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|                             |               |
|-----------------------------|---------------|
| <b>Report Reference ID:</b> | 146144-1TRFWL |
|-----------------------------|---------------|

|                            |   |
|----------------------------|---|
| <b>Test specification:</b> | Title 47 - Telecommunication<br>Chapter I - Federal Communications Commission<br>Subchapter A - General<br>Part 15 - Radio Frequency Devices<br>Subpart C - Intentional Radiators<br><br>– <b>§15.249 - Operation in the 902–928 MHz, 2400–2483.5 MHz, 5725–5875 MHz and 24.0–24.25 GHz</b> |
|----------------------------|---|

|                   |  |
|-------------------|--|
| <b>Applicant:</b> | TeleMedic Inc.<br>6700 Choquette, bur. 200<br>St-Hyacinthe, QC J2S 8L1<br>Canada |
| <b>Apparatus:</b> | Telemedic MUMS-002   |
| <b>FCC ID:</b>    | T3W-MUMS-002   |
| <b>Model:</b>     | MUMS-002   |

|                            |   |
|----------------------------|---|
| <b>Testing laboratory:</b> | <b>Nemko Canada Inc.</b><br>303 River Road<br>Ottawa, ON, Canada<br>K1V 1H2<br><br>Telephone: (613) 737-9680<br>Facsimile: (613) 737-9691 |
|----------------------------|---|

|                     | <b>Name and title</b>                           | <b>Date</b>   |
|---------------------|---|---------------|
| <b>Tested by:</b>   | Kevin Ma, Wireless/EMC Specialist               | June 14, 2010 |
| <b>Reviewed by:</b> | Andrey Adelberg, Senior Wireless/EMC Specialist | June 14, 2010 |



Nemko Canada Inc., a testing laboratory, is accredited by the Standards Council of Canada.  
The tests included in this report are within the scope of this accreditation.

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## Section 1: Report summary

### 1.1 Test specification

#### Specifications

FCC Part 15 Subpart C, 15.249

Operation in the 902–928 MHz, 2400–2483.5 MHz, 5725–5875 MHz and 24.0–24.25 GHz

### 1.2 Statement of compliance

#### Compliance

In the configuration tested the EUT was found compliant

Yes ☒

No ☐

This report contains an assessment of apparatus against specifications based upon tests carried out on samples submitted at Nemko Canada Inc. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15; Subpart C. Radiated tests were conducted in accordance with ANSI C63.4-2003.

### 1.3 Exclusions

#### Exclusions

None

### 1.4 Registration number

#### Test site FCC ID number

176392 (3 m Semi anechoic chamber)

### 1.5 Test report revision history

| Revision # | Details of changes made to test report |
|------------|--|
| TRF        | Original report issued                 |

### 1.6 Limits of responsibility

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.

This test report has been completed in accordance with the requirements of ISO/IEC 17025. All results contain in this report are within Nemko Canada's ISO/IEC 17025 accreditation.

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Nemko Canada Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

## Section 2: Summary of test results

### 2.1 FCC Part 15 Subpart C – Intentional Radiators, test results

#### General requirements for FCC Part 15

| Part       | Test description                | Verdict |
|------------|---------------------------------|---------|
| §15.31(e)  | Variation of power source       | Pass    |
| §15.31(m)  | Number of operating frequencies | Pass    |
| §15.203    | Antenna requirement             | Pass    |
| §15.207(a) | Conducted limits                | Pass    |
| §15.215(c) | 20 dB bandwidth                 | Pass    |

#### Specific requirements for FCC Part 15 Subpart C, 15.249

| Part       | Test description  | Verdict |
|------------|---|---------|
| §15.249(a) | Radiated emissions not in restricted bands                | Pass    |
| §15.249(b) | Fixed Point-to-Point operation in the 24.0–24.25 GHz band | Pass    |
| §15.249(d) | Spurious emissions (except harmonics)                     | Pass    |

Notes: None

## Section 3: Equipment under test (EUT) and application details

### 3.1 Applicant details

|   |                                    |                          |
|---|------------------------------------|--------------------------|
| <b>Applicant complete business name</b> | Name:                              | TeleMedic Inc.           |
|   | Federal Registration Number (FRN): | 0014738223               |
|   | Grantee code                       | T3W                      |
| <b>Mailing address</b>                  | Address:                           | 6700 Choquette, bur. 200 |
|   | City:                              | St-Hyacinthe             |
|   | Province/State:                    | QC                       |
|   | Post code:                         | J2S 8L1                  |
|   | Country:                           | Canada                   |

### 3.2 Modular equipment

|   |  |
|---|--|
| <b>a) Single modular approval</b>         | Single modular approval<br>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>         |
| <b>b) Limited single modular approval</b> | Limited single modular approval<br>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |


### 3.3 Product details

|   |   |          |
|---|---|----------|
| <b>FCC ID</b>                                   | Grantee code:   | T3W      |
|   | Product code:   | MUMS-002 |
| <b>Equipment class</b>                          | DXT – Digital Transmission system   |          |
| <b>Description of product as it is marketed</b> | The MUMS-002 contains two identical RF transceivers, M93 and I9X operating in the 900 MHz ISM band. Two transceivers controlled by software to transmit only one at a time. M93 was deemed as a representative model and test results for only this transceiver are reported. |          |
|   | Model name/number:  | MUMS-002 |
|   | Serial number:  | 01090024 |

### 3.4 Accessories and support equipment

The following information identifies accessories used to exercise the EUT during testing:

|                               |              |
|-------------------------------|--------------|
| Item # 1                      |              |
| <b>Type of equipment:</b>     | Power Supply |
| <b>Brand name:</b>            | CUI INC      |
| <b>Model name or number:</b>  | HK-H1-A09    |
| <b>Nemko sample number:</b>   | 6            |
| <b>Connection port:</b>       | DC port      |
| <b>Cable length and type:</b> | 1.8 m        |
| Item # 2                      |              |
| <b>Type of equipment:</b>     | Test key     |
| <b>Brand name:</b>            | TeleMedic    |
| <b>Model name or number:</b>  | 31-0455      |
| <b>Nemko sample number:</b>   | 3            |
| <b>Connection port:</b>       | Key port     |

|   |  |                                    |
|---|--|------------------------------------|
| <br>Nemko Canada Inc.<br>303 River Rd, Ottawa, ON, Canada, K1V 1H2 | <b>Section 3: Equipment under test (EUT) details</b> | <b>Product:</b> Telemedic MUMS-002 |
|---|--|------------------------------------|

### 3.5 Application purpose

|                            |  |
|----------------------------|--|
| <b>Type of application</b> | <input checked="" type="checkbox"/> Original certification<br><input type="checkbox"/> Change in identification of presently authorized equipment<br>Original FCC ID: _____ Grant date: _____<br><input type="checkbox"/> Class II permissive change or modification of presently authorized equipment |
|----------------------------|--|

### 3.6 Composite/related equipment

|                               |  |
|-------------------------------|--|
| <b>a) Composite equipment</b> | The EUT is a composite device subject to an additional equipment authorization<br>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>  |
| <b>b) Related equipment</b>   | The EUT is part of a system that operates with, or is marketed with, another device that requires an equipment authorization<br>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>  |
| <b>c) Related FCC ID</b>      | If either of the above is "yes":<br><input type="checkbox"/> has been granted under the FCC ID(s) listed below:<br><input type="checkbox"/> is in the process of being filled under the FCC ID(s) listed below:<br><input type="checkbox"/> is pending with the FCC ID(s) listed below:<br><input type="checkbox"/> has a mix of pending and granted statuses under the FCC ID(s) listed below:<br>i FCC ID: _____<br>ii FCC ID: _____ |

### 3.7 Sample information

|                                |                |
|--------------------------------|----------------|
| <b>Receipt date:</b>           | March 30, 2010 |
| <b>Nemko sample ID number:</b> | 2              |

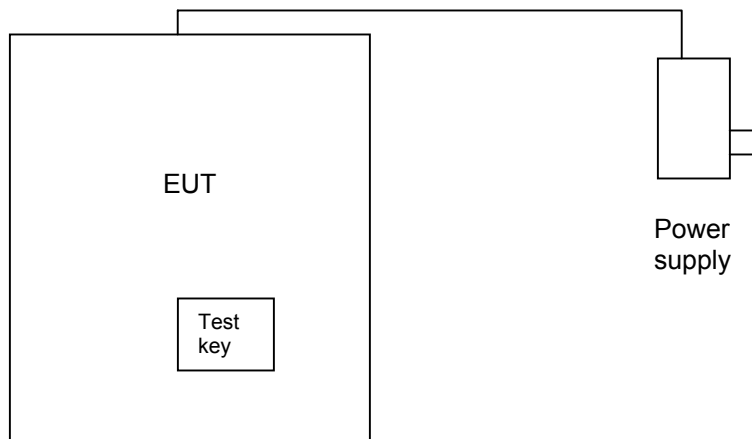
### 3.8 EUT technical specifications

|                             |   |
|-----------------------------|---|
| <b>Operating band:</b>      | 902–928 MHz   |
| <b>Operating frequency:</b> | 916.48 MHz  |
| <b>Modulation type:</b>     | FSK   |
| <b>Occupied bandwidth:</b>  | 104.16 kHz  |
| <b>Emission designator:</b> | F1D   |
| <b>Antenna type:</b>        | Integral<br>Permanent fixed antenna, which may be built-in,<br>(Equipment does not have an external 50 $\Omega$ RF connector) |
| <b>Power source:</b>        | 9 VDC from AC/DC power adapter at 120 VAC, 60 Hz  |

### 3.9 Operation of the EUT during testing

|                 |  |
|-----------------|--|
| <b>Details:</b> | The EUT was controlled to transmit continuously by special test key. |
|-----------------|--|

### 3.10 EUT setup diagram



## Section 4: Engineering considerations

### 4.1 Modifications incorporated in the EUT

#### Modifications

Modifications performed to the EUT during this assessment  
 None ☒ Yes ☐, performed by Client ☐ or Nemko ☐  
 Details:

### 4.2 Deviations from laboratory tests procedures

#### Deviations

Deviations from laboratory test procedures  
 None ☒ Yes ☐ - details are listed below:

### 4.3 Technical judgment

#### Judgment

None



## Section 5: Test conditions

### 5.1 Power source and ambient temperatures

**Normal temperature, humidity and air pressure test conditions**

Temperature: 15–30 °C  
 Relative humidity: 20–75 %  
 Air pressure: 86–106 kPa

When it is impracticable to carry out tests under these conditions, a note to this effect stating the ambient temperature and relative humidity during the tests shall be recorded and stated.

**Power supply range:**

The normal test voltage for equipment to be connected to the mains shall be the nominal mains voltage. For the purpose of the present document, the nominal voltage shall be the declared voltage, or any of the declared voltages  $\pm 5\%$ , for which the equipment was designed.

## Section 6: Measurement uncertainty

Nemko Canada measurement uncertainty has been calculated using guidance of UKAS LAB 34:2003 and TIA-603-B Nov 7, 2002. All calculations have been performed to provide a confidence level of 95 % and can be found in Nemko Canada document MU-003.

## Section 7: Test equipment

### 7.1 Test equipment list

| Equipment                  | Manufacturer       | Model No.  | Asset/Serial No. | Next cal.   |
|----------------------------|--------------------|------------|------------------|-------------|
| 3 m EMI Test Chamber       | TDK                | SAC-3      | FA002047         | May 06/11   |
| Flush Mount Turntable      | Sunol              | FM2022     | FA002082         | NCR         |
| Bilog                      | Sunol              | JB3        | FA002108         | Jan. 18/11  |
| Controller                 | Sunol              | SC104V     | FA002060         | NCR         |
| Mast                       | Sunol              | TLT2       | FA002061         | NCR         |
| Receiver/Spectrum Analyzer | Rohde & Schwarz    | ESU 26     | FA002043         | Dec. 16/10  |
| International Power Supply | California Inst.   | 3001i      | FA001021         | Jan. 13/11  |
| Spectrum Analyzer          | Rohde & Schwarz    | FSU46      | FA001877         | Sep. 29/10  |
| Horn Antenna #2            | EMCO               | 3115       | FA000825         | Jan. 21/11  |
| 1 – 18 GHz Amplifier       | JCA                | JCA118-503 | FA002091         | Oct 07/10   |
| LISN                       | Rohde & Schwarz    | ENV216     | FA002023         | Sept. 02/10 |
| Highpass Filter            | K&L                | 1 GHz      | FA001434         | COU         |
| Notch Filter               | Microwave Circuits | 902-928MHz | FA002096         | COU         |

Note: N/A = Not Applicable, NCR = No Cal Required, COU = CAL On Use



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**Section 8:** Testing data

**Product:** Telemedic MUMS-002

**Test name:** Clause 15.31(e) Variation of power source

**Test date:** May 20,2010

**Test engineer:** Kevin Ma

**Verdict:** Pass

**Specification:** FCC Part 15 Subpart A

## Section 8: Testing data

### 8.1 Clause 15.31(e) Variation of power source

#### § 15.31 Measurement standards.

- (e) For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85 % and 115 % of the nominal rated supply voltage. For battery-operated equipment, the equipment tests shall be performed using a new battery.

#### Special notes

None

#### Test data

- Transmit fundamental field strength was measured while supply voltage was varied from 85 % to 115 % of the nominal rated supply voltage via power supply.
- No change in transmit output power was observed.

|   |                                |                                    |
|---|--------------------------------|------------------------------------|
| <b>Section 8:</b> Testing data                                    |                                | <b>Product:</b> Telemedic MUMS-002 |
| <b>Test name:</b> Clause 15.31(m) Number of operating frequencies |                                |                                    |
| <b>Test date:</b> May 20,2010                                     | <b>Test engineer:</b> Kevin Ma | <b>Verdict:</b> Pass               |
| Specification: FCC Part 15 Subpart A                              |                                |                                    |

## 8.2 Clause 15.31(m) Number of operating frequencies

### § 15.31 Measurement standards.

- (m) Measurements on intentional radiators or receivers, other than TV broadcast receivers, shall be performed and, if required, reported for each band in which the device can be operated with the device operating at the number of frequencies in each band specified in the following table:

| Frequency range over which device operates | Number of frequencies | Location in the range of operation          |
|--|-----------------------|---|
| 1 MHz and less                             | 1                     | Middle                                      |
| 1 to 10 MHz                                | 2                     | 1 near top and 1 near bottom                |
| More than 10 MHz                           | 3                     | 1 near top, 1 near middle and 1 near bottom |

### Special notes

None

### Test data

The EUT transmits only on one channel.

| Transmitter | Frequency,<br>(MHz) |
|-------------|---------------------|
| M93         | 916.48              |



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**Section 8:** Testing data

Product: Telemedic MUMS-002

**Test name:** Clause 15.203 Antenna requirement

**Test date:** May 20,2010

**Test engineer:** Kevin Ma

**Verdict:** Pass

**Specification:** FCC Part 15 Subpart C

### 8.3 Clause 15.203 Antenna requirement

#### § 15.203 Antenna requirement.


An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

#### Special notes

None

#### Test data

The EUT use non-detachable antenna to the intentional radiators.

|   |   |  |                                     |  |
|---|---|--|-------------------------------------|--|
| <br>Nemko Canada Inc.,<br>303 River Rd, Ottawa, ON, Canada, K1V 1H2 | <b>Section 8:</b> Testing data                      |  | <b>Product:</b> Telemedic MUMS-002  |  |
|   | <b>Test name:</b> Clause 15.207(a) Conducted limits |  |                                     |  |
|   | <b>Test date:</b> May 20,2010                       |  | <b>Test engineer:</b> Kevin Ma      |  |
|   | <b>Verdict:</b> Pass                                |  | <b>Supply input:</b> 110 VAC, 60 Hz |  |
|   | <b>Temperature:</b> 23.5 °C                         |  | <b>Air pressure:</b> 996 mbar       |  |
|   |   |  | <b>Relative humidity:</b> 38.5 %    |  |
| <b>Specification:</b> FCC Part 15 Subpart C   |   |  |                                     |  |

## 8.4 Clause 15.207(a) Conducted limits

### § 15.207 Conducted limits.

- (a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50  $\mu$ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

| Frequency of emission (MHz) | Conducted limit (dB $\mu$ V) |           |
|-----------------------------|------------------------------|-----------|
|                             | 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 of the frequency.

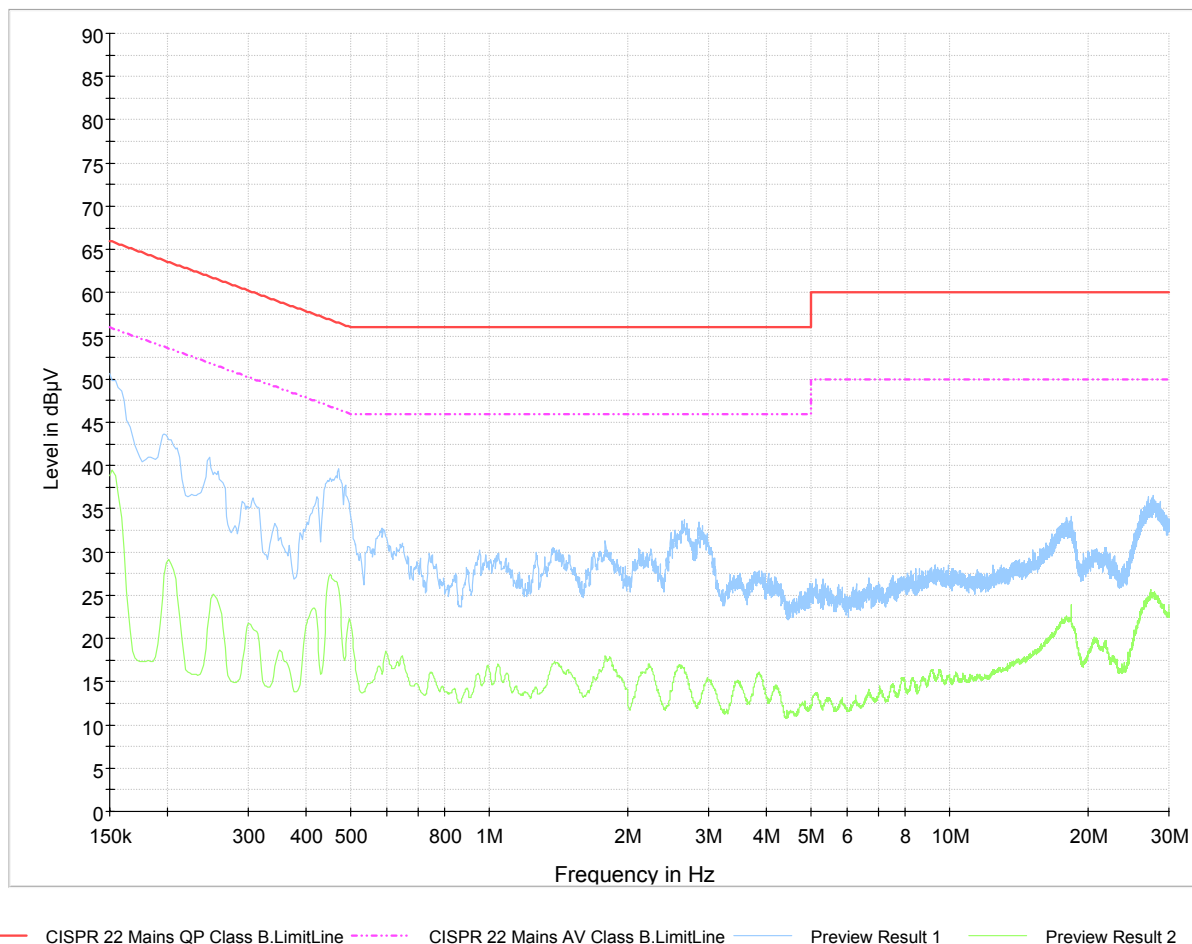
### Special notes

Only the worst-case results are presented.

|   |                               |                                     |
|---|-------------------------------|-------------------------------------|
| <b>Section 8: Testing data</b>                      |                               | <b>Product:</b> Telemedic MUMS-002  |
| <b>Test name:</b> Clause 15.207(a) Conducted limits |                               |                                     |
| <b>Test date:</b> May 20,2010                       |                               | <b>Test engineer:</b> Kevin Ma      |
| <b>Verdict:</b> Pass                                |                               | <b>Supply input:</b> 110 VAC, 60 Hz |
| <b>Temperature:</b> 23.5 °C                         | <b>Air pressure:</b> 996 mbar | <b>Relative humidity:</b> 38.5 %    |
| <b>Specification:</b> FCC Part 15 Subpart C         |                               |                                     |

## Test data

Neutral:



The spectral scan has been corrected with transducer factors (i.e. cable loss, LISN factors, and attenuators) for determination of compliance.

A preview measurement was generated with the receiver in continuous scan mode. Emissions detected within 6 dB or above limit were re-measured with the appropriate detector against the correlating limit and recorded as the final measurement.

### Receiver/Spectrum analyzer settings:

0.15 MHz to 30 MHz

#### Preview measurements

Receiver: 9 kHz RBW, Peak and Average detector, max hold  
Measurement time 100 ms

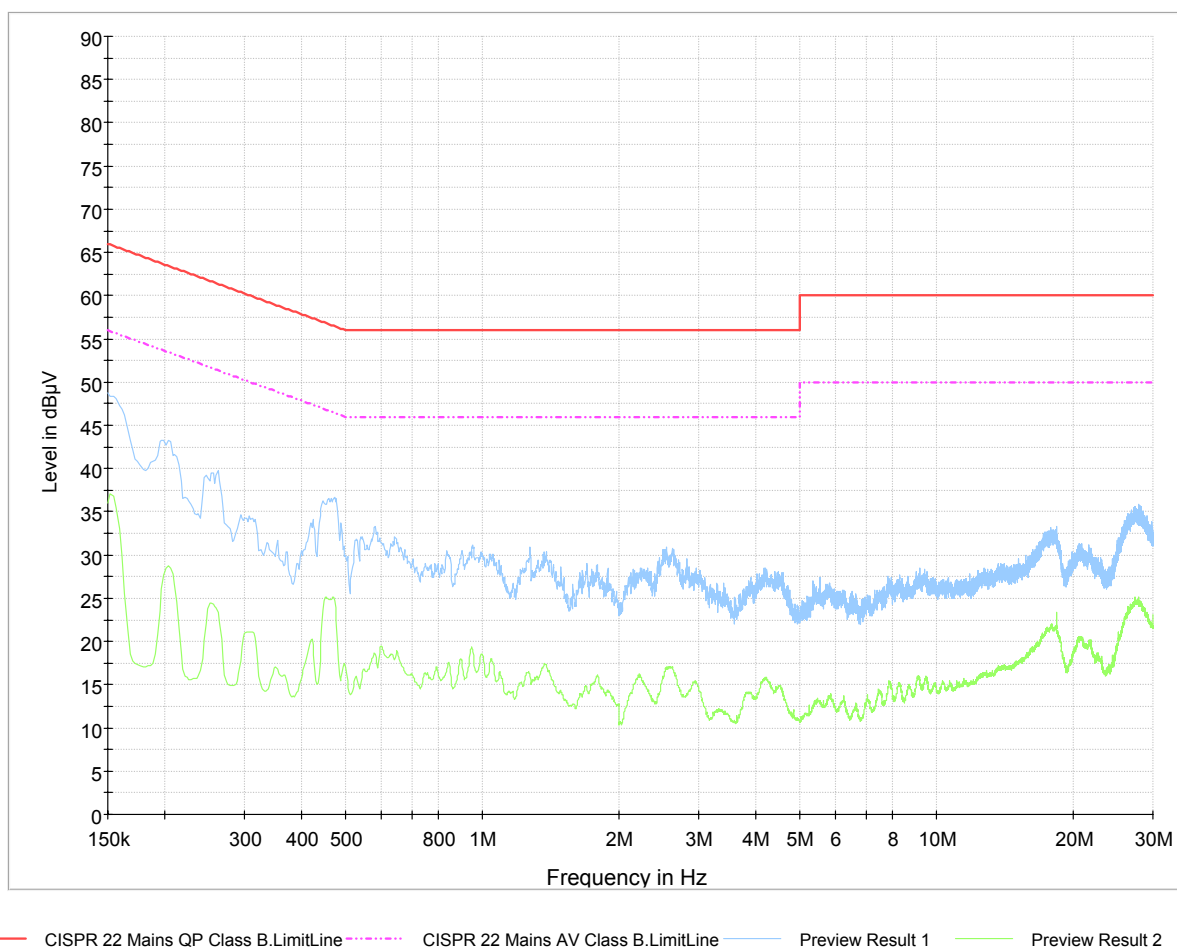
#### Final measurement

Receiver: 9 kHz RBW, Quasi-peak and Average detector





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**Section 8: Testing data****Product:** Telemedic MUMS-002**Test name:** Clause 15.207(a) Conducted limits**Test date:** May 20,2010**Test engineer:** Kevin Ma**Verdict:** Pass**Supply input:** 110 VAC, 60 Hz**Temperature:** 23.5 °C**Air pressure:** 996 mbar**Relative humidity:** 38.5 %**Specification:** FCC Part 15 Subpart C**Test data, continued****Phase:**

The spectral scan has been corrected with transducer factors (i.e. cable loss, LISN factors, and attenuators) for determination of compliance.

A preview measurement was generated with the receiver in continuous scan mode. Emissions detected within 6 dB or above limit were re-measured with the appropriate detector against the correlating limit and recorded as the final measurement.

**Receiver/Spectrum analyzer settings:**

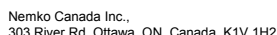
0.15 MHz to 30 MHz

**Preview measurements****Final measurement**

Receiver: 9 kHz RBW, Peak and Average detector, max hold

Receiver: 9 kHz RBW, Quasi-peak and Average detector

Measurement time 100 ms



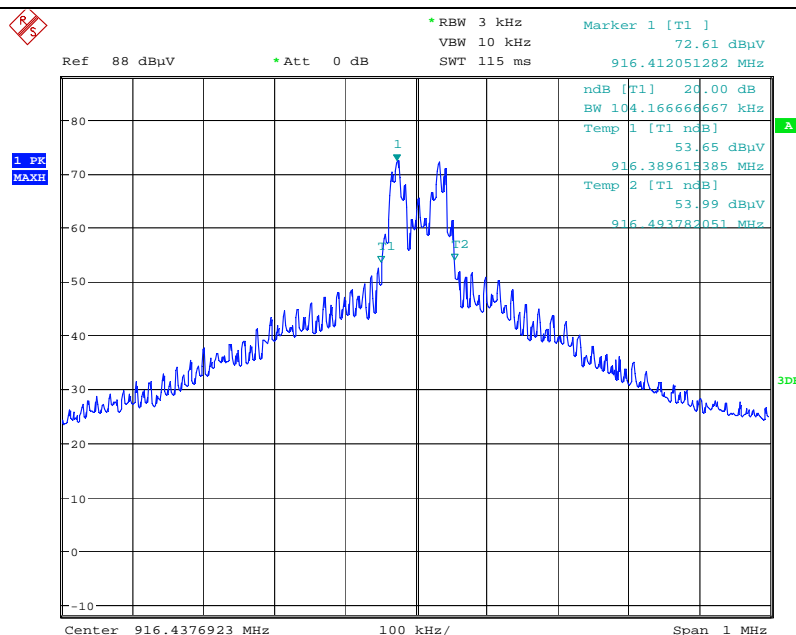
|   |                               |                                     |  |
|---|-------------------------------|-------------------------------------|--|
| <b>Section 8: Testing data</b>                        |                               | <b>Product:</b> Telemedic MUMS-002  |  |
| <b>Test name:</b> Clause 15.215(c) Emission bandwidth |                               |                                     |  |
| <b>Test date:</b> May 20,2010                         |                               | <b>Test engineer:</b> Kevin Ma      |  |
| <b>Verdict:</b> Pass                                  |                               | <b>Supply input:</b> 110 VAC, 60 Hz |  |
| <b>Temperature:</b> 23.5 °C                           | <b>Air pressure:</b> 996 mbar | <b>Temperature:</b> 23.5 °C         |  |
| <b>Specification:</b> FCC Part 15 Subpart C           |                               |                                     |  |

## § 15.215 Additional provisions to the general radiated emission limitations

(c) Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80 % of the permitted band in order to minimize the possibility of out-of-band operation.

The test was performed using peak detector of the spectrum analyzer with RBW no narrower than 1 % of the emission bandwidth.


### M93 Measured results



Date: 9.JUN.2010 14:27:30

20 dB bandwidth,  
(kHz)

104.16

|   |   |  |                                     |  |
|---|---|--|-------------------------------------|--|
| <br><br>Nemko Canada Inc.,<br>303 River Rd, Ottawa, ON, Canada, K1V 1H2 | <b>Section 8: Testing data</b>  |  | <b>Product:</b> Telemedic MUMS-002  |  |
|   | <b>Test name:</b> Clause 15.249(a) Field strength of radiated emissions not in restricted bands |  |                                     |  |
|   | <b>Test date:</b> May 20,2010   |  | <b>Test engineer:</b> Kevin Ma      |  |
|   | <b>Verdict:</b> Pass  |  | <b>Supply input:</b> 110 VAC, 60 Hz |  |
|   | <b>Temperature:</b> 23.5 °C   |  | <b>Air pressure:</b> 996 mbar       |  |
|   |   |  | <b>Temperature:</b> 23.5 °C         |  |
| <b>Specification:</b> FCC Part 15 Subpart C   |   |  |                                     |  |

## 8.6 Clause 15.249(a) Field strength of radiated emissions not in restricted bands

### § 15.249 Operation within the bands 902–928 MHz, 2400–2483.5 MHz, 5725–5875 MHz, and 24.0–24.25 GHz.

- (a) Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

| Fundamental frequency (MHz) | Field strength of fundamental |          | Field strength of spurious emissions |          |
|-----------------------------|-------------------------------|----------|--------------------------------------|----------|
|                             | (mV/m)                        | (dBµV/m) | (µV/m)                               | (dBµV/m) |
| 902–928                     | 50                            | 94       | 500                                  | 54       |
| 2400–2483.5                 | 50                            | 94       | 500                                  | 54       |
| 5725–5875                   | 50                            | 94       | 500                                  | 54       |
| 24.0–24.25                  | 250                           | 108      | 2500                                 | 68       |

- (e) As shown in §15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a) and (b) of this section are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For point-to-point operation under paragraph (b) of this section, the peak field strength shall not exceed 2500 millivolts/meter (128 dBµV/m) at 3 meters along the antenna azimuth.

### Special notes

- The spectrum was searched from 30 MHz to the 10<sup>th</sup> harmonic.
- All measurements were performed at a distance of 3 m.
- All measurements were performed:
  - within 30–1000 MHz range: using a quasi-peak detector with 120 kHz/300 kHz RBW/VBW,
  - above 1 GHz: using peak detector with 1 MHz/3 MHz RBW/VBW for peak results
    - and using peak detector with 1 MHz/10 Hz RBW/VBW for average results

### Test data


#### M93:

#### Fundamental:

| Frequency, (MHz) | Pol. | FS QP, (dBµV/m) | FS QP Limit, (dBµV/m) | Margin, (dB) |
|------------------|------|-----------------|-----------------------|--------------|
| 916.48           | H    | 93.41           | 94.00                 | 0.59         |
|                  | V    | 91.09           | 94.00                 | 2.91         |

#### Harmonics:

| Frequency, (MHz) | Pol. | FS Peak, (dBµV/m) | FS Peak Limit, (dBµV/m) | Margin, (dB) | FS Avg, (dBµV/m) | FS Avg Limit, (dBµV/m) | Margin, (dB) |
|------------------|------|-------------------|-------------------------|--------------|------------------|------------------------|--------------|
| 1832.83          | H    | 50.87             | 74.00                   | 23.13        | 49.46            | 54.00                  | 4.54         |
|                  | V    | 45.09             | 74.00                   | 28.91        | 41.40            | 54.00                  | 12.60        |
| 2749.27          | H    | 47.76             | 74.00                   | 26.24        | 41.29            | 54.00                  | 12.71        |
|                  | V    | 47.00             | 74.00                   | 27.00        | 38.03            | 54.00                  | 15.97        |
| 3665.67          | H    | 55.49             | 74.00                   | 18.51        | 52.78            | 54.00                  | 1.22         |
|                  | V    | 56.41             | 74.00                   | 17.59        | 53.31            | 54.00                  | 0.69         |

|   |  |  |                                     |  |
|---|--|--|-------------------------------------|--|
| <br>Nemko Canada Inc.,<br>303 River Rd, Ottawa, ON, Canada, K1V 1H2 | <b>Section 8: Testing data</b>   |  | <b>Product:</b> Telemedic MUMS-002  |  |
|   | <b>Test name:</b> Clause 15.249(d) Spurious emissions (except for harmonics) |  |                                     |  |
|   | <b>Test date:</b> May 20,2010  |  | <b>Test engineer:</b> Kevin Ma      |  |
|   | <b>Verdict:</b> Pass   |  | <b>Supply input:</b> 110 VAC, 60 Hz |  |
|   | <b>Temperature:</b> 23.5 °C  |  | <b>Air pressure:</b> 996 mbar       |  |
|   |  |  | <b>Temperature:</b> 23.5 °C         |  |
| <b>Specification:</b> FCC Part 15 Subpart C   |  |  |                                     |  |

## 8.7 Clause 15.249(d) Spurious emissions (except for harmonics)

### § 15.249 Operation within the bands 902–928 MHz, 2400–2483.5 MHz, 5725–5875 MHz, and 24.0–24.25 GHz.

- (d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

### Special notes

#### §15.209 – Radiated emission limits

| Frequency<br>(MHz) | Field strength      |                       | Measurement distance<br>(m) |
|--------------------|---------------------|-----------------------|-----------------------------|
|                    | ( $\mu\text{V/m}$ ) | (dB $\mu\text{V/m}$ ) |                             |
| 0.009–0.490        | 2400/F              | 67.6–20log(F)         | 300                         |
| 0.490–1.705        | 24000/F             | 87.6–20log(F)         | 30                          |
| 1.705–30.0         | 30                  | 29.5                  | 30                          |
| 30–88              | 100                 | 40.0                  | 3                           |
| 88–216             | 150                 | 43.5                  | 3                           |
| 216–960            | 200                 | 46.0                  | 3                           |
| above 960          | 500                 | 54.0                  | 3                           |

#### Notes:

- F = fundamental frequency in kHz
- In the emission table above, the tighter limit applies at the band edges.
- For frequencies above 1 GHz the limit on peak RF emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test.
- The spectrum was searched from 30 MHz to the 10<sup>th</sup> harmonic.
- All measurements were performed at a distance of 3 m.
- All measurements were performed:
  - within 30–1000 MHz range: using a quasi-peak detector with 120 kHz/300 kHz RBW/VBW,
  - above 1 GHz: using peak detector with 1 MHz/3 MHz RBW/VBW for peak results
    - and using peak detector with 1 MHz/10 Hz RBW/VBW for average results

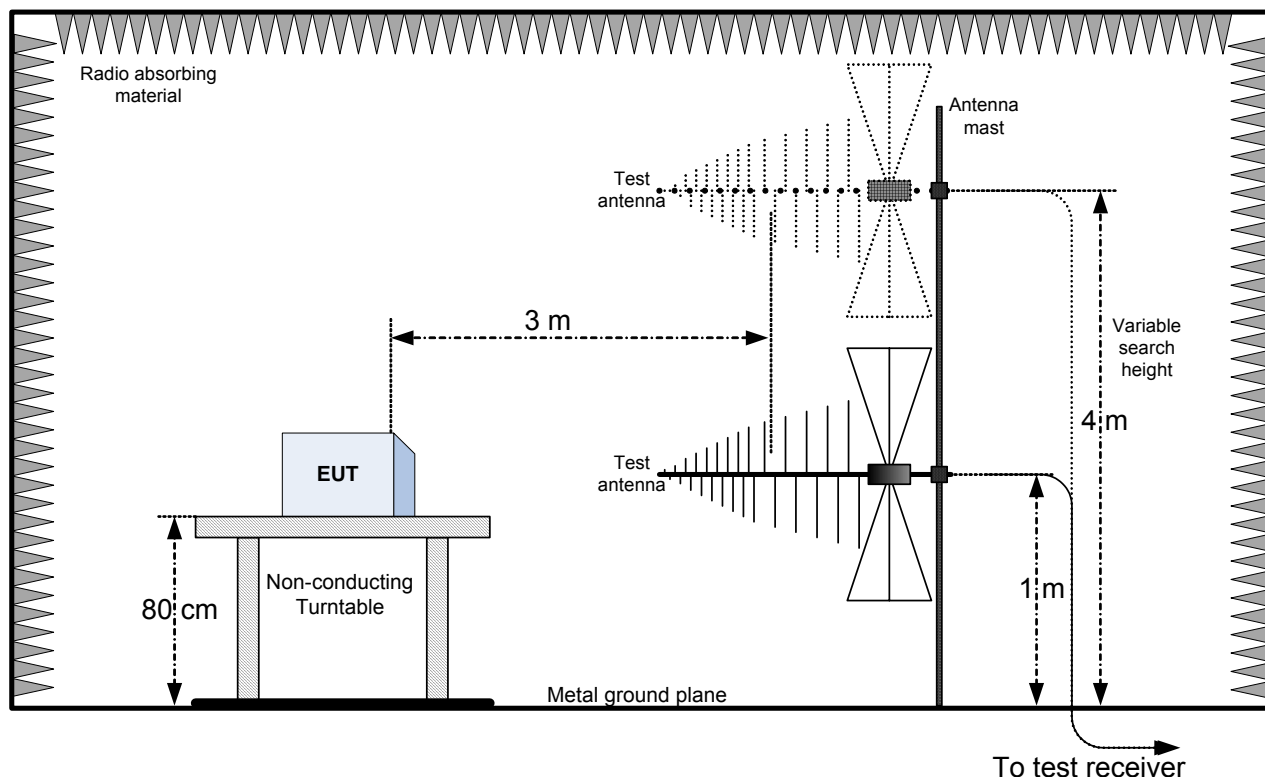
### Test data, continued

| Frequency,<br>(MHz) | Polarization<br>V/H | Field strength,<br>(dB $\mu\text{V/m}$ ) | Limit,<br>(dB $\mu\text{V/m}$ ) | Margin,<br>(dB) |
|---------------------|---------------------|--|---------------------------------|-----------------|
| 30.18               | V                   | 32.0                                     | 40                              | 8.0             |
| 84.00               | V                   | 33.8                                     | 40                              | 6.2             |

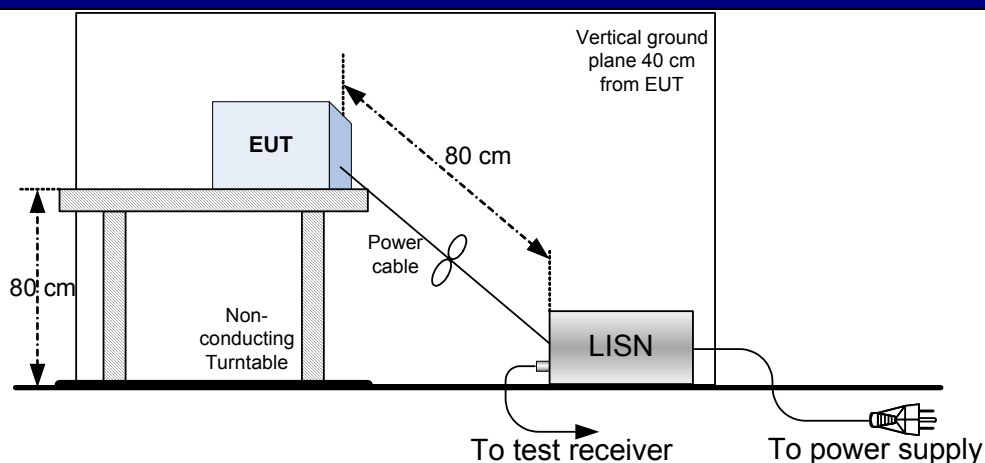
Note: Field strength includes correction factor of antenna, cable loss, amplifier, and attenuators where applicable.

## Section 9: Block diagrams of test set-ups

### Radiated emissions set-up



### Conducted emissions set-up



## Section 10: EUT photos

### EUT



EUT

