

|                    |                                     |                          |                |
|--------------------|-------------------------------------|--------------------------|----------------|
| <b>EUT</b>         | Smart Water Kettle                  | <b>Model Name</b>        | QKY-BOIL-SLV   |
| <b>Temperature</b> | 25°C                                | <b>Relative Humidity</b> | 55.4%          |
| <b>Pressure</b>    | 960hPa                              | <b>Test Voltage</b>      | Normal Voltage |
| <b>Test Mode</b>   | 802.11b with date rate 1<br>2437MHZ | <b>Antenna</b>           | Horizontal     |

| Frequency<br>(MHz) | Meter Reading<br>(dBμV) | Factor<br>(dB) | Emission Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Value Type |
|--------------------|-------------------------|----------------|----------------------------|--------------------|----------------|------------|
| 4874.066           | 46.99                   | 3.75           | 50.74                      | 74.00              | -23.26         | peak       |
| 4874.066           | 42.72                   | 3.75           | 46.47                      | 54.00              | -7.53          | AVG        |
| 7311.099           | 40.75                   | 8.16           | 48.91                      | 74.00              | -25.09         | peak       |
| 7311.099           | 36.12                   | 8.16           | 44.28                      | 54.00              | -9.72          | AVG        |
|                    |                         |                |                            |                    |                |            |
|                    |                         |                |                            |                    |                |            |

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

|                    |                                     |                          |                |
|--------------------|-------------------------------------|--------------------------|----------------|
| <b>EUT</b>         | Smart Water Kettle                  | <b>Model Name</b>        | QKY-BOIL-SLV   |
| <b>Temperature</b> | 25°C                                | <b>Relative Humidity</b> | 55.4%          |
| <b>Pressure</b>    | 960hPa                              | <b>Test Voltage</b>      | Normal Voltage |
| <b>Test Mode</b>   | 802.11b with date rate 1<br>2437MHZ | <b>Antenna</b>           | Vertical       |

| Frequency<br>(MHz) | Meter Reading<br>(dBμV) | Factor<br>(dB) | Emission Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Value Type |
|--------------------|-------------------------|----------------|----------------------------|--------------------|----------------|------------|
| 4874.066           | 47.97                   | 3.75           | 51.72                      | 74.00              | -22.28         | peak       |
| 4874.066           | 44.86                   | 3.75           | 48.61                      | 54.00              | -5.39          | AVG        |
| 7311.099           | 41.01                   | 8.16           | 49.17                      | 74.00              | -24.83         | peak       |
| 7311.099           | 38.53                   | 8.16           | 46.69                      | 54.00              | -7.31          | AVG        |
|                    |                         |                |                            |                    |                |            |
|                    |                         |                |                            |                    |                |            |

Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

|                    |                                     |                          |                |
|--------------------|-------------------------------------|--------------------------|----------------|
| <b>EUT</b>         | Smart Water Kettle                  | <b>Model Name</b>        | QKY-BOIL-SLV   |
| <b>Temperature</b> | 25°C                                | <b>Relative Humidity</b> | 55.4%          |
| <b>Pressure</b>    | 960hPa                              | <b>Test Voltage</b>      | Normal Voltage |
| <b>Test Mode</b>   | 802.11b with date rate 1<br>2462MHZ | <b>Antenna</b>           | Horizontal     |

| Frequency<br>(MHz)                                    | Meter Reading<br>(dBμV) | Factor<br>(dB) | Emission Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Value Type |
|-------------------------------------------------------|-------------------------|----------------|----------------------------|--------------------|----------------|------------|
| 4924.066                                              | 46.91                   | 3.81           | 50.72                      | 74.00              | -23.28         | peak       |
| 4924.066                                              | 43.80                   | 3.81           | 47.61                      | 54.00              | -6.39          | AVG        |
| 7386.099                                              | 38.47                   | 8.19           | 46.66                      | 74.00              | -27.34         | peak       |
| 7386.099                                              | 36.63                   | 8.19           | 44.82                      | 54.00              | -9.18          | AVG        |
|                                                       |                         |                |                            |                    |                |            |
|                                                       |                         |                |                            |                    |                |            |
| Remark:                                               |                         |                |                            |                    |                |            |
| Factor = Antenna Factor + Cable Loss – Pre-amplifier. |                         |                |                            |                    |                |            |

|                    |                                     |                          |                |
|--------------------|-------------------------------------|--------------------------|----------------|
| <b>EUT</b>         | Smart Water Kettle                  | <b>Model Name</b>        | QKY-BOIL-SLV   |
| <b>Temperature</b> | 25°C                                | <b>Relative Humidity</b> | 55.4%          |
| <b>Pressure</b>    | 960hPa                              | <b>Test Voltage</b>      | Normal Voltage |
| <b>Test Mode</b>   | 802.11b with date rate 1<br>2462MHZ | <b>Antenna</b>           | Vertical       |

| Frequency<br>(MHz)                                    | Meter Reading<br>(dBμV) | Factor<br>(dB) | Emission Level<br>(dBμV/m) | Limits<br>(dBμV/m) | Margin<br>(dB) | Value Type |
|-------------------------------------------------------|-------------------------|----------------|----------------------------|--------------------|----------------|------------|
| 4924.066                                              | 46.91                   | 3.81           | 50.72                      | 74.00              | -23.28         | peak       |
| 4924.066                                              | 44.80                   | 3.81           | 48.61                      | 54.00              | -5.39          | AVG        |
| 7386.099                                              | 38.87                   | 8.19           | 47.06                      | 74.00              | -26.94         | peak       |
| 7386.099                                              | 37.36                   | 8.19           | 45.55                      | 54.00              | -8.45          | AVG        |
|                                                       |                         |                |                            |                    |                |            |
|                                                       |                         |                |                            |                    |                |            |
| Remark:                                               |                         |                |                            |                    |                |            |
| Factor = Antenna Factor + Cable Loss – Pre-amplifier. |                         |                |                            |                    |                |            |

## RESULT: PASS

### Note:

Other emissions from 1G to 25 GHz are considered as ambient noise. No recording in the test report.

Factor = Antenna Factor + Cable loss - Amplifier gain, Over=Measure-Limit.

The "Factor" value can be calculated automatically by software of measurement system.

All test modes had been pre-tested. The 802.11b mode is the worst case and recorded in the report.

## 12. BAND EDGE EMISSION

### 12.1. MEASUREMENT PROCEDURE

Radiated restricted band edge measurements

The radiated restricted band edge measurements are measured with an EMI test receiver connected to the receive antenna while the EUT is transmitting

### 12.2. TEST SET-UP

same as 11.2

#### Note:

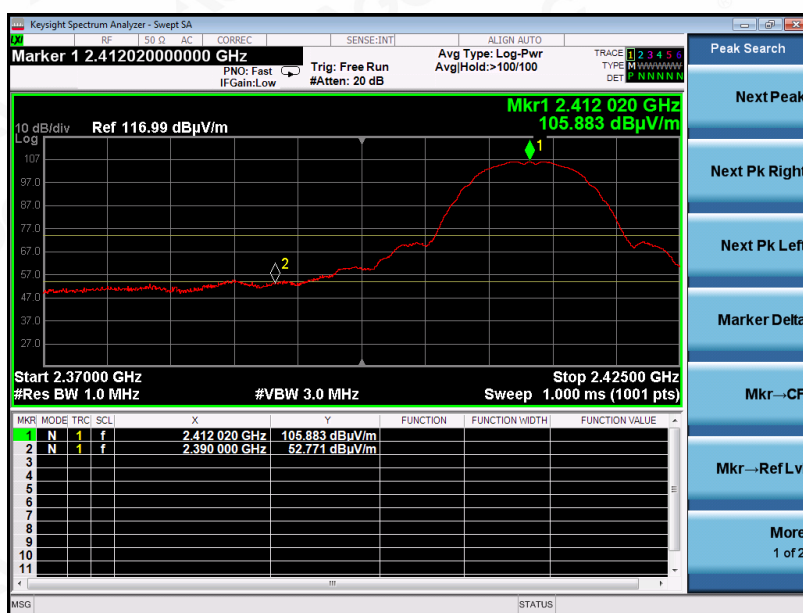
1. Factor=Antenna Factor + Cable loss - Amplifier gain. Field Strength=Factor + Reading level
2. The factor had been edited in the "Input Correction" of the Spectrum Analyzer. So the Amplitude of test plots is equal to Reading level plus the Factor in dB. Use the A dB( $\mu$ V) to represent the Amplitude. Use the F dB( $\mu$ V/m) to represent the Field Strength. So A=F.



### 12.3. TEST RESULT

|             |                                     |                   |                |
|-------------|-------------------------------------|-------------------|----------------|
| EUT         | Smart Water Kettle                  | Model Name        | QKY-BOIL-SLV   |
| Temperature | 25°C                                | Relative Humidity | 55.4%          |
| Pressure    | 960hPa                              | Test Voltage      | Normal Voltage |
| Test Mode   | 802.11b with data rate 1<br>2412MHZ | Antenna           | Horizontal     |

PK



AV



RESULT: PASS

|             |                                     |                   |                |
|-------------|-------------------------------------|-------------------|----------------|
| EUT         | Smart Water Kettle                  | Model Name        | QKY-BOIL-SLV   |
| Temperature | 25°C                                | Relative Humidity | 55.4%          |
| Pressure    | 960hPa                              | Test Voltage      | Normal Voltage |
| Test Mode   | 802.11b with data rate 1<br>2412MHZ | Antenna           | Vertical       |

PK



AV



RESULT: PASS

|             |                                     |                   |                |
|-------------|-------------------------------------|-------------------|----------------|
| EUT         | Smart Water Kettle                  | Model Name        | QKY-BOIL-SLV   |
| Temperature | 25°C                                | Relative Humidity | 55.4%          |
| Pressure    | 960hPa                              | Test Voltage      | Normal Voltage |
| Test Mode   | 802.11b with data rate 1<br>2462MHZ | Antenna           | Horizontal     |

PK



AV



RESULT: PASS

|             |                                     |                   |                |
|-------------|-------------------------------------|-------------------|----------------|
| EUT         | Smart Water Kettle                  | Model Name        | QKY-BOIL-SLV   |
| Temperature | 25°C                                | Relative Humidity | 55.4%          |
| Pressure    | 960hPa                              | Test Voltage      | Normal Voltage |
| Test Mode   | 802.11b with data rate 1<br>2462MHZ | Antenna           | Vertical       |

PK



AV



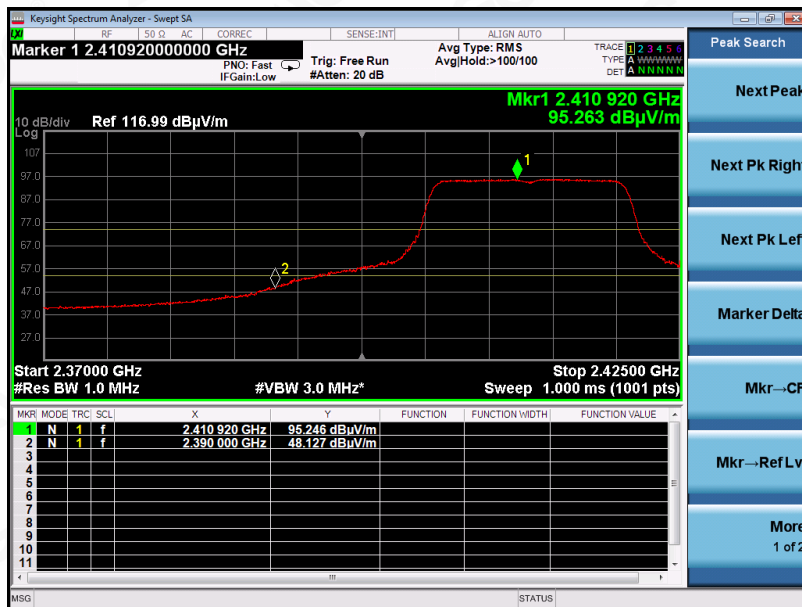
RESULT: PASS

|             |                                     |                   |                |
|-------------|-------------------------------------|-------------------|----------------|
| EUT         | Smart Water Kettle                  | Model Name        | QKY-BOIL-SLV   |
| Temperature | 25°C                                | Relative Humidity | 55.4%          |
| Pressure    | 960hPa                              | Test Voltage      | Normal Voltage |
| Test Mode   | 802.11g with data rate 6<br>2412MHZ | Antenna           | Horizontal     |

PK



AV



RESULT: PASS

|             |                                     |                   |                |
|-------------|-------------------------------------|-------------------|----------------|
| EUT         | Smart Water Kettle                  | Model Name        | QKY-BOIL-SLV   |
| Temperature | 25°C                                | Relative Humidity | 55.4%          |
| Pressure    | 960hPa                              | Test Voltage      | Normal Voltage |
| Test Mode   | 802.11g with data rate 6<br>2412MHZ | Antenna           | Vertical       |

PK



AV



RESULT: PASS

|             |                                     |                   |                |
|-------------|-------------------------------------|-------------------|----------------|
| EUT         | Smart Water Kettle                  | Model Name        | QKY-BOIL-SLV   |
| Temperature | 25°C                                | Relative Humidity | 55.4%          |
| Pressure    | 960hPa                              | Test Voltage      | Normal Voltage |
| Test Mode   | 802.11g with data rate 6<br>2462MHZ | Antenna           | Horizontal     |

PK



AV



RESULT: PASS

|             |                                     |                   |                |
|-------------|-------------------------------------|-------------------|----------------|
| EUT         | Smart Water Kettle                  | Model Name        | QKY-BOIL-SLV   |
| Temperature | 25°C                                | Relative Humidity | 55.4%          |
| Pressure    | 960hPa                              | Test Voltage      | Normal Voltage |
| Test Mode   | 802.11g with data rate 6<br>2462MHZ | Antenna           | Vertical       |

PK



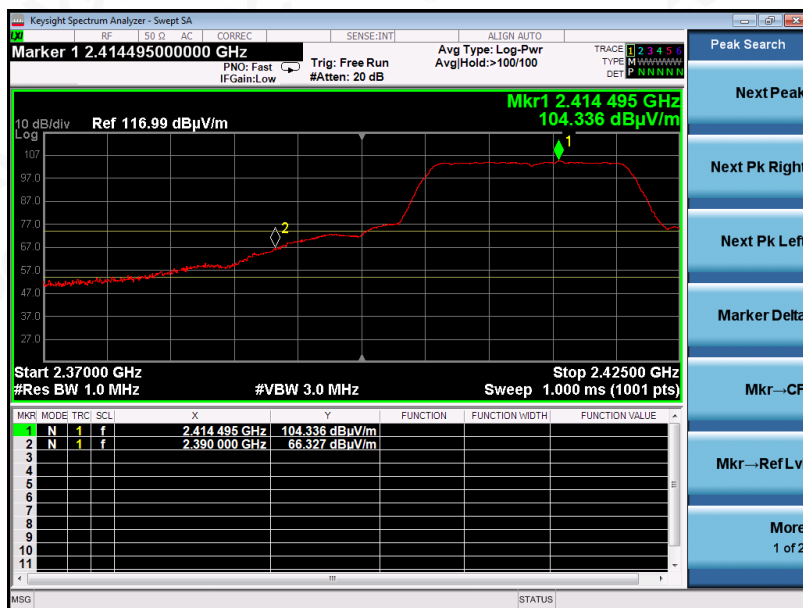
AV



RESULT: PASS

|             |                                          |                   |                |
|-------------|------------------------------------------|-------------------|----------------|
| EUT         | Smart Water Kettle                       | Model Name        | QKY-BOIL-SLV   |
| Temperature | 25°C                                     | Relative Humidity | 55.4%          |
| Pressure    | 960hPa                                   | Test Voltage      | Normal Voltage |
| Test Mode   | 802.11n 20 with data rate 6.5<br>2412MHZ | Antenna           | Horizontal     |

PK



AV



RESULT: PASS

|             |                                          |                   |                |
|-------------|------------------------------------------|-------------------|----------------|
| EUT         | Smart Water Kettle                       | Model Name        | QKY-BOIL-SLV   |
| Temperature | 25°C                                     | Relative Humidity | 55.4%          |
| Pressure    | 960hPa                                   | Test Voltage      | Normal Voltage |
| Test Mode   | 802.11n 20 with data rate 6.5<br>2412MHZ | Antenna           | Vertical       |

PK



AV



RESULT: PASS

|             |                                          |                   |                |
|-------------|------------------------------------------|-------------------|----------------|
| EUT         | Smart Water Kettle                       | Model Name        | QKY-BOIL-SLV   |
| Temperature | 25°C                                     | Relative Humidity | 55.4%          |
| Pressure    | 960hPa                                   | Test Voltage      | Normal Voltage |
| Test Mode   | 802.11n 20 with data rate 6.5<br>2462MHZ | Antenna           | Horizontal     |

PK



AV



RESULT: PASS

|             |                                          |                   |                |
|-------------|------------------------------------------|-------------------|----------------|
| EUT         | Smart Water Kettle                       | Model Name        | QKY-BOIL-SLV   |
| Temperature | 25°C                                     | Relative Humidity | 55.4%          |
| Pressure    | 960hPa                                   | Test Voltage      | Normal Voltage |
| Test Mode   | 802.11n 20 with data rate 6.5<br>2462MHZ | Antenna           | Vertical       |

PK



AV



RESULT: PASS

### 13. FCC LINE CONDUCTED EMISSION TEST

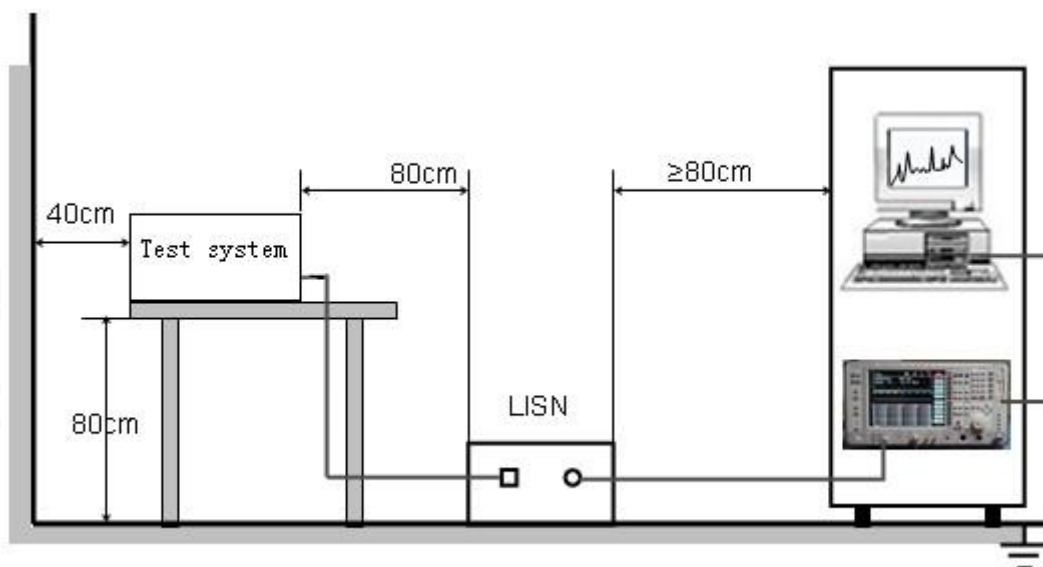
#### 13.1. LIMITS OF LINE CONDUCTED EMISSION TEST

| Frequency     | Maximum RF Line Voltage |                |
|---------------|-------------------------|----------------|
|               | Q.P.( dBuV)             | Average( dBuV) |
| 150kHz-500kHz | 66-56                   | 56-46          |
| 500kHz-5MHz   | 56                      | 46             |
| 5MHz-30MHz    | 60                      | 50             |

**Note:**

1. The lower limit shall apply at the transition frequency.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50MHz.

#### 13.2. BLOCK DIAGRAM OF TEST SETUP



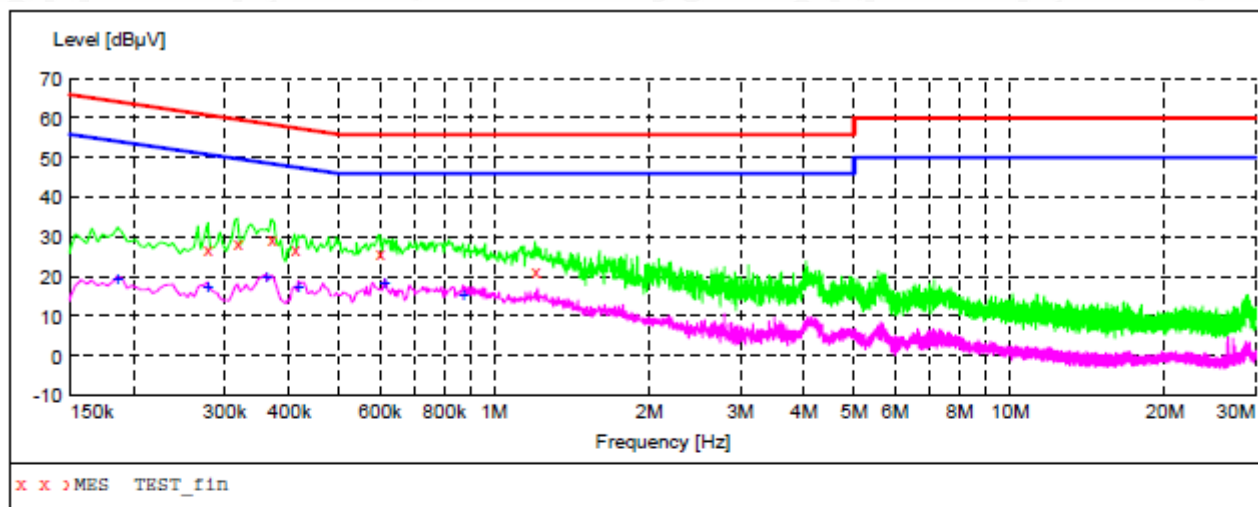
### 13.3. PROCEDURE OF LINE CONDUCTED EMISSION TEST

- (1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- (2) Support equipment, if needed, was placed as per ANSI C63.10.
- (3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- (4) The EUT received DC 5V power from adapter which received AC120V/60Hz power by a LISN.
- (5) The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- (6) Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- (7) During the above scans, the emissions were maximized by cable manipulation.
- (8) A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions.
- (9) Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less -2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.



### 13.4. TEST RESULT OF LINE CONDUCTED EMISSION TEST

#### LINE CONDUCTED EMISSION TEST-L1



#### MEASUREMENT RESULT: "TEST\_fin"

9/10/2019 7:37PM

| Frequency<br>MHz | Level<br>dBμV | Transd<br>dB | Limit<br>dBμV | Margin<br>dB | Detector | Line | PE  |
|------------------|---------------|--------------|---------------|--------------|----------|------|-----|
| 0.278000         | 27.20         | 10.9         | 61            | 33.7         | QP       | L1   | FLO |
| 0.318000         | 28.60         | 10.8         | 60            | 31.2         | QP       | L1   | FLO |
| 0.370000         | 29.80         | 10.5         | 59            | 28.7         | QP       | L1   | FLO |
| 0.410000         | 27.20         | 10.4         | 58            | 30.4         | QP       | L1   | FLO |
| 0.598000         | 26.30         | 10.7         | 56            | 29.7         | QP       | L1   | FLO |
| 1.202000         | 21.40         | 11.5         | 56            | 34.6         | QP       | L1   | FLO |

#### MEASUREMENT RESULT: "TEST\_fin2"

9/10/2019 7:37PM

| Frequency<br>MHz | Level<br>dBμV | Transd<br>dB | Limit<br>dBμV | Margin<br>dB | Detector | Line | PE  |
|------------------|---------------|--------------|---------------|--------------|----------|------|-----|
| 0.186000         | 19.30         | 10.9         | 54            | 34.9         | AV       | L1   | FLO |
| 0.278000         | 17.50         | 10.9         | 51            | 33.4         | AV       | L1   | FLO |
| 0.362000         | 20.00         | 10.5         | 49            | 28.7         | AV       | L1   | FLO |
| 0.418000         | 17.60         | 10.5         | 48            | 29.9         | AV       | L1   | FLO |
| 0.614000         | 18.50         | 10.7         | 46            | 27.5         | AV       | L1   | FLO |
| 0.870000         | 15.50         | 11.0         | 46            | 30.5         | AV       | L1   | FLO |

**RESULT: PASS**


Attestation of Global Compliance

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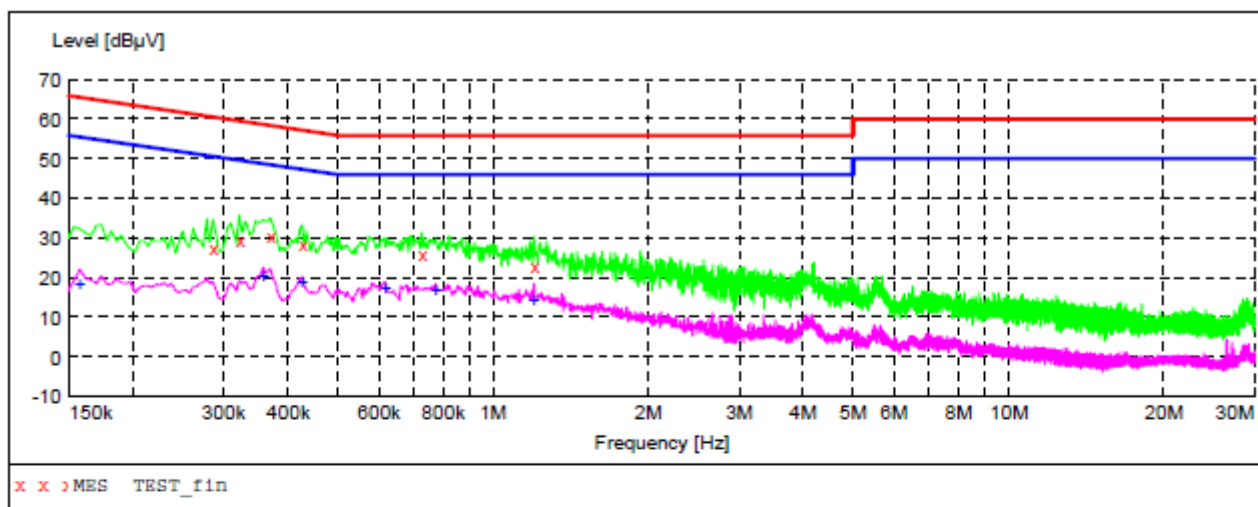
Add: 2/F., Building 2, Sanwei Chaxi Industrial Park, Sanwei Community,  
Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088

E-mail: agc@agc-cert.com

Service Hotline: 400 089 2118

# LINE CONDUCTED EMISSION TEST-N



## MEASUREMENT RESULT: "TEST\_fin"

9/10/2019 7:34PM

| Frequency<br>MHz | Level<br>dBμV | Transd<br>dB | Limit<br>dBμV | Margin<br>dB | Detector | Line | PE  |
|------------------|---------------|--------------|---------------|--------------|----------|------|-----|
| 0.286000         | 27.60         | 10.9         | 61            | 33.0         | QP       | N    | FLO |
| 0.322000         | 29.80         | 10.8         | 60            | 29.9         | QP       | N    | FLO |
| 0.370000         | 30.80         | 10.5         | 59            | 27.7         | QP       | N    | FLO |
| 0.426000         | 28.40         | 10.6         | 57            | 28.9         | QP       | N    | FLO |
| 0.726000         | 26.30         | 10.5         | 56            | 29.7         | QP       | N    | FLO |
| 1.202000         | 23.00         | 11.5         | 56            | 33.0         | QP       | N    | FLO |

## MEASUREMENT RESULT: "TEST\_fin2"

9/10/2019 7:34PM

| Frequency<br>MHz | Level<br>dBμV | Transd<br>dB | Limit<br>dBμV | Margin<br>dB | Detector | Line | PE  |
|------------------|---------------|--------------|---------------|--------------|----------|------|-----|
| 0.158000         | 18.30         | 10.8         | 56            | 37.3         | AV       | N    | FLO |
| 0.358000         | 20.50         | 10.5         | 49            | 28.3         | AV       | N    | FLO |
| 0.426000         | 18.80         | 10.6         | 47            | 28.5         | AV       | N    | FLO |
| 0.618000         | 17.60         | 10.7         | 46            | 28.4         | AV       | N    | FLO |
| 0.774000         | 17.10         | 10.6         | 46            | 28.9         | AV       | N    | FLO |
| 1.202000         | 14.40         | 11.5         | 46            | 31.6         | AV       | N    | FLO |



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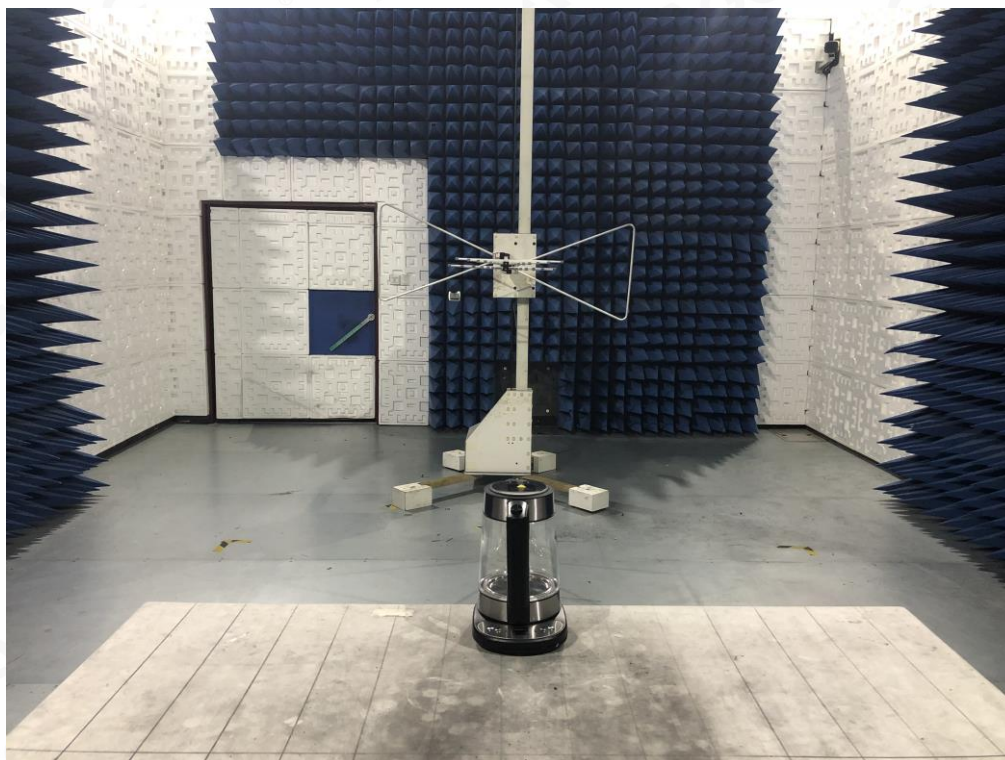
Tel: +86-755 2523 4088

E-mail: agc@agc-cert.com

Service Hotline: 400 089 2118

## APPENDIX A: PHOTOGRAPHS OF TEST SETUP

### FCC RADIATED EMISSION TEST SETUP BELOW 1GHZ



FCC RADIATED EMISSION TEST SETUP ABOVE 1GHZ



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E-mail: agc@agc-cert.com

Service Hotline:400 089 2118

**FCC CONDUCTED EMISSION TEST SETUP**

## APPENDIX B: PHOTOGRAPHS OF EUT

### ALL VIEW OF EUT





TOP VIEW OF EUT



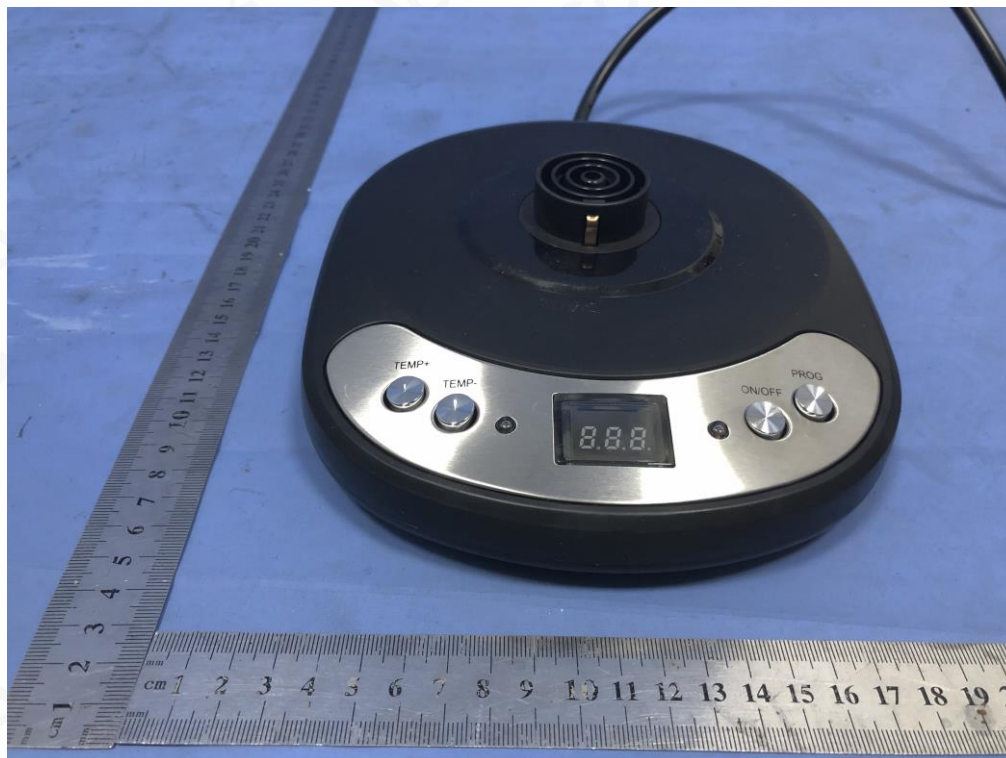
**BOTTOM VIEW OF EUT**



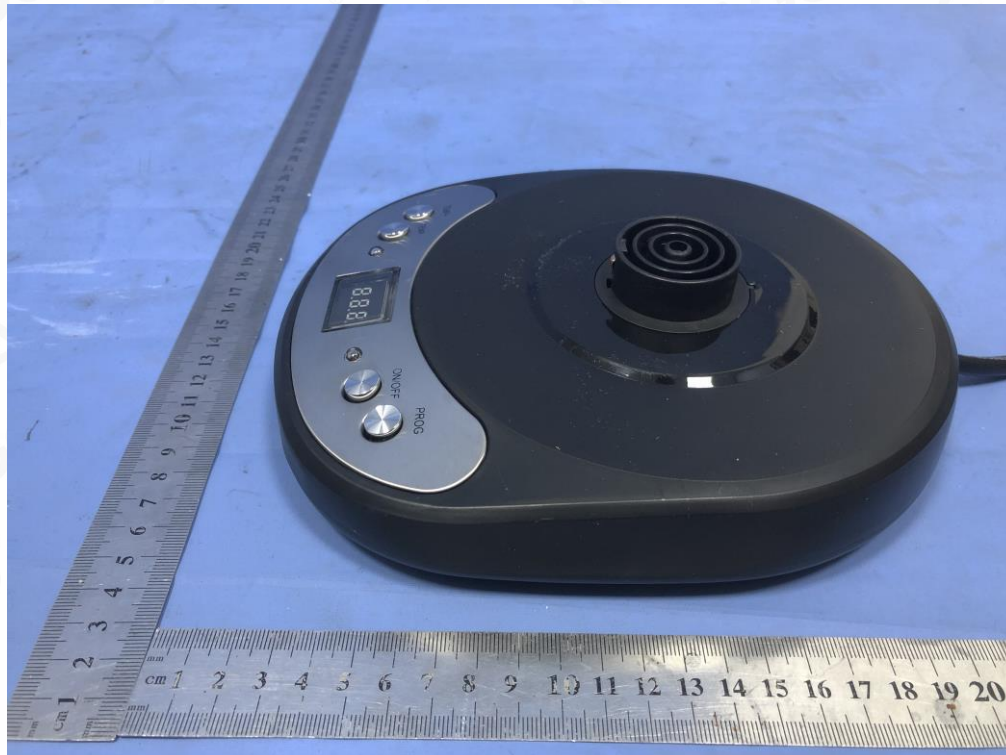
**FRONT VIEW OF EUT**



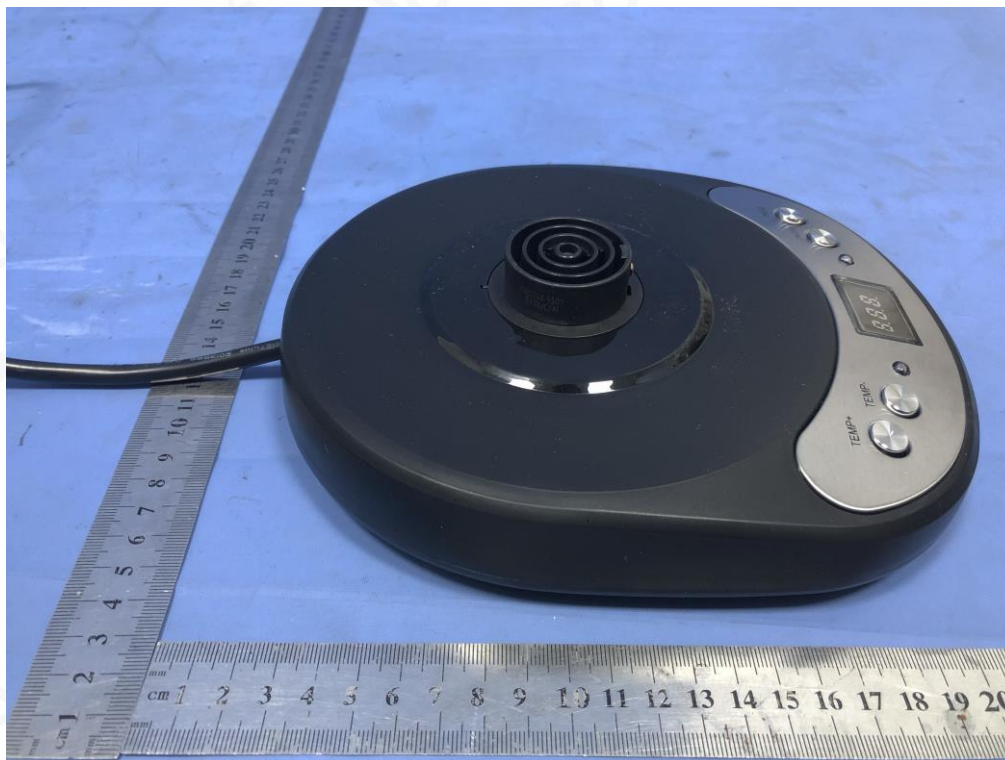
BACK VIEW OF EUT



LEFT VIEW OF EUT



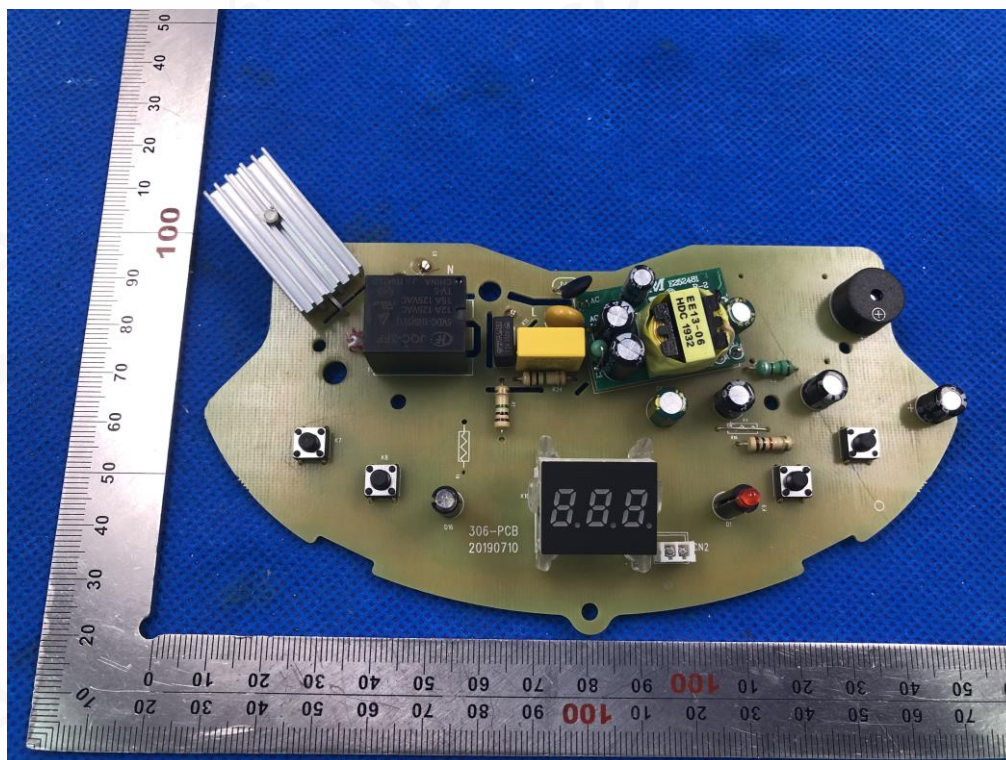
RIGHT VIEW OF EUT



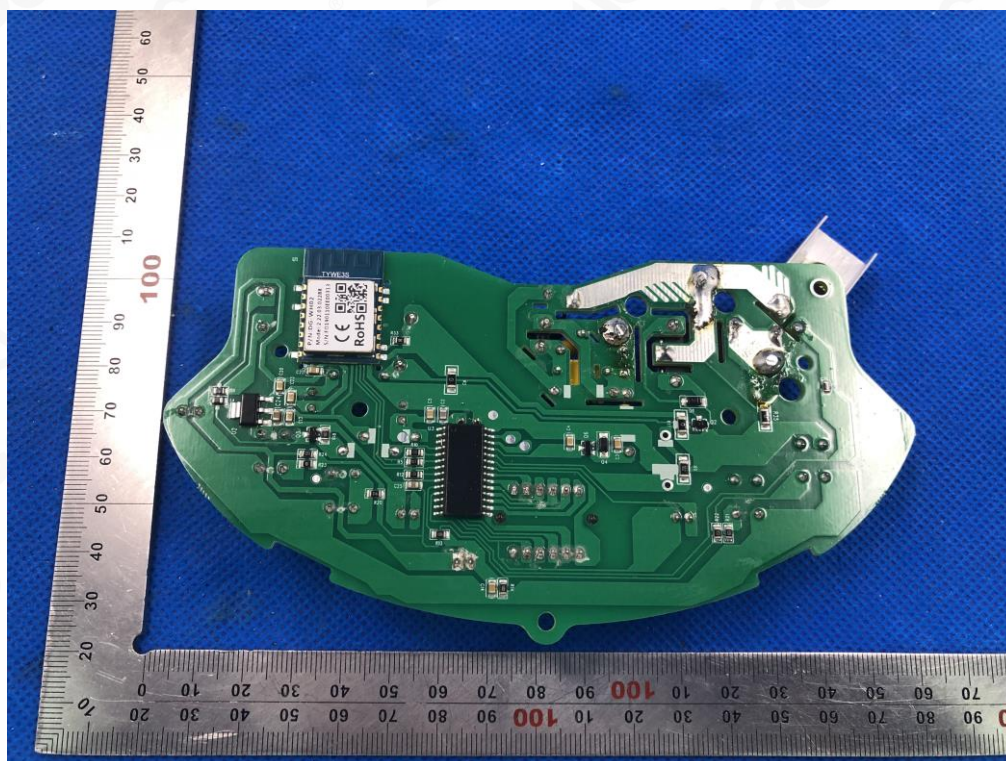
OPEN VIEW OF EUT-1



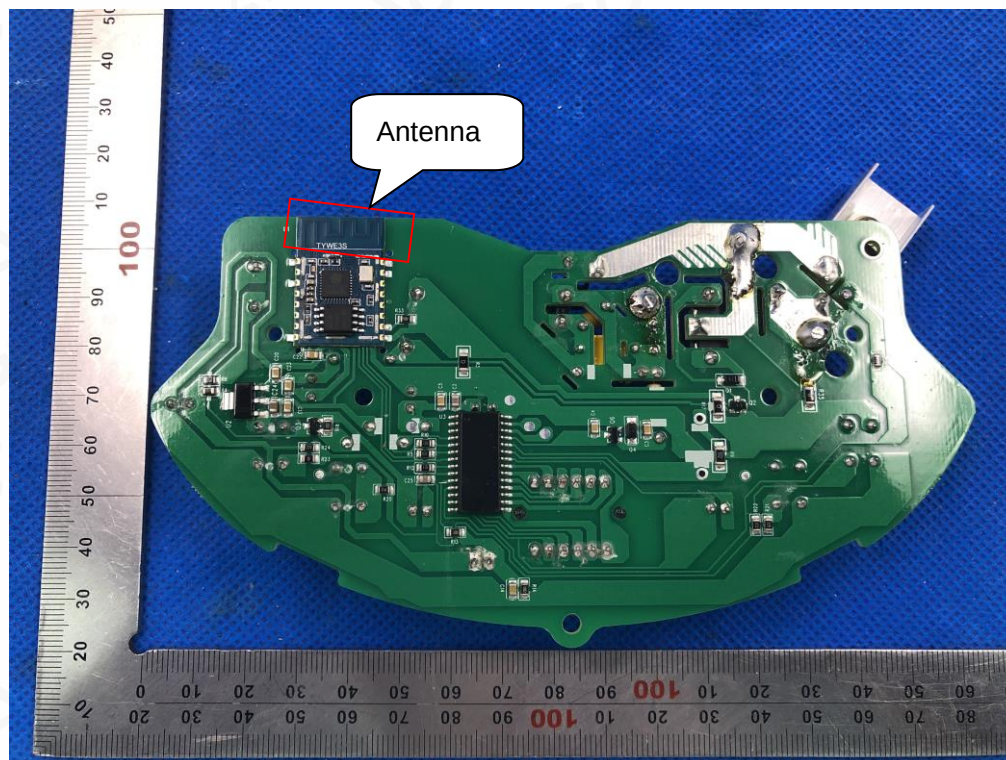
INTERNAL VIEW OF EUT-1



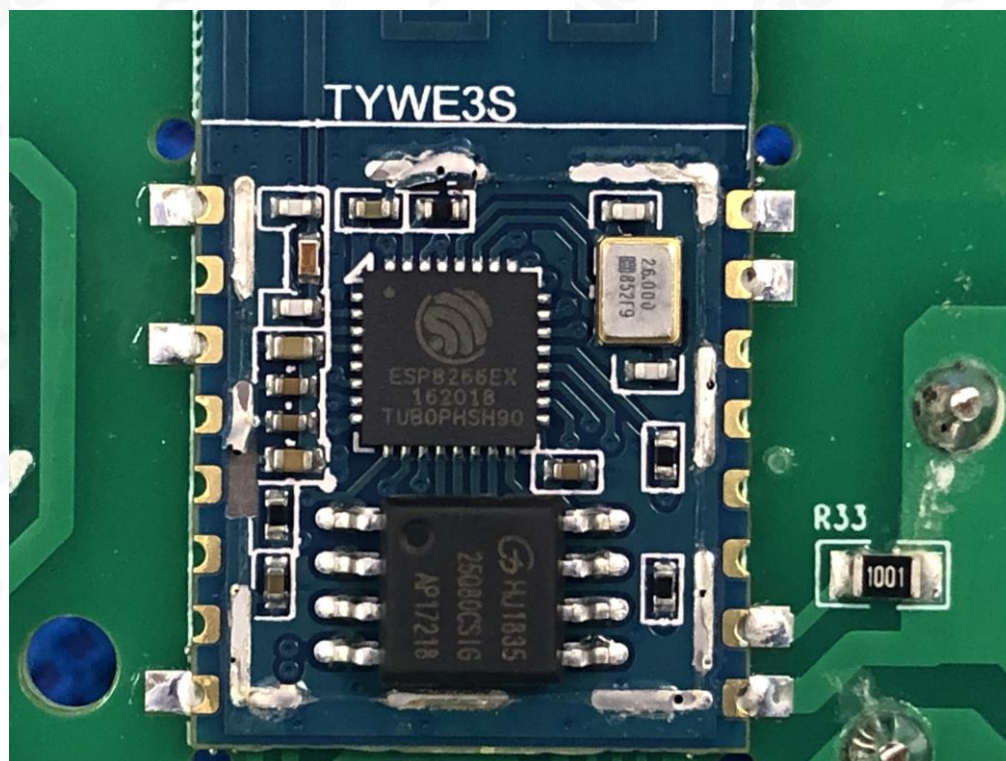
INTERNAL VIEW OF EUT-2



INTERNAL VIEW OF EUT-3



INTERNAL VIEW OF EUT-4



----END OF REPORT----