

第三部份 WiFi 測試項目: LP0002 4.7

12. 功率限制

12.1 適用規範

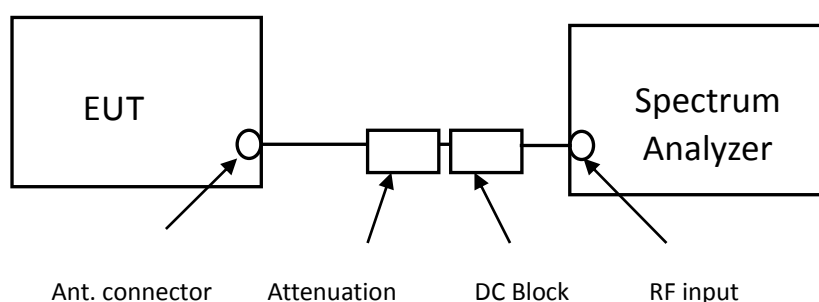
依據國家通訊傳播委員會低功率射頻電機技術規範 4.7.2 節之規定，操作在 5.15-5.25 GHz 頻帶下之最大傳導輸出功率應小於或等於 250 mW(用戶端裝置)，操作在 5.25-5.35 GHz 與 5.47-5.725GHz 頻帶下之最大傳導輸出功率應小於或等於 250 mW 或 11 分貝毫瓦 (dBm) +10 log B (B 是 26 dB 發射頻寬，單位 MHz)之較小者；

操作在 5.725-5.85 GHz 頻帶下之最大傳導輸出功率應小於或等於 1W。

12.2 測試方法

將發射機之天線埠經由適當之衰減直接連至測試儀器。設定解析頻寬為 1 MHz，視訊頻寬為 3 MHz，開啟頻譜頻道功率之量測功能。

12.3 測試配置圖



12.4 測試結果

溫度 : 26 °C

相對濕度 : 59 %

SISO

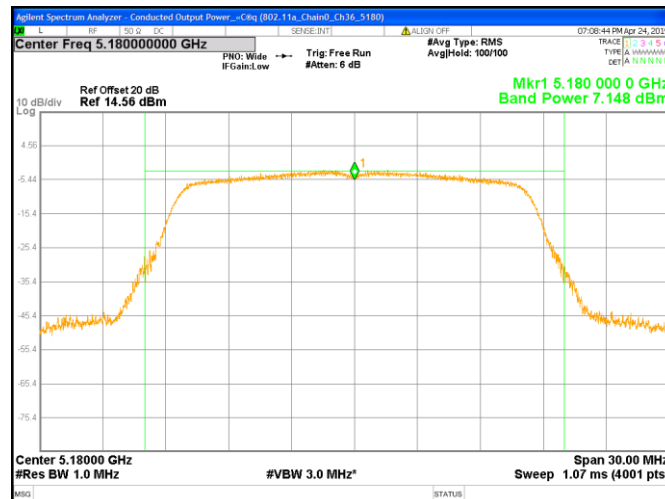
Mode	Channel	Frequency (MHz)	Output Power (AV)		Antenna Gain (dBi)	E.I.R.P. (dBm)	Limit of Conducted Power (dBm)	Margin (dB)	Limit of E.I.R.P. (dBm)	Margin (dB)
			dBm	mW						
802.11a (Chain0)	36	5180	7.15	5.19	3.17	10.32	24.00	-16.85	30.00	-19.68
	44	5220	7.52	5.65	3.17	10.69	24.00	-16.48	30.00	-19.31
	48	5240	7.08	5.11	3.17	10.25	24.00	-16.92	30.00	-19.75
	52	5260	6.87	4.86	3.17	10.04	24.00	-17.13	30.00	-19.96
	60	5300	7.33	5.41	3.17	10.50	24.00	-16.67	30.00	-19.50
	64	5320	7.66	5.83	3.17	10.83	24.00	-16.34	30.00	-19.17
	100	5500	7.53	5.66	3.17	10.70	24.00	-16.47	30.00	-19.30
	120	5600	7.23	5.28	3.17	10.40	24.00	-16.77	30.00	-19.60
	140	5700	6.29	4.26	3.17	9.46	24.00	-17.71	30.00	-20.54
	149	5745	7.02	5.04	3.17	10.19	30.00	-22.98	36.00	-25.81
	157	5785	7.78	6.00	3.17	10.95	30.00	-22.22	36.00	-25.05
	165	5825	7.52	5.65	3.17	10.69	30.00	-22.48	36.00	-25.31
802.11a (Chain1)	36	5180	8.89	7.74	3.43	12.32	24.00	-15.11	30.00	-17.68
	44	5220	9.69	9.31	3.43	13.12	24.00	-14.31	30.00	-16.88
	48	5240	10.05	10.12	3.43	13.48	24.00	-13.95	30.00	-16.52
	52	5260	10.13	10.30	3.43	13.56	24.00	-13.87	30.00	-16.44
	60	5300	10.54	11.32	3.43	13.97	24.00	-13.46	30.00	-16.03
	64	5320	10.67	11.67	3.43	14.10	24.00	-13.33	30.00	-15.90
	100	5500	9.80	9.55	3.43	13.23	24.00	-14.20	30.00	-16.77
	120	5600	9.76	9.46	3.43	13.19	24.00	-14.24	30.00	-16.81
	140	5700	9.65	9.23	3.43	13.08	24.00	-14.35	30.00	-16.92
	149	5745	9.56	9.04	3.43	12.99	30.00	-20.44	36.00	-23.01
	157	5785	9.66	9.25	3.43	13.09	30.00	-20.34	36.00	-22.91
	165	5825	9.62	9.16	3.43	13.05	30.00	-20.38	36.00	-22.95

MIMO

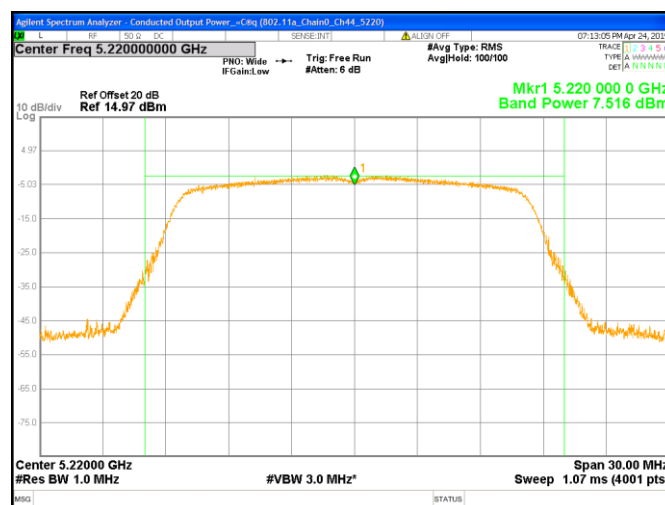
Mode	Ch	Freq (MHz)	Output Power (AV)		Total Power (AV)		Antenna 0 Gain (dBi)	Antenna 1 Gain (dBi)	E.I.R.P. (dBm)	Limit of Conducted Power (dBm)	Margin (dB)	Limit of E.I.R.P. (dBm)	Margin (dB)
			Chain 0	Chain 1									
			dBm	dBm	mW	dBm							
802.11ac (VHT20)	36	5180	6.88	8.10	11.33	10.54	3.17	3.43	13.86	24.00	-13.46	30.00	-16.14
	44	5220	7.26	8.80	12.90	11.11	3.17	3.43	14.43	24.00	-12.89	30.00	-15.57
	48	5240	6.99	9.18	13.27	11.23	3.17	3.43	14.56	24.00	-12.77	30.00	-15.44
	52	5260	6.63	8.95	12.45	10.95	3.17	3.43	14.29	24.00	-13.05	30.00	-15.71
	60	5300	7.22	9.34	13.87	11.42	3.17	3.43	14.75	24.00	-12.58	30.00	-15.25
	64	5320	9.36	9.28	17.10	12.33	3.17	3.43	15.63	24.00	-11.67	30.00	-14.37
	100	5500	9.36	8.98	16.53	12.18	3.17	3.43	15.48	24.00	-11.82	30.00	-14.52
	120	5600	8.86	9.27	16.14	12.08	3.17	3.43	15.39	24.00	-11.92	30.00	-14.61
	140	5700	8.25	9.22	15.04	11.77	3.17	3.43	15.09	24.00	-12.23	30.00	-14.91
	149	5745	8.80	9.00	15.52	11.91	3.17	3.43	15.21	30.00	-18.09	36.00	-20.79
	157	5785	9.31	8.98	16.44	12.16	3.17	3.43	15.46	30.00	-17.84	36.00	-20.54
	165	5825	9.44	9.01	16.75	12.24	3.17	3.43	15.54	30.00	-17.76	36.00	-20.46
802.11ac (VHT40)	38	5190	8.08	7.33	11.83	10.73	3.17	3.43	14.02	24.00	-13.27	30.00	-15.98
	46	5230	8.04	7.89	12.52	10.98	3.17	3.43	14.28	24.00	-13.02	30.00	-15.72
	54	5270	8.40	8.62	14.19	11.52	3.17	3.43	14.82	24.00	-12.48	30.00	-15.18
	62	5310	9.01	9.11	16.11	12.07	3.17	3.43	15.37	24.00	-11.93	30.00	-14.63
	102	5510	8.23	8.47	13.68	11.36	3.17	3.43	14.67	24.00	-12.64	30.00	-15.33
	118	5590	8.38	8.90	14.64	11.66	3.17	3.43	14.97	24.00	-12.34	30.00	-15.03
	134	5670	8.42	7.74	12.89	11.10	3.17	3.43	14.40	24.00	-12.90	30.00	-15.60
	151	5755	7.61	8.25	12.44	10.95	3.17	3.43	14.26	30.00	-19.05	36.00	-21.74
	159	5795	8.32	8.50	13.87	11.42	3.17	3.43	14.73	30.00	-18.58	36.00	-21.27
802.11ac (VHT80)	42	5210	6.53	5.78	8.28	9.18	3.17	3.43	12.47	24.00	-14.82	30.00	-17.53
	58	5290	6.80	6.81	9.58	9.82	3.17	3.43	13.12	24.00	-14.18	30.00	-16.88
	106	5530	6.28	6.73	8.95	9.52	3.17	3.43	12.83	24.00	-14.48	30.00	-17.17
	122	5610	6.18	6.97	9.13	9.60	3.17	3.43	12.92	24.00	-14.40	30.00	-17.08
	155	5775	5.89	6.54	8.39	9.24	3.17	3.43	12.55	30.00	-20.76	36.00	-23.45

12.5 繪圖資料

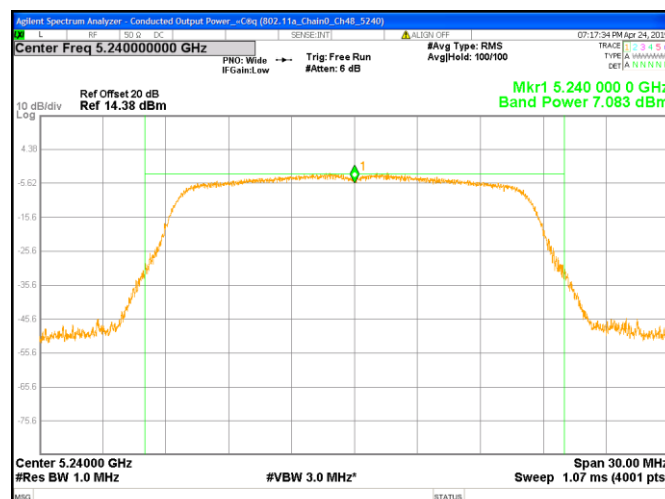
Chain0 : Conducted Power & EIRP @ 802.11a Mode Ch36



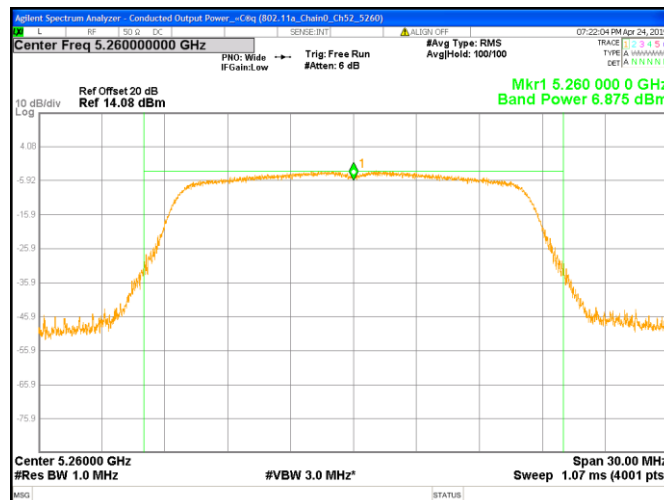
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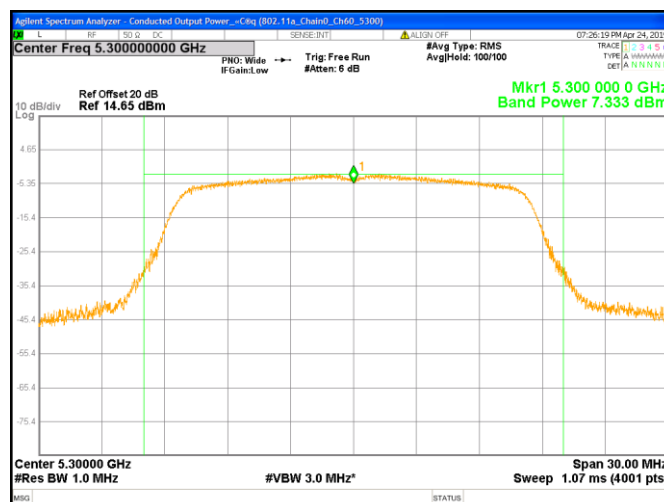
Chain0 : Conducted Power & EIRP @ 802.11a Mode Ch48



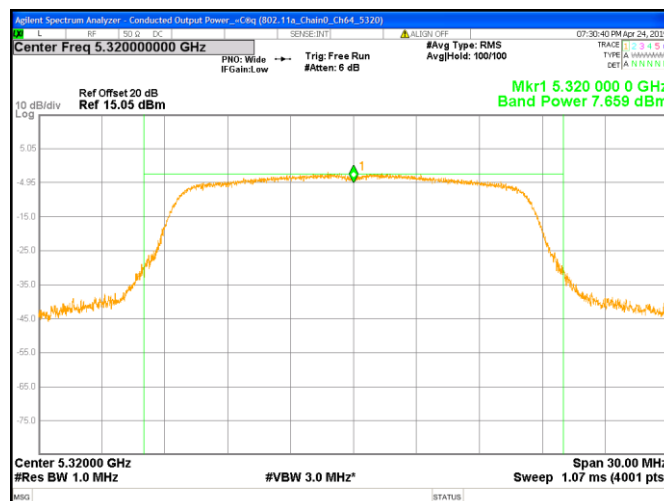
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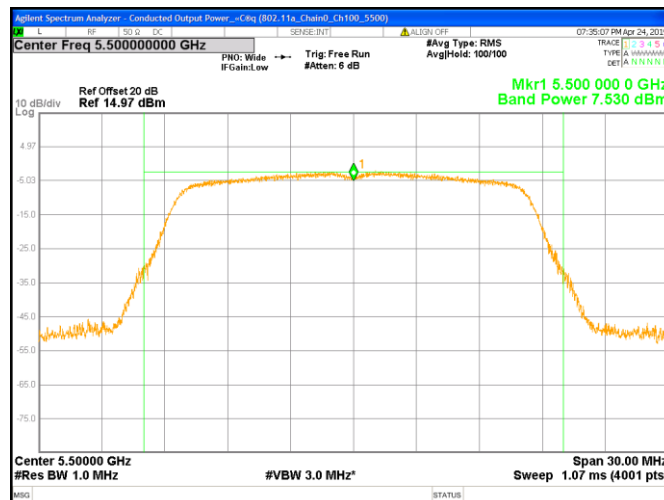
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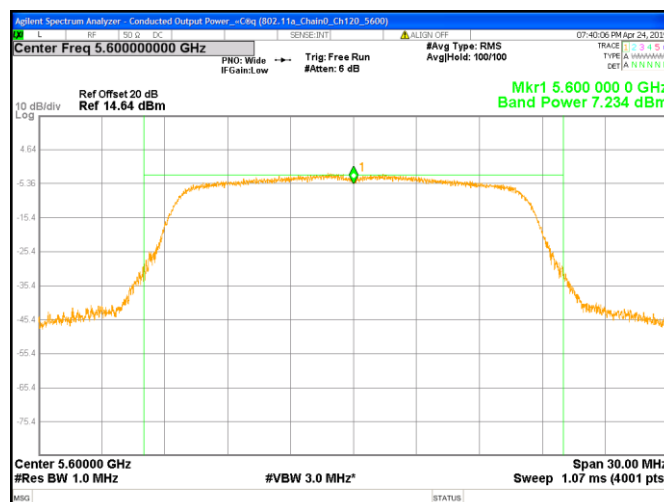
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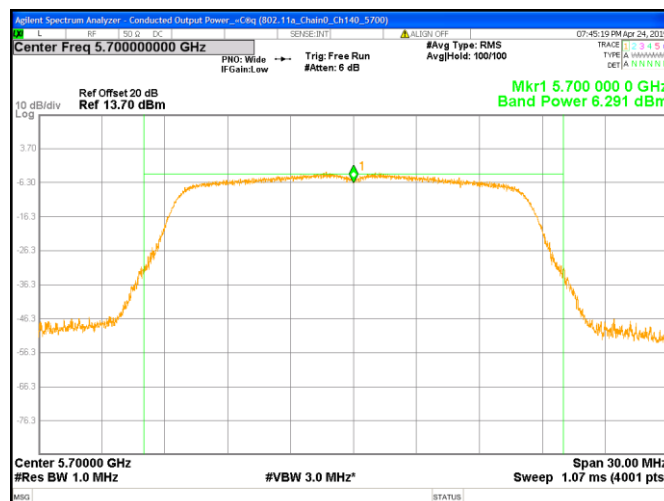
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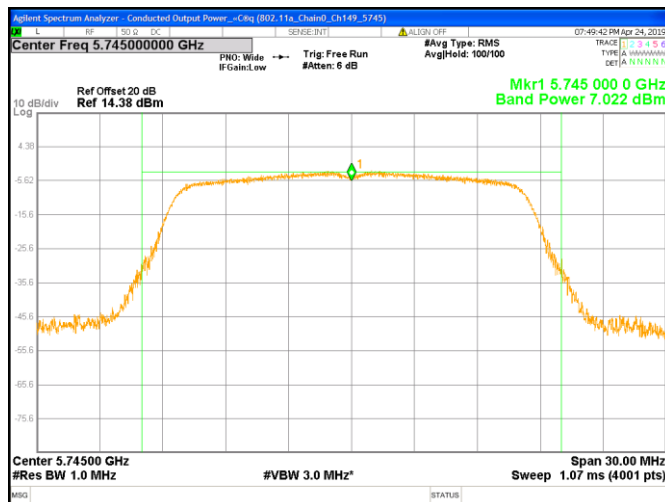
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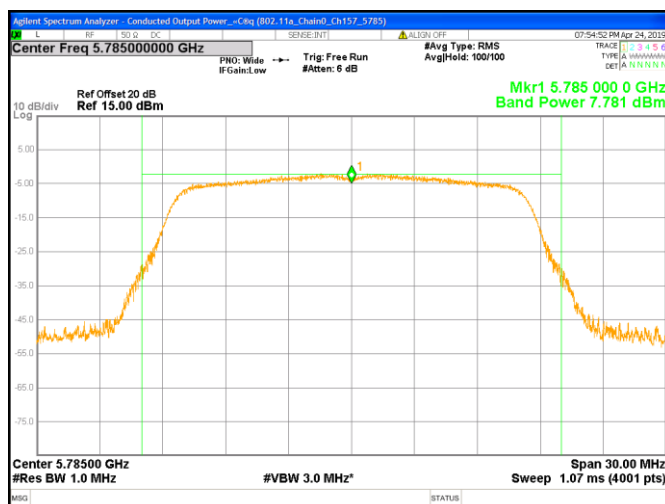
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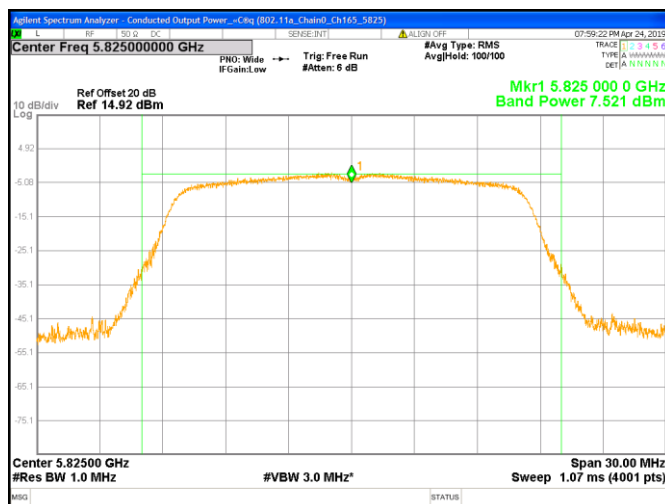
Chain0 : Conducted Power & EIRP @ 802.11a Mode Ch149



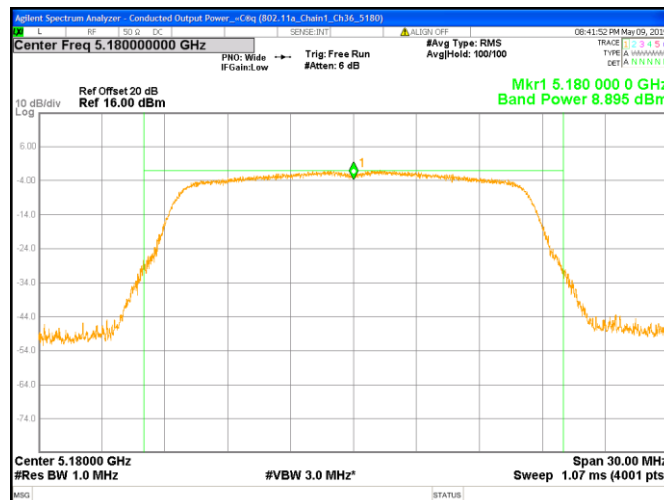
Chain0 : Conducted Power & EIRP @ 802.11a Mode Ch157



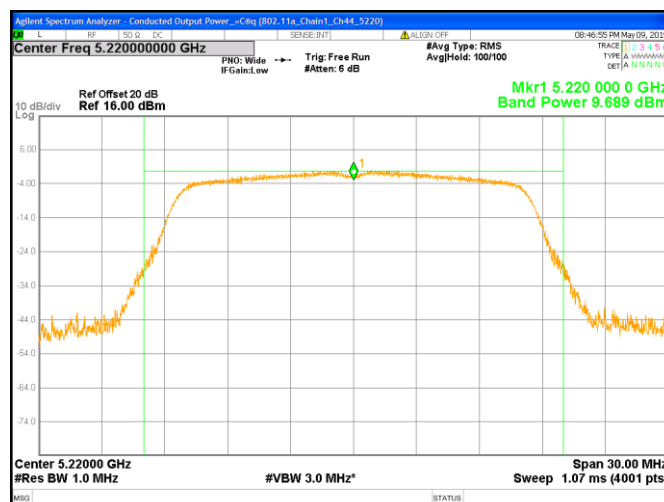
Chain0 : Conducted Power & EIRP @ 802.11a Mode Ch165



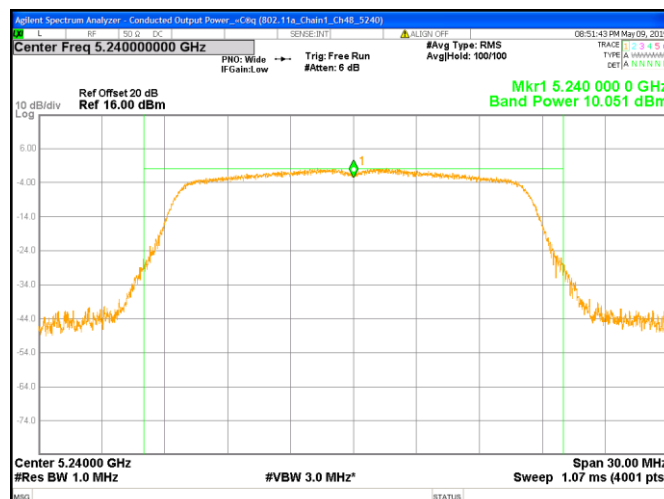
Chain1 : Conducted Power & EIRP @ 802.11a Mode Ch36



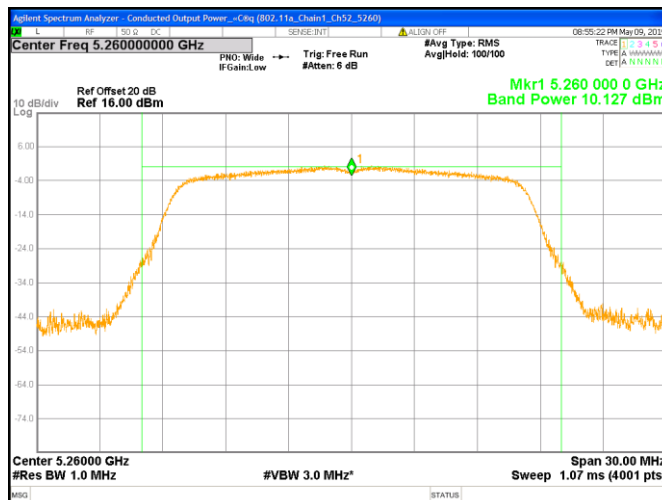
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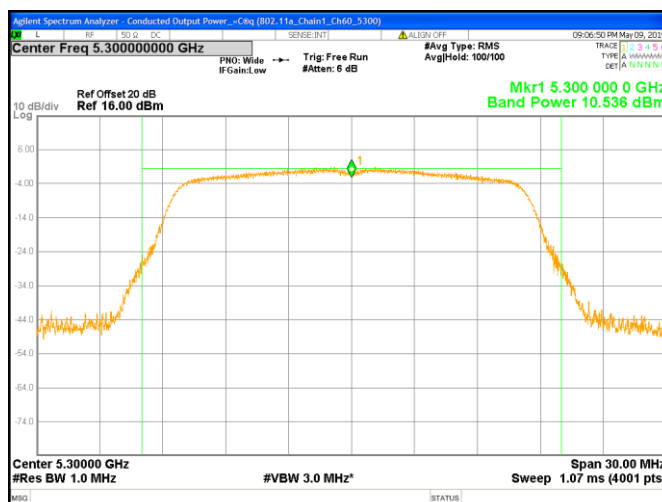
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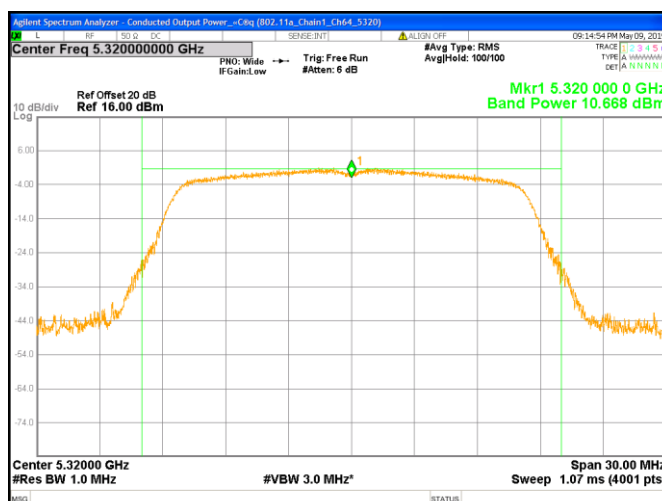
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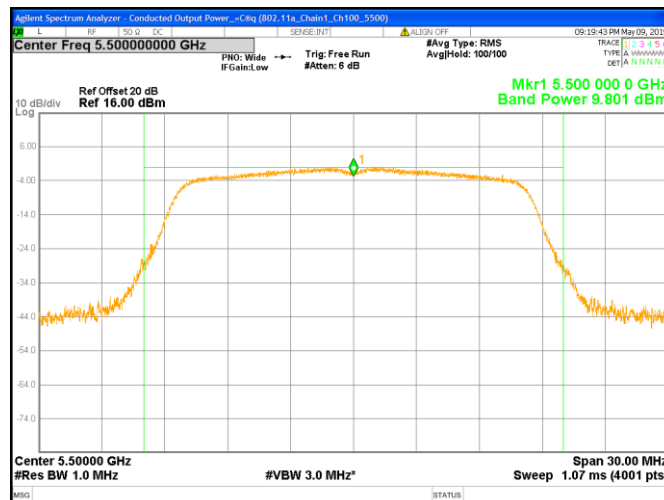
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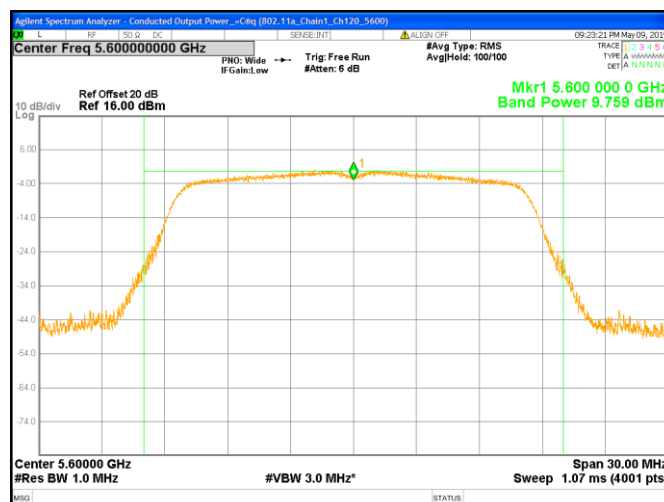
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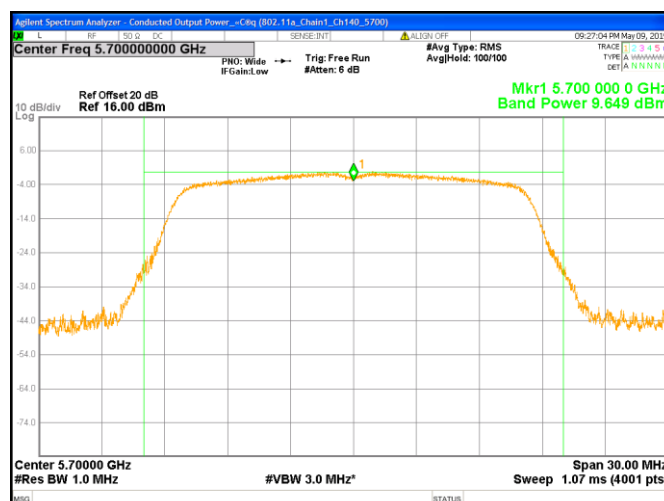
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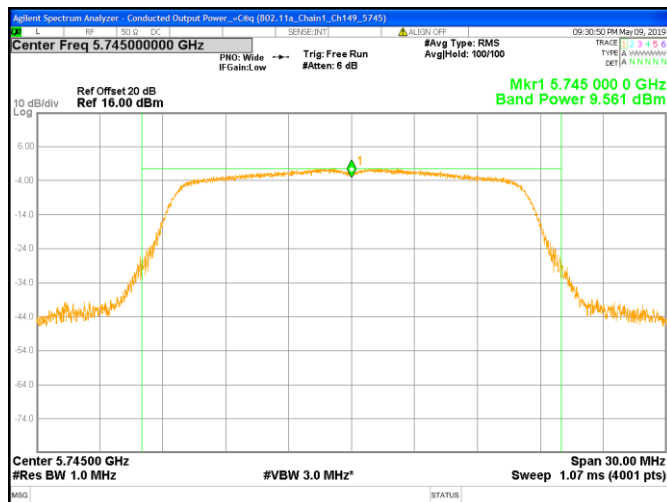
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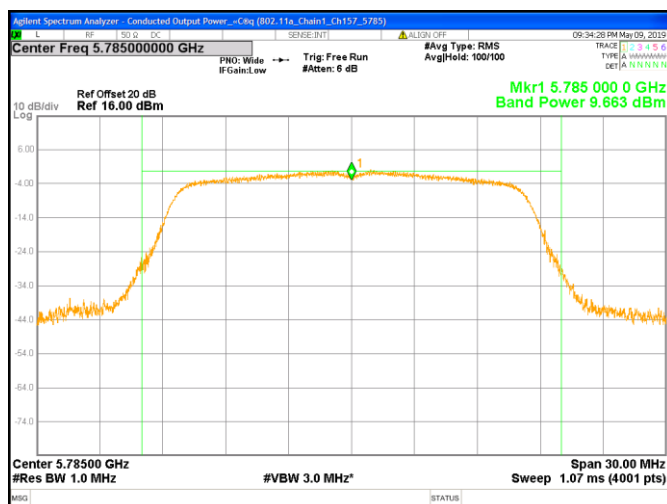
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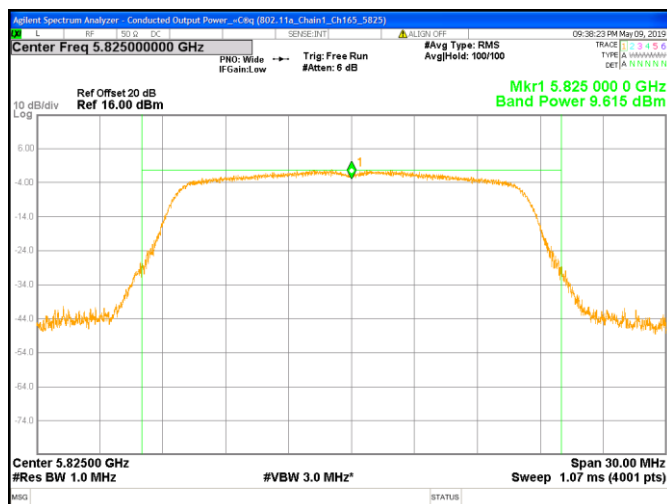
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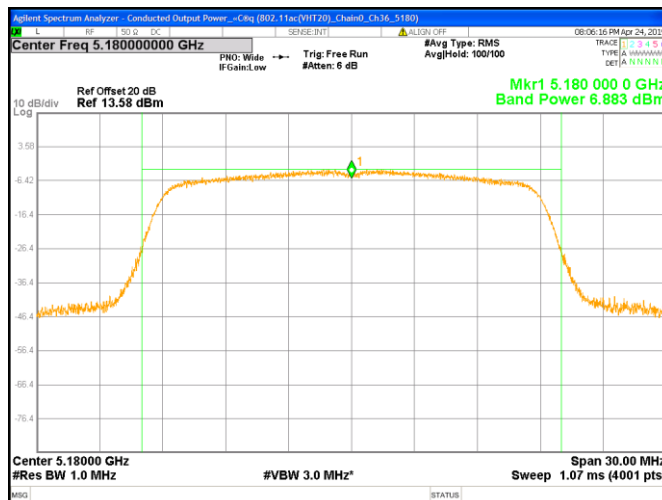
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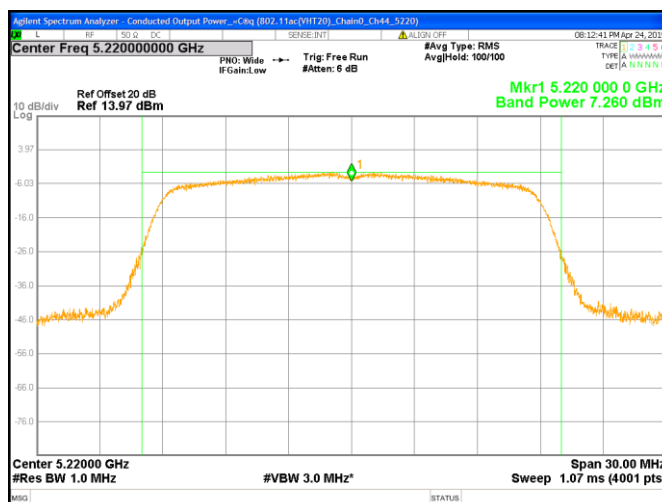
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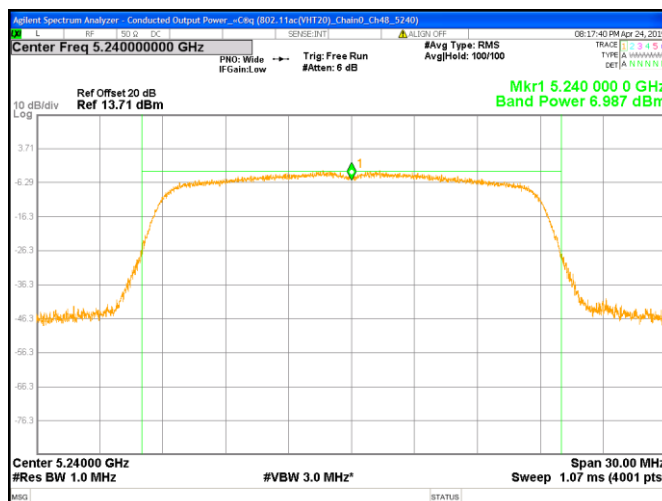
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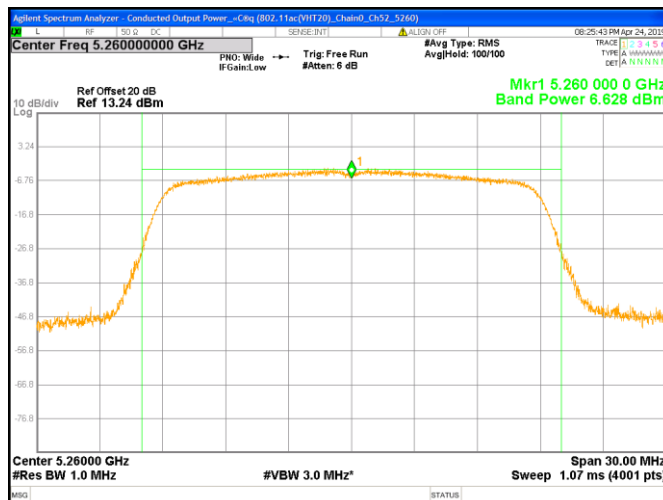
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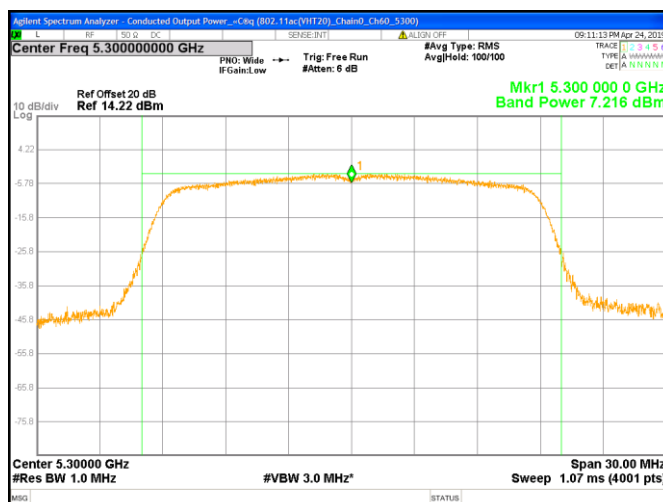
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Chain0 : Conducted Power & EIRP @ 802.11ac(VHT20) Mode Ch52



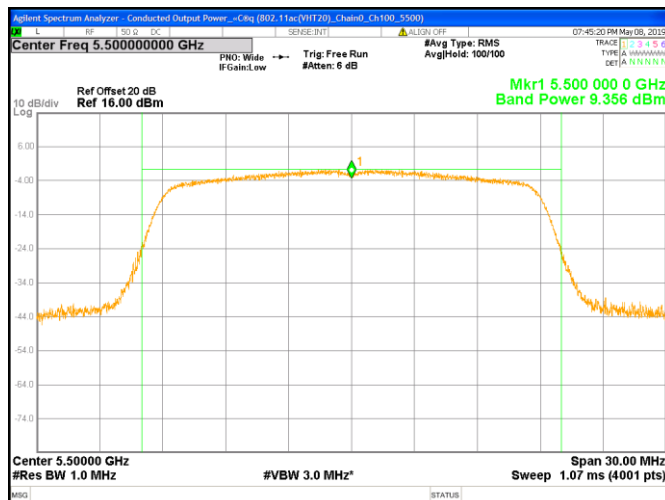
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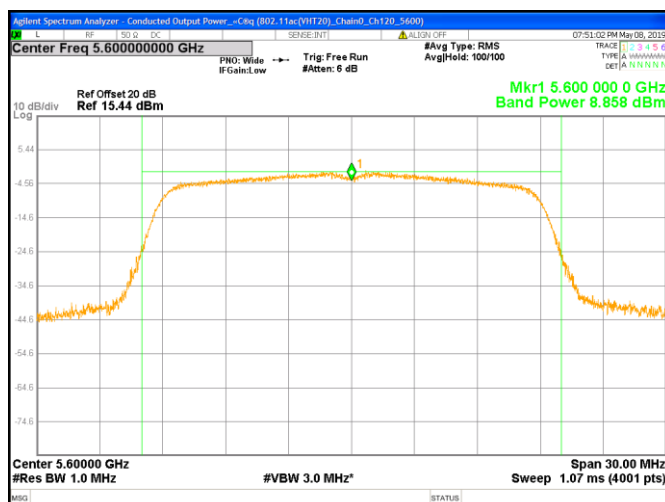
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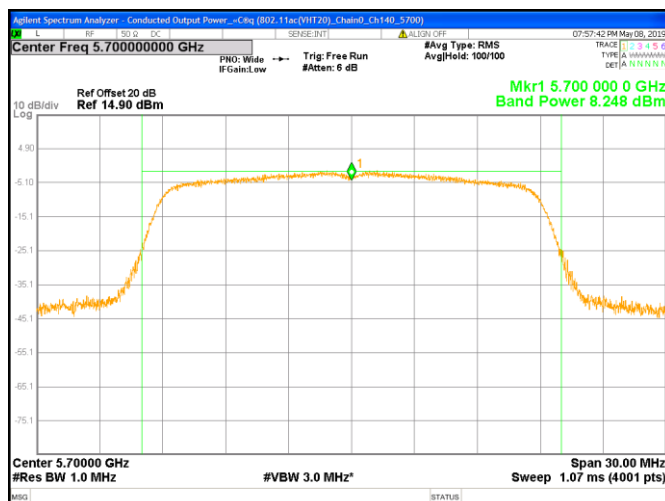
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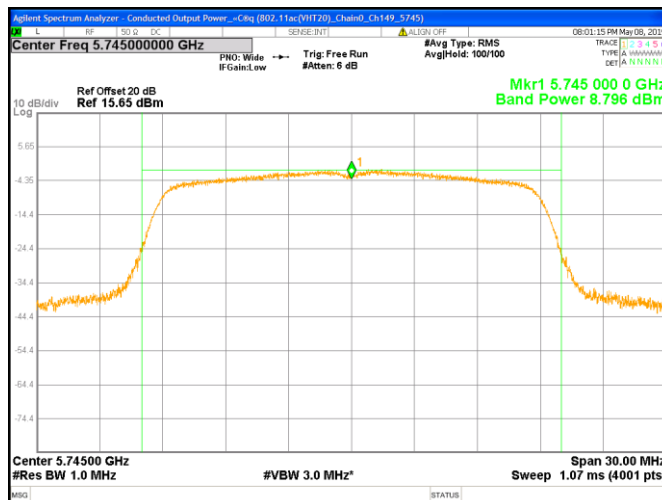
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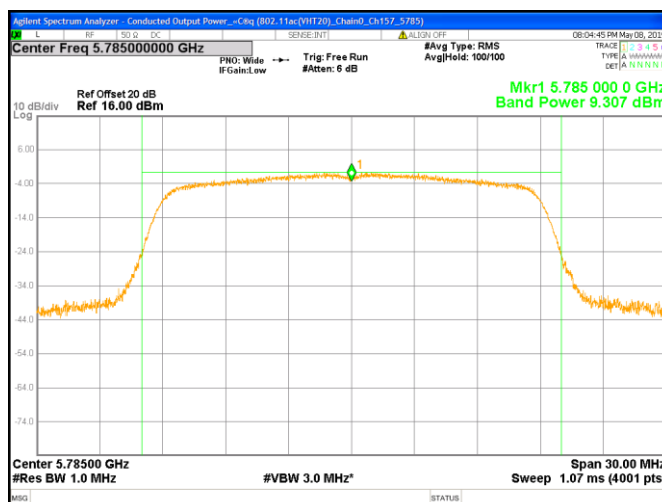
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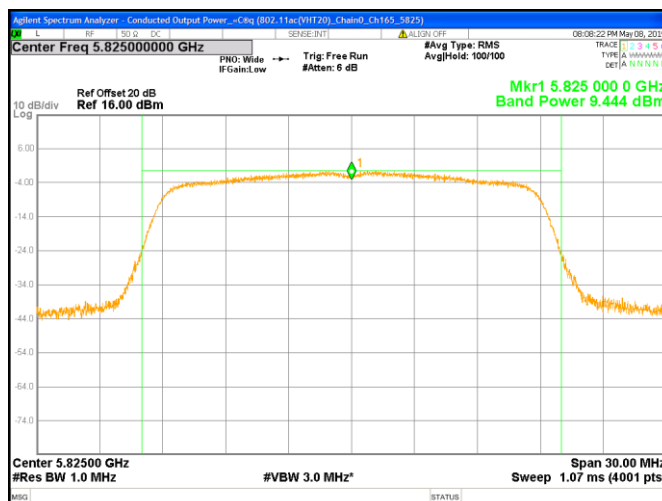
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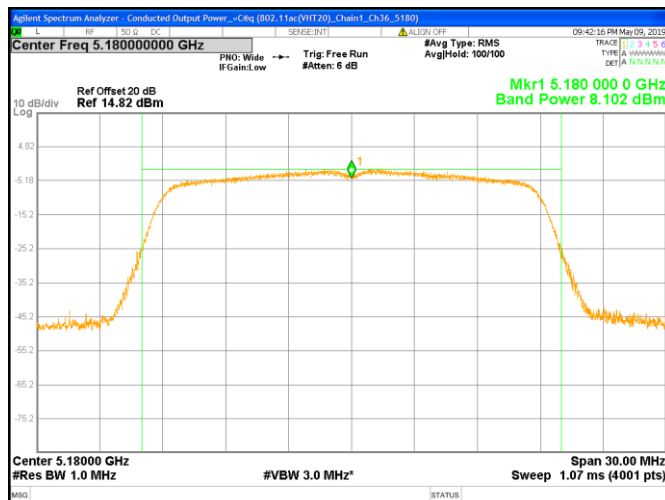
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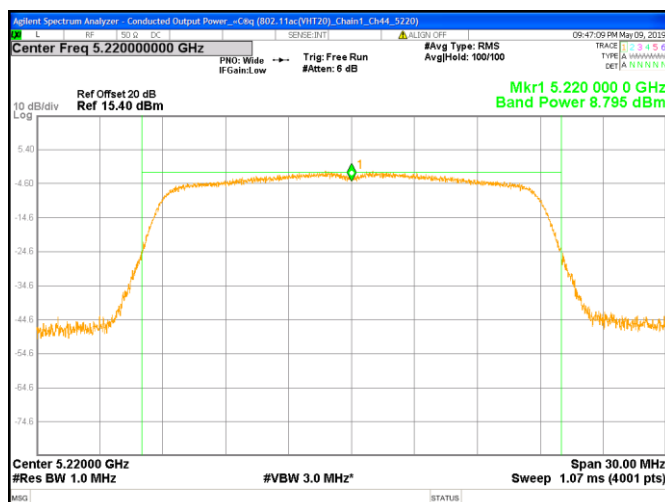
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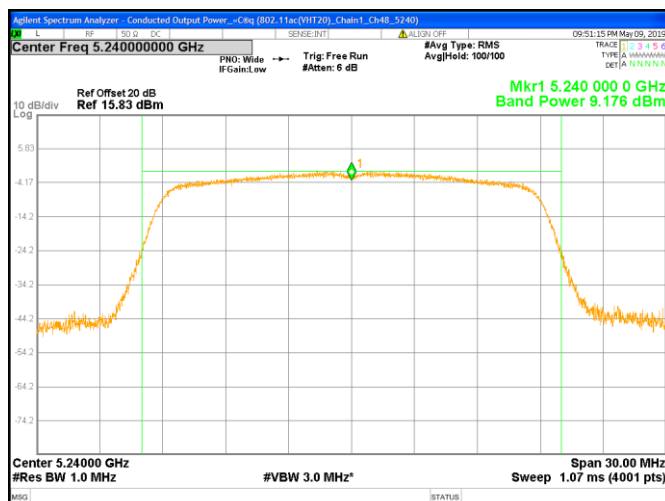
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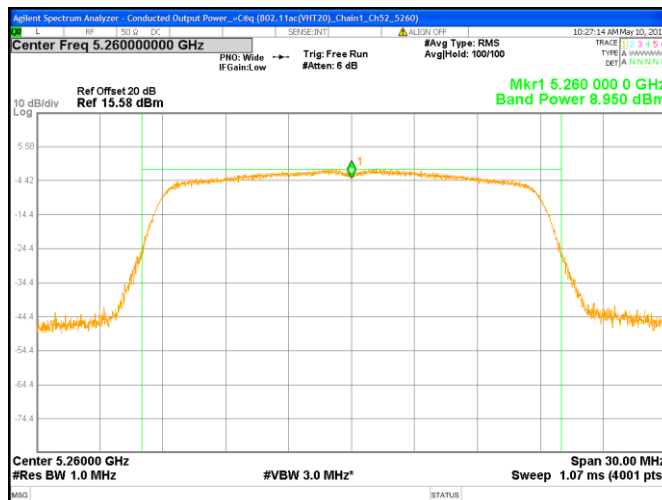
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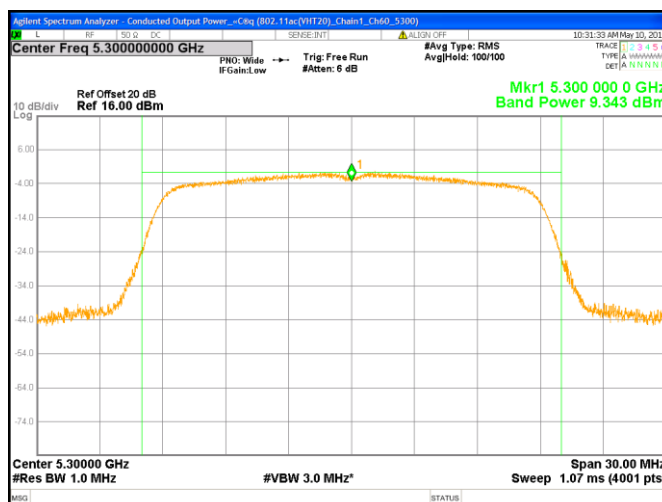
Chain1 : Conducted Power & EIRP @ 802.11ac(VHT20) Mode Ch48



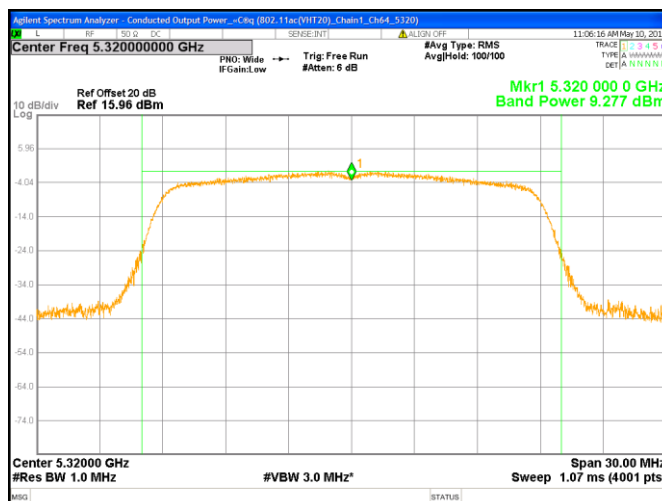
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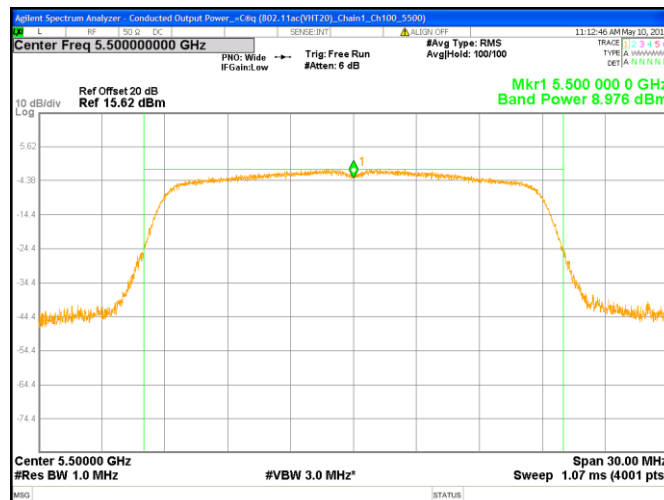
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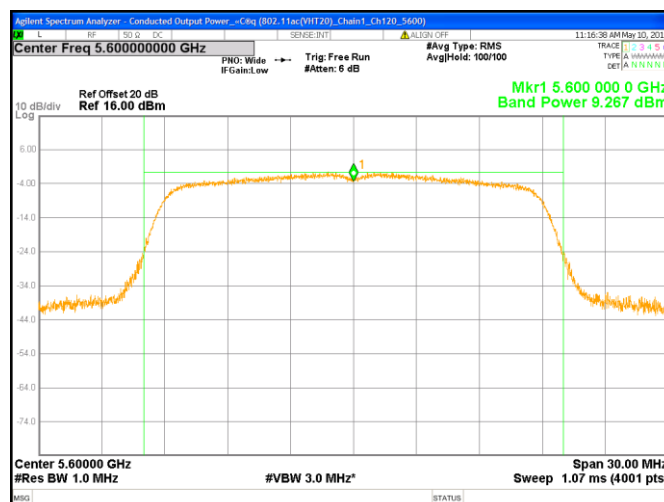
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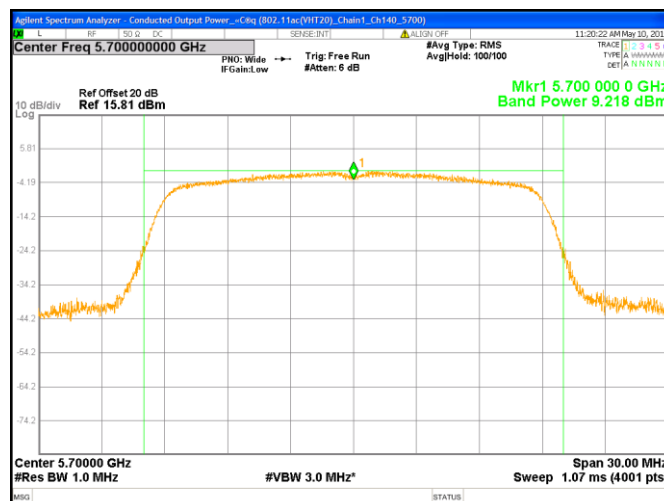
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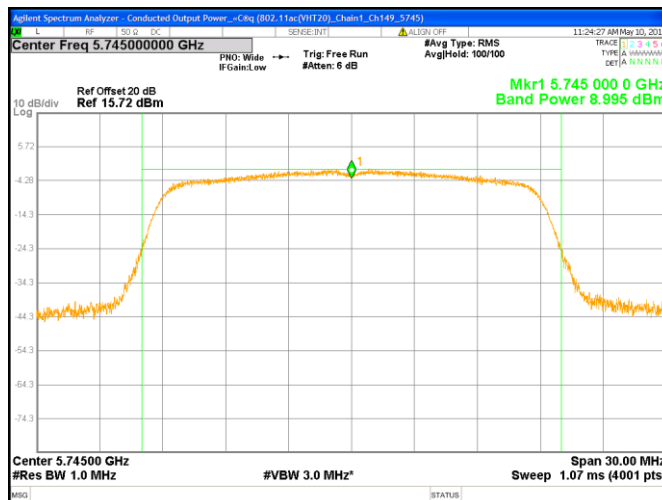
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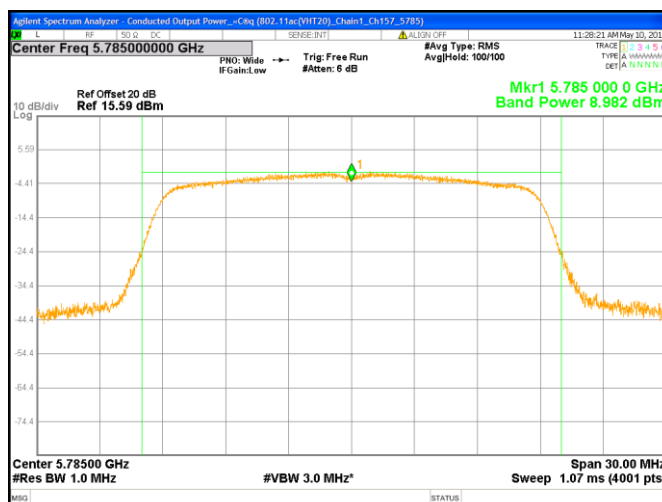
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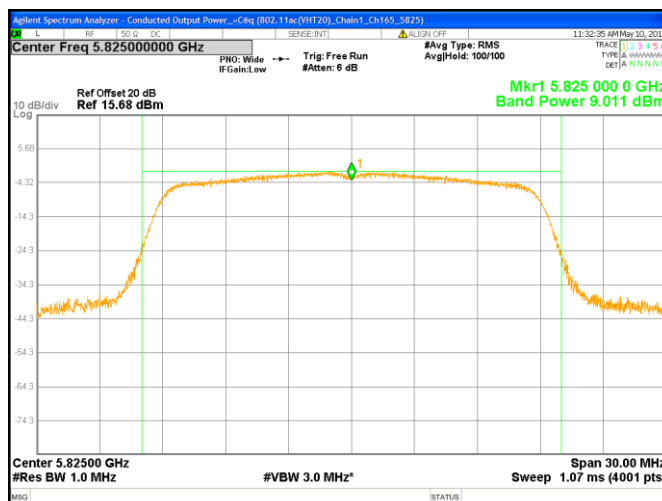
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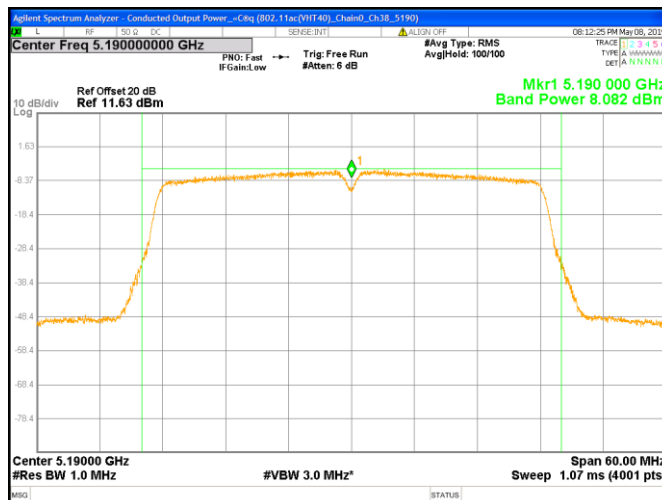
Chain1 : Conducted Power & EIRP @ 802.11ac(VHT20) Mode Ch157



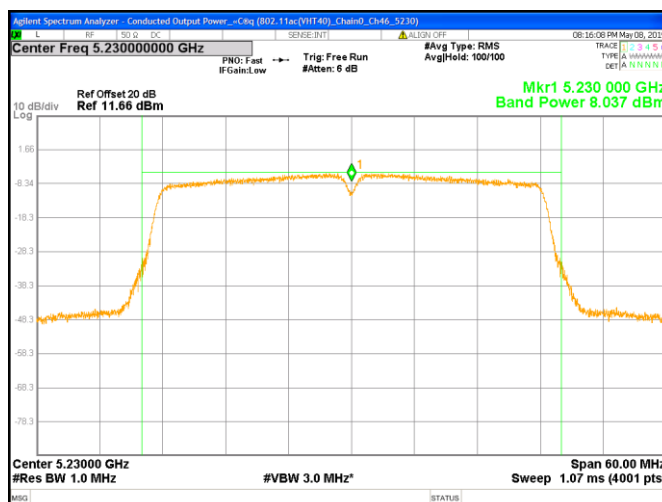
Chain1 : Conducted Power & EIRP @ 802.11ac(VHT20) Mode Ch165



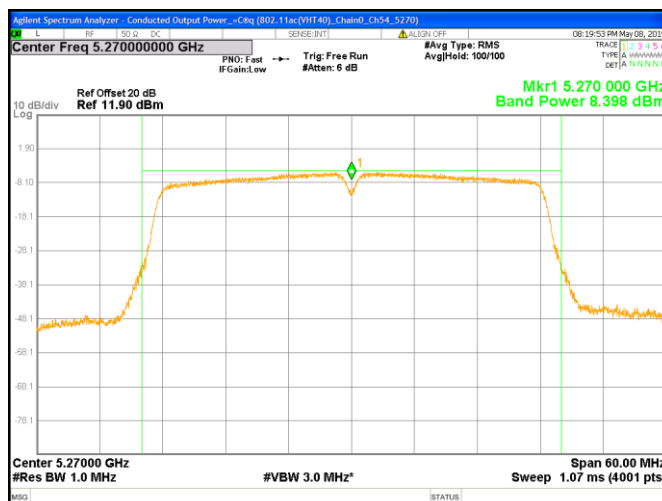
Chain0 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch38



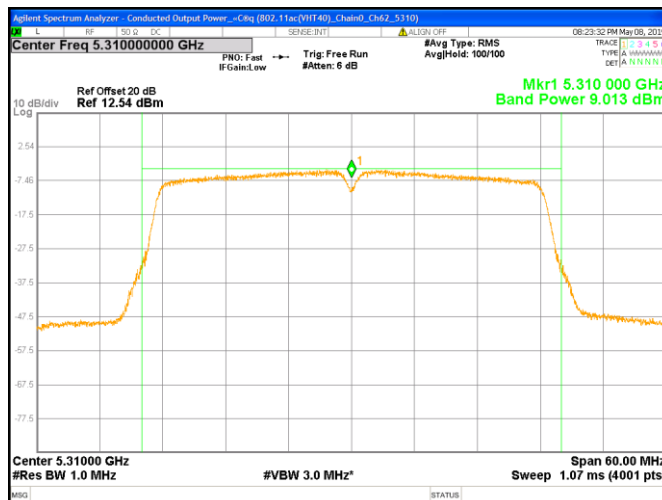
Chain0 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch46



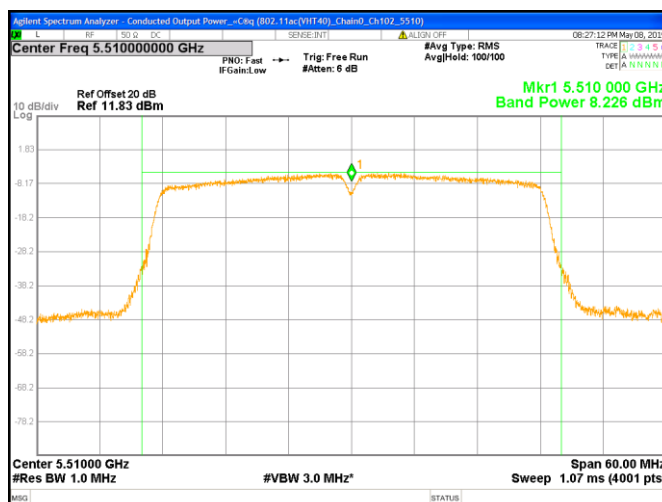
Chain0 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch54



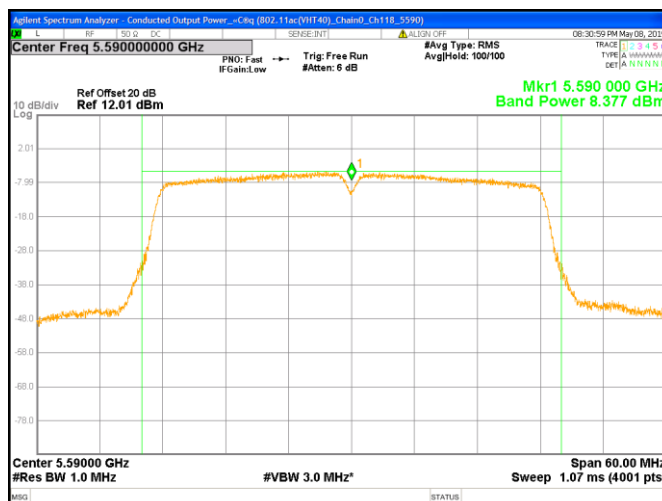
Chain0 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch62



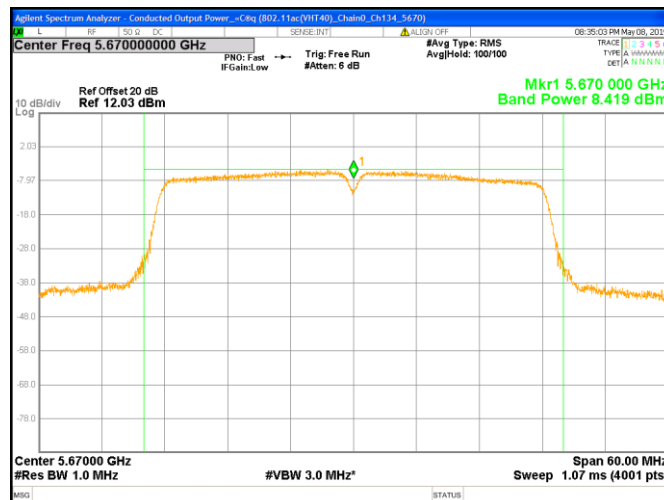
Chain0 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch102



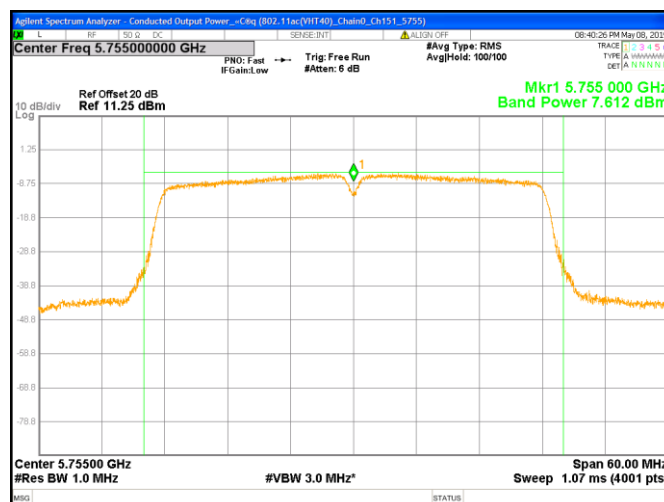
Chain0 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch118



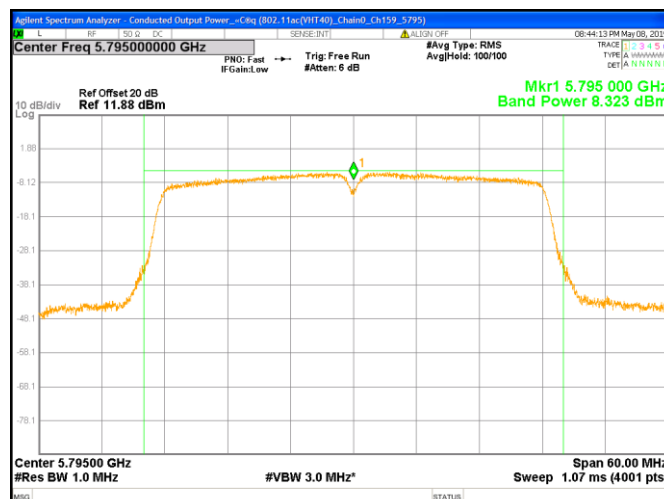
Chain0 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch134



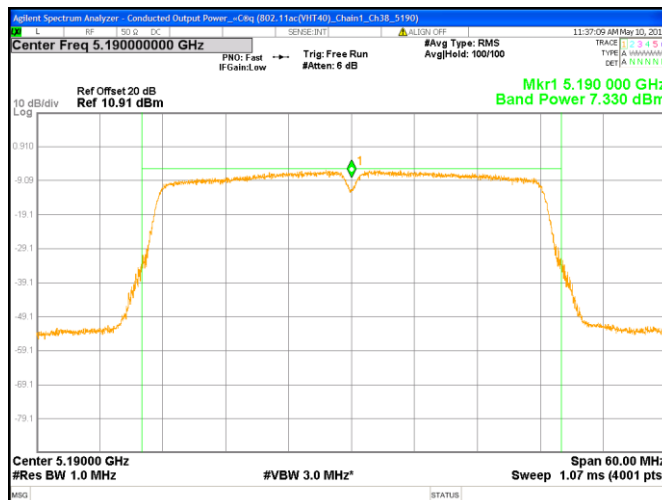
Chain0 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch151



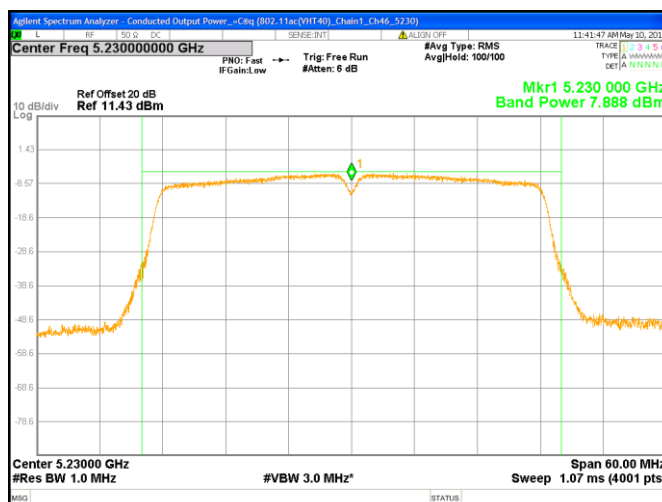
Chain0 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch159



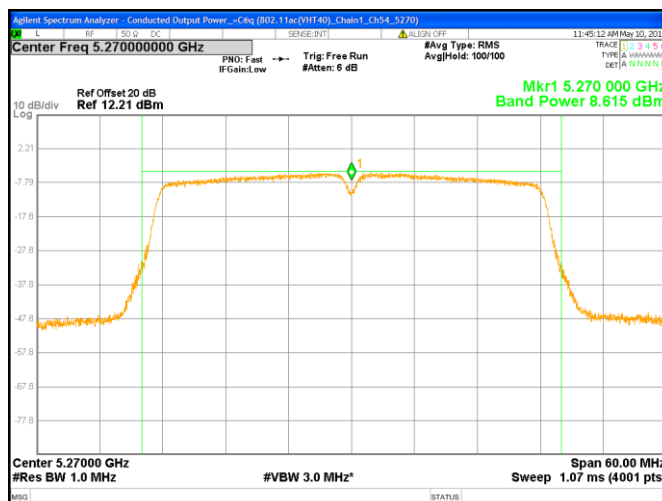
Chain1 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch38



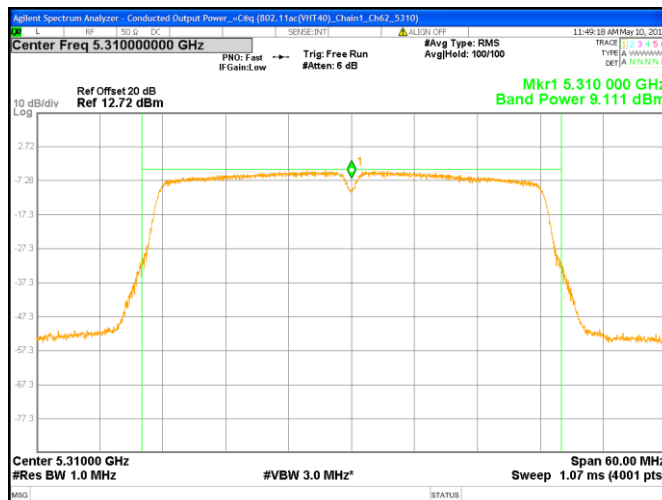
Chain1 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch46



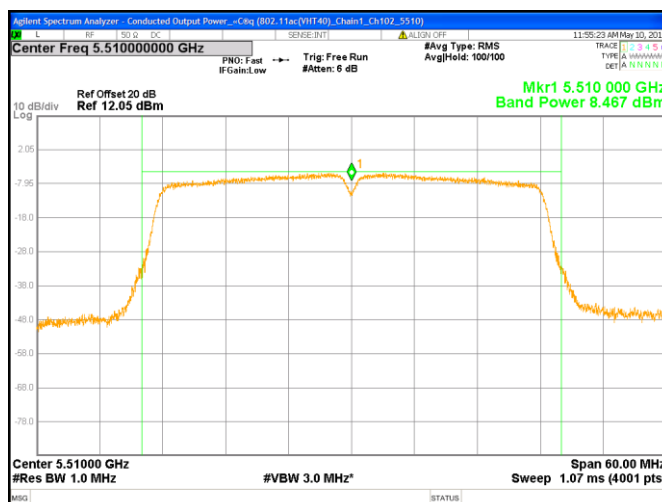
Chain1 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch54



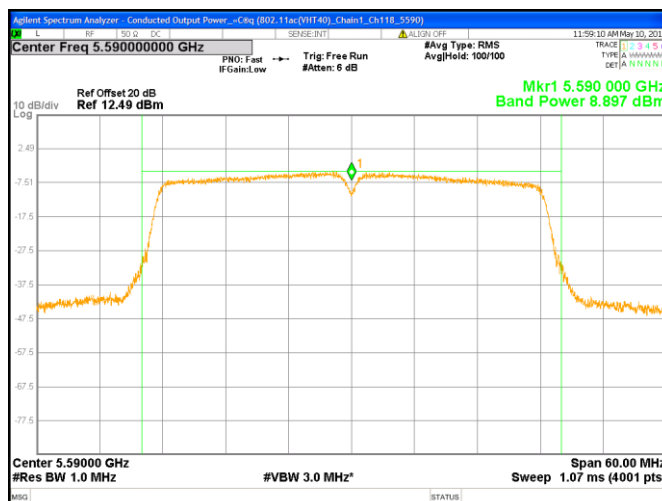
Chain1 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch62



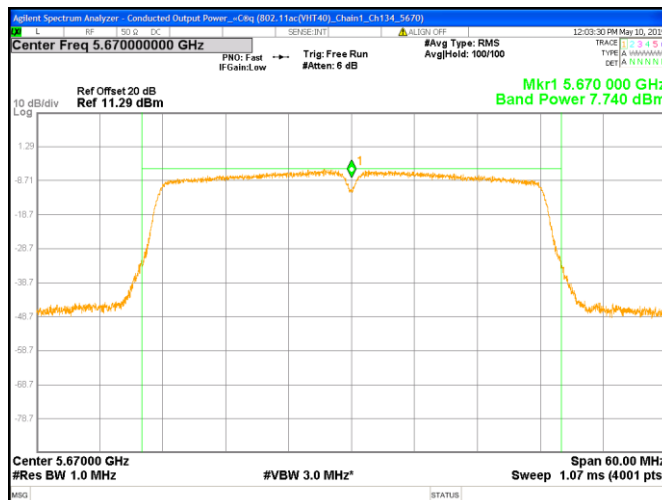
Chain1 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch102



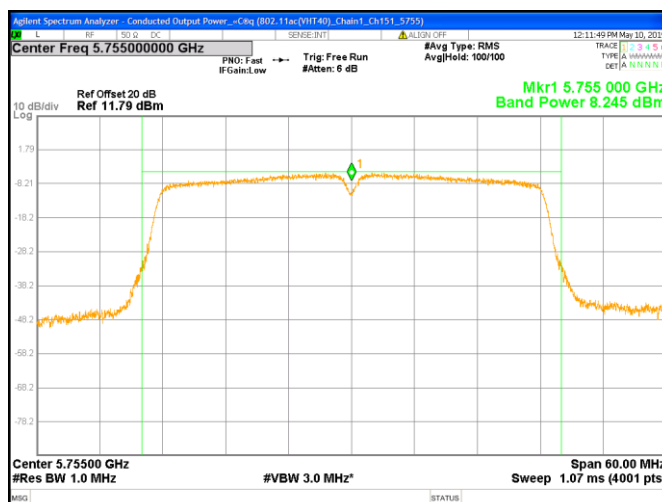
Chain1 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch118



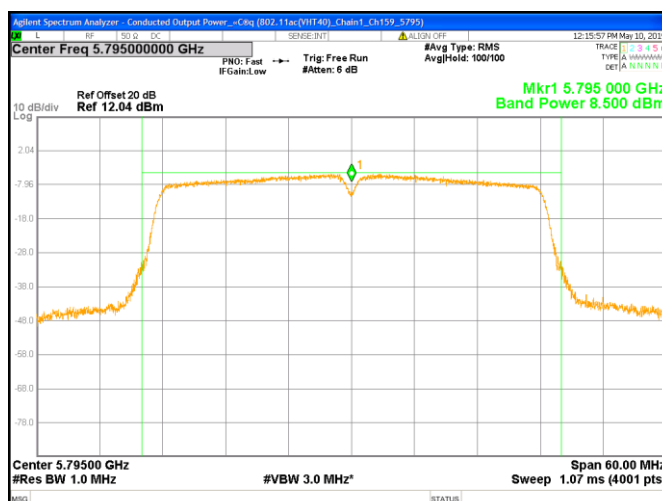
Chain1 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch134



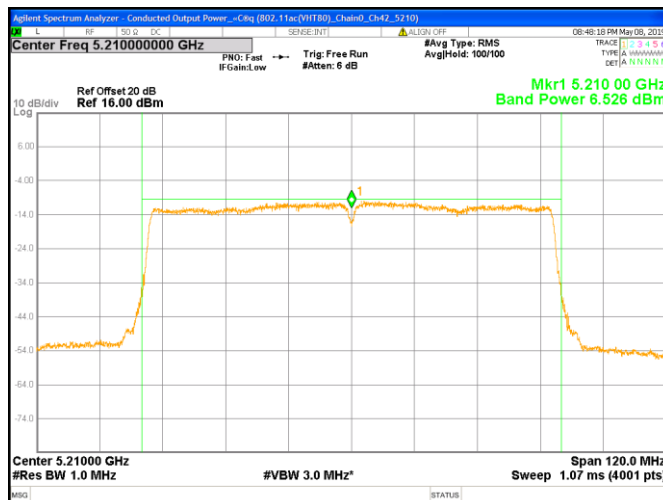
Chain1 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch151



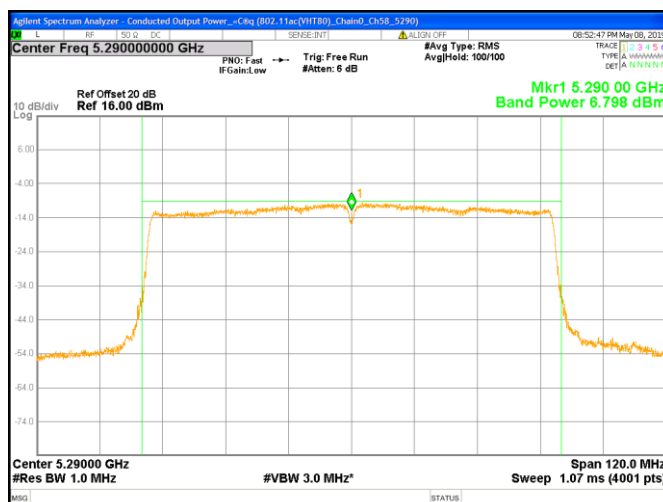
Chain1 : Conducted Power & EIRP @ 802.11ac(VHT40) Mode Ch159



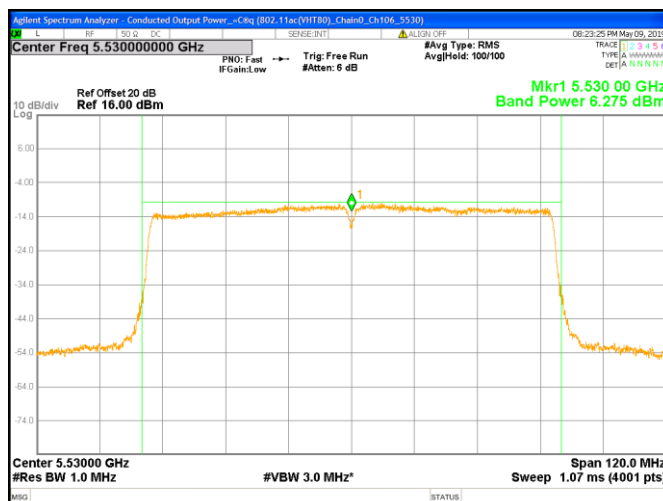
Chain0 : Conducted Power & EIRP @ 802.11ac(VHT80) Mode Ch42



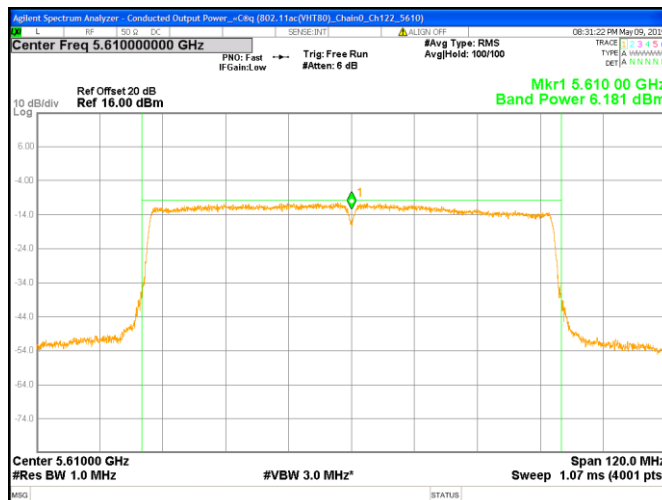
Chain0 : Conducted Power & EIRP @ 802.11ac(VHT80) Mode Ch58



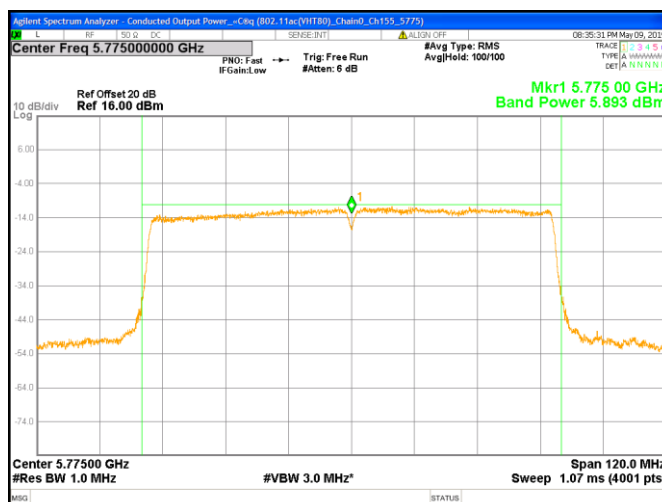
Chain0 : Conducted Power & EIRP @ 802.11ac(VHT80) Mode Ch106



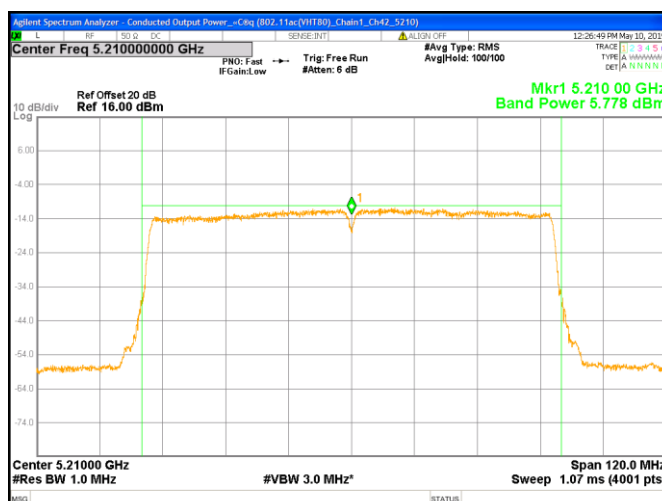
Chain0 : Conducted Power & EIRP @ 802.11ac(VHT80) Mode Ch122



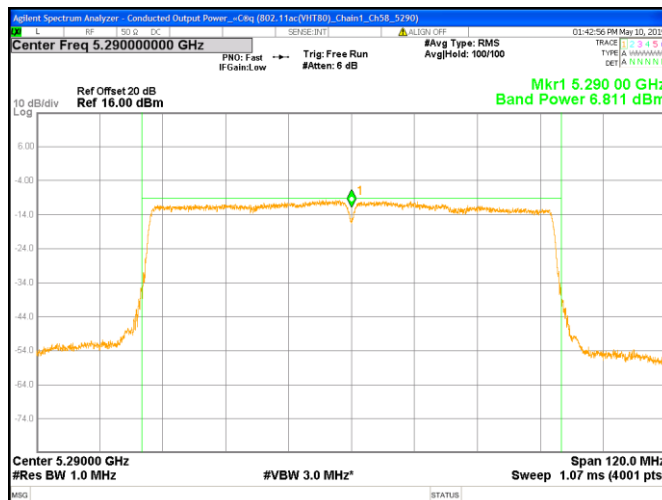
Chain0 : Conducted Power & EIRP @ 802.11ac(VHT80) Mode Ch155



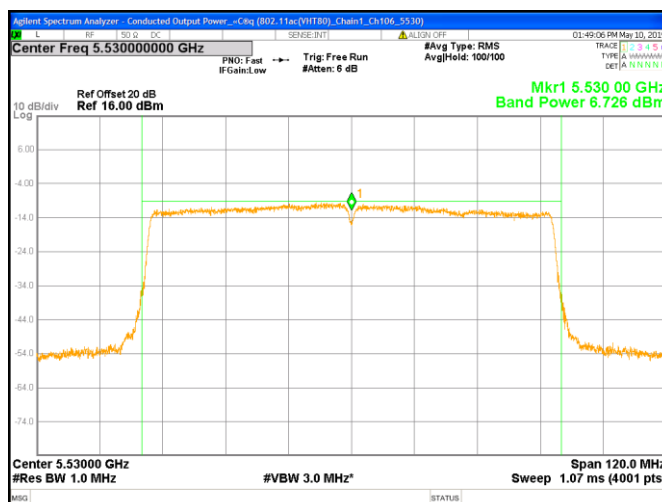
Chain1 : Conducted Power & EIRP @ 802.11ac(VHT80) Mode Ch42



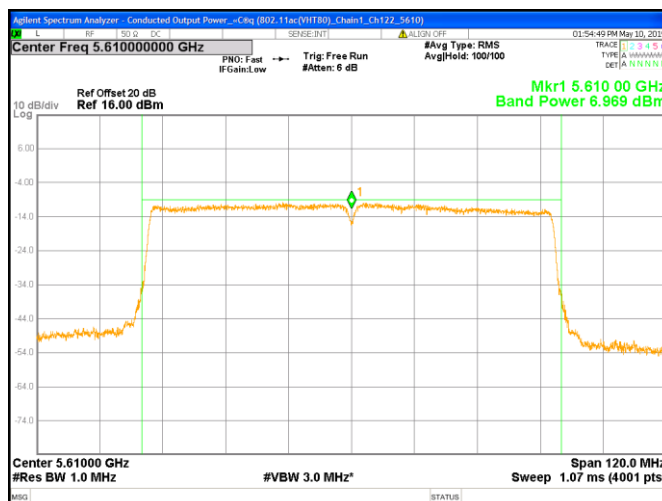
Chain1 : Conducted Power & EIRP @ 802.11ac(VHT80) Mode Ch58



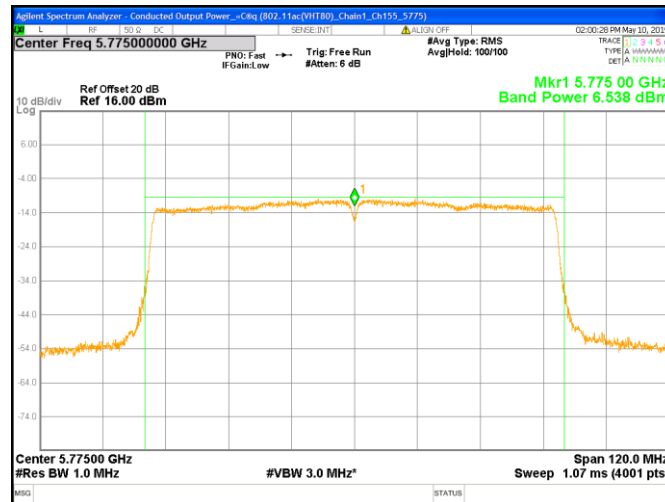
Chain1 : Conducted Power & EIRP @ 802.11ac(VHT80) Mode Ch106



Chain1 : Conducted Power & EIRP @ 802.11ac(VHT80) Mode Ch122



Chain1 : Conducted Power & EIRP @ 802.11ac(VHT80) Mode Ch155



13. 功率頻譜密度

13.1 適用規範

依據國家通訊傳播委員會低功率射頻電機技術規範 4.7.3 節之規定，操作在 5.15-5.25 GHz 頻帶，在任何 1 MHz 頻帶中功率頻譜密度不能超過 11 dBm(用戶端裝置)。

操作在 5.25-5.35 GHz 與 5.47-5.725 GHz 頻帶，在任何 1 MHz 頻帶中功率頻譜密度不能超過 11 dBm。

操作在 5.725-5.850 GHz 頻帶，在任何 500 kHz 頻帶中功率頻譜密度不能超過 30 dBm。

13.2 測試配置圖

