

TEST REPORT

To:	NEW BRIGHT INDUSTRIAL CO., LTD.		To:	-
Attn:	Eric Kwok		Attn:	-
Address:	9/F., NEW BRIGHT BUILDING, 11 SHEUNG YUET ROAD, KOWLOON BAY KOWLOON, HONG KONG.	,	Address:	-
Fax:	852 2795 3665		Fax:	-
E-mail:	ypeng01@newbright.com / chkwok01@newbright.com		E-mail:	-
Folder No.:	NBT-	5FE	014ETHS-B-B	
Factory name:			DUSTRIAL CO., L1	
Location:		HON	G KONG.	OWLOON BAY, KOWLOON,
Product:	_		nitter & Receiver No.: GF21H	
			Sample No:	HK150129/017 HK150129/018 HK150129/019
			Test date:	February 13, 2015
			Test Requested:	FCC Part 15 - 2012
			Test Method:	ANSI C63.4 - 2009
100			FCC ID:	G6DGF21H
The results	given in this report are related to the test	ed sp	ecimen of the des	cribed electrical apparatus.
CONCLUSION:	The submitted sample was found to <u>COI</u>	/IPL\	with requirement	of FCC Part 15 Subpart C.
	Authorized S	Signa	ture:	
	Careh		Br Ca	
Reviewed by: Ke	eith Yeung A	ved by: Steven Tsa	ng	

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office 1/F Pacific Trade Centre, 2 Kai Hing Road, Kowloon Bay, Kowloon,HONG KONG Tel: +852 2331 0888 Fax: +852 2331 0889

Date: February 26, 2015

www.cps.bureauveritas.com

This report is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. Our report is limited to the test samples identified herein. The results set forth in this report are not necessarily indicative or representative of the statistical quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof. You shall have thirty days from receipt of this report to request additional testing of the samples or to notify us of any errors or omissions relating to our report, provided, however, such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report

Date: February 26, 2015



Test Result Summary

EMISS	EMISSION TEST										
Test requirement: FCC Part 15 - 2012											
Test Condition	Test Method	Test	Result								
Test Condition	rest Method	Pass	Failed								
Radiated Emission Test,	ANSI C63.4										
9kHz to 40GHz											
Frequency range of Fundamental Emission	ANSI C63.4	\boxtimes									
26dB Bandwidth of Fundamental Emission	ANSI C63.4	\boxtimes									
Duty Cycle Correction During 100msec	ANSI C63.4	\boxtimes									

Report Revision & Sample Re-submit History:



Location of the test laboratory

Radiated and Conducted emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 – 2009. An Open Area Test Site and Full Anechoic Chamber (FCC Listed Site, Registration No. 642151) are set up for investigation and located at :

BUREAU VERITAS HONG KONG LIMITED, EMC CENTRE

No. 2106-2107, 21/F., Westin Centre, 26 Hung To Road, Kwun Tong, Kowloon, Hong Kong

List of measuring equipment

Radiated Emission

EQUIPMENT	MANUFACTURER	MODEL NO.	SERIAL NO.	LAST CALIBRATION	CALIBRATION DUE
EMI TEST RECEIVER	R&S	ESCI	100379	21-JAN-2015	20-JAN-2016
SPECTRUM ANALYZER	R&S	R3127	111000909	27-MAR-2014	26-MAR-2015
LOOP ANTENNA	ETS LINDGREN	6502	00102266	28-SEP-2014	27-SEP-2015
BILOG ANTENNA	SCHAFFNER	CBL6112D	25229	02-JAN-2015	02-JAN-2016
HORN ANTENNA	SCHWARZBECK	BBHA9120D	9120D-692	27-DEC-2014	26-DEC-2015
OPEN AREA TEST SITE	BVCPS	N/A	N/A	07-JUL-2014	06-JUL-2015
ANECHOIC CHAMBER	ALBATROSS	M-CDC	80374004499B	05-FEB-2014	03-FEB-2016
COAXIAL CABLE	HUBER + SUHNER	RG223	N/A	23-DEC-2014	22-DEC-2015
COAXIAL CABLE	HUBER + SUHNER	RG214	N/A	23-DEC-2014	22-DEC-2015
Signal Analyzer 40GHz	Rohde & Schwarz	FSV 40	100977	13-MAY-2014	12-MAY-2015
Wideband Horn Antenna 18 to 40GHz	STEATITE	QWH-SL-18-40-K-SG	12688	02-SEP-2014	01-SEP-2015
High frequency RF cable	Rohde & Schwarz	N/A	N/A	15-SEP-2014	14-SEP-2015

Remarks:-

N/A: Not Applicable or Not Available

The measurement instrumentation uncertainty would be taking into consideration on each of the test result



Equipment Under Test [EUT]

Description of Sample:

Model Name: TOY Transmitter & Receiver

Model Number: GF21H

Additional Model Name: -Additional Model Number: -Additional Model information: --

Rating: 3Vd.c. ("AA" size battery x 2)

Description of EUT Operation:

The Equipment Under Test (EUT) is a **NEW BRIGHT INDUSTRIAL CO., LTD.** of Remote Control Transceiver. It is a 2 sticks transceiver and operating at 2406MHz to 2472MHz. The lowest, middle and highest frequencies were tested and the results are shown in the report. The EUT transmit while buttons is being pressed or sticks are being pushed or pulled, Modulation by IC, and type is GFSK.

There are total 67 channels and below is the frequency list:

ch.no	freq.												
1	2406	11	2416	21	2426	31	2436	41	2446	51	2456	61	2466
2	2407	12	2417	22	2427	32	2437	42	2447	52	2457	62	2467
3	2408	13	2418	23	2428	33	2438	43	2448	53	2458	63	2468
4	2409	14	2419	24	2429	34	2439	44	2449	54	2459	64	2469
5	2410	15	2420	25	2430	35	2440	45	2450	55	2460	65	2470
6	2411	16	2421	26	2431	36	2441	46	2451	56	2461	66	2471
7	2412	17	2422	27	2432	37	2442	47	2452	57	2462	67	2472
8	2413	18	2423	28	2433	38	2443	48	2453	58	2463		
9	2414	19	2424	29	2434	39	2444	49	2454	59	2464		
10	2415	20	2425	30	2435	40	2445	50	2455	60	2465		

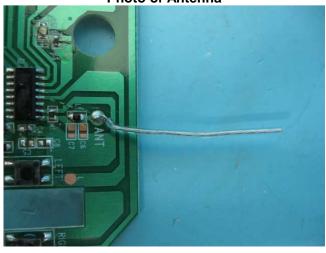
The transmitter has different control:

- 1. Left Stick control forward and backward
- 2. Right Stick control leftward and rightward

Antenna Requirement (Section 15.203)

The EUT is use of a permanently antenna. It is soldered on the PCB. The antenna consists of 3.5cm long wire The antenna is not replaceable or user serviceable. The requirements of S15.203 are met. There are no deviations or exceptions to the specifications.

Photo of Antenna



BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office 1/F Pacific Trade Centre, 2 Kai Hing Road, Kowloon Bay, Kowloon,HONG KONG Tel: +852 2331 0888 Fax: +852 2331 0889 www.cps.bureauveritas.com This report is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. Our report is limited to the test samples identified herein. The results set forth in this report are not necessarily indicative or representative of the statistical quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof. You shall have thirty days from receipt of this report to request additional testing of the samples or to notify us of any errors or omissions relating to our report, provided, however, such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report



Test Results

Radiated Emissions (Fundamental)

Test Requirement: FCC Part 15 Section 15.249

Test Method:
ANSI C63.4
Test Date(s):
2015-02-13
Temperature:
20.0 °C
Humidity:
66.0 %

Atmospheric Pressure: 100.7 kPa
Mode of Operation: Transmission mode

Tested Voltage: 3Vd.c. ("AA" size battery x 2)

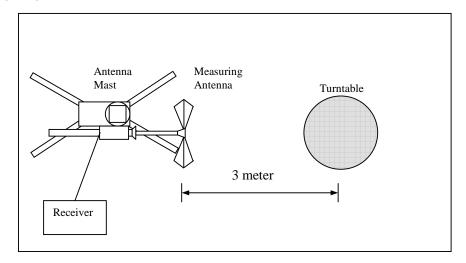
Test Procedure:

Radiated emissions measurements are investigated and taken pursuant to the procedures of ANSI C63.4 - 2009.

The equipment under test (EUT) was placed on a non-conductive turntable with dimensions of 1.5m x 1m and 0.8m high above the ground. 3m from the EUT, a broadband antenna mounting on the mast received the signal strength. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, For battery operated equipment, the equipment tests shall be perform using new battery. The turntable was rotated to maximize the emission level. The antenna was then moving along the mast from 1m up to 4m until no more higher value was found. Both horizontal and vertical polarization of the antenna were placed and investigated.

Location: The Roof, Westin Centre, 26 Hung To Road, Kwun Tong, Kowloon, Hong Kong

Test Setup: Open Area Test Site





Limits for Field Strength of Fundamental Emissions [FCC 47CFR 15.249]:

Frequency Range of	Field Strength of	Field Strength of
Fundamental	Fundamental Emission	Harmonics Emission
	(Average)	(Average)
[MHz]	[mV/m]	[µV/m]
2400-2483.5	50	500

Measurement Data

Test Result of (Transmission mode, Lowest frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty- cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
2406.00	Н	0.0	-20.0	85.2	114.0	-28.8	**65.2	94.0	-28.8
2406.00	V	0.0	-20.0	89.5	114.0	-24.5	**69.5	94.0	-24.5

Test Result of (Transmission mode, Middle frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty- cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
2443.00	Н	0.0	-20.0	88.5	114.0	-25.5	**68.5	94.0	-25.5
2443.00	V	0.0	-20.0	92.9	114.0	-21.1	**72.9	94.0	-21.1

Test Result of (Transmission mode, Highest frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty- cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
2472.00	Н	0.0	-20.0	88.0	114.0	-26.0	**68.0	94.0	-26.0
2472.00	V	0.0	-20.0	92.7	114.0	-21.3	**72.7	94.0	-21.3

[#] For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 1MHz

VBW = 1MHz

^{**}Duty Cycle Correction = 20Log(0.08) = -21.9dB.

^{**}Therefore, -20dB is taken.



Radiated Emissions (Spurious Emission)

FCC Part 15 Section 15.249 Test Requirement:

Test Method: **ANSI C63.4** 2015-02-13 Test Date(s): 20.0 °C Temperature: Humidity: 66.0 % Atmospheric Pressure: 100.7 kPa

Mode of Operation: Transmission mode

Tested Voltage: 3Vd.c. ("AA" size battery x 2)

Measurement Data

Test Result of (Transmission mode, Lowest frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty- cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
4812.00	Н	5.9	-20.0	68.5	74.0	-5.5	**48.5	54.0	-5.5
7218.00	Н	12.7	-20.0	64.4	74.0	-9.6	**44.4	54.0	-9.6
9624.00	Н	16.4	-20.0	61.0	74.0	-13.0	**41.0	54.0	-13.0
12030.00	Н	18.4	-20.0	53.3	74.0	-20.7	**33.3	54.0	-20.7
14436.00	Н	23.2	-20.0	60.5	74.0	-13.5	**40.5	54.0	-13.5
16842.00	Н	22.0	-20.0	61.5	74.0	-12.5	**41.5	54.0	-12.5
19248.00	Н	46.3	-20.0	62.5	74.0	-11.5	**42.5	54.0	-11.5
21654.00	Н	47.1	-20.0	63.4	74.0	-10.6	**43.4	54.0	-10.6
24060.00	Н	47.5	-20.0	63.7	74.0	-10.3	**43.7	54.0	-10.3
26466.00	Н	48.5	-20.0	63.5	74.0	-10.5	**43.5	54.0	-10.5

[#] For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.

Note: Field Strength includes Antenna Factor and Cable Loss.

RBW = 1MHz Receiver setting:

VBW = 1MHz

^{**}Duty Cycle Correction = 20Log(0.08) = -21.9dB.

^{**}Therefore, -20dB is taken.



Measurement Data

Test Result of (Transmission mode, Lowest frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty- cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
4812.00	V	5.9	-20.0	69.9	74.0	-4.1	**49.9	54.0	-4.1
7218.00	V	12.7	-20.0	63.6	74.0	-10.4	**43.6	54.0	-10.4
9624.00	V	16.4	-20.0	63.3	74.0	-10.7	**43.3	54.0	-10.7
12030.00	V	18.4	-20.0	55.9	74.0	-18.1	**35.9	54.0	-18.1
14436.00	V	23.2	-20.0	61.0	74.0	-13.0	**41.0	54.0	-13.0
16842.00	V	22.0	-20.0	62.1	74.0	-11.9	**42.1	54.0	-11.9
19248.00	V	46.3	-20.0	63.5	74.0	-10.5	**43.5	54.0	-10.5
21654.00	V	47.1	-20.0	62.8	74.0	-11.2	**42.8	54.0	-11.2
24060.00	V	47.5	-20.0	62.7	74.0	-11.3	**42.7	54.0	-11.3
26466.00	V	48.5	-20.0	63.4	74.0	-10.6	**43.4	54.0	-10.6

[#] For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.
**Duty Cycle Correction = 20Log(0.08) = -21.9dB.

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 1MHz

VBW = 1MHz

^{**}Therefore, -20dB is taken.



Measurement Data

Test Result of (Transmission mode, Middle frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty- cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
4886.00	Н	5.9	-20.0	65.1	74.0	-8.9	**45.1	54.0	-8.9
7329.00	Н	12.7	-20.0	67.5	74.0	-6.5	**47.5	54.0	-6.5
9772.00	Н	16.4	-20.0	62.0	74.0	-12.0	**42.0	54.0	-12.0
12215.00	Н	18.6	-20.0	55.0	74.0	-19.0	**35.0	54.0	-19.0
14658.00	Н	25.0	-20.0	61.3	74.0	-12.7	**41.3	54.0	-12.7
17101.00	Н	27.2	-20.0	62.8	74.0	-11.2	**42.8	54.0	-11.2
19544.00	Н	46.5	-20.0	63.3	74.0	-10.7	**43.3	54.0	-10.7
21987.00	Н	46.9	-20.0	62.0	74.0	-12.0	**42.0	54.0	-12.0
24430.00	Н	48.0	-20.0	61.1	74.0	-12.9	**41.1	54.0	-12.9
26873.00	Н	48.3	-20.0	61.6	74.0	-12.4	**41.6	54.0	-12.4

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty- cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBμV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
4886.00	V	5.9	-20.0	65.7	74.0	-8.3	**45.7	54.0	-8.3
7329.00	V	12.7	-20.0	65.6	74.0	-8.4	**45.6	54.0	-8.4
9772.00	V	16.4	-20.0	64.4	74.0	-9.6	**44.4	54.0	-9.6
12215.00	V	18.6	-20.0	56.5	74.0	-17.5	**36.5	54.0	-17.5
14658.00	V	25.0	-20.0	62.0	74.0	-12.0	**42.0	54.0	-12.0
17101.00	V	27.2	-20.0	62.5	74.0	-11.5	**42.5	54.0	-11.5
19544.00	V	46.5	-20.0	63.2	74.0	-10.8	**43.2	54.0	-10.8
21987.00	V	46.9	-20.0	61.2	74.0	-12.8	**41.2	54.0	-12.8
24430.00	V	48.0	-20.0	61.6	74.0	-12.4	**41.6	54.0	-12.4
26873.00	V	48.3	-20.0	62.9	74.0	-11.1	**42.9	54.0	-11.1

[#] For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 1MHz

VBW = 1MHz

BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office 1/F Pacific Trade Centre, 2 Kai Hing Road, Kowloon Bay, Kowloon,HONG KONG Tel: +852 2331 0888 Fax: +852 2331 0889

www.cps.bureauveritas.com

This report is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. Our report is limited to the test samples identified herein. The results set forth in this report are not necessarily indicative or representative of the statistical quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof. You shall have thirty days from receipt of this report to request additional testing of the samples or to notify us of any errors or omissions relating to our report, provided, however, such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report

^{**}Duty Cycle Correction = 20Log(0.08) = -21.9dB.

^{**}Therefore, -20dB is taken.



Measurement Data

Test Result of (Transmission mode, Highest frequency): PASS

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty- cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
4944.00	Н	5.9	-20.0	65.9	74.0	-8.1	**45.9	54.0	-8.1
7416.00	Ι	13.3	-20.0	67.0	74.0	-7.0	**47.0	54.0	-7.0
9888.00	Н	16.4	-20.0	65.3	74.0	-8.7	**45.3	54.0	-8.7
12360.00	Н	18.6	-20.0	53.7	74.0	-20.3	**33.7	54.0	-20.3
14832.00	Н	25.0	-20.0	61.9	74.0	-12.1	**41.9	54.0	-12.1
17304.00	Н	27.2	-20.0	62.5	74.0	-11.5	**42.5	54.0	-11.5
19776.00	Н	46.6	-20.0	63.4	74.0	-10.6	**43.4	54.0	-10.6
22248.00	Н	47.0	-20.0	60.8	74.0	-13.2	**40.8	54.0	-13.2
24720.00	Н	48.1	-20.0	61.8	74.0	-12.2	**41.8	54.0	-12.2
27192.00	Н	48.5	-20.0	62.5	74.0	-11.5	**42.5	54.0	-11.5

Frequency (MHz)	Polarity (H/V)	Antenna Factor & Cable Loss (dB/m)	Duty- cycle correction (dB)	Field Strength at 3m – Peak (dBµV/m)	Limit at 3m – Peak (dBµV/m)	Margin - Peak (dB)	Field Strength at 3m – Average (dBµV/m)	Limit at 3m – Average (dBµV/m)	Margin - Average (dB)
4944.00	V	5.9	-20.0	65.7	74.0	-8.3	**45.7	54.0	-8.3
7416.00	V	13.3	-20.0	66.4	74.0	-7.6	**46.4	54.0	-7.6
9888.00	V	16.4	-20.0	62.8	74.0	-11.2	**42.8	54.0	-11.2
12360.00	V	18.6	-20.0	54.6	74.0	-19.4	**34.6	54.0	-19.4
14832.00	V	25.0	-20.0	63.5	74.0	-10.5	**43.5	54.0	-10.5
17304.00	V	27.2	-20.0	64.9	74.0	-9.1	**44.9	54.0	-9.1
19776.00	V	46.6	-20.0	63.3	74.0	-10.7	**43.3	54.0	-10.7
22248.00	V	47.0	-20.0	61.5	74.0	-12.5	**41.5	54.0	-12.5
24720.00	V	48.1	-20.0	62.9	74.0	-11.1	**42.9	54.0	-11.1
27192.00	V	48.5	-20.0	62.9	74.0	-11.1	**42.9	54.0	-11.1

[#] For pulse modulated devices and using measuring equipment employing a peak detection mode, properly adjusted for such factor as pulse desensitisation.

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 1MHz

= 1MHz

BUREAU VERITAS HONG KONG LIMITED -Kowloon Bay Office
1/F Pacific Trade Centre,
2 Kai Hing Road, Kowloon Bay,
Kowloon,HONG KONG
Tel: +852 2331 0888

Fax: +852 2331 0889 www.cps.bureauveritas.com This report is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. Our report is limited to the test samples identified herein. The results set forth in this report are not necessarily indicative or representative of the statistical quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof. You shall have thirty days from receipt of this report to request additional testing of the samples or to notify us of any errors or omissions relating to our report, provided, however, such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report

^{**}Duty Cycle Correction = 20Log(0.08) = -21.9dB.

^{**}Therefore, -20dB is taken.



Radiated Emissions (9kHz – 40GHz)

Test Requirement: FCC Part 15 Section 15.209

Test Method:

ANSI C63.4

Test Date(s):

Temperature:

Humidity:

Atmospheric Pressure:

Mode of Operation:

ANSI C63.4

2015-02-13

20.0 °C

66.0 %

100.7 kPa

On mode

Tested Voltage: 3Vd.c. ("AA" size battery x 2)

Limits for Radiated Emissions [FCC 47 CFR 15.209]:

Frequency Range	Quasi-Peak Limits	Measurement Distance
[MHz]	[μV/m]	m
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above960	500	3

Measurement Data

Test Result of (On mode): PASS

Detection mode: Quasi-Peak

Frequency	Polarity (H/V)	Field Strength	Limit	Margin (dB)		
Emissions detected are more than 20 dB below the limit line(s) in						
9kHz to 30MHz						

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 200Hz

VBW = 200Hz



Measurement Data

Test Result of (On mode): PASS

Detection mode: Quasi-Peak

Frequency (MHz)	Polarity (H/V)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBμV/m)	Margin (dB)
38.12	Н	28.9	40.0	-11.1
63.96	Н	20.4	40.0	-19.6
162.20	Н	21.2	43.5	-22.3
389.08	Н	25.1	46.0	-20.9
623.80	Н	31.2	46.0	-14.8
708.64	Н	32.8	46.0	-13.2

Frequency (MHz)	Polarity (H/V)	Field Strength at 3m (dBµV/m)	Limit at 3m (dBµV/m)	Margin (dB)
38.12	V	28.3	40.0	-11.7
63.96	V	20.2	40.0	-19.8
162.20	V	23.0	43.5	-20.5
389.08	V	27.8	46.0	-18.2
623.80	V	31.0	46.0	-15.0
708.64	V	32.5	46.0	-13.5

Note: Field Strength includes Antenna Factor and Cable Loss.

Receiver setting: RBW = 120KHz

VBW = 120KHz



Frequency range of Fundamental Emission

Test Requirement: FCC 47 CFR 15.249

Test Method: ANSI C63.4:2009 (Section 13.1.7)

Test Date(s): 2015-02-13
Temperature: 20.0 °C
Humidity: 66.0 %
Atmospheric Pressure: 100.7 kPa

Mode of Operation: Transmission mode

Tested Voltage: 3Vd.c.("AA" size battery x 2)

Test Method:

The bandwidth is measured at an amplitude level reduced from the reference level by a specified ratio. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.

Limits for Frequency range of Fundamental Emission:

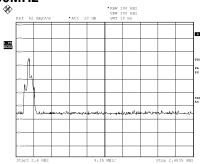
=e ioi i ioquonoj iungo i	
Frequency	FCC Limits
[MHz]	[MHz]
2404.940 - 2473.240	2400.00 - 2483.50



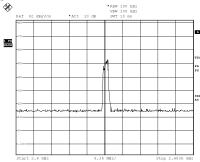
Measurement Data:

Test Result of Frequency Range of Fundamental Emission: PASS

Lowest Frequency – 2406.00MHz



Middle Frequency - 2443.00MHz



Highest Frequency - 2472.00MHz

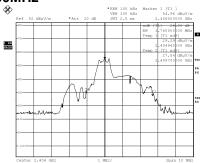




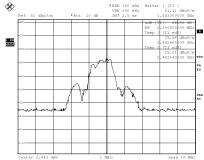
TEST REPORT No: (5215)035-0363 Measurement Data :

Test Result of 26dB Bandwidth of Fundamental Emission: PASS

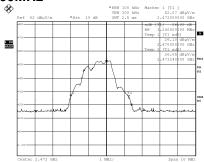
Lowest Frequency - 2406.00MHz



Middle Frequency - 2443.00MHz



Highest Frequency - 2472.00MHz





Duty Cycle Correction During 100msec:

Each function key sends a different series of characters, but each packet period ($\underline{100}$ msec) never exceeds a series of 4 pulses ($\underline{2}$ msec). Assuming any combination of short and long pulses maybe obtained due to encoding the worst case transmit duty cycle would be considered $\underline{2*4}$ per $\underline{100}$ msec = $\underline{8}\%$ duty cycle.

Remarks:

Duty Cycle Correction = 20Log(0.08) = -21.9dB Therefore, -20dB is taken

The following figures [Figure A] show the characteristics of the pulse train for one of these functions.



Center 2.409 GHz

Measurement Data:

Figure A [Pulse Train] Delta 1 [T1] -0.06 dB RBW 1 MHz VBW 3 MHz 82 dBµV/m SWT 100 ms 2.000000 ms 58.68 dBμV/n А 10.200000 ms 1 AP VIEW

10 ms/



Photographs of EUT

Front View of the product



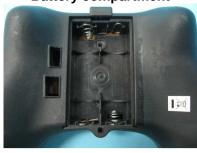
Top View of the product



Side View of the product



Battery compartment



Rear View of the product



Bottom View of the product



Side View of the product



Battery Cover



BUREAU VERITAS HONG KONG LIMITED – Kowloon Bay Office 1/F Pacific Trade Centre, 2 Kai Hing Road, Kowloon Bay, Kowloon,HONG KONG Tel: +852 2331 0888 Fax: +852 2331 0889

www.cps.bureauveritas.com

This report is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. Our report is limited to the test samples identified herein. The results set forth in this report are not necessarily indicative or representative of the statistical quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof. You shall have thirty days from receipt of this report to request delitional testing of the complex or to applic the or greater to request the product of the prod additional testing of the samples or to notify us of any errors or omissions relating to our report, provided, however, such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report



Photographs of EUT

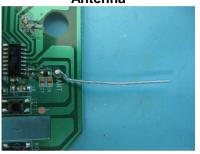
Internal View of the product



Inner Circuit Top View



Antenna



Internal View of the product



Inner Circuit Bottom View





Measurement of Radiated Emission Test Set Up



***** End of Report *****