

低功率射頻器材試驗報告



申請廠商 台灣思科系統股份有限公司
製造廠商 台北市信義路四段460號12樓
產品名稱 Cisco Systems, Inc.
廠牌 超可靠無線後置網路器
型號 Cisco
型號差異 FM1200V-HW
報告號碼 N/A
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呂宏洋

Approved By: _____

呂宏洋

待測裝置已於台灣檢驗科技股份有限公司射頻實驗中心，依據國家通訊傳播委員會於中華民國一百零九年七月頒佈之低功率射頻器材技術規範測試。

台灣檢驗科技股份有限公司根據此條文規範項目測試，測試各項數據皆能符合此規範規定之限度值。

報告中所描述之測試結果和待測設備的架構組合，均根據實際量測情況作詳實的記錄，且本測試報告僅對上述待測樣品負責。

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Revision History

Report Number	Revision	Description	Issue Date	Revised By
ER/2021/60083	00	Original.	October 19, 2021	黃卿雯

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目錄

1	測試實驗室資料.....	4
2	實驗室之量測不確定度.....	5
3	一般資料	6
4	最差測試模式:.....	9
5	測試方法之依據.....	10
6	適用規範	11
7	測試配置	15
8	量測儀器設備	16
9	電源線傳導干擾之量測.....	20
10	不必要發射限制之量測	23
11	26dB & 6dB 頻寬之測試	85
12	輸出峰值功率之量測.....	92
13	功率密度之限制	97

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1 測試實驗室資料

1.1 認可登錄資訊:

實驗室認可登錄： 中華民國實驗室認證體系

認可編號： TAF 3702

認證有效期間： 110年06月14日起至113年06月13日止

實驗室名稱： 台灣檢驗科技股份有限公司射頻實驗中心

實驗室地址： 新北市新北產業園區五工路134號

電話： 886-2-22993939

傳真： 886-2-22982698

1.2 實驗室場地資訊

測試場地	測試場地編號		
新北市新北產業園區五工路 134 號	SAC 1	SAC 3	Conduction 1
	Conducted 1	Conducted 2	Conducted 3
	Conducted 4	Conducted 5	Conducted 6
桃園市龜山區(華亞科技園區)科技一路 2 號	SAC C	SAC D	SAC G
	Conduction C	Conducted A	Conducted B
	Conducted C	Conducted D	Conducted E
	Conducted F	Conducted G	
註: 測試場地編號記錄於每項測試之儀器清單, 用以表示測試場地地址。			

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2 實驗室之量測不確定度

量測項目	量測不確定度			
	(擴充不確定度)			
傳導干擾量測	電源線	0.15-30MHz	2.34	dB
輻射干擾量測 (3m 測距)	水平極化	9kHz - 30MHz	2.64	dB
		30-1000MHz	4.45	dB
		1-18GHz	4.81	dB
		18-40GHz	4.52	dB
	垂直極化	9kHz - 30MHz	2.64	dB
		30-1000MHz	4.93	dB
		1-18GHz	4.81	dB
		18-40GHz	4.52	dB
頻率誤差量測			1.53	Hz
輸出功率	傳導方式		1	dB
有效輻射功率 (輻射方式)	水平極化	30-1000MHz	2	dB
		1-40GHz	3	dB
	垂直極化	30-1000MHz	2.33	dB
		1-40GHz	3	dB
功率頻譜密度	傳導方式		1.53	dB
鄰頻道功率量測 (輻射方式)	水平極化	30-1000MHz	2	dB
	垂直極化	30-1000MHz	2.33	dB
Transmitter Spurious Emission	33GHz-50GHz		3.8	dB
	50GHz-60GHz		4.67	dB
	60GHz-90GHz		4.81	dB
	90GHz-140GHz		4.57	dB
	140GHz-200GHz		5.42	dB

附註: 1. K=2 即代表測試結果具有95%的量測可信度。

2. 本報告中的符合性判定僅依據試驗結果，不考慮其試驗結果的量測不確定度。

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3 一般資料

3.1 產品描述

產品名稱	超可靠無線後置網路器
廠牌	Cisco
型號	FM1200V-HW
型號差異	N/A
使用電源	24Vdc

3.2 Modulation & Data Rate

Modulation type:	64QAM, 16QAM, QPSK, BPSK for OFDM
Transmission Rate:	802.11 n_20MHz: 6.5 - 144.4 Mbps
	802.11 n_40MHz: 13.5 - 300 Mbps

3.3 天線資訊

Antenna Type	Main / Aux	Brand	Antenna Model No.	Freq. (MHz)	Peak Antenna Gain (dBi)
Integrated	Main / Aux	Fluidmesh	FM1200V	5150~5250	12
				5725~5850	12

Note:

1. Pre-scanned was done on the above antennas, measurements were demonstrated by using the antenna with the highest gain as the worst case scenarios.
2. Antenna information is provided by the applicant.

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3.4 射頻特性

WLAN 5 GHz

Wi-Fi	Frequency Range	Channels	Rated Power(Avg) (dBm) (Worst Case)	Modulation Technology
n_HT 20M	5180~5240	4	15.48 dBm	OFDM
	5745-5825	5	20.80 dBm	OFDM
n_HT 40M	5190~5230	2	15.50 dBm	OFDM
	5755-5795	2	20.50 dBm	OFDM

3.5 配件資訊

以下不附賣配件經申請者切結，器材不隨貨提供並由實驗室提供併同檢驗。

是否附賣		配件	廠牌	型號	Power Rating (Vdc)	備註
Yes	No					
☒	☐	POE Adapter	CISCO	GFP241DA-240100HB	24	
☒	☐	Cord-set	和可有限公司	EJ-100+EJ-102 (125V 7A 2P+E C5)	-	
☐	☒	LAN Cable 1	Uptech	CAT6	N/A	Un-shielding, 線長 10 公尺
☐	☒	LAN Cable 2	HOSIWELL	CAT5	N/A	Un-shielding, 線長 100 公分

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3.6 使用頻段

Operated band in 5150 MHz ~5250 MHz:

20 M		40 M	
CH	Freq (MHz)	CH	Freq (MHz)
36	5180	38	5190
40	5200	46	5230
44	5220		
48	5240		

Operated band in 5725 MHz ~5850 MHz:

20 M		40 M	
CH	Freq (MHz)	CH	Freq (MHz)
149	5745	151	5755
153	5765	159	5795
157	5785		
161	5805		
165	5825		

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4 最差測試模式:

4.1.1 RADIATED EMISSION TEST:

RADIATED EMISSION TEST (BELOW 1 GHz)						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11n_HT20	5180~5240	36 to 48	44	OFDM	MCS8	MIMO
	5745~5825	149 to 165	157			
802.11n_HT40	5190~5230	38 to 46	38	OFDM	MCS8	MIMO
	5755~5795	151 to 159	151			

RADIATED EMISSION TEST (ABOVE 1 GHz)						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11n_HT20	5180~5240	36 to 48	36,44,48	OFDM	MCS8	MIMO
	5745~5825	149 to 165	149,157,165			
802.11n_HT40	5190~5230	38 to 46	38,46	OFDM	MCS8	MIMO
	5755~5795	151 to 159	151,159			

Note: The field strength of radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for 802.11a/n/ac Transmitter for channel Low, Mid and High, the worst case H position was reported.

4.1.2 ANTENNA PORT CONDUCTED MEASUREMENT:

CONDUCTED TEST						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11n_HT20	5180~5240	36 to 48	36,44,48	OFDM	MCS8	MIMO
	5745~5825	149 to 165	149,157,165			
802.11n_HT40	5190~5230	38 to 46	38,46	OFDM	MCS8	MIMO
	5755~5795	151 to 159	151,159			

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5 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(LP0002, 109.7.1 版本) 如無國家標準可適用者，得依美國 EIA、IEEE ANSI 檢驗法檢驗，及美國 FCC 47 CFR Part 2 有關檢驗之規定及參考 ANSI C63.10:2013、FCC CFR 47 15.407、FCC 14-30、KDB 789033D02 之檢驗法。

低功率射頻器材技術規範5.7節及FCC Part 15.407

項次	測試項目	適用規範	測試結果
1	不必要發射之限制	低功率射頻器材技術規範 5.7.4	符合
2	電源線傳導干擾	低功率射頻器材技術規範 3.3節	符合
3	天線增益之要求	低功率射頻器材技術規範 5.7.3.1 (1) (C) , (2) (C) , (3) (C) , (4) (C) 5.7.3.2 (3) 5.7.3.3 (3) , (4)	符合
4	26 dB& 6dB頻寬	低功率射頻器材技術規範 5.7.3 ,4	符合
5	最大輸出功率	低功率射頻器材技術規範 5.7.3	符合
6	功率密度	低功率射頻器材技術規範 5.7.3	符合

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6 適用規範

6.1 規範要求 (一般規定)

(1) 傳導之規定

依據NCC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150 kHz~30 百萬赫(MHz) 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(uH)及50 歐姆(Ω)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(MHz)	傳導限制值 (dBuV)	
	準峰值 (Quasi – peak)	平均值 (Average)
0.15 – 0.5	66 – 56	56 - 46
0.5 – 5	56	46
5 - 30	60	50

(2) 輻射之規定

依據NCC低功率射頻器材技術規範3.5節之要求，其他開放頻帶外不必要之輻射需符合3.6節之一般限制要求，其電場強度不得超過下表之限值，且其不必要之發射皆不得大於主波發射強度。各頻段重疊處，以較嚴格之限制值為準。

Frequency (MHz)	Field strength (microvolts/meter)	Distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

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(3) 禁用頻帶限制之規定

依據NCC低功率射頻器材技術規範3.5節之要求，任何低功率射頻器材之主波皆不得使用下表所列各頻帶內之頻率；低功率射頻器材落於下表所列頻帶內之混附發射，其電場強度必須符合第3.6節的限制規定。

頻率 (MHz)	頻率 (MHz)	頻率 (MHz)
0.090~0.110	240.00~285.00	3332.0~3339.0
0.490~0.510	322.00~335.40	3345.8~3358.0
2.172~2.198	399.90~410.00	3500.0~4400.0
3.013~3.033	485.00~510.00	4500.0~5250.0
4.115~4.198	608.00~614.00	5350.0~5460.0
5.670~5.690	703.00~748.00	7250.0~7750.0
6.200~6.300	758.00~803.00	8025.0~8500.0
8.230~8.400	825.00~915.00	9000.0~9200.0
12.265~12.600	930.00~1240.0	9300.0~9500.0
13.340~13.430	1300.0~1427.0	10600~12700
14.965~15.020	1435.0~1626.5	13250~13400
16.700~16.755	1660.0~1785.0	14470~14500
19.965~20.020	1805.0~1880.0	15350~16200
25.500~25.700	1885.0~1900.0	17700~21400
37.475~38.275	1905.0~1985.0	22010~23120
73.500~75.400	2010.0~2025.0	23600~24000
108.00~138.00	2110.0~2170.0	31200~31800
149.90~150.05	2200.0~2300.0	36430~36500
156.70~156.90	2310.0~2390.0	38600 以上
162.01~167.17	2483.5~2900.0	
167.72~173.20	3260.0~3267.0	

(4) 依據NCC低功率射頻器材技術規範3.9節之要求，低功率射頻電機之收、發信機為成套銷售者，收、發信機應一併送審或提供經型式認證合格之對應收、發信機之送審資料；收信機之輻射電場強度不得超過3.6之發射規定，且不得解調3.5所列之頻率。

6.2 規範要求

依據NCC低功率射頻器材技術規範5.7節無線資訊傳輸設備規範之規定如下

(A) 最大輸出功率與功率頻譜密度及天線增益，以及發射限制之要求限制

依據NCC低功率射頻器材技術規範5.7.3節之要求，使用於5.15 GHz~5.25 GHz 頻段

(1) 供戶外操作使用：

(A) 最大傳導輸出功率應小於或等於1 W。

(B) 在任何1 MHz 頻帶中最大功率頻譜密度應小於或等於17 dBm。

(C) 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

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減少最大傳導輸出功率及最大功率頻譜密度。

(D) 在水平面仰角超過30度時，其最大EIRP應小於或等於21 dBm。

(2) 供室內操作使用：

(A) 最大傳導輸出功率應小於或等於1 W。

(B) 在任何1 MHz 頻帶中最大功率頻譜密度應小於或等於17 dBm。

(C) 使用超過6 dBi 方向增益之發射天線時，應依超過6 dBi 天線方向增益的dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。

(3) 供固定式點對點操作使用：

(A) 最大傳導輸出功率應小於或等於1 W。

(B) 在任何1 MHz 頻帶中最大功率頻譜密度應小於或等於17 dBm。

(C) 使用超過23 dBi 方向增益之指向性天線時，應依超過23 dBi 天線方向增益的dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。

(D) 固定式點對點操作，不包括點對多點系統、全方向性應用及多台共站發射機傳送相同資訊。

(4) 供用戶端裝置(Client Device)操作使用：

(A) 最大傳導輸出功率應小於或等於250 mW。

(B) 在任何1 MHz 頻帶中最大功率頻譜密度應小於或等於11 dBm。

(C) 使用超過6 dBi 方向增益之發射天線時，應依超過6 dBi 天線方向增益的dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。

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

(1) 最大傳導輸出功率應小於或等於250 mW或11dBm+10log B (B是26 dB發射頻寬，單位MHz)之較小者。

(2) 最大功率頻譜密度在任何1 MHz 頻帶中應小於或等於11 dBm。

(3) 使用超過6 dBi 方向增益之發射天線時，應依超過6 dBi 天線方向增益的dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。

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使用頻率於5.725 GHz~5.850 GHz 頻段

- (1) 最大傳導輸出功率應小於或等於1 W。
- (2) 在任何500 kHz 頻帶中最大功率頻譜密度應小於或等於30 dBm。
- (3) 供固定式點對點操作時，使用方向增益超過6 dBi 之發射天線，可不需對應減少發射器之傳導輸出功率限制值。
- (4) 除(3)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及最大功率頻譜密度。

(B) 不必要發射之限制

依據NCC低功率射頻器材技術規範5.7.4節之要求，在5.15 GHz~5.35 GHz 及5.470 GHz~5.725 GHz 頻段操作的發射器：帶外發射之有效等向輻射功率(EIRP) ≤ -27 dBm/MHz。

在5.725 GHz~5.850 GHz 的頻段操作之發射器：所有頻帶邊緣向外5 MHz 內頻率之發射，有效等向輻射功率(EIRP) ≤ 27 dBm/MHz~15.6 dBm/MHz (以線性法計算對應之限制值)；所有頻帶邊緣向外5 MHz~25 MHz，有效等向輻射功率(EIRP) ≤ 15.6 dBm/MHz~10 dBm/MHz (以線性法計算對應之限制值)；所有頻帶邊緣外25 MHz~75 MHz，有效等向輻射功率(EIRP) ≤ 10 dBm/MHz~-27 dBm/MHz(以線性法計算對應之限制值)；所有頻帶邊緣外 ≥ 75 MHz 的頻率之發射，有效等向輻射功率(EIRP) ≤ -27 dBm/MHz；有關遮罩限制值詳圖1。

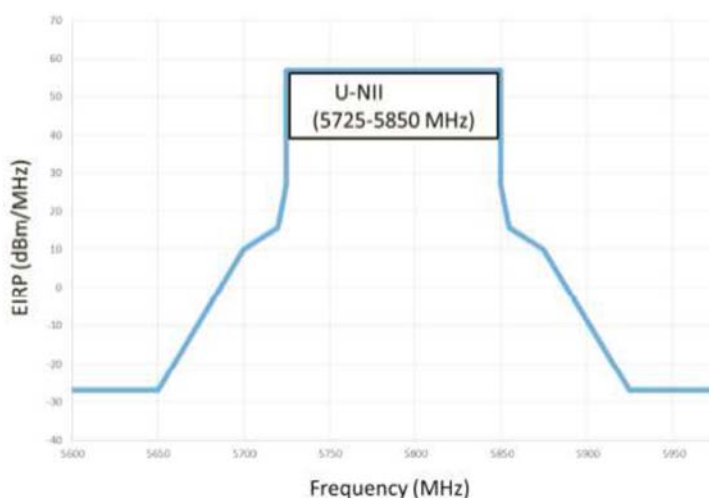


圖 1

(C) 依據 NCC 低功率射頻器材技術規範 5.7.3.4 節之要求，26dB & 6dB 發射頻寬之測試

- (1) 5.15 GHz~5.25 GHz、5.25 GHz~5.35 GHz 及5.47 GHz~5.725 GHz 頻段，測試儀器之頻寬應設定為1 MHz 頻寬或待測物之26 dB發射頻寬，兩者取較小者。
- (2) 5.725 GHz~5.850 GHz 頻段，測試儀器之頻寬應設定為500 kHz 或待測物之26dB發射頻寬，兩者取較小者。

解析頻寬小於(1)或(2)時，應以補償方式計算總功率頻譜密度。

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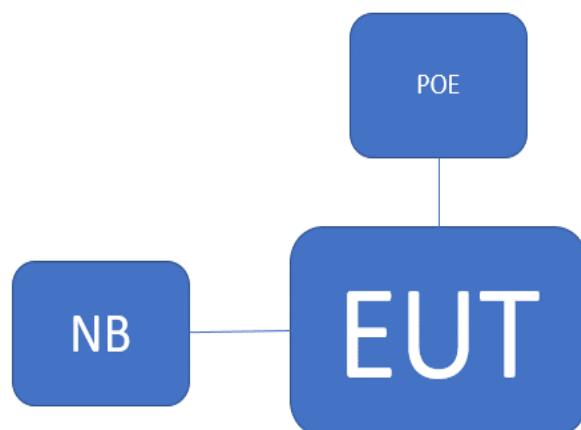
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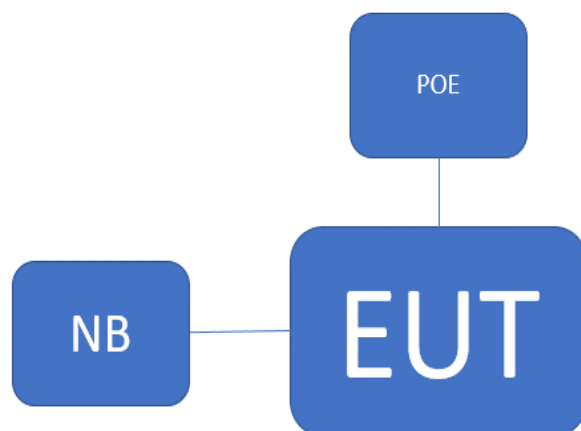
7 測試配置

7.1 待測物與測試週邊配置圖

Conducted (Antenna Port) Emission



Radiated Emission & Conduction (AC Power Line) Emission & Fully system



7.2 測試週邊描述

編號	產品別	商標	版本	型號	序號
1.	測試軟體 (http://192.168.0.10/tx99.php)	N/A	N/A	N/A	N/A
2.	Notebook	Lenovo	N/A	L480	PF-1D07MW

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8 量測儀器設備

8.1 AC 電源端傳導干擾之量測儀器

Radiated Emission Test Site: Conduction 1					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EMI Test Receiver	R&S	ESCI	101338	03/22/2021	03/21/2022
LISN	SCHWARZBECK	NSLK 8127	8127-465	04/09/2021	04/08/2022
LISN	SCHWARZBECK	NSLK 8127	8127-473	08/10/2020	08/09/2021
Coaxial Cables	N/A	Coaxial Cable	161207	12/07/2020	12/06/2021
Test Software	audix	e3	Ver. 6.11-20180413	N.C.R	N.C.R

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8.2 量測場強輻射之量測儀器

Radiated Emission Test Site: SAC 3					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Horn Antenna	SCHWARZBECK	BBHA9170	184	12/11/2020	12/10/2021
Horn Antenna	SCHWARZBECK	BBHA9120D	1441	10/16/2020	10/15/2021
Bi-log Antenna	SCHWARZBECK	VULB9168	378	08/06/2020	08/05/2021
Loop Antenna	ETS.LINDGREN	6502	148045	10/19/2020	10/18/2021
PXA Spectrum Analyzer	Agilent	N9030A	MY53120760	04/27/2021	04/26/2022
EMI Test Receiver	R&S	ESCI	101338	03/22/2021	03/21/2022
Pre-Amplifier	HP	8449B	3008A00578	12/16/2020	12/15/2021
Pre-Amplifier	EMC Instruments	EMC184045B	980135	10/27/2020	10/26/2021
Pre-Amplifier	HP	8447D	2944A07676	12/16/2020	12/15/2021
Attenuator	Mini-Circuit	BW-S10W2+	4	12/16/2020	12/15/2021
Filter 5150-5350 MHz	Micro-Tronics	BRM50703	1	12/16/2020	12/15/2021
Filter 5725-5875 MHz	Micro-Tronics	BRM50705	1	12/16/2020	12/15/2021
High Pass Filter	WI	WHKX7.0/18G-8SS	45	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 102	MY2636/2	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 104	340057/4	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 104PEA	800052/2	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 102	MY2621/2	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 102	MY2617/2	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 102	MY2630/2	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 102	MY22962/2	12/16/2020	12/15/2021
Site Cal	SGS	SAC III chamber	N/A	01/01/2021	12/31/2021
Test Software	audix	e3	Ver. 6.11-20180413	N.C.R	N.C.R

Note: The measurement was taken place with the long duration of the time, and additional equipment list as shown blow indicate those equipment of which has been subject to undertake the calibration in intermediate period of time of the measurement.

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Bi-log Antenna	SCHWARZBECK	VULB9168	378	08/20/2021	08/19/2022

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Fully system

Radiated Emission Test Site: SAC 3					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Bi-log Antenna	SCHWARZBECK	VULB9168	378	08/06/2020	08/05/2021
PXA Spectrum Analyzer	Agilent	N9030A	MY53120760	04/27/2021	04/26/2022
EMI Test Receiver	R&S	ESCI	101338	03/22/2021	03/21/2022
Pre-Amplifier	HP	8447D	2944A07676	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 102	MY2636/2	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 104	340057/4	12/16/2020	12/15/2021
Coaxial Cable	Huber Suhner	SUCOFLEX 104PEA	800052/2	12/16/2020	12/15/2021
Site Cal	SGS	SAC III chamber	N/A	01/01/2021	12/31/2021
Test Software	audix	e3	Ver. 6.11-20180413	N.C.R	N.C.R

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Note: The measurement was taken place with the long duration of the time, and additional equipment list as shown blow indicate those equipment of which has been subject to undertake the calibration in intermediate period of time of the measurement.

EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Bi-log Antenna	SCHWARZBECK	VULB9168	378	08/20/2021	08/19/2022

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8.3 天線端傳導測試之量測儀器

Conducted Emission Test Site: Conducted 4					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Power Meter	Anritsu	ML2496A	1804001	03/02/2021	03/01/2022
Power Sensor	Anritsu	MA2411B	1726104	03/02/2021	03/01/2022
Power Sensor	Anritsu	MA2411B	1726107	03/02/2021	03/01/2022
Attenuator	Mini-Circuit	BW-S10W2+	4	12/16/2020	12/15/2021
Coaxial Cable	Woken	00100A1F5A190S	N/A	N/A	N/A

Conducted Emission Test Site: Conducted 4					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
PXA Spectrum Analyzer	Agilent	N9030A	MY53120760	04/27/2021	04/26/2022
Attenuator	Mini-Circuit	BW-S10W2+	4	12/16/2020	12/15/2021
DC Block	Mini-Circuits	BLK-18-S+	1	12/16/2020	12/15/2021
Coaxial Cable	Woken	00100A1F5A190S	N/A	N/A	N/A

註: 以上部份設備跟量測值沒有影響，且沒有直接關聯，因此不需要進行校正。

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9 電源線傳導干擾之量測

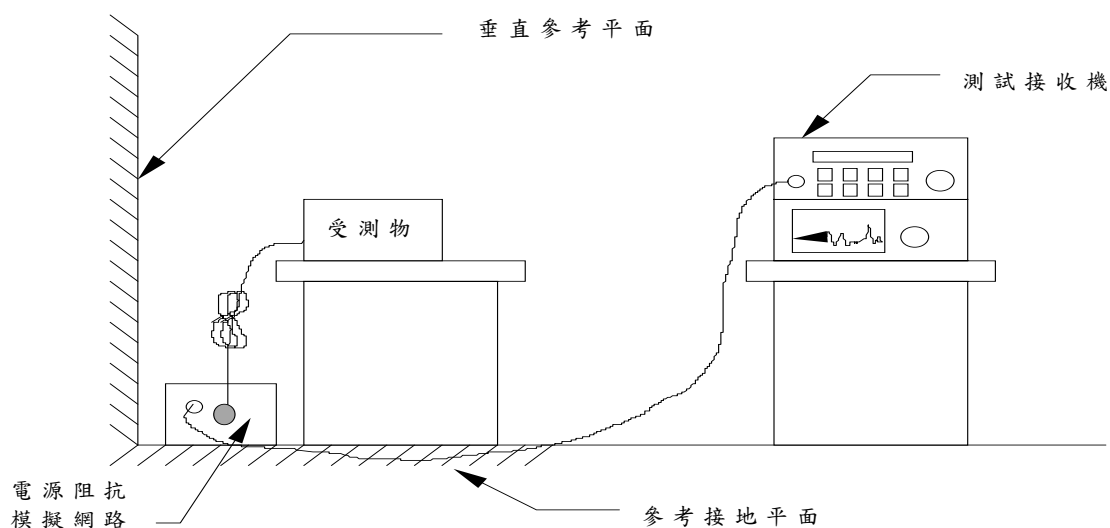
9.1 適用標準

依據NCC低功率射頻器材技術規範3.3節之要求。

9.2 測試方法

將待測物置於0.8米高的非金屬桌面，使其在工作狀態，待測物電源線接至電源線阻抗穩定網路上，從測試接收機記錄頻率由 0.15MHz 至 30MHz 之間之電源線傳導放射強度的峰值量側(Peak)並提供掃描圖，Mark 最大的六個頻率點進行準峰值量測(QP),如果準峰值QP結果值已低於AV限制值時將不再進行AV值的量測。

9.3 測試配置



9.4 干擾值之計算

電源傳導干擾電壓之計算公式如下

結果值 = 儀器讀值(QP/AV) + 校正因子

其中校正因子為：

饋線損失 + 電源阻抗模擬網路損失

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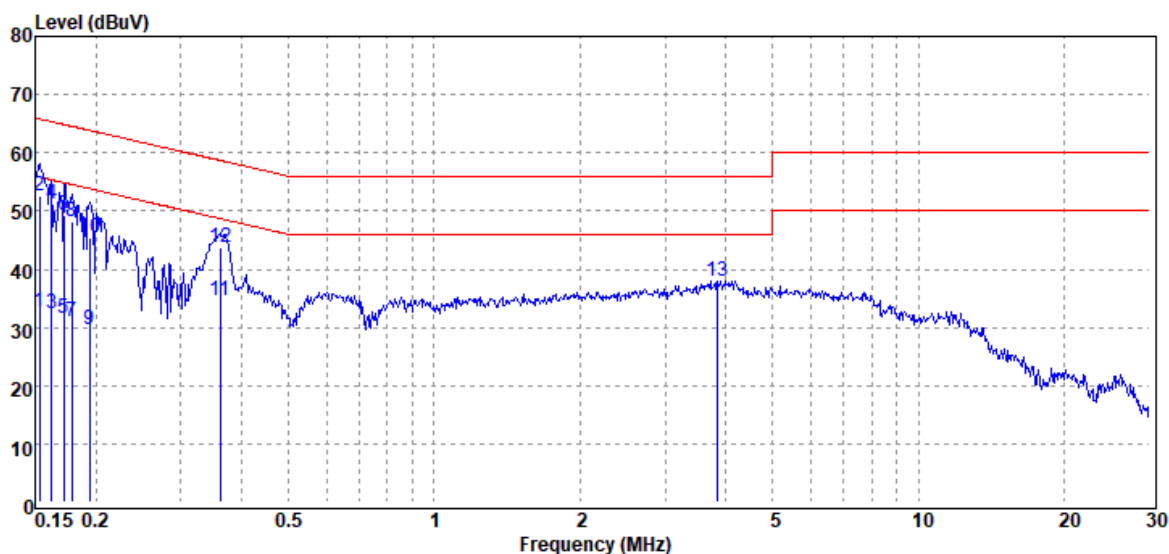
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9.5 傳導干擾之量測結果

Report Number :ER-2021-60083
 Test Mode :WLAN 5G
 Power :AC 110V/60Hz
 Probe :L

Test Site :Conduction 1
 Test Date :2021-07-19
 Temp./Humi. :26.6/61
 Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV	Limit dBμV	Margin dB
0.15	Average	32.73	0.04	32.77	55.82	-23.05
0.15	QP	52.62	0.04	52.66	65.82	-13.16
0.16	Average	32.28	0.04	32.32	55.34	-23.02
0.16	QP	51.06	0.04	51.10	65.34	-14.24
0.17	Average	31.63	0.04	31.67	54.86	-23.19
0.17	QP	49.15	0.04	49.19	64.86	-15.67
0.18	Average	30.85	0.04	30.89	54.55	-23.66
0.18	QP	48.02	0.04	48.06	64.55	-16.49
0.19	Average	29.66	0.04	29.70	53.84	-24.14
0.19	QP	45.39	0.04	45.43	63.84	-18.41
0.36	Average	34.55	0.09	34.64	48.69	-14.05
0.36	QP	43.75	0.09	43.84	58.69	-14.85
3.84	Peak	37.47	0.44	37.91	56.00	-18.09

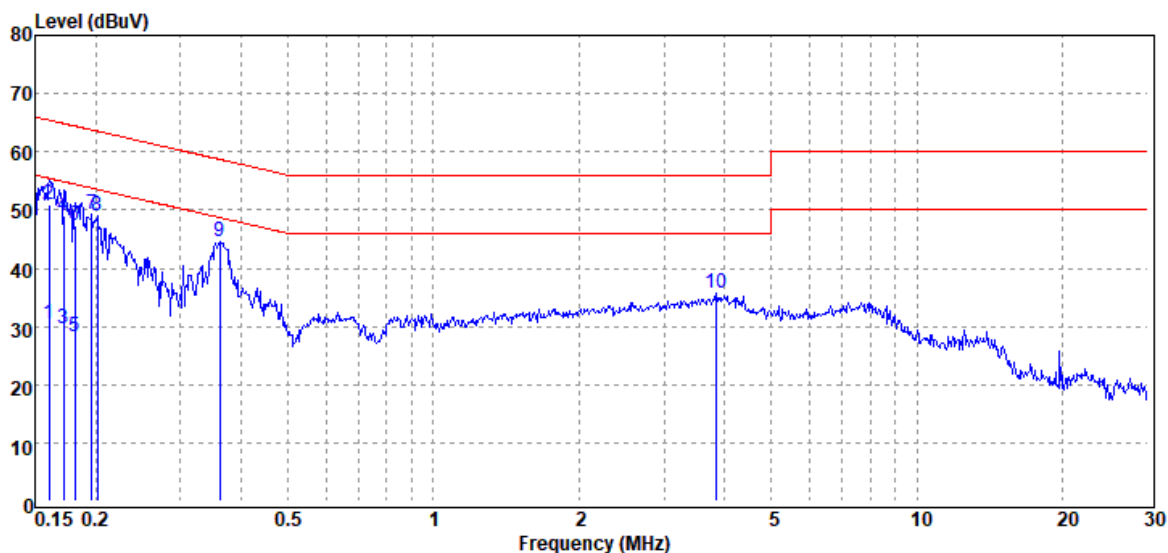
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Report Number :ER-2021-60083
 Test Mode :WLAN 5G
 Power :AC 110V/60Hz
 Probe :N

Test Site :Conduction 1
 Test Date :2021-07-19
 Temp./Humi. :26.6/61
 Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV	Limit dBμV	Margin dB
0.16	Average	30.28	0.11	30.39	55.43	-25.04
0.16	QP	50.92	0.11	51.03	65.43	-14.40
0.17	Average	29.39	0.11	29.50	54.86	-25.36
0.17	QP	48.82	0.11	48.93	64.86	-15.93
0.18	Average	28.12	0.11	28.23	54.42	-26.19
0.18	QP	47.18	0.11	47.29	64.42	-17.13
0.20	Peak	49.20	0.11	49.31	63.76	-14.45
0.20	Peak	48.84	0.11	48.95	63.54	-14.59
0.36	Peak	44.36	0.15	44.51	58.69	-14.18
3.84	Peak	35.24	0.39	35.63	56.00	-20.37

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10 不必要發射限制之量測

10.1 適用標準

依據NCC低功率射頻器材技術規範5.7.4節之要求，在5.15 GHz~5.35 GHz 及5.470 GHz~5.725 GHz 頻段操作的發射器：帶外發射之有效等向輻射功率(EIRP) $\leq$ -27 dBm/MHz。

在5.725 GHz~5.850 GHz 的頻段操作之發射器：所有頻帶邊緣向外5 MHz 內頻率之發射，有效等向輻射功率(EIRP) $\leq$ 27 dBm/MHz~15.6 dBm/MHz (以線性法計算對應之限制值)；所有頻帶邊緣向外5 MHz~25 MHz，有效等向輻射功率(EIRP) $\leq$ 15.6 dBm/MHz~10 dBm/MHz (以線性法計算對應之限制值)；所有頻帶邊緣外25 MHz~75 MHz，有效等向輻射功率(EIRP) $\leq$ 10 dBm/MHz~-27 dBm/MHz(以線性法計算對應之限制值)；所有頻帶邊緣外 $\geq$ 75 MHz 的頻率之發射，有效等向輻射功率(EIRP) $\leq$ -27 dBm/MHz；有關遮罩限制值詳圖1。

Limit derivation in terms of Field Strength:

$EIRP = (E \cdot d)^2 / 30$, where E is the field in V/m, d is the measurement distance (3m), EIRP is the equivalent isotropically radiated power in Watts.

$E = 1000000 \cdot (30 \cdot EIRP)^{1/2} / 3$ uV/m
= 68.2dBuV/m

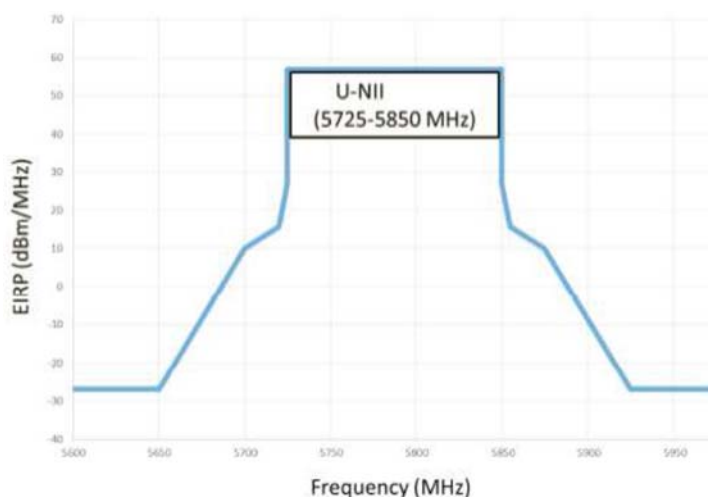


圖 1

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10.2 量測方法

將待測物置於非金屬桌面，測試頻率1GHz以下時，使用桌高0.8 米，1GHz以上時，使用桌高1.5米，使其在工作狀態，接收天線置於 3 米外相同的高度。待測物分別要垂直或水平放置，而且桌面要 360 度旋轉，另外接收天線也要從 1.0 米至 4.0 米升降變化，以找出最大的輻射電場強度，接收天線置於水平、垂直極向各執行測試一次。

以下為頻譜儀的設定：

頻率	RBW	VBW	Detector
9kHz~150kHz	300Hz	300Hz	Quasi-Peak
150kHz~30MHz	10kHz	10kHz	Quasi-Peak
1GHz以下	100kHz	100kHz	Peak / Quasi-Peak
1GHz以上	1MHz	3MHz	Peak
1GHz以上 Duty Cycle ≥ 98%	1MHz	10Hz	Average
1GHz以上 Duty Cycle < 98%	1MHz	1/T	Average

10.3 場強計算

- Distance extrapolation = $40 \cdot \log (\text{Required Distance(m)} / \text{Test Distance(m)})$
- Emission level (dBμV/m) = $20 \log \text{Emission level (μV/m)}$
- Actual FS(dBμV/m) = SPA. Reading level(dBμV) + Factor(dB)
Factor(dB) = Antenna Factor(dBμV/m) + Cable Loss(dB) – Pre_Amplifier Gain(dB)

註：

9 kHz ~ 30MHz 之輻射量測皆低於限制值 20dB 以上，依據LP0002 6.13規定混附發射毋需記錄。輻射量測僅放最差模式（30MHz 以上）。

比較H Plane、E1 Plane和E2 Plane測試值後，附上最差模式數據。

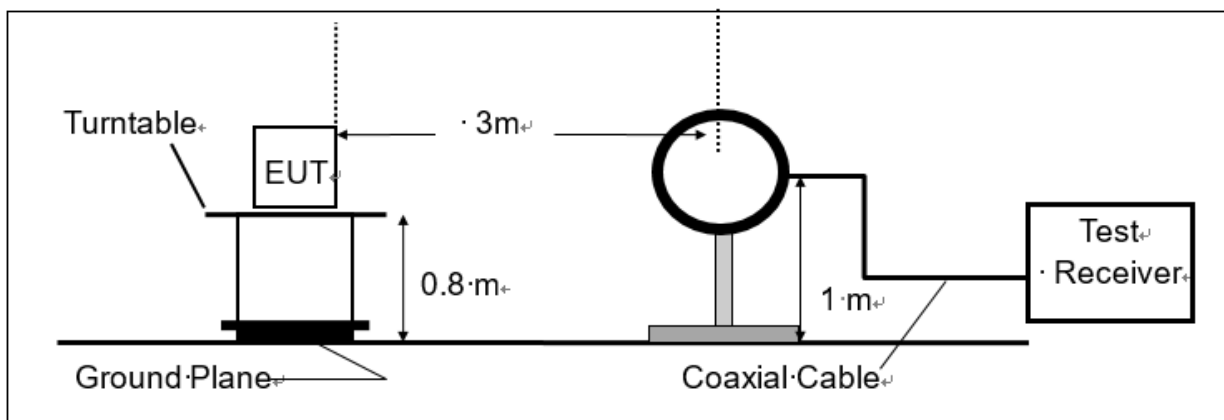
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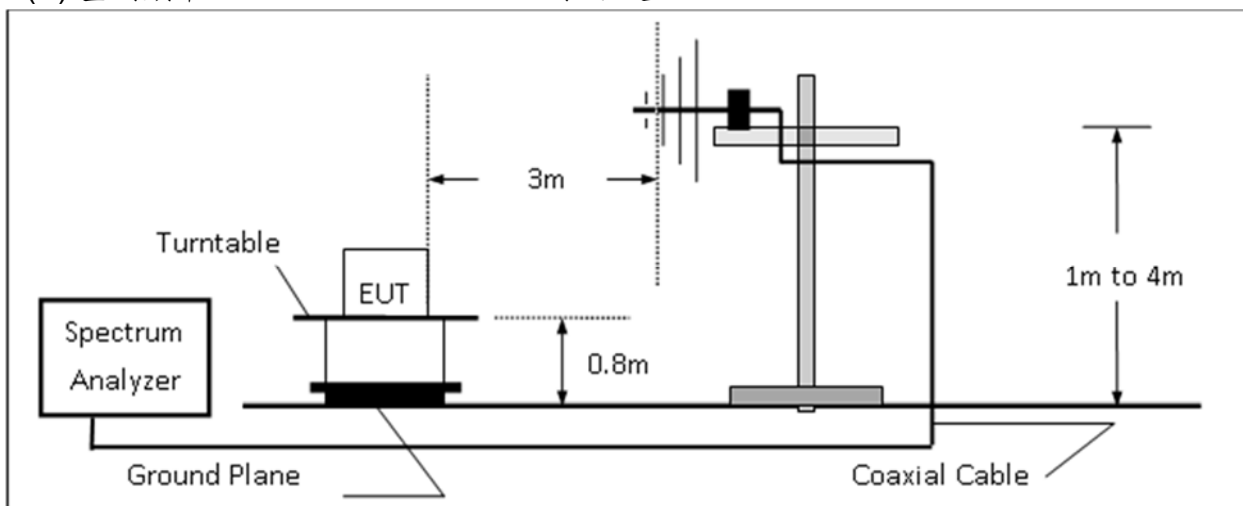
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10.4 輻射之測試配置

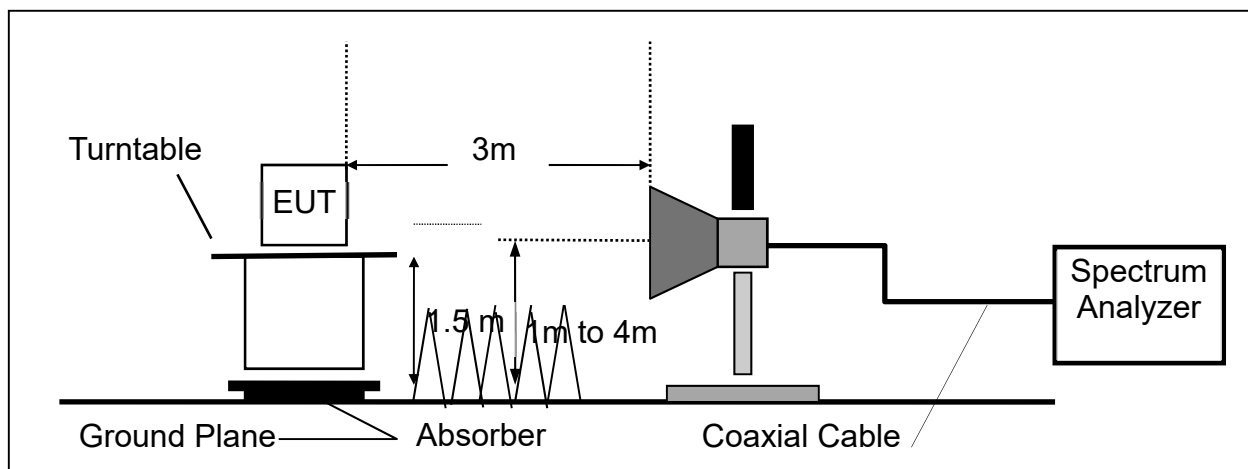
(A) 量測頻率低於 30MHz 以下之測試配置



(B) 量測頻率 30MHz 至 1000MHz 之測試配置



(C) 量測頻率 1000MHz 以上之測試配置

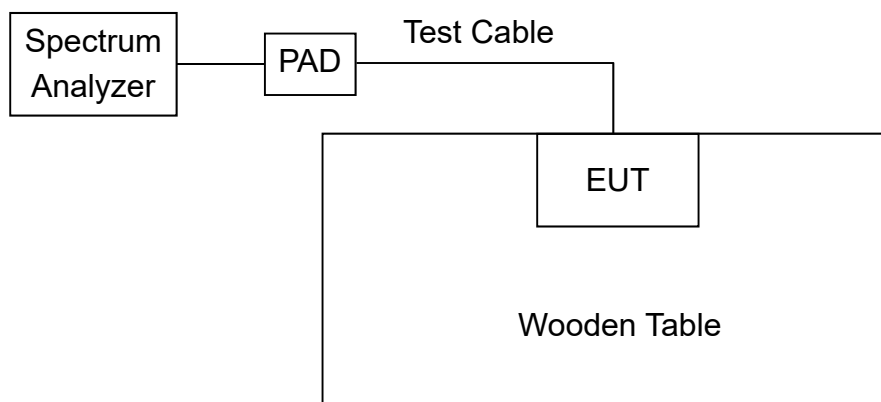


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(D) 傳導之測試配置圖



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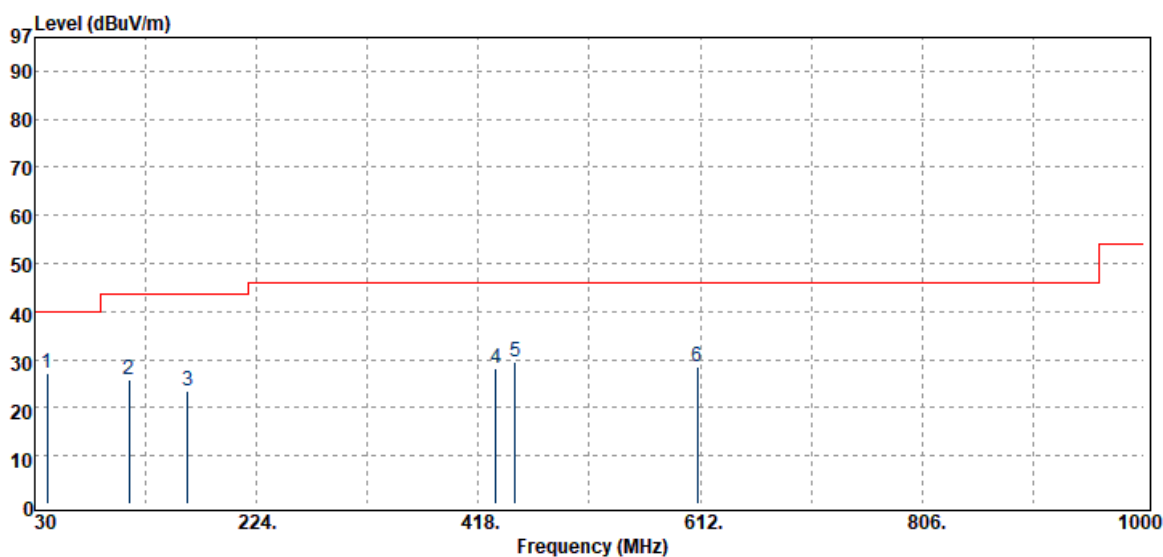
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10.5 場強輻射之量測結果

發射模式

Report Number :ER-2021-60083
 Operation Mode :802.11n20
 Test Frequency :5220 MHz
 Test Mode :Tx CH Mid
 EUT Pol :H Plane

Test Site :SAC 3
 Test Date :2021-07-19
 Temp./Humi. :27.4/55
 Antenna Pol. :VERTICAL
 Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
40.67	Peak	36.15	-9.10	27.05	40.00	-12.95
112.45	Peak	36.75	-11.03	25.72	43.50	-17.78
163.86	Peak	31.51	-7.99	23.52	43.50	-19.98
433.52	Peak	32.09	-3.78	28.31	46.00	-17.69
450.01	Peak	32.95	-3.25	29.70	46.00	-16.30
609.09	Peak	28.55	0.04	28.59	46.00	-17.41

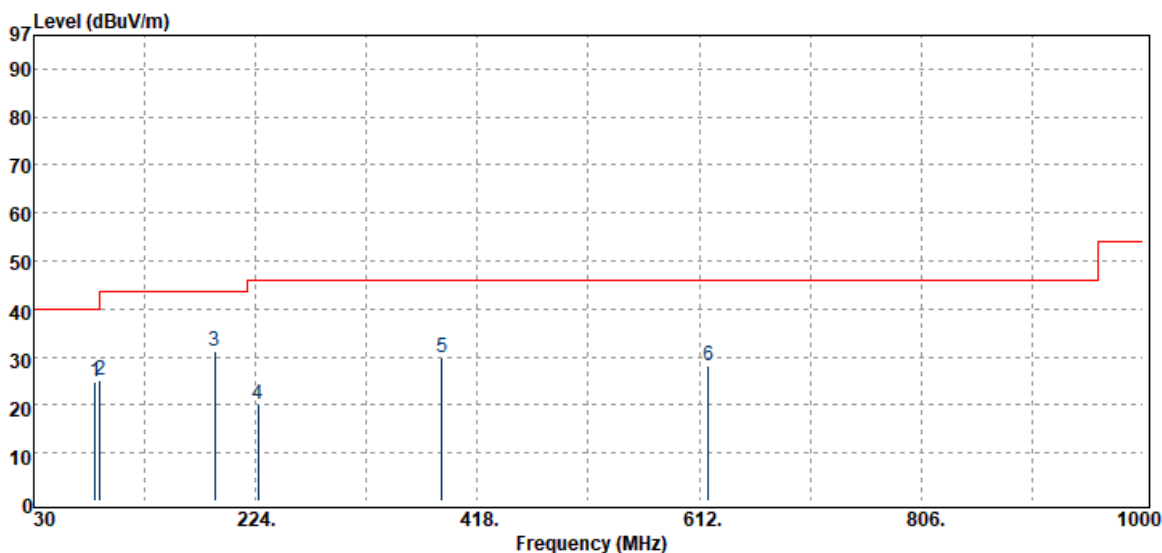
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5220 MHz
Test Mode :Tx CH Mid
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
83.35	Peak	38.17	-13.38	24.79	40.00	-15.21
88.20	Peak	39.34	-14.25	25.09	43.50	-18.41
188.11	Peak	41.15	-9.99	31.16	43.50	-12.34
225.94	Peak	30.55	-10.32	20.23	46.00	-25.77
386.96	Peak	34.88	-5.13	29.75	46.00	-16.25
619.76	Peak	28.58	-0.26	28.32	46.00	-17.68

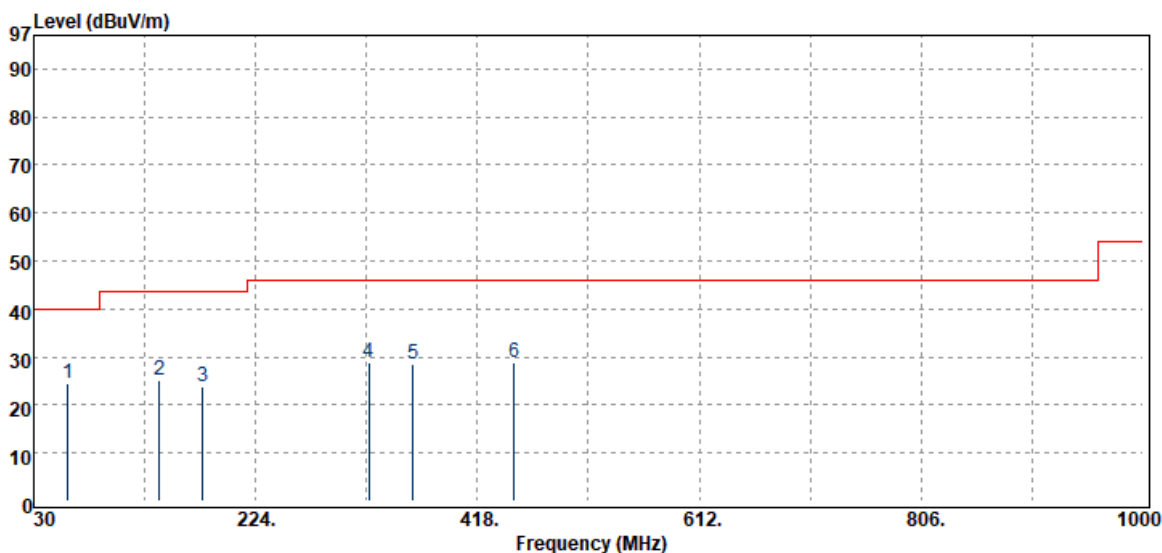
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5785 MHz
Test Mode :Tx CH Mid
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
60.07	Peak	33.73	-9.08	24.65	40.00	-15.35
139.61	Peak	33.38	-8.37	25.01	43.50	-18.49
177.44	Peak	32.83	-8.98	23.85	43.50	-19.65
322.94	Peak	34.87	-5.97	28.90	46.00	-17.10
361.74	Peak	34.13	-5.57	28.56	46.00	-17.44
450.01	Peak	32.04	-3.25	28.79	46.00	-17.21

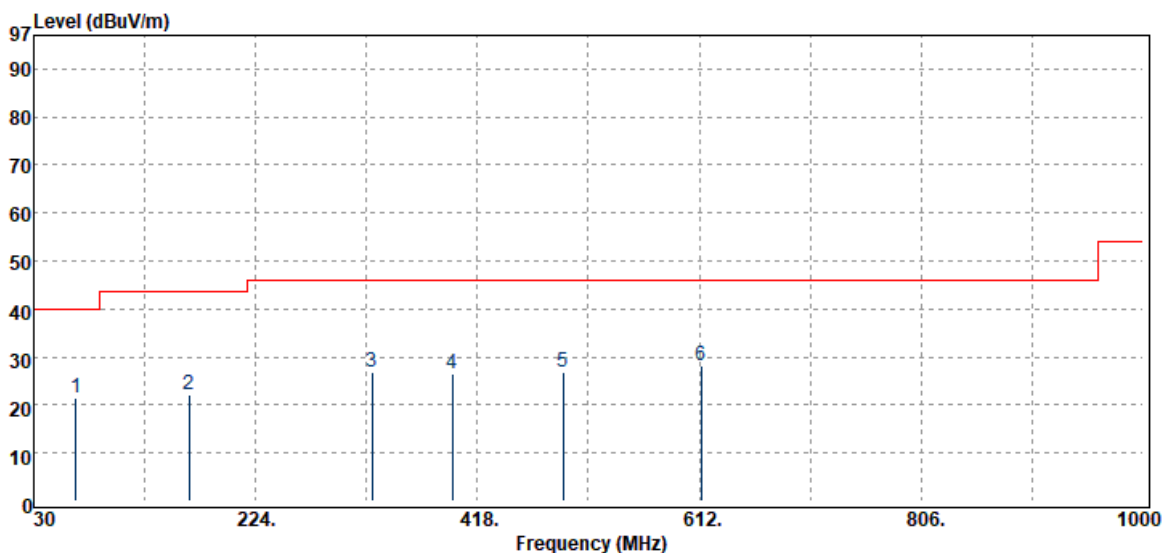
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5785 MHz
Test Mode :Tx CH Mid
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
66.86	Peak	31.54	-9.98	21.56	40.00	-18.44
165.80	Peak	30.17	-8.16	22.01	43.50	-21.49
325.85	Peak	32.89	-5.87	27.02	46.00	-18.98
395.69	Peak	31.55	-5.04	26.51	46.00	-19.49
492.69	Peak	30.15	-3.19	26.96	46.00	-19.04
613.94	Peak	28.20	-0.02	28.18	46.00	-17.82

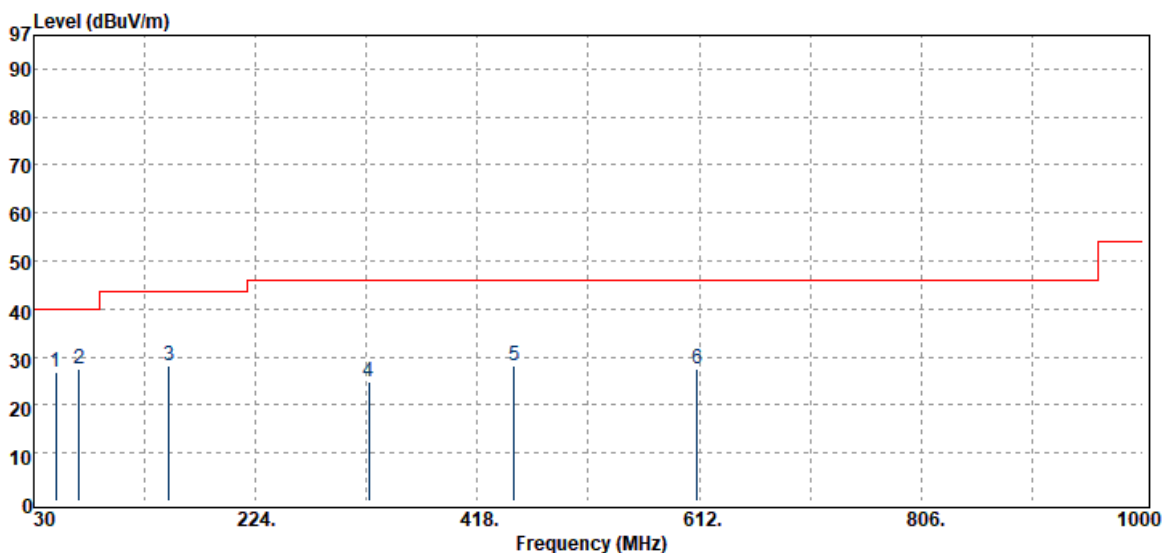
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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5190 MHz
Test Mode :Tx CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
49.40	Peak	35.66	-8.73	26.93	40.00	-13.07
69.77	Peak	37.78	-10.40	27.38	40.00	-12.62
148.34	Peak	36.11	-8.03	28.08	43.50	-15.42
322.94	Peak	30.72	-5.97	24.75	46.00	-21.25
450.01	Peak	31.58	-3.25	28.33	46.00	-17.67
610.06	Peak	27.48	0.07	27.55	46.00	-18.45

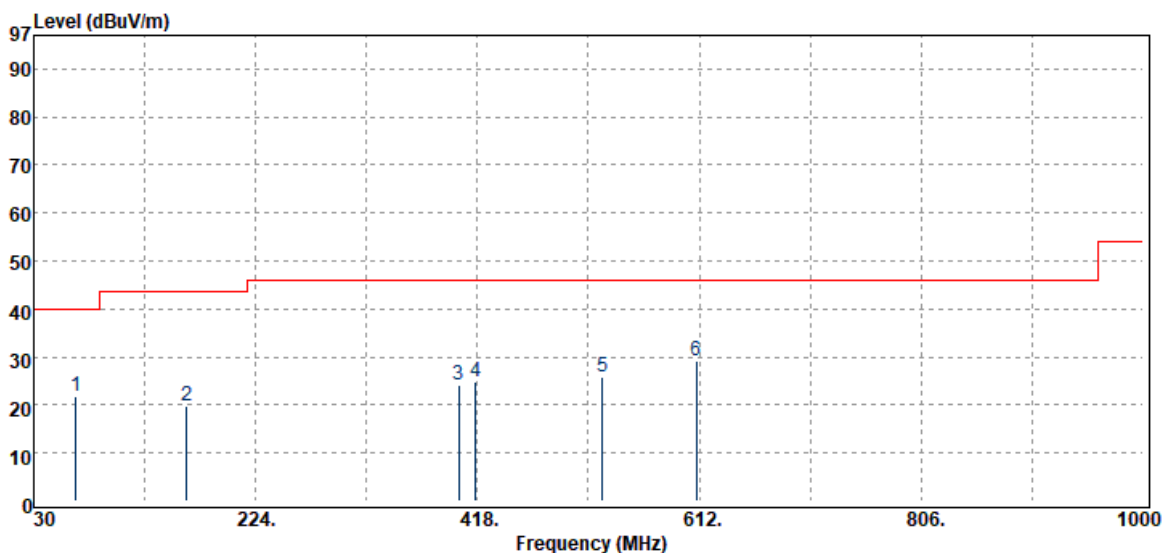
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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5190 MHz
Test Mode :Tx CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
66.86	Peak	31.84	-9.98	21.86	40.00	-18.14
163.86	Peak	27.95	-7.99	19.96	43.50	-23.54
401.51	Peak	29.21	-4.95	24.26	46.00	-21.74
416.06	Peak	29.51	-4.62	24.89	46.00	-21.11
527.61	Peak	28.55	-2.67	25.88	46.00	-20.12
609.09	Peak	29.02	0.04	29.06	46.00	-16.94

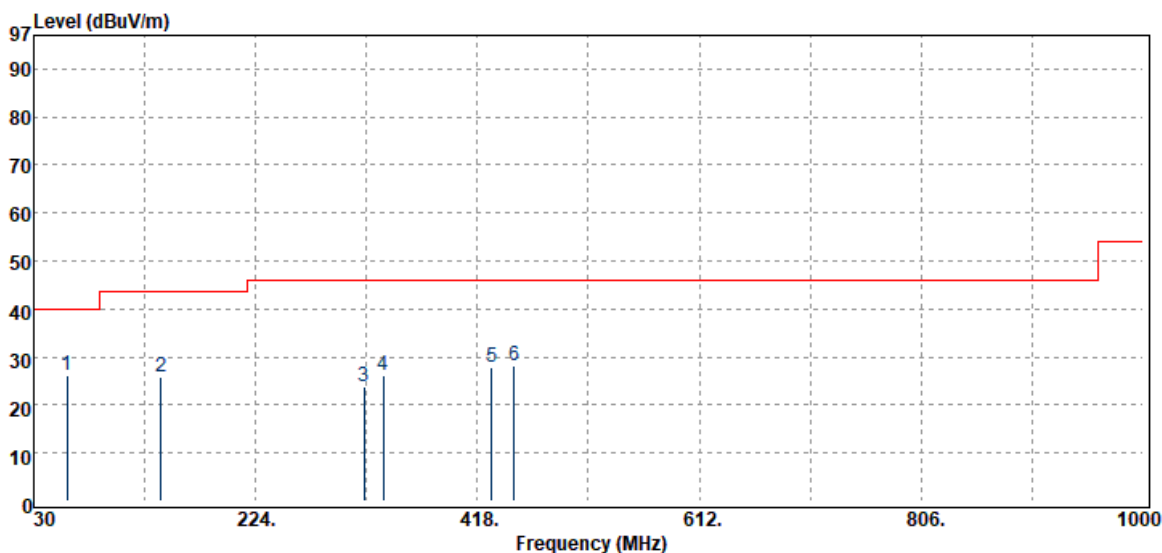
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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5755 MHz
Test Mode :Tx CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
59.10	Peak	35.33	-9.27	26.06	40.00	-13.94
141.55	Peak	34.28	-8.30	25.98	43.50	-17.52
319.06	Peak	29.83	-6.10	23.73	46.00	-22.27
335.55	Peak	32.02	-5.67	26.35	46.00	-19.65
430.61	Peak	31.95	-3.97	27.98	46.00	-18.02
450.01	Peak	31.51	-3.25	28.26	46.00	-17.74

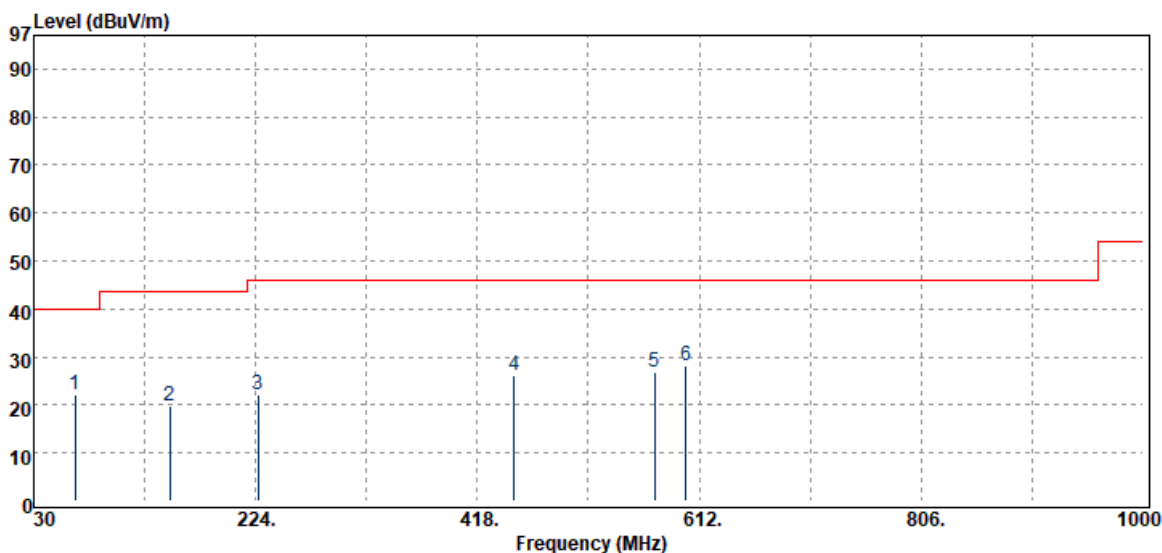
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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5755 MHz
Test Mode :Tx CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
65.89	Peak	32.23	-9.96	22.27	40.00	-17.73
149.31	Peak	28.08	-8.12	19.96	43.50	-23.54
225.94	Peak	32.31	-10.32	21.99	46.00	-24.01
450.01	Peak	29.26	-3.25	26.01	46.00	-19.99
573.20	Peak	28.15	-1.23	26.92	46.00	-19.08
600.36	Peak	28.65	-0.38	28.27	46.00	-17.73

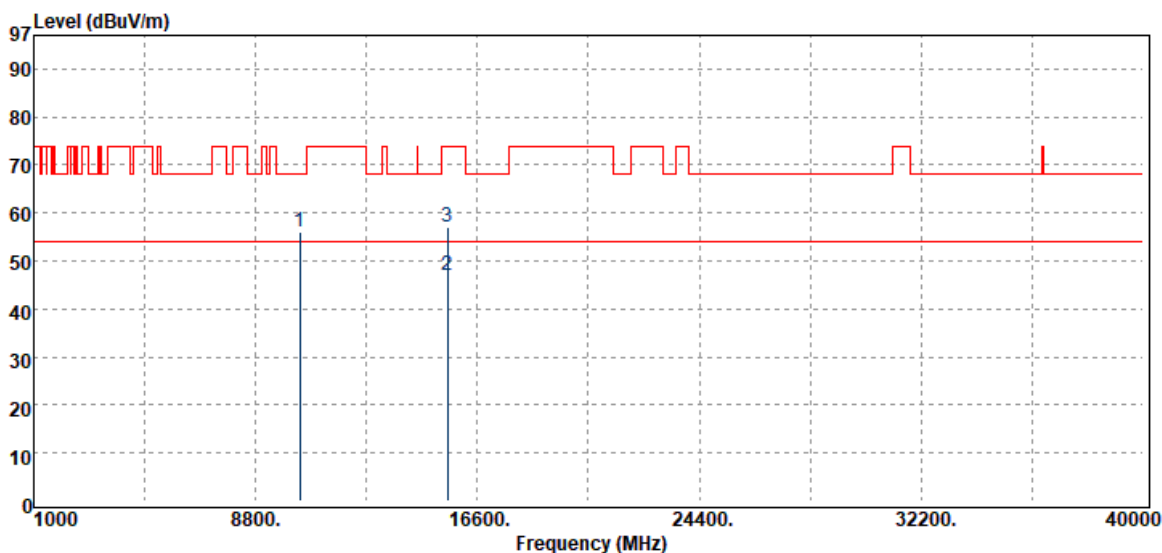
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5180 MHz
Test Mode :Tx CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10360.00	Peak	34.71	21.21	55.92	68.20	-12.28
15540.00	Average	23.48	23.35	46.83	54.00	-7.17
15540.00	Peak	33.60	23.35	56.95	74.00	-17.05

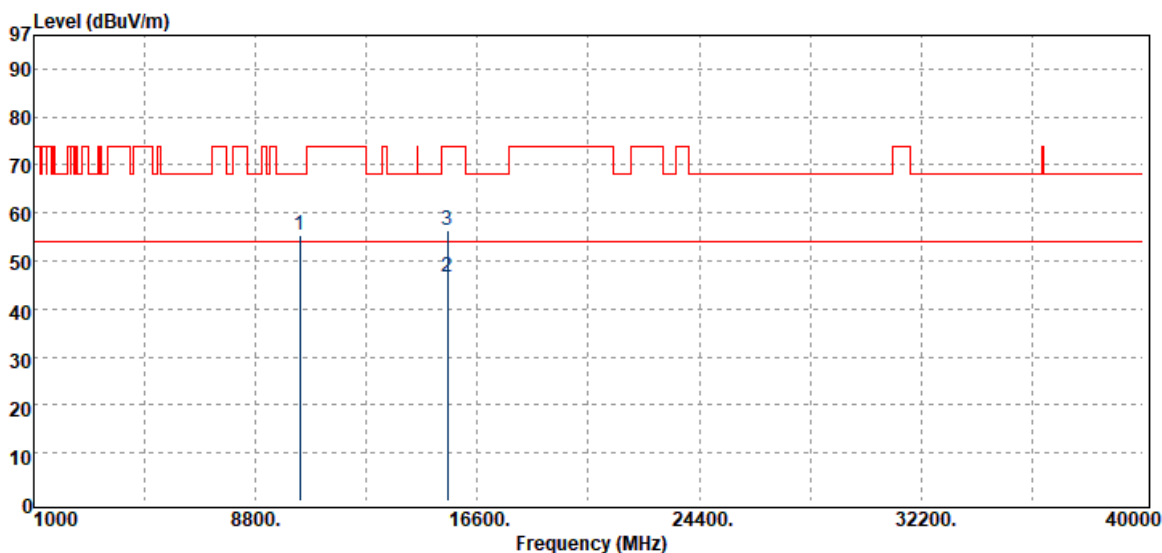
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5180 MHz
Test Mode :Tx CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10360.00	Peak	34.31	21.21	55.52	68.20	-12.68
15540.00	Average	23.35	23.35	46.70	54.00	-7.30
15540.00	Peak	33.13	23.35	56.48	74.00	-17.52

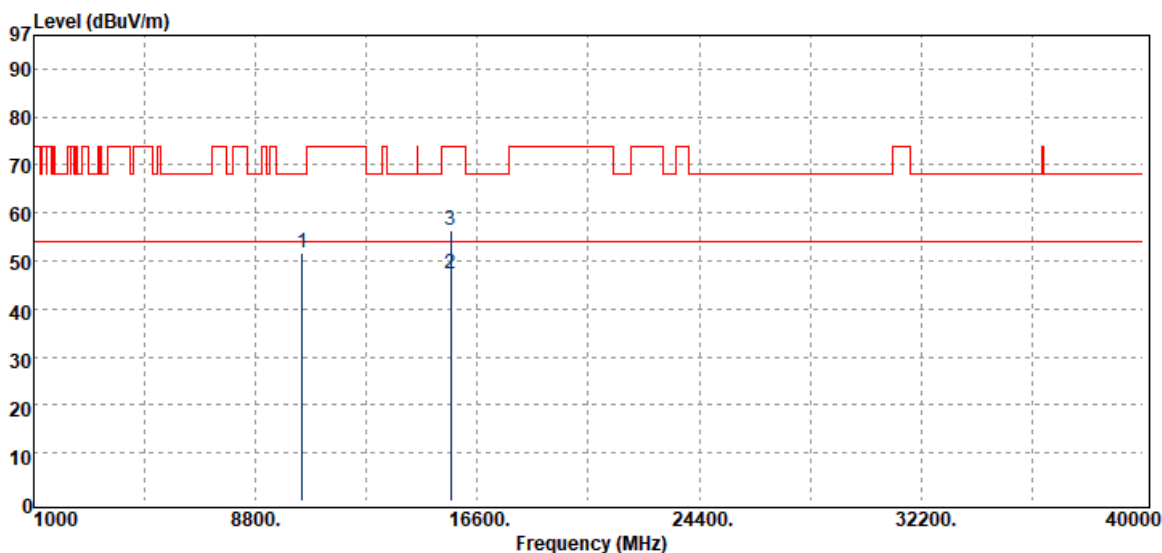
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5220 MHz
Test Mode :Tx CH Mid
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-08-31
Temp./Humi. :28.1/49
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10440.00	Peak	33.32	18.39	51.71	68.20	-16.49
15660.00	Average	23.29	24.07	47.36	54.00	-6.64
15660.00	Peak	32.38	24.07	56.45	74.00	-17.55

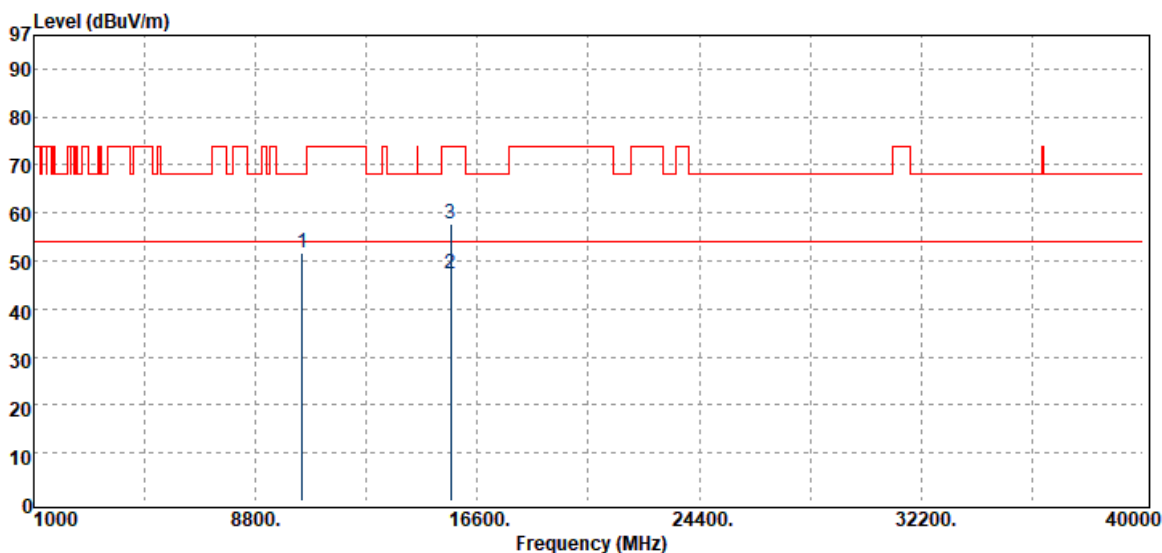
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5220 MHz
Test Mode :Tx CH Mid
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-08-31
Temp./Humi. :28.1/49
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10440.00	Peak	33.26	18.39	51.65	68.20	-16.55
15660.00	Average	23.16	24.07	47.23	54.00	-6.77
15660.00	Peak	33.59	24.07	57.66	74.00	-16.34

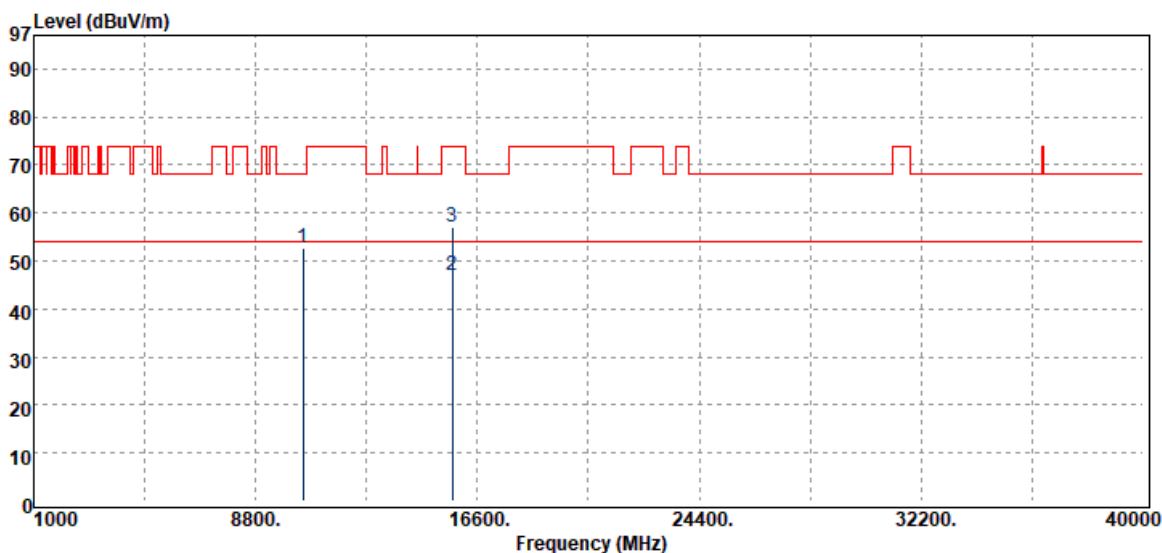
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5240 MHz
Test Mode :Tx CH High
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-08-31
Temp./Humi. :28.1/49
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
10480.00	Peak	33.54	19.27	52.81	68.20	-15.39
15720.00	Average	23.35	23.75	47.10	54.00	-6.90
15720.00	Peak	33.30	23.75	57.05	74.00	-16.95

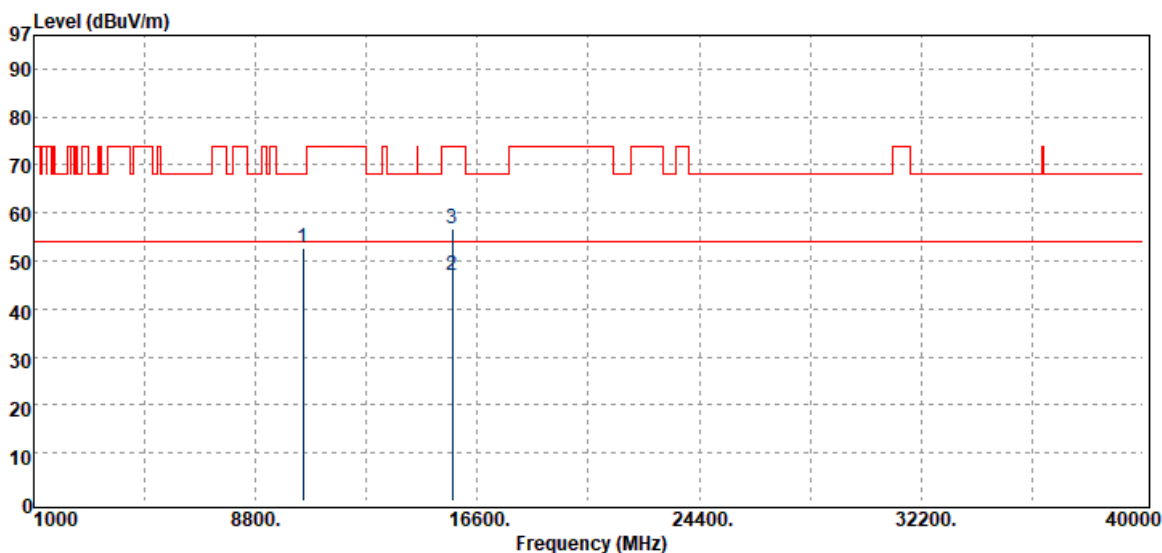
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5240 MHz
Test Mode :Tx CH High
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-08-31
Temp./Humi. :28.1/49
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10480.00	Peak	33.56	19.27	52.83	68.20	-15.37
15720.00	Average	23.22	23.75	46.97	54.00	-7.03
15720.00	Peak	32.85	23.75	56.60	74.00	-17.40

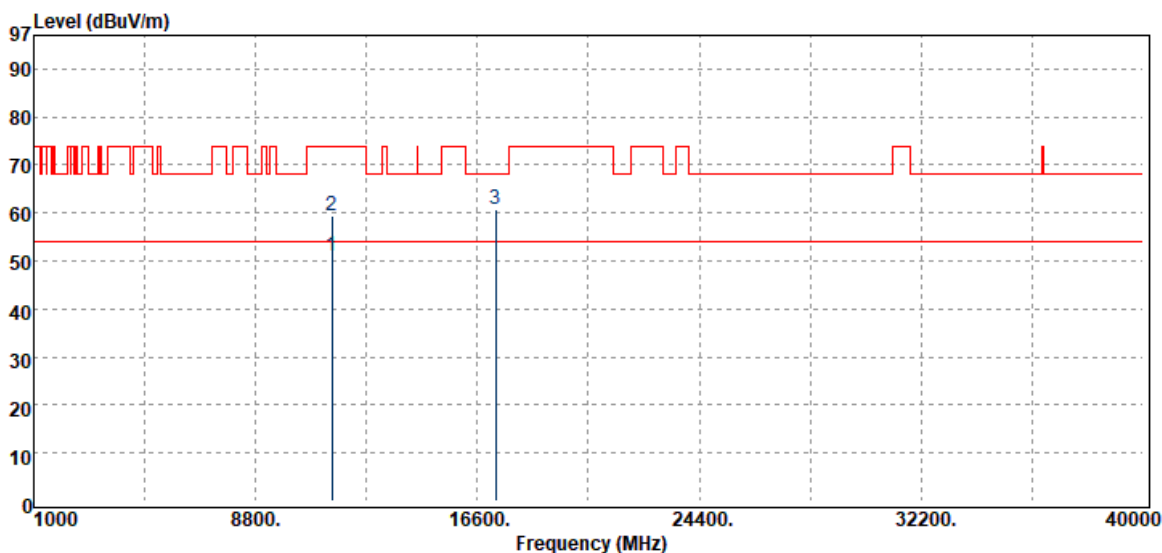
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5745 MHz
Test Mode :Tx CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
11490.00	Average	25.52	25.46	50.98	54.00	-3.02
11490.00	Peak	33.83	25.46	59.29	74.00	-14.71
17235.00	Peak	31.56	29.18	60.74	68.20	-7.46

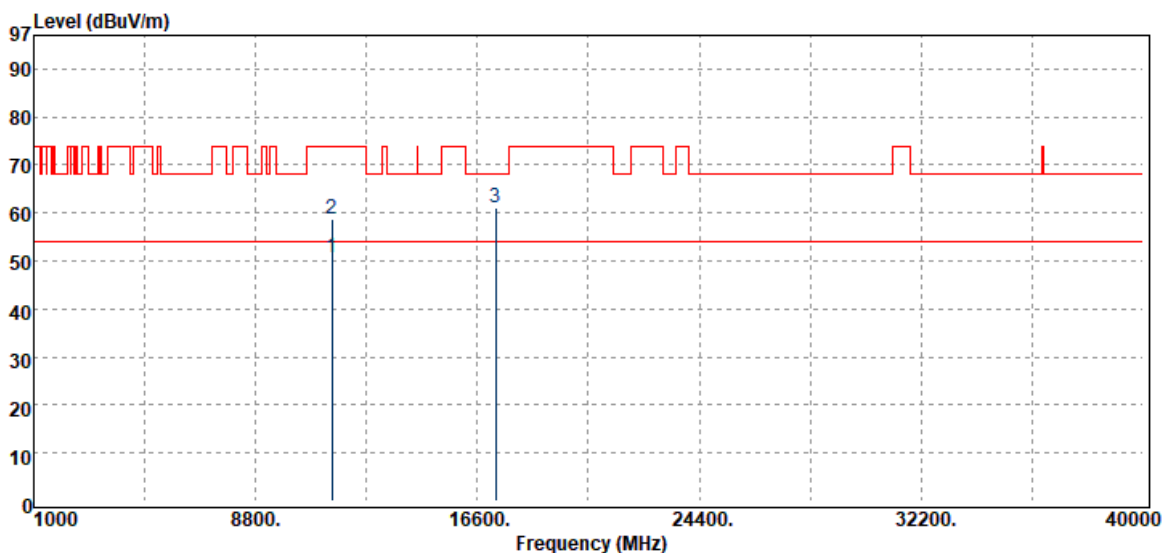
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5745 MHz
Test Mode :Tx CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
11490.00	Average	25.16	25.46	50.62	54.00	-3.38
11490.00	Peak	33.39	25.46	58.85	74.00	-15.15
17235.00	Peak	32.01	29.18	61.19	68.20	-7.01

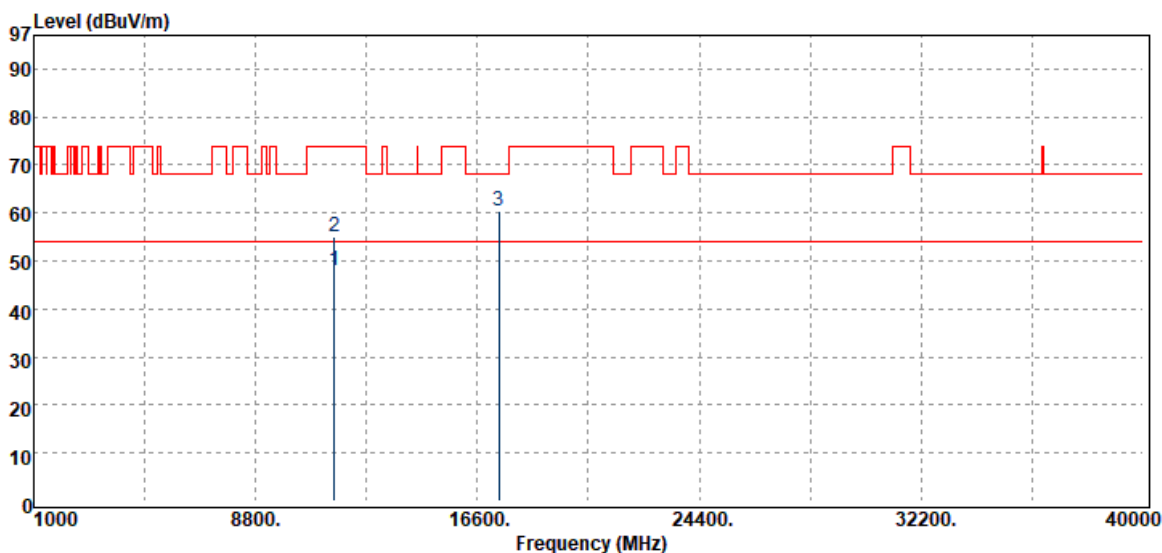
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5785 MHz
Test Mode :Tx CH Mid
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
11570.00	Average	26.06	21.87	47.93	54.00	-6.07
11570.00	Peak	33.30	21.87	55.17	74.00	-18.83
17355.00	Peak	31.33	28.93	60.26	68.20	-7.94

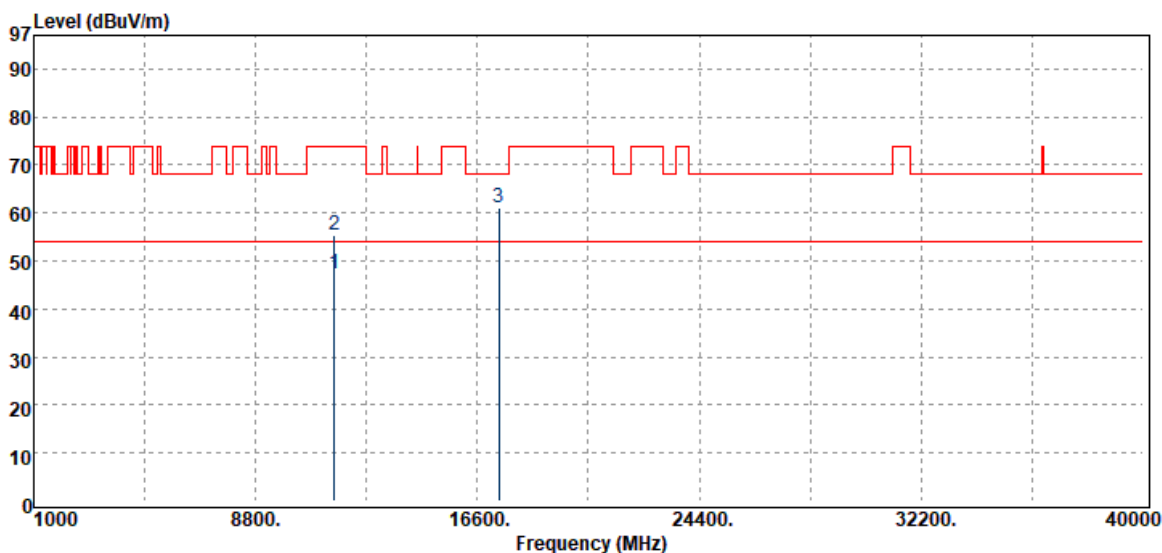
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5785 MHz
Test Mode :Tx CH Mid
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
11570.00	Average	25.33	21.87	47.20	54.00	-6.80
11570.00	Peak	33.45	21.87	55.32	74.00	-18.68
17355.00	Peak	32.06	28.93	60.99	68.20	-7.21

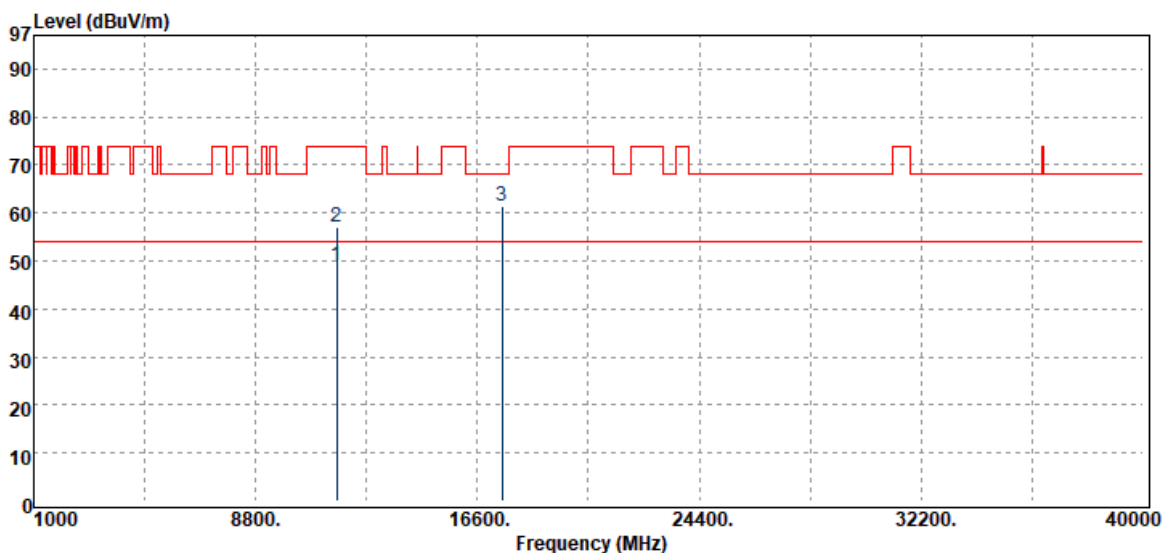
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5825 MHz
Test Mode :Tx CH High
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
11650.00	Average	26.13	22.86	48.99	54.00	-5.01
11650.00	Peak	34.12	22.86	56.98	74.00	-17.02
17475.00	Peak	31.09	30.27	61.36	68.20	-6.84

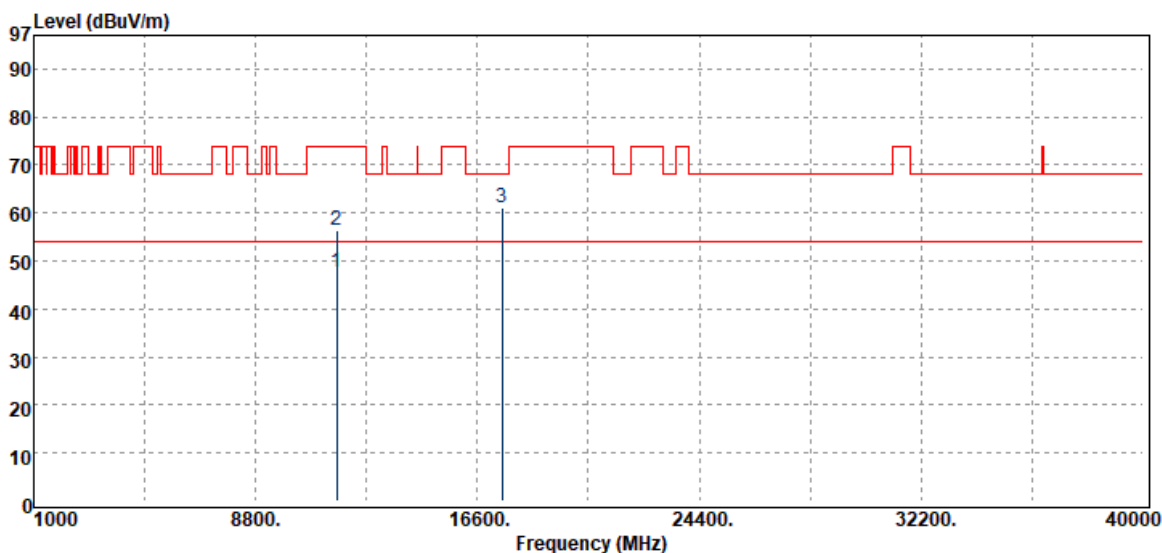
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5825 MHz
Test Mode :Tx CH High
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



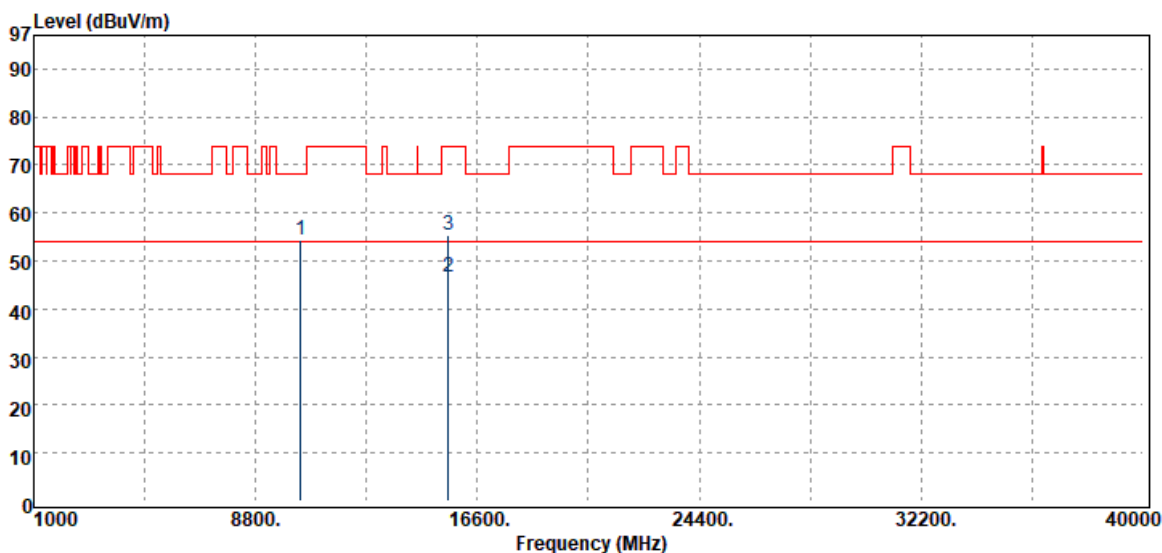
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11650.00	Average	24.93	22.86	47.79	54.00	-6.21
11650.00	Peak	33.40	22.86	56.26	74.00	-17.74
17475.00	Peak	30.90	30.27	61.17	68.20	-7.03

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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5190 MHz
Test Mode :Tx CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



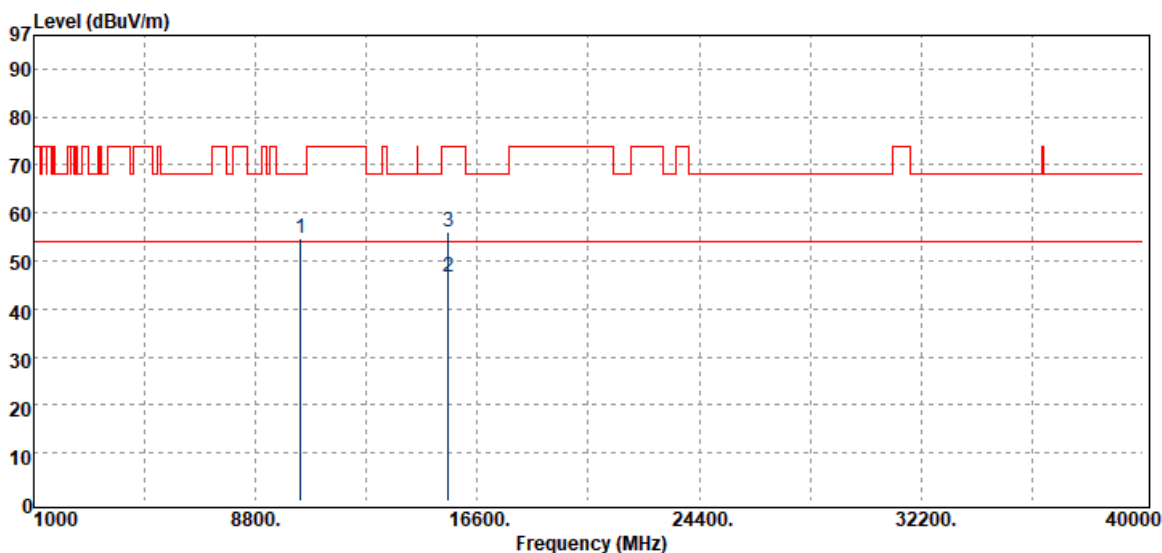
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10380.00	Peak	34.38	20.06	54.44	68.20	-13.76
15570.00	Average	23.38	23.35	46.73	54.00	-7.27
15570.00	Peak	32.18	23.35	55.53	74.00	-18.47

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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5190 MHz
Test Mode :Tx CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



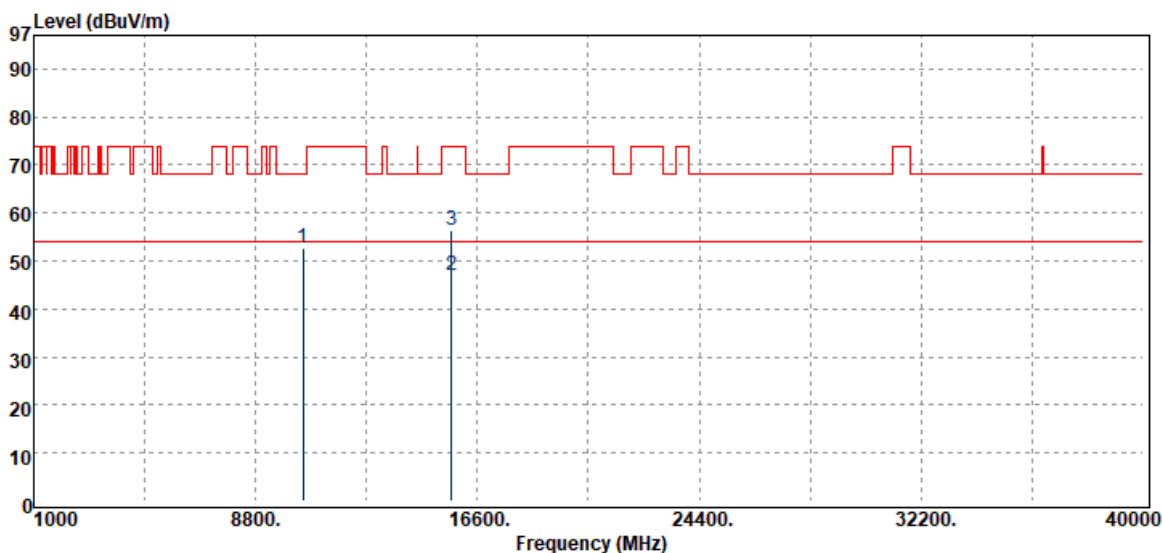
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10380.00	Peak	34.78	20.06	54.84	68.20	-13.36
15570.00	Average	23.25	23.35	46.60	54.00	-7.40
15570.00	Peak	32.73	23.35	56.08	74.00	-17.92

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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5230 MHz
Test Mode :Tx CH High
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-08-31
Temp./Humi. :28.1/49
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
10460.00	Peak	34.03	18.59	52.62	68.20	-15.58
15690.00	Average	23.17	23.79	46.96	54.00	-7.04
15690.00	Peak	32.73	23.79	56.52	74.00	-17.48

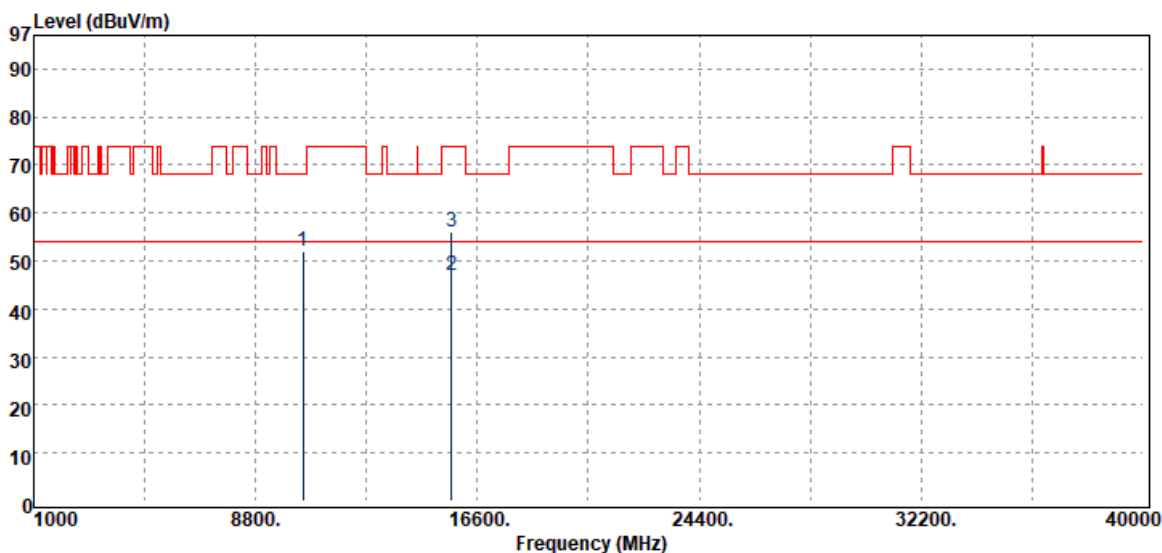
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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5230 MHz
Test Mode :Tx CH High
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-08-31
Temp./Humi. :28.1/49
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
10460.00	Peak	33.31	18.59	51.90	68.20	-16.30
15690.00	Average	23.14	23.79	46.93	54.00	-7.07
15690.00	Peak	32.27	23.79	56.06	74.00	-17.94

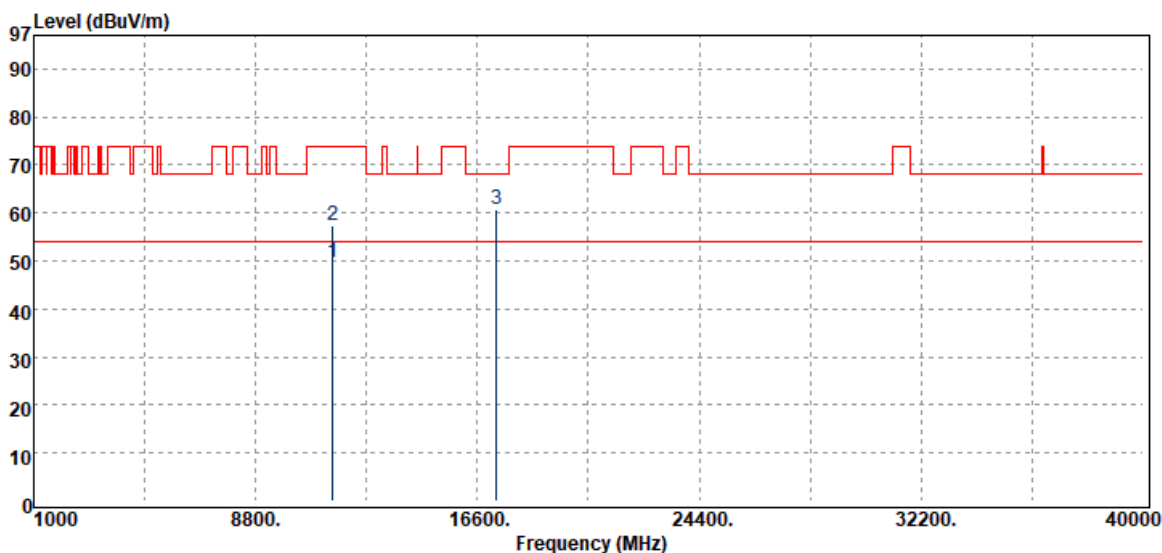
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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5755 MHz
Test Mode :Tx CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11510.00	Average	24.48	25.29	49.77	54.00	-4.23
11510.00	Peak	32.26	25.29	57.55	74.00	-16.45
17265.00	Peak	31.88	28.96	60.84	68.20	-7.36

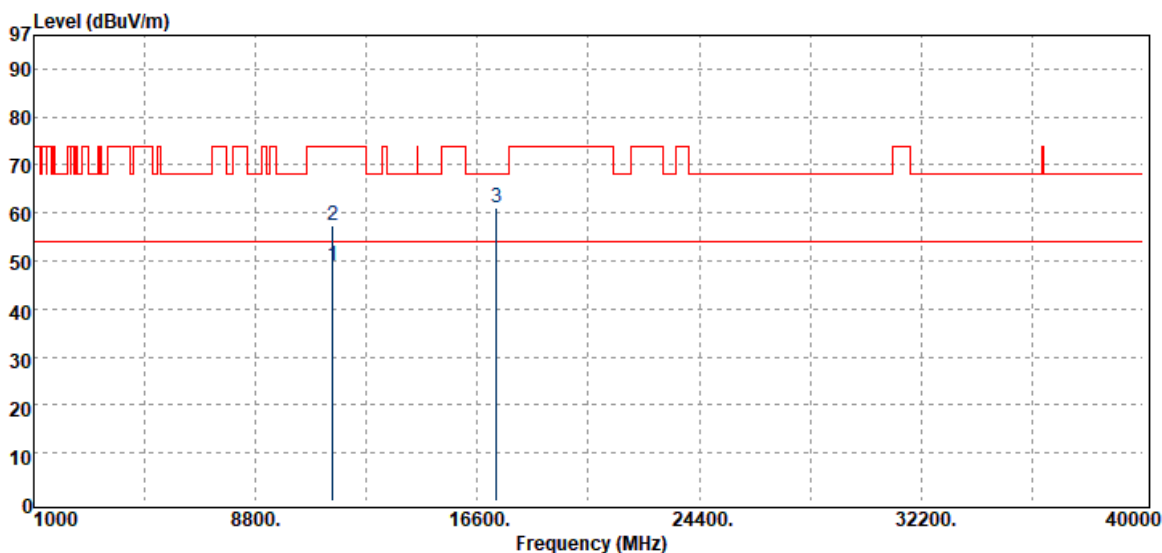
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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5755 MHz
Test Mode :Tx CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



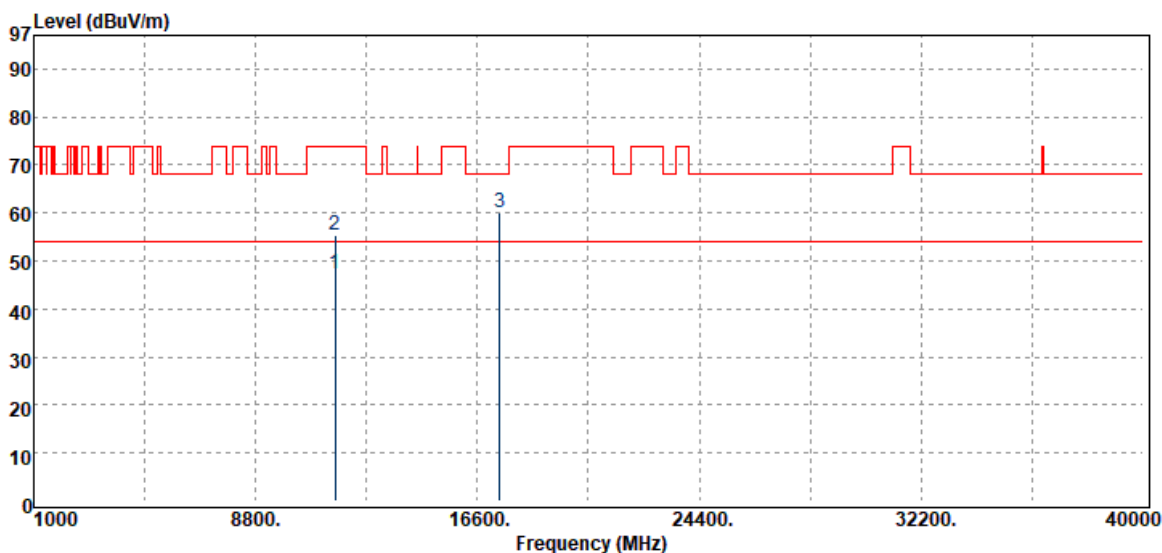
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
11510.00	Average	23.75	25.29	49.04	54.00	-4.96
11510.00	Peak	32.15	25.29	57.44	74.00	-16.56
17265.00	Peak	32.28	28.96	61.24	68.20	-6.96

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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5795 MHz
Test Mode :Tx CH High
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
11590.00	Average	25.50	21.67	47.17	54.00	-6.83
11590.00	Peak	33.83	21.67	55.50	74.00	-18.50
17385.00	Peak	30.66	29.46	60.12	68.20	-8.08

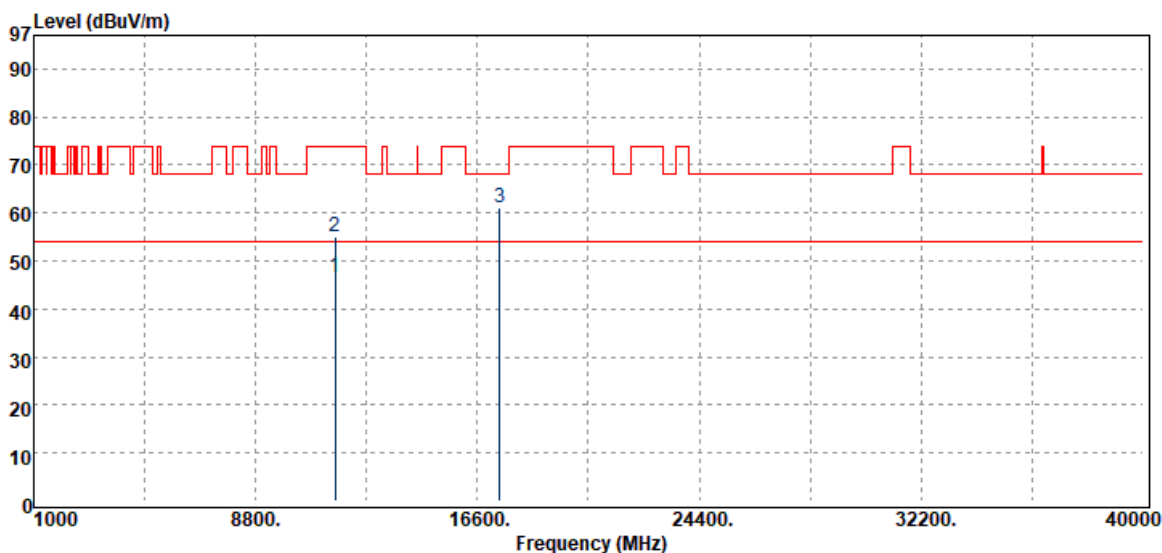
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Report Number :ER-2021-60083
 Operation Mode :802.11n40
 Test Frequency :5795 MHz
 Test Mode :Tx CH High
 EUT Pol :H Plane

Test Site :SAC 3
 Test Date :2021-07-19
 Temp./Humi. :27.4/55
 Antenna Pol. :HORIZONTAL
 Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
11590.00	Average	25.14	21.67	46.81	54.00	-7.19
11590.00	Peak	33.42	21.67	55.09	74.00	-18.91
17385.00	Peak	31.62	29.46	61.08	68.20	-7.12

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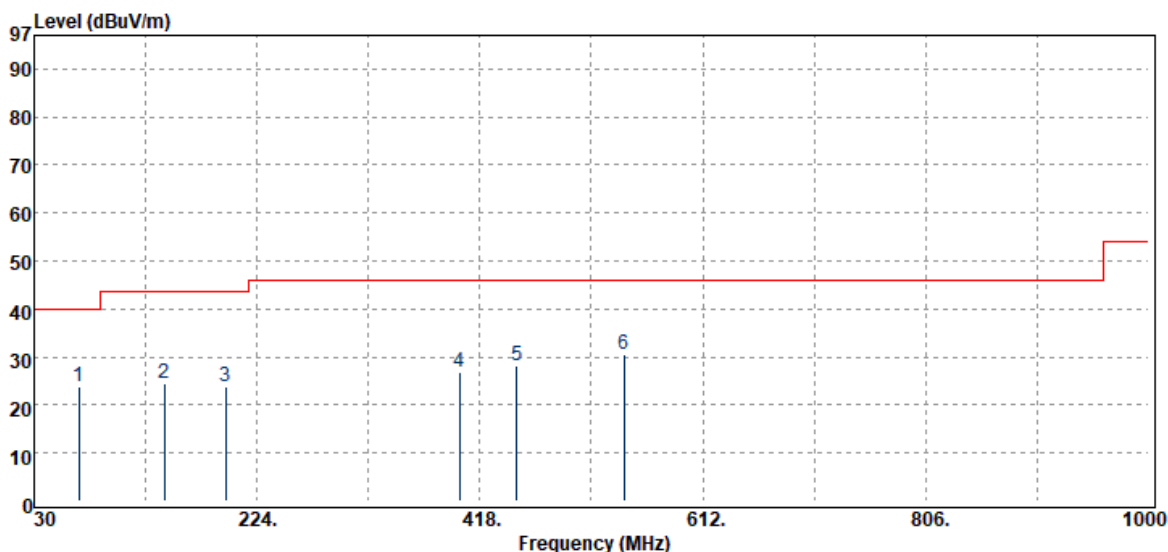
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接收模式 (最差模式)

Report Number :ER-2021-60083
 Operation Mode :802.11n20
 Test Frequency :5220 MHz
 Test Mode :Rx CH Mid
 EUT Pol :H Plane

Test Site :SAC 3
 Test Date :2021-07-19
 Temp./Humi. :27.4/55
 Antenna Pol. :VERTICAL
 Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
68.80	Peak	34.05	-10.18	23.87	40.00	-16.13
143.49	Peak	32.81	-8.15	24.66	43.50	-18.84
196.84	Peak	34.43	-10.62	23.81	43.50	-19.69
400.54	Peak	31.74	-4.97	26.77	46.00	-19.23
450.01	Peak	31.57	-3.25	28.32	46.00	-17.68
543.13	Peak	32.45	-2.03	30.42	46.00	-15.58

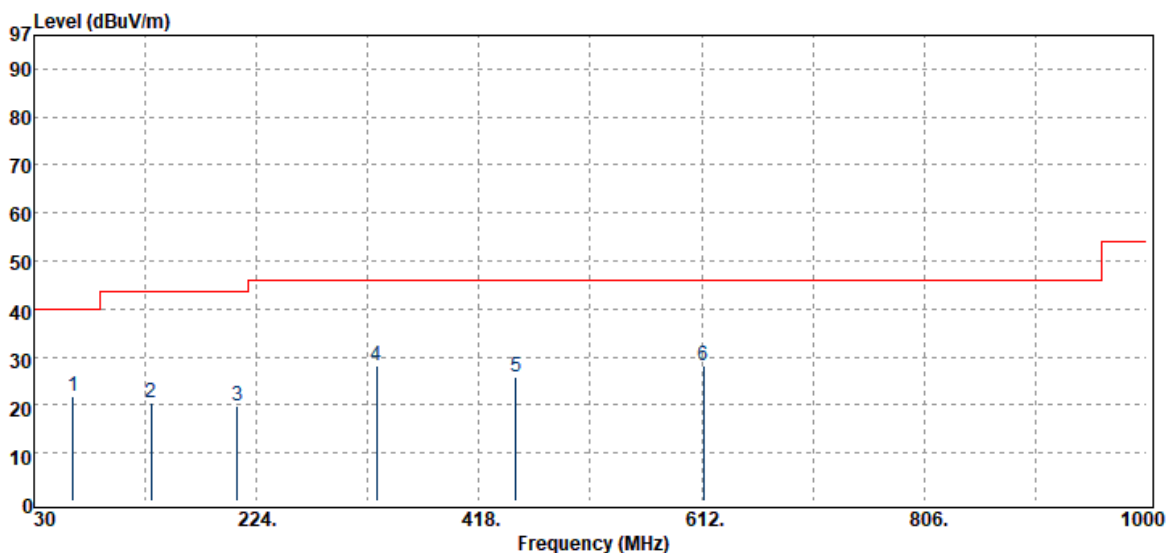
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5220 MHz
Test Mode :Rx CH Mid
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
63.95	Peak	31.25	-9.42	21.83	40.00	-18.17
131.85	Peak	29.37	-8.81	20.56	43.50	-22.94
207.51	Peak	30.85	-10.93	19.92	43.50	-23.58
328.76	Peak	34.04	-5.77	28.27	46.00	-17.73
450.01	Peak	29.09	-3.25	25.84	46.00	-20.16
613.94	Peak	28.36	-0.02	28.34	46.00	-17.66

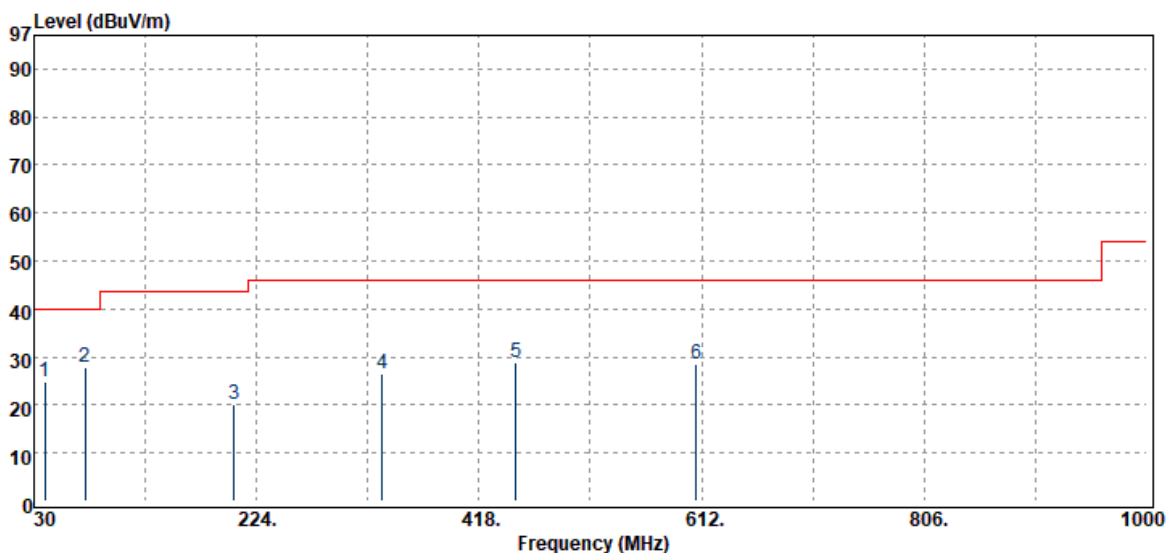
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5785 MHz
Test Mode :Rx CH Mid
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
39.70	Peak	34.13	-9.13	25.00	40.00	-15.00
74.62	Peak	39.00	-11.25	27.75	40.00	-12.25
204.60	Peak	30.86	-10.83	20.03	43.50	-23.47
333.61	Peak	32.24	-5.70	26.54	46.00	-19.46
450.01	Peak	32.14	-3.25	28.89	46.00	-17.11
607.15	Peak	28.54	-0.06	28.48	46.00	-17.52

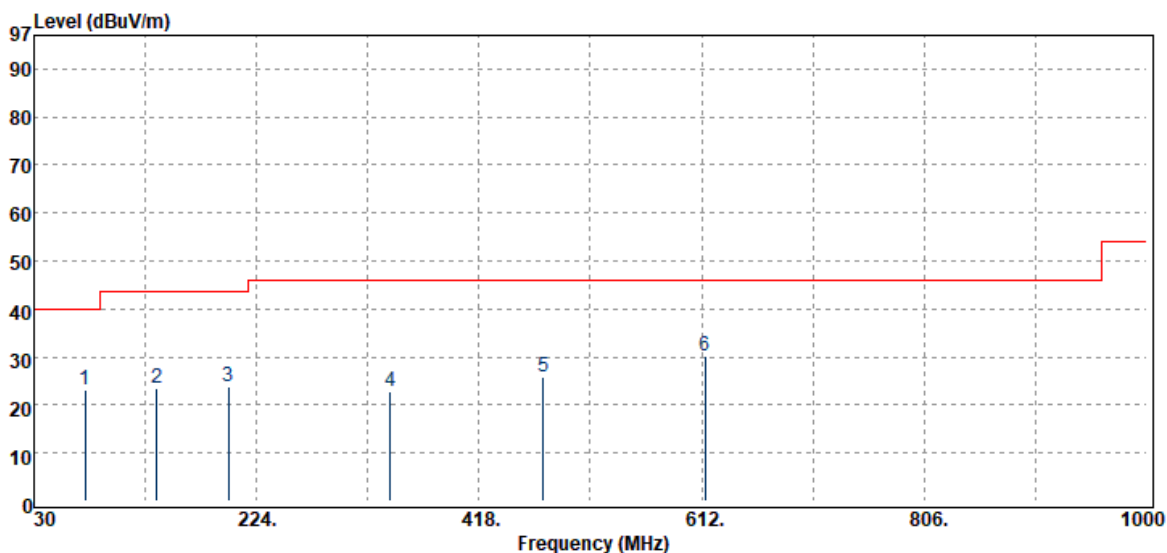
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5785 MHz
Test Mode :Rx CH Mid
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
74.62	Peak	34.52	-11.25	23.27	40.00	-16.73
136.70	Peak	32.04	-8.58	23.46	43.50	-20.04
199.75	Peak	34.60	-10.77	23.83	43.50	-19.67
340.40	Peak	28.49	-5.64	22.85	46.00	-23.15
474.26	Peak	28.90	-3.08	25.82	46.00	-20.18
614.91	Peak	30.41	-0.05	30.36	46.00	-15.64

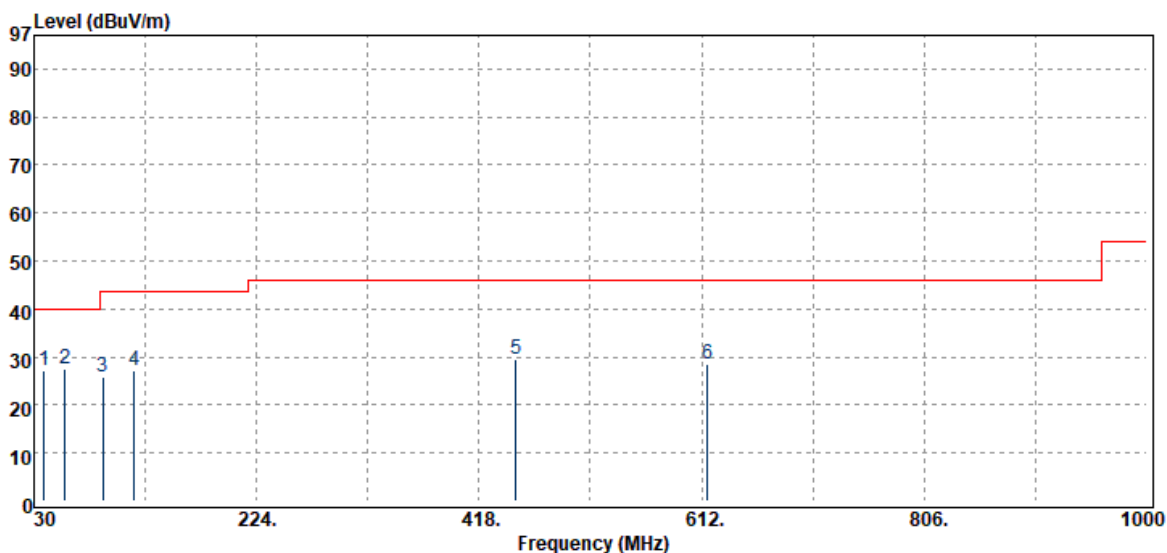
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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5190 MHz
Test Mode :Rx CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
38.73	Peak	36.33	-9.18	27.15	40.00	-12.85
57.16	Peak	36.57	-9.02	27.55	40.00	-12.45
90.14	Peak	40.12	-14.26	25.86	43.50	-17.64
117.30	Peak	37.37	-10.29	27.08	43.50	-16.42
450.01	Peak	32.78	-3.25	29.53	46.00	-16.47
616.85	Peak	28.61	-0.13	28.48	46.00	-17.52

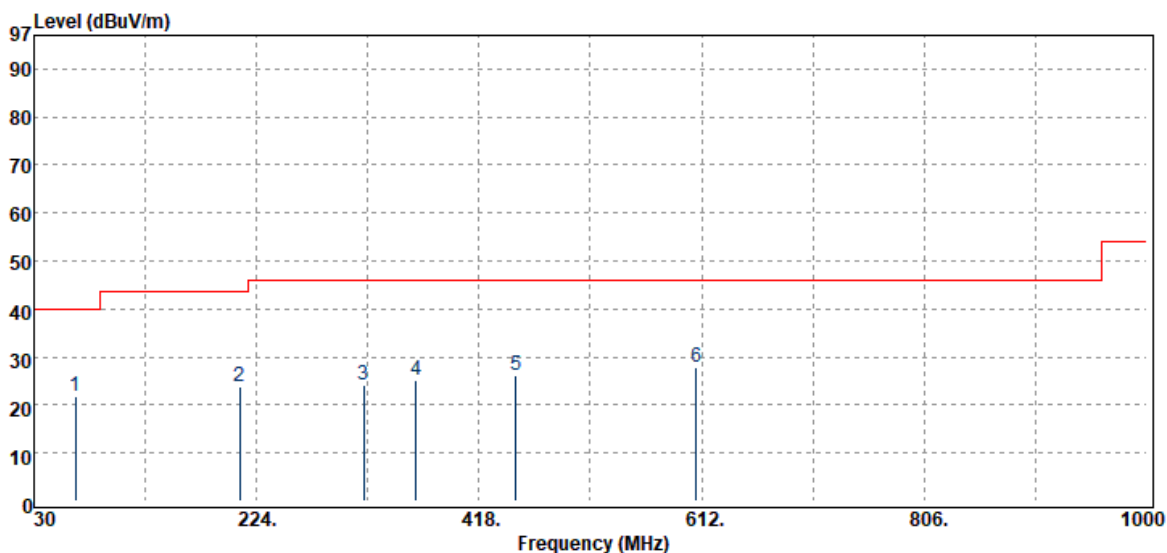
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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5190 MHz
Test Mode :Rx CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
65.89	Peak	31.89	-9.96	21.93	40.00	-18.07
209.45	Peak	34.78	-10.99	23.79	43.50	-19.71
317.12	Peak	30.32	-6.15	24.17	46.00	-21.83
362.71	Peak	30.79	-5.53	25.26	46.00	-20.74
450.01	Peak	29.55	-3.25	26.30	46.00	-19.70
607.15	Peak	27.77	-0.06	27.71	46.00	-18.29

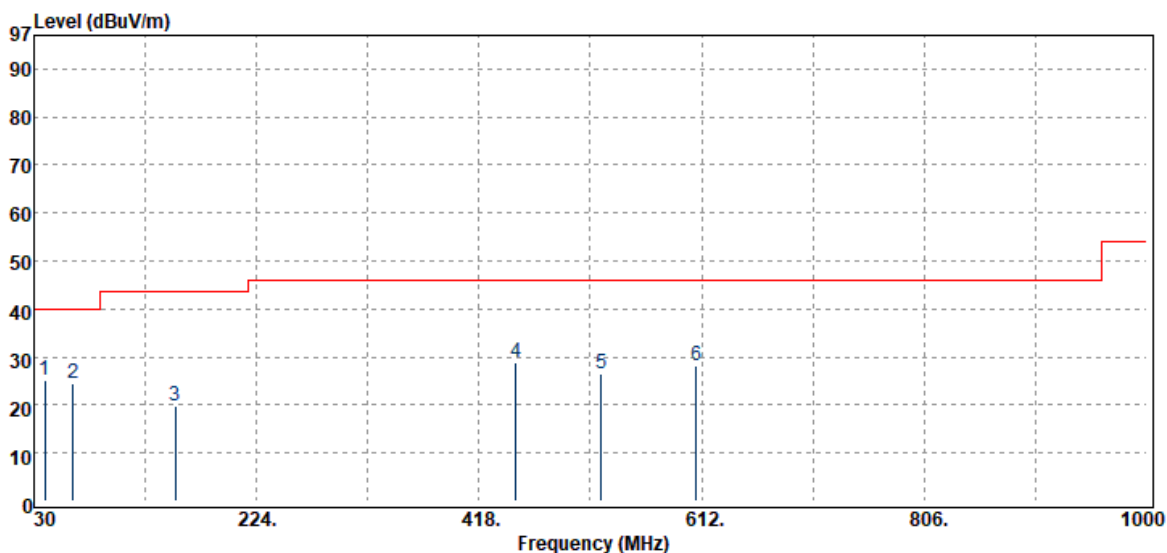
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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5755 MHz
Test Mode :Rx CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
39.70	Peak	34.27	-9.13	25.14	40.00	-14.86
63.95	Peak	34.04	-9.42	24.62	40.00	-15.38
153.19	Peak	27.78	-7.93	19.85	43.50	-23.65
450.01	Peak	32.03	-3.25	28.78	46.00	-17.22
524.70	Peak	29.23	-2.82	26.41	46.00	-19.59
607.15	Peak	28.42	-0.06	28.36	46.00	-17.64

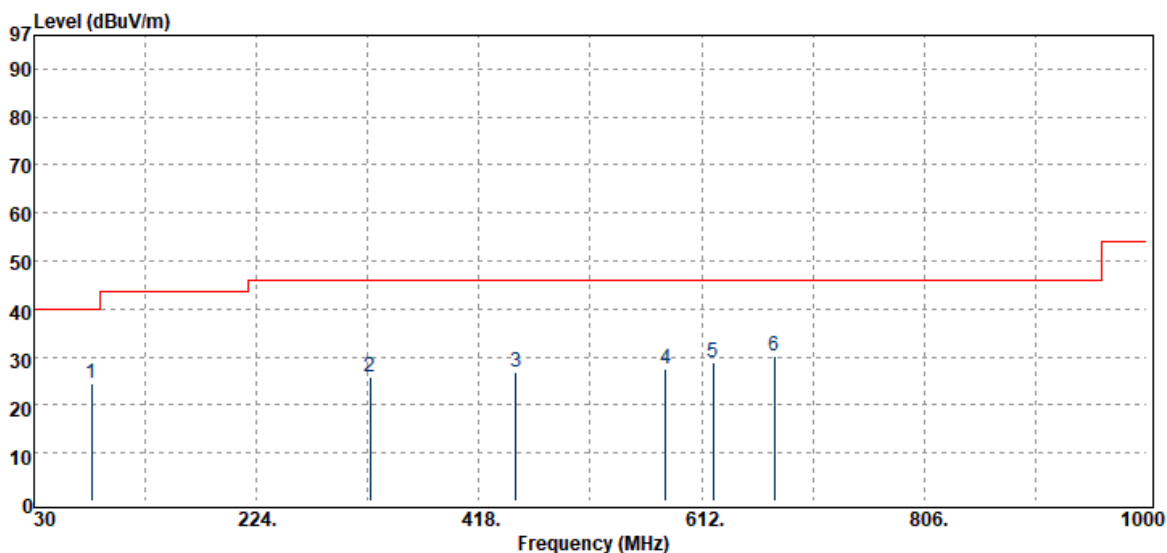
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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5755 MHz
Test Mode :Rx CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
80.44	Peak	37.28	-12.86	24.42	40.00	-15.58
322.94	Peak	31.96	-5.97	25.99	46.00	-20.01
450.01	Peak	30.23	-3.25	26.98	46.00	-19.02
580.96	Peak	28.12	-0.76	27.36	46.00	-18.64
621.70	Peak	29.09	-0.37	28.72	46.00	-17.28
675.05	Peak	29.75	0.51	30.26	46.00	-15.74

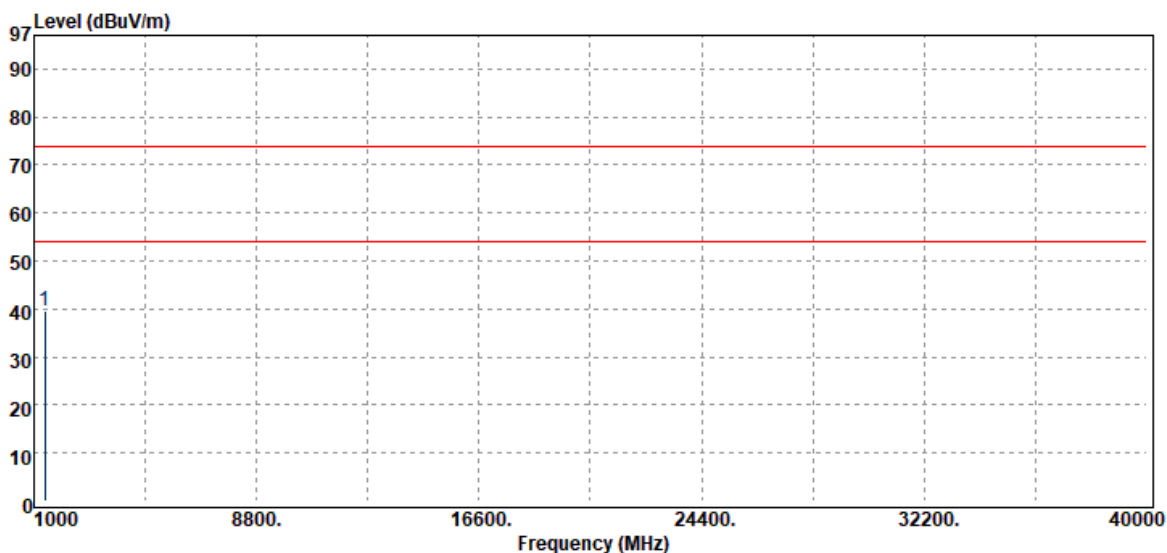
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5220 MHz
Test Mode :Rx CH Mid
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



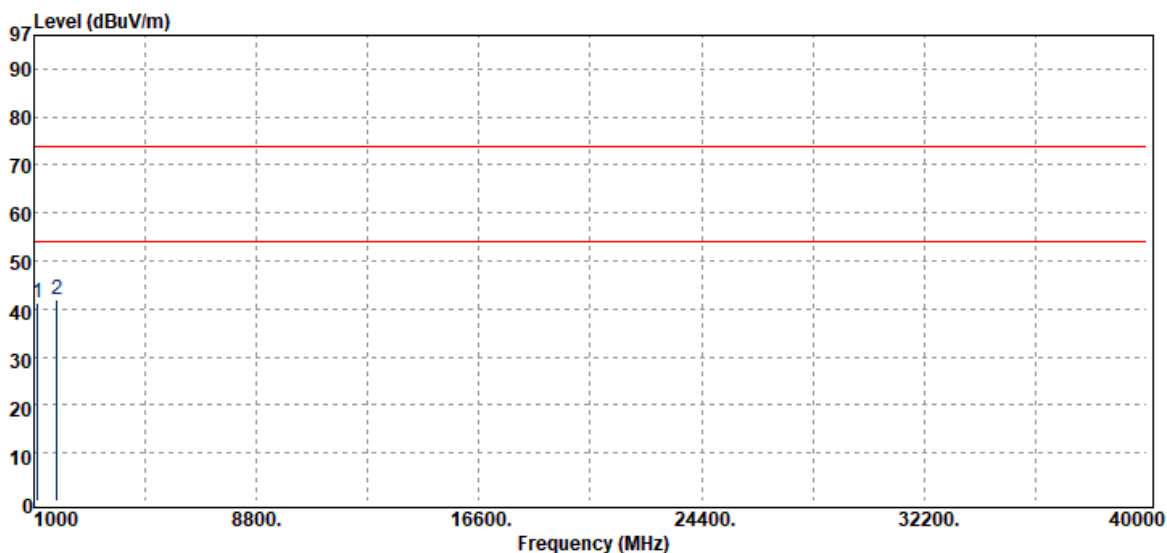
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
1385.00	Peak	42.82	-3.32	39.50	74.00	-34.50

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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5220 MHz
Test Mode :Rx CH Mid
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
1126.00	Peak	46.28	-5.02	41.26	74.00	-32.74
1805.00	Peak	44.83	-2.72	42.11	74.00	-31.89

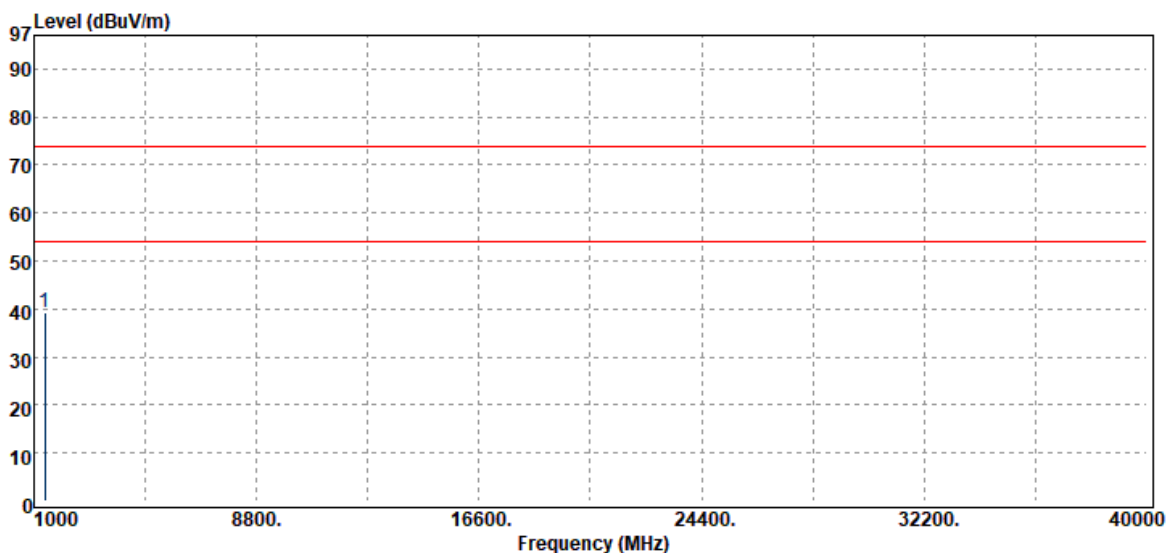
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5785 MHz
Test Mode :Rx CH Mid
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
1385.00	Peak	42.54	-3.32	39.22	74.00	-34.78

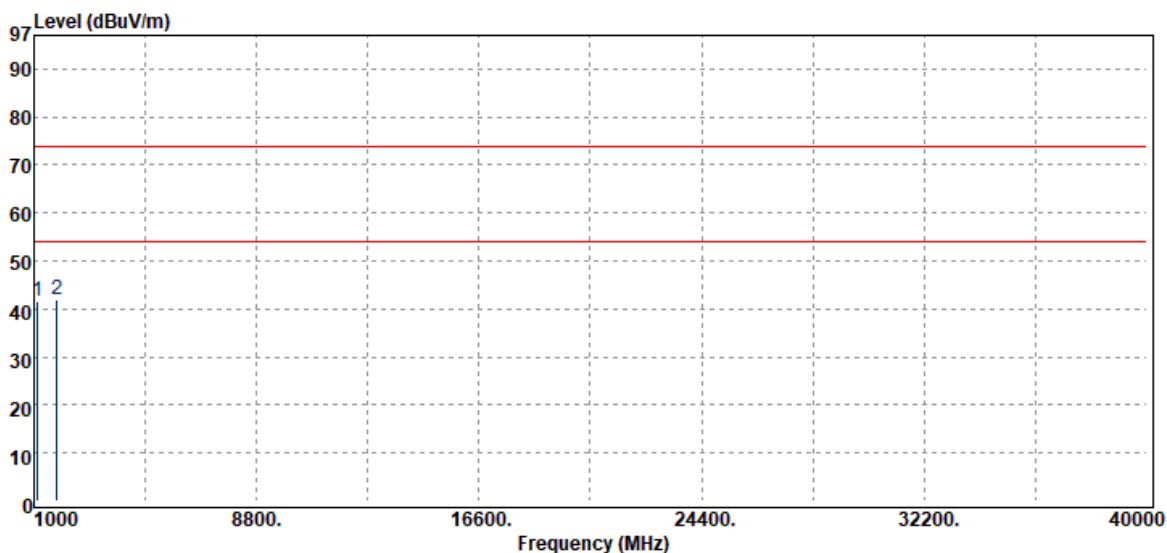
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5785 MHz
Test Mode :Rx CH Mid
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
1126.00	Peak	46.56	-5.02	41.54	74.00	-32.46
1805.00	Peak	44.63	-2.72	41.91	74.00	-32.09

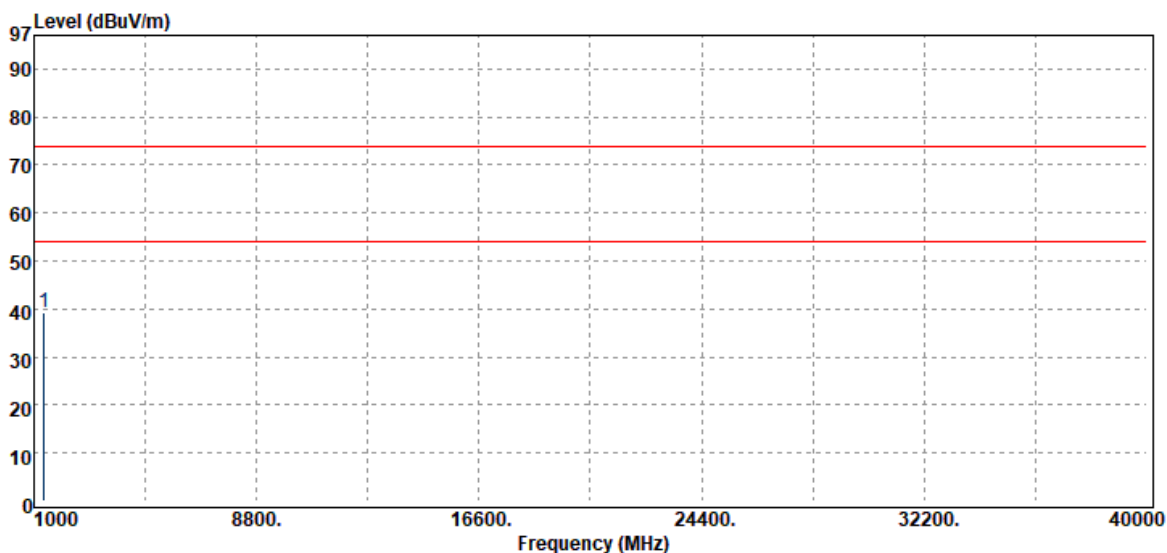
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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5190 MHz
Test Mode :Rx CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
1364.00	Peak	42.68	-3.35	39.33	74.00	-34.67

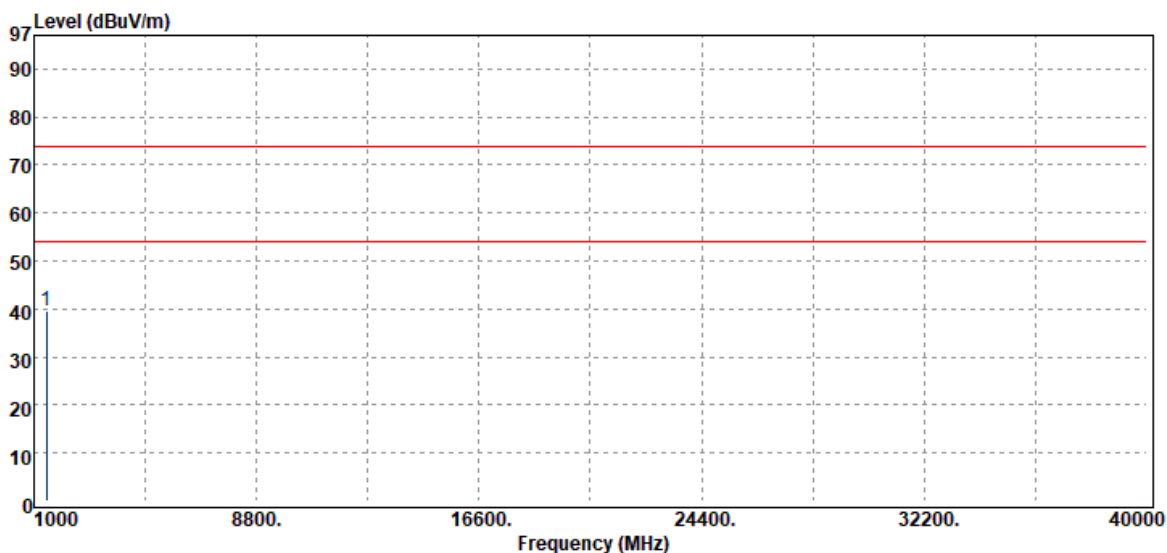
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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5190 MHz
Test Mode :Rx CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
1441.00	Peak	42.96	-3.20	39.76	74.00	-34.24

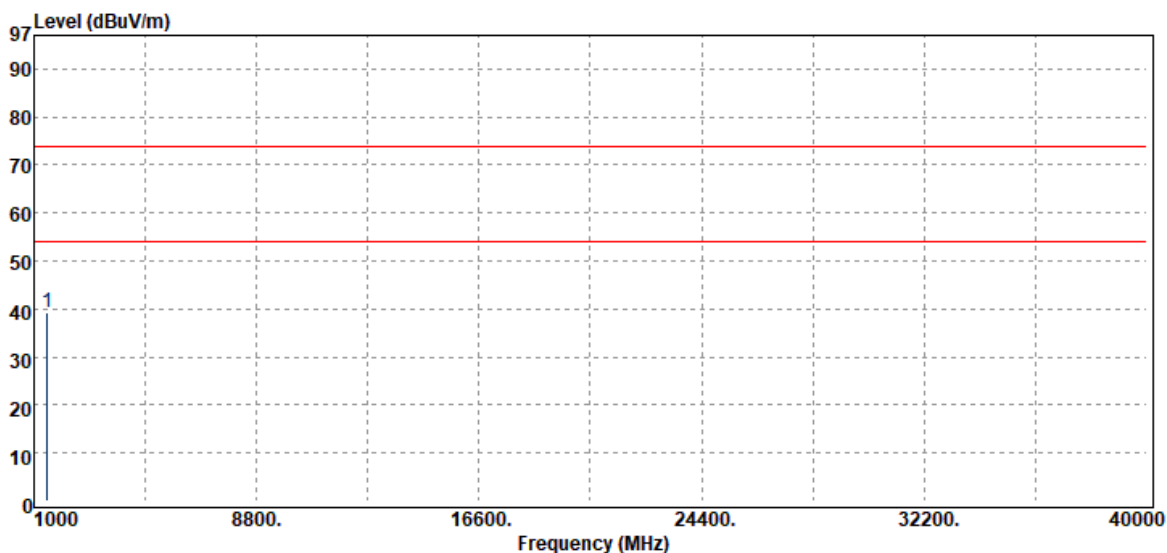
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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5755 MHz
Test Mode :Rx CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
1455.00	Peak	42.38	-3.20	39.18	74.00	-34.82

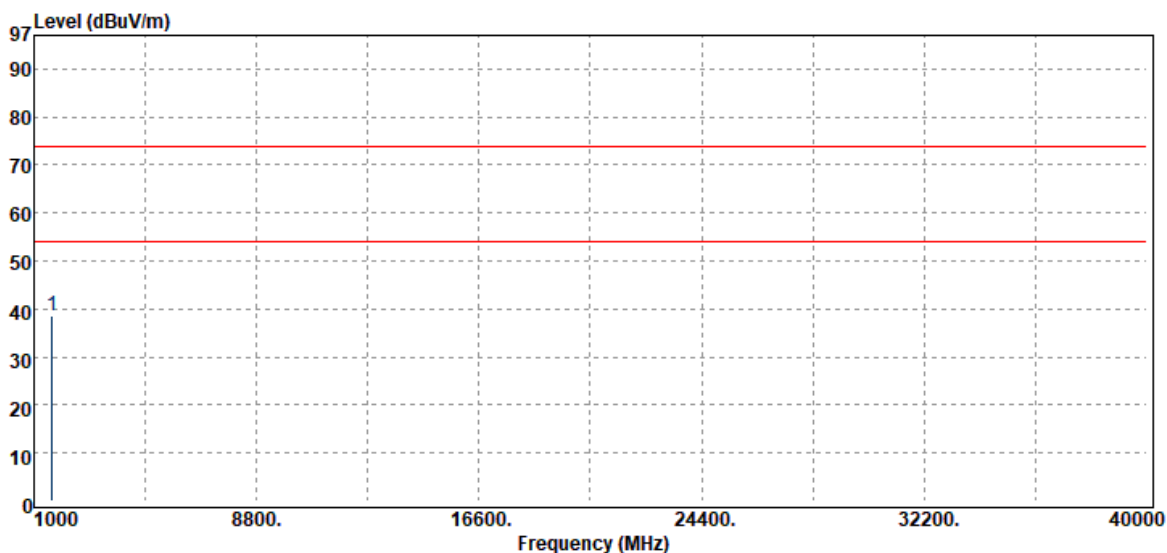
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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5755 MHz
Test Mode :Rx CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-19
Temp./Humi. :27.4/55
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
1630.00	Peak	41.79	-3.32	38.47	74.00	-35.53

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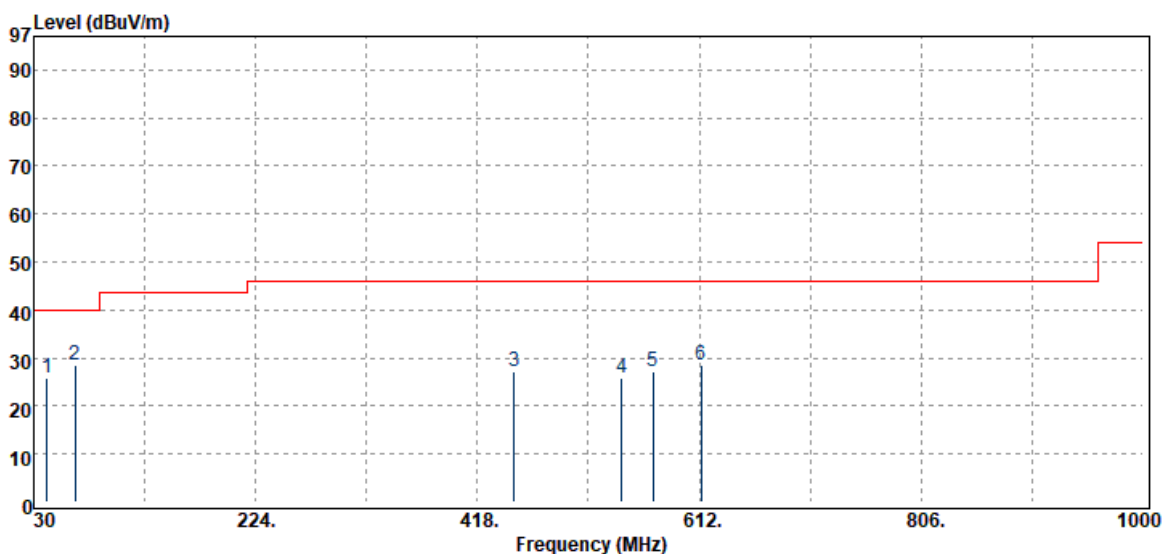
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(Fully system)

Report Number :ER-2021-60083
 Operation Mode :SYSTEM
 Test Frequency :SYSTEM
 Test Mode :SYSTEM
 EUT Pol :H Plane

Test Site :SAC 3
 Test Date :2021-07-20
 Temp./Humi. :27.8/53
 Antenna Pol. :VERTICAL
 Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBuV	Factor dB	Actual FS dBuV/m	Limit @3m dBuV/m	Margin dB
41.64	Peak	34.86	-8.90	25.96	40.00	-14.04
65.89	Peak	38.44	-9.96	28.48	40.00	-11.52
450.01	Peak	30.55	-3.25	27.30	46.00	-18.70
544.10	Peak	28.02	-2.01	26.01	46.00	-19.99
571.26	Peak	28.48	-1.36	27.12	46.00	-18.88
613.94	Peak	28.51	-0.02	28.49	46.00	-17.51

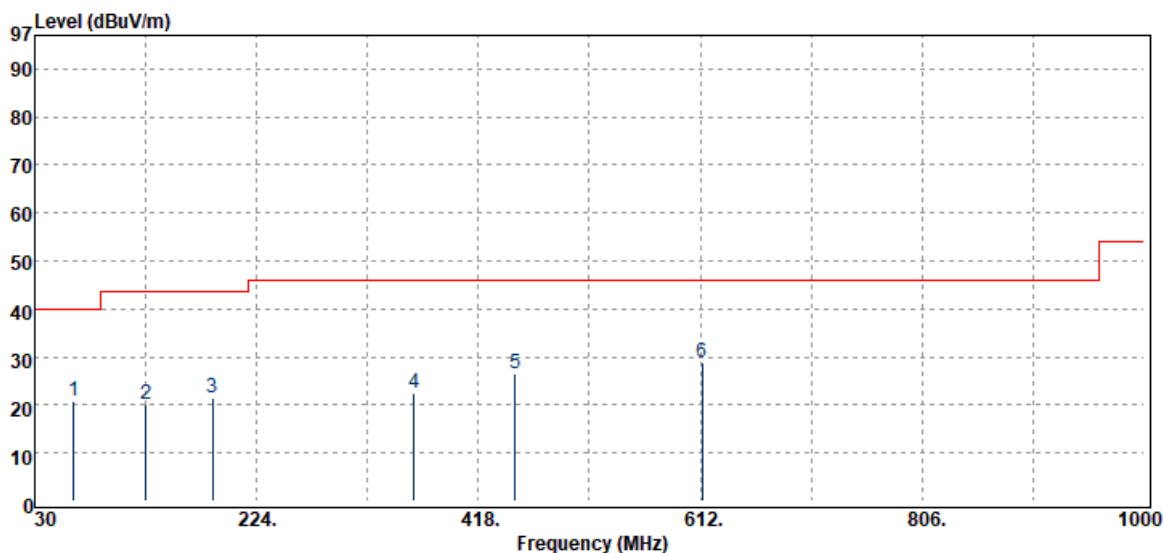
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Report Number :ER-2021-60083
Operation Mode :SYSTEM
Test Frequency :SYSTEM
Test Mode :SYSTEM
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-20
Temp./Humi. :27.8/53
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dB μ V	Factor dB	Actual FS dB μ V/m	Limit @3m dB μ V/m	Margin dB
63.95	Peak	30.37	-9.42	20.95	40.00	-19.05
127.00	Peak	29.39	-9.24	20.15	43.50	-23.35
185.20	Peak	31.21	-9.74	21.47	43.50	-22.03
361.74	Peak	28.09	-5.57	22.52	46.00	-23.48
450.01	Peak	29.85	-3.25	26.60	46.00	-19.40
613.94	Peak	28.94	-0.02	28.92	46.00	-17.08

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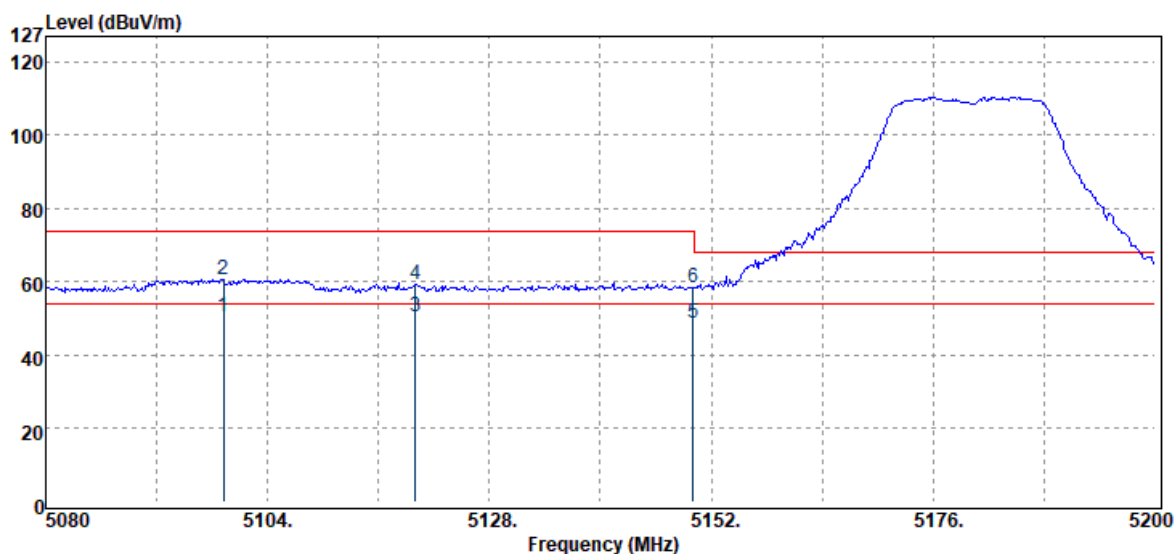
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10.6 開放頻帶邊緣量測結果

Report Number :ER-2021-60083
 Operation Mode :802.11n20
 Test Frequency :5180 MHz
 Test Mode :Bandedge CH Low
 EUT Pol :H Plane

Test Site :SAC 3
 Test Date :2021-07-16
 Temp./Humi. :27.2/57
 Antenna Pol. :VERTICAL
 Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5099.20	Average	42.11	8.61	50.72	54.00	-3.28
5099.20	Peak	52.14	8.61	60.75	74.00	-13.25
5120.00	Average	41.89	8.58	50.47	54.00	-3.53
5120.00	Peak	50.59	8.58	59.17	74.00	-14.83
5150.00	Average	40.26	8.53	48.79	54.00	-5.21
5150.00	Peak	49.77	8.53	58.30	74.00	-15.70

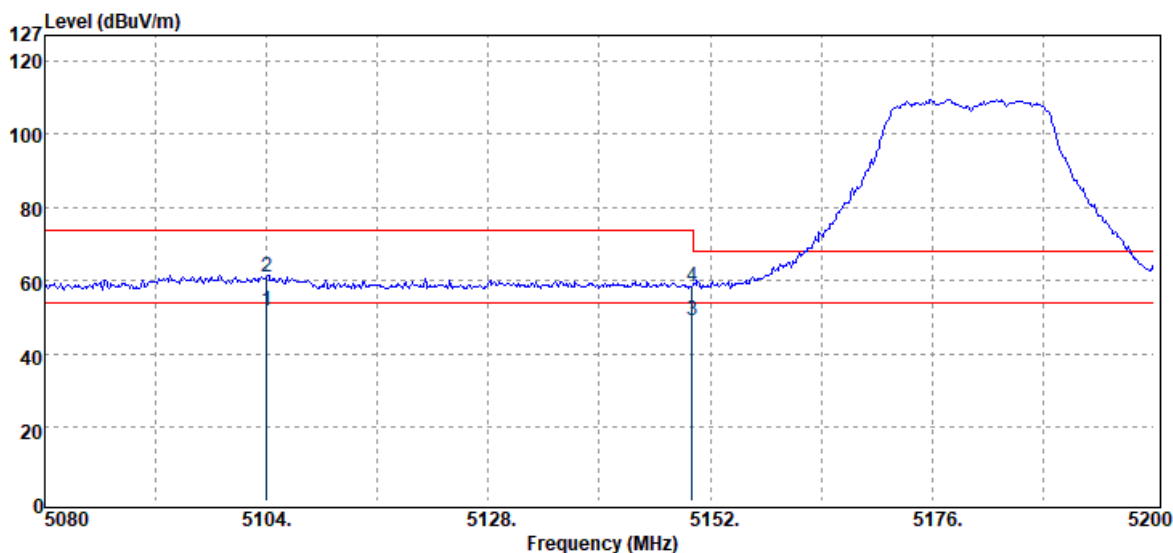
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5180 MHz
Test Mode :Bandedge CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-16
Temp./Humi. :27.2/57
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



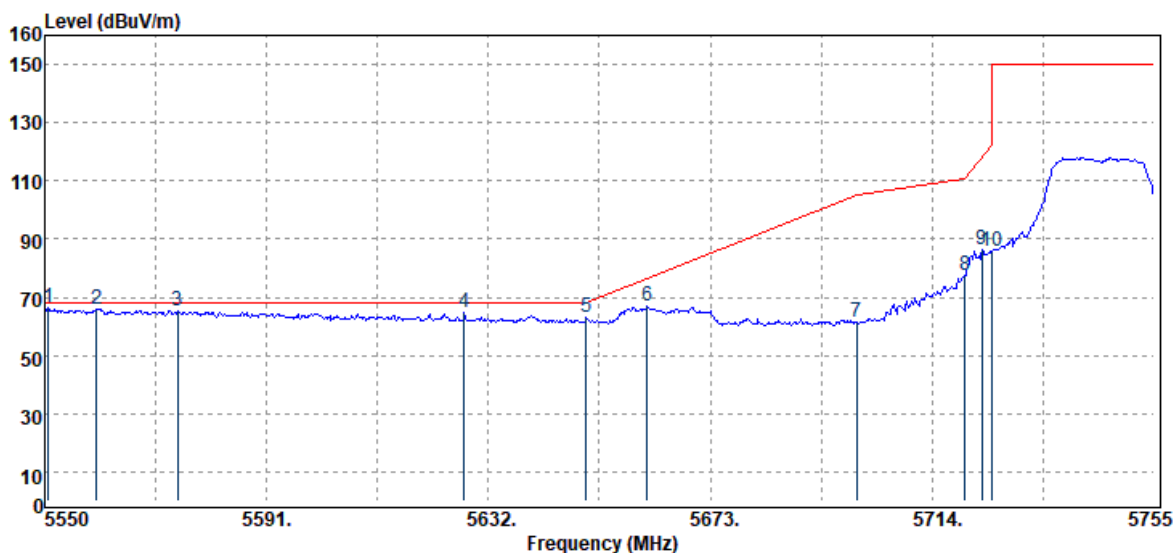
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5104.00	Average	43.37	8.61	51.98	54.00	-2.02
5104.00	Peak	52.59	8.61	61.20	74.00	-12.80
5150.00	Average	40.63	8.53	49.16	54.00	-4.84
5150.00	Peak	50.05	8.53	58.58	74.00	-15.42

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Report Number :ER-2021-60083
 Operation Mode :802.11n20
 Test Frequency :5745 MHz
 Test Mode :Bandedge CH Low
 EUT Pol :H Plane

Test Site :SAC 3
 Test Date :2021-08-31
 Temp./Humi. :28.1/49
 Antenna Pol. :VERTICAL
 Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5550.62	Peak	57.31	9.17	66.48	68.20	-1.72
5559.64	Peak	57.07	9.03	66.10	68.20	-2.10
5574.60	Peak	56.51	8.82	65.33	68.20	-2.87
5627.49	Peak	56.38	8.24	64.62	68.20	-3.58
5650.00	Peak	55.06	8.08	63.14	68.20	-5.06
5661.32	Peak	58.76	8.07	66.83	76.57	-9.74
5700.00	Peak	53.60	8.02	61.62	105.20	-43.58
5720.00	Peak	69.23	8.10	77.33	110.80	-33.47
5723.23	Peak	78.42	8.11	86.53	118.15	-31.62
5725.00	Peak	77.87	8.12	85.99	122.20	-36.21

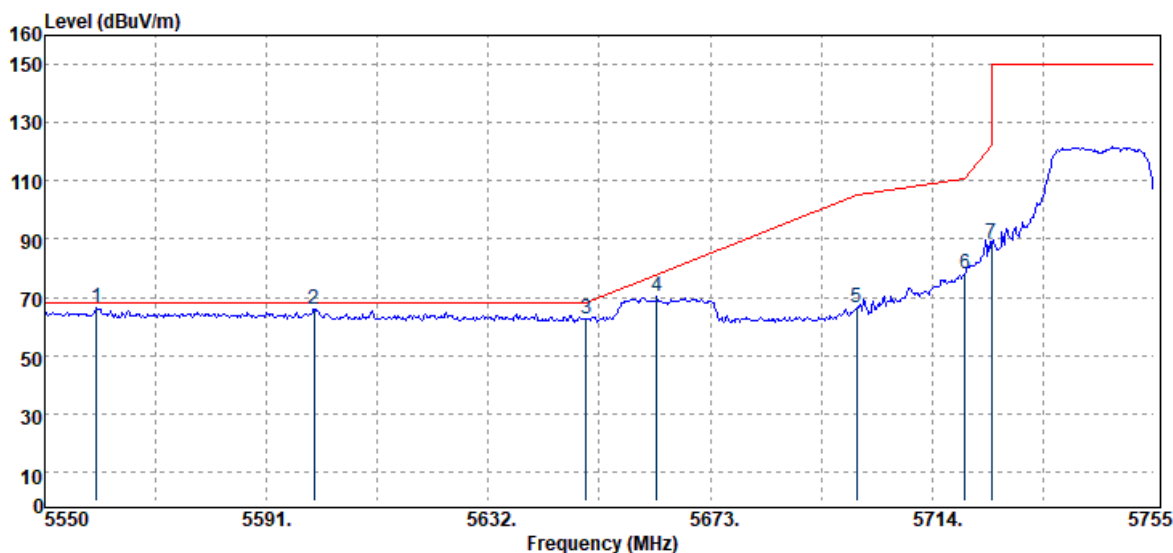
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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5745 MHz
Test Mode :Bandedge CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-08-31
Temp./Humi. :28.1/49
Antenna Pol. :HORIZONTAL
Engineer :Ricky Chen



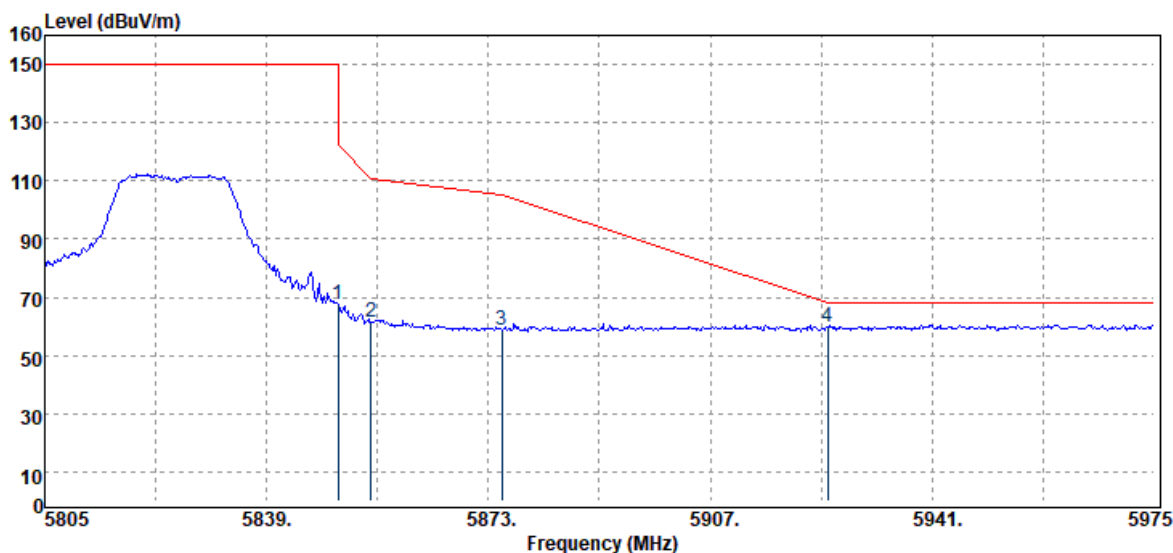
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5559.64	Peak	57.67	9.03	66.70	68.20	-1.50
5599.82	Peak	57.69	8.45	66.14	68.20	-2.06
5650.00	Peak	54.59	8.08	62.67	68.20	-5.53
5663.16	Peak	61.98	8.06	70.04	77.94	-7.90
5700.00	Peak	58.16	8.02	66.18	105.20	-39.02
5720.00	Peak	70.06	8.10	78.16	110.80	-32.64
5725.00	Peak	80.28	8.12	88.40	122.20	-33.80

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Report Number :ER-2021-60083
Operation Mode :802.11n20
Test Frequency :5825 MHz
Test Mode :Bandedge CH High
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-16
Temp./Humi. :27.2/57
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBUV	Factor dB	Actual FS dBUV/m	Limit @3m dBUV/m	Margin dB
5850.00	Peak	58.46	9.02	67.48	122.20	-54.72
5855.00	Peak	52.26	9.07	61.33	110.80	-49.47
5875.00	Peak	49.64	9.27	58.91	105.20	-46.29
5925.00	Peak	50.03	9.70	59.73	68.20	-8.47

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Report Number :ER-2021-60083

Operation Mode :802.11n20

Test Frequency :5825 MHz

Test Mode :Bandedge CH High

EUT Pol :H Plane

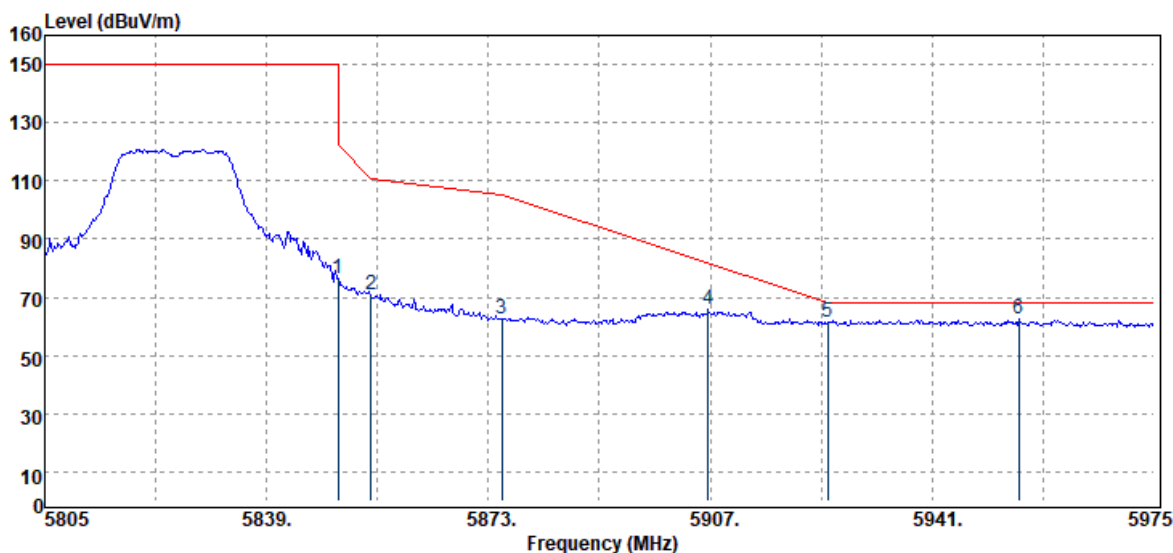
Test Site :SAC 3

Test Date :2021-07-16

Temp./Humi. :27.2/57

Antenna Pol. :HORIZONTAL

Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5850.00	Peak	67.29	9.02	76.31	122.20	-45.89
5855.00	Peak	61.81	9.07	70.88	110.80	-39.92
5875.00	Peak	53.18	9.27	62.45	105.20	-42.75
5906.66	Peak	56.27	9.57	65.84	81.77	-15.93
5925.00	Peak	51.61	9.70	61.31	68.20	-6.89
5954.26	Peak	52.51	9.90	62.41	68.20	-5.79

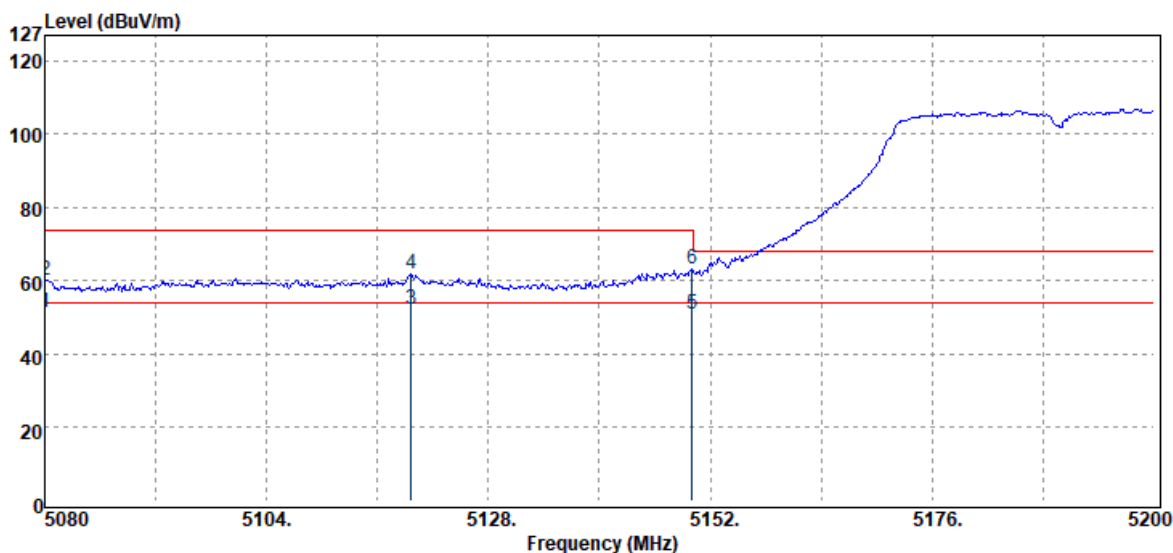
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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5190 MHz
Test Mode :Bandedge CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-16
Temp./Humi. :27.2/57
Antenna Pol. :VERTICAL
Engineer :Ricky Chen

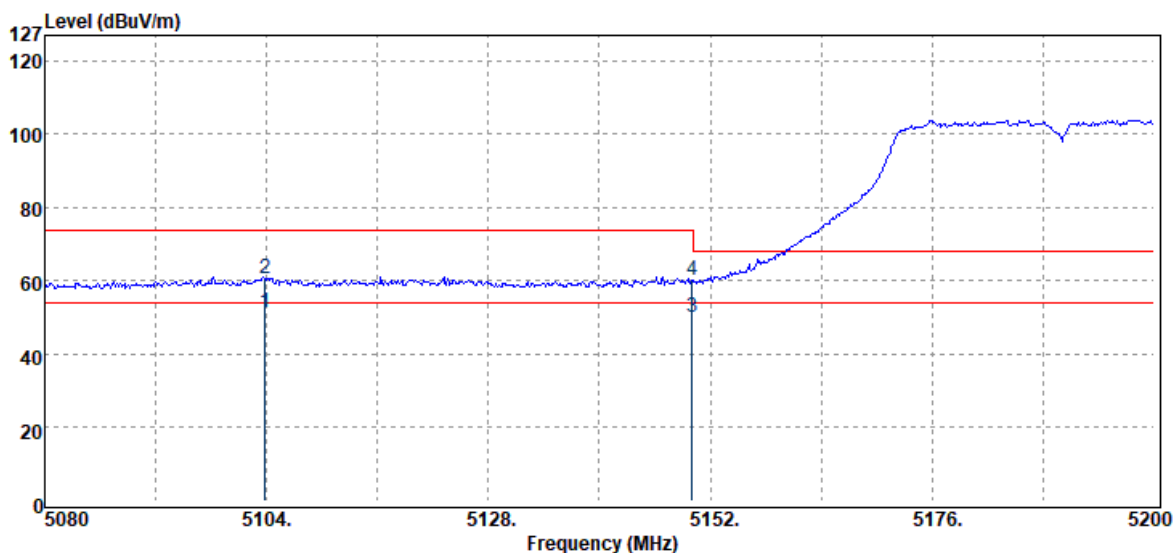


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5080.00	Average	43.26	8.37	51.63	54.00	-2.37
5080.00	Peak	51.90	8.37	60.27	74.00	-13.73
5119.60	Average	43.59	8.58	52.17	54.00	-1.83
5119.60	Peak	53.35	8.58	61.93	74.00	-12.07
5150.00	Average	42.56	8.53	51.09	54.00	-2.91
5150.00	Peak	54.83	8.53	63.36	74.00	-10.64

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Report Number	:ER-2021-60083	Test Site	:SAC 3
Operation Mode	:802.11n40	Test Date	:2021-07-16
Test Frequency	:5190 MHz	Temp./Humi.	:27.2/57
Test Mode	:Bandedge CH Low	Antenna Pol.	:HORIZONTAL
EUT Pol	:H Plane	Engineer	:Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5103.80	Average	42.89	8.61	51.50	54.00	-2.50
5103.80	Peak	51.95	8.61	60.56	74.00	-13.44
5150.00	Average	41.55	8.53	50.08	54.00	-3.92
5150.00	Peak	51.78	8.53	60.31	74.00	-13.69

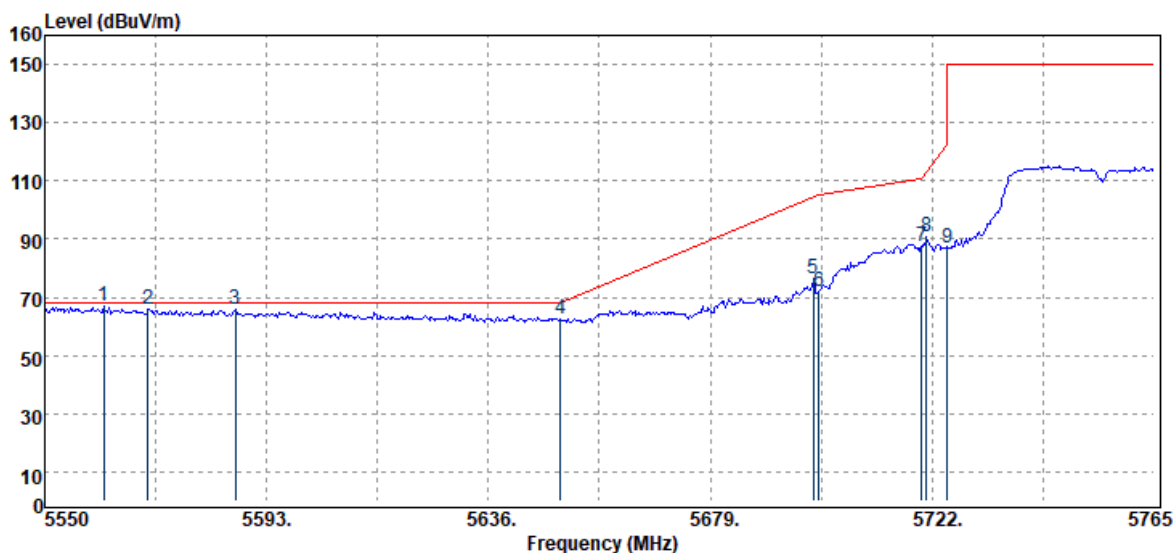
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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5755 MHz
Test Mode :Bandedge CH Low
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-08-31
Temp./Humi. :28.1/49
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



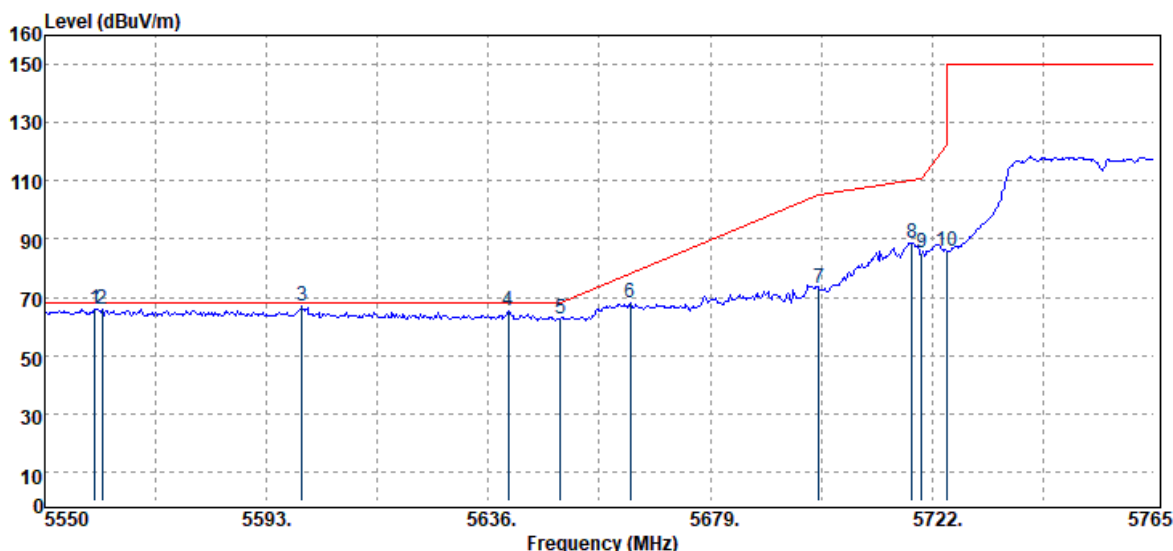
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5561.40	Peak	57.80	9.00	66.80	68.20	-1.40
5570.00	Peak	57.09	8.88	65.97	68.20	-2.23
5586.98	Peak	57.25	8.63	65.88	68.20	-2.32
5650.00	Peak	54.23	8.08	62.31	68.20	-5.89
5699.00	Peak	68.33	8.03	76.36	104.46	-28.10
5700.00	Peak	64.20	8.02	72.22	105.20	-32.98
5720.00	Peak	79.61	8.10	87.71	110.80	-23.09
5720.93	Peak	82.64	8.10	90.74	112.91	-22.17
5725.00	Peak	78.95	8.12	87.07	122.20	-35.13

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Report Number :ER-2021-60083
 Operation Mode :802.11n40
 Test Frequency :5755 MHz
 Test Mode :Bandedge CH Low
 EUT Pol :H Plane

Test Site :SAC 3
 Test Date :2021-08-31
 Temp./Humi. :28.1/49
 Antenna Pol. :HORIZONTAL
 Engineer :Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5559.68	Peak	57.12	9.03	66.15	68.20	-2.05
5561.18	Peak	56.93	9.01	65.94	68.20	-2.26
5599.88	Peak	58.34	8.45	66.79	68.20	-1.41
5639.87	Peak	57.40	8.15	65.55	68.20	-2.65
5650.00	Peak	54.60	8.08	62.68	68.20	-5.52
5663.52	Peak	59.84	8.06	67.90	78.20	-10.30
5700.00	Peak	65.03	8.02	73.05	105.20	-32.15
5718.13	Peak	80.69	8.10	88.79	110.28	-21.49
5720.00	Peak	77.08	8.10	85.18	110.80	-25.62
5725.00	Peak	77.60	8.12	85.72	122.20	-36.48

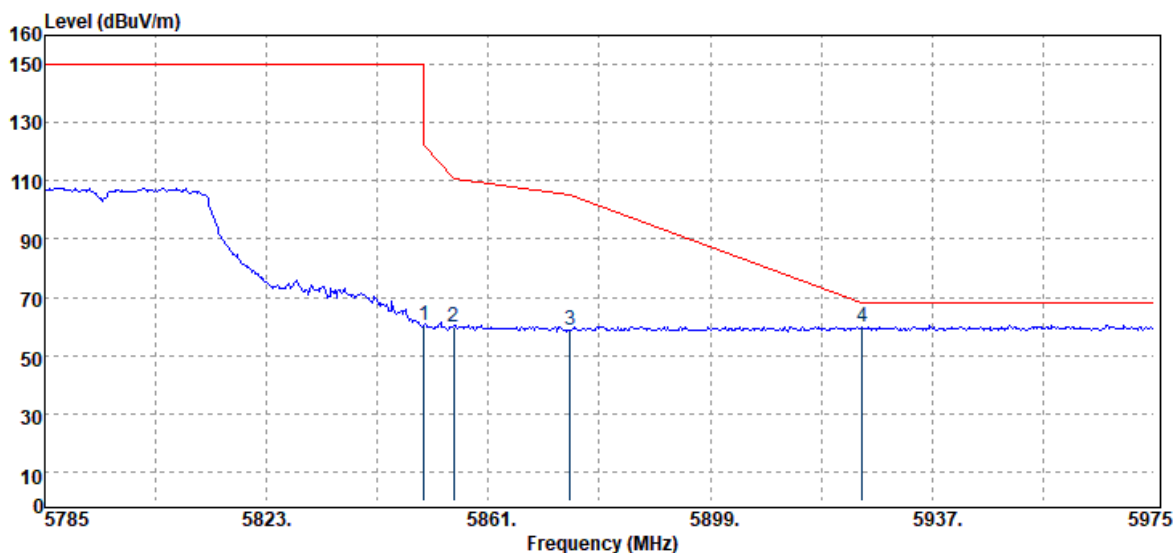
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Report Number :ER-2021-60083
Operation Mode :802.11n40
Test Frequency :5795 MHz
Test Mode :Bandedge CH High
EUT Pol :H Plane

Test Site :SAC 3
Test Date :2021-07-16
Temp./Humi. :27.2/57
Antenna Pol. :VERTICAL
Engineer :Ricky Chen



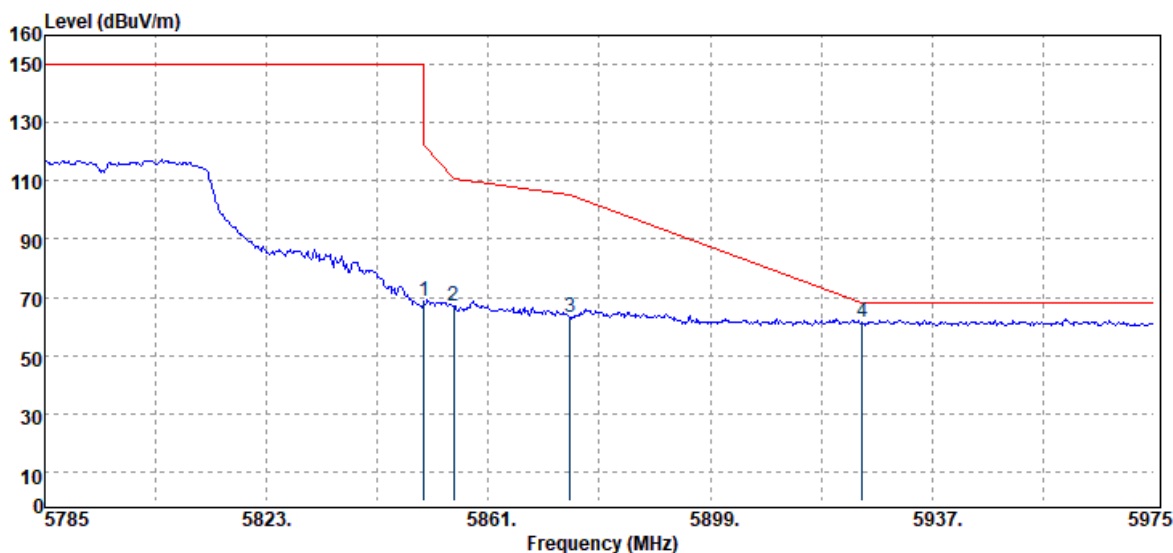
Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBUV	Factor dB	Actual FS dBUV/m	Limit @3m dBUV/m	Margin dB
5850.00	Peak	51.51	9.02	60.53	122.20	-61.67
5855.00	Peak	50.69	9.07	59.76	110.80	-51.04
5875.00	Peak	49.35	9.27	58.62	105.20	-46.58
5925.00	Peak	49.87	9.70	59.57	68.20	-8.63

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Report Number	:ER-2021-60083	Test Site	:SAC 3
Operation Mode	:802.11n40	Test Date	:2021-07-16
Test Frequency	:5795 MHz	Temp./Humi.	:27.2/57
Test Mode	:Bandedge CH High	Antenna Pol.	:HORIZONTAL
EUT Pol	:H Plane	Engineer	:Ricky Chen



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
5850.00	Peak	59.39	9.02	68.41	122.20	-53.79
5855.00	Peak	57.76	9.07	66.83	110.80	-43.97
5875.00	Peak	53.70	9.27	62.97	105.20	-42.23
5925.00	Peak	51.81	9.70	61.51	68.20	-6.69

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11 26DB & 6DB 頻寬之測試

11.1 適用標準

(1) 5.15 GHz~5.25 GHz、5.25 GHz~5.35 GHz 及 5.47 GHz~5.725 GHz 頻段，測試儀器之頻寬應設定為 1 MHz 頻寬或待測物之 26 dB 發射頻寬，兩者取較小者。

(2) 5.725 GHz~5.850 GHz 頻段，測試儀器之頻寬應設定為 500 kHz 或待測物之 26dB 發射頻寬，兩者取較小者。

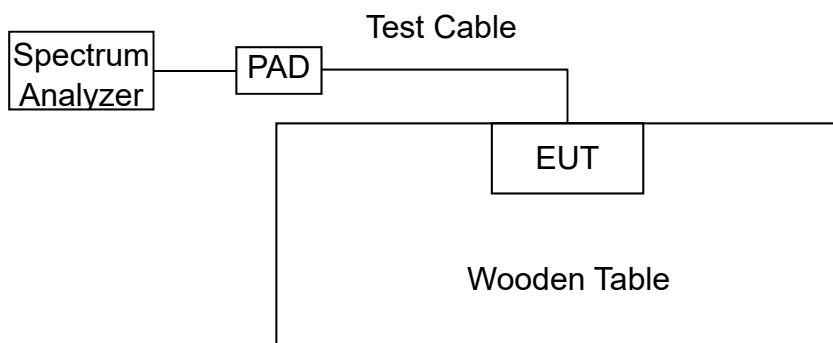
解析頻寬小於(1)或(2)時，應以補償方式計算總功率頻譜密度。

11.2 量測方法

將發射機之天線埠經由適當之衰減直接連至測試儀器。

設定儀器之解析頻寬為 100KHz, 視訊頻寬 $\geq$ 解析頻寬, 頻率掃描範圍(span)大於解析頻寬

11.3 測試配置



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11.4 量測結果

802.11n_HT20_Main

Freq. (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5180	21.15	13.250
5220	21.45	13.310
5240	21.66	13.360

802.11n_HT20_Aux

Freq. (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5180	21.93	13.410
5220	21.73	13.370
5240	21.52	13.330

802.11n_HT20_Main

Freq. (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5745	17.17	12.350
5785	16.70	12.230
5825	17.33	12.390

802.11n_HT20_Aux

Freq. (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5745	16.90	12.280
5785	16.90	12.280
5825	16.77	12.250

802.11n_HT20_Main

Freq. (MHz)	Measured Freq. (MHz)	Limit (MHz)
5240	5248.81	< 5250
5745	5736.14	> 5725

802.11n_HT20_Aux

Freq. (MHz)	Measured Freq. (MHz)	Limit (MHz)
5240	5248.80	< 5250
5745	5736.13	> 5725

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802.11n_HT40_Main

Freq. (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5190	46.07	16.630
5230	43.83	16.420

802.11n_HT40_Aux

Freq. (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5190	44.39	16.470
5230	44.70	16.500

802.11n_HT40_Main

Freq. (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5755	35.48	15.500
5795	35.42	15.490

802.11n_HT40_Aux

Freq. (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5755	35.75	15.530
5795	35.52	15.500

802.11n_HT40_Main

Freq. (MHz)	Measured Freq. (MHz)	Limit (MHz)
5230	5248.14	< 5250
5755	5736.84	> 5725

802.11n_HT40_Aux

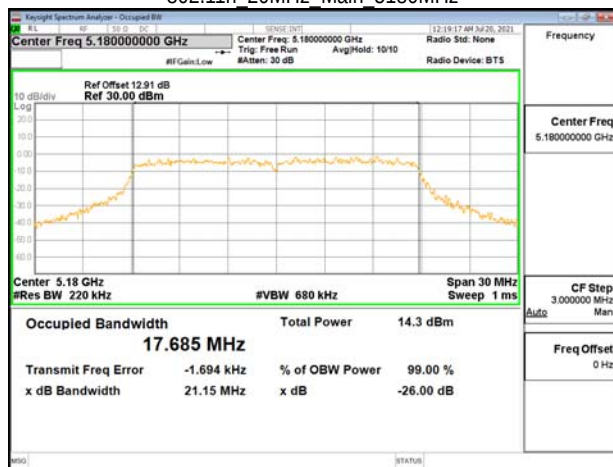
Freq. (MHz)	Measured Freq. (MHz)	Limit (MHz)
5230	5248.05	< 5250
5755	5736.83	> 5725

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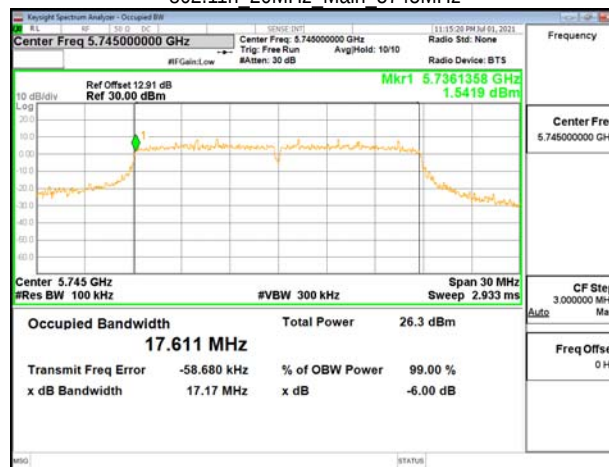
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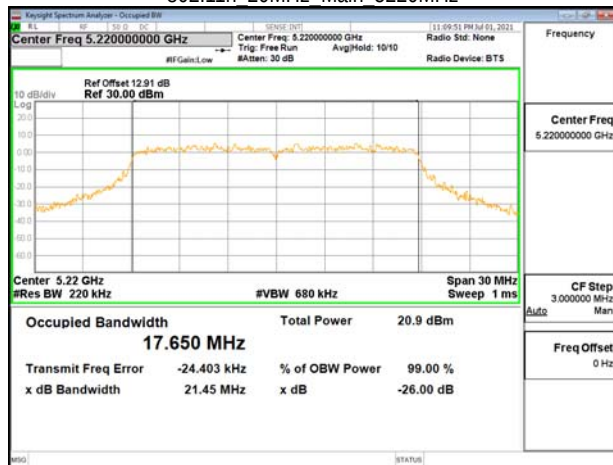
802.11n 20MHz Main 5180MHz



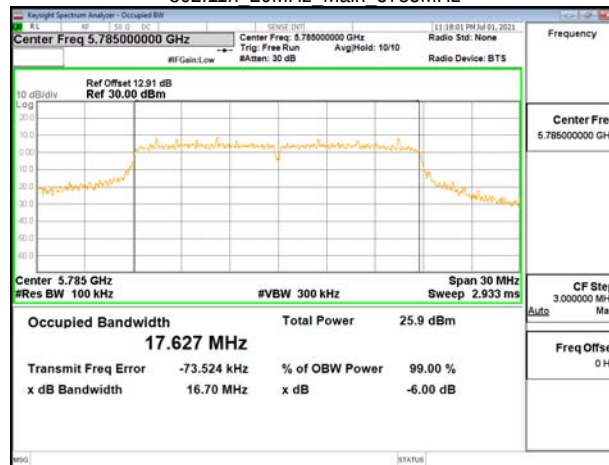
802.11n 20MHz Main 5745MHz



802.11n 20MHz Main 5220MHz



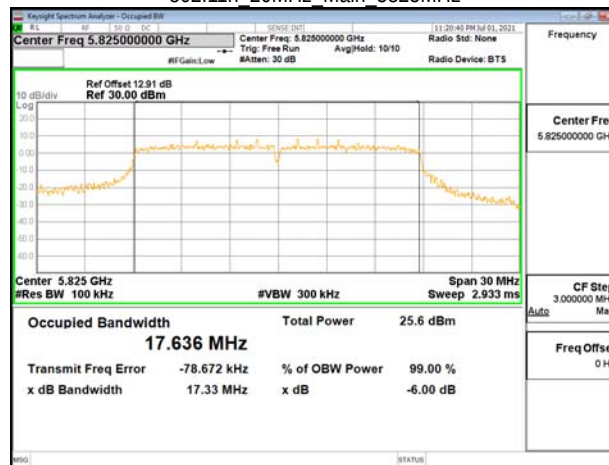
802.11n 20MHz Main 5785MHz



802.11n 20MHz Main 5240MHz



802.11n 20MHz Main 5825MHz

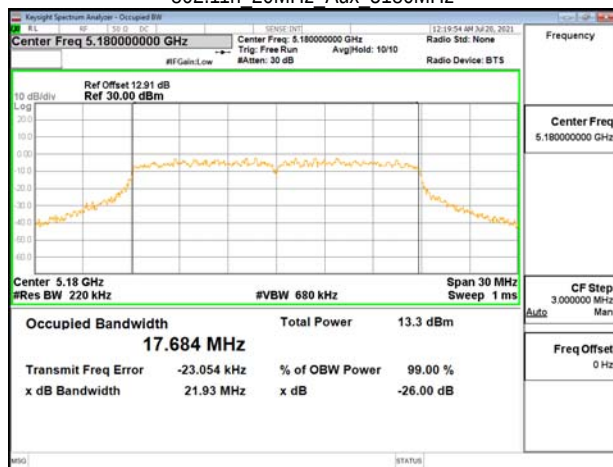


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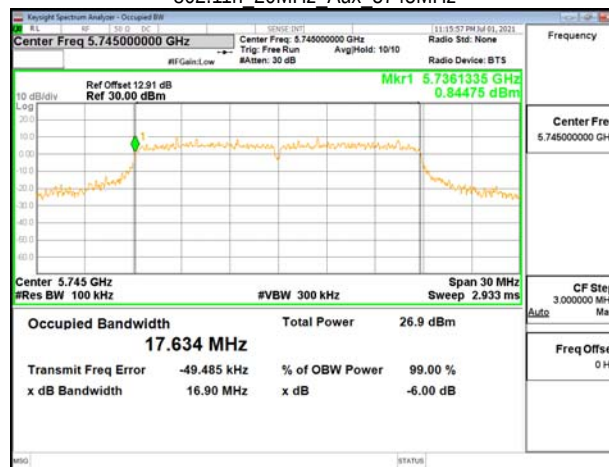
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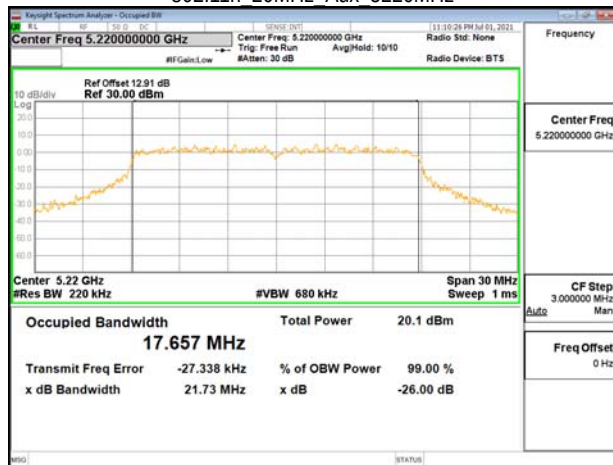
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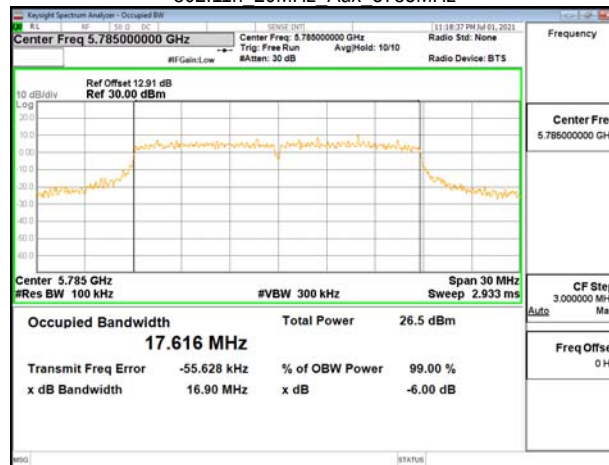
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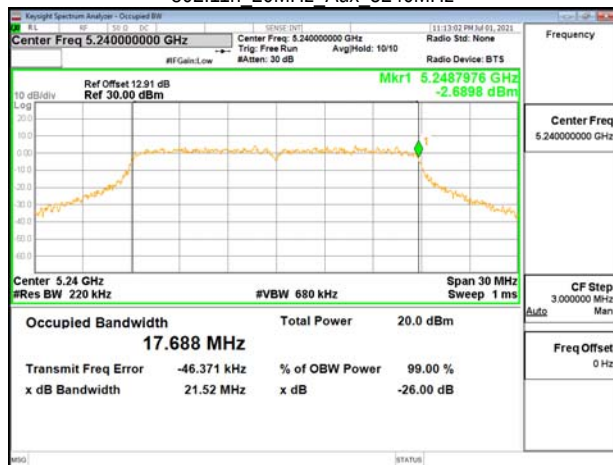
802.11n 20MHz Aux 5220MHz



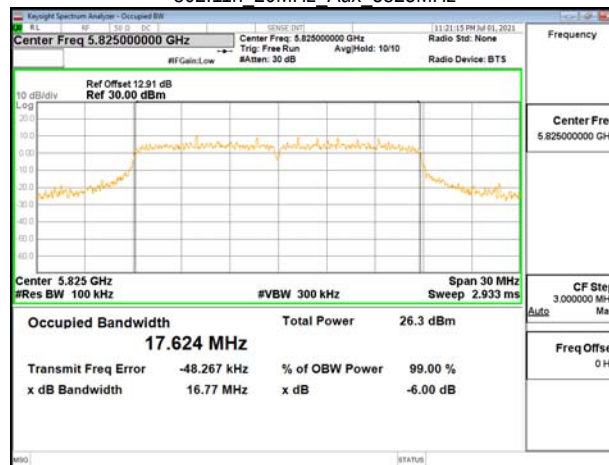
802.11n 20MHz Aux 5785MHz



802.11n 20MHz Aux 5240MHz



802.11n 20MHz Aux 5825MHz

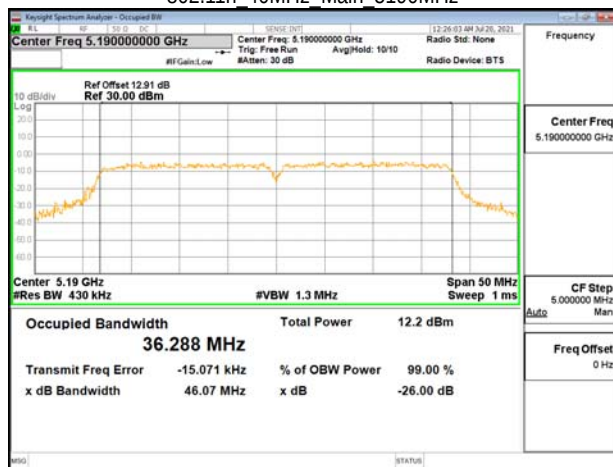


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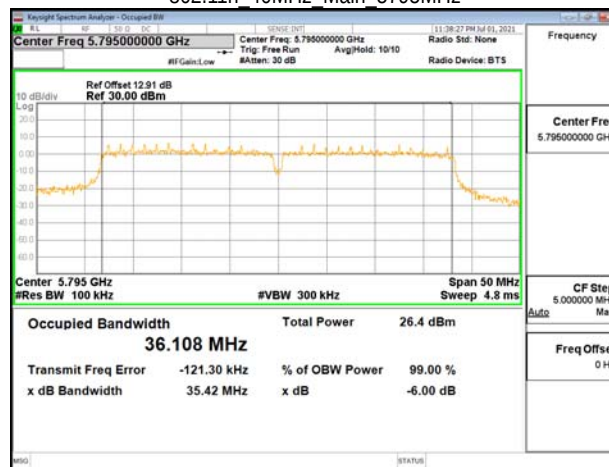
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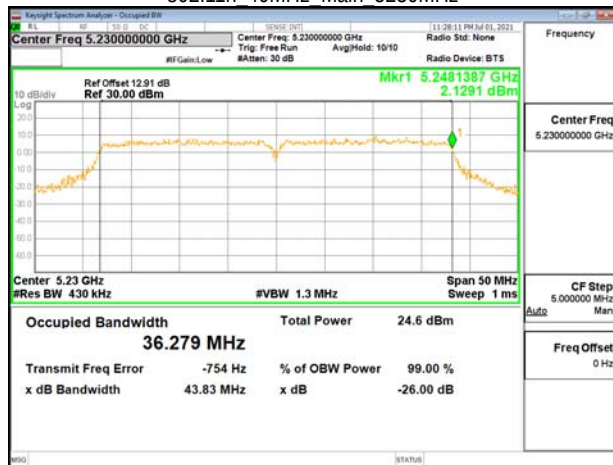
802.11n 40MHz Main 5190MHz



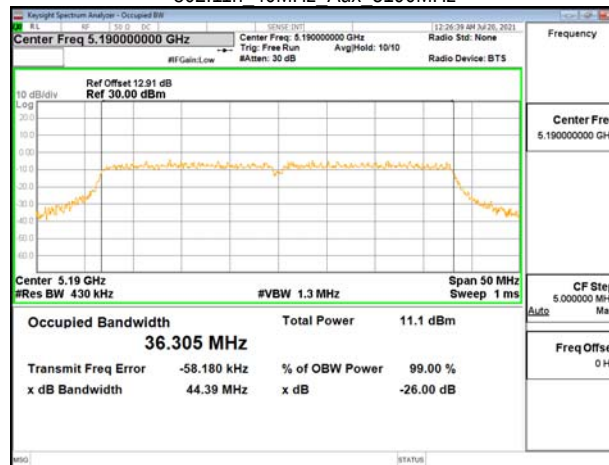
802.11n 40MHz Main 5795MHz



802.11n 40MHz Main 5230MHz



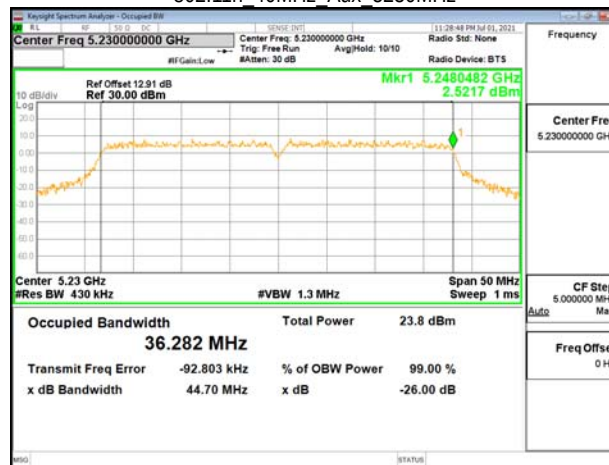
802.11n 40MHz Aux 5190MHz



802.11n 40MHz Main 5755MHz



802.11n 40MHz Aux 5230MHz

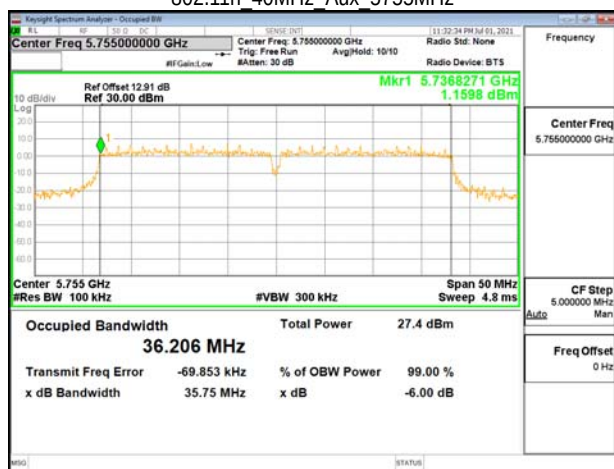


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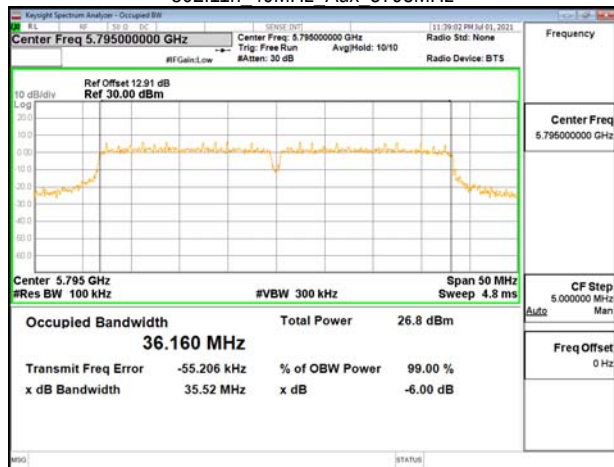
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802.11n 40MHz Aux 5755MHz



802.11n 40MHz Aux 5795MHz



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12 輸出峰值功率之量測

12.1 適用標準

依據NCC低功率射頻器材技術規範5.7.3節之要求，使用於5.15 GHz~5.25 GHz 頻段

(1) 供戶外操作使用：

- (A) 最大傳導輸出功率應小於或等於1 W。
- (B) 在任何1 MHz 頻帶中最大功率頻譜密度應小於或等於17 dBm。
- (C) 使用超過6 dBi 方向增益之發射天線時，應依超過6 dBi 天線方向增益的dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。
- (D) 在水平面仰角超過30 度時，其最大EIRP 應小於或等於21 dBm。

(2) 供室內操作使用：

- (A) 最大傳導輸出功率應小於或等於1 W。
- (B) 在任何1 MHz 頻帶中最大功率頻譜密度應小於或等於17 dBm。
- (C) 使用超過6 dBi 方向增益之發射天線時，應依超過6 dBi 天線方向增益的dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。

(3) 供固定式點對點操作使用：

- (A) 最大傳導輸出功率應小於或等於1 W。
- (B) 在任何1 MHz 頻帶中最大功率頻譜密度應小於或等於17 dBm。
- (C) 使用超過23 dBi 方向增益之指向性天線時，應依超過23 dBi 天線方向增益的dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。
- (D) 固定式點對點操作，不包括點對多點系統、全方向性應用及多台共站發射機傳送相同資訊。

(4) 供用戶端裝置(Client Device)操作使用：

- (A) 最大傳導輸出功率應小於或等於250 mW。
- (B) 在任何1 MHz 頻帶中最大功率頻譜密度應小於或等於11 dBm。
- (C) 使用超過6 dBi 方向增益之發射天線時，應依超過6 dBi 天線方向增益的dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。

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

- (1) 最大傳導輸出功率應小於或等於250 mW或11dBm+10log B (B是26 dB發射頻寬，單位MHz)之較小者。
- (2) 最大功率頻譜密度在任何1 MHz 頻帶中應小於或等於11 dBm。
- (3) 使用超過6 dBi 方向增益之發射天線時，應依超過6 dBi 天線方向增益的dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。

使用頻率於5.725 GHz~5.850 GHz 頻段

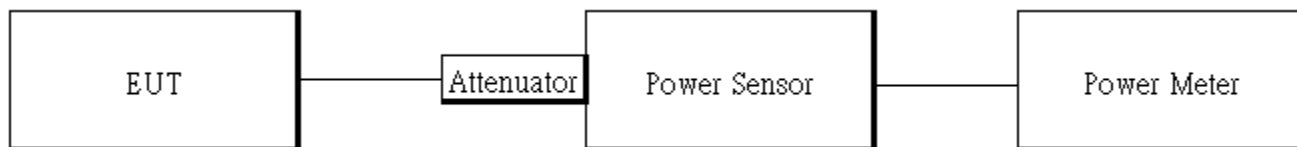
- (1) 最大傳導輸出功率應小於或等於1 W。
- (2) 在任何500 kHz 頻帶中最大功率頻譜密度應小於或等於30 dBm。
- (3) 供固定式點對點操作時，使用方向增益超過6 dBi 之發射天線，可不需對應減少發射器之傳導輸出功率限制值。
- (4) 除(3)外，使用超過6 dBi 方向增益之發射天線時，應依超過6 dBi 天線方向增益的dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。

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12.2 輸出功率之測試配置



12.3 量測方式

12.3.1 載波頻率工作週期儀器設定

Span = Zero, RBW = 8MHz, VBW = 8MHz, Detector = Peak

12.3.2 輸出功率量測

1. 將 EUT 置於發射模式。
2. 移除天線，使用 low loss cable 連接 EUT 的 antenna port 及 power meter。
3. 設定 offset $10 \cdot \log(1/x)$ ($x=0.99$), 約等於 0.04。
4. 紀錄最大功率讀值並重覆在所有頻段。

12.4 天線增益及輸出功率限值計算

依據 FCC KDB 662911 D01 F. 2). e). (ii)

If antenna gains are not equal and each transmit antenna is driven by only one spatial stream, directional gain may be calculated by either of the following formulas.

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

NSS = the number of independent spatial streams of data;

NANT = the total number of antennas

$g_{j,k}$ = / 20 10Gk if the kth antenna is being fed by spatial stream j, or zero if it is not;

G_k is the gain in dBi of the kth antenna.

天線方向增益大於 6dBi, 因此降低輸出功率限值，並計入測試結果:

	Antenna Gain (dBi)	Conducted Power Limit (dBm)
UNII-1	15.01	20.99
UNII-3	15.01	20.99

*註: 本器材供戶外操作使用

*註: 經評估比較各調變測試值後，附上最差模式數據。

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12.5 量測結果

12.5.1 載波頻率工作週期

Mode	Duty Cycle (%) =Ton / (Ton+Toff)	Duty Factor (dB) =10*log (1/Duty Cycle)	1/T (kHz)	VBW setting (kHz)
802.11n_20	96.00	0.18	0.66	1.00
802.11n_40	95.00	0.22	1.33	2.00

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802.11n 20MHz Main 5180MHz



802.11n 40MHz Main 5190MHz



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12.5.2 輸出功率之量測結果

802.11n_HT20_MIMO

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Main	Aux				
36	5180	MCS8	9	8.65	7.78	11.42	13.881	20.99	PASS
44	5220	MCS8	13	12.34	11.71	15.22	33.297	20.99	PASS
48	5240	MCS8	13	12.42	12.17	15.48	35.354	20.99	PASS
149	5745	MCS8	17	17.32	17.86	20.79	119.839	20.99	PASS
157	5785	MCS8	17	17.36	17.72	20.73	118.340	20.99	PASS
165	5825	MCS8	18	17.08	18.09	20.80	120.279	20.99	PASS

802.11n_HT40_MIMO

CH	Frequency (MHz)	Data Rate	Power set	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
				Main	Aux				
38	5190	MCS8	6	6.22	5.24	8.99	7.926	20.99	PASS
46	5230	MCS8	13	12.64	11.85	15.50	35.449	20.99	PASS
151	5755	MCS8	17	16.68	17.74	20.48	111.566	20.99	PASS
159	5795	MCS8	17	16.77	17.72	20.50	112.305	20.99	PASS

Antenna 30 degrees

MODE	BANDWIDTH (MHz)	FREQUENCY (MHz)	MAXIMUM CONDUCTED OUTPUT POWER (dBm)	ELEVATION ABOVE 30° DIRECTIONAL GAIN (dBi)	ELEVATION ABOVE 30° MAX EIRP (dBm)	EIRP LIMIT (dBm)	RESULT
Configuration IEEE 802.11n_HT20	20	5180	11.42	5.01	16.43	21	PASS
		5220	15.22	5.01	20.23	21	PASS
		5240	15.48	5.01	20.49	21	PASS
Configuration IEEE 802.11_HT40	40	5190	8.99	5.01	14.00	21	PASS
		5230	15.50	5.01	20.51	21	PASS

Note: 此 EUT 有多組功率可選擇，量測數據請參閱附件一。

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13 功率密度之限制

13.1 適用標準

依據NCC低功率射頻器材技術規範5.7.3節之要求，使用於5.15 GHz~5.25 GHz 頻段

(1) 供戶外操作使用：

- (A) 最大傳導輸出功率應小於或等於1 W。
- (B) 在任何1 MHz 頻帶中最大功率頻譜密度應小於或等於17 dBm。
- (C) 使用超過6 dBi 方向增益之發射天線時，應依超過6 dBi 天線方向增益的dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。
- (D) 在水平面仰角超過30 度時，其最大EIRP 應小於或等於21 dBm。

(2) 供室內操作使用：

- (A) 最大傳導輸出功率應小於或等於1 W。
- (B) 在任何1 MHz 頻帶中最大功率頻譜密度應小於或等於17 dBm。
- (C) 使用超過6 dBi 方向增益之發射天線時，應依超過6 dBi 天線方向增益的dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。

(3) 供固定式點對點操作使用：

- (A) 最大傳導輸出功率應小於或等於1 W。
- (B) 在任何1 MHz 頻帶中最大功率頻譜密度應小於或等於17 dBm。
- (C) 使用超過23 dBi方向增益之指向性天線時，應依超過23 dBi天線方向增益的dBi總量，等量減少最大傳導輸出功率及最大功率頻譜密度。
- (D) 固定式點對點操作，不包括點對多點系統、全方向性應用及多台共站發射機傳送相同資訊。

(4) 供用戶端裝置(Client Device)操作使用：

- (A) 最大傳導輸出功率應小於或等於250 mW。
- (B) 在任何1 MHz 頻帶中最大功率頻譜密度應小於或等於11 dBm。
- (C) 使用超過6 dBi 方向增益之發射天線時，應依超過6 dBi 天線方向增益的dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。

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

- (1) 最大傳導輸出功率應小於或等於250 mW或11dBm+10log B (B是26 dB發射頻寬，單位MHz)之較小者。
- (2) 最大功率頻譜密度在任何1 MHz 頻帶中應小於或等於11 dBm。
- (3) 使用超過6 dBi 方向增益之發射天線時，應依超過6 dBi 天線方向增益的dBi 總量，等量減少最大傳導輸出功率及最大功率頻譜密度。

使用頻率於5.725 GHz~5.850 GHz 頻段

- (1) 最大傳導輸出功率應小於或等於1 W。
- (2) 在任何500 kHz 頻帶中最大功率頻譜密度應小於或等於30 dBm。
- (3) 供固定式點對點操作時，使用方向增益超過6 dBi 之發射天線，可不需對應減少發射器之傳導輸出功率限制值。
- (4) 除(3)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及最大功率頻譜密度。

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13.2 測試方式

將發射機之天線埠經由適當之衰減直接連至測試儀器。找出發射峰值並擴展於通帶內，設定解析頻寬為 1 MHz，視訊頻寬大於解析頻寬。

13.3 天線增益及最大功率頻譜密度限值計算

依據 FCC KDB 662911 D01 F. 2). e). (ii)

If antenna gains are not equal and each transmit antenna is driven by only one spatial stream, directional gain may be calculated by either of the following formulas.

$$\bullet \quad DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

NSS = the number of independent spatial streams of data;

NANT = the total number of antennas

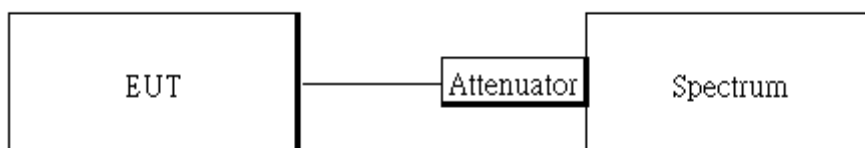
$g_{j,k}$ = / 20 10Gk if the kth antenna is being fed by spatial stream j, or zero if it is not;

G_k is the gain in dBi of the kth antenna.

天線方向增益大於 6dBi, 因此降低最大功率頻譜密度限值，並計入測試結果:

	Antenna Gain (dBi)	PSD Limit	
UNII-1	15.01	7.99	dBm/Mhz
U-NII-3	15.01	20.99	dBm/500kHz

13.4 測試配置



*註: 經評估比較各調變測試值後，附上最差模式數據。

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13.5 功率密度量測結果

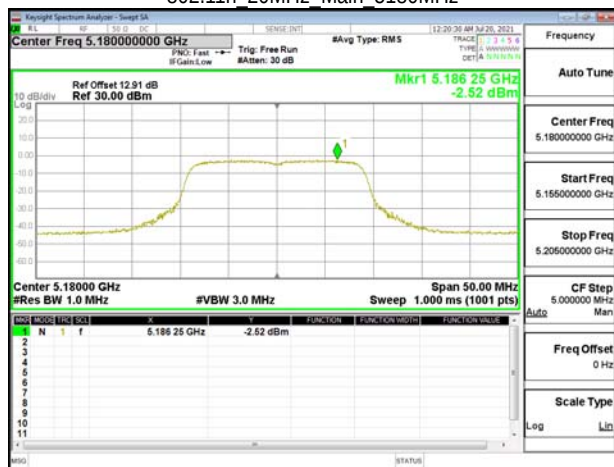
POWER DENSITY 802.11n HT20 MODE							
Frequency (MHz)	Main meas PSD (dBm/MHz)	Aux meas PSD (dBm/MHz)	Duty Factor (dB)	Total Corr'd PSD(dBm/MHz)		Limit	Margin (dB)
5180	-2.52	-3.51	0.18	0.20		7.99 dBm/MHz	-7.79
5220	1.34	0.99	0.18	4.36		7.99 dBm/MHz	-3.63
5240	1.45	1.19	0.18	4.51		7.99 dBm/MHz	-3.48
Frequency (MHz)	Main meas PSD (dBm/300kHz)	Aux meas PSD (dBm/300kHz)	Duty Factor (dB)	10log (500kHz/RBW) Factor(dB)	Total Corr'd PSD(dBm/500kHz)	Limit	Margin (dB)
5745	1.89	2.51	0.18	2.22	7.62	20.99 dBm/500kHz	-13.37
5785	1.52	1.94	0.18	2.22	7.15	20.99 dBm/500kHz	-13.84
5825	0.76	1.83	0.18	2.22	6.74	20.99 dBm/500kHz	-14.25
POWER DENSITY 802.11n HT40 MODE							
Frequency (MHz)	Main meas PSD (dBm/MHz)	Aux meas PSD (dBm/MHz)	Duty Factor (dB)	Total Corr'd PSD(dBm/MHz)		Limit	Margin (dB)
5190	-7.37	-8.82	0.22	-4.81		7.99 dBm/MHz	-12.80
5230	-1.02	-2.54	0.22	1.52		7.99 dBm/MHz	-6.47
Frequency (MHz)	Main meas PSD (dBm/300kHz)	Aux meas PSD (dBm/300kHz)	Duty Factor (dB)	10log (500kHz/RBW) Factor(dB)	Total Corr'd PSD(dBm/500kHz)	Limit	Margin (dB)
5755	-1.40	-1.11	0.22	2.22	4.20	20.99 dBm/500kHz	-16.79
5795	-2.38	-1.41	0.22	2.22	3.58	20.99 dBm/500kHz	-17.41

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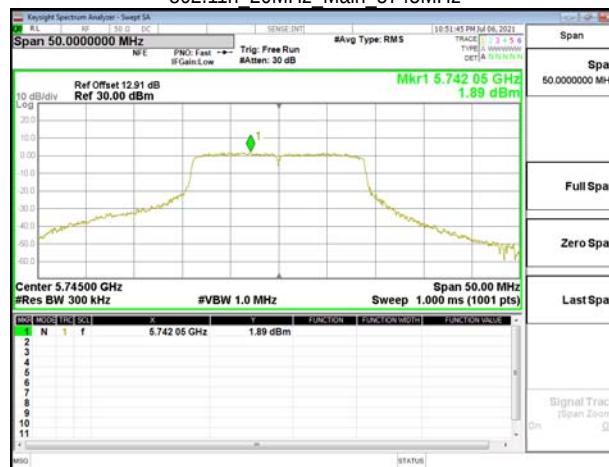
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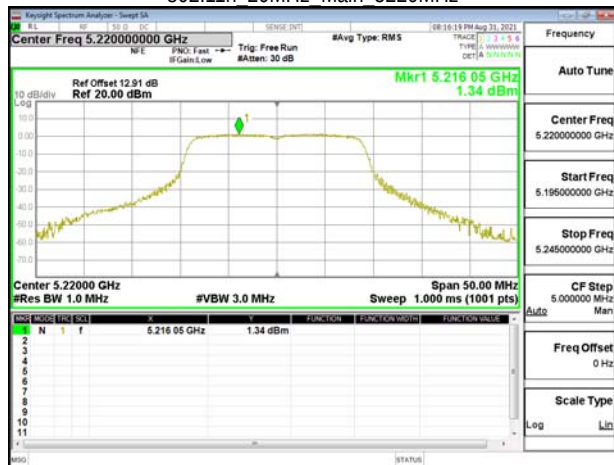
802.11n 20MHz Main 5180MHz



802.11n 20MHz Main 5745MHz



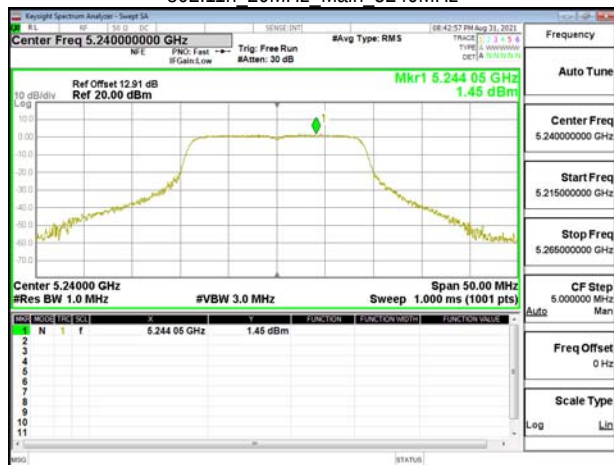
802.11n 20MHz Main 5220MHz



802.11n 20MHz Main 5785MHz



802.11n 20MHz Main 5240MHz



802.11n 20MHz Main 5825MHz

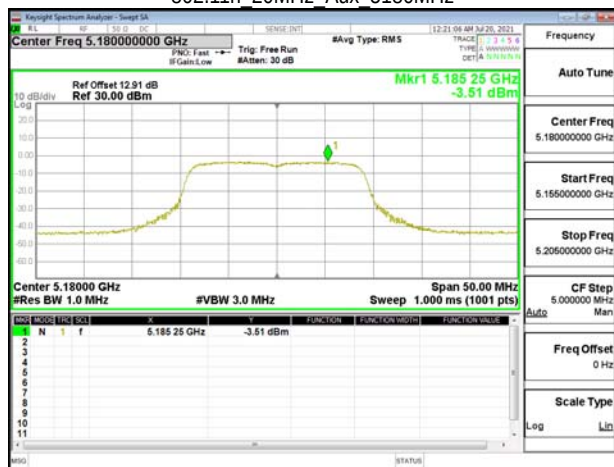


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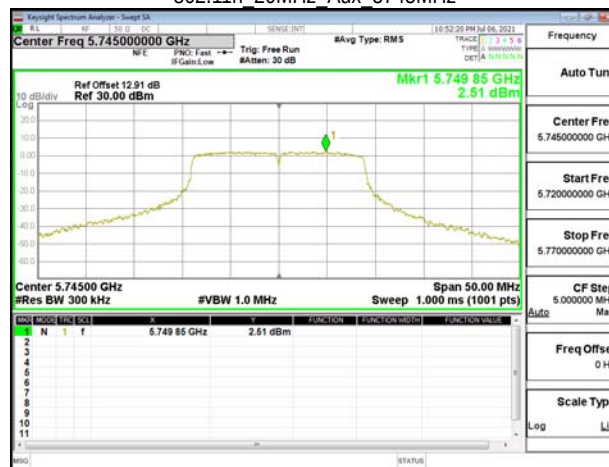
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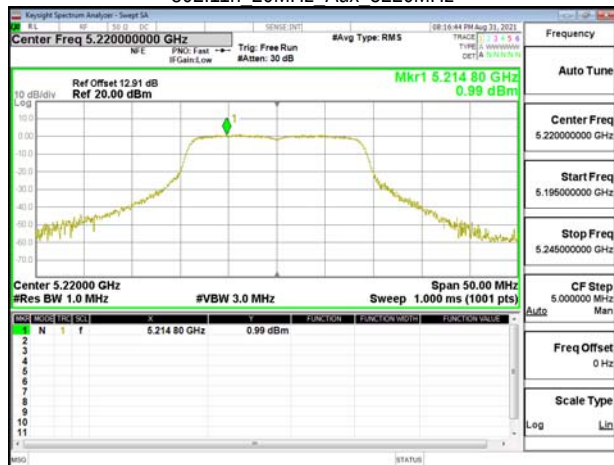
802.11n 20MHz Aux 5180MHz



802.11n 20MHz Aux 5745MHz



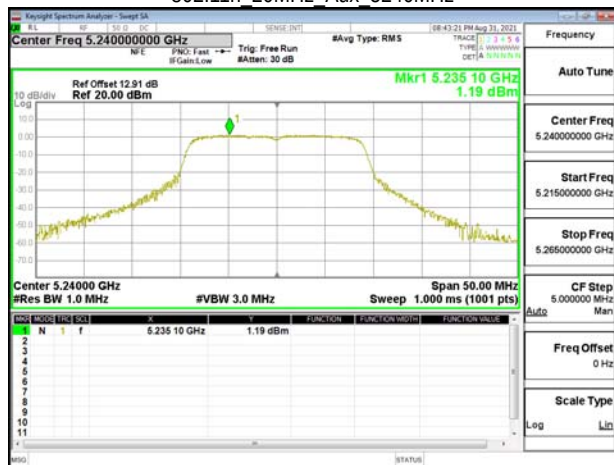
802.11n 20MHz Aux 5220MHz



802.11n 20MHz Aux 5785MHz



802.11n 20MHz Aux 5240MHz



802.11n 20MHz Aux 5825MHz

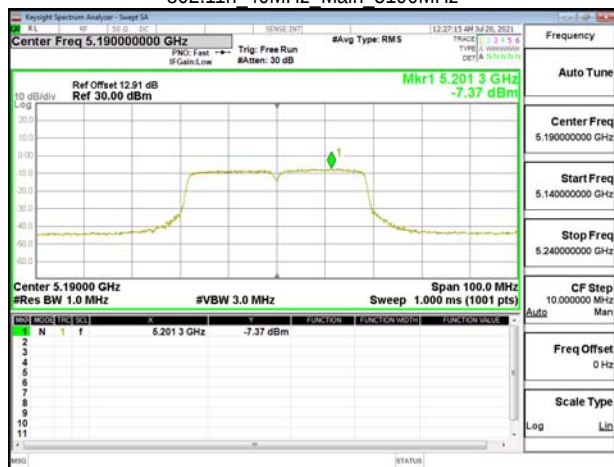


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802.11n 40MHz Main 5190MHz



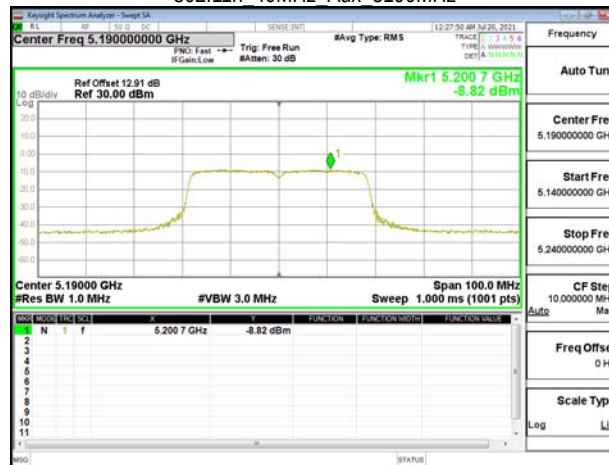
802.11n 40MHz Main 5795MHz



802.11n 40MHz Main 5230MHz



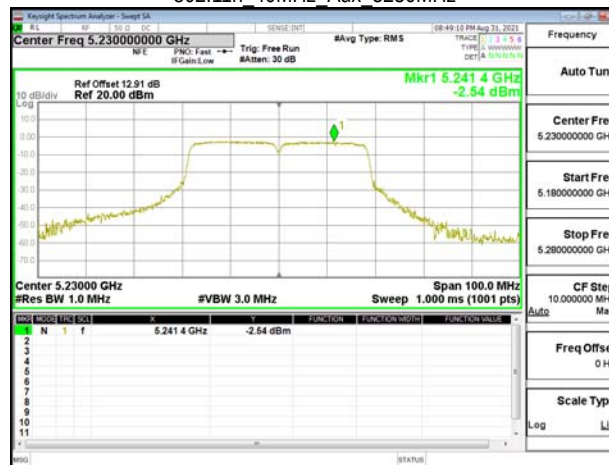
802.11n 40MHz Aux 5190MHz



802.11n 40MHz Main 5755MHz



802.11n 40MHz Aux 5230MHz



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802.11n 40MHz Aux 5755MHz



802.11n 40MHz Aux 5795MHz



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