Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

Room 02, & 101/E201/E301/E401/E501/E601/E701/E801 of Room 01 1-8/F., No. 7-2. Caipin Road, Science City, GETDD, Guangzhou, Guangdong, China

Job No.: 230510042GZU

FCC ID: 2AYCK174XXXX863XXXX

RF Exposure Compliance Requirement

Model no.: 1745020-1745999, 8635012-8635999, 8730000-8739999

1. Standard requirement

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 level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2m normally can be maintained between the user and the device.

(a) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S)(mW/cm²)	Averaging Times $\lvert E \rvert^2$, $\lvert H \rvert^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	F/300	6
1500-100000	--	--	5	6

(b) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S)(mW/cm²)	Averaging Times $\lvert E \rvert^2$, $\lvert H \rvert^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	F/1500	30
1500-100000	--	--	1.0	30

Note: f=frequency in MHz; *Plane-wave equivalent power density

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2. MPE Calculation Method

$E (V/m)=(30*P*G)^{0.5}/d$ Power Density: $Pd(W/m^2)=E^2/377$

E=Electric Field (V/m)

P=Peak RF output Power (W)

G=EUT Antenna numeric gain (numeric)

d= Separation distance between radiator and human body (m)

The formula can be changed to

$Pd= (30*P*G)/(377*d^2)$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained.

3. Calculated Result and Limit

WIFI

Antenna 1:

Peak Output Power = 8.03dBm(max.value declared by client), antenna gain = 2dBi

Frequency (MHz)	Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	Test Result
2412-2462	1.58	8.03	6.353	0.02003	1	Complies

MPE ratio: 0.02003(mW/cm²)/1(mW/cm²) =0.02003

WIFI

Antenna 2:

Peak Output Power = 8.03dBm(max.value declared by client), antenna gain = 1.3dBi

Frequency (MHz)	Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	Test Result
2412-2462	1.35	8.03	6.353	0.00171	1	Complies

MPE ratio: 0.00171(mW/cm²)/1(mW/cm²) =0.00171

BLE

Peak Output Power = -6.38dBm(max.value declared by client), antenna gain = 1.78dBi

Frequency (MHz)	Antenna Gain (Numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm²)	Limit of Power Density (S) (mW/cm²)	Test Result
2402-2480	1.51	-6.38	0.23	0.00007	1	Complies

MPE ratio: 0.00007(mW/cm²)/1(mW/cm²) =0.00007

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Sum of the MPE ratio for all simultaneously transmitting antennas:

WIFI antenna 1+BLE=0.02003+0.00007 = 0.0201< 1

WIFI antenna 2+BLE=0.00171+0.00007 = 0.00178< 1

Test Location:

Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

All tests were performed at:

Room102/104, No 203, KeZhu Road, Science City, GETDD Guangzhou, China