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|--|---|--|---|---|
| Prüfbericht-Nr.: <i>Test report no.:</i> | 60434794 002 | Auftrags-Nr.: <i>Order no.:</i> | 168292739 | Seite 1 von 12 Page 1 of 12 |
| Kunden-Referenz-Nr.: <i>Client reference no.:</i> | N/A | Auftragsdatum: <i>Order date:</i> | 2020-11-30 | |
| Auftraggeber: <i>Client:</i> | Sanford, L.P.dba Dymo 3 Glendale Parkway, NE Atlanta GA 30328, United States Of America | | | |
| Prüfgegenstand: <i>Test item:</i> | Label maker | | | |
| Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i> | LabelWriter 550 Turbo | | | |
| Auftrags-Inhalt: <i>Order content:</i> | Test Report | | | |
| Prüfgrundlage: <i>Test specification:</i> | CFR47 FCC Part 15: Subpart B ICES-003 Issue 7 October 2020 | | | |
| Wareneingangsdatum: <i>Date of sample receipt:</i> | 2020-12-04 | Please refer to photo documents | | |
| Prüfmuster-Nr.: <i>Test sample no.:</i> | A002960663-005 | | | |
| Prüfzeitraum: <i>Testing period:</i> | 2020-12-05 – 2021-01-11 | | | |
| Ort der Prüfung: <i>Place of testing:</i> | TÜV Rheinland (Shenzhen) Co., Ltd. | | | |
| Prüflaboratorium: <i>Testing laboratory:</i> | TÜV Rheinland (Shenzhen) Co., Ltd. | | | |
| Prüfergebnis*: <i>Test result*:</i> | Pass | | | |
| geprüft von: <i>tested by:</i> |  Lin Lin | | genehmigt von: <i>authorized by:</i> | Winni e Hou |
| Datum: <i>Date:</i> | 2021-01-12 | | Ausstellungsdatum: <i>Issue date:</i> | 2021-01-12 |
| Stellung / Position: | Senior Project Manager | | Stellung / Position: | Technical Certifier |
| Sonstiges / Other: | FCC ID: RGDLW550T | | | |
| Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i> | Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i> | | | |
| * Legende: | 1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n) | 2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n) | 3 = befriedigend N/A = nicht anwendbar | 4 = ausreichend N/T = nicht getestet |
| * Legend: | 1 = very good P(ass) = passed a.m. test specification(s) | 2 = good F(ail) = failed a.m. test specification(s) | 3 = satisfactory N/A = not applicable | 4 = sufficient N/T = not tested |
| Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i> | | | | |

v05

Test Summary

5.1.1 RADIATED EMISSIONS

RESULT: Pass

5.1.2 CONDUCTED EMISSIONS ON AC MAINS

RESULT: Pass

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1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Test Setup Photos

Appendix B: Test results of EMC

2 Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

362 Huanguan Road Middle Longhua District, Shenzhen 518110 People's Republic of China

FCC Accreditation Designation No.: CN1260

ISED Wireless Device Testing Laboratory: 25069

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

| Radiated Emissions | | | | |
|---------------------------------|---------------------|---------------------|-------------------|-------------------|
| Equipment | Manufacturer | Model No. | Serial No. | Cal. Until |
| 3m SAC | ETS | SAC3 | CT001632-Q1362 | 2021-08-23 |
| EMI Test Receiver | R&S | ESR7 | 102111 | 2021-12-16 |
| Horn Antenna | R&S | HF907 | 102706 | 2022-08-07 |
| Preamplifier | FIT | SCU-18F | 180077 | 2021-08-16 |
| Active magnetic loop antenna | SCHWARZBECK | FMZB1519B | 00080 | 2021-08-20 |
| Trilog-Broadband antenna | SCHWARZBECK | VULB9168 | 0945 | 2021-12-13 |
| Switching Controller Interface | R&S | OSP 120 | 102039 | N/A |
| EMC32 test software | R&S | EMC32(Ver.10.50.01) | N/A | N/A |
| Conducted Emissions | | | | |
| Equipment | Manufacturer | Model No. | Serial No. | Cal. Until |
| EMI Test Receiver | R&S | ESR3 | 102428 | 2021-08-16 |
| Impedance Stabilisation Network | R&S | ENY81 | 100323 | 2021-08-16 |
| Impedance Stabilisation Network | R&S | ENY81-CA6 | 101810 | 2021-08-16 |
| Artificial Mains Network | R&S | ENV216 | 102333 | 2021-08-16 |
| EMC32 test software | R&S | EMC32(Ver.10.50.01) | N/A | N/A |

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table.

| Parameter | Uncertainty |
|--|-----------------------|
| Radiated Emission (3m SAC), 30MHz to 1000MHz | ± 4.52 dB |
| Radiated Emission (3m SAC), above 1000MHz | ± 4.37 dB |
| Conducted Emission, (9kHz to 150kHz)/(150kHz to 30MHz) | ± 3.70 dB / ± 3.30 dB |

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A & B of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) Co., Ltd. file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at 362 Huanguan Road Middle Longhua District, Shenzhen 518110 People's Republic of China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3 General Product Information

3.1 Product Function and Intended Use

The device is a Label maker, which supports NFC function.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

| General Information of EUT | Value |
|----------------------------|---|
| Kind of Equipment | Label maker |
| Type Designation | LabelWriter 550 Turbo |
| FCC ID | RGDLW550T |
| Equipment Class | B |
| Operating Voltage | DC 24V@2.5A input via power adapter |
| Testing Voltage | AC 120V/60Hz |
| Power adapter | Model: DYS865-240250W Input: 100-240V, 50/60Hz Output: DC 24V, 2.5A |

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, Print by USB + NFC mode
- B. On, Print by RJ45 + NFC mode
- C. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- User Manual

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All tests were performed according to the procedures in ANSI C63.4: 2014.

4.3 Special Accessories and Auxiliary Equipment

Table 3: List of Accessories and Auxiliary Equipment

| Description | Manufacturer | Model | S/N | Remark |
|-----------------|--------------|---------------|----------|--|
| Portable Laptop | Lenovo | ThinkPad T480 | 10Q67059 | N/A |
| USB Cable | newell | USB Cable | --- | Shielded, Length: 1.2m Provided by client |

4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

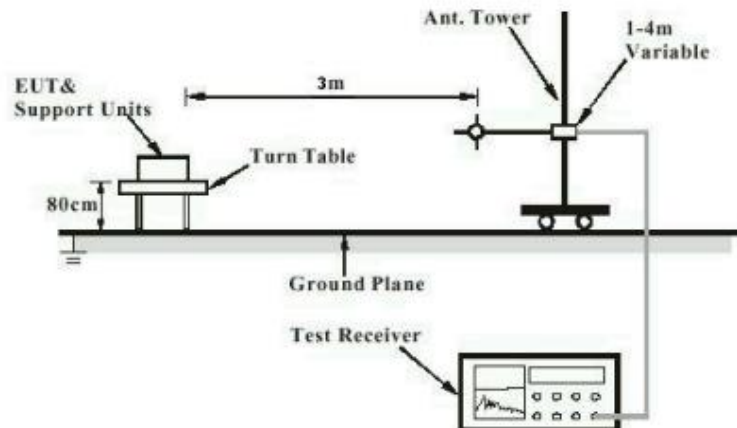


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

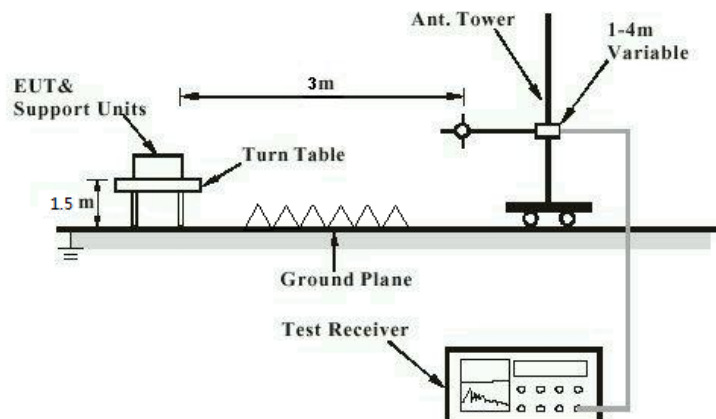
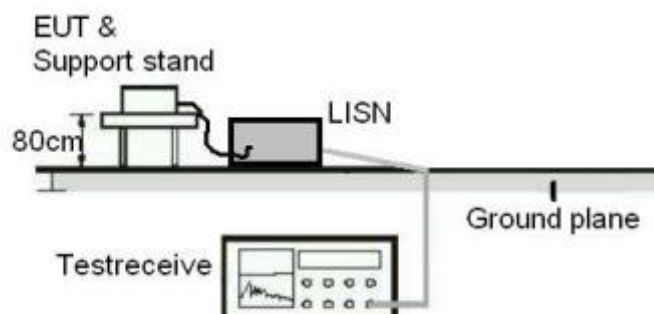


Diagram of Measurement Equipment Configuration for Mains Conduction Measurement



5 Test Results

5.1.1 Radiated Emissions

RESULT:**Pass****Test Specification**

| | |
|-------------------|--|
| Test standard | : FCC Part 15.109(a) ICES-003 Issue 7, Clause 3.2.2 |
| Basic standard | : ANSI C63.4: 2014 |
| Frequency range | : 30MHz to 2000MHz |
| Classification | : Class B |
| Limits | : FCC Part 15.109(a) ICES-003 Issue 7, Clause 3.2.2 |
| Kind of test site | : 3m Semi-anechoic Chamber |

Test Setup

| | |
|----------------------|---------------------------|
| Date of testing | : 2020-12-30 ~ 2020-12-31 |
| Input voltage | : AC 120V/60Hz |
| Operation mode | : A+B |
| Earthing | : Not connected |
| Ambient temperature | : 23 °C |
| Relative humidity | : 50 % |
| Atmospheric pressure | : 101 kPa |

Note: The product internal highest operation frequency is lower than 500MHz, so the highest measurement frequency range is up to 2GHz.

For the measurement records, refer to the appendix B.

5.1.2 Conducted Emissions on AC Mains

RESULT:**Pass****Test Specification**

| | |
|-------------------|--|
| Test standard | : FCC Part 15.107(a) ICES-003 Issue 7, Clause 3.2.1 |
| Basic standard | : ANSI C63.4: 2014 |
| Frequency range | : 150KHz to 30MHz |
| Classification | : Class B |
| Limits | : FCC Part 15.109(a) ICES-003 Issue 7, Clause 3.2.1 |
| Kind of test site | : Shielded Room |

Test Setup

| | |
|----------------------|-----------------|
| Date of testing | : 2021-01-11 |
| Input voltage | : AC 120V/60Hz |
| Operation mode | : A, B |
| Earthing | : Not connected |
| Ambient temperature | : 23 °C |
| Relative humidity | : 50 % |
| Atmospheric pressure | : 101 kPa |

For the measurement records, refer to the appendix B.

6 Photographs of the Test Set-Up

For photographs of the test set-up, refer to the appendix A.

7 List of Tables

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