



Appendix B

Coordination with fixed microwave service

UTAM, Inc.

SECTION 15.307(b) AFFIDAVIT

I, Michael Stima, Managing Director of UTAM, Inc., hereby swear and affirm that:

LAKE COMMUNICATIONS LIMITED

is a participating member of UTAM, Inc. in good standing for purposes of Section 15.307(b) of the FCC rules.

Subscribed to and sworn this 5TH day of October, 2005



Michael Stima, Managing Director
UTAM, Inc.
1170 U.S. Hwy 22
P.O. Box 8126
Bridgewater, New Jersey 08807
Tel: (508) 526-3636

Affidavit #: LAKE100405



Appendix C

Reference to Subpart B

UTAM, Inc.

SECTION 15.307(b) AFFIDAVIT

I, Michael Stima, Managing Director of UTAM, Inc., hereby swear and affirm that:

LAKE COMUNICATIONS LIMITED

is a participating member of UTAM, Inc. in good standing for purposes of Section 15.307(b) of the FCC rules.

Subscribed to and sworn this 5TH day of October, 2005



Michael Stima, Managing Director
UTAM, Inc.
1170 U.S. Hwy 22
P.O. Box 8126
Bridgewater, New Jersey 08807
Tel: (508) 526-3636

Affidavit #: LAKE100405



Appendix D

Labeling requirements

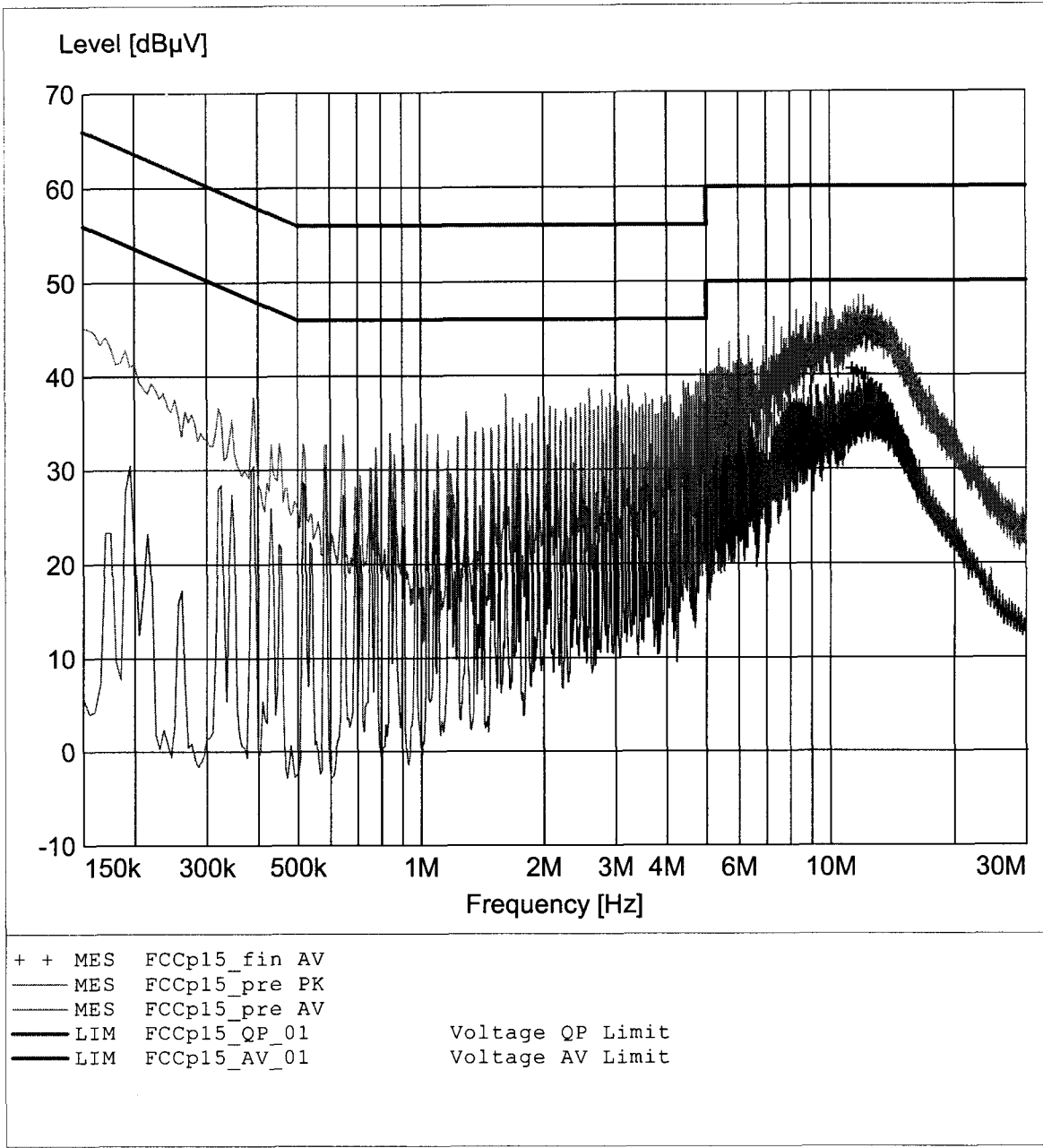


Appendix E

Conducted limits AC Power line

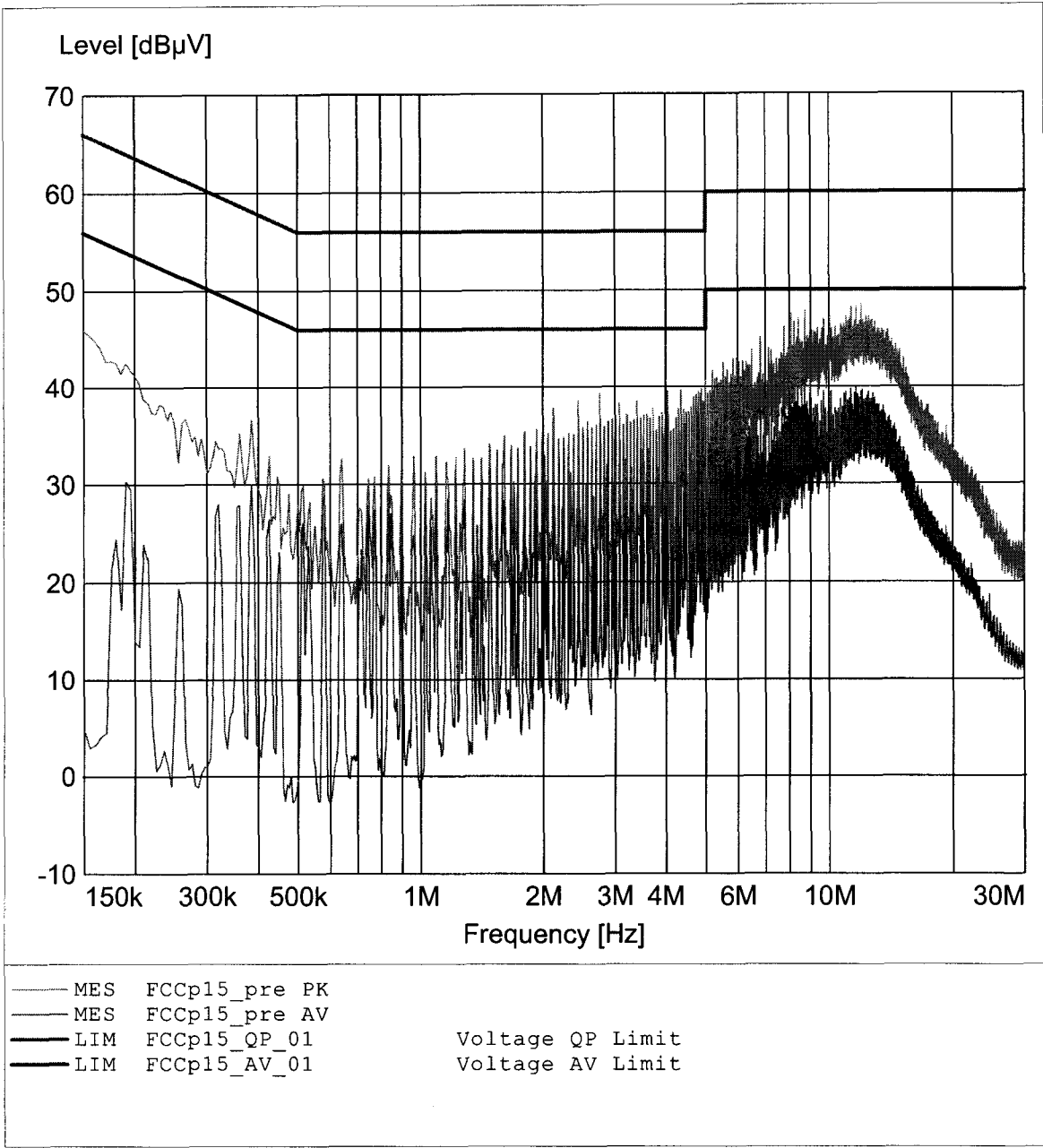
EMI voltage test in the ac-mains according to FCC part 15

EUT: Sigma / Connection Central
 Manufacturer: LAKE Communications Ltd.
 Operating Condition: Unom: 120VAC (AC/DC adaptor), Tnom: 23°C
 Test Site: ETS
 Operator: Mr. Marquardt
 Test Specification: V-Network: ESH2-Z5 (L1)
 Comment: model: 5923-05500
 Adaptor: SPA2400700



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

EUT: Sigma / Connection Central
 Manufacturer: LAKE Communications Ltd.
 Operating Condition: Unom: 120VAC (AC/DC adaptor), Tnom: 23°C
 Test Site: ETS
 Operator: Mr. Marquardt
 Test Specification: V-Network: ESH2-Z5 (N)
 Comment: model: 5923-05500
 Adaptor: SPA2400700





Appendix F

Emission bandwidth

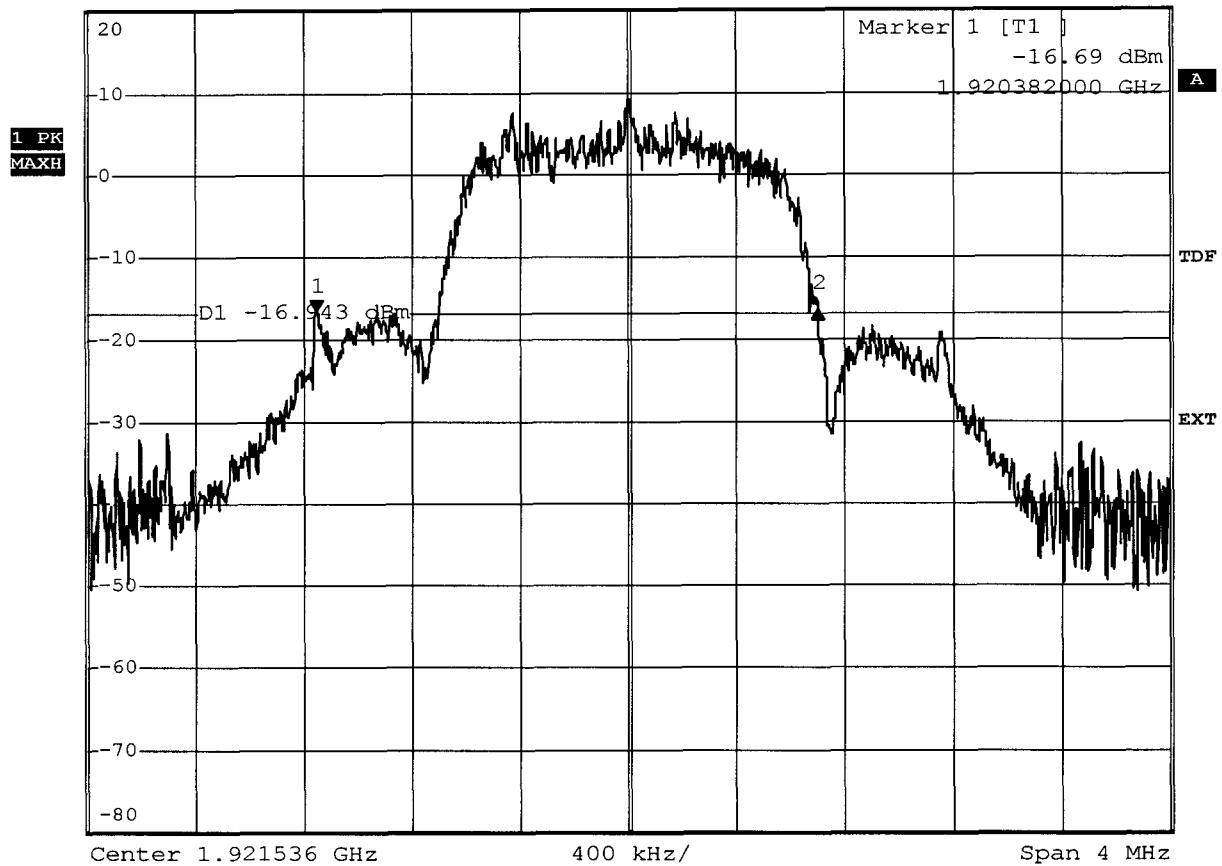
FCC Part 15.303(b) Emission bandwidth

Testprocedure ANSI 63.17-1998 6.1.3 UPCS

EUT	Sigma / Connection Central
Model	5923-05500
Applicant	LAKE Communications Ltd.
Temperature	23°C
Test Site / Operator	ETS Reichenwalde
Test Specification	6.1.3 Emission bandwidth
Measured Bandwidth	Emission Bandwidth = 1.86MHz
Max. Permitted BW	Limit = 2.5 MHz
Test result	Verdict = PASS



Emission Bandwidth *RBW 10 kHz Delta 2 [T1]
 *VBW 30 kHz 0.31 dB
 Ref 20 dBm *Att 30 dB SWT 40 ms 1.858000000 MHz



Comment: Ansi C63.17-1998 6.1.3
 Date: 17.SEP.2005 13:57:11

Measurement diagram



**Additional values as required for the detailed threshold monitoring bandwidth test
ANSI C63.17-1988 7.4.2**

-6 dB points

Lower frequency : 1920.994MHz
Higher frequency : 1921.926MHz

-12 dB points

Lower frequency : 1920.922MHz
Higher frequency : 1922.134MHz

Measurement diagram



FCC Part 15.303(b) Emission bandwidth

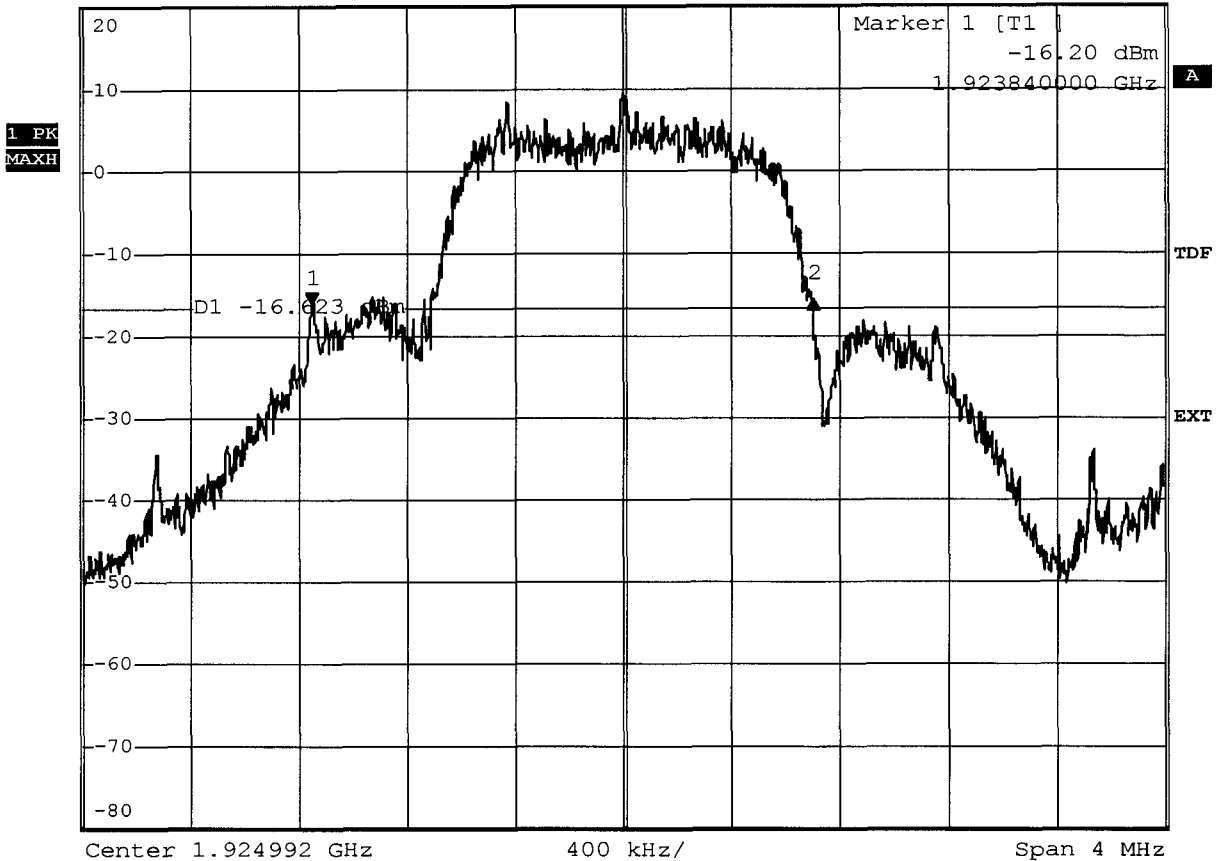
Testprocedure ANSI 63.17-1998 6.1.3

UPCS

EUT	Sigma / Connection Central
Model	5923-05500
Applicant	LAKE Communications Ltd.
Temperature	23°C
Test Site / Operator	ETS Reichenwalde
Test Specification	6.1.3 Emission bandwidth
Measured Bandwidth	Emission Bandwidth = 1.85MHz
Max. Permitted BW	Limit = 2.5 MHz
Test result	Verdict = PASS



Emission Bandwidth *RBW 10 kHz Delta 2 [T1]
 *VBW 30 kHz 0.56 dB
 Ref 20 dBm *Att 30 dB SWT 40 ms 1.852000000 MHz



Comment: Ansi C63.17-1998 6.1.3
 Date: 17.SEP.2005 14:00:17

Measurement diagram



**Additional values as required for the detailed threshold monitoring bandwidth test
ANSI C63.17-1988 7.4.2**

-6 dB points

Lower frequency : 1924.444MHz
Higher frequency : 1925.472MHz

-12 dB points

Lower frequency : 1924.366MHz
Higher frequency : 1925.598MHz

Measurement diagram



FCC Part 15.303(b) Emission bandwidth

Testprocedure ANSI 63.17-1998 6.1.3 UPCS

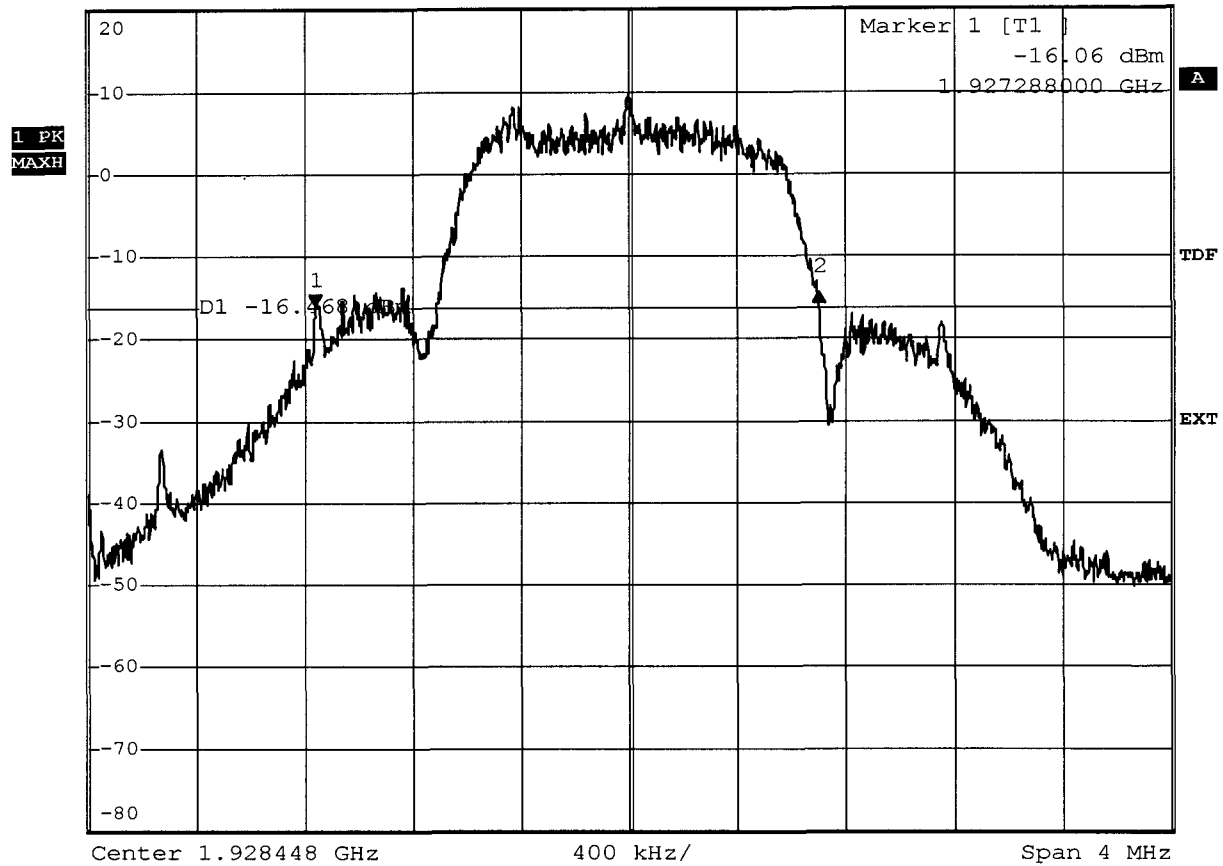
EUT Sigma / Connection Central
Model 5923-05500
Applicant LAKE Communications Ltd.
Temperature 23°C
Test Site / Operator ETS Reichenwalde
Test Specification 6.1.3 Emission bandwidth

Measured Bandwidth Emission Bandwidth = 1.86MHz
Max. Permitted BW Limit = 2.5 MHz

Test result Verdict = PASS



Emission Bandwidth *RBW 10 kHz Delta 2 [T1]
*VBW 30 kHz 1.60 dB
Ref 20 dBm *Att 30 dB SWT 40 ms 1.860000000 MHz



Comment: Ansi C63.17-1998 6.1.3
Date: 17.SEP.2005 14:04:55

Measurement diagram

**Additional values as required for the detailed threshold monitoring bandwidth test
ANSI C63.17-1988 7.4.2**

-6 dB points

Lower frequency : 1927.906MHz
Higher frequency : 1928.934MHz

-12 dB points

Lower frequency : 1927.824MHz
Higher frequency : 1929.05MHz



Appendix G

Peak Transmit Power



FCC Part 15.319(c) Peak Transmit Power limit

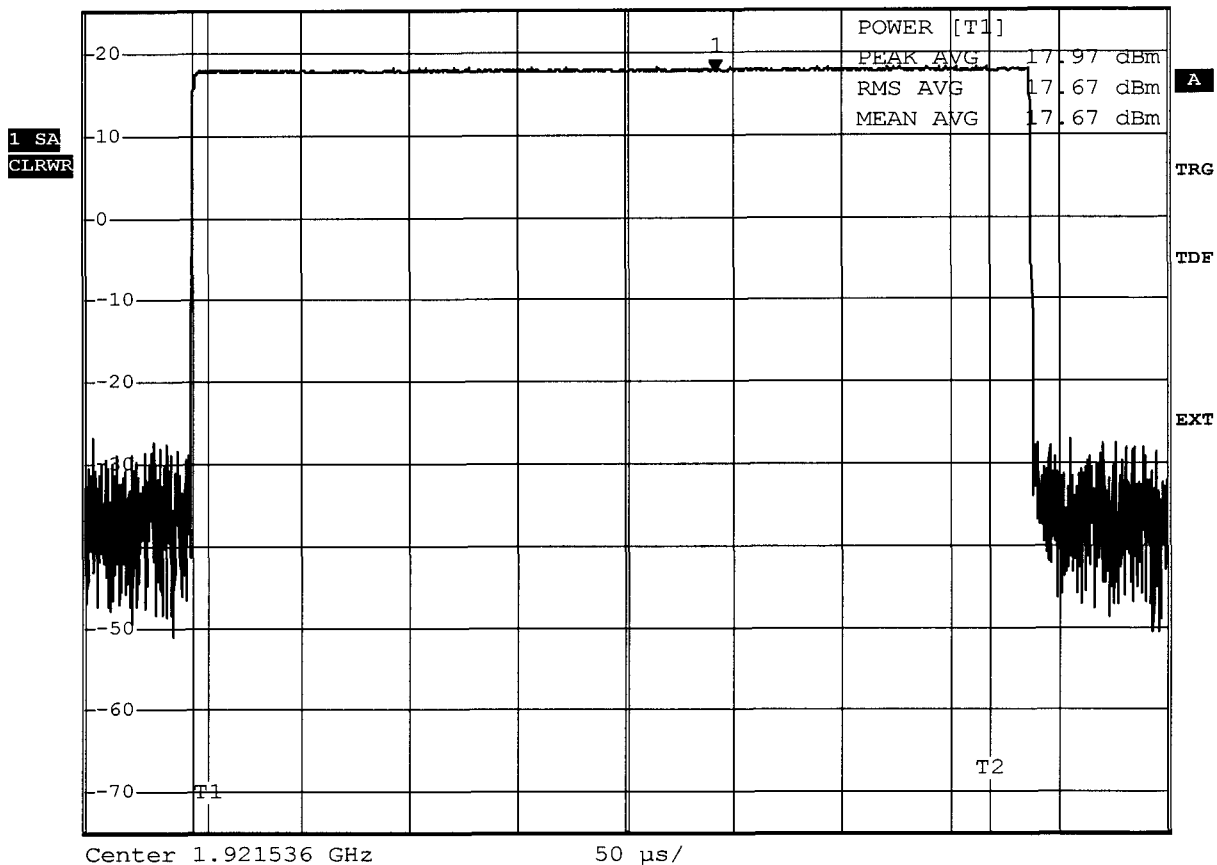
Testprocedure ANSI 63.17-1998 6.1.2 UPCS

EUT Sigma / Connection Central
 Model 5923-05500
 Applicant LAKE Communications Ltd.
 Temperat. / Voltage 23°C / Unom
 Test Site / Operator ETS Reichenwalde
 Test Specification 6.1.2 Peak transmit power

Measured Bandwidth 1.86MHz
 Max. Permitted Power 21,34 dBm
 Measured Power 17,97 dBm
 Test result Verdict = PASS



Peak transmit power RBW 3 MHz Marker 1 [T1] 17.50 dBm
 *VBW 10 MHz 242.000000 µs
 Ref 25 dBm *Att 40 dB SWT 500 µs



Comment: Ansi C63.17-1998 6.1.2
 Date: 17.SEP.2005 14:35:52

Measurement diagram

FCC Part 15.319(c) Peak Transmit Power limit

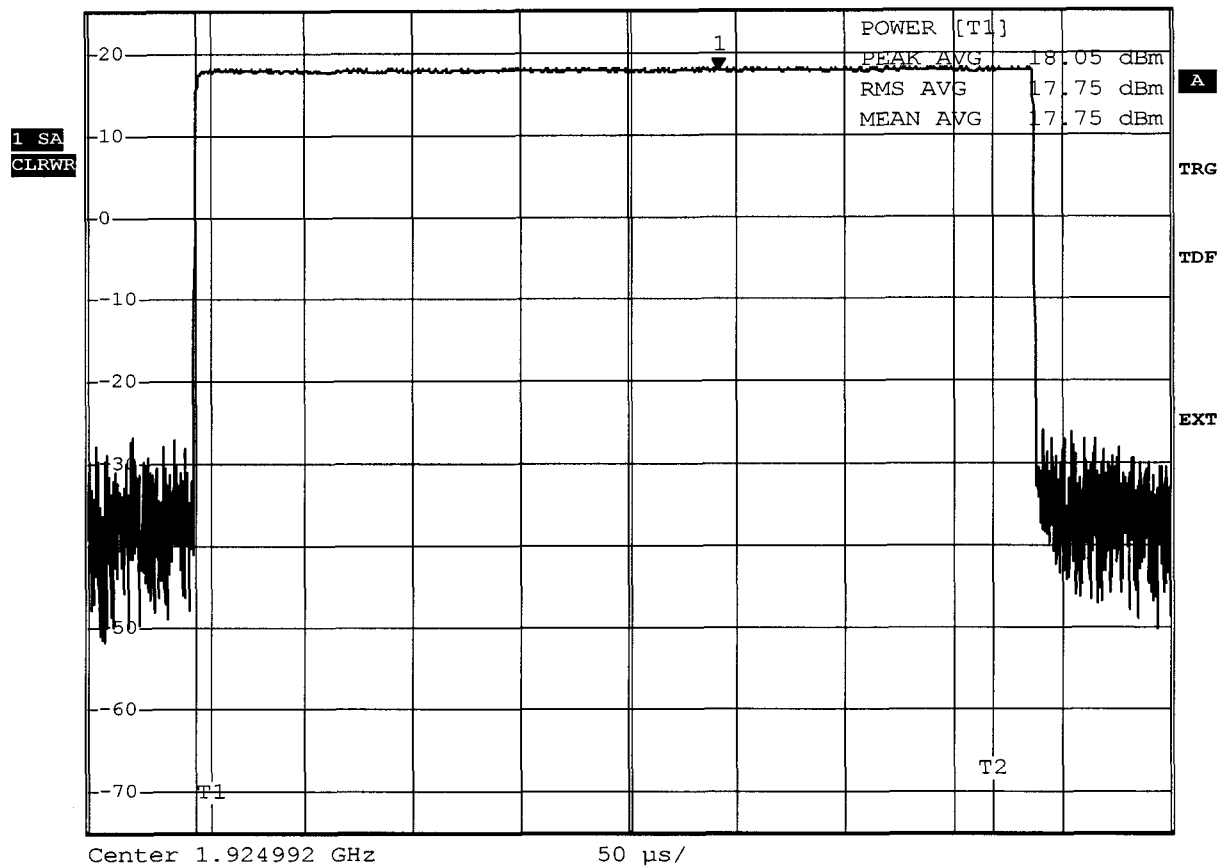
Testprocedure ANSI 63.17-1998 6.1.2 UPCS

EUT Sigma / Connection Central
 Model 5923-05500
 Applicant LAKE Communications Ltd.
 Temperat. / Voltage 23°C / Unom
 Test Site / Operator ETS Reichenwalde
 Test Specification 6.1.2 Peak transmit power

Measured Bandwidth 1.86MHz
 Max. Permitted Power 21,34 dBm
 Measured Power 18,05 dBm
 Test result Verdict = PASS



Peak transmit power RBW 3 MHz Marker 1 [T1] 17.75 dBm
 *VBW 10 MHz 242.000000 µs
 Ref 25 dBm *Att 40 dB SWT 500 µs



Comment: Ansi C63.17-1998 6.1.2
 Date: 17.SEP.2005 14:20:42

Measurement diagram



FCC Part 15.319(c) Peak Transmit Power limit

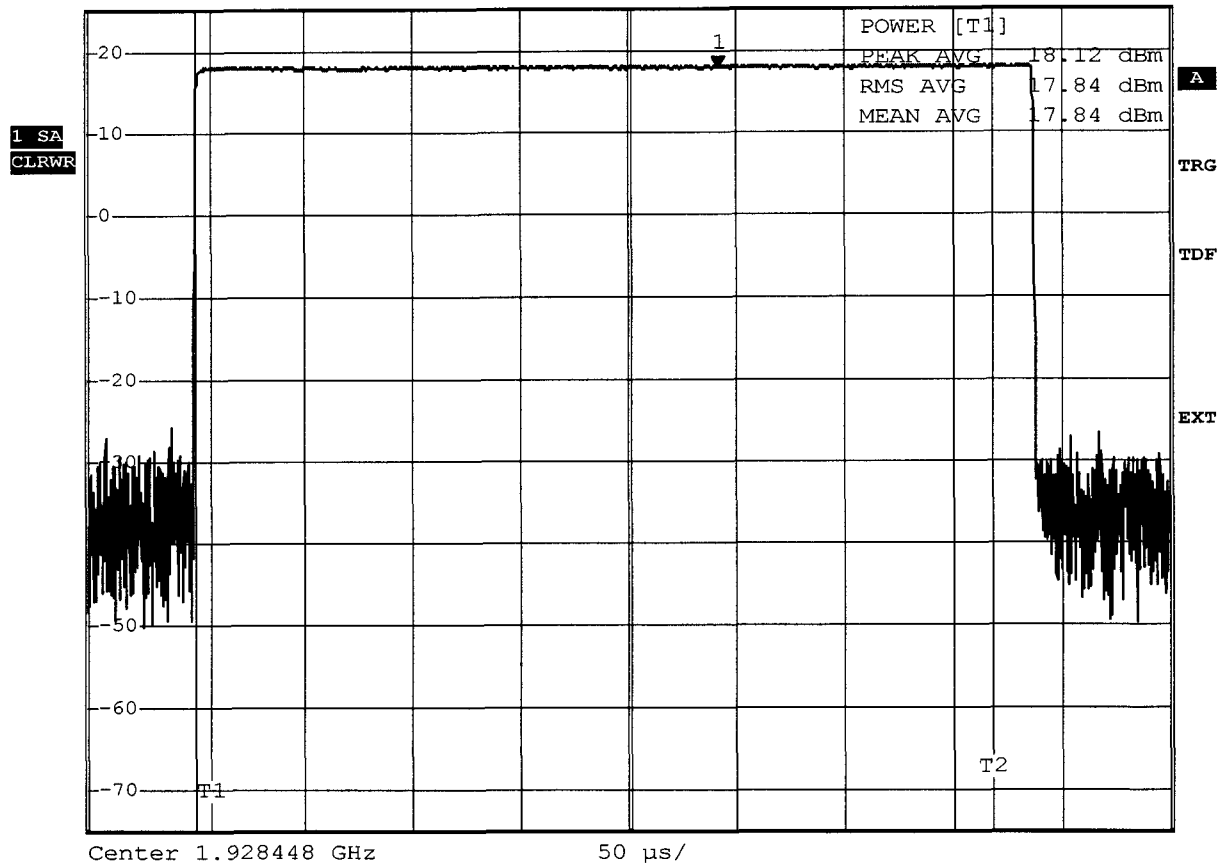
Testprocedure ANSI 63.17-1998 6.1.2 UPCS

EUT Sigma / Connection Central
 Model 5923-05500
 Applicant LAKE Communications Ltd.
 Temperat. / Voltage 23°C / Unom
 Test Site / Operator ETS Reichenwalde
 Test Specification 6.1.2 Peak transmit power

Measured Bandwidth 1.86MHz
 Max. Permitted Power 21,34 dBm
 Measured Power 18,12 dBm
 Test result Verdict = PASS



Peak transmit power RBW 3 MHz Marker 1 [T1] 17.75 dBm
 *Att 40 dB *VBW 10 MHz 242.000000 µs
 Ref 25 dBm SWT 500 µs



Comment: Ansi C63.17-1998 6.1.2
 Date: 17.SEP.2005 14:17:53

Measurement diagram



FCC Part 15.319(c) Peak Transmit Power limit

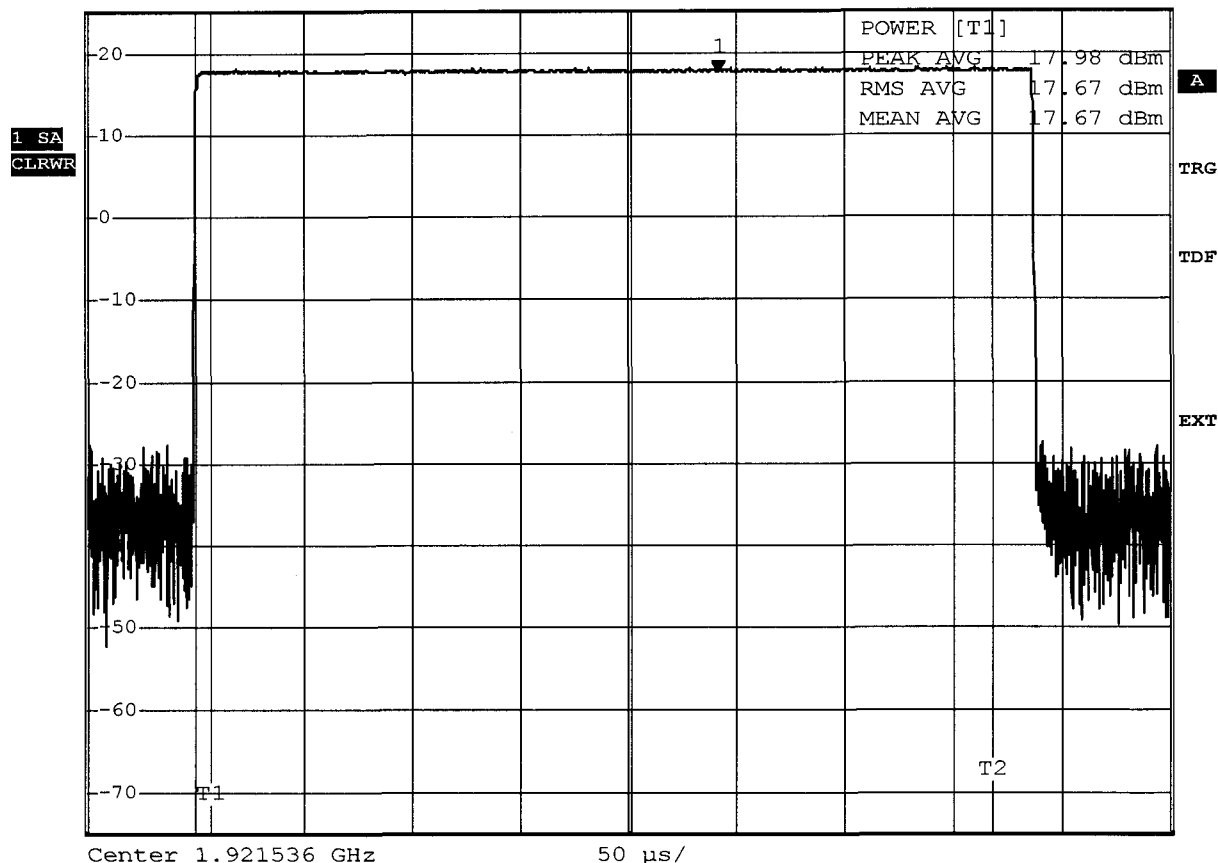
Testprocedure ANSI 63.17-1998 6.1.2
 UPCS

EUT Sigma / Connection Central
 Model 5923-05500
 Applicant LAKE Communications Ltd.
 Temperat. / Voltage 23°C / Umax
 Test Site / Operator ETS Reichenwalde
 Test Specification 6.1.2 Peak transmit power

Measured Bandwidth 1.86MHz
 Max. Permitted Power 21,34 dBm
 Measured Power 17,98 dBm
 Test result Verdict = PASS



Peak transmit power RBW 3 MHz Marker 1 [T1] 17.50 dBm
 *VBW 10 MHz
 Ref 25 dBm *Att 40 dB SWT 500 µs 242.000000 µs



Comment: Ansi C63.17-1998 6.1.2
 Date: 17.SEP.2005 14:35:04

Measurement diagram



FCC Part 15.319(c) Peak Transmit Power limit

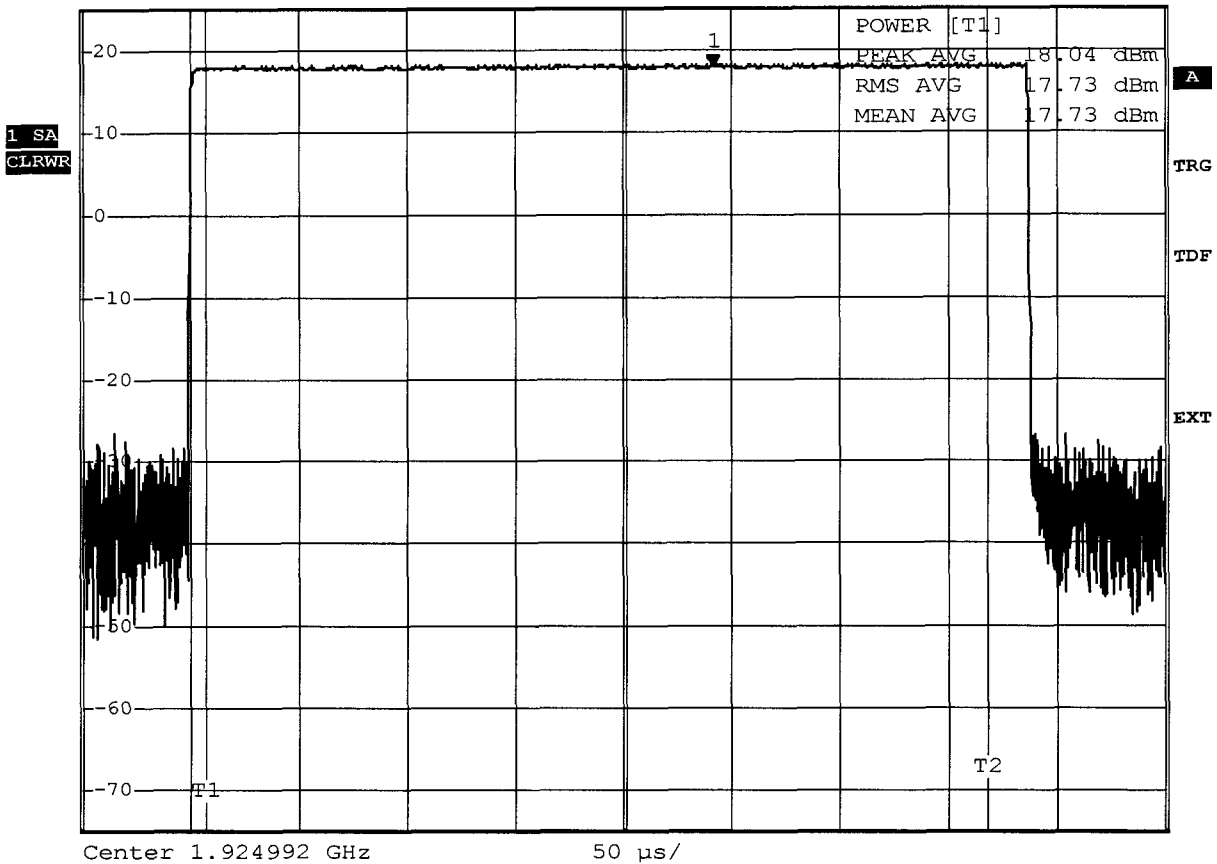
Testprocedure ANSI 63.17-1998 6.1.2 UPCS

EUT Sigma / Connection Central
 Model 5923-05500
 Applicant LAKE Communications Ltd.
 Temperat. / Voltage 23°C / Umax
 Test Site / Operator ETS Reichenwalde
 Test Specification 6.1.2 Peak transmit power

Measured Bandwidth 1.86MHz
 Max. Permitted Power 21,34 dBm
 Measured Power 18,05 dBm
 Test result Verdict = PASS



Peak transmit power RBW 3 MHz Marker 1 [T1] 17.66 dBm
 *VBW 10 MHz
 Ref 25 dBm *Att 40 dB SWT 500 µs 242.000000 µs



Comment: Ansi C63.17-1998 6.1.2
 Date: 17.SEP.2005 14:32:45

Measurement diagram



FCC Part 15.319(c) Peak Transmit Power limit

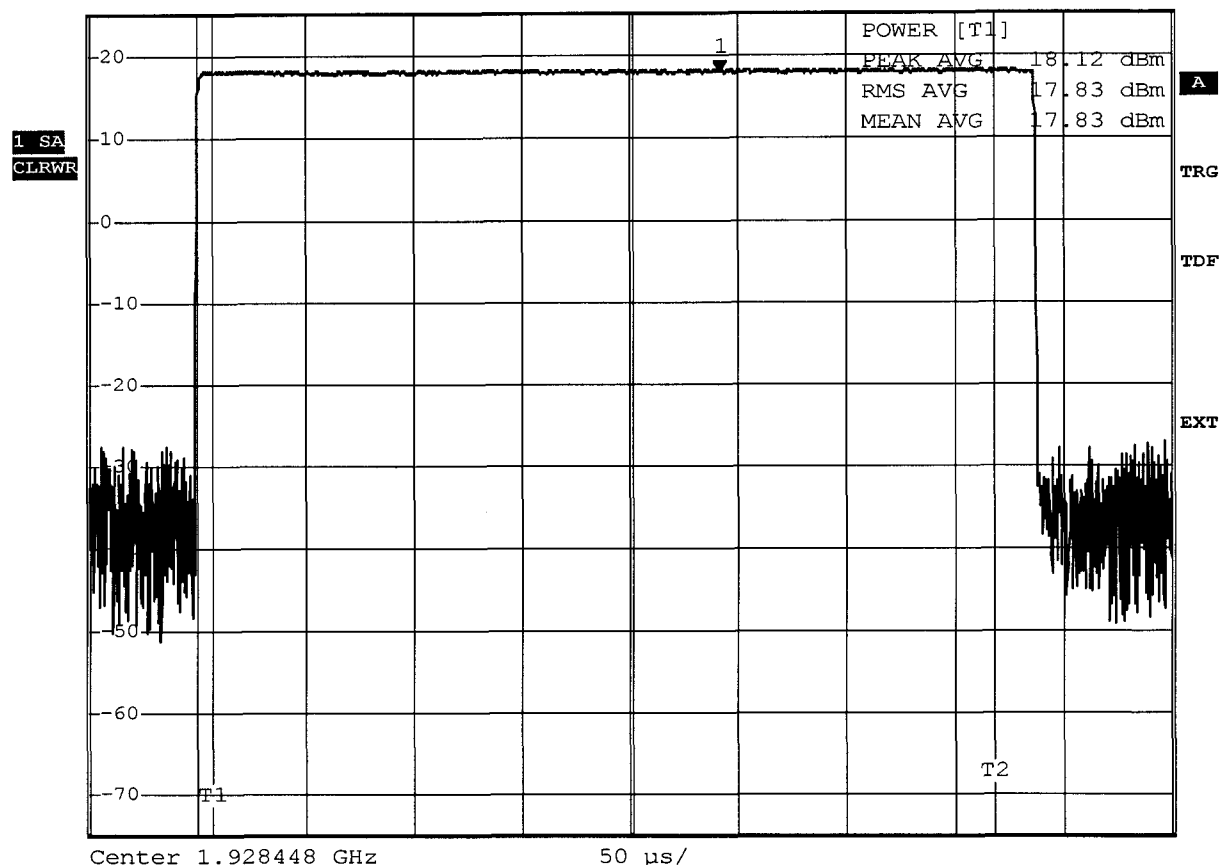
Testprocedure ANSI 63.17-1998 6.1.2 UPCS

EUT Sigma / Connection Central
 Model 5923-05500
 Applicant LAKE Communications Ltd.
 Temperat. / Voltage 23°C / Umax
 Test Site / Operator ETS Reichenwalde
 Test Specification 6.1.2 Peak transmit power

Measured Bandwidth 1.86MHz
 Max. Permitted Power 21,34 dBm
 Measured Power 18,12 dBm
 Test result Verdict = PASS



Peak transmit power RBW 3 MHz Marker 1 [T1] 17.78 dBm
 *VBW 10 MHz 242.000000 µs
 Ref 25 dBm *Att 40 dB SWT 500 µs



Comment: Ansi C63.17-1998 6.1.2
 Date: 17.SEP.2005 14:18:39

Measurement diagram

FCC Part 15.319(c) Peak Transmit Power limit

Testprocedure ANSI 63.17-1998 6.1.2

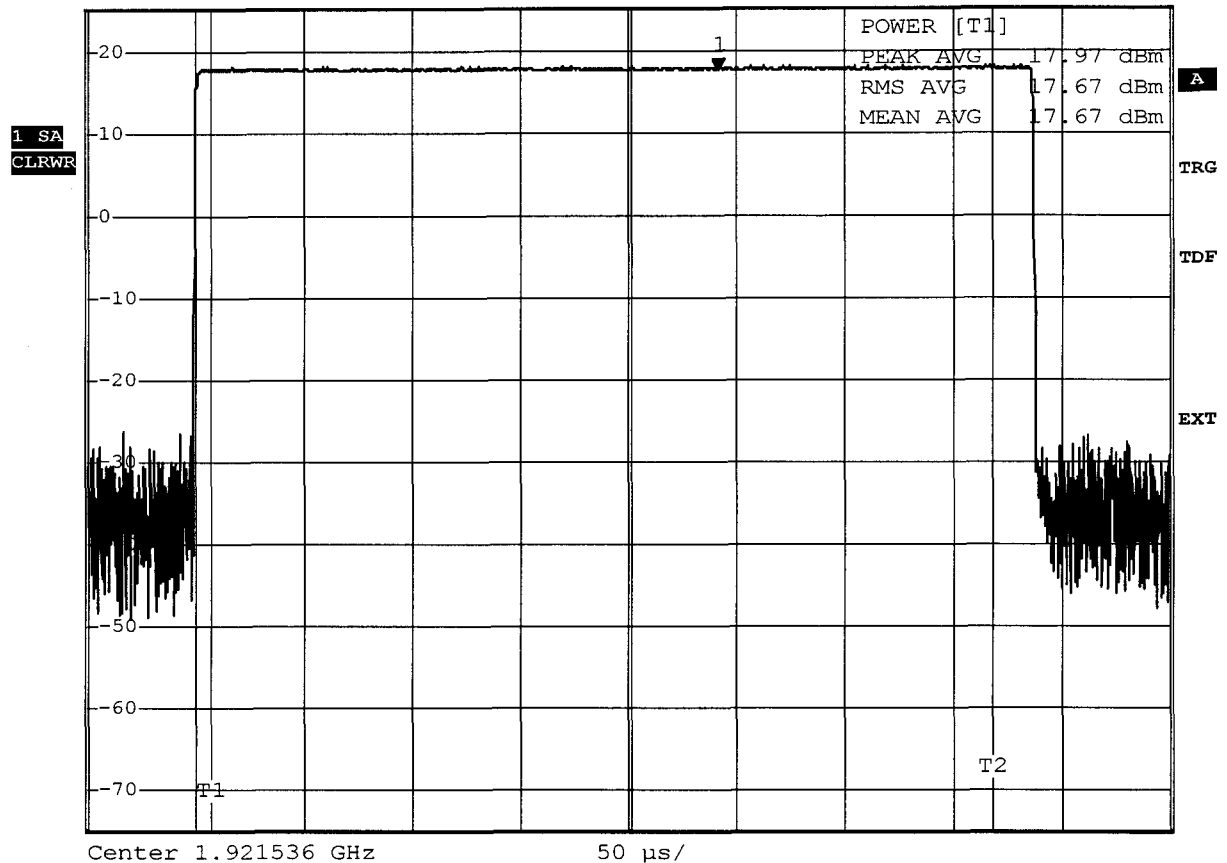
UPCS

EUT Sigma / Connection Central
 Model 5923-05500
 Applicant LAKE Communications Ltd.
 Temperat. / Voltage 23°C / Umin
 Test Site / Operator ETS Reichenwalde
 Test Specification 6.1.2 Peak transmit power

Measured Bandwidth 1.86MHz
 Max. Permitted Power 21,34 dBm
 Measured Power 17,97 dBm
 Test result Verdict = PASS



Peak transmit power RBW 3 MHz Marker 1 [T1] 17.63 dBm
 *VBW 10 MHz
 Ref 25 dBm *Att 40 dB SWT 500 µs 242.000000 µs



Comment: Ansi C63.17-1998 6.1.2
 Date: 17.SEP.2005 14:38:58

Measurement diagram

FCC Part 15.319(c) Peak Transmit Power limit

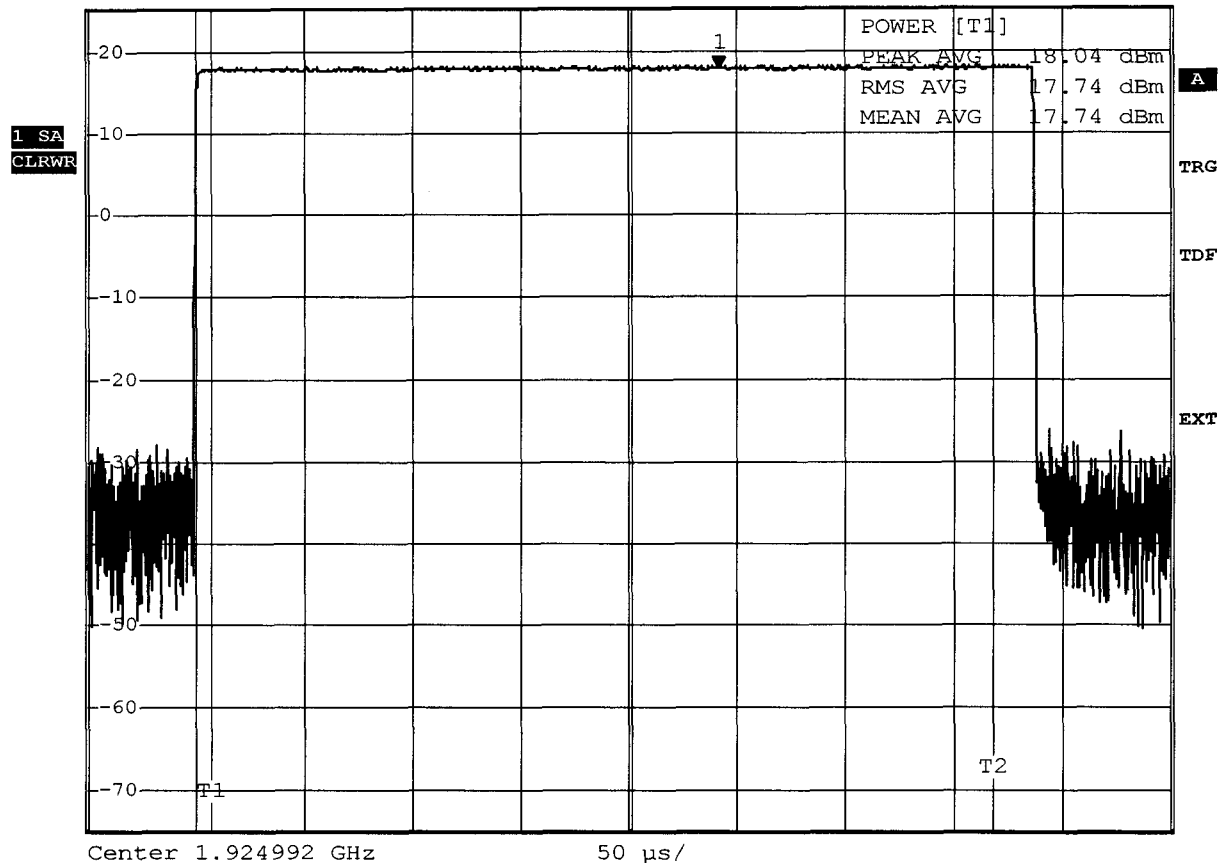
Testprocedure ANSI 63.17-1998 6.1.2 UPCS

EUT Sigma / Connection Central
 Model 5923-05500
 Applicant LAKE Communications Ltd.
 Temperat. / Voltage 23°C / Umin
 Test Site / Operator ETS Reichenwalde
 Test Specification 6.1.2 Peak transmit power

Measured Bandwidth 1.86MHz
 Max. Permitted Power 21,34 dBm
 Measured Power 17,99 dBm
 Test result Verdict = PASS



Peak transmit power RBW 3 MHz Marker 1 [T1] 17.72 dBm
 *VBW 10 MHz
 Ref 25 dBm *Att 40 dB SWT 500 µs 242.000000 µs



Comment: Ansi C63.17-1998 6.1.2
 Date: 17.SEP.2005 14:29:16

Measurement diagram

FCC Part 15.319(c) Peak Transmit Power limit

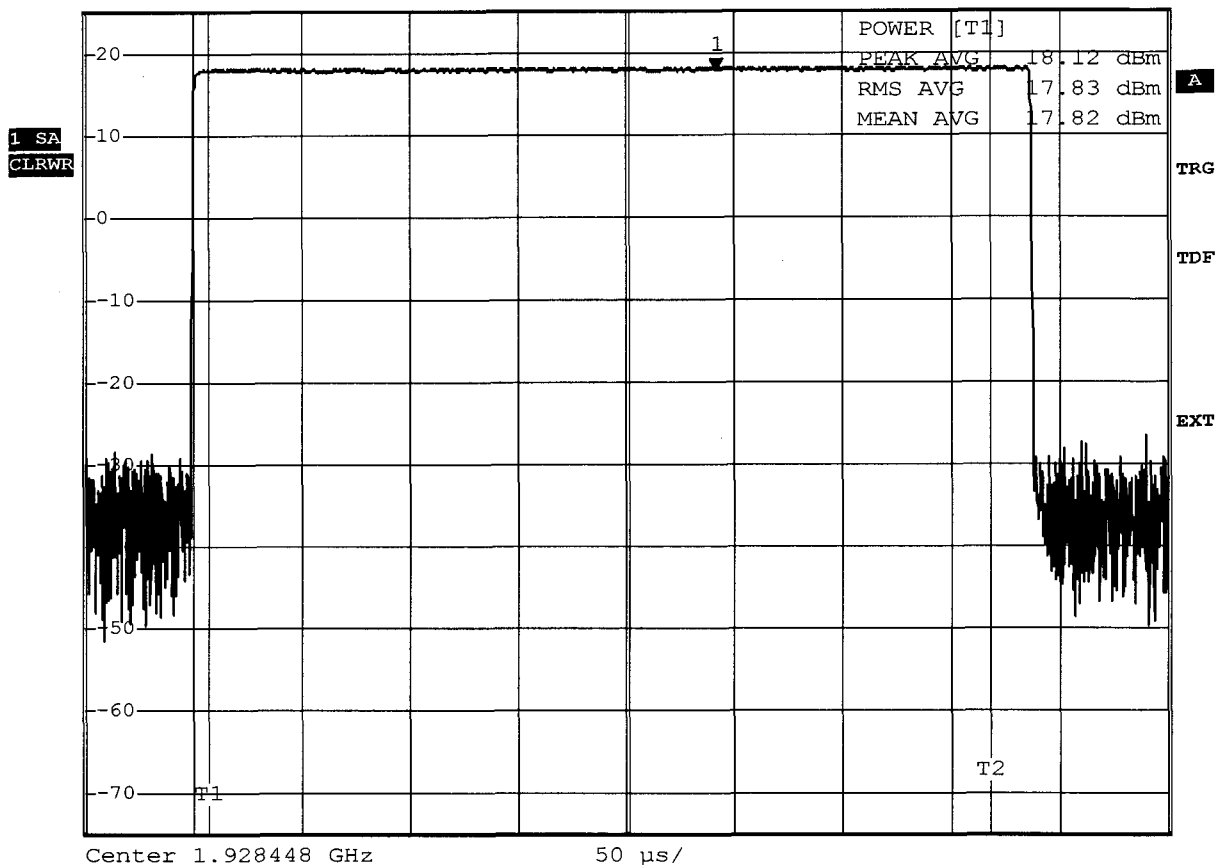
Testprocedure ANSI 63.17-1998 6.1.2 UPCS

EUT Sigma / Connection Central
 Model 5923-05500
 Applicant LAKE Communications Ltd.
 Temperat. / Voltage 23°C / Umin
 Test Site / Operator ETS Reichenwalde
 Test Specification 6.1.2 Peak transmit power

Measured Bandwidth 1.86MHz
 Max. Permitted Power 21,34 dBm
 Measured Power 18,11 dBm
 Test result Verdict = PASS



Peak transmit power RBW 3 MHz Marker 1 [T1] 17.87 dBm
 *Att 40 dB *VBW 10 MHz 242.000000 µs
 Ref 25 dBm SWT 500 µs



Comment: Ansi C63.17-1998 6.1.2
 Date: 17.SEP.2005 14:33:50

Measurement diagram



Appendix H

Power spectral density

FCC Part 15.319(d) Power spectral density

Testprocedure ANSI 63.17-1998 6.1.5 UPCS

EUT	Sigma / Connection Central
Model	5923-05500
Applicant	LAKE Communications Ltd.
Temperature	23°C
Test Site / Operator	ETS Reichenwalde
Test Specification	6.1.5 Power spectral density

Measured Maximum	2.335 dBm
Value in mW	1.712mW
Maximal permitted	limit=3mW
Test result	Verdict = PASS



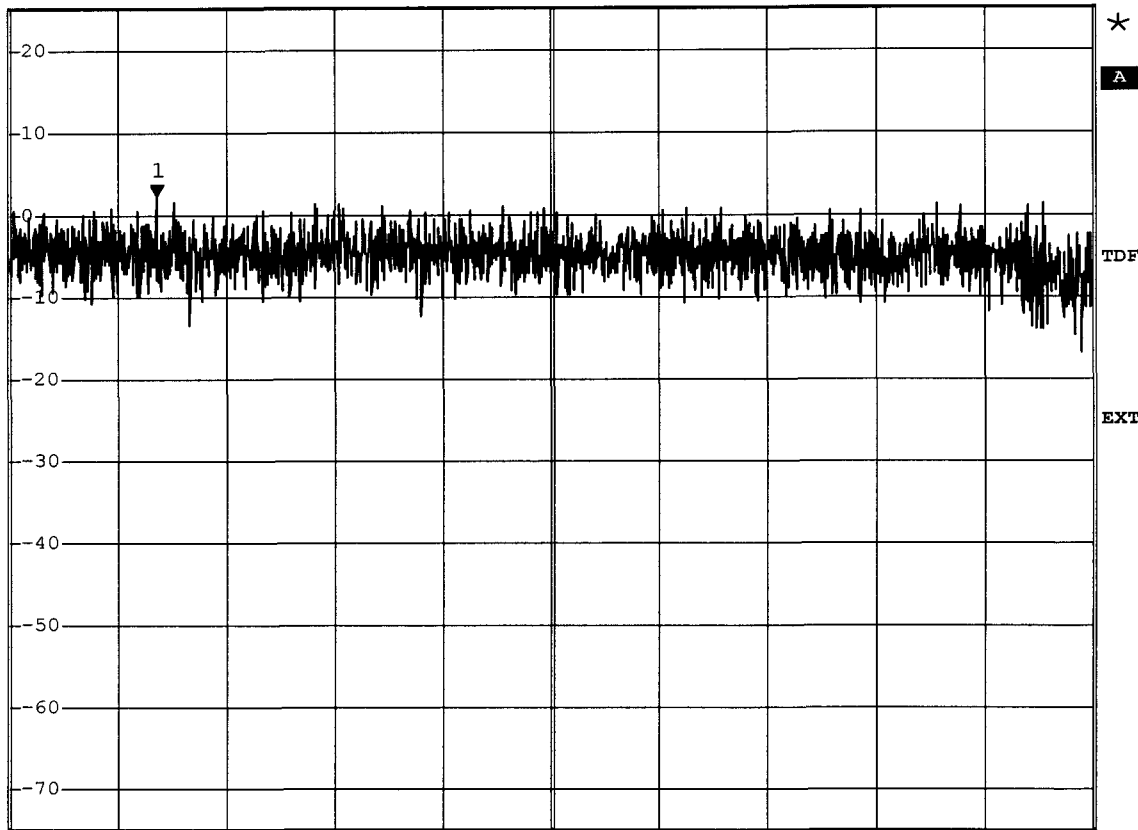
Power Spectral Densit

*RBW 3 kHz Marker 1 [T1]
 *VBW 3 kHz 2.34 dBm
 *SWT 23 s 1.921713705 GHz

Ref 25 dBm

*Att 40 dB

1 PK
MAXH



Center 1.92171735 GHz

1 kHz/

Span 10 kHz

Comment: Ansi C63.17-1998 6.1.5
 Date: 17.SEP.2005 14:42:55

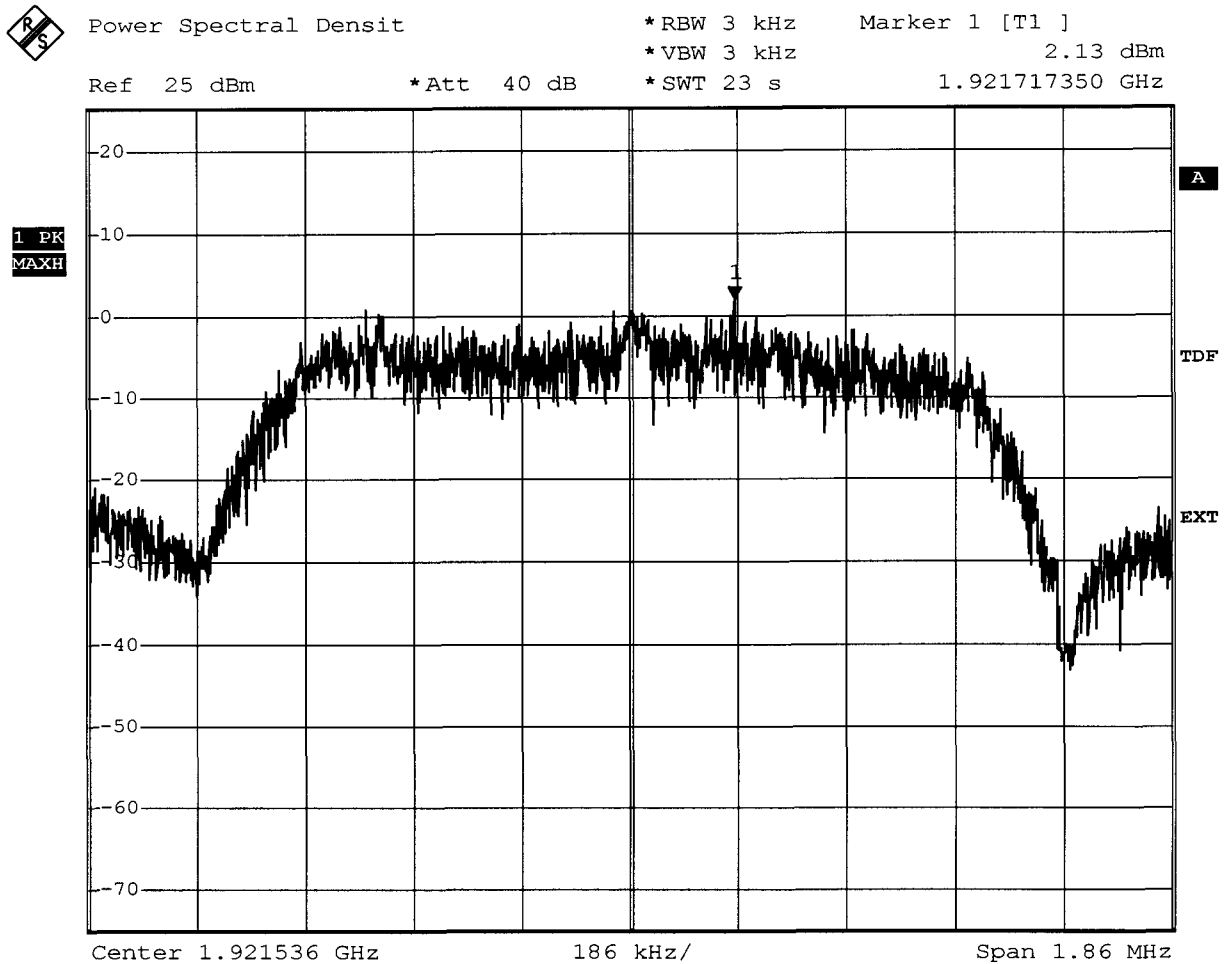
Measurement diagram

FCC Part 15.319(d) Power spectral density

Testprocedure ANSI 63.17-1998 6.1.5 UPCS

EUT	Sigma / Connection Central
Model	5923-05500
Applicant	LAKE Communications Ltd.
Temperature	23°C
Test Site / Operator	ETS Reichenwalde
Test Specification	6.1.5 Power spectral density

Test step 1 initial condition



Comment: Ansi C63.17-1998 6.1.5
Date: 17.SEP.2005 14:42:06

Measurement diagram



FCC Part 15.319(d) Power spectral density

Testprocedure ANSI 63.17-1998 6.1.5 UPCS

EUT	Sigma / Connection Central
Model	5923-05500
Applicant	LAKE Communications Ltd.
Temperature	23°C
Test Site / Operator	ETS Reichenwalde
Test Specification	6.1.5 Power spectral density

Measured Maximum	2.626 dBm
Value in mW	1.831mW
Maximal permitted	limit=3mW
Test result	Verdict = PASS



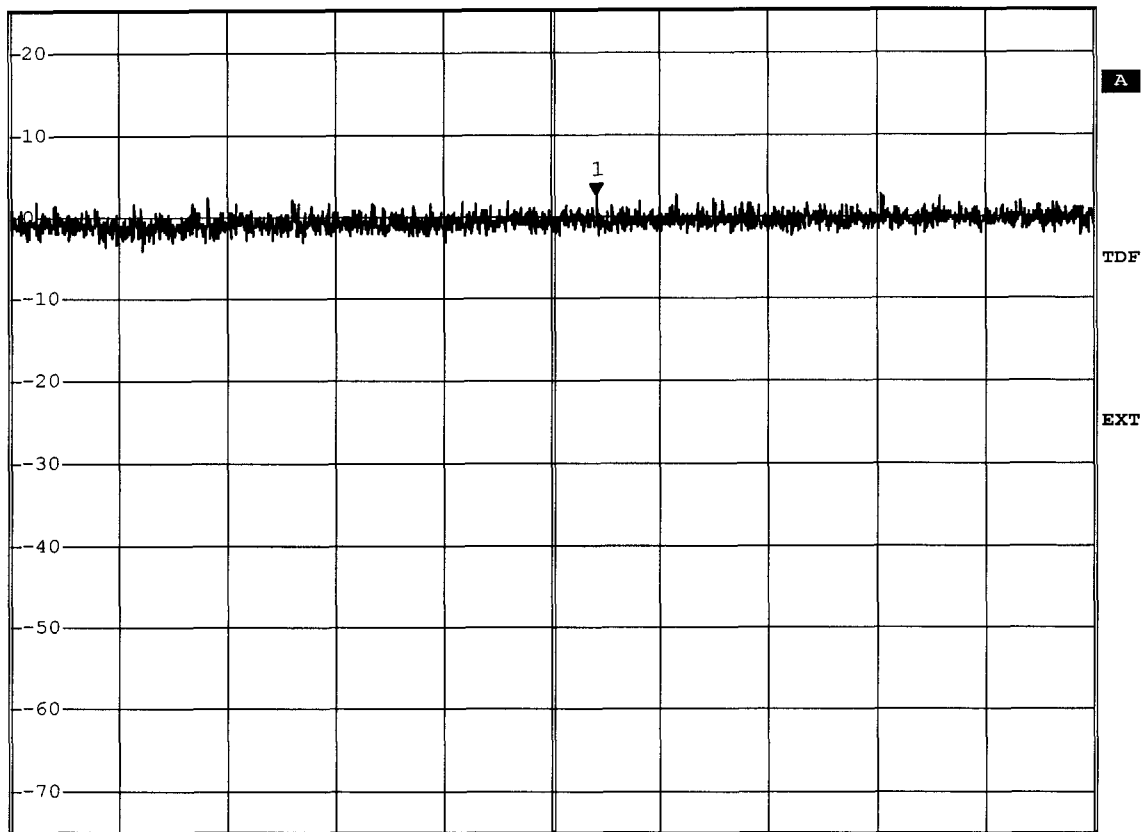
Power Spectral Densit

*RBW 3 kHz Marker 1 [T1]
 *VBW 3 kHz 2.63 dBm
 *SWT 23 s 1.924992425 GHz

Ref 25 dBm

*Att 40 dB

1 PK
MAXH



Center 1.924992 GHz

1 kHz/

Span 10 kHz

Comment: Ansi C63.17-1998 6.1.5
 Date: 17.SEP.2005 14:48:40

Measurement diagram



FCC Part 15.319(d) Power spectral density

Testprocedure ANSI 63.17-1998 6.1.5 UPCS

EUT	Sigma / Connection Central
Model	5923-05500
Applicant	LAKE Communications Ltd.
Temperature	23°C
Test Site / Operator	ETS Reichenwalde
Test Specification	6.1.5 Power spectral density

Test step 1 initial condition



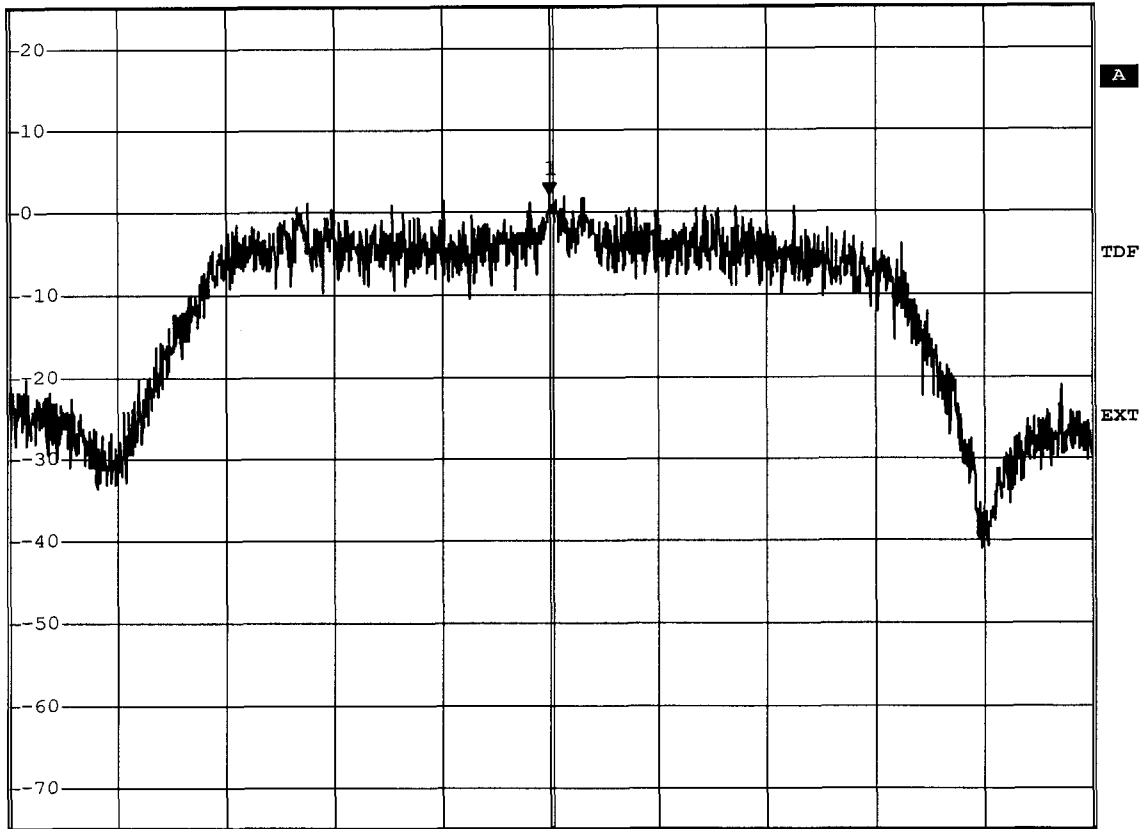
Power Spectral Densit

*RBW 3 kHz Marker 1 [T1] 1.94 dBm
 *VBW 3 kHz
 *SWT 23 s 1.924992000 GHz

Ref 25 dBm

*Att 40 dB

1 PK
MAXH



Center 1.924992 GHz

186 kHz/

Span 1.86 MHz

Comment: Ansi C63.17-1998 6.1.5
 Date: 17.SEP.2005 14:47:49

Measurement diagram



FCC Part 15.319(d) Power spectral density

Testprocedure ANSI 63.17-1998 6.1.5 UPCS

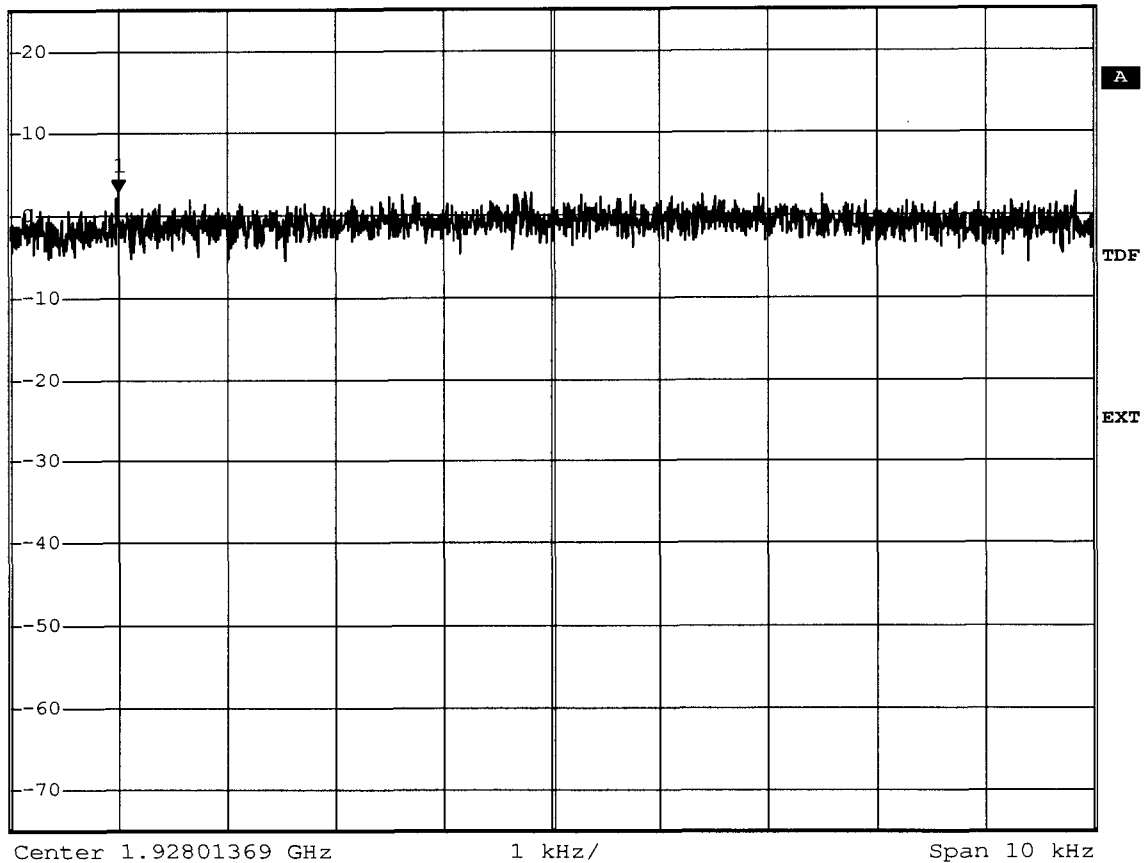
EUT	Sigma / Connection Central
Model	5923-05500
Applicant	LAKE Communications Ltd.
Temperature	23°C
Test Site / Operator	ETS Reichenwalde
Test Specification	6.1.5 Power spectral density

Measured Maximum	2.717 dBm
Value in mW	1.869mW
Maximal permitted	limit=3mW
Test result	Verdict = PASS



Power Spectral Densit *RBW 3 kHz Marker 1 [T1]
 Ref 25 dBm *Att 40 dB *VBW 3 kHz 2.72 dBm
 *SWT 23 s 1.928009695 GHz

1 PK
MAXH



Comment: Ansi C63.17-1998 6.1.5
 Date: 17.SEP.2005 14:52:04

Measurement diagram

FCC Part 15.319(d) Power spectral density

Testprocedure ANSI 63.17-1998 6.1.5 UPCS

EUT	Sigma / Connection Central
Model	5923-05500
Applicant	LAKE Communications Ltd.
Temperature	23°C
Test Site / Operator	ETS Reichenwalde
Test Specification	6.1.5 Power spectral density

Test step 1 initial condition



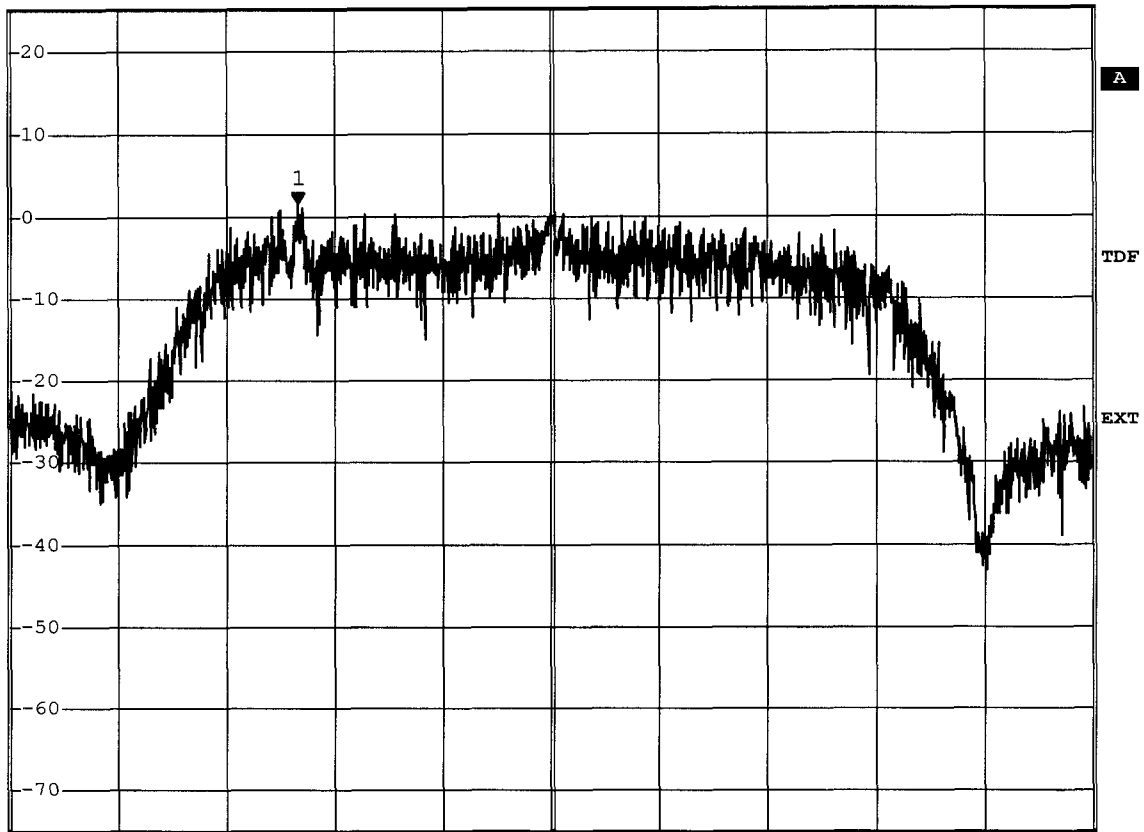
Power Spectral Densit

*RBW 3 kHz Marker 1 [T1]
 *VBW 3 kHz 1.47 dBm
 *SWT 23 s 1.928013690 GHz

Ref 25 dBm

*Att 40 dB

1 PK
MAXH



Center 1.928448 GHz

186 kHz/

Span 1.86 MHz

Comment: Ansi C63.17-1998 6.1.5
 Date: 17.SEP.2005 14:50:33

Measurement diagram



Appendix I

Directional gain of the antenna



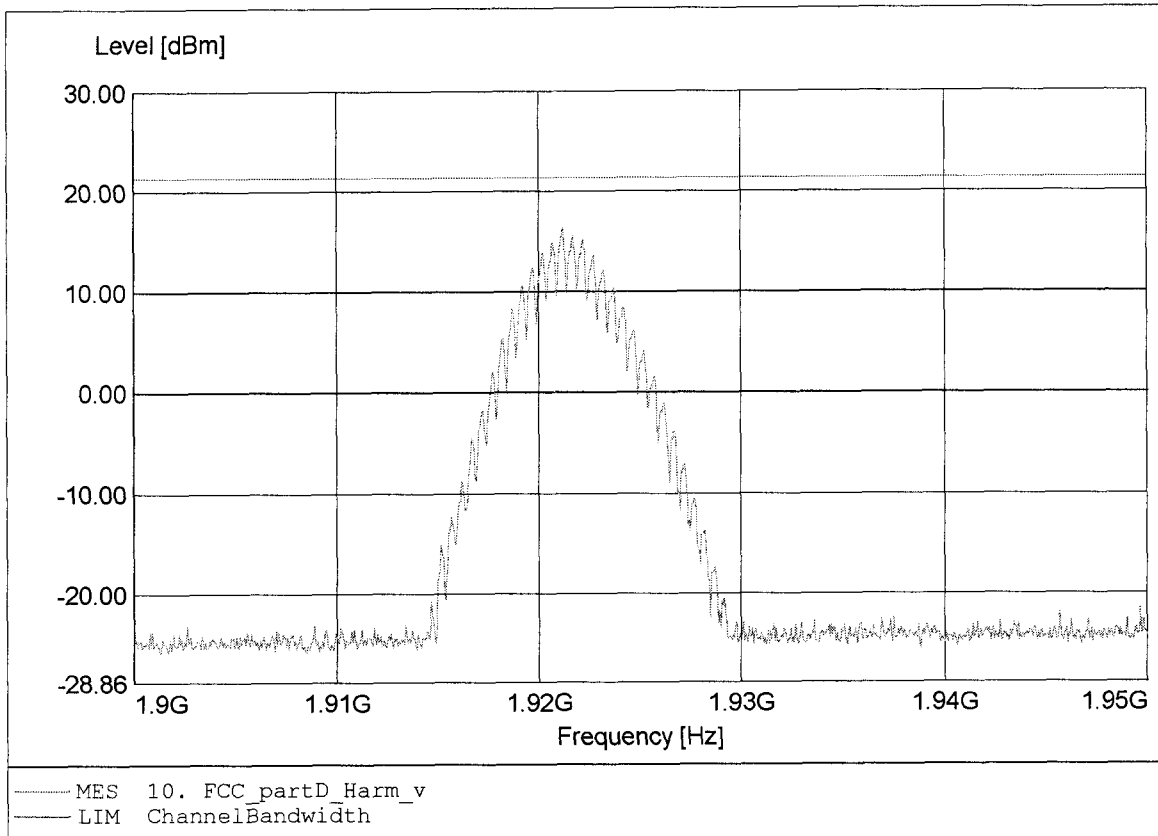
Appendix J

Radio frequency radiation exposure

Peak Transmit Power, Radiated

FCC RULES PART 15, SUBPART D

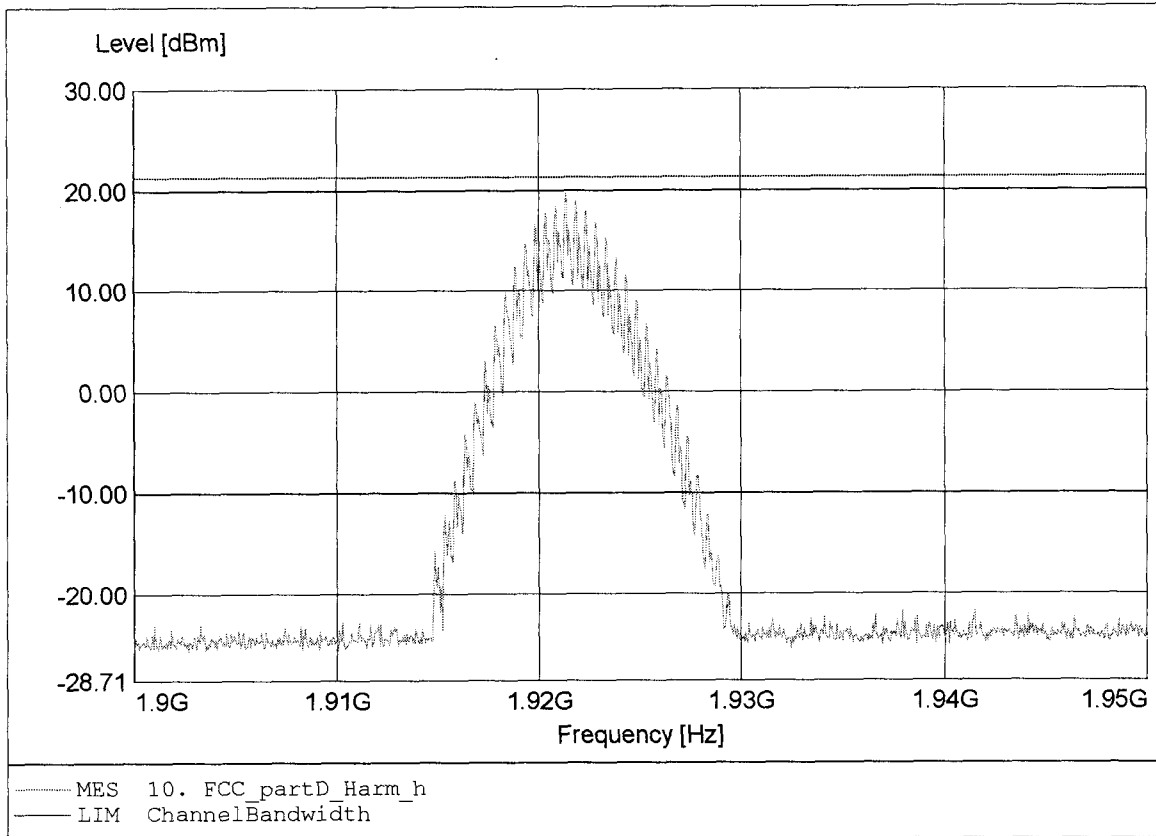
Type approval holder: LAKE Communications Ltd
EUT / Model: Sigma Connection Central / 59230-5500
antenna / Ch: 1 / 4
Test Site / Operator: ETS / Mr. Cersovsky
Temperature/ Voltage: 23°C / 110 V~ (AC/DC adapter)
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HL 025,
Comment 2: Freq:1.921GHz Pmax:16.30dBm RBW: 5 MHz



Peak Transmit Power, Radiated

FCC RULES PART 15, SUBPART D

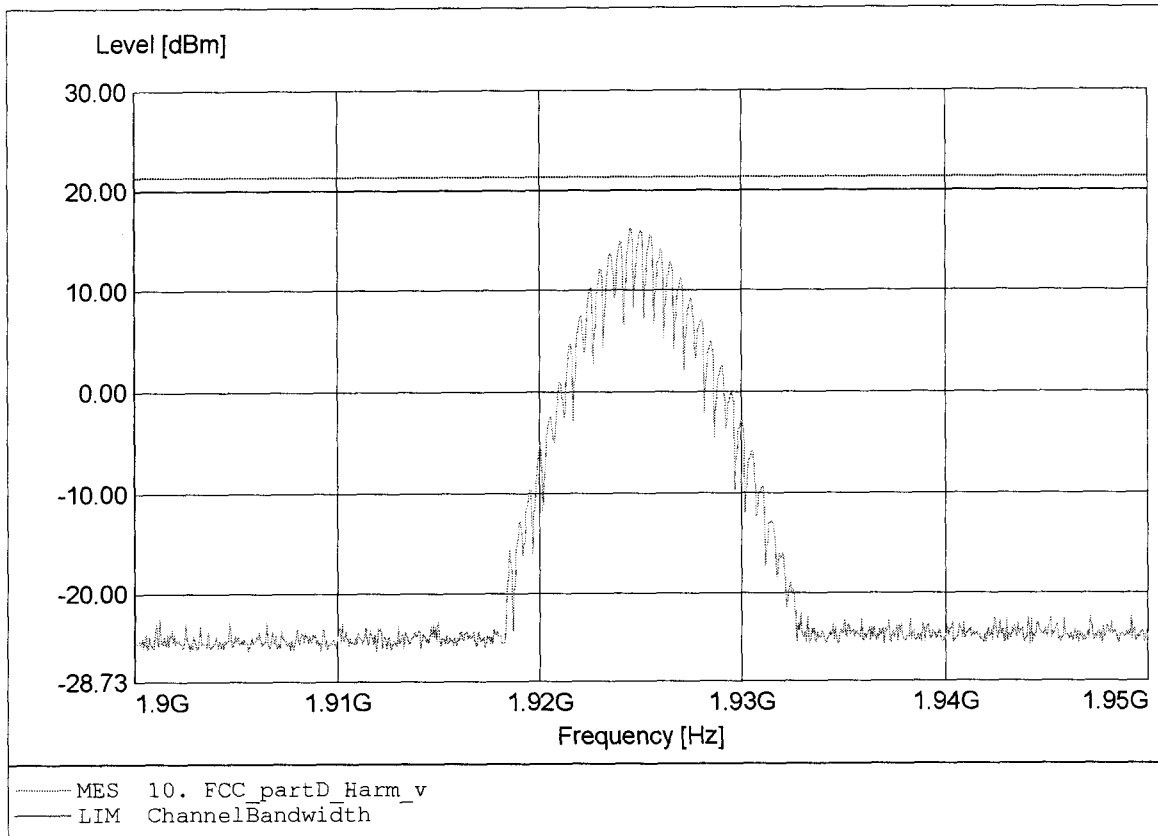
Type approval holder: LAKE Communications Ltd
EUT / Model: Sigma Connection Central / 59230-5500
antenna / Ch: 1 / 4
Test Site / Operator: ETS / Mr. Cersovsky
Temperature/ Voltage: 23°C / 110 V~ (AC/DC adapter)
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HL 025,
Comment 2: Freq:1.921GHz Pmax:19.70dBm RBW: 5 MHz



Peak Transmit Power, Radiated

FCC RULES PART 15, SUBPART D

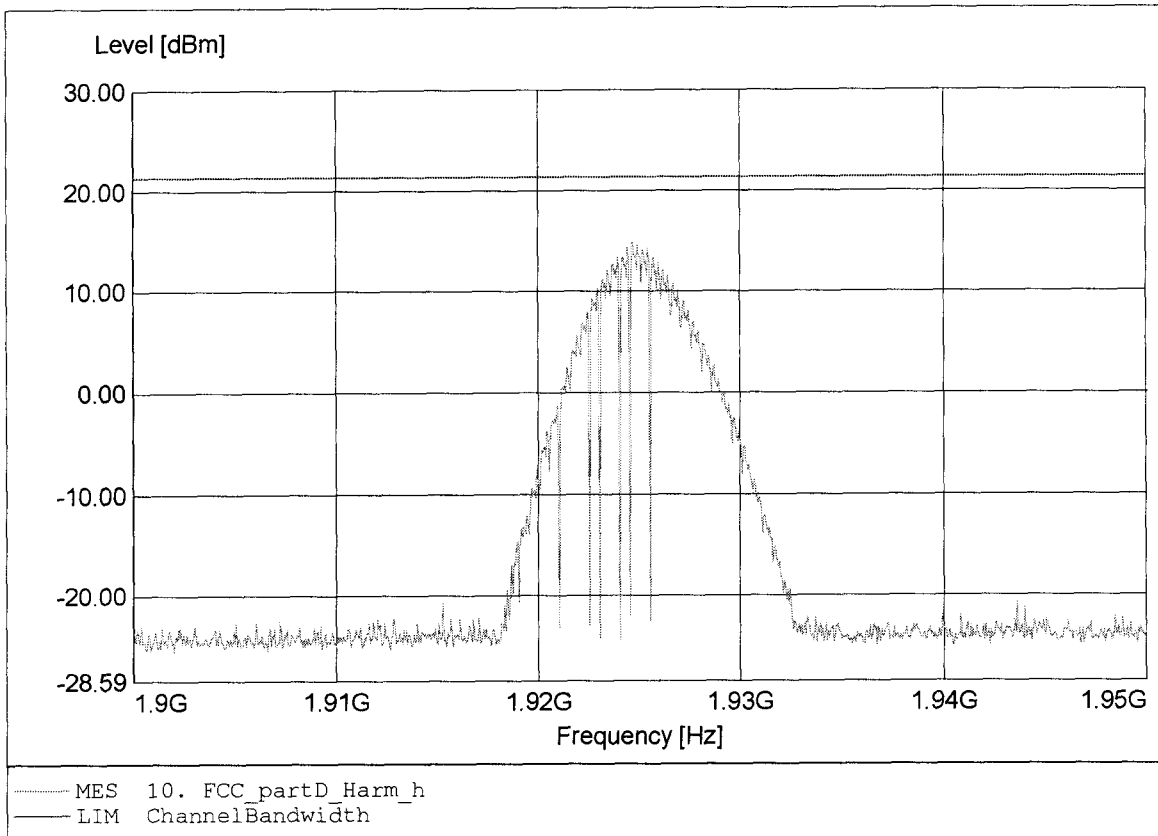
Type approval holder: LAKE Communications Ltd
EUT / Model: Sigma Connection Central / 59230-5500
antenna / Ch: 1 / 2
Test Site / Operator: ETS / Mr. Cersovsky
Temperature/ Voltage: 23°C / 110 V~ (AC/DC adapter)
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HL 025,
Comment 2: Freq:1.925GHz Pmax:16.27dBm RBW: 5 MHz



Peak Transmit Power, Radiated

FCC RULES PART 15, SUBPART D

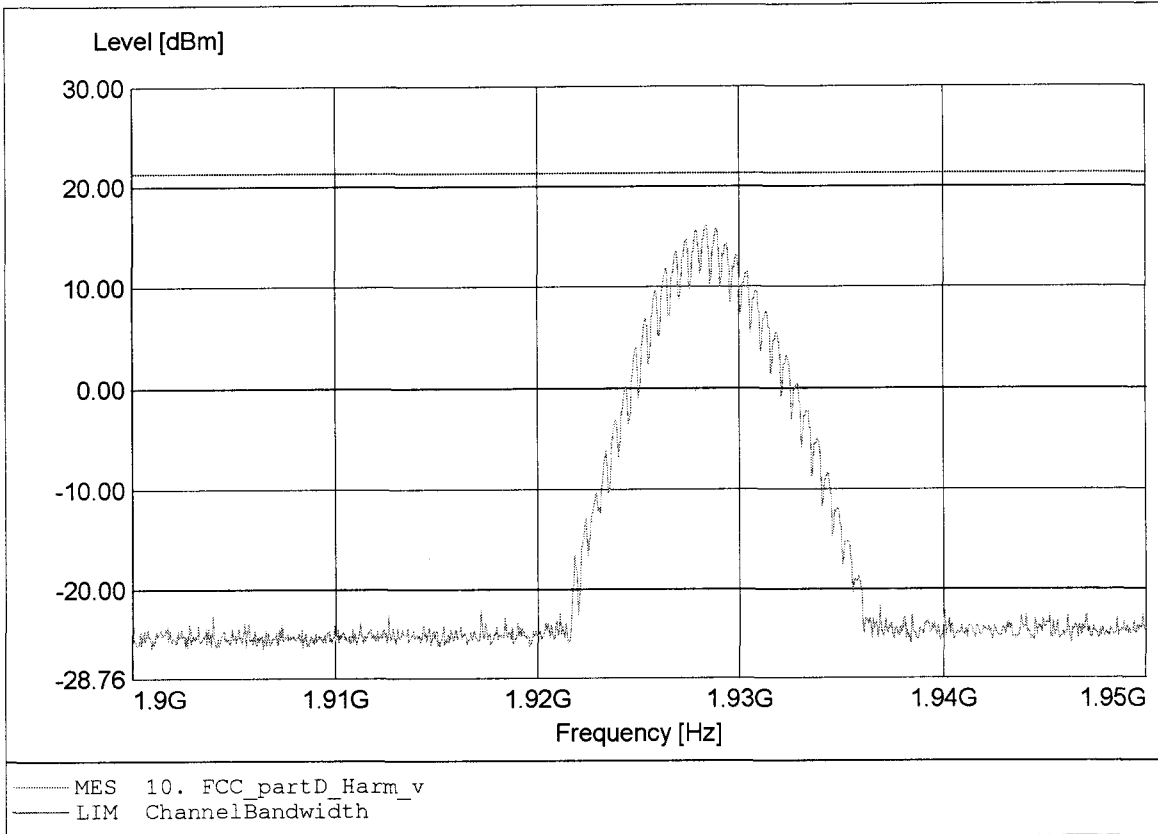
Type approval holder: LAKE Communications Ltd
EUT / Model: Sigma Connection Central / 59230-5500
antenna / Ch: 1 / 2
Test Site / Operator: ETS / Mr. Cersovsky
Temperature/ Voltage: 23°C / 110 V~ (AC/DC adapter)
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HL 025,
Comment 2: Freq:1.925GHz Pmax:14.85dBm RBW: 5 MHz



Peak Transmit Power, Radiated

FCC RULES PART 15, SUBPART D

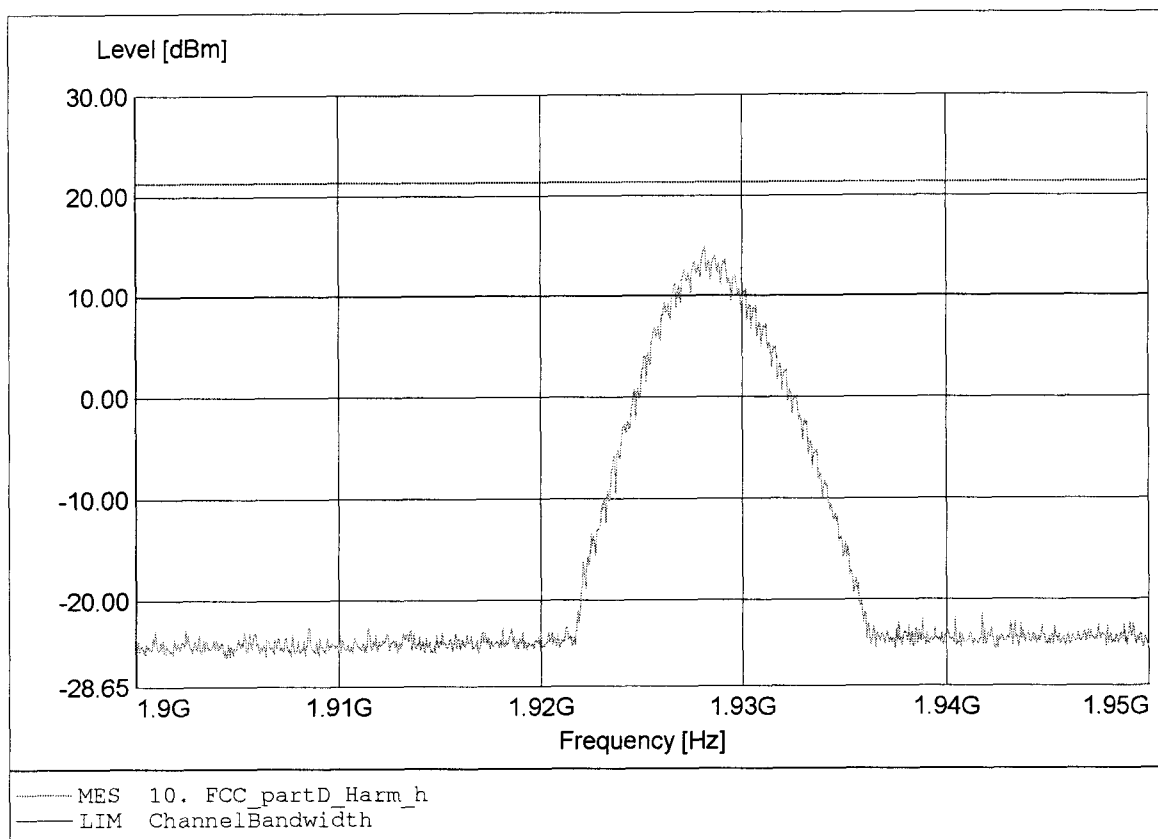
Type approval holder: LAKE Communications Ltd
EUT / Model: Sigma Connection Central / 59230-5500
antenna / Ch: 1 / 0
Test Site / Operator: ETS / Mr. Cersovsky
Temperature/ Voltage: 23°C / 110 V~ (AC/DC adapter)
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HL 025,
Comment 2: Freq:1.928GHz Pmax:16.17dBm RBW: 5 MHz



Peak Transmit Power, Radiated

FCC RULES PART 15, SUBPART D

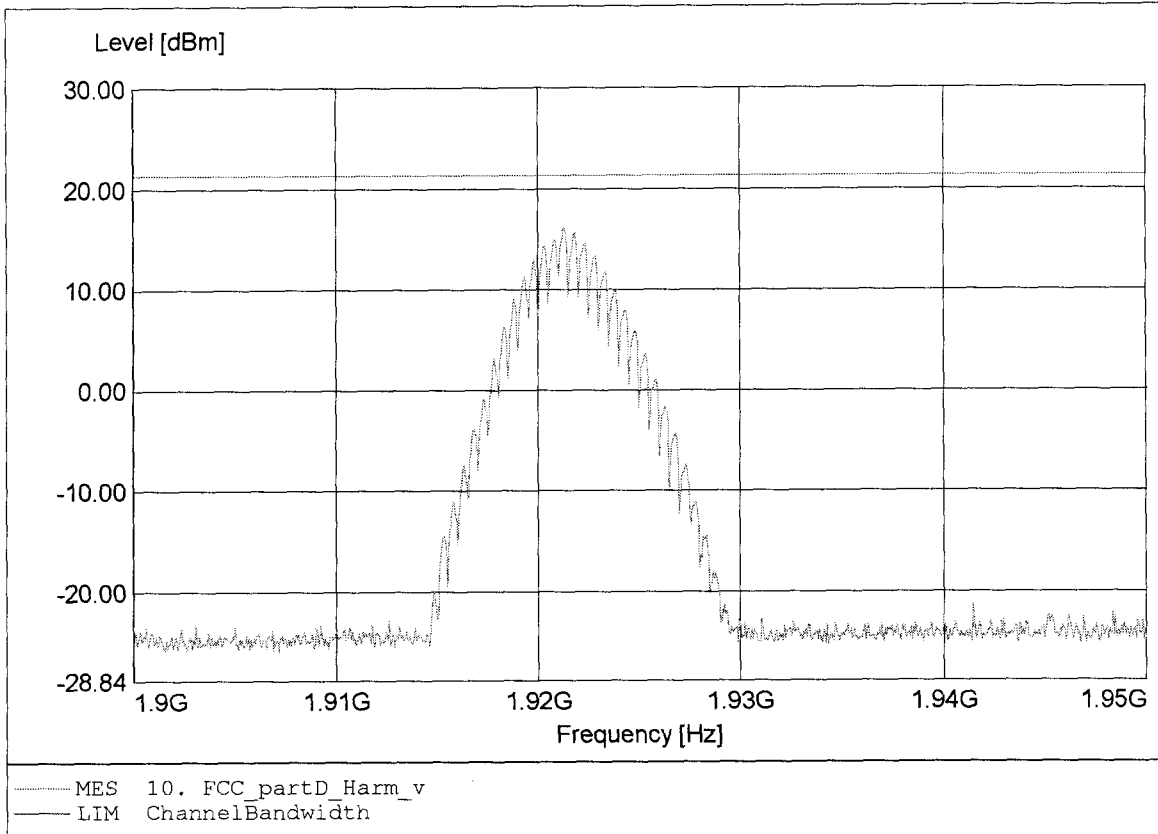
Type approval holder: LAKE Communications Ltd
EUT / Model: Sigma Connection Central / 59230-5500
antenna / Ch: 1 / 0
Test Site / Operator: ETS / Mr. Cerovsky
Temperature/ Voltage: 23°C / 110 V~ (AC/DC adapter)
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HL 025,
Comment 2: Freq:1.928GHz Pmax:14.83dBm RBW: 5 MHz



Peak Transmit Power, Radiated

FCC RULES PART 15, SUBPART D

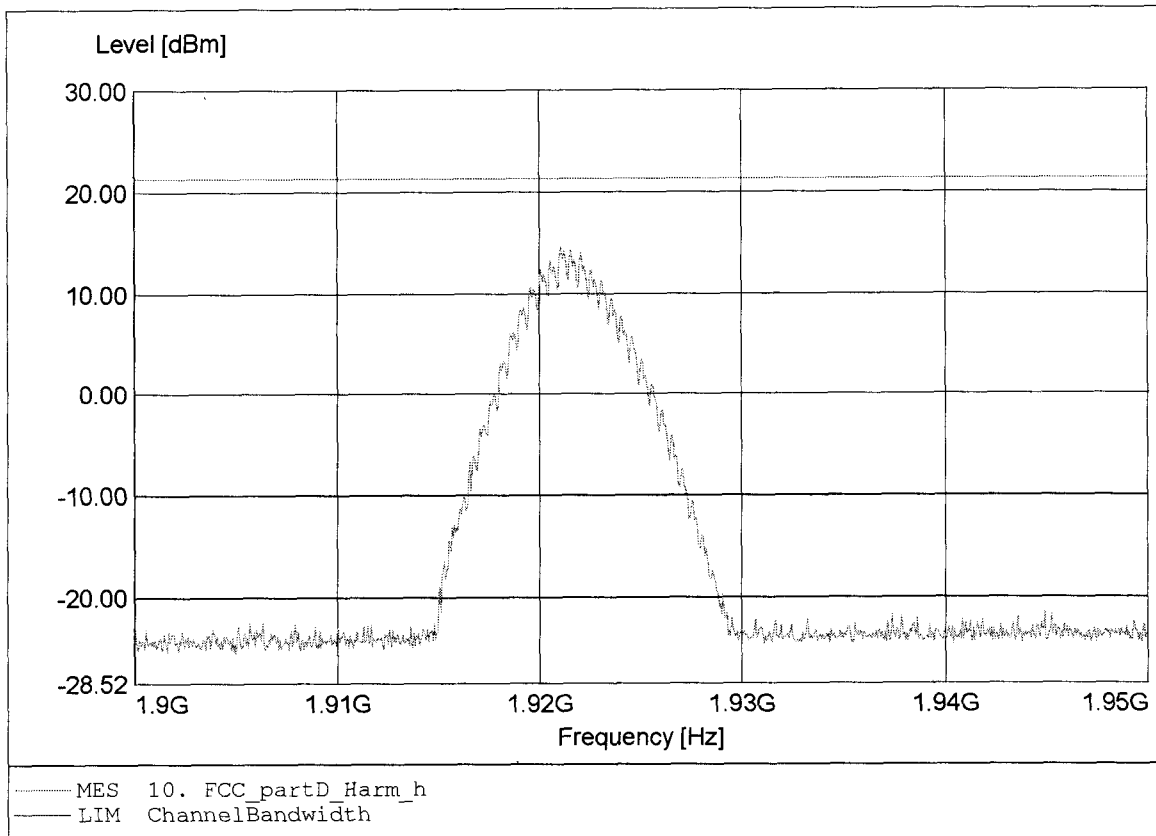
Type approval holder: LAKE Communications Ltd
EUT / Model: Sigma Connection Central / 59230-5500
antenna / Ch: 2 / 4
Test Site / Operator: ETS / Mr. Cerovsky
Temperature/ Voltage: 23°C / 110 V~ (AC/DC adapter)
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HL 025,
Comment 2: Freq:1.921GHz Pmax:16.20dBm RBW: 5 MHz



Peak Transmit Power, Radiated

FCC RULES PART 15, SUBPART D

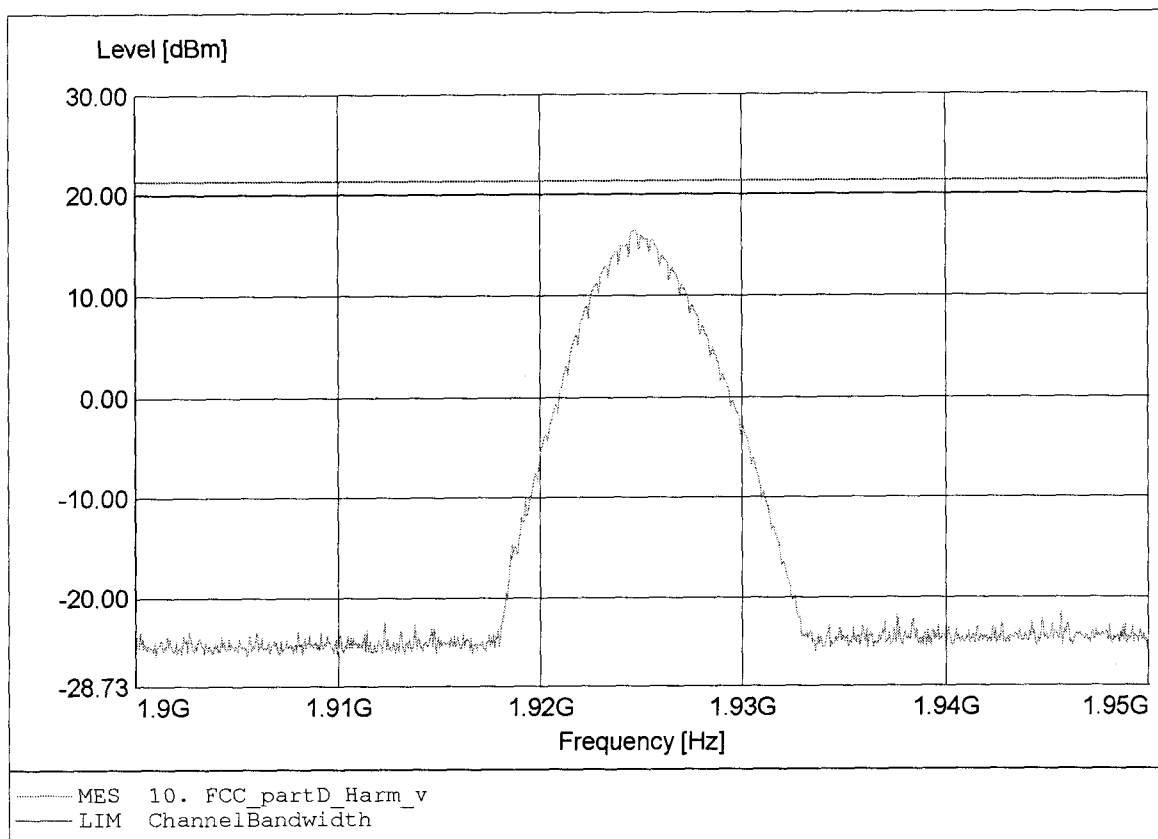
Type approval holder: LAKE Communications Ltd
EUT / Model: Sigma Connection Central / 59230-5500
antenna / Ch: 2 / 4
Test Site / Operator: ETS / Mr. Cersovsky
Temperature/ Voltage: 23°C / 110 V~ (AC/DC adapter)
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HL 025,
Comment 2: Freq:1.921GHz Pmax:14.61dBm RBW: 5 MHz



Peak Transmit Power, Radiated

FCC RULES PART 15, SUBPART D

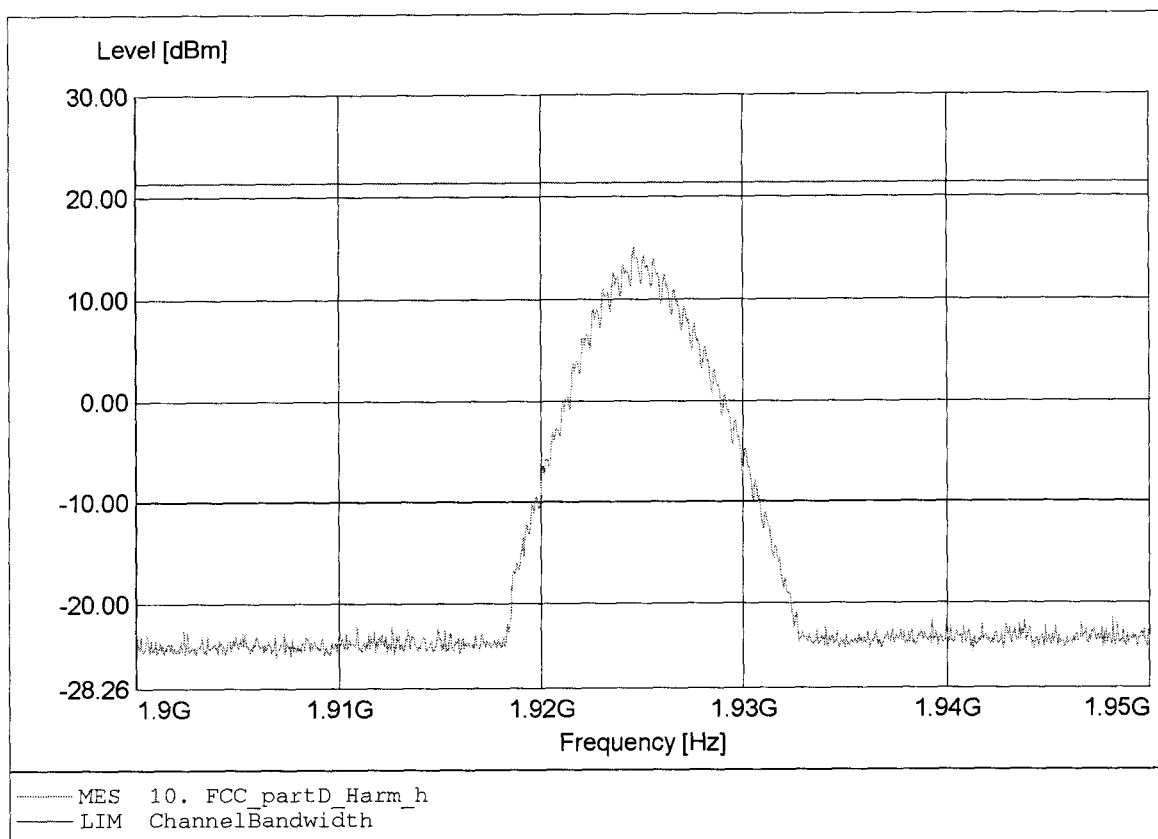
Type approval holder: LAKE Communications Ltd
EUT / Model: Sigma Connection Central / 59230-5500
antenna / Ch: 2 / 2
Test Site / Operator: ETS / Mr. Cersovsky
Temperature/ Voltage: 23°C / 110 V~ (AC/DC adapter)
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HL 025,
Comment 2: Freq:1.925GHz Pmax:16.42dBm RBW: 5 MHz



Peak Transmit Power, Radiated

FCC RULES PART 15, SUBPART D

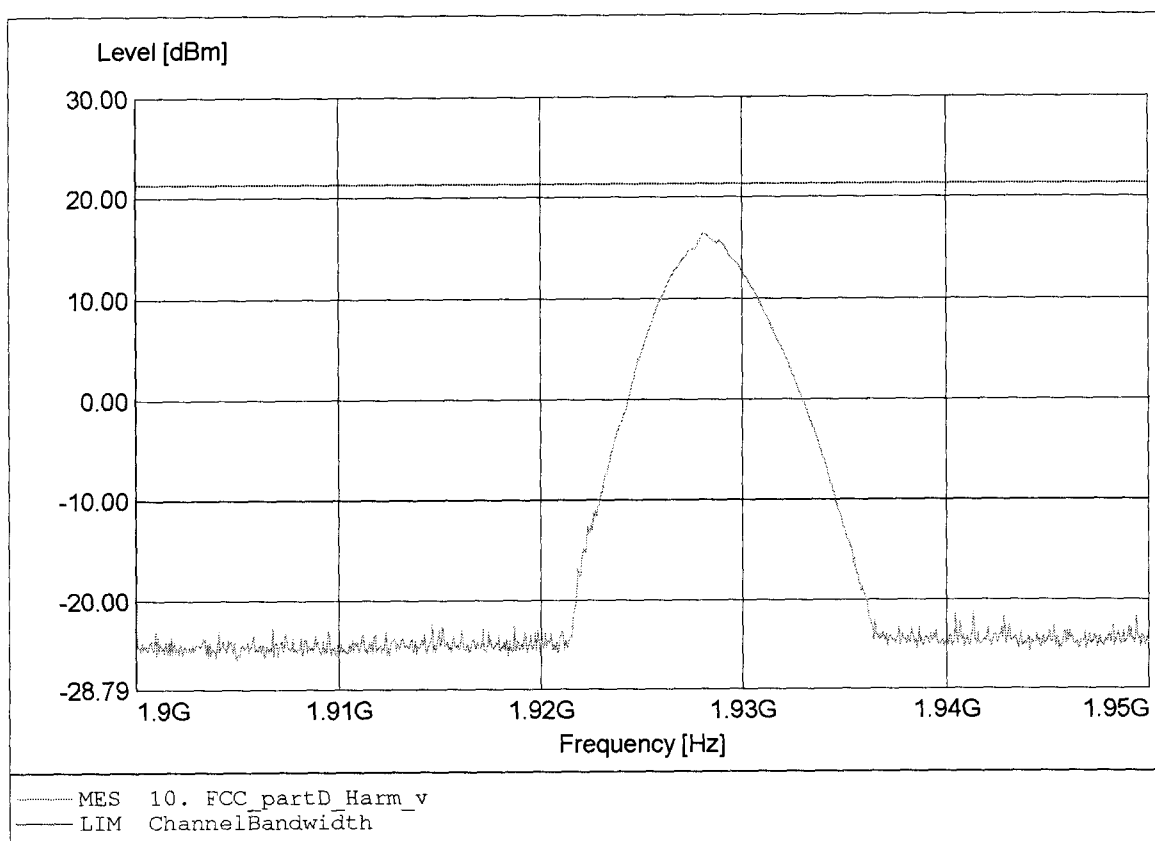
Type approval holder: LAKE Communications Ltd
EUT / Model: Sigma Connection Central / 59230-5500
antenna / Ch: 2 / 2
Test Site / Operator: ETS / Mr. Cersovsky
Temperature/ Voltage: 23°C / 110 V~ (AC/DC adapter)
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HL 025,
Comment 2: Freq:1.925GHz Pmax:14.98dBm RBW: 5 MHz



Peak Transmit Power, Radiated

FCC RULES PART 15, SUBPART D

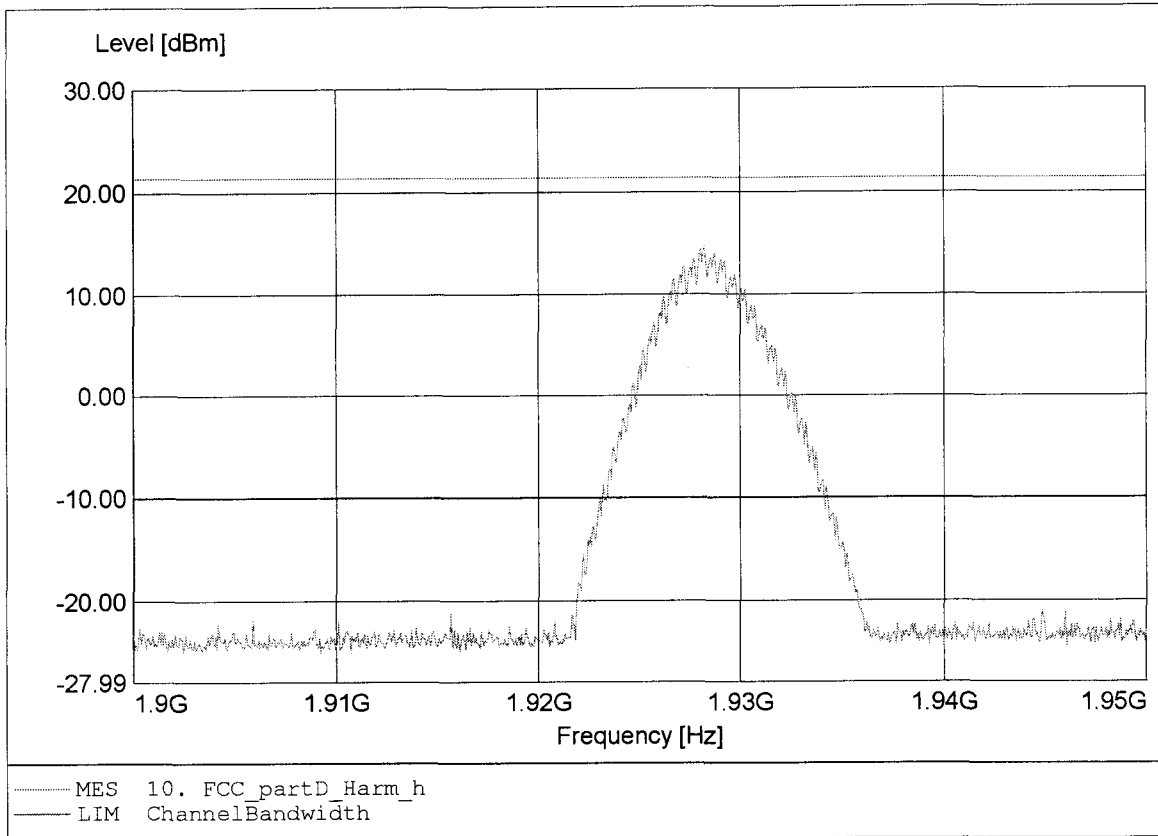
Type approval holder: LAKE Communications Ltd
EUT / Model: Sigma Connection Central / 59230-5500
antenna / Ch: 2 / 0
Test Site / Operator: ETS / Mr. Cersovsky
Temperature/ Voltage: 23°C / 110 V~ (AC/DC adapter)
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HL 025,
Comment 2: Freq:1.928GHz Pmax:16.44dBm RBW: 5 MHz



Peak Transmit Power, Radiated

FCC RULES PART 15, SUBPART D

Type approval holder: LAKE Communications Ltd
EUT / Model: Sigma Connection Central / 59230-5500
antenna / Ch: 2 / 0
Test Site / Operator: ETS / Mr. Cersovsky
Temperature/ Voltage: 23°C / 110 V~ (AC/DC adapter)
Test Specification: Fully anechoic chamber / mode: Tx
Comment 1: Dist.: 3m, Ant.: HL 025,
Comment 2: Freq:1.928GHz Pmax:14.63dBm RBW: 5 MHz





Appendix K

Monitoring threshold

Test case Rev. Draft 1.1 ANSI_7.3.2.1.2_least_interfered_channel
 Date 21.09.2005 12:44:53
 Reference to the EUT G0M20509-9830 / 5923-05500
 Comment: 7.3.2.1.2_a

Sigma / Connection Central
 LAKE Communications Ltd.

The LOG table shows the level changes on each Channel of the transmission system

Time stamp	1921.536 MHz	1923.264 MHz	1924.992 MHz	1926.720 MHz	1928.448 MHz	Comment
	Peak in dBm	Peak in dBm	Peak in dBm	Peak in dBm	Peak in dBm	
	RMS in dBm	RMS in dBm	RMS in dBm	RMS in dBm	RMS in dBm	
01:32:28.1875000	-39,1 -63,5	-17,2 -40,4	-45,9 -75,7	-55,1 -81,6	-67,2 -89,3	No Interference
01:32:48.6093750	-57,5 -58,2	-55,8 -58,1	-50,5 -58	-38,8 -61	-17,2 -39,9	OK 1
01:33:02.0625000	-39,2 -63,6	-17,3 -40,2	-46 -74,9	-55,5 -81,6	-68,2 -89,5	
01:33:18.7343750	-57,1 -58,1	-54,7 -58,1	-49,9 -58	-38,6 -60,8	-17,3 -40,4	OK 2
01:33:33.1718750	-39,1 -63,6	-17,2 -40	-45,6 -74,6	-81,6 -91,2	-69,1 -89,2	
01:33:44.1406250	-55,7 -58,1	-57 -58,1	-50,6 -58	-39,7 -61,5	-17,2 -40,1	OK 3
01:33:56.6406250	-65,6 -89	-55,9 -81,6	-39 -63,6	-17,3 -40,2	-46,1 -74,6	
01:34:07.8750000	-55,7 -58,1	-56 -58,1	-50,8 -58	-39,6 -61,3	-17,2 -40,9	OK 4
01:34:25.9062500	-39,7 -63,9	-17,2 -39,8	-44,9 -74,6	-55,4 -82,1	-67,9 -89,3	
01:34:35.8437500	-57 -58,1	-54,6 -58,1	-50,8 -58	-38,5 -60,9	-17,2 -40	OK 5

Log file

Test case Rev. Draft 1.1 ANSI_7.3.2.1.2_least_interfered_channel
 Date 21.09.2005 12:51:26
 Reference to the EUT G0M20509-9830 / 5923-05500
 Comment: 7.3.2.1.2_b

Sigma / Connection Central
 LAKE Communications Ltd.

The LOG table shows the level changes on each Channel of the transmission system

Time stamp	1921.536	1923.264	1924.992	1926.720	1928.448	Comment
	MHZ	MHz	MHz	MHz	MHz	
	Peak in dBm	Peak in dBm	Peak in dBm	Peak in dBm	Peak in dBm	
	RMS in dBm	RMS in dBm	RMS in dBm	RMS in dBm	RMS in dBm	
01:39:27.4062500	-39,3 -63,6	-17,2 -40,6	-45,7 -73,9	-55,3 -82,2	-64 -88,5	No interference
01:39:37	-57,5 -58,2	-50,9 -58	-39,7 -57	-17,4 -40	-45,7 -64,4	OK1
01:39:52.7187500	-54,3 -81,2	-39,6 -63,9	-17,1 -39,4	-45,6 -75,2	-55,2 -81,7	
01:40:01.4062500	-57,1 -58,1	-52 -58	-38,1 -56,8	-17,1 -40	-46,4 -64,4	OK2
01:40:14.7656250	-39,3 -63,5	-17,2 -40,6	-45,9 -74,5	-54,5 -81,8	-69,4 -89,6	
01:40:21.1406250	-57 -58,1	-50,9 -58	-38,9 -56,8	-17 -40,5	-44,9 -64,4	OK3
01:40:36.1718750	-54,8 -80,9	-39,5 -63,8	-17,2 -40	-46,5 -75,6	-55,6 -82,2	
01:40:43.2968750	-55,8 -58,1	-50,9 -58	-38,4 -56,8	-17,2 -40,4	-47,2 -64,5	OK4
01:40:52.9687500	-39,4 -63,4	-17 -40,3	-46,9 -74,8	-55,7 -81,8	-65,9 -88,6	
01:41:00.4062500	-54,9 -58,1	-51,6 -58	-38,9 -56,9	-17,2 -40,5	-46,1 -64,5	OK5

Log file

Test case Rev. Draft 1.1 ANSI_7.3.2.1.2_least_interfered_channel
 Date 21.09.2005 12:58:00
 Reference to the EUT G0M20509-9830 / 5923-05500
 Comment: 7.3.2.1.2_c

Sigma / Connection Central
 LAKE Communications Ltd.

The LOG table shows the level changes on each Channel of the transmission system

Time stamp	1921.536	1923.264	1924.992	1926.720	1928.448	Comment
	MHZ	MHZ	MHZ	MHZ	MHZ	
	Peak in dBm	Peak in dBm	Peak in dBm	Peak in dBm	Peak in dBm	
	RMS in dBm	RMS in dBm	RMS in dBm	RMS in dBm	RMS in dBm	
01:45:22.7500000	-65,3 -88,7	-55,7 -81,9	-38,9 -63,4	-17,3 -40,2	-46,3 -75,3	No interference
01:45:35.7656250	-56 -58,1	-55 -58,1	-50,1 -57,9	-39,6 -63,3	-17,2 -40,4	OK1
01:46:10.0156250	-39,3 -63,4	-17,1 -39,9	-46,5 -75	-55,9 -82	-68,5 -89,5	
01:46:17.5781250	-56,9 -58,2	-56,6 -58,1	-50,6 -57,9	-39,5 -63,2	-17,2 -40,5	OK2
01:46:33.3437500	-17,1 -40,2	-46,9 -75,1	-54,2 -80,9	-71,2 -89,7	-68,4 -89,8	
01:46:42.3437500	-56,7 -58,1	-54,8 -58,1	-51 -57,9	-39,3 -63	-17,2 -40,3	OK3
01:47:02.4375000	-38,9 -63,5	-17,2 -40,5	-47,1 -75	-54,6 -81,8	-69,7 -90,1	
01:47:11.3437500	-55,7 -58,1	-56,1 -58,1	-50,7 -57,9	-39,1 -62,7	-17,2 -40	OK4
01:47:31.2343750	-39,3 -63,6	-17,2 -40,3	-46 -74,2	-56,3 -82,4	-62,2 -88,4	
01:47:39.4218750	-55,9 -58,1	-54,9 -58,1	-50,8 -58	-39,3 -63,2	-17,2 -40,5	OK5

Log file

Test case Rev. Draft 1.1 ANSI_7.3.2.1.2_least_interfered_channel
 Date 21.09.2005 13:04:45
 Reference to the EUT G0M20509-9830 / 5923-05500
 Comment: 7.3.2.1.2_d
 Sigma / Connection Central
 LAKE Communications Ltd.

The LOG table shows the level changes on each Channel of the transmission system

Time stamp	1921.536	1923.264	1924.992	1926.720	1928.448	Comment
	MHZ	MHz	MHz	MHz	MHz	
	Peak in dBm	Peak in dBm	Peak in dBm	Peak in dBm	Peak in dBm	
	RMS in dBm	RMS in dBm	RMS in dBm	RMS in dBm	RMS in dBm	
01:51:12.3281250	-54,8 -81,2	-39,3 -62,9	-17,1 -40	-45,9 -75,4	-54,5 -81,7	No interference
01:51:39.8593750	-57,1 -58,1	-50,7 -58	-39,6 -56,9	-17,2 -40,3	-46,6 -70,2	Ok 1
01:51:56.9531250	-54,6 -81,3	-39,6 -63,7	-17 -40,5	-48 -75,3	-56,2 -82	
01:52:06.7343750	-56,3 -58,1	-50,9 -58,1	-38,2 -56,7	-17,2 -40,2	-46,9 -70,2	OK 2
01:52:20.9062500	-65 -89,1	-61,8 -88,2	-53,5 -80,8	-38,9 -63,2	-17,1 -40,4	
01:52:30.3281250	-56 -58,1	-51,2 -58,1	-39,4 -57	-17,2 -40,2	-45,2 -70,3	OK 3
01:52:44.2031250	-39,1 -63,5	-17,2 -40	-45,8 -74,6	-53,3 -81,1	-68 -89,4	
01:52:50.1718750	-57 -58,2	-51,1 -58	-37,9 -56,7	-17,3 -40,5	-45,7 -69,7	OK 4
01:53:04.4531250	-54,3 -81,6	-39,5 -63,8	-17,1 -39,7	-48,1 -75,3	-56,4 -82,4	
01:53:12.1093750	-57,1 -58,1	-50,8 -58	-38,9 -56,9	-17,2 -40	-45,3 -69,9	OK 5

Log file

Test case Rev. Draft 1.1 ANSI_7.3.1.1.3_upper_theshold
 Date 21.09.2005 10:15:51
 Reference to the EUT G0M20509-9830 / 5923-05500
 Comment: initial setup
 Sigma / Connection Central
 LAKE Communications Ltd.

The LOG table shows the level changes on each Channel of the transmission system

Time stamp	1921.536	1923.264	1924.992	1926.720	1928.448	Comment
	MHZ	MHz	MHz	MHz	MHz	
	Peak in dBm	Peak in dBm	Peak in dBm	Peak in dBm	Peak in dBm	
	RMS in dBm	RMS in dBm	RMS in dBm	RMS in dBm	RMS in dBm	
00:43:12.7187500	-64,7 -88,9	-54,4 -81	-39,2 -63,7	-17,1 -40,4	-46,1 -75	No interference, dummy bearer on
00:44:11.5000000	-52,1 -52,4	-52,1 -52,4	-51,7 -52,3	-51,4 -52,4	-50,7 -52,1	-52,5 dBm
00:44:24.9843750	-53 -53,4	-53,1 -53,4	-52,7 -53,3	-52,1 -53,2	-51,8 -53,1	-53,5 dBm
00:44:38.2500000	-54,1 -54,5	-54 -54,4	-53,6 -54,3	-53,1 -54,2	-52,6 -54,1	-54,5 dBm
00:44:49.6093750	-55 -55,5	-55,1 -55,5	-54,6 -55,3	-54,1 -55,2	-53,7 -55	-55,5 dBm
00:45:05.1093750	-55,9 -56,5	-56 -56,5	-55,6 -56,4	-55,1 -56,2	-54,7 -56,2	-56,5 dBm
00:45:17.1406250	-57 -57,5	-57 -57,4	-56,5 -57,3	-56,1 -57,3	-55,7 -57,2	-57,5 dBm
00:45:30.0156250	-57,8 -58,5	-57,9 -58,4	-57,5 -58,3	-57,2 -58,2	-56,7 -58,1	-58,5 dBm
00:45:43.6875000	-58,8 -59,5	-58,9 -59,4	-58,4 -59,3	-58 -59,3	-57,5 -59,2	-59,5 dBm
00:46:13.4218750	-59,7 -60,4	-59,8 -60,4	-59,4 -60,3	-58,9 -60,2	-58,4 -60,1	-60,5 dBm
00:46:27.8593750	-17,2 -40,2	-46,9 -63,1	-52,9 -63,3	-59 -63,2	-60,2 -63,2	Threshold -61,5 dBm

Log file



Appendix L

Monitoring of intended transmit window and maximum reaction time

Test case Rev. Draft 1.1 ANSI_7.5_reaction_time_low_ch
 Date 22.09.2005 10:07:28
 Reference to the EUT GOM20509-9830 / 5923-05500
 Comment: low channel
 Sigma / Connection Central
 LAKE Communications Ltd.

The LOG table shows the level changes on each Channel of the transmission system

Time stamp	1921.536	1923.264	1924.992	1926.720	1928.448	Comment
	MHZ	MHz	MHz	MHz	MHz	
	Peak in dBm	Peak in dBm	Peak in dBm	Peak in dBm	Peak in dBm	
	RMS in dBm	RMS in dBm	RMS in dBm	RMS in dBm	RMS in dBm	
00:25:10.0781250	-53,7 -80,9	-39,1 -63,8	-17,1 -39,7	-47,8 -74,8	-54,7 -81,6	50µs interferer is off
00:25:46.5312500	-53,2 -68,8	-57,9 -58,4	-57,2 -58	-56,7 -57,8	-56,3 -57,7	interferer is on no connection
00:25:57.7968750	-63,4 -88,8	-55 -81,3	-38,9 -63,4	-16,9 -40,6	-46,8 -75	35µs interferer is off
00:26:57.1093750	-48,5 -64,8	-57,8 -58,4	-57,2 -58	-56,7 -57,9	-56,2 -57,7	interferer is on no connection
00:27:09.2968750	-66,2 -89,5	-54,9 -81,3	-39 -63,7	-17,3 -40,4	-46,2 -75,1	75µs on symbol 0 is off
00:28:14.4531250	-44,5 -57,7	-57,9 -58,4	-57,1 -58	-56,7 -57,9	-56,3 -57,8	interferer is on no connection
00:28:30.7500000	-64,5 -89,2	-54,5 -81	-39,4 -63,8	-17,1 -40,2	-81,9 -91,2	75µs on symbol 180 is off
00:29:33.7187500	-43,7 -57,9	-57,9 -58,4	-57,2 -58	-56,6 -57,8	-56,3 -57,7	interferer is on no connection
00:29:43.0781250	-64,6 -89,7	-54,4 -80,6	-39,6 -64	-17,3 -40,8	-46,6 -75,3	75µs on symbol 360 is off
00:30:42.6718750	-43,6 -57,9	-57,8 -58,4	-57,2 -58	-56,7 -57,9	-56,3 -57,8	interferer is on no connection

Log file

Test case Rev. Draft 1.1 ANSI_7.5_reaction_time_mid_ch
 Date 22.09.2005 09:54:18
 Reference to the EUT GOM20509-9830 / 5923-05500
 Comment: mid channel
 Sigma / Connection Central
 LAKE Communications Ltd.

The LOG table shows the level changes on each Channel of the transmission system

Time stamp	1921.536	1923.264	1924.992	1926.720	1928.448	Comment
	MHZ	MHZ	MHz	MHz	MHz	
	Peak in dBm	Peak in dBm	Peak in dBm	Peak in dBm	Peak in dBm	
	RMS in dBm	RMS in dBm	RMS in dBm	RMS in dBm	RMS in dBm	
00:12:57.6093750	-67,9 -89,4	-67,2 -89	-54,2 -80,7	-39,5 -63,8	-17,1 -40,9	50µs interferer is off
00:13:37.0781250	-57,5 -58,1	-57,3 -57,8	-54,1 -68,8	-56,6 -57,9	-56,3 -57,8	interferer is on no connection
00:13:46.8906250	-62,9 -88,8	-54,4 -81,4	-39,4 -63,8	-17,4 -40,2	-46,6 -75,1	35µs interferer is off
00:14:50.7968750	-57,5 -58,2	-57,4 -57,8	-47,9 -65,8	-56,7 -57,8	-56,3 -57,8	interferer is on no connection
00:15:00.9843750	-55 -81,4	-39,5 -63,9	-17,2 -40,2	-46,9 -73,8	-55 -82,1	75µs on symbol 0 is off
00:16:05.7656250	-57,6 -58,2	-57,3 -57,8	-44,5 -58,4	-56,7 -57,8	-56,2 -57,7	interferer is on no connection
00:16:16.5000000	-62,6 -88,6	-54,5 -80,8	-39,6 -63,9	-17,2 -40,4	-45,8 -75,2	75µs on symbol 180 is off
00:17:27.0625000	-57,5 -58,1	-57,2 -57,8	-44,3 -58	-56,7 -57,9	-56,3 -57,8	interferer is on no connection
00:17:39.4843750	-65,3 -89,2	-55,8 -81,6	-39,1 -63,8	-17,1 -40,5	-46,6 -75,4	75µs on symbol 360 is off
00:18:43.5937500	-57,6 -58,2	-57,3 -57,8	-42,7 -57,5	-56,8 -57,8	-56,2 -57,8	interferer is on no connection

Log file

Test case Rev. Draft 1.1 ANSI_7.5_reaction_time_high_ch
 Date 22.09.2005 09:41:35
 Reference to the EUT G0M20509-9830 / 5923-05500
 Comment: high channel
 Sigma / Connection Central
 LAKE Communications Ltd.

The LOG table shows the level changes on each Channel of the transmission system

Time stamp	1921.536	1923.264	1924.992	1926.720	1928.448	Comment
	MHZ	MHZ	MHZ	MHZ	MHZ	
	Peak in dBm	Peak in dBm	Peak in dBm	Peak in dBm	Peak in dBm	
	RMS in dBm	RMS in dBm	RMS in dBm	RMS in dBm	RMS in dBm	
00:00:16.1406250	-63,8 -89,2	-54,1 -80,4	-39,5 -64,1	-17,2 -40,1	-46,4 -74,9	50µs interferer is off
00:01:04.6250000	-57,5 -58,1	-57,3 -57,8	-56,8 -57,6	-56,4 -57,6	-53,6 -70,2	interferer is on no connection
00:01:36.5000000	-65,6 -89,3	-65,4 -89,3	-53,5 -80	-39,1 -63,7	-17 -40,4	35µs interferer is off
00:02:26.5781250	-57,5 -58,2	-57,3 -57,8	-56,8 -57,6	-56,3 -57,5	-47,9 -65,4	interferer is on no connection
00:02:45.6093750	-57 -58,1	-56,7 -57,8	-50,8 -57,6	-38,4 -56,6	-16,9 -40,2	75µs on symbol 0 is off
00:03:30.1093750	-57,5 -58,1	-57,3 -57,8	-56,4 -57,3	-56,7 -57,9	-44,2 -58	interferer is on no connection
00:03:48.7031250	-56,1 -58,1	-54,6 -57,8	-55 -81,3	-39,8 -57	-17,1 -40,1	75µs on symbol 180 is off
00:04:36.1875000	-57,5 -58,2	-57,4 -57,8	-56,5 -57,2	-56,7 -57,8	-43,5 -58,5	interferer is on no connection
00:04:51.0937500	-56,2 -58,1	-55,1 -57,8	-50,6 -57,3	-38,4 -56,8	-17,2 -40,4	75µs on symbol 360 is off
00:05:00.3593750	-68,5 -89,9	-67,1 -88,7	-54 -80,9	-39,5 -64	-17,3 -40,3	interferer is on no connection

Log file