

TEST REPORT

ACCORDING TO: FCC 47CFR part 15 subpart C § 15.209 and
RSS-210 issue 8 section 2.5.1

FOR:

Visonic Ltd.

**RFID tag reader of
touch screen keyprox**

Model: KP-160 PG2

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1 Applicant information

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Contact name: Mr. Arick Elshtein

2 Equipment under test attributes

Product name: RFID tag reader of touch screen keyprox
Product type: Transmitter
Model(s): KP-160 PG2
Serial number: 0-101755
Hardware version: 0500 L 8-303351
Software release: V1.0.07
Receipt date: 7/24/2011

3 Manufacturer information

Manufacturer name: Visonic Ltd.
Address: Habarzel street 24, Tel Aviv 69710, Israel
Telephone: +972 3645 6714
Fax: +972 3645 6788
E-Mail: aelshtein@visonic.com
Contact name: Mr. Arick Elshtein

4 Test details

Project ID: 22015
Location: Hermon Laboratories Ltd. Harakevet Industrial Zone, Binyamina 30500, Israel
Test started: 7/24/2011
Test completed: 7/28/2011
Test specification(s): FCC 47CFR part 15, subpart C, §15.209;
RSS-210 issue 8 section 2.5.1, RSS-Gen issue 3 Table 6



5 Tests summary

| Test | Status |
|--|--------|
| Transmitter characteristics | |
| FCC section 15.209, RSS-Gen section 7.2.5, Field strength of emissions | Pass |
| FCC section 15.203, RSS-Gen section 7.1.2, Antenna requirement | Pass |
| RSS-Gen, Section 4.6.1, Occupied bandwidth | Tested |

Testing was completed against all relevant requirements of the test standard. The results obtained indicate that the product under test complies in full with the requirements tested.
The test results relate only to the items tested. Pass/ fail decision was based on nominal values.

| | Name and Title | Date | Signature |
|---------------------|--|------------------|-----------|
| Tested by: | Mrs. E. Pitt, test engineer | July 28, 2011 | |
| Reviewed by: | Mrs. M. Cherniavsky, certification engineer | August 10, 2011 | |
| Approved by: | Mr. M. Nikishin, EMC and radio group manager | October 18, 2011 | |

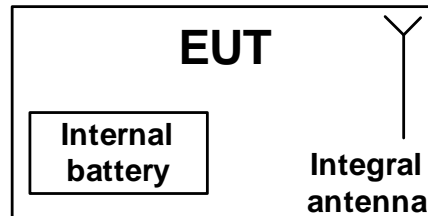


6 EUT description

6.1 General information

The EUT, RFID tag reader, operating at 123.5 kHz with ASK modulation, is included in KP-160 PG2 touch screen keyprox.

6.2 Test configuration



6.3 Changes made in EUT

No changes were implemented in the EUT.

| | | | |
|----------------------------|---|--------------------------------|----------------------------------|
| Test specification: | Section 15.209, RSS-Gen section 7.2.5, Field strength of emissions | | |
| Test procedure: | ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date(s): | 7/28/2011 | | |
| Temperature: 21 °C | Air Pressure: 1012 hPa | Relative Humidity: 51 % | Power Supply: 6 V battery |
| Remarks: | | | |

7 Transmitter tests according to 47CFR part 15 subpart C and RSS-210 requirements

7.1 Field strength of emissions

7.1.1 General

This test was performed to measure field strength of fundamental and spurious emissions from the EUT. Specification test limits are given Table 7.1.1 and Table 7.1.2.

Table 7.1.1 Radiated fundamental emission limits

| Fundamental frequency, kHz | Field strength at 3 m, dB(μV/m) | |
|----------------------------|---------------------------------|--|
| | Average | |
| 123.538 | 105.8 | |

Table 7.1.2 Radiated spurious emissions limits

| Frequency, MHz | Field strength at 3 m, dB(μV/m) | | |
|----------------------------------|---------------------------------|-----------------|-----------------|
| | Within restricted bands | | |
| | Peak | Quasi Peak | Average |
| 0.009 – 0.090 | 148.5 – 128.5 | NA | 128.5 – 108.5** |
| 0.090 – 0.110 | NA | 108.5 – 106.8** | NA |
| 0.110 – 0.490 | 126.8 – 113.8 | NA | 106.8 – 93.8** |
| 0.490 – 1.705 | NA | 73.8 – 63.0** | NA |
| 1.705 – 30.0* | | 69.5 | |
| 30 – 88 | | 40.0 | |
| 88 – 216 | | 43.5 | |
| 216 – 960 | | 46.0 | |
| 960 - 1000 | | 54.0 | |
| 1000 – 10 th harmonic | 74.0 | NA | 54.0 |

*- The limit for 3 m test distance was calculated using the inverse square distance extrapolation factor as follows:

$$\text{Lim}_{S_2} = \text{Lim}_{S_1} + 40 \log(S_1/S_2),$$

where S_1 and S_2 – standard defined and test distance respectively in meters.

** - The limit decreases linearly with the logarithm of frequency.

7.1.2 Test procedure for fundamental and spurious emission field strength measurements in 9 kHz to 30 MHz

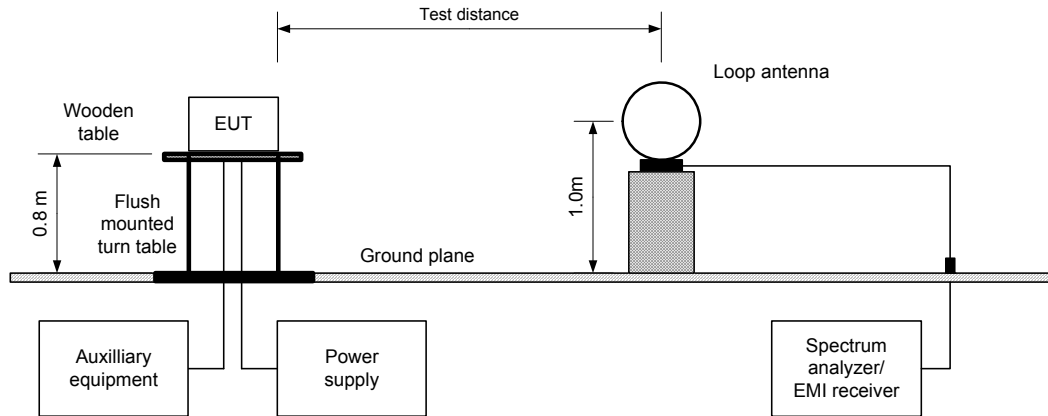
7.1.2.1 The EUT was set up as shown in Figure 7.1.1, energized and the performance check was conducted.

7.1.2.2 The specified frequency range was investigated with a loop antenna connected to spectrum analyzer/ EMI receiver. To find maximum radiation the turntable was rotated 360°, the measuring antenna was rotated around its vertical axis. The measuring antenna polarization was switched from vertical to horizontal.

7.1.2.3 The worst test results (the lowest margins) were recorded in Table 7.1.3, Table 7.1.4 and shown in the associated plots.

| | | | |
|----------------------------|-------------------------------|---|----------------------------------|
| Test specification: | | Section 15.209, RSS-Gen section 7.2.5, Field strength of emissions | |
| Test procedure: | | ANSI C63.4, Section 13.1.4 | |
| Test mode: | Compliance | Verdict: | PASS |
| Date(s): | 7/28/2011 | | |
| Temperature: 21 °C | Air Pressure: 1012 hPa | Relative Humidity: 51 % | Power Supply: 6 V battery |
| Remarks: | | | |

Figure 7.1.1 Setup for spurious emission field strength measurements below 30 MHz



| | | | |
|----------------------------|-------------------------------|---|----------------------------------|
| Test specification: | | Section 15.209, RSS-Gen section 7.2.5, Field strength of emissions | |
| Test procedure: | | ANSI C63.4, Section 13.1.4 | |
| Test mode: | Compliance | Verdict: | PASS |
| Date(s): | 7/28/2011 | | |
| Temperature: 21 °C | Air Pressure: 1012 hPa | Relative Humidity: 51 % | Power Supply: 6 V battery |
| Remarks: | | | |

Table 7.1.3 Field strength of fundamental emission

TEST DISTANCE: 3 m
 TEST SITE: Semi anechoic chamber
 EUT POSITION: Typical (Vertical)
 TRANSMITTER OUTPUT POWER SETTINGS: Maximum
 INVESTIGATED FREQUENCY RANGE: 0.009 – 30 MHz
 DETECTOR USED: Peak
 RESOLUTION BANDWIDTH: 1 kHz (9 kHz – 150 kHz)
 9.0 kHz (150 kHz – 30 MHz)
 VIDEO BANDWIDTH: ≥ Resolution bandwidth
 TEST ANTENNA TYPE: Active loop (9 kHz – 30 MHz)

| F, kHz | Antenna | | Azimuth, degrees* | Peak field strength | | | Average field strength | | | Verdict |
|---------|---------|-----------|-------------------|---------------------|-----------------|--------------|------------------------|-----------------|--------------|---------|
| | Pol. | Height, m | | Measured, dB(μV/m) | Limit, dB(μV/m) | Margin, dB** | Measured, dB(μV/m) | Limit, dB(μV/m) | Margin, dB** | |
| 123.538 | V | 1.0 | 30 | 51.69 | 125.8 | -74.11 | 51.69 | 105.8 | -54.11 | Pass |

*- EUT front panel refers to 0 degrees position of turntable.

** - Margin (dB) = measured result - specification limit.

Reference numbers of test equipment used

| | | | | | | | |
|---------|---------|---------|---------|--|--|--|--|
| HL 0446 | HL 0521 | HL 2871 | HL 3623 | | | | |
|---------|---------|---------|---------|--|--|--|--|

Full description is given in Appendix A.

| | | | |
|----------------------------|-------------------------------|---|----------------------------------|
| Test specification: | | Section 15.209, RSS-Gen section 7.2.5, Field strength of emissions | |
| Test procedure: | | ANSI C63.4, Section 13.1.4 | |
| Test mode: | Compliance | Verdict: | PASS |
| Date(s): | 7/28/2011 | | |
| Temperature: 21 °C | Air Pressure: 1012 hPa | Relative Humidity: 51 % | Power Supply: 6 V battery |
| Remarks: | | | |

Table 7.1.4 Field strength of spurious emissions

TEST DISTANCE: 3 m
 TEST SITE: Semi Anechoic chamber
 EUT POSITION: Typical (Vertical)
 TRANSMITTER OUTPUT POWER SETTINGS: Maximum
 INVESTIGATED FREQUENCY RANGE: 0.009 – 30 MHz
 DETECTOR USED: Peak
 RESOLUTION BANDWIDTH: 1 kHz (9 kHz – 150 kHz)
 9.0 kHz (150 kHz – 30 MHz)
 VIDEO BANDWIDTH: ≥ Resolution bandwidth
 TEST ANTENNA TYPE: Active loop (9 kHz – 30 MHz)
 Biconilog (30 MHz – 1000 MHz)

| F, MHz | Antenna | | Azimuth, degrees* | Peak field strength | | | Average field strength | | | Verdict |
|-------------------------|---------|-----------|-------------------|---------------------|-----------------|--------------|------------------------|-----------------|--------------|---------|
| | Pol. | Height, m | | Measured, dB(μV/m) | Limit, dB(μV/m) | Margin, dB** | Measured, dB(μV/m) | Limit, dB(μV/m) | Margin, dB** | |
| No emissions were found | | | | | | | | | | |
| Pass | | | | | | | | | | |

*- EUT front panel refers to 0 degrees position of turntable.

**- Margin (dB) = measured result - specification limit.

Table 7.1.5 Restricted bands

| MHz | MHz | MHz | MHz | MHz | GHz |
|-------------------|---------------------|-----------------------|-----------------|---------------|---------------|
| 0.09 - 0.11 | 8.37625 - 8.38675 | 73 - 74.6 | 399.9 - 410 | 2690 - 2900 | 10.6 - 12.7 |
| 0.495 - 0.505 | 8.41425 - 8.41475 | 74.8 - 75.2 | 608 - 614 | 3260 - 3267 | 13.25 - 13.4 |
| 2.1735 - 2.1905 | 12.29 - 12.293 | 108 - 121.94 | 960 - 1240 | 3332 - 3339 | 14.47 - 14.5 |
| 4.125 - 4.128 | 12.51975 - 12.52025 | 123 - 138 | 1300 - 1427 | 3345.8 - 3358 | 15.35 - 16.2 |
| 4.17725 - 4.17775 | 12.57675 - 12.57725 | 149.9 - 150.05 | 1435 - 1626.5 | 3600 - 4400 | 17.7 - 21.4 |
| 4.20725 - 4.20775 | 13.36 - 13.41 | 156.52475 - 156.52525 | 1645.5 - 1646.5 | 4500 - 5150 | 22.01 - 23.12 |
| 6.215 - 6.218 | 16.42 - 16.423 | 156.7 - 156.9 | 1660 - 1710 | 5350 - 5460 | 23.6 - 24 |
| 6.26775 - 6.26825 | 16.69475 - 16.69525 | 162.0125 - 167.17 | 1718.8 - 1722.2 | 7250 - 7750 | 31.2 - 31.8 |
| 6.31175 - 6.31225 | 16.80425 - 16.80475 | 167.72 - 173.2 | 2200 - 2300 | 8025 - 8500 | 36.43 - 36.5 |
| 8.291 - 8.294 | 25.5 - 25.67 | 240 - 285 | 2310 - 2390 | 9000 - 9200 | Above 38.6 |
| 8.362 - 8.366 | 37.5 - 38.25 | 322 - 335.4 | 2483.5 - 2500 | 9300 - 9500 | |

Reference numbers of test equipment used

| | | | | | | |
|---------|---------|---------|---------|--|--|--|
| HL 0446 | HL 0521 | HL 2871 | HL 3623 | | | |
|---------|---------|---------|---------|--|--|--|

Full description is given in Appendix A.

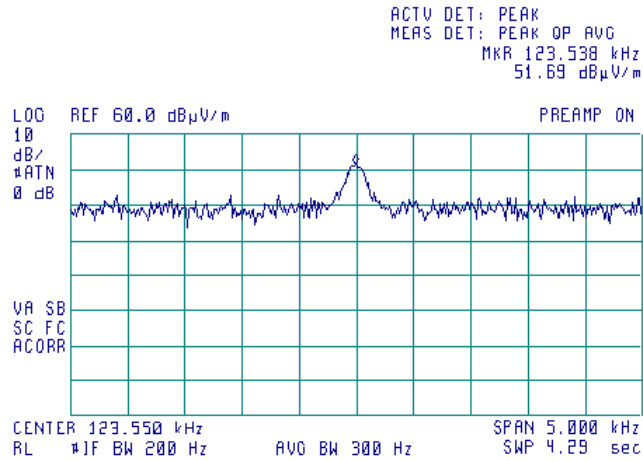


HERMON LABORATORIES

| | | | |
|----------------------------|---|--------------------------------|----------------------------------|
| Test specification: | Section 15.209, RSS-Gen section 7.2.5, Field strength of emissions | | |
| Test procedure: | ANSI C63.4, Section 13.1.4 | | |
| Test mode: | Compliance | Verdict: | PASS |
| Date(s): | 7/28/2011 | | |
| Temperature: 21 °C | Air Pressure: 1012 hPa | Relative Humidity: 51 % | Power Supply: 6 V battery |
| Remarks: | | | |

Plot 7.1.1 Radiated emission measurements at the fundamental frequency

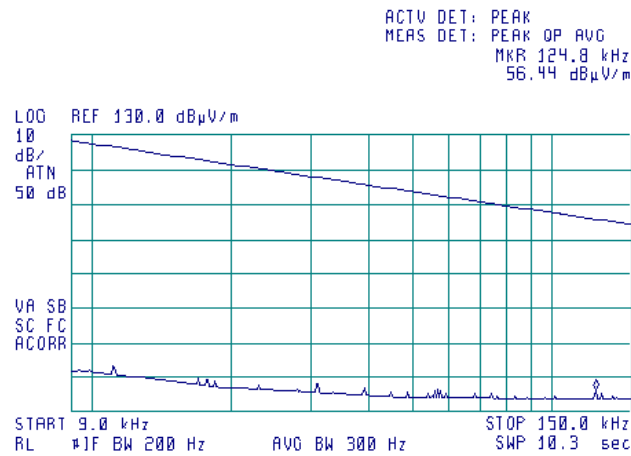
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical & Horizontal
EUT POSITION: Typical (Vertical)



| | | | |
|---|-------------------------------|--------------------------------|----------------------------------|
| Test specification: Section 15.209, RSS-Gen section 7.2.5, Field strength of emissions | | | |
| Test procedure: ANSI C63.4, Section 13.1.4 | | | |
| Test mode: Compliance | Verdict: PASS | | |
| Date(s): 7/28/2011 | | | |
| Temperature: 21 °C | Air Pressure: 1012 hPa | Relative Humidity: 51 % | Power Supply: 6 V battery |
| Remarks: | | | |

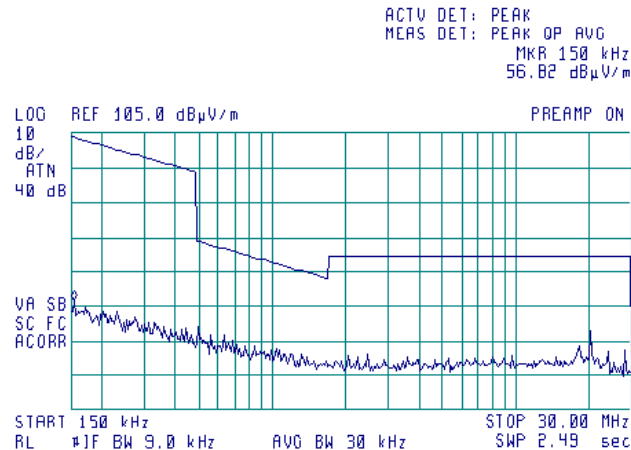
Plot 7.1.2 Radiated emission measurements from 9 to 150 kHz

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical & Horizontal
EUT POSITION: Typical (Vertical)



Plot 7.1.3 Radiated emission measurements from 0.15 to 30 MHz

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical & Horizontal
EUT POSITION: Typical (Vertical)





| | | | |
|----------------------------|-------------------------------|---|----------------------------------|
| Test specification: | | Section 15.203, RSS-Gen section 7.1.2, Antenna requirement | |
| Test procedure: | | Visual inspection / supplier declaration | |
| Test mode: | Compliance | Verdict: | PASS |
| Date: | 7/28/2011 | | |
| Temperature: 21 °C | Air Pressure: 1012 hPa | Relative Humidity: 51 % | Power Supply: 6 V battery |
| Remarks: | | | |

7.2 Antenna requirements

The EUT was verified for compliance with antenna requirements. A transmitter shall be designed to ensure that no antenna other than that furnished by the responsible party will be used with the device. It may be either permanently attached or employs a unique antenna connector for every antenna proposed for use with the EUT. This requirement does not apply to professionally installed transmitters.

The rationale for compliance with the above requirements was either visual inspection results or supplier declaration. The summary of results is provided in Table 7.2.1.

Table 7.2.1 Antenna requirements

| Requirement | Rationale | Verdict |
|--|-------------------|---------|
| The transmitter antenna is permanently attached | Visual inspection | Comply |
| The transmitter employs a unique antenna connector | NA | |
| The transmitter requires professional installation | NA | |

Photograph 7.2.1 Antenna assembly



RFID reader antenna



| | |
|---|-------------------------------|
| Test specification: RSS-Gen, Section 4.6.1, Occupied bandwidth | |
| Test procedure: ANSI C63.4, Section 13.1.7 | |
| Test mode: Compliance | Verdict: PASS |
| Date: 7/28/2011 | |
| Temperature: 21 °C | Air Pressure: 1012 hPa |
| Relative Humidity: 51 % | |
| Power Supply: 6 V battery | |
| Remarks: | |

7.3 Occupied bandwidth test

7.3.1 General

This test was performed to measure transmitter occupied bandwidth not specified by the standard.

7.3.2 Test procedure

7.3.2.1 The EUT was set up as shown in Figure 7.3.1, energized and its proper operation was checked.

7.3.2.2 The EUT was set to transmit modulated carrier at maximum data rate.

7.3.2.3 The transmitter bandwidth was measured with spectrum analyzer as frequency delta between reference points on modulation envelope and provided in Table 7.3.1 and the associated plot.

Figure 7.3.1 Occupied bandwidth test setup





| | |
|---|-------------------------------|
| Test specification: RSS-Gen, Section 4.6.1, Occupied bandwidth | |
| Test procedure: ANSI C63.4, Section 13.1.7 | |
| Test mode: Compliance | Verdict: PASS |
| Date: 7/28/2011 | |
| Temperature: 21 °C | Air Pressure: 1012 hPa |
| Relative Humidity: 51 % | |
| Power Supply: 6 V battery | |
| Remarks: | |

Table 7.3.1 Occupied bandwidth test results

DETECTOR USED: Peak
 SWEEP TIME: Auto
 RESOLUTION BANDWIDTH: ≥ 1% of the 20 dB bandwidth
 VIDEO BANDWIDTH: ≥ RBW
 SIGNAL: MODULATED
 MODULATION ENVELOPE REFERENCE POINTS: 20.0 dBc

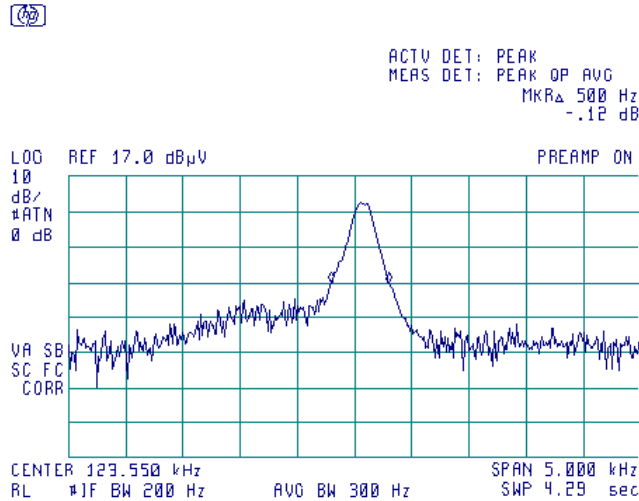
| Carrier frequency, MHz | Occupied bandwidth, kHz | Limit, kHz | Margin, kHz | Verdict |
|------------------------|-------------------------|------------|-------------|---------|
| 123.55 | 0.5 | NA | NA | Tested |

Reference numbers of test equipment used

| | | | | | | | |
|---------|---------|---------|---------|--|--|--|--|
| HL 0446 | HL 0521 | HL 2871 | HL 3623 | | | | |
|---------|---------|---------|---------|--|--|--|--|

Full description is given in Appendix A.

Plot 7.3.1 Occupied bandwidth test result



8 APPENDIX A Test equipment and ancillaries used for tests

| HL No | Description | Manufacturer | Model | Ser. No. | Last Cal. | Due Cal. |
|-------|---|-----------------|-------------|-----------------------------------|-----------|-----------|
| 0446 | Antenna, Loop, Active, 10 kHz - 30 MHz | EMCO | 6502 | 2857 | 3-July-11 | 3-July-12 |
| 0521 | EMI Receiver (Spectrum Analyzer) with RF filter section 9 kHz-6.5 GHz | Hewlett Packard | 8546A | 3617A 00319, 3448A002 53 | 25-Aug-10 | 25-Aug-11 |
| 2871 | Microwave Cable Assembly, 18 GHz, 6.4 m, SMA - SMA | Huber-Suhner | 198-8155-00 | 2871 | 14-Sep-10 | 14-Sep-11 |
| 3623 | Cable RF, 6.0 m, N type-N type, DC-6.5 GHz | Belden | MIL C-17 | 3623 | 19-May-11 | 19-May-12 |

9 APPENDIX B Measurement uncertainties

Expanded uncertainty at 95% confidence in Hermon Labs EMC measurements

| Test description | Expanded uncertainty |
|---|--|
| Radiated emissions at 3 m measuring distance Horizontal polarization | Biconilog antenna: ± 5.3 dB Biconical antenna: ± 5.0 dB Log periodic antenna: ± 5.3 dB Double ridged horn antenna: ± 5.3 dB |
| Vertical polarization | Biconilog antenna: ± 6.0 dB Biconical antenna: ± 5.7 dB Log periodic antenna: ± 6.0 dB Double ridged horn antenna: ± 6.0 dB |

Hermon Laboratories is accredited by A2LA for calibration according to present requirements of ISO/IEC 17025 and NCSL Z540-1. The accreditation is granted to perform calibration of parameters that are listed in the Scope of Hermon Laboratories Accreditation.

Hermon Laboratories calibrates its reference and transfer standards by calibration laboratories accredited to ISO/IEC 17025 by a mutually recognized Accreditation Body or by a recognized national metrology institute. All reference and transfer standards used in the calibration system are traceable to national or international standards.

In-house calibration of all test and measurement equipment is performed on a regular basis according to Hermon Laboratories calibration procedures, manufacturer calibration/verification procedures or procedures defined in the relevant standards. The Hermon Laboratories test and measurement equipment is calibrated within the tolerances specified by the manufacturers and/or by the relevant standards.

10 APPENDIX C Test laboratory description

Tests were performed at Hermon Laboratories Ltd., which is a fully independent, private, EMC, safety, environmental and telecommunication testing facility.

Hermon Laboratories is listed by the Federal Communications Commission (USA) for all parts of Code of Federal Regulations 47 (CFR 47), Registration Numbers 90624 for OATS and 90623 for the anechoic chamber; by Industry Canada for electromagnetic emissions (file numbers IC 2186A-1 for OATS, IC 2186A-2 for anechoic chamber, IC 2186A-3 for full-anechoic chamber for RE measurements above 1 GHz), certified by VCCI, Japan (the registration numbers are R-808 for OATS, R-1082 for anechoic chamber, G-27 for full-anechoic chamber for RE measurements above 1 GHz, C-845 for conducted emissions site, T-1606 for conducted emissions at telecommunication ports), has a status of a Telefication - Listed Testing Laboratory, Certificate No. L138/00. The laboratory is accredited by American Association for Laboratory Accreditation (USA) according to ISO/IEC 17025 for electromagnetic compatibility, product safety, telecommunications testing and environmental simulation (for exact scope please refer to Certificate No. 839.01). The FCC Designation Number is US1003.

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11 APPENDIX D Specification references

| | |
|-------------------------|---|
| FCC 47CFR part 15: 2010 | Radio Frequency Devices |
| ANSI C63.2: 1996 | American National Standard for Instrumentation-Electromagnetic Noise and Field Strength, 10 kHz to 40 GHz-Specifications |
| ANSI C63.4: 2003 | American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz |
| RSS-210 Issue 8: 2010 | Low Power Licence- Exempt Radiocommunication Devices |
| RSS-Gen Issue 3: 2010 | General Requirements and Information for the Certification of Radiocommunication Equipment |

12 APPENDIX E Test equipment correction factors

Antenna factor
Active loop antenna
Model 6502, S/N 2857, HL 0446

| Frequency, MHz | Magnetic antenna factor, dB | Electric antenna factor, dB |
|-------------------|--------------------------------|--------------------------------|
| 0.009 | -32.8 | 18.7 |
| 0.010 | -33.8 | 17.7 |
| 0.020 | -38.3 | 13.2 |
| 0.050 | -41.1 | 10.4 |
| 0.075 | -41.3 | 10.2 |
| 0.100 | -41.6 | 9.9 |
| 0.150 | -41.7 | 9.8 |
| 0.250 | -41.6 | 9.9 |
| 0.500 | -41.8 | 9.8 |
| 0.750 | -41.9 | 9.7 |
| 1.000 | -41.4 | 10.1 |
| 2.000 | -41.5 | 10.0 |
| 3.000 | -41.4 | 10.2 |
| 4.000 | -41.4 | 10.1 |
| 5.000 | -41.5 | 10.1 |
| 10.000 | -41.9 | 9.6 |
| 15.000 | -41.9 | 9.6 |
| 20.000 | -42.2 | 9.3 |
| 25.000 | -42.8 | 8.7 |
| 30.000 | -44.0 | 7.5 |

Antenna factor in dB(1/m) is to be added to receiver meter reading in dB(μ V) to convert it into field intensity in dB(μ V/m).

Cable loss
Cable coaxial, Huber-Suhner, 18 GHz, 6.4 m, SMA - SMA, model 198-8155-00,
HL 2871

| Frequency, MHz | Cable loss, dB | Frequency, MHz | Cable loss, dB | Frequency, MHz | Cable loss, dB |
|----------------|----------------|----------------|----------------|----------------|----------------|
| 10 | 0.12 | 5750 | 2.34 | 12000 | 3.55 |
| 30 | 0.14 | 6000 | 2.39 | 12250 | 3.61 |
| 100 | 0.27 | 6250 | 2.46 | 12500 | 3.67 |
| 250 | 0.45 | 6500 | 2.52 | 12750 | 3.74 |
| 500 | 0.63 | 6750 | 2.58 | 13000 | 3.79 |
| 750 | 0.76 | 7000 | 2.64 | 13250 | 3.82 |
| 1000 | 0.89 | 7250 | 2.68 | 13500 | 3.83 |
| 1250 | 1.01 | 7500 | 2.73 | 13750 | 3.83 |
| 1500 | 1.12 | 7750 | 2.78 | 14000 | 3.88 |
| 1750 | 1.23 | 8000 | 2.83 | 14250 | 3.93 |
| 2000 | 1.32 | 8250 | 2.88 | 14500 | 3.96 |
| 2250 | 1.41 | 8500 | 2.94 | 14750 | 4.01 |
| 2500 | 1.49 | 8750 | 2.97 | 15000 | 4.00 |
| 2750 | 1.58 | 9000 | 3.02 | 15250 | 4.01 |
| 3000 | 1.66 | 9250 | 3.07 | 15500 | 4.00 |
| 3250 | 1.73 | 9500 | 3.13 | 15750 | 4.13 |
| 3500 | 1.80 | 9750 | 3.18 | 16000 | 4.22 |
| 3750 | 1.87 | 10000 | 3.21 | 16250 | 4.29 |
| 4000 | 1.93 | 10250 | 3.26 | 16500 | 4.29 |
| 4250 | 2.01 | 10500 | 3.30 | 16750 | 4.32 |
| 4500 | 2.06 | 10750 | 3.36 | 17000 | 4.37 |
| 4750 | 2.12 | 11000 | 3.39 | 17250 | 4.45 |
| 5000 | 2.17 | 11250 | 3.44 | 17500 | 4.49 |
| 5250 | 2.24 | 11500 | 3.48 | 17750 | 4.53 |
| 5500 | 2.29 | 11750 | 3.52 | 18000 | 4.55 |

Cable loss
Cable coaxial, MIL C-17, N type-N type, 6 m
Belden, HL 3623

| Frequency, MHz | Cable loss, dB | Frequency, MHz | Cable loss, dB | Frequency, MHz | Cable loss, dB |
|----------------|----------------|----------------|----------------|----------------|----------------|
| 10 | 0.13 | 2600 | 4.38 | 5400 | 7.76 |
| 30 | 0.25 | 2700 | 4.53 | 5500 | 7.79 |
| 50 | 0.33 | 2800 | 4.64 | 5600 | 7.88 |
| 100 | 0.49 | 2900 | 4.79 | 5700 | 7.93 |
| 200 | 0.76 | 3000 | 4.93 | 5800 | 8.05 |
| 300 | 0.97 | 3100 | 5.02 | 5900 | 8.03 |
| 400 | 1.18 | 3200 | 5.18 | 6000 | 8.07 |
| 500 | 1.38 | 3300 | 5.27 | 6100 | 8.14 |
| 600 | 1.54 | 3400 | 5.41 | 6200 | 8.21 |
| 700 | 1.71 | 3500 | 5.57 | 6300 | 8.28 |
| 800 | 1.88 | 3600 | 5.65 | 6400 | 8.35 |
| 900 | 2.04 | 3700 | 5.82 | 6500 | 8.43 |
| 1000 | 2.19 | 3800 | 5.89 | | |
| 1100 | 2.38 | 3900 | 6.02 | | |
| 1200 | 2.61 | 4000 | 6.15 | | |
| 1300 | 2.63 | 4100 | 6.26 | | |
| 1400 | 2.79 | 4200 | 6.37 | | |
| 1500 | 2.90 | 4300 | 6.52 | | |
| 1600 | 3.08 | 4400 | 6.63 | | |
| 1700 | 3.21 | 4500 | 6.74 | | |
| 1800 | 3.31 | 4600 | 6.86 | | |
| 1900 | 3.47 | 4700 | 6.98 | | |
| 2000 | 3.59 | 4800 | 7.09 | | |
| 2100 | 3.74 | 4900 | 7.17 | | |
| 2200 | 3.86 | 5000 | 7.30 | | |
| 2300 | 3.98 | 5100 | 7.41 | | |
| 2400 | 4.12 | 5200 | 7.59 | | |
| 2500 | 4.24 | 5300 | 7.71 | | |

13 APPENDIX F Abbreviations and acronyms

| | |
|----------------|---|
| A | ampere |
| AC | alternating current |
| A/m | ampere per meter |
| AM | amplitude modulation |
| AVRG | average (detector) |
| cm | centimeter |
| dB | decibel |
| dBm | decibel referred to one milliwatt |
| dB(μ V) | decibel referred to one microvolt |
| dB(μ V/m) | decibel referred to one microvolt per meter |
| dB(μ A) | decibel referred to one microampere |
| DC | direct current |
| EIRP | equivalent isotropically radiated power |
| ERP | effective radiated power |
| EUT | equipment under test |
| F | frequency |
| GHz | gigahertz |
| GND | ground |
| H | height |
| HL | Hermon laboratories |
| Hz | hertz |
| k | kilo |
| kHz | kilohertz |
| LO | local oscillator |
| m | meter |
| MHz | megahertz |
| min | minute |
| mm | millimeter |
| ms | millisecond |
| μ s | microsecond |
| NA | not applicable |
| NB | narrow band |
| OATS | open area test site |
| Ω | Ohm |
| PM | pulse modulation |
| PS | power supply |
| ppm | part per million (10^{-6}) |
| QP | quasi-peak |
| RE | radiated emission |
| RF | radio frequency |
| rms | root mean square |
| Rx | receive |
| s | second |
| T | temperature |
| Tx | transmit |
| V | volt |
| WB | wideband |

END OF DOCUMENT