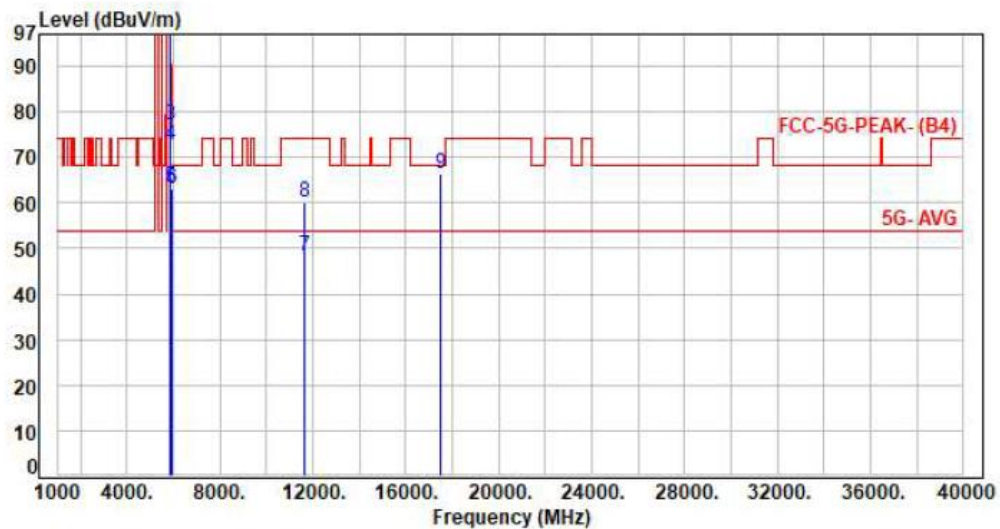


**Test Mode** Mode 2, Band 4

Test Mode : 2TX 11ac20 CH165 NSS1 MCS0
Voltage : From System(AC120V/60Hz)
Pol : Horizontal



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5825.00	7.46	91.52	98.98	200.00	-101.02	Average	251	258	P
2	5825.00	7.46	100.76	108.22	200.00	-91.78	Peak	251	258	P
3	5850.00	7.47	69.72	77.19	122.20	-45.01	Peak	251	258	P
4	5855.00	7.49	65.03	72.52	110.80	-38.28	Peak	251	258	P
5	5875.00	7.57	55.94	63.51	105.20	-41.69	Peak	251	258	P
6	5925.00	7.73	55.41	63.14	68.20	-5.06	Peak	251	258	P
7	11650.00	18.67	29.76	48.43	54.00	-5.57	Average	100	227	P
8	11650.00	18.67	41.62	60.29	74.00	-13.71	Peak	100	227	P
9	17475.00	25.92	40.31	66.23	68.20	-1.97	Peak	100	192	P

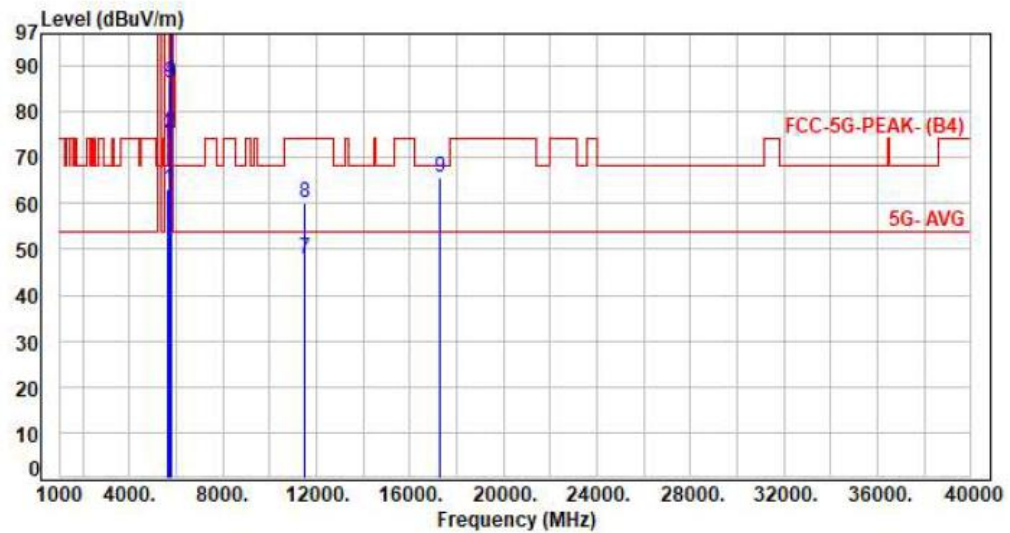
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor

**Test Mode** Mode 3, Band 4

Test Mode : 2TX 11ac40 CH151 NSS1 MCS0
Voltage : From System(AC120V/60Hz)
Pol : Vertical



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	7.51	55.74	63.25	68.20	-4.95	Peak	348	161	P
2	5700.00	7.43	67.79	75.22	105.20	-29.98	Peak	348	161	P
3	5720.00	7.43	78.83	86.26	110.80	-24.54	Peak	348	161	P
4	5725.00	7.43	79.20	86.63	122.20	-35.57	Peak	348	161	P
5	5755.00	7.44	92.60	100.04	200.00	-99.96	Average	348	161	P
6	5755.00	7.44	101.25	108.69	200.00	-91.31	Peak	348	161	P
7	11510.00	18.39	29.64	48.03	54.00	-5.97	Average	100	144	P
8	11510.00	18.39	41.77	60.16	74.00	-13.84	Peak	100	144	P
9	17265.00	24.63	40.88	65.51	68.20	-2.69	Peak	100	264	P

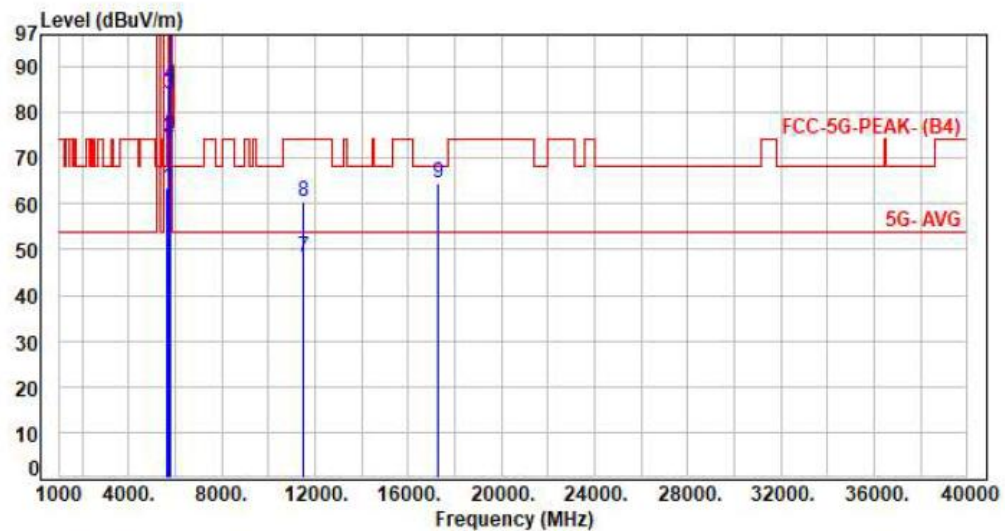
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor

**Test Mode** Mode 3, Band 4

Test Mode : 2TX 11ac40 CH151 NSS1 MCS0
Voltage : From System(AC120V/60Hz)
Pol : Horizontal



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	7.51	55.85	63.36	68.20	-4.84	Peak	231	263	P
2	5700.00	7.43	66.94	74.37	105.20	-30.83	Peak	231	263	P
3	5720.00	7.43	76.78	84.21	110.80	-26.59	Peak	231	263	P
4	5725.00	7.43	78.50	85.93	122.20	-36.27	Peak	231	263	P
5	5755.00	7.44	89.03	96.47	200.00	-103.53	Average	231	263	P
6	5755.00	7.44	97.70	105.14	200.00	-94.86	Peak	231	263	P
7	11510.00	18.39	29.78	48.17	54.00	-5.83	Average	100	119	P
8	11510.00	18.39	41.96	60.35	74.00	-13.65	Peak	100	119	P
9	17265.00	24.63	40.10	64.73	68.20	-3.47	Peak	100	269	P

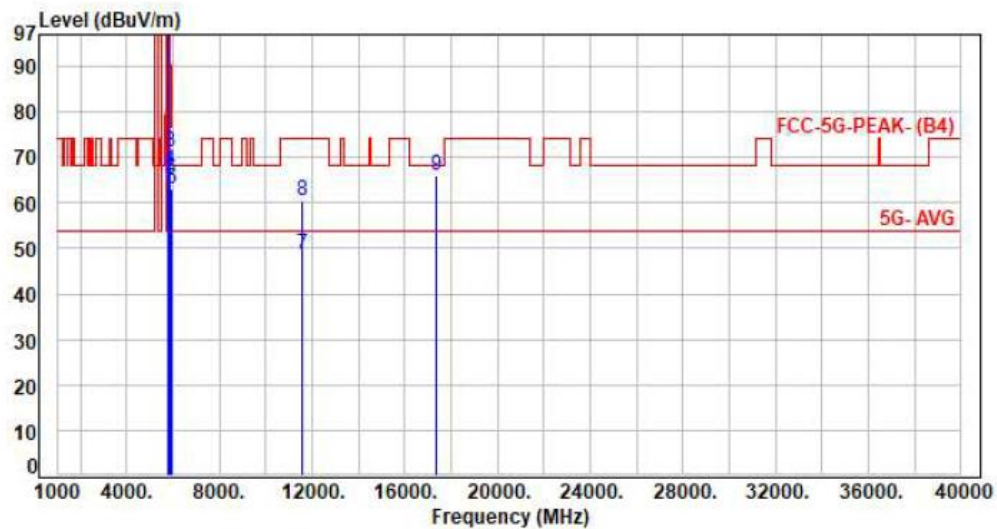
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor

**Test Mode** Mode 3, Band 4

Test Mode : 2TX 11ac40 CH159 NSS1 MCS0
Voltage : From System(AC120V/60Hz)
Pol : Vertical



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5795.00	7.45	92.16	99.61	200.00	-100.39	Average	378	171	P
2	5795.00	7.45	101.82	109.27	200.00	-90.73	Peak	378	171	P
3	5850.00	7.47	63.66	71.13	122.20	-51.07	Peak	378	171	P
4	5855.00	7.49	59.59	67.08	110.80	-43.72	Peak	378	171	P
5	5875.00	7.57	57.81	65.38	105.20	-39.82	Peak	378	171	P
6	5925.00	7.73	55.49	63.22	68.20	-4.98	Peak	378	171	P
7	11590.00	18.62	29.99	48.61	54.00	-5.39	Average	100	117	P
8	11590.00	18.62	41.95	60.57	74.00	-13.43	Peak	100	117	P
9	17385.00	25.34	40.63	65.97	68.20	-2.23	Peak	100	123	P

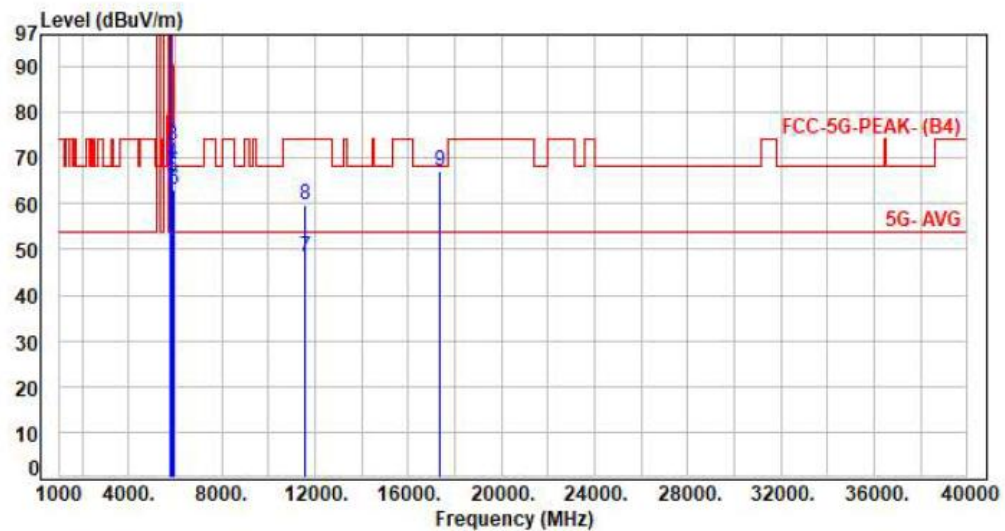
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor

**Test Mode** Mode 3, Band 4

Test Mode : 2TX 11ac40 CH159 NSS1 MCS0
Voltage : From System(AC120V/60Hz)
Pol : Horizontal



No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5795.00	7.45	89.36	96.81	200.00	-103.19	Average	256	262	P
2	5795.00	7.45	98.80	106.25	200.00	-93.75	Peak	256	262	P
3	5850.00	7.47	65.34	72.81	122.20	-49.39	Peak	256	262	P
4	5855.00	7.49	61.55	69.04	110.80	-41.76	Peak	256	262	P
5	5875.00	7.57	58.25	65.82	105.20	-39.38	Peak	256	262	P
6	5925.00	7.73	55.24	62.97	68.20	-5.23	Peak	256	262	P
7	11590.00	18.62	29.68	48.30	54.00	-5.70	Average	100	213	P
8	11590.00	18.62	40.95	59.57	74.00	-14.43	Peak	100	213	P
9	17385.00	25.34	41.64	66.98	68.20	-1.22	Peak	100	119	P

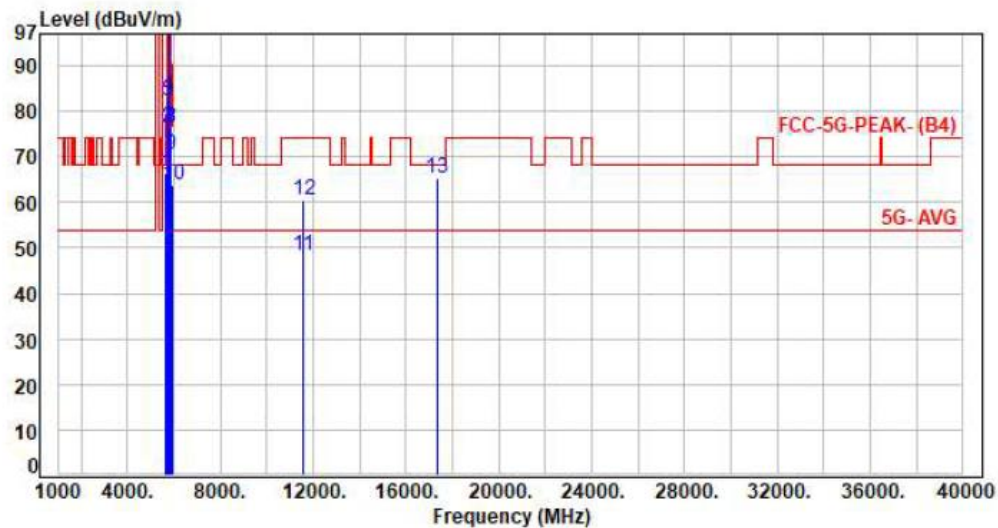
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor

**Test Mode** Mode 4, Band 4

Test Mode : 2TX 11ac80 CH155 NSS1 MCS0
Voltage : From System(AC120V/60Hz)
Pol : Vertical



No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	7.51	58.88	66.39	68.20	-1.81	Peak	346	176	P
2	5700.00	7.43	69.08	76.51	105.20	-28.69	Peak	346	176	P
3	5720.00	7.43	74.86	82.29	110.80	-28.51	Peak	346	176	P
4	5725.00	7.43	76.06	83.49	122.20	-38.71	Peak	346	176	P
5	5775.00	7.45	90.28	97.73	200.00	-102.27	Average	346	176	P
6	5775.00	7.45	99.20	106.65	200.00	-93.35	Peak	346	176	P
7	5850.00	7.47	68.42	75.89	122.20	-46.31	Peak	346	176	P
8	5855.00	7.49	68.68	76.17	110.80	-34.63	Peak	346	176	P
9	5875.00	7.57	62.89	70.46	105.20	-34.74	Peak	346	176	P
10	5925.00	7.73	55.93	63.66	68.20	-4.54	Peak	346	176	P
11	11550.00	18.54	29.65	48.19	54.00	-5.81	Average	100	119	P
12	11550.00	18.54	41.99	60.53	74.00	-13.47	Peak	100	119	P
13	17325.00	25.10	40.27	65.37	68.20	-2.83	Peak	100	188	P

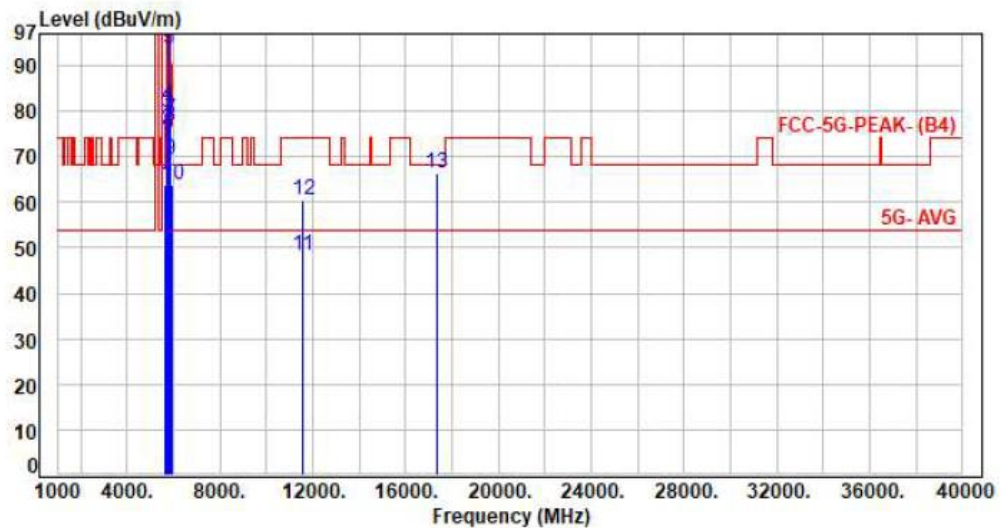
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor

**Test Mode** Mode 4, Band 4

Test Mode : 2TX 11ac80 CH155 NSS1 MCS0
Voltage : From System(AC120V/60Hz)
Pol : Horizontal



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	7.51	56.27	63.78	68.20	-4.42	Peak	242	249	P
2	5700.00	7.43	68.49	75.92	105.20	-29.28	Peak	242	249	P
3	5720.00	7.43	72.26	79.69	110.80	-31.11	Peak	242	249	P
4	5725.00	7.43	73.82	81.25	122.20	-40.95	Peak	242	249	P
5	5775.00	7.45	86.15	93.60	200.00	-106.40	Average	242	249	P
6	5775.00	7.45	95.09	102.54	200.00	-97.46	Peak	242	249	P
7	5850.00	7.47	70.90	78.37	122.20	-43.83	Peak	242	249	P
8	5855.00	7.49	69.09	76.58	110.80	-34.22	Peak	242	249	P
9	5875.00	7.57	61.73	69.30	105.20	-35.90	Peak	242	249	P
10	5925.00	7.73	56.22	63.95	68.20	-4.25	Peak	242	249	P
11	11550.00	18.54	29.68	48.22	54.00	-5.78	Average	100	167	P
12	11550.00	18.54	41.77	60.31	74.00	-13.69	Peak	100	167	P
13	17325.00	25.10	41.31	66.41	68.20	-1.79	Peak	100	214	P

Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



6.7. Restricted Bands of Operation

Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.09000 – 0.11000	16.42000 – 16.42300	399.9 – 410.0	4.500 – 5.150
0.49500 – 0.505**	16.69475 – 16.69525	608.0 – 614.0	5.350 – 5.460
2.17350 – 2.19050	16.80425 – 16.80475	960.0 – 1240.0	7.250 – 7.750
4.12500 – 4.12800	25.50000 – 25.67000	1300.0 – 1427.0	8.025 – 8.500
4.17725 – 4.17775	37.50000 – 38.25000	1435.0 – 1626.5	9.000 – 9.200
4.20725 – 4.20775	73.00000 – 74.60000	1645.5 – 1646.5	9.300 – 9.500
6.21500 – 6.21800	74.80000 – 75.20000	1660.0 – 1710.0	10.600 – 12.700
6.26775 – 6.26825	108.00000 – 121.94000	1718.8 – 1722.2	13.250 – 13.400
6.31175 – 6.31225	123.00000 – 138.00000	2200.0 – 2300.0	14.470 – 14.500
8.29100 – 8.29400	149.90000 – 150.05000	2310.0 – 2390.0	15.350 – 16.200
8.36200 – 8.36600	156.52475 – 156.52525	2483.5 – 2500.0	17.700 – 21.400
8.37625 – 8.38675	156.70000 – 156.90000	2655.0 – 2900.0	22.010 – 23.120
8.41425 – 8.41475	162.01250 – 167.17000	3260.0 – 3267.0	23.600 – 24.000
12.29000 – 12.29300	167.72000 – 173.20000	3332.0 – 3339.0	31.200 – 31.800
12.51975 – 12.52025	240.00000 – 285.00000	3345.8 – 3358.0	36.430 – 36.500
12.57675 – 12.57725	322.00000 – 335.40000	3600.0 – 4400.0	Above 38.6
13.36000 – 13.41000			

** : Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz



7. On Time, Duty Cycle and Measurement methods

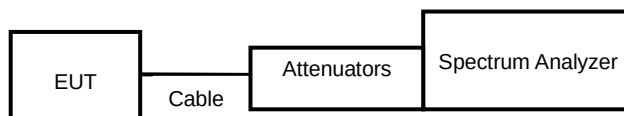
7.1. Test Limit

None; for reporting purposes only.

7.2. Test Procedure

KDB 789033 Zero-Span Spectrum Analyzer Method.

7.3. Test Setup Layout



7.4. Test Result and Data

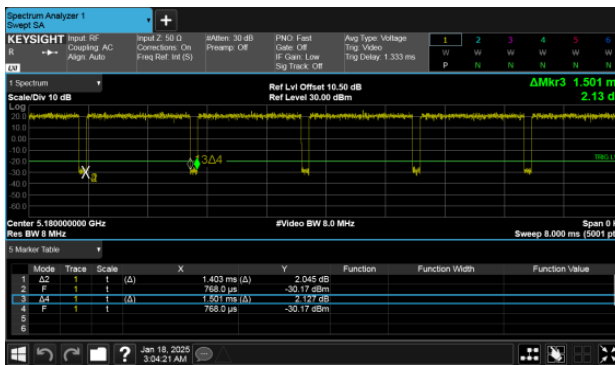
Modulation Type	On Time (ms)	Period Time (ms)	Duty Cycle (%)
802.11a,6M	1.403	1.501	93.47%
802.11ac VHT20	1.320	1.417	93.15%
802.11ac VHT40	0.663	0.758	87.54%
802.11ac VHT80	0.329	0.426	77.40%

7.5. Measurement Methods

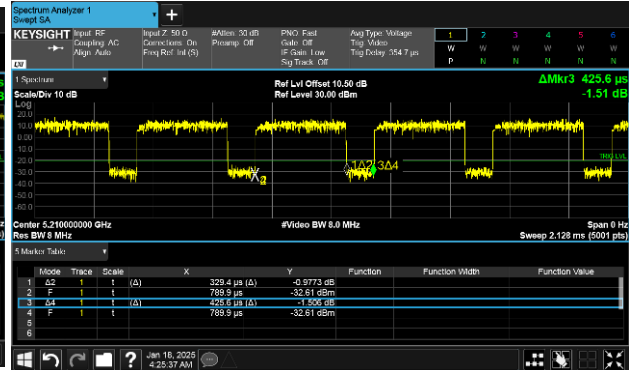
26 dB and 6dB Emission BW	KDB 789033 D02 v02r01, Section C
99% Occupied BW	KDB 789033 D02 v02r01, Section D
Conducted Output Power	KDB 789033 D02 v02r01, Section E.2.d and E.3.b (Method PM-G)
Power Spectral Density	KDB 789033 D02 v02r01, Section F
Unwanted emissions in restricted bands	KDB 789033 D02 v02r01, Sections G and H
Unwanted emissions in non-restricted bands	KDB 789033 D02 v02r01, Sections G and H



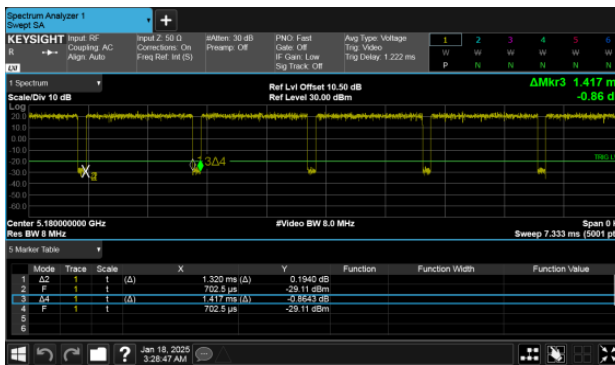
Modulation Type: 802.11a (6Mbps)



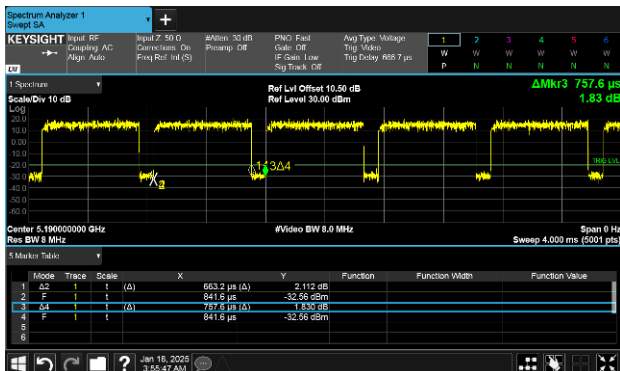
Modulation Type: 802.11ac VHT80 (29.3Mbps)



Modulation Type: 802.11ac VHT20 (6.5Mbps)



Modulation Type: 802.11ac VHT40 (13.5Mbps)





8. 6dB Bandwidth & 99% Occupied Bandwidth

8.1. Test Limit

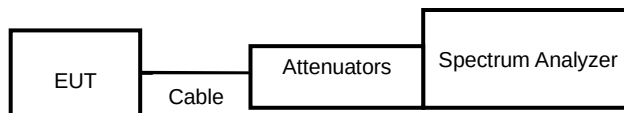
FCC §15.407

The minimum 6 dB bandwidth shall be at least 500 kHz.

8.2. Test Procedure

Reference to 789033 D02 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW set to 100KHz, the VBW $\geq 3 \times$ RBW, peak detector and max hold.

8.3. Test Setup Layout





8.4. Test Result and Data

In the 5.8G Band

Modulation Type	Channel	Frequency (MHz)	6dB Bandwidth(MHz)	Minimum Limit (MHz)
11a	149	5745	15.73	0.50
11a	157	5785	15.72	0.50
11a	165	5825	15.74	0.50
11ac VHT20	149	5745	15.90	0.50
11ac VHT20	157	5785	15.19	0.50
11ac VHT20	165	5825	15.49	0.50
11ac VHT40	151	5755	35.17	0.50
11ac VHT40	159	5795	35.43	0.50
11ac VHT80	155	5775	75.18	0.50

In the 5.8G Band

Modulation Type	Channel	Frequency (MHz)	99% Bandwidth(MHz)
11a	149	5745	19.87
11a	157	5785	19.69
11a	165	5825	19.59
11ac VHT20	149	5745	19.59
11ac VHT20	157	5785	19.66
11ac VHT20	165	5825	19.63
11ac VHT40	151	5755	39.22
11ac VHT40	159	5795	39.13
11ac VHT80	155	5775	77.09

UNII Emission Bandwidth Result (Extends across 5725MHz band)				
Modulation Type	Data Rate / MCS	Frequency (MHz)	6dB Bandwidth(MHz)	99% Bandwidth(MHz)
11a	6 Mbps	5720	2.74	12.30
11ac VHT20	NSS1-MCS0	5720	2.71	12.74
11ac VHT40	NSS1-MCS0	5710	2.93	33.66
11ac VHT80	NSS1-MCS0	5690	2.74	67.53

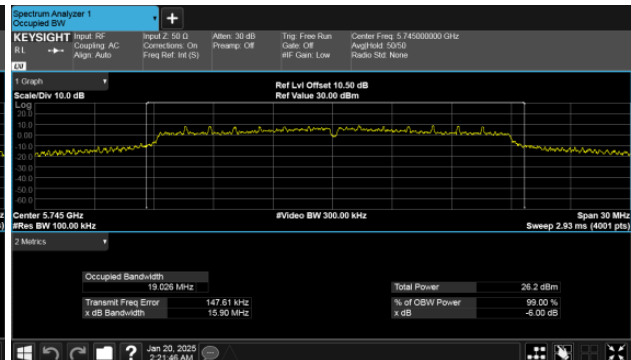


6dB Bandwidth

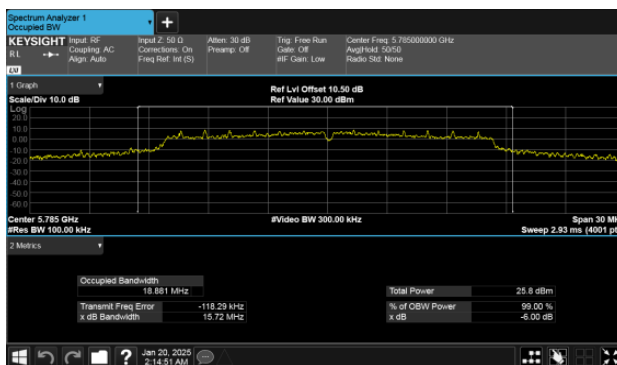
Modulation Type: 802.11a CH149



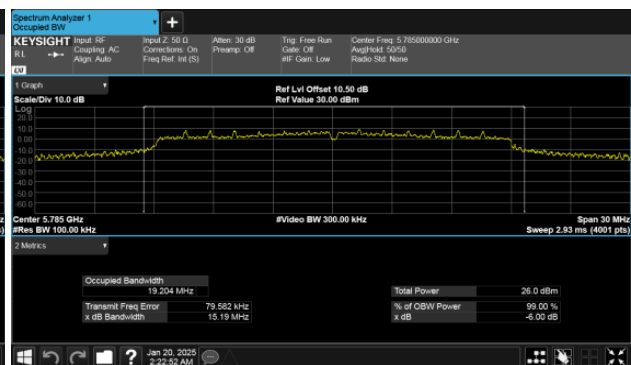
Modulation Type: 802.11ac VHT20 CH149



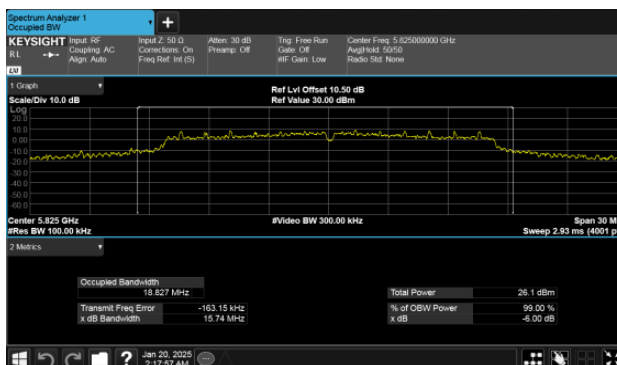
Modulation Type: 802.11a CH157



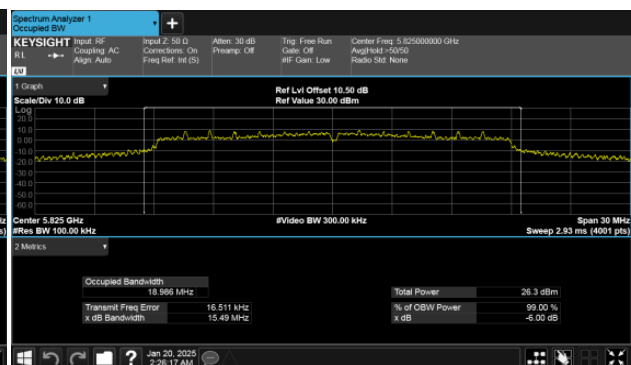
Modulation Type: 802.11ac VHT20 CH157



Modulation Type: 802.11a CH165



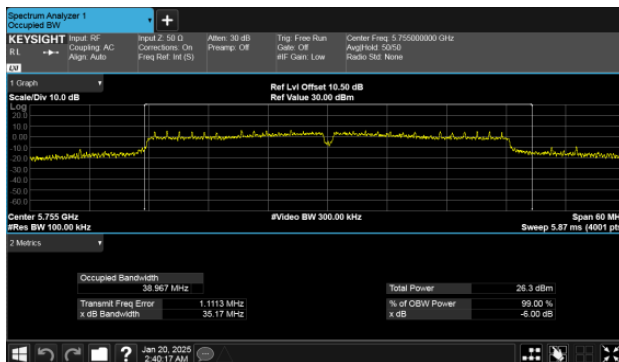
Modulation Type: 802.11ac VHT20 CH165



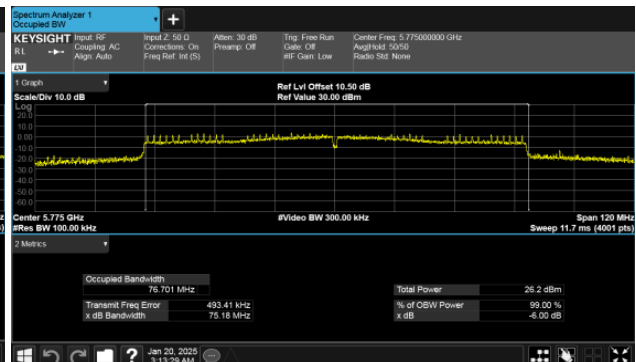


6dB Bandwidth

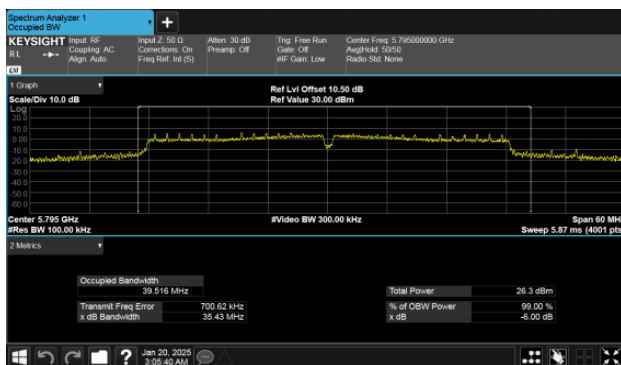
Modulation Type: 802.11ac VHT40 CH151



Modulation Type: 802.11ac VHT80 CH155



Modulation Type: 802.11ac VHT40 CH159



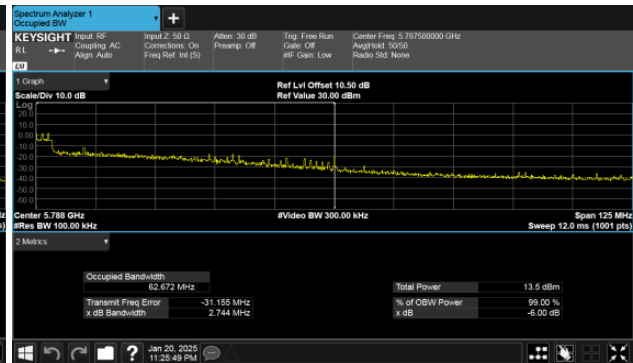
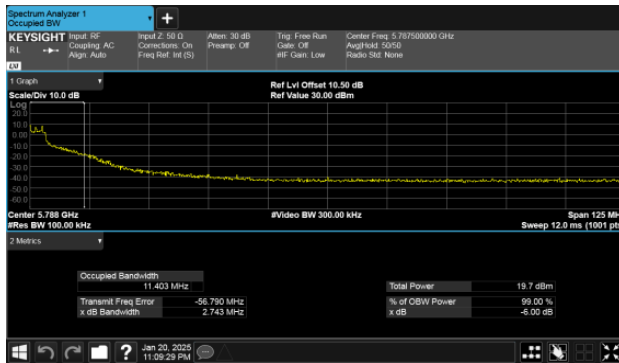


6dB Bandwidth

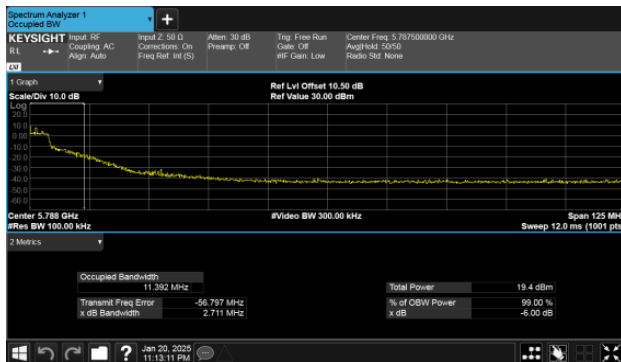
Extends across 5725MHz Band, Straddle Channel

Modulation Type: 802.11a CH144

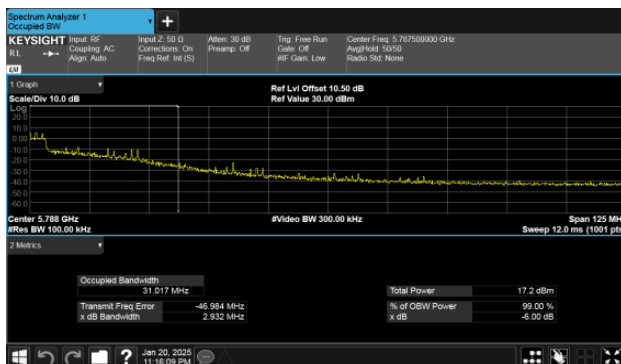
Modulation Type: 802.11ac VHT80 CH138



Modulation Type: 802.11ac VHT20 CH144



Modulation Type: 802.11ac VHT40 CH142





99% Bandwidth
Modulation Type: 802.11a CH149



Modulation Type: 802.11ac VHT20 CH149



Modulation Type: 802.11a CH157



Modulation Type: 802.11ac VHT20 CH157



Modulation Type: 802.11a CH165



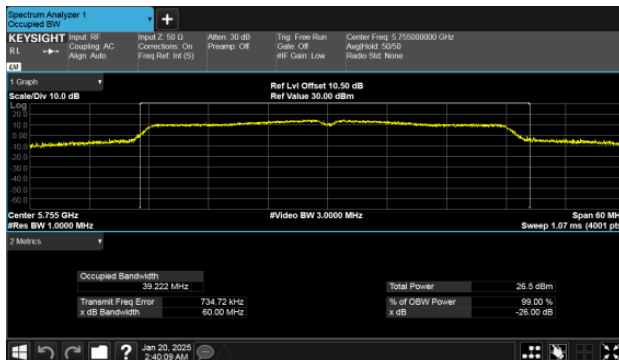
Modulation Type: 802.11ac VHT20 CH165



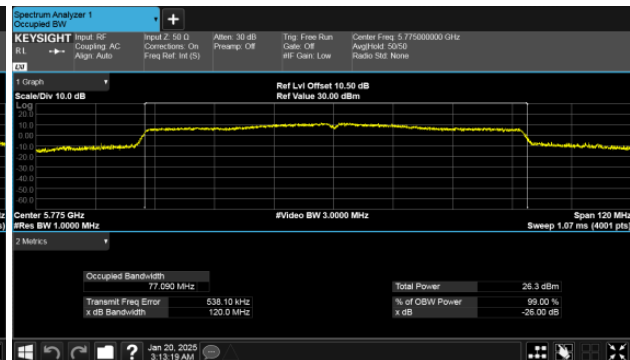


99% Bandwidth

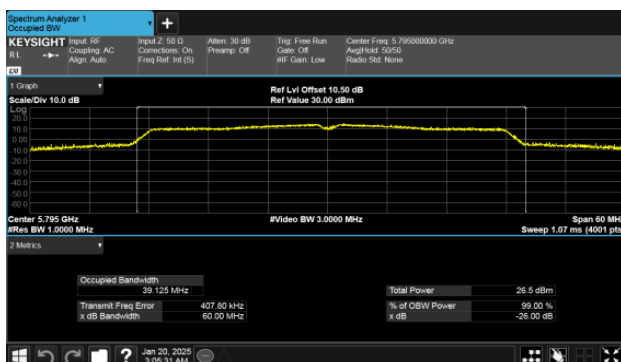
Modulation Type: 802.11ac VHT40 CH151



Modulation Type: 802.11ac VHT80 CH155



Modulation Type: 802.11ac VHT40 CH159



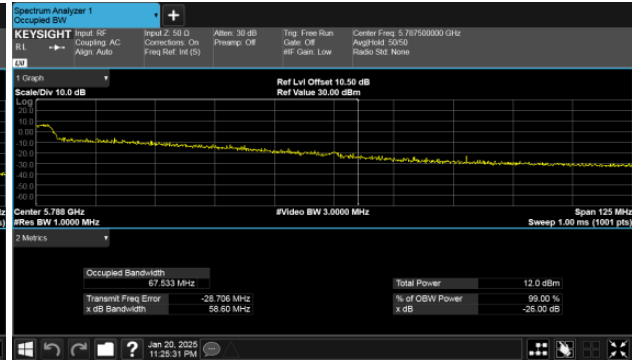
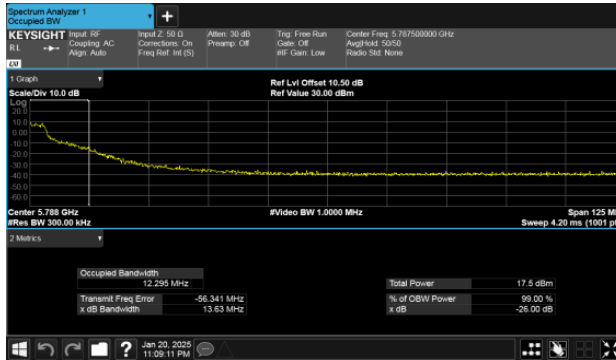


99% Bandwidth

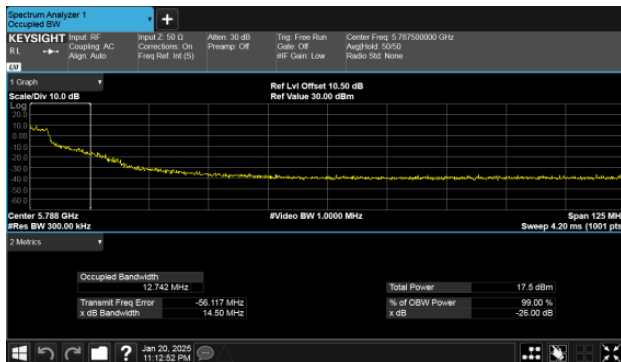
Extends across 5725MHz Band, Straddle Channel

Modulation Type: 802.11a CH144

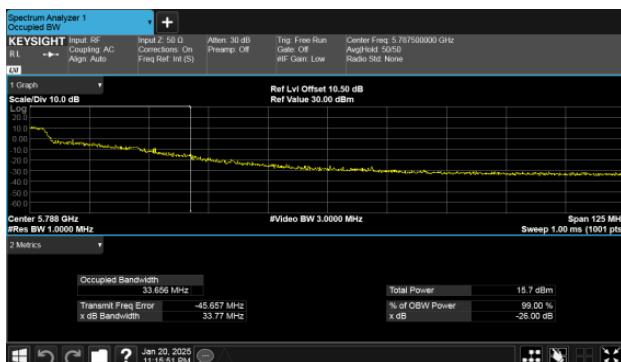
Modulation Type: 802.11ac VHT80 CH138



Modulation Type: 802.11ac VHT20 CH144



Modulation Type: 802.11ac VHT40 CH142





9. 26dB Bandwidth & 99% Occupied Bandwidth

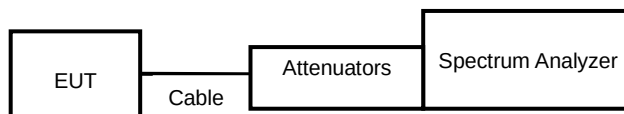
9.1. Test Limit

None; for reporting purposes only.

9.2. Test Procedure

Reference to 789033 D02 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW = approximately 1% of the emission bandwidth, the VBW $\geq 3 \times$ RBW, peak detector and max hold.

9.3. Test Setup Layout



9.4. Test Result and Data

In the 5.2G Band

Mode	Channel	Frequency (MHz)	26dB Bandwidth(MHz)
11a	36	5180	21.38
11a	40	5200	29.99
11a	48	5240	29.93
11ac VHT20	36	5180	23.93
11ac VHT20	40	5200	29.98
11ac VHT20	48	5240	30
11ac VHT40	38	5190	40.63
11ac VHT40	46	5230	59.96
11ac VHT80	42	5210	81.46



In the 5.3G Band

Mode	Channel	Frequency (MHz)	26dB Bandwidth(MHz)
11a	52	5260	30
11a	60	5300	30
11a	64	5320	23.08
11ac VHT20	52	5260	30
11ac VHT20	60	5300	30
11ac VHT20	64	5320	26.56
11ac VHT40	54	5270	60
11ac VHT40	62	5310	40.42
11ac VHT80	58	5290	81.57

In the 5.5G Band

Mode	Channel	Frequency (MHz)	26dB Bandwidth(MHz)
11a	100	5500	23.67
11a	120	5600	30
11a	140	5700	21.36
11ac VHT20	100	5500	22.08
11ac VHT20	120	5600	29.99
11ac VHT20	140	5700	22.21
11ac VHT40	102	5510	42.02
11ac VHT40	118	5590	60
11ac VHT40	134	5670	59.21
11ac VHT80	106	5530	80.85
11ac VHT80	122	5610	119.4

UNII Emission Bandwidth Result (Within 5470-5725MHz band)			
Modulation Type	Data Rate / MCS	Frequency (MHz)	26dB Bandwidth(MHz)
11a	6 Mbps	5720	21.60
11ac VHT20	NSS1-MCS0	5720	21.83
11ac VHT40	NSS1-MCS0	5710	54.68
11ac VHT80	NSS1-MCS0	5690	110.50