



FCC ID: P27BC852 Report No.: T190711D16-MF Page 1 / 8 Rev.: 01

#### IEEE C95.1 2005 KDB 447498 D03 47 C.F.R. Part 1, Subpart I, Section 1.1310 47 C.F.R. Part 2, Subpart J, Section 2.1091

# **RF EXPOSURE REPORT**

For

# Wireless Full HD Battery Camera

Model: BC852yxxxxxx (y should be "blank" or "-"; x could be 0 to 9, A to Z, a to z, "blank" or "-", for marketing purpose)

# Trade Name: Sercomm

Issued to

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Issued by

Compliance Certification Services Inc. Wugu Laboratory No.11, Wugong 6th Rd., Wugu Dist., New Taipei City 24891, Taiwan. (R.O.C.) Issue Date: October 3, 2019

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部分複製。

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## **Revision History**

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	September 25, 2019	Initial Issue	ALL	Allison Chen
01	October 3, 2019	See the following note Rev.(01)	P.8	Allison Chen

Rev.(01)

1. Revised max. tune up power values in section 5.



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## 1. TEST RESULT CERTIFICATION

#### We hereby certify that:

The above equipment was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10: 2013 and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules Part 15.207, 15.209, 15.247.

The test results of this report relate only to the tested sample EUT identified in this report.

APPLICABLE STANDARDS					
STANDARD	TEST RESULT				
IEEE C95.1 2005 KDB 447498 D03 47 C.F.R. Part 1, Subpart I, Section 1.1310 47 C.F.R. Part 2, Subpart J, Section 2.1091	No non-compliance noted				
Statements of Conformity					
Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.					

Approved by:

Komil Tson

Kevin Tsai Deputy Manager Compliance Certification Services Inc.

Reporter:

Allison Chen

Allison Chen Report coordinator Compliance Certification Services Inc.



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## 2. LIMIT

According to §15.247(i), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this chapter.



#### 3. EUT SPECIFICATION

EUT	Wireless Full HD Battery Camera						
Model	BC852yxxxxxxx (y should be "blank" or "-"; x could be 0 to 9, A to Z, a to z, "blank" or "-", for marketing purpose)						
Model Discrepancy	All the above models are identical except for the designation of model numbers. The suffix of (y should be "blank" or "-"; x could be 0 to 9, A to Z, a to z, "blank" or "-", for marketing purpose) on model number is just for marketing purpose only.						
Frequency band (Operating)	<ul> <li>Bluetooth: 2402MHz-2480MHz</li> <li>802.11b/g/n HT20: 2412MHz ~ 2462 MHz</li> <li>802.11n HT40: 2422MHz ~ 2452MHz</li> <li>802.11a/n HT20: 5180MHz ~ 5240MHz / 5260MHz ~ 5320MHz / 5500MHz ~ 5700MHz / 5745MHz ~ 5825MHz</li> <li>802.11n HT40: 5190MHz ~ 5230MHz / 5270MHz ~ 5310MHz / 5510MHz ~ 5670MHz / 5755MHz ~ 5795MHz</li> <li>802.11ac VHT80: 5210MHz / 5290MHz / 5530MHz / 5775MHz</li> <li>Others</li> </ul>						
Device category	<ul> <li>Portable (&lt;20cm separation)</li> <li>Mobile (&gt;20cm separation)</li> <li>Others</li> </ul>						
Exposure classification	<ul> <li>Occupational/Controlled exposure (S = 5mW/cm<sup>2</sup>)</li> <li>General Population/Uncontrolled exposure (S=1mW/cm<sup>2</sup>)</li> </ul>						
Antenna Specification	2.4GHz: Antenna Gain : 2.97 dBi (Numeric gain 1.98)						
Maximum average output power	IEEE 802.11b Mode:21.72 dBm(148.594 mW)IEEE 802.11g Mode:20.05 dBm(101.158 mW)IEEE 802.11n HT 20 Mode:19.84 dBm(96.383 mW)						
Maximum tune up power	IEEE 802.11b Mode:23.50 dBm(223.872 mW)IEEE 802.11g Mode:22.00 dBm(158.489 mW)IEEE 802.11n HT 20 Mode:21.00 dBm(125.893 mW)						
Evaluation applied	<ul> <li>MPE Evaluation*</li> <li>SAR Evaluation</li> <li>N/A</li> </ul>						



## 4. TEST RESULTS

#### No non-compliance noted.

**Calculation** 

 $E = \frac{\sqrt{30 \times P \times G}}{d} \quad \& \quad S = \frac{E^2}{377}$ Given 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(mW) = P(W) / 1000 and d(cm) = d(m) / 100

**Yields** 

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

Where d = Distance in cm P = Power in mWG = Numeric antenna gain

 $S = Power density in mW / cm^2$ 

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## 5. 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

 $S = Power density in mW / cm^2$ 

#### IEEE 802.11b mode:

Ch	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)
1	2412	223.872	1.98	20	0.0882	1

#### IEEE 802.11g mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)
6	2437	158.489	1.98	20	0.0624	1

#### IEEE 802.11n HT20 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)
6	2437	125.893	1.98	20	0.0496	1

--End of Report--