

低功率射頻器材 檢驗報告

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受檢設備名稱	Wireless LAN Converter
廠牌	silex technology
型號	FBR-3250
檢驗依據標準	國家通訊傳播委員會低功率射頻器材 技術規範 (LP0002)
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實驗室認可編號及範圍：0371 (9 kHz to 325 GHz)

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測試報告記錄

申請廠商：台灣村田機械股份有限公司
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 品名：Wireless LAN Converter
 型號：FBR-3250
 檢驗依據標準：國家通訊傳播委員會低功率射頻器材技術規範(LP0002)
 規範修訂日期109年07月01日
 發射功率(電場強度)：28.46 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:Unictron / H2B1PC1A1C0100/ 2.9dBi

- 備註：1. 本試驗報告中是描述本實驗室以最佳的知識和能力進行試驗，我們的責任僅限於合理與謹慎的試驗，並非確保賣方之法律和/或合同的義務。
 2. 本符合性試驗係依據適當的標準及試驗樣品進行測試，其中量測不確定度可符合國際標準要求不列入結果考量，本試驗報告的結果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	低功率射頻器材技術規範 3.3節	----	----	因使用直流電源故無需測試
2	天線增益之要求	低功率射頻器材技術規範 4.10.1.3	----	請參閱5.2節	----
3	發射頻寬之要求	低功率射頻器材技術規範 4.10.1.6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	低功率射頻器材技術規範 4.10.1.2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	低功率射頻器材技術規範 4.10.1.6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	低功率射頻器材技術規範 4.10.1.5	請參閱9.3節	請參閱9.4節	合格
7	場強輻射之要求	低功率射頻器材技術規範 4.10.1.5	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：鄭景 109.11.17 直接主管：黃致祥 109.11.17 量測員：郭世偉 109/11/17

1 一般資料

1.1 產品描述

- a) 產品型態 : Wireless LAN Converter
 b) 商 標 : silex technology
 c) 產品型號 : FBR-3250
 d) 供應電源 : DC 12V

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:20-04-MAS-061-02，UNII Band 2 (5260 至 5320 MHz)部份請見ETC報告編號:20-04-MAS-061-03，UNII Band 3 (5500至 5700 MHz) 部份請見ETC報告編號:20-04-MAS-061-04，UNII Band 4 (5725至 5850 MHz) 部份請見ETC報告編號:20-04-MAS-061-05。

本案經申請者切結器材不提供隨貨配件，配件由實驗室(或申請者)提供併同檢驗。

1.2 產品特性

此裝置為 Wireless LAN Converter，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 28.46 dBm，即為 701.09 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器材技術規範以及參考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：財團法人台灣商品檢測驗證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：

- ❶ ISO/IEC 17025：TAF(0371), NVLAP(Lab code: 200133-0), CBTL(TÜ V SÜ D)
- ❷ Recognized：BSMI, NCC, FCC(TW0371, TW1112), ISED(Industry Canada Site # 2949A-2)
- ❸ Filing：VCCI (C-13518, R-13177, G-10098, T-11682)
- ❹ MRA：Australia, New Zealand, Singapore

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器材技術規範之3.3節，以市電為電源之低功率射頻器材，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

使用數位調變技術之低功率射頻器材，依據國家通訊傳播委員會低功率射頻器材技術規範4.10.1.3之規定，

(1)操作於2400 MHz~2483.5 MHz 頻段：

(A)進行固定式點對點操作時，其發射天線之方向性增益超過6 dBi，每超過3 dBi，最大傳導輸出功率限制值應降低1 dB。

(B)天線以多向波束發射方式(含同時發射或循序發射)將訊號導向多個接收機或接收機群組時，應符合下列規定：

(a)非同時發射多向波束者，所有載波或頻道傳輸至所有天線陣列或陣列群之總和傳導輸出功率應符合4.10.1.2 之功率限制值。如天線/天線陣列群之方向性增益超過6 dBi，每超過3 dBi，總和傳導輸出功率限制值應降低1 dB。方向性增益值應計算如下：

(i)方向性增益值= $10\log(\text{天線陣列之單元數目})$ + 各單元中最高之方向性增益值。

(ii)天線陣列間之遮蔽效應或波束干涉損失能充分佐證時，方向性增益得低於(i)計算數值。

(b)同時發射多向波束於相同或不同頻道者，其每一波束功率應符合(a)之功率限制值。如發射波束有重疊現象，功率應降低，以確保總和傳導輸出功率符合(a)之限制值。同時發射的所有波束總和傳導輸出功率不大於(a)總和傳導輸出功率限制值加8 dB。方向性增益值計算同(a)。

(c)發射機之天線具備單向波束功能者，應符合(1)(A)及(3)後段之規定。

(3)除(1)及(2)外，使用超過6 dBi 方向增益之發射天線時，應依超過6 dBi天線方向增益的dBi 總量，等量減少最大傳導輸出功率限制值。

(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器材技術規範4.10.1.6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器材技術規範4.10.1.2節之(1)(C)規定，數位調變技術系統：1 W(含) 以下。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器材技術規範4.10.1.6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4.10.1.3之方式降低功率頻譜密度限制值。

(6) 帶外發射限制之要求

帶外發射限制：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4.10.1.2(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3.5 禁用頻段之輻射發射，應符合3.6 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器材技術規範4.10.1.5之要求，落於3.5節禁用頻段之輻射發射，應符合3.6節之規定：

頻率(f) MHz	電場強度 (微伏特/公尺， μ V/m)	測距 (公尺)
$0.009 \leq f \leq 0.490$	$2400/f(\text{kHz})$	300
$0.490 < f \leq 1.705$	$24000/f(\text{kHz})$	30
$1.705 < f < 30$	30	30
$30 \leq f \leq 88$	100	3
$88 < f \leq 216$	150	3
$216 < f \leq 960$	200	3
$960 < f$	500	3

2.2 限制使用之頻帶

頻率 (MHz)	頻率 (MHz)
0.090~0.110	1660.0~1785.0
0.490~0.510	1805.0~1880.0
2.172~2.198	1885.0~1900.0
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	

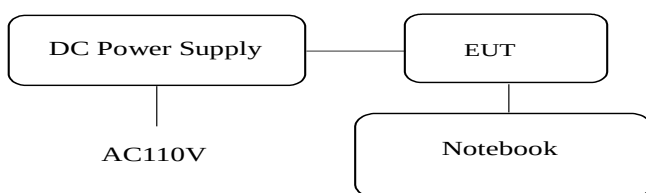
3 受測裝置之系統說明

3.1 受測裝置

裝置名稱	製造者/代理者	型 號	纜線說明
* Wireless LAN Converter	silex technology, Inc.	FBR-3250	----
Notebook	HP	650G1	----
DC Power Supply	GW	GPS-1850	非隔離電源線 2.0m*1 非隔離電源線 1.8m*1 (Volex/V1625)
LAN Cable	eje	N/A	非隔離信號線 1.0m * 1

註: 1.標記“*”表欲申請之受測物及配件。

2.測試配置：



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 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 data rate is the worse case for full testing.

4. 軟體設定：

Modulation	Test Channel	Power Setting
IEEE 802.11b	L	12.5
	M	14.5
	H	11
IEEE 802.11g	L	13.5
	M	16.5
	H	11.5
IEEE 802.11n HT20	L	11.5
	M	15.5
	H	10.0
IEEE 802.11n HT40	L	5.5
	M	14.5
	H	3.5

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(註2)	測試頻道
1	電源線傳導干擾之量測	-	-
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	L, M, H
4	功率密度之量測	A, B, C, D	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. 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，以最大峰值輸出功率較大者做為Worse Case，進行其他項目之量測。

3. 量測場強輻射時，應對其三個正交軸(X、Y、Z)的方位評估測試，並分別測試以找出最大輻射電場強度軸向，以最差軸模式測試，並記錄其值與軸向放置。

4. 依 NCC 74 次一致性會議：審驗時不具一般正常使用模式者，得不包括一般正常使用模式。

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

IEEE 802.11b

File: 20-04-MAS-061_B_Ant0

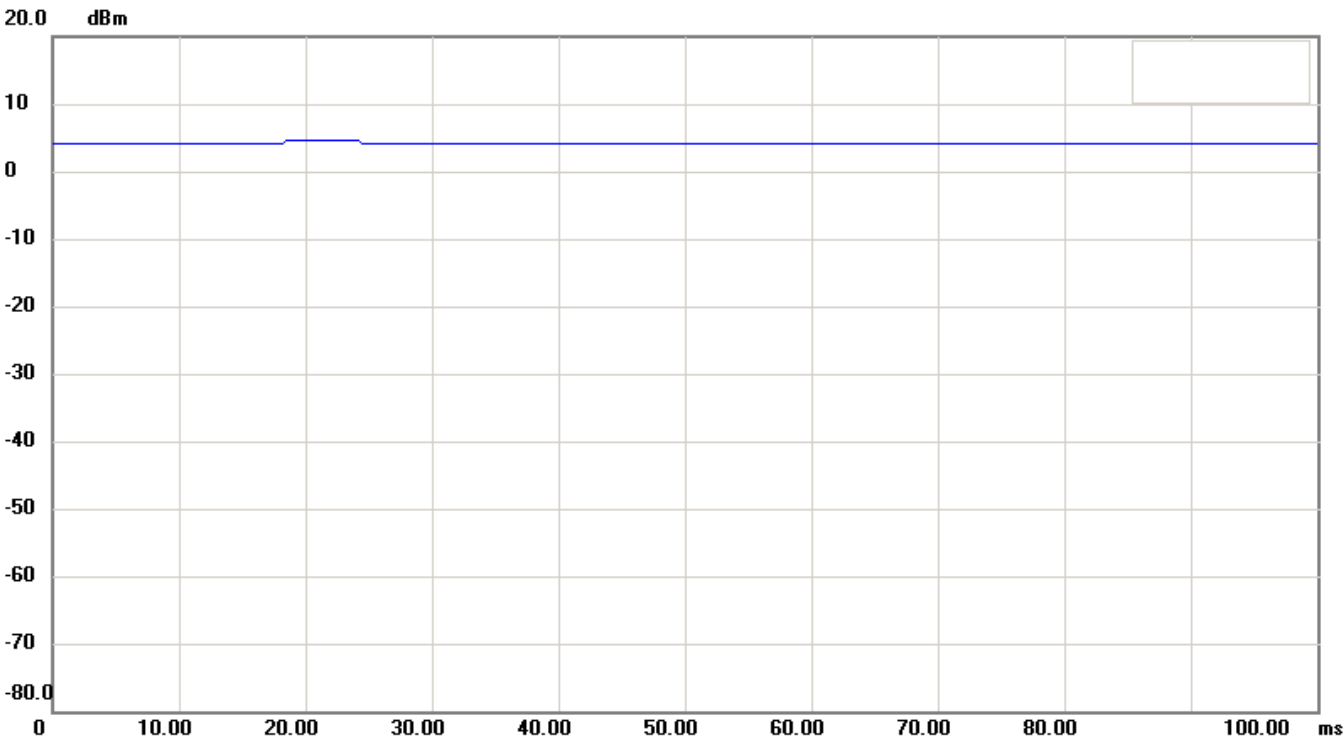
#12

Date: 2020/5/21

Temperature: 25 °C

Site: RF-Cond01

Humidity: 57 %



Condition:

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

Note: NCC_LP0002_802.11b Duty Cycle-1

RF Conducted

Sweep Time: 100ms

RBW: 1000 KHz

Operator:

Att.: 20dB

VBW: 1000 KHz

Phillip

File: 20-04-MAS-061_B_Ant0

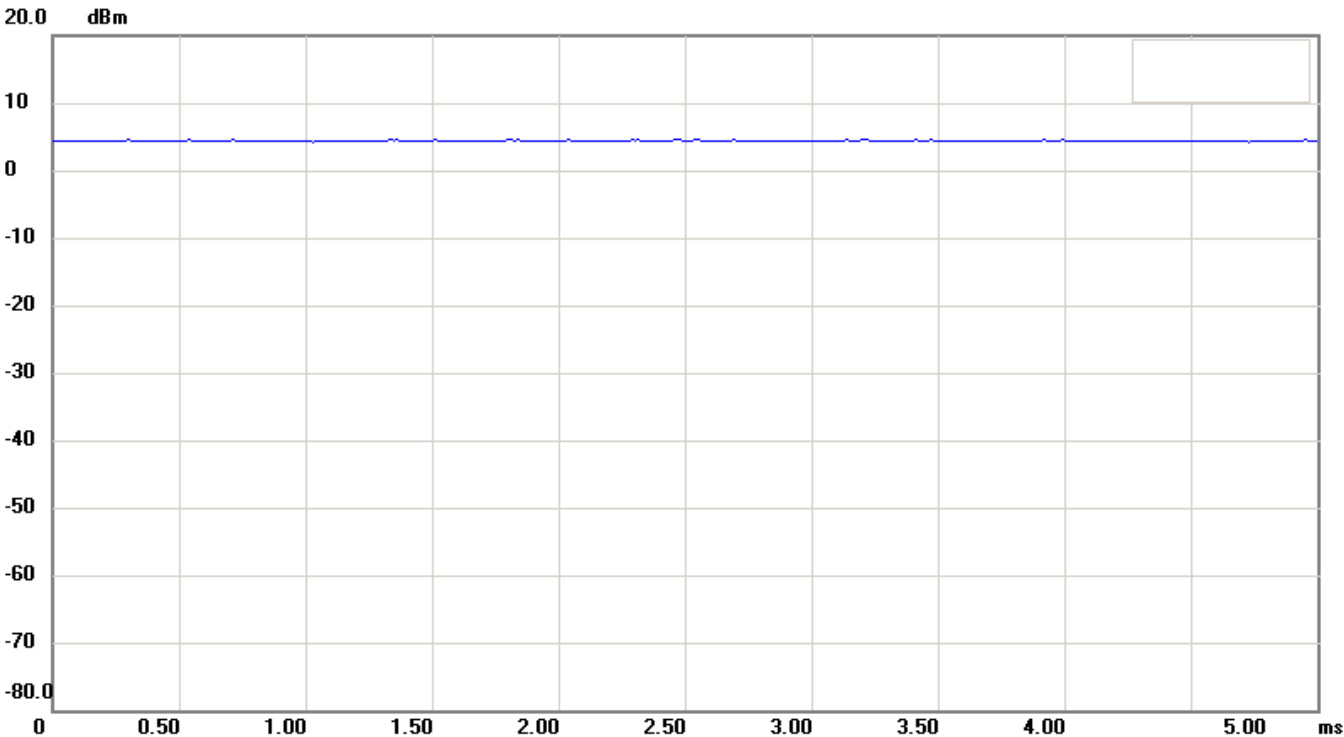
#14

Date: 2020/5/21

Temperature: 25 ℃

Site: RF-Cond01

Humidity: 57 %



Condition:

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

Note: NCC_LP0002_802.11b Duty Cycle-2 (Duty Cycle > 98%)

RF Conducted

Sweep Time: 5ms

RBW: 1000 KHz

Operator:

Att.: 20dB

VBW: 1000 KHz

Phillip

IEEE 802.11g

File: 20-04-MAS-061_B_Ant0

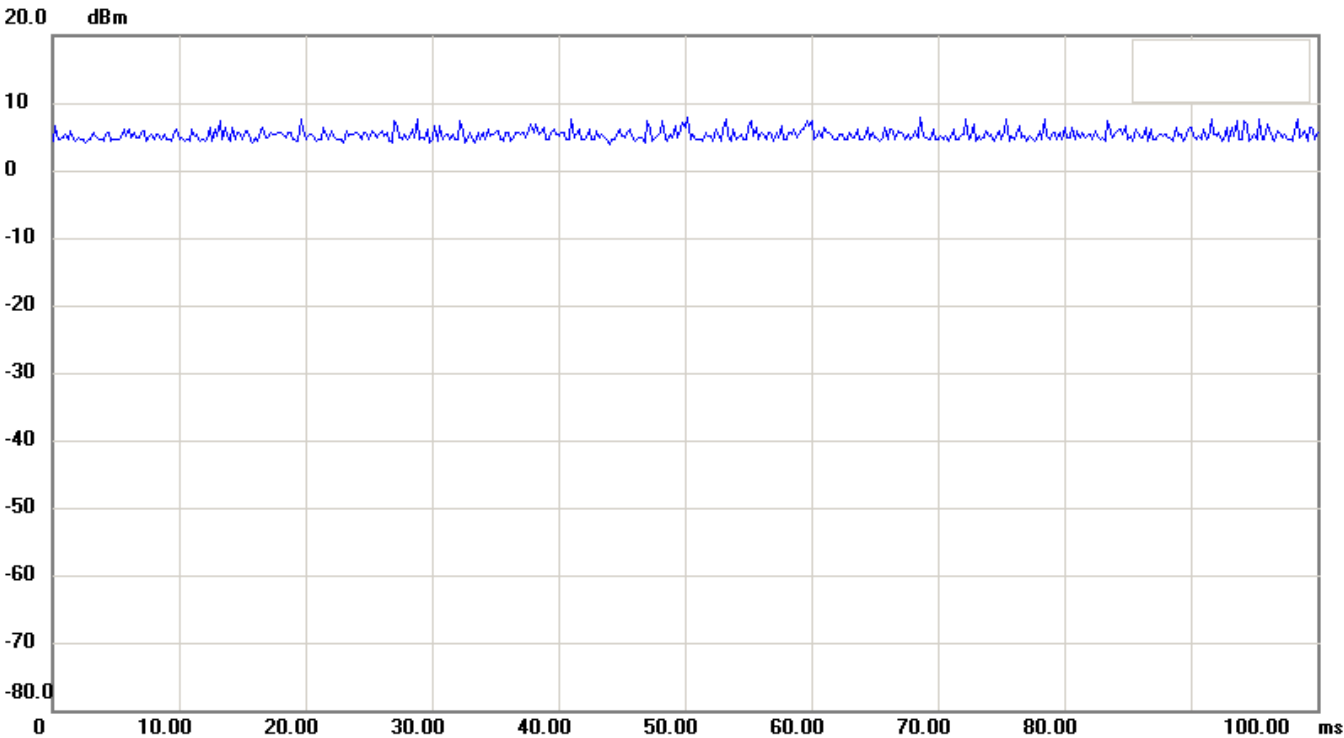
#27

Date: 2020/5/21

Temperature: 25 °C

Site: RF-Cond01

Humidity: 57 %



Condition:		RF Conducted	
EUT:	Wireless LAN Conveter	Sweep Time: 100ms	Att.: 20dB
Model:	FBR-3250	RBW: 1000 KHz	VBW: 1000 KHz
Test Mode:	DTS	Operator:	Phillip
Note:	NCC_LP0002_802.11g Duty Cycle-1		

File: 20-04-MAS-061_B_Ant0

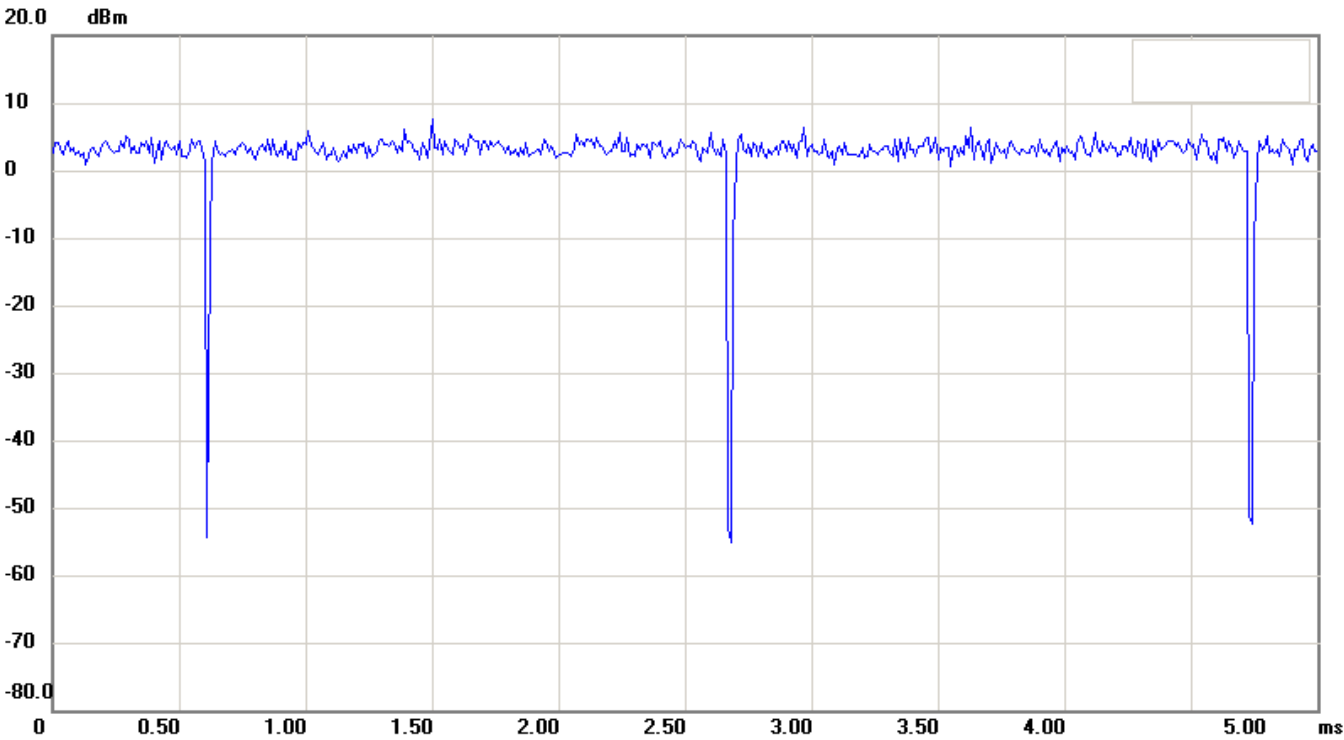
#28

Date: 2020/5/21

Temperature: 25 °C

Site: RF-Cond01

Humidity: 57 %



Condition:		RF Conducted	
EUT:	Wireless LAN Conveter	Sweep Time: 5ms	Att.: 20dB
Model:	FBR-3250	RBW: 1000 KHz	VBW: 1000 KHz
Test Mode:	DTS	Operator:	Phillip
Note:	NCC_LP0002_802.11g Duty Cycle-2 (Duty Cycle > 98%)		

IEEE 802.11n HT20

File: 20-04-MAS-061_n20_Ant0

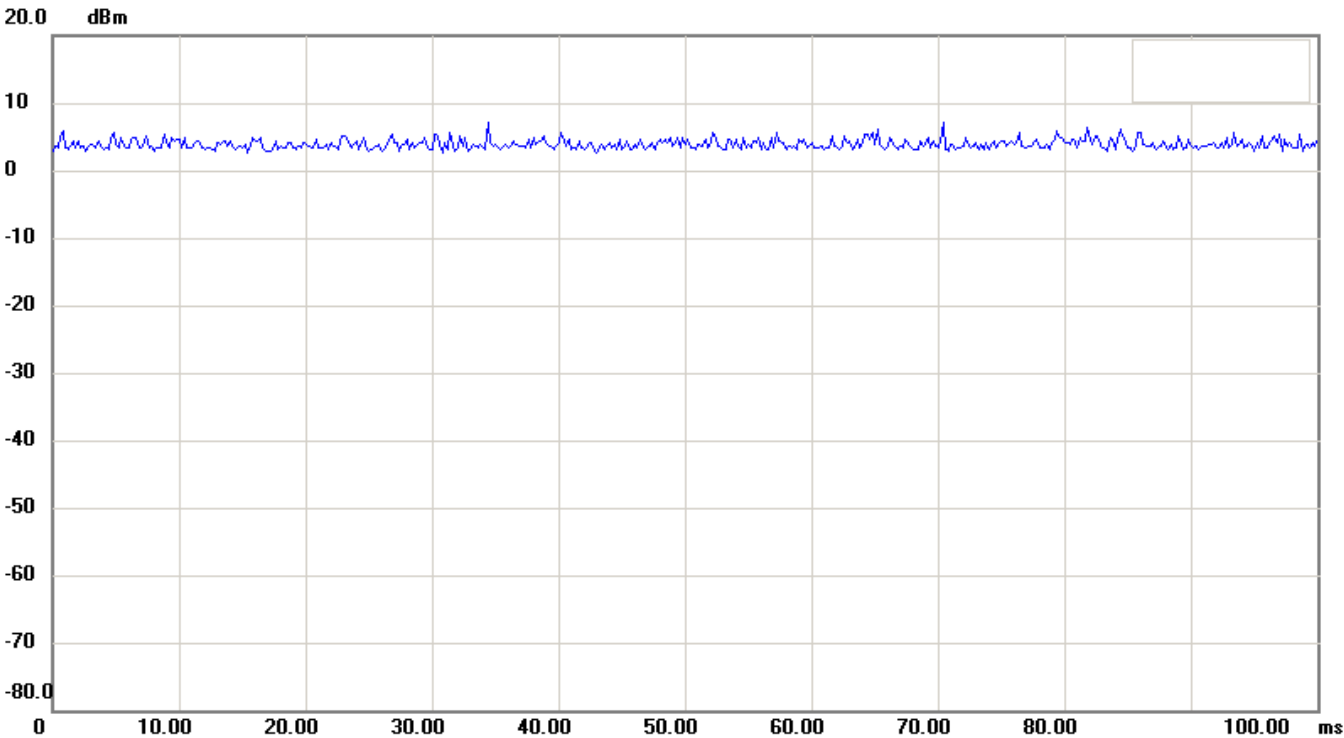
#13

Date: 2020/5/21

Temperature: 25 °C

Site: RF-Cond01

Humidity: 57 %



Condition:	RF Conducted	
EUT:	Wireless LAN Conveter	Sweep Time: 100ms Att.: 20dB
Model:	FBR-3250	RBW: 1000 KHz VBW: 1000 KHz
Test Mode:	DTS	Operator: Phillip
Note:	NCC_LP0002_802.11n20 Duty Cycle-1	

File: 20-04-MAS-061_n20_Ant0

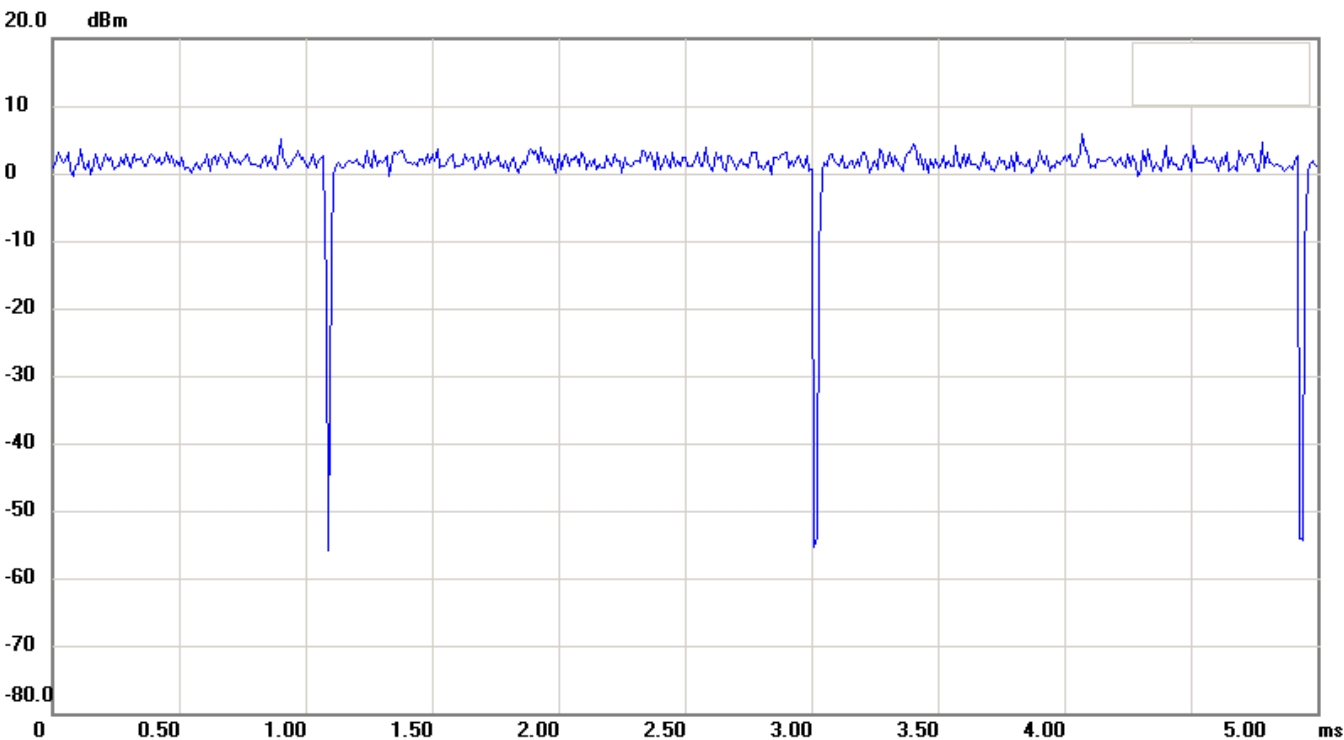
#14

Date: 2020/5/21

Temperature: 25 °C

Site: RF-Cond01

Humidity: 57 %



Condition:	RF Conducted	
EUT:	Wireless LAN Conveter	Sweep Time: 5ms Att.: 20dB
Model:	FBR-3250	RBW: 1000 KHz VBW: 1000 KHz
Test Mode:	DTS	Operator: Phillip
Note:	NCC_LP0002_802.11n20 Duty Cycle-2 (Duty Cycle = 97.4%)	

IEEE 802.11n HT40

File: 20-04-MAS-061_n40_Ant0

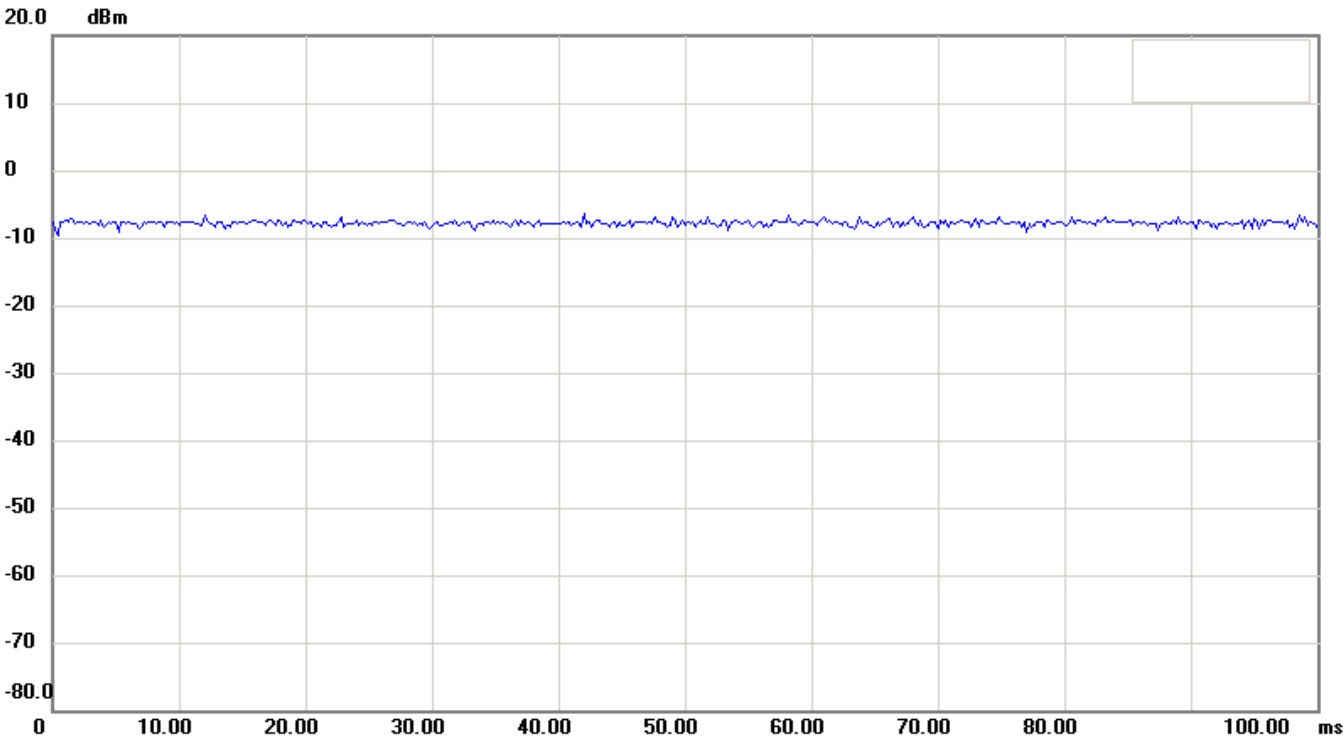
#12

Date: 2020/5/21

Temperature: 25 °C

Site: RF-Cond01

Humidity: 57 %



Condition:	RF Conducted	
EUT:	Wireless LAN Conveter	Sweep Time: 100ms
Model:	FBR-3250	Att.: 20dB
Test Mode:	DTS	RBW: 1000 KHz
Note:	NCC_LP0002_802.11n40 Duty Cycle-1	VBW: 1000 KHz
		Operator: Phillip

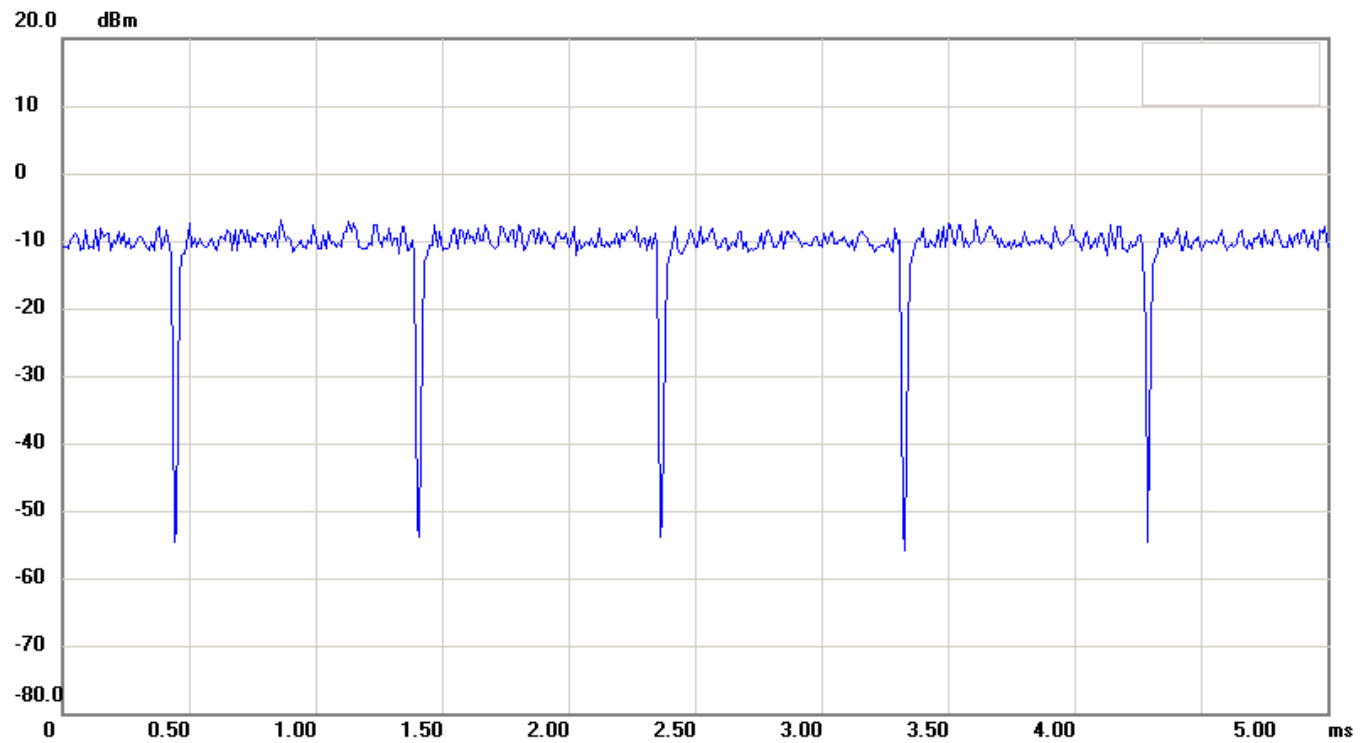
File: 20-04-MAS-061_n40_Ant0
Site: RF-Cond01

#13

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

**Condition:**

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

Note: NCC_LP0002_802.11n40 Duty Cycle-2 (Duty Cycle = 95.8%)

RF Conducted

Sweep Time: 5ms Att.: 20dB

RBW: 1000 KHz VBW: 1000 KHz

Operator: Phillip

4 電源線傳導干擾之量測

本產品使用電源為直流電源，故無須對其電源傳導干擾部份進行測試。

5 天線增益之要求

5.1 適用標準

使用數位調變技術之低功率射頻器材，依據國家通訊傳播委員會低功率射頻器材技術規範4.10.1.3之規定，

(1)操作於2400 MHz~2483.5 MHz 頻段：

(A)進行固定式點對點操作時，其發射天線之方向性增益超過6 dBi，每超過3 dBi，最大傳導輸出功率限制值應降低1 dB。

(B)天線以多向波束發射方式(含同時發射或循序發射)將訊號導向多個接收機或接收機群組時，應符合下列規定：

(a)非同時發射多向波束者，所有載波或頻道傳輸至所有天線陣列或陣列群之總和傳導輸出功率應符合4.10.1.2 之功率限制值。如天線/天線陣列群之方向性增益超過6 dBi，每超過3 dBi，總和傳導輸出功率限制值應降低1 dB。方向性增益值應計算如下：

(i)方向性增益值= $10\log(\text{天線陣列之單元數目}) + \text{各單元中最高之方向性增益值}$ 。

(ii)天線陣列間之遮蔽效應或波束干涉損失能充分佐證時，方向性增益得低於(i)計算數值。

(b)同時發射多向波束於相同或不同頻道者，其每一波束功率應符合(a)之功率限制值。如發射波束有重疊現象，功率應降低，以確保總和傳導輸出功率符合(a)之限制值。同時發射的所有波束總和傳導輸出功率不大於(a) 總和傳導輸出功率限制值加8 dB。方向性增益值計算同(a)。

(c)發射機之天線具備單向波束功能者，應符合(1)(A)及(3)後段之規定。

(3)除(1)及(2)外，使用超過6 dBi 方向增益之發射天線時，應依超過6 dBi天線方向增益的dBi 總量，等量減少最大傳導輸出功率限制值。

5.2 天線增益

此裝置使用兩隻相同的內接式天線，其天線資料如下：

廠牌: Unictron

型號: H2B1PC1A1C0100

Antenna Type	PCB Antenna
Operation Frequency Range	2400~2484 MHz
Antenna Gain	2.9 dBi

(參照天線規格資料)

操作於MIMO模式下，Antenna1(CHAIN 0)+Antenna2(CHAIN 1) = 5.91 dBi，天線之方向性增益小於 6dBi。

5.3 結果判定

天線之方向性增益皆低於6dBi，因此無需減少峰值輸出功率及功率密度之限制值。

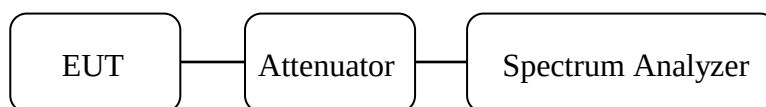
6 發射頻寬之要求

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器材技術規範4.10.1.6節之(2)(A)之規定，6dB頻寬至少應有500 kHz。

6.2 測試配置

圖 1：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: May 21, 2020

環境溫度 : 25°C

環境濕度: 57%

Channel	6dB Bandwidth (MHz)	NCC Limit (kHz)	Chart
L	10.2	500	Page 25
M	10.2	500	Page 26
H	10.2	500	Page 27

註：繪圖資料請參考第 25-27 頁。

File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

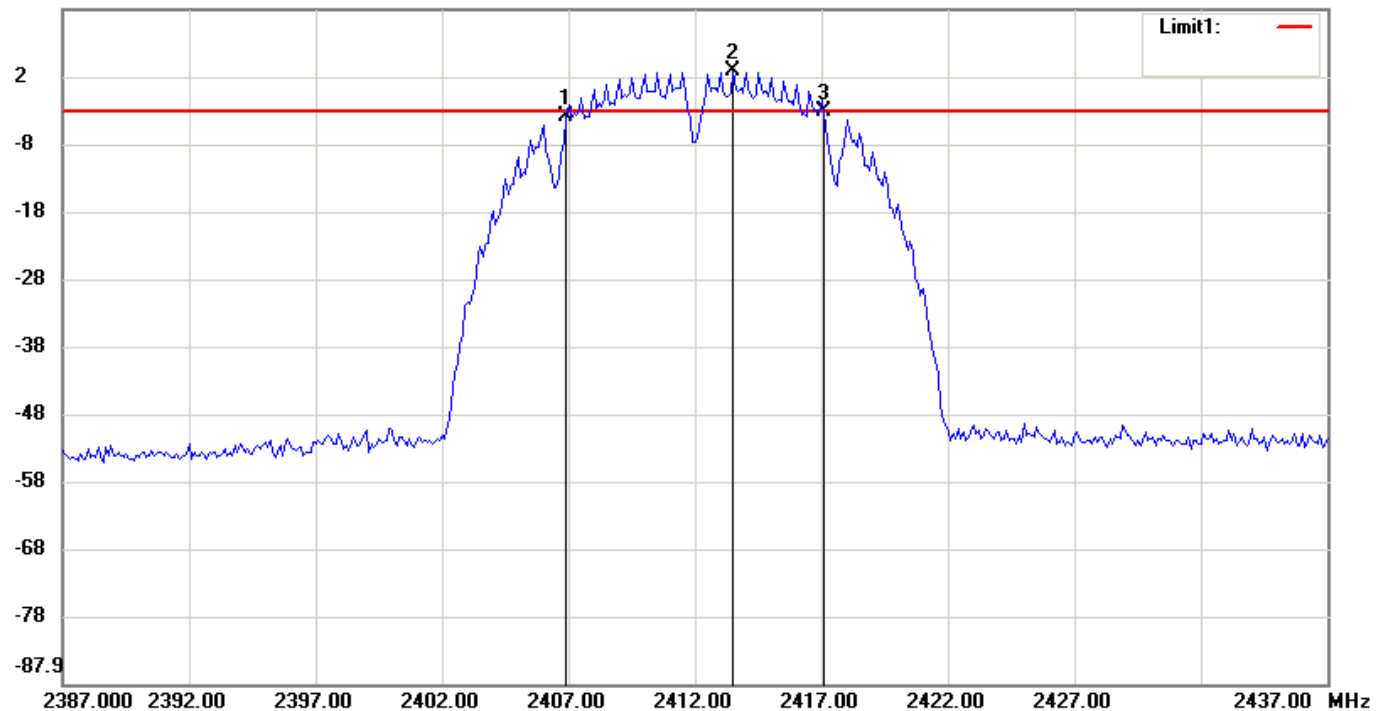
#1

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

12.1 dBm



Condition: -3.14dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11b Channel 01-6dB EBW

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

No.	Frequency(MHz)	Level(dBm)
1	2406.90000	-3.70
2	2413.50000	2.86
3	2417.10000	-3.16

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	10.2	0.54

File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

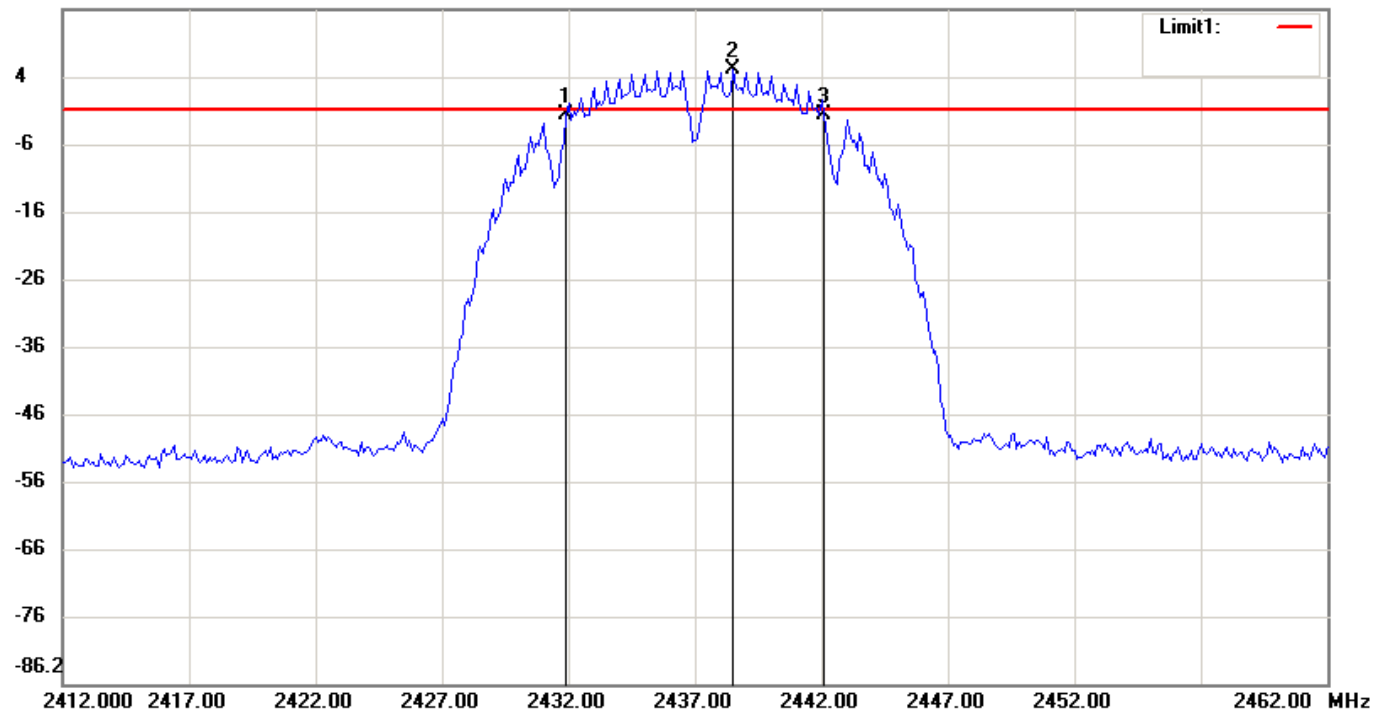
#5

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

13.8 dBm



Condition: -1.1dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11b Channel 06-6dB EBW

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

No.	Frequency(MHz)	Level(dBm)
1	2431.90000	-1.71
2	2438.50000	4.90
3	2442.10000	-1.73

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	10.2	-0.02

File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

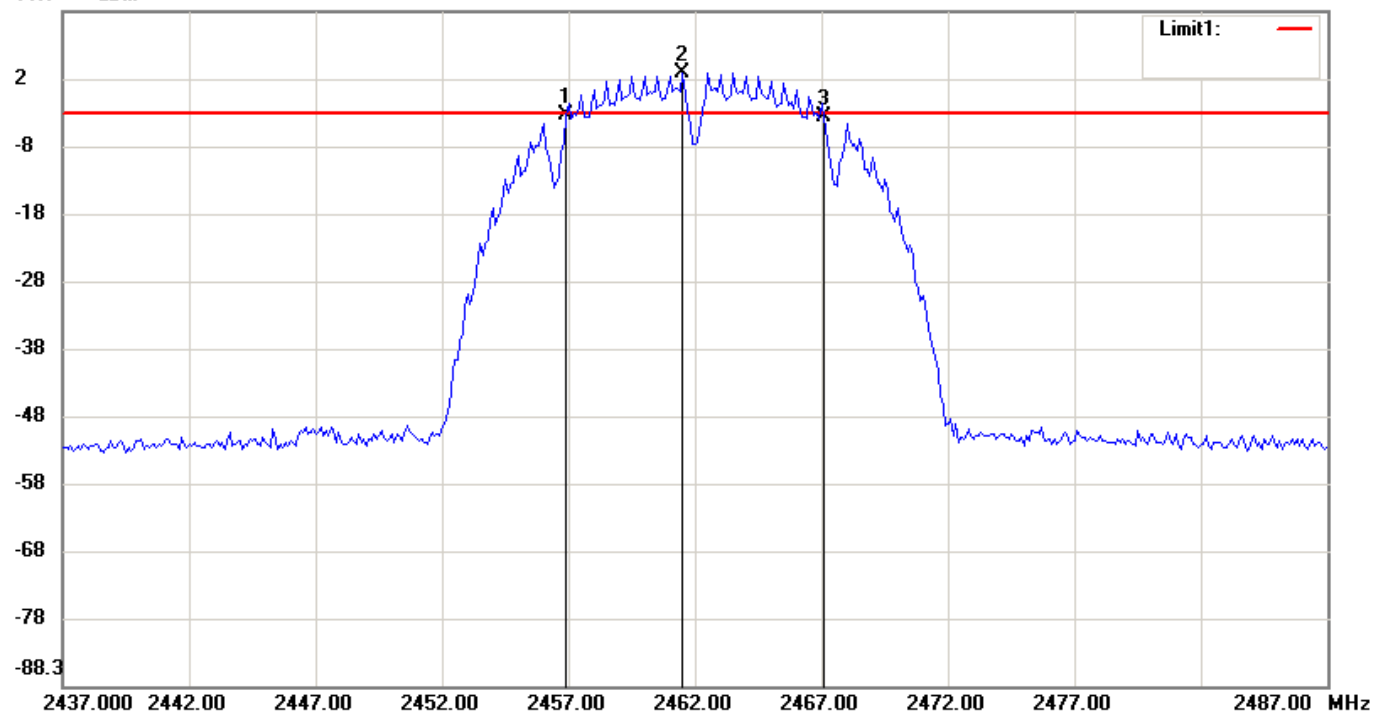
#8

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

11.7 dBm



Condition: -3.38dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11b Channel 11-6dB EBW

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

No.	Frequency(MHz)	Level(dBm)
1	2456.90000	-3.74
2	2461.50000	2.62
3	2467.10000	-4.00

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	10.2	-0.26

6.4.2 調變技術: IEEE 802.11g

測試日期: May 21, 2020

環境溫度 : 25°C

環境濕度: 57%

Channel	6dB Bandwidth (MHz)	NCC Limit (kHz)	Chart
L	16.6	500	Page 29
M	16.6	500	Page 30
H	16.6	500	Page 31

註：繪圖資料請參考第 29-31 頁。

File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

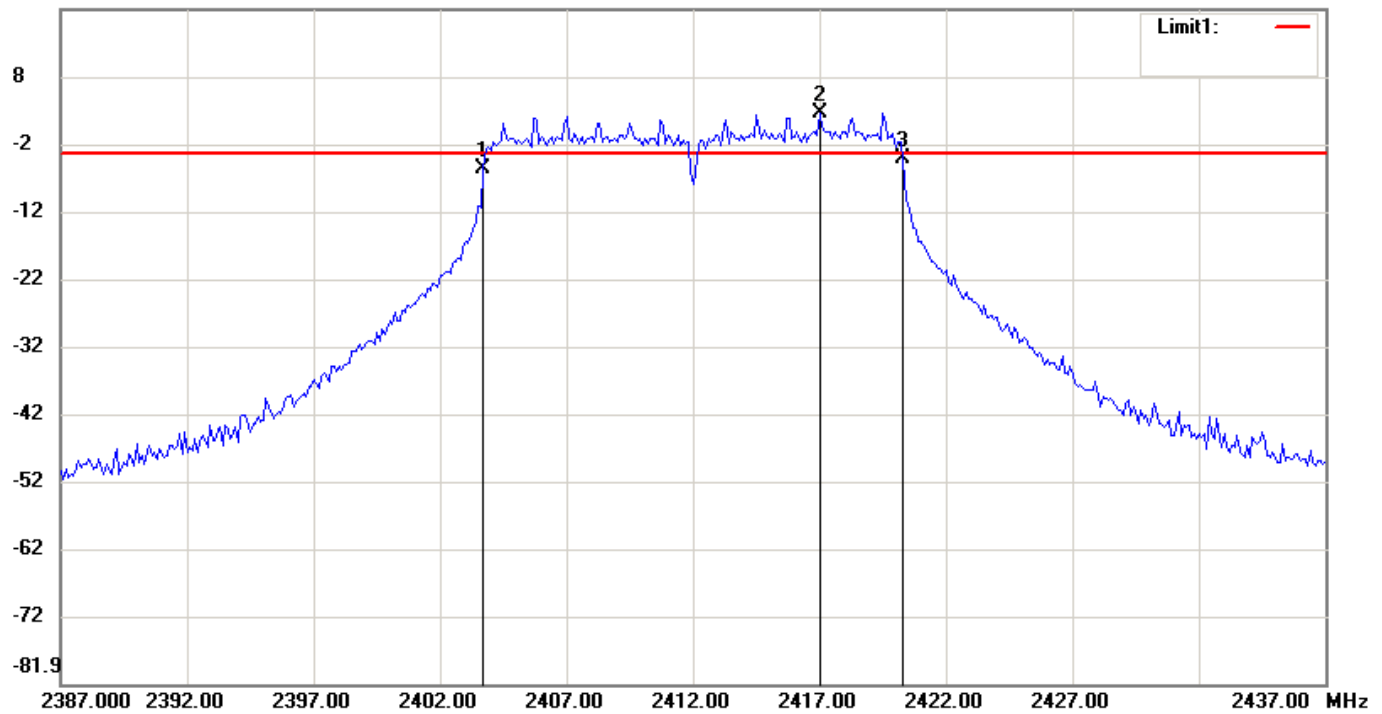
#15

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

18.1 dBm



Condition: -3.23dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11g Channel 01-6dB EBW

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

No.	Frequency(MHz)	Level(dBm)
1	2403.70000	-5.53
2	2417.00000	2.77
3	2420.30000	-3.89

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	16.6	1.64

File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

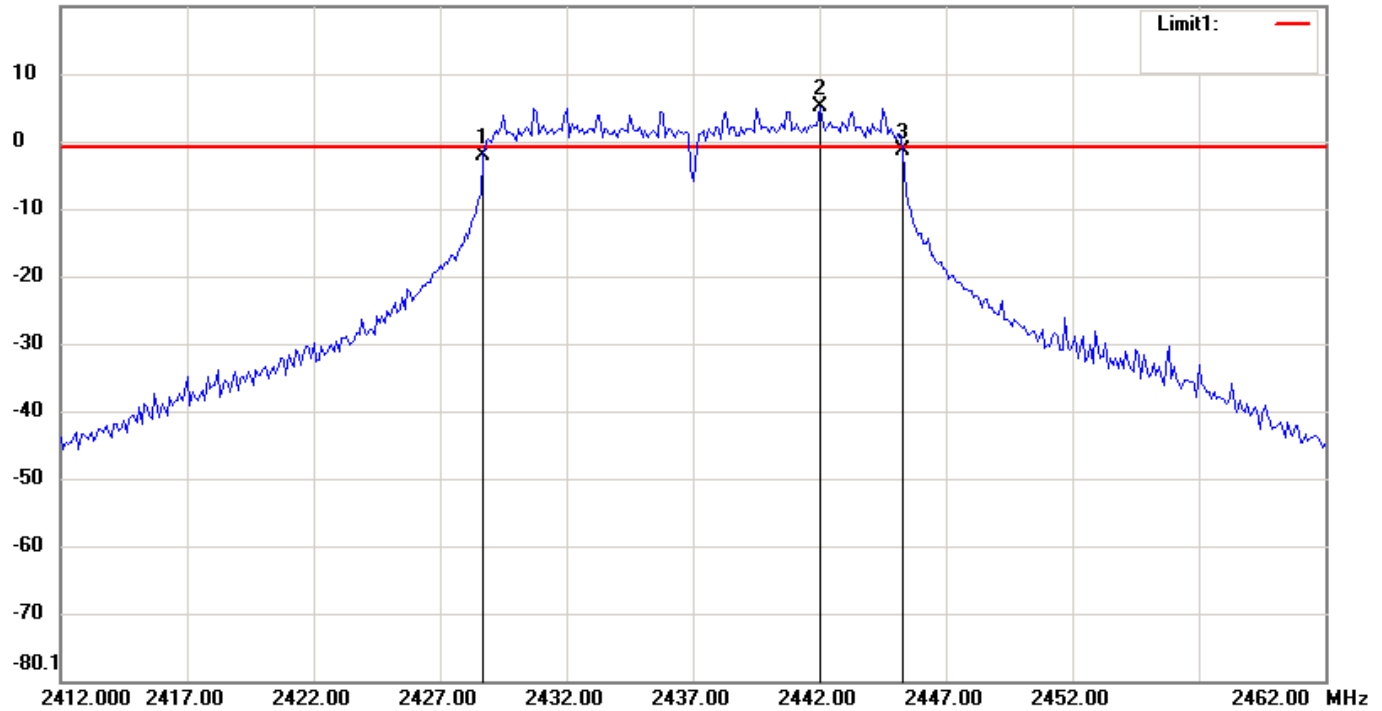
#19

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

19.9 dBm



Condition: -0.95dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11g Channel 06-6dB EBW

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

No.	Frequency(MHz)	Level(dBm)
1	2428.70000	-2.19
2	2442.00000	5.05
3	2445.30000	-1.56

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	16.6	0.63

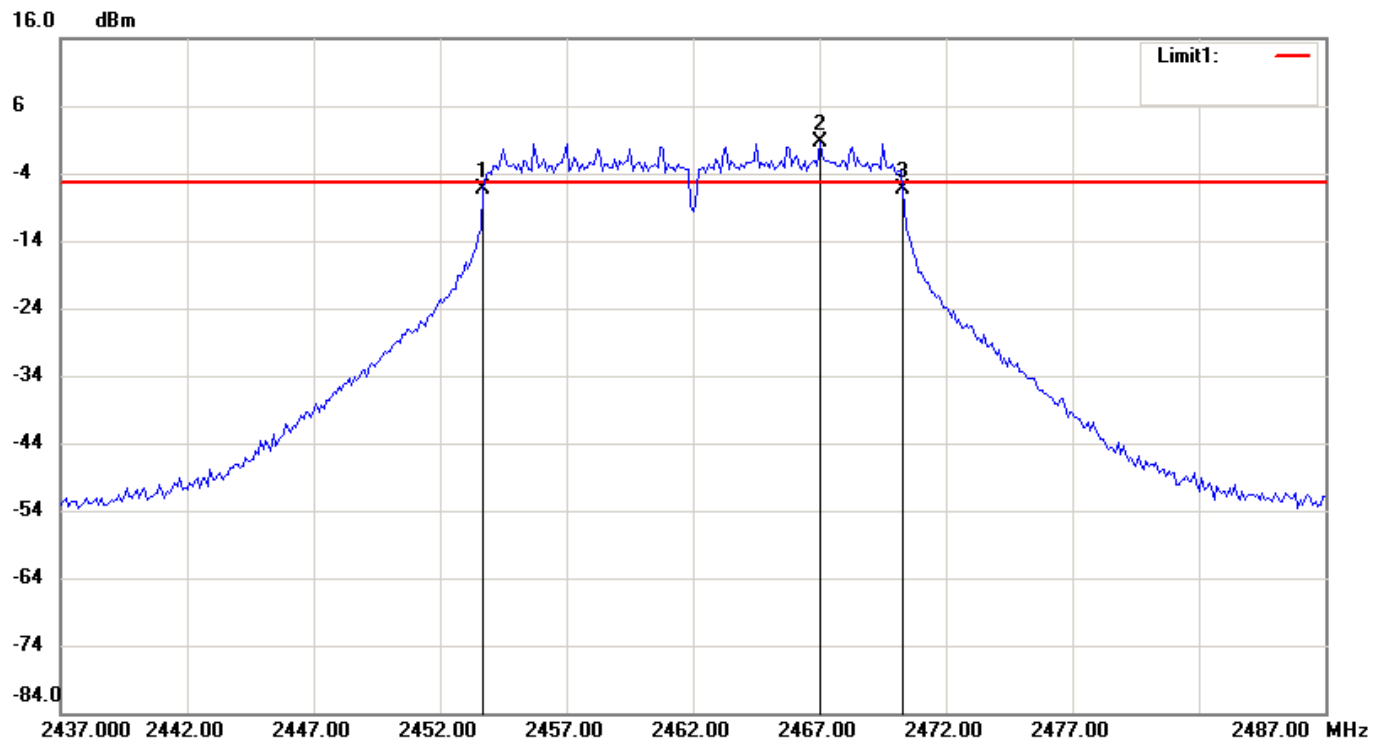
File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

#23

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition: -5.31dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11g Channel 11-6dB EBW

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

No.	Frequency(MHz)	Level(dBm)
1	2453.70000	-6.21
2	2467.00000	0.69
3	2470.30000	-6.33

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	16.6	-0.12

6.4.3 調變技術: IEEE 802.11n HT20

6.4.3.1 CHAIN 0

測試日期: May 21, 2020

環境溫度 : 25°C

環境濕度: 57%

Channel	6dB Bandwidth (MHz)	NCC Limit (kHz)	Chart
L	17.6	500	Page 33
M	17.8	500	Page 34
H	17.8	500	Page 35

註：繪圖資料請參考第 33-35 頁。

File: 20-04-MAS-061_n20_Ant0
Site: RF-Cond01

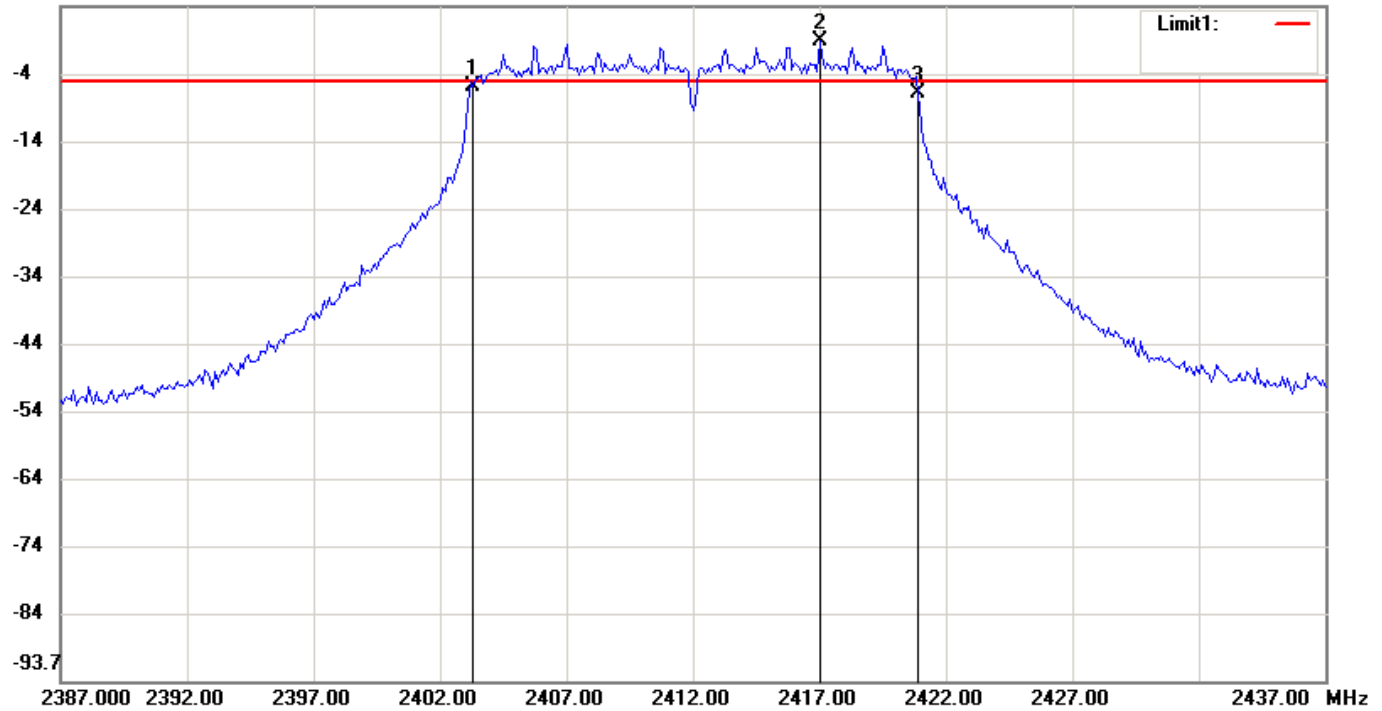
#1

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

6.3 dBm



Condition: -4.78dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT20 Channel 01-6dB EBW

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

No.	Frequency(MHz)	Level(dBm)
1	2403.30000	-5.63
2	2417.00000	1.22
3	2420.90000	-6.54

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	17.6	-0.91

File: 20-04-MAS-061_n20_Ant0
Site: RF-Cond01

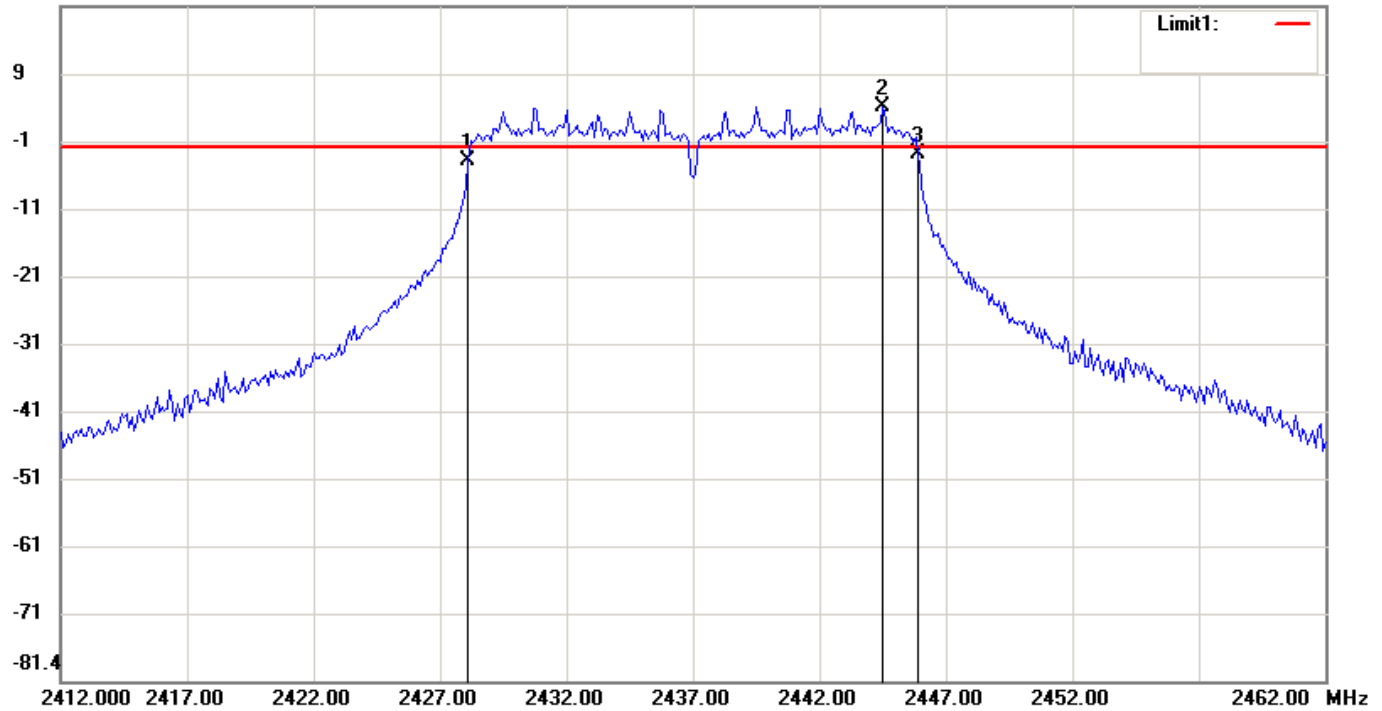
#6

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

18.6 dBm



Condition: -2.12dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT20 Channel 06-6dB EBW

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

No.	Frequency(MHz)	Level(dBm)
1	2428.10000	-4.28
2	2444.50000	3.88
3	2445.90000	-3.33

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	17.8	0.95

File: 20-04-MAS-061_n20_Ant0
Site: RF-Cond01

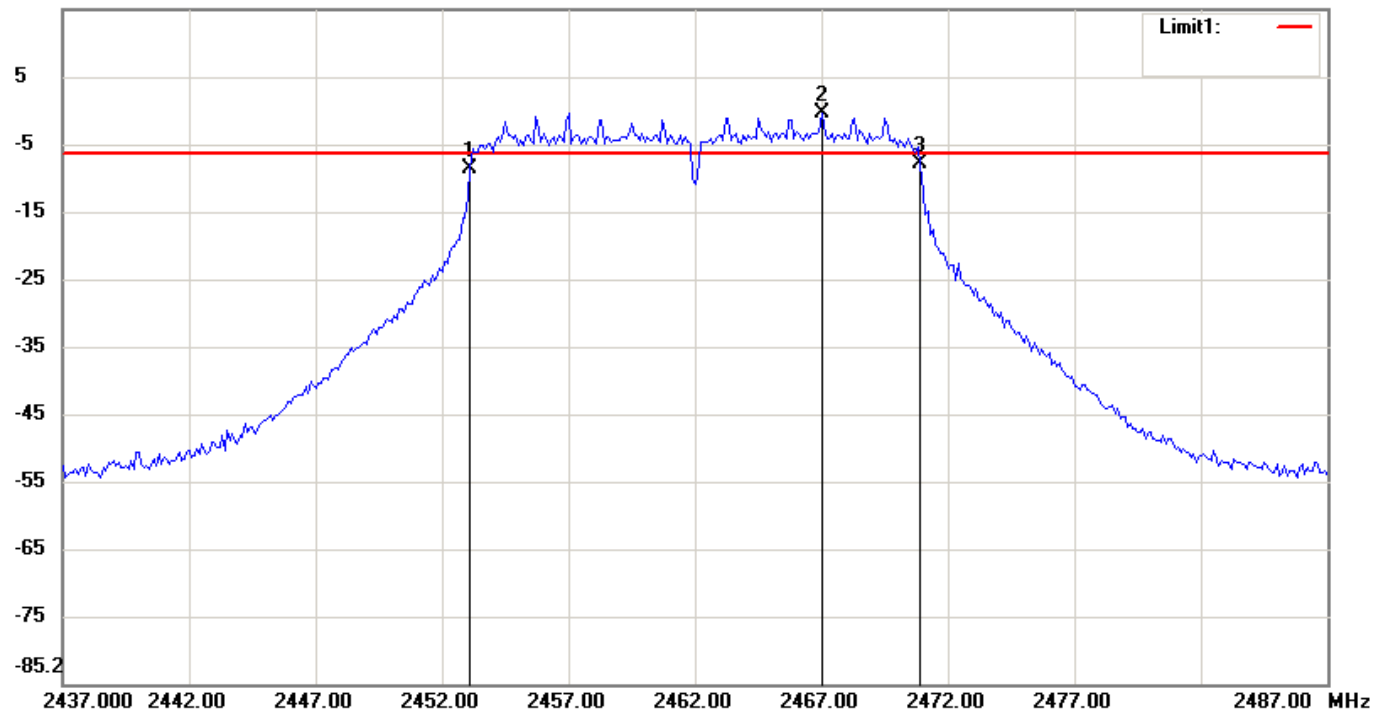
#9

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

14.8 dBm



Condition: -6.52dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT20 Channel 11-6dB EBW

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

No.	Frequency(MHz)	Level(dBm)
1	2453.10000	-8.74
2	2467.00000	-0.52
3	2470.90000	-8.16

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	17.8	0.58

6.4.3.2 CHAIN 1

測試日期: May 21, 2020

環境溫度 : 25°C

環境濕度: 57%

Channel	6dB Bandwidth (MHz)	NCC Limit (kHz)	Chart
L	17.8	500	Page 37
M	17.8	500	Page 38
H	17.8	500	Page 39

註：繪圖資料請參考第 37-39 頁。

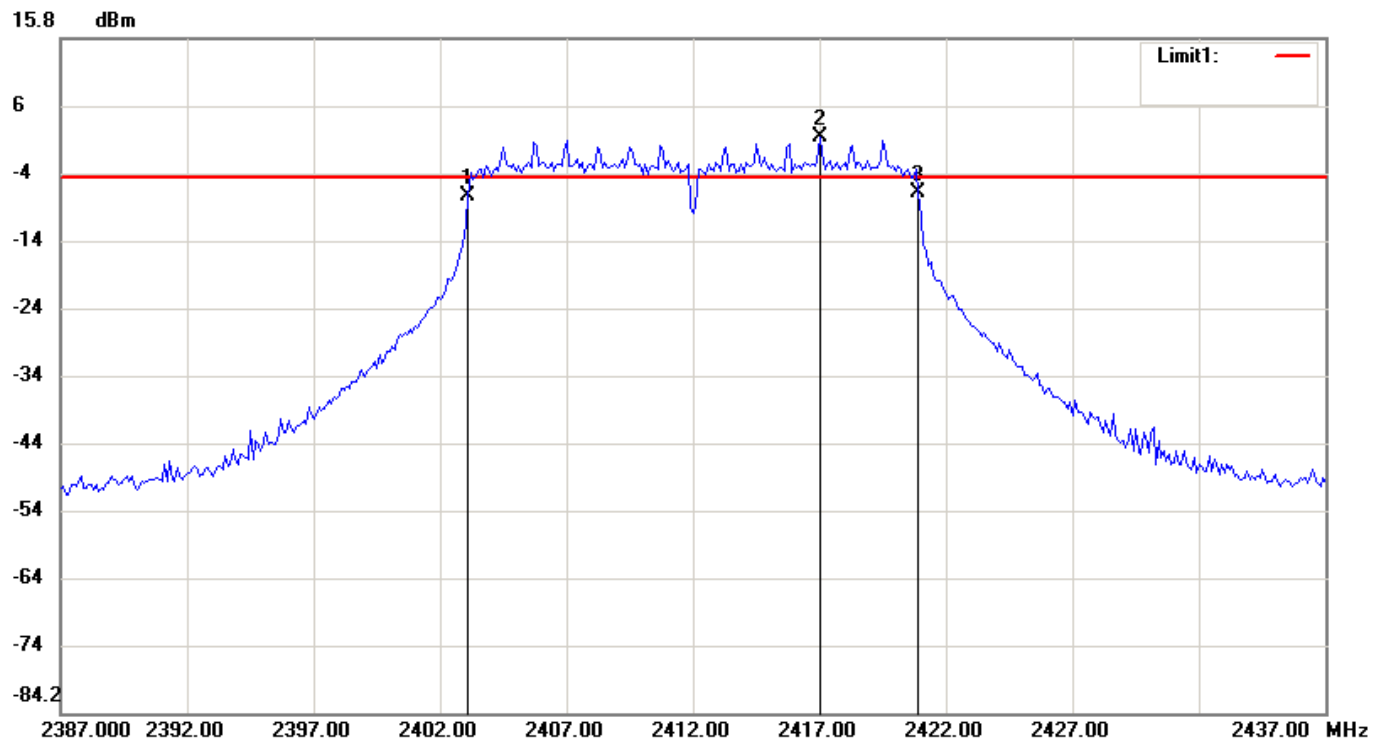
File: 20-04-MAS-061_n20_Ant1
Site: RF-Cond01

#1

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition: -4.82dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT20 Channel 01-6dB EBW

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

No.	Frequency(MHz)	Level(dBm)
1	2403.10000	-7.47
2	2417.00000	1.18
3	2420.90000	-6.99

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

File: 20-04-MAS-061_n20_Ant1
 Site: RF-Cond01

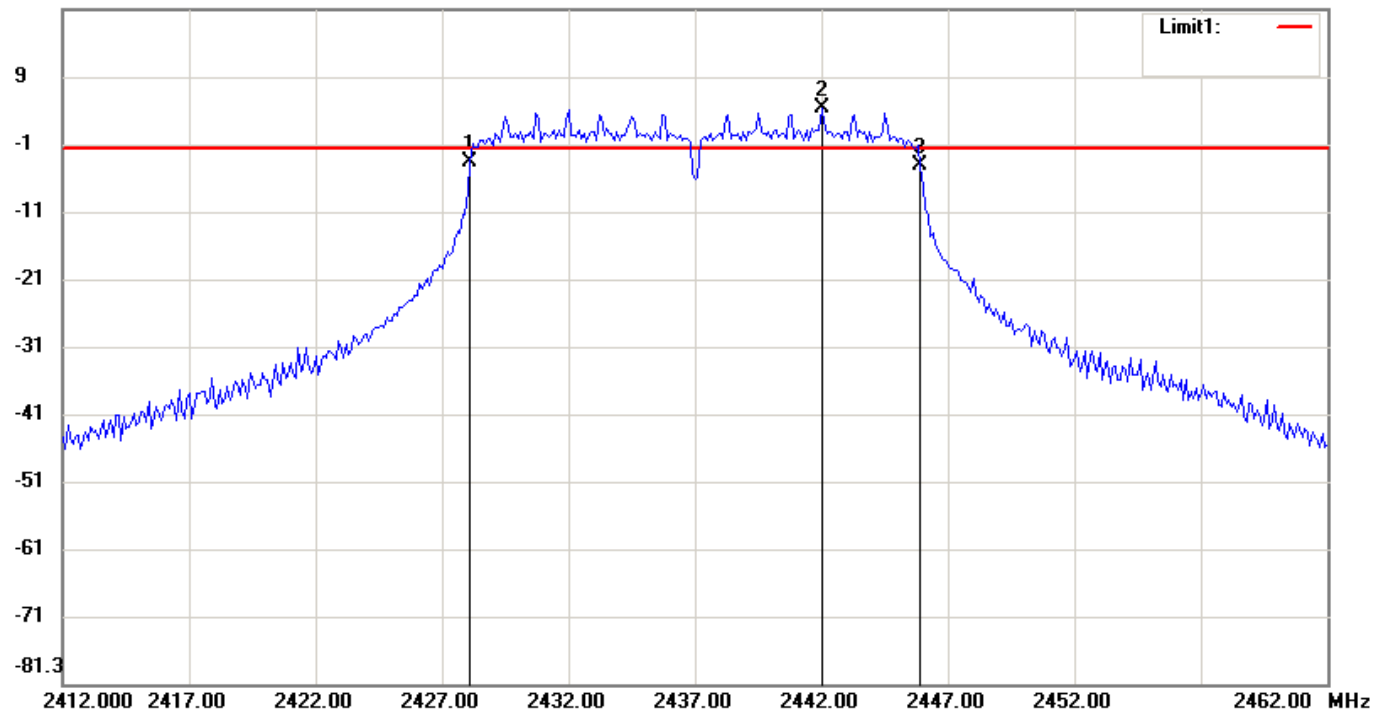
#5

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

18.7 dBm



Condition: -1.81dBm
 EUT: Wireless LAN Conveter
 Model: FBR-3250
 Test Mode: DTS
 Note: NCC_LP0002_802.11n-HT20 Channel 06-6dB EBW

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

No.	Frequency(MHz)	Level(dBm)
1	2428.10000	-3.95
2	2442.00000	4.19
3	2445.90000	-4.47

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	17.8	-0.52

File: 20-04-MAS-061_n20_Ant1
Site: RF-Cond01

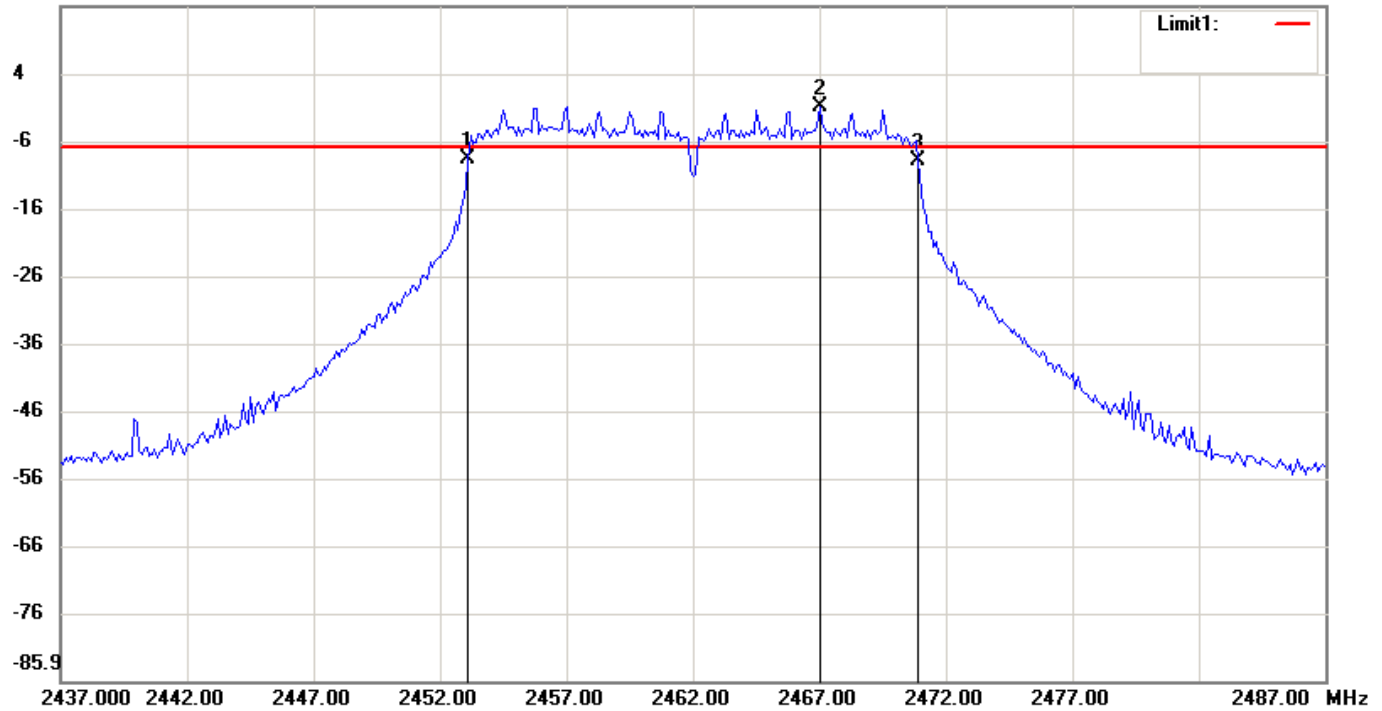
#8

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

14.1 dBm



Condition: -6.75dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT20 Channel 11-6dB EBW

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

No.	Frequency(MHz)	Level(dBm)
1	2453.10000	-8.43
2	2467.00000	-0.75
3	2470.90000	-8.76

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	17.8	-0.33

6.4.4 調變技術: IEEE 802.11n HT40

6.4.4.1 CHAIN 0

測試日期: May 21, 2020

環境溫度 : 25°C

環境濕度: 57%

Channel	6dB Bandwidth (MHz)	NCC Limit (kHz)	Chart
L	36.4	500	Page 41
M	36.8	500	Page 42
H	36.8	500	Page 43

註：繪圖資料請參考第 41-43 頁。

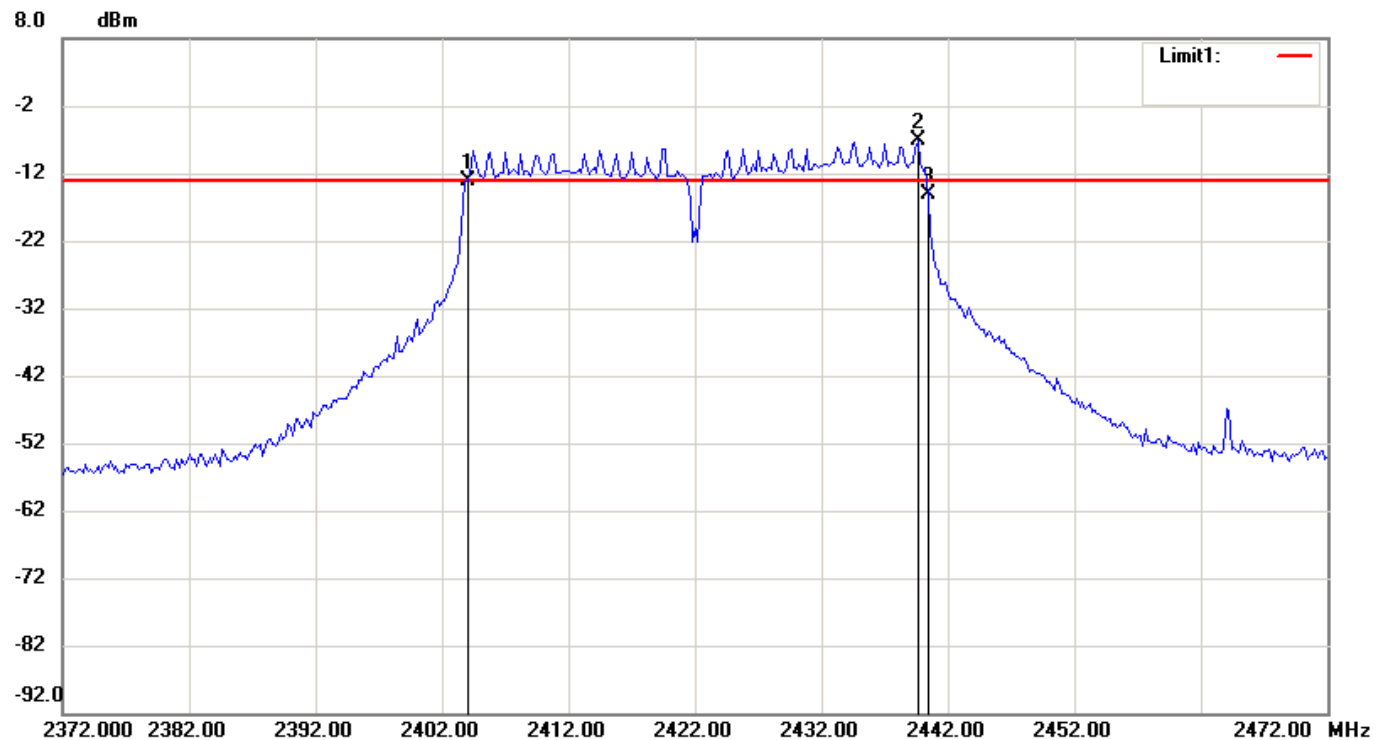
File: 20-04-MAS-061_n40_Ant0
Site: RF-Cond01

#1

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition: -13.08dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT40 Channel 03-6dB EBW

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

No.	Frequency(MHz)	Level(dBm)
1	2404.00000	-13.16
2	2439.60000	-7.08
3	2440.40000	-15.11

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	36.4	-1.95

File: 20-04-MAS-061_n40_Ant0
Site: RF-Cond01

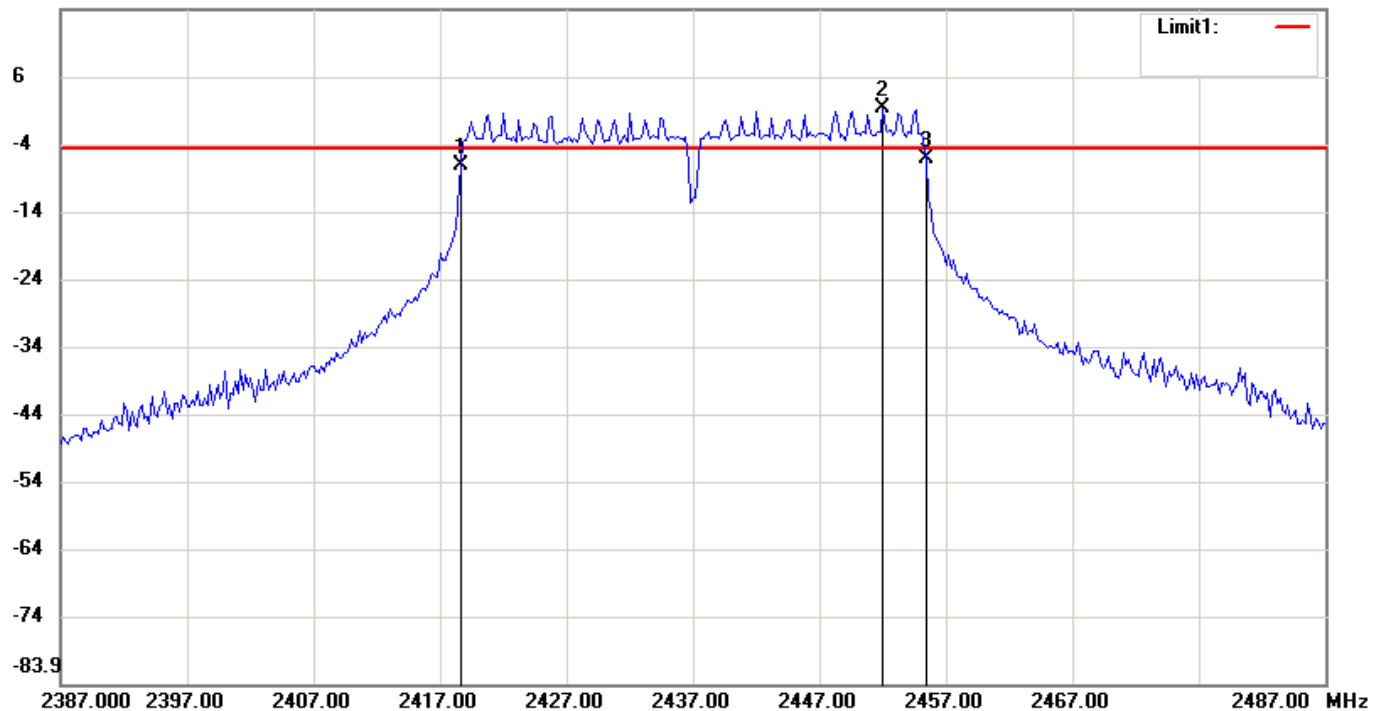
#5

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

16.1 dBm



Condition: -4.64dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT40 Channel 06-6dB EBW

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

No.	Frequency(MHz)	Level(dBm)
1	2418.60000	-6.98
2	2452.00000	1.36
3	2455.40000	-6.02

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	36.8	0.96

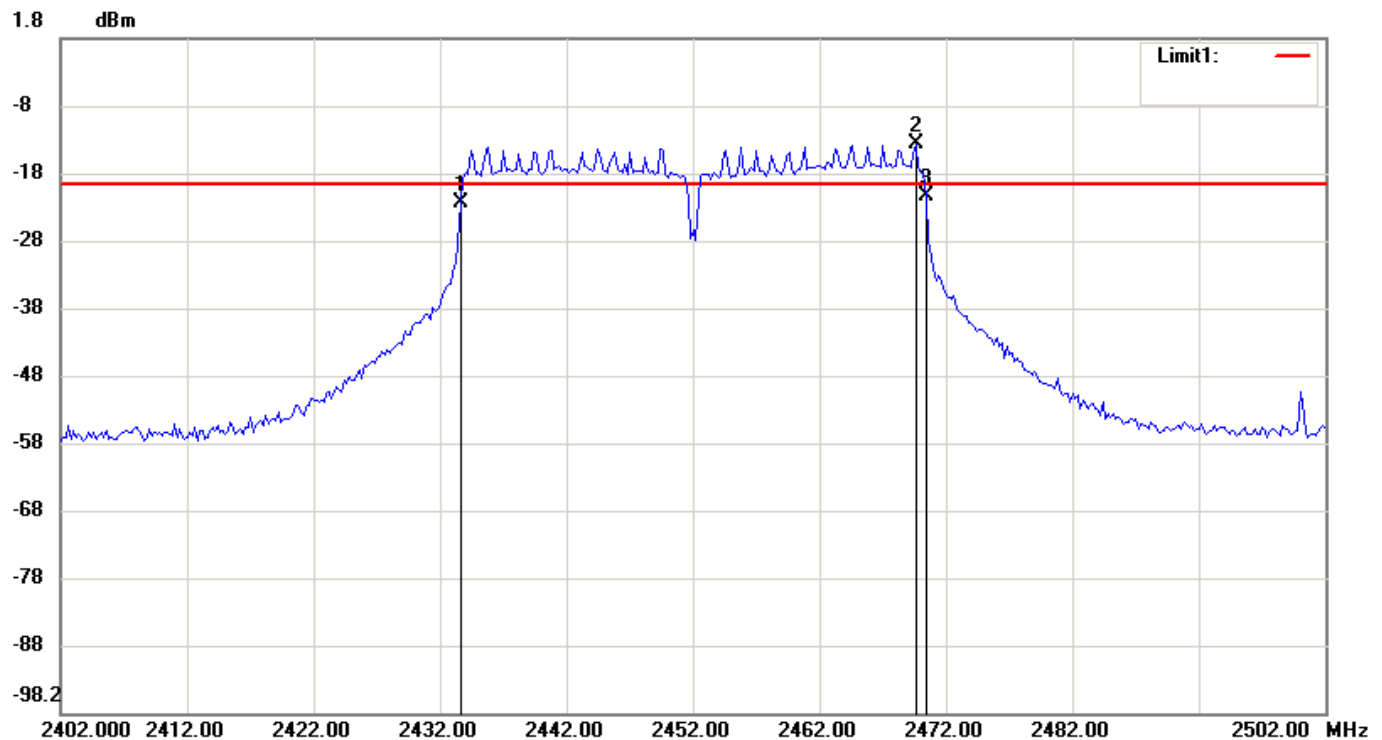
File: 20-04-MAS-061_n40_Ant0
Site: RF-Cond01

#8

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition: -19.74dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT40 Channel 9-6dB EBW

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

No.	Frequency(MHz)	Level(dBm)
1	2433.60000	-22.46
2	2469.60000	-13.74
3	2470.40000	-21.61

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	36.8	0.85

6.4.4.2 CHAIN 1

測試日期: May 21, 2020

環境溫度 : 25°C

環境濕度: 57%

Channel	6dB Bandwidth (MHz)	NCC Limit (kHz)	Chart
L	36.8	500	Page 45
M	36.8	500	Page 46
H	36.8	500	Page 47

註：繪圖資料請參考第 45-47 頁。

6.5 結果判定

高、中、低頻段的6dB頻寬皆大於500KHz。

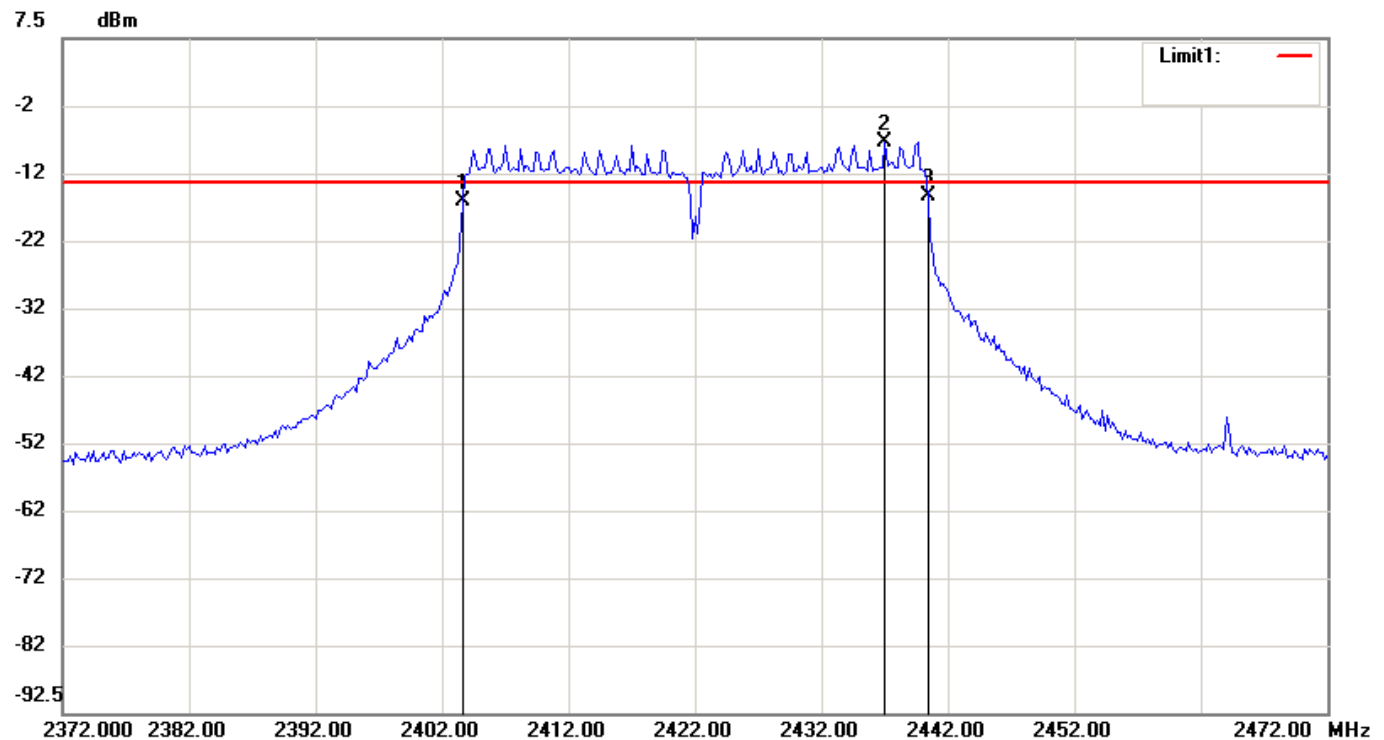
File: 20-04-MAS-061_n40_Ant1
Site: RF-Cond01

#1

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition: -13.78dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT40 Channel 03-6dB EBW

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

No.	Frequency(MHz)	Level(dBm)
1	2403.60000	-16.62
2	2437.00000	-7.78
3	2440.40000	-15.84

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	36.8	0.78

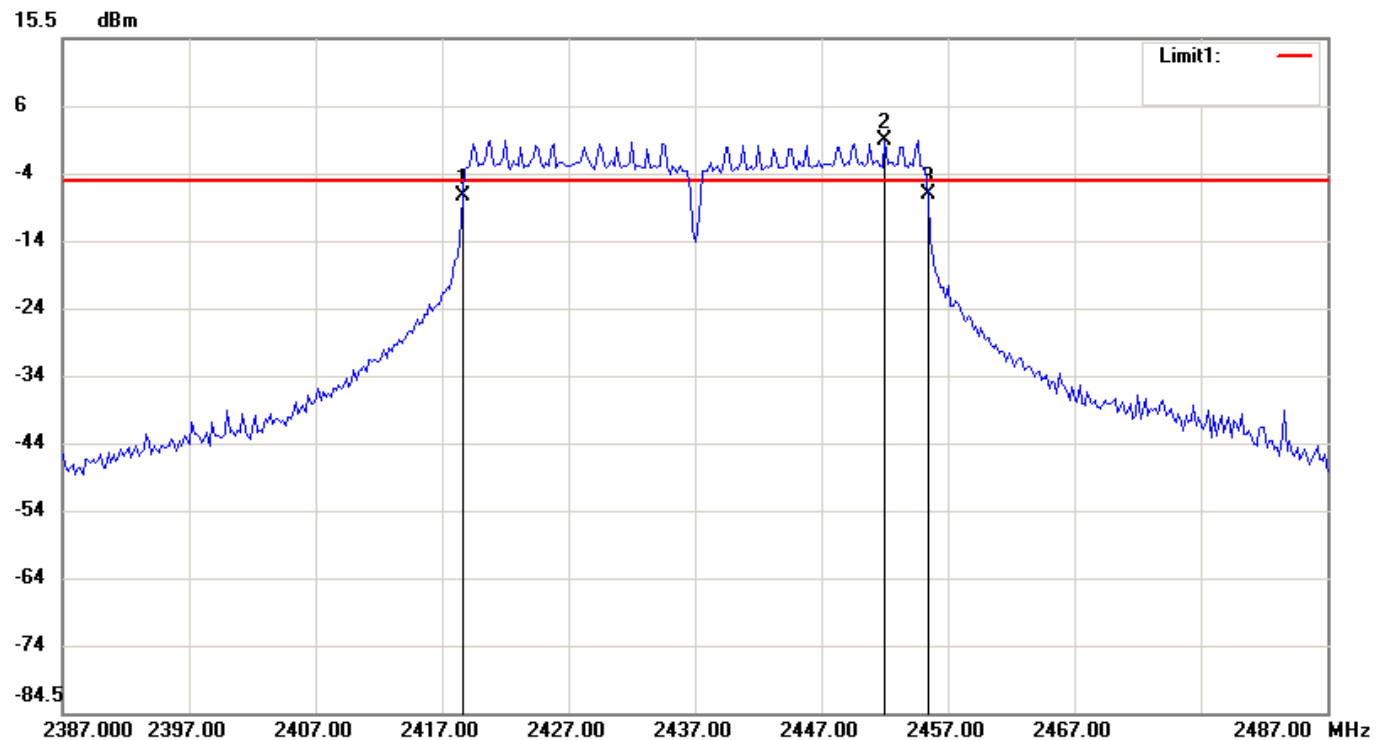
File: 20-04-MAS-061_n40_Ant1
Site: RF-Cond01

#5

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition: -5.49dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT40 Channel 06-6dB EBW

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

No.	Frequency(MHz)	Level(dBm)
1	2418.60000	-7.87
2	2452.00000	0.51
3	2455.40000	-7.52

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	36.8	0.35

File: 20-04-MAS-061_n40_Ant1
Site: RF-Cond01

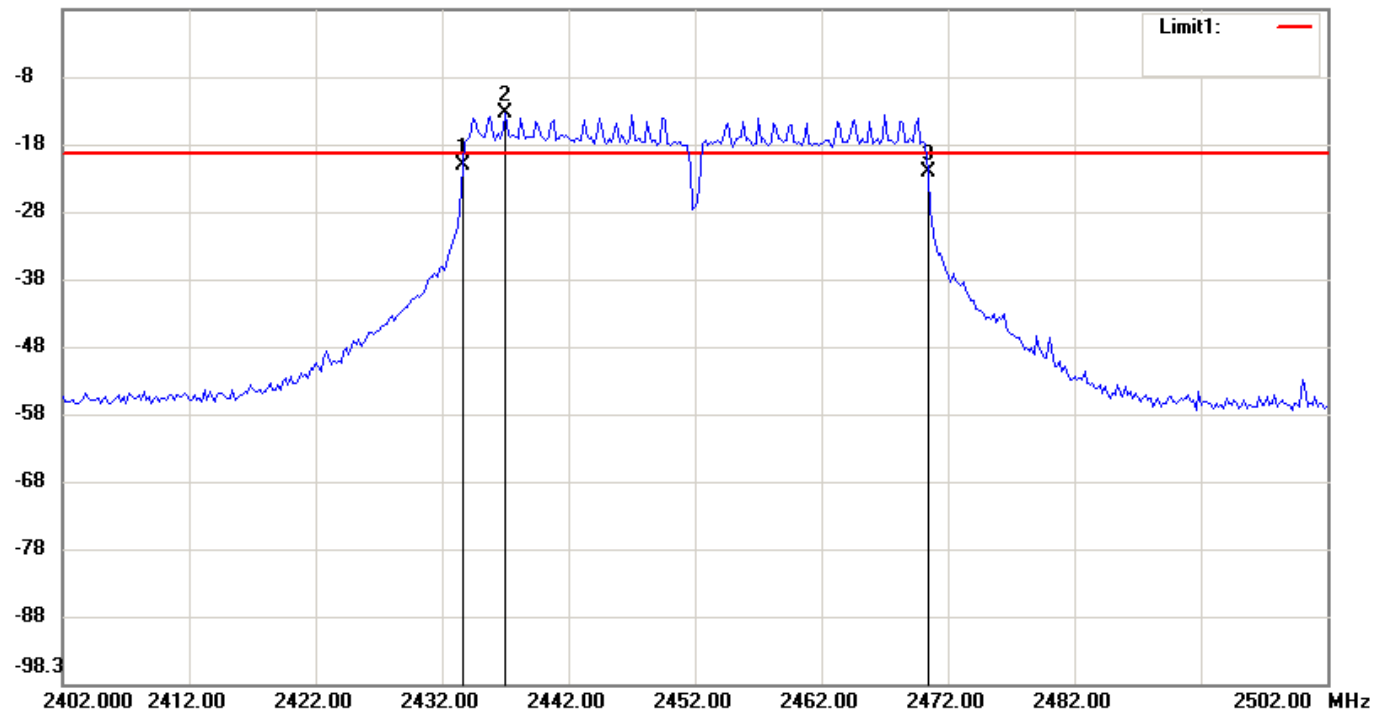
#9

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

1.7 dBm



Condition: -19.75dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT40 Channel 9-6dB EBW

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

No.	Frequency(MHz)	Level(dBm)
1	2433.60000	-21.52
2	2437.00000	-13.75
3	2470.40000	-22.51

No.		Δ Frequency(MHz)	Δ Level(dB)
1	mk3-mk1	36.8	-0.99

7 峰值傳導輸出功率之量測

7.1 峰值適用標準

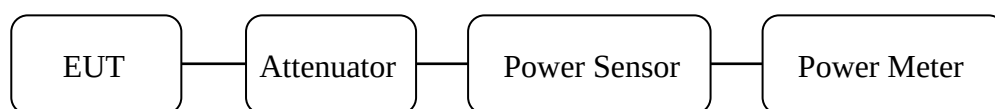
依據國家通訊傳播委員會低功率射頻器材技術規範4.10.1.2節之(1)(C)規定，操作於2400-2483.5兆赫(MHz)之所有數位調變技術系統:1瓦(W)(含)以下。

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 2：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: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

7.4.1 調變技術: IEEE 802.11b

7.4.1.1 CHAIN 0

Channel	Maximum Peak Output Power (dBm)	NCC Limit (dBm)	Chart
L	15.30	30	-
M	16.75	30	-
H	14.11	30	-

7.4.1.2 CHAIN 1

Channel	Maximum Peak Output Power (dBm)	NCC Limit (dBm)	Chart
L	14.92	30	-
M	16.54	30	-
H	13.78	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: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

7.4.2.1 CHAIN 0

Channel	Maximum Peak Output Power (dBm)	NCC Limit (dBm)	Chart
L	23.48	30	-
M	24.89	30	-
H	22.34	30	-

7.4.2.2 CHAIN 1

Channel	Maximum Peak Output Power (dBm)	NCC Limit (dBm)	Chart
L	23.36	30	-
M	24.65	30	-
H	22.14	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 0

測試日期: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

天線增益最大值為 2.9 dBi, NCC Limit 如下表所示:

Channel	Maximum Peak Output Power (dBm)	NCC Limit (dBm)	Chart
L	22.53	30	-
M	24.16	30	-
H	21.37	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 1

測試日期: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

天線增益最大值為 2.9 dBi，NCC Limit 如下表所示：

Channel	Maximum Peak Output Power (dBm)	NCC Limit (dBm)	Chart
L	22.40	30	-
M	24.41	30	-
H	20.83	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: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

7.4.3.3 CHAIN 0 + CHAIN 1

測試日期: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

Ant 1 / Ant 2 combination 天線增益最大值為 5.91 dBi，NCC Limit 如下表所示：

Channel	CHAIN 0 Maximum Peak Output Power (dBm)	CHAIN 1 Maximum Peak Output Power (dBm)	TOTAL Power (dBm)	NCC Limit (dBm)
L	22.53	22.40	25.48	30
M	24.16	24.41	27.30	30
H	21.37	20.83	24.12	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 調變技術: IEEE 802.11n HT40

7.4.4.1 CHAIN 0

測試日期: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

天線增益最大值為 2.9 dBi, NCC Limit 如下表所示:

Channel	Maximum Peak Output Power (dBm)	NCC Limit (dBm)	Chart
L	22.53	30	-
M	24.16	30	-
H	21.37	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 1

測試日期: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

天線增益最大值為 2.9 dBi, NCC Limit 如下表所示:

Channel	Maximum Peak Output Power (dBm)	NCC Limit (dBm)	Chart
L	22.40	30	-
M	24.41	30	-
H	20.83	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 0 + CHAIN 1

測試日期: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

Ant 0 / Ant 1 combination 天線增益最大值為 5.91 dBi，NCC Limit 如下表所示：

Channel	CHAIN 0 Maximum Peak Output Power (dBm)	CHAIN 1 Maximum Peak Output Power (dBm)	TOTAL Power (dBm)	NCC Limit (dBm)
L	17.68	17.23	20.47	30
M	25.59	25.30	28.46	30
H	12.39	11.73	15.08	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器材技術規範4.10.1.6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4.10.1.3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 1 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: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

Channel	Peak Power Spectral Density (dBm)	NCC Limit (dBm)	Chart
L	-11.60	8	Page 59
M	-9.79	8	Page 60
H	-12.21	8	Page 61

註: 1. 繪圖資料請參考第 59-61 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: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

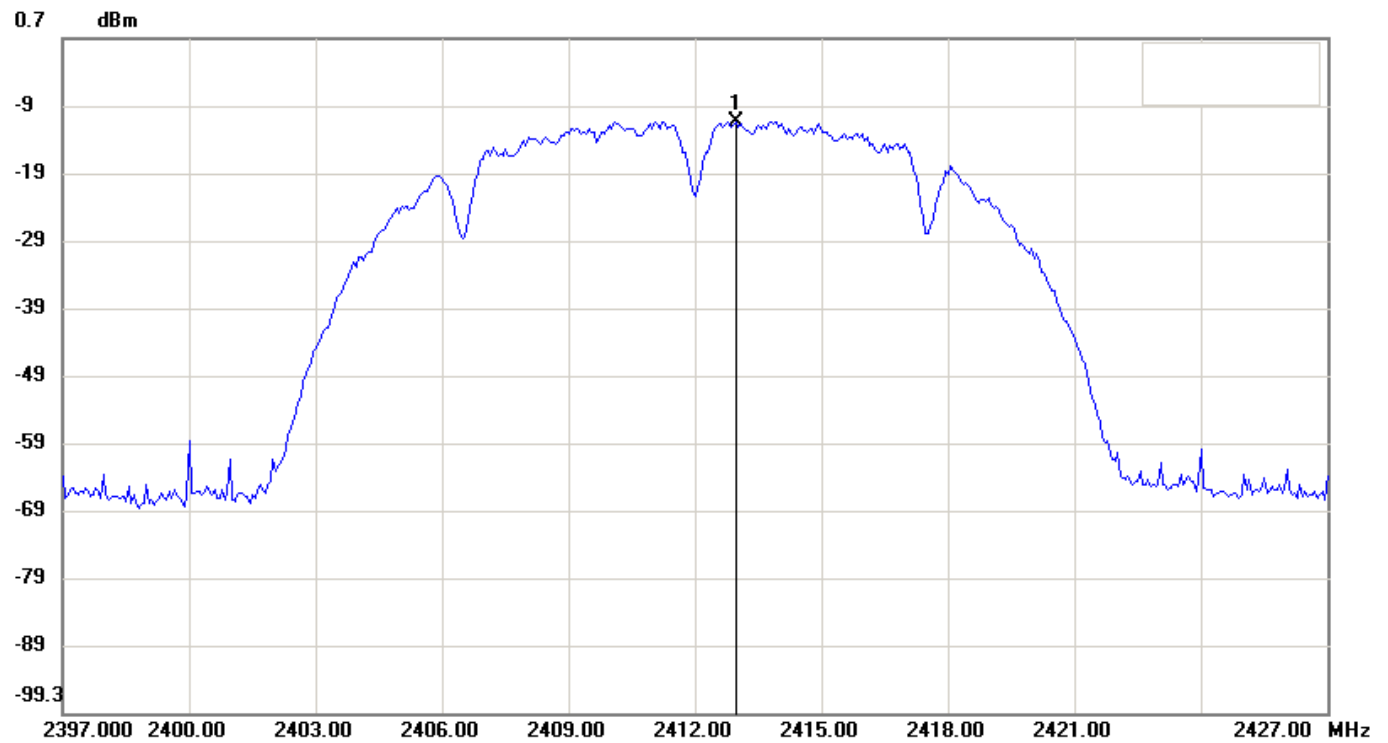
File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

#3

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition:

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

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

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz

VBW: 10 KHz

Operator:

Phillip

No.	Frequency(MHz)	Level(dBm)
1	2412.96000	-11.60

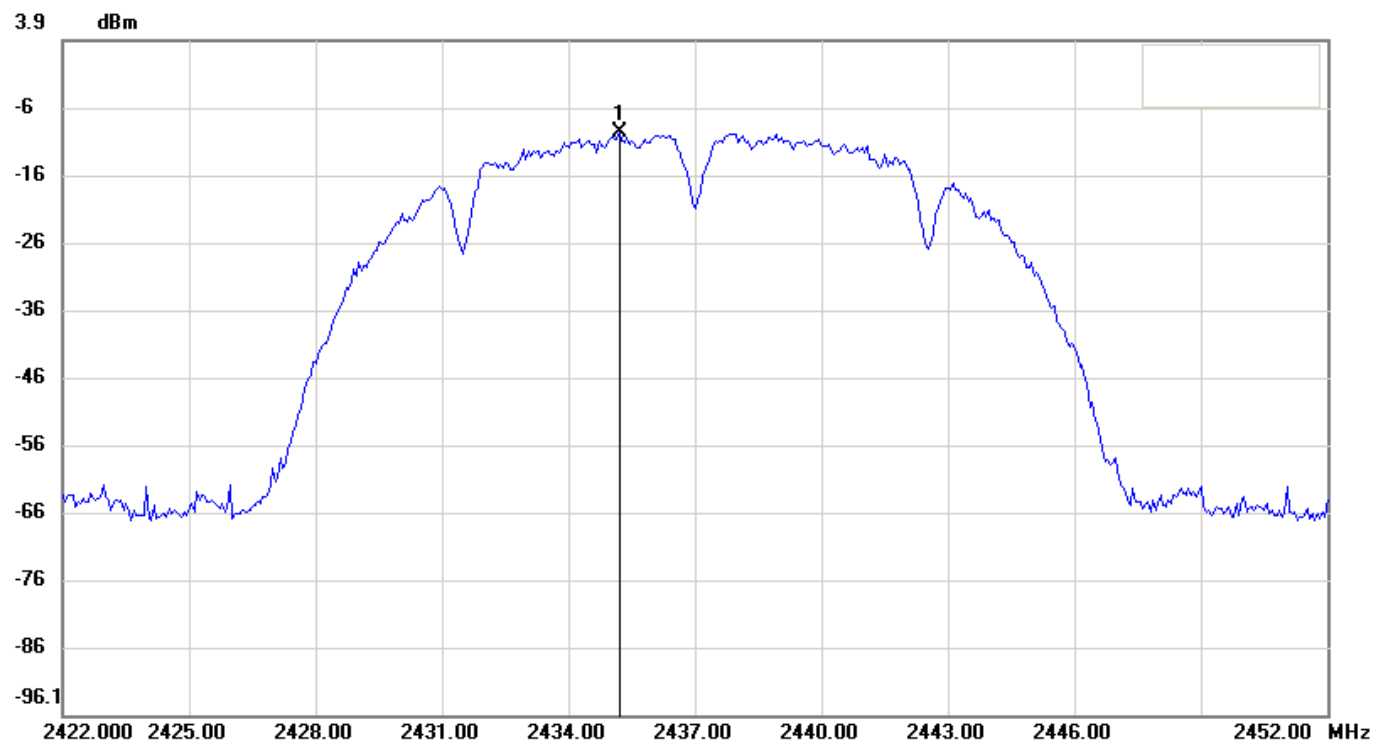
File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

#7

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

**Condition:**

EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11b Channel 06-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB
RBW: 3 KHz VBW: 10 KHz
Operator: Phillip

No.	Frequency(MHz)	Level(dBm)
1	2435.20000	-9.79

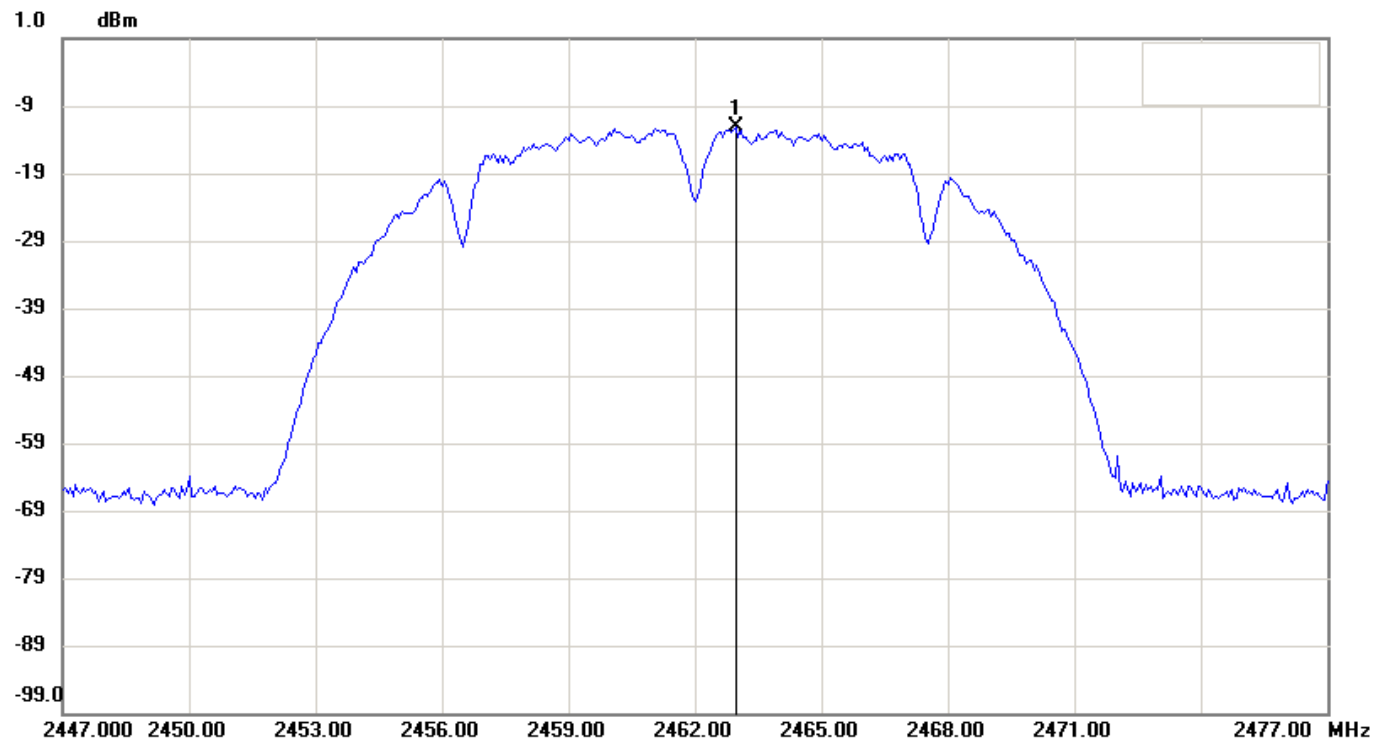
File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

#10

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition:

EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11b Channel 11-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB
RBW: 3 KHz VBW: 10 KHz
Operator: Phillip

No.	Frequency(MHz)	Level(dBm)
1	2462.96000	-12.21

8.4.2 調變技術: IEEE 802.11g

測試日期: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

Channel	Peak Power Spectral Density (dBm)	NCC Limit (dBm)	Chart
L	-9.67	8	Page 63
M	-7.71	8	Page 64
H	-11.61	8	Page 65

註：1. 繪圖資料請參考第 63-65 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: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

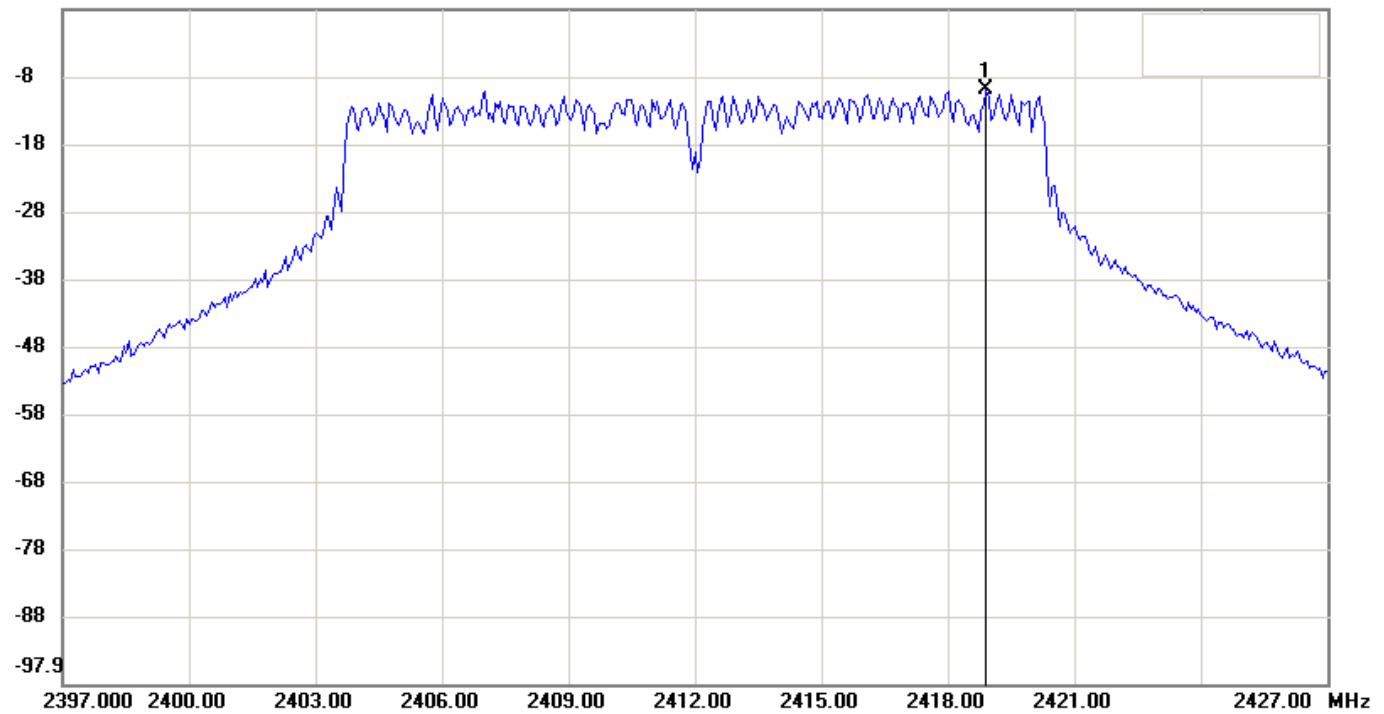
#17

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

2.1 dBm



Condition:

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

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

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz

VBW: 10 KHz

Operator:

Phillip

No.	Frequency(MHz)	Level(dBm)
1	2418.90000	-9.67

File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

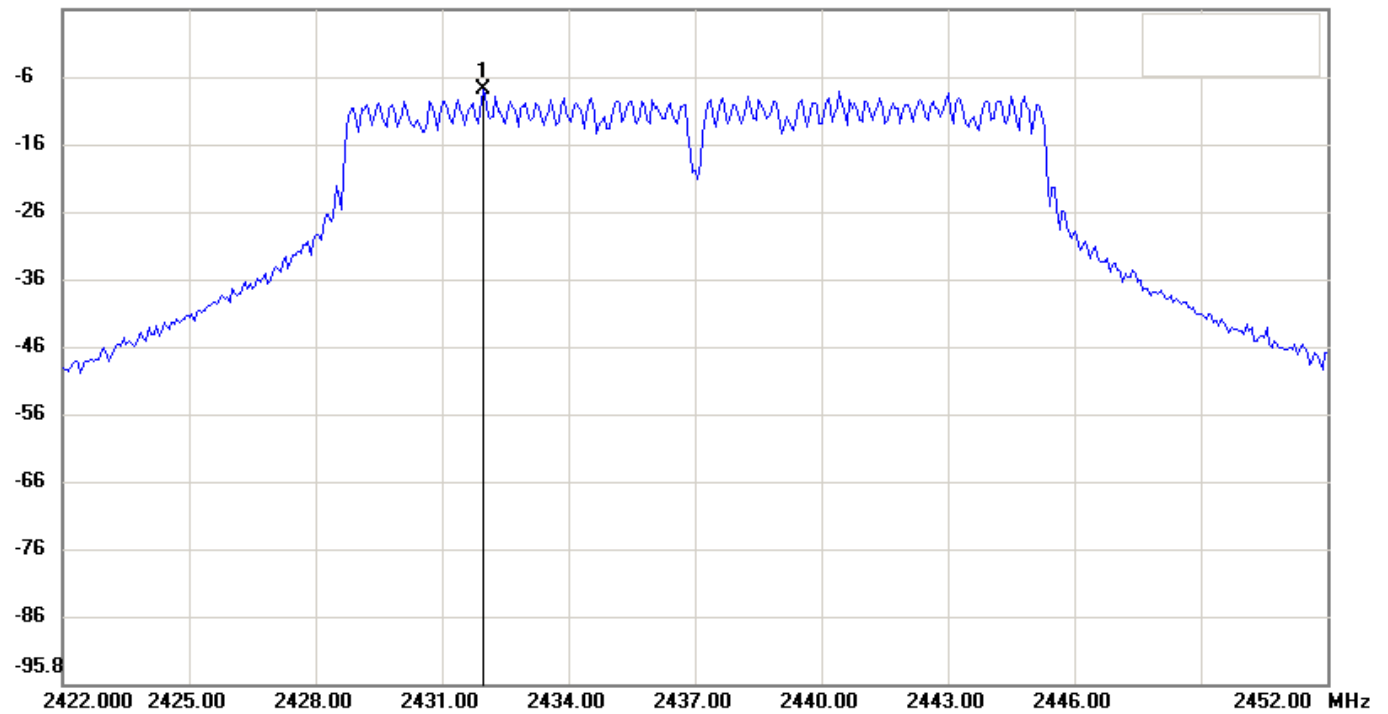
#21

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

4.2 dBm



Condition:

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

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

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz

VBW: 10 KHz

Operator:

Phillip

No.	Frequency(MHz)	Level(dBm)
1	2431.96000	-7.71

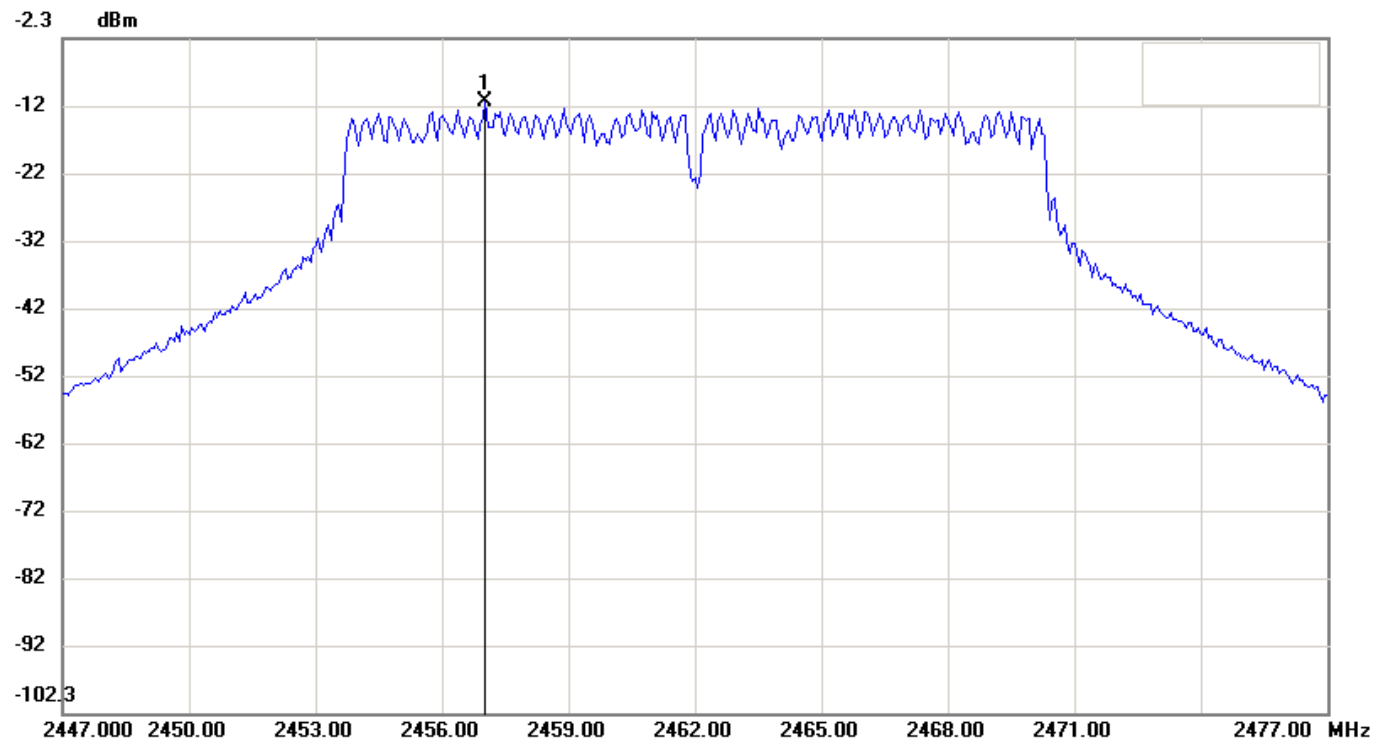
File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

#25

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition:

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

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

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

Operator: Phillip

No.	Frequency(MHz)	Level(dBm)
1	2457.02000	-11.61

8.4.3 調變技術: IEEE 802.11n HT20

8.4.3.1 CHAIN 0

測試日期: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

天線增益最大值為 2.9 dBi, NCC Limit 如下表所示:

Channel	Peak Power Spectral Density (dBm)	NCC Limit (dBm)	Chart
L	-10.83	8	Page 67
M	-9.67	8	Page 68
H	-12.85	8	Page 69

註: 1. 繪圖資料請參考第 67-69 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: 20-04-MAS-061_n20_Ant0

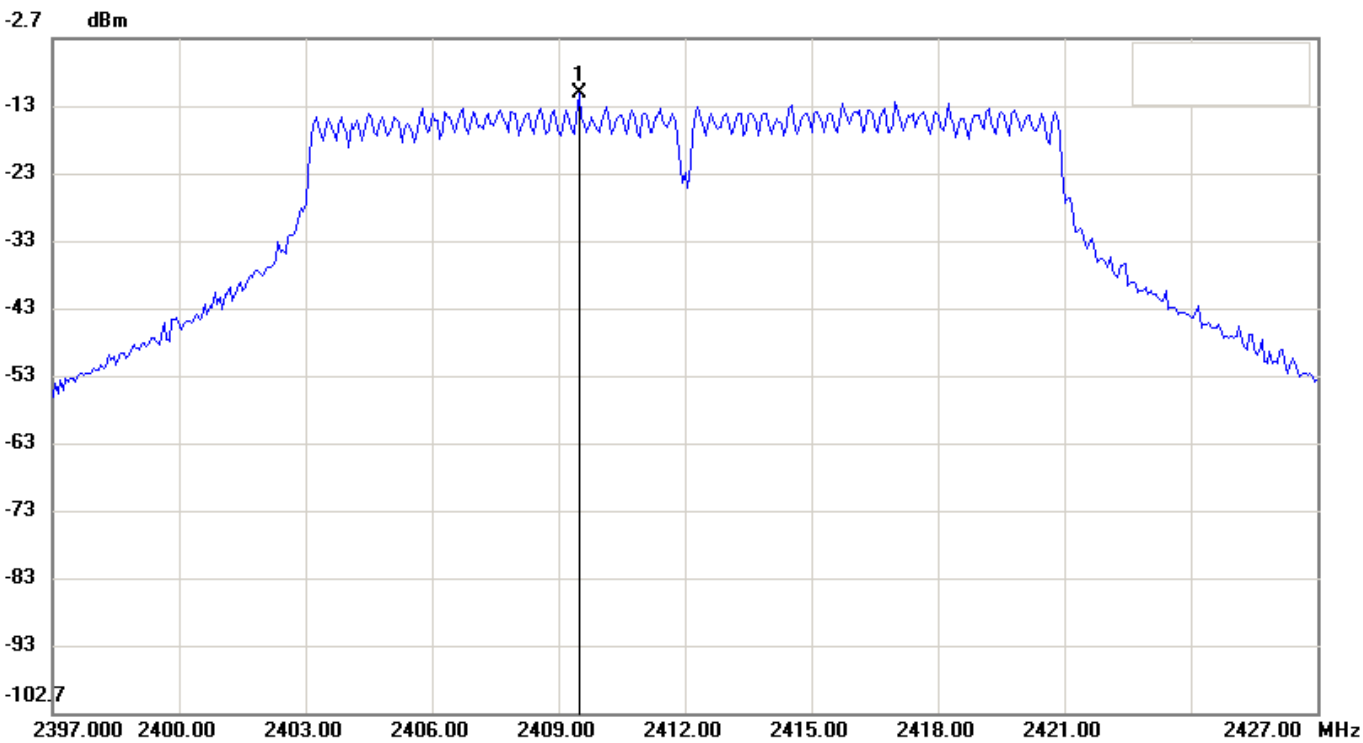
#3

Date: 2020/5/21

Temperature: 25 °C

Site: RF-Cond01

Humidity: 57 %



Condition:

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

Note: NCC_LP0002_802.11n-HT20 Channel 01-Power Density (PK)

RF Conducted

Sweep Time: 334ms

RBW: 3 KHz

Operator:

Att.: 20dB

VBW: 10 KHz

Phillip

No.	Frequency(MHz)	Level(dBm)
1	2409.48000	-10.83

File: 20-04-MAS-061_n20_Ant0
 Site: RF-Cond01

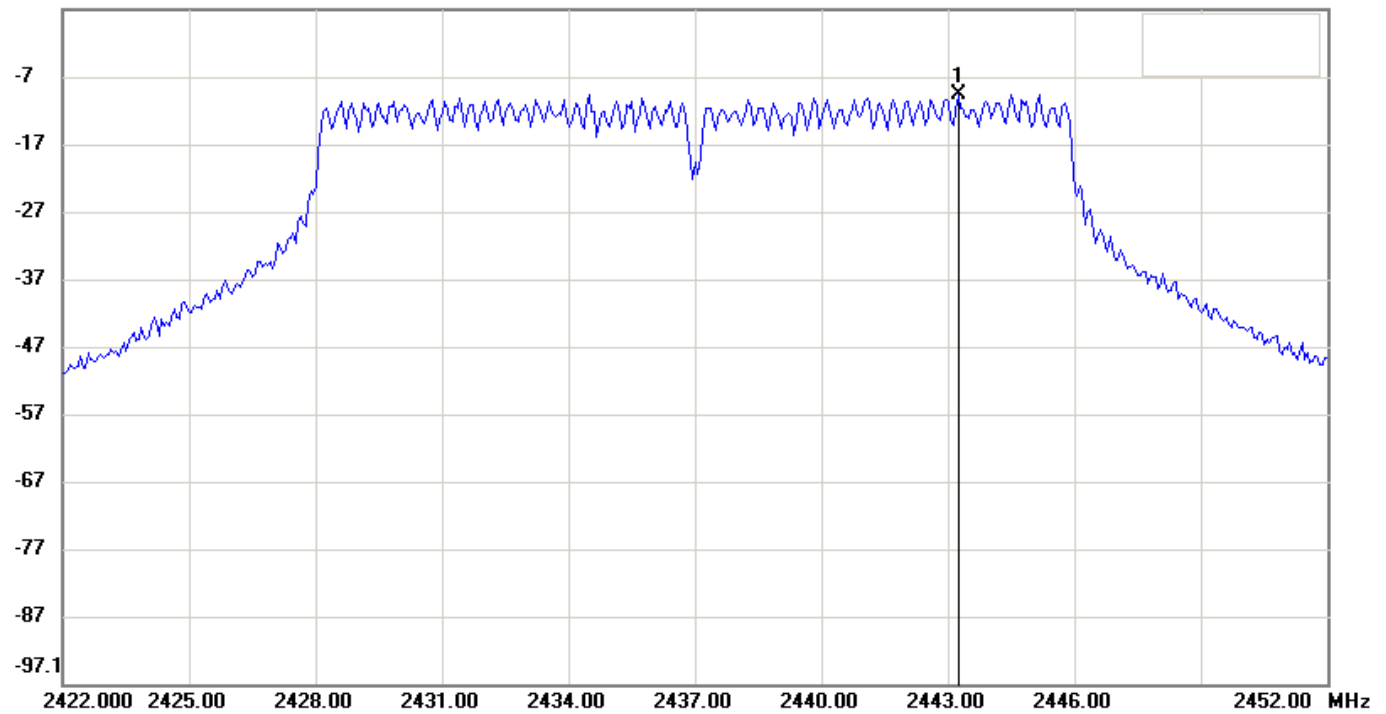
#8

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

2.9 dBm



Condition:

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

Note: NCC_LP0002_802.11n-HT20 Channel 06-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz

VBW: 10 KHz

Operator:

Phillip

No.	Frequency(MHz)	Level(dBm)
1	2443.24000	-9.67

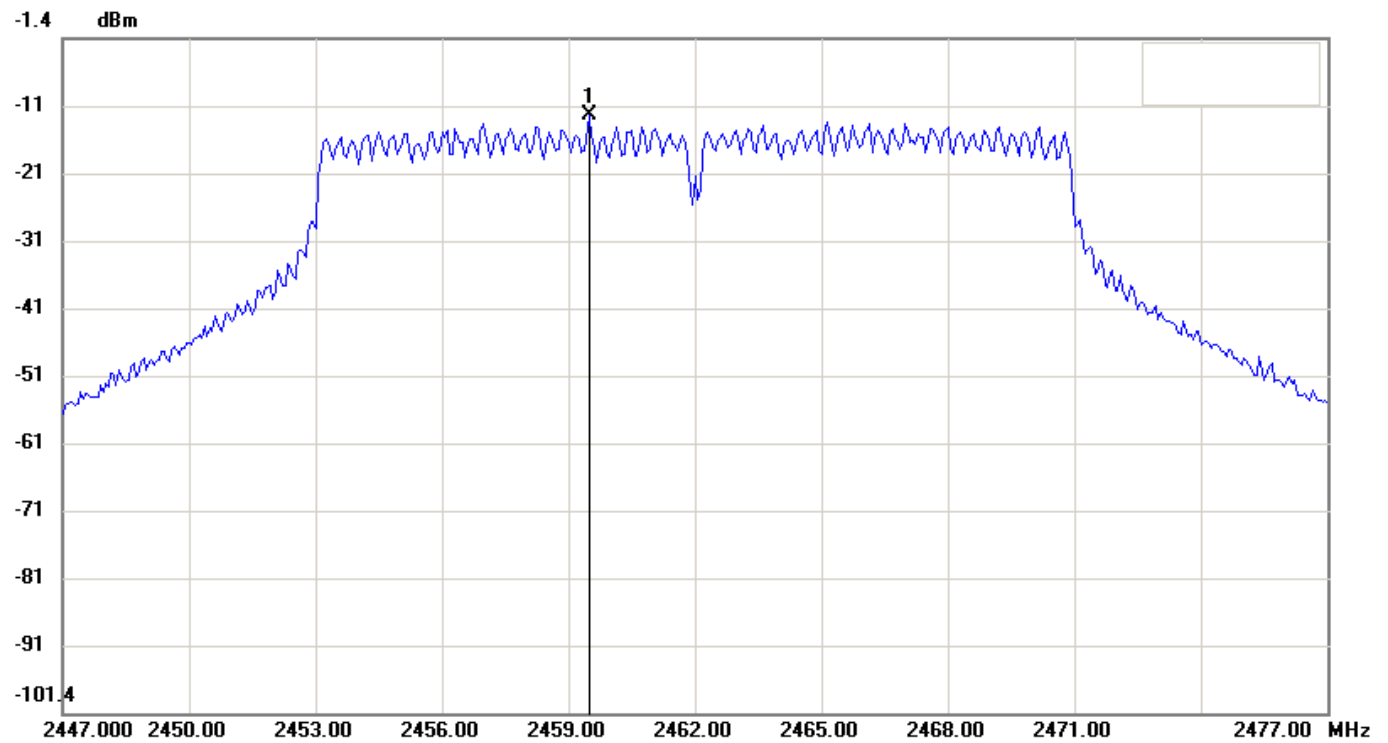
File: 20-04-MAS-061_n20_Ant0
 Site: RF-Cond01

#11

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition:

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

Note: NCC_LP0002_802.11n-HT20 Channel 11-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

Operator: Phillip

No.	Frequency(MHz)	Level(dBm)
1	2459.48000	-12.85

8.4.3.2 CHAIN 1

測試日期: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

天線增益最大值為 2.9 dBi，NCC Limit 如下表所示：

Channel	Peak Power Spectral Density (dBm)	NCC Limit (dBm)	Chart
L	-12.26	8	Page 71
M	-9.80	8	Page 72
H	-13.67	8	Page 73

註：1. 繪圖資料請參考第 71-73 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: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

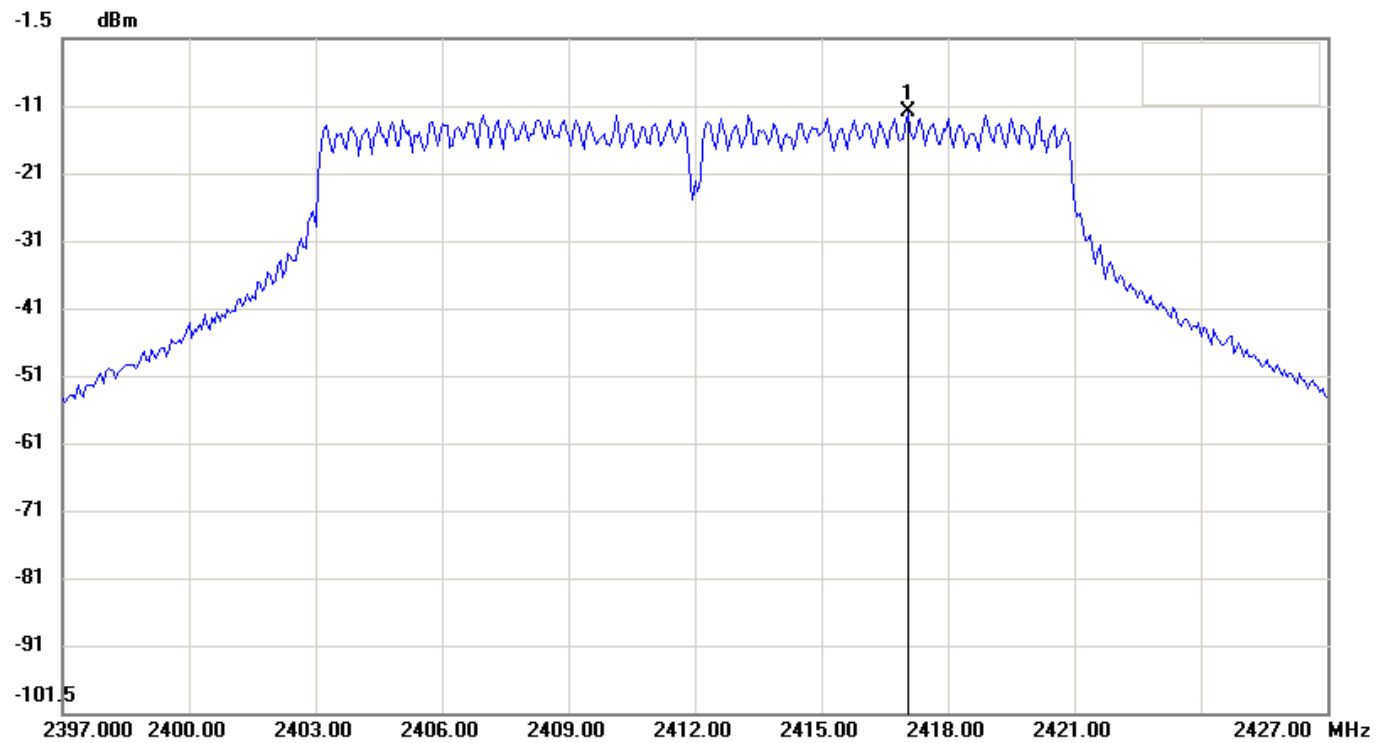
File: 20-04-MAS-061_n20_Ant1
Site: RF-Cond01

#3

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition:

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

Note: NCC_LP0002_802.11n-HT20 Channel 01-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

Operator: Phillip

No.	Frequency(MHz)	Level(dBm)
1	2417.04000	-12.26

File: 20-04-MAS-061_n20_Ant1
 Site: RF-Cond01

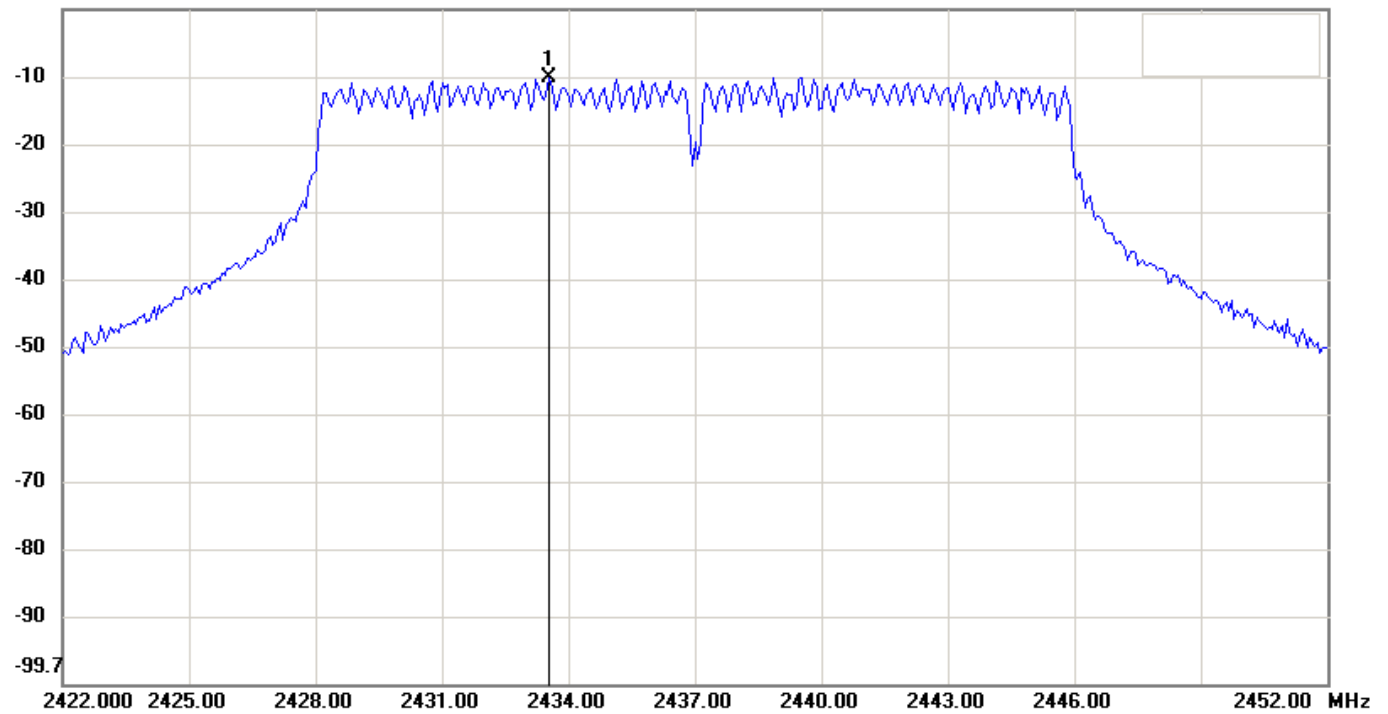
#7

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

0.3 dBm



Condition:

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

Note: NCC_LP0002_802.11n-HT20 Channel 06-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz

VBW: 10 KHz

Operator:

Phillip

No.	Frequency(MHz)	Level(dBm)
1	2433.52000	-9.80

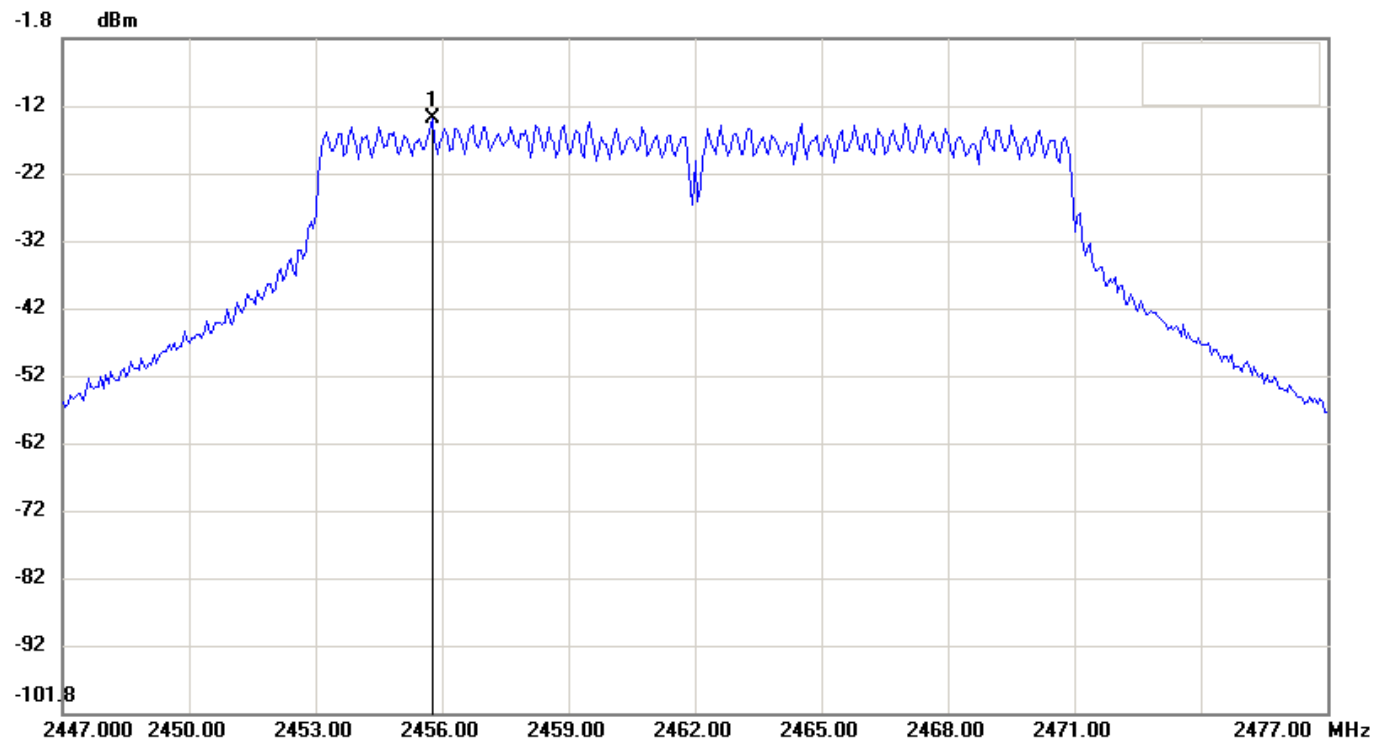
File: 20-04-MAS-061_n20_Ant1
 Site: RF-Cond01

#10

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition:

EUT: Wireless LAN Conveter
 Model: FBR-3250
 Test Mode: DTS
 Note: NCC_LP0002_802.11n-HT20 Channel 11-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB
 RBW: 3 KHz VBW: 10 KHz
 Operator: Phillip

No.	Frequency(MHz)	Level(dBm)
1	2455.76000	-13.67

8.4.3.3 CHAIN 0 + CHAIN 1

測試日期: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

Total power density calculation formula:

$$10 \log (10^{(\text{Chain 0 PPSD} / 10)} + 10^{(\text{Chain 1 PPSD} / 10)})$$

天線增益最大值為 5.91 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 0	Chain 1			
L	-10.83	-12.26	-8.48	8	-
M	-9.67	-9.80	-6.72	8	-
H	-12.85	-13.67	-10.23	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: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

8.4.4 調變技術: IEEE 802.11n HT40

8.4.4.1 CHAIN 0

測試日期: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

天線增益最大值為 2.9 dBi, NCC Limit 如下表所示:

Channel	Peak Power Spectral Density (dBm)	NCC Limit (dBm)	Chart
L	-19.36	8	Page 76
M	-10.52	8	Page 77
H	-25.53	8	Page 78

註: 1. 繪圖資料請參考第 76-78 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: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

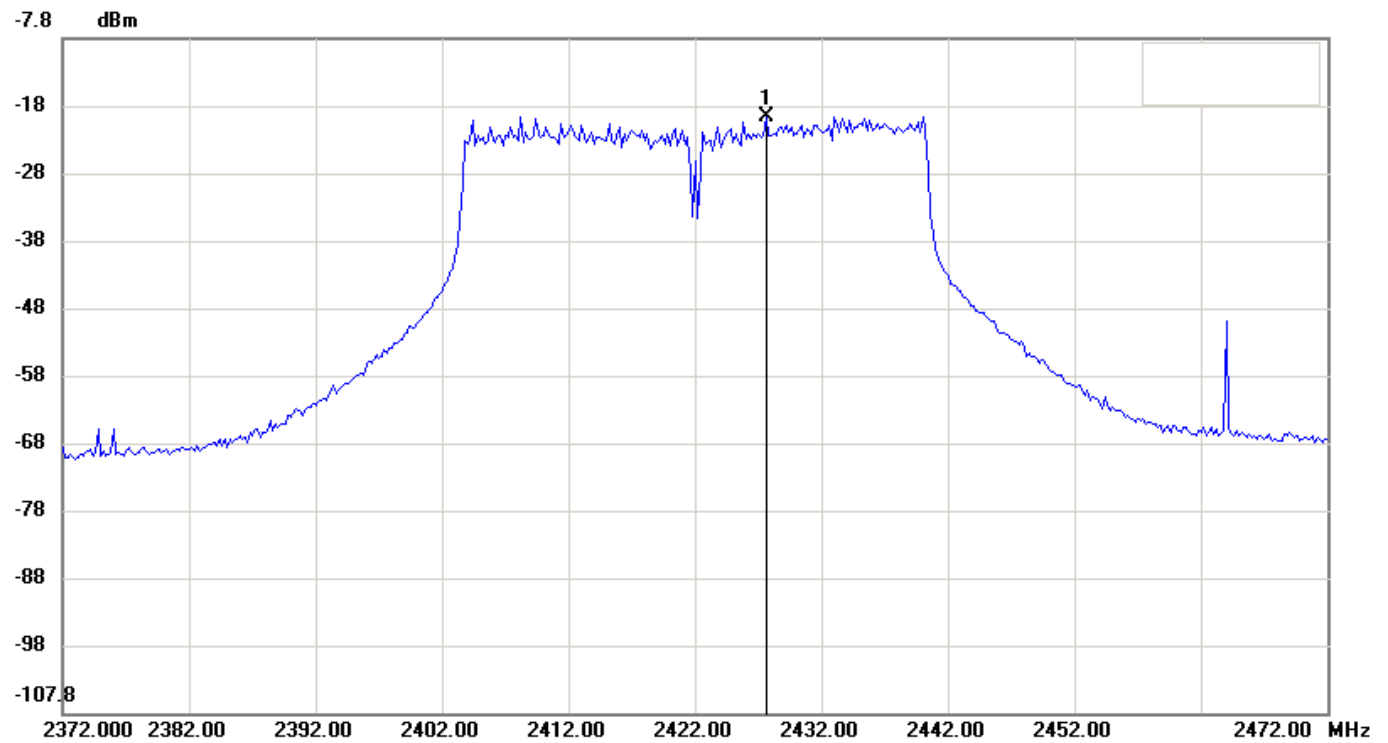
File: 20-04-MAS-061_n40_Ant0
Site: RF-Cond01

#3

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition:

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

Note: NCC_LP0002_802.11n-HT40 Channel 03-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

Operator: Phillip

No.	Frequency(MHz)	Level(dBm)
1	2427.60000	-19.36

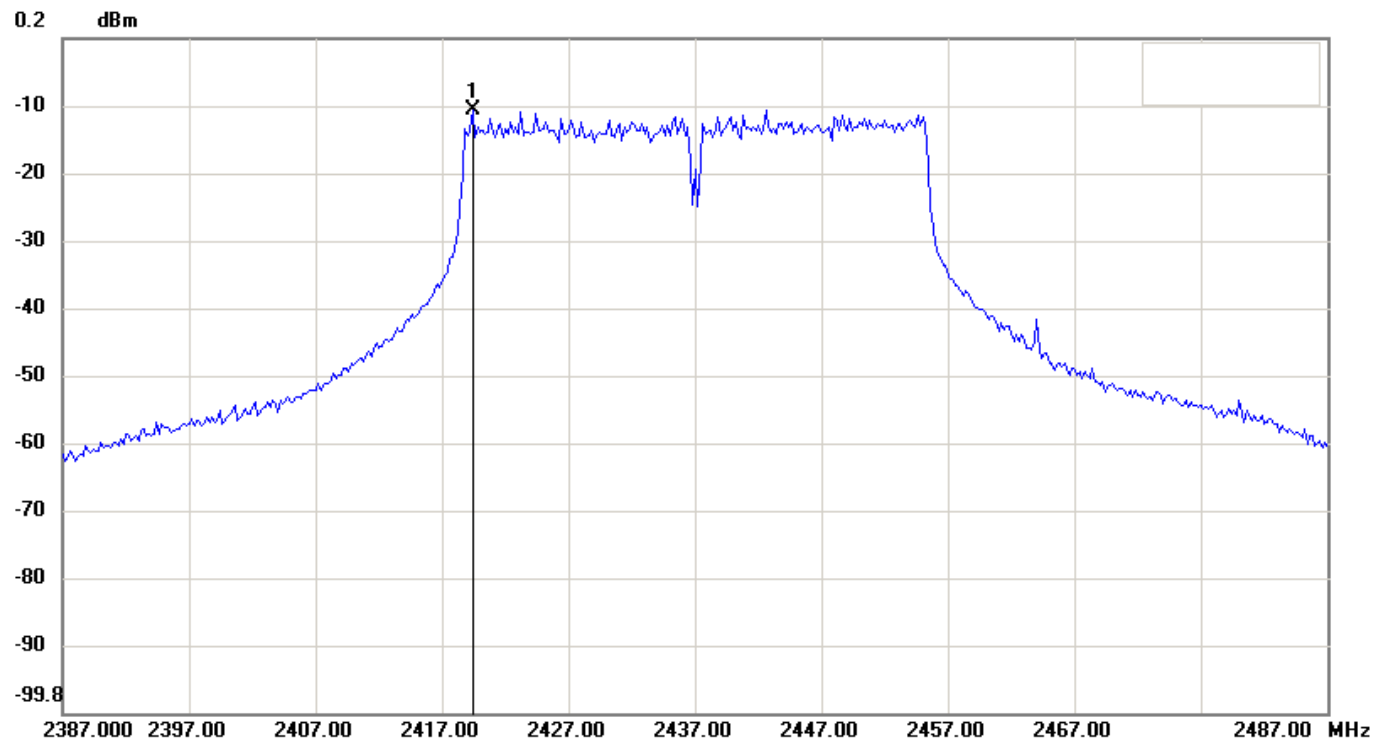
File: 20-04-MAS-061_n40_Ant0
 Site: RF-Cond01

#7

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition:

EUT: Wireless LAN Conveter
 Model: FBR-3250
 Test Mode: DTS
 Note: NCC_LP0002_802.11n-HT40 Channel 06-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB
 RBW: 3 KHz VBW: 10 KHz
 Operator: Phillip

No.	Frequency(MHz)	Level(dBm)
1	2419.40000	-10.52

File: 20-04-MAS-061_n40_Ant0
Site: RF-Cond01

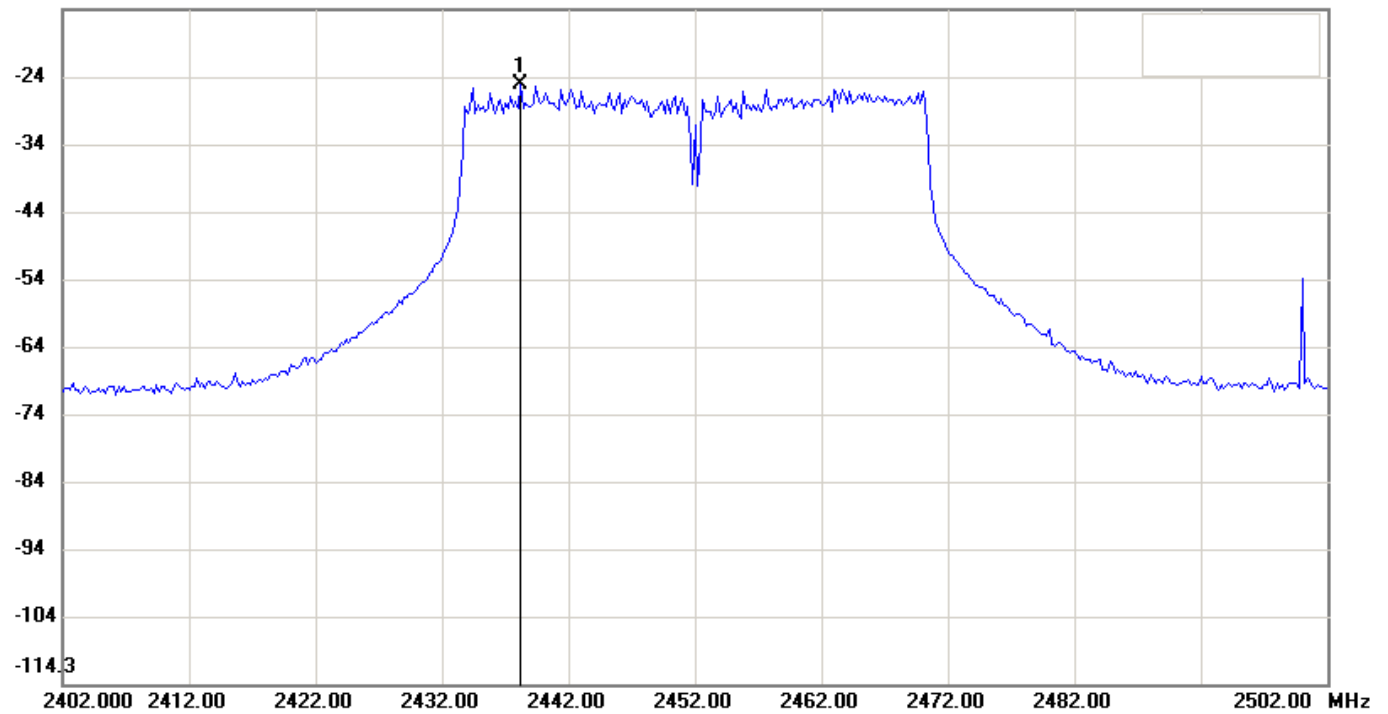
#10

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

-14.3 dBm



Condition:

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

Note: NCC_LP0002_802.11n-HT40 Channel 9-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

Operator: Phillip

No.	Frequency(MHz)	Level(dBm)
1	2438.20000	-25.33

8.4.4.2 CHAIN 1

測試日期: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

天線增益最大值為 2.9 dBi，NCC Limit 如下表所示：

Channel	Peak Power Spectral Density (dBm)	NCC Limit (dBm)	Chart
L	-18.83	8	Page 80
M	-10.13	8	Page 81
H	-24.75	8	Page 82

註：1. 繪圖資料請參考第 80-82 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: $\pm 1.5\text{dB}$ ($1\text{GHz} \leq f \leq 18\text{GHz}$)

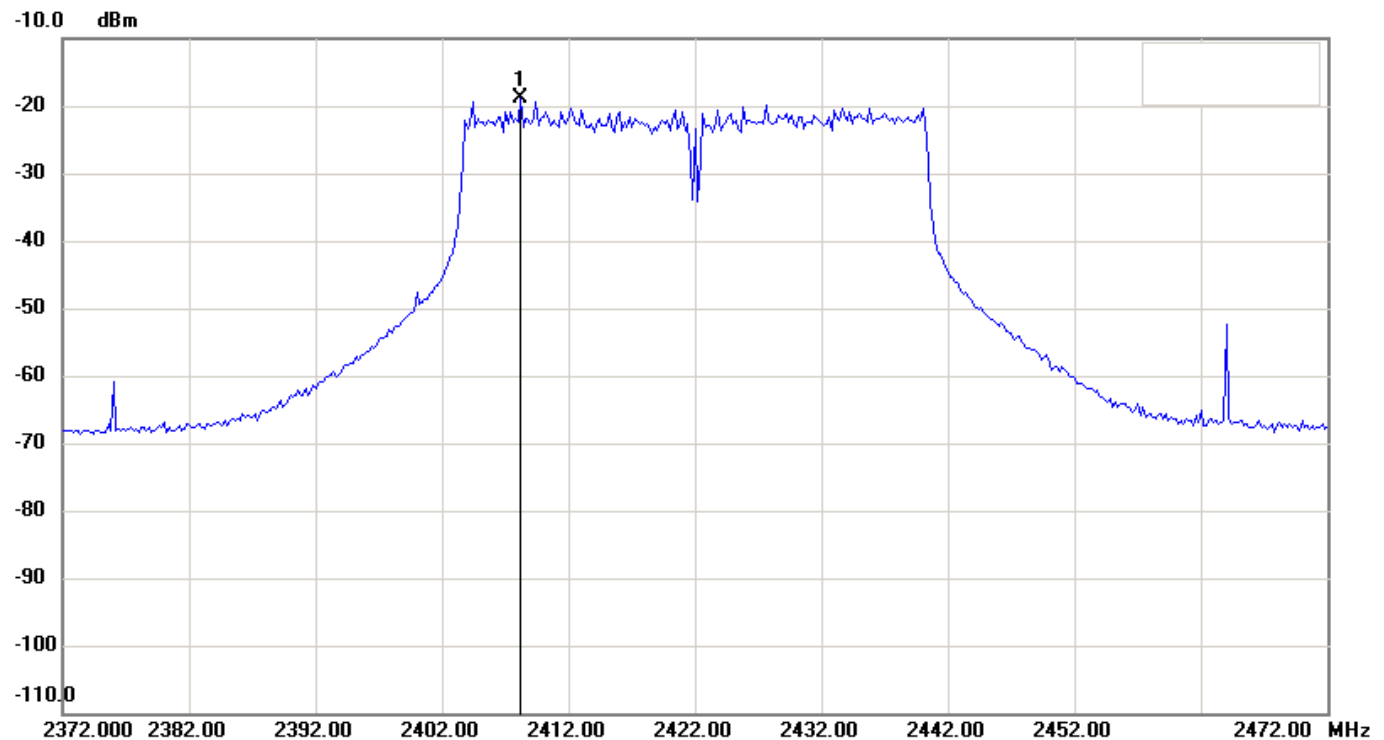
File: 20-04-MAS-061_n40_Ant1
Site: RF-Cond01

#3

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition:

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

Note: NCC_LP0002_802.11n-HT40 Channel 03-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

Operator: Phillip

No.	Frequency(MHz)	Level(dBm)
1	2408.20000	-18.83

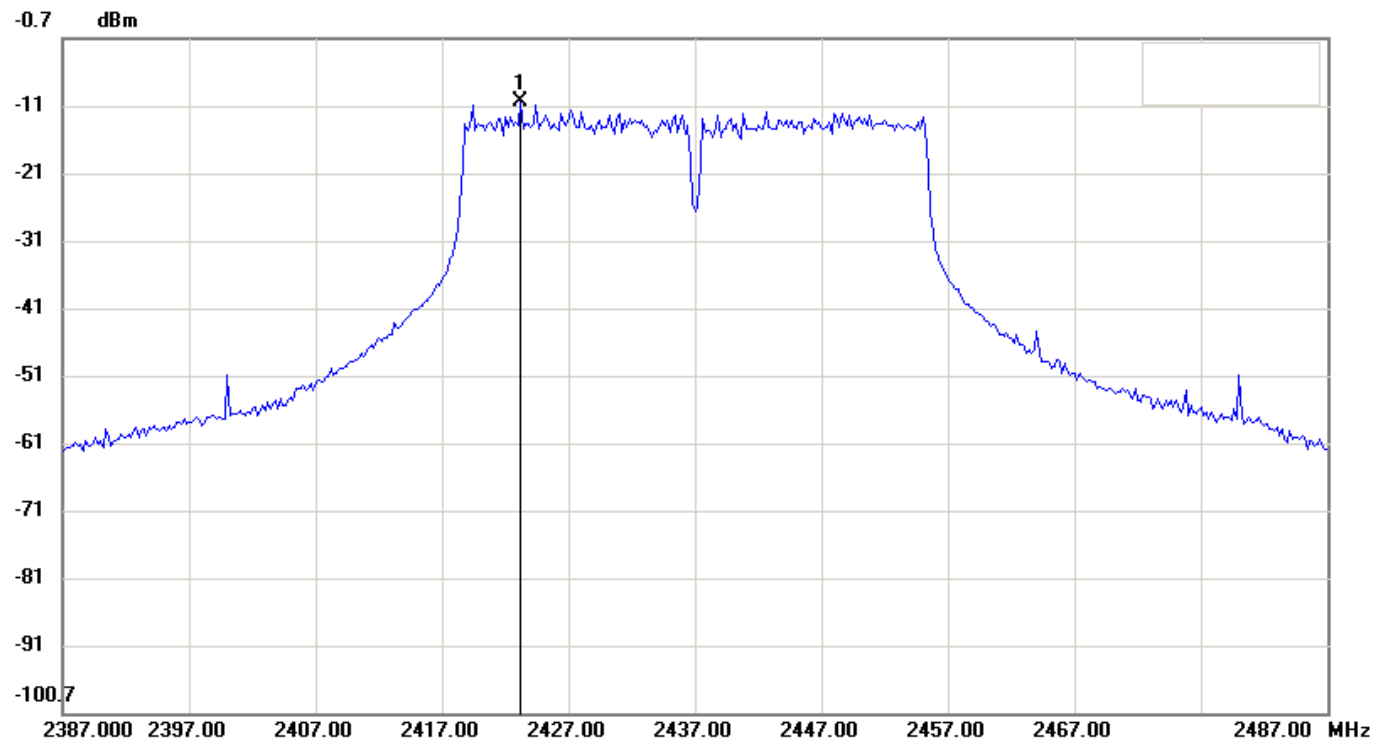
File: 20-04-MAS-061_n40_Ant1
Site: RF-Cond01

#7

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition:

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

Note: NCC_LP0002_802.11n-HT40 Channel 06-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

Operator: Phillip

No.	Frequency(MHz)	Level(dBm)
1	2423.20000	-10.13

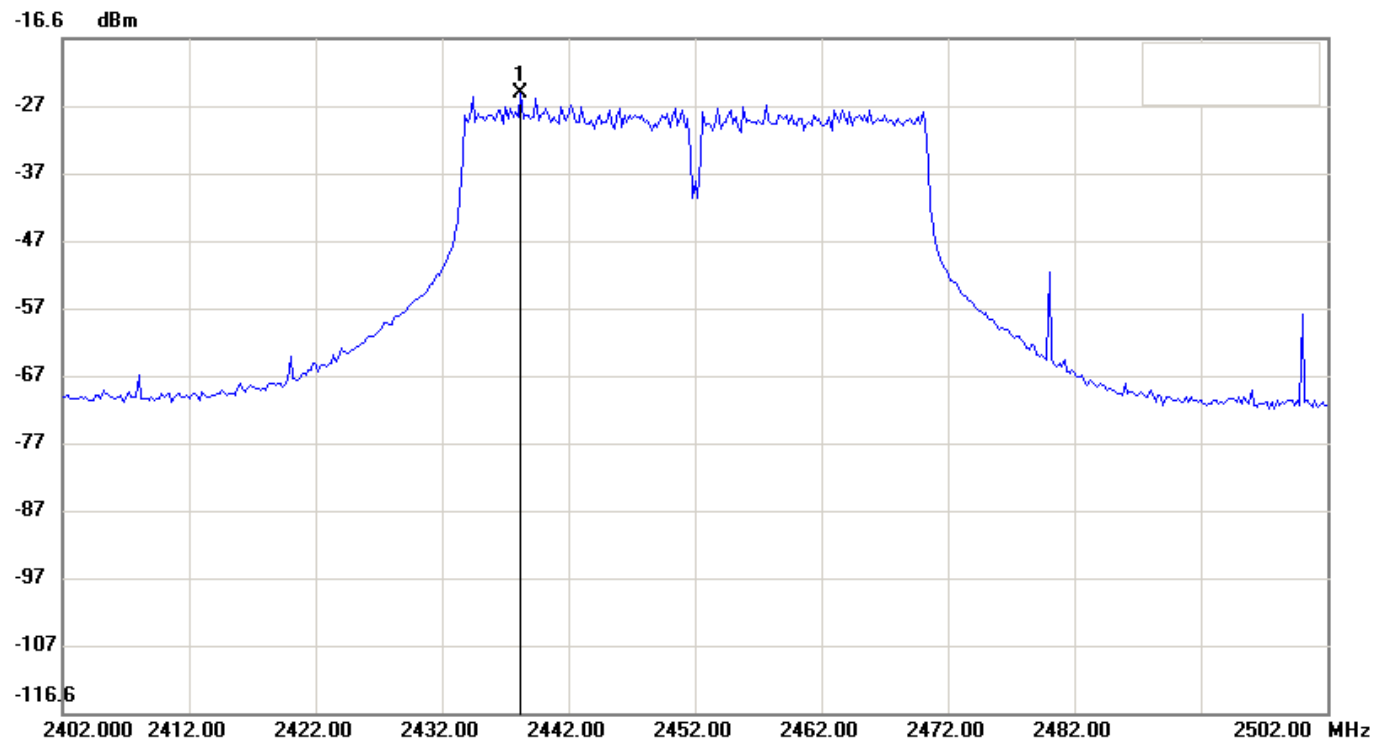
File: 20-04-MAS-061_n40_Ant1
 Site: RF-Cond01

#11

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition:

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

Note: NCC_LP0002_802.11n-HT40 Channel 9-Power Density (PK)

RF Conducted

Sweep Time: 334ms Att.: 20dB

RBW: 3 KHz VBW: 10 KHz

Operator: Phillip

No.	Frequency(MHz)	Level(dBm)
1	2438.20000	-24.75

8.4.4.3 CHAIN 0 + CHAIN 1

測試日期: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

Total power density calculation formula:

$$10 \log (10^{(\text{Chain 0 PPSD} / 10)} + 10^{(\text{Chain 1 PPSD} / 10)})$$

天線增益最大值為 5.91 dBi，NCC Limit 如下表所示：

Channel	Peak Power Spectral Density (dBm)		Total Peak Power Spectral Density (dBm)	NCC Limit (dBm)
	Chain 0	Chain 1		
L	-19.36	-18.83	-16.08	8
M	-10.52	-10.13	-7.31	8
H	-25.33	-24.75	-22.02	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器材技術規範4.10.1.5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4.10.1.2(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器材技術規範第3.5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器材技術規範第3.6節之規定。

9.2 混附波發射限制之測試配置

如圖1 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: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

- a. 下邊緣頻帶：距下頻帶邊緣40MHz內最大混附波產生於 2399.950 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 2500.024 MHz，比主波低 20dB以上，合乎標準規定。

註：1. 繪圖資料請參考第 85-89 頁。

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

File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

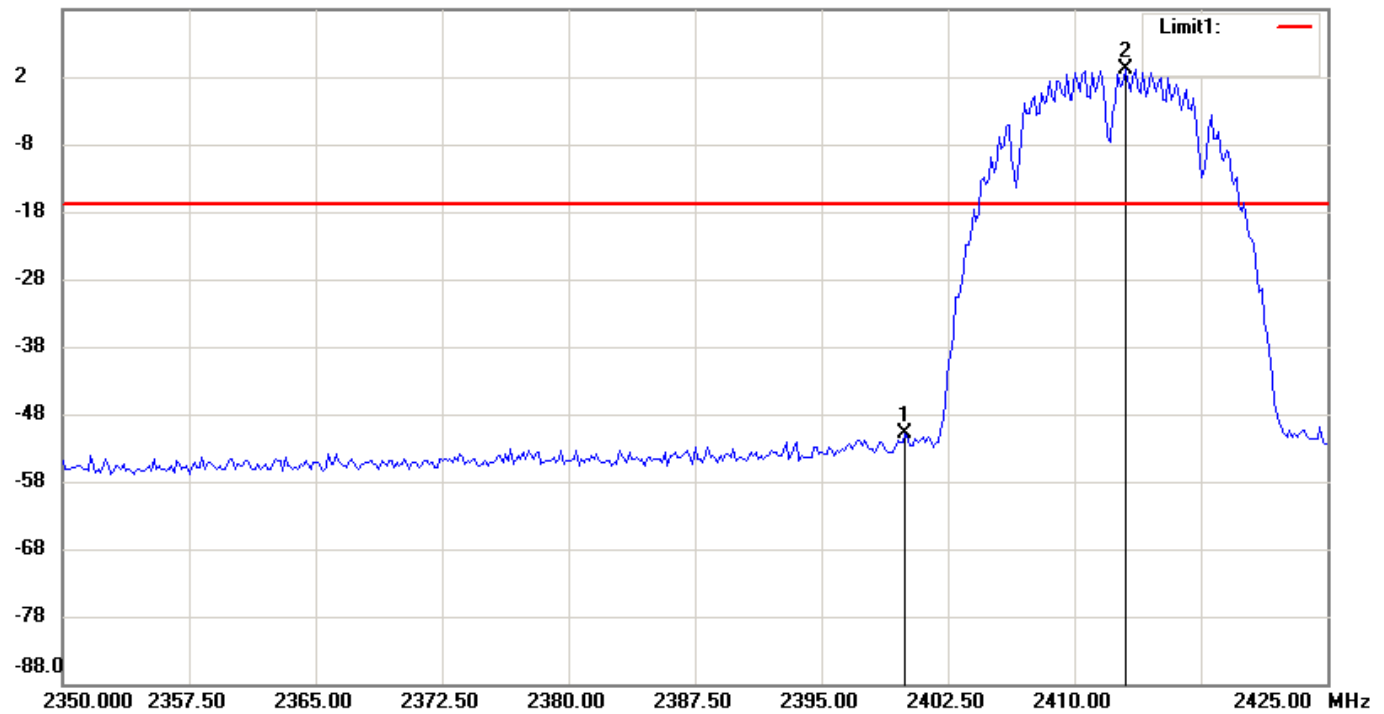
#4

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

12.0 dBm



Condition: -16.86dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11b Channel 01-Bandedge

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

No.	Frequency(MHz)	Level(dBm)
1	2399.95000	-50.92
2	2413.00000	3.14

File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

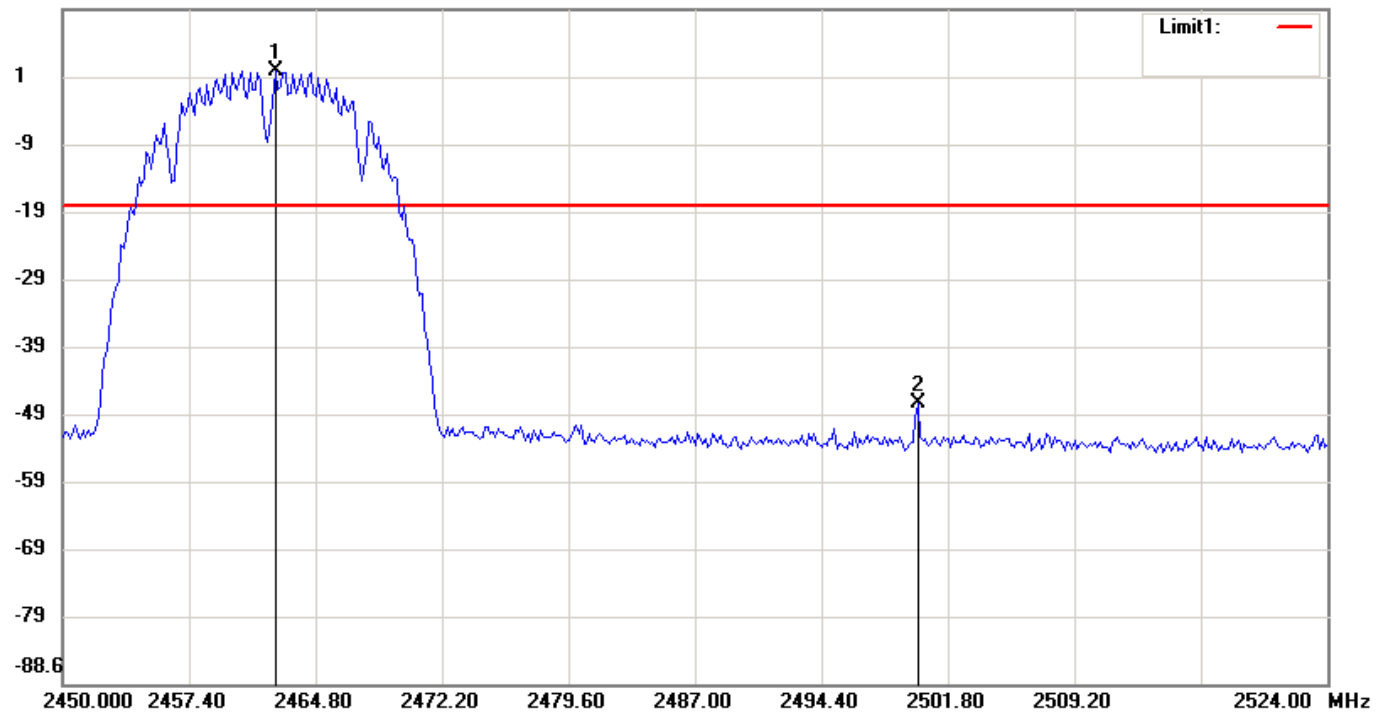
#11

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

11.4 dBm



Condition: -17.69dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11b Channel 11-Bandedge

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

No.	Frequency(MHz)	Level(dBm)
1	2462.43200	2.31
2	2500.02400	-46.91

File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

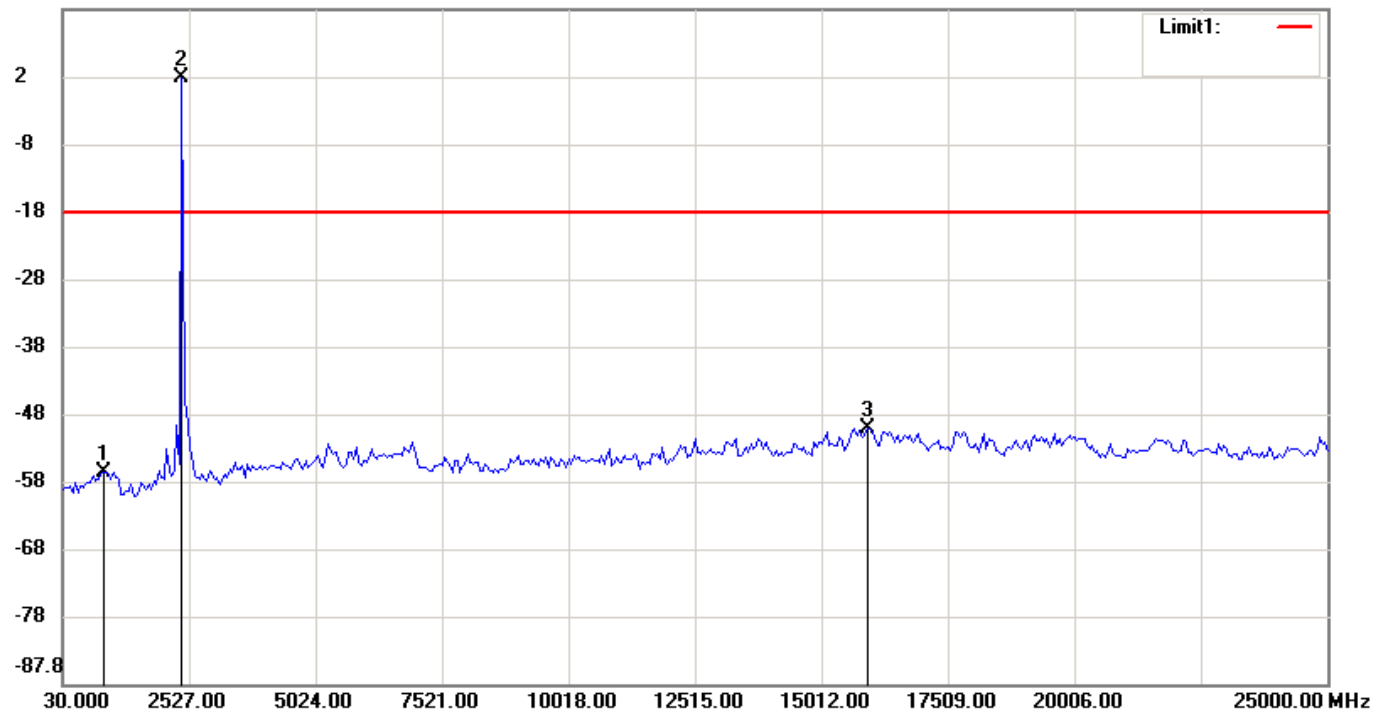
#2

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

12.2 dBm



Condition: -17.93dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11b Channel 01-Conducted Spurious

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

No.	Frequency(MHz)	Level(dBm)
1	829.0400	-56.35
2	2377.18000	2.07
3	15910.92000	-49.95

File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

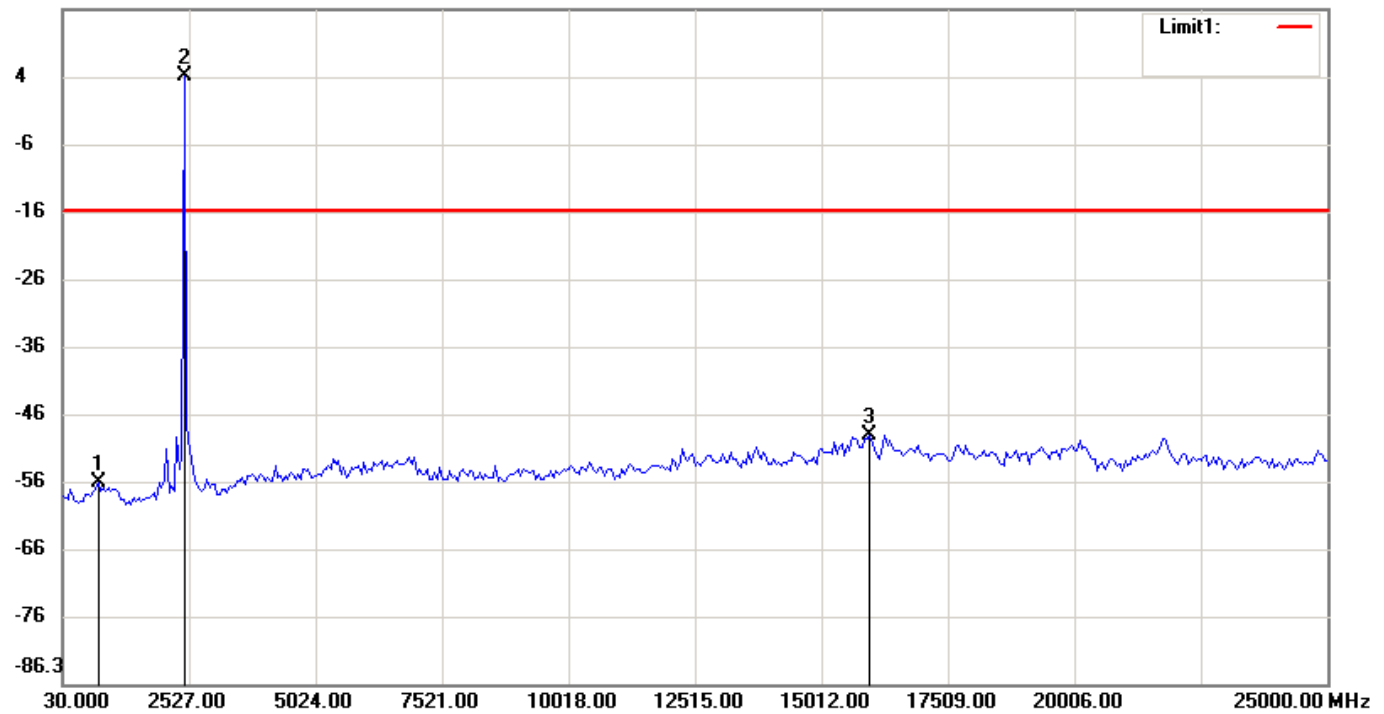
#6

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

13.7 dBm



Condition: -16.05dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11b Channel 06-Conducted Spurious

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

No.	Frequency(MHz)	Level(dBm)
1	729.1600	-56.34
2	2427.12000	3.95
3	15960.86000	-49.49

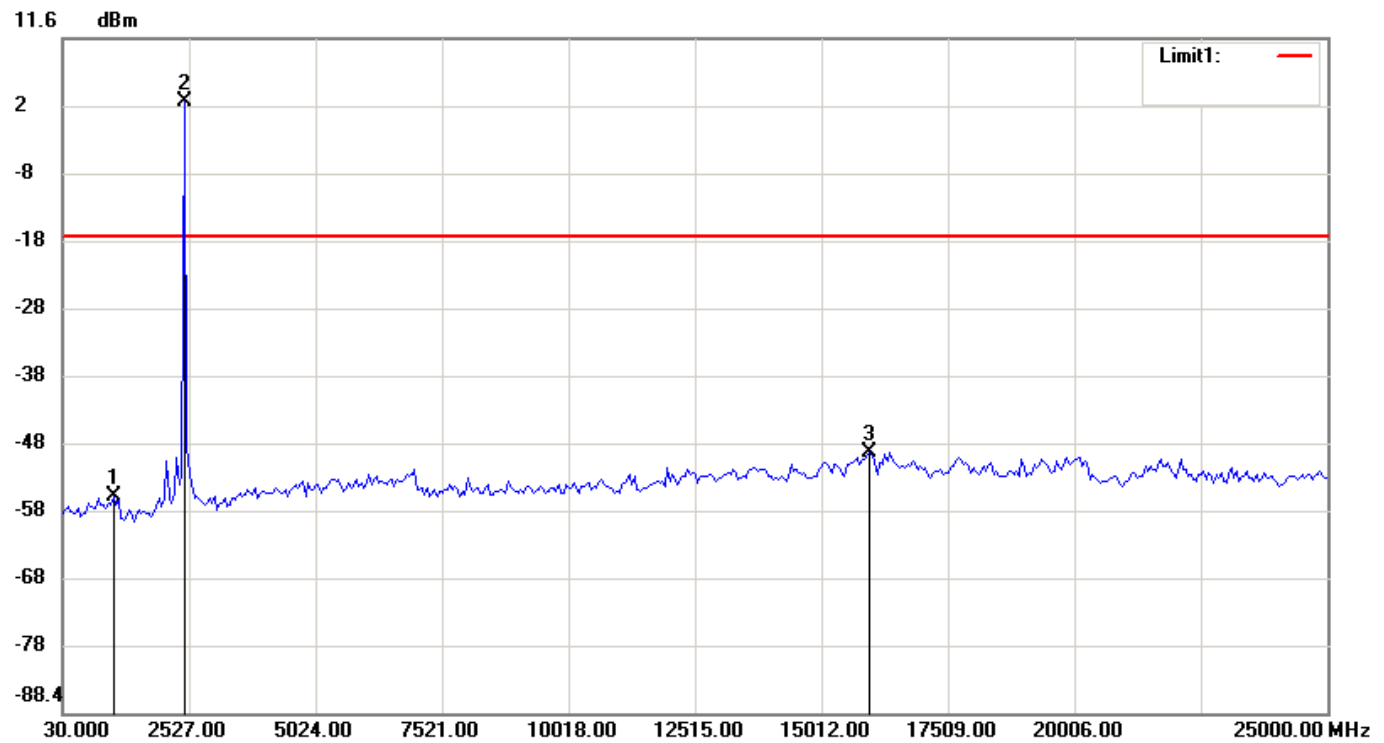
File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

#9

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition: -17.78dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11b Channel 11-Conducted Spurious

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

No.	Frequency(MHz)	Level(dBm)
1	1028.80000	-56.41
2	2427.12000	2.22
3	15960.86000	-49.70

9.4.2 調變技術: IEEE 802.11g

測試日期: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

- a. 下邊緣頻帶：距下頻帶邊緣40MHz內最大混附波產生於 2399.950 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 2500.024 MHz，比主波低 20dB以上，合乎標準規定。

註：1. 繪圖資料請參考第 91-95 頁。

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

File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

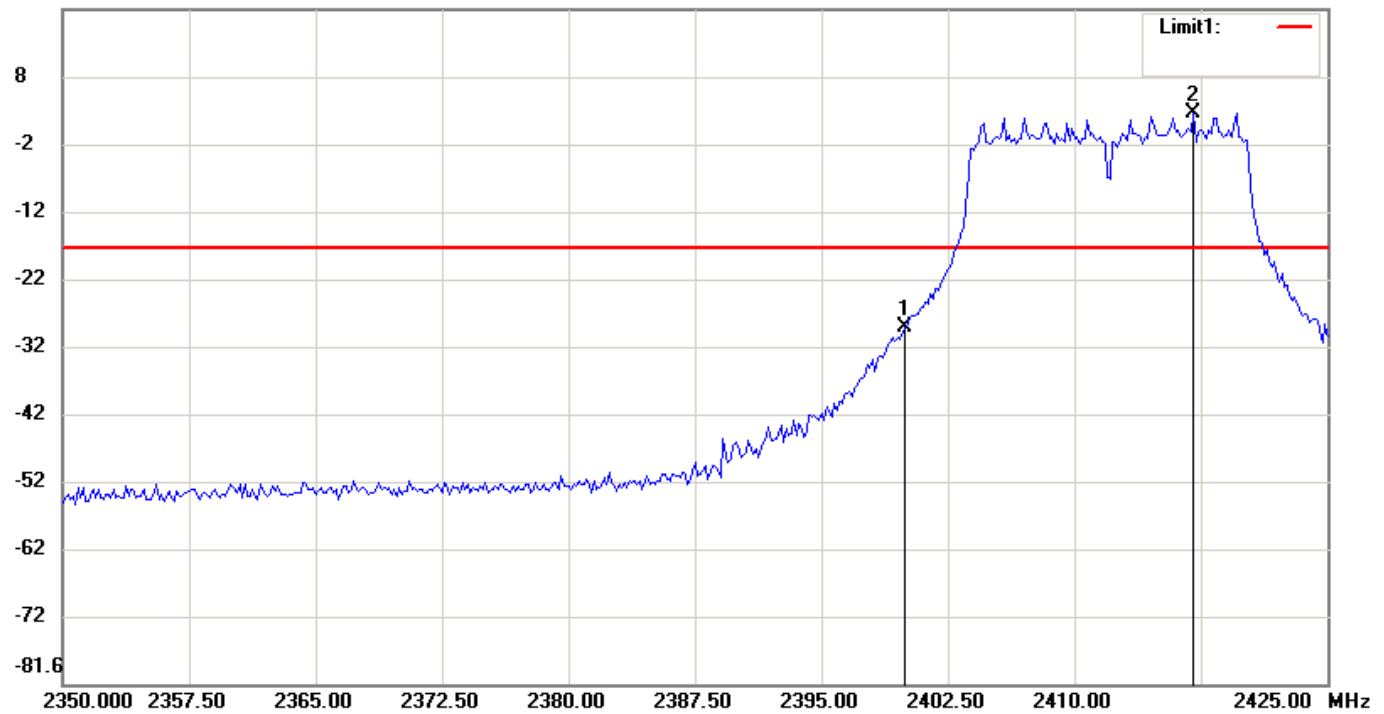
#18

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

18.4 dBm



Condition: -16.9dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11g Channel 01-Bandedge

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

No.	Frequency(MHz)	Level(dBm)
1	2399.95000	-28.58
2	2417.05000	3.10

File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

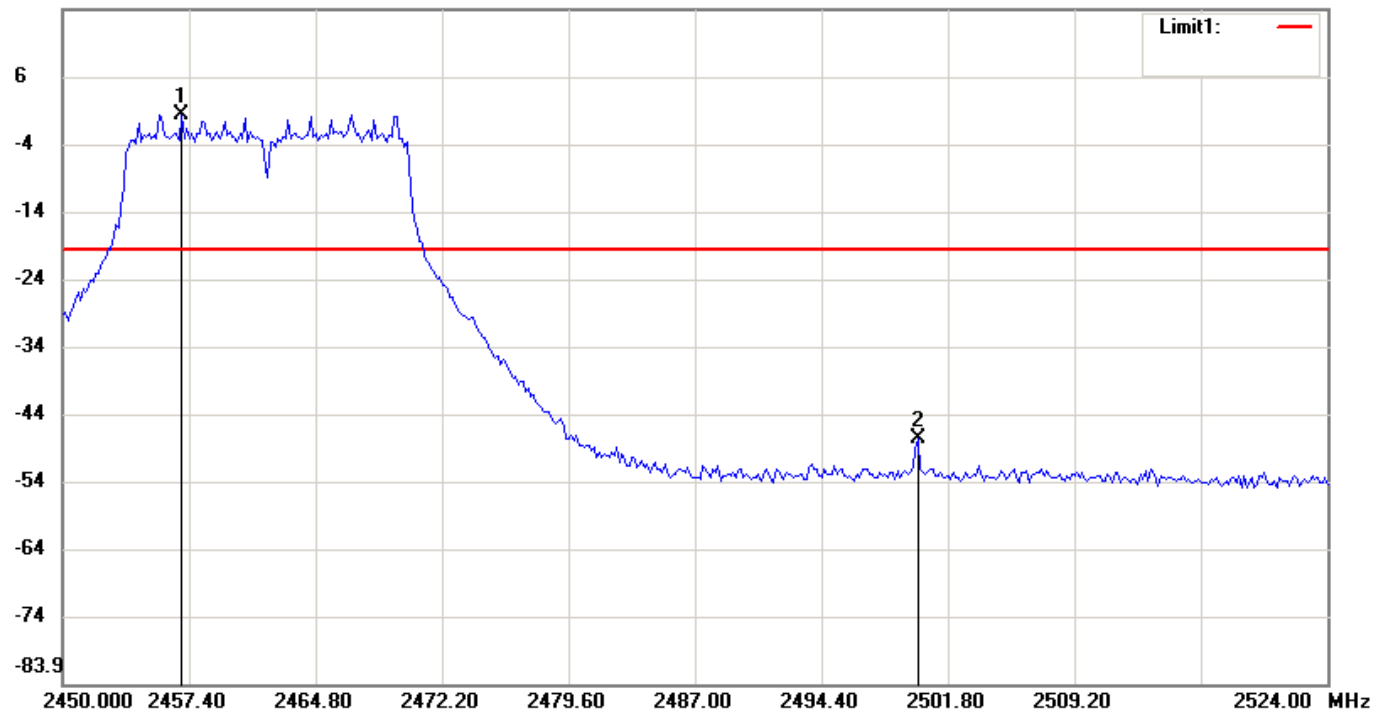
#26

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

16.1 dBm



Condition: -19.53dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11g Channel 11-Bandedge

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

No.	Frequency(MHz)	Level(dBm)
1	2456.95600	0.47
2	2500.02400	-47.44

File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

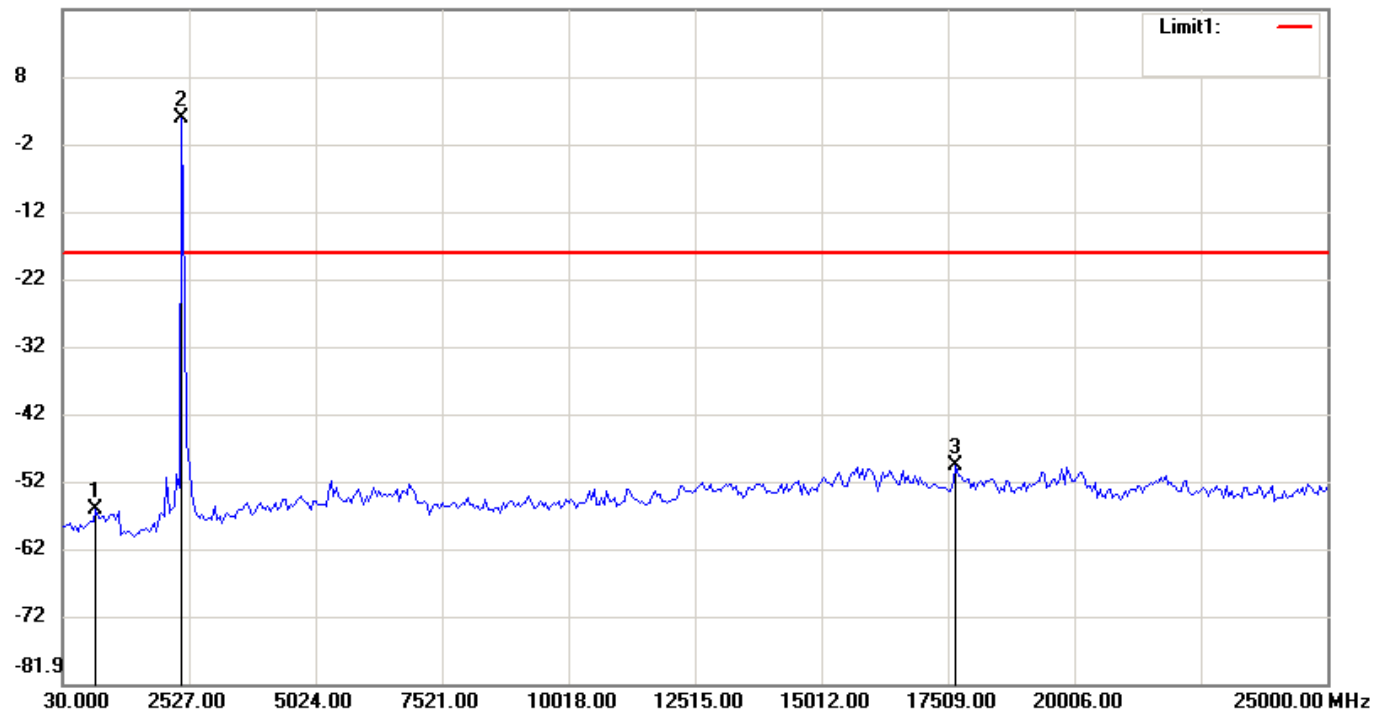
#16

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

18.1 dBm



Condition: -17.95dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11g Channel 01-Conducted Spurious

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

No.	Frequency(MHz)	Level(dBm)
1	679.2200	-56.09
2	2377.18000	2.05
3	17658.82000	-49.61

File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

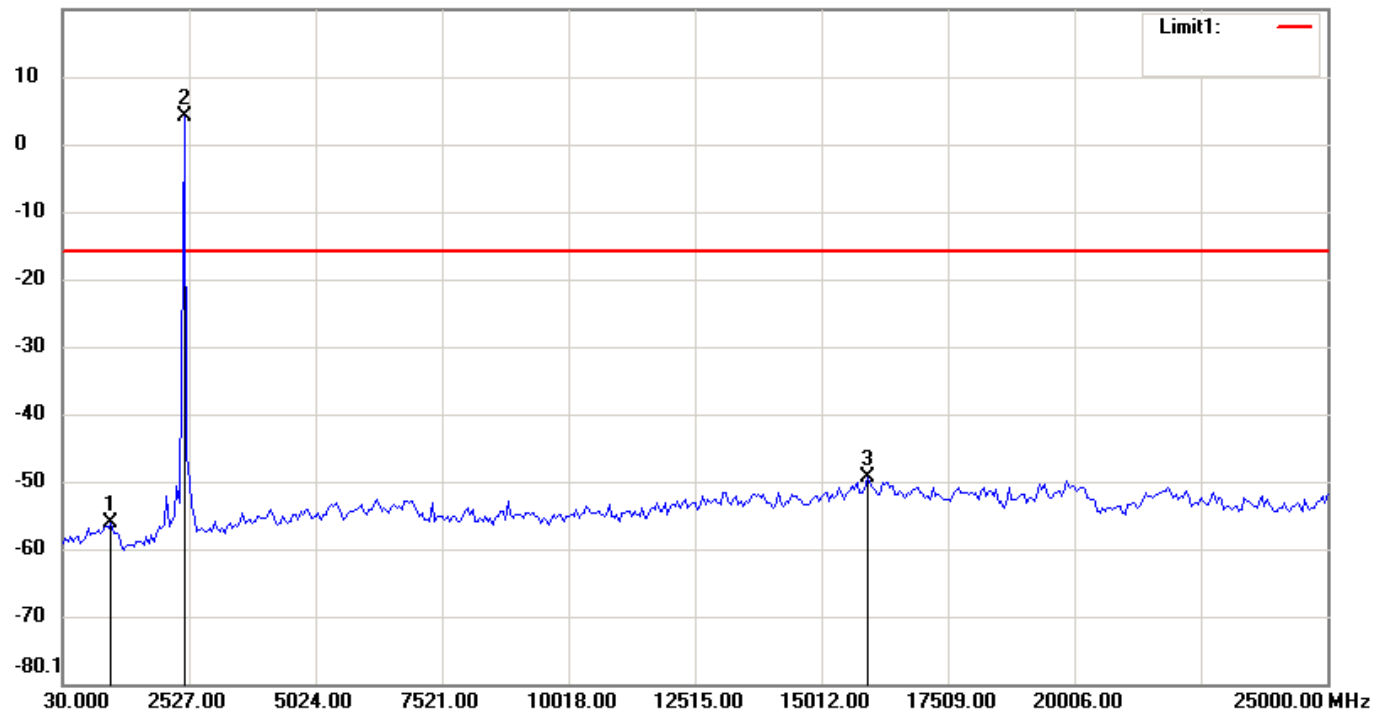
#20

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

19.9 dBm



Condition: -15.87dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11g Channel 06-Conducted Spurious

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

No.	Frequency(MHz)	Level(dBm)
1	978.8600	-56.22
2	2427.12000	4.13
3	15910.92000	-49.46

File: 20-04-MAS-061_B_Ant0
Site: RF-Cond01

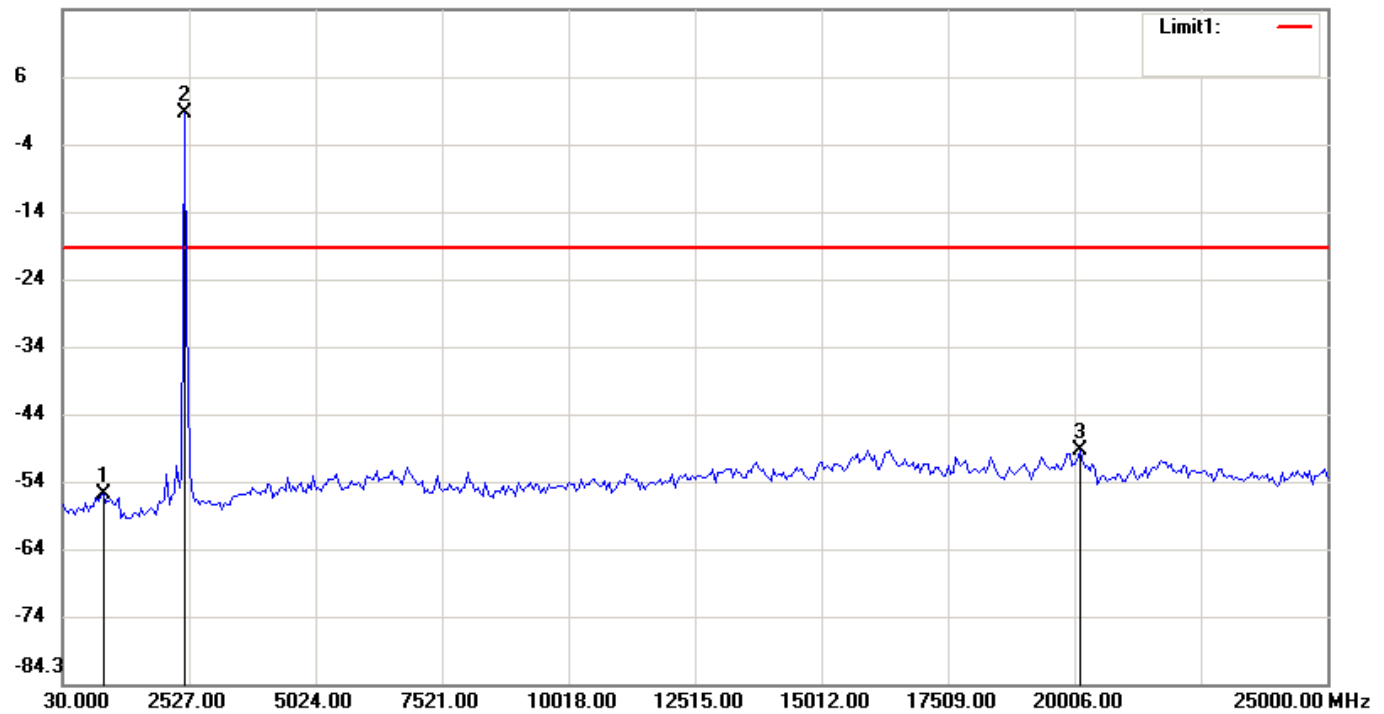
#24

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

15.7 dBm



Condition: -19.59dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11g Channel 11-Conducted Spurious

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

No.	Frequency(MHz)	Level(dBm)
1	829.0400	-56.23
2	2427.12000	0.41
3	20105.88000	-49.59

9.4.3 調變技術: IEEE 802.11n HT20

9.4.3.1 CHAIN 0

測試日期: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

- a. 下邊緣頻帶：距下頻帶邊緣40MHz內最大混附波產生於 2399.950 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 2500.024 MHz，比主波低 20dB以上，合乎標準規定。

註：1. 繪圖資料請參考第 97-101 頁。

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

File: 20-04-MAS-061_n20_Ant0
Site: RF-Cond01

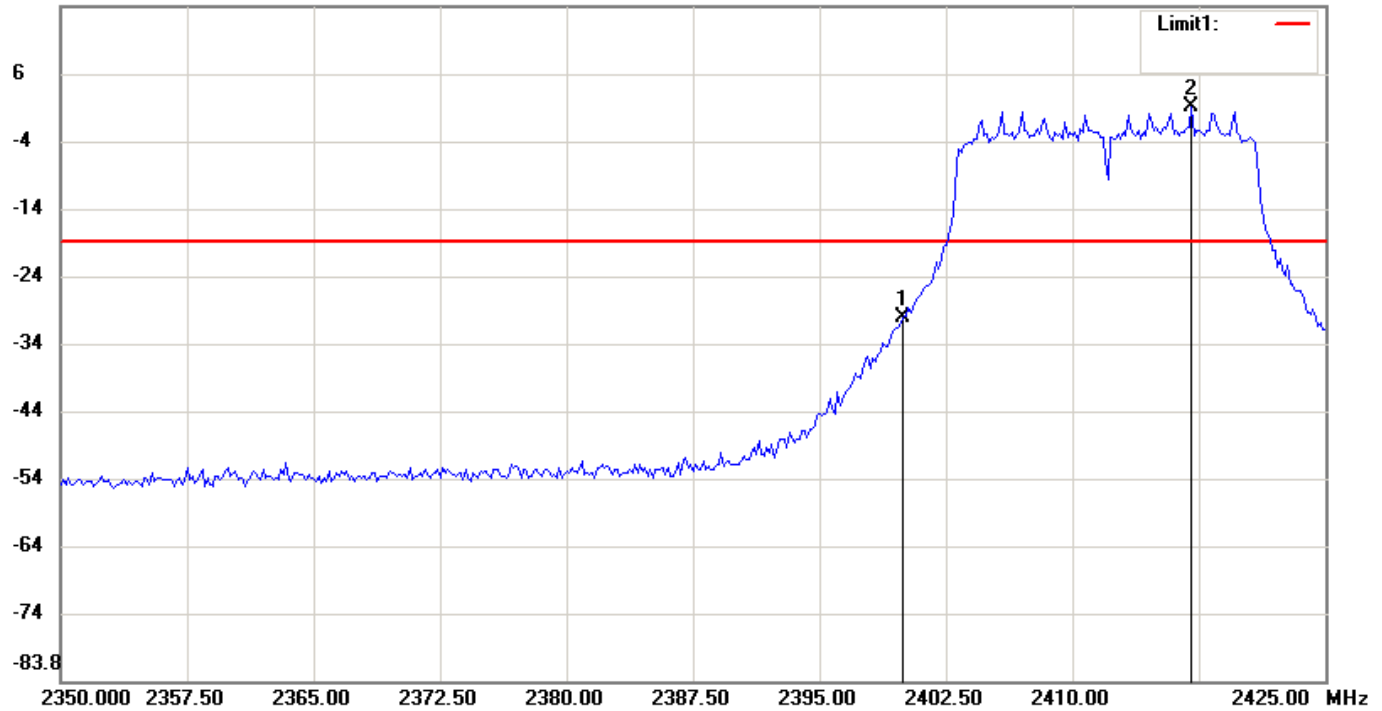
#4

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

16.2 dBm



Condition: -18.67dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT20 Channel 01-Bandedge

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

No.	Frequency(MHz)	Level(dBm)
1	2399.95000	-29.99
2	2417.05000	1.33

File: 20-04-MAS-061_n20_Ant0
 Site: RF-Cond01

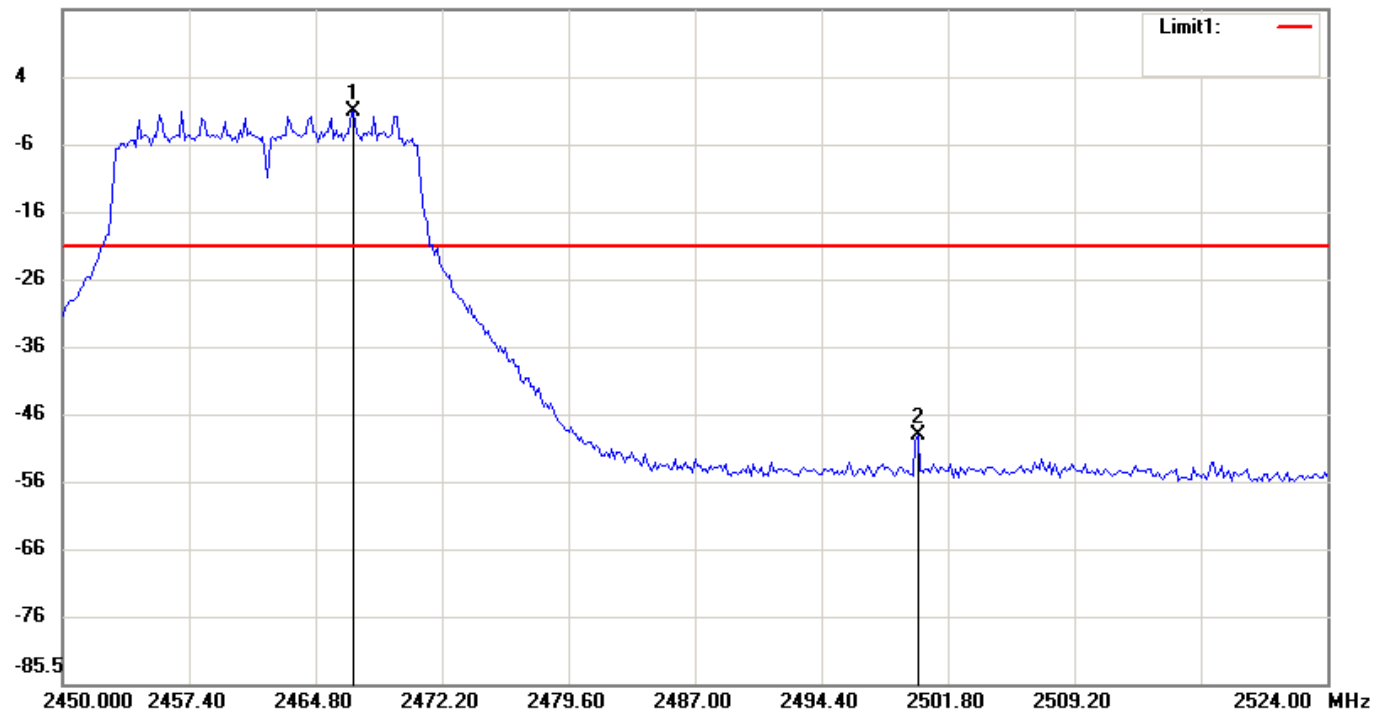
#12

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

14.5 dBm



Condition: -20.57dBm
 EUT: Wireless LAN Conveter
 Model: FBR-3250
 Test Mode: DTS
 Note: NCC_LP0002_802.11n-HT20 Channel 11-Bandedge

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

No.	Frequency(MHz)	Level(dBm)
1	2467.02000	-0.57
2	2500.02400	-48.54

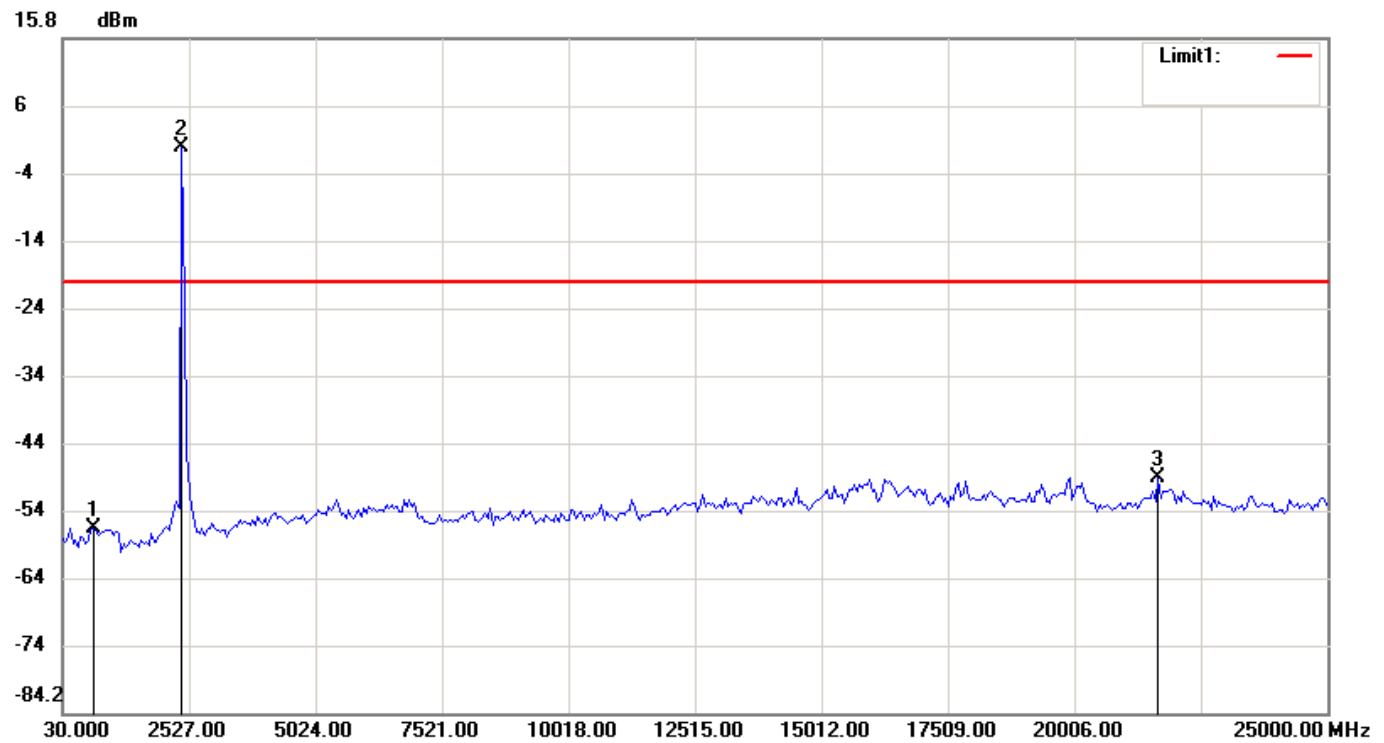
File: 20-04-MAS-061_n20_Ant0
Site: RF-Cond01

#2

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition: -20.48dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT20 Channel 01-Conducted Spurious

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

No.	Frequency(MHz)	Level(dBm)
1	629.2800	-56.76
2	2377.18000	-0.48
3	21654.02000	-49.38

File: 20-04-MAS-061_n20_Ant0
 Site: RF-Cond01

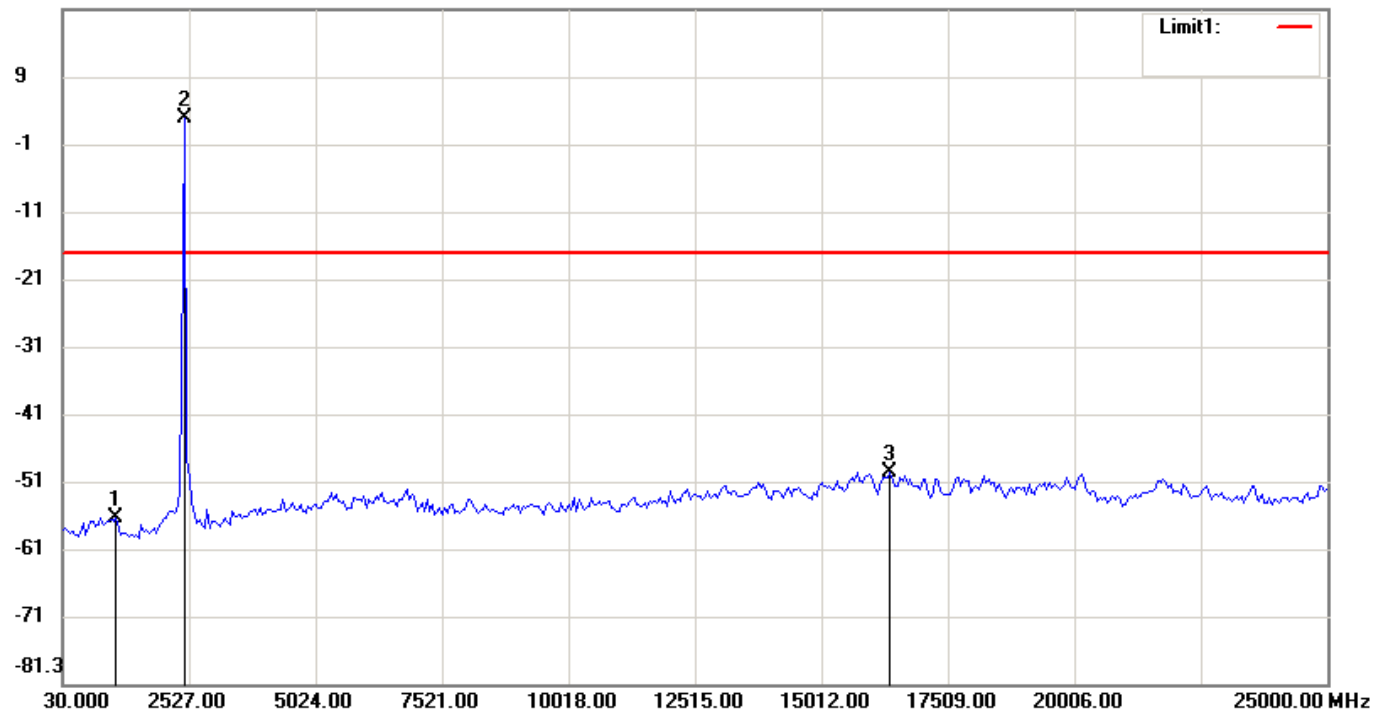
#7

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

18.7 dBm



Condition: -17.32dBm
 EUT: Wireless LAN Conveter
 Model: FBR-3250
 Test Mode: DTS
 Note: NCC_LP0002_802.11n-HT20 Channel 06-Conducted Spurious

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

No.	Frequency(MHz)	Level(dBm)
1	1078.74000	-56.67
2	2427.12000	2.68
3	16360.38000	-49.90

File: 20-04-MAS-061_n20_Ant0
Site: RF-Cond01

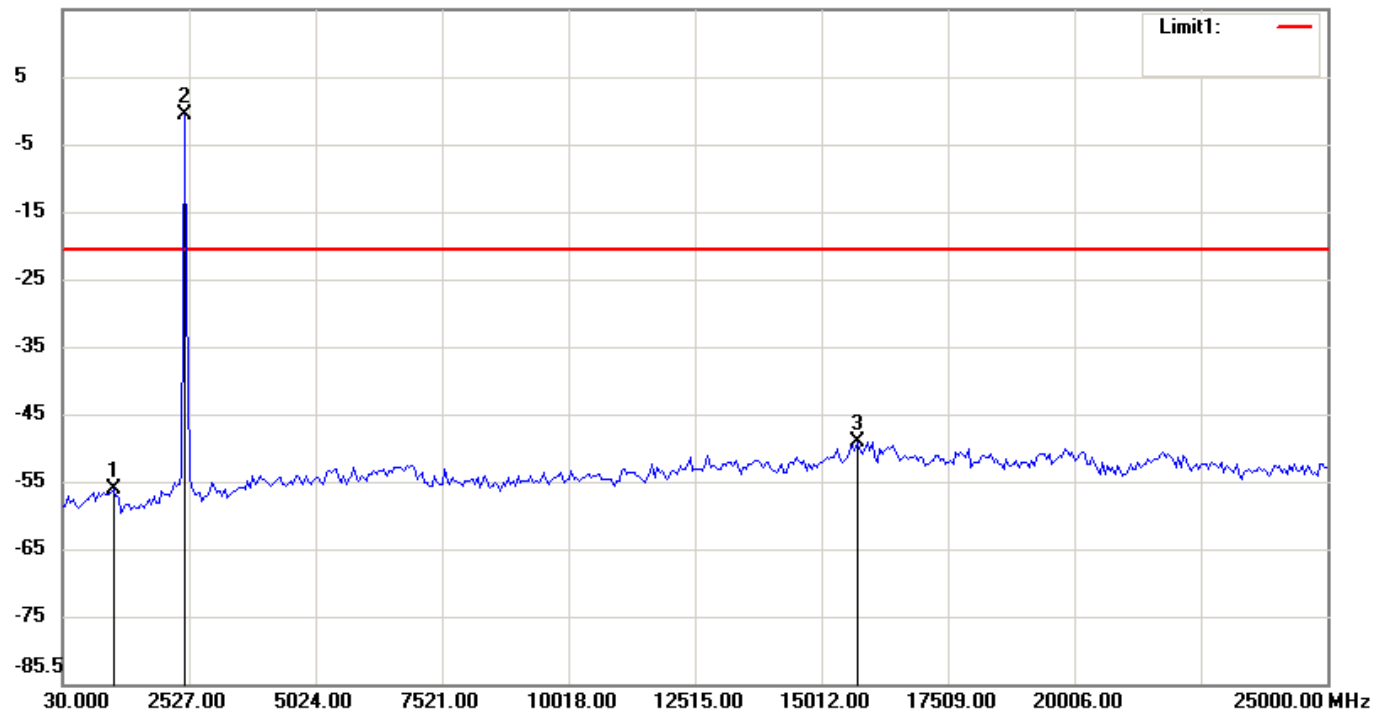
#10

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

14.5 dBm



Condition: -21.14dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT20 Channel 11-Conducted Spurious

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

No.	Frequency(MHz)	Level(dBm)
1	1028.80000	-56.68
2	2427.12000	-1.14
3	15711.16000	-49.48

9.4.3.2 CHAIN 1

測試日期: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

- a. 下邊緣頻帶：距下頻帶邊緣40MHz內最大混附波產生於 2399.950 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 2500.024 MHz，比主波低 20dB以上，合乎標準規定。

註：1. 繪圖資料請參考第 103-107 頁。

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

File: 20-04-MAS-061_n20_Ant1
Site: RF-Cond01

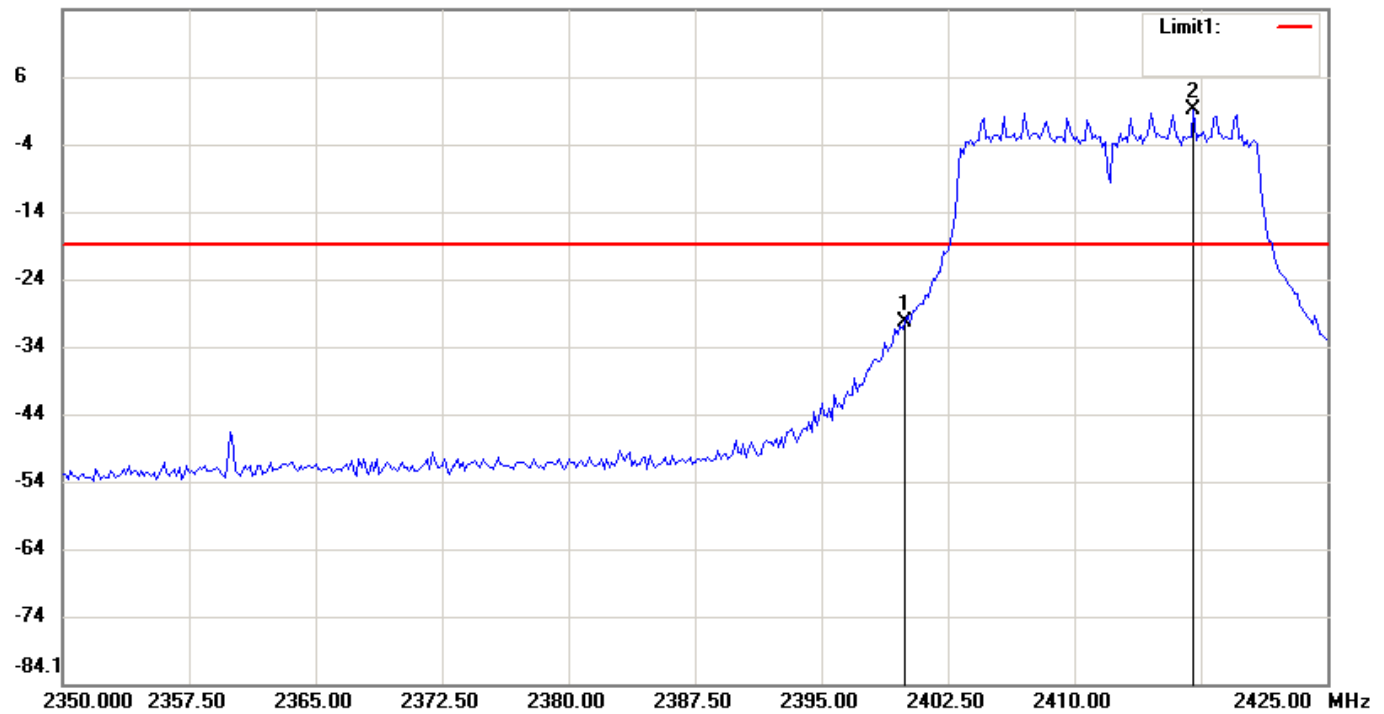
#4

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

15.9 dBm



Condition: -18.87dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT20 Channel 01-Bandedge

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

No.	Frequency(MHz)	Level(dBm)
1	2399.95000	-30.52
2	2417.05000	1.13

File: 20-04-MAS-061_n20_Ant1
Site: RF-Cond01

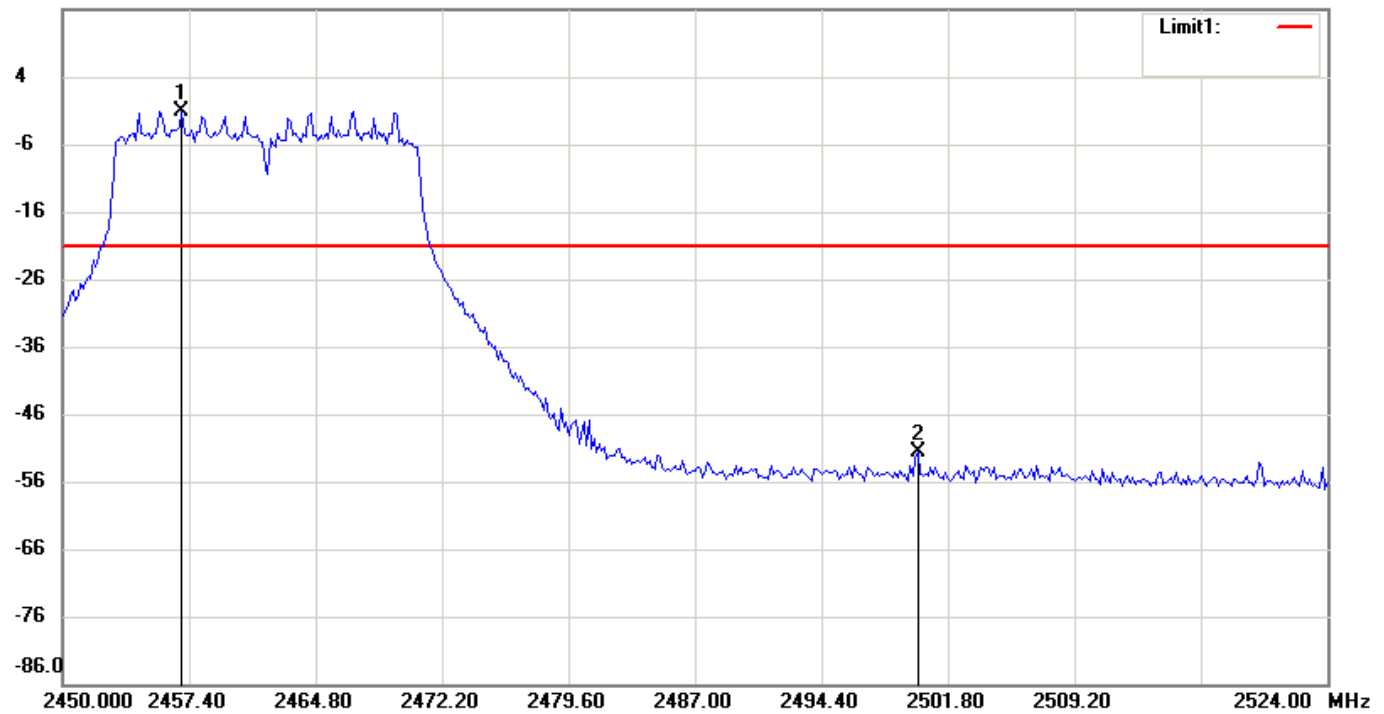
#11

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

14.0 dBm



Condition: -21.08dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT20 Channel 11-Bandedge

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

No.	Frequency(MHz)	Level(dBm)
1	2456.95600	-1.08
2	2500.02400	-51.69

File: 20-04-MAS-061_n20_Ant1
Site: RF-Cond01

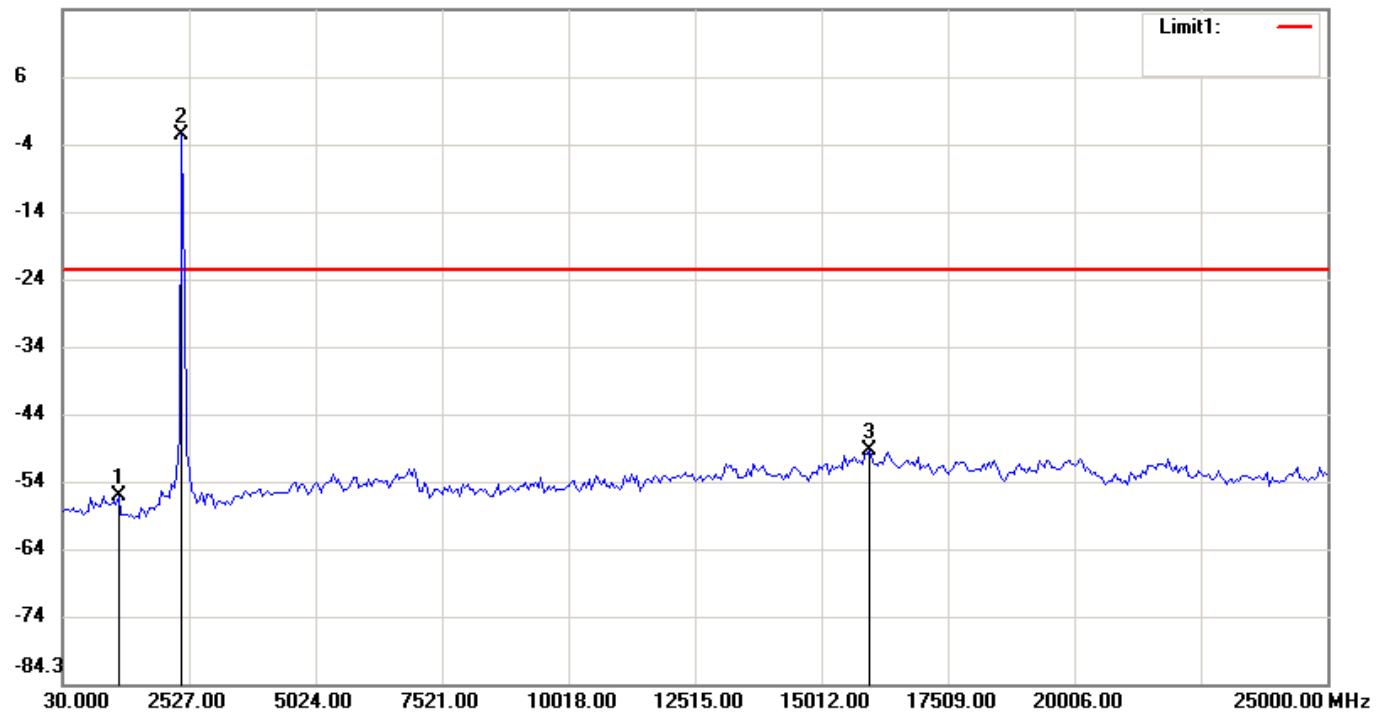
#2

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

15.7 dBm



Condition: -22.84dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT20 Channel 01-Conducted Spurious

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

No.	Frequency(MHz)	Level(dBm)
1	1128.68000	-56.44
2	2377.18000	-2.84
3	15960.86000	-49.73

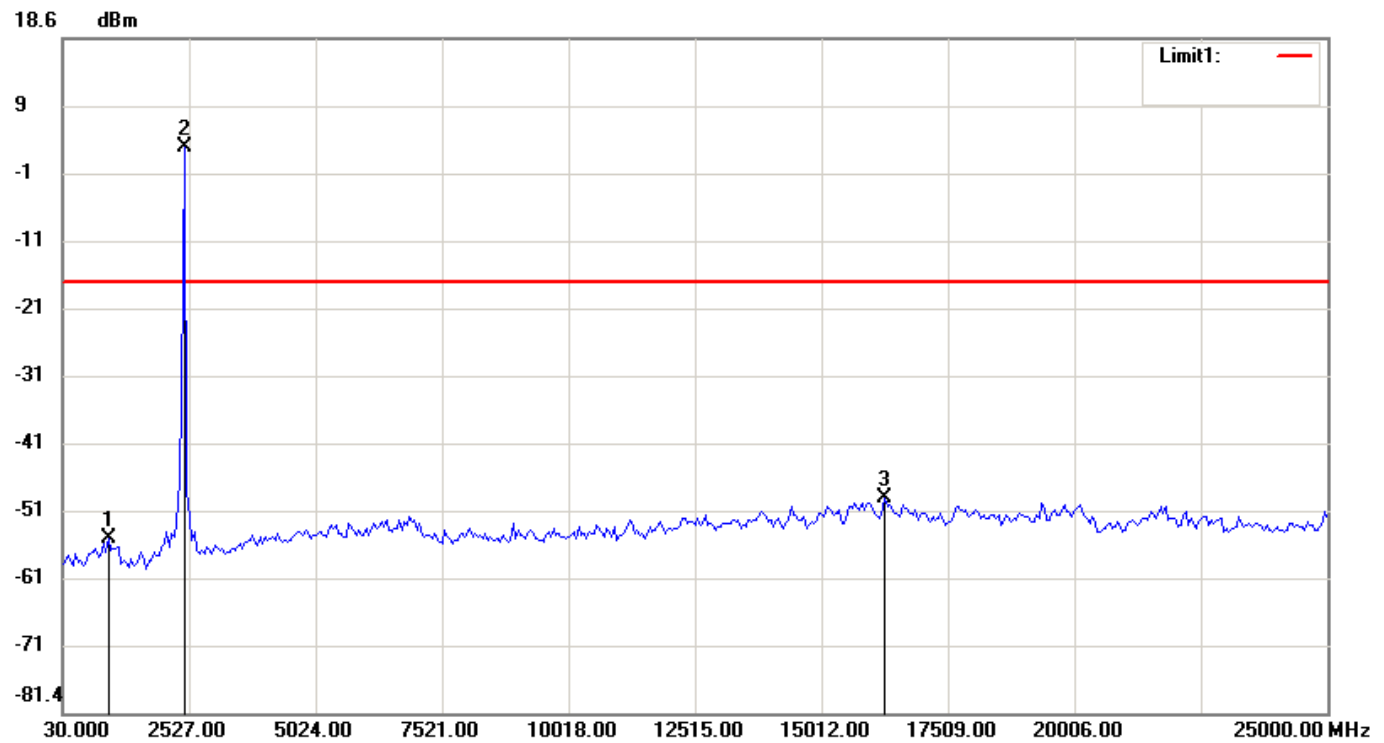
File: 20-04-MAS-061_n20_Ant1
Site: RF-Cond01

#6

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition: -17.49dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT20 Channel 06-Conducted Spurious

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

No.	Frequency(MHz)	Level(dBm)
1	928.9200	-55.46
2	2427.12000	2.51
3	16260.50000	-49.66

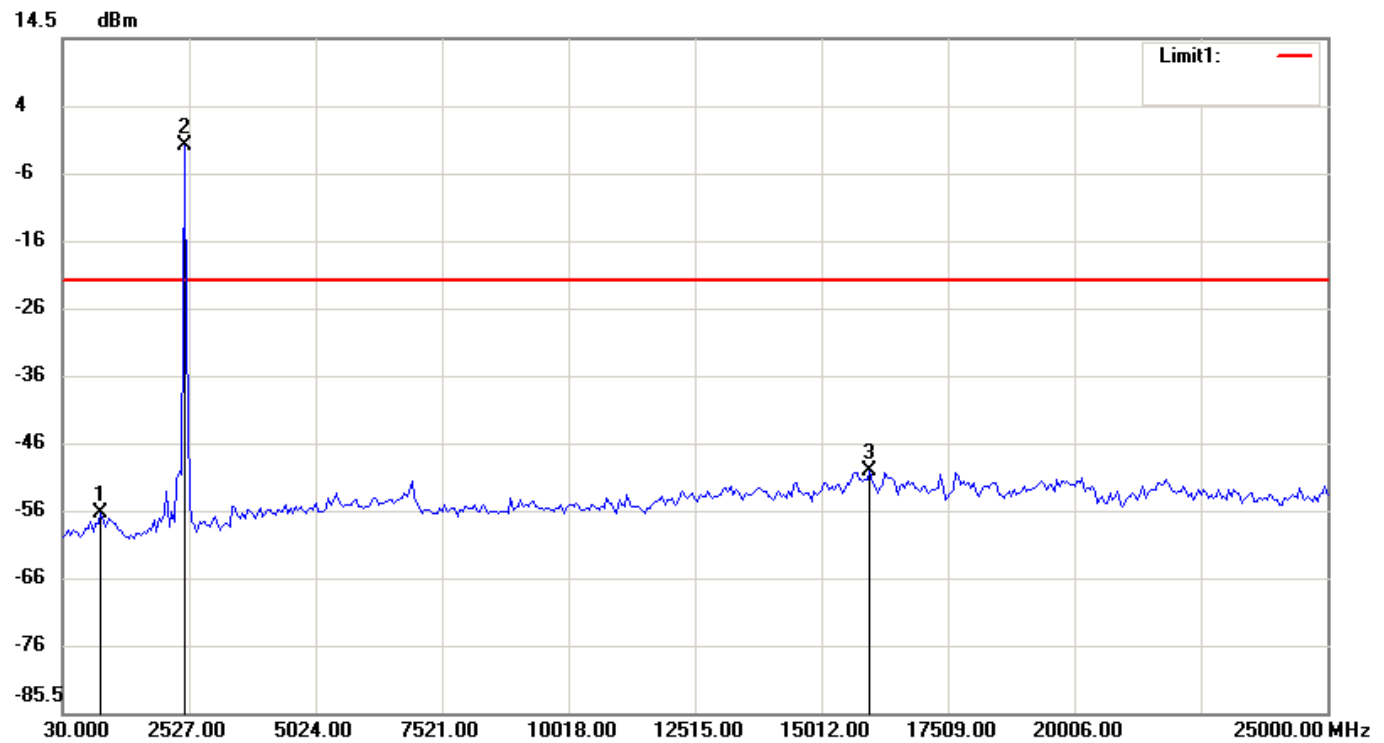
File: 20-04-MAS-061_n20_Ant1
Site: RF-Cond01

#9

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition: -21.32dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT20 Channel 11-Conducted Spurious

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

No.	Frequency(MHz)	Level(dBm)
1	779.1000	-56.03
2	2427.12000	-1.32
3	15960.86000	-49.69

9.4.4 調變技術: IEEE 802.11n HT40

9.4.4.1 CHAIN 0

測試日期: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

- a. 下邊緣頻帶：距下頻帶邊緣40MHz內最大混附波產生於 2399.950 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 2500.024 MHz，比主波低 20dB以上，合乎標準規定。

註：1. 繪圖資料請參考第 109-113 頁。

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

File: 20-04-MAS-061_n40_Ant0

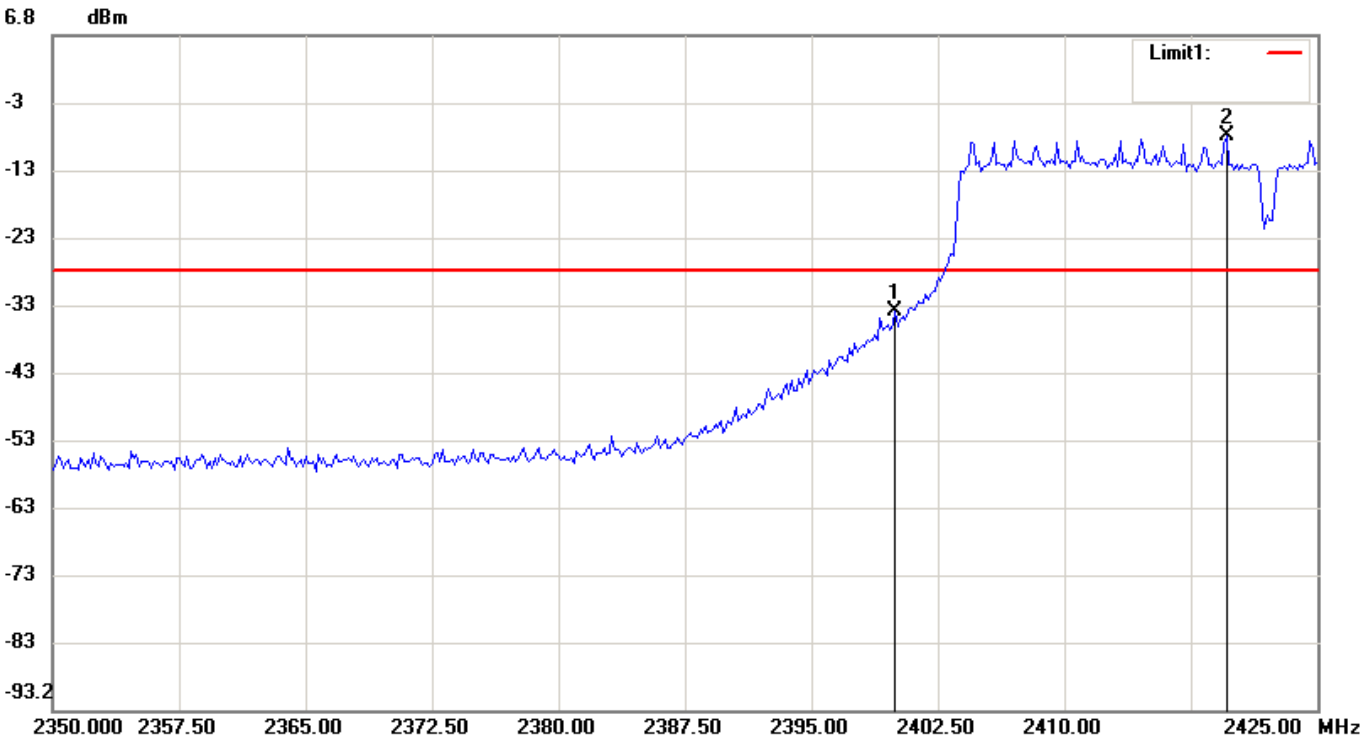
#4

Date: 2020/5/21

Temperature: 25 °C

Site: RF-Cond01

Humidity: 57 %



Condition: -28.15dBm

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

Note: NCC_LP0002_802.11n-HT40 Channel 03-Bandedge

RF Conducted

Sweep Time: 500ms

RBW: 100 KHz

Operator:

Att.: 20dB

VBW: 300 KHz

Phillip

No.	Frequency(MHz)	Level(dBm)
1	2399.95000	-34.09
2	2419.60000	-8.15

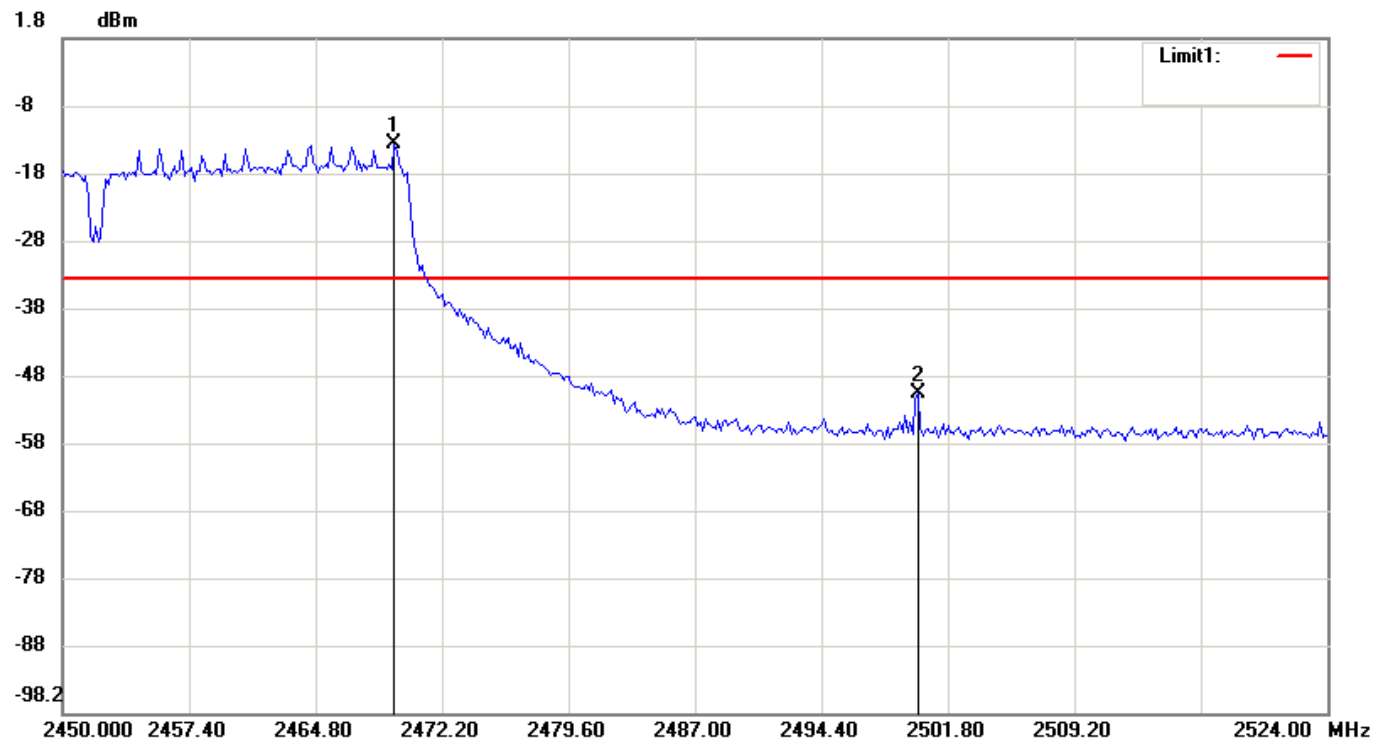
File: 20-04-MAS-061_n40_Ant0
Site: RF-Cond01

#11

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition: -33.79dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT40 Channel 9-Bandedge

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

No.	Frequency(MHz)	Level(dBm)
1	2469.38800	-13.79
2	2500.02400	-50.95

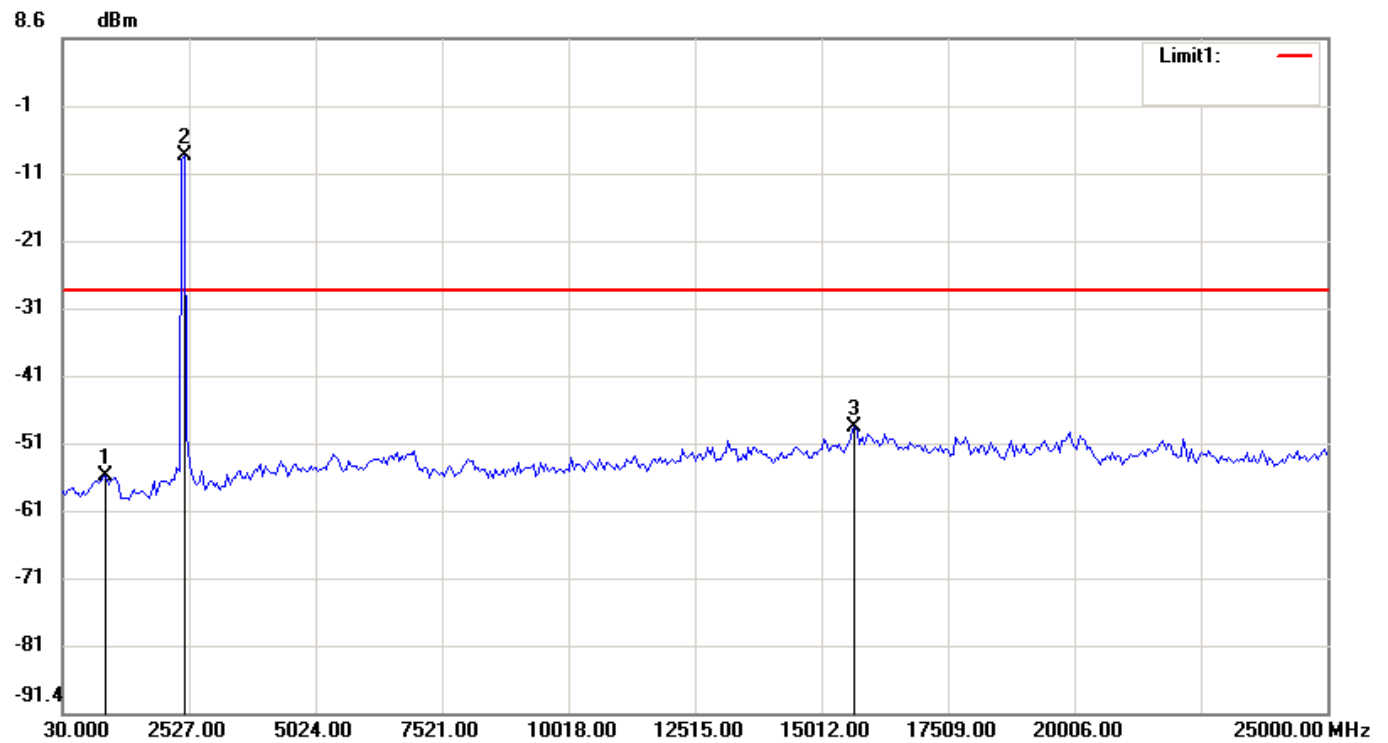
File: 20-04-MAS-061_n40_Ant0
Site: RF-Cond01

#2

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition: -28.89dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT40 Channel 03-Conducted Spurious

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

No.	Frequency(MHz)	Level(dBm)
1	878.9800	-56.20
2	2427.12000	-8.89
3	15661.22000	-49.09

File: 20-04-MAS-061_n40_Ant0
Site: RF-Cond01

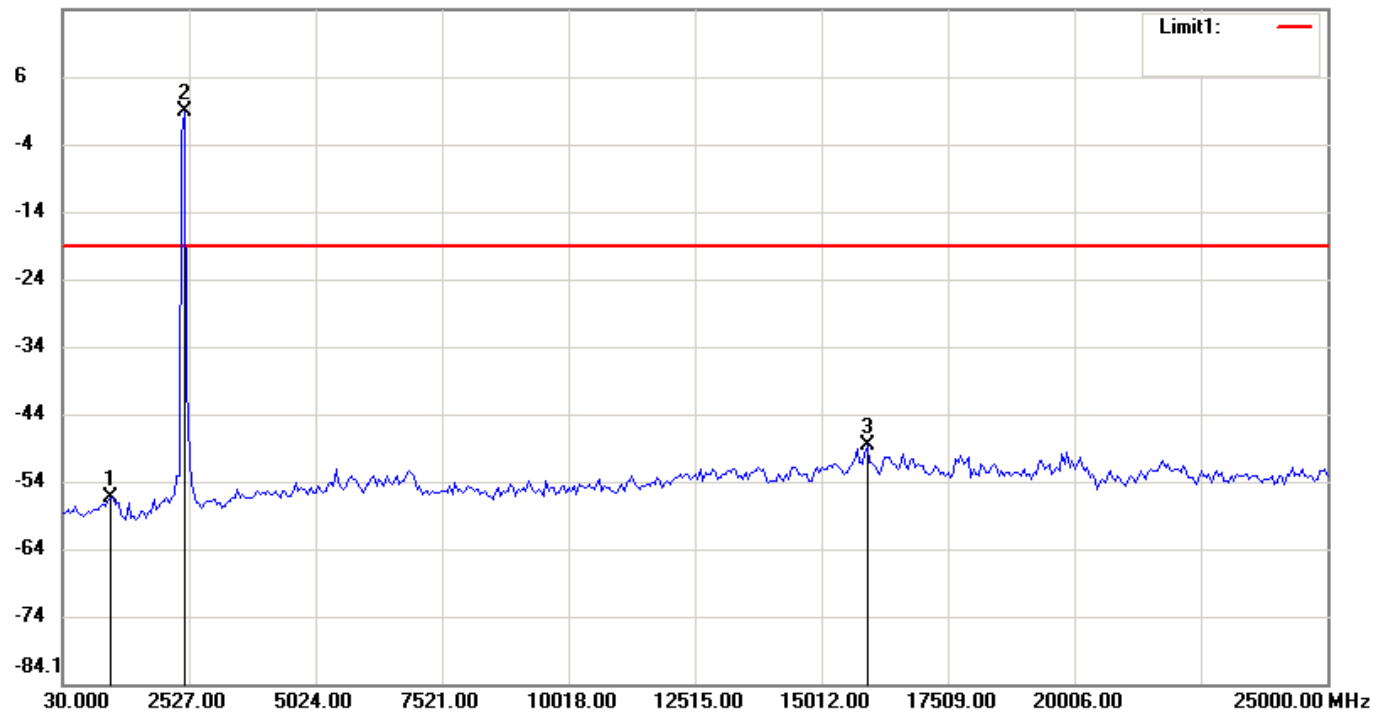
#6

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

15.9 dBm



Condition: -19.3dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT40 Channel 06-Conducted Spurious

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

No.	Frequency(MHz)	Level(dBm)
1	978.8600	-56.43
2	2427.12000	0.70
3	15910.92000	-48.69

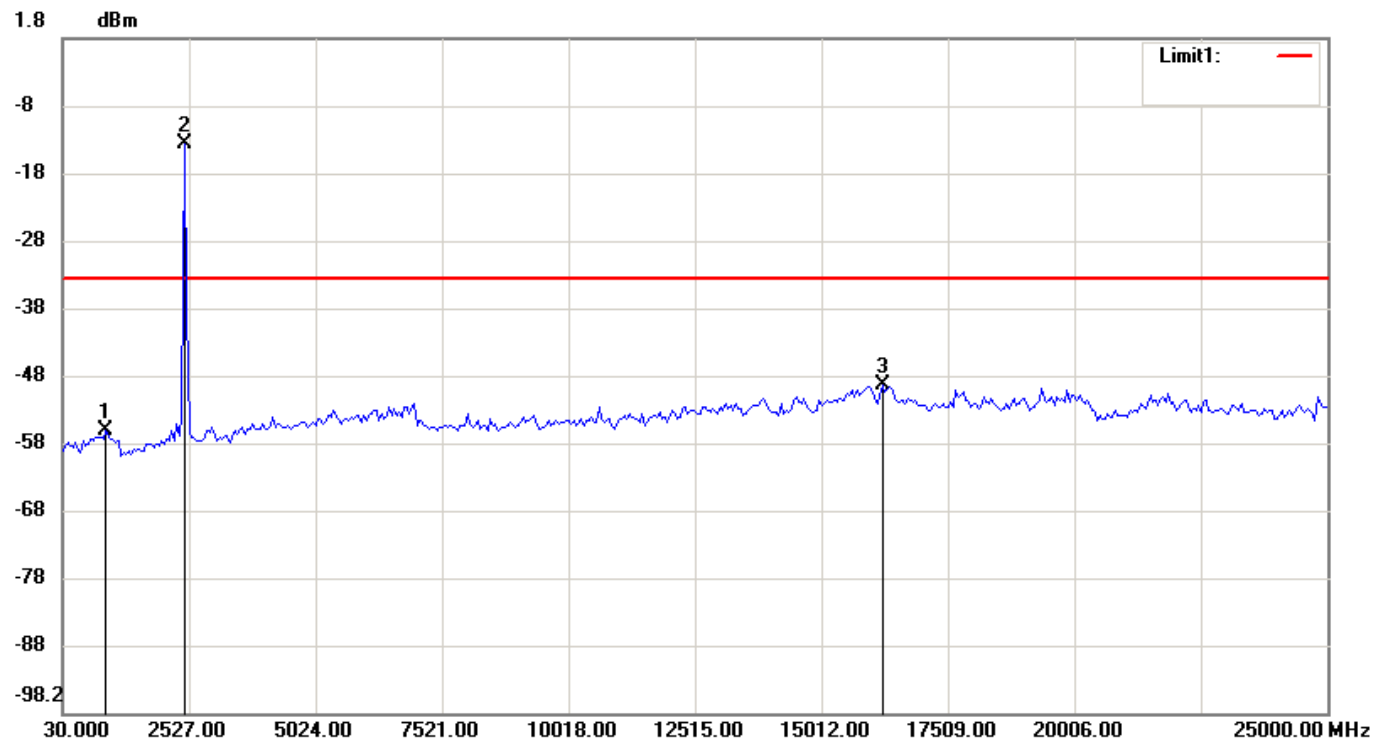
File: 20-04-MAS-061_n40_Ant0
Site: RF-Cond01

#9

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition: -33.78dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT40 Channel 11-Conducted Spurious

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

No.	Frequency(MHz)	Level(dBm)
1	878.9800	-56.30
2	2427.12000	-13.78
3	16210.56000	-49.67

9.4.4.2 CHAIN 1

測試日期: May 21, 2020

環境溫度: 25°C

環境濕度: 57%

- a. 下邊緣頻帶：距下頻帶邊緣40MHz內最大混附波產生於 2399.950 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 2500.024 MHz，比主波低 20dB以上，合乎標準規定。

註：1. 繪圖資料請參考第 115-119 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: 20-04-MAS-061_n40_Ant1

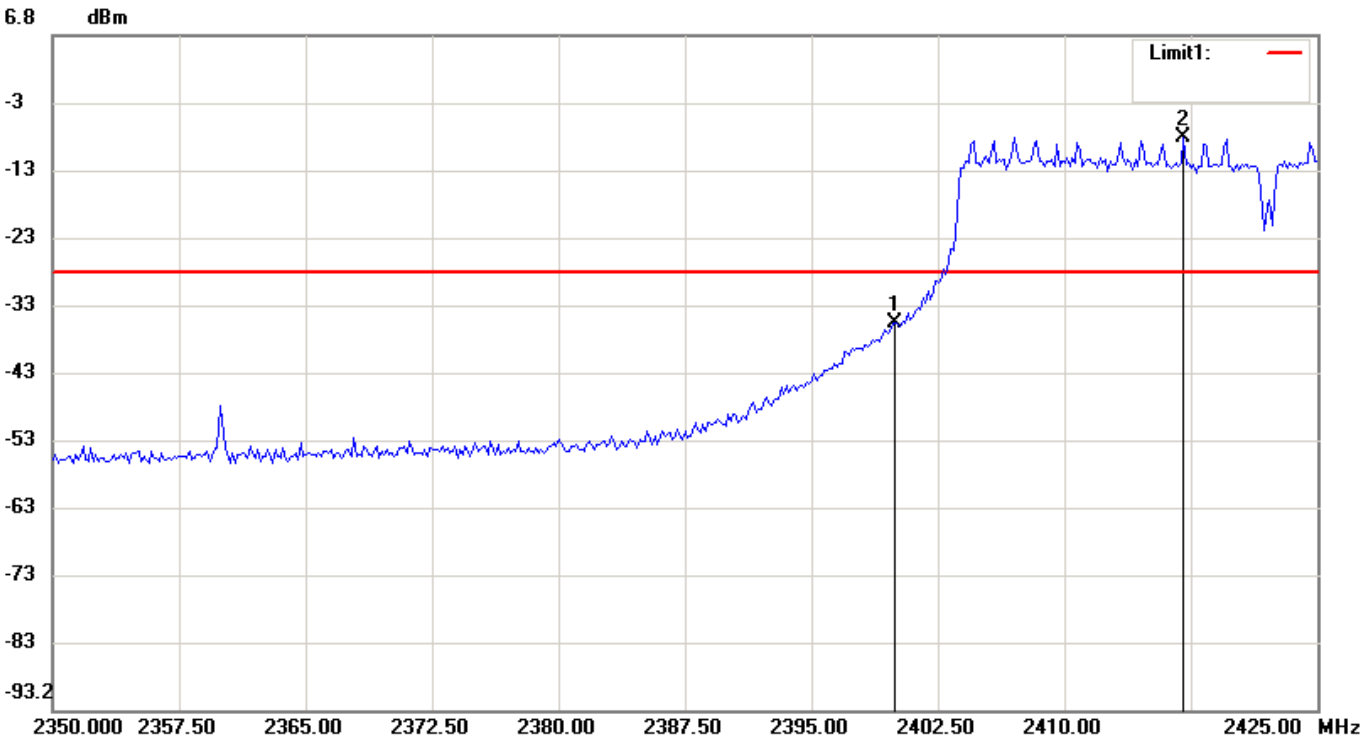
#4

Date: 2020/5/21

Temperature: 25 °C

Site: RF-Cond01

Humidity: 57 %



Condition: -28.3dBm

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

Note: NCC_LP0002_802.11n-HT40 Channel 03-Bandedge

RF Conducted

Sweep Time: 500ms

RBW: 100 KHz

Operator:

Att.: 20dB

VBW: 300 KHz

Phillip

No.	Frequency(MHz)	Level(dBm)
1	2399.95000	-35.87
2	2417.05000	-8.30

File: 20-04-MAS-061_n40_Ant1

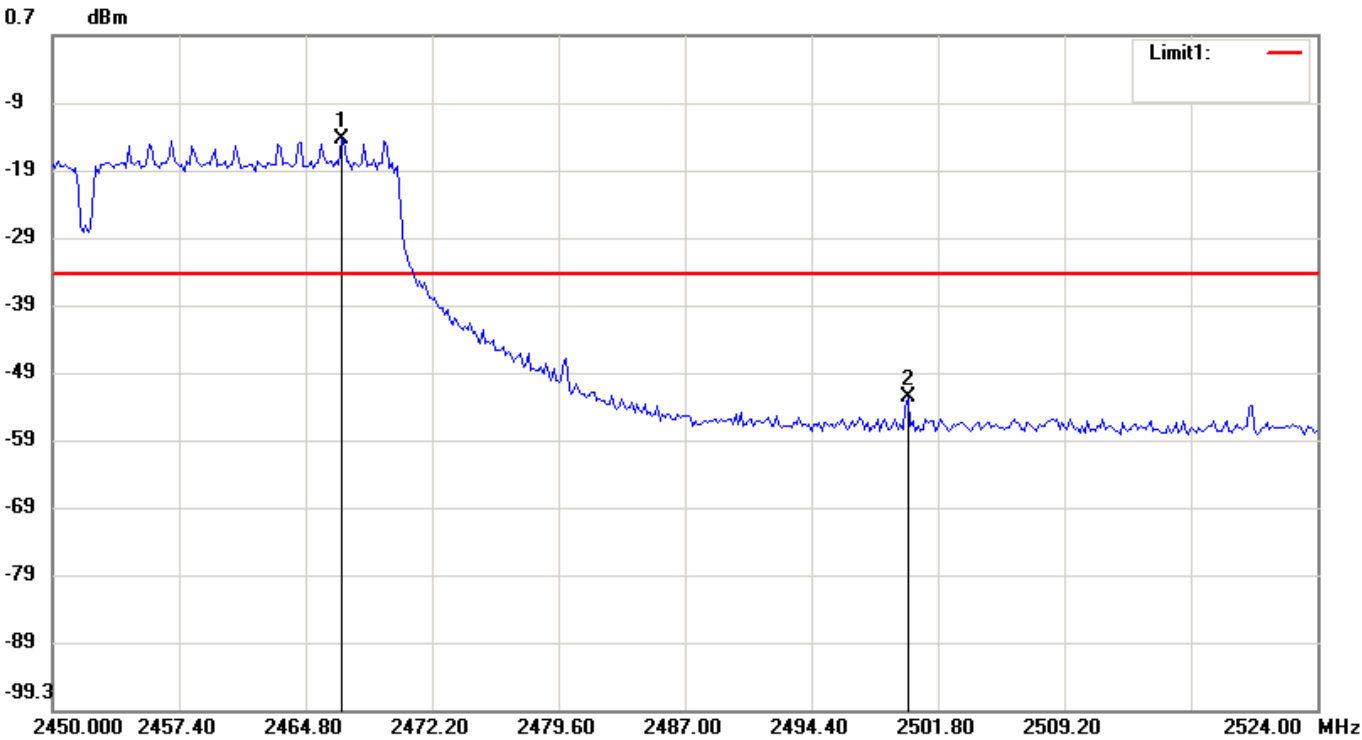
#12

Date: 2020/5/21

Temperature: 25 °C

Site: RF-Cond01

Humidity: 57 %



Condition: -34.55dBm

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

Note: NCC_LP0002_802.11n-HT40 Channel 9-Bandedge

RF Conducted

Sweep Time: 500ms

RBW: 100 KHz

Operator:

Att.: 20dB

VBW: 300 KHz

Phillip

No.	Frequency(MHz)	Level(dBm)
1	2466.87200	-14.55
2	2500.02400	-53.00

File: 20-04-MAS-061_n40_Ant1
Site: RF-Cond01

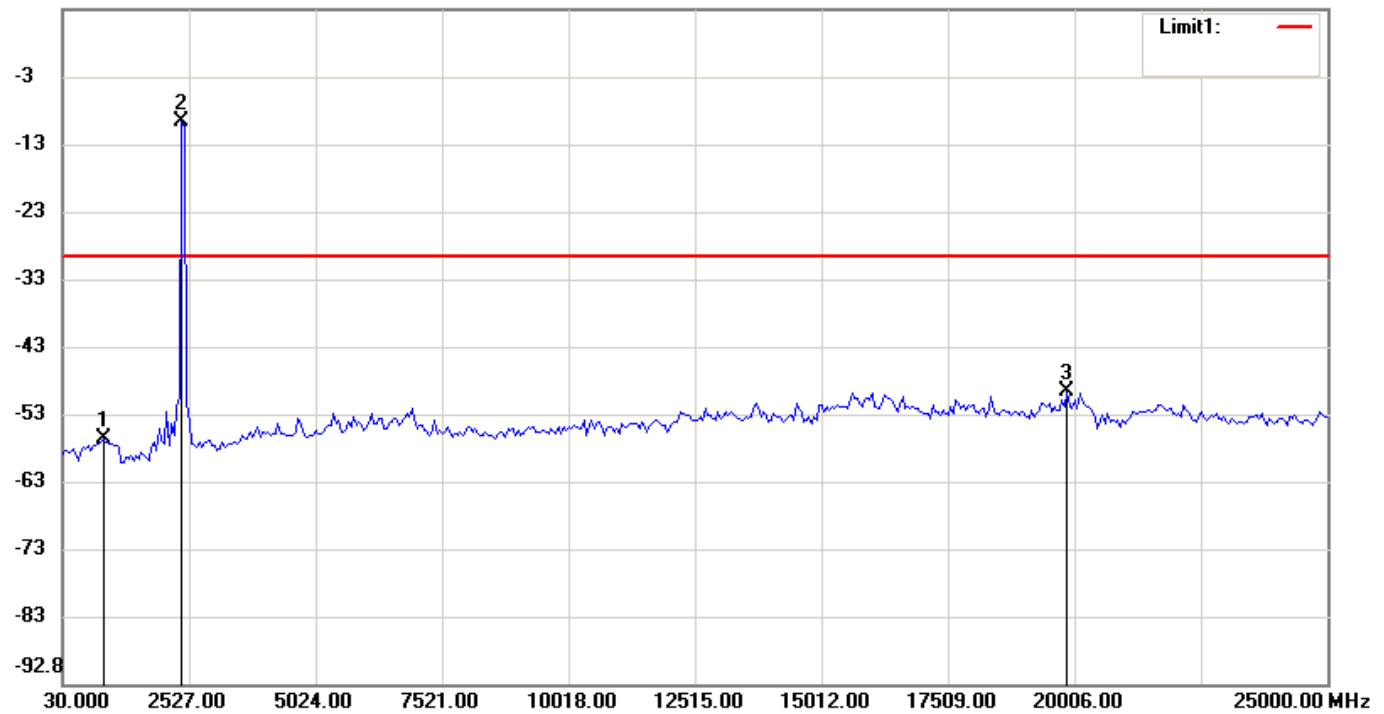
#2

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

7.2 dBm



Condition: -29.45dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT40 Channel 03-Conducted Spurious

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

No.	Frequency(MHz)	Level(dBm)
1	829.0400	-56.47
2	2377.18000	-9.45
3	19856.18000	-49.57

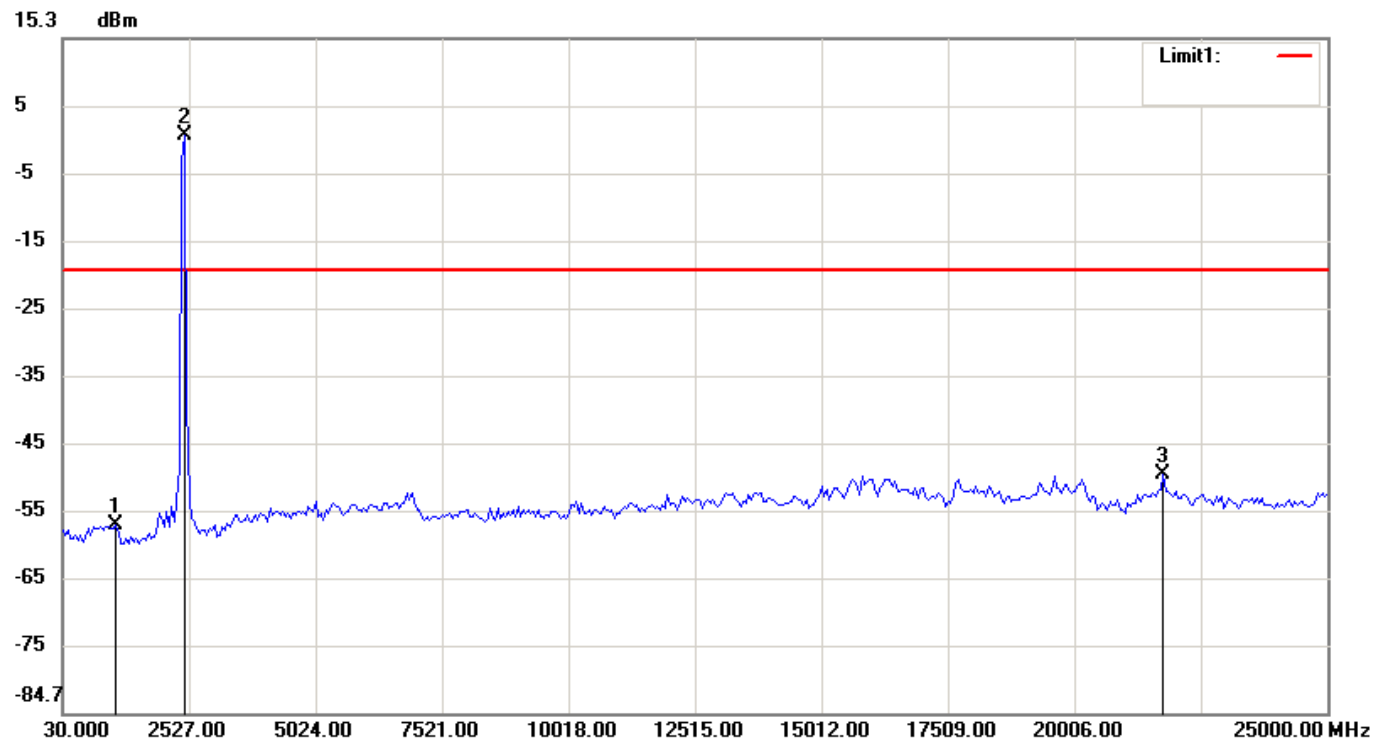
File: 20-04-MAS-061_n40_Ant1
Site: RF-Cond01

#6

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %



Condition: -19.18dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT40 Channel 06-Conducted Spurious

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

No.	Frequency(MHz)	Level(dBm)
1	1078.74000	-56.88
2	2427.12000	0.82
3	21753.90000	-49.28

File: 20-04-MAS-061_n40_Ant1
Site: RF-Cond01

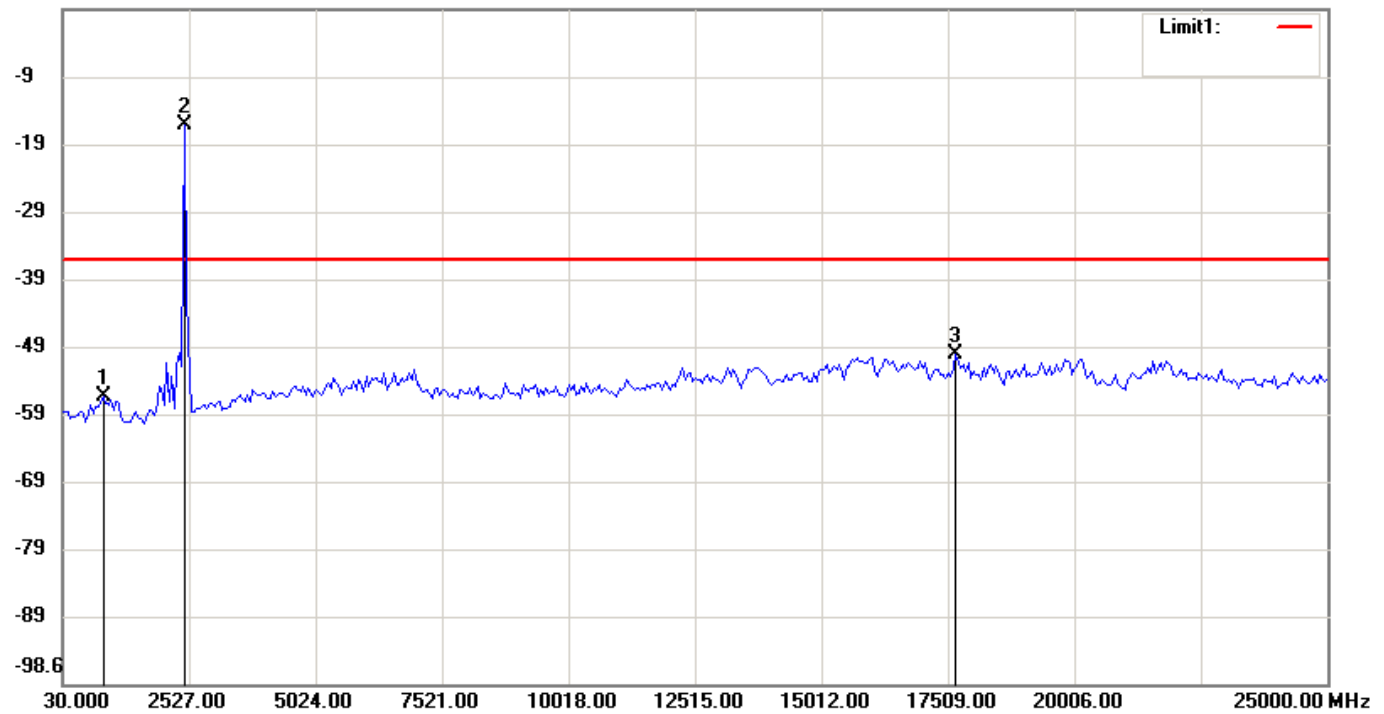
#10

Date: 2020/5/21

Temperature: 25 °C

Humidity: 57 %

1.4 dBm



Condition: -35.73dBm
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note: NCC_LP0002_802.11n-HT40 Channel 11-Conducted Spurious

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

No.	Frequency(MHz)	Level(dBm)
1	829.0400	-56.08
2	2427.12000	-15.73
3	17658.82000	-49.80

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器材技術規範4.10.1.5之要求，落於3.5節禁用頻段之輻射干擾需符合3.6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 : May 13, 2020

環境溫度: 23°C

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)
4823.8900	H	51.12	44.09	1.19	52.31	45.28	74.0	54.0	-8.72
4824.0000	V	---	---	1.19	---	---	74.0	54.0	---
7236.0000	H	---	---	3.66	---	---	74.0	54.0	---
7236.0000	V	---	---	3.66	---	---	74.0	54.0	---
9648.0000	H	---	---	4.98	---	---	74.0	54.0	---
9648.0000	V	---	---	4.98	---	---	74.0	54.0	---
12060.0000	H	---	---	8.25	---	---	74.0	54.0	---
12060.0000	V	---	---	8.25	---	---	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。
3. 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：May 13, 2020

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)
4874.0800	H	50.79	44.62	1.29	52.08	45.91	74.0	54.0	-8.09
4874.0000	V	---	---	1.29	---	---	74.0	54.0	---
7311.0000	H	---	---	3.69	---	---	74.0	54.0	---
7311.0000	V	---	---	3.69	---	---	74.0	54.0	---
9748.0000	H	---	---	5.08	---	---	74.0	54.0	---
9748.0000	V	---	---	5.08	---	---	74.0	54.0	---
12185.0000	H	---	---	8.46	---	---	74.0	54.0	---
12185.0000	V	---	---	8.46	---	---	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。
3. 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：May 13, 2020

環境溫度：23°C

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	
4924.0000	H	---	---	1.38	---	---	74.0	54.0	---
4924.0000	V	---	---	1.38	---	---	74.0	54.0	---
7386.0000	H	---	---	3.71	---	---	74.0	54.0	---
7386.0000	V	---	---	3.71	---	---	74.0	54.0	---
9848.0000	H	---	---	5.19	---	---	74.0	54.0	---
9848.0000	V	---	---	5.19	---	---	74.0	54.0	---
12310.0000	H	---	---	8.68	---	---	74.0	54.0	---
12310.0000	V	---	---	8.68	---	---	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。
3. 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：May 13, 2020

環境溫度：23°C

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)
4824.7100	H	53.36	35.19	1.19	54.55	36.38	74.0	54.0	-17.62
4824.0000	V	---	---	1.19	---	---	74.0	54.0	---
7236.6300	H	51.09	37.79	3.66	54.75	41.45	74.0	54.0	-12.55
7236.0000	V	---	---	3.66	---	---	74.0	54.0	---
9648.0000	H	---	---	4.98	---	---	74.0	54.0	---
9648.0000	V	---	---	4.98	---	---	74.0	54.0	---
12060.0000	H	---	---	8.25	---	---	74.0	54.0	---
12060.0000	V	---	---	8.25	---	---	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。
3. 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：May 13, 2020

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)
4879.6120	H	53.14	36.29	1.30	54.44	37.59	74.0	54.0	-16.41
4872.2200	V	49.74	---	1.29	51.03	---	74.0	54.0	-2.97
7313.2000	H	51.61	37.35	3.68	55.29	41.03	74.0	54.0	-12.97
7236.6300	V	51.09	37.79	3.66	54.75	41.45	74.0	54.0	-12.55
9748.0000	H	---	---	5.08	---	---	74.0	54.0	---
9748.0000	V	---	---	5.08	---	---	74.0	54.0	---
12185.0000	H	---	---	8.46	---	---	74.0	54.0	---
12185.0000	V	---	---	8.46	---	---	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。
3. 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：May 13, 2020

環境溫度：23°C

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 (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
4924.0000	H	---	---	1.38	---	---	74.0	54.0	---
4924.0000	V	---	---	1.38	---	---	74.0	54.0	---
7386.0000	H	---	---	3.71	---	---	74.0	54.0	---
7386.0000	V	---	---	3.71	---	---	74.0	54.0	---
9848.0000	H	---	---	5.19	---	---	74.0	54.0	---
9848.0000	V	---	---	5.19	---	---	74.0	54.0	---
12310.0000	H	---	---	8.68	---	---	74.0	54.0	---
12310.0000	V	---	---	8.68	---	---	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。
3. 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：May 13, 2020

環境溫度：23°C

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)
4829.6090	H	52.53	34.61	1.20	53.73	35.81	74.0	54.0	-18.19
4824.0000	V	---	---	1.19	---	---	74.0	54.0	---
7236.0000	H	---	---	3.66	---	---	74.0	54.0	---
7236.0000	V	---	---	3.66	---	---	74.0	54.0	---
9648.0000	H	---	---	4.98	---	---	74.0	54.0	---
9648.0000	V	---	---	4.98	---	---	74.0	54.0	---
12060.0000	H	---	---	8.25	---	---	74.0	54.0	---
12060.0000	V	---	---	8.25	---	---	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。
3. 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：May 13, 2020

環境溫度：23°C

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)
4878.4070	H	54.82	37.04	1.29	56.11	38.33	74.0	54.0	-15.67
4873.5994	V	50.06	---	1.29	51.35	---	74.0	54.0	-2.65
7321.5770	H	51.07	34.72	3.69	54.76	38.41	74.0	54.0	-15.59
7302.9071	V	55.43	36.27	3.69	59.12	39.96	74.0	54.0	-14.04
9748.0000	H	---	---	5.08	---	---	74.0	54.0	---
9748.0000	V	---	---	5.08	---	---	74.0	54.0	---
12185.0000	H	---	---	8.46	---	---	74.0	54.0	---
12185.0000	V	---	---	8.46	---	---	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。
3. 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：May 13, 2020

環境溫度：23°C

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	
4924.0000	H	---	---	1.38	---	---	74.0	54.0	---
4924.0000	V	---	---	1.38	---	---	74.0	54.0	---
7386.0000	H	---	---	3.71	---	---	74.0	54.0	---
7386.0000	V	---	---	3.71	---	---	74.0	54.0	---
9848.0000	H	---	---	5.19	---	---	74.0	54.0	---
9848.0000	V	---	---	5.19	---	---	74.0	54.0	---
12310.0000	H	---	---	8.68	---	---	74.0	54.0	---
12310.0000	V	---	---	8.68	---	---	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。
3. 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：May 13, 2020

環境溫度：23°C

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 (worse) (dB)
		Peak	AVG		Peak	AVG	Peak	AVG	
4844.0000	H	51.12	44.09	1.22	52.34	45.31	74.0	54.0	-8.69
4844.0000	V	---	---	1.22	---	---	74.0	54.0	---
7266.0000	H	---	---	3.68	---	---	74.0	54.0	---
7266.0000	V	---	---	3.68	---	---	74.0	54.0	---
9688.0000	H	---	---	5.01	---	---	74.0	54.0	---
9688.0000	V	---	---	5.01	---	---	74.0	54.0	---
12110.0000	H	---	---	8.34	---	---	74.0	54.0	---
12110.0000	V	---	---	8.34	---	---	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。
3. 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：May 13, 2020

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)
4874.4808	H	51.03	35.11	1.29	52.32	36.40	74.0	54.0	-17.60
4874.0000	V	---	---	1.29	---	---	74.0	54.0	---
7299.1410	H	48.89	33.26	3.69	52.58	36.95	74.0	54.0	-17.05
7311.0000	V	---	---	3.69	---	---	74.0	54.0	---
9748.0000	H	---	---	5.08	---	---	74.0	54.0	---
9748.0000	V	---	---	5.08	---	---	74.0	54.0	---
12185.0000	H	---	---	8.46	---	---	74.0	54.0	---
12185.0000	V	---	---	8.46	---	---	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。
3. 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：May 13, 2020

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)
4904.0000	H	---	---	1.34	---	---	74.0	54.0	---
4904.0000	V	---	---	1.34	---	---	74.0	54.0	---
7356.0000	H	---	---	3.70	---	---	74.0	54.0	---
7356.0000	V	---	---	3.70	---	---	74.0	54.0	---
9808.0000	H	---	---	5.16	---	---	74.0	54.0	---
9808.0000	V	---	---	5.16	---	---	74.0	54.0	---
12260.0000	H	---	---	8.59	---	---	74.0	54.0	---
12260.0000	V	---	---	8.59	---	---	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。
3. 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: 20-04-MAS-061_B

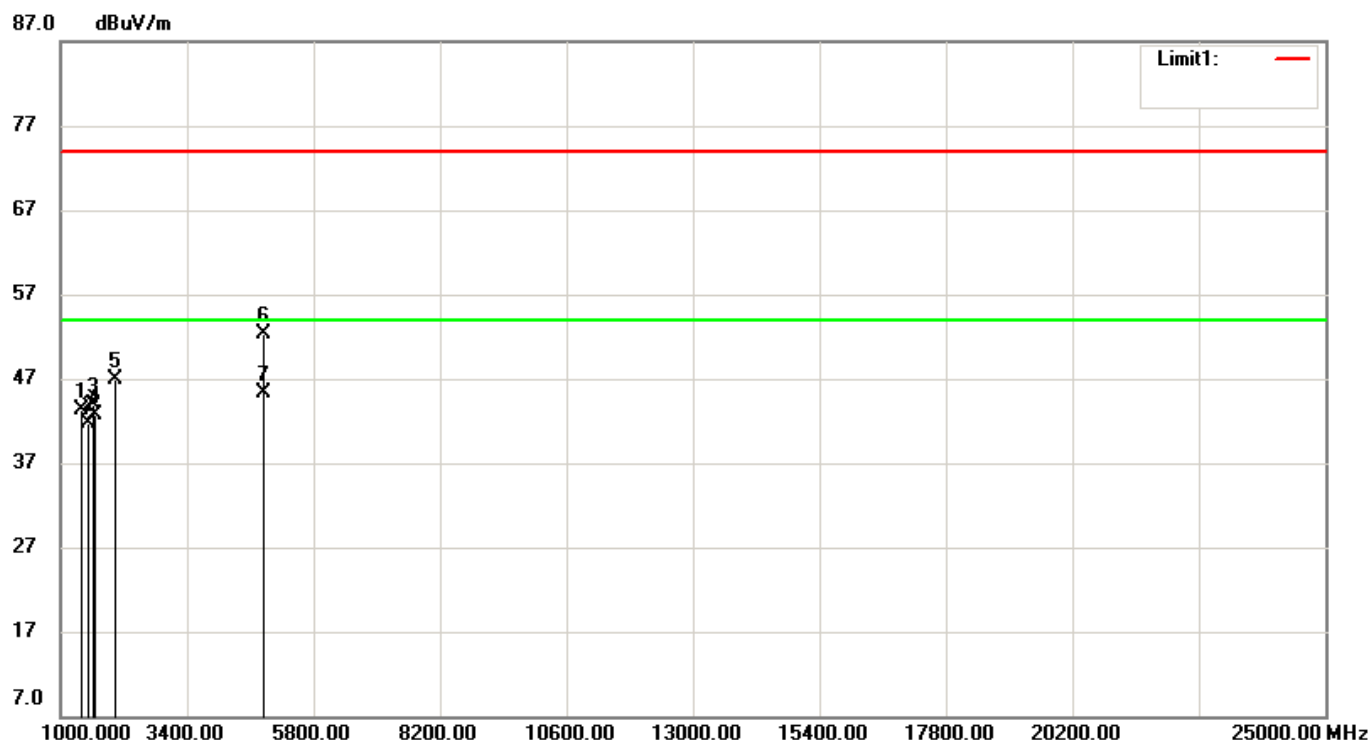
#59

Date: 2020/5/13

Temperature: 23 °C

Site: RE02-EMC B1- N2

Humidity: 60 %



Condition: NCC_Above1G_Pk
 EUT: Wireless LAN Conveter
 Model: FBR-3250
 Test Mode: DTS
 Note: CH LOW

Polarization: Horizontal
 Distance: 3m
 Operator: Phillip

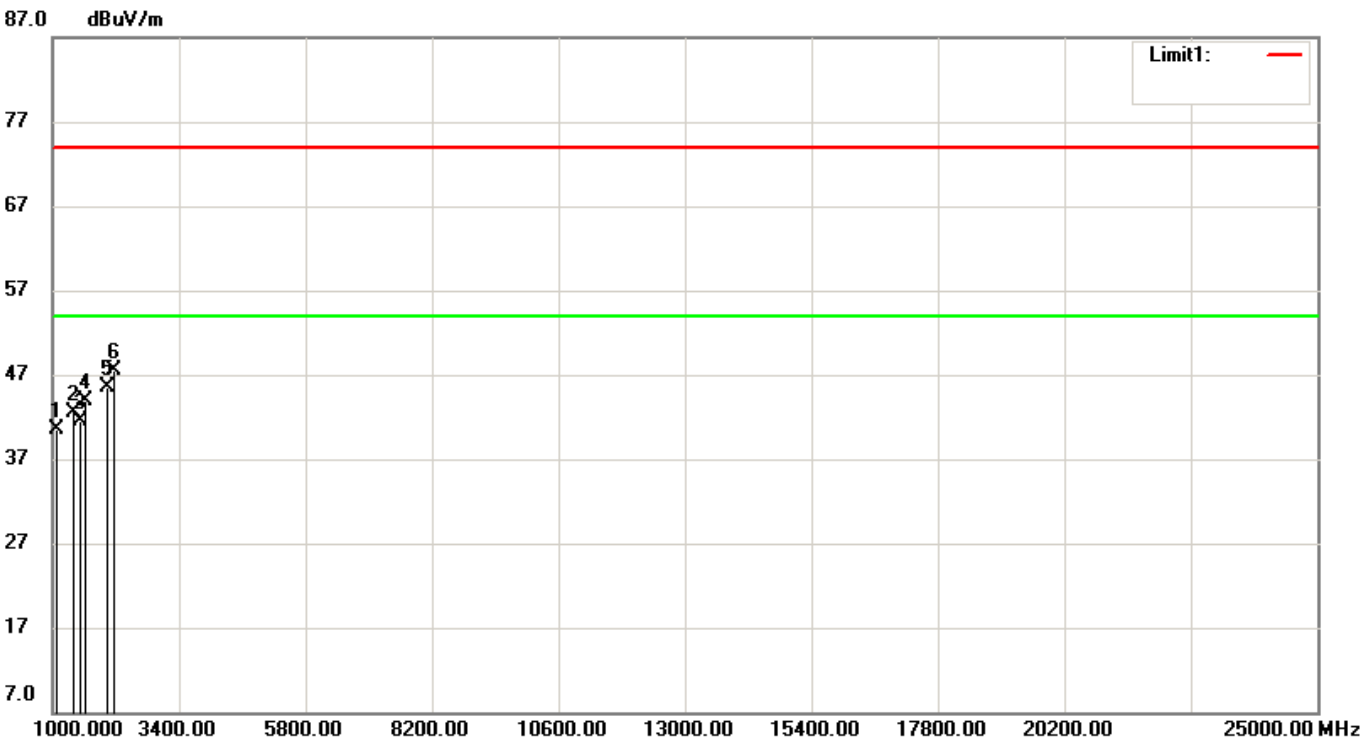
No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1374.67940	51.77	peak	-8.53	43.24	74.00	-30.76
2	1500.32050	49.81	peak	-8.20	41.61	74.00	-32.39
3	1594.55120	51.27	peak	-7.34	43.93	74.00	-30.07
4	1625.96150	49.81	peak	-7.07	42.74	74.00	-31.26
5	2000.64100	50.63	peak	-3.70	46.93	74.00	-27.07
6	4823.89000	51.12	peak	1.19	52.31	74.00	-21.69
7	4823.89000	44.09	AVG	1.19	45.28	54.00	-8.72

註：1. 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。

2. 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: 20-04-MAS-061_B #60 Date: 2020/5/13 Temperature: 23 °C
Site: RE02-EMC B1- N2 Humidity: 60 %



Condition: NCC_Above1G_Pk Polarization: Vertical
EUT: Wireless LAN Conveter Distance: 3m
Model: FBR-3250
Test Mode: DTS Operator: Phillip
Note: CH LOW

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1067.30760	49.81	peak	-9.31	40.50	74.00	-33.50
2	1374.67940	51.13	peak	-8.53	42.60	74.00	-31.40
3	1500.32050	49.75	peak	-8.20	41.55	74.00	-32.45
4	1599.03840	51.31	peak	-7.31	44.00	74.00	-30.00
5	2000.64100	49.12	peak	-3.70	45.42	74.00	-28.58
6	2126.28200	50.87	peak	-3.37	47.50	74.00	-26.50

註：1. 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。
2. 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: 20-04-MAS-061_B

#61

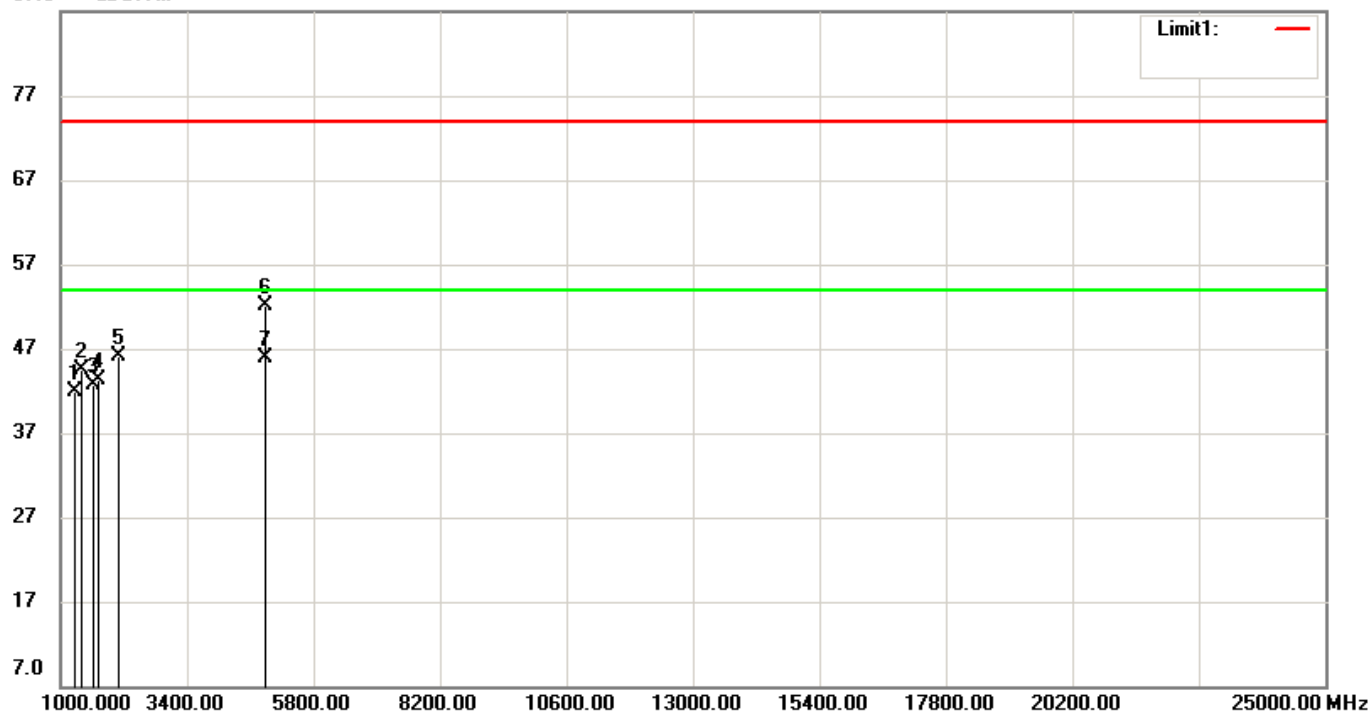
Date: 2020/5/13

Temperature: 23 °C

Site: RE02-EMC B1- N2

Humidity: 60 %

87.0 dBuV/m



Condition: NCC_Above1G_Pk
 EUT: Wireless LAN Conveter
 Model: FBR-3250
 Test Mode: DTS
 Note: CH MID

Polarization: Horizontal
 Distance: 3m
 Operator: Phillip

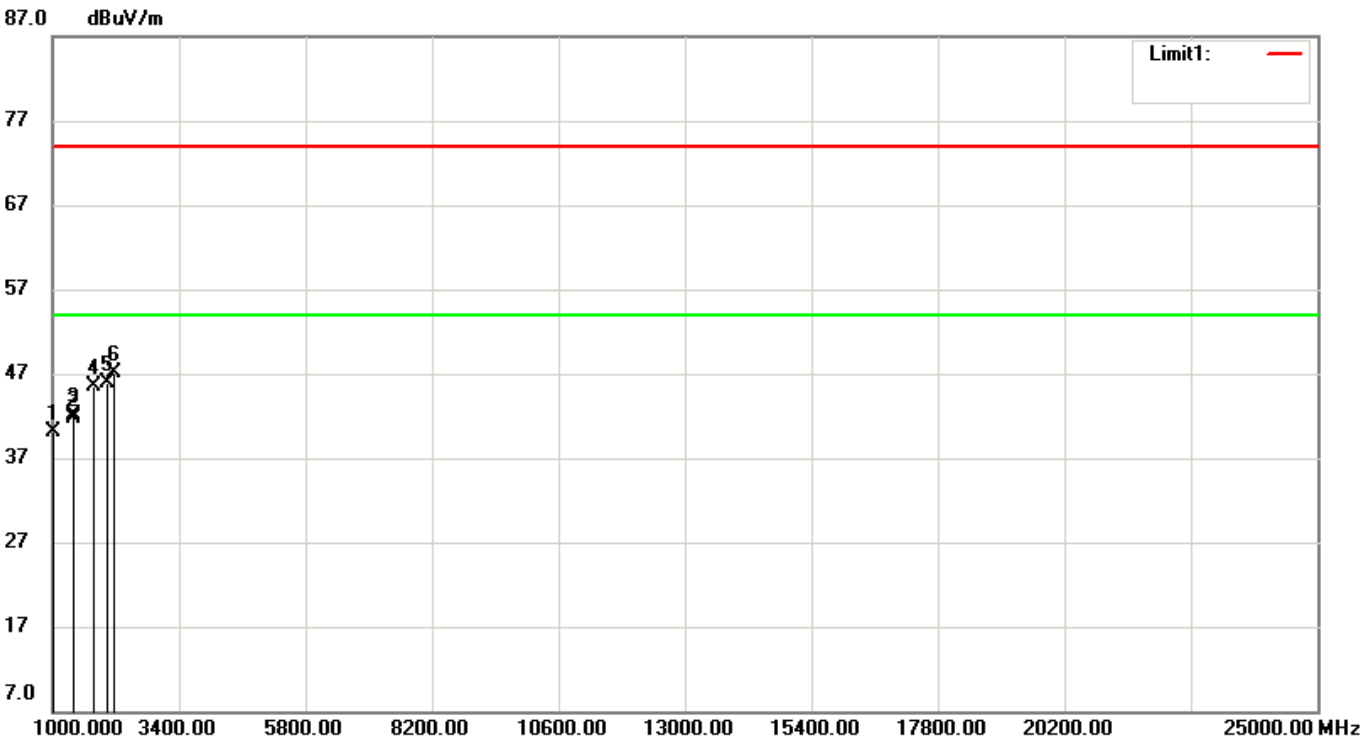
No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1237.82050	50.88	peak	-8.88	42.00	74.00	-32.00
2	1374.67940	53.09	peak	-8.53	44.56	74.00	-29.44
3	1599.03840	49.92	peak	-7.31	42.61	74.00	-31.39
4	1693.26920	49.76	peak	-6.46	43.30	74.00	-30.70
5	2112.82050	49.61	peak	-3.41	46.20	74.00	-27.80
6	4874.08000	50.79	peak	1.29	52.08	74.00	-21.92
7	4874.08000	44.62	AVG	1.29	45.91	54.00	-8.09

註：1. 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。

2. 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: 20-04-MAS-061_B #62 Date: 2020/5/13 Temperature: 23 °C
Site: RE02-EMC B1- N2 Humidity: 60 %



Condition: NCC_Above1G_Pk Polarization: Vertical
EUT: Wireless LAN Conveter Distance: 3m
Model: FBR-3250
Test Mode: DTS Operator: Phillip
Note: CH MID

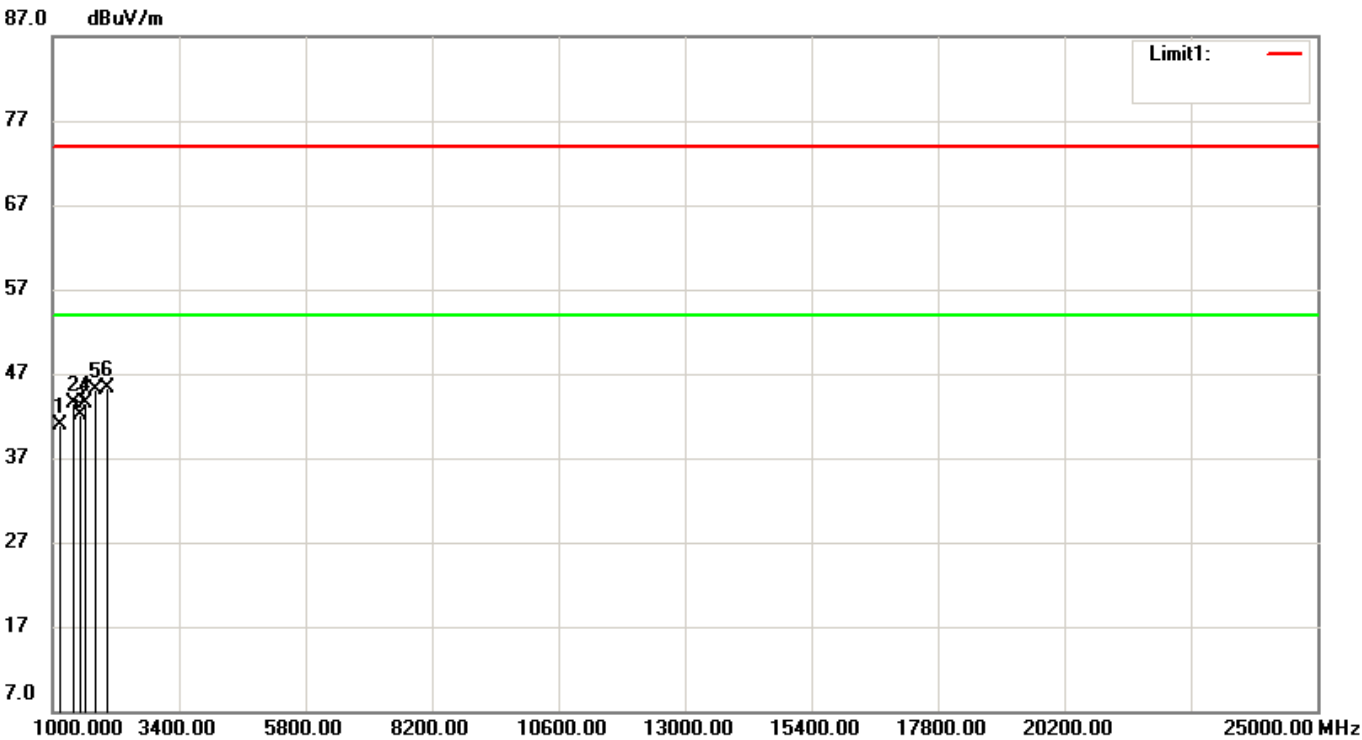
No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1020.19230	49.59	peak	-9.43	40.16	74.00	-33.84
2	1356.73070	50.27	peak	-8.57	41.70	74.00	-32.30
3	1374.67940	50.60	peak	-8.53	42.07	74.00	-31.93
4	1760.57700	51.36	peak	-5.86	45.50	74.00	-28.50
5	2000.64100	49.53	peak	-3.70	45.83	74.00	-28.17
6	2126.28200	50.42	peak	-3.37	47.05	74.00	-26.95

註：1. 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。
2. 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: 20-04-MAS-061_B #63 Date: 2020/5/13 Temperature: 23 °C
Site: RE02-EMC B1- N2 Humidity: 60 %



Condition: NCC_Above1G_Pk Polarization: Horizontal
EUT: Wireless LAN Conveter Distance: 3m
Model: FBR-3250
Test Mode: DTS Operator: Phillip
Note: CH HIGH

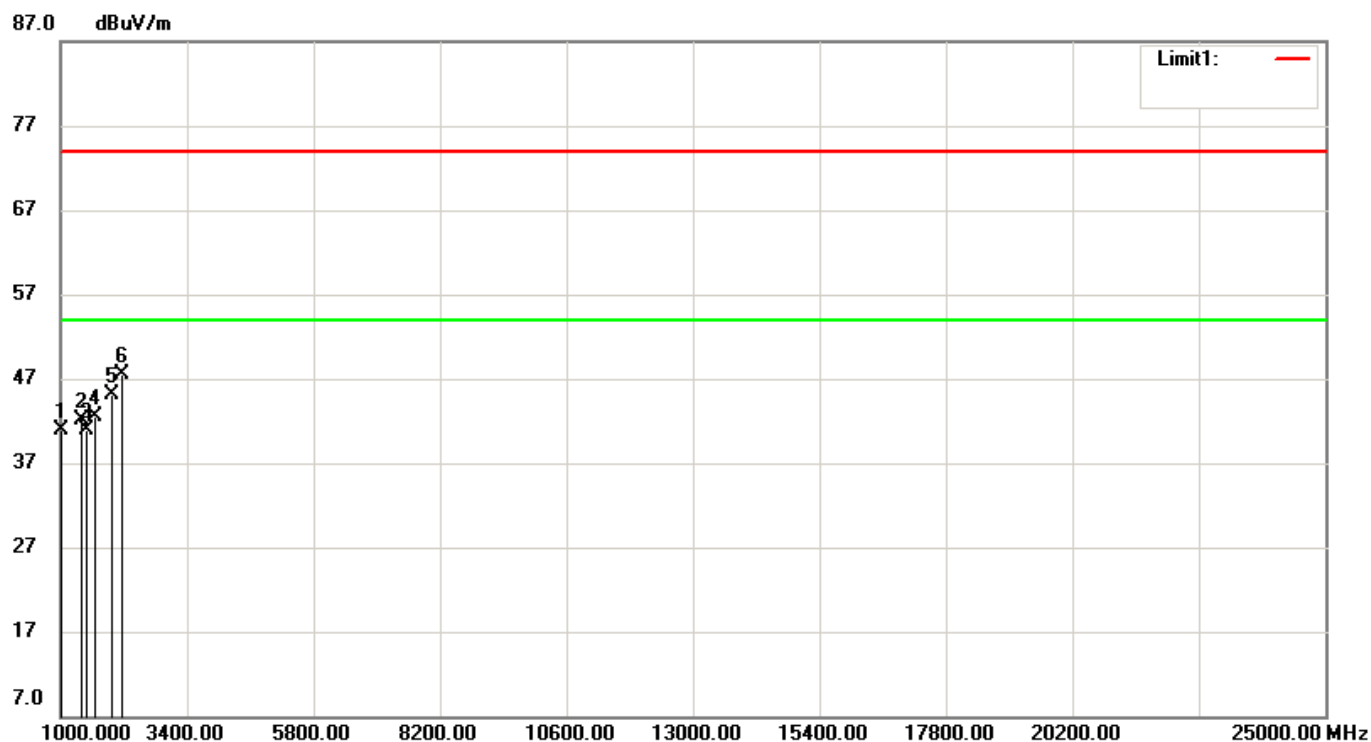
No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1123.39740	50.04	peak	-9.18	40.86	74.00	-33.14
2	1374.67940	52.07	peak	-8.53	43.54	74.00	-30.46
3	1500.32050	50.22	peak	-8.20	42.02	74.00	-31.98
4	1599.03840	50.87	peak	-7.31	43.56	74.00	-30.44
5	1769.55120	50.88	peak	-5.78	45.10	74.00	-28.90
6	2000.64100	49.05	peak	-3.70	45.35	74.00	-28.65

註：1. 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。
2. 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: 20-04-MAS-061_B
Site: RE02-EMC B1- N2

#64 Date: 2020/5/13 Temperature: 23 °C
Humidity: 60 %



Condition: NCC_Above1G_Pk
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
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	1000.0000	50.39	peak	-9.49	40.90	74.00	-33.10
2	1374.67940	50.73	peak	-8.53	42.20	74.00	-31.80
3	1480.12820	49.14	peak	-8.25	40.89	74.00	-33.11
4	1625.96150	49.50	peak	-7.07	42.43	74.00	-31.57
5	1944.55120	49.32	peak	-4.20	45.12	74.00	-28.88
6	2126.28200	50.87	peak	-3.37	47.50	74.00	-26.50

註：1. 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。

2. 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: 20-04-MAS-061_G

#58

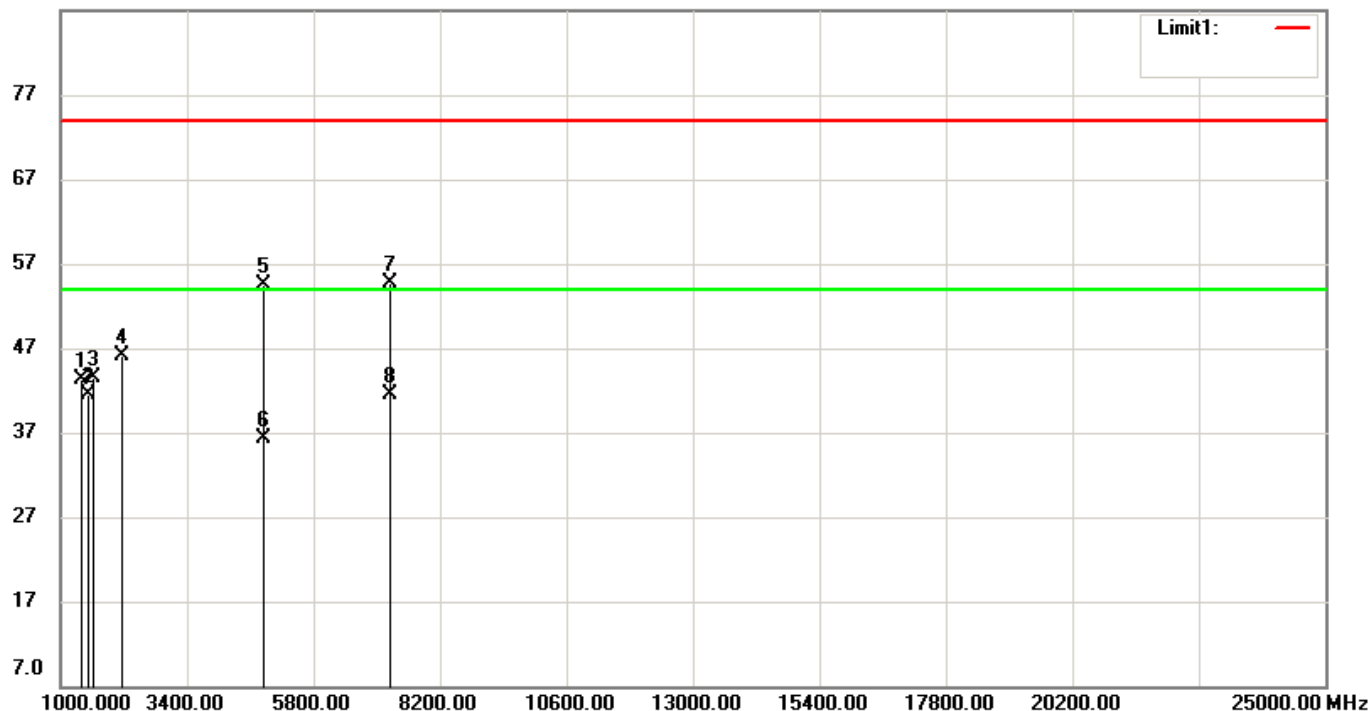
Date: 2020/5/13

Temperature: 23 °C

Site: RE02-EMC B1- N2

Humidity: 60 %

87.0 dBuV/m



Condition: NCC_Above1G_Pk
 EUT: Wireless LAN Conveter
 Model: FBR-3250
 Test Mode: DTS
 Note: CH LOW

Polarization: Horizontal
 Distance: 3m
 Operator: Phillip

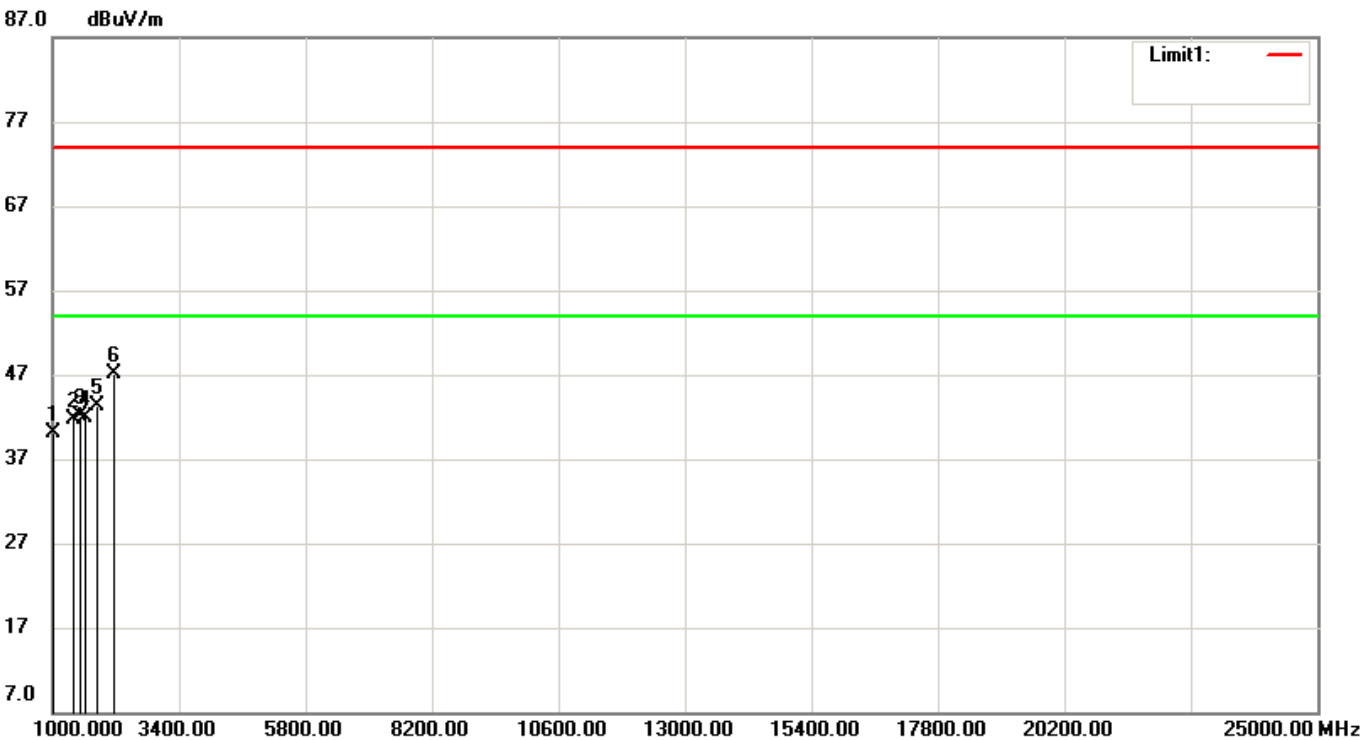
No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1374.67940	51.89	peak	-8.53	43.36	74.00	-30.64
2	1500.32050	49.63	peak	-8.20	41.43	74.00	-32.57
3	1594.55120	50.81	peak	-7.34	43.47	74.00	-30.53
4	2126.28200	49.45	peak	-3.37	46.08	74.00	-27.92
5	4824.71000	53.36	peak	1.19	54.55	74.00	-19.45
6	4824.71000	35.19	AVG	1.19	36.38	54.00	-17.62
7	7236.63000	51.09	peak	3.66	54.75	74.00	-19.25
8	7236.63000	37.79	AVG	3.66	41.45	54.00	-12.55

註：1. 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。

2. 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: 20-04-MAS-061_G #59 Date: 2020/5/13 Temperature: 23 °C
Site: RE02-EMC B1- N2 Humidity: 60 %



Condition: NCC_Above1G_Pk Polarization: Vertical
EUT: Wireless LAN Conveter Distance: 3m
Model: FBR-3250
Test Mode: DTS Operator: Phillip
Note: CH LOW

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1024.67940	49.47	peak	-9.43	40.04	74.00	-33.96
2	1374.67940	50.33	peak	-8.53	41.80	74.00	-32.20
3	1500.32050	50.31	peak	-8.20	42.11	74.00	-31.89
4	1594.55120	49.28	peak	-7.34	41.94	74.00	-32.06
5	1816.66660	48.60	peak	-5.36	43.24	74.00	-30.76
6	2126.28200	50.39	peak	-3.37	47.02	74.00	-26.98

註：1. 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。
2. 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: 20-04-MAS-061_G

#60

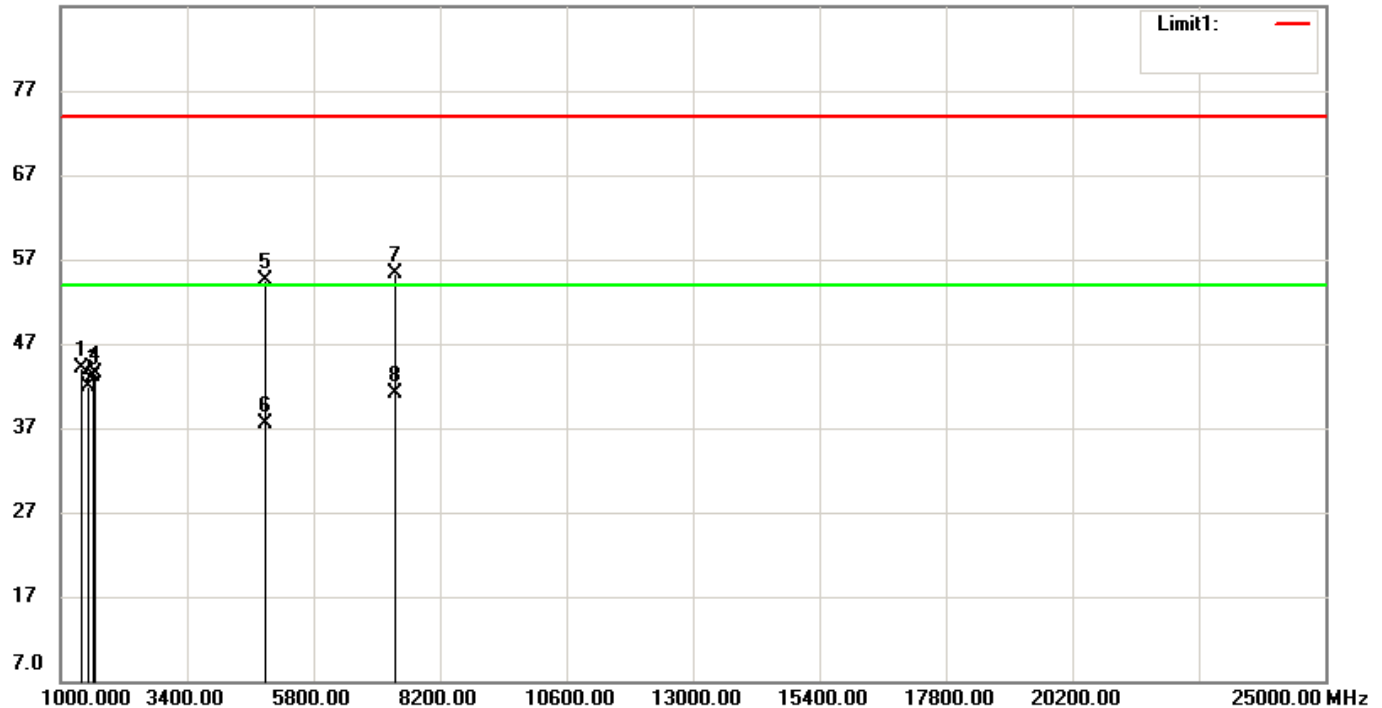
Date: 2020/5/13

Temperature: 23 °C

Site: RE02-EMC B1- N2

Humidity: 60 %

87.0 dBuV/m



Condition: NCC_Above1G_Pk
 EUT: Wireless LAN Conveter
 Model: FBR-3250
 Test Mode: DTS
 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	1374.67940	52.57	peak	-8.53	44.04	74.00	-29.96
2	1500.32050	50.13	peak	-8.20	41.93	74.00	-32.07
3	1599.03840	50.49	peak	-7.31	43.18	74.00	-30.82
4	1625.96150	50.63	peak	-7.07	43.56	74.00	-30.44
5	4879.61200	53.14	peak	1.30	54.44	74.00	-19.56
6	4879.61200	36.29	AVG	1.30	37.59	54.00	-16.41
7	7313.20000	51.61	peak	3.68	55.29	74.00	-18.71
8	7313.20000	37.35	AVG	3.68	41.03	54.00	-12.97

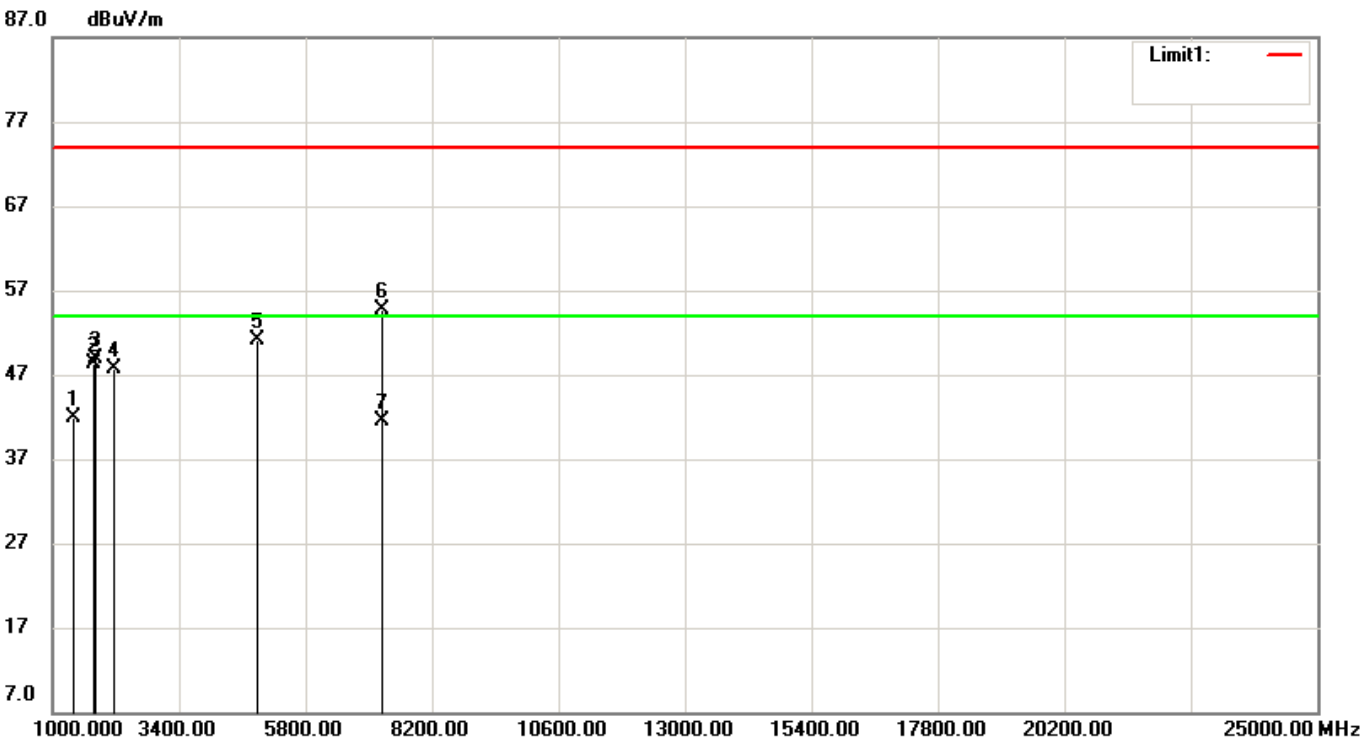
註：1. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值。

2. 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: 20-04-MAS-061_G #61 Date: 2020/5/13 Temperature: 23 °C
Site: RE02-EMC B1- N2 Humidity: 60 %



Condition: NCC_Above1G_Pk Polarization: Vertical
EUT: Wireless LAN Conveter Distance: 3m
Model: FBR-3250
Test Mode: DTS Operator: Phillip
Note: CH MID

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1374.67940	50.45	peak	-8.53	41.92	74.00	-32.08
2	1756.08970	54.10	peak	-5.89	48.21	74.00	-25.79
3	1774.03840	54.56	peak	-5.73	48.83	74.00	-25.17
4	2126.28200	51.08	peak	-3.37	47.71	74.00	-26.29
5	4872.22000	49.74	peak	1.29	51.03	74.00	-22.97
6	7236.63000	51.09	peak	3.66	54.75	74.00	-19.25
7	7236.63000	37.79	AVG	3.66	41.45	54.00	-12.55

註：1. 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。
2. 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: 20-04-MAS-061_G

#62

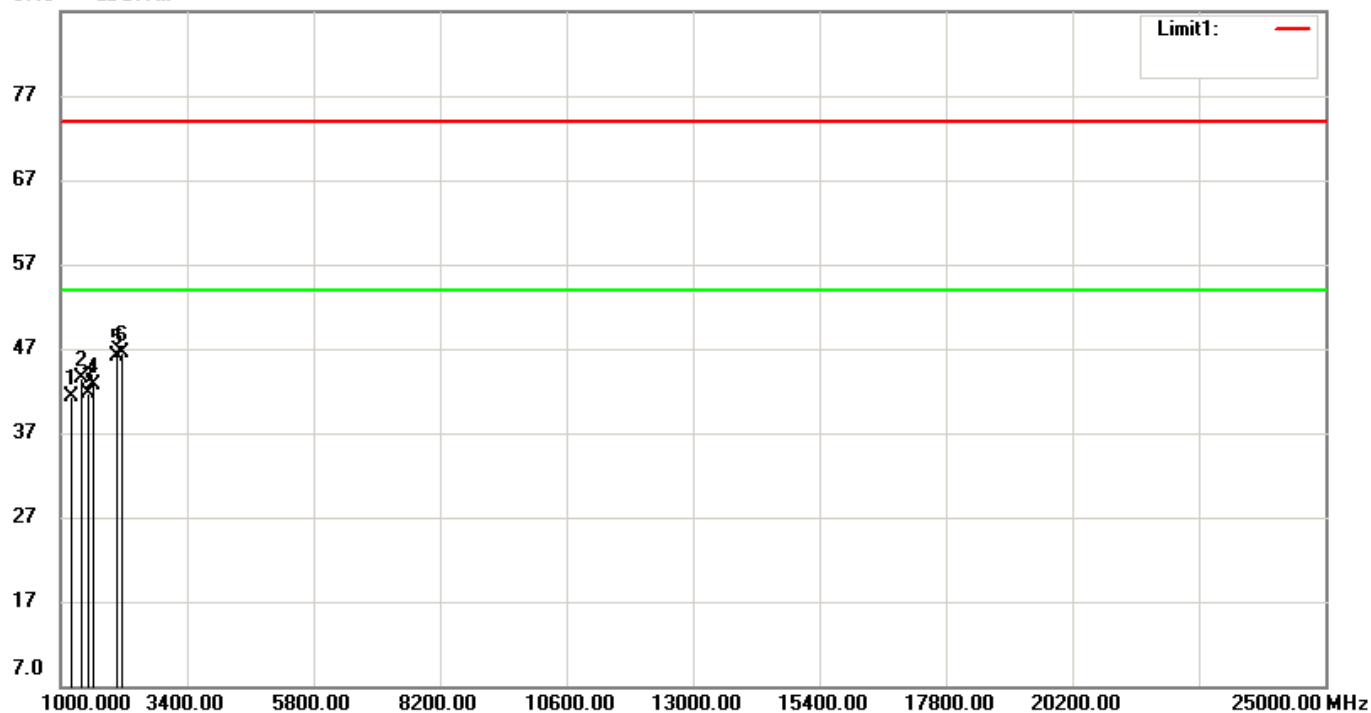
Date: 2020/5/13

Temperature: 23 °C

Site: RE02-EMC B1- N2

Humidity: 60 %

87.0 dBuV/m



Condition: NCC_Above1G_Pk
 EUT: Wireless LAN Conveter
 Model: FBR-3250
 Test Mode: DTS
 Note: CH HIGH

Polarization: Horizontal
 Distance: 3m
 Operator: Phillip

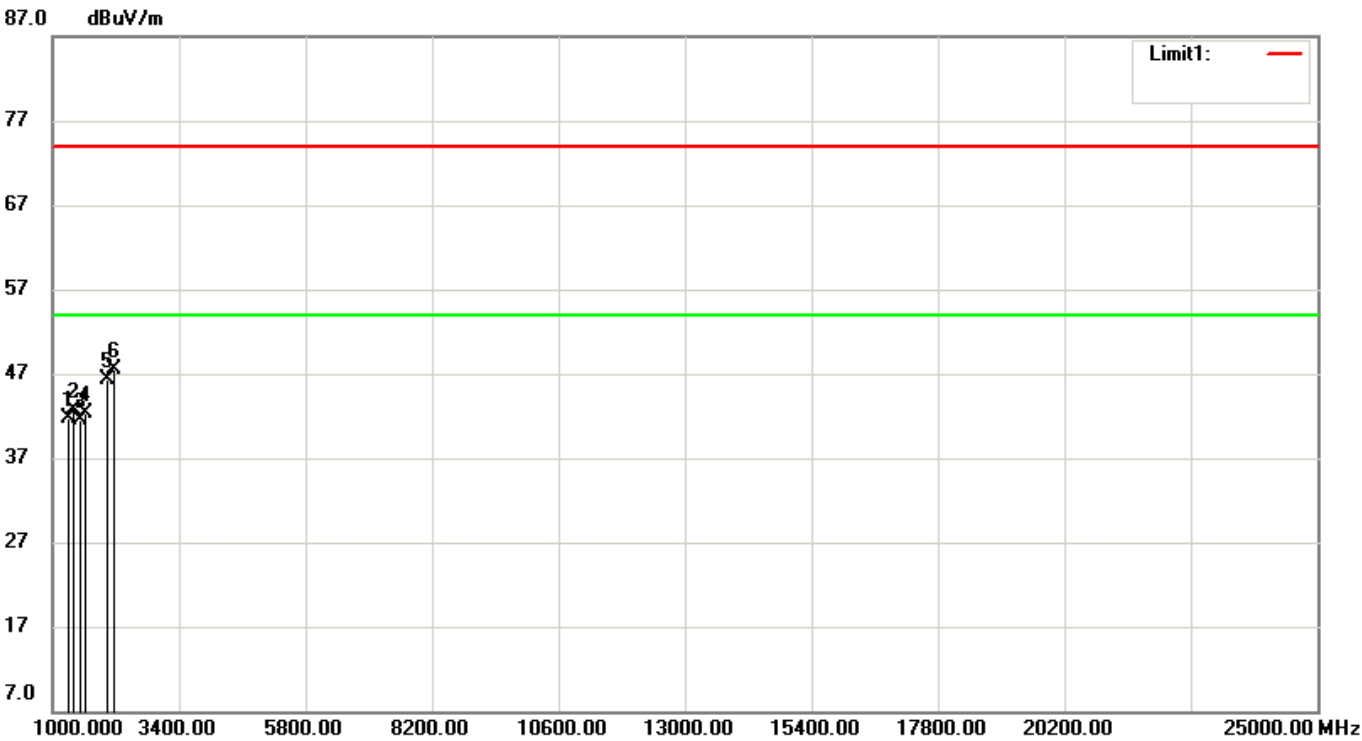
No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1168.26920	50.45	peak	-9.06	41.39	74.00	-32.61
2	1374.67940	51.96	peak	-8.53	43.43	74.00	-30.57
3	1500.32050	49.95	peak	-8.20	41.75	74.00	-32.25
4	1601.28200	50.05	peak	-7.29	42.76	74.00	-31.24
5	2041.02560	49.70	peak	-3.59	46.11	74.00	-27.89
6	2126.28200	49.97	peak	-3.37	46.60	74.00	-27.40

註：1. 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。

2. 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: 20-04-MAS-061_G #63 Date: 2020/5/13 Temperature: 23 °C
Site: RE02-EMC B1- N2 Humidity: 60 %



Condition: NCC_Above1G_Pk Polarization: Vertical
EUT: Wireless LAN Conveter Distance: 3m
Model: FBR-3250
Test Mode: DTS Operator: Phillip
Note: CH HIGH

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1282.69230	50.43	peak	-8.76	41.67	74.00	-32.33
2	1374.67940	51.15	peak	-8.53	42.62	74.00	-31.38
3	1500.32050	49.66	peak	-8.20	41.46	74.00	-32.54
4	1599.03840	49.70	peak	-7.31	42.39	74.00	-31.61
5	2000.64100	49.95	peak	-3.70	46.25	74.00	-27.75
6	2126.28200	50.88	peak	-3.37	47.51	74.00	-26.49

註：1. 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。
2. 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: 20-04-MAS-061_n20

#56

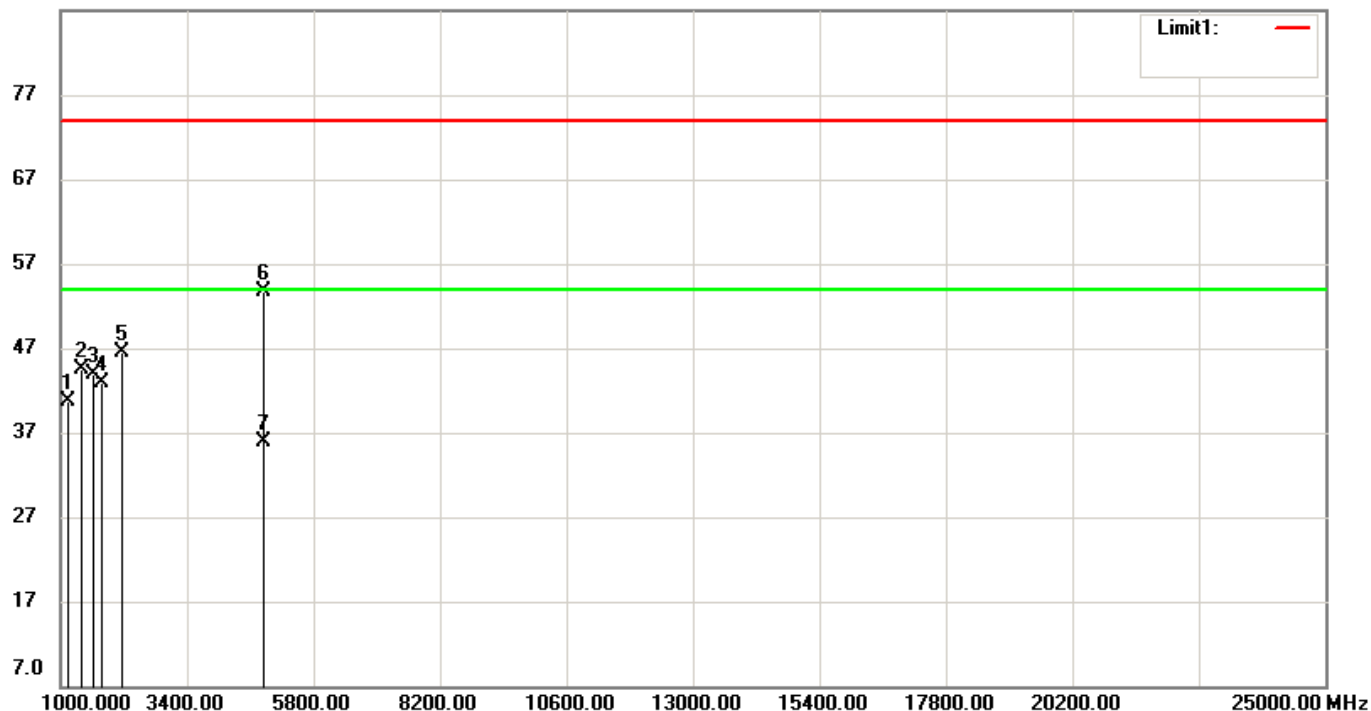
Date: 2020/5/13

Temperature: 23 °C

Site: RE02-EMC B1- N2

Humidity: 60 %

87.0 dBuV/m



Condition: NCC_Above1G_Pk
 EUT: Wireless LAN Conveter
 Model: FBR-3250
 Test Mode: DTS
 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	49.90	peak	-9.18	40.72	74.00	-33.28
2	1374.67940	52.96	peak	-8.53	44.43	74.00	-29.57
3	1594.55120	51.16	peak	-7.34	43.82	74.00	-30.18
4	1747.11530	48.81	peak	-5.98	42.83	74.00	-31.17
5	2126.28200	49.94	peak	-3.37	46.57	74.00	-27.43
6	4829.60900	52.53	peak	1.20	53.73	74.00	-20.27
7	4829.60900	34.61	AVG	1.20	35.81	54.00	-18.19

註：1. 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。

2. 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: 20-04-MAS-061_n20

#57

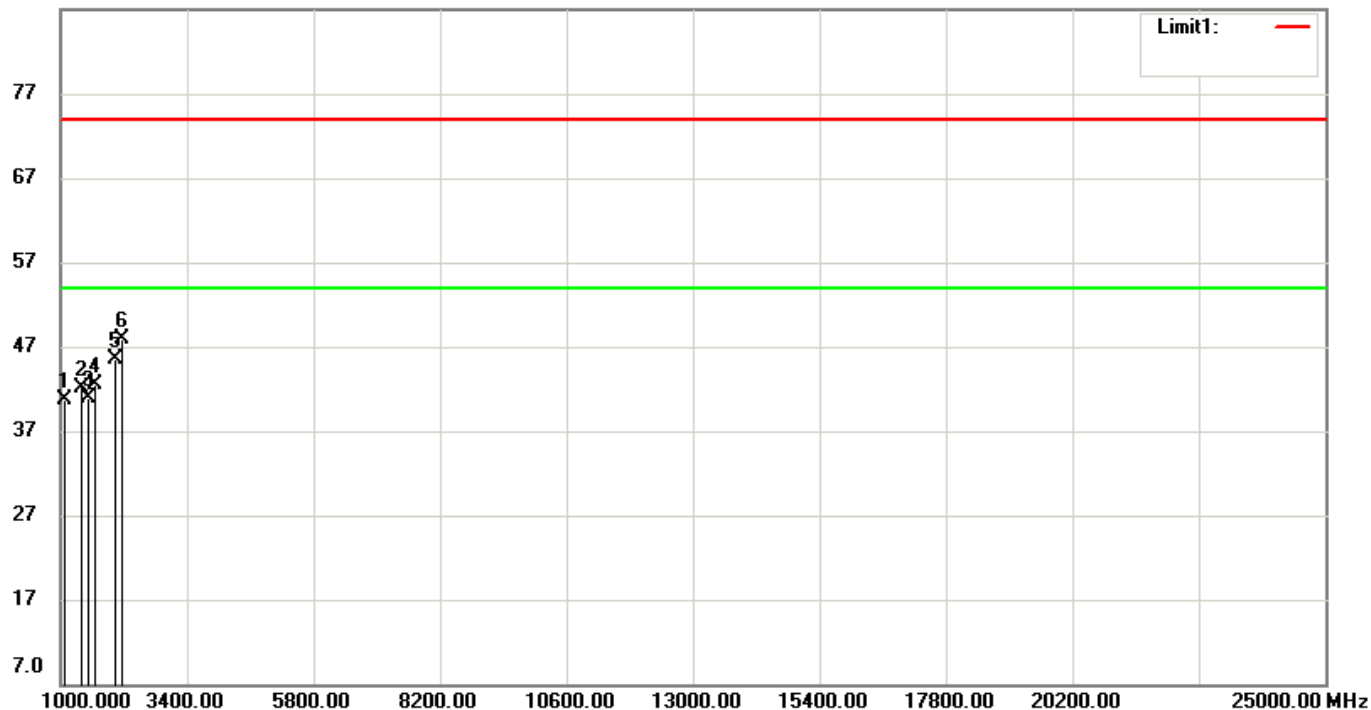
Date: 2020/5/13

Temperature: 23 °C

Site: RE02-EMC B1- N2

Humidity: 60 %

87.0 dBuV/m



Condition: NCC_Above1G_Pk
 EUT: Wireless LAN Conveter
 Model: FBR-3250
 Test Mode: DTS
 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	1071.79470	50.02	peak	-9.31	40.71	74.00	-33.29
2	1374.67940	50.68	peak	-8.53	42.15	74.00	-31.85
3	1500.32050	49.19	peak	-8.20	40.99	74.00	-33.01
4	1646.15380	49.32	peak	-6.89	42.43	74.00	-31.57
5	2000.64100	49.12	peak	-3.70	45.42	74.00	-28.58
6	2126.28200	51.21	peak	-3.37	47.84	74.00	-26.16

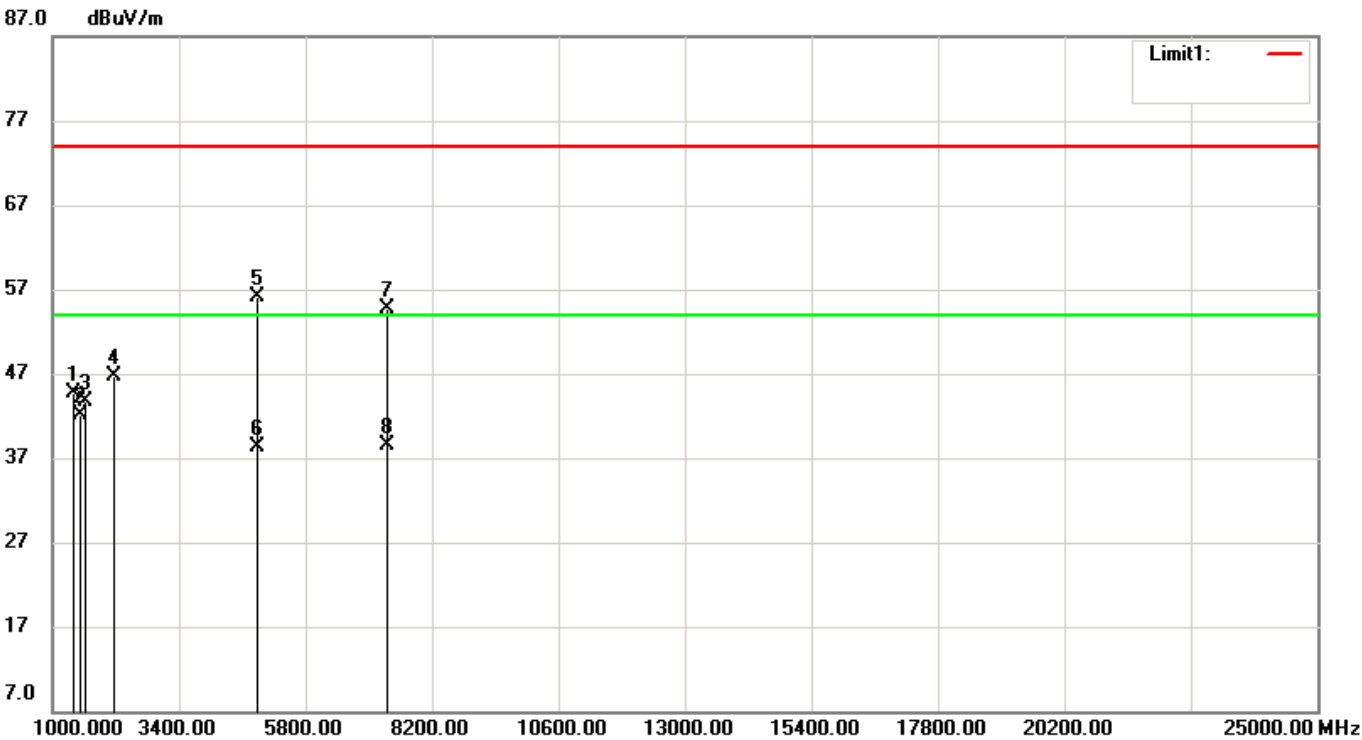
註：1. 若以峰值檢測功能測量之值符合平均值限制值，則可視同以平均值功能測量之值亦符合平均值限制值。

2. 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: 20-04-MAS-061_n20 #58 Date: 2020/5/13 Temperature: 23 °C
Site: RE02-EMC B1- N2 Humidity: 60 %



Condition: NCC_Above1G_Pk Polarization: Horizontal
EUT: Wireless LAN Conveter Distance: 3m
Model: FBR-3250
Test Mode: DTS Operator: Phillip
Note: CH MID

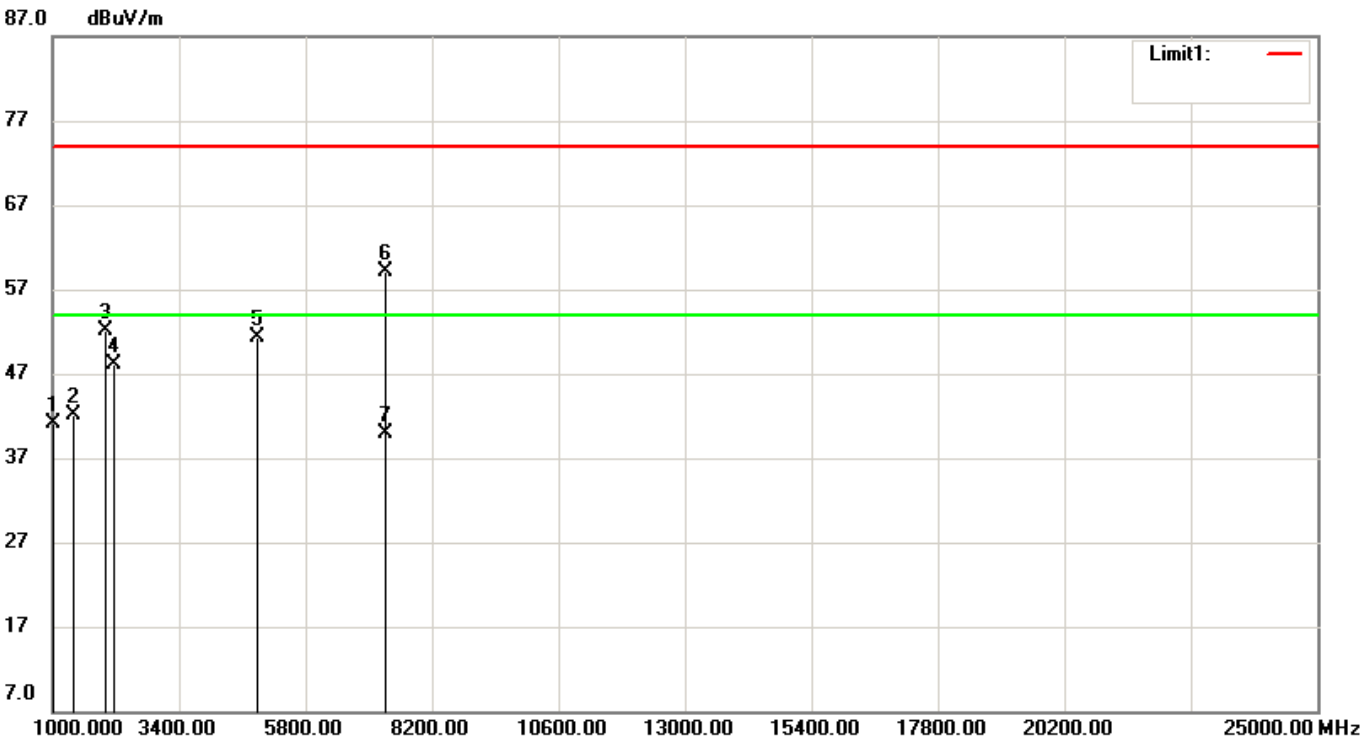
No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1374.67940	53.14	peak	-8.53	44.61	74.00	-29.39
2	1500.32050	50.32	peak	-8.20	42.12	74.00	-31.88
3	1599.03840	51.09	peak	-7.31	43.78	74.00	-30.22
4	2126.28200	50.13	peak	-3.37	46.76	74.00	-27.24
5	4878.40700	54.82	peak	1.29	56.11	74.00	-17.89
6	4878.40700	37.04	AVG	1.29	38.33	54.00	-15.67
7	7321.57700	51.07	peak	3.69	54.76	74.00	-19.24
8	7321.57700	34.72	AVG	3.69	38.41	54.00	-15.59

註：1. 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。

2. 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: 20-04-MAS-061_n20 #59 Date: 2020/5/13 Temperature: 23 °C
Site: RE02-EMC B1- N2 Humidity: 60 %



Condition: NCC_Above1G_Pk Polarization: Vertical
EUT: Wireless LAN Conveter Distance: 3m
Model: FBR-3250
Test Mode: DTS Operator: Phillip
Note: CH MID

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1020.19230	50.44	peak	-9.43	41.01	74.00	-32.99
2	1374.67940	50.60	peak	-8.53	42.07	74.00	-31.93
3	1962.50000	56.24	peak	-4.04	52.20	74.00	-21.80
4	2126.28200	51.54	peak	-3.37	48.17	74.00	-25.83
5	4873.59940	50.06	peak	1.29	51.35	74.00	-22.65
6	7302.90710	55.43	peak	3.69	59.12	74.00	-14.88
7	7302.90710	36.27	AVG	3.69	39.96	54.00	-14.04

註：1. 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。
2. 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: 20-04-MAS-061_n20

#60

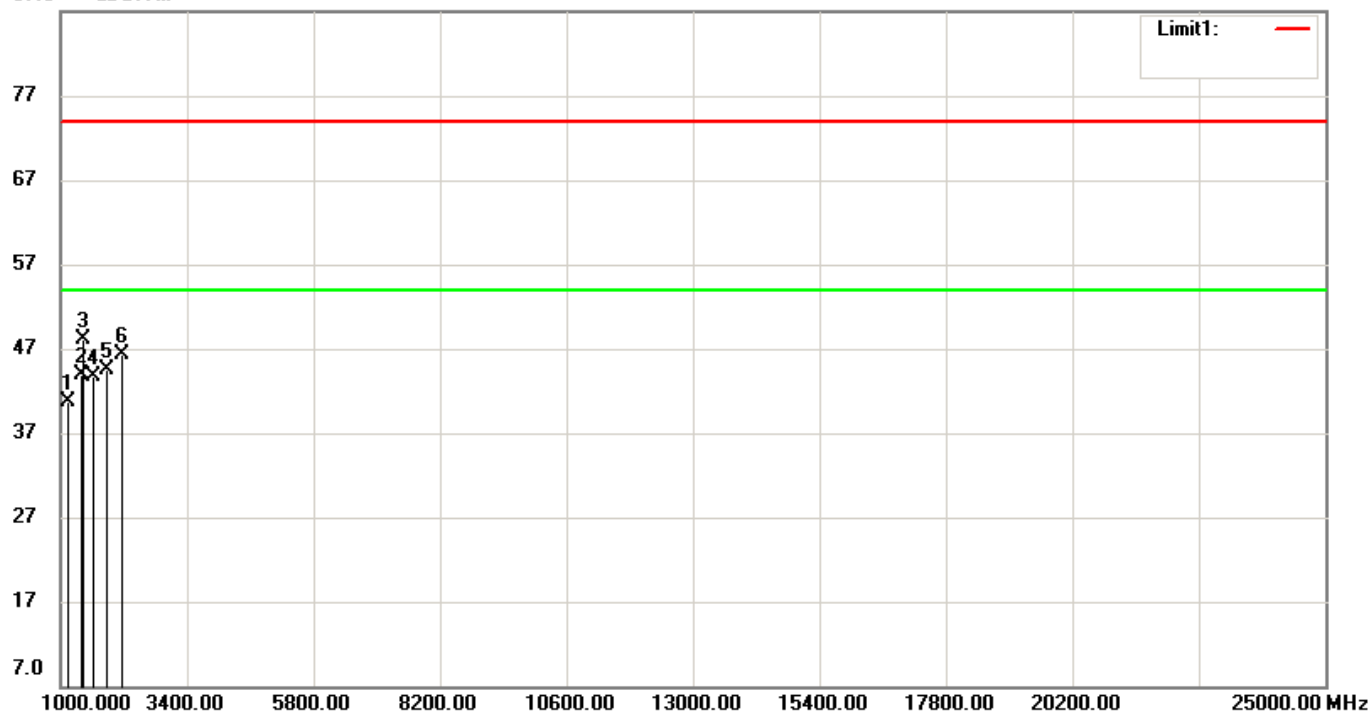
Date: 2020/5/13

Temperature: 23 °C

Site: RE02-EMC B1- N2

Humidity: 60 %

87.0 dBuV/m



Condition: NCC_Above1G_Pk
 EUT: Wireless LAN Conveter
 Model: FBR-3250
 Test Mode: DTS
 Note: CH HIGH

Polarization: Horizontal
 Distance: 3m
 Operator: Phillip

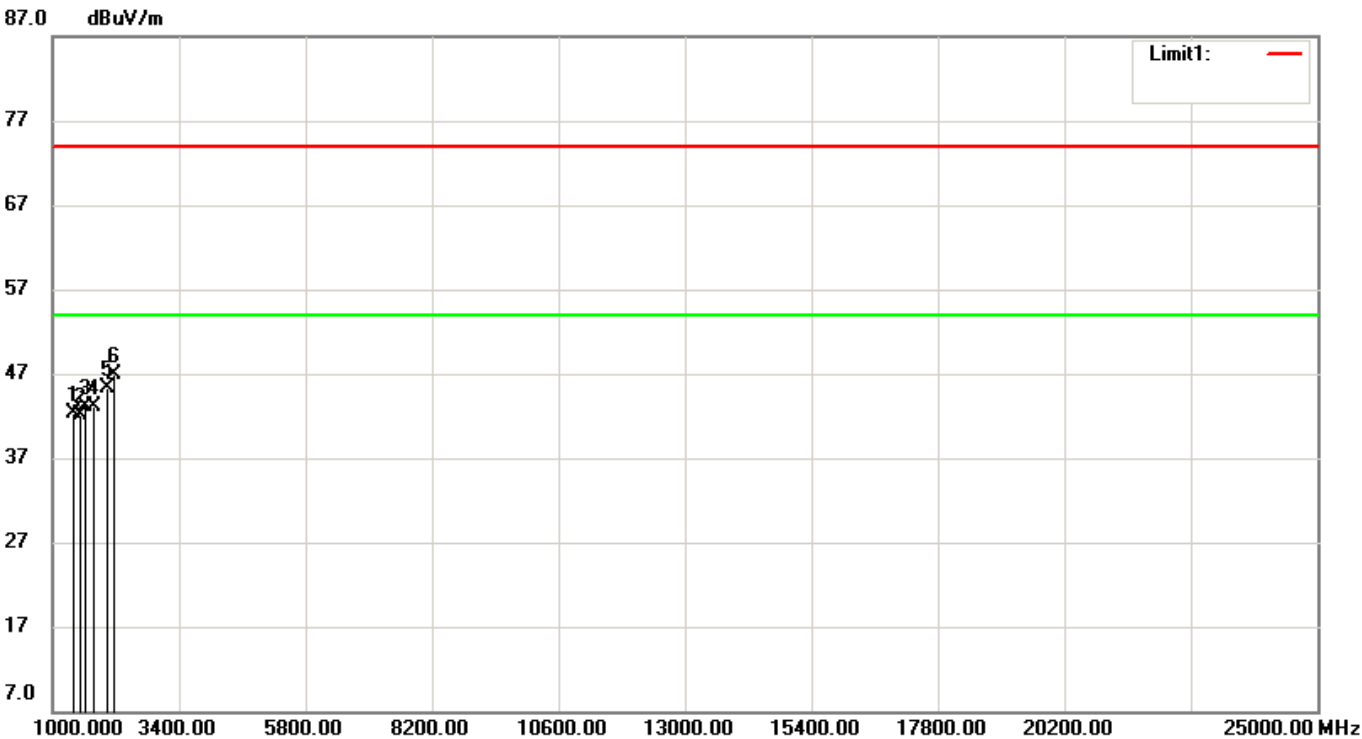
No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1123.39740	49.95	peak	-9.18	40.77	74.00	-33.23
2	1374.67940	52.52	peak	-8.53	43.99	74.00	-30.01
3	1401.60250	56.56	peak	-8.45	48.11	74.00	-25.89
4	1594.55120	51.05	peak	-7.34	43.71	74.00	-30.29
5	1863.78200	49.39	peak	-4.93	44.46	74.00	-29.54
6	2126.28200	49.60	peak	-3.37	46.23	74.00	-27.77

註：1. 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。

2. 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: 20-04-MAS-061_n20 #61 Date: 2020/5/13 Temperature: 23 °C
Site: RE02-EMC B1- N2 Humidity: 60 %



Condition: NCC_Above1G_Pk Polarization: Vertical
EUT: Wireless LAN Conveter Distance: 3m
Model: FBR-3250
Test Mode: DTS Operator: Phillip
Note: CH HIGH

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1374.67940	50.79	peak	-8.53	42.26	74.00	-31.74
2	1500.32050	50.22	peak	-8.20	42.02	74.00	-31.98
3	1599.03840	50.39	peak	-7.31	43.08	74.00	-30.92
4	1742.62820	49.18	peak	-6.01	43.17	74.00	-30.83
5	2000.64100	48.92	peak	-3.70	45.22	74.00	-28.78
6	2126.28200	50.20	peak	-3.37	46.83	74.00	-27.17

註：1. 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。
2. 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: 20-04-MAS-061_n40

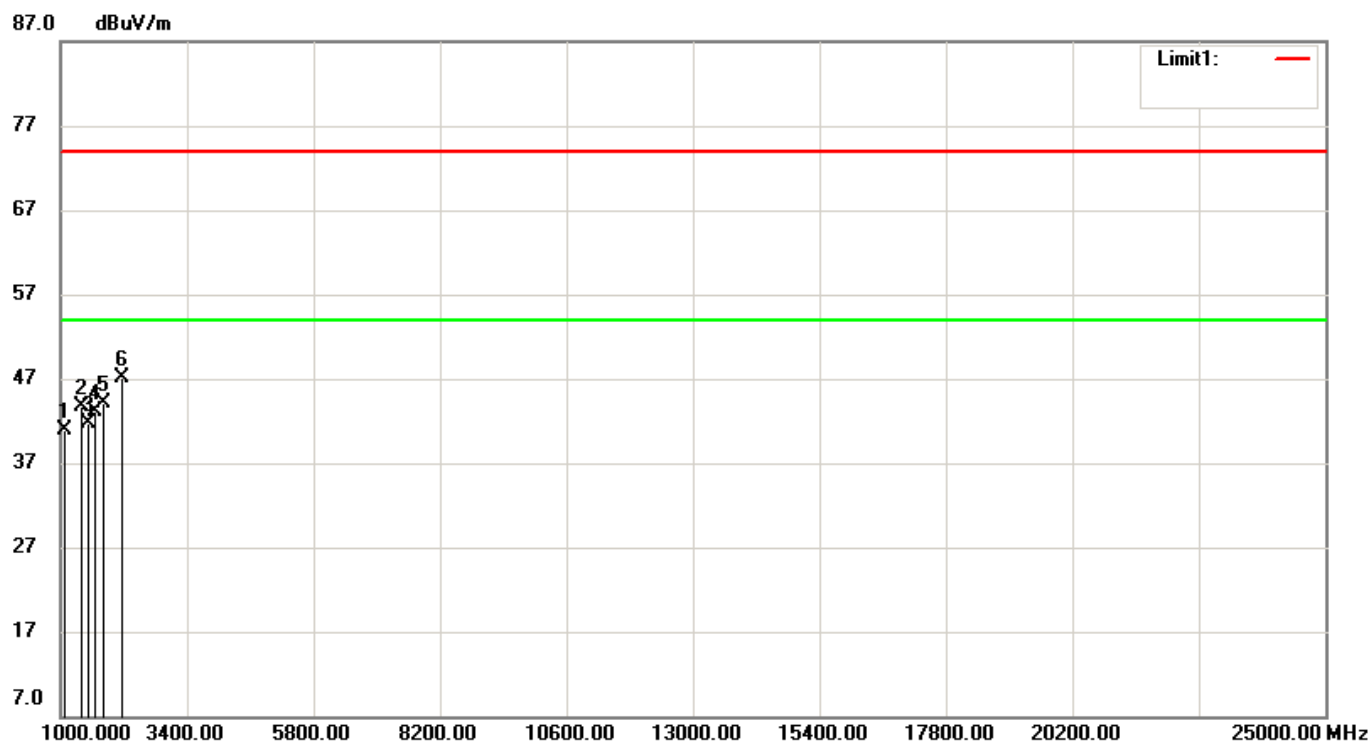
#53

Date: 2020/5/13

Temperature: 23 °C

Site: RE02-EMC B1- N2

Humidity: 60 %



Condition: NCC_Above1G_Pk
 EUT: Wireless LAN Converter
 Model: FBR-3250
 Test Mode: DTS
 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	1044.87170	50.22	peak	-9.37	40.85	74.00	-33.15
2	1374.67940	52.23	peak	-8.53	43.70	74.00	-30.30
3	1520.51280	49.73	peak	-8.02	41.71	74.00	-32.29
4	1625.96150	50.19	peak	-7.07	43.12	74.00	-30.88
5	1774.03840	49.92	peak	-5.73	44.19	74.00	-29.81
6	2126.28200	50.52	peak	-3.37	47.15	74.00	-26.85

註：1. 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。

2. 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

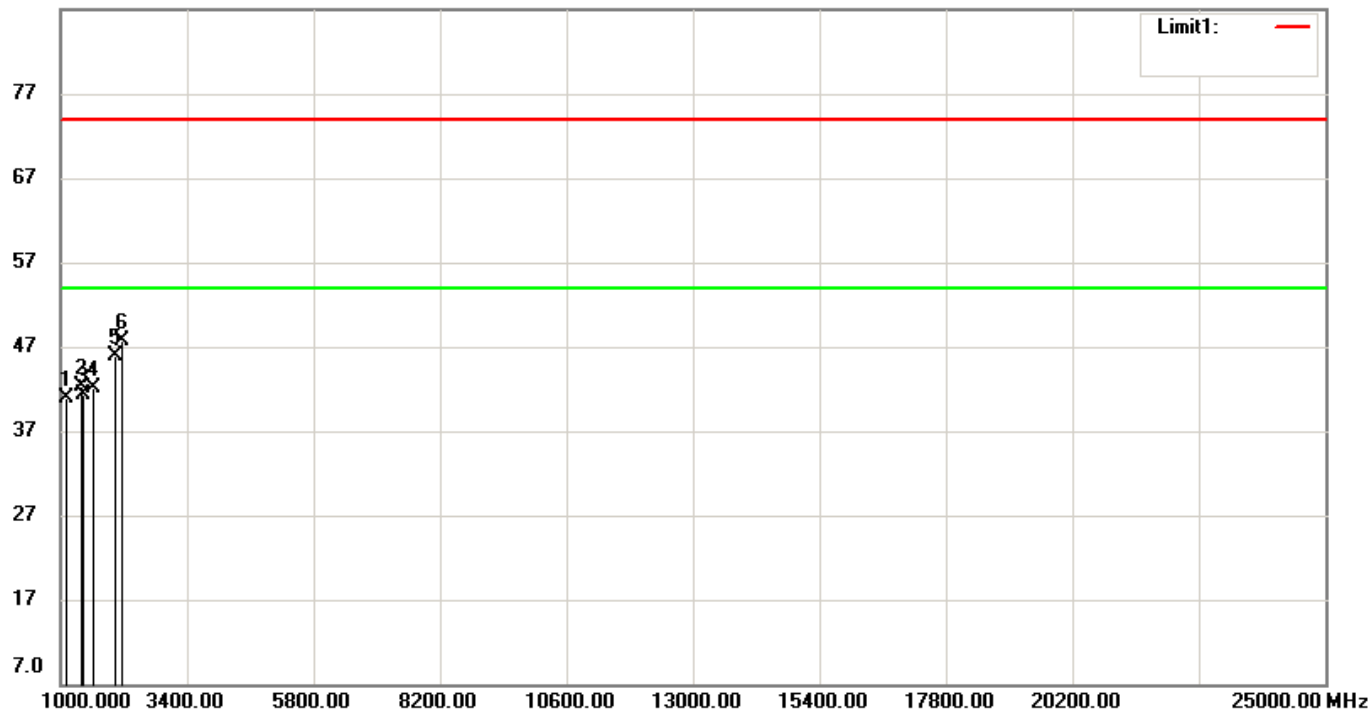
File: 20-04-MAS-061_n40
Site: RE02-EMC B1- N2

#54

Date: 2020/5/13

Temperature: 23 °C
Humidity: 60 %

87.0 dBuV/m



Condition: NCC_Above1G_Pk
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
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	1089.74350	50.08	peak	-9.25	40.83	74.00	-33.17
2	1374.67940	50.79	peak	-8.53	42.26	74.00	-31.74
3	1401.60250	49.75	peak	-8.45	41.30	74.00	-32.70
4	1594.55120	49.53	peak	-7.34	42.19	74.00	-31.81
5	2000.64100	49.51	peak	-3.70	45.81	74.00	-28.19
6	2126.28200	51.07	peak	-3.37	47.70	74.00	-26.30

註：1. 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。

2. 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: 20-04-MAS-061_n40

#55

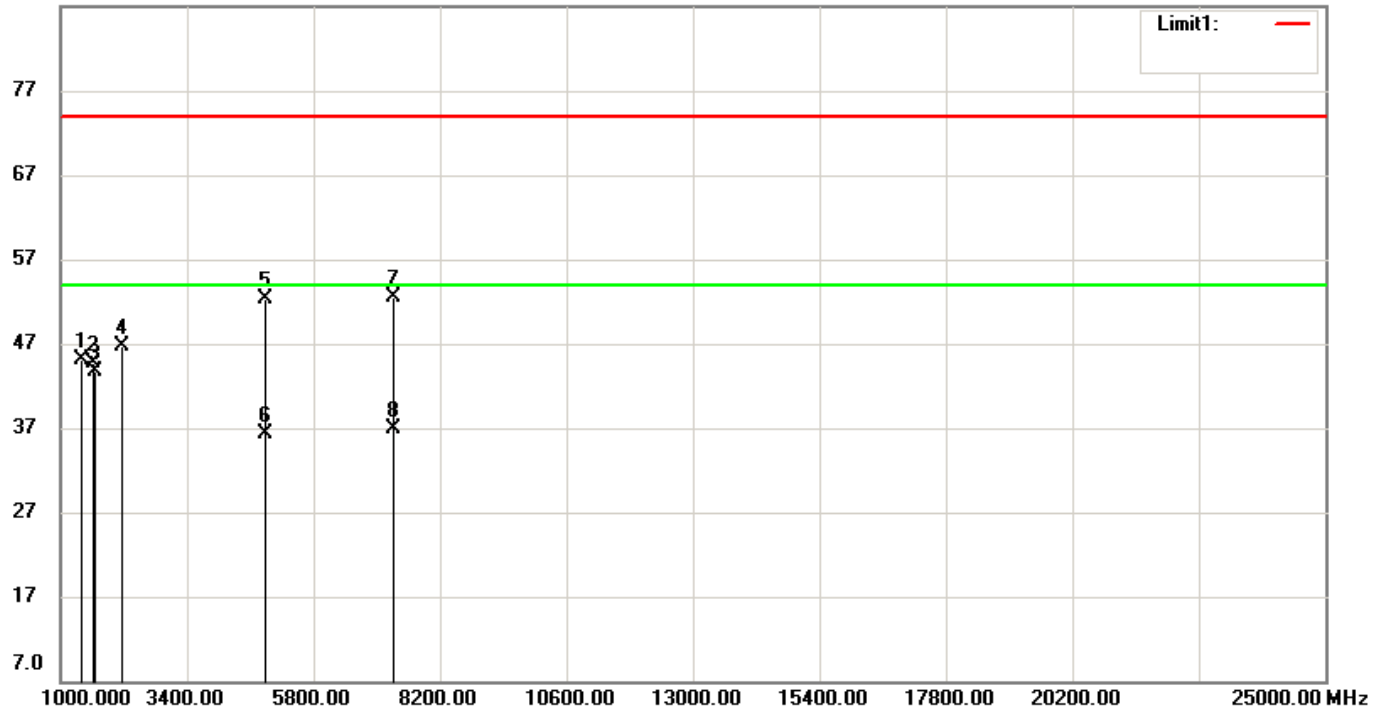
Date: 2020/5/13

Temperature: 23 °C

Site: RE02-EMC B1- N2

Humidity: 60 %

87.0 dBuV/m



Condition: NCC_Above1G_Pk
 EUT: Wireless LAN Conveter
 Model: FBR-3250
 Test Mode: DTS
 Note: CH MID

Polarization: Horizontal
 Distance: 3m
 Operator: Phillip

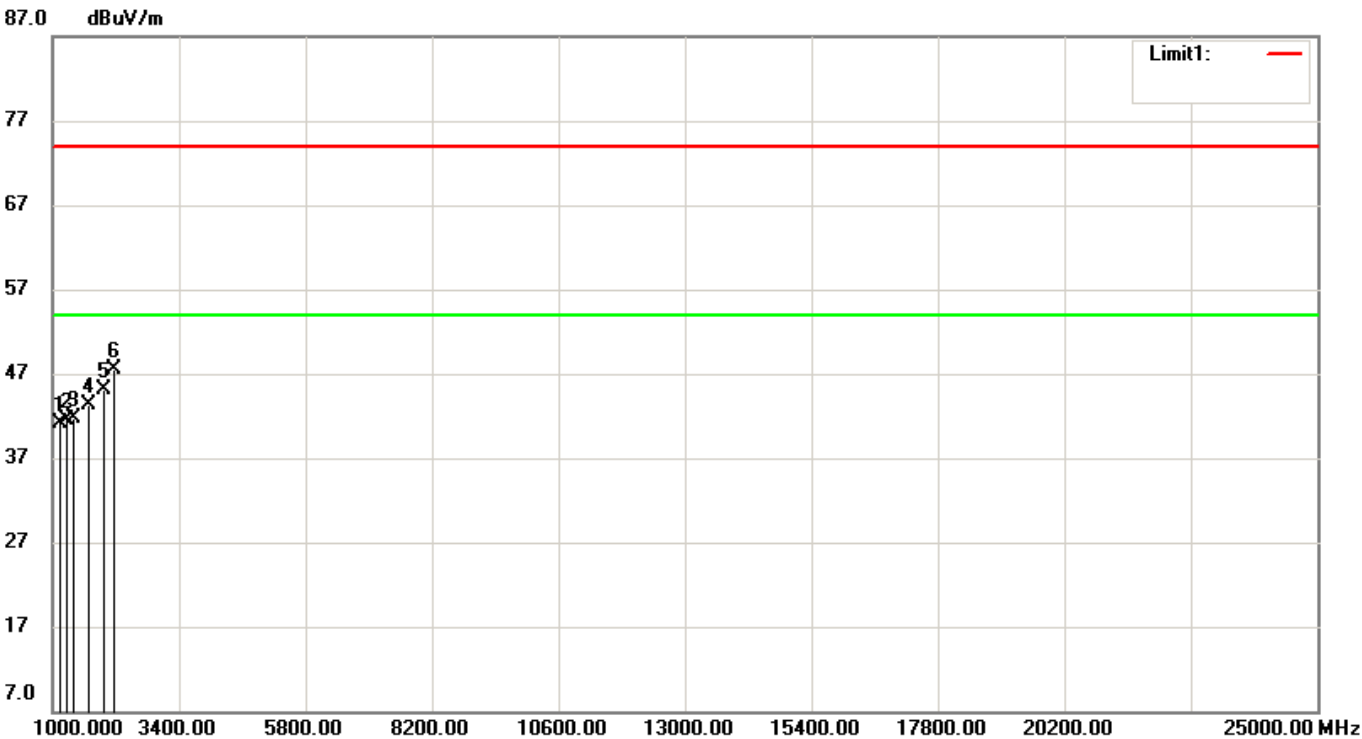
No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1374.67940	53.56	peak	-8.53	45.03	74.00	-28.97
2	1596.79470	52.02	peak	-7.32	44.70	74.00	-29.30
3	1625.96150	50.69	peak	-7.07	43.62	74.00	-30.38
4	2126.28200	50.02	peak	-3.37	46.65	74.00	-27.35
5	4874.48080	51.03	peak	1.29	52.32	74.00	-21.68
6	4874.48080	35.11	AVG	1.29	36.40	54.00	-17.60
7	7299.14100	48.89	peak	3.69	52.58	74.00	-21.42
8	7299.14100	33.26	AVG	3.69	36.95	54.00	-17.05

註：1. 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。

2. 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: 20-04-MAS-061_n40 #56 Date: 2020/5/13 Temperature: 23 °C
Site: RE02-EMC B1- N2 Humidity: 60 %



Condition: NCC_Above1G_Pk Polarization: Vertical
EUT: Wireless LAN Conveter Distance: 3m
Model: FBR-3250
Test Mode: DTS Operator: Phillip
Note: CH MID

No.	Frequency (MHz)	Reading (dBuV/m)	Detector	Corrected dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)
1	1121.15380	50.21	peak	-9.18	41.03	74.00	-32.97
2	1240.06410	50.43	peak	-8.87	41.56	74.00	-32.44
3	1374.67940	50.26	peak	-8.53	41.73	74.00	-32.27
4	1673.07700	49.96	peak	-6.64	43.32	74.00	-30.68
5	1924.35900	49.49	peak	-4.38	45.11	74.00	-28.89
6	2126.28200	50.79	peak	-3.37	47.42	74.00	-26.58

註：1. 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。
2. 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: 20-04-MAS-061_n40

#57

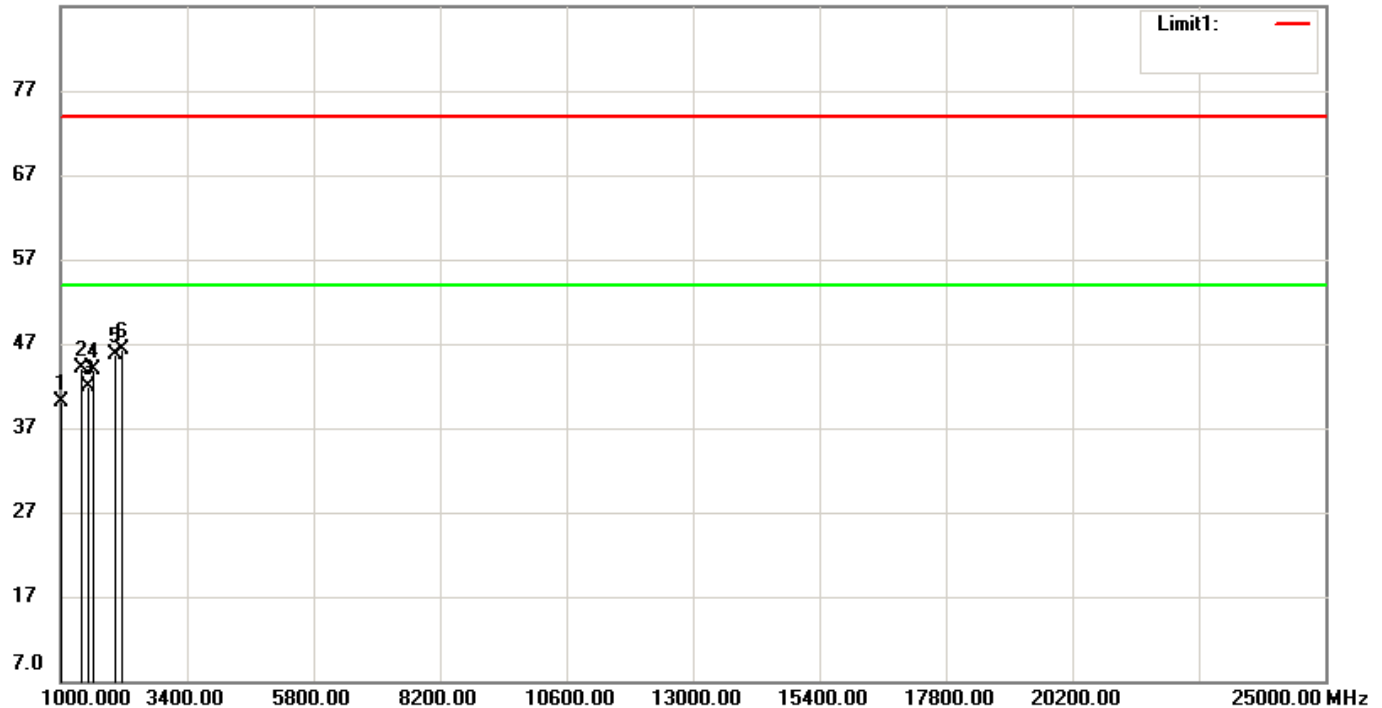
Date: 2020/5/13

Temperature: 23 °C

Site: RE02-EMC B1- N2

Humidity: 60 %

87.0 dBuV/m



Condition: NCC_Above1G_Pk
 EUT: Wireless LAN Conveter
 Model: FBR-3250
 Test Mode: DTS
 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	1000.0000	49.66	peak	-9.49	40.17	74.00	-33.83
2	1374.67940	52.69	peak	-8.53	44.16	74.00	-29.84
3	1500.32050	50.16	peak	-8.20	41.96	74.00	-32.04
4	1594.55120	51.20	peak	-7.34	43.86	74.00	-30.14
5	2000.64100	49.31	peak	-3.70	45.61	74.00	-28.39
6	2126.28200	49.71	peak	-3.37	46.34	74.00	-27.66

註：1. 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。

2. 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: 20-04-MAS-061_n40
Site: RE02-EMC B1- N2

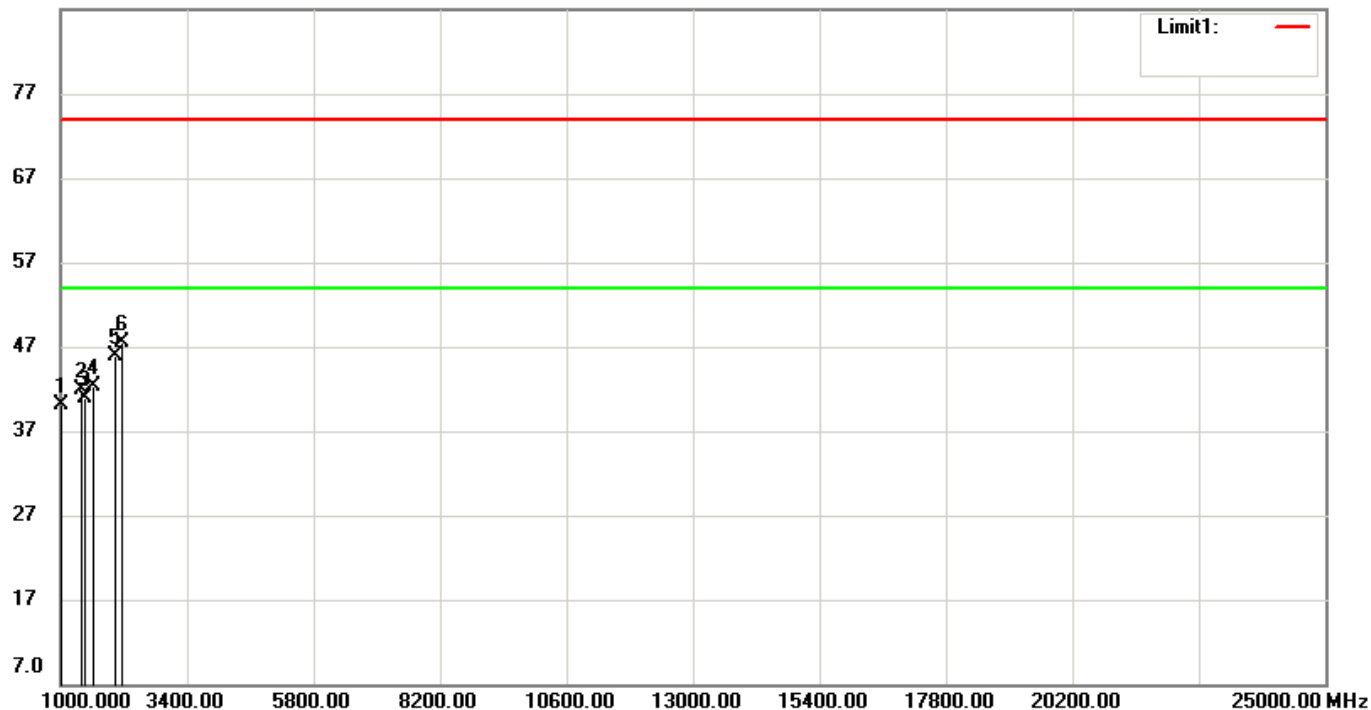
#58

Date: 2020/5/13

Temperature: 23 °C

Humidity: 60 %

87.0 dBuV/m



Condition: NCC_Above1G_Pk
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
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	1026.92300	49.57	peak	-9.42	40.15	74.00	-33.85
2	1374.67940	50.53	peak	-8.53	42.00	74.00	-32.00
3	1448.71800	49.22	peak	-8.33	40.89	74.00	-33.11
4	1599.03840	49.68	peak	-7.31	42.37	74.00	-31.63
5	2011.85900	49.48	peak	-3.67	45.81	74.00	-28.19
6	2126.28200	50.86	peak	-3.37	47.49	74.00	-26.51

註：1. 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。

2. 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: 20-04-MAS-061_Below
1G_new1

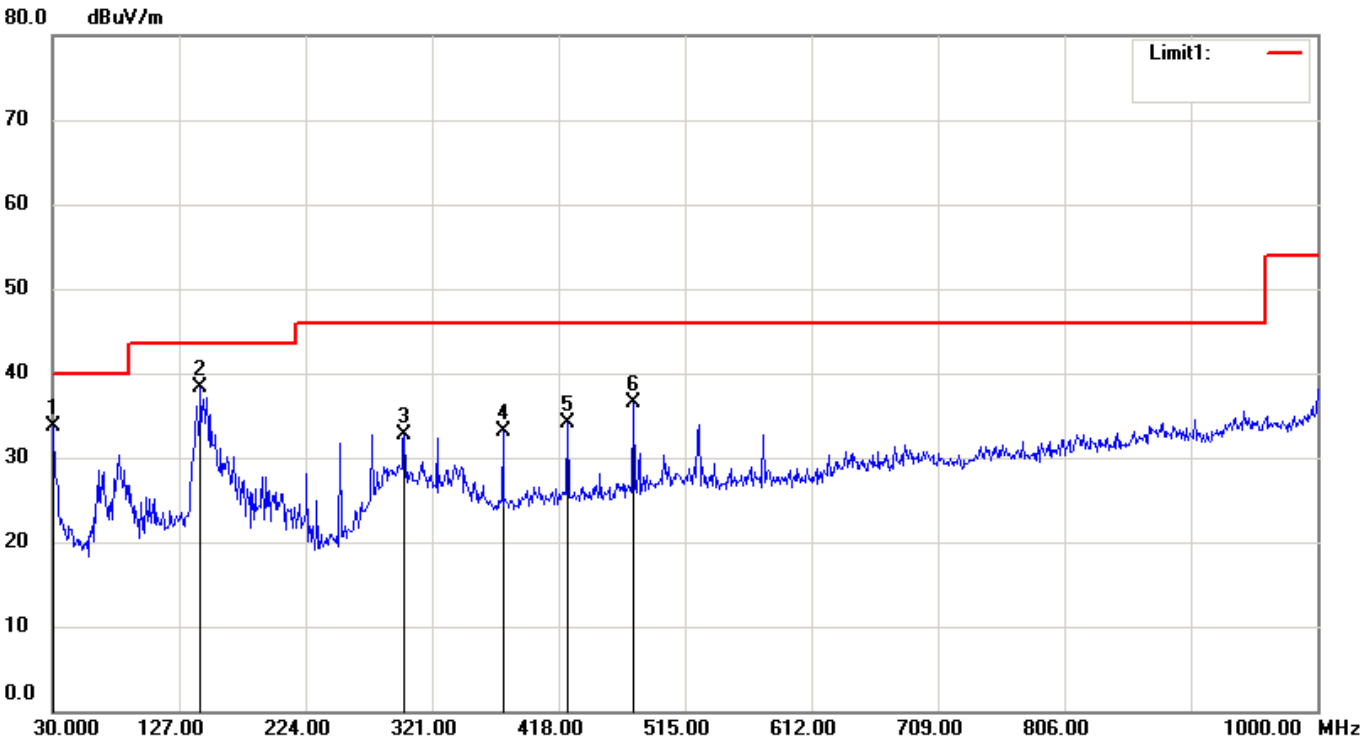
#1

Date: 2020/9/16

Temperature: 23 °C

Site: RE02-EMC B1-N2

Humidity: 61 %



Condition: NCC_LP0002_30-1000MHz

EUT: Wireless LAN Conveter

Model: FBR-3250

Test Mode: DTS

Note:

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	30.9700	37.70	QP	-3.92	33.78	40.00	-6.22
2*	143.4900	42.71	QP	-4.45	38.26	43.50	-5.24
3	299.6600	37.17	QP	-4.44	32.73	46.00	-13.27
4	375.3200	35.72	QP	-2.55	33.17	46.00	-12.83
5	424.7900	35.75	QP	-1.62	34.13	46.00	-11.87
6	475.2300	37.61	QP	-1.12	36.49	46.00	-9.51

File: 20-04-MAS-061_Below
1G_new1
Site: RE02-EMC B1-N2

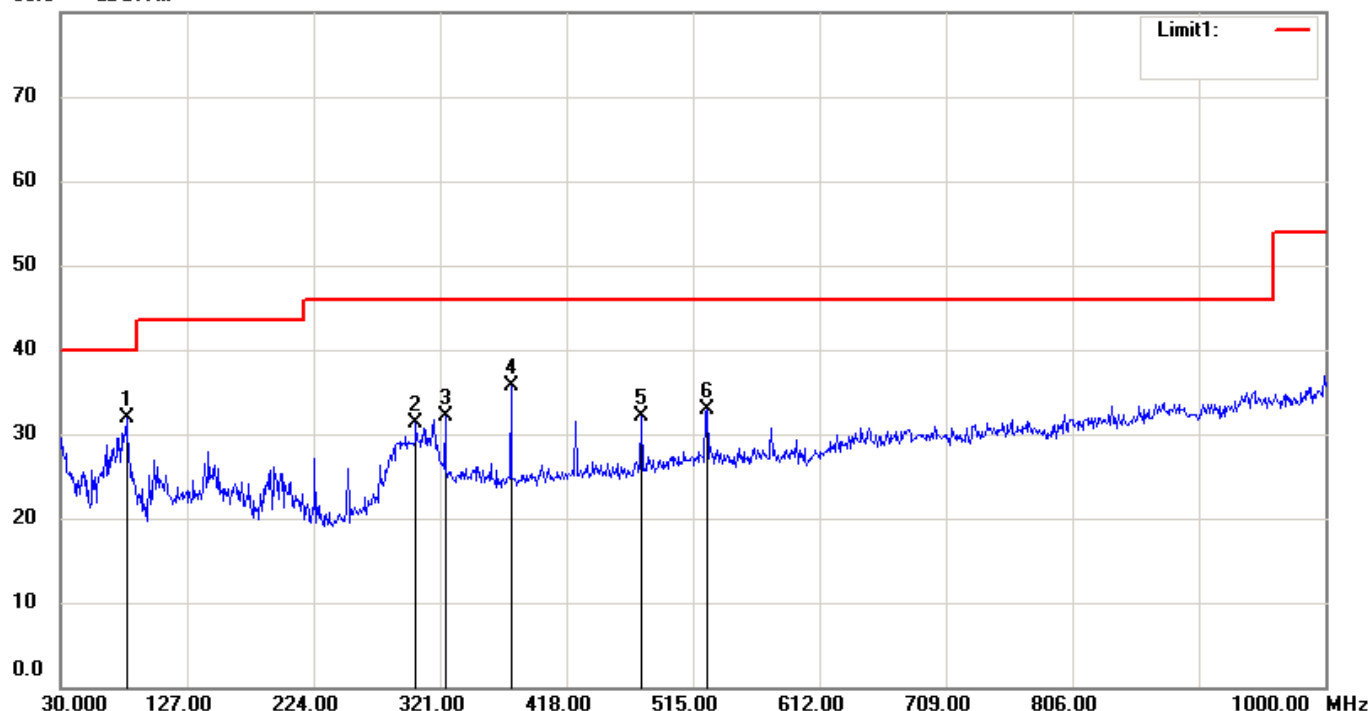
#2

Date: 2020/9/16

Temperature: 23 °C

Humidity: 61 %

80.0 dBuV/m



Condition: NCC_LP0002_30-1000MHz
EUT: Wireless LAN Conveter
Model: FBR-3250
Test Mode: DTS
Note:

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*	80.4400	44.78	QP	-12.94	31.84	40.00	-8.16
2	302.5700	35.74	QP	-4.39	31.35	46.00	-14.65
3	324.8800	36.04	QP	-4.03	32.01	46.00	-13.99
4	375.3200	38.25	QP	-2.55	35.70	46.00	-10.30
5	475.2300	33.13	QP	-1.12	32.01	46.00	-13.99
6	525.6700	33.21	QP	-0.40	32.81	46.00	-13.19

註：1. 若以峰值檢測功能測量之值符合準峰值限制值，則可視同以準峰值功能測量之值亦符合準峰值限制值。

2. 量測不準確度: +4.20dB/ -4.24 dB (30MHz ≤ f < 1GHz)

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: May 13, 2020

環境溫度: 23°C

環境濕度: 60%

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	2390.000	28.2	15.1	28.0	14.1	34.7	62.9	49.8	74	54	-11.1	-4.2
CH High	2483.500	28.7	15.1	28.0	14.1	34.9	63.6	50.0	74	54	-10.4	-4.0

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	34.4	16.6	27.5	14.1	34.7	69.1	51.3	74	54	-4.9	-2.7
CH High	2483.500	28.9	15.3	27.7	14.1	34.9	63.8	50.2	74	54	-10.2	-3.8

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	30.1	16.5	27.9	14.4	34.7	64.8	51.2	74	54	-9.2	-2.8
CH High	2483.500	29.1	15.6	27.8	14.2	34.9	64.0	50.5	74	54	-10.0	-3.5

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	31.1	15.9	27.6	14.4	34.7	65.8	50.6	74	54	-8.2	-3.4
CH High	2483.500	28.8	15.0	28.3	14.1	34.9	63.7	49.9	74	54	-10.3	-4.1

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

2. 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 3: 量測頻率低於1GHz之測試配置

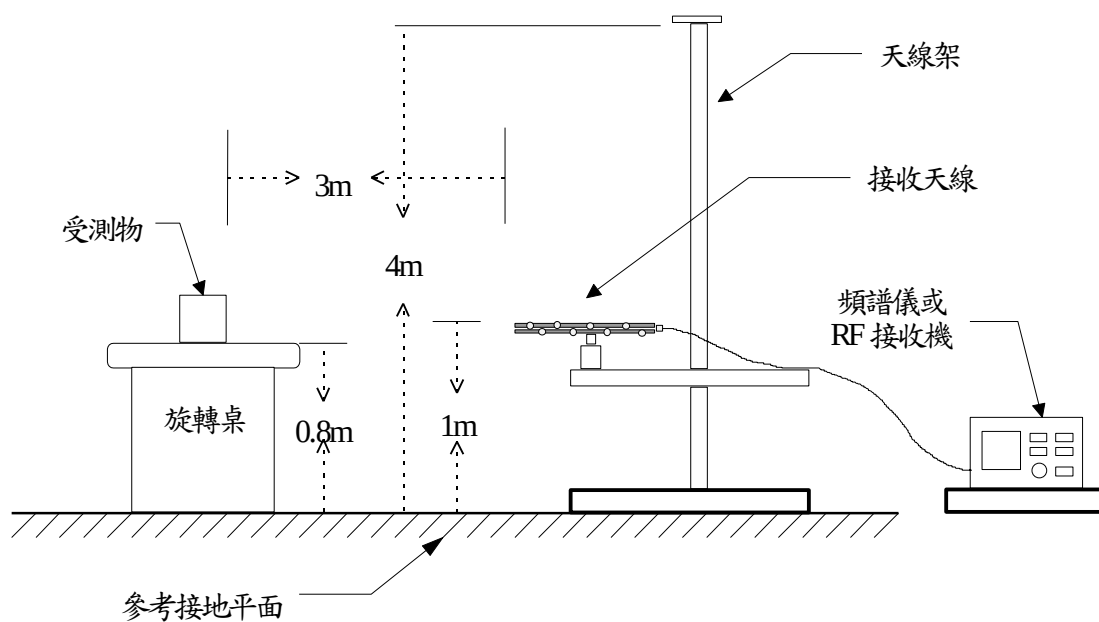
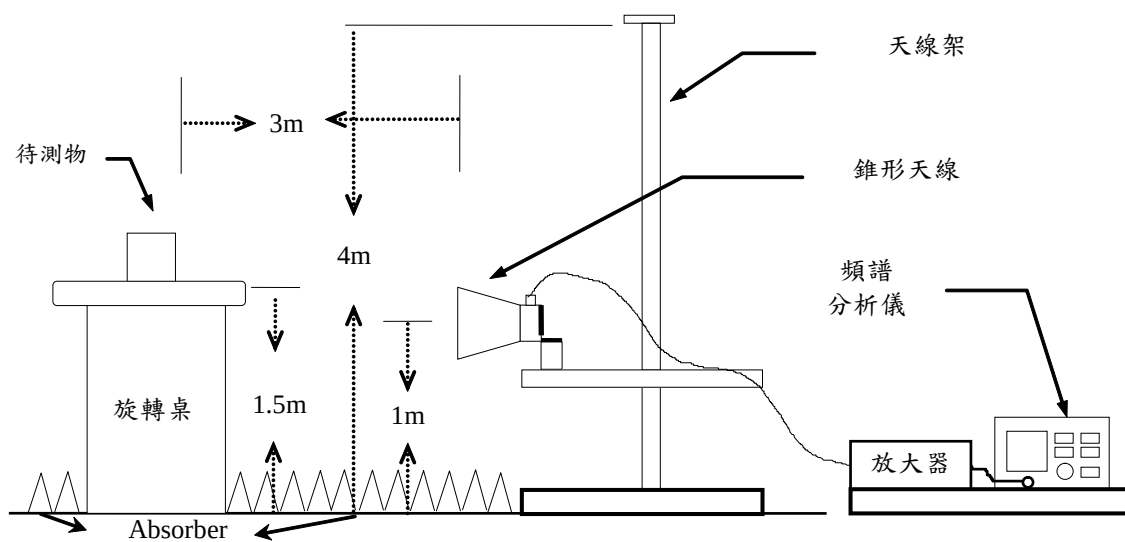


圖 4: 量測頻率高於1GHz之測試配置



10.9 輻射量測之配置照片

請參考產品照片

11 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
Spectrum Analyzer	R&S	FSV	13052017-001	06/12/2020	06/11/2021
Attenuator	WEINSCHEL	56-10	58772	04/24/2020	04/23/2021
Power Meter	Agilent	N1912A	13050625-001	10/14/2020	10/13/2021
Power Sensor	Agilent	N1922A	13053523-001	10/14/2020	10/13/2021
EMI Receiver	R&S	ESCI	13054423-001	12/24/2019	12/25/2020
Spectrum Analyzer	R&S	FSU46	13040904-001	05/28/2020	05/27/2021
Horn Antenna	EMCO	3117	13059211-004	04/21/2020	04/20/2021
Horn Antenna	EMCO	3116	13059202-001	11/15/2019	11/14/2020
PRE-Amplifier	Agilent	8449B	13040709-001	12/31/2019	12/30/2020
PRE-Amplifier	Agilent	8447D	13040715-002	04/22/2020	04/21/2021
BiLog Antenna	ETC	MCTD 2786	BL19J04024	01/14/2020	01/13/2021