



Test Report No.: FM180309N010

RF EXPOSURE REPORT

Applicant	Mr. Christmas Ltd.
Address	Flat/Rm.901-3,9/F.,Railway Plaza, 39 Chatham Road South, Tsim sha Tsui, Kowloon, Hong kong

Manufacturer or Supplier	Mr. Christmas Ltd.
Address	Flat/Rm.901-3,9/F.,Railway Plaza, 39 Chatham Road South, Tsim sha Tsui, Kowloon, Hong kong
Product	Mr. Drive-in Complete Outdoor Home Theatre
Brand Name	N/A
Model	61353
Additional Model & Model Difference	N/A
Date of tests	Mar. 09, 2018 ~ Apr. 24, 2018

FCC Part 2 (Section 2.1091)

KDB 447498 D01

IEEE C95.1

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Tested by Breeze Jiang Project Engineer / EMC Department	Approved by Glyn He Supervisor / EMC Department

Date: Apr. 26, 2018

This report is 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. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the 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 based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that 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 contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification



Test Report No.: FM180309N010

TABLE OF CONTENTS

RELEASE CONTROL RECORD	3
1. CERTIFICATION.....	4
2. RF EXPOSURE LIMIT	5
3. MPE CALCULATION FORMULA.....	5
4. CLASSIFICATION	5
5. ANTENNA GAIN	6
6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER.....	6



Test Report No.: FM180309N010

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FM180309N010	Original release	Apr. 26, 2018

**Bureau Veritas Shenzhen Co., Ltd.
Dongguan Branch**

No. 34, Chenwulu Section, Guantai Rd., Houjie
Town, Dongguan City,
Guangdong 523942, China

Tel: +86 769 8593 5656
Fax: +86 769 8593 1080
Email: customerservice.dg@cn.bureauveritas.com



Test Report No.: FM180309N010

1. CERTIFICATION

FCC ID:	SHV61353
PRODUCT:	Mr. Drive-in Complete Outdoor Home Theatre
BRAND NAME:	N/A
MODEL NO.:	61353
ADDITIONAL NO.:	N/A
TEST SAMPLE:	Engineering Sample
APPLICANT:	Mr. Christmas Ltd.
STANDARDS:	FCC Part 2 (Section 2.1091)
	KDB 447498 D01
	IEEE C95.1



Test Report No.: FM180309N010

2. RF EXPOSURE LIMIT

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm ²)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	F/1500	30
1500-100,000	1.0	30

F = Frequency in MHz

3. MPE CALCULATION FORMULA

$$Pd = (Pout * G) / (4 * \pi * r^2)$$

where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

4. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.



Test Report No.: FM180309N010

5. ANTENNA GAIN

The antennas provided to the EUT, please refer to the following table:

Mode	Transmitter Circuit	Peak Gain (dBi)	Antenna Type
BT/WIFI	Chain 0	2.0	FPCB Antenna

6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

The tuned conducted Average Power (declared by client)

Mode	Frequency (MHz)	Target Power (dBm)	Tolerance (dBm)	Lower Tolerance (dBm)	Upper Tolerance (dBm)
BT-LE (GFSK)	2402-2480MHz	4	+2	2	6
802.11b	2412-2462MHz	11	+2	9	13
802.11g	2412-2462MHz	7	+2	5	9
802.11n HT20	2412-2462MHz	6	+2	4	8
802.11n HT40	2422-2452MHz	5	+2	3	7

The measured conducted Average Power

Mode	Frequency (MHz)	Averaged Power (dBm)
BT-LE (GFSK)	2402	4.02
802.11b	2462	11.15
802.11g	2462	7.64
802.11n HT20	2462	6.67
802.11n HT40	2452	5.29

FREQUENCY BAND (MHz)	MAX AVERAGE POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
BT 2402-2480	6	2.0	20	0.00126	1.0
WiFi 2412-2462	13	2.0	20	0.00629	1.0



Test Report No.: FM180309N010

CONCLUSION:

The BT and WLAN can transmit simultaneously, the formula of calculated the MPE is:

$$\text{CPD1 / LPD1 + CPD2 / LPD2 +etc.} < 1$$

CPD = Calculation power density

LPD = Limit of power density

$(0.00126/1)+(0.00629/1) = 0.00755 < 1$, which is less than the "1" limit.

--- END ---