

## CENTRE OF TESTING SERVICE INTERNATIONAL

**OPERATE ACCORDING TO ISO/IEC 17025** 

# FCC ID TEST REPORT

TEST REPORT NUMBER: CGZ3110921-00779-E



CENTRE OF TESTING SERVICE CO., LTD.

Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China.





	TEST REPORT For FCC ID
	47 CFR PART 15 OCT, 2010
Report Reference No	. CGZ3110921-00779-E
Date of issue	. 22 Sept~29 Sept 2011
Testing Laboratory Name	. CETRE OF TESTING SERVICE CO., LTD.
Address	· Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China.
Testing location/ procedure	. Full application of Harmonised standards ■
	Partial application of Harmonised standards $\square$
	Other standard testing method $\square$
Applicant's name	BELLMATE HOLDINGS LTD.
Address	. UNIT206, STERLING CENTRE, 11 CHEUNG YUE STREET, CHEUNG SHA WAN,KOWLOON, HONG KONG.
Test specification	
Standard	47 CFR PART 15 OCT, 2010; ANSI C63.4-2009
Test Report Form No	. CTSEMC-1.0
TRF Originator	. CENTRE OF TESTING SERVICE CO., LTD
Master TRF	. Dated 2009-01
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Test item description	Wireless Controller
Trade Mark	PRO 1
Manufacturer	BELLMATE HOLDINGS LTD.
Model/Type reference	T631W-2TX
Ratings	DC 3V By Battery or AC 24V
Operating Frequency	. 916MHz/ FSK
Result	. Positive

Tiolex

Supervised by:

Approved by:

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Tom Xiao / Technique principal

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## FCCID-TEST REPORT

**Test Report No. : CGZ3110921-00779-E** 29 Sept 2011 Date of issue

Type / Model	T631W-2TX
EUT	Wireless Controller
Applicant	BELLMATE HOLDINGS LTD.
Address	UNIT206, STERLING CENTRE, 11 CHEUNG YUE STREET, CHEUNG SHA WAN,KOWLOON, HONG KONG.
Telephone	+852-27850364
Fax	+852-27850493
Contact	Mr.Zhao
Manufacturer	BELLMATE HOLDINGS LTD.
Address	UNIT206, STERLING CENTRE, 11 CHEUNG YUE STREET, CHEUNG SHA WAN,KOWLOON, HONG KONG.
Telephone	+852-27850364
Fax	+852-27850493
Contact	Mr.Zhao
Test report holder	BELLMATE HOLDINGS LTD.
Address	UNIT206, STERLING CENTRE, 11 CHEUNG YUE STREET, CHEUNG SHA WAN,KOWLOON, HONG KONG.
Telephone	+852-27850364
Fax	+852-27850493
Contact	Mr.Zhao
L	

## Test Result according to the standards on page 3: Positive

The test report merely corresponds to the test sample.

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## 1.TEST STANDARDS

The tests were performed according to following standards:

- 47 CFR PART 15 OCT, 2010
- ANSI C63.4-2009

### 2.SUMMARY

#### 2.1 GENERAL REMARKS

Date of receipt of test sample	21 Sept 2011
Testing commenced on	22 Sept ~29 Sept 2011
_	
Testing concluded on	29 Sept 2011

### 2.2 FINAL ASSESSMENT

The FCC requirements pertaining to the technical standards and tested operation modes are

□ - **not** fulfilled.

The equipment under test

- fulfils the FCC requirements cited on page 3.
- □ **does not** fulfil the FCC requirements cited on page 3.

## 3.EQUIPMENT UNDER TEST

## 3.1 Power supply system utilised

Power supply voltage : DC3V By Battery or AC 24V

## 3.2 Short description of the Equipment under Test (EUT)

Number of tested samples: 1

Serial number: Prototype

#### 3.3 EUT operation mode

The equipment under test was operated during the measurement under the following conditions:

TX- Y position
TX- Zposition

■ TX- X position

Operation mode 1 DC 3V For Radiated: TX-X Position (916MHz)
Operation mode 2 AC 24V For conducted: TX-X Position (916MHz)

Note: TX -X position of EUT is the worst case, so only these test results be recorded in the test report.

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## 3.4 EUT configuration

## 3.4.1. Description of configuration (EUT)

Description	:	Wireless Controller
Model Number	:	T631W-2TX
Operation frequency	:	916 MHz
Radio Technology	:	FSK
Modulation Technology	:	FSK modulation
Antenna	:	Integral antenna, met requirement of FCC 15.203

### 3.4.2. Tested Supporting System Details

N/A

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## 4.TEST ENVIRONMENT

### 4.1 Address of the test laboratory

Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China

Tel: +86-20-85543113 (32 lines) Fax: +86-20-38780406

### 4.2 Test facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L3394

CENTRE OF TESTING SERVICE CO., LTD has been assessed and proved to be in compliance with CNAS-CL01: 2006 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories.

### IC-Registration No.: 8374A

The 3m Alternate Test Site of CENTRE OF TESTING SERVICE CO., LTD has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 8374A on June 6, 2011.

### FCC-Registration No.: 971995

CENTRE OF TESTING SERVICE CO., LTD, EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration No.791995, July 21, 2009.

#### 4.3 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15~35 ° C
Humidity:	25~75 %
Atmospheric pressure:	86~106 kPa

### 4.4 Definitions of symbols used in this test report

- - The black square indicates that the listed condition, standard or equipment is applicable for this report.
- □ The empty square indicates that the listed condition, standard or equipment is **not** applicable for this report.

### 4.5 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calib ration limits of the equipm ent and facilities. The mea surement uncertainty was calculated for all measurement s listed in this test report acc. to CISPR 16 - 4 "Spe cification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements" and is documented in the CTS quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may re sult in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

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## **4.6 Measurement Uncertainty**

Test Item	Frequency Range	Uncertainty	Note
Conduction disturbance	150kHz~30MHz	±1.22dB	(1)
Power disturbance	30MHz~300MHz	±1.38dB	(1)
Radiation emission (3m)	30MHz~300MHz	±3.14dB	(1)
	300MHz~1000MHz	±3.18dB	(1)

<sup>(1).</sup> This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

## 5. Summary of standards and results

## 5.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION		
Description of Test Item	Standard	Results
Radiated Emission Test	FCC Part 15 C: 15.249 FCC Part 15 : 109 FCC Part 15: 209 ANSI C63.4-2009	PASSED
Conducted Emission Test	47 CFR PART 15 OCT, 2010 FCC Part 15: 207 ANSI C63.4-2009	PASSED
Band Edge Compliance Test	FCC Part 15 C: 15.249 ANSI C63.4-2009	PASSED
20dB bandwith	FCC Part 15 C: 15.249 ANSI C63.4-2009	PASSED
N/A is an abbreviation for Not Applicable.		

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## **6TEST CONDITIONS AND RESULTS**

#### 6.1 Power Line Conducted Emission Test

For test instruments and accessories used see section 6.1.5

#### 6.1.1 Description of the test location

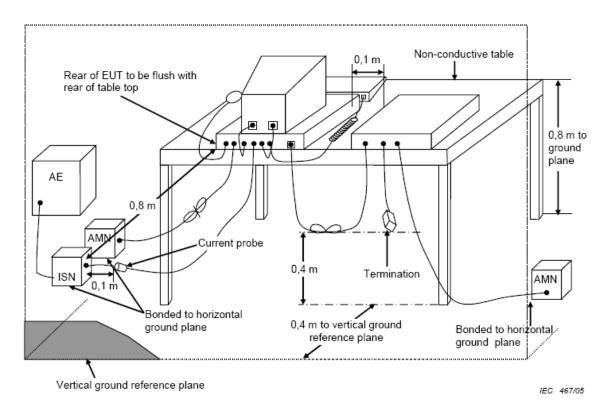
Test location : Shielding Room

### 6.1.2 Description of the test set-up

6.1.2.1 Operating Condition

The EUT is engraving during the test, and the results of the maximum emanation are recorded

#### 6.1.2.2 Block Diagram of Test Setup



### 6.1.3 Limits of disturbance (Class B)

	Maximum RF Line Voltage	
Frequency	Quasi-Peak Level	Average Level
. requesting	dB(μV)	dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Note: (1) The tighter limit shall apply at the edge between two frequency bands.

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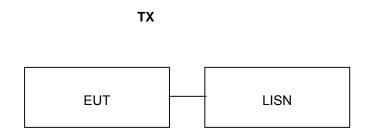
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## 6.1.4.Block Diagram of Test Setup

### 6.1.4.1 Block Diagram of connection between EUT and simulators



(EUT: Wireless Controller)

## 6.1.5. Conduced disturbance Test Equipment

Condu	ucted Disturbance				
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESHS10	842884/012	2010/12
2	Artificial Mains	ROHDE & SCHWARZ	ESH3-Z5	832479/025	2010/12
3	Pulse Limiter	ROHDE & SCHWARZ	ESHSZ2	100301	2010/12
4	EMI Test Software	ROHDE & SCHWARZ	ESK1	N/A	2010/12

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#### 6.1.6 Test result

The requirements are	Fulfilled
Band width	9kHz
Frequency range	0.15kHz - 30 MHz
Min. limit margin	>8.04 dB at 0.15MHz - 30 MHz

**Remarks:** The limits are kept. For detailed results, please see the following page(s).

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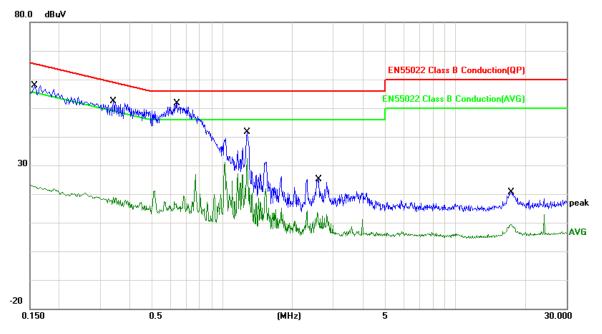




#### 6.1.7Test protocol

Test Mode:	TX-X Position (916MHz)	Result:	■ - passed
Frequency range:	0.15~30MHz		☐ - not passed

EUT	Wireless Controller	
Firm Name	BELLMATE HOLDINGS LTD.	
Operating Condition	AC 24V for TX	
Test Condition	Ambient Temperature: 25°C Humidity: 56%	
Test Date:	22 Sept ~29 Sept 2011	
Operator	Peter	
MODEL NO	T631W-2TX	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1580	9.99	39.60	49.59	65.57	-15.98	QP
2	0.1580	9.99	11.64	21.63	55.57	-33.94	AVG
3	0.3420	9.99	33.55	43.54	59.15	-15.61	QP
4	0.3420	9.99	7.03	17.02	49.15	-32.13	AVG
5	0.6420	10.07	32.17	42.24	56.00	-13.76	QP
6	0.6420	10.07	4.38	14.45	46.00	-31.55	AVG
7	1.2860	10.11	29.02	39.13	56.00	-16.87	QP
8	1.2860	10.11	18.79	28.90	46.00	-17.10	AVG
9	2.5980	10.05	5.68	15.73	56.00	-40.27	QP
10	2.5980	10.05	-0.45	9.60	46.00	-36.40	AVG
11	17.3860	10.20	4.26	14.46	60.00	-45.54	QP
12	17.3860	10.20	-1.78	8.42	50.00	-41.58	AVG

Note:Level=Reading+Facytor. Margin= Level -Limit.

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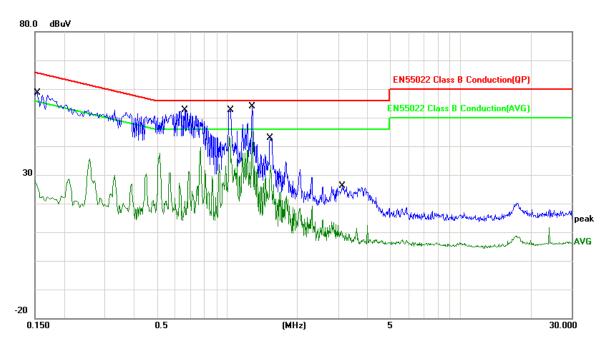
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Test Mode: TX-X Position (916MHz) Result: ■ - passed □ - not passed



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1539	9.99	40.47	50.46	65.78	-15.32	QP
2	0.1539	9.99	14.99	24.98	55.78	-30.80	AVG
3	0.6580	10.08	33.15	43.23	56.00	-12.77	QP
4	0.6580	10.08	9.60	19.68	46.00	-26.32	AVG
5	1.0420	10.12	30.31	40.43	56.00	-15.57	QP
6	1.0420	10.12	23.46	33.58	46.00	-12.42	AVG
7	1.2860	10.11	41.64	51.75	56.00	-4.25	QP
8	1.2860	10.11	31.97	42.08	46.00	-3.92	AVG
9	1.5339	10.10	29.91	40.01	56.00	-15.99	QP
10	1.5339	10.10	19.37	29.47	46.00	-16.53	AVG
11	3.1099	10.03	6.17	16.20	56.00	-39.80	QP
12	3.1099	10.03	-1.14	8.89	46.00	-37.11	AVG

Note:Level=Reading+Facytor. Margin= Level -Limit.

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## 7. Radiated disturbance (electric field)

## 7.1.Test Equipment

Radia	Radiated disturbance (electric field)					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100868	2010/12	
2	Biconical Antenna	ROHDE & SCHWARZ	HK116	100221	2010/12	
3	Log per Antenna	ROHDE & SCHWARZ	HL223	100226	2010/12	
4	Log per Antenna	ROHDE & SCHWARZ	HL050	100186	2010/12	
5	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2010/12	
6	Loop Antenna	A.R.A	PLA-1030/B	1030	2010/12	

## 7.2.Block Diagram of Test Setup

6.2.1 Block Diagram of connection between EUT and simulators

EUT

(EUT: Wireless Controller)

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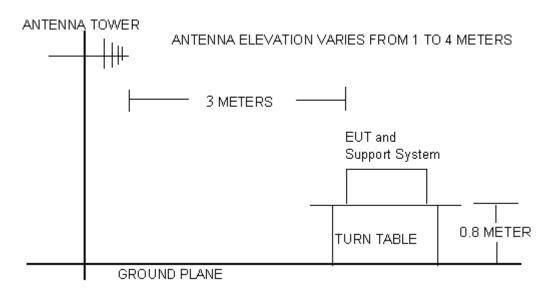
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### 7.2.2 Anechoic Chamber Setup Diagram



### 7.3. Radiated Emission Limit:

## Standard:FCC 15.249 ,FCC 15.109 FCC 15.209.

Except as provided in paragraph (a) of this section, the field strength of em issions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental Frequency (MHz)	Field Strength of Fundamental (mV/m)	Field Strength of Harmonics (μV/m)
902-928	50	500
2400-2483.5	50	500
5725-5875	50	500
24000-24250	250	2500

Fundamental Frequency (MHz)	Field Strength of Fundamental (mV/m)	Field Strength of Harmonics (μV/m)
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

Remark: (1) Emission level  $dB\mu V = 20 log Emission level <math>\mu V/m$ 

- (2) The smaller limit shall apply at the cross point between two frequency bands.
- (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

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#### 7.4.Test Procedure

The EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2009on radiated emission Test.

The frequency range from 30MHz to 1000MHz and above 1GHz. is investigated. Please see the following pages.

All measurements for radiated emissions within the restricted bands were performed using a Quasi-Peak detector with 120kHz RBW below 1GHz and a Peak and Average detector with 1MHz RBW above 1GHz,

All measurements for radiated emissions within the restricted bands were performed using a Quasi-Peak detector with 300kHz VBW below 1GHz and a Peak detector with 1MHz VBW above 1GHz, A average detector with 10Hz VBW above 1GHz

Pretest x, y, z position of EUT, final, select the worst case x position test and record the test results in the report.

The test modes (TX Mode) is tested in Anechoic Chamber and all the scanning waveforms are reported on section 7.5

#### 7.5. Radiated Emission Test Results

#### PASSED.

The frequency range from 9KHz~30MHz,30MHz to 230MHz, 230MHz to 1000MHz and above 1GHz. is investigated.

Please see the following pages.

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Test Mode: TX –X Position Mode 916MHz Result: □ - passed □ - not passed

No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	2.7380	18.77	10.72	29.49	49.5	-20.01	QP
2	26.6460	21.43	7.37	28.80	49.5	-20.70	QP

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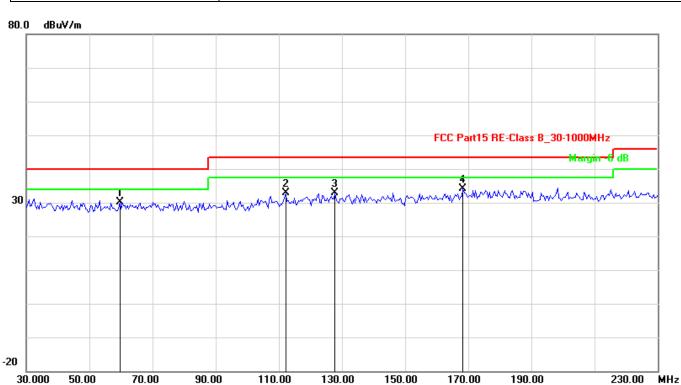
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Channel:	TX –X Position Mode 916MHz	Result:	■ - passed
Test point:	Horizontal		□ - not passed
Frequency range:	30MHz~1000MHz		

EUT	Wireless Controller	
Firm Name	BELLMATE HOLDINGS LTD.	
Operating Condition	DC 3V for TX	
Test Condition	Ambient Temperature: 25°C Humidity: 56%	
Test distance	3 Meter	
Test Date:	22 Sept ~29 Sept 2011	
Operator	Peter	
MODEL NO	T631W-2TX	



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	59.6593	5.35	24.88	30.23	40.00	-9.77	QP
2	112.1643	5.91	27.03	32.94	43.50	-10.56	QP
3	127.7956	6.58	26.21	32.79	43.50	-10.71	QP
4	168.2766	7.27	26.86	34.13	43.50	-9.37	QP

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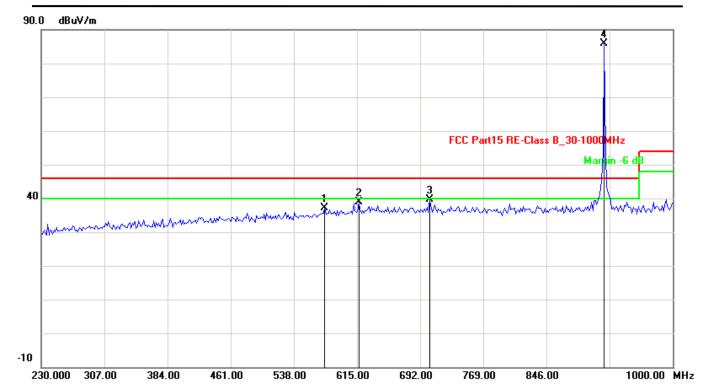
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No.	Frequency	Factor	Reading	Level	Limit	Margin	Det.
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	575.6513	9.15	28.04	37.19	46.00	-8.81	QP
2	617.3146	9.61	29.30	38.91	46.00	-7.09	QP
3	703.7275	10.33	29.25	39.58	46.00	-6.42	QP
4	916.1733	10.50	71.03	81.53	94.00	-12.47	QP

Note: 1. Emission level=Read level + Factor

2. Factor=Antenna factor + Cable loss

3. Margin=Level-Limit.

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Channel: TX –X Position Mode 916MHz Result: □ - passed □ - not passed □ - not passed

EUT	Wireless Controller
Firm Name	BELLMATE HOLDINGS LTD.
Operating Condition	DC 3V for TX
Test Condition	Ambient Temperature: 25°C Humidity: 56%
Test distance	3 Meter
Test Date:	22 Sept ~29 Sept 2011
Operator	Peter
MODEL NO	T631W-2TX

No.	Frequency	Factor	Reading	Level	Limit	Margin	Det.		
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)			
1	1370.741	14.08	30.07	44.15	74.00	-29.85	peak		
2	1370.741	14.08	19.87	33.95	54.00	-20.05	AVG		
3	2633.267	18.78	30.90	49.68	74.00	-24.32	peak		
4	2633.267	18.78	16.62	35.40	54.00	-18.60	AVG		
5	2863.727	19.77	32.14	51.91	74.00	-22.09	peak		
6	2863.727	19.77	18.03	37.80	54.00	-16.20	AVG		
7	3775.551	21.00	27.99	48.99	74.00	-25.01	peak		
8	3775.551	21.00	20.60	41.60	54.00	-12.40	AVG		
9	4747.495	22.80	29.30	52.10	74.00	-21.90	peak		
10	4747.495	22.80	18.00	40.80	54.00	-13.20	AVG		
11	5579.158	24.21	29.94	54.15	74.00	-19.85	peak		
12	5579.158	24.21	16.89	41.10	54.00	-12.90	AVG		
Remark: C	Remark: Other frequency mini margin all >10 dB of Limit								

Note: 1. Emission level=Read level + Factor

- 2. Factor=Antenna factor + Cable loss
- 3. Margin=Level-Limit.

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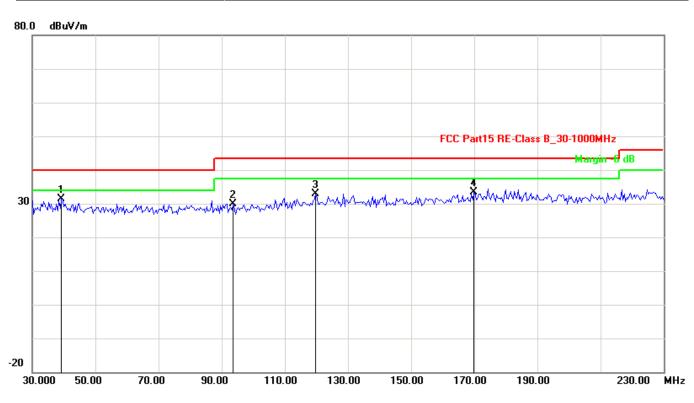
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Channel:	TX –X Position Mode 916MHz	Result:	■ - passed
Test point:	Vertical		□ - not passed
Frequency range:	30-230MHz and 230-1000MHz		

EUT	Wireless Controller
Firm Name	BELLMATE HOLDINGS LTD.
Operating Condition	DC 3V for TX
Test Condition	Ambient Temperature: 25°C Humidity: 56%
Test distance	3 Meter
Test Date:	22 Sept ~29 Sept 2011
Operator	Peter
MODEL NO	T631W-2TX



No.	Frequency	Factor	Reading	Level	Limit	Margin	Det.
	(MHz)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	39.2184	5.75	25.53	31.28	40.00	-8.72	QP
2	93.7275	4.96	24.97	29.93	43.50	-13.57	QP
3	119.7796	6.48	26.35	32.83	43.50	-10.67	QP
4	169.8798	7.39	26.06	33.45	43.50	-10.05	QP

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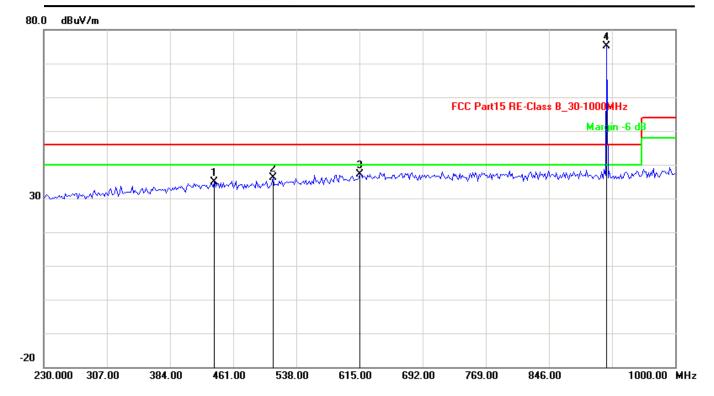
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No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	438.3166	8.25	26.75	35.00	46.00	-11.00	QP
2	509.2986	8.62	27.59	36.21	46.00	-9.79	QP
3	615.7715	9.58	27.57	37.15	46.00	-8.85	QP
4	916.1733	10.50	54.38	64.88	94.00	-29.12	QP

Note: 1. Emission level=Read level + Factor

2. Factor=Antenna factor + Cable loss

3.Margin=Level- Limit.

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Channel:	TX –X Position Mode 916MHz	Result:	■ - passed
Test point:	Vertical		☐ - not passed
Frequency range:	1GHz-26.5GHz		

EUT	Wireless Controller
Firm Name	BELLMATE HOLDINGS LTD.
Operating Condition	DC 3V for TX
Test Condition	Ambient Temperature: 25°C Humidity: 56%
Test distance	3 Meter
Test Date:	22 Sept ~29 Sept 2011
Operator	Peter
MODEL NO	T631W-2TX

No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.		
1	1140.281	13.07	31.05	44.12	74.00	-29.88	peak		
2	1140.281	13.07	20.55	33.62	54.00	-20.38	AVG		
3	1831.663	15.66	31.64	47.30	74.00	-26.70	peak		
4	1831.663	15.66	18.42	34.08	54.00	-19.92	AVG		
5	2783.567	19.43	33.17	52.60	74.00	-21.40	peak		
6	2783.567	19.43	19.07	38.50	54.00	-15.50	AVG		
7	3004.008	20.36	30.21	50.57	74.00	-23.43	peak		
8	3004.008	20.36	21.74	42.10	54.00	-11.90	AVG		
9	4837.675	23.00	28.10	51.10	74.00	-22.90	peak		
10	4837.675	23.00	20.60	43.60	54.00	-10.40	AVG		
11	5498.998	24.09	29.26	53.35	74.00	-20.65	peak		
12	5498.998	24.09	15.81	39.90	54.00	-14.10	AVG		
Remark:	Remark: Other frequency mini margin all >10 dB of Limit								

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## 8.Band Edge Compliance test

## 8.1. Test Equipment

Band Edge Compliance test									
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.				
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	10868	2010/12				
2	Log per Antenna	ROHDE & SCHWARZ	HL050	100186	2010/12				
3	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2010/12				
4	Log per Antenna	ROHDE & SCHWARZ	HL223	100226	2010/12				

## 8.2. Test Information

EUT	Wireless Controller	
Firm Name	BELLMATE HOLDINGS LTD.	
Operating Condition	DC 3V for TX	
Test Condition	Ambient Temperature: 25°C Humidity: 56%	
Test distance	3 Meter	
Test Date:	22 Sept ~29 Sept 2011	
Operator	Peter	
MODEL NO	T631W-2TX	

## 8.3. Test procedure

- 1. The EUT operates at TX mode. The transmitter channel are tested to verify the largest transmission and spurious emissions power at the continuous transmission mode.
- 2. Max hold the trace of the setp 1,and the EUT operates at Normal test mode to verify the largest spurious emissions power.

### 8.4. Test Results

## PASSED.

The EUT operates at TX test mode. The transmitter channel are tested to verify the band edge emissions.

Test Mode	Channel Marked Frequency	Test Result Highest Emission (dBuv/m)					
		Horizontal			Vertical		
		Peak	QP	Average	Peak	QP	Average
Low Channel	614MHz	29.40	26.74	18.26	29.23	26.05	18.24
High Channel	960MHz	30.40	26.93	18.99	30.32	26.66	19.01
Remark: Other Spurious Emissions mini margin all >10 dB of Limit.							

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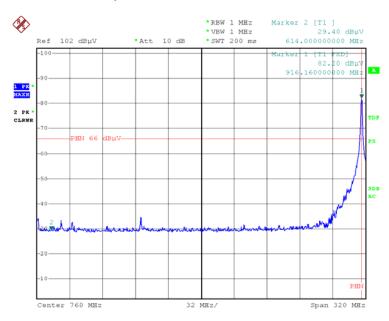
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## Band Edges(Low) Detector mode:Peak

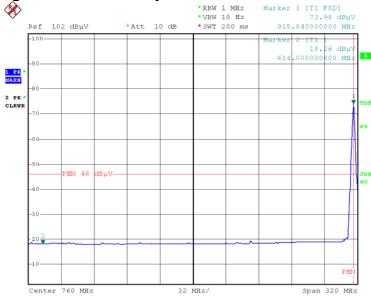
### **Polarity:Horizontal**



Date: 28.SEP.2011 09:28:33

## Band Edges(CH Low) Detector mode: Average

#### **Polarity:Horizontal**



Date: 28.SEP.2011 09:42:08

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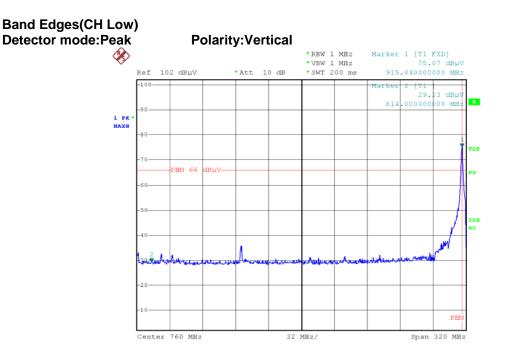
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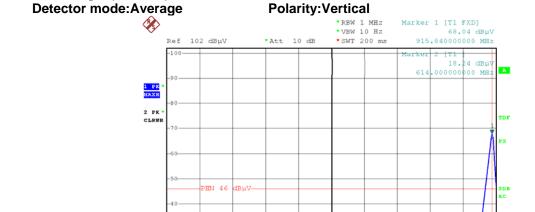
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Band Edges(CH Low)





Date: 28.SEP.2011 09:31:28



Date: 28.SEP.2011 09:52:01

Center 760 MHz

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32 MHz/

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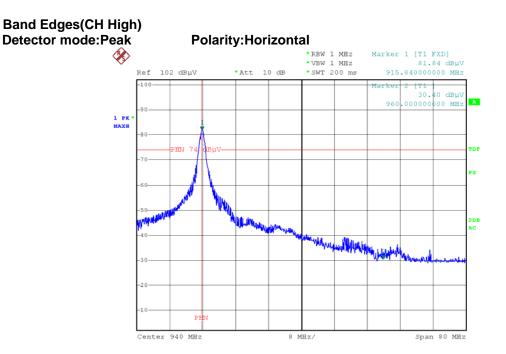
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Span 320 MHz

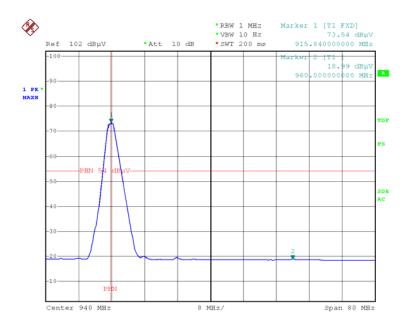




Date: 28.SEP.2011 10:15:04

## Band Edges(CH High) Detector mode: Average

### Polarity:Horizontal



Date: 28.SEP.2011 10:11:32

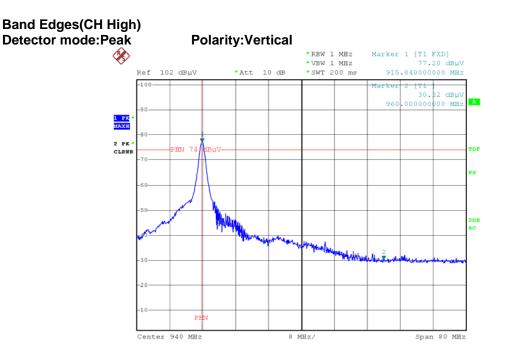
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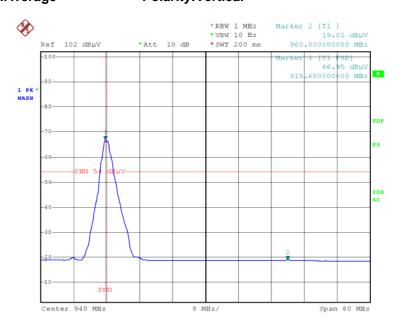




Date: 28.SEP.2011 10:16:04

## Band Edges(CH High) Detector mode: Average

### Polarity: Vertical



Date: 28.SEP.2011 09:59:47

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## 9 20 dB Bandwidth test

## 9.1. Test Equipment

20 dB l	20 dB Bandwidth test						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.		
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	10868	2010/12		
2	Log per Antenna	ROHDE & SCHWARZ	HL223	100226	2010/12		
3	Biconical Antenna	ROHDE & SCHWARZ	HK116	100221	2010/12		
4	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	100311	2010/12		

## 9.2. Test Information

EUT	Wireless Controller	
Firm Name	BELLMATE HOLDINGS LTD.	
Operating Condition	DC 3V for TX	
Test Condition	Ambient Temperature: 25°C Humidity: 56%	
Test distance	3 Meter	
Test Date:	22 Sept ~29 Sept 2011	
Operator	Peter	
MODEL NO	T631W-2TX	

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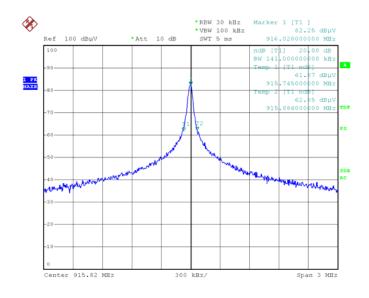
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## 9.3. Test Results PASSED.

The testing data was attached in the next pages.



Date: 11.0CT.2011 17:20:09

## 10. Deviation to test specifications

[NONE]

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