

# FCC TEST REPORT

For

Shenzhen TrustFire Technology Co., LTD

Product Name : T62 flashlight

Trademark : TrustFire

Model Number : T62

Prepared For : Shenzhen TrustFire Technology Co., LTD

Address : No. 12 Shouli Binhe Road, Center of the Communities,  
Pingdi Street, Longgang District, Shenzhen

Report No. : LST190678036FR

Testing laboratory : Shenzhen LST Technology Co., Ltd.

Address : Huichao Building, Yintian Industry zone, Bao'an  
District, Shenzhen, Guangdong P.R. China

**Shenzhen LST Testing Co., Ltd.**

Applicant : Shenzhen TrustFire Technology Co., LTD  
Address : No. 12 Shouli Binhe Road, Center of the Communities, Pingdi Street,  
Longgang District, Shenzhen  
Manufacturer : Shenzhen TrustFire Technology Co., LTD  
Address : No. 12 Shouli Binhe Road, Center of the Communities, Pingdi Street,  
Longgang District, Shenzhen  
EUT : T62 flashlight  
Model Number : T62  
Trademark: : TrustFire  
Test Date : Jun .19, 2019 - Jun. 25, 2019  
Date of Report : Jun. 25, 2019  
**Test Result:** : The equipment under test was found to be compliance with the  
requirements of the standards applied.

## Test Procedure Used:

FCC Part 15 B

ANSI C63.4:2014

Tested by (name + signature):



Reviewed by (name + signature):



Approved by (name + signature)



This test report is based on a single evaluation of one sample of above mentioned products. The test results in the report only apply to the tested sample. It is not permitted to be duplicated in extracts without written approval of Shenzhen LST Technology Co., Ltd.

## 1. GENERAL INFORMATION

### 1.1. Description of Device (EUT)

EUT : T62 flashlight  
Trademark : TrustFire  
Model Number : T62  
Power Supply : Input:DC 8.4V,3.5A  
                  : Output:DC 5.8V,4.3A

### 1.2. Tested System Details

None.

### 1.3. Test Uncertainty

Conducted Emission Uncertainty :  $\pm 1.82$  dB

Radiated Emission Uncertainty :  $\pm 2.51$  dB

### 1.4. Test Facility

Site Description :

Name of Firm : Shenzhen LST Technology Co., Ltd.

Address : Huichao Building, Yintian Industry zone, Bao'an  
          : District, Shenzhen, Guangdong P.R. China

## 2. TEST INSTRUMENT USED

### For Conducted Emission at the mains terminals Test

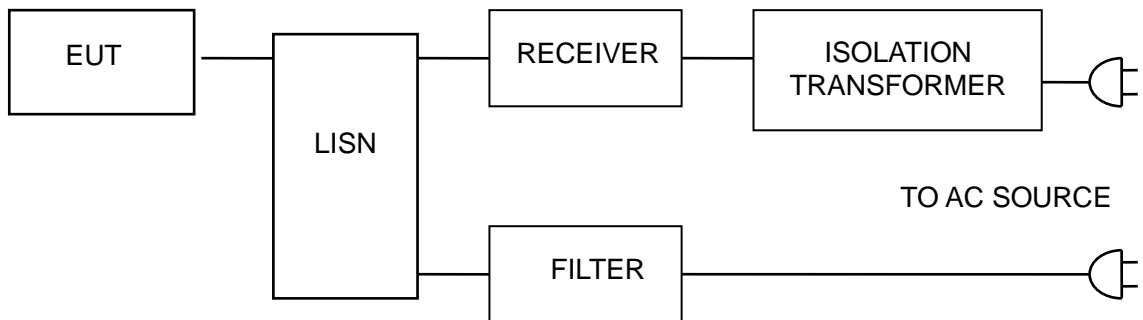
| Conducted Emission Test ( A --- site) |              |          |         |               |               |
|---------------------------------------|--------------|----------|---------|---------------|---------------|
| Equipment                             | Manufacturer | Model#   | Serial# | Last Cal.     | Next Cal.     |
| 843 Shielded Room                     | ChengYu      | 843 Room | 843     | Aug. 25, 2018 | Aug. 24, 2019 |
| EMI Receiver                          | R&S          | ESCI     | 101421  | Aug. 27, 2018 | Aug. 26, 2019 |
| LISN                                  | Schwarzbeck  | NSLK8127 | 8127739 | Sep. 07, 2018 | Sep. 06, 2019 |
| Attenuator                            | R&S          | ESH3-Z2  | LST021E | Aug. 25, 2018 | Aug. 24, 2019 |
| 843 Cable 1#                          | FUJIKURA     | 843C1#   | 001     | Aug. 25, 2018 | Aug. 24, 2019 |

### For Radiated Emission Test

| Radiation Emission Test (966 chamber) |              |           |               |               |               |
|---------------------------------------|--------------|-----------|---------------|---------------|---------------|
| Equipment                             | Manufacturer | Model#    | Serial#       | Last Cal.     | Next Cal.     |
| 966 chamber                           | ChengYu      | 966 Room  | 966           | Aug. 25, 2018 | Aug. 24, 2019 |
| Spectrum Analyzer                     | Agilent      | E4407B    | MY45109572    | Aug. 27, 2018 | Aug. 26, 2019 |
| Amplifier                             | Schwarzbeck  | BBV9743   | 9743-119      | Aug. 25, 2018 | Aug. 24, 2019 |
| Amplifier                             | Schwarzbeck  | BBV9718   | 9718-270      | Aug. 25, 2018 | Aug. 24, 2019 |
| Log-periodic Antenna                  | Schwarzbeck  | VULB9160  | VULB9160-3369 | Sep. 07, 2018 | Sep. 06, 2019 |
| EMI Receiver                          | R&S          | ESCI      | 101421        | Aug. 27, 2018 | Aug. 26, 2019 |
| Horn Antenna                          | Schwarzbeck  | BBHA9120D | 9120D-1275    | Aug. 25, 2018 | Aug. 24, 2019 |
| 966 Cable 1#                          | CHENGYU      | 966       | 004           | Aug. 25, 2018 | Aug. 24, 2019 |
| 966 Cable 2#                          | CHENGYU      | 966       | 003           | Aug. 25, 2018 | Aug. 24, 2019 |

### 3. CONDUCTED EMISSION AT THE MAINS TERMINALS TEST

#### 1.1. Block Diagram Of Test Setup



#### 1.2. Test Standard

FCC PART 15 B

#### 1.3. Power Line Conducted Emission Limit

| Frequency<br>MHz | Limits dB(μV)    |               |
|------------------|------------------|---------------|
|                  | Quasi-peak Level | Average Level |
| 0.15 ~ 0.50      | 66 ~ 56*         | 56 ~ 46*      |
| 0.50 ~ 5.00      | 56               | 46            |
| 5.00 ~ 30.00     | 60               | 50            |

Notes: 1. \*Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

#### 1.4. EUT Configuration on Test

The following equipments are installed on conducted emission test to meet FCC PART 15 B requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

#### 1.5. Operating Condition of EUT

3.5.1 Setup the EUT and simulators as shown in Section 3.1.

3.5.2 Turn on the power of all equipments.

3.5.3 Let the EUT work in test modes and test it.

## 1.6. Test Procedure

The EUT is put on the ground and connected to the AC mains through a Artificial Mains Network (AMN). This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are checked to find out the maximum conducted emission levels according to the **FCC PART 15 B** regulations during conducted emission test.

The bandwidth of the test receiver (R&S Test Receiver ESCI) is set at 10KHz.

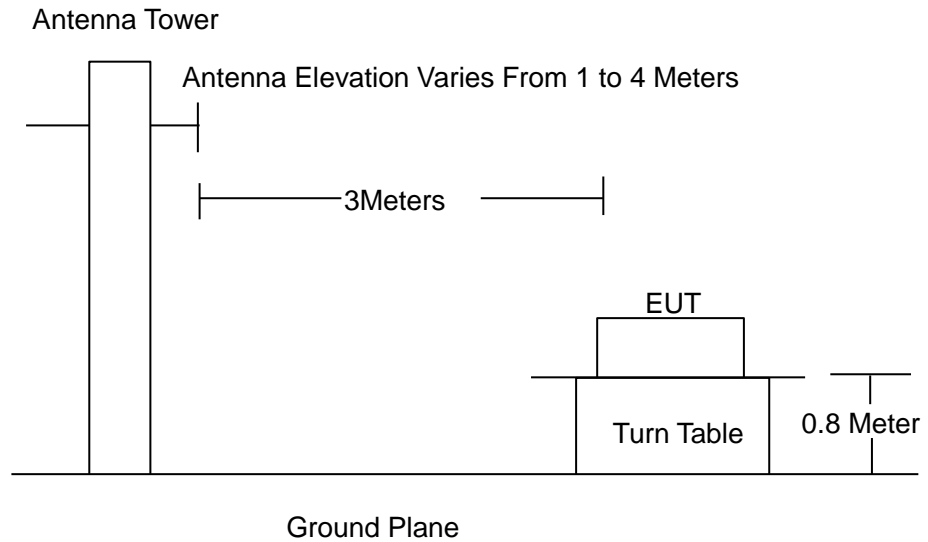
The frequency range from 150 KHz to 30 MHz is investigated.

## 1.7. Test Result

The EUT is powered by the DC only, the test item is not applicable.

## 4. RADIATION EMISSION TEST

### 2.1. Block Diagram of Test Setup



### 2.2. Test Standard

FCC PART 15 B

### 2.3. Radiation Limit

| FREQUENCY (MHz) | DISTANCE (Meters) | FIELD STRENGTHS LIMITS (dB $\mu$ V/m) |
|-----------------|-------------------|---------------------------------------|
| 30 ~ 88         | 3                 | 40.0                                  |
| 88 ~ 216        | 3                 | 43.5                                  |
| 216 ~ 960       | 3                 | 46.0                                  |
| 960 ~ 1000      | 3                 | 54.0                                  |

### 2.4. EUT Configuration on Test

The FCC PART 15 B regulations test method must be used to find the maximum emission during radiated emission test.

The configuration of EUT is the same as used in conducted emission test. Please refer to Section 2.2.

### 2.5. Operating Condition of EUT

Same as conducted emission test, which is listed in Section 2.2 except the test set up replaced as Section 4.1.

## 2.6. Test Procedure

The EUT and its simulators are placed on a turned table that is 0.8 meter above the ground. The turned 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 that is mounted on the antenna tower. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated biconical and log periodical 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, the interface cable must be manipulated according to FCC PART 15 B on radiated emission test.

The bandwidth setting on the field strength meter (R&S Test Receiver ESCI) is set at 120KHz below 1GHz, set at 1MHz above 1GHz

The frequency range from 30MHz to 1000MHz is checked.

The highest frequency of the internal sources of the EUT was below 108MHz, so the measurement was only made up to 1GHz.

## 2.7. Test Result

**PASS**

Please refer to the following page.



| Radiation Emission Test Data |         |                    |             |
|------------------------------|---------|--------------------|-------------|
| Temperature:                 | 24.5 °C | Relative Humidity: | 54%         |
| Pressure:                    | 1009hPa | Phase :            | Horizontal  |
| Test Voltage :               | DC 8.4V | Test Mode:         | Normal Mode |

### Radiated Emission Measurement

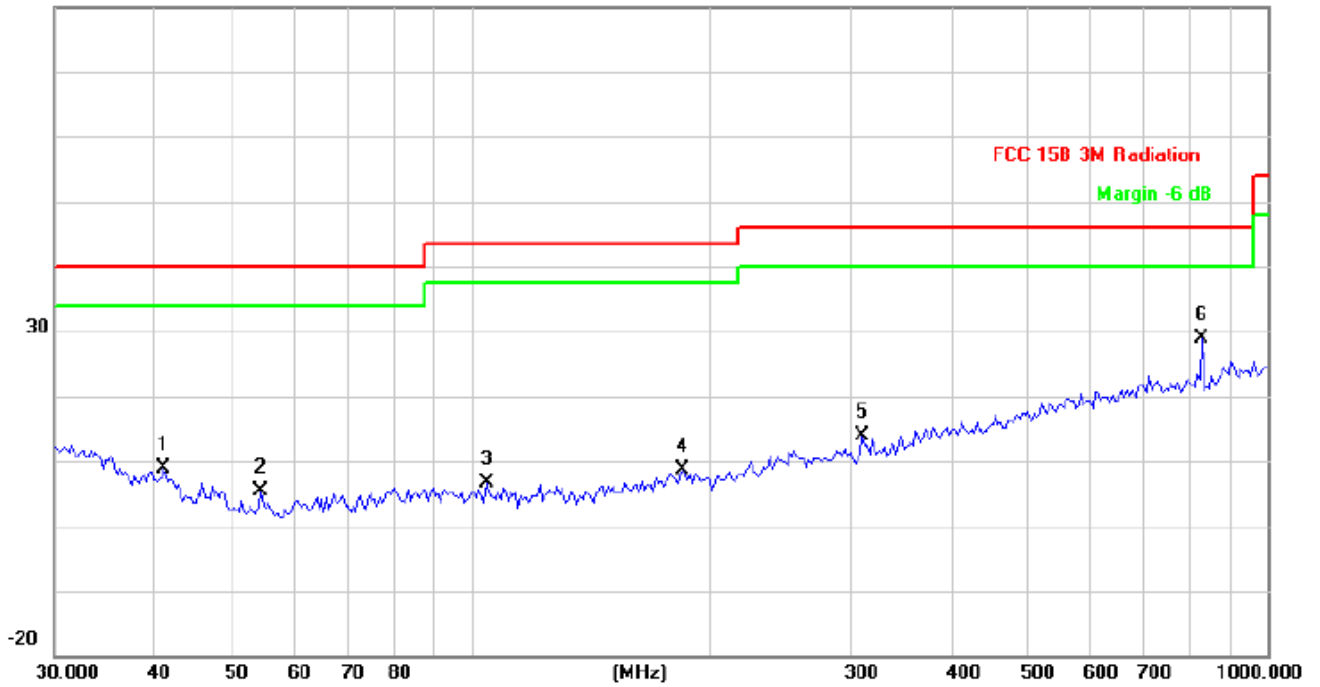
File :6

Data :#13

Date: 2019/6/20

Time: 18:45:10

80.0 dBuV/m



| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   | Antenna Height | Table Degree |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|---------|
|     |     | MHz      | dBuV          | dB/m           | dBuV/m      | dBuV/m | dB     | cm             | degree       | Comment |
| 1   |     | 41.1320  | 28.52         | -19.74         | 8.78        | 40.00  | -31.22 |                |              | peak    |
| 2   |     | 54.4516  | 29.21         | -23.83         | 5.38        | 40.00  | -34.62 |                |              | peak    |
| 3   |     | 104.5361 | 28.94         | -22.29         | 6.65        | 43.50  | -36.85 |                |              | peak    |
| 4   |     | 184.4898 | 28.71         | -19.97         | 8.74        | 43.50  | -34.76 |                |              | peak    |
| 5   |     | 309.9977 | 29.52         | -15.67         | 13.85       | 46.00  | -32.15 |                |              | peak    |
| 6   | *   | 827.4934 | 34.40         | -5.45          | 28.95       | 46.00  | -17.05 |                |              | peak    |

\*:Maximum data    x:Over limit    !:over margin

| Radiation Emission Test Data |         |                    |             |
|------------------------------|---------|--------------------|-------------|
| Temperature:                 | 24.5 °C | Relative Humidity: | 54%         |
| Pressure:                    | 1009hPa | Phase :            | Vertical    |
| Test Voltage :               | DC 8.4V | Test Mode:         | Normal Mode |

### Radiated Emission Measurement

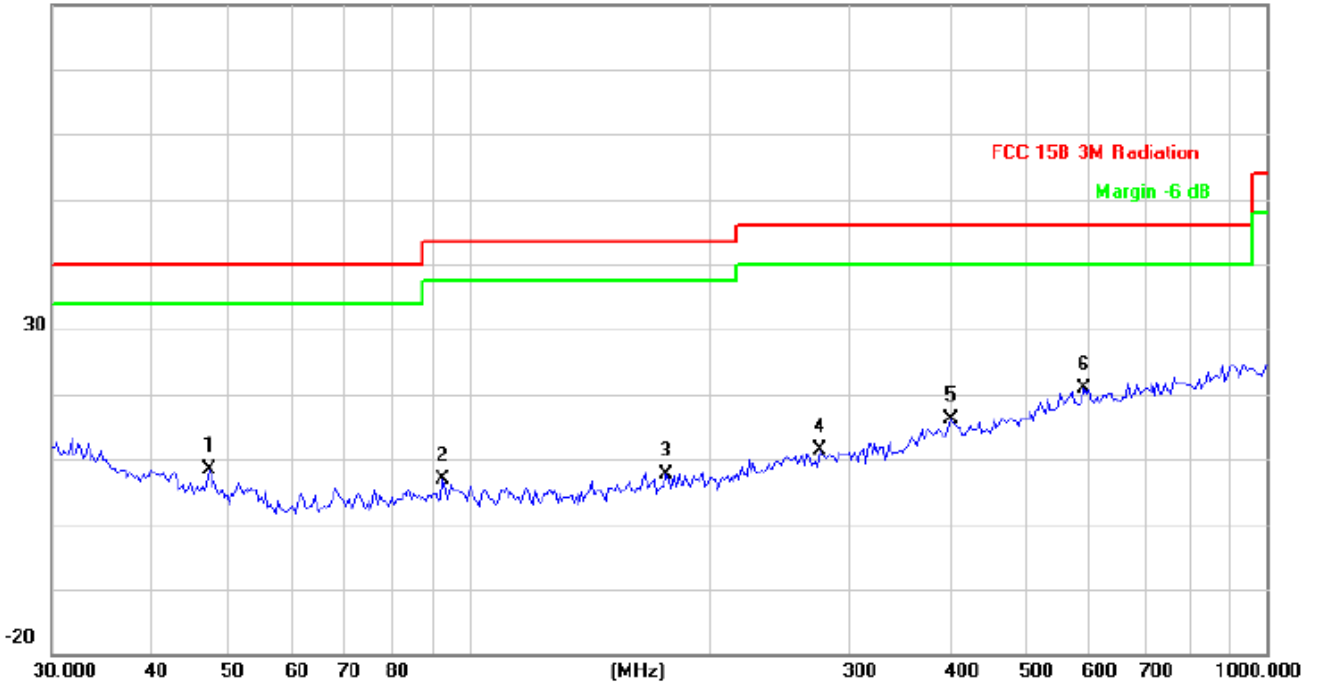
File :6

Data :#14

Date: 2019/6/20

Time: 18:45:30

80.0 dBuV/m



| No. | Mk. | Freq.    | Reading Level | Correct Factor | Measurement | Limit  | Over   | Antenna Height | Table Degree |         |
|-----|-----|----------|---------------|----------------|-------------|--------|--------|----------------|--------------|---------|
|     |     | MHz      | dBuV          | dB/m           | dBuV/m      | dBuV/m | dB     | cm             | degree       | Comment |
| 1   |     | 47.3255  | 30.89         | -22.45         | 8.44        | 40.00  | -31.56 |                |              | peak    |
| 2   |     | 92.7871  | 28.85         | -22.05         | 6.80        | 43.50  | -36.70 |                |              | peak    |
| 3   |     | 176.8878 | 27.94         | -20.23         | 7.71        | 43.50  | -35.79 |                |              | peak    |
| 4   |     | 275.1570 | 27.97         | -16.52         | 11.45       | 46.00  | -34.55 |                |              | peak    |
| 5   |     | 401.8385 | 28.10         | -12.08         | 16.02       | 46.00  | -29.98 |                |              | peak    |
| 6   | *   | 590.9737 | 29.23         | -8.29          | 20.94       | 46.00  | -25.06 |                |              | peak    |

\*:Maximum data    x:Over limit    !:over margin

**ANNEX A:**  
**Photo-documentation**

**EUT Photo 1**



**EUT Photo 2**



EUT Photo 3



EUT Photo 4



**EUT Photo 5**

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