

RF Exposure Evaluation Report

Product : Trail Camera
Trade mark : BROWNING
Model/Type reference : BTC-PSM, BTC-PSM-IF
Serial Number : N/A
Report Number : EED32N80406802
FCC ID : 2ALGTBTC-PSM
Date of Issue : Jul. 15, 2021
Test Standards : 47 CFR Part 1.1307
47 CFR Part 2.1091
KDB447498D01v06
Test result : PASS

Prepared for:

Prometheus Group LLC

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Jul. 15, 2021

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2 Version

Version No.	Date	Description
00	Jul. 15, 2021	Original

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4 General Information

4.1 Client Information

Applicant:	Prometheus Group LLC
Address of Applicant:	P.O. Box 130100 Birmingham, Alabama 35213-0100 USA
Manufacturer:	Hooray Innovation Limited
Address of Manufacturer:	Flat 3, 15/F, Wah Yiu Industrial Building, 30-32 Au Pui Wan Street, Shatin, HK.
Factory:	Hooray Innovation Limited
Address of Factory:	Flat 3, 15/F, Wah Yiu Industrial Building, 30-32 Au Pui Wan Street, Shatin, HK.

4.2 General Description of EUT

Product Name:	Trail Camera
Model No. (EUT):	BTC-PSM
Add Model No.:	BTC-PSM-IF
Trade Mark:	BROWNING
EUT Supports Radios application	LTE Band 2: Tx: 1850-1910MHz, Rx: 1930-1990MHz LTE Band 4: Tx: 1710-1755 MHz, Rx: 2110-2155 MHz LTE Band 12: Tx: 699-716 MHz, Rx: 729-746 MHz LTE Band 13: Tx: 777-787 MHz, Rx: 746-756 MHz

4.3 Product Specification subjective to this standard

Frequency Range:	LTE Band 2: Tx: 1850 MHz – 1910MHz, Rx: 1930 MHz – 1990MHz LTE Band 4: Tx: 1710 MHz – 1755 MHz, Rx: 2110 MHz – 2155 MHz LTE Band 12: TX: 699 MHz to 716 MHz RX: 729 MHz to 746 MHz LTE Band 13: Tx: 777 MHz – 787 MHz, Rx: 746 MHz – 756 MHz		
Modulation Type:	QPSK, 16QAM		
Test Power Grade:	Default		
Test Software of EUT:	Default		
Antenna Type:	Dipole Antenna		
Antenna Gain:	4..2dBi		
Maximum tune up power	LTE Band 2:	22.00 dBm	(158.489 mW)
	LTE Band 4:	22.00 dBm	(158.489 mW)
	LTE Band 12:	22.00 dBm	(158.489 mW)
	LTE Band 13:	22.00 dBm	(158.489 mW)
Power Supply:	Battery	AA 1.5V*8	
Sample Received Date:	Jun. 15, 2021		
Sample tested Date:	Jun. 15, 2021 to Jul. 07, 2021		
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. Model No.: BTC-PSM. BTC-PSM-IF			

Only the model BTC-PSM was tested, BTC-PSM compared with BTC-PSM-IF, all RF parts of the product, Their electrical circuit design, layout, components used and internal wiring are identical, except only the model name, IR LED illumination board, IR LED component and the plastic lens at the IR illumination area are different, specific use models see the table below:

BTC-PSM is equipped with 850nm IR LEDs for illumination

BTC-PSM-IF is equipped with 940nm IR LEDs for illumination

The certified module ID is FCC ID: QIPEXS62-W, and report numbers of this certified module are 191019009RFC-1 and RF exposure analysis dated on Dec/21/2019.

This certified module will be integrated into a host that is a hunting camera. Therefore, it is the same mobile condition as the original filling.

In this report, this certified module is same as the original filling. We have verified the power and test for new radiated emission/exposure evaluation to demonstrate full compliance.

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 RF Exposure Evaluation

5.1 RF Exposure Compliance Requirement

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{377}$

Where E = Field strength in Volts / meter

P = Power in Watts

G = Numeric antenna gain

d = Distance in meters

S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377 d^2}$$

Changing to units of mW and cm, using:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$

$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \quad \text{Equation 1}$$

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

5.2 Maximum Permissible Exposure

Substituting the MPE safe distance using $d = 20$ cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

LTE Band 2:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
18900	1880	158.489	2.63	20	0.0829	4.526

LTE Band 4:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
19957	1710.7	158.489	2.63	20	0.0829	4.243

LTE Band 12:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
23165	714.5	158.489	2.63	20	0.0829	2.336

LTE Band 13:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
23255	784.5	158.489	2.63	20	0.0829	2.491

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32N80406801 for EUT external and internal photos.

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 ***