

TEST REPORT

Application No.: SHEM1912019865HS
Applicant: Chuzhou Bettyma Baby Carrier Co.,Ltd
Address of Applicant: Shitan Modern Industrial Park, Quanjiao, Chuzhou, Anhui, China
Manufacturer: Chuzhou Bettyma Baby Carrier Co.,Ltd
Address of Manufacturer: Shitan Modern Industrial Park, Quanjiao, Chuzhou, Anhui, China
Factory: Chuzhou Bettyma Baby Carrier Co.,Ltd
Address of Factory: Shitan Modern Industrial Park, Quanjiao, Chuzhou, Anhui, China
Equipment Under Test (EUT):
EUT Name: Battery-Powerde Ride-On Children's Cars/Ride On Vehicle
Model No.: BDM-0923
Standard(s) : EN 55014-1:2017
 EN 61000-3-2:2014
 EN 61000-3-3:2013
 EN 55014-2:2015
Date of Receipt: 2019-12-20
Date of Test: 2019-12-26 to 2019-12-31
Date of Issue: 2020-01-03

| | |
|---------------------|--------------|
| Test Result: | Pass* |
|---------------------|--------------|

* In the configuration tested, the EUT complied with the standards specified above.

The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EU Declaration of Conformity and compliance with all relevant EU Directives.

Parlam Zhan

Parlam Zhan
E&E Section Manager



The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.



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| Revision Record | | | |
|-----------------|-------------|------------|--------|
| Version | Description | Date | Remark |
| 00 | Original | 2020-01-03 | / |
| | | | |
| | | | |

| | | | |
|---------------------------------|--|--|--|
| Authorized for issue by: | | | |
| |  | | |
| | Leo Xu / Project Engineer | | |
| |  | | |
| | Bruce Tang / Reviewer | | |

2 Test Summary

| Emission Part | | | | |
|---|-------------------|-------------------|--------------------------|--------|
| Item | Standard | Method | Requirement | Result |
| Conducted Emissions at Mains Terminals (150kHz-30MHz) | EN 55014-1:2017 | CISPR 16-2-1 | N/A | Pass |
| Radiated Emissions (30MHz-1GHz) | EN 55014-1:2017 | CISPR 16-2-3 | N/A | Pass |
| Harmonic Current Emission | EN 61000-3-2:2014 | EN 61000-3-2:2014 | Class A | N/A* |
| Voltage Fluctuations and Flicker | EN 61000-3-3:2013 | EN 61000-3-3:2013 | Clause 5 of EN 61000-3-3 | Pass |

N/A: Not applicable

N/A*: Please refer to Section 6.3 of this report for details.

| Immunity Part | | | | |
|--|-----------------|---------------------------------------|--|--------|
| Item | Standard | Method | Requirement | Result |
| Electrostatic Discharge | EN 55014-2:2015 | EN 61000-4-2:2009 | 4kV Contact Discharge 8kV Air Discharge | Pass |
| Radiated Immunity (80MHz-1GHz) | EN 55014-2:2015 | EN 61000-4-3:2006 +A1:2008+A2:2010 | 3V/m, 80%, 1kHz Amp. Mod. | Pass |
| Electrical Fast Transients/Burst at Power Port | EN 55014-2:2015 | EN 61000-4-4:2012 | 1kV 5/50ns Tr/Td 5kHz Repetition Frequency | Pass |
| Surge at Power Port | EN 55014-2:2015 | EN 61000-4-5:2014 +A1:2017 | 1.2/50µs Tr/Td 1kV Line to Line 2kV Line to Ground | Pass |
| Conducted Immunity at Power Port (150kHz-230MHz) | EN 55014-2:2015 | EN 61000-4-6:2014 | 3Vrms (emf),80%,1kHz Amp. Mod. | Pass |
| Voltage Dips and Interruptions | EN 55014-2:2015 | EN 61000-4-11:2004 +A1:2017 | For 50Hz: 0 % UT for 0.5per 40 % UT for 10per 70 % UT for 25per For 60Hz: 0 % UT for 0.5per 40 % UT for 12per 70 % UT for 30per UT is Supply Voltage | Pass |

N/A: Not applicable

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4 General Information

4.1 Details of E.U.T.

Power supply: DC12V4A,48W
 Adaptor:LKC-120050-G
 Input:100-240V~,50/60Hz,0.26A
 Output:DC12V500mA
 Test voltage: AC230V50Hz

4.2 Description of Support Units

The EUT has been tested as an independent unit.

4.3 Measurement Uncertainty

| No. | Item | Measurement Uncertainty |
|-----|--|---------------------------|
| 1 | Conducted Emission at mains port using AMN | ±2.6dB (9kHz to 150kHz) |
| | | ±2.3dB (150kHz to 30MHz) |
| 2 | Conducted Emission at mains port using VP | ±1.9 dB (9kHz to 30MHz) |
| 3 | Conducted Emission at telecommunication port using AAN | ±4.1 dB (150kHz to 30MHz) |
| 4 | Radiated Power | ±3.0dB |
| 5 | Radiated emission | ±4.4dB (30MHz-1GHz) |
| | | ±4.8dB (1GHz-6GHz) |
| | | ±5.2dB (6GHz-18GHz) |

Note: The measurement uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. E&E Lab

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China

Tel: +86 21 6191 5666

Fax: +86 21 6191 5678

No tests were sub-contracted.

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **NVLAP (LAB CODE: 201034-0)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP).

- **FCC (Designation Number: CN5033)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been recognized as an accredited testing laboratory. Test Firm Registration Number: 479755.

- **ISED (CAB identifier: CN0020)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. EMC Laboratory has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory. ISED#: 8617A.

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-13868, C-14336, T-12221, G-10830 respectively.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

4.8 Monitoring of EUT for All Immunity Test

Visual: weoking status

5 Equipment List

| Conducted Emissions at Mains Terminals (150kHz-30MHz) | | | | | |
|--|---------------------|-----------------|---------------------|-----------------|---------------------|
| Equipment | Manufacturer | Model No | Inventory No | Cal Date | Cal Due Date |
| EMI test receiver | Rohde & Schwarz | ESR7 | SHEM162-1 | 2019-12-20 | 2020-12-19 |
| Line impedance stabilization network | SCHWARZBECK | NSLK8127 | SHEM061-1 | 2019-12-20 | 2020-12-19 |
| Line impedance stabilization network | EMCO | 3816/2 | SHEM019-1 | 2019-12-20 | 2020-12-19 |
| Pulse limiter | Rohde & Schwarz | ESH3-Z2 | SHEM029-1 | 2019-12-20 | 2020-12-19 |
| Shielding Room | ZHONGYU | 8*4*3M | SHEM079-2 | 2017-12-20 | 2020-12-19 |
| CE test Cable | / | / | CE01 | 2019-12-26 | 2020-12-25 |

| Radiated Emissions (30MHz-1GHz) | | | | | |
|--|---------------------|-------------------|---------------------|-----------------|---------------------|
| Equipment | Manufacturer | Model No | Inventory No | Cal Date | Cal Due Date |
| EMI test receiver | Rohde & Schwarz | ESU40 | SHEM051-1 | 2019-12-20 | 2020-12-19 |
| CONTROLLER | INNCO | CO200 | SHEM047-1 | N/A | N/A |
| ANTENNA MAST | INNCO | MA400-EP | SHEM047-2 | N/A | N/A |
| TURN DEVICE | INNCO | DE 3600-RH | SHEM047-3 | N/A | N/A |
| Broadband UHF-VHF ANTENNA | SCHWARZBECK | VULB9168 | SHEM048-1 | 2019-10-14 | 2021-10-13 |
| Semi/Fully Anechoic | ST | 11*6*6M | SHEM078-2 | 2017-07-22 | 2020-07-21 |
| Low Amplifier | CLAVIIO | BDLNA-0001-412010 | SHEM164-1 | 2019-08-13 | 2020-08-12 |

| Voltage Fluctuations and Flicker | | | | | |
|---|---------------------|-----------------|---------------------|-----------------|---------------------|
| Equipment | Manufacturer | Model No | Inventory No | Cal Date | Cal Due Date |
| Harmonic&Flicker analyzer | AMETEK | PACS-1 | SHEM024-2 | 2019-08-13 | 2020-08-12 |
| AC Power Source 5KVA | AMETEK | 5001iX | SHEM025-2 | 2019-08-13 | 2020-08-12 |

| Electrostatic Discharge | | | | | |
|-----------------------------------|---------------------|-----------------|---------------------|-----------------|---------------------|
| Equipment | Manufacturer | Model No | Inventory No | Cal Date | Cal Due Date |
| Electrostatic Discharge Simulator | TESEQ | NSG 437 | SHEM041-2 | 2019-08-13 | 2020-08-12 |

| Radiated Immunity (80MHz-1GHz) | | | | | |
|---------------------------------------|---------------------|-----------------|---------------------|-----------------|---------------------|
| Equipment | Manufacturer | Model No | Inventory No | Cal Date | Cal Due Date |
| Signal generator | Rohde & Schwarz | SMJ100A | SHEM141-1 | 2019-08-13 | 2020-08-12 |
| Power Meter | Rohde & Schwarz | NRP | SHEM057-1 | 2019-12-20 | 2020-12-19 |
| Power meter sensor | Rohde & Schwarz | NRP-Z91 | SHEM057-2 | 2019-12-20 | 2020-12-19 |
| Antenna | SCHWARZBECK | STLP9128D | SHEM130-1 | N/A | N/A |
| Amplifier | MILMEGA | AS0840-55-55 | SHEM133-1 | 2019-12-20 | 2020-12-19 |
| Power meter sensor | Rohde & Schwarz | NRP-Z22 | SHEM136-1 | 2019-12-20 | 2020-12-19 |
| ElectroMagnetic Field Probe | ETS-Lindgren | HI-6105 | SHEM134-1 | 2019-08-13 | 2020-08-12 |
| Semi/Fully Anechoic | ST | 11*6*6M | SHEM078-2 | 2017-07-22 | 2020-07-21 |

| Electrical Fast Transients/Burst at Power Port | | | | | |
|---|---------------------|-----------------|---------------------|-----------------|---------------------|
| Equipment | Manufacturer | Model No | Inventory No | Cal Date | Cal Due Date |
| Immunity Test System | EMC PARTNER | TRA3000 F-S-D-V | SHEM163-1 | 2019-12-20 | 2020-12-19 |

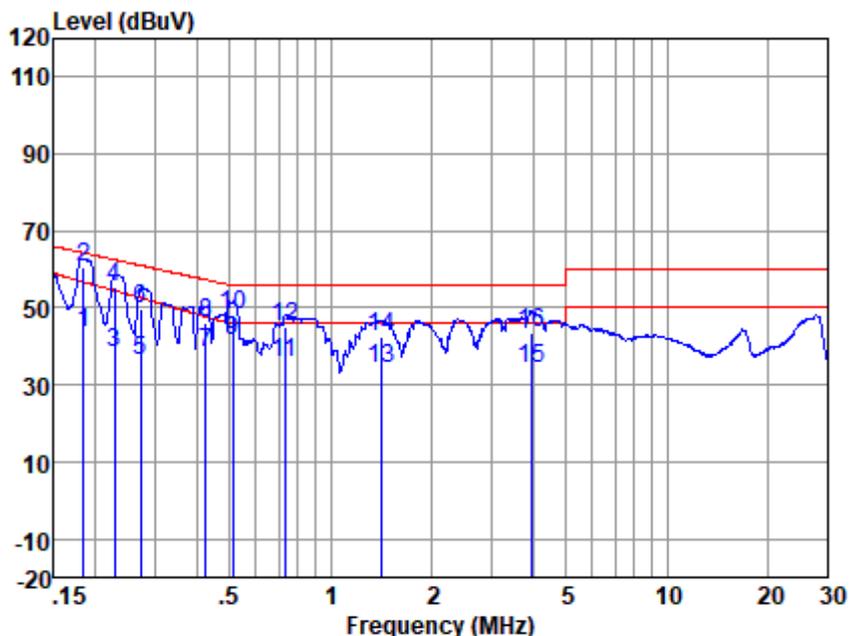
| Surge at Power Port | | | | | |
|----------------------------|---------------------|-----------------|---------------------|-----------------|---------------------|
| Equipment | Manufacturer | Model No | Inventory No | Cal Date | Cal Due Date |
| Immunity Test System | EMC PARTNER | TRA3000 F-S-D-V | SHEM163-1 | 2019-12-20 | 2020-12-19 |

| Conducted Immunity at Power Port (150kHz-230MHz) | | | | | |
|---|---------------------|-----------------|---------------------|-----------------|---------------------|
| Equipment | Manufacturer | Model No | Inventory No | Cal Date | Cal Due Date |
| Signal generator | Rohde & Schwarz | SMJ100A | SHEM141-1 | 2019-08-13 | 2020-08-12 |
| PAMP Conducted RF test system | HAEFFLY | PAMP250 | SHEM023-1 | 2019-12-20 | 2020-12-19 |
| 6dB Attenuator | HUAXIANG | DTS50-6dB-1G-A | SHEM123-2 | 2019-12-20 | 2020-12-19 |
| CDN impedance and K-factor | LUTHI | L-801 M1 | SHEM023-5 | 2019-12-20 | 2020-12-19 |
| CDN impedance and K-factor | LUTHI | L-801 M2/M3 | SHEM023-6 | 2019-12-20 | 2020-12-19 |
| Shielding Room | ZHONGYU | 5*5*3M | SHEM079-6 | 2019-12-20 | 2022-12-19 |
| Coupling and Decoupling Network | Teseq | CDN M016 | SHEM168-1 | 2019-08-13 | 2020-08-12 |

| Voltage Dips and Interruptions | | | | | |
|---------------------------------------|---------------------|-----------------|---------------------|-----------------|---------------------|
| Equipment | Manufacturer | Model No | Inventory No | Cal Date | Cal Due Date |
| Immunity Test System | EMC PARTNER | TRA3000 F-S-D-V | SHEM163-1 | 2019-12-20 | 2020-12-19 |

| General used equipment | | | | | |
|-------------------------------|-----------------------------|-----------------|---------------------|-----------------|---------------------|
| Equipment | Manufacturer | Model No | Inventory No | Cal Date | Cal Due Date |
| Digital pressure meter | YONGZHI | DYM3-01 | SHEM082-1 | 2018-01-25 | 2021-01-24 |
| Temperature&humidity recorder | ShangHai weather meter work | ZJ 1-2B | SHEM042-1~6 | 2019-09-16 | 2020-09-15 |
| Digital Multimeter | FLUKE | 17B | SHEM043-3 | 2019-09-02 | 2020-09-01 |
| Autoformer regulator | Guangzhou bao de | TDGC2-5KVA | SHEM150-1 | N/A | N/A |
| Multi-purpose tong tester | FLUKE | 316 | SHEM001-1 | 2019-12-20 | 2020-12-19 |

Mode:a; Line:Live Line

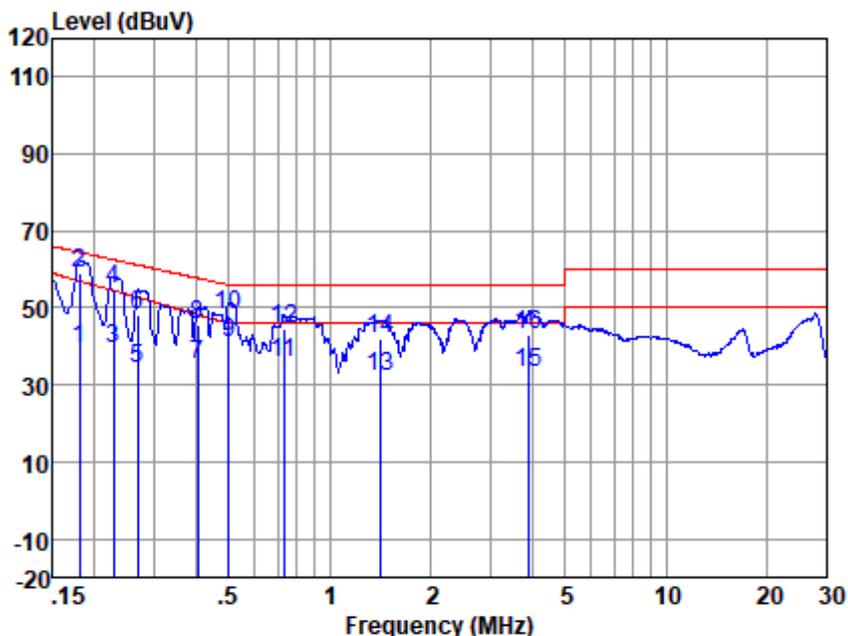


LISN : LINE
 EUT/Project No : 19865HS
 Test Mode : a

| Freq (MHz) | Read level (dBuV) | LISN Factor (dB) | Cable Loss (dB) | Emission Level (dBuV) | Limit (dBuV) | Over Limit (dB) | Remark | |
|------------|-------------------|------------------|-----------------|-----------------------|--------------|-----------------|--------|---------|
| 1 | 0.18 | 33.38 | 0.07 | 10.00 | 43.45 | 56.83 | -13.38 | Average |
| 2 | 0.18 | 50.49 | 0.07 | 10.00 | 60.56 | 64.33 | -3.77 | QP |
| 3 | 0.23 | 28.23 | 0.07 | 10.00 | 38.30 | 54.54 | -16.24 | Average |
| 4 | 0.23 | 45.31 | 0.07 | 10.00 | 55.38 | 62.57 | -7.19 | QP |
| 5 | 0.27 | 26.19 | 0.07 | 10.00 | 36.26 | 52.59 | -16.33 | Average |
| 6 | 0.27 | 39.93 | 0.07 | 10.00 | 50.00 | 61.07 | -11.07 | QP |
| 7 | 0.42 | 28.35 | 0.08 | 10.00 | 38.43 | 47.79 | -9.36 | Average |
| 8 | 0.42 | 36.27 | 0.08 | 10.00 | 46.35 | 57.37 | -11.02 | QP |
| 9 | 0.51 | 31.34 | 0.08 | 10.00 | 41.42 | 46.00 | -4.58 | Average |
| 10 | 0.51 | 38.27 | 0.08 | 10.00 | 48.35 | 56.00 | -7.65 | QP |
| 11 | 0.73 | 25.49 | 0.09 | 10.00 | 35.58 | 46.00 | -10.42 | Average |
| 12 | 0.73 | 34.79 | 0.09 | 10.00 | 44.88 | 56.00 | -11.12 | QP |
| 13 | 1.41 | 24.19 | 0.11 | 10.10 | 34.40 | 46.00 | -11.60 | Average |
| 14 | 1.41 | 32.19 | 0.11 | 10.10 | 42.40 | 56.00 | -13.60 | QP |
| 15 | 3.94 | 23.70 | 0.13 | 10.30 | 34.13 | 46.00 | -11.87 | Average |
| 16 | 3.94 | 33.25 | 0.13 | 10.30 | 43.68 | 56.00 | -12.32 | QP |

Notes: Emission Level = Read Level +LISN Factor + Cable loss

Mode:a; Line:Neutral Line



LISN : NEUTRAL
 EUT/Project No : 19865HS
 Test Mode : a

| Freq (MHz) | Read level (dBuV) | LISN Factor (dB) | Cable Loss (dB) | Emission Level (dBuV) | Limit (dBuV) | Over Limit (dB) | Remark | |
|------------|-------------------|------------------|-----------------|-----------------------|--------------|-----------------|--------|---------|
| 1 | 0.18 | 29.28 | 0.06 | 10.00 | 39.34 | 57.05 | -17.71 | Average |
| 2 | 0.18 | 48.72 | 0.06 | 10.00 | 58.78 | 64.50 | -5.72 | QP |
| 3 | 0.23 | 29.35 | 0.06 | 10.00 | 39.41 | 54.54 | -15.13 | Average |
| 4 | 0.23 | 44.75 | 0.06 | 10.00 | 54.81 | 62.57 | -7.76 | QP |
| 5 | 0.27 | 24.30 | 0.06 | 10.00 | 34.36 | 52.71 | -18.35 | Average |
| 6 | 0.27 | 38.34 | 0.06 | 10.00 | 48.40 | 61.16 | -12.76 | QP |
| 7 | 0.40 | 25.04 | 0.06 | 10.00 | 35.10 | 48.30 | -13.20 | Average |
| 8 | 0.40 | 35.40 | 0.06 | 10.00 | 45.46 | 57.77 | -12.31 | QP |
| 9 | 0.50 | 31.07 | 0.06 | 10.00 | 41.13 | 46.00 | -4.87 | Average |
| 10 | 0.50 | 38.29 | 0.06 | 10.00 | 48.35 | 56.00 | -7.65 | QP |
| 11 | 0.73 | 25.68 | 0.07 | 10.00 | 35.75 | 46.00 | -10.25 | Average |
| 12 | 0.73 | 34.44 | 0.07 | 10.00 | 44.51 | 56.00 | -11.49 | QP |
| 13 | 1.42 | 22.21 | 0.09 | 10.10 | 32.40 | 46.00 | -13.60 | Average |
| 14 | 1.42 | 31.81 | 0.09 | 10.10 | 42.00 | 56.00 | -14.00 | QP |
| 15 | 3.92 | 22.62 | 0.13 | 10.30 | 33.05 | 46.00 | -12.95 | Average |
| 16 | 3.92 | 32.80 | 0.13 | 10.30 | 43.23 | 56.00 | -12.77 | QP |

Notes: Emission Level = Read Level + LISN Factor + Cable loss

6.2 Radiated Emissions (30MHz-1GHz)

| | |
|-----------------------|--|
| Test Requirement: | EN 55014-1:2017 |
| Test Method: | CISPR 16-2-3 |
| Frequency Range: | 30MHz to 1GHz |
| Measurement Distance: | 3m |
| Limit: | |
| 30MHz-230MHz | 40 dB(μ V/m) quasi-peak |
| 230MHz-1GHz | 47 dB(μ V/m) quasi-peak |
| Detector: | Peak for pre-scan (120kHz resolution bandwidth) 30M to 1000MHz |

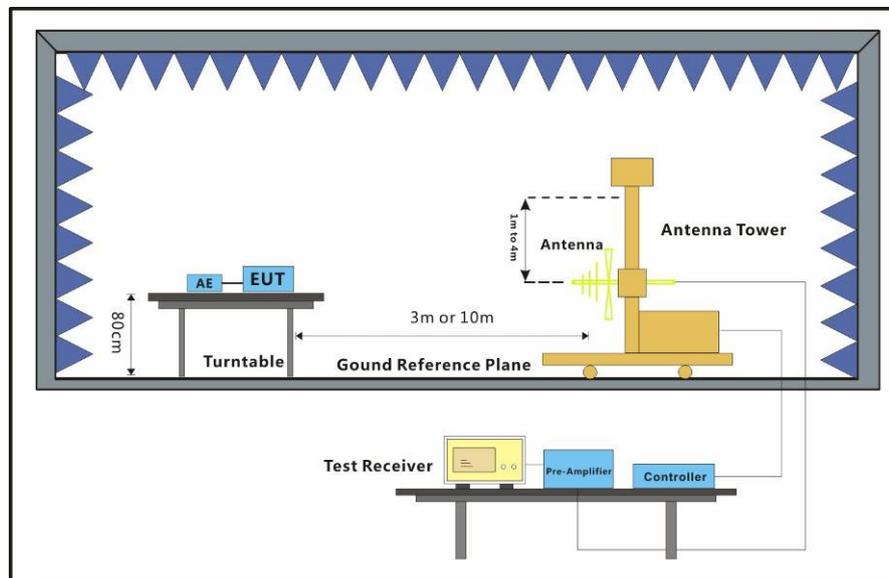
6.2.1 E.U.T. Operation

Operating Environment:

Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1020 mbar

Test mode: a: Charging mode: keep EUT charging with adaptor,
 b: Running mode: keep EUT running.

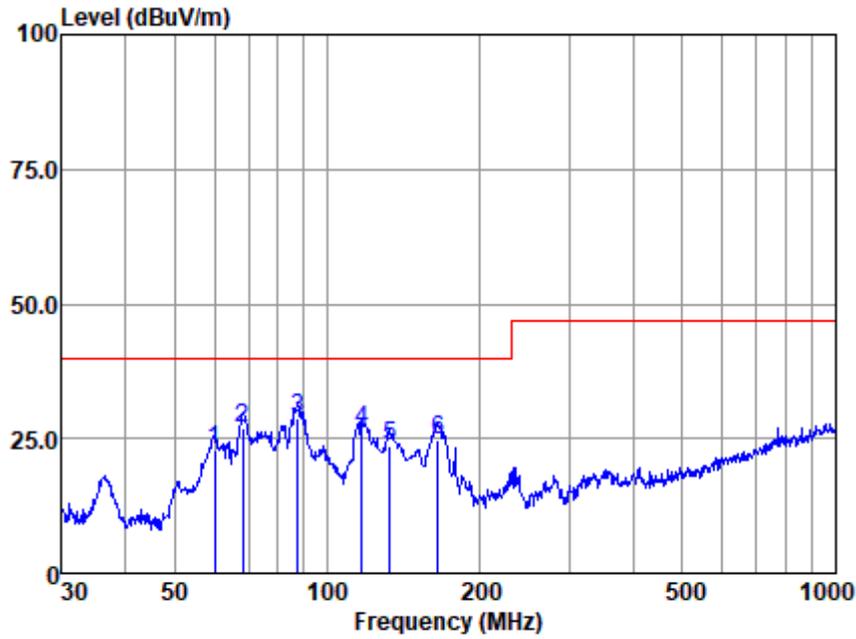
6.2.2 Test Setup Diagram



6.2.3 Measurement Data

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities.

Mode:a; Polarization:Horizontal

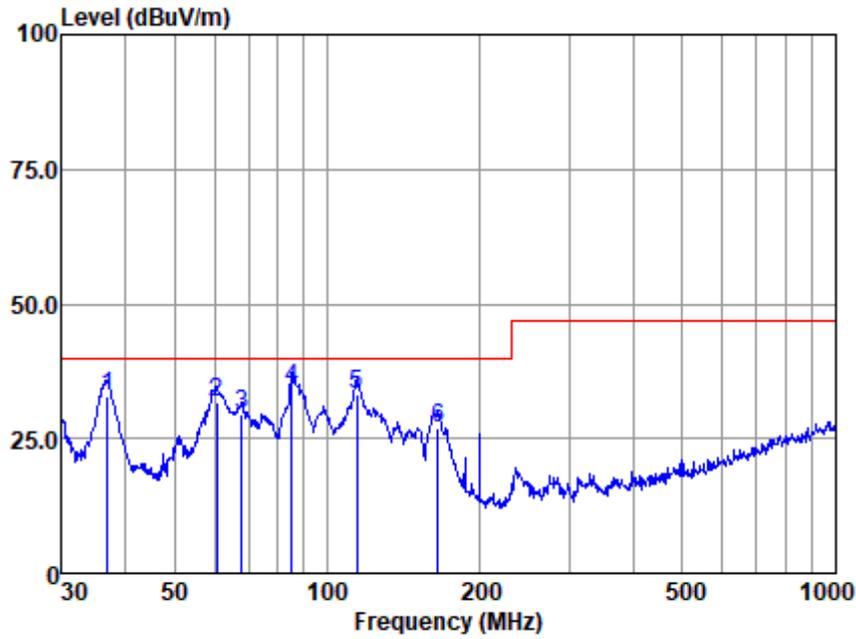


Antenna Polarity :HORIZONTAL
EUT/Project :19865HS
Test mode :a

| | Freq | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Emission Level | Limit Line | Over Limit | Remark |
|---|---------|------------|----------------|------------|---------------|----------------|------------|------------|--------|
| | MHz | dBuV | dB/m | dB | dB | dBuV/m | dBuV/m | dB | |
| 1 | 60.069 | 51.40 | 13.10 | 0.59 | 42.33 | 22.76 | 40.00 | -17.24 | QP |
| 2 | 68.151 | 56.63 | 11.95 | 0.64 | 42.27 | 26.95 | 40.00 | -13.05 | QP |
| 3 | 87.418 | 62.01 | 8.06 | 0.94 | 42.28 | 28.73 | 40.00 | -11.27 | QP |
| 4 | 116.950 | 56.90 | 10.74 | 1.28 | 42.29 | 26.63 | 40.00 | -13.37 | QP |
| 5 | 132.685 | 52.44 | 12.00 | 1.41 | 42.26 | 23.59 | 40.00 | -16.41 | QP |
| 6 | 165.487 | 52.55 | 12.98 | 1.49 | 42.21 | 24.81 | 40.00 | -15.19 | QP |

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:a; Polarization:Vertical

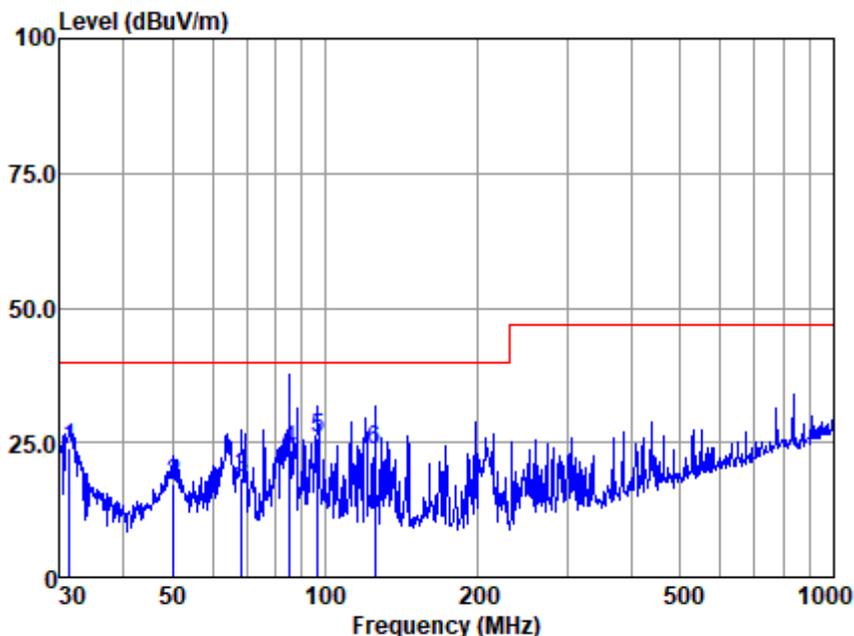


Antenna Polarity :VERTICAL
EUT/Project :19865HS
Test mode :a

| | Freq | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Emission Level | Limit Line | Over Limit | Remark |
|---|---------|------------|----------------|------------|---------------|----------------|------------|------------|--------|
| | MHz | dBuV | dB/m | dB | dB | dBuV/m | dBuV/m | dB | |
| 1 | 36.895 | 62.02 | 12.72 | 0.35 | 42.34 | 32.75 | 40.00 | -7.25 | QP |
| 2 | 60.492 | 60.38 | 13.04 | 0.59 | 42.32 | 31.69 | 40.00 | -8.31 | QP |
| 3 | 67.913 | 59.31 | 11.99 | 0.63 | 42.27 | 29.66 | 40.00 | -10.34 | QP |
| 4 | 85.298 | 67.22 | 8.38 | 0.89 | 42.28 | 34.21 | 40.00 | -5.79 | QP |
| 5 | 114.114 | 63.72 | 10.48 | 1.24 | 42.29 | 33.15 | 40.00 | -6.85 | QP |
| 6 | 164.908 | 54.58 | 13.00 | 1.49 | 42.21 | 26.86 | 40.00 | -13.14 | QP |

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:b; Polarization:Horizontal

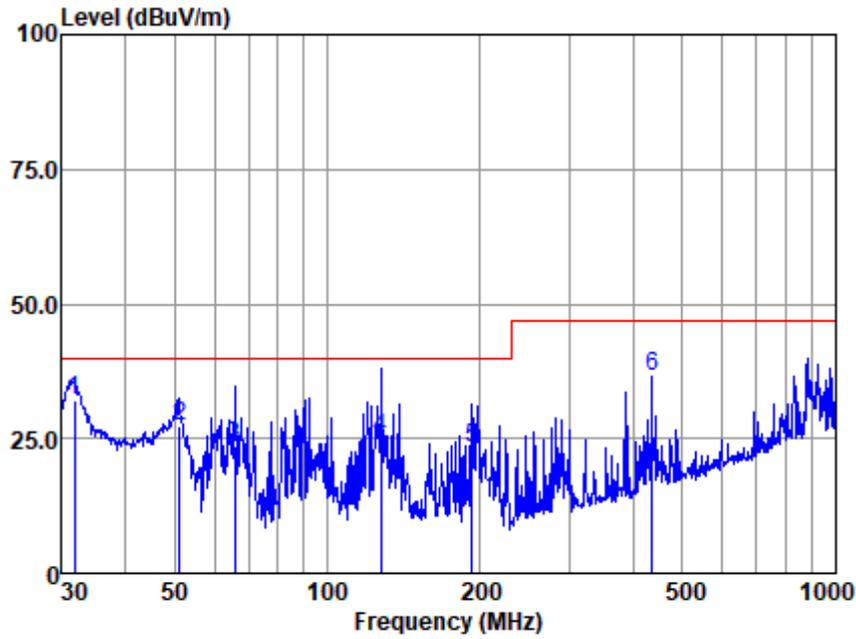


Antenna Polarity :HORIZONTAL
 EUT/Project :19865HS
 Test mode :b

| | Freq | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Emission Level | Limit Line | Over Limit | Remark |
|---|---------|------------|----------------|------------|---------------|----------------|------------|------------|--------|
| | MHz | dBuV | dB/m | dB | dB | dBuV/m | dBuV/m | dB | |
| 1 | 31.289 | 53.88 | 12.25 | 0.28 | 42.37 | 24.04 | 40.00 | -15.96 | QP |
| 2 | 50.232 | 45.58 | 13.69 | 0.48 | 42.33 | 17.42 | 40.00 | -22.58 | QP |
| 3 | 68.391 | 48.05 | 11.92 | 0.64 | 42.27 | 18.34 | 40.00 | -21.66 | QP |
| 4 | 84.999 | 56.53 | 8.43 | 0.89 | 42.28 | 23.57 | 40.00 | -16.43 | QP |
| 5 | 96.775 | 58.50 | 8.40 | 1.09 | 42.31 | 25.68 | 40.00 | -14.32 | QP |
| 6 | 125.007 | 53.05 | 11.42 | 1.37 | 42.27 | 23.57 | 40.00 | -16.43 | QP |

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

Mode:b; Polarization:Vertical



Antenna Polarity :VERTICAL
EUT/Project :19865HS
Test mode :b

| | Freq | Read Level | Antenna Factor | Cable Loss | Preamp Factor | Emission Level | Limit Line | Over Limit | Remark |
|---|---------|------------|----------------|------------|---------------|----------------|------------|------------|--------|
| | MHz | dBuV | dB/m | dB | dB | dBuV/m | dBuV/m | dB | |
| 1 | 31.731 | 61.61 | 12.27 | 0.45 | 42.37 | 31.96 | 40.00 | -8.04 | QP |
| 2 | 51.121 | 55.65 | 13.63 | 0.49 | 42.33 | 27.44 | 40.00 | -12.56 | QP |
| 3 | 65.573 | 52.97 | 12.30 | 0.62 | 42.29 | 23.60 | 40.00 | -16.40 | QP |
| 4 | 127.665 | 54.24 | 11.63 | 1.41 | 42.27 | 25.01 | 40.00 | -14.99 | QP |
| 5 | 192.419 | 53.44 | 10.34 | 1.71 | 42.19 | 23.30 | 40.00 | -16.70 | QP |
| 6 | 435.590 | 58.46 | 16.56 | 3.16 | 41.81 | 36.37 | 47.00 | -10.63 | QP |

Note:Emission Level=Read Level+Antenna Factor+Cable loss-Preamp Factor

6.3 Harmonic Current Emission

Test Requirement: EN 61000-3-2:2014

Test Method: EN 61000-3-2:2014

Frequency Range: 100Hz to 2kHz

There is no need for Harmonics test to be performed on this product (rated power is less than 75W) in accordance with EN 61000-3-2:2014.

For further details, please refer to Clause 7 of EN 61000-3-2 which states:

"For the following categories of equipment, limits are not specified in this standard.- equipment with a rated power of 75W or less, other than lighting equipment."

6.4 Voltage Fluctuations and Flicker

Test Requirement: EN 61000-3-3:2013

Test Method: EN 61000-3-3:2013

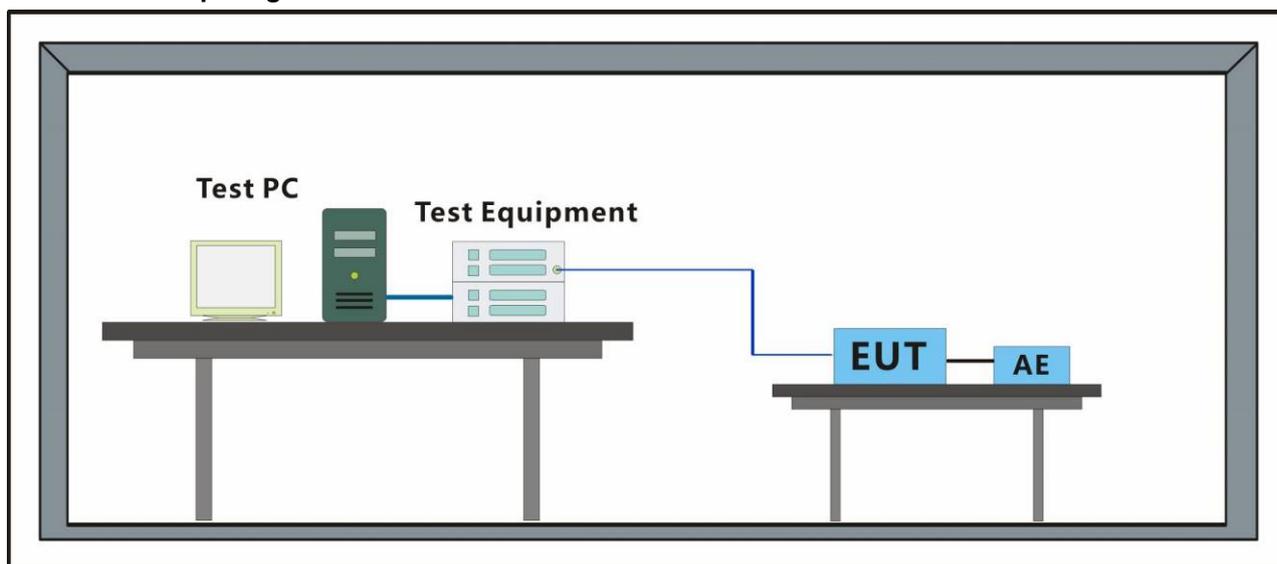
6.4.1 E.U.T. Operation

Operating Environment:

Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1020 mbar

Test mode a: Charging mode: keep EUT charging with adaptor,

6.4.2 Test Setup Diagram



6.4.3 Measurement Data

Mode:a

Parameter values recorded during the test:

| | | | | |
|---------------------------------|--------|------------------|-------|------|
| Vrms at the end of test (Volt): | 229.96 | | | |
| T-max (mS): | 0 | Test limit (mS): | 500.0 | Pass |
| Highest dc (%): | 0.56 | Test limit (%): | 3.30 | Pass |
| Highest dmax (%): | 0.35 | Test limit (%): | 4.00 | Pass |
| Highest Pst (10 min. period): | 0.026 | Test limit: | 1.000 | Pass |
| Highest Plt (2 hr. period): | 0.022 | Test limit: | 0.650 | Pass |

7 Immunity Test Results

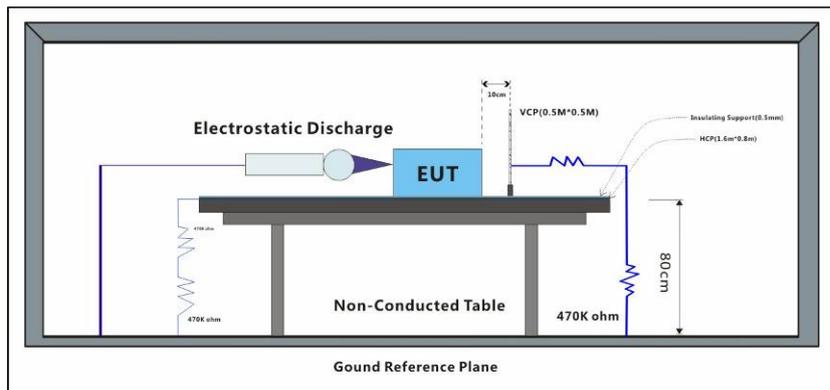
7.1 Performance Criteria Description in EN 55014-2:2015

- Criterion A** The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.
- Criterion B** The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however. No change of actual operating state or stored data is allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation and from what the user may reasonably expect from the apparatus if used as intended.
- Criterion C** Temporary loss of function is allowed, provided the function is self recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

7.2 Electrostatic Discharge

Test Requirement: EN 55014-2:2015
 Test Method: EN 61000-4-2:2009
 Performance Criterion: B
 Discharge Impedance: 330Ω/150pF
 Number of Discharge: Minimum 10 times at each test point
 Discharge Mode: Single Discharge
 Discharge Period: 1 second minimum

7.2.1 Test Setup Diagram



7.2.2 E.U.T. Operation

Operating Environment:
 Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1020 mbar
 Test mode: a: Charging mode: keep EUT charging with adaptor,
 b: Running mode: keep EUT running.

7.2.3 Test Results:

- Observations: Test Point:
1. All insulated enclosure and seams.
 2. All accessible metal parts of the enclosure.
 3. All side

| Discharge type | Level (kV) | Polarity | Test Point | Result / Observations |
|-------------------|------------|----------|------------|-----------------------|
| Air Discharge | 8 | + | 1 | B |
| Air Discharge | 8 | - | 1 | B |
| Contact Discharge | 4 | + | 2 | A |
| Contact Discharge | 4 | - | 2 | A |
| Vertical Coupling | 4 | + | 3 | A |
| Vertical Coupling | 4 | - | 3 | A |

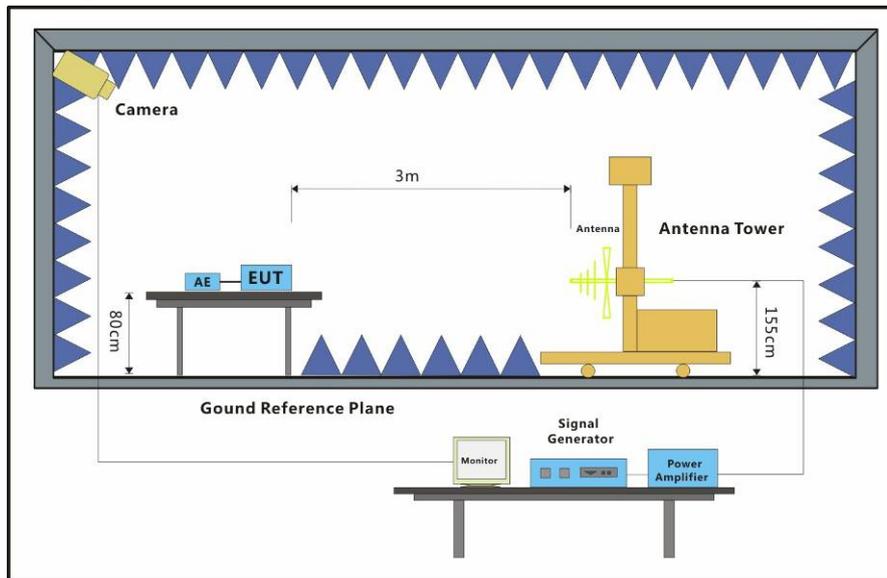
Results:

- A: No degradation in the performance of the EUT was observed.
 B: Discharging the AUX port, the audio device of EUT restarted.

7.3 Radiated Immunity (80MHz-1GHz)

Test Requirement: EN 55014-2:2015
 Test Method: EN 61000-4-3:2006 +A1:2008+A2:2010
 Performance Criterion: A
 Frequency Range: 80MHz to 1GHz
 Antenna Polarisation: Vertical and Horizontal
 Modulation: 1kHz,80% Amp. Mod,1% increment

7.3.1 Test Setup Diagram



7.3.2 E.U.T. Operation

Operating Environment:
 Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1020 mbar
 Test mode:
 a: Charging mode: keep EUT charging with adaptor,
 b: Running mode: keep EUT running.

7.3.3 Test Results:

| Frequency | Level (V/m) | EUT Face | Dwell time | Result / Observations |
|------------|-------------|-----------|------------|-----------------------|
| 80MHz-1GHz | 3 | Front | 3s | A |
| 80MHz-1GHz | 3 | Back | 3s | A |
| 80MHz-1GHz | 3 | Left | 3s | A |
| 80MHz-1GHz | 3 | Right | 3s | A |
| 80MHz-1GHz | 3 | Top | 3s | A |
| 80MHz-1GHz | 3 | Underside | 3s | A |

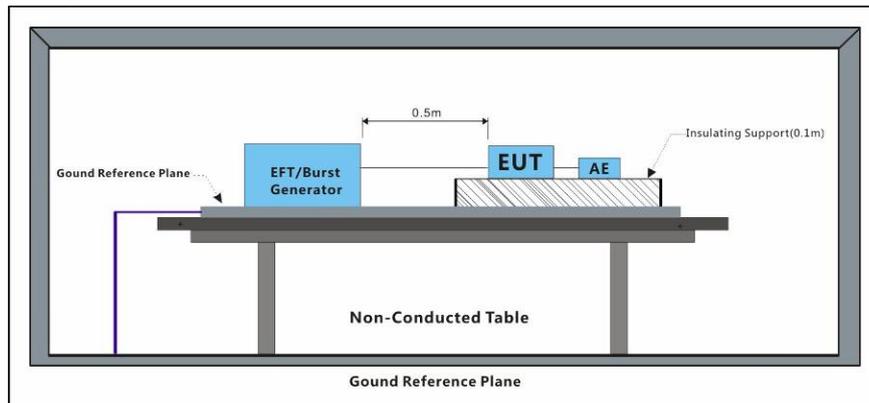
Results:

A: No degradation in the performance of the EUT was observed.

7.4 Electrical Fast Transients/Burst at Power Port

Test Requirement: EN 55014-2:2015
 Test Method: EN 61000-4-4:2012
 Performance Criterion: B
 Repetition Frequency: 5kHz
 Burst Period: 300ms
 Test Duration: 2 minute per level & polarity

7.4.1 Test Setup Diagram



7.4.2 E.U.T. Operation

Operating Environment:
 Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1020 mbar
 Test mode: a: Charging mode: keep EUT charging with adaptor,

7.4.3 Test Results:

| Test Line | Level (kV) | Polarity | CDN/Clamp | Result / Observations |
|---------------|------------|----------|-----------|-----------------------|
| AC power port | 1 | + | CDN | A |
| AC power port | 1 | - | CDN | A |

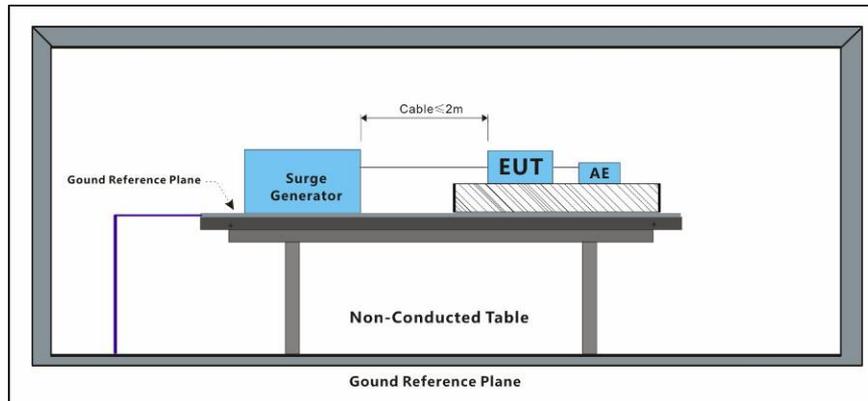
Results:

A: No degradation in the performance of the EUT was observed.

7.5 Surge at Power Port

Test Requirement: EN 55014-2:2015
 Test Method: EN 61000-4-5:2014 +A1:2017
 Performance Criterion: B
 Interval: 60s between each surge
 No. of surges: 5 positive at 90°, 5 negative at 270°.

7.5.1 Test Setup Diagram



7.5.2 E.U.T. Operation

Operating Environment:
 Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1020 mbar
 Test mode: a: Charging mode: keep EUT charging with adaptor,

7.5.3 Test Results:

| Test Line | Level (kV) | Polarity | Phase (deg) | Result / Observations |
|-----------|------------|----------|-------------|-----------------------|
| L-N | 1 | + | 90° | A |
| L-N | 1 | - | 270° | A |

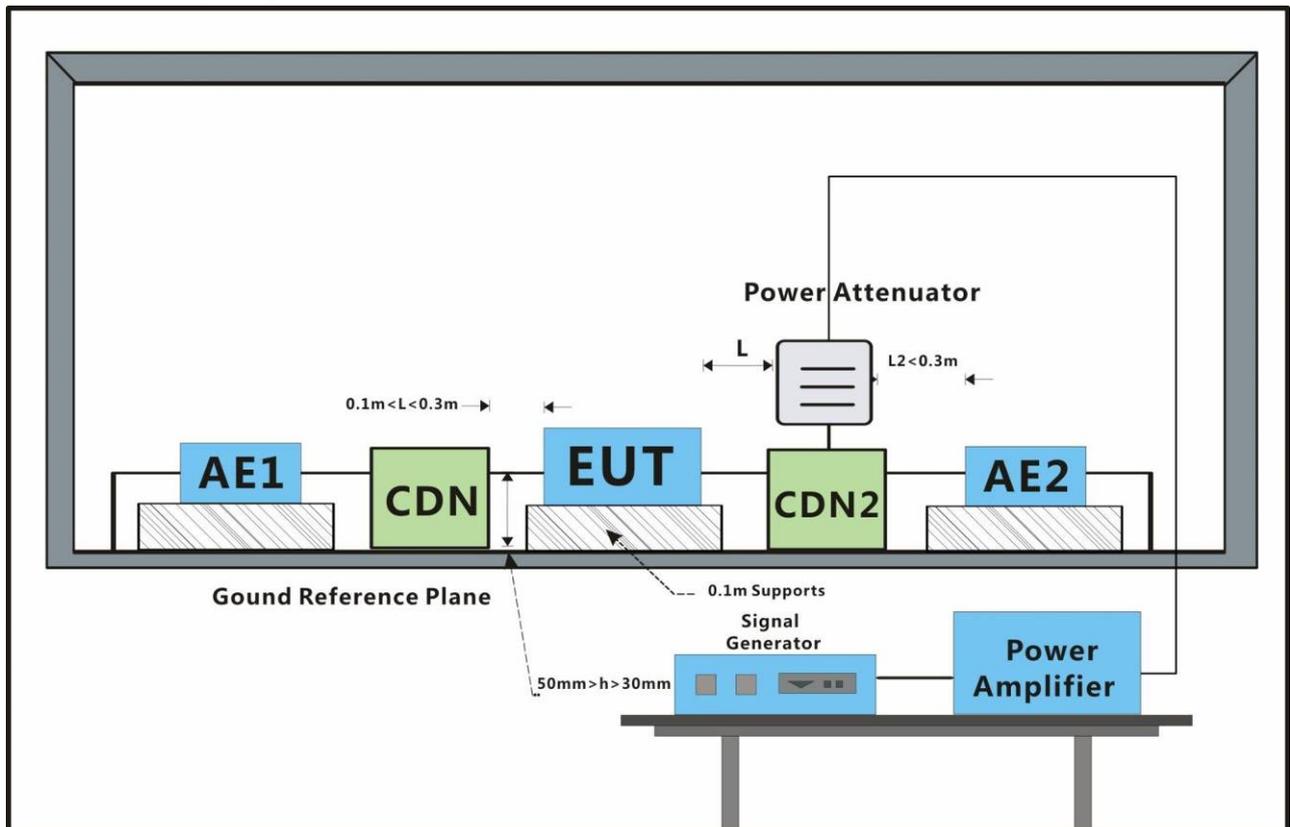
Results:

A: No degradation in the performance of the EUT was observed.

7.6 Conducted Immunity at Power Port (150kHz-230MHz)

Test Requirement: EN 55014-2:2015
 Test Method: EN 61000-4-6:2014
 Performance Criterion: A
 Frequency Range: 0.15MHz to 230MHz
 Modulation: 80%, 1kHz Amplitude Modulation
 Step Size: 1%

7.6.1 Test Setup Diagram



7.6.2 E.U.T. Operation

Operating Environment:

Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1020 mbar

Test mode: a: Charging mode: keep EUT charging with adaptor,

7.6.3 Test Results:

| Cable port | Level (Vrms) | CDN/Clamp | Dwell time | Result / Observations |
|---------------|--------------|-----------|------------|-----------------------|
| AC power port | 3 | CDN | 2s | A |

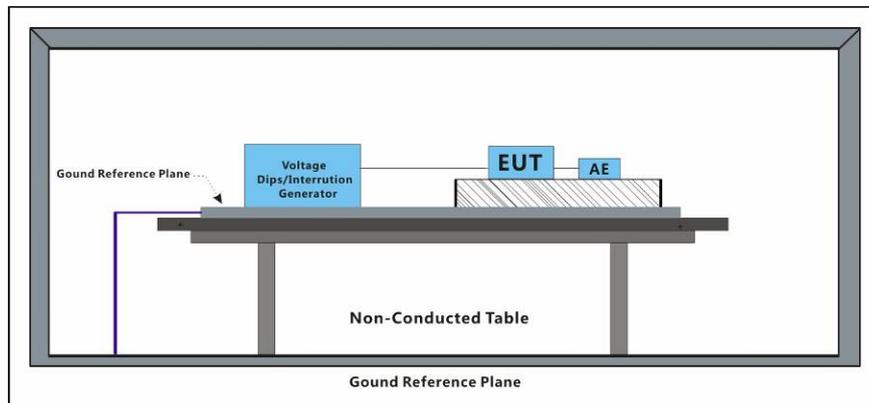
Results:

A: No degradation in the performance of the EUT was observed.

7.7 Voltage Dips and Interruptions

Test Requirement: EN 55014-2:2015
 Test Method: EN 61000-4-11:2004 +A1:2017
 Performance Criterion: For 50Hz:
 0% of UT (Rated Voltage) for 0.5 Cycle: C;
 40% of UT for 10 Cycle: C;
 70% of UT for 25 Cycle: C
 For 60Hz:
 0% of UT (Rated Voltage) for 0.5 Cycle: C;
 40% of UT for 12 Cycle: C;
 70% of UT for 30 Cycle: C
 No. of Dips / Interruptions: 3 per Level
 Time between dropout 10s

7.7.1 Test Setup Diagram



7.7.2 E.U.T. Operation

Operating Environment:
 Temperature: 22 °C Humidity: 50 % RH Atmospheric Pressure: 1020 mbar
 Test mode: a: Charging mode: keep EUT charging with adaptor,

7.7.3 Test Results:

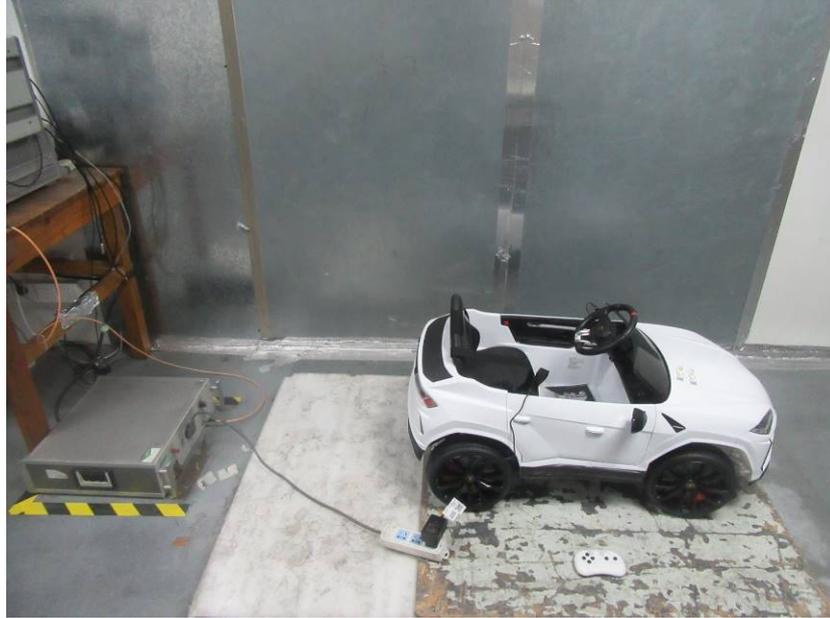
| Level % UT | Phase (deg) | Duration | No. of Dips / Interruptions | Result / Observations |
|------------|-------------|------------|-----------------------------|-----------------------|
| 0 | 0° | 0.5 Cycles | 3 | A |
| 0 | 180° | 0.5 Cycles | 3 | A |
| 40 | 0° | 10 Cycles | 3 | A |
| 40 | 180° | 10 Cycles | 3 | A |
| 70 | 0° | 25 Cycles | 3 | A |
| 70 | 180° | 25 Cycles | 3 | A |

Results:

A: No degradation in the performance of the EUT was observed.

8 Photographs

8.1 Conducted Emissions at Mains Terminals (150kHz-30MHz) Test Setup



8.2 Radiated Emissions (30MHz-1GHz) Test Setup





8.3 Voltage Fluctuations and Flicker Test Setup



8.4 Electrostatic Discharge Test Setup



8.5 Radiated Immunity (80MHz-1GHz) Test Setup



8.6 Electrical Fast Transients/Burst at Power Port Test Setup



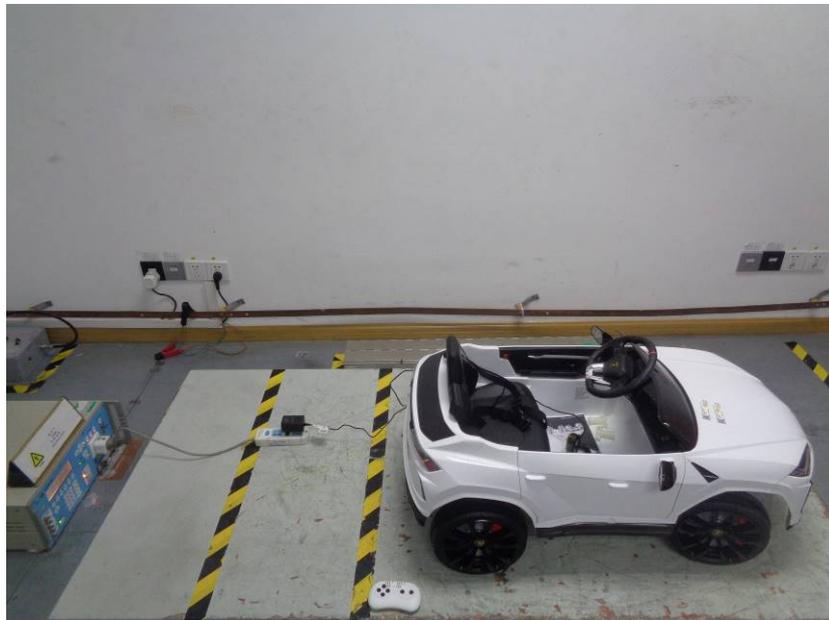
8.7 Surge at Power Port Test Setup



8.8 Conducted Immunity at Power Port (150kHz-230MHz) Test Setup

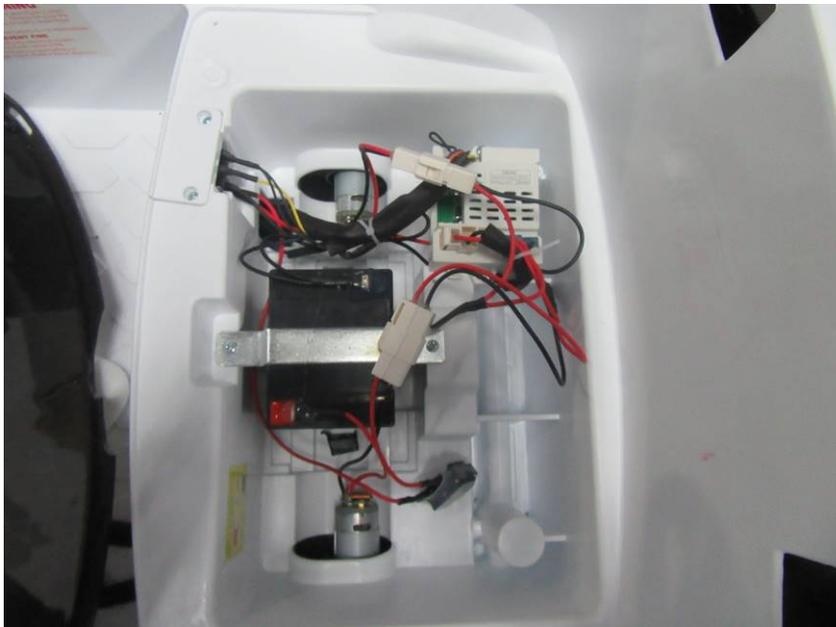


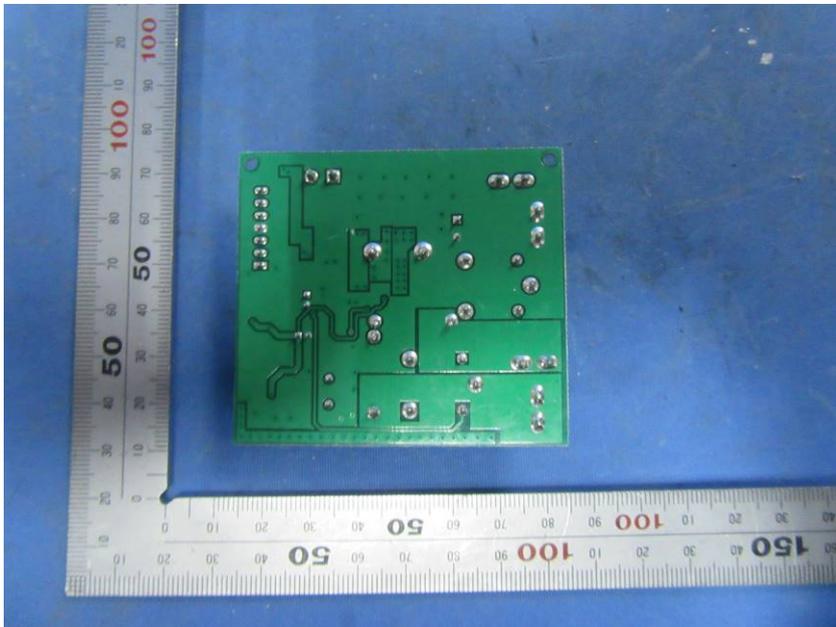
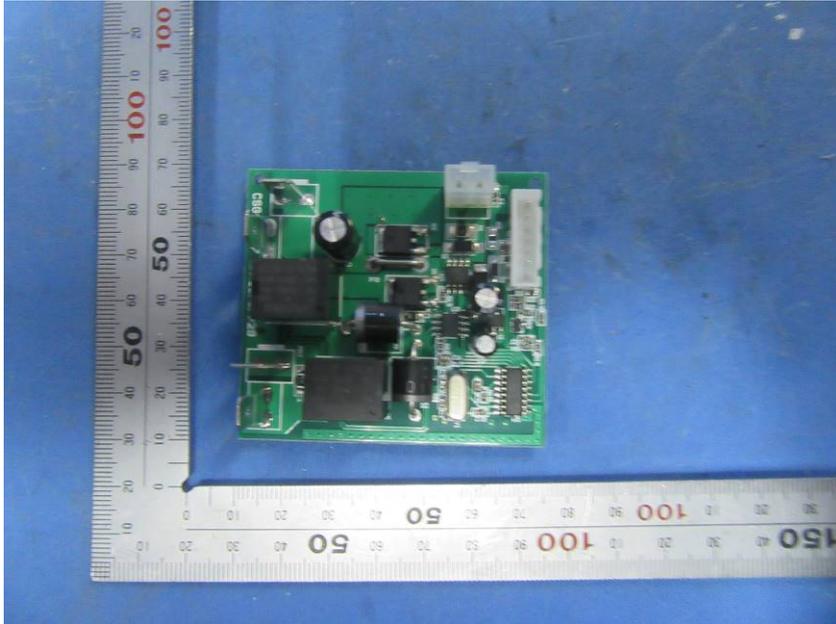
8.9 Voltage Dips and Interruptions Test Setup

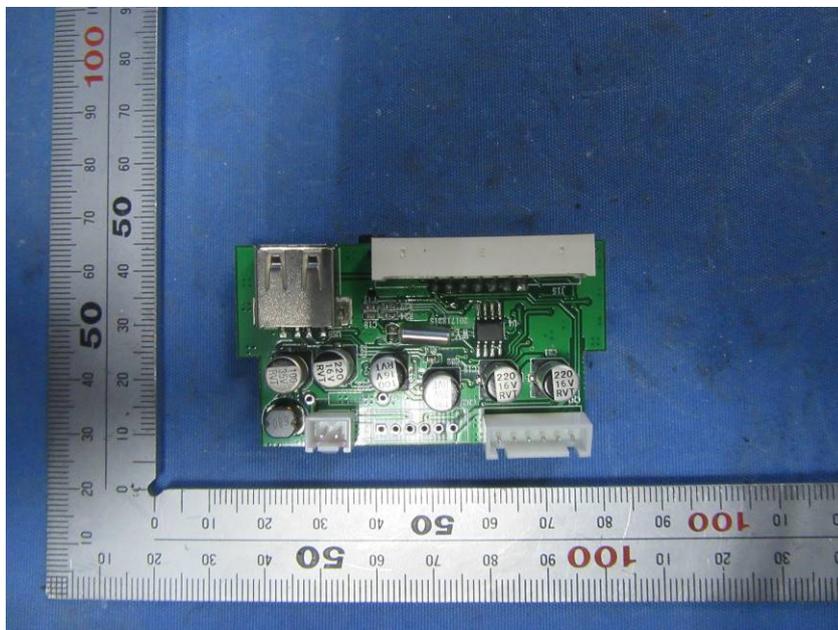


8.10 EUT Constructional Details (EUT Photos)

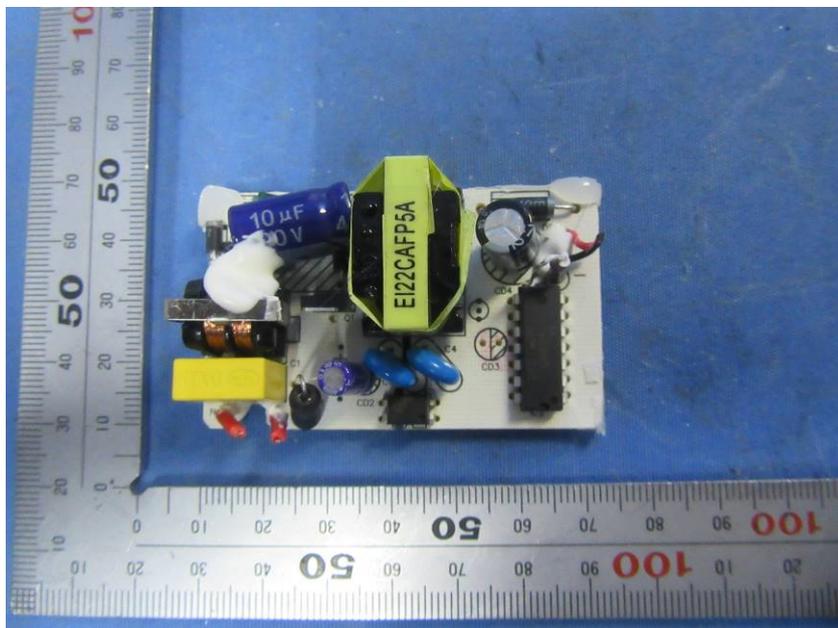


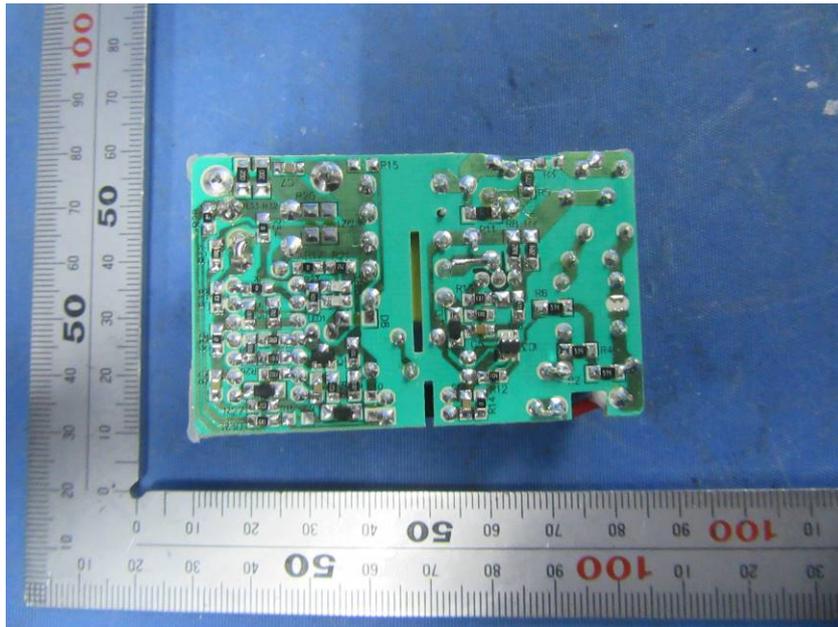












- End of the Report -