

8 26dB 頻寬測試

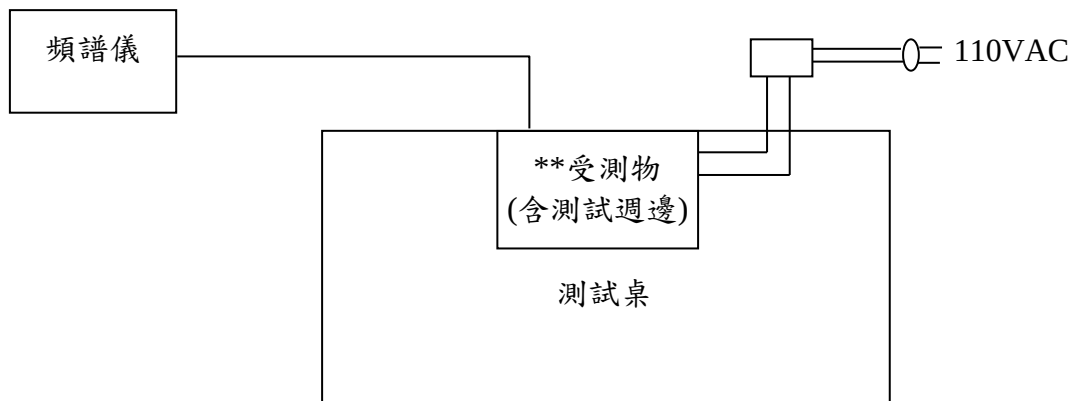
8.1 適用標準

對使用無線資訊傳輸設備低功率發射機，依據國家通訊傳播委員會低功率射頻電機技術規範 4.7.3.4 節之規定實施 26dB 頻寬測試。

8.2 測試方法

測量時，頻譜分析儀之解析頻寬為 26dB 頻寬之 1% ~ 3%，視訊頻寬不小於解析頻寬。為求得精確測量，頻率掃描範圍(Span)遠大於解析頻寬。

8.3 發射頻寬之測試配置



註: **請參照 3.2 節

8.4 發射頻寬之量測結果

Band I

Test mode: IEEE 802.11a mode

Channel	Frequency (MHz)	Bandwidth (MHz)
36	5180	22.1739
44	5220	22.2464
48	5240	22.1739

Test mode: IEEE 802.11n HT 20 MHz mode

Channel	Frequency (MHz)	Bandwidth (MHz)
36	5180	24.2029
44	5220	23.3333
48	5240	23.3333

Band II

Test mode: IEEE 802.11a mode

Channel	Frequency (MHz)	Bandwidth (MHz)
52	5260	22.4638
56	5280	22.5362
64	5320	23.1884

Test mode: IEEE 802.11n HT 20 MHz mode

Channel	Frequency (MHz)	Bandwidth (MHz)
52	5260	23.3333
56	5280	23.4783
64	5320	24.3478



Report No.: T180806W05-RD3

Page 115 / 160
Rev. 01

Band III

Test mode: IEEE 802.11a mode

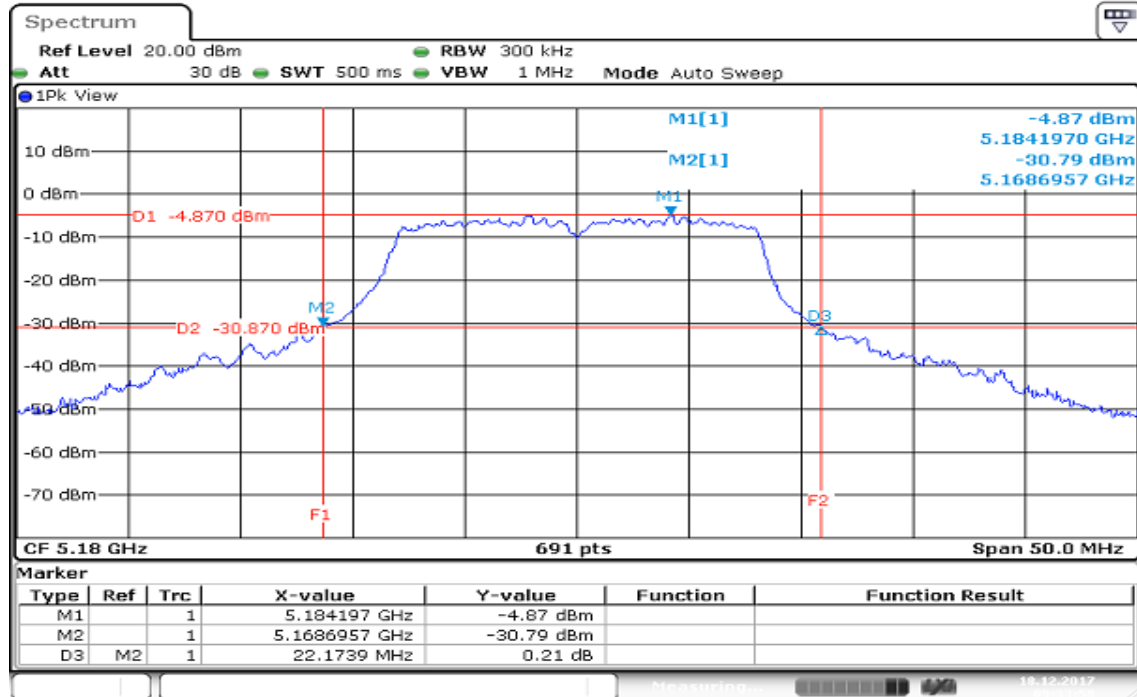
Channel	Frequency (MHz)	Bandwidth (MHz)
100	5500	23.6232
116	5580	23.2609
140	5700	22.0290

Test mode: IEEE 802.11n HT 20 MHz mode

Channel	Frequency (MHz)	Bandwidth (MHz)
100	5500	24.4203
116	5580	23.4058
140	5700	23.1159

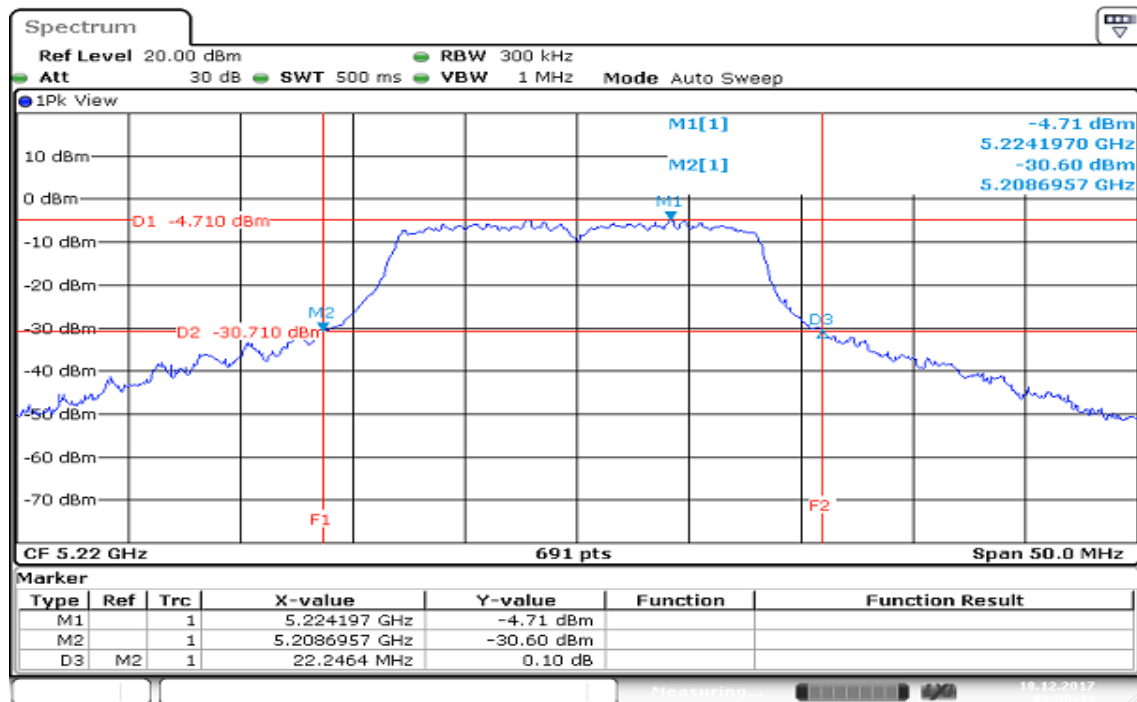
Band I

發射頻寬量測值 IEEE 802.11a Mode / 5180MHz



Date: 18 DEC 2017 09:23:58

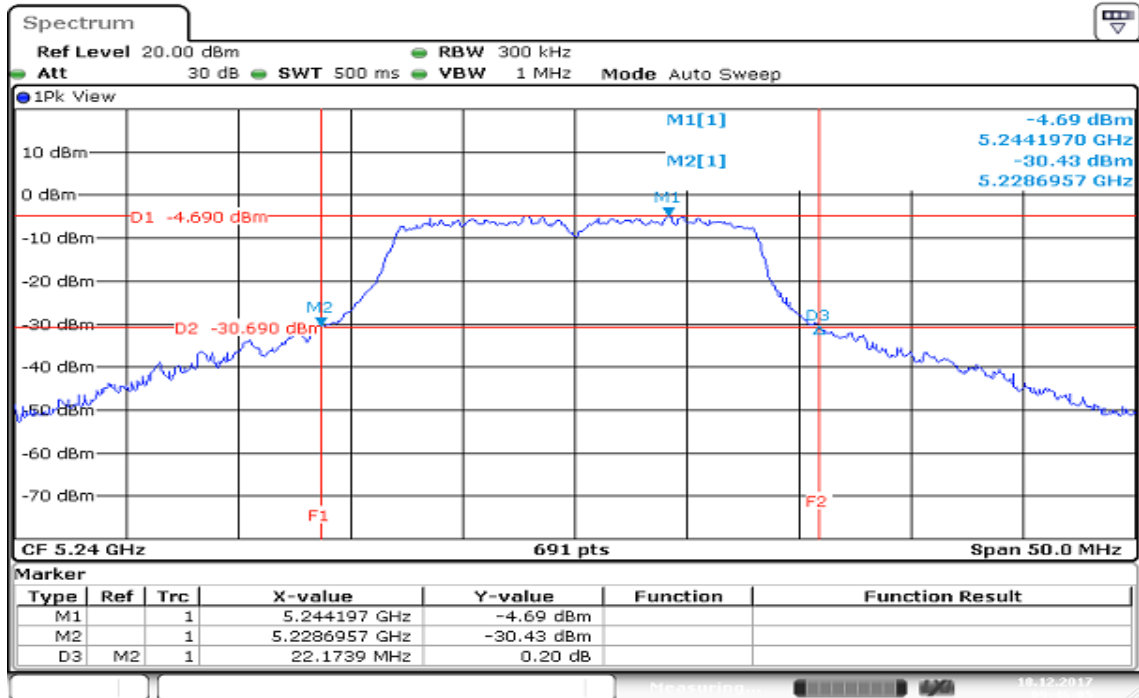
發射頻寬量測值 IEEE 802.11a Mode / 5220MHz



Date: 18 DEC 2017 09:28:44

Report No.: T180806W05-RD3

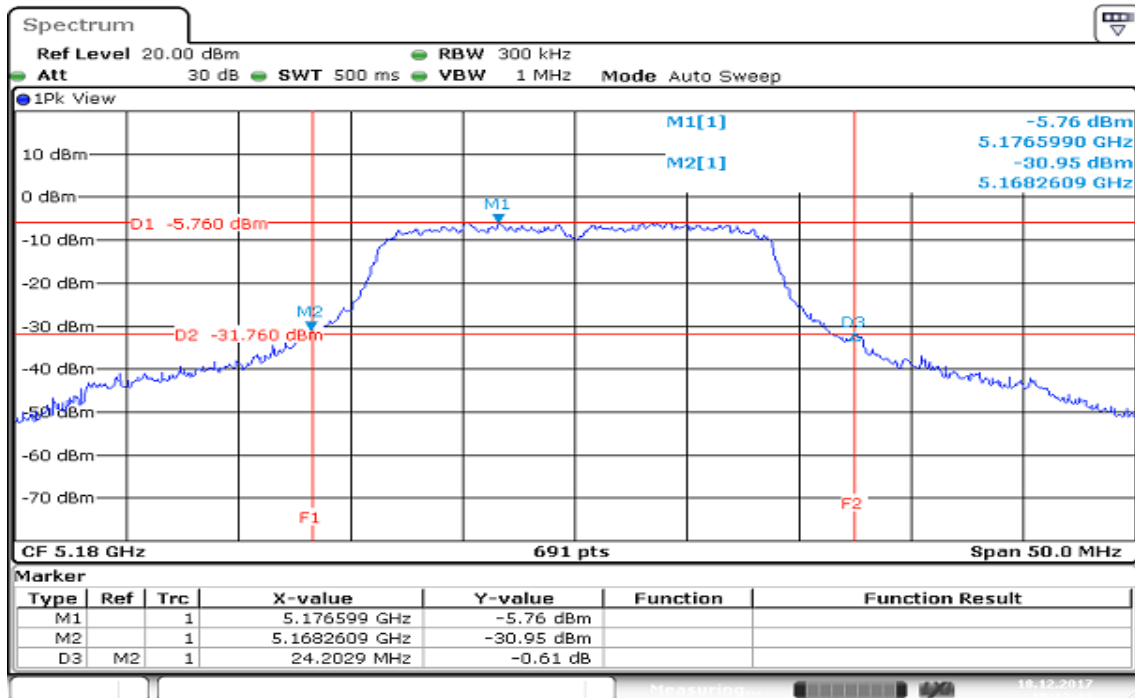
發射頻寬量測值 IEEE 802.11a Mode / 5240MHz



Date: 18 DEC 2017 09:46:05

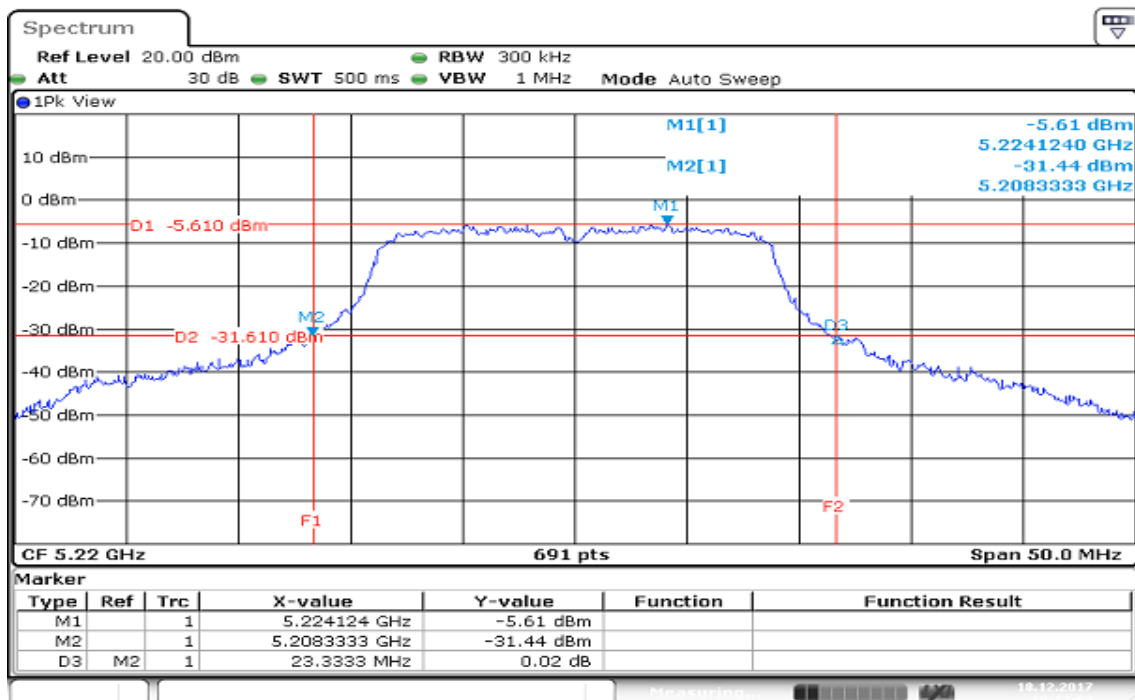
Report No.: T180806W05-RD3

發射頻寬量測值 IEEE 802.11n HT20 MHz Mode / 5180MHz



Date: 18 DEC 2017 10:12:12

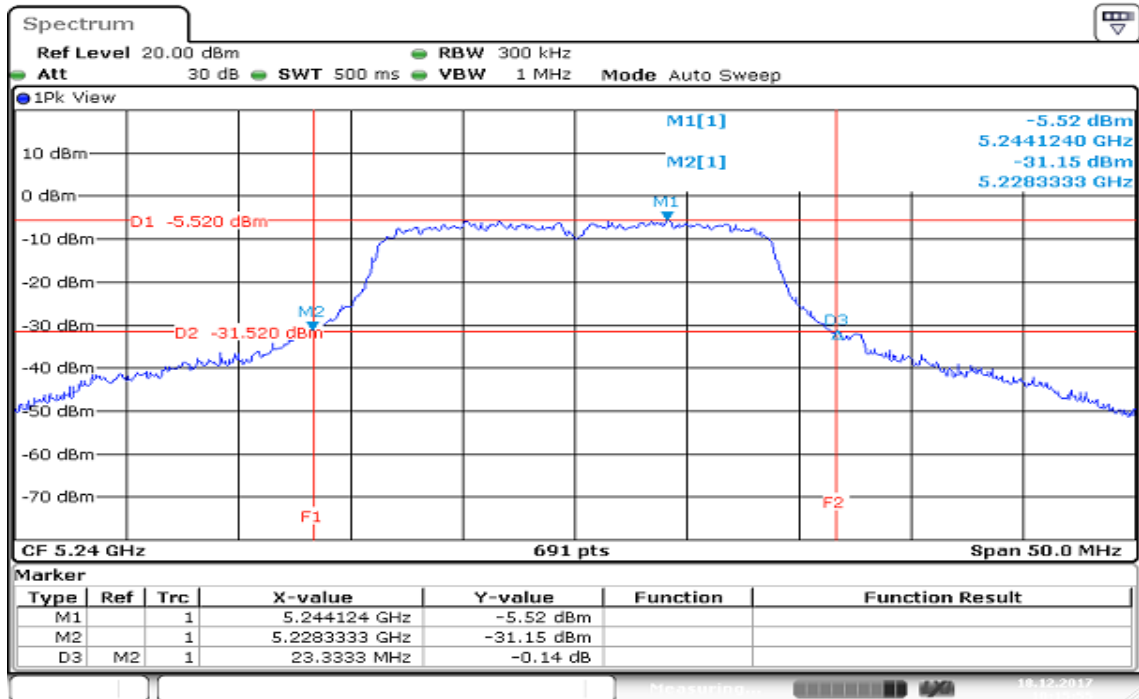
發射頻寬量測值 IEEE 802.11n HT20 MHz Mode / 5220MHz



Date: 18 DEC 2017 10:13:55

Report No.: T180806W05-RD3

發射頻寬量測值 IEEE 802.11n HT20 MHz Mode / 5240MHz

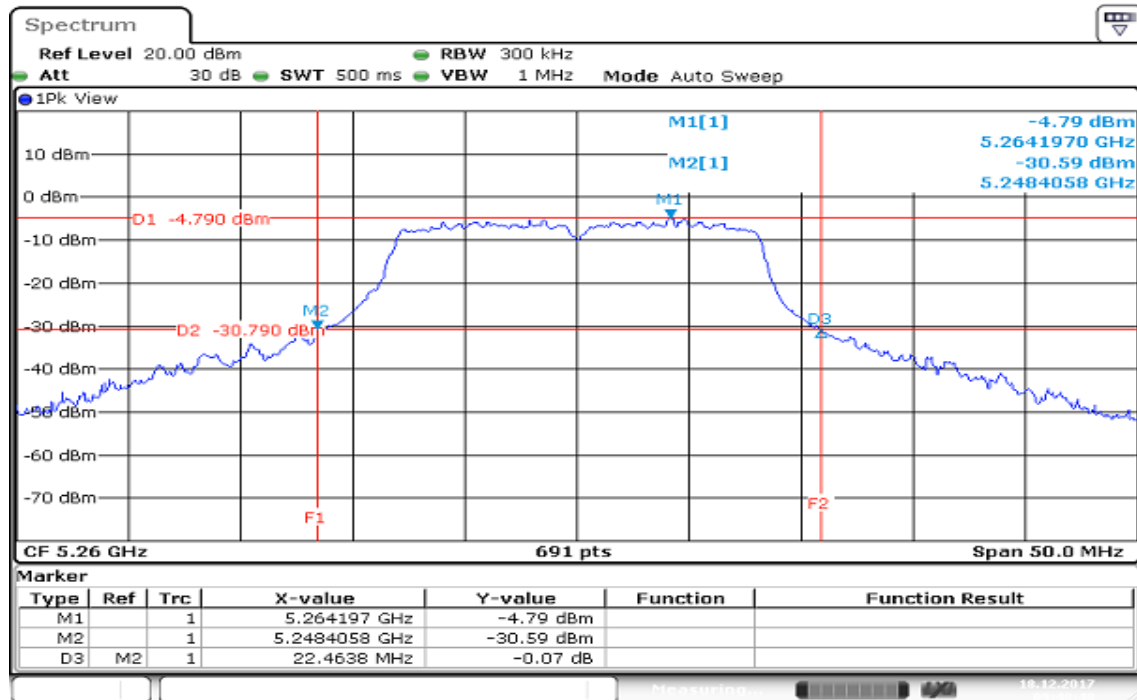


Date: 18 DEC 2017 10:15:56

Report No.: T180806W05-RD3

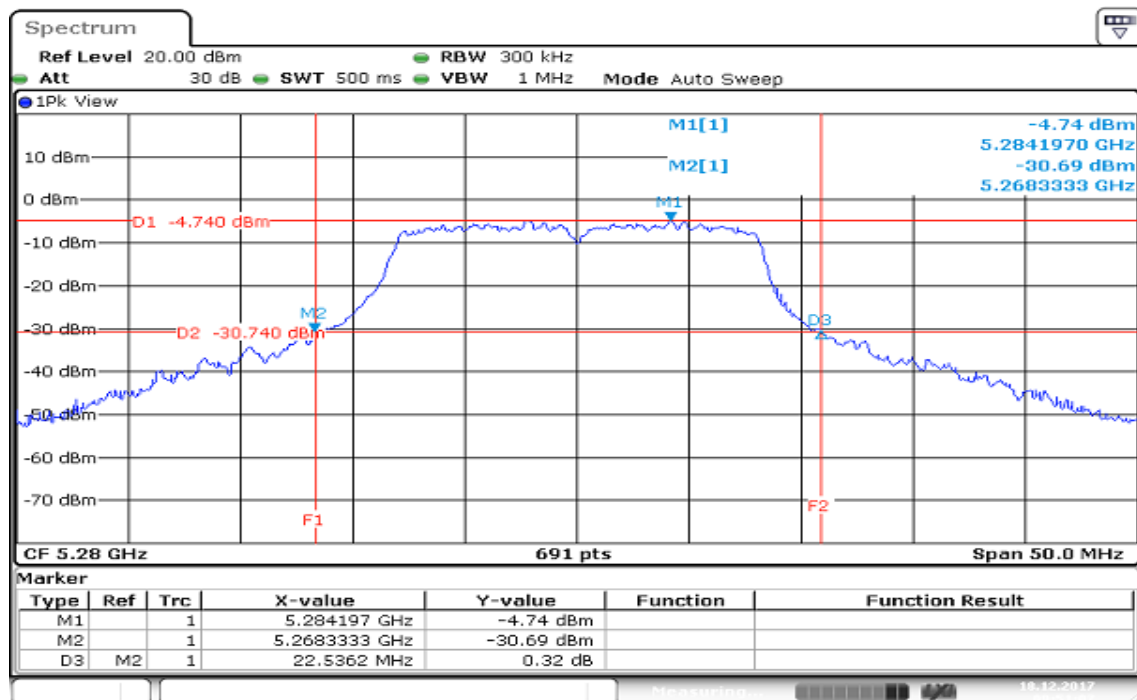
Band II

發射頻寬量測值 IEEE 802.11a Mode / 5260MHz



Date: 18 DEC 2017 09:46:49

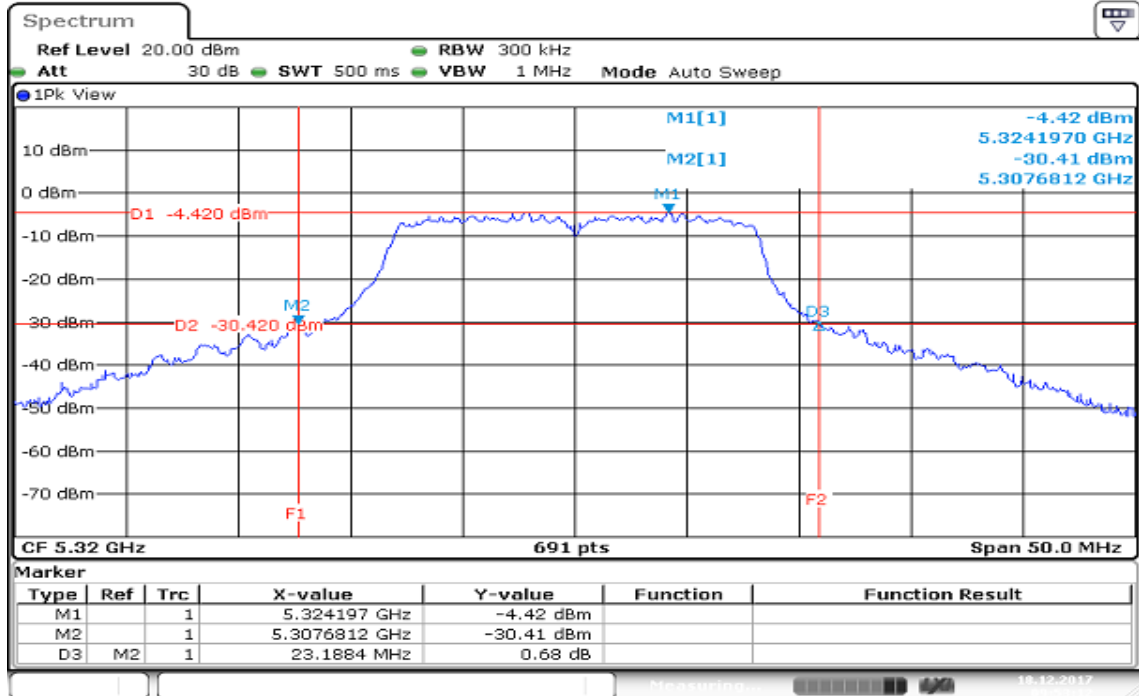
發射頻寬量測值 IEEE 802.11a Mode / 5280MHz



Date: 18 DEC 2017 09:51:08

Report No.: T180806W05-RD3

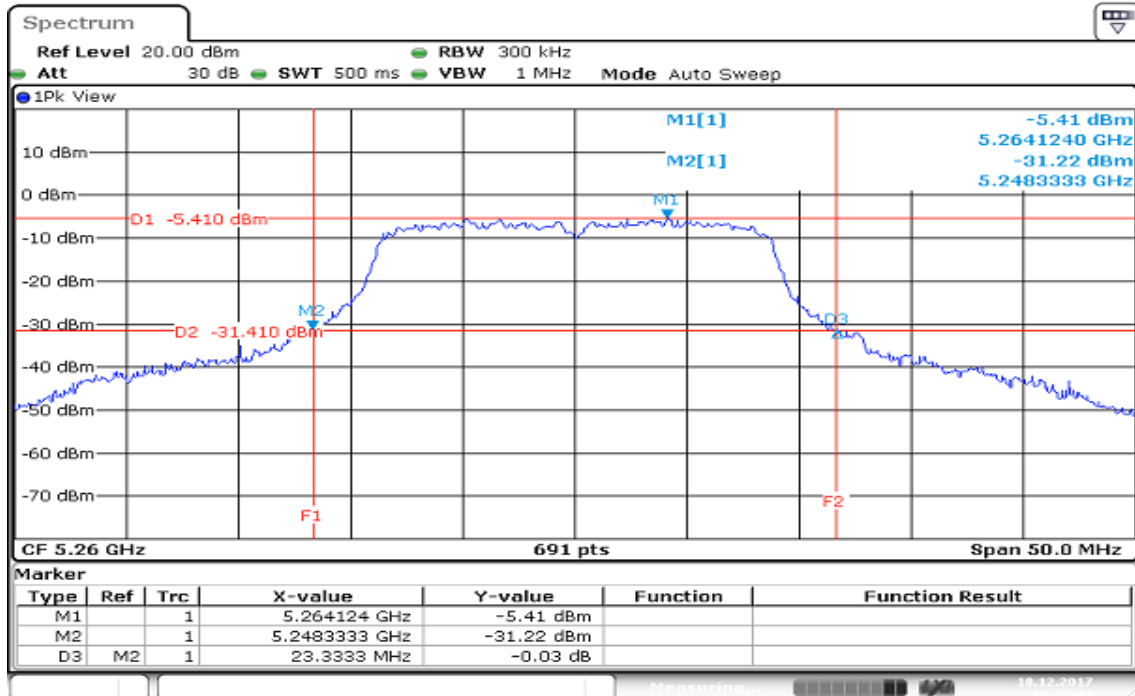
發射頻寬量測值 IEEE 802.11a Mode / 5320MHz



Date: 18 DEC 2017 09:53:13

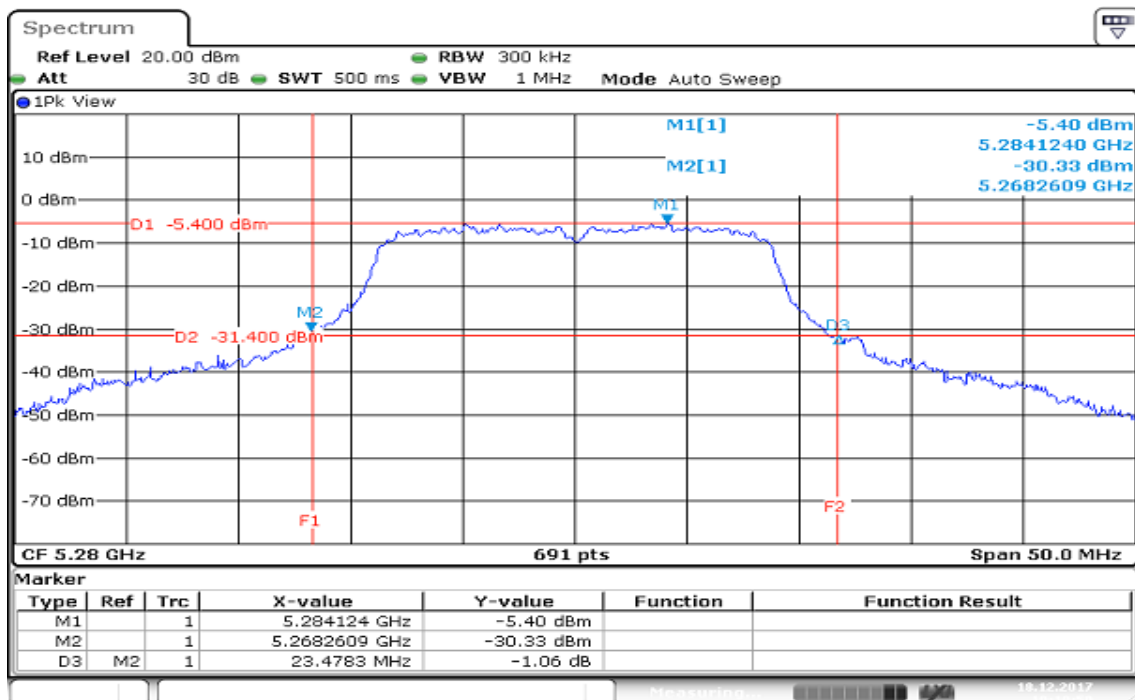
Report No.: T180806W05-RD3

發射頻寬量測值 IEEE 802.11n HT20 MHz Mode / 5260MHz



Date: 18 DEC 2017 10:17:42

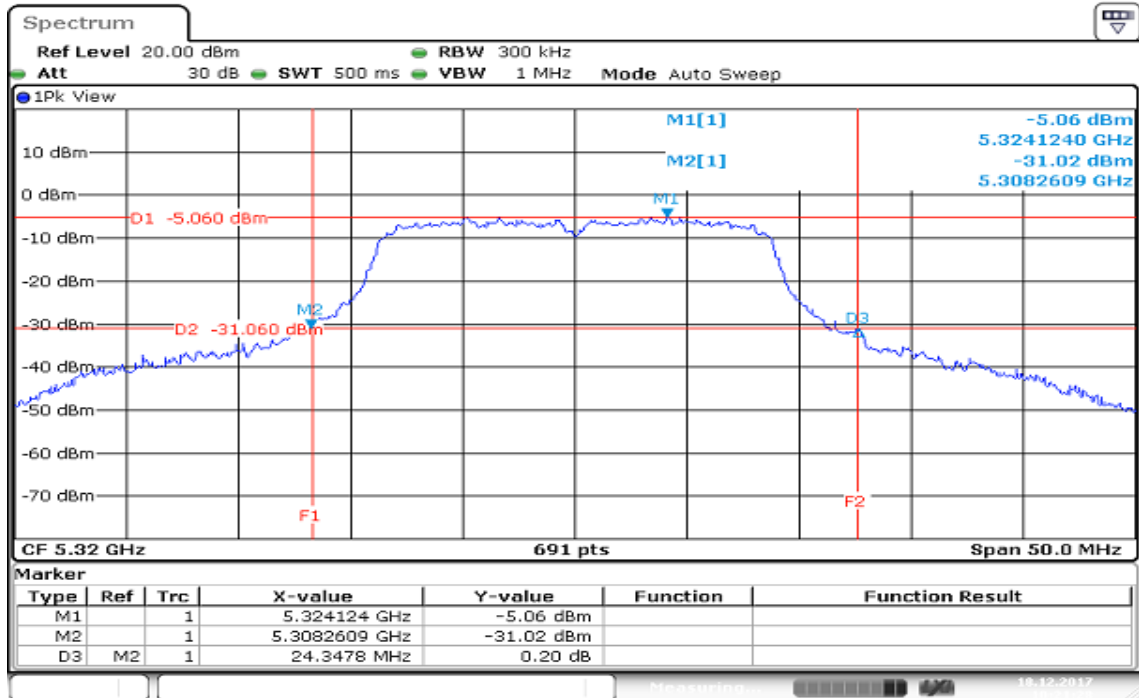
發射頻寬量測值 IEEE 802.11n HT20 MHz Mode / 5280MHz



Date: 18 DEC 2017 10:19:51

Report No.: T180806W05-RD3

發射頻寬量測值 IEEE 802.11n HT20 MHz Mode / 5320MHz

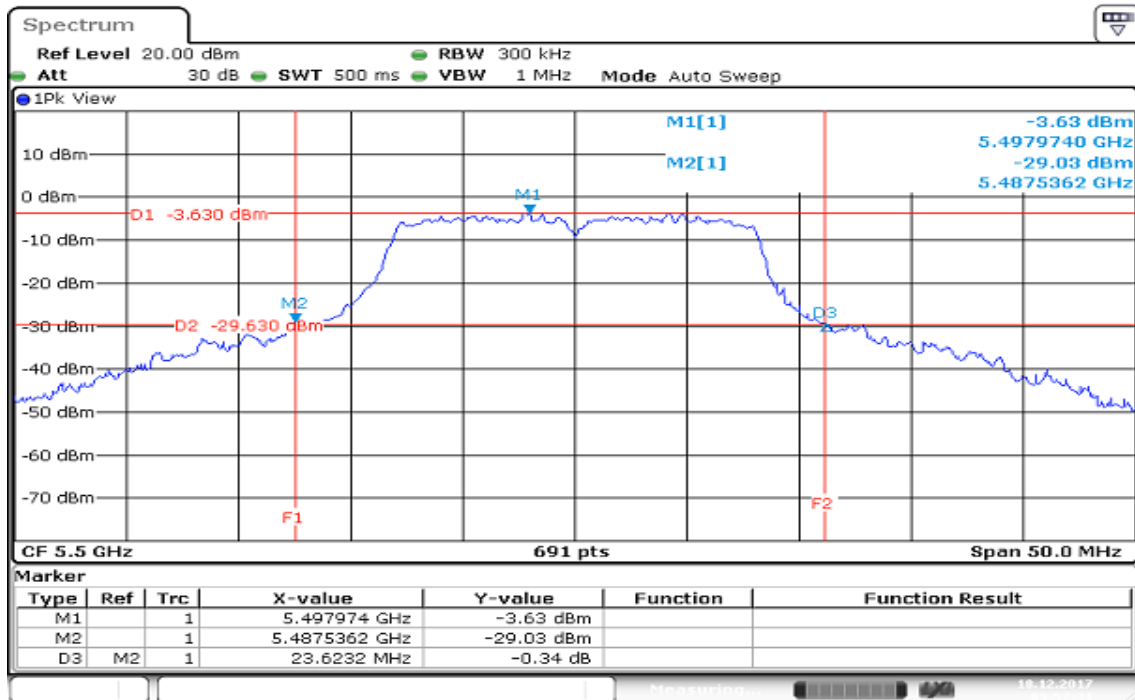


Date: 18 DEC 2017 10:21:28

Report No.: T180806W05-RD3

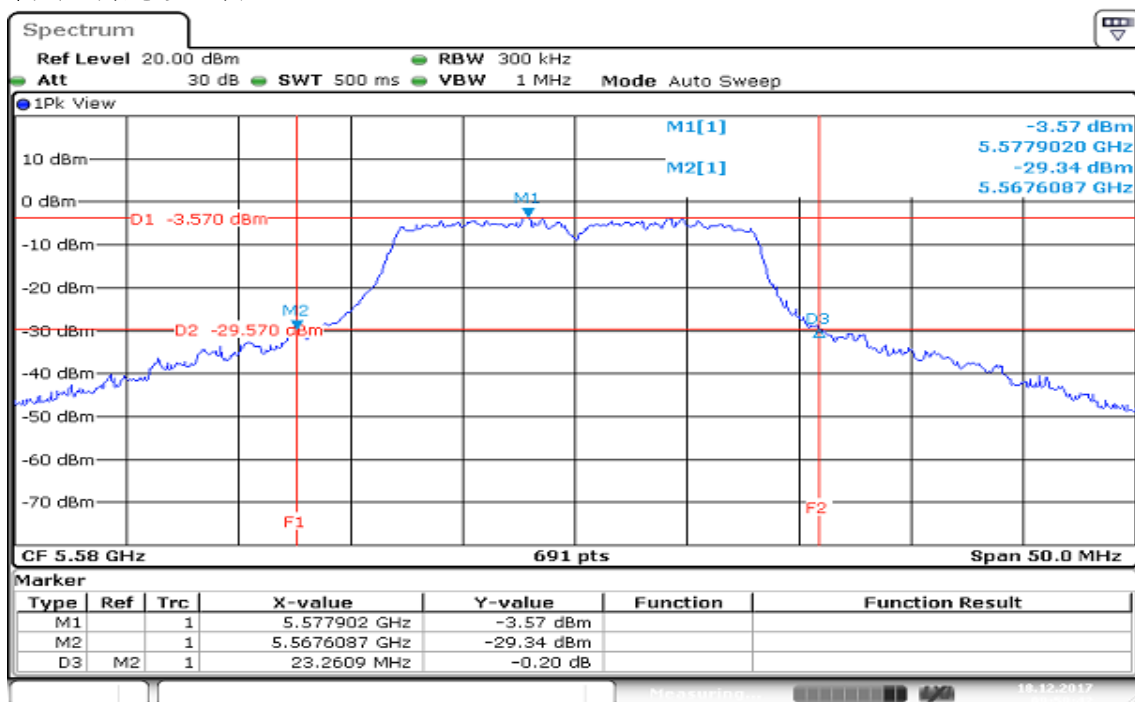
Band III

發射頻寬量測值 IEEE 802.11a Mode / 5500 MHz



Date: 18 DEC 2017 09:57:31

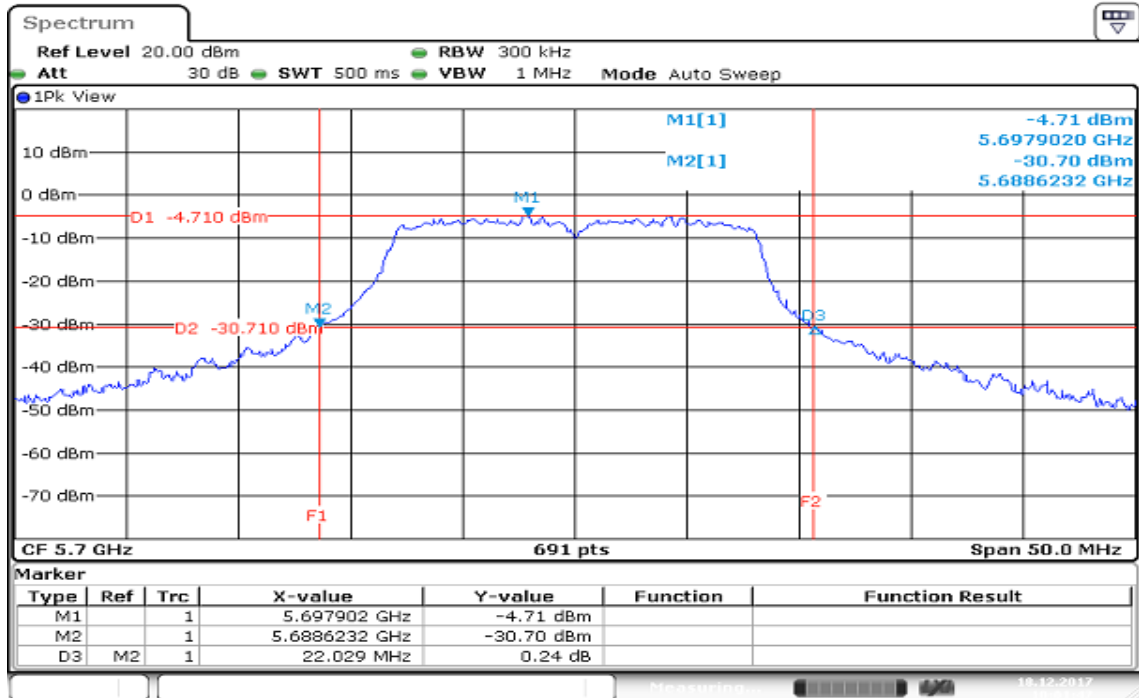
發射頻寬量測值 IEEE 802.11a Mode / 5580 MHz



Date: 18 DEC 2017 09:59:43

Report No.: T180806W05-RD3

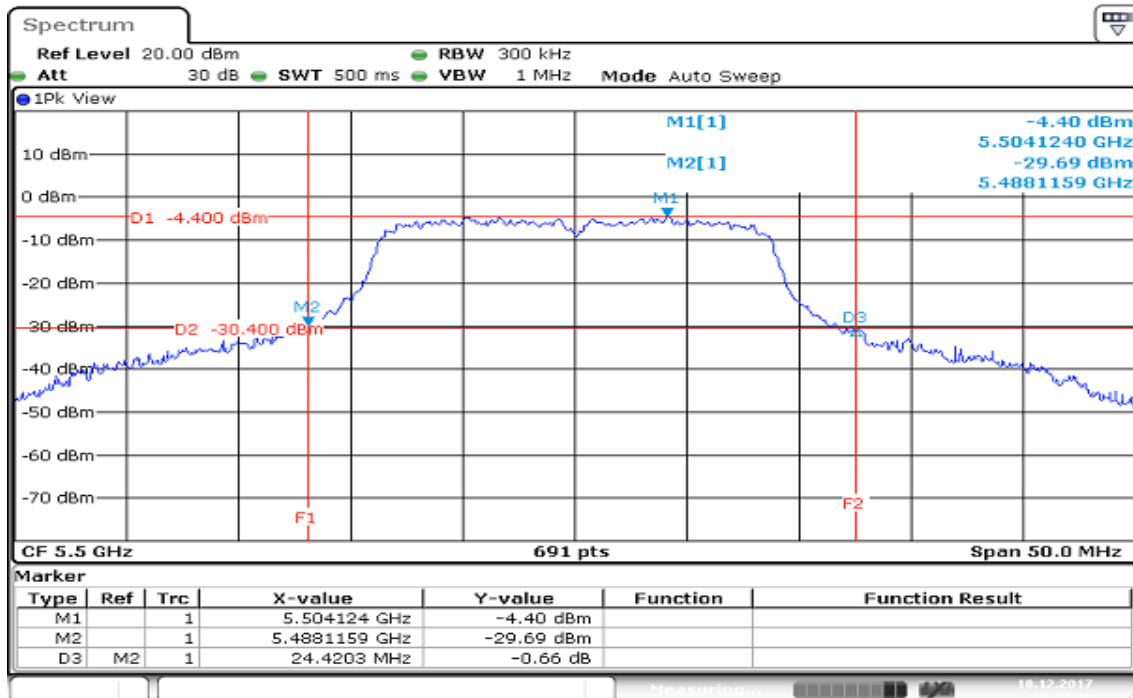
發射頻寬量測值 IEEE 802.11a Mode / 5700 MHz



Date: 18 DEC 2017 10:01:48

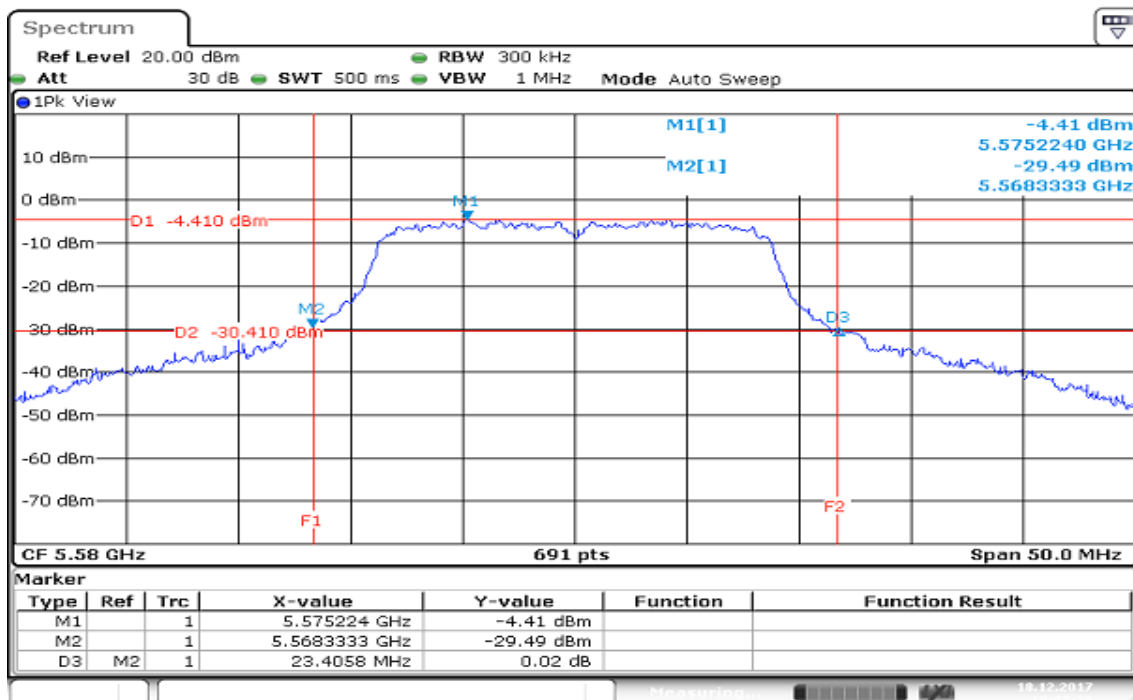
Report No.: T180806W05-RD3

發射頻寬量測值 IEEE 802.11n HT20 MHz Mode / 5500MHz



Date: 18 DEC 2017 10:23:47

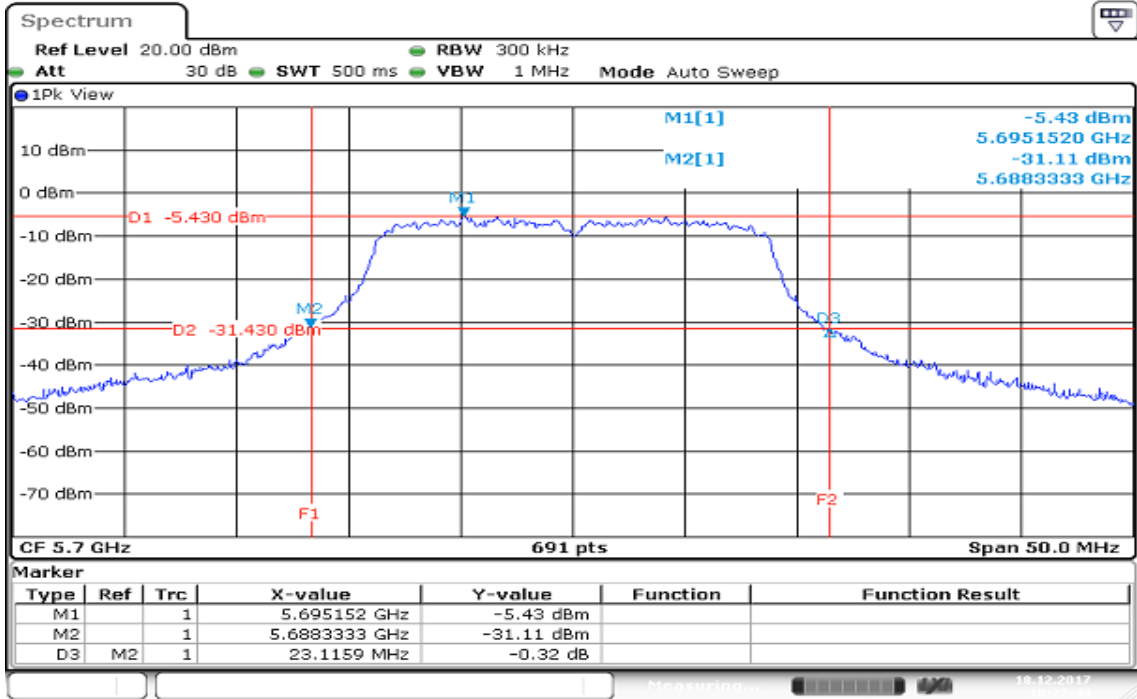
發射頻寬量測值 IEEE 802.11n HT20 MHz Mode / 5580MHz



Date: 18 DEC 2017 10:25:40

Report No.: T180806W05-RD3

發射頻寬量測值 IEEE 802.11n HT20 MHz Mode / 5700MHz



Date: 18 DEC 2017 10:27:44

9 發射頻寬之要求

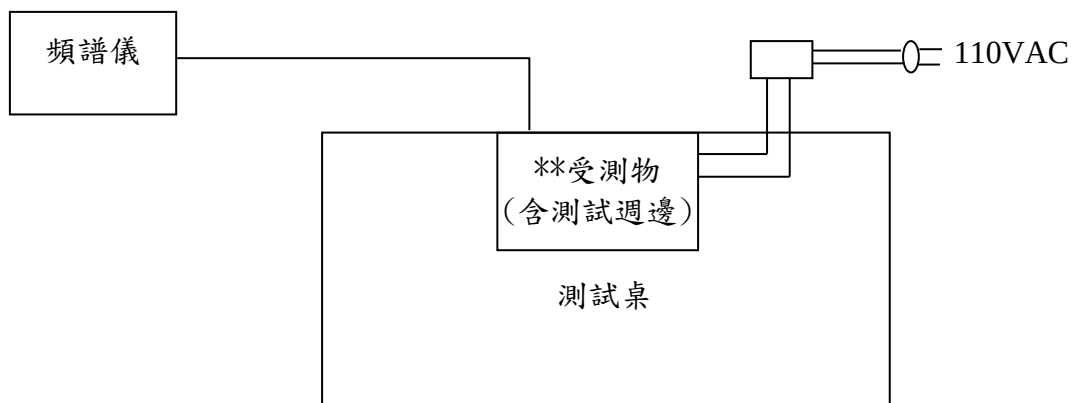
9.1 適用標準

對使用數位調變技術之低功率發射機，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，6dB之頻寬至少應有500kHz。

9.2 測試方法

測量時，頻譜分析儀之解析頻寬不小於99% Bandwidth之1%頻寬，視訊頻寬不小於解析頻寬。為求得精確測量，頻率掃描範圍(Span)遠大於解析頻寬。

9.3 測試配置



註: **請參照 3.2 節

9.4 發射頻寬之量測結果

Test Mode: IEEE 802.11a Mode

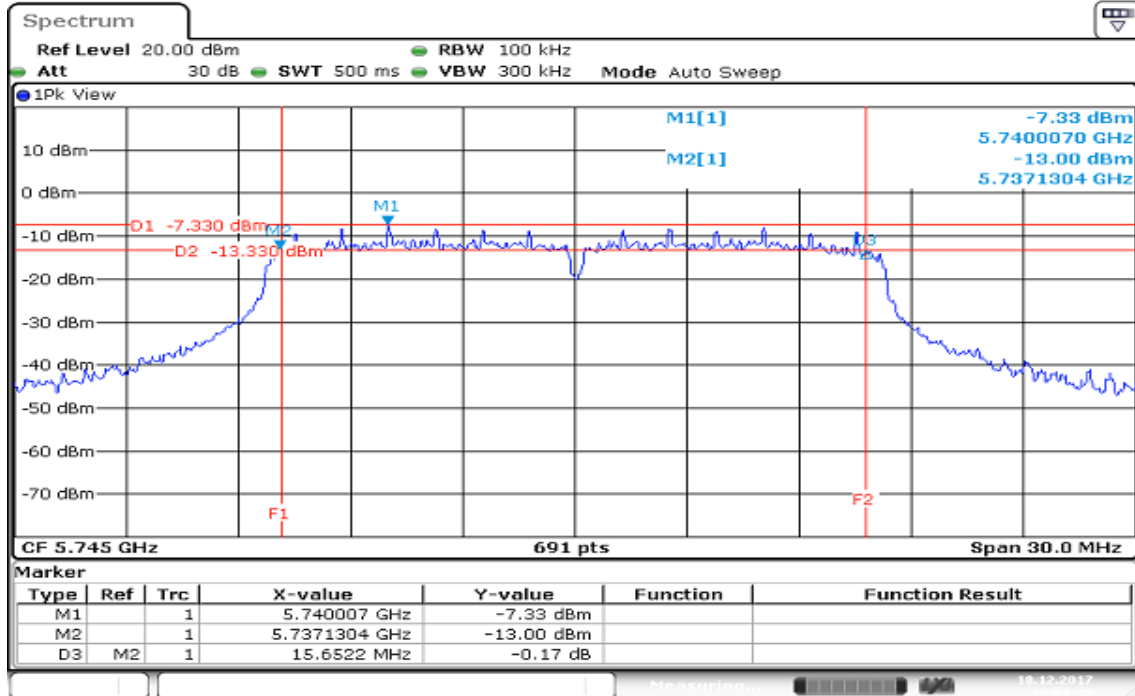
頻道	頻率 (MHz)	頻寬讀值 (MHz)	限制值 (kHz)	測試結果
Low	5745	15.6522	>500	PASS
Mid	5785	15.7826		PASS
High	5825	16.0870		PASS

Test mode: IEEE 802.11n HT 20 MHz mode

頻道	頻率 (MHz)	頻寬讀值 (MHz)	限制值 (kHz)	測試結果
Low	5745	16.8261	>500	PASS
Mid	5785	16.8261		PASS
High	5825	16.8261		PASS

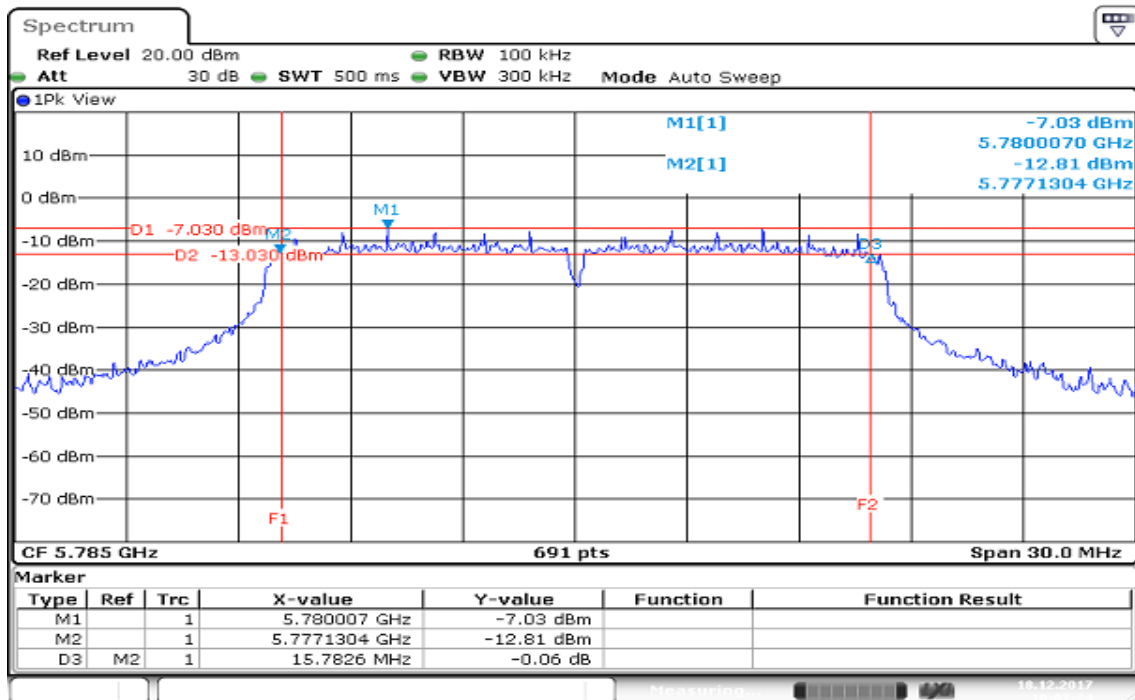
Report No.: T180806W05-RD3

發射頻寬測試值 IEEE 802.11a Mode/ 5745MHz



Date: 18 DEC 2017 10:03:48

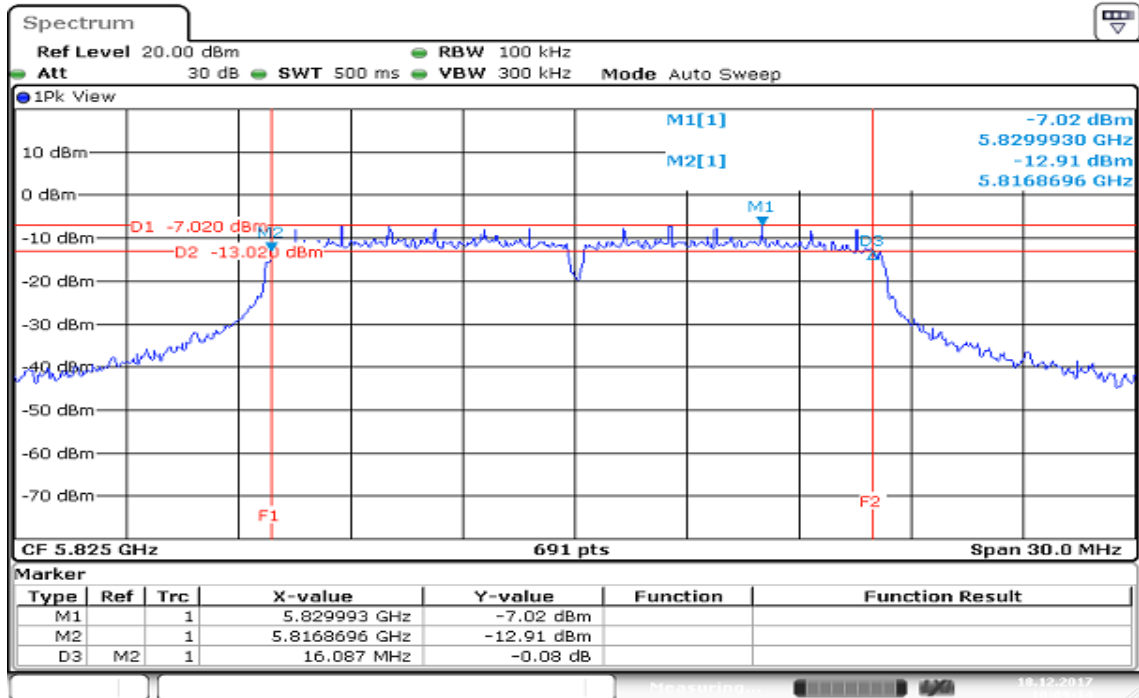
發射頻寬測試值 IEEE 802.11a Mode/ 5785MHz



Date: 18 DEC 2017 10:07:24

Report No.: T180806W05-RD3

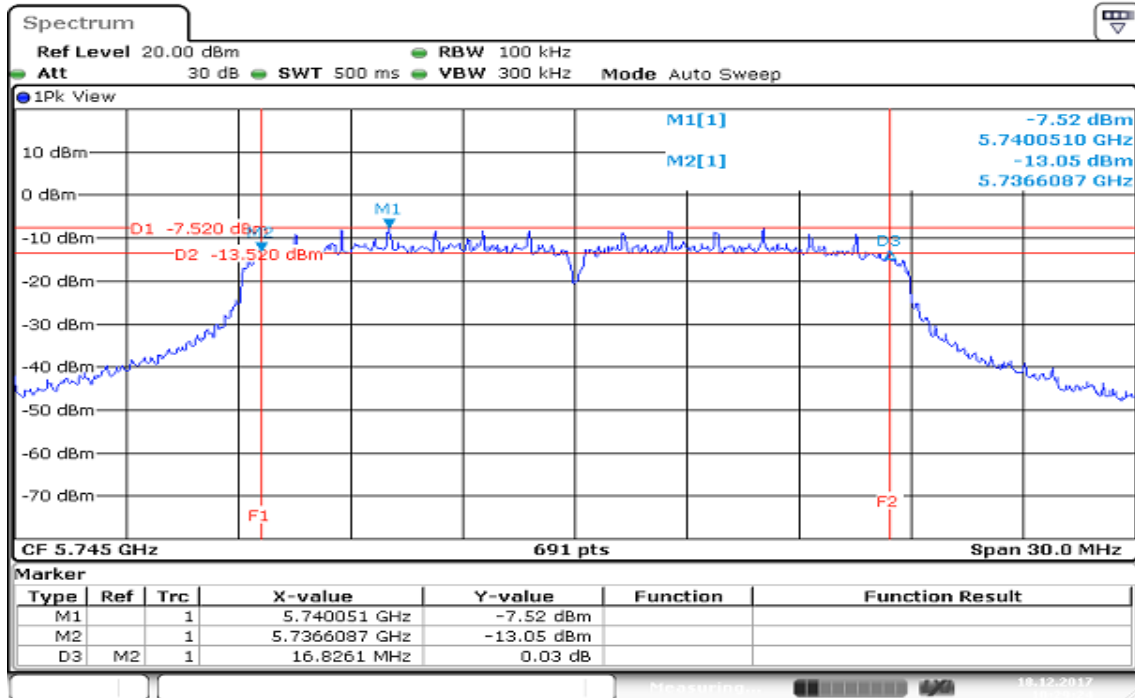
發射頻寬測試值 IEEE 802.11a Mode/ 5825MHz



Date: 18 DEC 2017 10:09:15

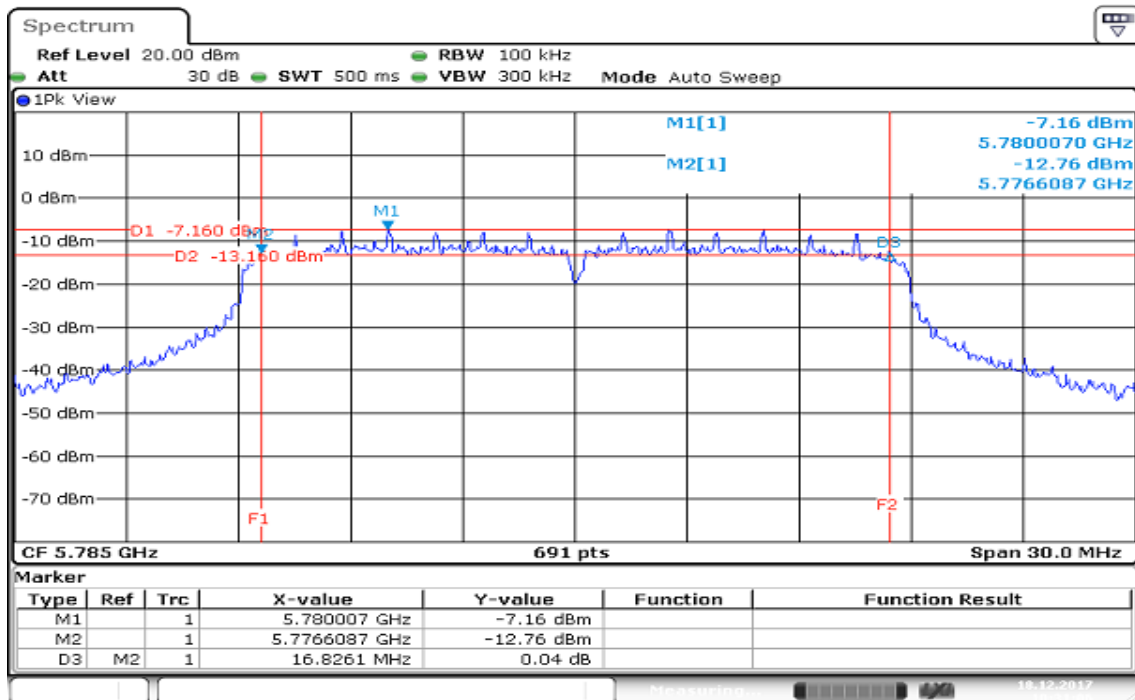
Report No.: T180806W05-RD3

發射頻寬測試值 IEEE 802.11n HT20 MHz Mode/ 5745MHz



Date: 18 DEC 2017 10:29:24

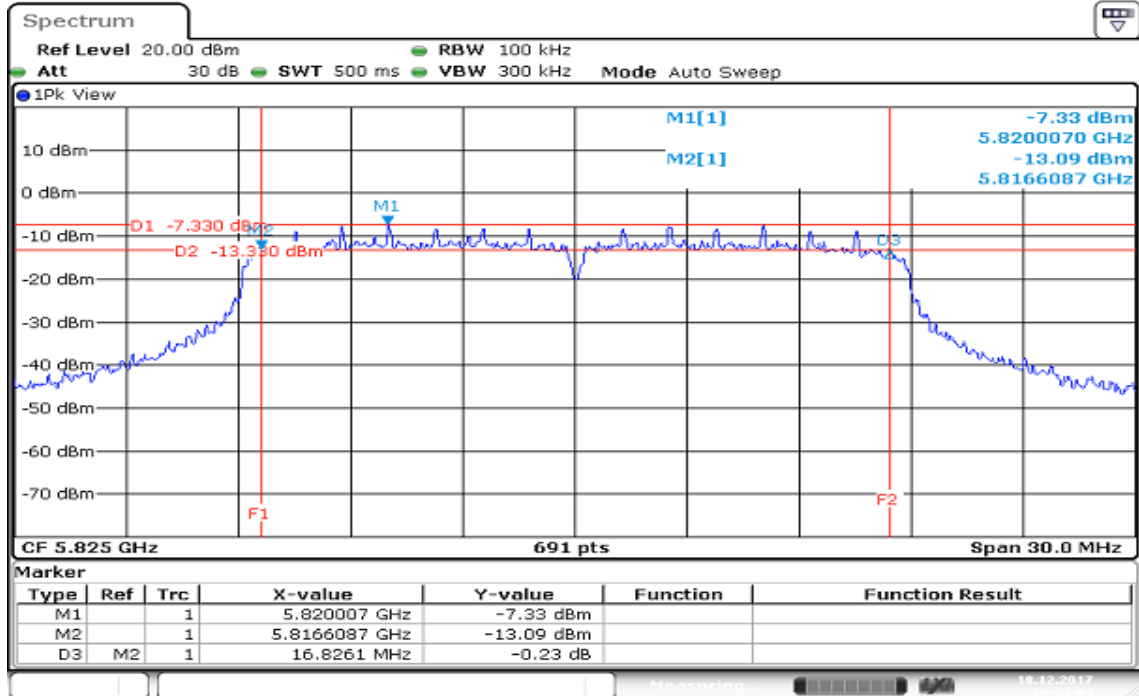
發射頻寬測試值 IEEE 802.11n HT20 MHz Mode/ 5785MHz



Date: 18 DEC 2017 10:31:07

Report No.: T180806W05-RD3

發射頻寬測試值 IEEE 802.11n HT20 MHz Mode/ 5825MHz



Date: 18 DEC 2017 10:33:05

10 輸出功率之量測

10.1 適用標準

使用頻率於 5.15GHz ~ 5.25GHz 頻段

4.7.3.1(1): 供戶外操作使用, 最大傳導輸出功率應小於或等於 1W。

4.7.3.1(2): 供室內操作使用, 最大傳導輸出功率應小於或等於 1W。

4.7.3.1(3): 供固定式點對點操作使用, 最大傳導輸出功率應小於或等於 1W。

4.7.3.1(4): 供用戶端裝置(Client Device)操作使用, 最大傳導輸出功率應小於或等於 250mW, 若使用超過 6dBi 方向增益之發射天線時, 應依超過 6dBi 天線方向增益的 dBi 總量, 等量減少最大傳導輸出功率及最大功率密度。

使用頻率於 5.25GHz ~ 5.35GHz 與 5.470GHz ~ 5.725GHz 頻段

4.7.3.2(1): 最大傳導輸出功率應小於或等於 250mW 或 11dBm_{10logB} (B=26dB 發射頻寬, 單位 MH)之較小者, 若使用超過 6dBi 方向增益之發射天線時, 應依超過 6dBi 天線方向增益的 dBi 總量, 等量減少最大傳導輸出功率及最大功率密度。

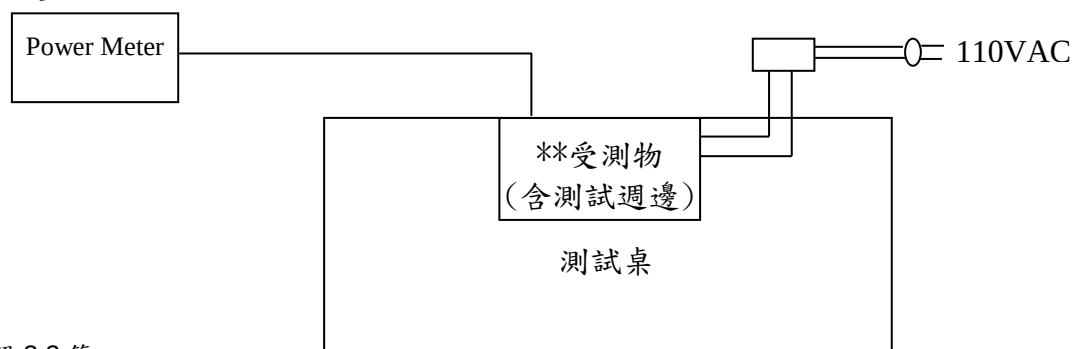
使用頻率於 5.725 GHz~5.850 GHz 頻段

4.7.3.3(1): 最大傳導輸出功率應小於或等於 1 W。

10.2 測試方法

The transmitter output is connected to the Power Meter. The Power Meter is set to the peak power detection.

10.3 測試配置



註: **請參照 3.2 節

Report No.: T180806W05-RD3

10.4 輸出功率之量測結果

Band I

Test Mode: IEEE 802.11a Mode

頻道	頻率 (MHz)	輸出峰值 (dBm)	輸出峰值 (dBm)	限制值 (dBm)	測試結果
36	5180	14.02	0.0252	24.00	PASS
44	5220	14.45	0.0279	24.00	PASS
48	5240	*14.47	0.0280	24.00	PASS

Test Mode: IEEE 802.11n HT20 MHz Mode

頻道	頻率 (MHz)	輸出峰值 (dBm)	輸出峰值 (dBm)	限制值 (dBm)	測試結果
36	5180	14.31	0.0270	24.00	PASS
44	5220	14.26	0.0267	24.00	PASS
48	5240	14.29	0.0269	24.00	PASS

Band II

Test Mode: IEEE 802.11a Mode

頻道	頻率 (MHz)	輸出峰值 (dBm)	輸出峰值 (dBm)	限制值 (dBm)	測試結果
52	5260	14.28	0.0268	24.00	PASS
56	5280	14.43	0.0277	24.00	PASS
64	5320	*14.52	0.0283	24.00	PASS

Test Mode: IEEE 802.11n HT20 MHz Mode

頻道	頻率 (MHz)	輸出峰值 (dBm)	輸出峰值 (dBm)	限制值 (dBm)	測試結果
52	5260	14.37	0.0274	24.00	PASS
56	5280	14.51	0.0282	24.00	PASS
64	5320	*14.79	0.0301	24.00	PASS



Report No.: T180806W05-RD3

Band III

Test Mode: IEEE 802.11a Mode

頻道	頻率 (MHz)	輸出峰值 (dBm)	輸出峰值 (dBm)	限制值 (dBm)	測試結果
100	5500	15.12	0.0325	24.00	PASS
116	5580	*15.15	0.0327	24.00	PASS
140	5700	14.22	0.0264	24.00	PASS

Test Mode: IEEE 802.11n HT20 MHz Mode

頻道	頻率 (MHz)	輸出峰值 (dBm)	輸出峰值 (dBm)	限制值 (dBm)	測試結果
100	5500	*15.18	0.0330	24.00	PASS
116	5580	15.14	0.0327	24.00	PASS
140	5700	14.02	0.0252	24.00	PASS

Band IV

Test Mode: IEEE 802.11a Mode

頻道	頻率 (MHz)	輸出峰值 (dBm)	輸出峰值 (dBm)	限制值 (dBm)	測試結果
149	5745	14.52	0.0283	30.00	PASS
157	5785	*14.67	0.0293	30.00	PASS
165	5825	14.24	0.0265	30.00	PASS

Test Mode: IEEE 802.11n HT20 MHz Mode

頻道	頻率 (MHz)	輸出峰值 (dBm)	輸出峰值 (dBm)	限制值 (dBm)	測試結果
149	5745	14.21	0.0264	30.00	PASS
157	5785	*14.52	0.0283	30.00	PASS
165	5825	14.45	0.0279	30.00	PASS

11 功率密度之量測

11.1 適用標準

使用頻率於 5.15GHz ~ 5.25GHz 頻段

4.7.3.1(1): 供戶外操作使用, 在任何 1 MHz 頻帶中最大功率頻譜密度應小於或等於 17 dBm。

4.7.3.1(2): 供室內操作使用, 在任何 1 MHz 頻帶中最大功率頻譜密度應小於或等於 17 dBm。

4.7.3.1(3): 供固定式點對點操作使用, 在任何 1 MHz 頻帶中最大功率頻譜密度應小於或等於 17 dBm。

4.7.3.1(4): 供用戶端裝置(Client Device)操作使用, 在任何 1 MHz 頻帶中最大功率頻譜密度應小於或等於 11 dBm, 若使用超過 6dBi 方向增益之發射天線時, 應依超過 6dBi 天線方向增益的 dBi 總量, 等量減少最大傳導輸出功率及最大功率密度。

使用頻率於 5.25GHz ~ 5.35GHz 與 5.470GHz ~ 5.725GHz 頻段

4.7.3.2(2): 最大功率頻譜密度在任何 1 MHz 頻帶中應小於或等於 11 dBm, 若使用超過 6dBi 方向增益之發射天線時, 應依超過 6dBi 天線方向增益的 dBi 總量, 等量減少最大傳導輸出功率及最大功率密度。

使用頻率於 5.725 GHz~5.850 GHz 頻段

4.7.3.3(2): 在任何 500 kHz 頻帶中最大功率頻譜密度應小於或等於 30 dBm, 若使用超過 6 dBi 方向增益之發射天線時, 應依超過 6 dBi 天線方向增益的 dBi 總量, 等量減少最大傳導輸出功率及最大功率頻譜密度。

11.2 測試方法

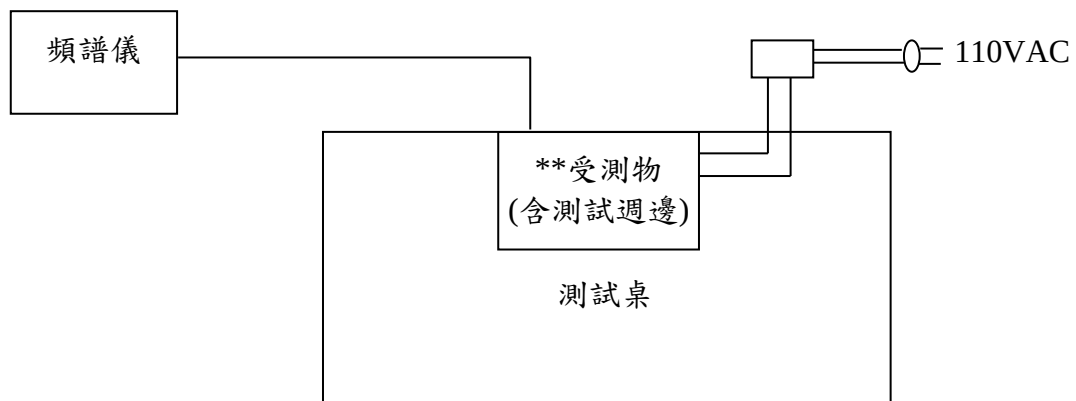
For Band 1

1. Place the EUT on the table and set it in transmitting mode.
Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
2. Set the spectrum analyzer as RBW = 1MHz, VBW = 3MHz, Span = Sweep= AUTO
3. Record the max. reading.
4. Repeat the above procedure until the measurements for all frequencies are completed

For Band 4

1. Place the EUT on the table and set it in transmitting mode.
Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
2. Set the spectrum analyzer as RBW = 500kHz, VBW = 3 x RBW, Span = 1.5 x bandwidth, Sweep=auto
3. Record the max. reading.
4. Repeat the above procedure until the measurements for all frequencies are completed.

11.3 測試配置



註: **請參照 3.2 節

Report No.: T180806W05-RD3

11.4 功率密度之量測結果

Band I

Test Mode: IEEE 802.11a Mode

頻道	頻率 (MHz)	功率密度 (dBm)	限制值 (dBm)	測試結果
36	5180	2.69	11.00	PASS
44	5220	2.48	11.00	PASS
48	5240	2.89	11.00	PASS

Test Mode: IEEE 802.11n HT20 MHz Mode

頻道	頻率 (MHz)	功率密度 (dBm)	限制值 (dBm)	測試結果
36	5180	2.22	11.00	PASS
44	5220	2.40	11.00	PASS
48	5240	2.50	11.00	PASS

Band II

Test Mode: IEEE 802.11a Mode

頻道	頻率 (MHz)	功率密度 (dBm)	限制值 (dBm)	測試結果
52	5260	2.96	11.00	PASS
56	5280	2.91	11.00	PASS
64	5320	3.34	11.00	PASS

Test Mode: IEEE 802.11n HT20 MHz Mode

頻道	頻率 (MHz)	功率密度 (dBm)	限制值 (dBm)	測試結果
52	5260	2.61	11.00	PASS
56	5280	2.58	11.00	PASS
64	5320	2.90	11.00	PASS

Band III

Test Mode: IEEE 802.11a Mode

頻道	頻率 (MHz)	功率密度 (dBm)	限制值 (dBm)	測試結果
100	5500	3.99	11.00	PASS
116	5580	3.95	11.00	PASS
140	5700	2.94	11.00	PASS

Test Mode: IEEE 802.11n HT20 MHz Mode

頻道	頻率 (MHz)	功率密度 (dBm)	限制值 (dBm)	測試結果
100	5500	3.54	11.00	PASS
116	5580	3.56	11.00	PASS
140	5700	2.56	11.00	PASS

Band IV

Test Mode: IEEE 802.11a MHz Mode

頻道	頻率 (MHz)	功率密度 (dBm)	限制值 (dBm)	測試結果
149	5745	8.28	30.00	PASS
157	5785	9.23	30.00	PASS
165	5825	9.06	30.00	PASS

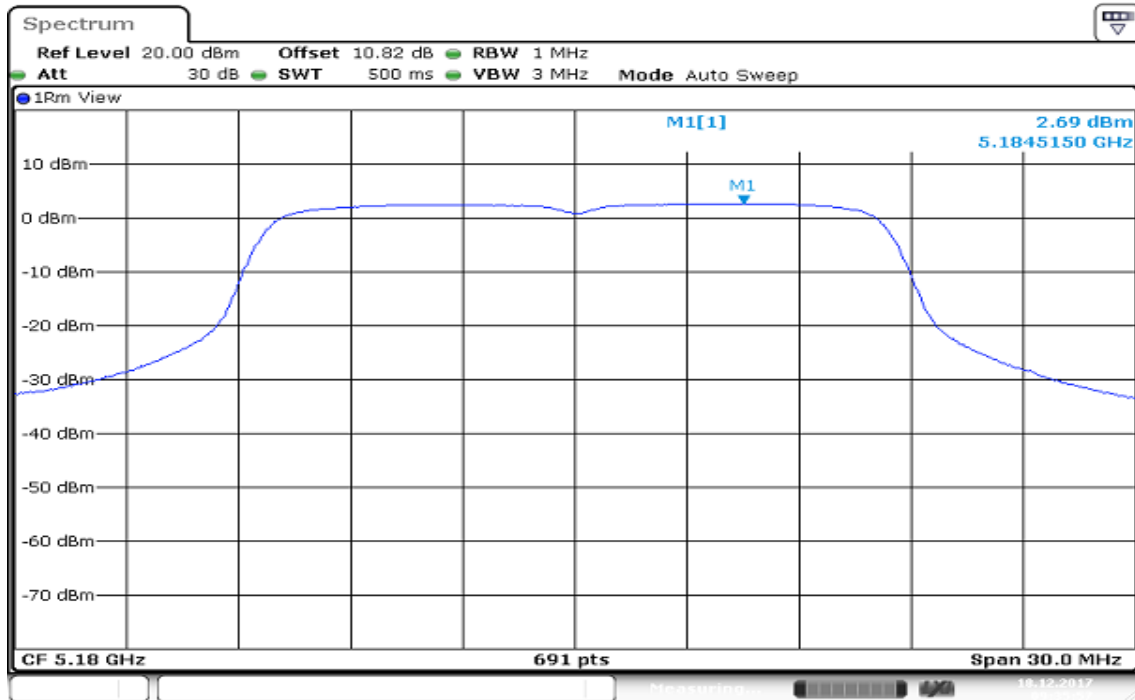
Test Mode: IEEE 802.11n HT20 MHz Mode

頻道	頻率 (MHz)	功率密度 (dBm)	限制值 (dBm)	測試結果
149	5745	8.32	30.00	PASS
157	5785	8.49	30.00	PASS
165	5825	8.25	30.00	PASS

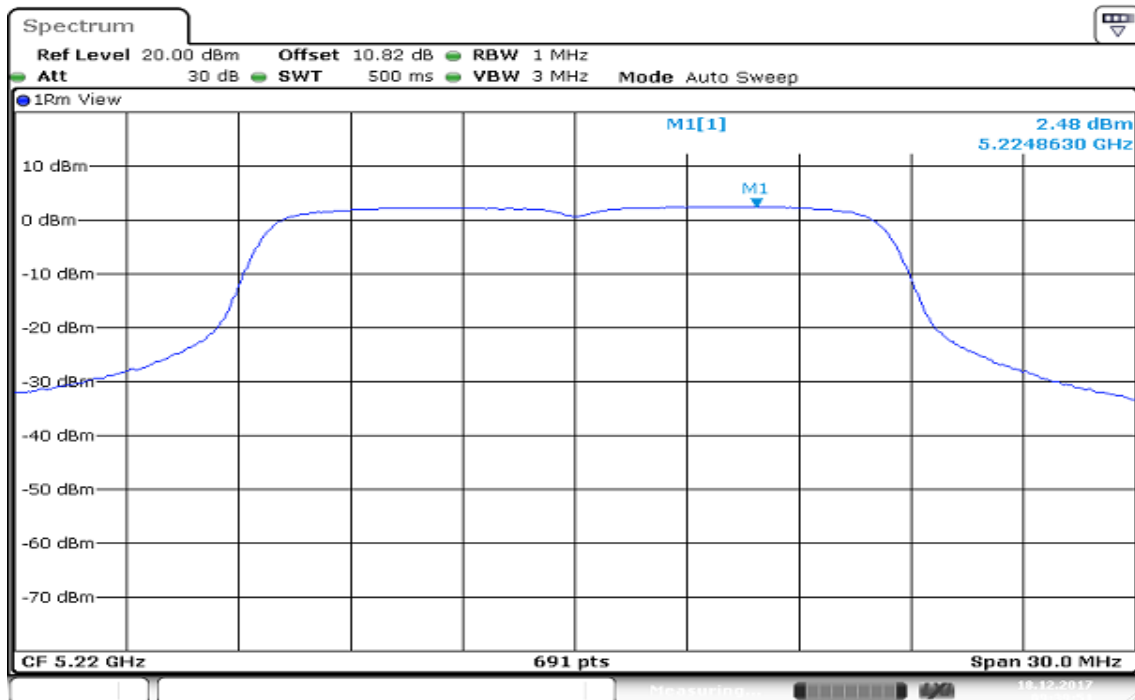
Report No.: T180806W05-RD3

Band I

功率密度量測值 IEEE 802.11a Mode / 5180MHz



功率密度量測值 IEEE 802.11a Mode / 5220MHz

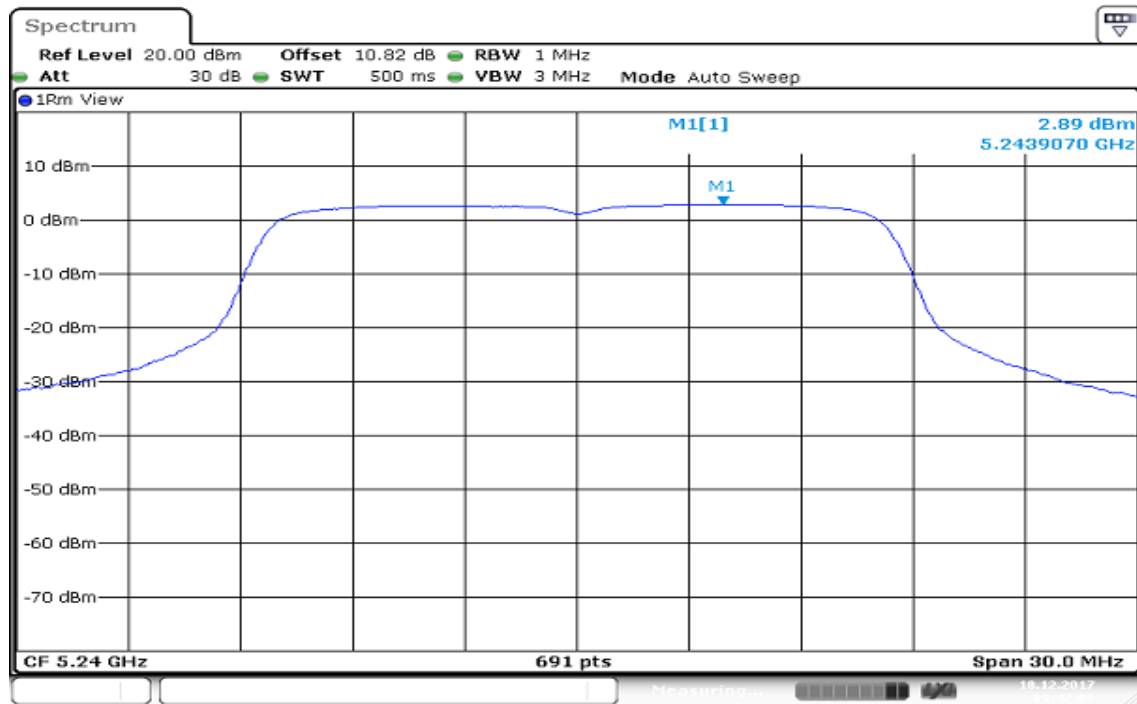




Report No.: T180806W05-RD3

Page 142 / 160
Rev. 01

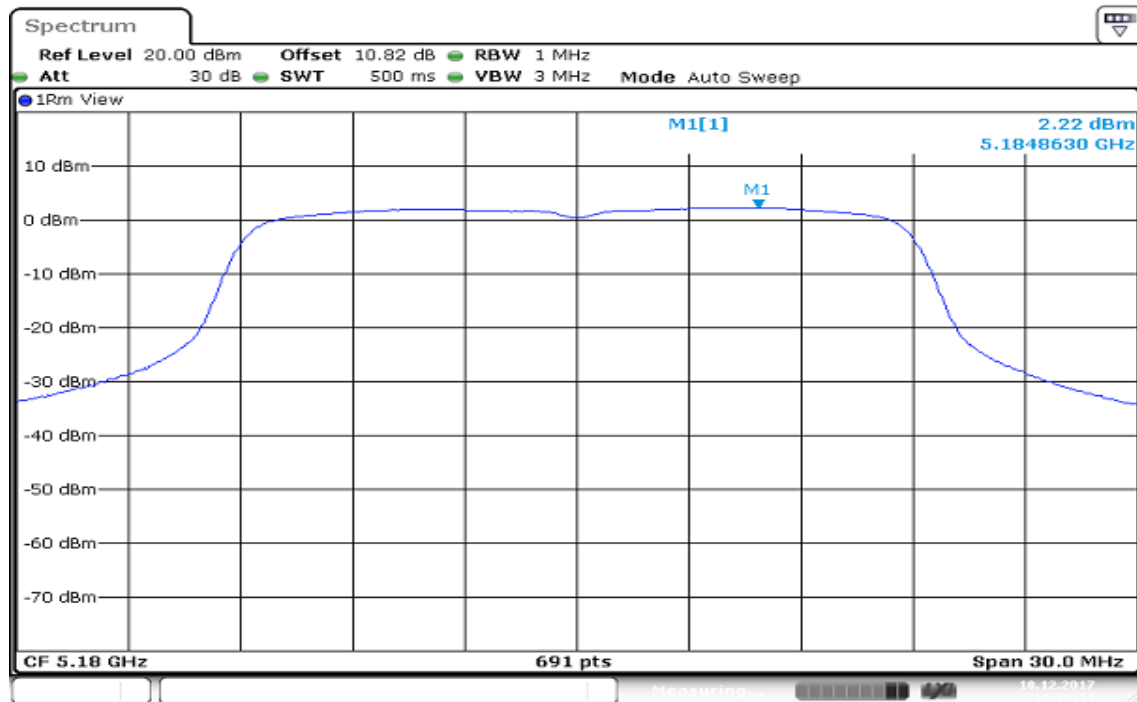
功率密度量測值 IEEE 802.11a Mode / 5240MHz



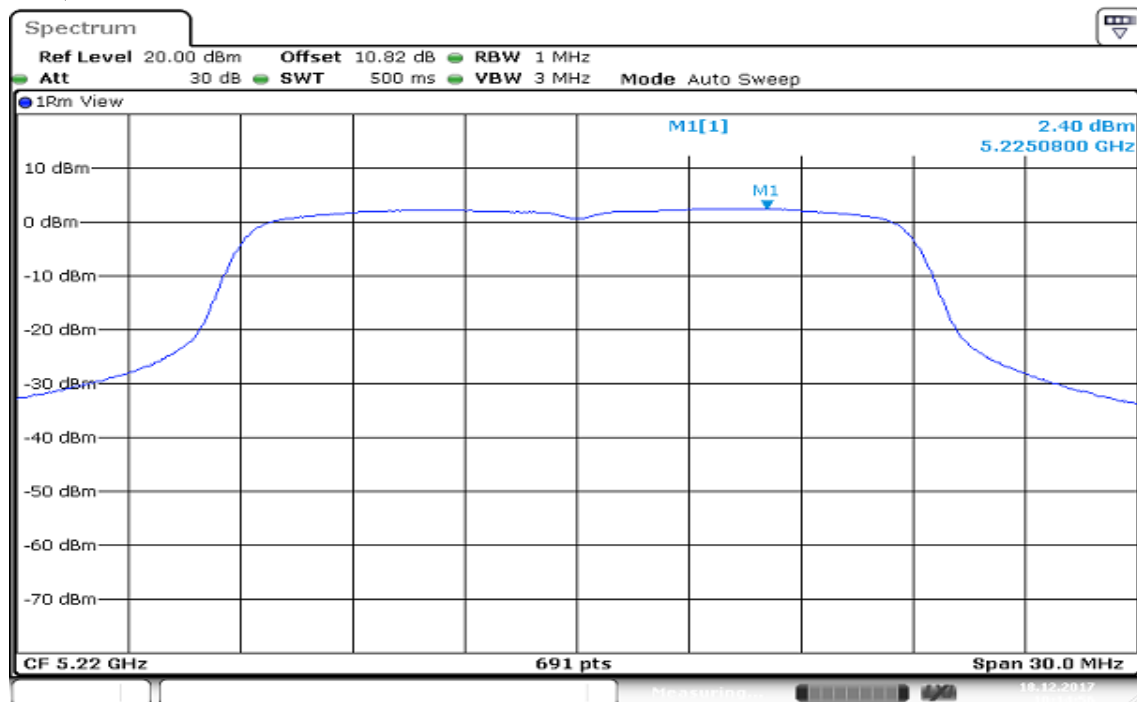
Date: 18 DEC 2017 09:47:09

Report No.: T180806W05-RD3

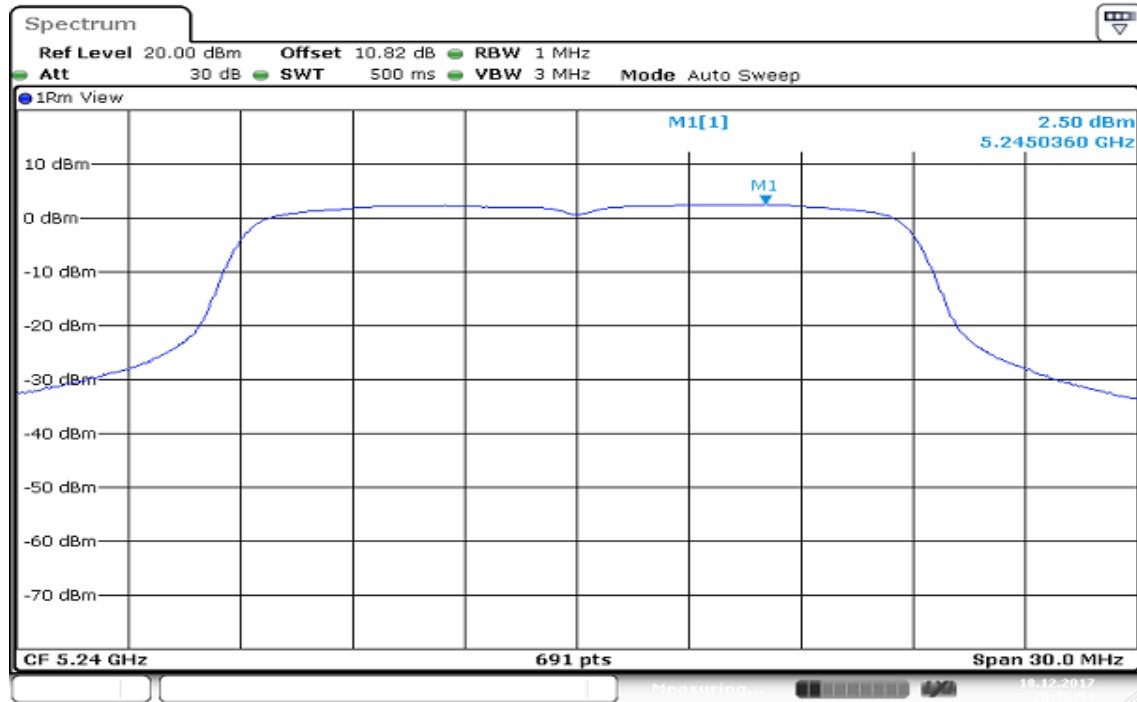
功率密度量測值 IEEE 802.11n HT20 MHz Mode / 5180MHz



功率密度量測值 IEEE 802.11n HT20 MHz Mode / 5220MHz



功率密度量測值 IEEE 802.11n HT20 MHz Mode / 5240MHz

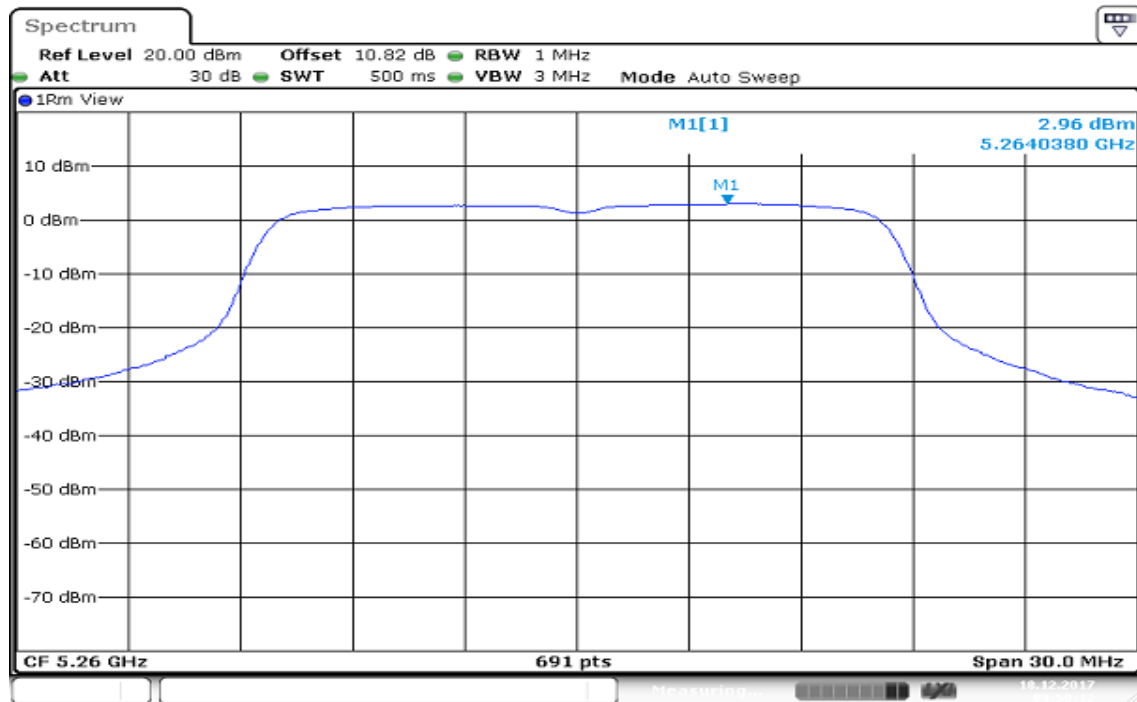


Date: 18 DEC 2017 10:16:54

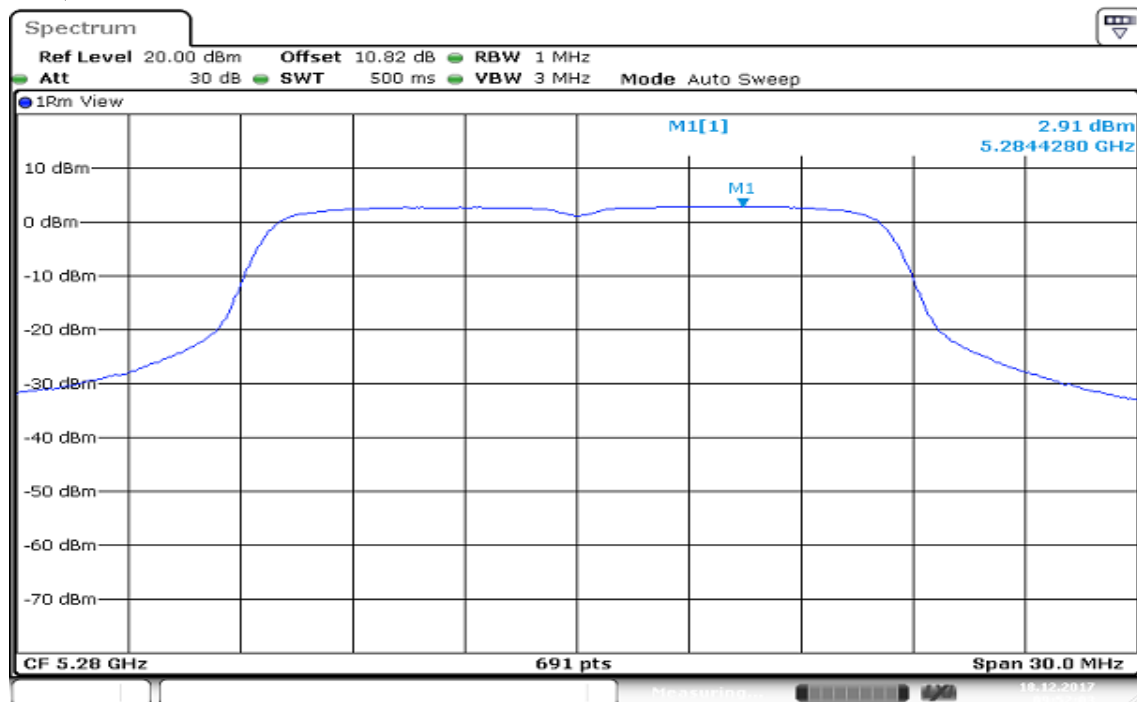
Report No.: T180806W05-RD3

Band II

功率密度量測值 IEEE 802.11a Mode / 5260MHz



功率密度量測值 IEEE 802.11a Mode / 5280MHz

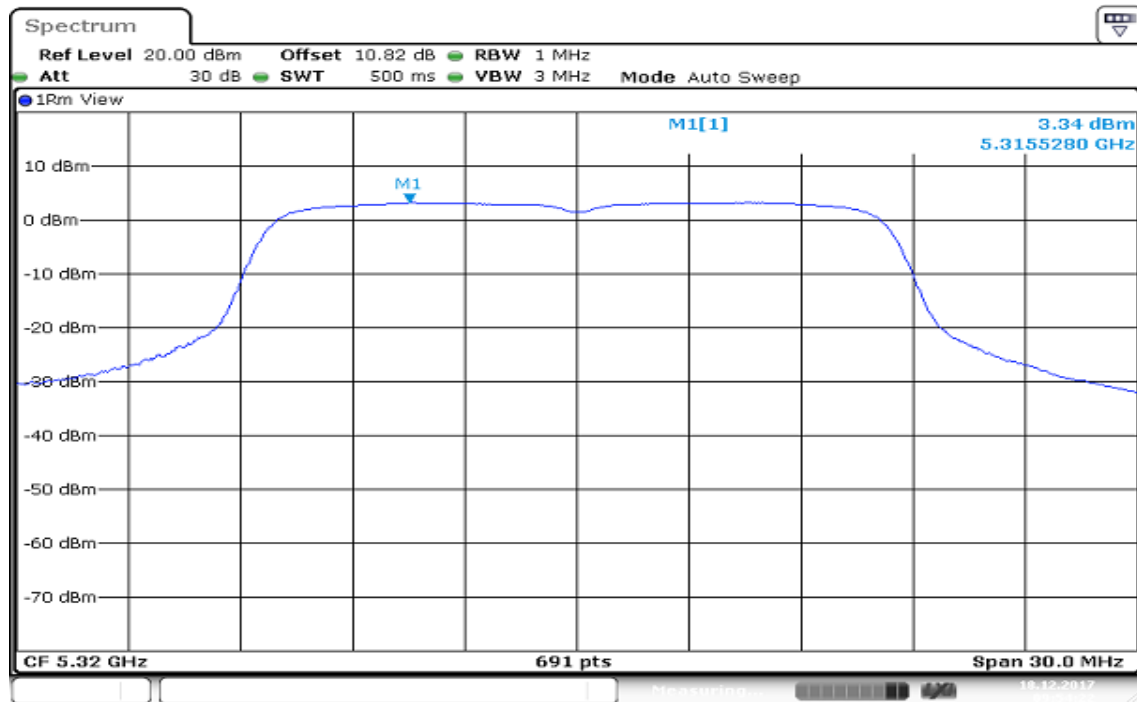




Report No.: T180806W05-RD3

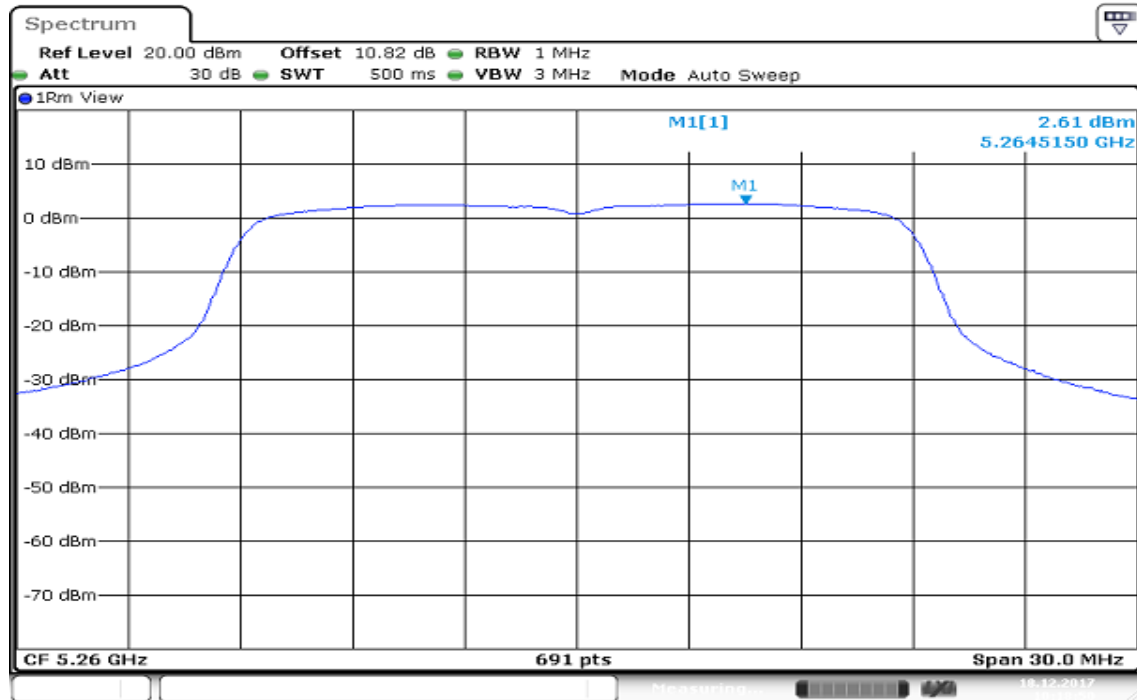
Page 146 / 160
Rev. 01

功率密度量測值 IEEE 802.11a Mode / 5320MHz

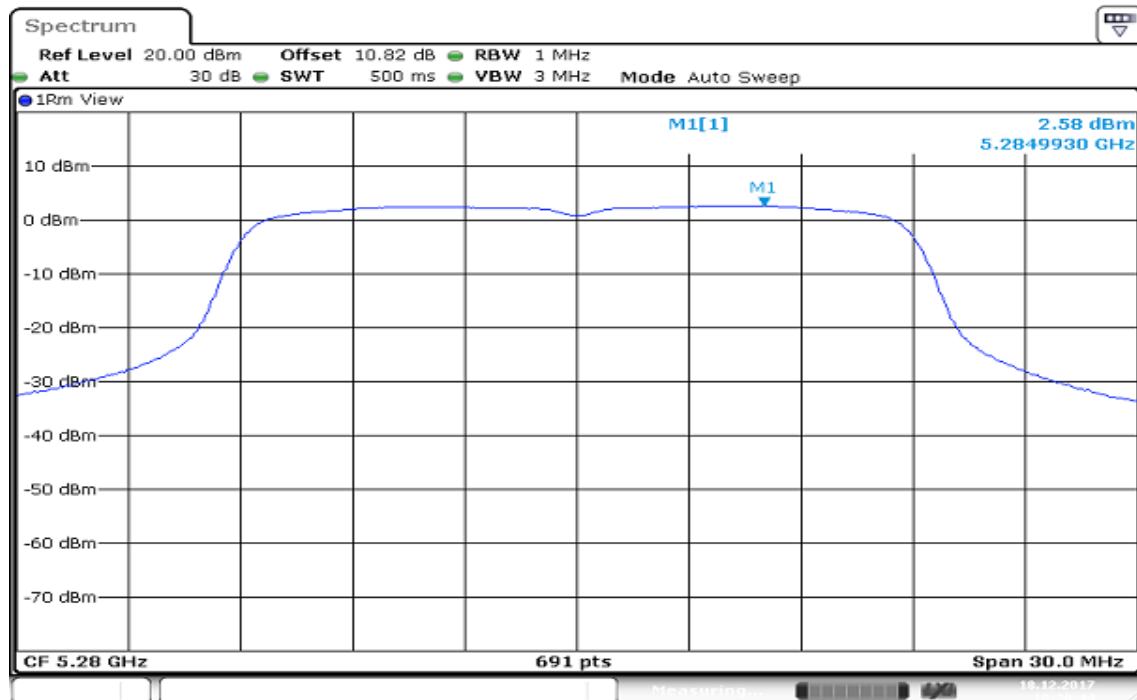


Date: 18 DEC 2017 09:54:22

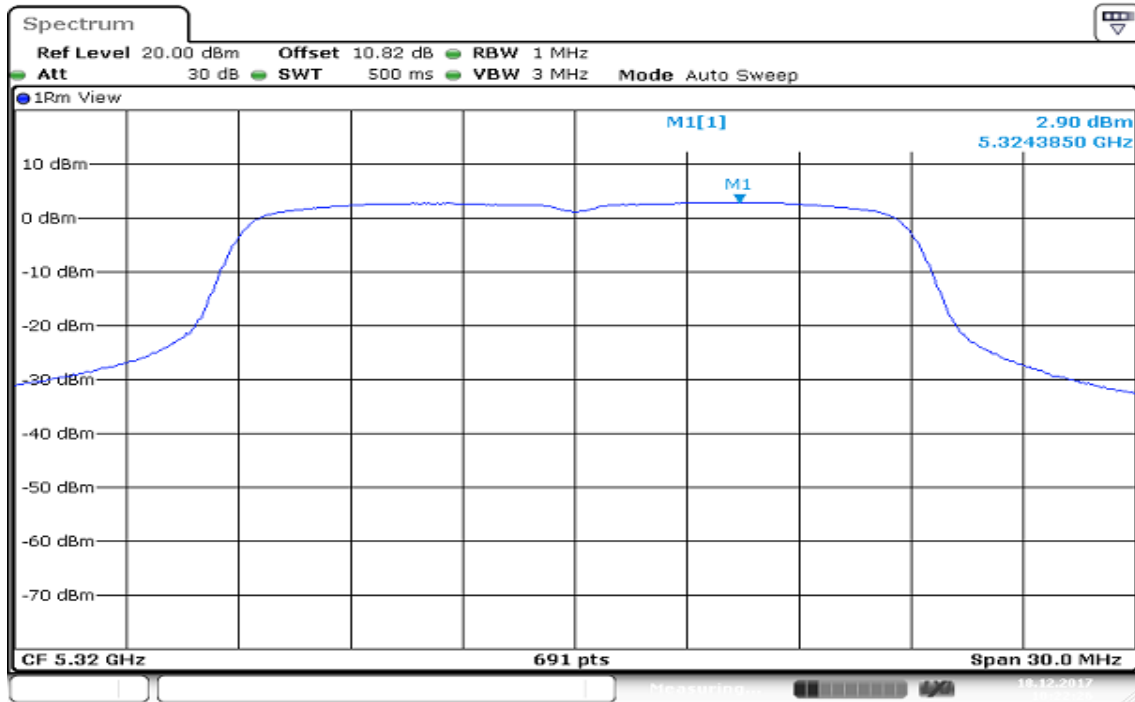
功率密度量測值 IEEE 802.11n HT20 MHz Mode / 5260MHz



功率密度量測值 IEEE 802.11n HT20 MHz Mode / 5280MHz



功率密度量測值 IEEE 802.11n HT20 MHz Mode / 5320MHz

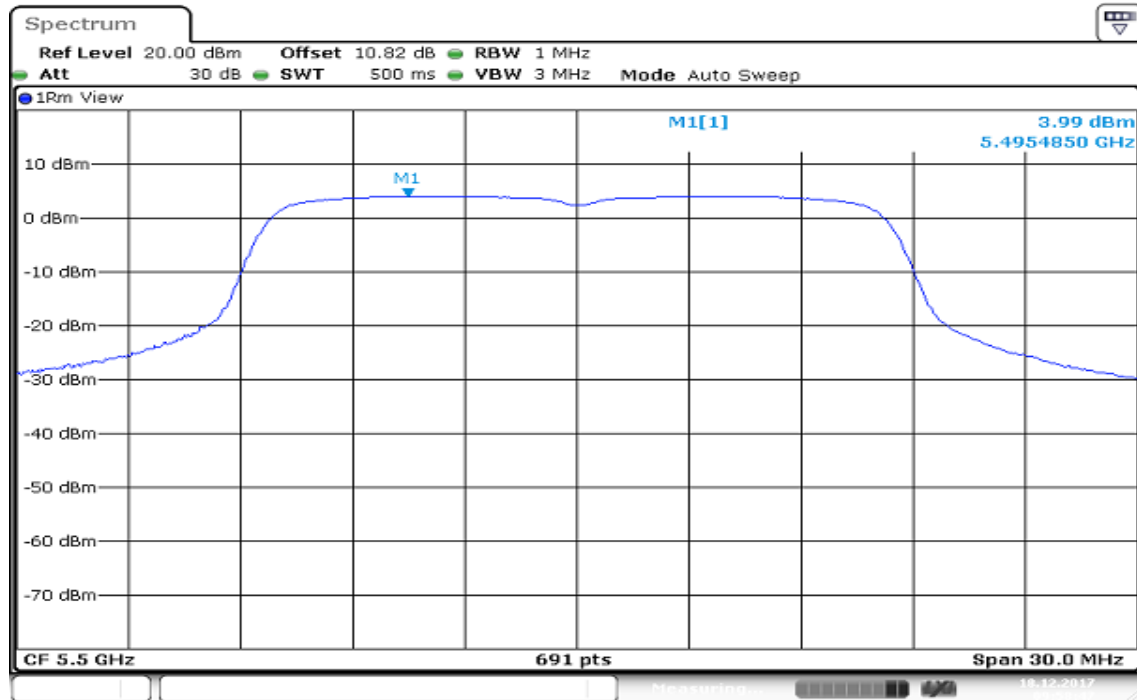


Date: 18 DEC 2017 10:22:27

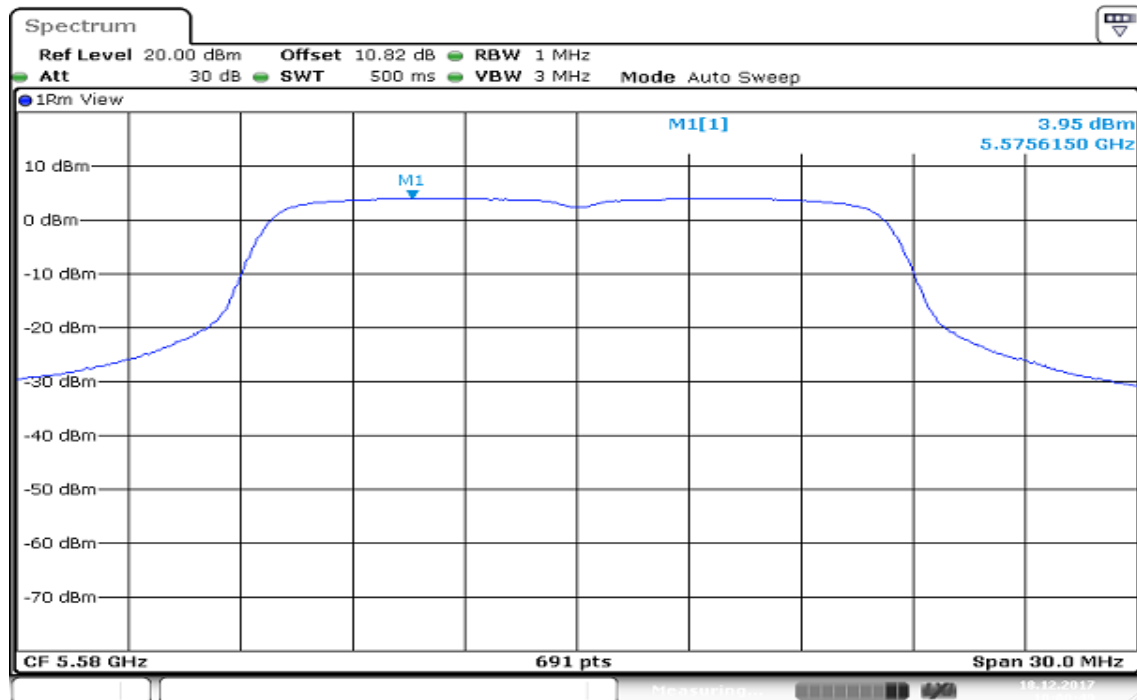
Report No.: T180806W05-RD3

Band III

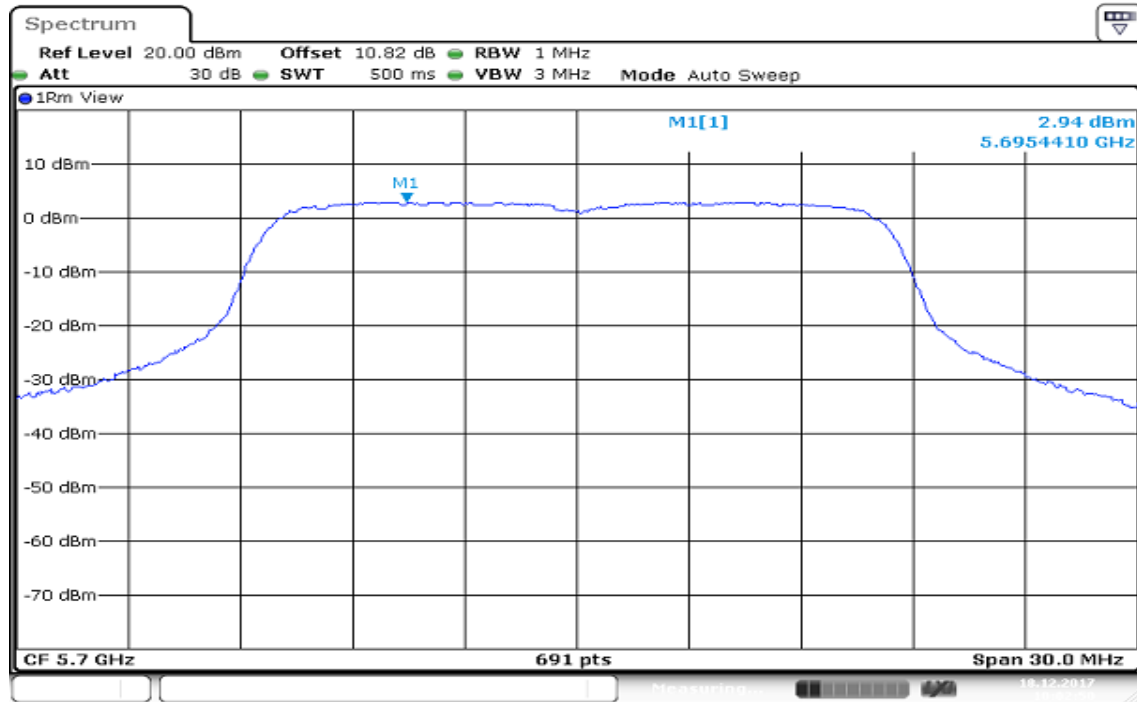
功率密度量測值 IEEE 802.11a Mode / 5500MHz



功率密度量測值 IEEE 802.11a Mode / 5580MHz

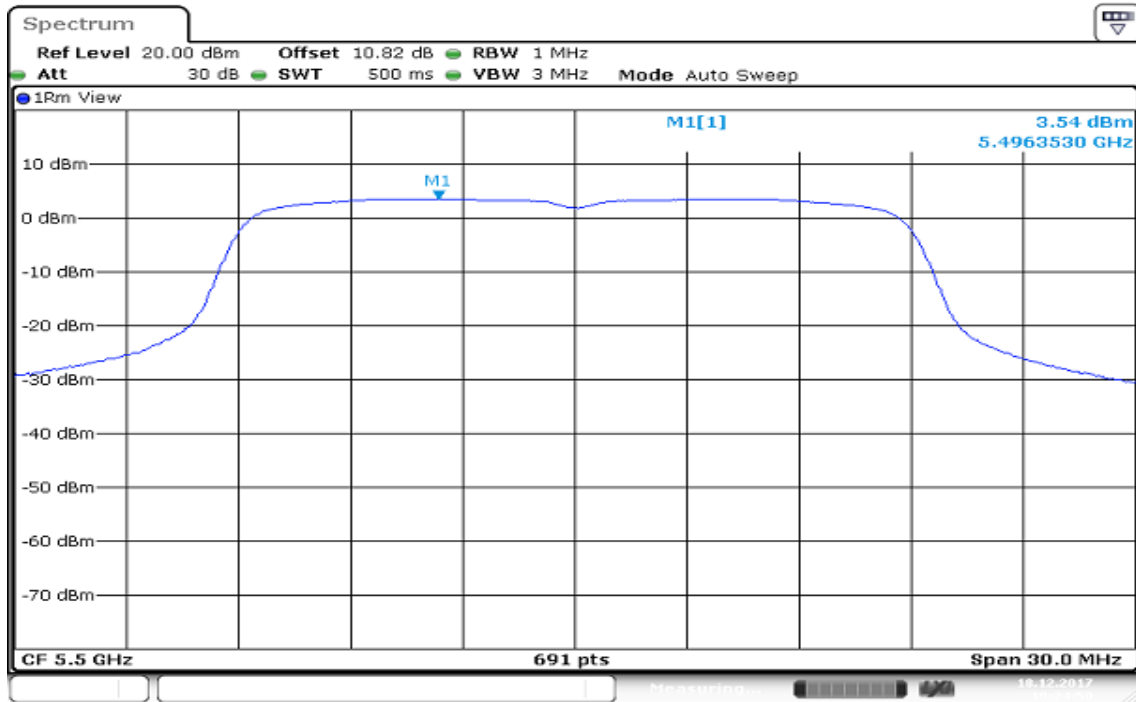


功率密度量測值 IEEE 802.11a Mode / 5700MHz

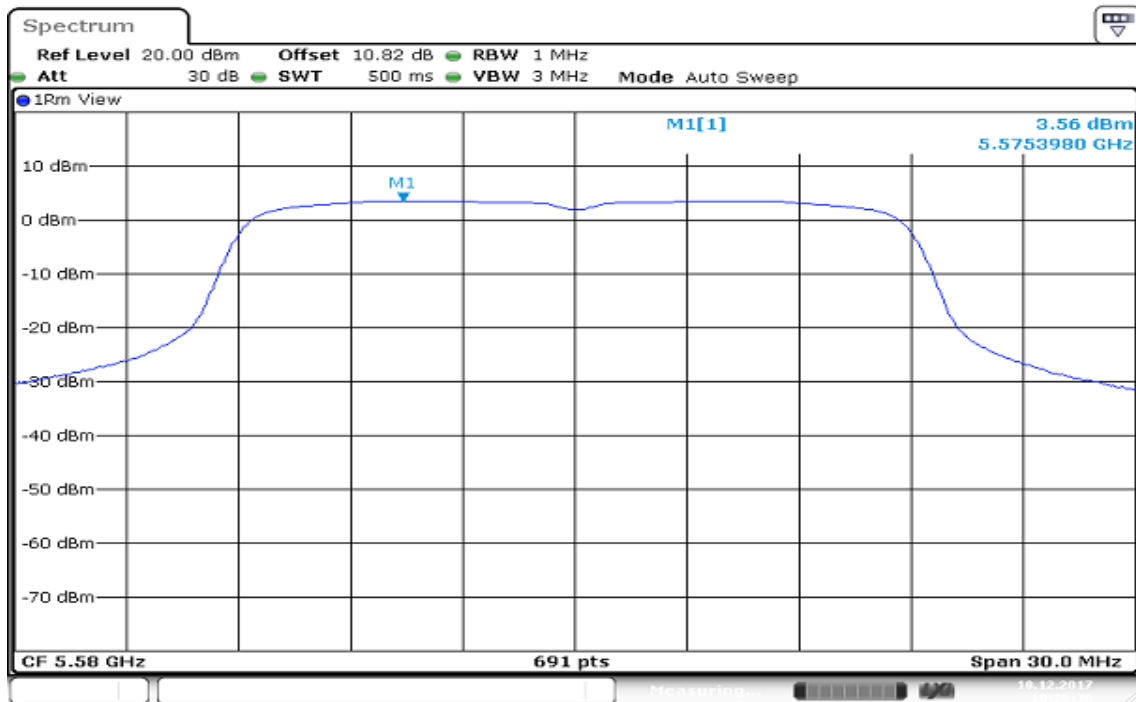


Date: 18 DEC 2017 10:02:51

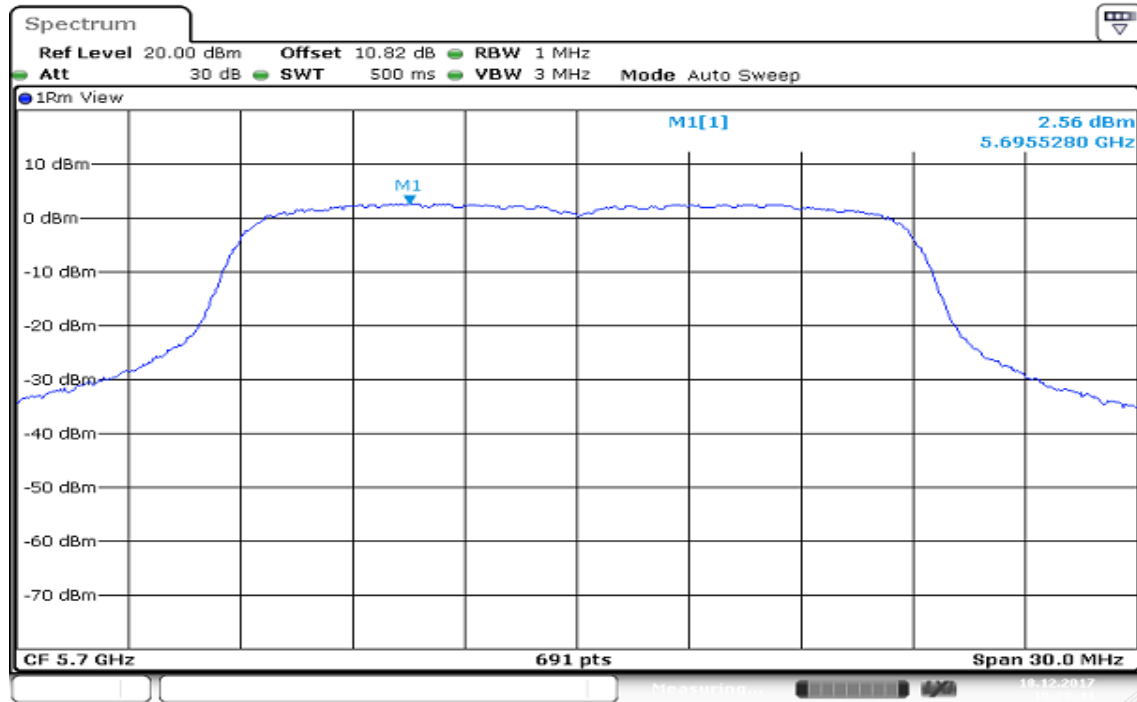
功率密度量測值 IEEE 802.11n HT20 MHz Mode / 5500MHz



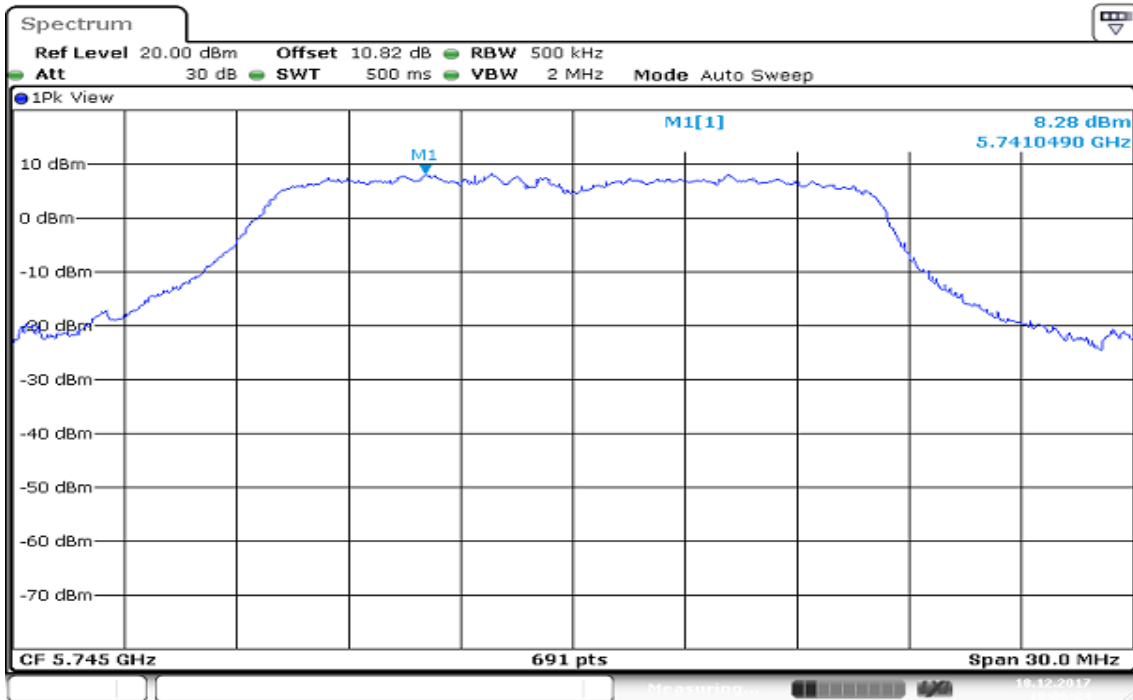
功率密度量測值 IEEE 802.11n HT20 MHz Mode / 5580MHz



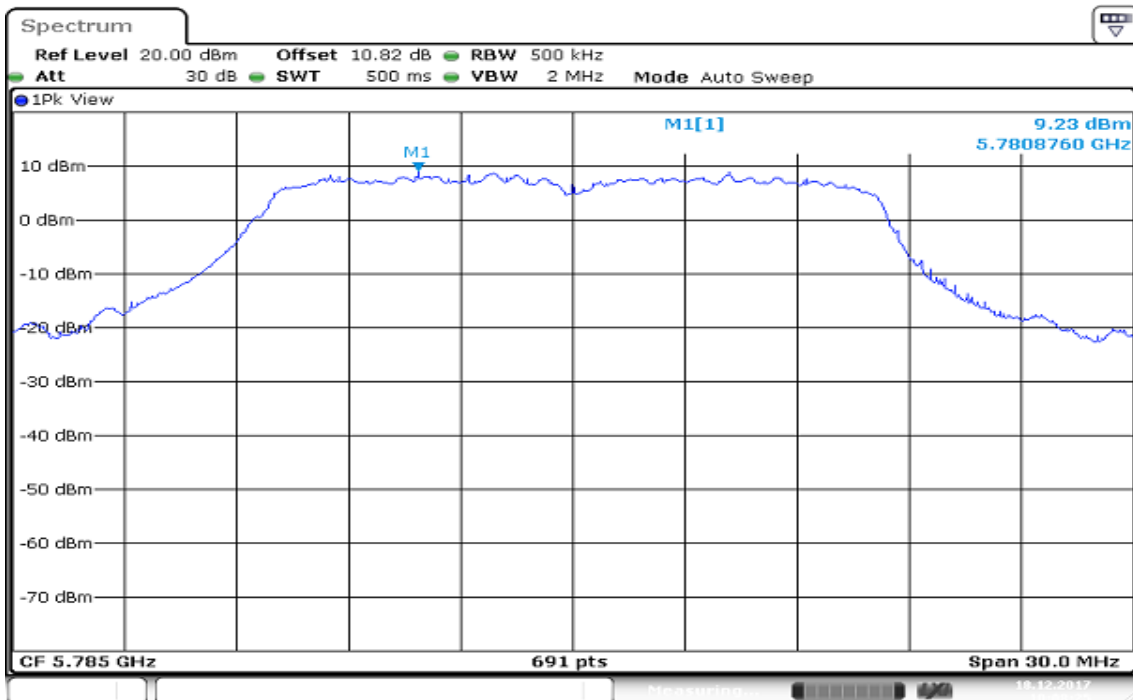
功率密度量測值 IEEE 802.11n HT20 MHz Mode / 5700MHz



Date: 18 DEC 2017 10:28:42

Band IV**功率密度量測值 IEEE 802.11a Mode/ 5745MHz**

Date: 18 DEC 2017 10:06:24

功率密度量測值 IEEE 802.11a Mode/ 5785MHz

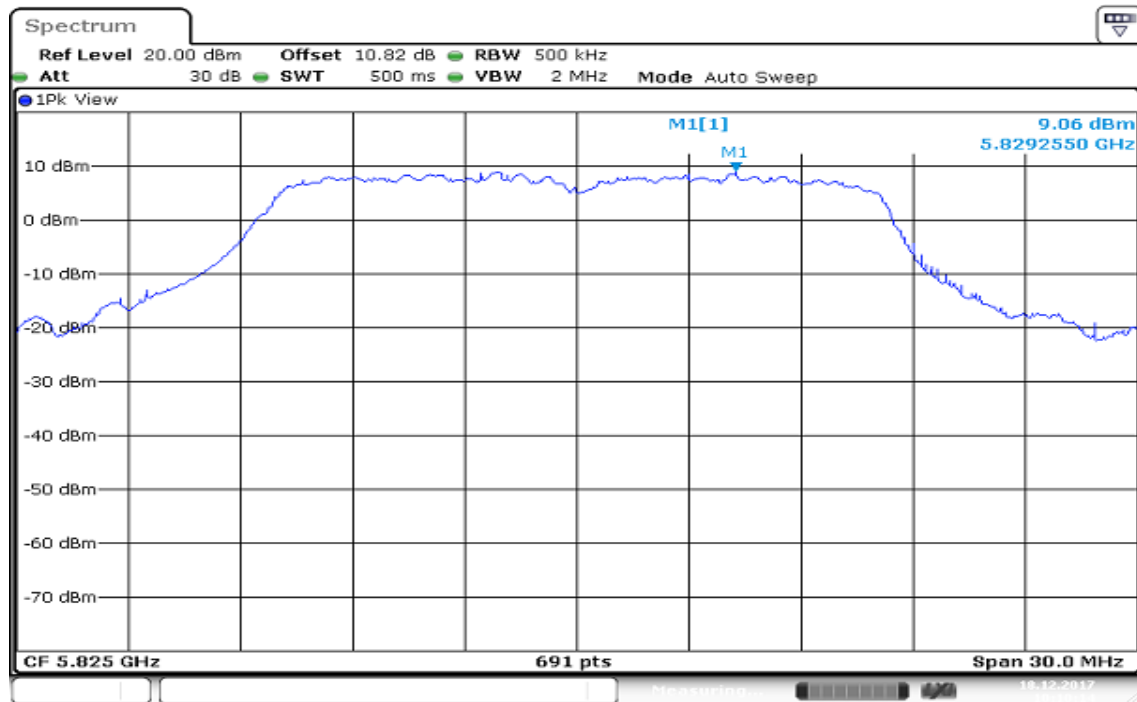
Date: 18 DEC 2017 10:08:25



Report No.: T180806W05-RD3

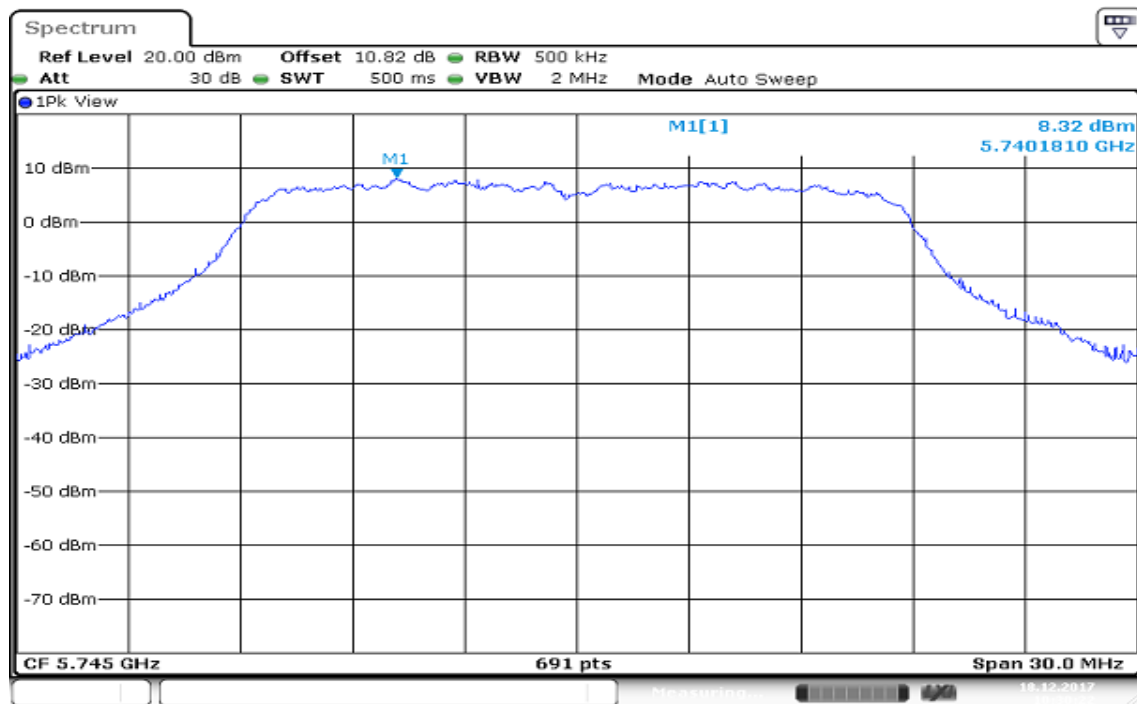
Page 154 / 160
Rev. 01

功率密度量測值 IEEE 802.11a Mode/ 5825MHz

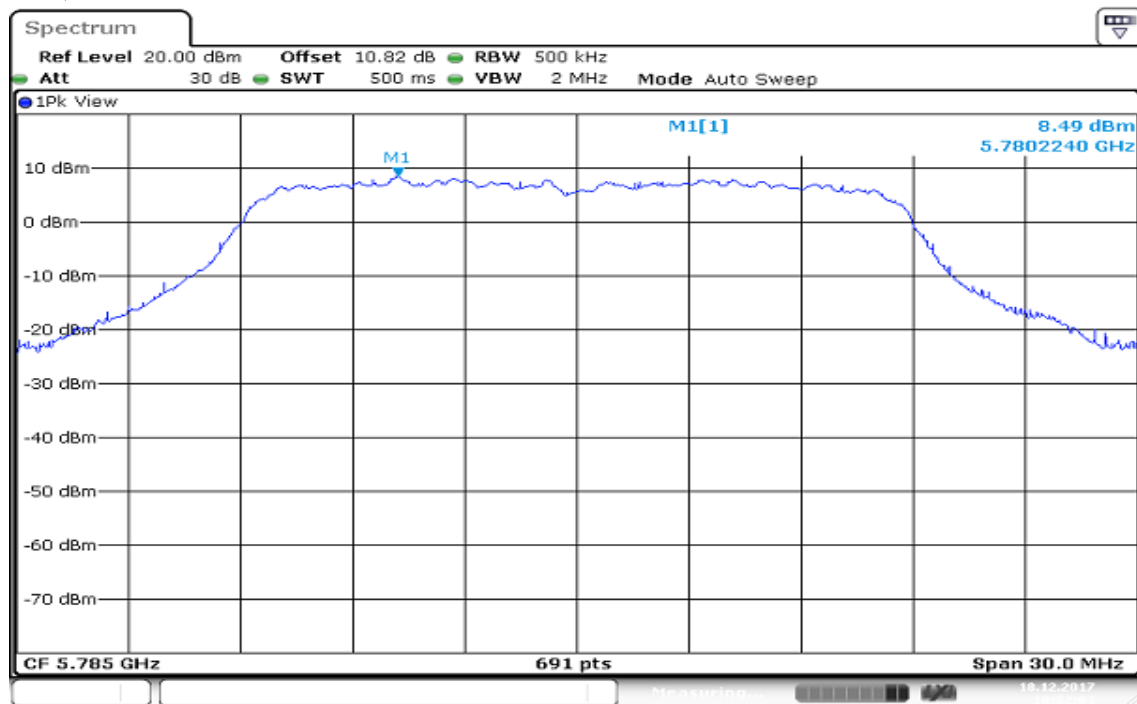


Date: 18 DEC 2017 10:10:15

功率密度量測值 IEEE 802.11n HT20 MHz Mode/ 5745MHz



功率密度量測值 IEEE 802.11n HT20 MHz Mode/ 5785MHz

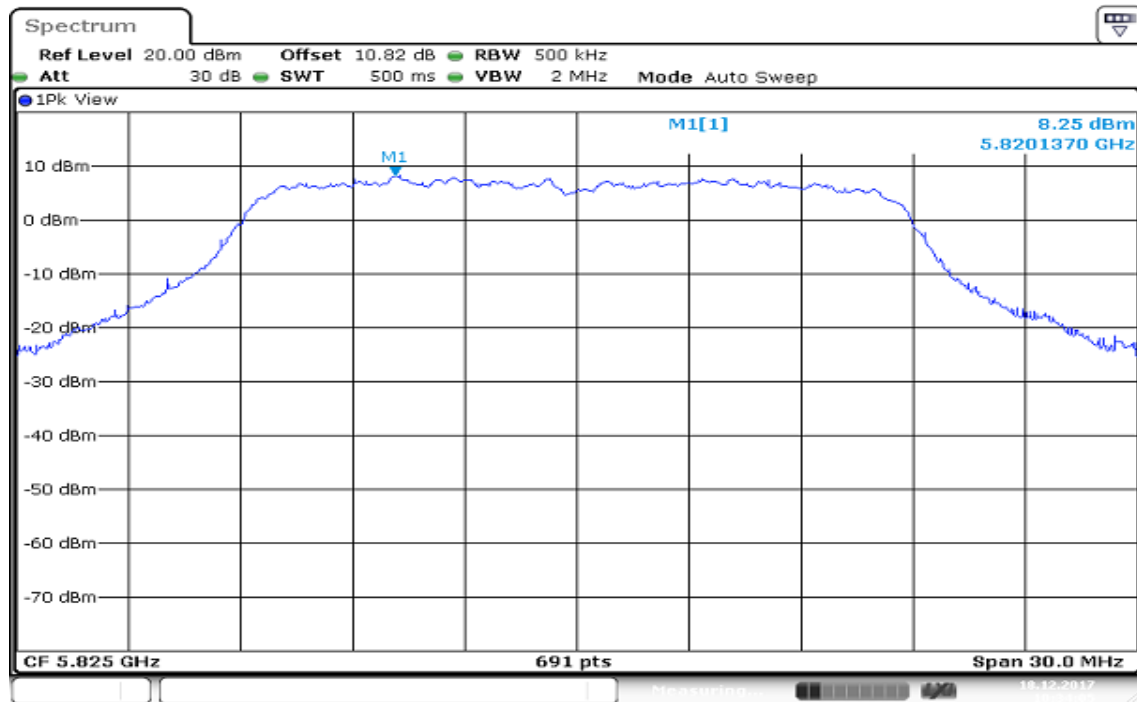




Report No.: T180806W05-RD3

Page 156 / 160
Rev. 01

功率密度量測值 IEEE 802.11n HT20 MHz Mode/ 5825MHz



Date: 18 DEC 2017 10:34:05

--End of Test Report--