

低功率射頻電機 檢驗報告

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製造廠商	Canon Inc.
受檢設備名稱	WIRELESS FILE TRANSMITTER
廠牌	Canon
型號	DS586194
檢驗依據標準	國家通訊傳播委員會低功率射頻電機 技術規範 (LP0002)
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財團法人台灣電子檢驗中心

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實驗室認可編號及範圍: 0371 (9 kHz to 325 GHz)

實驗室認可證書有效期限: 110年10月31日



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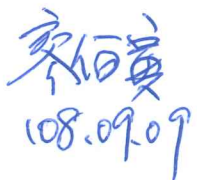
測試報告記錄

申請廠商：台灣佳能資訊股份有限公司
 製造廠商：Canon Inc.
 廠牌：Canon
 品名：WIRELESS FILE TRANSMITTER
 型號：DS586194
 檢驗依據標準：國家通訊傳播委員會低功率射頻電機技術規範(LP0002)
 規範修訂日期107年01月10日
 發射功率(電場強度)：23.38 dBm (發射功率)
 工作頻率及調變方式：2412 ~ 2462 MHz / DSSS + OFDM
 天線規格：廠牌/型號/天線增益: Canon/ canon-ant-2018-03-1/ -1.77 dBi
 廠牌/型號/天線增益: Canon/ canon-ant-2018-03-2/ -3.92 dBi

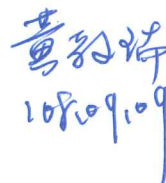
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 2. 本符合性試驗係依據適當的標準及試驗樣品進行測試，本試驗報告的結果僅與測試項目有關，且僅針對受試驗之樣品負責，無法確保產品生產過程中的品質與性能要求。
 3. 非經本中心同意，檢驗報告不得摘錄複印使用。（全部複製除外）。

項次	測試項目	適用規範	量測設備	測試結果	結果判定
1	電源線傳導干擾之要求	低功率射頻電機技術規範 2.3節	請參閱4.4節	請參閱4.3節	合格
2	天線增益之要求	低功率射頻電機技術規範 3.10.1.3	----	請參閱5.2節	----
3	發射頻寬之要求	低功率射頻電機技術規範 3.10.1.6節之(2)(A)	請參閱6.3節	請參閱6.4節	合格
4	峰值輸出功率之要求	低功率射頻電機技術規範 3.10.1.2節之(1)(C)	請參閱7.3節	請參閱7.4節	合格
5	功率密度之要求	低功率射頻電機技術規範 3.10.1.6節之(2)(B)	請參閱8.3節	請參閱8.4節	合格
6	混附波發射限制之要求	低功率射頻電機技術規範 3.10.1.5	請參閱9.3節	請參閱9.4節	合格
7	場強輻射之要求	低功率射頻電機技術規範 3.10.1.5	請參閱10.3節	請參閱10.5節	合格
	以下空白				

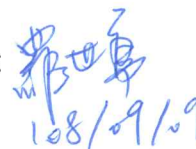
測量實驗室負責人：


 108.09.09

直接主管：


 108.09.10

量測員：


 108/09/10

1 一般資料

1.1 產品描述

- a) 產品型態 : WIRELESS FILE TRANSMITTER
 b) 商 標 : Canon
 c) 產品型號 : DS586194
 d) 供應電源 : DC 3.3V

備註：本產品內含WLAN無線技術，WLAN部份包含DTS與UNII頻帶。本報告僅記錄DTS部份，UNII Band 1 (5180 MHz 至 5240 MHz)部份請見ETC報告編號: 19-07-MAS-008-02，UNII Band 2 (5260 至 5320 MHz)部份請見ETC報告編號: 19-07-MAS-008-03，UNII Band 3 (5500至 5700 MHz) 部份請見ETC報告編號: 19-07-MAS-008-04，UNII Band 4 (5725至 5850 MHz) 部份請見ETC報告編號: 19-07-MAS-008-05。

1.2 產品特性

此裝置為 WIRELESS FILE TRANSMITTER，內含之WLAN其發射頻率落於 2412 至 2462 MHz頻段分為 11 個頻道，採用 IEEE 802.11b/g/n HT20/40 直接序列展頻調變技術，最高資料傳送速度為 135 Mbps，調變方式為 DSSS (IEEE 802.11b)：DBPSK，DQPSK，CCK 以及 OFDM (IEEE 802.11g/n HT20/40)：BPSK，QPSK，16QAM，64QAM，其應用為區域網路無線傳輸。主波發射功率為 23.38 dBm，即為 217.71 mW，其頻道對應頻率如下：

頻道	對應頻率(MHz)	頻道	對應頻率(MHz)
01	2412	07	2442
02	2417	08	2447
03	2422	09	2452
04	2427	10	2457
05	2432	11	2462
06	2437		

1.3 測試方法之依據

本測試報告之所有項目皆依據國家通訊傳播委員會低功率射頻電機技術規範以及參考IEEE ANSI、歐盟ETSI EN與美國EIA、FCC 47 CFR PART 2、KDB及ARIB STD-T67 等有關檢驗之規定。

試驗室介紹：財團法人台灣電子檢驗中心電磁相容試驗室通過下列評鑑、認可、登錄與相互認可協議：

- ① ISO/IEC 17025: BSMI, TAF, NCC, NVLAP, ILAC MRA, UL, Compliance
- ② Filing: FCC, Industry Canada, VCCI
- ③ MRA: Australia, Hong Kong, New Zealand, Singapore, USA, Japan, Korea, China, ILAC MRA through TAF
- ④ FCC Registration Number: TW0371, TW1112
- ⑤ Industry Canada Site Registration Number: IC 2949A-2

2 適用規範

2.1 規範要求

(1) 傳導之規定

依據國家通訊傳播委員會低功率射頻電機技術規範之2.3節，以市電為電源之低功率射頻電機，其傳導回電源線上頻率自150KHz~30MHz之射頻電壓(在電源端子每一電源線對接地點)應小於或等於下表所列之限制值。測量時應經過50微亨利及50歐姆之電源線阻抗穩定網路(Line Impedance Stabilization Network；LISN)。頻率重疊處，以較低限制值為準。

頻率範圍 MHz	傳導限制值(dB μ V)	
	準峰值(Quasi-peak)	平均值(Average)
0.15 – 0.5	66-56(註)	56-46(註)
0.5 – 5	56	46
5 – 30	60	50

註:隨頻率之對數遞減

(2) 天線增益之要求

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3.10.1.3之規定，若發射天線之方向性增益超過6dBi時，除符合下列情形外，應依其所超過之dB數降低最大傳導輸出功率。

依據國家通訊傳播委員會低功率射頻電機技術規範3.10.1.3節之(3)規定，除3.10.1.3節之(1)與(2)外，使用超過6dBi方向增益之發射天線時，應依照超過6 dBi天線方向性增益的dBi總量，等量減少最大傳導輸出功率限制值。

(3) 頻寬之要求

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3.10.1.6節之(2)(A)規定，6dB頻寬至少應有500 kHz。

(4) 峰值傳導輸出功率之要求

依據國家通訊傳播委員會低功率射頻電機技術規範3.10.1.2節之(1)(C)規定，對使用數位調變技術之低功率發射機，其峰值傳導輸出功率不得大於1 Watt，且其所使用天線之增益不可大於6 dBi，若使用大於6dBi增益之天線，則其峰值傳導輸出功率相對需衰減天線增益所增加之量(單位為dB)。放寬之條件請參考天線增益之要求。

(5) 功率密度之要求

依據國家通訊傳播委員會低功率射頻電機技術規範3.10.1.6節之(2)(B)規定，對數位調變技術系統，在使用頻率範圍之任一3 kHz頻寬內，由發射機傳導至天線之功率頻譜密度在任意傳輸期間內，皆小於或等於8毫分貝(dBm)，且應依3.10.1.3之方式降低功率頻譜密度限制值。

(6) 發射限制之要求

操作頻帶範圍外之任意100 kHz內，發射器所產生的射頻功率相較於使用頻帶範圍中包含最高所需功率之100 kHz內的射頻功率，其衰減值限制如下：

- (1) 輸出功率以附件二之峰值輸出功率方式測量者，至少須衰減20 dB，可使用射頻傳導或輻射方式測量。
- (2) 輸出功率以3.10.1.2(1)(C)之最大傳導輸出功率測量方式者，至少須衰減30 dB。

此外，落於第 2.7 節禁用頻段之輻射發射，應符合第 2.8 節之規定。

(7) 輻射之規定

依據國家通訊傳播委員會低功率射頻電機技術規範3.10.1.5之要求，落於2.7節禁用頻段之輻射發射，應符合2.8節之規定：

頻率 MHz	測試距離 m	限制值 μ V/m
0.009 - 0.490(含)	300	2400/頻率(kHz)
0.490(不含) - 1.705(含)	30	24000/頻率(kHz)
1.705(不含) - 30(不含)	30	30
30(含) - 88(含)	3	100
88(不含) - 216(含)	3	150
216(不含) - 960(含)	3	200
960(不含)以上	3	500

2.2 限制使用之頻帶

MHz	MHz
0.090 - 0.110	1660.0 – 1785.0
0.490 - 0.510	1805.0 – 1880.0
2.172 - 2.198	1855.0 – 1900.0
3.013 - 3.033	1905.0 – 1985.0
4.115 - 4.198	2010.0 – 2025.0
5.670 - 5.690	2110.0 – 2170.0
6.200 - 6.300	2200.0 – 2300.0
8.230 - 8.400	2310.0 - 2390.0
12.265 - 12.600	2483.5 - 2900.0
13.340 - 13.430	3260.0 – 3267.0
14.965 - 15.020	3332.0 – 3339.0
16.700 - 16.755	3345.8 – 3358.0
19.965 - 20.020	3500.0 - 4400.0
25.500 - 25.700	4500.0 – 5250.0
37.475 - 38.275	5350.0 - 5460.0
73.500 - 75.400	7250.0 - 7750.0
108.00 - 138.00	8025.0 - 8500.0
149.90 - 150.05	9000.0 - 9200.0
156.70 - 156.90	9300.0 - 9500.0
162.01 – 167.17	10600 - 12700
167.72 – 173.20	13250 - 13400
240.00 – 285.00	14470 - 14500
322.00 – 335.40	15350 - 16200
399.90 – 410.00	17700 - 21400
485.00 – 510.00	22010 - 23120
608.00 – 614.00	23600 - 24000
703.00 – 748.00	31200 - 31800
758.00 – 803.00	36430 - 36500
825.00 – 915.00	38600 以上
930.00 – 1240.0	
1300.0 – 1427.0	
1435.0 – 1626.5	

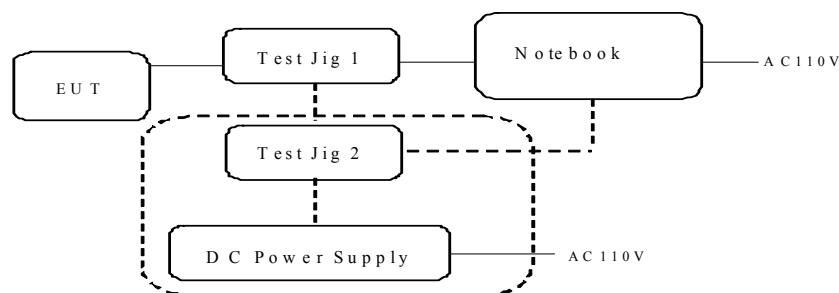
3 受測裝置之系統說明

3.1 受測裝置

裝置名稱	製造者/代理者	型 號	纜線說明
* WIRELESS FILE TRANSMITTER	Canon Inc.	DS586194	----
Test Jig 1	N/A	N/A	非隔離信號線 0.7m * 1
Notebook	HP	6570b	非隔離電源線 2.8m * 1/Adapter 非隔離信號線 1.0m * 1 (USB) (Buffalo/BCVAMNSM210BK)
Test Jig 2	N/A	N/A	非隔離電源線 1.8m * 1 非隔離信號線 1.5m * 1 (USB) 非隔離信號線 1.0m * 1 (USB)
DC Power Supply	GW	GPS-3030D	非隔離電源線 1.8m*1

註: 1.標記“*”表欲申請之受測物。

2.測試配置：



註: Test Jig 2及DC Power Supply在完成測試模式設定之後，從以上測試配置中移除來進行最終測試，以降低雜訊之干擾。

3. 測試模式:

3.1 IEEE 802.11b, g and IEEE 802.11n HT20 mode:

測試頻道如下:

Channel	Frequency (MHz)
Low = 1	2412
Middle = 6	2437
High = 11	2462

IEEE 802.11b mode: 1 Mbps data rate is the worse case for full testing.

IEEE 802.11g mode: 6 Mbps data rate is the worse case for full testing.

IEEE 802.11n HT20 mode: MCS0 6.5 Mbps data rate is the worse case for full testing.

3.2 IEEE 802.11n HT40 mode:

測試頻道如下:

Channel	Frequency (MHz)
Low = 3	2422
Middle = 6	2437
High = 9	2452

IEEE 802.11n HT40 mode: MCS0 13.5 Mbps data rate is the worse case for full testing.

4. 軟體設定：

Modulation	Test Channel	Power Setting
IEEE 802.11b	L	7
	M	7
	H	7
IEEE 802.11g	L	7
	M	7
	H	7
IEEE 802.11n HT20	L	7
	M	7
	H	7
IEEE 802.11n HT40	L	7
	M	7
	H	7

3.2 測試模式說明

3.2.1 調變方式及模式

Test Mode	Modulation	Note
A	IEEE 802.11b	-
B	IEEE 802.11g	-
C	IEEE 802.11n HT20	-
D	IEEE 802.11n HT40	-

Mode	IEEE 802.11b/g/n HT20	IEEE 802.11n HT40
Test Channel	Frequency (MHz)	Frequency (MHz)
Channel Low (L)	2412	2422
Channel Mid (M)	2437	2437
Channel High (H)	2462	2452

3.2.2 測試項目及模式

Item	測試項目	測試模式	測試頻道
1	電源線傳導干擾之量測	D (註 1)	M (Worse Case)
2	發射頻寬之量測	A, B, C, D	L, M, H
3	峰值輸出功率之量測	A, B, C, D(註3)	L, M, H
4	功率密度之量測	A, B, C, D(註3)	L, M, H
5	混附波發射限制之量測	A, B, C, D	L, M, H
6	場強輻射之量測(主諧波)	A, B, C, D	L, M, H
6.1	場強輻射之量測(1GHz以下)	D (註 1)	M (Worse Case)
6.2	場強輻射之量測(1GHz以上)	A, B, C, D	L, M, H

註: 1. 各調變預掃時無差異，擇一作最終測試並記錄之。

2. 量測場強輻射時，此產品分別要以三軸向(X、Y、Z)放置，並分別測試以找出最大輻射電場強度軸向，其中以 Y 軸模式較差，並記錄其讀值與軸向放置

3. 本產品內含雙天線，802.11n 模式下有 MIMO 之功能，故對兩隻天線分別進行測試再加總並記錄之。802.11b/g 無 MIMO 之功能，以峰值輸出功率較大者做為 Worse Case，進行其他項目之量測。

3.2.3 測試場地

項次	測 試 場 地
1	■ RE02 — EMC B1 — N2 第一大樓地下二樓 3m 半電波暗室(N2)
2	■ CE04 — 10M 2F 第三大樓二樓傳導測試室(10m 大樓)
3	■ RF — Cond01 第一大樓地下一樓直量測試區
4	□ RF — Cond02 第一大樓地下二樓直量測試區

3.2.4 Duty cycle

File:

19-07-MAS-008_b_Ant2

Dat

#12

a

Date:

2019/7/30

Temperature:

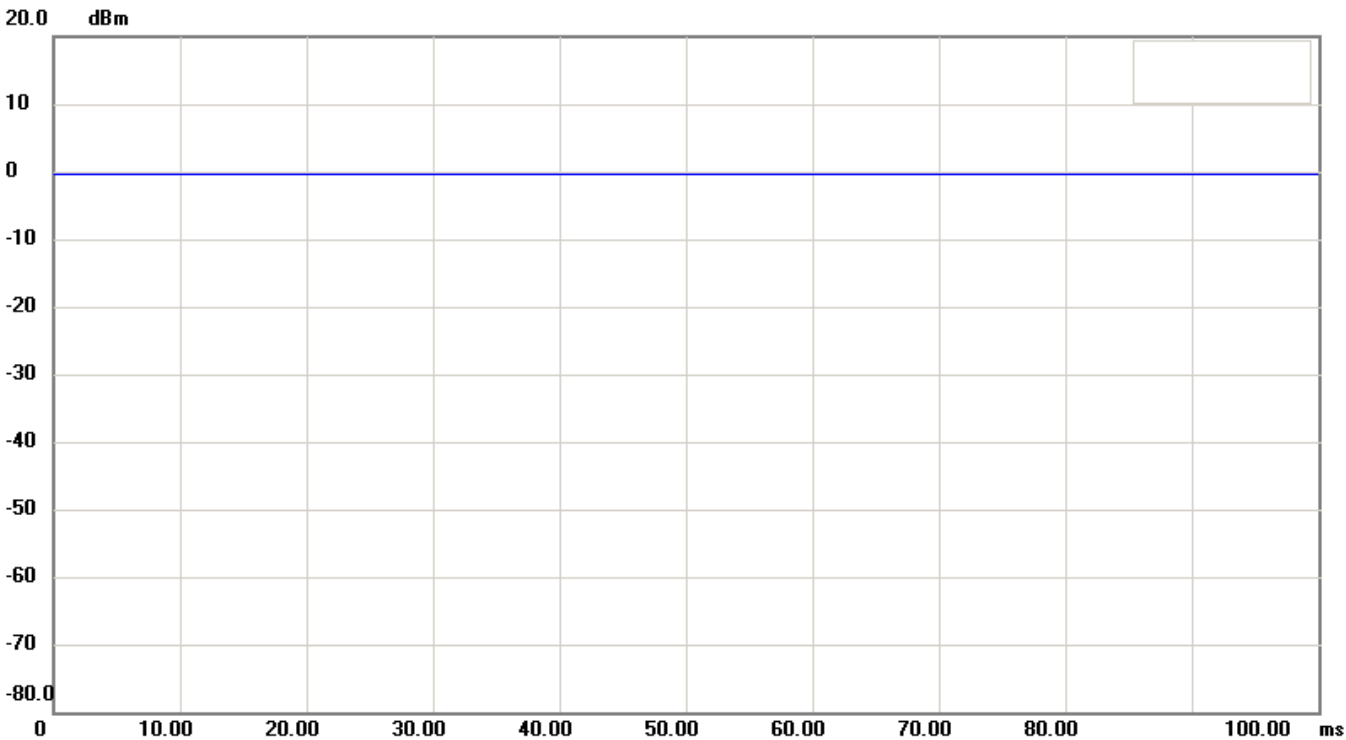
25 °C

Time:

上午 11:17:06

Humidity:

63 %



Condition:

EUT:

Model:

Test Mode:

Note:

Wireless File Transmitter

DS586194

TX_Ant2

Operator: Phillip

NCC_LP0002_802.11b Duty Cycle-1 (Duty Cycle > 98%)

RF Conducted

Sweep Time: 100ms

RBW: 1000 KHz

Att.: 20dB

VBW: 1000 KHz

File: 19-07-MAS-008_g_Ant2

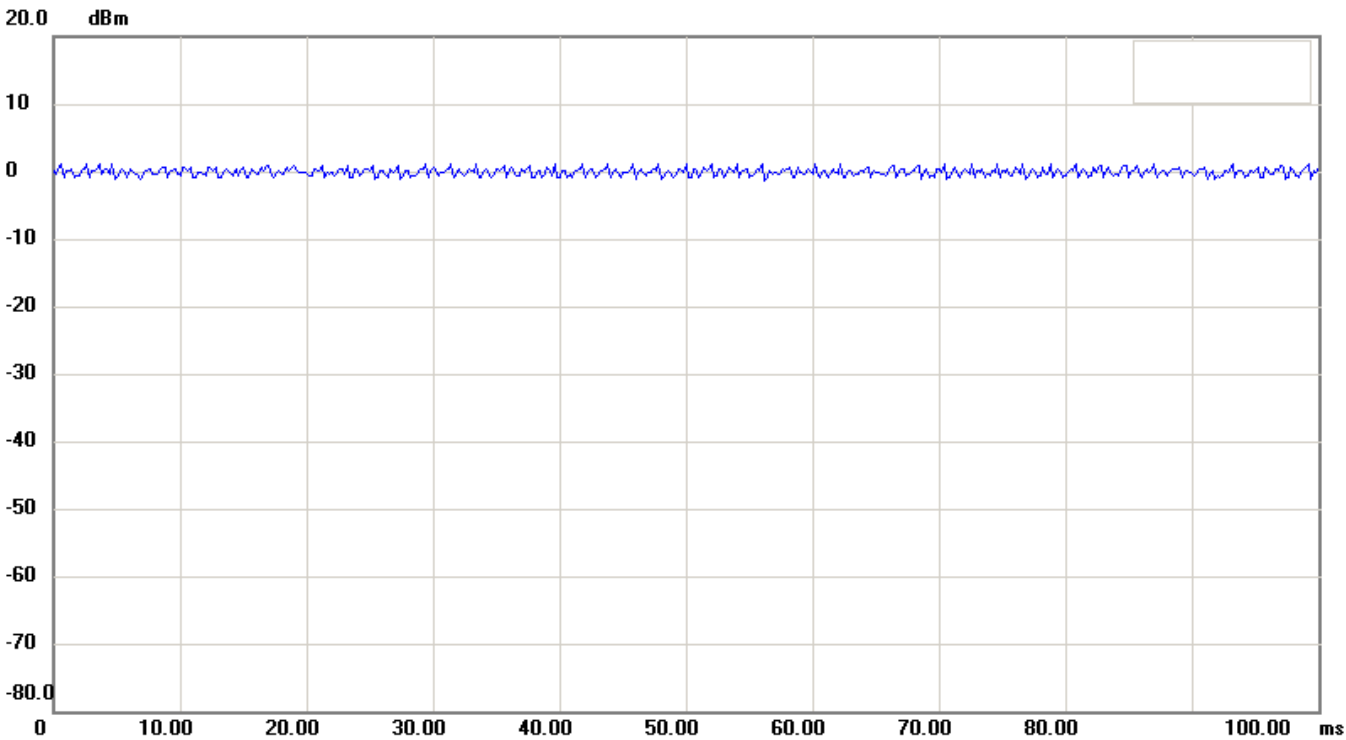
Dat #12a

Date: 2019/7/30

Temperature: 25 ℃

Time: 上午 11:45:33

Humidity: 63 %



Condition:	RF Conducted	
EUT:	Wireless File Transmitter	Sweep Time: 100ms Att.: 20dB
Model:	DS586194	RBW: 1000 KHz VBW: 1000 KHz
Test Mode:	TX_Ant2	
Note:	Operator: Phillip	
	NCC_LP0002_802.11g Duty Cycle-1(Duty Cycle > 98%)	

File: 19-07-MAS-008_n20_Ant1

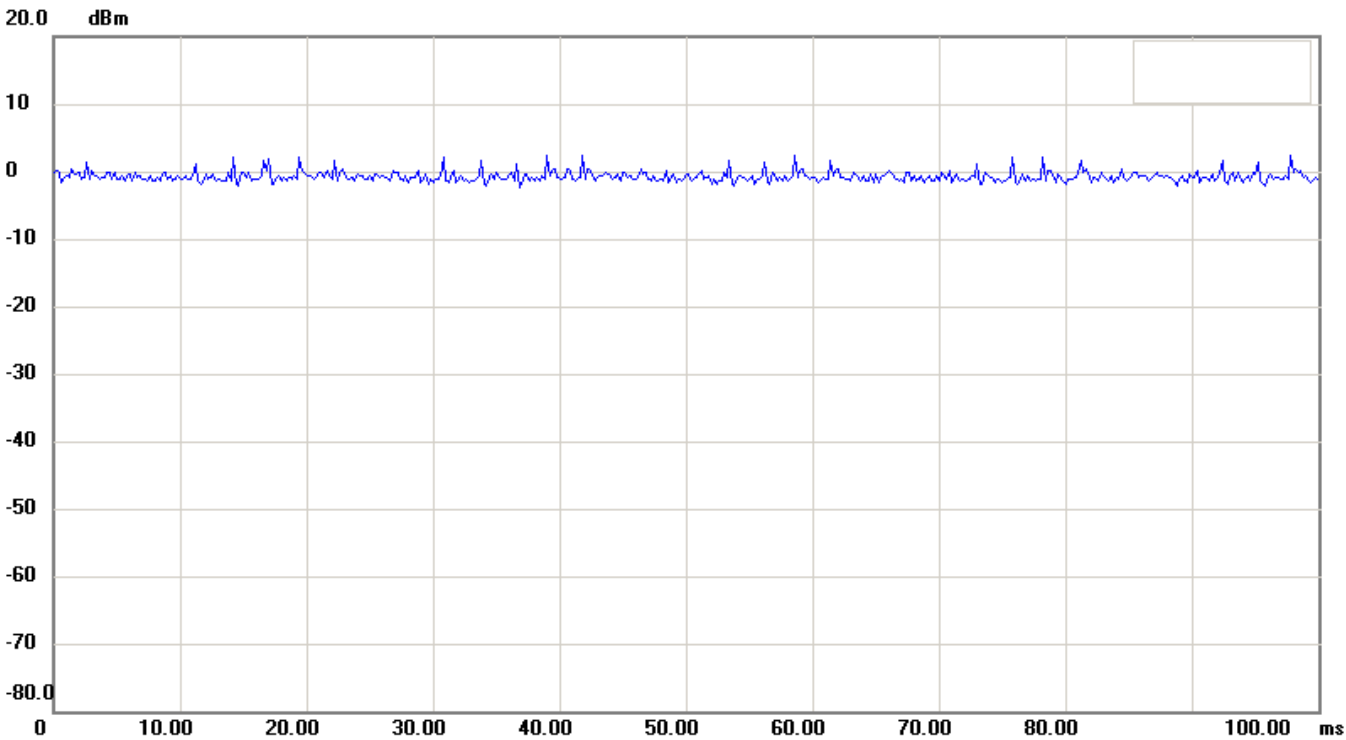
Dat #12a

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 02:37:41

Humidity: 63 %



Condition:		RF Conducted
EUT:	Wireless File Transmitter	Sweep Time: 100ms Att.: 20dB
Model:	DS586194	RBW: 1000 KHz VBW: 1000 KHz
Test Mode:	TX_Ant1	
Note:	Operator: Phillip	
	NCC_LP0002_802.11n20 Duty Cycle-1 (Duty Cycle >98%)	

File: 19-07-MAS-008_n40_Ant1

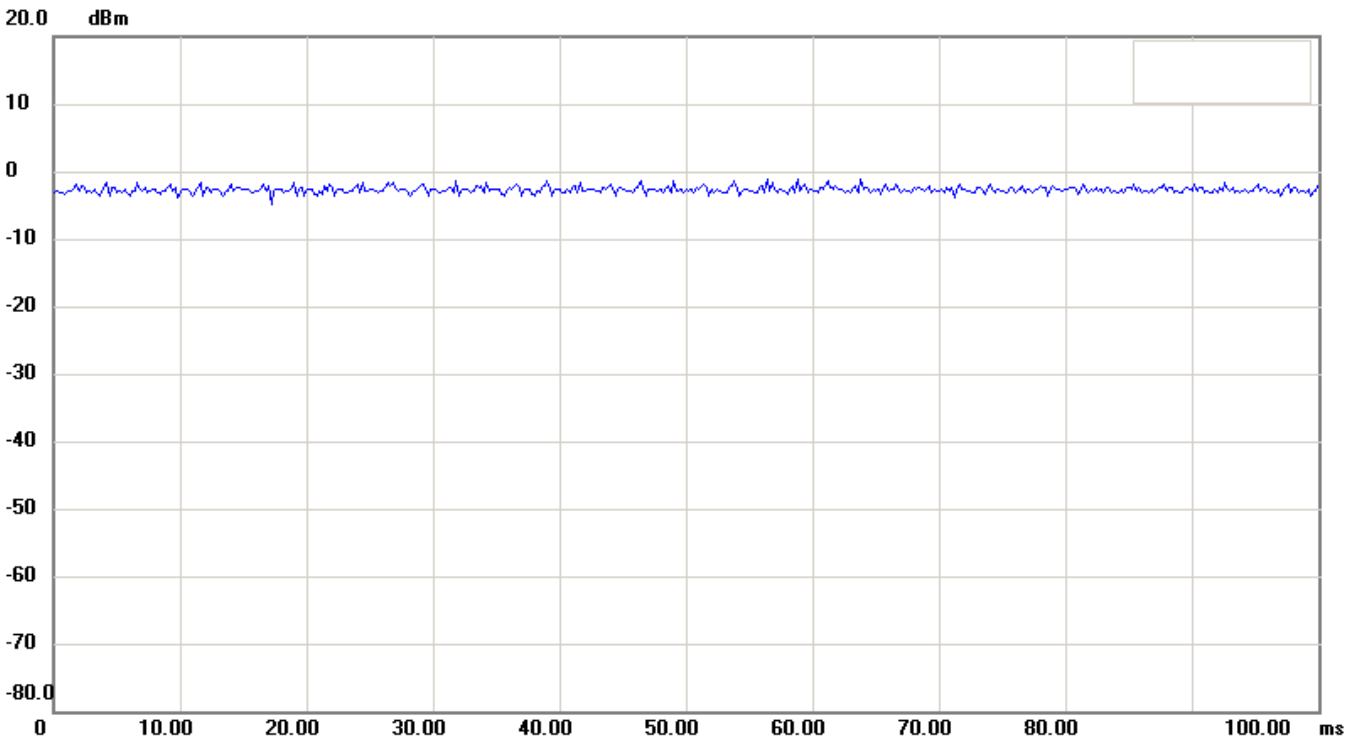
Dat #12a

Date: 2019/7/30

Temperature: 25 ℃

Time: 下午 02:09:15

Humidity: 63 %



Condition:	RF Conducted	
EUT:	Wireless File Transmitter	Sweep Time: 100ms Att.: 20dB
Model:	DS586194	RBW: 1000 KHz VBW: 1000 KHz
Test Mode:	TX_Ant1	
Note:	Operator: Phillip	
	NCC_LP0002_802.11n40 Duty Cycle-1(Duty Cycle >98%)	

4 電源線傳導干擾之量測

4.1 適用標準

依據國家通訊傳播委員會低功率射頻電機技術規範2.3節之要求。

4.2 測試方法

將待測物置於0.8米高的非金屬桌面，使其在工作狀態，待測物電源線接至電源線阻抗穩定網路上，從測試接收機記錄頻率由 0.15MHz 至 30MHz 之間之電源線傳導干擾強度。

4.3 量測電源線傳導干擾之儀器

儀器名稱	廠 牌	型 號
EMI Test Receiver	R&S	ESCI
V-LISN	R&S	ENV216

測試軟體: EZ-EMC (Ver. ETC-03A1)

4.4 傳導干擾之量測結果

測試工程師: 羅世勇

File: 19-07-MAS-008

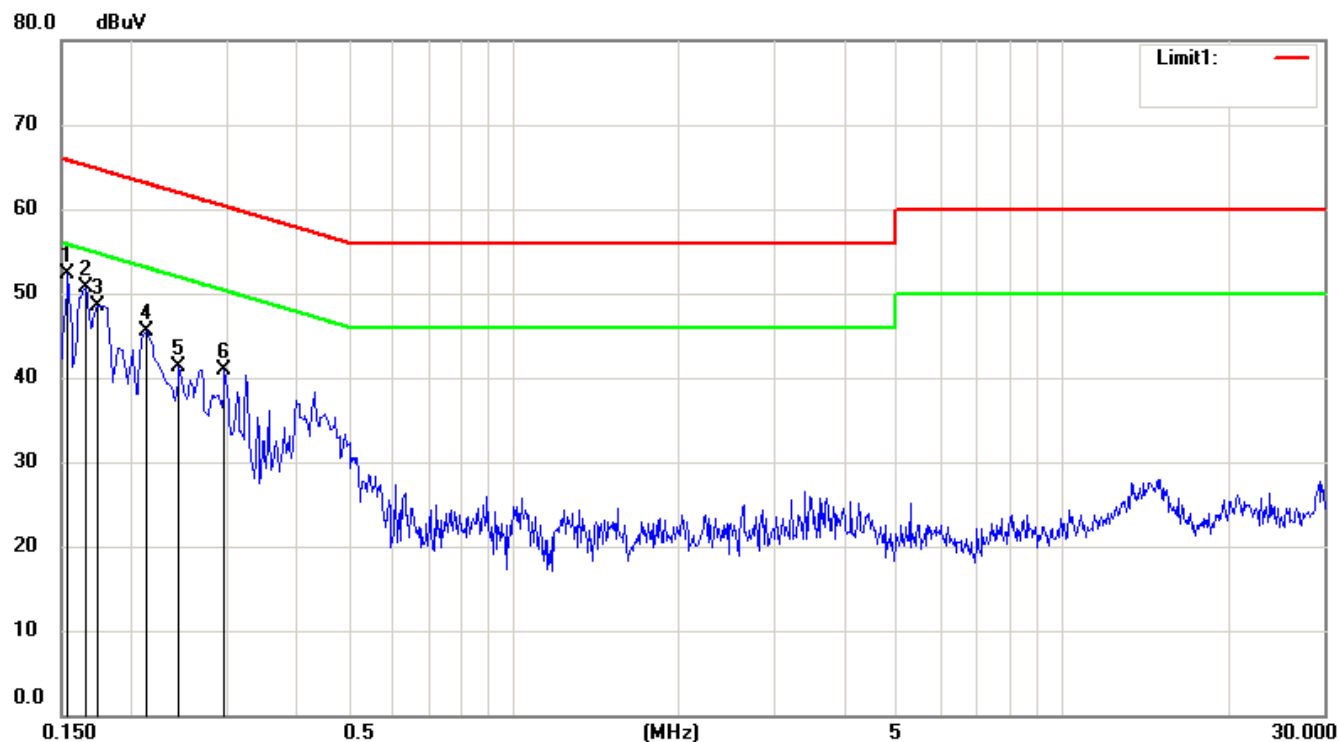
Data: #2

Date: 2019/9/3

Temperature: 24 °C

Site: CE04-10M 2F

Humidity: 51 %



Condition: NCC Conduction(QP)

Phase: L1

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: DTS

Operator: Phillip

Note:

No.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected dB	Result (dBuV)	Limit (dBuV)	Margin (dB)
1*	0.1540	42.69	QP	9.69	52.38	65.78	-13.40
2	0.1660	41.07	QP	9.69	50.76	65.16	-14.40
3	0.1740	38.90	QP	9.69	48.59	64.77	-16.18
4	0.2140	35.87	QP	9.70	45.57	63.05	-17.48
5	0.2460	31.58	QP	9.70	41.28	61.89	-20.61
6	0.2980	31.16	QP	9.70	40.86	60.30	-19.44

註： 1. “----”表示量測準峰值的結果符合平均值的限制值，則視為同時符合準峰值與平均值的限制值，不需再對其平均值進行量測。

2. “#”表示干擾值太小，直接量取其峰值。

3. 標記“***”表示為本地震盪頻率及其諧波。

4. 量測不準確度: $\pm 2.5\text{dB}$ ($150\text{kHz} \leq f \leq 30\text{MHz}$)。

File: 19-07-MAS-008

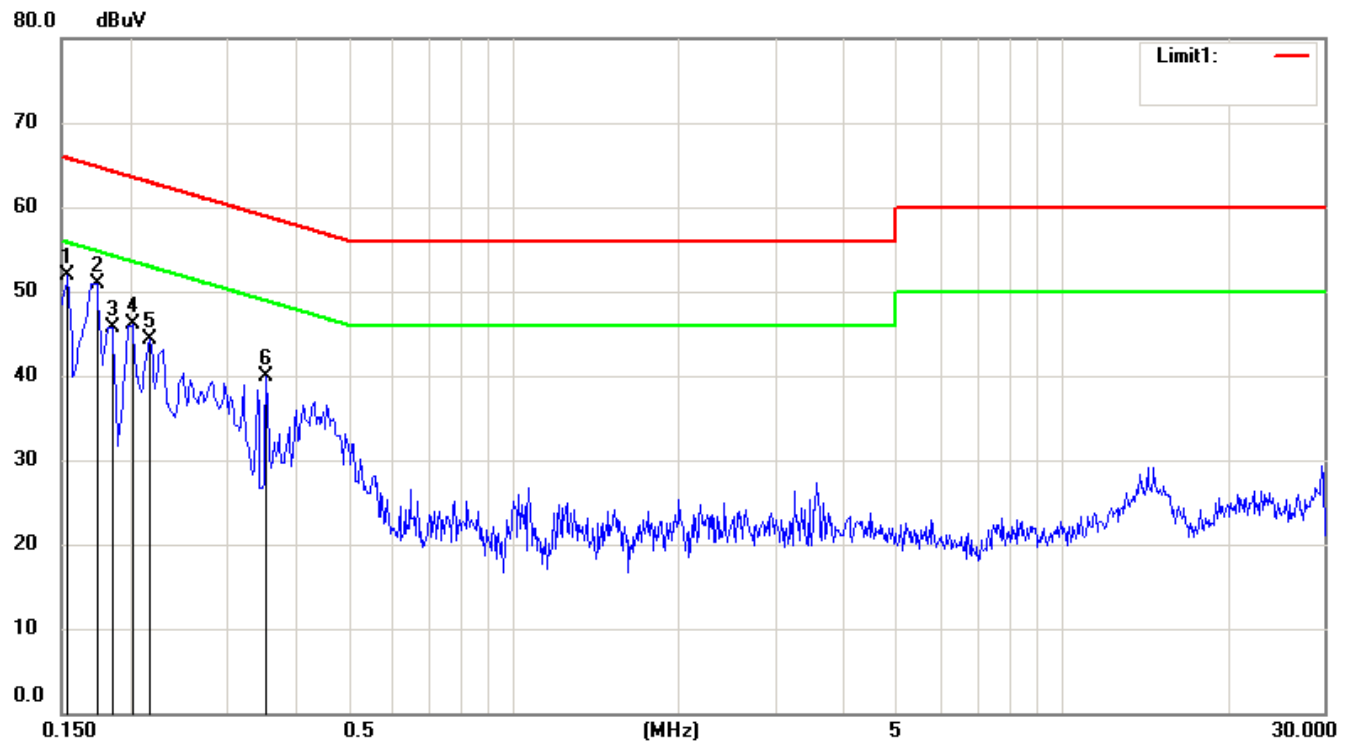
Data: #1

Date: 2019/9/3

Temperature: 24 °C

Site: CE04-10M 2F

Humidity: 51 %



Condition: NCC Conduction(QP)

Phase: N

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: DTS

Operator: Phillip

Note:

No.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected dB	Result (dBuV)	Limit (dBuV)	Margin (dB)
1	0.1540	42.15	QP	9.68	51.83	65.78	-13.95
2*	0.1740	41.30	QP	9.68	50.98	64.77	-13.79
3	0.1860	36.07	QP	9.68	45.75	64.21	-18.46
4	0.2020	36.42	QP	9.68	46.10	63.53	-17.43
5	0.2180	34.59	QP	9.68	44.27	62.89	-18.62
6	0.3540	30.18	QP	9.67	39.85	58.87	-19.02

註： 1. “----”表示量測準峰值的結果符合平均值的限制值，則視為同時符合準峰值與平均值的限制值，不需再對其平均值進行量測。

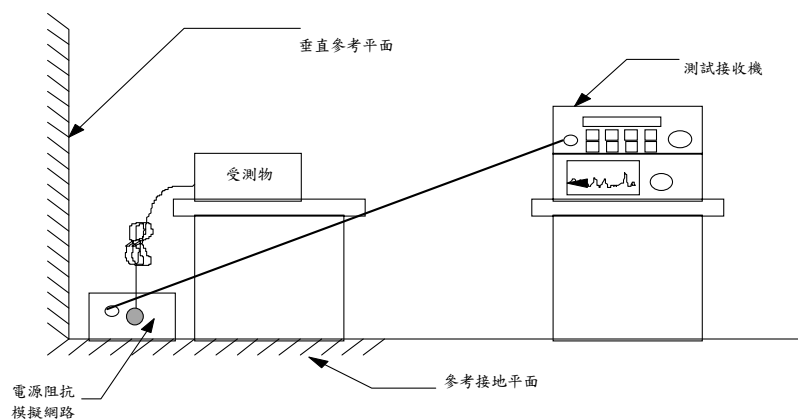
2. “#”表示干擾值太小，直接量取其峰值。

3. 標記“***”表示為本地震盪頻率及其諧波。

4. 量測不準確度: $\pm 2.5\text{dB}$ ($150\text{kHz} \leq f \leq 30\text{MHz}$)。

4.5 電源線傳導干擾之測試配置

圖 1



4.6 傳導量測之配置照片

請參考產品照片

5 天線增益之要求

5.1 適用標準

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3.10.1.3之規定，若發射天線之方向性增益超過6dBi時，除符合下列情形外，應依其所超過之dB數降低最大傳導輸出功率。

依據國家通訊傳播委員會低功率射頻電機技術規範3.10.1.3節之(3)規定，除3.10.1.3節之(1)與(2)外，使用超過6dBi方向增益之發射天線時，應依照超過6 dBi天線方向性增益的 dBi總量，等量減少最大傳導輸出功率限制值。

5.2 天線增益

此裝置使用外接式天線，其天線資料如下：

Antenna 1:

廠牌:Canon

型號: canon-ant-2018-03-1

Antenna Type	PCB Antenna
Operation Frequency Range	2400~2500 MHz
Antenna Gain	-1.77 dBi

Antenna 2:

廠牌:Canon

型號: canon-ant-2018-03-2

Antenna Type	PIFA
Operation Frequency Range	2400~2500 MHz
Antenna Gain	-3.92 dBi

(參照天線規格資料)

5.3 結果判定

CHAIN 1 及 CHAIN 2 之方向性增益皆未超過 6 dBi，因此不需減少峰值輸出功率及功率密度之限制值。

操作在MIMO模式下，CHAIN 1 + CHAIN 2 之天線增益為 1.24 dBi 低於6dBi，因此不需減少峰值輸出功率及功率密度之限制值。

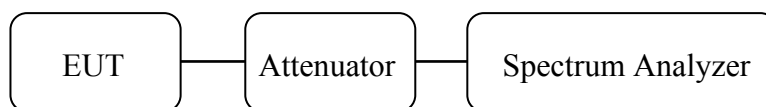
6 發射頻寬之要求

6.1 適用標準

對使用直接序列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3.10.1.6節之(2)(A)之規定，6dB頻寬至少應有500 kHz。

6.2 測試配置

圖 2：發射頻寬之測試配置



6.3 發射頻寬之量測儀器

儀器名稱	製造者	型 號
Spectrum Analyzer	Agilent	E4446A
Attenuator	WEINSCHEL	56-10

測試軟體: LZ-RF (Ver. ETC-3A2)

6.4 量測結果

測試工程師: 羅世勇

6.4.1 調變技術: IEEE 802.11b

測試日期: Jul. 30, 2019

環境溫度 : 25°C

環境濕度: 63%

Channel	6dB Bandwidth (MHz)	NCC Limit (kHz)	Chart
L	10.2	500	Page 24
M	10.2	500	Page 25
H	10.2	500	Page 26

註：1. 繪圖資料請參考第 24-26 頁。

2. 量測不準確度 8.25×10^{-7} ($1\text{GHz} \leq f \leq 18\text{GHz}$)

File: 19-07-MAS-
008_b_Ant2

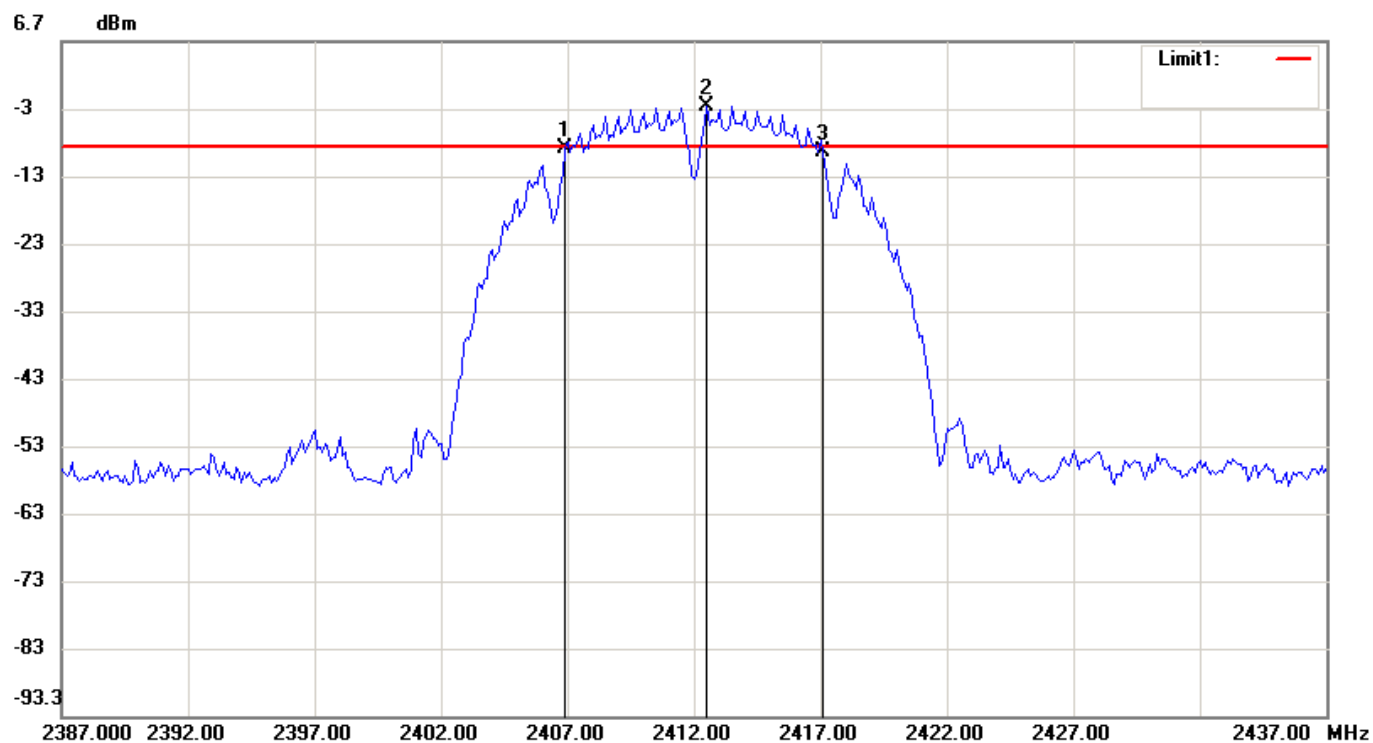
#1

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 10:55:21

Humidity: 63 %



Condition: -8.97dBm

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11b Channel 01-6dB EBW

RF Conducted

Sweep Time: 500ms Att.: 20dB

RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	2406.90000	-9.09
2	2412.50000	-2.97
3	2417.10000	-9.69

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	10.2	-0.6

File: 19-07-MAS-008_b_Ant2

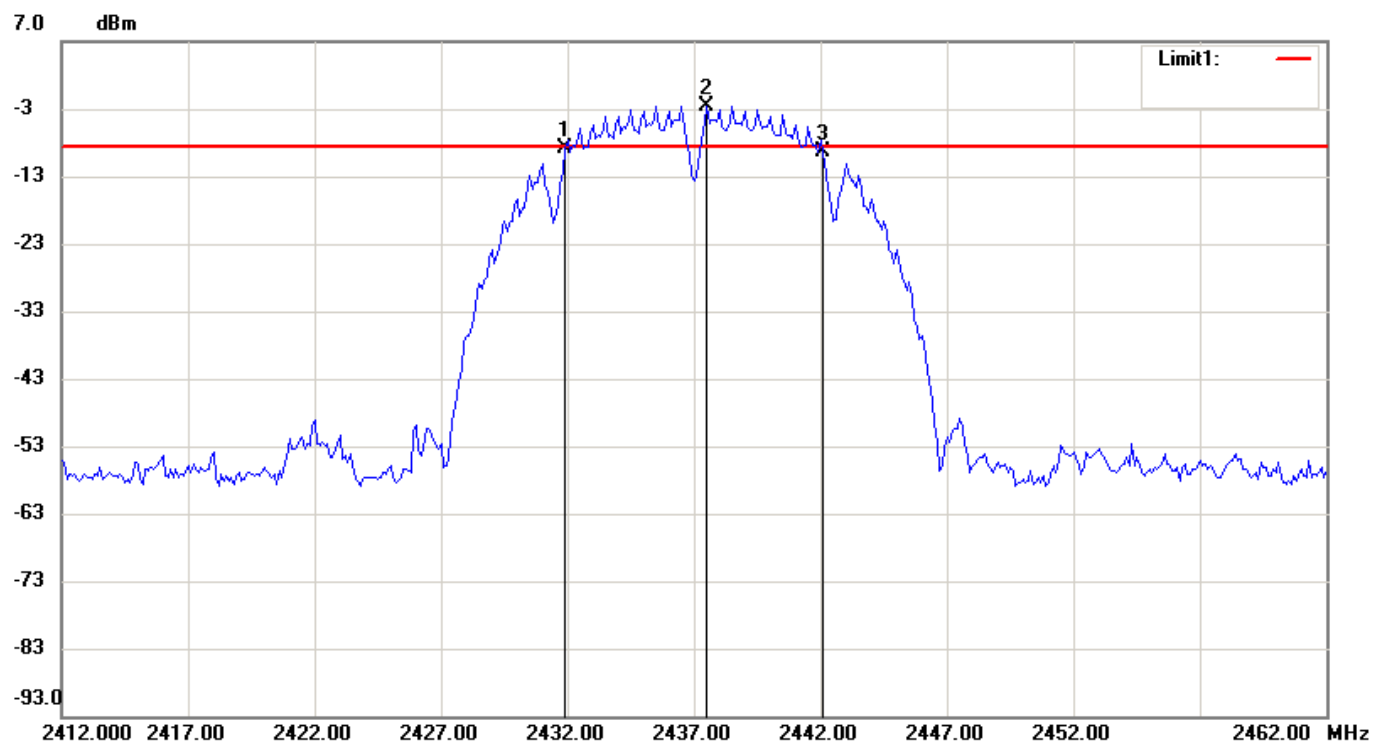
#5

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 11:01:39

Humidity: 63 %



Condition: -8.67dBm

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11b Channel 06-6dB EBW

RF Conducted

Sweep Time: 500ms Att.: 20dB

RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	2431.90000	-9.00
2	2437.50000	-2.67
3	2442.10000	-9.39

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	10.2	-0.39

File: 19-07-MAS-008_b_Ant2

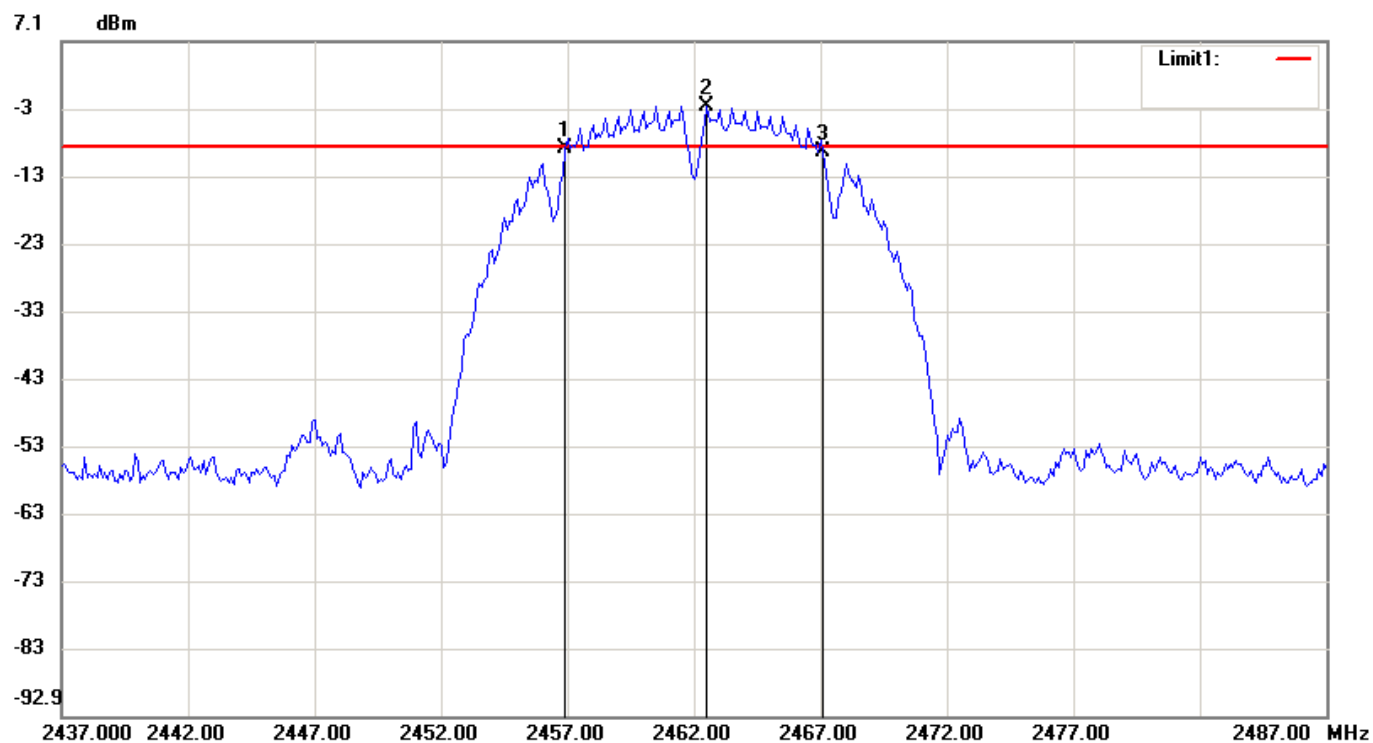
#8

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 11:11:59

Humidity: 63 %



Condition: -8.46dBm

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11b Channel 11-6dB EBW

RF Conducted

Sweep Time: 500ms Att.: 20dB

RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	2456.90000	-8.73
2	2462.50000	-2.46
3	2467.10000	-9.36

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	10.2	-0.63

6.4.2 調變技術: IEEE 802.11g

測試日期: Jul. 30, 2019

環境溫度 : 25°C

環境濕度: 63%

Channel	6dB Bandwidth (MHz)	NCC Limit (kHz)	Chart
L	16.6	500	Page 28
M	16.6	500	Page 29
H	16.6	500	Page 30

註：1. 繪圖資料請參考第 28-30 頁。

2. 量測不準確度 8.25×10^{-7} ($1\text{GHz} \leq f \leq 18\text{GHz}$)

File: 19-07-MAS-
008_g_Ant2

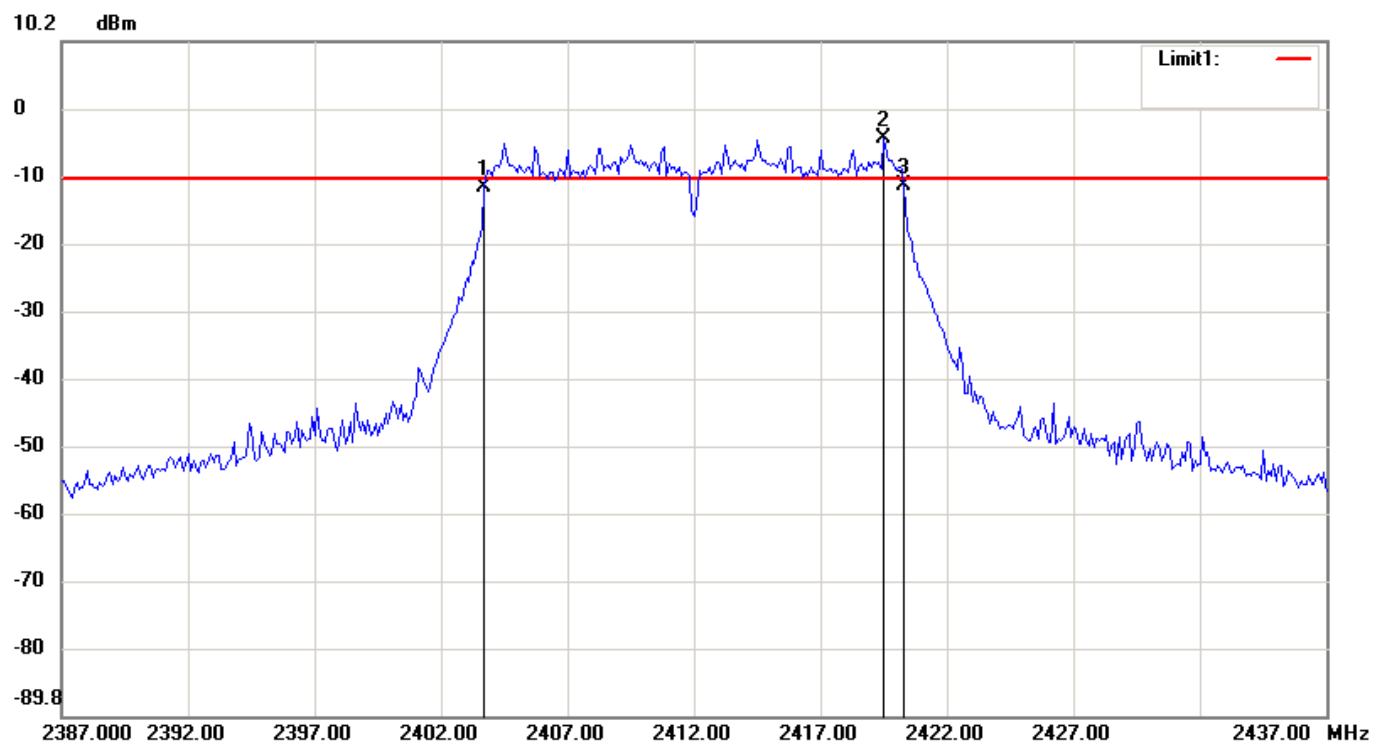
#1

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 11:29:17

Humidity: 63 %



Condition: -10.26dBm
 EUT: Wireless File Transmitter
 Model: DS586194
 Test Mode: TX_Ant2
 Note: Operator: Phillip
 NCC_LP0002_802.11g Channel 01-6dB EBW

RF Conducted
 Sweep Time: 500ms Att.: 20dB
 RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	2403.70000	-11.52
2	2419.50000	-4.26
3	2420.30000	-11.19

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	16.6	0.33

File: 19-07-MAS-008_g_Ant2

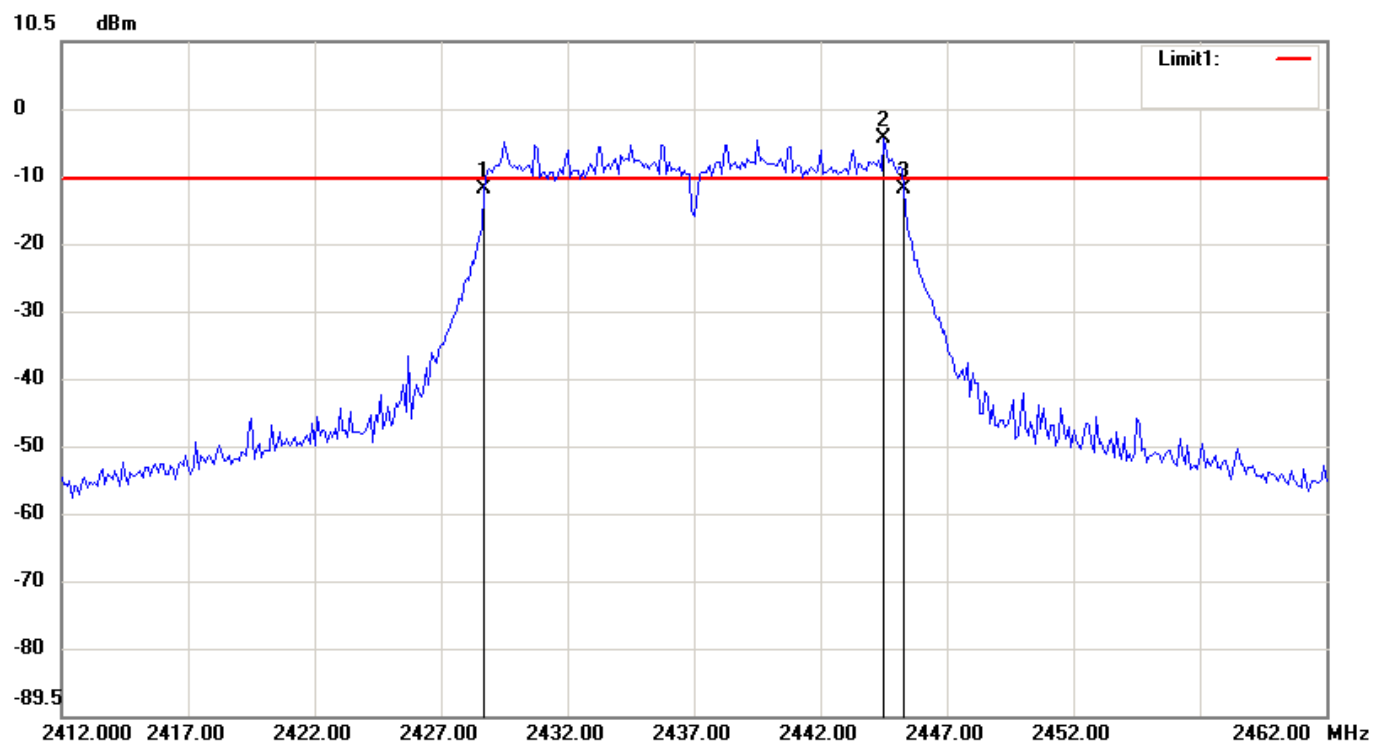
#5

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 11:35:17

Humidity: 63 %



Condition:

-10dBm

RF Conducted

EUT:

Wireless File Transmitter

Sweep Time: 500ms Att.: 20dB

Model:

DS586194

RBW: 100 KHz

VBW: 300 KHz

Test Mode:

TX_Ant2

Note:

Operator: Phillip

NCC_LP0002_802.11g Channel 06-6dB EBW

No.	Frequency(MHz)	Level(dBm)
1	2428.70000	-11.39
2	2444.50000	-4.00
3	2445.30000	-11.38

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	16.6	0.01

File: 19-07-MAS-
008_g_Ant2

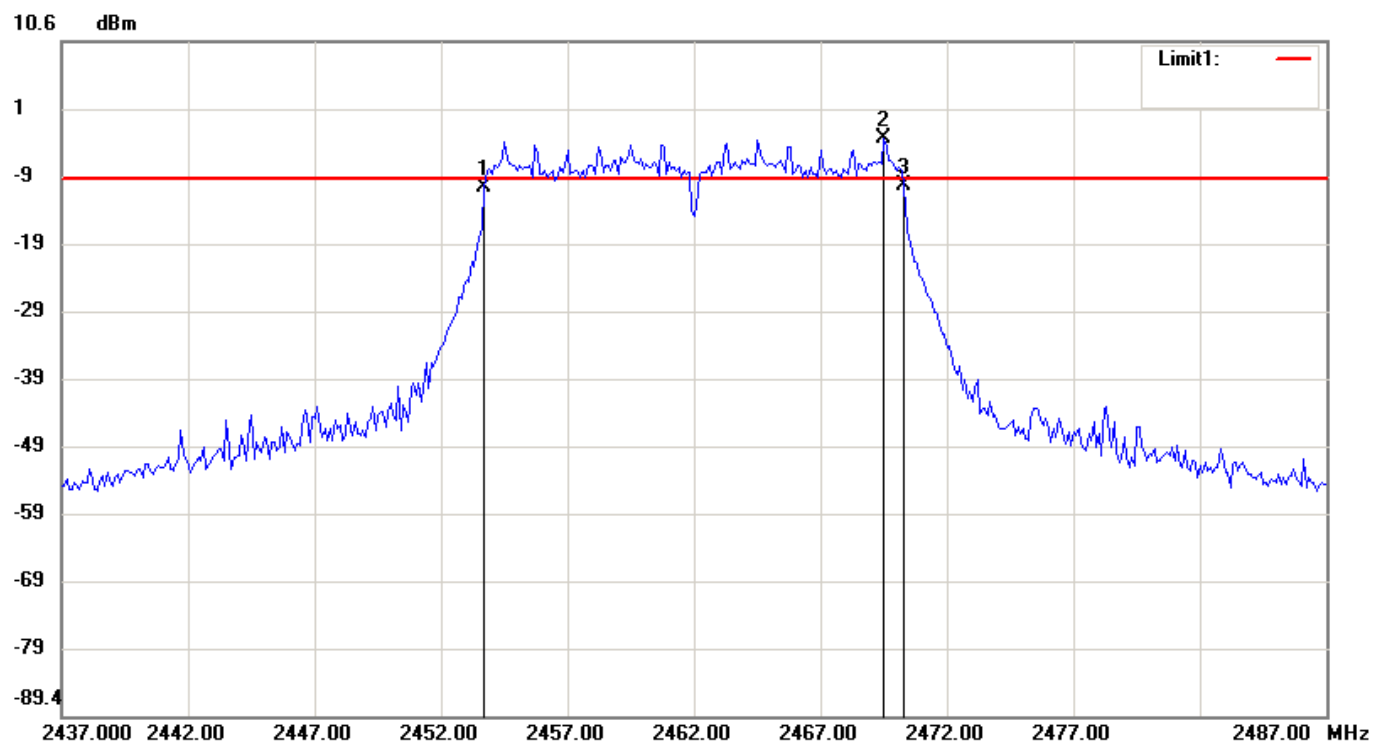
#8

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 11:40:26

Humidity: 63 %



Condition: -9.84dBm

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11g Channel 11-6dB EBW

RF Conducted

Sweep Time: 500ms Att.: 20dB

RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	2453.70000	-11.09
2	2469.50000	-3.84
3	2470.30000	-10.79

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	16.6	0.3

6.4.3 調變技術: IEEE 802.11n HT20

6.4.3.1 CHAIN 1

測試日期: Jul. 30, 2019

環境溫度 : 25°C

環境濕度: 63%

Channel	6dB Bandwidth (MHz)	NCC Limit (kHz)	Chart
L	17.8	500	Page 32
M	17.8	500	Page 33
H	17.8	500	Page 34

註：1. 繪圖資料請參考第 32-34 頁。

2. 量測不準確度 8.25×10^{-7} ($1\text{GHz} \leq f \leq 18\text{GHz}$)

File: 19-07-MAS-
008_n20_Ant1

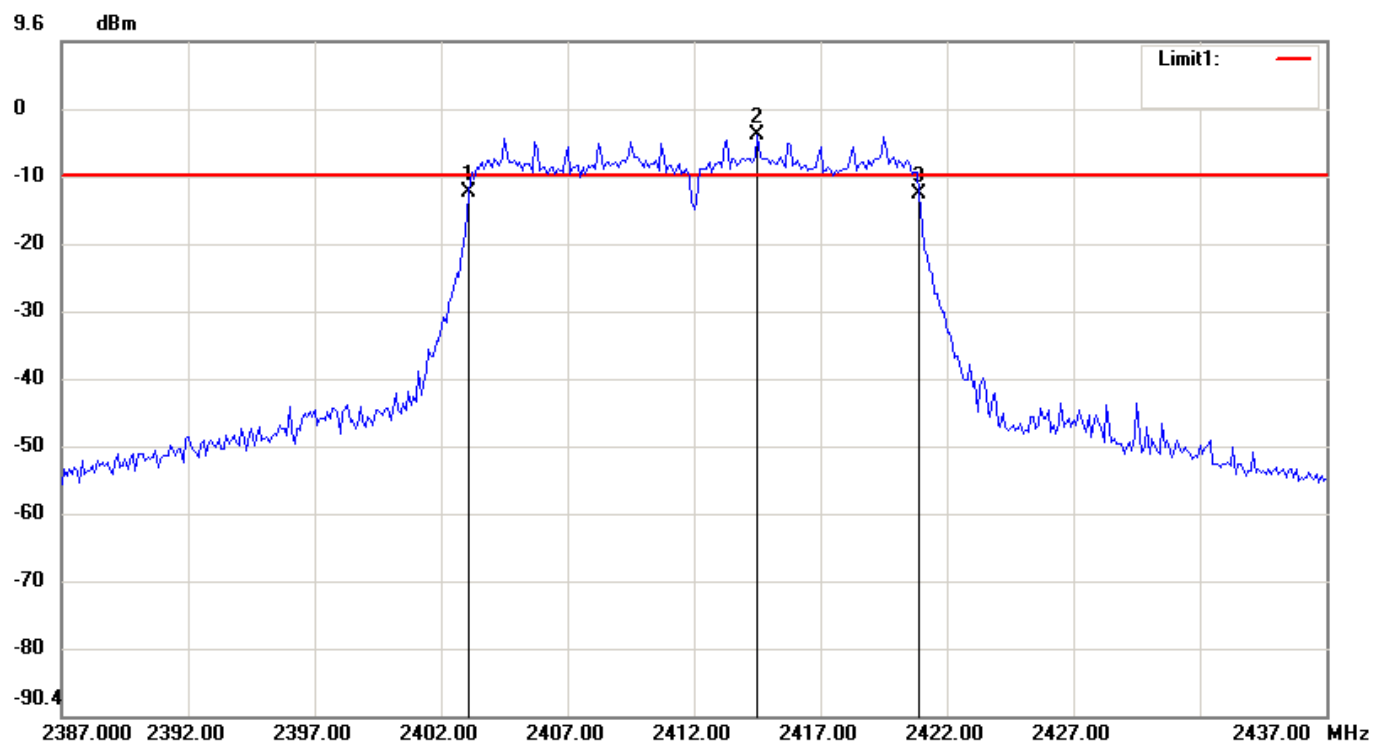
#1

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 02:15:58

Humidity: 63 %



Condition: -10.33dBm

RF Conducted

EUT: Wireless File Transmitter

Sweep Time: 500ms Att.: 20dB

Model: DS586194

RBW: 100 KHz VBW: 300 KHz

Test Mode: TX_Ant1

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT20 Channel 01-6dB EBW

No.	Frequency(MHz)	Level(dBm)
1	2403.10000	-12.82
2	2414.50000	-4.33
3	2420.90000	-13.02

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	17.8	-0.2

File: 19-07-MAS-
008_n20_Ant1

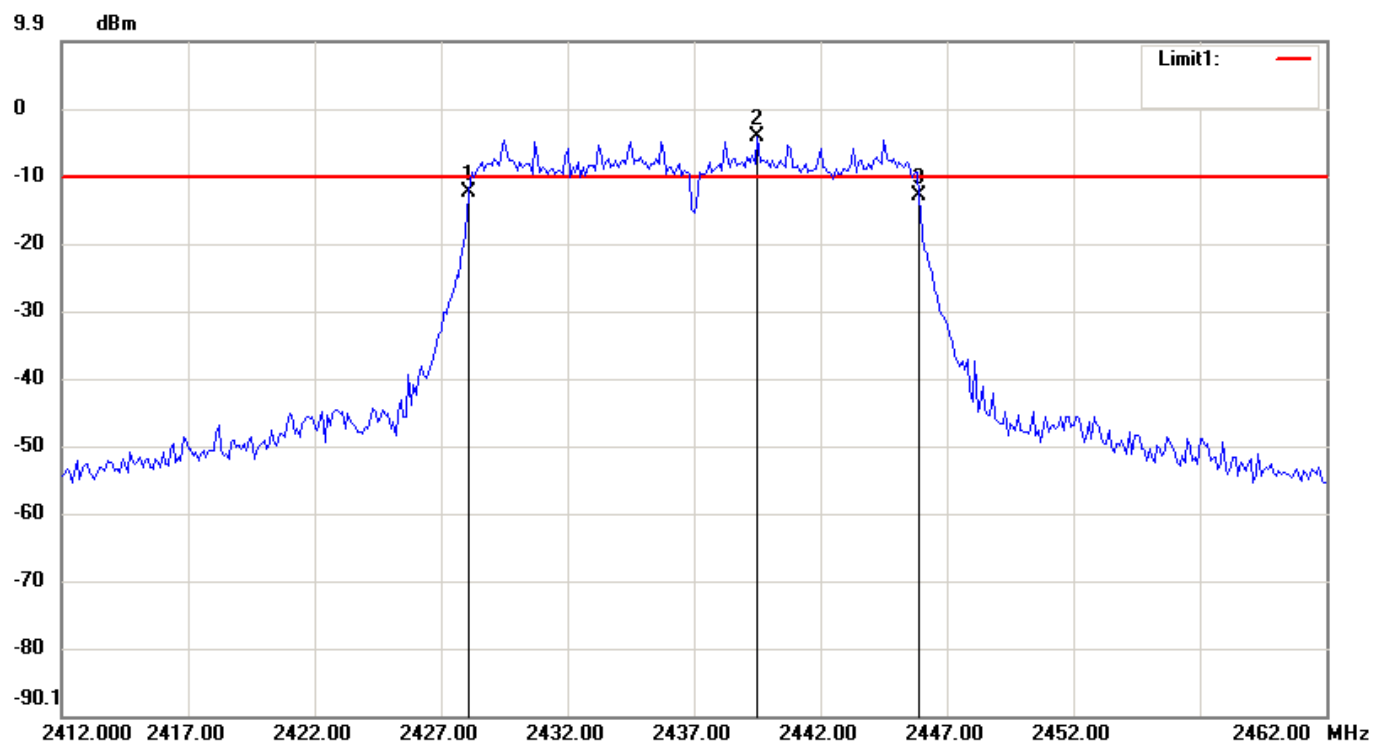
#5

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 02:27:32

Humidity: 63 %



Condition: -10.18dBm

RF Conducted

EUT: Wireless File Transmitter

Sweep Time: 500ms Att.: 20dB

Model: DS586194

RBW: 100 KHz VBW: 300 KHz

Test Mode: TX_Ant1

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT20 Channel 06-6dB EBW

No.	Frequency(MHz)	Level(dBm)
1	2428.10000	-12.42
2	2439.50000	-4.18
3	2445.90000	-12.90

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	17.8	-0.48

File: 19-07-MAS-
008_n20_Ant1

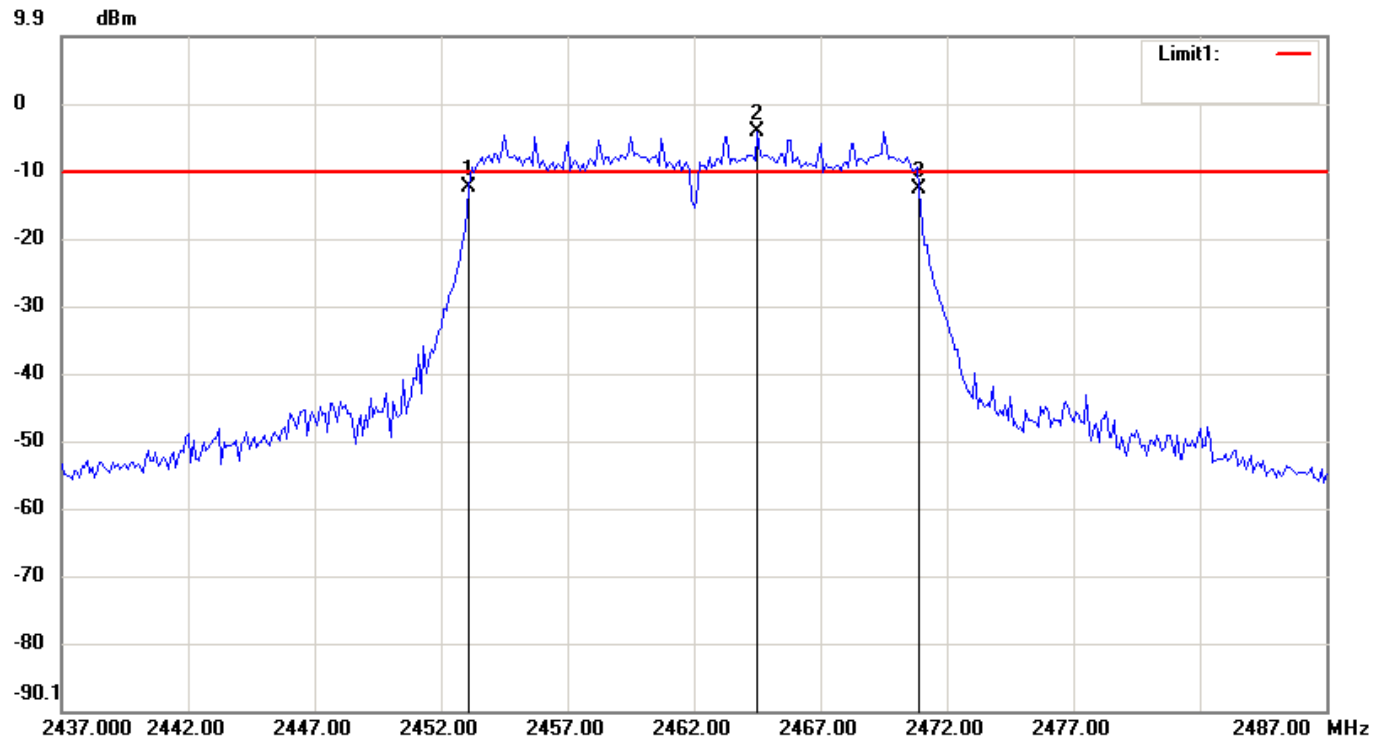
#8

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 02:32:32

Humidity: 63 %



Condition: -10.18dBm

RF Conducted

EUT: Wireless File Transmitter

Sweep Time: 500ms Att.: 20dB

Model: DS586194

RBW: 100 KHz VBW: 300 KHz

Test Mode: TX_Ant1

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT20 Channel 11-6dB EBW

No.	Frequency(MHz)	Level(dBm)
1	2453.10000	-12.49
2	2464.50000	-4.18
3	2470.90000	-12.68

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	17.8	-0.19

6.4.3.2 CHAIN 2

測試日期: Jul. 30, 2019

環境溫度 : 25°C

環境濕度: 63%

Channel	6dB Bandwidth (MHz)	NCC Limit (kHz)	Chart
L	17.8	500	Page 36
M	17.8	500	Page 37
H	17.8	500	Page 38

註：1. 繪圖資料請參考第 36-38 頁。

2. 量測不準確度 8.25×10^{-7} ($1\text{GHz} \leq f \leq 18\text{GHz}$)

File: 19-07-MAS-
008_n20_Ant2

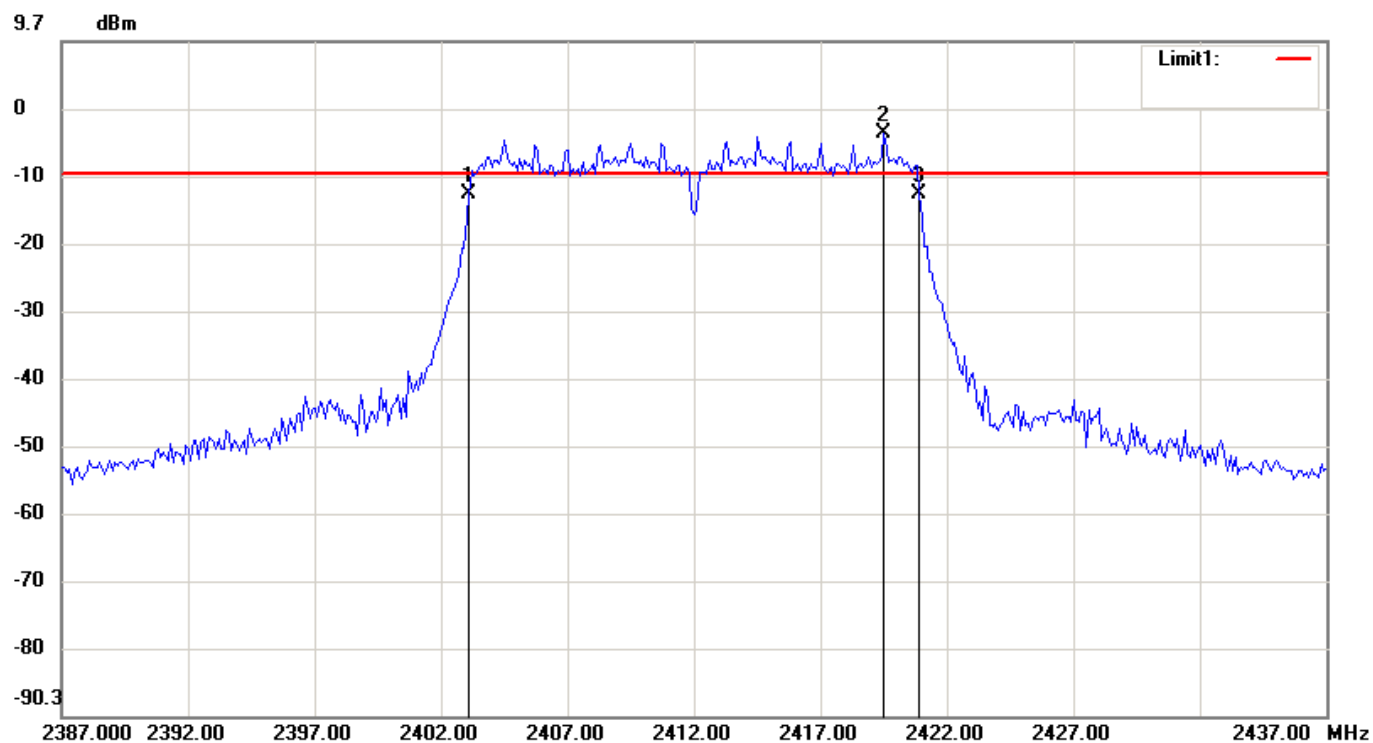
#1

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 11:55:31

Humidity: 63 %



Condition: -9.93dBm

RF Conducted

EUT: Wireless File Transmitter

Sweep Time: 500ms Att.: 20dB

Model: DS586194

RBW: 100 KHz VBW: 300 KHz

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT20 Channel 01-6dB EBW

No.	Frequency(MHz)	Level(dBm)
1	2403.10000	-12.98
2	2419.50000	-3.93
3	2420.90000	-12.84

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	17.8	0.14

File: 19-07-MAS-
008_n20_Ant2

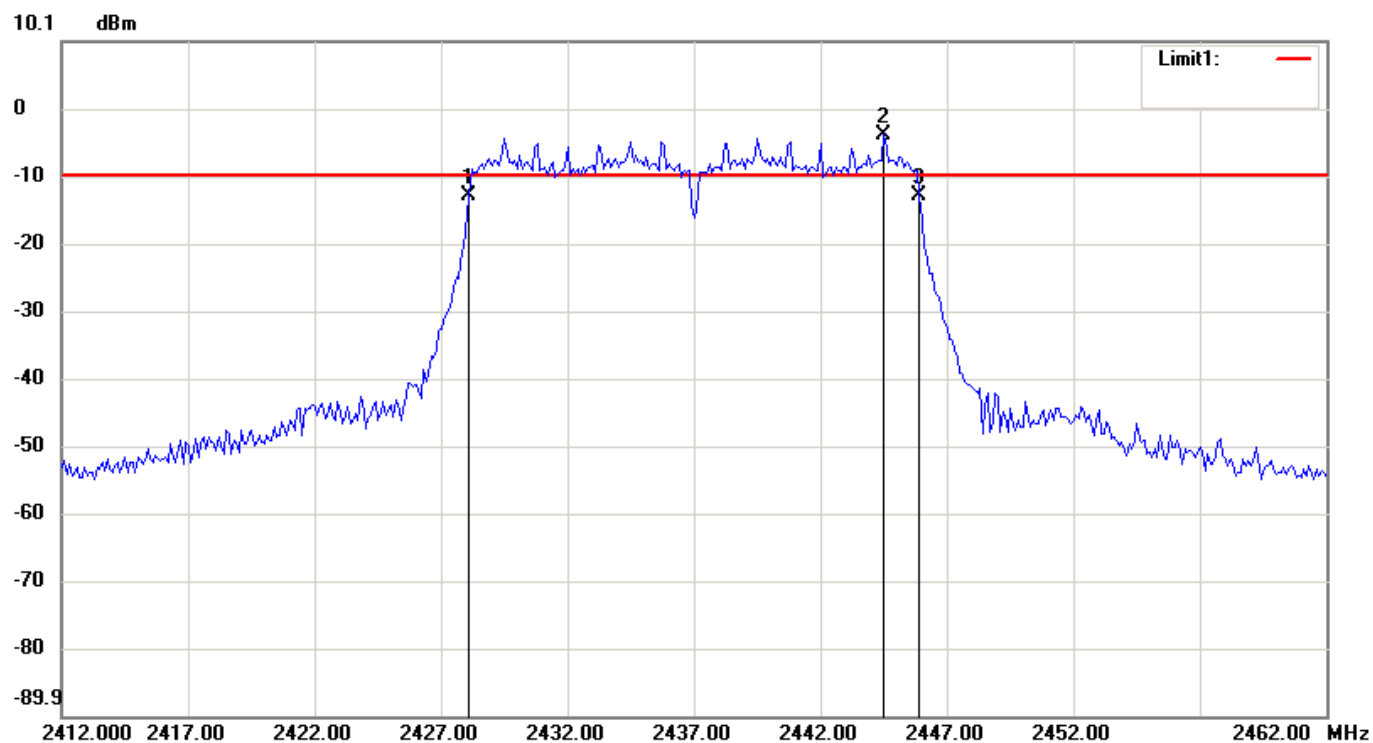
#5

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 12:03:21

Humidity: 63 %



Condition:

-9.7dBm

RF Conducted

EUT:

Wireless File Transmitter

Sweep Time: 500ms Att.: 20dB

Model:

DS586194

RBW: 100 KHz

VBW: 300 KHz

Test Mode:

TX_Ant2

Note:

Operator: Phillip

NCC_LP0002_802.11gn-HT20 Channel 06-6dB EBW

No.	Frequency(MHz)	Level(dBm)
1	2428.10000	-12.86
2	2444.50000	-3.70
3	2445.90000	-12.90

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	17.8	-0.04

File: 19-07-MAS-
008_n20_Ant2

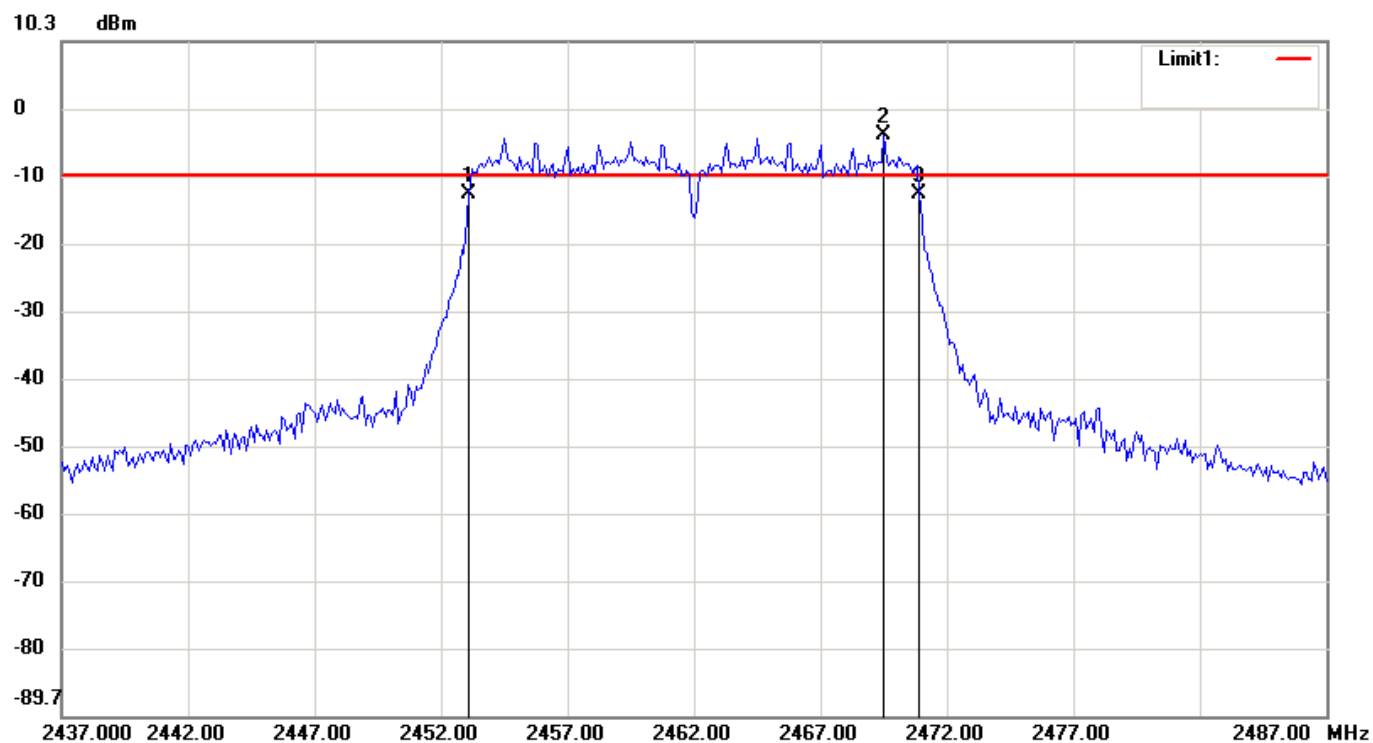
#8

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 12:09:26

Humidity: 63 %



Condition: -9.45dBm

RF Conducted

EUT: Wireless File Transmitter

Sweep Time: 500ms Att.: 20dB

Model: DS586194

RBW: 100 KHz VBW: 300 KHz

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT20 Channel 11-6dB EBW

No.	Frequency(MHz)	Level(dBm)
1	2453.10000	-12.31
2	2469.50000	-3.45
3	2470.90000	-12.35

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	17.8	-0.04

6.4.4 調變技術: IEEE 802.11n HT40

6.4.4.1 CHAIN 1

測試日期: Jul. 30, 2019

環境溫度 : 25°C

環境濕度: 63%

Channel	6dB Bandwidth (MHz)	NCC Limit (kHz)	Chart
L	36.2	500	Page 40
M	36.6	500	Page 41
H	36.4	500	Page 42

註：1. 繪圖資料請參考第 40-42 頁。

2. 量測不準確度 8.25×10^{-7} ($1\text{GHz} \leq f \leq 18\text{GHz}$)

File: 19-07-MAS-
008_n40_Ant1

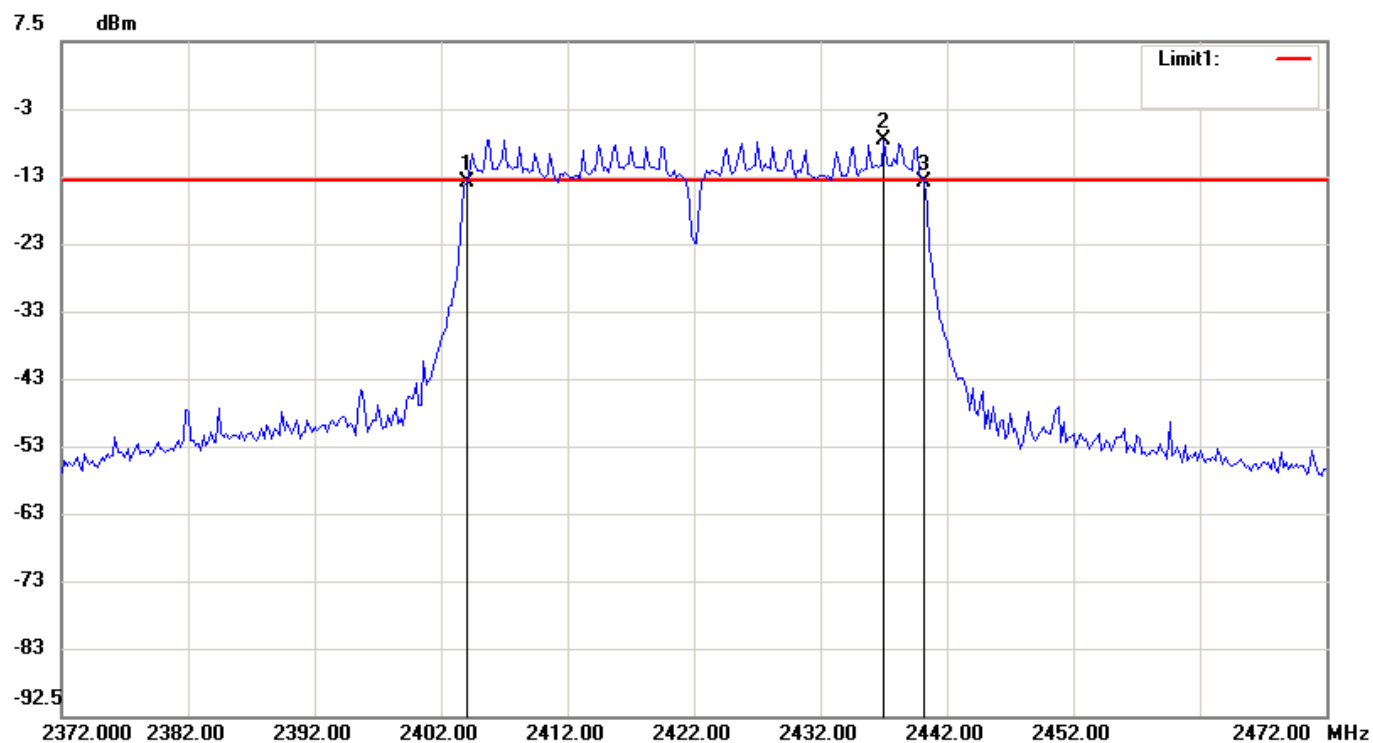
#1

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 01:48:22

Humidity: 63 %



Condition: -13.03dBm

RF Conducted

EUT: Wireless File Transmitter

Sweep Time: 500ms Att.: 20dB

Model: DS586194

RBW: 100 KHz VBW: 300 KHz

Test Mode: TX_Ant1

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 03-6dB EBW

No.	Frequency(MHz)	Level(dBm)
1	2404.00000	-13.30
2	2437.00000	-7.03
3	2440.20000	-13.33

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	36.2	-0.03

File: 19-07-MAS-
008_n40_Ant1

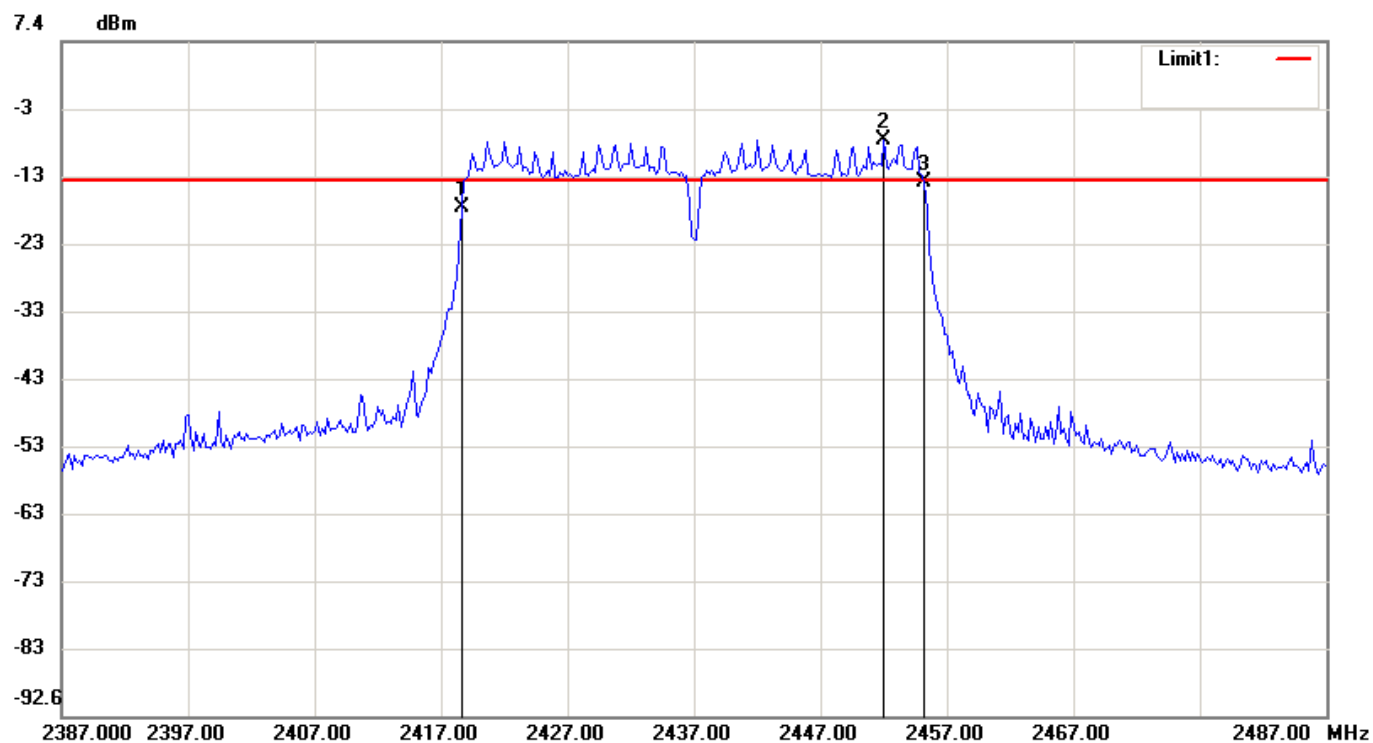
#5

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 01:56:18

Humidity: 63 %



Condition: -13.22dBm

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant1

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 06-6dB EBW

RF Conducted

Sweep Time: 500ms Att.: 20dB

RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	2418.60000	-17.28
2	2452.00000	-7.22
3	2455.20000	-13.31

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	36.6	3.97

File: 19-07-MAS-
008_n40_Ant1

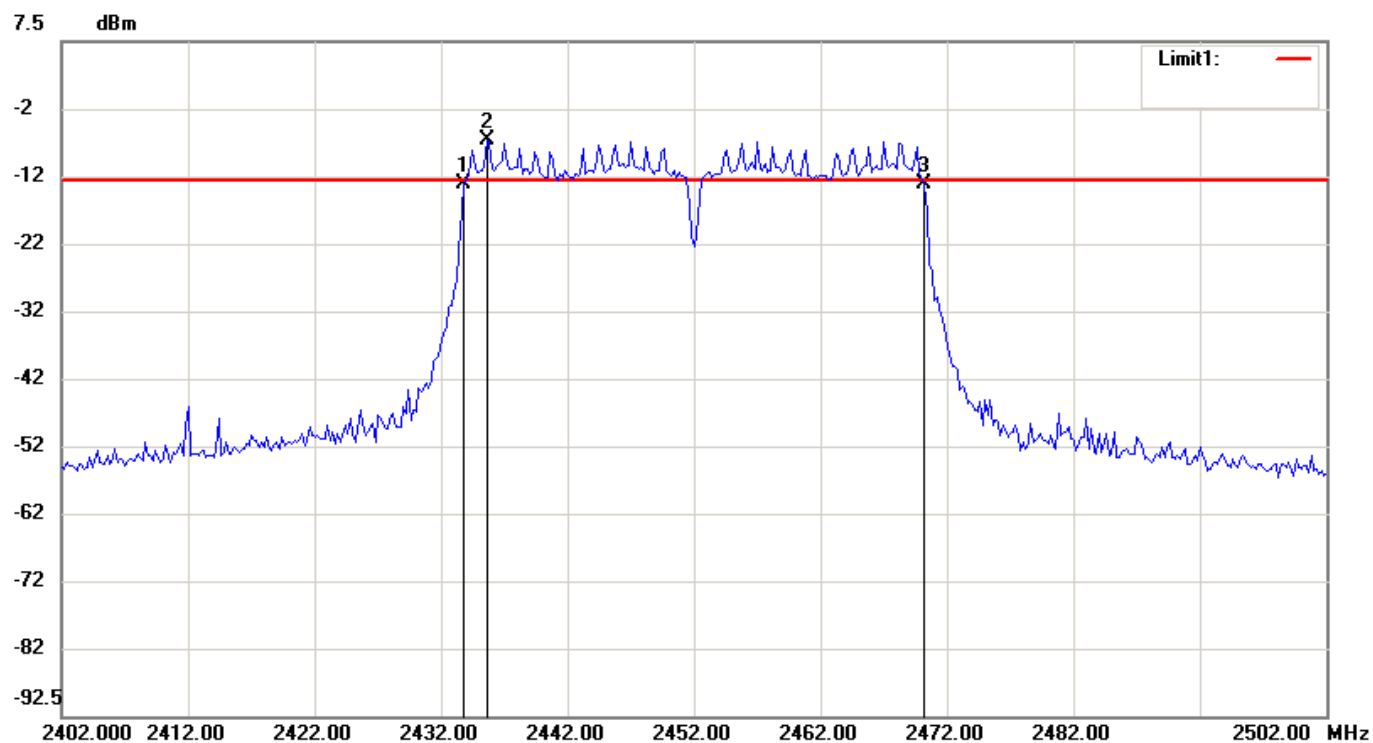
#8

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 02:04:09

Humidity: 63 %



Condition: -13.14dBm

RF Conducted

EUT: Wireless File Transmitter

Sweep Time: 500ms Att.: 20dB

Model: DS586194

RBW: 100 KHz VBW: 300 KHz

Test Mode: TX_Ant1

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 11-6dB EBW

No.	Frequency(MHz)	Level(dBm)
1	2433.80000	-13.53
2	2435.60000	-7.14
3	2470.20000	-13.47

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	36.4	0.06

6.4.4.2 CHAIN 2

測試日期: Jul. 30, 2019

環境溫度 : 25°C

環境濕度: 63%

Channel	6dB Bandwidth (MHz)	NCC Limit (kHz)	Chart
L	35.6	500	Page 44
M	36.2	500	Page 45
H	35.6	500	Page 46

註：1. 繪圖資料請參考第 44-46 頁。

2. 量測不準確度 8.25×10^{-7} ($1\text{GHz} \leq f \leq 18\text{GHz}$)

6.5 結果判定

高、中、低頻段的6dB頻寬皆大於500KHz。

File: 19-07-MAS-
008_n40_Ant2

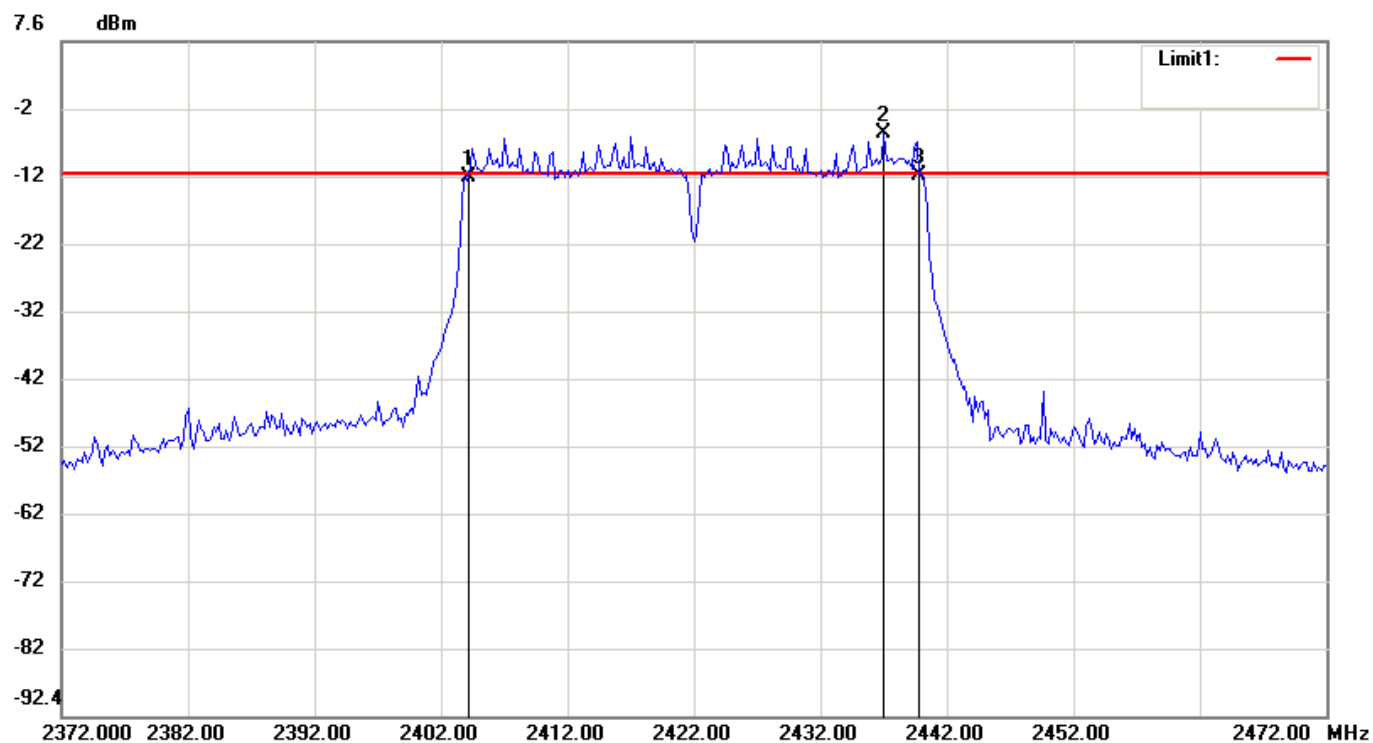
#1

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 01:10:32

Humidity: 63 %



Condition: -12.06dBm

RF Conducted

EUT: Wireless File Transmitter

Sweep Time: 500ms Att.: 20dB

Model: DS586194

RBW: 100 KHz VBW: 300 KHz

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 03-6dB EBW

No.	Frequency(MHz)	Level(dBm)
1	2404.20000	-12.50
2	2437.00000	-6.06
3	2439.80000	-12.28

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	35.6	0.22

File: 19-07-MAS-
008_n40_Ant2

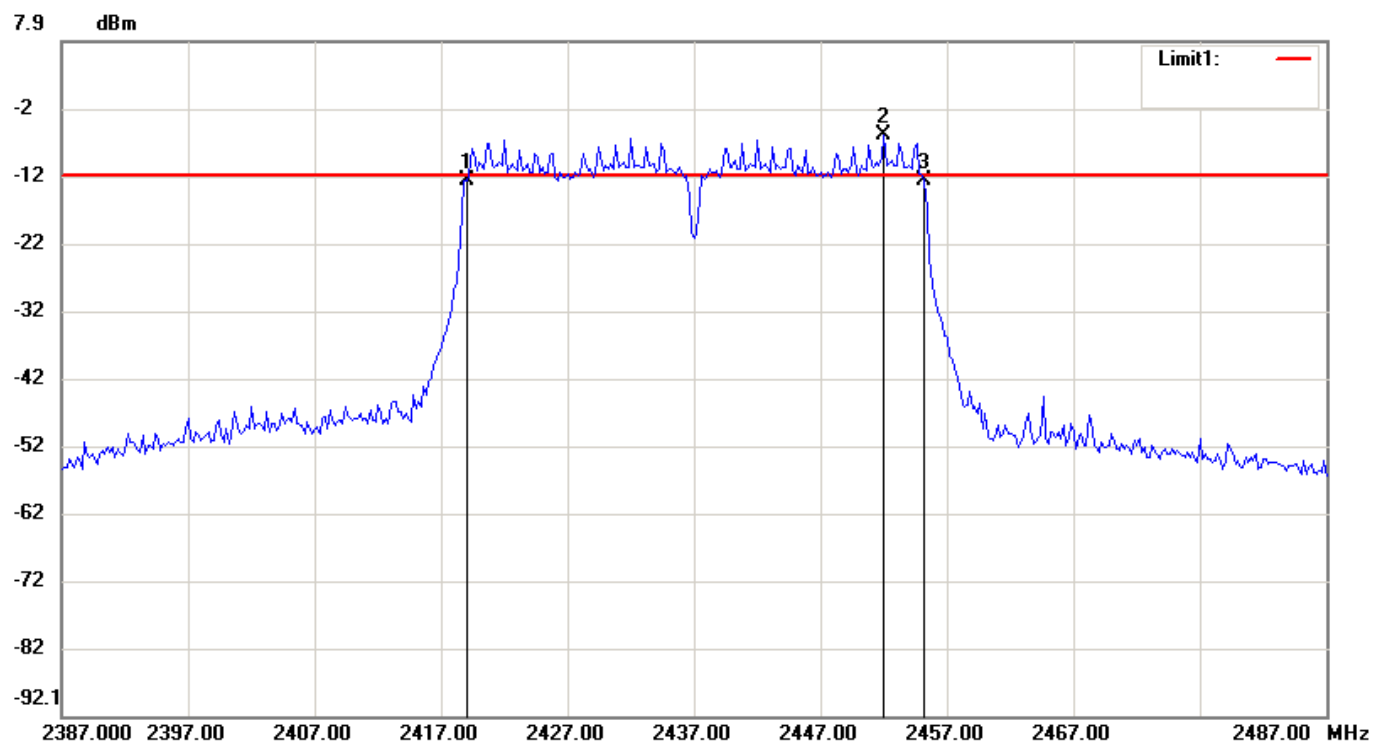
#5

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 01:16:35

Humidity: 63 %



Condition: -11.98dBm

RF Conducted

EUT: Wireless File Transmitter

Sweep Time: 500ms Att.: 20dB

Model: DS586194

RBW: 100 KHz VBW: 300 KHz

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 06-6dB EBW

No.	Frequency(MHz)	Level(dBm)
1	2419.00000	-12.75
2	2452.00000	-5.98
3	2455.20000	-12.69

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	36.2	0.06

File: 19-07-MAS-
008_n40_Ant2

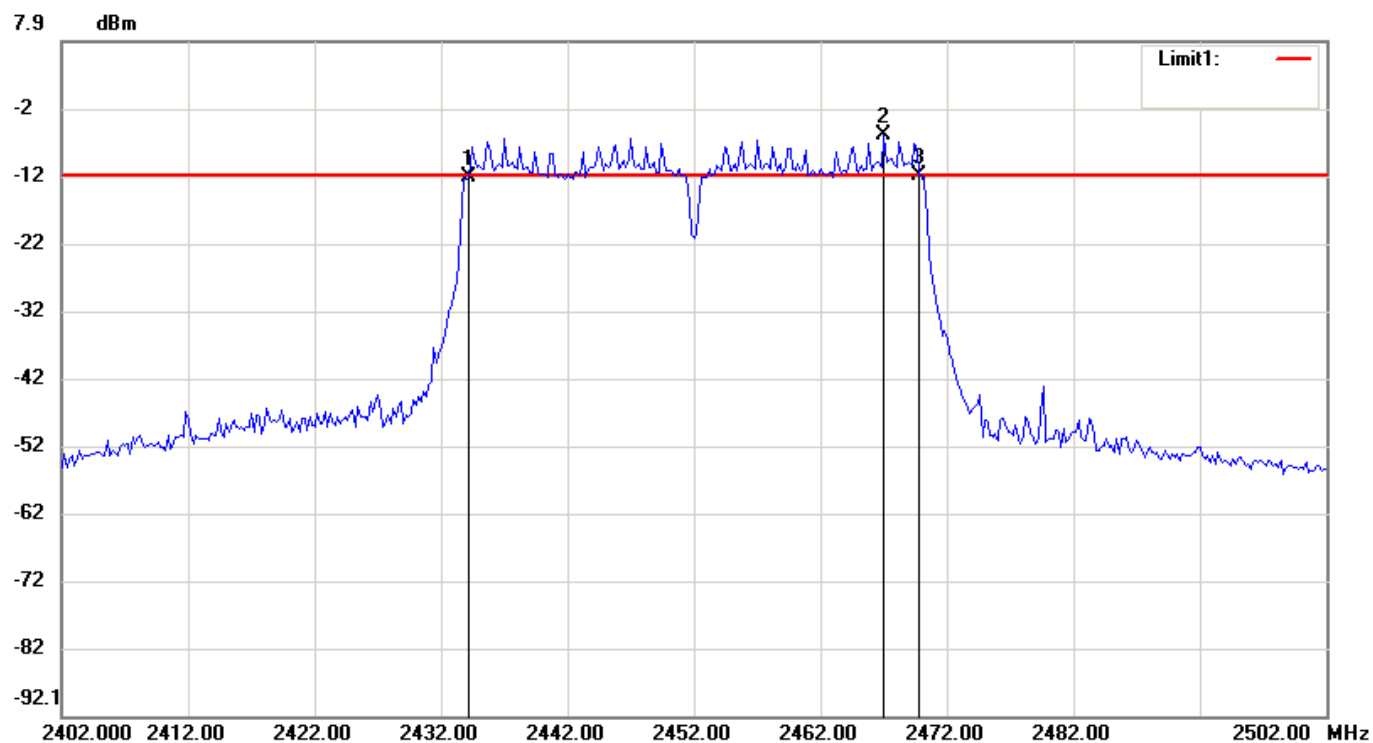
#8

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 01:26:14

Humidity: 63 %



Condition: -11.99dBm

RF Conducted

EUT: Wireless File Transmitter

Sweep Time: 500ms Att.: 20dB

Model: DS586194

RBW: 100 KHz VBW: 300 KHz

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 11-6dB EBW

No.	Frequency(MHz)	Level(dBm)
1	2434.20000	-12.10
2	2467.00000	-5.99
3	2469.80000	-12.04

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	35.6	0.06

7 峰值傳導輸出功率之量測

7.1 峰值適用標準

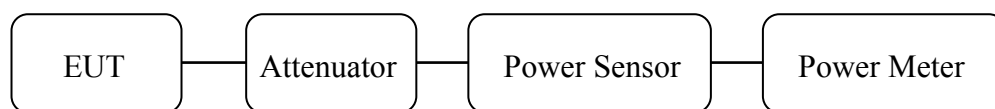
依據國家通訊傳播委員會低功率射頻電機技術規範3.10.1.2節之(1)(C)規定，操作於2400-2483.5兆赫(MHz)之所有數位調變技術系統:1瓦(W)(含)以下。

用於非於固定式點對點操作時，若其發射天線之方向性增益超過6dBi，應依所超過之dB數等量降低峰值輸出功率。如用於固定式點對點操作時，應符合下列情形：

操作於2400-2483.5兆赫(MHz)者，其發射天線之方向性增益超過6dBi，每超過3dBi，最大傳導輸出功率限制值應降低1dB。

7.2 峰值輸出功率之測試配置

圖 3：峰值輸出功率之測試配置



7.3 峰值輸出功率之量測儀器

儀器名稱	製造者	型 號
Power Meter	Agilent	N1912A
Power Sensor	Agilent	N1922A
Attenuator	WEINSCHEL	56-10

測試軟體: LZ-RF (Ver. ETC-3A2)

7.4 峰值輸出功率之量測結果

測試工程師: 羅世勇

測試日期: Jul. 30, 2019 環境溫度 : 25°C 環境濕度: 63%

7.4.1 調變技術: IEEE 802.11b

7.4.1.1 CHAIN 1

Channel	Maximum Peak Output Power (dBm)	NCC Limit (dBm)	Chart
L	9.58	30	-
M	9.78	30	-
H	9.84	30	-

7.4.1.2 CHAIN 2

Channel	Maximum Peak Output Power (dBm)	NCC Limit (dBm)	Chart
L	11.24	30	-
M	10.59	30	-
H	10.77	30	-

註：

1. 最大峰值輸出功率 (Maximum Peak Output Power) 為經儀器校正補償過後的結果值。
2. If antenna gain $\leq$ 6dBi, NCC Limit = 30 dBm
3. If antenna gain $>$ 6dBi, NCC Limit = 30dBm – (highest antenna gain – 6 dBi)
4. NCC Limit (dBm)=10 log NCC Limit (mW)
5. 量測不準確度: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

7.4.2 調變技術: IEEE 802.11g

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

7.4.2.1 CHAIN 1

Channel	Maximum Peak Output Power (dBm)	NCC Limit (dBm)	Chart
L	17.51	30	-
M	17.84	30	-
H	18.05	30	-

7.4.2.2 CHAIN 2

Channel	Maximum Peak Output Power (dBm)	NCC Limit (dBm)	Chart
L	18.06	30	-
M	18.39	30	-
H	18.60	30	-

註：

1. 最大峰值輸出功率 (Maximum Peak Output Power) 為經儀器校正補償過後的結果值。
2. If antenna gain $\leq$ 6dBi, NCC Limit = 30 dBm
3. If antenna gain > 6dBi, NCC Limit = 30dBm – (highest antenna gain – 6 dBi)
4. NCC Limit (dBm)=10 log NCC Limit (mW)
5. 量測不準確度: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

7.4.3 調變技術: IEEE 802.11n HT20

7.4.3.1 CHAIN 1

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

天線增益最大值為 -1.77 dBi，NCC Limit 如下表所示：

Channel	Maximum Peak Output Power (dBm)	NCC Limit (dBm)	Chart
L	17.64	30	-
M	17.97	30	-
H	18.16	30	-

註：

1. 最大峰值輸出功率 (Maximum Peak Output Power) 為經儀器校正補償過後的結果值。
2. If antenna gain $\leq$ 6dBi, NCC Limit = 30 dBm
3. If antenna gain $>$ 6dBi, NCC Limit = 30dBm – (highest antenna gain – 6 dBi)
4. NCC Limit (dBm)=10 log NCC Limit (mW)
5. 量測不準確度: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

7.4.3.2 CHAIN 2

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

天線增益最大值為 -3.92 dBi，NCC Limit 如下表所示：

Channel	Maximum Peak Output Power (dBm)	NCC Limit (dBm)	Chart
L	18.13	30	-
M	18.44	30	-
H	18.63	30	-

註：

1. 最大峰值輸出功率 (Maximum Peak Output Power) 為經儀器校正補償過後的結果值。
2. If antenna gain $\leq$ 6dBi, NCC Limit = 30 dBm
3. If antenna gain > 6dBi, NCC Limit = 30dBm – (highest antenna gain – 6 dBi)
4. NCC Limit (dBm)=10 log NCC Limit (mW)
5. 量測不準確度:±1.5dB(1GHz≤f≤18GHz)

7.4.3.3 CHAIN 1 + CHAIN 2

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

Ant 1 / Ant 2 combination 天線增益最大值為 1.24 dBi，NCC Limit 如下表所示：

Channel	CHAIN 1 Maximum Peak Output Power (dBm)	CHAIN 2 Maximum Peak Output Power (dBm)	TOTAL Power (dBm)	NCC Limit (dBm)
L	17.64	18.13	20.90	30
M	17.97	18.44	21.22	30
H	18.16	18.63	21.41	30

註:

1. 最大峰值輸出功率 (Maximum Peak Output Power) 為經儀器校正補償過後的結果值。
2. If antenna gain $\leq$ 6dBi, NCC Limit = 30 dBm
3. If antenna gain $>$ 6dBi, NCC Limit = 30dBm – (highest antenna gain – 6 dBi)
4. NCC Limit (dBm)=10 log NCC Limit (mW)
5. 量測不準確度: ± 1.5 dB ($1\text{GHz} \leq f \leq 18\text{GHz}$)

7.4.4 調變技術: IEEE 802.11n HT40

7.4.4.1 CHAIN 1

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

天線增益最大值為 -1.77 dBi, NCC Limit 如下表所示:

Channel	Maximum Peak Output Power (dBm)	NCC Limit (dBm)	Chart
L	19.72	30	-
M	20.05	30	-
H	20.19	30	-

註:

1. 最大峰值輸出功率 (Maximum Peak Output Power) 為經儀器校正補償過後的結果值。
2. If antenna gain $\leq$ 6dBi, NCC Limit = 30 dBm
3. If antenna gain $>$ 6dBi, NCC Limit = 30dBm – (highest antenna gain – 6 dBi)
4. NCC Limit (dBm)=10 log NCC Limit (mW)
5. 量測不準確度: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

7.4.4.2 CHAIN 2

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

天線增益最大值為 -3.92 dBi，NCC Limit 如下表所示：

Channel	Maximum Peak Output Power (dBm)	NCC Limit (dBm)	Chart
L	20.19	30	-
M	20.40	30	-
H	20.54	30	-

註：

1. 最大峰值輸出功率 (Maximum Peak Output Power) 為經儀器校正補償過後的結果值。
2. If antenna gain $\leq$ 6dBi, NCC Limit = 30 dBm
3. If antenna gain $>$ 6dBi, NCC Limit = 30dBm – (highest antenna gain – 6 dBi)
4. NCC Limit (dBm)=10 log NCC Limit (mW)
5. 量測不準確度: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

7.4.4.3 CHAIN 1 + CHAIN 2

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

Ant 0 / Ant 1 combination 天線增益最大值為 1.24 dBi，NCC Limit 如下表所示：

Channel	CHAIN 1 Maximum Peak Output Power (dBm)	CHAIN 2 Maximum Peak Output Power (dBm)	TOTAL Power (dBm)	NCC Limit (dBm)
L	19.72	20.19	22.97	30
M	20.05	20.40	23.24	30
H	20.19	20.54	23.38	30

註:

1. 最大峰值輸出功率 (Maximum Peak Output Power) 為經儀器校正補償過後的結果值。
2. If antenna gain $\leq$ 6dBi, NCC Limit = 30 dBm
3. If antenna gain $>$ 6dBi, NCC Limit = 30dBm – (highest antenna gain – 6 dBi)
- 4 NCC Limit (dBm)=10 log NCC Limit (mW)
5. 量測不準確度: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

7.5 結果判定

高、中、低頻段的峰值輸出功率皆低於限制值。

8 功率密度之量測

8.1 適用標準

依據國家通訊傳播委員會低功率射頻電機技術規範3.10.1.6節之(2)(B)規定，對數位調變技術系統，在使用頻率範圍之任一3 kHz頻寬內，由發射機傳導至天線之功率頻譜密度在任意傳輸期間內，皆小於或等於8毫分貝(dBm)，且應依3.10.1.3之方式降低功率頻譜密度限制值。

8.2 量測功率密度之配置

如圖 2 所示。

8.3 量測功率密度之儀器

儀器名稱	製造者	型 號
Spectrum Analyzer	Agilent	E4446A
Attenuator	WEINSCHEL	56-10

測試軟體: LZ-RF (Ver. ETC-3A2)

8.4 量測結果

測試工程師: 羅世勇

8.4.1 調變技術: IEEE 802.11b

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

Channel	Peak Power Spectral Density (dBm)	NCC Limit (dBm)	Chart
L	-12.11	8	Page 58
M	-11.78	8	Page 59
H	-11.62	8	Page 60

註: 1. 繪圖資料請參考第 58-60 頁。

2. If antenna gain $\leq$ 6dBi, NCC Limit = 8 dBm

3. If antenna gain $>$ 6dBi, NCC Limit = 8dBm – (highest antenna gain – 6 dBi)

4. 量測不準確度: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

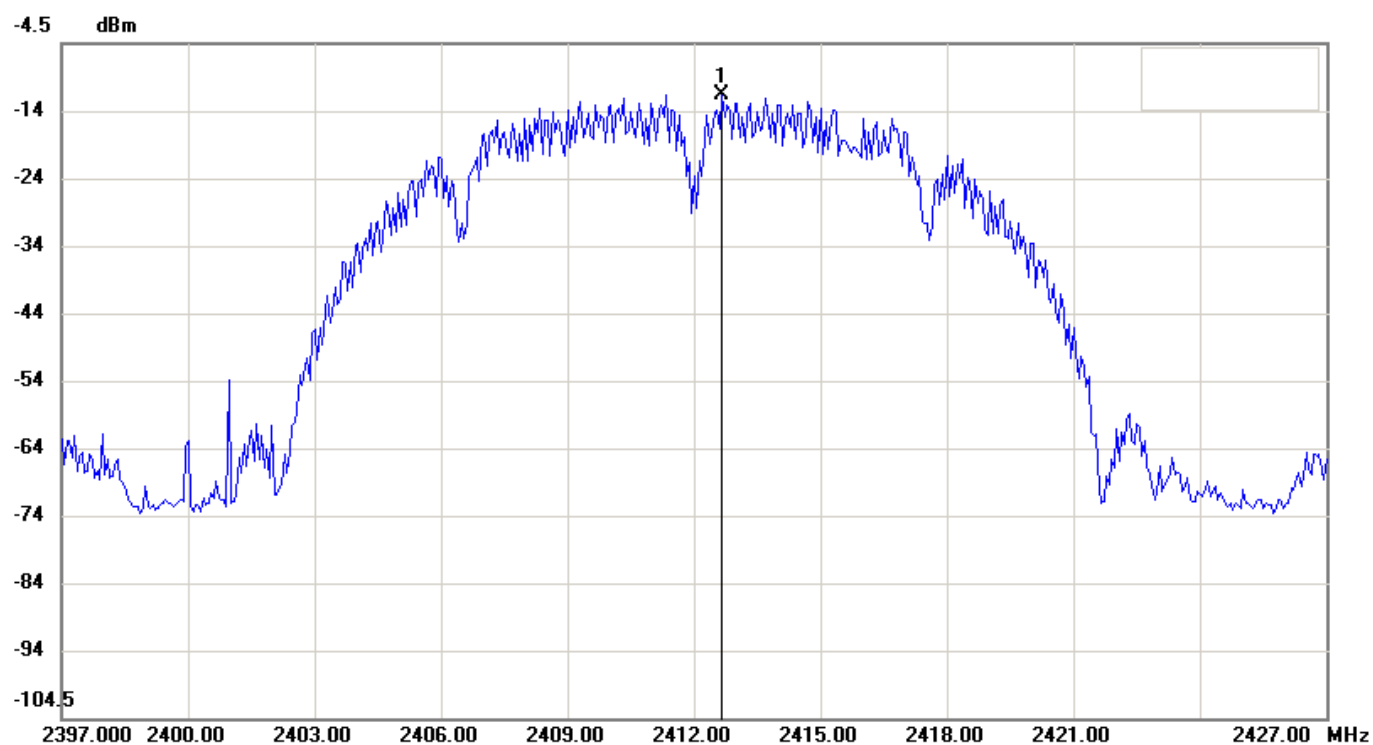
File: 19-07-MAS- #3
008_b_Ant2

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 10:59:24

Humidity: 63 %



Condition:

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11b Channel 01-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

No.	Frequency(MHz)	Level(dBm)
1	2412.66000	-12.11

File: 19-07-MAS-
008_b_Ant2

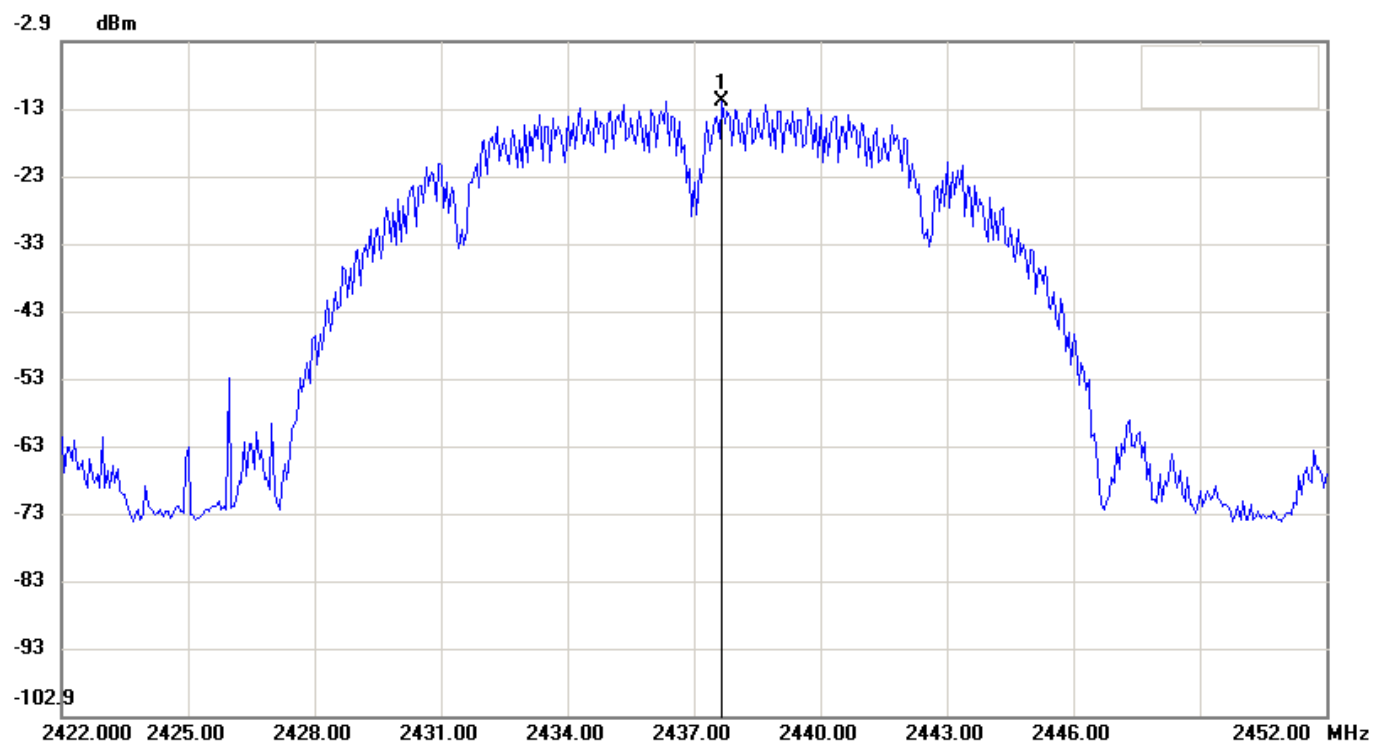
#7

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 11:05:30

Humidity: 63 %

**Condition:****EUT:** Wireless File Transmitter**Model:** DS586194**Test Mode:** TX_Ant2**Note:** Operator: Phillip

NCC_LP0002_802.11b Channel 06-Power Density (PK)

RF Conducted**Sweep Time:** 334ms **Att.:** 20dB**RBW:** 3 KHz **VBW:** 10 KHz

No.	Frequency(MHz)	Level(dBm)
1	2437.66000	-11.78

File: 19-07-MAS-
008_b_Ant2

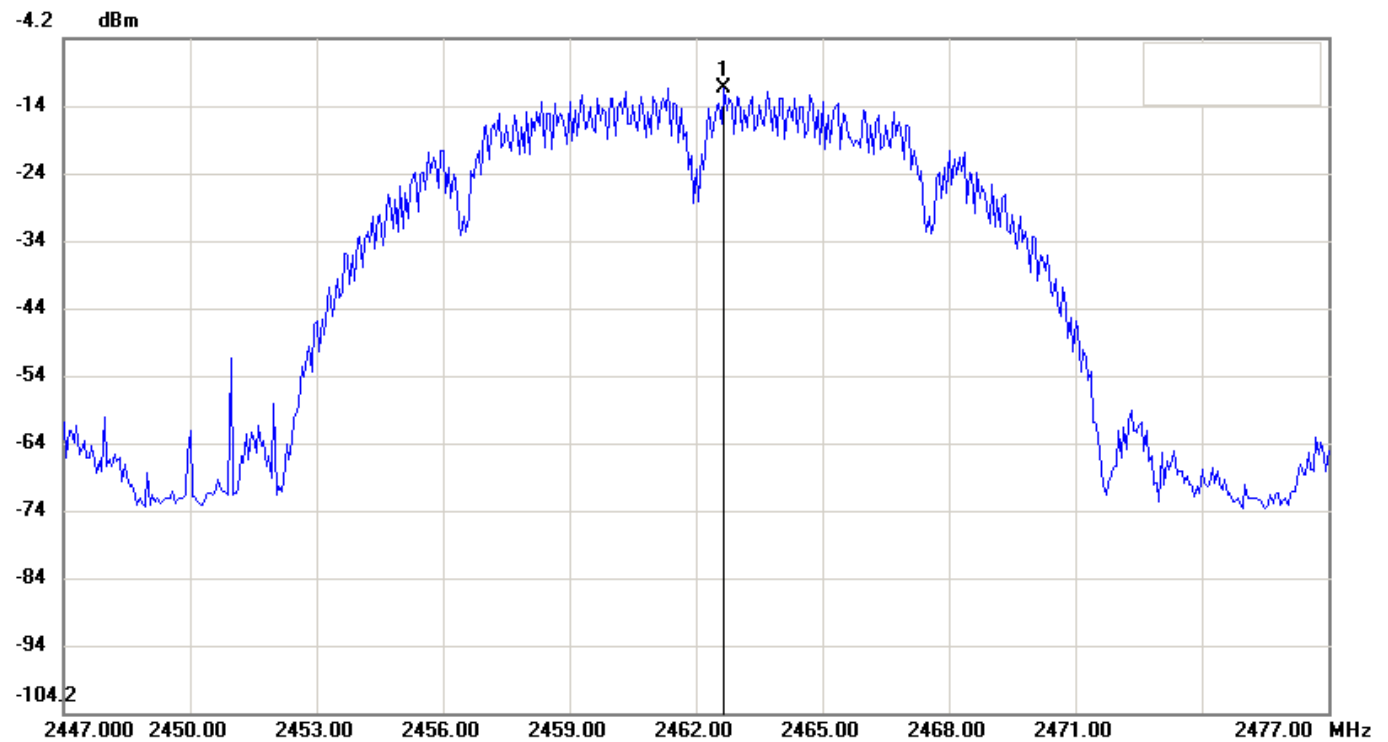
#10

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 11:15:41

Humidity: 63 %



Condition:

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11b Channel 11-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

No.	Frequency(MHz)	Level(dBm)
1	2462.66000	-11.62

8.4.2 調變技術: IEEE 802.11g

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

Channel	Peak Power Spectral Density (dBm)	NCC Limit (dBm)	Chart
L	-19.20	8	Page 62
M	-18.67	8	Page 63
H	-18.36	8	Page 64

註：1. 繪圖資料請參考第 62-64 頁。

2. If antenna gain $\leq 6\text{dBi}$, NCC Limit = 8 dBm

3. If antenna gain $> 6\text{dBi}$, NCC Limit = 8dBm – (highest antenna gain – 6 dBi)

4. 量測不準確度: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

File: 19-07-MAS-
008_g_Ant2

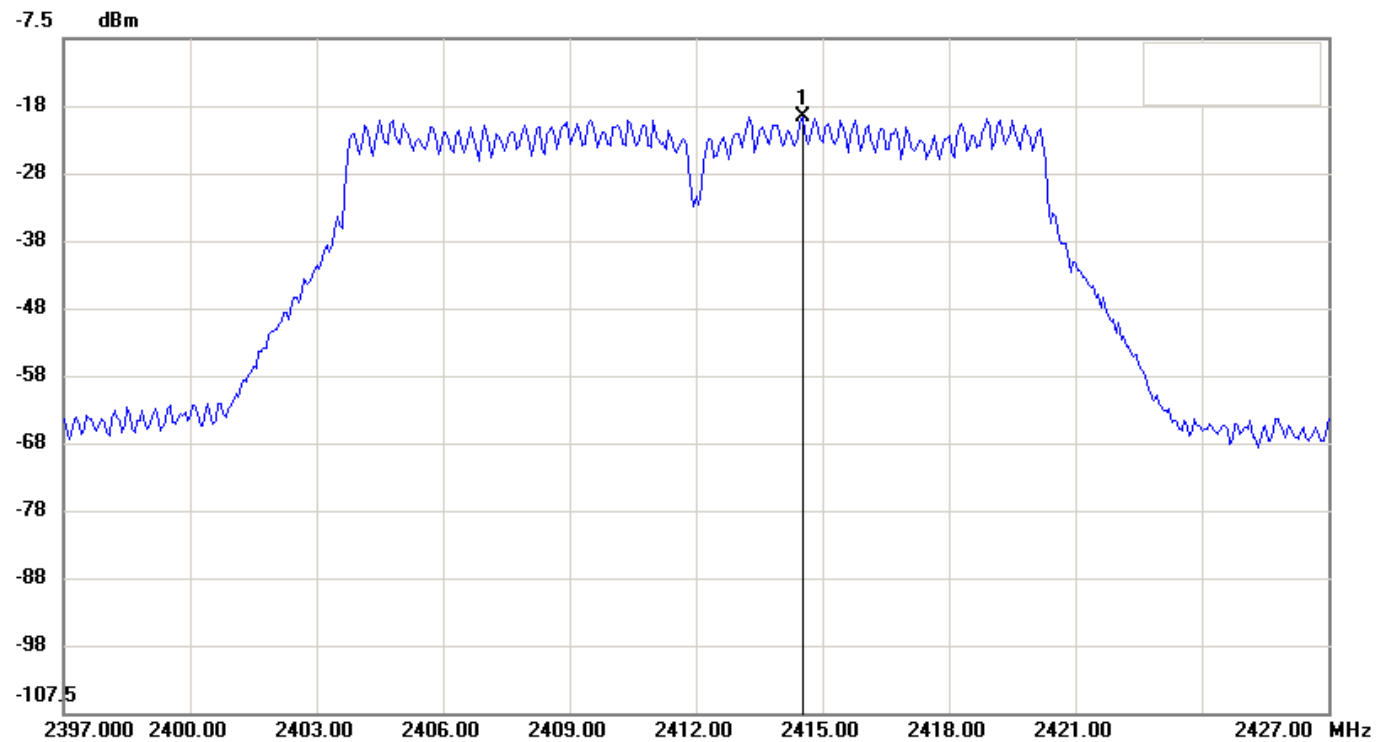
#3

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 11:33:03

Humidity: 63 %



Condition:

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11g Channel 01-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

No.	Frequency(MHz)	Level(dBm)
1	2414.52000	-19.20

File: 19-07-MAS-
008_g_Ant2

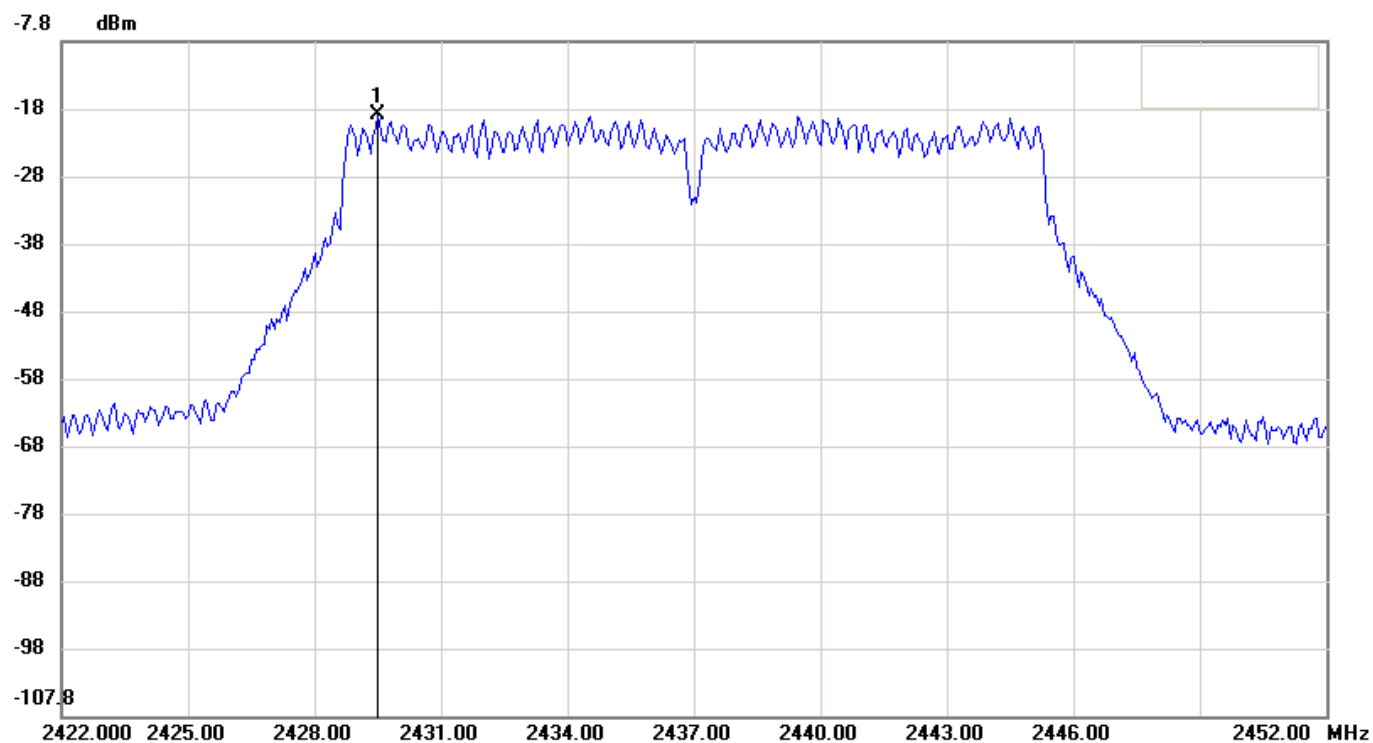
#7

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 11:38:59

Humidity: 63 %



Condition:

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11g Channel 06-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

No.	Frequency(MHz)	Level(dBm)
1	2429.50000	-18.67

File: 19-07-MAS-
008_g_Ant2

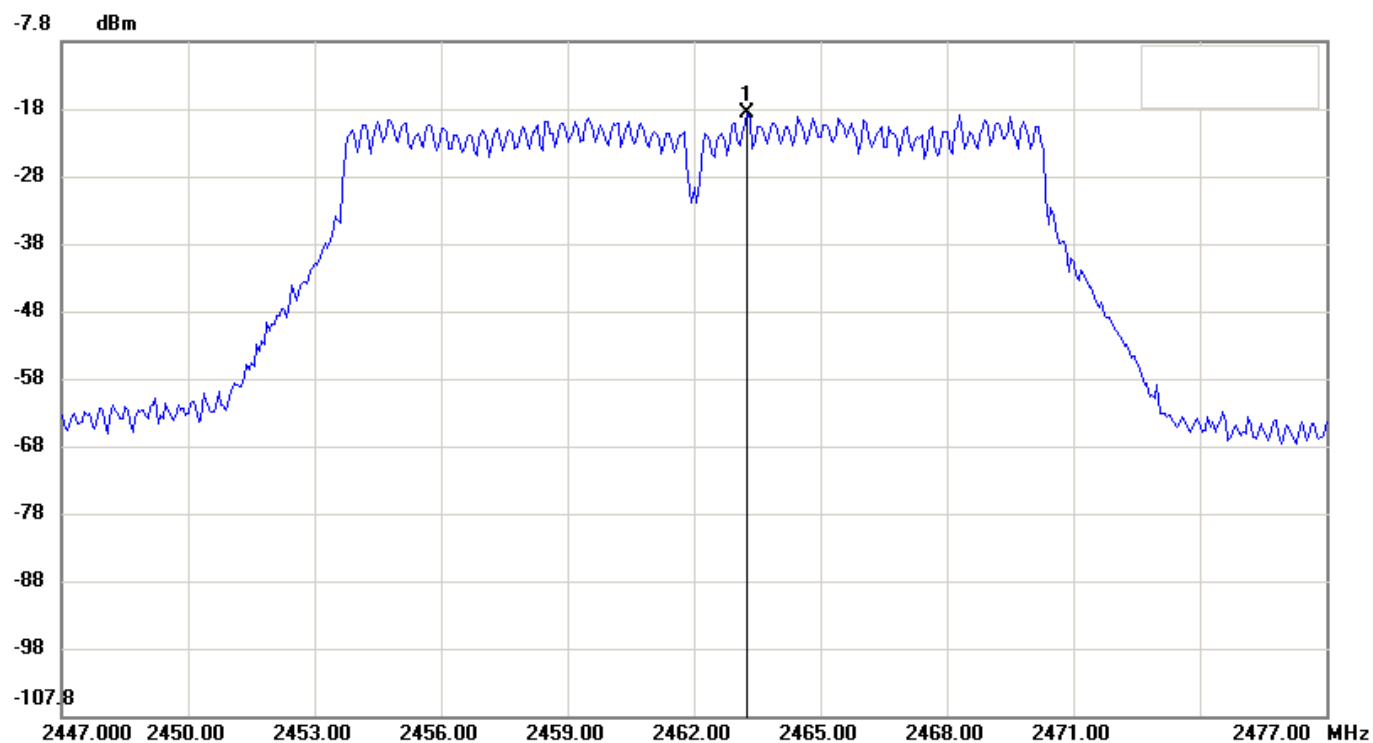
#10

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 11:44:08

Humidity: 63 %



Condition:

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11g Channel 11-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

No.	Frequency(MHz)	Level(dBm)
1	2463.26000	-18.36

8.4.3 調變技術: IEEE 802.11n HT20

8.4.3.1 CHAIN 1

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

天線增益最大值為 -1.77 dBi, NCC Limit 如下表所示:

Channel	Peak Power Spectral Density (dBm)	NCC Limit (dBm)	Chart
L	-16.49	8	Page 66
M	-17.93	8	Page 67
H	-17.83	8	Page 68

註: 1. 繪圖資料請參考第 66-68 頁。

2. If antenna gain $\leq 6\text{dBi}$, NCC Limit = 8 dBm3. If antenna gain $> 6\text{dBi}$, NCC Limit = 8dBm – (highest antenna gain – 6 dBi)4. 量測不準確度: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

File: 19-07-MAS-
008_n20_Ant1

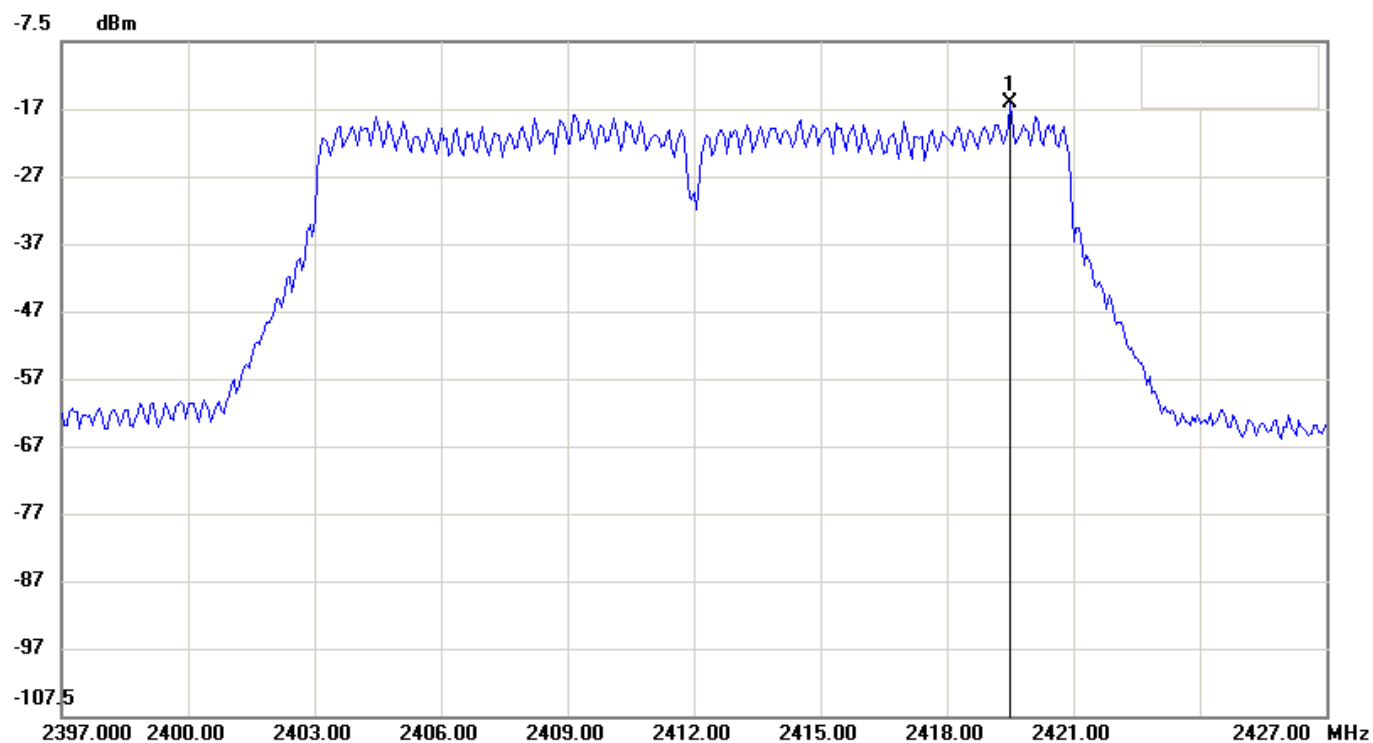
#3

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 02:19:39

Humidity: 63 %

**Condition:**

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant1

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT20 Channel 01-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

No.	Frequency(MHz)	Level(dBm)
1	2419.50000	-16.49

File: 19-07-MAS-
008_n20_Ant1

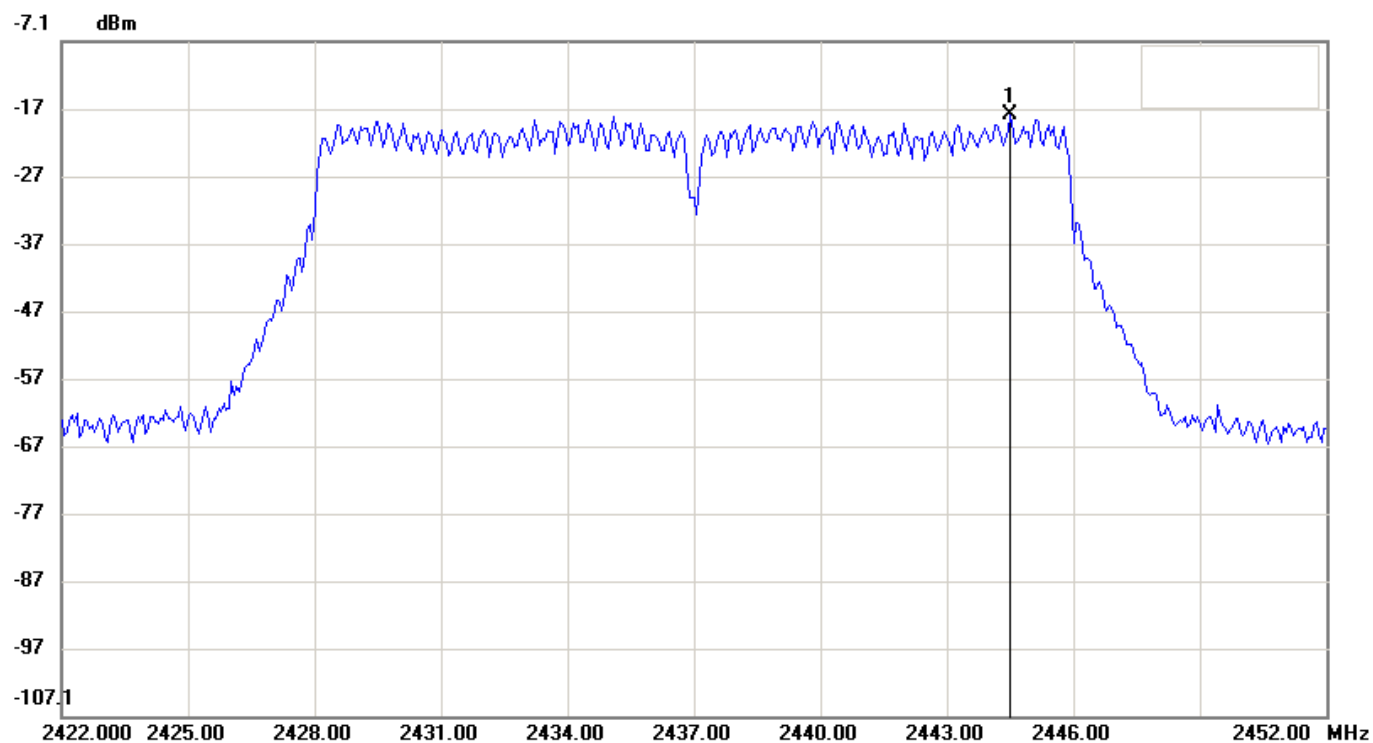
#7

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 02:31:13

Humidity: 63 %



Condition:

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant1

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT20 Channel 06-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

No.	Frequency(MHz)	Level(dBm)
1	2444.50000	-17.93

File: 19-07-MAS-
008_n20_Ant1

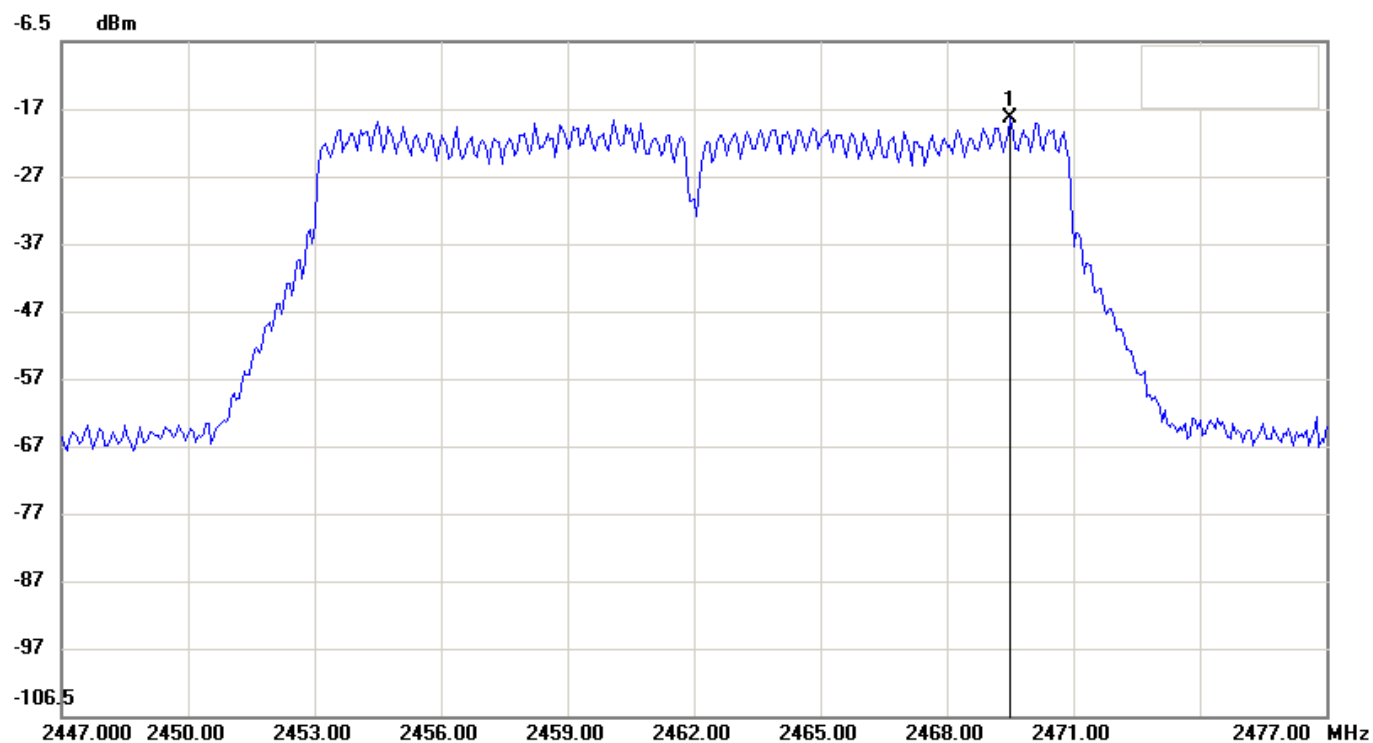
#10

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 02:36:13

Humidity: 63 %



Condition:

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant1

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT20 Channel 11-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

No.	Frequency(MHz)	Level(dBm)
1	2469.50000	-17.83

8.4.3.2 CHAIN 2

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

天線增益最大值為-3.92 dBi, NCC Limit 如下表所示:

Channel	Peak Power Spectral Density (dBm)	NCC Limit (dBm)	Chart
L	-17.63	8	Page 70
M	-17.36	8	Page 71
H	-17.48	8	Page 72

註: 1. 繪圖資料請參考第 70-72 頁。

2. If antenna gain $\leq 6\text{dBi}$, NCC Limit = 8 dBm3. If antenna gain $> 6\text{dBi}$, NCC Limit = 8dBm – (highest antenna gain – 6 dBi)4. 量測不準確度: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

File: 19-07-MAS-008_n20_Ant2

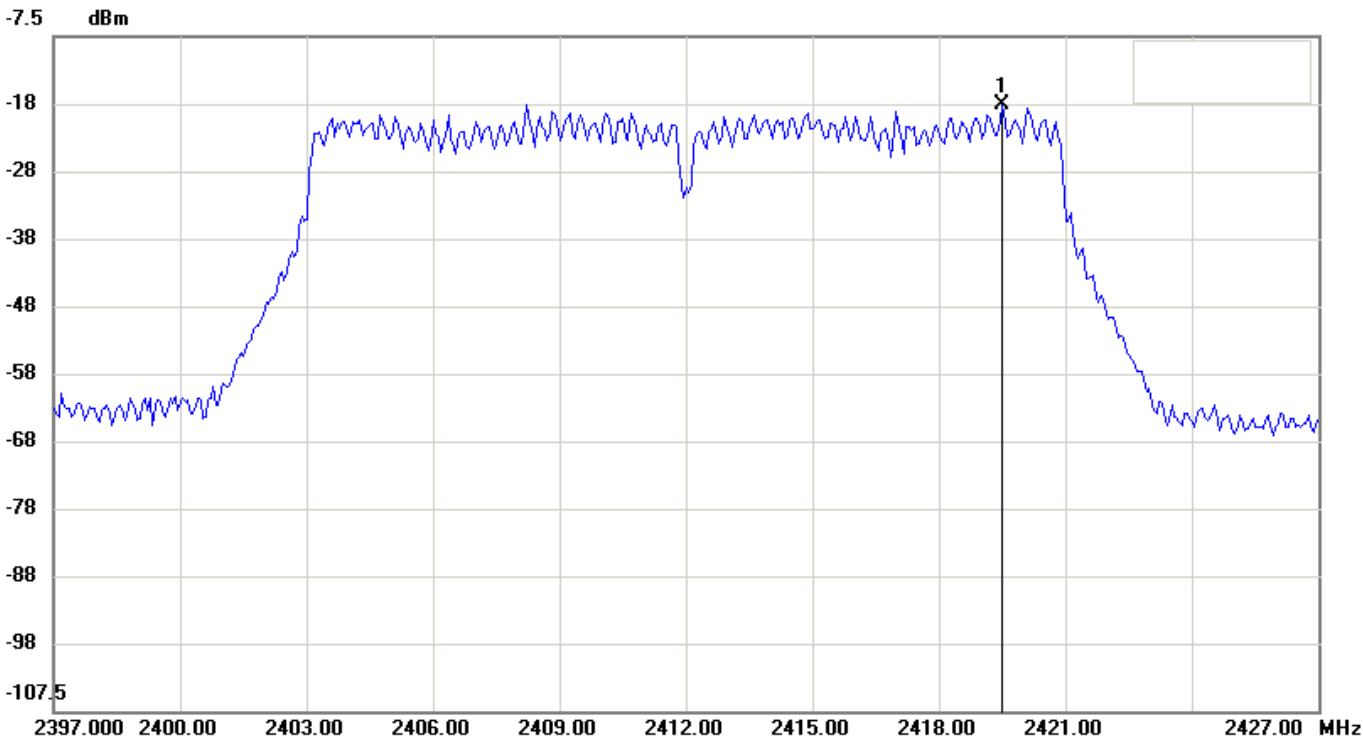
#3

Date: 2019/7/30

Temperature: 25 ℃

Time: 上午 11:59:13

Humidity: 63 %



Condition:

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT20 Channel 01-Power Density (PK)

RF Conducted

Sweep Time: 334ms

RBW: 3 KHz

Att.: 20dB

VBW: 10 KHz

No.	Frequency(MHz)	Level(dBm)
1	2419.50000	-17.63

File: 19-07-MAS-
008_n20_Ant2

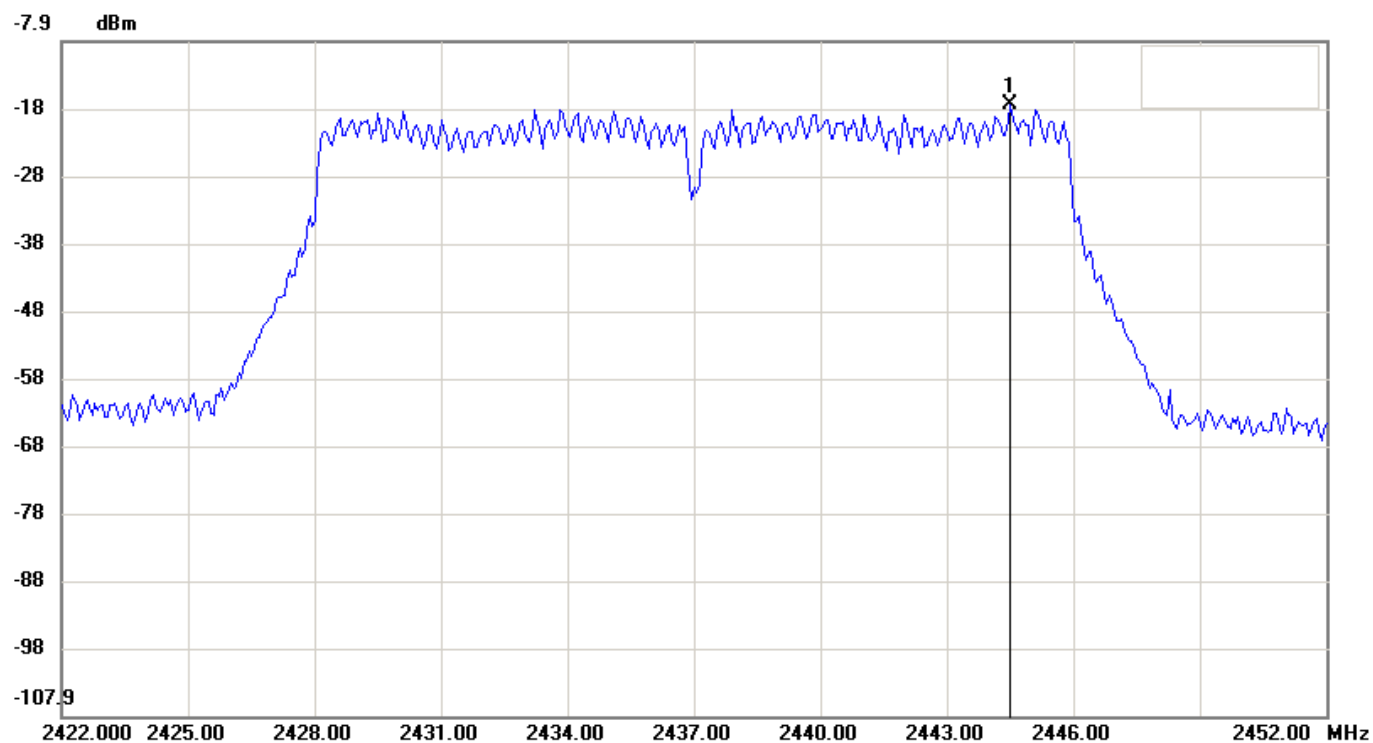
#7

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 12:07:06

Humidity: 63 %



Condition:

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT20 Channel 06-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

No.	Frequency(MHz)	Level(dBm)
1	2444.50000	-17.36

File: 19-07-MAS-
008_n20_Ant2

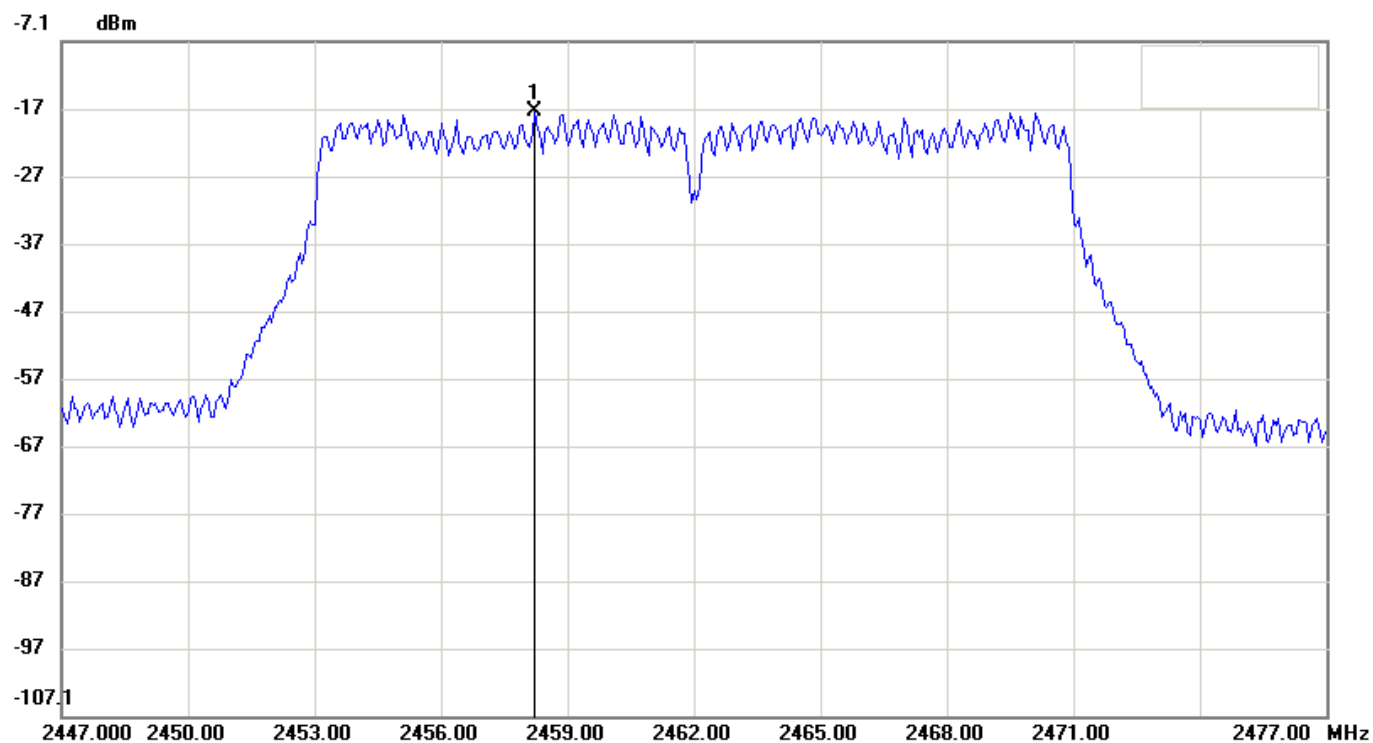
#10

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 12:13:07

Humidity: 63 %



Condition:

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT20 Channel 11-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

No.	Frequency(MHz)	Level(dBm)
1	2458.22000	-17.48

8.4.3.3 CHAIN 1 + CHAIN 2

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

Total power density calculation formula:

$$10 \log (10^{(\text{CHAIN 1 PPSD} / 10)} + 10^{(\text{CHAIN 2 PPSD} / 10)})$$

天線增益最大值為 1.24 dBi，NCC Limit 如下表所示：

Channel	Peak Power Spectral Density (dBm)		Total Peak Power Spectral Density (dBm)	NCC Limit (dBm)	Chart
	CHAIN 1	CHAIN 2			
L	-16.49	-17.63	-14.01	8	-
M	-17.93	-17.36	-14.63	8	-
H	-17.83	-17.48	-14.64	8	-

註：1. If antenna gain $\leq$ 6dBi, NCC Limit = 8 dBm2. If antenna gain $>$ 6dBi, NCC Limit = 8dBm – (highest antenna gain – 6 dBi)3. 量測不準確度: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

8.4.4 調變技術: IEEE 802.11n HT40

8.4.4.1 CHAIN 1

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

天線增益最大值為 -1.77 dBi, NCC Limit 如下表所示:

Channel	Peak Power Spectral Density (dBm)	NCC Limit (dBm)	Chart
L	-19.65	8	Page 75
M	-19.83	8	Page 76
H	-19.57	8	Page 77

註: 1. 繪圖資料請參考第 75-77 頁。

2. If antenna gain $\leq$ 6dBi, NCC Limit = 8 dBm

3. If antenna gain > 6dBi, NCC Limit = 8dBm – (highest antenna gain – 6 dBi)

4. 量測不準確度: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

File: 19-07-MAS-
008_n40_Ant1

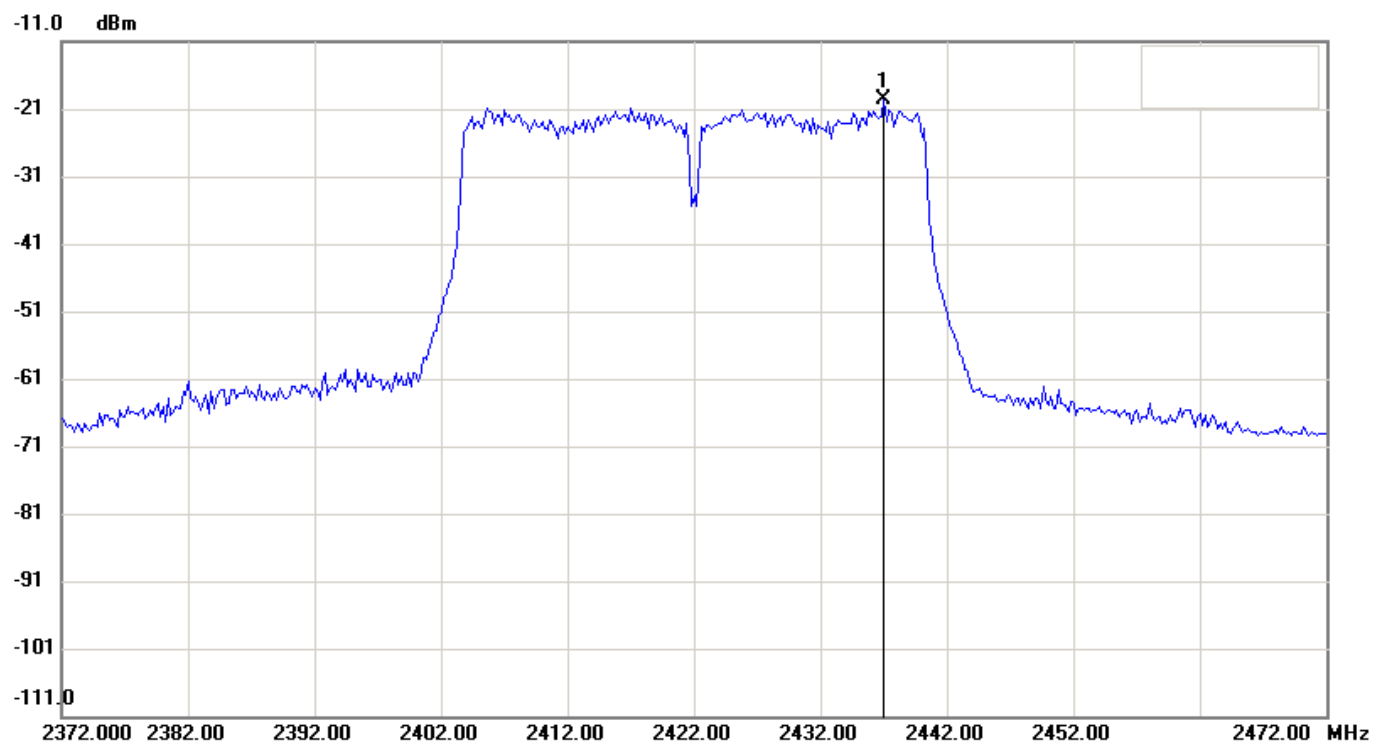
#3

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 01:52:05

Humidity: 63 %



Condition:

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant1

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 03-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

No.	Frequency(MHz)	Level(dBm)
1	2437.00000	-19.65

File: 19-07-MAS-
008_n40_Ant1

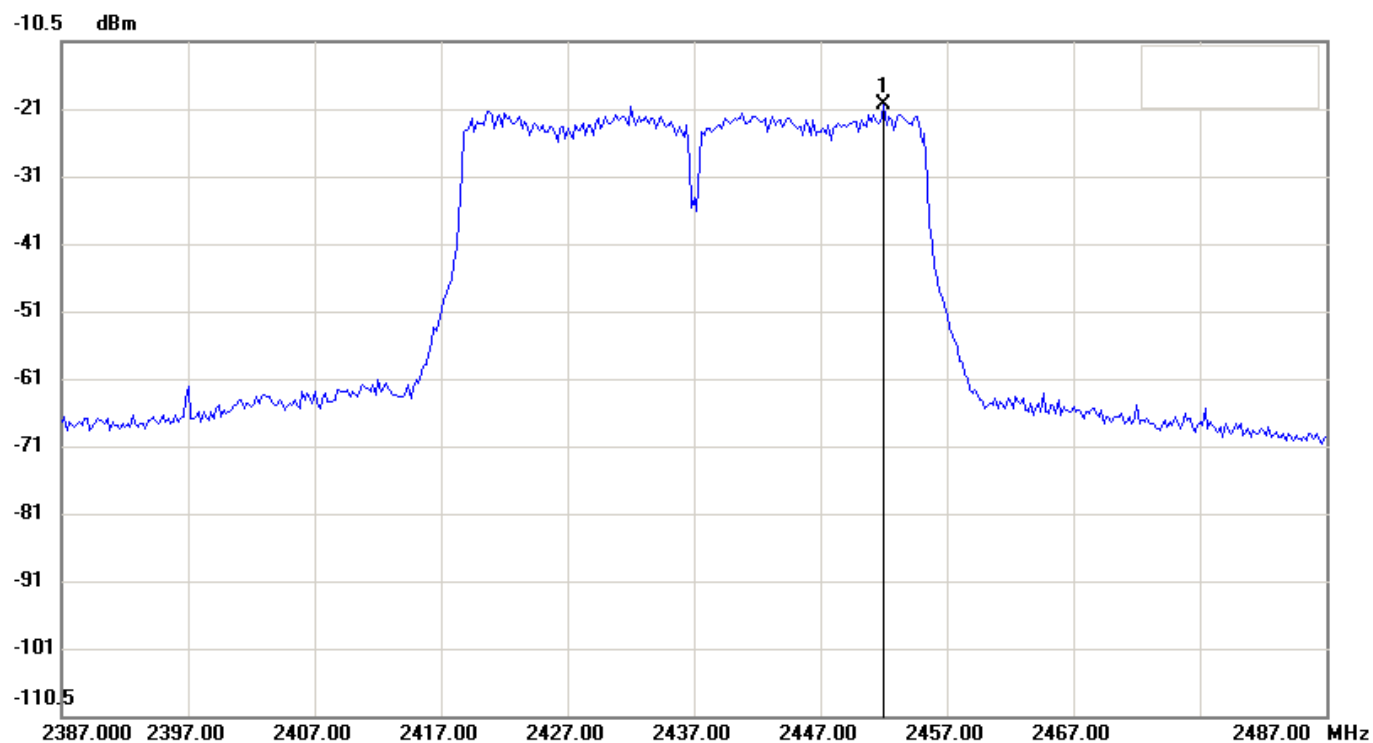
#7

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 01:59:59

Humidity: 63 %

**Condition:**

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant1

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 06-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

No.	Frequency(MHz)	Level(dBm)
1	2452.00000	-19.83

File: 19-07-MAS-
008_n40_Ant1

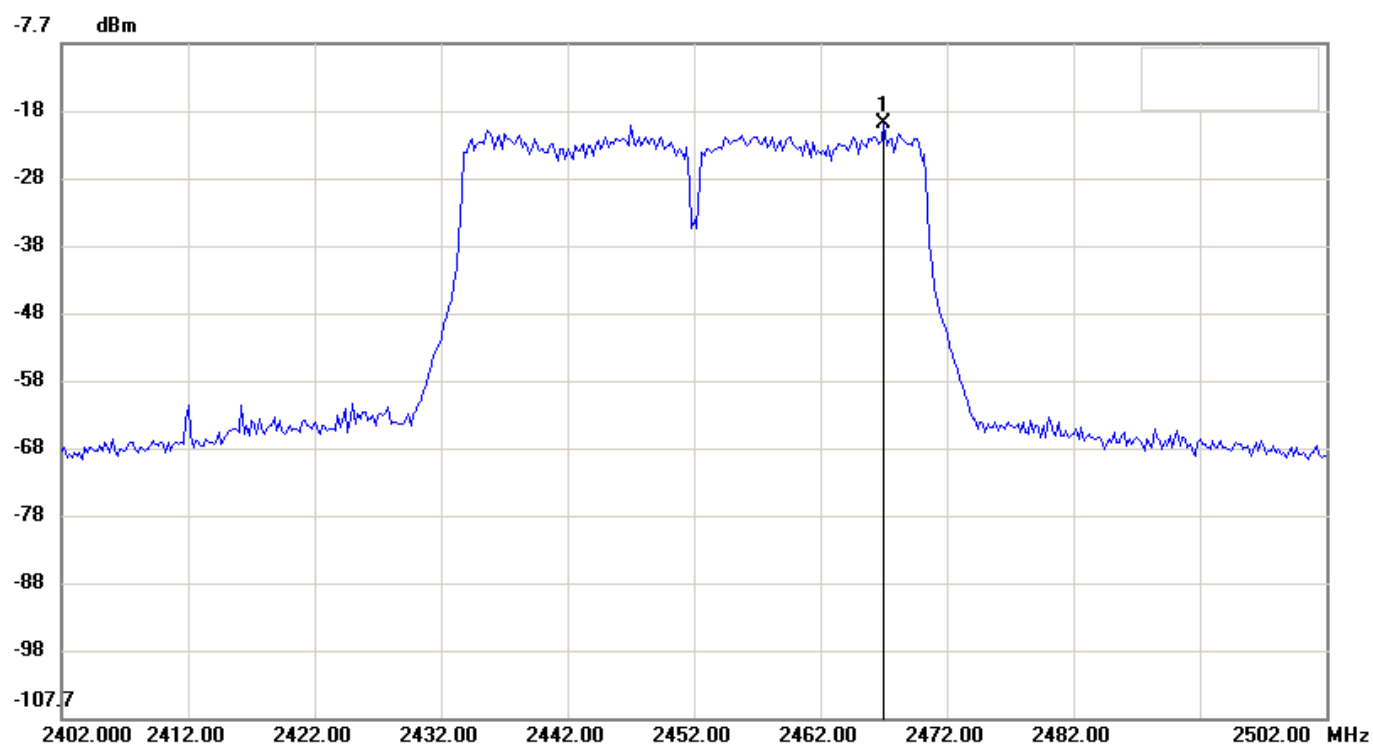
#10

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 02:07:50

Humidity: 63 %



Condition:

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant1

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 11-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

No.	Frequency(MHz)	Level(dBm)
1	2467.00000	-19.57

8.4.4.2 CHAIN 2

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

天線增益最大值為 -3.92 dBi，NCC Limit 如下表所示：

Channel	Peak Power Spectral Density (dBm)	NCC Limit (dBm)	Chart
L	-19.34	8	Page 79
M	-19.32	8	Page 80
H	-19.21	8	Page 81

註：1. 繪圖資料請參考第 79-81 頁。

2. If antenna gain $\leq$ 6dBi, NCC Limit = 8 dBm3. If antenna gain $>$ 6dBi, NCC Limit = 8dBm – (highest antenna gain – 6 dBi)4. 量測不準確度: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

File: 19-07-MAS-008_n40_Ant2

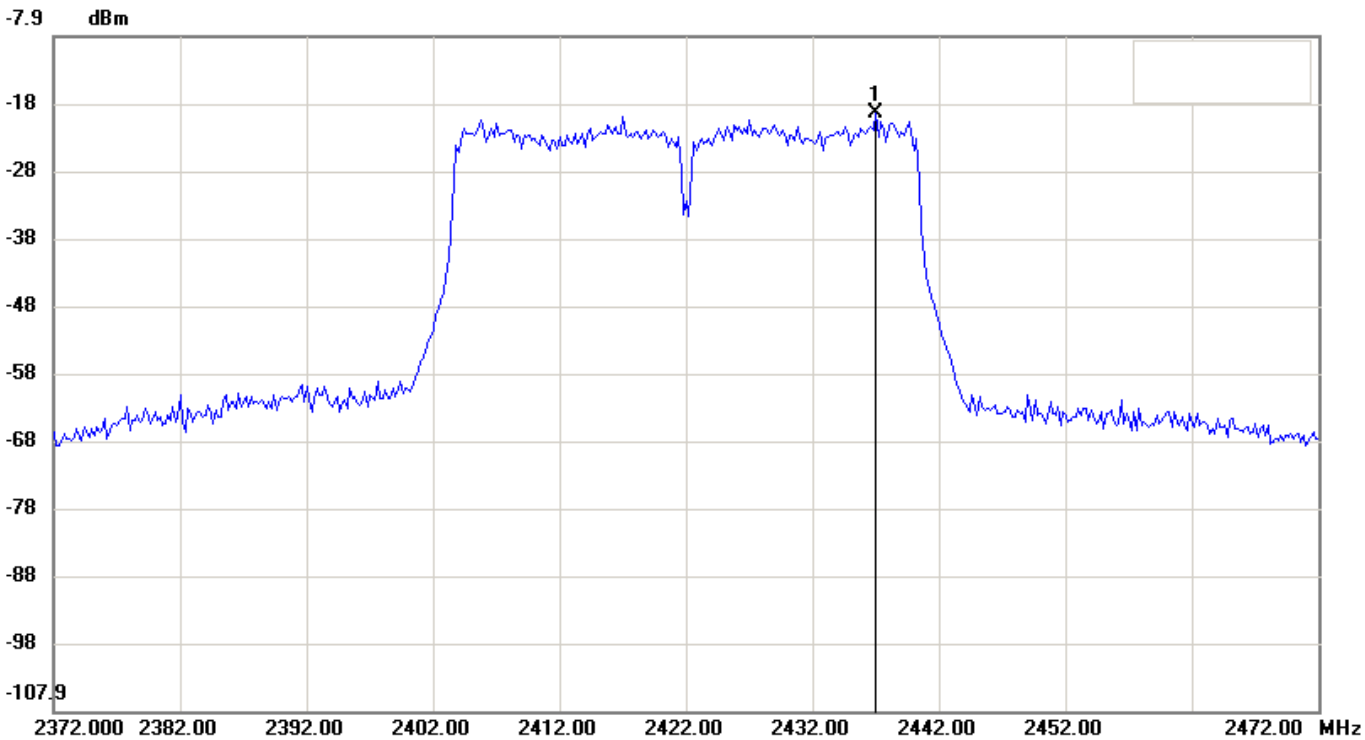
#3

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 01:14:13

Humidity: 63 %



Condition:

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 03-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

No.	Frequency(MHz)	Level(dBm)
1	2437.00000	-19.34

File: 19-07-MAS-
008_n40_Ant2

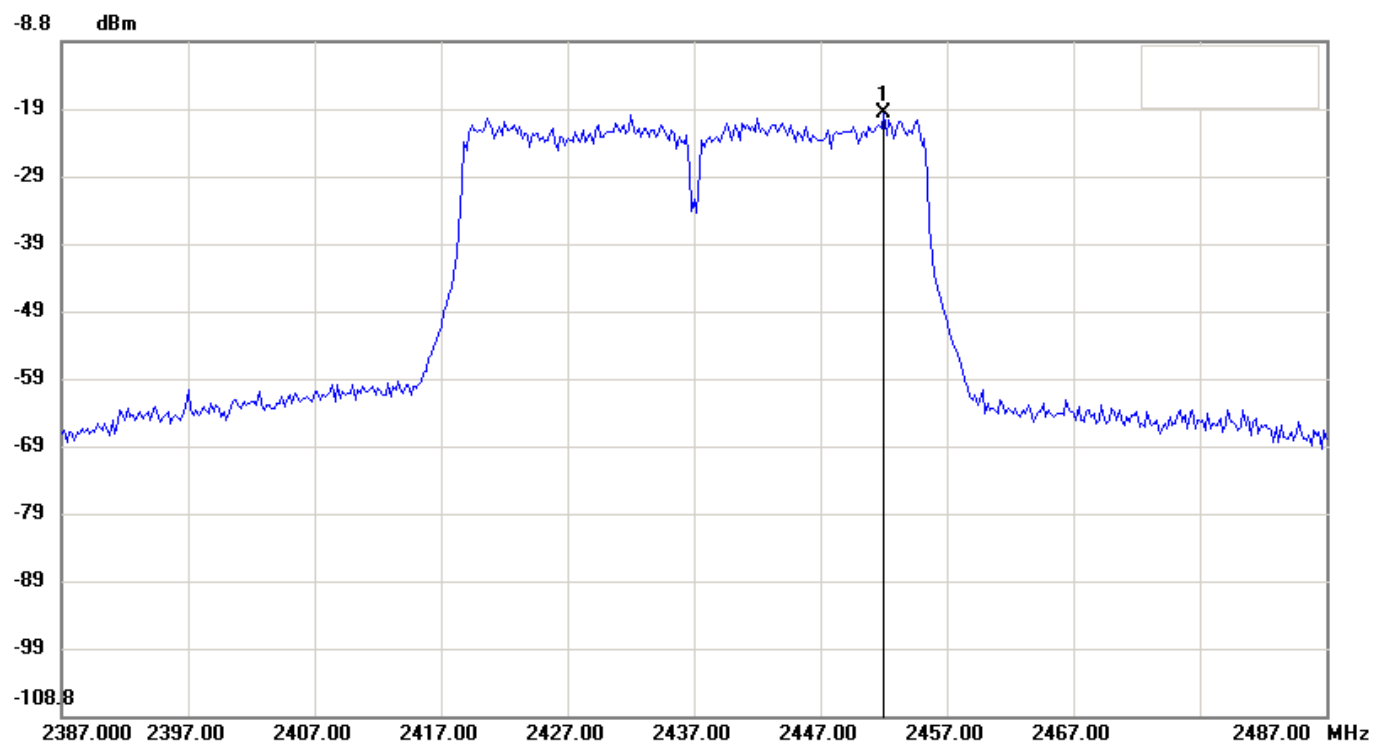
#7

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 01:20:16

Humidity: 63 %



Condition:

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 06-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

No.	Frequency(MHz)	Level(dBm)
1	2452.00000	-19.32

File: 19-07-MAS-
008_n40_Ant2

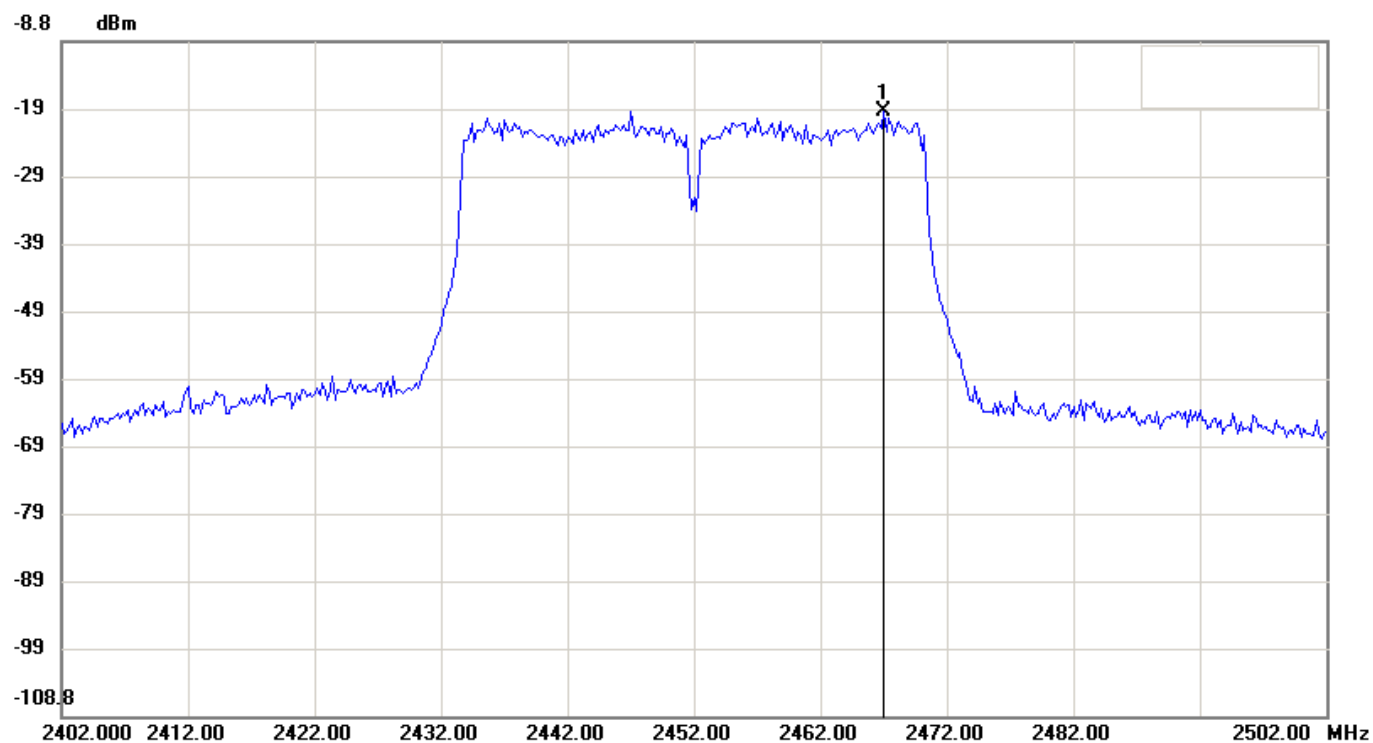
#10

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 01:29:55

Humidity: 63 %



Condition:

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 11-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

No.	Frequency(MHz)	Level(dBm)
1	2467.00000	-19.21

8.4.4.3 CHAIN 1 + CHAIN 2

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

Total power density calculation formula:

$$10 \log (10^{(\text{CHAIN 1 PPSD} / 10)} + 10^{(\text{CHAIN 2 PPSD} / 10)})$$

天線增益最大值為 1.24 dBi，NCC Limit 如下表所示：

Channel	Peak Power Spectral Density (dBm)		Total Peak Power Spectral Density (dBm)	NCC Limit (dBm)
	CHAIN 1	CHAIN 2		
L	-19.65	-19.34	-16.48	8
M	-19.83	-19.32	-16.56	8
H	-19.57	-19.21	-16.38	8

註：1. If antenna gain $\leq$ 6dBi, NCC Limit = 8 dBm

2. If antenna gain > 6dBi, NCC Limit = 8dBm – (highest antenna gain – 6 dBi)

3. 量測不準確度: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

8.5 結果判定

高、中、低頻段的3kHz功率密度皆低於限制值，合乎標準規定。

9 混附波發射限制之量測

9.1 適用標準

依據國家通訊傳播委員會低功率射頻電機技術規範3.10.1.5之規定，操作頻帶範圍外之任意100 kHz內，發射機所產生的射頻功率相較於使用頻帶範圍中包含最高所需功率之100 kHz內的射頻功率，其衰減值限制如下：

- (1) 輸出功率以附件二之峰值輸出功率方式測量者，至少須衰減20 dB，可使用射頻傳導或輻射方式測量。
- (2) 輸出功率以3.10.1.2(1)(C)之最大傳導輸出功率測量方式者，至少須衰減30 dB。

此外，落於國家通訊傳播委員會低功率射頻電機技術規範第2.7節禁用頻段之輻射發射，應符合國家通訊傳播委員會低功率射頻電機技術規範第2.8節之規定。

9.2 混附波發射限制之測試配置

如圖2 所示。

9.3 量測混附波發射限制之儀器

儀器名稱	製造者	型 號
Spectrum Analyzer	Agilent	E4446A
Attenuator	WEINSCHEL	56-10

測試軟體: LZ-RF (Ver. ETC-3A2)

9.4 混附波發射限制之量測結果 (傳導方式量測)

測試工程師: 羅世勇

9.4.1 調變技術: IEEE 802.11b

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

- a. 下邊緣頻帶：距下頻帶邊緣40MHz內最大混附波產生於 2400.000 MHz，比主波低 20dB以上，合乎標準規定。
- b. 上邊緣頻帶：距上頻帶邊緣40MHz內最大混附波產生於 2484.040 MHz，比主波低 20dB以上，合乎標準規定。

註：1. 繪圖資料請參考第 84-88 頁。

2. 量測不準確度: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

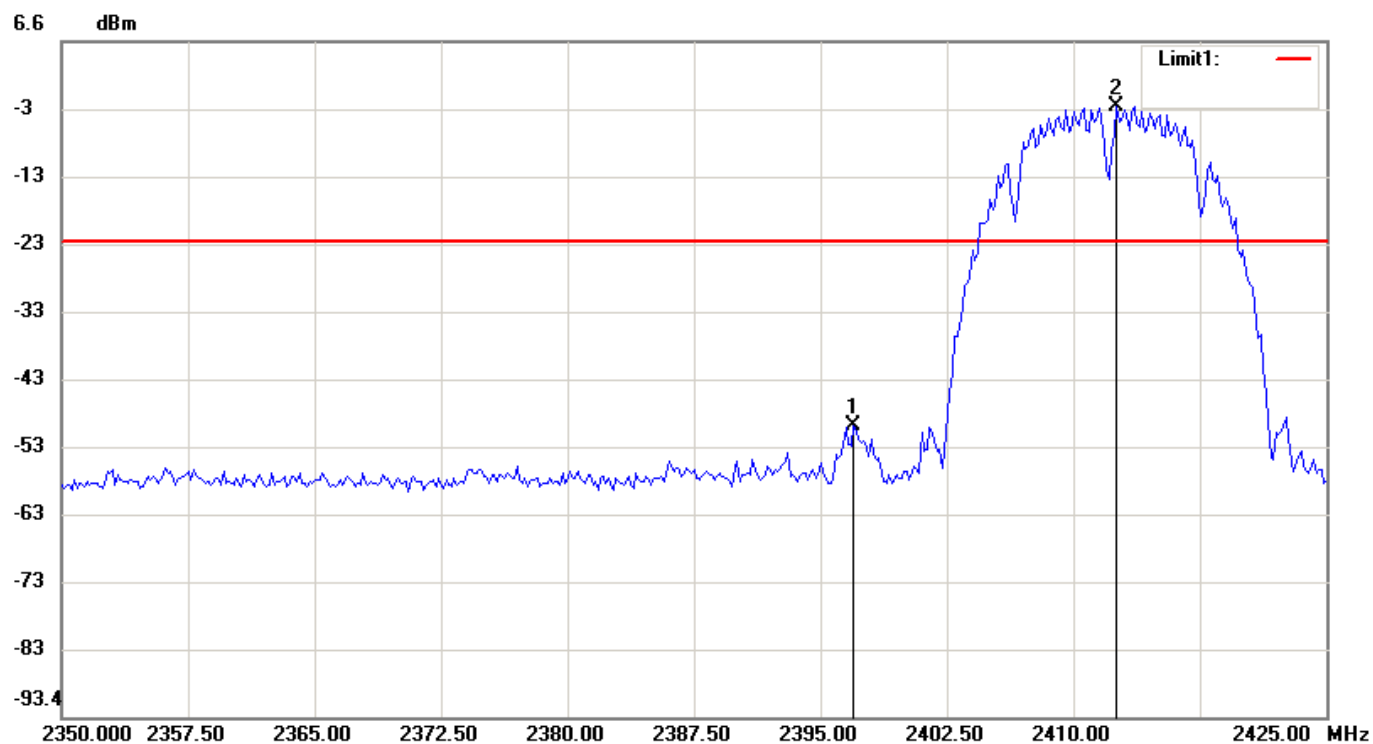
File: 19-07-MAS-008_b_Ant2 #4

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 11:00:15

Humidity: 63 %



Condition: -22.99dBm
 EUT: Wireless File Transmitter
 Model: DS586194
 Test Mode: TX_Ant2
 Note: Operator: Phillip
 NCC_LP0002_802.11b Channel 01-Bandedge

RF Conducted
 Sweep Time: 500ms Att.: 20dB
 RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	2396.95000	-50.24
2	2412.55000	-2.99

File: 19-07-MAS-
008_b_Ant2

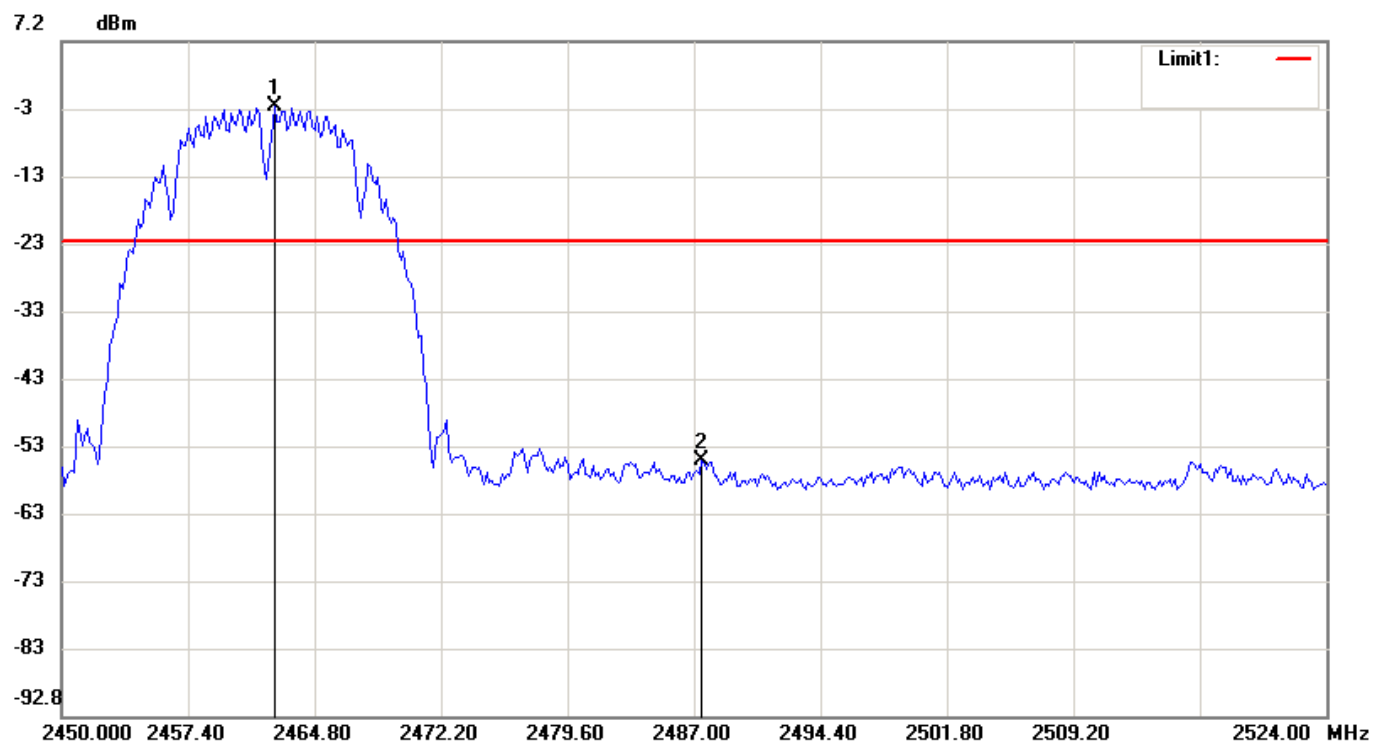
#11

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 11:16:32

Humidity: 63 %



Condition: -22.5dBm
 EUT: Wireless File Transmitter
 Model: DS586194
 Test Mode: TX_Ant2
 Note: Operator: Phillip
 NCC_LP0002_802.11b Channel 11-Bandedge

RF Conducted
 Sweep Time: 500ms Att.: 20dB
 RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	2462.43200	-2.50
2	2487.44400	-55.00

File: 19-07-MAS-008_b_Ant2

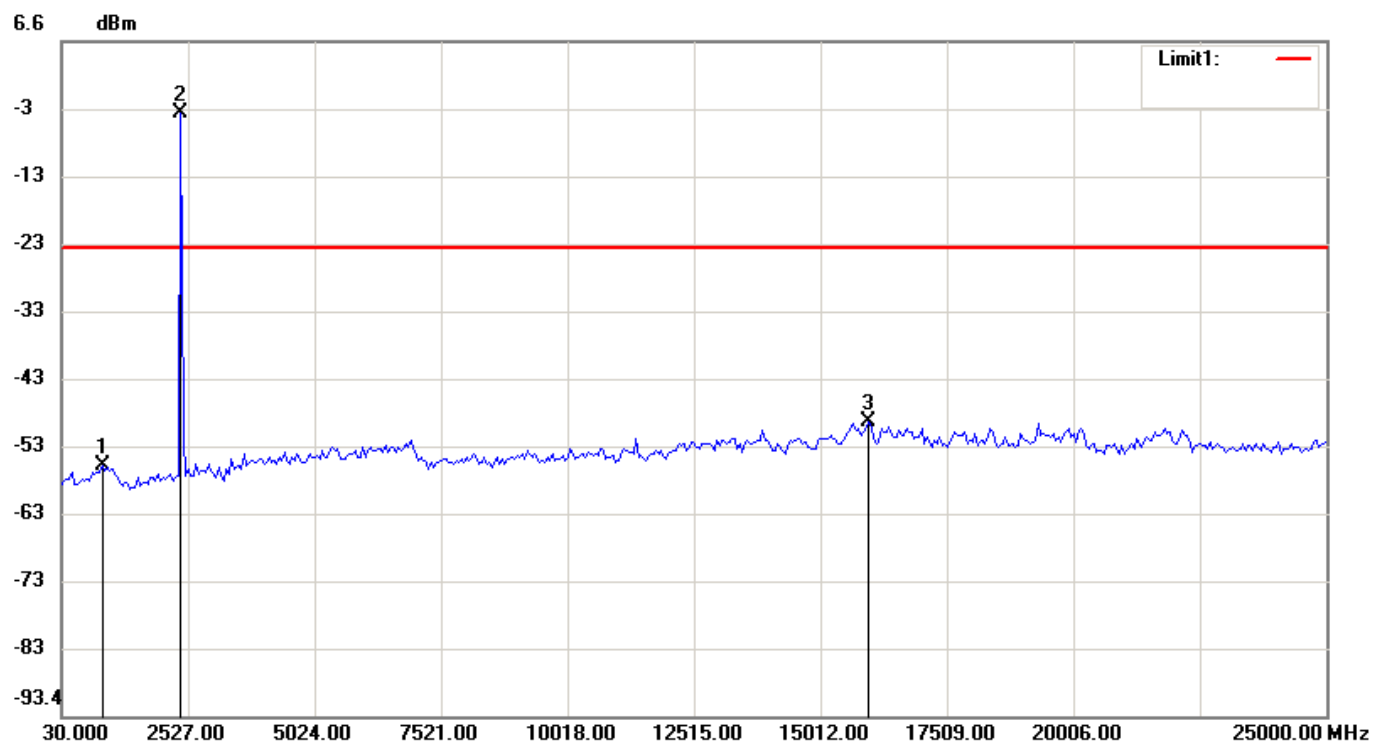
#2

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 10:56:47

Humidity: 63 %



Condition: -23.97dBm

RF Conducted

EUT: Wireless File Transmitter

Sweep Time: 250ms Att.: 20dB

Model: DS586194

RBW: 100 KHz VBW: 300 KHz

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11b Channel 01-Conducted Spurious

No.	Frequency(MHz)	Level(dBm)
1	829.0400	-56.37
2	2377.18000	-3.97
3	15960.86000	-49.85

File: 19-07-MAS-008_b_Ant2

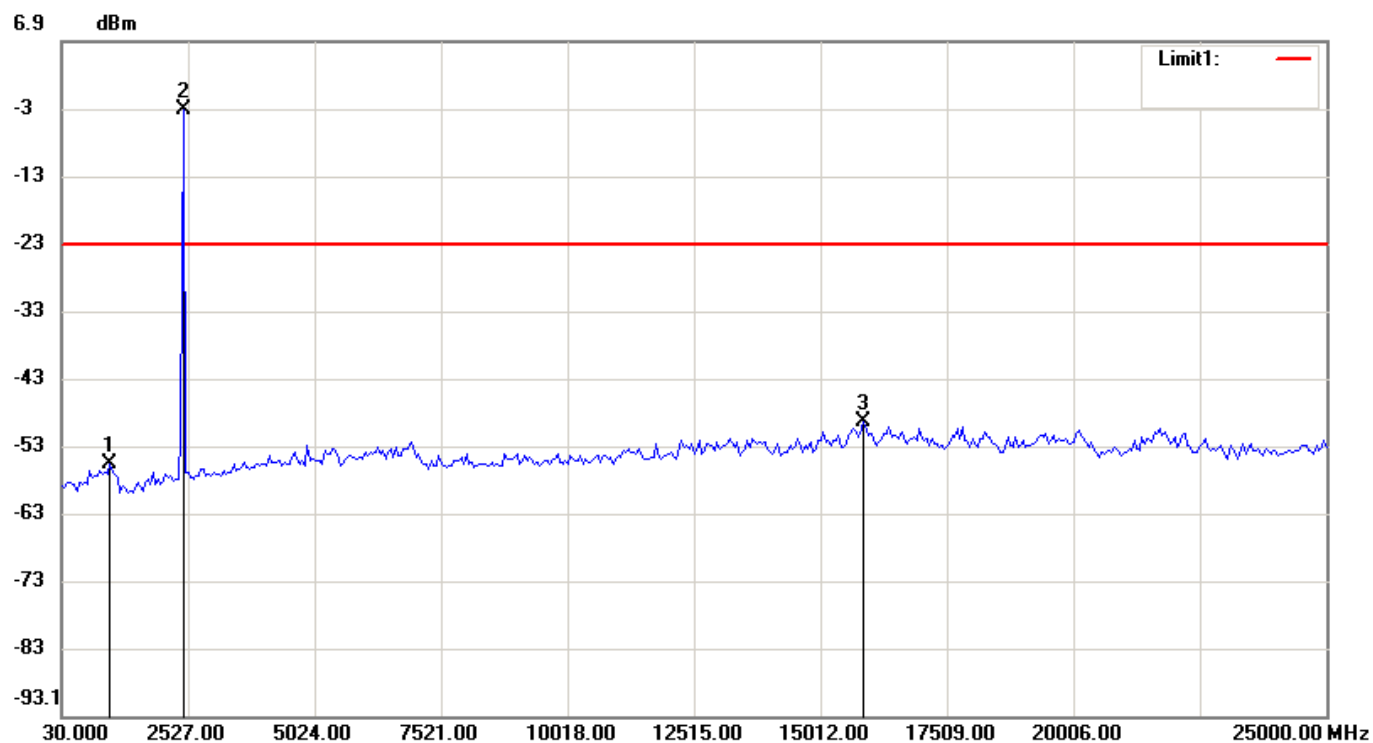
#6

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 11:02:46

Humidity: 63 %



Condition: -23.15dBm

RF Conducted

EUT: Wireless File Transmitter

Sweep Time: 250ms Att.: 20dB

Model: DS586194

RBW: 100 KHz VBW: 300 KHz

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11b Channel 06-Conducted Spurious

No.	Frequency(MHz)	Level(dBm)
1	978.8600	-55.78
2	2427.12000	-3.15
3	15860.98000	-49.52

File: 19-07-MAS-
008_b_Ant2

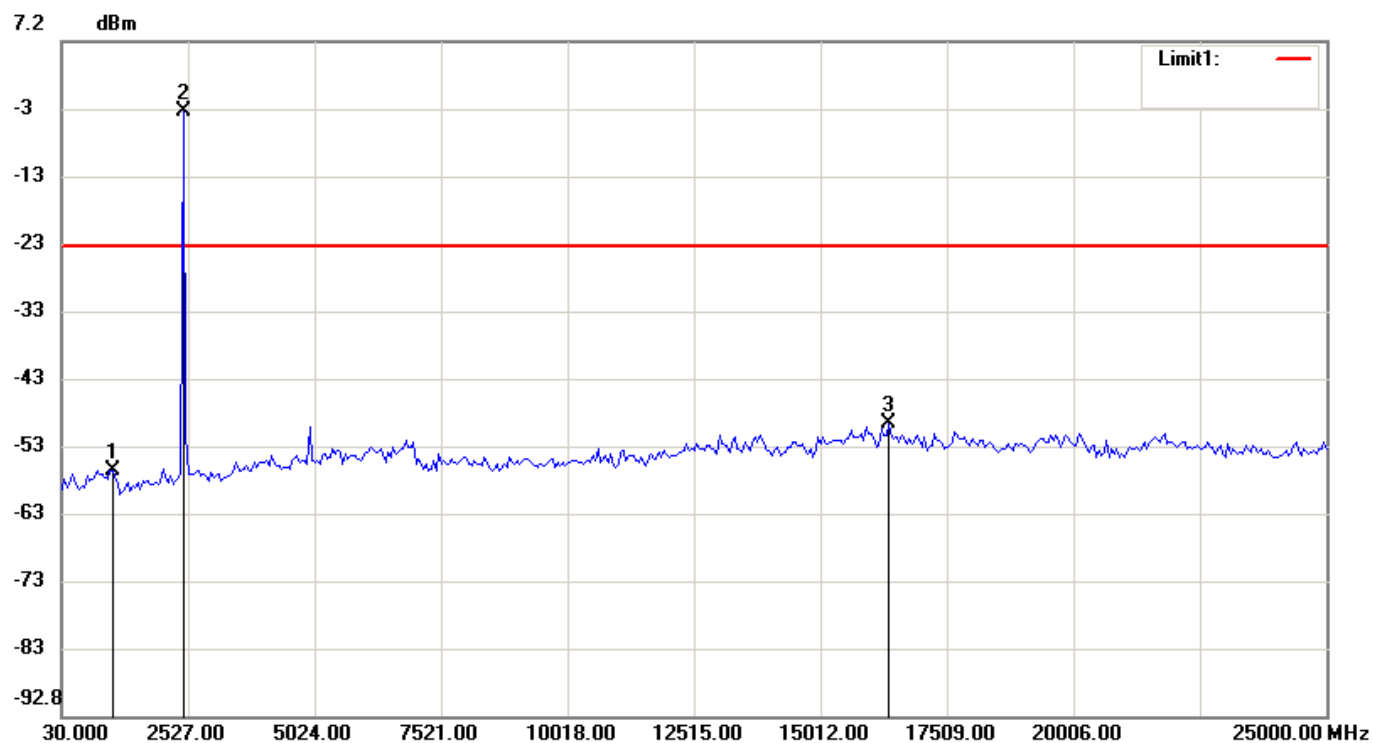
#9

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 11:13:05

Humidity: 63 %



Condition: -23.13dBm
EUT: Wireless File Transmitter
Model: DS586194
Test Mode: TX_Ant2
Note: Operator: Phillip

RF Conducted
Sweep Time: 250ms Att.: 20dB
RBW: 100 KHz VBW: 300 KHz

NCC_LP0002_802.11b Channel 11-Conducted Spurious

No.	Frequency(MHz)	Level(dBm)
1	1028.80000	-56.36
2	2427.12000	-3.13
3	16360.38000	-49.51

9.4.2 調變技術: IEEE 802.11g

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

- a. 下邊緣頻帶：距下頻帶邊緣40MHz內最大混附波產生於 2399.750 MHz，比主波低 20dB以上，合乎標準規定。
- b. 上邊緣頻帶：距上頻帶邊緣40MHz內最大混附波產生於 2501.9233 MHz，比主波低 20dB以上，合乎標準規定。

註：1. 繪圖資料請參考第 90-94 頁。

2. 量測不準確度: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

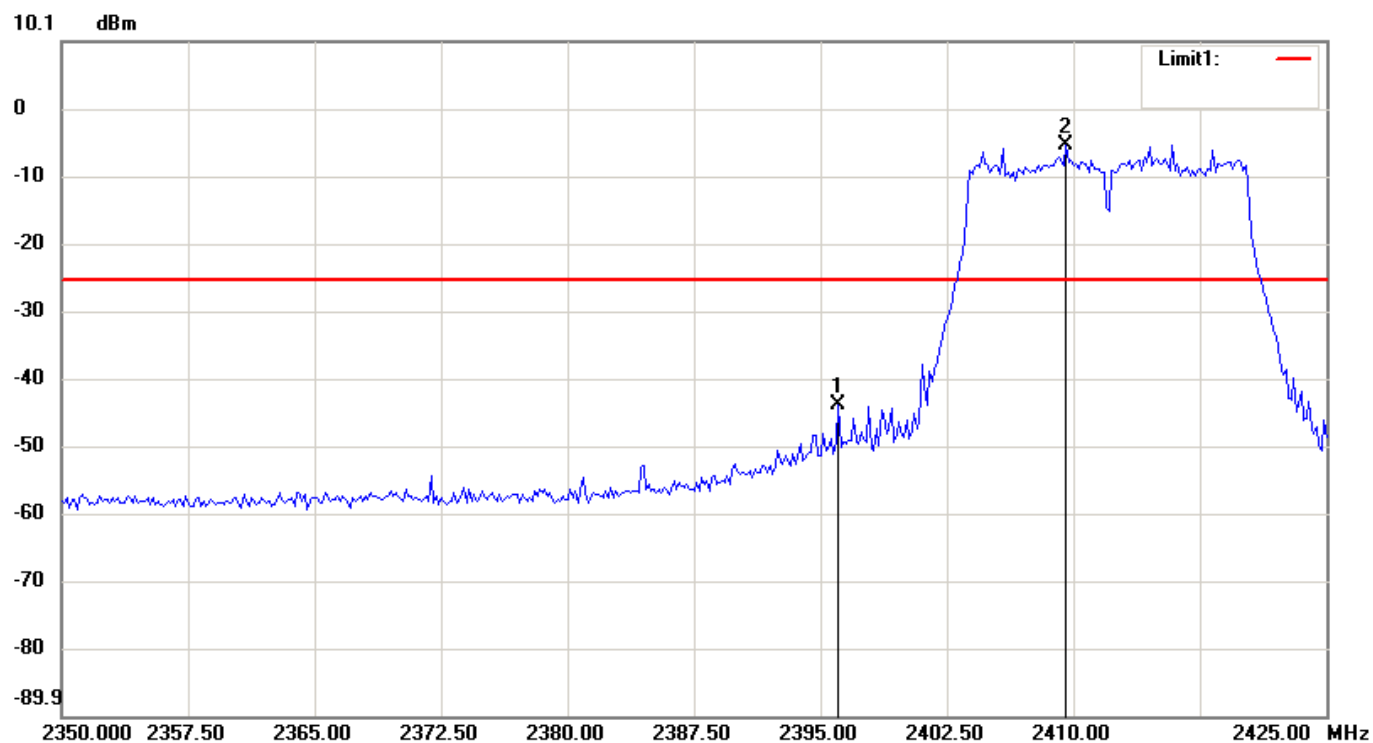
File: 19-07-MAS- #4
008_g_Ant2

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 11:33:53

Humidity: 63 %



Condition: -25.19dBm

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11g Channel 01-Bandedge

RF Conducted

Sweep Time: 500ms Att.: 20dB

RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	2396.05000	-43.75
2	2409.55000	-5.19

File: 19-07-MAS-008_g_Ant2

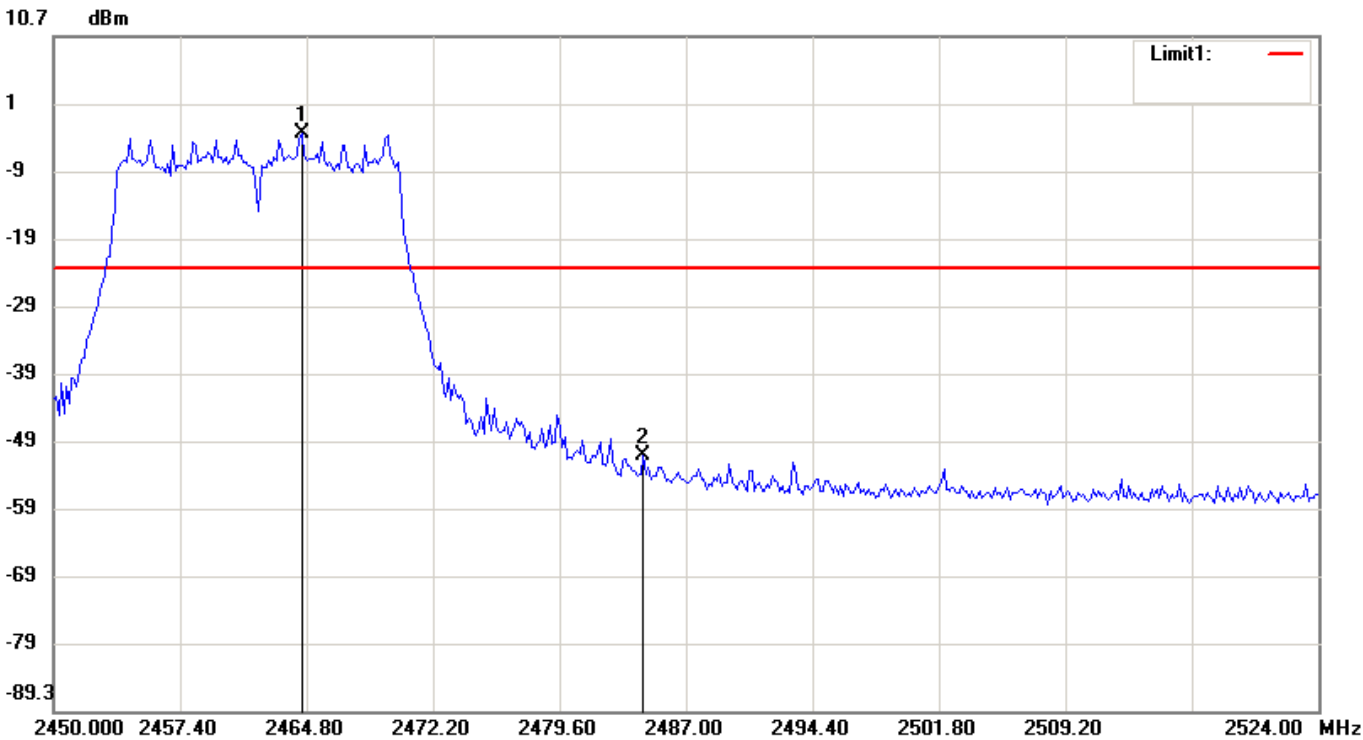
#11

Date: 2019/7/30

Temperature: 25 ℃

Time: 上午 11:44:59

Humidity: 63 %



Condition: -23.81dBm

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11g Channel 11-Bandedge

RF Conducted

Sweep Time: 500ms Att.: 20dB

RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	2464.50400	-3.81
2	2484.48400	-51.48

File: 19-07-MAS-
008_g_Ant2

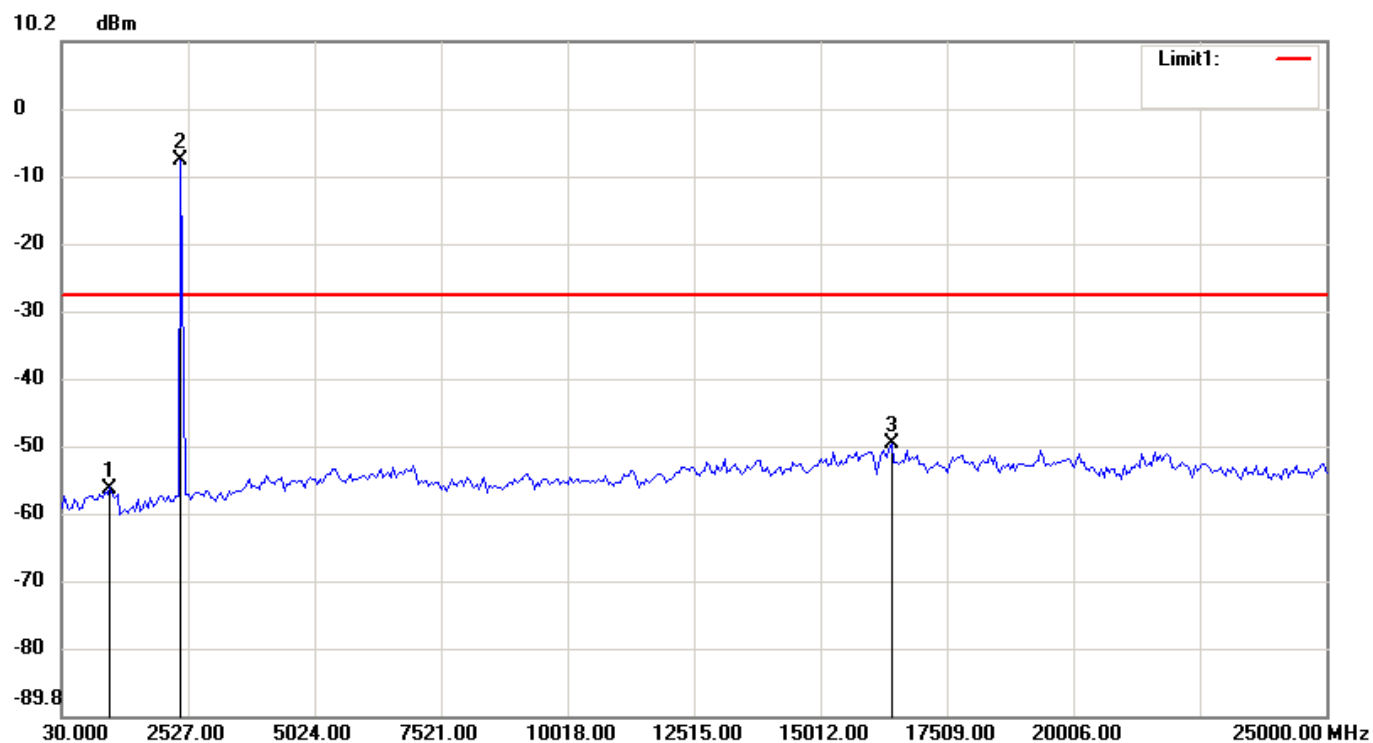
#2

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 11:30:23

Humidity: 63 %



Condition: -27.46dBm

RF Conducted

EUT: Wireless File Transmitter

Sweep Time: 250ms Att.: 20dB

Model: DS586194

RBW: 100 KHz VBW: 300 KHz

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11g Channel 01-Conducted Spurious

No.	Frequency(MHz)	Level(dBm)
1	978.8600	-56.07
2	2377.18000	-7.46
3	16410.32000	-49.42

File: 19-07-MAS-
008_g_Ant2

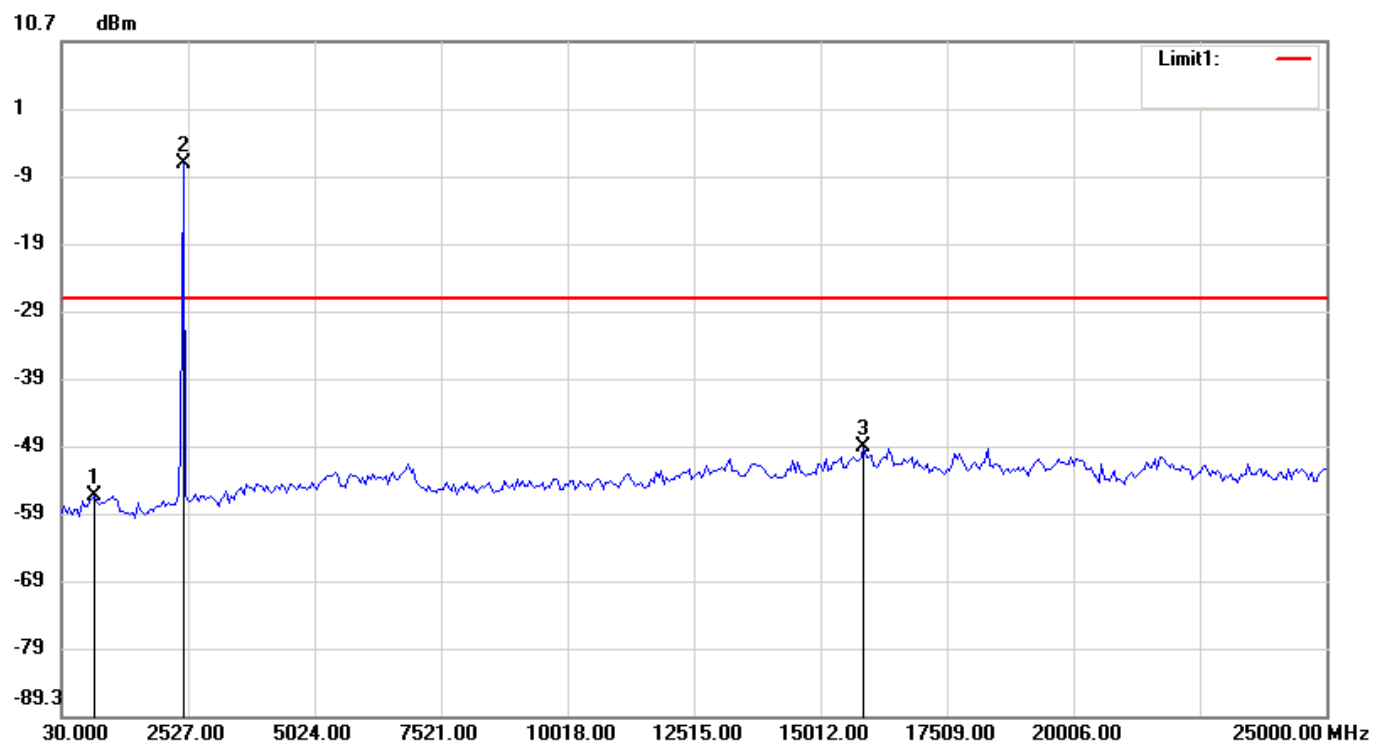
#6

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 11:36:23

Humidity: 63 %



Condition: -27.53dBm
EUT: Wireless File Transmitter
Model: DS586194
Test Mode: TX_Ant2
Note: Operator: Phillip

RF Conducted
Sweep Time: 250ms Att.: 20dB
RBW: 100 KHz VBW: 300 KHz

NCC_LP0002_802.11g Channel 06-Conducted Spurious

No.	Frequency(MHz)	Level(dBm)
1	679.2200	-56.59
2	2427.12000	-7.53
3	15860.98000	-49.45

File: 19-07-MAS-008_g_Ant2

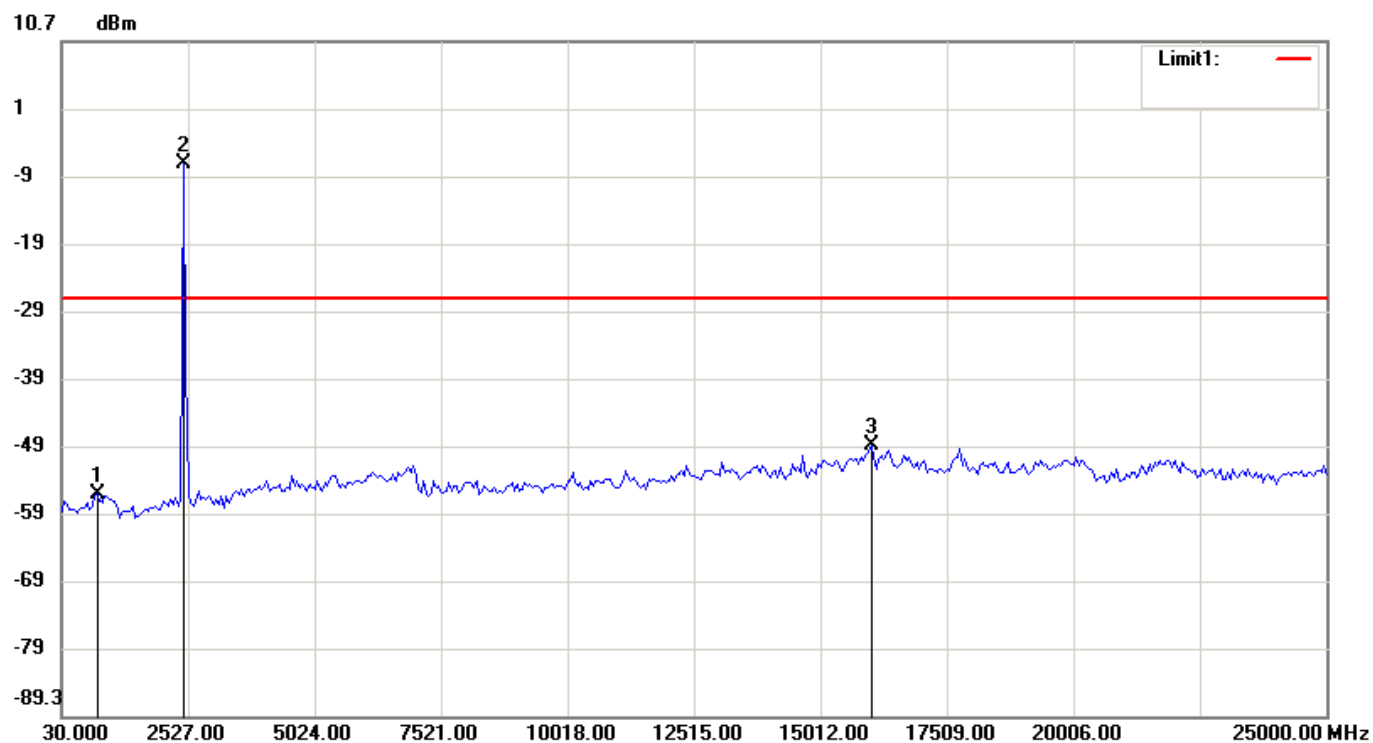
#9

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 11:41:32

Humidity: 63 %



Condition: -27.45dBm
 EUT: Wireless File Transmitter
 Model: DS586194
 Test Mode: TX_Ant2
 Note: Operator: Phillip

RF Conducted
 Sweep Time: 250ms Att.: 20dB
 RBW: 100 KHz VBW: 300 KHz

NCC_LP0002_802.11g Channel 11-Conducted Spurious

No.	Frequency(MHz)	Level(dBm)
1	729.1600	-56.52
2	2427.12000	-7.45
3	16010.80000	-49.23

9.4.3 調變技術: IEEE 802.11n HT20

9.4.3.1 CHAIN 1

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

- a. 下邊緣頻帶：距下頻帶邊緣40MHz內最大混附波產生於 2399.875 MHz，比主波低 20dB以上，合乎標準規定。
- b. 上邊緣頻帶：距上頻帶邊緣40MHz內最大混附波產生於 2483.5467 MHz，比主波低 20dB以上，合乎標準規定。

註：1. 繪圖資料請參考第 96-100 頁。

2. 量測不準確度: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

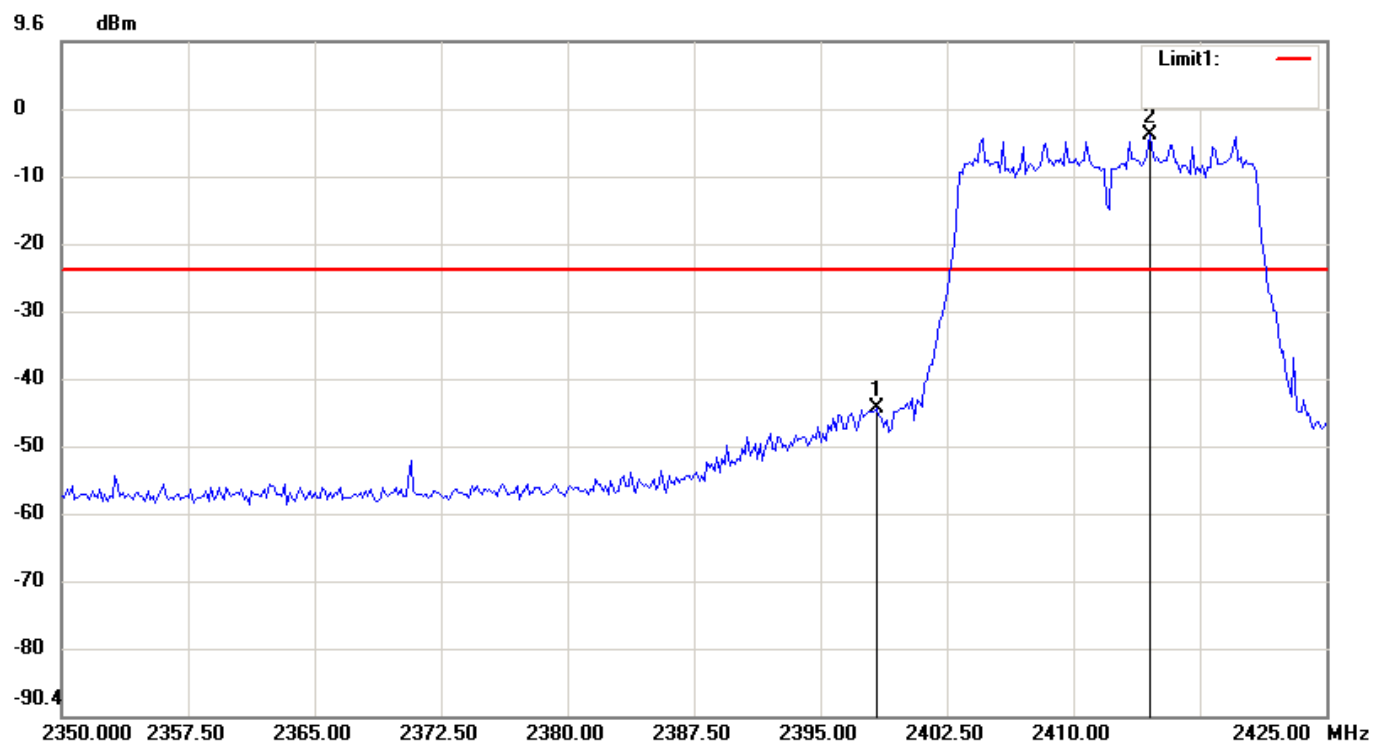
File: 19-07-MAS- #4
008_n20_Ant1

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 02:20:32

Humidity: 63 %



Condition: -24.4dBm
EUT: Wireless File Transmitter
Model: DS586194
Test Mode: TX_Ant1
Note: Operator: Phillip
NCC_LP0002_802.11gn-HT20 Channel 01-Bandedge

RF Conducted
Sweep Time: 500ms Att.: 20dB
RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	2398.30000	-44.73
2	2414.50000	-4.40

File: 19-07-MAS-
008_n20_Ant1

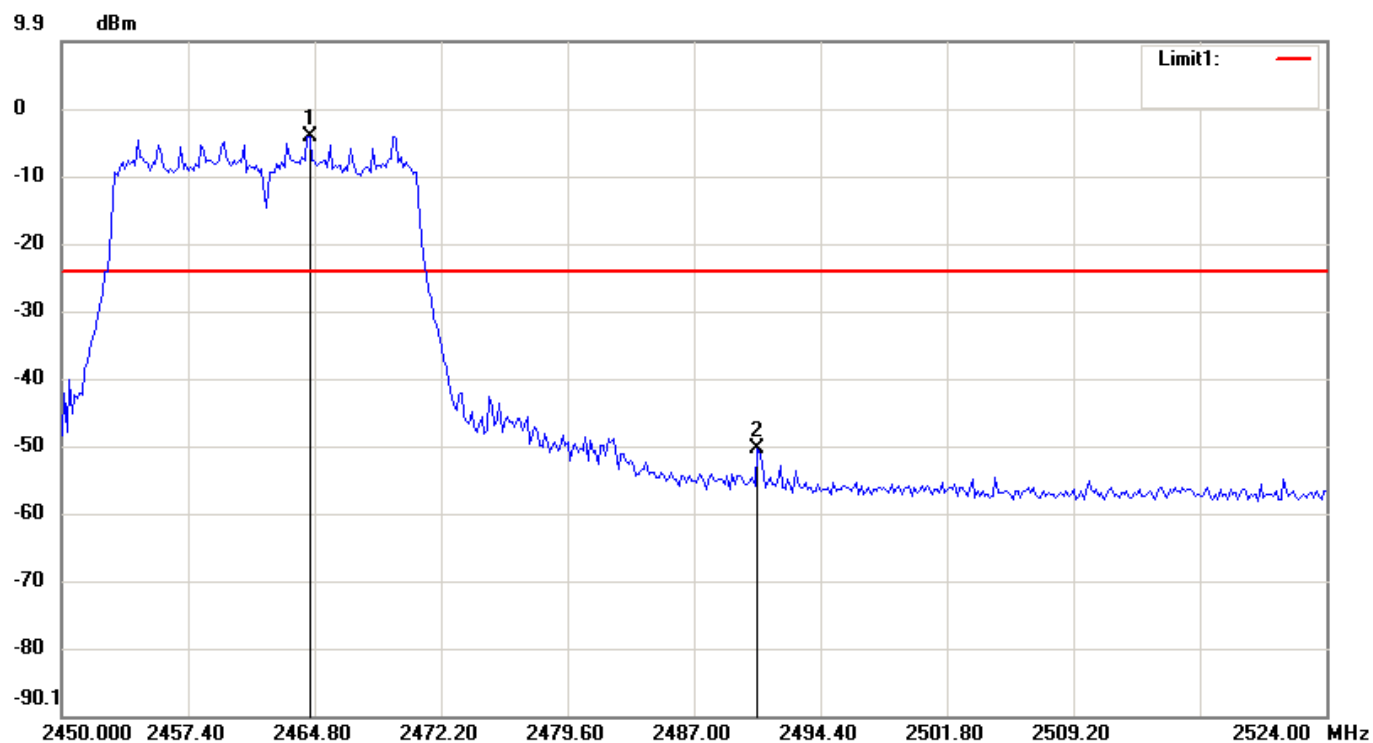
#11

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 02:37:03

Humidity: 63 %



Condition: -24.25dBm

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant1

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT20 Channel 11-Bandedge

RF Conducted

Sweep Time: 500ms Att.: 20dB

RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	2464.50400	-4.25
2	2490.70000	-50.50

File: 19-07-MAS-
008_n20_Ant1

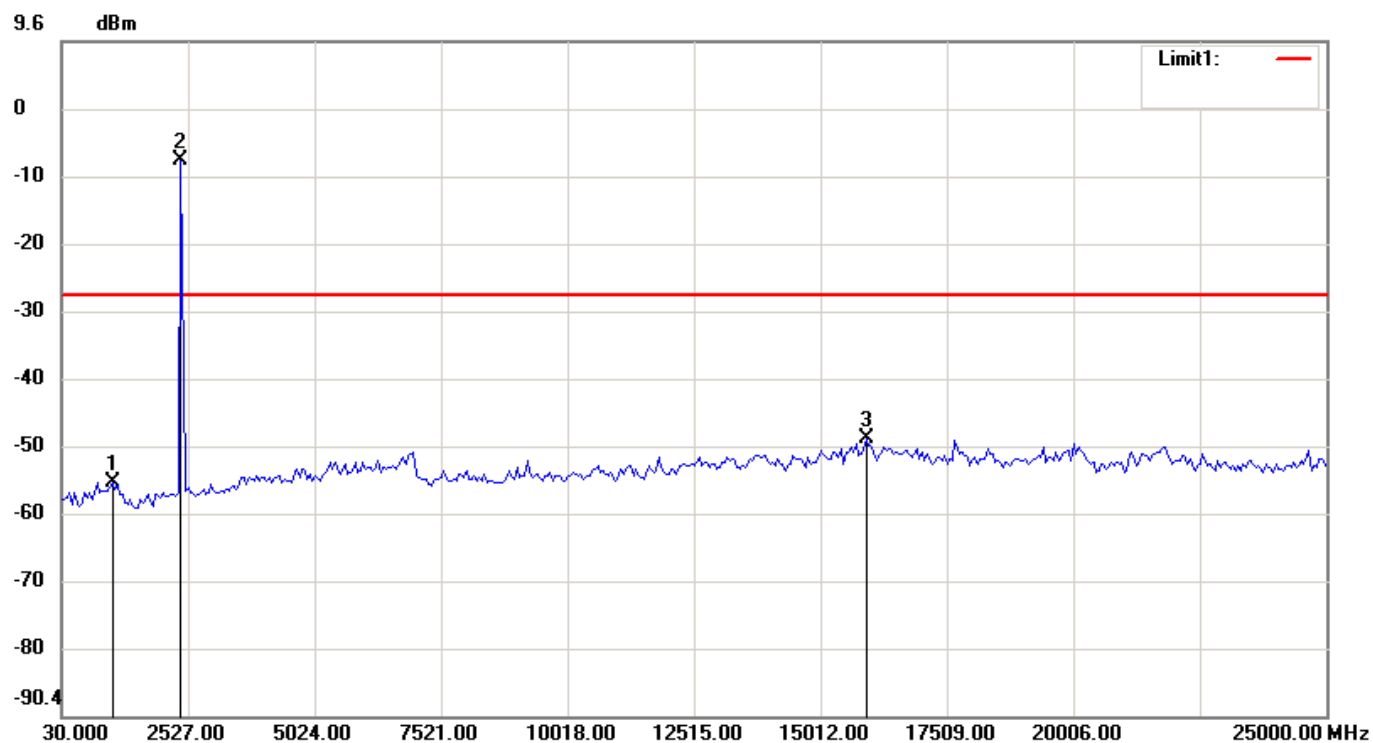
#2

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 02:17:03

Humidity: 63 %



Condition: -27.91dBm
EUT: Wireless File Transmitter
Model: DS586194
Test Mode: TX_Ant1
Note: Operator: Phillip

RF Conducted
Sweep Time: 250ms Att.: 20dB
RBW: 100 KHz VBW: 300 KHz

NCC_LP0002_802.11gn-HT20 Channel 01-Conducted Spurious

No.	Frequency(MHz)	Level(dBm)
1	1028.80000	-55.61
2	2377.18000	-7.91
3	15910.92000	-49.19

File: 19-07-MAS-
008_n20_Ant1

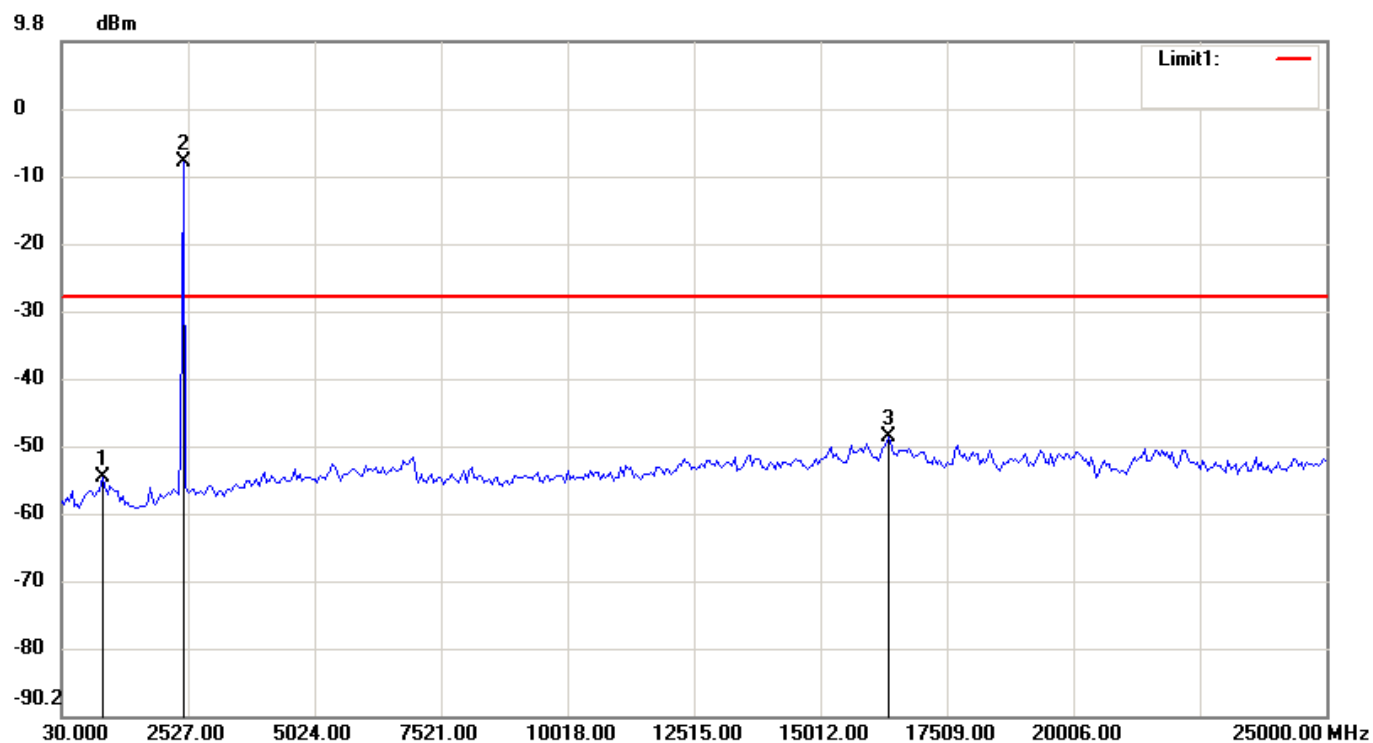
#6

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 02:28:37

Humidity: 63 %



Condition: -27.92dBm

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant1

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT20 Channel 06-Conducted Spurious

RF Conducted

Sweep Time: 250ms Att.: 20dB

RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	829.0400	-54.77
2	2427.12000	-7.92
3	16360.38000	-48.86

File: 19-07-MAS-
008_n20_Ant1

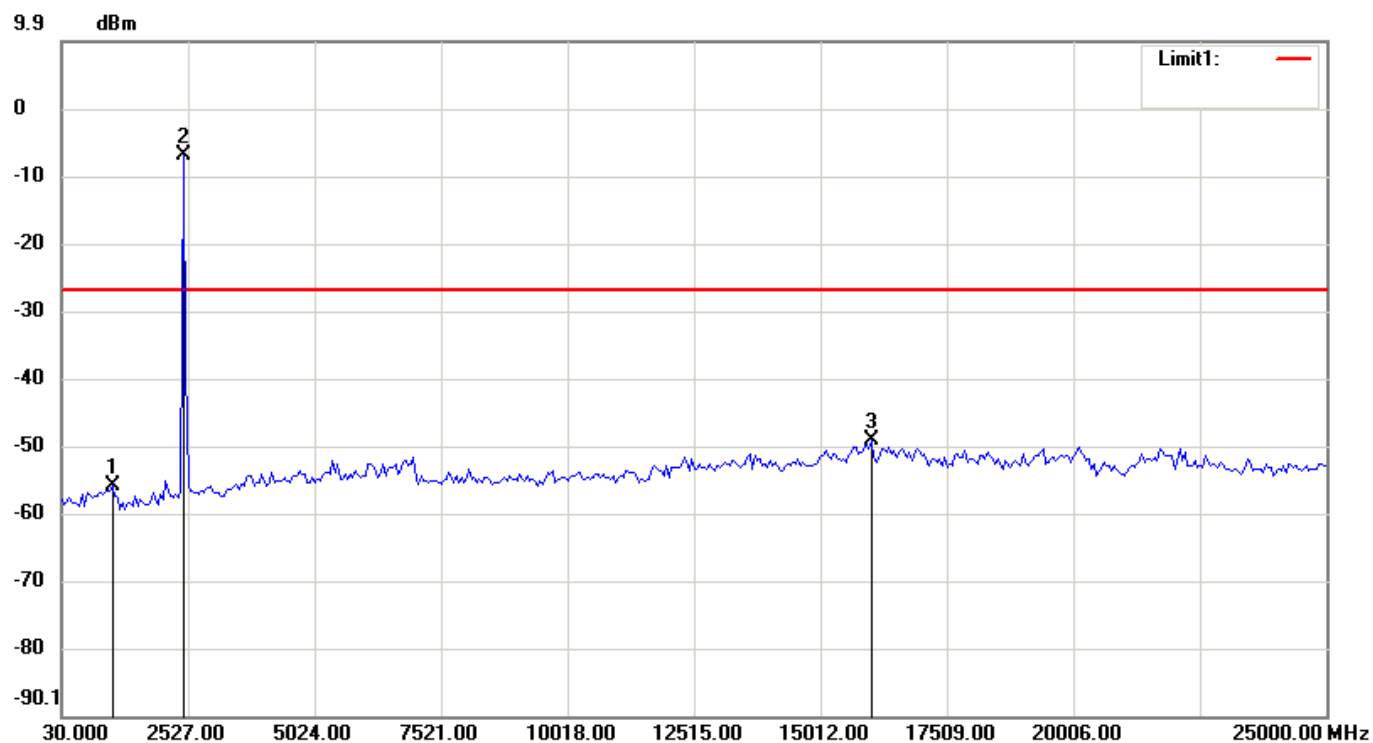
#9

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 02:33:37

Humidity: 63 %



Condition: -26.85dBm
EUT: Wireless File Transmitter
Model: DS586194
Test Mode: TX_Ant1
Note: Operator: Phillip

RF Conducted
Sweep Time: 250ms Att.: 20dB
RBW: 100 KHz VBW: 300 KHz

NCC_LP0002_802.11gn-HT20 Channel 11-Conducted Spurious

No.	Frequency(MHz)	Level(dBm)
1	1028.80000	-55.90
2	2427.12000	-6.85
3	16010.80000	-49.26

9.4.3.2 CHAIN 2

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

- a. 下邊緣頻帶：距下頻帶邊緣40MHz內最大混附波產生於 2399.875 MHz，比主波低 20dB以上，合乎標準規定。
- b. 上邊緣頻帶：距上頻帶邊緣40MHz內最大混附波產生於 2483.5467 MHz，比主波低 20dB以上，合乎標準規定。

註：1. 繪圖資料請參考第 102-106 頁。

2. 量測不準確度: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

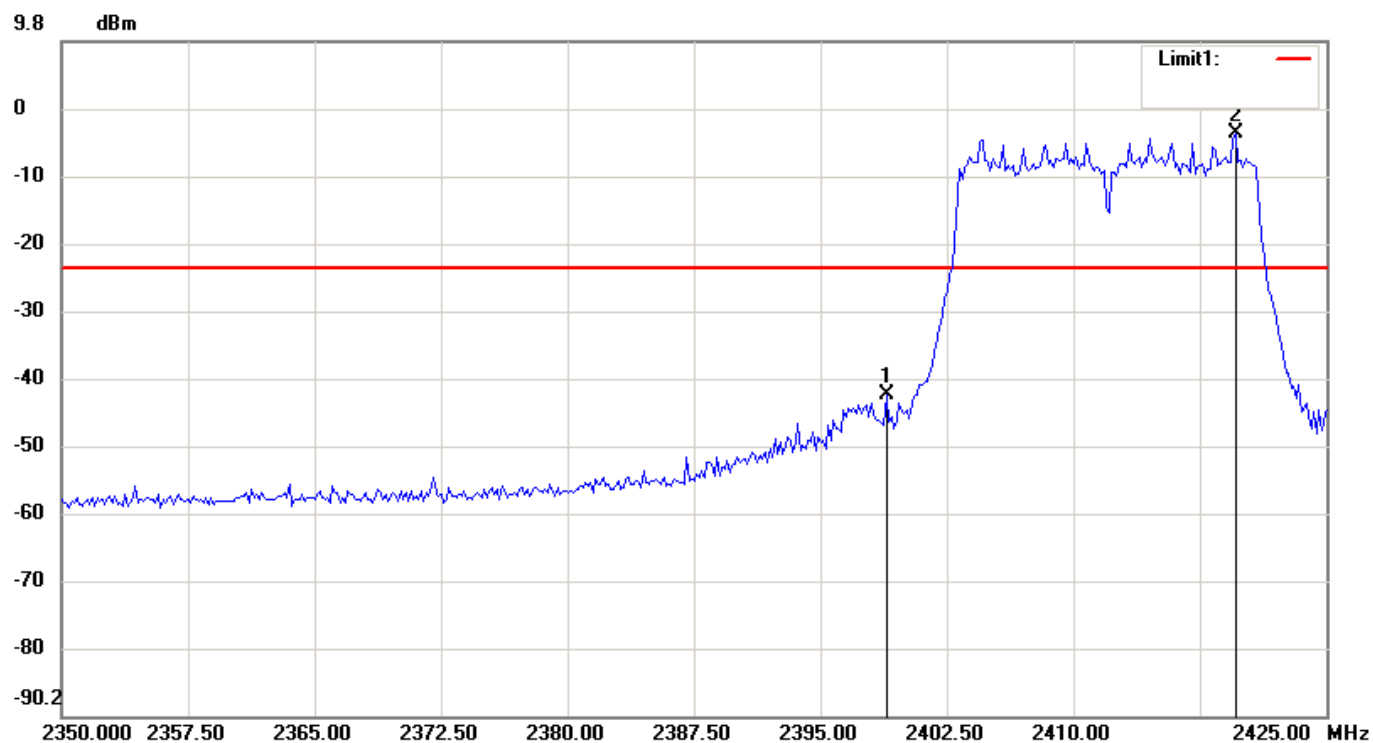
File: 19-07-MAS- #4
008_n20_Ant2

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 12:00:07

Humidity: 63 %



Condition: -23.87dBm
EUT: Wireless File Transmitter
Model: DS586194
Test Mode: TX_Ant2
Note: Operator: Phillip
NCC_LP0002_802.11gn-HT20 Channel 01-Bandedge

RF Conducted
Sweep Time: 500ms Att.: 20dB
RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	2398.90000	-42.60
2	2419.60000	-3.87

File: 19-07-MAS-
008_n20_Ant2

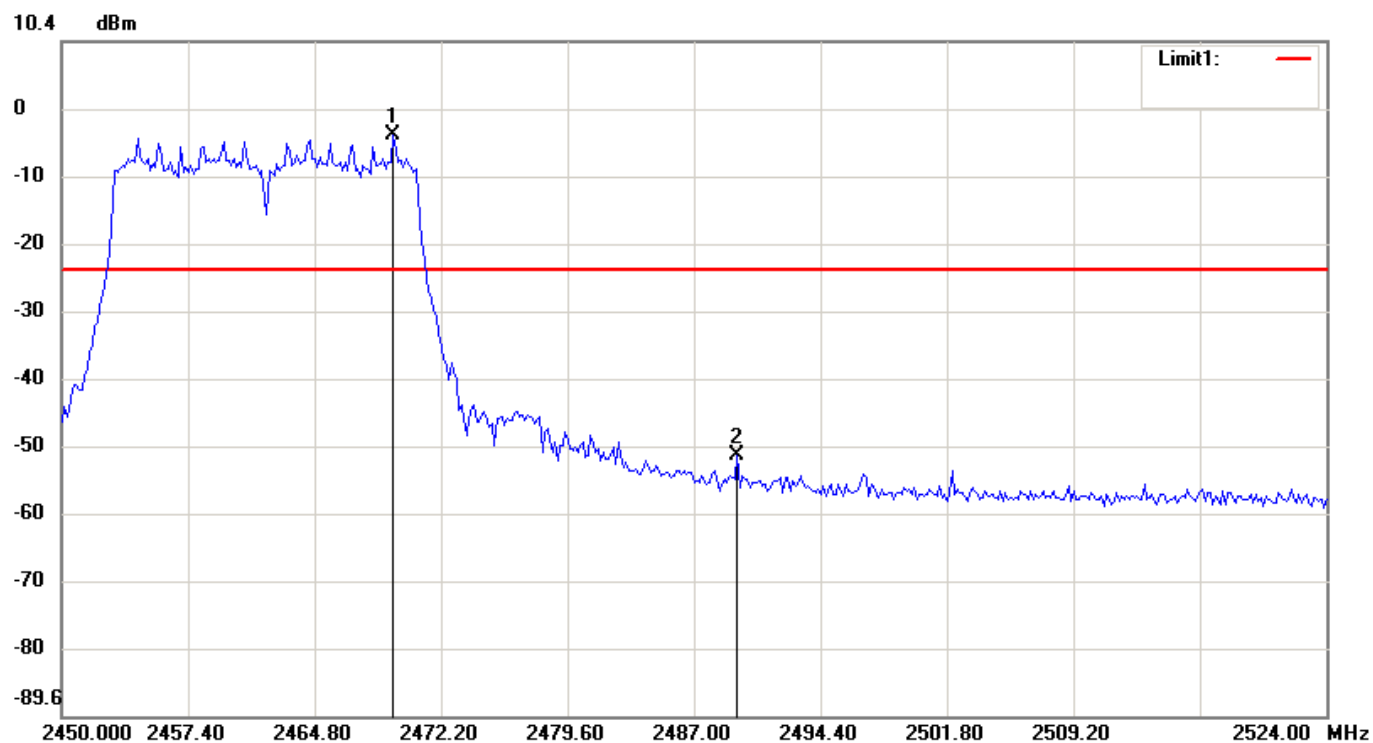
#11

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 12:14:01

Humidity: 63 %



Condition: -23.52dBm

RF Conducted

EUT: Wireless File Transmitter

Sweep Time: 500ms Att.: 20dB

Model: DS586194

RBW: 100 KHz VBW: 300 KHz

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT20 Channel 11-Bandedge

No.	Frequency(MHz)	Level(dBm)
1	2469.38800	-3.52
2	2489.51600	-50.92

File: 19-07-MAS-
008_n20_Ant2

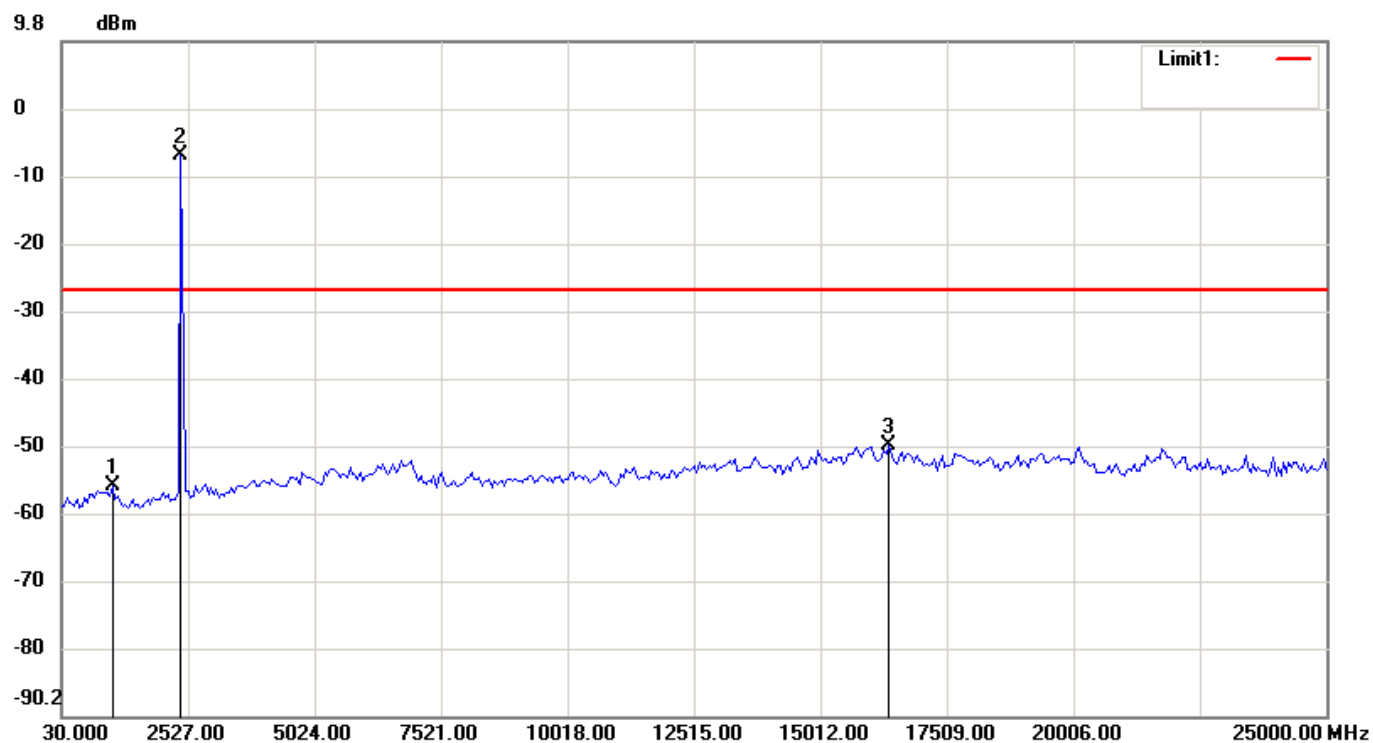
#2

Date: 2019/7/30

Temperature: 25 °C

Time: 上午 11:56:37

Humidity: 63 %



Condition: -26.98dBm
EUT: Wireless File Transmitter
Model: DS586194
Test Mode: TX_Ant2
Note: Operator: Phillip

RF Conducted
Sweep Time: 250ms Att.: 20dB
RBW: 100 KHz VBW: 300 KHz

NCC_LP0002_802.11gn-HT20 Channel 01-Conducted Spurious

No.	Frequency(MHz)	Level(dBm)
1	1028.80000	-55.98
2	2377.18000	-6.98
3	16360.38000	-49.99

File: 19-07-MAS-
008_n20_Ant2

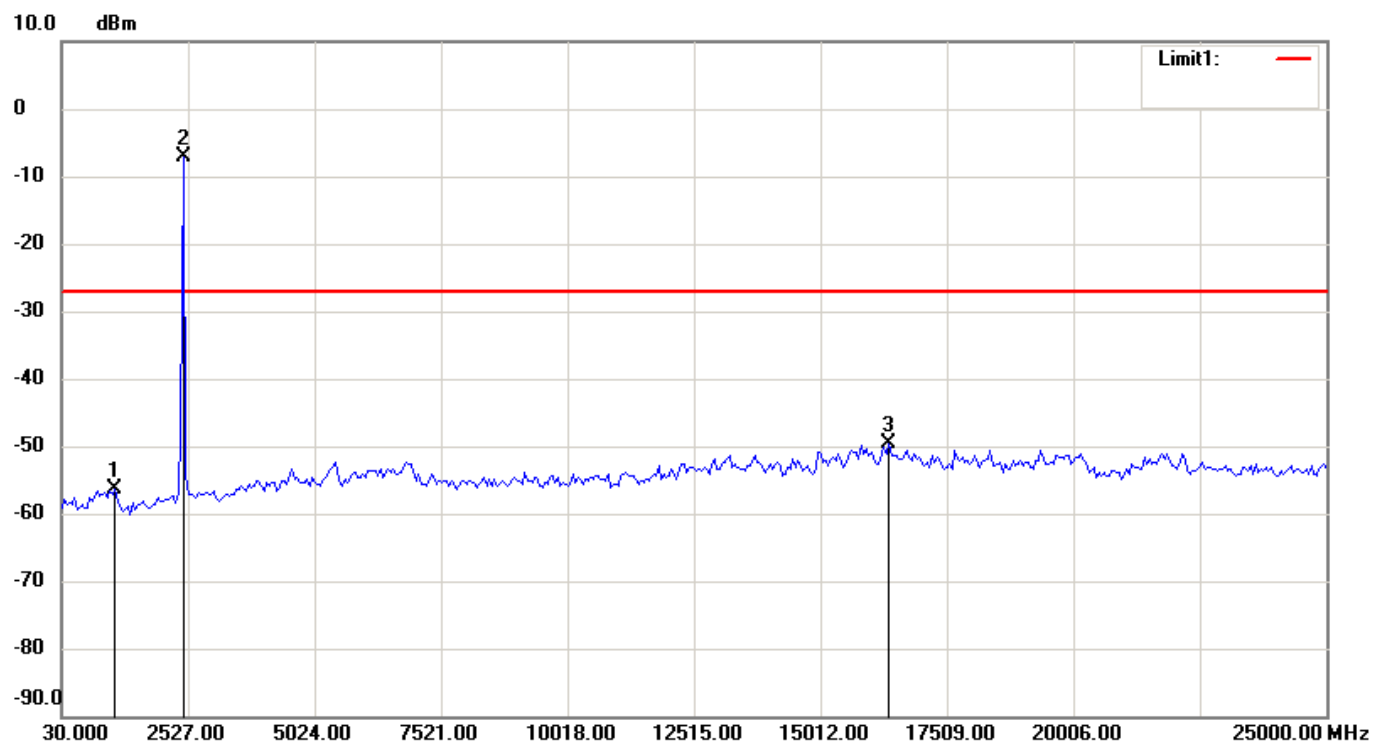
#6

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 12:04:26

Humidity: 63 %



Condition: -27.15dBm

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT20 Channel 06-Conducted Spurious

RF Conducted

Sweep Time: 250ms Att.: 20dB

RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	1078.74000	-56.47
2	2427.12000	-7.15
3	16360.38000	-49.61

File: 19-07-MAS-
008_n20_Ant2

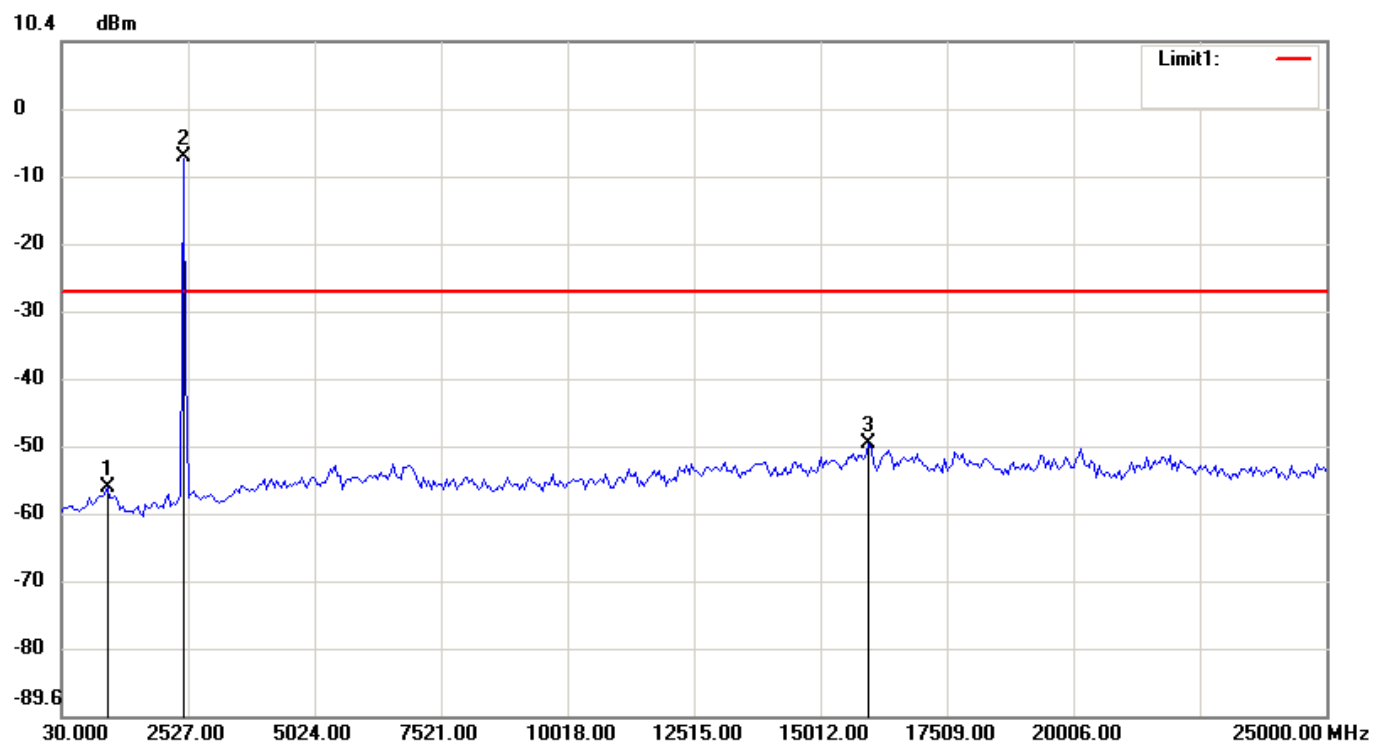
#9

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 12:10:31

Humidity: 63 %



Condition: -26.89dBm

RF Conducted

EUT: Wireless File Transmitter

Sweep Time: 250ms Att.: 20dB

Model: DS586194

RBW: 100 KHz VBW: 300 KHz

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT20 Channel 11-Conducted Spurious

No.	Frequency(MHz)	Level(dBm)
1	928.9200	-55.79
2	2427.12000	-6.89
3	15960.86000	-49.26

9.4.4 調變技術: IEEE 802.11n HT40

9.4.4.1 CHAIN 1

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

- a. 下邊緣頻帶：距下頻帶邊緣40MHz內最大混附波產生於 2400.000 MHz，比主波低 20dB以上，合乎標準規定。
- b. 上邊緣頻帶：距上頻帶邊緣40MHz內最大混附波產生於 2483.5467 MHz，比主波低 20dB以上，合乎標準規定。

註：1. 繪圖資料請參考第 108-112 頁。

2. 量測不準確度: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

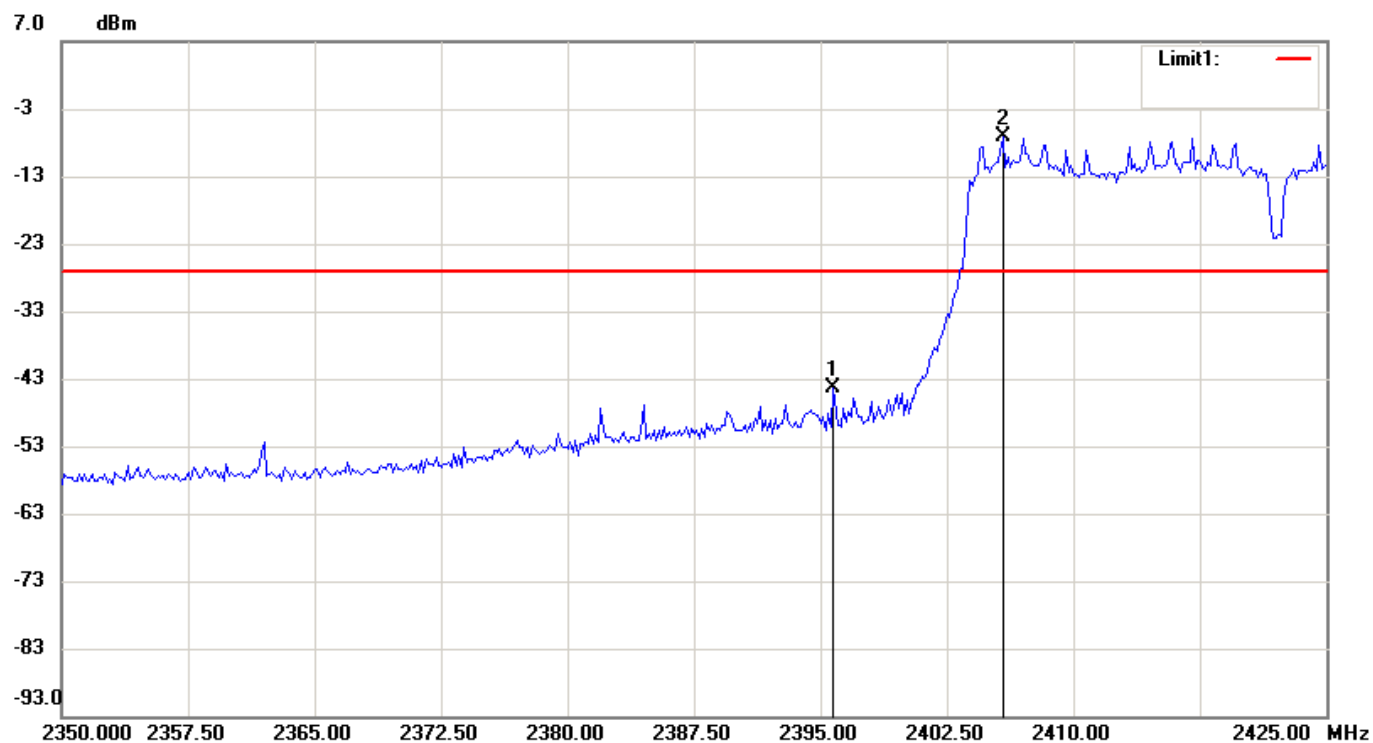
File: 19-07-MAS- #4
008_n40_Ant1

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 01:52:55

Humidity: 63 %



Condition: -27.02dBm

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant1

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 03-Bandedge

RF Conducted

Sweep Time: 500ms Att.: 20dB

RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	2395.75000	-44.44
2	2405.80000	-7.02

File: 19-07-MAS-
008_n40_Ant1

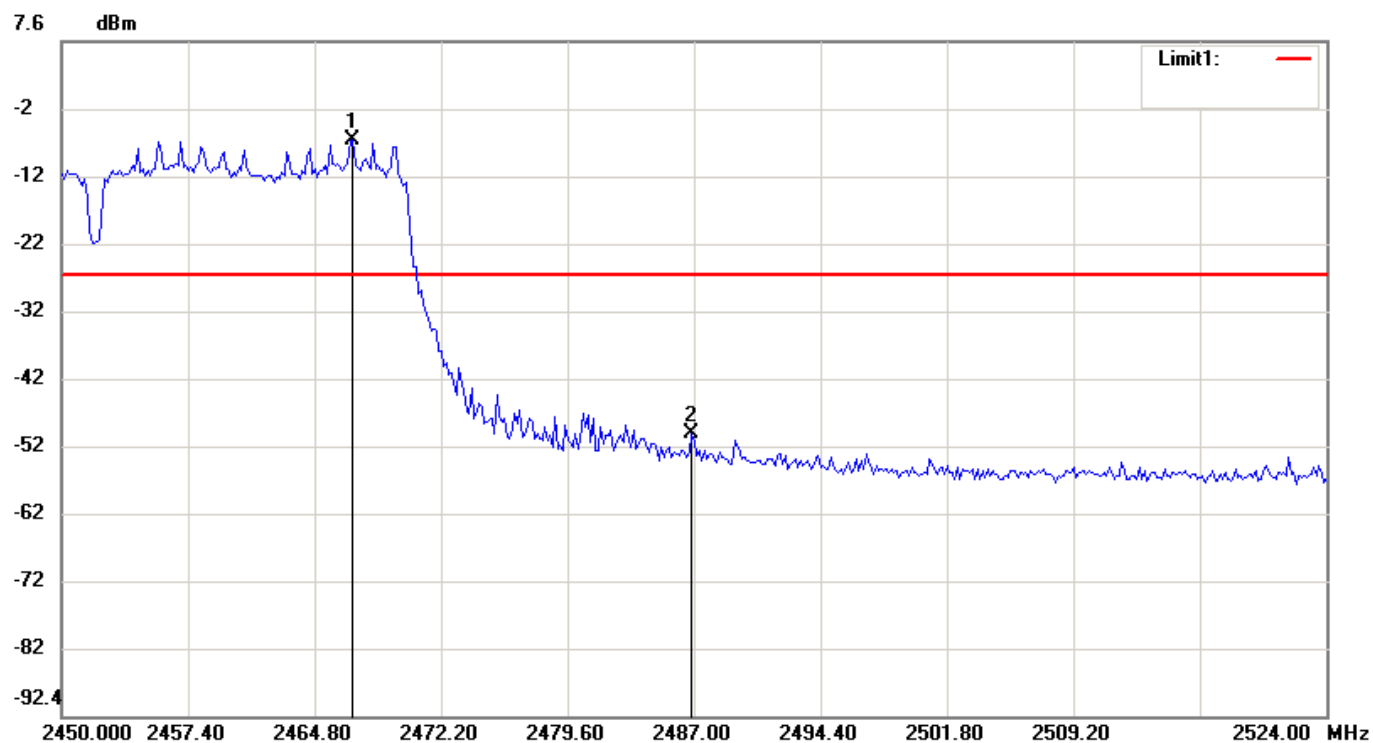
#11

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 02:08:41

Humidity: 63 %



Condition: -27.04dBm

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant1

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 11-Bandedge

RF Conducted

Sweep Time: 500ms Att.: 20dB

RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	2467.02000	-7.04
2	2486.85200	-50.50

File: 19-07-MAS-
008_n40_Ant1

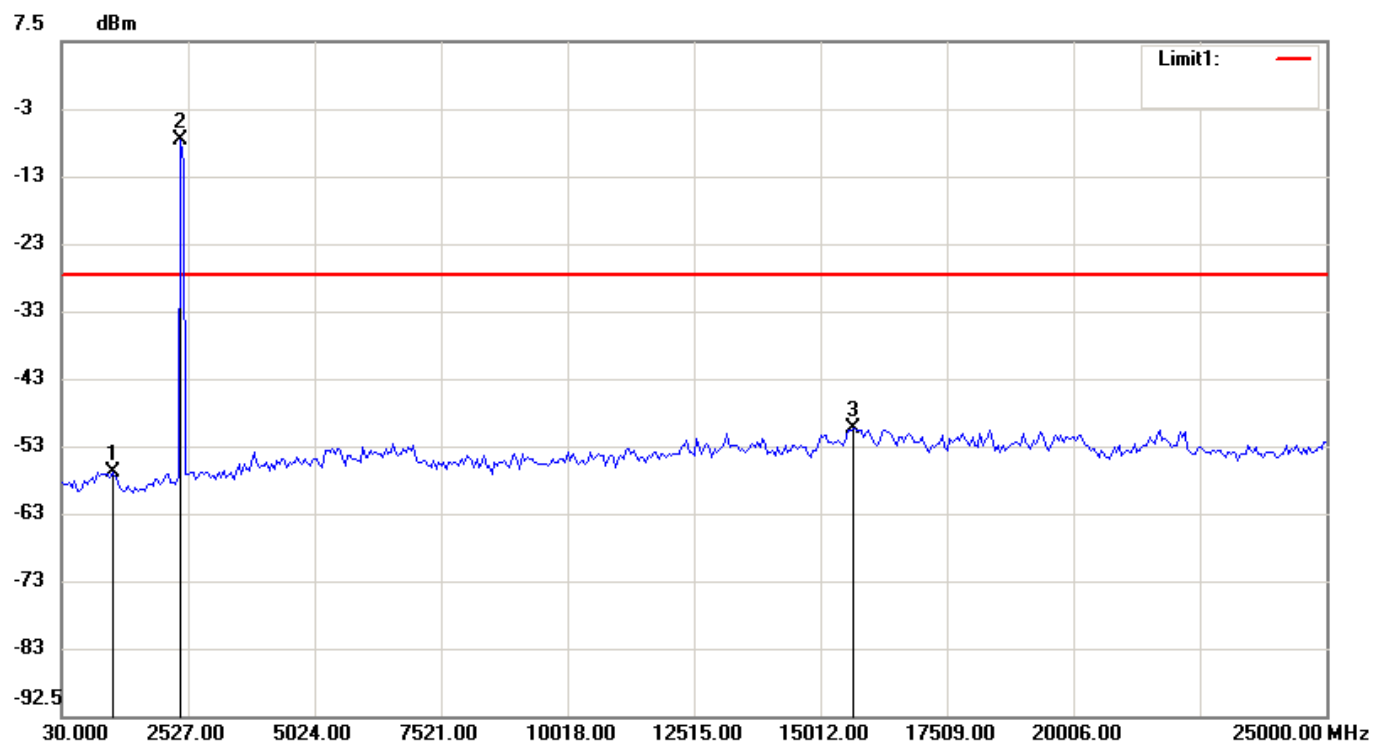
#2

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 01:49:29

Humidity: 63 %



Condition: -27.03dBm

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant1

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 03-Conducted Spurious

RF Conducted

Sweep Time: 250ms Att.: 20dB

RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	1028.80000	-56.29
2	2377.18000	-7.03
3	15661.22000	-49.92

File: 19-07-MAS-
008_n40_Ant1

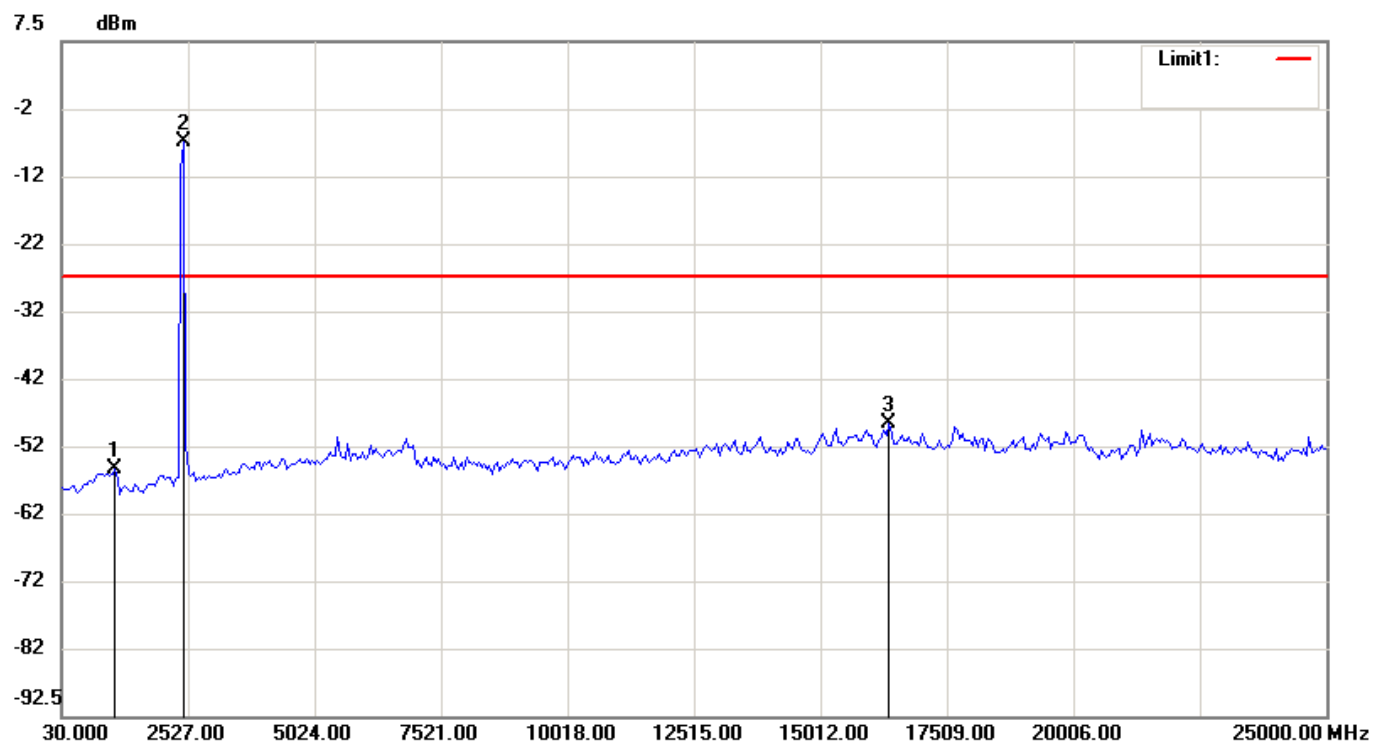
#6

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 01:57:24

Humidity: 63 %



Condition: -27.36dBm

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant1

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 06-Conducted Spurious

RF Conducted

Sweep Time: 250ms Att.: 20dB

RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	1078.74000	-55.95
2	2427.12000	-7.36
3	16360.38000	-49.18

File: 19-07-MAS-
008_n40_Ant1

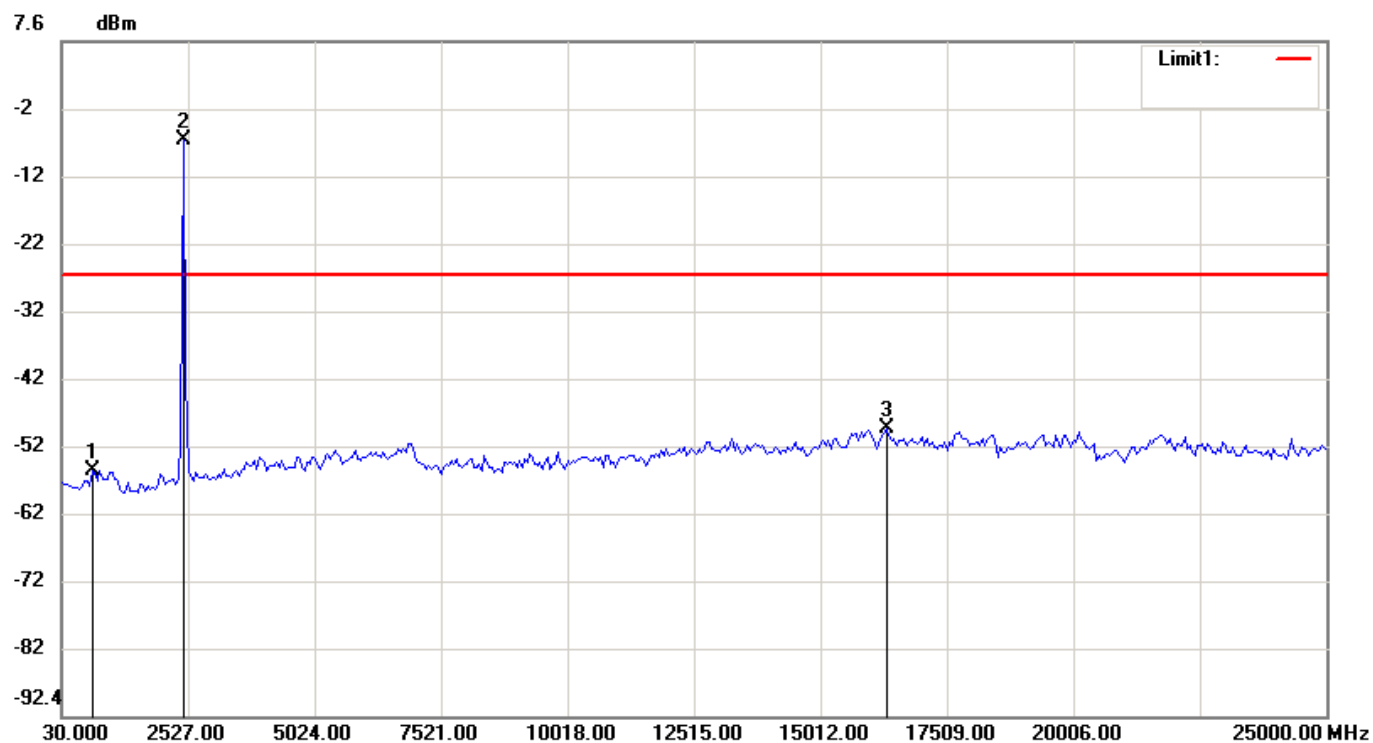
#9

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 02:05:14

Humidity: 63 %



Condition: -26.99dBm

RF Conducted

EUT: Wireless File Transmitter

Sweep Time: 250ms Att.: 20dB

Model: DS586194

RBW: 100 KHz VBW: 300 KHz

Test Mode: TX_Ant1

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 11-Conducted Spurious

No.	Frequency(MHz)	Level(dBm)
1	629.2800	-55.90
2	2427.12000	-6.99
3	16310.44000	-49.77

9.4.4.2 CHAIN 2

測試日期: Jul. 30, 2019

環境溫度: 25°C

環境濕度: 63%

- a. 下邊緣頻帶：距下頻帶邊緣40MHz內最大混附波產生於 2400.000 MHz，比主波低 20dB以上，合乎標準規定。
- b. 上邊緣頻帶：距上頻帶邊緣40MHz內最大混附波產生於 2483.5467 MHz，比主波低 20dB以上，合乎標準規定。

註：1. 繪圖資料請參考第 114-118 頁。

2. 量測不準確度: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

9.5 結果判定

混附波之發射皆低於使用頻帶內最高的射頻功率20dB以上，符合標準規定。

File: 19-07-MAS-
008_n40_Ant2

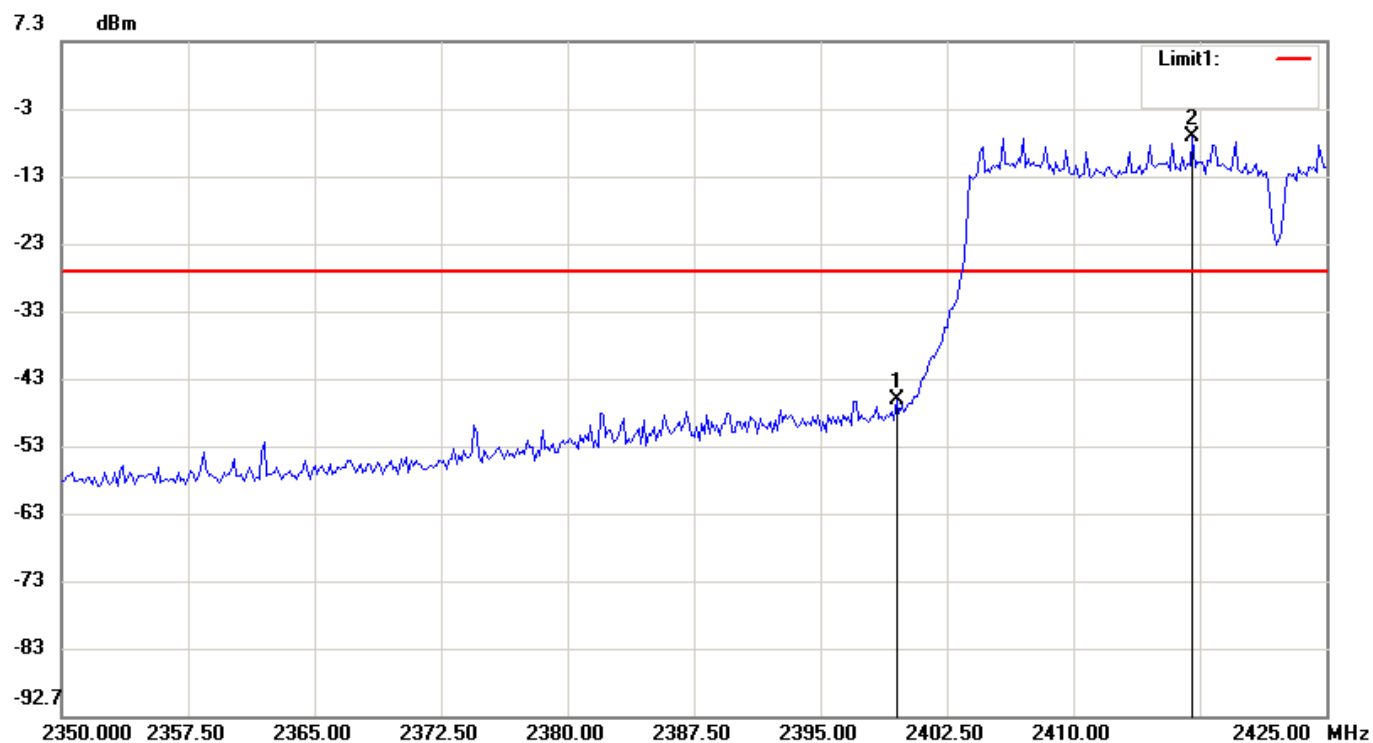
#4

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 01:15:05

Humidity: 63 %



Condition: -26.66dBm

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 03-Bandedge

RF Conducted

Sweep Time: 500ms Att.: 20dB

RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	2399.50000	-45.72
2	2417.05000	-6.66

File: 19-07-MAS-
008_n40_Ant2

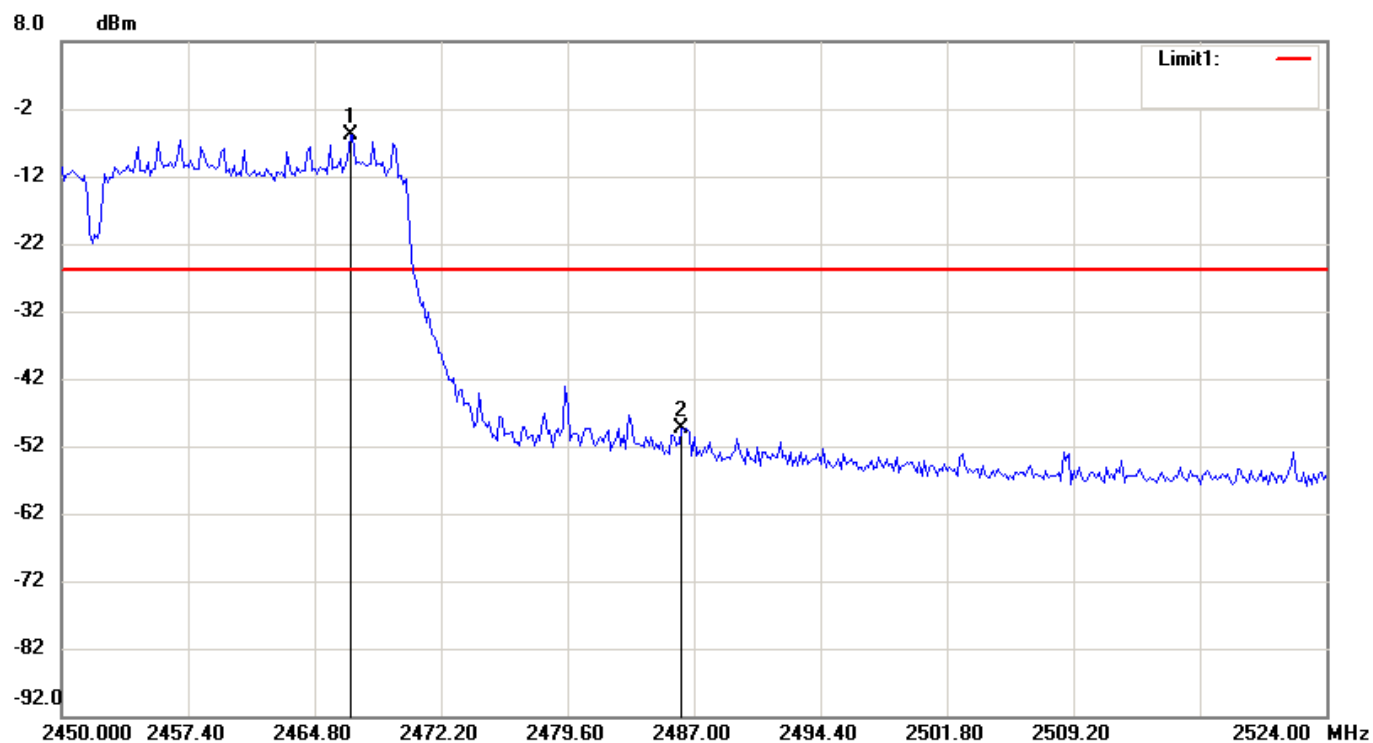
#11

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 01:30:45

Humidity: 63 %



Condition: -25.91dBm

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 11-Bandedge

RF Conducted

Sweep Time: 500ms Att.: 20dB

RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	2466.87200	-5.91
2	2486.26000	-49.44

File: 19-07-MAS-
008_n40_Ant2

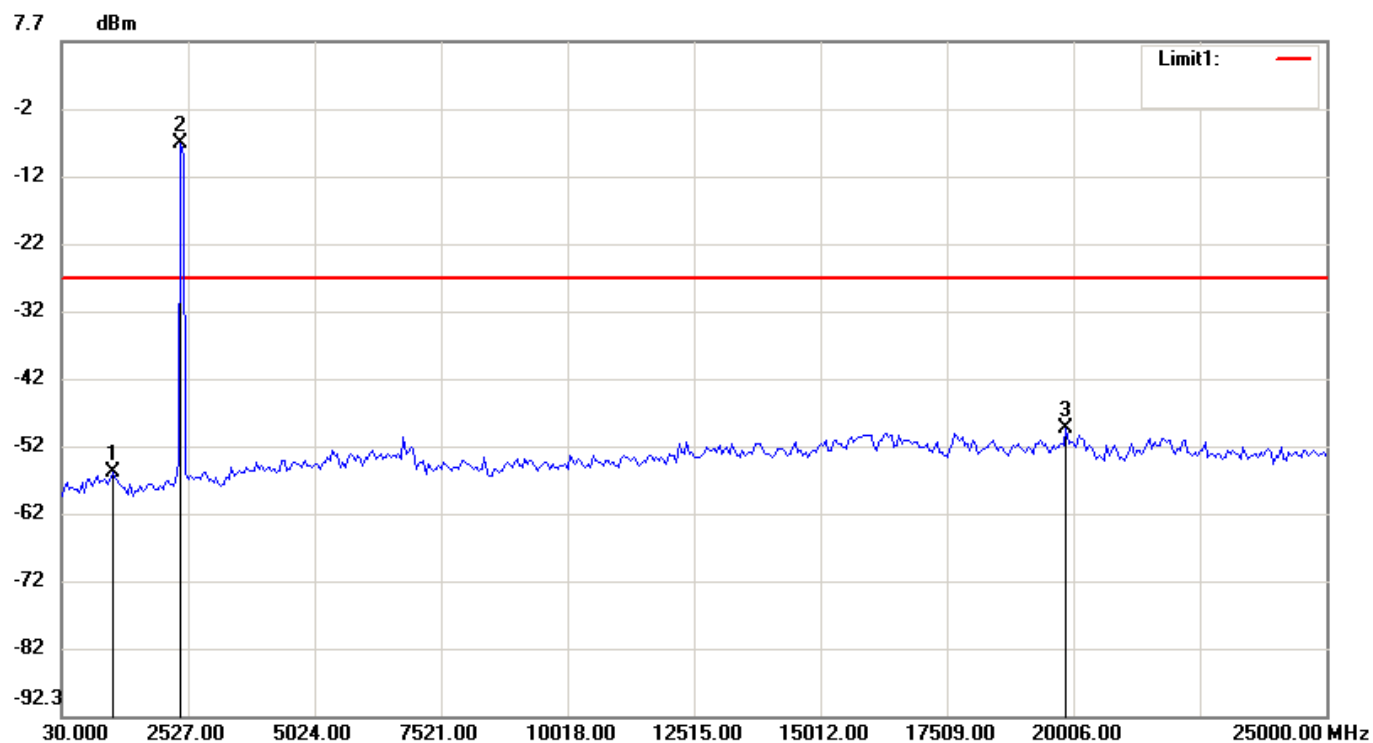
#2

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 01:11:38

Humidity: 63 %



Condition: -27.37dBm

RF Conducted

EUT: Wireless File Transmitter

Sweep Time: 250ms Att.: 20dB

Model: DS586194

RBW: 100 KHz VBW: 300 KHz

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 03-Conducted Spurious

No.	Frequency(MHz)	Level(dBm)
1	1028.80000	-56.33
2	2377.18000	-7.37
3	19856.18000	-49.78

File: 19-07-MAS-
008_n40_Ant2

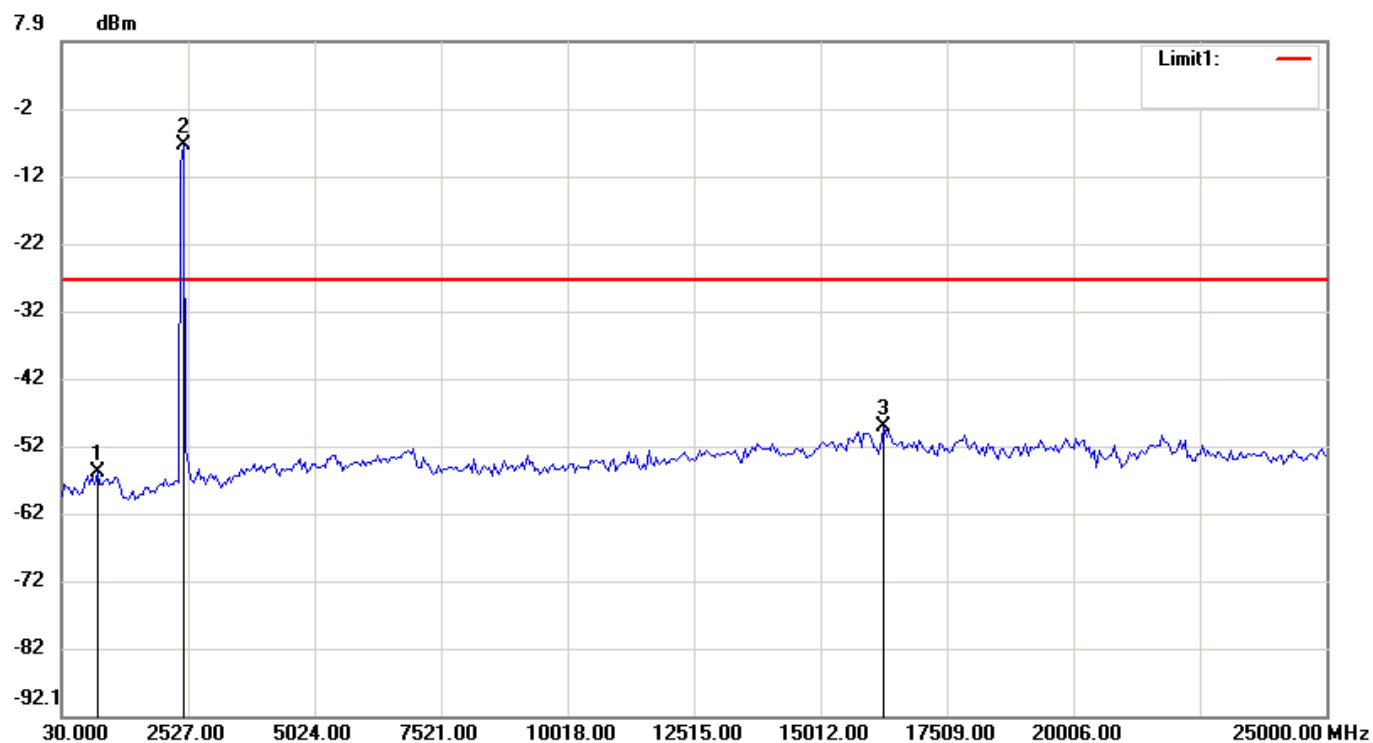
#6

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 01:17:40

Humidity: 63 %



Condition: -27.45dBm

RF Conducted

EUT: Wireless File Transmitter

Sweep Time: 250ms Att.: 20dB

Model: DS586194

RBW: 100 KHz VBW: 300 KHz

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 06-Conducted Spurious

No.	Frequency(MHz)	Level(dBm)
1	729.1600	-56.05
2	2427.12000	-7.45
3	16260.50000	-49.12

File: 19-07-MAS-
008_n40_Ant2

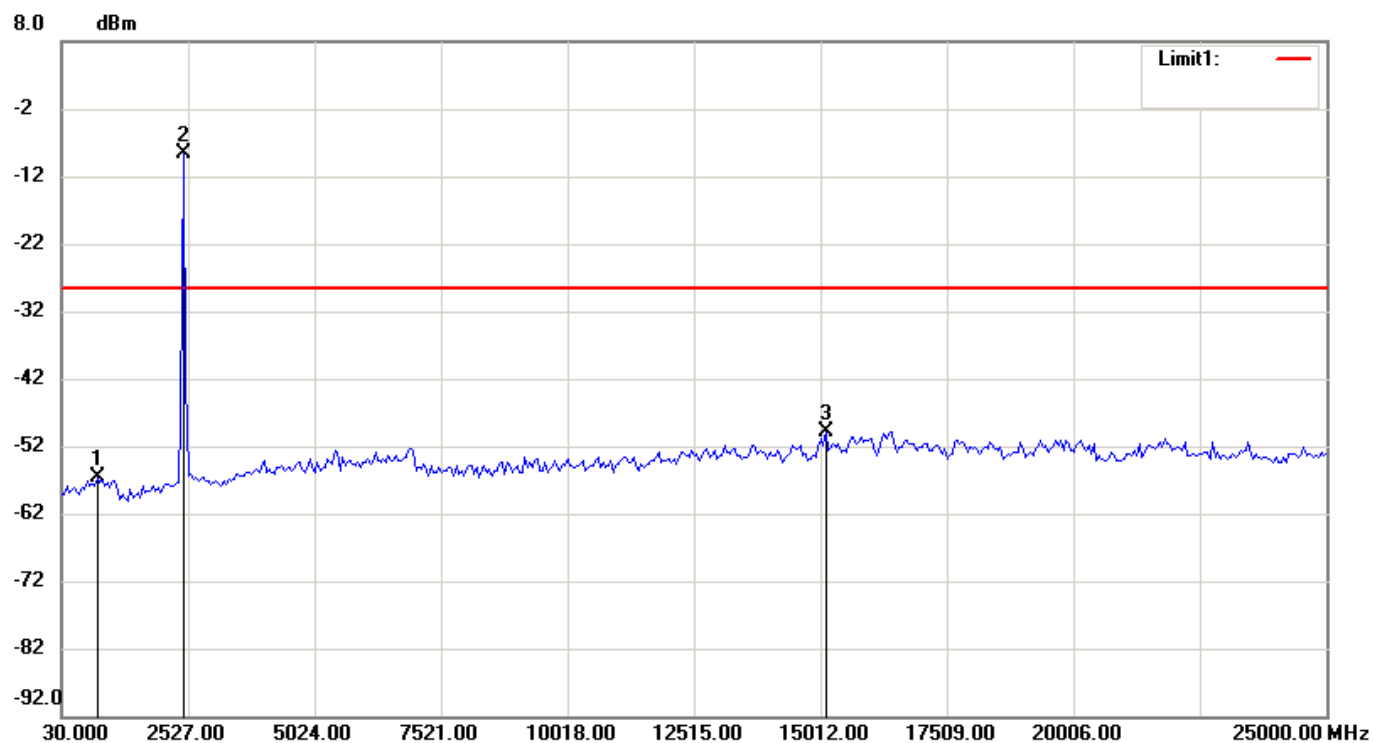
#9

Date: 2019/7/30

Temperature: 25 °C

Time: 下午 01:27:19

Humidity: 63 %



Condition: -28.71dBm

EUT: Wireless File Transmitter

Model: DS586194

Test Mode: TX_Ant2

Note: Operator: Phillip

NCC_LP0002_802.11gn-HT40 Channel 11-Conducted Spurious

RF Conducted

Sweep Time: 250ms Att.: 20dB

RBW: 100 KHz VBW: 300 KHz

No.	Frequency(MHz)	Level(dBm)
1	729.1600	-56.70
2	2427.12000	-8.71
3	15111.88000	-49.84

10 場強輻射之量測

10.1 適用標準

依據國家通訊傳播委員會低功率射頻電機技術規範3.10.1.5之要求，落於2.7節禁用頻段之輻射干擾需符合2.8節之一般限制要求。

10.2 量測方法

將待測物置於非金屬桌面，使其在測試模式狀態，且設定為高、中、低各頻道產生最高峰值輸出功率的傳輸速率，接收天線置於3米外，且桌面要360度旋轉，另外接收天線也要從1米至4米升降變化，接收天線置於水平、垂直極向各執行測試一次。待測物若為手持式則分別要以三軸相放置，並分別測試以找出最大輻射電場強度。

10.3 量測場強輻射之儀器

(1)量測儀器

儀器名稱	製造者	型號
EMI Receiver	R&S	ESCI
Spectrum Analyzer	R&S	FSU46
Horn Antenna	EMCO	3117
Horn Antenna	EMCO	3116
PRE-Amplifier	Agilent	8449B
PRE-Amplifier	Agilent	8447D
BiLog Antenna	ETC	MCTD 2786
Spectrum Analyzer	R&S	FSV

測試軟體: LZ-RF (Ver. ETC-3A2)

(2)儀器設定

Frequency Band (MHz)	Instrument	Function	Resolution Bandwidth	Video Bandwidth
30 to 1000	RF Test Receiver	Quasi-Peak	120 kHz	300 kHz
	RF Test Receiver	Peak	120 kHz	300 kHz
Above 1000	Spectrum Analyzer	Peak	1 MHz	1 MHz
	Spectrum Analyzer	Average	1 MHz	10 Hz

10.4 場強度之計算

場強之計算公式如下

$$\text{結果值} = \text{讀值} + \text{校正因子}$$

其中校正因子為：

天線因子+饋線損失+濾波器損失（若有使用）-放大器增益（若有使用）
量測結果請見下頁。

10.5 場強輻射之量測結果

測試工程師: 羅世勇

10.5.1 諧波發射

10.5.1.1 調變技術: IEEE 802.11b

a. Channel Low

操作模式 : 發射接收

基本波頻率 : 2412 MHz

測試日期 : Aug. 21, 2019

環境溫度: 24°C

環境濕度: 59%

輻射 頻率 (MHz)	天線 極性 H/V	機器讀值 (dBuV/m)@3m		校正 因子 (dB)	結果值 (dBuV/m)@3m		限制值 (dBuV/m)@3m		餘裕值 (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
4824.0320	H	53.27	47.63	1.06	54.33	48.69	74.0	54.0	-5.31
4823.7837	V	53.23	47.70	1.06	54.29	48.76	74.0	54.0	-5.24
7236.0000	H	---	---	3.64	---	---	74.0	54.0	---
7236.0000	V	---	---	3.64	---	---	74.0	54.0	---
9648.0000	H	---	---	4.70	---	---	74.0	54.0	---
9648.0000	V	---	---	4.70	---	---	74.0	54.0	---
12060.0000	H	---	---	8.06	---	---	74.0	54.0	---
12060.0000	V	---	---	8.06	---	---	74.0	54.0	---

註：

1. 標記“---”表發射之訊號太弱而儀器無法量測。
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。
3. 標記“*”表示為本地震盪頻率及其諧波
4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

b. Channel Mid

操作模式：發射接收

基本波頻率：2437 MHz

測試日期：Aug. 21, 2019

環境溫度：24°C

環境濕度：59%

輻射 頻率 (MHz)	天線 極性 H/V	機器讀值 (dBuV/m)@3m		校正 因子 (dB)	結果值 (dBuV/m)@3m		限制值 (dBuV/m)@3m		餘裕值 (dB) (worse)
		Peak	AVG		Peak	AVG	Peak	AVG	
4874.0080	H	52.61	46.85	1.17	53.78	48.02	74.0	54.0	-5.98
4874.1282	V	53.80	46.89	1.17	54.97	48.06	74.0	54.0	-5.94
7311.0000	H	---	---	3.66	---	---	74.0	54.0	---
7311.0000	V	---	---	3.66	---	---	74.0	54.0	---
9748.0000	H	---	---	4.82	---	---	74.0	54.0	---
9748.0000	V	---	---	4.82	---	---	74.0	54.0	---
12185.0000	H	---	---	8.29	---	---	74.0	54.0	---
12185.0000	V	---	---	8.29	---	---	74.0	54.0	---

註：

1. 標記“---”表發射之訊號太弱而儀器無法量測。
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。
3. 標記“*”表示為本地震盪頻率及其諧波
4. 量測不準確度： $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

c. Channel High

操作模式：發射接收

基本波頻率：2462 MHz

測試日期：Aug. 21, 2019

環境溫度：24°C

環境濕度：59%

輻射 頻率 (MHz)	天線 極性 H/V	機器讀值 (dBuV/m)@3m		校正 因子 (dB)	結果值 (dBuV/m)@3m		限制值 (dBuV/m)@3m		餘裕值 (dB) (worse)
		Peak	AVG		Peak	AVG	Peak	AVG	
4923.9520	H	55.56	52.00	1.28	56.84	53.28	74.0	54.0	-0.72
4924.0721	V	52.81	47.50	1.28	54.09	48.78	74.0	54.0	-5.22
7386.0000	H	---	---	3.68	---	---	74.0	54.0	---
7386.0000	V	---	---	3.68	---	---	74.0	54.0	---
9848.0000	H	---	---	4.94	---	---	74.0	54.0	---
9848.0000	V	---	---	4.94	---	---	74.0	54.0	---
12310.0000	H	---	---	8.54	---	---	74.0	54.0	---
12310.0000	V	---	---	8.54	---	---	74.0	54.0	---
14772.0000	H	---	---	10.74	---	---	74.0	54.0	---
14772.0000	V	---	---	10.74	---	---	74.0	54.0	---

註：

1. 標記“---”表發射之訊號太弱而儀器無法量測。
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。
3. 標記“*”表示為本地震盪頻率及其諧波
4. 量測不準確度: $\pm 4.1\text{dB}(1\text{GHz} \leq f < 18\text{GHz})$
 $\pm 4.4\text{dB}(18\text{GHz} \leq f \leq 40\text{GHz})$

10.5.1.2 調變技術: IEEE 802.11g

a. Channel Low

操作模式：發射接收

基本波頻率：2412 MHz

測試日期：Aug. 21, 2019

環境溫度：24°C

環境濕度：59%

輻射 頻率	天線 極性	機器讀值 (dBuV/m)@3m		校正 因子	結果值 (dBuV/m)@3m		限制值 (dBuV/m)@3m		餘裕值 (worse)
(MHz)	H/V	Peak	AVG	(dB)	Peak	AVG	Peak	AVG	(dB)
4824.4006	H	52.40	39.97	1.06	53.46	41.03	74.0	54.0	-12.97
4827.6058	V	50.86	---	1.07	51.93	---	74.0	54.0	-2.07
7236.0000	H	---	---	3.64	---	---	74.0	54.0	---
7236.0000	V	---	---	3.64	---	---	74.0	54.0	---
9648.0000	H	---	---	4.70	---	---	74.0	54.0	---
9648.0000	V	---	---	4.70	---	---	74.0	54.0	---
12060.0000	H	---	---	8.06	---	---	74.0	54.0	---
12060.0000	V	---	---	8.06	---	---	74.0	54.0	---

註：

1. 標記“---”表發射之訊號太弱而儀器無法量測。
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。
3. 標記“*”表示為本地震盪頻率及其諧波
4. 量測不準確度: $\pm 4.1\text{dB}(1\text{GHz} \leq f < 18\text{GHz})$
 $\pm 4.4\text{dB}(18\text{GHz} \leq f \leq 40\text{GHz})$

b. Channel Mid

操作模式：發射接收

基本波頻率：2437 MHz

測試日期：Aug. 21, 2019

環境溫度：24°C

環境濕度：59%

輻射 頻率	天線 極性	機器讀值 (dBuV/m)@3m		校正 因子	結果值 (dBuV/m)@3m		限制值 (dBuV/m)@3m		餘裕值 (worse)
		Peak	AVG		Peak	AVG	Peak	AVG	
(MHz)	H/V			(dB)					(dB)
4873.5192	H	54.94	39.39	1.17	56.11	40.56	74.0	54.0	-13.44
4876.8876	V	49.92	---	1.18	51.10	---	74.0	54.0	-2.90
7311.0000	H	---	---	3.66	---	---	74.0	54.0	---
7311.0000	V	---	---	3.66	---	---	74.0	54.0	---
9748.0000	H	---	---	4.82	---	---	74.0	54.0	---
9748.0000	V	---	---	4.82	---	---	74.0	54.0	---
12185.0000	H	---	---	8.29	---	---	74.0	54.0	---
12185.0000	V	---	---	8.29	---	---	74.0	54.0	---

註：

1. 標記“---”表發射之訊號太弱而儀器無法量測。
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。
3. 標記“*”表示為本地震盪頻率及其諧波
4. 量測不準確度： $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

c. Channel High

操作模式：發射接收

基本波頻率：2462 MHz

測試日期：Aug. 21, 2019

環境溫度：24°C

環境濕度：59%

輻射 頻率 (MHz)	天線 極性 H/V	機器讀值 (dBuV/m)@3m		校正 因子 (dB)	結果值 (dBuV/m)@3m		限制值 (dBuV/m)@3m		餘裕值 (dB) (worse)
		Peak	AVG		Peak	AVG	Peak	AVG	
4923.8397	H	54.11	40.18	1.28	55.39	41.46	74.0	54.0	-12.54
4922.0770	V	49.31	---	1.28	50.59	---	74.0	54.0	-3.41
7386.0000	H	---	---	3.68	---	---	74.0	54.0	---
7386.0000	V	---	---	3.68	---	---	74.0	54.0	---
9848.0000	H	---	---	4.94	---	---	74.0	54.0	---
9848.0000	V	---	---	4.94	---	---	74.0	54.0	---
12310.0000	H	---	---	8.54	---	---	74.0	54.0	---
12310.0000	V	---	---	8.54	---	---	74.0	54.0	---
14772.0000	H	---	---	10.74	---	---	74.0	54.0	---
14772.0000	V	---	---	10.74	---	---	74.0	54.0	---

註：

1. 標記“---”表發射之訊號太弱而儀器無法量測。
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。
3. 標記“*”表示為本地震盪頻率及其諧波
4. 量測不準確度: $\pm 4.1\text{dB}(1\text{GHz} \leq f < 18\text{GHz})$
 $\pm 4.4\text{dB}(18\text{GHz} \leq f \leq 40\text{GHz})$

10.5.1.3 調變技術: IEEE 802.11n HT20

a. Channel Low

操作模式：發射接收

基本波頻率：2412 MHz

測試日期：Aug. 20, 2019

環境溫度：23℃

環境濕度：60%

輻射 頻率	天線 極性	機器讀值 (dBuV/m)@3m		校正 因子	結果值 (dBuV/m)@3m		限制值 (dBuV/m)@3m		餘裕值 (worse)
(MHz)	H/V	Peak	AVG	(dB)	Peak	AVG	Peak	AVG	(dB)
4819.1122	H	54.07	39.70	1.06	55.13	40.76	74.0	54.0	-13.24
4821.7564	V	51.20	36.90	1.06	52.26	37.96	74.0	54.0	-16.04
7236.0000	H	---	---	3.64	---	---	74.0	54.0	---
7236.0000	V	---	---	3.64	---	---	74.0	54.0	---
9648.0000	H	---	---	4.70	---	---	74.0	54.0	---
9648.0000	V	---	---	4.70	---	---	74.0	54.0	---
12060.0000	H	---	---	8.06	---	---	74.0	54.0	---
12060.0000	V	---	---	8.06	---	---	74.0	54.0	---

註：

1. 標記“---”表發射之訊號太弱而儀器無法量測。
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。
3. 標記“*”表示為本地震盪頻率及其諧波
4. 量測不準確度: $\pm 4.1\text{dB}(1\text{GHz} \leq f < 18\text{GHz})$
 $\pm 4.4\text{dB}(18\text{GHz} \leq f \leq 40\text{GHz})$

b. Channel Mid

操作模式：發射接收

基本波頻率：2437 MHz

測試日期：Aug. 20, 2019

環境溫度：23℃

環境濕度：60%

輻射 頻率	天線 極性	機器讀值 (dBuV/m)@3m		校正 因子	結果值 (dBuV/m)@3m		限制值 (dBuV/m)@3m		餘裕值 (worse)
		Peak	AVG		Peak	AVG	Peak	AVG	
(MHz)	H/V			(dB)					(dB)
4873.3590	H	53.88	40.37	1.17	55.05	41.54	74.0	54.0	-12.46
4873.1987	V	49.33	---	1.17	50.50	---	74.0	54.0	-3.50
7311.0000	H	---	---	3.66	---	---	74.0	54.0	---
7311.0000	V	---	---	3.66	---	---	74.0	54.0	---
9748.0000	H	---	---	4.82	---	---	74.0	54.0	---
9748.0000	V	---	---	4.82	---	---	74.0	54.0	---
12185.0000	H	---	---	8.29	---	---	74.0	54.0	---
12185.0000	V	---	---	8.29	---	---	74.0	54.0	---

註：

1. 標記“---”表發射之訊號太弱而儀器無法量測。
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。
3. 標記“*”表示為本地震盪頻率及其諧波
4. 量測不準確度： $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

c. Channel High

操作模式：發射接收

基本波頻率：2462 MHz

測試日期：Aug. 20, 2019

環境溫度：23℃

環境濕度：60%

輻射 頻率 (MHz)	天線 極性 H/V	機器讀值 (dBuV/m)@3m		校正 因子 (dB)	結果值 (dBuV/m)@3m		限制值 (dBuV/m)@3m		餘裕值 (dB) (worse)
		Peak	AVG		Peak	AVG	Peak	AVG	
4922.7180	H	54.23	39.95	1.28	55.51	41.23	74.0	54.0	-12.77
4928.4872	V	48.59	---	1.29	49.88	---	74.0	54.0	-4.12
7386.0000	H	---	---	3.68	---	---	74.0	54.0	---
7386.0000	V	---	---	3.68	---	---	74.0	54.0	---
9848.0000	H	---	---	4.94	---	---	74.0	54.0	---
9848.0000	V	---	---	4.94	---	---	74.0	54.0	---
12310.0000	H	---	---	8.54	---	---	74.0	54.0	---
12310.0000	V	---	---	8.54	---	---	74.0	54.0	---
14772.0000	H	---	---	10.74	---	---	74.0	54.0	---
14772.0000	V	---	---	10.74	---	---	74.0	54.0	---

註：

1. 標記“---”表發射之訊號太弱而儀器無法量測。
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。
3. 標記“*”表示為本地震盪頻率及其諧波
4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

10.5.1.4 調變技術: IEEE 802.11n HT40

a. Channel Low

操作模式：發射接收

基本波頻率：2422 MHz

測試日期：Aug. 20, 2019

環境溫度：23℃

環境濕度：60%

輻射 頻率 (MHz)	天線 極性 H/V	機器讀值 (dBuV/m)@3m		校正 因子 (dB)	結果值 (dBuV/m)@3m		限制值 (dBuV/m)@3m		餘裕值 (dB) (worse)
		Peak	AVG		Peak	AVG	Peak	AVG	
4845.1218	H	51.01	37.30	1.10	52.11	38.40	74.0	54.0	-15.60
4841.6763	V	49.65	---	1.10	50.75	---	74.0	54.0	-3.25
7266.0000	H	---	---	3.66	---	---	74.0	54.0	---
7266.0000	V	---	---	3.66	---	---	74.0	54.0	---
9688.0000	H	---	---	4.74	---	---	74.0	54.0	---
9688.0000	V	---	---	4.74	---	---	74.0	54.0	---
12110.0000	H	---	---	8.16	---	---	74.0	54.0	---
12110.0000	V	---	---	8.16	---	---	74.0	54.0	---

註：

1. 標記“---”表發射之訊號太弱而儀器無法量測。
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。
3. 標記“*”表示為本地震盪頻率及其諧波
4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

b. Channel Mid

操作模式：發射接收

基本波頻率：2437 MHz

測試日期：Aug. 20, 2019

環境溫度：23℃

環境濕度：60%

輻射 頻率	天線 極性	機器讀值 (dBuV/m)@3m		校正 因子	結果值 (dBuV/m)@3m		限制值 (dBuV/m)@3m		餘裕值 (worse)
(MHz)	H/V	Peak	AVG	(dB)	Peak	AVG	Peak	AVG	(dB)
4874.6410	H	50.53	---	1.17	51.70	---	74.0	54.0	-2.30
4874.3013	V	48.53	---	1.17	49.70	---	74.0	54.0	-4.30
7311.0000	H	---	---	3.66	---	---	74.0	54.0	---
7311.0000	V	---	---	3.66	---	---	74.0	54.0	---
9748.0000	H	---	---	4.82	---	---	74.0	54.0	---
9748.0000	V	---	---	4.82	---	---	74.0	54.0	---
12185.0000	H	---	---	8.29	---	---	74.0	54.0	---
12185.0000	V	---	---	8.29	---	---	74.0	54.0	---

註：

1. 標記“---”表發射之訊號太弱而儀器無法量測。
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。
3. 標記“*”表示為本地震盪頻率及其諧波
4. 量測不準確度： $\pm 4.1\text{dB}(1\text{GHz} \leq f < 18\text{GHz})$
 $\pm 4.4\text{dB}(18\text{GHz} \leq f \leq 40\text{GHz})$

c. Channel High

操作模式：發射接收

基本波頻率：2452 MHz

測試日期：Aug. 20, 2019

環境溫度：23℃

環境濕度：60%

輻射 頻率	天線 極性	機器讀值 (dBuV/m)@3m		校正 因子	結果值 (dBuV/m)@3m		限制值 (dBuV/m)@3m		餘裕值 (worse)
(MHz)	H/V	Peak	AVG	(dB)	Peak	AVG	Peak	AVG	(dB)
4906.2435	H	49.38	---	1.24	50.62	---	74.0	54.0	-3.38
4904.2372	V	46.95	---	1.24	48.19	---	74.0	54.0	-5.81
7356.0000	H	---	---	3.68	---	---	74.0	54.0	---
7356.0000	V	---	---	3.68	---	---	74.0	54.0	---
9808.0000	H	---	---	4.90	---	---	74.0	54.0	---
9808.0000	V	---	---	4.90	---	---	74.0	54.0	---
12260.0000	H	---	---	8.44	---	---	74.0	54.0	---
12260.0000	V	---	---	8.44	---	---	74.0	54.0	---

註：

1. 標記“---”表發射之訊號太弱而儀器無法量測。
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。
3. 標記“*”表示為本地震盪頻率及其諧波
4. 量測不準確度： $\pm 4.1\text{dB}(1\text{GHz} \leq f < 18\text{GHz})$
 $\pm 4.4\text{dB}(18\text{GHz} \leq f \leq 40\text{GHz})$

10.5.2 諧波及其它不必要之訊號測試圖

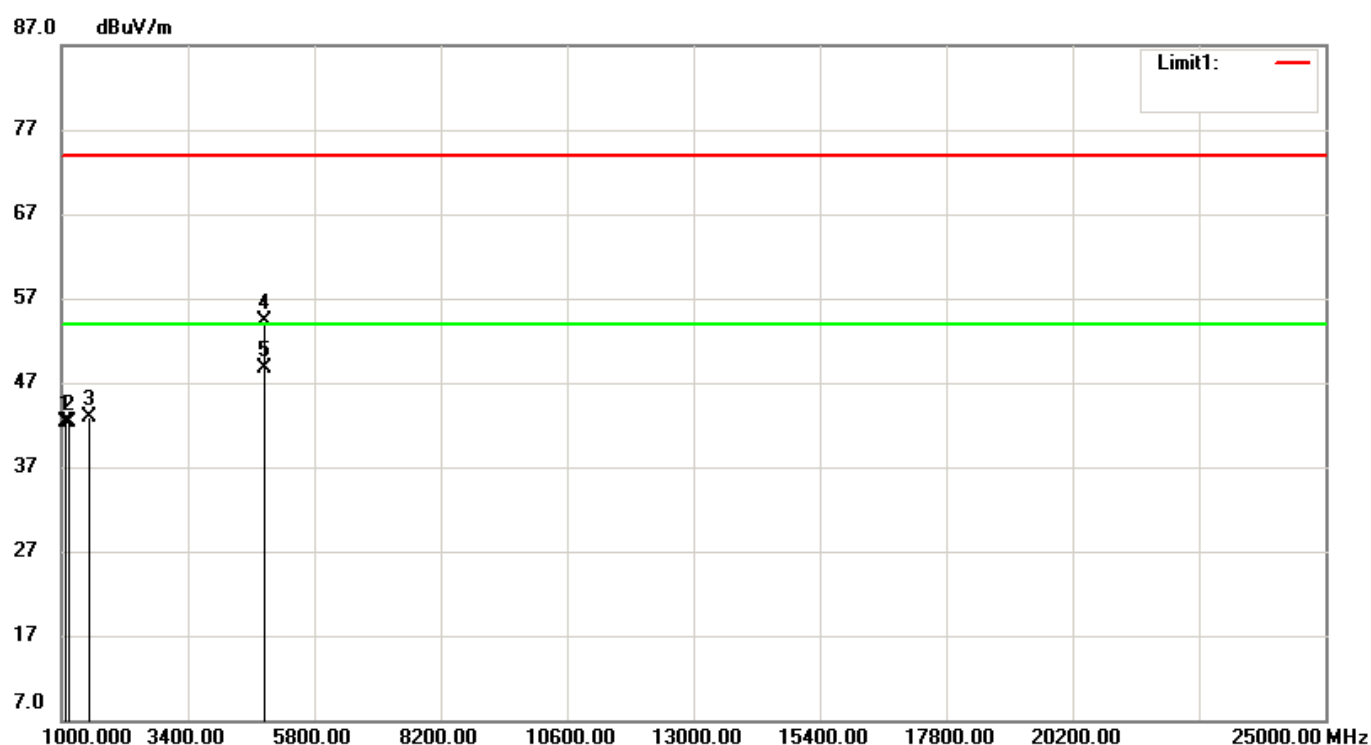
10.5.2.1 調變技術: IEEE 802.11b

a. Channel Low

操作模式：發射接收

基本波頻率：2412 MHz

File: 19-07-MAS-008_b #25 Date 2019/8/21 Temperature: 24 °C
 Site RE02-EMC B1- N2 Humidity: 59 %
 :



Condition: NCC_Above1G_Pk Polarization: Horizontal
 EUT: Wireless File Transmitter Distance: 3m
 Model: DS586194
 Test Mode: TX_Y Operator: Phillip
 Note: CH LOW

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1074.03840	52.18	peak	-9.79	42.39	74.00	-31.61
2	1125.64100	51.81	peak	-9.59	42.22	74.00	-31.78
3	1500.32050	51.09	peak	-8.28	42.81	74.00	-31.19
4	4824.03200	53.27	peak	1.06	54.33	74.00	-19.67
5	4824.03200	47.63	AVG	1.06	48.69	54.00	-5.31

註：1. 標記“---”表發射之訊號太弱而儀器無法量測。

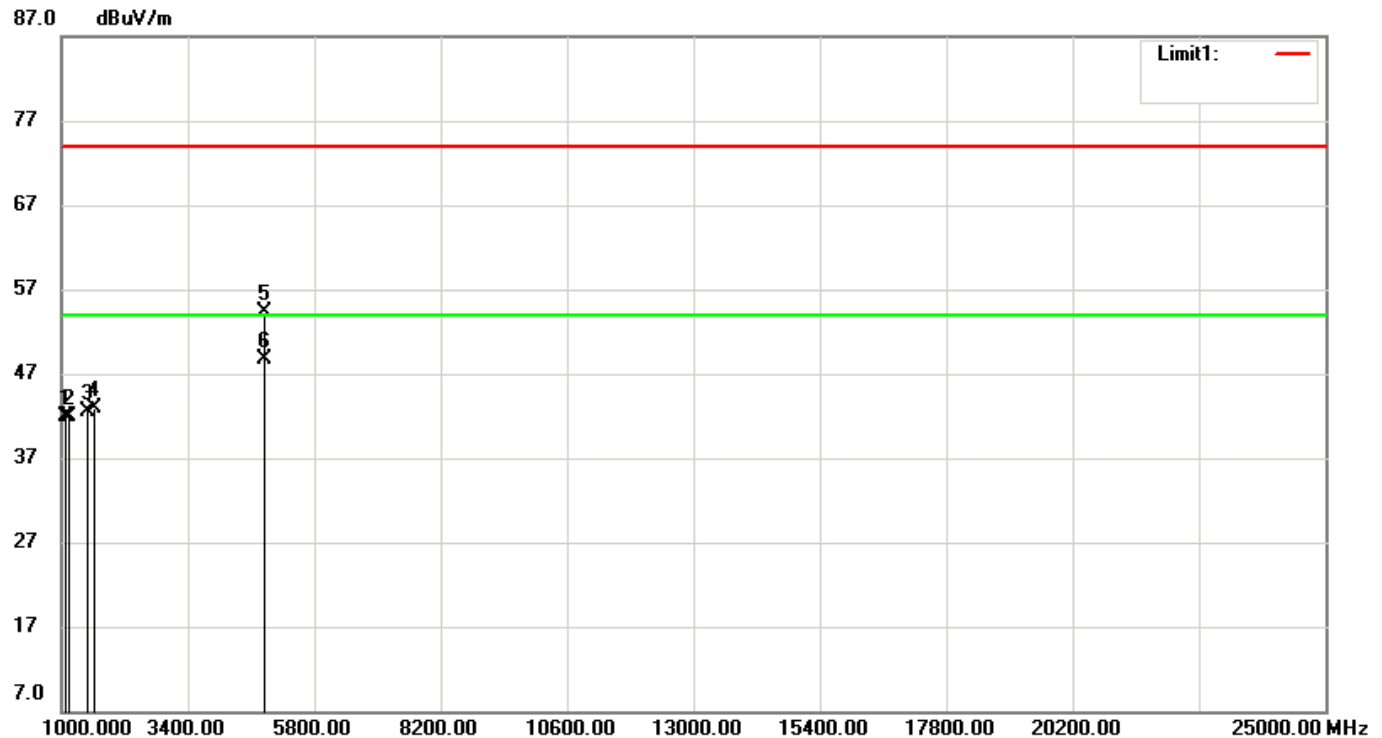
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。

3. 標記“*”表示為本地震盪頻率及其諧波

4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

操作模式：發射接收
基本波頻率：2412 MHz

File: 19-07-MAS-008_b #26 Date 2019/8/21 Temperature: 24 °C
Site: RE02-EMC B1- N2 Humidity: 59 %



Condition: NCC_Above1G_Pk Polarization: Vertical
EUT: Wireless File Transmitter Distance: 3m
Model: DS586194
Test Mode: TX_Y Operator: Phillip
Note: CH LOW

No.	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
	(MHz)	(dBuV/m)		dB/m	(dBuV/m)	(dBuV/m)	(dB)
1	1074.03840	51.71	peak	-9.79	41.92	74.00	-32.08
2	1123.39740	51.51	peak	-9.61	41.90	74.00	-32.10
3	1498.07700	50.81	peak	-8.28	42.53	74.00	-31.47
4	1594.55120	50.27	peak	-7.42	42.85	74.00	-31.15
5	4823.78370	53.23	peak	1.06	54.29	74.00	-19.71
6	4823.78370	47.70	AVG	1.06	48.76	54.00	-5.24

- 註：1. 標記“---”表發射之訊號太弱而儀器無法量測。
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。
3. 標記“*”表示為本地震盪頻率及其諧波
4. 量測不準確度: $\pm 4.1\text{dB}(1\text{GHz} \leq f < 18\text{GHz})$
 $\pm 4.4\text{dB}(18\text{GHz} \leq f \leq 40\text{GHz})$

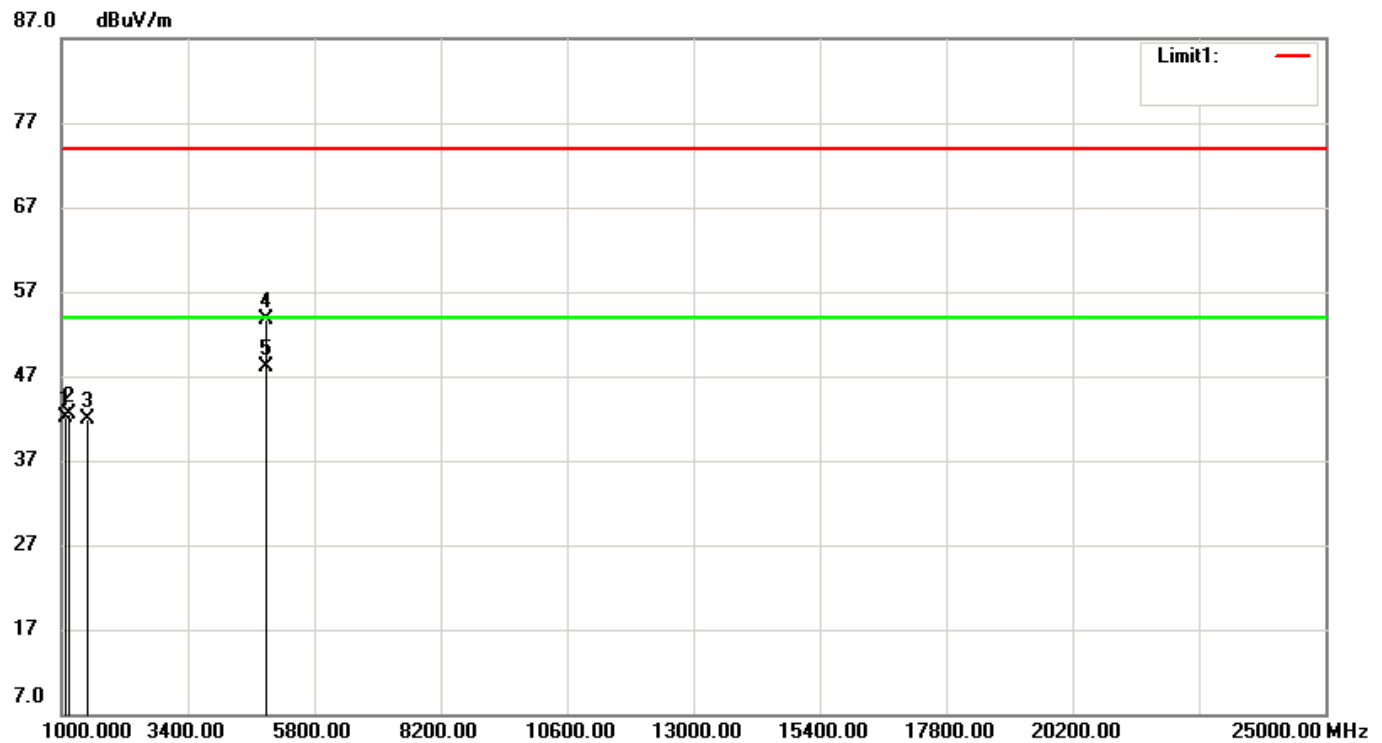
b. Channel Mid

操作模式：發射接收

基本波頻率：2437 MHz

File: 19-07-MAS-008_b #35 Date 2019/8/21 Temperature: 24 °C

Site: RE02-EMC B1- N2 Humidity: 59 %



Condition: NCC_Above1G_Pk
 EUT: Wireless File Transmitter
 Model: DS586194
 Test Mode: TX_Y
 Note: CH MID

Polarization: Horizontal
 Distance: 3m
 Operator: Phillip

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1074.03840	51.90	peak	-9.79	42.11	74.00	-31.89
2	1125.64100	52.08	peak	-9.59	42.49	74.00	-31.51
3	1498.07700	51.24	peak	-8.28	41.95	74.00	-32.05
4	4874.00800	52.61	peak	1.17	53.78	74.00	-20.22
5	4874.00800	46.85	AVG	1.17	48.02	54.00	-5.98

註：1. 標記“---”表發射之訊號太弱而儀器無法量測。

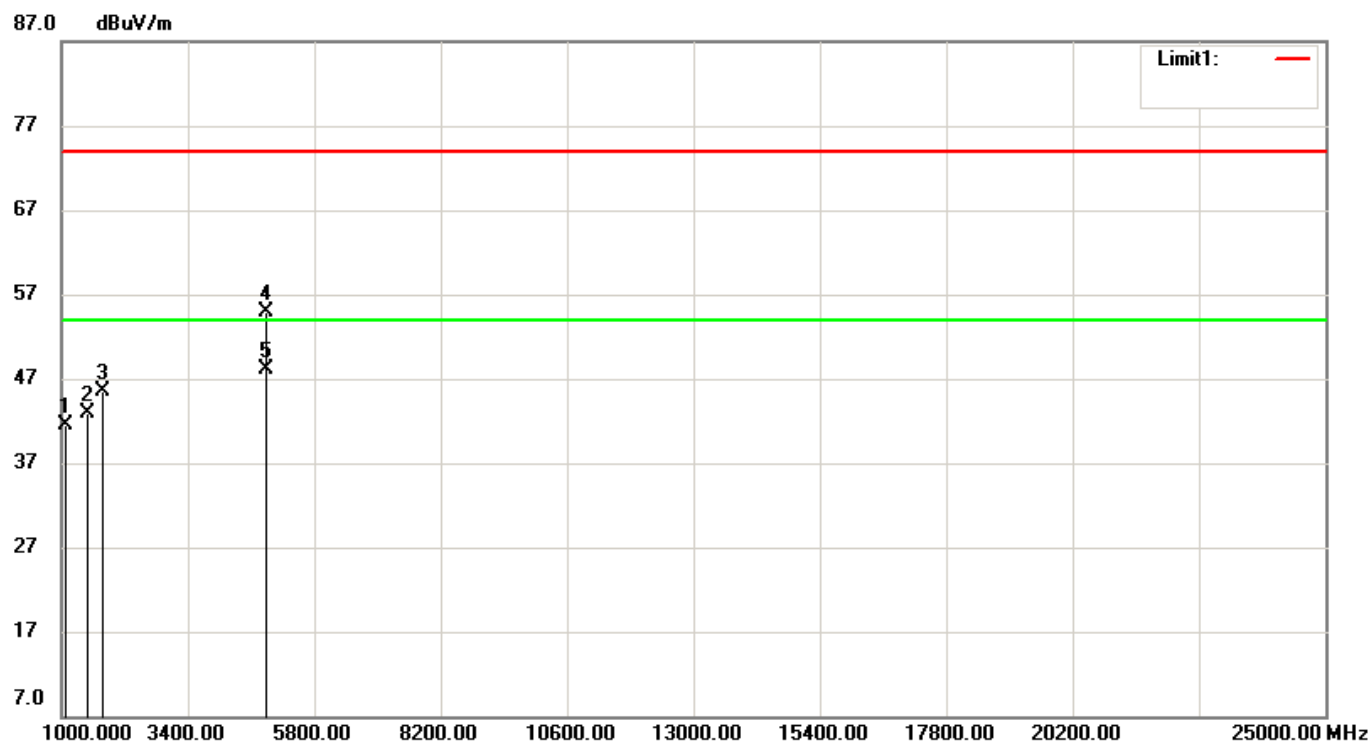
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。

3. 標記“*”表示為本地震盪頻率及其諧波

4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

操作模式：發射接收
基本波頻率：2437 MHz

File: 19-07-MAS-008_b #36 Date 2019/8/21 Temperature: 24 °C
Site: RE02-EMC B1- N2 Humidity: 59 %



Condition: NCC_Above1G_Pk Polarization: Vertical
EUT: Wireless File Transmitter Distance: 3m
Model: DS586194
Test Mode: TX_Y Operator: Phillip
Note: CH MID

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1074.03840	51.34	peak	-9.79	41.55	74.00	-32.45
2	1493.58970	51.22	peak	-8.30	42.92	74.00	-31.08
3	1758.33330	51.43	peak	-5.95	45.48	74.00	-28.52
4	4874.12820	53.80	peak	1.17	54.97	74.00	-19.03
5	4874.12820	46.89	AVG	1.17	48.06	54.00	-5.94

註：1. 標記“---”表發射之訊號太弱而儀器無法量測。

2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。

3. 標記“*”表示為本地震盪頻率及其諧波

4. 量測不準確度: $\pm 4.1\text{dB}(1\text{GHz} \leq f < 18\text{GHz})$
 $\pm 4.4\text{dB}(18\text{GHz} \leq f \leq 40\text{GHz})$

c. Channel High

操作模式：發射接收

基本波頻率：2462 MHz

File: 19-07-MAS-008_b

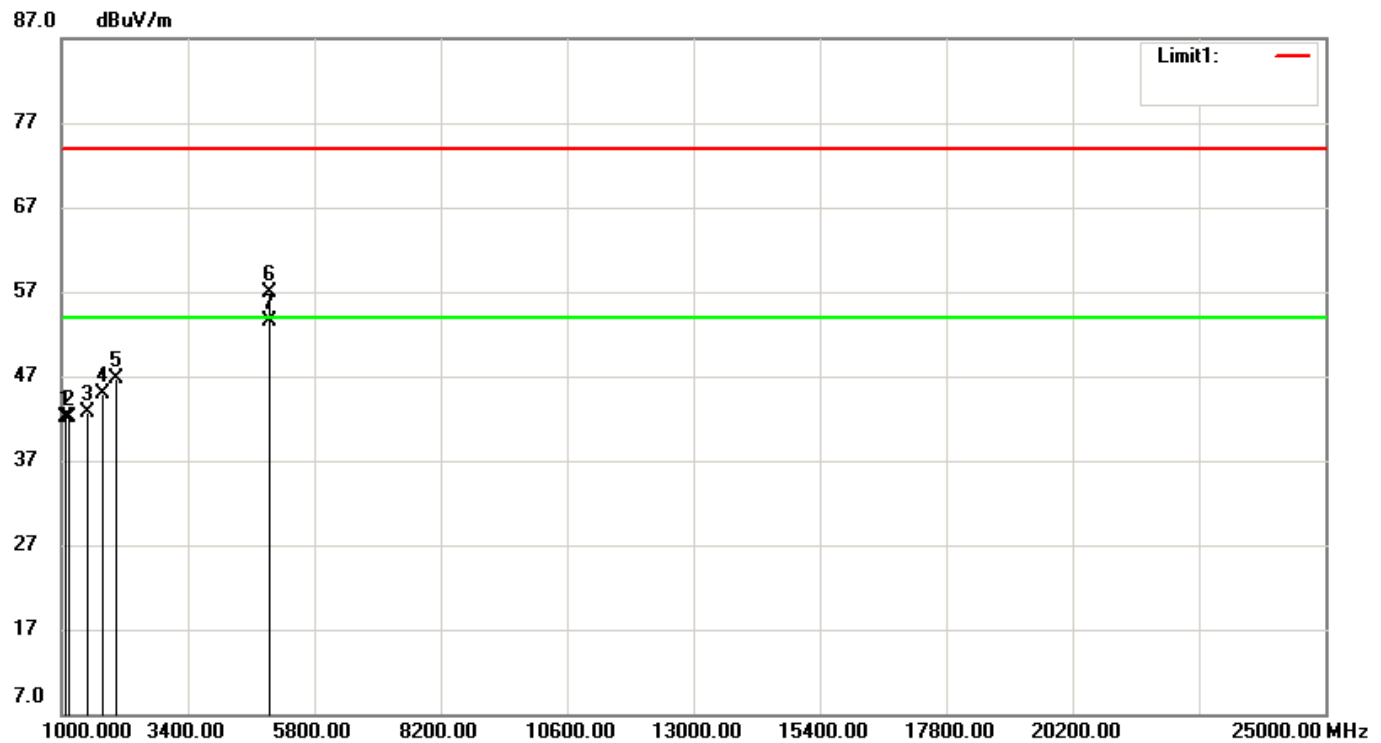
#45

Date 2019/8/21

Temperature: 24 °C

Site: RE02-EMC B1- N2

Humidity: 59 %



Condition: NCC_Above1G_Pk
 EUT: Wireless File Transmitter
 Model: DS586194
 Test Mode: TX_Y
 Note: CH HIGH

Polarization: Horizontal
 Distance: 3m
 Operator: Phillip

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1074.03840	51.88	peak	-9.79	42.09	74.00	-31.91
2	1125.64100	51.60	peak	-9.59	42.01	74.00	-31.99
3	1495.83330	50.98	peak	-8.29	42.69	74.00	-31.31
4	1758.33330	50.76	peak	-5.95	44.81	74.00	-29.19
5	2025.32050	50.29	peak	-3.68	46.61	74.00	-27.39
6	4923.95200	55.56	peak	1.28	56.84	74.00	-17.16
7	4923.95200	52.00	AVG	1.28	53.28	54.00	-0.72

註：1. 標記“---”表發射之訊號太弱而儀器無法量測。

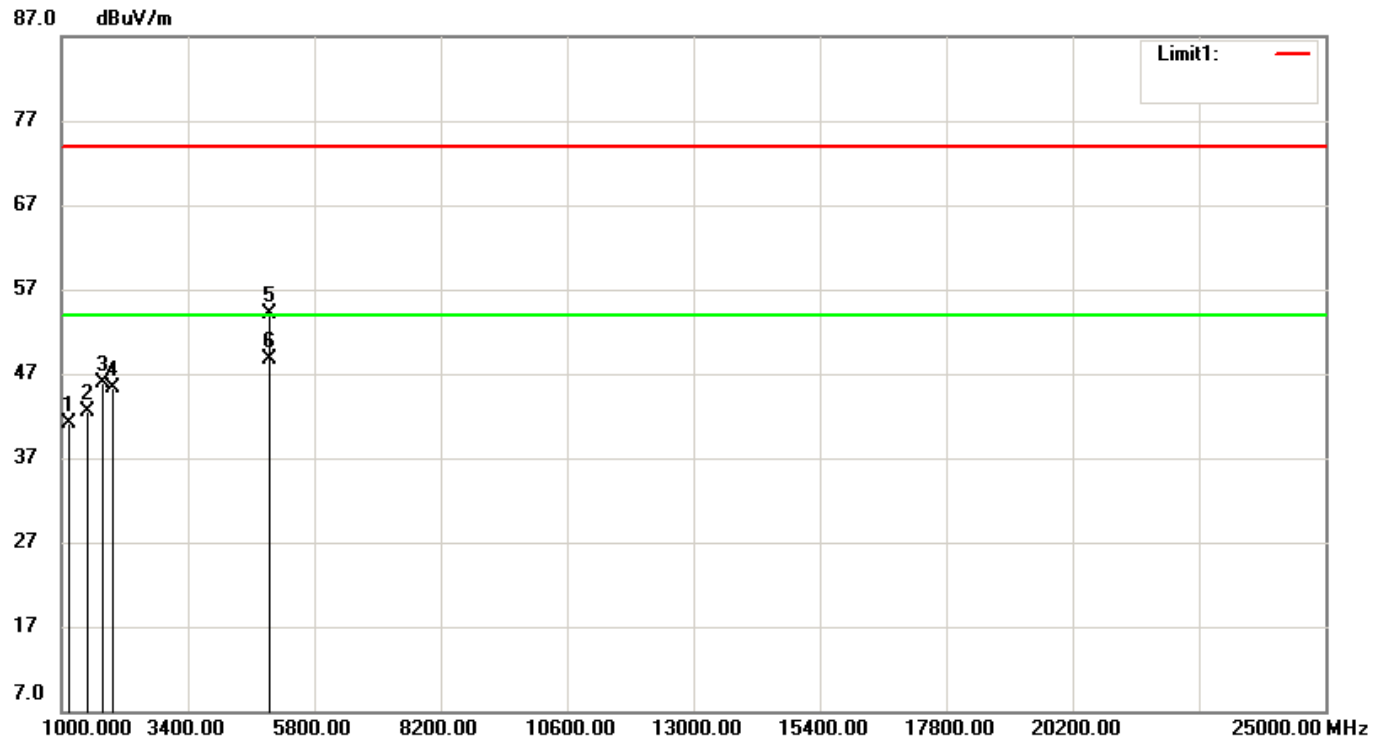
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。

3. 標記“*”表示為本地震盪頻率及其諧波

4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

操作模式：發射接收
基本波頻率：2462 MHz

File: 19-07-MAS-008_b #46 Date 2019/8/21 Temperature: 24 °C
Site: RE02-EMC B1- N2 Humidity: 59 %



Condition: NCC_Above1G_Pk Polarization: Vertical
EUT: Wireless File Transmitter Distance: 3m
Model: DS586194
Test Mode: TX_Y Operator: Phillip
Note: CH HIGH

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1125.64100	50.64	peak	-9.59	41.05	74.00	-32.95
2	1495.83330	50.82	peak	-8.29	42.53	74.00	-31.47
3	1765.06410	51.88	peak	-5.88	46.00	74.00	-28.00
4	1926.60250	49.82	peak	-4.42	45.40	74.00	-28.60
5	4924.07210	52.81	peak	1.28	54.09	74.00	-19.91
6	4924.07210	47.50	AVG	1.28	48.78	54.00	-5.22

註：1. 標記“---”表發射之訊號太弱而儀器無法量測。

2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。

3. 標記“*”表示為本地震盪頻率及其諧波

4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

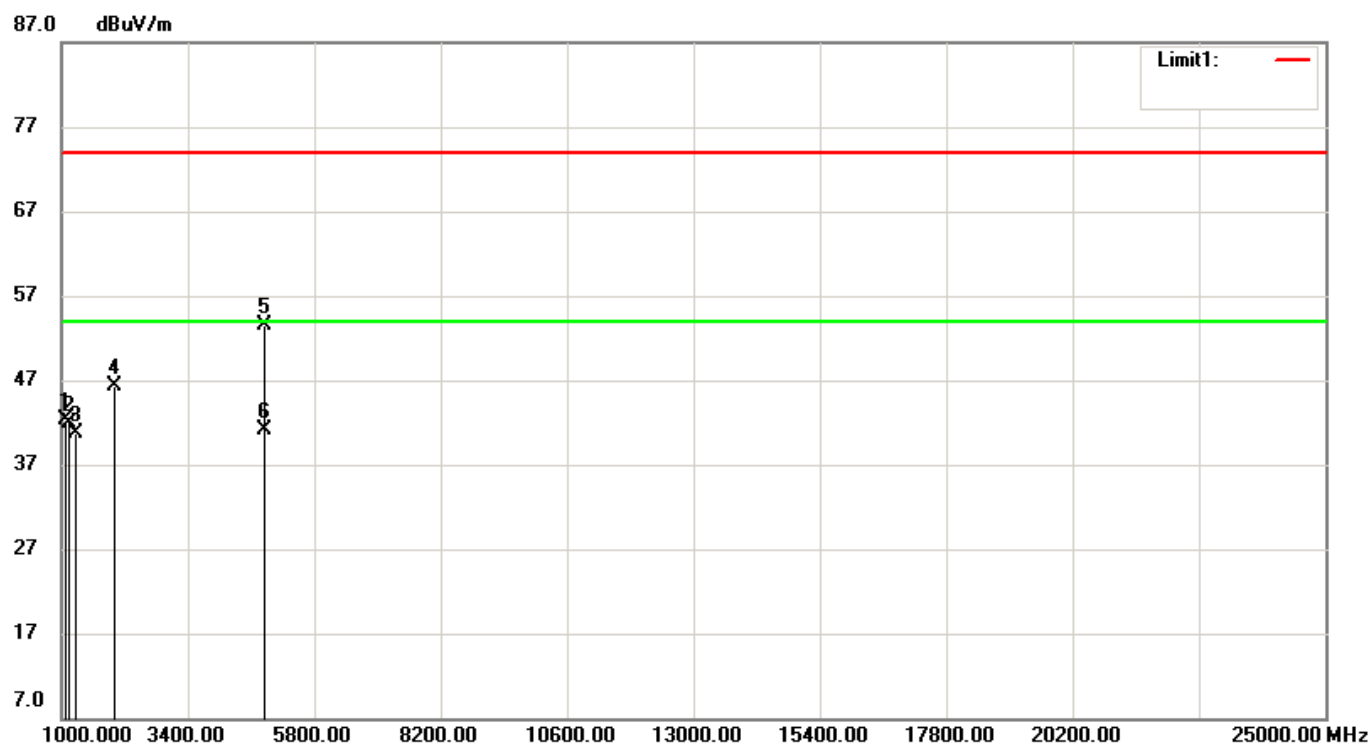
10.5.2.2 調變技術: IEEE 802.11g

a. Channel Low

操作模式：發射接收

基本波頻率：2412 MHz

File: 19-07-MAS-008_G #26 Date 2019/8/21 Temperature: 24 °C
 Site RE02-EMC B1- N2 Humidity: 59 %
 :



Condition: NCC_Above1G_Pk Polarization: Horizontal
 EUT: Wireless File Transmitter Distance: 3m
 Model: DS586194
 Test Mode: TX_Y Operator: Phillip
 Note: CH LOW

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1074.03840	52.11	peak	-9.79	42.32	74.00	-31.68
2	1123.39740	51.52	peak	-9.61	41.91	74.00	-32.09
3	1260.25640	49.87	peak	-9.12	40.75	74.00	-33.25
4	1975.96150	50.21	peak	-3.98	46.23	74.00	-27.77
5	4824.40060	52.40	peak	1.06	53.46	74.00	-20.54
6	4824.40060	39.97	AVG	1.06	41.03	54.00	-12.97

註：1. 標記“---”表發射之訊號太弱而儀器無法量測。

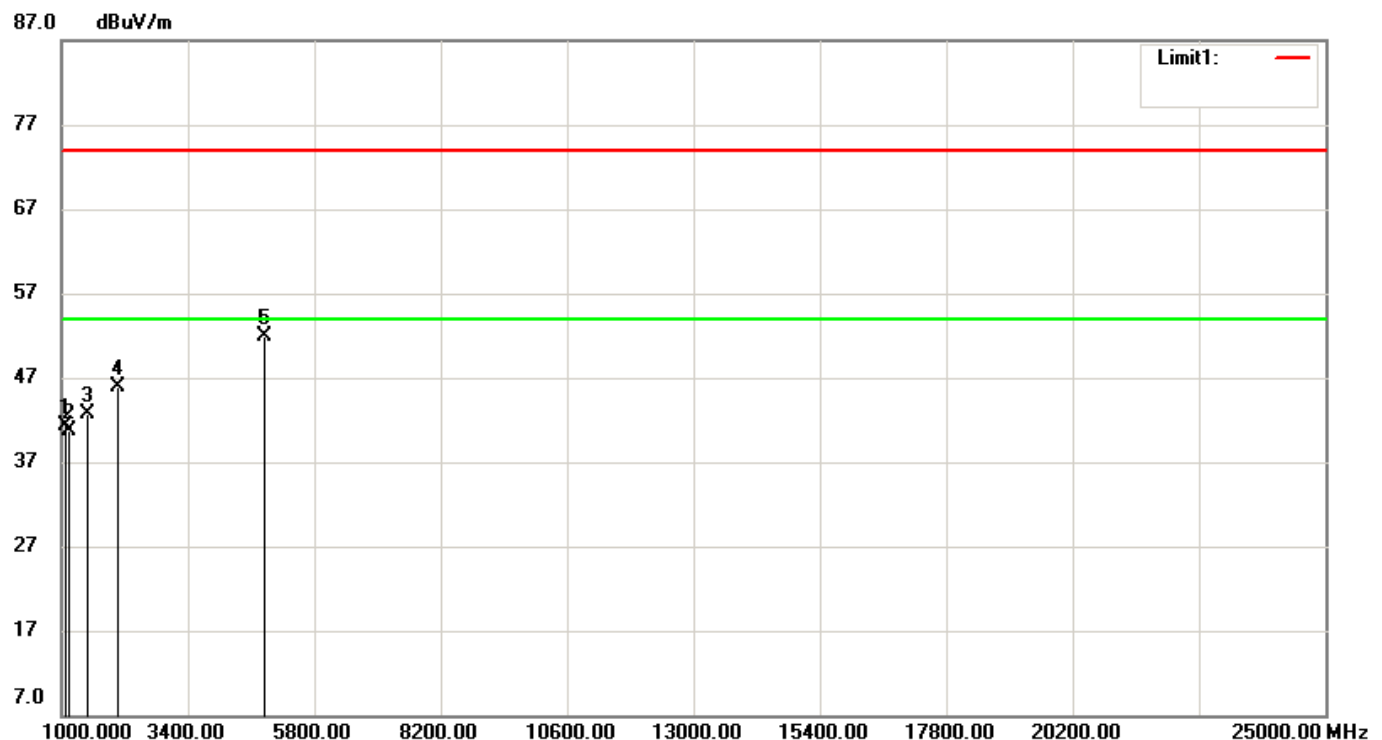
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。

3. 標記“*”表示為本地震盪頻率及其諧波

4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

操作模式：發射接收
基本波頻率：2412 MHz

File: 19-07-MAS-008_G #27 Date 2019/8/21 Temperature: 24 °C
Site RE02-EMC B1- N2 : Humidity: 59 %



Condition: NCC_Above1G_Pk Polarization: Vertical
EUT: Wireless File Transmitter Distance: 3m
Model: DS586194
Test Mode: TX_Y Operator: Phillip
Note: CH LOW

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1074.03840	51.14	peak	-9.79	41.35	74.00	-32.65
2	1125.64100	50.33	peak	-9.59	40.74	74.00	-33.26
3	1495.83330	50.98	peak	-8.29	42.69	74.00	-31.31
4	2076.92300	49.52	peak	-3.55	45.97	74.00	-28.03
5	4827.60580	50.86	peak	1.07	51.93	74.00	-22.07

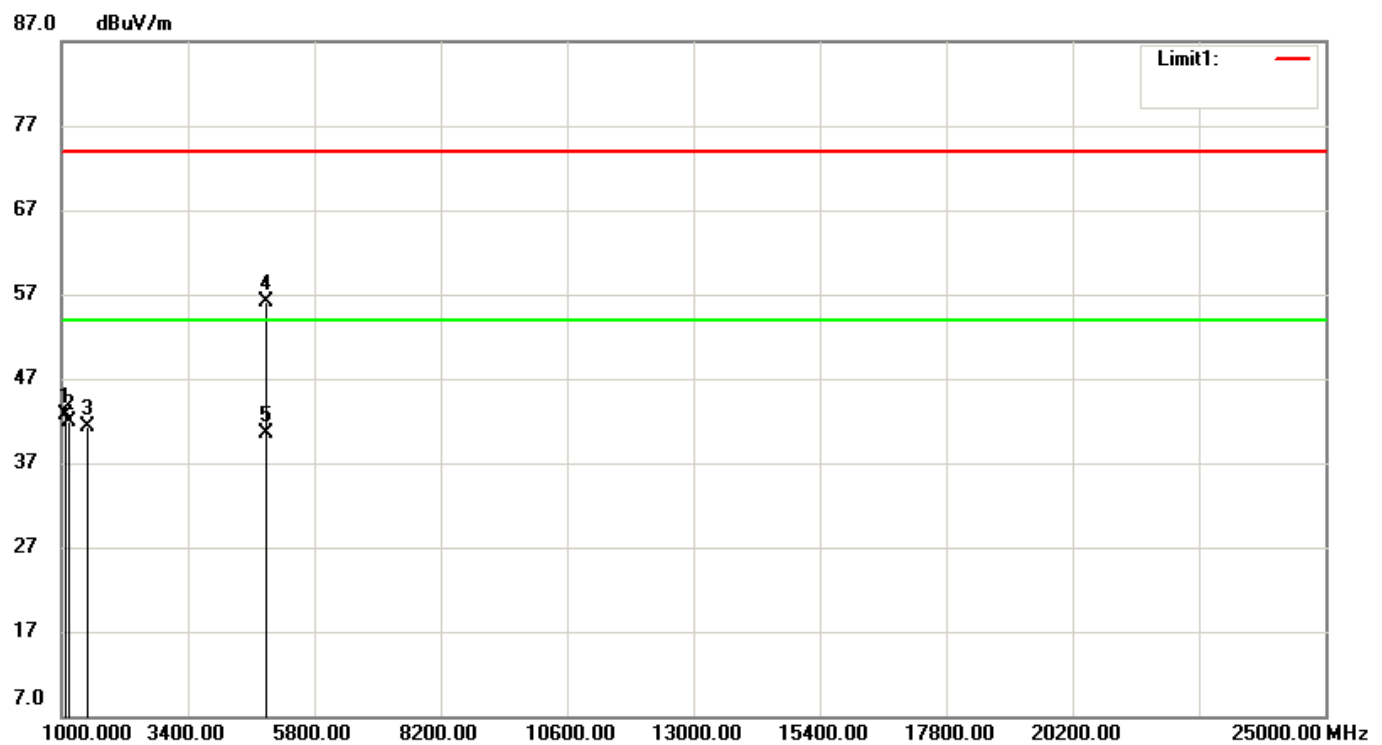
- 註：1. 標記“---”表發射之訊號太弱而儀器無法量測。
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。
3. 標記“*”表示為本地震盪頻率及其諧波
4. 量測不準確度: $\pm 4.1\text{dB}(1\text{GHz} \leq f < 18\text{GHz})$
 $\pm 4.4\text{dB}(18\text{GHz} \leq f \leq 40\text{GHz})$

b. Channel Mid

操作模式：發射接收

基本波頻率：2437 MHz

File: 19-07-MAS-008_G #36 Date 2019/8/21 Temperature: 24 °C

Site RE02-EMC B1- N2 Humidity: 59 %
:

Condition: NCC_Above1G_Pk
EUT: Wireless File Transmitter
Model: DS586194
Test Mode: TX_Y
Note: CH MID

Polarization: Horizontal
Distance: 3m
Operator: Phillip

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1074.03840	52.42	peak	-9.79	42.63	74.00	-31.37
2	1123.39740	51.42	peak	-9.61	41.81	74.00	-32.19
3	1493.58970	49.54	peak	-8.30	41.24	74.00	-32.76
4	4873.51920	54.94	peak	1.17	56.11	74.00	-17.89
5	4873.51920	39.39	AVG	1.17	40.56	54.00	-13.44

註：1. 標記“---”表發射之訊號太弱而儀器無法量測。

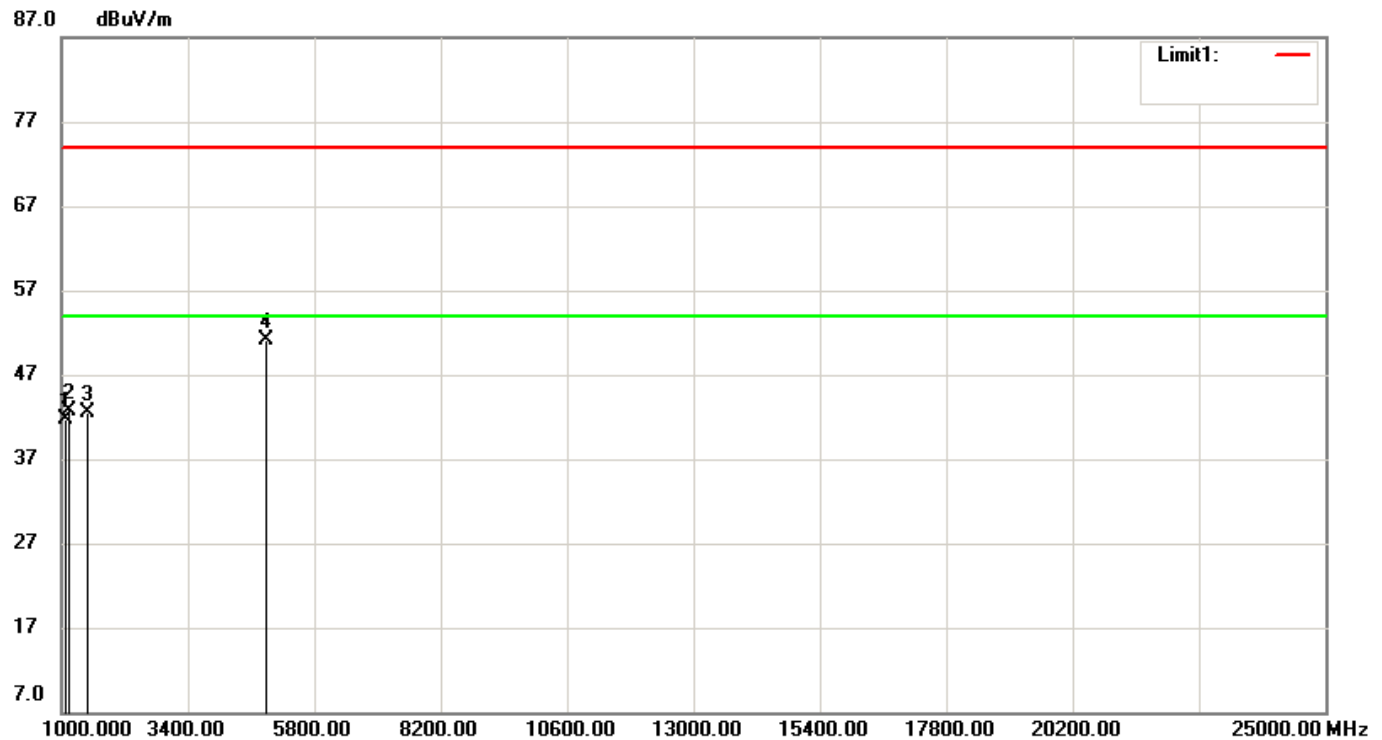
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。

3. 標記“*”表示為本地震盪頻率及其諧波

4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

操作模式：發射接收
基本波頻率：2437 MHz

File: 19-07-MAS-008_G #37 Date 2019/8/21 Temperature: 24 °C
Site RE02-EMC B1- N2 : Humidity: 59 %



Condition: NCC_Above1G_Pk Polarization: Vertical
EUT: Wireless File Transmitter Distance: 3m
Model: DS586194
Test Mode: TX_Y Operator: Phillip
Note: CH MID

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1074.03840	51.41	peak	-9.79	41.62	74.00	-32.38
2	1125.64100	52.20	peak	-9.59	42.61	74.00	-31.39
3	1498.07700	50.72	peak	-8.28	42.44	74.00	-31.56
4	4876.88760	49.92	peak	1.18	51.10	74.00	-22.90

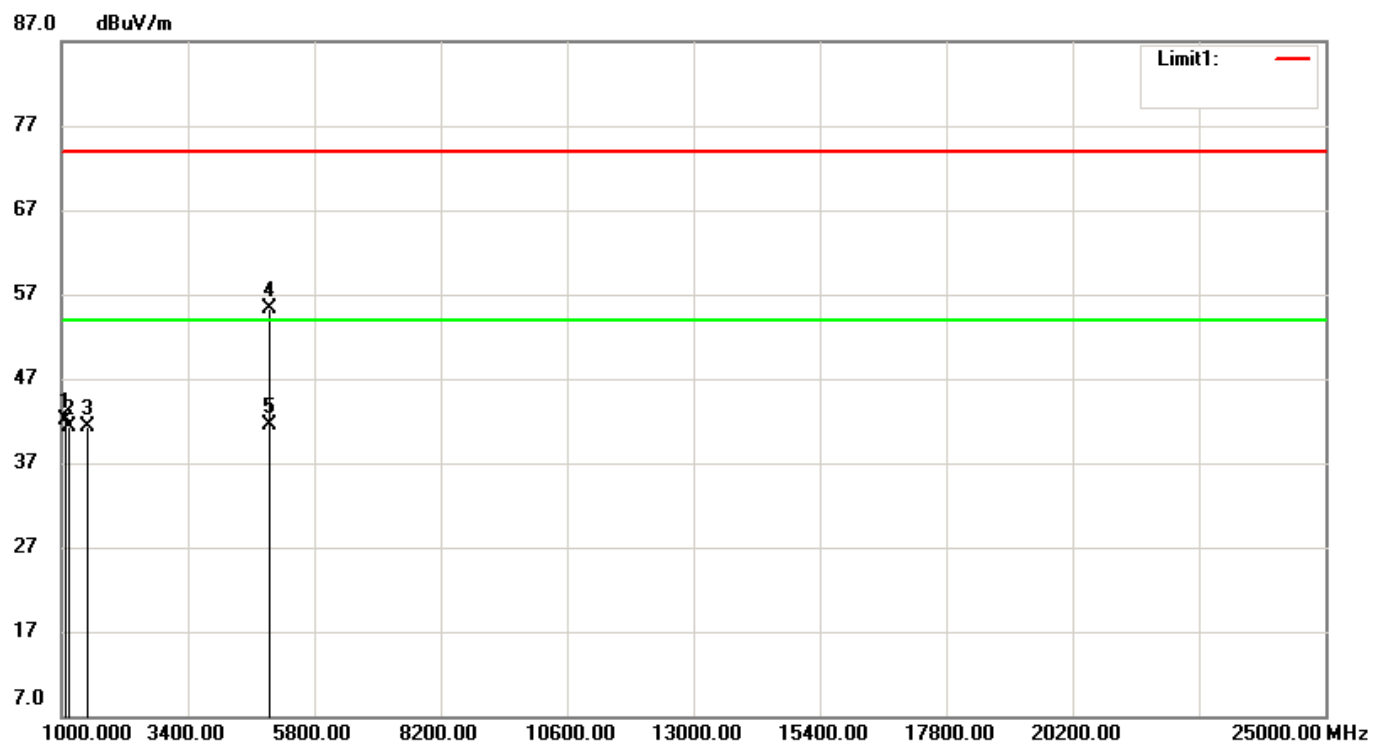
- 註：1. 標記“---”表發射之訊號太弱而儀器無法量測。
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。
3. 標記“*”表示為本地震盪頻率及其諧波
4. 量測不準確度: $\pm 4.1\text{dB}(1\text{GHz} \leq f < 18\text{GHz})$
 $\pm 4.4\text{dB}(18\text{GHz} \leq f \leq 40\text{GHz})$

c. Channel High

操作模式：發射接收

基本波頻率：2462 MHz

File: 19-07-MAS-008_G #46 Date 2019/8/21 Temperature: 24 °C

Site RE02-EMC B1- N2 Humidity: 59 %
:

Condition: NCC_Above1G_Pk
 EUT: Wireless File Transmitter
 Model: DS586194
 Test Mode: TX_Y
 Note: CH HIGH

Polarization: Horizontal
 Distance: 3m
 Operator: Phillip

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1074.03840	51.91	peak	-9.79	42.12	74.00	-31.88
2	1123.39740	50.94	peak	-9.61	41.33	74.00	-32.67
3	1493.58970	49.63	peak	-8.30	41.33	74.00	-32.67
4	4923.83970	54.11	peak	1.28	55.39	74.00	-18.61
5	4923.83970	40.18	AVG	1.28	41.46	54.00	-12.54

註：1. 標記“---”表發射之訊號太弱而儀器無法量測。

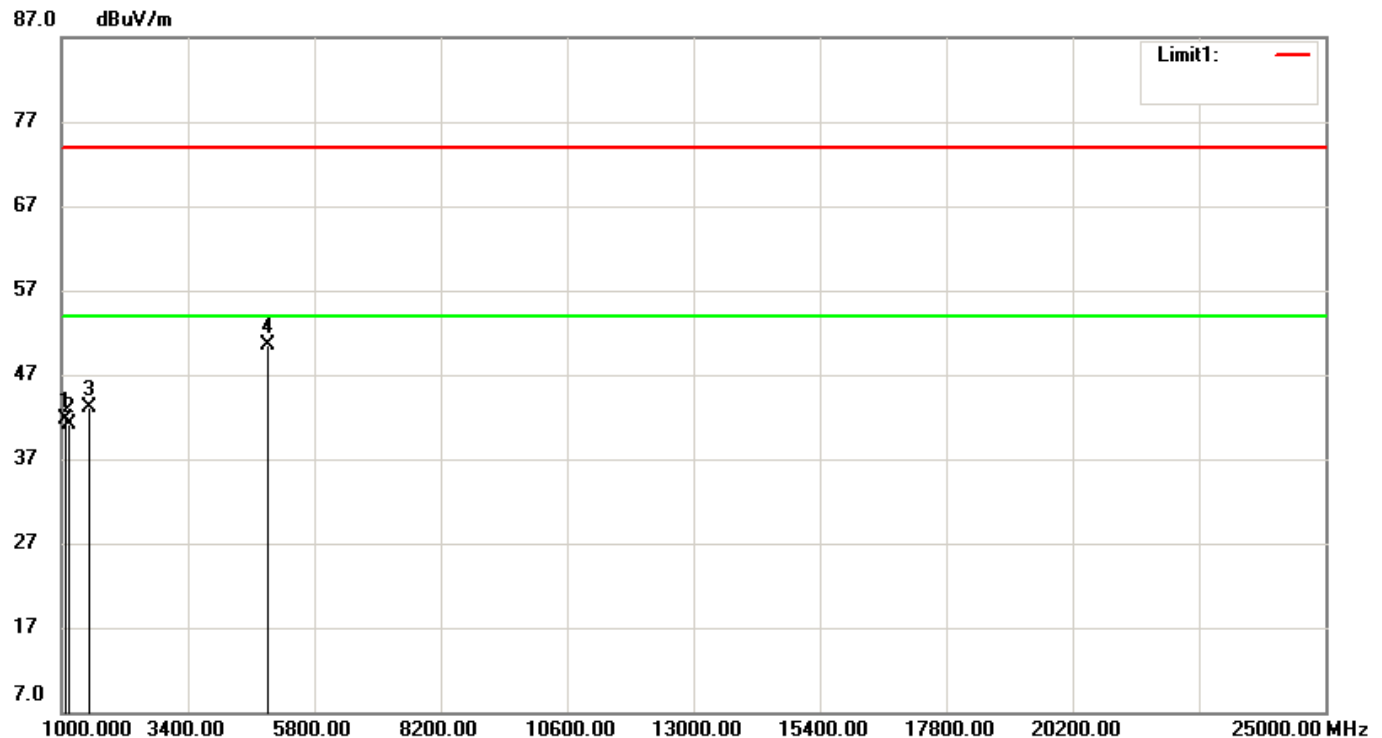
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。

3. 標記“*”表示為本地震盪頻率及其諧波

4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

操作模式：發射接收
基本波頻率：2462 MHz

File: 19-07-MAS-008_G #47 Date 2019/8/21 Temperature: 24 °C
Site RE02-EMC B1- N2 Humidity: 59 %
:



Condition: NCC_Above1G_Pk Polarization: Vertical
EUT: Wireless File Transmitter Distance: 3m
Model: DS586194
Test Mode: TX_Y Operator: Phillip
Note: CH HIGH

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1074.03840	51.49	peak	-9.79	41.70	74.00	-32.30
2	1125.64100	50.79	peak	-9.59	41.20	74.00	-32.80
3	1500.32050	51.29	peak	-8.28	43.01	74.00	-30.99
4	4922.07700	49.31	peak	1.28	50.59	74.00	-23.41

註：1. 標記“---”表發射之訊號太弱而儀器無法量測。

2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。

3. 標記“*”表示為本地震盪頻率及其諧波

4. 量測不準確度: $\pm 4.1\text{dB}(1\text{GHz} \leq f < 18\text{GHz})$
 $\pm 4.4\text{dB}(18\text{GHz} \leq f \leq 40\text{GHz})$

10.5.2.3 調變技術: IEEE 802.11n HT20

a. Channel Low

操作模式：發射接收

基本波頻率：2412 MHz

File: 19-07-MAS-008_N20

#31

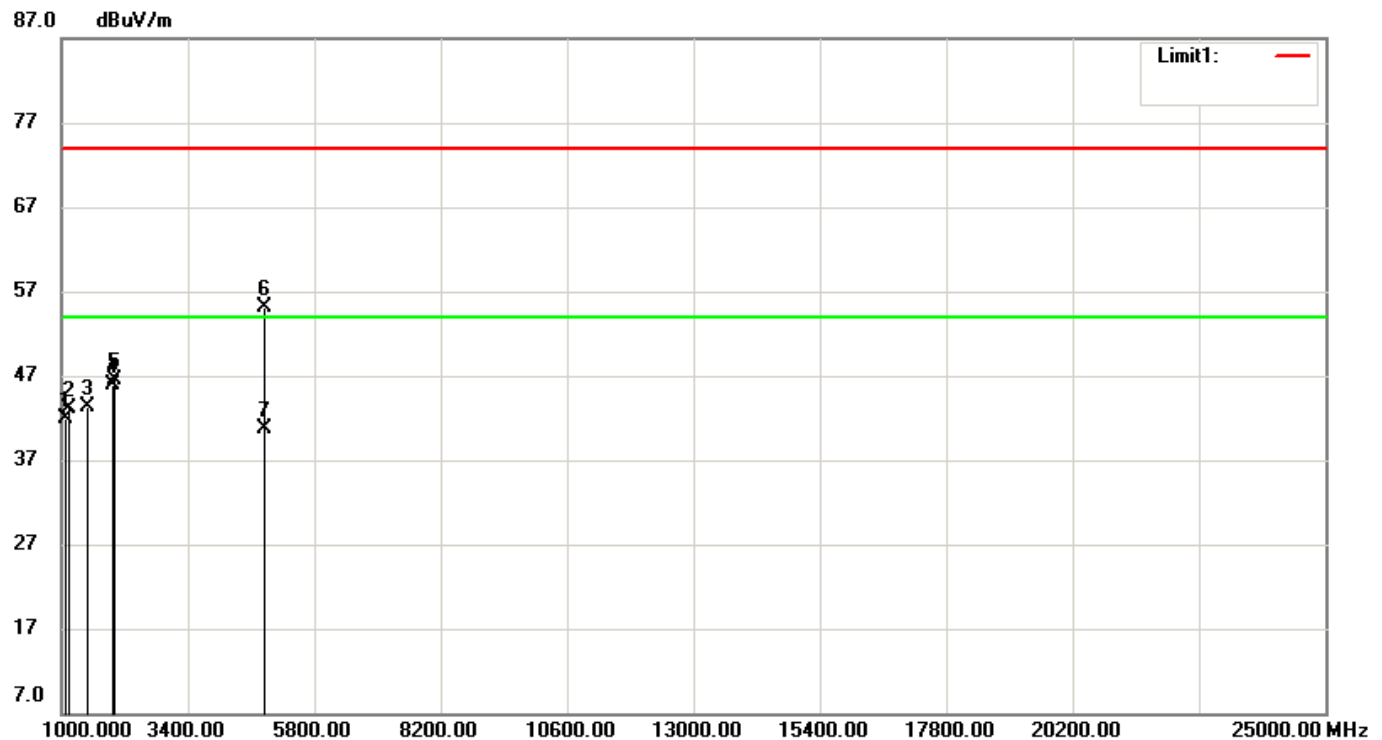
Date 2019/8/20

Temperature: 23 °C

:

Site: RE02-EMC B1- N2

Humidity: 60 %



Condition: NCC_Above1G_Pk
 EUT: Wireless File Transmitter
 Model: DS586194
 Test Mode: TX_Y
 Note: CH LOW

Polarization: Horizontal
 Distance: 3m
 Operator: Phillip

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1074.03840	51.66	peak	-9.79	41.87	74.00	-32.13
2	1123.39740	52.76	peak	-9.61	43.15	74.00	-30.85
3	1493.58970	51.55	peak	-8.30	43.25	74.00	-30.75
4	1924.35900	50.43	peak	-4.44	45.99	74.00	-28.01
5	1975.96150	50.49	peak	-3.98	46.51	74.00	-27.49
6	4819.11220	54.07	peak	1.06	55.13	74.00	-18.87
7	4819.11220	39.70	AVG	1.06	40.76	54.00	-13.24

註：1. 標記“---”表發射之訊號太弱而儀器無法量測。

2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。

3. 標記“*”表示為本地震盪頻率及其諧波

4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)

$\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

操作模式：發射接收
基本波頻率：2412 MHz

File: 19-07-MAS-008_N20

#32

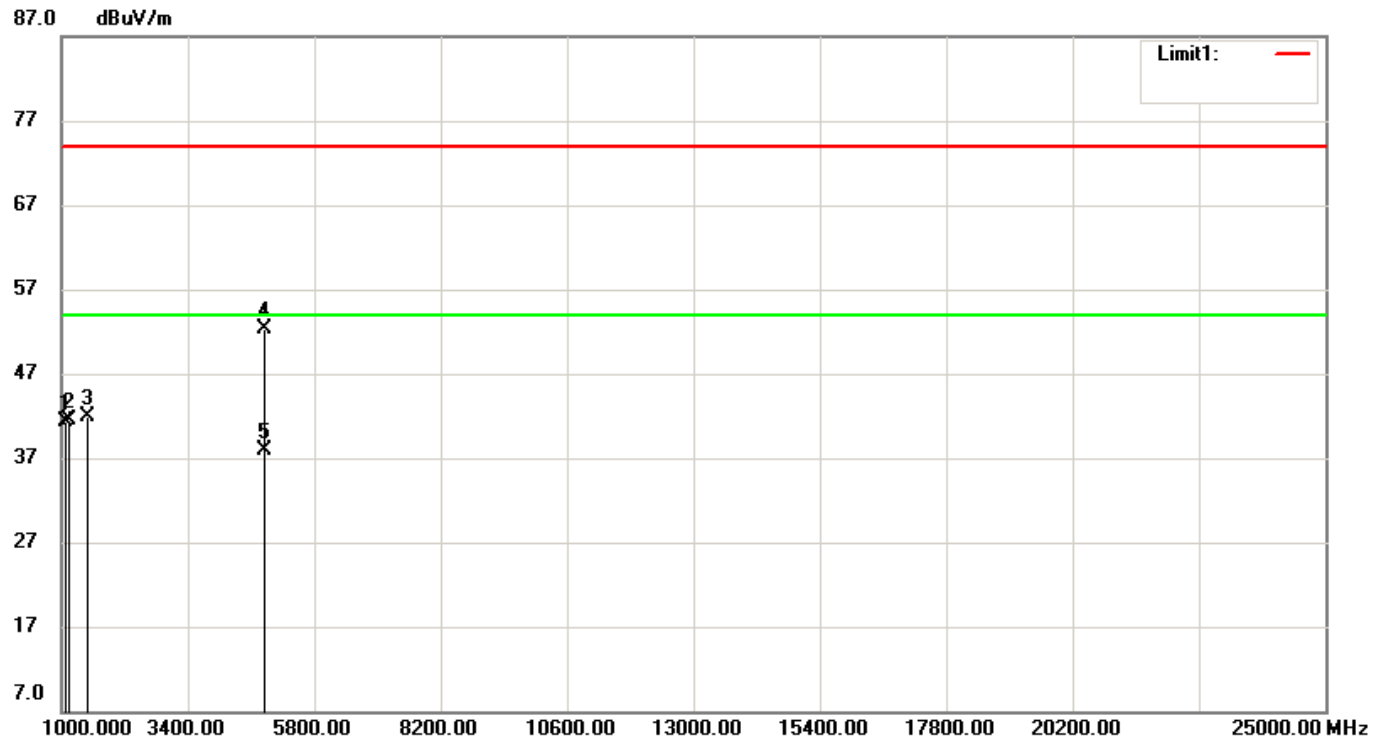
Date 2019/8/20

Temperature: 23 °C

:

Site: RE02-EMC B1- N2

Humidity: 60 %



Condition: NCC_Above1G_Pk
EUT: Wireless File Transmitter
Model: DS586194
Test Mode: TX_Y
Note: CH LOW

Polarization: Vertical
Distance: 3m
Operator: Phillip

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1074.03840	51.15	peak	-9.79	41.36	74.00	-32.64
2	1125.64100	51.16	peak	-9.59	41.57	74.00	-32.43
3	1495.83330	50.14	peak	-8.29	41.85	74.00	-32.15
4	4821.75640	51.20	peak	1.06	52.26	74.00	-21.74
5	4821.75640	36.90	AVG	1.06	37.96	54.00	-16.04

註：1. 標記“---”表發射之訊號太弱而儀器無法量測。

2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。

3. 標記“*”表示為本地震盪頻率及其諧波

4. 量測不準確度: $\pm 4.1\text{dB}(1\text{GHz} \leq f < 18\text{GHz})$
 $\pm 4.4\text{dB}(18\text{GHz} \leq f \leq 40\text{GHz})$

b. Channel Mid

操作模式：發射接收

基本波頻率：2437 MHz

File: 19-07-MAS-008_N20

#41

Date 2019/8/20

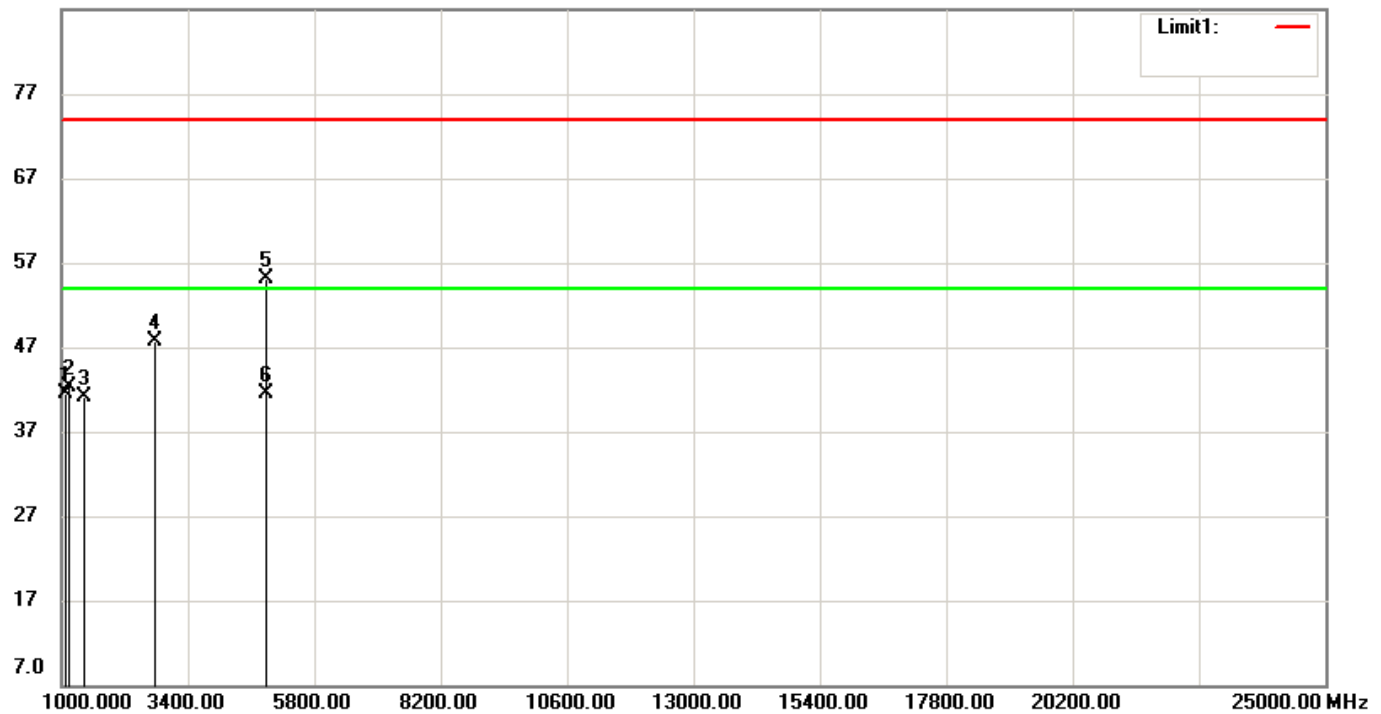
Temperature: 23 °C

:

Site: RE02-EMC B1- N2

Humidity: 60 %

87.0 dBuV/m



Condition: NCC_Above1G_Pk
 EUT: Wireless File Transmitter
 Model: DS586194
 Test Mode: TX_Y
 Note: CH MID

Polarization: Horizontal
 Distance: 3m
 Operator: Phillip

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1074.03840	51.26	peak	-9.79	41.47	74.00	-32.53
2	1123.39740	52.01	peak	-9.61	42.40	74.00	-31.60
3	1399.35900	49.82	peak	-8.63	41.19	74.00	-32.81
4	2757.02800	49.87	peak	-2.23	47.64	74.00	-26.36
5	4873.35900	53.88	peak	1.17	55.05	74.00	-18.95
6	4873.35900	40.37	AVG	1.17	41.54	54.00	-12.46

註：1. 標記“---”表發射之訊號太弱而儀器無法量測。

2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。

3. 標記“*”表示為本地震盪頻率及其諧波

4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

操作模式：發射接收
基本波頻率：2437 MHz

File: 19-07-MAS-008_N20

#42

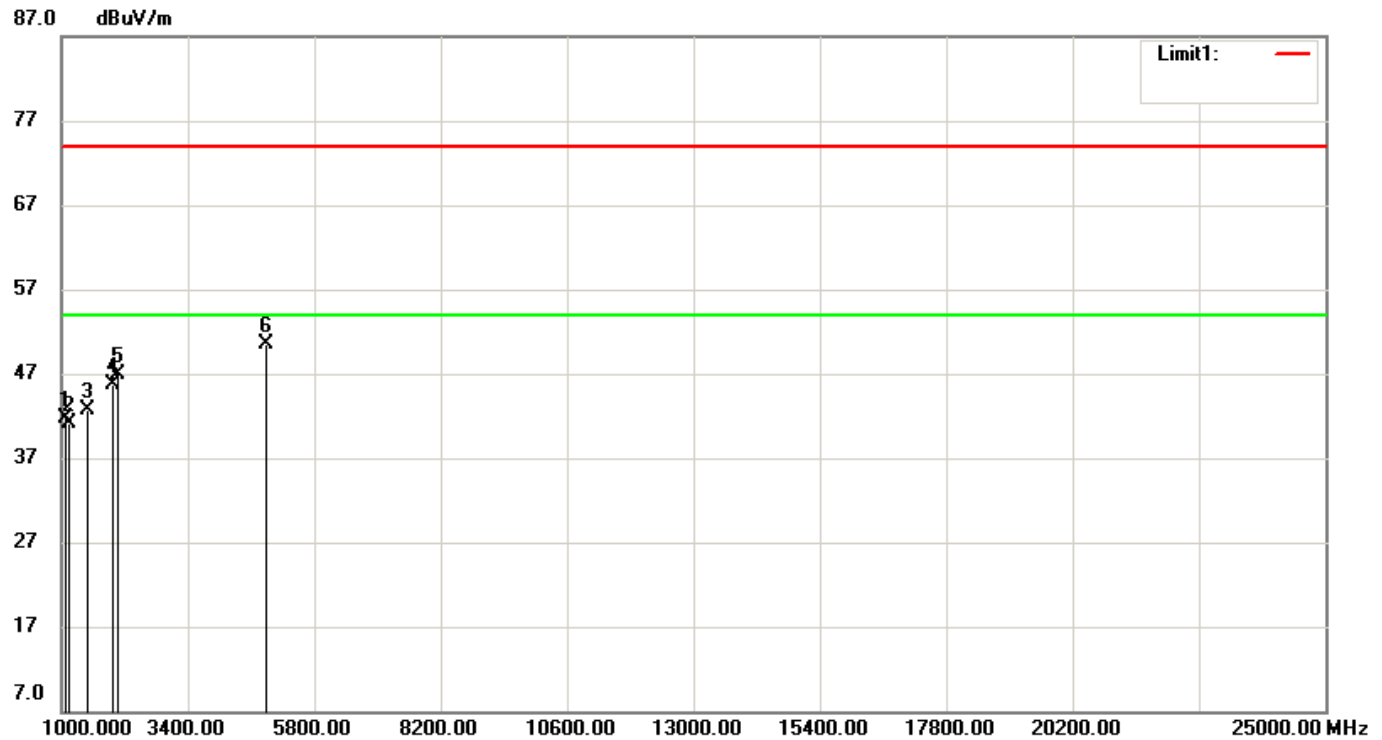
Date 2019/8/20

Temperature: 23 °C

:

Site: RE02-EMC B1- N2

Humidity: 60 %



Condition: NCC_Above1G_Pk
EUT: Wireless File Transmitter
Model: DS586194
Test Mode: TX_Y
Note: CH MID

Polarization: Vertical
Distance: 3m
Operator: Phillip

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1074.03840	51.56	peak	-9.79	41.77	74.00	-32.23
2	1125.64100	50.71	peak	-9.59	41.12	74.00	-32.88
3	1495.83330	51.03	peak	-8.29	42.74	74.00	-31.26
4	1924.35900	50.17	peak	-4.44	45.73	74.00	-28.27
5	2076.92300	50.50	peak	-3.55	46.95	74.00	-27.05
6	4873.19870	49.33	peak	1.17	50.50	74.00	-23.50

註：1. 標記“---”表發射之訊號太弱而儀器無法量測。

2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。

3. 標記“*”表示為本地震盪頻率及其諧波

4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

c. Channel High

操作模式：發射接收

基本波頻率：2462 MHz

File: 19-07-MAS-008_N20

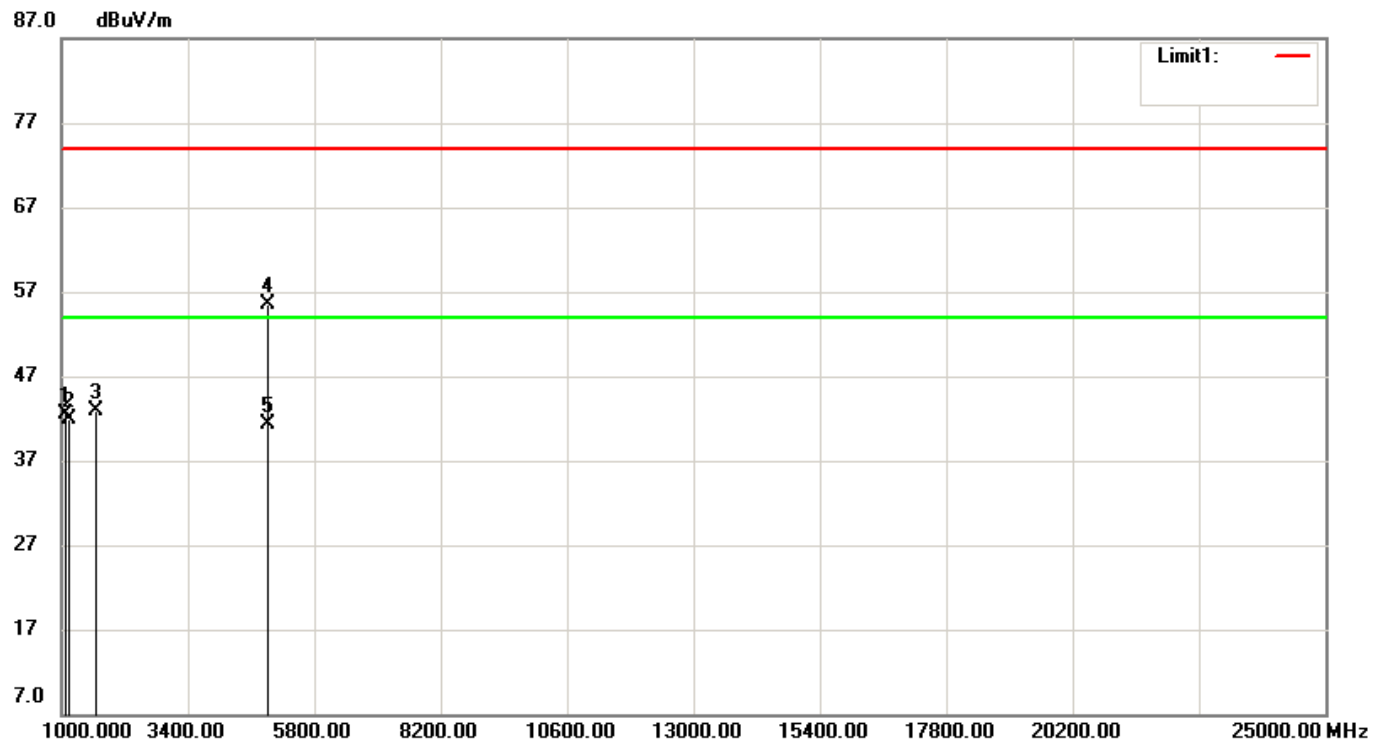
#51

Date 2019/8/20

Temperature: 23 °C

Site: RE02-EMC B1- N2

Humidity: 60 %



Condition: NCC_Above1G_Pk
EUT: Wireless File Transmitter
Model: DS586194
Test Mode: TX_Y
Note: CH HIGH

Polarization: Horizontal
Distance: 3m
Operator: Phillip

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1074.03840	52.35	peak	-9.79	42.56	74.00	-31.44
2	1123.39740	51.50	peak	-9.61	41.89	74.00	-32.11
3	1643.91020	49.92	peak	-6.98	42.94	74.00	-31.06
4	4922.71800	54.23	peak	1.28	55.51	74.00	-18.49
5	4922.71800	39.95	AVG	1.28	41.23	54.00	-12.77

註：1. 標記“---”表發射之訊號太弱而儀器無法量測。

2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。

3. 標記“*”表示為本地震盪頻率及其諧波

4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

操作模式：發射接收
基本波頻率：2462 MHz

File: 19-07-MAS-008_N20

#52

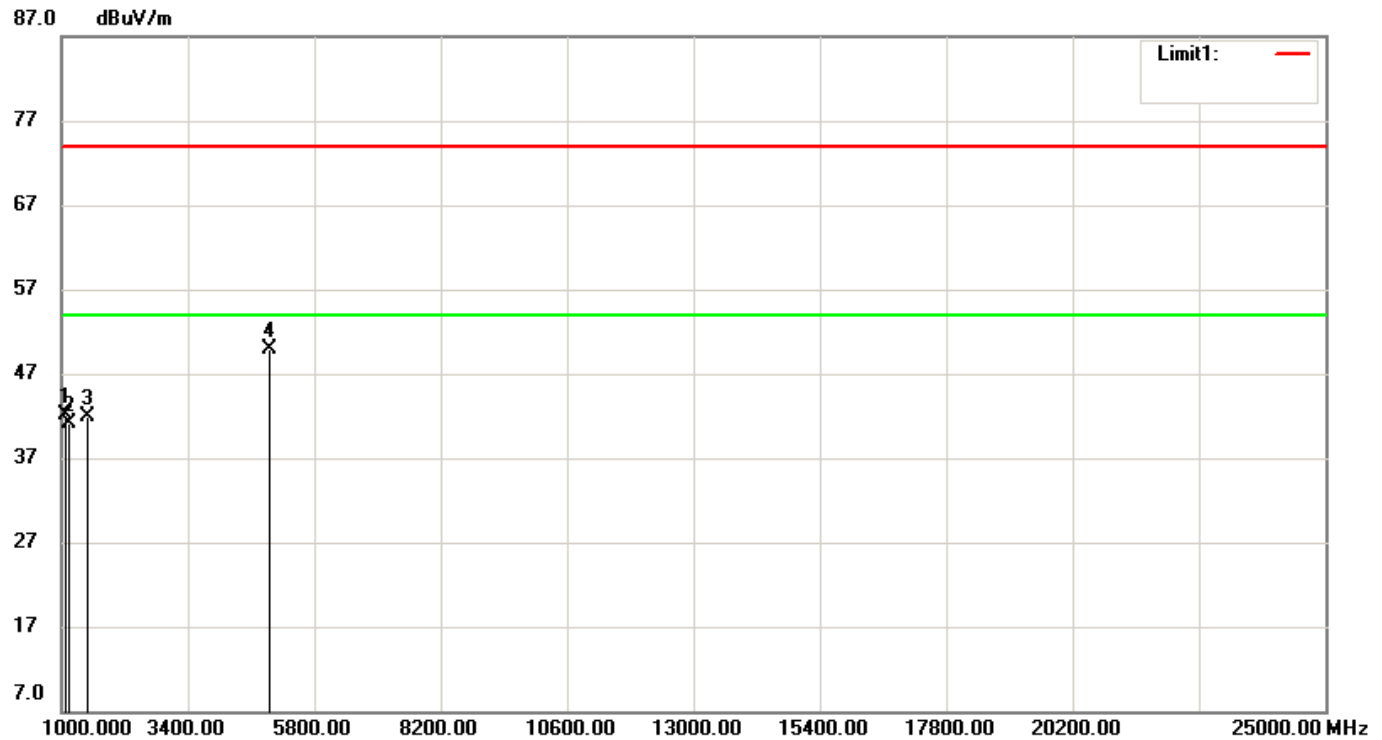
Date 2019/8/20

Temperature: 23 °C

:

Site: RE02-EMC B1- N2

Humidity: 60 %



Condition: NCC_Above1G_Pk
EUT: Wireless File Transmitter
Model: DS586194
Test Mode: TX_Y
Note: CH HIGH

Polarization: Vertical
Distance: 3m
Operator: Phillip

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1074.03840	51.94	peak	-9.79	42.15	74.00	-31.85
2	1123.39740	50.66	peak	-9.61	41.05	74.00	-32.95
3	1493.58970	50.19	peak	-8.30	41.89	74.00	-32.11
4	4928.48720	48.59	peak	1.29	49.88	74.00	-24.12

註：1. 標記“---”表發射之訊號太弱而儀器無法量測。

2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。

3. 標記“*”表示為本地震盪頻率及其諧波

4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

10.5.2.4 調變技術: IEEE 802.11n HT40

a. Channel Low

操作模式：發射接收

基本波頻率：2422 MHz

File: 19-07-MAS-008_N40

#9

Date

2019/8/20

Temperature:

23 °C

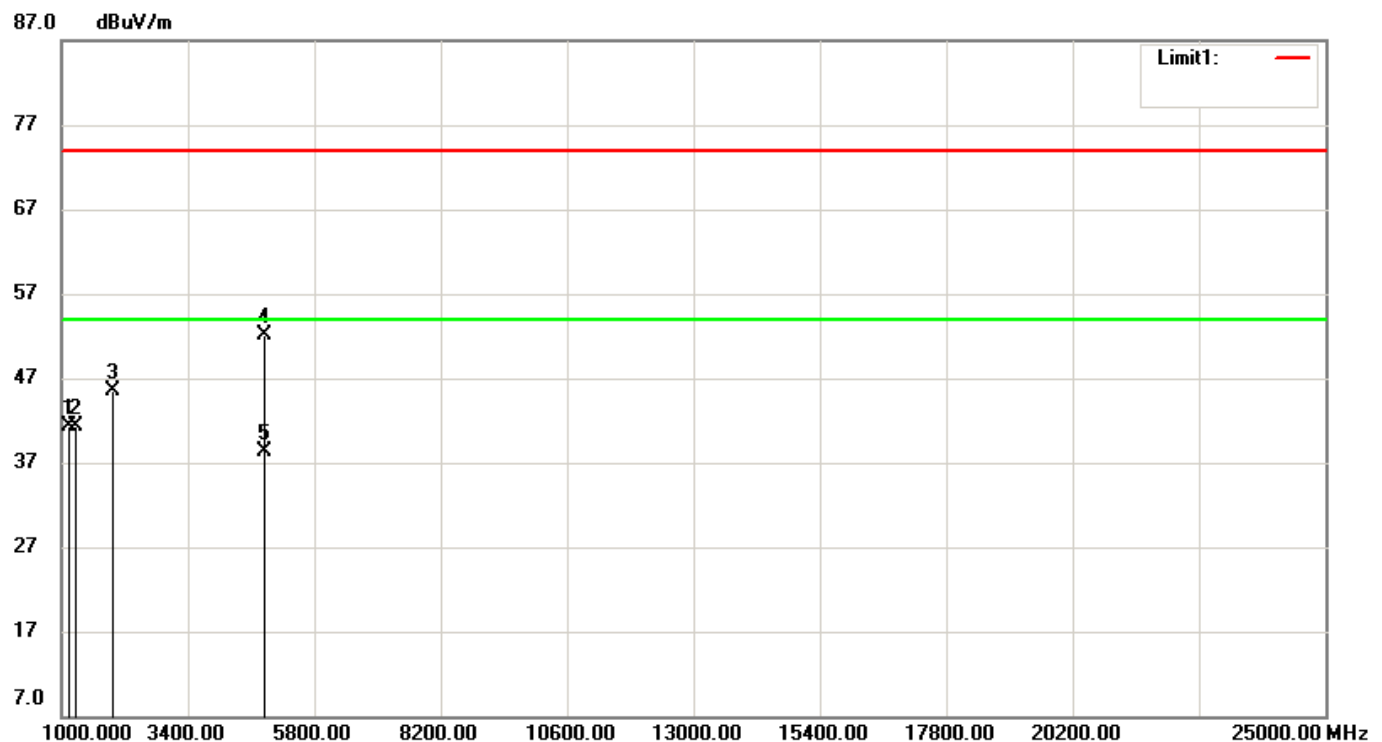
:

Site RE02-EMC B1- N2

Humidity:

60 %

:



Condition: NCC_Above1G_Pk
 EUT: Wireless File Transmitter
 Model: DS586194
 Test Mode: TX_Y
 Note: CH LOW

Polarization: Horizontal
 Distance: 3m
 Operator: Phillip

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1123.39740	50.84	peak	-9.61	41.23	74.00	-32.77
2	1260.25640	50.46	peak	-9.12	41.34	74.00	-32.66
3	1926.60250	50.02	peak	-4.42	45.60	74.00	-28.40
4	4845.12180	51.01	peak	1.10	52.11	74.00	-21.89
5	4845.12180	37.30	AVG	1.10	38.40	54.00	-15.60

註：1. 標記“---”表發射之訊號太弱而儀器無法量測。

2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。

3. 標記“*”表示為本地震盪頻率及其諧波

4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

操作模式：發射接收
基本波頻率：2422 MHz

File: 19-07-MAS-008_N40

#10

Date 2019/8/20

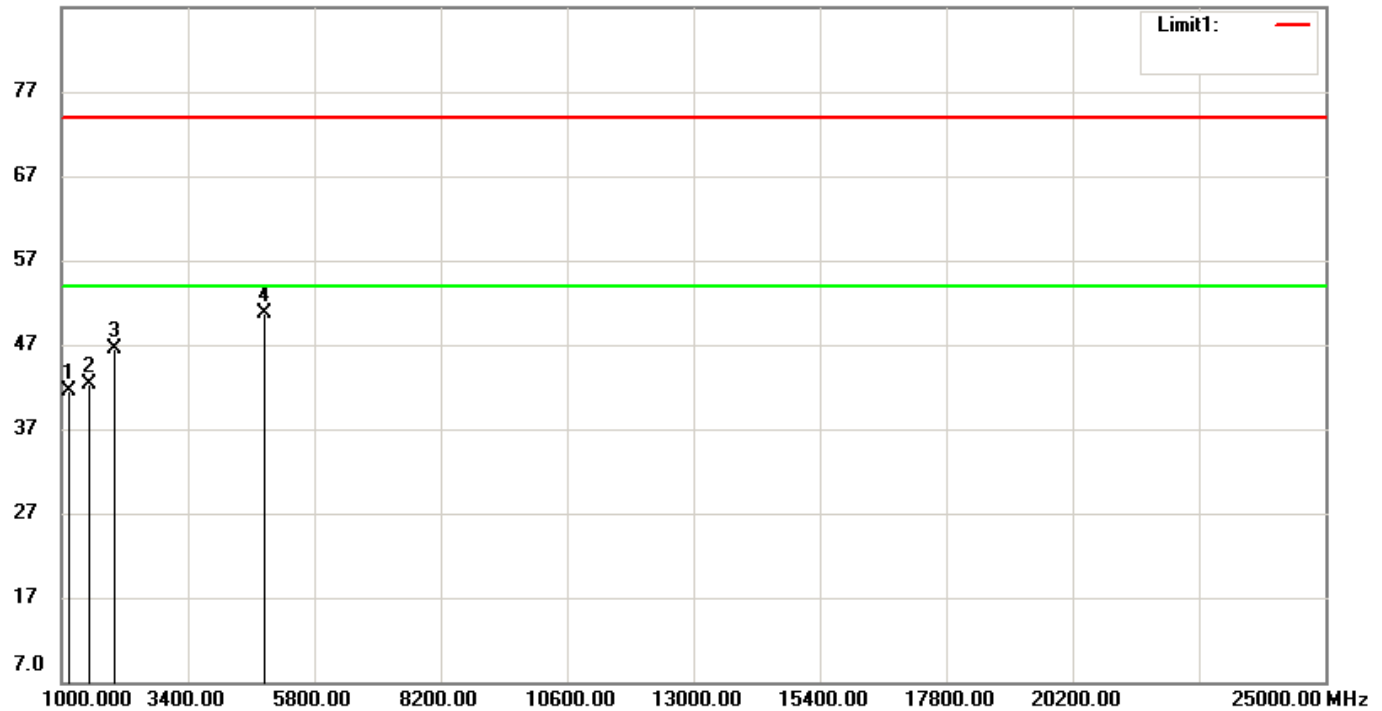
Temperature: 23 °C

:

Site: RE02-EMC B1- N2

Humidity: 60 %

87.0 dBuV/m



Condition: NCC_Above1G_Pk
EUT: Wireless File Transmitter
Model: DS586194
Test Mode: TX_Y
Note: CH LOW

Polarization: Vertical
Distance: 3m
Operator: Phillip

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1125.64100	51.05	peak	-9.59	41.46	74.00	-32.54
2	1500.32050	50.50	peak	-8.28	42.22	74.00	-31.78
3	1975.96150	50.58	peak	-3.98	46.60	74.00	-27.40
4	4841.67630	49.65	peak	1.10	50.75	74.00	-23.25

註：1. 標記“---”表發射之訊號太弱而儀器無法量測。

2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。

3. 標記“*”表示為本地震盪頻率及其諧波

4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

b. Channel Mid

操作模式：發射接收

基本波頻率：2437 MHz

File: 19-07-MAS-008_N40

#19

Date 2019/8/20

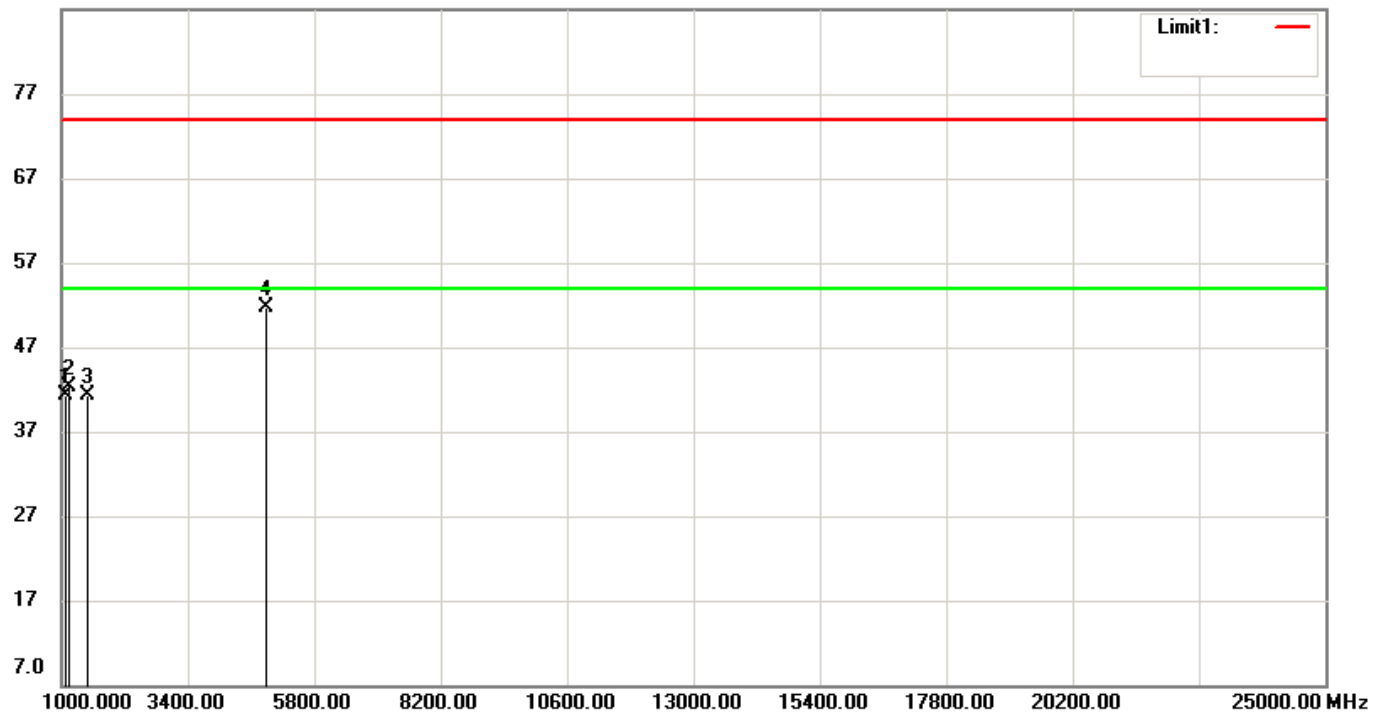
Temperature: 23 °C

:

Site: RE02-EMC B1- N2

Humidity: 60 %

87.0 dBuV/m



Condition: NCC_Above1G_Pk
 EUT: Wireless File Transmitter
 Model: DS586194
 Test Mode: TX_Y
 Note: CH MID

Polarization: Horizontal
 Distance: 3m
 Operator: Phillip

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1074.03840	51.03	peak	-9.79	41.24	74.00	-32.76
2	1125.64100	51.95	peak	-9.59	42.36	74.00	-31.64
3	1498.07700	49.66	peak	-8.28	41.38	74.00	-32.62
4	4874.64100	50.53	peak	1.17	51.70	74.00	-22.30

註：1. 標記“---”表發射之訊號太弱而儀器無法量測。

2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。

3. 標記“*”表示為本地震盪頻率及其諧波

4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

操作模式：發射接收
基本波頻率：2437 MHz

File: 19-07-MAS-008_N40

#20

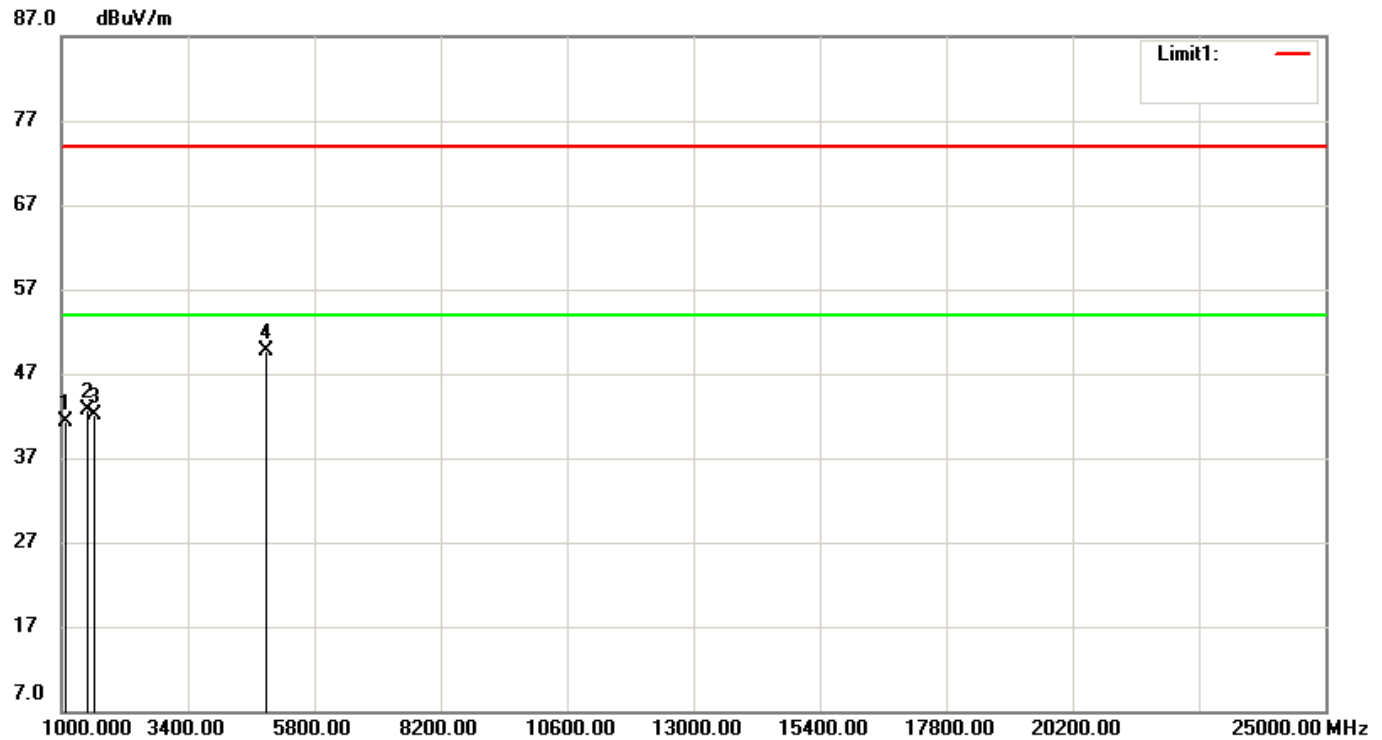
Date 2019/8/20

Temperature: 23 °C

:

Site: RE02-EMC B1- N2

Humidity: 60 %



Condition: NCC_Above1G_Pk
EUT: Wireless File Transmitter
Model: DS586194
Test Mode: TX_Y
Note: CH MID

Polarization: Vertical
Distance: 3m
Operator: Phillip

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1074.03840	51.01	peak	-9.79	41.22	74.00	-32.78
2	1498.07700	51.05	peak	-8.28	42.77	74.00	-31.23
3	1599.03840	49.53	peak	-7.39	42.14	74.00	-31.86
4	4874.30130	48.53	peak	1.17	49.70	74.00	-24.30

註：1. 標記“---”表發射之訊號太弱而儀器無法量測。

2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。

3. 標記“*”表示為本地震盪頻率及其諧波

4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

c. Channel High

操作模式：發射接收

基本波頻率：2452 MHz

File: 19-07-MAS-008_N40

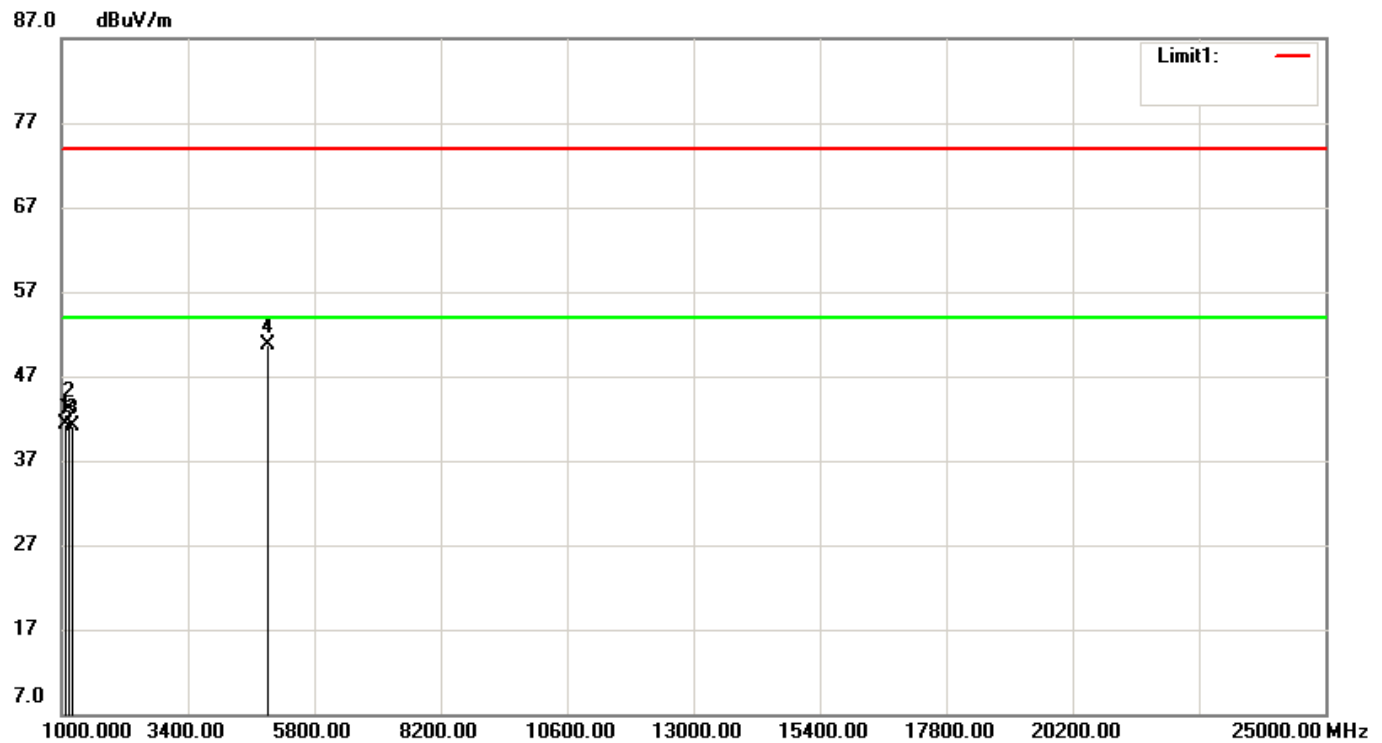
#29

Date 2019/8/20

Temperature: 23 °C

Site: RE02-EMC B1- N2

Humidity: 60 %



Condition: NCC_Above1G_Pk
 EUT: Wireless File Transmitter
 Model: DS586194
 Test Mode: TX_Y
 Note: CH HIGH

Polarization: Horizontal
 Distance: 3m
 Operator: Phillip

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1074.03840	51.01	peak	-9.79	41.22	74.00	-32.78
2	1125.64100	52.77	peak	-9.59	43.18	74.00	-30.82
3	1175.00000	50.59	peak	-9.43	41.16	74.00	-32.84
4	4906.24350	49.38	peak	1.24	50.62	74.00	-23.38

註：1. 標記“---”表發射之訊號太弱而儀器無法量測。

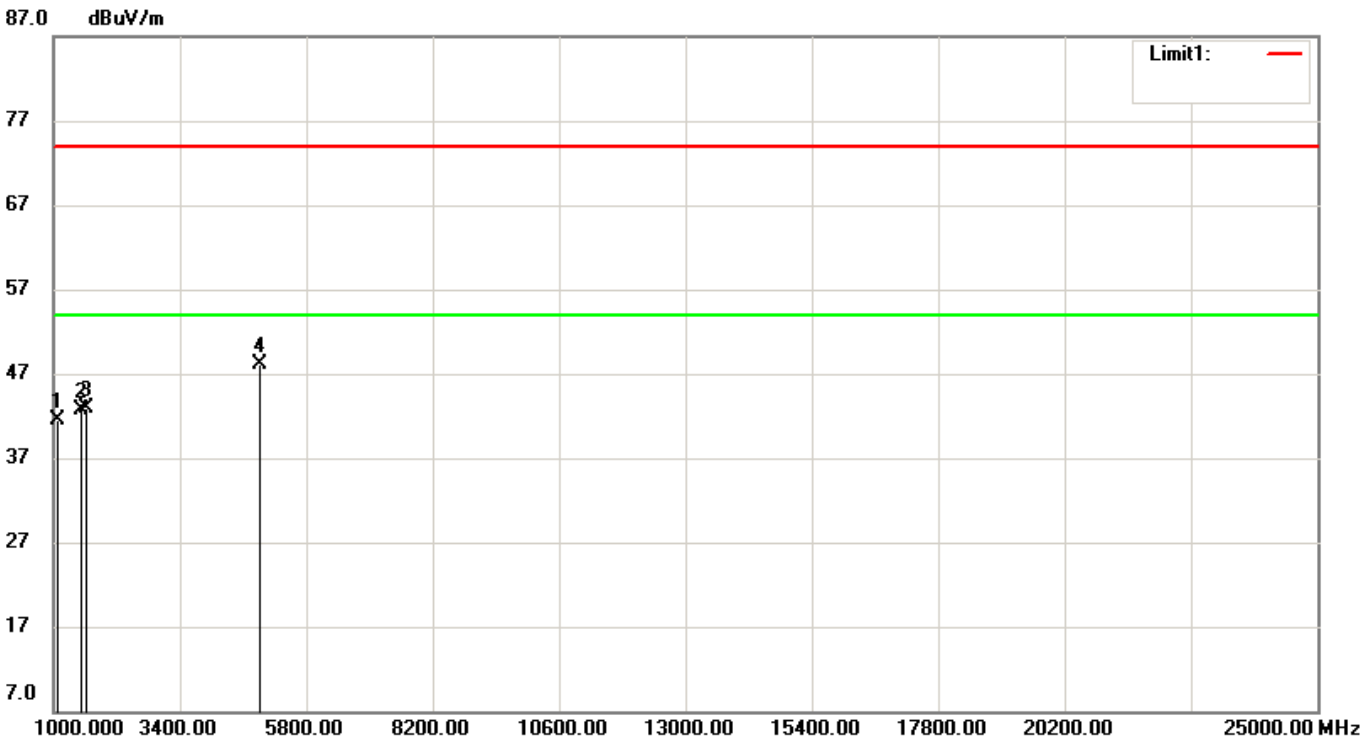
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。

3. 標記“*”表示為本地震盪頻率及其諧波

4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f < 18\text{GHz}$)
 $\pm 4.4\text{dB}$ ($18\text{GHz} \leq f \leq 40\text{GHz}$)

操作模式：發射接收
基本波頻率：2452 MHz

File: 19-07-MAS-008_N40 #30 Date 2019/8/20 Temperature: 23 °C
Site: RE02-EMC B1- N2 Humidity: 60 %



Condition: NCC_Above1G_Pk Polarization: Vertical
EUT: Wireless File Transmitter Distance: 3m
Model: DS586194
Test Mode: TX_Y Operator: Phillip
Note: CH HIGH

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1074.03840	51.29	peak	-9.79	41.50	74.00	-32.50
2	1500.32050	51.07	peak	-8.28	42.79	74.00	-31.21
3	1599.03840	50.32	peak	-7.39	42.93	74.00	-31.07
4	4904.23720	46.95	peak	1.24	48.19	74.00	-25.81

- 註：1. 標記“---”表發射之訊號太弱而儀器無法量測。
2. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值，在此以標記“#”表之。
3. 標記“*”表示為本地震盪頻率及其諧波
4. 量測不準確度: $\pm 4.1\text{dB}(1\text{GHz} \leq f < 18\text{GHz})$
 $\pm 4.4\text{dB}(18\text{GHz} \leq f \leq 40\text{GHz})$

10.5.3 其它不必要之訊號

File: 19-07-MAS-008_Below 1G

#4

Date 2019/8/25

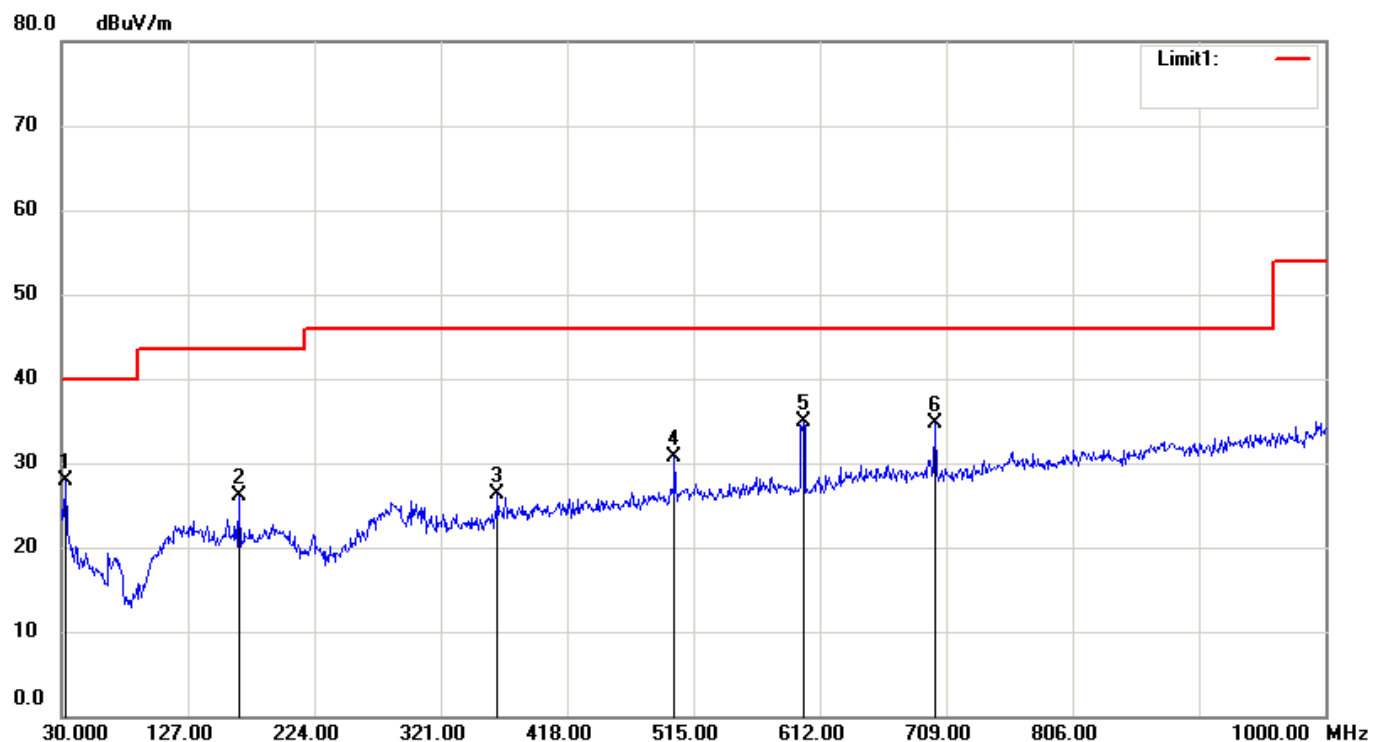
Temperature: 24 °C

:

Site RE02-EMC B1- N2

Humidity: 61 %

:



Condition: NCC_LP0002_30-1000MHz

Polarization: Horizontal

EUT: Wireless File Transmitter

Distance: 3m

Model: DS586194

Test Mode: 2.4G DTS

Operator:

Note:

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	32.9100	35.76	QP	-7.84	27.92	40.00	-12.08
2	165.8000	34.75	QP	-8.71	26.04	43.50	-17.46
3	364.6500	29.67	QP	-3.31	26.36	46.00	-19.64
4	500.4500	31.92	QP	-1.24	30.68	46.00	-15.32
5	599.3900	34.99	QP	-0.13	34.86	46.00	-11.14
6	700.2700	32.89	QP	1.80	34.69	46.00	-11.31

File: 19-07-MAS-008_Below 1G

#5

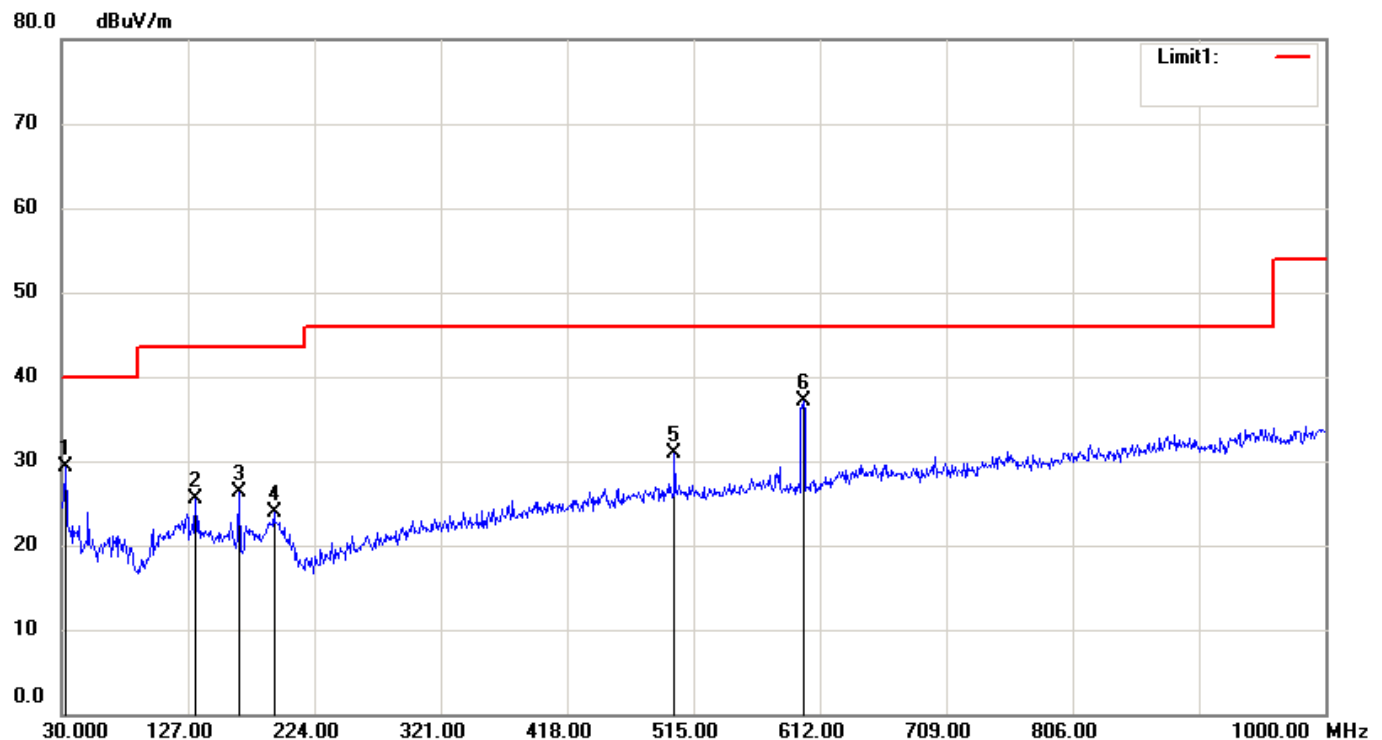
Date 2019/8/25

Temperature: 24 °C

Site RE02-EMC B1- N2

Humidity: 61 %

:



Condition: NCC_LP0002_30-1000MHz
 EUT: Wireless File Transmitter
 Model: DS586194
 Test Mode: 2.4G DTS
 Note:

Polarization: Vertical
 Distance: 3m
 Operator:

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	32.9100	37.18	QP	-7.84	29.34	40.00	-10.66
2	132.8200	31.01	QP	-5.47	25.54	43.50	-17.96
3	165.8000	35.04	QP	-8.71	26.33	43.50	-17.17
4	192.9600	33.86	QP	-10.05	23.81	43.50	-19.69
5	500.4500	32.14	QP	-1.24	30.90	46.00	-15.10
6	599.3900	37.15	QP	-0.13	37.02	46.00	-8.98

註：1. “#”，表示干擾值很低，記錄其峰值。
 2. 標記“---”表發射之訊號太弱而儀器無法量測。
 3. 量測不準確度: +4.20dB/ -4.24 dB ($30\text{MHz} \leq f < 1\text{GHz}$)
 +4.10dB/ -4.10 dB ($1\text{GHz} \leq f < 18\text{GHz}$)
 +4.40dB/ -4.42 dB ($18\text{GHz} \leq f \leq 40\text{GHz}$)

10.6 禁用頻段邊緣輻射場強之量測結果

操作模式: 發射接收

測試日期 :Aug. 21, 2019

環境溫度: 24℃

環境濕度: 59%

10.6.1 調變技術: IEEE 802.11b

主波 頻道	輻射 頻率	儀器讀值@3m (dBuV/m)				校正 因子	結果值		限制值@3m		餘裕值 (worse)	
		水平		垂直			(dBuV/m)		(dBuV/m)		(dB)	
	(MHz)	峰值	平均值	峰值	平均值	(dB)	峰值	平均值	峰值	平均值	峰值	平均值
CH Low	2386.410	27.8	14.1	27.7	14.0	34.6	62.4	48.7	74	54	-11.7	-5.3
CH High	2483.500	27.6	14.2	29.2	14.1	34.8	64.0	49.0	74	54	-10.1	-5.0

10.6.2 調變技術: IEEE 802.11g

主波 頻道	輻射 頻率	儀器讀值@3m (dBuV/m)				校正 因子	結果值		限制值@3m		餘裕值 (worse)	
		水平		垂直			(dBuV/m)		(dBuV/m)		(dB)	
	(MHz)	峰值	平均值	峰值	平均值	(dB)	峰值	平均值	峰值	平均值	峰值	平均值
CH Low	2390.000	30.8	14.9	27.6	14.1	34.6	65.4	49.5	74	54	-8.7	-4.5
CH High	2484.029	30.6	14.6	27.6	14.1	34.8	65.4	49.4	74	54	-8.6	-4.6

10.6.3 調變技術: IEEE 802.11n HT20

主波 頻道	輻射 頻率	儀器讀值@3m (dBuV/m)				校正 因子	結果值		限制值@3m		餘裕值 (worse)	
		水平		垂直			(dBuV/m)		(dBuV/m)		(dB)	
	(MHz)	峰值	平均值	峰值	平均值	(dB)	峰值	平均值	峰值	平均值	峰值	平均值
CH Low	2390.000	29.8	16.2	27.2	14.2	34.6	64.4	50.8	74	54	-9.6	-3.2
CH High	2483.500	31.3	15.0	28.4	14.1	34.8	66.1	49.8	74	54	-7.9	-4.2

10.6.4 調變技術: IEEE 802.11n HT40

主波 頻道	輻射 頻率	儀器讀值@3m (dBuV/m)				校正 因子	結果值		限制值@3m		餘裕值 (worse)	
		水平		垂直			(dBuV/m)		(dBuV/m)		(dB)	
	(MHz)	峰值	平均值	峰值	平均值	(dB)	峰值	平均值	峰值	平均值	峰值	平均值
CH Low	2390.000	31.4	17.8	27.5	14.5	34.6	66.0	52.4	74	54	-8.0	-1.6
CH High	2483.500	30.4	16.0	28.7	14.3	34.8	65.2	50.8	74	54	-8.8	-3.2

註:1. “----”表示干擾值太小而儀器無法量得。

2. “#”表示干擾值太小，直接量取其峰值。

3. 標記“***”表示為本地震盪頻率及其諧波。

4. 量測不準確度: $\pm 4.1\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

5. 量測頻率範圍為 2310 ~ 2390 MHz 及 2483.5 ~ 2900 MHz, 並記錄兩頻率範圍中之最大讀值。

10.7 結果判定

以上之場強輻射測試結果皆低於限制值，合乎標準規定。

10.8 輻射之測試配置

圖 4: 量測頻率低於1GHz之測試配置

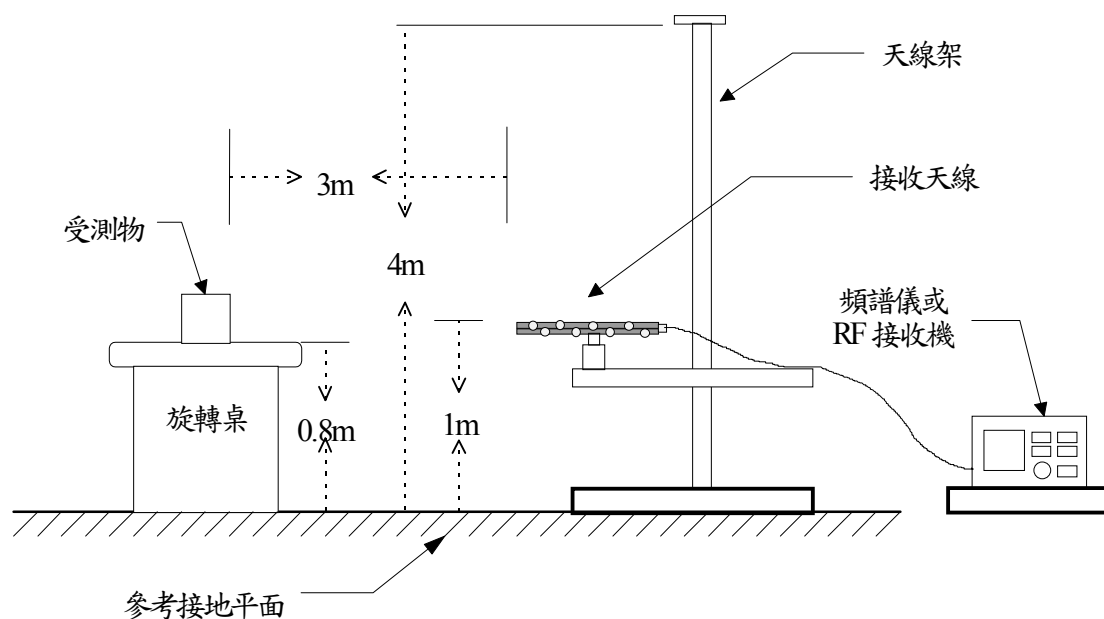
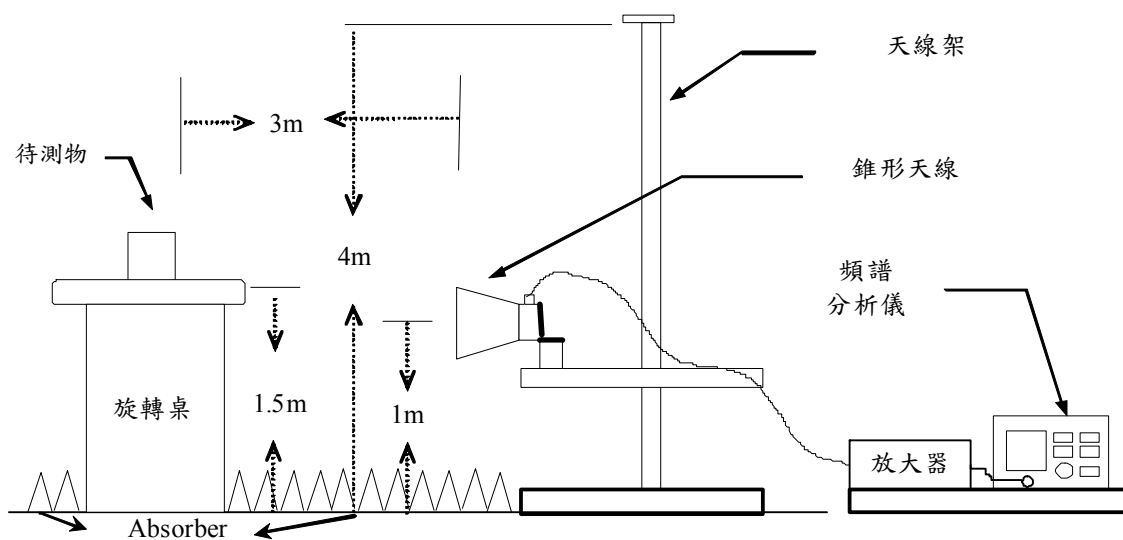


圖 5: 量測頻率高於1GHz之測試配置



10.9 輻射量測之配置照片

請參考產品照片

11 MAXIMUM PERMISSIBLE EXPOSURE

Standard Applicable

According to FCC Part1.1310: Radiofrequency radiation exposure limits. The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency radiation as specified in 1.1307(b) LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range	Electric field strength	Magnetic field strength	Power density	Averaging time
(MHz)	(V/m)	(A/m)	(mW/cm ²)	(minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1	30

F = Frequency in MHz

Calculations

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

r = distance between observation point and center of the radiator in cm

The limit of P_d is 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance where the P_d at 20 mm is meet the limit of MPE.

Result (Worse case mode)

測試日期: Aug. 08, 2019

環境溫度: 23°C

環境濕度: 61%

Radio Technology	Operation Frequency (MHz)	Distance (mm)	Maximu Output Power with Antenna Gain (mW)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2.4 GHz	2462	20	229.61	0.046	1

The **P_d** at 20 mm distance calculated from the Friis transmission formula is much smaller than the limit requirement 1 mW/cm² or 10W/m².

The **Installation Manual** instructs the user to install the device such that it has a separation of at least 20 mm from persons to comply with the FCC's requirements. This separation of 20 mm more than meets the FCC's and Industry Canada RF exposure requirements.

Simultaneous Evaluation:

All MPE evaluations are less than 1, which confirm the device comply the MPE limit.

12 量測之儀器

儀器名稱	製造者	型號	財產編號/序號	校驗日期	下次校驗日期
EMI Test Receiver	R&S	ESCI	13054418-001	01/24/2019	01/23/2020
V-LISN	R&S	ENV216	13057719-001	09/21/2018	09/20/2019
Spectrum Analyzer	R&S	FSV	13052017-001	07/05/2019	07/04/2020
Attenuator	WEINSCHL	56-10	58772	04/22/2019	04/21/2020
Power Meter	Agilent	N1912A	13050625-001	10/11/2018	10/10/2019
Power Sensor	Agilent	N1922A	13053523-001	10/11/2018	10/10/2019
EMI Receiver	R&S	ESCI	13054423-001	01/04/2019	01/03/2020
Spectrum Analyzer	R&S	FSU46	13040904-001	06/10/2019	06/09/2020
Horn Antenna	EMCO	3117	13059211-004	04/24/2019	04/23/2020
Horn Antenna	EMCO	3116	13059202-001	11/23/2018	11/22/2019
PRE-Amplifier	Agilent	8449B	13040709-001	01/03/2019	01/02/2020
PRE-Amplifier	Agilent	8447D	13040715-002	04/24/2019	04/23/2020
BiLog Antenna	ETC	MCTD 2786	BL19J04024	01/15/2019	01/14/2020