RF EXPOSURE REPORT

Applicant	SZ Telstar CO.,LTD
Address	Telstar Technology Park No.12~14,Gangbei Industrial Zone, Ailian, Longgang District, ShenZhen

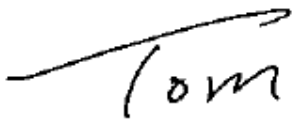
Manufacturer or Supplier	SZ Telstar CO.,LTD
Address	Telstar Technology Park No.12~14,Gangbei Industrial Zone, Ailian, Longgang District, ShenZhen
Product	Projector
Brand Name	miroir, Brookstone
Model	U5
Additional Model & Model Difference	M400A, M400, 318490, see item 3.1
Date of tests	Oct. 15, 2016 ~ Nov. 08, 2016

☒ **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 Tom Chen Project Engineer / EMC Department	Approved by Glyn He Supervisor/ EMC Department
	 Date: Nov. 30, 2016

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FS160928N001	Original release	Nov. 30, 2016

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1. CERTIFICATION

FCC ID:	2AFOW-UST520U5
PRODUCT:	Projector
BRAND NAME:	miroir, Brookstone
MODEL NO.:	U5
ADDITIONAL NO.:	M400A, M400, 318490
APPLICANT:	SZ Telstar CO.,LTD
STANDARDS:	FCC Part 2 (Section 2.1091)
	KDB 447498 D01
	IEEE C95.1

NOTE:

1. Additional models M400A, M400, 318490 are identical with the test model U5, except the model number and trade name for marketing purpose.

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/cm^2

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**.

5. ANTENNA GAIN

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

Module 1

Transmitter Circuit	Peak Gain (dBi)	Antenna Type
Chain 0	2 dBi For BT, BT-BLE, WIFI 2.4GHz, WIFI 5GHz	Integral FPCB Antenna
Chain 1	2 dBi For WIFI 2.4GHz(802.11n), WIFI 5GHz	Integral FPCB Antenna

For wifi: 2+10log(n)=2+10log2=2+3.01=5.01dBi

Module 2

Transmitter Circuit	Peak Gain (dBi)	Antenna Type
Chain 0	2 dBi For BT-BLE	Integral FPCB Antenna

6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

For Module 1

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
2402-2480(BT)	3.443	2	20	0.00109	1.0
2402-2480(BT-BLE)	7.228	2	20	**0.00228**	1.0
2412-2462(WLAN)	212.385	5.01	20	**0.13392**	1.0
5180-5240 (WIFI 5GHz)	40.926	5.01	20	0.02581	1.0
5745-5825 (WIFI 5GHz)	25.763	5.01	20	0.01625	1.0

For Module 2

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
2402-2480(BT-BLE)	6.779	2	20	0.00214	1.0

CONCLUSION:

The module 1 and module 2 can transmit simultaneously, but WIFI 2.4GHz and WIFI 5GHz can not transmit simultaneously, the formula of calculated the MPE is:

$CPD_1 / LPD_1 + CPD_2 / LPD_2$ + ……etc. < 1
CPD = Calculation power density
LPD = Limit of power density

Therefore, the worst-case situation is 0.00228 / 1 + 0.13392 / 1+0.00214 / 1= 0.13834, which is less than “1”. This confirmed that the device comply with FCC 1.1310 MPE limit.

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