

低功率射頻電機測試報告

報告編號:

RT181009C08

申請者

u-blox AG

產品名稱

Stand-alone Bluetooth LE module

型號

ANNA-B112

製造廠商

u-blox AG

商標或廠牌

u-blox

該產品樣品試驗

國家通訊傳播委員會低功率射頻電機技術規範

依據之試驗標準

107 年 1 月修訂

試驗結果

合格

香港商立德國際商品試驗有限公司桃園分公司 林口實驗室

日期 107 年 11 月 16 日

報告簽署人簽章:



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報告發行紀錄

Issue No.	Description	Date Issued
RT181009C08	Original release	107 年 11 月 16 日

證 明 書

發行日期：107 年 11 月 16 日

產 品 名 稱： Stand-alone Bluetooth LE module
商 標： u-blox
型 號： ANNA-B112
申 請 者： u-blox AG
量 測 規 範： 低功率射頻電機技術規範 LP0002
ANSI C63.10-2013

香港商立德國際商品試驗有限公司桃園分公司在此證明上述待測設備樣品一組(型號:ANNA-B112)，收件日期 107 年 10 月 09 日，於 107 年 10 月 25 日至 107 年 11 月 09 日，已在本公司的標準測試場地完成量測。報告中所描述之測試結果和待測設備的架構組合，均根據樣品實際的量測情況作詳實的記錄。

立德桃園分公司依“低功率射頻電機技術規範”、“低功率電波輻射性電機管理辦法”及“電信管制射頻器材審驗辦法”製作測試結果報告。

特 此 證 明 ！

報告製作者：



， 日 期： 107 年 11 月 16 日

陳美如 / 專 員

審 核 者：



， 日 期： 107 年 11 月 16 日

邱碧民 / 專案工程師

香港商立德國際商品試驗有限公司桃園分公司

實驗室地址：新北市林口區嘉寶里 14 鄰 47-2 號

此份報告不得摘錄複製，除全份複製外，需經實驗室書面同意。



1 低功率射頻電機量測記錄表

申請廠商: u-blox AG

製造廠商: u-blox AG

申請廠商地址: Zuercherstrasse 68, CH-8800 Thalwil, Switzerland

產品名稱: Stand-alone Bluetooth LE module

廠牌: u-blox

型號: ANNA-B112

量測單位名稱: 香港商立德國際商品試驗有限公司桃園分公司

林口實驗室華亞檢測部

量測單位地址: 桃園市龜山區文化里華亞二路 19 號

量測單位認可編號: TAF 2021 (9 kHz ~ 40 GHz)

量測規範: 低功率射頻電機技術規範 LP0002

ANSI C63.10-2013

Bluetooth LE 頻段概要

項次	量測項目	規 範	量測結果判定
1	帶外發射	低功率射頻電機技術規範 3.10.1.5 節	合格
2	電源線傳導干擾	低功率射頻電機技術規範 2.3 節	合格
3	6 dB 頻寬	低功率射頻電機技術規範 3.10.1.6 節	合格
4	峰值傳導輸出功率	低功率射頻電機技術規範 3.10.1.2 節	合格
5	功率頻譜密度	低功率射頻電機技術規範 3.10.1.6 節	合格

NFC 頻段概要

項次	量測項目	規 範	量測結果判定
1	主波發射	低功率射頻電機技術規範 3.2.1.1 節	合格
1	不必要之發射	低功率射頻電機技術規範 2.8 節, 3.2.1.2 節	合格
2	電源線傳導干擾	低功率射頻電機技術規範 2.3 節	合格
3	天線之要求	低功率射頻電機技術規範 2.2 節	合格
4	頻率容許差度	低功率射頻電機技術規範 3.2.1.3 節	合格

最大暴露允許值(Maximum Permissible Exposure, MPE)

項次	量測項目	規 範	量測結果判定
1	電波暴露量	低功率射頻電機技術規範第 5.20.2 節	合格

2 一般敘述

2.1 待測設備

產品名稱：	Stand-alone Bluetooth LE module	
型號：	ANNA-B112	
額定電源：	3.3 Vdc (Host equipment)	
調變方式：	Bluetooth LE 4.0	GFSK
	Bluetooth LE 5.0	GFSK
	NFC (Rx Only)	ASK
傳輸速率：	Bluetooth LE 4.0	1 Mbps
	Bluetooth LE 5.0	2 Mbps
載波頻率：	Bluetooth LE 4.0	2402 ~ 2480 MHz
	Bluetooth LE 5.0	2402 ~ 2480 MHz
	NFC (Rx Only)	13.56 MHz
頻道數：	Bluetooth LE 4.0	40
	Bluetooth LE 5.0	40
	NFC (Rx Only)	1
發射功率：	Bluetooth LE 4.0	3.72 dBm
	Bluetooth LE 5.0	3.59 dBm
天線種類：	見註 1	
電源線類別：	N/A	
信號線類別：	N/A	
配件：	N/A	

註：

1. 此待測設備包含樣品如下：

樣品	型號	EVB / Reference 型號	描述
A	ANNA-B112	EVB-ANNA-B112U	With external antenna connector.
B		EVB-ANNA-B112C	Reference design with internal antenna and ANNA-B112 mounted in the corner of the carrier board.
C		EVB-ANNA-B112E	Reference design with internal antenna and ANNA-B112 mounted on the edge of the carrier board.

2. 此待測設備搭配測試的天線，其資料如下：

For EVB-ANNA-B112U						
	頻帶 (MHz)	天線型式	天線型號	商標	接頭型式	增益 (dBi)
Bluetooth	2402 ~ 2480	Patch, PCB	PC17.07.0070A	Taoglas	IPEX	0.9
		FPCB	FXP75.07.0045B	Taoglas	IPEX	2.5
● Only the antenna (FXP75.07.0045B) which has the worse gain was chosen as representative for final test.						

For EVB-ANNA-B112C & EVB-ANNA-B112E						
	頻帶 (MHz)	天線型式	天線型號	商標	接頭型式	增益 (dBi)
Bluetooth	2402 ~ 2480	Multilayer Chip	AT1608-A2R4NAA	ACX	N/A	0.5

	頻帶 (MHz)	天線型式	天線型號	商標	接頭型式	增益 (dBi)
NFC	13.56	Loop	N/A	N/A	N/A	-

3. 此待測設備搭配使用之配件請參閱產品照編號: 181009C08

4. 此報告中，場強輻射量測經過評估後以下列測試模式進行最終量測。

量測項目	發射	接收
2402 ~ 2480 MHz (Bluetooth LE 4.0)		
1 GHz 以上量測	Ch 0, 19, 39	Ch 39
其它不必要之訊號	Ch 39	Ch 39
2402 ~ 2480 MHz (Bluetooth LE 5.0)		
主波發射之量測	Ch 0, 19, 39	Ch 39
不必要發射之量測	Ch 39	Ch 39
13.56 MHz (NFC)		
1 GHz 以上量測	Ch 1	Ch 1
不必要之發射量測	Ch 1	Ch 1

5. Bluetooth LE傳輸模式，場強輻射量測及電源線傳導干擾量測之外的測試項目，以GFSK調變技術進行測試並記錄最終量測結果於報告中。

6. 此報告中，測試模式評估如下

(1) 電源線傳導干擾量測經預掃後以模式2具有較大干擾值，故以其模式進行最終測試。

(2) 場強輻射量測以模式1~9評估完整測試。

模式	樣品	測試狀態
1	A	BT LE 4.0 + USB Cable + Adapter
2		BT LE 5.0 + USB Cable + Adapter
3		NFC + USB Cable + Adapter
4	B	BT LE 4.0 + USB Cable + Adapter
5		BT LE 5.0 + USB Cable + Adapter
6		NFC + USB Cable + Adapter
7	C	BT LE 4.0 + USB Cable + Adapter
8		BT LE 5.0 + USB Cable + Adapter
9		NFC + USB Cable + Adapter

7. 此待測設備，經評估三個正交軸方位評估測試擺設方式：平躺、垂直、側放，其各擺放最大干擾值之位置如下表，故以此擺放方式進行最終量測，並將測試結果紀錄。

	樣品	Bluetooth LE	NFC
擺放方式	A	平躺	平躺
	B	平躺	平躺
	C	垂直	平躺

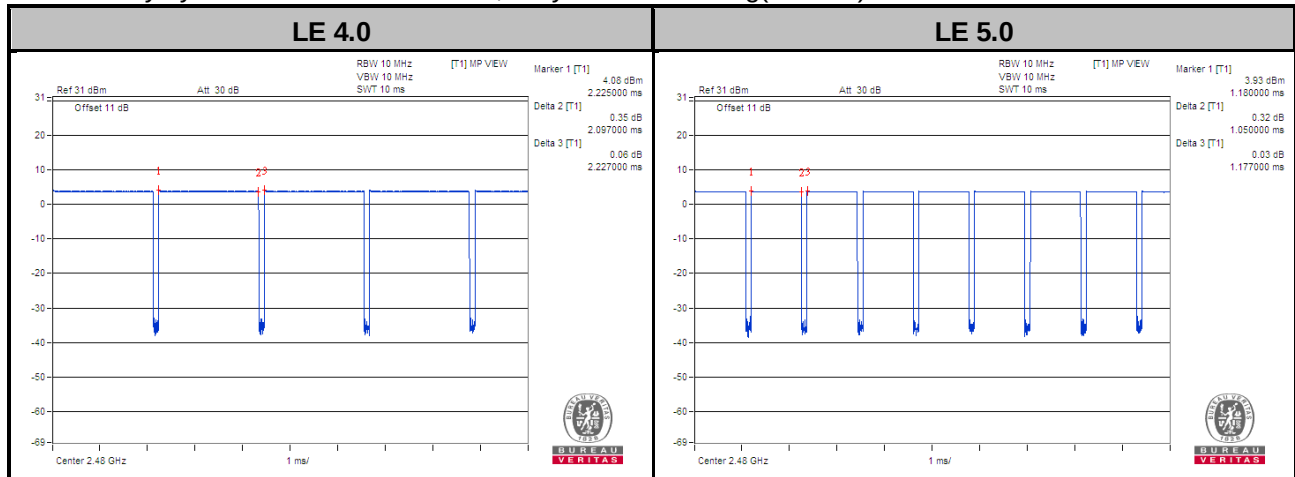
8. Duty cycle of test signal.

BT LE 频段

样品A

LE 4.0: Duty cycle = $2.097/2.227 = 0.942$, Duty factor = $10 * \log(1/0.942) = 0.26$

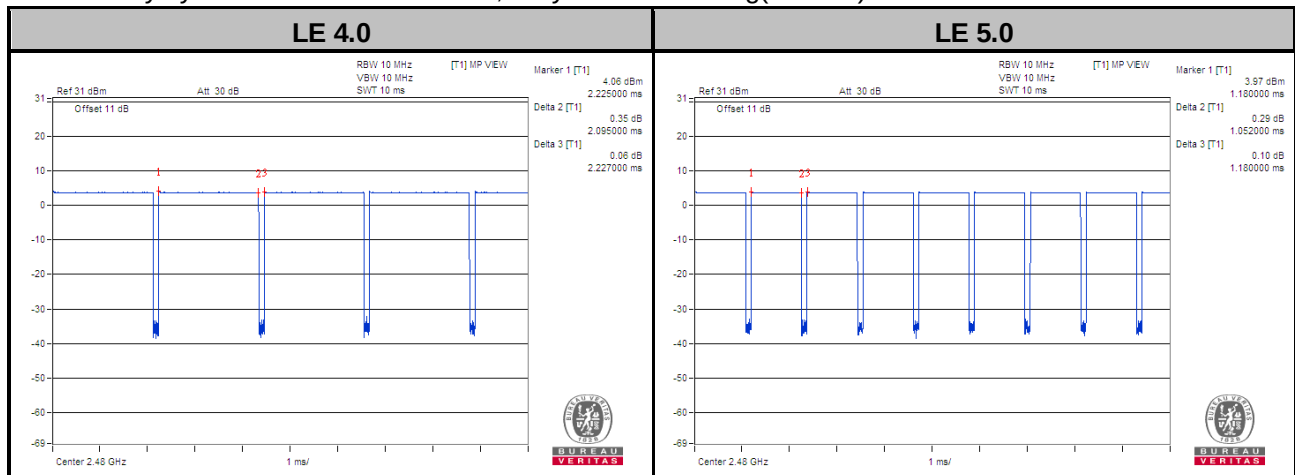
LE 5.0: Duty cycle = $1.050/1.177 = 0.892$, Duty factor = $10 * \log(1/0.892) = 0.50$



样品B

LE 4.0: Duty cycle = $2.095/2.227 = 0.941$, Duty factor = $10 * \log(1/0.941) = 0.27$

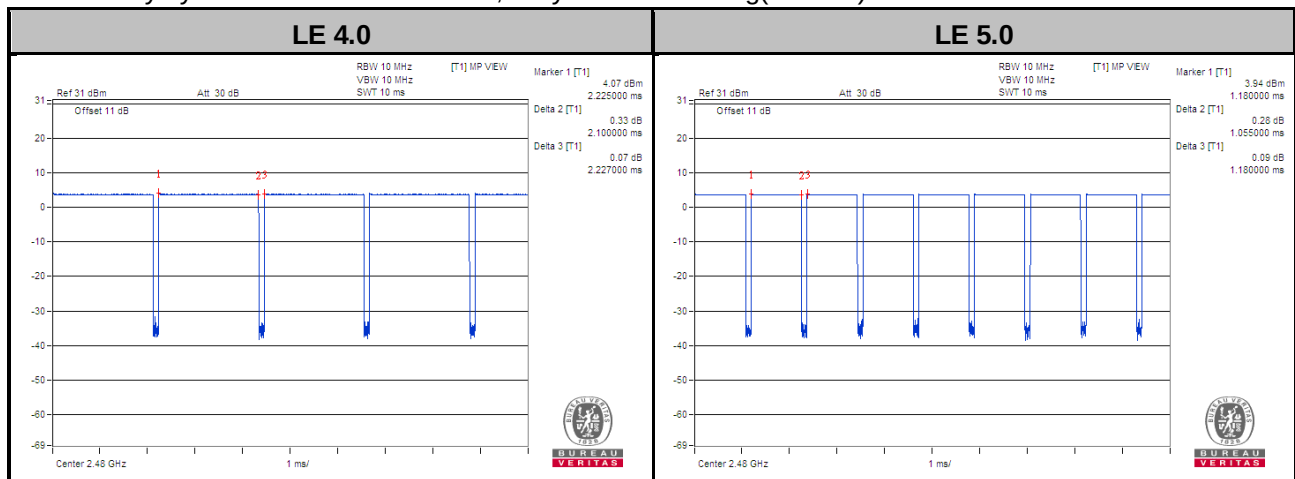
LE 5.0: Duty cycle = $1.052/1.180 = 0.892$, Duty factor = $10 * \log(1/0.892) = 0.50$



樣品C

LE 4.0: Duty cycle = $2.100/2.227 = 0.943$, Duty factor = $10 * \log(1/0.943) = 0.26$

LE 5.0: Duty cycle = $1.055/1.180 = 0.894$, Duty factor = $10 * \log(1/0.894) = 0.49$



此裝置各頻道的中心頻率如下：

Bluetooth LE 頻段：

頻道	對應頻率 (MHz)	頻道	對應頻率 (MHz)	頻道	對應頻率 (MHz)	頻道	對應頻率 (MHz)	頻道	對應頻率 (MHz)
0	2402	8	2418	16	2434	24	2450	32	2466
1	2404	9	2420	17	2436	25	2452	33	2468
2	2406	10	2422	18	2438	26	2454	34	2470
3	2408	11	2424	19	2440	27	2456	35	2472
4	2410	12	2426	20	2442	28	2458	36	2474
5	2412	13	2428	21	2444	29	2460	37	2476
6	2414	14	2430	22	2446	30	2462	38	2478
7	2416	15	2432	23	2448	31	2464	39	2480

NFC 頻段：

頻道	對應頻率 (MHz)
1	13.56

詳細之規格請參考使用說明書。

2.2 輔助測試之週邊設備描述

待測設備於受測時均接上其所屬的配件或一般用途之相關設備；下列輔助設備或配件測試中所使用的配備，以形成一個代表待測物實際運作的受測系統。

No.	Product	Brand	Model No.	Serial No.	FCC ID
1	Jig	Ublox	E204460-M11S940V-0	N/A	N/A
2	Adapter	HUAWEI	HW-050100U0	N/A	N/A
3	Smart Phone	Samsung	N/A	N/A	A3LSN920A

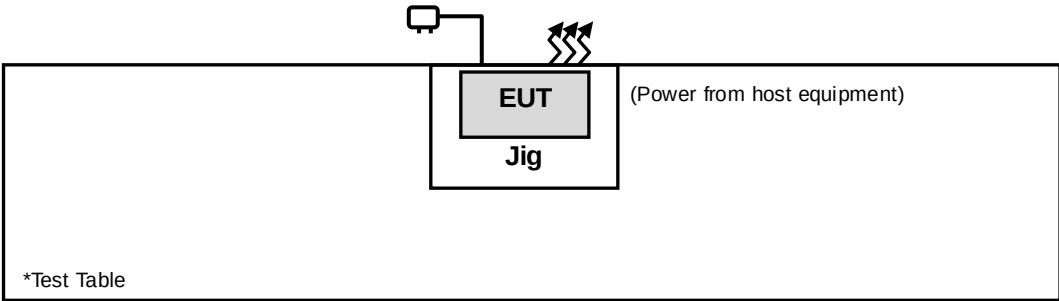
No.	Signal Cable Description Of The Above Support Units
1	N/A
2	N/A
3	N/A

NOTE:

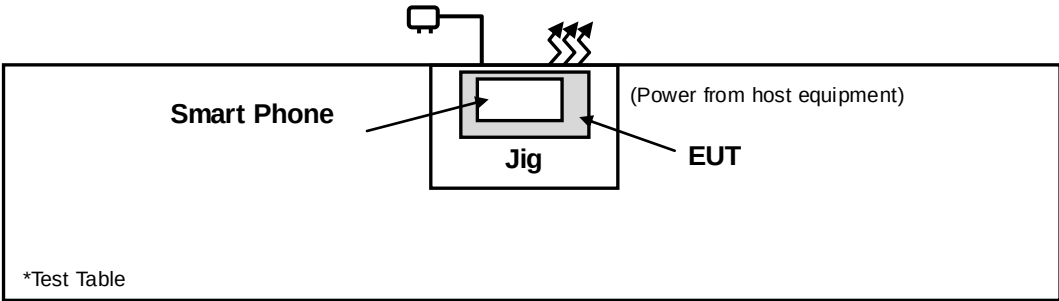
1. All power cords of the above support units are non shielded (1.8m).

2.3 測試架構圖

<Bluetooth LE>



<NFC>



3 適用規範

3.1 規範要求

► Bluetooth LE 頻段部分：

(1) 傳導之規定

依據國家通訊傳播委員會低功率射頻電機技術規範之 2.3 節，電源傳導干擾之限制要求如下：

頻率 (MHz)	傳導限制值 (dBuV)	
	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) 帶外發射之規定

依據國家通訊傳播委員會低功率射頻電機技術規範 3.10.1.5 節之要求，操作頻帶範圍外之任意 100 kHz 內，發射機所產生的射頻功率相較於使用頻帶範圍中包含最高所需功率之 100 kHz 內的射頻功率，其衰減值限制如下：(1) 輸出功率以附件二之峰值輸出功率方式測量者，至少須衰減 20 dB，可使用射頻傳導或輻射方式測量。(2) 輸出功率以 3.10.1.2(1)(C) 之最大傳導輸出功率測量方式者，至少須衰減 30 dB。此外，落於 2.7 禁用頻段之輻射發射，應符合 2.8 之規定。

頻率 (兆赫)	電場強度 (微伏/公尺)	測距 (公尺)
0.009 - 0.490 (含)	2,400/頻率 (千赫)	300
0.490 (不含) - 1.705 (含)	24,000/頻率 (千赫)	30
1.705 (不含) - 30 (不含)	30	30
30 (含) - 88 (含)	100	3
88 (不含) - 216 (含)	150	3
216 (不含) - 960 (含)	200	3
960 (不含) 以上	500	3

(3) 天線之規定

天線規格不受第 2.2 節規定之限制。

(4) 天線增益之要求

低功率發射機，依據國家通訊傳播委員會低功率射頻電機技術規範 3.10.1 節 (3) 之規定如下：

- (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 3.10.1.2 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。

除(A)及(B)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) 6 dB 頻寬之要求

對使用數位調變技術(digital modulation techniques)系統之低功率發射機，依據國家通訊傳播委員會低功率射頻電機技術規範 3.10.1.6 節之規定，6 dB 頻寬至少應有 500 kHz。

(6) 峰值傳導輸出功率之要求

依據國家通訊傳播委員會低功率射頻電機技術規範 3.10.1.2 節之規定：

數位調變技術系統：1 W(含)以下。

(7) 功率頻譜密度之要求

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

(8) 電波暴露量之評估

依據國家通訊傳播委員會低功率射頻電機技術規範 5.20.2 節之規定，若受測物於正常操作模式下，其發射機距離人體 20 公分以上者，可測試最大暴露允許值(Maximum Permissible Exposure, MPE)以證明其符合電波暴露量之要求。

限制值如下：

(1) 職業性/可控制之暴露

頻率範圍 (MHz)	電場強度 (V/m)	磁場強度 (A/m)	功率密度 (mW/cm ²)	平均時間 (minutes)
0.3 - 3.0	614	1.63	*100	6
3 - 30	1842/f	4.89/f	*900/f ²	6
30 - 300	61.4	0.163	1.0	6
300 - 1,500	---	---	f/300	6
1,500 - 100,000	---	---	5.0	6

註 1：標記*表平面波等效功率密度。

註 2：f 表測試頻率，單位：MHz。

(2) 一般人/不可控制之暴露

頻率範圍 (MHz)	電場強度 (V/m)	磁場強度 (A/m)	功率密度 (mW/cm ²)	平均時間 (minutes)
0.3 - 3.0	614	1.63	*100	30
3 - 30	1842/f	4.89/f	*180/f ²	30
30 - 300	27.5	0.073	1.0	30
300 - 1,500	---	---	f/1500	30
1,500 - 100,000	---	---	1.0	30

註 1：標記*表平面波等效功率密度。

註 2：f 表測試頻率，單位：MHz。

► NFC 頻段部分：

(9) 傳導之規定

依據國家通訊傳播委員會低功率射頻電機技術規範之 2.3 節，電源傳導干擾之限制要求如下：

頻率(MHz)	傳導限制值 (dBuV)	
	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。

(10) 主波發射之規定

依據國家通訊傳播委員會低功率射頻電機技術規範 3.2.1.1 節之要求，距器材 30 公尺處之主波電場強度應小於或等於 15848 uV/m。

(11) 不必要之發射之規定

依據國家通訊傳播委員會低功率射頻電機技術規範 3.2.1.2 節之要求，應符合第 2.8 節之規定：

頻率(兆赫)	電場強度(微伏/公尺)	測距(公尺)
0.009 - 0.490 (含)	2,400/頻率(千赫)	300
0.490 (不含) - 1.705 (含)	24,000/頻率(千赫)	30
1.705 (不含) - 30 (不含)	30	30
30 (含) - 88 (含)	100	3
88 (不含) - 216 (含)	150	3
216 (不含) - 960 (含)	200	3
960 (不含)以上	500	3

(12) 頻率容許差度之規定

依據國家通訊傳播委員會低功率射頻電機技術規範 3.2.1.3 節之要求，應維持在主波頻率之 $\pm 0.01\%$ 以內。在正常供應電壓下，溫度在攝氏零下二十度至攝氏五十度間變化；及在攝氏二十度下，供應電壓在額定值之 $\pm 15\%$ 內變化時。以電池作業者，應以新電池測試，須符合第 5.18 節之規定。

(13) 天線之規定

低功率射頻電機之發射機或收發信機所使用之天線，除本規範章節中另有規定外，應為全固定、半固定式或以獨特之耦合(unique coupling)方式連接機體。製造者可設計供使用者因損壞而替換之天線，但不得設計或使用原認證以外之天線或可供引接各類電纜之標準天線插座或電氣連接頭，如：BNC、F type、N type、M type、UG type、RCA、SMA、SMB...等及其他各類工業或通訊標準接頭。

3.2 限制使用之頻帶

除本規範另有規定外，任何低功率射頻電機之主波皆不得使用下表所列各頻段之頻率；低功率射頻電機落於下表所列頻段之混附發射，其電場強度必須符合 2.8 之限制規定。

頻率(兆赫)	頻率(兆赫)	頻率(兆赫)
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	

BLUETOOTH LE 頻段測試紀錄結果

4 帶外發射之量測

4.1 適用標準

請見本報告 3.1 節第(2)項的規定。

4.2 量測方法

在電波暗室，將待測物置於 0.8 米高的非金屬桌面，使其操作在工作狀態。接收天線置於 3 米距離。桌面要 360 度旋轉，另外接收天線從離地 1 米至 4 米升降變化，以找出最大的輻射電場強度，接收天線分別置於水平、垂直極化各執行測試一次。

Note: 對於 1 GHz 以上場強輻射的測試，待測物則置於 1.5 米高的非金屬桌面。

發射諧波：

Peak 為 RBW = 1 MHz, VBW = 3 MHz；

Average 為 RBW = 1 MHz, VBW = 1 kHz

接收諧波：

Below 1 GHz

Peak 為 RBW = 120 kHz, VBW = 300 kHz；Quasi-Peak 為 RBW = 120 kHz, VBW = 120 kHz

Above 1 GHz:

Peak 為 RBW = 1 MHz, VBW = 3 MHz；Average 為 RBW = 1 MHz, VBW = 1 kHz

其它不必要之訊號

Peak 為 RBW = 120 kHz, VBW = 360 kHz；Quasi-Peak 為 RBW = 120 kHz, VBW = 120 kHz

4.3 量測儀器

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Due Date Of Calibration
Test Receiver Agilent	N9038A	MY51210203	Mar. 16, 2018	Mar. 15, 2019
Spectrum Analyzer Agilent	N9010A	MY52220314	Nov. 24, 2017	Nov. 23, 2018
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-969	Dec. 12, 2017	Dec. 11, 2018
BILOG Antenna SCHWARZBECK	VULB 9168	9168-472	Dec. 06, 2017	Dec. 05, 2018
Broadband Horn Antenna SCHWARZBECK	BBHA 9170	148	Dec. 13, 2017	Dec. 12, 2018
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 16, 2018	Apr. 15, 2019
Loop Antenna	HLA 6121	45745	Jun. 14, 2018	Jun. 13, 2019
Preamplifier EMCI	EMC001340	980201	Jan. 23, 2018	Jan. 22, 2019
Preamplifier EMCI	EMC 012645	980115	Oct. 12, 2018	Oct. 11, 2019
Preamplifier EMCI	EMC 184045	980116	Oct. 12, 2018	Oct. 11, 2019
Preamplifier EMCI	EMC 330H	980112	Oct. 12, 2018	Oct. 11, 2019
RF Coaxial Cable HUBER+SUHNNER	EMC104-SM-SM-800 0&3000	140811+170717	Oct. 12, 2018	Oct. 11, 2019
RF Coaxial Cable HUBER+SUHNNER	SUCOFLEX 104	EMC104-SM-SM-1000 (140807)	Oct. 12, 2018	Oct. 11, 2019
RF Coaxial Cable Worken	8D-FB	Cable-Ch10-01	Oct. 12, 2018	Oct. 11, 2019
Software BV ADT	E3 6.120103	NA	NA	NA
Antenna Tower MF	MFA-440H	NA	NA	NA
Turn Table MF	MFT-201SS	NA	NA	NA
Antenna Tower & Turn Table Controller MF	MF-7802	NA	NA	NA

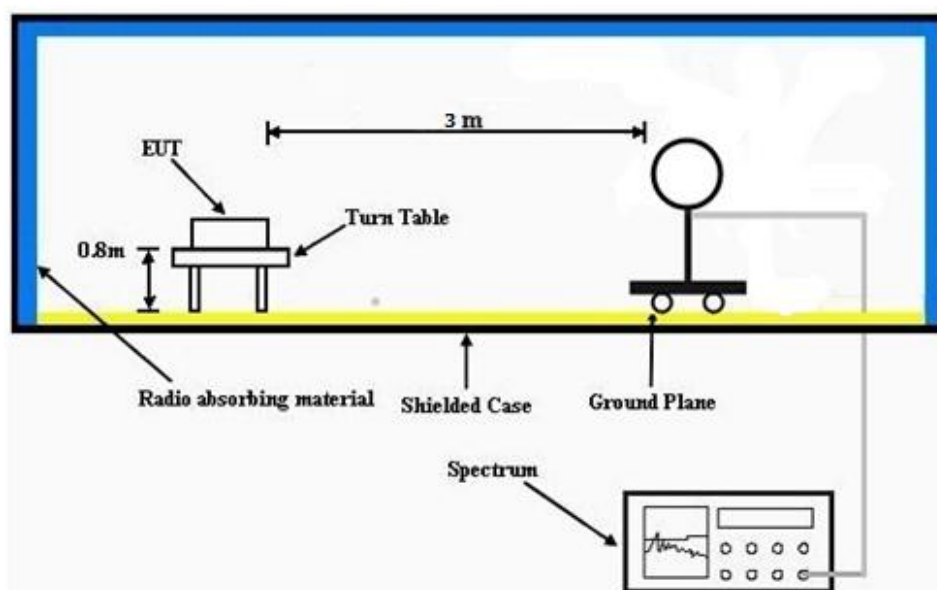
NOTE:

- The calibration interval of the above test instruments is 12 or 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
- The test was performed in HwaYa Chamber 10.
- The horn antenna and preamplifier (model: EMC 184045) are used only for the measurement of emission frequency above 1 GHz if tested.
- The FCC Designation Number is TW0003. The number will be varied with the Lab location and scope as attached.
- The IC Site Registration No. is 7450F-10.
- The following table is for the measurement uncertainty, which is calculated as per the document CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of k=2.

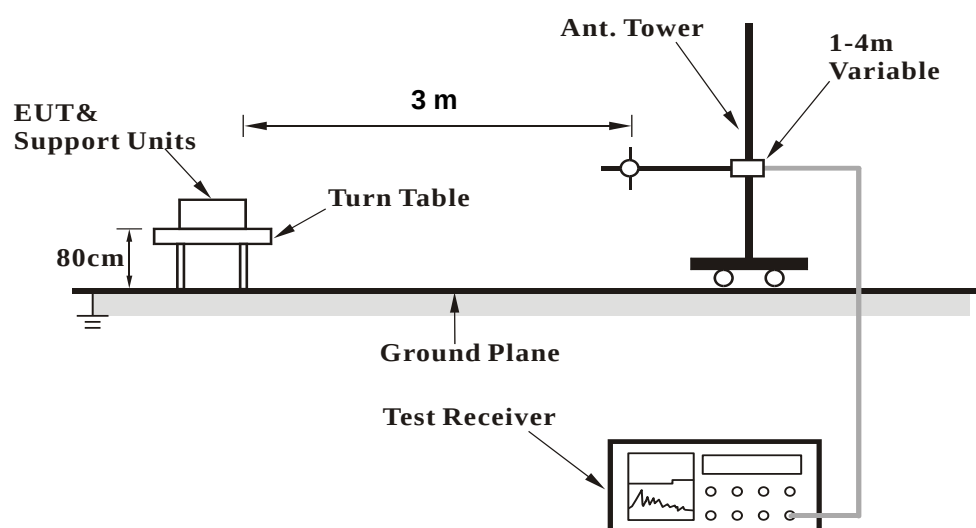
Measurement	Frequency	Uncertainty
Radiated emissions	30 MHz ~ 200 MHz	2.93 dB
	200 MHz ~1000 MHz	2.95 dB
	1 GHz ~ 18 GHz	2.26 dB
	18 GHz ~ 40 GHz	1.94 dB

4.4 測試配置

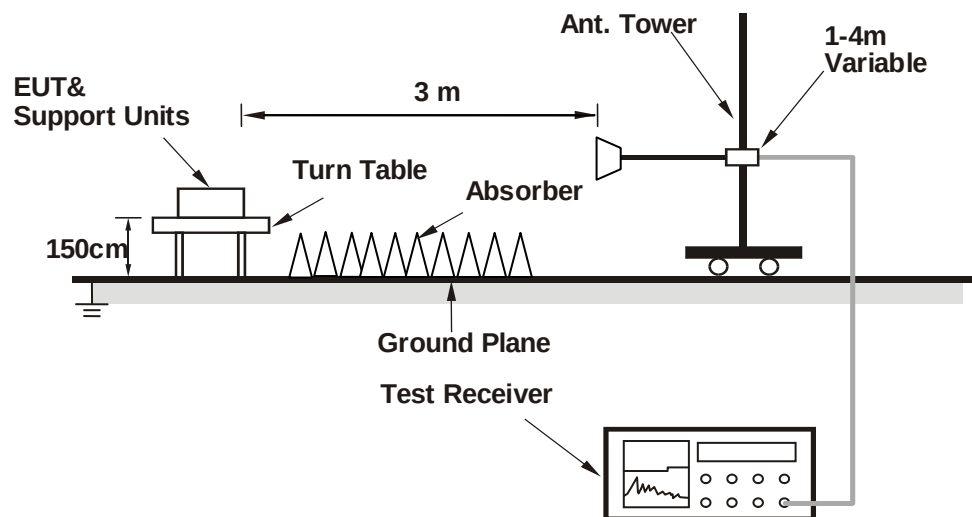
<Frequency Range 9 kHz ~ 30 MHz>



<Frequency Range below 1 GHz>



<Frequency Range above 1 GHz>



4.5 場強度之計算

場強之計算公式如下：

結果值 Emission level (dBuV/m) = 機器讀值 Raw Value (dBuV) + 校正因子 Correction Factor (dB/m)

餘裕度 Margin(dB) = 結果值 Emission level (dBuV/m) - 限制值 Limit value (dBuV/m)

量測結果請見下頁。

4.6 量測結果

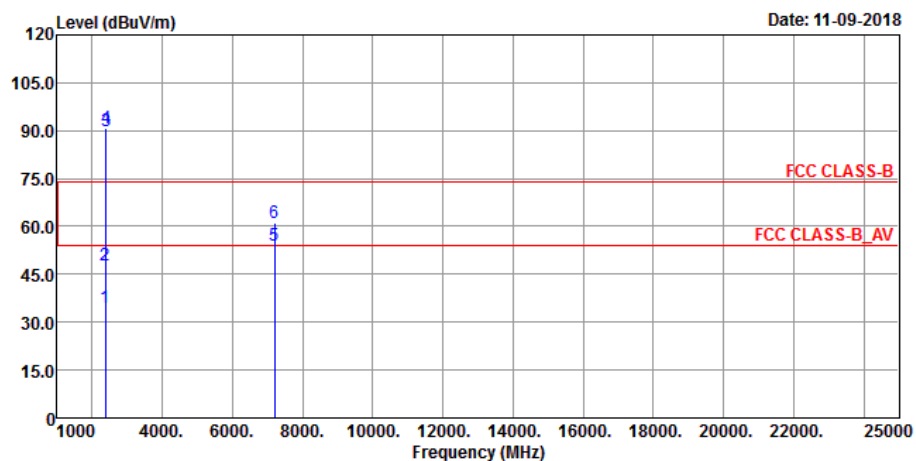
4.6.1 發射諧波

樣品 A

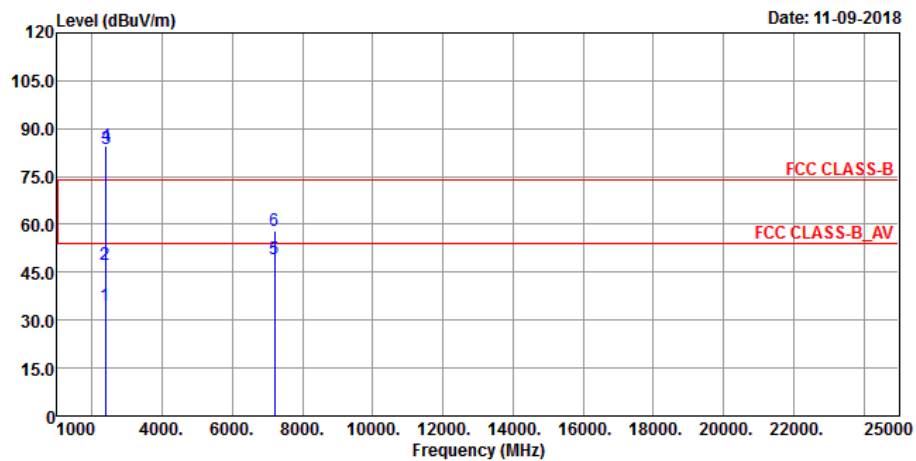
<LE 4.0>

EUT Test Condition		Measurement Detail	
Channel	Channel 0	Frequency Range	1 GHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Thomas Wei

Horizontal



Vertical



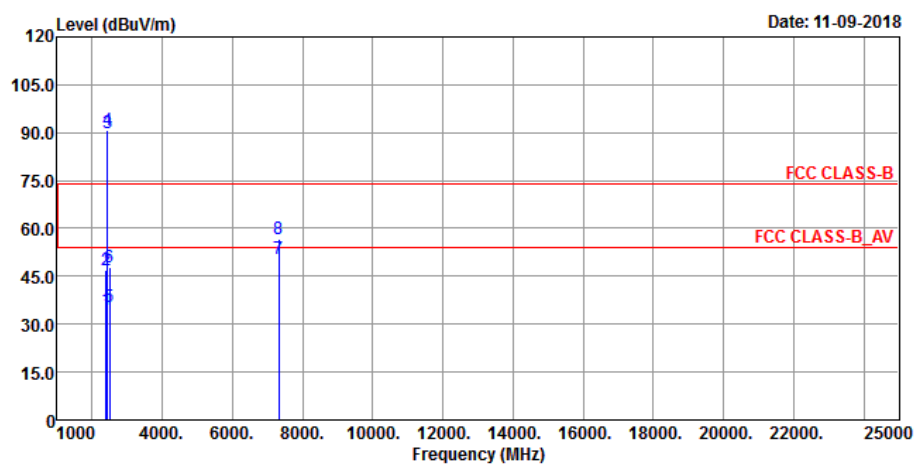
Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2376.64	34.5	40.58	54	-19.5	27.08	4.34	37.5	119	76	Average
2376.64	47.62	53.7	74	-26.38	27.08	4.34	37.5	119	76	Peak
2402	89.88	95.87			27.16	4.37	37.52	119	76	Average
2402	90.68	96.67			27.16	4.37	37.52	119	76	Peak
*7206	54.16	62	69.88	-15.72	35.67	8.46	51.97	100	19	Average
*7206	61.16	69	70.68	-9.52	35.67	8.46	51.97	100	19	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2371.32	34.48	40.56	54	-19.52	27.08	4.34	37.5	238	108	Average
2371.32	47.21	53.29	74	-26.79	27.08	4.34	37.5	238	108	Peak
2402	83.73	89.72			27.16	4.37	37.52	238	108	Average
2402	84.55	90.54			27.16	4.37	37.52	238	108	Peak
*7206	49.26	57.1	63.73	-14.47	35.67	8.46	51.97	119	243	Average
*7206	58.03	65.87	64.55	-6.52	35.67	8.46	51.97	119	243	Peak

Remarks:

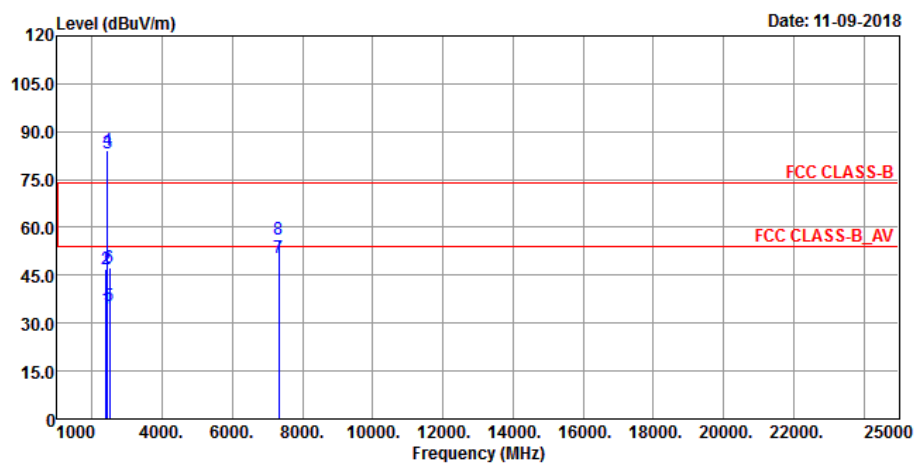
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 2402 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 19	Frequency Range	1 GHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Thomas Wei

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2388.96	34.52	40.5	54	-19.48	27.16	4.36	37.5	118	73	Average
2388.96	46.95	52.93	74	-27.05	27.16	4.36	37.5	118	73	Peak
2440	89.67	95.35			27.38	4.4	37.46	118	73	Average
2440	90.6	96.28			27.38	4.4	37.46	118	73	Peak
2487.52	35.37	40.65	54	-18.63	27.61	4.43	37.32	118	73	Average
2487.52	47.7	52.98	74	-26.3	27.61	4.43	37.32	118	73	Peak
7320	50.53	57.89	54	-3.47	35.97	8.46	51.79	100	21	Average
7320	56.5	63.86	74	-17.5	35.97	8.46	51.79	100	21	Peak

Antenna Polarity & Test Distance: Vertical at 3 m

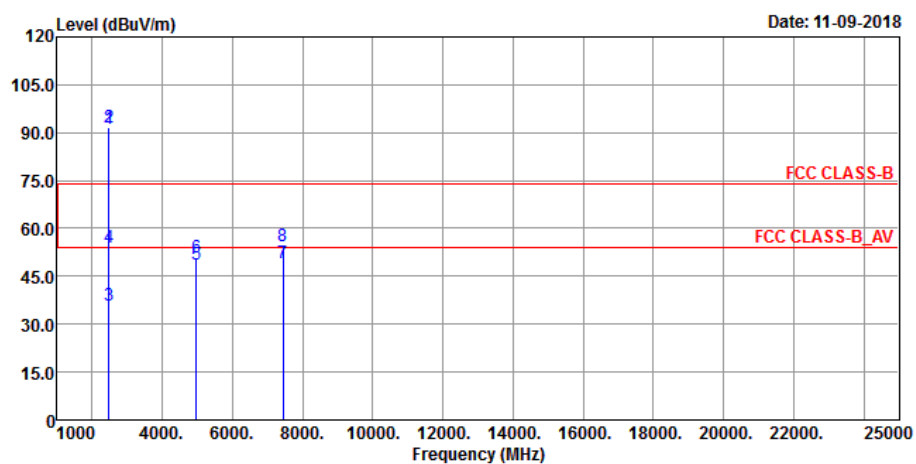
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2383.5	34.54	40.61	54	-19.46	27.08	4.35	37.5	258	109	Average
2383.5	46.86	52.93	74	-27.14	27.08	4.35	37.5	258	109	Peak
2440	83.33	89.01			27.38	4.4	37.46	258	109	Average
2440	84.19	89.87			27.38	4.4	37.46	258	109	Peak
2499.16	35.24	40.44	54	-18.76	27.61	4.44	37.25	258	109	Average
2499.16	47.46	52.66	74	-26.54	27.61	4.44	37.25	258	109	Peak
7320	50.59	57.95	54	-3.41	35.97	8.46	51.79	100	231	Average
7320	56.42	63.78	74	-17.58	35.97	8.46	51.79	100	231	Peak

Remarks:

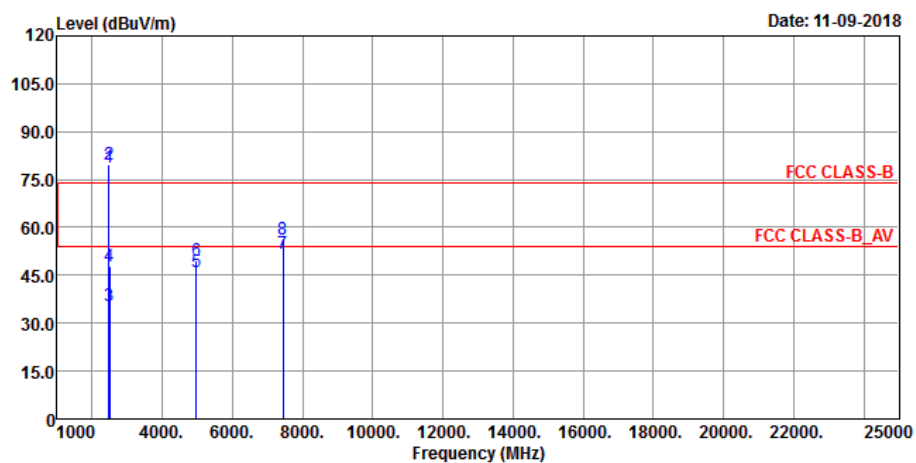
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
2. 2440 MHz: Fundamental Frequency
3. The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 39	Frequency Range	1 GHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Thomas Wei

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2480	91.06	96.42			27.53	4.43	37.32	147	74	Average
2480	91.86	97.22			27.53	4.43	37.32	147	74	Peak
2483.52	36	41.36	54	-18	27.53	4.43	37.32	147	74	Average
2483.52	53.8	59.16	74	-20.2	27.53	4.43	37.32	147	74	Peak
4960	48.83	63.45	54	-5.17	31.4	6.9	52.92	137	86	Average
4960	50.96	65.58	74	-23.04	31.4	6.9	52.92	137	86	Peak
7440	49.37	56.21	54	-4.63	36.27	8.54	51.65	108	251	Average
7440	54.64	61.48	74	-19.36	36.27	8.54	51.65	108	251	Peak

Antenna Polarity & Test Distance: Vertical at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2480	78.79	84.15			27.53	4.43	37.32	104	25	Average
2480	79.75	85.11			27.53	4.43	37.32	104	25	Peak
2498.08	35.3	40.5	54	-18.7	27.61	4.44	37.25	104	25	Average
2498.08	47.85	53.05	74	-26.15	27.61	4.44	37.25	104	25	Peak
4960	45.97	60.59	54	-8.03	31.4	6.9	52.92	100	92	Average
4960	49.39	64.01	74	-24.61	31.4	6.9	52.92	100	92	Peak
7440	51.77	58.61	54	-2.23	36.27	8.54	51.65	102	220	Average
7440	56.21	63.05	74	-17.79	36.27	8.54	51.65	102	220	Peak

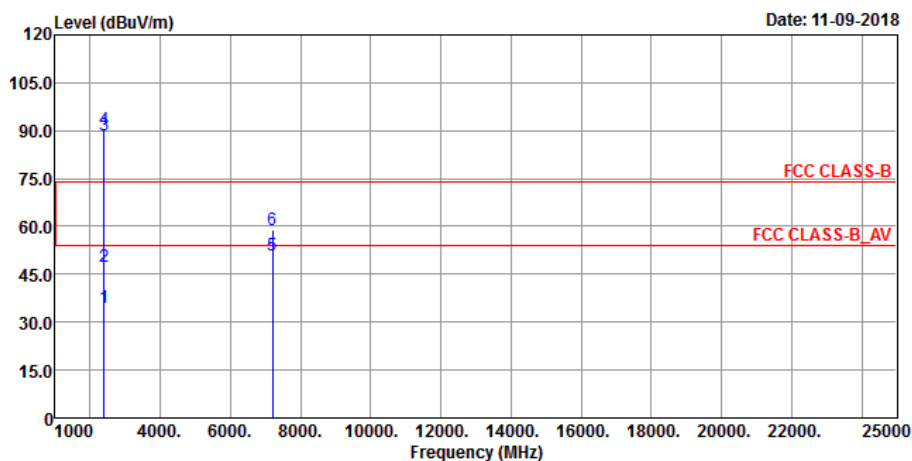
Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
2. 2480 MHz: Fundamental Frequency
3. The other emission levels were very low against the limit.

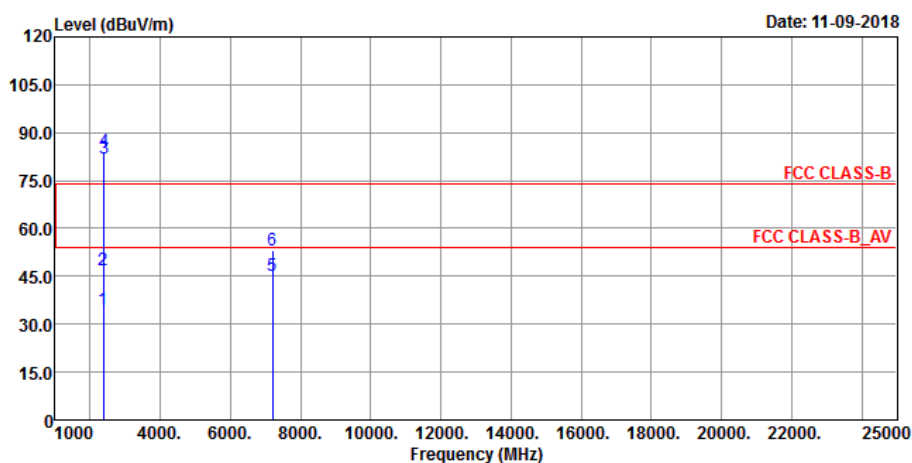
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EUT Test Condition		Measurement Detail	
Channel	Channel 0	Frequency Range	1 GHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Thomas Wei

Horizontal



Vertical



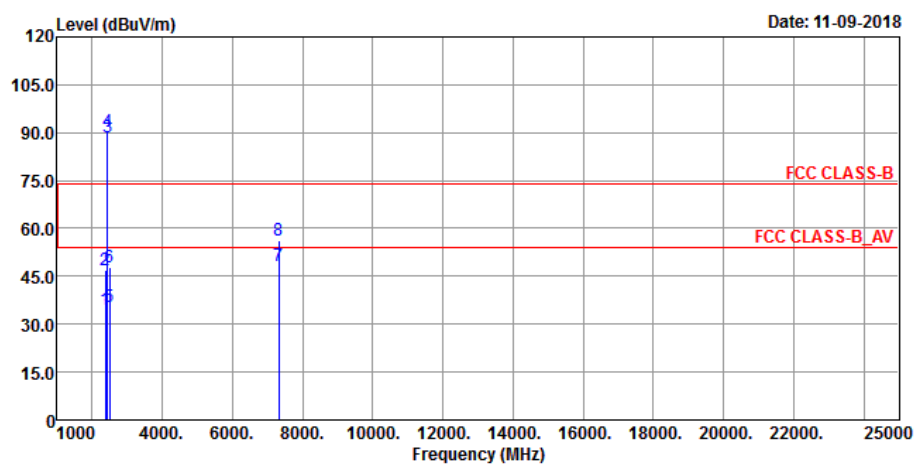
Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2387.42	34.59	40.57	54	-19.41	27.16	4.36	37.5	120	75	Average
2387.42	47.39	53.37	74	-26.61	27.16	4.36	37.5	120	75	Peak
2402	88.43	94.42			27.16	4.37	37.52	120	75	Average
2402	90.36	96.35			27.16	4.37	37.52	120	75	Peak
*7206	51.06	58.9	68.43	-17.37	35.67	8.46	51.97	100	20	Average
*7206	59.11	66.95	70.36	-11.25	35.67	8.46	51.97	100	20	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2370.62	34.49	40.57	54	-19.51	27.08	4.34	37.5	238	110	Average
2370.62	46.95	53.03	74	-27.05	27.08	4.34	37.5	238	110	Peak
2402	82.09	88.08			27.16	4.37	37.52	238	110	Average
2402	83.99	89.98			27.16	4.37	37.52	238	110	Peak
*7206	45.16	53	62.09	-16.93	35.67	8.46	51.97	100	224	Average
*7206	53.35	61.19	63.99	-10.64	35.67	8.46	51.97	100	224	Peak

Remarks:

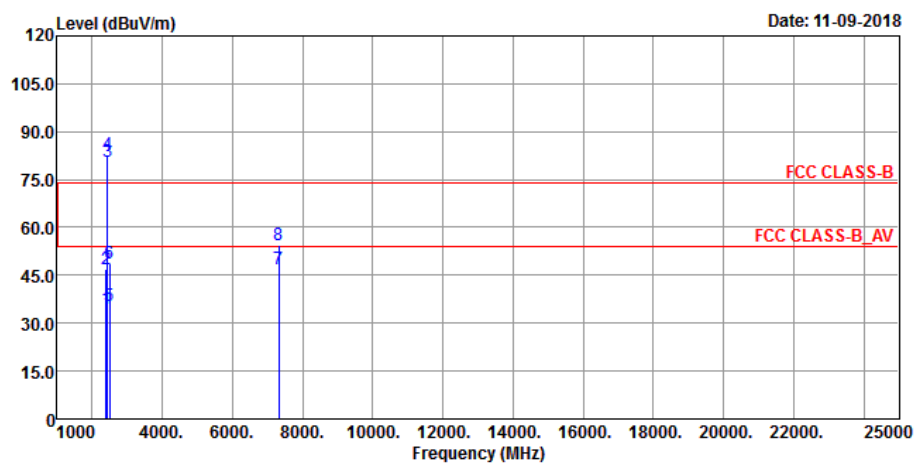
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 2402 MHz: Fundamental Frequency
- *: Out of Restricted Band
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 19	Frequency Range	1 GHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Thomas Wei

Horizontal



Vertical



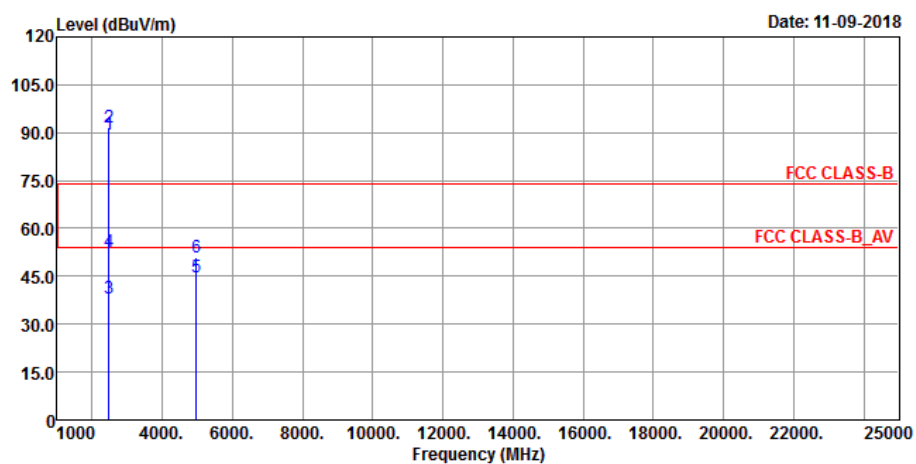
Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2375.66	34.57	40.65	54	-19.43	27.08	4.34	37.5	118	72	Average
2375.66	46.97	53.05	74	-27.03	27.08	4.34	37.5	118	72	Peak
2440	88.78	94.46			27.38	4.4	37.46	118	72	Average
2440	90.54	96.22			27.38	4.4	37.46	118	72	Peak
2498.48	35.37	40.57	54	-18.63	27.61	4.44	37.25	118	72	Average
2498.48	47.62	52.82	74	-26.38	27.61	4.44	37.25	118	72	Peak
7320	48.35	55.71	54	-5.65	35.97	8.46	51.79	100	19	Average
7320	56.28	63.64	74	-17.72	35.97	8.46	51.79	100	19	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2384.2	34.48	40.55	54	-19.52	27.08	4.35	37.5	241	94	Average
2384.2	46.94	53.01	74	-27.06	27.08	4.35	37.5	241	94	Peak
2440	80.81	86.49			27.38	4.4	37.46	241	94	Average
2440	82.71	88.39			27.38	4.4	37.46	241	94	Peak
2495.88	35.21	40.41	54	-18.79	27.61	4.44	37.25	241	94	Average
2495.88	48.51	53.71	74	-25.49	27.61	4.44	37.25	241	94	Peak
7320	46.95	54.31	54	-7.05	35.97	8.46	51.79	100	269	Average
7320	54.38	61.74	74	-19.62	35.97	8.46	51.79	100	269	Peak

Remarks:

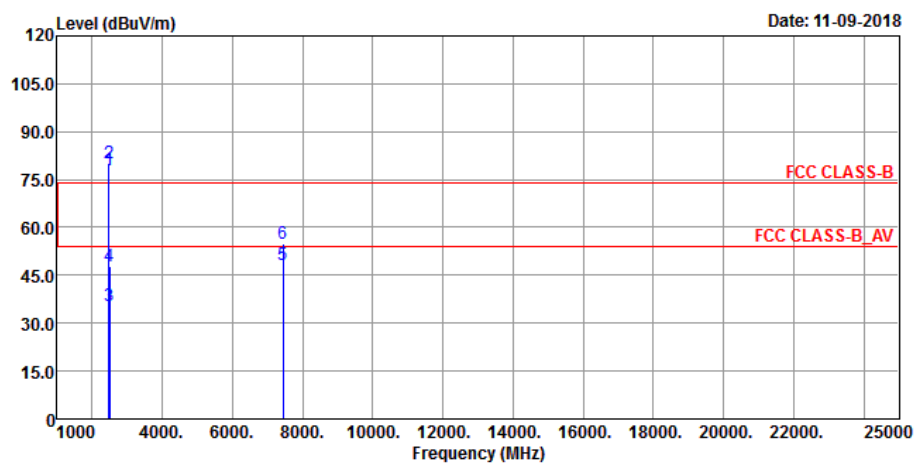
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
2. 2440 MHz: Fundamental Frequency
3. The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 39	Frequency Range	1 GHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Thomas Wei

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2480	89.61	94.97			27.53	4.43	37.32	102	72	Average
2480	91.52	96.88			27.53	4.43	37.32	102	72	Peak
2483.52	38.15	43.51	54	-15.85	27.53	4.43	37.32	102	72	Average
2483.52	52.65	58.01	74	-21.35	27.53	4.43	37.32	102	72	Peak
4960	44.77	59.39	54	-9.23	31.4	6.9	52.92	138	81	Average
4960	50.88	65.5	74	-23.12	31.4	6.9	52.92	138	81	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2480	78.07	83.43			27.53	4.43	37.32	134	299	Average
2480	80.12	85.48			27.53	4.43	37.32	134	299	Peak
2488.32	35.39	40.67	54	-18.61	27.61	4.43	37.32	134	299	Average
2488.32	47.9	53.18	74	-26.1	27.61	4.43	37.32	134	299	Peak
7440	48.37	55.21	54	-5.63	36.27	8.54	51.65	100	258	Average
7440	54.73	61.57	74	-19.27	36.27	8.54	51.65	100	258	Peak

Remarks:

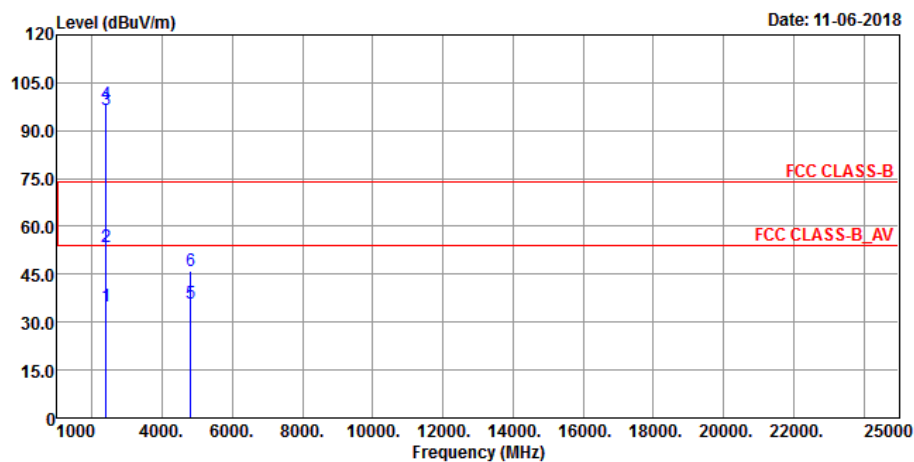
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 2480 MHz: Fundamental Frequency
- The other emission levels were very low against the limit.

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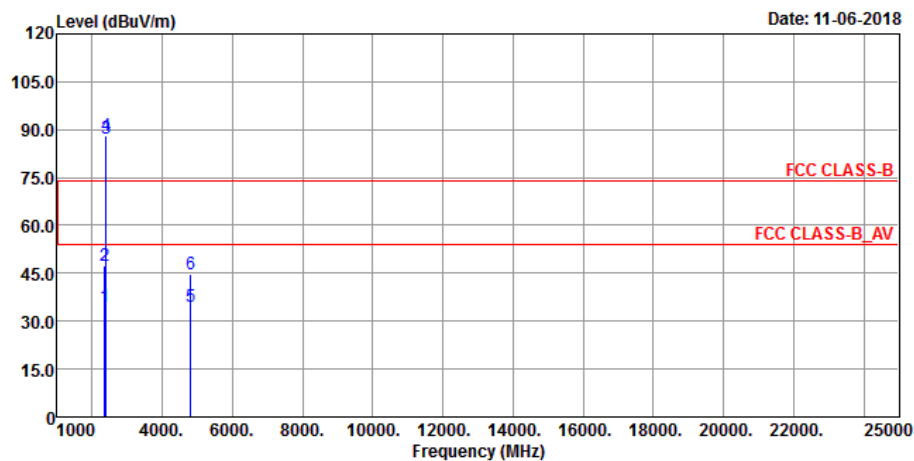
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EUT Test Condition		Measurement Detail	
Channel	Channel 0	Frequency Range	1 GHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Horizontal



Vertical



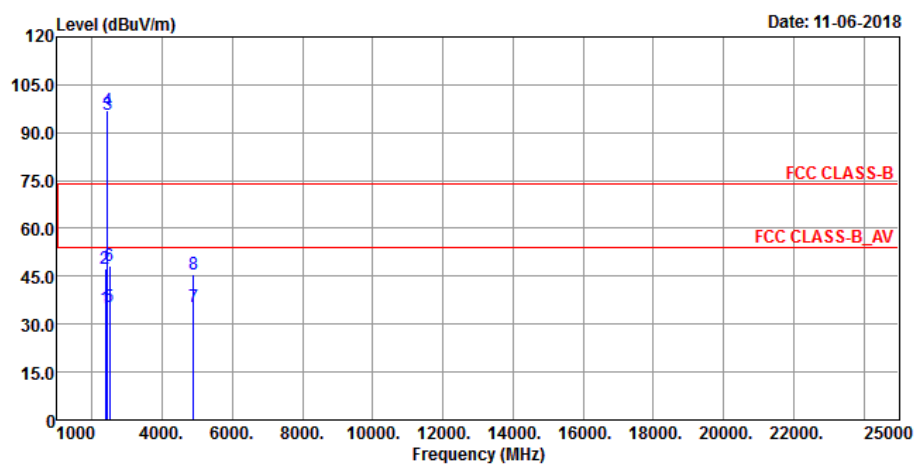
Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.8	34.98	40.98	54	-19.02	27.16	4.36	37.52	178	181	Average
2389.8	53.53	59.53	74	-20.47	27.16	4.36	37.52	178	181	Peak
2402	96.55	102.54			27.16	4.37	37.52	178	181	Average
2402	98.43	104.42			27.16	4.37	37.52	178	181	Peak
4804	35.93	50.9	54	-18.07	31.14	6.79	52.9	175	206	Average
4804	45.93	60.9	74	-28.07	31.14	6.79	52.9	175	206	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2345.84	34.64	40.89	54	-19.36	26.93	4.31	37.49	293	251	Average
2345.84	47.26	53.51	74	-26.74	26.93	4.31	37.49	293	251	Peak
2402	87.38	93.37			27.16	4.37	37.52	293	251	Average
2402	88.25	94.24			27.16	4.37	37.52	293	251	Peak
4804	34.7	49.67	54	-19.3	31.14	6.79	52.9	185	214	Average
4804	44.7	59.67	74	-29.3	31.14	6.79	52.9	185	214	Peak

Remarks:

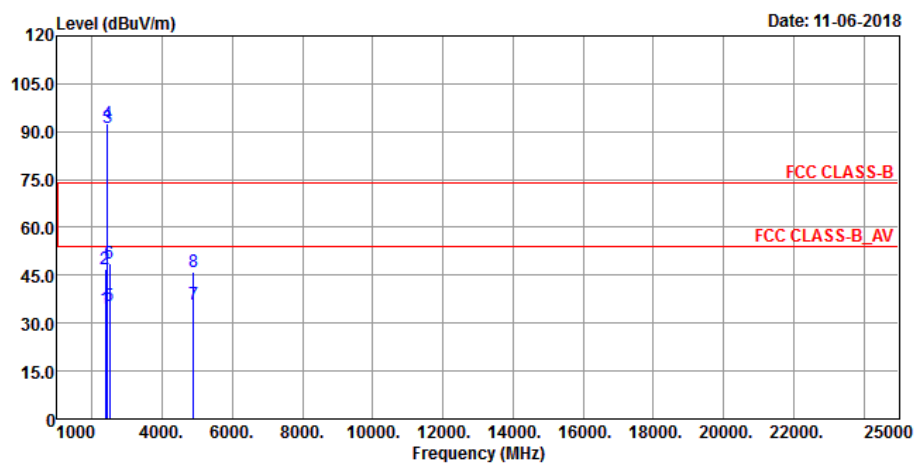
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 2402 MHz: Fundamental Frequency
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 19	Frequency Range	1 GHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2375.94	34.86	40.94	54	-19.14	27.08	4.34	37.5	171	185	Average
2375.94	47.57	53.65	74	-26.43	27.08	4.34	37.5	171	185	Peak
2440	95.8	101.48			27.38	4.4	37.46	171	185	Average
2440	96.99	102.67			27.38	4.4	37.46	171	185	Peak
2485.56	35.51	40.87	54	-18.49	27.53	4.43	37.32	171	185	Average
2485.56	48.22	53.58	74	-25.78	27.53	4.43	37.32	171	185	Peak
4880	35.61	50.36	54	-18.39	31.25	6.86	52.86	165	251	Average
4880	45.62	60.37	74	-28.38	31.25	6.86	52.86	165	251	Peak

Antenna Polarity & Test Distance: Vertical at 3 m

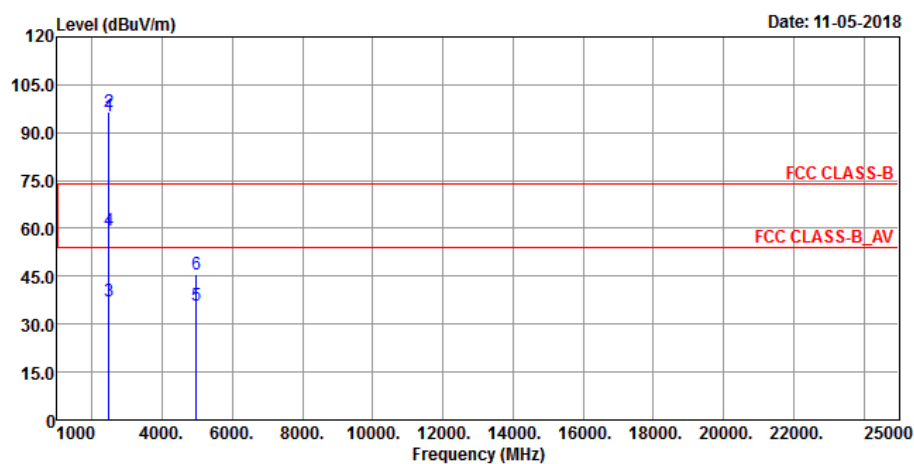
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2375.66	34.7	40.78	54	-19.3	27.08	4.34	37.5	271	218	Average
2375.66	46.79	52.87	74	-27.21	27.08	4.34	37.5	271	218	Peak
2440	91.3	96.98			27.38	4.4	37.46	271	218	Average
2440	92.75	98.43			27.38	4.4	37.46	271	218	Peak
2492.24	35.47	40.68	54	-18.53	27.61	4.43	37.25	271	218	Average
2492.24	48.9	54.11	74	-25.1	27.61	4.43	37.25	271	218	Peak
4880	35.92	50.67	54	-18.08	31.25	6.86	52.86	152	111	Average
4880	45.93	60.68	74	-28.07	31.25	6.86	52.86	152	111	Peak

Remarks:

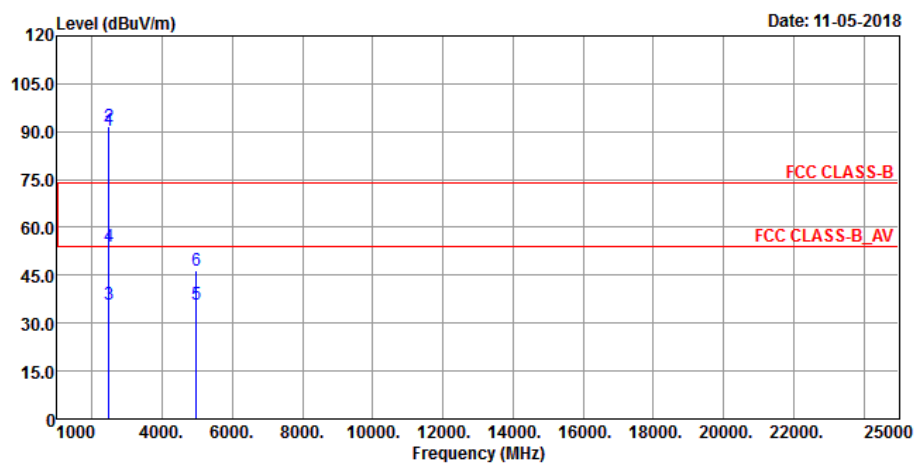
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
2. 2440 MHz: Fundamental Frequency
3. The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 39	Frequency Range	1 GHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2480	95.11	100.47			27.53	4.43	37.32	133	187	Average
2480	96.72	102.08			27.53	4.43	37.32	133	187	Peak
2483.72	37.19	42.55	54	-16.81	27.53	4.43	37.32	133	187	Average
2483.72	59.51	64.87	74	-14.49	27.53	4.43	37.32	133	187	Peak
4960	35.82	50.44	54	-18.18	31.4	6.9	52.92	152	231	Average
4960	45.83	60.45	74	-28.17	31.4	6.9	52.92	152	231	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2480	90.39	95.75			27.53	4.43	37.32	258	224	Average
2480	91.76	97.12			27.53	4.43	37.32	258	224	Peak
2483.84	35.97	41.33	54	-18.03	27.53	4.43	37.32	258	224	Average
2483.84	54.1	59.46	74	-19.9	27.53	4.43	37.32	258	224	Peak
4960	35.89	50.51	54	-18.11	31.4	6.9	52.92	152	111	Average
4960	46.36	60.98	74	-27.64	31.4	6.9	52.92	152	111	Peak

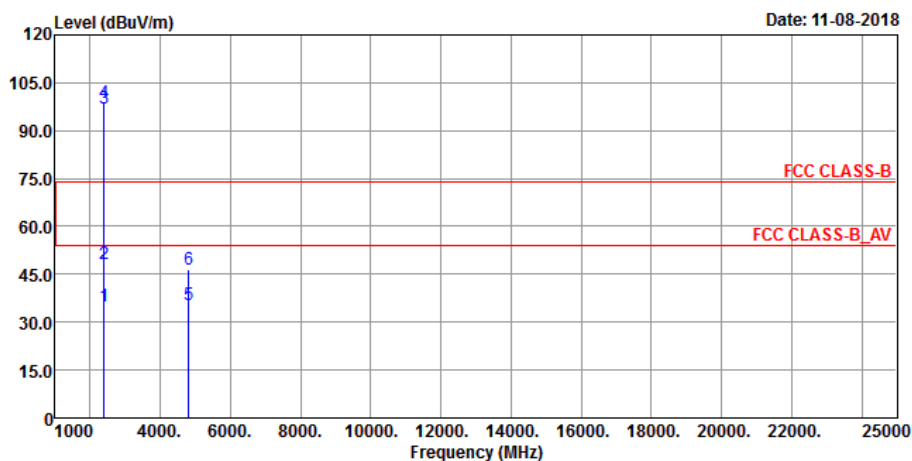
Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 2480 MHz: Fundamental Frequency
- The other emission levels were very low against the limit.

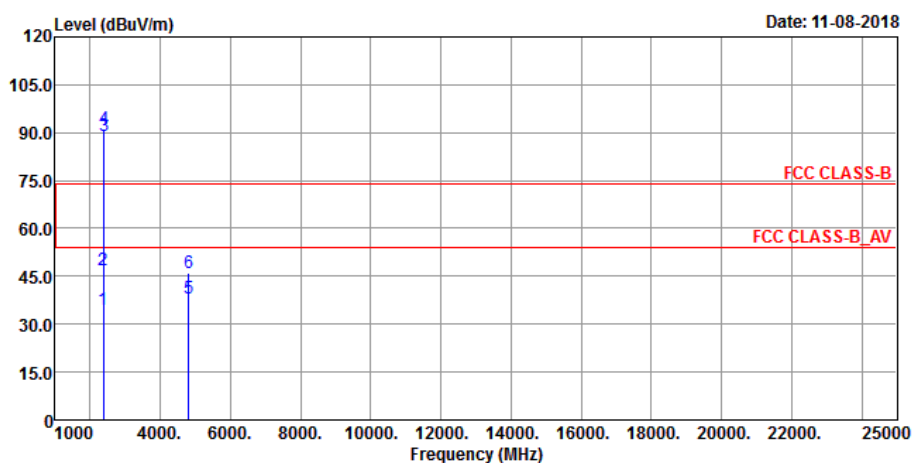
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EUT Test Condition		Measurement Detail	
Channel	Channel 0	Frequency Range	1 GHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Thomas Wei

Horizontal



Vertical



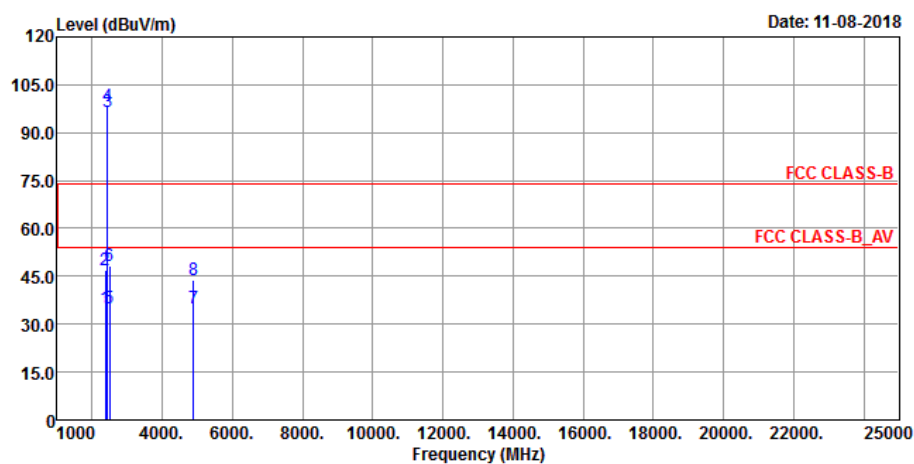
Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.94	35.2	41.2	54	-18.8	27.16	4.36	37.52	198	0	Average
2389.94	48.26	54.26	74	-25.74	27.16	4.36	37.52	198	0	Peak
2402	96.83	102.82			27.16	4.37	37.52	198	0	Average
2402	98.68	104.67			27.16	4.37	37.52	198	0	Peak
4804	35.31	50.28	54	-18.69	31.14	6.79	52.9	162	238	Average
4804	46.31	61.28	74	-27.69	31.14	6.79	52.9	162	238	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2380.84	34.45	40.52	54	-19.55	27.08	4.35	37.5	304	40	Average
2380.84	46.76	52.83	74	-27.24	27.08	4.35	37.5	304	40	Peak
2402	89.16	95.15			27.16	4.37	37.52	304	40	Average
2402	91.05	97.04			27.16	4.37	37.52	304	40	Peak
4804	38.13	53.1	54	-15.87	31.14	6.79	52.9	149	261	Average
4804	46.09	61.06	74	-27.91	31.14	6.79	52.9	149	261	Peak

Remarks:

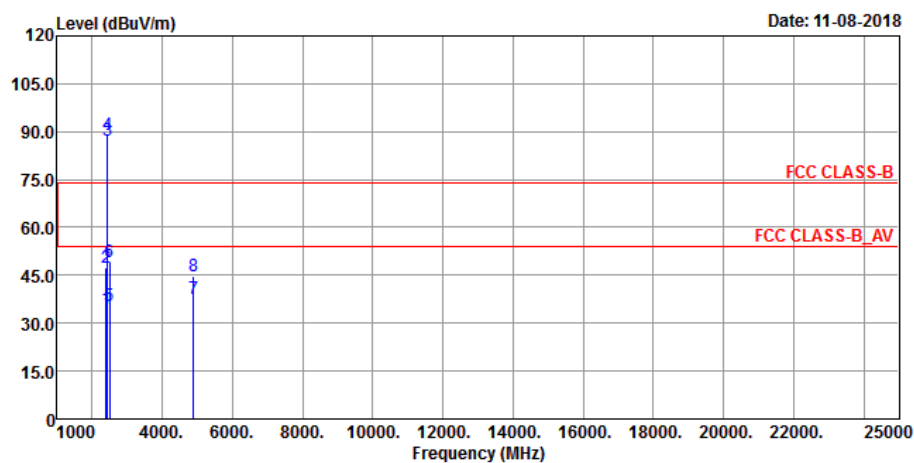
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 2402 MHz: Fundamental Frequency
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 19	Frequency Range	1 GHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Thomas Wei

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2376.08	35.01	41.09	54	-18.99	27.08	4.34	37.5	156	0	Average
2376.08	46.81	52.89	74	-27.19	27.08	4.34	37.5	156	0	Peak
2440	96.31	101.99			27.38	4.4	37.46	156	0	Average
2440	98.19	103.87			27.38	4.4	37.46	156	0	Peak
2494.88	35.16	40.36	54	-18.84	27.61	4.44	37.25	156	0	Average
2494.88	48.44	53.64	74	-25.56	27.61	4.44	37.25	156	0	Peak
4880	35.11	49.86	54	-18.89	31.25	6.86	52.86	151	238	Average
4880	43.84	58.59	74	-30.16	31.25	6.86	52.86	151	238	Peak

Antenna Polarity & Test Distance: Vertical at 3 m

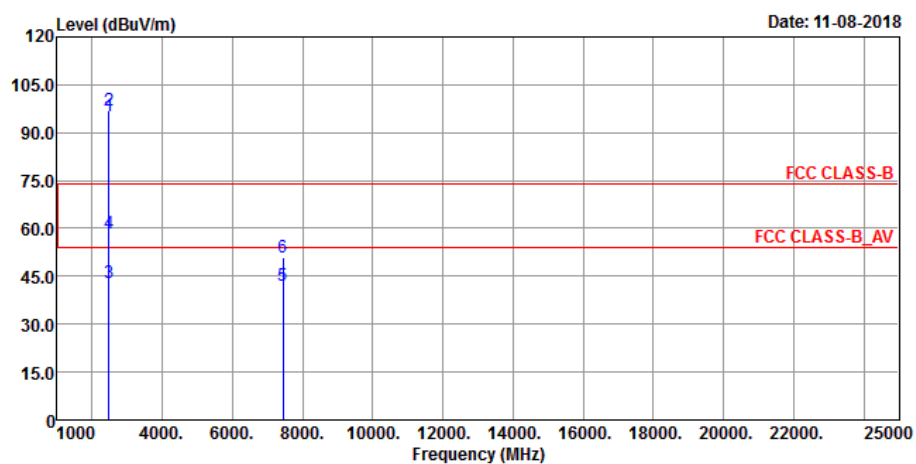
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2386.86	34.43	40.41	54	-19.57	27.16	4.36	37.5	262	60	Average
2386.86	47.34	53.32	74	-26.66	27.16	4.36	37.5	262	60	Peak
2440	87.28	92.96			27.38	4.4	37.46	262	60	Average
2440	89.17	94.85			27.38	4.4	37.46	262	60	Peak
2494.72	35.26	40.46	54	-18.74	27.61	4.44	37.25	262	60	Average
2494.72	49.26	54.46	74	-24.74	27.61	4.44	37.25	262	60	Peak
4880	37.75	52.5	54	-16.25	31.25	6.86	52.86	111	266	Average
4880	44.94	59.69	74	-29.06	31.25	6.86	52.86	111	266	Peak

Remarks:

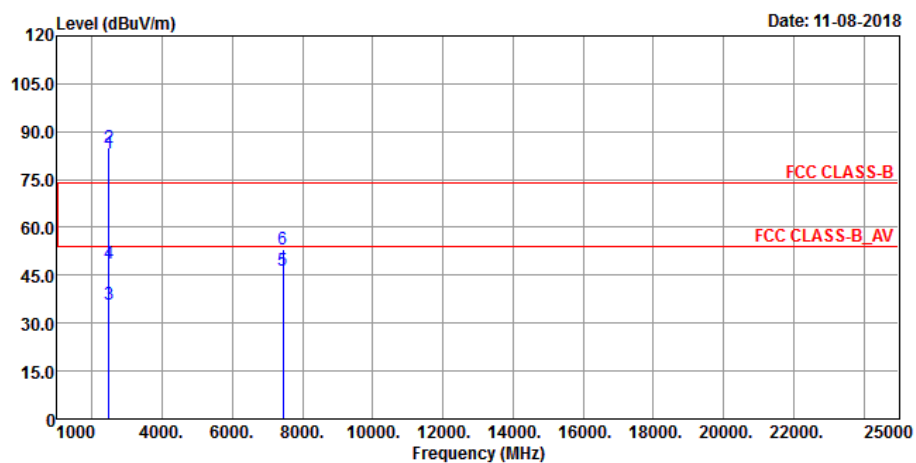
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
2. 2440 MHz: Fundamental Frequency
3. The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 39	Frequency Range	1 GHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Thomas Wei

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2480	95.29	100.65			27.53	4.43	37.32	153	0	Average
2480	97.18	102.54			27.53	4.43	37.32	153	0	Peak
2483.52	42.85	48.21	54	-11.15	27.53	4.43	37.32	153	0	Average
2483.52	58.58	63.94	74	-15.42	27.53	4.43	37.32	153	0	Peak
7440	42.17	49.01	54	-11.83	36.27	8.54	51.65	100	156	Average
7440	51.07	57.91	74	-22.93	36.27	8.54	51.65	100	156	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2480	83.21	88.57			27.53	4.43	37.32	100	102	Average
2480	85.15	90.51			27.53	4.43	37.32	100	102	Peak
2483.52	36.05	41.41	54	-17.95	27.53	4.43	37.32	100	103	Average
2483.52	48.56	53.92	74	-25.44	27.53	4.43	37.32	100	103	Peak
7440	46.69	53.53	54	-7.31	36.27	8.54	51.65	100	246	Average
7440	53.14	59.98	74	-20.86	36.27	8.54	51.65	100	246	Peak

Remarks:

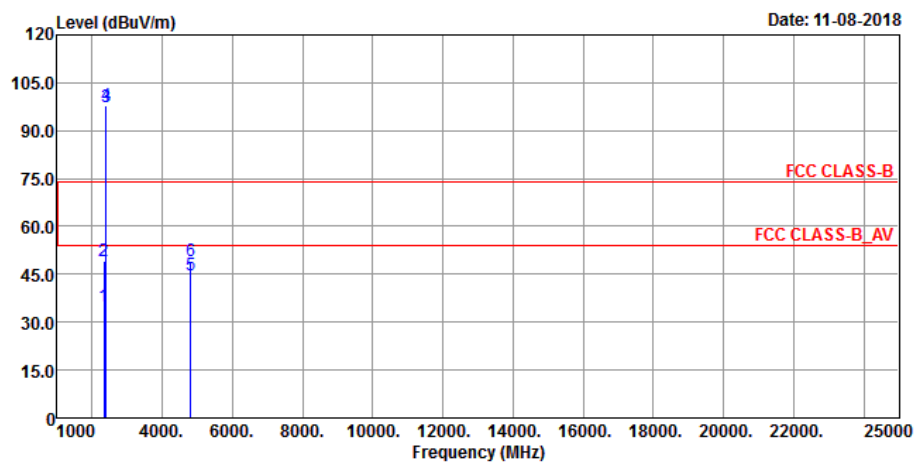
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 2480 MHz: Fundamental Frequency
- The other emission levels were very low against the limit.

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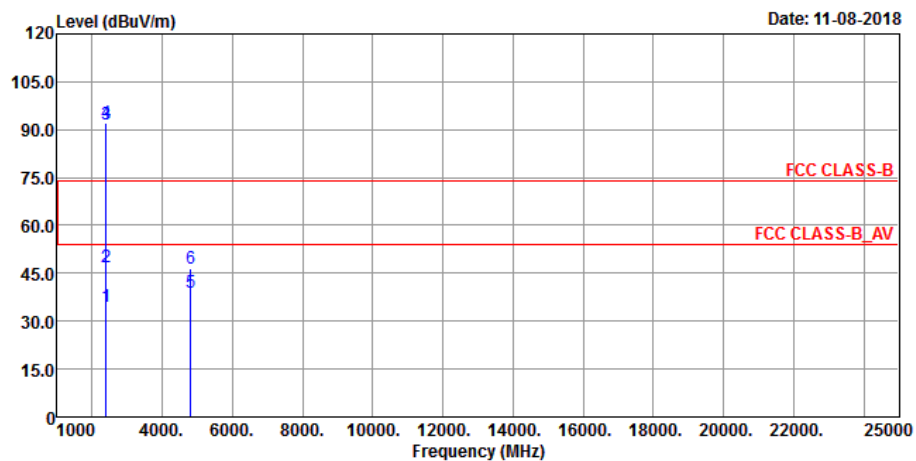
<LE 4.0>

EUT Test Condition		Measurement Detail	
Channel	Channel 0	Frequency Range	1 GHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Thomas Wei

Horizontal



Vertical



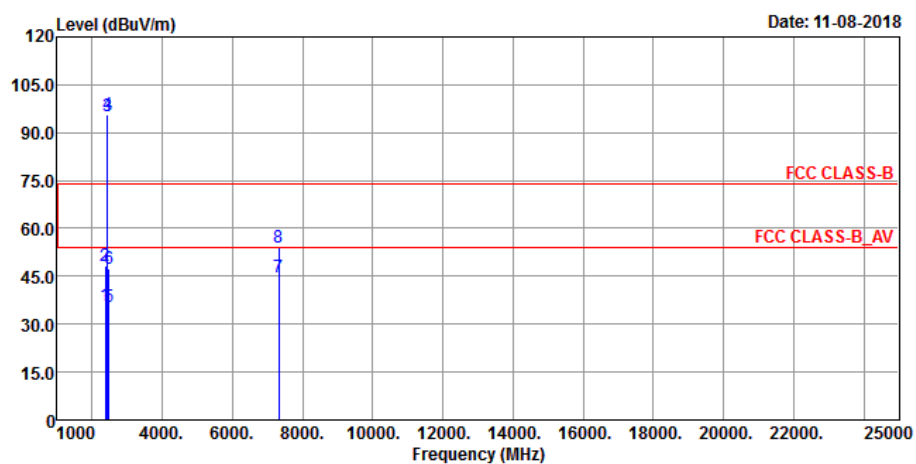
Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2337.72	34.99	41.23	54	-19.01	26.93	4.3	37.47	159	11	Average
2337.72	49.21	55.45	74	-24.79	26.93	4.3	37.47	159	11	Peak
2402	97.23	103.22			27.16	4.37	37.52	159	11	Average
2402	97.98	103.97			27.16	4.37	37.52	159	11	Peak
4804	44.57	59.54	54	-9.43	31.14	6.79	52.9	240	289	Average
4804	49.35	64.32	74	-24.65	31.14	6.79	52.9	240	289	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2387.98	34.5	40.48	54	-19.5	27.16	4.36	37.5	133	254	Average
2387.98	46.94	52.92	74	-27.06	27.16	4.36	37.5	133	254	Peak
2402	91.46	97.45			27.16	4.37	37.52	133	254	Average
2402	92.24	98.23			27.16	4.37	37.52	133	254	Peak
4804	39.03	54	54	-14.97	31.14	6.79	52.9	170	360	Average
4804	46.53	61.5	74	-27.47	31.14	6.79	52.9	170	360	Peak

Remarks:

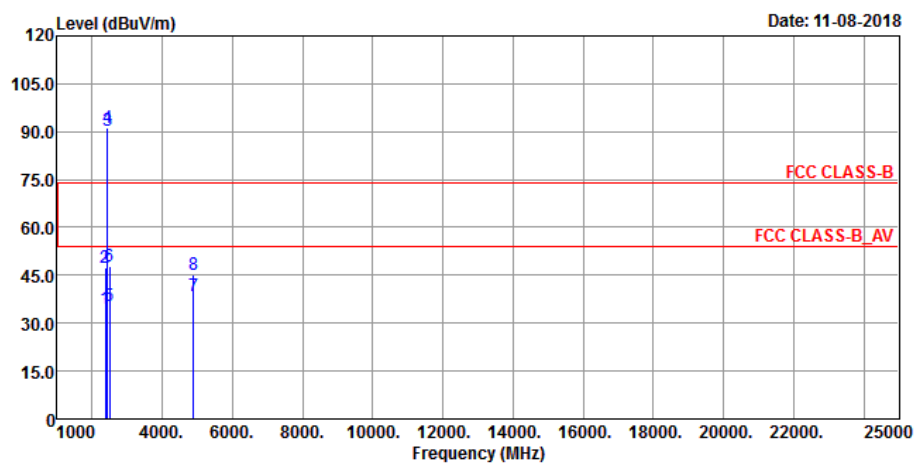
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 2402 MHz: Fundamental Frequency
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 19	Frequency Range	1 GHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Thomas Wei

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2376.08	35.89	41.97	54	-18.11	27.08	4.34	37.5	126	13	Average
2376.08	48.26	54.34	74	-25.74	27.08	4.34	37.5	126	13	Peak
2440	95.06	100.74			27.38	4.4	37.46	126	13	Average
2440	95.75	101.43			27.38	4.4	37.46	126	13	Peak
2483.52	35.31	40.67	54	-18.69	27.53	4.43	37.32	126	13	Average
2483.52	47.49	52.85	74	-26.51	27.53	4.43	37.32	126	13	Peak
7320	44.67	52.03	54	-9.33	35.97	8.46	51.79	170	63	Average
7320	53.99	61.35	74	-20.01	35.97	8.46	51.79	170	63	Peak

Antenna Polarity & Test Distance: Vertical at 3 m

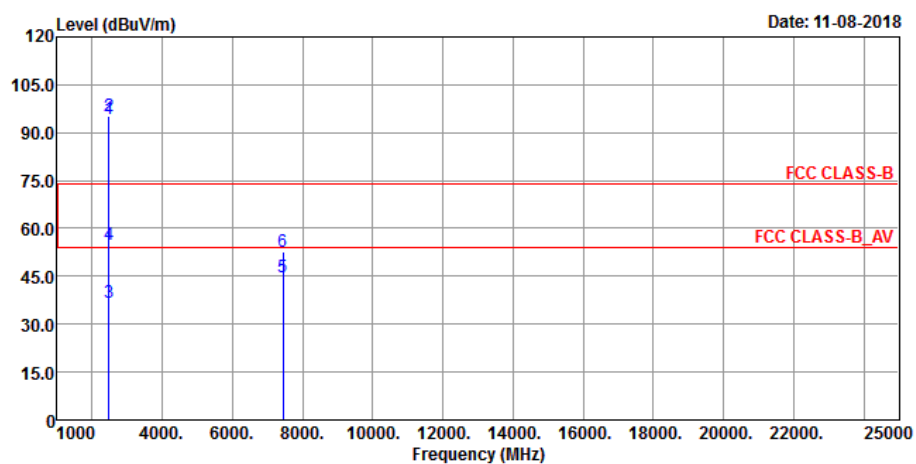
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2375.8	34.75	40.83	54	-19.25	27.08	4.34	37.5	144	254	Average
2375.8	47.31	53.39	74	-26.69	27.08	4.34	37.5	144	254	Peak
2440	90.4	96.08			27.38	4.4	37.46	144	254	Average
2440	91.12	96.8			27.38	4.4	37.46	144	254	Peak
2490.24	35.25	40.53	54	-18.75	27.61	4.43	37.32	144	254	Average
2490.24	47.86	53.14	74	-26.14	27.61	4.43	37.32	144	254	Peak
4880	38.44	53.19	54	-15.56	31.25	6.86	52.86	164	354	Average
4880	45.08	59.83	74	-28.92	31.25	6.86	52.86	164	354	Peak

Remarks:

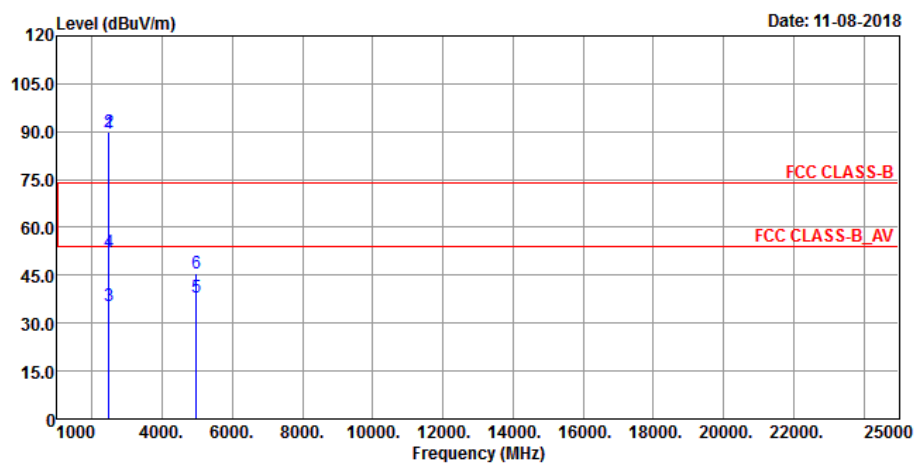
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
2. 2440 MHz: Fundamental Frequency
3. The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 39	Frequency Range	1 GHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Thomas Wei

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2480	94.37	99.73			27.53	4.43	37.32	124	13	Average
2480	95.14	100.5			27.53	4.43	37.32	124	13	Peak
2483.52	36.8	42.16	54	-17.2	27.53	4.43	37.32	124	13	Average
2483.52	55.09	60.45	74	-18.91	27.53	4.43	37.32	124	13	Peak
7440	44.87	51.71	54	-9.13	36.27	8.54	51.65	100	60	Average
7440	52.67	59.51	74	-21.33	36.27	8.54	51.65	100	60	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2480	89.33	94.69			27.53	4.43	37.32	114	255	Average
2480	90.1	95.46			27.53	4.43	37.32	114	255	Peak
2483.92	35.54	40.9	54	-18.46	27.53	4.43	37.32	114	255	Average
2483.92	52.06	57.42	74	-21.94	27.53	4.43	37.32	114	255	Peak
4960	38.23	52.85	54	-15.77	31.4	6.9	52.92	149	13	Average
4960	45.44	60.06	74	-28.56	31.4	6.9	52.92	149	13	Peak

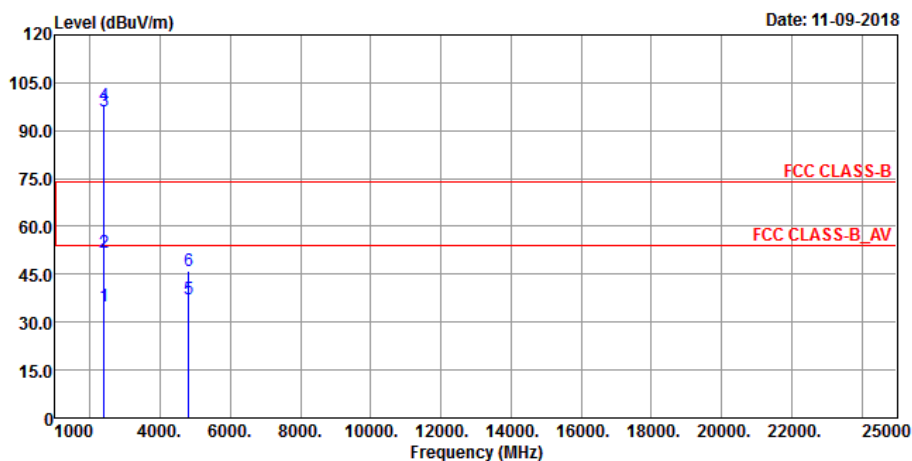
Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 2480 MHz: Fundamental Frequency
- The other emission levels were very low against the limit.

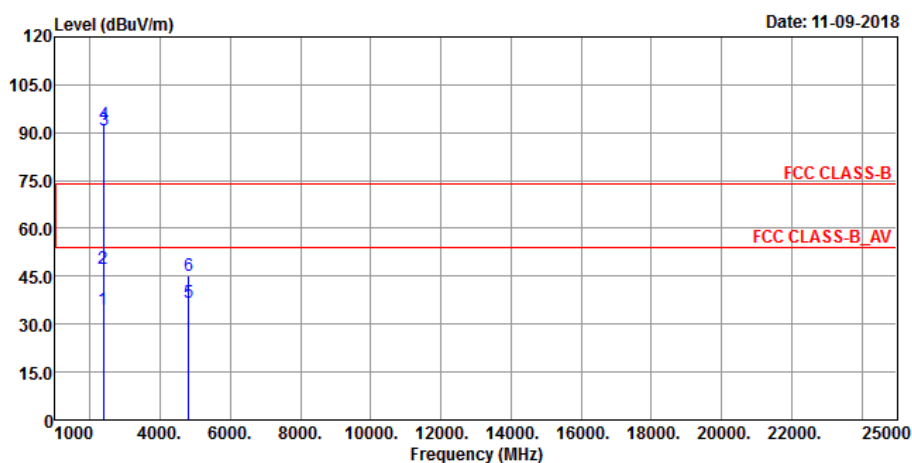
<LE 5.0>

EUT Test Condition		Measurement Detail	
Channel	Channel 0	Frequency Range	1 GHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Thomas Wei

Horizontal



Vertical



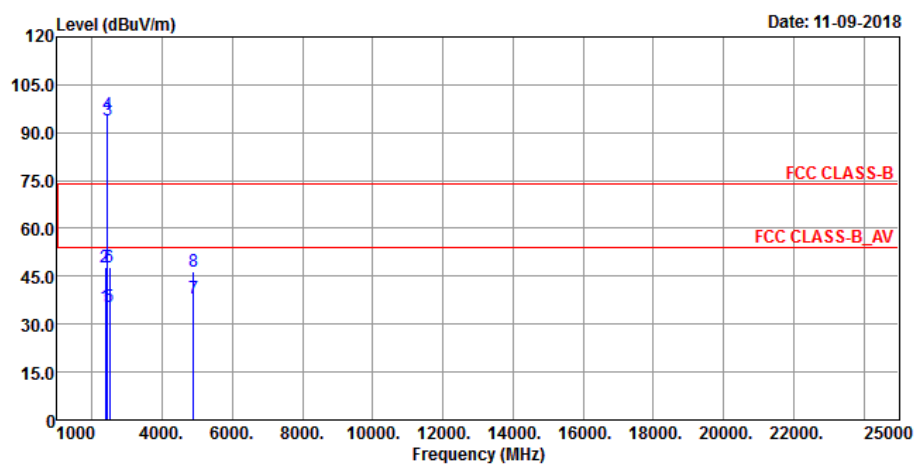
Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2389.8	34.94	40.94	54	-19.06	27.16	4.36	37.52	161	14	Average
2389.8	51.61	57.61	74	-22.39	27.16	4.36	37.52	161	14	Peak
2402	96.1	102.09			27.16	4.37	37.52	161	14	Average
2402	98.05	104.04			27.16	4.37	37.52	161	14	Peak
4804	37.4	52.37	54	-16.6	31.14	6.79	52.9	134	235	Average
4804	45.9	60.87	74	-28.1	31.14	6.79	52.9	134	235	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2370.76	34.6	40.68	54	-19.4	27.08	4.34	37.5	134	254	Average
2370.76	47.58	53.66	74	-26.42	27.08	4.34	37.5	134	254	Peak
2402	90.59	96.58			27.16	4.37	37.52	134	254	Average
2402	92.55	98.54			27.16	4.37	37.52	134	254	Peak
4804	36.69	51.66	54	-17.31	31.14	6.79	52.9	108	69	Average
4804	45.24	60.21	74	-28.76	31.14	6.79	52.9	108	69	Peak

Remarks:

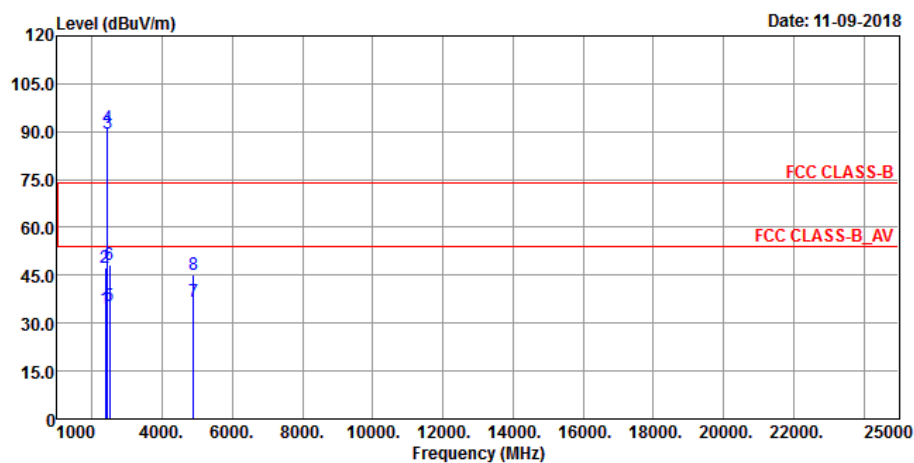
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 2402 MHz: Fundamental Frequency
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 19	Frequency Range	1 GHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Thomas Wei

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2375.52	35.45	41.53	54	-18.55	27.08	4.34	37.5	126	13	Average
2375.52	47.7	53.78	74	-26.3	27.08	4.34	37.5	126	13	Peak
2440	93.71	99.39			27.38	4.4	37.46	126	13	Average
2440	95.64	101.32			27.38	4.4	37.46	126	13	Peak
2496.48	35.45	40.65	54	-18.55	27.61	4.44	37.25	126	13	Average
2496.48	47.96	53.16	74	-26.04	27.61	4.44	37.25	126	13	Peak
4880	37.99	52.74	54	-16.01	31.25	6.86	52.86	129	223	Average
4880	46.42	61.17	74	-27.58	31.25	6.86	52.86	129	223	Peak

Antenna Polarity & Test Distance: Vertical at 3 m

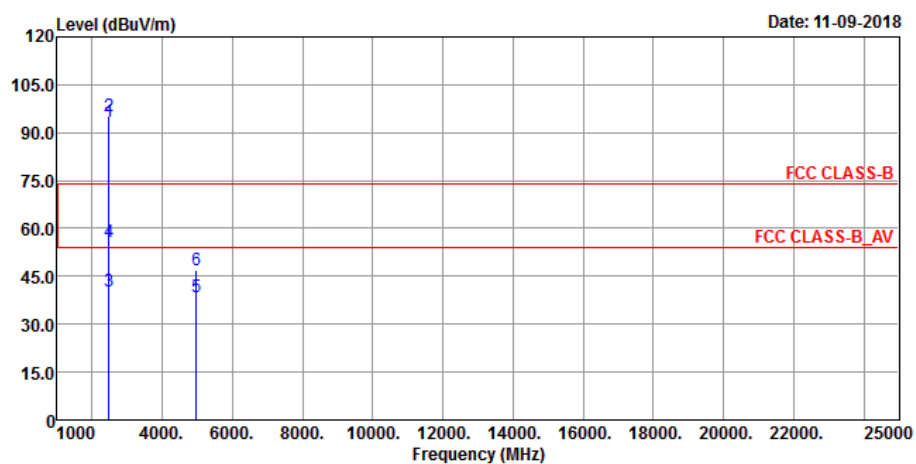
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2375.66	34.6	40.68	54	-19.4	27.08	4.34	37.5	145	253	Average
2375.66	47.39	53.47	74	-26.61	27.08	4.34	37.5	145	253	Peak
2440	89.24	94.92			27.38	4.4	37.46	145	253	Average
2440	91.23	96.91			27.38	4.4	37.46	145	253	Peak
2494.56	35.22	40.42	54	-18.78	27.61	4.44	37.25	145	253	Average
2494.56	48.14	53.34	74	-25.86	27.61	4.44	37.25	145	253	Peak
4880	36.73	51.48	54	-17.27	31.25	6.86	52.86	137	104	Average
4880	45.29	60.04	74	-28.71	31.25	6.86	52.86	137	104	Peak

Remarks:

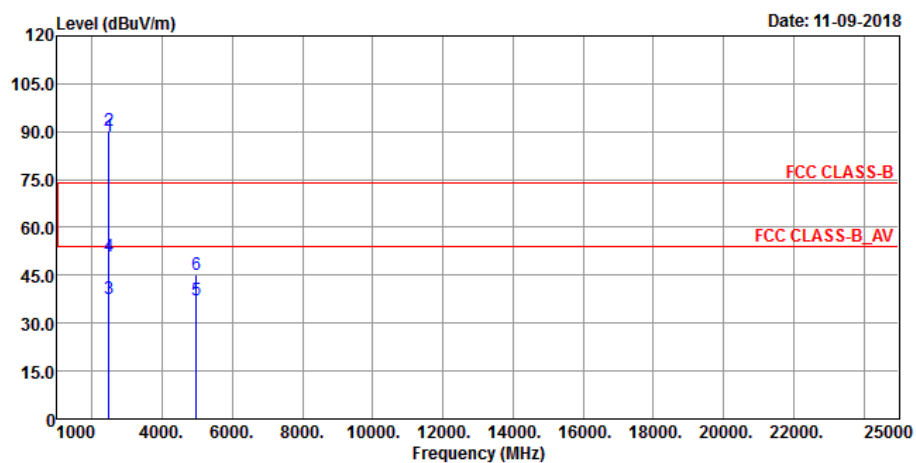
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
2. 2440 MHz: Fundamental Frequency
3. The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Channel	Channel 39	Frequency Range	1 GHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) Average (AV)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Thomas Wei

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2480	93.44	98.8			27.53	4.43	37.32	124	16	Average
2480	95.41	100.77			27.53	4.43	37.32	124	16	Peak
2483.52	40.51	45.87	54	-13.49	27.53	4.43	37.32	124	16	Average
2483.52	55.78	61.14	74	-18.22	27.53	4.43	37.32	124	16	Peak
4960	38.55	53.17	54	-15.45	31.4	6.9	52.92	167	254	Average
4960	46.94	61.56	74	-27.06	31.4	6.9	52.92	167	254	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
2480	88.47	93.83			27.53	4.43	37.32	117	255	Average
2480	90.48	95.84			27.53	4.43	37.32	117	255	Peak
2483.52	37.66	43.02	54	-16.34	27.53	4.43	37.32	117	255	Average
2483.52	50.93	56.29	74	-23.07	27.53	4.43	37.32	117	255	Peak
4960	37.03	51.65	54	-16.97	31.4	6.9	52.92	144	195	Average
4960	45.22	59.84	74	-28.78	31.4	6.9	52.92	144	195	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- 2480 MHz: Fundamental Frequency
- The other emission levels were very low against the limit.

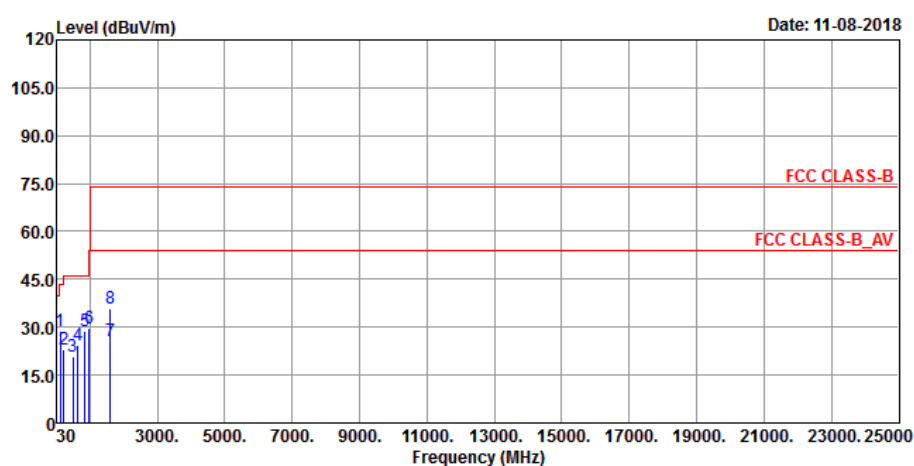
4.6.2 接收諧波

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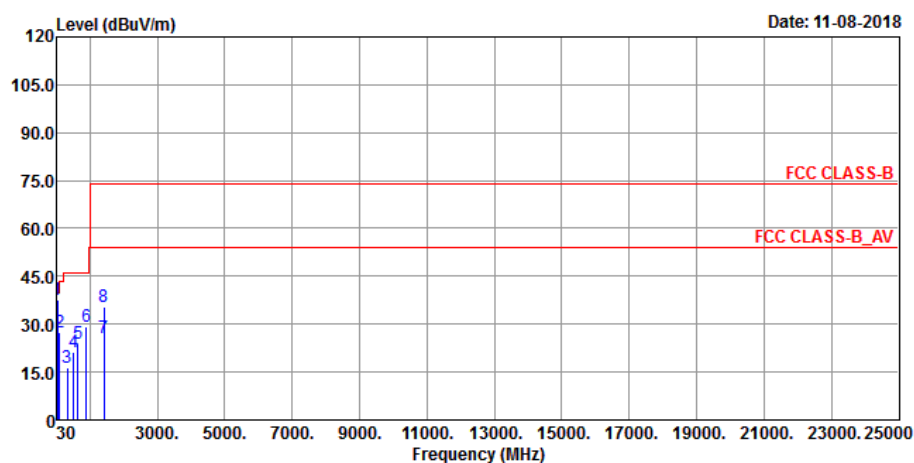
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EUT Test Condition		Measurement Detail	
Channel	Channel 39	Frequency Range	30 MHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Above 1 GHz: Peak (PK) & Average (AV) Below 1 GHz: Peak (PK) or Quasi-Peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
110.51	28.8	49.77	43.5	-14.7	10.09	0.79	31.85	165	251	Peak
224.97	23.18	43.18	46	-22.82	10.42	1.36	31.78	185	295	Peak
500.45	21	32.77	46	-25	17.33	2.52	31.62	147	152	Peak
639.16	24.27	33.23	46	-21.73	20.08	3.06	32.1	165	231	Peak
849.65	28.59	33.76	46	-17.41	22.86	3.84	31.87	165	274	Peak
975.75	29.56	33.07	54	-24.44	23.93	4.35	31.79	198	256	Peak
1599	25.9	50.27	54	-28.1	25.39	3.95	53.71	162	111	Average
1599	35.8	60.17	74	-38.2	25.39	3.95	53.71	162	111	Peak

Antenna Polarity & Test Distance: Vertical at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
33.88	37.75	55.74	40	-2.25	12.63	0.46	31.08	165	251	Peak
108.57	27.42	48.59	43.5	-16.08	9.9	0.78	31.85	147	185	Peak
333.61	16.56	32.82	46	-29.44	13.75	1.8	31.81	256	132	Peak
511.12	21.36	32.81	46	-24.64	17.57	2.57	31.59	111	184	Peak
635.28	23.94	32.97	46	-22.06	20.03	3.05	32.11	147	195	Peak
902.03	29.18	33.63	46	-16.82	23.52	4.05	32.02	165	251	Peak
1412	25.8	50.51	54	-28.2	25.31	3.71	53.73	222	295	Average
1412	35.26	59.97	74	-38.74	25.31	3.71	53.73	222	295	Peak

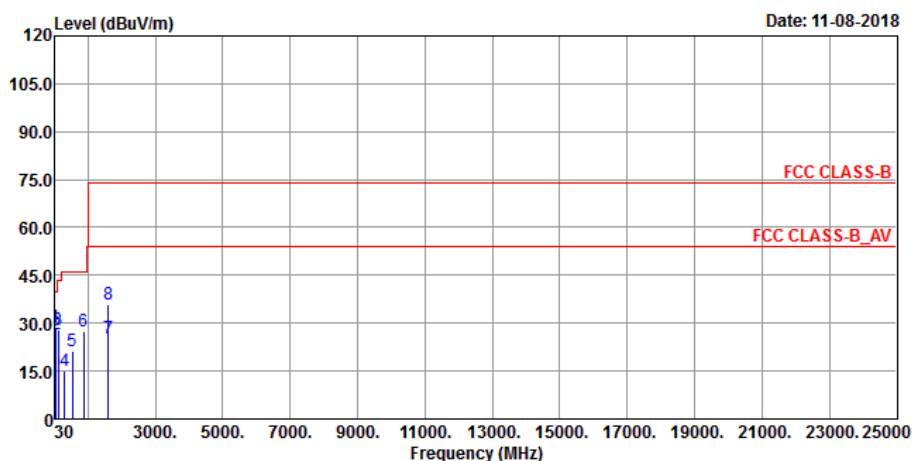
Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- The other emission levels were very low against the limit.

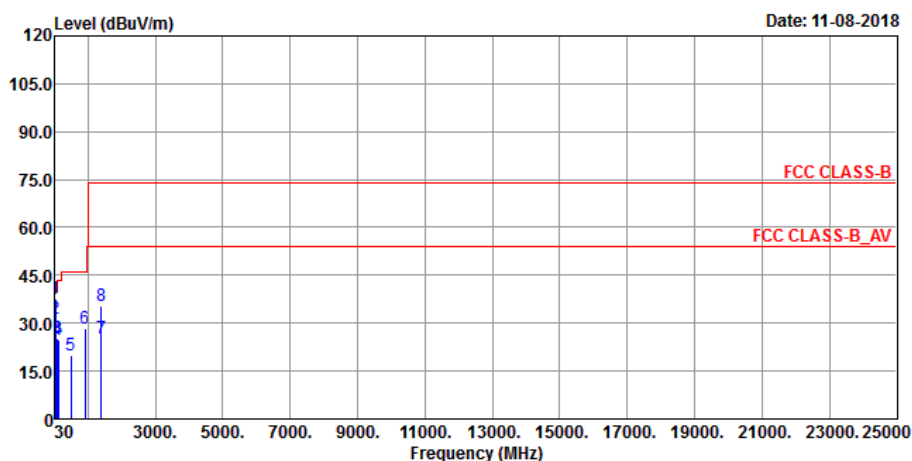
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EUT Test Condition		Measurement Detail	
Channel	Channel 39	Frequency Range	30 MHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Above 1 GHz: Peak (PK) & Average (AV) Below 1 GHz: Peak (PK) or Quasi-Peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
44.55	28.67	45.7	40	-11.33	13.6	0.51	31.14	185	265	Peak
53.28	26.67	44.79	40	-13.33	12.66	0.55	31.33	111	147	Peak
113.42	27.76	48.44	43.5	-15.74	10.37	0.81	31.86	152	231	Peak
305.48	15.04	32.18	46	-30.96	13.08	1.68	31.9	165	295	Peak
531.49	21.37	32.39	46	-24.63	18.04	2.64	31.7	102	251	Peak
866.14	27.25	32.22	46	-18.75	23.08	3.92	31.97	165	284	Peak
1595	25.2	49.57	54	-28.8	25.39	3.95	53.71	162	222	Average
1595	35.69	60.06	74	-38.31	25.39	3.95	53.71	162	222	Peak

Antenna Polarity & Test Distance: Vertical at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
32.91	37.48	55.64	40	-2.52	12.47	0.46	31.09	165	231	Peak
43.58	31.41	48.43	40	-8.59	13.59	0.5	31.11	111	147	Peak
104.69	25.22	46.82	43.5	-18.28	9.53	0.77	31.9	152	285	Peak
115.36	24.92	45.42	43.5	-18.58	10.55	0.82	31.87	165	295	Peak
493.66	20.14	32.19	46	-25.86	17.2	2.47	31.72	154	251	Peak
918.52	28.21	32.48	46	-17.79	23.61	4.13	32.01	185	265	Peak
1404	25.23	49.94	54	-28.77	25.31	3.71	53.73	165	285	Average
1404	35.26	59.97	74	-38.74	25.31	3.71	53.73	165	285	Peak

Remarks:

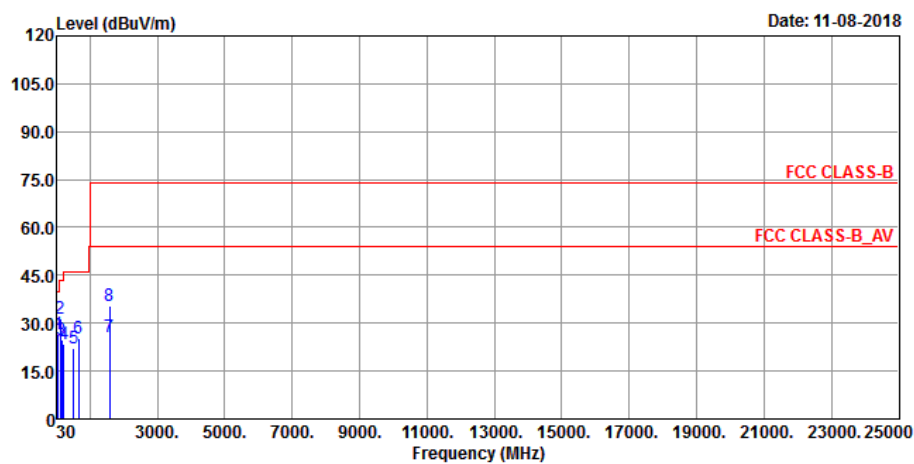
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- The other emission levels were very low against the limit.

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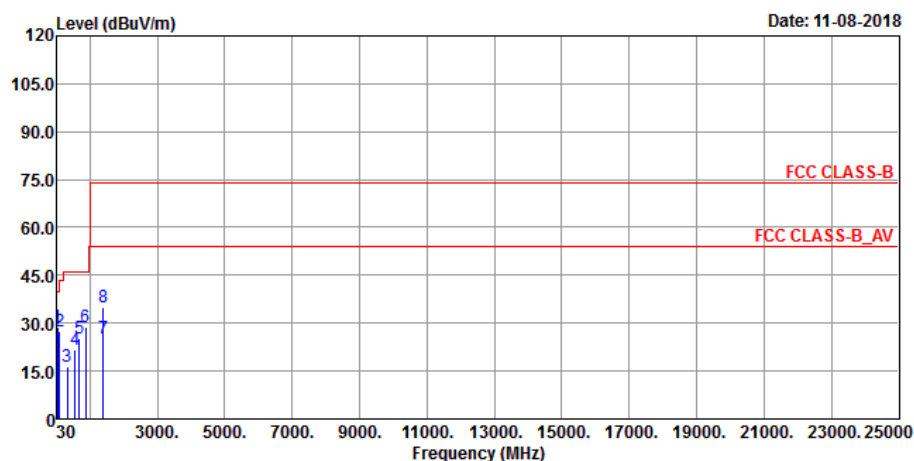
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EUT Test Condition		Measurement Detail	
Channel	Channel 39	Frequency Range	30 MHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Above 1 GHz: Peak (PK) & Average (AV) Below 1 GHz: Peak (PK) or Quasi-Peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
52.31	26.52	44.54	40	-13.48	12.76	0.54	31.32	185	245	Peak
113.42	31.64	52.32	43.5	-11.86	10.37	0.81	31.86	165	231	Peak
168.71	24.75	43.57	43.5	-18.75	11.86	1.06	31.74	111	195	Peak
224.97	23.31	43.31	46	-22.69	10.42	1.36	31.78	205	254	Peak
513.06	22.23	33.62	46	-23.77	17.62	2.57	31.58	185	147	Peak
674.08	25.25	33.37	46	-20.75	20.5	3.2	31.82	165	231	Peak
1586	25.48	49.85	54	-28.52	25.39	3.95	53.71	145	252	Average
1586	35.28	59.65	74	-38.72	25.39	3.95	53.71	145	252	Peak

Antenna Polarity & Test Distance: Vertical at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
44.55	28.98	46.01	40	-11.02	13.6	0.51	31.14	165	231	Peak
109.54	27.34	48.4	43.5	-16.16	9.99	0.79	31.84	147	152	Peak
323.91	16.44	33.01	46	-29.56	13.52	1.77	31.86	195	285	Peak
555.74	21.86	32.57	46	-24.14	18.59	2.72	32.02	165	231	Peak
682.81	25.32	33.32	46	-20.68	20.61	3.23	31.84	147	152	Peak
870.02	28.71	33.67	46	-17.29	23.12	3.93	32.01	205	231	Peak
1401	25.25	49.96	54	-28.75	25.31	3.71	53.73	198	225	Average
1401	34.96	59.67	74	-39.04	25.31	3.71	53.73	198	225	Peak

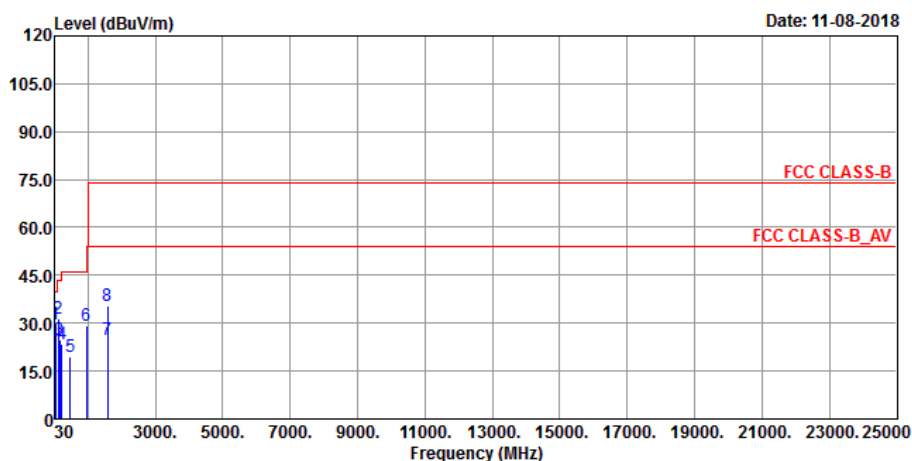
Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- The other emission levels were very low against the limit.

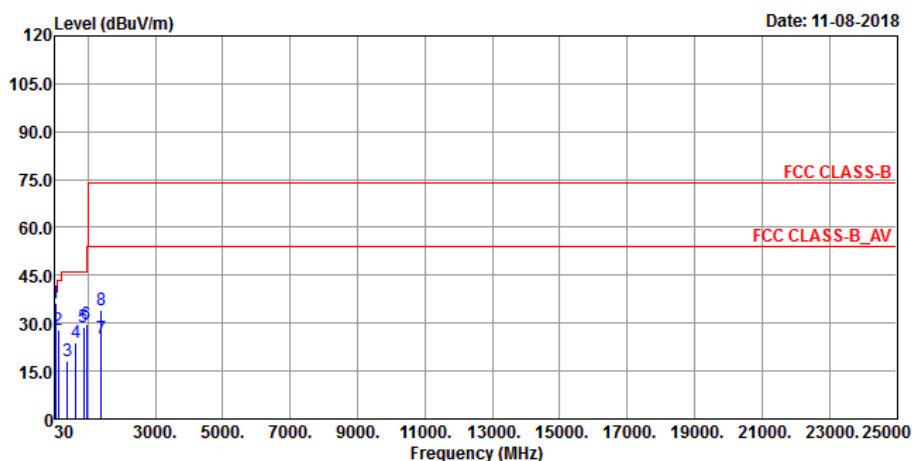
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EUT Test Condition		Measurement Detail	
Channel	Channel 39	Frequency Range	30 MHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Above 1 GHz: Peak (PK) & Average (AV) Below 1 GHz: Peak (PK) or Quasi-Peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
43.58	29.58	46.6	40	-10.42	13.59	0.5	31.11	152	111	Peak
113.42	31.64	52.32	43.5	-11.86	10.37	0.81	31.86	165	231	Peak
168.71	24.75	43.57	43.5	-18.75	11.86	1.06	31.74	147	152	Peak
224.97	23.31	43.31	46	-22.69	10.42	1.36	31.78	102	251	Peak
475.23	19.45	32.1	46	-26.55	16.83	2.39	31.87	156	231	Peak
961.2	29.42	33.2	54	-24.58	23.85	4.29	31.92	147	152	Peak
1587	25.01	49.38	54	-28.99	25.39	3.95	53.71	162	222	Average
1587	35.23	59.6	74	-38.77	25.39	3.95	53.71	162	222	Peak

Antenna Polarity & Test Distance: Vertical at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
32.91	36.42	54.58	40	-3.58	12.47	0.46	31.09	198	256	Peak
113.42	27.9	48.58	43.5	-15.6	10.37	0.81	31.86	111	174	Peak
382.11	18.32	33.37	46	-27.68	14.91	2.01	31.97	102	251	Peak
634.31	23.98	33.04	46	-22.02	20.02	3.04	32.12	132	256	Peak
870.02	28.71	33.67	46	-17.29	23.12	3.93	32.01	111	195	Peak
958.29	29.51	33.31	46	-16.49	23.84	4.27	31.91	147	152	Peak
1402	25.02	49.73	54	-28.98	25.31	3.71	53.73	152	236	Average
1402	34.23	58.94	74	-39.77	25.31	3.71	53.73	152	236	Peak

Remarks:

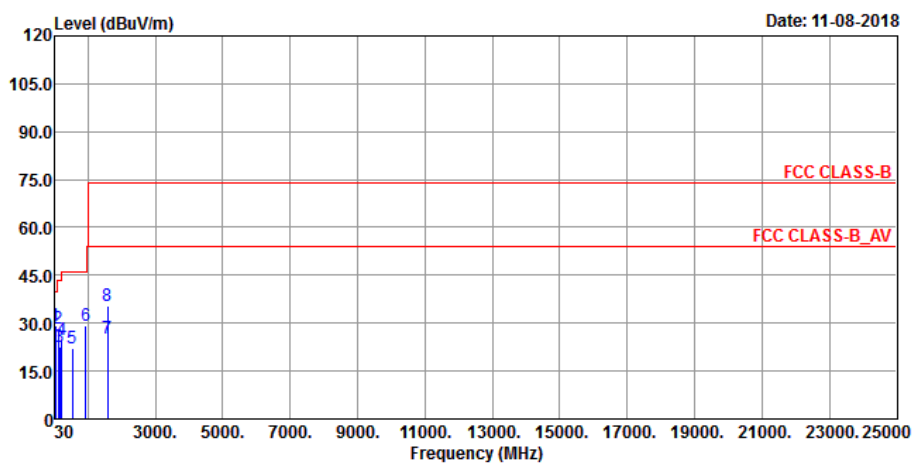
1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
2. The other emission levels were very low against the limit.

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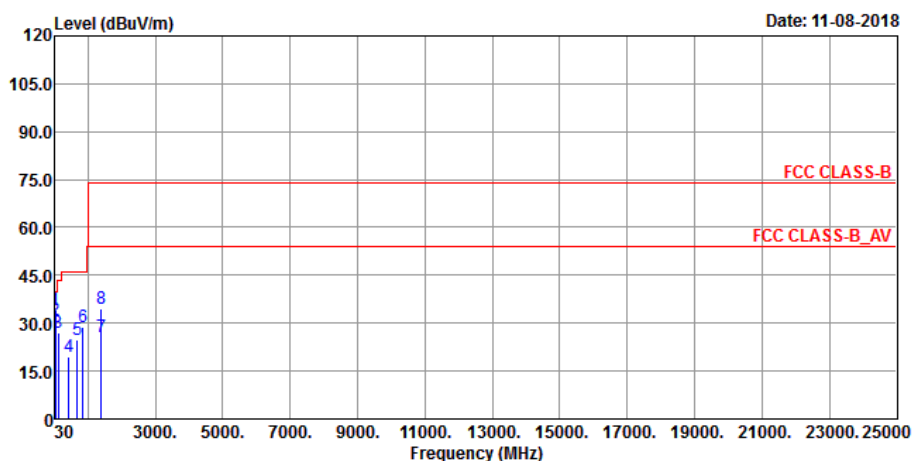
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EUT Test Condition		Measurement Detail	
Channel	Channel 39	Frequency Range	30 MHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Above 1 GHz: Peak (PK) & Average (AV) Below 1 GHz: Peak (PK) or Quasi-Peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
43.58	29.41	46.43	40	-10.59	13.59	0.5	31.11	111	152	Peak
111.48	28.45	49.32	43.5	-15.05	10.18	0.8	31.85	165	231	Peak
159.98	22.72	40.85	43.5	-20.78	12.73	1.02	31.88	185	147	Peak
224.97	24.79	44.79	46	-21.21	10.42	1.36	31.78	195	285	Peak
534.4	22.14	33.11	46	-23.86	18.1	2.64	31.71	165	231	Peak
933.07	29.32	33.43	46	-16.68	23.69	4.17	31.97	111	174	Peak
1587	25.12	49.49	54	-28.88	25.39	3.95	53.71	145	252	Average
1587	35.62	59.99	74	-38.38	25.39	3.95	53.71	145	252	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
33.88	34.22	52.21	40	-5.78	12.63	0.46	31.08	152	231	Peak
43.58	31.18	48.2	40	-8.82	13.59	0.5	31.11	165	274	Peak
111.48	27.03	47.9	43.5	-16.47	10.18	0.8	31.85	111	162	Peak
424.79	19.57	33.6	46	-26.43	15.83	2.17	32.03	185	274	Peak
678.93	24.88	32.94	46	-21.12	20.56	3.22	31.84	165	198	Peak
861.29	28.97	33.98	46	-17.03	23.01	3.89	31.91	174	135	Peak
1403	25.62	50.33	54	-28.38	25.31	3.71	53.73	111	123	Average
1403	34.55	59.26	74	-39.45	25.31	3.71	53.73	111	123	Peak

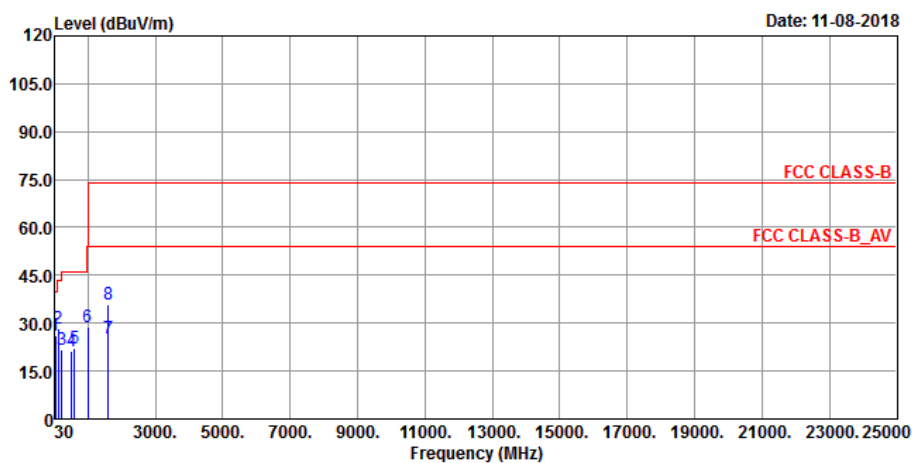
Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
2. The other emission levels were very low against the limit.

<LE 5.0>

EUT Test Condition		Measurement Detail	
Channel	Channel 39	Frequency Range	30 MHz ~ 25 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Above 1 GHz: Peak (PK) & Average (AV) Below 1 GHz: Peak (PK) or Quasi-Peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Horizontal



Antenna Polarity & Test Distance: Horizontal at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
42.61	26.23	43.23	40	-13.77	13.58	0.5	31.08	152	265	Peak
110.51	28.44	49.41	43.5	-15.06	10.09	0.79	31.85	174	184	Peak
227.88	21.77	41.69	46	-24.23	10.54	1.37	31.83	198	265	Peak
516.94	21.13	32.42	46	-24.87	17.71	2.58	31.58	132	254	Peak
604.24	21.98	31.58	46	-24.02	19.66	2.92	32.18	102	256	Peak
1000	28.84	32.11	54	-25.16	24.07	4.42	31.76	165	231	Peak
1599	25.1	49.47	54	-28.9	25.39	3.95	53.71	125	165	Average
1599	35.65	60.02	74	-38.35	25.39	3.95	53.71	125	165	Peak

Antenna Polarity & Test Distance: Vertical at 3 m

Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
31.94	33.03	51.39	40	-6.97	12.3	0.45	31.11	145	285	Peak
41.64	30.35	47.34	40	-9.65	13.56	0.5	31.05	165	231	Peak
52.31	25.6	43.62	40	-14.4	12.76	0.54	31.32	195	256	Peak
108.57	26.63	47.8	43.5	-16.87	9.9	0.78	31.85	147	152	Peak
619.76	23.35	32.69	46	-22.65	19.84	2.99	32.17	165	231	Peak
929.19	27.68	31.84	46	-18.32	23.67	4.16	31.99	165	284	Peak
1405	25.12	49.83	54	-28.88	25.31	3.71	53.73	174	154	Average
1405	34.65	59.36	74	-39.35	25.31	3.71	53.73	174	154	Peak

Remarks:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
2. The other emission levels were very low against the limit.

4.6.3 其它不必要之訊號

9 kHz ~ 30 MHz Data:

The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

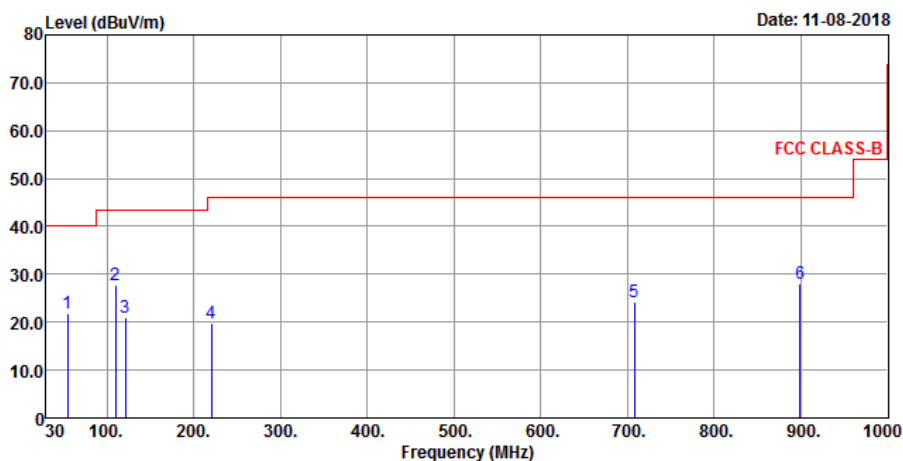
30 MHz ~ 1 GHz Data:

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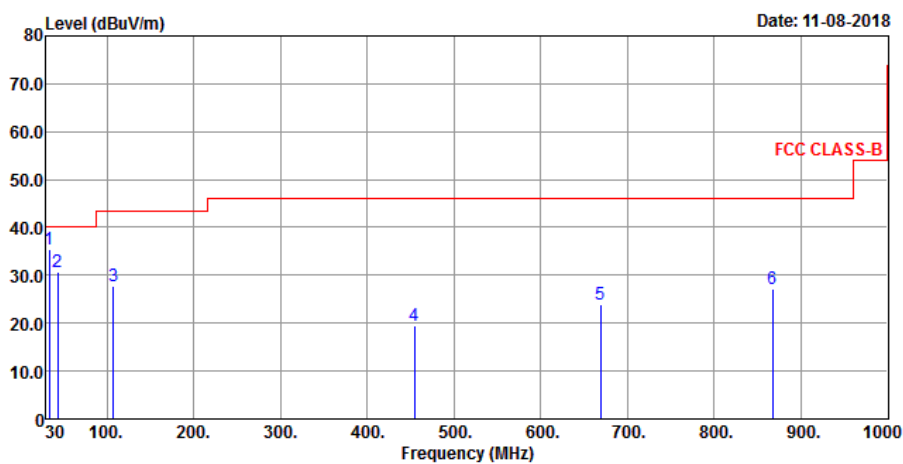
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EUT Test Condition		Measurement Detail	
Channel	Channel 39	Frequency Range	30 MHz ~ 1 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) or Quasi-Peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
54.25	21.85	40.07	40	-18.15	12.56	0.55	31.33	152	231	Peak
109.54	27.73	48.79	43.5	-15.77	9.99	0.79	31.84	165	295	Peak
121.18	20.93	40.89	43.5	-22.57	11.09	0.85	31.9	147	152	Peak
220.12	19.71	39.87	46	-26.29	10.22	1.33	31.71	185	251	Peak
708.03	24.29	31.76	46	-21.71	20.93	3.35	31.75	165	231	Peak
899.12	28.07	32.55	46	-17.93	23.5	4.03	32.01	147	152	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
33.88	35.45	53.44	40	-4.55	12.63	0.46	31.08	147	152	Peak
43.58	30.8	47.82	40	-9.2	13.59	0.5	31.11	165	231	Peak
107.6	27.79	49.06	43.5	-15.71	9.81	0.78	31.86	195	285	Peak
454.86	19.59	32.85	46	-26.41	16.43	2.3	31.99	147	152	Peak
669.23	23.87	32.08	46	-22.13	20.44	3.17	31.82	165	231	Peak
867.11	27.29	32.26	46	-18.71	23.09	3.92	31.98	102	284	Peak

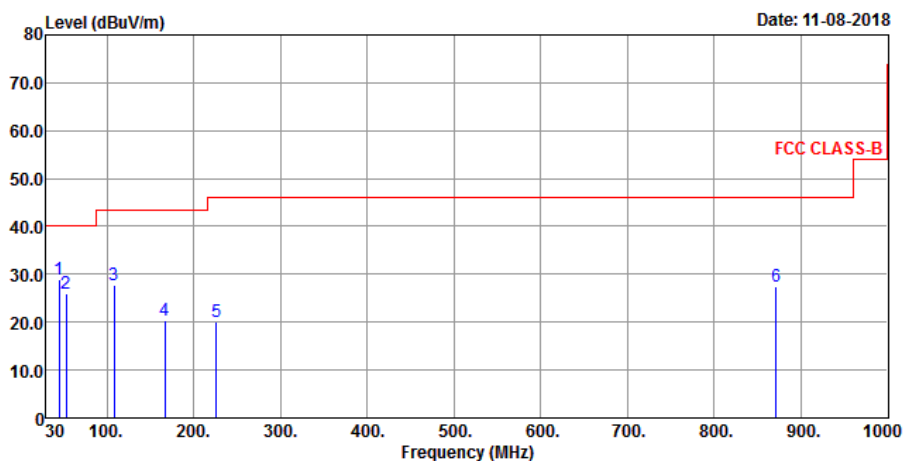
Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- The other emission levels were very low against the limit.

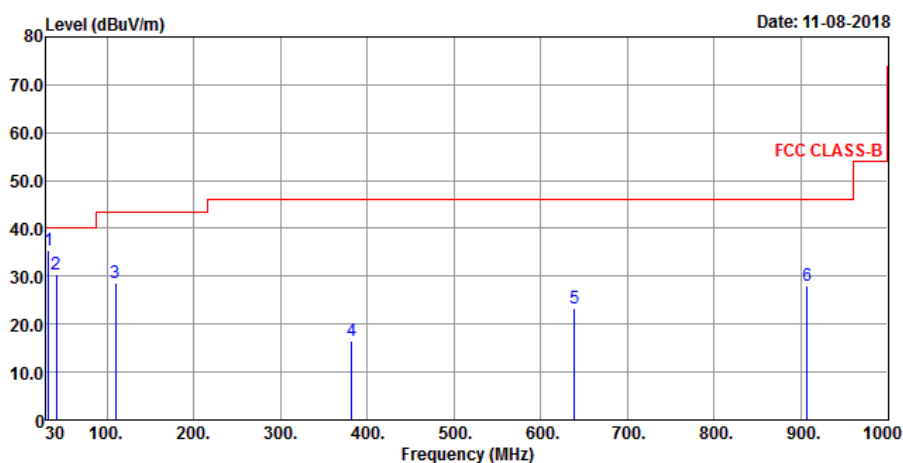
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EUT Test Condition		Measurement Detail	
Channel	Channel 39	Frequency Range	30 MHz ~ 1 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) or Quasi-Peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
44.55	28.85	45.88	40	-11.15	13.6	0.51	31.14	165	251	Peak
53.28	26.01	44.13	40	-13.99	12.66	0.55	31.33	111	147	Peak
108.57	27.63	48.8	43.5	-15.87	9.9	0.78	31.85	102	295	Peak
166.77	20.42	39.09	43.5	-23.08	12.05	1.05	31.77	147	185	Peak
225.94	20.21	40.19	46	-25.79	10.46	1.36	31.8	165	231	Peak
870.99	27.5	32.43	46	-18.5	23.14	3.94	32.01	111	195	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
32.91	35.37	53.53	40	-4.63	12.47	0.46	31.09	165	231	Peak
41.64	30.39	47.38	40	-9.61	13.56	0.5	31.05	111	145	Peak
109.54	28.57	49.63	43.5	-14.93	9.99	0.79	31.84	152	265	Peak
382.11	16.67	31.72	46	-29.33	14.91	2.01	31.97	198	152	Peak
639.16	23.46	32.42	46	-22.54	20.08	3.06	32.1	165	231	Peak
906.88	28.02	32.45	46	-17.98	23.55	4.06	32.04	165	284	Peak

Remarks:

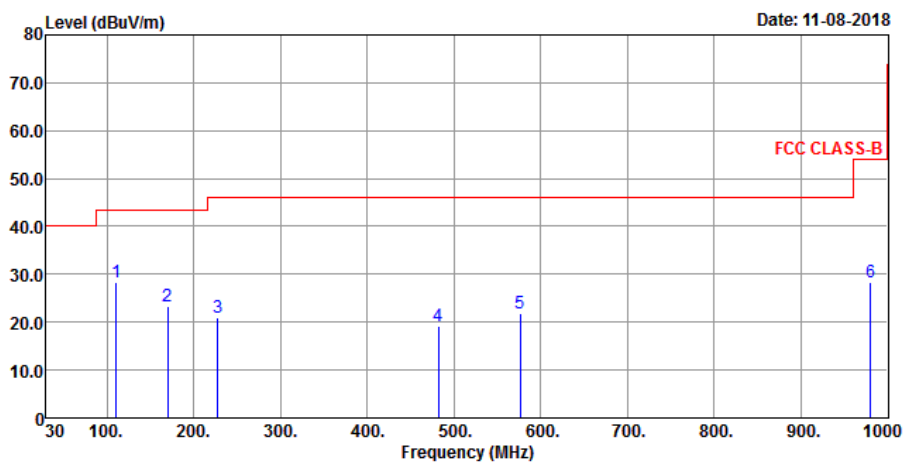
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- The other emission levels were very low against the limit.

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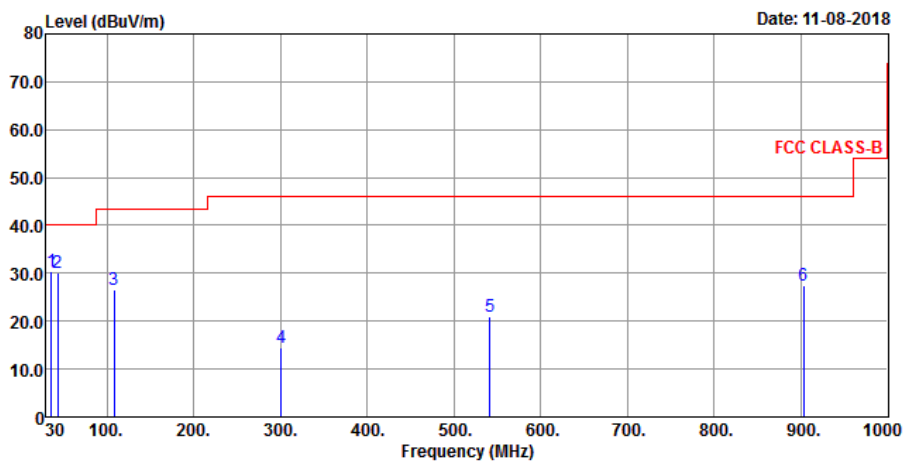
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EUT Test Condition		Measurement Detail	
Channel	Channel 39	Frequency Range	30 MHz ~ 1 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) or Quasi-Peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
110.51	28.35	49.32	43.5	-15.15	10.09	0.79	31.85	165	258	Peak
169.68	23.33	42.23	43.5	-20.17	11.76	1.07	31.73	165	214	Peak
227.88	20.9	40.82	46	-25.1	10.54	1.37	31.83	165	231	Peak
482.02	19.08	31.53	46	-26.92	16.96	2.42	31.83	195	285	Peak
576.11	21.75	31.99	46	-24.25	19.06	2.8	32.1	165	231	Peak
980.6	28.26	31.67	54	-25.74	23.96	4.37	31.74	111	185	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
35.82	30.39	48.03	40	-9.61	12.94	0.47	31.05	111	165	Peak
43.58	30.25	47.27	40	-9.75	13.59	0.5	31.11	102	285	Peak
108.57	26.53	47.7	43.5	-16.97	9.9	0.78	31.85	147	165	Peak
300.63	14.51	31.75	46	-31.49	12.96	1.65	31.85	132	251	Peak
541.19	21.04	31.86	46	-24.96	18.26	2.67	31.75	195	264	Peak
903	27.52	31.96	46	-18.48	23.53	4.05	32.02	102	163	Peak

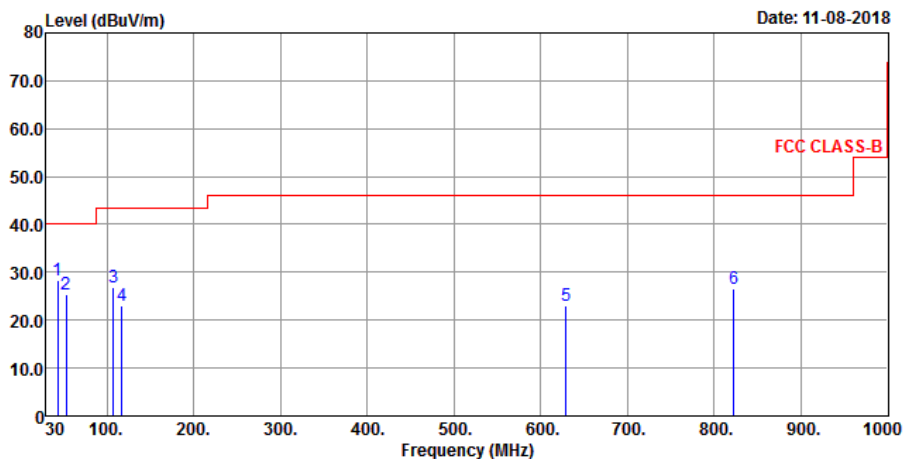
Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- The other emission levels were very low against the limit.

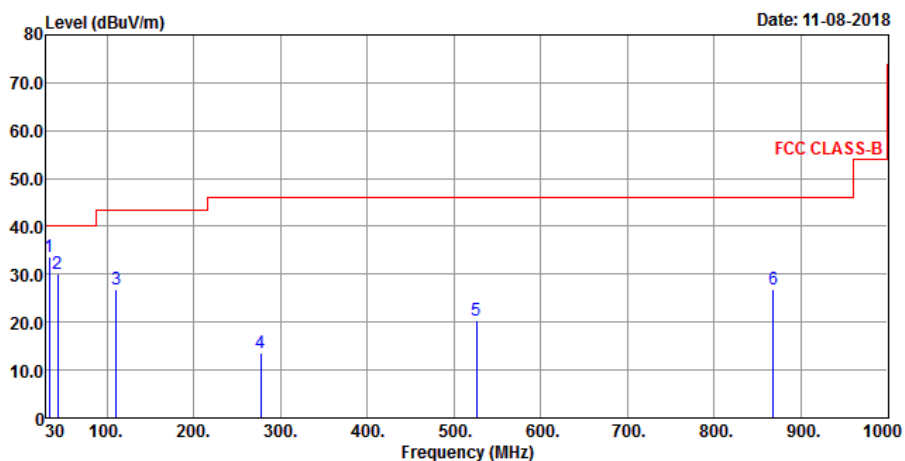
<LE 5.0>

EUT Test Condition		Measurement Detail	
Channel	Channel 39	Frequency Range	30 MHz ~ 1 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) or Quasi-Peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
43.58	28.43	45.45	40	-11.57	13.59	0.5	31.11	152	111	Peak
53.28	25.25	43.37	40	-14.75	12.66	0.55	31.33	165	22	Peak
107.6	26.98	48.25	43.5	-16.52	9.81	0.78	31.86	152	25	Peak
117.3	23	43.31	43.5	-20.5	10.74	0.83	31.88	195	285	Peak
629.46	23.13	32.29	46	-22.87	19.96	3.02	32.14	132	251	Peak
822.49	26.66	32.02	46	-19.34	22.52	3.75	31.63	121	11	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
33.88	33.8	51.79	40	-6.2	12.63	0.46	31.08	165	231	Peak
43.58	30.25	47.27	40	-9.75	13.59	0.5	31.11	111	147	Peak
110.51	27.01	47.98	43.5	-16.49	10.09	0.79	31.85	152	22	Peak
277.35	13.73	31.76	46	-32.27	12.28	1.57	31.88	295	21	Peak
525.67	20.43	31.55	46	-25.57	17.91	2.61	31.64	132	251	Peak
868.08	26.98	31.94	46	-19.02	23.1	3.93	31.99	165	295	Peak

Remarks:

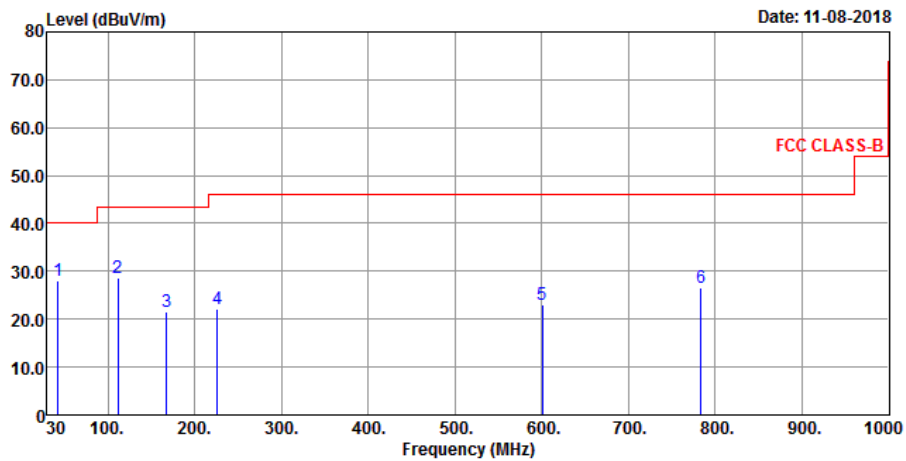
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- The other emission levels were very low against the limit.

様品C

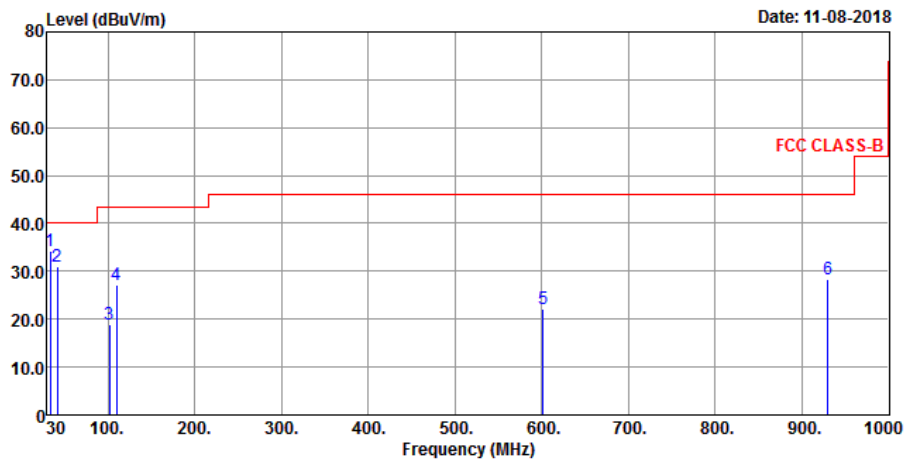
<LE 4.0>

EUT Test Condition		Measurement Detail	
Channel	Channel 39	Frequency Range	30 MHz ~ 1 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) or Quasi-Peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
42.61	28.06	45.06	40	-11.94	13.58	0.5	31.08	152	251	Peak
111.48	28.6	49.47	43.5	-14.9	10.18	0.8	31.85	165	295	Peak
167.74	21.6	40.34	43.5	-21.9	11.96	1.06	31.76	102	231	Peak
225.94	22.15	42.13	46	-23.85	10.46	1.36	31.8	111	174	Peak
600.36	23.08	32.82	46	-22.92	19.61	2.9	32.25	185	295	Peak
783.69	26.7	32.51	46	-19.3	22	3.61	31.42	165	231	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
33.88	34.3	52.29	40	-5.7	12.63	0.46	31.08	147	152	Peak
41.64	30.86	47.85	40	-9.14	13.56	0.5	31.05	162	285	Peak
101.78	18.97	40.9	43.5	-24.53	9.25	0.76	31.94	195	265	Peak
109.54	27.02	48.08	43.5	-16.48	9.99	0.79	31.84	147	152	Peak
601.33	22.26	31.96	46	-23.74	19.62	2.91	32.23	132	154	Peak
930.16	28.35	32.5	46	-17.65	23.68	4.16	31.99	165	295	Peak

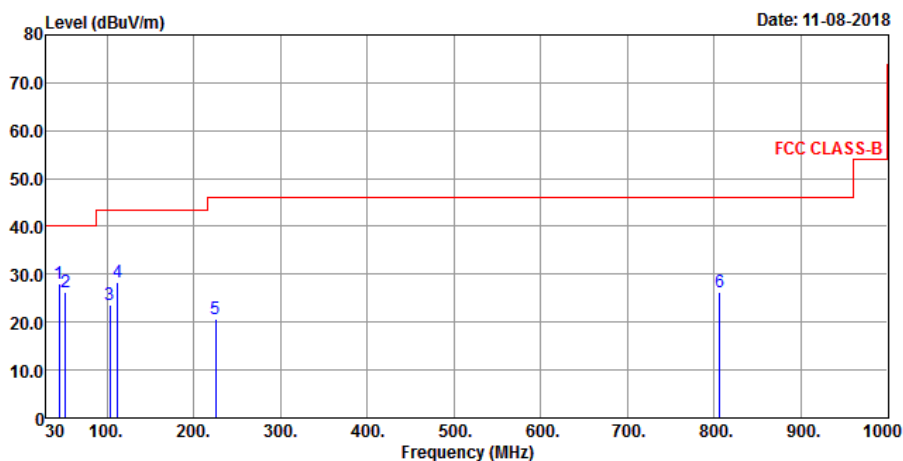
Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- The other emission levels were very low against the limit.

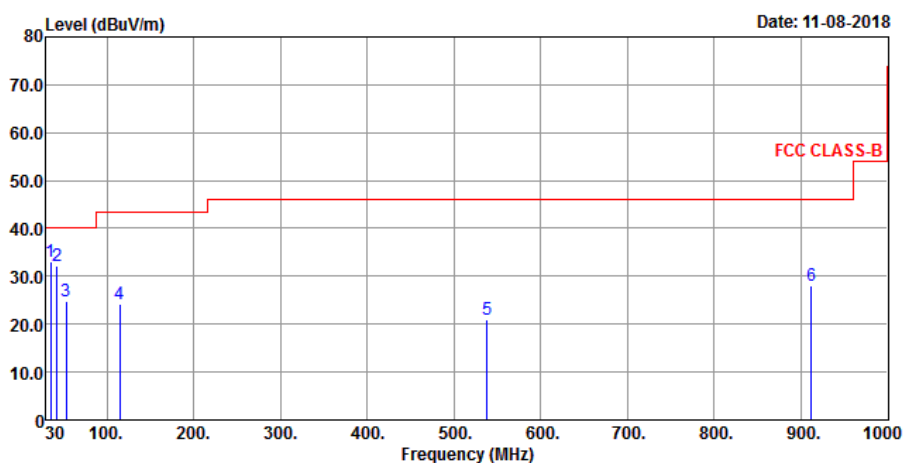
<LE 5.0>

EUT Test Condition		Measurement Detail	
Channel	Channel 39	Frequency Range	30 MHz ~ 1 GHz
Input Power	110 Vac, 60 Hz	Detector Function	Peak (PK) or Quasi-Peak (QP)
Environmental Conditions	25 deg. C, 65 % RH	Tested By	Jisyong Wang

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
44.55	28.07	45.1	40	-11.93	13.6	0.51	31.14	152	231	Peak
52.31	26.38	44.4	40	-13.62	12.76	0.54	31.32	165	295	Peak
103.72	23.52	45.23	43.5	-19.98	9.43	0.77	31.91	111	102	Peak
112.45	28.27	49.06	43.5	-15.23	10.27	0.8	31.86	147	185	Peak
224.97	20.63	40.63	46	-25.37	10.42	1.36	31.78	251	231	Peak
806	26.18	31.63	46	-19.82	22.3	3.69	31.44	165	295	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
34.85	33.2	51	40	-6.8	12.79	0.47	31.06	195	265	Peak
42.61	32.14	49.14	40	-7.86	13.58	0.5	31.08	111	147	Peak
53.28	24.86	42.98	40	-15.14	12.66	0.55	31.33	102	231	Peak
114.39	24.35	44.95	43.5	-19.15	10.46	0.81	31.87	165	285	Peak
538.28	20.89	31.77	46	-25.11	18.19	2.65	31.72	195	256	Peak
911.73	27.93	32.29	46	-18.07	23.58	4.1	32.04	111	147	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- The other emission levels were very low against the limit.

4.7 量測結果判定

依據測試數據結果，符合低功率射頻電機技術規範之要求。

5 6 dB 頻寬之要求

5.1 適用標準

請見本報告 3.1 節第(5)項的規定。

5.2 量測方法

- 將待測物輸出經由衰減器接到頻譜分析儀上。
- 設定待測物處於連續發射狀態。
- 計算由最大輸出功率峰值減 6 dB 的最大頻率範圍。

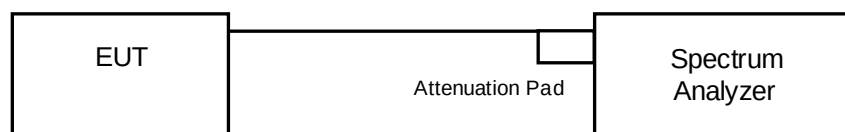
5.3 量測儀器

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Due Date Of Calibration
Spectrum Analyzer R&S	FSU43	101261	Jan. 11, 2018	Jan. 10, 2019

Note:

- The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
- The measurement uncertainty is 207 Hz, which is calculated as per the document ETSI TR 100 028. This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of k=2.

5.4 測試配置



5.5 量測結果

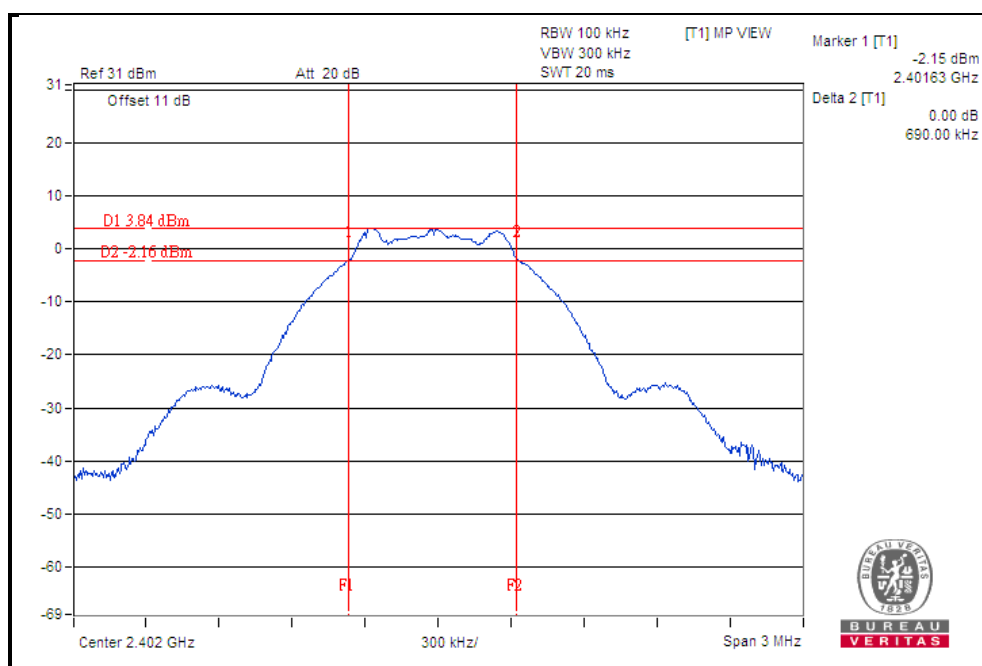
樣品 A

<LE 4.0>

操作模式	發射	測試日期	107 年 10 月 25 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	黃文勝		

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
0	2402	0.69	0.5	Pass
19	2440	0.71	0.5	Pass
39	2480	0.71	0.5	Pass

**此測試圖僅放測試結果最差的頻道。

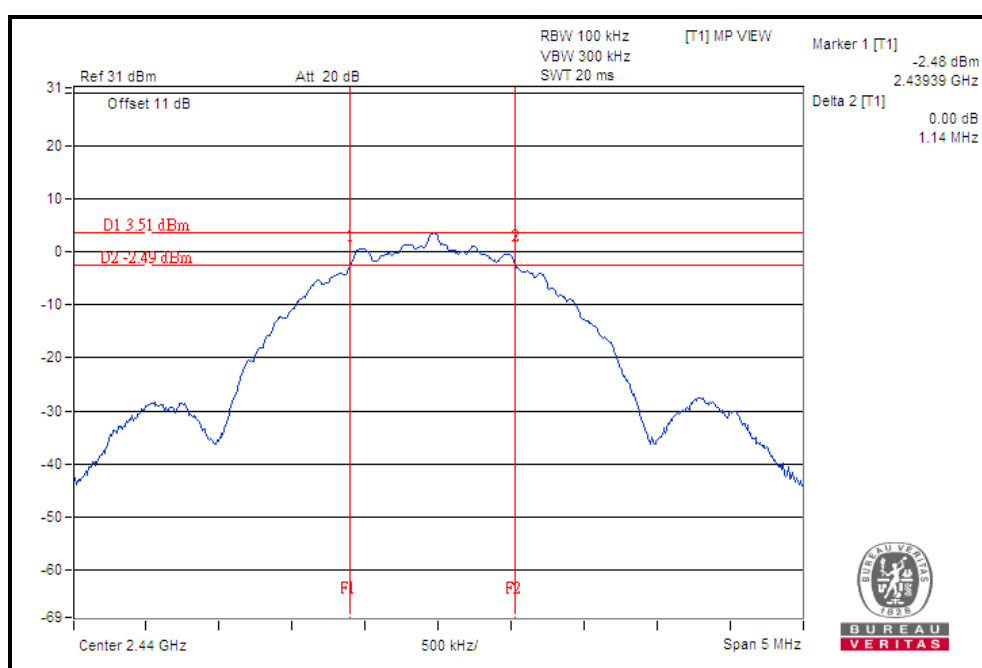


<LE 5.0>

操作模式	發射	測試日期	107 年 10 月 25 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	黃文勝		

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
0	2402	1.17	0.5	Pass
19	2440	1.14	0.5	Pass
39	2480	1.15	0.5	Pass

**此測試圖僅放測試結果最差的頻道。



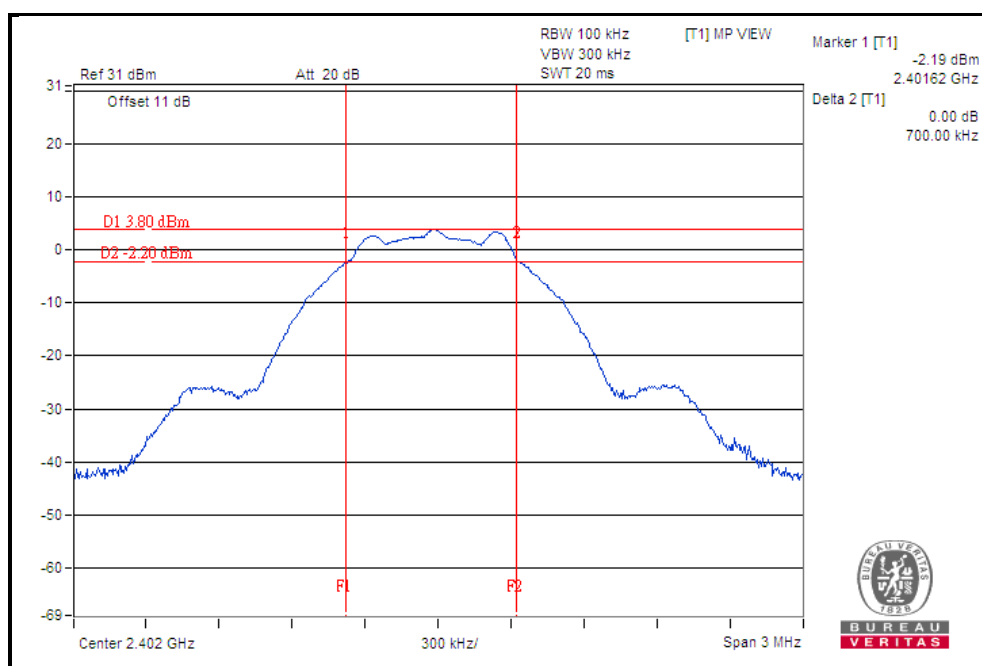
樣品B

<LE 4.0>

操作模式	發射	測試日期	107 年 10 月 25 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	黃文勝		

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
0	2402	0.70	0.5	Pass
19	2440	0.71	0.5	Pass
39	2480	0.71	0.5	Pass

**此測試圖僅放測試結果最差的頻道。

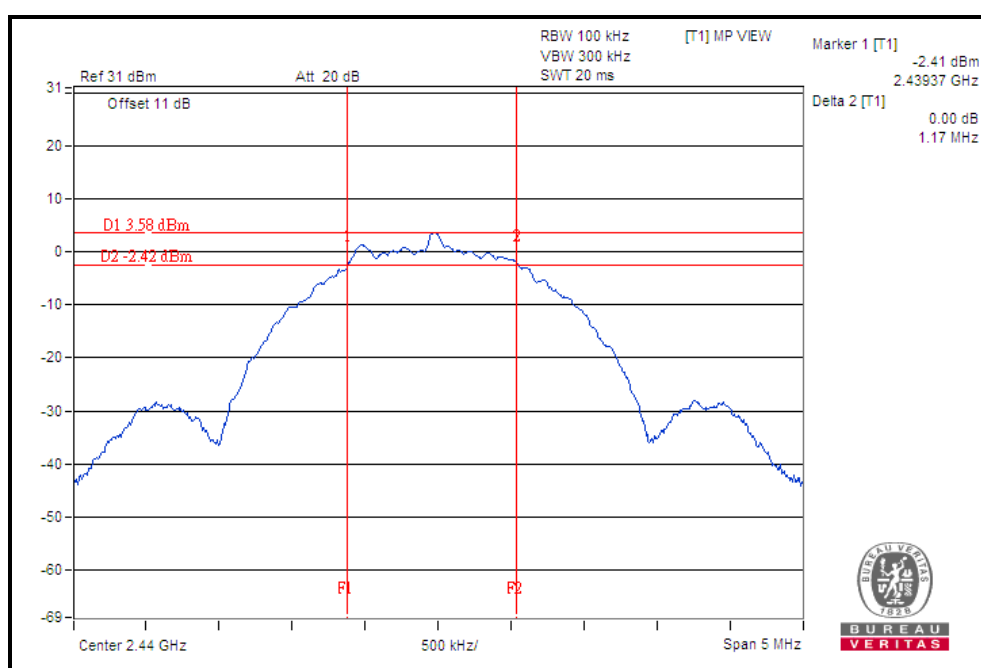


<LE 5.0>

操作模式	發射	測試日期	107 年 10 月 25 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	黃文勝		

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
0	2402	1.19	0.5	Pass
19	2440	1.17	0.5	Pass
39	2480	1.21	0.5	Pass

**此測試圖僅放測試結果最差的頻道。



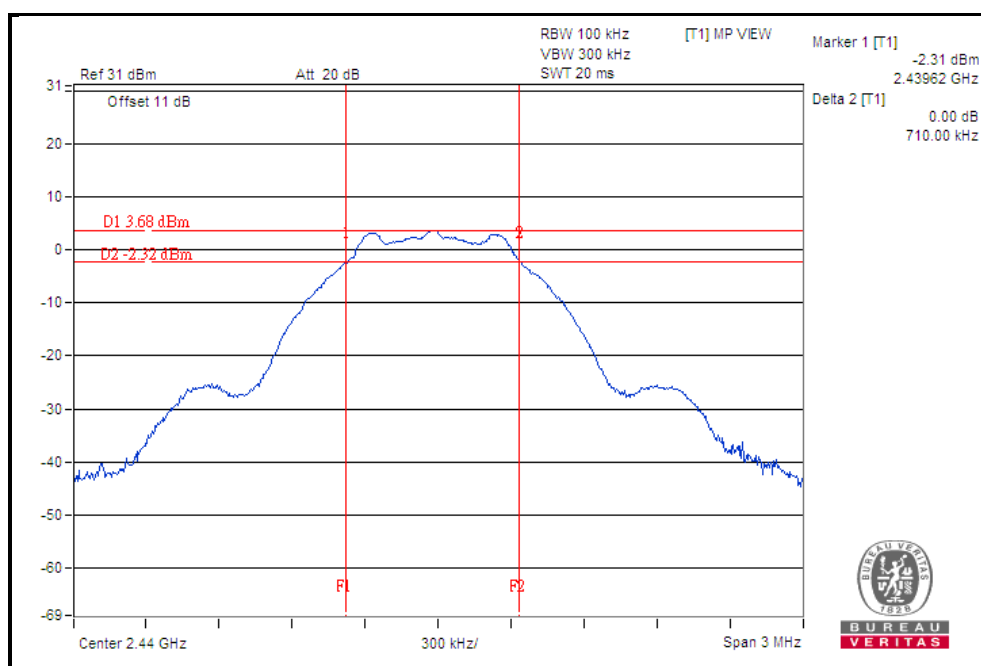
樣品C

<LE 4.0>

操作模式	發射	測試日期	107 年 10 月 25 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	黃文勝		

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
0	2402	0.72	0.5	Pass
19	2440	0.71	0.5	Pass
39	2480	0.71	0.5	Pass

**此測試圖僅放測試結果最差的頻道。

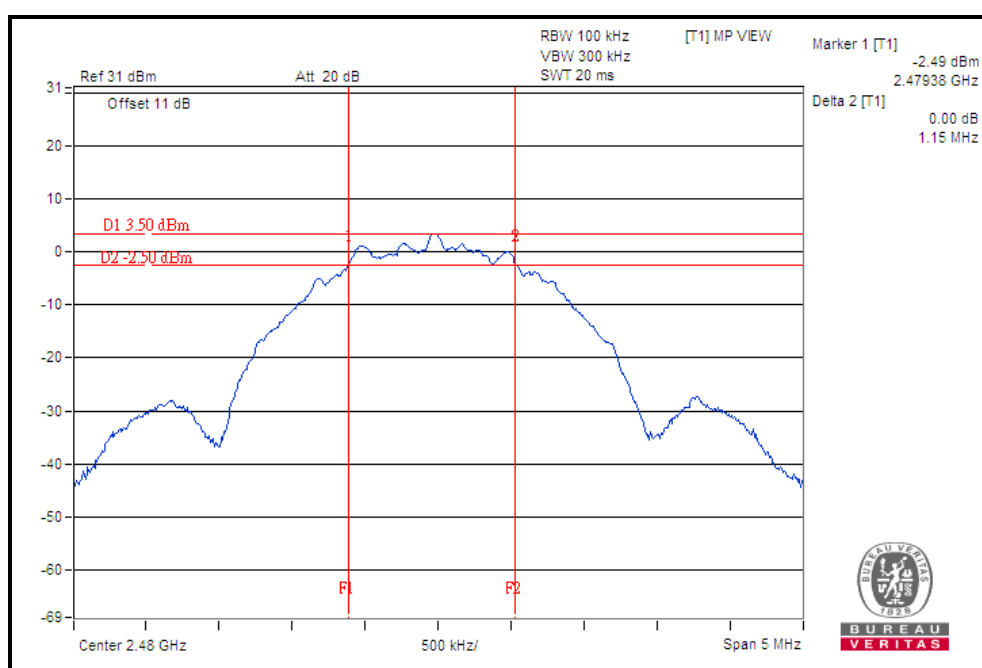


<LE 5.0>

操作模式	發射	測試日期	107 年 10 月 25 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	黃文勝		

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
0	2402	1.21	0.5	Pass
19	2440	1.16	0.5	Pass
39	2480	1.15	0.5	Pass

**此測試圖僅放測試結果最差的頻道。



5.6 量測結果判定

依據測試數據結果，符合低功率射頻電機技術規範之要求。

6 峰值傳導輸出功率之量測

6.1 適用標準

請見本報告 3.1 節第(4)及(6)項的規定。

6.2 量測方法

- 將待測物輸出經由衰減器接到功率計上。
- 設定待測物處於連續發射狀態。
- 計算其輸出功率峰值。

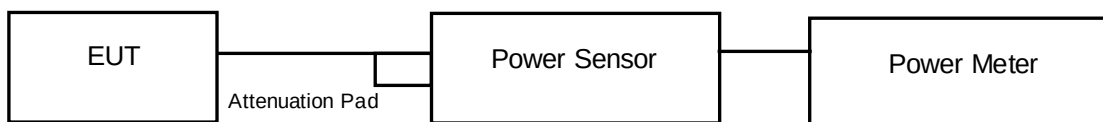
6.3 量測儀器

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Due Date Of Calibration
Power Meter Anritsu	ML2495A	1232002	Dec. 07, 2017	Dec. 06, 2018
Power Sensor Anritsu	MA2411B	1207325	Dec. 07, 2017	Dec. 06, 2018

Note:

- The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
- The measurement uncertainty is 1.393 dB, which is calculated as per the document ETSI TR 100 028. This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of k=2.
- Measurement Bandwidth of ML2495A is 65 MHz greater than 6 dB bandwidth of emission.

6.4 測試配置



6.5 量測結果

樣品 A

<LE 4.0>

操作模式	發射	測試日期	107 年 10 月 25 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	黃文勝		

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
0	2402	2.355	3.72	30	Pass
19	2440	2.275	3.57	30	Pass
39	2480	2.234	3.49	30	Pass

<LE 5.0>

操作模式	發射	測試日期	107 年 10 月 25 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	黃文勝		

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
0	2402	2.286	3.59	30	Pass
19	2440	2.203	3.43	30	Pass
39	2480	2.153	3.33	30	Pass

樣品B

<LE 4.0>

操作模式	發射	測試日期	107 年 10 月 25 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	黃文勝		

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
0	2402	2.275	3.57	30	Pass
19	2440	2.208	3.44	30	Pass
39	2480	2.163	3.35	30	Pass

<LE 5.0>

操作模式	發射	測試日期	107 年 10 月 25 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	黃文勝		

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
0	2402	2.244	3.51	30	Pass
19	2440	2.178	3.38	30	Pass
39	2480	2.133	3.29	30	Pass

樣品C

<LE 4.0>

操作模式	發射	測試日期	107 年 10 月 25 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	黃文勝		

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
0	2402	2.291	3.60	30	Pass
19	2440	2.228	3.48	30	Pass
39	2480	2.188	3.40	30	Pass

<LE 5.0>

操作模式	發射	測試日期	107 年 10 月 25 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	黃文勝		

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
0	2402	2.203	3.43	30	Pass
19	2440	2.133	3.29	30	Pass
39	2480	2.08	3.18	30	Pass

6.6 量測結果判定

依據測試數據結果，符合低功率射頻電機技術規範之要求。

7 功率頻譜密度之量測

7.1 適用標準

請見本報告 3.1 節第(7)項的規定。

7.2 量測方法

- 將待測物之天線埠經由適當之衰減直接連至測試儀器。
- 設定解析頻寬為 3 kHz，視訊頻寬為 10 kHz，掃描時間為 auto。
- 掃描頻寬設於足夠觀察發射機所產生的主頻信號，並找到最大的峰值準位。
- 其峰值位準必須不大於+8 dBm。

7.3 量測儀器

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Due Date Of Calibration
Spectrum Analyzer R&S	FSU43	101261	Jan. 11, 2018	Jan. 10, 2019

Note:

- The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
- The measurement uncertainty is 207 Hz, which is calculated as per the document ETSI TR 100 028. This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of k=2.

7.4 測試配置



7.5 量測結果

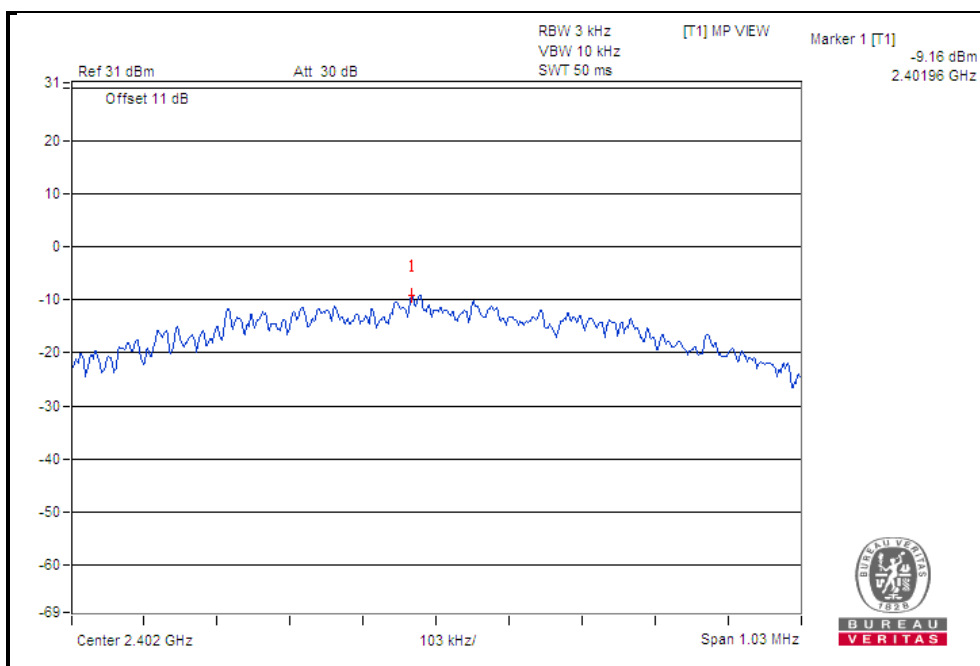
樣品 A

<LE 4.0>

操作模式	發射	測試日期	107 年 10 月 25 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	黃文勝		

Channel	Frequency (MHz)	PSD (dBm/3 kHz)	Limit (dBm/3 kHz)	Pass / Fail
0	2402	-9.16	8	Pass
19	2440	-9.25	8	Pass
39	2480	-9.58	8	Pass

**此測試圖僅放測試結果最差的頻道。

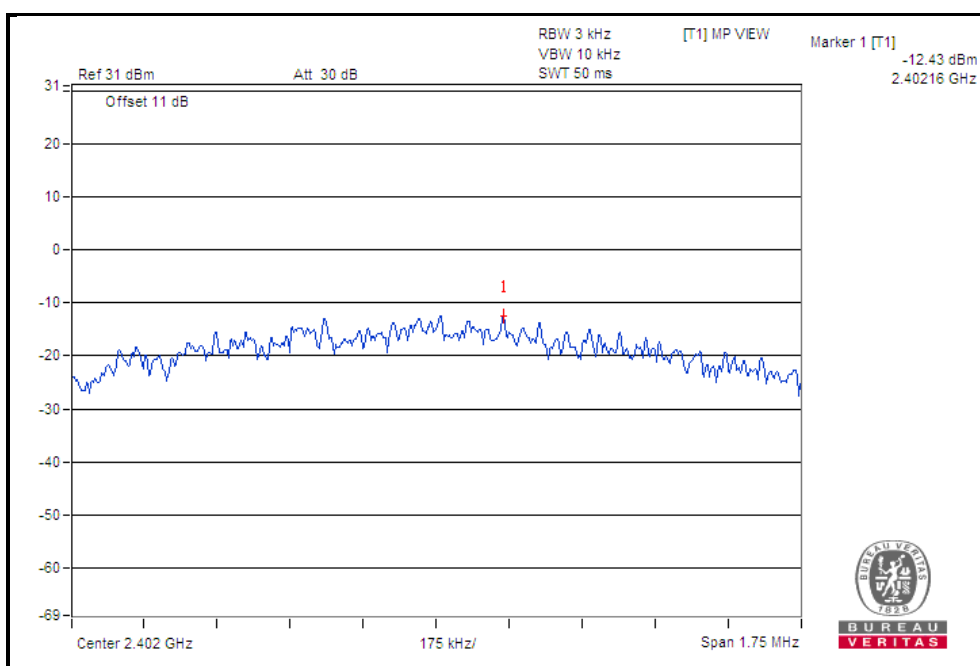


<LE 5.0>

操作模式	發射	測試日期	107 年 10 月 25 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	黃文勝		

Channel	Frequency (MHz)	PSD (dBm/3 kHz)	Limit (dBm/3 kHz)	Pass / Fail
0	2402	-12.43	8	Pass
19	2440	-12.58	8	Pass
39	2480	-13.18	8	Pass

**此測試圖僅放測試結果最差的頻道。



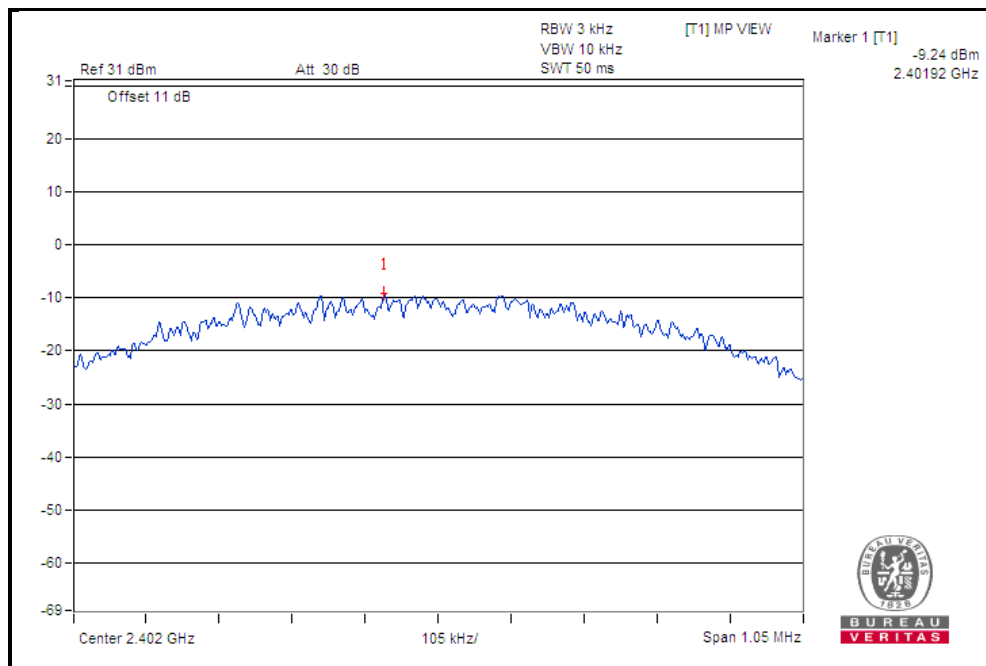
樣品B

<LE 4.0>

操作模式	發射	測試日期	107 年 10 月 25 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	黃文勝		

Channel	Frequency (MHz)	PSD (dBm/3 kHz)	Limit (dBm/3 kHz)	Pass / Fail
0	2402	-9.24	8	Pass
19	2440	-9.41	8	Pass
39	2480	-9.77	8	Pass

**此測試圖僅放測試結果最差的頻道。

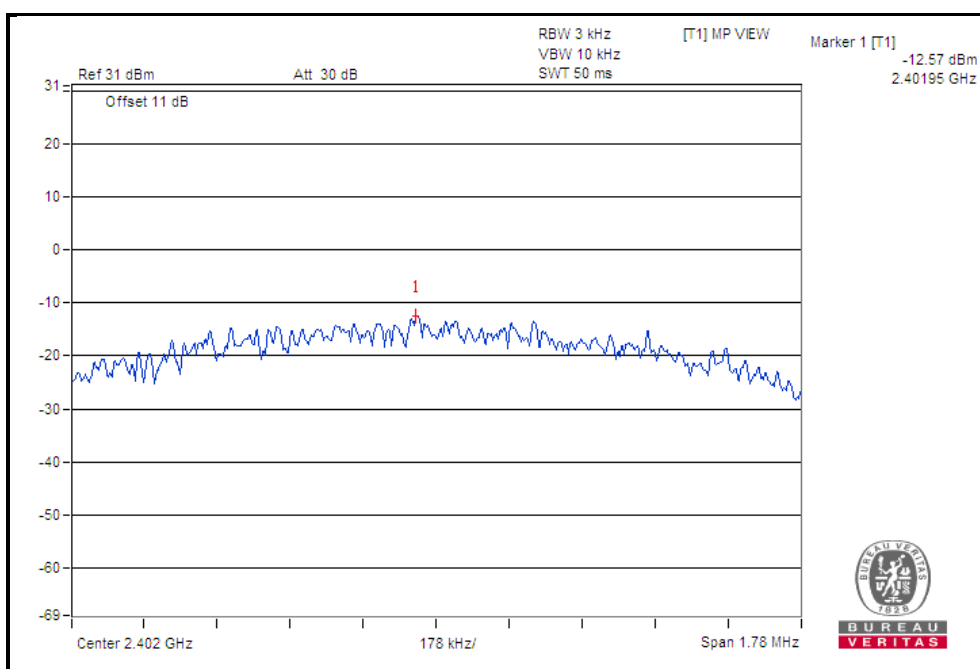


<LE 5.0>

操作模式	發射	測試日期	107 年 10 月 25 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	黃文勝		

Channel	Frequency (MHz)	PSD (dBm/3 kHz)	Limit (dBm/3 kHz)	Pass / Fail
0	2402	-12.57	8	Pass
19	2440	-12.74	8	Pass
39	2480	-12.94	8	Pass

**此測試圖僅放測試結果最差的頻道。



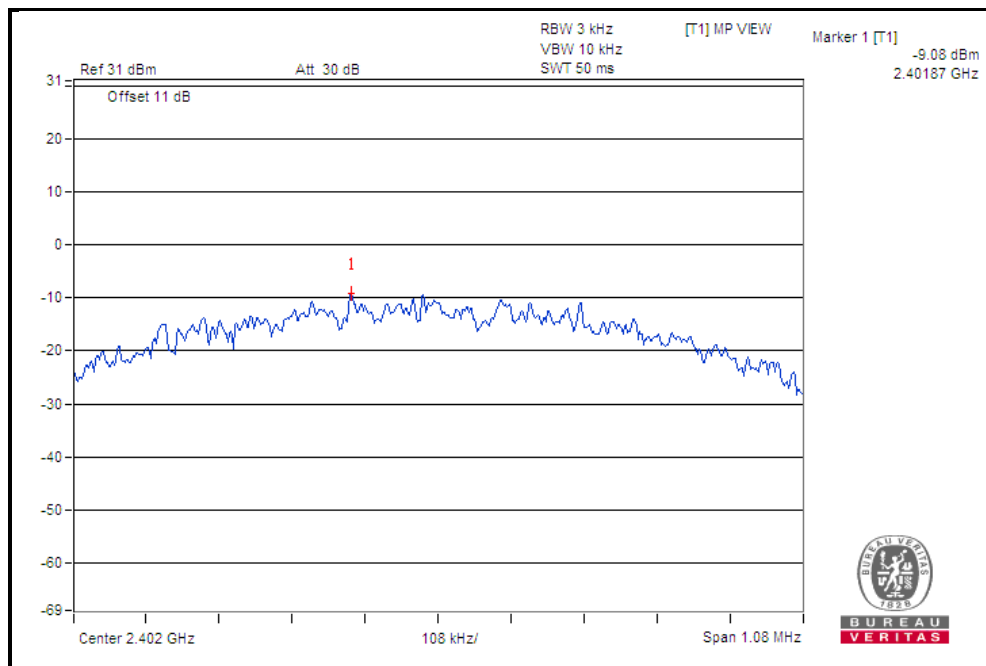
樣品C

<LE 4.0>

操作模式	發射	測試日期	107 年 10 月 25 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	黃文勝		

Channel	Frequency (MHz)	PSD (dBm/3 kHz)	Limit (dBm/3 kHz)	Pass / Fail
0	2402	-9.08	8	Pass
19	2440	-9.22	8	Pass
39	2480	-9.30	8	Pass

**此測試圖僅放測試結果最差的頻道。

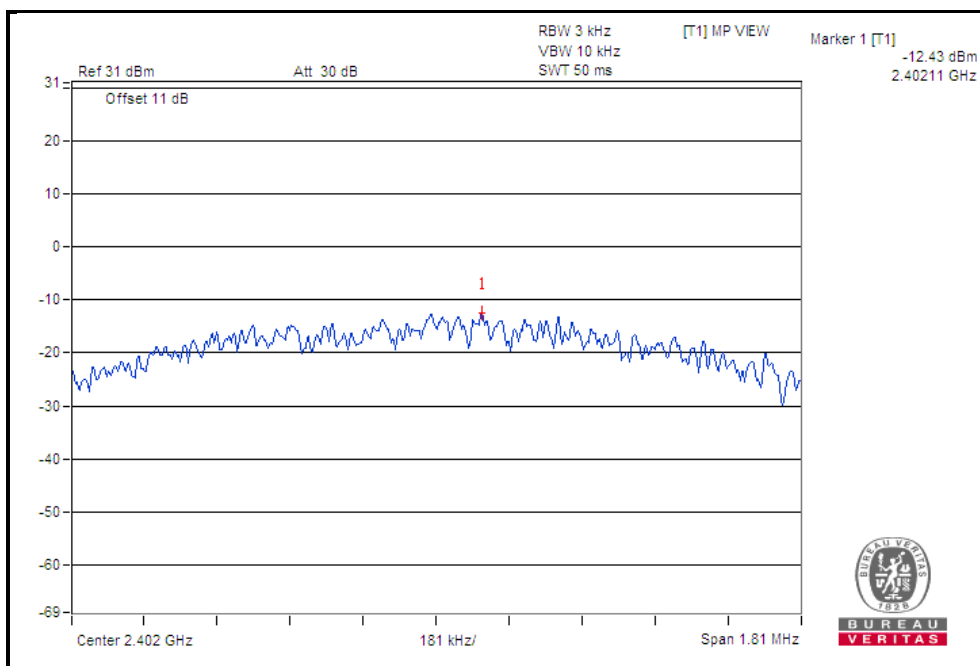


<LE 5.0>

操作模式	發射	測試日期	107 年 10 月 25 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	黃文勝		

Channel	Frequency (MHz)	PSD (dBm/3 kHz)	Limit (dBm/3 kHz)	Pass / Fail
0	2402	-12.43	8	Pass
19	2440	-12.50	8	Pass
39	2480	-12.68	8	Pass

**此測試圖僅放測試結果最差的頻道。



7.6 量測結果判定

依據測試數據結果，符合低功率射頻電機技術規範之要求。

NFC 頻段測試紀錄結果

8 主波發射之量測

8.1 適用標準

請見本報告 3.1 節第(10)項規定。

8.2 量測方法

在電波暗室，將待測物置於 0.8 米高的非金屬桌面，使其操作在工作狀態。接收天線置於 3 米距離。桌面要 360 度旋轉，另外接收天線分別置於 OPEN、CLOSE、GROUND-PARALLEL 極化各執行測試一次，以紀錄最大場強值。

Measurement Instrument Setting

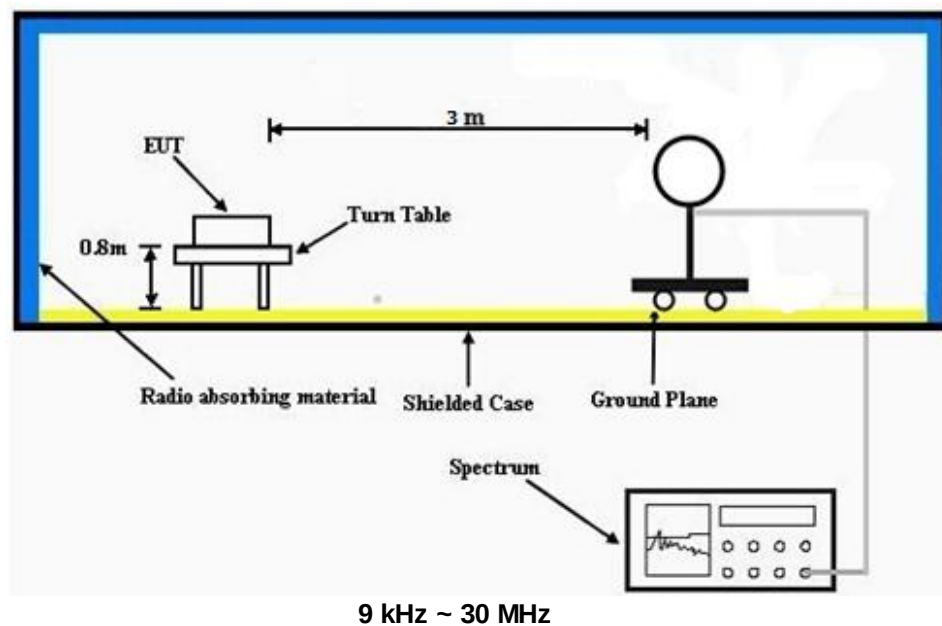
The following table is the setting of receiver

Frequency Range	Setting
9 kHz ~ 150 kHz	Quasi-Peak: RBW = 200 Hz
150 kHz ~ 30 MHz	Quasi-Peak: RBW = 9 kHz
30 MHz ~ 1000 MHz	Peak: RBW = 120 kHz; Quasi-Peak: RBW = 120 kHz

8.3 量測儀器

同 4.3 節

8.4 測試配置



8.5 場強度之計算

場強之計算公式如下：

結果值 Emission level (dBuV/m)=機器讀值 Raw Value (dBuV) +校正因子 Correction Factor (dB/m)

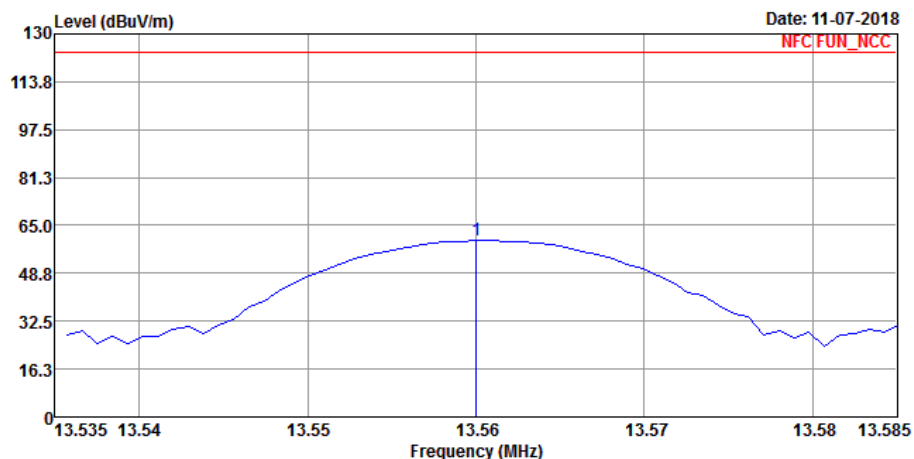
餘裕度 Margin(dB) = 結果值 Emission level (dBuV/m)-限制值 Limit value (dBuV/m)

量測結果請見下頁。

8.6 量測結果

樣品 A

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Frequency Range	13.553 ~ 13.567 MHz
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Quasi-Peak (QP)
Tested By	Jisyong Wang		



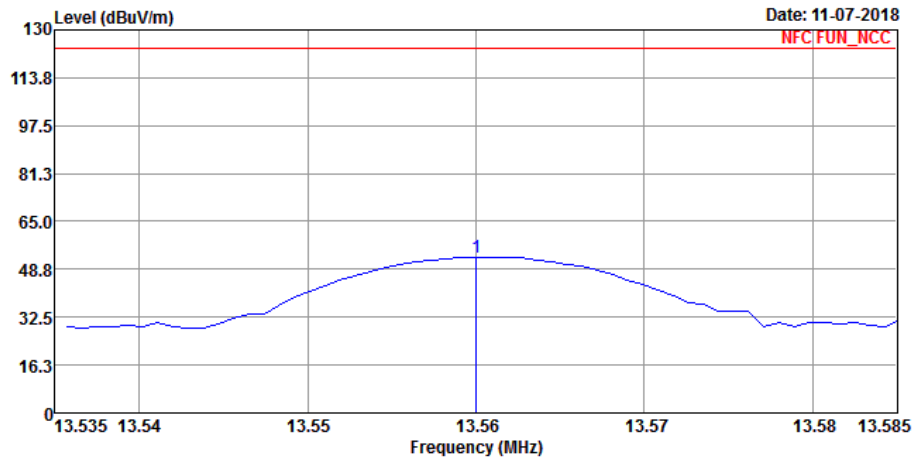
Antenna Polarity & Test Distance: Loop Antenna Open at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
13.56	59.78	63.16	124	-64.22	37.67	0.31	41.36	100	360	QP

Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值

$$\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40 \log(30 / 3) = \text{Limit @ 30 m} + 40$$
- Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Frequency Range	13.553 ~ 13.567 MHz
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Quasi-Peak (QP)
Tested By	Jisyong Wang		



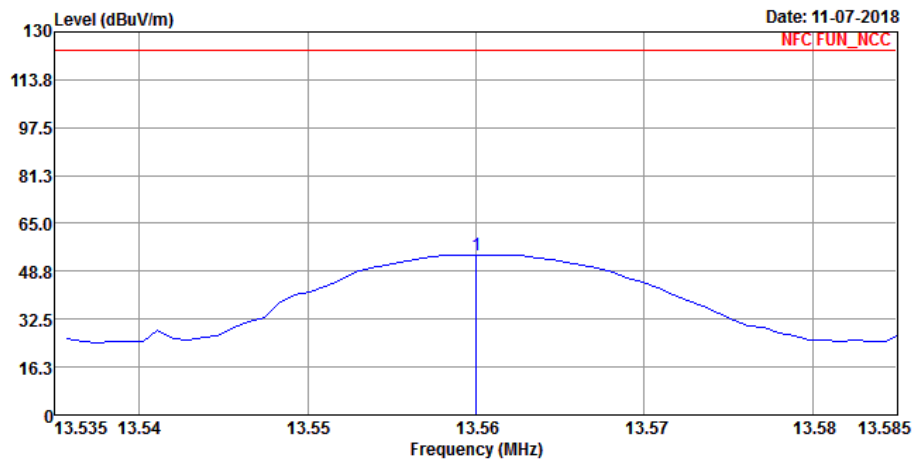
Antenna Polarity & Test Distance: Loop Antenna Close at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
13.56	52.91	56.29	124	-71.09	37.67	0.31	41.36	100	0	QP

Note:

1. Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level - Limit value
5. 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值

$$\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40 \log(30 / 3) = \text{Limit @ 30 m} + 40$$
6. Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Frequency Range	13.553 ~ 13.567 MHz
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Quasi-Peak (QP)
Tested By	Jisyong Wang		



Antenna Polarity & Test Distance: Loop Antenna Ground-Parallel at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
13.56	54.32	57.7	124	-69.68	37.67	0.31	41.36	100	360	QP

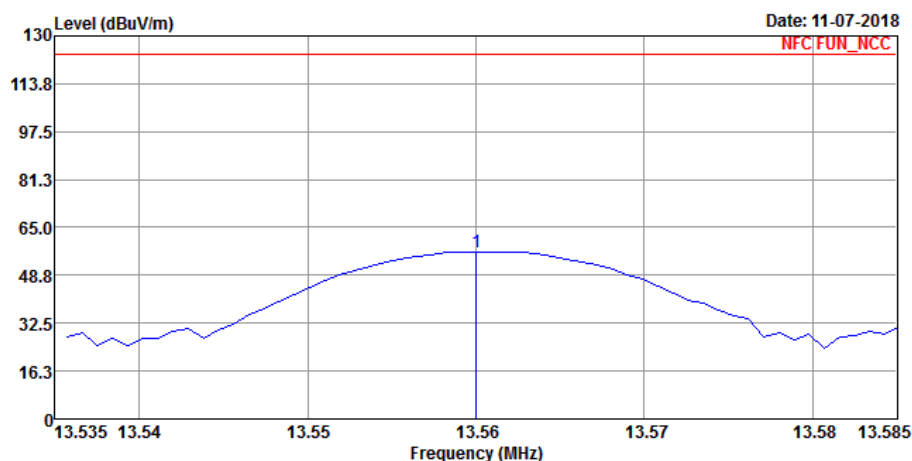
Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值

$$\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$$
- Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

樣品B

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Frequency Range	13.553 ~ 13.567 MHz
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Quasi-Peak (QP)
Tested By	Jisyong Wang		



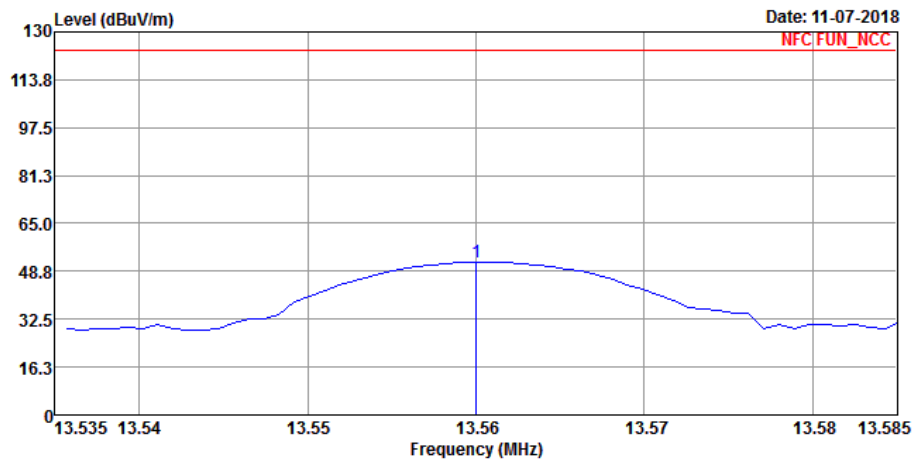
Antenna Polarity & Test Distance: Loop Antenna Open at 3 m											
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark	
13.56	56.78	60.16	124	-67.22	37.67	0.31	41.36	100	360	QP	

Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值

$$\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$$
- Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Frequency Range	13.553 ~ 13.567 MHz
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Quasi-Peak (QP)
Tested By	Jisyong Wang		



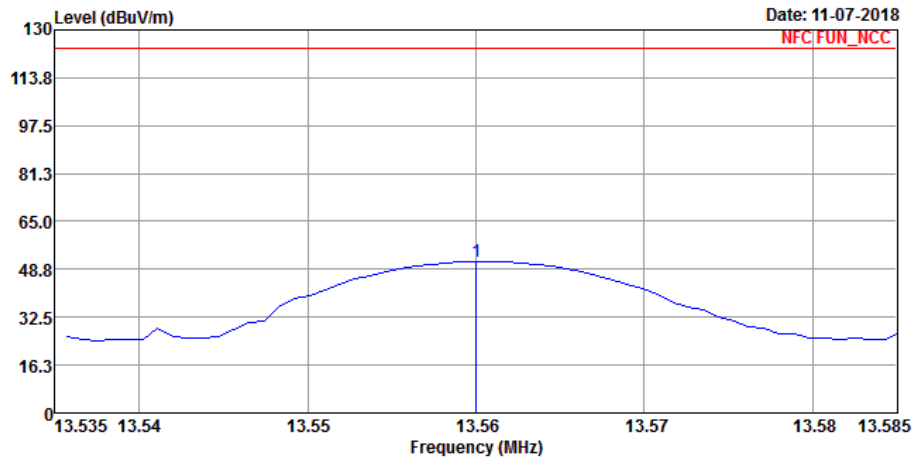
Antenna Polarity & Test Distance: Loop Antenna Close at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
13.56	51.91	55.29	124	-72.09	37.67	0.31	41.36	100	0	QP

Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值

$$\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40 \log(30 / 3) = \text{Limit @ 30 m} + 40$$
- Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Frequency Range	13.553 ~ 13.567 MHz
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Quasi-Peak (QP)
Tested By	Jisyong Wang		



Antenna Polarity & Test Distance: Loop Antenna Ground-Parallel at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
13.56	51.32	54.7	124	-72.68	37.67	0.31	41.36	100	360	QP

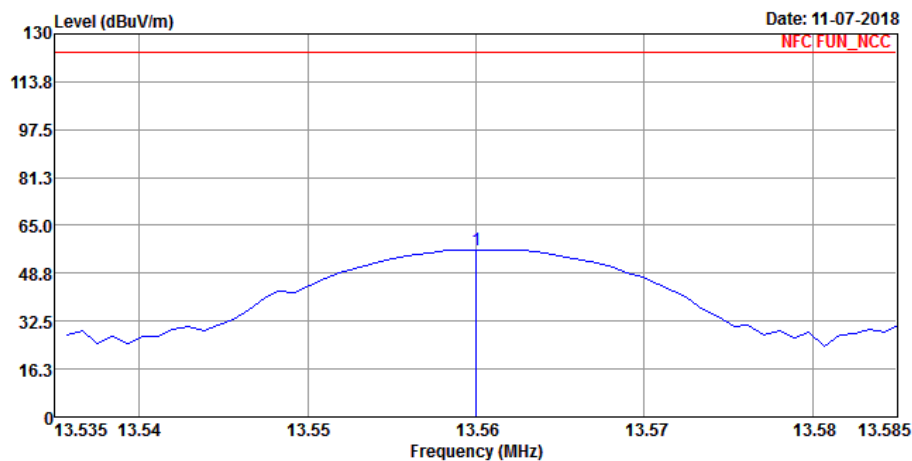
Note:

1. Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level - Limit value
5. 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值

$$\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40 \log(30 / 3) = \text{Limit @ 30 m} + 40$$
6. Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

樣品C

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Frequency Range	13.553 ~ 13.567 MHz
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Quasi-Peak (QP)
Tested By	Jisyong Wang		



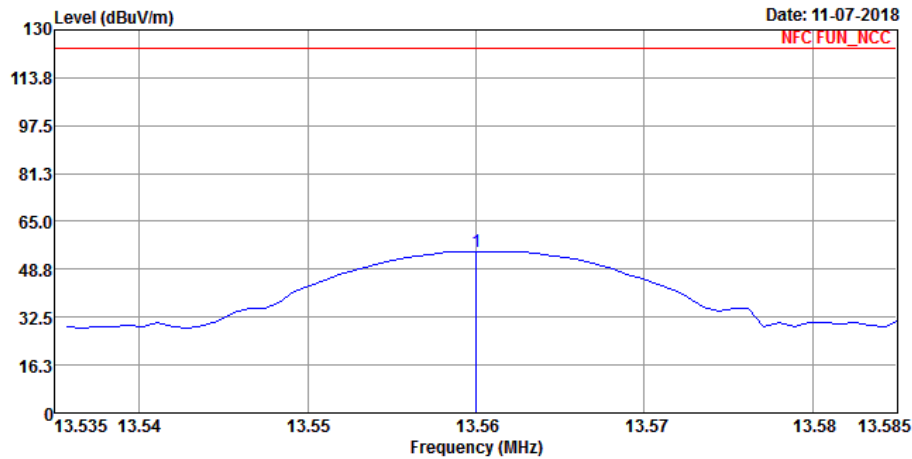
Antenna Polarity & Test Distance: Loop Antenna Open at 3 m											
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark	
13.56	56.78	60.16	124	-67.22	37.67	0.31	41.36	100	360	QP	

Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值

$$\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$$
- Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Frequency Range	13.553 ~ 13.567 MHz
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Quasi-Peak (QP)
Tested By	Jisyong Wang		



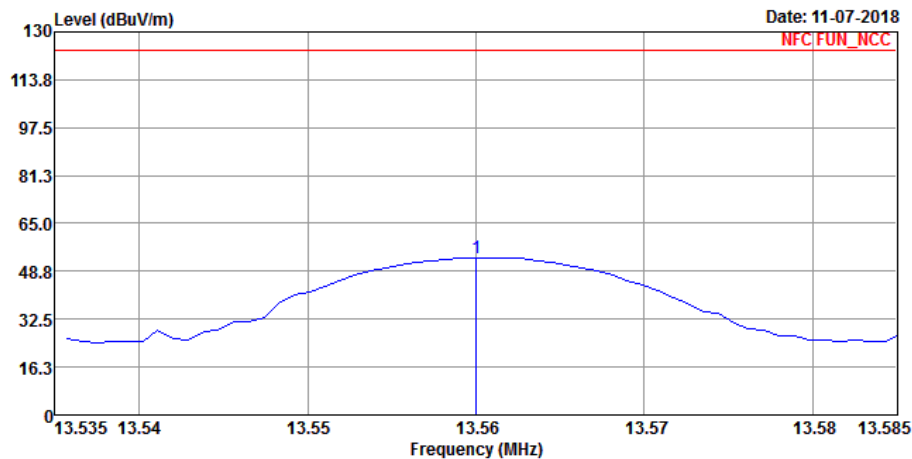
Antenna Polarity & Test Distance: Loop Antenna Close at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
13.56	54.91	58.29	124	-69.09	37.67	0.31	41.36	100	0	QP

Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamp Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值

$$\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$$
- Open: loop antenna 面向 EUT
 Close: loop antenna與EUT垂直
 Ground-parallel: loop antenna與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Frequency Range	13.553 ~ 13.567 MHz
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Quasi-Peak (QP)
Tested By	Jisyong Wang		



Antenna Polarity & Test Distance: Loop Antenna Ground-Parallel at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
13.56	53.32	56.7	124	-70.68	37.67	0.31	41.36	100	360	QP

Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值

$$\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40 \log(30 / 3) = \text{Limit @ 30 m} + 40$$
- Open: loop antenna 面向 EUT
Close: loop antenna 與 EUT 垂直
Ground-parallel: loop antenna 與地面平行

8.7 量測結果判定

依據測試數據結果，符合低功率射頻電機技術規範之要求。

9 不必要之發射量測

9.1 適用標準

請見本報告 3.1 節第(11)項規定。

9.2 量測方法

9 kHz ~ 30 MHz 量測：

在電波暗室，將待測物置於 0.8 米高的非金屬桌面，使其操作在工作狀態。接收天線置於 3 米距離。桌面要 360 度旋轉，另外接收天線分別置於 OPEN、CLOSE、GROUND-PARALLEL 極化各執行測試一次，以紀錄最大場強值。

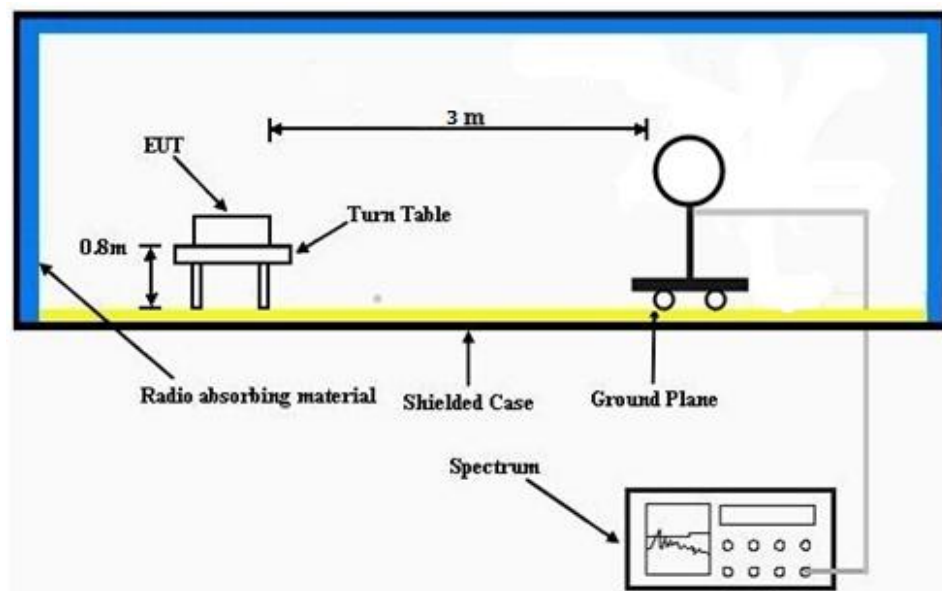
30 MHz ~ 1 GHz 量測：

在電波暗室，將待測物置於 0.8 米高的非金屬桌面，使其操作在工作狀態。接收天線置於 3 米距離。桌面要 360 度旋轉，另外接收天線從離地 1 米至 4 米升降變化，以找出最大的輻射電場強度，接收天線分別置於水平、垂直極化各執行測試一次。

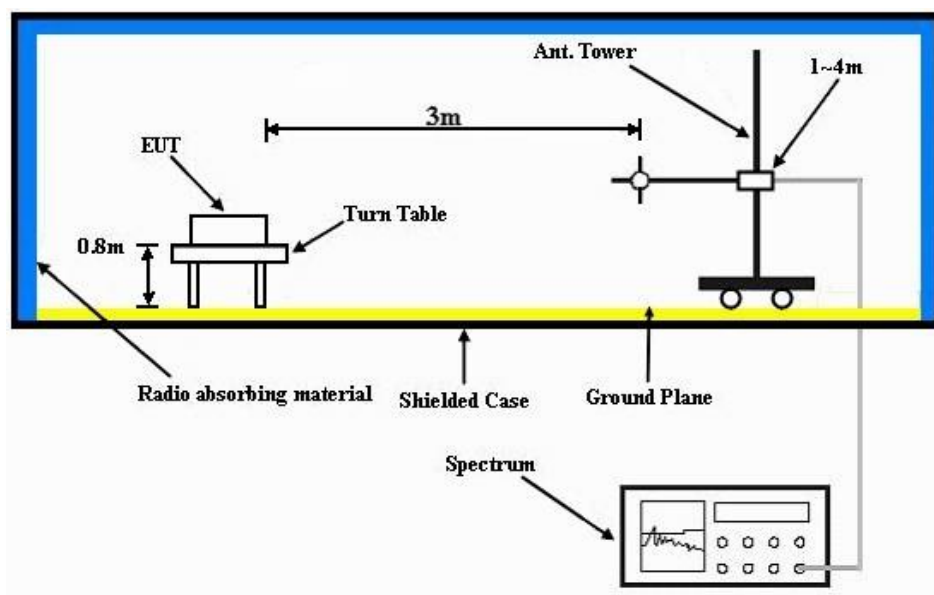
9.3 量測儀器

同 4.3 節

9.4 測試配置



9 kHz ~ 30 MHz



30 MHz ~ 1 GHz

9.5 場強度之計算

場強之計算公式如下：

結果值 Emission level (dBuV/m) = 機器讀值 Raw Value (dBuV) + 校正因子 Correction Factor (dB/m)

餘裕度 Margin(dB) = 結果值 Emission level (dBuV/m) - 限制值 Limit value (dBuV/m)

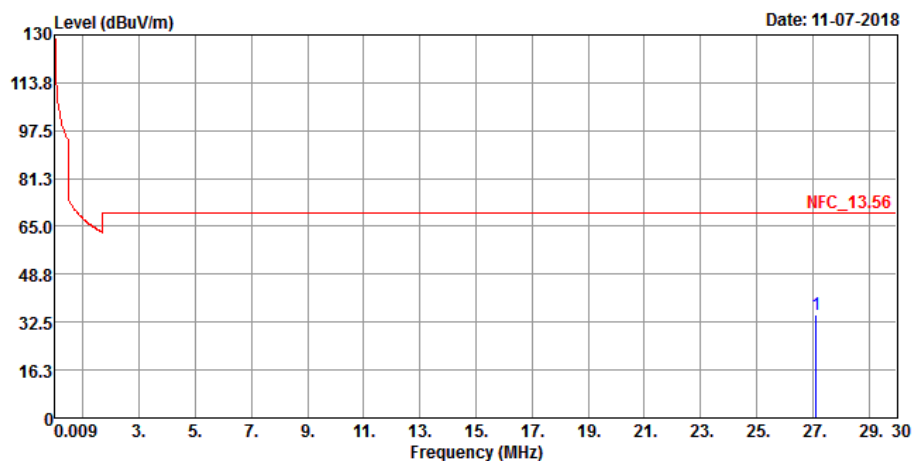
量測結果請見下頁。

9.6 量測結果

<Below 30 MHz>

樣品 A

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Transmitter
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Average (AV) Quasi-Peak (QP)
Tested By	Jisyoung Wang		



Antenna Polarity & Test Distance: Loop Antenna Open at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
27.12	34.98	40.38	69.54	-34.56	35.55	0.38	41.33	100	0	QP

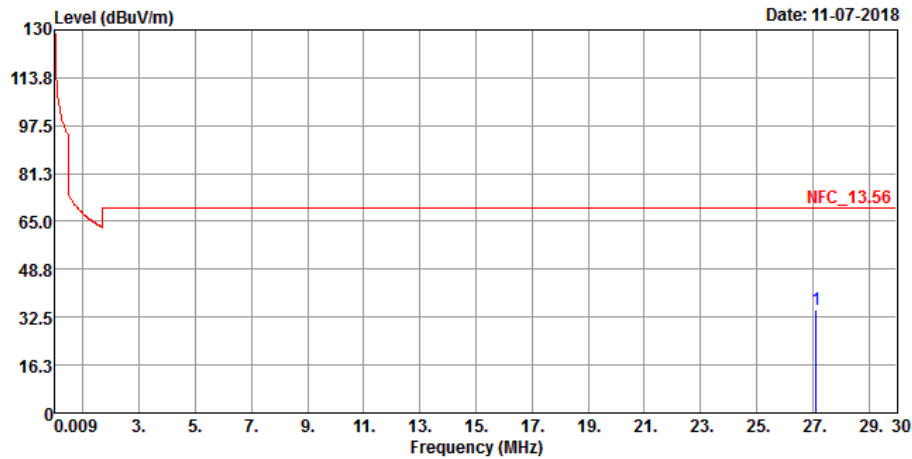
Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值

$$\text{Limit @ 3 m} = \text{Limit @ 300 m} + 40\log(300 / 3) = \text{Limit @ 300 m} + 80$$

$$\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$$
- Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Transmitter
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Average (AV) Quasi-Peak (QP)
Tested By	Jisyoung Wang		

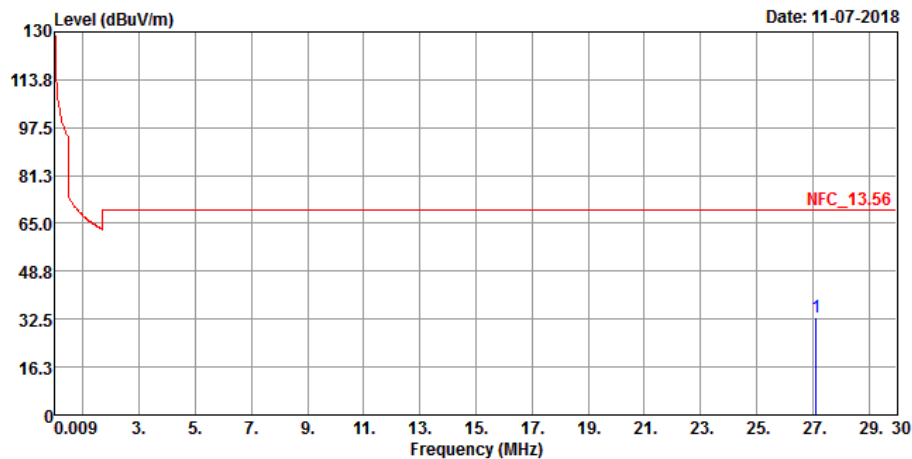


Antenna Polarity & Test Distance: Loop Antenna Close at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
27.12	34.85	40.25	69.54	-34.69	35.55	0.38	41.33	100	360	QP

Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值
 $\text{Limit @ 3 m} = \text{Limit @ 300 m} + 40\log(300 / 3) = \text{Limit @ 300 m} + 80$
 $\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$
- Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Transmitter
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Average (AV) Quasi-Peak (QP)
Tested By	Jisyoung Wang		



Antenna Polarity & Test Distance: Loop Antenna Ground-Parallel at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
27.12	33.26	38.66	69.54	-36.28	35.55	0.38	41.33	100	0	QP

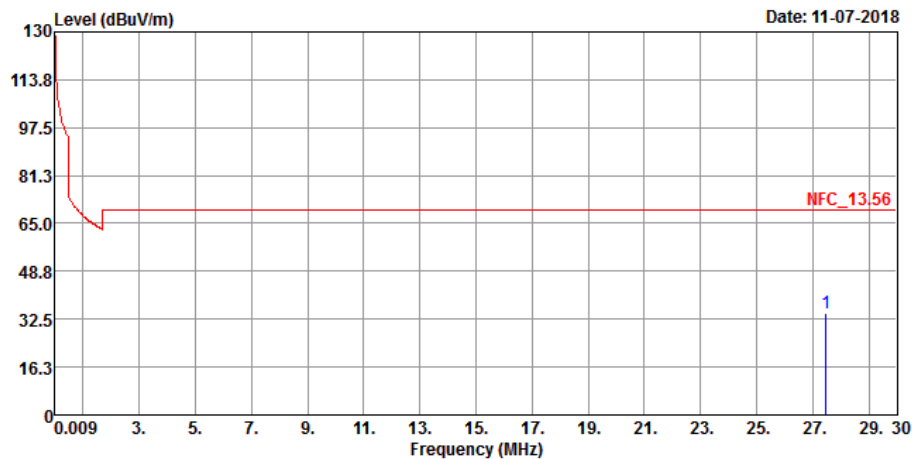
Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值

$$\text{Limit @ 3 m} = \text{Limit @ 300 m} + 40\log(300 / 3) = \text{Limit @ 300 m} + 80$$

$$\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$$
- Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Receiver
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Average (AV) Quasi-Peak (QP)
Tested By	Jisyoung Wang		

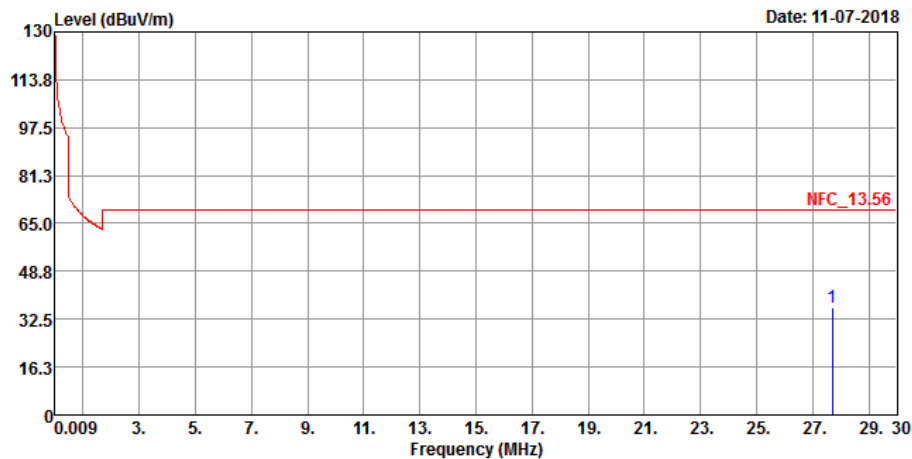


Antenna Polarity & Test Distance: Loop Antenna Open at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
27.48	34.65	39.85	69.54	-34.89	35.75	0.38	41.33	100	0	QP

Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值
 $\text{Limit @ 3 m} = \text{Limit @ 300 m} + 40\log(300 / 3) = \text{Limit @ 300 m} + 80$
 $\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$
- Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Receiver
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Average (AV) Quasi-Peak (QP)
Tested By	Jisyoung Wang		

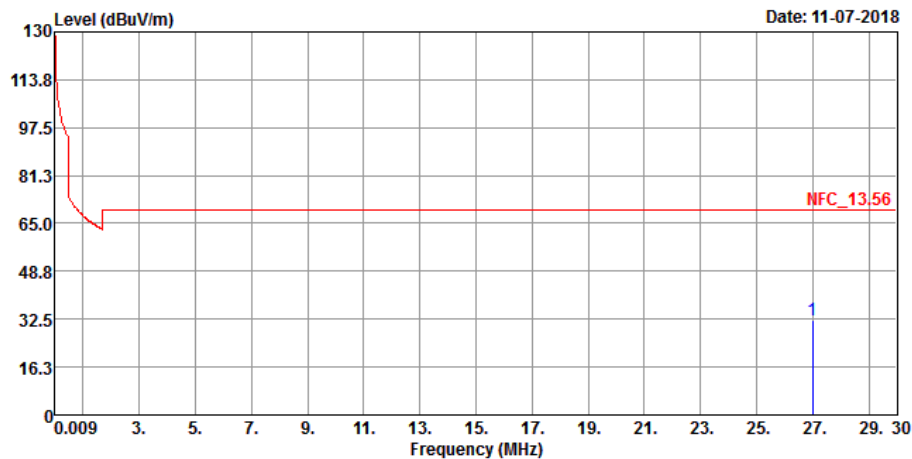


Antenna Polarity & Test Distance: Loop Antenna Close at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
27.71	36.52	41.52	69.54	-33.02	35.95	0.38	41.33	100	360	QP

Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值
 $\text{Limit @ 3 m} = \text{Limit @ 300 m} + 40\log(300 / 3) = \text{Limit @ 300 m} + 80$
 $\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$
- Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Receiver
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Average (AV) Quasi-Peak (QP)
Tested By	Jisyoung Wang		



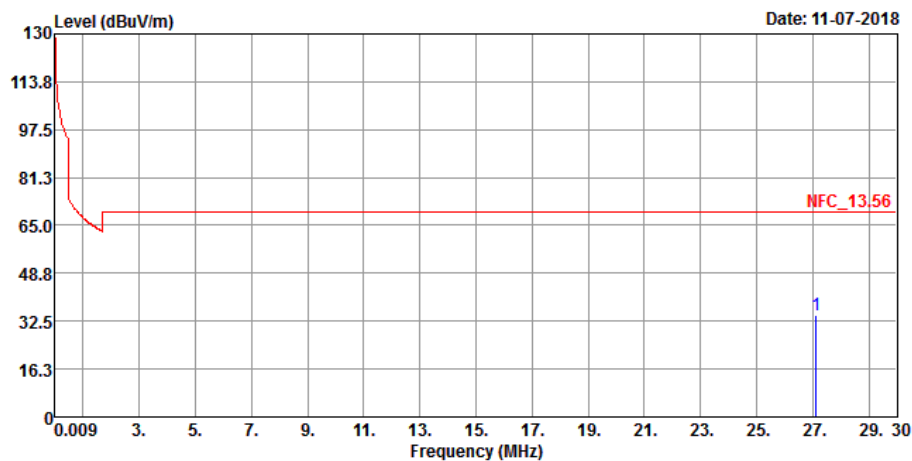
Antenna Polarity & Test Distance: Loop Antenna Ground-Parallel at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
27.01	32.36	37.95	69.54	-37.18	35.36	0.38	41.33	100	0	QP

Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamp Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值
 $\text{Limit @ 3 m} = \text{Limit @ 300 m} + 40\log(300 / 3) = \text{Limit @ 300 m} + 80$
 $\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$
- Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

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EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Transmitter
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Average (AV) Quasi-Peak (QP)
Tested By	Jisyong Wang		

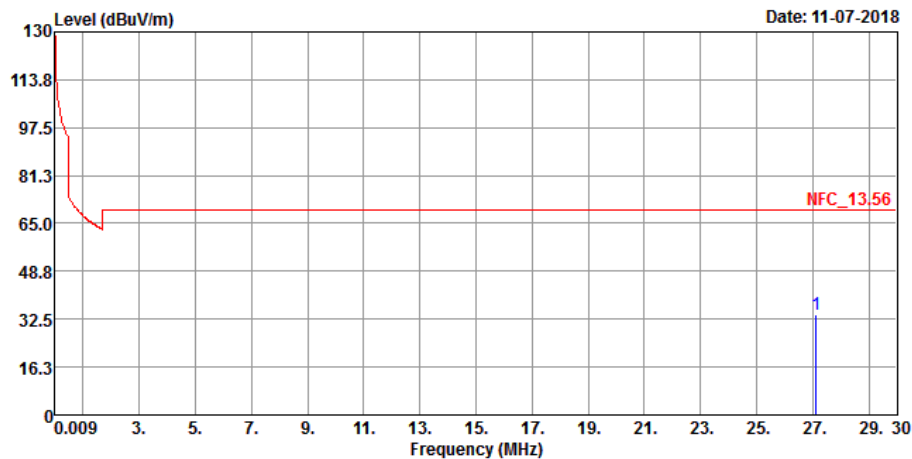


Antenna Polarity & Test Distance: Loop Antenna Open at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
27.12	34.52	39.92	69.54	-35.02	35.55	0.38	41.33	100	0	QP

Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值
 $\text{Limit @ 3 m} = \text{Limit @ 300 m} + 40\log(300 / 3) = \text{Limit @ 300 m} + 80$
 $\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$
- Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Transmitter
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Average (AV) Quasi-Peak (QP)
Tested By	Jisyoung Wang		

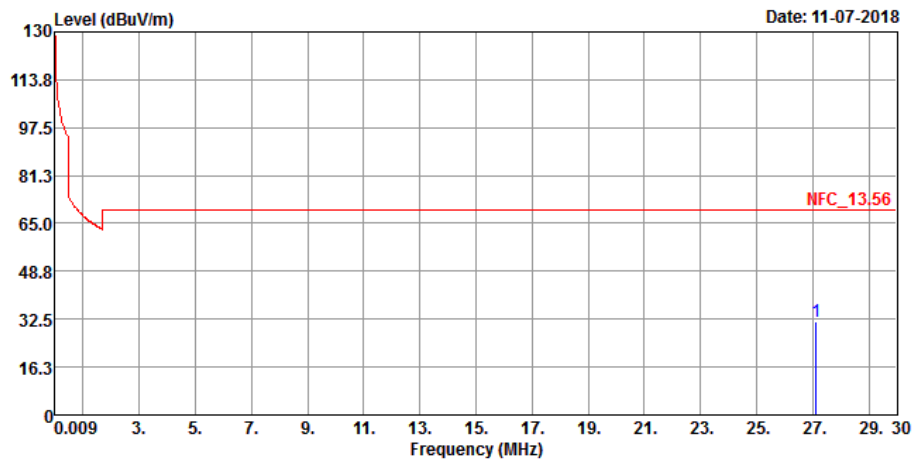


Antenna Polarity & Test Distance: Loop Antenna Close at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
27.12	34.15	39.55	69.54	-35.39	35.55	0.38	41.33	100	360	QP

Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamp Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值
 $\text{Limit @ 3 m} = \text{Limit @ 300 m} + 40\log(300 / 3) = \text{Limit @ 300 m} + 80$
 $\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$
- Open: loop antenna 面向 EUT
 Close: loop antenna與EUT垂直
 Ground-parallel: loop antenna與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Transmitter
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Average (AV) Quasi-Peak (QP)
Tested By	Jisyoung Wang		

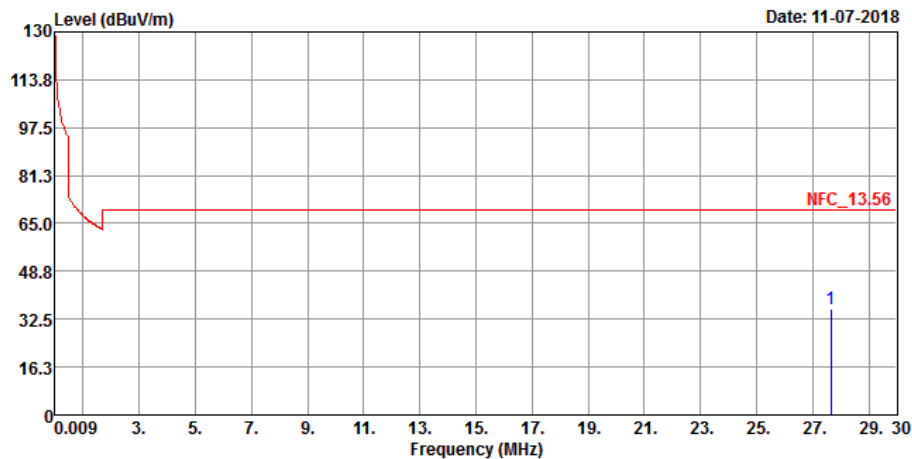


Antenna Polarity & Test Distance: Loop Antenna Ground-Parallel at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
27.12	31.78	37.18	69.54	-37.76	35.55	0.38	41.33	100	0	QP

Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamp Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值
 $\text{Limit @ 3 m} = \text{Limit @ 300 m} + 40\log(300 / 3) = \text{Limit @ 300 m} + 80$
 $\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$
- Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Receiver
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Average (AV) Quasi-Peak (QP)
Tested By	Jisyoung Wang		

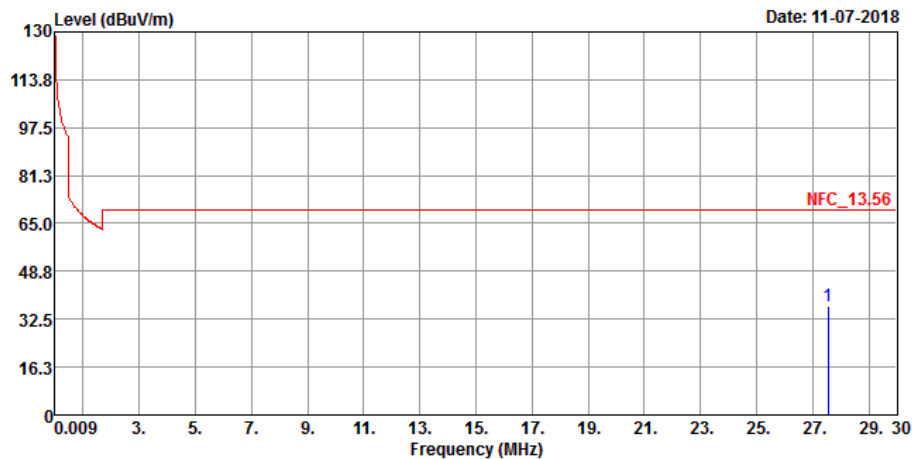


Antenna Polarity & Test Distance: Loop Antenna Open at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
27.65	35.98	40.98	69.54	-33.56	35.95	0.38	41.33	100	0	QP

Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值
 $\text{Limit @ 3 m} = \text{Limit @ 300 m} + 40\log(300 / 3) = \text{Limit @ 300 m} + 80$
 $\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$
- Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Receiver
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Average (AV) Quasi-Peak (QP)
Tested By	Jisyoung Wang		



Antenna Polarity & Test Distance: Loop Antenna Close at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
27.55	36.85	42.05	69.54	-32.69	35.75	0.38	41.33	100	360	QP

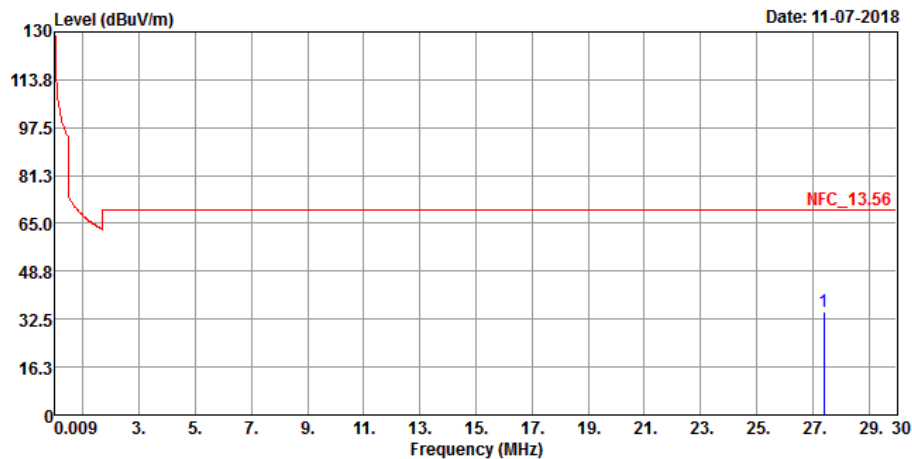
Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值

$$\text{Limit @ 3 m} = \text{Limit @ 300 m} + 40\log(300 / 3) = \text{Limit @ 300 m} + 80$$

$$\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$$
- Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Receiver
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Average (AV) Quasi-Peak (QP)
Tested By	Jisyoung Wang		



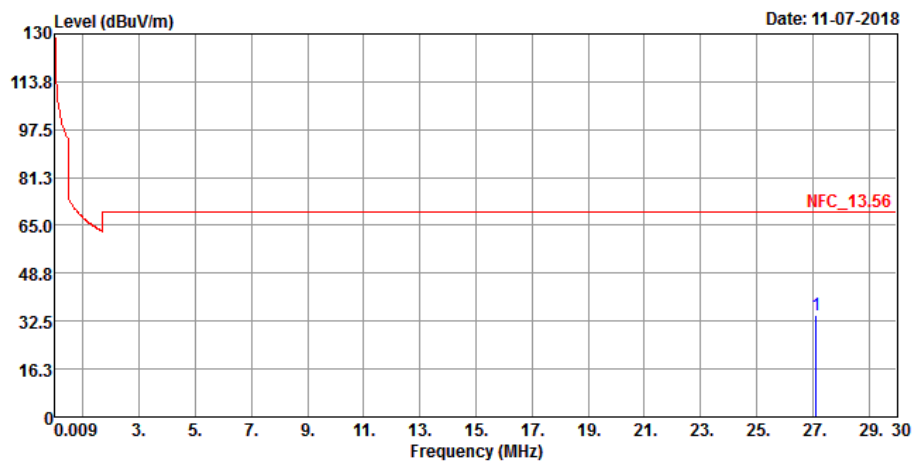
Antenna Polarity & Test Distance: Loop Antenna Ground-Parallel at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
27.41	34.95	40.15	69.54	-34.59	35.75	0.38	41.33	100	0	QP

Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值
 $\text{Limit @ 3 m} = \text{Limit @ 300 m} + 40\log(300 / 3) = \text{Limit @ 300 m} + 80$
 $\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$
- Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

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EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Transmitter
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Average (AV) Quasi-Peak (QP)
Tested By	Jisyong Wang		



Antenna Polarity & Test Distance: Loop Antenna Open at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
27.12	34.62	40.02	69.54	-34.92	35.55	0.38	41.33	100	0	QP

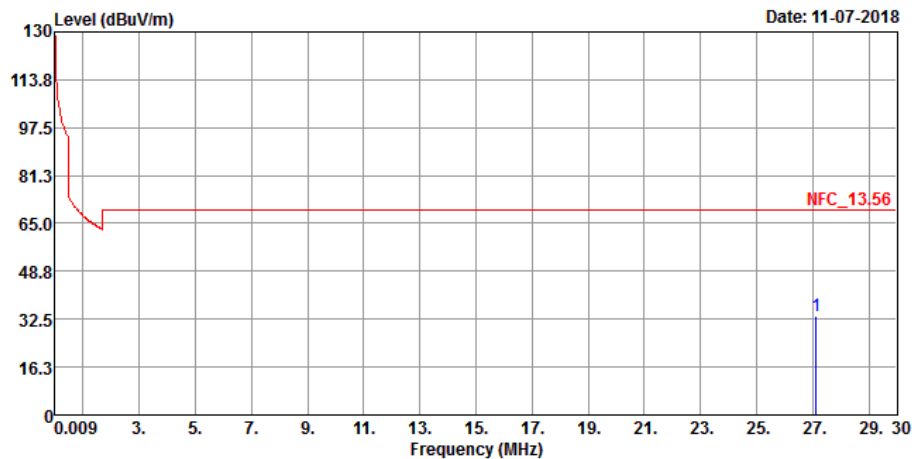
Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值

$$\text{Limit @ 3 m} = \text{Limit @ 300 m} + 40\log(300 / 3) = \text{Limit @ 300 m} + 80$$

$$\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$$
- Open: loop antenna 面向 EUT
Close: loop antenna 與 EUT 垂直
Ground-parallel: loop antenna 與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Transmitter
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Average (AV) Quasi-Peak (QP)
Tested By	Jisyoung Wang		

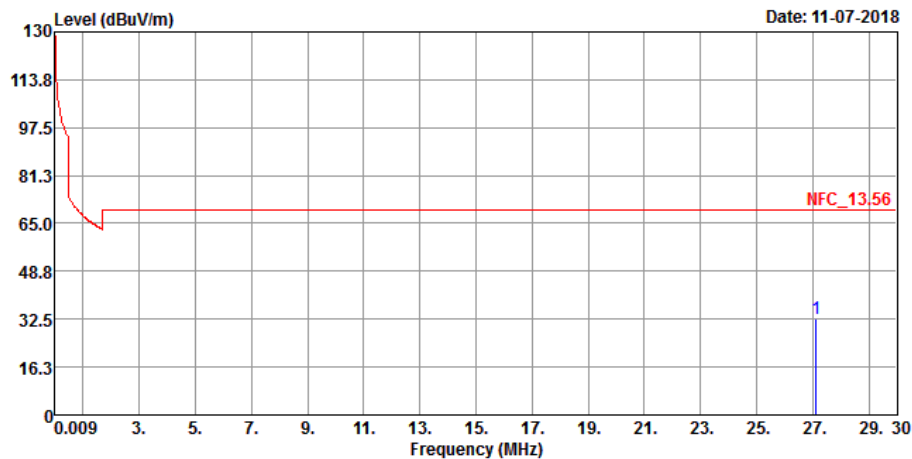


Antenna Polarity & Test Distance: Loop Antenna Close at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
27.12	33.78	39.18	69.54	-35.76	35.55	0.38	41.33	100	360	QP

Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值
 $\text{Limit @ 3 m} = \text{Limit @ 300 m} + 40\log(300 / 3) = \text{Limit @ 300 m} + 80$
 $\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$
- Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Transmitter
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Average (AV) Quasi-Peak (QP)
Tested By	Jisyoung Wang		

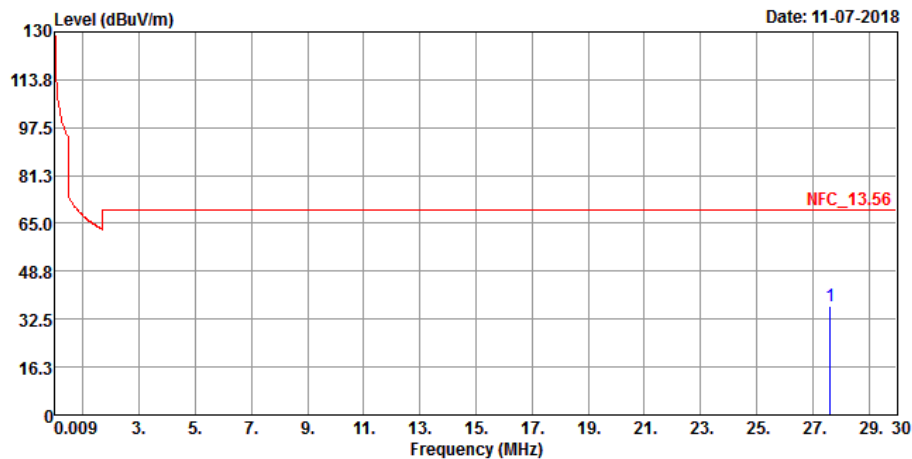


Antenna Polarity & Test Distance: Loop Antenna Ground-Parallel at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
27.12	32.61	38.01	69.54	-36.93	35.55	0.38	41.33	100	0	QP

Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值
 $\text{Limit @ 3 m} = \text{Limit @ 300 m} + 40\log(300 / 3) = \text{Limit @ 300 m} + 80$
 $\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$
- Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Receiver
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Average (AV) Quasi-Peak (QP)
Tested By	Jisyoung Wang		

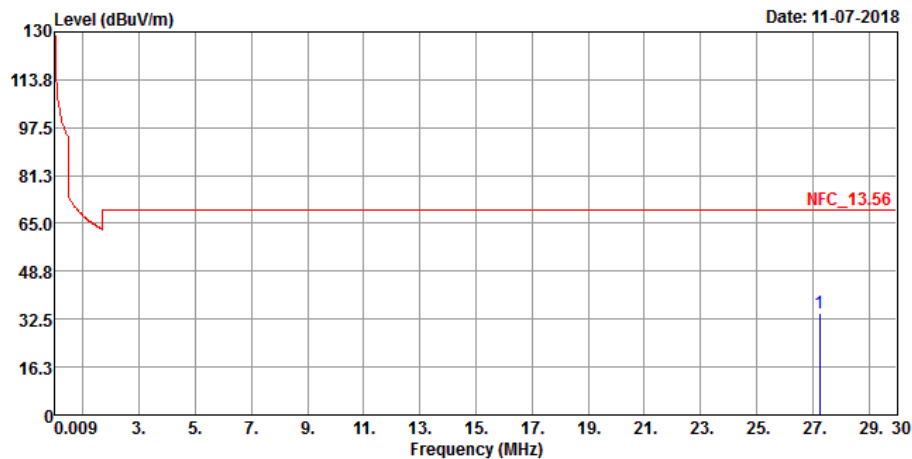


Antenna Polarity & Test Distance: Loop Antenna Open at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
27.63	36.85	41.85	69.54	-32.69	35.95	0.38	41.33	100	0	QP

Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamp Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值
 $\text{Limit @ 3 m} = \text{Limit @ 300 m} + 40\log(300 / 3) = \text{Limit @ 300 m} + 80$
 $\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$
- Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Receiver
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Average (AV) Quasi-Peak (QP)
Tested By	Jisyoung Wang		

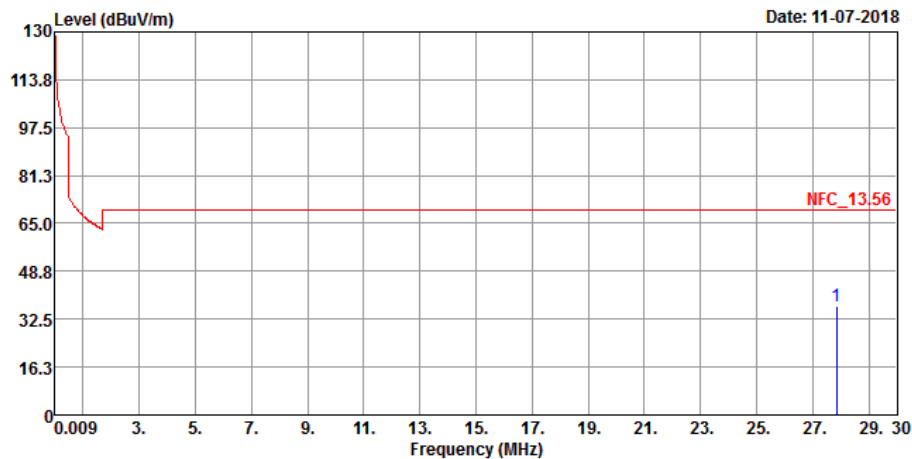


Antenna Polarity & Test Distance: Loop Antenna Close at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
27.25	34.62	40.02	69.54	-34.92	35.55	0.38	41.33	100	360	QP

Note:

- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamp Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值
 $\text{Limit @ 3 m} = \text{Limit @ 300 m} + 40\log(300 / 3) = \text{Limit @ 300 m} + 80$
 $\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$
- Open: loop antenna 面向 EUT
 Close: loop antenna與EUT垂直
 Ground-parallel: loop antenna與地面平行

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Receiver
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Average (AV) Quasi-Peak (QP)
Tested By	Jisyoung Wang		



Antenna Polarity & Test Distance: Loop Antenna Ground-Parallel at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
27.85	36.85	41.66	69.54	-32.69	36.14	0.38	41.33	100	0	QP

Note:

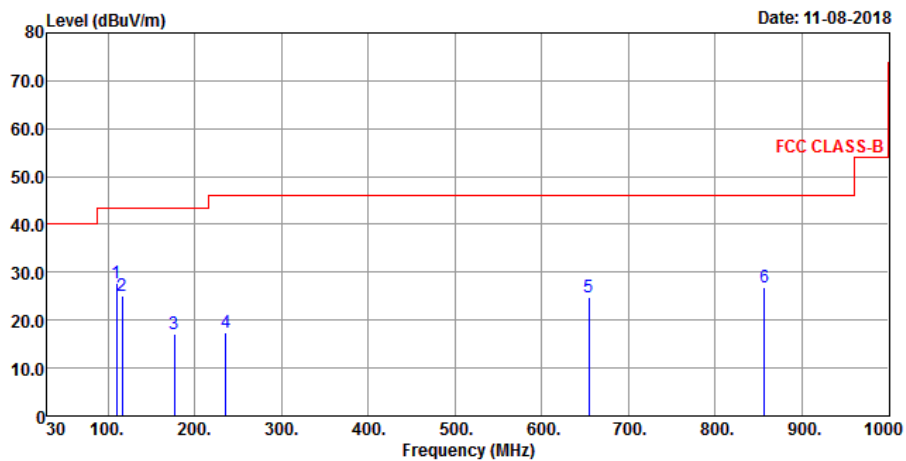
- Emission level (dBuV/m) = Read Level (dBuV) + Correction Factor (dB/m)
- Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Preamplifier Factor (dB)
- The other emission levels were very low against the limit.
- Margin value = Emission level - Limit value
- 當測試距離較規定距離為近時，測試結果應以插補係數換算至規定距離之值
 $\text{Limit @ 3 m} = \text{Limit @ 300 m} + 40\log(300 / 3) = \text{Limit @ 300 m} + 80$
 $\text{Limit @ 3 m} = \text{Limit @ 30 m} + 40\log(30 / 3) = \text{Limit @ 30 m} + 40$
- Open: loop antenna 面向 EUT
 Close: loop antenna 與 EUT 垂直
 Ground-parallel: loop antenna 與地面平行

<Above 30 MHz>

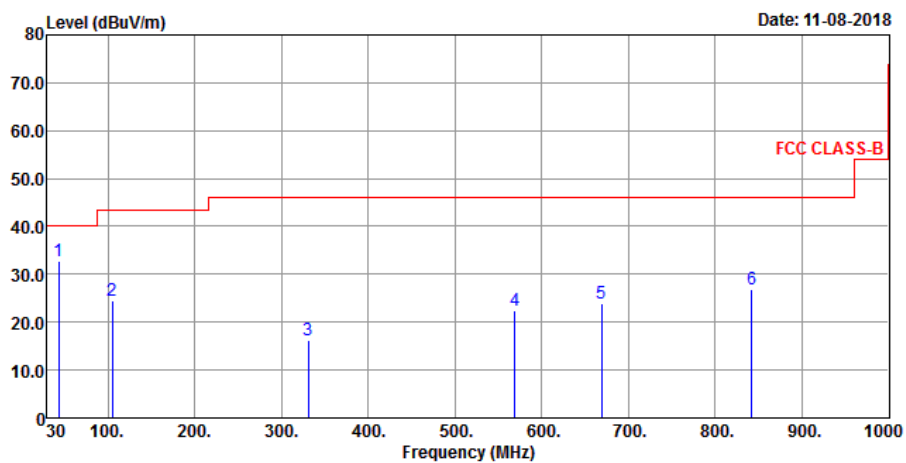
様品 A

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Transmitter
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Peak (PK) Quasi-Peak (QP)
Tested By	Jisyong Wang		

Horizontal



Vertical



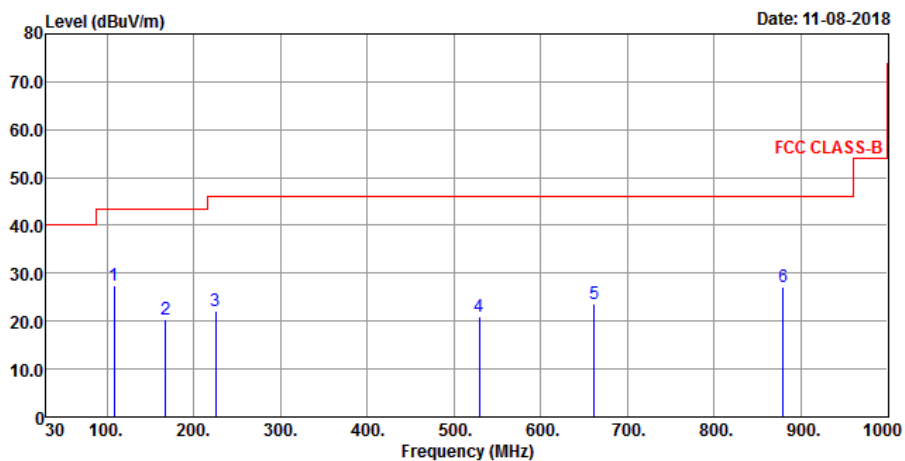
Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
109.54	27.86	48.92	43.5	-15.64	9.99	0.79	31.84	165	295	Peak
116.33	25.22	45.63	43.5	-18.28	10.65	0.82	31.88	147	152	Peak
176.47	17.08	36.68	43.5	-26.42	11.1	1.1	31.8	132	295	Peak
235.64	17.47	36.99	46	-28.53	10.87	1.42	31.81	111	174	Peak
654.68	24.71	33.3	46	-21.29	20.27	3.13	31.99	165	231	Peak
856.44	26.99	32.06	46	-19.01	22.95	3.87	31.89	111	185	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
43.58	32.7	49.72	40	-7.3	13.59	0.5	31.11	165	231	Peak
104.69	24.42	46.02	43.5	-19.08	9.53	0.77	31.9	147	185	Peak
330.7	16.36	32.7	46	-29.64	13.68	1.79	31.81	100	360	Peak
569.32	22.43	32.84	46	-23.57	18.9	2.77	32.08	165	230	Peak
669.23	23.8	32.01	46	-22.2	20.44	3.17	31.82	214	152	Peak
841.89	26.98	32.22	46	-19.02	22.76	3.81	31.81	195	285	Peak

Remarks:

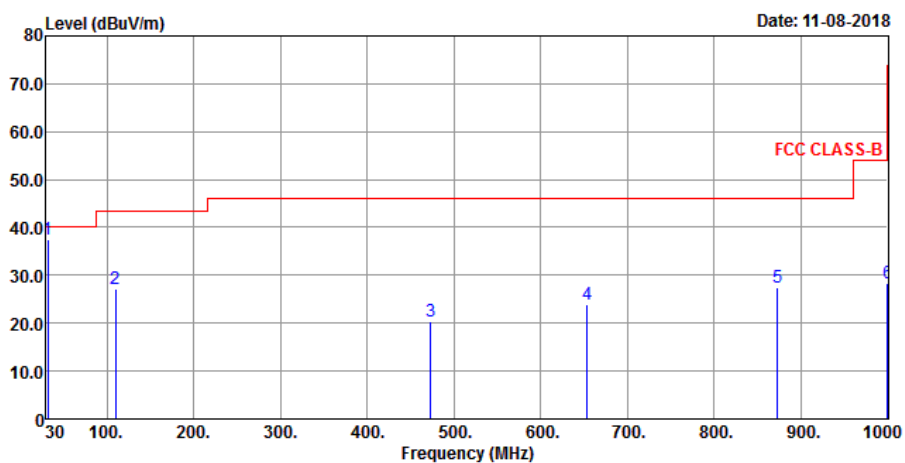
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Receiver
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Peak (PK) Quasi-Peak (QP)
Tested By	Jisyoung Wang		

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
108.57	27.49	48.66	43.5	-16.01	9.9	0.78	31.85	111	145	Peak
167.74	20.27	39.01	43.5	-23.23	11.96	1.06	31.76	254	111	Peak
224.97	22.17	42.17	46	-23.83	10.42	1.36	31.78	165	295	Peak
529.55	20.84	31.91	46	-25.16	17.99	2.63	31.69	145	185	Peak
661.47	23.47	31.89	46	-22.53	20.35	3.15	31.92	132	256	Peak
879.72	27.03	31.8	46	-18.97	23.25	3.96	31.98	152	147	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
31.94	37.5	55.86	40	-2.5	12.3	0.45	31.11	165	231	Peak
109.54	27.04	48.1	43.5	-16.46	9.99	0.79	31.84	195	265	Peak
473.29	20.5	33.21	46	-25.5	16.79	2.38	31.88	132	251	Peak
653.71	23.91	32.51	46	-22.09	20.26	3.13	31.99	132	152	Peak
872.93	27.41	32.31	46	-18.59	23.16	3.94	32	165	285	Peak
1000	28.48	31.75	54	-25.52	24.07	4.42	31.76	165	295	Peak

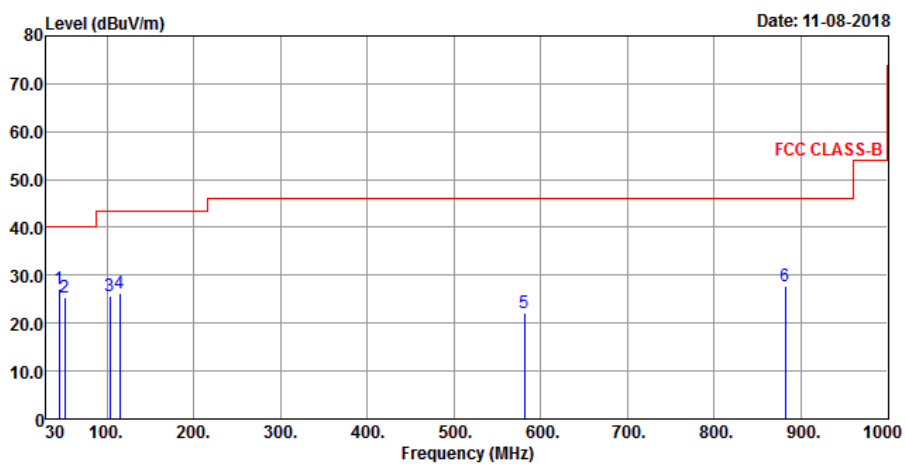
Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- The other emission levels were very low against the limit.

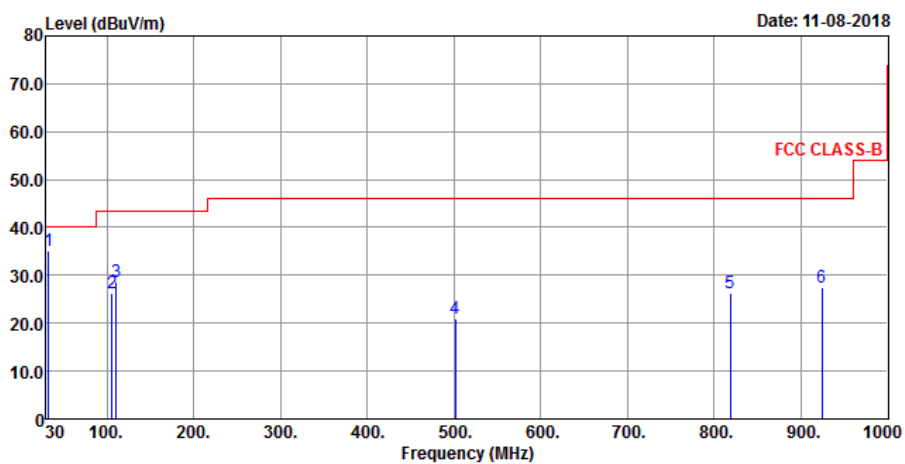
様品B

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Transmitter
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Peak (PK) Quasi-Peak (QP)
Tested By	Jisyong Wang		

Horizontal



Vertical



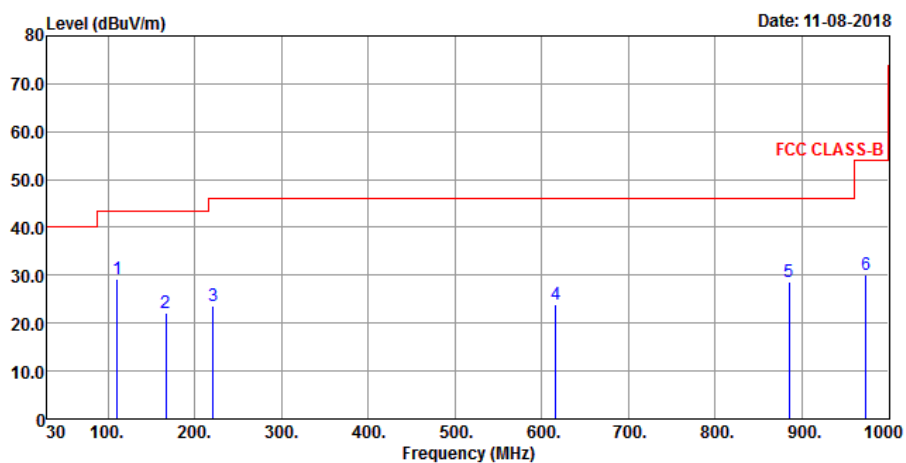
Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
44.55	27.2	44.23	40	-12.8	13.6	0.51	31.14	165	231	Peak
51.34	25.36	43.26	40	-14.64	12.87	0.54	31.31	152	111	Peak
103.72	25.77	47.48	43.5	-17.73	9.43	0.77	31.91	198	245	Peak
114.39	26.38	46.98	43.5	-17.12	10.46	0.81	31.87	174	152	Peak
580.96	22.1	32.23	46	-23.9	19.17	2.82	32.12	102	231	Peak
881.66	27.76	32.5	46	-18.24	23.27	3.97	31.98	165	295	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
32.91	35.03	53.19	40	-4.97	12.47	0.46	31.09	165	111	Peak
105.66	26.37	47.87	43.5	-17.13	9.62	0.77	31.89	174	185	Peak
110.51	28.62	49.59	43.5	-14.88	10.09	0.79	31.85	165	231	Peak
501.42	20.82	32.57	46	-25.18	17.35	2.52	31.62	195	185	Peak
818.61	26.41	31.79	46	-19.59	22.47	3.74	31.59	132	254	Peak
924.34	27.46	31.66	46	-18.54	23.65	4.15	32	102	265	Peak

Remarks:

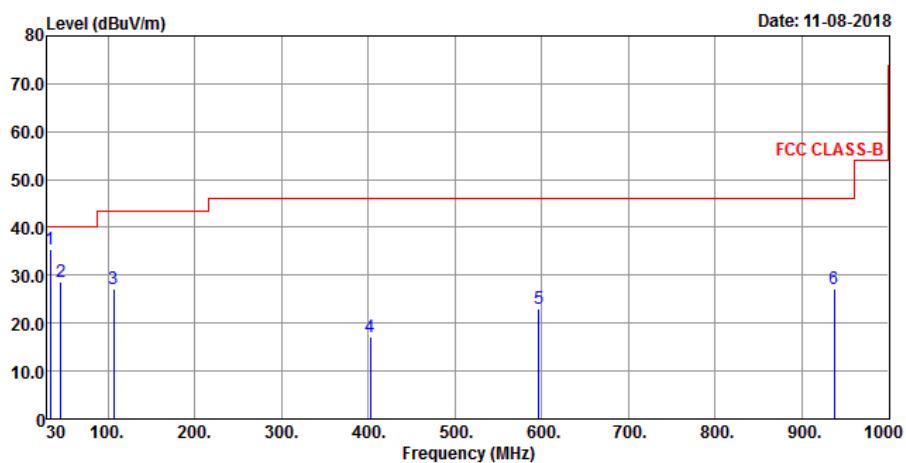
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Receiver
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Peak (PK) Quasi-Peak (QP)
Tested By	Jisyoung Wang		

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
110.51	29.34	50.31	43.5	-14.16	10.09	0.79	31.85	152	111	Peak
166.77	22.22	40.89	43.5	-21.28	12.05	1.05	31.77	165	232	Peak
221.09	23.7	43.82	46	-22.3	10.26	1.34	31.72	205	265	Peak
615.88	24.05	33.41	46	-21.95	19.8	2.97	32.13	174	185	Peak
885.54	28.5	33.19	46	-17.5	23.32	3.98	31.99	165	231	Peak
973.81	29.99	33.55	54	-24.01	23.92	4.34	31.82	195	285	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
33.88	35.46	53.45	40	-4.54	12.63	0.46	31.08	165	231	Peak
45.52	28.54	45.69	40	-11.46	13.5	0.51	31.16	185	174	Peak
106.63	27.13	48.52	43.5	-16.37	9.71	0.78	31.88	102	251	Peak
402.48	17.26	31.87	46	-28.74	15.39	2.09	32.09	165	231	Peak
596.48	22.97	32.77	46	-23.03	19.52	2.89	32.21	195	265	Peak
936.95	27.23	31.29	46	-18.77	23.72	4.17	31.95	111	147	Peak

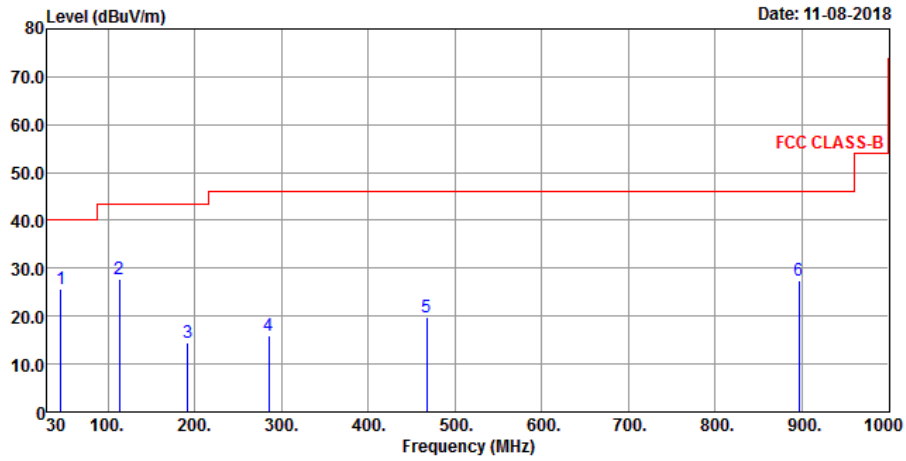
Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- The other emission levels were very low against the limit.

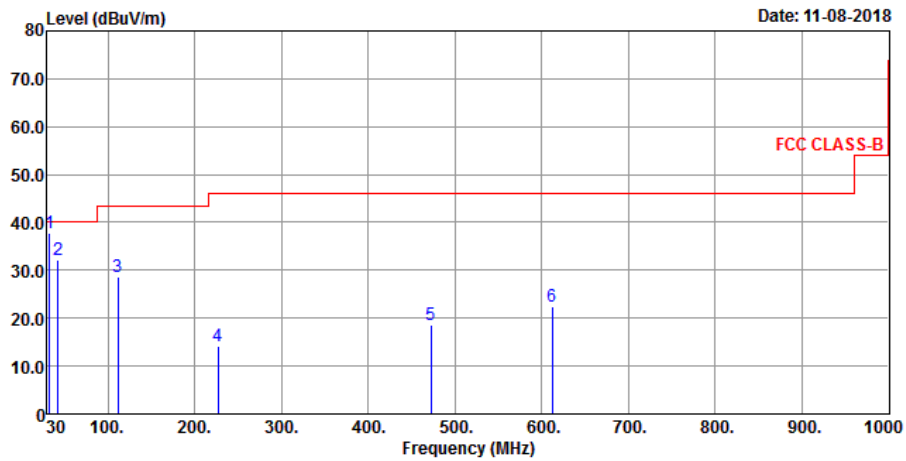
样品C

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Transmitter
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Peak (PK) Quasi-Peak (QP)
Tested By	Jisyoung Wang		

Horizontal



Vertical



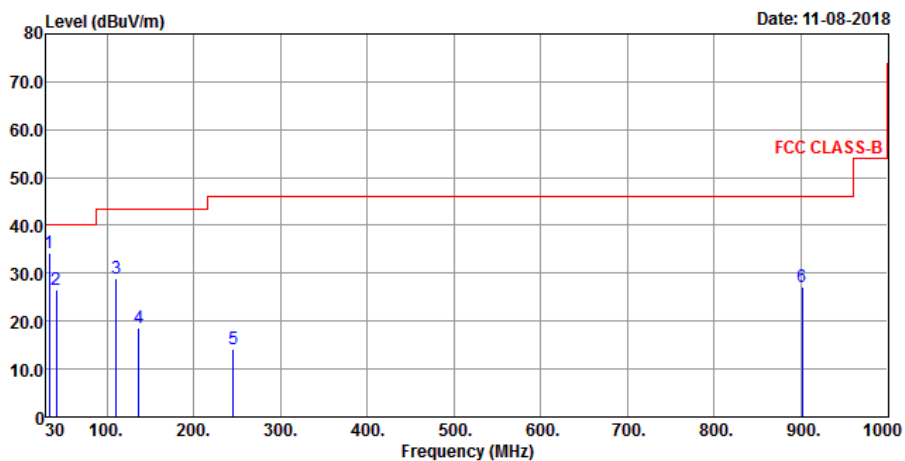
Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
45.52	25.78	42.93	40	-14.22	13.5	0.51	31.16	165	231	Peak
113.42	27.81	48.49	43.5	-15.69	10.37	0.81	31.86	195	285	Peak
191.99	14.52	35.12	43.5	-28.98	9.91	1.18	31.69	147	152	Peak
285.11	15.95	33.58	46	-30.05	12.51	1.6	31.74	165	231	Peak
467.47	19.78	32.67	46	-26.22	16.68	2.35	31.92	195	265	Peak
896.21	27.44	31.96	46	-18.56	23.46	4.02	32	111	148	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
32.91	37.8	55.96	40	-2.2	12.47	0.46	31.09	132	256	Peak
42.61	32.13	49.13	40	-7.87	13.58	0.5	31.08	147	152	Peak
111.48	28.68	49.55	43.5	-14.82	10.18	0.8	31.85	208	265	Peak
226.91	14.09	34.05	46	-31.91	10.5	1.36	31.82	165	231	Peak
472.32	18.47	31.2	46	-27.53	16.77	2.38	31.88	111	195	Peak
612	22.35	31.75	46	-23.65	19.75	2.95	32.1	174	152	Peak

Remarks:

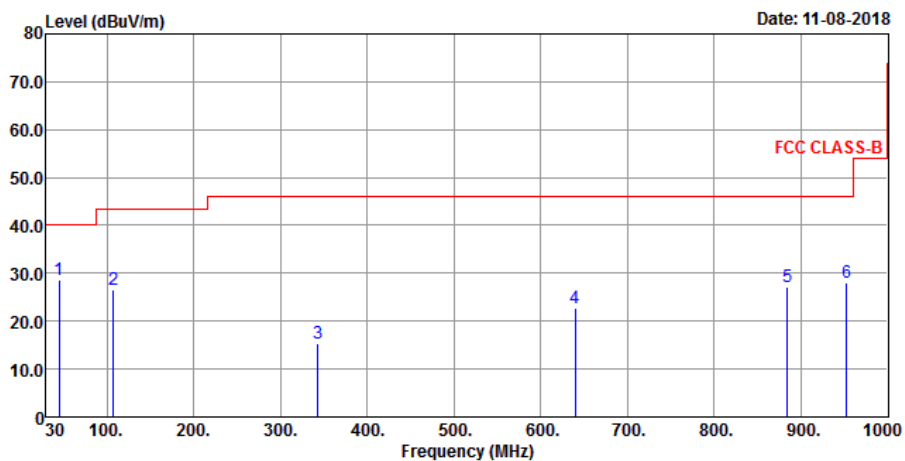
- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- The other emission levels were very low against the limit.

EUT Test Condition		Measurement Detail	
Input Power	110 Vac, 60 Hz	Operating Method	Receiver
Environmental Conditions	25 deg. C, 65 % RH	Detector Function	Peak (PK) Quasi-Peak (QP)
Tested By	Jisyong Wang		

Horizontal



Vertical



Antenna Polarity & Test Distance: Horizontal at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
33.88	34.1	52.09	40	-5.9	12.63	0.46	31.08	165	231	Peak
41.64	26.53	43.52	40	-13.47	13.56	0.5	31.05	185	295	Peak
110.51	29.05	50.02	43.5	-14.45	10.09	0.79	31.85	147	152	Peak
136.7	18.49	37.14	43.5	-25.01	12.14	0.92	31.71	102	231	Peak
245.34	14.23	33.36	46	-31.77	11.28	1.46	31.87	256	231	Peak
901.06	27.21	31.67	46	-18.79	23.52	4.03	32.01	111	185	Peak
Antenna Polarity & Test Distance: Vertical at 3 m										
Frequency (MHz)	Emission Level (dBuV/m)	Read Level (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Antenna Height (cm)	Table Angle (Degree)	Remark
44.55	28.66	45.69	40	-11.34	13.6	0.51	31.14	165	231	Peak
107.6	26.63	47.9	43.5	-16.87	9.81	0.78	31.86	147	185	Peak
343.31	15.44	31.44	46	-30.56	13.98	1.85	31.83	165	231	Peak
640.13	22.7	31.63	46	-23.3	20.09	3.07	32.09	195	285	Peak
884.57	27.16	31.85	46	-18.84	23.31	3.98	31.98	111	165	Peak
952.47	28	31.81	46	-18	23.8	4.24	31.85	274	124	Peak

Remarks:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin Value = Emission Level – Limit value
- The other emission levels were very low against the limit.

9.7 量測結果判定

依據測試數據結果，符合低功率射頻電機技術規範之要求。

10 天線之要求

10.1 適用標準

請見本報告 3.1 節第(13)項的規定。

10.2 天線規格

此待測物使用 Loop 天線，無使用天線接頭。

10.3 結果判定

符合低功率射頻電機技術規範之要求。

11 頻率容許差度之量測

11.1 適用標準

請見本報告 3.1 節第(12)項的規定。

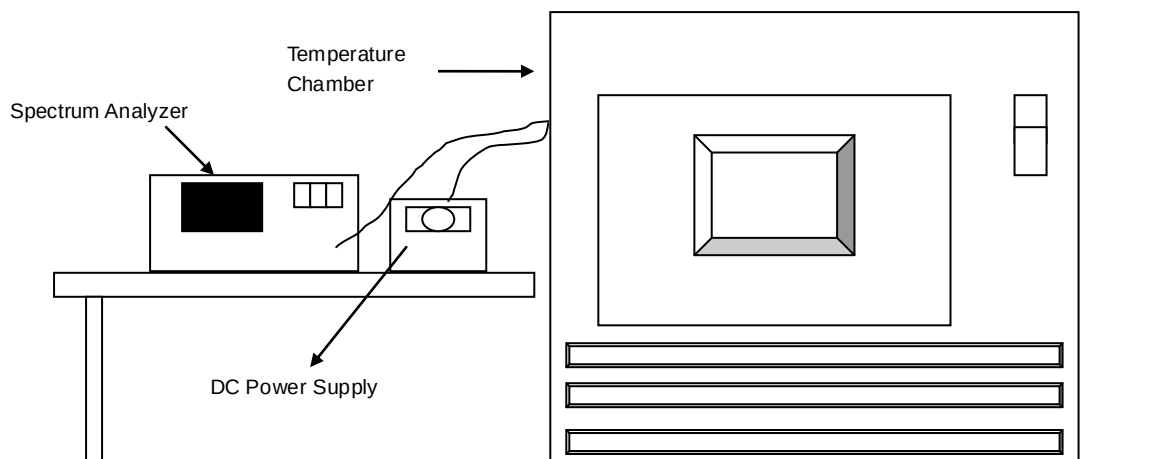
11.2 量測儀器

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Due Date Of Calibration
Spectrum Analyzer R&S	FSU43	101261	Jan. 11, 2018	Jan. 10, 2019
Temperature & Humidity Chamber	GTH-120-40-C P-AR	MAA1306-019	Sep. 05, 2018	Sep. 04, 2019
Power Supply Anritsu	2303	1341402	Oct. 18, 2018	Oct. 17, 2019

Note:

- The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
- The measurement uncertainty is 207 Hz, which is calculated as per the document ETSI TR 100 028. This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of $k=2$.

11.3 測試配置



11.4 量測結果

樣品 A

操作模式	發射	測試日期	107 年 11 月 09 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	王紀雄		

AFC Frequency Error vs. Temperature Limit : $\pm 0.01\%$									
Temp. (°C)	Power Supply (Vdc)	0 minute		2 minute		5 minute		10 minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
85	3.3	13.56006	0.00044	13.56007	0.00052	13.56005	0.00037	13.56006	0.00044
80	3.3	13.55996	-0.00029	13.55997	-0.00022	13.55997	-0.00022	13.55996	-0.00029
70	3.3	13.56001	0.00007	13.56001	0.00007	13.56001	0.00007	13.56001	0.00007
60	3.3	13.56003	0.00022	13.56002	0.00015	13.56003	0.00022	13.56003	0.00022
50	3.3	13.55995	-0.00037	13.55994	-0.00044	13.55995	-0.00037	13.55995	-0.00037
40	3.3	13.56005	0.00037	13.56005	0.00037	13.56005	0.00037	13.56005	0.00037
30	3.3	13.56002	0.00015	13.56001	0.00007	13.56001	0.00007	13.56002	0.00015
20	3.3	13.55995	-0.00037	13.55994	-0.00044	13.55995	-0.00037	13.55995	-0.00037
10	3.3	13.56005	0.00037	13.56005	0.00037	13.56006	0.00044	13.56005	0.00037
0	3.3	13.55994	-0.00044	13.55994	-0.00044	13.55995	-0.00037	13.55994	-0.00044
-10	3.3	13.55996	-0.00029	13.55995	-0.00037	13.55996	-0.00029	13.55996	-0.00029
-20	3.3	13.56001	0.00007	13.56002	0.00015	13.56002	0.00015	13.56002	0.00015
-30	3.3	13.55997	-0.00022	13.55997	-0.00022	13.55996	-0.00029	13.55997	-0.00022
-40	3.3	13.55999	-0.00007	13.55999	-0.00007	13.55999	-0.00007	13.55998	-0.00015

AFC Frequency Error vs. Voltage Limit : $\pm 0.01\%$									
Temp. (°C)	Power Supply (Vdc)	0 minute		2 minute		5 minute		10 minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	3.6	13.55995	-0.00037	13.55994	-0.00044	13.55995	-0.00037	13.55995	-0.00037
	3.3	13.55995	-0.00037	13.55994	-0.00044	13.55995	-0.00037	13.55995	-0.00037
	1.7	13.55995	-0.00037	13.55994	-0.00044	13.55995	-0.00037	13.55995	-0.00037

註 1：此待測物電源輸入使用 Dummy Battery 進行測試

註 2：此電壓為客戶宣告

樣品B

操作模式	發射	測試日期	107 年 11 月 09 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	王紀雄		

AFC Frequency Error vs. Temperature Limit : $\pm 0.01\%$									
Temp. (°C)	Power Supply (Vdc)	0 minute		2 minute		5 minute		10 minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
85	3.3	13.56004	0.00029	13.56003	0.00022	13.56002	0.00015	13.56004	0.00029
80	3.3	13.56006	0.00044	13.56006	0.00044	13.56006	0.00044	13.56006	0.00044
70	3.3	13.56006	0.00044	13.56006	0.00044	13.56005	0.00037	13.56004	0.00029
60	3.3	13.55999	-0.00007	13.55998	-0.00015	13.55998	-0.00015	13.55998	-0.00015
50	3.3	13.56003	0.00022	13.56003	0.00022	13.56003	0.00022	13.56003	0.00022
40	3.3	13.55995	-0.00037	13.55996	-0.00029	13.55995	-0.00037	13.55996	-0.00029
30	3.3	13.55994	-0.00044	13.55993	-0.00052	13.55993	-0.00052	13.55994	-0.00044
20	3.3	13.55995	-0.00037	13.55995	-0.00037	13.55994	-0.00044	13.55995	-0.00037
10	3.3	13.56007	0.00052	13.56007	0.00052	13.56007	0.00052	13.56007	0.00052
0	3.3	13.55995	-0.00037	13.55995	-0.00037	13.55995	-0.00037	13.55995	-0.00037
-10	3.3	13.56004	0.00029	13.56004	0.00029	13.56004	0.00029	13.56004	0.00029
-20	3.3	13.56004	0.00029	13.56004	0.00029	13.56004	0.00029	13.56005	0.00037
-30	3.3	13.56005	0.00037	13.56005	0.00037	13.56005	0.00037	13.56005	0.00037
-40	3.3	13.56001	0.00007	13.56001	0.00007	13.56001	0.00007	13.56001	0.00007

AFC Frequency Error vs. Voltage Limit : $\pm 0.01\%$									
Temp. (°C)	Power Supply (Vdc)	0 minute		2 minute		5 minute		10 minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	3.6	13.55995	-0.00037	13.55995	-0.00037	13.55994	-0.00044	13.55995	-0.00037
	3.3	13.55995	-0.00037	13.55995	-0.00037	13.55994	-0.00044	13.55995	-0.00037
	1.7	13.55995	-0.00037	13.55995	-0.00037	13.55994	-0.00044	13.55995	-0.00037

註 1：此待測物電源輸入使用 Dummy Battery 進行測試

註 2：此電壓為客戶宣告

樣品C

操作模式	發射	測試日期	107 年 11 月 09 日
量測場地溫度	25 °C	量測場地濕度	60 % RH
測試者	王紀雄		

AFC Frequency Error vs. Temperature Limit : $\pm 0.01\%$									
Temp. (°C)	Power Supply (Vdc)	0 minute		2 minute		5 minute		10 minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
85	3.3	13.56004	0.00029	13.56004	0.00029	13.56004	0.00029	13.56004	0.00029
80	3.3	13.55996	-0.00029	13.55995	-0.00037	13.55995	-0.00037	13.55996	-0.00029
70	3.3	13.56007	0.00052	13.56006	0.00044	13.56007	0.00052	13.56008	0.00059
60	3.3	13.55995	-0.00037	13.55995	-0.00037	13.55994	-0.00044	13.55995	-0.00037
50	3.3	13.55996	-0.00029	13.55995	-0.00037	13.55996	-0.00029	13.55996	-0.00029
40	3.3	13.55997	-0.00022	13.55997	-0.00022	13.55997	-0.00022	13.55996	-0.00029
30	3.3	13.55999	-0.00007	13.55998	-0.00015	13.55998	-0.00015	13.55998	-0.00015
20	3.3	13.56004	0.00029	13.56004	0.00029	13.56005	0.00037	13.56005	0.00037
10	3.3	13.56005	0.00037	13.56005	0.00037	13.56007	0.00052	13.56005	0.00037
0	3.3	13.56002	0.00015	13.56002	0.00015	13.56003	0.00022	13.56002	0.00015
-10	3.3	13.56004	0.00029	13.56004	0.00029	13.56004	0.00029	13.56004	0.00029
-20	3.3	13.56001	0.00007	13.56001	0.00007	13.56001	0.00007	13.56002	0.00015
-30	3.3	13.56004	0.00029	13.56006	0.00044	13.56005	0.00037	13.56005	0.00037
-40	3.3	13.56003	0.00022	13.56004	0.00029	13.56003	0.00022	13.56003	0.00022

AFC Frequency Error vs. Voltage Limit : $\pm 0.01\%$									
Temp. (°C)	Power Supply (Vdc)	0 minute		2 minute		5 minute		10 minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	3.6	13.56004	0.00029	13.56004	0.00029	13.56005	0.00037	13.56005	0.00037
	3.3	13.56004	0.00029	13.56004	0.00029	13.56005	0.00037	13.56005	0.00037
	1.7	13.56004	0.00029	13.56004	0.00029	13.56005	0.00037	13.56005	0.00037

註 1：此待測物電源輸入使用 Dummy Battery 進行測試

註 2：此電壓為客戶宣告

11.5 量測結果判定

依據測試數據結果，符合低功率射頻電機技術規範之要求。

12 電源線傳導干擾之量測

12.1 適用標準

請見本報告 3.1 節第(1)項的規定。

12.2 量測方法

將待測物置於 0.8 米高的非金屬桌面，使其操作在工作狀態，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 0.15 MHz 至 30 MHz 之間之電源線傳導放射強度。

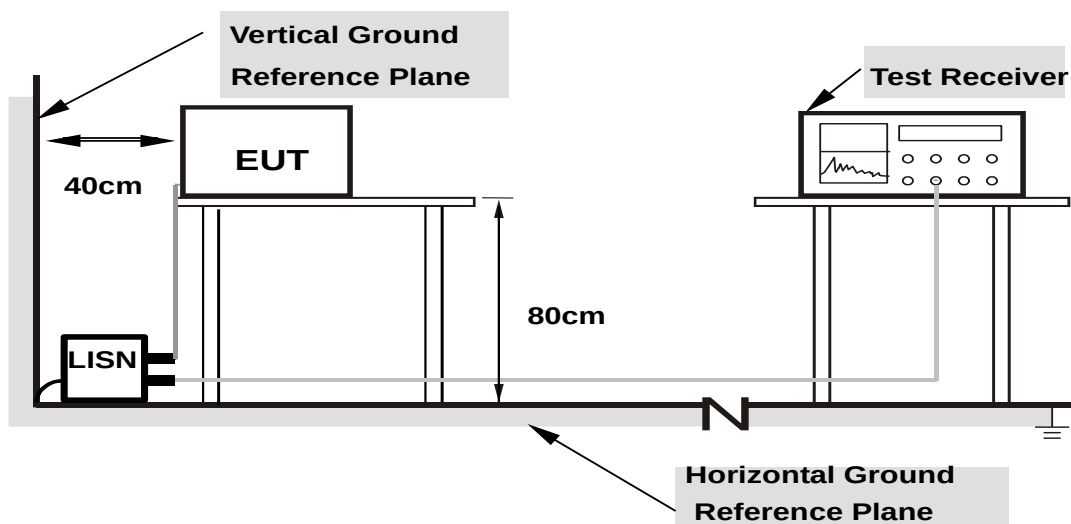
12.3 量測儀器

Description & Manufacturer	Model No.	Serial No.	Date Of Calibration	Due Date Of Calibration
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Nov. 23, 2017	Nov. 22, 2018
RF signal cable Woken	5D-FB	Cable-cond1-01	Sep. 05, 2018	Sep. 04, 2019
LISN ROHDE & SCHWARZ (EUT)	ENV216	101826	Feb. 26, 2018	Feb. 25, 2019
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 19, 2018	Aug. 18, 2019
Software ADT	BV ADT_Cond_ V7.3.7.4	NA	NA	NA

NOTE:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 1.
3. The VCCI Site Registration No. is C-2040.
4. The measurement uncertainty is 2.44 dB, which is calculated as per the document CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95 % confidence level using a coverage factor of k=2.

12.4 測試配置



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

12.5 干擾值之計算

餘裕度 Margin(dB)= 結果值 Emission level (dBuV)-限制值 Limit value (dBuV)

電源傳導干擾電壓之計算公式如下

結果值 Emission level (dBuV)=校正因子 Correction Factor (dB)+儀器讀值 Reading value (dBuV)

其中校正因子 Correction Factor (dB)為：

饋線損失+電源阻抗模擬網路損失

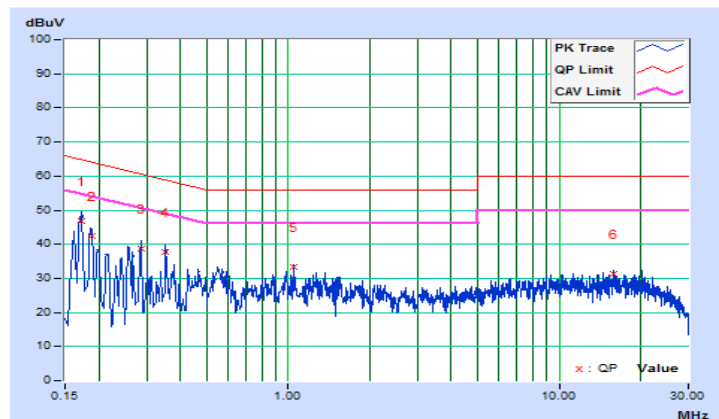
12.6 量測結果

量測頻率範圍	150kHz ~ 30MHz	檢測器與頻寬	準峰值 (QP) / 平均值 (AV), 9kHz
量測電壓值	110Vac, 60Hz	量測場地溫濕度	25°C, 65%RH
測試者	韋佑豪	測試日期	2018/11/7
測試模式	Mode 2		

量測電源端點：火線 (L1)										
No	頻率 (MHz)	修正 因子 (dB)	量測讀值 (dBuV)		干擾值 (dBuV)		限制值 (dBuV)		餘裕 (dB)	
			準峰值	平均值	準峰值	平均值	準峰值	平均值	準峰值	平均值
1	0.17328	9.67	37.28	10.64	46.95	20.31	64.80	54.80	-17.85	-34.49
2	0.18910	9.67	32.87	9.09	42.54	18.76	64.08	54.08	-21.54	-35.32
3	0.28685	9.67	29.04	2.92	38.71	12.59	60.62	50.62	-21.91	-38.03
4	0.35332	9.66	27.98	3.82	37.64	13.48	58.88	48.88	-21.24	-35.40
5	1.04148	9.65	23.74	0.41	33.39	10.06	56.00	46.00	-22.61	-35.94
6	15.82519	9.89	21.37	1.19	31.26	11.08	60.00	50.00	-28.74	-38.92

附註：

1. 其它頻率的干擾值對限制值而言非常低，所以未記錄。
2. 餘裕值(dB) = 干擾值(dBuV) - 限制值(dBuV)
3. 干擾值(dBuV) = 修正因子(dB) + 量測讀值(dBuV)

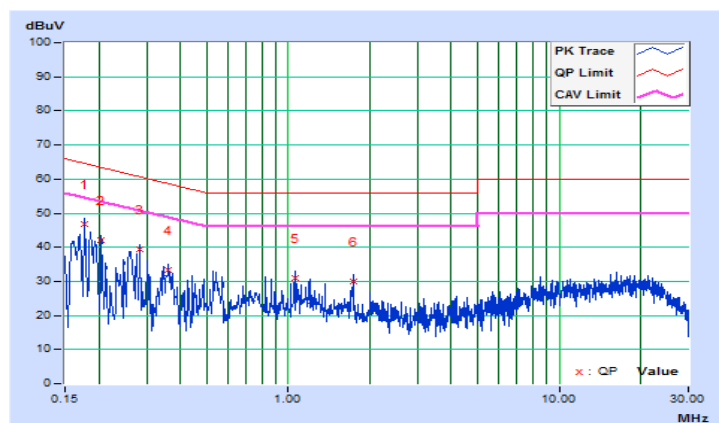


量測頻率範圍	150kHz ~ 30MHz	檢測器與頻寬	準峰值 (QP) / 平均值 (AV), 9kHz
量測電壓值	110Vac, 60Hz	量測場地溫濕度	25°C, 65%RH
測試者	韋佑豪	測試日期	2018/11/7
測試模式	Mode 2		

量測電源端點：中性線 (N)										
No	頻率 (MHz)	修正因子 (dB)	量測讀值 (dBuV)		干擾值 (dBuV)		限制值 (dBuV)		餘裕 (dB)	
			準峰值	平均值	準峰值	平均值	準峰值	平均值	準峰值	平均值
1	0.17737	9.67	37.18	9.82	46.85	19.49	64.61	54.61	-17.76	-35.12
2	0.20474	9.67	32.26	3.49	41.93	13.16	63.42	53.42	-21.49	-40.26
3	0.28294	9.67	29.82	3.44	39.49	13.11	60.73	50.73	-21.24	-37.62
4	0.36114	9.67	23.70	2.43	33.37	12.10	58.70	48.70	-25.33	-36.60
5	1.05712	9.65	21.27	2.66	30.92	12.31	56.00	46.00	-25.08	-33.69
6	1.74528	9.67	20.15	3.77	29.82	13.44	56.00	46.00	-26.18	-32.56

附註：

1. 其它頻率的干擾值對限制值而言非常低，所以未記錄。
2. 餘裕值(dB) = 干擾值(dBuV) - 限制值(dBuV)
3. 干擾值(dBuV) = 修正因子(dB) + 量測讀值(dBuV)



12.7 量測結果判定

依據測試數據結果，符合低功率射頻電機技術規範之要求。

13 電波暴露量之評估

13.1 適用標準

請見本報告 3.1 節第(8)項的規定。

13.2 評估方法

a) 以 6.5 節所測得的最大輸出功率值再加上待測物天線的增益值(Gain)帶入下面公式換算出待測物所輻射的功率密度。

$$b) P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

P_d = power density in mW/cm^2

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

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

13.3 評估結果

樣品 A

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)	Pass / Fail
2402-2480	3.72	2.5	20	0.001	1	Pass

樣品 B

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)	Pass / Fail
2402-2480	3.57	0.5	20	0.001	1	Pass

樣品 C

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)	Pass / Fail
2402-2480	3.60	0.5	20	0.001	1	Pass

14 待測物照片

請參照 BV CPS 報告編號：181009C08

15 檢測實驗室基本資料

立德國際商品試驗有限公司桃園分公司提供產業界最佳的檢測以及諮詢服務。
本公司為 ISO/IEC 17025 認可實驗室。

如您有任何問題或建議，請與下列實驗室聯絡：

林口 EMC / RF 實驗室：

Tel: 886-2-26052180

Fax: 886-2-26051924

新竹 EMC / RF 及通訊實驗室：

Tel: 886-3-5935343

Fax: 886-3-5935342

華亞 EMC / RF / Safety 實驗室：

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

您也可以在我们的網站內找到各實驗室的地圖。

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