

RF Exposure Evaluation Report

Product : 318MHz Transmitter
Trade mark : N/A
Model/Type reference : HB-318
Serial Number : S/N
Report Number : EED32P82012102
FCC ID : KUTHB318
Date of Issue : Mar. 25, 2024
Test Standards : 47 CFR Part 1.1307
47 CFR Part 1.1310
KDB 447498 D04 Interim General RF
Exposure Guidance v01
Test result : PASS

Prepared for:

Capital Prospect Ltd.

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Prepared by:

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Mar. 25, 2024



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2 Version

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4 General Information

4.1 Client Information

Applicant:	Capital Prospect Ltd.
Address of Applicant:	Rm 03, 13/F, Block B, Veristrong Industrial Building, 34-36 Au Pui Wan Street, Fo Tan, NT, Hong Kong
Manufacturer:	Capital Prospect Ltd.
Address of Manufacturer:	Rm 03, 13/F, Block B, Veristrong Industrial Building, 34-36 Au Pui Wan Street, Fo Tan, NT, Hong Kong

4.2 General Description of EUT

Product Name:	318MHz Transmitter
Model No.(EUT):	HB-318
Trade Mark:	N/A

4.3 Product Specification subjective to this standard

Frequency Range:	318MHz
Modulation type:	OOK
Test Power Grade:	Default
Test Software of EUT:	RF test
Antenna Type:	PCB antenna
Power Supply:	Battery DC 3.0V
Sample Received Date:	Dec. 11, 2023
Sample tested Date:	Dec. 11, 2023 to Dec. 13, 2023
Remark:	Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.

4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Limits

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold P_{th} (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and ERP_{20cm} is per Formula (B.1).

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B.1})$$

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

5.1.2 Test Procedure

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

5.1.3 EUT RF Exposure Evaluation

For 318MHz:

Frequency (MHz)	Field strength of the fundamental signal (dBuV/m@3m)	ERP (dBm)	ERP (mW)	Limit (mW)	Result
318	74.82	-22.56	0.0055	≤5.7162	PASS

Note:

- ① EIRP=conducted power+antenna gain;
- ② ERP=EIRP-2.15;
- ③ EIRP(dBm) = Field strength of the fundamental signal(dBuV/m@3m) – 95.23;
- ④ ERP(mW) = $10^{(ERP (dBm)/10)}$;
- ⑤ The estimation distance is 0.5cm;
- ⑥ The test data please refer to the report of EED32P82012101.

Only the worst case data was recorded in the report.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

*** End of Report ***