Maximum Permissible Exposure Evaluation
FCC ID: 2APRB-X30

1. Client Information

Applicant	:	Guangdong Juan Intelligent Technology Joint Stock Co., Ltd.
Address	:	THE FIRST AND SECOND FLOORS OF BUILDING 2 (PLANT NO.2), WEST SIDE OF SHANXI VILLAGE, DASHI STREET, PANYU DISTRICT, GUANGZHOU, China
Manufacturer	:	Guangdong Juan Intelligent Technology Joint Stock Co., Ltd.
Address	:	THE FIRST AND SECOND FLOORS OF BUILDING 2 (PLANT NO.2), WEST SIDE OF SHANXI VILLAGE, DASHI STREET, PANYU DISTRICT, GUANGZHOU, China

2. General Description of EUT

EUT Name	:	4G CAMERA	
Model(s) No.		X30, Q203A-G, BP-HSD2241-A-4G-EU-Tuya, BP-HSD2241-A-4G-EN-Tuya, BP-HSD2241-A-4G-US-Tuya	
Model Difference	:	All these models are identical in the same PCB layout and electrical circuit, the only difference is that appearance.	
Product Description	:	Operation Frequency:	LTE Band 2/4/5/12/13
Power Supply	:	USB Input: DC 5V1A or DC 3.7V 18000mAh by rechargeable Li-ion battery	
Software Version	:	V4.1.11.0	
Hardware Version	:	V313P	
Remark: The antenna gain provided by the applicant, the adapter and verified for the RF conduction test and adapter provided by TOBY test lab.			

Note: More test information about the EUT please refer the RF Test Report.

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MPE Calculations

1. **Antenna Gain:**

LTE Dipole Antenna: LTE Band 2: 3.85dBi
LTE Band 4: 3.8dBi
LTE Band 5: 0.85dBi
LTE Band 12: 0.85dBi
LTE Band 13: 0.85dBi

2. **EUT Operation Condition:**

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

3. **Exposure Evaluation:**

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S=(PG)/4\pi R^2$$

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

4. Test Result:

Mode	N_{TX}	Conducted Power(max) (dBm)	Turn-up Power (dB)	Max tune up power (dBm) [P]	ANT Gain (dBi) [G]	Distance (cm) [R]	Power Density (mW/ cm^2) [S]	limit (mW/cm2)
LTE Band 2	1	24.02	24±1	25	3.85	20	0.1527	1
LTE Band 4	1	23.07	23±1	24	3.85	20	0.1213	1
LTE Band 5	1	24.42	24±1	25	0.85	20	0.0765	0.55
LTE Band 12	1	23.98	24±1	25	0.85	20	0.0765	0.47
LTE Band 13	1	24.44	24±1	25	0.85	20	0.0765	0.52
Note: RF Output power specifies that Maximum Conducted Peak Output Power.								

5. Conclusion:

As specified in Table 1B of 47 CFR 1.1310- Limits for Maximum Permissible Exposure (MPE),

Limits for General Population/ Uncontrolled Exposure

Frequency Range (MHz)	Power density (mW/ cm^2)
300-1,500	F/1500
1,500-100,000	1.0

For LTE

MPE limit S: $1mW/ cm^2$

The MPE is calculated as **0.1527** ***< limit 1mW / cm²***. So, RF exposure limit warning or SAR test are not required.

The EUT will only be used with a separation of 20cm or greater between the antenna and nearby persons and can therefore be considered a mobile transmitter per 47 CFR2.1091 (b).

The RF Exposure Information page from the manual is included here for reference.

Note

For a more detailed features description, please refer to the RF Test Report.

6. Conclusion:

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

-----END OF REPORT-----