Mode	Freq.(MHz)	Tone	RU Index	Test Result (dBm)			Antenna Gain(dBi)	e.i.r.p[Note1] (dBm)
				ANT 1	ANT 2	ANT1+ANT2 (CDD)		
802.11ax (HE20)	5 180	106	53	4.42	4.62	7.53	7.46	14.99
			54	4.33	4.43	7.39	7.46	14.85
	5 200	106	53	4.15	5.00	7.61	7.46	15.07
			54	4.24	5.29	7.81	7.46	15.27
	5 240	106	53	4.15	5.33	7.79	7.46	15.25
			54	4.26	5.30	7.82	7.46	15.28
	5 260	106	53	9.67	10.88	13.33	7.46	20.79
			54	9.71	10.46	13.11	7.46	20.57
	5 300	106	53	10.52	11.45	14.02	7.46	21.48
			54	10.55	11.63	14.13	7.46	21.59
	5 320	106	53	10.84	11.62	14.26	7.46	21.72
			54	10.93	11.66	14.32	7.46	21.78
	5 500	106	53	10.28	10.39	13.35	7.46	20.81
			54	10.35	10.28	13.33	7.46	20.79
	5 580	106	53	10.38	10.51	13.46	7.46	20.92
			54	10.49	10.70	13.61	7.46	21.07
	5 720	106	53	9.87	10.75	13.34	7.46	20.80
			54	9.86	10.56	13.23	7.46	20.69
	5 745	106	53	15.32	14.54	17.96	7.46	25.42
			54	15.24	14.43	17.86	7.46	25.32
	5 785	106	53	15.73	16.08	18.92	7.46	26.38
			54	15.63	16.19	18.93	7.46	26.39
	5 825	106	53	16.04	16.20	19.13	7.46	26.59
			54	16.03	16.33	19.19	7.46	26.65

Note 1: e.i.r.p= Conducted Output Power + Antenna Gain

Mode	Freq.(MHz)	Tone	RU Index	Test Result (dBm)			Antenna Gain(dBi)	e.i.r.p[Note1] (dBm)
				ANT 1	ANT 2	ANT1+ANT2 (CDD)		
802.11ax (HE20)	5 180	242	61	7.17	7.32	10.26	7.46	17.72
	5 200	242	61	7.11	7.91	10.54	7.46	18.00
	5 240	242	61	7.04	8.18	10.66	7.46	18.12
	5 260	242	61	12.48	14.08	16.36	7.46	23.82
	5 300	242	61	13.53	14.45	17.02	7.46	24.48
	5 320	242	61	13.43	14.41	16.96	7.46	24.42
	5 500	242	61	12.90	13.26	16.09	7.46	23.55
	5 580	242	61	13.02	13.29	16.17	7.46	23.63
	5 720	242	61	13.11	13.24	16.19	7.46	23.65
	5 745	242	61	15.41	14.46	17.97	7.46	25.43
	5 785	242	61	15.82	15.97	18.91	7.46	26.37
	5 825	242	61	15.62	16.16	18.91	7.46	26.37
802.11ax (HE20)	5 180	SU	NA	7.26	7.38	10.33	7.46	17.79
	5 200	SU	NA	7.02	7.86	10.47	7.46	17.93
	5 240	SU	NA	7.06	8.18	10.67	7.46	18.13
	5 260	SU	NA	12.36	13.85	16.18	7.46	23.64
	5 300	SU	NA	13.09	14.21	16.70	7.46	24.16
	5 320	SU	NA	13.23	14.61	16.98	7.46	24.44
	5 500	SU	NA	12.91	12.31	15.63	7.46	23.09
	5 580	SU	NA	12.79	13.13	15.97	7.46	23.43
	5 720	SU	NA	12.45	13.64	16.10	7.46	23.56
	5 745	SU	NA	15.43	14.46	17.98	7.46	25.44
	5 785	SU	NA	15.63	15.76	18.71	7.46	26.17
	5 825	SU	NA	15.48	15.69	18.60	7.46	26.06

Note 1: e.i.r.p= Conducted Output Power + Antenna Gain

Mode	Freq.(MHz)	Tone	RU Index	Test Result (dBm)			Antenna Gain(dBi)	e.i.r.p[Note1] (dBm)
				ANT 1	ANT 2	ANT1+ANT2 (CDD)		
802.11ax (HE40)	5 190	26	0	-1.40	-0.89	1.87	7.46	9.33
			8	-0.88	-0.76	2.19	7.46	9.65
			17	-1.11	-0.67	2.13	7.46	9.59
	5 230	26	0	-1.25	-1.10	1.84	7.46	9.30
			8	-0.70	-1.23	2.05	7.46	9.51
			17	-0.85	-1.09	2.04	7.46	9.50
	5 270	26	0	4.85	5.63	8.27	7.46	15.73
			8	5.39	5.45	8.43	7.46	15.89
			17	5.24	5.67	8.47	7.46	15.93
	5 310	26	0	5.10	5.85	8.50	7.46	15.96
			8	5.70	5.93	8.83	7.46	16.29
			17	5.51	5.91	8.72	7.46	16.18
	5 510	26	0	5.85	5.30	8.59	7.46	16.05
			8	6.35	5.42	8.92	7.46	16.38
			17	6.20	5.30	8.78	7.46	16.24
	5 550	26	0	5.92	5.59	8.77	7.46	16.23
			8	6.46	5.47	9.00	7.46	16.46
			17	6.21	5.66	8.95	7.46	16.41
	5 710	26	0	4.56	5.37	7.99	7.46	15.45
			8	5.10	5.32	8.22	7.46	15.68
			17	4.91	5.49	8.22	7.46	15.68
	5 755	26	0	15.31	15.28	18.31	7.46	25.77
			8	15.82	15.33	18.59	7.46	26.05
			17	15.67	15.47	18.58	7.46	26.04
	5 795	26	0	14.98	15.09	18.05	7.46	25.51
			8	15.52	15.26	18.40	7.46	25.86
			17	15.11	15.42	18.28	7.46	25.74

Note 1: e.i.r.p= Conducted Output Power + Antenna Gain

Mode	Freq.(MHz)	Tone	RU Index	Test Result (dBm)			Antenna Gain(dBi)	e.i.r.p[Note1] (dBm)
				ANT 1	ANT 2	ANT1+ANT2 (CDD)		
802.11ax (HE40)	5 190	52	37	1.32	0.82	4.09	7.46	11.55
			40	1.73	1.25	4.51	7.46	11.97
			44	1.48	0.86	4.19	7.46	11.65
	5 230	52	37	0.82	1.32	4.09	7.46	11.55
			40	1.46	1.89	4.69	7.46	12.15
			44	1.15	1.51	4.34	7.46	11.80
	5 270	52	37	7.26	7.27	10.28	7.46	17.74
			40	7.53	7.73	10.64	7.46	18.10
			44	7.27	7.33	10.31	7.46	17.77
	5 310	52	37	7.32	7.45	10.40	7.46	17.86
			40	7.73	7.94	10.85	7.46	18.31
			44	7.38	7.46	10.43	7.46	17.89
	5 510	52	37	8.07	7.95	11.02	7.46	18.48
			40	8.55	8.40	11.49	7.46	18.95
			44	8.30	8.03	11.18	7.46	18.64
	5 550	52	37	7.89	7.36	10.64	7.46	18.10
			40	8.43	7.78	11.13	7.46	18.59
			44	8.17	7.45	10.84	7.46	18.30
	5 710	52	37	7.33	7.61	10.48	7.46	17.94
			40	7.86	8.07	10.98	7.46	18.44
			44	7.54	7.59	10.58	7.46	18.04
	5 755	52	37	15.39	15.20	18.31	7.46	25.77
			40	15.83	15.61	18.73	7.46	26.19
			44	15.49	15.10	18.31	7.46	25.77
	5 795	52	37	15.71	16.01	18.87	7.46	26.33
			40	16.30	16.43	19.38	7.46	26.84
			44	15.89	15.86	18.89	7.46	26.35

Note 1: e.i.r.p= Conducted Output Power + Antenna Gain

Mode	Freq.(MHz)	Tone	RU Index	Test Result (dBm)			Antenna Gain(dBi)	e.i.r.p[Note1] (dBm)
				ANT 1	ANT 2	ANT1+ANT2 (CDD)		
802.11ax (HE40)	5 190	106	53	4.20	3.94	7.08	7.46	14.54
			54	4.67	4.44	7.57	7.46	15.03
			56	4.55	4.49	7.53	7.46	14.99
	5 230	106	53	3.77	4.15	6.97	7.46	14.43
			54	4.42	4.69	7.57	7.46	15.03
			56	4.22	4.54	7.39	7.46	14.85
	5 270	106	53	10.06	10.42	13.25	7.46	20.71
			54	10.55	10.87	13.72	7.46	21.18
			56	10.36	10.93	13.66	7.46	21.12
	5 310	106	53	10.14	10.70	13.44	7.46	20.90
			54	10.57	11.25	13.93	7.46	21.39
			56	10.45	11.16	13.83	7.46	21.29
	5 510	106	53	10.96	10.57	13.78	7.46	21.24
			54	11.35	11.02	14.20	7.46	21.66
			56	11.15	11.02	14.10	7.46	21.56
	5 550	106	53	10.97	10.48	13.74	7.46	21.20
			54	11.33	11.08	14.22	7.46	21.68
			56	11.21	10.95	14.09	7.46	21.55
	5 710	106	53	9.92	10.29	13.12	7.46	20.58
			54	10.36	10.75	13.57	7.46	21.03
			56	10.24	10.80	13.54	7.46	21.00
	5 755	106	53	15.56	15.47	18.53	7.46	25.99
			54	16.01	16.00	19.02	7.46	26.48
			56	16.54	16.07	19.32	7.46	26.78
	5 795	106	53	15.82	16.20	19.02	7.46	26.48
			54	16.19	16.57	19.39	7.46	26.85
			56	16.21	16.66	19.45	7.46	26.91

Note 1: e.i.r.p= Conducted Output Power + Antenna Gain

Mode	Freq.(MHz)	Tone	RU Index	Test Result (dBm)			Antenna Gain(dBi)	e.i.r.p[Note1] (dBm)
				ANT 1	ANT 2	ANT1+ANT2 (CDD)		
802.11ax (HE40)	5 190	242	61	7.62	6.94	10.30	7.46	17.76
			62	7.37	6.79	10.10	7.46	17.56
	5 230	242	61	7.55	7.83	10.70	7.46	18.16
			62	7.18	7.61	10.41	7.46	17.87
	5 270	242	61	13.29	14.01	16.68	7.46	24.14
			62	13.12	13.86	16.52	7.46	23.98
	5 310	242	61	13.18	13.93	16.58	7.46	24.04
			62	12.95	13.68	16.34	7.46	23.80
	5 510	242	61	13.60	13.44	16.53	7.46	23.99
			62	13.31	13.24	16.29	7.46	23.75
	5 550	242	61	13.11	13.54	16.34	7.46	23.80
			62	12.87	13.37	16.14	7.46	23.60
	5 710	242	61	12.71	13.36	16.06	7.46	23.52
			62	12.49	13.16	15.85	7.46	23.31
	5 755	242	61	15.62	15.45	18.55	7.46	26.01
			62	15.39	15.24	18.33	7.46	25.79
	5 795	242	61	16.28	16.37	19.34	7.46	26.80
			62	16.08	16.08	19.09	7.46	26.55
802.11ax (HE40)	5 190	484	65	9.97	10.01	13.00	7.46	20.46
	5 230	484	65	9.52	10.67	13.14	7.46	20.60
	5 270	484	65	14.49	15.89	18.26	7.46	25.72
	5 310	484	65	13.26	14.32	16.83	7.46	24.29
	5 510	484	65	12.57	13.70	16.18	7.46	23.64
	5 550	484	65	15.08	15.71	18.42	7.46	25.88
	5 710	484	65	15.54	16.24	18.91	7.46	26.37
	5 755	484	65	15.17	15.50	18.35	7.46	25.81
	5 795	484	65	15.69	15.68	18.70	7.46	26.16
802.11ax (HE40)	5 190	SU	NA	9.11	9.10	12.12	7.46	19.58
	5 230	SU	NA	8.62	9.49	12.09	7.46	19.55
	5 270	SU	NA	13.53	14.89	17.27	7.46	24.73
	5 310	SU	NA	12.62	13.64	16.17	7.46	23.63
	5 510	SU	NA	12.81	13.08	15.96	7.46	23.42
	5 550	SU	NA	14.20	14.65	17.44	7.46	24.90
	5 710	SU	NA	14.62	15.19	17.92	7.46	25.38
	5 755	SU	NA	15.17	14.90	18.05	7.46	25.51
	5 795	SU	NA	15.43	15.83	18.64	7.46	26.10

Note 1: e.i.r.p= Conducted Output Power + Antenna Gain

Mode	Freq.(MHz)	Tone	RU Index	Test Result (dBm)			Antenna Gain(dBi)	e.i.r.p[Note1] (dBm)
				ANT 1	ANT 2	ANT1+ANT2 (CDD)		
802.11ax (HE80)	5 210	26	0	-0.57	-1.09	2.19	7.46	9.65
			17	-0.87	-0.69	2.23	7.46	9.69
			36	-0.66	-0.43	2.47	7.46	9.93
	5 290	26	0	4.96	5.76	8.39	7.46	15.85
			17	4.75	5.48	8.14	7.46	15.60
			36	4.53	5.66	8.14	7.46	15.60
	5 530	26	0	5.86	5.53	8.71	7.46	16.17
			17	5.63	5.61	8.63	7.46	16.09
			36	5.75	5.69	8.73	7.46	16.19
	5 690	26	0	4.51	5.27	7.92	7.46	15.38
			17	4.62	5.35	8.01	7.46	15.47
			36	4.59	5.43	8.04	7.46	15.50
	5 775	26	0	15.46	15.05	18.27	7.46	25.73
			17	15.33	15.21	18.28	7.46	25.74
			36	15.24	15.29	18.28	7.46	25.74
802.11ax (HE80)	5 210	52	37	1.71	1.07	4.41	7.46	11.87
			44	1.82	1.22	4.54	7.46	12.00
			52	1.49	1.29	4.40	7.46	11.86
	5 290	52	37	6.16	6.45	9.32	7.46	16.78
			44	6.33	6.33	9.34	7.46	16.80
			52	6.22	6.39	9.32	7.46	16.78
	5 530	52	37	7.83	7.86	10.86	7.46	18.32
			44	7.84	7.48	10.67	7.46	18.13
			52	7.78	7.56	10.68	7.46	18.14
	5 690	52	37	7.15	7.54	10.36	7.46	17.82
			44	7.24	7.55	10.41	7.46	17.87
			52	7.34	7.39	10.38	7.46	17.84
	5 775	52	37	15.53	15.94	18.75	7.46	26.21
			44	15.42	15.86	18.66	7.46	26.12
			52	15.67	15.77	18.73	7.46	26.19

Note 1: e.i.r.p= Conducted Output Power + Antenna Gain

Mode	Freq.(MHz)	Tone	RU Index	Test Result (dBm)			Antenna Gain(dBi)	e.i.r.p[Note1] (dBm)
				ANT 1	ANT 2	ANT1+ANT2 (CDD)		
802.11ax (HE80)	5 210	106	53	4.58	4.04	7.33	7.46	14.79
			56	4.43	4.32	7.39	7.46	14.85
			60	4.49	4.16	7.34	7.46	14.80
	5 290	106	53	9.58	10.10	12.86	7.46	20.32
			56	9.57	10.00	12.80	7.46	20.26
			60	9.50	10.12	12.83	7.46	20.29
	5 530	106	53	10.92	10.52	13.73	7.46	21.19
			56	10.76	10.63	13.71	7.46	21.17
			60	10.88	10.45	13.68	7.46	21.14
	5 690	106	53	9.94	10.57	13.28	7.46	20.74
			56	9.48	10.52	13.04	7.46	20.50
			60	9.80	10.66	13.26	7.46	20.72
	5 775	106	53	15.50	15.29	18.41	7.46	25.87
			56	15.43	15.18	18.32	7.46	25.78
			60	15.58	15.14	18.38	7.46	25.84
802.11ax (HE80)	5 210	242	61	7.98	6.95	10.51	7.46	17.97
			62	7.54	6.53	10.07	7.46	17.53
			64	7.69	6.48	10.14	7.46	17.60
	5 290	242	61	11.19	11.67	14.45	7.46	21.91
			62	11.28	11.56	14.43	7.46	21.89
			64	11.46	11.52	14.50	7.46	21.96
	5 530	242	61	11.47	10.92	14.21	7.46	21.67
			62	11.83	10.84	14.37	7.46	21.83
			64	11.64	10.80	14.25	7.46	21.71
	5 690	242	61	15.81	16.19	19.01	7.46	26.47
			62	15.96	16.23	19.11	7.46	26.57
			64	15.78	16.34	19.08	7.46	26.54
	5 775	242	61	15.64	15.31	18.49	7.46	25.95
			62	15.40	15.20	18.31	7.46	25.77
			64	15.28	15.34	18.32	7.46	25.78

Note 1: e.i.r.p= Conducted Output Power + Antenna Gain

Mode	Freq.(MHz)	Tone	RU Index	Test Result (dBm)			Antenna Gain(dBi)	e.i.r.p[Note1] (dBm)
				ANT 1	ANT 2	ANT1+ANT2 (CDD)		
802.11ax (HE80)	5 210	484	65	10.41	9.85	13.15	7.46	20.61
			66	10.39	9.94	13.18	7.46	20.64
	5 290	484	65	11.25	11.72	14.50	7.46	21.96
			66	11.08	11.43	14.27	7.46	21.73
	5 530	484	65	11.63	11.04	14.36	7.46	21.82
			66	11.46	11.67	14.58	7.46	22.04
	5 690	484	65	16.00	16.15	19.09	7.46	26.55
			66	16.03	16.08	19.07	7.46	26.53
	5 775	484	65	15.71	15.49	18.61	7.46	26.07
			66	15.66	15.48	18.58	7.46	26.04
802.11ax (HE80)	5 210	996	67	10.61	11.68	14.19	7.46	21.65
	5 290	996	67	10.46	11.70	14.13	7.46	21.59
	5 530	996	67	11.85	12.09	14.98	7.46	22.44
	5 690	996	67	15.63	15.86	18.76	7.46	26.22
	5 775	996	67	15.17	14.74	17.97	7.46	25.43
802.11ax (HE80)	5 210	SU	NA	9.73	10.54	13.16	7.46	20.62
	5 290	SU	NA	10.43	11.33	13.91	7.46	21.37
	5 530	SU	NA	10.98	10.96	13.98	7.46	21.44
	5 690	SU	NA	15.54	15.40	18.48	7.46	25.94
	5 775	SU	NA	15.12	14.82	17.98	7.46	25.44

Note 1: e.i.r.p= Conducted Output Power + Antenna Gain

5.4. Maximum Power Spectral Density

▣ Test requirements

Part. 15.407(a)

(1) For the band 5.15 GHz - 5.25 GHz.

(i) For an outdoor access point operating in the band 5.15 GHz - 5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 MHz band. **note1**

(ii) For an indoor access point operating in the band 5.15 GHz - 5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 MHz band. note1

(iii) For fixed point-to-point access points operating in the band 5.15 GHz - 5.25 GHz, transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi.

(iv) For mobile and portable client devices in the 5.15 GHz - 5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 MHz band. note1

(2) For the 5.25 GHz - 5.35 GHz and 5.47 GHz - 5.725 GHz bands, the peak power spectral density shall not exceed 11 dBm in any 1 MHz band. note1

(3) For the band 5.725 GHz - 5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500 kHz band.note1,note2

Note1: If transmitting antennas of directional gain greater than 6 dBi are used, the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Note2: Fixed point - to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

RSS-247[7.3] Power and unwanted emissions limits

RSS-247[7.3.1.2] For band 5 150 MHz – 5 250 MHz

For OEM devices installed in vehicles, the maximum e.i.r.p. shall not exceed the lesser of: 30 mW; or 1.76 + 10 log10B, dBm.

OEM devices installed in vehicles with a maximum e.i.r.p. greater than 15 mW shall implement TPC in order to have the capability to operate at least 3 dB below the maximum permitted e.i.r.p. of 30 mW.

For all other devices the maximum e.i.r.p. spectral density shall not exceed 10 dBm/MHz. The maximum e.i.r.p. shall not exceed the lesser of:

200 mW; or 10 + 10 log10B, dBm.

RSS-247[7.3.2.2] For band 5 250 MHz – 5 350 MHz

For OEM devices installed in vehicles, the maximum e.i.r.p. shall not exceed the lesser of:

a. 30 mW; or

b. 1.76 + 10 log10B, dBm.

OEM devices installed in vehicles with a maximum e.i.r.p. greater than 15 mW shall implement TPC in order to have the capability to operate at least 3 dB below the maximum permitted e.i.r.p. of 30 mW.

All other devices shall comply with the following:

a. the maximum power spectral density shall not exceed 11 dBm/MHz and the maximum conducted output power shall not exceed the lesser of:

i. 250 mW; or

ii. 11 + 10 log10B, dBm.

b. the maximum e.i.r.p. shall not exceed the lesser of:

i. 1.0 W; or

ii. 17 + 10 log10B, dBm.

c.Devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

RSS-247[7.3.3.2] For band 5 470 MHz – 5 725 MHz

Equipment operating in the band 5470-5725 MHz band shall comply with the following power limits:

a.the maximum conducted output power shall not exceed the lesser of:

i. 250 mW; or

ii. 11 + 10 log10B, dBm.

b. the maximum power spectral density shall not exceed 11 dBm/MHz.

c. the maximum e.i.r.p. shall not exceed the lesser of:

i. 1.0 W; or

ii. 17 + 10 log10B, dBm.

d. equipment with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

RSS-247[7.3.4.3] For band 5 725 MHz – 5 850 MHz

Equipment operating in the band 5725-5850 shall comply with the following power limits:

a. the maximum conducted output power shall not exceed 1 W; and

b. the maximum output power spectral density shall not exceed 30 dBm/500 kHz.

When using transmitting antennas with a directional gain exceeding 6 dBi, the maximum conducted output power and the output power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

However, FPTP devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter maximum conducted output power and the power spectral density. FPTP operations exclude the use of PTMP systems, omnidirectional applications and multiple collocated transmitters transmitting the same information. However, remote stations of PTMP systems shall be permitted to operate at e.i.r.p. greater than 4 W under the same conditions as for FPTP systems.

▣ Test Configuration

Refer to the APPENDIX I.

▣ Test Procedure

Maximum Power Spectral Density is measured using Measurement Procedure **of KDB789033 D02v02r01**

1) Create an average power spectrum for the EUT operating mode being tested by following the instructions in section II.E.2. for measuring maximum conducted output power using a spectrum analyzer or EMI receiver: select the appropriate test method (SA - 1, SA - 2, SA - 3, or alternatives to each) and apply it up to, but not including, the step labeled, “Compute power…”. (This procedure is required even if the maximum conducted output power measurement was performed using a power meter, method PM.)

2) Use the peak search function on the instrument to find the peak of the spectrum and record its value.

3) Make the following adjustments to the peak value of the spectrum, if applicable:
   a) If Method SA - 2 or SA - 2 Alternative was used, add 10 log(1 / x), where x is the duty cycle, to the peak of the spectrum.
   b) If Method SA - 3 Alternative was used and the linear mode was used in step II.E.2.g (viii), add 1 dB to the final result to compensate for the difference between linear averaging and power averaging.

4) The result is the Maximum PSD over 1 MHz reference bandwidth.

5) For devices operating in the bands 5.15 - 5.25 GHz, 5.25 - 5.35 GHz, and 5.47 - 5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in §15.407(a)(5). For devices operating in the band 5.725 - 5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 kHz bandwidth, the following adjustments to the procedures apply:
   a) Set RBW = 1 MHz.
   b) Set VBW ≥ 1 / T, where T is defined in item a1) in 12.2.
   c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log(500 kHz / RBW) to the measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
   d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10 log(1 MHz / RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
   g) Detector = peak.
   h) Video filtering shall be applied to a voltage-squared or power signal (i.e., rms mode), if possible. Otherwise, it shall be set to operate on a linear voltage signal (which can require use of linear display mode). Log mode shall not be used:
      1) The preferred voltage-squared (i.e., power or rms) mode is selected on some instruments by setting the “average-VBW type” to power or rms.
      2) **If RMS mode is not available, then linear voltage mode is selected on some analyzers by setting the display mode to linear. Other instruments have a setting for “average-VBW type” that can be set to “voltage” regardless of the display mode.**
   i) Trace mode = max hold.

Note: As a practical matter, it is recommended to use reduced RBW of 100 kHz for the sections 5.c) and 5.d) above, since RBW = 100 kHz is available on nearly all spectrum analyzers.

▣ **Test Results: Comply**

Mode	Frequency (MHz)	Tone	RU Index	Reading (dBm)		Power Spectral Density(dBm)	Antenna Gain(dBi)	e.i.r.p Spectral Density (dBm)
				ANT 1	ANT 2	ANT1+ANT2 (CDD)		
802.11ax (HE20)	5 180	26	0	-3.12	-2.27	0.34	7.46	7.80
			4	-3.90	-3.15	-0.50	7.46	6.96
			8	**-2.78**	**-1.94**	**0.67**	**7.46**	**8.13**
		242	61	-3.05	-2.53	0.23	7.46	7.69
		SU	NA	-2.75	-2.53	0.37	7.46	7.83
	5 200	26	0	-2.70	-2.18	0.58	7.46	8.04
			4	-3.57	-3.01	-0.27	7.46	7.19
			8	**-2.55**	**-1.86**	**0.82**	**7.46**	**8.28**
		242	61	-2.90	-2.51	0.31	7.46	7.77
		SU	NA	-2.43	-2.33	0.63	7.46	8.09
	5 240	26	0	-2.84	-1.89	0.67	7.46	8.13
			4	-3.46	-2.51	0.05	7.46	7.51
			8	**-2.41**	**-1.19**	**1.25**	**7.46**	**8.71**
		242	61	-2.68	-2.04	0.66	7.46	8.12
		SU	NA	-2.07	-1.59	1.18	7.46	8.64
	5 260	26	0	2.91	4.48	6.78	7.46	14.24
			4	1.85	3.75	5.91	7.46	13.37
			8	**3.03**	**4.93**	**7.09**	**7.46**	**14.55**
		242	61	2.59	3.80	6.25	7.46	13.71
		SU	NA	3.22	4.19	6.74	7.46	14.20
	5 300	26	0	3.92	4.78	7.38	7.46	14.84
			4	2.89	3.84	6.40	7.46	13.86
			8	**4.10**	**5.11**	**7.64**	**7.46**	**15.10**
		242	61	3.65	4.09	6.89	7.46	14.35
		SU	NA	4.23	4.23	7.24	7.46	14.70
	5 320	26	0	3.87	4.94	7.45	7.46	14.91
			4	3.10	3.96	6.56	7.46	14.02
			8	**4.31**	**5.15**	**7.76**	**7.46**	**15.22**
		242	61	3.80	4.17	7.00	7.46	14.46
		SU	NA	4.28	4.39	7.35	7.46	14.81
	5 500	26	0	3.22	3.73	6.49	7.46	13.95
			4	2.14	2.93	5.56	7.46	13.02
			8	**3.33**	**4.06**	**6.72**	**7.46**	**14.18**
		242	61	2.85	3.03	5.95	7.46	13.41
		SU	NA	3.32	3.40	6.37	7.46	13.83
	5 580	26	0	2.34	2.84	5.61	7.46	13.07
			4	1.61	1.94	4.79	7.46	12.25
			8	**2.64**	**3.16**	**5.92**	**7.46**	**13.38**
		242	61	2.88	3.06	5.98	7.46	13.44
		SU	NA	3.31	3.27	6.30	7.46	13.76
	5 720	26	0	2.06	3.78	6.01	7.46	13.47
			4	1.03	2.78	5.01	7.46	12.47
			8	**2.10**	**3.81**	**6.05**	**7.46**	**13.51**
		242	61	2.00	3.35	5.74	7.46	13.20
		SU	NA	2.32	3.62	6.03	7.46	13.49

Note 1: e.i.r.p Spectral Density= Power spectral density + EUT Antenna Gain

Mode	Frequency (MHz)	Tone	RU Index	Reading (dBm)		Power Spectral Density(dBm)	Antenna Gain(dBi)	e.i.r.p Spectral Density (dBm)
				ANT 1	ANT 2	ANT1+ANT2 (CDD)		
802.11ax (HE40)	5 190	26	0	-4.27	-3.97	-1.11	7.46	6.35
			8	**-2.46**	**-2.63**	**0.47**	**7.46**	**7.93**
			17	-2.87	-2.85	0.15	7.46	7.61
		484	65	-2.19	-1.82	1.01	7.46	8.47
		SU	NA	-2.66	-2.72	0.32	7.46	7.78
	5 230	26	0	-4.11	-3.97	-1.03	7.46	6.43
			8	**-2.31**	**-2.25**	**0.73**	**7.46**	**8.19**
			17	-2.51	-2.15	0.68	7.46	8.14
		484	65	-2.31	-1.36	1.20	7.46	8.66
		SU	NA	-2.84	-2.30	0.45	7.46	7.91
	5 270	26	0	2.43	3.03	5.75	7.46	13.21
			8	**3.81**	**4.36**	**7.10**	**7.46**	**14.56**
			17	3.62	4.08	6.87	7.46	14.33
		484	65	2.86	3.93	6.44	7.46	13.90
		SU	NA	2.28	3.07	5.70	7.46	13.16
	5 310	26	0	2.68	3.02	5.86	7.46	13.32
			8	**3.97**	**4.43**	**7.22**	**7.46**	**14.68**
			17	3.96	4.19	7.08	7.46	14.54
		484	65	1.56	1.98	4.78	7.46	12.24
		SU	NA	1.38	1.54	4.47	7.46	11.93
	5 510	26	0	3.86	3.57	6.73	7.46	14.19
			8	**4.23**	**4.17**	**7.21**	**7.46**	**14.67**
			17	4.12	3.74	6.94	7.46	14.40
		484	65	1.16	1.50	4.34	7.46	11.80
		SU	NA	1.05	1.19	4.13	7.46	11.59
	5 550	26	0	3.97	3.60	6.80	7.46	14.26
			8	**4.41**	**4.09**	**7.26**	**7.46**	**14.72**
			17	3.94	4.03	7.00	7.46	14.46
		484	65	3.26	3.21	6.25	7.46	13.71
		SU	NA	2.91	2.57	5.75	7.46	13.21
	5 710	26	0	2.18	3.28	5.78	7.46	13.24
			8	**2.40**	**3.68**	**6.09**	**7.46**	**13.55**
			17	2.41	3.52	6.01	7.46	13.47
		484	65	3.42	4.02	6.74	7.46	14.20
		SU	NA	2.93	3.37	6.16	7.46	13.62

Note 1: e.i.r.p Spectral Density= Power spectral density + EUT Antenna Gain

Mode	Frequency (MHz)	Tone	RU Index	Reading (dBm)		Power Spectral Density(dBm)	Antenna Gain(dBi)	e.i.r.p Spectral Density (dBm)
				ANT 1	ANT 2	ANT1+ANT2 (CDD)		
802.11ax (HE80)	5 210	26	0	-3.16	-2.95	-0.04	7.46	7.42
			17	-2.61	-2.54	0.43	7.46	7.89
			36	**-2.56**	**-2.28**	**0.59**	**7.46**	**8.05**
		996	67	-4.54	-3.94	-1.22	7.46	6.24
		SU	NA	-4.75	-3.99	-1.34	7.46	6.12
	5 290	26	0	3.36	4.02	6.71	7.46	14.17
			17	3.63	4.17	6.92	7.46	14.38
			36	**3.99**	**4.22**	**7.11**	**7.46**	**14.57**
		996	67	-4.72	-3.61	-1.12	7.46	6.34
		SU	NA	-3.90	-2.24	0.02	7.46	7.48
	5 530	26	0	3.93	3.86	6.90	7.46	14.36
			17	4.21	3.90	7.07	7.46	14.53
			36	**4.15**	**4.15**	**7.16**	**7.46**	**14.62**
		996	67	-3.32	-3.56	-0.43	7.46	7.03
		SU	NA	-3.64	-3.82	-0.72	7.46	6.74
	5 690	26	0	1.04	2.00	4.56	7.46	12.02
			17	2.31	3.30	5.84	7.46	13.30
			36	**2.28**	**3.64**	**6.02**	**7.46**	**13.48**
		996	67	0.40	0.27	3.35	7.46	10.81
		SU	NA	1.09	1.68	4.40	7.46	11.86

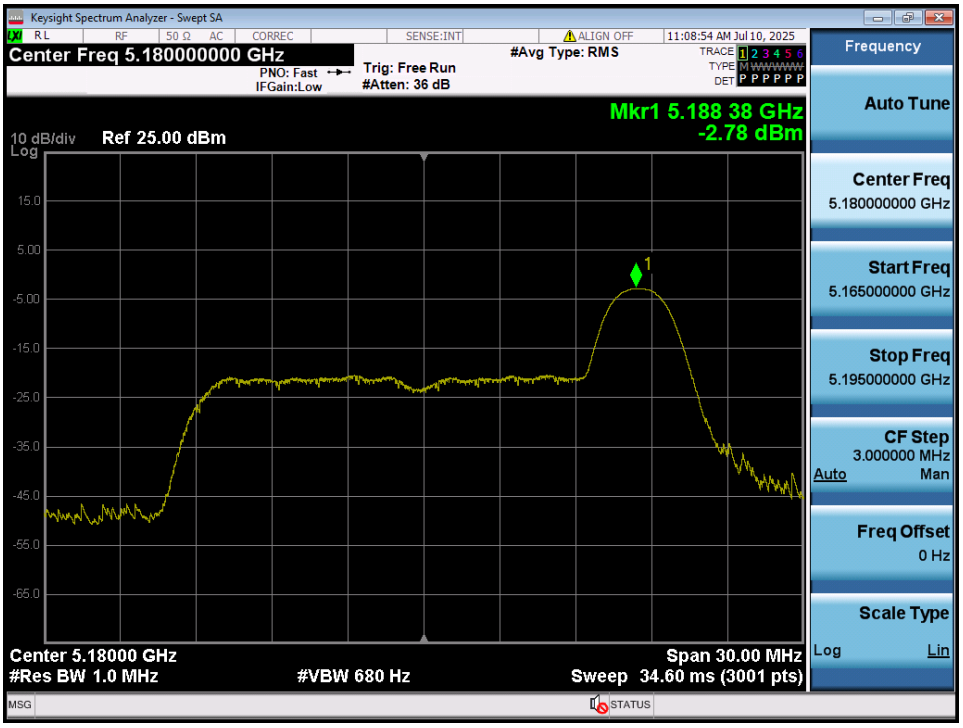
Note 1: e.i.r.p Spectral Density= Power spectral density + EUT Antenna Gain

Mode	Frequency (MHz)	Tone	RU Index	Reading (dBm/500kHz)		Power Spectral Density (dBm/500kHz)	Antenna Gain(dBi)	e.i.r.p Spectral Density (dBm/ 500kHz)
				ANT 1	ANT 2	ANT1+ANT2 (CDD)		
802.11ax (HE20)	5 745	26	0	**10.14**	**10.53**	**13.35**	**7.46**	**20.81**
			4	9.84	10.50	13.19	7.46	20.65
			8	10.05	10.56	13.32	7.46	20.78
		242	61	2.10	2.72	5.43	7.46	12.89
		SU	NA	2.57	3.08	5.84	7.46	13.30
	5 785	26	0	9.39	9.57	12.49	7.46	19.95
			4	9.19	9.41	12.31	7.46	19.77
			8	**9.32**	**9.72**	**12.53**	**7.46**	**19.99**
		242	61	2.43	2.54	5.50	7.46	12.96
		SU	NA	2.69	2.81	5.76	7.46	13.22
	5 825	26	0	**9.53**	**9.75**	**12.65**	**7.46**	**20.11**
			4	9.51	9.37	12.45	7.46	19.91
			8	9.40	9.80	12.62	7.46	20.08
		242	61	2.81	2.70	5.77	7.46	13.23
		SU	NA	3.08	2.92	6.01	7.46	13.47
802.11ax (HE40)	5 755	26	0	9.31	9.72	12.53	7.46	19.99
			8	**10.55**	**11.03**	**13.81**	**7.46**	**21.27**
			17	10.68	10.57	13.64	7.46	21.10
		484	65	0.22	0.55	3.40	7.46	10.86
		SU	NA	0.85	1.70	4.31	7.46	11.77
	5 795	26	0	10.38	10.37	13.38	7.46	20.84
			8	**10.81**	**10.94**	**13.89**	**7.46**	**21.35**
			17	10.96	10.72	13.85	7.46	21.31
		484	65	0.25	0.68	3.48	7.46	10.94
		SU	NA	1.27	1.57	4.43	7.46	11.89
802.11ax (HE80)	5 775	26	0	9.66	9.93	12.80	7.46	20.26
			17	**10.45**	**9.77**	**13.13**	**7.46**	**20.59**
			36	9.51	9.85	12.69	7.46	20.15
		996	67	-2.42	-2.77	0.42	7.46	7.88
		SU	NA	-1.37	-0.98	1.84	7.46	9.30

Note 1: e.i.r.p Spectral Density= Power spectral density + EUT Antenna Gain

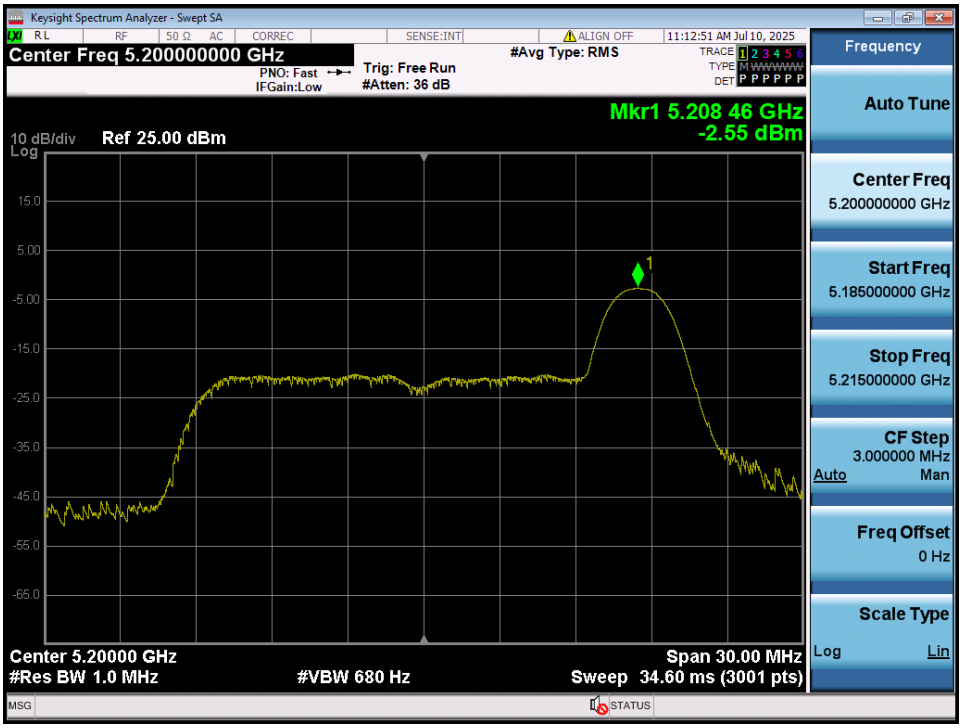
Maximum Power Spectral Density

Test Mode: 802.11ax HE20 & ANT 1 & 26 Tone & 8 RU & Ch.36

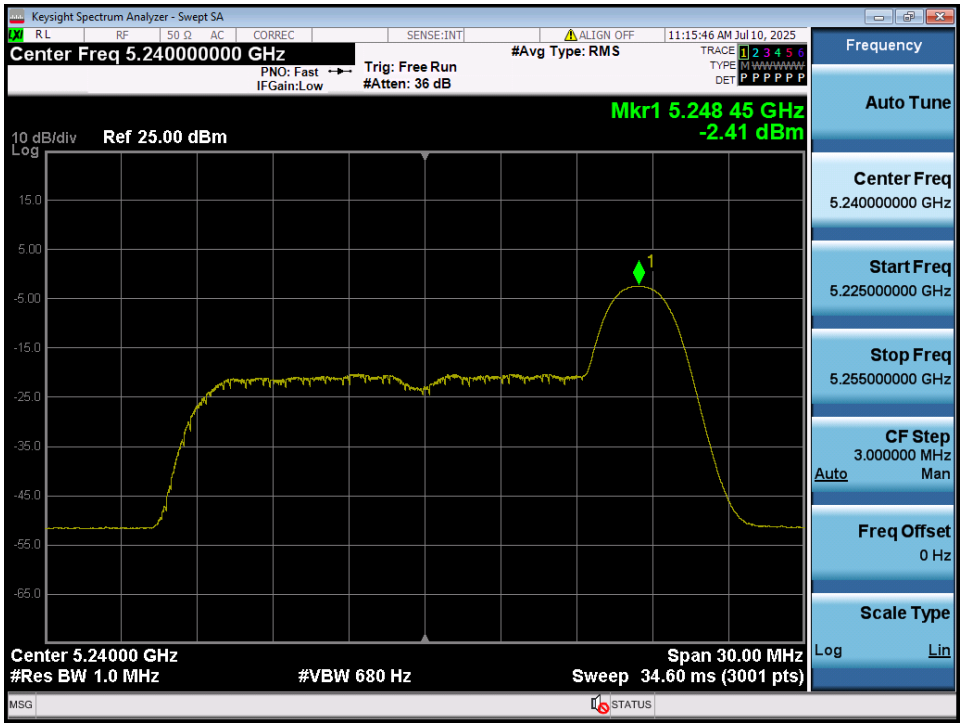


Maximum Power Spectral Density

Test Mode: 802.11ax HE20 & ANT 1 & 26 Tone & 8 RU & Ch.40

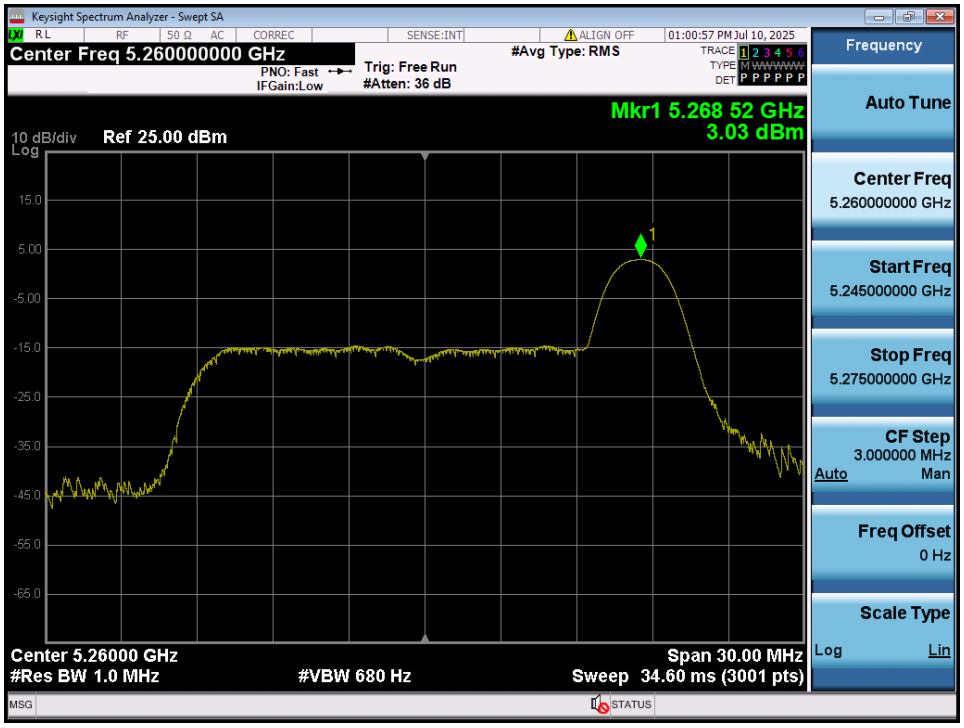


Maximum Power Spectral Density Test Mode: 802.11ax HE20 & ANT 1 & 26 Tone & 8 RU & Ch.48



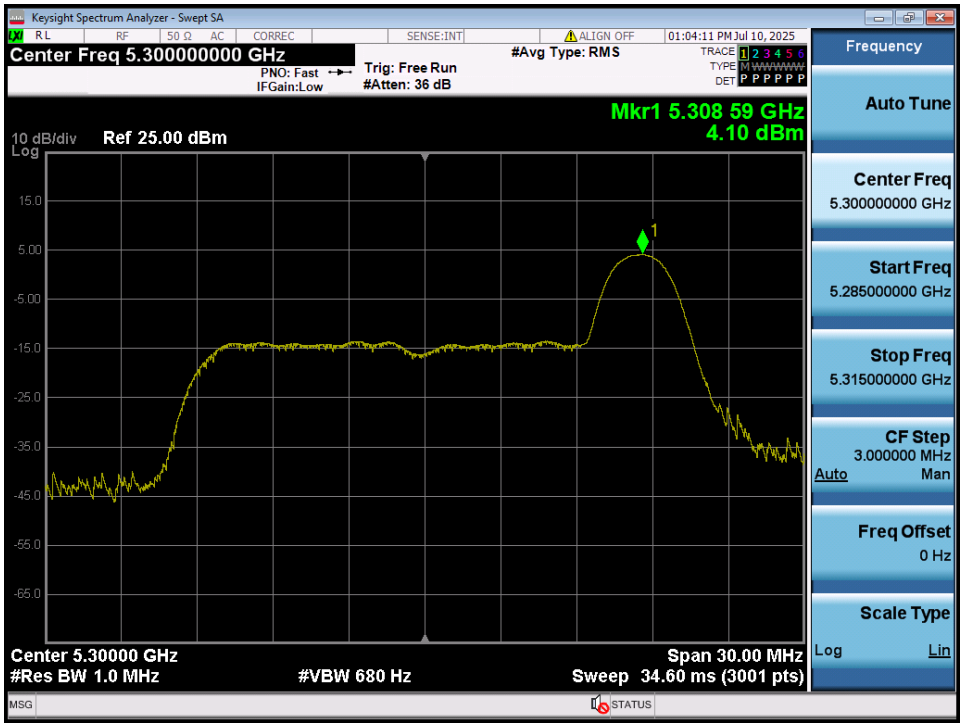
Maximum Power Spectral Density

Test Mode: 802.11ax HE20 & ANT 1 & 26 Tone & 8 RU & Ch.52



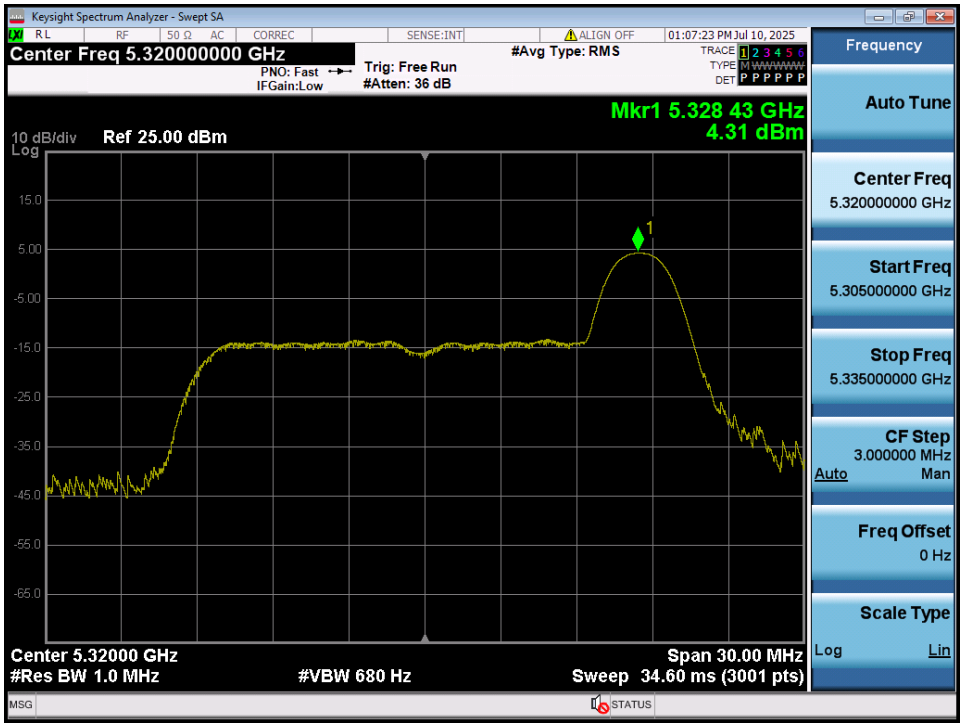
Maximum Power Spectral Density

Test Mode: 802.11ax HE20 & ANT 1 & 26 Tone & 8 RU & Ch.60



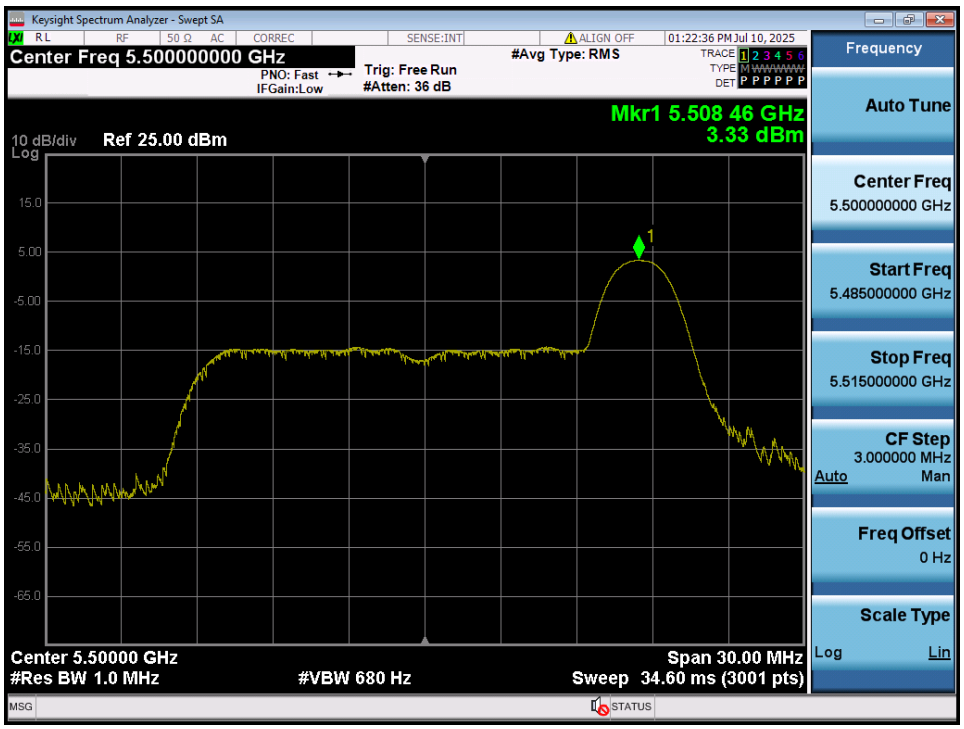
Maximum Power Spectral Density

Test Mode: 802.11ax HE20 & ANT 1 & 26 Tone & 8 RU & Ch.64



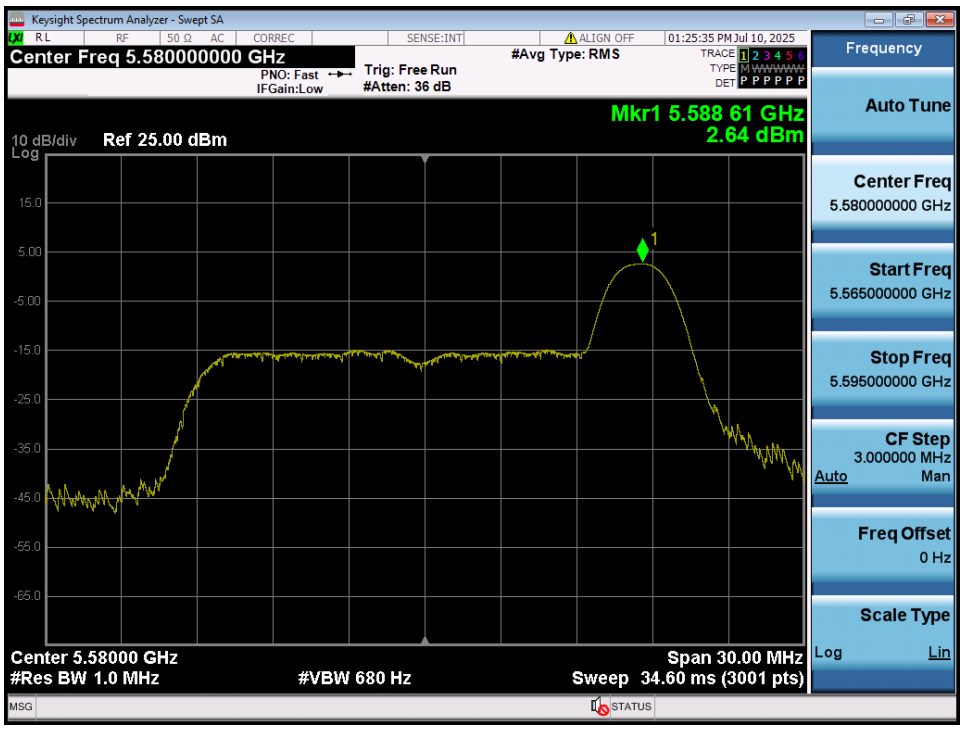
Maximum Power Spectral Density

Test Mode: 802.11ax HE20 & ANT 1 & 26 Tone & 8 RU & Ch.100



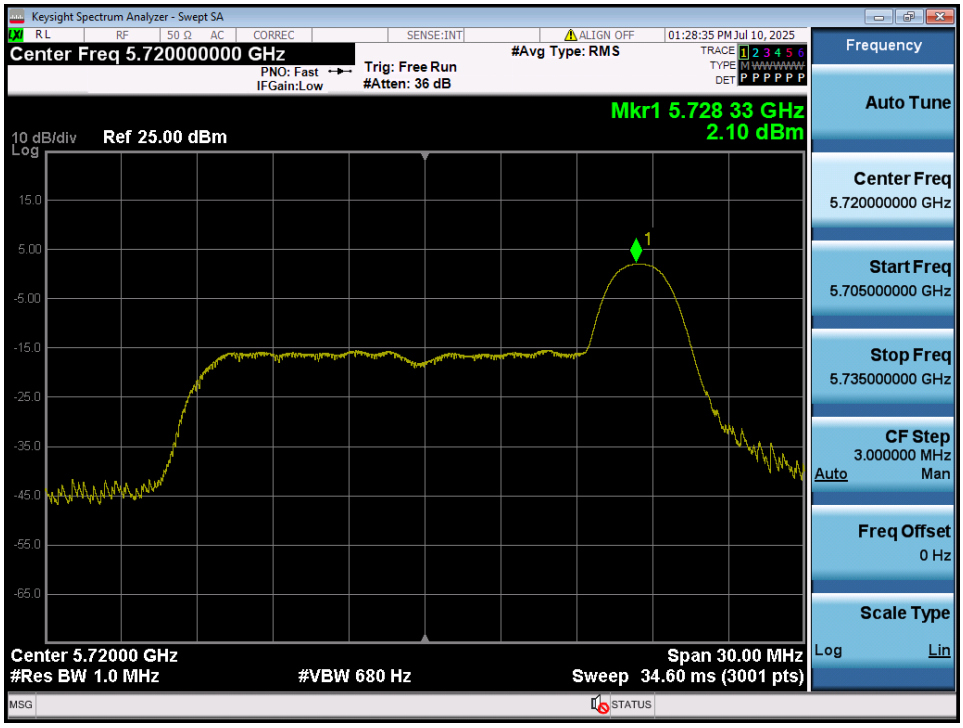
Maximum Power Spectral Density

Test Mode: 802.11ax HE20 & ANT 1 & 26 Tone & 8 RU & Ch.116



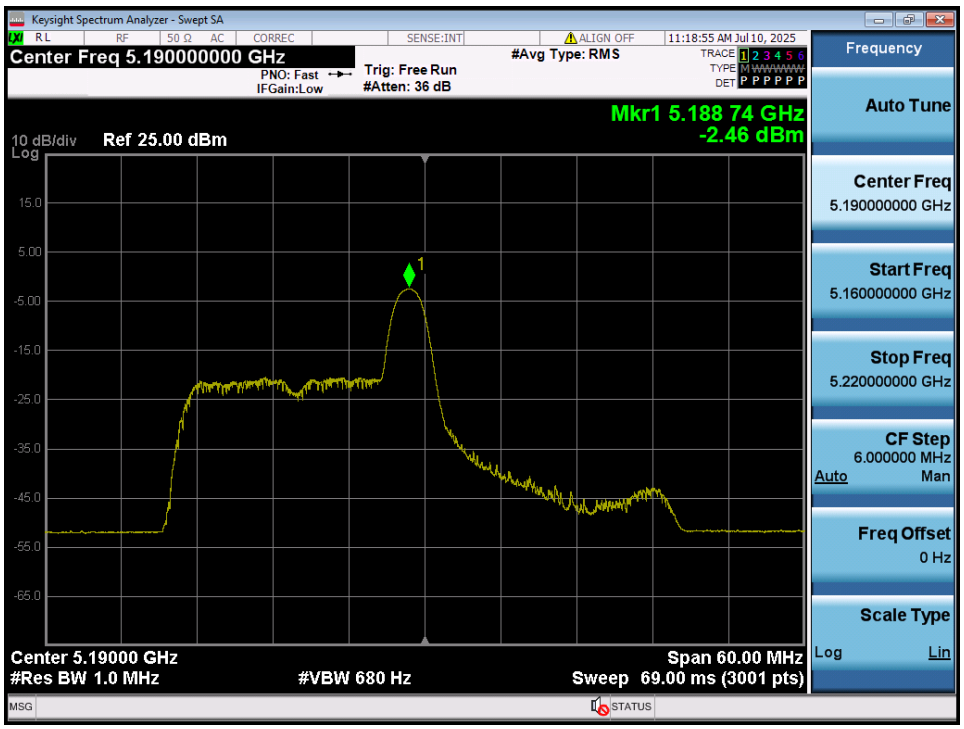
Maximum Power Spectral Density

Test Mode: 802.11ax HE20 & ANT 1 & SU & Ch.144



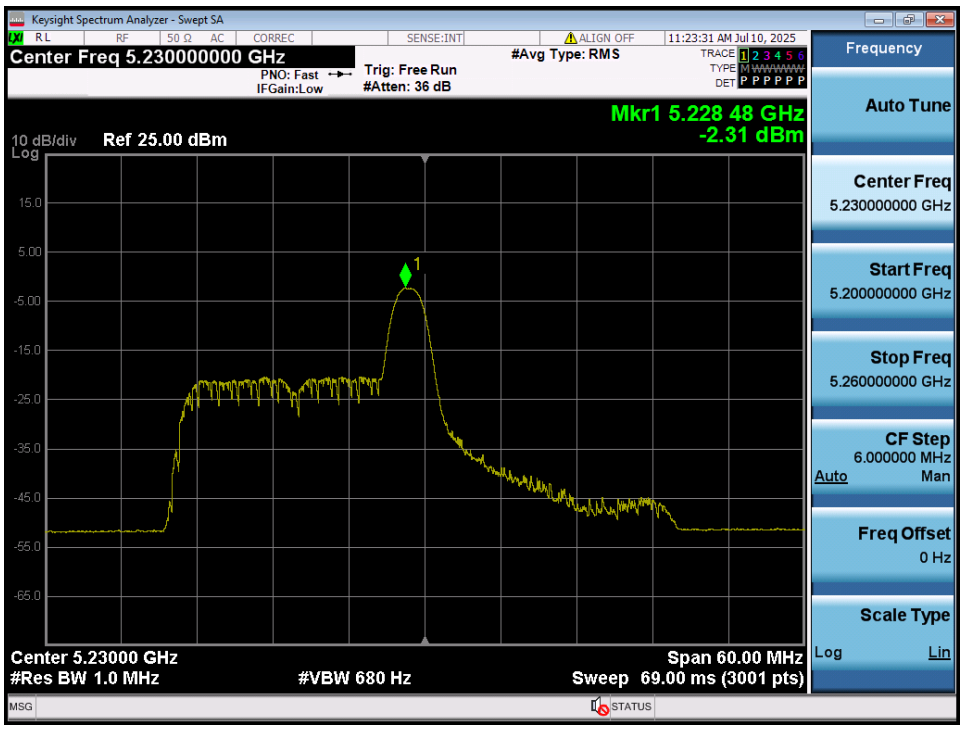
Maximum Power Spectral Density

Test Mode: 802.11ax HE40 & ANT 1 & 26 Tone & 8 RU & Ch.38



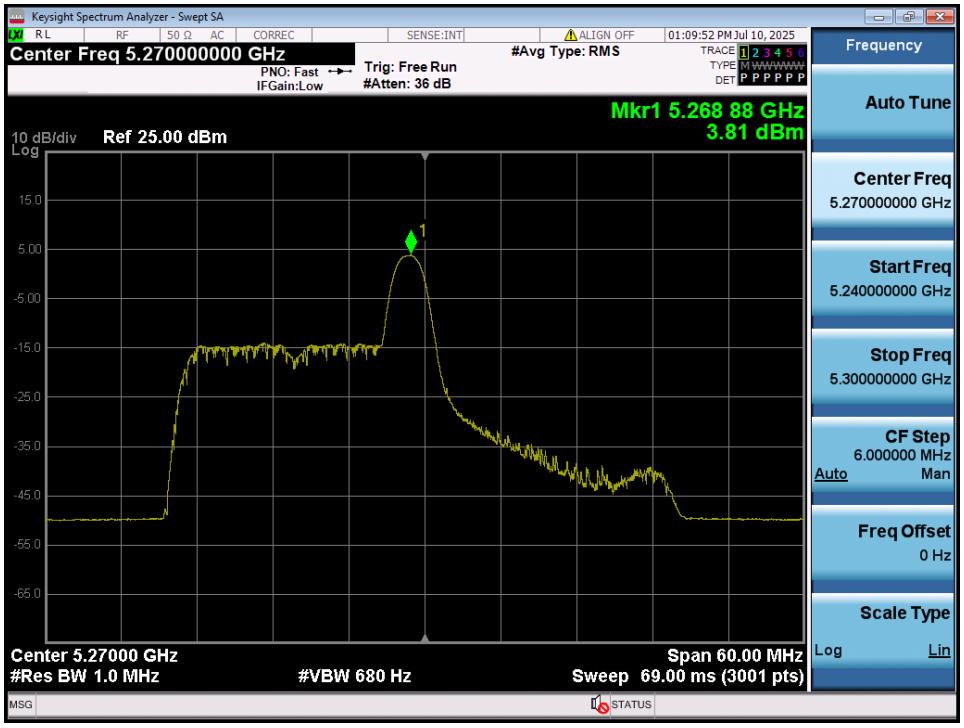
Maximum Power Spectral Density

Test Mode: 802.11ax HE40 & ANT 1 & 26 Tone & 8 RU & Ch.46



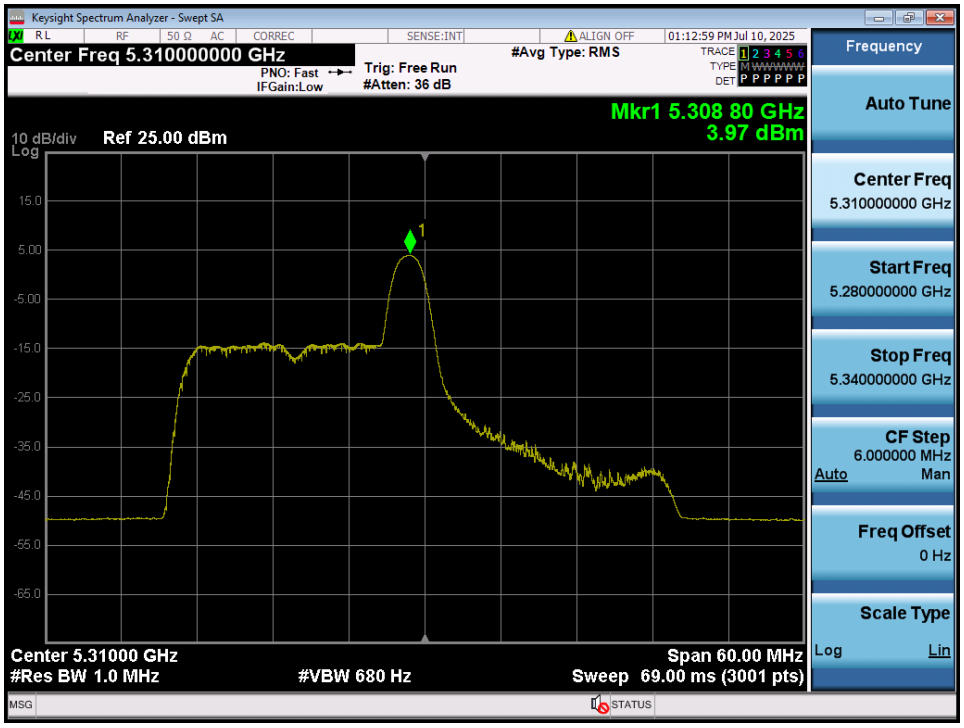
Maximum Power Spectral Density

Test Mode: 802.11ax HE40 & ANT 1 & 26 Tone & 8 RU & Ch.54

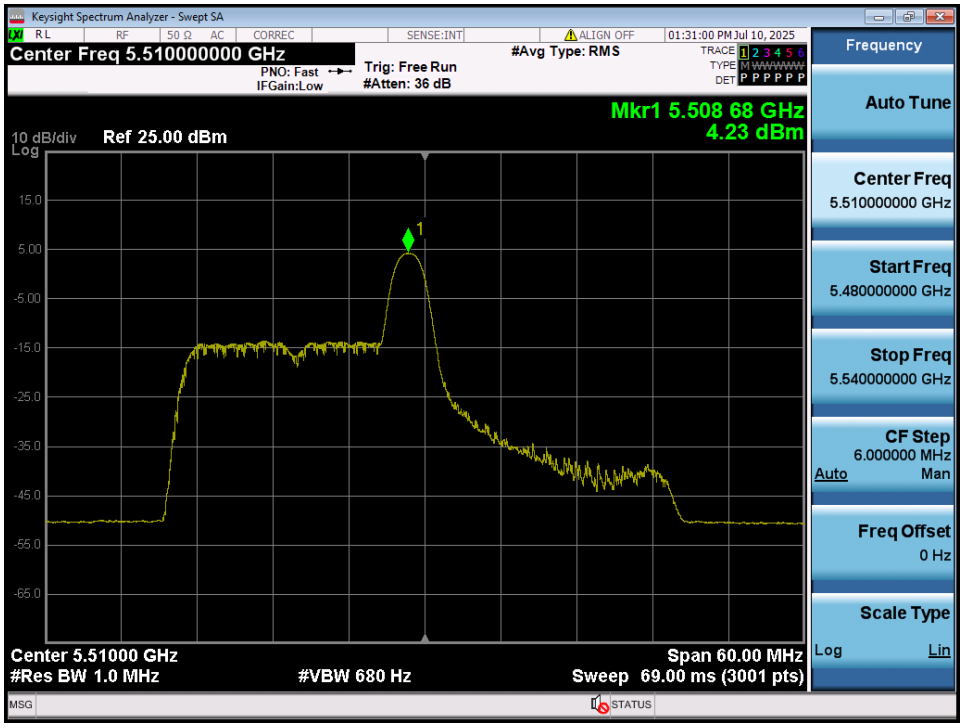


Maximum Power Spectral Density

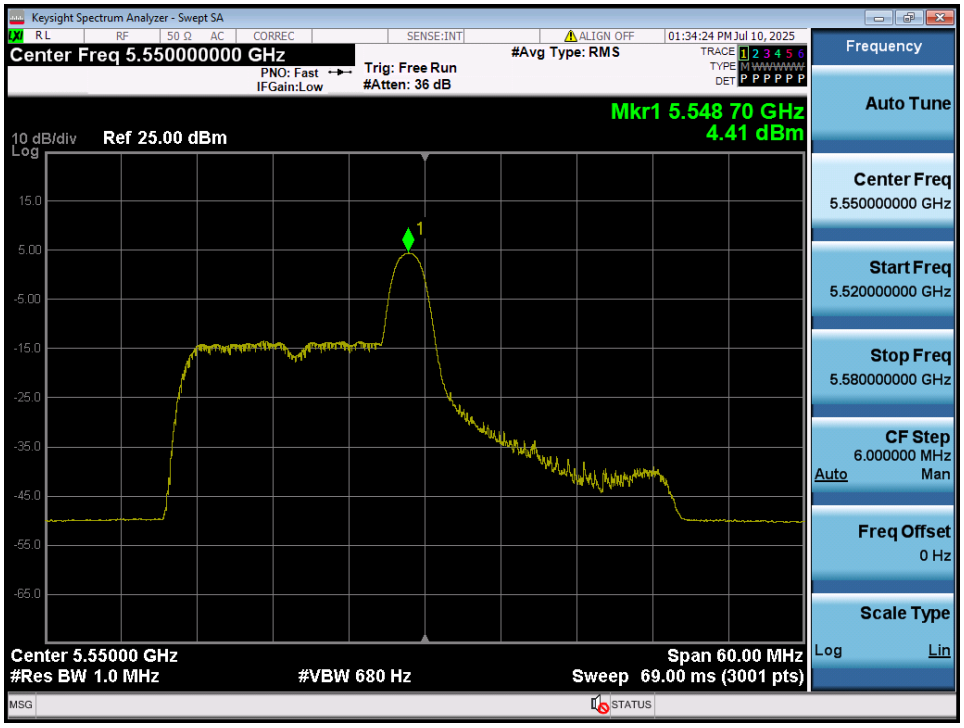
Test Mode: 802.11ax HE40 & ANT 1 & 26 Tone & 8 RU & Ch.62



Maximum Power Spectral Density Test Mode: 802.11ax HE40 & ANT 1 & 26 Tone & 8 RU & Ch.102

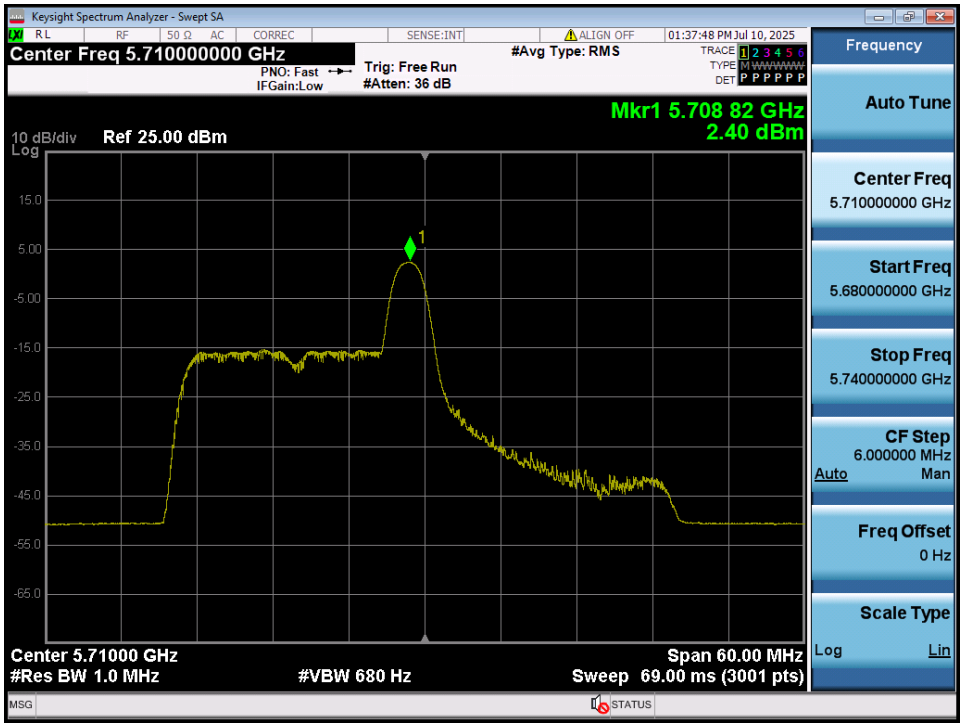


Maximum Power Spectral Density Test Mode: 802.11ax HE40 & ANT 1 & 26 Tone & 8 RU & Ch.110

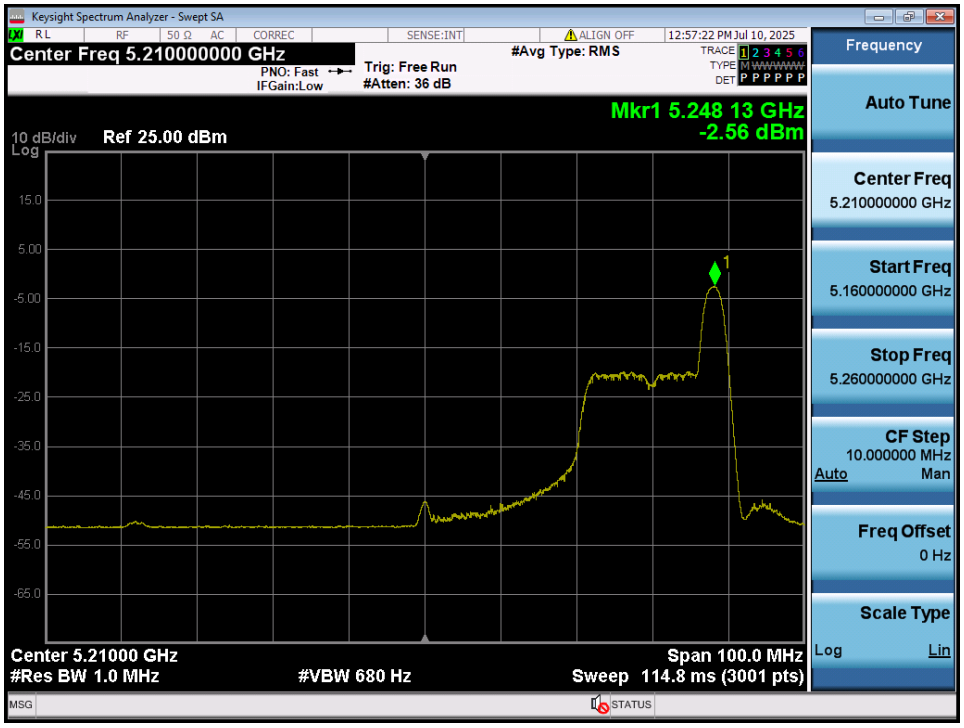


Maximum Power Spectral Density

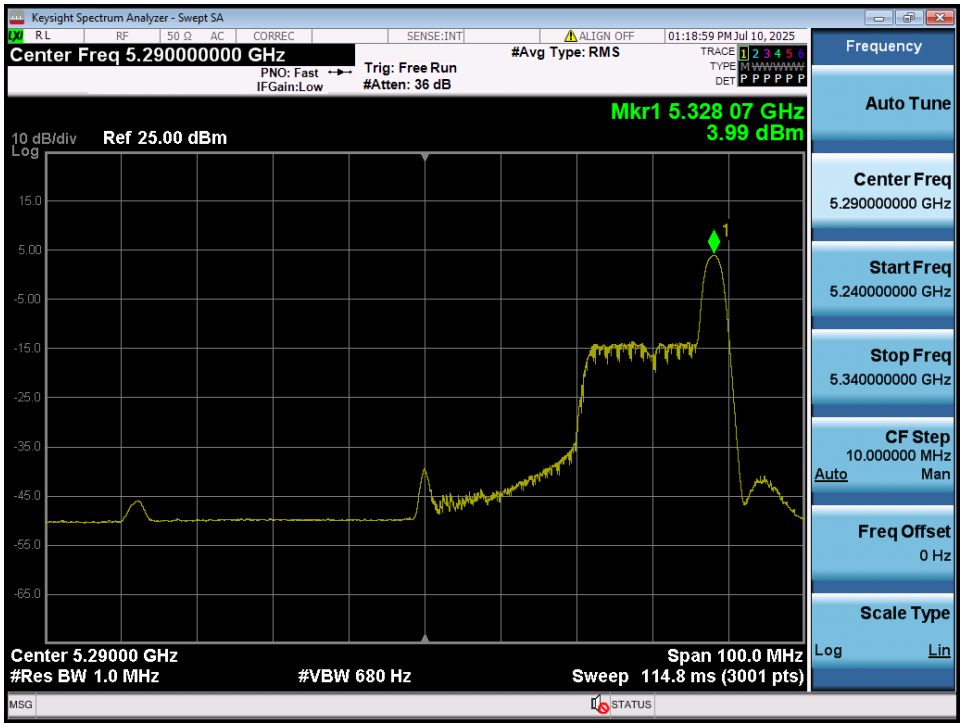
Test Mode: 802.11ax HE40 & ANT 1 & 26 Tone & 8 RU & Ch.142



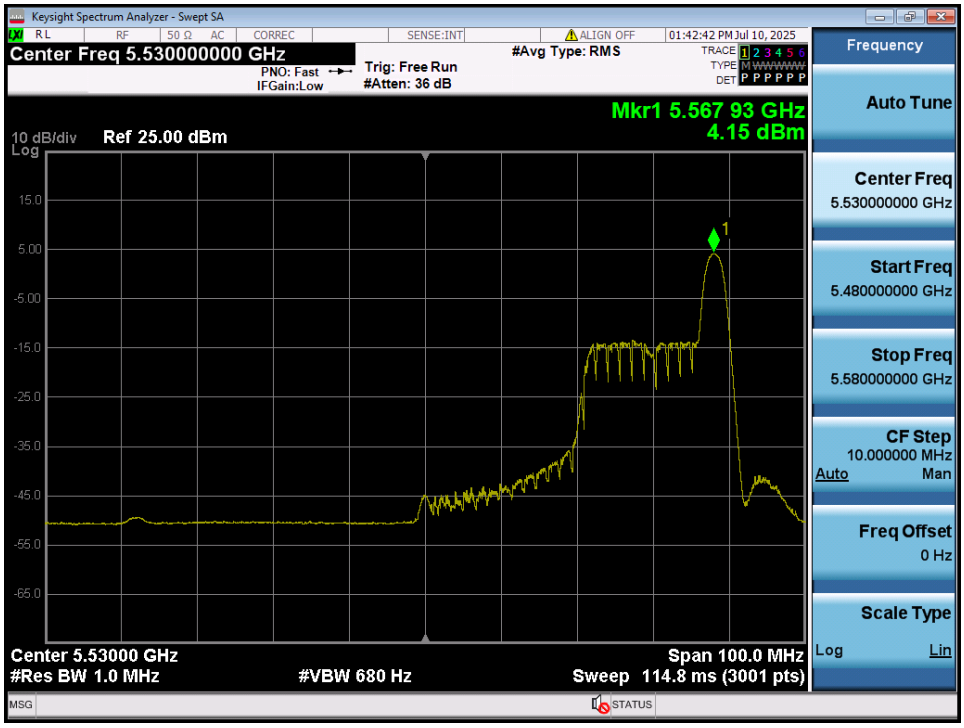
Maximum Power Spectral Density Test Mode: 802.11ax HE80 & ANT 1 & 26 Tone & 36 RU & Ch.42



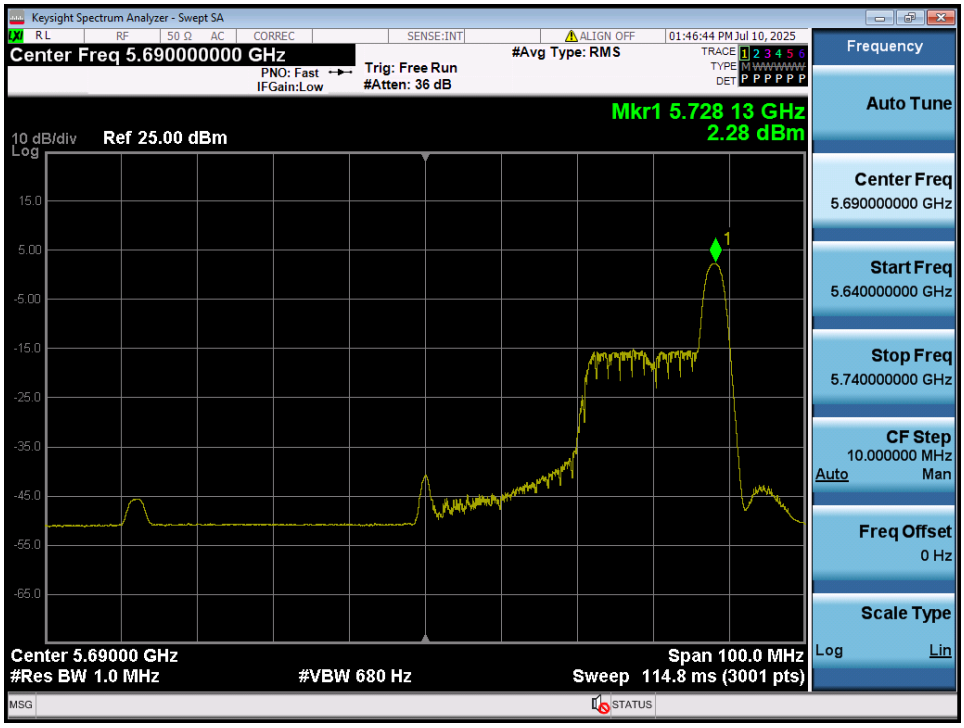
Maximum Power Spectral Density Test Mode: 802.11ax HE80 & ANT 1 & 26 Tone & 0 RU & Ch.58



Maximum Power Spectral Density Test Mode: 802.11ax HE80 & ANT 1 & 26 Tone & 36 RU & Ch.106

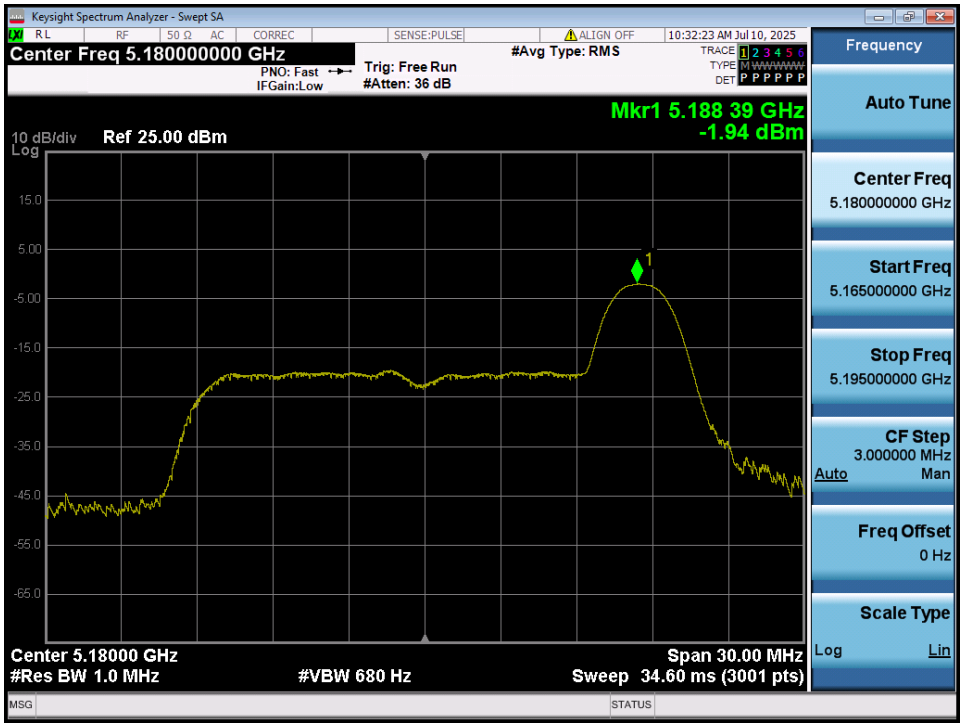


Maximum Power Spectral Density Test Mode: 802.11ax HE80 & ANT 1 & 26 Tone & 0 RU & Ch.138



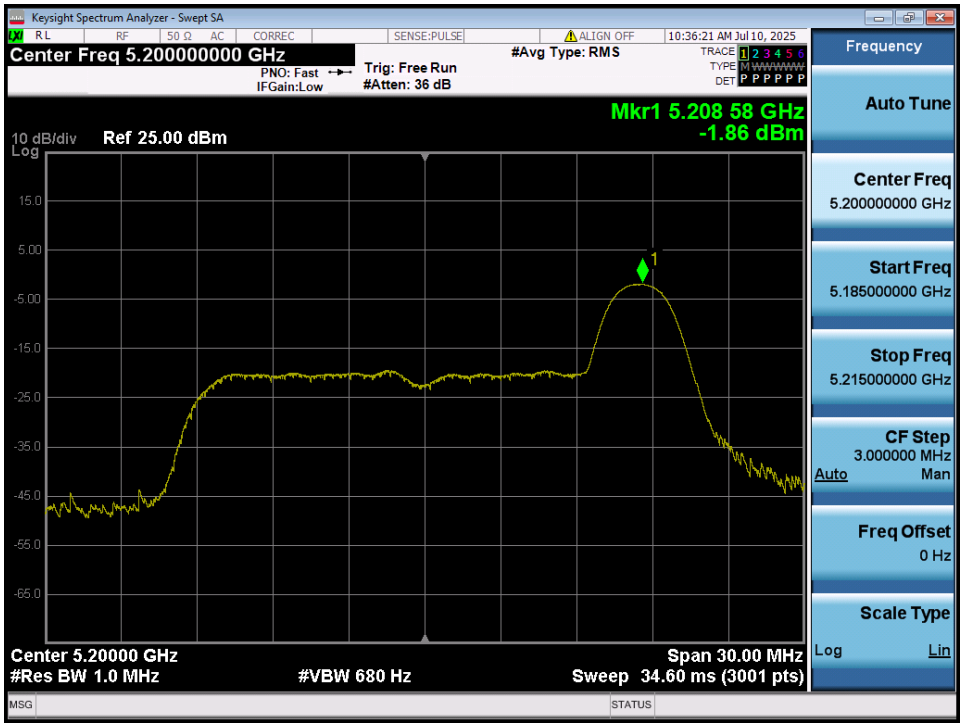
Maximum Power Spectral Density

Test Mode: 802.11ax HE20 & ANT 2 & 26 Tone & 8 RU & Ch.36

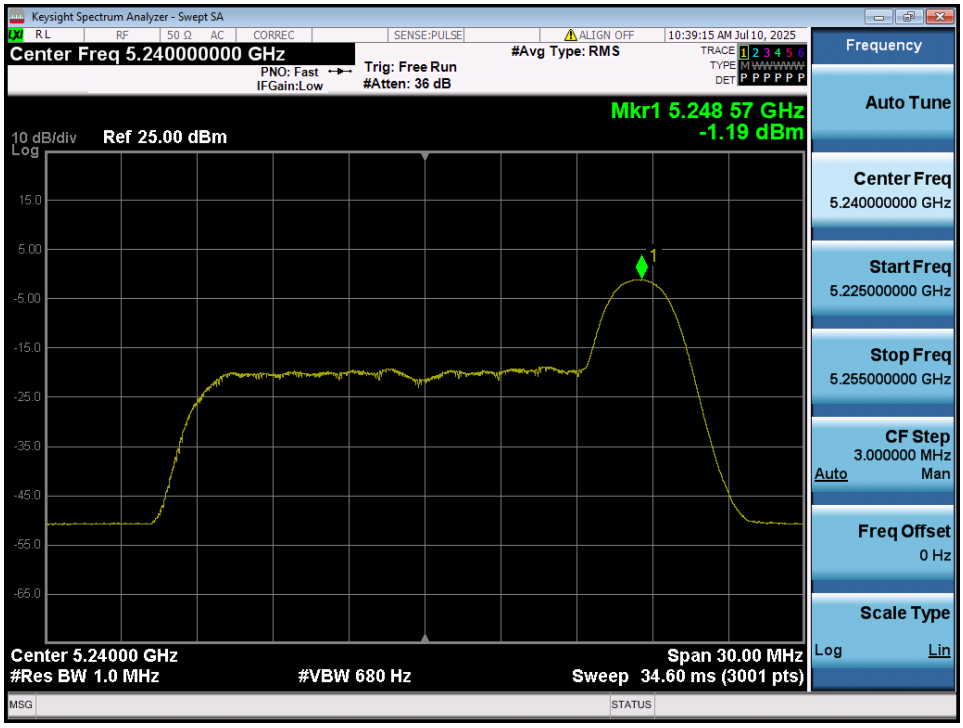


Maximum Power Spectral Density

Test Mode: 802.11ax HE20 & ANT 2 & 26 Tone & 0 RU & Ch.40

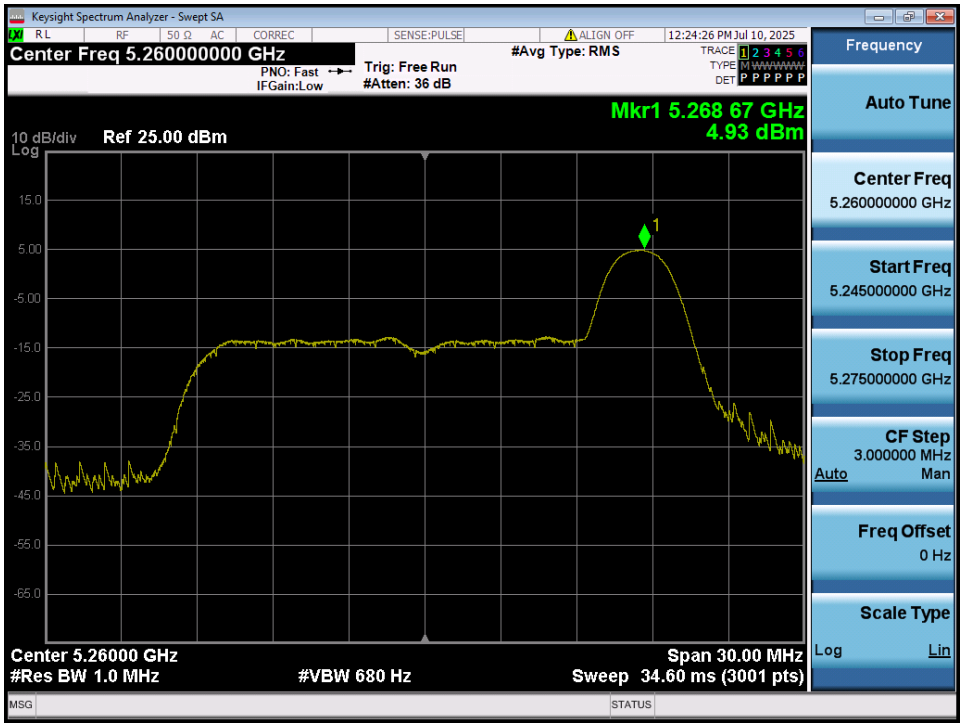


Maximum Power Spectral Density Test Mode: 802.11ax HE20 & ANT 2 & 26 Tone & 8 RU & Ch.48



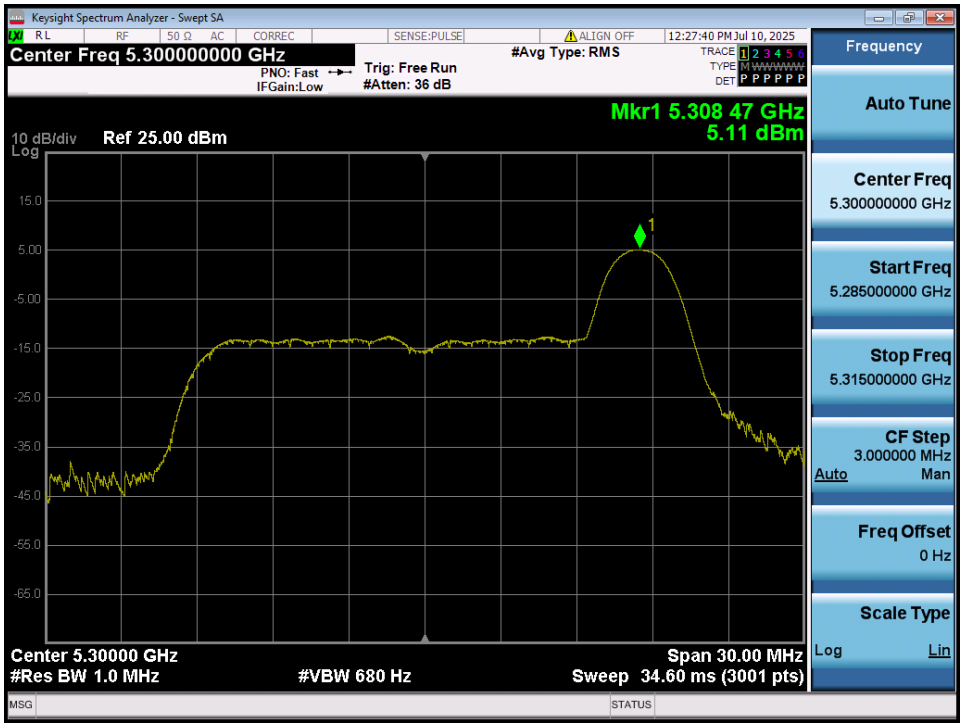
Maximum Power Spectral Density

Test Mode: 802.11ax HE20 & ANT 2 & 26 Tone & 8 RU & Ch.52



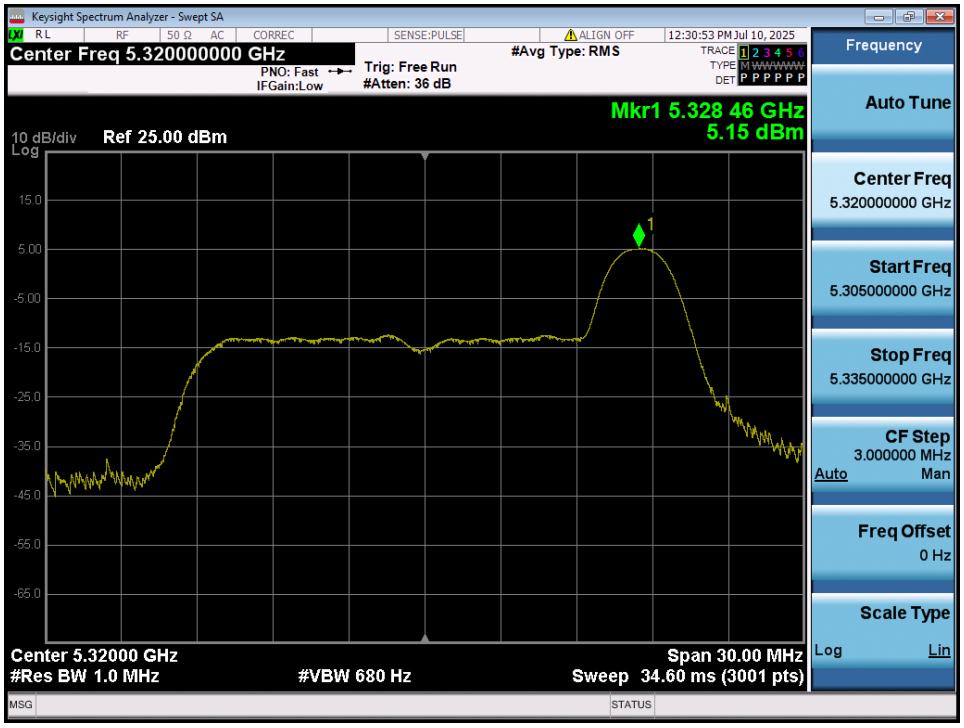
Maximum Power Spectral Density

Test Mode: 802.11ax HE20 & ANT 2 & 26 Tone & 8 RU & Ch.60



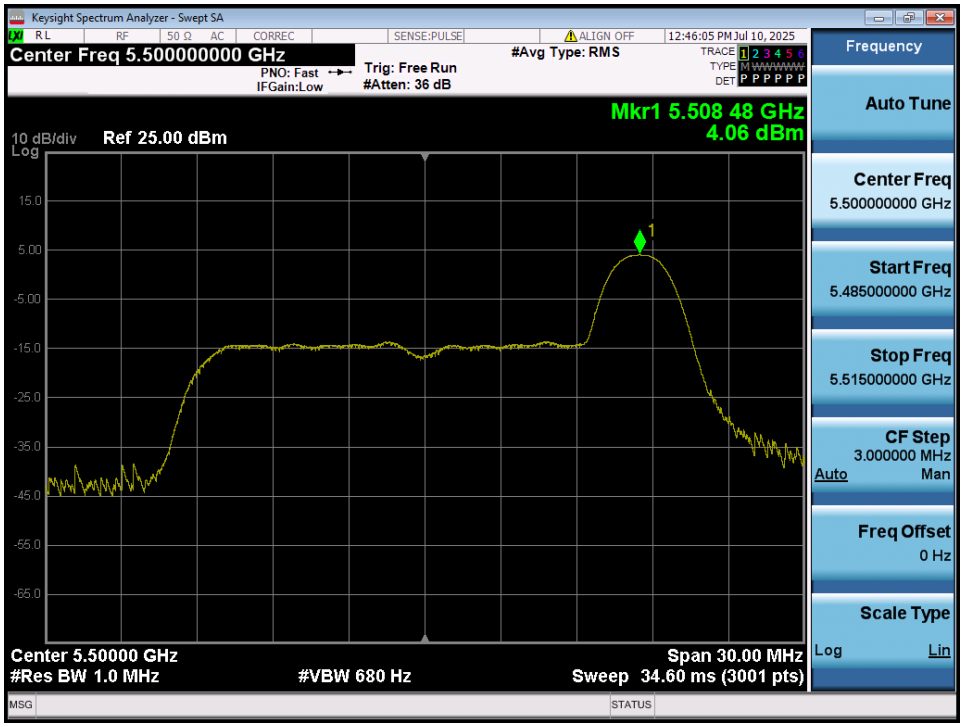
Maximum Power Spectral Density

Test Mode: 802.11ax HE20 & ANT 2 & 26 Tone & 8 RU & Ch.64



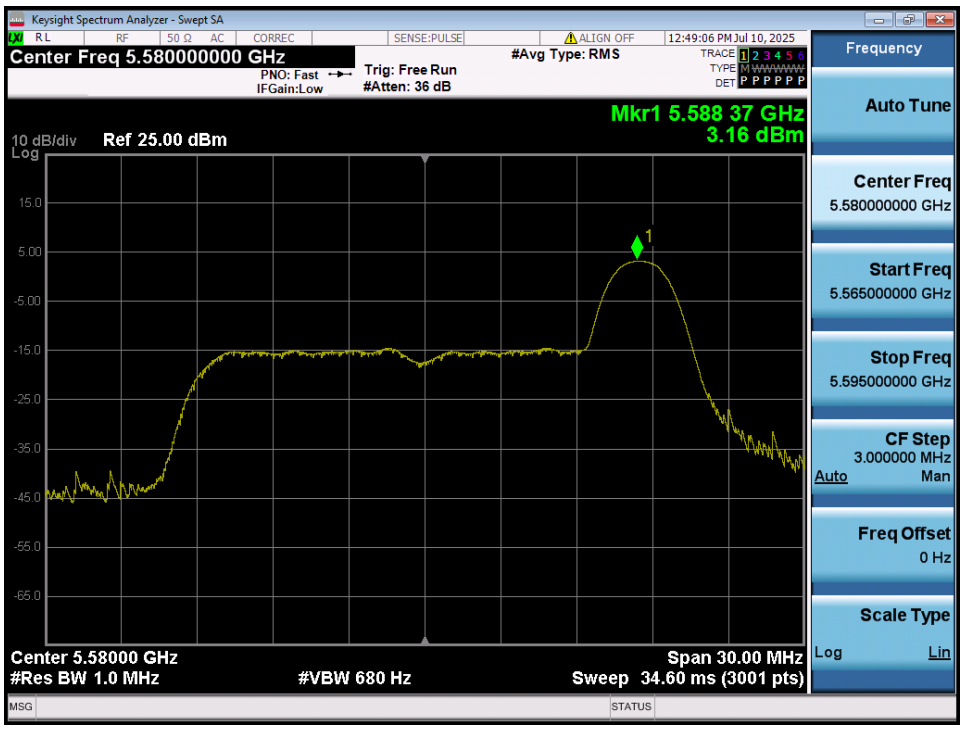
Maximum Power Spectral Density

Test Mode: 802.11ax HE20 & ANT 2 & 26 Tone & 8 RU & Ch.100



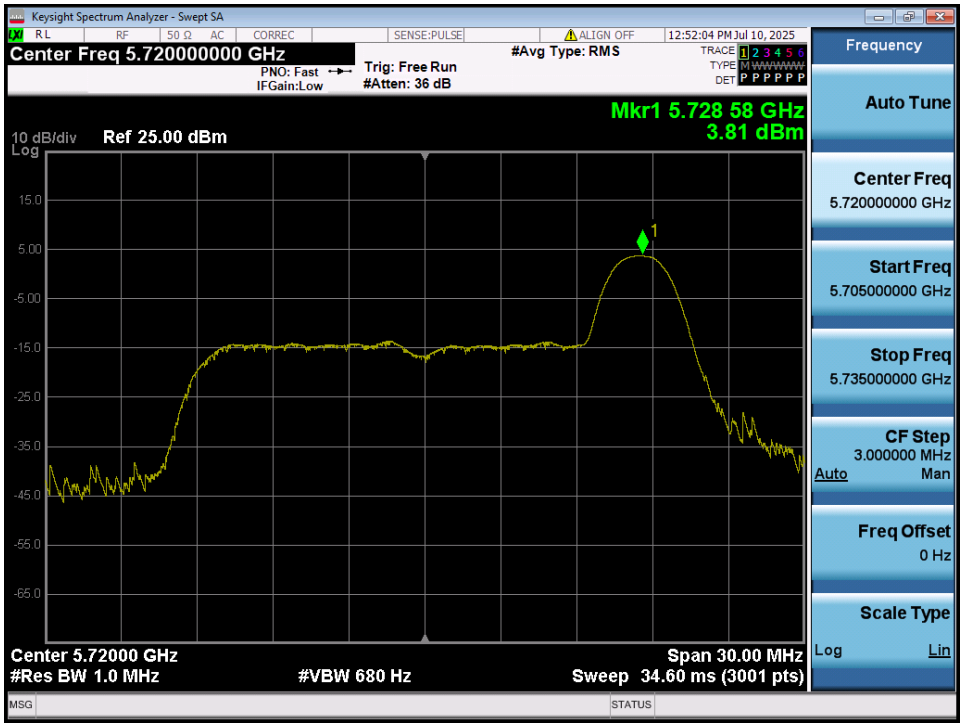
Maximum Power Spectral Density

Test Mode: 802.11ax HE20 & ANT 2 & 26 Tone & 8 RU & Ch.116



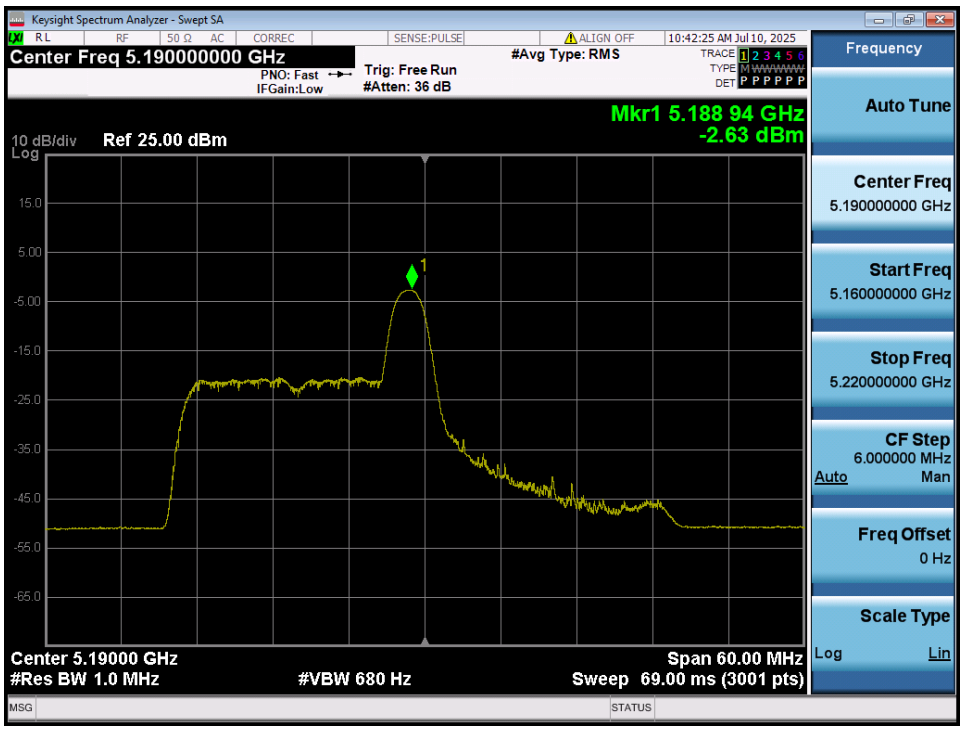
Maximum Power Spectral Density

Test Mode: 802.11ax HE20 & ANT 2 & 26 Tone & 8 RU & Ch.144



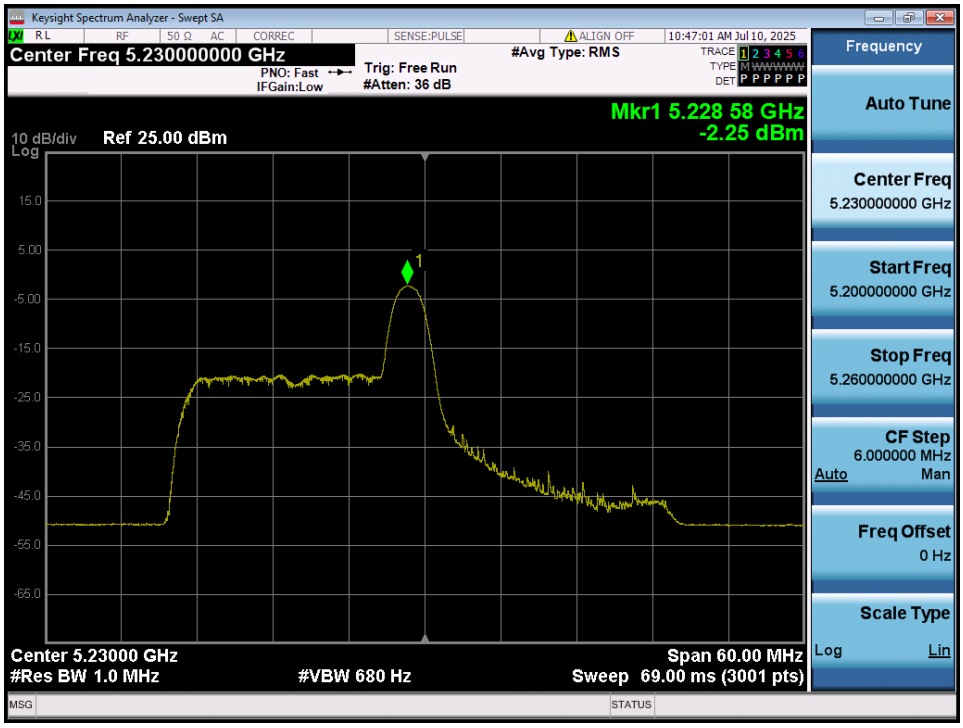
Maximum Power Spectral Density

Test Mode: 802.11ax HE40 & ANT 2 & 26 Tone & 8 RU & Ch.38



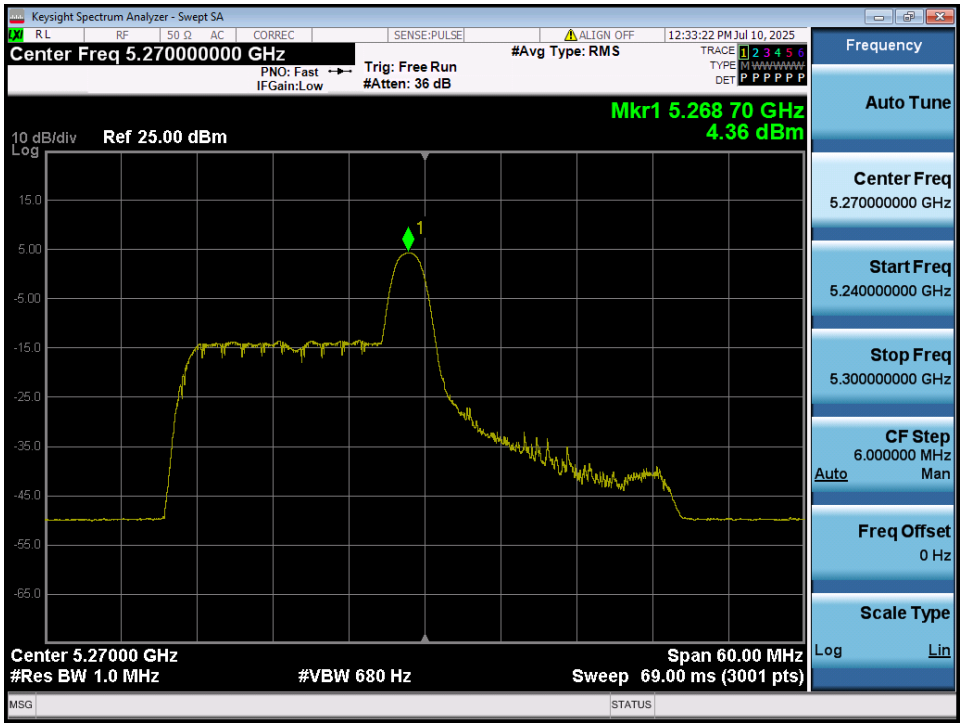
Maximum Power Spectral Density

Test Mode: 802.11ax HE40 & ANT 2 & 26 Tone 17 8 RU & Ch.46



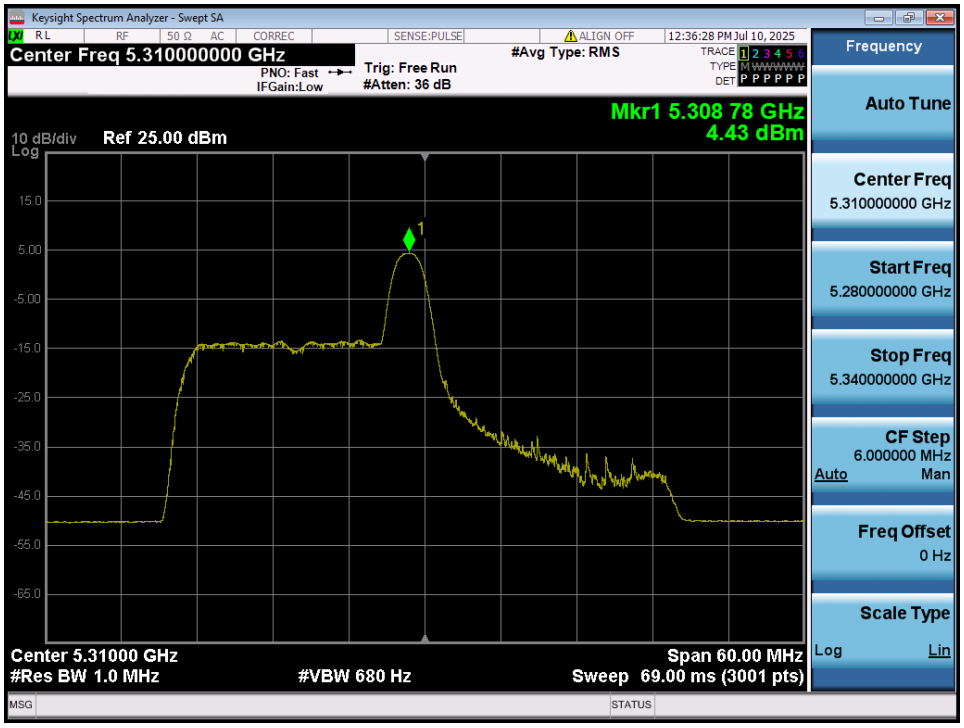
Maximum Power Spectral Density

Test Mode: 802.11ax HE40 & ANT 2 & 26 Tone & 8 RU & Ch.54



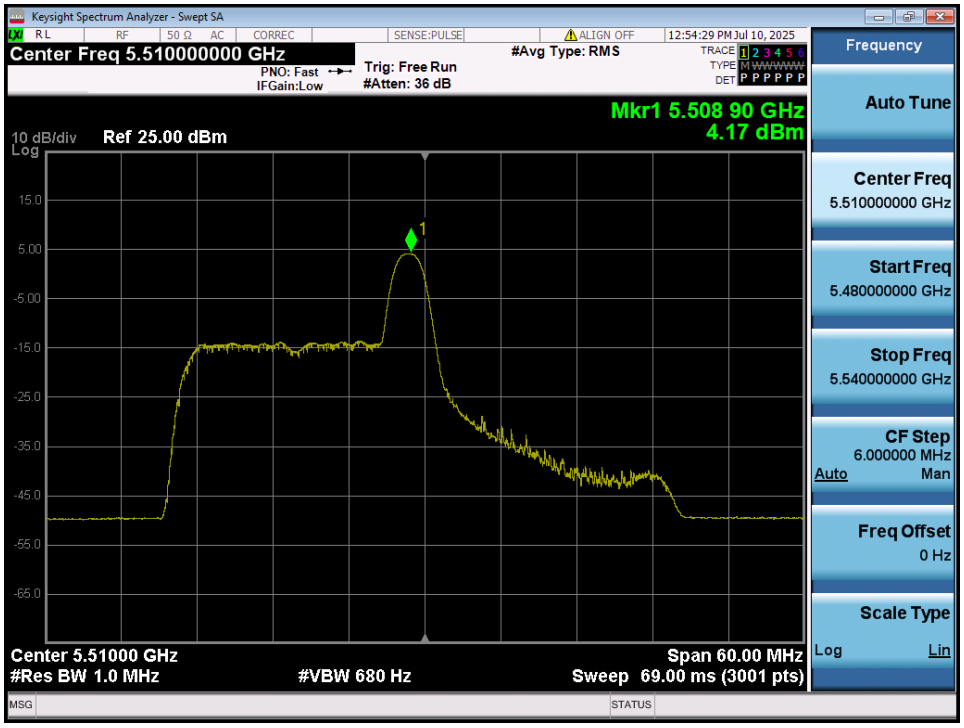
Maximum Power Spectral Density

Test Mode: 802.11ax HE40 & ANT 2 & 26 Tone & 8 RU & Ch.62



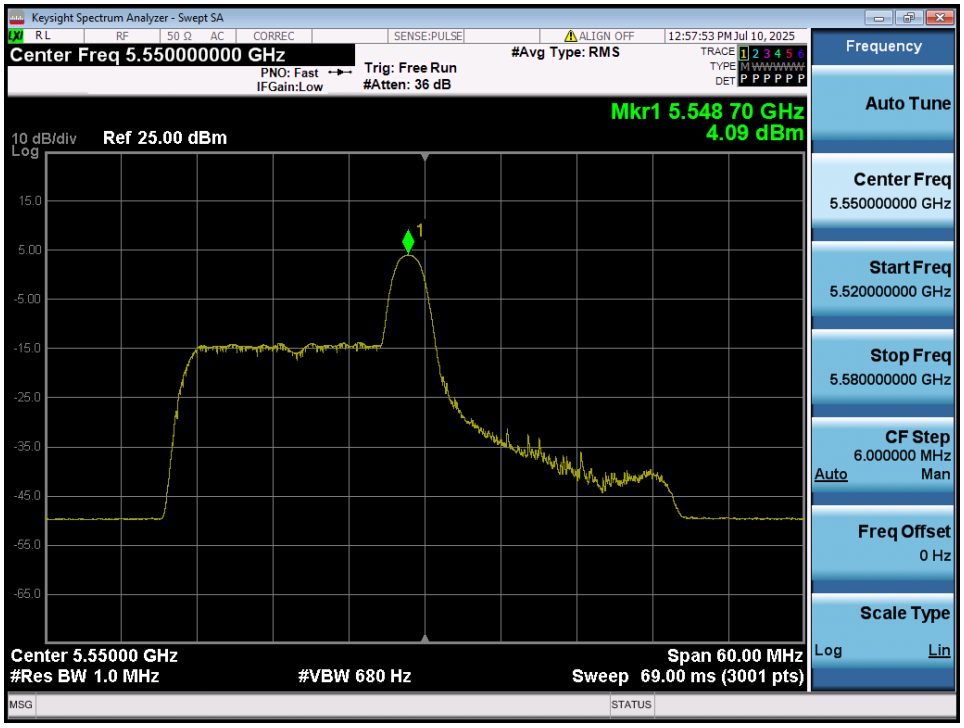
Maximum Power Spectral Density

Test Mode: 802.11ax HE40 & ANT 2 & 26 Tone & 8 RU & Ch.102



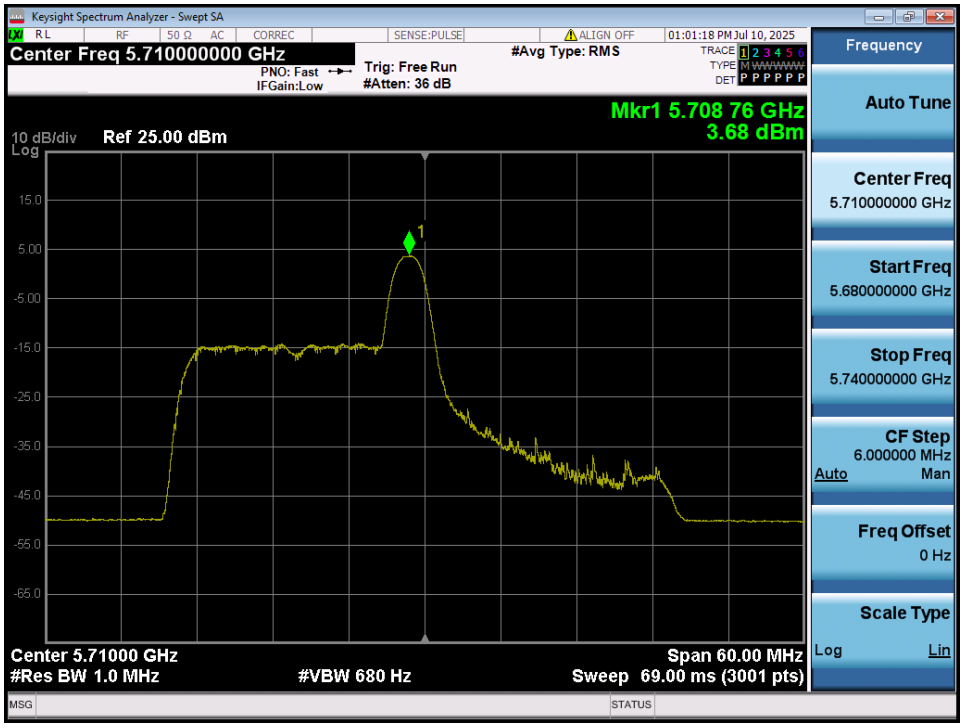
Maximum Power Spectral Density

Test Mode: 802.11ax HE40 & ANT 2 & 26 Tone & 8 RU & Ch.110

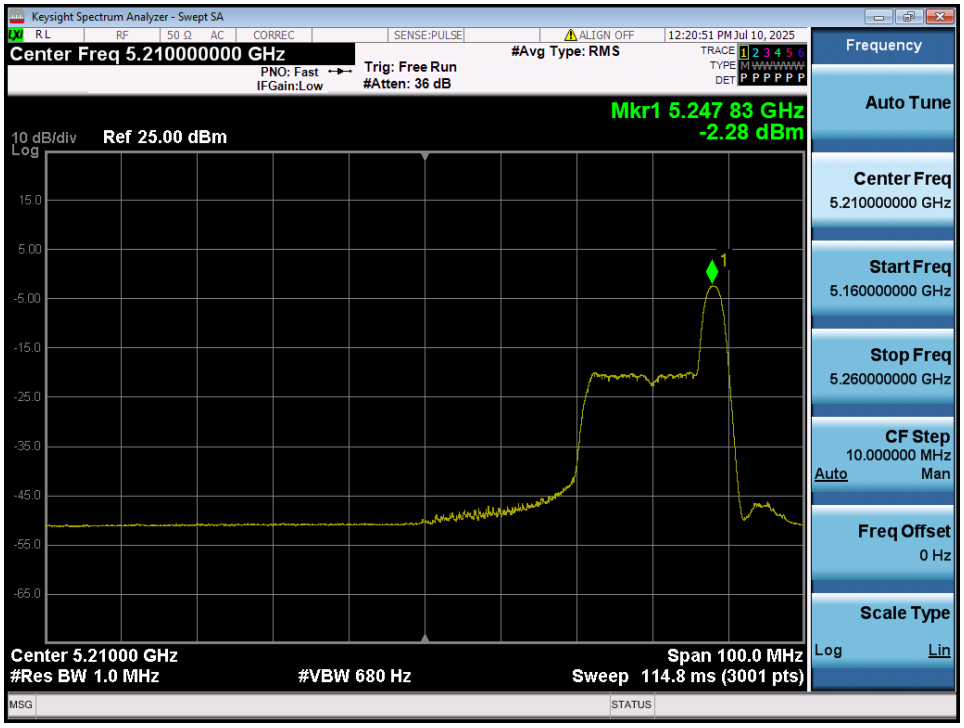


Maximum Power Spectral Density

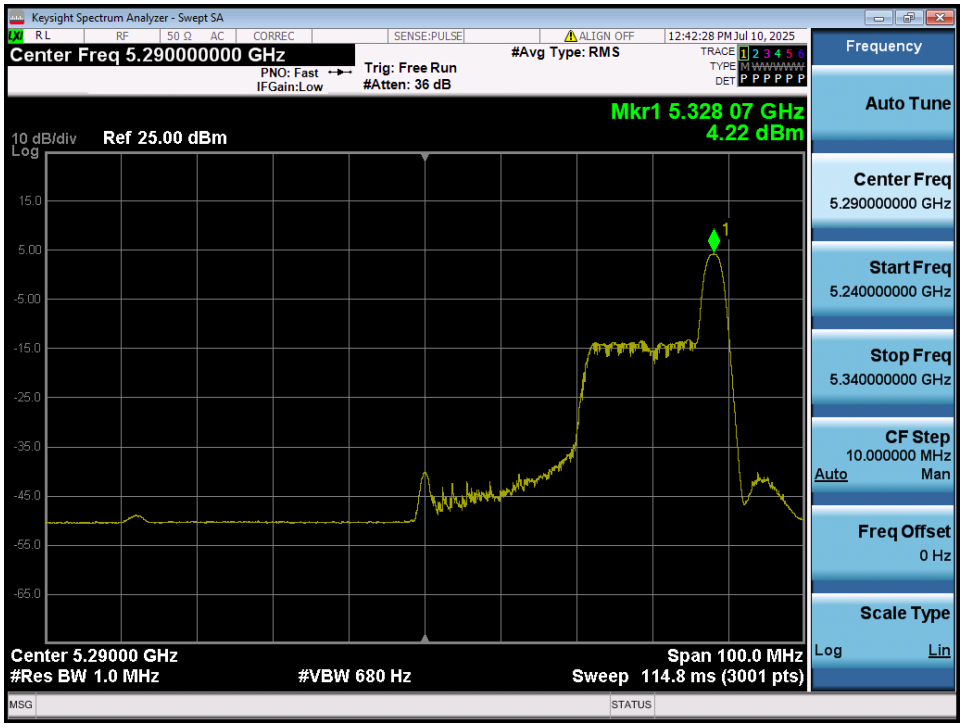
Test Mode: 802.11ax HE40 & ANT 2 & 26 Tone & 8 RU & Ch.142



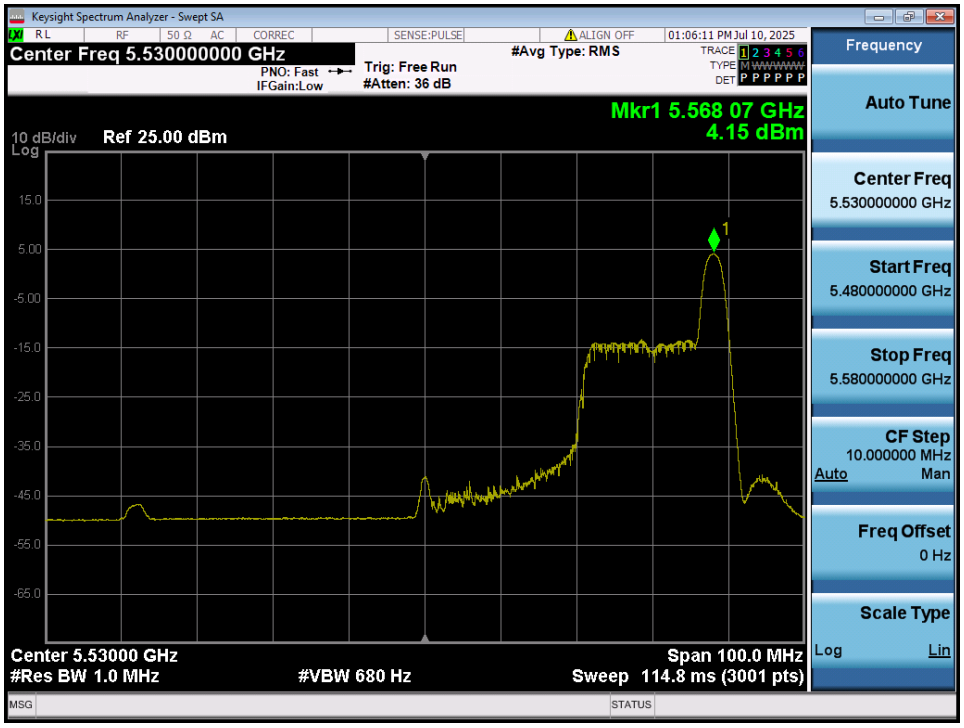
Maximum Power Spectral Density Test Mode: 802.11ax HE80 & ANT 2 & 26 Tone & 36 RU & Ch.42



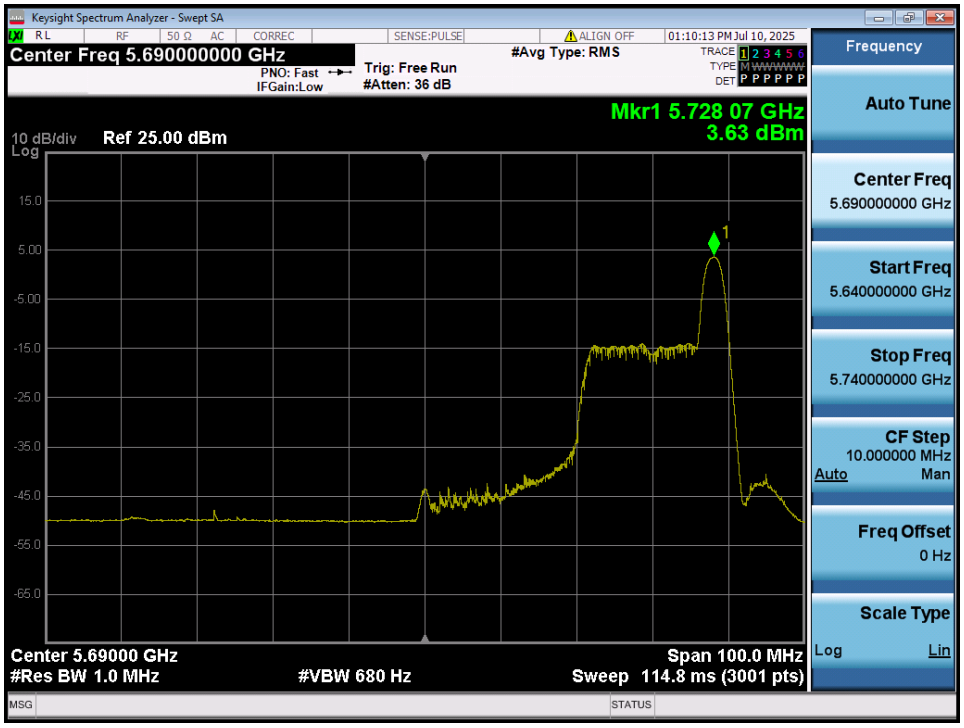
Maximum Power Spectral Density Test Mode: 802.11ax HE80 & ANT 2 & 26 Tone & 36 RU & Ch.58



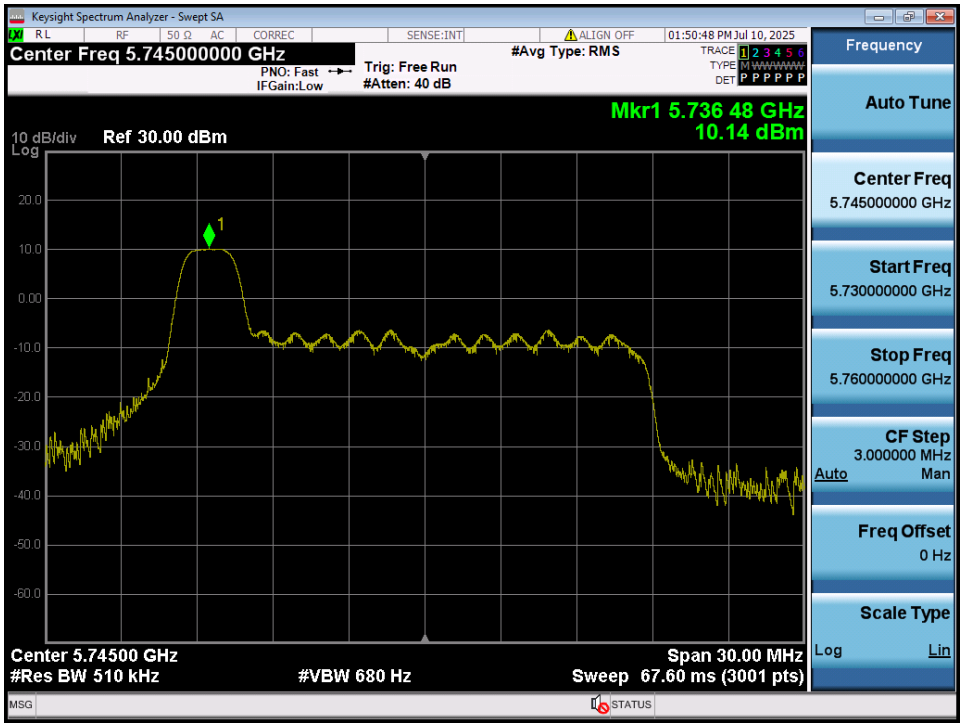
Maximum Power Spectral Density Test Mode: 802.11ax HE80 & ANT 2 & 26 Tone & 36 RU & Ch.106



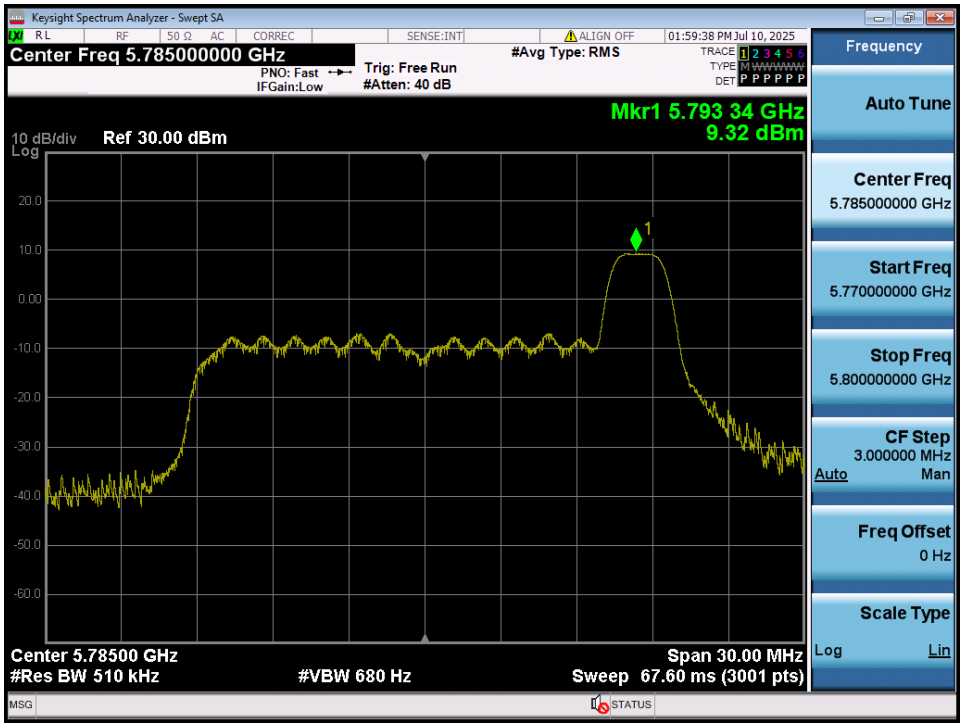
Maximum Power Spectral Density Test Mode: 802.11ax HE80 & ANT 2 & 26 Tone & 36 RU & Ch.138



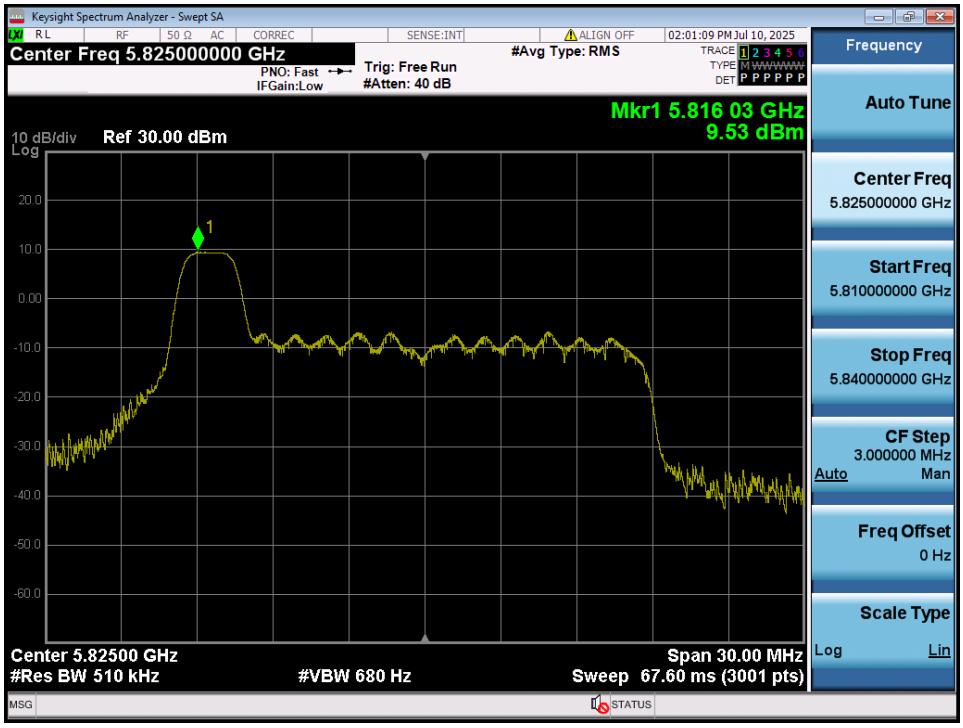
Maximum Power Spectral Density Test Mode: 802.11ax HE20 & ANT 1 & 26 Tone & 0 RU & Ch.149



Maximum Power Spectral Density Test Mode: 802.11ax HE20 & ANT 1 & 26 Tone & 8 RU & Ch.157

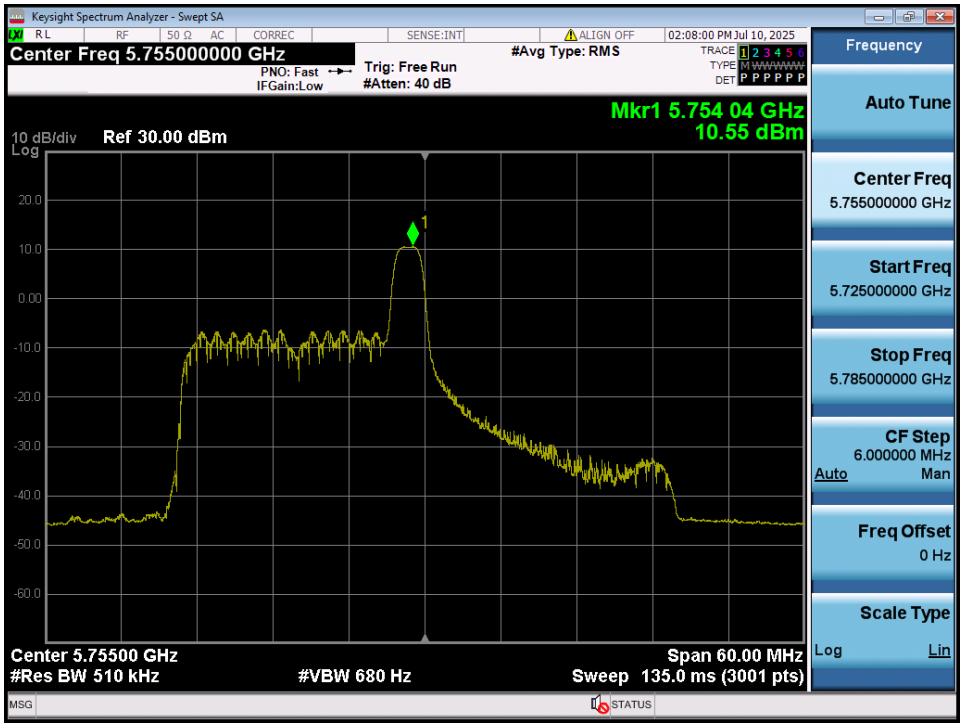


Maximum Power Spectral Density Test Mode: 802.11ax HE20 & ANT 1 & 26 Tone & 0 RU & Ch.165



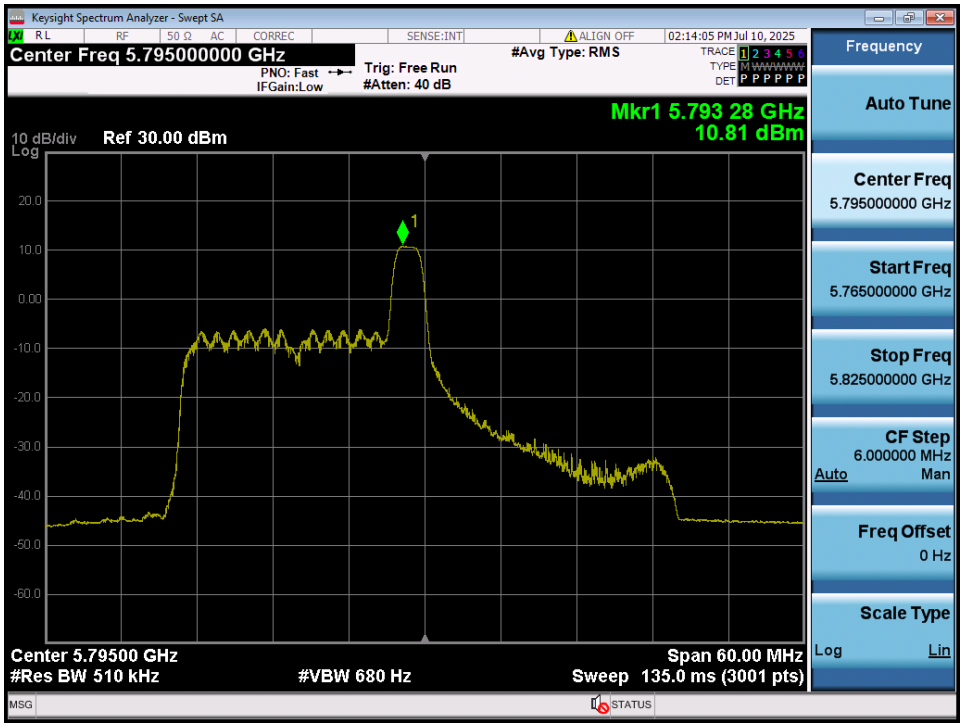
Maximum Power Spectral Density

Test Mode: 802.11ax HE40 & ANT 1 & 26 Tone & 0 RU & Ch.151



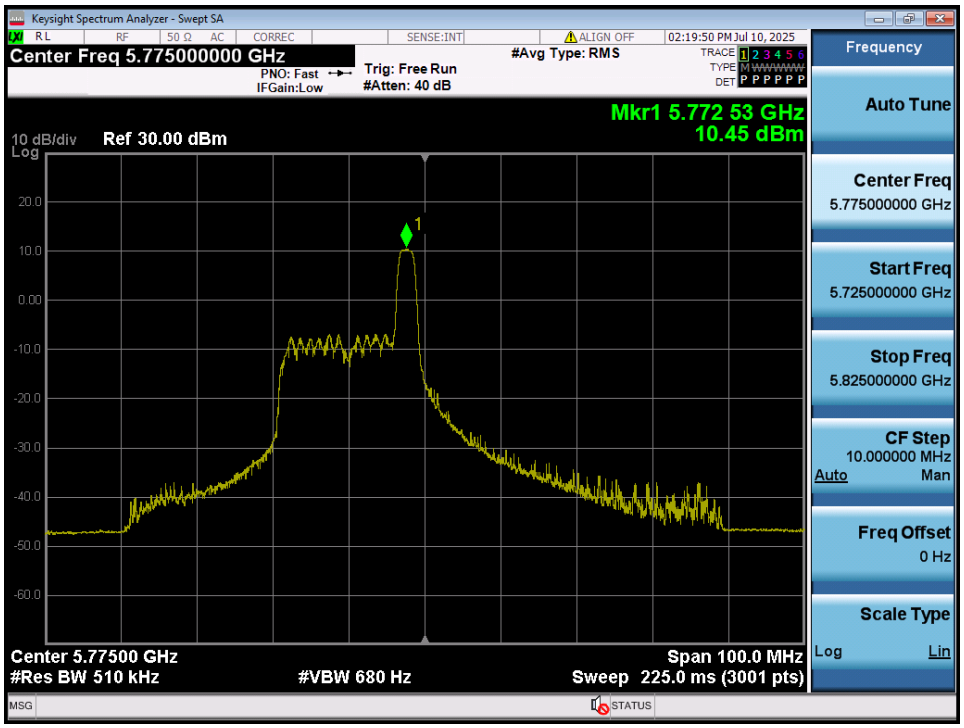
Maximum Power Spectral Density

Test Mode: 802.11ax HE40 & ANT 1 & 26 Tone & 8 RU & Ch.159

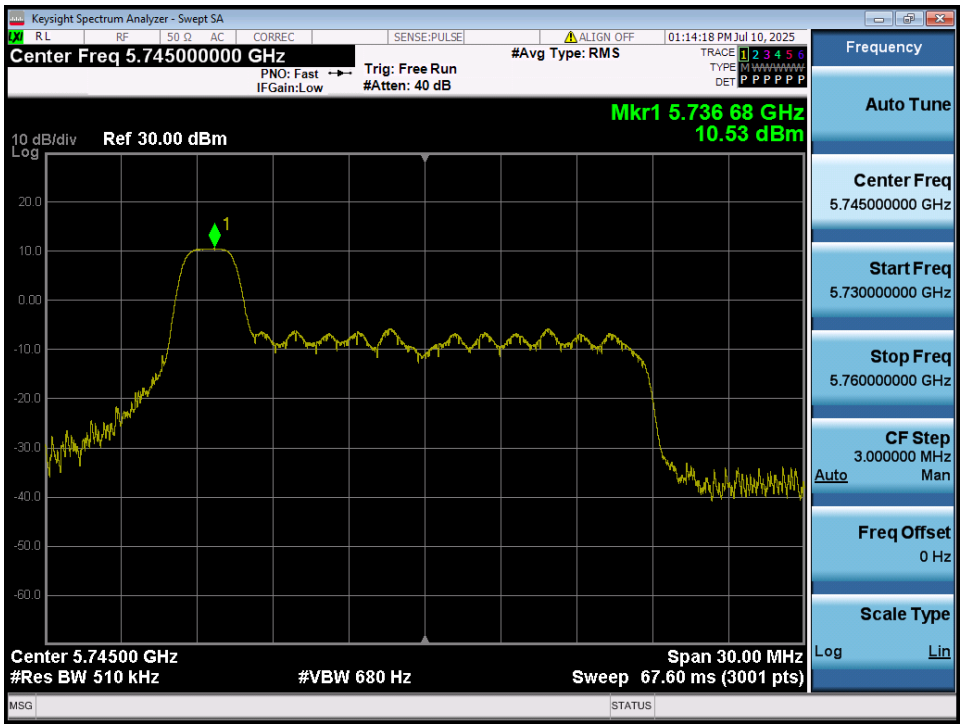


Maximum Power Spectral Density

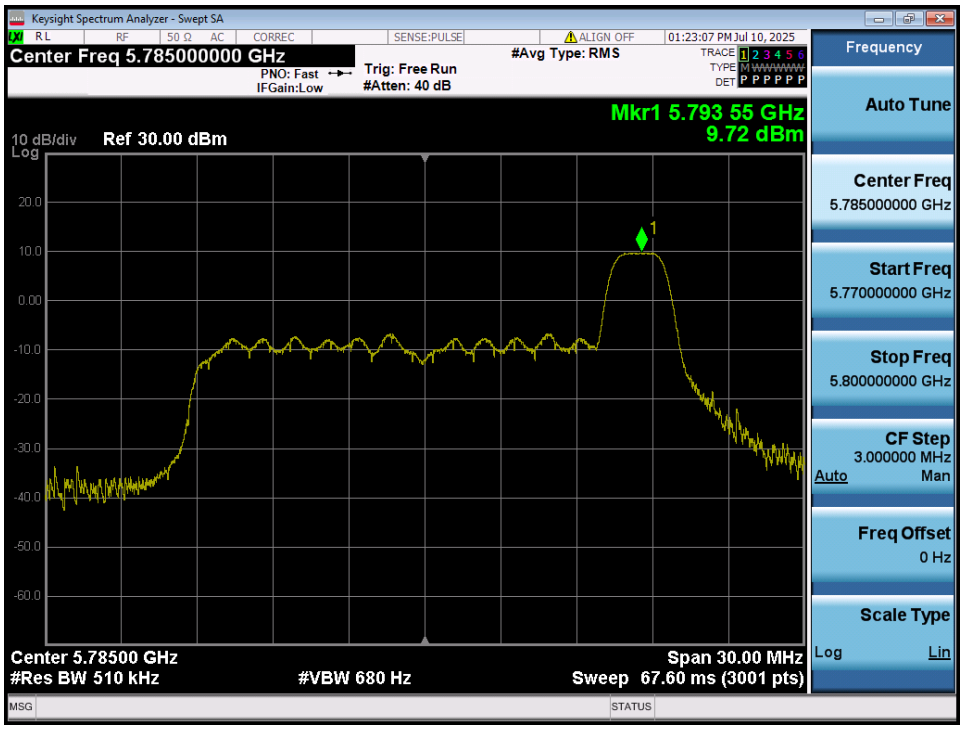
Test Mode: 802.11ax HE80 & ANT 1 & 26 Tone & 36 RU & Ch.155



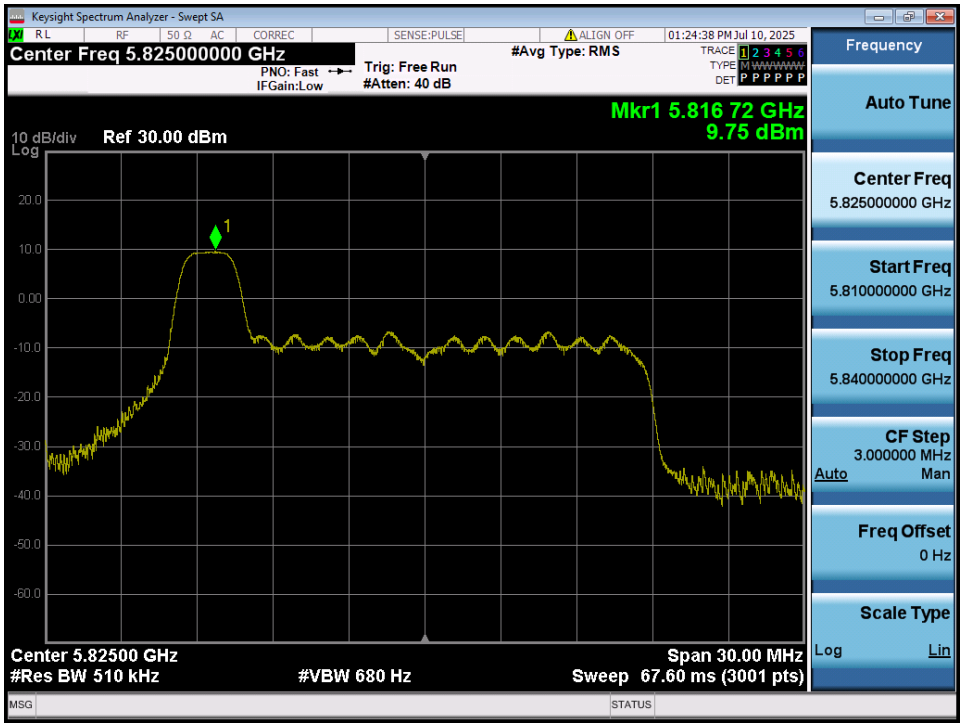
Maximum Power Spectral Density Test Mode: 802.11ax HE20 & ANT 2 & 26 Tone & 0 RU & Ch.149



Maximum Power Spectral Density Test Mode: 802.11ax HE20 & ANT 2 & 26 Tone & 8 RU & Ch.157

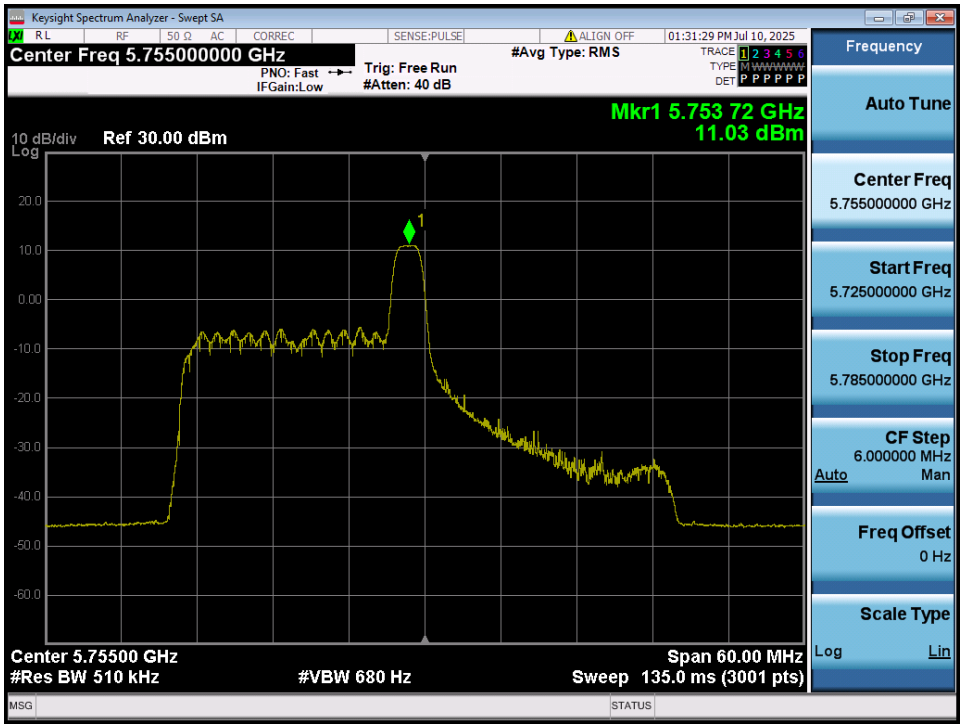


Maximum Power Spectral Density



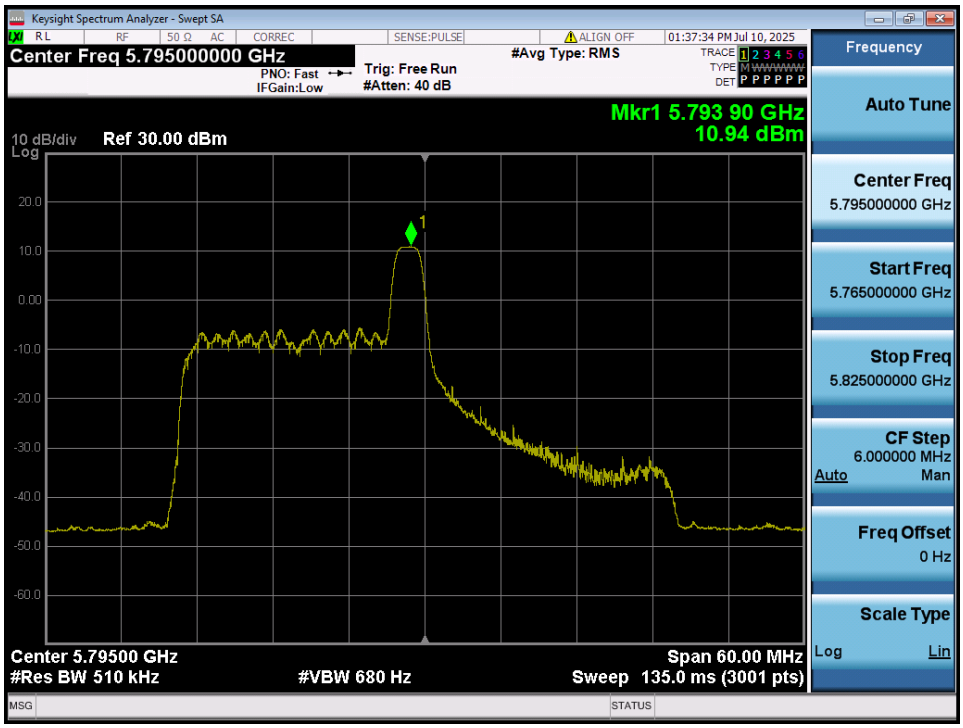
Maximum Power Spectral Density

Test Mode: 802.11ax HE40 & ANT 2 & 26 Tone & 8 RU & Ch.151



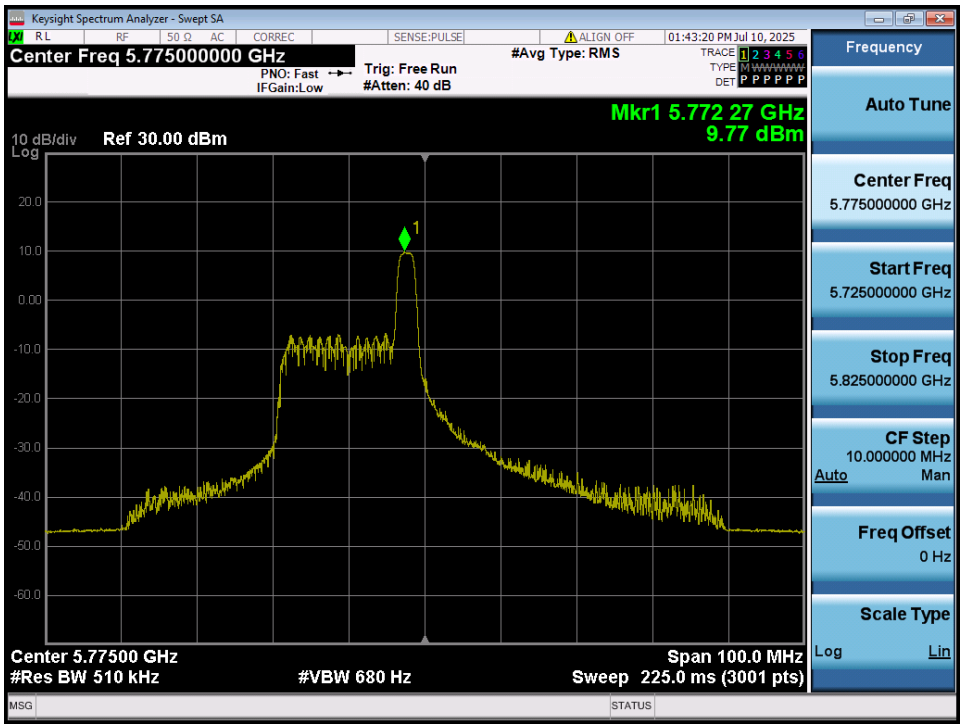
Maximum Power Spectral Density

Test Mode: 802.11ax HE40 & ANT 2 & 26 Tone & 8 RU & Ch.159



Maximum Power Spectral Density

Test Mode: 802.11ax HE80 & ANT 2 & 26 Tone & 17 RU & Ch.155



5.5. Unwanted Emissions

▣ Test Requirements

Part 15.407(b)

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the **5.15 GHz - 5.25 GHz band**: all emissions outside of the **5.15 GHz - 5.35 GHz band** shall not exceed an **EIRP of -27 dBm/MHz**.

(2) For transmitters operating in the **5.25 GHz - 5.35 GHz band**: all emissions outside of the **5.15 GHz - 5.35 GHz band** shall not exceed an **EIRP of -27 dBm/MHz**.

(3) For transmitters operating in the **5.47 GHz - 5.725 GHz band**: all emissions outside of the **5.47 GHz - 5.725 GHz band** shall not exceed an **EIRP of -27 dBm/MHz.**

(4) For transmitters operating in the **5.725 GHz - 5.85 GHz band**: (i) 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. The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

(5) Unwanted emissions **below 1 GHz** must comply with the general field strength limits set forth in **Section 15.209**.
Further, any U-NII devices using an **AC power line** are required to comply also with the conducted limits set forth in **Section 15.207**.

RSS-247[7.3.3] Power and unwanted emissions limits

RSS-247[7.3.1.3]

For transmitters with operating frequencies in the band 5150-5250 MHz:

a. all emissions outside the 5150-5350 MHz band shall not exceed -27 dBm/MHz peak e.i.r.p. spectral density;

b. any unwanted emissions that falls between the upper edge of the 26 dB bandwidth and 5350 MHz shall be attenuated below the channel power by at least 26 dB, when measured using a resolution bandwidth between 1 and 5% of the occupied bandwidth.

c. if the occupied bandwidth also falls within the 5250-5350 MHz band, the transmission is considered as intentional and the devices shall comply with all requirements in the band 5250-5350 MHz including implementing DFS (see section 7.3.6) and TPC, on the portion of the emission that resides in the 5250-5350 MHz band

RSS-247[7.3.2.3]

Devices shall comply with the following:

a. all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz peak e.i.r.p spectral density.

b. all emissions inside the band 5150-5250 MHz shall either:

i. not exceed -27 dBm/MHz peak e.i.r.p spectral density, or

ii. comply with the power spectral density for operation in section 7.3.1.2.

RSS-247[7.3.3.3]

Equipment operating in the bands 5470-5725 MHz shall comply with the following unwanted emission limits:

a. for devices with fundamental emissions fully contained within the 5470-5725 MHz band, all unwanted emissions outside the band 5470-5725 MHz shall not exceed -27 dBm/MHz peak e.i.r.p. spectral density.

b. for devices with bandwidth overlapping the band edge of 5725 MHz, all unwanted emissions shall not exceed -27 dBm/MHz peak e.i.r.p. spectral density at 5850 MHz instead of 5725 MHz.

RSS-247[7.3.4.4]

Equipment operating in the band 5725-5850 MHz shall comply with the following peak e.i.r.p. spectral density limits:

a. 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;

b. 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;

c. 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges; and

d. -27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.

Part 15.209 & RSS-Gen[8.9]: General requirements

Frequency (MHz)	FCC Limit (uV/m)	IC Limit (μA/m)	Measurement Distance (m)
0.009 – 0.490	2 400 / F (kHz)	6.37/F (F in kHz)	300
0.490 – 1.705	24 000 / F (kHz)	63.7/F (F in kHz)	30
1.705 – 30.0	30	0.08	30

Frequency (MHz)	FCC Limit (uV/m)	IC Limit (uV/m)	Measurement Distance (m)
30 ~ 88	100 **	100	3
88 ~ 216	150 **	150	3
216 ~ 960	200 **	200	3
Above 960	500	500	3

**Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §15.231 and 15.241.

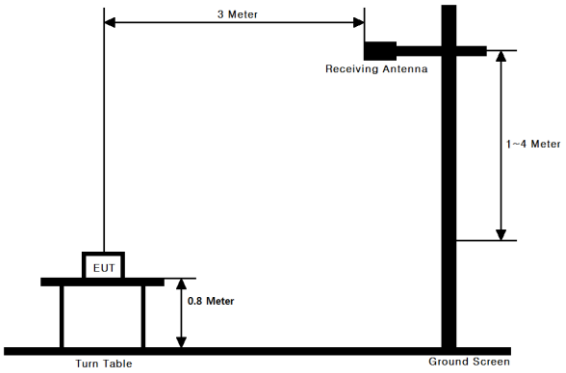
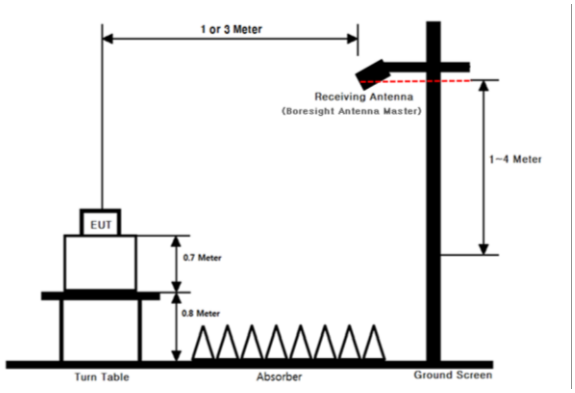
Part 15.205(a): Restricted band of operation

MHz	MHz	MHz	MHz	GHz	GHz
0.009 ~ 0.110	8.414 25 ~ 8.414 75	108 ~ 121.94	1 300 ~ 1 427	4.5 ~ 5.15	14.47 ~ 14.5
0.495 ~ 0.505	12.29 ~ 12.293	123 ~ 138	1 435 ~ 1 626.5	5.35 ~ 5.46	15.35 ~ 16.2
2.173 5 ~ 2.190 5	12.519 75 ~ 12.520 25	149.9 ~ 150.05	1 645.5 ~ 1 646.5	7.25 ~ 7.75	17.7 ~ 21.4
4.125 ~ 4.128	12.576 75 ~ 12.577 25	156.524 75 ~ 156.525 25	1 660 ~ 1 710	8.025 ~ 8.5	22.01 ~ 23.12
4.177 25 ~ 4.177 75	13.36 ~ 13.41	156.7 ~ 156.9	1 718.8 ~ 1 722.2	9.0 ~ 9.2	23.6 ~ 24.0
4.207 25 ~ 4.207 75	16.42 ~ 16.423	162.012 5 ~ 167.17	2 200 ~ 2 300	9.3 ~ 9.5	31.2 ~ 31.8
6.215 ~ 6.218	16.694 75 ~ 16.695 25	167.72 ~ 173.2	2 310 ~ 2 390	10.6 ~ 12.7	36.43 ~ 36.5
6.267 75 ~ 6.268 25	16.804 25 ~ 16.804 75	240 ~ 285	2 483.5 ~ 2 500	13.25 ~ 13.4	Above 38.6
6.311 75 ~ 6.312 25	25.5 ~ 25.67	322 ~ 335.4	2 655 ~ 2 900		
8.291 ~ 8.294	37.5 ~ 38.25	399.90 ~ 410	3 260 ~ 3 267		
8.362 ~ 8.366	73 ~ 74.6	608 ~ 614	3 332 ~ 3 339		
8.376 25 ~ 8.386 75	74.8 ~ 75.2	960 ~ 1 240	3 345.8 ~ 3 358		
			3 600 ~ 4 400		

RSS-Gen[8.10]: Restricted frequency bands

MHz	MHz	MHz	MHz	MHz	GHz
0.090 ~ 0.110	8.362 ~ 8.366	73 ~ 74.6	608 ~ 614	3 345.8 ~ 3 358	9.0 ~ 9.2
0.495 ~ 0.505	8.376 25 ~ 8.386 75	74.8 ~ 75.2	960 ~ 1 427	3 500 ~ 4 400	9.3 ~ 9.5
2.173 5 ~ 2.190 5	8.414 25 ~ 8.414 75	108 ~ 138	1 435 ~ 1 626.5	4 500 ~ 5 150	10.6 ~ 12.7
3.020 ~ 3.026	12.29 ~ 12.293	149.9 ~ 150.05	1 645.5 ~ 1 646.5	5 350 ~ 5 460	13.25 ~ 13.4
4.125 ~ 4.128	12.519 75 ~ 12.520 25	156.524 75 ~	1 660 ~ 1 710	7 250 ~ 7 750	14.47 ~ 14.5
4.177 25 ~ 4.177 75	12.576 75 ~ 12.577 25	156.525 25	1 718.8 ~ 1 722.2	8 025 ~ 8 500	15.35 ~ 16.2
4.207 25 ~ 4.207 75	13.36 ~ 13.41	156.7 ~ 156.9	2 200 ~ 2 300		17.7 ~ 21.4
5.677 ~ 5.683	16.42 ~ 16.423	162.01 25 ~ 167.17	2 310 ~ 2 390		22.01 ~ 23.12
6.215 ~ 6.218	16.694 75 ~ 16.695 25	167.72 ~ 173.2	2 483.5 ~ 2 500		23.6 ~ 24.0
6.267 75 ~ 6.268 25	16.804 25 ~ 16.804 75	240 ~ 285	2 655 ~ 2 900		31.2 ~ 31.8
6.311 75 ~ 6.312 25	25.5 ~ 25.67	322 ~ 335.4	3 260 ~ 3 267		36.43 ~ 36.5
8.291 ~ 8.294	37.5 ~ 38.25	399.90 ~ 410	3 332 ~ 3 339		Above 38.6

▣ Test Configuration

Below 1 GHz	Above 1 GHz
	

▣ Test Procedure

1. The EUT is placed on a non-conductive table. For emission measurements at or below 1 GHz, the table height is 80 cm. For emission measurements above 1 GHz, the table height is 1.5 m.
2. The turn table shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 1 m or 3 m away from the receiving antenna, which is varied from 1 m to 4 m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.

Radiated spurious emission measured using following Measurement Procedure **of KDB789033 D02v02r01**

► General Requirements for Unwanted Emissions Measurements

The following requirements apply to all unwanted emissions measurements, both in and outside of the restricted bands:

- EUT Duty Cycle

(1) The EUT shall be configured or modified to **transmit continuously** except as stated in (ii), below. The intent is to test at 100 percent duty cycle; however a small reduction in duty cycle (**to no lower than 98 percent**) is permitted if required by the EUT for amplitude control purposes. Manufacturers are expected to provide software to the test lab to permit such continuous operation.

(2) If **continuous transmission (or at least 98 percent duty cycle) cannot be achieved** due to hardware limitations of the EUT (e.g., overheating), the following additions to the measurement and reporting procedures are required:

- The EUT shall be configured to operate at the maximum achievable duty cycle.
- Measure the duty cycle, x, of the transmitter output signal.
- Adjustments to measurement procedures (e.g., increasing test time and number of traces averaged) shall be performed as described in the procedures below.
- The test report shall include the following additional information:
  - The reason for the duty cycle limitation.
  - The duty cycle achieved for testing and the associated transmit duration and interval between transmissions.
  - The sweep time and the amount of time used for trace stabilization during max-hold measurements for peak emission measurements.

(3) Reduction of the measured emission amplitude levels to account for operational duty factor is not permitted. Compliance is based on emission levels occurring during transmission - not on an average across on and off times of the transmitter.

► **Measurements below 1 000 MHz**

a) Follow the requirements in section II.G.3, “General Requirements for Unwanted Emissions Measurements”.

b) Compliance shall be demonstrated using **CISPR quasi-peak detection**; however, **peak detection** is permitted as an alternative to quasi-peak detection.

► **Measurements Above 1 000 MHz (Peak)**

a) Follow the requirements in section II.G.3, “General Requirements for Unwanted Emissions Measurements”.

b) Peak emission levels are measured by setting the analyzer as follows:

(i) **RBW = 1 MHz.**
(ii) **VBW ≥ 3 MHz.**
(iii) **Detector = Peak.**
(iv) Sweep time = Auto.
(v) Trace mode = Max hold.
(vi) Allow sweeps to continue until the trace stabilizes. Note that if the transmission is not continuous, the time required for the trace to stabilize will increase by a factor of approximately 1/x, where x is the duty cycle. For example, at 50 percent duty cycle, the measurement time will increase by a factor of two relative to measurement time for continuous transmission.

► **Measurements Above 1000 MHz (Method AD)**

(i) **RBW = 1 MHz.**
(ii) **VBW ≥ 3 MHz.**
(iii) **Detector = RMS**, if span / (# of points in sweep) ≤ RBW / 2. Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If the condition is not satisfied, the detector mode shall be set to peak.
(iv) Averaging type = power (i.e., RMS)
- As an alternative, the detector and averaging type may be set for linear voltage averaging. Some analyzers require linear display mode in order to use linear voltage averaging. Log or dB averaging shall not be used.

(v) Sweep time = Auto.
(vi) Perform a trace average of at least 100 traces if the transmission is continuous. If the transmission is not continuous, the number of traces shall be increased by a factor of 1/x, where x is the duty cycle. For example, with 50 percent duty cycle, at least 200 traces shall be averaged.
(vii) If tests are performed with the EUT transmitting at a duty cycle less than 98 percent, a correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle. The correction factor is computed as follows:
- **If power averaging (RMS) mode was used in step (iv) above, the correction factor is 10 log(1/x), where x is the duty cycle.** For example, if the transmit duty cycle was 50 percent, then 3 dB must be added to the measured emission levels.
- If linear voltage averaging mode was used in step (iv) above, the correction factor is 20 log (1/x), where x is the duty cycle. For example, if the transmit duty cycle was 50 percent, then 6 dB must be added to the measured emission levels.
- If a specific emission is demonstrated to be continuous (100 percent duty cycle) rather than turning on and off with the transmit cycle, no duty cycle correction is required for that emission.

▣ Test Results

Test Notes

1. The radiated emissions were investigated 9 kHz to 40 GHz. And no other spurious and harmonic emissions were found below listed frequencies.
2. Information of Distance Correction Factor
   For finding emissions, measurements may be performed at a distance closer than that specified in the regulations.
   In this case, the distance factor is applied to the result.
   - Calculation of distance correction factor
   At frequencies below 30 MHz = 40 log(tested distance / specified distance)
   At frequencies at or above 30 MHz = 20 log(tested distance / specified distance)
   When distance factor is “N/A”, the measurements were performed at the specified distance and distance factor is not applied.
3. Sample Calculation.
   Margin = Limit – Result / Result = Reading + TF+ DCF / TF = AF + CL + HL + AL – AG
   Where, TF = Total Factor, AF = Antenna Factor, CL = Cable Loss, AG = Amplifier Gain, HL = High pass filter Loss, AL = Attenuator Loss, DCF = Distance Correction Factor
4. The limit is converted to field strength.
   E(dBuV/m) = EIRP(dBm) + 95.2 dB = -27 dBm + 95.2 = 68.2 dBuV/m

Radiated Spurious Emissions data(9 kHz ~ 40 GHz) : *MIMO(CDD) & 802.11ax HE20*

Band	Tested Frequency (MHz)	Tone	RU	Freq. (MHz)	ANT Pol	EUT Position (Axis)	Detector Mode	Reading (dBuV)	TF (dB/m)	DCCF (dB)	DCF (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
U-NII 1	5 180	26	0	5 149.41	H	Z	PK	50.69	2.77	N/A	N/A	53.46	74.00	20.54
		26	0	5 148.50	H	Z	AV	40.41	2.77	0.52	N/A	43.70	54.00	10.30
		242	61	5 148.67	H	Z	PK	50.69	2.77	N/A	N/A	53.46	74.00	20.54
		242	61	5 148.81	H	Z	AV	40.30	2.77	0.76	N/A	43.83	54.00	10.17
		SU	N/A	5 148.87	H	Z	PK	50.37	2.77	N/A	N/A	53.14	74.00	20.86
		SU	N/A	5 149.22	H	Z	AV	40.45	2.77	2.20	N/A	45.42	54.00	8.58
		26	0	10 343.77	V	Z	PK	43.62	9.20	N/A	N/A	52.82	68.20	15.38
		242	61	10 360.33	V	Z	PK	43.38	9.22	N/A	N/A	52.60	68.20	15.60
	5 200	26	0	10 382.77	V	Z	PK	44.94	9.20	N/A	N/A	54.14	68.20	14.06
		242	61	10 400.32	V	Z	PK	44.45	9.20	N/A	N/A	53.65	68.20	14.55
	5 240	26	0	10 463.79	V	Z	PK	43.93	9.42	N/A	N/A	53.35	68.20	14.85
		242	61	10 480.11	V	Z	PK	43.39	9.47	N/A	N/A	52.86	68.20	15.34
U-NII 2A	5 260	26	0	10 502.70	V	Z	PK	46.21	9.54	N/A	N/A	55.75	68.20	12.45
		242	61	10 525.62	V	Z	PK	44.73	9.50	N/A	N/A	54.23	68.20	13.97
	5 300	26	4	10 599.75	V	Z	PK	45.51	9.39	N/A	N/A	54.90	68.20	13.30
		26	4	10 600.16	V	Z	PK	47.05	9.39	N/A	N/A	56.44	74.00	17.56
		26	4	10 600.19	V	Z	AV	35.15	9.39	0.52	N/A	45.06	54.00	8.94
		242	61	10 598.10	V	Z	PK	44.75	9.39	N/A	N/A	54.14	68.20	14.06
		242	61	10 600.76	V	Z	PK	45.31	9.39	N/A	N/A	54.70	74.00	19.30
		242	61	10 600.24	V	Z	AV	35.52	9.39	0.76	N/A	45.67	54.00	8.33
	5 320	26	8	5 350.83	H	Z	PK	51.46	3.20	N/A	N/A	54.66	74.00	19.34
		26	8	5 350.80	H	Z	AV	40.71	3.20	0.52	N/A	44.43	54.00	9.57
		242	61	5 352.28	H	Z	PK	53.80	3.21	N/A	N/A	57.01	74.00	16.99
		242	61	5 352.51	H	Z	AV	43.44	3.21	0.76	N/A	47.41	54.00	6.59
		SU	N/A	5 351.53	H	Z	PK	54.24	3.20	N/A	N/A	57.44	74.00	16.56
		SU	N/A	5 350.80	H	Z	AV	40.71	3.20	2.20	N/A	46.11	54.00	7.89
		26	0	10 622.69	V	Z	PK	44.58	9.35	N/A	N/A	53.93	74.00	20.07
		26	0	10 622.72	V	Z	AV	34.27	9.35	0.52	N/A	44.14	54.00	9.86
		242	61	10 638.12	V	Z	PK	45.47	9.33	N/A	N/A	54.80	74.00	19.20
		242	61	10 638.19	V	Z	AV	35.42	9.33	0.76	N/A	45.51	54.00	8.49

Radiated Spurious Emissions data(9 kHz ~ 40 GHz) : *MIMO(CDD) & 802.11ax HE20*

Band	Tested Frequency (MHz)	Tone	RU	Freq. (MHz)	ANT Pol	EUT Position (Axis)	Detector Mode	Reading (dBuV)	TF (dB/m)	DCCF (dB)	DCF (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
U-NII 2C	5 500	26	0	5 458.00	H	Z	PK	51.60	3.56	N/A	N/A	55.16	74.00	18.84
		26	0	5 466.85	H	Z	PK	51.19	3.60	N/A	N/A	54.79	68.20	13.41
		26	0	5 458.86	H	Z	AV	41.38	3.56	0.52	N/A	45.46	54.00	8.54
		242	61	5 458.77	H	Z	PK	54.41	3.56	N/A	N/A	57.97	74.00	16.03
		242	61	5 462.30	H	Z	PK	55.03	3.58	N/A	N/A	58.61	68.20	9.59
		242	61	5 459.14	H	Z	AV	44.03	3.56	0.76	N/A	48.35	54.00	5.65
		SU	N/A	5 459.35	H	Z	PK	54.14	3.56	N/A	N/A	57.70	74.00	16.30
		SU	N/A	5 466.08	H	Z	PK	56.86	3.60	N/A	N/A	60.46	68.20	7.74
		SU	N/A	5 458.91	H	Z	AV	42.92	3.56	2.20	N/A	48.68	54.00	5.32
		26	0	10 982.82	V	Z	PK	45.28	8.91	N/A	N/A	54.19	74.00	19.81
		26	0	10 982.67	V	Z	AV	35.09	8.91	0.52	N/A	44.52	54.00	9.48
		242	61	11 001.05	V	Z	PK	45.51	8.88	N/A	N/A	54.39	74.00	19.61
		242	61	11 000.47	V	Z	AV	35.37	8.88	0.76	N/A	45.01	54.00	8.99
	5 580	26	0	11 143.27	V	Z	PK	44.98	9.00	N/A	N/A	53.98	74.00	20.02
		26	0	11 143.02	V	Z	AV	34.57	9.00	0.52	N/A	44.09	54.00	9.91
		242	61	11 162.83	V	Z	PK	45.27	9.00	N/A	N/A	54.27	74.00	19.73
		242	61	11 163.04	V	Z	AV	34.58	9.00	0.76	N/A	44.34	54.00	9.66
	5 720	26	0	11 422.27	V	Z	PK	44.54	9.18	N/A	N/A	53.72	74.00	20.28
		26	0	11 422.79	V	Z	AV	34.58	9.18	0.52	N/A	44.28	54.00	9.72
		242	61	11 440.56	V	Z	PK	45.51	9.21	N/A	N/A	54.72	74.00	19.28
		242	61	11 440.62	V	Z	AV	35.72	9.21	0.76	N/A	45.69	54.00	8.31
U-NII 3	5 745	26	0	5 649.63	H	Z	PK	52.01	3.56	N/A	N/A	55.57	68.20	12.63
		26	0	5 719.63	H	Z	PK	72.51	3.51	N/A	N/A	76.02	110.70	34.68
		242	61	5 648.05	H	Z	PK	53.35	3.56	N/A	N/A	56.91	68.20	11.29
		242	61	5 719.20	H	Z	PK	67.06	3.51	N/A	N/A	70.57	110.58	40.01
		SU	N/A	5 649.65	H	Z	PK	55.60	3.56	N/A	N/A	59.16	68.20	9.04
		SU	N/A	5 718.60	H	Z	PK	74.03	3.51	N/A	N/A	77.54	110.41	32.87
		26	0	11 472.94	V	Z	PK	51.67	9.24	N/A	N/A	60.91	74.00	13.09
		26	0	11 472.85	V	Z	AV	40.97	9.24	0.52	N/A	50.73	54.00	3.27
		242	61	11 490.19	V	Z	PK	46.31	9.24	N/A	N/A	55.55	74.00	18.45
		242	61	11 490.45	V	Z	AV	36.15	9.24	0.76	N/A	46.15	54.00	7.85
	5 785	26	0	11 552.66	V	Z	PK	50.70	9.26	N/A	N/A	59.96	74.00	14.04
		26	0	11 552.70	V	Z	AV	40.69	9.26	0.52	N/A	50.47	54.00	3.53
		242	61	11 570.32	V	Z	PK	46.29	9.34	N/A	N/A	55.63	74.00	18.37
		242	61	11 570.37	V	Z	AV	36.43	9.34	0.76	N/A	46.53	54.00	7.47
	5 825	26	8	5 868.46	H	Z	PK	58.89	3.80	N/A	N/A	62.69	107.03	44.34
		26	8	5 929.19	H	Z	PK	52.58	4.62	N/A	N/A	57.20	68.20	11.00
		242	61	5 876.65	H	Z	PK	60.32	3.93	N/A	N/A	64.25	103.98	39.73
		242	61	5 932.26	H	Z	PK	57.49	4.65	N/A	N/A	62.14	68.20	6.06
		SU	N/A	5 879.42	H	Z	PK	56.43	3.97	N/A	N/A	60.40	101.93	41.53
		SU	N/A	5 931.18	H	Z	PK	52.13	4.64	N/A	N/A	56.77	68.20	11.43
		26	0	11 632.91	V	Z	PK	51.14	9.47	N/A	N/A	60.61	74.00	13.39
		26	0	11 632.81	V	Z	AV	40.96	9.47	0.52	N/A	50.95	54.00	3.05
		242	61	11 650.42	V	Z	PK	47.27	9.48	N/A	N/A	56.75	74.00	17.25
		242	61	11 650.09	V	Z	AV	36.30	9.48	0.76	N/A	46.54	54.00	7.46

Radiated Spurious Emissions data(9 kHz ~ 40 GHz) : *MIMO(CDD) & 802.11ax(HE40)*

Band	Tested Frequency (MHz)	Tone	RU	Freq. (MHz)	ANT Pol	EUT Position (Axis)	Detector Mode	Reading (dBuV)	TF (dB/m)	DCCF (dB)	DCF (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
U-NII 1	5 190	26	0	5 147.37	H	Z	PK	50.55	2.76	N/A	N/A	53.31	74.00	20.69
		26	0	5 148.32	H	Z	AV	40.48	2.77	0.52	N/A	43.77	54.00	10.23
		484	65	5 149.08	H	Z	PK	55.47	2.77	N/A	N/A	58.24	74.00	15.76
		484	65	5 149.65	H	Z	AV	44.20	2.77	0.88	N/A	47.85	54.00	6.15
		SU	N/A	5 149.05	H	Z	PK	53.82	2.77	N/A	N/A	56.59	74.00	17.41
		SU	N/A	5 149.54	H	Z	AV	43.52	2.77	2.29	N/A	48.58	54.00	5.42
		26	0	10 343.10	V	Z	PK	43.31	9.20	N/A	N/A	52.51	68.20	15.69
		484	65	10 385.34	V	Z	PK	44.30	9.20	N/A	N/A	53.50	68.20	14.70
	5 230	26	0	10 423.89	V	Z	PK	43.16	9.28	N/A	N/A	52.44	68.20	15.76
		484	65	10 466.35	V	Z	PK	44.19	9.42	N/A	N/A	53.61	68.20	14.59
U-NII 2A	5 270	26	0	10 503.26	V	Z	PK	44.58	9.54	N/A	N/A	54.12	68.20	14.08
		484	65	10 540.31	V	Z	PK	46.23	9.48	N/A	N/A	55.71	68.20	12.49
	5 310	26	17	5 363.58	H	Z	PK	51.62	3.24	N/A	N/A	54.86	74.00	19.14
		26	17	5 363.50	H	Z	AV	41.34	3.24	0.52	N/A	45.10	54.00	8.90
		484	65	5 350.28	H	Z	PK	62.89	3.20	N/A	N/A	66.09	74.00	7.91
		484	65	5 350.22	H	Z	AV	46.92	3.20	0.88	N/A	51.00	54.00	3.00
		SU	N/A	5 350.73	H	Z	PK	59.23	3.20	N/A	N/A	62.43	74.00	11.57
		SU	N/A	5 350.17	H	Z	AV	44.92	3.20	2.29	N/A	50.41	54.00	3.59
		26	8	10 616.28	V	Z	PK	46.11	9.36	N/A	N/A	55.47	74.00	18.53
		26	8	10 616.60	V	Z	AV	34.87	9.36	0.52	N/A	44.75	54.00	9.25
		484	65	10 622.79	V	Z	PK	45.54	9.35	N/A	N/A	54.89	74.00	19.11
		484	65	10 623.33	V	Z	AV	34.78	9.35	0.88	N/A	45.01	54.00	8.99
U-NII 2C	5 510	26	0	5 457.40	H	Z	PK	51.78	3.55	N/A	N/A	55.33	74.00	18.67
		26	0	5 462.97	H	Z	PK	51.14	3.58	N/A	N/A	54.72	68.20	13.48
		26	0	5 457.11	H	Z	AV	42.19	3.55	0.52	N/A	46.26	54.00	7.74
		484	65	5 457.23	H	Z	PK	55.82	3.55	N/A	N/A	59.37	74.00	14.63
		484	65	5 467.98	H	Z	PK	61.86	3.61	N/A	N/A	65.47	68.20	2.73
		484	65	5 458.10	H	Z	AV	45.13	3.56	0.88	N/A	49.57	54.00	4.43
		SU	N/A	5 458.67	H	Z	PK	55.85	3.56	N/A	N/A	59.41	74.00	14.59
		SU	N/A	5 468.29	H	Z	PK	61.11	3.61	N/A	N/A	64.72	68.20	3.48
		SU	N/A	5 458.58	H	Z	AV	43.74	3.56	2.29	N/A	49.59	54.00	4.41
		26	0	10 982.98	V	Z	PK	46.11	8.91	N/A	N/A	55.02	74.00	18.98
		26	0	10 983.09	V	Z	AV	34.84	8.91	0.52	N/A	44.27	54.00	9.73
		484	65	11 013.08	V	Z	PK	45.66	8.91	N/A	N/A	54.57	74.00	19.43
		484	65	11 013.03	V	Z	AV	35.23	8.91	0.88	N/A	45.02	54.00	8.98
	5 550	26	0	11 064.23	V	Z	PK	45.61	8.99	N/A	N/A	54.60	74.00	19.40
		26	0	11 064.08	V	Z	AV	35.02	8.99	0.52	N/A	44.53	54.00	9.47
		484	65	11 096.83	V	Z	PK	45.73	8.99	N/A	N/A	54.72	74.00	19.28
		484	65	11 096.29	V	Z	AV	34.88	8.99	0.88	N/A	44.75	54.00	9.25
	5 710	26	0	11 384.38	V	Z	PK	44.85	9.13	N/A	N/A	53.98	74.00	20.02
		26	0	11 384.43	V	Z	AV	34.34	9.13	0.52	N/A	43.99	54.00	10.01
		484	65	11 418.76	V	Z	PK	45.79	9.17	N/A	N/A	54.96	74.00	19.04
		484	65	11 417.78	V	Z	AV	35.41	9.17	0.88	N/A	45.46	54.00	8.54

Radiated Spurious Emissions data(9 kHz ~ 40 GHz) : *MIMO(CDD) & 802.11ax(HE40)*

Band	Tested Frequency (MHz)	Tone	RU	Freq. (MHz)	ANT Pol	EUT Position (Axis)	Detector Mode	Reading (dBuV)	TF (dB/m)	DCCF (dB)	DCF (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
U-NII 3	5 755	26	0	5 647.15	H	Z	PK	52.92	3.56	N/A	N/A	56.48	68.20	11.72
		26	0	5 664.58	H	Z	PK	66.64	3.53	N/A	N/A	70.17	78.99	8.82
		484	65	5 647.63	H	Z	PK	53.64	3.56	N/A	N/A	57.20	68.20	11.00
		484	65	5 718.28	H	Z	PK	73.81	3.50	N/A	N/A	77.31	110.32	33.01
		SU	N/A	5 648.00	H	Z	PK	54.69	3.56	N/A	N/A	58.25	68.20	9.95
		SU	N/A	5 717.10	H	Z	PK	74.47	3.49	N/A	N/A	77.96	109.99	32.03
		26	0	11 473.30	V	Z	PK	50.99	9.24	N/A	N/A	60.23	74.00	13.77
		26	0	11 473.37	V	Z	AV	41.15	9.24	0.52	N/A	50.91	54.00	3.09
		484	65	11 510.23	V	Z	PK	45.96	9.24	N/A	N/A	55.20	74.00	18.80
		484	65	11 510.79	V	Z	AV	35.98	9.24	0.88	N/A	46.10	54.00	7.90
	5 795	26	17	5 883.99	H	Z	PK	66.19	4.04	N/A	N/A	70.23	97.03	26.80
		26	17	5 943.98	H	Z	PK	52.63	4.76	N/A	N/A	57.39	68.20	10.81
		484	65	5 888.64	H	Z	PK	58.54	4.11	N/A	N/A	62.65	95.11	32.46
		484	65	5 925.20	H	Z	PK	56.51	4.57	N/A	N/A	61.08	68.20	7.12
		SU	N/A	5 888.28	H	Z	PK	54.63	4.11	N/A	N/A	58.74	95.37	36.63
		SU	N/A	5 930.96	H	Z	PK	51.95	4.64	N/A	N/A	56.59	68.20	11.61
		26	0	11 553.22	V	Z	PK	50.75	9.27	N/A	N/A	60.02	74.00	13.98
		26	0	11 553.34	V	Z	AV	40.99	9.27	0.52	N/A	50.78	54.00	3.22
		484	65	11 587.95	V	Z	PK	45.37	9.41	N/A	N/A	54.78	74.00	19.22
		484	65	11 588.22	V	Z	AV	34.96	9.41	0.88	N/A	45.25	54.00	8.75

Radiated Spurious Emissions data(9 kHz ~ 40 GHz) : *MIMO(CDD) & 802.11ax(HE80)*

Band	Tested Frequency (MHz)	Tone	RU	Freq. (MHz)	ANT Pol	EUT Position (Axis)	Detector Mode	Reading (dBuV)	TF (dB/m)	DCCF (dB)	DCF (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
U-NII 1	5 210	26	0	5 127.28	H	Z	PK	51.03	2.71	N/A	N/A	53.74	74.00	20.26
		26	0	5 127.77	H	Z	AV	39.64	2.71	0.52	N/A	42.87	54.00	11.13
		996	67	5 149.90	H	Z	PK	58.60	2.77	N/A	N/A	61.37	74.00	12.63
		996	67	5 149.68	H	Z	AV	47.38	2.77	1.13	N/A	51.28	54.00	2.72
		SU	N/A	5 145.76	H	Z	PK	57.19	2.76	N/A	N/A	59.95	74.00	14.05
		SU	N/A	5 145.62	H	Z	AV	45.09	2.76	2.51	N/A	50.36	54.00	3.64
		26	0	10 344.73	V	Z	PK	43.20	9.20	N/A	N/A	52.40	68.20	15.80
		996	67	10 419.02	V	Z	PK	44.33	9.26	N/A	N/A	53.59	68.20	14.61
U-NII 2A	5 290	26	36	5 357.00	H	Z	PK	51.83	3.22	N/A	N/A	55.05	74.00	18.95
		26	36	5 356.33	H	Z	AV	40.87	3.22	0.52	N/A	44.61	54.00	9.39
		996	67	5 351.54	H	Z	PK	58.31	3.20	N/A	N/A	61.51	74.00	12.49
		996	67	5 352.21	H	Z	AV	46.69	3.21	1.13	N/A	51.03	54.00	2.97
		SU	N/A	5 353.67	H	Z	PK	58.92	3.21	N/A	N/A	62.13	74.00	11.87
		SU	N/A	5 354.62	H	Z	AV	45.28	3.21	2.51	N/A	51.00	54.00	3.00
		26	36	10 655.24	V	Z	PK	44.47	9.30	N/A	N/A	53.77	74.00	20.23
		26	36	10 655.73	V	Z	AV	33.94	9.30	0.52	N/A	43.76	54.00	10.24
		996	67	10 578.75	V	Z	PK	44.50	9.42	N/A	N/A	53.92	68.20	14.28
U-NII 2C	5 530	26	0	5 453.69	H	Z	PK	51.12	3.54	N/A	N/A	54.66	74.00	19.34
		26	0	5 465.90	H	Z	PK	51.13	3.60	N/A	N/A	54.73	68.20	13.47
		26	0	5 454.61	H	Z	AV	41.50	3.54	0.52	N/A	45.56	54.00	8.44
		996	67	5 458.87	H	Z	PK	61.74	3.56	N/A	N/A	65.30	74.00	8.70
		996	67	5 463.38	H	Z	PK	61.07	3.59	N/A	N/A	64.66	68.20	3.54
		996	67	5 458.54	H	Z	AV	46.49	3.56	1.13	N/A	51.18	54.00	2.82
		SU	N/A	5 456.45	H	Z	PK	56.85	3.55	N/A	N/A	60.40	74.00	13.60
		SU	N/A	5 468.84	H	Z	PK	60.55	3.61	N/A	N/A	64.16	68.20	4.04
		SU	N/A	5 457.19	H	Z	AV	44.35	3.55	2.51	N/A	50.41	54.00	3.59
		26	0	10 982.75	V	Z	PK	45.64	8.91	N/A	N/A	54.55	74.00	19.45
		26	0	10 983.00	V	Z	AV	34.91	8.91	0.52	N/A	44.34	54.00	9.66
		996	67	11 049.81	V	Z	PK	45.40	8.99	N/A	N/A	54.39	74.00	19.61
		996	67	11 049.03	V	Z	AV	34.61	8.98	1.13	N/A	44.72	54.00	9.28
	5 690	26	0	11 302.99	V	Z	PK	45.99	9.02	N/A	N/A	55.01	74.00	18.99
		26	0	11 303.52	V	Z	AV	34.95	9.02	0.52	N/A	44.49	54.00	9.51
		996	67	11 374.76	V	Z	PK	45.44	9.12	N/A	N/A	54.56	74.00	19.44
		996	67	11 375.27	V	Z	AV	34.51	9.13	1.13	N/A	44.77	54.00	9.23
U-NII 3	5 775	26	0	5 644.53	H	Z	PK	51.06	3.56	N/A	N/A	54.62	68.20	13.58
		26	0	5 661.45	H	Z	PK	69.91	3.53	N/A	N/A	73.44	76.67	3.23
		26	36	5 887.04	H	Z	PK	73.54	4.09	N/A	N/A	77.63	95.40	17.77
		26	36	5 964.32	H	Z	PK	59.70	4.89	N/A	N/A	64.59	68.20	3.61
		996	67	5 646.93	H	Z	PK	56.25	3.56	N/A	N/A	59.81	68.20	8.39
		996	67	5 699.05	H	Z	PK	66.64	3.45	N/A	N/A	70.09	104.50	34.41
		996	67	5 865.80	H	Z	PK	70.93	3.75	N/A	N/A	74.68	107.78	33.10
		996	67	5 925.68	H	Z	PK	56.29	4.58	N/A	N/A	60.87	68.20	7.33
		SU	N/A	5 642.05	H	Z	PK	57.04	3.56	N/A	N/A	60.60	68.20	7.60
		SU	N/A	5 688.20	H	Z	PK	67.45	3.48	N/A	N/A	70.93	96.47	25.54
		SU	N/A	5 883.36	H	Z	PK	63.75	4.03	N/A	N/A	67.78	99.01	31.23
		SU	N/A	5 926.84	H	Z	PK	55.00	4.59	N/A	N/A	59.59	68.20	8.61
		26	0	11 473.45	V	Z	PK	50.75	9.24	N/A	N/A	59.99	74.00	14.01
		26	0	11 473.15	V	Z	AV	40.56	9.24	0.52	N/A	50.32	54.00	3.68
		996	67	11 550.34	V	Z	PK	44.51	9.25	N/A	N/A	53.76	74.00	20.24
		996	67	11 550.62	V	Z	AV	34.96	9.25	1.13	N/A	45.34	54.00	8.66

5.6. AC Power-Line Conducted Emissions

▣ Test Requirements, §15.207 & RSS-Gen[8.8]

An intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 uH/50 ohm line impedance stabilization network (LISN).

Compliance with the provision of this paragraph shall on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower applies at the boundary between the frequency ranges.

Frequency Range (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15 ~ 0.5	66 to 56 *	56 to 46 *
0.5 ~ 5.0	56	46
5 ~ 30	60	50

* Decreases with the logarithm of the frequency

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

▣ Test Configuration

See test photographs for the actual connections between EUT and support equipment.

▣ Test Procedure

Conducted emissions from the EUT were measured according to the ANSI C63.10-2020.

1. The test procedure is performed in a 6.5 m × 3.5 m × 3.5 m (L × W × H) shielded room. The EUT along with its peripherals were placed on a 1.0 m (W) × 1.5 m (L) and 0.8 m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane.
2. The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room.
3. All peripherals were connected to the second LISN and the chassis ground also bounded to the horizontal ground plane of shielded room.
4. The excess power cable between the EUT and the LISN was bundled. The power cables of peripherals were unbundled. All connecting cables of EUT and peripherals were moved to find the maximum emission.

▣ Test Results: Comply

Refer to the next page. The worst case data was reported.

AC Line Conducted Emissions (Graph)

Test Mode: U-NII 1 & 802.11ax HE20 & MIMO(CDD) & 5 180 MHz

Results of Conducted Emission

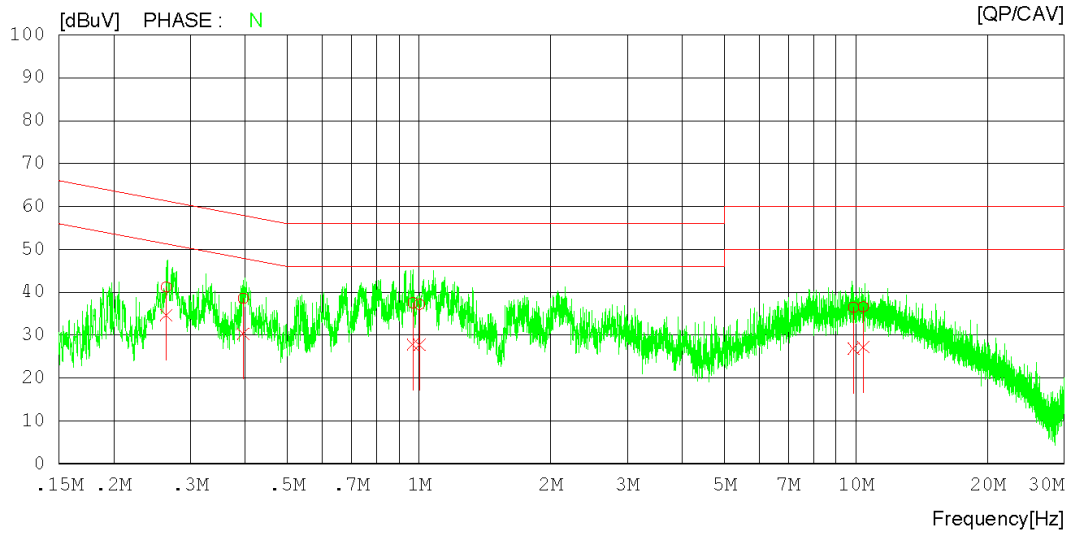
Date 2025-06-16

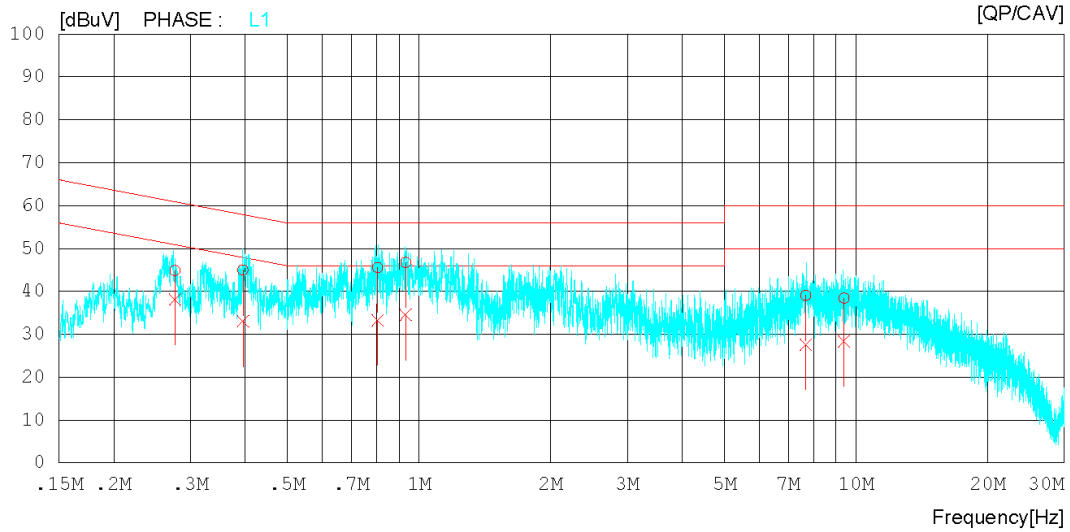
Order No.		Referrence No.	
Model No.	WC1NH25	Power Supply	120 V, 60 Hz
Serial No.		Temp/Humi.	23 'C / 41 %
Test Condition	UNII_1	Operator	S.M.GIL

Memo 802.11ax(HE20)_5180

LIMIT : FCC P15.207 AV
FCC P15.207 QP

Lisn Factor
1. NSLK 8128 RC-387_N_24.10.21
2. NSLK 8128 RC-387_L1_24.10.21
Cable Loss
1. C1_LISN TO RECEIVER_2024-12-11
Pulse Lmitter
1. PULSE LIMITER_ESH3-Z2_101333_2024.08.21





AC Line Conducted Emissions (Data List)

Test Mode: U-NII 1 & 802.11ax HE20 & MIMO(CDD) & 5 180 MHz

Results of Conducted Emission

Date 2025-06-16

Order No.		Referrence No.	
Model No.	WC1NH25	Power Supply	120 V, 60 Hz
Serial No.		Temp/Humi.	23 'C / 41 %
Test Condition	UNII_1	Operator	S.M.GIL

Memo 802.11ax(HE20)_5180

LIMIT : FCC P15.207 AV
FCC P15.207 QP

Lisn Factor
1. NSLK 8128 RC-387_N_24.10.21
2. NSLK 8128 RC-387_L1_24.10.21
Cable Loss
1. C1_LISN TO RECEIVER_2024-12-11
Pulse Lmitter
1. PULSE LIMITER_ESH3-Z2_101333_2024.08.21

NO	FREQ	READING QP [dBuV]	READING CAV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT CAV [dBuV]	LIMIT QP [dBuV]	LIMIT CAV [dBuV]	MARGIN QP [dBuV]	MARGIN CAV [dBuV]	PHASE
1	0.26401	31.20	24.65	10.01	41.21	34.66	61.30	51.30	20.09	16.64	N
2	0.39606	28.51	20.25	10.03	38.54	30.28	57.94	47.94	19.40	17.66	N
3	0.96974	27.45	17.72	10.06	37.51	27.78	56.00	46.00	18.49	18.22	N
4	1.00340	27.06	17.67	10.06	37.12	27.73	56.00	46.00	18.88	18.27	N
5	9.87240	26.09	16.51	10.35	36.44	26.86	60.00	50.00	23.56	23.14	N
6	10.39540	26.17	16.84	10.38	36.55	27.22	60.00	50.00	23.45	22.78	N
7	0.27650	34.83	28.12	10.01	44.84	38.13	60.92	50.92	16.08	12.79	L1
8	0.39529	34.96	23.01	10.03	44.99	33.04	57.95	47.95	12.96	14.91	L1
9	0.80450	35.52	23.21	10.05	45.57	33.26	56.00	46.00	10.43	12.74	L1
10	0.93245	36.72	24.51	10.06	46.78	34.57	56.00	46.00	9.22	11.43	L1
11	7.68660	28.73	17.26	10.32	39.05	27.58	60.00	50.00	20.95	22.42	L1
12	9.39220	27.97	17.97	10.42	38.39	28.39	60.00	50.00	21.61	21.61	L1