APPENDIX I
RADIO FREQUENCY EXPOSURE

LIMIT

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See §15.247(i) and §1.1307(b)(1) of this chapter.

EUT Specification

EUT	Handheld Computer
Frequency band (Operating)	☒ WLAN: 2.412GHz ~ 2.462GHz ☐ WLAN: 5.18GHz ~ 5.32GHz / 5.50GHz ~ 5.70GHz ☐ WLAN: 5.745GHz ~ 5.825GHz ☐ Bluetooth: 2.402GHz ~ 2.480 GHz
Device category	☐ Portable (<20cm separation) ☒ Mobile (>20cm separation)
Exposure classification	☐ Occupational/Controlled exposure (S = 5mW/cm2) ☒ General Population/Uncontrolled exposure (S=1mW/cm2)
Antenna diversity	☐ Single antenna ☒ Multiple antennas ☐ Tx diversity ☐ Rx diversity ☒ Tx/Rx diversity
Max. output power	IEEE 802.11b: 17.12 dBm (51.52mW) IEEE 802.11g: 21.55 dBm (142.88mW)
Antenna gain (Max)	0.59 dBi (Numeric gain: 1.14)
Evaluation applied	☒ MPE Evaluation* ☐ SAR Evaluation ☐ N/A
Remark: *The maximum output power is 21.55dBm (142.88mW) at 2442MHz (with 1.14 numeric antenna gain.)*	

TEST RESULTS

No non-compliance noted.

Note:

(1) This EUT none voice function (only data function). And According KDB447498 D01 4 C) iii).

(2) This EUT is hand-held and hand-operated devices average maximum conducted output power is 14.41 dBm(IEEE 802.11g mode, IEEE 802.11b mode is 14.22dBm) is less than SAR test power theory (1000[f(GHz)]$^{-0.5}$, 28.05 dBm), so SAR test for hand is not required.

(3) And Body SAR average maximum conducted output power is less than SAR test power theory (300[f(GHz)]$^{-0.5}$, 22.82 dBm), so SAR test for body is not required.

Calculation

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{3770}$

Where *E = Field strength in Volts / meter*
P = Power in Watts
G = Numeric antenna gain
d = Distance in meters
S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{3770 d^2}$$

Changing to units of mW and cm, using:

P (mW) = P (W) / 1000 and

d (cm) = d(m) / 100

Yields

$$S = \frac{30 \times (P/1000) \times G}{3770 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$ ***Equation 1***

Where *d = Distance in cm*
P = Power in mW
G = Numeric antenna gain
S = Power density in mW / cm^2

Maximum Permissible Exposure

Substituting the MPE safe distance using d = 20 cm into Equation 1:

Yields

$$S = 0.000199 \times P \times G$$

Where *P = Power in mW*
G = Numeric antenna gain
S = Power density in mW / cm^2

IEEE 802.11b mode:

EUT output power = 51.52mW

Numeric Antenna gain = 1.14

→ *Power density = 0.011688 mW / cm2*

IEEE 802.11g mode:

EUT output power = 142.88 mW

Numeric Antenna gain = 1.14

→ *Power density = 0.032414 mW / cm2*

(For mobile or fixed location transmitters, the maximum power density is 1.0 mW/cm^2 even if the calculation indicates that the power density would be larger.)