

8. 6dB&26dB Bandwidth Measurement

8.1 Provisions Applicable

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

8.2 Measurement Procedure

◆ -6dB bandwidth (DTS bandwidth) Test setting:

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on operation frequency individually.
3. Set RBW = 100kHz.
4. Set the VBW $\geq 3 \times$ RBW. Detector = Peak. Trace mode = max hold.
5. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.

◆ 99% occupied bandwidth test setting:

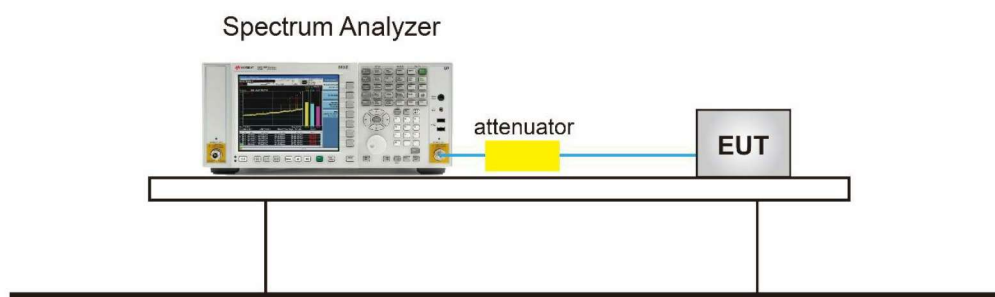
1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set Span = approximately 1.5 to 5 times the OBW, centered on a nominal channel
The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW; Sweep = auto; Detector function = peak
4. Set SPA Trace 1 Max hold, then View.

◆ -26dB Bandwidth test setting:

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW > RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Measure the maximum width of the emission that is 26 dB down from the maximum of the emission.
Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

Note: The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

8.3 Measurement Setup (Block Diagram of Configuration)



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8.4 Measurement Results

Test Data of Occupied Bandwidth and -26dB Bandwidth for band 5.15-5.25 GHz					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	-26dB Bandwidth (MHz)	Limits (MHz)	Pass or Fail
802.11a	5180	16.892	23.705	N/A	Pass
	5200	16.971	25.927	N/A	Pass
	5240	16.909	24.936	N/A	Pass
802.11n20	5180	18.182	27.815	N/A	Pass
	5200	18.119	26.509	N/A	Pass
	5240	18.139	27.128	N/A	Pass
802.11n40	5190	36.884	45.554	N/A	Pass
	5230	36.704	46.407	N/A	Pass
802.11ac20	5180	18.101	25.708	N/A	Pass
	5200	18.215	26.804	N/A	Pass
	5240	18.195	25.826	N/A	Pass
802.11ac40	5190	36.757	47.792	N/A	Pass
	5230	36.770	46.145	N/A	Pass
802.11ax20	5180	19.196	25.537	N/A	Pass
	5200	19.142	27.060	N/A	Pass
	5240	19.097	25.137	N/A	Pass
802.11ax40	5190	38.002	44.360	N/A	Pass
	5230	38.073	46.351	N/A	Pass

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Test Data of Occupied Bandwidth and -26dB Bandwidth for band 5.25-5.35 GHz					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	-26dB Bandwidth (MHz)	Limits (MHz)	Pass or Fail
802.11a	5260	16.898	25.617	N/A	Pass
	5300	16.982	25.124	N/A	Pass
	5320	16.955	25.856	N/A	Pass
802.11n20	5260	18.161	26.454	N/A	Pass
	5300	18.150	26.799	N/A	Pass
	5320	18.095	26.845	N/A	Pass
802.11n40	5270	36.810	46.655	N/A	Pass
	5310	36.797	47.466	N/A	Pass
802.11ac20	5260	18.148	26.294	N/A	Pass
	5300	18.191	26.625	N/A	Pass
	5320	18.133	26.230	N/A	Pass
802.11ac40	5270	36.862	45.678	N/A	Pass
	5310	36.787	48.538	N/A	Pass
802.11ax20	5260	19.134	25.891	N/A	Pass
	5300	19.208	25.255	N/A	Pass
	5320	19.157	25.851	N/A	Pass
802.11ax40	5270	38.015	43.952	N/A	Pass
	5310	38.001	46.829	N/A	Pass

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Test Data of Occupied Bandwidth and -26dB Bandwidth for band 5.47-5.725 GHz					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	-26dB Bandwidth (MHz)	Limits (MHz)	Pass or Fail
802.11a	5500	17.098	24.608	N/A	Pass
	5600	17.020	25.289	N/A	Pass
	5700	17.119	25.778	N/A	Pass
802.11n20	5500	18.282	26.776	N/A	Pass
	5600	18.314	26.806	N/A	Pass
	5700	18.332	26.799	N/A	Pass
802.11n40	5510	37.100	47.552	N/A	Pass
	5590	37.199	48.432	N/A	Pass
	5670	37.018	48.391	N/A	Pass
802.11ac20	5500	18.345	26.948	N/A	Pass
	5600	18.334	27.301	N/A	Pass
	5700	18.341	27.536	N/A	Pass
802.11ac40	5510	37.092	46.542	N/A	Pass
	5590	37.137	48.318	N/A	Pass
	5670	37.059	48.955	N/A	Pass
802.11ax20	5500	19.247	26.008	N/A	Pass
	5600	19.287	26.007	N/A	Pass
	5700	19.307	28.075	N/A	Pass
802.11ax40	5510	38.185	46.251	N/A	Pass
	5590	38.143	45.769	N/A	Pass
	5670	38.227	47.737	N/A	Pass

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Test Data of Occupied Bandwidth and DTS Bandwidth for band 5.725-5.85 GHz					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (MHz)	DTS Bandwidth (MHz)	Limits (MHz)	Pass or Fail
802.11a	5745	17.128	16.478	0.5	Pass
	5785	17.119	16.434	0.5	Pass
	5825	17.149	16.425	0.5	Pass
802.11n20	5745	18.280	17.707	0.5	Pass
	5785	18.324	17.705	0.5	Pass
	5825	18.404	17.734	0.5	Pass
802.11n40	5755	37.096	36.709	0.5	Pass
	5795	37.149	36.833	0.5	Pass
802.11ac20	5745	18.363	17.742	0.5	Pass
	5785	18.345	17.739	0.5	Pass
	5825	18.367	17.748	0.5	Pass
802.11ac40	5755	37.198	36.597	0.5	Pass
	5795	37.146	36.488	0.5	Pass
802.11ax20	5180	19.296	19.004	0.5	Pass
	5200	19.238	18.979	0.5	Pass
	5240	19.280	19.090	0.5	Pass
802.11ax40	5190	38.156	37.955	0.5	Pass
	5230	38.153	37.810	0.5	Pass

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Test Graphs of Occupied Bandwidth and -26dB Bandwidth for band 5.15-5.25 GHz



Test_Graph_802.11a_ANT1_5180_6Mbps_OBW



Test_Graph_802.11a_ANT1_5200_6Mbps_OBW

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Test_Graph_802.11a_ANT1_5240_6Mbps_OBW



Test_Graph_802.11n20_ANT1_5180_MCS0_OBW

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Test_Graph_802.11n20_ANT1_5200_MCS0_OBW



Test_Graph_802.11n20_ANT1_5240_MCS0_OBW

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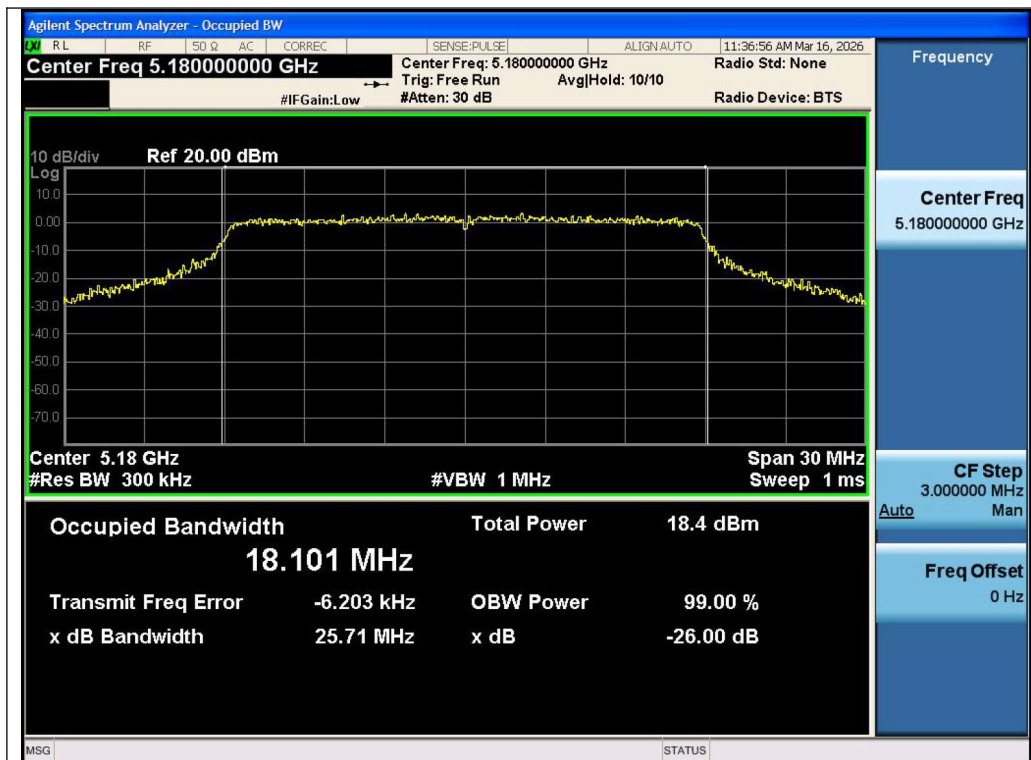


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Test_Graph_802.11n40_ANT1_5230_MCS0_OBW

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Test_Graph_802.11ac20_ANT1_5180_MCS0_OBW



Test_Graph_802.11ac20_ANT1_5200_MCS0_OBW

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Test_Graph_802.11ac40_ANT1_5190_MCS0_OBW

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Test_Graph_802.11ac40_ANT1_5230_MCS0_OBW

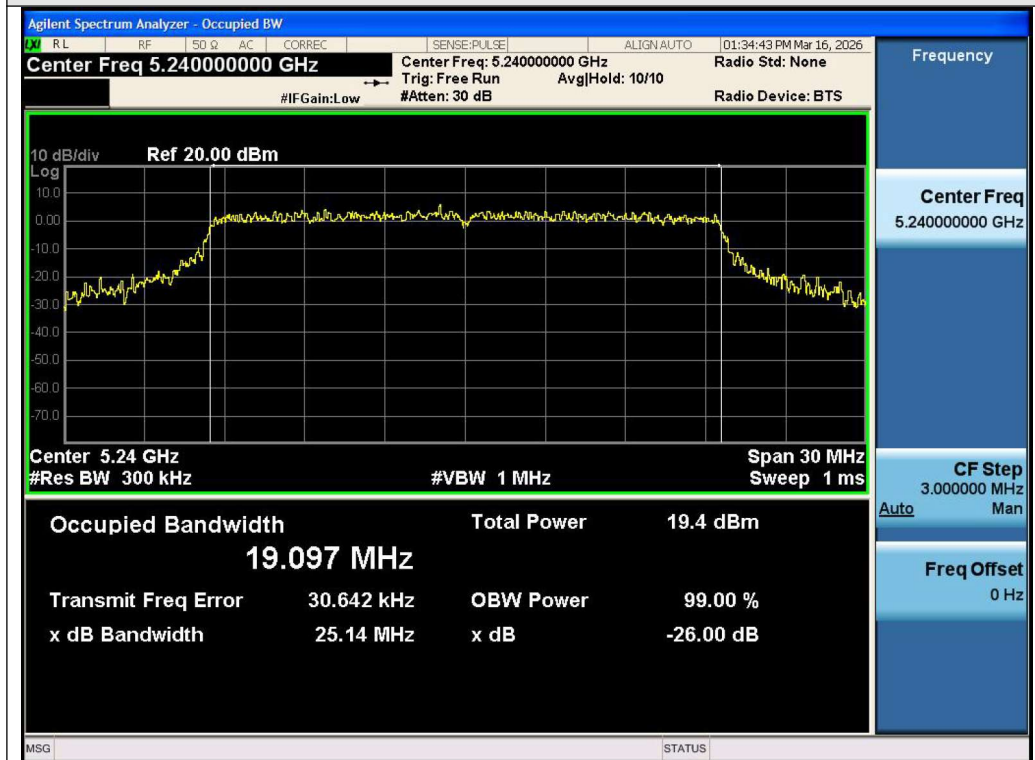


Test_Graph_802.11ax20_ANT1_5180_MCS0_OBW

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Test_Graph_802.11ax20_ANT1_5200_MCS0_OBW



Test_Graph_802.11ax20_ANT1_5240_MCS0_OBW

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Test_Graph_802.11ax40_ANT1_5190_MCS0_OBW



Test_Graph_802.11ax40_ANT1_5230_MCS0_OBW

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Test Graphs of Occupied Bandwidth for band 5.250-5.350 GHz



Test_Graph_802.11a_ANT1_5260_6Mbps_OBW



Test_Graph_802.11a_ANT1_5300_6Mbps_OBW

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Test_Graph_802.11a_ANT1_5320_6Mbps_OBW



Test_Graph_802.11n20_ANT1_5260_MCS0_OBW

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Test_Graph_802.11n40_ANT1_5270_MCS0_OBW

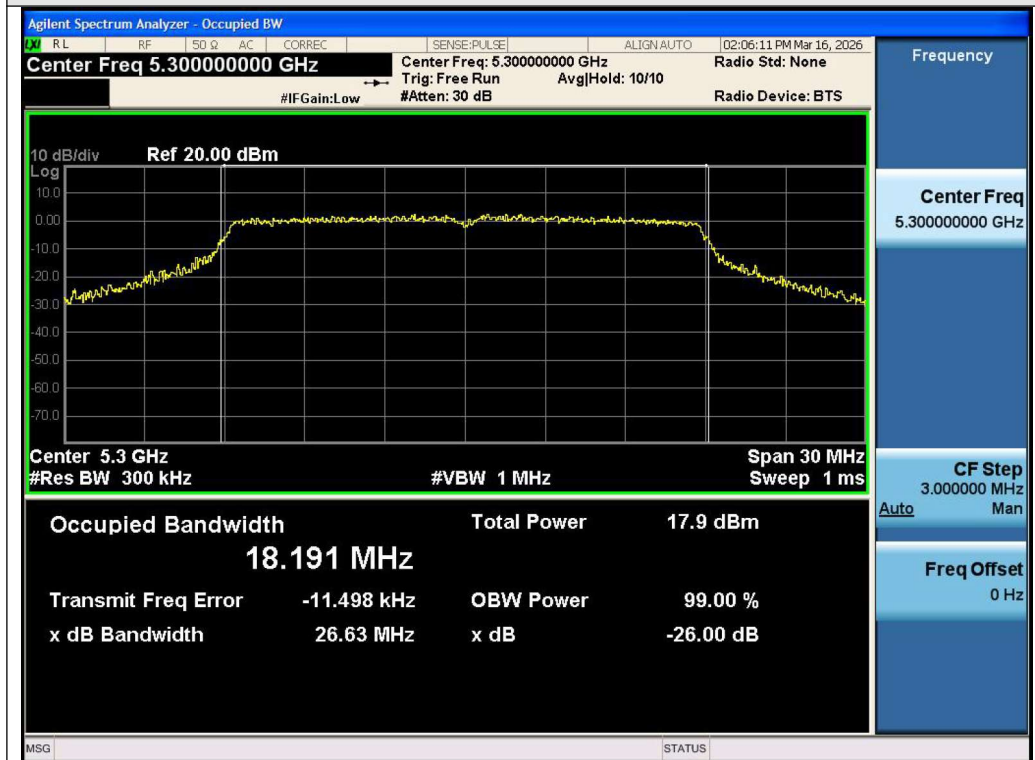


Test_Graph_802.11n40_ANT1_5310_MCS0_OBW

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