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## RF EXPOSURE EVALUATION

<b>Applicant</b>	Pittasoft Co.,Ltd.
<b>Applicant Address</b>	A 4th floor, ABN Tower, 331, Pangyo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea
<b>FCC ID</b>	YCK-ELITE8
<b>Certification Number ISED</b>	23402-ELITE8
<b>Product Description</b>	Car Dashcam
<b>Basic model (HVIN)</b>	ELITE8-2CH



### Standard Requirement [FCC]

The following FCC Rule Parts and procedures are applicable :  
Part 1.1310 Radiofrequency radiation exposure limits

Table 1 below sets forth limits for Maximum Permissible Exposure (MPE) to radiofrequency electromagnetic fields.

*Table 1—Limits for Maximum Permissible Exposure (MPE)*

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposure</b>				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f <sup>2</sup>	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f <sup>2</sup>	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			<u>1.0</u>	30

*f = frequency in MHz*

*\* = Plane-wave equivalent power density*



### **Standard Requirement [ISED]**

#### RSS-102(Issue 6) 6.6 Field reference level exposure exemption limits – RF Exposure Evaluation

Field reference level (FRL) exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm (i.e. mobile devices), except when the device operates as follows:

- below 20 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 1W (adjusted for tune-up tolerance);
- at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than  $4.49/f^{0.5}$ W (adjusted for tune-up tolerance), where  $f$  is in MHz;
- at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance);
- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than  $1.31 \times 10^{-2} f^{0.6834}$ W (adjusted for tune-up tolerance), where  $f$  is in MHz;
- at or above 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 5 W (adjusted for tune-up tolerance).

In these cases, the information contained in the RF exposure technical brief may be limited to information that demonstrates how the EIRP was derived.

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### MPE calculation[FCC]

$$S = \text{EIRP} / (4\pi R^2)$$

Where

S : Power density (mW/cm<sup>2</sup> or W/m<sup>2</sup>)

EIRP : P + T + G (dBm)

P : Maximum transmitter power (dBm)

G : Antenna gain (dBi)

R : distance to the centre of radiation of the antenna

T : Power tolerance (dB)

**Safety distance(R) : 20 cm or 0.2 m**

Mode	Frequency [MHz]	Conducted Output power [dBm]	Antenna Gain [dBi]	Power tolerance [dB]	Power density [mW/cm <sup>2</sup> ]	Limit [mW/cm <sup>2</sup> ]
Bluetooth LE 1M	2 480	5.58	0.02	2	0.001	1
WLAN 2.4 GHz	2 462	16.23	0.02	2	0.013	1
WLAN 5 GHz	5 745	7.26	1.73	2	0.002	1

### Conclusion

This confirms compliance to the required Radio frequency radiation exposure limit.



### RF exposure evaluation[ISED]

EIRP : P + G (dBm)

P : Maximum transmitter power (dBm)

G : Antenna gain (dBi)

Limit :  $1.31 \times 10^{-2} \times f^{0.6834} W$

Mode	Frequency [MHz]	Conducted Output power [dBm]	Antenna Gain [dBi]	Power tolerance [dB]	EIRP [dBm]	EIRP [W]	Limit [W]
Bluetooth LE 1M	2 480	5.58	0.02	2	7.6	0.01	2.736
WLAN 2.4 GHz	2 462	16.23	0.02	2	18.25	0.07	2.722
WLAN 5 GHz	5 745	7.26	1.73	2	10.99	0.01	4.857

### Conclusion

This confirms compliance to the required Radio frequency radiation exposure limit.

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