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Telephone: +86 (0) 755 2601 2053 Report No.: SZEM140800417803

Fax: +86 (0) 755 2671 0594 Page : 1 of 19

FCC REPORT

Application No.: SZEM1408004178RF

Applicant: Philips Consumer Lifestyle

Manufacturer:IDT Technology LimitedFactory:IDT Technology Limited

Product Name: Activity Monitor with OHR

Model No.(EUT): DL8770

Add Model No.: DL8770/XX ("X" can be A-Z or 0-9 for different country version)

Trade Mark: Philips

Standards: 47 CFR Part 15B (2013)

Date of Receipt: 2014-08-07

Date of Test: 2014-08-15 to 2014-08-18

Date of Issue: 2014-09-05

Test Result: PASS *

Authorized Signature:



Jack Zhang EMC Laboratory 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.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

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



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2 Version

| Revision Record | | | | | | | | | |
|-----------------|---------|------------|----------|----------|--|--|--|--|--|
| Version | Chapter | Date | Modifier | Remark | | | | | |
| 00 | | 2014-09-05 | | Original | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

| Authorized for issue by: | | |
|--------------------------|------------------------------|------------------|
| Tested By | Back Huang)/Project Engineer | 2014-08-18 Date |
| Prepared By | Mohrda Ii | 2014-09-05 |
| | (Molinda Li) /Clerk | Date |
| Checked By | Emen-Li | 2014-09-05 |
| | (Emen Li) /Reviewer | Date |



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2 Test Summary

| Test Item | Test Requirement | Test method | Result | |
|---------------------|------------------|--------------------|--------|--|
| Radiated Emission § | 47 CFR Part 15B | ANSI C63.4 (2009) | PASS | |
| Conducted Emission | 47 CFR Part 15B | ANSI C63.4 (2009) | PASS | |
| (150kHz to 30MHz) | 47 OFN Part 13B | AINSI 003.4 (2009) | | |

Remark:

§ If the highest frequency of the internal sources of the EUT is less than 108 MHz, the measurement shall only be made up to 1 GHz.

Model No.: DL8770, DL8770/XX "X" can be A-Z or 0-9 for different country version Only the model DL8770 was tested, since the electrical circuit design, PCB layout, components used and internal wiring were identical for the above models, only different on exterior printing.



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4 General Information

4.1 Client Information

| Applicant: | Philips Consumer Lifestyle | | | |
|--------------------------|--|--|--|--|
| Address of Applicant: | 5/F., Philips Electronics Building, 5 Science Park East Avenue, Hong Kong | | | |
| Manufacturer: | IDT Technology Limited | | | |
| Address of Manufacturer: | Block C, 9/F., Kaiser Estate, Phase 1, 41 Man Yue Street, Hunghom, Kowloon, Hong Kong. | | | |
| Factory: | IDT Technology Limited | | | |
| Address of Factory: | Chentian Industrial Estate Xixiang, BaoAn, Shenzhen, PRC | | | |

4.2 General Description of EUT

| Product Name: | Activity Monitor with OHR |
|---------------|---|
| Model No.: | DL8770, DL8770/XX ("X" can be A-Z or 0-9 for different country version) |
| Trade Mark: | Philips |
| Sample Type: | Portable production |
| Antenna Type: | Integral |
| Antenna Gain: | 0dBi |
| Power Supply: | DC 3.8V 100mA (Li-Polymer Battery) |
| Test Voltage: | AC 120V 60Hz |



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4.3 Test Environment and Mode

| Operating Environment: | | | | | |
|--------------------------|---|--|--|--|--|
| Temperature: | 23.0 °C | | | | |
| Humidity: | 56 % RH | | | | |
| Atmospheric Pressure: | 1000 mbar | | | | |
| Test mode: | | | | | |
| Communicate with PC mode | Build the connection between EUT and PC, keep data transmit | | | | |

4.4 Description of Support Units

The EUT has been tested independent unit.

4.5 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch E&E Lab,

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.



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4.6 Test Facility

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

CNAS (No. CNAS L2929)

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 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.

VCCI

The 3m Semi-anechoic chamber, Full-anechoic Chamber and Shielded Room (7.5m x 4.0m x 3.0m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2197, G-416, T-1153 and C-2383 respectively.

• FCC – Registration No.: 556682

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 556682.

• Industry Canada (IC)

Two 3m Semi-anechoic chambers of SGS-CSTC Standards Technical Services Co., Ltd. have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1 & 4620C-2.

4.7 Deviation from Standards

None.

4.8 Abnormalities from Standard Conditions

None.

4.9 Other Information Requested by the Customer

None.



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4.10 Equipment List

| | RE in Chamber | | | | |
|------|---------------------------------------|------------------------------------|-----------|------------------|---------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Due date (yyyy-mm-dd) |
| 1 | 3m Semi-Anechoic Chamber | ETS-LINDGREN N/A | | SEL0017 | 2015-06-10 |
| 2 | EMI Test Receiver | Rohde & Schwarz | ESIB26 | SEL0023 | 2015-05-16 |
| 3 | EMI Test software | AUDIX | E3 | SEL0050 | N/A |
| 4 | Coaxial cable | SGS | N/A | SEL0027 | 2015-05-29 |
| 5 | Coaxial cable | SGS | N/A | SEL0189 | 2015-05-29 |
| 6 | Coaxial cable | SGS | N/A | SEL0121 | 2015-05-29 |
| 7 | Coaxial cable | SGS | N/A | SEL0178 | 2015-05-29 |
| 8 | BiConiLog Antenna (26-3000MHz) | ETS-LINDGREN | 3142C | SEL0015 | 2014-10-24 |
| 9 | Double-ridged horn (1-18GHz) | ETS-LINDGREN | 3117 | SEL0006 | 2014-10-24 |
| 10 | Pre-amplifier (0.1-1300MHz) | Agilent Technologies | 8447D | SEL0053 | 2015-05-16 |
| 11 | Pre-Amplifier (0.1-26.5GHz) | Compliance Directions Systems Inc. | PAP-0126 | SEL0168 | 2014-10-24 |
| 12 | Barometer | ChangChun | DYM3 | SEL0088 | 2015-05-16 |
| 13 | DC Power Supply | Zhao Xin | RXN-305D | SEL0117 | 2014-10-24 |
| 14 | Humidity/ Temperature Indicator | Shanhai Qixiang | ZJ1-2B | SEL0103 | 2014-10-24 |
| 15 | Signal Generator | Rohde & Schwarz | SMY01 | SEL0155 | 2014-10-24 |
| 16 | Signal Generator (10M-27GHz) | Rohde & Schwarz | SMR27 | SEL0067 | 2015-05-16 |
| 17 | Loop Antenna | Beijing Daze | ZN30401 | SEL0203 | 2015-06-04 |



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| | Conducted Emission | n | | | |
|------|---------------------------------------|--|---------------------------|------------------|---------------------------|
| Item | Test Equipment | Manufacturer | Model No. | Inventory No. | Cal.Due date (yyyy-mm-dd) |
| 1 | Shielding Room | ZhongYu Electron | ZhongYu Electron GB-88 SE | | 2015-06-10 |
| 2 | LISN | Rohde & Schwarz | ENV216 | SEL0152 | 2014-10-24 |
| 3 | LISN | ETS-LINDGREN | 3816/2 | SEL0021 | 2015-05-16 |
| 4 | 8 Line ISN | Fischer Custom Communications Inc. | FCC-TLISN- T8-02 | SEL0162 | 2014-11-10 |
| 5 | 4 Line ISN | Fischer Custom Communications Inc. | FCC-TLISN- T4-02 | SEL0163 | 2014-11-10 |
| 6 | 2 Line ISN | Fischer Custom Communications Inc. | FCC-TLISN- T2-02 | SEL0164 | 2014-11-10 |
| 7 | EMI Test Receiver | Rohde & Schwarz | ESCI | SEL0022 | 2015-05-16 |
| 8 | Coaxial Cable | SGS | N/A | SEL0025 | 2015-05-29 |
| 9 | DC Power Supply | Zhao Xin | RXN-305D | SEL0117 | 2014-10-24 |
| 10 | Humidity/ Temperature Indicator | Shanhai Qixiang | ZJ1-2B | SEL0103 | 2014-10-24 |
| 11 | Barometer | Chang Chun | DYM3 | SEL0088 | 2015-05-16 |

Note: The calibration interval is one year, all the instruments are valid.





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5 Test results and Measurement Data

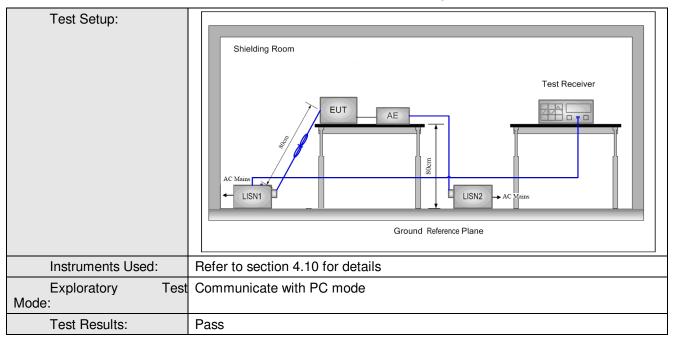
5.1 Conducted Emissions

| Test Requirement: | 47 CFR Part 15B | | | | | |
|-----------------------|---|--|--------------------------|--|--|--|
| Test Method: | ANSI C63.4: 2009 | | | | | |
| Test frequency range: | 150kHz to 30MHz | | | | | |
| Limit: | F (AUL.) | Limit (dBuV) | | | | |
| | Frequency range (MHz) | Quasi-peak | Average | | | |
| | 0.15-0.5 | 66 to 56* | 56 to 46* | | | |
| | 0.5-5 | 56 | 46 | | | |
| | 5-30 | 60 | 50 | | | |
| | * Decreases with the logarithm | n of the frequency. | | | | |
| Test Procedure: | The mains terminal disturb room. On The FUT recessors and the second seco | - | | | | |
| | 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω linear | | | | | |
| | | | | | | |
| | impedance. The power cables of all other units of the EUT were contonant to a second LISN 2, which was bonded to the ground reference the same way as the LISN 1 for the unit being measured. A multiple so outlet strip was used to connect multiple power cables to a single LI | | | | | |
| | provided the rating of the l | | | | | |
| | The tabletop EUT was place ground reference plane. At the classical section is a second of the classical section. | nd for floor-standing ar | | | | |
| | placed on the horizontal gr | • | former where The reserve | | | |
| | the EUT shall be 0.4 m fro vertical ground reference pane. The LISN unit under test and bonded on top of the ground refere closest points of the LISN associated equipment was 5) In order to find the maxim equipment and all of the interface cab | est was performed with a vertical ground reference plane. The rear JT shall be 0.4 m from the vertical ground reference plane. The all ground reference plane was bonded to the horizontal ground note plane. The LISN 1 was placed 0.8 m from the boundary of the order test and bonded to a ground reference plane for LISNs mount of the ground reference plane. This distance was between the st points of the LISN 1 and the EUT. All other units of the EUT and lated equipment was at least 0.8 m from the LISN 2. Her to find the maximum emission, the relative positions of the interface cables must be changed according to ANSI C63.4 on conducted measurement. | | | | |



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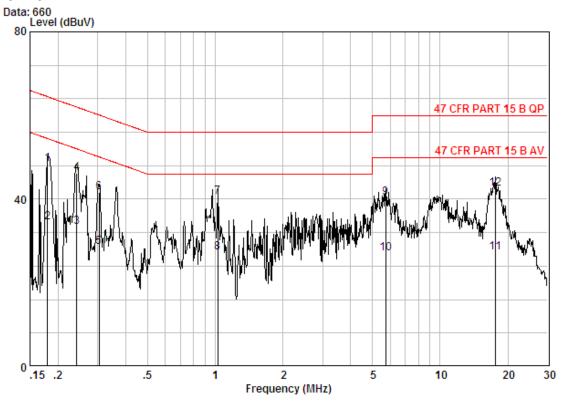
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Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Live Line:



Site : Shielding Room

Condition : 47 CFR PART 15 B QP CE LINE

Job No. : 4178RF

Mode : Communicate with PC

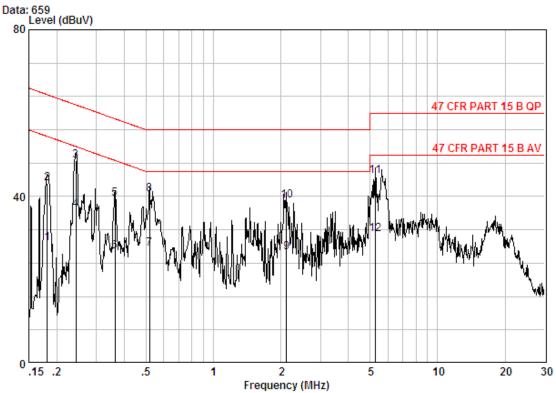
| | Freq | Cable Loss | LISN Factor | Read Level | Level | Limit Line | Over Limit | Remark |
|-----|---------|---------------|----------------|---------------|-------|---------------|---------------|---------|
| | | | | | | | | |
| | MHz | dB | dB | dBuV | dBuV | dBuV | dB | |
| 1 | 0.17961 | 0.02 | 9.70 | 38.64 | 48.36 | 64.50 | -16.15 | QP |
| 2 | 0.17961 | 0.02 | 9.70 | 24.72 | 34.44 | 54.50 | -20.06 | Average |
| 3 | 0.24165 | 0.02 | 9.70 | 23.67 | 33.38 | 52.04 | -18.66 | Average |
| 4 | 0.24165 | 0.02 | 9.70 | 36.59 | 46.30 | 62.04 | -15.74 | QP |
| 5 | 0.30509 | 0.01 | 9.71 | 18.87 | 28.58 | 50.10 | -21.52 | Average |
| 6 | 0.30509 | 0.01 | 9.71 | 31.84 | 41.55 | 60.10 | -18.55 | QP |
| 7 @ | 1.027 | 0.02 | 9.80 | 30.66 | 40.48 | 56.00 | -15.52 | QP |
| 8 | 1.027 | 0.02 | 9.80 | 17.45 | 27.27 | 46.00 | -18.73 | Average |
| 9 | 5.713 | 0.01 | 9.90 | 30.51 | 40.42 | 60.00 | -19.58 | QP |
| 10 | 5.713 | 0.01 | 9.90 | 17.08 | 26.99 | 50.00 | -23.01 | Average |
| 11 | 17.661 | 0.02 | 10.10 | 17.03 | 27.15 | 50.00 | -22.85 | Average |
| 12 | 17.661 | 0.02 | 10.10 | 32.31 | 42.43 | 60.00 | -17.57 | QP |



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Neutral Line:



Site : Shielding Room

Condition : 47 CFR PART 15 B QP CE NEUTRAL

Job No. : 4178RF

Mode : Communicate with PC

| | Freq | Cable Loss | LISN Factor | Read Level | Level | Limit Line | Over Limit | Remark |
|------|---------|---------------|----------------|---------------|-------|---------------|---------------|---------|
| | MHz | dB | dB | dBuV | dBuV | dBuV | dB | |
| 1 | 0.18152 | 0.02 | 9.70 | 19.05 | 28.77 | 54.42 | -25.65 | Average |
| 2 | 0.18152 | 0.02 | 9.70 | 33.54 | 43.26 | 64.42 | -21.16 | QP |
| 3 @ | 0.24293 | 0.02 | 9.70 | 38.86 | 48.58 | 62.00 | -13.42 | QP |
| 4 @ | 0.24293 | 0.02 | 9.70 | 27.02 | 36.74 | 52.00 | -15.26 | Average |
| 5 | 0.36338 | 0.01 | 9.77 | 29.65 | 39.43 | 58.65 | -19.22 | QP |
| 6 | 0.36338 | 0.01 | 9.77 | 17.02 | 26.80 | 48.65 | -21.85 | Average |
| 7 | 0.51824 | 0.01 | 9.80 | 17.69 | 27.50 | 46.00 | -18.50 | Average |
| 8 @ | 0.51824 | 0.01 | 9.80 | 30.75 | 40.56 | 56.00 | -15.44 | QP |
| 9 | 2.121 | 0.02 | 9.81 | 16.75 | 26.57 | 46.00 | -19.43 | Average |
| 10 | 2.121 | 0.02 | 9.81 | 29.17 | 38.99 | 56.00 | -17.01 | QP |
| 11 @ | 5.277 | 0.01 | 9.92 | 34.91 | 44.84 | 60.00 | -15.16 | QP |
| 12 | 5.277 | 0.01 | 9.92 | 20.96 | 30.88 | 50.00 | -19.12 | Average |

Notes:

- 1. The following Quasi-Peak and Average measurements were performed on the EUT:
- 2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.



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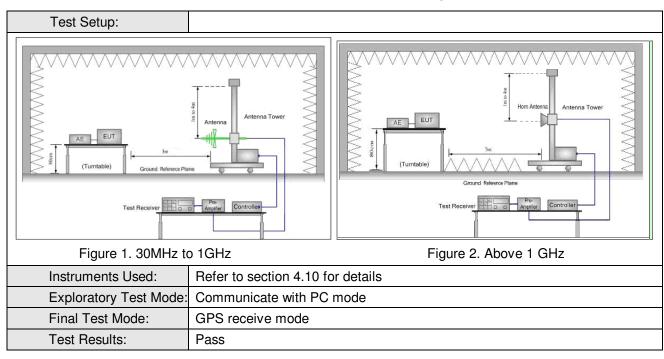
5.2 Radiated Emission

| Test Requirement: | 47 CFR Part 15B | | | | | | | |
|-------------------|--|--|---------------|--------------------|--------|---------|------------------|--|
| Test Method: | ANSI C63.4: 2009 | | | | | | | |
| Test site: | Measurement Distance: 3m (Semi-Anechoic Chamber) | | | | | | | |
| Receiver setup: | | Frequency Detector | | | RBW | VBW | Remark | |
| | | 30MHz-1GHz | lz Quasi-peal | | 100kHz | 300kHz | Quasi-peak Value | |
| | | Above 1GHz | Peak | | 1MHz | 3MHz | Peak Value | |
| Limit: | | Freque | ncy | Limit (dBuV/m @3m) | | (m @3m) | Remark | |
| | | 30MHz-88MHz 88MHz-216MHz | | | 40.0 | | Quasi-peak Value | |
| | | | | | 43.5 | | Quasi-peak Value | |
| | | 216MHz-960MHz | | 46.0 | |) | Quasi-peak Value | |
| | | 960MHz-1GHz | | | 54.0 | | Quasi-peak Value | |
| | | Above 1GHz | | | 54.0 | | Average Value | |
| | | | | | 74.0 | | Peak Value | |
| Test Procedure: | a. b. c. d. g. | a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. | | | | | | |



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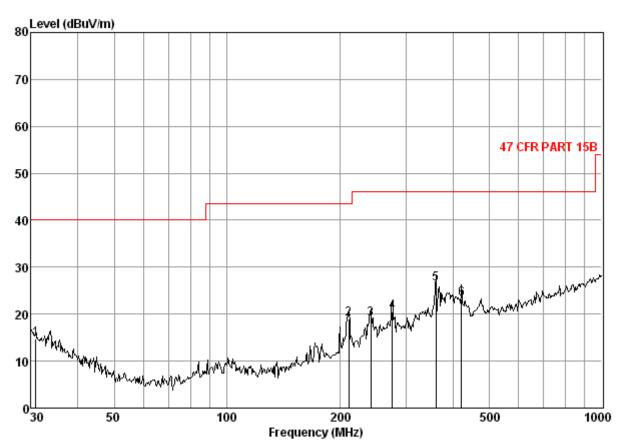


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QP value: Below 1GHz

Horizontal



Condition: 47 CFR PART 15B 3m 3142C HORIZONTAL

Job No. : 4178RF

Mode : Communicate with PC

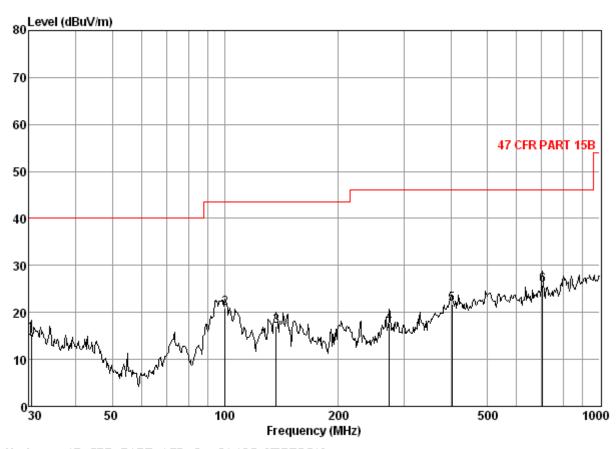
| | | LUSS | ľactor | Factor | Level | | Limit Line | Limit |
|--------------------------|---|------------------------------|----------------------------------|--------|----------------------------------|--------------------------------------|----------------------------------|----------------------------|
| | MHz | ₫B | dB/m | dB | dBuV | $\overline{\text{dBuV/m}}$ | $\overline{\text{dBuV/m}}$ | dB |
| 2 2 3 2 4 2 5 3 | 30.85 211.53 241.68 276.12 360.45 422.06 | 1.47 1.63 1.80 2.09 | 10.80 12.03 12.85 14.78 | | 33.37 31.96 32.38 36.44 | 18. 98 19. 06 20. 57 26. 44 | 43.50 46.00 46.00 46.00 | -24.52 -26.94 -25.43 |



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Vertical



Condition: 47 CFR PART 15B 3m 3142C VERTICAL

Job No. : 4178RF

Mode : Communicate with PC

| dB dB/m | <u>dB</u> | | | | |
|--|--|--|--|--|--|
| | | шuv | dBuV/m | dBuV/m | dB |
| l. 20 9. 10 l. 29 7. 98 l. 79 12. 78 2. 21 16. 31 | 27. 20 26. 97 26. 47 27. 15 | 23. 74 37. 79 34. 69 29. 62 30. 28 | 15. 44 20. 89 16. 99 17. 72 21. 65 | 43.50 43.50 46.00 46.00 | -24. 56 -22. 61 -26. 51 -28. 28 -24. 35 |
| 1 | .20 9.10 .29 7.98 .79 12.78 .21 16.31 | .20 9.10 27.20 .29 7.98 26.97 .79 12.78 26.47 .21 16.31 27.15 | .20 9.10 27.20 37.79 .29 7.98 26.97 34.69 .79 12.78 26.47 29.62 .21 16.31 27.15 30.28 | .20 9.10 27.20 37.79 20.89 .29 7.98 26.97 34.69 16.99 .79 12.78 26.47 29.62 17.72 .21 16.31 27.15 30.28 21.65 | .20 9.10 27.20 37.79 20.89 43.50 .29 7.98 26.97 34.69 16.99 43.50 .79 12.78 26.47 29.62 17.72 46.00 .21 16.31 27.15 30.28 21.65 46.00 |

Remark:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor



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6 Photographs - EUT Test Setup

Test Model No.: DL8770

6.1 Conducted Emission Test Setup



6.2 Radiated Emission Test Setup





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7 Photographs - EUT Constructional Details

Test Model No.: DL8770

Refer to Report No. SZEM140800417801 for EUT external and internal photos.

