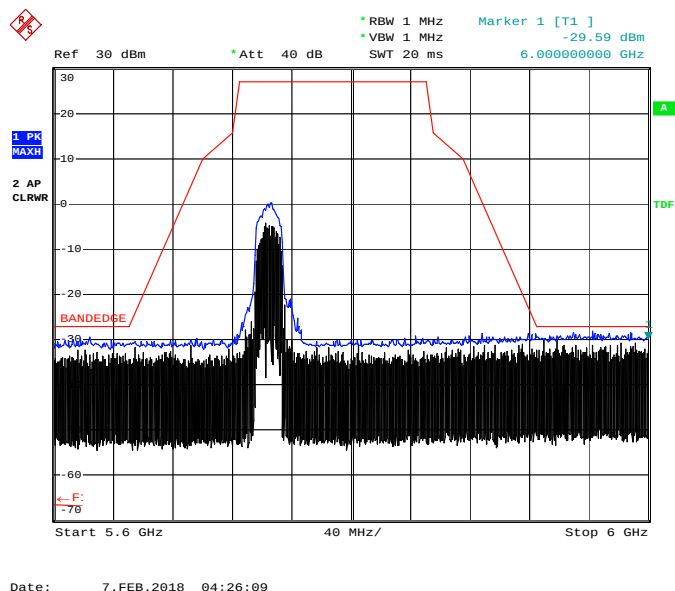
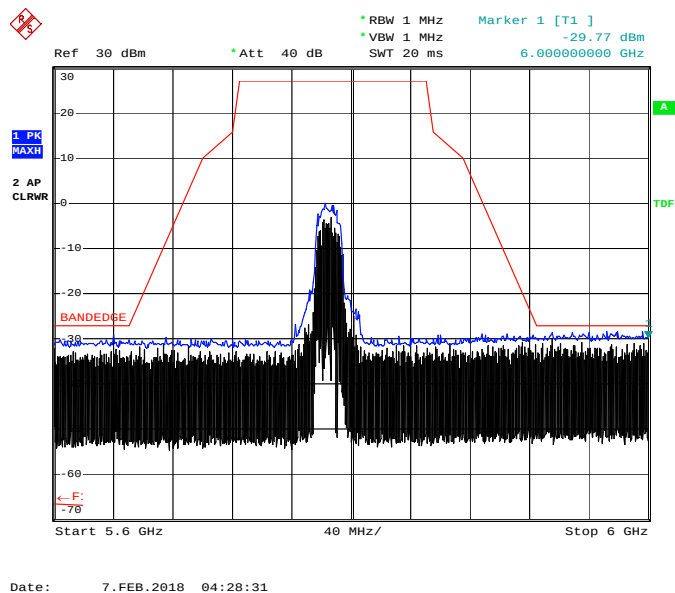


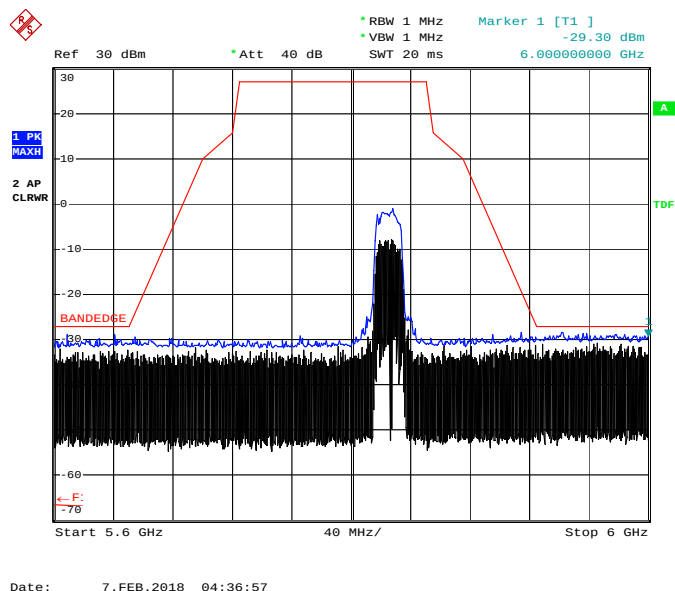
Out-of-band emission limits for U-NII-3 @ 11n20 chain0+1 ch149 Lower Mode



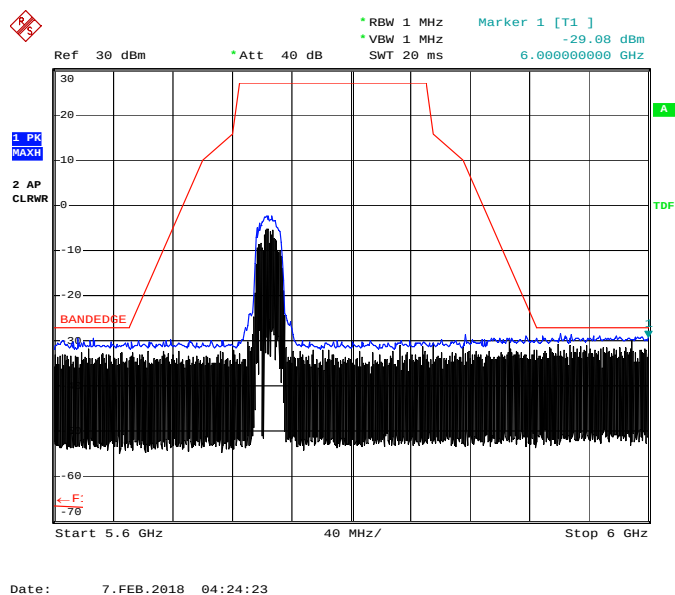
Out-of-band emission limits for U-NII-3 @ 11n20 chain0+1 ch157 Mid. Mode



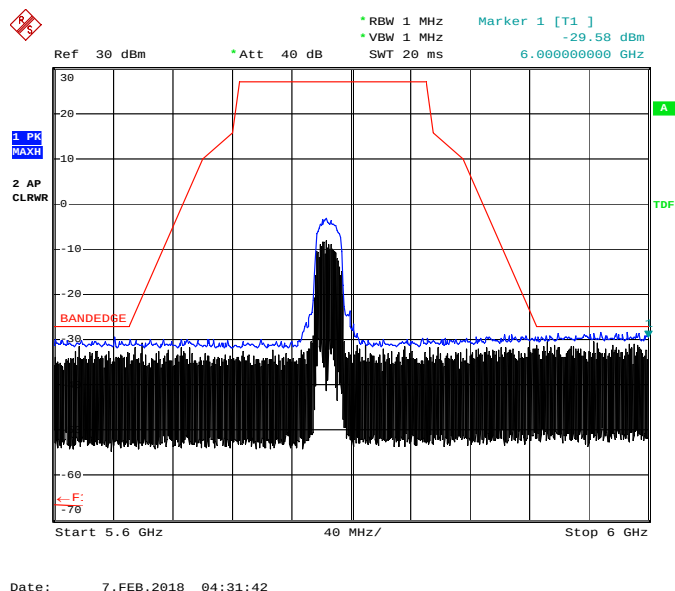
Out-of-band emission limits for U-NII-3 @ 11n20 chain0+1 ch165 Upper Mode



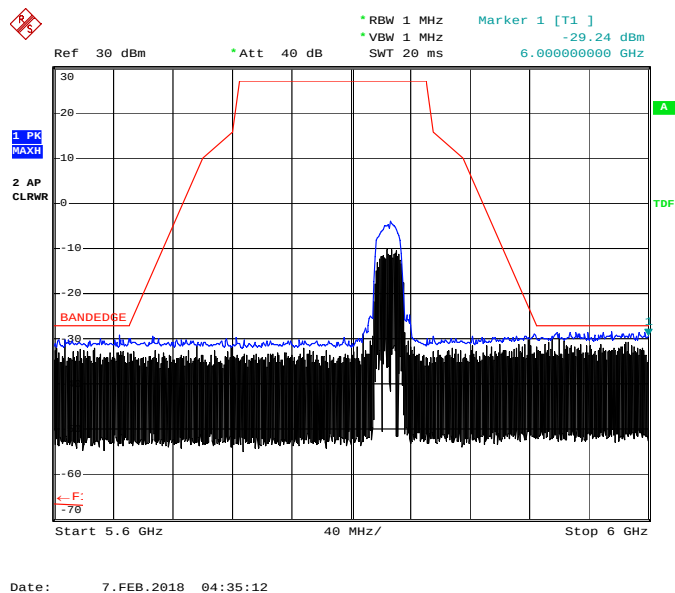
Out-of-band emission limits for U-NII-3 @ 11n20 chain1 ch149 Lower Mode



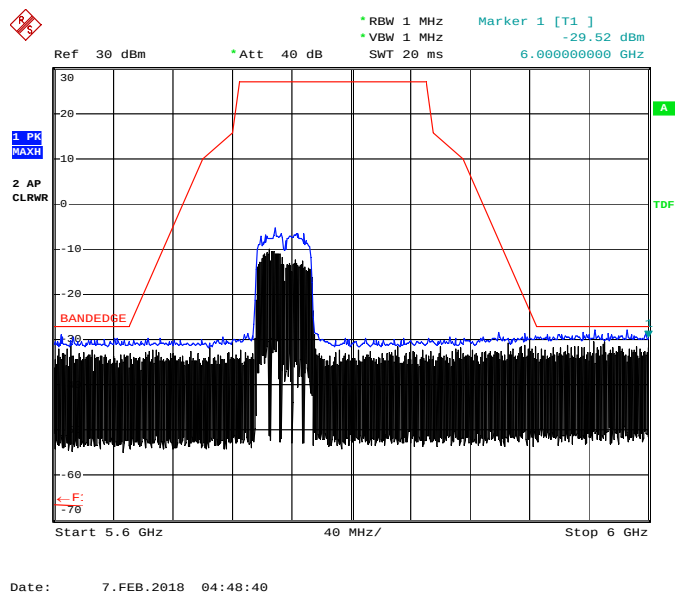
Out-of-band emission limits for U-NII-3 @ 11n20 chain1 ch157 Mid. Mode



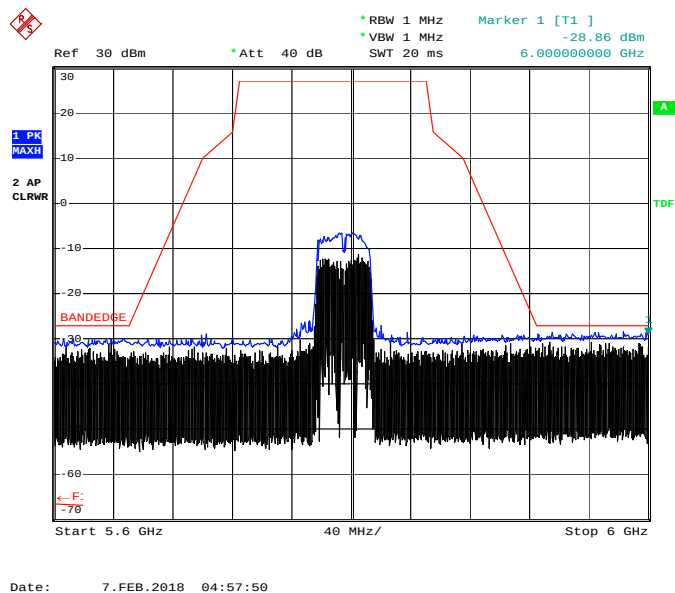
Out-of-band emission limits for U-NII-3 @ 11n20 chain1 ch165 Upper Mode



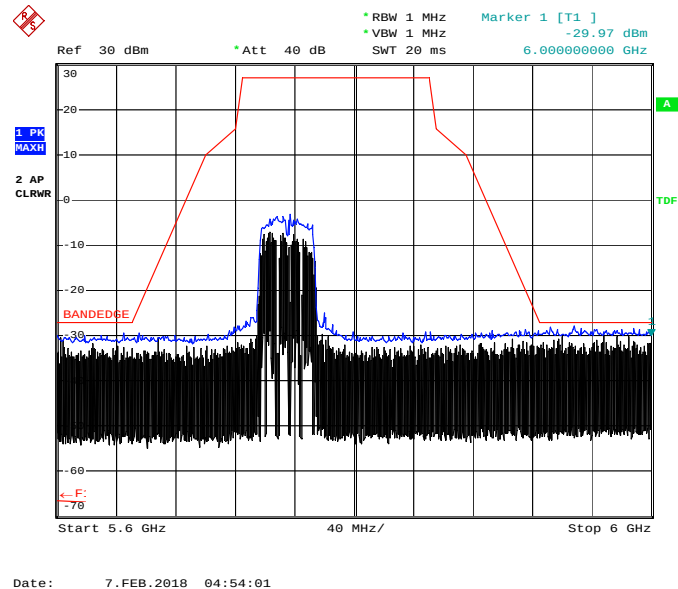
Out-of-band emission limits for U-NII-3 @ 11n40 chain0 ch151 Lower Mode



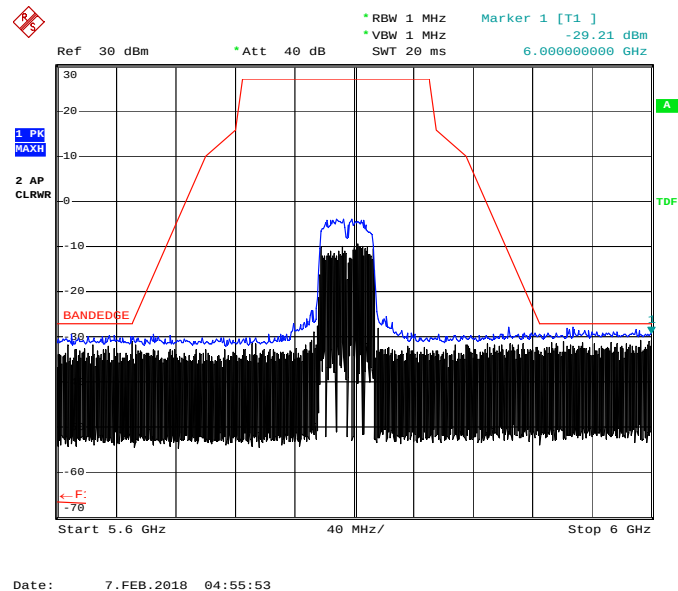
Out-of-band emission limits for U-NII-3 @ 11n40 chain0 ch159 Upper Mode



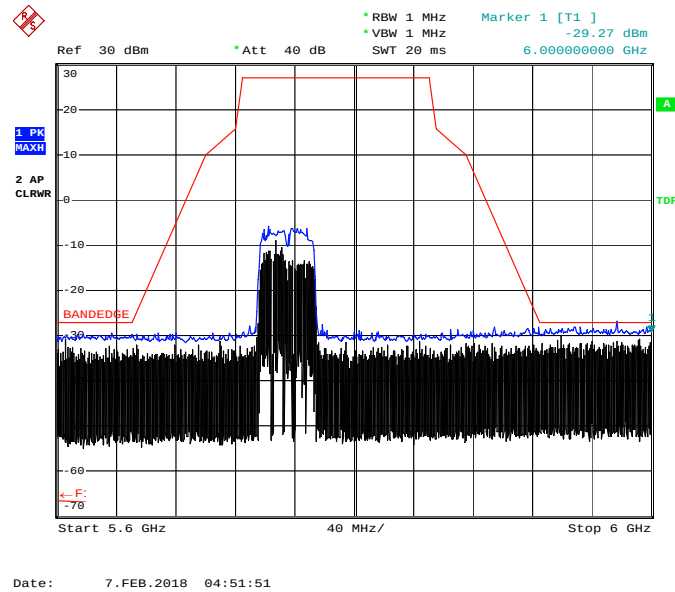
Out-of-band emission limits for U-NII-3 @ 11n40 chain0+1 ch151 Lower Mode



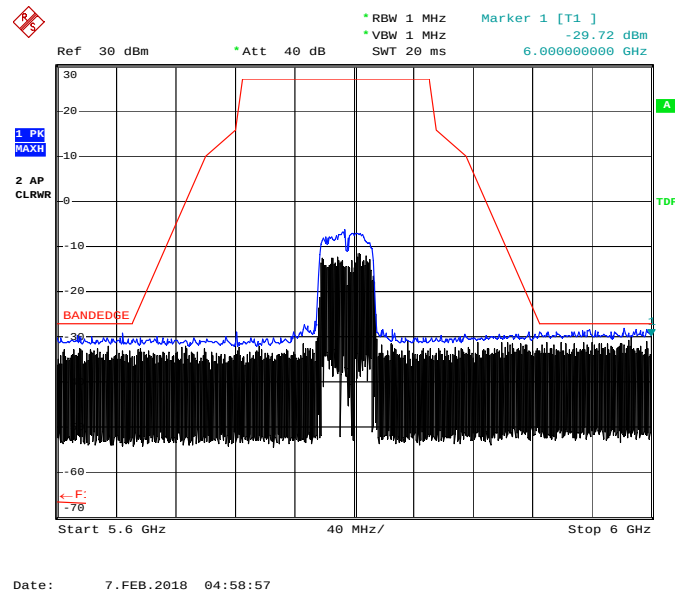
Out-of-band emission limits for U-NII-3 @ 11n40 chain0+1 ch159 Upper Mode



Out-of-band emission limits for U-NII-3 @ 11n40 chain1 ch151 Lower Mode



Out-of-band emission limits for U-NII-3 @ 11n40 chain1 ch159 Upper Mode



14. 佔用頻寬

14.1 適用規範

發射頻寬(emission bandwidth)：係測量訊號兩點之間寬度而得，此兩點 調變載波中心頻率上下兩邊，相對其調變載波最高功率降低 26 dB 處。26 dB 發射頻寬可用於最大傳導輸出功率限制值之計算。

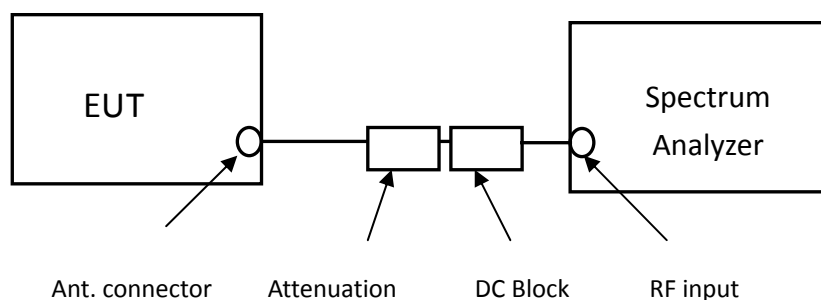
依據國家通訊傳播委員會低功率射頻電機技術規範4.7.5之規定，5.725 GHz ~ 5.850 GHz 頻段，6 dB頻寬至少應有500 kHz。

針對操作在 5.15 GHz ~ 5.25 GHz 和 5.725 GHz ~ 5.850 GHz 的發射機 99%頻寬如占用到 5.25 GHz ~ 5.35 GHz 及 5.47 GHz ~ 5.725 GHz 須測試 DFS。

14.2 測試方法

此為 RF 傳導測試，將發射機之天線埠經由適當之衰減直接連接至測試儀器。

14.3 測試配置圖



14.4 測試結果

溫度 : 25 °C

相對濕度 : 50 %

大氣壓力 : 1008 hPa

測試日期: 2018/1/23

儀器設定

RBW : 100 kHz

VBW : 300 kHz

UNII-1 SISO

Mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
802.11a Chain0	36	5180	20.297811
	44	5220	20.414416
	48	5240	20.050387
802.11a Chain1	36	5180	20.274374
	44	5220	20.237112
	48	5240	20.230377
802.11n (HT 20) Chain0	36	5180	20.568687
	44	5220	20.70585
	48	5240	20.390416
802.11n (HT 20) Chain1	36	5180	20.701477
	44	5220	20.608757
	48	5240	20.350077
802.11n (HT 40) Chain0	38	5190	41.479187
	46	5230	41.331943
802.11n (HT 40) Chain1	38	5190	41.469419
	46	5230	41.204797
802.11ac (HT 80) Chain0	42	5210	80.254868
802.11ac (HT 80) Chain1	42	5210	80.504288

MIMO

Mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
802.11n (HT 20) Chain0	36	5180	20.752661
	44	5220	21.222999
	48	5240	20.353425
802.11n (HT 20) Chain1	36	5180	20.540977
	44	5220	20.166959
	48	5240	20.211944
802.11n (HT 40) Chain0	38	5190	41.439603
	46	5230	40.33948
802.11n (HT 40) Chain1	38	5190	41.364166
	46	5230	40.534329
802.11ac (HT 80) Chain0	42	5210	80.393235
802.11ac (HT 80) Chain1	42	5210	80.250188

**UNII-2A
SISO**

Mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
802.11a Chain0	52	5260	24.095641
	60	5300	22.452862
	64	5320	22.566261
802.11a Chain1	52	5260	20.34057
	60	5300	20.073696
	64	5320	20.375663
802.11n (HT 20) Chain0	52	5260	20.642164
	60	5300	20.669315
	64	5320	20.679809
802.11n (HT 20) Chain1	52	5260	20.761191
	60	5300	20.721207
	64	5320	20.756986
802.11n (HT 40) Chain0	54	5270	41.676423
	62	5310	41.633773
802.11n (HT 40) Chain1	54	5270	41.392786
	62	5310	41.271174
802.11ac (HT 80) Chain0	58	5290	81.132395
802.11ac (HT 80)Chain1	58	5290	81.080919

MIMO

Mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
802.11n (HT 20) Chain0	52	5260	23.37292
	60	5300	23.229271
	64	5320	23.306197
802.11n (HT 20) Chain1	52	5260	20.249645
	60	5300	20.500976
	64	5320	20.657159
802.11n (HT 40) Chain0	54	5270	41.29667
	62	5310	41.571671
802.11n (HT 40) Chain1	54	5270	41.270529
	62	5310	41.510584
802.11ac (HT 80) Chain0	58	5290	80.462673
802.11ac (HT 80) Chain1	58	5290	80.057769

UNII-2C
SISO

Mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
802.11a Chain0	100	5500	20.455378
	120	5600	20.428094
	140	5700	20.471127
802.11a Chain1	100	5500	20.359438
	120	5600	20.342218
	140	5700	20.488115
802.11n (HT 20) Chain0	100	5500	20.651443
	120	5600	20.789592
	140	5700	20.714739
802.11n (HT 20) Chain1	100	5500	20.655823
	120	5600	20.638081
	140	5700	20.692284
802.11n (HT 40) Chain0	102	5510	41.471486
	118	5590	41.577753
	134	5670	41.800995
802.11n (HT 40) Chain1	102	5510	41.448841
	118	5590	41.418863
	134	5670	41.313251
802.11ac (HT 80) Chain0	106	5530	80.83411
	122	5610	81.249298
802.11ac (HT 80) Chain1	106	5530	81.256748
	122	5610	81.229212

MIMO

Mode	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
802.11n (HT 20) Chain0	100	5500	20.659095
	120	5600	20.798988
	140	5700	20.74053
802.11n (HT 20) Chain1	100	5500	20.286989
	120	5600	20.196524
	140	5700	20.368444
802.11n (HT 40) Chain0	102	5510	41.444514
	118	5590	41.681673
	134	5670	41.762822
802.11n (HT 40) Chain1	102	5510	41.423603
	118	5590	41.162422
	134	5670	41.536069
802.11ac (HT 80) Chain0	106	5530	80.190244
	122	5610	80.125997
802.11ac (HT 80) Chain1	106	5530	79.706572
	122	5610	79.880975

UNII-3 SISO

Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Test Result
802.11a Chain0	149	5745	16.281	>0.5	Pass
	157	5785	15.071		Pass
	165	5825	15.67		Pass
802.11a Chain1	149	5745	14.038	>0.5	Pass
	157	5785	14.832		Pass
	165	5825	15.09		Pass
802.11n (HT 20) Chain0	149	5745	14.689	>0.5	Pass
	157	5785	15.122		Pass
	165	5825	13.864		Pass
802.11n (HT 20) Chain1	149	5745	15.459	>0.5	Pass
	157	5785	15.046		Pass
	165	5825	15.898		Pass
802.11n (HT 40) Chain0	151	5755	35.14	>0.5	Pass
	159	5795	35.139		Pass
802.11n (HT 40) Chain1	151	5755	35.149	>0.5	Pass
	159	5795	35.107		Pass
802.11ac (HT 80) Chain0	155	5775	75.789	>0.5	Pass
802.11ac (HT 80) Chain1	155	5775	75.36	>0.5	Pass

MIMO

Mode	Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Test Result
802.11n (HT 20) Chain0	149	5745	15.026	>0.5	Pass
	157	5785	15.024		Pass
	165	5825	15.004		Pass
802.11n (HT 20) Chain1	149	5745	15.652	>0.5	Pass
	157	5785	15.094		Pass
	165	5825	15.065		Pass
802.11n (HT 40) Chain0	151	5755	35.093	>0.5	Pass
	159	5795	35.103		Pass
802.11n (HT 40) Chain1	151	5755	35.143	>0.5	Pass
	159	5795	35.151		Pass
802.11ac (HT 80) Chain0	155	5775	75.747	>0.5	Pass
802.11ac (HT 80) Chain1	155	5775	76.056	>0.5	Pass

以上測試結果符合規範

**UNII-1
SISO**

Mode	Channel	Frequency (MHz)	99% Bandwidth (MHz)	upper Frequency (MHz)	upper limit
802.11a chain0	36	5180	16.543		
	44	5220	16.579	5230.202	5250
	48	5240	16.568	5249.871	5250
802.11a chain1	36	5180	16.500		
	44	5220	16.589	5230.082	5250
	48	5240	16.579	5249.993	5250
802.11n (HT 20) chain0	36	5180	17.646		
	44	5220	17.626	5230.335	5250
	48	5240	17.753	5249.992	5250
802.11n (HT 20) chain1	36	5180	17.635		
	44	5220	17.564	5230.309	5250
	48	5240	17.675	5249.975	5250
802.11n (HT 40) chain0	38	5190	36.296		
	46	5230	36.175	5249.962	5250
802.11n (HT 40) chain1	38	5190	36.059		
	46	5230	36.165	5249.549	5250
802.11ac (VHT80) chain0	42	5210	75.854	5249.644	5250
802.11ac (VHT80) chain1	42	5210	75.986	5249.994	5250

MIMO

Mode	Channel	Frequency (MHz)	99% Bandwidth (MHz)	upper Frequency (MHz)	upper limit
802.11n (HT 20) chain0	36	5180	17.687		
	44	5220	17.560	5230.331	5250
	48	5240	17.616	5249.983	5250
802.11n (HT 20) chain1	36	5180	17.583		
	44	5220	17.586	5230.029	5250
	48	5240	17.628	5249.971	5250
802.11n (HT 40) chain0	38	5190	36.130		
	46	5230	36.208	5248.8	5250
802.11n (HT 40) chain1	38	5190	36.142		
	46	5230	36.159	5248.8	5250
802.11ac (VHT80) chain0	42	5210	75.850	5249.973	5250
802.11ac (VHT80) chain1	42	5210	75.606	5249.99	5250

UNII-2A

SISO

Mode	Channel	Frequency (MHz)	99% Bandwidth (MHz)
802.11a chain0	52	5260	16.645
	60	5300	16.614
	64	5320	16.641
802.11a chain1	52	5260	16.521
	60	5300	16.632
	64	5320	16.643
802.11n (HT 20) chain0	52	5260	17.668
	60	5300	17.671
	64	5320	17.571
802.11n (HT 20) chain1	52	5260	17.593
	60	5300	17.636
	64	5320	17.608
802.11n (HT 40) chain0	54	5270	36.185
	62	5310	36.103
802.11n(HT 40)chain1	54	5270	36.067
	62	5310	36.139
802.11ac (VHT80) chain0	58	5290	76.050
802.11ac (VHT80) chain1	58	5290	75.861

MIMO

Mode	Channel	Frequency (MHz)	99% Bandwidth (MHz)
802.11n (HT 20) chain0	52	5260	17.612
	60	5300	17.577
	64	5320	17.629
802.11n (HT 20) chain1	52	5260	17.594
	60	5300	17.545
	64	5320	17.539
802.11n (HT 40) chain0	54	5270	36.198
	62	5310	36.131
802.11n (HT 40) chain1	54	5270	36.165
	62	5310	36.099
802.11ac(VHT80) chain0	58	5290	76.093
802.11ac(VHT80) chain1	58	5290	75.936

UNII-2C
SISO

Mode	Channel	Frequency (MHz)	99% Bandwidth (MHz)
802.11a chain0	100	5500	16.550
	120	5600	16.527
	140	5700	16.667
802.11a chain1	100	5500	16.527
	120	5600	16.561
	140	5700	16.630
802.11n (HT 20) chain0	100	5500	17.610
	120	5600	17.701
	140	5700	17.621
802.11n (HT 20) chain1	100	5500	17.698
	120	5600	17.617
	140	5700	17.627
802.11n (HT 40) chain0	102	5510	36.249
	118	5590	36.141
	134	5670	36.040
802.11n (HT 40) chain1	102	5510	36.179
	118	5590	36.090
	134	5670	36.227
802.11ac(VHT80) chain0	106	5530	75.899
	122	5610	75.954
802.11ac(VHT80) chain1	106	5530	75.954
	122	5610	76.000

MIMO

Mode	Channel	Frequency (MHz)	99% Bandwidth (MHz)
802.11n (HT 20) chain0	100	5500	17.585
	120	5600	17.630
	140	5700	17.612
802.11n (HT 20) chain1	100	5500	17.577
	120	5600	17.578
	140	5700	17.530
802.11n (HT 40) chain0	102	5510	36.138
	118	5590	36.230
	134	5670	36.281
802.11n (HT 40) chain1	102	5510	36.015
	118	5590	36.108
	134	5670	36.158
802.11ac (VHT80) chain0	106	5530	75.880
	122	5610	75.945
802.11ac (VHT80) chain1	106	5530	75.885
	122	5610	75.690

UNII-3
SISO

Mode	Channel	Frequency (MHz)	99% Bandwidth (MHz)
802.11a chain0	149	5745	16.607
	157	5785	16.528
	165	5825	16.622
802.11a chain1	149	5745	16.773
	157	5785	16.574
	165	5825	16.590
802.11n (HT 20) chain0	149	5745	17.694
	157	5785	17.680
	165	5825	17.721
802.11n (HT 20) chain1	149	5745	17.657
	157	5785	17.697
	165	5825	17.679
802.11n (HT 40) chain0	151	5755	36.259
	159	5795	36.329
802.11n (HT 40) chain1	151	5755	36.164
	159	5795	36.201
802.11ac (VHT80) chain0	155	5775	76.225
802.11ac (VHT80) chain1	155	5775	76.063

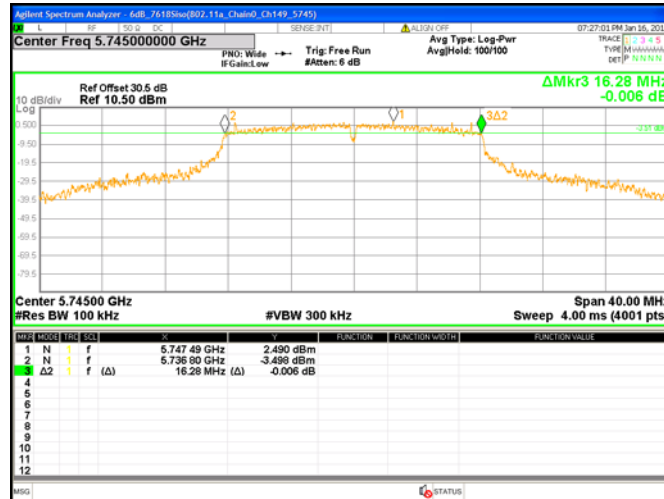
MIMO

Mode	Channel	Frequency (MHz)	99% Bandwidth (MHz)
802.11n (HT 20) chain0	149	5745	17.775
	157	5785	17.776
	165	5825	17.665
802.11n (HT 20) chain1	149	5745	17.665
	157	5785	17.648
	165	5825	17.683
802.11n (HT 40) chain0	151	5755	36.200
	159	5795	36.289
802.11n (HT 40) chain1	151	5755	36.241
	159	5795	36.196
802.11ac (VHT80) chain0	155	5775	76.151
802.11ac (VHT80) chain1	155	5775	75.957

14.5 繪圖資料

SISO

Chain0 : 6dB Bandwidth @ 802.11a Mode Ch149



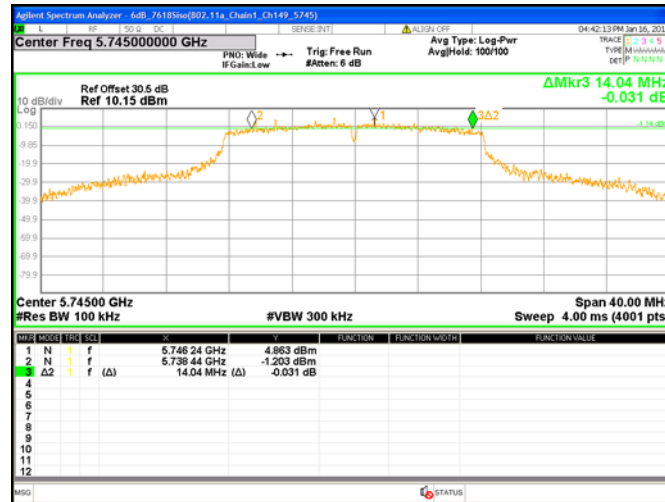
Chain0 : 6dB Bandwidth @ 802.11a Mode Ch157



Chain0 : 6dB Bandwidth @ 802.11a Mode Ch165



Chain1 : 6dB Bandwidth @ 802.11a Mode Ch149



Chain1 : 6dB Bandwidth @ 802.11a Mode Ch157



Chain1 : 6dB Bandwidth @ 802.11a Mode Ch165



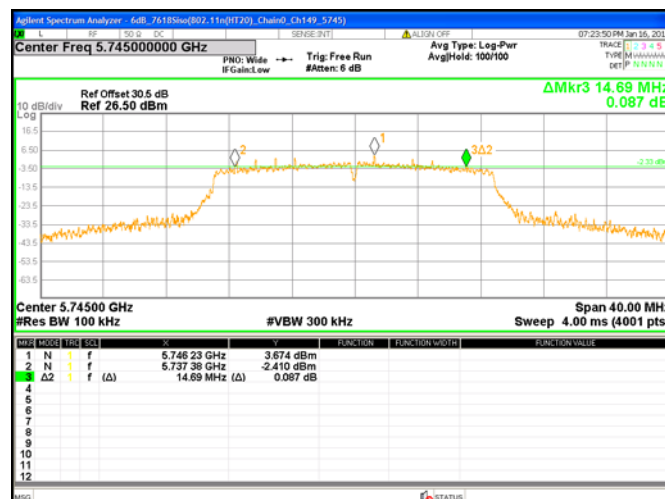
Chain0 : 6dB Bandwidth @ 802.11ac(VHT80) Mode Ch155



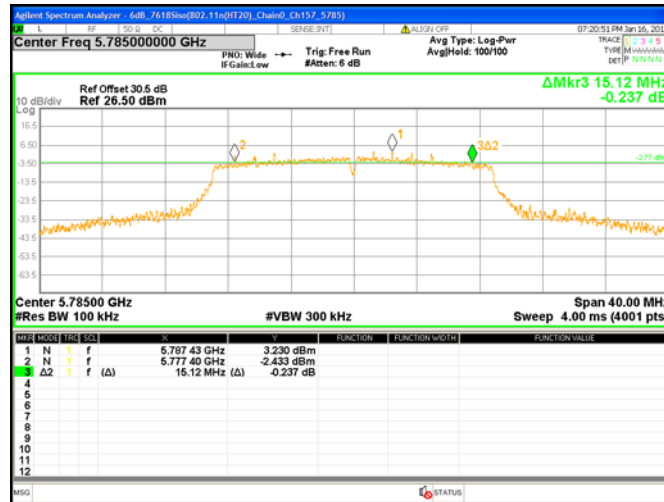
Chain1 : 6dB Bandwidth @ 802.11ac(VHT80) Mode Ch155



Chain0 : 6dB Bandwidth @ 802.11n(HT20) Mode Ch149



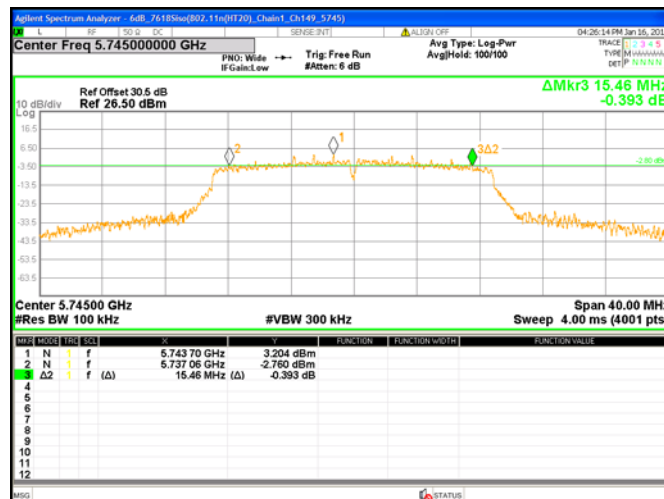
Chain0 : 6dB Bandwidth @ 802.11n(HT20) Mode Ch157



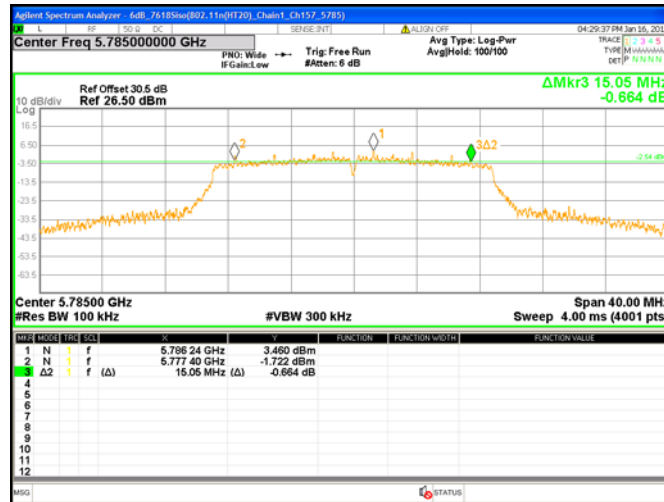
Chain0 : 6dB Bandwidth @ 802.11n(HT20) Mode Ch165



Chain1 : 6dB Bandwidth @ 802.11n(HT20) Mode Ch149



Chain1 : 6dB Bandwidth @ 802.11n(HT20) Mode Ch157



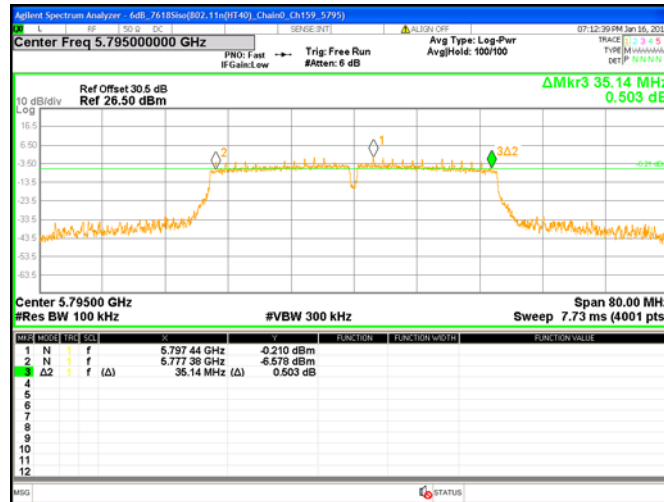
Chain1 : 6dB Bandwidth @ 802.11n(HT20) Mode Ch165



Chain0 : 6dB Bandwidth @ 802.11n(HT40) Mode Ch151



Chain0 : 6dB Bandwidth @ 802.11n(HT40) Mode Ch159



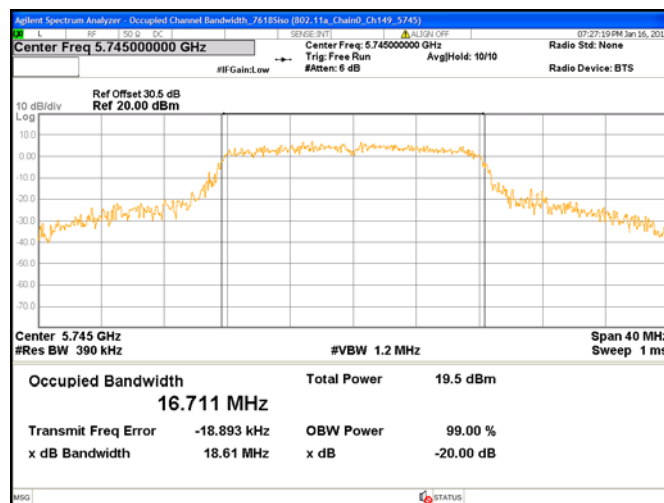
Chain1 : 6dB Bandwidth @ 802.11n(HT40) Mode Ch151



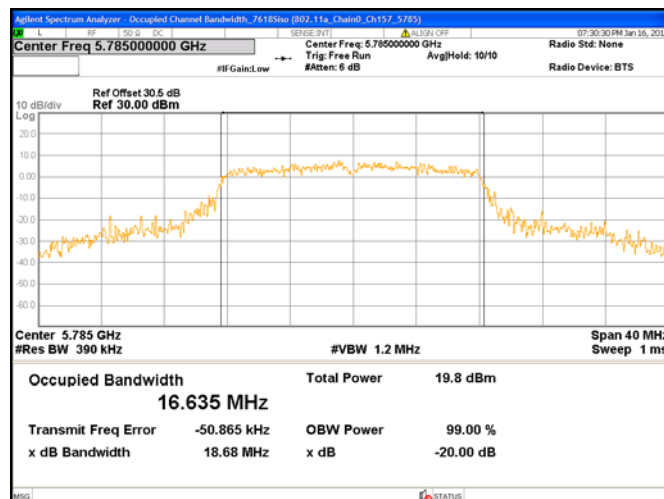
Chain1 : 6dB Bandwidth @ 802.11n(HT40) Mode Ch159



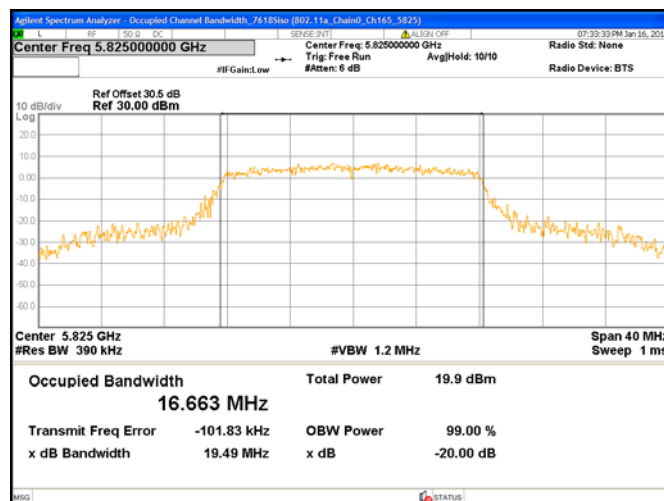
Chain0 : 99% OBW @ 802.11a Mode Ch149



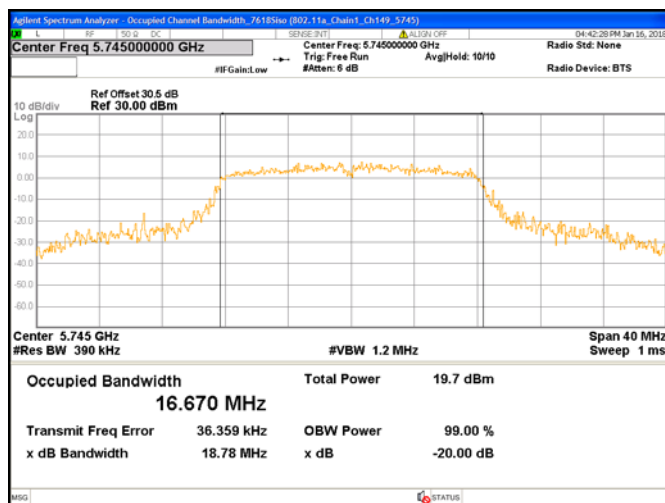
Chain0 : 99% OBW @ 802.11a Mode Ch157



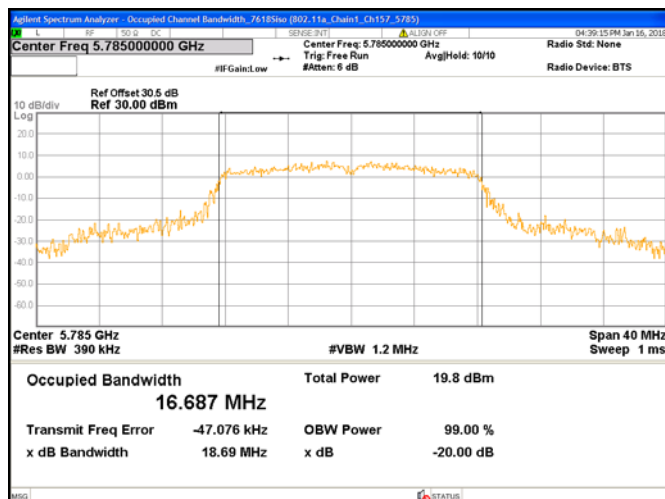
Chain0 : 99% OBW @ 802.11a Mode Ch165



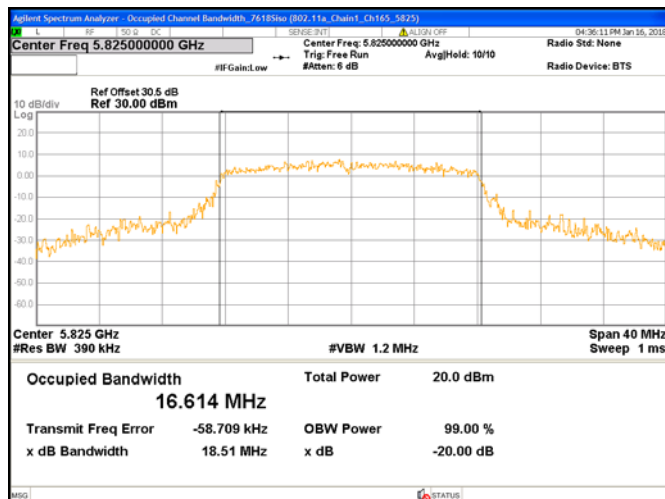
Chain1 : 99% OBW @ 802.11a Mode Ch149



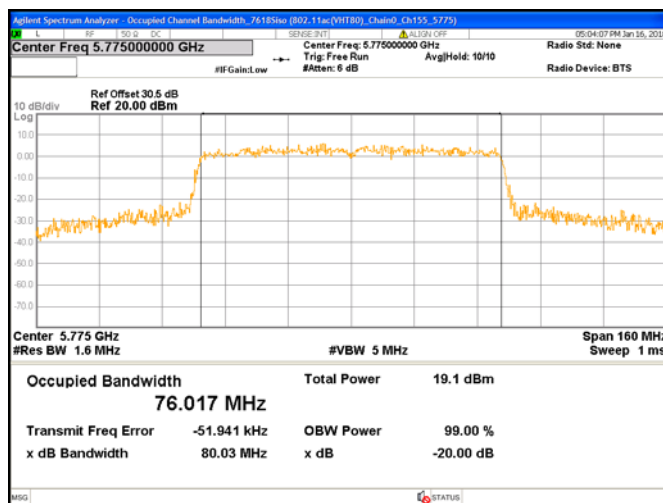
Chain1 : 99% OBW @ 802.11a Mode Ch157



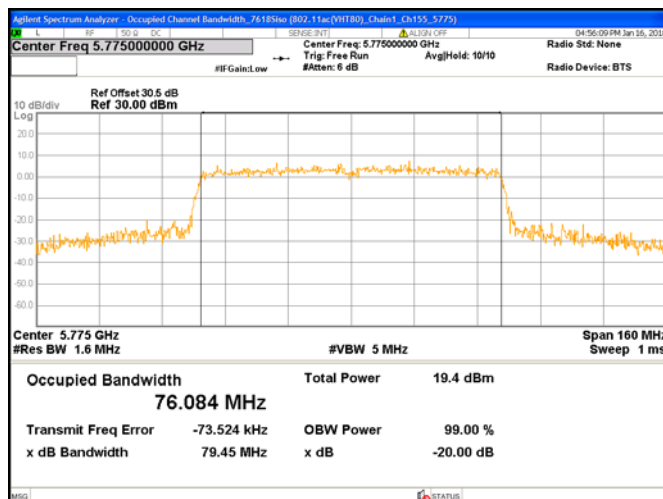
Chain1 : 99% OBW @ 802.11a Mode Ch165



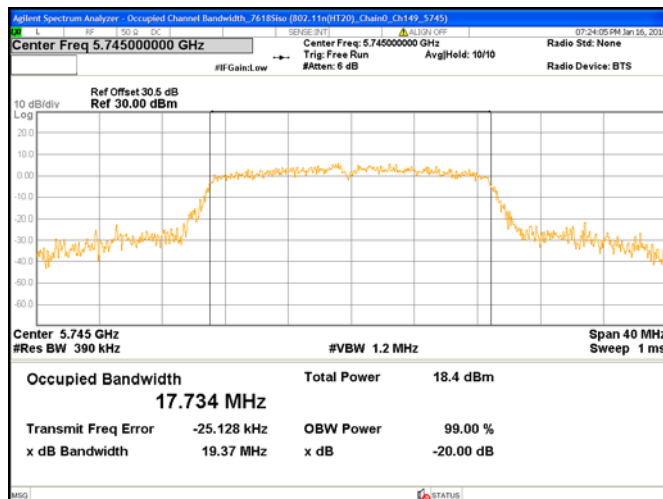
Chain0 : 99% OBW @ 802.11ac(VHT80) Mode Ch155



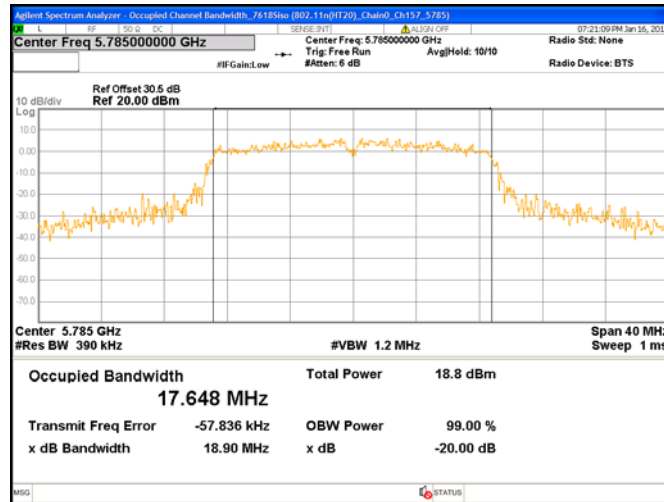
Chain1 : 99% OBW @ 802.11ac(VHT80) Mode Ch155



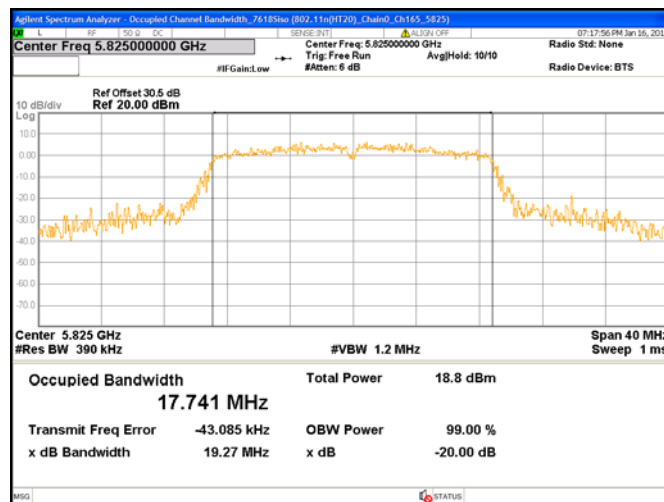
Chain0 : 99% OBW @ 802.11n(HT20) Mode Ch149



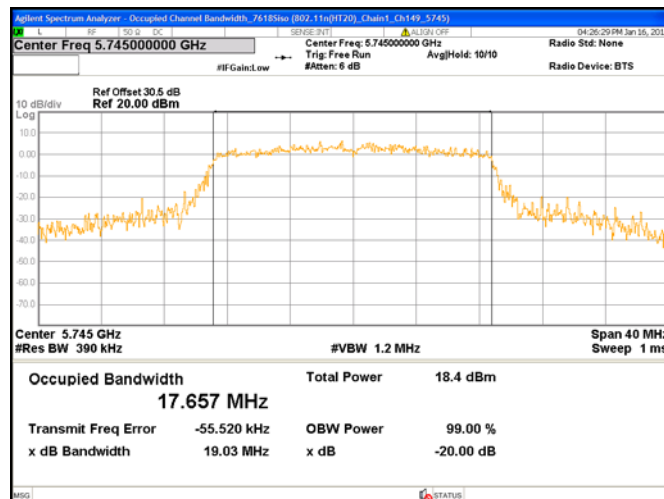
Chain0 : 99% OBW @ 802.11n(HT20) Mode Ch157



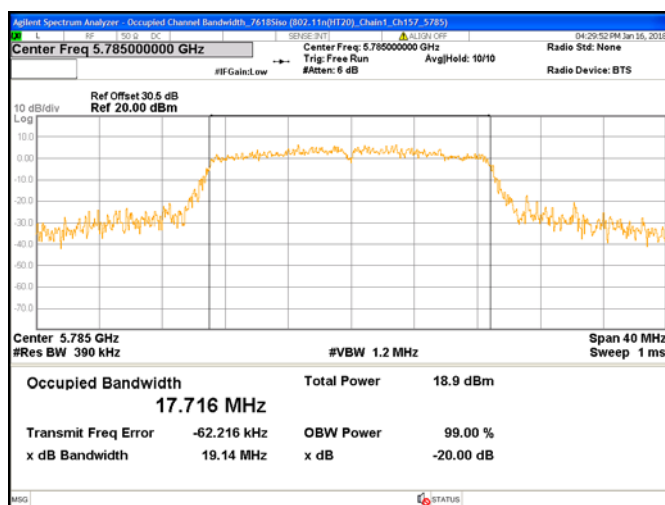
Chain0 : 99% OBW @ 802.11n(HT20) Mode Ch165



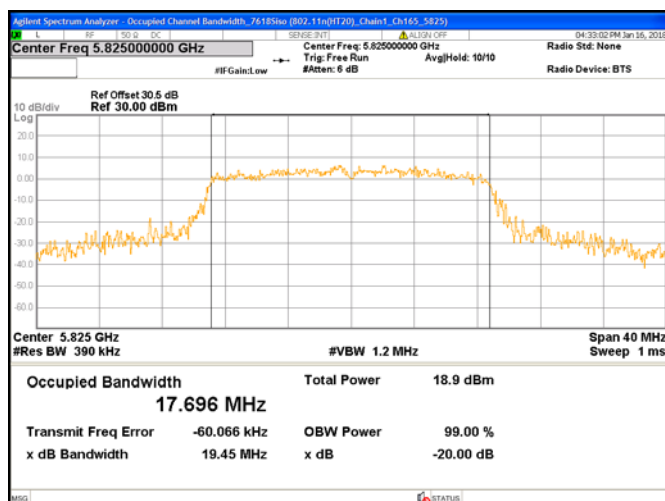
Chain1 : 99% OBW @ 802.11n(HT20) Mode Ch149



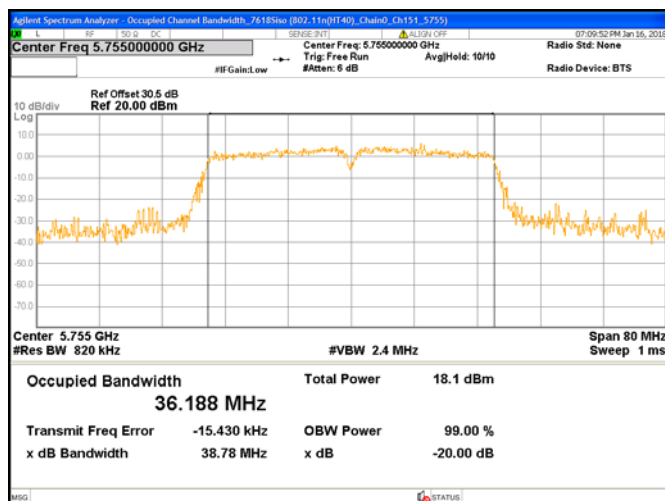
Chain1 : 99% OBW @ 802.11n(HT20) Mode Ch157



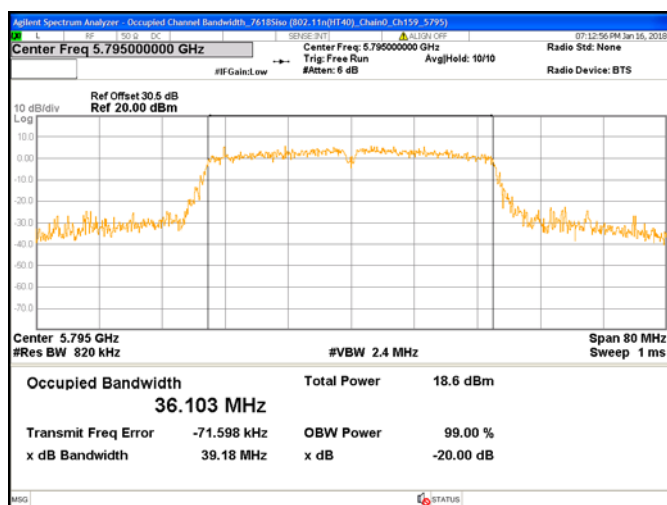
Chain1 : 99% OBW @ 802.11n(HT20) Mode Ch165



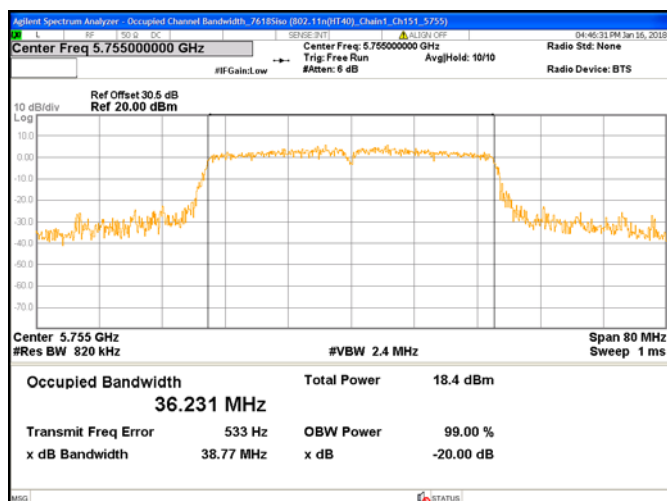
Chain0 : 99% OBW @ 802.11n(HT40) Mode Ch151



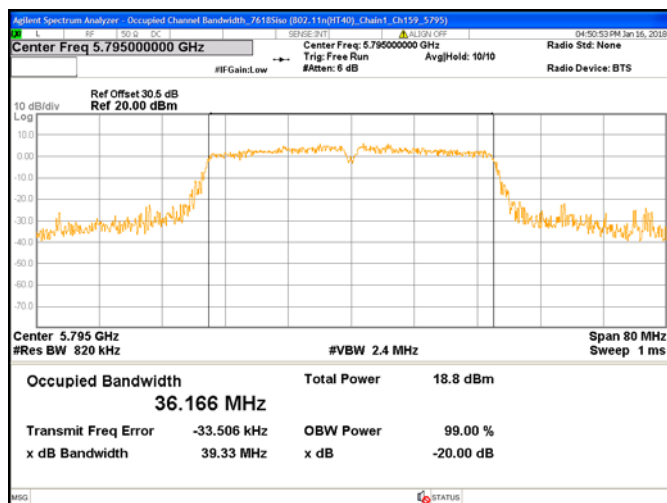
Chain0 : 99% OBW @ 802.11n(HT40) Mode Ch159



Chain1 : 99% OBW @ 802.11n(HT40) Mode Ch151



Chain1 : 99% OBW @ 802.11n(HT40) Mode Ch159



MIMO

Chain0 : 6dB Bandwidth @ 802.11ac(VHT80) Mode Ch155



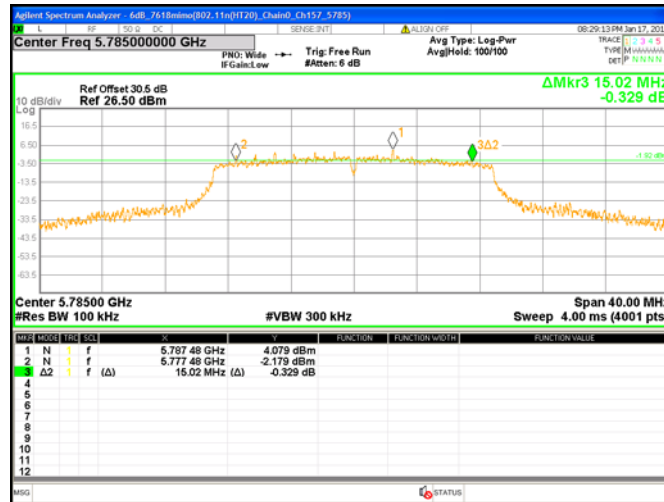
Chain1 : 6dB Bandwidth @ 802.11ac(VHT80) Mode Ch155



Chain0 : 6dB Bandwidth @ 802.11n(HT20) Mode Ch149



Chain0 : 6dB Bandwidth @ 802.11n(HT20) Mode Ch157



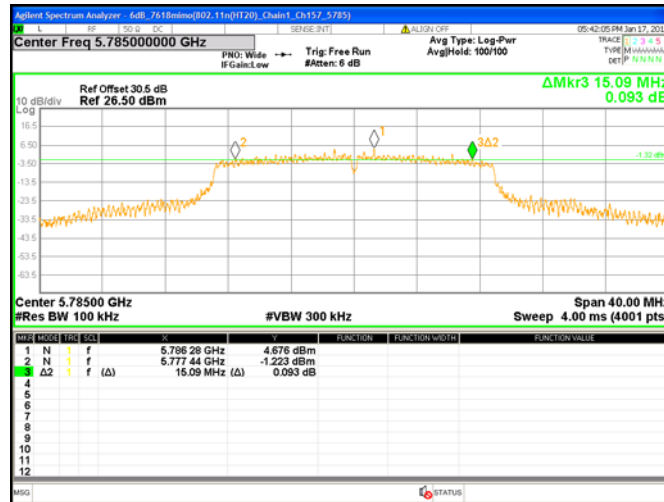
Chain0 : 6dB Bandwidth @ 802.11n(HT20) Mode Ch165



Chain1 : 6dB Bandwidth @ 802.11n(HT20) Mode Ch149



Chain1 : 6dB Bandwidth @ 802.11n(HT20) Mode Ch157



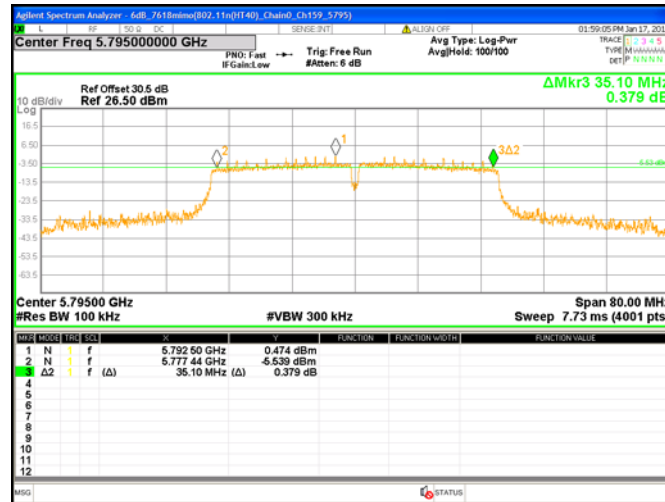
Chain1 : 6dB Bandwidth @ 802.11n(HT20) Mode Ch165



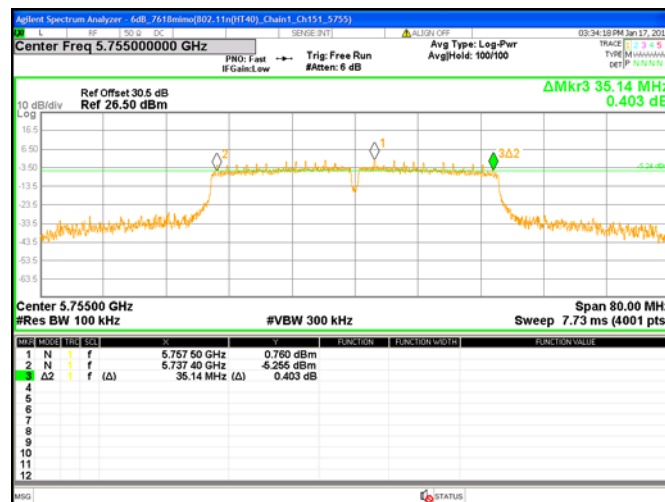
Chain0 : 6dB Bandwidth @ 802.11n(HT40) Mode Ch151



Chain0 : 6dB Bandwidth @ 802.11n(HT40) Mode Ch159



Chain1 : 6dB Bandwidth @ 802.11n(HT40) Mode Ch151



Chain1 : 6dB Bandwidth @ 802.11n(HT40) Mode Ch159

