TEST REPORT

Product	:	Trail Camera
Trade mark	:	BROWNING
Model/Type reference	:	BTC-PSM, BTC-PSM-IF
Serial Number	:	N/A
Report Number	:	EED32N80406801
FCC ID	:	2ALGTBTC-PSM
Date of Issue	:	Jul. 15, 2021
Test Standards	:	47 CFR Part 24 Subpart E 47 CFR Part 27 Subpart L
Test result	:	PASS

Prepared for:

Prometheus Group LLC
P.O. Box 130100 Birmingham, Alabama 35213-0100 USA

Prepared by:

Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District,
Shenzhen, Guangdong, China
TEL: +86-755-3368 3668
FAX: +86-755-3368 3385

Compiled by: Tom Chen — Tom Chen

Reviewed by: Aaron Ma — Aaron Ma

Approved by: David Wang — David Wang

Date: Jul. 15, 2021

Check No.:2433270521

CENTRE TESTING INTERNATIONAL GROUP CO.,LTD. CTI Report Seal

2 Version

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

3 Test Summary

Test Item	Test Requirement	Result
47 CFR Part 24 Subpart E		
RF output power	Part 2.1046/Part 24.232	Note 1
99% &26dB Occupied Bandwidth	Part 2.1049	Note 1
Peak to average power ratio	Part 24.232	Note 1
Spurious emissions	Part 2.1053/Part 24.238	PASS
Spurious emissions at antenna terminals	Part 24.238	Note 1
Frequency stability	Part 2.1055/Part 24.235	Note 1
47 CFR Part 27 Subpart L		
RF output power	Part 2.1046/Part 27.50	Note 1
99% &26dB Occupied Bandwidth	Part 2.1049	Note 1
Peak to average power ratio	Part 24.232	Note 1
Spurious emissions	Part 2.1053/Part 27.53	PASS
Spurious emissions at antenna terminals	Part 27.53	Note 1
Frequency stability	Part 2.1055/Part 25.54	Note 1

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.

Tx: In this whole report Tx (or tx) means Transmitter.

Rx: In this whole report Rx (or rx) means Receiver.

RF: In this whole report RF means Radiated Frequency.

CH: In this whole report CH means channel.

Volt: In this whole report Volt means Voltage.

Temp: In this whole report Temp means Temperature.

Humid: In this whole report Humid means humidity.

Press: In this whole report Press means Pressure.

N/A: In this whole report not application

Note 1: Refer to FCC ID: QIPEXS62-W report.

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

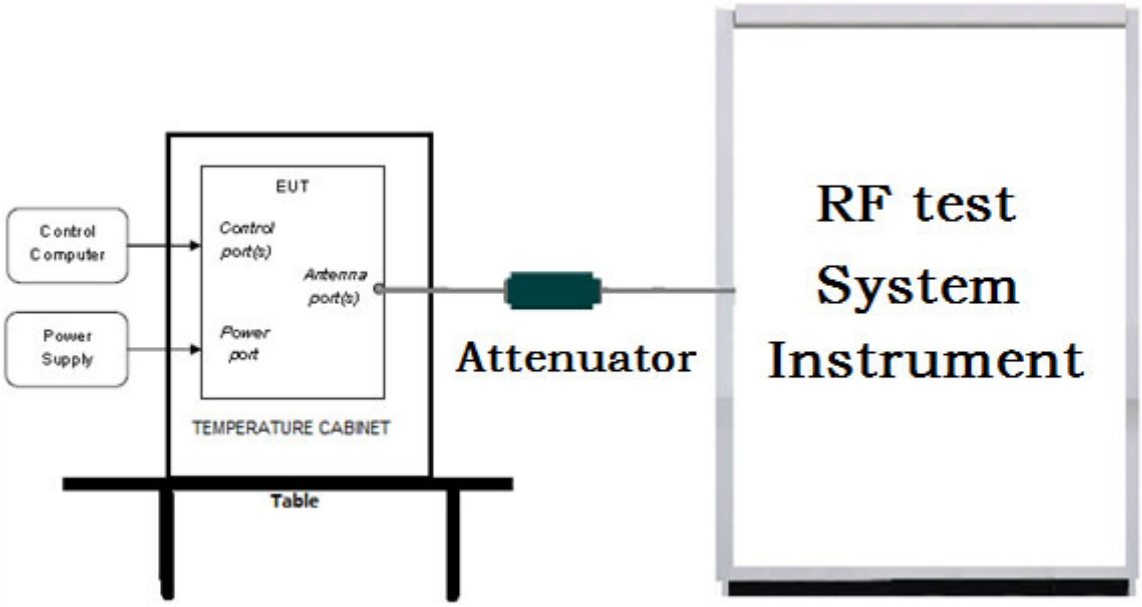
BTC-PSM-IF is equipped with 940nm IR LEDs for illumination

4 Content

5 Test Requirement

5.1 Test setup

5.1.1 For Conducted test setup



5.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

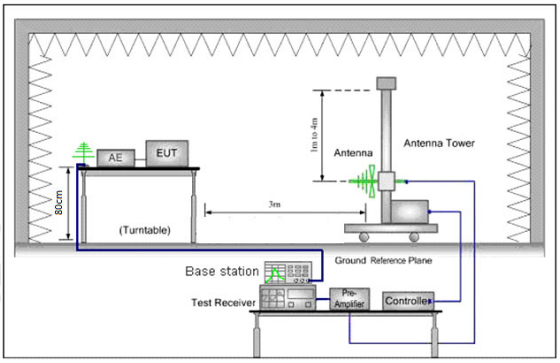


Figure 1.30MHz to 1GHz

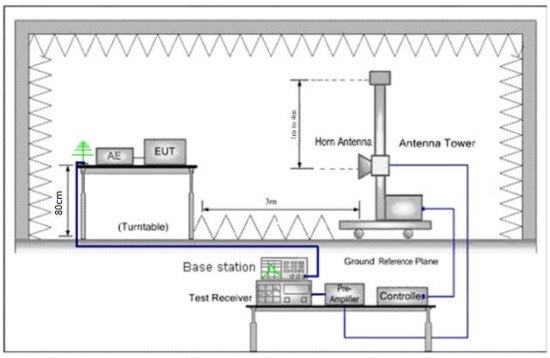


Figure 2. above 1GHz

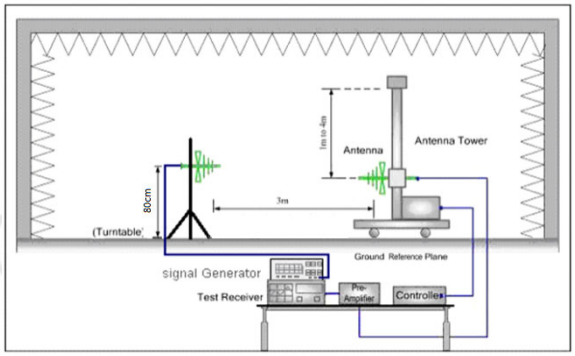


Figure 1. 30MHz to 1GHz

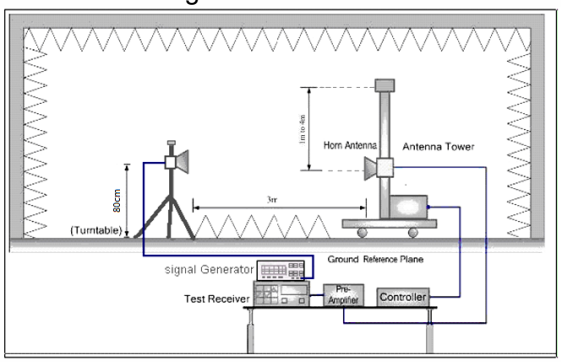


Figure 2. above 1GHz

5.2 Test Environment

Operating Environment:	
Temperature:	24.0 °C
Humidity:	56 % RH
Atmospheric Pressure:	1010mbar

6 General Information

6.1 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.

6.2 General Description of EUT

Product Name:	Trail Camera
Model No. (EUT):	BTC-PSM
Add Model No.:	BTC-PSM-IF
Trade Mark:	BROWNING
Frequency Band:	LTE Band 2 TX:1850~1910MHz RX:1930~1990MHz LTE Band 4 TX:1710~1755MHz RX:2110~2155MHz LTE Band 12 TX:699~716MHz RX:729~746MHz LTE Band 13 TX: 777~787MHz RX:746~756MHz
Modulation Type:	LTE: QPSK,16QAM
Sample Type:	Fix Location
Antenna Type:	Dipole Antenna
Antenna Gain:	4..2dBi
Power Supply:	8X1.5V Batteries; size AA
Test Voltage:	DC 12V
Sample Received Date:	Jun. 15, 2021
Sample tested Date:	Jun. 15, 2021 to Jul. 07, 2021

6.3 Description of Support Units

The EUT has been tested independently.

6.4 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

6.5 Deviation from Standards

None.

6.6 Abnormalities from Standard Conditions

None.

6.7 Other Information Requested by the Customer

None.

6.8 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9×10^{-8}
2	RF power, conducted	0.46dB (30MHz-1GHz)
		0.55dB (1GHz-18GHz)
3	Radiated Spurious emission test	4.3dB (30MHz-1GHz)
		4.5dB (1GHz-12.75GHz)
4	Conduction emission	3.5dB (9kHz to 150kHz)
		3.1dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	3.8%
7	DC power voltages	0.026%

7 Equipment List

3M full-anechoic Chamber					
Equipment	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
RSE Automatic test software	JS Tonscend	JS36-RSE	10166	---	---
Receiver	Keysight	N9038A	MY57290136	03-04-2021	03-03-2022
Spectrum Analyzer	Keysight	N9020B	MY57111112	03-04-2021	03-03-2022
Spectrum Analyzer	Keysight	N9030B	MY57140871	03-04-2021	03-03-2022
TRILOG Broadband Antenna	Schwarzbeck	VULB 9163	9163-1148	04-28-2021	04-27-2024
Horn Antenna	Schwarzbeck	BBHA 9170	9170-832	04-15-2021	04-14-2024
Communication Antenna	Schwarzbeck	CLSA 0110L	1014	---	---
Horn Antenna	ETS-LINDGREN	3117	57407	07-10-2018	07-09-2021
Preamplifier	EMCI	EMC184055SE	980597	05-20-2021	05-19-2022
Communication test set	R&S	CMW500	102898	12-31-2020	12-30-2021
Preamplifier	EMCI	EMC001330	980563	04-15-2021	04-14-2022
Preamplifier	JS Tonscend	980380	EMC051845 SE	12-31-2020	12-30-2021
Temperature/ Humidity Indicator	biaozhi	GM1360	EE1186631	04-16-2021	04-15-2022
Fully Anechoic Chamber	TDK	FAC-3	---	01-09-2021	01-08-2024
Cable line	Times	SFT205-NMSM-2.50M	394812-0001	---	---
Cable line	Times	SFT205-NMSM-2.50M	394812-0002	---	---
Cable line	Times	SFT205-NMSM-2.50M	394812-0003	---	---
Cable line	Times	SFT205-NMSM-2.50M	393495-0001	---	---
Cable line	Times	EMC104-NMNM-1000	SN160710	---	---
Cable line	Times	SFT205-NMSM-3.00M	394813-0001	---	---
Cable line	Times	SFT205-NMNM-1.50M	381964-0001	---	---
Cable line	Times	SFT205-NMSM-7.00M	394815-0001	---	---

8 Field strength of spurious radiation

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
0.009MHz-30MHz	Peak	10kHz	30kHz	Peak
30MHz-1GHz	Peak	120kHz	300kHz	Peak
Above 1GHz	Peak	1MHz	3MHz	Peak

Measurement Procedure:

1. Scan up to 10th harmonic, find the maximum radiation frequency to measure.
2. The technique used to find the Spurious Emissions of the transmitter was the antenna substitution method. Substitution method was performed to determine the actual ERP/EIRP emission levels of the EUT.

Test procedure as below:

1) The EUT was powered ON and placed on a 0.8m hight table at a 3 meter fully Anechoic Chamber. The antenna of the transmitter was extended to its maximum length. modulation mode and the measuring receiver shall be tuned to the frequency of the transmitter under test.
2) The EUT was set 3 meters(above 18GHz the distance is 1 meter) away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3) The disturbance of the transmitter was maximized on the test receiver display by raising and lowering from 1m to 4m the receive antenna and by rotating through 360° the turntable. After the fundamental emission was maximized, a field strength measurement was made.
4) Steps 1) to 3) were performed with the EUT and the receive antenna in both vertical and horizontal polarization.
5) The transmitter was then removed and replaced with another antenna. The center of the antenna was approximately at the same location as the center of the transmitter.
6) A signal at the disturbance was fed to the substitution antenna by means of a non-radiating cable. With both the substitution and the receive antennas horizontally polarized, the receive antenna was raised and lowered to obtain a maximum reading at the test receiver. The level of the signal generator was adjusted until the measured field strength level in step 3) is obtained for this set of conditions.
7) The output power into the substitution antenna was then measured.
8) Steps 6) and 7)were repeated with both antennas polarized.
9) Calculate power in dBm by the following formula:
   ERP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBd)
   EIRP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBi)
   EIRP=ERP+2.15dB
   where:
   Pg is the generator output power into the substitution antenna.
10) Test the EUT in the lowest channel, the middle channel the Highest channel
11) The radiation measurements are performed in X, Y, Z axis positioning for EUT operation mode, And found the X axis positioning which it is worse case.
12) Repeat above procedures until all frequencies measured was complete.

Limit: Attenuated at least 43+10log(P)

Measurement Data

Remark: Only the worst case was recorded in the report.

Mode:	LTE		
Band:	Band 2	Channel:	18900
Remark:			

Suspected List								
NO.	Freq. [MHz]	Height [cm]	Azimuth [deg]	Level [dBm]	Limit [dBm]	Margin [dB]	Result	Polarity
1	99.4659	150	80	-75.58	-13.00	62.58	PASS	Horizontal
2	270.0260	150	13	-72.55	-13.00	59.55	PASS	Horizontal
3	552.9346	150	156	-75.33	-13.00	62.33	PASS	Horizontal
4	2414.3414	150	360	-45.61	-13.00	32.61	PASS	Horizontal
5	7667.4834	150	347	-50.96	-13.00	37.96	PASS	Horizontal
6	17602.4801	150	227	-42.92	-13.00	29.92	PASS	Horizontal
7	120.0340	150	3	-66.01	-13.00	53.01	PASS	Vertical
8	160.0060	150	3	-62.89	-13.00	49.89	PASS	Vertical
9	739.2118	150	3	-70.00	-13.00	57.00	PASS	Vertical
10	2556.5557	150	110	-45.34	-13.00	32.34	PASS	Vertical
11	7401.2201	150	301	-51.24	-13.00	38.24	PASS	Vertical
12	14350.3175	150	32	-44.01	-13.00	31.01	PASS	Vertical

Mode:	LTE		
Band:	Band 4	Channel:	20175
Remark:			

Suspected List								
NO.	Freq. [MHz]	Height [cm]	Azimuth [deg]	Level [dBm]	Limit [dBm]	Margin [dB]	Result	Polarity
1	139.8260	150	324	-74.57	-13.00	61.57	PASS	Horizontal
2	270.0260	150	256	-72.11	-13.00	59.11	PASS	Horizontal
3	731.8384	150	3	-72.84	-13.00	59.84	PASS	Horizontal
4	2687.3687	150	93	-45.77	-13.00	32.77	PASS	Horizontal
5	9715.0858	150	237	-47.71	-13.00	34.71	PASS	Horizontal
6	14363.0682	150	256	-43.35	-13.00	30.35	PASS	Horizontal
7	120.0340	150	3	-64.71	-13.00	51.71	PASS	Vertical
8	160.0060	150	3	-64.51	-13.00	51.51	PASS	Vertical
9	726.2112	150	3	-58.95	-13.00	45.95	PASS	Vertical
10	2704.1704	150	90	-45.58	-13.00	32.58	PASS	Vertical
11	5031.8516	150	110	-53.26	-13.00	40.26	PASS	Vertical
12	14404.3202	150	64	-42.64	-13.00	29.64	PASS	Vertical

Mode:	LTE		
Band:	Band 12	Channel:	18900
Remark:			

Suspected List								
NO.	Freq. [MHz]	Height [cm]	Azimuth [deg]	Level [dBm]	Limit [dBm]	Margin [dB]	Result	Polarity
1	62.4045	150	13	-74.90	-13.00	61.90	PASS	Horizontal
2	120.0340	150	3	-73.65	-13.00	60.65	PASS	Horizontal
3	270.0260	150	13	-72.08	-13.00	59.08	PASS	Horizontal
4	5022.8511	150	192	-53.93	-13.00	40.93	PASS	Horizontal
5	9724.0862	150	118	-47.85	-13.00	34.85	PASS	Horizontal
6	16501.4251	150	90	-42.63	-13.00	29.63	PASS	Horizontal
7	71.9124	150	3	-72.60	-13.00	59.60	PASS	Vertical
8	160.0060	150	3	-62.51	-13.00	49.51	PASS	Vertical
9	548.4717	150	183	-71.14	-13.00	58.14	PASS	Vertical
10	5058.1029	150	156	-54.06	-13.00	41.06	PASS	Vertical
11	9292.0646	150	257	-48.72	-13.00	35.72	PASS	Vertical
12	14474.0737	150	284	-42.75	-13.00	29.75	PASS	Vertical

Mode:	LTE		
Band:	Band 13	Channel:	20525
Remark:			

Suspected List								
NO.	Freq. [MHz]	Height [cm]	Azimuth [deg]	Level [dBm]	Limit [dBm]	Margin [dB]	Result	Polarity
1	39.8960	150	80	-73.52	-13.00	60.52	PASS	Horizontal
2	137.1094	150	13	-74.92	-13.00	61.92	PASS	Horizontal
3	270.0260	150	360	-72.06	-13.00	59.06	PASS	Horizontal
4	5028.8514	150	301	-53.79	-13.00	40.79	PASS	Horizontal
5	9730.8365	150	13	-47.75	-13.00	34.75	PASS	Horizontal
6	14396.0698	150	107	-43.95	-13.00	30.95	PASS	Horizontal
7	120.0340	150	3	-67.36	-13.00	54.36	PASS	Vertical
8	160.0060	150	3	-63.16	-13.00	50.16	PASS	Vertical
9	284.9670	150	258	-70.34	-13.00	57.34	PASS	Vertical
10	5020.6010	150	310	-53.79	-13.00	40.79	PASS	Vertical
11	11191.9096	150	292	-47.30	-13.00	34.30	PASS	Vertical
12	16498.4249	150	0	-42.43	-13.00	29.43	PASS	Vertical