

Appendix B

RF power output conducted

ETS Product Service AG Registriernummer: G0M20703-1213-C-1 Appendix B



EUT

2.4GHz 802.15.4/ZigBee OEM module

Model

ZDM-A1281-A2

Approval Holder

LuxLabs Ltd. DBA MeshNetics

Temperature / Voltage

23°C / Vnom

Test Site / Operator

ETS

Test Specification Comment 1

Power Output Option 1 Output Power conducted

Comment 2

Channel: 19 / 2445 MHz

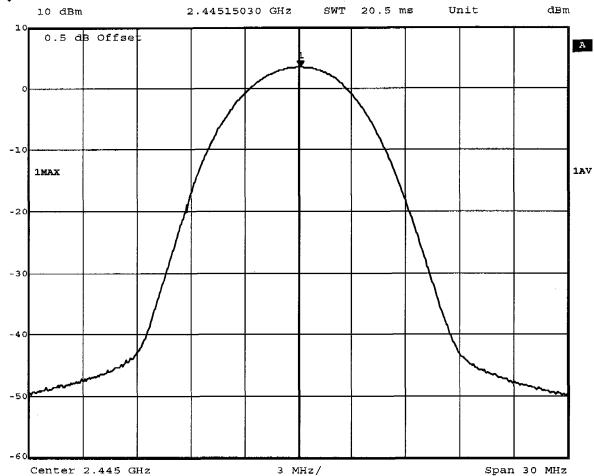
Comment 3

RF Att 30 dB 5 MHz Marker 1 [T1] RBW



3.37 dBm

VBW 10 MHz



Date:

6.MAR.2007 11:59:54



EUT

2.4GHz 802.15.4/ZigBee OEM module

Model

ZDM-A1281-A2

Approval Holder

LuxLabs Ltd. DBA MeshNetics 23°C / Vnom

Temperature / Voltage

23°C ETS

Test Site / Operator Test Specification

E15

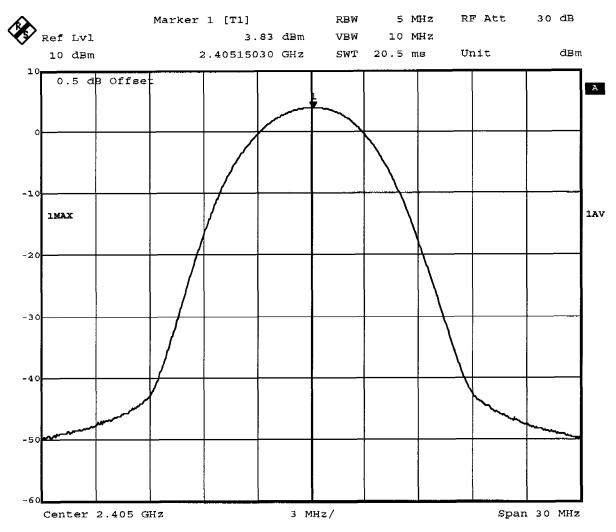
Comment 1

Power Output Option 1 Output Power conducted

Comment 2

Channel: 11 / 2405 MHz

Comment 3



Date:

6.MAR.2007 11:56:56



EUT

2.4GHz 802.15.4/ZigBee OEM module

Model

ZDM-A1281-A2

Approval Holder

LuxLabs Ltd. DBA MeshNetics

Temperature / Voltage

23°C / Vnom

Test Site / Operator

ETS

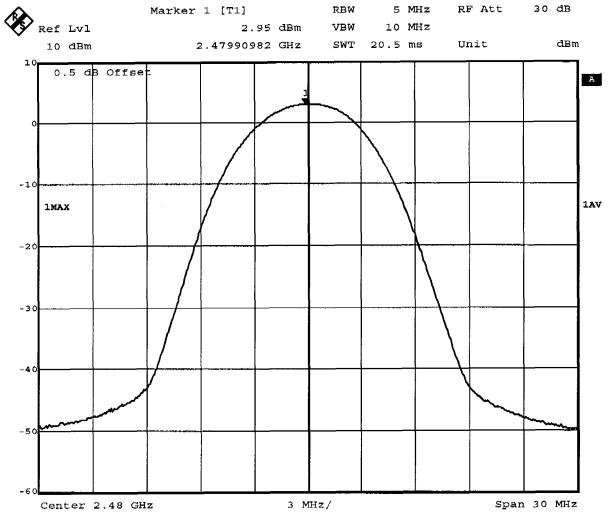
Test Specification

Power Output Option 1 Output Power conducted

Comment 1 Comment 2

Channel: 26 / 2480 MHz

Comment 3



Date:

6.MAR.2007 11:50:25



EUT 2.4GHz 802.15.4/ZigBee OEM module

Model ZDM-A1281-A2

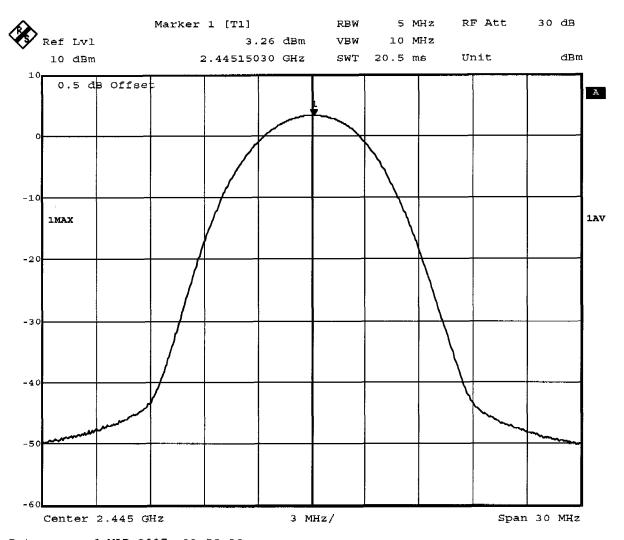
Approval Holder LuxLabs Ltd. DBA MeshNetics

Temperature / Voltage 23°C / Vmin

Test Site / Operator ETS

Test Specification Power Output Option 1
Comment 1 Output Power conducted
Comment 2 Channel: 19 / 2445 MHz

Comment 3



Date: 6.MAR.2007 11:59:09

Measurement diagram



EUT

2.4GHz 802.15.4/ZigBee OEM module

Model

ZDM-A1281-A2

Approval Holder

LuxLabs Ltd. DBA MeshNetics

Temperature / Voltage

/ Vmin

Test Site / Operator

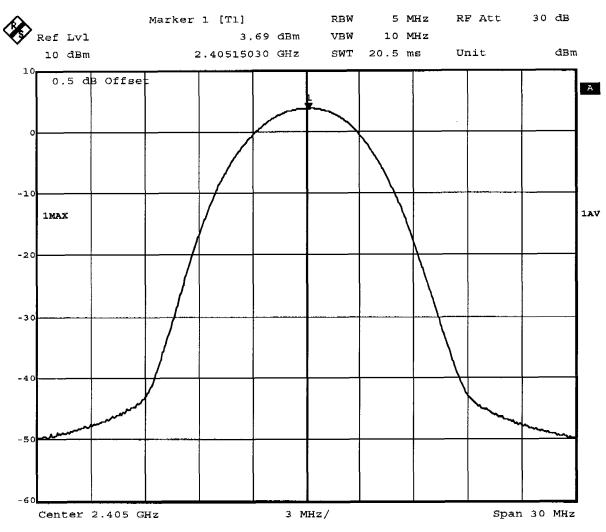
23°C ETS

Test Specification Comment 1 Power Output Option 1 Output Power conducted

Comment 2

Channel: 11 / 2405 MHz

Comment 3



Date:

6.MAR.2007 11:58:07



EUT

2.4GHz 802.15.4/ZigBee OEM module

Model

ZDM-A1281-A2

Approval Holder

LuxLabs Ltd. DBA MeshNetics

Temperature / Voltage

/ Vmin

23°C **ETS**

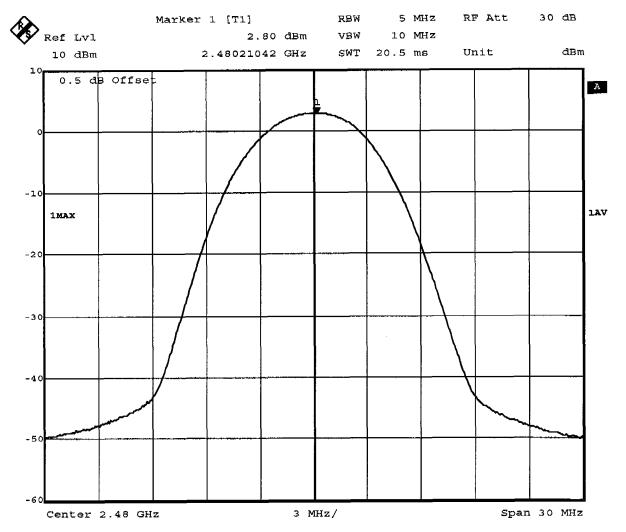
Test Site / Operator Test Specification Comment 1

Power Output Option 1 Output Power conducted

Comment 2

Channel: 26 / 2480 MHz

Comment 3



Date:

6.MAR.2007 11:47:32



EUT

2.4GHz 802.15.4/ZigBee OEM module

Model

ZDM-A1281-A2

Approval Holder

LuxLabs Ltd. DBA MeshNetics

Temperature / Voltage

/ Vmax

Test Site / Operator Test Specification

23°C **ETS**

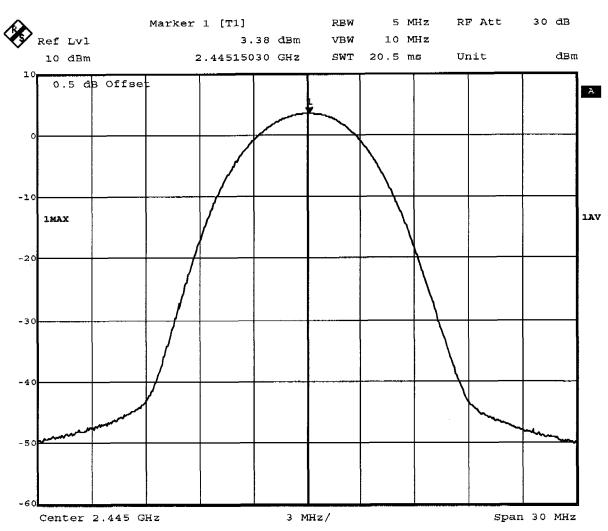
Comment 1

Power Output Option 1 Output Power conducted

Comment 2

Channel: 19 / 2445 MHz

Comment 3



Date:

6.MAR.2007 12:00:43



EUT

2.4GHz 802.15.4/ZigBee OEM module

Model

ZDM-A1281-A2

Approval Holder

LuxLabs Ltd. DBA MeshNetics

Temperature / Voltage

/ Vmax

Test Site / Operator

ETS

23°C

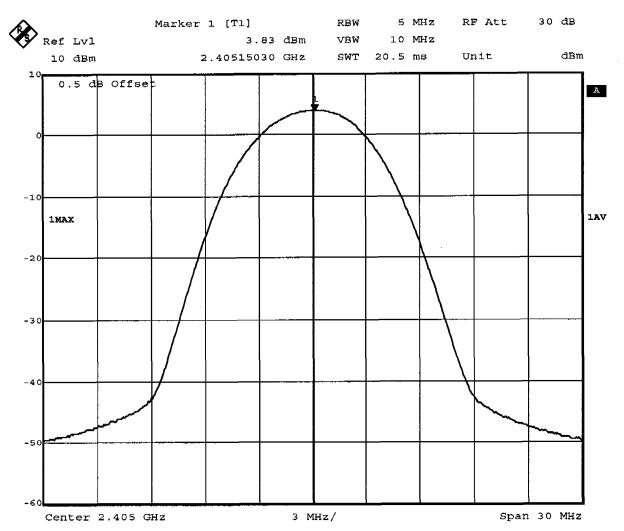
Test Specification Comment 1

Power Output Option 1 Output Power conducted

Comment 2

Channel: 11 / 2405 MHz

Comment 3



Date:

6.MAR.2007 11:55:40



EUT 2.4GHz 802.15.4/ZigBee OEM module

ZDM-A1281-A2 Model

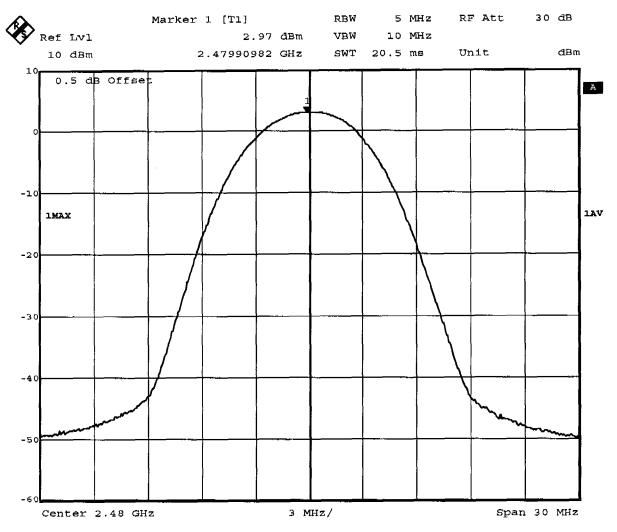
LuxLabs Ltd. DBA MeshNetics Approval Holder

/ Vmax Temperature / Voltage 23°C

ETS

Test Site / Operator Test Specification Power Output Option 1 Comment 1 Output Power conducted Channel: 26 / 2480 MHz Comment 2

Comment 3



Date:

6.MAR.2007 11:52:23



Appendix C

RF power output radiated (EIRP)

Registriernummer: G0M20703-1213-C-1

Appendix C



Appendix D

6 dB bandwidth



FCC part 15.247 (a)2 Bandwidth

EUT

2.4GHz 802.15.4/ZigBee OEM module

Model

ZDM-A1281-A2

Approval Holder

LuxLabs Ltd. DBA MeshNetics

Temperature / Voltage

/ Vnom

Test Site / Operator Test Specification

23°C ETS

FCC part 15.247 (a)2

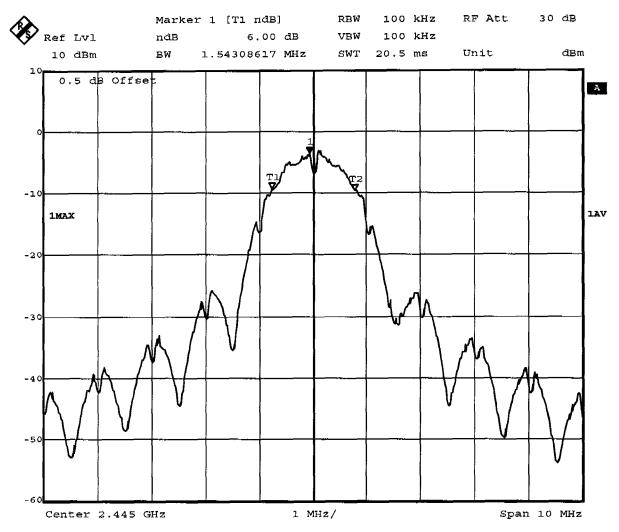
Comment 1

Bandwidth

Comment 2

Channel: 19 / 2445 MHz

Comment 3



Date:

6.MAR.2007 13:45:45



FCC part 15.247 (a)2 Bandwidth

EUT

2.4GHz 802.15.4/ZigBee OEM module

Model

ZDM-A1281-A2

Approval Holder

LuxLabs Ltd. DBA MeshNetics

Temperature / Voltage

/ Vnom

Test Site / Operator Test Specification

23°C **ETS**

FCC part 15.247 (a)2

Comment 1

Bandwidth

Comment 2

Channel: 11 / 2405 MHz

Comment 3

30 dB RF Att Marker 1 [T1 ndB] RBW 100 kHz Ref Lvl ndB 6.00 dB VBW 100 kHz ₫Bm 1.44288577 MHz Unit 10 dBm ВW SWT 20.5 ms 0.5 dB Offse A -10 1AV 1MAX -26 -30 1 MHz/ Span 10 MHz Center 2.405 GHz

Date:

6.MAR.2007 12:12:43



FCC part 15.247 (a)2 Bandwidth

EUT

2.4GHz 802.15.4/ZigBee OEM module

Model

ZDM-A1281-A2

Approval Holder

LuxLabs Ltd. DBA MeshNetics

Temperature / Voltage

23°C / Vnom

Test Site / Operator

ETS

Test Specification

FCC part 15.247 (a)2

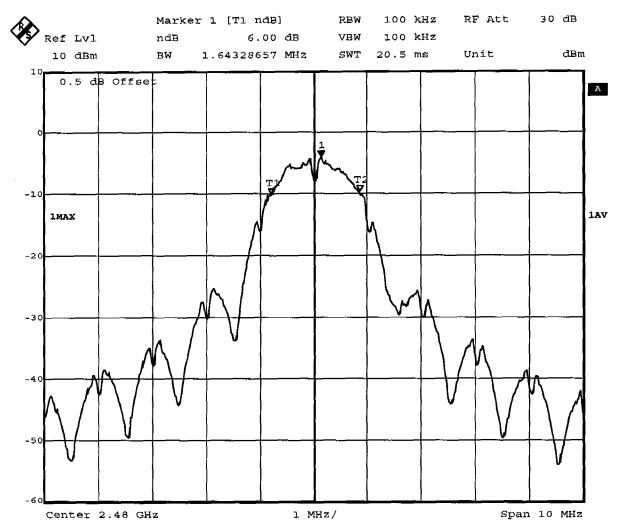
Comment 1

Bandwidth

Comment 2

Channel: 26 / 2480 MHz

Comment 3



Date:

6.MAR.2007 13:59:42



Appendix E

Peak power spectral density



FCC part 15.247 (d) Power spectral density (PSD)

EUT

2.4GHz 802.15.4/ZigBee OEM module

Model

ZDM-A1281-A2

Approval Holder

LuxLabs Ltd. DBA MeshNetics

Temperature / Voltage

/ Vnom 23°C

Test Site / Operator

ETS

Test Specification

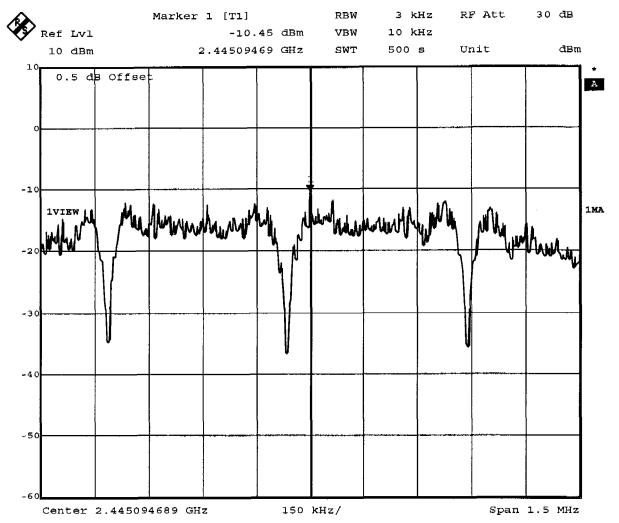
FCC part 15.247 (d) (PSD)

Comment 1

Power spectral density conducted Channel: 19 / 2445 MHz

Comment 2

Comment 3



Date:

6.MAR.2007 14:21:36

Measurement diagram



FCC part 15.247 (d) Power spectral density (PSD)

EUT

2.4GHz 802.15.4/ZigBee OEM module

Model

ZDM-A1281-A2

Approval Holder

LuxLabs Ltd. DBA MeshNetics

Temperature / Voltage

23°C / Vnom

Test Site / Operator

ETS

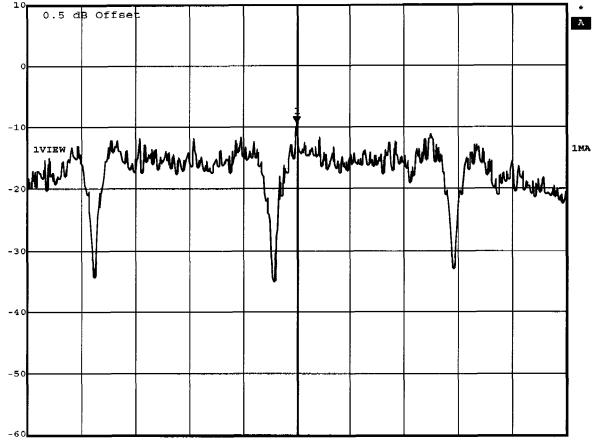
Test Specification

FCC part 15.247 (d) (PSD)

Comment 1 Comment 2 Power spectral density conducted Channel: 11 / 2405 MHz

Comment 3

30 dB RF Att RBW 3 kHz Marker 1 [T1] Ref Lvl -9.39 dBm VBW 10 kHz dBm 10 dBm 2.40509619 GHz SWT a 002 Unit 0.5 dB Offse



Center 2.405094689 GHz

150 kHz/

Span 1.5 MHz

Date:

6.MAR.2007 14:18:25



FCC part 15.247 (d) Power spectral density (PSD)

EUT

2.4GHz 802.15.4/ZigBee OEM module

Model

ZDM-A1281-A2

Approval Holder

LuxLabs Ltd. DBA MeshNetics

Temperature / Voltage

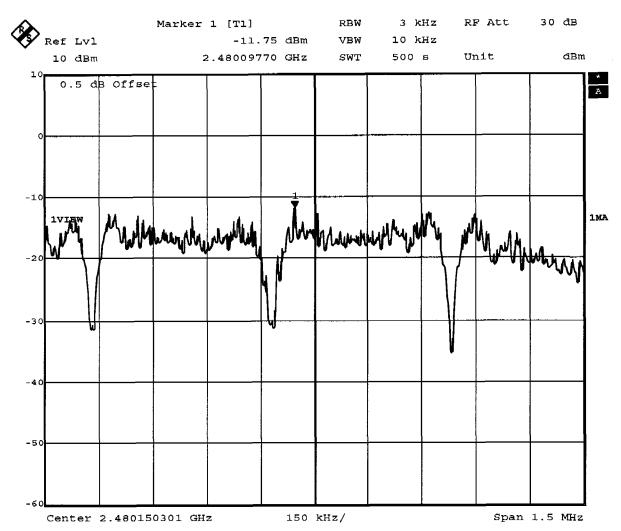
23°C / Vnom

Test Site / Operator

ETS

Test Specification Comment 1 FCC part 15.247 (d) (PSD) Power spectral density conducted Channel: 19 / 2445 MHz

Comment 2 Comment 3



Date:

6.MAR.2007 14:12:32

Measurement diagram



Appendix F

Spurious emission conducted

ETS Product Service AG

Registriernummer: G0M20703-1213-C-1



Appendix G

Spurious emission radiated

Carrier power (Field Strength)

FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2 EUT / Model: 2.4 GHZ 002.13.1, 2480 MHz

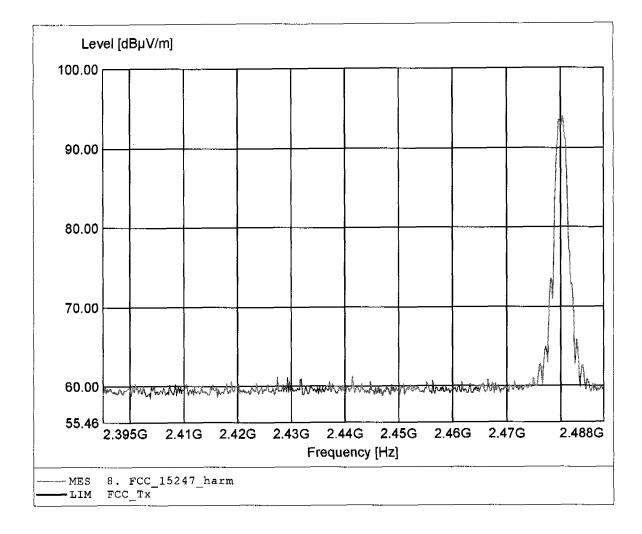
Mode: Channel: 26 / 2480 MHz

Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

EUT / Model: Mode:

Test Site / Operator: E15 / Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)
Test Specification: according to \$15.247
Comment 1: Dist.: 3m, Ant.: BBHA9120D
Comment 2: Freq: 2.480GHz, Emax: 93.95dBµV/m, RBW: 100kHz



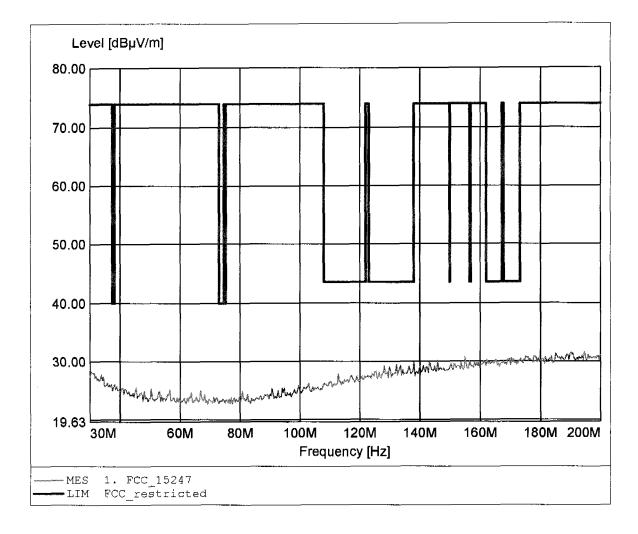
FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

EUT / Model: Mode:

EUT / Model: 2.4 GHz 802.15.4 / ZigBee OEM module / ZigBee OEM mod



FCC RULES PART 15, SUBPART C

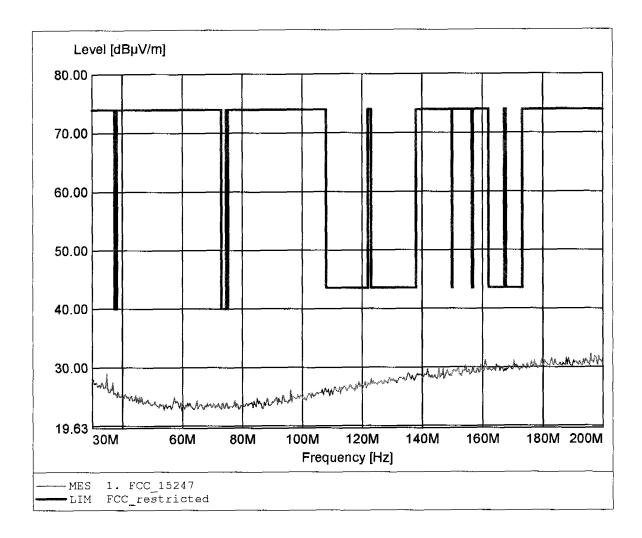
LuxLabs Ltd. DBA MeshNetics Approval Holder:

EUT / Model: Mode: 2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

Mode: Channel: 11 / 2405 MHz
Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery) Test Condition:

Test Specification: according to \$15.247
Comment 1: Dist.: 3m, Ant.: HK 116

Freq: 195.912MHz, Emax: 32.22dBµV/m, RBW: 100kHz Comment 2:



FCC RULES PART 15, SUBPART C

Approval Holder: LuxLabs Ltd. DBA MeshNetics

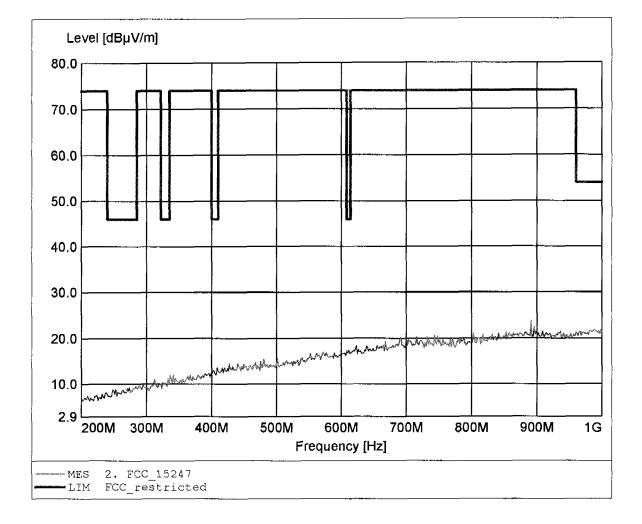
2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2 EUT / Model: Mode:

Mode: Channel: 11 / 2405 MHz
Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery) Test Condition:

according to \$15.247 Test Specification:

Comment 1:

Dist.: 3m, Ant.: HL 223, amplif. Freq: 890.982MHz, Emax: 23.73dBµV/m, RBW: 100kHz Comment 2:

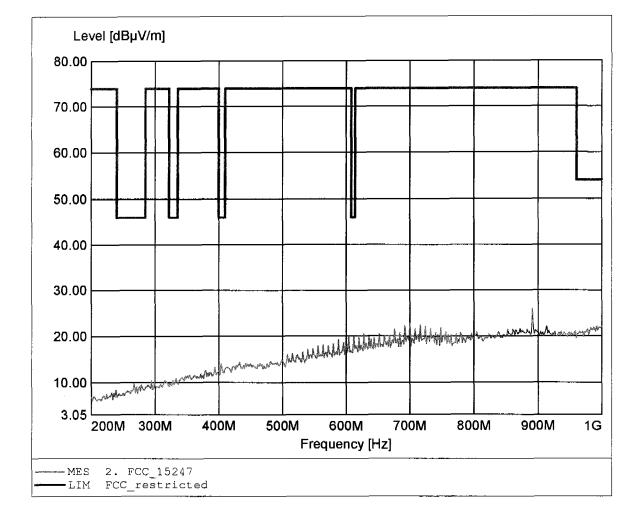


FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2 EUT / Model: Mode:

Mode: 2.4 GHZ 802.15.4 / ZigBee OEM module / Z



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2 EUT / Model: Mode:

Mode: Channel: 11 / 2405 MHz

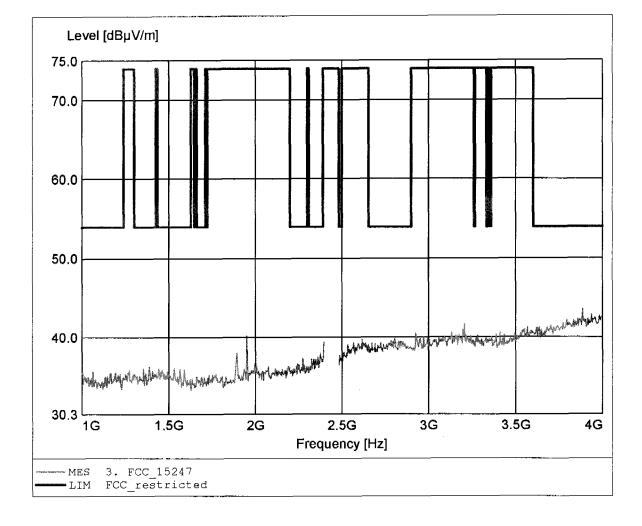
Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector

Dist.: 3m, Ant.: BBHA9120D, amplif., notch-filter Freq: 3.885GHz, Emax: 43.55dBµV/m, RBW: 1MHz Comment 1:

Comment 2:



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2 EUT / Model: Mode:

Mode: Channel: 11 / 2405 MHz

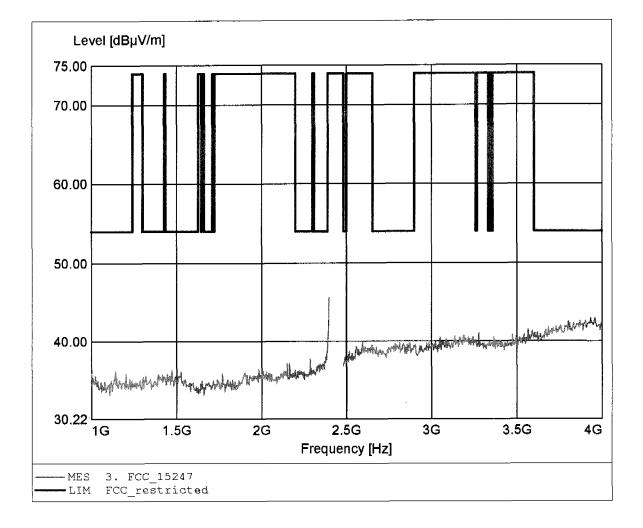
Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector

Dist.: 3m, Ant.: BBHA9120D, amplif., notch-filter Freq: 2.397GHz, Emax: 45.63dBµV/m, RBW: 1MHz Comment 1:

Comment 2:



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

EUT / Model: Mode: 2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

Mode: Channel: 11 / 2405 MHz

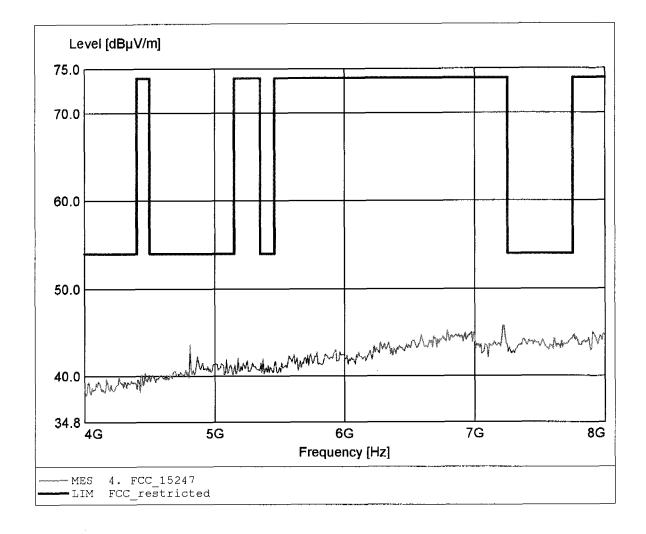
Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector Dist.: 3m, Ant.: BBHA9120D, ampl.+HP. Comment 1:

Comment 2:

Freq: 7.222GHz, Emax: 45.80dBuV/m, RBW: 1MHz



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

EUT / Model: Mode:

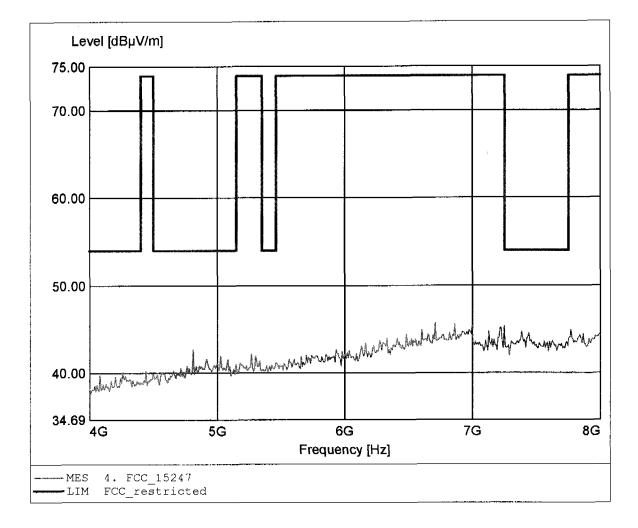
Mode: Channel: 11 / 2405 MHz

Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector Dist.: 3m, Ant.: BBHA9120D, ampl.+HP. Freq: 6.709GHz, Emax: 45.73dBµV/m, RBW: 1MHz Comment 1:

Comment 2:



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

EUT / Model: Mode:

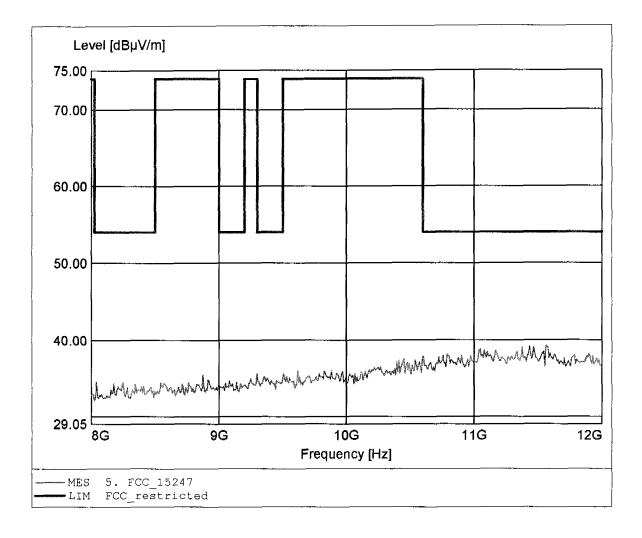
Mode: Channel: 11 / 2405 MHz

Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector Comment 1:

Dist.: 3m, Ant.: BBHA9120D, ampl.+HP. Freq: 11.559GHz, Emax: 39.30dBuV/m, RBW: 1MHz Comment 2:



FCC RULES PART 15, SUBPART C

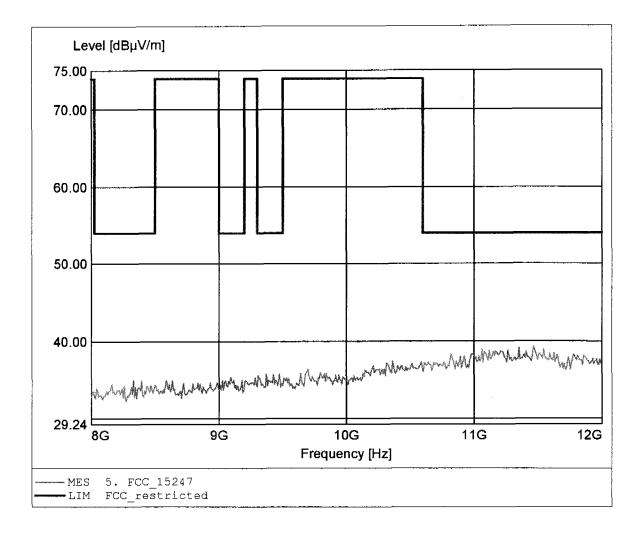
LuxLabs Ltd. DBA MeshNetics Approval Holder:

EUT / Model: Mode: 2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

Mode: Channel: 11 / 2405 MHz

Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)
Test Specification: according to \$15.247, peak detector Comment 1:

Dist.: 3m, Ant.: BBHA9120D, ampl.+HP. Freq: 11.463GHz, Emax: 39.32dBµV/m, RBW: 1MHz Comment 2:



FCC RULES PART 15, SUBPART C

Approval Holder: LuxLabs Ltd. DBA MeshNetics

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2 EUT / Model: Mode:

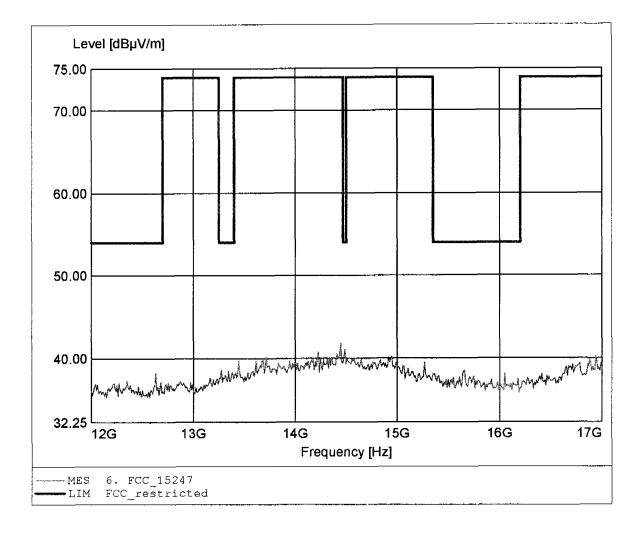
Mode: Channel: 11 / 2405 MHz

Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector Comment 1:

Dist.: 3m, Ant.: BBHA9120D, ampl.+HP. Freq: 14.445GHz, Emax: 41.85dBpV/m, RBW: 1MHz Comment 2:



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

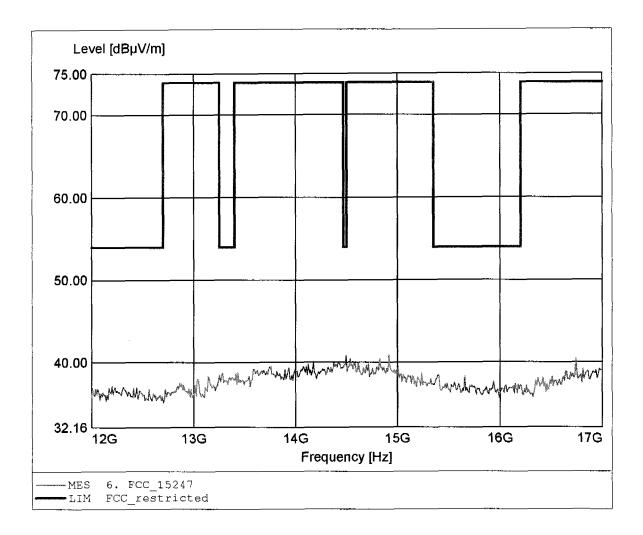
2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2 EUT / Model: Mode:

Mode: Channel: 11 / 2405 MHz

Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector Test Condition:
Test Specification:
Comment 1:
Comment 2:
Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Freq: 14.916GHz, Emax: 40.86dBµV/m, RBW: 1MHz



FCC RULES PART 15, SUBPART C

Approval Holder: LuxLabs Ltd. DBA MeshNetics

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2 EUT / Model: Mode:

Mode: 2.4 GHZ 802.13.4 / 21gBee OBM Module / Channel: 11 / 2405 MHz

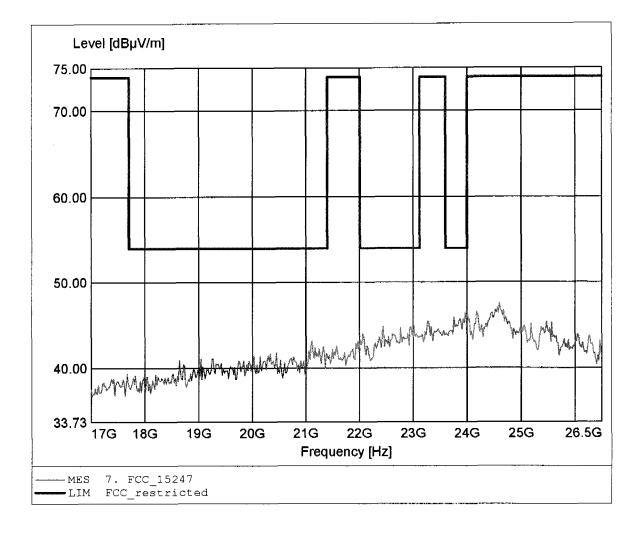
Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector

Comment 1: Dist.: 3m, Ant.: HL025, amplif.

Comment 2: Freq: 24.596GHz, Emax: 47.53dBµV/m, RBW: 1MHz



FCC RULES PART 15, SUBPART C

Approval Holder: LuxLabs Ltd. DBA MeshNetics

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

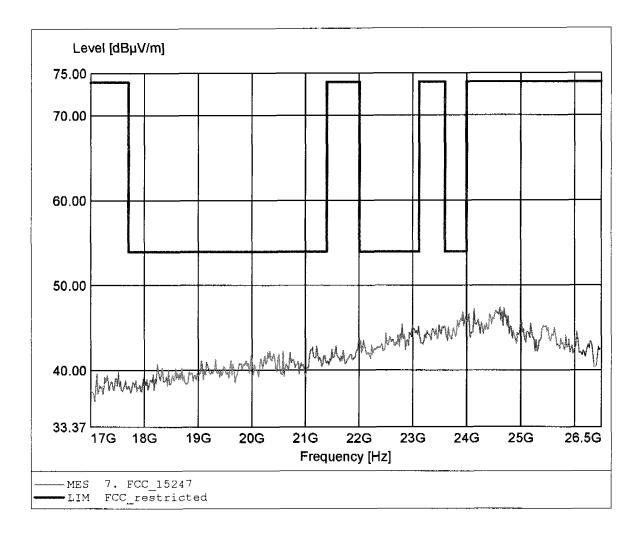
EUT / Model: Mode:

Mode: Channel: 11 / 2405 MHz

Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector Test Condition:
Test Specification:
Comment 1:
Dist.: 3m, Ant.: HL025, amplif.
Freq: 24.615GHz, Emax: 47.35dBµV/m, RBW: 1MHz



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

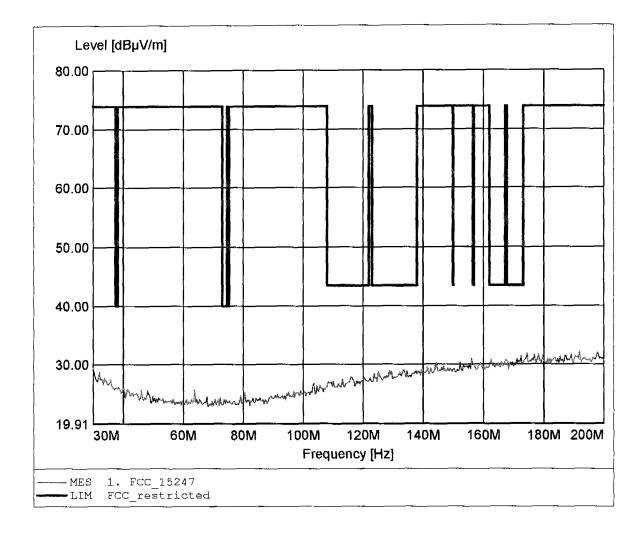
EUT / Model: Mode:

Mode: Channel: 19 / 2445 MHz

Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)
Test Specification: according to \$15.247
Comment 1: Dist.: 3m, Ant.: HK 116
Comment 2: Freq: 191.824MHz, Emax: 32.08dBµV/m, RBW: 100kHz



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

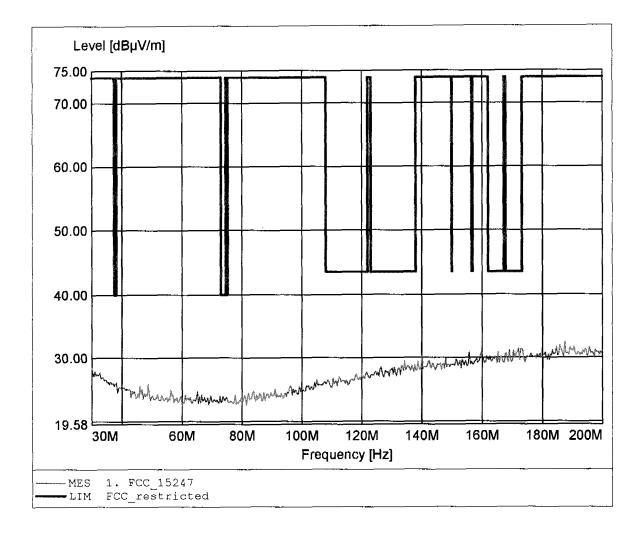
EUT / Model: Mode:

Mode: Channel: 19 / 2445 MHz

Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)
Test Specification: according to \$15.247

Comment 1:

Dist.: 3m, Ant.: HK 116 Freq: 187.395MHz, Emax: 32.45dBpV/m, RBW: 100kHz Comment 2:



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

EUT / Model: Mode:

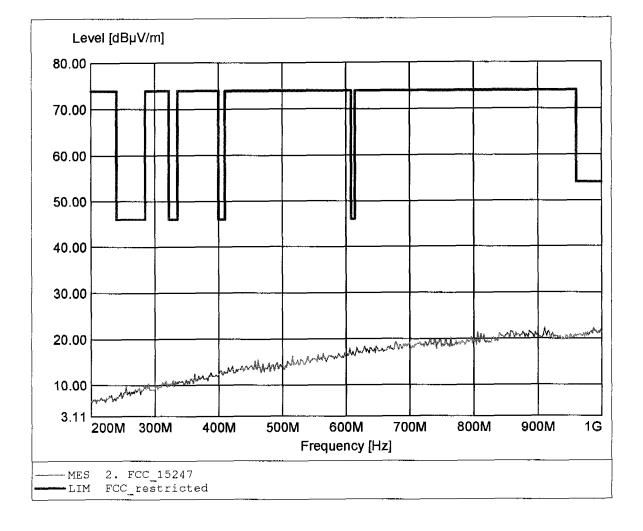
EUT / Model: 2.4 GHZ 002.13.7 / 2445 MHZ

Mode: Channel: 19 / 2445 MHZ

Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Condition.
Test Specification: according to \$15.24/
Comment 1: Dist.: 3m, Ant.: HL 223, amplif.
Comment 2: Freq: 910.220MHz, Emax: 22.43dBpV/m, RBW: 100kHz



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

EUT / Model: Mode:

Mode: Channel: 19 / 2445 MHz

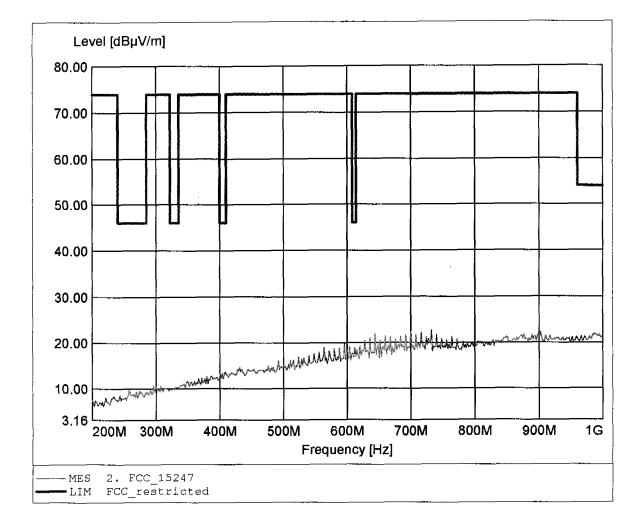
Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247

Comment 1:

Dist.: 3m, Ant.: HL 223, amplif. Freq: 732.265MHz, Emax: 22.74dBµV/m, RBW: 100kHz Comment 2:



FCC RULES PART 15, SUBPART C

Approval Holder: LuxLabs Ltd. DBA MeshNetics

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2 EUT / Model: Mode:

Mode: Channel: 19 / 2445 MHz

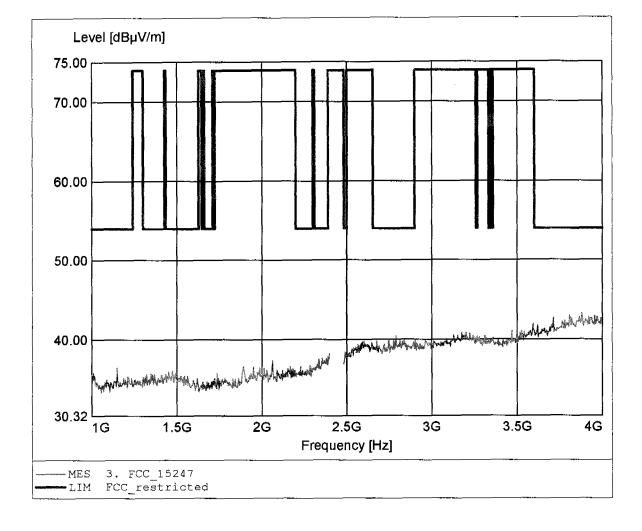
Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector

Test Condition:
Test Specification:
Comment 1:
Comment 2:

according to \$15.247, peak detector
Dist.: 3m, Ant.: BBHA9120D, amplif., notch-filter
Freq: 3.878GHz, Emax: 43.27dBµV/m, RBW: 1MHz



FCC RULES PART 15, SUBPART C

Approval Holder:

LuxLabs Ltd. DBA MeshNetics
2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

EUT / Model: Mode:

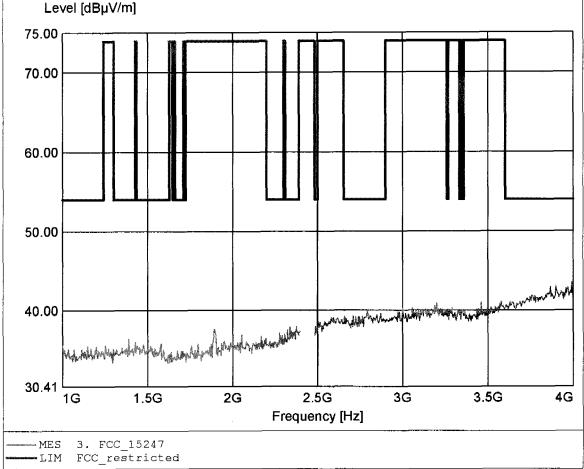
Mode: Channel: 19 / 2445 MHz

Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector

Dist.: 3m, Ant.: BBHA9120D, amplif., notch-filter Freq: 3.991GHz, Emax: 43.55dBµV/m, RBW: 1MHz Comment 1: Comment 2:



FCC RULES PART 15, SUBPART C

Approval Holder:

LuxLabs Ltd. DBA MeshNetics
2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

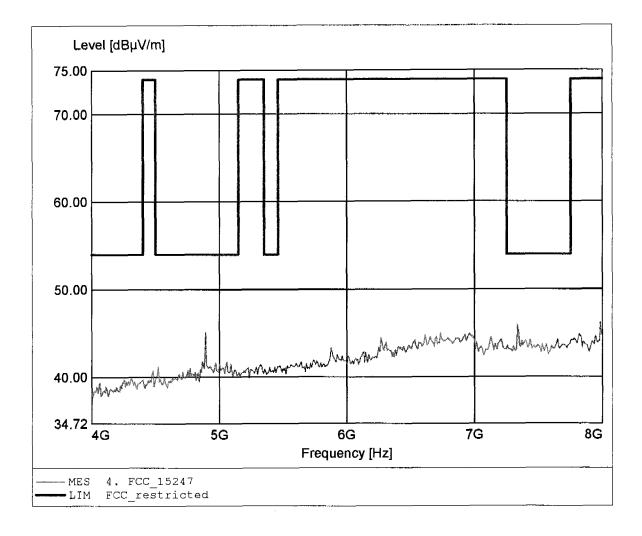
EUT / Model: Mode:

Mode: Channel: 19 / 2445 MHz

Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector Test Condition:
Test Specification:
Comment 1:
Comment 2:
Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Freq: 7.984GHz, Emax: 46.15dBµV/m, RBW: 1MHz



FCC RULES PART 15, SUBPART C

Approval Holder:

LuxLabs Ltd. DBA MeshNetics
2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2 EUT / Model: Mode:

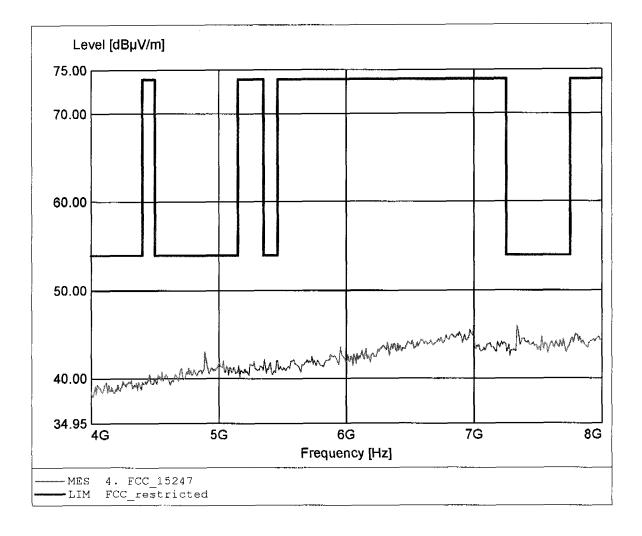
Mode: Channel: 19 / 2445 MHz

Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector Dist.: 3m, Ant.: BBHA9120D, ampl.+HP. Comment 1:

Freq: 6.998GHz, Emax: 45.98dBuV/m, RBW: 1MHz Comment 2:



FCC RULES PART 15, SUBPART C

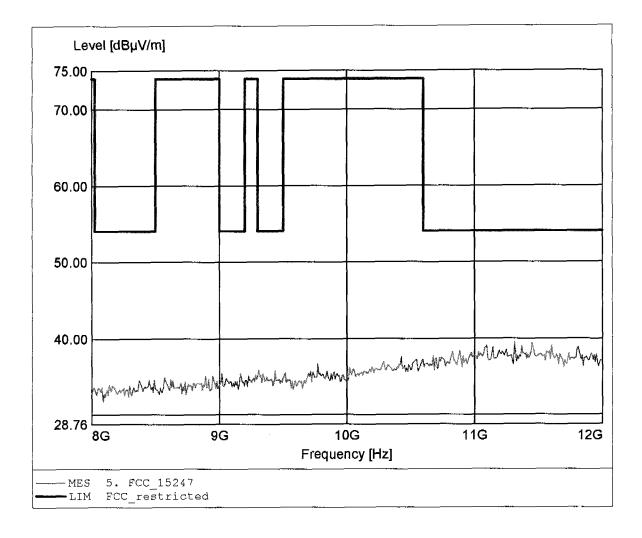
LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

EUT / Model: Mode: Channel: 19 / 2445 MHz

Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)
Test Specification: according to \$15.247, peak detector Comment 1:

Dist.: 3m, Ant.: BBHA9120D, ampl.+HP. Freq: 11.311GHz, Emax: 39.53dBµV/m, RBW: 1MHz Comment 2:



FCC RULES PART 15, SUBPART C

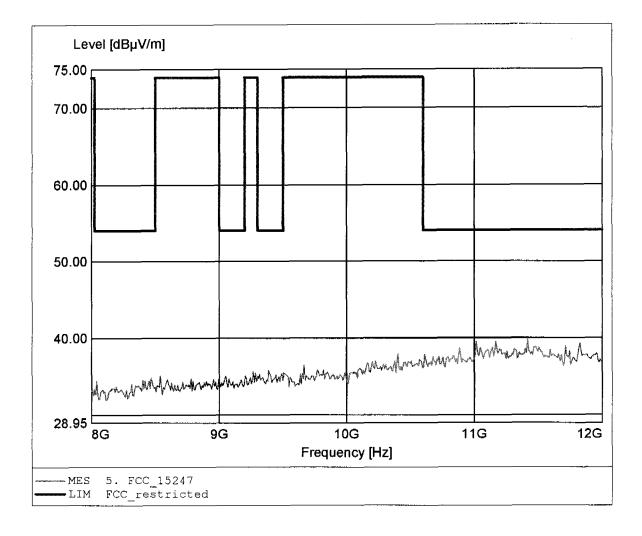
LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

EUT / Model: Mode: Channel: 19 / 2445 MHz

Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)
Test Specification: according to \$15.247, peak detector Dist.: 3m, Ant.: BBHA9120D, ampl.+HP. Freq: 11.415GHz, Emax: 39.92dBµV/m, RBW: 1MHz Comment 1:

Comment 2:



FCC RULES PART 15, SUBPART C

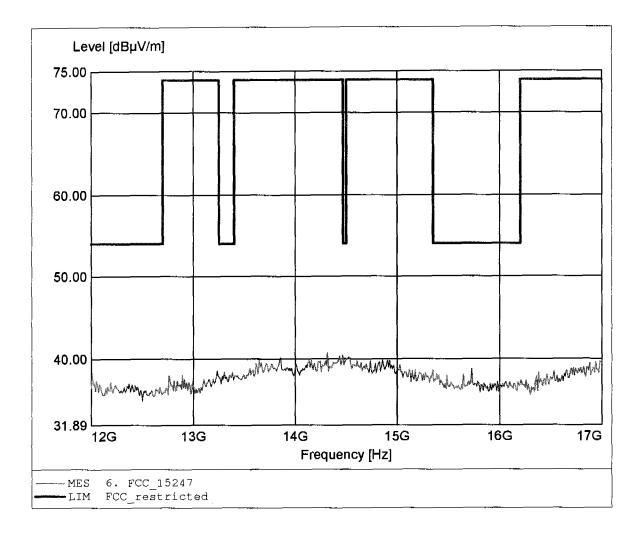
LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

EUT / Model: Mode: Channel: 19 / 2445 MHz

Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)
Test Specification: according to \$15.247, peak detector Comment 1:

Dist.: 3m, Ant.: BBHA9120D, ampl.+HP. Freq: 14.315GHz, Emax: 40.74dBµV/m, RBW: 1MHz Comment 2:



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

EUT / Model: Mode:

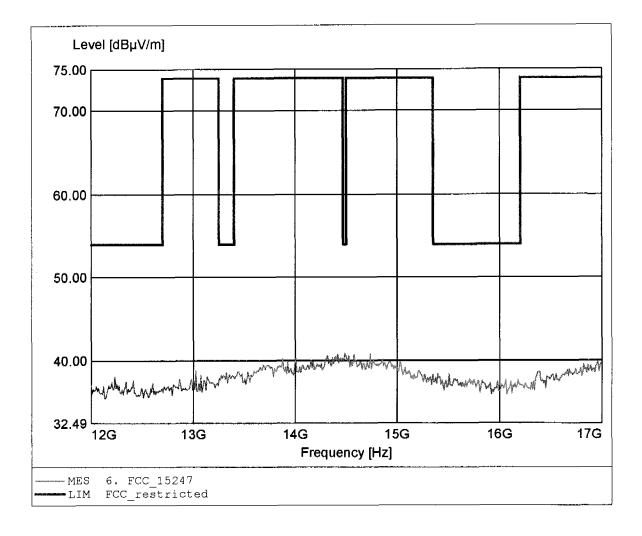
Mode: Channel: 19 / 2445 MHz

Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector Comment 1:

Dist.: 3m, Ant.: BBHA9120D, ampl.+HP. Freq: 14.485GHz, Emax: 40.87dBuV/m, RBW: 1MHz Comment 2:



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

EUT / Model: Mode:

Mode:

Channel: 19 / 2445 MHz

Test Site / Operator: ETS / Mr. Schlaps

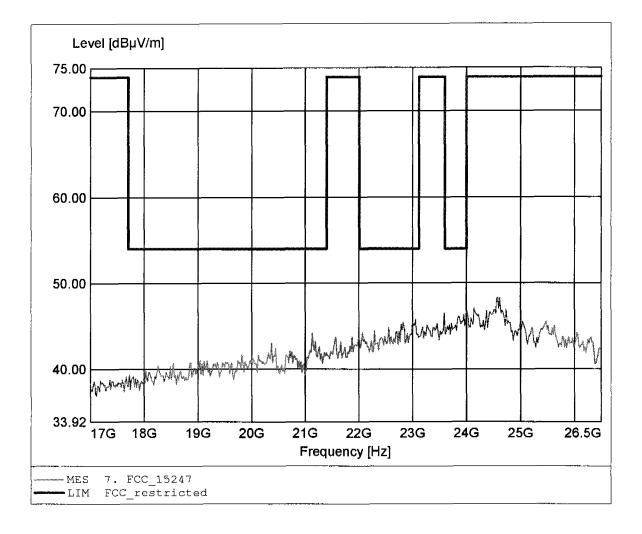
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector

Comment 1: Dist.: 3m, Ant.: HL025, amplif.

Comment 2: Freq: 24.615GHz, Emax: 48.32dBµV/m, RBW: 1MHz





FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

EUT / Model: Mode:

Mode: 2.4 GHZ 802.15.4 / 21gBee OLM Module /
Mode: Channel: 19 / 2445 MHz

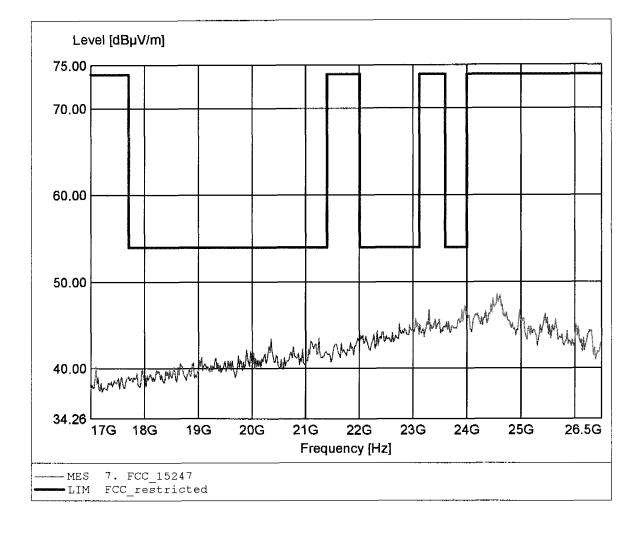
Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector

Comment 1: Dist.: 3m, Ant.: HL025, amplif.

Comment 2: Freq: 24.558GHz, Emax: 48.61dBµV/m, RBW: 1MHz



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

EUT / Model: Mode: 2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

EUT / Model: 2.4 GHz 602.13.3 / 2480 MHz

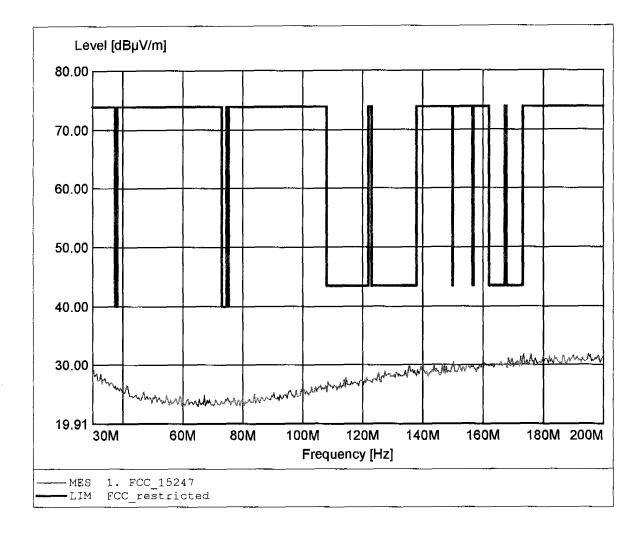
Mode: Channel: 26 / 2480 MHz

Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Condition: 25°C / Unom.: 2 x 1.
Test Specification: according to \$15.247
Comment 1: Dist.: 3m, Ant.: HK 116
Comment 2:

Freq: 175.812MHz, Emax: 31.87dBμV/m, RBW: 100kHz Comment 2:



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

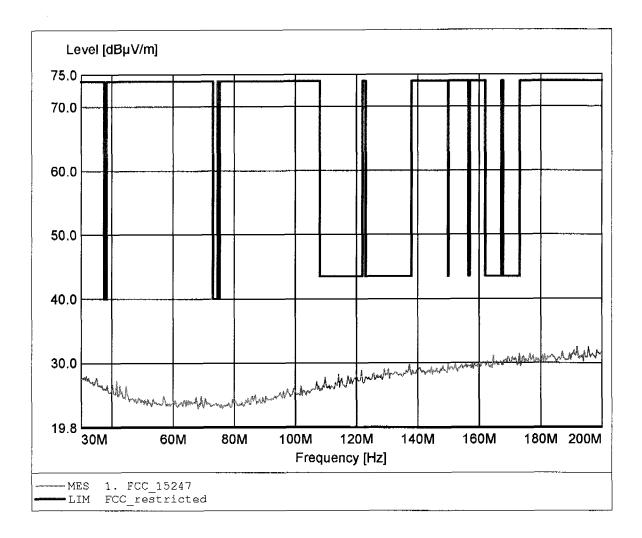
2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

EUT / Model: Mode:

Mode: Channel: 26 / 2480 MHz
Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery) Test Condition:

according to \$15.247 Test Specification: Comment 1:

Dist.: 3m, Ant.: HK 116 Freq: 191.824MHz, Emax: 32.49dBuV/m, RBW: 100kHz Comment 2:



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2 EUT / Model:

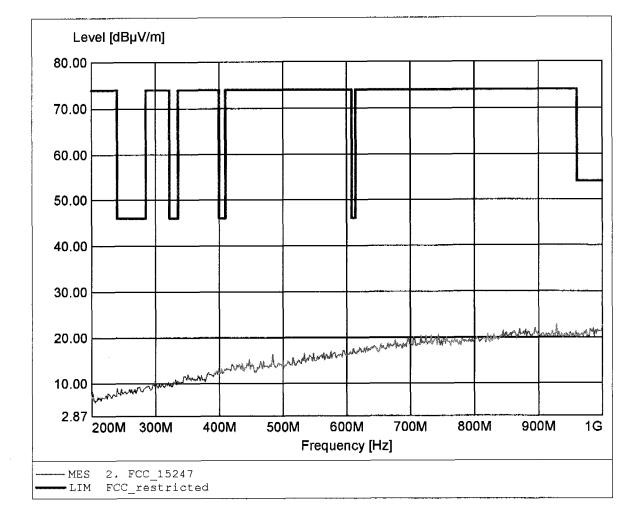
Channel: 26 / 2480 MHz Mode:

Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery) Test Condition:

Test Specification: according to \$15.247

Comment 1: Dist.: 3m, Ant.: HL 223, amplif.

Comment 2: Freq: 927.856MHz, Emax: 22.75dBµV/m, RBW: 100kHz



FCC RULES PART 15, SUBPART C

Approval Holder:

LuxLabs Ltd. DBA MeshNetics

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

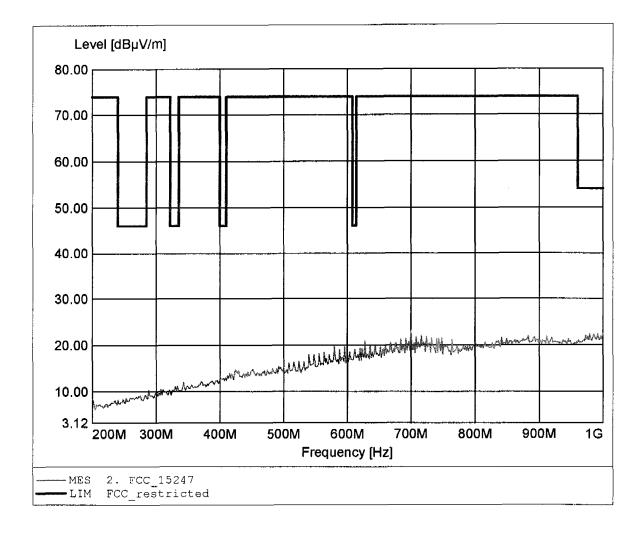
EUT / Model: Mode:

Mode: Channel: 26 / 2480 MHz
Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247

Comment 1:

Dist.: 3m, Ant.: HL 223, amplif. Freq: 700.200MHz, Emax: 23.17dBuV/m, RBW: 100kHz Comment 2:



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

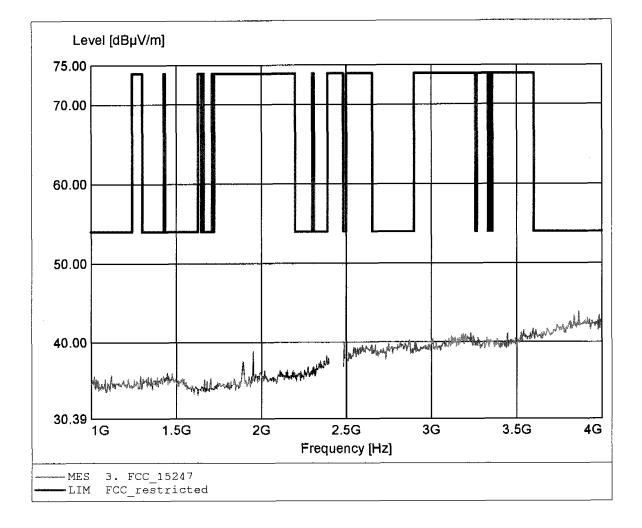
2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2 EUT / Model: Mode:

Mode: Channel: 26 / 2480 MHz
Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

according to \$15.247, peak detector Test Specification:

Dist.: 3m, Ant.: BBHA9120D, amplif., notch-filter Freq: 3.863GHz, Emax: 43.87dBµV/m, RBW: 1MHz Comment 1:

Comment 2:



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

EUT / Model: Mode:

Mode: Channel: 26 / 2480 MHz

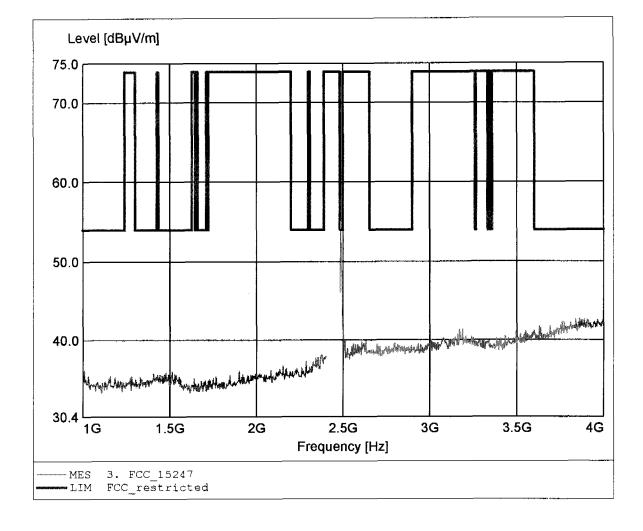
Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector

Dist.: 3m, Ant.: BBHA9120D, amplif., notch-filter Comment 1:

Freq: 2.487GHz, Emax: 55.08dBuV/m, RBW: 1MHz Comment 2:



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2 EUT / Model: Mode:

Mode: Channel: 26 / 2480 MHz

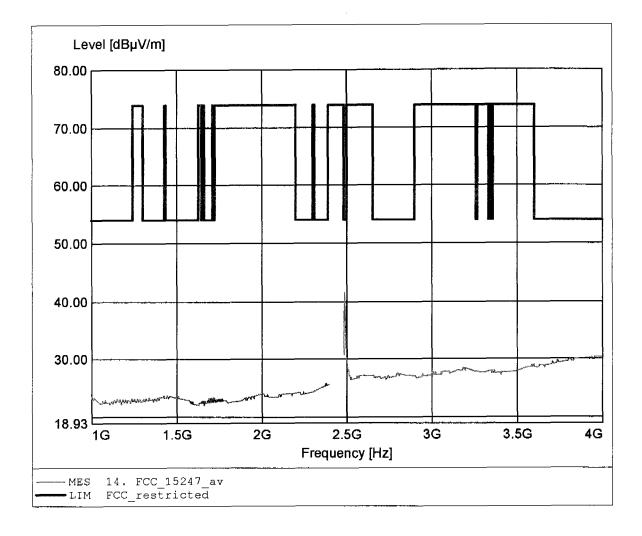
Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, average detector

Dist.: 3m, Ant.: BBHA9120D, amplif., notch-filter Freq: 2.487GHz, Emax: 41.56dBµV/m, RBW: 1MHz Comment 1:

Comment 2:



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

EUT / Model: Mode: 2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

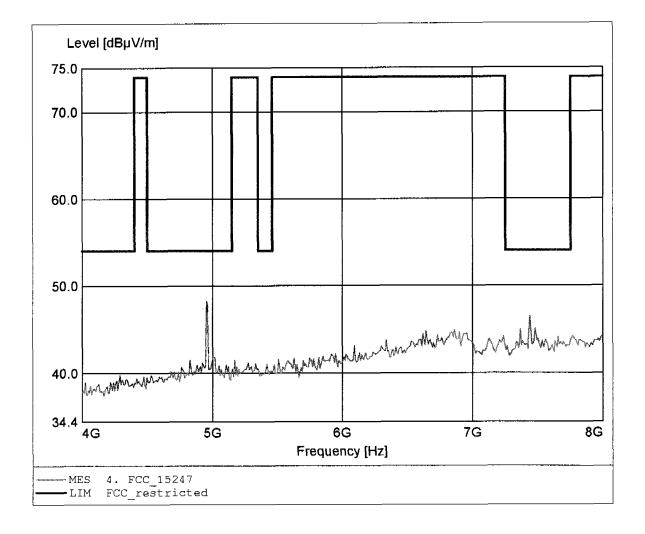
Mode: Channel: 26 / 2480 MHz

Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector Comment 1:

Dist.: 3m, Ant.: BBHA9120D, ampl.+HP. Freq: 4.954GHz, Emax: 48.27dBµV/m, RBW: 1MHz Comment 2:



FCC RULES PART 15, SUBPART C

Approval Holder:

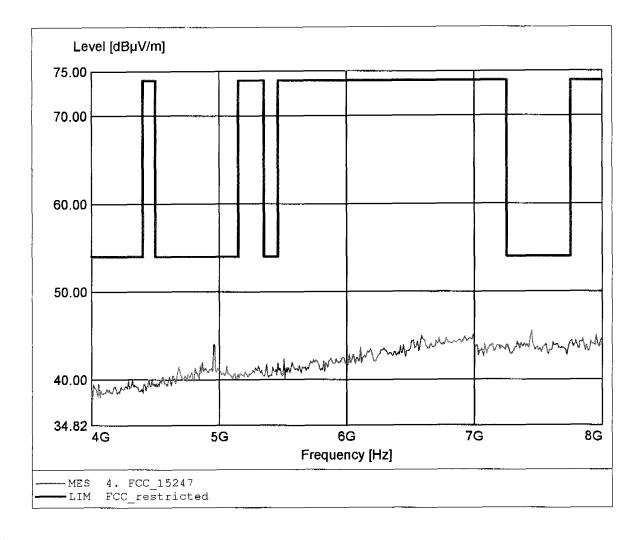
LuxLabs Ltd. DBA MeshNetics
2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2 EUT / Model: Mode:

Channel: 26 / 2480 MHz

Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)
Test Specification: according to \$15.247, peak detector Test Condition: according to \$15.247, peak detector

Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.

Comment 2: Freq: 7.447GHz, Emax: 45.52dBµV/m, RBW: 1MHz



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

EUT / Model: Mode:

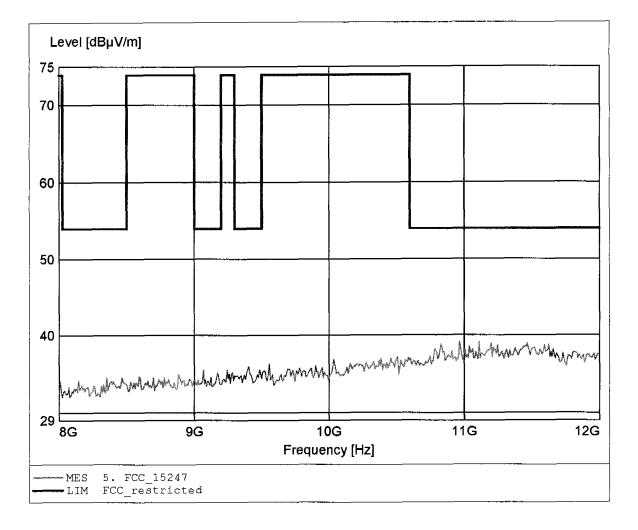
Mode: Channel: 26 / 2480 MHz

Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector Comment 1:

Dist.: 3m, Ant.: BBHA9120D, ampl.+HP. Freq: 10.966GHz, Emax: 39.15dBµV/m, RBW: 1MHz Comment 2:



FCC RULES PART 15, SUBPART C

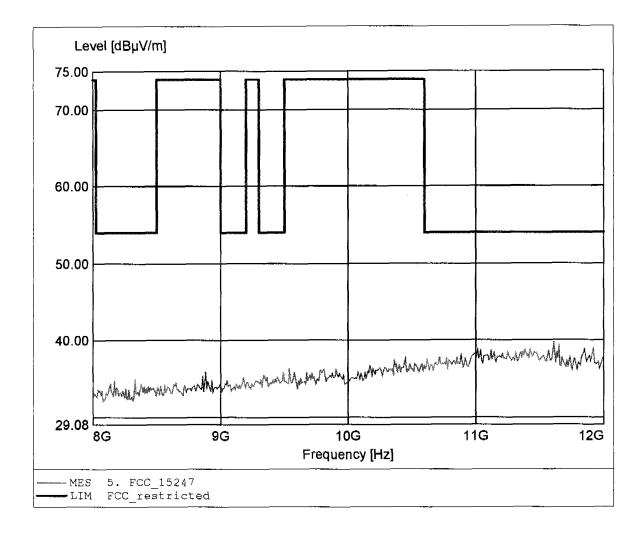
LuxLabs Ltd. DBA MeshNetics Approval Holder:

EUT / Model: Mode: 2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

Test Site / Operator: ETS

Channel: 26 / 2480 MHz
ETS / Mr. Schlaps
25°C / Unom.: 2 x 1.5 V DC (battery)
according to \$15.247, peak detector Test Condition: Test Specification: Comment 1:

Dist.: 3m, Ant.: BBHA9120D, ampl.+HP. Freq: 11.607GHz, Emax: 39.69dBµV/m, RBW: 1MHz Comment 2:



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

EUT / Model: Mode:

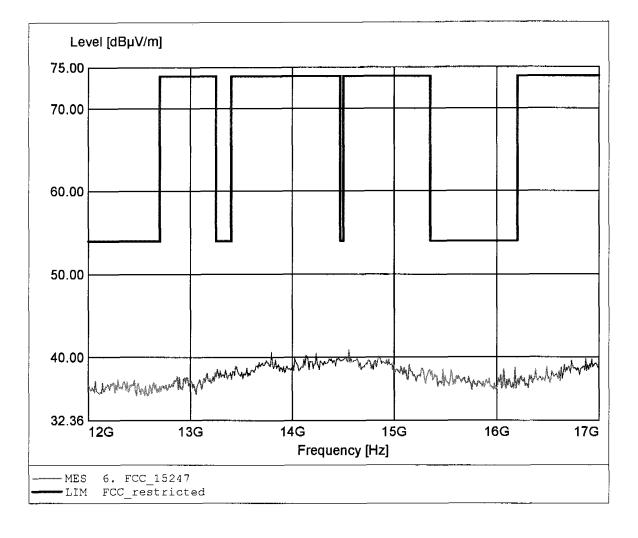
Mode: Channel: 26 / 2480 MHz

Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector Dist.: 3m, Ant.: BBHA9120D, ampl.+HP. Freq: 14.555GHz, Emax: 40.92dBµV/m, RBW: 1MHz Comment 1:

Comment 2:



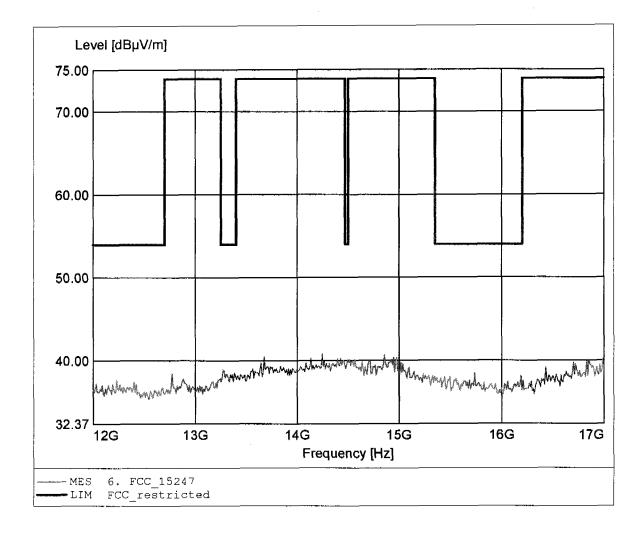
FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

EUT / Model: Mode: Channel: 26 / 2480 MHz

Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)
Test Specification: according to \$15.247, peak detector
Comment 1: Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2: Freq: 14.244GHz, Emax: 40.80dBµV/m, RBW: 1MHz



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

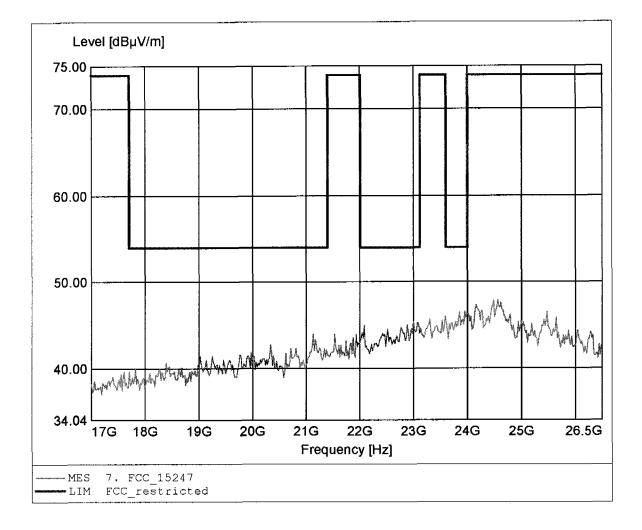
2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2 EUT / Model: Mode:

Mode: Channel: 26 / 2480 MHz

Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector Test Condition:
Test Specification: according to \$15.24/, peak decomment 1:
Dist.: 3m, Ant.: HL025, amplif.
Comment 2:
Freq: 24.558GHz, Emax: 47.84dBµV/m, RBW: 1MHz



FCC RULES PART 15, SUBPART C

LuxLabs Ltd. DBA MeshNetics Approval Holder:

2.4 GHz 802.15.4 / ZigBee OEM module / ZDM-A1281-A2

EUT / Model: Mode:

EUT / Model: 2.4 GHz 802.15.4 / 21gBee OEM Module /
Mode: Channel: 26 / 2480 MHz

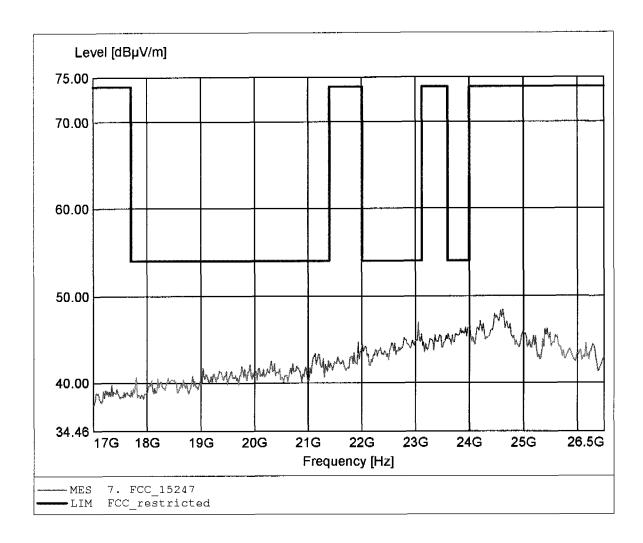
Test Site / Operator: ETS / Mr. Schlaps

Test Condition: 25°C / Unom.: 2 x 1.5 V DC (battery)

Test Specification: according to \$15.247, peak detector

Comment 1: Dist.: 3m, Ant.: HL025, amplif.

Comment 2: Freq: 24.615GHz, Emax: 48.47dBµV/m, RBW: 1MHz





Appendix H

AC power line conducted emissions

ETS Product Service AG Registriernummer: G0M20703-1213-C-1 Appendix H

EMI voltage test in the ac-mains according to FCC part 15

EUT:

2.4GHz 802.15.4/ZigBee OEM module

Manufacturer:

LuxLabs Ltd. DBA MeshNetics

Operating Condition: Unom: 120VAC(AC/DC-adaptor), Tnom: 23°C

Test Site:

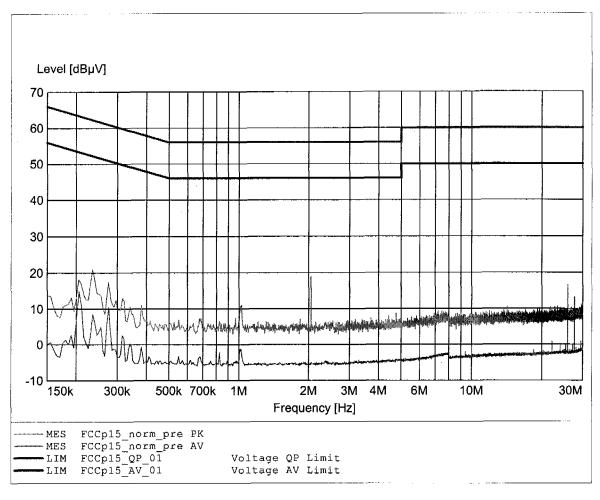
ETS

Operator:

Mr. Pflug

Test Specification: V-Network: ESH2-Z5 (L1/N)
Comment: model: ZDM-A1281-A2 brandname: ZigBit

mode: bluetooth-link





Appendix I

Receiver radiated emisisons

ETS Product Service AG Registriernummer: G0M20703-1213-C-1 Appendix I

Standards Industry Canada, RSS-GEN

Approval Holder: LUXLABS LTD. DBA MESHNETICS

2.4 GHZ 802.15.4 / ZIGBEE OEM MODULE / ZDM-A1281-A2

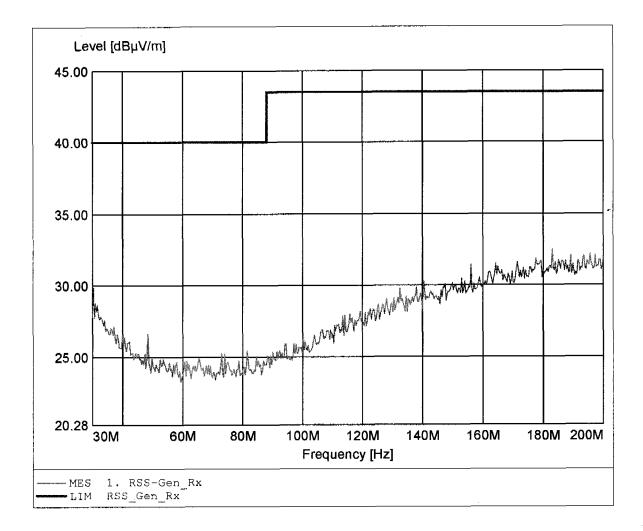
EUT / Model: Mode: Channel: 19 / 2445 MHz

Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (BATTERY) Test Condition:

according to RSS-Gen Is:
Dist.: 3m, Ant.: HK 116 according to RSS-Gen Issue 1 Test Specification:

Comment 1:

Freq:182.966MHz Emax:32.54dBuV/m RBW: 100 kHz Comment 2:



Standards Industry Canada, RSS-GEN

LUXLABS LTD. DBA MESHNETICS Approval Holder:

2.4 GHZ 802.15.4 / ZIGBEE OEM MODULE / ZDM-A1281-A2 EUT / Model: Mode:

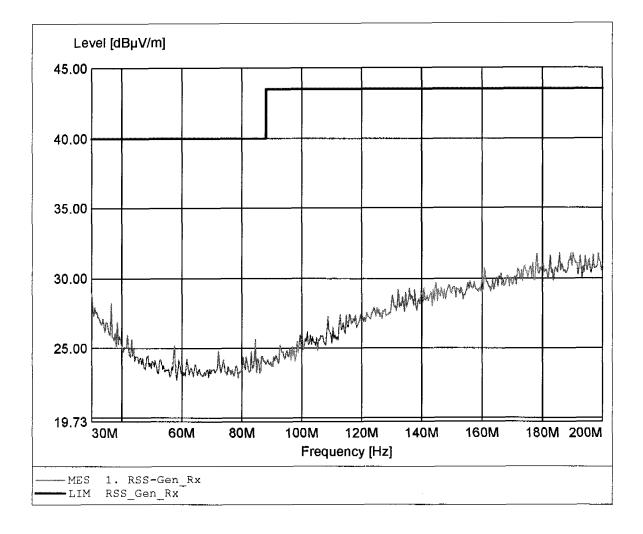
Channel: 19 / 2445 MHz

Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (BATTERY)
Test Specification: according to RSS-Gen Issue 1

Comment 1: Comment 2:

Dist.: 3m, Ant.: HK 116

Freq:190.120MHz Emax:31.81dBuV/m RBW: 100 kHz



Standards Industry Canada, RSS-GEN

LUXLABS LTD. DBA MESHNETICS Approval Holder:

2.4 GHZ 802.15.4 / ZIGBEE OEM MODULE / ZDM-A1281-A2 EUT / Model: Mode:

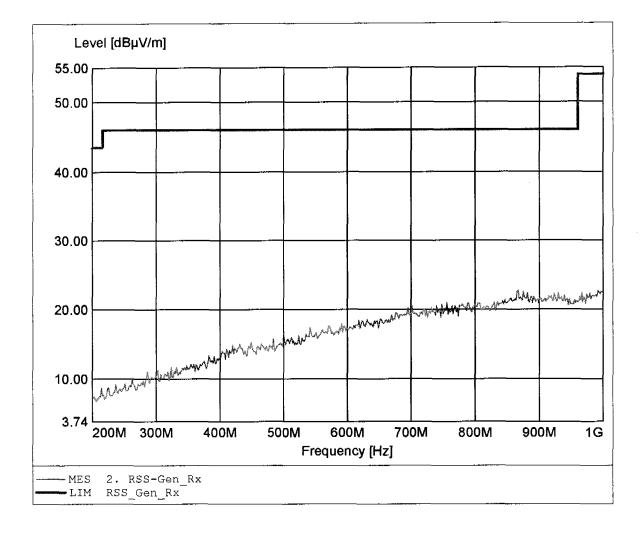
Channel: 19 / 2445 MHz

Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (BATTERY) Test Condition:

Test Specification: according to RSS-Gen Issue 1

Comment 1:

Dist.: 3m, Ant.: HL 223, ampl. Freq:866.934MHz Emax:22.71dBµV/m RBW: 100 kHz Comment 2:



Standards Industry Canada, RSS-GEN

LUXLABS LTD. DBA MESHNETICS Approval Holder:

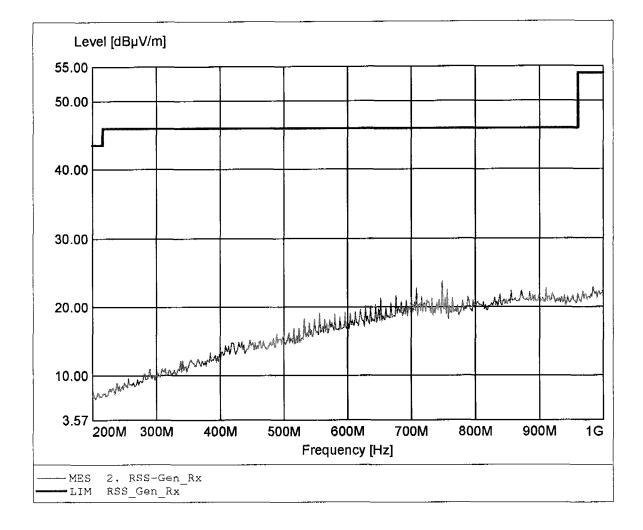
2.4 GHZ 802.15.4 / ZIGBEE OEM MODULE / ZDM-A1281-A2 Channel: 19 / 2445 MHz EUT / Model: Mode:

Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (BATTERY) Test Condition:

according to RSS-Gen Issue 1 Test Specification:

Comment 1:

Dist.: 3m, Ant.: HL 223, ampl. Freq:748.297MHz Emax:23.78dBuV/m RBW: 100 kHz Comment 2:



Standards Industry Canada, RSS-GEN

LUXLABS LTD. DBA MESHNETICS Approval Holder:

2.4 GHZ 802.15.4 / ZIGBEE OEM MODULE / ZDM-A1281-A2

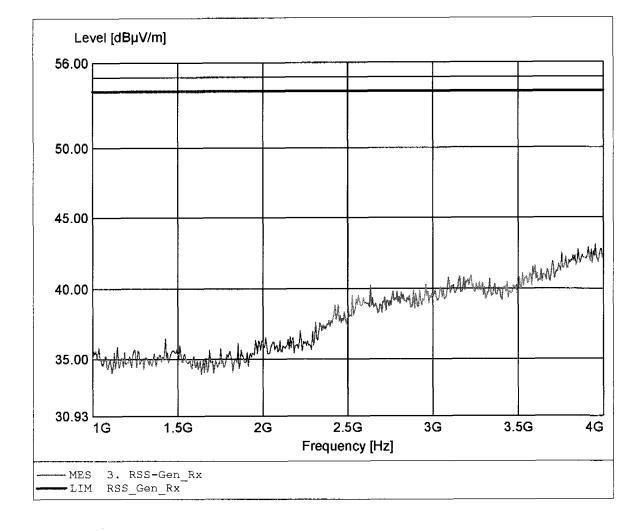
EUT / Model: Mode: Channel: 19 / 2445 MHz

Mode: Changer. 19 ,
Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (BATTERY)

according to RSS-Gen Issue 1 Test Specification:

Dist.: 3m, Ant.: BBHA9120D, ampl. Comment 1:

Freq:3.952GHz Emax:43.11dBuV/m RBW: 1 MHz Comment 2:



Standards Industry Canada, RSS-GEN

LUXLABS LTD. DBA MESHNETICS Approval Holder:

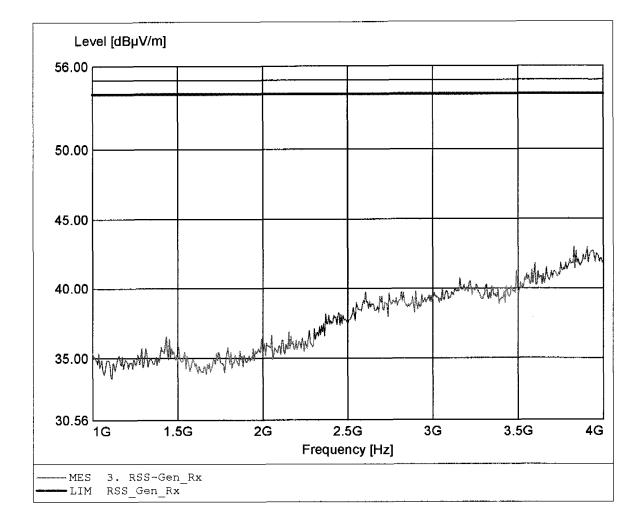
ZDM-A1281-A2 EUT / Model: Mode: 2.4 GHZ 802.15.4 / ZIGBEE OEM MODULE /

Channel: 19 / 2445 MHz

Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (BATTERY)
Test Specification: according to RSS-Gen Issue 1

Dist.: 3m, Ant.: BBHA9120D, ampl. Comment 1:

Freq:3.826GHz Emax:42.97dBuV/m RBW: 1 MHz Comment 2:



Standards Industry Canada, RSS-GEN

LUXLABS LTD. DBA MESHNETICS Approval Holder:

2.4 GHz 802.15.4 / ZIGBEE OEM MODULE / ZDM-A1281-A2 Channel: 19 / 2445 MHz

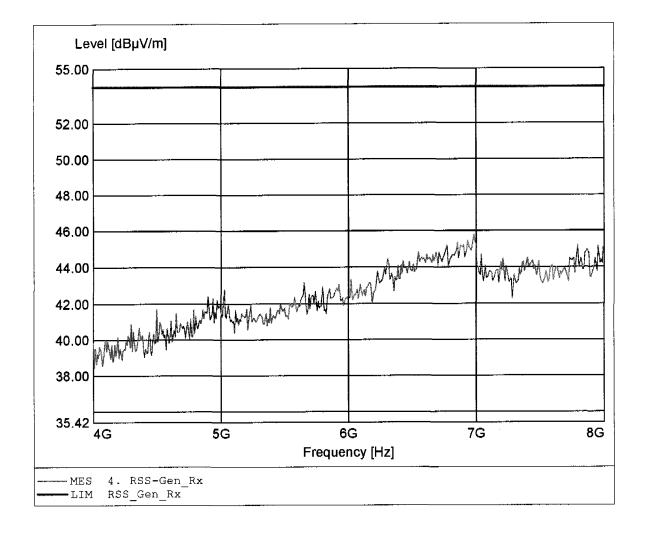
EUT / Model: Mode:

Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (BATTERY) Test Condition:

according to RSS-Gen Issue 1 Test Specification:

Dist.: 3m, Ant.: BBHA9120D, ampl. Comment 1:

Freq: 6.982GHz Emax: 45.77dBuV/m RBW: 1 MHz Comment 2:



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LUXLABS LTD. DBA MESHNETICS Approval Holder:

EUT / Model: Mode: 2.4 GHZ 802.15.4 / ZIGBEE OEM MODULE / ZDM-A1281-A2

Channel: 19 / 2445 MHz

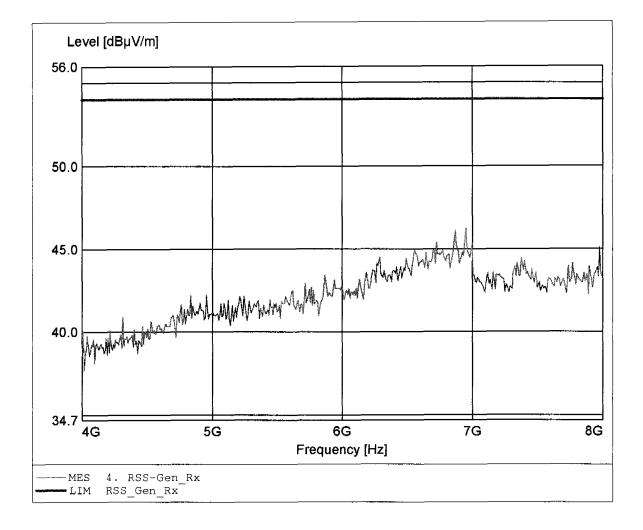
/ Mr. Schlaps Test Site / Operator: ETS

25°C / Unom.: 2 x 1.5 V DC (BATTERY) Test Condition:

according to RSS-Gen Issue 1 Test Specification:

Dist.: 3m, Ant.: BBHA9120D, ampl. Comment 1:

Freq: 6.950GHz Emax: 46.21dBuV/m RBW: 1 MHz Comment 2:



Standards Industry Canada, RSS-GEN

LUXLABS LTD. DBA MESHNETICS Approval Holder:

EUT / Model: Mode: 2.4 GHZ 802.15.4 / ZIGBEE OEM MODULE / ZDM-A1281-A2

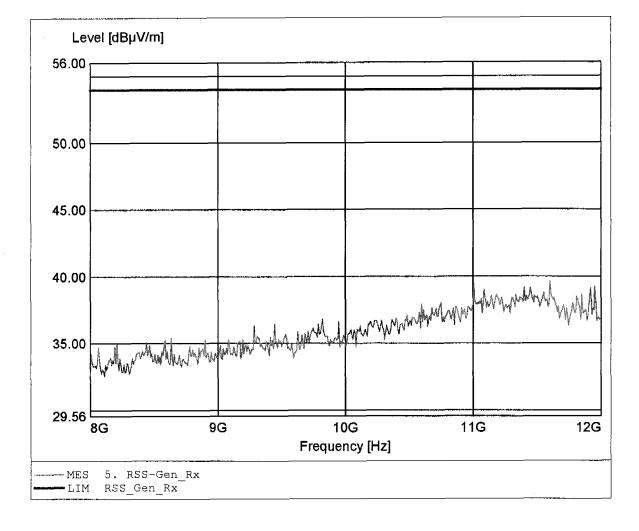
Channel: 19 / 2445 MHz

Mode:
Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (BATTERY)

according to RSS-Gen Issue 1 Test Specification:

Dist.: 3m, Ant.: BBHA9120D, ampl. Comment 1:

Freq:11.599GHz Emax:39.66dBuV/m RBW: 1 MHz Comment 2:



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LUXLABS LTD. DBA MESHNETICS Approval Holder:

2.4 GHZ 802.15.4 / ZIGBEE OEM MODULE / ZDM-A1281-A2 Channel: 19 / 2445 MHz EUT / Model: Mode:

Mode: Chainer. 19 / 2.20 And Test Site / Operator: ETS / Mr. Schlaps
Test Condition: 25°C / Unom.: 2 x 1.5 V DC (BATTERY)

according to RSS-Gen Issue 1 Test Specification:

Dist.: 3m, Ant.: BBHA9120D, ampl. Comment 1:

Freq:11.599GHz Emax:39.35dBuV/m RBW: 1 MHz Comment 2:

