

# FCC Part 15C Test Report FCC ID: XHWEDA20S

Product Name:	quadcopter	
Trademark:	N/A	
Model Name :	EDA203, EDA204C.	
Prepared For :	E-matic	
Address :	3435 Ocean Park Blvd # 107 PMB#444 Santa Monica CA 90405 Los Angeles, CA 90405.	
Prepared By :	Shenzhen BCTC Technology Co., Ltd.	
Address :	No.101, Yousong Road, Longhua New District, Shenzhen, China	
Test Date:	Jan. 04 - Jan. 11, 2016	
Date of Report :	Jan. 11, 2016	
Report No.:	BCTC-151216321	



# **VERIFICATION OF COMPLIANCE**

Applicant's name:	E-matic
Address:	3435 Ocean Park Blvd # 107 PMB#444 Santa Monica CA
	90405 Los Angeles, CA 90405.
Manufacture's Name:	
Address:	2231 Colby Ave. L.A., C.A., 90064 U.S.A
Product description	
Product name:	quadconter
Trademark:	N/A
Model Name:	EDA203
Test procedure	FCC Part15.249
Standards	ANSI C63.10-2013
	as been tested by BCTC, and the test results show that the n compliance with the FCC requirements. And it is applicable only n the report.
	ced except in full, without the written approval of BCTC, this vised by BCTC, personal only, and shall be noted in the revision of
rest result	
Testing Engineer :	tric Yang
	(Eric Yang)
Technical Manager :	Sophie w
	(Sophia Lee)
Authorized Signatory:	(Carson. Zhang)
	(Oaison, Zhang)





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#### 1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.249) , Subpart C					
Standard Section	Test Item	Judgment	Remark		
15.207	Conducted Emission	N/A			
15.249	Fundamental &Radiated Spurious Emission Measurement	PASS			
15.249	Bandwidth	PASS			
15.205	Band Edge Emission	PASS			
15.203	Antenna Requirement	PASS			

#### NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

#### 1.1 TEST FACILITY

Shenzhen BCTC Technology Co., Ltd.

Add.: No.101, Yousong Road, Longhua New District, Shenzhen, China

FCC Registration No.:187086

#### 1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $\mathbf{y} \pm \mathbf{U}$ , where expended uncertainty  $\mathbf{U}$  is based on a standard uncertainty multiplied by a coverage factor of  $\mathbf{k=2}$ , providing a level of confidence of approximately 95 %  $^{\circ}$ 

No.	Item	Uncertainty
1	Conducted Emission Test	±1.38dB
2	RF power,conducted	±0.16dB
3	Spurious emissions,conducted	±0.21dB
4	All emissions,radiated(<1G)	±4.68dB
5	All emissions,radiated(>1G)	±4.89dB
6	Temperature	±0.5°C
7	Humidity	±2%



# 2. GENERAL INFORMATION

#### 2.1 GENERAL DESCRIPTION OF EUT

Equipment	quadcopter			
Trade Name	N/A			
Model Name	EDA203			
Serial Model	EDA204C.			
Model Difference	All the same,Only model nan	ne is different.		
Product Description	Operation Frequency: 2402-2475MHz  Modulation Type: GFSK  Number Of Channel 6 CH  Antenna Designation: Please see Note 3.  Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.			
Channel List	Please refer to the Note	2.		
Battery	DC 3V(AAA1.5x2)			
Connecting I/O Port(s)	Please refer to the User's Manual			
hardware version				
Software version				

#### Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.

	Channel List					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	
00	2402	01	2411	02	2433	
03	2460	04	2465	05	2475	

3.

### Table for Filed Antenna

Ant	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	N/A	N/A	Internal Antenna	N/A	0	



#### 2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

For All Mode	Description	Modulation Type	
Mode 1	CH00		
Mode 2	CH02	GFSK	
Mode 3	CH05		
Mode 4	Link mode(conducted emission and Radiated emission)		

#### Note:

- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) Fully-charged battery is used during the test

#### 2.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of FHSS

Frequency	2402 MHz	2433 MHz	2475 MHz
Channel	Low	Middle	High

#### 2.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious Emission Test

E-1 EUT Shenzhen BCTC Technology Co., Ltd.

# 2.5 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	quadcopter	N/A	EDA203	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note

#### Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in <code>"Length\_"</code> column.
- (3) "YES" is means "shielded" "with core"; "NO" is means "unshielded" "without core".



#### 2.6 EQUIPMENTS LIST FOR ALL TEST ITEMS

Conduction Test equipment

Item	Kind of	Manufactu	Type No.	Serial No.	Last	Calibrated	Calibratio
	Equipment	rer	Type No.	Serial No.	calibration	until	n period
1	Test Receiver	R&S	ESCI	1166.5950K 03-101165- ha	2015.06.06	2016.06.05	1 year
2	LISN	R&S	NSLK81 26	812646 6	2015.08.24	2016.08.23	1 year
3	LISN	R&S	NSLK81 26	812648 7	2015.08.24	2016.08.23	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	620026441 7	2015.06.07	2016.06.06	1 year
5	RF cables	R&S	R204	R20X	2015.07.06	2016.07.05	1 year

Radiation test, Band-edge test and 20db bandwith test quipment

Raui	Radiation test, Band-edge test and 200b bandwith test quipment						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibratio n period
1	Spectrum Analyzer	Agilent	E4407B	MY4510804 0	2015.07.06	2016.07.05	1 year
2	Test Receiver	R&S	ESPI	101318	2015.06.07	2016.06.06	1 year
3	Bilog Antenna	R&S	VULB 9168	VULB91 68-438	2015.07.06	2016.07.05	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	620026441 6	2015.06.07	2016.06.06	1 year
5	Spectrum Analyzer	ADVANTEST	R3132	150900201	2015.06.07	2016.06.06	1 year
6	Horn Antenna	R&S	HF906	10027	2015.07.06	2016.07.05	1 year
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2015.07.06	2016.07.05	1 year
8	Amplifier	R&S	BBV9743	9743-01 9	2014.12.22	2015.12.21	1 year
9	Loop Antenna	ARA	PLA-1030/B	1029	2015.06.08	2016.06.07	1 year
10	RF cables	R&S	R203	R20X	2015.07.06	2016.07.05	1 year
11	Antenna connector	Florida RFLa bs	Lab-Fle	RF 01#	2015.07.06	2016.07.05	1 year



#### 3. EMC EMISSION TEST

#### 3.1 CONDUCTED EMISSION MEASUREMENT

## 3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)		Standard	
PREQUENCT (MITZ)	Quasi-peak	Average	Quas -peak	Average	Standard	
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	CISPR	
0.50 -5.0	73.00	60.00	56.00	46.00	CISPR	
5.0 -30.0	73.00	60.00	60.00	50.00	CISPR	

0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	60.00	50.00	FCC

#### Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting	
Attenuation	10 dB	
Start Frequency	0.15 MHz	
Stop Frequency	30 MHz	
IF Bandwidth	9 kHz	



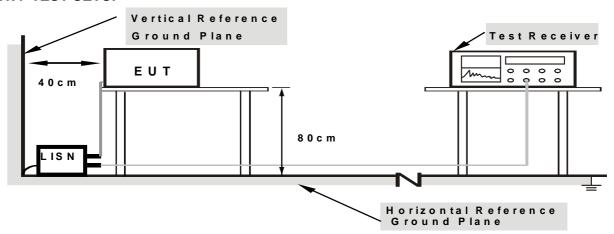
#### 3.1.2 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

#### 3.1.3 DEVIATION FROM TEST STANDARD

No deviation

#### 3.1.4 TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

#### 3.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

NOTE: This EUT is powered by the battery only, this test item is not applicable.



#### 3.2 RADIATED EMISSION MEASUREMENT

#### 3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequencies	Field Strength	Measurement Distance
(MHz)	(micorvolts/meter)	(meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

#### LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class B (dBuV/m) (at 3M)		
PREQUENCT (WITZ)	PEAK	AVERAGE	
Above 1000	74	54	

#### Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

#### FREQUENCY RANGE OF RADIATED MEASUREMENT (For unintentional radiators)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 – 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5 <sup>th</sup> harmonic of the highest frequency or 40 GHz, whichever is lower



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Spectrum Parameter	Setting		
Attenuation	Auto		
Start Frequency	1000 MHz		
Stop Frequency	10th carrier harmonic		
RB / VB (emission in restricted	4 Mile / 4 Mile for Dook 4 Mile / 40He for Average		
band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average		

Receiver Parameter	Setting	
Attenuation	Auto	
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP	
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP	
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP	

#### 3.2.2 TEST PROCEDURE

- a. The measuring distance of at 3 m shall be used for measurements at frequency up to 25GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 and 1.5 meters above the ground at a 3 meter semi-chamber test. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; above 1GHz, the height was 1.5m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.
- g. For the radiated emission test above 1GHz:
  - Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response.

The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane. Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

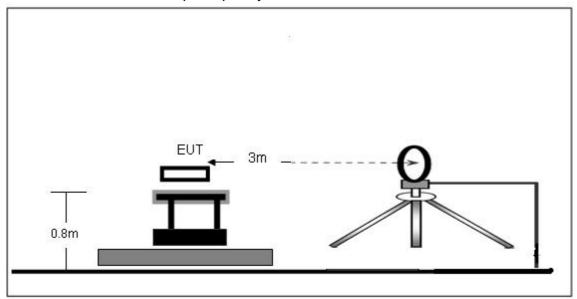
#### 3.2.3 DEVIATION FROM TEST STANDARD

No deviation

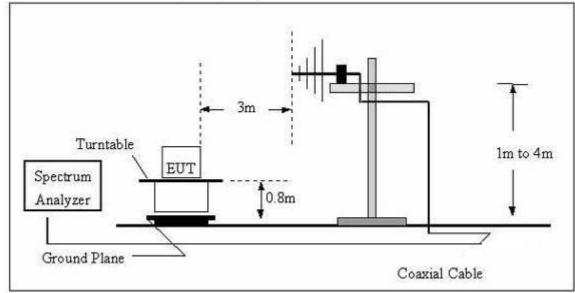


#### 3.2.4 TEST SETUP

(A) Radiated Emission Test-Up Frequency Below 30MHz



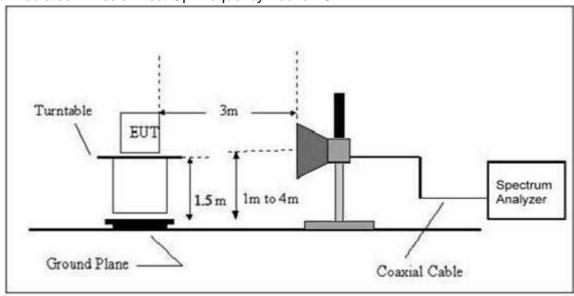
(B) Radiated Emission Test-Up Frequency 30MHz~1GHz





#### Shenzhen BCTC Technology Co., Ltd.

# (C) Radiated Emission Test-Up Frequency Above 1GHz



#### 3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.



#### 3.2.6 TEST RESULTS

Radiated Spurious Emission (Below 30MHz)

EUT:	quadcopter	Model Name :	EDA203
Temperature:	<b>20</b> ℃	Relative Humidity:	48%
Pressure :	1010 hPa	Polarization:	
Test Voltage :	DC 3V		
Test Mode :	Mode 4		

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
				PASS
				PASS

#### NOTE:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor =40 log (specific distance/test distance)(dB);

Limit line = specific limits(dBuv) + distance extrapolation factor.



# Radiated Spurious Emission (Between 30MHz – 1GHz)

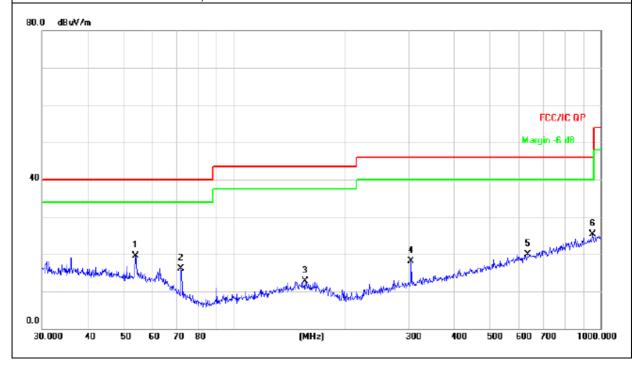
EUT:	quadcopter	Model Name :	EDA203
Temperature:	<b>25</b> ℃	Relative Humidity:	54%
Pressure :	1010 hPa	Polarization :	Horizontal
Test Voltage :	DC 3V		
Test Mode : (Worst)	Mode 4		

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Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
53.8818	30.50	-10.93	19.57	40.00	-20.43	QP
71.8320	31.38	-15.19	16.19	40.00	-23.81	QP
156.4578	25.64	-12.87	12.77	43.50	-30.73	QP
304.6099	30.52	-12.47	18.05	46.00	-27.95	QP
633.9073	25.26	-5.37	19.89	46.00	-26.11	QP
952.0937	25.80	-0.46	25.34	46.00	-20.66	QP

#### Remark:

Factor = Antenna Factor + Cable Loss - Pre-amplifier.
All interfaces was connected, and BT TX mode was link.



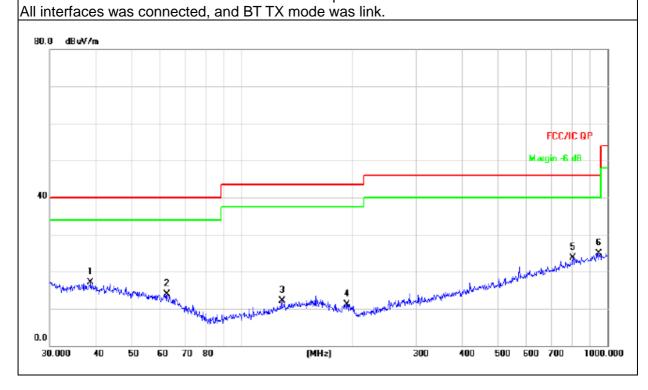


EUT:	quadcopter	Model Name :	EDA203
Temperature:	<b>25</b> ℃	Relative Humidity:	54%
Pressure:	1010 hPa	Polarization:	Vertical
Test Voltage :	DC 3V		
Test Mode : (Worst)	Mode 4		

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Detector Type
38.7518	25.85	-8.79	17.06	40.00	-22.94	QP
62.6507	26.03	-12.05	13.98	40.00	-26.02	QP
129.0146	26.34	-14.17	12.17	43.50	-31.33	QP
194.4534	27.00	-15.86	11.14	43.50	-32.36	QP
804.6028	26.16	-2.47	23.69	46.00	-22.31	QP
948.7610	25.48	-0.48	25.00	46.00	-21.00	QP

#### Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.





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Radiated Spurious Emission ( 1GHz to  $10^{\text{th}}$  harmonics) GFSK

GFSK	Freq.	Receiver Reading	Detector	Polar	Corrected Factor	Emission Level	Limit	Result
	(MHz)	(dBµV)	(PK/QP/Ave)	(H/V)	(dB)	(dBµV/m)	(dBµV/m)	
Lower Channel 2402.000MHz	2402.000	89.58	PK	Н	13.85	103.43	114	Pass
	2402.000	72.35	Ave	Н	13.85	86.2	94	Pass
	4804.500	49.58	PK	Н	19.36	68.94	74	Pass
2402.000MHz	4804.500	28.75	Ave	Н	19.36	48.11	54	Pass
	2402.000	90.62	PK	V	13.85	104.47	114	Pass
	2402.000	71.73	Ave	V	13.85	85.58	94	Pass
	4804.500	48.27	PK	V	19.36	67.63	74	Pass
	4804.500	28.55	Ave	V	19.36	47.91	54	Pass
	2433.000	90.23	PK	Н	13.94	104.17	114	Pass
	2433.000	71.89	Ave	Н	13.94	85.83	94	Pass
	4866.750	48.15	PK	Н	19.43	67.58	74	Pass
Middle Channel	4866.750	28.35	Ave	Н	19.43	47.78	54	Pass
2433.000MHz	2433.000	91.12	PK	V	13.94	105.06	114	Pass
	2433.000	69.65	Ave	V	13.94	83.59	94	Pass
	4866.750	46.99	PK	V	19.43	66.42	74	Pass
	4866.750	27.35	Ave	V	19.43	46.78	54	Pass
	2475.000	90.49	PK	Н	14.02	104.51	114	Pass
	2475.000	74.15	Ave	Н	14.02	88.17	94	Pass
	4950.150	44.76	PK	Н	19.51	64.27	74	Pass
Upper Channel	4950.150	28.23	Ave	Н	19.51	47.74	54	Pass
2475.000MHz	2475.000	91.35	PK	V	14.02	105.37	114	Pass
	2475.000	74.44	Ave	V	14.02	88.46	94	Pass
	4950.150	44.85	PK	V	19.51	64.36	74	Pass
	4950.150	27.63	Ave	V	19.51	47.14	54	Pass

Remark:

Factor = Antenna Factor + Cable Loss - Pre-amplifier.

Emission Level = Meter Reading + Factor

Margin = Emission Level - Limit

Other harmonics emissions are lower than 20dB below the allowable limit.



#### 4. BANDWIDTH TEST

#### 4.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.249) , Subpart C								
Section	Test Item	Frequency Range (MHz)	Result					
15.249	Bandwidth	(20dB bandwidth)	2400-2483.5	PASS				

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> Measurement Bandwidth or Channel Separation
RB	100KHz
VB	≥RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

#### 4.1.1 TEST PROCEDURE

#### 4.1.2 DEVIATION FROM STANDARD

No deviation.

#### 4.1.3 TEST SETUP



#### 4.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,

b. Spectrum Setting : RBW= 100KHz, VBW≥ RBW, Sweep time = Auto.



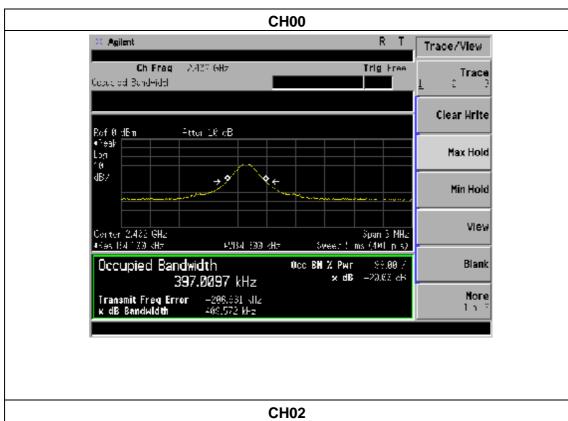
# 4.1.5 TEST RESULTS

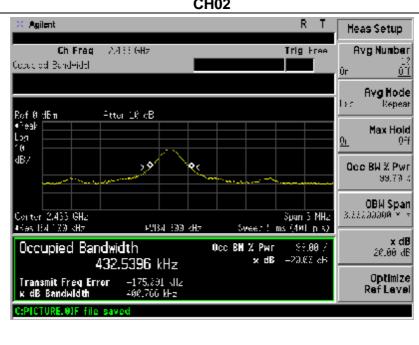
EUT:	quadcopter	Model Name :	EDA203
Temperature :	<b>25</b> ℃	Relative Humidity:	54%
Pressure:	1012 hPa	Test Voltage :	DC 3V
Test Mode :	CH00 /CH02/ CH05		

	Frequency	20dB Bandwidth (kHz)	Result
	2402 MHz	409.572	PASS
GFSK	2433 MHz	400.766	PASS
	2475MHz	405.884	PASS



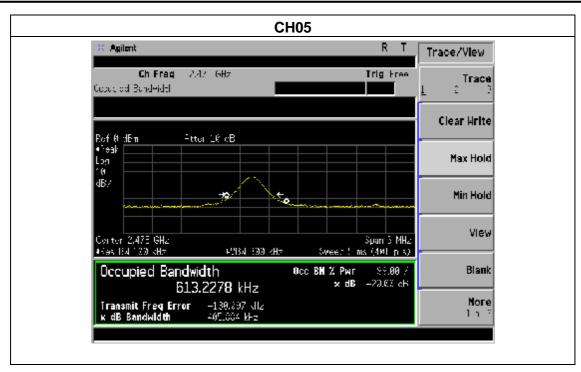
#### **GFSK**







Shenzhen BCTC Technology Co., Ltd.





# 5. 100 KHZ BANDWIDTH OF FREQUENCY BAND EDGE APPLICABLE STANDARD

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

#### **TEST PROCEDURE**

- a. The measuring distance of at 3 m shall be used for measurements at frequency up to 25GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 and 1.5 meters above the ground at a 3 meter semi-chamber test. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; above 1GHz, the height was 1.5m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.
- g. For the radiated emission test above 1GHz:
  - Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response.
  - The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane. Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported



#### **5.1 DEVIATION FROM STANDARD**

No deviation.

#### **5.2 TEST SETUP**

#### 5.3 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

#### **5.4 TEST RESULTS**

EUT:	quadcopter	Model Name :	EDA203
Temperature:	25 ℃	Relative Humidity:	54%
Pressure :	1012 hPa	Test Voltage :	DC 3V
Test Mode :	CH00 / CH05		

	Frequen cy (MHz)	Antenna polarization (H/V)	Frequen cy (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission (dBuV/m)		dge Limit uV/m)	Result Pass
	<2400	Н	2390.00	36.15	13.83	49.98	74.00	54.00	Pass
	<2400	V	2390.00	35.22	13.83	49.05	74.00	54.00	Pass
	<2400	Н	2400.00	35.51	13.85	49.36	74.00	54.00	Pass
GFSK	<2400	V	2400.00	35.76	13.85	49.61	74.00	54.00	Pass
GFSK	>2483.5	Н	2483.50	34.35	14.02	48.37	74.00	54.00	Pass
	>2483.5	V	2483.50	34.43	14.02	48.45	74.00	54.00	Pass
	>2483.5	Н	2485.50	34.14	14.02	48.16	74.00	54.00	Pass
	>2483.5	V	2485.50	34.27	14.02	48.29	74.00	54.00	Pass
	Remark:								
	Factor = Antenna Factor + Cable Loss – Pre-amplifier.								
	Emission L	evel = Meter Rea	iding + Facto	r					

If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.



#### **6. ANTENNA REQUIREMENT**

#### **6.1 STANDARD REQUIREMENT**

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

#### **6.2 EUT ANTENNA**

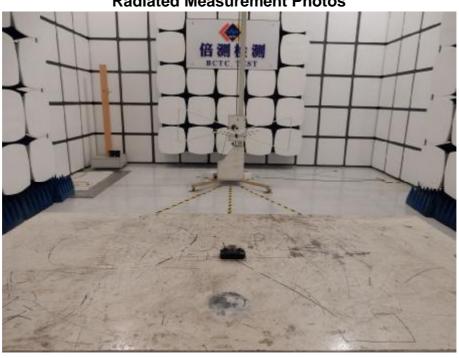
The EUT antenna is Internal Antenna. It complies with the standard requirement.

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# 7. EUT TEST PHOTO







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# 8. EUT PHOTO





**\*\*\*\*\*** END OF REPORT **\*\*\*\***