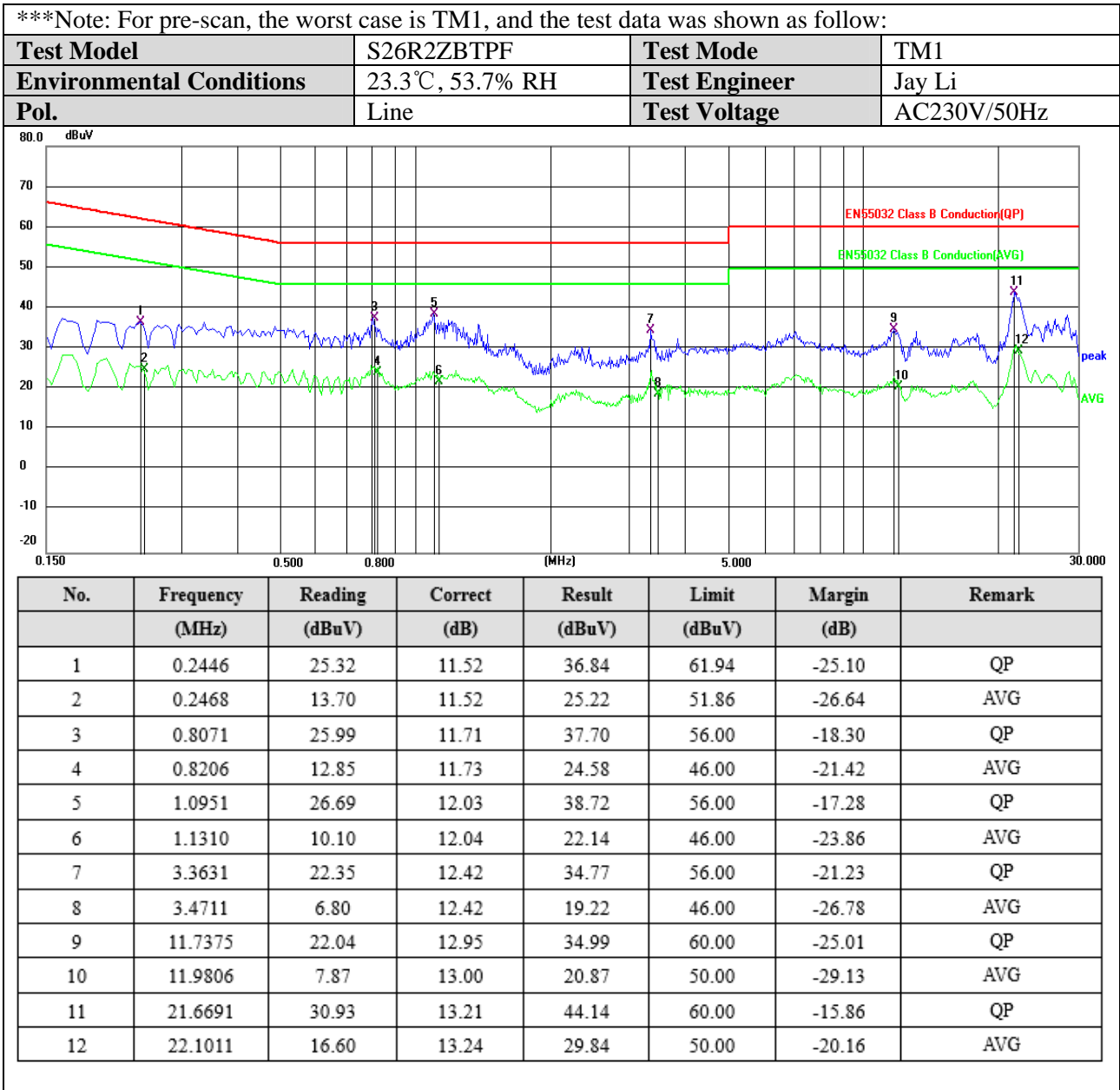


## Appendix A for Emission and Immunity test results

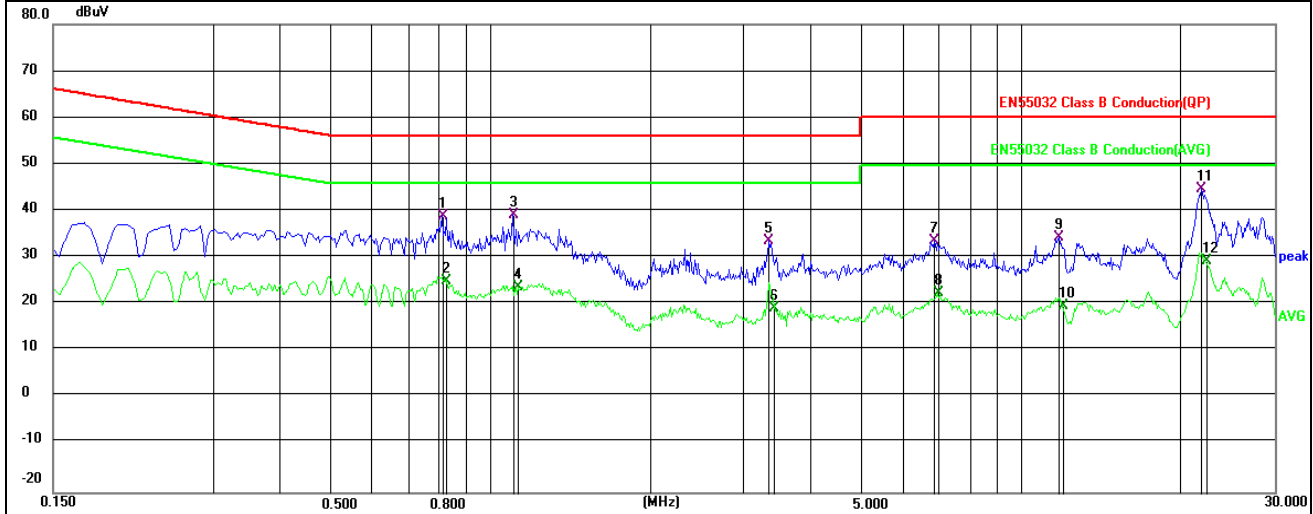
**Product Name: ZigBee Smart Plug**

**Test Model: S26R2ZBTPF**

### A.1 Line Conducted Emission



|                                 |                  |                      |             |
|---------------------------------|------------------|----------------------|-------------|
| <b>Test Model</b>               | S26R2ZBTPF       | <b>Test Mode</b>     | TM1         |
| <b>Environmental Conditions</b> | 23.3°C, 53.7% RH | <b>Test Engineer</b> | Jay Li      |
| <b>Pol.</b>                     | Neutral          | <b>Test Voltage</b>  | AC230V/50Hz |

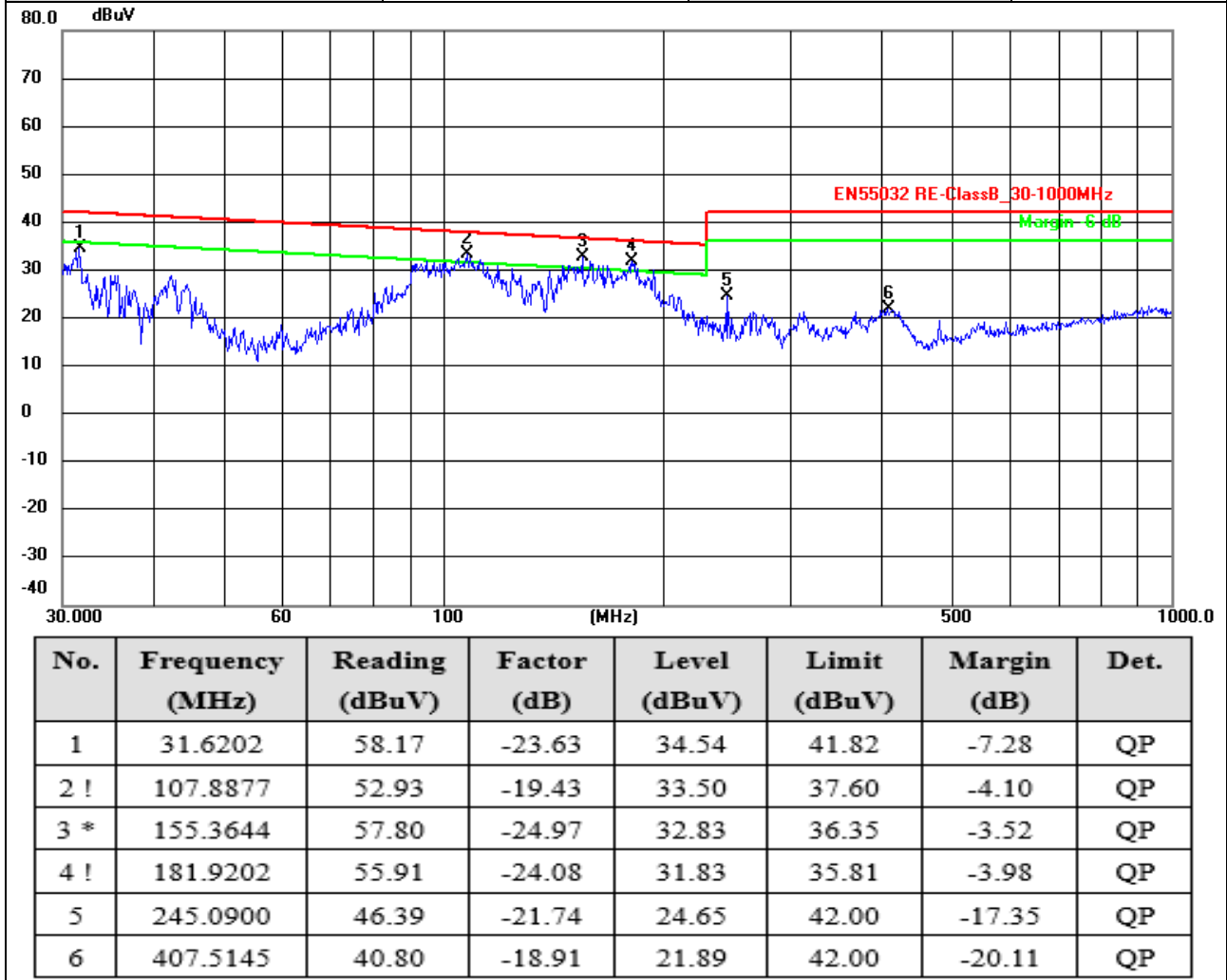


| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB) | Result (dBuV) | Limit (dBuV) | Margin (dB) | Remark |
|-----|-----------------|----------------|--------------|---------------|--------------|-------------|--------|
| 1   | 0.8116          | 27.46          | 11.71        | 39.17         | 56.00        | -16.83      | QP     |
| 2   | 0.8251          | 13.59          | 11.73        | 25.32         | 46.00        | -20.68      | AVG    |
| 3   | 1.1041          | 27.21          | 12.02        | 39.23         | 56.00        | -16.77      | QP     |
| 4   | 1.1310          | 11.86          | 12.03        | 23.89         | 46.00        | -22.11      | AVG    |
| 5   | 3.3631          | 21.49          | 12.41        | 33.90         | 56.00        | -22.10      | QP     |
| 6   | 3.4216          | 7.03           | 12.41        | 19.44         | 46.00        | -26.56      | AVG    |
| 7   | 6.8551          | 21.52          | 12.27        | 33.79         | 60.00        | -26.21      | QP     |
| 8   | 6.9856          | 10.39          | 12.27        | 22.66         | 50.00        | -27.34      | AVG    |
| 9   | 11.7466         | 21.64          | 12.95        | 34.59         | 60.00        | -25.41      | QP     |
| 10  | 11.9941         | 6.98           | 13.00        | 19.98         | 50.00        | -30.02      | AVG    |
| 11  | 21.8536         | 31.72          | 13.02        | 44.74         | 60.00        | -15.26      | QP     |
| 12  | 22.2001         | 16.47          | 13.05        | 29.52         | 50.00        | -20.48      | AVG    |

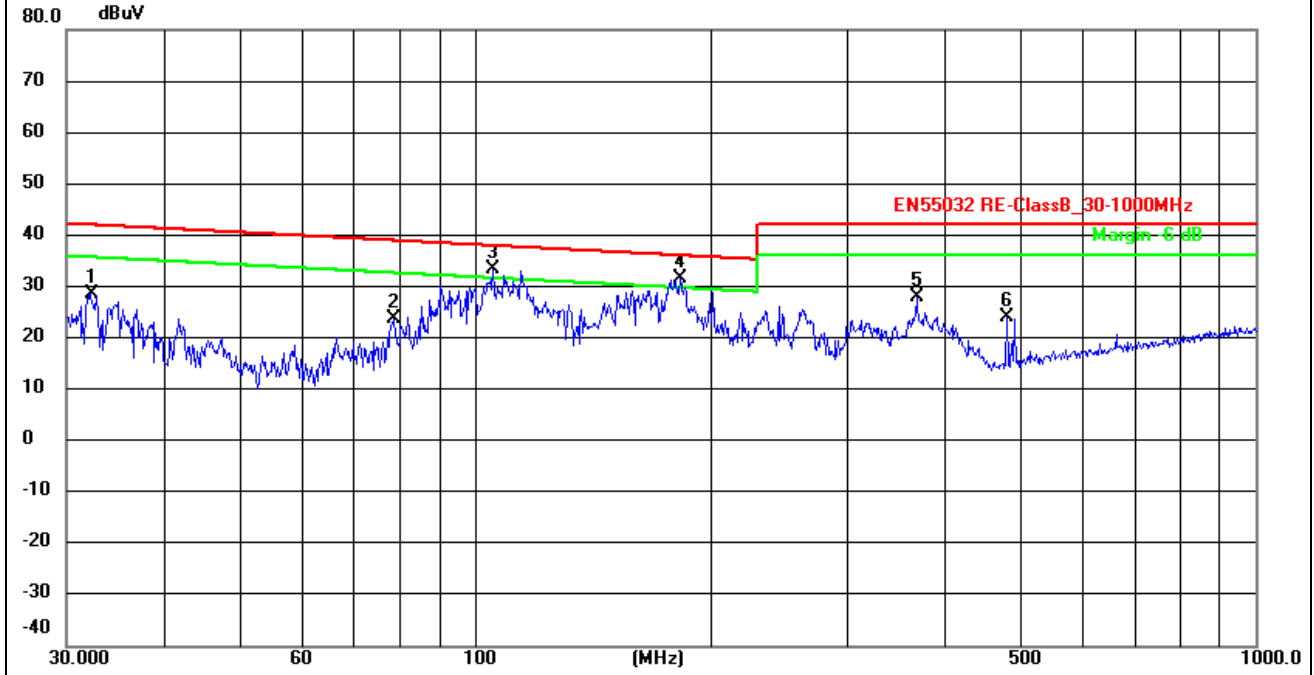
Note: For conducted emission and radiated emission test, a power supply of 230VAC and 120VAC was used for testing respectively, and only recorded the worst case of 230VAC.

### A.3 Radiated Disturbance

|                          |                  |                   |              |
|--------------------------|------------------|-------------------|--------------|
| Test Model               | S26R2ZBTPF       | Test Mode         | TM1          |
| Environmental Conditions | 21.6°C, 52.7% RH | Test Engineer     | Jay Li       |
| Pol.                     | Vertical         | Detector Function | Quasi-peak   |
| Distance                 | 3m               | Test Voltage      | AC 230V/50Hz |



|                                 |                  |                          |              |
|---------------------------------|------------------|--------------------------|--------------|
| <b>Test Model</b>               | S26R2ZBTPF       | <b>Test Mode</b>         | TM1          |
| <b>Environmental Conditions</b> | 21.6°C, 52.7% RH | <b>Test Engineer</b>     | Jay Li       |
| <b>Pol.</b>                     | Horizontal       | <b>Detector Function</b> | Quasi-peak   |
| <b>Distance</b>                 | 3m               | <b>Test Voltage</b>      | AC 230V/50Hz |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB) | Level (dBuV) | Limit (dBuV) | Margin (dB) | Det. |
|-----|-----------------|----------------|-------------|--------------|--------------|-------------|------|
| 1   | 32.1795         | 52.07          | -23.59      | 28.48        | 41.76        | -13.28      | QP   |
| 2   | 78.6888         | 48.33          | -24.52      | 23.81        | 38.69        | -14.88      | QP   |
| 3 ! | 105.6415        | 52.72          | -19.38      | 33.34        | 37.67        | -4.33       | QP   |
| 4 * | 183.2005        | 55.56          | -23.98      | 31.58        | 35.78        | -4.20       | QP   |
| 5   | 368.1116        | 47.59          | -19.56      | 28.03        | 42.00        | -13.97      | QP   |
| 6   | 480.5276        | 41.96          | -17.87      | 24.09        | 42.00        | -17.91      | QP   |

|                                     |                             |
|-------------------------------------|-----------------------------|
| <b>Test Mode:</b> TM1 (Above 1GHz)  | <b>Tested by:</b> Jay Li    |
| <b>Test Voltage:</b> AC 230V/50Hz   | <b>Test Distance:</b> 3m    |
| <b>Detector Function:</b> Peak + AV | <b>Test Results:</b> Passed |

| Freq. MHz | Reading dBuV | Factor dB/m | Level dBuV/m | Limit dBuV/m | Margin dB | Remark  | Pol.       |
|-----------|--------------|-------------|--------------|--------------|-----------|---------|------------|
| 1126.02   | 49.33        | 1.14        | 50.47        | 70.00        | -19.53    | Peak    | Horizontal |
| 1126.02   | 30.56        | 1.14        | 31.70        | 50.00        | -18.30    | Average | Horizontal |
| 1693.29   | 49.40        | 2.67        | 52.07        | 70.00        | -17.93    | Peak    | Horizontal |
| 1693.29   | 29.25        | 2.67        | 31.92        | 50.00        | -18.08    | Average | Horizontal |
| 2396.21   | 48.79        | 5.75        | 54.54        | 70.00        | -15.46    | Peak    | Horizontal |
| 2396.21   | 29.86        | 5.75        | 35.61        | 50.00        | -14.39    | Average | Horizontal |
| 3383.28   | 49.07        | 1.83        | 50.90        | 74.00        | -23.10    | Peak    | Horizontal |
| 3383.28   | 31.22        | 1.83        | 33.05        | 54.00        | -20.95    | Average | Horizontal |
| 4189.39   | 49.65        | 3.17        | 52.82        | 74.00        | -21.18    | Peak    | Horizontal |
| 4189.39   | 28.22        | 3.17        | 31.39        | 54.00        | -22.61    | Average | Horizontal |
| 5925.61   | 51.19        | 6.13        | 57.32        | 74.00        | -16.68    | Peak    | Horizontal |
| 5925.61   | 28.53        | 6.13        | 34.66        | 54.00        | -19.34    | Average | Horizontal |

| Freq. MHz | Reading dBuV | Factor dB/m | Level dBuV/m | Limit dBuV/m | Margin dB | Remark  | Pol.     |
|-----------|--------------|-------------|--------------|--------------|-----------|---------|----------|
| 1126.29   | 50.56        | 1.14        | 51.70        | 70.00        | -18.30    | Peak    | Vertical |
| 1126.29   | 29.48        | 1.14        | 30.62        | 50.00        | -19.38    | Average | Vertical |
| 1558.46   | 49.26        | 2.67        | 51.93        | 70.00        | -18.07    | Peak    | Vertical |
| 1558.46   | 29.09        | 2.67        | 31.76        | 50.00        | -18.24    | Average | Vertical |
| 2918.37   | 48.17        | 5.75        | 53.92        | 70.00        | -16.08    | Peak    | Vertical |
| 2918.37   | 30.00        | 5.75        | 35.75        | 50.00        | -14.25    | Average | Vertical |
| 3734.56   | 49.34        | 1.83        | 51.17        | 74.00        | -22.83    | Peak    | Vertical |
| 3734.56   | 30.72        | 1.83        | 32.55        | 54.00        | -21.45    | Average | Vertical |
| 4597.15   | 48.59        | 3.17        | 51.76        | 74.00        | -22.24    | Peak    | Vertical |
| 4597.15   | 30.51        | 3.17        | 33.68        | 54.00        | -20.32    | Average | Vertical |
| 5978.99   | 48.09        | 6.13        | 54.22        | 74.00        | -19.78    | Peak    | Vertical |
| 5978.99   | 31.94        | 6.13        | 38.07        | 54.00        | -15.93    | Average | Vertical |

Note:

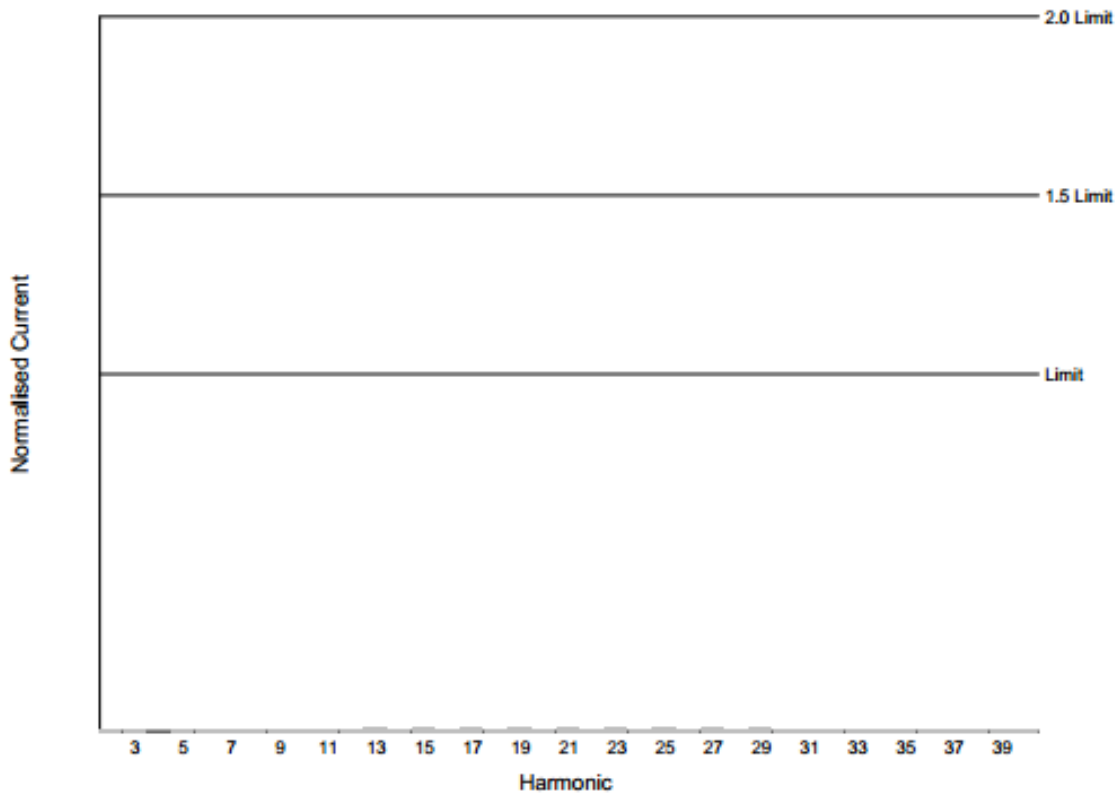
- Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB.
- Measurements above show only up to 6 maximum emissions noted.
- Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- Factor = Antenna Factor + Cable Loss + Amplifier Factor  
Emission Level = Reading level + Factor  
Margin = Emission Level - Limit

### A.4 Harmonic Current Emissions

|   |                     |                 |
|---|---------------------|-----------------|
| <b>Type of Test:</b> EN61000:2006 Harmonics inc. interharmonics to EN61000-4-7:2002<br><b>Limits:</b> Class A<br><b>Power Analyzer:</b> Voltech PM6000 SN: 200006700523 Firmware version: v1.21.07RC2<br><b>Channel(s):</b><br>1. SN: 090015502053, 28 Adjusted Date: 22 JUN 2011. 2. SN:None Adjusted Date:None<br>3. SN:None Adjusted Date:None 4. SN:None Adjusted Date:None<br>5. SN:None Adjusted Date:None 6. SN:None Adjusted Date:None<br><b>Shunt(s):</b><br>1. SN: 091024301916, 4 Adjusted Date: 23 JUN 2011. 2. SN:None Adjusted Date:None<br>3. SN:None Adjusted Date:None 4. SN:None Adjusted Date:None<br>5. SN:None Adjusted Date:None 6. SN:None Adjusted Date:None<br><b>AC Source:</b> Mains / Manual Source |                     |                 |
| <b>Harmonic Results Against Chosen Limits:</b><br><br><div style="font-size: 2em; color: green; text-align: center; font-weight: bold;">PASS</div>  |                     | <b>Notes:</b>   |
| <b>Test Parameter Details</b>   | <b>User Entered</b> | <b>Measured</b> |
| Operating Frequency:  | 50                  | 49.9840         |
| Operating Voltage:  | 230                 | 229.4801        |
| Specified Power:  | 0.0000              | 139.7908        |
| Fundamental Current:  | 0.0000              | 0.6092          |
| Power Factor:   | 0.0000              | 0.9997          |
| Average Input Current:  |                     | 0.6092          |
| Maximum POHC:   |                     | 0.0023          |
| POHC Limit:   |                     | 0.2514          |
| Maximum THC:  |                     | 0.0077          |
| Minimum Power:  | 75                  |                 |
| Class Multiplier:   | 1.0000              |                 |
| Test Duration:  | 00:02:30            |                 |

|  |  |
|--|--|
| Type of Test: Fluctuating Harmonics Test - Normalised Worst Case Bar Chart (2006)<br>Power Analyzer: Voltech PM6000 SN: 200006700523 Firmware version: v1.21.07RC2<br>Channel(s):<br>1. SN: 090015502053, 28 Adjusted Date: 22 JUN 2011. 2. SN:None Adjusted Date:None<br>3. SN:None Adjusted Date:None 4. SN:None Adjusted Date:None<br>5. SN:None Adjusted Date:None 6. SN:None Adjusted Date:None<br>Shun(s):<br>1. SN: 091024301916, 4 Adjusted Date: 23 JUN 2011. 2. SN:None Adjusted Date:None<br>3. SN:None Adjusted Date:None 4. SN:None Adjusted Date:None<br>5. SN:None Adjusted Date:None 6. SN:None Adjusted Date:None |  |
| AC Source: Mains / Manual Source   |  |
| Overall Result:  | <div style="font-size: 2em; color: green; font-weight: bold;">PASS</div> |
|  |  |

|                  |         |
|------------------|---------|
| Class            | Class A |
| Class Multiplier | 1       |



|                 |   |
|-----------------|---|
| Type of Test:   | Fluctuating Harmonics Test - Source Qualification (2006)  |
| Power Analyzer: | Voltech PM6000 SN: 200006700523 Firmware version: v1.21.07RC2   |
| Channel(s):     | 1. SN: 090015502053, 28 Adjusted Date: 22 JUN 2011. 2. SN:None Adjusted Date:None<br>3. SN:None Adjusted Date:None 4. SN:None Adjusted Date:None<br>5. SN:None Adjusted Date:None 6. SN:None Adjusted Date:None |
| Shunt(s):       | 1. SN: 091024301916, 4 Adjusted Date: 23 JUN 2011. 2. SN:None Adjusted Date:None<br>3. SN:None Adjusted Date:None 4. SN:None Adjusted Date:None<br>5. SN:None Adjusted Date:None 6. SN:None Adjusted Date:None  |
| AC Source:      | Mains / Manual Source   |
| Overall Result: | <b>PASS</b>   |

|                  | Nominal | Measured | Deviation | Allowed Deviation | Result |
|------------------|---------|----------|-----------|-------------------|--------|
| Supply Voltage   | 230.00V | 229.48V  | 0.52V     | 4.60V             | Pass   |
| Supply Frequency | 50.00Hz | 49.98Hz  | 0.02Hz    | 0.25Hz            | Pass   |
| Crest Factor     | 1.4100  | 1.4189   | 0.0089    | +/- 0.01          | Pass   |

| Harmonic | Reading | Limit | Result | Harmonic | Reading | Limit | Result |
|----------|---------|-------|--------|----------|---------|-------|--------|
| 2        | 0.12%   | 0.20% | Pass   | 3        | 0.06%   | 0.90% | Pass   |
| 4        | 0.04%   | 0.20% | Pass   | 5        | 0.05%   | 0.40% | Pass   |
| 6        | 0.03%   | 0.20% | Pass   | 7        | 0.06%   | 0.30% | Pass   |
| 8        | 0.04%   | 0.20% | Pass   | 9        | 0.04%   | 0.20% | Pass   |
| 10       | 0.02%   | 0.20% | Pass   | 11       | 0.03%   | 0.10% | Pass   |
| 12       | 0.02%   | 0.10% | Pass   | 13       | 0.02%   | 0.10% | Pass   |
| 14       | 0.01%   | 0.10% | Pass   | 15       | 0.04%   | 0.10% | Pass   |
| 16       | 0.01%   | 0.10% | Pass   | 17       | 0.02%   | 0.10% | Pass   |
| 18       | 0.01%   | 0.10% | Pass   | 19       | 0.02%   | 0.10% | Pass   |
| 20       | 0.01%   | 0.10% | Pass   | 21       | 0.03%   | 0.10% | Pass   |
| 22       | 0.01%   | 0.10% | Pass   | 23       | 0.01%   | 0.10% | Pass   |
| 24       | 0.01%   | 0.10% | Pass   | 25       | 0.02%   | 0.10% | Pass   |
| 26       | 0.01%   | 0.10% | Pass   | 27       | 0.03%   | 0.10% | Pass   |
| 28       | 0.01%   | 0.10% | Pass   | 29       | 0.01%   | 0.10% | Pass   |
| 30       | 0.01%   | 0.10% | Pass   | 31       | 0.01%   | 0.10% | Pass   |
| 32       | 0.01%   | 0.10% | Pass   | 33       | 0.01%   | 0.10% | Pass   |
| 34       | 0.01%   | 0.10% | Pass   | 35       | 0.01%   | 0.10% | Pass   |
| 36       | 0.01%   | 0.10% | Pass   | 37       | 0.03%   | 0.10% | Pass   |
| 38       | 0.01%   | 0.10% | Pass   | 39       | 0.03%   | 0.10% | Pass   |
| 40       | 0.01%   | 0.10% | Pass   |          |         |       |        |



|                 |   |
|-----------------|---|
| Type of Test:   | Fluctuating Harmonics Test - Worst Case Table (2006)  |
| Power Analyzer: | Voltech PM6000 SN: 200006700523 Firmware version: v1.21.07RC2   |
| Channel(s):     | 1. SN: 090015502053, 28 Adjusted Date: 22 JUN 2011. 2. SN:None Adjusted Date:None<br>3. SN:None Adjusted Date:None 4. SN:None Adjusted Date:None<br>5. SN:None Adjusted Date:None 6. SN:None Adjusted Date:None |
| Shunt(s):       | 1. SN: 091024301916, 4 Adjusted Date: 23 JUN 2011. 2. SN:None Adjusted Date:None<br>3. SN:None Adjusted Date:None 4. SN:None Adjusted Date:None<br>5. SN:None Adjusted Date:None 6. SN:None Adjusted Date:None  |
| AC Source:      | Mains / Manual Source   |
| Overall Result: | PASS  |

|                  |         |
|------------------|---------|
| Class            | Class A |
| Class Multiplier | 1       |

| Harm | Limit 1 | Limit 2 | Average Reading | <L1 <L2 | Max Reading | <L2 | Pass FAIL | Harm | Limit 1 | Limit 2 | Average Reading | <L1 <L2 | Max Reading | <L2 | Pass FAIL |
|------|---------|---------|-----------------|---------|-------------|-----|-----------|------|---------|---------|-----------------|---------|-------------|-----|-----------|
| 2    | 1.0600A | 1.6200A | 0.782mA         | ✓✓      | 0.828mA     | ✓   | N/A       | 3    | 2.3000A | 3.4500A | 4.930mA         | ✓✓      | 4.996mA     | ✓   | N/A       |
| 4    | 430.0mA | 645.0mA | 0.257mA         | ✓✓      | 0.299mA     | ✓   | N/A       | 5    | 1.1400A | 1.7100A | 1.919mA         | ✓✓      | 1.981mA     | ✓   | N/A       |
| 6    | 300.0mA | 450.0mA | 0.278mA         | ✓✓      | 0.322mA     | ✓   | N/A       | 7    | 770.0mA | 1.1550A | 2.328mA         | ✓✓      | 2.417mA     | ✓   | N/A       |
| 8    | 230.0mA | 345.0mA | 0.204mA         | ✓✓      | 0.364mA     | ✓   | N/A       | 9    | 400.0mA | 600.0mA | 1.989mA         | ✓✓      | 2.056mA     | ✓   | N/A       |
| 10   | 184.0mA | 276.0mA | 0.142mA         | ✓✓      | 0.160mA     | ✓   | N/A       | 11   | 330.0mA | 495.0mA | 1.847mA         | ✓✓      | 1.874mA     | ✓   | N/A       |
| 12   | 153.3mA | 230.0mA | 0.211mA         | ✓✓      | 0.237mA     | ✓   | N/A       | 13   | 210.0mA | 315.0mA | 1.785mA         | ✓✓      | 1.809mA     | ✓   | N/A       |
| 14   | 131.4mA | 197.1mA | 0.119mA         | ✓✓      | 0.142mA     | ✓   | N/A       | 15   | 150.0mA | 225.0mA | 1.790mA         | ✓✓      | 1.813mA     | ✓   | N/A       |
| 16   | 115.0mA | 172.5mA | 0.147mA         | ✓✓      | 0.159mA     | ✓   | N/A       | 17   | 132.3mA | 198.5mA | 1.479mA         | ✓✓      | 1.499mA     | ✓   | N/A       |
| 18   | 102.2mA | 153.3mA | 0.141mA         | ✓✓      | 0.157mA     | ✓   | N/A       | 19   | 118.4mA | 177.6mA | 1.326mA         | ✓✓      | 1.343mA     | ✓   | N/A       |
| 20   | 92.00mA | 138.0mA | 0.135mA         | ✓✓      | 0.151mA     | ✓   | N/A       | 21   | 107.1mA | 160.7mA | 1.157mA         | ✓✓      | 1.178mA     | ✓   | N/A       |
| 22   | 83.63mA | 125.4mA | 0.128mA         | ✓✓      | 0.140mA     | ✓   | N/A       | 23   | 97.82mA | 146.7mA | 1.064mA         | ✓✓      | 1.085mA     | ✓   | N/A       |
| 24   | 76.66mA | 115.0mA | 0.174mA         | ✓✓      | 0.185mA     | ✓   | N/A       | 25   | 90.00mA | 135.0mA | 0.816mA         | ✓✓      | 0.846mA     | ✓   | N/A       |
| 26   | 70.76mA | 106.1mA | 0.123mA         | ✓✓      | 0.134mA     | ✓   | N/A       | 27   | 83.33mA | 125.0mA | 0.951mA         | ✓✓      | 0.969mA     | ✓   | N/A       |
| 28   | 65.71mA | 98.57mA | 0.106mA         | ✓✓      | 0.116mA     | ✓   | N/A       | 29   | 77.58mA | 116.3mA | 0.667mA         | ✓✓      | 0.684mA     | ✓   | N/A       |
| 30   | 61.33mA | 92.00mA | 0.104mA         | ✓✓      | 0.115mA     | ✓   | N/A       | 31   | 72.58mA | 108.8mA | 0.494mA         | ✓✓      | 0.516mA     | ✓   | N/A       |
| 32   | 57.50mA | 86.25mA | 0.106mA         | ✓✓      | 0.120mA     | ✓   | N/A       | 33   | 68.18mA | 102.2mA | 0.291mA         | ✓✓      | 0.308mA     | ✓   | N/A       |
| 34   | 54.11mA | 81.17mA | 0.093mA         | ✓✓      | 0.104mA     | ✓   | N/A       | 35   | 64.28mA | 96.42mA | 0.328mA         | ✓✓      | 0.344mA     | ✓   | N/A       |
| 36   | 51.11mA | 76.66mA | 0.117mA         | ✓✓      | 0.128mA     | ✓   | N/A       | 37   | 60.81mA | 91.21mA | 0.325mA         | ✓✓      | 0.344mA     | ✓   | N/A       |
| 38   | 48.42mA | 72.63mA | 0.111mA         | ✓✓      | 0.120mA     | ✓   | N/A       | 39   | 57.69mA | 86.53mA | 0.128mA         | ✓✓      | 0.140mA     | ✓   | N/A       |
| 40   | 46.00mA | 69.00mA | 0.094mA         | ✓✓      | 0.105mA     | ✓   | N/A       |      |         |         |                 |         |             |     |           |

<L1 : Reading is below limit 1.

<L2 : Reading is below limit 2.

N/A : Harmonic current below 0.6% of rated current or 5mA, whichever is greater, are disregarded.

### A.5 Voltage Fluctuation and Flicker

|   |                              |                      |              |                 |
|---|------------------------------|----------------------|--------------|-----------------|
| <b>Test Model</b>   | S26R2ZBTPF                   | <b>Test Engineer</b> | Jay Li       |                 |
| <b>Environmental Conditions</b>   | 22.2°C, 52.4% RH             | <b>Test Voltage</b>  | AC 230V/50Hz |                 |
| Type of Test: Flickermeter Test - Table<br>Power Analyzer: Voltech PM6000 SN: 200006700523 Firmware Version: v1.21.07RC2<br>Channel(s):<br>1. SN: 090015502053, 28 Adjusted Date: 22 JUN 2011. 2. SN:None Adjusted Date:None<br>3. SN:None Adjusted Date:None 4. SN:None Adjusted Date:None<br>5. SN:None Adjusted Date:None 6. SN:None Adjusted Date:None<br>Shunt(s):<br>1. SN: 091024301916, 4 Adjusted Date: 23 JUN 2011. 2. SN:None Adjusted Date:None<br>3. SN:None Adjusted Date:None 4. SN:None Adjusted Date:None<br>5. SN:None Adjusted Date:None 6. SN:None Adjusted Date:None<br>AC Source: Mains / Manual Source |                              |                      |              |                 |
| Overall Result:   | Notes:                       |                      |              |                 |
| <b>PASS</b>   | Measurement method - Voltage |                      |              |                 |
| <hr/>   |                              |                      |              |                 |
|   | Pst                          | dc (%)               | dmax (%)     | d(t) > 3.3%(ms) |
| Limit   | 1.000                        | 3.300                | 4.000        | 500             |
| Reading 1   | 0.089                        | 0.006                | 0.116        | 0               |

**A.6 RF Electromagnetic Field (80 MHz - 6000 MHz)**

|                                 |                  |                      |              |
|---------------------------------|------------------|----------------------|--------------|
| <b>Test Model</b>               | S26R2ZBTPF       | <b>Test Engineer</b> | Jay Li       |
| <b>Environmental Conditions</b> | 23.2°C, 53.6% RH | <b>Test Voltage</b>  | AC 230V/50Hz |

**TM1 Test Result:**

| EUT Working Mode | Antenna Polarity | Frequency (MHz) | Fielded Strength (V/m) | Observation | Position                 | Conclusion |
|------------------|------------------|-----------------|------------------------|-------------|--------------------------|------------|
| Operating Mode   | Vertical         | 80-6000         | 3                      | CT, CR      | Front, Right, Left, Back | Pass       |
|                  | Horizontal       | 80-6000         | 3                      | CT, CR      | Front, Right, Left, Back | Pass       |
| Idle             | Vertical         | 80-6000         | 3                      | CT, CR      | Front, Right, Left, Back | Pass       |
|                  | Horizontal       | 80-6000         | 3                      | CT, CR      | Front, Right, Left, Back | Pass       |

**TM2 Test Result:**

| EUT Working Mode | Antenna Polarity | Frequency (MHz) | Fielded Strength (V/m) | Observation | Position                 | Conclusion |
|------------------|------------------|-----------------|------------------------|-------------|--------------------------|------------|
| Operating Mode   | Vertical         | 80-6000         | 3                      | CT, CR      | Front, Right, Left, Back | Pass       |
|                  | Horizontal       | 80-6000         | 3                      | CT, CR      | Front, Right, Left, Back | Pass       |
| Idle             | Vertical         | 80-6000         | 3                      | CT, CR      | Front, Right, Left, Back | Pass       |
|                  | Horizontal       | 80-6000         | 3                      | CT, CR      | Front, Right, Left, Back | Pass       |

## A.7 Electrostatic Discharge

| Electrostatic Discharge Test Results   |   |                      |                    |
|--|---|----------------------|--------------------|
| <b>Standard</b>  | <input type="checkbox"/> IEC 61000-4-2 <input checked="" type="checkbox"/> EN 61000-4-2 |                      |                    |
| <b>Applicant</b>   | Shenzhen Sonoff Technologies Co., Ltd.  |                      |                    |
| <b>EUT</b>   | ZigBee Smart Plug   | <b>Temperature</b>   | 22.2°C             |
| <b>M/N</b>   | S26R2ZBTPF  | <b>Humidity</b>      | 52.5%              |
| <b>Criterion</b>   | B   | <b>Pressure</b>      | 1021mbar           |
| <b>Test Mode</b>   | TM1-TM2   | <b>Test Engineer</b> | Jay Li             |
| TEST RESULT OF TM1   |   |                      |                    |
| Test Voltage   | Coupling  | Observation          | Result (Pass/Fail) |
| ±2KV, ±4kV   | Contact Discharge   | TT, TR               | Pass               |
| ±2KV, ±4kV, ±8kV   | Air Discharge   | TT, TR               | Pass               |
| ±2KV, ±4kV   | Indirect Discharge HCP  | TT, TR               | Pass               |
| ±2KV, ±4kV   | Indirect Discharge VCP  | TT, TR               | Pass               |
| TEST RESULT OF TM2   |   |                      |                    |
| Test Voltage   | Coupling  | Result (Pass/Fail)   |                    |
| ±2KV, ±4kV   | Contact Discharge   | Pass                 |                    |
| ±2KV, ±4kV, ±8kV   | Air Discharge   | Pass                 |                    |
| ±2KV, ±4kV   | Indirect Discharge HCP  | Pass                 |                    |
| ±2KV, ±4kV   | Indirect Discharge VCP  | Pass                 |                    |
| Note: The EUT performance complied with performance criteria for TT&TR Function and there is no any degradation of performance and function. |   |                      |                    |

## A.8 Electrical Fast Transient Immunity

| Electrical Fast Transient/Burst Test Results |   |                    |        |
|--|---|--------------------|--------|
| <b>Standard</b>                              | <input type="checkbox"/> IEC 61000-4-4 <input checked="" type="checkbox"/> EN 61000-4-4 |                    |        |
| <b>Applicant</b>                             | Shenzhen Sonoff Technologies Co., Ltd.  |                    |        |
| <b>EUT</b>                                   | ZigBee Smart Plug   | <b>Temperature</b> | 23.6°C |
| <b>M/N</b>                                   | S26R2ZBTPF  | <b>Humidity</b>    | 52.5%  |
| <b>Test Mode</b>                             | TM1-TM2   | <b>Criterion</b>   | B      |
| <b>Test Engineer</b>                         | Jay Li  |                    |        |

### TEST RESULT OF TM1

| Line | Test Voltage | Polarity | Observation | Result (Pass/Fail) |
|------|--------------|----------|-------------|--------------------|
| L    | 1KV          | +/-      | TT, TR      | Pass               |
| N    | 1KV          | +/-      | TT, TR      | Pass               |
| L-N  | 1KV          | +/-      | TT, TR      | Pass               |

### TEST RESULT OF TM2

| Line | Test Voltage | Polarity | Result (Pass/Fail) |
|------|--------------|----------|--------------------|
| L    | 1KV          | +/-      | Pass               |
| N    | 1KV          | +/-      | Pass               |
| L-N  | 1KV          | +/-      | Pass               |

## A.9 RF Common Mode

| Injected Currents Susceptibility Test Results                |   |                   |                    |                    |
|--|---|-------------------|--------------------|--------------------|
| Standard   | <input type="checkbox"/> IEC 61000-4-6 <input checked="" type="checkbox"/> EN 61000-4-6 |                   |                    |                    |
| Applicant  | Shenzhen Sonoff Technologies Co., Ltd.  |                   |                    |                    |
| EUT  | ZigBee Smart Plug   | Temperature       | 23.5°C             |                    |
| M/N  | S26R2ZBTPF  | Humidity          | 52.4%              |                    |
| Test Mode  | TM1-TM2   | Criterion         | A                  |                    |
| Test Engineer  | Jay Li  |                   |                    |                    |
| TEST RESULT OF TM1   |   |                   |                    |                    |
| Frequency Range (MHz)  | Strength (Unmodulated)  | Injected Position | Observation        | Result (Pass/Fail) |
| 0.15 ~ 10  | 3V  | AC Mains          | CT, CR             | Pass               |
| 10 ~ 30  | 3V to 1V  |                   |                    |                    |
| 30 ~ 80  | 1V  |                   |                    |                    |
| TEST RESULT OF TM2   |   |                   |                    |                    |
| Frequency Range (MHz)  | Strength (Unmodulated)  | Injected Position | Result (Pass/Fail) |                    |
| 0.15 ~ 10  | 3V  | AC Mains          | Pass               |                    |
| 10 ~ 30  | 3V to 1V  |                   |                    |                    |
| 30 ~ 80  | 1V  |                   |                    |                    |
| Remark:  |   |                   |                    |                    |
| 1. Modulation Signal: 1kHz 80% AM                            |   |                   |                    |                    |
| 2. Measurement Equipment :                                   |   |                   |                    |                    |
| Simulator: CIT-10 (FRANKONIA)                                |   |                   |                    |                    |
| CDN : <input checked="" type="checkbox"/> CDN-M2 (FRANKONIA) |   |                   |                    |                    |
| <input type="checkbox"/> CDN-M3 (FRANKONIA)                  |   |                   |                    |                    |

## A.10 Surges, Line to Line and Line to Ground

| Surge Immunity Test Result |   |                    |        |
|----------------------------|---|--------------------|--------|
| <b>Standard</b>            | <input type="checkbox"/> IEC 61000-4-5 <input checked="" type="checkbox"/> EN 61000-4-5 |                    |        |
| <b>Applicant</b>           | Shenzhen Sonoff Technologies Co., Ltd.  |                    |        |
| <b>EUT</b>                 | ZigBee Smart Plug   | <b>Temperature</b> | 22.4°C |
| <b>M/N</b>                 | S26R2ZBTPF  | <b>Humidity</b>    | 52.6%  |
| <b>Test Mode</b>           | TM1-TM2   | <b>Criterion</b>   | B      |
| <b>Test Engineer</b>       | Jay Li  |                    |        |

| TEST RESULT OF TM1 |          |                     |                 |                    |             |                    |
|--------------------|----------|---------------------|-----------------|--------------------|-------------|--------------------|
| Location           | Polarity | Phase Angle         | Number of Pulse | Pulse Voltage (KV) | Observation | Result (Pass/Fail) |
| L-N                | +        | 0°, 90°, 180°, 270° | 5               | 1.0                | TT, TR      | Pass               |
|                    | -        | 0°, 90°, 180°, 270° | 5               | 1.0                | TT, TR      | Pass               |
|                    |          |                     |                 |                    |             |                    |
|                    |          |                     |                 |                    |             |                    |
| TEST RESULT OF TM2 |          |                     |                 |                    |             |                    |
| Location           | Polarity | Phase Angle         | Number of Pulse | Pulse Voltage (KV) | Observation | Result (Pass/Fail) |
| L-N                | +        | 0°, 90°, 180°, 270° | 5               | 1.0                |             | Pass               |
|                    | -        | 0°, 90°, 180°, 270° | 5               | 1.0                |             | Pass               |
|                    |          |                     |                 |                    |             |                    |
|                    |          |                     |                 |                    |             |                    |

## A.11 Voltage Dips/Interruptions Immunity Test

| Voltage Dips And Interruptions Test Results |   |                    |         |
|---|---|--------------------|---------|
| <b>Standard</b>                             | <input type="checkbox"/> IEC 61000-4-11 <input checked="" type="checkbox"/> EN 61000-4-11 |                    |         |
| <b>Applicant</b>                            | Shenzhen Sonoff Technologies Co., Ltd.  |                    |         |
| <b>EUT</b>                                  | ZigBee Smart Plug   | <b>Temperature</b> | 23.1 °C |
| <b>M/N</b>                                  | S26R2ZBTPF  | <b>Humidity</b>    | 52.2%   |
| <b>Test Mode</b>                            | TM1-TM2   | <b>Criterion</b>   | B&C     |
| <b>Test Engineer</b>                        | Jay Li  |                    |         |

| TEST RESULT OF TM1             |  |                          |                    |                    |
|--------------------------------|--|--------------------------|--------------------|--------------------|
| Test Level<br>% U <sub>T</sub> | Voltage Dips & Short<br>Interruptions % U <sub>T</sub> | Duration<br>(in periods) | Observation        | Result (Pass/Fail) |
| 0                              | 100  | 0.5P                     | TT, TR             | Pass               |
| 0                              | 100  | 1P                       | TT, TR             | Pass               |
| 70                             | 30   | 25P                      | TT, TR             | Pass               |
| 0                              | 100  | 250P                     | TT, TR             | Pass               |
| TEST RESULT OF TM2             |  |                          |                    |                    |
| Test Level<br>% U <sub>T</sub> | Voltage Dips & Short<br>Interruptions % U <sub>T</sub> | Duration<br>(in periods) | Result (Pass/Fail) |                    |
| 0                              | 100  | 0.5P                     | Pass               |                    |
| 0                              | 100  | 1P                       | Pass               |                    |
| 70                             | 30   | 25P                      | Pass               |                    |
| 0                              | 100  | 250P                     | Pass               |                    |