MRE report

Applicant: Asian Express Holdings Limited
Product Description: HD Video Drone
Model No.: BKST007
FCC ID: VLEBKST007R

Frequency range: 2408MHz – 2472MHz

According to FCC §15.247(i) and §1.1307(b)(1), 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 of the Commission's guidelines.

Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Averaging Time (minutes)
Limits for General Population/Uncontrolled Exposure				
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

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

MPE Calculation Method

The MPE was calculated at 20cm to show compliance with the power density limit.
The following formula was used to calculate the Power Density:

$$\mathrm{E}\left(\frac{\mathrm{V}}{\mathrm{m}}\right) = \frac{\sqrt{(30*P*G)}}{d} \qquad \text{Power Density: } \mathrm{Pd}\left(\frac{\mathrm{W}}{m^2}\right) = \frac{E^2}{377}$$

E = Electric field (V/m)
P = Peak RF output power (W)
G = EUT Antenna numeric gain
d = Separation distance between radiator and human body (m)

The formula can be changed to

$$\mathrm{Pd} = \frac{30 * P * G}{377 * d^2}$$

Calculated Result and Limit

Maximum peak output power (dBm): -3.552
Maximum peak output power (mW): 0.4414
Distance (cm): 20
Frequency (MHz): 2472
Antenna Gain (dBi): -9.248

Antenna Gain (numeric): 0.1189
Power density of prediction frequency at 20 cm (mW/cm^2): 0.0000104
MPE limit for uncontrolled exposure at prediction frequency (mW/cm^2): 1.0

The device is compliant with the requirement MPE limit for uncontrolled exposure. The maximum power density at the distance of 20 cm is 0.0000104 mW/cm^2, limit is 1.0 mW/cm^2.