.34	1.88	10.0	-8.12
	5240	48	ax (SU) (20MHz)	SDM	98/103.2 (MCS4)	3.42	3.22	6.33	-1.34	1.87	10.0	-8.13
	5190	38	n (40MHz)	CDD	162/180 (MCS12)	0.90	0.56	3.75	1.66	2.23	10.0	-7.77
	5230	46	n (40MHz)	SDM	162/180 (MCS12)	4.60	4.23	7.43	-1.34	2.89	10.0	-7.11
	5190	38	ax (SU) (40MHz)	CDD	196/206.5 (MCS4)	-1.13	-0.98	1.96	1.66	0.69	10.0	-9.31
	5230	46	ax (SU) (40MHz)	SDM	196/206.5 (MCS4)	3.15	2.90	6.03	-1.34	1.55	10.0	-8.45
	5210	42	ac (80MHz)	CDD	351/390 (MCS4)	-3.85	-3.76	-0.79	1.66	-2.09	10.0	-12.09
	5210	42	ax (SU) (80MHz)	CDD	408/432.4 (MCS4)	-4.83	-5.04	-1.92	1.66	-3.38	10.0	-13.38
Band 1/2	5250	50	ac (160MHz)	CDD	351/390 (MCS4)	-7.77	-7.97	-4.86	1.66	-6.30	10.0	-16.30
	5250	50	ax (SU) (160MHz)	CDD	408/432.4 (MCS4)	-8.60	-7.86	-5.21	1.66	-6.20	10.0	-16.20

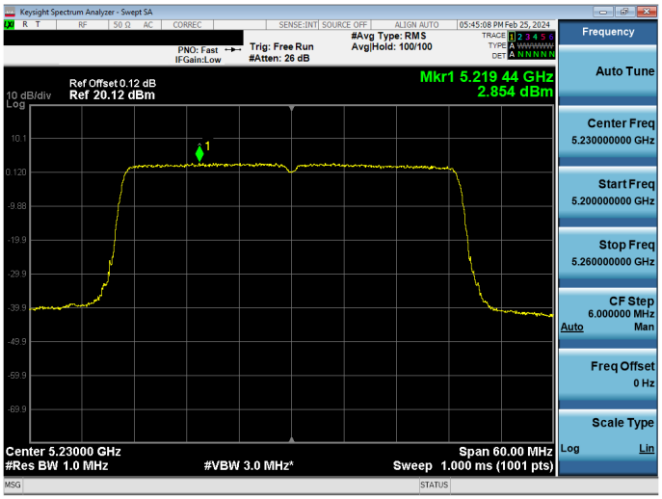
Table 7-243. ISED Band 1 e.i.r.p. Power Spectral Density Measurements CDD/SDM Diversity (Mid Data Rate)

	Frequency [MHz]	Channel No.	802.11 MODE	Mode	Data Rate [Mbps]	Ant 4a Power Density [dBm/MHz]	Ant 2a Power Density [dBm/MHz]	Summed Power Density [dBm/MHz]	Directional Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
Band 1	5180	36	n (20MHz)	SDM	130/144.4 (MCS15)	3.32	3.54	6.44	-1.34	2.20	10.0	-7.80
	5200	40	n (20MHz)	SDM	130/144.4 (MCS15)	3.53	3.73	6.64	-1.34	2.39	10.0	-7.61
	5240	48	n (20MHz)	SDM	130/144.4 (MCS15)	3.49	4.06	6.80	-1.34	2.72	10.0	-7.28
	5180	36	ax (SU) (20MHz)	SDM	270/286.8 (MCS11)	3.63	3.26	6.46	-1.34	1.92	10.0	-8.08
	5200	40	ax (SU) (20MHz)	SDM	270/286.8 (MCS11)	3.11	3.24	6.18	-1.34	1.89	10.0	-8.11
	5240	48	ax (SU) (20MHz)	SDM	270/286.8 (MCS11)	3.41	3.40	6.41	-1.34	2.05	10.0	-7.95
	5190	38	n (40MHz)	CDD	270/300 (MCS15)	-1.13	-1.17	1.86	1.66	0.49	10.0	-9.51
	5230	46	n (40MHz)	SDM	270/300 (MCS15)	3.25	3.41	6.34	-1.34	2.07	10.0	-7.93
	5190	38	ax (SU) (40MHz)	CDD	271/286.8 (MCS11)	-2.08	-1.75	1.10	1.66	-0.09	10.0	-10.09
	5230	46	ax (SU) (40MHz)	SDM	271/286.8 (MCS11)	3.28	3.24	6.27	-1.34	1.90	10.0	-8.10
	5210	42	ac (80MHz)	CDD	780/866.7 (MCS9)	-4.86	-4.98	-1.91	1.66	-3.32	10.0	-13.32
	5210	42	ax (SU) (80MHz)	CDD	1134/1201 (MCS11)	-5.21	-5.48	-2.33	1.66	-3.82	10.0	-13.82
Band 1/2	5250	50	ac (160MHz)	CDD	780/866.7 (MCS9)	-8.65	-7.78	-5.18	1.66	-6.12	10.0	-16.12
	5250	50	ax (SU) (160MHz)	CDD	1134/1201 (MCS11)	-9.12	-8.03	-5.53	1.66	-6.37	10.0	-16.37

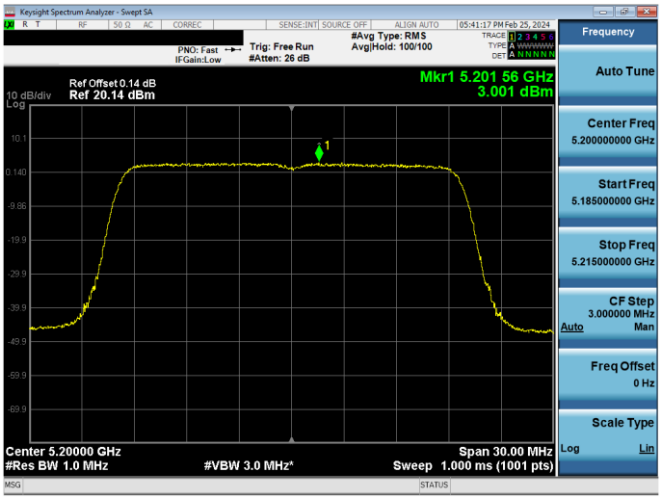
Table 7-244. ISED Band 1 e.i.r.p. Power Spectral Density Measurements CDD/SDM Diversity (High Data Rate)



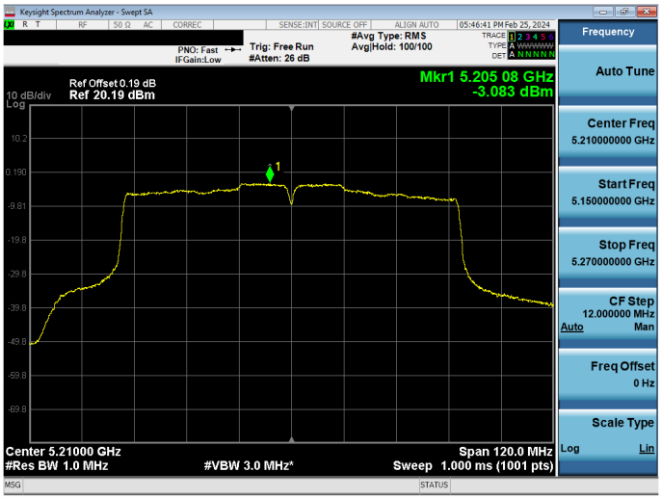
Plot 7-865. ISED PSD SDM Diversity Antenna 2a (20MHz BW 11n – Ch.40, MCS10)



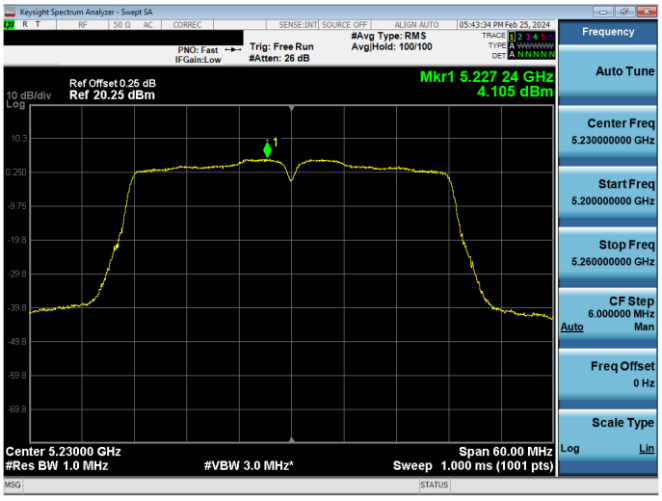
Plot 7-868. ISED PSD CDD Diversity Antenna 2a (40MHz BW 11ax(SU) – Ch.46, MCS2)



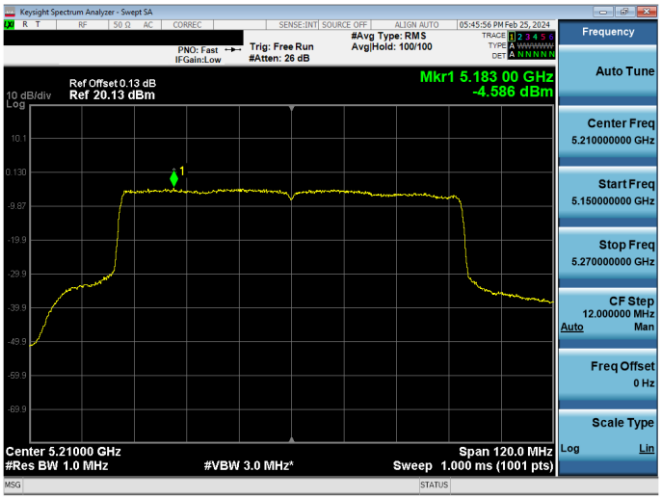
Plot 7-866. ISED PSD SDM Diversity Antenna 2a (20MHz BW 11ax(SU) – Ch.40, MCS2)



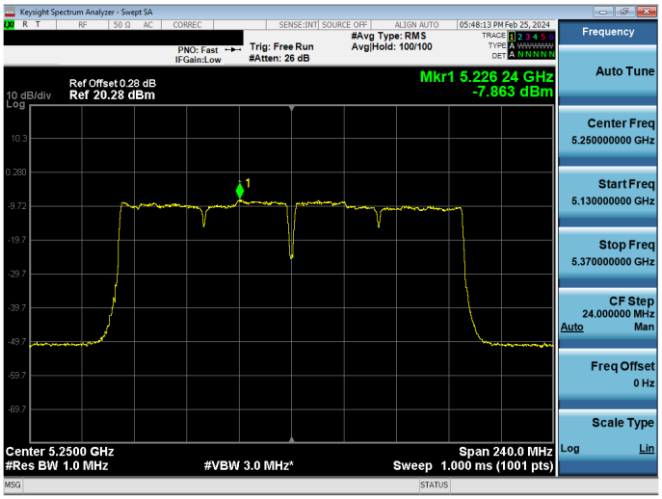
Plot 7-869. ISED PSD CDD Diversity Antenna 2a (80MHz BW 11ac – Ch.42, MCS2)



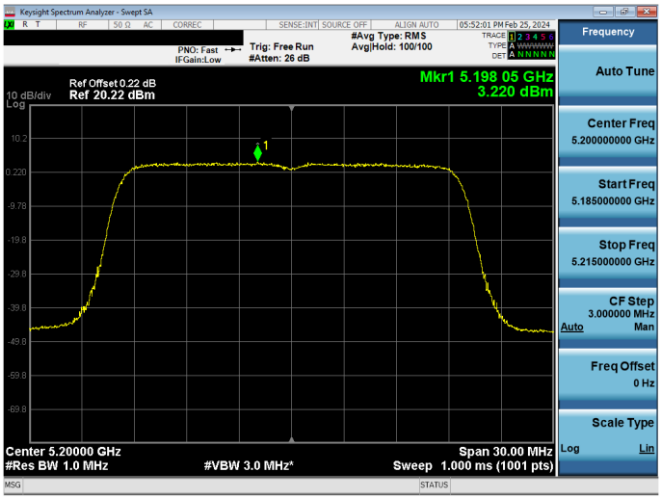
Plot 7-867. ISED PSD SDM Diversity Antenna 2a (40MHz BW 11n – Ch.46, MCS10)



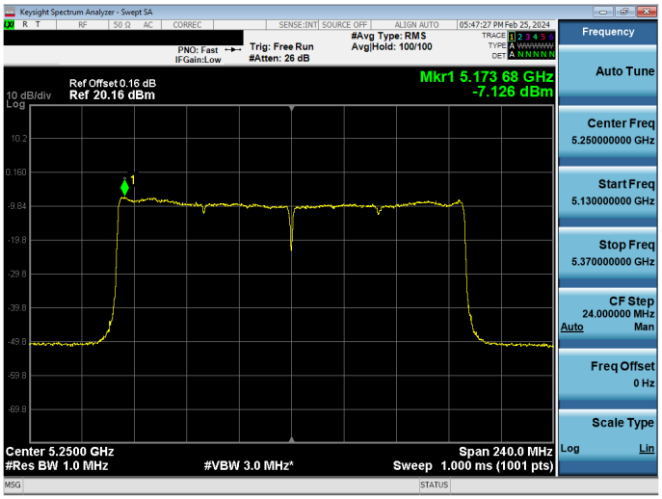
Plot 7-870. ISED PSD CDD Diversity Antenna 2a (80MHz BW 11ax (SU) – Ch.42, MCS2)



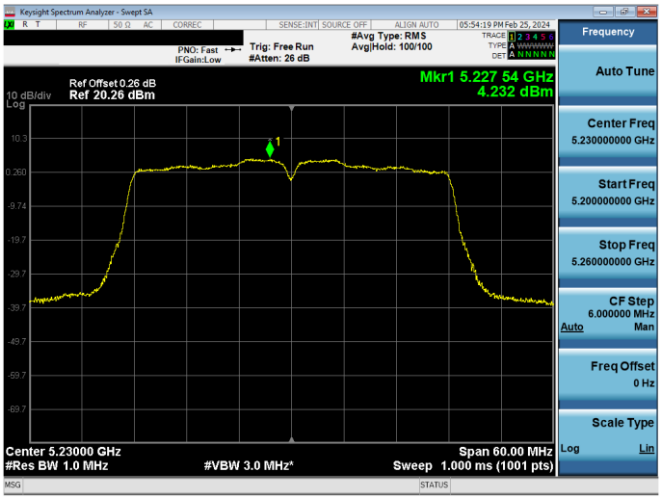
Plot 7-871. ISED PSD CDD Diversity Antenna 2a (160MHz BW 11ac – Ch.50, MCS2)



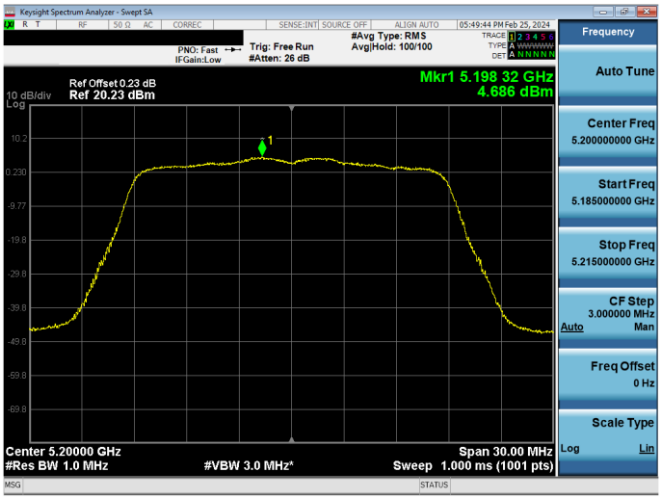
Plot 7-874. ISED PSD SDM Diversity Antenna 2a (20MHz BW 11ax(SU) – Ch.40, MCS4)



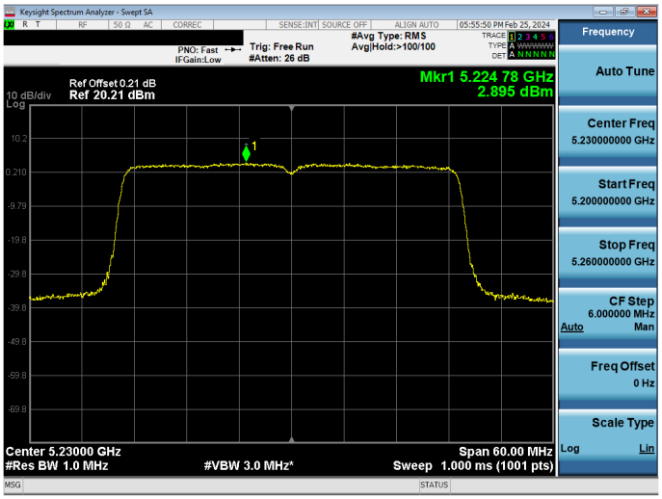
Plot 7-872. ISED PSD CDD Diversity Antenna 2a (160MHz BW 11ax (SU) – Ch.50, MCS2)



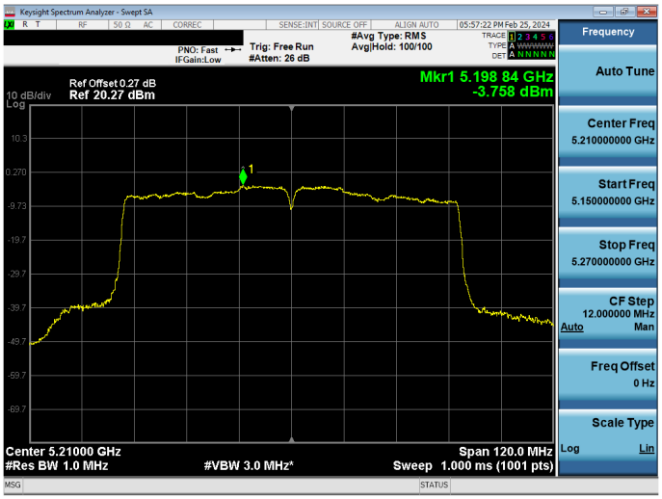
Plot 7-875. ISED PSD SDM Diversity Antenna 2a (40MHz BW 11n – Ch.46, MCS12)



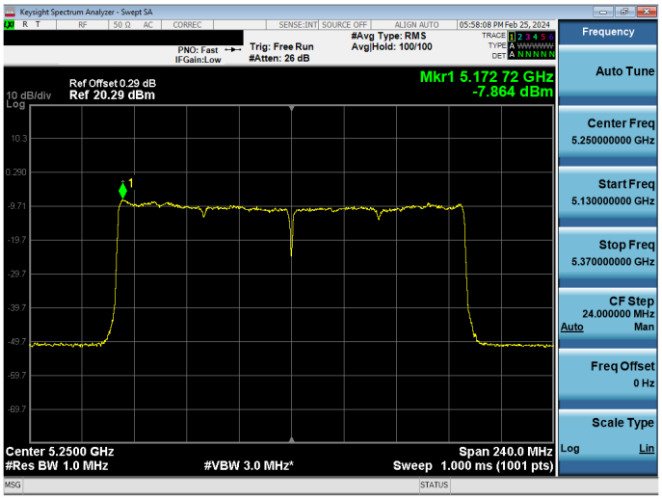
Plot 7-873. ISED PSD CDD Diversity Antenna 2a (20MHz BW 11n – Ch.40, MCS12)



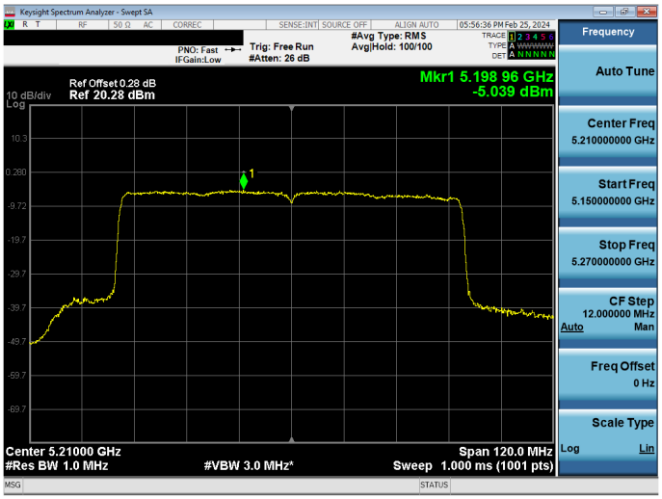
Plot 7-876. ISED PSD SDM Diversity Antenna 2a (40MHz BW 11ax(SU) – Ch.46, MCS4)



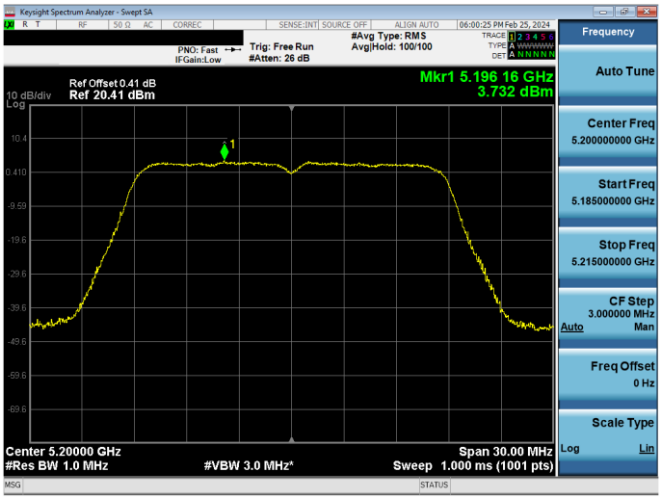
Plot 7-877. ISED PSD CDD Diversity Antenna 2a (80MHz BW 11ac – Ch.42, MCS4)



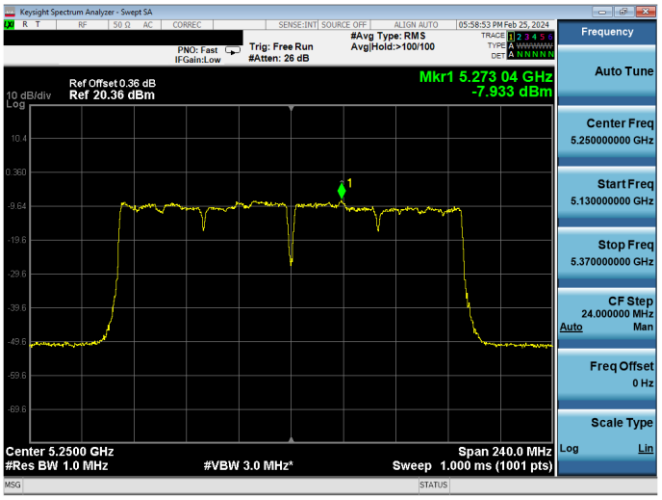
Plot 7-880. ISED CDD SDM Diversity Antenna 2a (160MHz BW 11ax (SU) – Ch.50, MCS4)



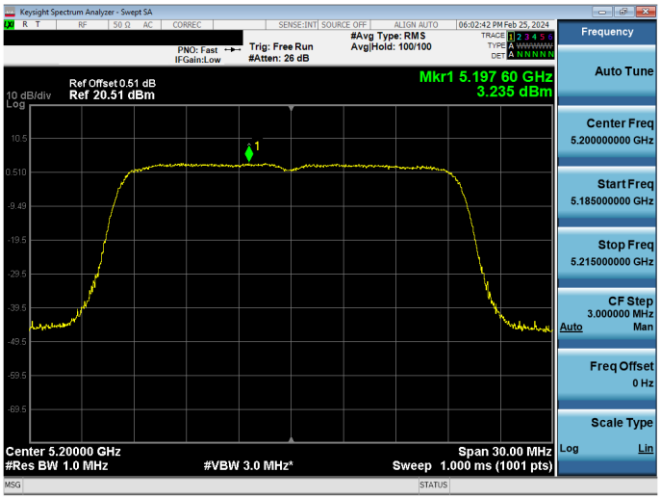
Plot 7-878. ISED PSD CDD Diversity Antenna 2a (80MHz BW 11ax (SU) – Ch.42, MCS4)



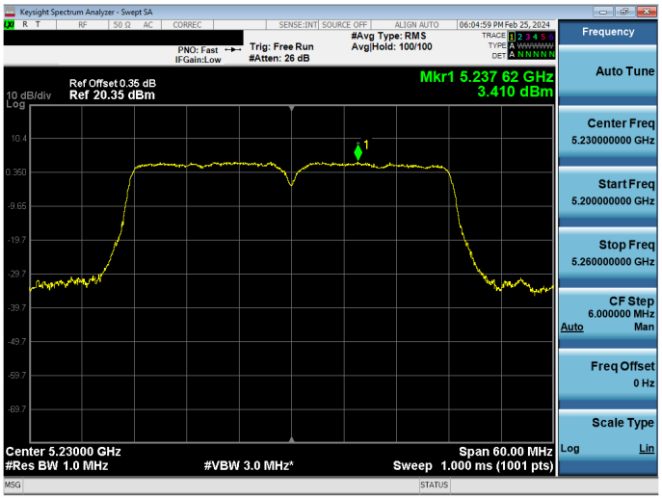
Plot 7-881. ISED PSD CDD Diversity Antenna 2a (20MHz BW 11n – Ch.40, MCS15)



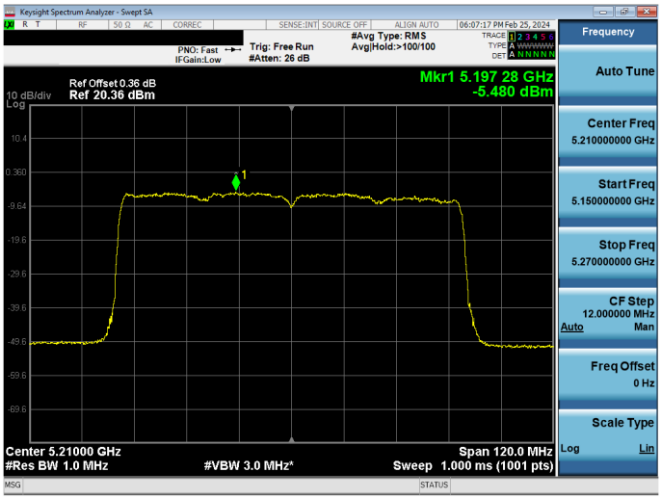
Plot 7-879. ISED PSD CDD Diversity Antenna 2a (160MHz BW 11ac – Ch.50, MCS4)



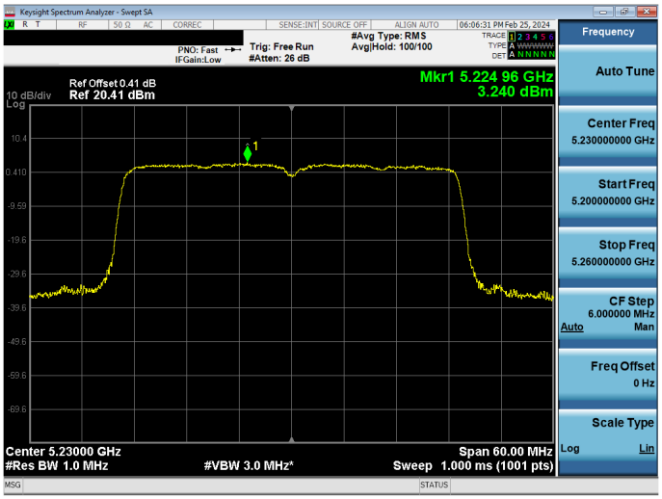
Plot 7-882. ISED PSD CDD Diversity Antenna 2a (20MHz BW 11ax(SU) – Ch.40, MCS11)



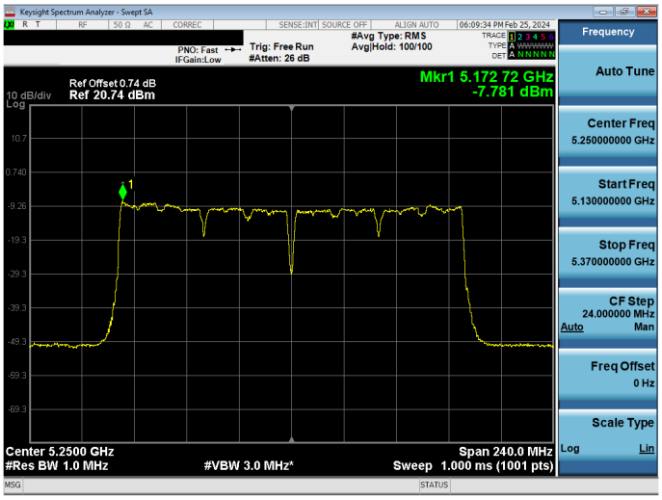
Plot 7-883. ISED PSD SDM Diversity Antenna 2a (40MHz BW 11n – Ch.46, MCS15)



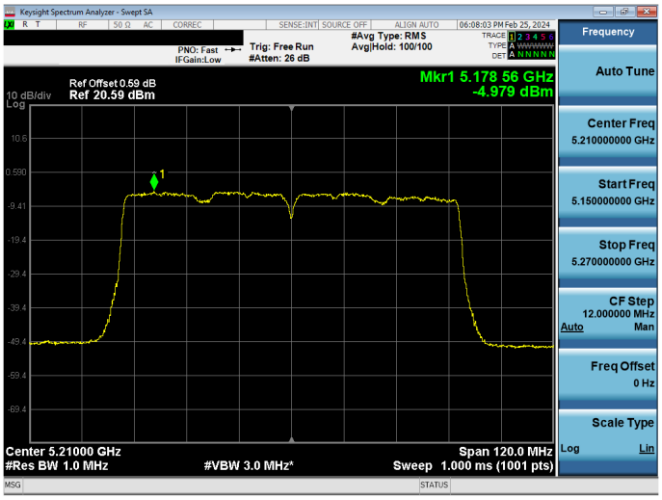
Plot 7-886. ISED PSD CDD Diversity Antenna 2a (80MHz BW 11ax (SU) – Ch.42, MCS11)



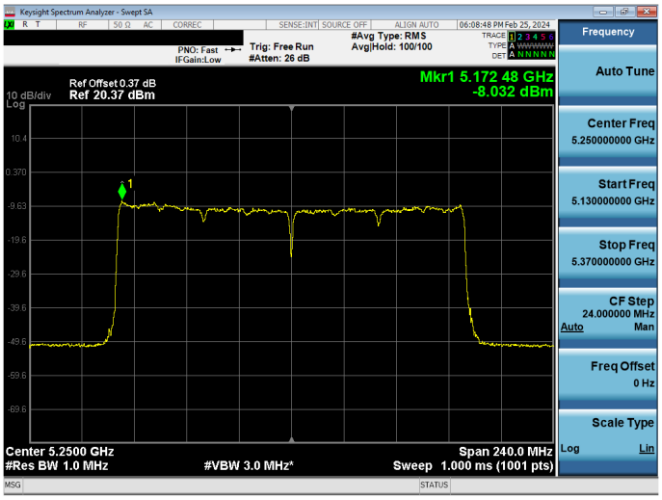
Plot 7-884. ISED PSD SDM Diversity Antenna 2a (40MHz BW 11ax(SU) – Ch.46, MCS11)



Plot 7-887. ISED PSD CDD Diversity Antenna 2a (160MHz BW 11ac – Ch.50, MCS9)



Plot 7-885. ISED PSD CDD Diversity Antenna 2a (80MHz BW 11ac – Ch.42, MCS9)



Plot 7-888. ISED PSD CDD Diversity Antenna 2a (160MHz BW 11ax (SU) – Ch.50, MCS11)

7.6 Radiated Spurious Emissions – Above 1GHz

§15.407(b) §15.205 §15.209; RSS-Gen [8.9]

Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at its maximum duty cycle, at its maximum power control level, as defined in ANSI C63.10-2013 and KDB 789033 D02 v02r01, and at the appropriate frequencies. All channels, modes (e.g. 802.11a, 802.11n, 802.11ax(SU) (20MHz BW), 802.11n, 802.11ax(SU) (40MHz BW), and 802.11ac, 802.11ax(SU) (80MHz), and modulations/data rates were investigated among all UNII bands. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

For transmitters operating in the 5.15-5.25 GHz and 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of −27 dBm/MHz.

For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of −27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR and Table 7 of RSS-Gen (8.10) must not exceed the limits shown in Table 7-245 per Section 15.209 and RSS-Gen (8.9).

Frequency	Field Strength [μV/m]	Measured Distance [Meters]
Above 960.0 MHz	500	3

Table 7-245. Radiated Limits

Test Procedures Used

ANSI C63.10-2013 – Sections 12.7.7.2, 12.7.6, 12.7.5
KDB 789033 D02 v02r01 – Section G

Test Settings

Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = power average (RMS)
5. Number of measurement points = 1001 (Number of points must be ≥ 2 x span/RBW)
6. Averaging type = power (RMS)
7. Sweep time = auto couple
8. Trace was averaged over 100 sweeps

Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

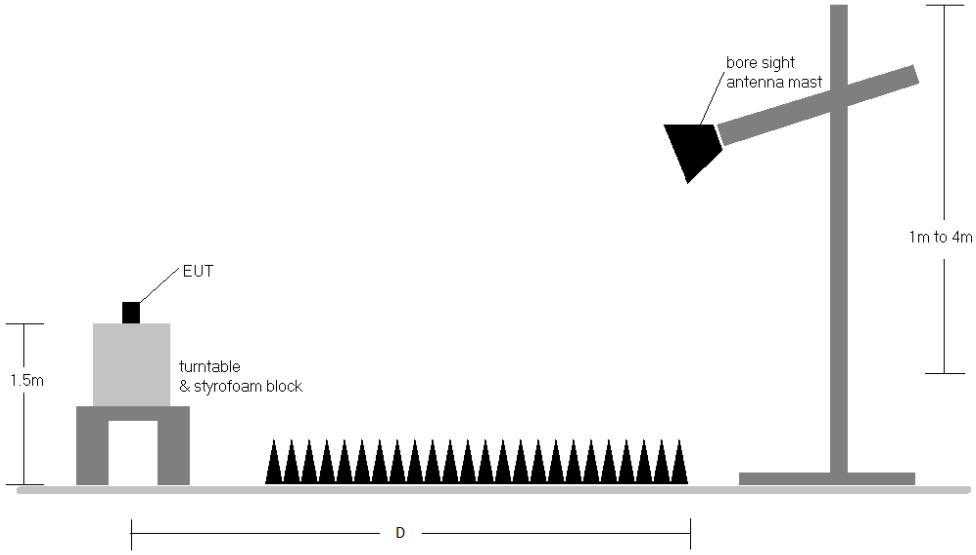


Figure 7-5. Test Instrument & Measurement Setup

Test Notes

1. All emissions that lie in the restricted bands (denoted by a * next to the frequency) specified in §15.205 and Section 8.10 of RSS-Gen are below the limit shown in Table 7-245.
2. All spurious emissions lying in restricted bands specified in §15.205 and Section 8.10 of RSS-Gen are below the limit shown in Table 7-245. All spurious emissions that do not lie in a restricted band are subject to a peak limit of -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions of 68.2dBμV/m.
3. The antenna is manipulated through typical positions, polarity and length during the tests. The EUT is manipulated through three orthogonal planes.
4. This unit was tested with its standard battery.
5. The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter using CISPR quasi peak detector below 1GHz. Above 1 GHz, average and peak measurements were taken using linearly polarized horn antennas.
6. D is the measurement test distance and emissions 1-18GHz were measured at a 3 meters test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
7. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. Any emissions found to be within 20dB of the limit are fully investigated and the results are shown in this section.
8. All data rates were investigated and only the worse case is reported
9. The unit was tested with all possible modes and only the highest emission is reported.
10. The "-" shown in the following RSE tables are used to denote a noise floor measurement.

Sample Calculations

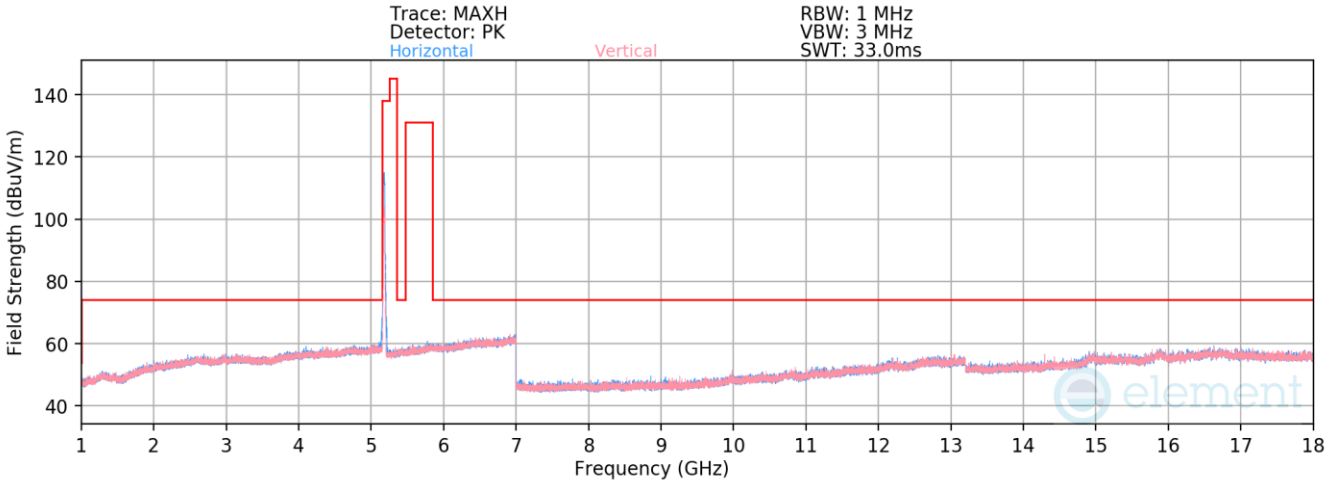
Determining Spurious Emissions Levels

- Field Strength Level [dBμV/m] = Analyzer Level [dBm] + 107 + AFCL [dB/m]
- AFCL [dB/m] = Antenna Factor [dB/m] + Cable Loss [dB] – Preamplifier Gain [dB]
- Margin [dB] = Field Strength Level [dBμV/m] – Limit [dBμV/m]

Radiated Band Edge Measurement Offset

- The amplitude offset shown in the radiated restricted band edge plots in Section 7.6.7-7.6.26 was calculated using the formula:
  Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain

7.6.1 Antenna WF5b Radiated Spurious Emission



Plot 7-889. Radiated Spurious Emissions above 1GHz Antenna WF5b (802.11n – Ch. 36)

Mode:	802.11n
Data Rate:	MCS0
Distance of Measurements:	3 Meters
Operating Frequency:	5180MHz
Channel:	36

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10360.00	Peak	H	-	-	-71.89	15.15	50.25	68.23	-17.98
*	15540.00	Average	H	-	-	-84.94	23.25	45.31	53.98	-8.67
*	15540.00	Peak	H	-	-	-73.28	23.12	56.84	73.98	-17.14

Table 7-246. Radiated Measurements Antenna WF5b