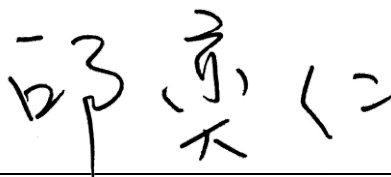


MPE REPORT

案 號： 1903C316
產 品 名 稱： Notebook
型 號： RZ09-0300
申 請 廠 商（ 名 稱 ）： 台灣雷蛇有限公司
申 請 廠 商（ 地 址 ）： 104 臺北市中山區民生東路 3 段 69、71 號 4 樓

According to : LP0002 第 5.20.2 節

報告簽署人：



發 行 日 期： 108 年 04 月 26 日

東 研 信 超 股 份 有 限 公 司
臺 北 市 內 湖 區 舊 宗 路 二 段 1 7 1 巷 1 8 號
電 話： (02) 2657-3299 傳 真： (02) 2657-3331

TAF實驗室認可編號： 0659

MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi^2} = \frac{EIRP}{4\pi^2}$$

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Table for Filed Antenna:

For 2.4GHz:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1		BY5810-16-001-C	PIFA	IPEX	3.69
2		BY5810-16-002-C	PIFA	IPEX	2.79

Note: This EUT supports MIMO 2X2, any transmit signals are correlated with each other, so Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N]$ dBi, that is Directional gain = $10\log[(10^{3.69/20} + 10^{2.79/20})^2 / 2]$ dBi = 6.26. So, the output power limit is $30 - 6.26 + 6 = 29.74$, the power spectral density limit is $8 - 6.26 + 6 = 7.74$.

For 5GHz:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1		BY5810-16-001-C	PIFA	IPEX	4.65
2		BY5810-16-002-C	PIFA	IPEX	4.69

Note: This EUT supports MIMO 2X2, any transmit signals are correlated with each other, so Directional gain = $10\log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N]$ dBi, that is Directional gain = $10\log[(10^{4.65/20} + 10^{4.69/20})^2 / 2]$ dBi = 7.68. So, the UNII-1, UNII-2A, UNII-2C output power limit is $24 - 7.68 + 6 = 22.32$, the UNII-3 output power limit is $30 - 7.68 + 6 = 28.32$. The UNII-1, UNII-2A, UNII-2C power density limit is $11 - 7.68 + 6 = 9.32$, the UNII-3 power density limit is $30 - 7.68 + 6 = 28.32$.

TEST RESULTS:

For 2.4GHz

測試頻道: IEEE 802.11n(20 MHz)

測試模式: 發射

檢測器: Peak

測試日期: 108/04/02

環境溫度: 22.2°C

環境濕度: 55%

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
6.26	4.2267	24.36	272.8978	0.22959	1	Complies

For 5GHz

For UNII-1

測試頻道: IEEE 802.11ac (20 MHz)

測試模式: 發射

檢測器: RMS

測試日期: 108/04/08

環境溫度: 22.2 °C

環境濕度: 55%

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
7.68	5.8614	19.16	82.4138	0.09615	1	Complies

For UNII-2A

測試頻道: IEEE 802.11ac (20 MHz)

測試模式: 發射

檢測器: RMS

測試日期: 108/04/08

環境溫度: 22.2 °C

環境濕度: 55%

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
7.68	5.8614	19.2	83.1764	0.09704	1	Complies

For UNII-2C

測試頻道: IEEE 802.11ac (20 MHz)

測試模式: 發射

檢測器: RMS

測試日期: 108/04/08

環境溫度: 22.2 °C

環境濕度: 55%

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
7.68	5.8614	19.19	82.9851	0.09682	1	Complies

For UNII-3

測試頻道: IEEE 802.11ac (20 MHz)

測試模式: 發射

檢測器: RMS

測試日期: 108/04/08

環境溫度: 22.2 °C

環境濕度: 55%

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
7.68	5.8614	19.19	82.9851	0.09682	1	Complies

Note: The evaluated distance is 20cm.

結束